

February 10, 2020

**Vista Work Order No. 1904159**

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 November 26, 2019 under your Project Name 'Gasco-PDI 000029-02.59'.

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

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

Sincerely,

Martha Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by 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. 1904159

### Case Narrative

#### Sample Condition on Receipt:

Thirty sediment samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The additional ten samples listed on the CoC were assigned to Vista Work Order 1904160.

#### 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 above the sample quantitation limits in the Method Blanks. The OPR recoveries were within the method acceptance criteria.

A Duplicate was performed on sample "PDI-013SC-A-02-03-190925". The RPDs were out of the acceptance criteria for 1,2,3,7,8,9-HxCDD and 2,3,4,7,8-PeCDF.

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

#### QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
1904159-03	PDI-015SC-A-07-08-191012	EPA Method 1613B	13C-OCDD	H	10.4

H = Recovery was outside laboratory acceptance criteria.

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# Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1904159-01	PDI-013SC-A-02-03-190925	25-Sep-19 13:51	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-02	PDI-013SC-A-03-04-190925	25-Sep-19 13:51	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-03	PDI-015SC-A-07-08-191012	12-Oct-19 16:07	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-04	PDI-015SC-A-08-09-191012	12-Oct-19 16:07	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-05	PDI-016SC-A-00-01-191009	09-Oct-19 09:48	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-06	PDI-016SC-A-01-02-191009	09-Oct-19 09:48	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-07	PDI-018SC-A-06-07-190926	26-Sep-19 08:54	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-08	PDI-018SC-A-07-08-190926	26-Sep-19 08:54	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-09	PDI-019SC-A-06-07-191008	08-Oct-19 14:46	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-10	PDI-019SC-A-07-08-191008	08-Oct-19 14:46	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-11	PDI-020SC-A-02-03-191008	08-Oct-19 10:37	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-12	PDI-020SC-A-03-04-191008	08-Oct-19 10:37	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-13	PDI-023SC-A-04-05-191009	09-Oct-19 12:14	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-14	PDI-023SC-A-05-06-191009	09-Oct-19 12:14	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-15	PDI-024SC-A-02-03-190927	27-Sep-19 12:00	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-16	PDI-024SC-A-03-04-190927	27-Sep-19 12:00	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-17	PDI-025SC-A-02-03-190927	27-Sep-19 14:16	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-18	PDI-025SC-A-03-04-190927	27-Sep-19 14:16	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-19	PDI-026SC-A-04-05-191014	14-Oct-19 11:01	26-Nov-19 08:55	Amber Glass, 120 mL
1904159-20	PDI-026SC-A-05-06-191014	14-Oct-19 11:01	26-Nov-19 08:55	Amber Glass, 120 mL

## **ANALYTICAL RESULTS**

Sample ID: Method Blank					EPA Method 1613B				
Matrix: Solid Sample Size: 10.0 g		QC Batch: B0A0001 Date Extracted: 02-Jan-2020 5:43		Lab Sample: B0A0001-BLK1 Date Analyzed: 16-Jan-20 15:20 Column: ZB-5MS					
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.0989			IS 13C-2,3,7,8-TCDD	84.6	25 - 164		
1,2,3,7,8-PeCDD	ND	0.124			13C-1,2,3,7,8-PeCDD	78.3	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.217			13C-1,2,3,4,7,8-HxCDD	85.1	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.237			13C-1,2,3,6,7,8-HxCDD	71.0	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.240			13C-1,2,3,7,8,9-HxCDD	77.4	32 - 141		
1,2,3,4,6,7,8-HpCDD	ND	0.224			13C-1,2,3,4,6,7,8-HpCDD	78.1	23 - 140		
OCDD	ND	0.217			13C-OCDD	64.5	17 - 157		
2,3,7,8-TCDF	ND	0.0952			13C-2,3,7,8-TCDF	80.2	24 - 169		
1,2,3,7,8-PeCDF	ND	0.102			13C-1,2,3,7,8-PeCDF	77.1	24 - 185		
2,3,4,7,8-PeCDF	ND	0.0988			13C-2,3,4,7,8-PeCDF	70.0	21 - 178		
1,2,3,4,7,8-HxCDF	ND	0.0577			13C-1,2,3,4,7,8-HxCDF	94.7	26 - 152		
1,2,3,6,7,8-HxCDF	ND	0.0692			13C-1,2,3,6,7,8-HxCDF	81.7	26 - 123		
2,3,4,6,7,8-HxCDF	ND	0.0702			13C-2,3,4,6,7,8-HxCDF	82.8	28 - 136		
1,2,3,7,8,9-HxCDF	ND	0.0941			13C-1,2,3,7,8,9-HxCDF	88.0	29 - 147		
1,2,3,4,6,7,8-HpCDF	ND	0.123			13C-1,2,3,4,6,7,8-HpCDF	81.9	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	0.116			13C-1,2,3,4,7,8,9-HpCDF	84.7	26 - 138		
OCDF	ND	0.251			13C-OCDF	72.1	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	81.1	35 - 197		
					<b>Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)</b>				
					TEQMinWHO2005Dioxin		0.00		
<b>TOTALS</b>									
Total TCDD	ND	0.0989							
Total PeCDD	ND	0.124							
Total HxCDD	ND	0.232							
Total HpCDD	ND	0.224							
Total TCDF	ND	0.0952							
Total PeCDF	ND	0.100							
Total HxCDF	ND	0.0720							
Total HpCDF	ND	0.120							

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

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

Sample ID: OPR					EPA Method 1613B		
Matrix: Solid	QC Batch: B0A0001	Lab Sample: B0A0001-BS1					
Sample Size: 10.0 g	Date Extracted: 02-Jan-2020 5:43	Date Analyzed: 16-Jan-20 12:57	Column: ZB-5MS				
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	22.2	20.0	111	67 - 158	IS 13C-2,3,7,8-TCDD	90.2	20 - 175
1,2,3,7,8-PeCDD	103	100	103	70 - 142	13C-1,2,3,7,8-PeCDD	82.3	21 - 227
1,2,3,4,7,8-HxCDD	102	100	102	70 - 164	13C-1,2,3,4,7,8-HxCDD	84.4	21 - 193
1,2,3,6,7,8-HxCDD	107	100	107	76 - 134	13C-1,2,3,6,7,8-HxCDD	77.1	25 - 163
1,2,3,7,8,9-HxCDD	105	100	105	64 - 162	13C-1,2,3,7,8,9-HxCDD	80.4	21 - 193
1,2,3,4,6,7,8-HpCDD	106	100	106	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	80.6	26 - 166
OCDD	220	200	110	78 - 144	13C-OCDD	69.0	13 - 199
2,3,7,8-TCDF	20.0	20.0	99.9	75 - 158	13C-2,3,7,8-TCDF	81.1	22 - 152
1,2,3,7,8-PeCDF	109	100	109	80 - 134	13C-1,2,3,7,8-PeCDF	78.9	21 - 192
2,3,4,7,8-PeCDF	107	100	107	68 - 160	13C-2,3,4,7,8-PeCDF	77.3	13 - 328
1,2,3,4,7,8-HxCDF	94.6	100	94.6	72 - 134	13C-1,2,3,4,7,8-HxCDF	95.8	19 - 202
1,2,3,6,7,8-HxCDF	93.9	100	93.9	84 - 130	13C-1,2,3,6,7,8-HxCDF	88.1	21 - 159
2,3,4,6,7,8-HxCDF	97.2	100	97.2	70 - 156	13C-2,3,4,6,7,8-HxCDF	83.6	22 - 176
1,2,3,7,8,9-HxCDF	95.8	100	95.8	78 - 130	13C-1,2,3,7,8,9-HxCDF	90.9	17 - 205
1,2,3,4,6,7,8-HpCDF	91.5	100	91.5	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	88.7	21 - 158
1,2,3,4,7,8,9-HpCDF	91.3	100	91.3	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	90.5	20 - 186
OCDF	198	200	98.8	63 - 170	13C-OCDF	79.0	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	87.7	31 - 191

LCL-UCL - Lower control limit - upper control limit

Sample ID: Method Blank					EPA Method 1613B			
Matrix: Solid	QC Batch: B0B0017	Lab Sample: B0B0017-BLK1			Date Analyzed: 09-Feb-20 15:16 Column: ZB-5MS			
Sample Size: 10.0 g	Date Extracted: 04-Feb-2020 6:35							
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0690			IS 13C-2,3,7,8-TCDD	87.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0662			13C-1,2,3,7,8-PeCDD	84.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0570			13C-1,2,3,4,7,8-HxCDD	79.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0588			13C-1,2,3,6,7,8-HxCDD	78.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0678			13C-1,2,3,7,8,9-HxCDD	78.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.108			13C-1,2,3,4,6,7,8-HpCDD	78.3	23 - 140	
OCDD	0.355			J	13C-OCDD	66.5	17 - 157	
2,3,7,8-TCDF	ND	0.0465			13C-2,3,7,8-TCDF	90.9	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0420			13C-1,2,3,7,8-PeCDF	80.3	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0410			13C-2,3,4,7,8-PeCDF	82.1	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0475			13C-1,2,3,4,7,8-HxCDF	85.4	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0467			13C-1,2,3,6,7,8-HxCDF	83.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0488			13C-2,3,4,6,7,8-HxCDF	86.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND		0.107		13C-1,2,3,7,8,9-HxCDF	85.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0708			13C-1,2,3,4,6,7,8-HpCDF	86.4	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0781			13C-1,2,3,4,7,8,9-HpCDF	87.6	26 - 138	
OCDF	0.240			J	13C-OCDF	72.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	87.7	35 - 197	
					<b>Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)</b>			
					TEQMinWHO2005Dioxin	0.000179		
<b>TOTALS</b>								
Total TCDD	ND	0.0690						
Total PeCDD	ND	0.0662						
Total HxCDD	ND	0.0678						
Total HpCDD	ND	0.108						
Total TCDF	ND	0.0465						
Total PeCDF	ND	0.0420						
Total HxCDF	ND		0.107					
Total HpCDF	ND	0.0781						

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

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



Sample ID: OPR					EPA Method 1613B		
Matrix: Solid	QC Batch: B0B0017	Lab Sample: B0B0017-BS1					
Sample Size: 10.0 g	Date Extracted: 04-Feb-2020 6:35	Date Analyzed: 09-Feb-20 12:55	Column: ZB-5MS				
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	18.5	20.0	92.3	67 - 158	IS 13C-2,3,7,8-TCDD	87.6	20 - 175
1,2,3,7,8-PeCDD	90.3	100	90.3	70 - 142	13C-1,2,3,7,8-PeCDD	84.8	21 - 227
1,2,3,4,7,8-HxCDD	101	100	101	70 - 164	13C-1,2,3,4,7,8-HxCDD	79.0	21 - 193
1,2,3,6,7,8-HxCDD	94.2	100	94.2	76 - 134	13C-1,2,3,6,7,8-HxCDD	81.6	25 - 163
1,2,3,7,8,9-HxCDD	97.6	100	97.6	64 - 162	13C-1,2,3,7,8,9-HxCDD	80.0	21 - 193
1,2,3,4,6,7,8-HpCDD	99.2	100	99.2	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	80.8	26 - 166
OCDD	192	200	96.1	78 - 144	13C-OCDD	72.0	13 - 199
2,3,7,8-TCDF	20.1	20.0	101	75 - 158	13C-2,3,7,8-TCDF	91.0	22 - 152
1,2,3,7,8-PeCDF	96.8	100	96.8	80 - 134	13C-1,2,3,7,8-PeCDF	79.7	21 - 192
2,3,4,7,8-PeCDF	97.4	100	97.4	68 - 160	13C-2,3,4,7,8-PeCDF	79.7	13 - 328
1,2,3,4,7,8-HxCDF	107	100	107	72 - 134	13C-1,2,3,4,7,8-HxCDF	86.1	19 - 202
1,2,3,6,7,8-HxCDF	111	100	111	84 - 130	13C-1,2,3,6,7,8-HxCDF	82.1	21 - 159
2,3,4,6,7,8-HxCDF	110	100	110	70 - 156	13C-2,3,4,6,7,8-HxCDF	86.7	22 - 176
1,2,3,7,8,9-HxCDF	106	100	106	78 - 130	13C-1,2,3,7,8,9-HxCDF	86.1	17 - 205
1,2,3,4,6,7,8-HpCDF	111	100	111	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	88.1	21 - 158
1,2,3,4,7,8,9-HpCDF	111	100	111	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	90.8	20 - 186
OCDF	209	200	105	63 - 170	13C-OCDF	76.1	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	81.8	31 - 191

LCL-UCL - Lower control limit - upper control limit

**Sample ID: PDI-013SC-A-02-03-190925** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-01      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 11.7 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 25-Sep-2019 13:51	% Solids: 86.2	Date Analyzed : 16-Jan-20 18:32 Column: ZB-5MS 31-Jan-20 16:54 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.332			IS 13C-2,3,7,8-TCDD	63.3	25 - 164	
1,2,3,7,8-PeCDD	0.441			J	13C-1,2,3,7,8-PeCDD	48.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND		0.907		13C-1,2,3,4,7,8-HxCDD	53.5	32 - 141	
1,2,3,6,7,8-HxCDD	7.28				13C-1,2,3,6,7,8-HxCDD	46.7	28 - 130	
1,2,3,7,8,9-HxCDD	2.80				13C-1,2,3,7,8,9-HxCDD	41.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	448				13C-1,2,3,4,6,7,8-HpCDD	41.5	23 - 140	
OCDD	3290				13C-OCDD	29.2	17 - 157	
2,3,7,8-TCDF	1.83				13C-2,3,7,8-TCDF	64.6	24 - 169	
1,2,3,7,8-PeCDF	2.28			J	13C-1,2,3,7,8-PeCDF	54.3	24 - 185	
2,3,4,7,8-PeCDF	1.87			J	13C-2,3,4,7,8-PeCDF	48.7	21 - 178	
1,2,3,4,7,8-HxCDF	3.92				13C-1,2,3,4,7,8-HxCDF	55.5	26 - 152	
1,2,3,6,7,8-HxCDF	1.21			J	13C-1,2,3,6,7,8-HxCDF	47.7	26 - 123	
2,3,4,6,7,8-HxCDF	0.676			J	13C-2,3,4,6,7,8-HxCDF	44.6	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.686			13C-1,2,3,7,8,9-HxCDF	46.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	21.6				13C-1,2,3,4,6,7,8-HpCDF	42.3	28 - 143	
1,2,3,4,7,8,9-HpCDF	1.62			J	13C-1,2,3,4,7,8,9-HpCDF	40.0	26 - 138	
OCDF	113				13C-OCDF	30.3	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	61.8	35 - 197	

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

TEQMinWHO2005Dioxin      8.58

<b>TOTALS</b>		
Total TCDD	0.810	2.08
Total PeCDD	4.48	8.55
Total HxCDD	105	110
Total HpCDD	1090	
Total TCDF	16.7	19.9
Total PeCDF	10.7	14.9
Total HxCDF	24.5	
Total HpCDF	98.5	

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

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

Sample ID: Duplicate					EPA Method 1613B				
Source Client ID: PDI-013SC-A-02-03-190925		QC Batch: B0A0001		Lab Sample: B0A0001-DUP1					
Source LabNumber: 1904159-01		Date Extracted: 02-Jan-2020 5:43		Date Analyzed: 16-Jan-20 17:44 Column: ZB-5MS					
Matrix: Solid									
Sample Size: 11.8 g									
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.408			IS 13C-2,3,7,8-TCDD	66.7	25 - 164		
1,2,3,7,8-PeCDD	ND	0.408			13C-1,2,3,7,8-PeCDD	51.0	25 - 181		
1,2,3,4,7,8-HxCDD	ND	1.05			13C-1,2,3,4,7,8-HxCDD	53.2	32 - 141		
1,2,3,6,7,8-HxCDD	5.78				13C-1,2,3,6,7,8-HxCDD	46.4	28 - 130		
1,2,3,7,8,9-HxCDD	1.91			J	13C-1,2,3,7,8,9-HxCDD	42.1	32 - 141		
1,2,3,4,6,7,8-HpCDD	396				13C-1,2,3,4,6,7,8-HpCDD	39.8	23 - 140		
OCDD	2770				13C-OCDD	28.9	17 - 157		
2,3,7,8-TCDF	1.68				13C-2,3,7,8-TCDF	65.5	24 - 169		
1,2,3,7,8-PeCDF	2.26			J	13C-1,2,3,7,8-PeCDF	58.4	24 - 185		
2,3,4,7,8-PeCDF	1.22			J	13C-2,3,4,7,8-PeCDF	49.1	21 - 178		
1,2,3,4,7,8-HxCDF	3.55				13C-1,2,3,4,7,8-HxCDF	58.0	26 - 152		
1,2,3,6,7,8-HxCDF	0.969			J	13C-1,2,3,6,7,8-HxCDF	49.7	26 - 123		
2,3,4,6,7,8-HxCDF	0.745			J	13C-2,3,4,6,7,8-HxCDF	45.7	28 - 136		
1,2,3,7,8,9-HxCDF	ND	0.783			13C-1,2,3,7,8,9-HxCDF	47.3	29 - 147		
1,2,3,4,6,7,8-HpCDF	19.0				13C-1,2,3,4,6,7,8-HpCDF	43.3	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	1.12			13C-1,2,3,4,7,8,9-HpCDF	38.9	26 - 138		
OCDF	102				13C-OCDF	29.8	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	63.2	35 - 197		
					<b>Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)</b>				
					TEQMinWHO2005Dioxin		6.91		
<b>TOTALS</b>									
Total TCDD	0.483		1.75						
Total PeCDD	4.07		6.61						
Total HxCDD	98.8								
Total HpCDD	965								
Total TCDF	11.6		14.4						
Total PeCDF	15.3		16.2						
Total HxCDF	22.6								
Total HpCDF	85.2								

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL - Lower control limit - upper control limit

The results are reported in dry weight.

The sample size is reported in wet weight.

Sample ID: Duplicate					EPA Method 1613B				
Source Client ID: PDI-013SC-A-02-03-190925					Duplicate Lab Sample: B0A0001-DUP1				
Source LabNumber: 1904159-01									
Matrix: Solid									
Analyte	Dup Conc. (pg/g )	Source Conc.	RPD	RPD Limits	Labeled Standard	Dup %R	Source %R	LCL-UCL	
2,3,7,8-TCDD	ND	ND	NA	25	IS 13C-2,3,7,8-TCDD	66.7	63.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.441	#	25	13C-1,2,3,7,8-PeCDD	51.0	48.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	ND	NA	25	13C-1,2,3,4,7,8-HxCDD	53.2	53.5	32 - 141	
1,2,3,6,7,8-HxCDD	5.78	7.28	23.0	25	13C-1,2,3,6,7,8-HxCDD	46.4	46.7	28 - 130	
1,2,3,7,8,9-HxCDD	1.91	2.80	37.9	25	13C-1,2,3,7,8,9-HxCDD	42.1	41.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	396	448	12.5	25	13C-1,2,3,4,6,7,8-HpCDD	39.8	41.5	23 - 140	
OCDD	2770	3290	17.3	25	13C-OCDD	28.9	29.2	17 - 157	
2,3,7,8-TCDF	1.68	1.83	8.84	25	13C-2,3,7,8-TCDF	65.5	64.6	24 - 169	
1,2,3,7,8-PeCDF	2.26	2.28	1.24	25	13C-1,2,3,7,8-PeCDF	58.4	54.3	24 - 185	
2,3,4,7,8-PeCDF	1.22	1.87	42.4	25	13C-2,3,4,7,8-PeCDF	49.1	48.7	21 - 178	
1,2,3,4,7,8-HxCDF	3.55	3.92	9.96	25	13C-1,2,3,4,7,8-HxCDF	58.0	55.5	26 - 152	
1,2,3,6,7,8-HxCDF	0.969	1.21	22.5	25	13C-1,2,3,6,7,8-HxCDF	49.7	47.7	26 - 123	
2,3,4,6,7,8-HxCDF	0.745	0.676	9.72	25	13C-2,3,4,6,7,8-HxCDF	45.7	44.6	28 - 136	
1,2,3,7,8,9-HxCDF	ND	ND	NA	25	13C-1,2,3,7,8,9-HxCDF	47.3	46.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	19.0	21.6	13.0	25	13C-1,2,3,4,6,7,8-HpCDF	43.3	42.3	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	1.62	#	25	13C-1,2,3,4,7,8,9-HpCDF	38.9	40.0	26 - 138	
OCDF	102	113	10.8	25	13C-OCDF	29.8	30.3	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	63.2	61.8	35 - 197	

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

**Sample ID: PDI-013SC-A-03-04-190925** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-02      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 12.6 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 25-Sep-2019 13:51	% Solids: 79.5	Date Analyzed : 16-Jan-20 19:20      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.194			IS 13C-2,3,7,8-TCDD	85.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.503			13C-1,2,3,7,8-PeCDD	67.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.559			13C-1,2,3,4,7,8-HxCDD	62.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.596			13C-1,2,3,6,7,8-HxCDD	51.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.667			13C-1,2,3,7,8,9-HxCDD	52.3	32 - 141	
1,2,3,4,6,7,8-HpCDD	2.90				13C-1,2,3,4,6,7,8-HpCDD	40.1	23 - 140	
OCDD	54.0				13C-OCDD	24.6	17 - 157	
2,3,7,8-TCDF	ND	0.225			13C-2,3,7,8-TCDF	74.1	24 - 169	
1,2,3,7,8-PeCDF	ND	0.176			13C-1,2,3,7,8-PeCDF	65.3	24 - 185	
2,3,4,7,8-PeCDF	ND	0.189			13C-2,3,4,7,8-PeCDF	60.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.356			13C-1,2,3,4,7,8-HxCDF	71.6	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.361			13C-1,2,3,6,7,8-HxCDF	64.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.512			13C-2,3,4,6,7,8-HxCDF	51.3	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.570			13C-1,2,3,7,8,9-HxCDF	63.0	29 - 147	
1,2,3,4,6,7,8-HpCDF	1.16			J	13C-1,2,3,4,6,7,8-HpCDF	47.7	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.633			13C-1,2,3,4,7,8,9-HpCDF	47.2	26 - 138	
OCDF	ND	0.841			13C-OCDF	29.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	79.8	35 - 197	

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

TEQMinWHO2005Dioxin      0.0568

<b>TOTALS</b>		
Total TCDD	ND	0.0864
Total PeCDD	ND	0.889
Total HxCDD	ND	0.667
Total HpCDD	8.03	
Total TCDF	0.438	
Total PeCDF	1.04	1.37
Total HxCDF	1.44	
Total HpCDF	1.16	

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

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

**Sample ID: PDI-015SC-A-07-08-191012** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-03      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 12.7 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 12-Oct-2019 16:07	% Solids: 79.4	Date Analyzed : 16-Jan-20 20:08 Column: ZB-5MS 31-Jan-20 17:26 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.465		IS 13C-2,3,7,8-TCDD	40.1	25 - 164	
1,2,3,7,8-PeCDD	1.34			J	13C-1,2,3,7,8-PeCDD	50.3	25 - 181	
1,2,3,4,7,8-HxCDD	1.79			J	13C-1,2,3,4,7,8-HxCDD	57.0	32 - 141	
1,2,3,6,7,8-HxCDD	16.3				13C-1,2,3,6,7,8-HxCDD	45.2	28 - 130	
1,2,3,7,8,9-HxCDD	5.09				13C-1,2,3,7,8,9-HxCDD	47.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	737				13C-1,2,3,4,6,7,8-HpCDD	33.9	23 - 140	
OCDD	4980				13C-OCDD	10.4	17 - 157	H
2,3,7,8-TCDF	1.76				13C-2,3,7,8-TCDF	39.4	24 - 169	
1,2,3,7,8-PeCDF	1.22			J	13C-1,2,3,7,8-PeCDF	54.3	24 - 185	
2,3,4,7,8-PeCDF	2.47				13C-2,3,4,7,8-PeCDF	51.5	21 - 178	
1,2,3,4,7,8-HxCDF	2.31			J	13C-1,2,3,4,7,8-HxCDF	55.6	26 - 152	
1,2,3,6,7,8-HxCDF	0.957			J	13C-1,2,3,6,7,8-HxCDF	51.7	26 - 123	
2,3,4,6,7,8-HxCDF	2.04			J	13C-2,3,4,6,7,8-HxCDF	42.6	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.589			13C-1,2,3,7,8,9-HxCDF	53.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	69.6				13C-1,2,3,4,6,7,8-HpCDF	47.4	28 - 143	
1,2,3,4,7,8,9-HpCDF	2.49				13C-1,2,3,4,7,8,9-HpCDF	39.4	26 - 138	
OCDF	264				13C-OCDF	21.3	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	39.2	35 - 197	

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

TEQMinWHO2005Dioxin      14.8

<b>TOTALS</b>		
Total TCDD	3.74	7.29
Total PeCDD	11.2	22.0
Total HxCDD	199	
Total HpCDD	1860	
Total TCDF	52.4	56.4
Total PeCDF	46.9	49.3
Total HxCDF	59.5	
Total HpCDF	255	

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

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

**Sample ID: PDI-015SC-A-08-09-191012** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-04      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 16.3 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 12-Oct-2019 16:07	% Solids: 61.9	Date Analyzed : 16-Jan-20 20:55      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.251			IS 13C-2,3,7,8-TCDD	96.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.287			13C-1,2,3,7,8-PeCDD	90.0	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.360			13C-1,2,3,4,7,8-HxCDD	103	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.369			13C-1,2,3,6,7,8-HxCDD	84.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.398			13C-1,2,3,7,8,9-HxCDD	89.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	1.69			J	13C-1,2,3,4,6,7,8-HpCDD	84.6	23 - 140	
OCDD	14.7				13C-OCDD	72.6	17 - 157	
2,3,7,8-TCDF	ND	0.191			13C-2,3,7,8-TCDF	89.3	24 - 169	
1,2,3,7,8-PeCDF	ND	0.159			13C-1,2,3,7,8-PeCDF	89.1	24 - 185	
2,3,4,7,8-PeCDF	ND	0.153			13C-2,3,4,7,8-PeCDF	85.4	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.124			13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.139			13C-1,2,3,6,7,8-HxCDF	96.8	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.154			13C-2,3,4,6,7,8-HxCDF	97.0	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.206			13C-1,2,3,7,8,9-HxCDF	103	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.214			13C-1,2,3,4,6,7,8-HpCDF	94.8	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.205			13C-1,2,3,4,7,8,9-HpCDF	94.6	26 - 138	
OCDF	ND	0.364			13C-OCDF	79.7	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	93.7	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      0.0213

<b>TOTALS</b>			
Total TCDD	ND		1.28
Total PeCDD	ND		0.414
Total HxCDD	1.64		
Total HpCDD	4.61		
Total TCDF	ND		0.318
Total PeCDF	ND	0.159	
Total HxCDF	ND	0.206	
Total HpCDF	ND	0.214	

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

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

**Sample ID: PDI-016SC-A-00-01-191009** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-05      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 18.4 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 09-Oct-2019 9:48	% Solids: 54.9	Date Analyzed : 22-Jan-20 00:30 Column: ZB-5MS 31-Jan-20 22:41 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	1.08				IS 13C-2,3,7,8-TCDD	90.6	25 - 164	
1,2,3,7,8-PeCDD	1.27			J	13C-1,2,3,7,8-PeCDD	89.2	25 - 181	
1,2,3,4,7,8-HxCDD	1.15			J	13C-1,2,3,4,7,8-HxCDD	79.8	32 - 141	
1,2,3,6,7,8-HxCDD	6.15				13C-1,2,3,6,7,8-HxCDD	76.1	28 - 130	
1,2,3,7,8,9-HxCDD	2.54				13C-1,2,3,7,8,9-HxCDD	78.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	210				13C-1,2,3,4,6,7,8-HpCDD	76.5	23 - 140	
OCDD	2960				13C-OCDD	69.0	17 - 157	
2,3,7,8-TCDF	30.0				13C-2,3,7,8-TCDF	81.1	24 - 169	
1,2,3,7,8-PeCDF	54.7				13C-1,2,3,7,8-PeCDF	83.0	24 - 185	
2,3,4,7,8-PeCDF	23.1				13C-2,3,4,7,8-PeCDF	80.3	21 - 178	
1,2,3,4,7,8-HxCDF	101				13C-1,2,3,4,7,8-HxCDF	84.7	26 - 152	
1,2,3,6,7,8-HxCDF	23.8				13C-1,2,3,6,7,8-HxCDF	83.3	26 - 123	
2,3,4,6,7,8-HxCDF	6.42				13C-2,3,4,6,7,8-HxCDF	75.5	28 - 136	
1,2,3,7,8,9-HxCDF	4.50				13C-1,2,3,7,8,9-HxCDF	78.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	63.9				13C-1,2,3,4,6,7,8-HpCDF	78.7	28 - 143	
1,2,3,4,7,8,9-HpCDF	15.6				13C-1,2,3,4,7,8,9-HpCDF	72.7	26 - 138	
OCDF	136				13C-OCDF	64.9	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	93.1	35 - 197	

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

TEQMinWHO2005Dioxin      32.3

<b>TOTALS</b>		
Total TCDD	6.77	
Total PeCDD	7.84	9.87
Total HxCDD	71.4	
Total HpCDD	509	
Total TCDF	131	132
Total PeCDF	161	162
Total HxCDF	194	
Total HpCDF	168	

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

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



**Sample ID: PDI-016SC-A-01-02-191009** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-06      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 13.5 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 09-Oct-2019 9:48	% Solids: 74.2	Date Analyzed : 16-Jan-20 01:57 Column: ZB-5MS 31-Jan-20 17:57 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.290			IS 13C-2,3,7,8-TCDD	93.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.518			13C-1,2,3,7,8-PeCDD	81.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.988			13C-1,2,3,4,7,8-HxCDD	86.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND		0.866		13C-1,2,3,6,7,8-HxCDD	77.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	1.16			13C-1,2,3,7,8,9-HxCDD	74.1	32 - 141	
1,2,3,4,6,7,8-HpCDD	45.2				13C-1,2,3,4,6,7,8-HpCDD	87.2	23 - 140	
OCDD	539				13C-OCDD	71.0	17 - 157	
2,3,7,8-TCDF	1.39				13C-2,3,7,8-TCDF	88.4	24 - 169	
1,2,3,7,8-PeCDF	ND		2.40		13C-1,2,3,7,8-PeCDF	86.5	24 - 185	
2,3,4,7,8-PeCDF	0.976			J	13C-2,3,4,7,8-PeCDF	82.3	21 - 178	
1,2,3,4,7,8-HxCDF	4.41				13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
1,2,3,6,7,8-HxCDF	1.23			J	13C-1,2,3,6,7,8-HxCDF	93.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND		0.665		13C-2,3,4,6,7,8-HxCDF	84.9	28 - 136	
1,2,3,7,8,9-HxCDF	0.516			J	13C-1,2,3,7,8,9-HxCDF	77.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	6.10				13C-1,2,3,4,6,7,8-HpCDF	88.4	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND		1.09		13C-1,2,3,4,7,8,9-HpCDF	90.4	26 - 138	
OCDF	18.9				13C-OCDF	87.9	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	91.1	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
TEQMinWHO2005Dioxin      1.73

<b>TOTALS</b>		DL	EMPC	Qualifiers
Total TCDD	ND	0.290		
Total PeCDD	0.875			
Total HxCDD	6.39		11.9	
Total HpCDD	110			
Total TCDF	3.70		4.94	
Total PeCDF	6.23		10.5	
Total HxCDF	13.8		14.4	
Total HpCDF	20.5		21.6	

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

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

**Sample ID: PDI-018SC-A-06-07-190926** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-07      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 18.1 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 26-Sep-2019 8:54	% Solids: 55.5	Date Analyzed : 17-Jan-20 02:45 Column: ZB-5MS 31-Jan-20 18:30 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.336		IS 13C-2,3,7,8-TCDD	83.1	25 - 164	
1,2,3,7,8-PeCDD	2.96				13C-1,2,3,7,8-PeCDD	64.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND		1.22		13C-1,2,3,4,7,8-HxCDD	65.5	32 - 141	
1,2,3,6,7,8-HxCDD	24.8				13C-1,2,3,6,7,8-HxCDD	55.4	28 - 130	
1,2,3,7,8,9-HxCDD	7.91				13C-1,2,3,7,8,9-HxCDD	52.6	32 - 141	
1,2,3,4,6,7,8-HpCDD	605				13C-1,2,3,4,6,7,8-HpCDD	42.3	23 - 140	
OCDD	8340			D	13C-OCDD	27.6	17 - 157	D
2,3,7,8-TCDF	1.54				13C-2,3,7,8-TCDF	75.6	24 - 169	
1,2,3,7,8-PeCDF	2.34			J	13C-1,2,3,7,8-PeCDF	76.2	24 - 185	
2,3,4,7,8-PeCDF	8.42				13C-2,3,4,7,8-PeCDF	63.4	21 - 178	
1,2,3,4,7,8-HxCDF	15.1				13C-1,2,3,4,7,8-HxCDF	78.0	26 - 152	
1,2,3,6,7,8-HxCDF	18.2				13C-1,2,3,6,7,8-HxCDF	67.7	26 - 123	
2,3,4,6,7,8-HxCDF	22.8				13C-2,3,4,6,7,8-HxCDF	57.9	28 - 136	
1,2,3,7,8,9-HxCDF	ND		1.41		13C-1,2,3,7,8,9-HxCDF	67.0	29 - 147	
1,2,3,4,6,7,8-HpCDF	951				13C-1,2,3,4,6,7,8-HpCDF	48.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	5.77				13C-1,2,3,4,7,8,9-HpCDF	53.3	26 - 138	
OCDF	320				13C-OCDF	33.1	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	78.5	35 - 197	

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

TEQMinWHO2005Dioxin	32.8
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<b>TOTALS</b>		
Total TCDD	3.66	8.04
Total PeCDD	34.8	41.5
Total HxCDD	237	239
Total HpCDD	1470	
Total TCDF	176	181
Total PeCDF	345	348
Total HxCDF	731	735
Total HpCDF	1660	

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

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

**Sample ID: PDI-018SC-A-07-08-190926** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-08      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 12.7 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 26-Sep-2019 8:54	% Solids: 78.9	Date Analyzed : 17-Jan-20 03:33      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.427			IS 13C-2,3,7,8-TCDD	49.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.803			13C-1,2,3,7,8-PeCDD	36.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.870			13C-1,2,3,4,7,8-HxCDD	60.6	32 - 141	
1,2,3,6,7,8-HxCDD	6.64				13C-1,2,3,6,7,8-HxCDD	50.7	28 - 130	
1,2,3,7,8,9-HxCDD	2.39			J	13C-1,2,3,7,8,9-HxCDD	54.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	112				13C-1,2,3,4,6,7,8-HpCDD	58.4	23 - 140	
OCDD	1800				13C-OCDD	51.9	17 - 157	
2,3,7,8-TCDF	ND	0.551			13C-2,3,7,8-TCDF	62.4	24 - 169	
1,2,3,7,8-PeCDF	ND	0.537			13C-1,2,3,7,8-PeCDF	46.7	24 - 185	
2,3,4,7,8-PeCDF	2.89				13C-2,3,4,7,8-PeCDF	38.7	21 - 178	
1,2,3,4,7,8-HxCDF	5.96				13C-1,2,3,4,7,8-HxCDF	66.8	26 - 152	
1,2,3,6,7,8-HxCDF	7.97				13C-1,2,3,6,7,8-HxCDF	61.8	26 - 123	
2,3,4,6,7,8-HxCDF	9.13				13C-2,3,4,6,7,8-HxCDF	58.1	28 - 136	
1,2,3,7,8,9-HxCDF	ND	1.73			13C-1,2,3,7,8,9-HxCDF	60.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	320				13C-1,2,3,4,6,7,8-HpCDF	62.4	28 - 143	
1,2,3,4,7,8,9-HpCDF	2.48			J	13C-1,2,3,4,7,8,9-HpCDF	60.2	26 - 138	
OCDF	105				13C-OCDF	57.9	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	76.4	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      8.99

<b>TOTALS</b>			
Total TCDD	0.785		
Total PeCDD	8.00	13.7	
Total HxCDD	53.8		
Total HpCDD	254		
Total TCDF	24.6	34.5	
Total PeCDF	128	132	
Total HxCDF	245		
Total HpCDF	533		

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

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

**Sample ID: PDI-019SC-A-06-07-191008** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-09      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 16.9 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 08-Oct-2019 14:46	% Solids: 59.6	Date Analyzed : 22-Jan-20 02:04      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.0410		IS 13C-2,3,7,8-TCDD	69.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0557			13C-1,2,3,7,8-PeCDD	74.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0710			13C-1,2,3,4,7,8-HxCDD	62.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0736			13C-1,2,3,6,7,8-HxCDD	58.6	28 - 130	
1,2,3,7,8,9-HxCDD	0.0931			J	13C-1,2,3,7,8,9-HxCDD	63.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND		0.283		13C-1,2,3,4,6,7,8-HpCDD	69.4	23 - 140	
OCDD	1.76			J	13C-OCDD	64.7	17 - 157	
2,3,7,8-TCDF	ND	0.0276			13C-2,3,7,8-TCDF	62.4	24 - 169	
1,2,3,7,8-PeCDF	ND		0.0627		13C-1,2,3,7,8-PeCDF	71.4	24 - 185	
2,3,4,7,8-PeCDF	ND		0.0443		13C-2,3,4,7,8-PeCDF	68.7	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0598			13C-1,2,3,4,7,8-HxCDF	69.5	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0525			13C-1,2,3,6,7,8-HxCDF	67.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND		0.0609		13C-2,3,4,6,7,8-HxCDF	63.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND		0.0939		13C-1,2,3,7,8,9-HxCDF	64.8	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.121		13C-1,2,3,4,6,7,8-HpCDF	67.2	28 - 143	
1,2,3,4,7,8,9-HpCDF	0.0925			J	13C-1,2,3,4,7,8,9-HpCDF	68.1	26 - 138	
OCDF	0.338			J	13C-OCDF	65.3	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	103	35 - 197	

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

TEQMinWHO2005Dioxin      0.0109

<b>TOTALS</b>								
Total TCDD	0.123		0.164					
Total PeCDD	ND	0.0557						
Total HxCDD	0.252							
Total HpCDD	0.344		0.627					
Total TCDF	ND	0.0276						
Total PeCDF	ND		0.107					
Total HxCDF	ND		0.155					
Total HpCDF	0.0925		0.213					

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

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

**Sample ID: PDI-019SC-A-07-08-191008** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-10      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 16.5 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 08-Oct-2019 14:46	% Solids: 61.4	Date Analyzed : 17-Jan-20 05:09      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.237			IS 13C-2,3,7,8-TCDD	68.4	25 - 164	
1,2,3,7,8-PeCDD	ND	0.355			13C-1,2,3,7,8-PeCDD	58.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.425			13C-1,2,3,4,7,8-HxCDD	64.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.468			13C-1,2,3,6,7,8-HxCDD	58.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.523			13C-1,2,3,7,8,9-HxCDD	58.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.442			13C-1,2,3,4,6,7,8-HpCDD	67.5	23 - 140	
OCDD	ND	0.930			13C-OCDD	62.3	17 - 157	
2,3,7,8-TCDF	ND	0.213			13C-2,3,7,8-TCDF	76.8	24 - 169	
1,2,3,7,8-PeCDF	ND	0.157			13C-1,2,3,7,8-PeCDF	76.9	24 - 185	
2,3,4,7,8-PeCDF	ND	0.161			13C-2,3,4,7,8-PeCDF	72.6	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.242			13C-1,2,3,4,7,8-HxCDF	71.1	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.245			13C-1,2,3,6,7,8-HxCDF	67.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.276			13C-2,3,4,6,7,8-HxCDF	66.0	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.470			13C-1,2,3,7,8,9-HxCDF	69.1	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.407			13C-1,2,3,4,6,7,8-HpCDF	72.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.360			13C-1,2,3,4,7,8,9-HpCDF	78.5	26 - 138	
OCDF	ND	0.511			13C-OCDF	72.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	99.7	35 - 197	

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

TEQMinWHO2005Dioxin      0.00

<b>TOTALS</b>			
Total TCDD	ND	0.237	
Total PeCDD	ND	0.355	
Total HxCDD	ND	0.523	
Total HpCDD	ND	0.442	
Total TCDF	ND	0.213	
Total PeCDF	ND	0.161	
Total HxCDF	ND	0.470	
Total HpCDF	ND	0.407	

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

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

**Sample ID: PDI-020SC-A-02-03-191008** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-11      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 13.7 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 08-Oct-2019 10:37	% Solids: 73.2	Date Analyzed : 22-Jan-20 02:51 Column: ZB-5MS 31-Jan-20 21:37 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.808		IS 13C-2,3,7,8-TCDD	57.0	25 - 164	
1,2,3,7,8-PeCDD	1.01			J	13C-1,2,3,7,8-PeCDD	61.8	25 - 181	
1,2,3,4,7,8-HxCDD	0.642			J	13C-1,2,3,4,7,8-HxCDD	49.1	32 - 141	
1,2,3,6,7,8-HxCDD	3.74				13C-1,2,3,6,7,8-HxCDD	47.0	28 - 130	
1,2,3,7,8,9-HxCDD	1.30			J	13C-1,2,3,7,8,9-HxCDD	49.1	32 - 141	
1,2,3,4,6,7,8-HpCDD	184				13C-1,2,3,4,6,7,8-HpCDD	56.0	23 - 140	
OCDD	1940				13C-OCDD	54.1	17 - 157	
2,3,7,8-TCDF	22.2				13C-2,3,7,8-TCDF	50.9	24 - 169	
1,2,3,7,8-PeCDF	30.8				13C-1,2,3,7,8-PeCDF	57.4	24 - 185	
2,3,4,7,8-PeCDF	19.2				13C-2,3,4,7,8-PeCDF	55.0	21 - 178	
1,2,3,4,7,8-HxCDF	67.0				13C-1,2,3,4,7,8-HxCDF	56.6	26 - 152	
1,2,3,6,7,8-HxCDF	13.4				13C-1,2,3,6,7,8-HxCDF	54.3	26 - 123	
2,3,4,6,7,8-HxCDF	3.44				13C-2,3,4,6,7,8-HxCDF	49.2	28 - 136	
1,2,3,7,8,9-HxCDF	2.64				13C-1,2,3,7,8,9-HxCDF	51.7	29 - 147	
1,2,3,4,6,7,8-HpCDF	36.5				13C-1,2,3,4,6,7,8-HpCDF	51.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	10.7				13C-1,2,3,4,7,8,9-HpCDF	54.9	26 - 138	
OCDF	93.3				13C-OCDF	52.0	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	99.0	35 - 197	

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

TEQMinWHO2005Dioxin      22.1

<b>TOTALS</b>		
Total TCDD	2.19	3.36
Total PeCDD	4.48	5.51
Total HxCDD	43.2	
Total HpCDD	402	
Total TCDF	104	106
Total PeCDF	83.2	105
Total HxCDF	117	
Total HpCDF	104	

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

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

**Sample ID: PDI-020SC-A-03-04-191008** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-12      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 13.2 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 08-Oct-2019 10:37	% Solids: 75.9	Date Analyzed : 17-Jan-20 06:44      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.246			IS 13C-2,3,7,8-TCDD	98.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.301			13C-1,2,3,7,8-PeCDD	69.0	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.411			13C-1,2,3,4,7,8-HxCDD	99.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.434			13C-1,2,3,6,7,8-HxCDD	86.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.446			13C-1,2,3,7,8,9-HxCDD	90.3	32 - 141	
1,2,3,4,6,7,8-HpCDD	3.16				13C-1,2,3,4,6,7,8-HpCDD	93.2	23 - 140	
OCDD	38.6				13C-OCDD	86.0	17 - 157	
2,3,7,8-TCDF	ND	0.228			13C-2,3,7,8-TCDF	88.9	24 - 169	
1,2,3,7,8-PeCDF	ND		0.160		13C-1,2,3,7,8-PeCDF	81.4	24 - 185	
2,3,4,7,8-PeCDF	ND	0.247			13C-2,3,4,7,8-PeCDF	64.5	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.194			13C-1,2,3,4,7,8-HxCDF	109	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.183			13C-1,2,3,6,7,8-HxCDF	98.7	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.222			13C-2,3,4,6,7,8-HxCDF	98.4	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.296			13C-1,2,3,7,8,9-HxCDF	106	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.393			13C-1,2,3,4,6,7,8-HpCDF	105	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.428			13C-1,2,3,4,7,8,9-HpCDF	97.0	26 - 138	
OCDF	ND		1.13		13C-OCDF	113	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	94.7	35 - 197	

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

TEQMinWHO2005Dioxin      0.0432

<b>TOTALS</b>								
Total TCDD	ND	0.246						
Total PeCDD	ND	0.301						
Total HxCDD	ND		0.341					
Total HpCDD	7.98							
Total TCDF	ND	0.228						
Total PeCDF	ND		0.160					
Total HxCDF	ND	0.296						
Total HpCDF	ND	0.428						

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

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

**Sample ID: PDI-023SC-A-04-05-191009** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-13      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 14.0 g	QC Batch: B0B0017      Date Extracted: 04-Feb-2020 6:35
Date Collected: 09-Oct-2019 12:14	% Solids: 72.7	Date Analyzed: 09-Feb-20 16:50      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.117		IS 13C-2,3,7,8-TCDD	85.2	25 - 164	
1,2,3,7,8-PeCDD	ND		0.327		13C-1,2,3,7,8-PeCDD	78.6	25 - 181	
1,2,3,4,7,8-HxCDD	0.306			J	13C-1,2,3,4,7,8-HxCDD	66.5	32 - 141	
1,2,3,6,7,8-HxCDD	0.455			J	13C-1,2,3,6,7,8-HxCDD	63.2	28 - 130	
1,2,3,7,8,9-HxCDD	0.505			J	13C-1,2,3,7,8,9-HxCDD	63.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	2.62				13C-1,2,3,4,6,7,8-HpCDD	66.0	23 - 140	
OCDD	15.5			B	13C-OCDD	50.8	17 - 157	
2,3,7,8-TCDF	ND	0.0814			13C-2,3,7,8-TCDF	83.5	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0706			13C-1,2,3,7,8-PeCDF	70.1	24 - 185	
2,3,4,7,8-PeCDF	0.0577			J	13C-2,3,4,7,8-PeCDF	69.4	21 - 178	
1,2,3,4,7,8-HxCDF	0.140			J	13C-1,2,3,4,7,8-HxCDF	72.0	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0984			13C-1,2,3,6,7,8-HxCDF	68.3	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0993			13C-2,3,4,6,7,8-HxCDF	70.0	28 - 136	
1,2,3,7,8,9-HxCDF	ND		0.0923		13C-1,2,3,7,8,9-HxCDF	71.0	29 - 147	
1,2,3,4,6,7,8-HpCDF	0.486			J	13C-1,2,3,4,6,7,8-HpCDF	68.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.123			13C-1,2,3,4,7,8,9-HpCDF	72.0	26 - 138	
OCDF	ND		0.302		13C-OCDF	51.4	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	83.5	35 - 197	

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

TEQMinWHO2005Dioxin      0.194

<b>TOTALS</b>			
Total TCDD	0.483		0.879
Total PeCDD	2.13		3.15
Total HxCDD	6.09		
Total HpCDD	6.00		
Total TCDF	0.479		0.539
Total PeCDF	0.418		0.752
Total HxCDF	0.465		0.808
Total HpCDF	0.789		

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

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



**Sample ID: PDI-023SC-A-05-06-191009** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-14      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 13.4 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 09-Oct-2019 12:14	% Solids: 74.9	Date Analyzed : 17-Jan-20 08:20      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.388			IS 13C-2,3,7,8-TCDD	70.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.356			13C-1,2,3,7,8-PeCDD	76.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.499			13C-1,2,3,4,7,8-HxCDD	48.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.598			13C-1,2,3,6,7,8-HxCDD	39.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.724			13C-1,2,3,7,8,9-HxCDD	35.5	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.876			13C-1,2,3,4,6,7,8-HpCDD	31.9	23 - 140	
OCDD	ND		1.62		13C-OCDD	25.0	17 - 157	
2,3,7,8-TCDF	ND	0.361			13C-2,3,7,8-TCDF	59.3	24 - 169	
1,2,3,7,8-PeCDF	ND	0.180			13C-1,2,3,7,8-PeCDF	83.6	24 - 185	
2,3,4,7,8-PeCDF	ND	0.212			13C-2,3,4,7,8-PeCDF	68.4	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.306			13C-1,2,3,4,7,8-HxCDF	50.3	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.334			13C-1,2,3,6,7,8-HxCDF	45.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.421			13C-2,3,4,6,7,8-HxCDF	38.6	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.525			13C-1,2,3,7,8,9-HxCDF	44.7	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.465			13C-1,2,3,4,6,7,8-HpCDF	39.4	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.584			13C-1,2,3,4,7,8,9-HpCDF	35.2	26 - 138	
OCDF	ND	0.967			13C-OCDF	28.7	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	64.0	35 - 197	

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

TEQMinWHO2005Dioxin      0.00

<b>TOTALS</b>								
Total TCDD	ND	0.388						
Total PeCDD	ND	0.356						
Total HxCDD	ND		0.218					
Total HpCDD	ND	0.876						
Total TCDF	ND	0.361						
Total PeCDF	ND	0.212						
Total HxCDF	ND	0.525						
Total HpCDF	ND	0.584						

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

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

**Sample ID: PDI-024SC-A-02-03-190927** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-15      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 14.2 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 27-Sep-2019 12:00	% Solids: 71.2	Date Analyzed : 17-Jan-20 09:08 Column: ZB-5MS 31-Jan-20 22:10 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	1.63				IS 13C-2,3,7,8-TCDD	74.5	25 - 164	
1,2,3,7,8-PeCDD	1.00			J	13C-1,2,3,7,8-PeCDD	88.4	25 - 181	
1,2,3,4,7,8-HxCDD	0.979			J	13C-1,2,3,4,7,8-HxCDD	62.7	32 - 141	
1,2,3,6,7,8-HxCDD	4.37				13C-1,2,3,6,7,8-HxCDD	54.3	28 - 130	
1,2,3,7,8,9-HxCDD	1.55			J	13C-1,2,3,7,8,9-HxCDD	53.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	101				13C-1,2,3,4,6,7,8-HpCDD	54.0	23 - 140	
OCDD	1120				13C-OCDD	45.0	17 - 157	
2,3,7,8-TCDF	17.6				13C-2,3,7,8-TCDF	67.0	24 - 169	
1,2,3,7,8-PeCDF	28.7				13C-1,2,3,7,8-PeCDF	100	24 - 185	
2,3,4,7,8-PeCDF	9.77				13C-2,3,4,7,8-PeCDF	87.3	21 - 178	
1,2,3,4,7,8-HxCDF	49.8				13C-1,2,3,4,7,8-HxCDF	77.6	26 - 152	
1,2,3,6,7,8-HxCDF	13.4				13C-1,2,3,6,7,8-HxCDF	65.8	26 - 123	
2,3,4,6,7,8-HxCDF	3.69				13C-2,3,4,6,7,8-HxCDF	60.4	28 - 136	
1,2,3,7,8,9-HxCDF	5.07				13C-1,2,3,7,8,9-HxCDF	63.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	34.3				13C-1,2,3,4,6,7,8-HpCDF	60.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	9.32				13C-1,2,3,4,7,8,9-HpCDF	56.5	26 - 138	
OCDF	92.4				13C-OCDF	46.0	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	71.9	35 - 197	

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

TEQMinWHO2005Dioxin      17.9

<b>TOTALS</b>		
Total TCDD	4.87	7.35
Total PeCDD	2.59	5.53
Total HxCDD	32.6	
Total HpCDD	215	
Total TCDF	81.3	99.3
Total PeCDF	64.0	90.8
Total HxCDF	101	102
Total HpCDF	86.9	

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

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

**Sample ID: PDI-024SC-A-03-04-190927** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-16      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 13.8 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 27-Sep-2019 12:00	% Solids: 72.9	Date Analyzed : 17-Jan-20 09:56 Column: ZB-5MS 31-Jan-20 19:00 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.331			IS 13C-2,3,7,8-TCDD	73.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.425			13C-1,2,3,7,8-PeCDD	53.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.833			13C-1,2,3,4,7,8-HxCDD	58.8	32 - 141	
1,2,3,6,7,8-HxCDD	5.26				13C-1,2,3,6,7,8-HxCDD	53.0	28 - 130	
1,2,3,7,8,9-HxCDD	ND	1.02			13C-1,2,3,7,8,9-HxCDD	49.3	32 - 141	
1,2,3,4,6,7,8-HpCDD	191				13C-1,2,3,4,6,7,8-HpCDD	41.1	23 - 140	
OCDD	2440				13C-OCDD	40.5	17 - 157	
2,3,7,8-TCDF	1.83				13C-2,3,7,8-TCDF	109	24 - 169	
1,2,3,7,8-PeCDF	4.06				13C-1,2,3,7,8-PeCDF	101	24 - 185	
2,3,4,7,8-PeCDF	2.19			J	13C-2,3,4,7,8-PeCDF	84.1	21 - 178	
1,2,3,4,7,8-HxCDF	7.24				13C-1,2,3,4,7,8-HxCDF	66.3	26 - 152	
1,2,3,6,7,8-HxCDF	2.32			J	13C-1,2,3,6,7,8-HxCDF	58.7	26 - 123	
2,3,4,6,7,8-HxCDF	1.43			J	13C-2,3,4,6,7,8-HxCDF	52.9	28 - 136	
1,2,3,7,8,9-HxCDF	0.567			J	13C-1,2,3,7,8,9-HxCDF	57.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	22.3				13C-1,2,3,4,6,7,8-HpCDF	47.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	2.76				13C-1,2,3,4,7,8,9-HpCDF	41.8	26 - 138	
OCDF	89.5				13C-OCDF	40.1	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	69.9	35 - 197	

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

TEQMinWHO2005Dioxin      5.56

<b>TOTALS</b>		
Total TCDD	0.469	
Total PeCDD	ND	0.425
Total HxCDD	27.1	
Total HpCDD	397	
Total TCDF	3.02	5.56
Total PeCDF	16.5	18.1
Total HxCDF	52.7	
Total HpCDF	100	

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

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

**Sample ID: PDI-025SC-A-02-03-190927** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-17      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 12.9 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 27-Sep-2019 14:16	% Solids: 78.4	Date Analyzed : 22-Jan-20 04:25 Column: ZB-5MS 31-Jan-20 19:32 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.125		IS 13C-2,3,7,8-TCDD	89.5	25 - 164	
1,2,3,7,8-PeCDD	0.112			J	13C-1,2,3,7,8-PeCDD	90.2	25 - 181	
1,2,3,4,7,8-HxCDD	0.202			J	13C-1,2,3,4,7,8-HxCDD	74.6	32 - 141	
1,2,3,6,7,8-HxCDD	0.720			J	13C-1,2,3,6,7,8-HxCDD	72.7	28 - 130	
1,2,3,7,8,9-HxCDD	0.421			J	13C-1,2,3,7,8,9-HxCDD	72.5	32 - 141	
1,2,3,4,6,7,8-HpCDD	29.5				13C-1,2,3,4,6,7,8-HpCDD	71.1	23 - 140	
OCDD	146				13C-OCDD	65.8	17 - 157	
2,3,7,8-TCDF	ND		0.453		13C-2,3,7,8-TCDF	75.4	24 - 169	
1,2,3,7,8-PeCDF	0.637			J	13C-1,2,3,7,8-PeCDF	76.9	24 - 185	
2,3,4,7,8-PeCDF	0.303			J	13C-2,3,4,7,8-PeCDF	72.8	21 - 178	
1,2,3,4,7,8-HxCDF	0.853			J	13C-1,2,3,4,7,8-HxCDF	81.9	26 - 152	
1,2,3,6,7,8-HxCDF	0.251			J	13C-1,2,3,6,7,8-HxCDF	78.2	26 - 123	
2,3,4,6,7,8-HxCDF	ND		0.0949		13C-2,3,4,6,7,8-HxCDF	70.0	28 - 136	
1,2,3,7,8,9-HxCDF	0.138			J	13C-1,2,3,7,8,9-HxCDF	75.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.701		13C-1,2,3,4,6,7,8-HpCDF	74.6	28 - 143	
1,2,3,4,7,8,9-HpCDF	0.204			J	13C-1,2,3,4,7,8,9-HpCDF	76.4	26 - 138	
OCDF	2.38			J	13C-OCDF	64.7	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	97.3	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
TEQMinWHO2005Dioxin      0.822

<b>TOTALS</b>			
Total TCDD	ND		0.492
Total PeCDD	1.56		2.08
Total HxCDD	15.9		
Total HpCDD	58.6		
Total TCDF	3.71		3.80
Total PeCDF	2.11		2.79
Total HxCDF	1.62		2.11
Total HpCDF	1.60		2.30

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

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

**Sample ID: PDI-025SC-A-03-04-190927** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-18      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 13.0 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 27-Sep-2019 14:16	% Solids: 77.8	Date Analyzed : 22-Jan-20 05:12      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.173		IS 13C-2,3,7,8-TCDD	98.2	25 - 164	
1,2,3,7,8-PeCDD	0.0799			J	13C-1,2,3,7,8-PeCDD	104	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0423			13C-1,2,3,4,7,8-HxCDD	91.8	32 - 141	
1,2,3,6,7,8-HxCDD	0.101			J	13C-1,2,3,6,7,8-HxCDD	90.5	28 - 130	
1,2,3,7,8,9-HxCDD	0.204			J	13C-1,2,3,7,8,9-HxCDD	93.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	1.47			J	13C-1,2,3,4,6,7,8-HpCDD	100	23 - 140	
OCDD	12.9				13C-OCDD	116	17 - 157	
2,3,7,8-TCDF	ND	0.0165			13C-2,3,7,8-TCDF	86.6	24 - 169	
1,2,3,7,8-PeCDF	ND		0.0158		13C-1,2,3,7,8-PeCDF	87.9	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0208			13C-2,3,4,7,8-PeCDF	88.5	21 - 178	
1,2,3,4,7,8-HxCDF	ND		0.0404		13C-1,2,3,4,7,8-HxCDF	96.2	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0199			13C-1,2,3,6,7,8-HxCDF	93.5	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0222			13C-2,3,4,6,7,8-HxCDF	93.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0296			13C-1,2,3,7,8,9-HxCDF	93.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.0625		13C-1,2,3,4,6,7,8-HpCDF	105	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0260			13C-1,2,3,4,7,8,9-HpCDF	120	26 - 138	
OCDF	ND		0.130		13C-OCDF	121	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	107	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      0.129

<b>TOTALS</b>								
Total TCDD	0.540		0.772					
Total PeCDD	0.358		0.666					
Total HxCDD	2.28							
Total HpCDD	4.17							
Total TCDF	ND	0.0165						
Total PeCDF	ND		0.0158					
Total HxCDF	ND		0.0404					
Total HpCDF	ND		0.0625					

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

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

**Sample ID: PDI-026SC-A-04-05-191014** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-19      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 12.9 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 14-Oct-2019 11:01	% Solids: 77.8	Date Analyzed : 22-Jan-20 05:59 Column: ZB-5MS 31-Jan-20 20:03 Column: DB-225

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.615		IS 13C-2,3,7,8-TCDD	92.9	25 - 164	
1,2,3,7,8-PeCDD	0.662			J	13C-1,2,3,7,8-PeCDD	93.6	25 - 181	
1,2,3,4,7,8-HxCDD	0.321			J	13C-1,2,3,4,7,8-HxCDD	80.4	32 - 141	
1,2,3,6,7,8-HxCDD	1.47			J	13C-1,2,3,6,7,8-HxCDD	76.7	28 - 130	
1,2,3,7,8,9-HxCDD	0.699			J	13C-1,2,3,7,8,9-HxCDD	76.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	42.8				13C-1,2,3,4,6,7,8-HpCDD	80.3	23 - 140	
OCDD	490				13C-OCDD	81.7	17 - 157	
2,3,7,8-TCDF	12.6				13C-2,3,7,8-TCDF	81.0	24 - 169	
1,2,3,7,8-PeCDF	15.7				13C-1,2,3,7,8-PeCDF	81.9	24 - 185	
2,3,4,7,8-PeCDF	6.01				13C-2,3,4,7,8-PeCDF	80.1	21 - 178	
1,2,3,4,7,8-HxCDF	33.1				13C-1,2,3,4,7,8-HxCDF	85.1	26 - 152	
1,2,3,6,7,8-HxCDF	7.85				13C-1,2,3,6,7,8-HxCDF	81.5	26 - 123	
2,3,4,6,7,8-HxCDF	1.75			J	13C-2,3,4,6,7,8-HxCDF	77.8	28 - 136	
1,2,3,7,8,9-HxCDF	1.06			J	13C-1,2,3,7,8,9-HxCDF	81.7	29 - 147	
1,2,3,4,6,7,8-HpCDF	18.9				13C-1,2,3,4,6,7,8-HpCDF	81.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	6.37				13C-1,2,3,4,7,8,9-HpCDF	91.1	26 - 138	
OCDF	43.7				13C-OCDF	79.5	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	99.5	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
TEQMinWHO2005Dioxin      9.66

<b>TOTALS</b>			
Total TCDD	1.48		2.43
Total PeCDD	2.32		2.91
Total HxCDD	12.9		
Total HpCDD	90.2		
Total TCDF	49.5		50.0
Total PeCDF	43.3		45.6
Total HxCDF	57.1		57.4
Total HpCDF	43.5		43.8

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

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

**Sample ID: PDI-026SC-A-05-06-191014** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1904159-20      Date Received: 26-Nov-2019 8:55
Project: Gasco-PDI 000029-02.59	Sample Size: 12.8 g	QC Batch: B0A0001      Date Extracted: 02-Jan-2020 5:43
Date Collected: 14-Oct-2019 11:01	% Solids: 78.2	Date Analyzed : 22-Jan-20 06:46 Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.0759		IS 13C-2,3,7,8-TCDD	99.8	25 - 164	
1,2,3,7,8-PeCDD	ND		0.0659		13C-1,2,3,7,8-PeCDD	109	25 - 181	
1,2,3,4,7,8-HxCDD	ND		0.0654		13C-1,2,3,4,7,8-HxCDD	90.2	32 - 141	
1,2,3,6,7,8-HxCDD	0.117			J	13C-1,2,3,6,7,8-HxCDD	90.2	28 - 130	
1,2,3,7,8,9-HxCDD	0.185			J	13C-1,2,3,7,8,9-HxCDD	93.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	1.58			J	13C-1,2,3,4,6,7,8-HpCDD	107	23 - 140	
OCDD	13.7				13C-OCDD	114	17 - 157	
2,3,7,8-TCDF	ND	0.0175			13C-2,3,7,8-TCDF	87.1	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0178			13C-1,2,3,7,8-PeCDF	90.3	24 - 185	
2,3,4,7,8-PeCDF	ND		0.0216		13C-2,3,4,7,8-PeCDF	91.7	21 - 178	
1,2,3,4,7,8-HxCDF	ND		0.0287		13C-1,2,3,4,7,8-HxCDF	101	26 - 152	
1,2,3,6,7,8-HxCDF	0.0270			J	13C-1,2,3,6,7,8-HxCDF	96.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0169			13C-2,3,4,6,7,8-HxCDF	93.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND		0.0397		13C-1,2,3,7,8,9-HxCDF	97.0	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.0458		13C-1,2,3,4,6,7,8-HpCDF	105	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0268			13C-1,2,3,4,7,8,9-HpCDF	123	26 - 138	
OCDF	ND		0.0927		13C-OCDF	114	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	105	35 - 197	

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

TEQMinWHO2005Dioxin      0.0528

<b>TOTALS</b>								
Total TCDD	0.0787		0.155					
Total PeCDD	0.267		0.524					
Total HxCDD	2.18		2.25					
Total HpCDD	4.28							
Total TCDF	ND	0.0175						
Total PeCDF	ND		0.0216					
Total HxCDF	0.0270		0.0953					
Total HpCDF	ND		0.0458					

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

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

## DATA QUALIFIERS & ABBREVIATIONS

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

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



### Vista Analytical Laboratory Certifications

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

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

## NELAP Accredited Test Methods

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

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

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

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

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

**Chain of Custody Record & Laboratory Analysis Request**

1904159 3.9°C, 1.1°C



Laboratory Number:														ANCHOR QEA						
Date: 11.25.19																				
Project Name: Gasco PDI																				
Project Number: 000029-02.59																				
Project Manager: Delaney Peterson																				
Phone Number: 360.715.2707																				
Shipment Method: FedEx														Comments/Preservation						
Samplers: dep																				
Line	Field Sample ID	Collection Date/Time	Matrix	No. of Containers	Dioxin/furans (1613B)	Total Solids (SM 2540G)														
1	PDI-013SC-A-02-03-190925	092519 13:51	SE	1	X	X														
2	PDI-013SC-A-03-04-190925	092519 13:51	SE	1	X	X														
3	PDI-015SC-A-07-08-191012	101219 16:07	SE	1	X	X														
4	PDI-015SC-A-08-09-191012	101219 16:07	SE	1	X	X														
5	PDI-016SC-A-00-01-191009	100919 09:48	SE	1	X	X														
6	PDI-016SC-A-01-02-191009	100919 09:48	SE	1	X	X														
7	PDI-018SC-A-06-07-190926	092619 08:54	SE	1	X	X														
8	PDI-018SC-A-07-08-190926	092619 08:54	SE	1	X	X														
9	PDI-019SC-A-06-07-191008	100819 14:46	SE	1	X	X														
10	PDI-019SC-A-07-08-191008	100819 14:46	SE	1	X	X														
11	PDI-020SC-A-02-03-191008	100819 10:37	SE	1	X	X														
12	PDI-020SC-A-03-04-191008	100819 10:37	SE	1	X	X														
13	PDI-023SC-A-04-05-191009	100919 12:14	SE	1	X	X														
14	PDI-023SC-A-05-06-191009	100919 12:14	SE	1	X	X														
15	PDI-024SC-A-02-03-190927	092719 12:00	SE	1	X	X														

Please analyze a duplicate on one per 20 samples.

Relinquished By: Modi Raduma Company: Anchor QEA, LLC  
 Signature/Printed Name DR Date/Time 11/25/19 12:15

Received By: Hayden Gama Company: VAL  
 Signature/Printed Name Hayden Gama Date/Time 11/26/19 08:58

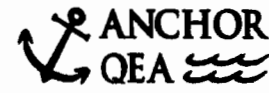
Relinquished By: \_\_\_\_\_ Company: \_\_\_\_\_  
 Signature/Printed Name \_\_\_\_\_ Date/Time \_\_\_\_\_

Received By: \_\_\_\_\_ Company: \_\_\_\_\_  
 Signature/Printed Name \_\_\_\_\_ Date/Time \_\_\_\_\_

1904159

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number:			
Date:	11.25.19		
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	Matrix	No. of Containers	Dioxin/furans (1613B)	Total solids (SM 2540G)											Comments/Preservation			
* 16	PDI-024SC-A-03-04-190927	092719 12:00	SE	1	X	X														
* 17	PDI-025SC-A-02-03-190927	092719 14:16	SE	1	X	X														
* 18	PDI-025SC-A-03-04-190927	092719 14:16	SE	1	X	X														
* 19	PDI-026SC-A-04-05-191014	101419 11:01	SE	1	X	X														
* 20	PDI-026SC-A-05-06-191014	101419 11:01	SE	1	X	X														
(A) 21	PDI-029SC-A-00-01-191009	100919 14:39	SE	1	X	X														
(A) 22	PDI-029SC-A-01-02-191009	100919 14:39	SE	1	X	X														
(A) 23	PDI-030SC-A-01-02-190929	092919 13:58	SE	1	X	X														
(A) 24	PDI-032SC-A-01-02-191010	101019 08:17	SE	1	X	X														
(A) 25	PDI-033SC-A-04-05-191008	100819 13:26	SE	1	X	X														
(A) 26	PDI-033SC-A-05-06-191008	100819 13:26	SE	1	X	X														
(A) 27	PDI-035SC-A-03-04-191010	101019 14:18	SE	1	X	X														
(A) 28	PDI-035SC-A-04-05-191010	101019 14:18	SE	1	X	X														
(A) 29	PDI-036SC-A-00-01-190929	092919 13:09	SE	1	X	X														
(A) 30	PDI-036SC-A-01-02-190929	092919 13:09	SE	1	X	X														

Please analyze a duplicate on one per 20 samples.

\* WO 1904159  
(A) WO# 1904160

Relinquished By: Modi Raduma Company: Anchor QEA, LLC  
Signature/Printed Name Date/Time 11/25/19 12:15

Received By: Haydon Crane Company: VAL  
Signature/Printed Name Date/Time 11/26/19 08:55

Relinquished By: \_\_\_\_\_ Company: \_\_\_\_\_  
Signature/Printed Name \_\_\_\_\_ Date/Time \_\_\_\_\_

Received By: \_\_\_\_\_ Company: \_\_\_\_\_  
Signature/Printed Name \_\_\_\_\_ Date/Time \_\_\_\_\_

# Sample Log-In Checklist

Page # 1 of 2  
TAT Std

Vista Work Order #: 1904159

<b>Samples Arrival:</b>	<b>Date/Time:</b> 11/26/19 0855	<b>Initials:</b> ajm	<b>Location:</b> WR-2
			<b>Shelf/Rack:</b> N/A
<b>Delivered By:</b>	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> GSO	<input type="checkbox"/> DHL
		<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
<b>Preservation:</b>	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
<b>Temp °C:</b> 3.9 (uncorrected)	<b>Probe used:</b> Y <input checked="" type="checkbox"/> N		<b>Thermometer ID:</b> IR-3
<b>Temp °C:</b> 3.9 (corrected)			

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>1 of 2</u> Trk # <u>7770 7667 7300</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Logged In:</b>	<b>Date/Time:</b> 11/27/19 1424	<b>Initials:</b> RdB	<b>Location:</b> <del>WR-2</del> WR2
			<b>Shelf/Rack:</b> 12/2/19 B4 D6
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

# Sample Log-In Checklist

Page # 2 of 2

Vista Work Order #: 1904159 TAT Std

Samples Arrival:	Date/Time		Initials:		Location: <u>WR-2</u>		
	<u>11/26/19 08:55</u>		<u>H06</u>		Shelf/Rack: <u>NA</u>		
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice		<input type="checkbox"/> Blue Ice		<input type="checkbox"/> Dry Ice		<input type="checkbox"/> None
Temp °C:	<u>1.1</u>	(uncorrected)		Probe used: <u>Y / N</u>		Thermometer ID: <u>IA-3</u>	
Temp °C:	<u>1.1</u>	(corrected)					

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Airbill <u>2 of 2</u> Trk # <u>7770 7667 6874</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/>	<input checked="" type="checkbox"/> Return	<input type="checkbox"/> Dispose
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Holding Time Acceptable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Logged In:	Date/Time		Initials:
	<u>11/27/19 1426</u>		<u>UBB</u>
	Location: <u>WR-2</u>		Shelf/Rack: <u>12/19/19 B4 D6</u>
COC Anomaly/Sample Acceptance Form completed?			
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

# CoC/Label Reconciliation Report WO# 1904159

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
1904159-01	A PDI-013SC-A-02-03-190925	<input checked="" type="checkbox"/> C2	25-Sep-19 13:51	Amber Glass, 120 mL	Solid	
1904159-02	A PDI-013SC-A-03-04-190925	<input checked="" type="checkbox"/> C2	25-Sep-19 13:51	Amber Glass, 120 mL	Solid	
1904159-03	A PDI-015SC-A-07-08-191012	<input checked="" type="checkbox"/> C2	12-Oct-19 16:07	Amber Glass, 120 mL	Solid	
1904159-04	A PDI-015SC-A-08-09-191012	<input checked="" type="checkbox"/> C2	12-Oct-19 16:07	Amber Glass, 120 mL	Solid	
1904159-05	A PDI-016SC-A-00-01-191009	<input checked="" type="checkbox"/> C2	09-Oct-19 09:48	Amber Glass, 120 mL	Solid	
1904159-06	A PDI-016SC-A-01-02-191009	<input checked="" type="checkbox"/> C2	09-Oct-19 09:48	Amber Glass, 120 mL	Solid	
1904159-07	A PDI-018SC-A-06-07-190926	<input checked="" type="checkbox"/> C2	26-Sep-19 08:54	Amber Glass, 120 mL	Solid	
1904159-08	A PDI-018SC-A-07-08-190926	<input checked="" type="checkbox"/> C2	26-Sep-19 08:54	Amber Glass, 120 mL	Solid	
1904159-09	A PDI-019SC-A-06-07-191008	<input checked="" type="checkbox"/> C1	08-Oct-19 14:46	Amber Glass, 120 mL	Solid	
1904159-10	A PDI-019SC-A-07-08-191008	<input checked="" type="checkbox"/> C1	08-Oct-19 14:46	Amber Glass, 120 mL	Solid	
1904159-11	A PDI-020SC-A-02-03-191008	<input checked="" type="checkbox"/> C1	08-Oct-19 10:37	Amber Glass, 120 mL	Solid	
1904159-12	A PDI-020SC-A-03-04-191008	<input checked="" type="checkbox"/> C1	08-Oct-19 10:37	Amber Glass, 120 mL	Solid	
1904159-13	A PDI-023SC-A-04-05-191009	<input checked="" type="checkbox"/> C1	09-Oct-19 12:14	Amber Glass, 120 mL	Solid	
1904159-14	A PDI-023SC-A-05-06-191009	<input checked="" type="checkbox"/> C1	09-Oct-19 12:14	Amber Glass, 120 mL	Solid	
1904159-15	A PDI-024SC-A-02-03-190927	<input checked="" type="checkbox"/> C2	27-Sep-19 12:00	Amber Glass, 120 mL	Solid	
1904159-16	A PDI-024SC-A-03-04-190927	<input checked="" type="checkbox"/> C2	27-Sep-19 12:00	Amber Glass, 120 mL	Solid	
1904159-17	A PDI-025SC-A-02-03-190927	<input checked="" type="checkbox"/> C2	27-Sep-19 14:16	Amber Glass, 120 mL	Solid	
1904159-18	A PDI-025SC-A-03-04-190927	<input checked="" type="checkbox"/> C2	27-Sep-19 14:16	Amber Glass, 120 mL	Solid	
1904159-19	A PDI-026SC-A-04-05-191014	<input checked="" type="checkbox"/> C1	14-Oct-19 11:01	Amber Glass, 120 mL	Solid	
1904159-20	A PDI-026SC-A-05-06-191014	<input checked="" type="checkbox"/> C1	14-Oct-19 11:01	Amber Glass, 120 mL	Solid	

Checkmarks indicate that information on the COC reconciled with the sample label.  
Any discrepancies are noted in the following columns.



	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		
Preservation Documented: Na2S2O3 Trizma <del>None</del> Other		✓	✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Comments:

C1 = cooler 1  
C2 = cooler 2

Verified by/Date: HOG 12/02/19

## **EXTRACTION INFORMATION**

**Process Sheet**  
**Workorder: 1904159**

Prep Expiration: 2020-09-24  
 Client: Anchor QEA, LLC

**Workorder Due: 19-Dec-19 00:00**

TAT: 23

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

Prep Batch: BOR0001

Prep Data Entered: AO 01/07/20  
Date and Initials

Initial Sequence: SOA0036

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1904159-01	<input type="checkbox"/>	PDI-013SC-A-02-03-190925	26-Nov-19 08:55	WR-2 D-6	Dup
1904159-02	<input checked="" type="checkbox"/>	PDI-013SC-A-03-04-190925	26-Nov-19 08:55	WR-2 D-6	
1904159-03	<input checked="" type="checkbox"/>	PDI-015SC-A-07-08-191012	26-Nov-19 08:55	WR-2 D-6	
1904159-04	<input checked="" type="checkbox"/>	PDI-015SC-A-08-09-191012	26-Nov-19 08:55	WR-2 D-6	
1904159-05	<input checked="" type="checkbox"/>	PDI-016SC-A-00-01-191009	26-Nov-19 08:55	WR-2 D-6	
1904159-06	<input checked="" type="checkbox"/>	PDI-016SC-A-01-02-191009	26-Nov-19 08:55	WR-2 D-6	
1904159-07	<input checked="" type="checkbox"/>	PDI-018SC-A-06-07-190926	26-Nov-19 08:55	WR-2 D-6	
1904159-08	<input checked="" type="checkbox"/>	PDI-018SC-A-07-08-190926	26-Nov-19 08:55	WR-2 D-6	
1904159-09	<input checked="" type="checkbox"/>	PDI-019SC-A-06-07-191008	26-Nov-19 08:55	WR-2 D-6	
1904159-10	<input checked="" type="checkbox"/>	PDI-019SC-A-07-08-191008	26-Nov-19 08:55	WR-2 D-6	
1904159-11	<input checked="" type="checkbox"/>	PDI-020SC-A-02-03-191008	26-Nov-19 08:55	WR-2 D-6	
1904159-12	<input checked="" type="checkbox"/>	PDI-020SC-A-03-04-191008	26-Nov-19 08:55	WR-2 D-6	
1904159-13	<input checked="" type="checkbox"/>	PDI-023SC-A-04-05-191009	26-Nov-19 08:55	WR-2 D-6	
1904159-14	<input checked="" type="checkbox"/>	PDI-023SC-A-05-06-191009	26-Nov-19 08:55	WR-2 D-6	
1904159-15	<input checked="" type="checkbox"/>	PDI-024SC-A-02-03-190927	26-Nov-19 08:55	WR-2 D-6	
1904159-16	<input checked="" type="checkbox"/>	PDI-024SC-A-03-04-190927	26-Nov-19 08:55	WR-2 D-6	
1904159-17	<input checked="" type="checkbox"/>	PDI-025SC-A-02-03-190927	26-Nov-19 08:55	WR-2 D-6	
1904159-18	<input checked="" type="checkbox"/>	PDI-025SC-A-03-04-190927	26-Nov-19 08:55	WR-2 D-6	
1904159-19	<input checked="" type="checkbox"/>	PDI-026SC-A-04-05-191014	26-Nov-19 08:55	WR-2 D-6	
1904159-20	<input checked="" type="checkbox"/>	PDI-026SC-A-05-06-191014	26-Nov-19 08:55	WR-2 D-6	

**WO Comments:** ~~Fast 4g extraction (dry weight) PCB, Aldrin, 5-Chlorodane, Dieldrin, Lindane~~  
**Dioxin - 10g (dry weight)**  
~~PCB - 5g extraction (dry weight)~~

Pre-Prep Check Out: CHT 12/11/19  
Pre-Prep Check In: CHT 12/11/19

Prep Check Out: BUB 01/02/20  
Prep Check In: BUB 01/08/20

Prep Reconciled Initials/Date: CHT 12/11/19  
Spike Reconciled Initials/Date: BUB 01/02/20  
VialBoxID: I AM JENNY

PREPARATION BENCH SHEET

Matrix: Solid

B0A0001

Chemist: BUS N

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 02-Jan-20 05:43

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	B0A0001-BLK1 <sup>(A)</sup>	NA	(10.00)	<del>11/11/20</del>	11/03/20	01/03/20	01/06/20	RR 01/06/20	AO 01/06/20	AO 01/06/20
<input type="checkbox"/>	B0A0001-BS1	↓	(10.00)	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	B0A0001-DUP1	⊙	11.60	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-01	11.60	11.80	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-02	11.60	11.74	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-03	12.58	12.60	↓	↓	NA	↓	↓	↓	↓
<input type="checkbox"/>	1904159-04	12.60	12.73	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-05	16.16	16.28	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-06	18.22	18.36	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-07	13.47	13.51	↓	↓	↓	↓	↓	AZ 01/06/2020	↓
<input type="checkbox"/>	1904159-08	18.01	18.14	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-09	12.67	12.73	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-10	16.77	16.86	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-11	16.28	16.50	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-12	13.67	13.74	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-12	13.17	13.21	↓	↓	↓	↓	↓	↓	↓

IS Name <u>NS</u>	NS Name <u>NS</u>	CRS Name <u>VS</u>	RS Name <u>VS</u>	Cycle Time	APP: SEFUN <u>SOX</u> <u>SDS</u>	Check Out: Chemist/Date: <u>BUS 01/02/20</u>
PCDD/F <u>AC1902, 10µL</u>	PCDD/F <u>18F1913, 10µL</u>	PCDD/F <u>19I1602, 10µL</u>	PCDD/F <u>19I1603, 10µL</u>	Start Date/Time: <u>01/02/20 1830</u>	SOLV: <u>TOL.</u>	Check In: Chemist/Date: <u>BUS 01/02/20</u>
PCB _____	PCB _____	PCB _____	PCB _____	Stop Date/Time: <u>01/03/20 0530</u>	Other: <u>NA</u>	Balance ID: <u>HRMS-8</u>
PAH _____	PAH _____	PAH _____	PAH _____	Final Volume(s): <u>30µL</u>	<u>C14</u>	

Comments:

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

PREPARATION BENCH SHEET

Matrix: Solid

Method: 1613 Full List

B0A0001

Chemist: SUB 21

Prepared using: HRMS - Soxhlet

Prep Date/Time: 02-Jan-20 05:43

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	1904159-13 (C)	13.76	13.87	11300 1/2/20	11300 01/03/20	N/A	11300 01/06/20	RR 01/06/20	11300 01/06/20	11300 01/06/20
<input type="checkbox"/>	1904159-14	13.85	13.37	↓	↓	11300 01/03/20	↓	↓	11300 01/06/20	↓
<input type="checkbox"/>	1904159-15	14.05	14.18	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-16	13.71	13.77	↓	↓	11300 01/03/20	↓	↓	↓	↓
<input type="checkbox"/>	1904159-17 ✓	12.76	12.88	↓	↓	N/A	↓	↓	↓	↓
<input type="checkbox"/>	1904159-18	12.85	12.96	↓	↓	N/A	↓	↓	↓	↓
<input type="checkbox"/>	1904159-19 (C)	12.85	12.90	↓	↓	11300 01/03/20	↓	↓	↓	↓
<input type="checkbox"/>	1904159-20	12.78	12.82	↓	↓	N/A	↓	↓	↓	↓

(A) Incorrectly written comment. 11300 01/06/20  
 (C) Columns were extensively discolored. 11300 01/06/20

IS Name (V1)	NS Name (U5)	CRS Name (V5)	RS Name (V5)	Cycle Time	APP: SEFUN (SOX) (SDS)	Check Out: Chemist/Date: SUB 01/02/20
PCDD/F 191102, 10 µL	PCDD/F 18F113, 10 µL	PCDD/F 191160, 10 µL	PCDD/F 191160, 10 µL	Start Date/Time: 01/02/20 1330	SOLV: Tol	Check In: Chemist/Date: SUB 01/02/20
PCB	PCB	PCB	PCB	Stop Date/Time: 01/02/20 0530	Other: NA	Balance ID: HRMS-8
PAH	PAH	PAH	PAH		Final Volume(s): 20 µL	
					C14	

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

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1904159-01	11.74 ✓	86.22449	10.1228	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-02	12.6 ✓	79.4971	10.0166	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-03	12.73 ✓	79.38312	10.1055	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-04	16.28 ✓	61.87399	10.0731	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-05	18.36 ✓	54.8796	10.0759	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-06	13.51 ✓	74.23014	10.0285	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-07	18.14 ✓	55.53506	10.0741	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-08	12.73 ✓	78.9366	10.0486	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-09	16.86 ✓	59.62344	10.0525	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-10	16.5 ✓	61.41619	10.1337	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-11	13.74 ✓	73.16018	10.0522	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-12	13.21 ✓	75.9058	10.0272	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-13	13.87 ✓	72.6629	10.0783	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-14	13.37 ✓	74.89362	10.0133	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-15	14.18 ✓	71.17117	10.0921	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-16	13.77 ✓	72.91666	10.0406	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-17	12.88 ✓	78.35249	10.0918	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-18	12.96 ✓	77.84431	10.0886	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-19	12.9 ✓	77.8098	10.0375	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
1904159-20	12.82 ✓	78.23834	10.0302	20	02-Jan-20 05:43	BNB			Sediment	1613 Full List
<b>B0A0001-BLK1</b>	10			20	02-Jan-20 05:43	BNB				QC
<b>B0A0001-BS1</b>	10			20	02-Jan-20 05:43	BNB	18F1913	10		QC
<b>B0A0001-DUP1</b>	11.8 ✓		10.1745	20	02-Jan-20 05:43	BNB				QC

All bolded data on report verified against written benchsheet by (initial/date) AO 01/07/20

Percent Moisture/ Percent Solids

D2216-90

BATCH ID B9L0060

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

Inst HRMS-9      Date/Time IN: 12/11/19 1145      Date/Time OUT: 12/12/19 1053

Particle Size	SampID	SampType	E		G		H	I	K L M N O				P	
			Initial and Date:	CHT 12/11/19	CHT 12/12/19	Dry Sample Weight (g)			%Solids RawVal	Visual Inspection	CI-	pH Before		pH After
			Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)									
	1904159-01	Sample	1.2700	5.1900	4.6500	3.3800	86.22	DIRT	NA	NA	NA	NA	Y	
	1904159-02	Sample	1.2800	6.4500	5.3900	4.1100	79.50	DIRT	NA	NA	NA	NA	Y	
	1904159-03	Sample	1.2700	7.4300	6.1600	4.8900	79.38	DIRT	NA	NA	NA	NA	Y	
	1904159-04	Sample	1.2800	7.4700	5.1100	3.8300	61.87	DIRT	NA	NA	NA	NA	Y	
	1904159-05	Sample	1.2800	9.1700	5.6100	4.3300	54.88	MUD	NA	NA	NA	NA	Y	
	1904159-06	Sample	1.2500	7.4200	5.8300	4.5800	74.23	DIRT	NA	NA	NA	NA	Y	
	1904159-07	Sample	1.2700	6.6900	4.2800	3.0100	55.54	DIRT	NA	NA	NA	NA	Y	
	1904159-08	Sample	1.2600	6.1500	5.1200	3.8600	78.94	DIRT	NA	NA	NA	NA	Y	
	1904159-09	Sample	1.2600	6.0400	4.1100	2.8500	59.62	DIRT	NA	NA	NA	NA	Y	
	1904159-10	Sample	1.2700	8.1900	5.5200	4.2500	61.42	DIRT	NA	NA	NA	NA	Y	
	1904159-11	Sample	1.2700	5.8900	4.6500	3.3800	73.16	DIRT	NA	NA	NA	NA	Y	
	1904159-12	Sample	1.2700	6.7900	5.4600	4.1900	75.91	DIRT	NA	NA	NA	NA	Y	
	1904159-13	Sample	1.2700	8.3300	6.4000	5.1300	72.66	MUD	NA	NA	NA	NA	Y	
	1904159-14	Sample	1.2600	5.9600	4.7800	3.5200	74.89	DIRT	NA	NA	NA	NA	Y	
	1904159-15	Sample	1.2700	7.9300	6.0100	4.7400	71.17	MUD	NA	NA	NA	NA	Y	
	1904159-16	Sample	1.2700	6.5500	5.1200	3.8500	72.92	DIRT	NA	NA	NA	NA	Y	
	1904159-17	Sample	1.2600	6.4800	5.3500	4.0900	78.35	DIRT	NA	NA	NA	NA	Y	
	1904159-18	Sample	1.2700	6.2800	5.1700	3.9000	77.84	DIRT	NA	NA	NA	NA	Y	
	1904159-19	Sample	1.2700	8.2100	6.6700	5.4000	77.81	DIRT	NA	NA	NA	NA	Y	
	1904159-20	Sample	1.2700	5.1300	4.2900	3.0200	78.24	DIRT	NA	NA	NA	NA	Y	

\*Sample homogenized in sample container unless otherwise noted.



Percent Moisture/ Percent Solids

D2216-90

BATCH ID B9L0060

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

Inst **HRMS-9**

Date/Time IN: **12/11/19 11:45** Date/Time OUT: **12/12/19 10:33**

Particle Size	SampID	SampType	Initial and Date:		Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	12/11/19 CHT				Sample Homogenized*
			Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)				Visual Inspection	Cl.	pH Before	pH After	
	1904159-01	Sample	1.27	5.19	4.65							✓
	1904159-02	Sample	1.28	6.43	5.39							✓
	1904159-03	Sample	1.27	7.43	6.16							✓
	1904159-04	Sample	1.28	7.47	5.11							✓
	1904159-05	Sample	1.28	9.17	5.61							✓
	1904159-06	Sample	1.25	7.42	5.83							✓
	1904159-07	Sample	1.27	6.69	4.28							✓
	1904159-08	Sample	1.26	6.15	5.12							✓
	1904159-09	Sample	1.26	6.04	4.11							✓
	1904159-10	Sample	1.27	8.19	5.52							✓
	1904159-11	Sample	1.27	5.89	4.65							✓
	1904159-12	Sample	1.27	6.79	5.46							✓
	1904159-13	Sample	1.27	8.33	6.40							✓
	1904159-14	Sample	1.26	5.96	5.43	4.78						✓
	1904159-15	Sample	1.27	7.93	6.01							✓
	1904159-16	Sample	1.27	6.55	5.12							✓
	1904159-17	Sample	1.26	6.48	5.35							✓
	1904159-18	Sample	1.27	6.28	5.17							✓
	1904159-19	Sample	1.27	8.21	6.67							✓
	1904159-20	Sample	1.27	5.13	4.24							✓

\*Sample homogenized in sample container unless otherwise noted.

Process Sheet  
 Workorder: **1904159**

RX

02/03/2020

Workorder Due: 26-Dec-19 00:00

Prep Expiration: 2020-09-24  
 Client: Anchor QEA, LLC

TAT: 30

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

**RUSH!**

Prep Batch: 8080017

Prep Data Entered: BUB 02/03/20  
 Date and Initials

Initial Sequence: SOB0016

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
<del>1904159-01</del>	<input type="checkbox"/>	<del>PDI-01000-A-02-03-190925</del>	26-Nov-19 08:55	WR-2 D-6	<b>Dup</b>
<del>1904159-02</del>	<input type="checkbox"/>	<del>PDI-01000-A-03-04-190925</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-03</del>	<input type="checkbox"/>	<del>PDI-015SC-A-07-08-191012</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-04</del>	<input type="checkbox"/>	<del>PDI-015SC-A-09-09-191012</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-05</del>	<input type="checkbox"/>	<del>PDI-016SC-A-09-01-191009</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-06</del>	<input type="checkbox"/>	<del>PDI-01000-A-04-03-191009</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-07</del>	<input type="checkbox"/>	<del>PDI-01000-A-06-07-190926</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-08</del>	<input type="checkbox"/>	<del>PDI-01000-A-07-08-190926</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-09</del>	<input type="checkbox"/>	<del>PDI-015SC-A-08-07-191008</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-10</del>	<input type="checkbox"/>	<del>PDI-015SC-A-07-08-191008</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-11</del>	<input type="checkbox"/>	<del>PDI-02000-A-09-09-191008</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-12</del>	<input type="checkbox"/>	<del>PDI-02000-A-09-01-191008</del>	26-Nov-19 08:55	WR-2 D-6	
1904159-13	<input checked="" type="checkbox"/>	PDI-023SC-A-04-05-191009	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-14</del>	<input type="checkbox"/>	<del>PDI-023SC-A-05-06-191009</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-15</del>	<input type="checkbox"/>	<del>PDI-024SC-A-02-03-190927</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-16</del>	<input type="checkbox"/>	<del>PDI-024SC-A-03-04-190927</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-17</del>	<input type="checkbox"/>	<del>PDI-023SC-A-09-09-190927</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-18</del>	<input type="checkbox"/>	<del>PDI-025SC-A-09-01-190927</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-19</del>	<input type="checkbox"/>	<del>PDI-02000-A-04-05-191014</del>	26-Nov-19 08:55	WR-2 D-6	
<del>1904159-20</del>	<input type="checkbox"/>	<del>PDI-026SC-A-05-06-191014</del>	26-Nov-19 08:55	WR-2 D-6	

WO Comments: Pest - 1g extraction (dry weight). DDX, Aldrin, 5-Chlordane, Dieldrin, Lindane  
 Dioxin - 10g (dry weight)  
 PCB - 5g extraction (dry weight)

Pre-Prep Check Out: LA

Pre-Prep Check In: LA

Prep Check Out: AO 02/04/20

Prep Check In: \_\_\_\_\_

Prep Reconciled Inits/Date: AO 02/04/20

Spike Reconciled Inits/Date: \_\_\_\_\_

VialBoxID: Aldehyde

PREPARATION BENCH SHEET

Matrix: Solid

B0B0017

Chemist: AZ

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 04-Feb-20 06:35

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	B0B0017-BLK1	NA	(10.00)	AO AZ 02/04/20	IL BUS 02/05/20	BUS 02/05/20	BUS 02/05/20	BUS 02/05/20	BUS 02/05/20	IL BUS 02/05/20
<input type="checkbox"/>	B0B0017-BS1	NA	110.00	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904159-13RE1	13.76	14.03	↓	↓	↓	↓ Color	↓	↓	↓

IS Name	NS Name	CRS Name <u>V4</u>	RS Name <u>V4</u>	Cycle Time	APP: SEFUN SOX <u>(SDS)</u>	Check Out: Chemist/Date: <u>AO 02/04/20</u>
PCDD/F <u>19L2301, 10mL</u>	PCDD/F <u>18F1913, 10mL</u>	PCDD/F <u>19I1602, 10mL</u>	PCDD/F <u>19I1603, 10mL</u>	Start Date/Time	SOLV: <u>Tol</u>	Check In: Chemist/Date: <u>AZ 02/04/20</u>
PCB _____	PCB _____	PCB _____	PCB _____	<u>1357 02/04/20</u>	Other <u>NA</u>	Balance ID: <u>HRMS-8</u>
PAH _____	PAH _____	PAH _____	PAH _____	Stop Date/Time	Final Volume(s) <u>20mL</u>	
				<u>559 02/05/20</u>	<u>C14</u>	

Comments:

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

Batch: B0B0017

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1904159-13RE1	14.03 ✓	72.6629	10.1946	20	04-Feb-20 06:35	AZK			Sediment	1613 Full List
B0B0017-BLK1	10	(100)	(10.00)	20	04-Feb-20 06:35	AZK				QC
B0B0017-BS1	10	(100)	(10.00)	20	04-Feb-20 06:35	AZK	18F1913 ✓	10 ✓		QC

All bolded data on report verified against written benchsheet by (initial/date) BUB 02/05/20

SAMPLE DATA – EPA METHOD 1613

Client ID: Method Blank  
Lab ID: B0A0001-BLK1

Filename: 200116D1 S:6 Acq:16-JAN-20 15:20:52  
GC Column ID: ZB-SMS ICal: 1613VG7-10-9-19 wt/vol:10.000

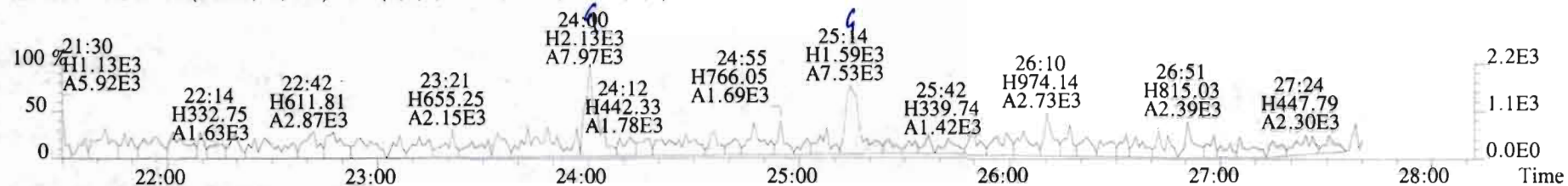
ConCal: ST200116D1-1  
EndCAL: NA

Page 5 of 5

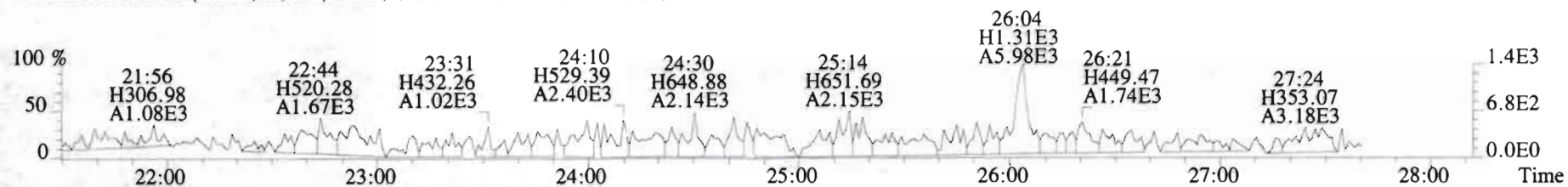
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	*	* n	0.91	Not F <sub>7</sub>	*		147	2.5	0.0989	Total Tetra-Dioxins	*	*		147	0.0989
1,2,3,7,8-PeCDD	*	* n	0.90	Not F <sub>7</sub>	*		174	2.5	0.124	Total Penta-Dioxins	*	*		174	0.124
1,2,3,4,7,8-HxCDD	*	* n	1.10	Not F <sub>7</sub>	*		204	2.5	0.217	Total Hexa-Dioxins	*	*		204	0.232
1,2,3,6,7,8-HxCDD	*	* n	0.94	Not F <sub>7</sub>	*		204	2.5	0.237	Total Hepta-Dioxins	*	*		172	0.224
1,2,3,7,8,9-HxCDD	*	* n	0.96	Not F <sub>7</sub>	*		204	2.5	0.240	Total Tetra-Furans	*	*		205	0.0952
1,2,3,4,6,7,8-HpCDD	*	* n	0.98	Not F <sub>7</sub>	*		172	2.5	0.224	Total Penta-Furans	0.0000	0.0000		157	0.100
OCDD	*	* n	0.96	Not F <sub>7</sub>	*		122	2.5	0.217	Total Hexa-Furans	*	*		146	0.0720
										Total Hepta-Furans	*	*		156	0.120
2,3,7,8-TCDF	*	* n	0.95	Not F <sub>7</sub>	*		205	2.5	0.0952						
1,2,3,7,8-PeCDF	*	* n	0.96	Not F <sub>7</sub>	*		157	2.5	0.102						
2,3,4,7,8-PeCDF	*	* n	1.01	Not F <sub>7</sub>	*		157	2.5	0.0988						
1,2,3,4,7,8-HxCDF	*	* n	1.18	Not F <sub>7</sub>	*		146	2.5	0.0577						
1,2,3,6,7,8-HxCDF	*	* n	1.07	Not F <sub>7</sub>	*		146	2.5	0.0692						
2,3,4,6,7,8-HxCDF	*	* n	1.11	Not F <sub>7</sub>	*		146	2.5	0.0702						
1,2,3,7,8,9-HxCDF	*	* n	1.06	Not F <sub>7</sub>	*		146	2.5	0.0941						
1,2,3,4,6,7,8-HpCDF	*	* n	1.13	Not F <sub>7</sub>	*		156	2.5	0.123						
1,2,3,4,7,8,9-HpCDF	*	* n	1.28	Not F <sub>7</sub>	*		156	2.5	0.116						
OCDF	*	* n	0.95	Not F <sub>7</sub>	*		176	2.5	0.251						
IS										Rec					
IS										Qual					
IS	13C-2,3,7,8-TCDD	5.49e+06	0.80 y	1.10	26:02	169.26				84.6					
IS	13C-1,2,3,7,8-PeCDD	4.08e+06	0.64 y	0.88	30:36	156.55				78.3					
IS	13C-1,2,3,4,7,8-HxCDD	3.63e+06	1.30 y	0.64	33:55	170.21				85.1					
IS	13C-1,2,3,6,7,8-HxCDD	4.03e+06	1.28 y	0.86	34:02	142.02				71.0					
IS	13C-1,2,3,7,8,9-HxCDD	4.15e+06	1.26 y	0.81	34:20	154.79				77.4					
IS	13C-1,2,3,4,6,7,8-HpCDD	3.39e+06	1.06 y	0.65	37:48	156.24				78.1					
IS	13C-OCDD	4.96e+06	0.89 y	0.58	41:04	257.88				64.5					
IS	13C-2,3,7,8-TCDF	8.19e+06	0.79 y	1.03	25:15	160.31				80.2					
IS	13C-1,2,3,7,8-PeCDF	6.50e+06	1.59 y	0.85	29:25	154.20				77.1					
IS	13C-2,3,4,7,8-PeCDF	5.85e+06	1.58 y	0.85	30:19	139.97				70.0					
IS	13C-1,2,3,4,7,8-HxCDF	5.23e+06	0.50 y	0.83	33:02	189.50				94.7					
IS	13C-1,2,3,6,7,8-HxCDF	5.62e+06	0.50 y	1.03	33:10	163.49				81.7					
IS	13C-2,3,4,6,7,8-HxCDF	5.24e+06	0.50 y	0.95	33:45	165.58				82.8					
IS	13C-1,2,3,7,8,9-HxCDF	4.83e+06	0.51 y	0.83	34:42	175.91				88.0					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.12e+06	0.42 y	0.76	36:33	163.84				81.9					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.27e+06	0.41 y	0.58	38:20	169.38				84.7					
IS	13C-OCDF	6.59e+06	0.90 y	0.69	41:18	288.22				72.1					
C/Up	37Cl-2,3,7,8-TCDD	2.30e+06		1.20	26:04	64.875				81.1					
RS/RT	13C-1,2,3,4-TCDD	5.92e+06	0.81 y	1.00	25:28	200.00									
RS	13C-1,2,3,4-TCDF	9.87e+06	0.79 y	1.00	24:01	200.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.64e+06	0.51 y	1.00	33:27	200.00									

Integrations  
by DB  
Analyst: DB  
Reviewed by GT  
Analyst: GT  
Date: 1/17/20  
Date: 01/30/2020

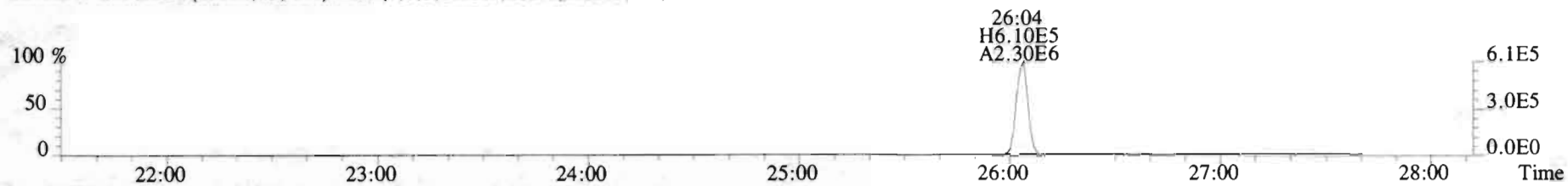
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Sample#6 File Text:Vista Analytical Laboratory\_VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
319.8965 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



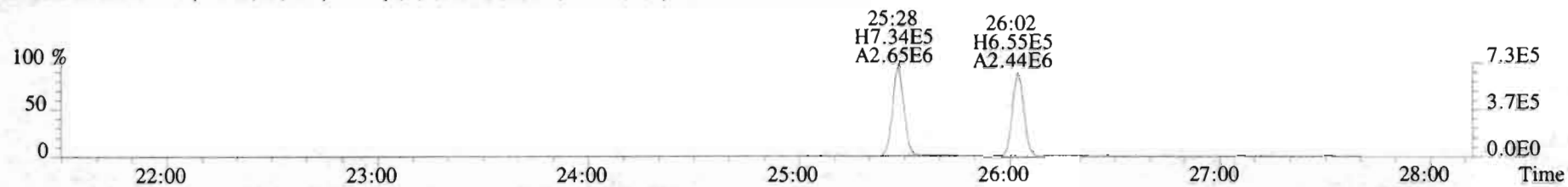
321.8936 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



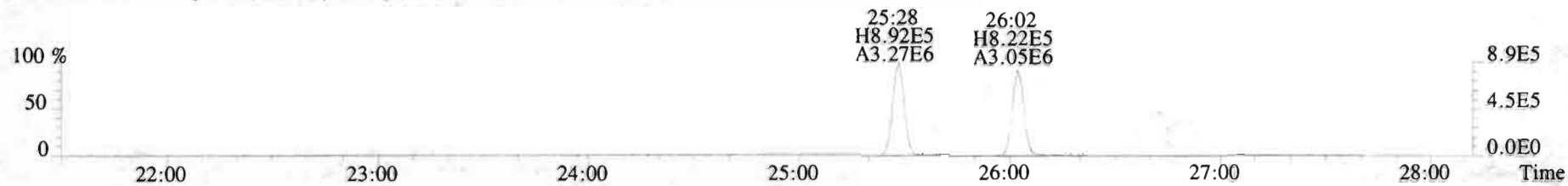
327.8847 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

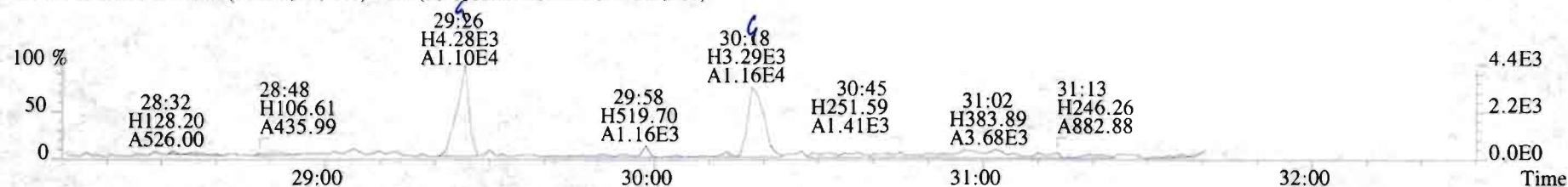


333.9339 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)





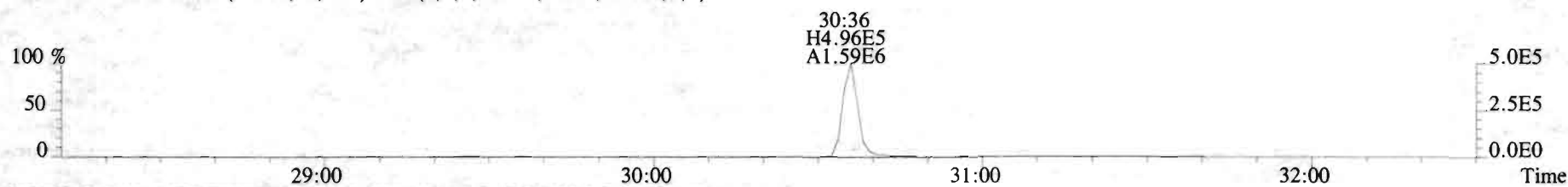
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Sample#6 File Text:Vista Analytical Laboratory VG7 Text:BOA0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



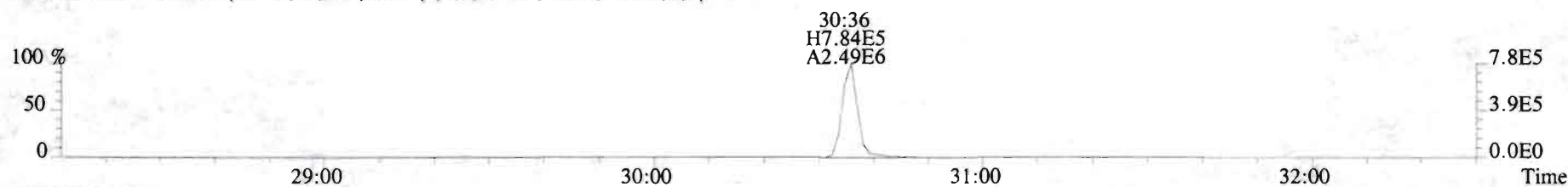
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



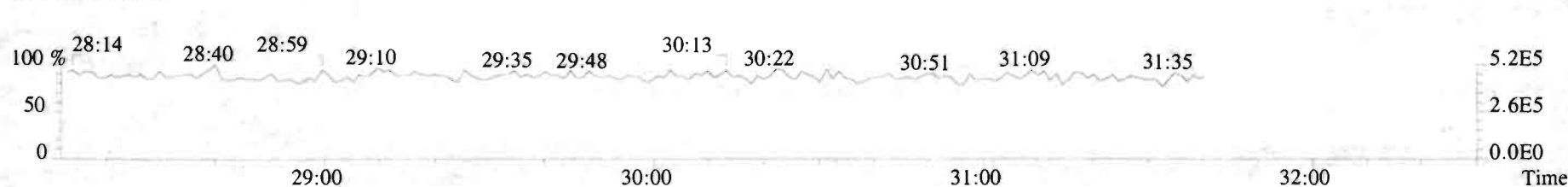
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



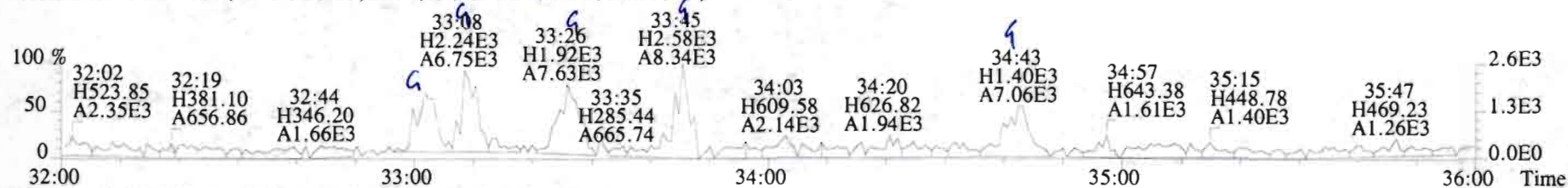
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



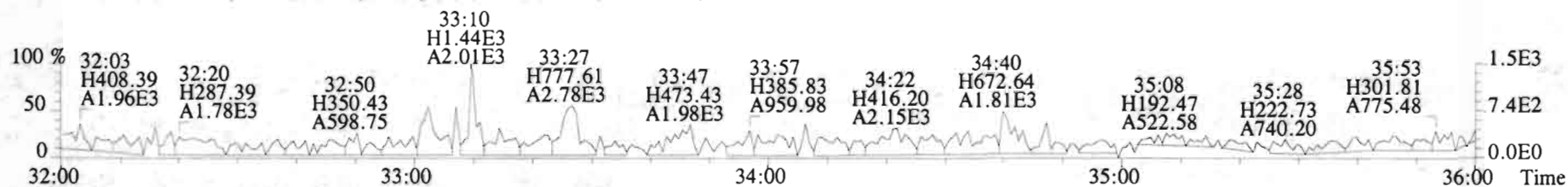
366.9792 S:6 F:2



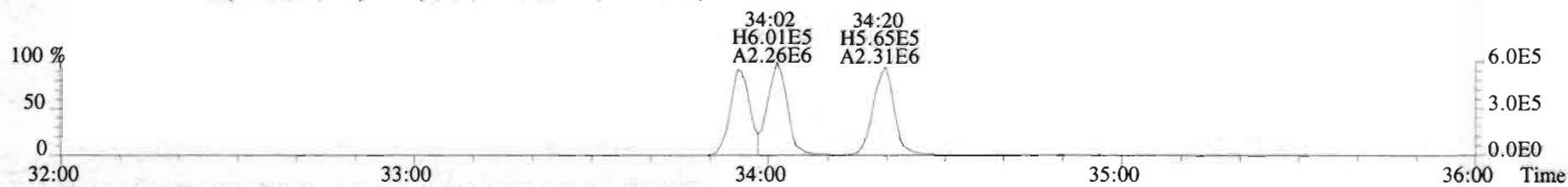
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 389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



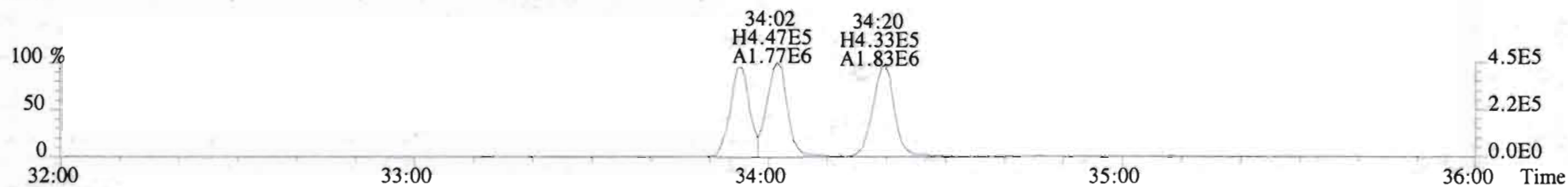
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



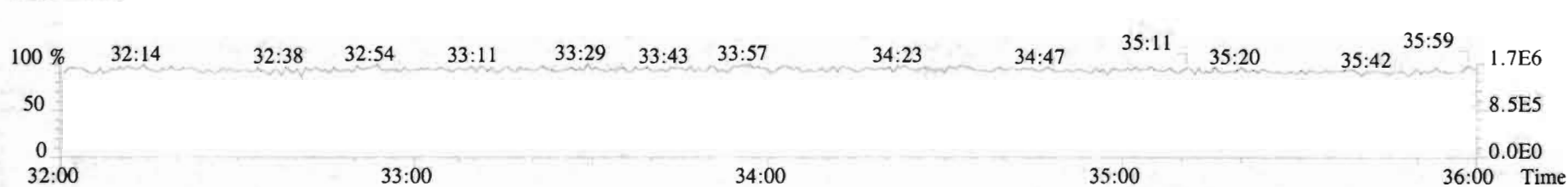
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



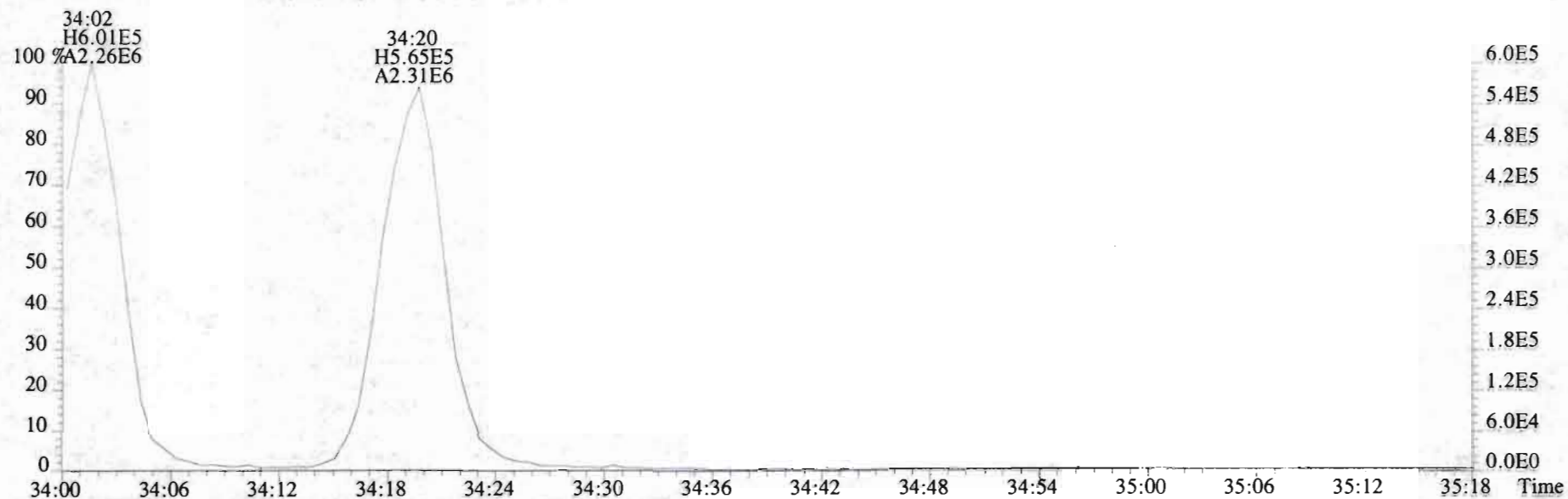
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



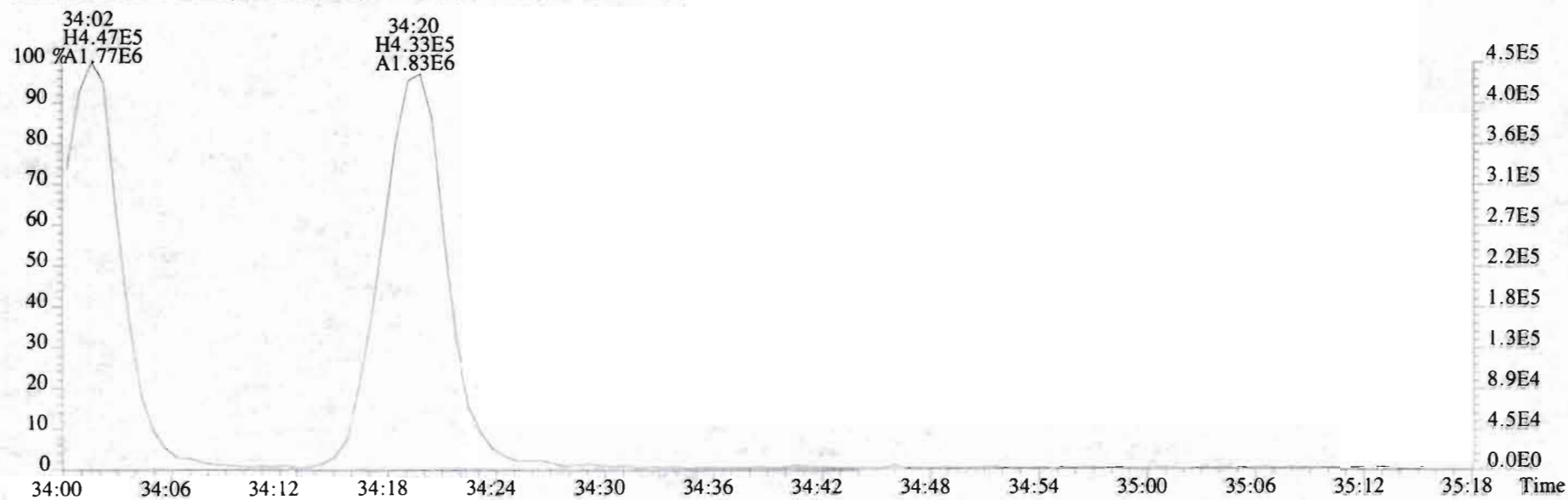
392.9760 S:6 F:3



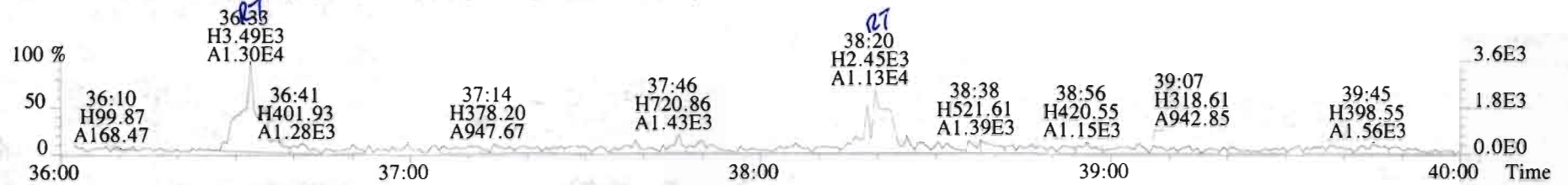
File:200116D1 #1-385 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaF  
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



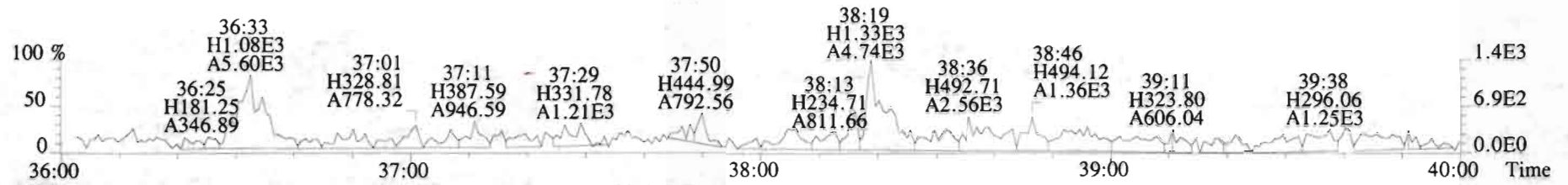
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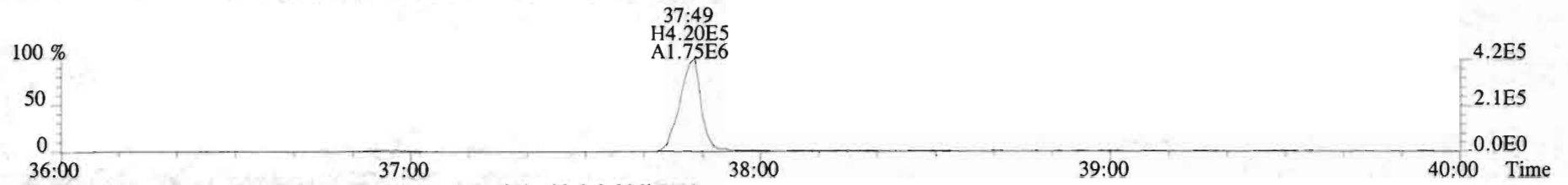
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Sample#6 File Text:Vista Analytical Laboratory VG7 Text:BOA0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



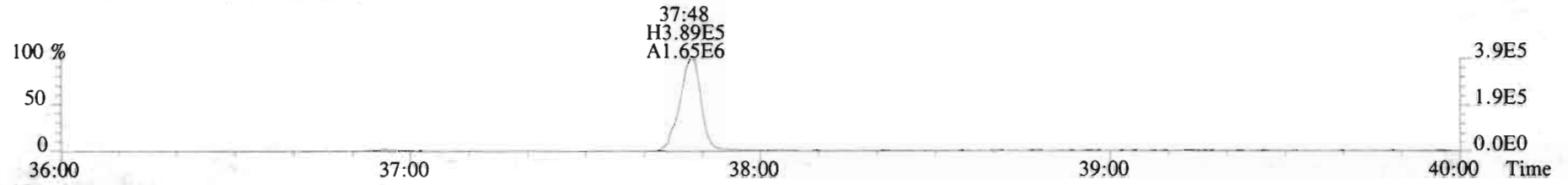
425.7737 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



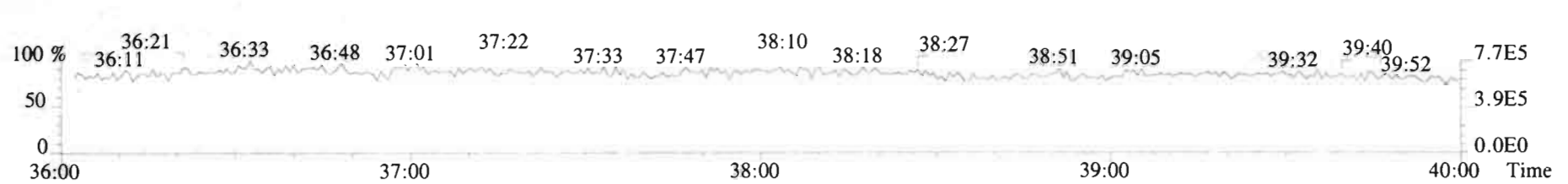
435.8169 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



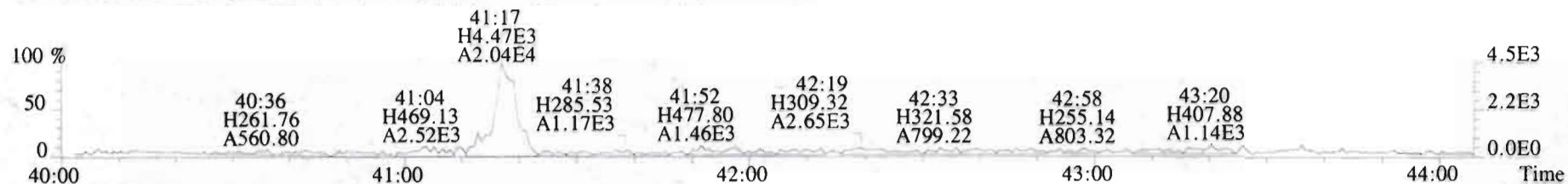
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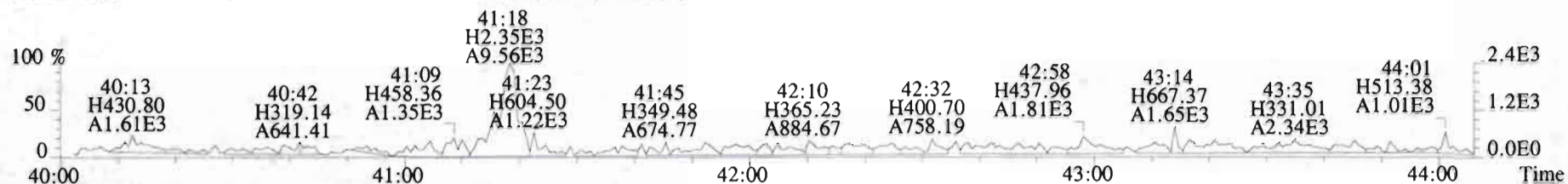
454.9728 S:6 F:4



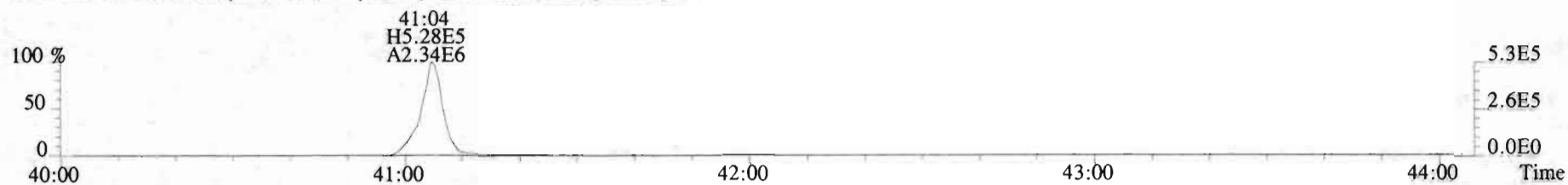
File:200116D1 #1-431 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



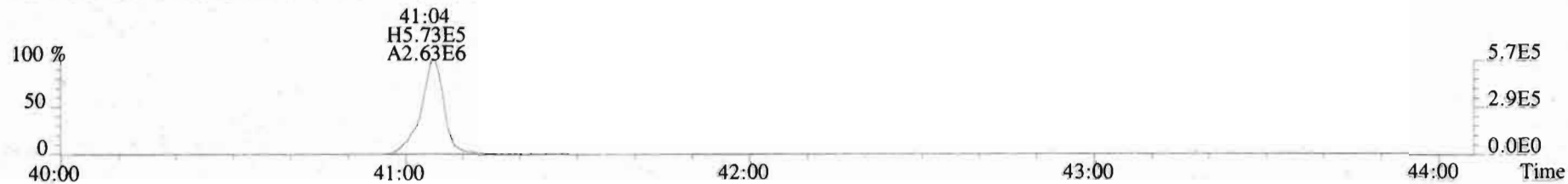
459.7348 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



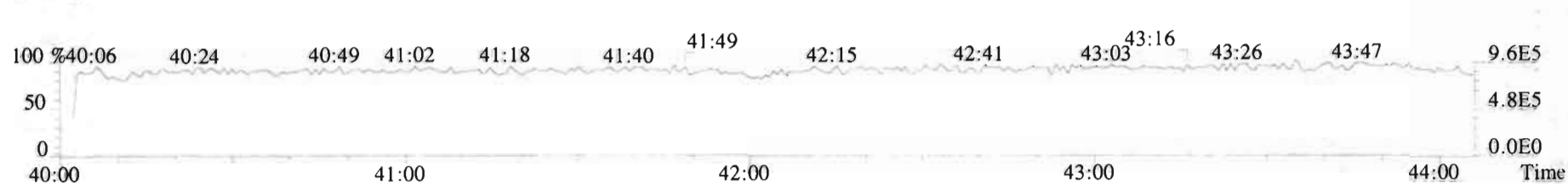
469.7780 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



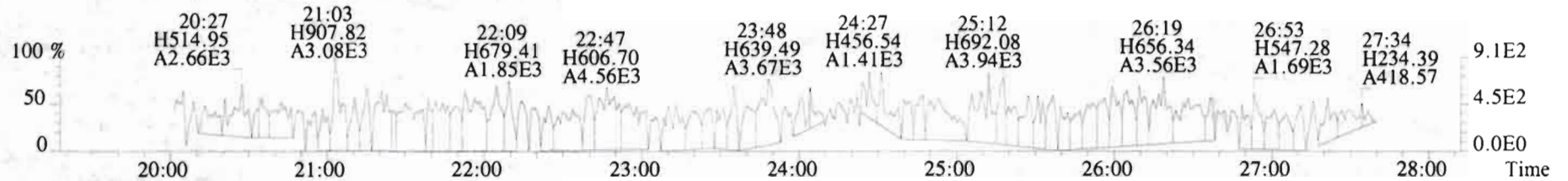
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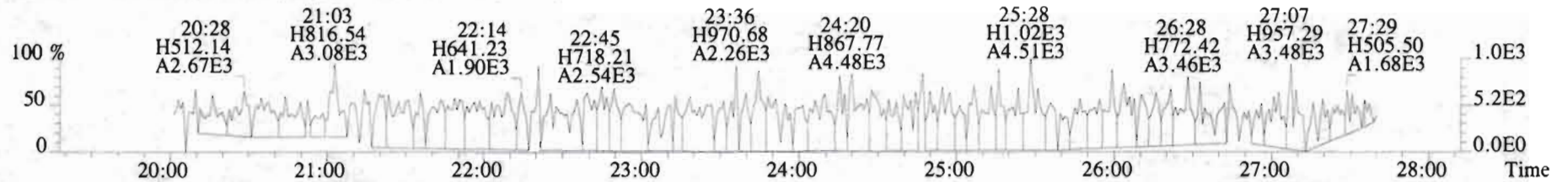
454.9728 S:6 F:5



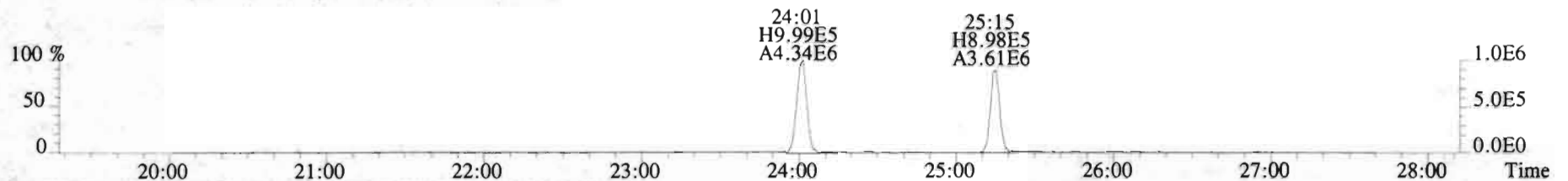
File:200116D1 #1-492 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory\_VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
 303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



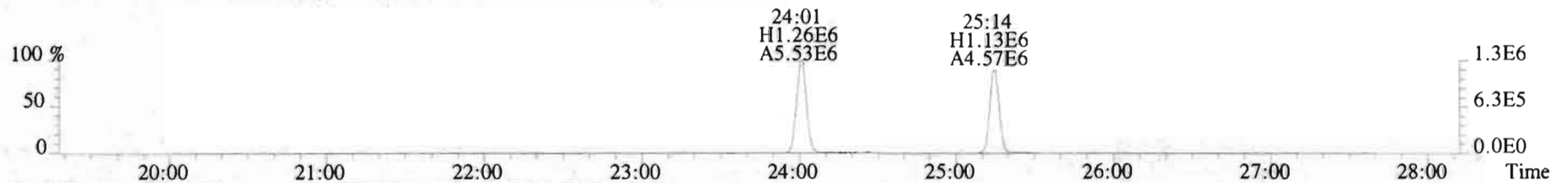
305.8987 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



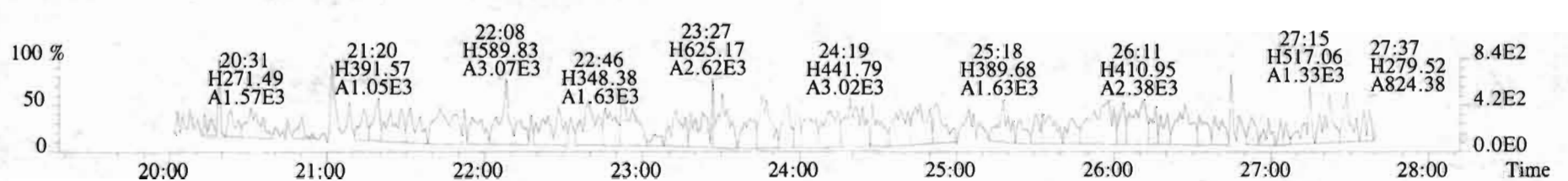
315.9419 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



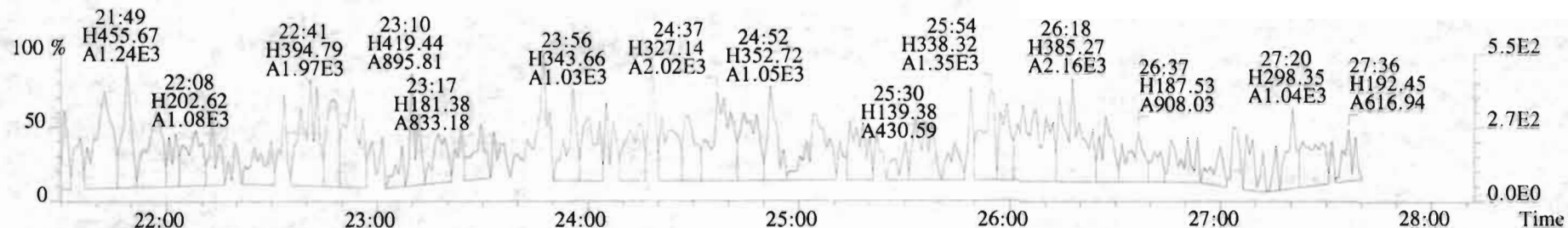
317.9389 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



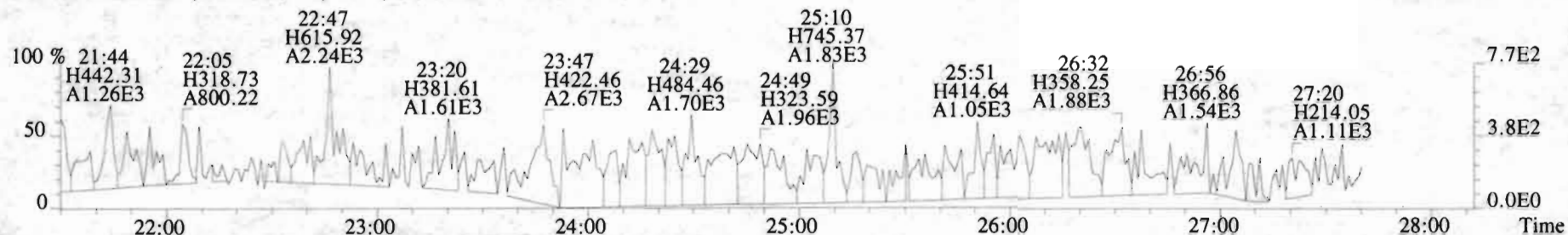
375.8364 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



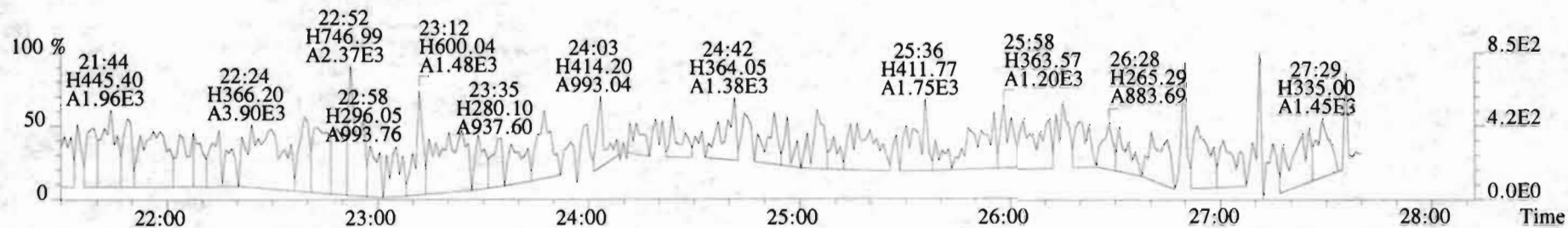
File:200116D1 #1-492 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:BOA0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
 339.8597 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



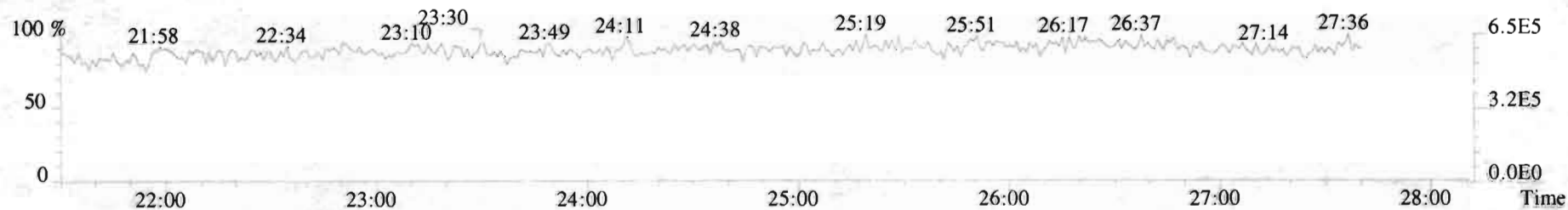
341.8568 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



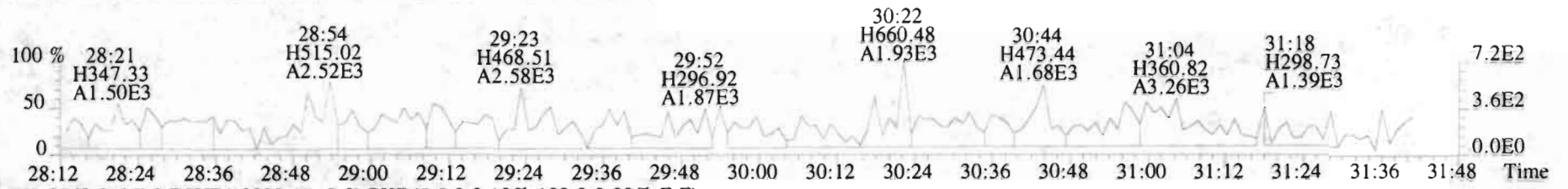
409.7974 S:6 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



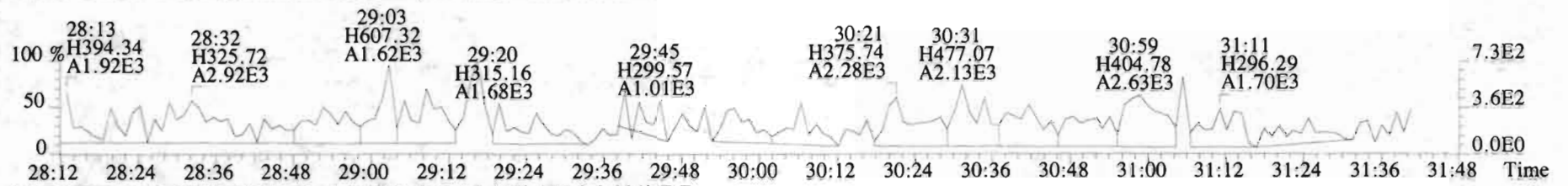
316.9824 S:6



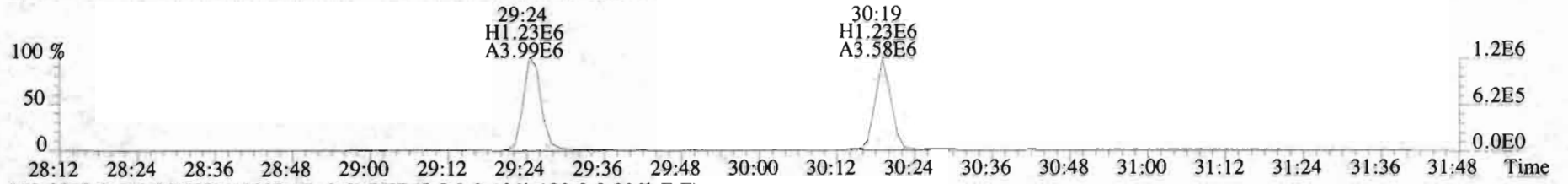
File:200116D1 #1-211 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
 339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



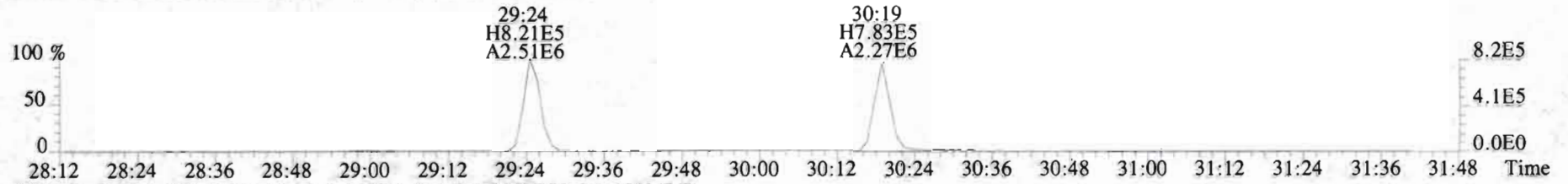
341.8568 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



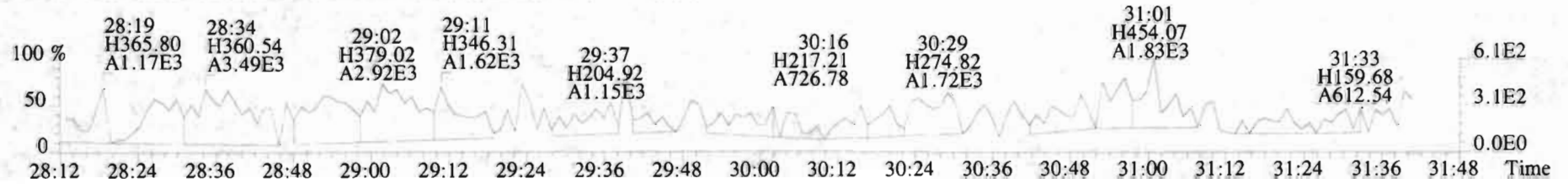
351.9000 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

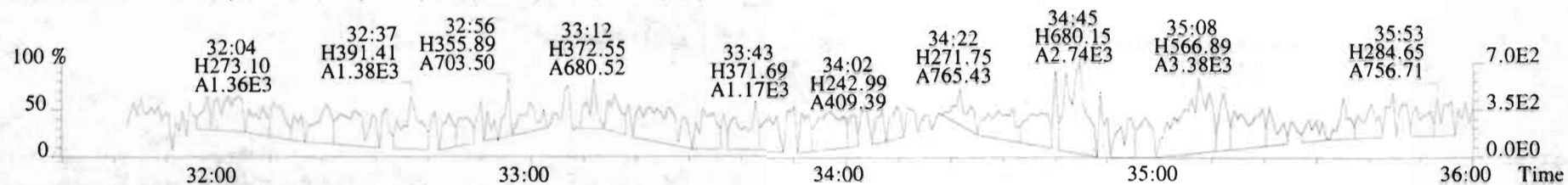


409.7974 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

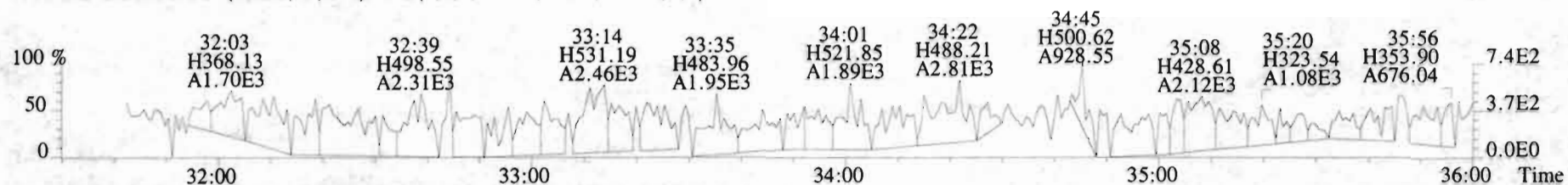




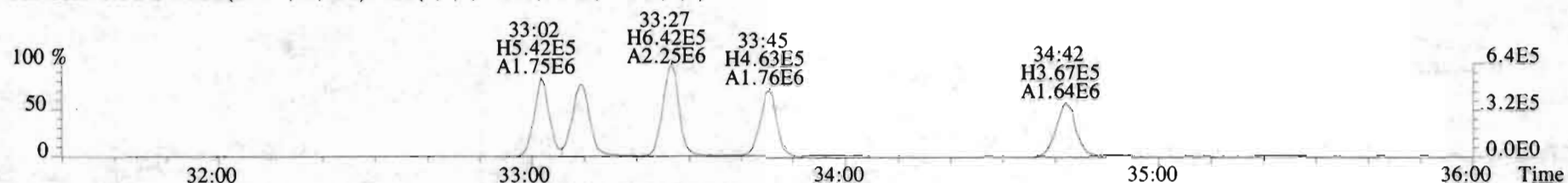
File:200116D1 #1-385 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:BOA0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



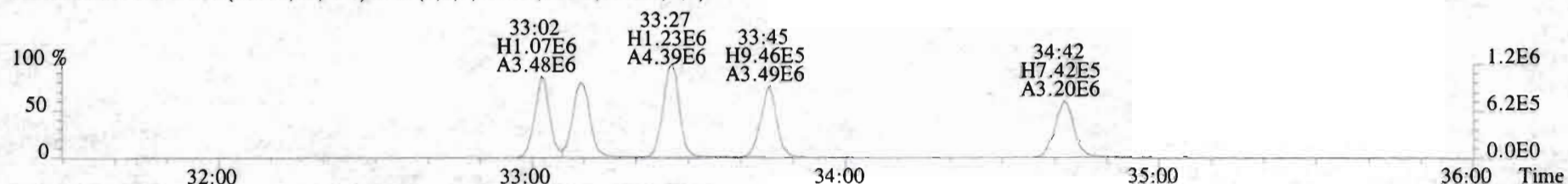
375.8178 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



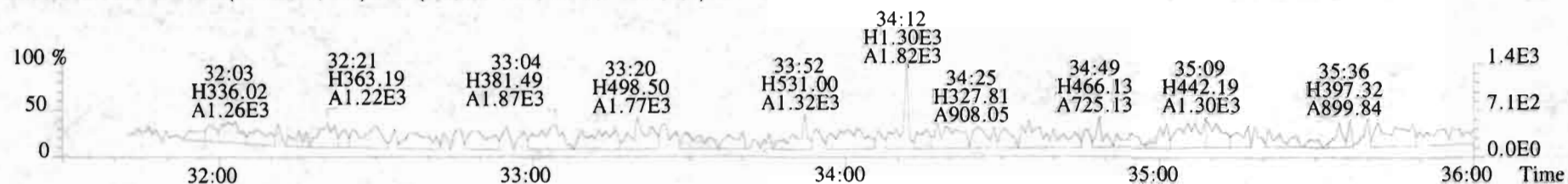
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



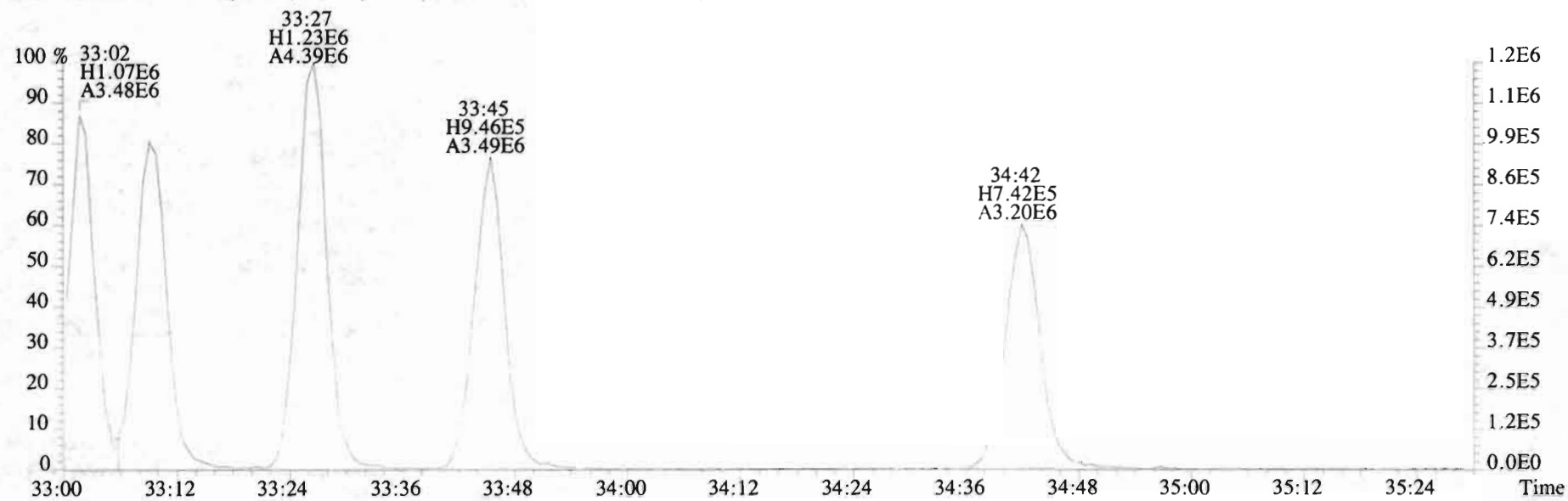
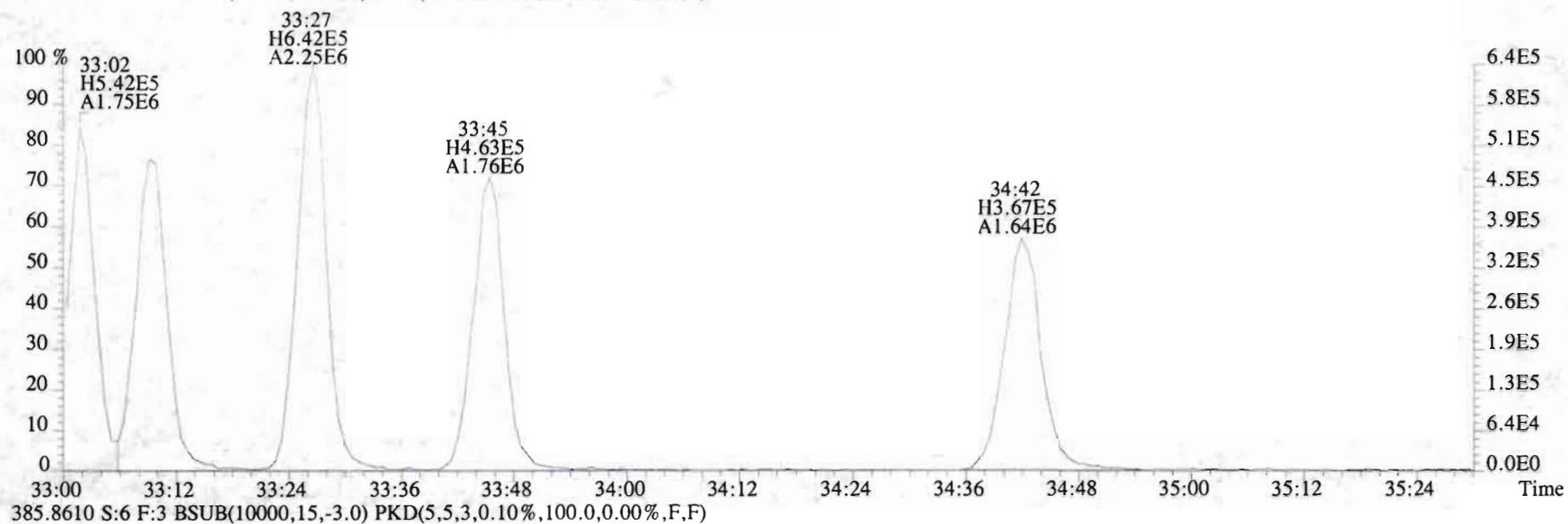
385.8610 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



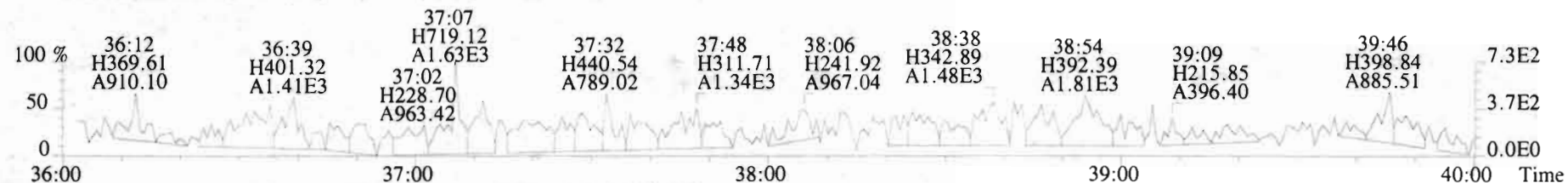
445.7555 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



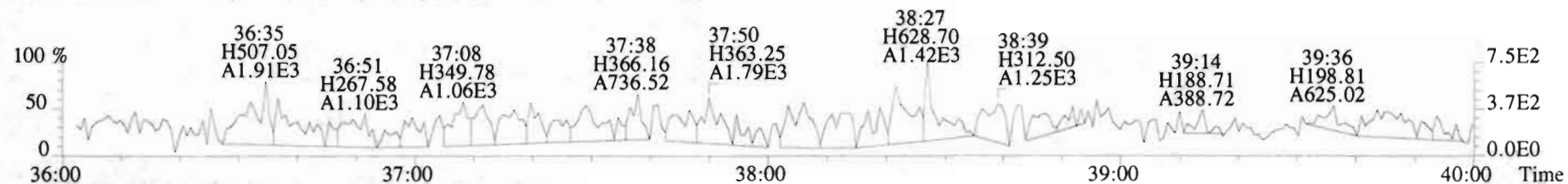
File:200116D1 #1-385 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



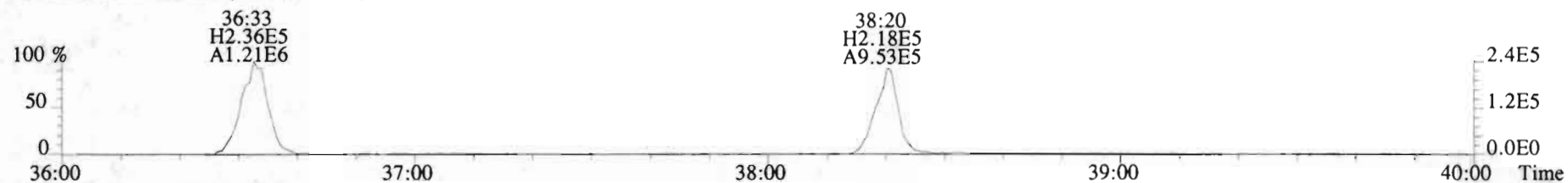
File:200116D1 #1-355 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



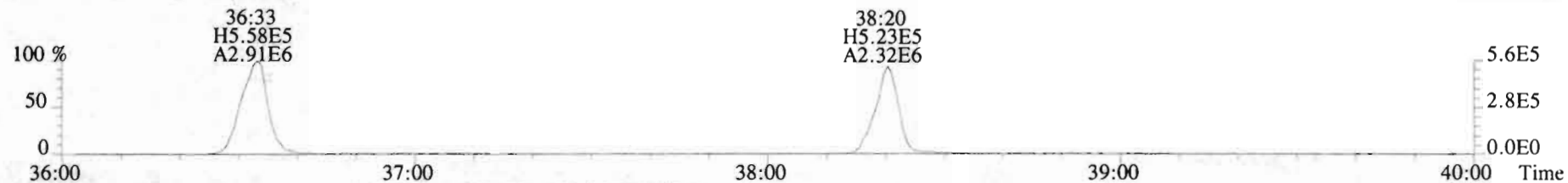
409.7788 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



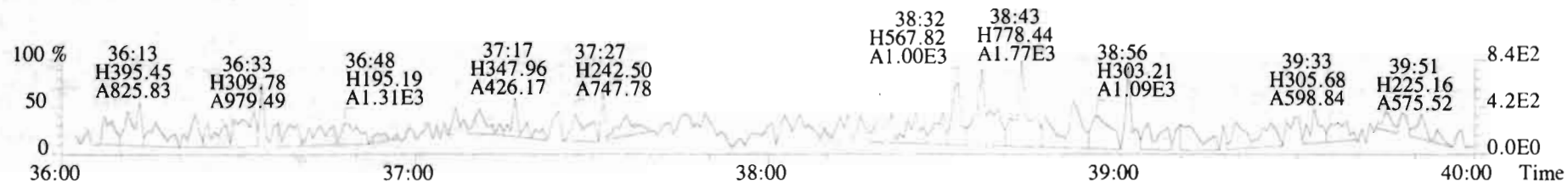
417.8253 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



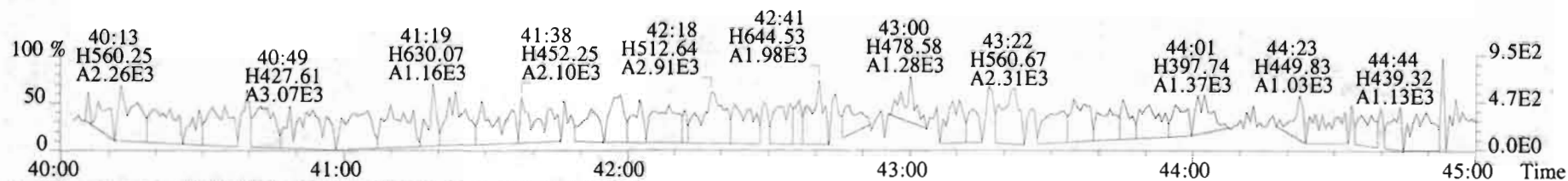
479.7165 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



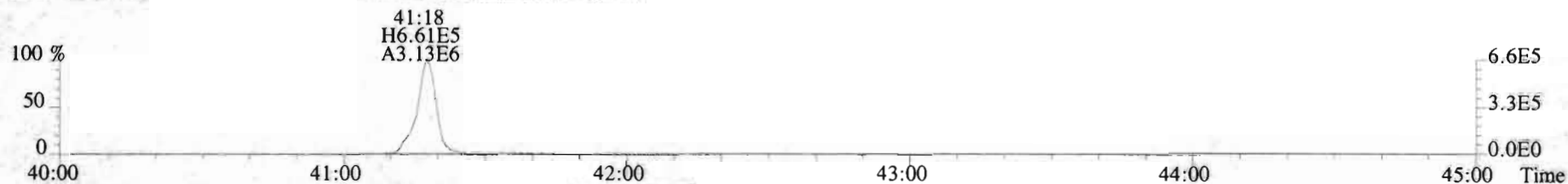
File:200116D1 #1-431 Acq:16-JAN-2020 15:20:52 GC EI+ Voltage SIR Autospec-UltimaF  
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:B0A0001-BLK1 Method Blank 10 Exp:OCDD\_DB5  
 441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)



## FORM 8A

## PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory      Extraction Batch: B0A0001-BS1

Contract No.:      SAS No.:

Matrix (aqueous/solid/leachate): SOLID      OPR Data Filename: 200116D1-3

Ext. Date:      Shift: Day      Analysis Date: 16-JAN-20      Time: 12:57:38

ALL CONCENTRATIONS REPORTED ON THIS FORM ARE CONCENTRATIONS IN EXTRACT.

NATIVE ANALYTES	SPIKE CONC. (ng/mL)	CONC. FOUND (ng/mL)	OPR CONC. LIMITS (1) (ng/mL)
2,3,7,8-TCDD	10	11.1	6.7 - 15.8 7.3 - 14.6 (2)
1,2,3,7,8-PeCDD	50	51.3	35.0 - 71.0
1,2,3,4,7,8-HxCDD	50	50.8	35.0 - 82.0
1,2,3,6,7,8-HxCDD	50	53.4	38.0 - 67.0
1,2,3,7,8,9-HxCDD	50	52.5	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50	53.1	35.0 - 70.0
OCDD	100	110	78.0 - 144.0
2,3,7,8-TCDF	10	9.99	7.5 - 15.8 8.0 - 14.7 (2)
1,2,3,7,8-PeCDF	50	54.4	40.0 - 67.0
2,3,4,7,8-PeCDF	50	53.3	34.0 - 80.0
1,2,3,4,7,8-HxCDF	50	47.3	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50	46.9	42.0 - 65.0
2,3,4,6,7,8-HxCDF	50	48.6	35.0 - 78.0
1,2,3,7,8,9-HxCDF	50	47.9	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	50	45.7	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50	45.7	39.0 - 69.0
OCDF	100	98.8	63.0 - 170.0

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

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

Analyst: DBDate: 1/17/20

## FORM 8B

## PCDD/PCDF ONGOING PRECISION AND RECOVERY (OPR)

Lab Name: Vista Analytical Laboratory      Extraction Batch: B0A0001-BS1

Contract No.:                      SAS No.:

Matrix (aqueous/solid/leachate): SOLID      OPR Data Filename: 200116D1-3

Ext. Date:                      Shift: Day      Analysis Date: 16-JAN-20      Time: 12:57:38

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	90.2	20.0 - 175.0 25.0 - 141.0 (2)
13C-1,2,3,7,8-PeCDD	100	82.3	21.0 - 227.0
13C-1,2,3,4,7,8-HxCDD	100	84.4	21.0 - 193.0
13C-1,2,3,6,7,8-HxCDD	100	77.1	25.0 - 163.0
13C-1,2,3,7,8,9-HxCDD	100	80.4	21.0 - 193.0
13C-1,2,3,4,6,7,8-HpCDD	100	80.6	26.0 - 166.0
13C-OCDD	200	138	26.0 - 397.0
13C-2,3,7,8-TCDF	100	81.1	22.0 - 152.0 26.0 - 126.0 (2)
13C-1,2,3,7,8-PeCDF	100	78.9	21.0 - 192.0
13C-2,3,4,7,8-PeCDF	100	77.3	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	88.1	21.0 - 159.0
13C-2,3,4,6,7,8-HxCDF	100	83.6	22.0 - 176.0
13C-1,2,3,7,8,9-HxCDF	100	90.9	17.0 - 205.0
13C-1,2,3,4,6,7,8-HpCDF	100	88.7	21.0 - 158.0
13C-1,2,3,4,7,8,9-HpCDF	100	90.5	20.0 - 186.0
13C-OCDF	200	158	26.0 - 397.0
CLEANUP STANDARD			
37Cl-2,3,7,8-TCDD	40	35.1	12.4 - 76.4

(1) Contract-required concentration limits for OPR  
as specified in Table 6, Method 1613. 10/94(2) Contract-required concentration limits for OPR  
as specified in Table 6a, Method 1613. 10/94Analyst: DBDate: 1/17/20

Client ID: OPR  
Lab ID: BOA0001-BS1

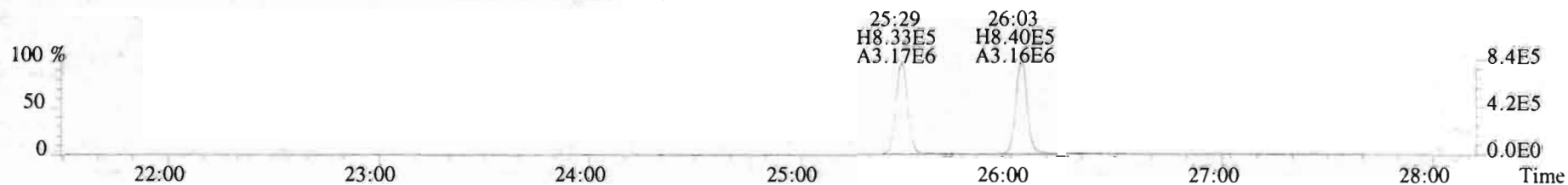
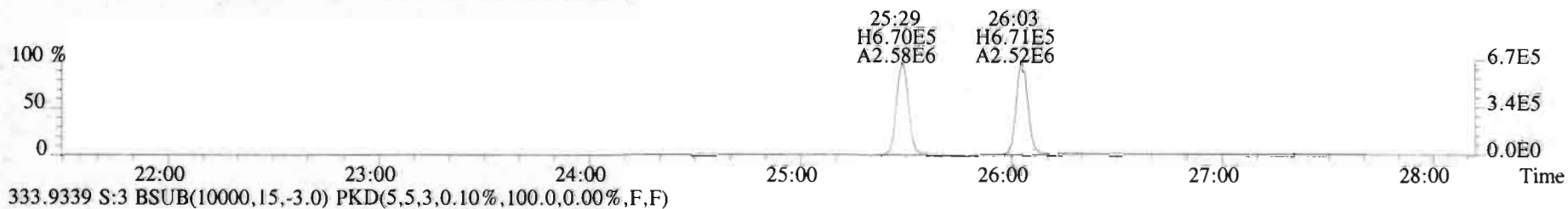
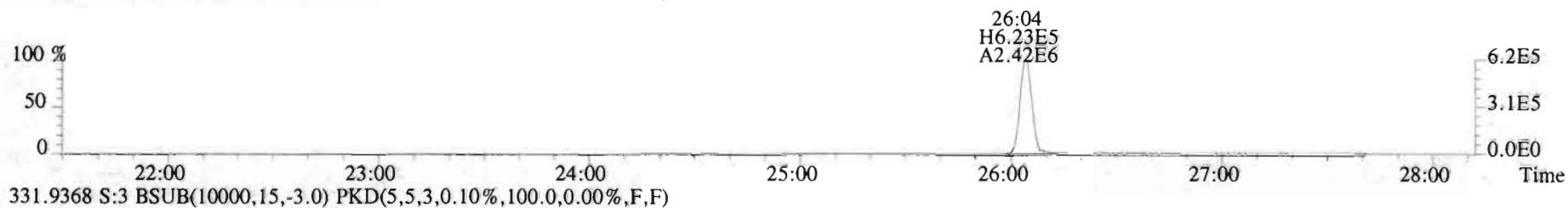
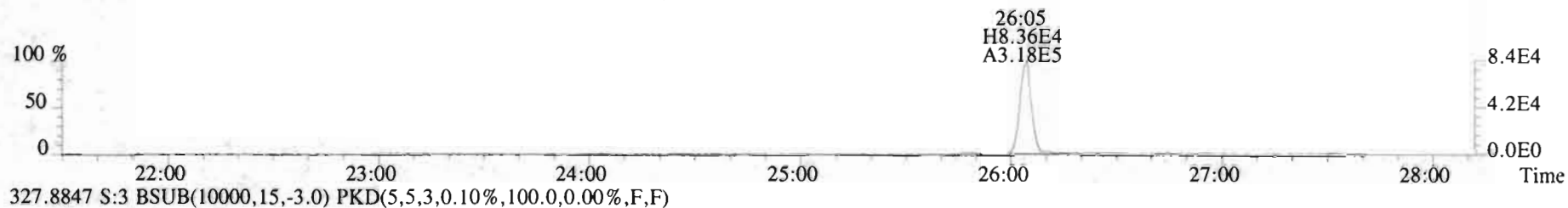
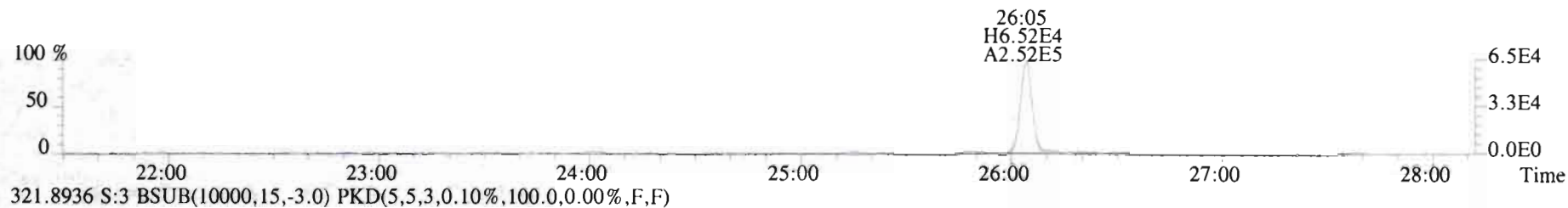
Filename: 200116D1 S:3 Acq:16-JAN-20 12:57:38  
GC Column ID: ZB-SMS ICAL: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST200116D1-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	5.70e+05	0.79 y	0.91	26:04	11.095	*	2.5	*	*	Total Tetra-Dioxins	11.2	13.2	*	*	*
1,2,3,7,8-PeCDD	1.93e+06	0.68 y	0.90	30:38	51.323	*	2.5	*	*	Total Penta-Dioxins	51.3	52.0	*	*	*
1,2,3,4,7,8-HxCDD	1.96e+06	1.23 y	1.10	33:57	50.845	*	2.5	*	*	Total Hexa-Dioxins	157	158	*	*	*
1,2,3,6,7,8-HxCDD	2.13e+06	1.23 y	0.94	34:03	53.352	*	2.5	*	*	Total Hepta-Dioxins	53.6	55.6	*	*	*
1,2,3,7,8,9-HxCDD	2.11e+06	1.24 y	0.96	34:21	52.531	*	2.5	*	*	Total Tetra-Furans	10.6	12.8	*	*	*
1,2,3,4,6,7,8-HpCDD	1.77e+06	1.03 y	0.98	37:50	53.141	*	2.5	*	*	Total Penta-Furans	109.31	110.58	*	*	*
OCDD	2.72e+06	0.90 y	0.96	41:07	109.79	*	2.5	*	*	Total Hexa-Furans	191	193	*	*	*
2,3,7,8-TCDF	7.74e+05	0.77 y	0.95	25:17	9.9919	*	2.5	*	*	Total Hepta-Furans	91.6	93.7	*	*	*
1,2,3,7,8-PeCDF	3.42e+06	1.63 y	0.96	29:26	54.381	*	2.5	*	*						
2,3,4,7,8-PeCDF	3.44e+06	1.64 y	1.01	30:21	53.291	*	2.5	*	*						
1,2,3,4,7,8-HxCDF	2.86e+06	1.20 y	1.18	33:03	47.293	*	2.5	*	*						
1,2,3,6,7,8-HxCDF	2.95e+06	1.17 y	1.07	33:11	46.933	*	2.5	*	*						
2,3,4,6,7,8-HxCDF	2.78e+06	1.15 y	1.11	33:47	48.586	*	2.5	*	*						
1,2,3,7,8,9-HxCDF	2.47e+06	1.20 y	1.06	34:45	47.909	*	2.5	*	*						
1,2,3,4,6,7,8-HpCDF	2.24e+06	0.97 y	1.13	36:35	45.740	*	2.5	*	*						
1,2,3,4,7,8,9-HpCDF	1.99e+06	0.99 y	1.28	38:22	45.672	*	2.5	*	*						
OCDF	3.29e+06	0.90 y	0.95	41:20	98.766	*	2.5	*	*						
IS	13C-2,3,7,8-TCDD	5.68e+06	0.80 y	1.10	26:03	90.206				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	4.17e+06	0.62 y	0.88	30:37	82.348				90.2					
IS	13C-1,2,3,4,7,8-HxCDD	3.50e+06	1.34 y	0.64	33:56	84.364				82.3					
IS	13C-1,2,3,6,7,8-HxCDD	4.26e+06	1.19 y	0.86	34:03	77.055				84.4					
IS	13C-1,2,3,7,8,9-HxCDD	4.19e+06	1.24 y	0.81	34:21	80.410				77.1					
IS	13C-1,2,3,4,6,7,8-HpCDD	3.40e+06	1.06 y	0.65	37:49	80.602				80.4					
IS	13C-OCDD	5.17e+06	0.89 y	0.58	41:06	138.09				80.6					
IS	13C-2,3,7,8-TCDF	8.15e+06	0.79 y	1.03	25:16	81.086				69.0					
IS	13C-1,2,3,7,8-PeCDF	6.55e+06	1.56 y	0.85	29:26	78.862				81.1					
IS	13C-2,3,4,7,8-PeCDF	6.37e+06	1.64 y	0.85	30:20	77.324				78.9					
IS	13C-1,2,3,4,7,8-HxCDF	5.14e+06	0.50 y	0.83	33:03	95.779				77.3					
IS	13C-1,2,3,6,7,8-HxCDF	5.89e+06	0.51 y	1.03	33:10	88.122				95.8					
IS	13C-2,3,4,6,7,8-HxCDF	5.14e+06	0.49 y	0.95	33:46	83.587				88.1					
IS	13C-1,2,3,7,8,9-HxCDF	4.86e+06	0.50 y	0.83	34:44	90.877				83.6					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.34e+06	0.42 y	0.76	36:34	88.708				90.9					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.40e+06	0.42 y	0.58	38:21	90.521				88.7					
IS	13C-OCDF	7.02e+06	0.90 y	0.69	41:19	157.91				90.5					
C/Up	37Cl-2,3,7,8-TCDD	2.42e+06		1.20	26:04	35.100				79.0					
RS/RT	13C-1,2,3,4-TCDD	5.75e+06	0.81 y	1.00	25:29	100.00				87.7					
RS	13C-1,2,3,4-TCDF	9.72e+06	0.78 y	1.00	24:02	100.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	6.46e+06	0.50 y	1.00	33:27	100.00									

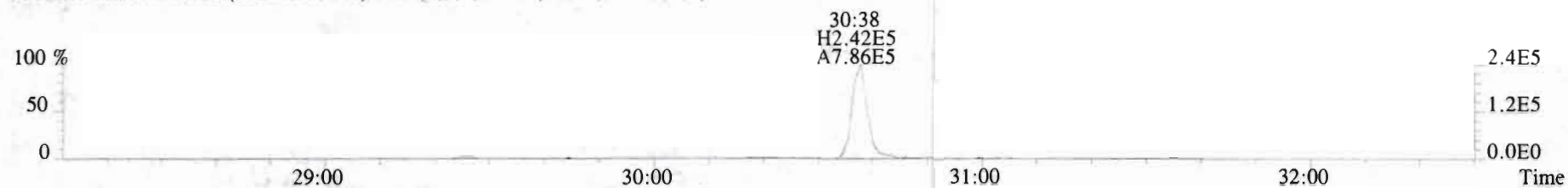
Integrations  
by DB  
Analyst: DB  
Date: 1/17/20  
Reviewed  
by CT  
Analyst: CT  
Date: 01/30/2020

File:200116D1 #1-493 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaF  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:B0A0001-BSI 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)

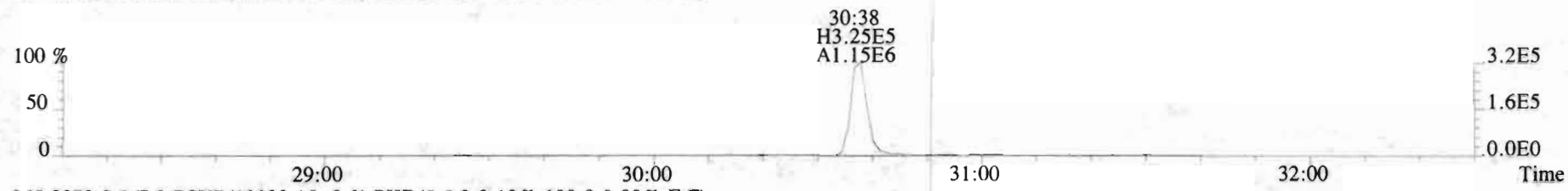




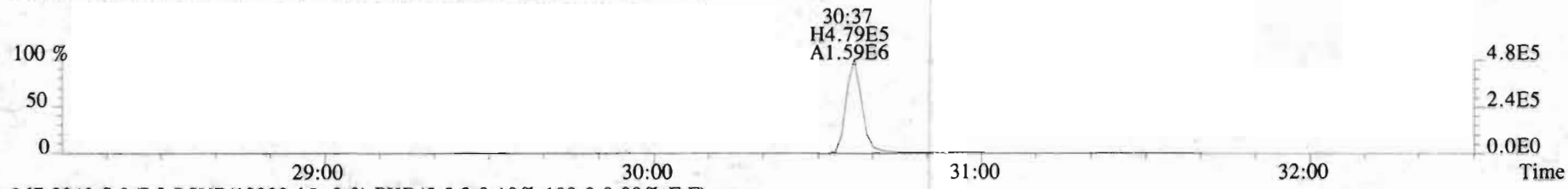
File:200116D1 #1-210 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory\_VG7 Text:B0A0001-BS1 OPR 10 Exp:OCDD\_DB5  
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



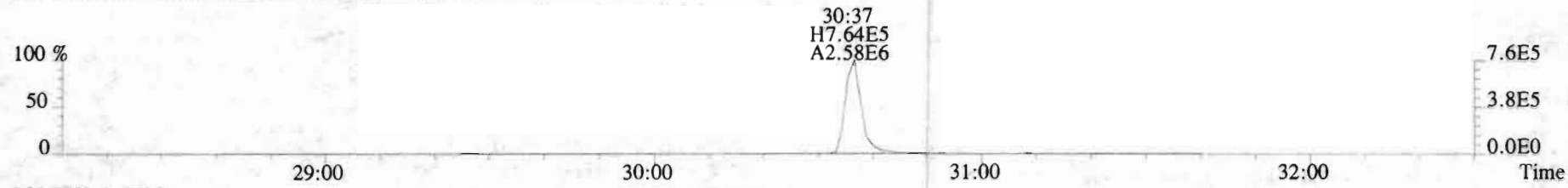
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



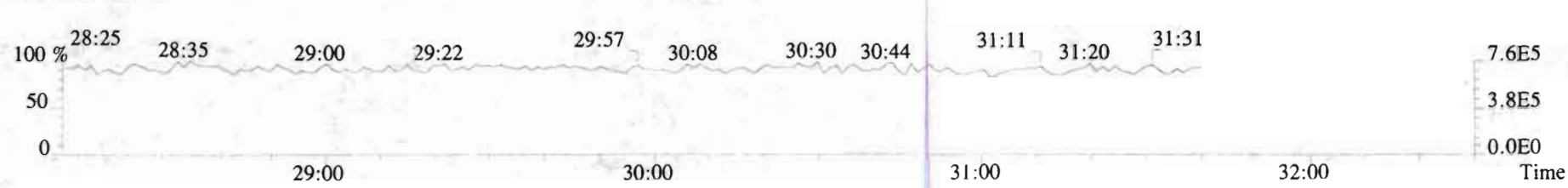
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



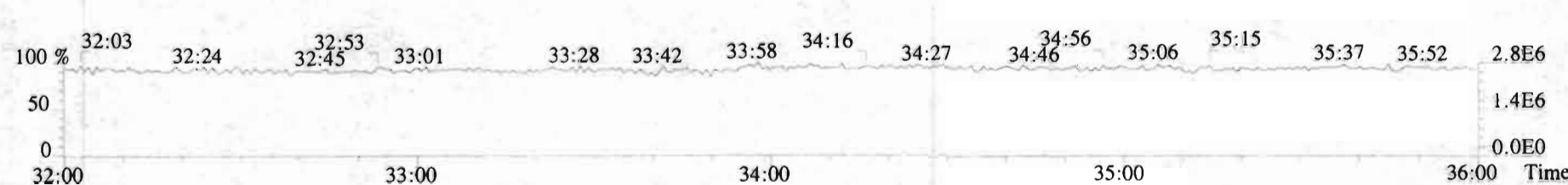
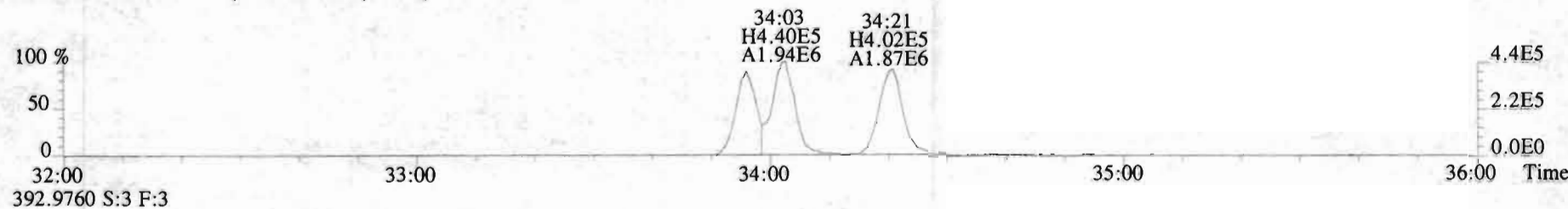
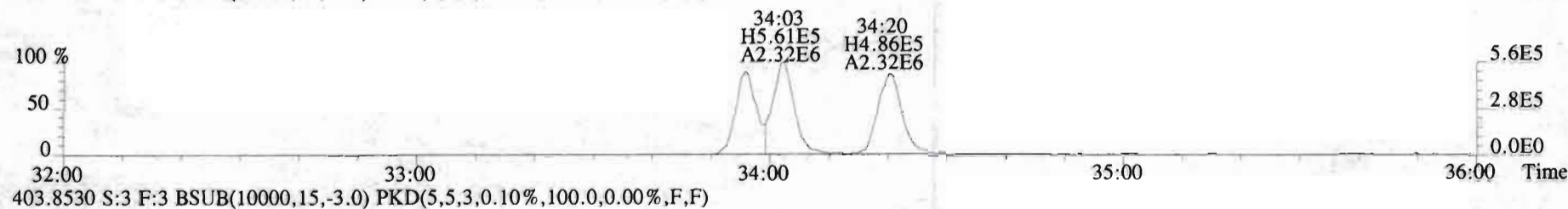
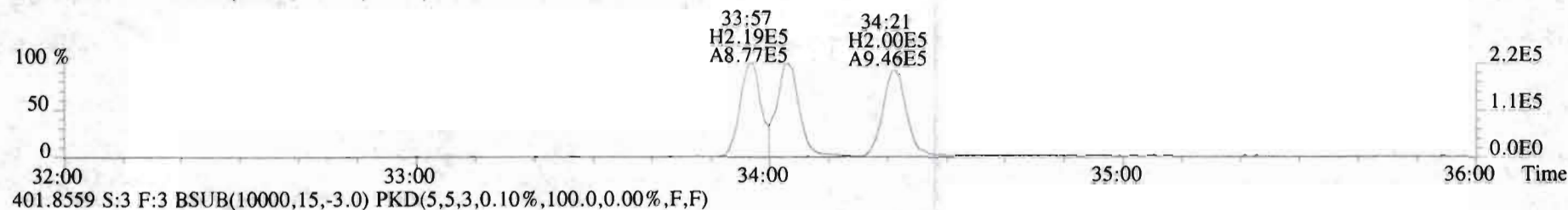
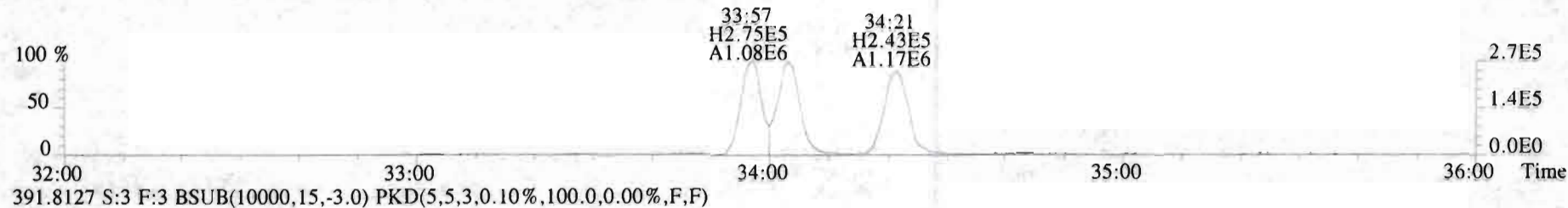
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



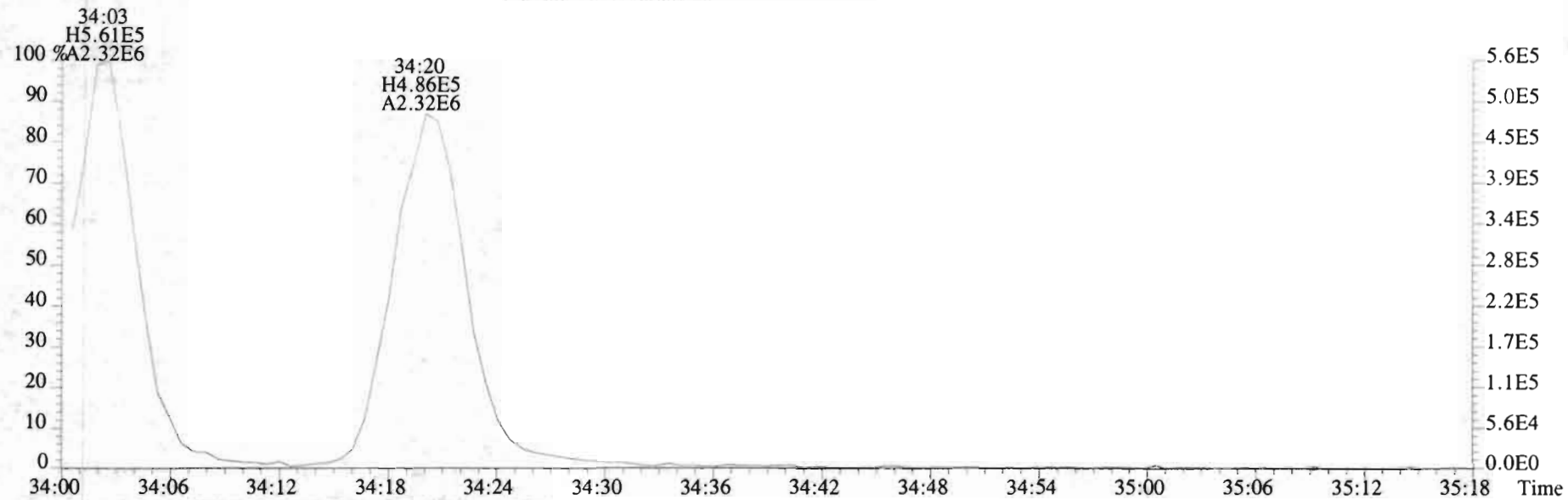
366.9792 S:3 F:2



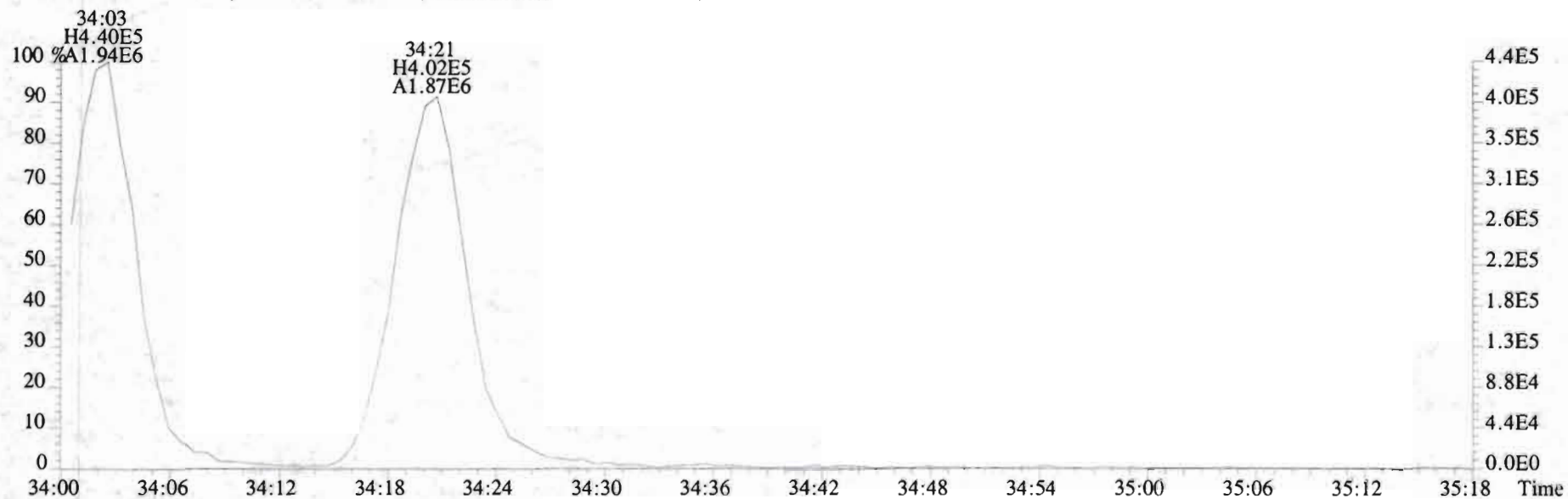
File:200116D1 #1-385 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:B0A0001-BS1 OPR 10 Exp:OCDD\_DB5  
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



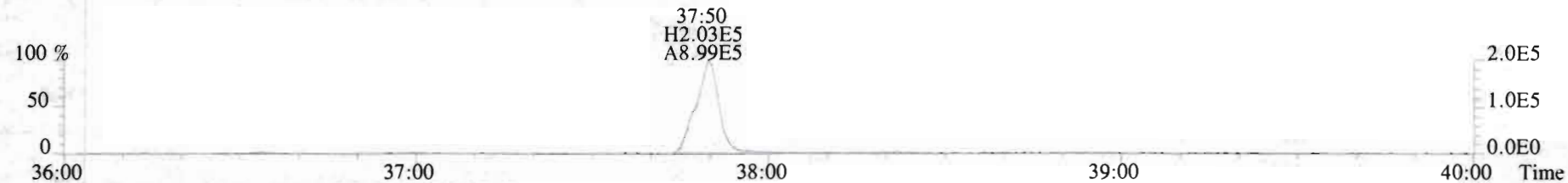
File:200116D1 #1-385 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:BOA0001-BS1 OPR 10 Exp:OCDD\_DB5  
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



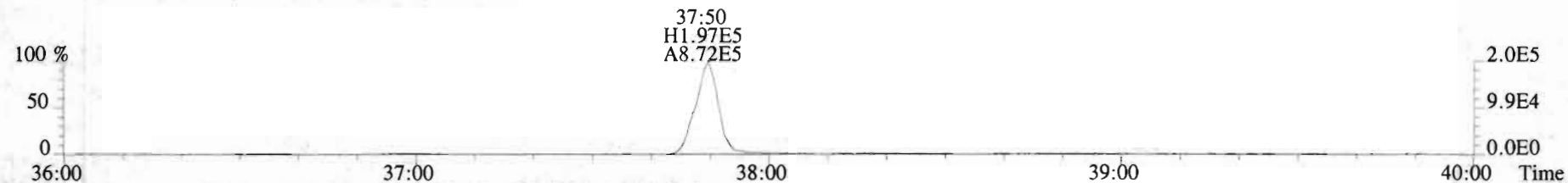
403.8530 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



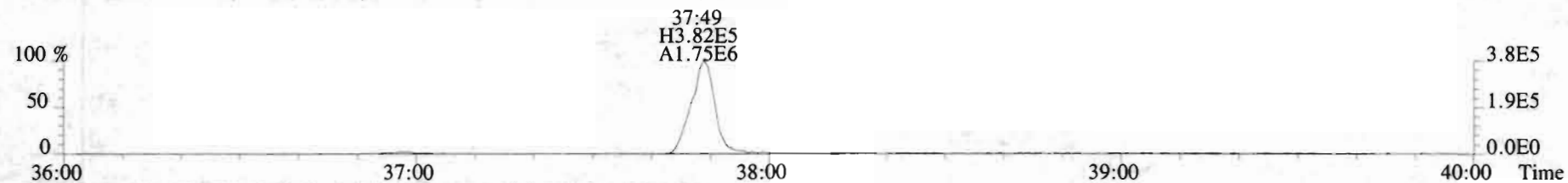
File:200116D1 #1-355 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:B0A0001-BS1 OPR 10 Exp:OCDD\_DB5  
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



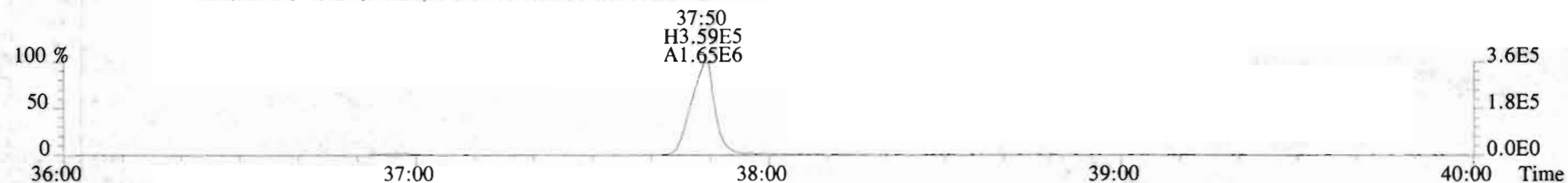
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



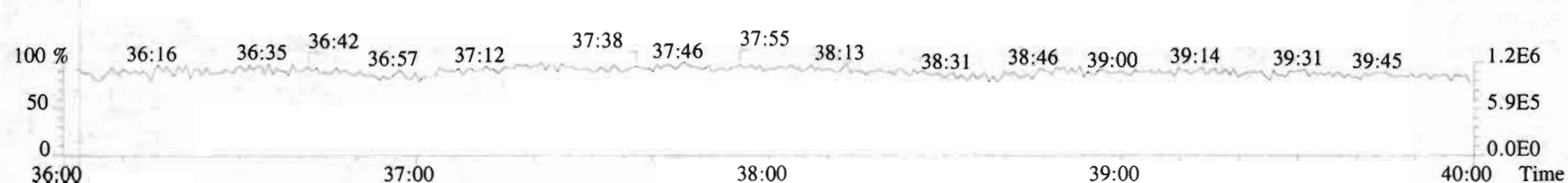
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



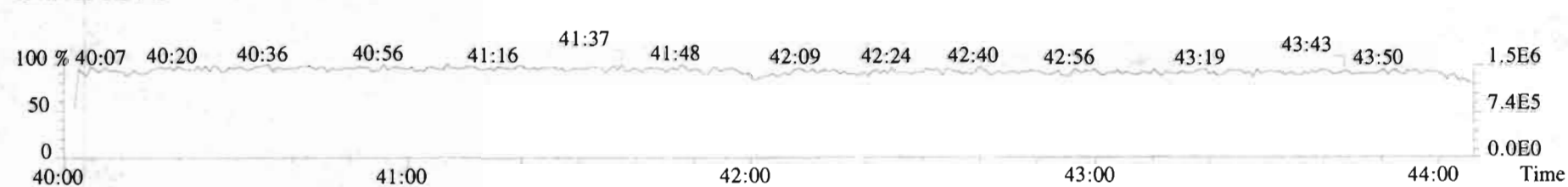
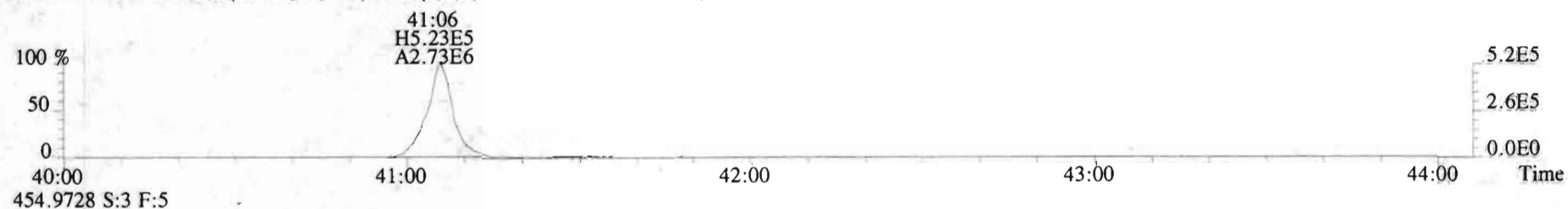
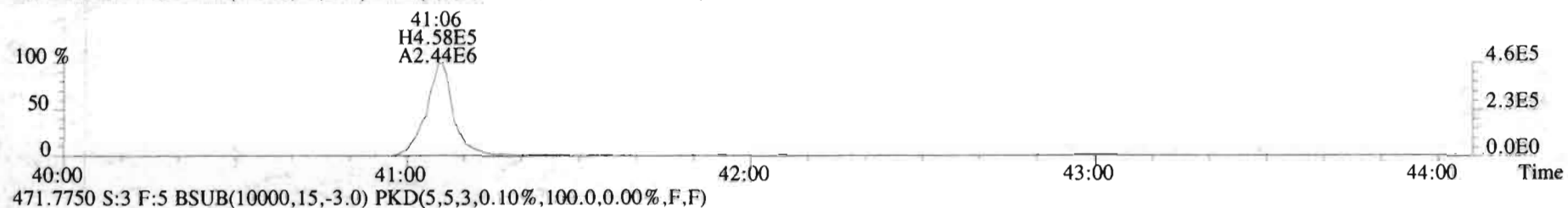
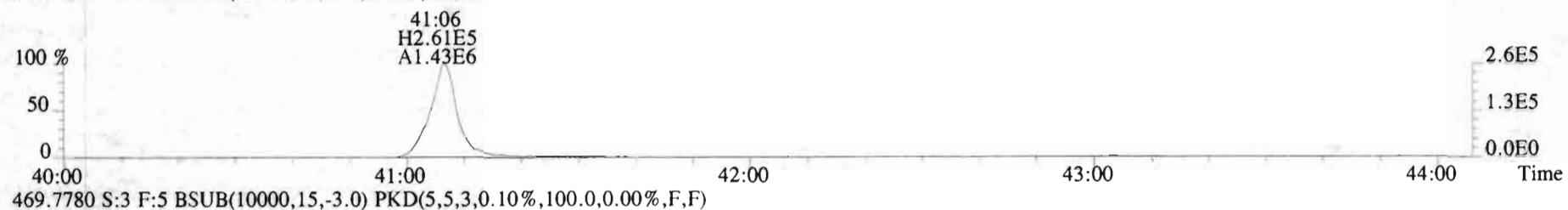
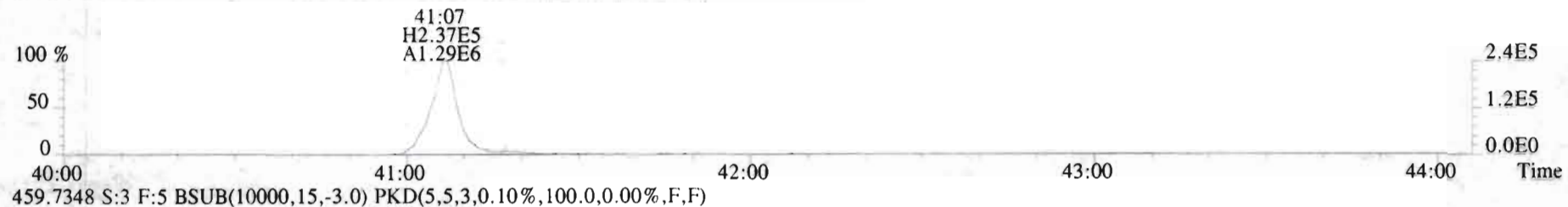
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



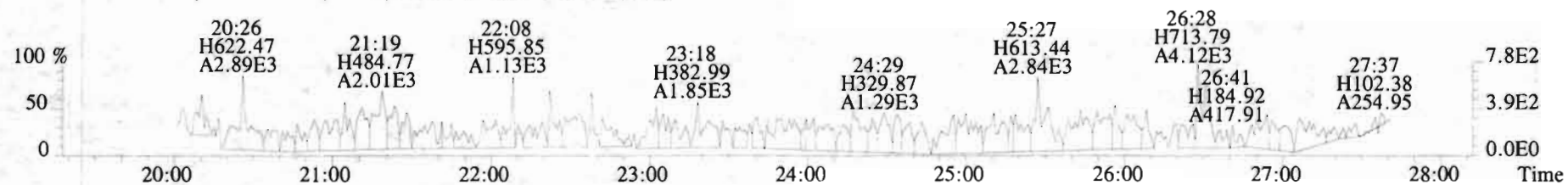
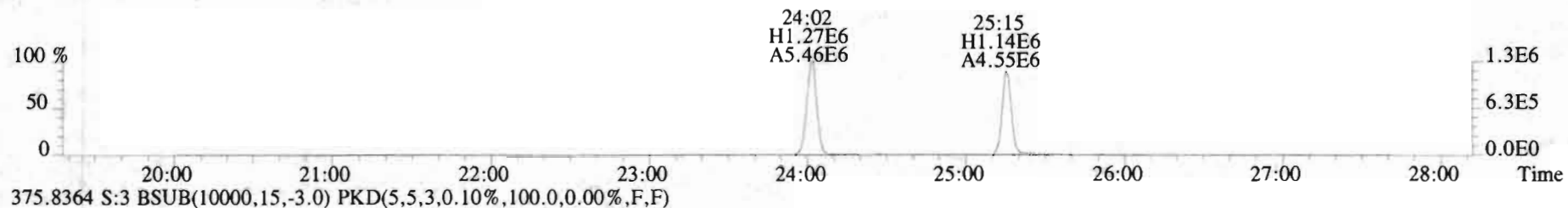
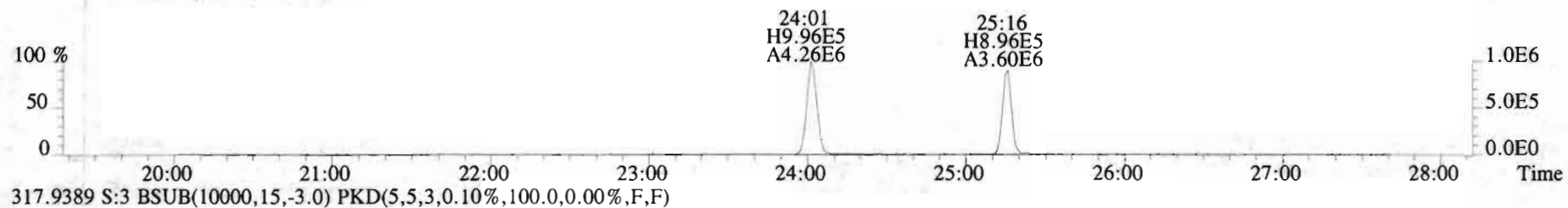
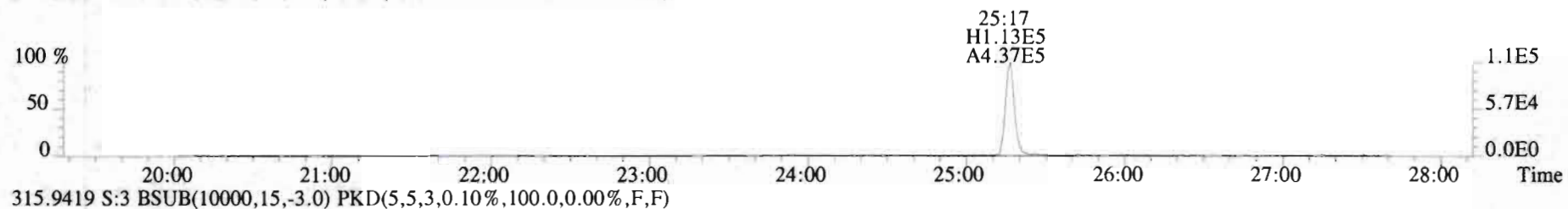
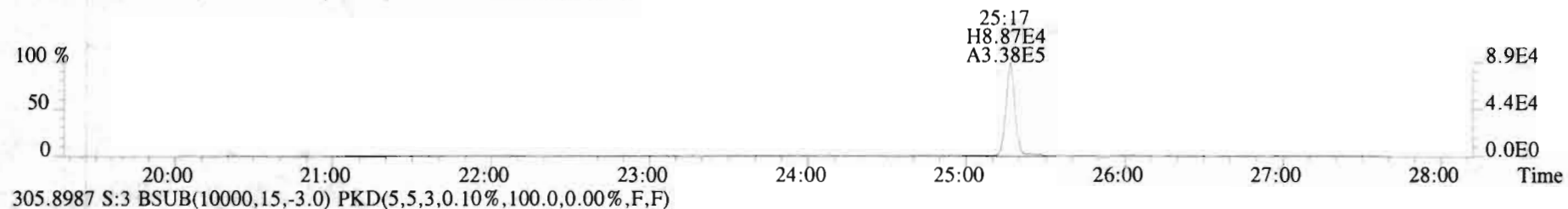
454.9728 S:3 F:4



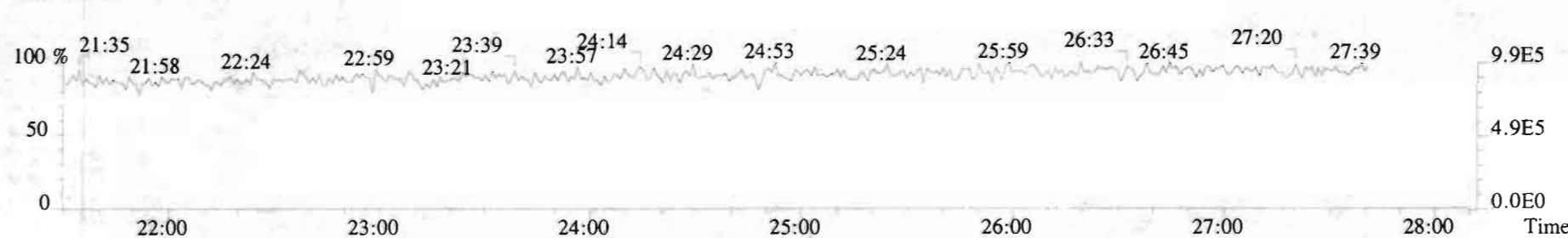
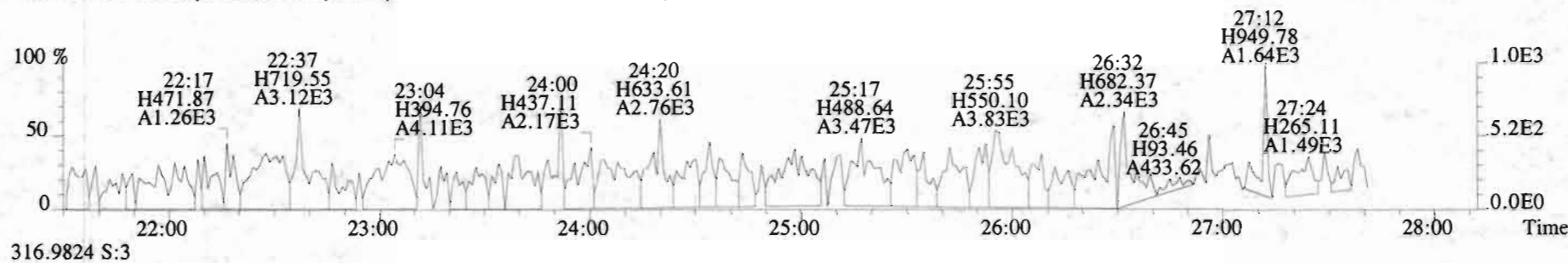
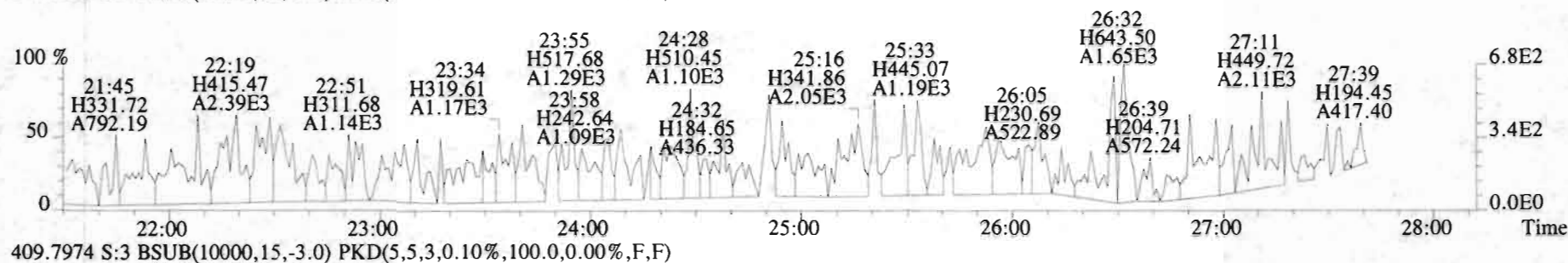
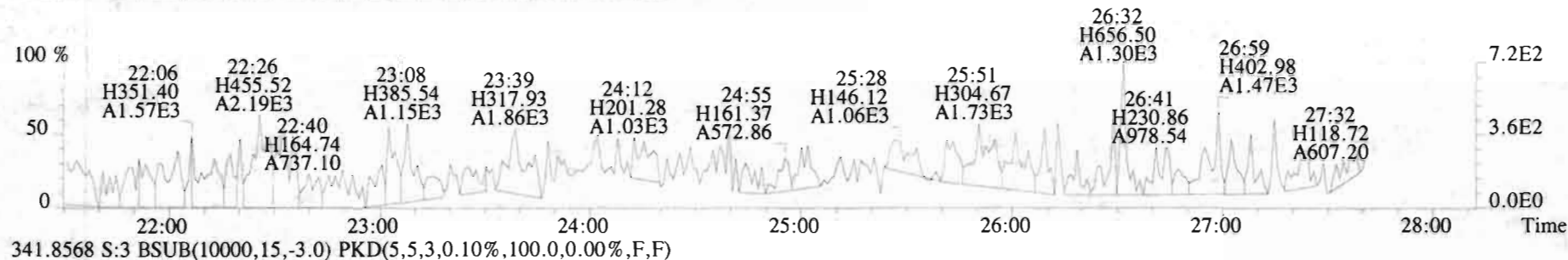
File:200116D1 #1-432 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:BOA0001-BS1 OPR 10 Exp:OCDD\_DB5  
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



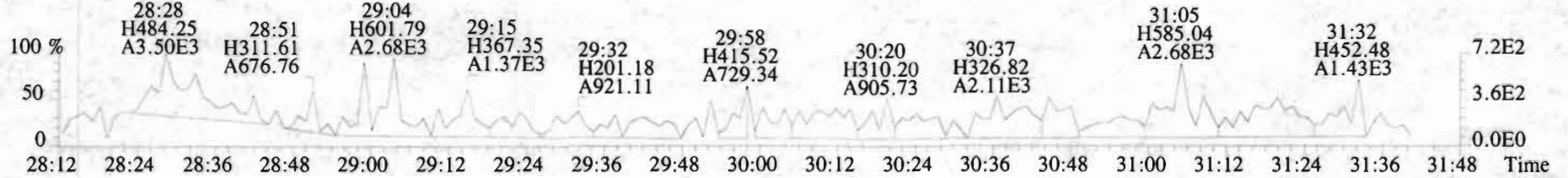
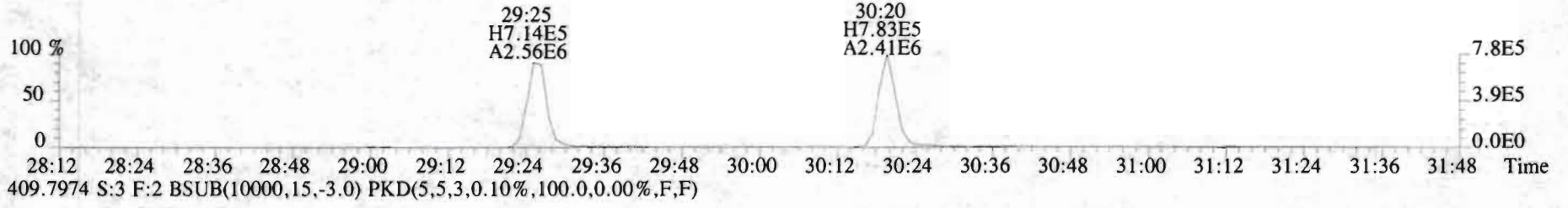
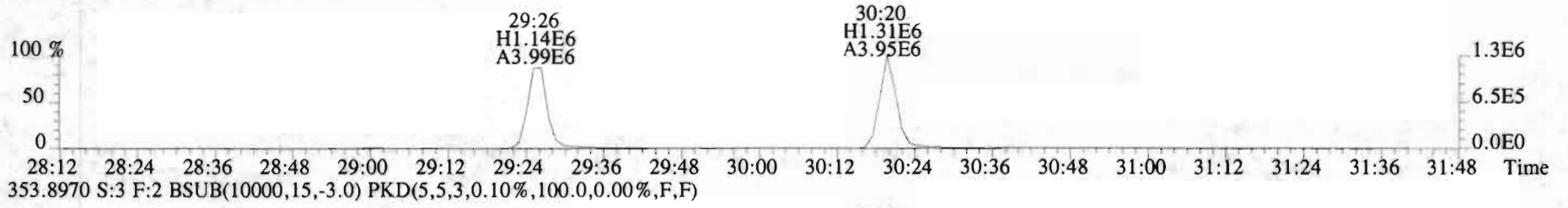
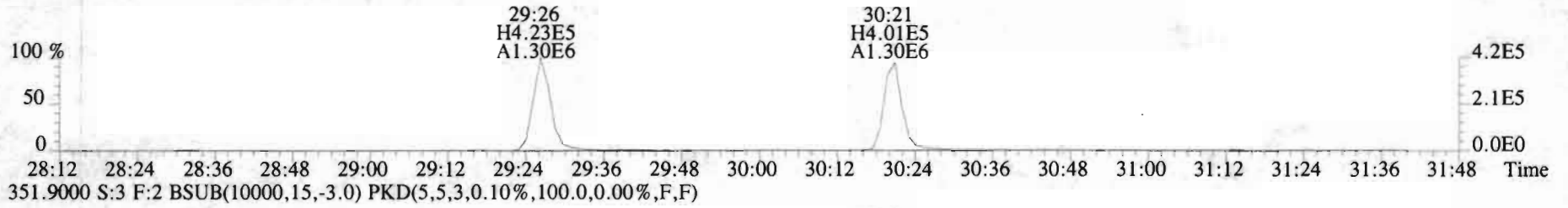
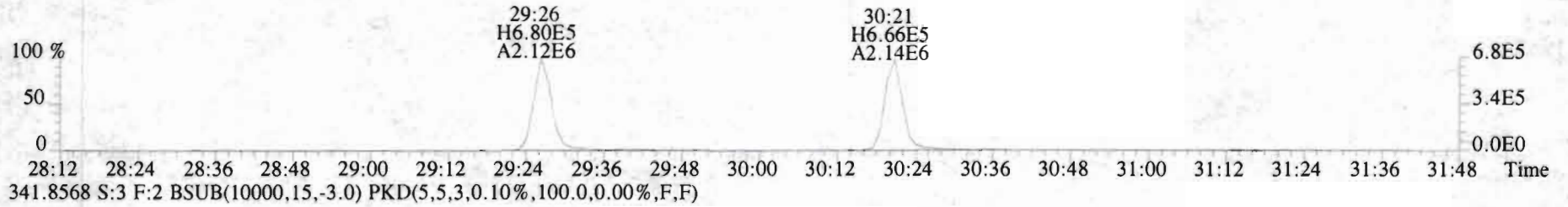
File:200116D1 #1-493 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory\_VG7 Text:B0A0001-BS1 OPR 10 Exp:OCDD\_DB5  
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:200116D1 #1-493 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#3 File Text:Vista Analytical Laboratory VG7 Text:BOA0001-BSI 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)

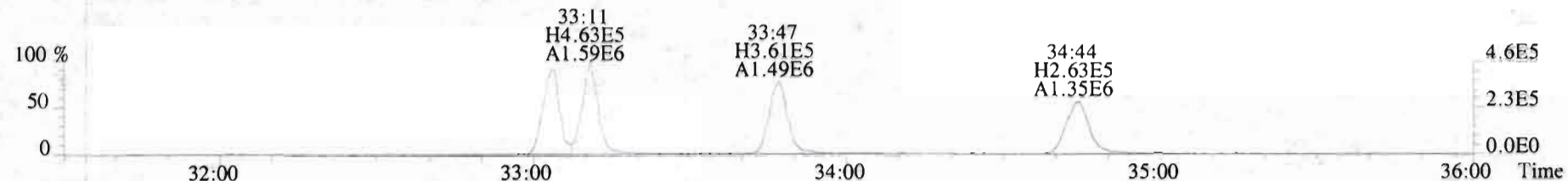


File:200116D1 #1-210 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:BOA0001-BS1 OPR 10 Exp:OCDD\_DB5  
 339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

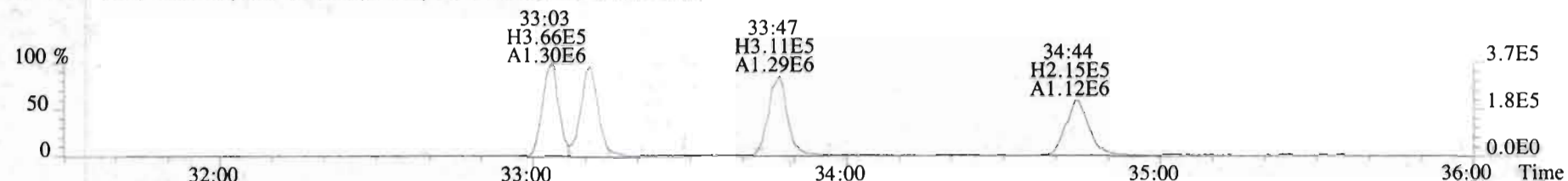




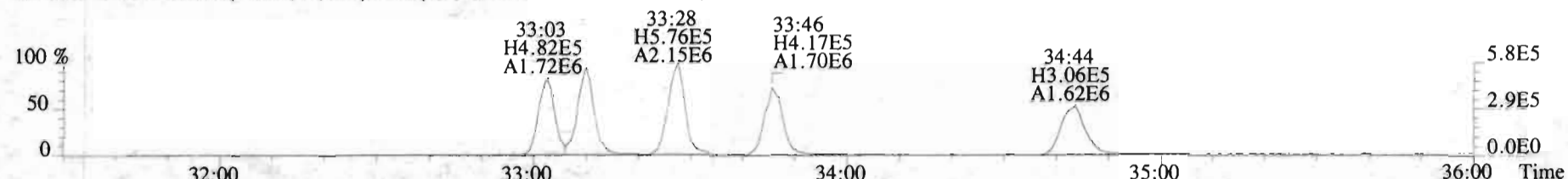
File:200116D1 #1-385 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:BOA0001-BS1 OPR 10 Exp:OCDD\_DB5  
 373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



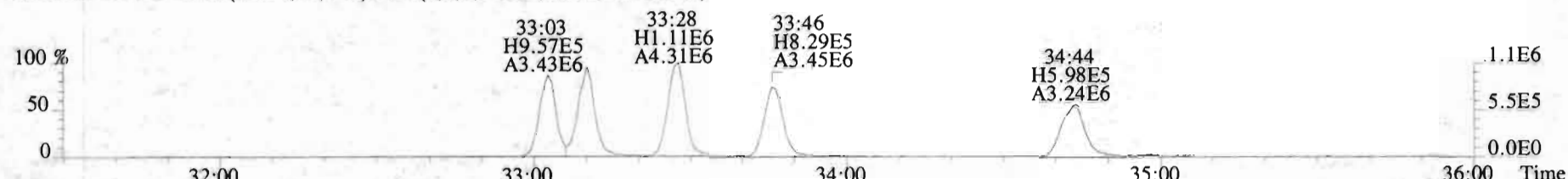
375.8178 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



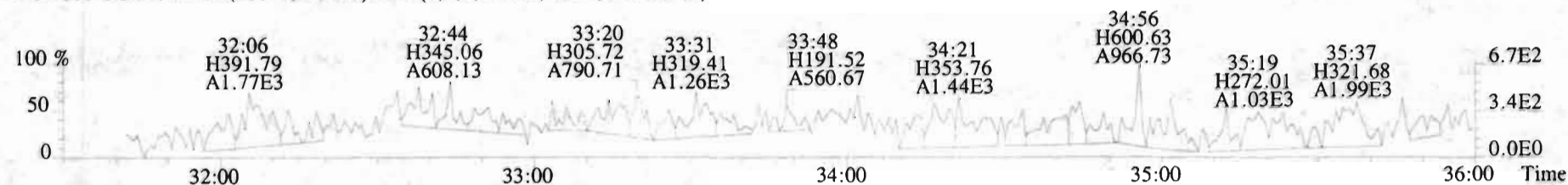
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



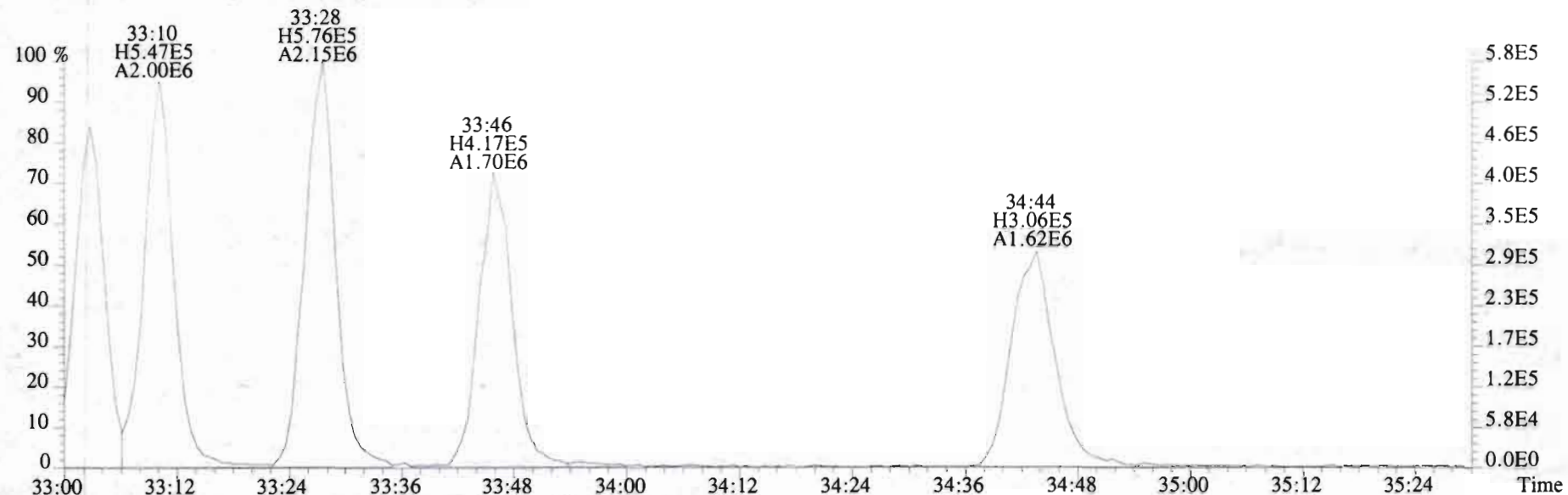
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



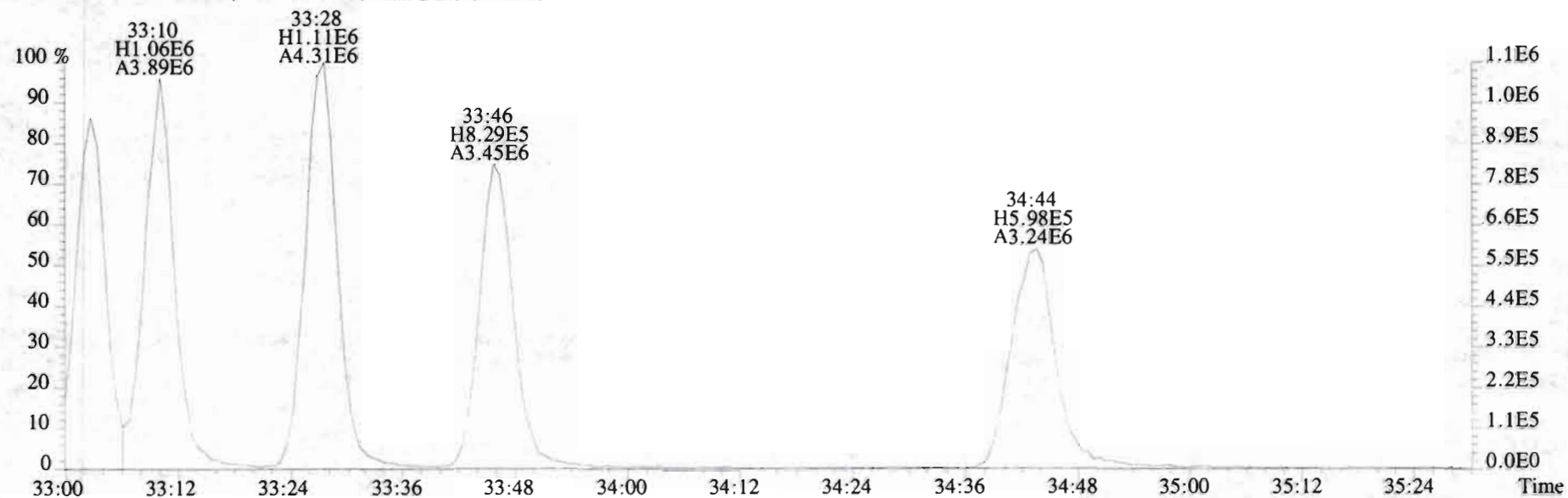
445.7555 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



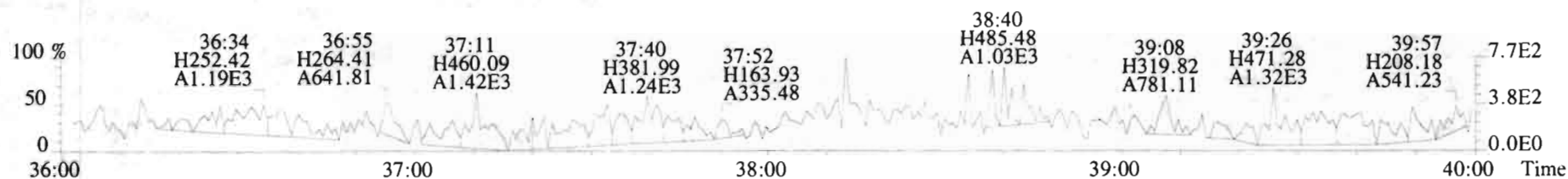
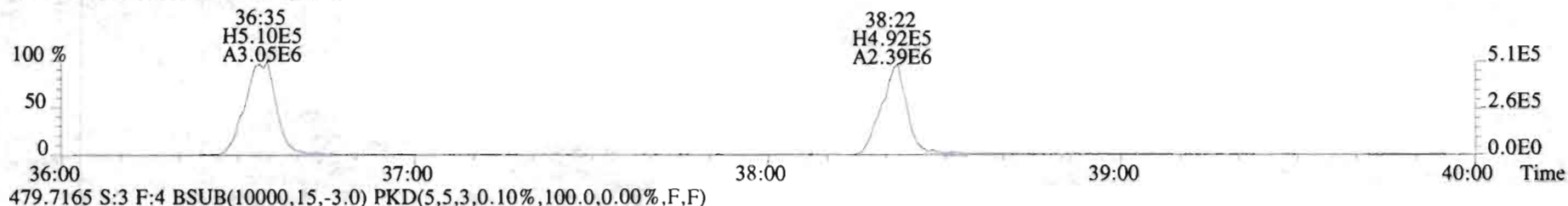
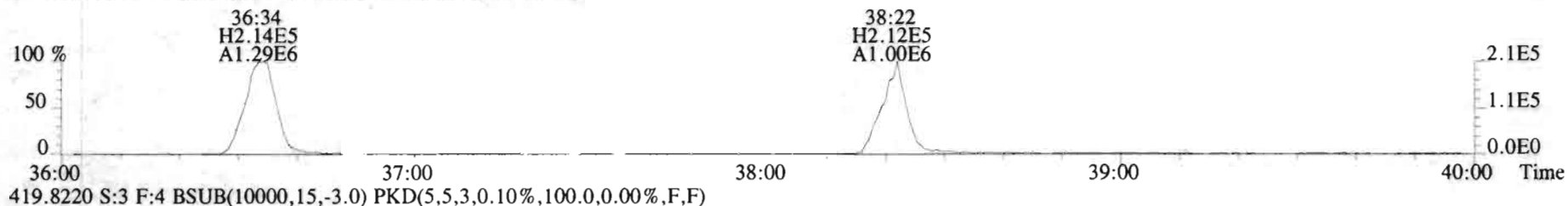
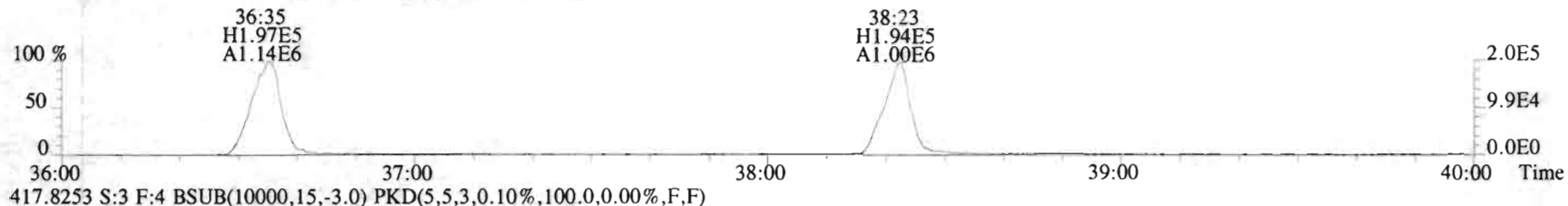
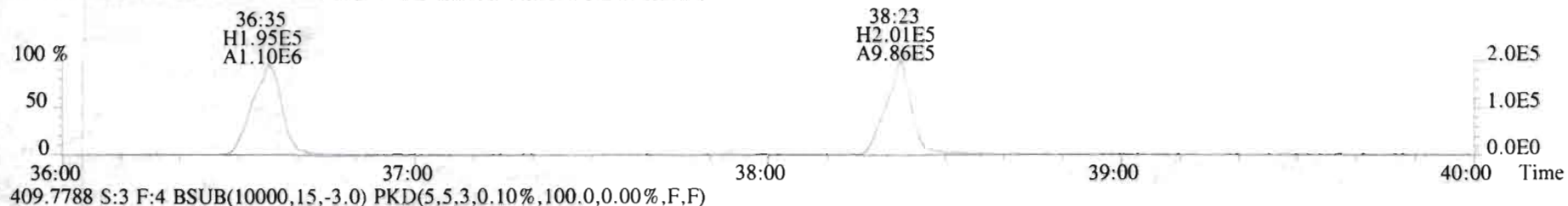
File:200116D1 #1-385 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:B0A0001-BS1 OPR 10 Exp:OCDD\_DB5  
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



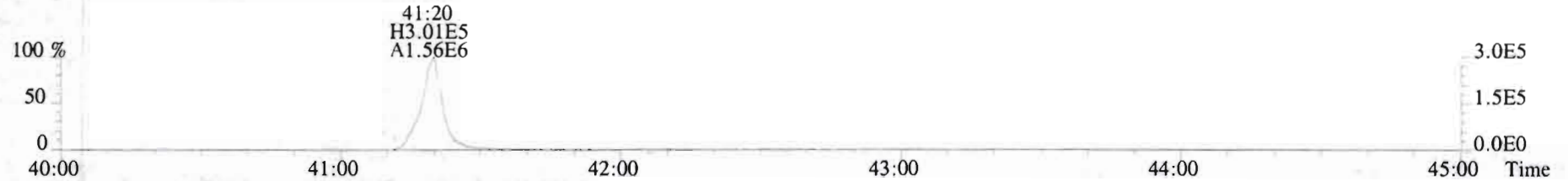
385.8610 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:200116D1 #1-355 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:BOA0001-BSI OPR 10 Exp:OCDD\_DB5  
 407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



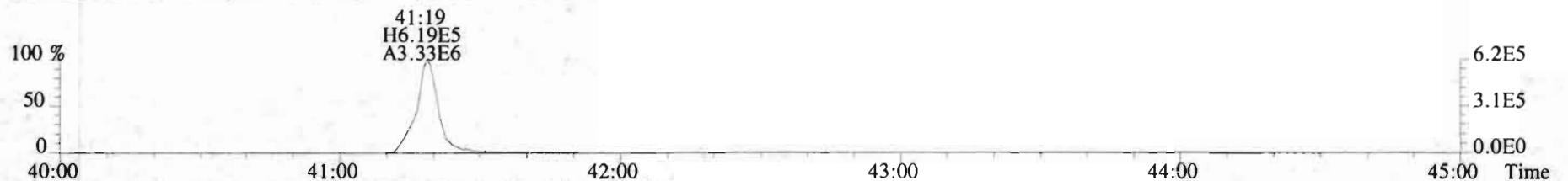
File:200116D1 #1-432 Acq:16-JAN-2020 12:57:38 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:BOA0001-BS1 OPR 10 Exp:OCDD\_DB5  
 441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



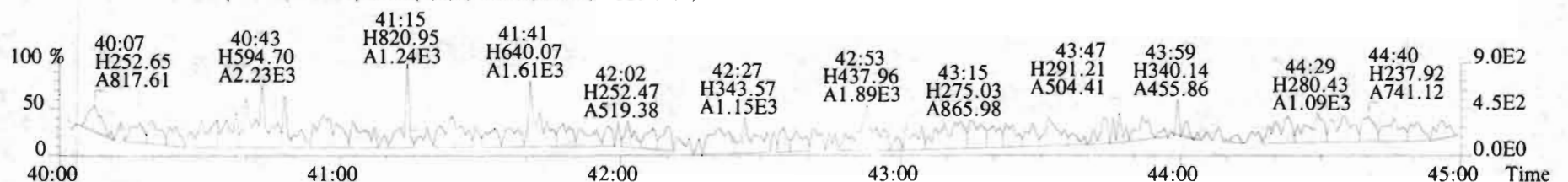
453.7831 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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



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



Dataset: U:\VG12.PRO\Results\200209R1\200209R1-5.qld

Last Altered: Monday, February 10, 2020 10:50:13 Pacific Standard Time  
Printed: Monday, February 10, 2020 10:53:49 Pacific Standard Time

GRB 02/10  
02/10/2020  
GRB  
C 02/10/2020

Method: Untitled 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD			NO	0.988	10.000	25.721		1.001				0.0690	
2	2 1,2,3,7,8-PeCDD			NO	0.972	10.000	30.719		1.001				0.0662	
3	3 1,2,3,4,7,8-HxCDD			NO	1.07	10.000	34.072		1.000				0.0570	
4	4 1,2,3,6,7,8-HxCDD			NO	0.921	10.000	34.158		1.000				0.0588	
5	5 1,2,3,7,8,9-HxCDD			NO	0.918	10.000	34.469		1.001				0.0678	
6	6 1,2,3,4,6,7,8-HpCDD			NO	0.923	10.000	37.950		1.000				0.108	
7	7 OCDD	1.11e3	0.84	NO	0.975	10.000	40.963	40.99	1.000	1.001	0.35454		0.106	0.355
8	8 2,3,7,8-TCDF			NO	0.802	10.000	24.802		1.001				0.0465	
9	9 1,2,3,7,8-PeCDF			NO	0.907	10.000	29.422		1.001				0.0420	
10	10 2,3,4,7,8-PeCDF			NO	0.952	10.000	30.422		1.001				0.0410	
11	11 1,2,3,4,7,8-HxCDF			NO	0.862	10.000	33.199		1.000				0.0475	
12	12 1,2,3,6,7,8-HxCDF			NO	0.841	10.000	33.326		1.000				0.0467	
13	13 2,3,4,6,7,8-HxCDF			NO	0.898	10.000	33.915		1.001				0.0488	
14	14 1,2,3,7,8,9-HxCDF	6.06e2	1.73	YES	0.858	10.000	34.775	34.79	1.000	1.000	0.13051		0.0291	0.107
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.851	10.000	36.559		1.001				0.0708	
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.980	10.000	38.556		1.000				0.0781	
17	17 OCDF	7.55e2	0.88	NO	0.806	10.000	41.144	41.17	1.000	1.001	0.23972		0.100	0.240
18	18 13C-2,3,7,8-TCDD	1.55e6	0.78	NO	1.20	10.000	25.675	25.69	1.026	1.026	175.66	87.8	0.202	
19	19 13C-1,2,3,7,8-PeCDD	1.20e6	0.63	NO	0.967	10.000	30.414	30.70	1.215	1.226	168.83	84.4	0.263	
20	20 13C-1,2,3,4,7,8-HxCDD	9.51e5	1.27	NO	0.874	10.000	34.053	34.06	1.014	1.014	158.52	79.3	0.279	
21	21 13C-1,2,3,6,7,8-HxCDD	1.13e6	1.24	NO	1.05	10.000	34.154	34.16	1.017	1.017	157.18	78.6	0.233	
22	22 13C-1,2,3,7,8,9-HxCDD	1.04e6	1.24	NO	0.974	10.000	34.456	34.44	1.026	1.025	155.96	78.0	0.250	
23	23 13C-1,2,3,4,6,7,8-HpCDD	8.03e5	1.05	NO	0.747	10.000	38.016	37.94	1.132	1.130	156.64	78.3	0.269	
24	24 13C-OCDD	1.29e6	0.89	NO	0.707	10.000	40.904	40.96	1.218	1.220	265.92	66.5	0.365	
25	25 13C-2,3,7,8-TCDF	2.14e6	0.78	NO	1.07	10.000	24.857	24.78	0.993	0.990	181.71	90.9	0.328	
26	26 13C-1,2,3,7,8-PeCDF	1.78e6	1.58	NO	1.00	10.000	29.187	29.40	1.166	1.175	160.58	80.3	0.312	
27	27 13C-2,3,4,7,8-PeCDF	1.74e6	1.58	NO	0.962	10.000	30.391	30.39	1.214	1.214	164.18	82.1	0.325	
28	28 13C-1,2,3,4,7,8-HxCDF	1.23e6	0.51	NO	1.05	10.000	33.180	33.20	0.988	0.989	170.85	85.4	0.301	
29	29 13C-1,2,3,6,7,8-HxCDF	1.36e6	0.52	NO	1.19	10.000	33.281	33.32	0.991	0.992	166.08	83.0	0.265	
30	30 13C-2,3,4,6,7,8-HxCDF	1.26e6	0.52	NO	1.07	10.000	33.889	33.88	1.009	1.009	172.39	86.2	0.296	
31	31 13C-1,2,3,7,8,9-HxCDF	1.08e6	0.54	NO	0.922	10.000	34.792	34.78	1.036	1.035	171.11	85.6	0.342	

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-5.qld

Last Altered: Monday, February 10, 2020 10:50:13 Pacific Standard Time

Printed: Monday, February 10, 2020 10:53:49 Pacific Standard Time

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	9.10e5	0.45	NO	0.767	10.000	36.538	36.52	1.088	1.088	172.80	86.4	0.350	
33	13C-1,2,3,4,7,8,9-HpCDF	6.64e5	0.45	NO	0.552	10.000	38.553	38.56	1.148	1.148	175.15	87.6	0.486	
34	13C-OCDF	1.56e6	0.88	NO	0.789	10.000	41.139	41.14	1.225	1.225	288.85	72.2	0.309	
35	37Cl-2,3,7,8-TCDD	6.09e5			1.18	10.000	25.708	25.70	1.027	1.027	70.155	87.7	0.0471	
36	13C-1,2,3,4-TCDD	1.48e6	0.80	NO	1.00	10.000	25.080	25.03	1.000	1.000	200.00	100	0.243	
37	13C-1,2,3,4-TCDF	2.21e6	0.79	NO	1.00	10.000	23.420	23.33	1.000	1.000	200.00	100	0.349	
38	13C-1,2,3,4,6,9-HxCDF	1.37e6	0.52	NO	1.00	10.000	33.520	33.58	1.000	1.000	200.00	100	0.316	
39	Total Tetra-Dioxins				0.988	10.000	24.620		0.000				0.0442	
40	Total Penta-Dioxins				0.972	10.000	29.960		0.000				0.0282	
41	Total Hexa-Dioxins				0.921	10.000	33.635		0.000				0.0292	
42	Total Hepta-Dioxins				0.923	10.000	37.640		0.000				0.0631	
43	Total Tetra-Furans				0.802	10.000	23.610		0.000				0.0201	
44	1st Func. Penta-Furans				0.907	10.000	27.090		0.000				0.0153	
45	Total Penta-Furans				0.907	10.000	29.275		0.000				0.0203	
46	Total Hexa-Furans				0.898	10.000	33.555		0.000		0.00000		0.0284	0.107
47	Total Hepta-Furans				0.851	10.000	37.835		0.000				0.0374	

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-5.qld

Last Altered: Monday, February 10, 2020 10:50:13 Pacific Standard Time

Printed: Monday, February 10, 2020 10:53:49 Pacific Standard Time

Method: Untitled 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

Tetra-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1											

Penta-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1											

Hexa-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1											

Hepta-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1											

Tetra-Furans

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1											

Penta-Furans function 1

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1											

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-5.qld

Last Altered: Monday, February 10, 2020 10:50:13 Pacific Standard Time

Printed: Monday, February 10, 2020 10:53:49 Pacific Standard Time

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

Penta-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

Hexa-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,7,8,9-HxCDF	34.79	4.677e3	5.324e3	3.837e2	2.224e2	1.73	YES	6.061e2	0.00000	0.10725	0.0391

Hepta-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

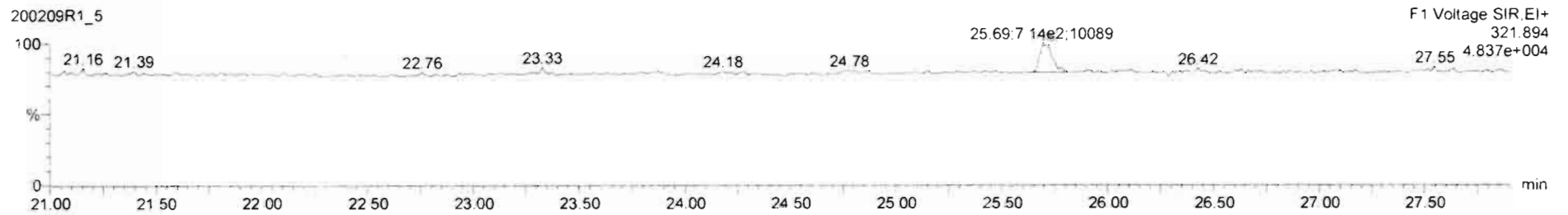


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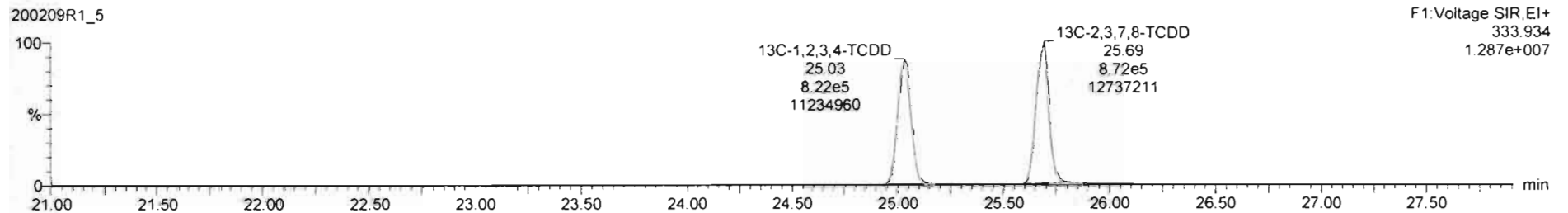
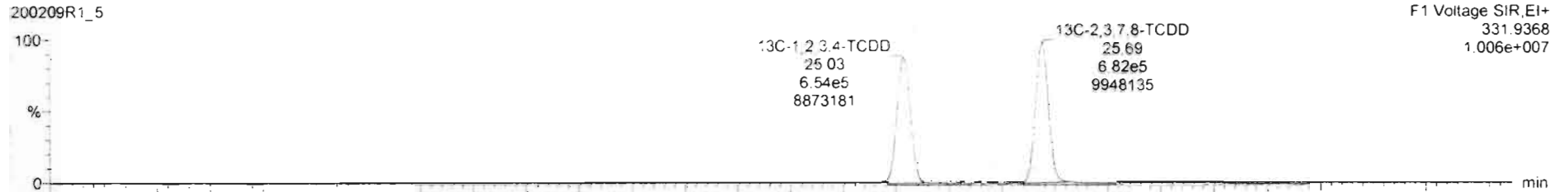
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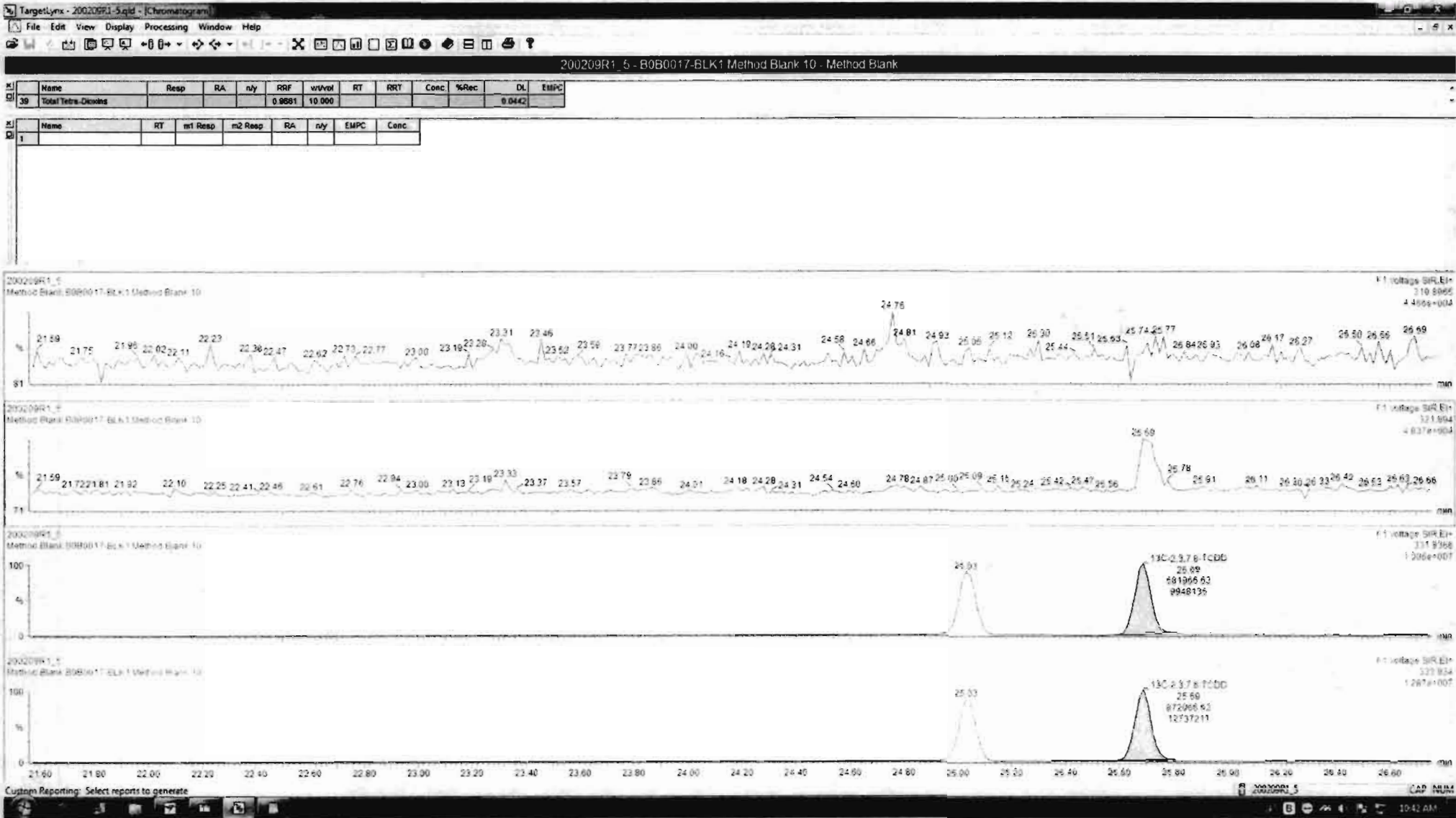
Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

2,3,7,8-TCDD



13C-2,3,7,8-TCDD





Dataset: Untitled

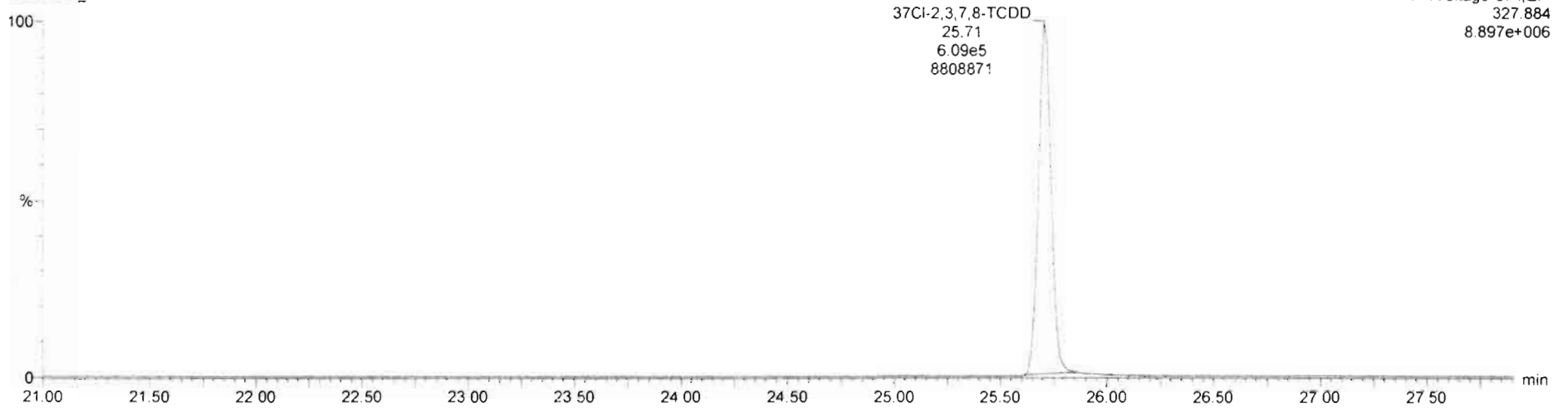
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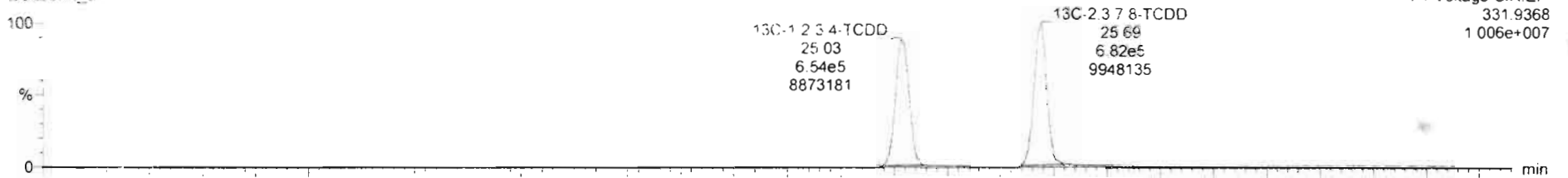
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200209R1\_5

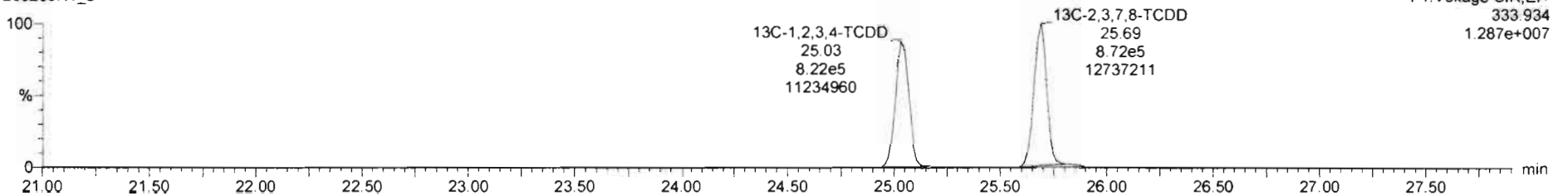


13C-1,2,3,4-TCDD

200209R1\_5



200209R1\_5



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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

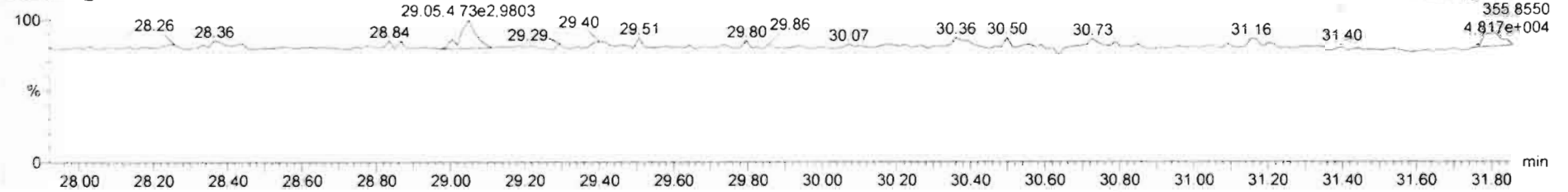
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1,2,3,7,8-PeCDD

200209R1\_5

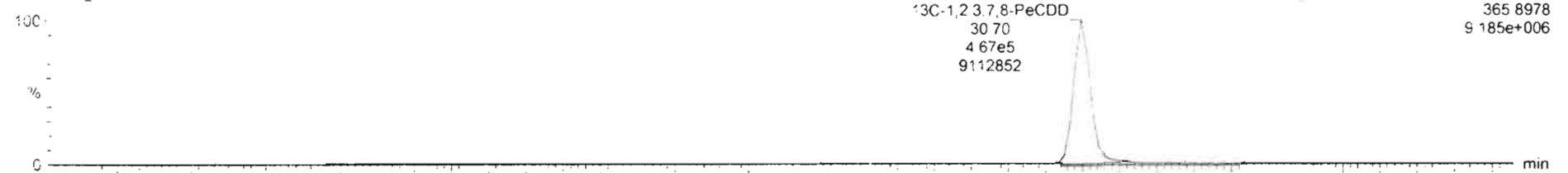


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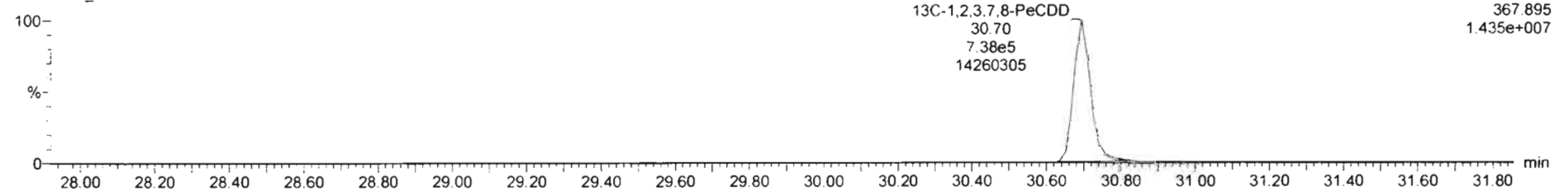


13C-1,2,3,7,8-PeCDD

200209R1\_5

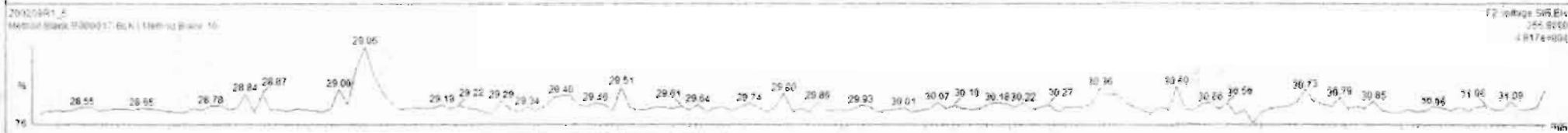
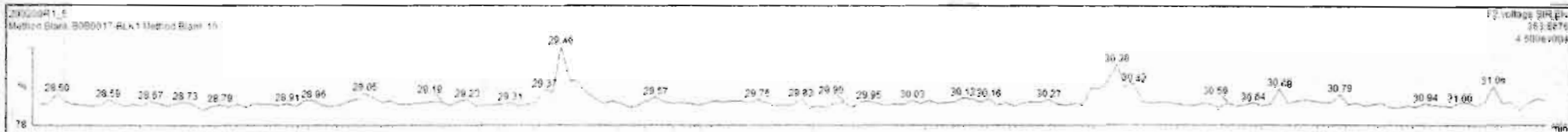


200209R1\_5



Name	Resp	RA	rvy	RRF	wt/vol	RT	RRT	Conc	%Rec	DL	EMPC
30 Total Tetra-Cloxa				0.9851	10.000					0.0442	

Name	RT	m1 Resp	m2 Resp	RA	rvy	EMPC	Conc
1							



Dataset: Untitled

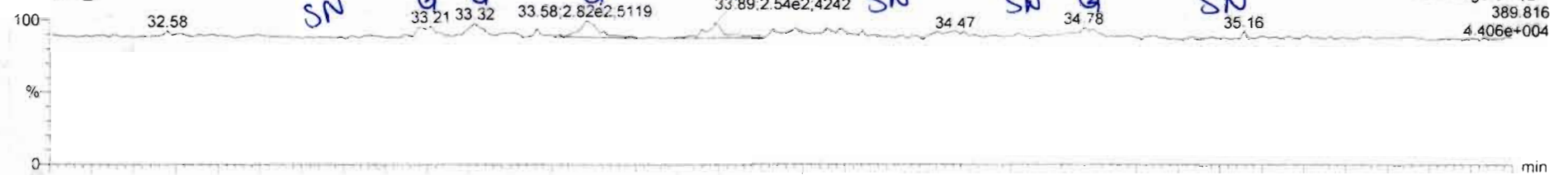
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

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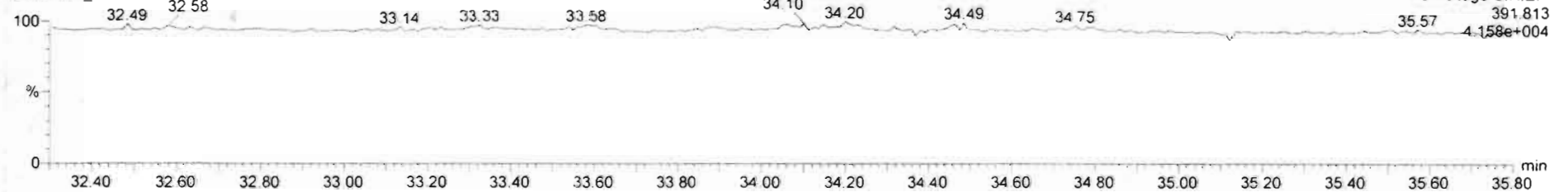
1,2,3,4,7,8-HxCDD

200209R1\_5



F3: Voltage SIR, EI+  
389.816  
4.406e+004

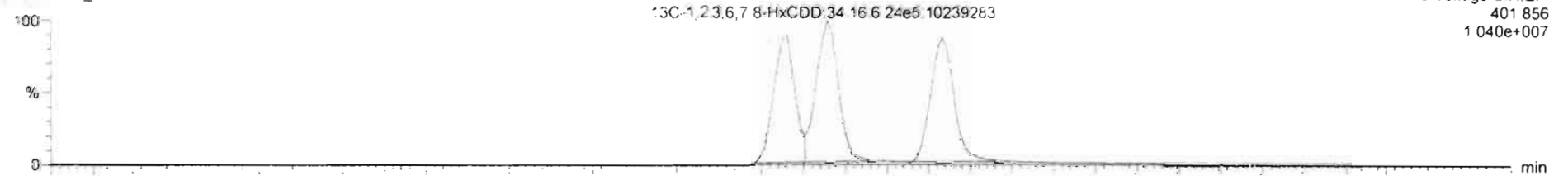
200209R1\_5



F3: Voltage SIR, EI+  
391.813  
4.158e+004

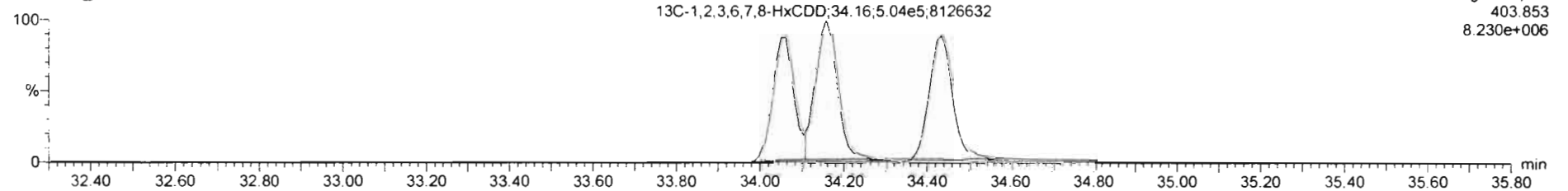
13C-1,2,3,4,7,8-HxCDD

200209R1\_5

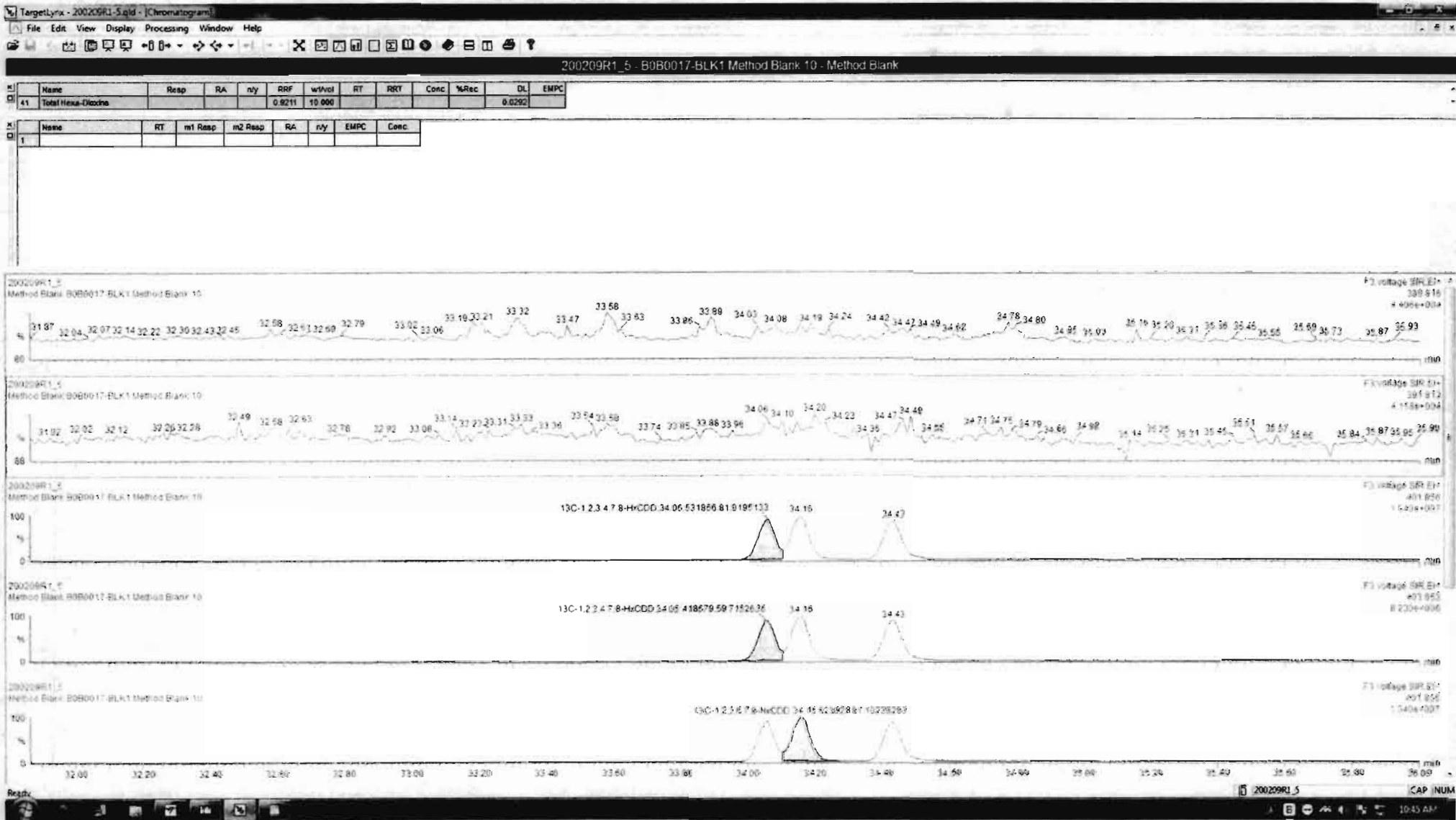


F3: Voltage SIR, EI+  
401.856  
1.040e+007

200209R1\_5



F3: Voltage SIR, EI+  
403.853  
8.230e+006



Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

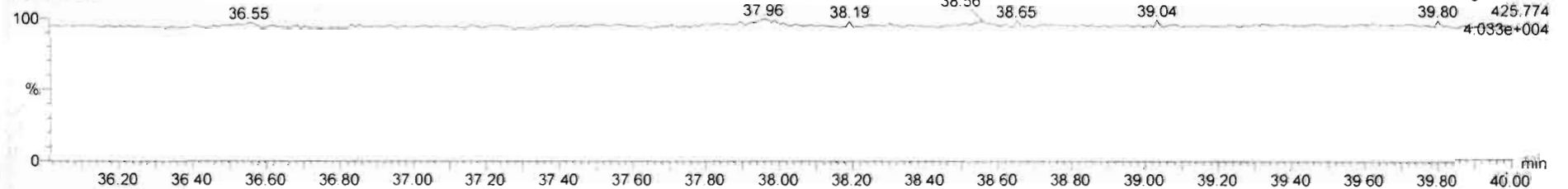
1,2,3,4,6,7,8-HpCDD

200209R1\_5



F4: Voltage SIR, EI+  
423.777  
4.339e+004

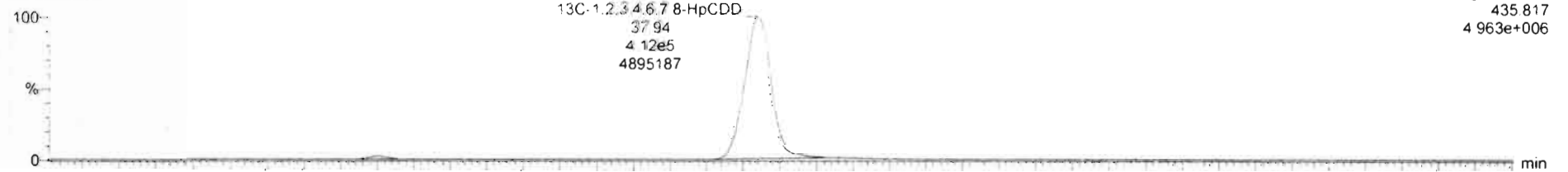
200209R1\_5



F4: Voltage SIR, EI+  
425.774  
4.033e+004

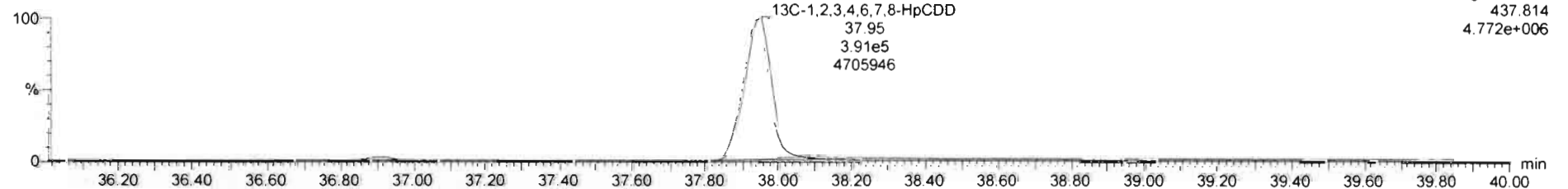
13C-1,2,3,4,6,7,8-HpCDD

200209R1\_5



F4: Voltage SIR, EI+  
435.817  
4.963e+006

200209R1\_5

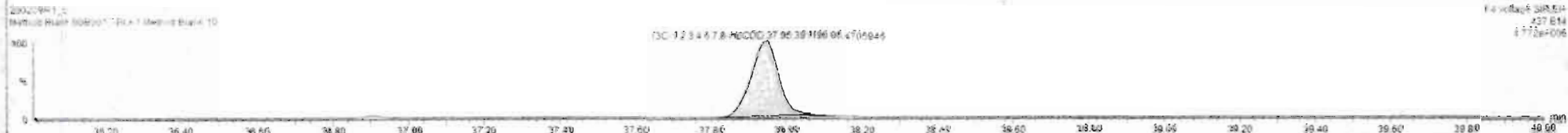
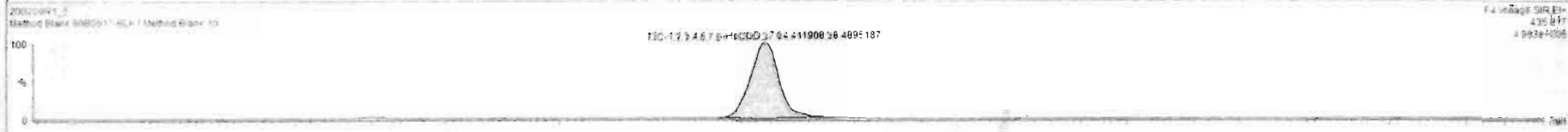
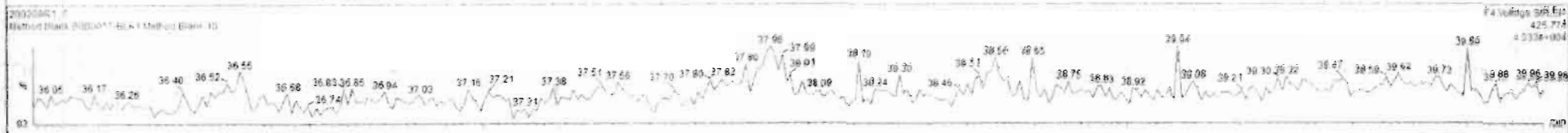
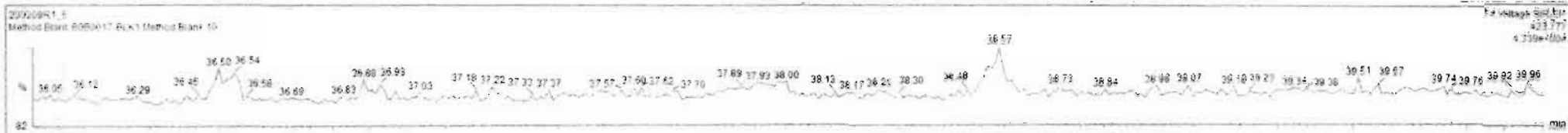


F4: Voltage SIR, EI+  
437.814  
4.772e+006



#	Name	Resp	RA	n/y	RRF	wt/Vol	RT	RRT	Conc	%Rec	DL	EMPC
41	Total Hexa-Dioxins				0.9211	10.000					0.0292	

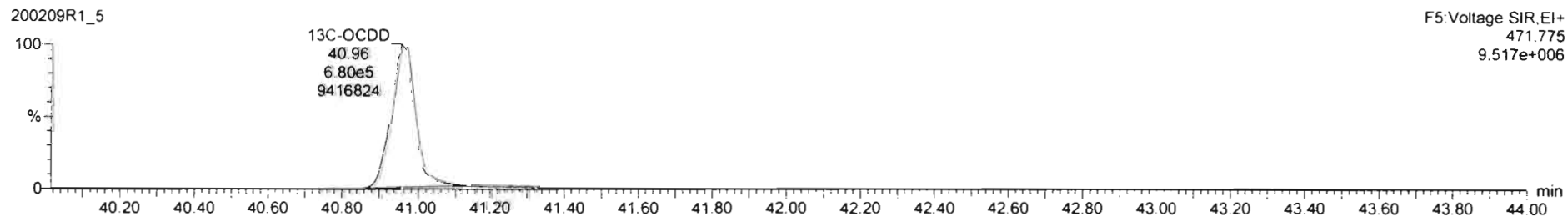
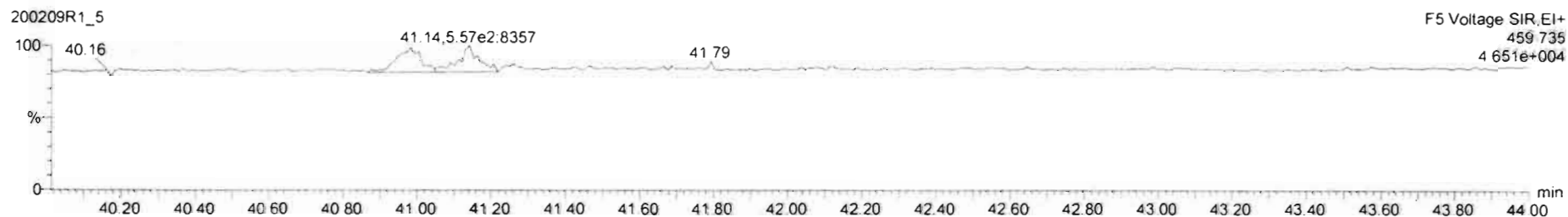
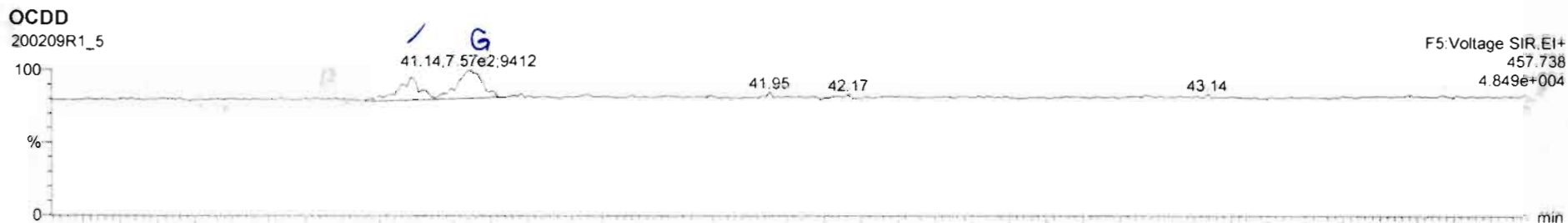
#	Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc
1								



Dataset: Untitled

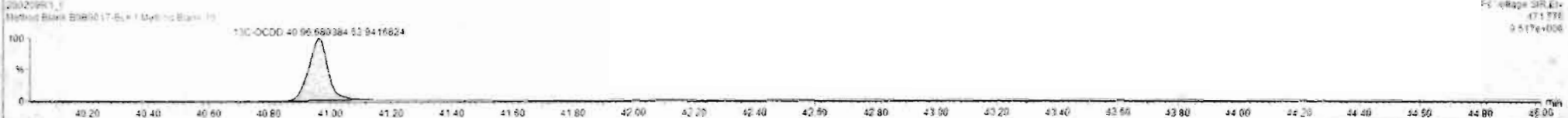
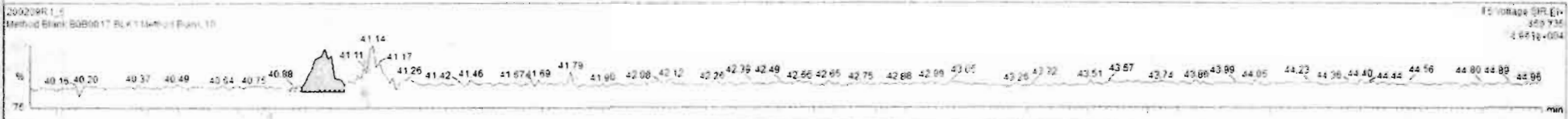
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Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank



200209R1\_5 - B0B0017-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	nly	RRF	w%vol	RT	RRT	Conc	%Rec	QL	EMPC
1	2,3,7,8-TCDD			NO	0.9581	10.000					0.0660	
2	1,2,3,7,8-PeCDD			NO	0.9723	10.000					0.0662	
3	1,2,3,4,7,8-HxCDD			NO	1.0708	10.000					0.0670	
4	1,2,3,6,7,8-HxCDD			NO	0.9211	10.000					0.0588	
5	1,2,3,7,8,9-HxCDD			NO	0.9152	10.000					0.0678	
6	1,2,3,4,6,7,8-HpCDD			NO	0.9231	10.000					0.108	
7	OCDD	1.11e3	0.54	NO	0.9746	10.000	40.98	1.001	0.355		0.108	0.356
8	2,3,7,8-TCDF			NO	0.8220	10.000					0.0465	
9	1,2,3,7,8-PeCDF			NO	0.9074	10.000					0.0420	
10	2,3,4,7,8-PeCDF			NO	0.9516	10.000					0.0410	
11	1,2,3,4,7,8-HxCDF			NO	0.8623	10.000					0.0475	
12	1,2,3,6,7,8-HxCDF			NO	0.6414	10.000					0.0467	
13	2,3,4,6,7,8-HxCDF			NO	0.8982	10.000					0.0488	
14	1,2,3,7,8,9-HxCDF			NO	0.8578	10.000					0.0653	
15	1,2,3,4,6,7,8-HpCDF			NO	0.8511	10.000					0.0708	
16	1,2,3,4,7,8,9-HpCDF			NO	0.9759	10.000					0.0781	
17	OCDF			NO	0.8055	10.000					0.100	

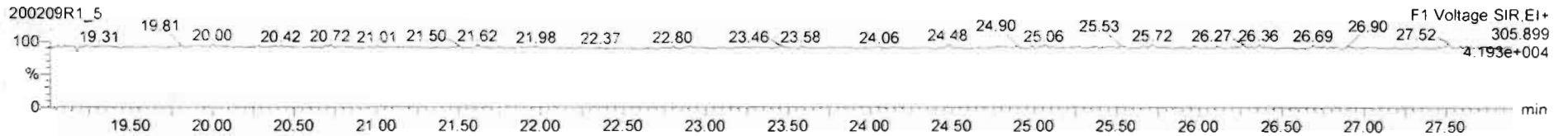
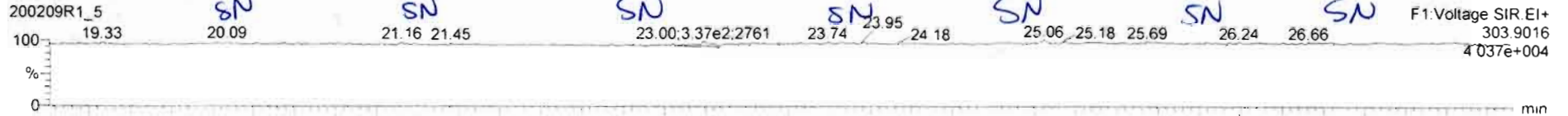


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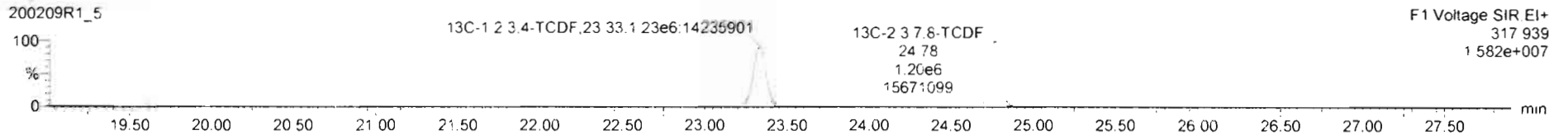
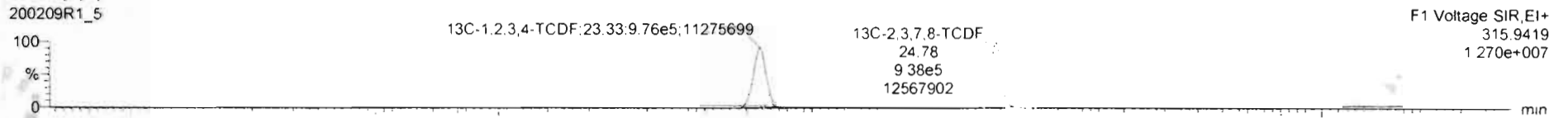
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Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

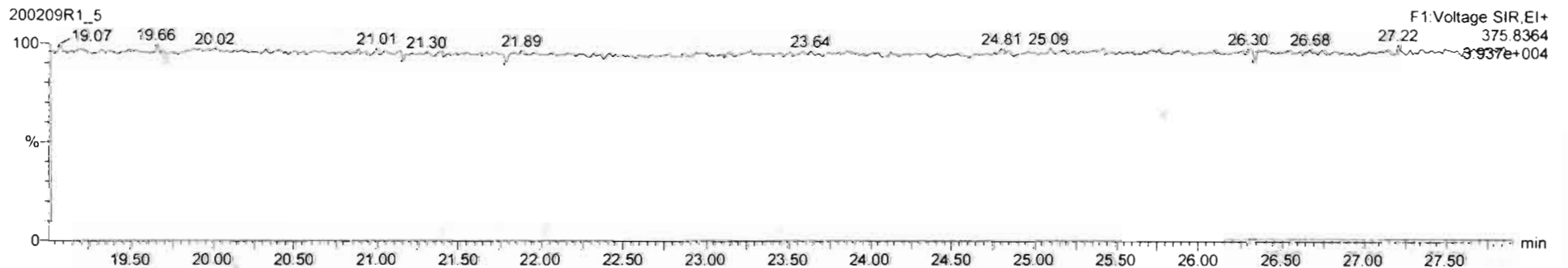
**2,3,7,8-TCDF**



**13C-2,3,7,8-TCDF**

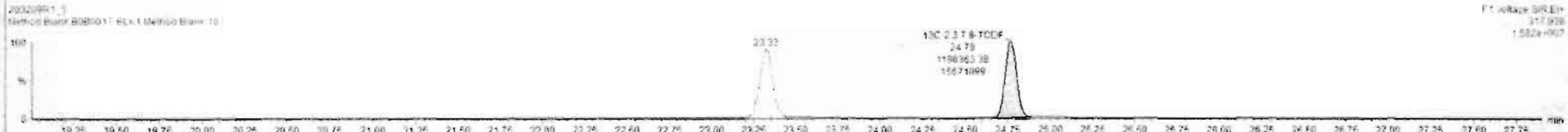
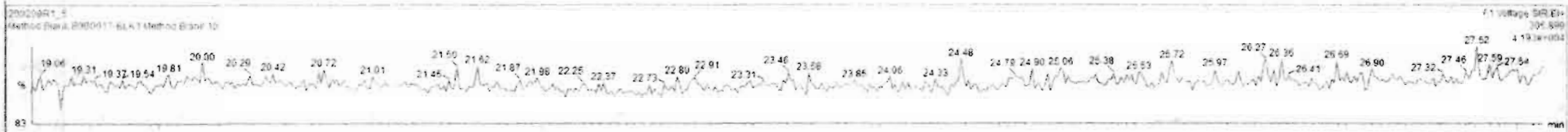


**DPE1**



Name	Resp	RA	n/y	RRF	wtVol	RT	RRT	Conc	%Rec	DL	EMPC
43 Total Tetra-Furane				0.0020	10.000					0.0201	

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc
1							



Dataset: Untitled

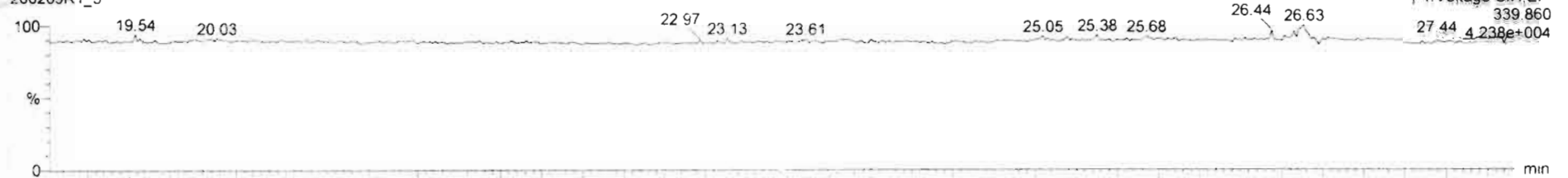
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

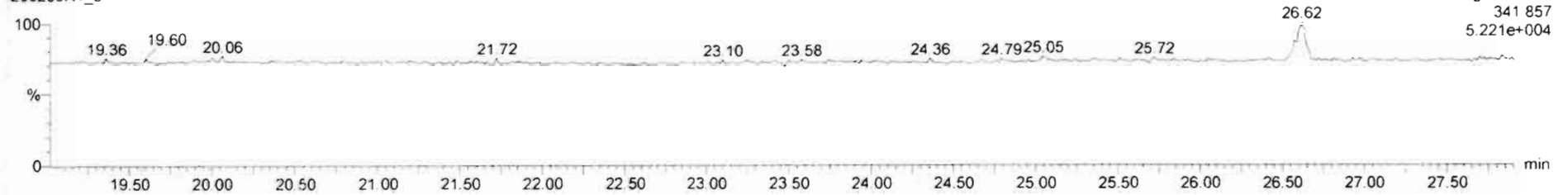
Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

1st Func. Penta-Furans

200209R1\_5

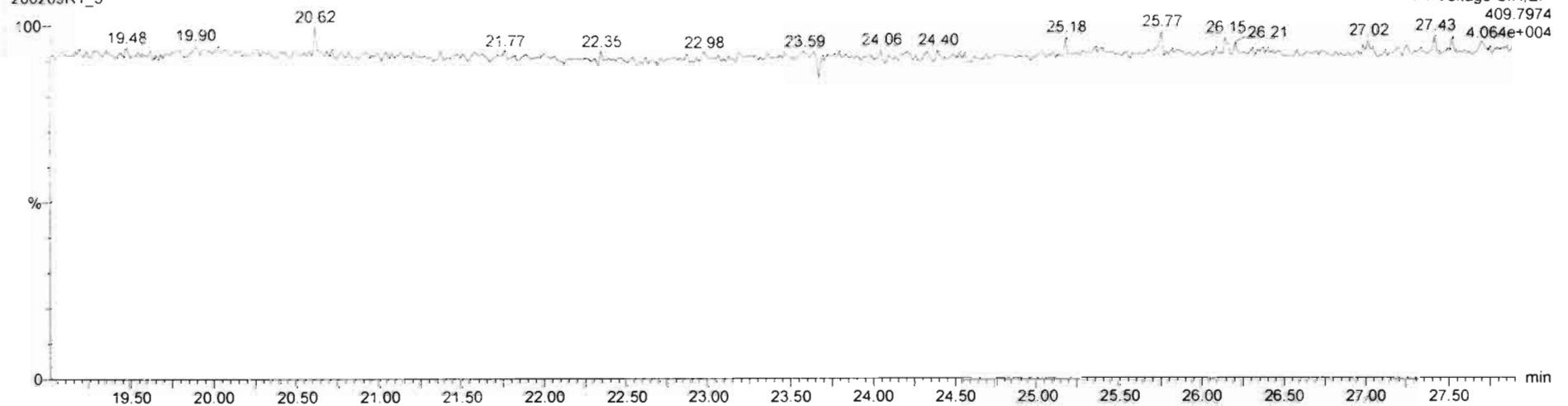


200209R1\_5



DPE6

200209R1\_5

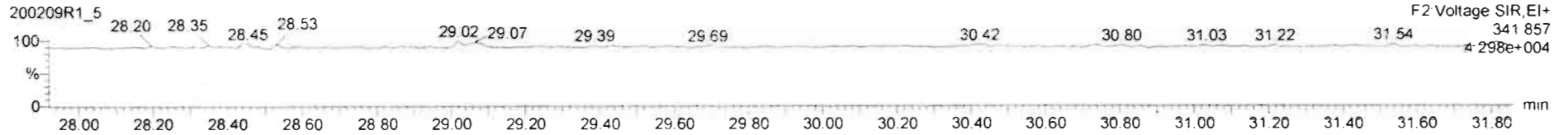
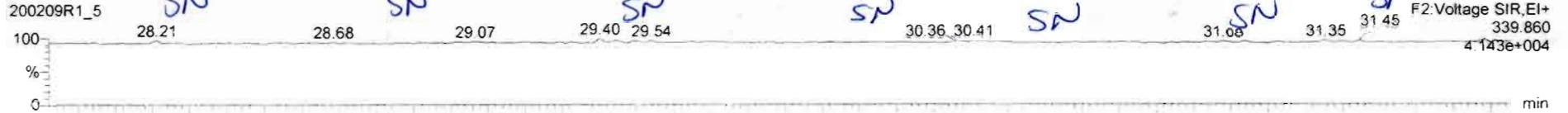


Dataset: Untitled

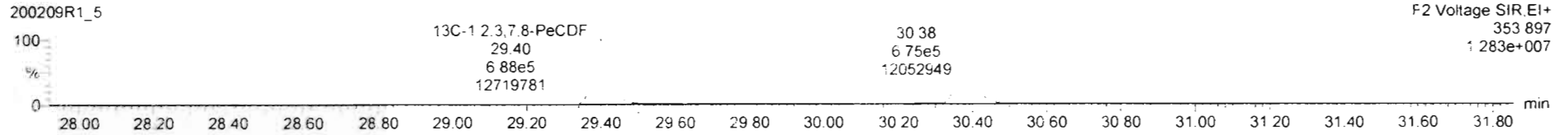
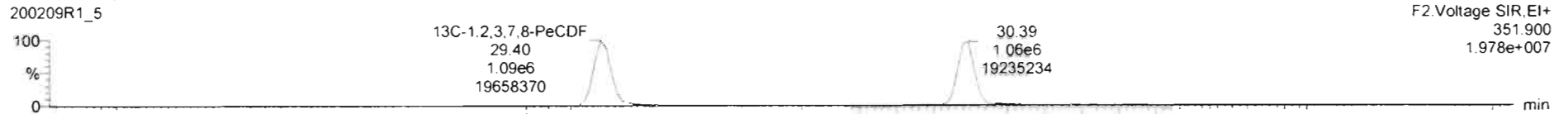
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

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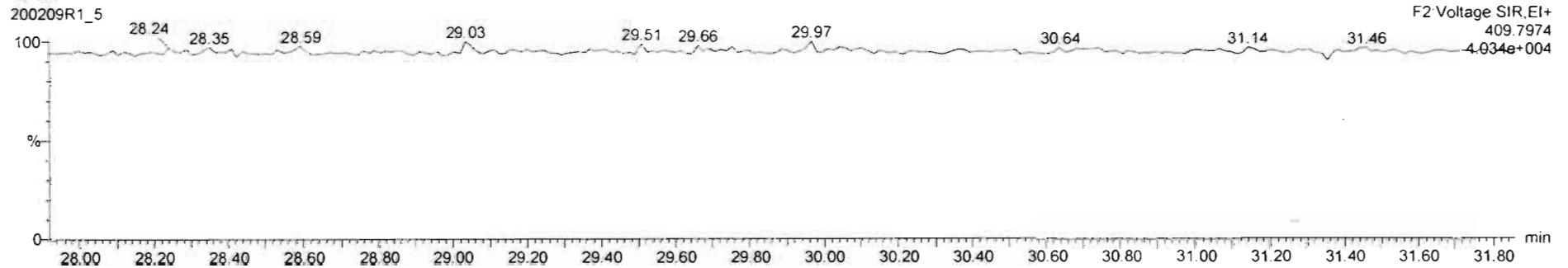
1,2,3,7,8-PeCDF

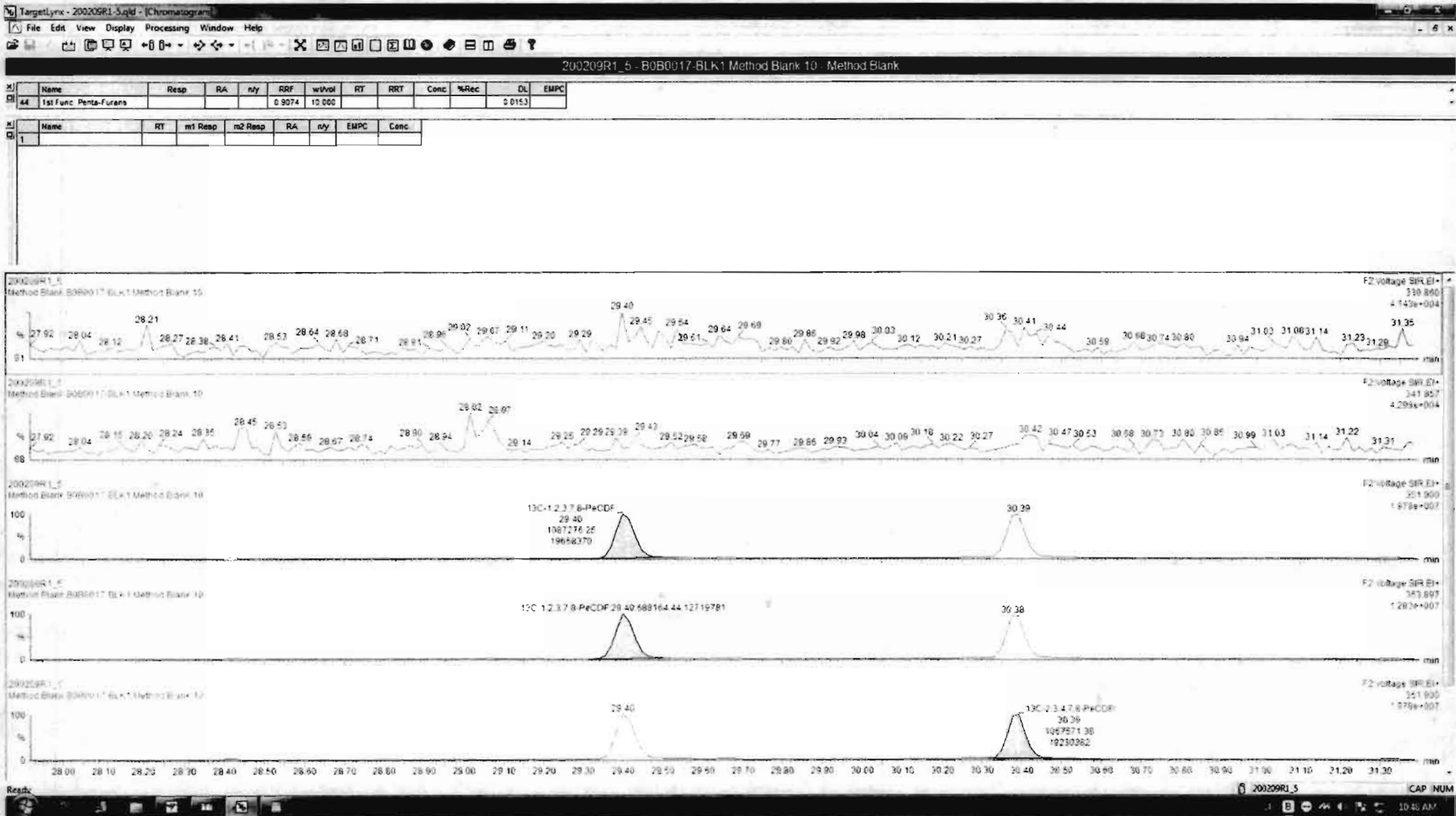


13C-1,2,3,7,8-PeCDF



DPE2





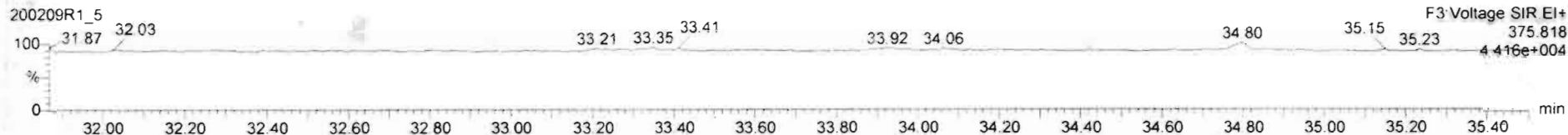
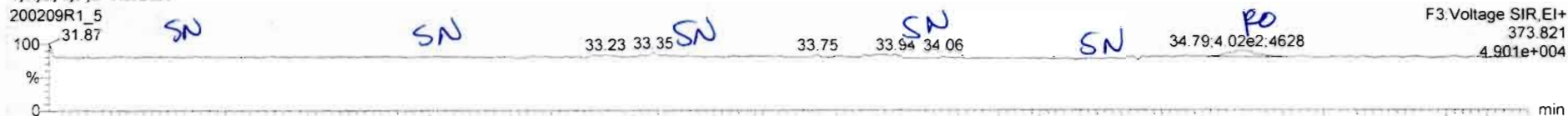


Dataset: Untitled

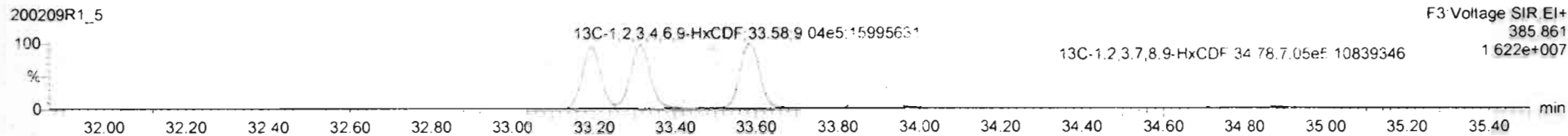
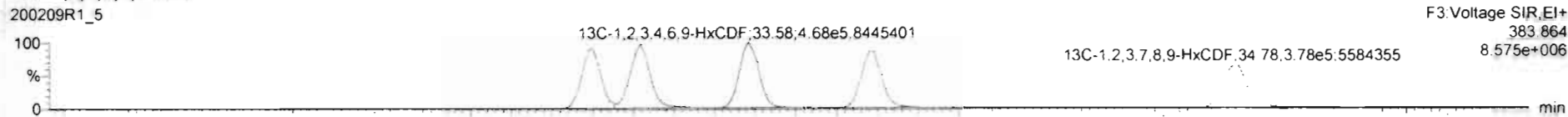
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

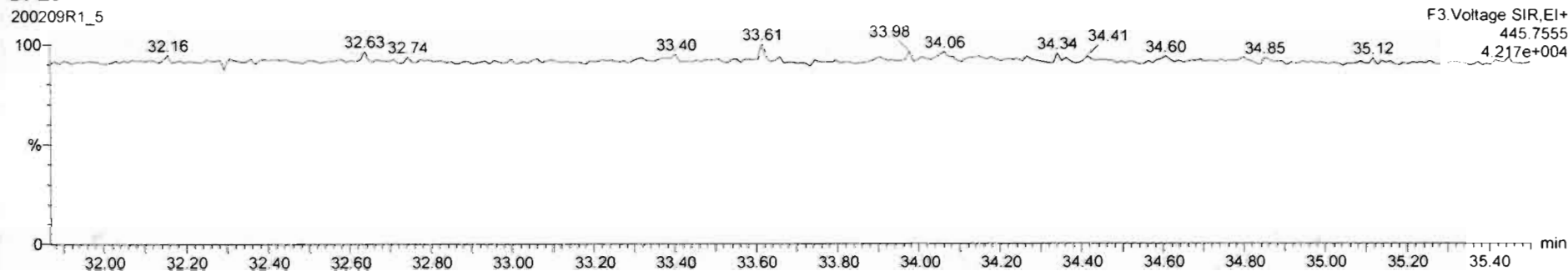
1,2,3,4,7,8-HxCDF

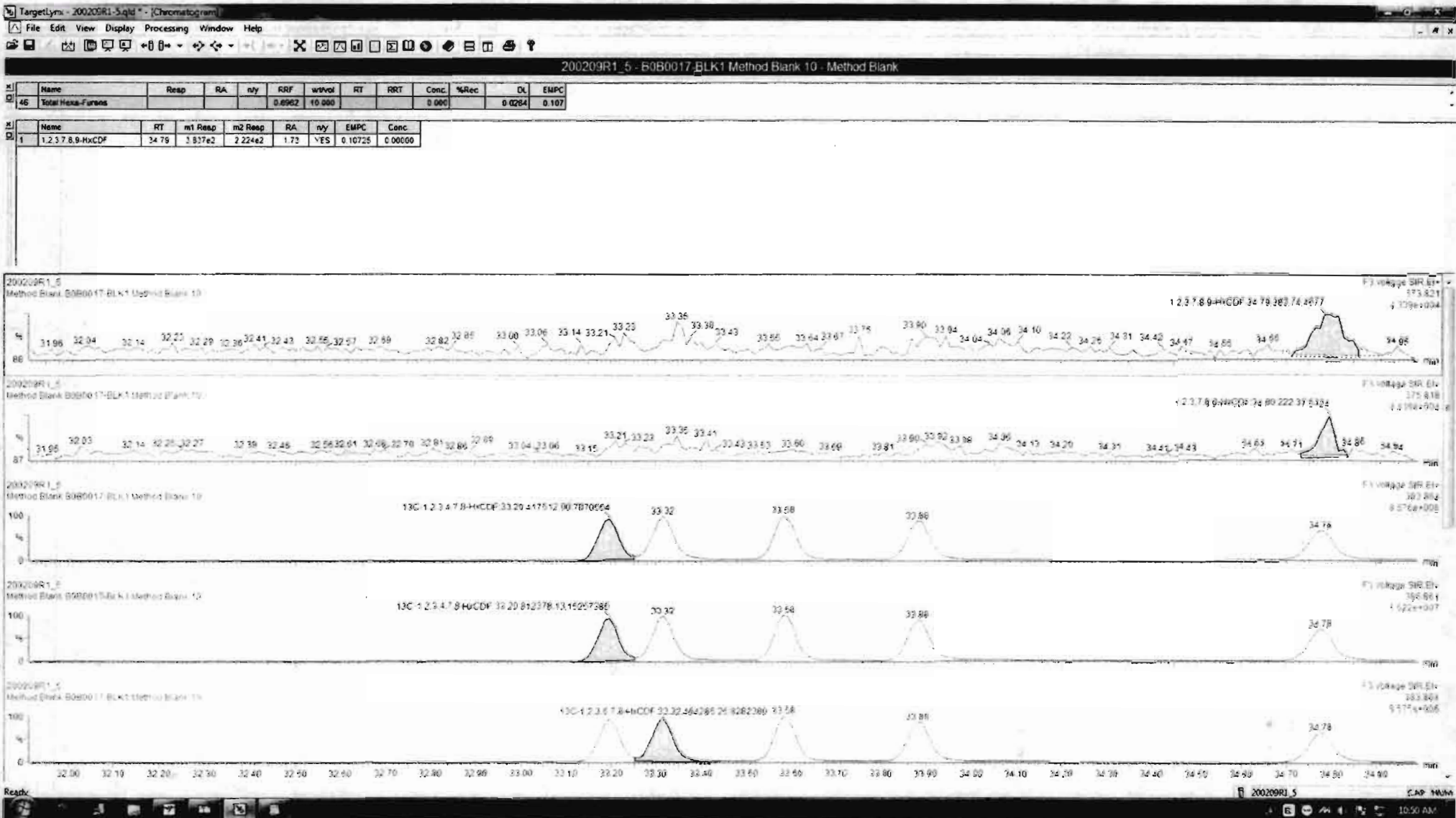


13C-1,2,3,4,7,8-HxCDF



DPE3





Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

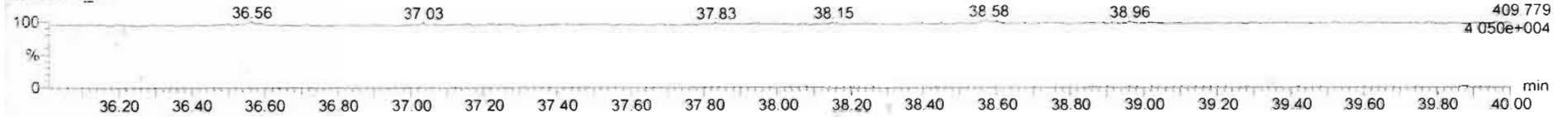
Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

1,2,3,4,6,7,8-HpCDF

200209R1\_5

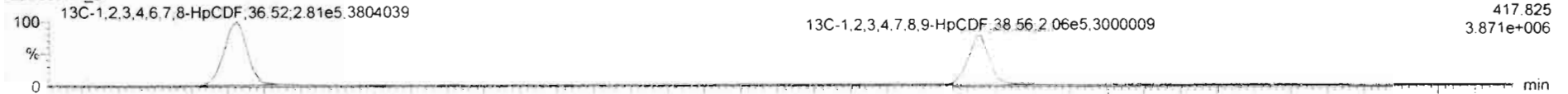


200209R1\_5

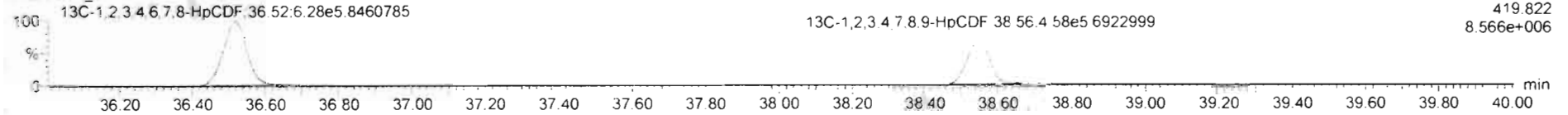


13C-1,2,3,4,6,7,8-HpCDF

200209R1\_5

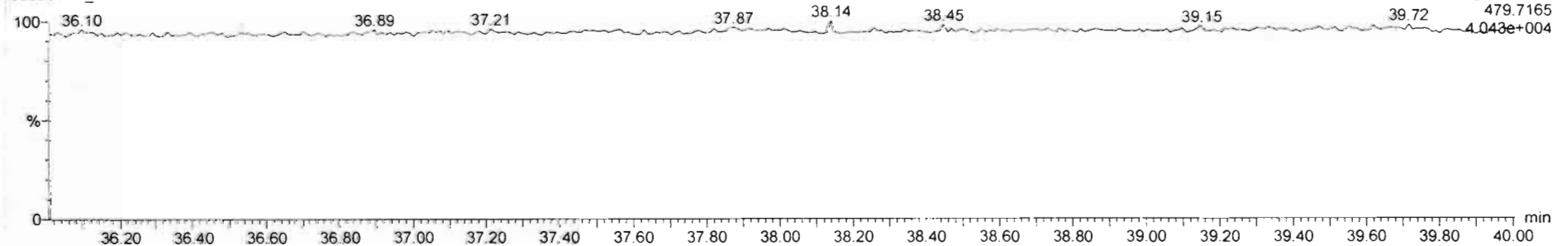


200209R1\_5



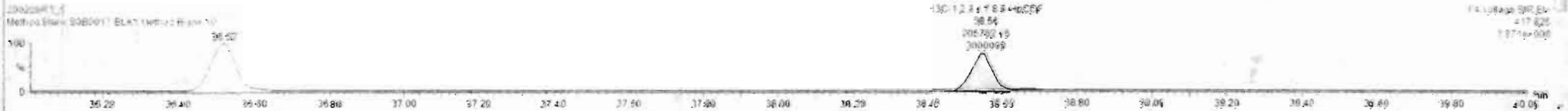
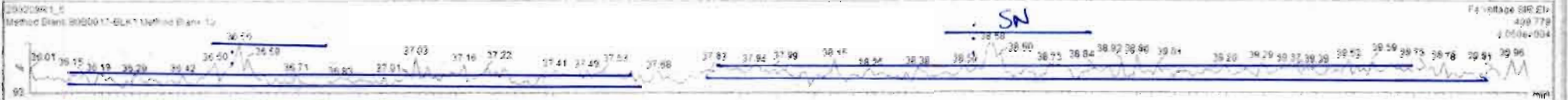
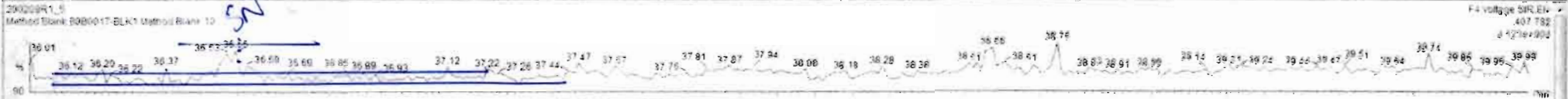
DPE4

200209R1\_5



Name	Resp	RA	nly	RRF	wtVol	RT	RRT	Conc	%Rec	DL	EMPC
46 Total Hexa-Furans				0.8982	10.000			0.000		0.0284	0.187

Name	RT	m1 Resp	m2 Resp	RA	nly	EMPC	Conc
1							

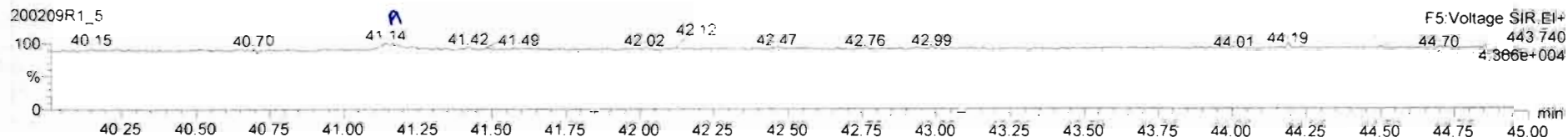


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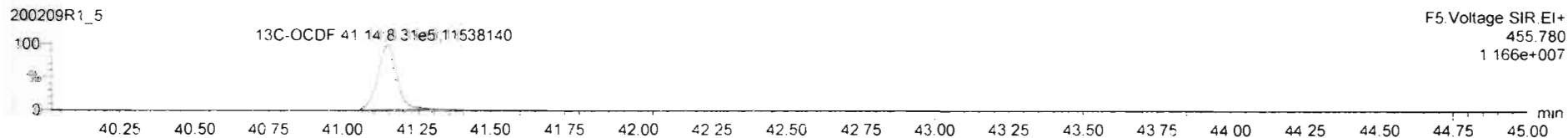
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

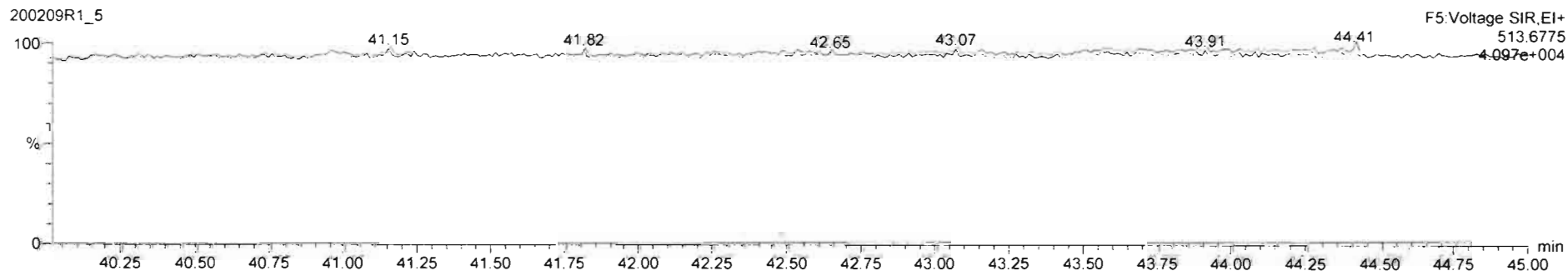
OCDF



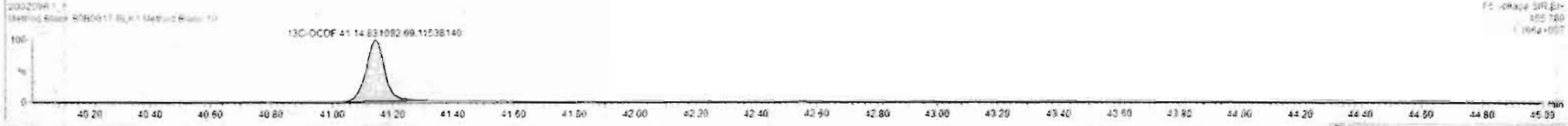
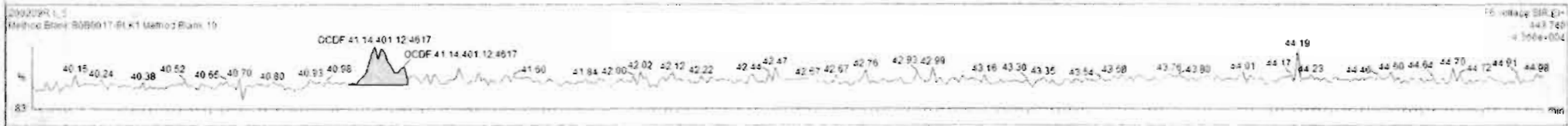
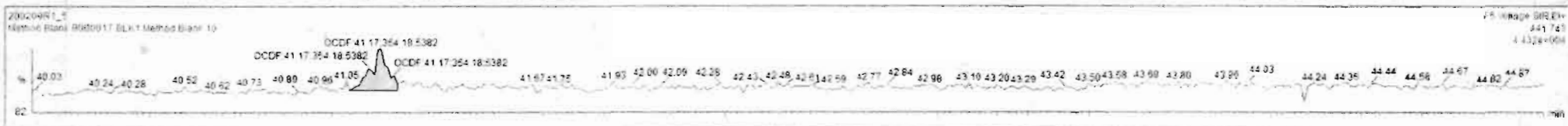
13C-OCDF



DPE5



KI	Name	Resp	RA	Rely	RRF	wtVol	RT	RRT	Conc	%Rec	DL	EMPC
1	2,3,7,8-TCDD			NO	0.9861	10.000					0.0690	
2	1,2,3,7,8-PeCDD			NO	0.8723	10.000					0.0662	
3	1,2,3,4,7,8-HxCDD			NO	1.0706	10.000					0.0570	
4	1,2,3,6,7,8-HxCDD			NO	0.9211	10.000					0.0588	
5	1,2,3,7,8,9-HxCDD			NO	0.9182	10.000					0.0678	
6	1,2,3,4,6,7,8-HpCDD			NO	0.9231	10.000					0.108	
7	OCDF	1.11e3	0.84	NO	0.9746	10.000	40.98	1.001	0.355		0.106	0.354
8	2,3,7,8-TCDF			NO	0.8020	10.000					0.0465	
9	1,2,3,7,8-PeCDF			NO	0.8074	10.000					0.0420	
10	2,3,4,7,8-PeCDF			NO	0.9516	10.000					0.0410	
11	1,2,3,4,7,8-HxCDF			NO	0.8623	10.000					0.0475	
12	1,2,3,6,7,8-HxCDF			NO	0.8414	10.000					0.0467	
13	2,3,4,6,7,8-HxCDF			NO	0.8982	10.000					0.0468	
14	1,2,3,7,8,9-HxCDF			NO	0.8578	10.000					0.0693	
15	1,2,3,4,6,7,8-HpCDF			NO	0.8511	10.000					0.0708	
16	1,2,3,4,7,8,9-HpCDF			NO	0.8799	10.000					0.0761	
17	OCDF	7.55e2	0.88	NO	0.8055	10.000	41.17	1.001	0.240		0.100	0.240

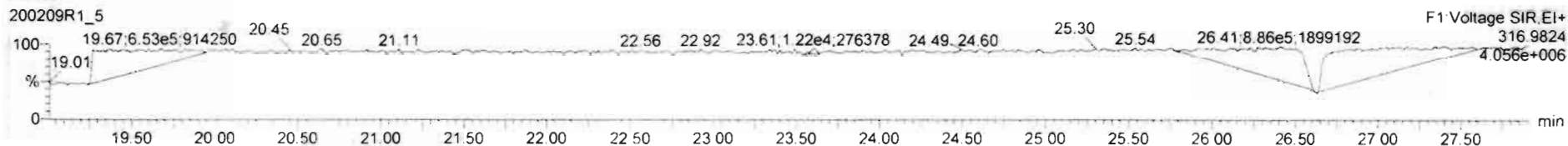


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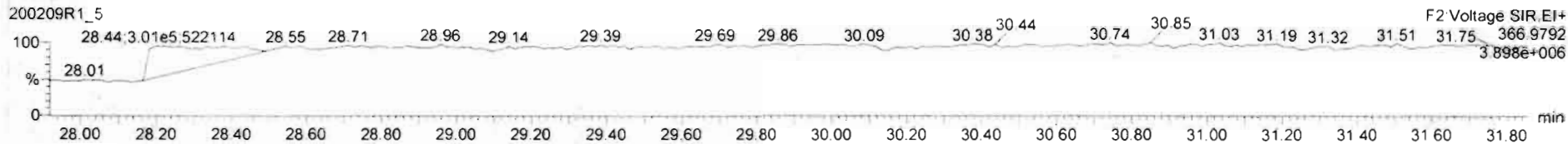
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_5, Date: 09-Feb-2020, Time: 15:16:07, ID: B0B0017-BLK1 Method Blank 10, Description: Method Blank

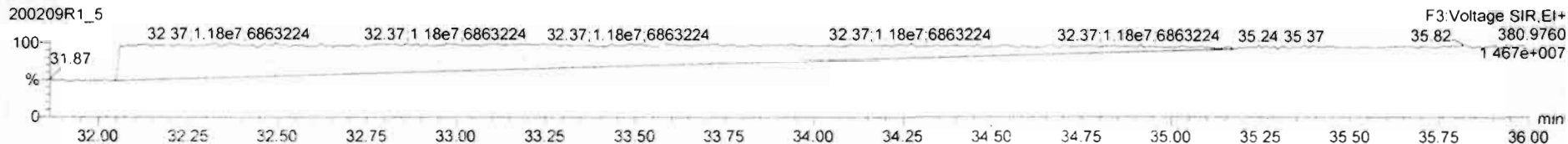
**PFK1**



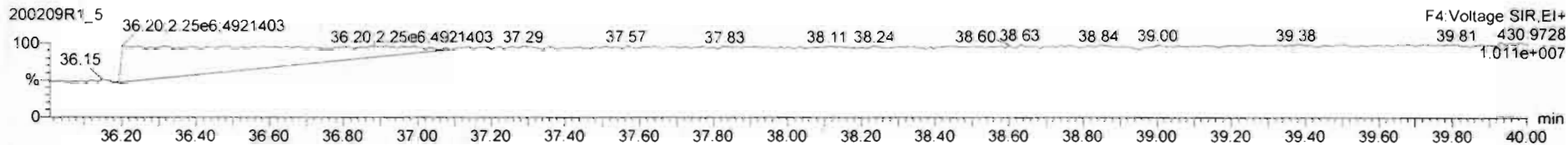
**PFK2**



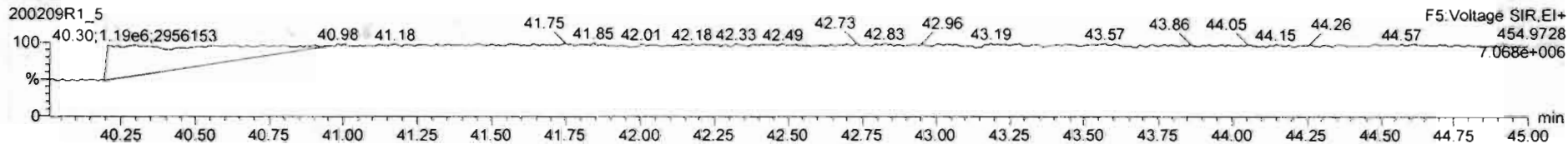
**PFK3**



**PFK4**



**PFK5**



Dataset: U:\VG12.PRO\Results\200209R1\200209R1-2.qld

Last Altered: Monday, February 10, 2020 10:31:08 Pacific Standard Time

Printed: Monday, February 10, 2020 10:31:29 Pacific Standard Time

GRB 02/10/2020

CT 02/10/2020

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.36e5	0.76	NO	0.988	10.000	25.721	25.72	1.001	1.001	18.459		0.149	18.5
2	2 1,2,3,7,8-PeCDD	5.11e5	0.63	NO	0.972	10.000	30.719	30.71	1.001	1.000	90.316		0.205	90.3
3	3 1,2,3,4,7,8-HxCDD	5.01e5	1.23	NO	1.07	10.000	34.061	34.07	1.000	1.001	101.47		0.288	101
4	4 1,2,3,6,7,8-HxCDD	4.95e5	1.25	NO	0.921	10.000	34.158	34.17	1.000	1.000	94.166		0.299	94.2
5	5 1,2,3,7,8,9-HxCDD	4.67e5	1.23	NO	0.918	10.000	34.469	34.44	1.001	1.000	97.636		0.326	97.6
6	6 1,2,3,4,6,7,8-HpCDD	3.69e5	1.01	NO	0.923	10.000	37.949	37.96	1.000	1.001	99.224		0.375	99.2
7	7 OCDD	6.37e5	0.88	NO	0.975	10.000	40.974	40.98	1.000	1.000	192.11		0.378	192
8	8 2,3,7,8-TCDF	1.67e5	0.76	NO	0.802	10.000	24.817	24.81	1.001	1.001	20.146		0.125	20.1
9	9 1,2,3,7,8-PeCDF	7.46e5	1.55	NO	0.907	10.000	29.422	29.42	1.001	1.001	96.848		0.159	96.8
10	10 2,3,4,7,8-PeCDF	7.57e5	1.55	NO	0.952	10.000	30.407	30.39	1.001	1.000	97.432		0.159	97.4
11	11 1,2,3,4,7,8-HxCDF	5.60e5	1.21	NO	0.862	10.000	33.188	33.21	1.000	1.001	107.45		0.286	107
12	12 1,2,3,6,7,8-HxCDF	6.09e5	1.21	NO	0.841	10.000	33.326	33.33	1.000	1.000	110.95		0.287	111
13	13 2,3,4,6,7,8-HxCDF	6.08e5	1.22	NO	0.898	10.000	33.915	33.90	1.001	1.001	109.55		0.296	110
14	14 1,2,3,7,8,9-HxCDF	4.83e5	1.21	NO	0.858	10.000	34.775	34.79	1.000	1.000	106.06		0.426	106
15	15 1,2,3,4,6,7,8-HpCDF	4.26e5	0.99	NO	0.851	10.000	36.559	36.53	1.001	1.000	110.79		0.333	111
16	16 1,2,3,4,7,8,9-HpCDF	3.64e5	0.99	NO	0.980	10.000	38.546	38.56	1.000	1.000	110.72		0.381	111
17	17 OCDF	6.77e5	0.89	NO	0.806	10.000	41.155	41.17	1.000	1.000	209.45		0.409	209
18	18 13C-2,3,7,8-TCDD	1.49e6	0.78	NO	1.20	10.000	25.691	25.69	1.026	1.026	175.17	87.6	0.262	
19	19 13C-1,2,3,7,8-PeCDD	1.16e6	0.64	NO	0.967	10.000	30.432	30.70	1.215	1.226	169.51	84.8	0.264	
20	20 13C-1,2,3,4,7,8-HxCDD	9.22e5	1.28	NO	0.874	10.000	34.053	34.05	1.014	1.014	157.92	79.0	0.304	
21	21 13C-1,2,3,6,7,8-HxCDD	1.14e6	1.27	NO	1.05	10.000	34.154	34.16	1.017	1.017	163.26	81.6	0.254	
22	22 13C-1,2,3,7,8,9-HxCDD	1.04e6	1.26	NO	0.974	10.000	34.456	34.44	1.026	1.025	160.06	80.0	0.272	
23	23 13C-1,2,3,4,6,7,8-HpCDD	8.06e5	1.04	NO	0.747	10.000	38.016	37.94	1.132	1.130	161.51	80.8	0.369	
24	24 13C-OCDD	1.36e6	0.89	NO	0.707	10.000	40.904	40.97	1.218	1.220	288.04	72.0	0.413	
25	25 13C-2,3,7,8-TCDF	2.06e6	0.77	NO	1.07	10.000	24.872	24.79	0.993	0.990	181.95	91.0	0.357	
26	26 13C-1,2,3,7,8-PeCDF	1.70e6	1.59	NO	1.00	10.000	29.205	29.40	1.166	1.174	159.31	79.7	0.324	
27	27 13C-2,3,4,7,8-PeCDF	1.63e6	1.57	NO	0.962	10.000	30.157	30.38	1.204	1.213	159.49	79.7	0.337	
28	28 13C-1,2,3,4,7,8-HxCDF	1.21e6	0.52	NO	1.05	10.000	33.180	33.19	0.988	0.988	172.28	86.1	0.437	
29	29 13C-1,2,3,6,7,8-HxCDF	1.31e6	0.52	NO	1.19	10.000	33.281	33.32	0.991	0.992	164.14	82.1	0.386	
30	30 13C-2,3,4,6,7,8-HxCDF	1.24e6	0.51	NO	1.07	10.000	33.889	33.88	1.009	1.009	173.37	86.7	0.431	
31	31 13C-1,2,3,7,8,9-HxCDF	1.06e6	0.53	NO	0.922	10.000	34.792	34.78	1.036	1.035	172.16	86.1	0.498	



Dataset: U:\VG12.PRO\Results\200209R1\200209R1-2.qld

Last Altered: Monday, February 10, 2020 10:31:08 Pacific Standard Time  
Printed: Monday, February 10, 2020 10:31:29 Pacific Standard Time

Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	9.03e5	0.44	NO	0.767	10.000	36.538	36.52	1.088	1.088	176.21	88.1	0.463	
33	33 13C-1,2,3,4,7,8,9-HpCDF	6.70e5	0.45	NO	0.552	10.000	38.553	38.55	1.148	1.148	181.67	90.8	0.643	
34	34 13C-OCDF	1.60e6	0.93	NO	0.789	10.000	41.139	41.15	1.225	1.225	304.22	76.1	0.327	
35	35 37Cl-2,3,7,8-TCDD	5.47e5			1.18	10.000	25.723	25.72	1.027	1.027	65.447	81.8	0.0895	
36	36 13C-1,2,3,4-TCDD	1.42e6	0.79	NO	1.00	10.000	25.080	25.05	1.000	1.000	200.00	100	0.315	
37	37 13C-1,2,3,4-TCDF	2.13e6	0.79	NO	1.00	10.000	23.420	23.35	1.000	1.000	200.00	100	0.381	
38	38 13C-1,2,3,4,6,9-HxCDF	1.34e6	0.52	NO	1.00	10.000	33.520	33.58	1.000	1.000	200.00	100	0.459	

Dataset: Untitled

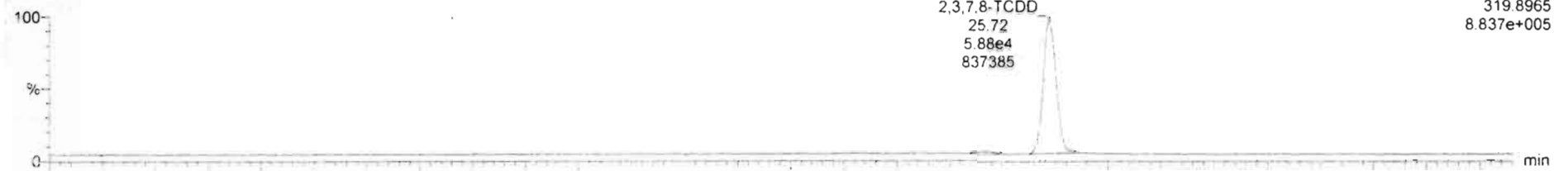
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

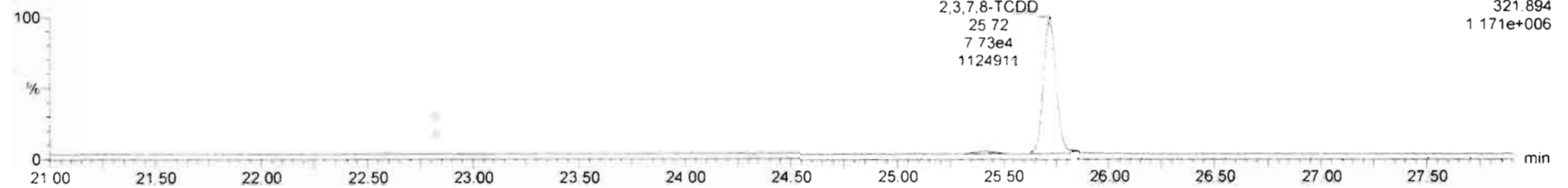
Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR

**2,3,7,8-TCDD**

200209R1\_2

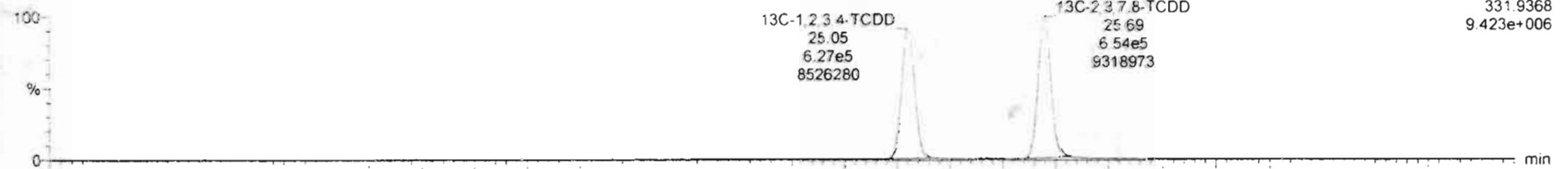


200209R1\_2

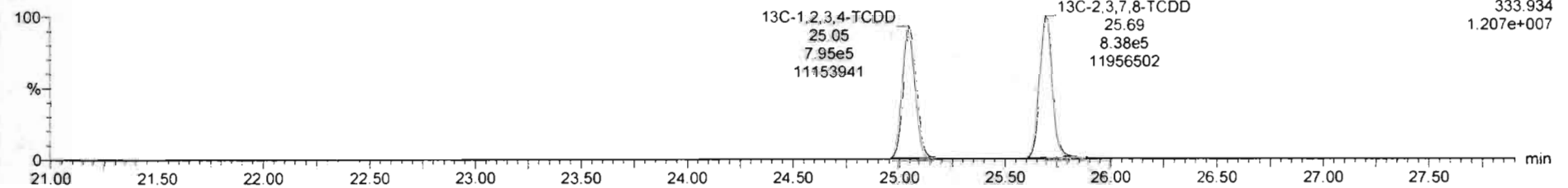


**13C-2,3,7,8-TCDD**

200209R1\_2



200209R1\_2



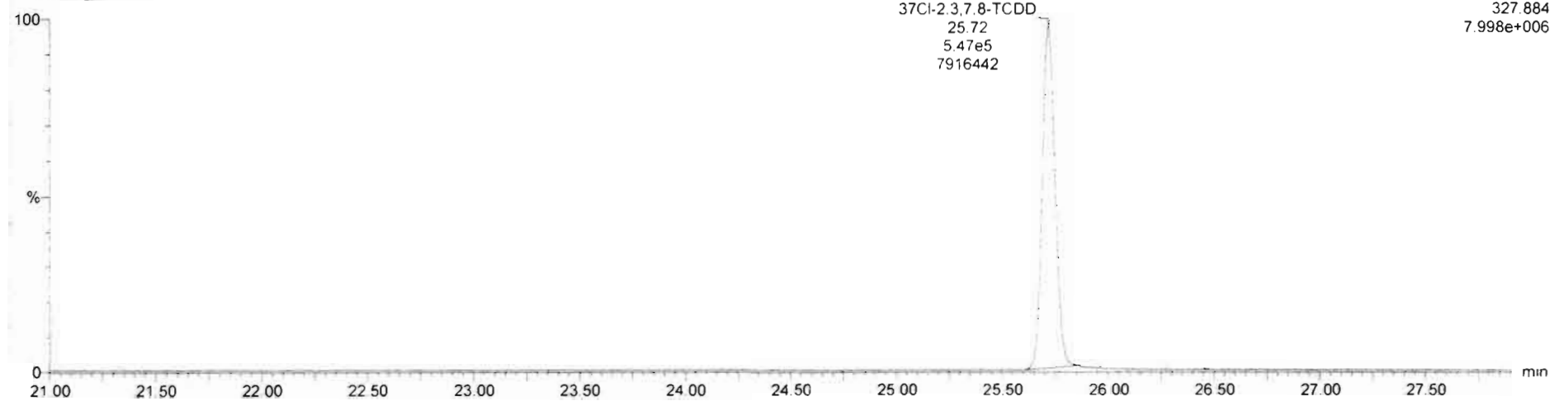
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Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR

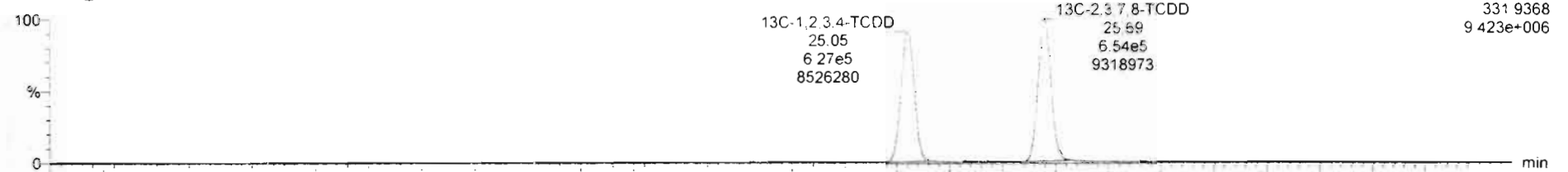
**37Cl-2,3,7,8-TCDD**

200209R1\_2

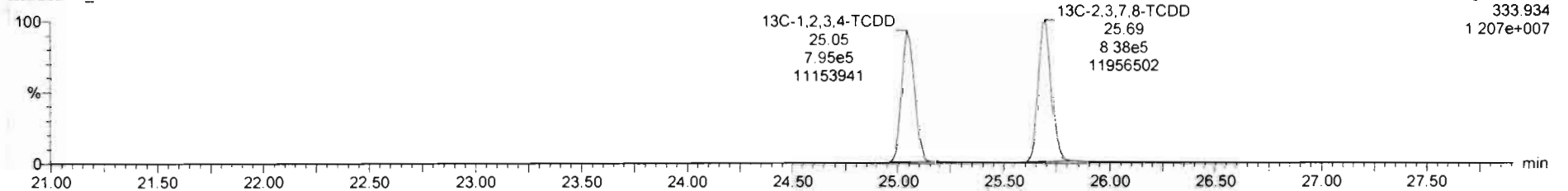


**13C-1,2,3,4-TCDD**

200209R1\_2



200209R1\_2



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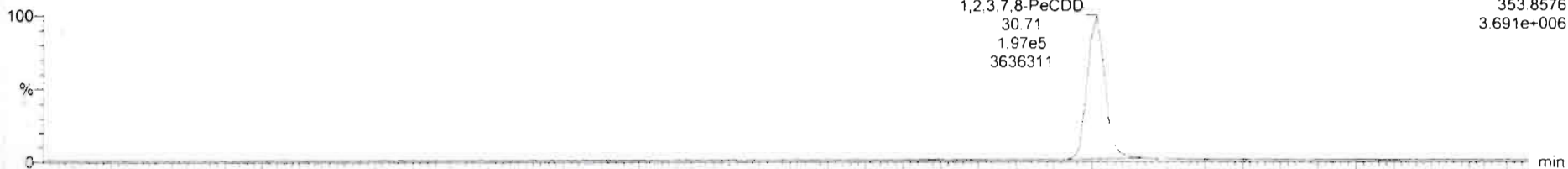
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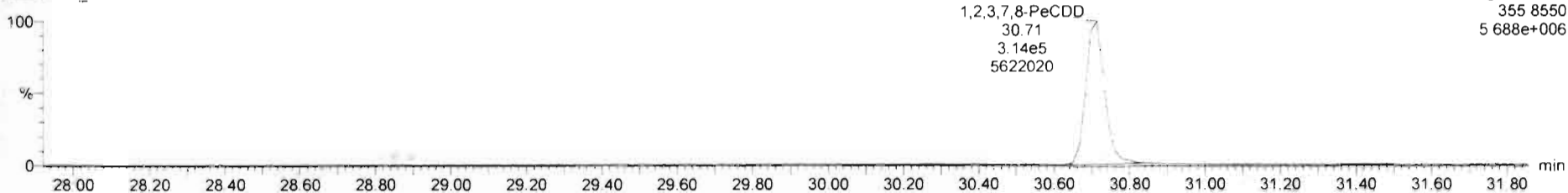
Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR

**1,2,3,7,8-PeCDD**

200209R1\_2

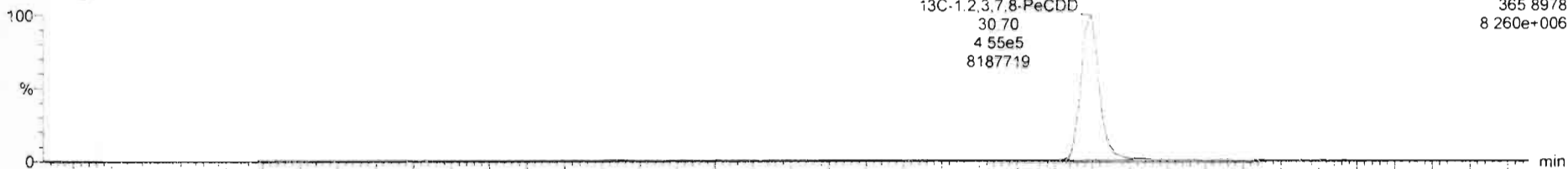


200209R1\_2

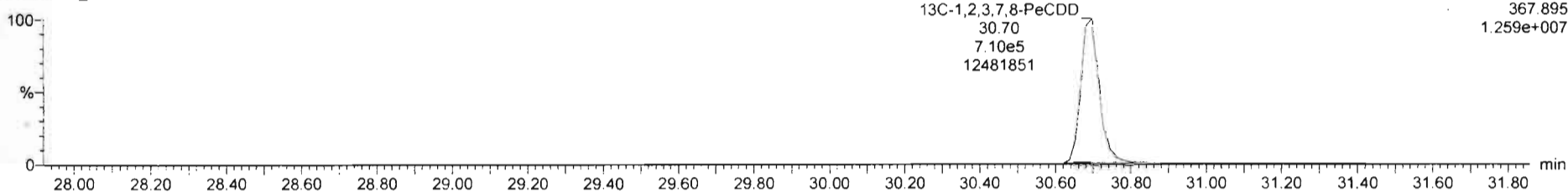


**13C-1,2,3,7,8-PeCDD**

200209R1\_2



200209R1\_2



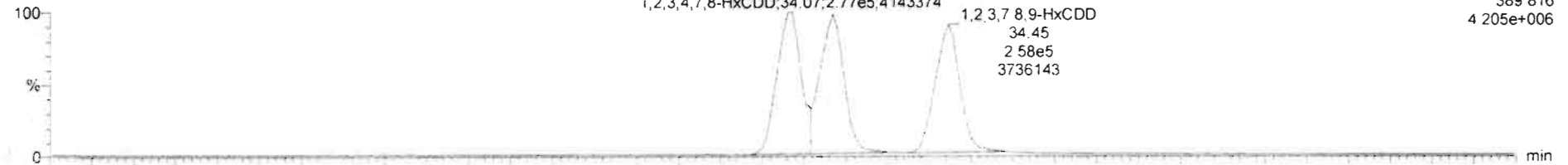
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

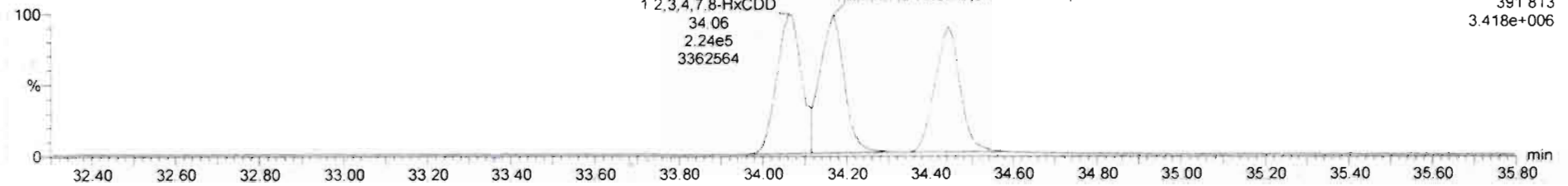
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1,2,3,4,7,8-HxCDD

200209R1\_2

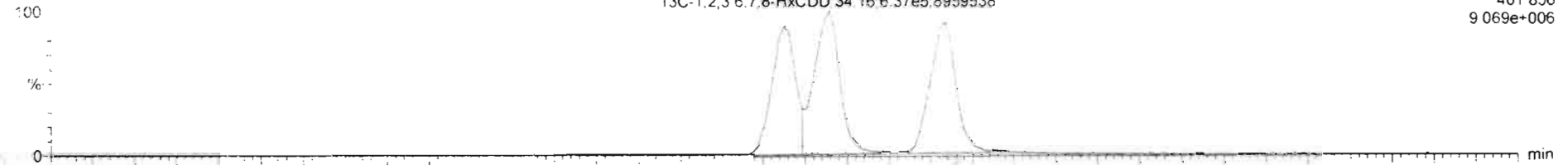


200209R1\_2

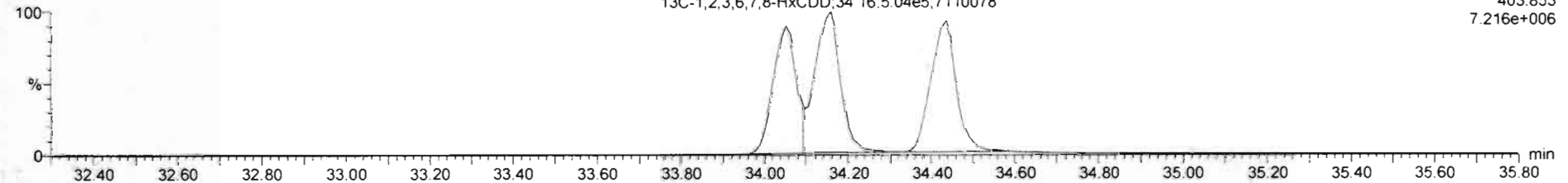


13C-1,2,3,4,7,8-HxCDD

200209R1\_2



200209R1\_2



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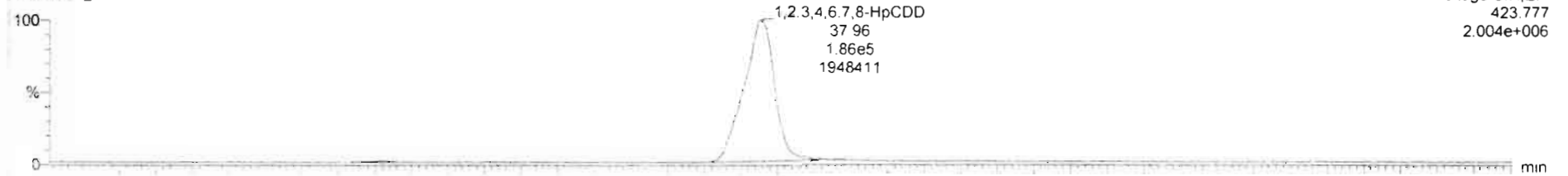
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

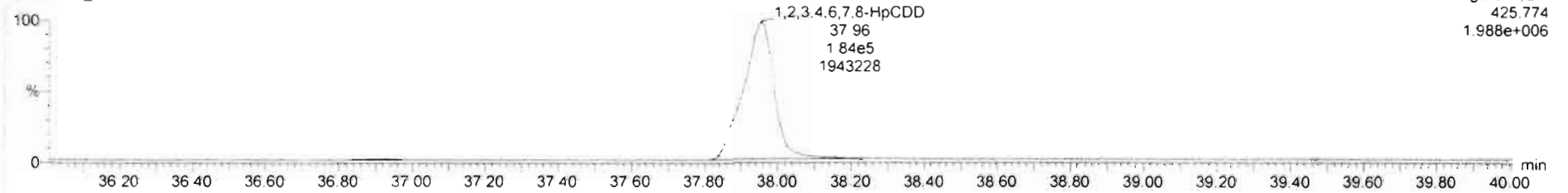
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1,2,3,4,6,7,8-HpCDD

200209R1\_2

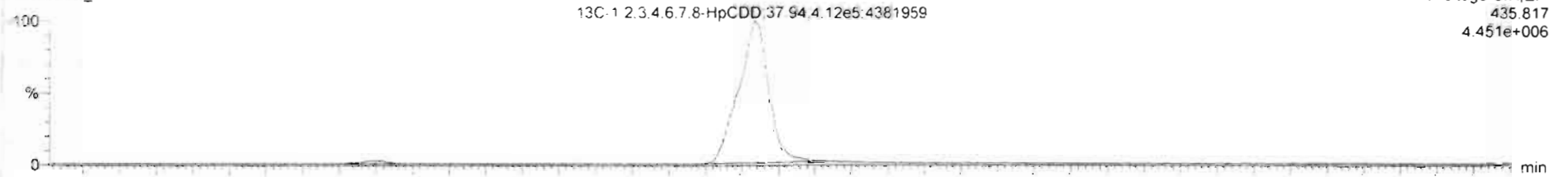


200209R1\_2

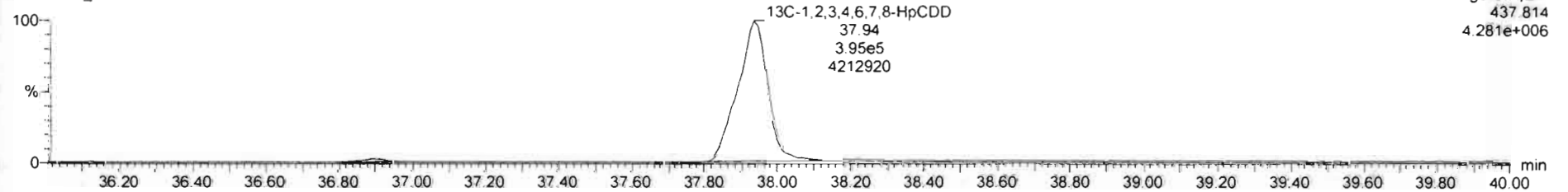


13C-1,2,3,4,6,7,8-HpCDD

200209R1\_2



200209R1\_2

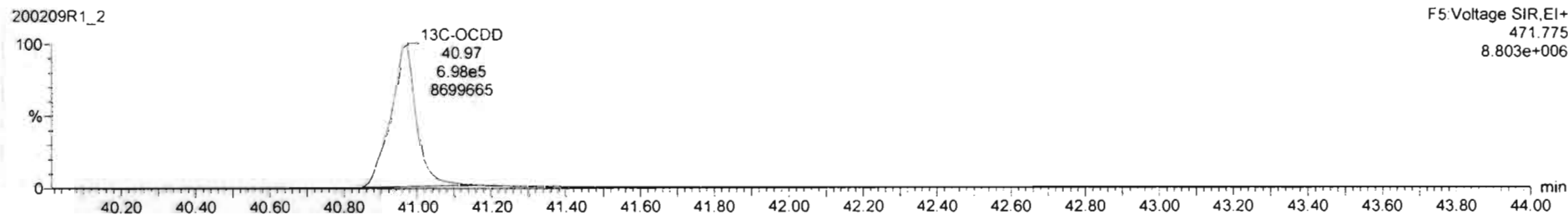
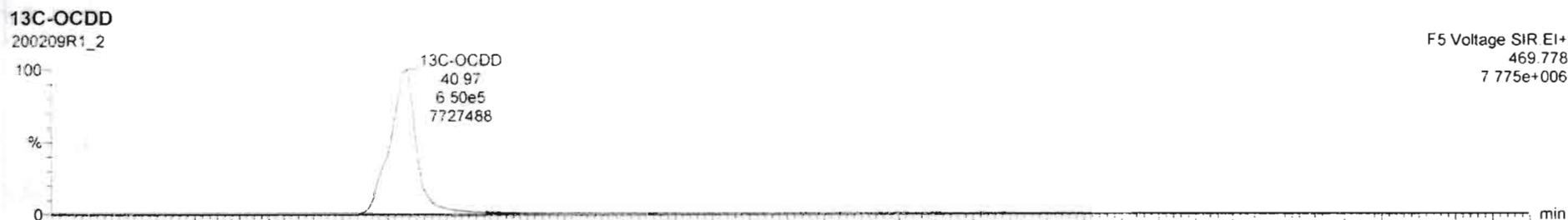
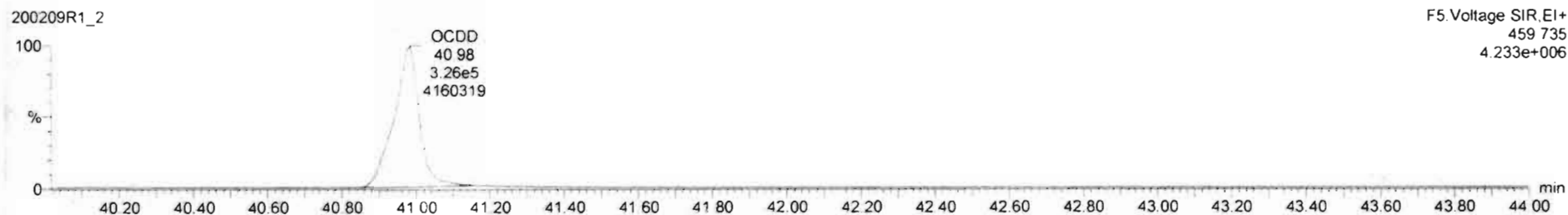


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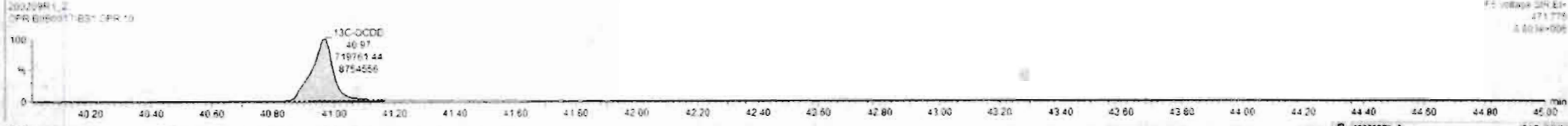
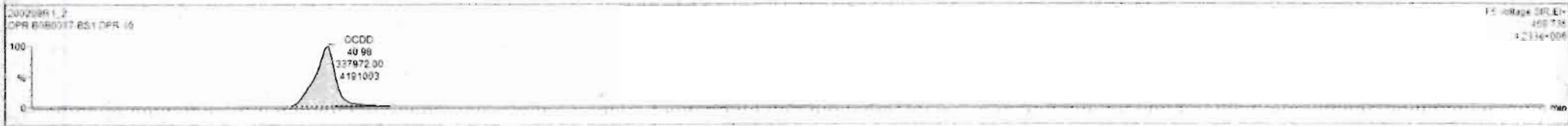
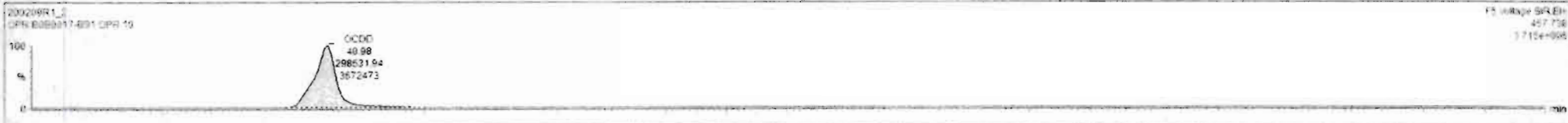
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR



#	Name	Resp	RA	nly	RRF	wt/vol	RT	BRT	Conc	%Rec	DL	EMPC
1	2,3,7,8-TCDD	1.36e5	0.76	NO	0.9851	10.000	25.72	1.001	18.5		0.149	18.5
2	1,2,3,7,8-PeCDD	5.11e5	0.83	NO	0.9723	10.000	30.71	1.000	80.3		0.205	80.3
3	1,2,3,4,7,8-HxCDD	5.01e5	1.23	NO	1.0708	10.000	34.07	1.001	101		0.268	101
4	1,2,3,6,7,8-HxCDD	4.95e5	1.25	NO	0.9211	10.000	34.17	1.000	94.2		0.299	94.2
5	1,2,3,7,8,9-HxCDD	4.57e5	1.23	NO	0.9182	10.000	34.44	1.000	97.6		0.326	97.6
6	1,2,3,4,6,7,8-HpCDD	3.69e5	1.01	NO	0.9231	10.000	37.96	1.001	99.2		0.375	99.2
7	OCDD	6.37e5	0.88	NO	0.9746	10.000	40.96	1.000	192		0.378	192
8	2,3,7,8-TCDF	1.87e5	0.76	NO	0.8020	10.000	24.81	1.001	20.1		0.125	20.1
9	1,2,3,7,8-PeCDF	7.46e5	1.55	NO	0.9074	10.000	29.42	1.001	96.8		0.159	96.8
10	2,3,4,7,8-PeCDF	7.57e5	1.55	NO	0.9516	10.000	30.39	1.000	97.4		0.159	97.4
11	1,2,3,4,7,8-HxCDF	5.60e5	1.21	NO	0.8623	10.000	33.21	1.001	107		0.286	107
12	1,2,3,6,7,8-HxCDF	6.09e5	1.21	NO	0.8414	10.000	33.33	1.000	111		0.287	111
13	2,3,4,6,7,8-HxCDF	6.08e5	1.22	NO	0.8982	10.000	33.90	1.001	110		0.296	110
14	1,2,3,7,8,9-HxCDF	4.83e5	1.21	NO	0.8578	10.000	34.79	1.000	106		0.426	106
15	1,2,3,4,6,7,8-HpCDF	4.26e5	0.99	NO	0.8511	10.000	36.63	1.000	111		0.333	111
16	1,2,3,4,7,8,9-HpCDF	3.54e5	0.99	NO	0.9769	10.000	38.56	1.000	111		0.361	111
17	OCDF	6.77e5	0.89	NO	0.8055	10.000	41.17	1.000	205		0.409	209





Dataset: Untitled

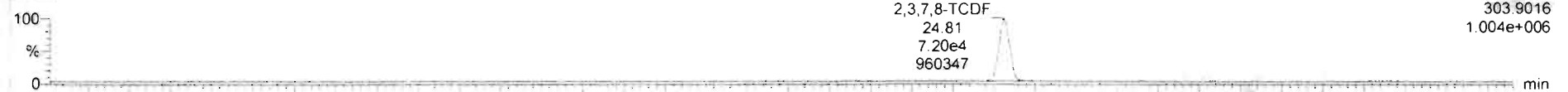
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

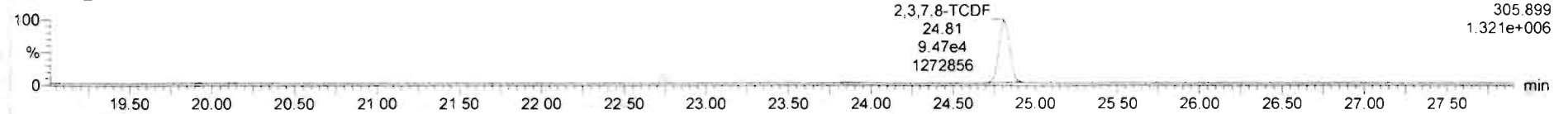
Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR

**2,3,7,8-TCDF**

200209R1\_2

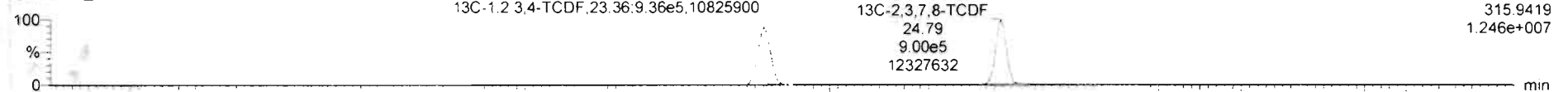


200209R1\_2

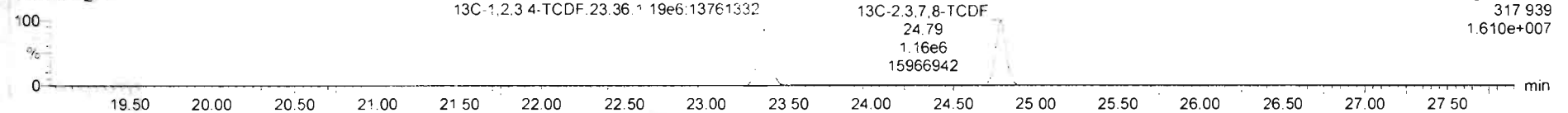


**13C-2,3,7,8-TCDF**

200209R1\_2

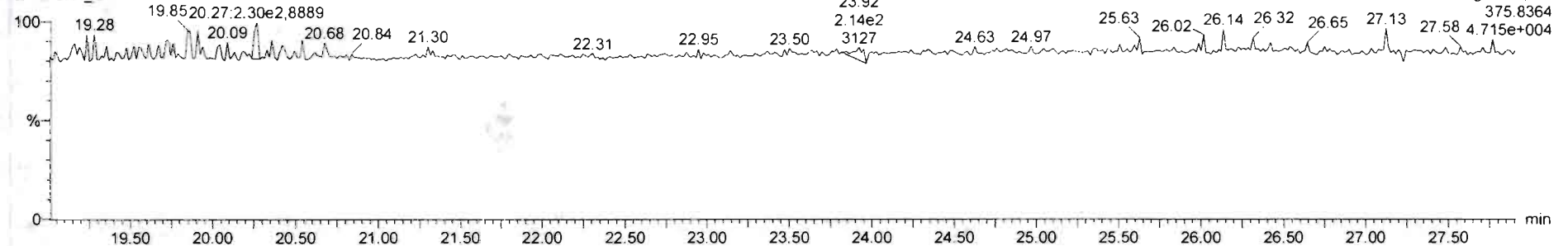


200209R1\_2



**DPE1**

200209R1\_2

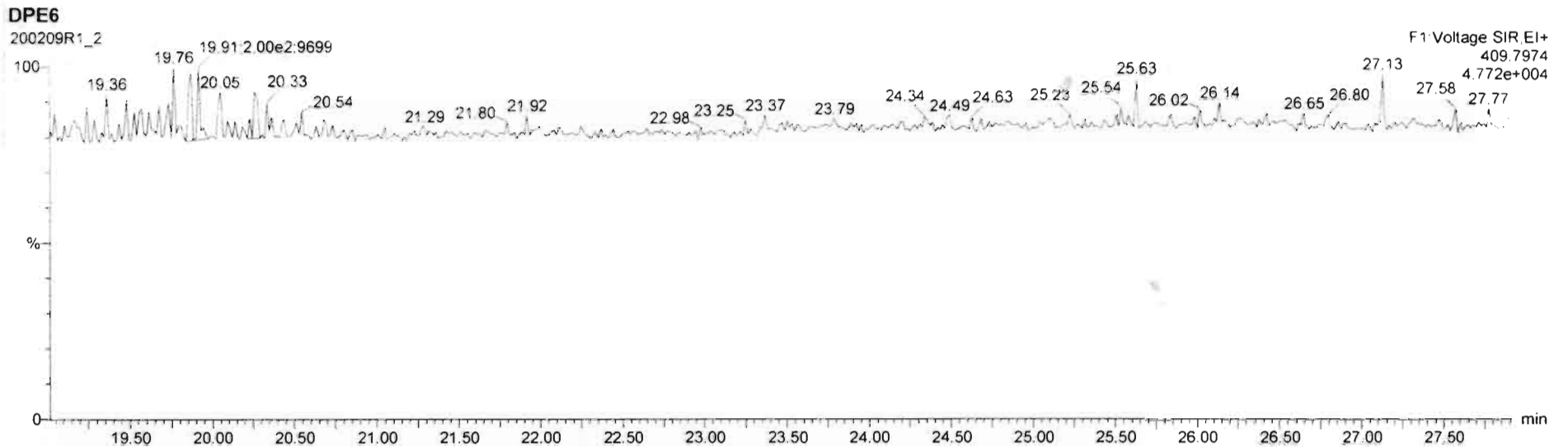
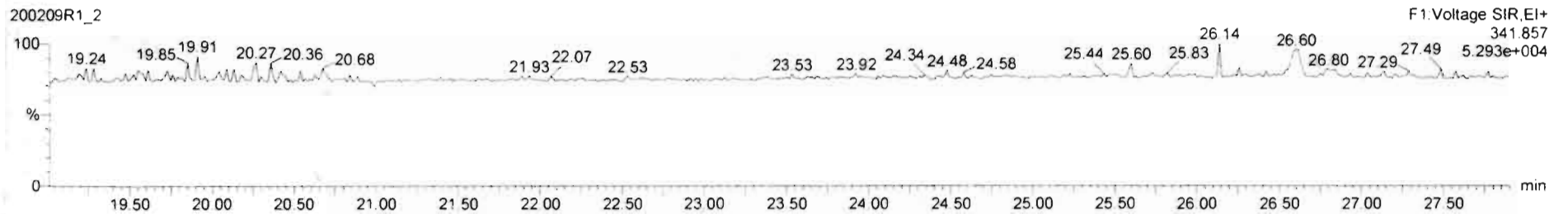
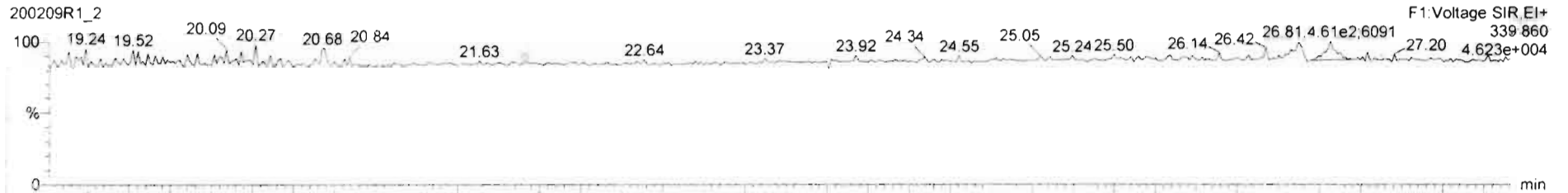


Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR

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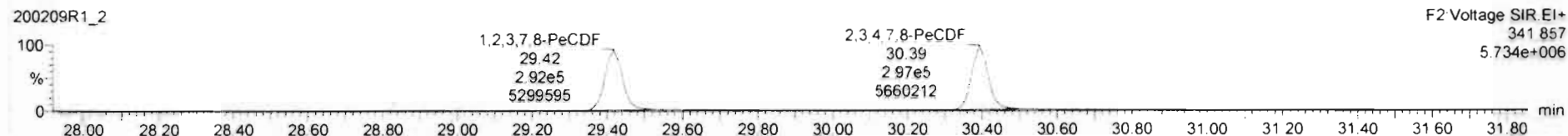
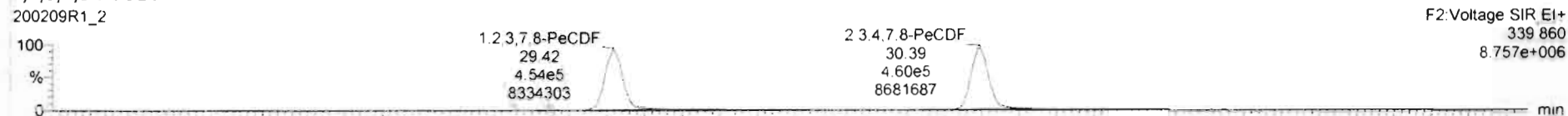


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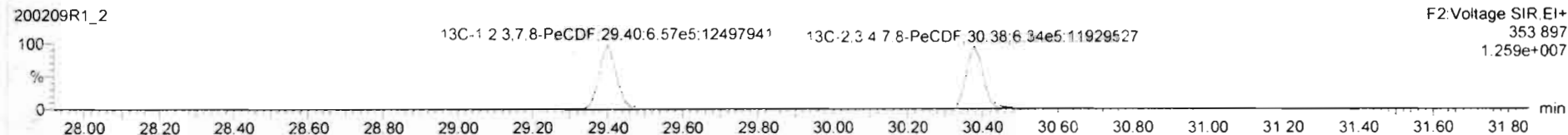
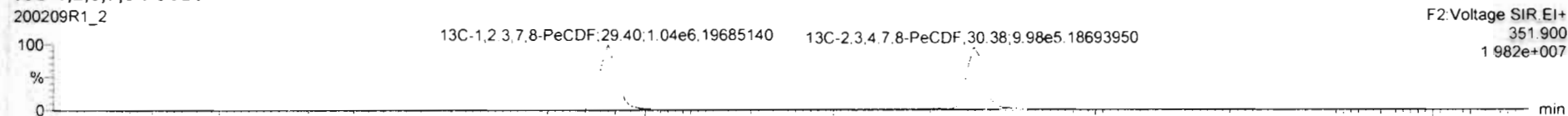
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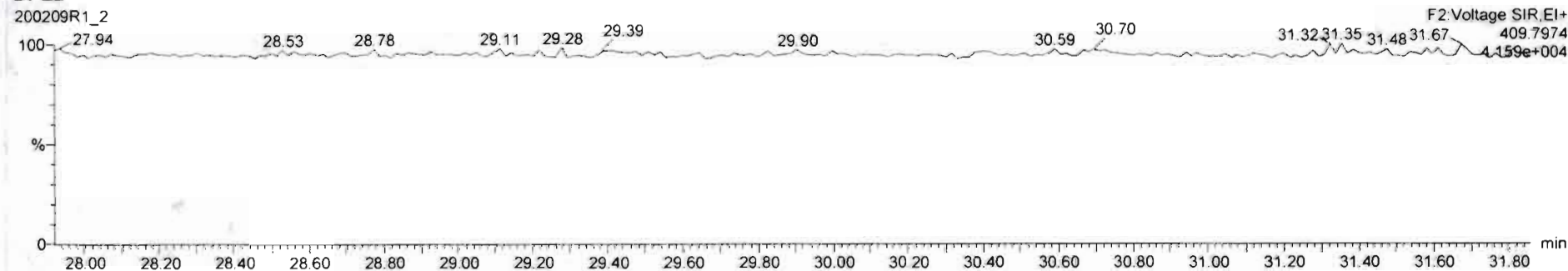
1,2,3,7,8-PeCDF



13C-1,2,3,7,8-PeCDF



DPE2

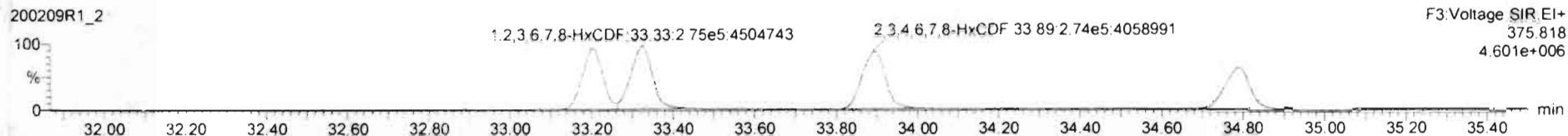
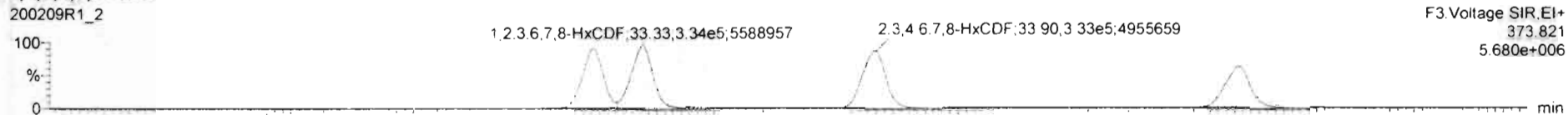


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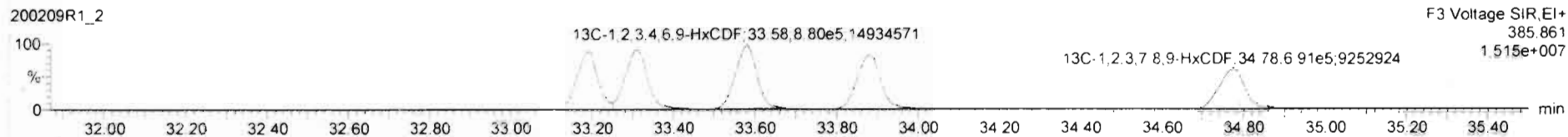
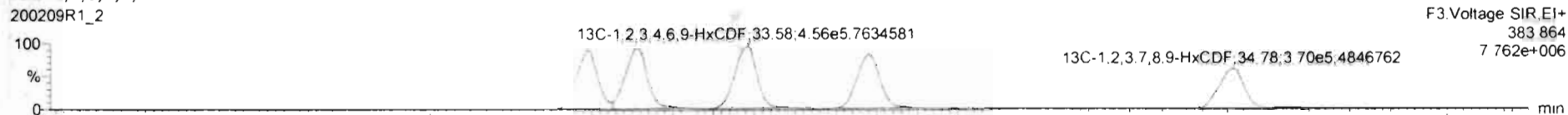
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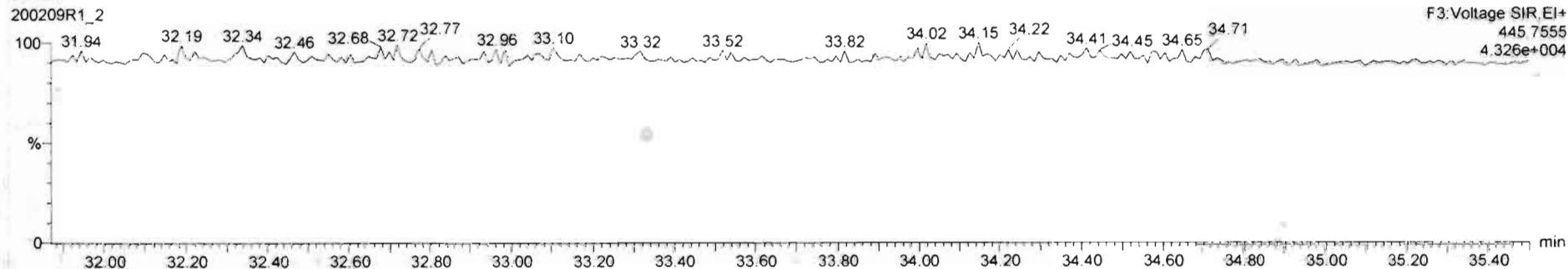
1,2,3,4,7,8-HxCDF



13C-1,2,3,4,7,8-HxCDF



DPE3



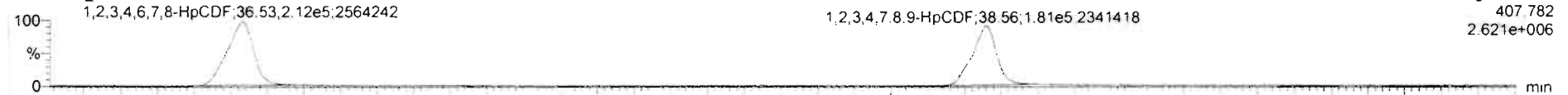
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Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

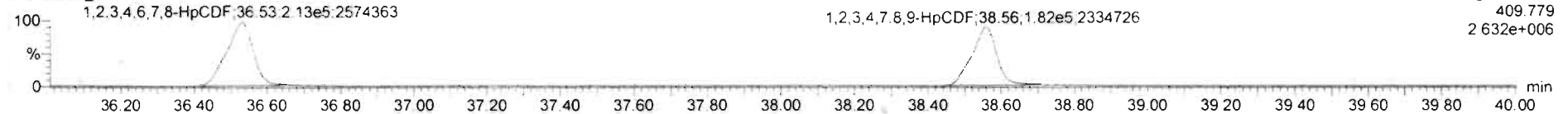
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1,2,3,4,6,7,8-HpCDF

200209R1\_2

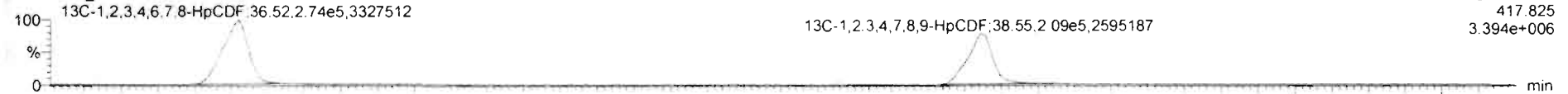


200209R1\_2

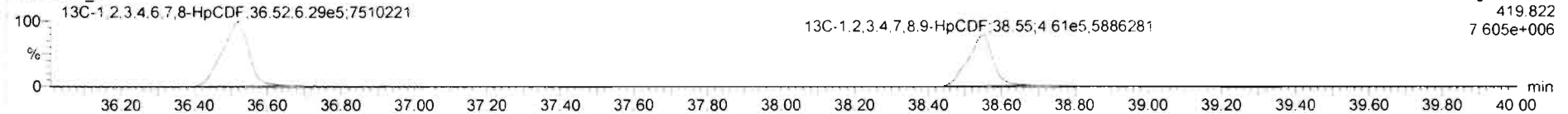


13C-1,2,3,4,6,7,8-HpCDF

200209R1\_2

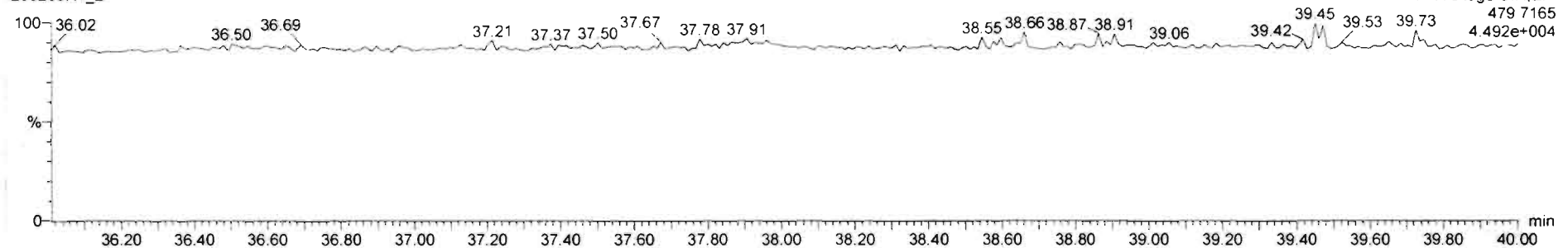


200209R1\_2



DPE4

200209R1\_2

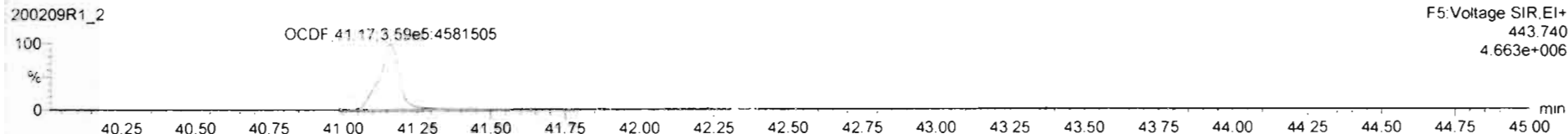


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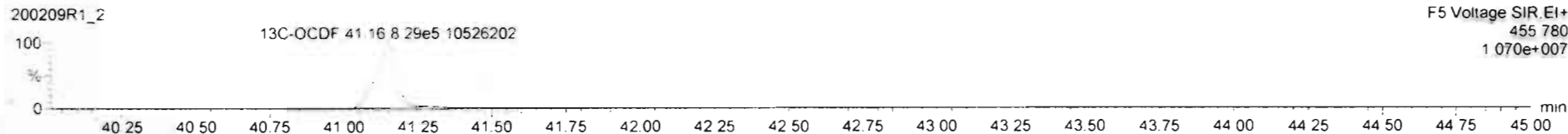
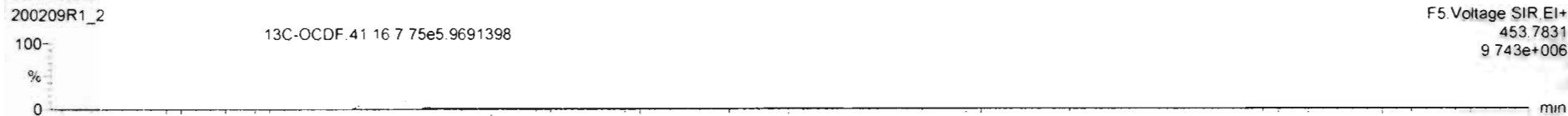
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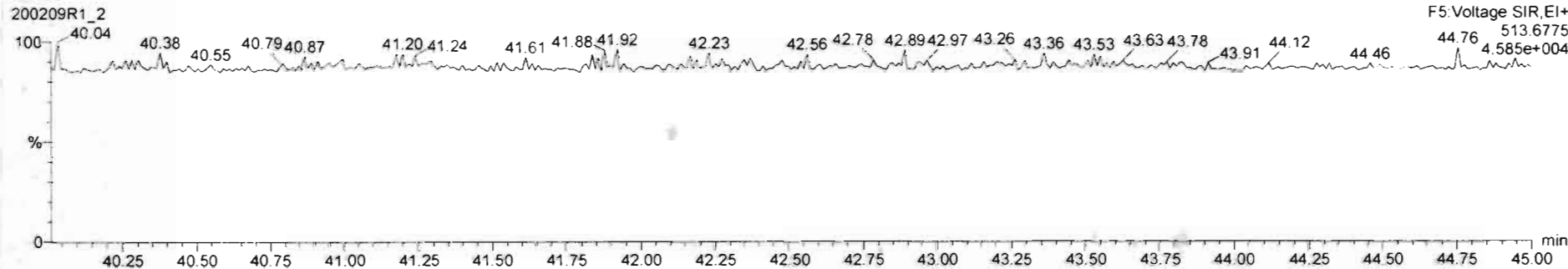
OCDF



13C-OCDF



DPE5

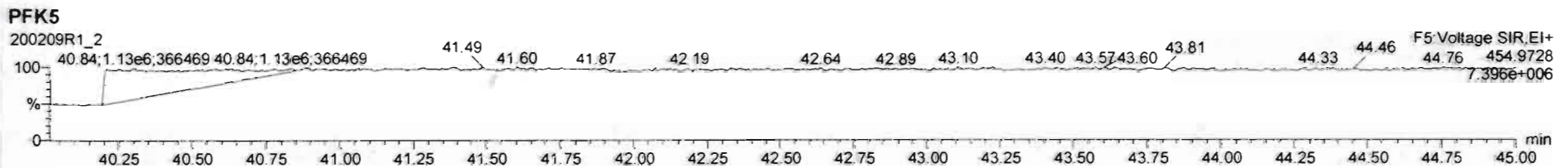
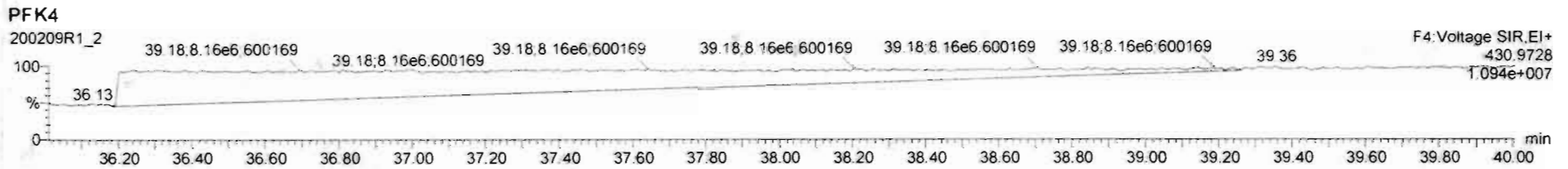
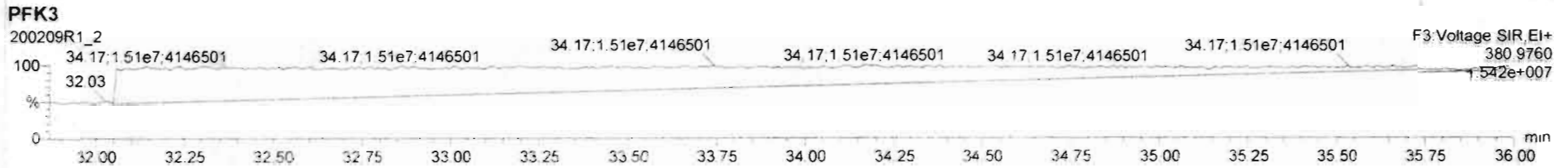
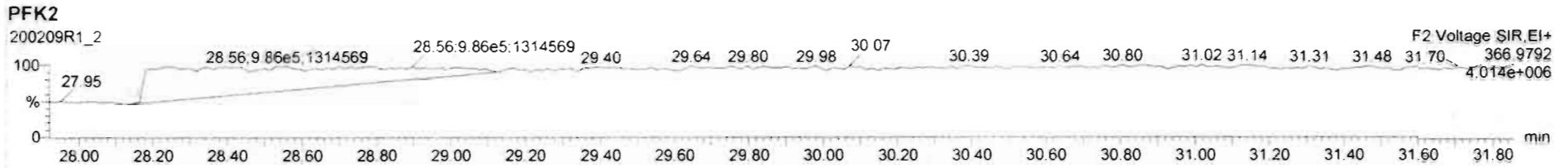
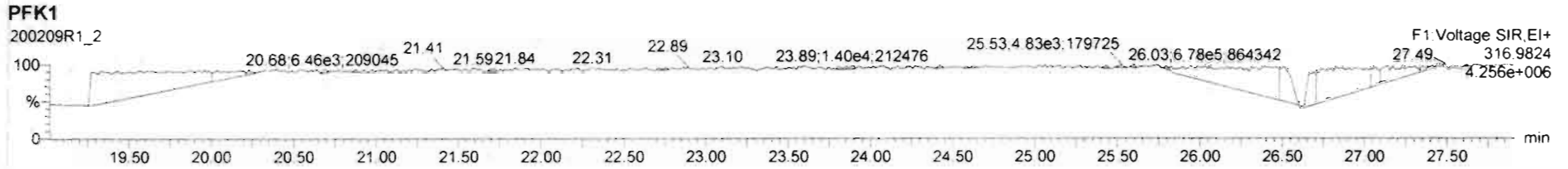


Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_2, Date: 09-Feb-2020, Time: 12:55:24, ID: B0B0017-BS1 OPR 10, Description: OPR



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-10B.qld  
 Last Altered: Friday, January 31, 2020 11:25:01 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:25:28 Pacific Standard Time

GPB 01/31/2020

C7 02/03/2020

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 25 Jan 2020 09:02:41

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 Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		8.09e4	10.1228	0.905			1.001		26.08					0.332
2	2 1,2,3,7,8-PeCDD	1.01e2	4.99e4	10.1228	0.903	0.570	NO	1.001	1.000	30.62	30.60	0.44074		0.441	0.962
3	3 1,2,3,4,7,8-HxCDD	2.68e2	4.19e4	10.1228	1.101	1.828	YES	1.000	1.001	33.92	33.95	1.1454		0.907	0.820
4	4 1,2,3,6,7,8-HxCDD	1.69e3	4.87e4	10.1228	0.939	1.203	NO	1.000	1.001	34.02	34.05	7.2847		7.28	0.881
5	5 1,2,3,7,8,9-HxCDD	5.62e2	4.12e4	10.1228	0.961	1.342	NO	1.001	1.001	34.35	34.36	2.8046		2.80	1.09
6	6 1,2,3,4,6,7,8-HpCDD	7.35e4	3.31e4	10.1228	0.979	1.018	NO	1.000	1.000	37.81	37.81	448.45		448	3.26
7	7 OCDD	3.29e5	4.12e4	10.1228	0.959	0.916	NO	1.000	1.000	41.07	41.08	3290.8		3290	3.09
8	8 2,3,7,8-TCDF	1.23e3	1.11e5	10.1228	0.950	0.790	NO	1.001	1.000	25.28	25.26	2.3198	(1.83)	2.32	0.335
9	9 1,2,3,7,8-PeCDF	8.53e2	7.68e4	10.1228	0.960	1.754	NO	1.001	1.001	29.43	29.43	2.2846		2.28	0.208
10	10 2,3,4,7,8-PeCDF	6.56e2	6.83e4	10.1228	1.015	1.721	NO	1.001	1.001	30.34	30.35	1.8718		1.87	0.211
11	11 1,2,3,4,7,8-HxCDF	1.32e3	5.63e4	10.1228	1.177	1.078	NO	1.000	1.001	33.03	33.05	3.9227		3.92	0.364
12	12 1,2,3,6,7,8-HxCDF	3.96e2	6.02e4	10.1228	1.069	1.149	NO	1.000	1.001	33.16	33.17	1.2141		1.21	0.391
13	13 2,3,4,6,7,8-HxCDF	1.98e2	5.19e4	10.1228	1.114	1.130	NO	1.001	1.000	33.79	33.77	0.67606		0.676	0.461
14	14 1,2,3,7,8,9-HxCDF		4.68e4	10.1228	1.062			1.000		34.70					0.686
15	15 1,2,3,4,6,7,8-HpCDF	4.82e3	3.90e4	10.1228	1.128	0.983	NO	1.001	1.001	36.58	36.58	21.621		21.6	1.03
16	16 1,2,3,4,7,8,9-HpCDF	2.97e2	2.84e4	10.1228	1.280	1.102	NO	1.000	1.000	38.34	38.34	1.6152		1.62	0.974
17	17 OCDF	1.38e4	5.08e4	10.1228	0.947	0.926	NO	1.000	1.000	41.29	41.30	113.17		113	0.987
18	18 13C-2,3,7,8-TCDD	8.09e4	1.17e5	10.1228	1.095	0.777	NO	1.023	1.023	26.05	26.05	125.10	63.3		0.440
19	19 13C-1,2,3,7,8-PeCDD	4.99e4	1.17e5	10.1228	0.881	0.602	NO	1.203	1.201	30.64	30.60	96.051	48.6		0.395
20	20 13C-1,2,3,4,7,8-Hx...	4.19e4	1.22e5	10.1228	0.642	1.297	NO	1.014	1.014	33.91	33.91	105.75	53.5		0.838
21	21 13C-1,2,3,6,7,8-Hx...	4.87e4	1.22e5	10.1228	0.856	1.314	NO	1.017	1.017	34.02	34.02	92.223	46.7		0.629
22	22 13C-1,2,3,7,8,9-Hx...	4.12e4	1.22e5	10.1228	0.807	1.281	NO	1.026	1.026	34.32	34.32	82.782	41.9		0.667
23	23 13C-1,2,3,4,6,7,8-H...	3.31e4	1.22e5	10.1228	0.654	1.066	NO	1.131	1.130	37.82	37.80	81.942	41.5		0.666
24	24 13C-OCDD	4.12e4	1.22e5	10.1228	0.580	0.929	NO	1.228	1.228	41.08	41.07	115.27	29.2		0.457
25	25 13C-2,3,7,8-TCDF	1.11e5	1.66e5	10.1228	1.035	0.772	NO	0.992	0.991	25.26	25.26	127.66	64.6		0.572
26	26 13C-1,2,3,7,8-PeCDF	7.68e4	1.66e5	10.1228	0.854	1.569	NO	1.156	1.154	29.45	29.41	107.38	54.3		0.635
27	27 13C-2,3,4,7,8-PeCDF	6.83e4	1.66e5	10.1228	0.847	1.615	NO	1.192	1.190	30.36	30.31	96.167	48.7		0.640
28	28 13C-1,2,3,4,7,8-Hx...	5.63e4	1.22e5	10.1228	0.832	0.494	NO	0.987	0.988	33.02	33.03	109.70	55.5		1.01
29	29 13C-1,2,3,6,7,8-Hx...	6.02e4	1.22e5	10.1228	1.034	0.511	NO	0.991	0.991	33.13	33.15	94.299	47.7		0.812
30	30 13C-2,3,4,6,7,8-Hx...	5.19e4	1.22e5	10.1228	0.953	0.507	NO	1.009	1.009	33.75	33.76	88.147	44.6		0.881
31	31 13C-1,2,3,7,8,9-Hx...	4.68e4	1.22e5	10.1228	0.828	0.502	NO	1.038	1.038	34.71	34.70	91.663	46.4		1.01



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-10B.qid

Last Altered: Friday, January 31, 2020 11:25:01 Pacific Standard Time

Printed: Friday, January 31, 2020 11:25:28 Pacific Standard Time

Name: VG7 200116D1\_10, Date: 16-JAN-2020, Time: 18:32:11, ID: 1904159-01 PDI-013SC-A-02-03-190925,  
 Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	3.90e4	1.22e5	10.1228	0.757	0.404	NO	1.093	1.093	36.55	36.54	83.500	42.3		0.775
33	33 13C-1,2,3,4,7,8,9-H...	2.84e4	1.22e5	10.1228	0.581	0.408	NO	1.147	1.146	38.35	38.34	79.058	40.0		1.01
34	34 13C-OCDF	5.08e4	1.22e5	10.1228	0.689	0.909	NO	1.235	1.235	41.30	41.29	119.54	30.3		0.558
35	35 37Cl-2,3,7,8-TCDD	3.45e4	1.17e5	10.1228	1.198			1.024	1.023	26.07	26.07	48.858	61.8		0.109
36	36 13C-1,2,3,4-TCDD	1.17e5	1.17e5	10.1228	1.000	0.806	NO	1.000	1.000	25.39	25.47	197.57	100.0		0.482
37	37 13C-1,2,3,4-TCDF	1.66e5	1.66e5	10.1228	1.000	0.812	NO	1.000	1.000	23.93	24.02	197.57	100.0		0.592
38	38 13C-1,2,3,4,6,9-Hx...	1.22e5	1.22e5	10.1228	1.000	0.500	NO	1.000	1.000	33.37	33.44	197.57	100.0		0.840
39	39 Total Tetra-Dioxins		8.09e4	10.1228	0.901			0.000		25.50		0.80981		2.08	0.334
40	40 Total Penta-Dioxins		4.99e4	10.1228	0.872			0.000		30.00		4.4844		8.55	0.995
41	41 Total Hexa-Dioxins		0.00e0	10.1228	0.976			0.000		33.80		104.88		110	0.942
42	42 Total Hepta-Dioxins		3.31e4	10.1228	0.989			0.000		37.75		1093.6		1090	3.23
43	43 Total Tetra-Furans		1.11e5	10.1228	0.943			0.000		24.00		16.727		19.9	0.337
44	44 1st Func. Penta-Fur...		0.00e0	10.1228	0.940			0.000		27.63		6.5748		6.57	0.137
45	45 Total Penta-Furans		0.00e0	10.1228	0.940			0.000		30.00		4.1564		8.32	0.220
46	46 Total Hexa-Furans		0.00e0	10.1228	1.078			0.000		33.00		24.451		24.5	0.475
47	47 Total Hepta-Furans		0.00e0	10.1228	1.135			0.000		37.75		98.472		98.5	1.05

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-10B.qld  
 Last Altered: Friday, January 31, 2020 11:25:01 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:25:28 Pacific Standard Time

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Calibration: 25 Jan 2020 09:02:41

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 Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	YES	26.35	60.513	35366.262	0.000	bb	0.0000	0.09
2	39 Total Tetra-Dioxins	YES	24.59	58.593	35366.262	0.000	MM	0.0000	0.37
3	39 Total Tetra-Dioxins	YES	24.37	67.355	35366.262	0.000	bb	0.0000	0.32
4	39 Total Tetra-Dioxins	NO	23.45	64.337	35366.262	3.667	MM	0.4021	0.40
5	39 Total Tetra-Dioxins	NO	23.00	67.437	35366.262	3.718	bb	0.4077	0.41
6	39 Total Tetra-Dioxins	YES	22.65	112.016	35366.262	0.000	MM	0.0000	0.50

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	YES	30.69	50.992	18766.107	0.000	bb	0.0000	0.36
2	40 Total Penta-Dioxins	YES	29.90	172.814	18766.107	0.000	MM	0.0000	2.03
3	40 Total Penta-Dioxins	NO	29.60	62.939	18766.107	6.051	bb	0.6853	0.69
4	40 Total Penta-Dioxins	YES	29.43	154.099	18766.107	0.000	bb	0.0000	1.09
5	40 Total Penta-Dioxins	NO	29.01	79.915	18766.107	7.738	MM	0.8764	0.88
6	40 Total Penta-Dioxins	NO	28.57	211.881	18766.107	21.913	bb	2.4819	2.48
7	40 Total Penta-Dioxins	YES	31.00	23.280	18766.107	0.000	MM	0.0000	0.27
8	2 1,2,3,7,8-PeCDD	NO	30.60	36.507	18766.107	4.027	MM	0.4407	0.44
9	40 Total Penta-Dioxins	YES	29.67	42.950	18766.107	0.000	MM	0.0000	0.31

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-10B.qld  
 Last Altered: Friday, January 31, 2020 11:25:01 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:25:28 Pacific Standard Time

Name: VG7 200116D1\_10, Date: 16-JAN-2020, Time: 18:32:11, ID: 1904159-01 PDI-013SC-A-02-03-190925,  
 Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Dioxins

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	41 Total Hexa-Dioxins	NO	34.24	353.029	24825.704	30.647	MM	3.1023	3.10
2	4 1,2,3,6,7,8-HxCDD	NO	34.05	920.386	27660.684	69.214	dd	7.2847	7.28
3	3 1,2,3,4,7,8-HxCDD	YES	33.95	172.983	23664.355	0.000	MM	0.0000	0.91
4	41 Total Hexa-Dioxins	YES	33.43	170.096	24825.704	0.000	db	0.0000	0.81
5	41 Total Hexa-Dioxins	YES	33.35	531.277	24825.704	0.000	dd	0.0000	3.67
6	41 Total Hexa-Dioxins	NO	33.23	4746.256	24825.704	389.469	MM	39.4246	39.42
7	41 Total Hexa-Dioxins	NO	32.97	669.653	24825.704	55.933	bb	5.6619	5.66
8	41 Total Hexa-Dioxins	NO	32.40	5433.114	24825.704	460.325	MM	46.5971	46.60
9	5 1,2,3,7,8,9-HxCDD	NO	34.36	322.320	23152.074	27.292	MM	2.8046	2.80

Hepta-Dioxins

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.81	37083.660	17069.031	4446.081	bb	448.4527	448.45
2	42 Total Hepta-Dioxins	NO	36.96	53644.770	17069.031	6457.293	bb	645.1865	645.19

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-10B.qld

Last Altered: Friday, January 31, 2020 11:25:01 Pacific Standard Time

Printed: Friday, January 31, 2020 11:25:28 Pacific Standard Time

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 Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Furans**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	NO	21.70	880.424	48230.863	36.734	bb	3.8490	3.85
2	43 Total Tetra-Furans	NO	21.07	272.199	48230.863	0.000	bb	0.0000	1.12
3	43 Total Tetra-Furans	YES	20.51	93.766	48230.863	0.000	MM	0.0000	0.41
4	43 Total Tetra-Furans	YES	27.08	121.103	48230.863	0.000	MM	0.0000	0.37
5	43 Total Tetra-Furans	YES	26.77	60.093	48230.863	0.000	bb	0.0000	0.26
6	43 Total Tetra-Furans	YES	26.61	50.899	48230.863	0.000	bb	0.0000	0.22
7	43 Total Tetra-Furans	NO	25.60	68.564	48230.863	2.888	MM	0.3026	0.30
8	8 2,3,7,8-TCDF	NO	25.26	544.909	48230.863	22.311	MM	2.3198	2.32
9	43 Total Tetra-Furans	NO	25.16	180.679	48230.863	7.029	bd	0.7365	0.74
10	43 Total Tetra-Furans	YES	24.73	57.414	48230.863	0.000	MM	0.0000	0.18
11	43 Total Tetra-Furans	NO	24.46	565.837	48230.863	24.299	bb	2.5461	2.55
12	43 Total Tetra-Furans	NO	24.01	117.768	48230.863	5.036	MM	0.5277	0.53
13	43 Total Tetra-Furans	NO	23.95	482.141	48230.863	21.019	dd	2.2024	2.20
14	43 Total Tetra-Furans	YES	23.79	80.441	48230.863	0.000	bd	0.0000	0.35
15	43 Total Tetra-Furans	YES	23.34	50.676	48230.863	0.000	db	0.0000	0.22
16	43 Total Tetra-Furans	NO	23.03	428.820	48230.863	17.865	MM	1.8719	1.87
17	43 Total Tetra-Furans	NO	22.62	548.856	48230.863	22.633	MM	2.3715	2.37

**Penta-Furans function 1**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.09	1369.569	44537.228	62.535	bb	6.5748	6.57

**Penta-Furans**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	10 2,3,4,7,8-PeCDF	NO	30.35	415.058	42147.215	19.228	MM	1.8718	1.87
2	45 Total Penta-Furans	NO	29.67	314.908	44537.228	0.000	db	0.0000	1.53
3	9 1,2,3,7,8-PeCDF	NO	29.43	543.464	46927.242	22.210	MM	2.2846	2.28
4	45 Total Penta-Furans	YES	29.27	125.313	44537.228	0.000	MM	0.0000	0.47
5	45 Total Penta-Furans	NO	29.07	286.343	44537.228	0.000	MM	0.0000	1.34
6	45 Total Penta-Furans	YES	28.86	53.719	44537.228	0.000	bb	0.0000	0.26
7	45 Total Penta-Furans	NO	30.37	123.851	44537.228	0.000	MM	0.0000	0.57

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-10B.qld  
 Last Altered: Friday, January 31, 2020 11:25:01 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:25:28 Pacific Standard Time

Name: VG7 200116D1\_10, Date: 16-JAN-2020, Time: 18:32:11, ID: 1904159-01 PDI-013SC-A-02-03-190925,  
 Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	12 1,2,3,6,7,8-HxCDF	NO	33.17	211.469	20352.428	13.137	MM	1.2141	1.21
2	11 1,2,3,4,7,8-HxCDF	NO	33.05	682.601	18627.275	46.729	bd	3.9227	3.92
3	46 Total Hexa-Furans	NO	32.57	2118.943	18021.853	143.745	bb	13.1775	13.18
4	46 Total Hexa-Furans	NO	32.03	665.154	18021.853	46.427	bb	4.2561	4.26
5	46 Total Hexa-Furans	NO	31.86	194.093	18021.853	13.141	MM	1.2046	1.20
6	13 2,3,4,6,7,8-HxCDF	NO	33.77	104.885	17454.570	7.621	MM	0.6761	0.68

Hepta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	15 1,2,3,4,6,7,8-HpCDF	NO	36.58	2387.758	11237.777	246.788	bb	21.6206	21.62
2	16 1,2,3,4,7,8,9-HpCDF	NO	38.34	155.579	8216.530	20.927	bb	1.6152	1.62
3	47 Total Hepta-Furans	NO	37.15	7341.326	9727.154	864.183	bb	75.2357	75.24

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 09:02:41 Pacific Standard Time

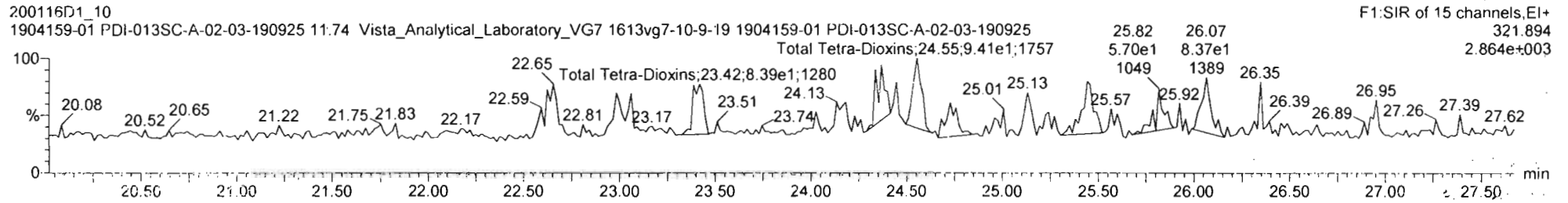
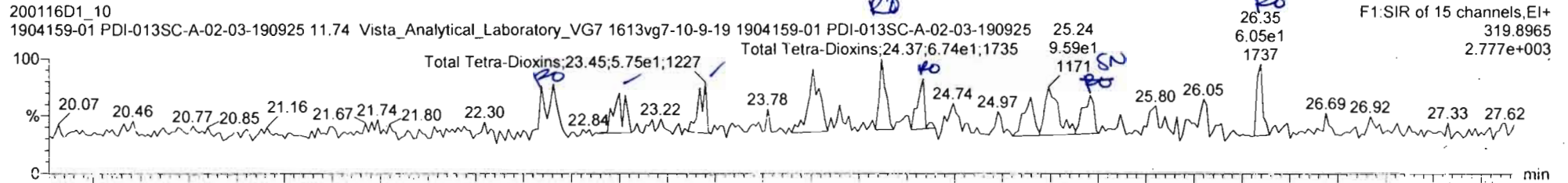
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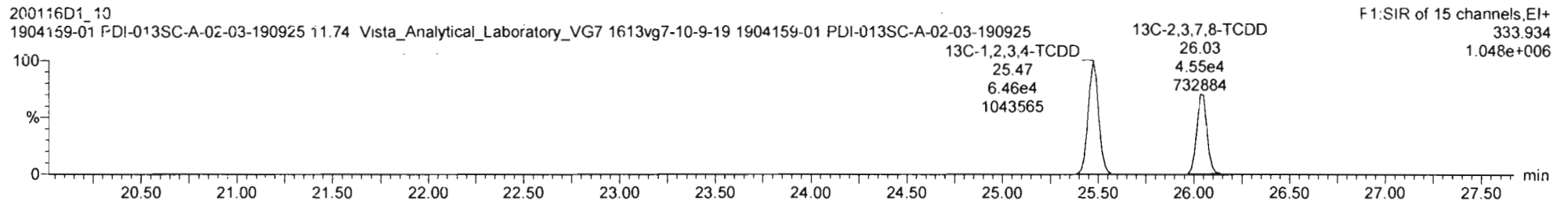
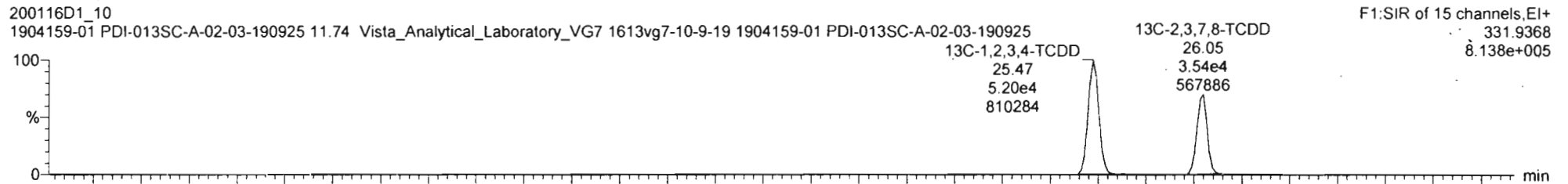
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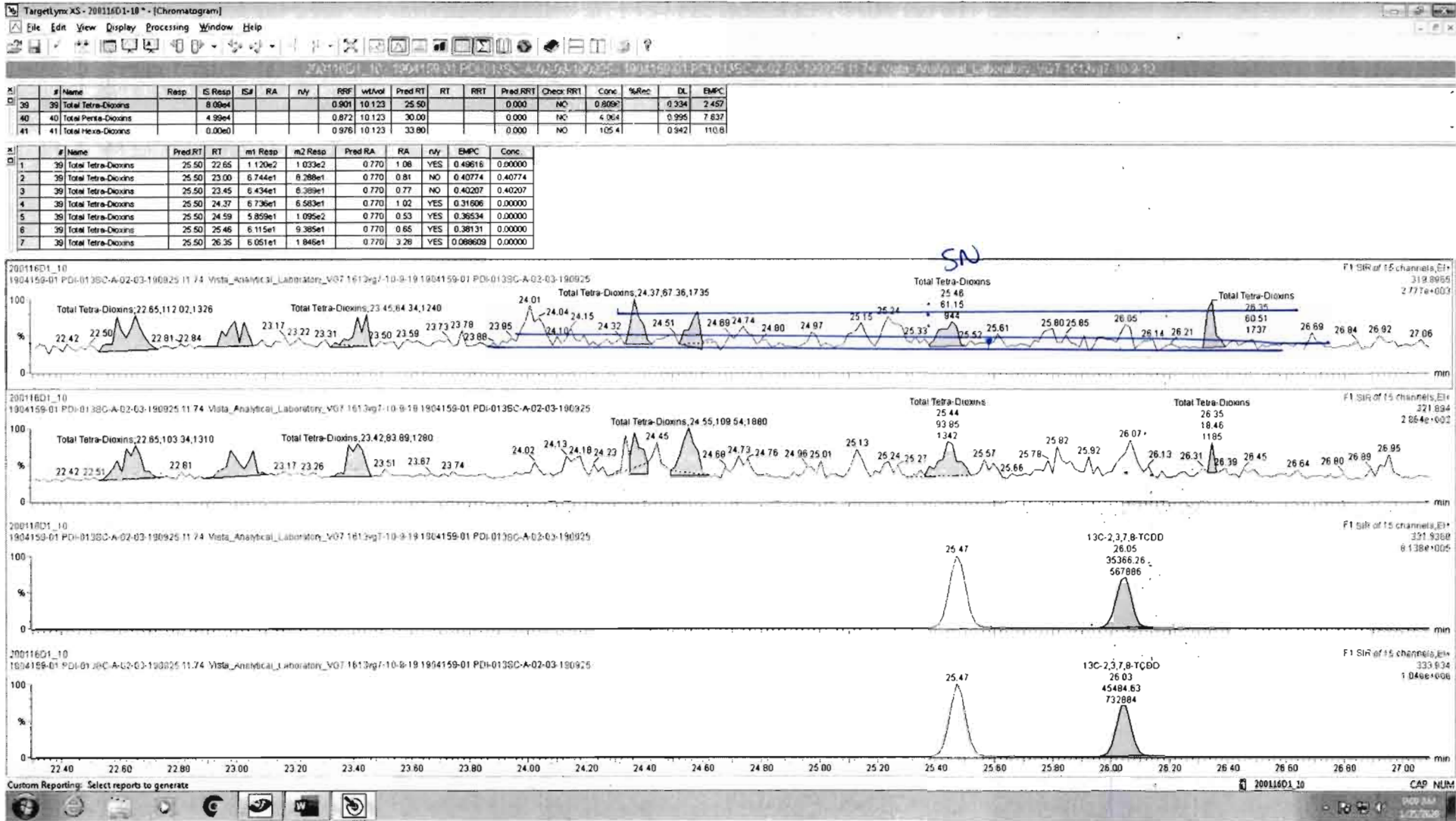
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Total Tetra-Dioxins



13C-2,3,7,8-TCDD



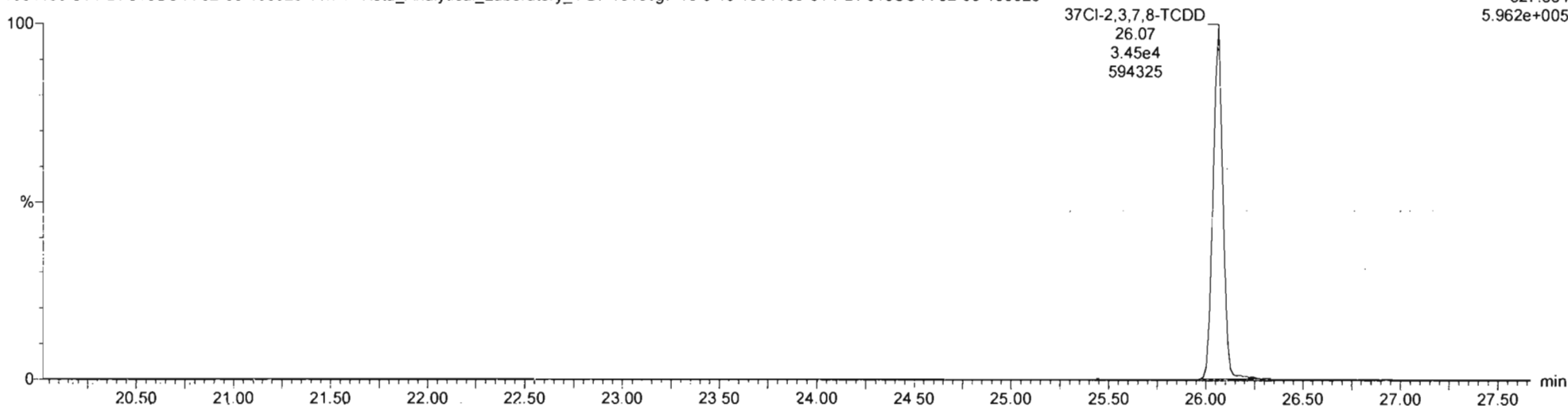


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**37Cl-2,3,7,8-TCDD**

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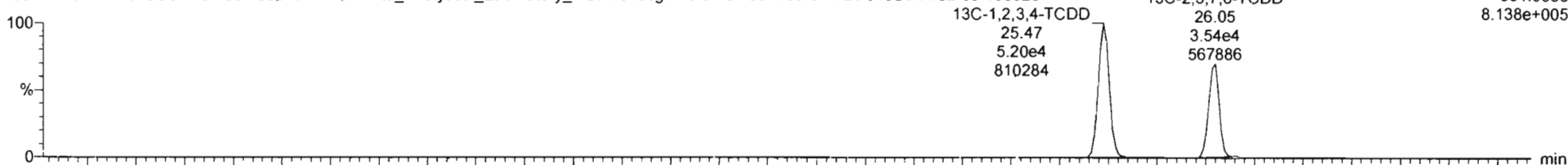
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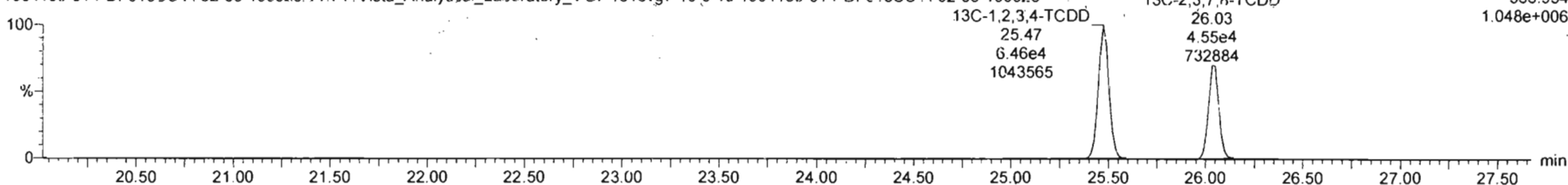
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1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-01 PDI-013SC-A-02-03-190925

F1:SIR of 15 channels,EI+  
331.9368  
8.138e+005



200116D1\_10  
1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-01 PDI-013SC-A-02-03-190925

F1:SIR of 15 channels,EI+  
333.934  
1.048e+006





Vista Analytical Laboratory

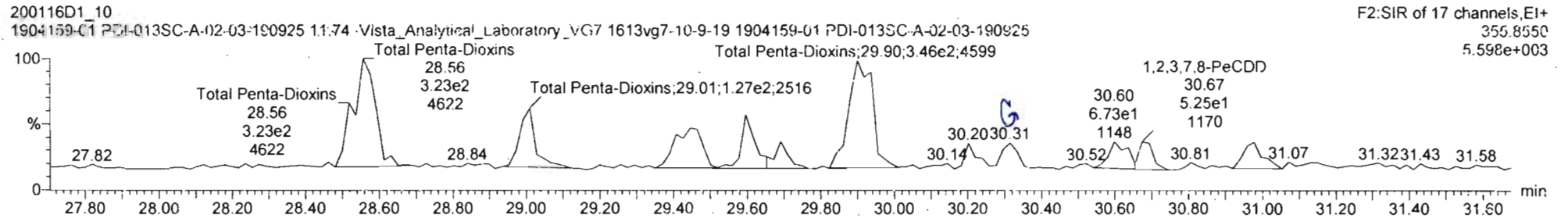
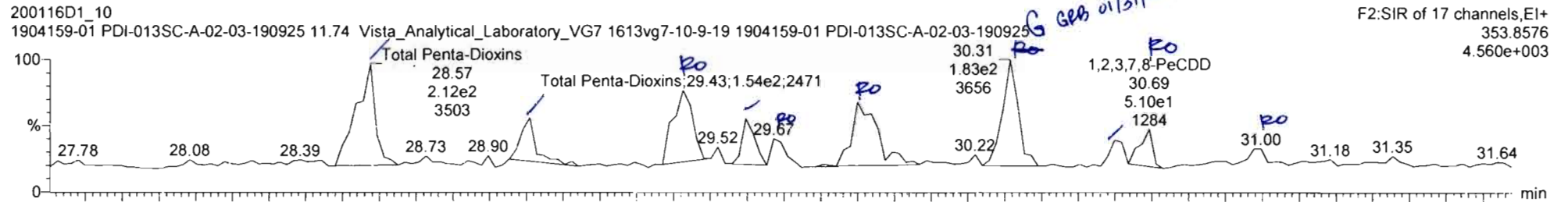
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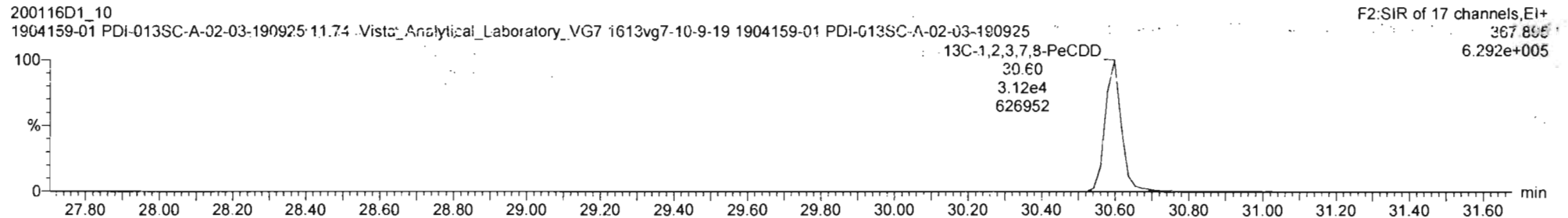
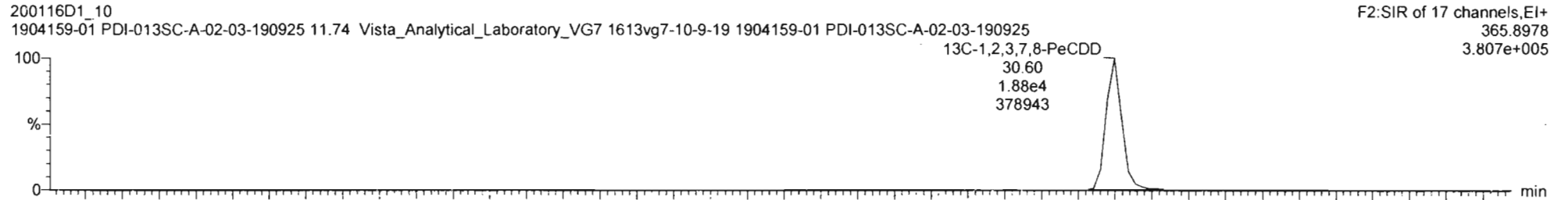
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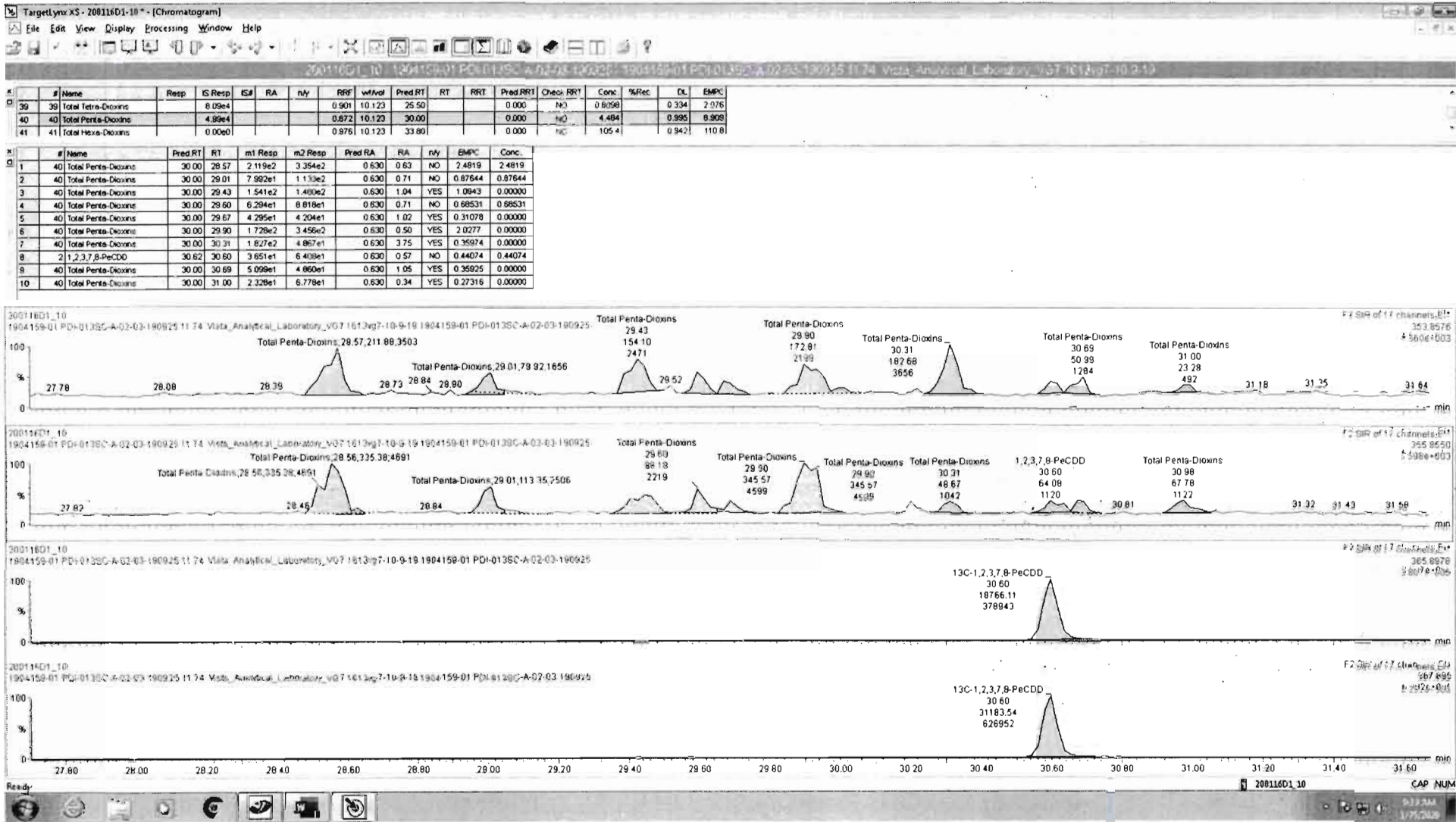
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Total Penta-Dioxins



13C-1,2,3,7,8-PeCDD





Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 09:02:41 Pacific Standard Time

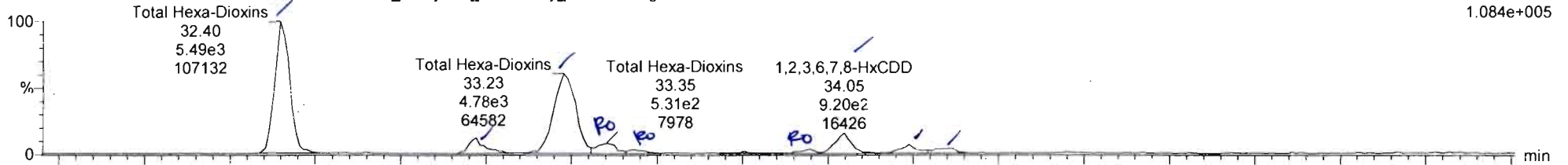
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Total Hexa-Dioxins

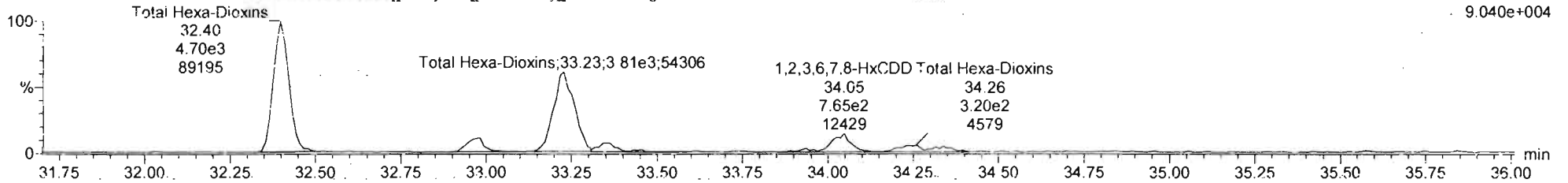
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F3:SIR of 11 channels,EI+ 389.816 1.084e+005



200116D1\_10 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-01 PDI-013SC-A-02-03-190925

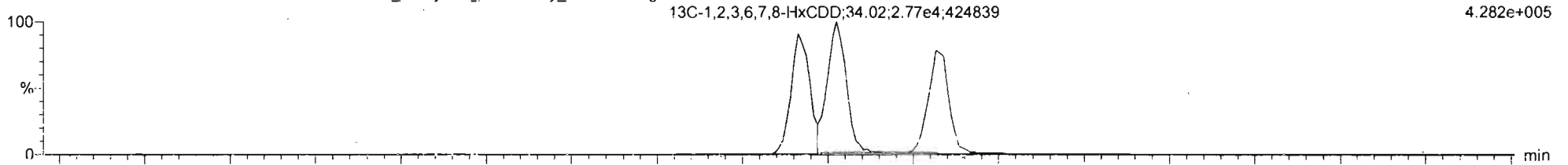
F3:SIR of 11 channels,EI+ 391.813 9.040e+004



13C-1,2,3,4,7,8-HxCDD

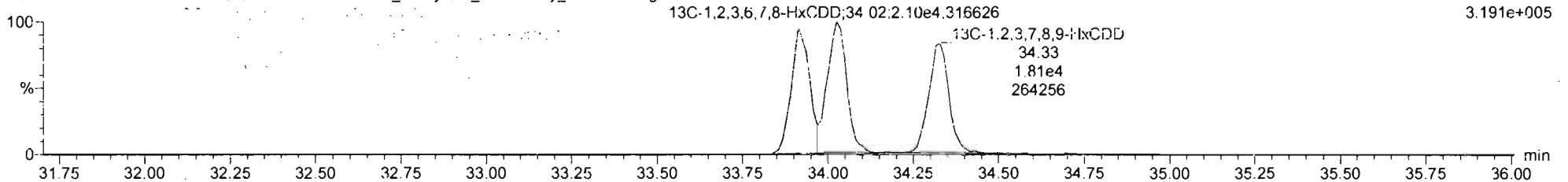
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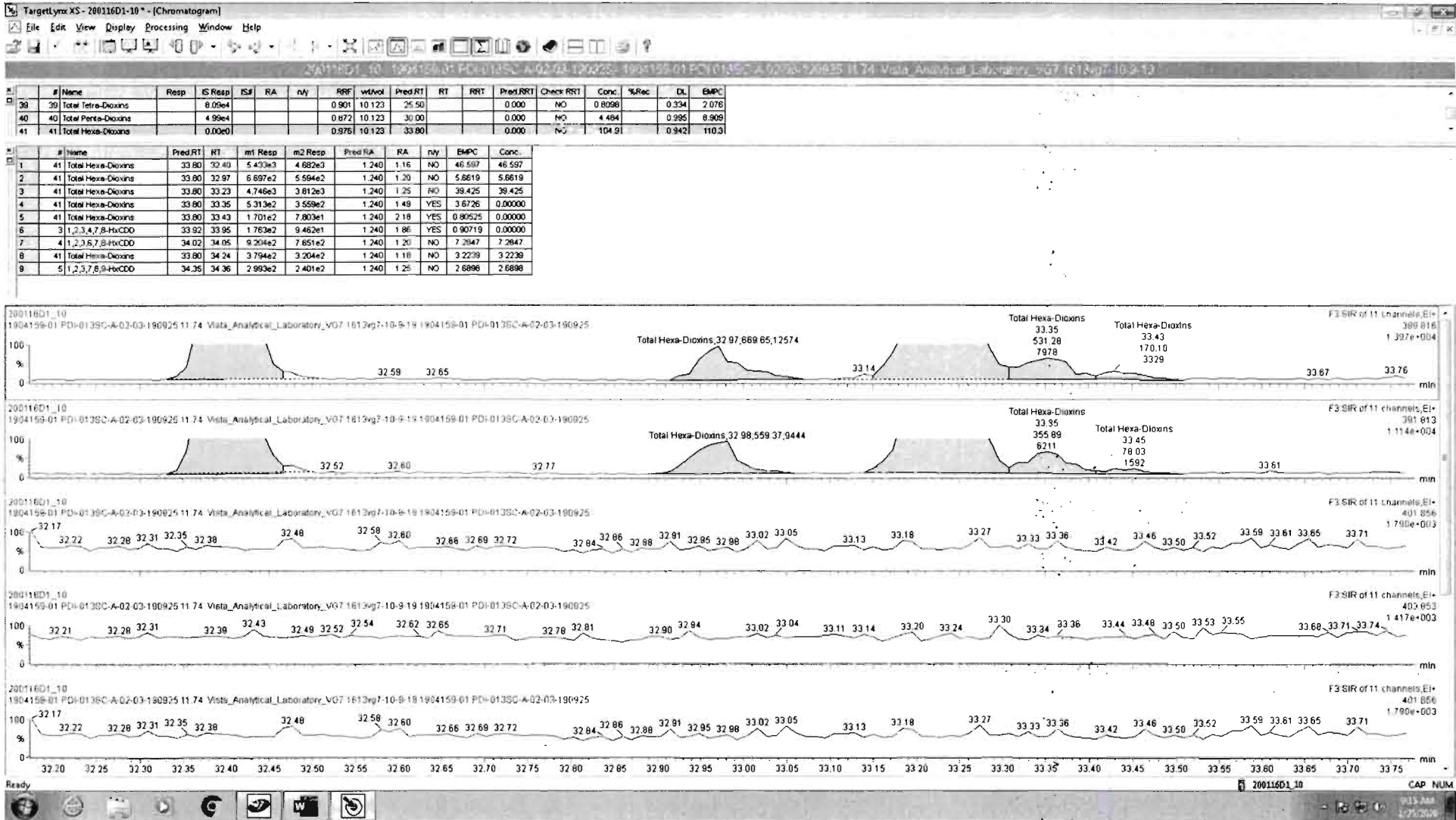
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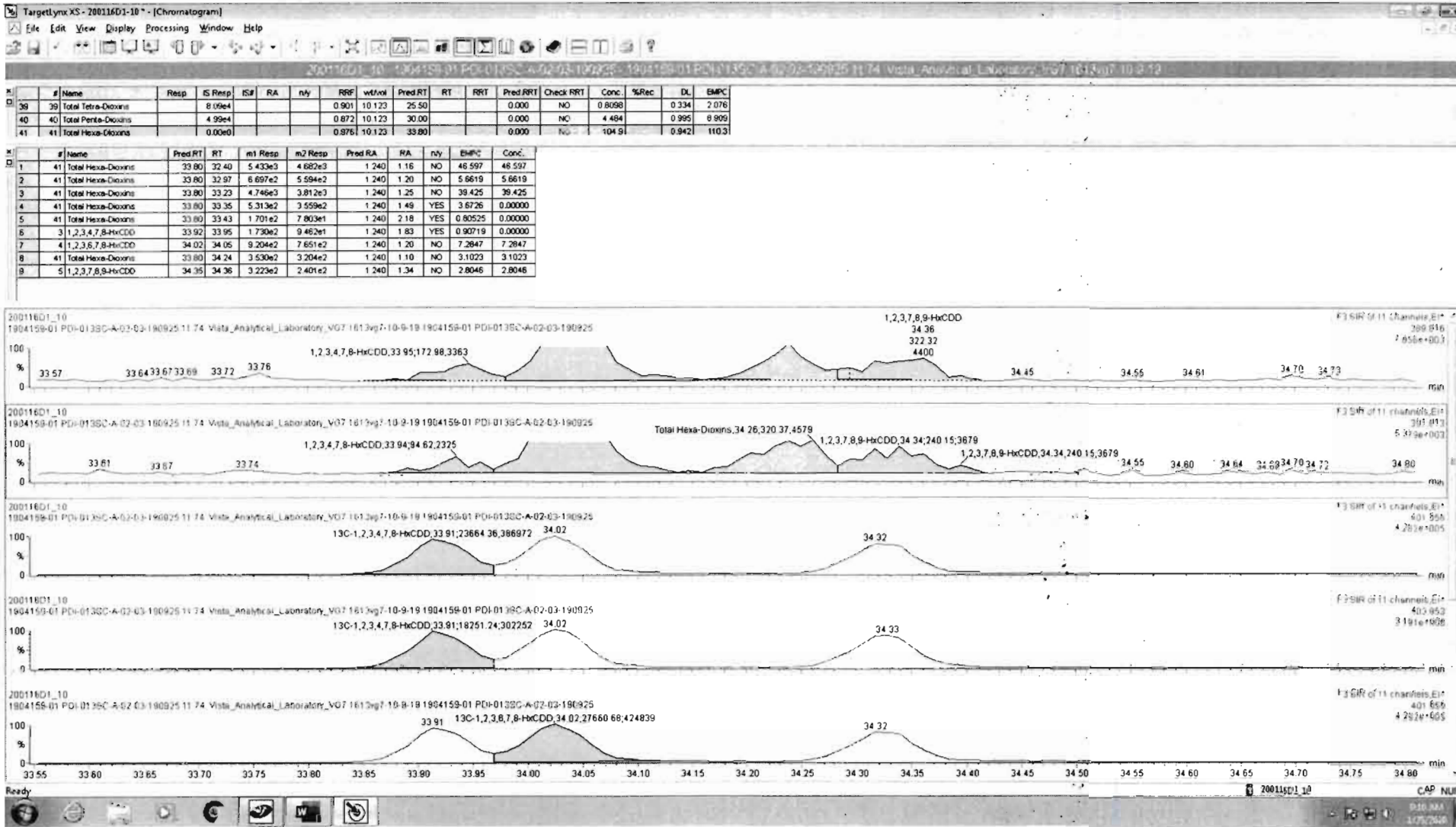


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F3:SIR of 11 channels,EI+ 403.853 3.191e+005





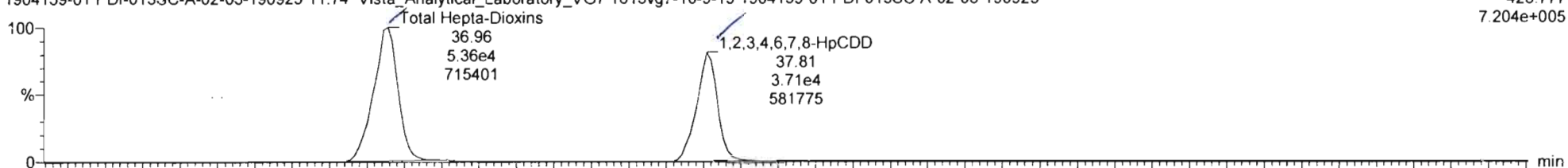


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Total Hepta-Dioxins

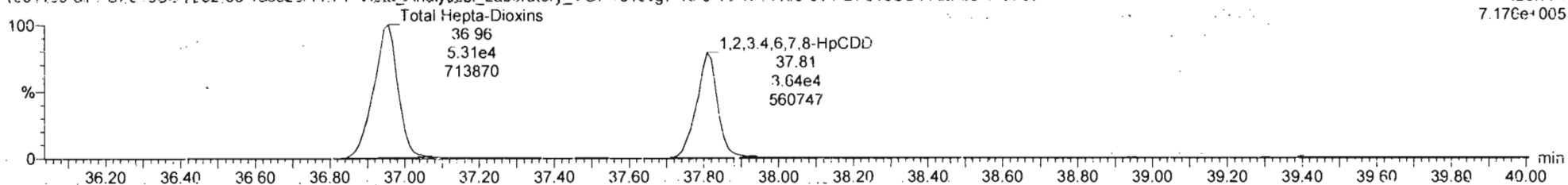
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F4:SIR of 11 channels,EI+  
423.777  
7.204e+005



200116D1\_10  
1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-01 PDI-013SC-A-02-03-190925

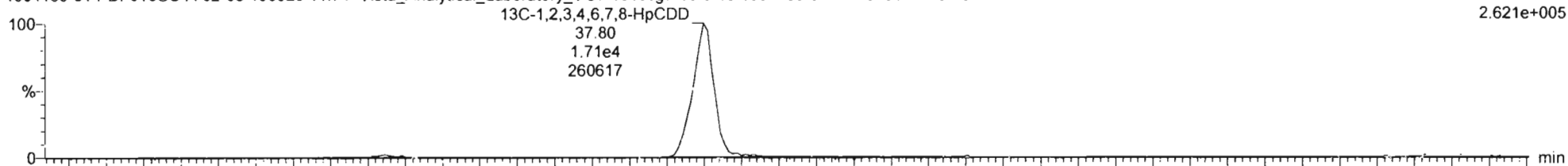
F4:SIR of 11 channels,EI+  
425.774  
7.176e+005



<sup>13</sup>C-1,2,3,4,6,7,8-HpCDD

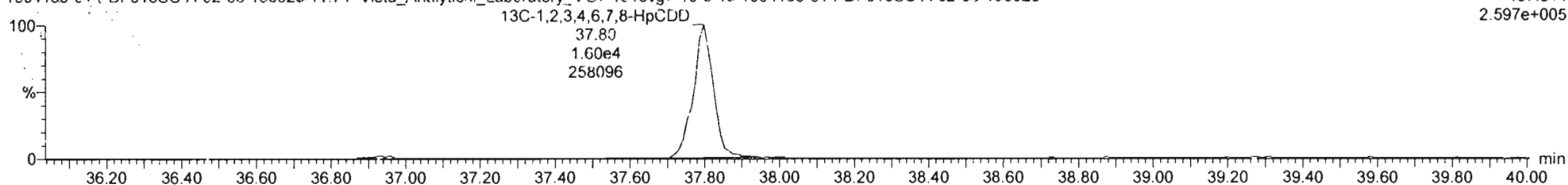
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F4:SIR of 11 channels,EI+  
435.817  
2.621e+005



200116D1\_10  
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F4:SIR of 11 channels,EI+  
437.814  
2.597e+005



Vista Analytical Laboratory

Dataset: Untitled

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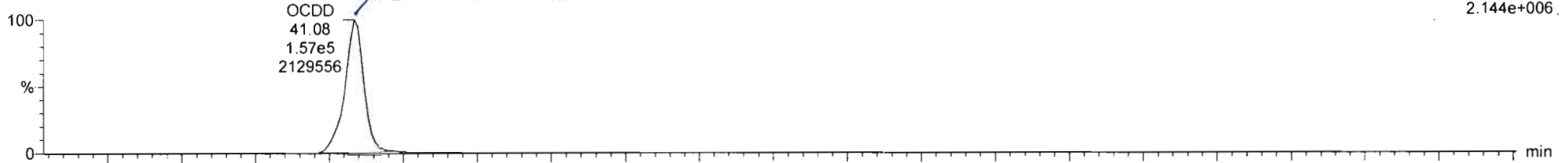
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OCDD

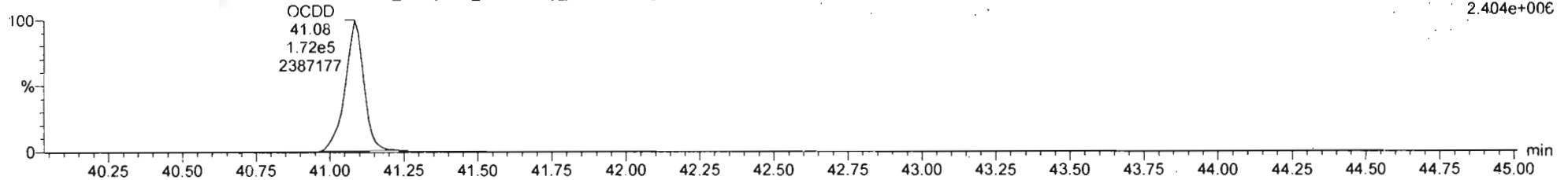
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F5:SIR of 11 channels, EI+  
457.738  
2.144e+006



200116D1\_10  
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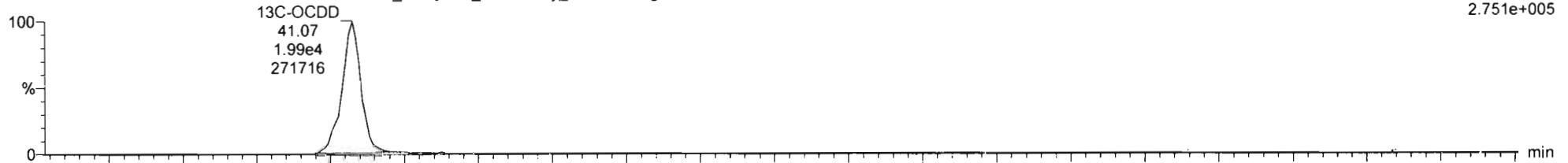
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13C-OCDD

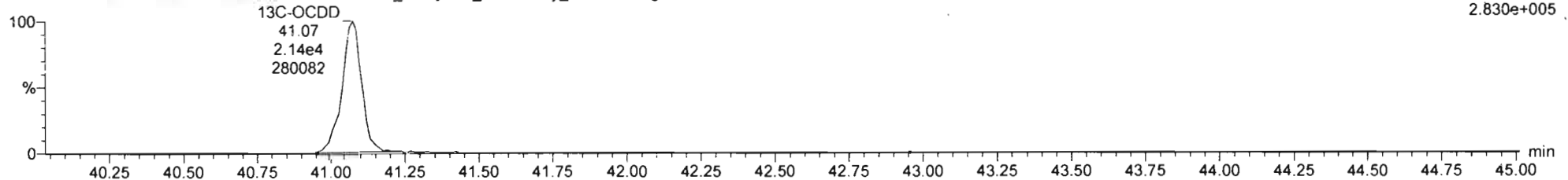
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F5:SIR of 11 channels, EI+  
469.778  
2.751e+005



200116D1\_10  
1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-01 PDI-013SC-A-02-03-190925

F5:SIR of 11 channels, EI+  
471.775  
2.830e+005



Vista Analytical Laboratory

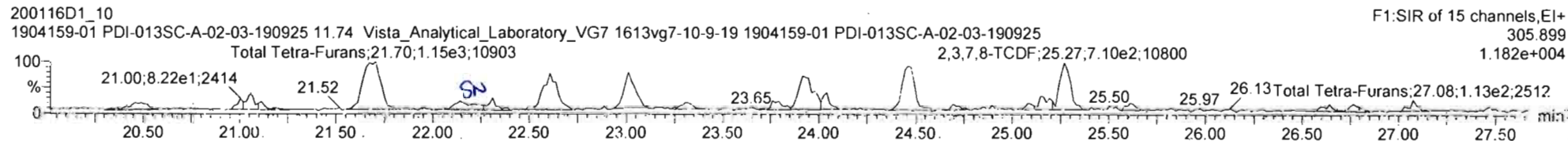
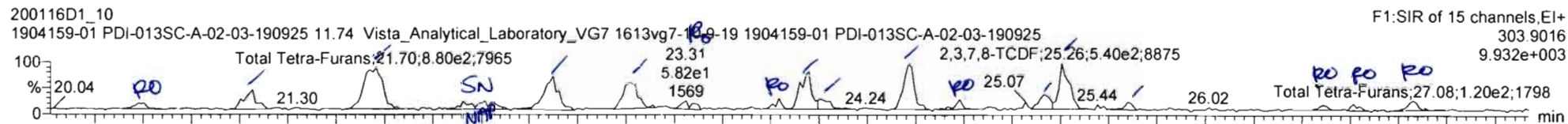
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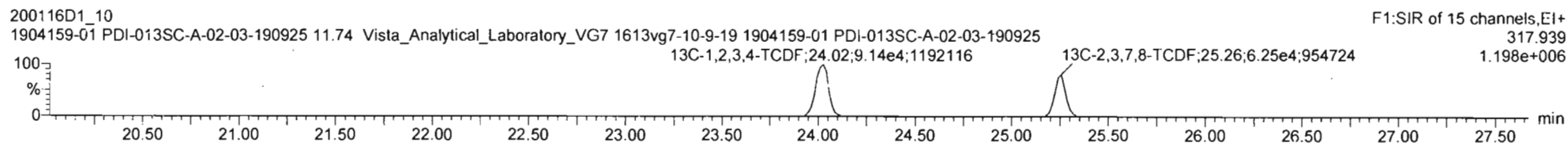
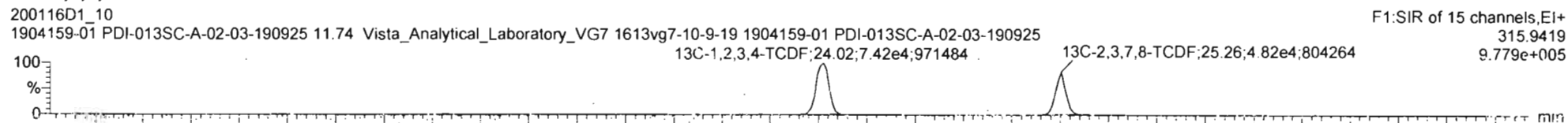
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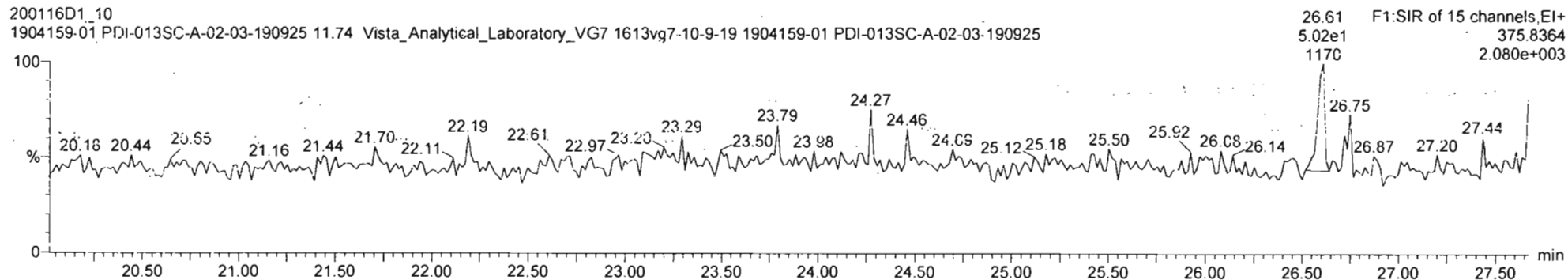
Total Tetra-Furans



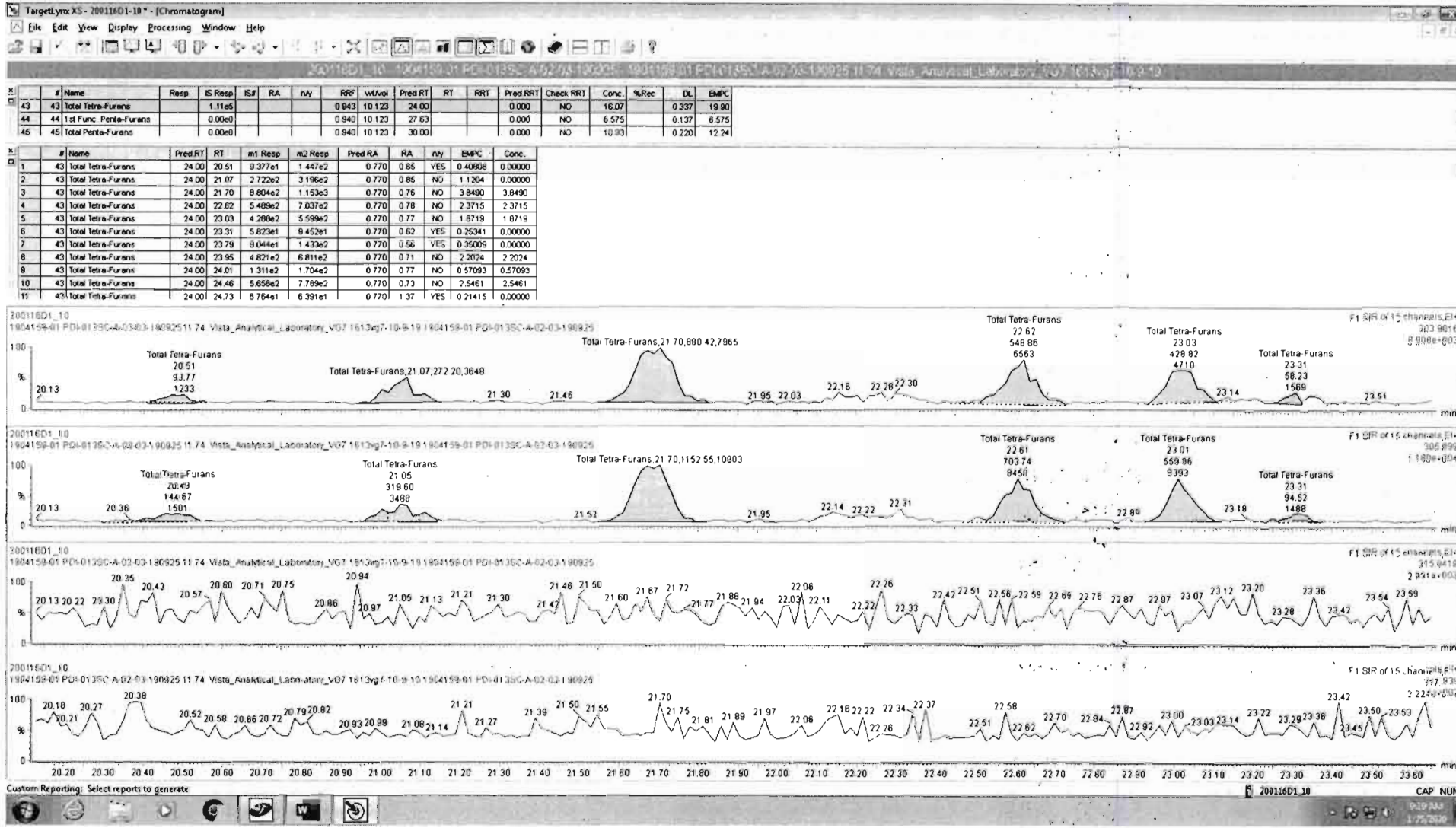
13C-2,3,7,8-TCDF

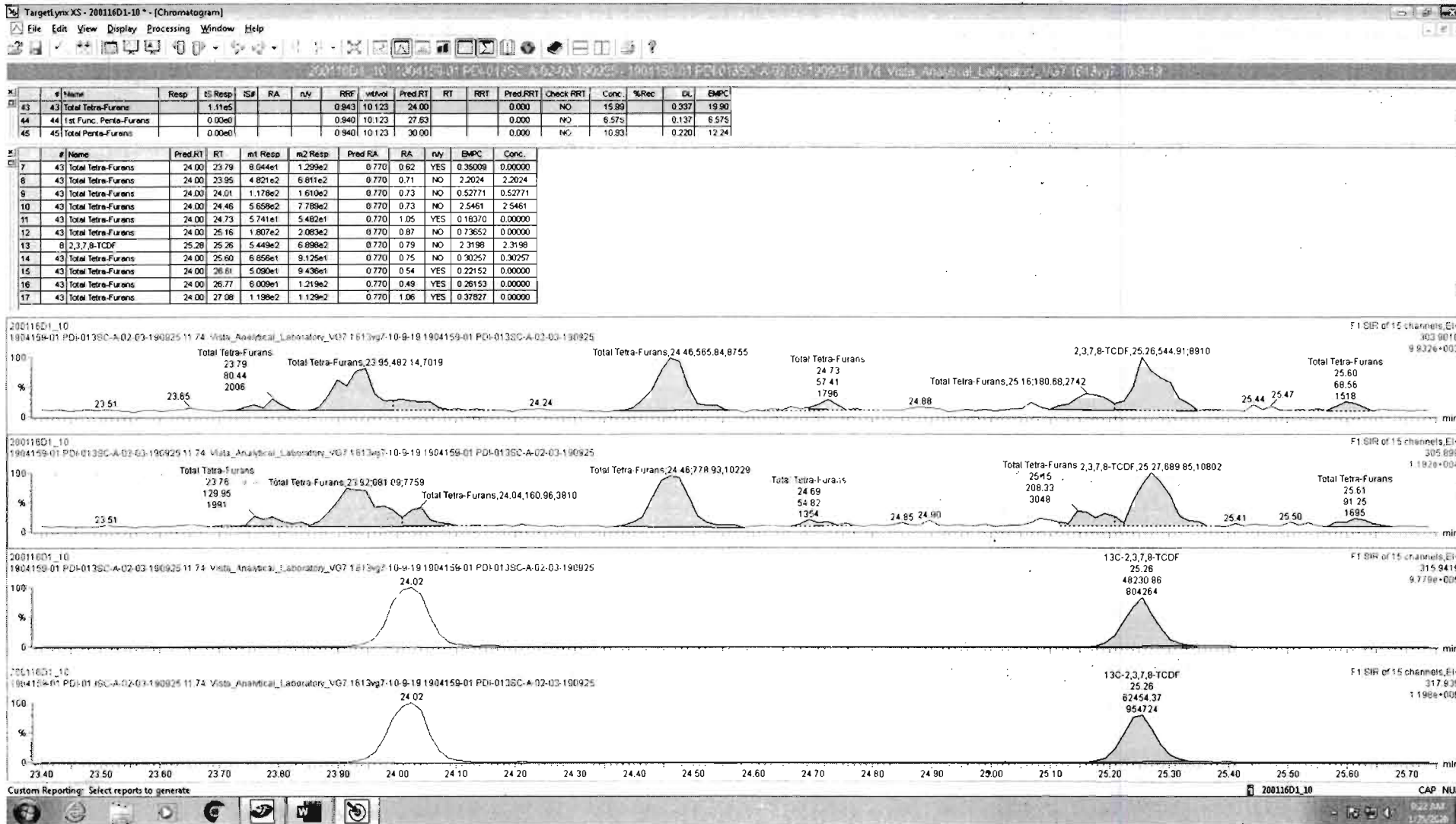


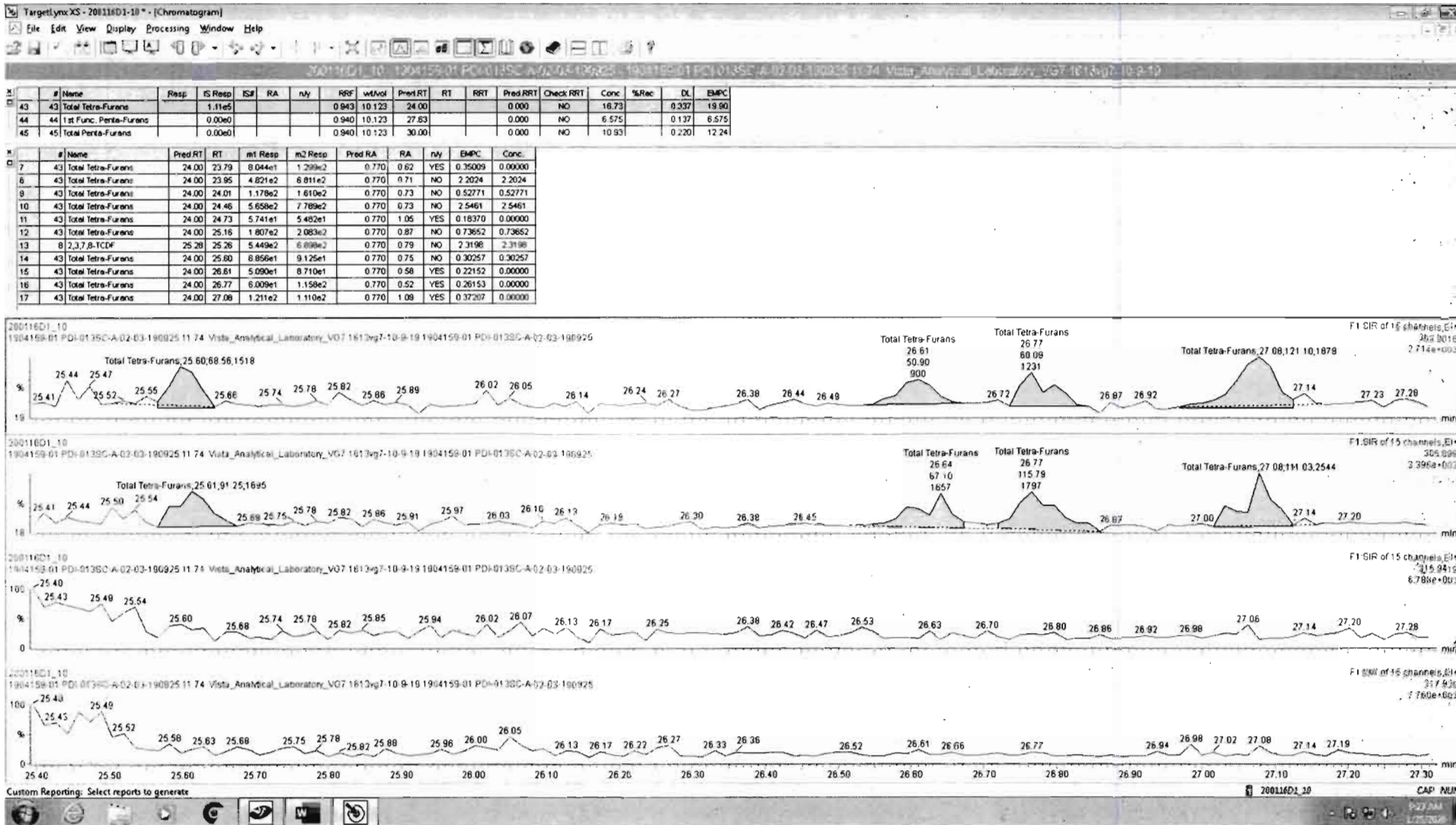
DPE1











Vista Analytical Laboratory

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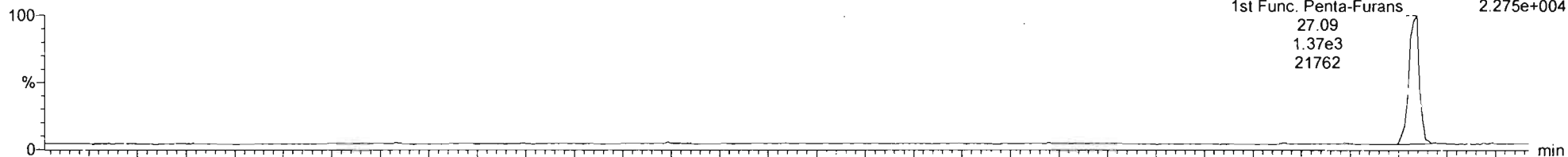
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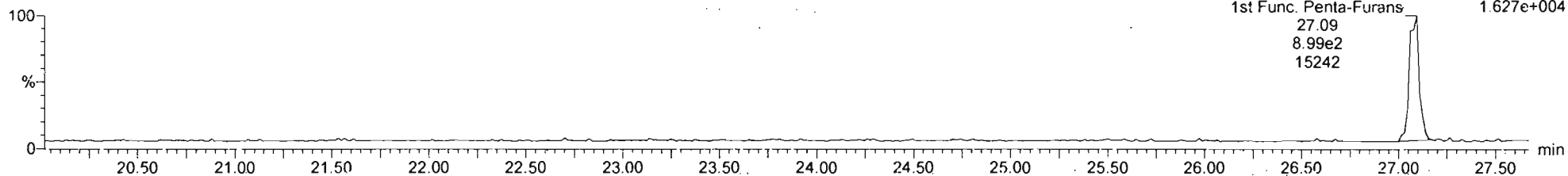
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1st Func. Penta-Furans

200116D1\_10  
1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-01 PDI-013SC-A-02-03-190925

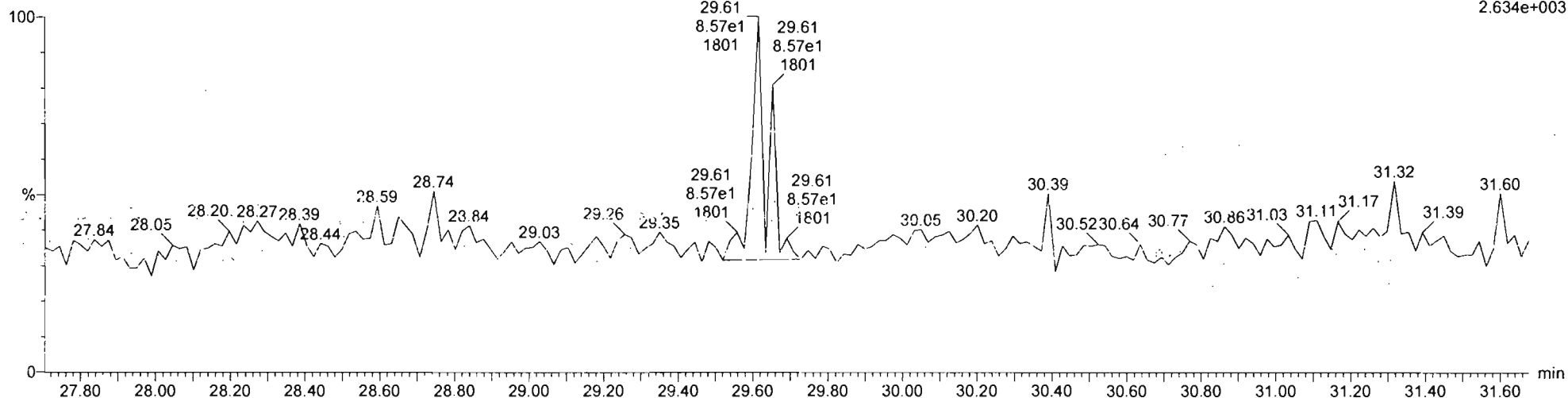


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DPE6

200116D1\_10  
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Vista Analytical Laboratory

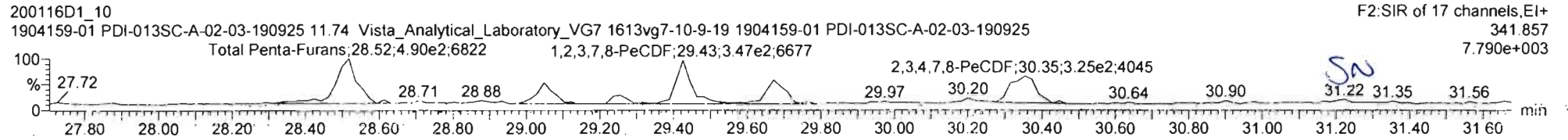
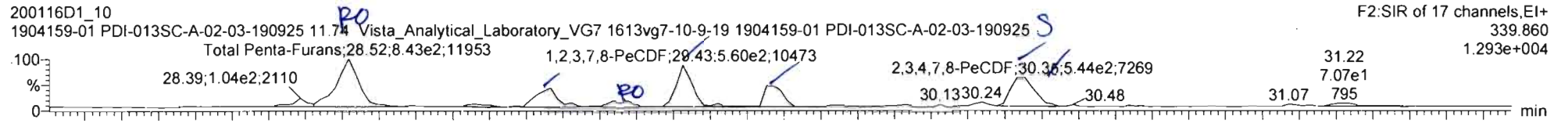
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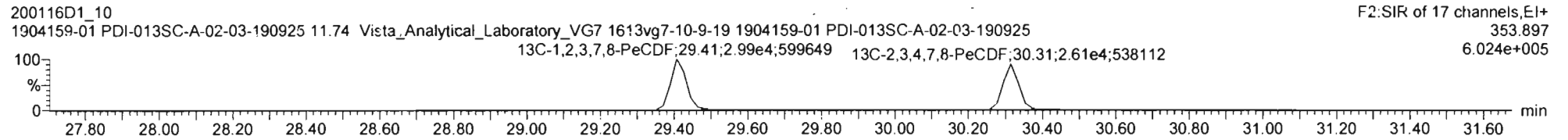
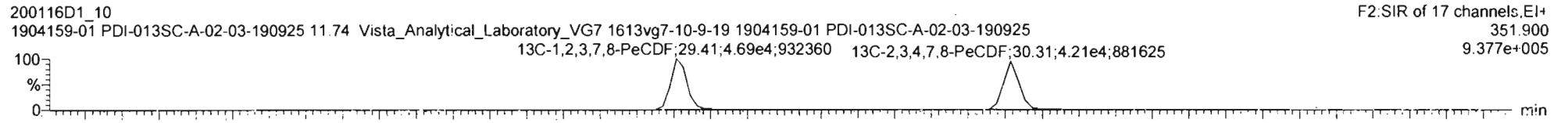
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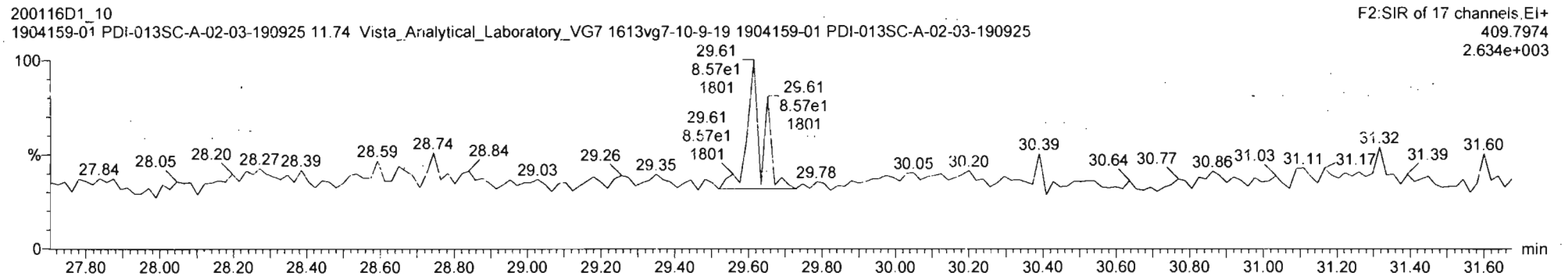
Total Penta-Furans

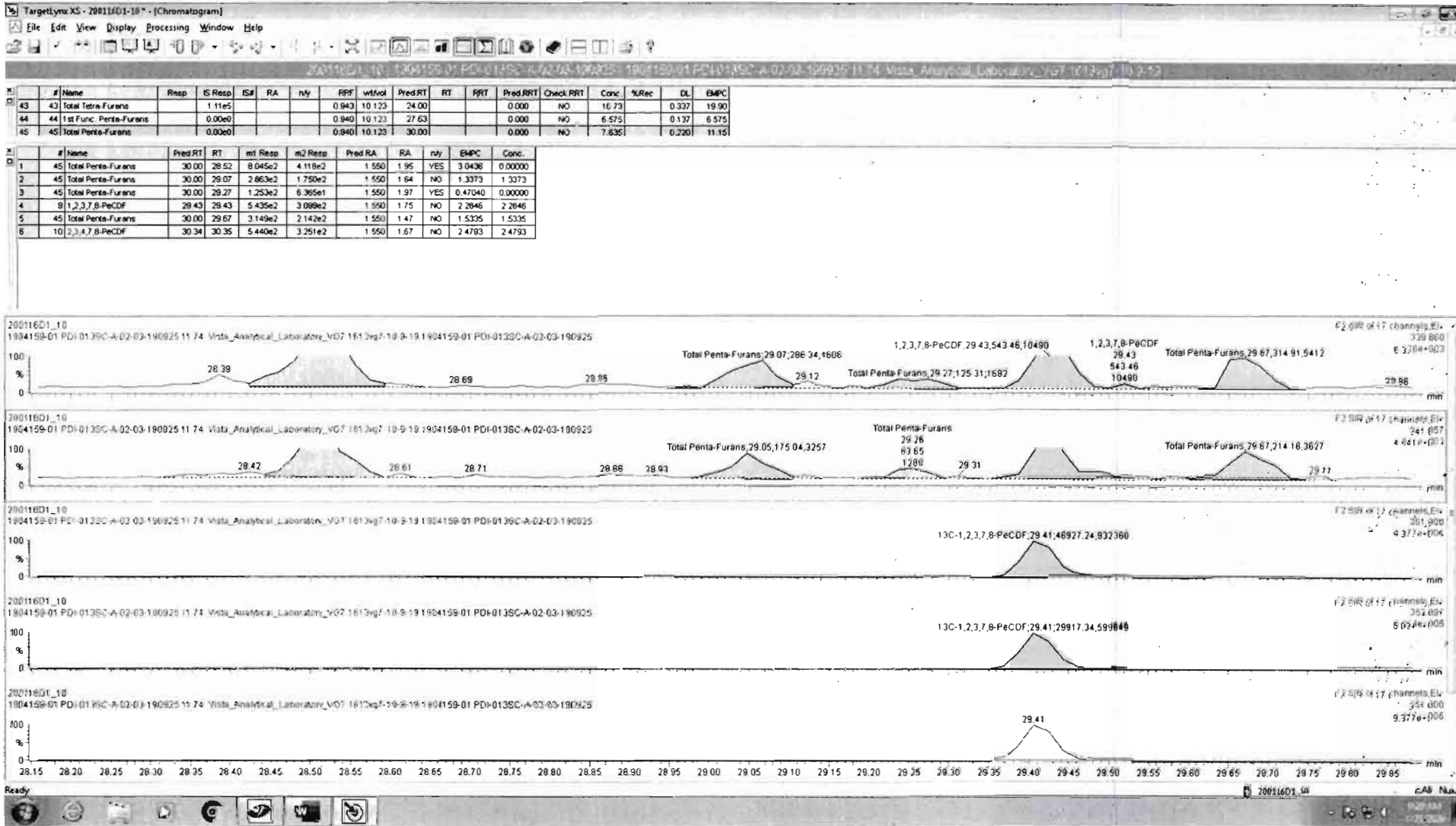


13C-1,2,3,7,8-PeCDF



DPE2

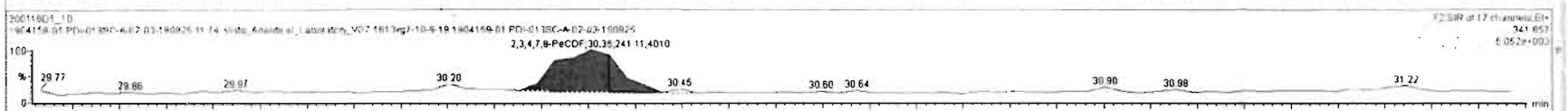
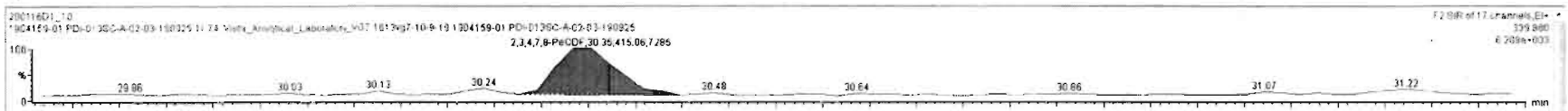




20011601\_10 - 1904159-01 PDI-0135C-A-02-03-190925 - 1904159-01 PDI-0135C-A-02-03-190925 11:74 Vista\_Analytical\_Laboratory\_V07 1613q7-10-9-19

#	Name	Resp	S Resp	IS#	RA	nly	RRF	wt/mol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	Dx	StatC
45	Total Penta-Furans	0.00e0					0.940	10.123	30.00			0.000	NO	4.156	0.220	8.323	
46	Total Hexa-Furans	0.00e0					1.078	10.123	33.00			0.000	NO	24.43	0.475	24.43	
47	Total Hepta-Furans	0.00e0					1.135	10.123	37.75			0.000	NO	98.47	1.05	98.47	
48	PFK1																
49	PFK2																
50	PFK3																
51	PFK4																
52	PFK5																

#	Name	Pred RT	RT	wt Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	Total Penta-Furans	30.00	29.86	5.372e1	4.119e2	1.550	0.13	YES	0.25815	0.00000
2	Total Penta-Furans	30.00	29.87	2.863e2	1.750e2	1.550	1.64	NO	1.3373	0.00000
3	Total Penta-Furans	30.00	29.27	1.253e2	6.365e1	1.550	1.97	YES	0.47040	0.00000
4	1,2,3,7,8-PeCDF	29.43	29.43	5.435e2	3.089e2	1.550	1.75	NO	2.2646	2.2646
5	Total Penta-Furans	30.00	29.87	3.149e2	2.142e2	1.550	1.47	NO	1.5336	0.00000
6	10,2,3,4,7,8-PeCDF	30.34	30.35	4.151e2	2.411e2	1.550	1.72	NO	1.8718	1.8718
7	Total Penta-Furans	30.00	30.37	1.239e2	7.242e1	1.550	1.71	NO	0.56889	0.00000



Vista Analytical Laboratory

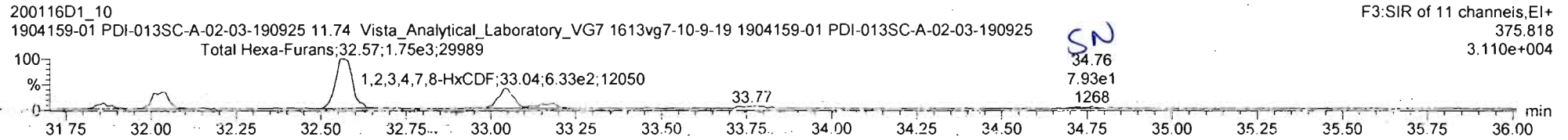
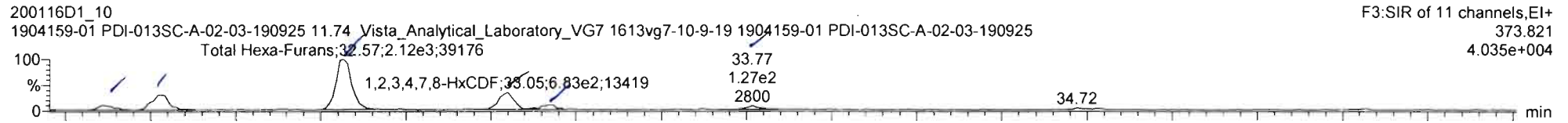
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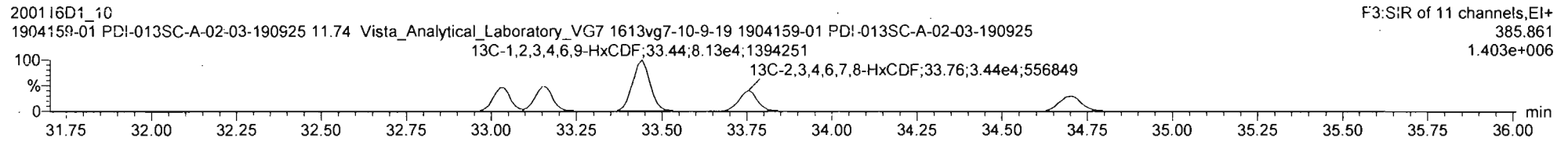
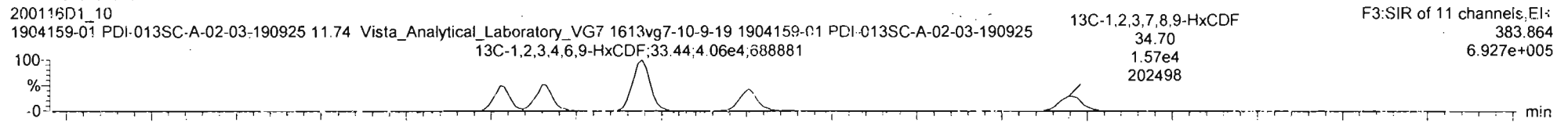
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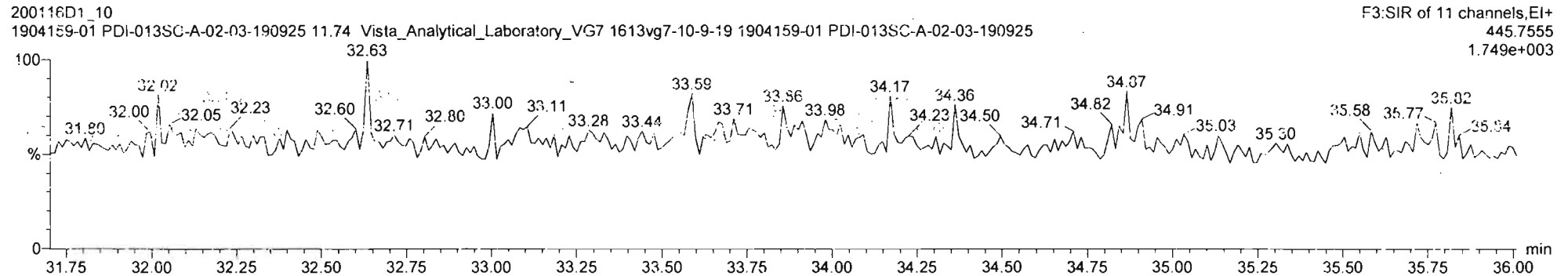
Total Hexa-Furans



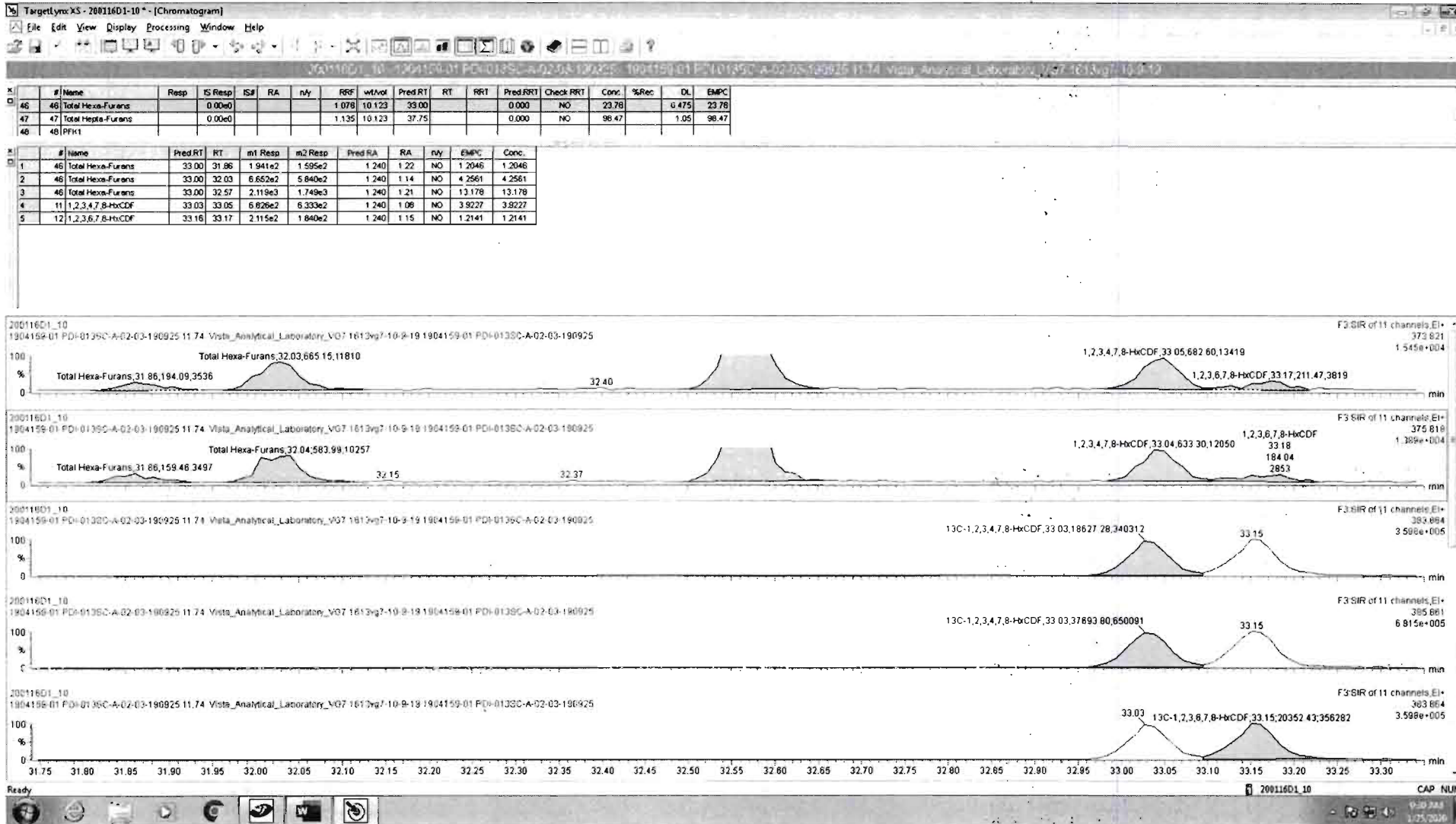
13C-1,2,3,4,7,8-HxCDF

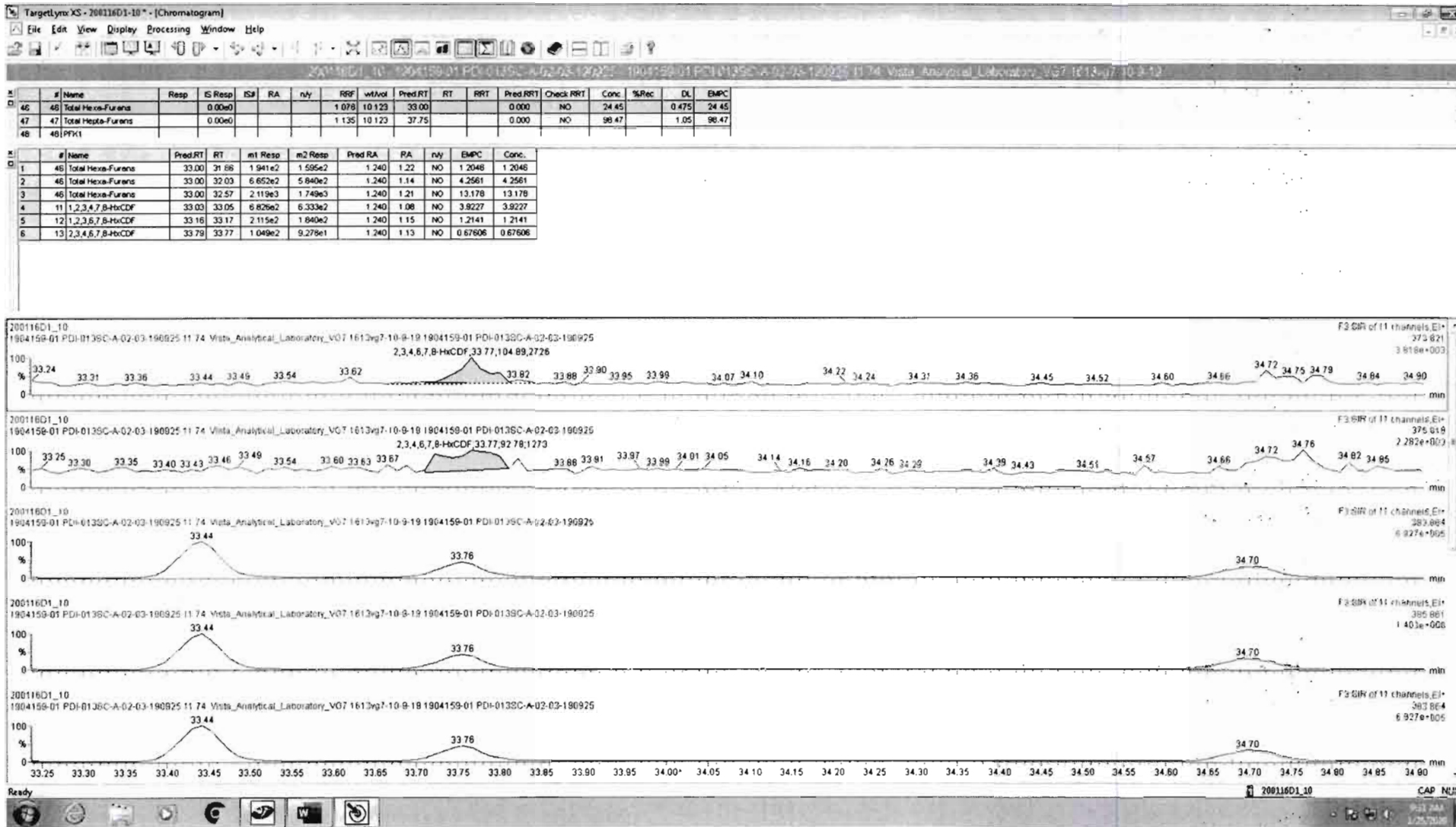


DPE3









Vista Analytical Laboratory

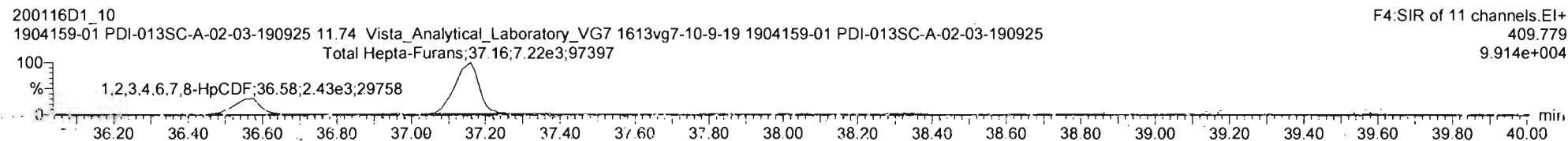
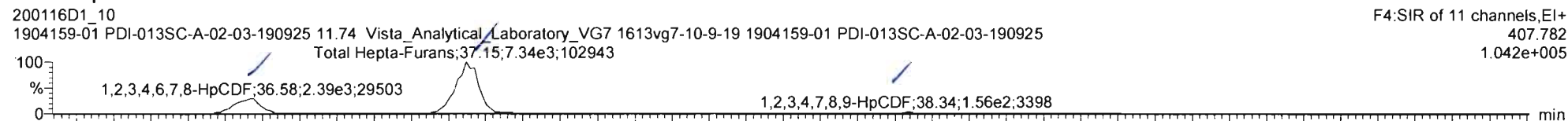
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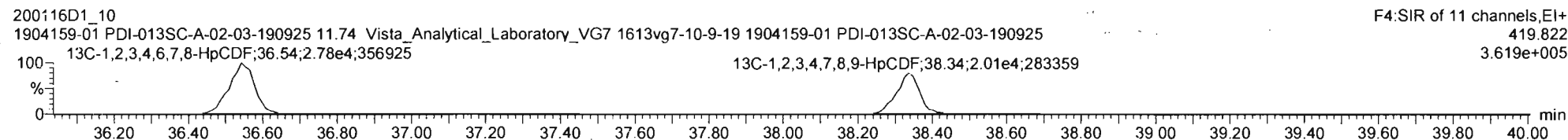
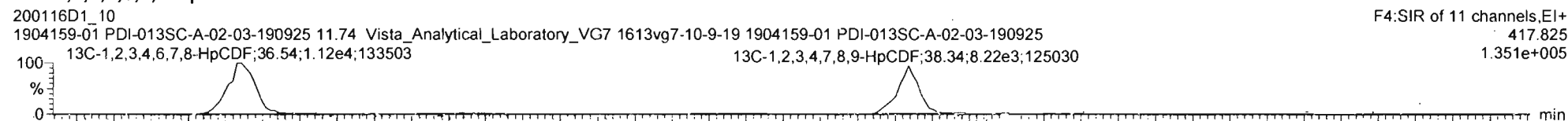
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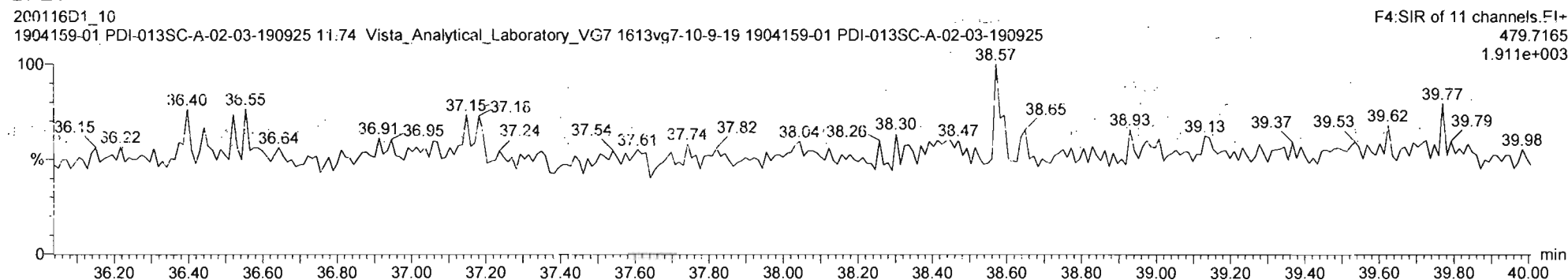
### Total Hepta-Furans

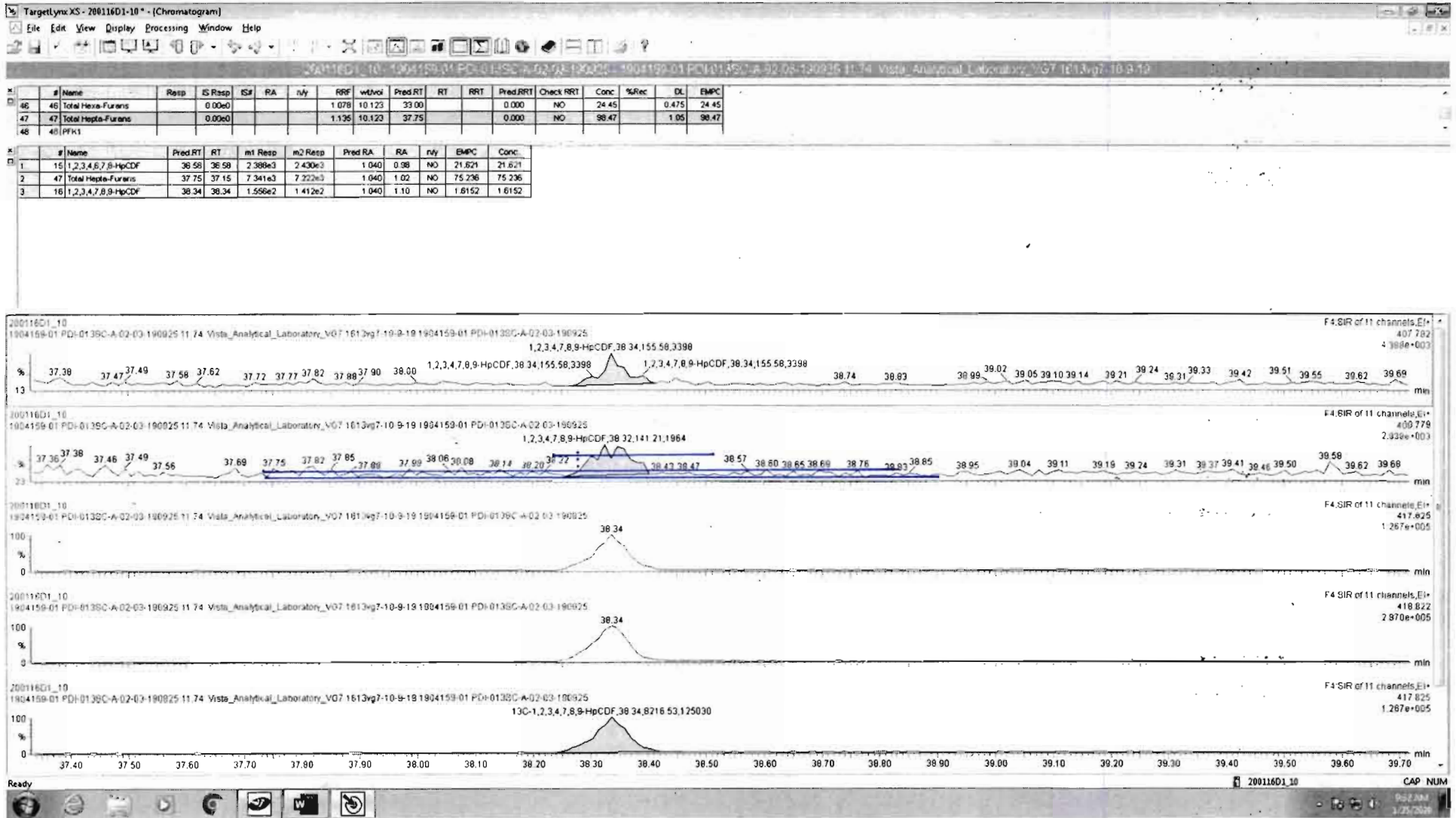


### 13C-1,2,3,4,6,7,8-HpCDF



### DPE4





Vista Analytical Laboratory

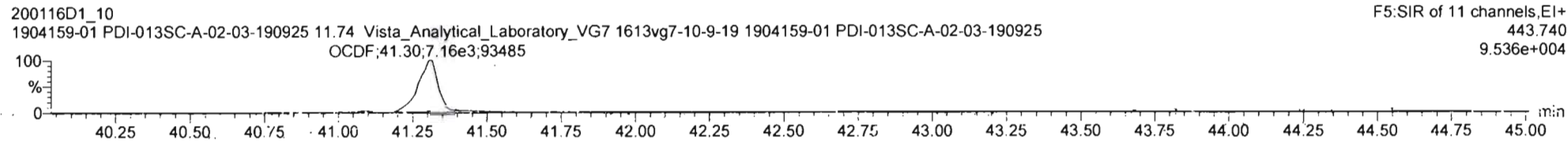
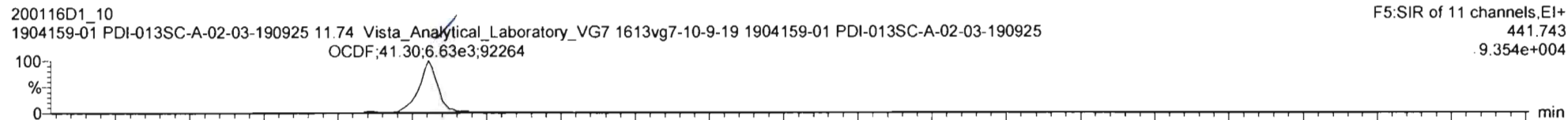
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Last Altered: Saturday, January 25, 2020 09:02:41 Pacific Standard Time

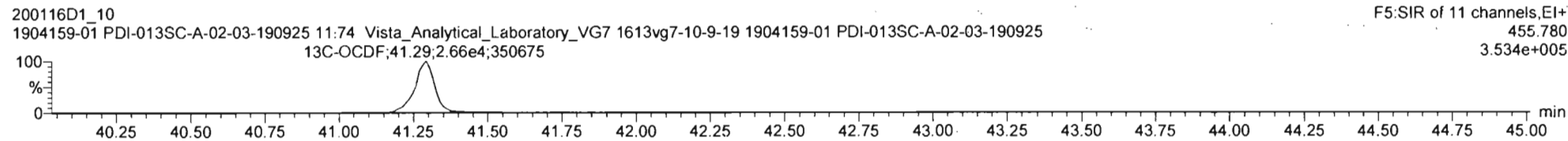
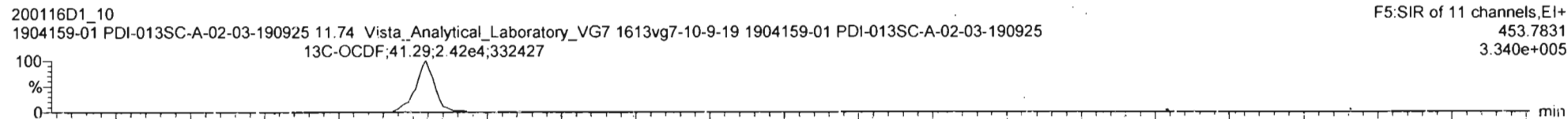
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Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

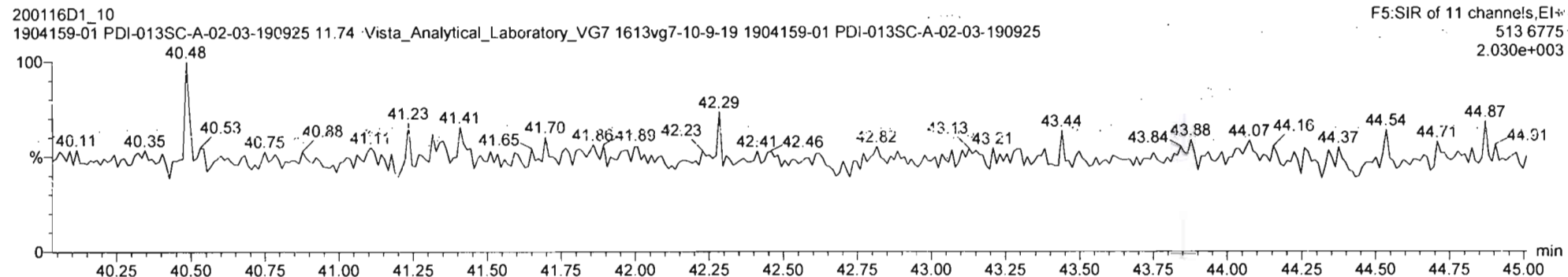
OCDF



13C-OCDF



DPE5



Vista Analytical Laboratory

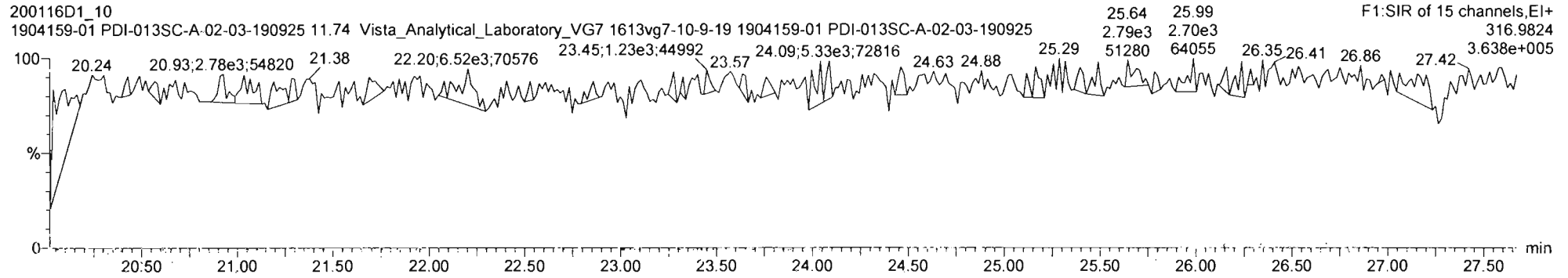
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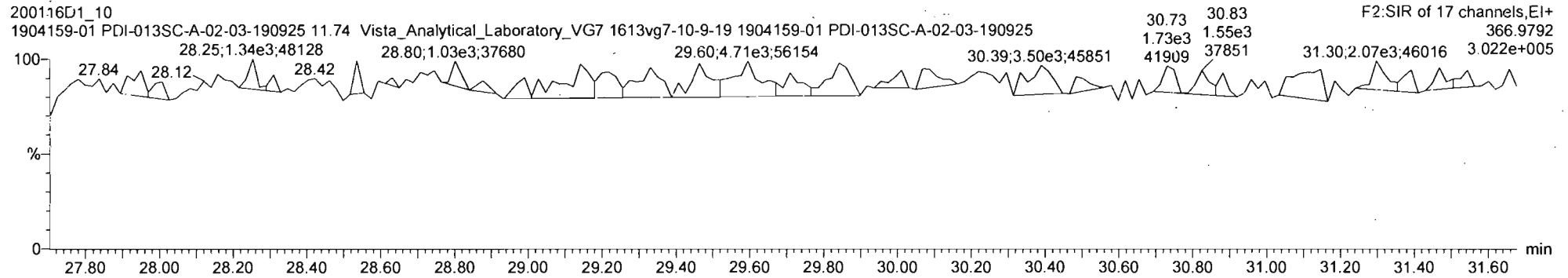
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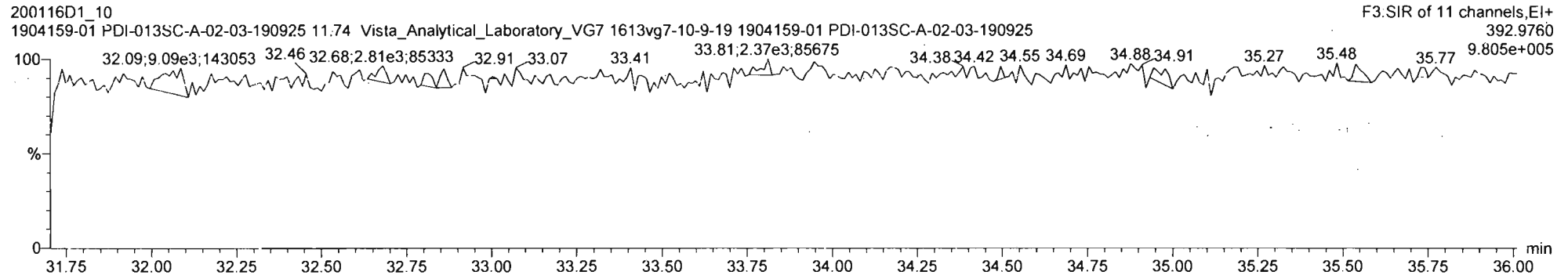
PFK1



PFK2



PFK3



Vista Analytical Laboratory

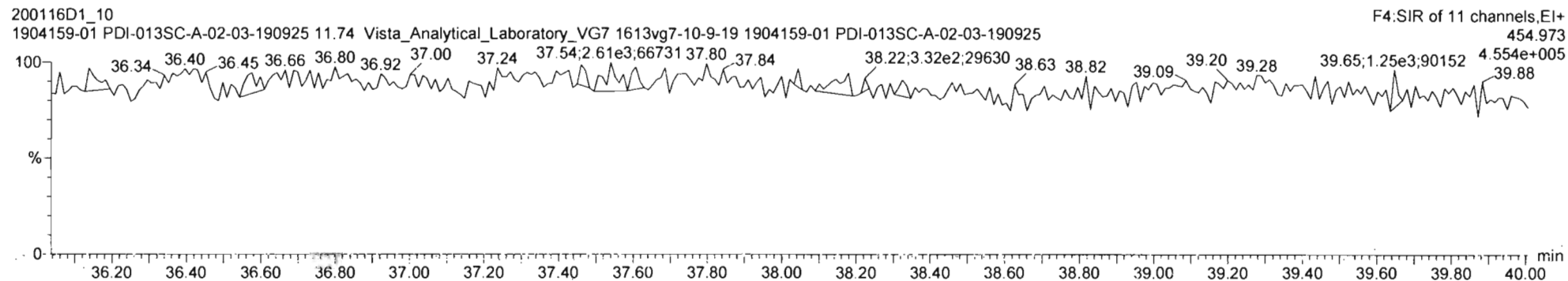
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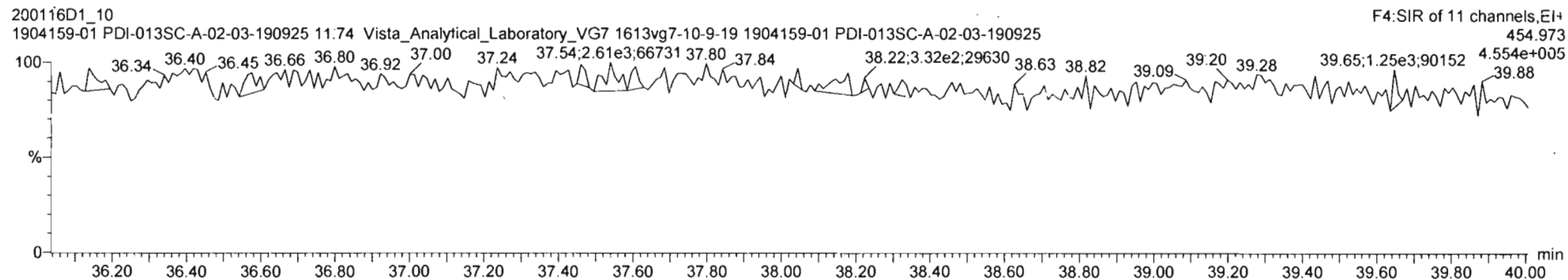
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Description: 1904159-01 PDI-013SC-A-02-03-190925 11.74 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

PFK4



PFK5



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-9b.qld  
 Last Altered: Friday, January 31, 2020 10:46:48 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:13:51 Pacific Standard Time

GRB 01/31/2020

C1 02/03/2020

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 25 Jan 2020 08:21:08

Name: VG7 200116D1\_9, Date: 16-JAN-2020, Time: 17:44:17, ID: B0A0001-DUP1 Duplicate,  
 Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		7.90e4	10.1745	0.905			1.001		26.07					0.408
2	2 1,2,3,7,8-PeCDD		4.86e4	10.1745	0.903			1.001		30.62					0.408
3	3 1,2,3,4,7,8-HxCDD		3.84e4	10.1745	1.101			1.000		33.94					1.05
4	4 1,2,3,6,7,8-HxCDD	1.23e3	4.46e4	10.1745	0.939	1.339	NO	1.000	1.000	34.04	34.05	5.7804		5.78	1.21
5	5 1,2,3,7,8,9-HxCDD	3.56e2	3.81e4	10.1745	0.961	1.324	NO	1.001	1.000	34.36	34.33	1.9104		1.91	1.47
6	6 1,2,3,4,6,7,8-HpCDD	5.76e4	2.92e4	10.1745	0.979	1.024	NO	1.000	1.000	37.82	37.82	395.62		396	3.24
7	7 OCDD	2.54e5	3.76e4	10.1745	0.959	0.916	NO	1.000	1.000	41.09	41.10	2767.7		2770	3.21
8	8 2,3,7,8-TCDF	1.20e3	1.07e5	10.1745	0.950	0.684	NO	1.001	1.001	25.28	25.27	2.3103 (1.68)		2.31	0.380
9	9 1,2,3,7,8-PeCDF	8.72e2	7.91e4	10.1745	0.960	1.451	NO	1.001	1.000	29.45	29.43	2.2564		2.26	0.278
10	10 2,3,4,7,8-PeCDF	4.14e2	6.59e4	10.1745	1.015	1.536	NO	1.001	1.001	30.35	30.33	1.2173		1.22	0.284
11	11 1,2,3,4,7,8-HxCDF	1.15e3	5.42e4	10.1745	1.177	1.132	NO	1.000	1.000	33.04	33.05	3.5504		3.55	0.434
12	12 1,2,3,6,7,8-HxCDF	3.04e2	5.77e4	10.1745	1.069	1.292	NO	1.000	1.000	33.17	33.16	0.96853		0.969	0.478
13	13 2,3,4,6,7,8-HxCDF	2.07e2	4.90e4	10.1745	1.114	1.366	NO	1.001	1.001	33.79	33.78	0.74512		0.745	0.535
14	14 1,2,3,7,8,9-HxCDF		4.40e4	10.1745	1.062			1.000		34.71					0.783
15	15 1,2,3,4,6,7,8-HpCDF	4.02e3	3.69e4	10.1745	1.128	0.972	NO	1.001	1.000	36.60	36.57	18.983		19.0	0.984
16	16 1,2,3,4,7,8,9-HpCDF		2.54e4	10.1745	1.280			1.000		38.35					1.12
17	17 OCDF	1.13e4	4.62e4	10.1745	0.947	0.911	NO	1.000	1.000	41.31	41.32	101.54		102	1.15
18	18 13C-2,3,7,8-TCDD	7.90e4	1.08e5	10.1745	1.095	0.774	NO	1.023	1.022	26.05	26.03	131.04	66.7		0.521
19	19 13C-1,2,3,7,8-PeCDD	4.86e4	1.08e5	10.1745	0.881	0.640	NO	1.203	1.201	30.64	30.60	100.22	51.0		0.371
20	20 13C-1,2,3,4,7,8-Hx...	3.84e4	1.12e5	10.1745	0.642	1.276	NO	1.014	1.014	33.91	33.93	104.63	53.2		0.847
21	21 13C-1,2,3,6,7,8-Hx...	4.46e4	1.12e5	10.1745	0.856	1.258	NO	1.017	1.018	34.03	34.04	91.132	46.4		0.636
22	22 13C-1,2,3,7,8,9-Hx...	3.81e4	1.12e5	10.1745	0.807	1.335	NO	1.026	1.026	34.32	34.33	82.748	42.1		0.674
23	23 13C-1,2,3,4,6,7,8-H...	2.92e4	1.12e5	10.1745	0.654	1.035	NO	1.131	1.131	37.82	37.81	78.137	39.8		0.800
24	24 13C-OCDD	3.76e4	1.12e5	10.1745	0.580	0.917	NO	1.228	1.229	41.08	41.09	113.62	28.9		0.712
25	25 13C-2,3,7,8-TCDF	1.07e5	1.59e5	10.1745	1.035	0.784	NO	0.992	0.991	25.26	25.26	128.75	65.5		0.664
26	26 13C-1,2,3,7,8-PeCDF	7.91e4	1.59e5	10.1745	0.854	1.652	NO	1.156	1.155	29.45	29.43	114.80	58.4		0.666
27	27 13C-2,3,4,7,8-PeCDF	6.59e4	1.59e5	10.1745	0.847	1.550	NO	1.192	1.190	30.36	30.32	96.427	49.1		0.671
28	28 13C-1,2,3,4,7,8-Hx...	5.42e4	1.12e5	10.1745	0.832	0.495	NO	0.987	0.988	33.02	33.04	113.93	58.0		1.08
29	29 13C-1,2,3,6,7,8-Hx...	5.77e4	1.12e5	10.1745	1.034	0.496	NO	0.991	0.992	33.14	33.16	97.644	49.7		0.870
30	30 13C-2,3,4,6,7,8-Hx...	4.90e4	1.12e5	10.1745	0.953	0.504	NO	1.009	1.009	33.75	33.76	89.904	45.7		0.944
31	31 13C-1,2,3,7,8,9-Hx...	4.40e4	1.12e5	10.1745	0.828	0.514	NO	1.038	1.038	34.71	34.71	93.025	47.3		1.09



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-9b.qld

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Name: VG7 200116D1\_9, Date: 16-JAN-2020, Time: 17:44:17, ID: B0A0001-DUP1 Duplicate,  
 Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	WL/Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	3.69e4	1.12e5	10.1745	0.757	0.408	NO	1.093	1.093	36.55	36.57	85.203	43.3		0.817
33	33 13C-1,2,3,4,7,8,9-H...	2.54e4	1.12e5	10.1745	0.581	0.415	NO	1.147	1.147	38.35	38.35	76.410	38.9		1.06
34	34 13C-OCDF	4.62e4	1.12e5	10.1745	0.689	0.912	NO	1.235	1.235	41.30	41.31	117.27	29.8		0.477
35	35 37Cl-2,3,7,8-TCDD	3.28e4	1.08e5	10.1745	1.198			1.024	1.023	26.08	26.07	49.726	63.2		0.117
36	36 13C-1,2,3,4-TCDD	1.08e5	1.08e5	10.1745	1.000	0.811	NO	1.000	1.000	25.39	25.47	196.57	100.0		0.571
37	37 13C-1,2,3,4-TCDF	1.59e5	1.59e5	10.1745	1.000	0.778	NO	1.000	1.000	23.93	24.03	196.57	100.0		0.687
38	38 13C-1,2,3,4,6,9-Hx...	1.12e5	1.12e5	10.1745	1.000	0.503	NO	1.000	1.000	33.37	33.44	196.57	100.0		0.900
39	39 Total Tetra-Dioxins		7.90e4	10.1745	0.901			0.000		25.50		0.48267		1.75	0.410
40	40 Total Penta-Dioxins		4.86e4	10.1745	0.872			0.000		30.00		4.0747		6.61	0.423
41	41 Total Hexa-Dioxins		0.00e0	10.1745	0.976			0.000		33.80		98.764		98.8	1.26
42	42 Total Hepta-Dioxins		2.92e4	10.1745	0.989			0.000		37.75		965.02		965	3.21
43	43 Total Tetra-Furans		1.07e5	10.1745	0.943			0.000		24.00		11.633		14.4	0.383
44	44 1st Func. Penta-Fur...		0.00e0	10.1745	0.940			0.000		27.63		5.3323		5.33	0.172
45	45 Total Penta-Furans		0.00e0	10.1745	0.940			0.000		30.00		9.9426		10.9	0.294
46	46 Total Hexa-Furans		0.00e0	10.1745	1.078			0.000		33.00		22.639		22.6	0.557
47	47 Total Hepta-Furans		0.00e0	10.1745	1.135			0.000		37.75		85.153		85.2	1.09

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-9b.qld

Last Altered: Friday, January 31, 2020 10:46:48 Pacific Standard Time

Printed: Friday, January 31, 2020 11:13:51 Pacific Standard Time

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Calibration: 25 Jan 2020 08:21:08

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 Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	YES	26.36	80.993	34476.090	0.000	MM	0.0000	0.33
2	39 Total Tetra-Dioxins	YES	24.55	88.974	34476.090	0.000	MM	0.0000	0.48
3	39 Total Tetra-Dioxins	NO	24.37	70.134	34476.090	4.424	bb	0.4827	0.48
4	39 Total Tetra-Dioxins	NO	22.64	75.350	34476.090	0.000	MM	0.0000	0.46

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	YES	29.90	193.549	18971.797	0.000	bb	0.0000	2.01
2	40 Total Penta-Dioxins	YES	29.69	50.243	18971.797	0.000	db	0.0000	0.52
3	40 Total Penta-Dioxins	NO	29.60	59.113	18971.797	6.145	MM	0.6924	0.69
4	40 Total Penta-Dioxins	NO	29.01	71.727	18971.797	8.115	MM	0.9145	0.91
5	40 Total Penta-Dioxins	NO	28.54	220.556	18971.797	21.899	MM	2.4678	2.47

**Hexa-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	5 1,2,3,7,8,9-HxCDD	NO	34.33	203.001	21811.178	18.685	MM	1.9104	1.91
2	41 Total Hexa-Dioxins	NO	34.23	349.826	22720.874	30.916	bd	3.1136	3.11
3	4 1,2,3,6,7,8-HxCDD	NO	34.05	704.007	24827.127	55.202	MM	5.7804	5.78
4	41 Total Hexa-Dioxins	NO	33.35	403.830	22720.874	36.608	MM	3.6869	3.69
5	41 Total Hexa-Dioxins	NO	33.23	4023.181	22720.874	354.930	MM	35.7458	35.75
6	41 Total Hexa-Dioxins	NO	32.97	523.992	22720.874	49.320	MM	4.9672	4.97
7	41 Total Hexa-Dioxins	NO	32.40	4834.497	22720.874	432.520	bb	43.5600	43.56

**Hepta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.82	29116.506	14854.374	3942.333	bb	395.6217	395.62
2	42 Total Hepta-Dioxins	NO	36.97	42155.617	14854.374	5727.860	bb	569.3965	569.40

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-9b.qld

Last Altered: Friday, January 31, 2020 10:46:48 Pacific Standard Time

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Name: VG7 200116D1\_9, Date: 16-JAN-2020, Time: 17:44:17, ID: B0A0001-DUP1 Duplicate,  
 Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	YES	22.28	72.332	47214.957	0.000	MM	0.0000	0.27
2	43 Total Tetra-Furans	NO	22.19	68.487	47214.957	3.202	dd	0.3338	0.33
3	43 Total Tetra-Furans	NO	21.67	587.632	47214.957	25.230	MM	2.6301	2.63
4	43 Total Tetra-Furans	YES	27.06	131.276	47214.957	0.000	MM	0.0000	0.46
5	8 2,3,7,8-TCDF	NO	25.27	487.257	47214.957	22.333	MM	2.3103	2.31
6	43 Total Tetra-Furans	NO	24.46	495.122	47214.957	19.799	bb	2.0641	2.06
7	43 Total Tetra-Furans	YES	23.99	201.000	47214.957	0.000	db	0.0000	0.67
8	43 Total Tetra-Furans	YES	23.93	311.160	47214.957	0.000	MM	0.0000	1.39
9	43 Total Tetra-Furans	NO	23.79	61.162	47214.957	2.484	MM	0.2589	0.26
10	43 Total Tetra-Furans	NO	23.31	108.425	47214.957	4.733	bb	0.4934	0.49
11	43 Total Tetra-Furans	NO	23.00	388.734	47214.957	15.485	MM	1.6142	1.61
12	43 Total Tetra-Furans	NO	22.62	437.548	47214.957	18.495	MM	1.9281	1.93

**Penta-Furans function 1**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.06	1123.360	44653.602	50.977	bb	5.3323	5.33

**Penta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	45 Total Penta-Furans	NO	28.52	652.307	44653.602	30.481	MM	3.1885	3.19
2	10 2,3,4,7,8-PeCDF	NO	30.33	250.780	40040.938	12.569	MM	1.2173	1.22
3	45 Total Penta-Furans	NO	29.67	297.851	44653.602	12.908	bb	1.3502	1.35
4	9 1,2,3,7,8-PeCDF	NO	29.43	516.067	49266.266	22.048	bb	2.2564	2.26
5	45 Total Penta-Furans	NO	29.26	132.510	44653.602	5.728	bb	0.5992	0.60
6	45 Total Penta-Furans	NO	29.07	266.736	44653.602	12.725	MM	1.3310	1.33
7	45 Total Penta-Furans	YES	30.37	226.941	44653.602	0.000	MM	0.0000	0.92

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-9b.qld

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Name: VG7 200116D1\_9, Date: 16-JAN-2020, Time: 17:44:17, ID: B0A0001-DUP1 Duplicate,  
 Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	46 Total Hexa-Furans	NO	31.86	191.564	17107.660	13.696	MM	1.2491	1.25
2	13 2,3,4,6,7,8-HxCDF	NO	33.78	119.381	16409.072	8.442	MM	0.7451	0.75
3	12 1,2,3,6,7,8-HxCDF	NO	33.16	171.354	19144.209	10.533	MM	0.9685	0.97
4	11 1,2,3,4,7,8-HxCDF	NO	33.05	611.067	17943.309	42.511	bd	3.5504	3.55
5	46 Total Hexa-Furans	NO	32.57	1876.285	17107.660	135.747	MM	12.3811	12.38
6	46 Total Hexa-Furans	NO	32.03	578.911	17107.660	41.058	bb	3.7448	3.75

Hepta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	47 Total Hepta-Furans	NO	37.16	5705.342	9068.343	763.932	MM	66.1700	66.17
2	15 1,2,3,4,6,7,8-HpCDF	NO	36.57	1979.619	10686.678	217.788	bb	18.9831	18.98

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 08:21:08 Pacific Standard Time

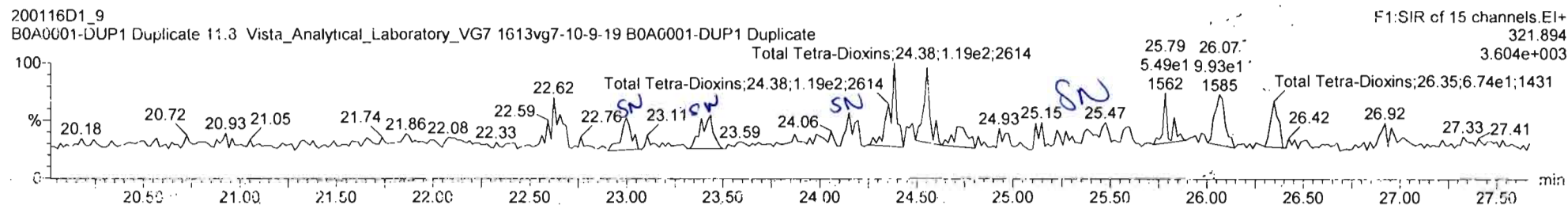
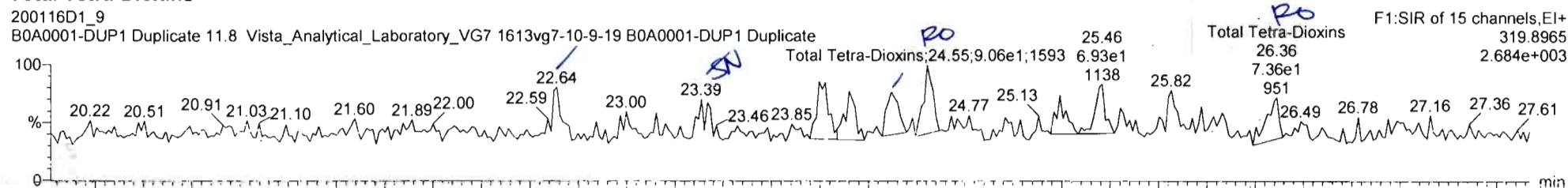
Printed: Saturday, January 25, 2020 08:26:41 Pacific Standard Time

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

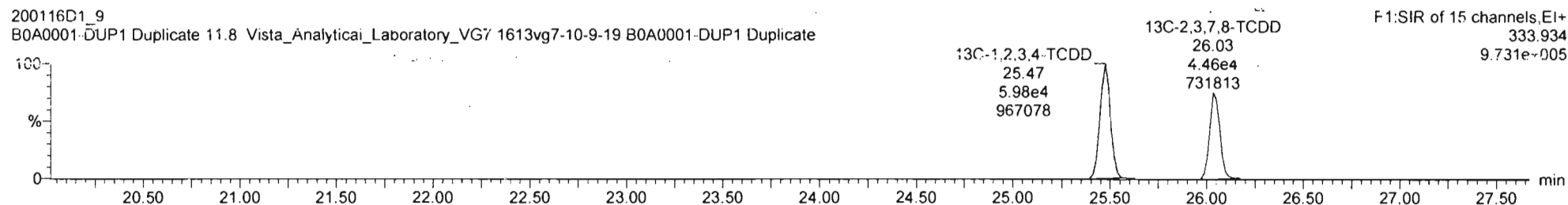
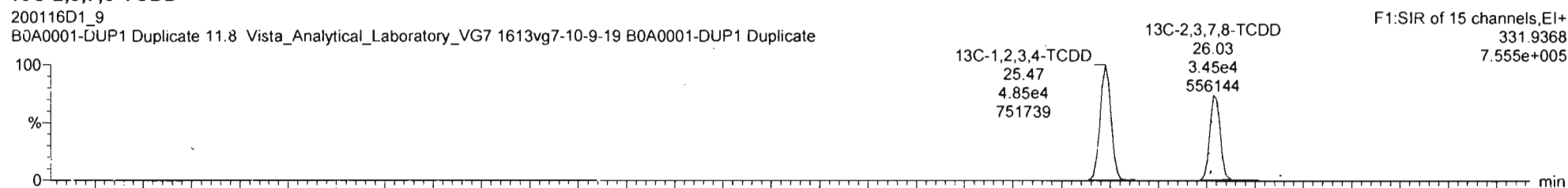
Calibration: 25 Jan 2020 08:21:08

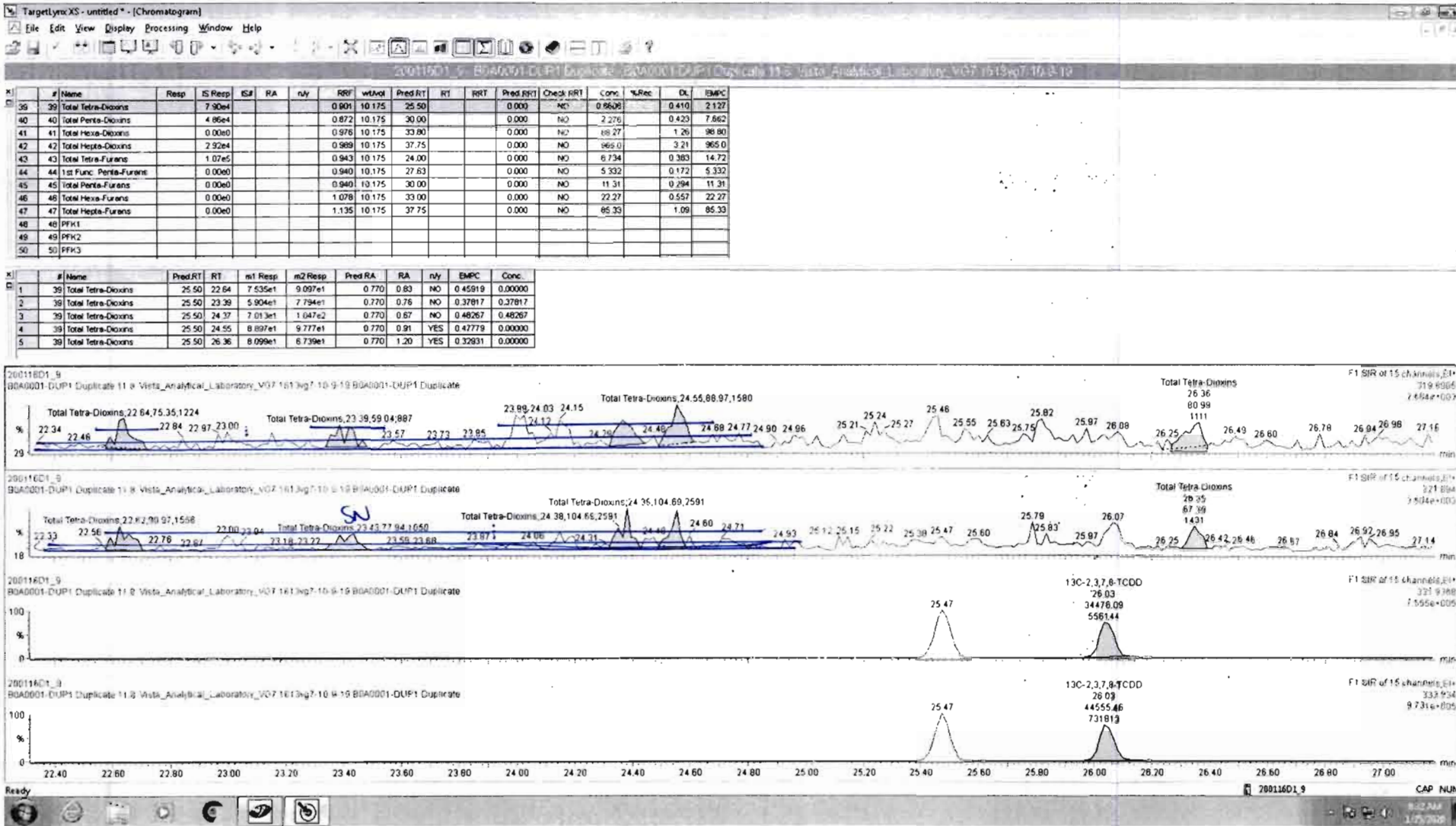
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Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Total Tetra-Dioxins**



**13C-2,3,7,8-TCDD**





Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 08:21:08 Pacific Standard Time

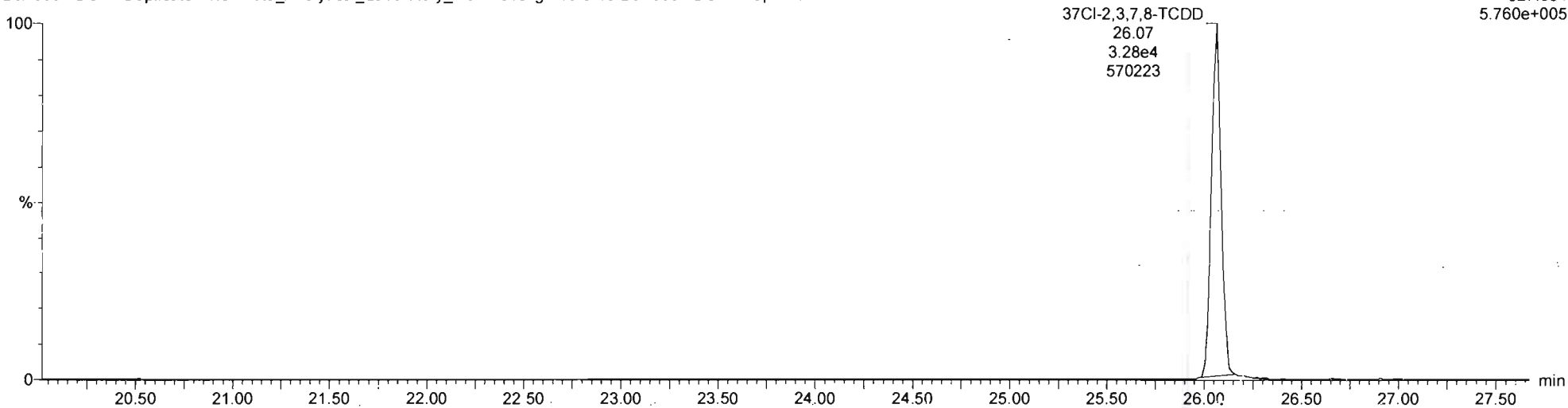
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Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**37Cl-2,3,7,8-TCDD**

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B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

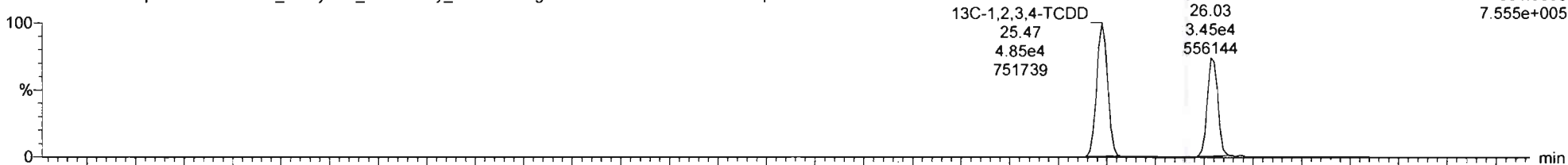
F1:SIR of 15 channels,EI+  
327.884  
5.760e+005



**13C-1,2,3,4-TCDD**

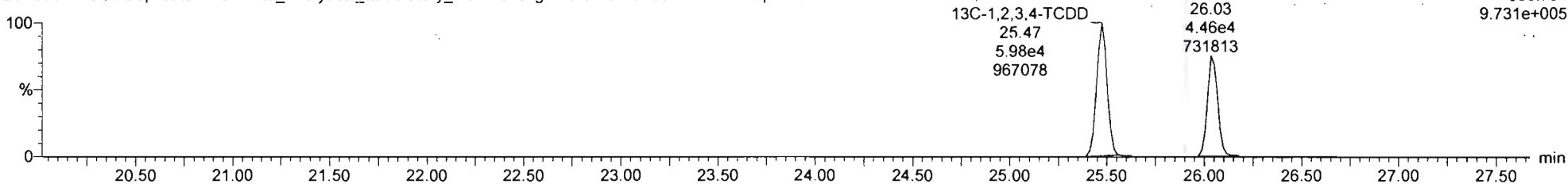
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B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F1:SIR of 15 channels,EI+  
331.9368  
7.555e+005



200116D1\_9  
B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F1:SIR of 15 channels,EI+  
333.934  
9.731e+005



Vista Analytical Laboratory

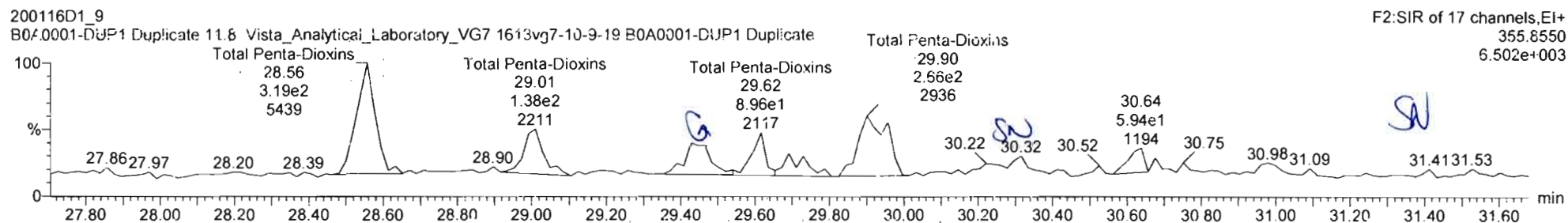
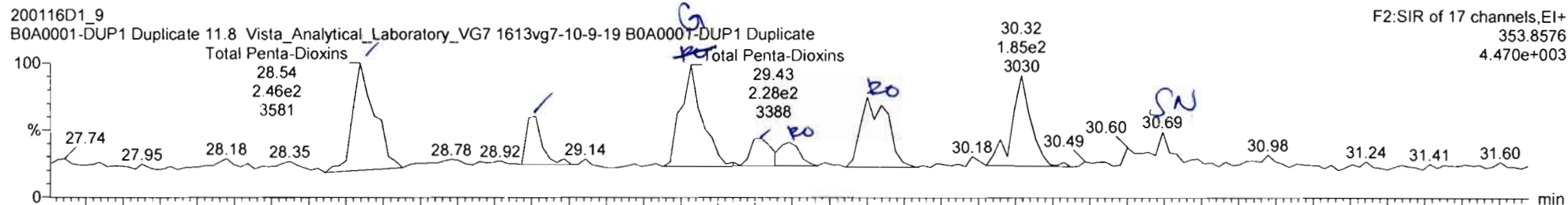
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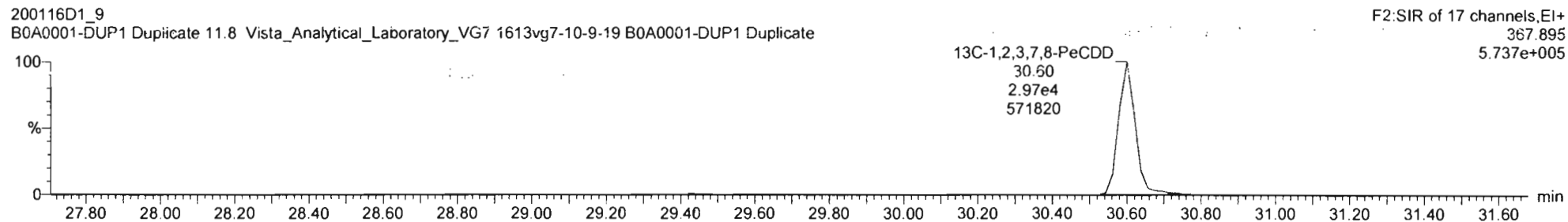
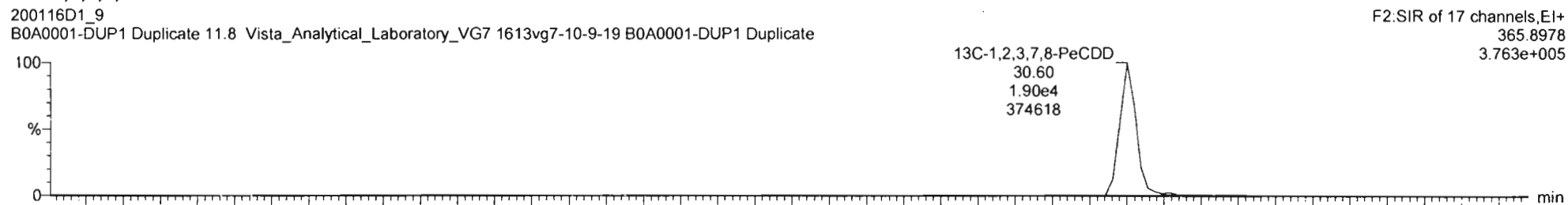
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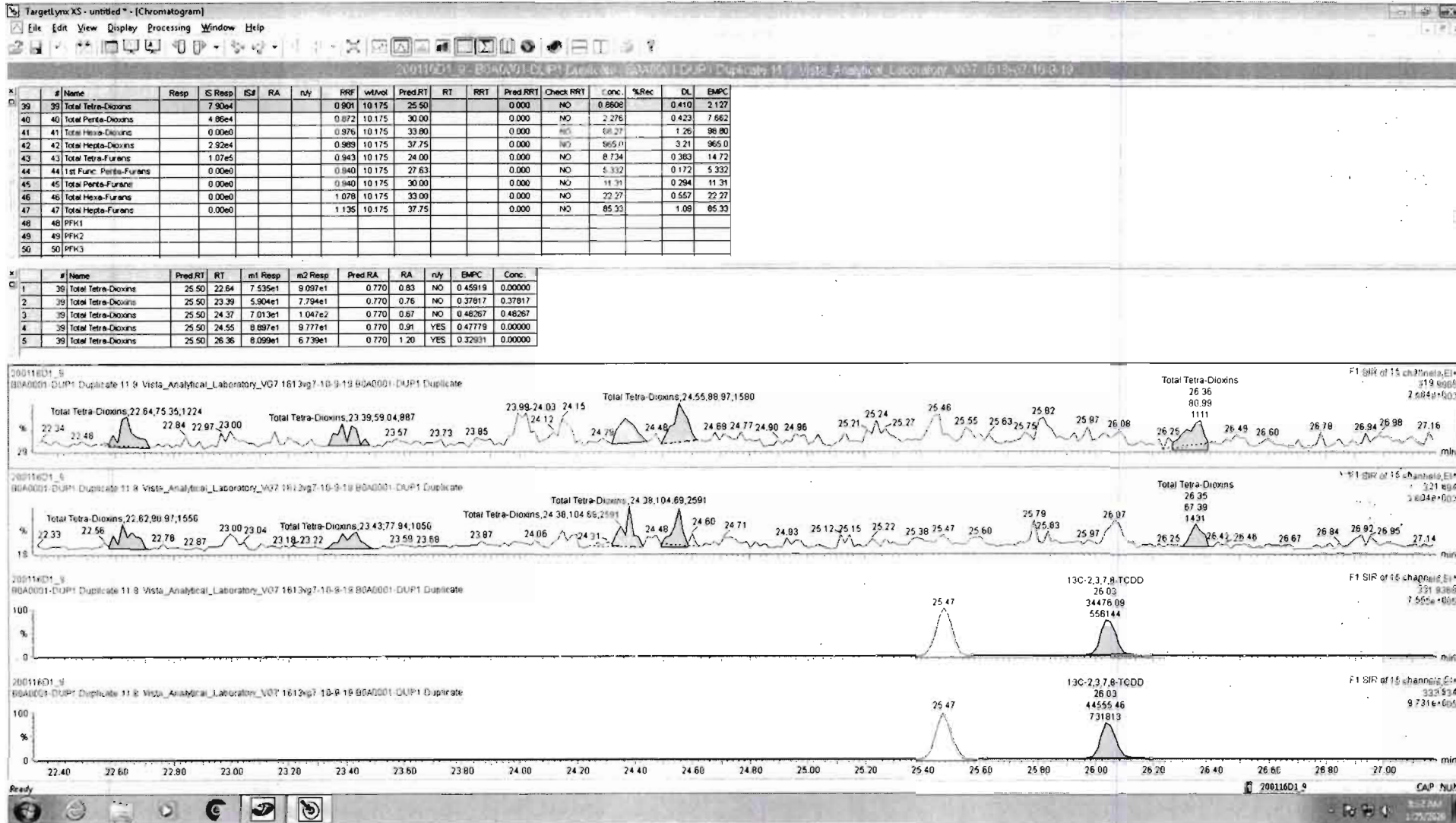
Total Penta-Dioxins



13C-1,2,3,7,8-PeCDD







Vista Analytical Laboratory

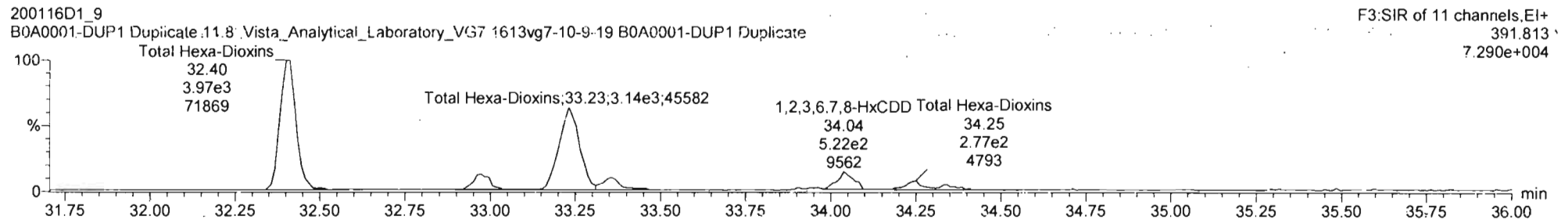
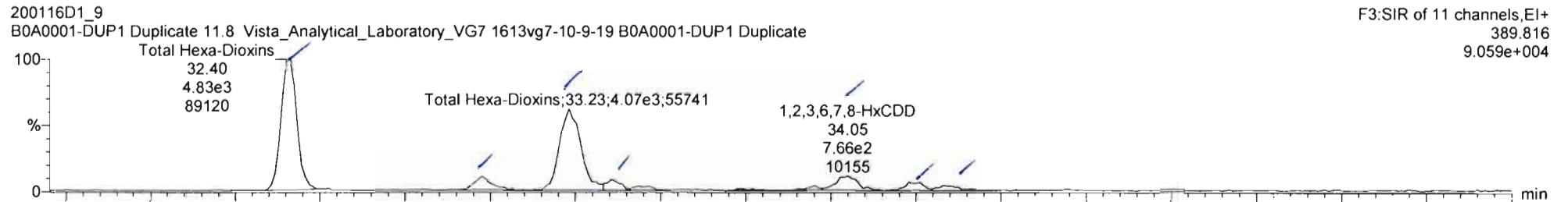
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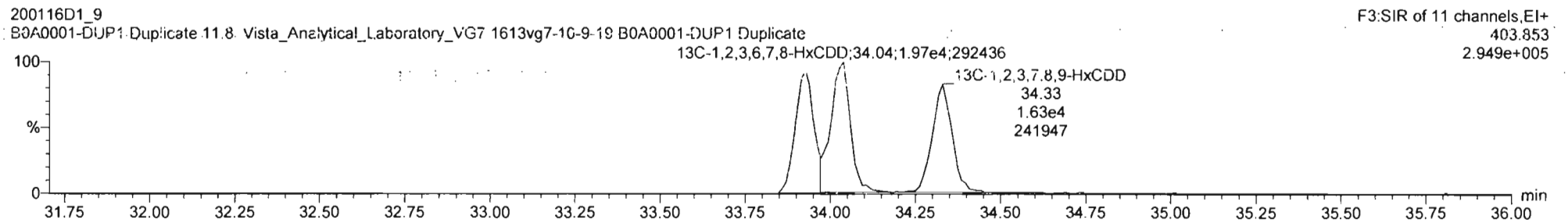
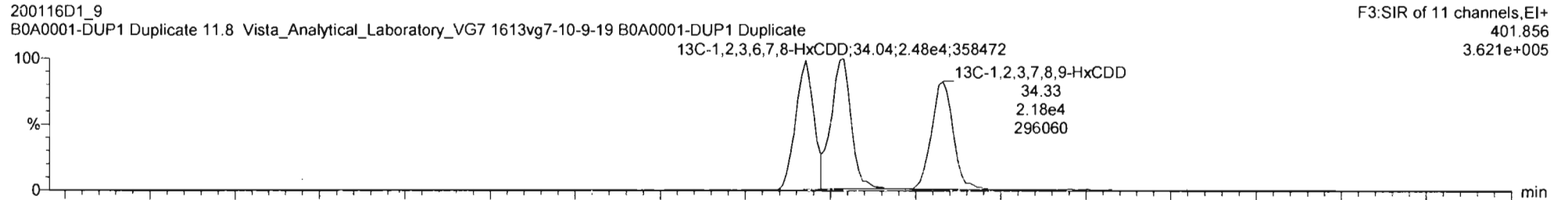
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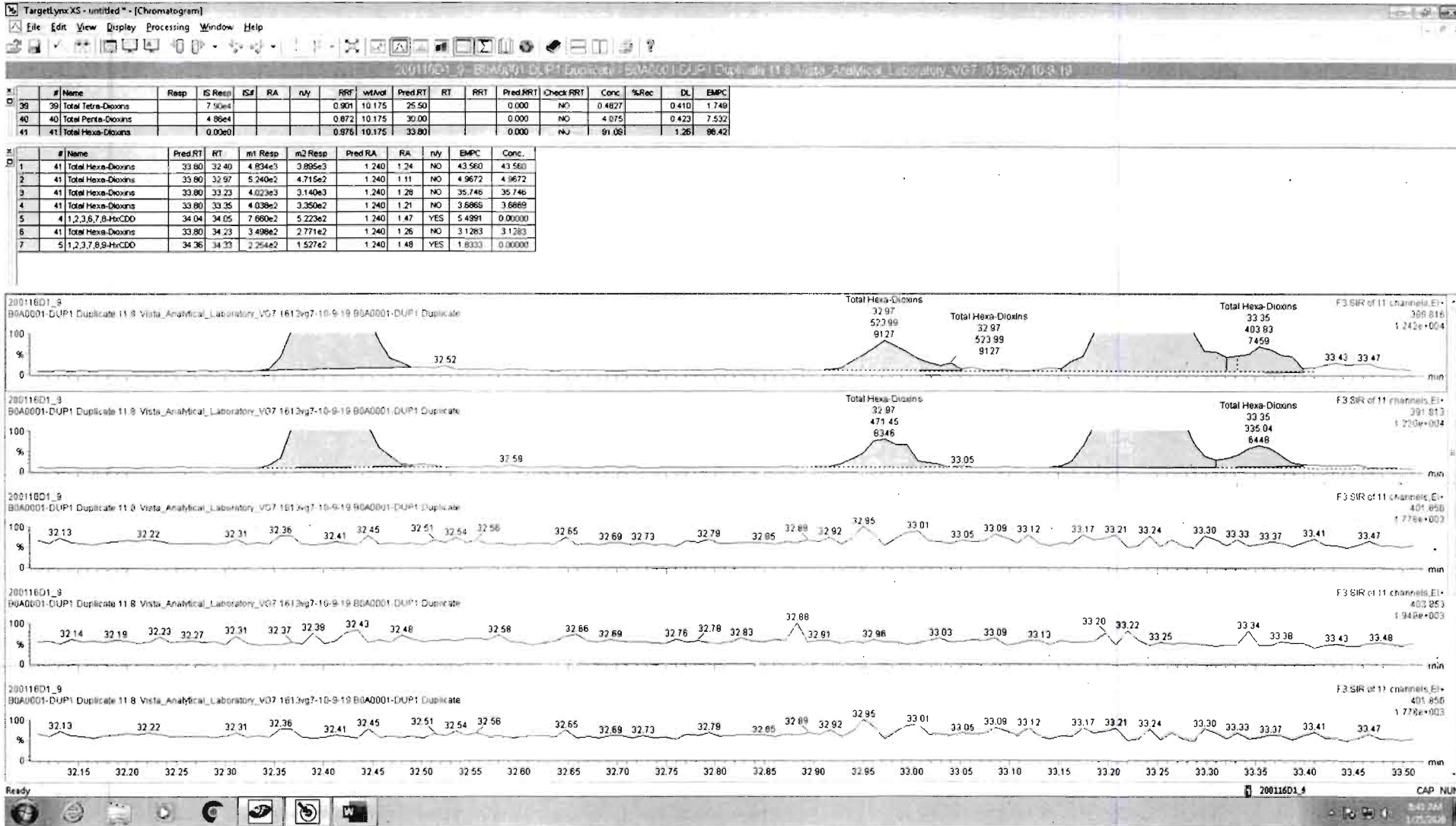
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Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

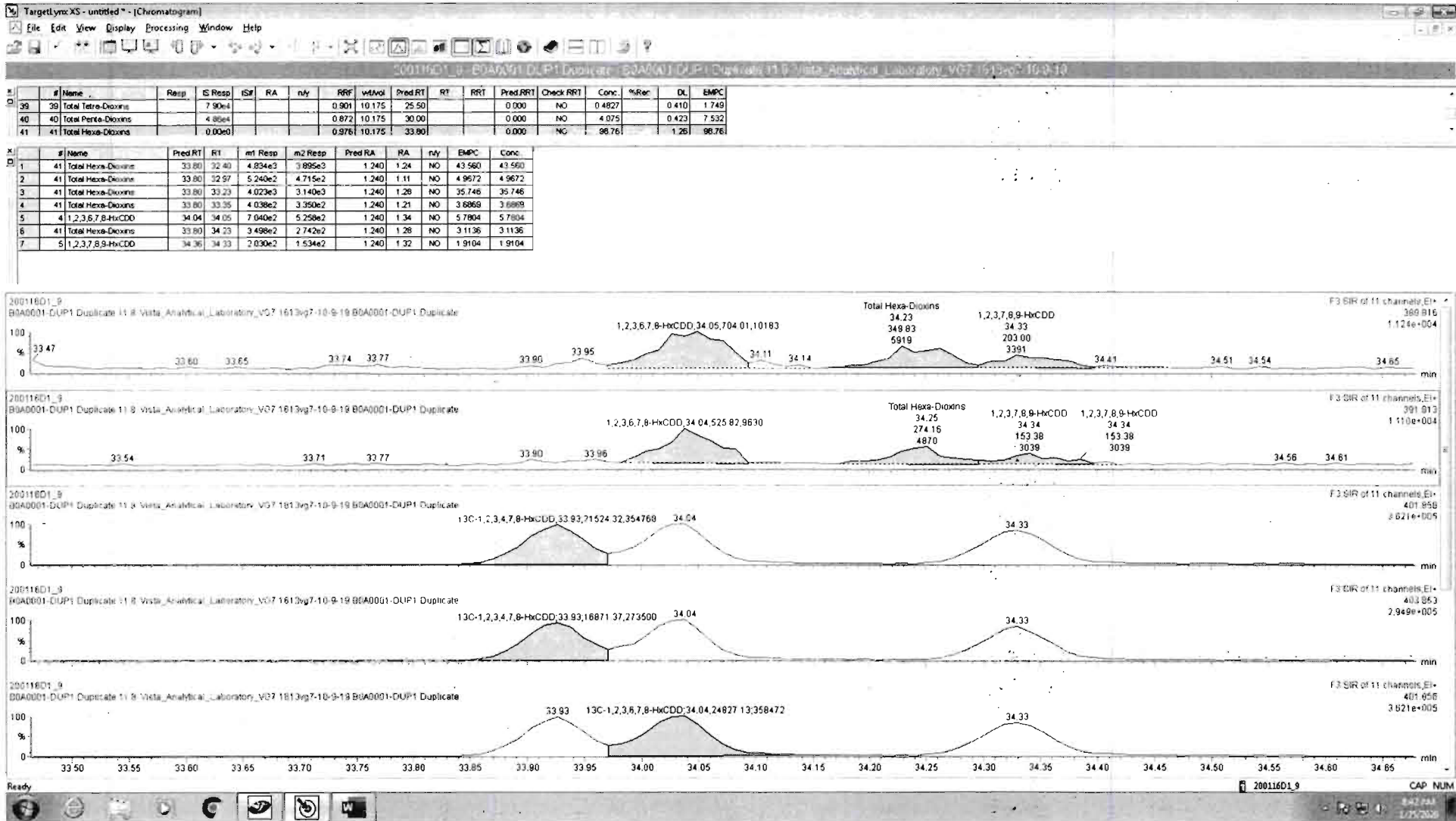
Total Hexa-Dioxins



13C-1,2,3,4,7,8-HxCDD







Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 08:21:08 Pacific Standard Time

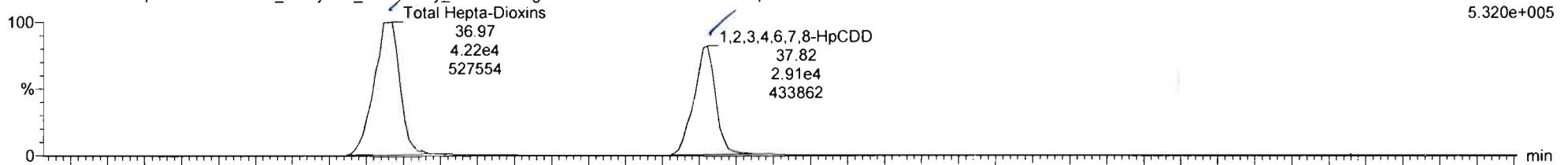
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**Total Hepta-Dioxins**

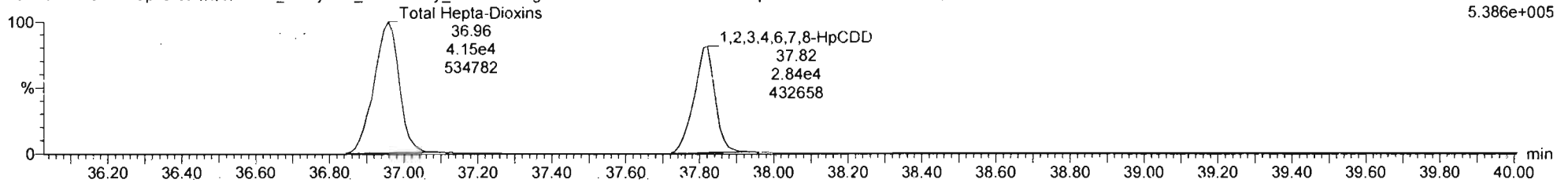
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 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F4:SIR of 11 channels,EI+  
 423.777  
 5.320e+005



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 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

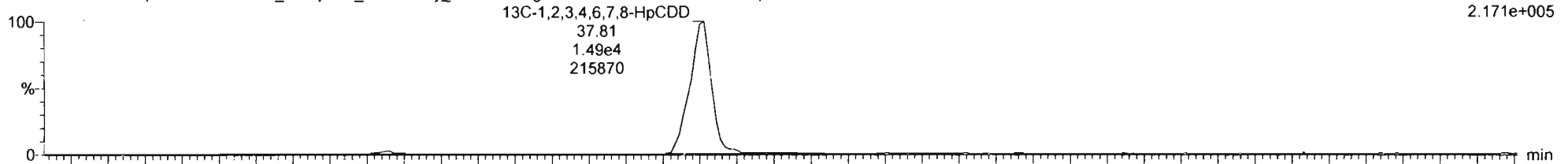
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 425.774  
 5.386e+005



**<sup>13</sup>C-1,2,3,4,6,7,8-HpCDD**

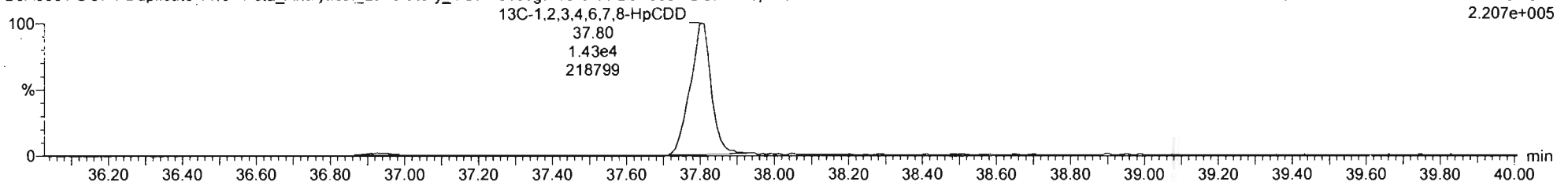
200116D1\_9  
 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F4:SIR of 11 channels,EI+  
 435.817  
 2.171e+005



200116D1\_9  
 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F4:SIR of 11 channels,EI+  
 437.814  
 2.207e+005

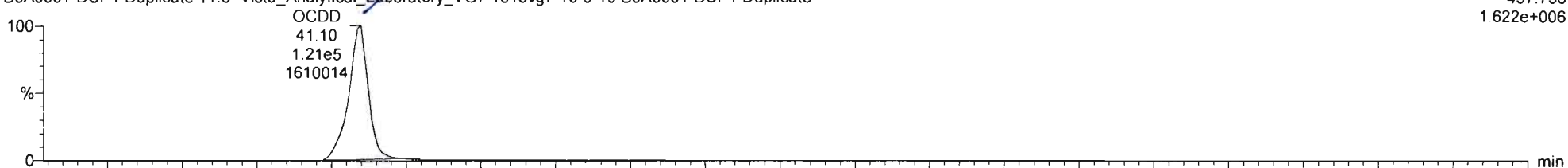


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OCDD

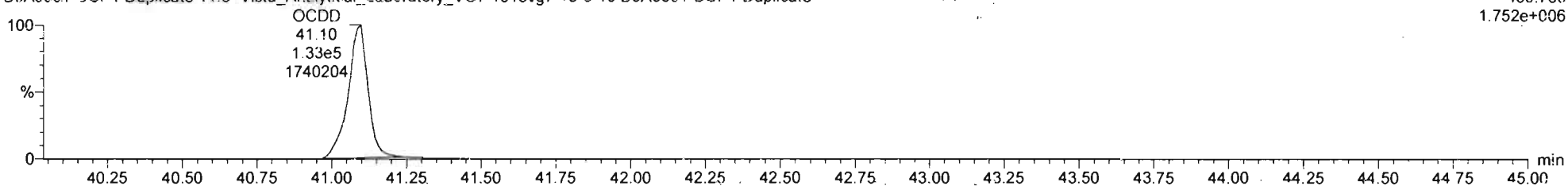
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B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F5:SIR of 11 channels,EI+  
457.738  
1.622e+006



200116D1\_9  
B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

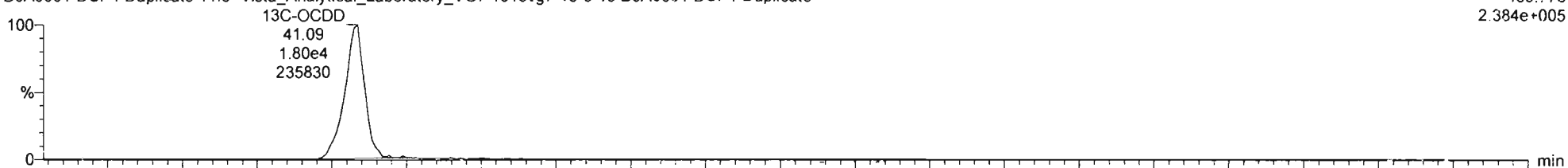
F5:SIR of 11 channels,EI+  
459.735  
1.752e+006



13C-OCDD

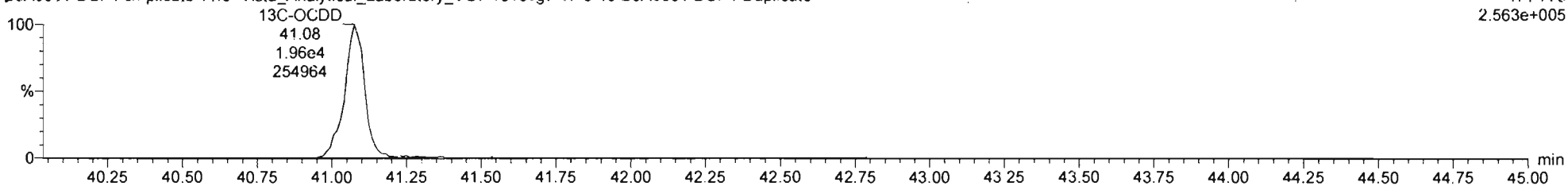
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F5:SIR of 11 channels,EI+  
469.778  
2.384e+005



200116D1\_9  
B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F5:SIR of 11 channels,EI+  
471.775  
2.563e+005



Vista Analytical Laboratory

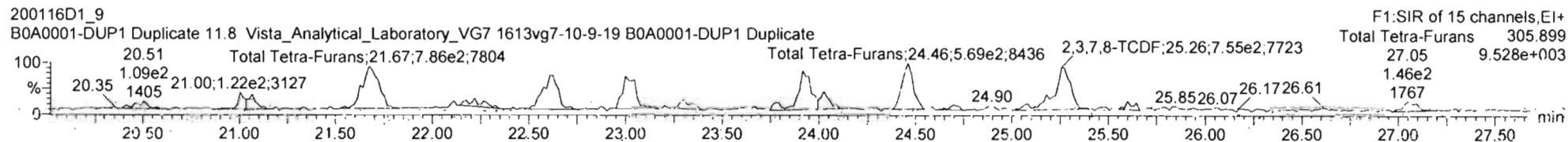
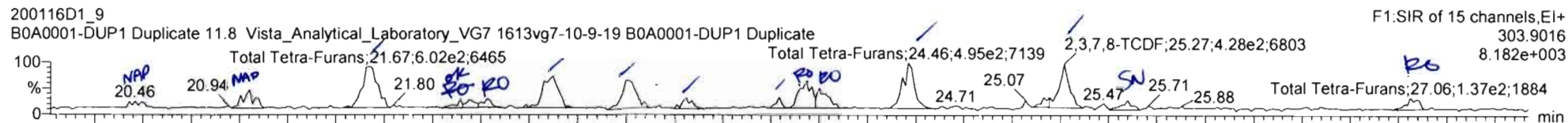
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Last Altered: Saturday, January 25, 2020 08:21:08 Pacific Standard Time

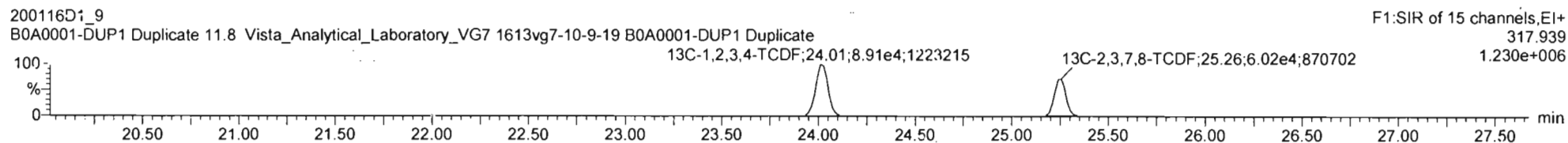
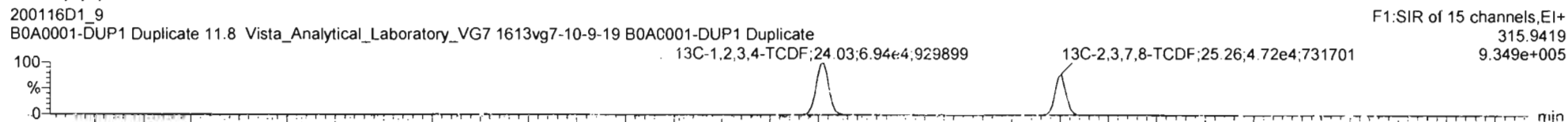
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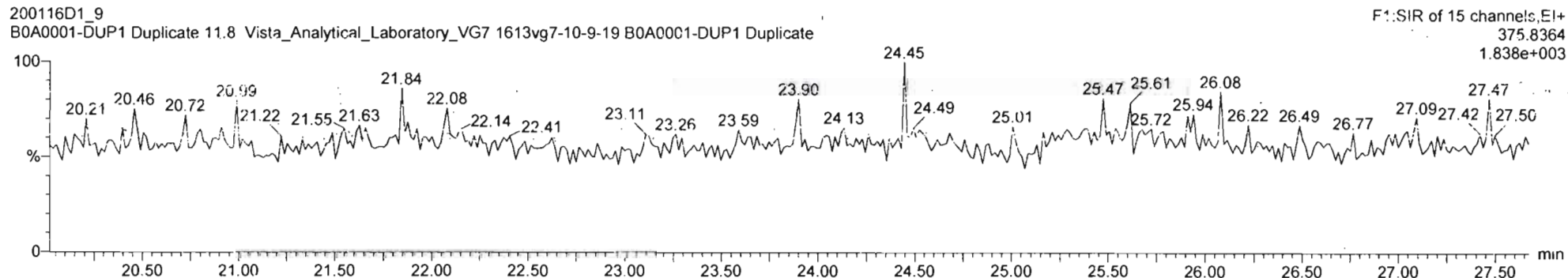
Total Tetra-Furans

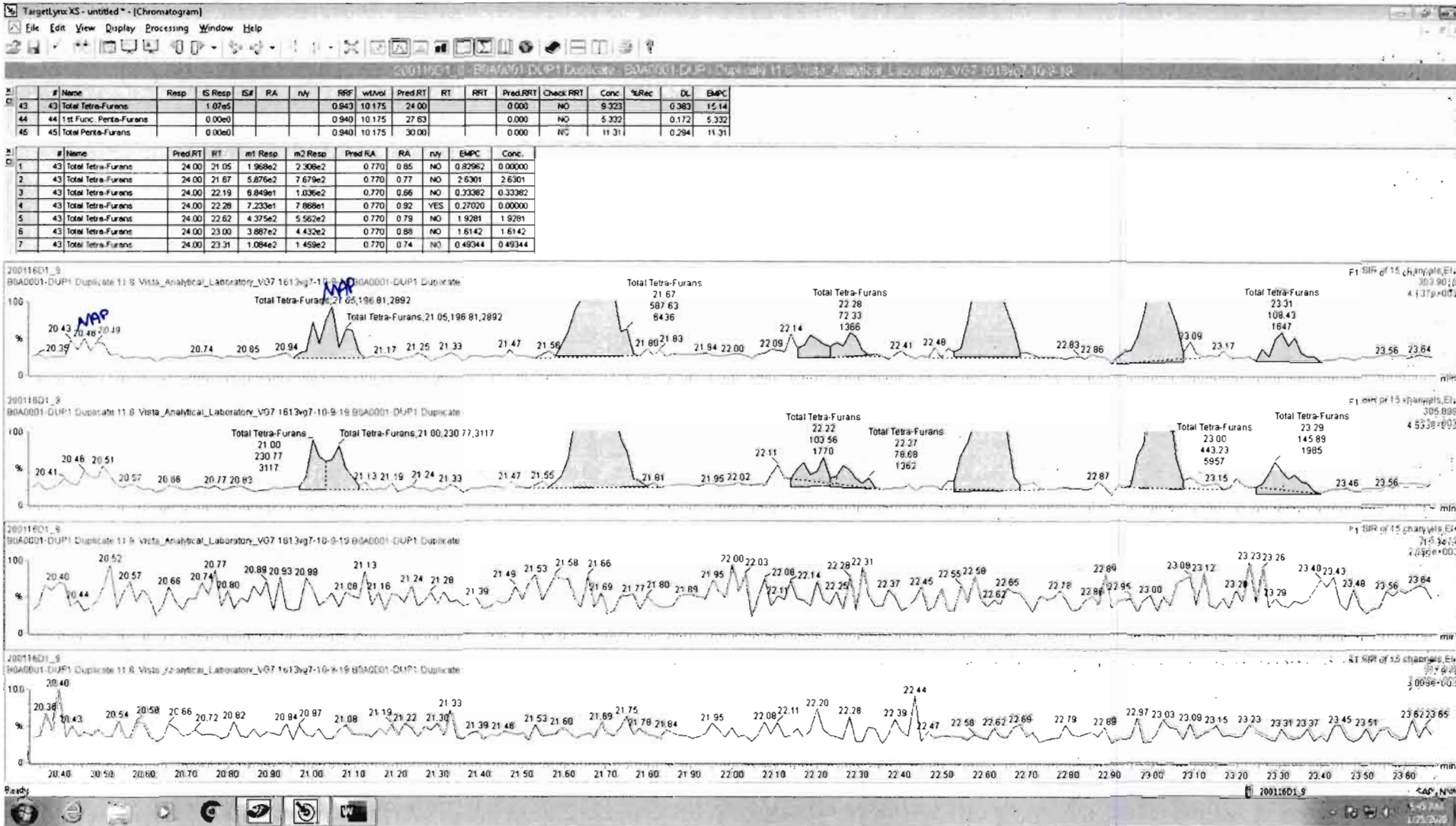


13C-2,3,7,8-TCDF

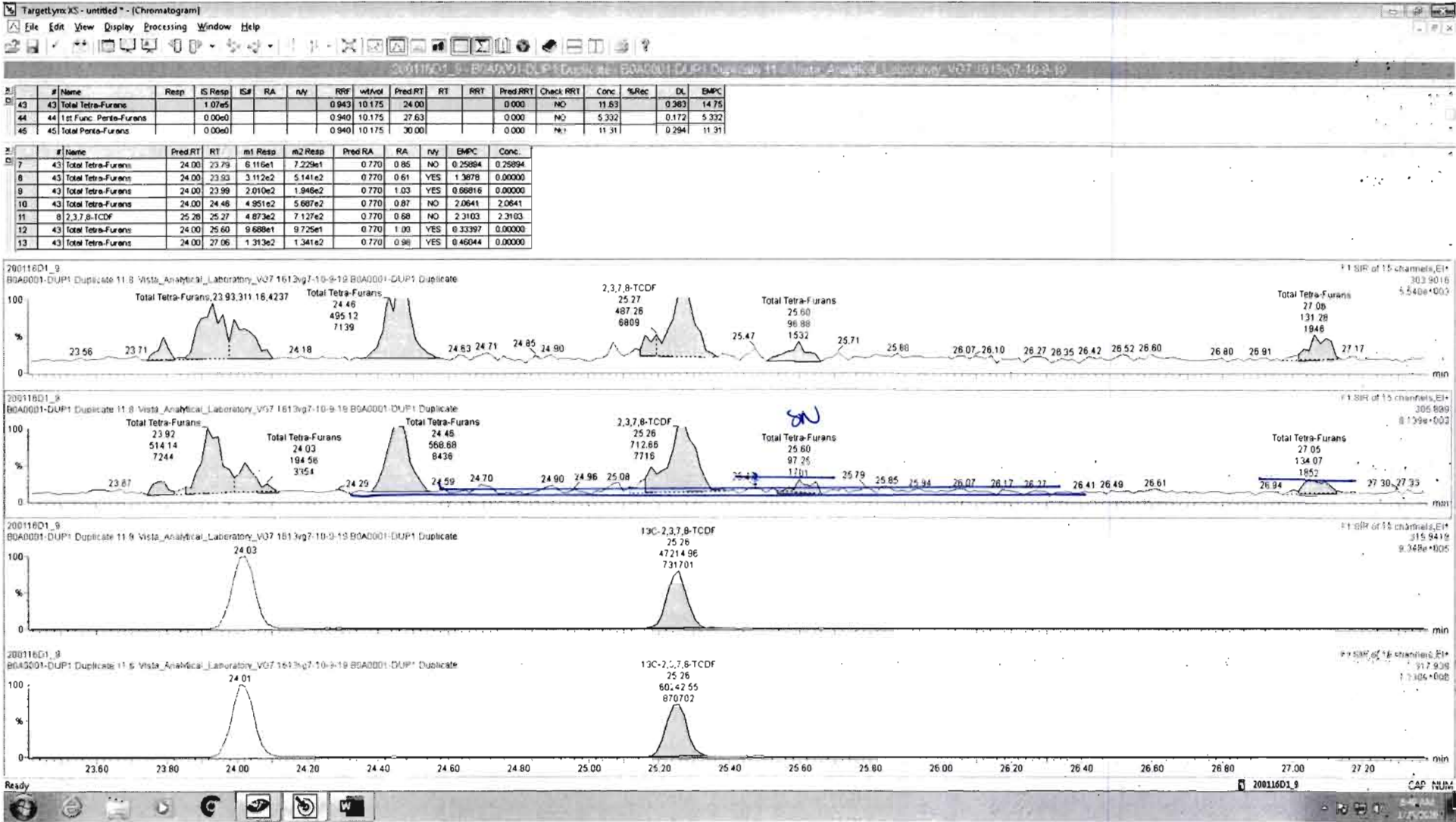


DPE1





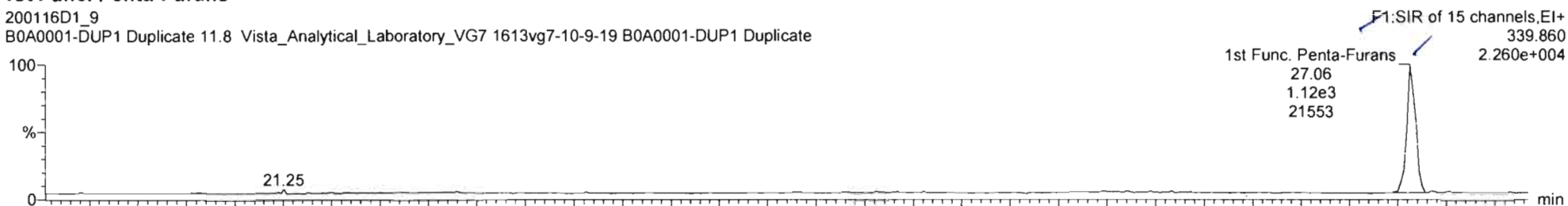




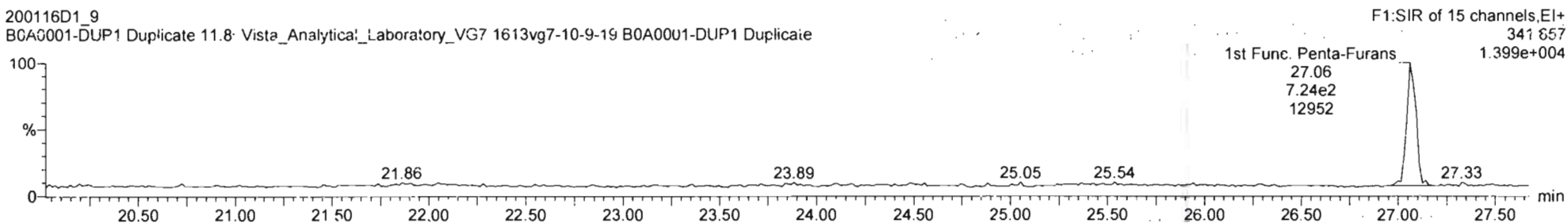
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Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans

200116D1\_9  
B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

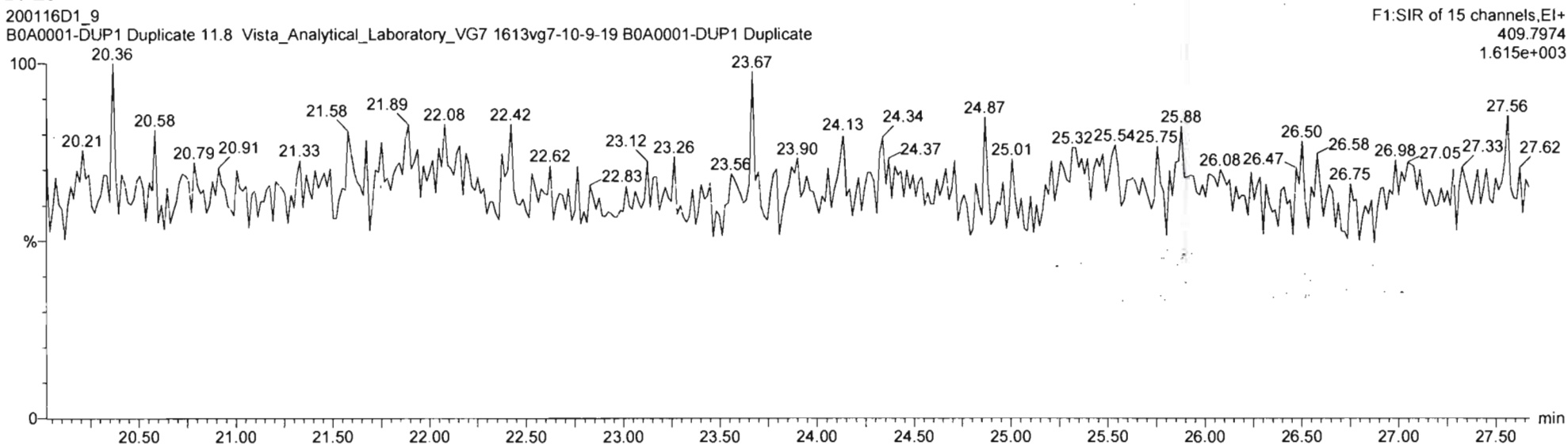


200116D1\_9  
B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate



DPE6

200116D1\_9  
B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate



Vista Analytical Laboratory

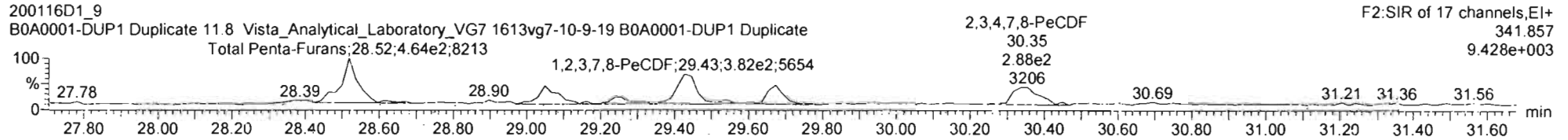
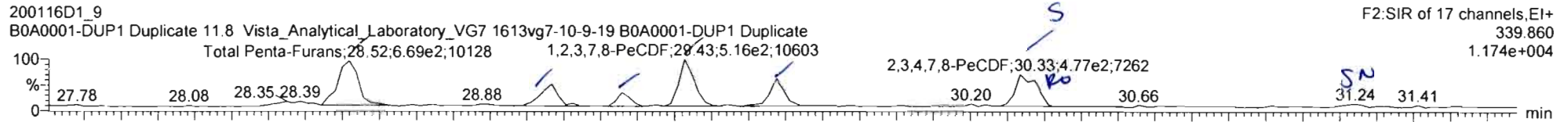
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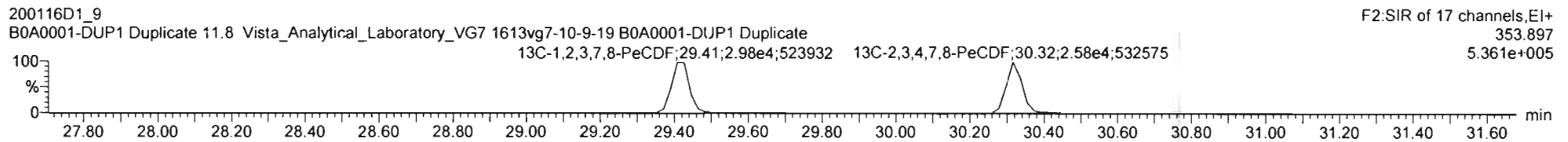
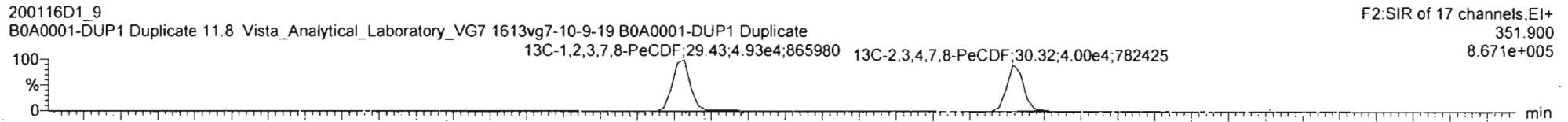
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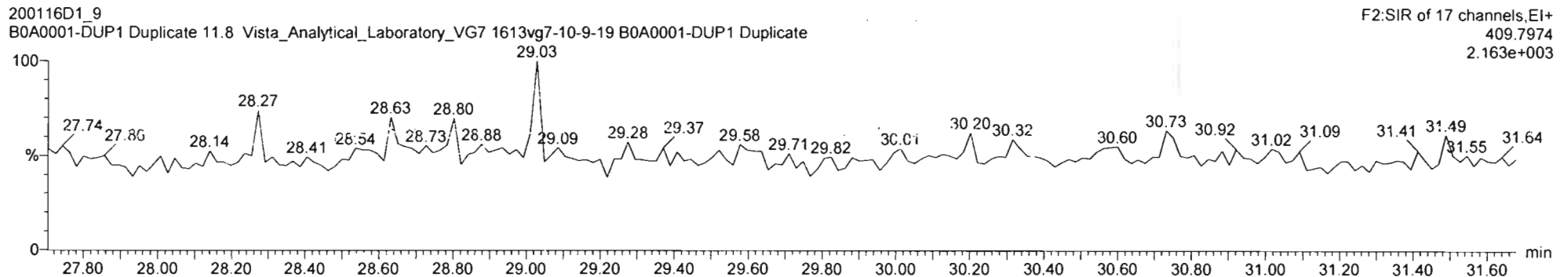
Total Penta-Furans

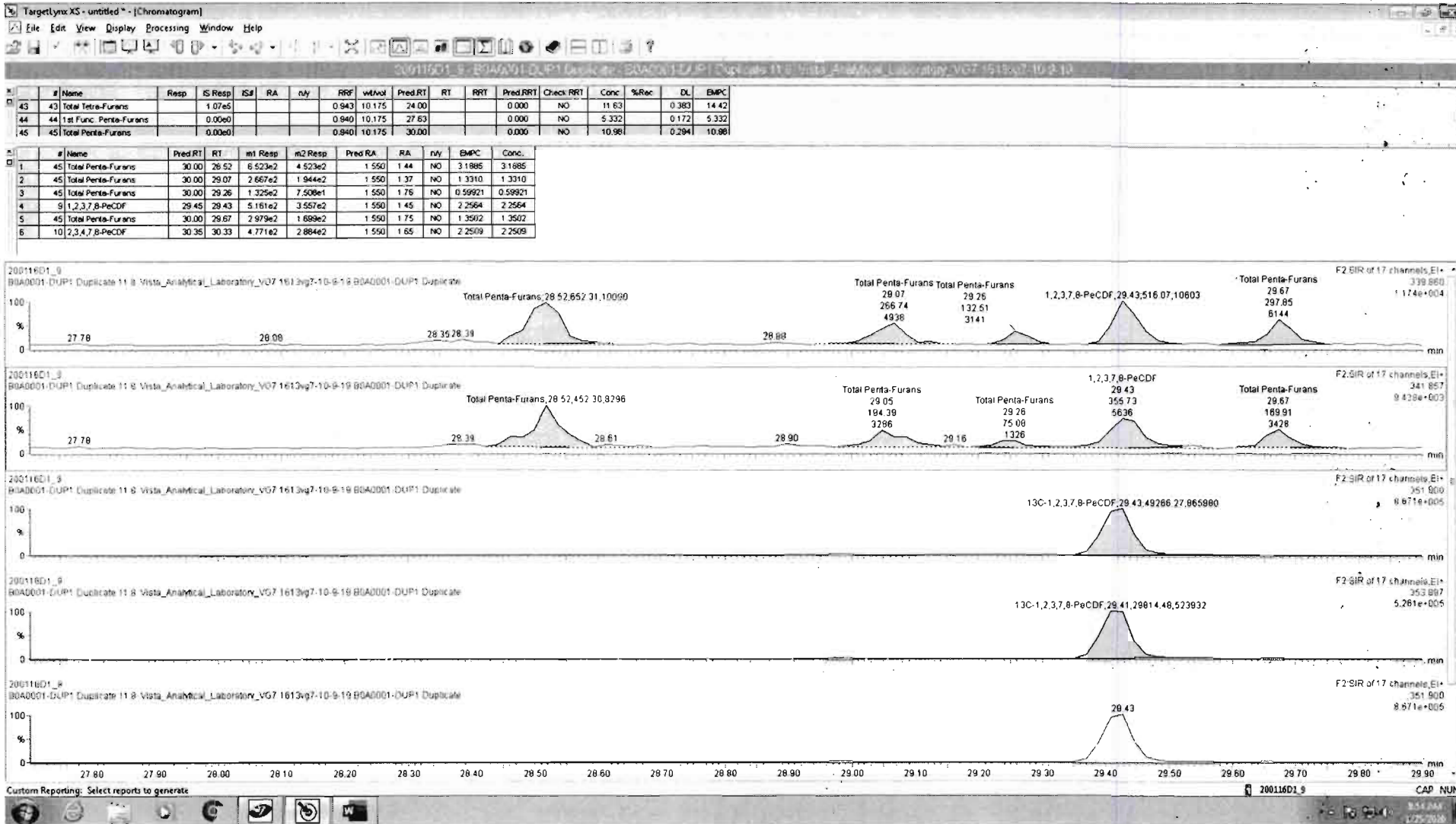


13C-1,2,3,7,8-PeCDF



DPE2

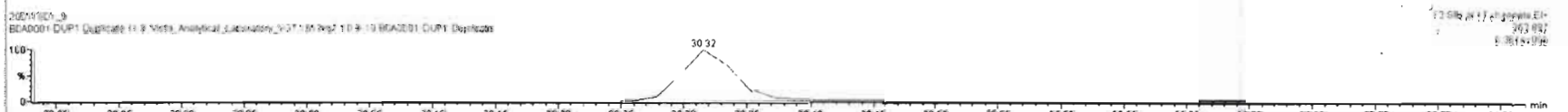
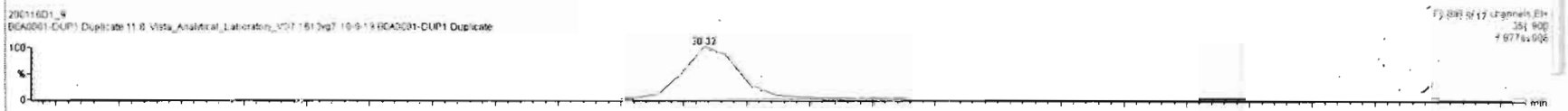
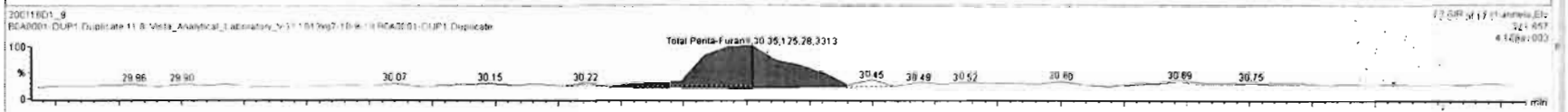
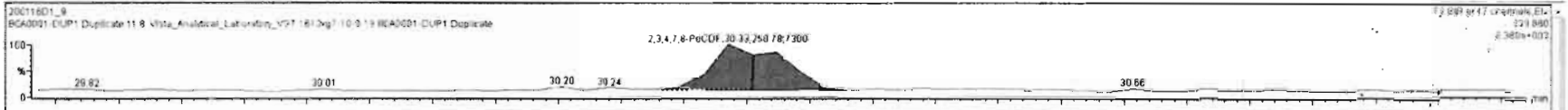




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#	Name	Resp	RA	nly	RFI	Method	Pred RT	RT	Pred R	RRT	RRT Fail	Conc	%Rec	DL	EMPC
1	2,3,7,8-TCDD						10.175	26.07	1.001		NO			0.400	
2	1,2,3,7,8-PeCDD						10.175	30.62	1.001		NO			0.490	
3	1,2,3,4,7,8-HxCDD						10.175	33.94	1.000		NO			1.05	
4	1,2,3,6,7,8-HxCDD	1.23e3	1.34	NO			10.175	34.04	34.05	1.000	1.000	NO	5.760	1.21	5.760
5	1,2,3,7,8,9-HxCDD	3.56e2	1.32	NO			10.175	34.36	34.33	1.001	1.000	NO	1.910	1.47	1.910
6	1,2,3,4,6,7,8-HpCDD	5.76e4	1.02	NO			10.175	37.82	37.82	1.000	1.000	NO	395.6	3.24	395.6
7	OCDD	2.54e5	0.82	NO			10.175	41.06	41.10	1.000	1.000	NO	2768	3.21	2768
8	2,3,7,8-TCDF	1.20e3	0.68	NO			10.175	25.26	25.27	1.001	1.001	NO	2.310	0.380	2.310

#	Name	Pred RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	nly	EMPC	Conc
1	45 Total Penta-Furans	30.00	29.92	6.523e2	4.523e2	1.550	1.44	NO	3.1605	3.1605
2	45 Total Penta-Furans	30.00	29.97	2.667e2	1.944e2	1.550	1.37	NO	1.3310	1.3310
3	45 Total Penta-Furans	30.00	29.26	1.325e2	7.508e1	1.550	1.76	NO	0.59921	0.59921
4	9 1,2,3,7,8-PeCDF	29.45	29.43	5.181e2	3.567e2	1.550	1.45	NO	2.2564	2.2564
5	45 Total Penta-Furans	30.00	29.67	2.979e2	1.699e2	1.550	1.75	NO	1.3502	1.3502
6	10 2,3,4,7,8-PeCDF	30.35	30.33	2.508e2	1.632e2	1.550	1.54	NO	1.2173	1.2173
7	45 Total Penta-Furans	30.00	30.37	2.269e2	1.253e2	1.550	1.81	YES	0.92215	0.00000



Vista Analytical Laboratory

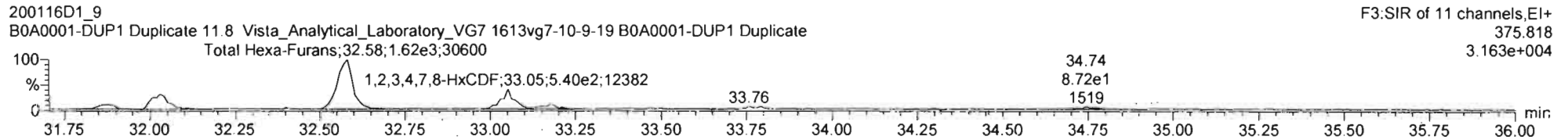
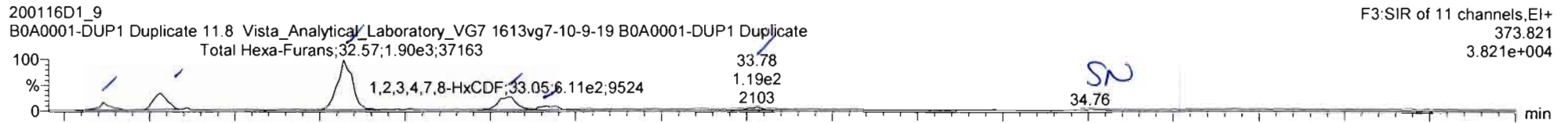
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Last Altered: Saturday, January 25, 2020 08:21:08 Pacific Standard Time

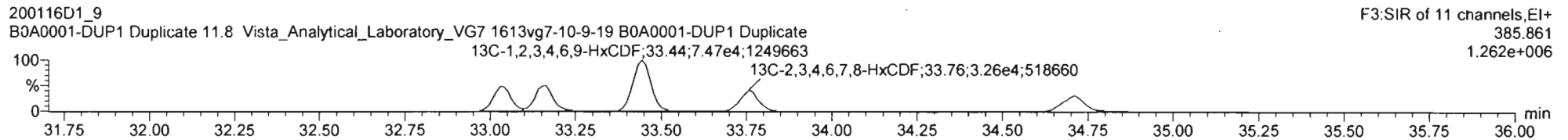
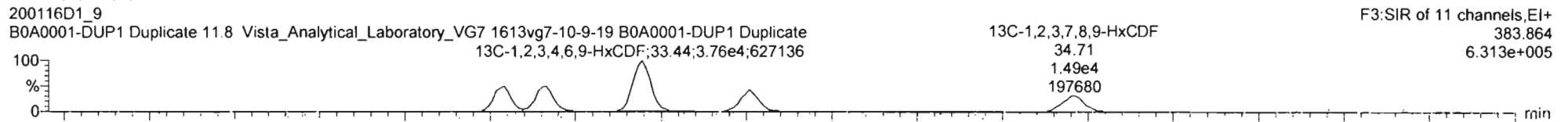
Printed: Saturday, January 25, 2020 08:26:41 Pacific Standard Time

Name: VG7 200116D1\_9, Date: 16-JAN-2020, Time: 17:44:17, ID: B0A0001-DUP1 Duplicate, Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

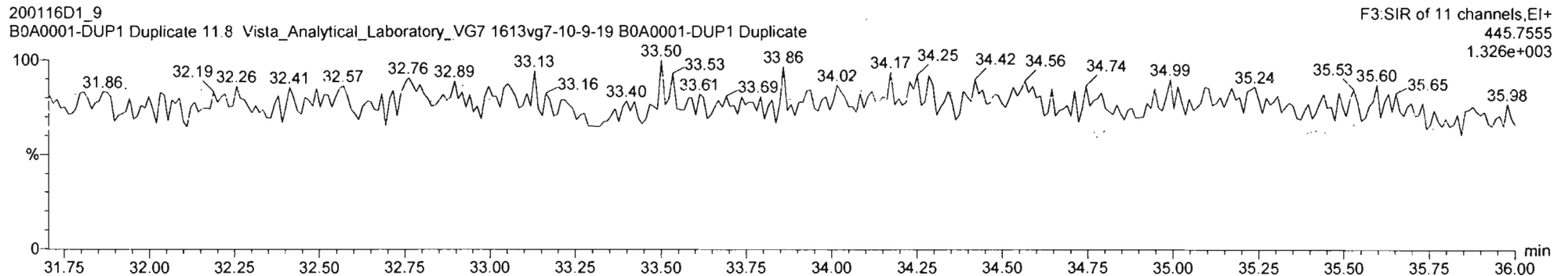
Total Hexa-Furans

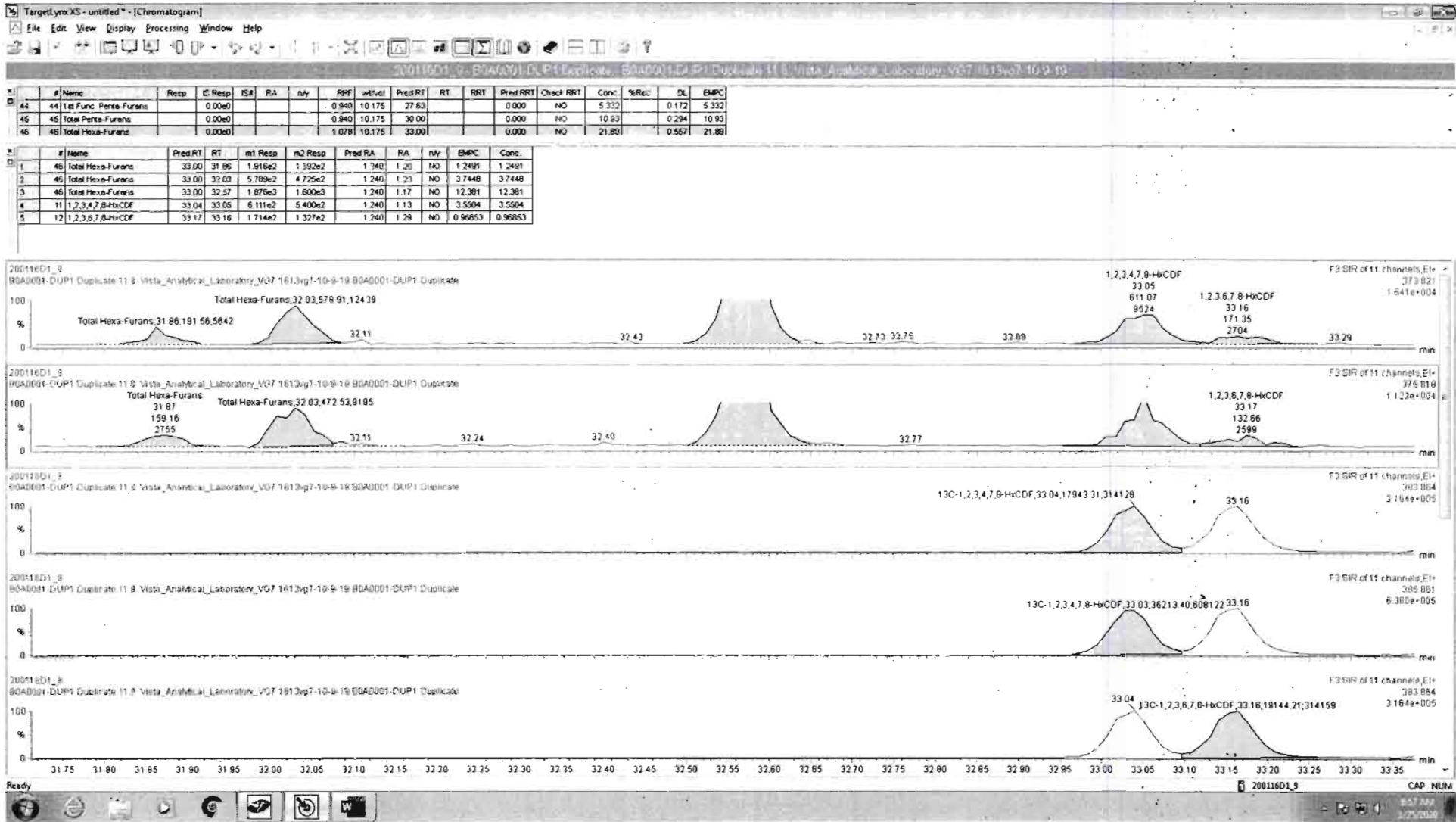


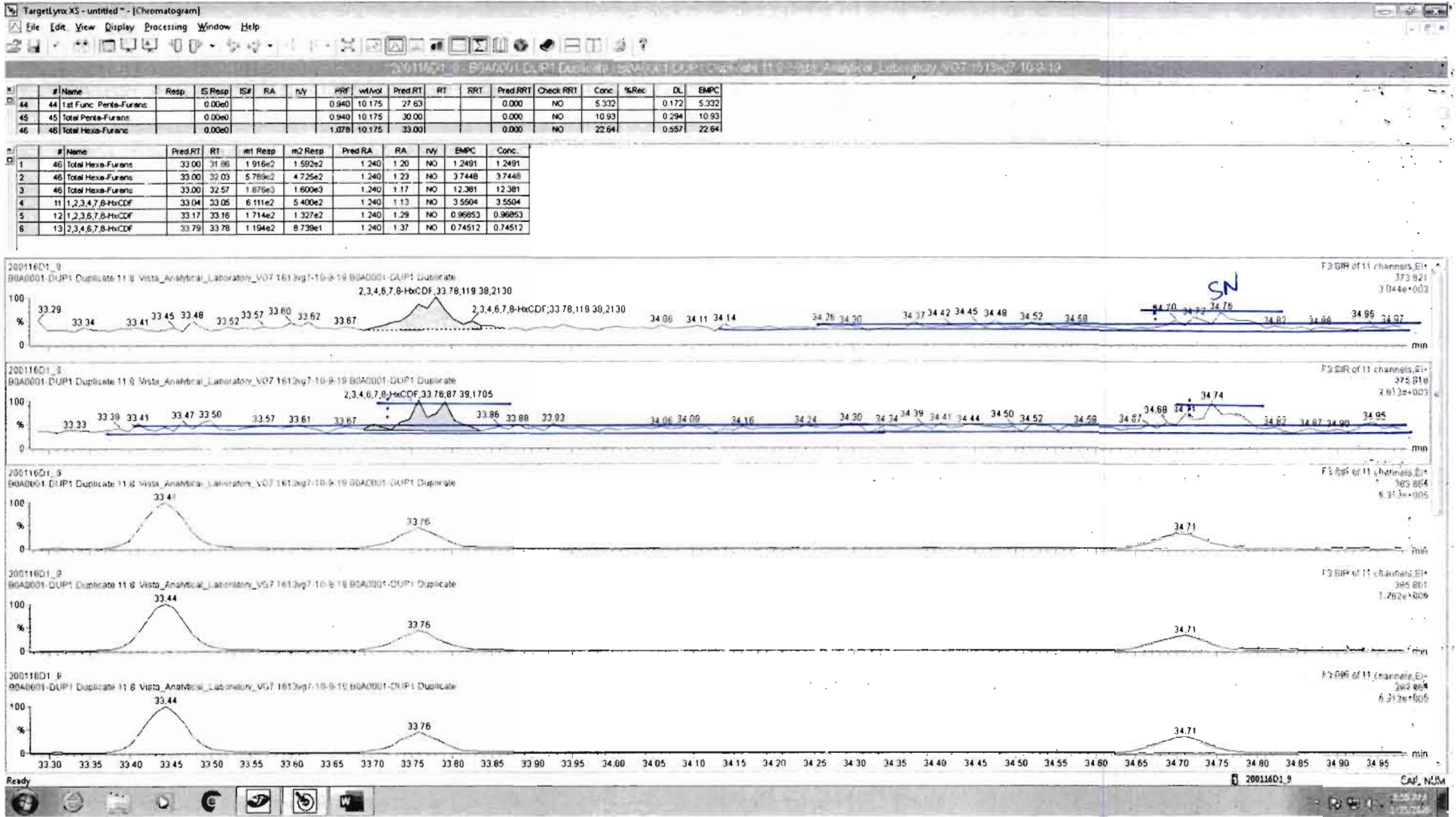
13C-1,2,3,4,7,8-HxCDF



DPE3



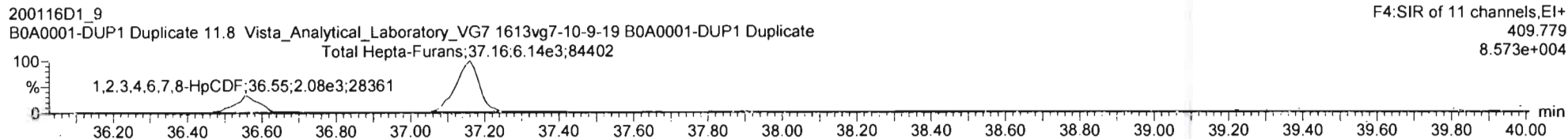
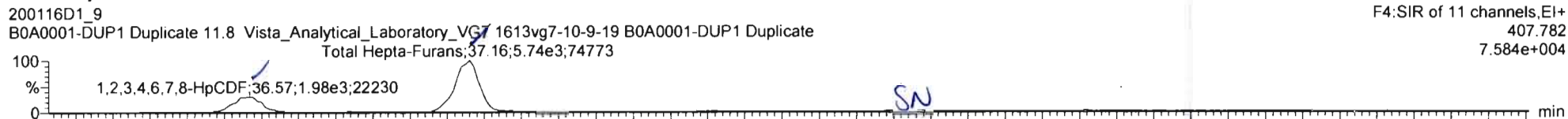




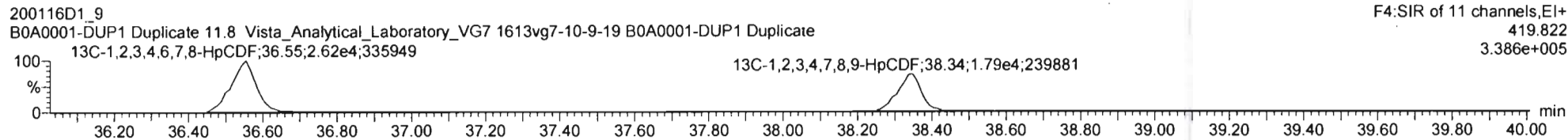
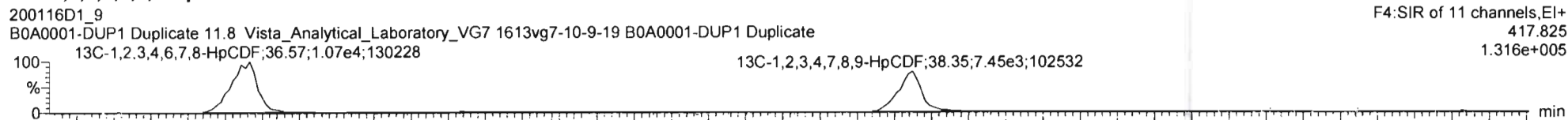


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Description: B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

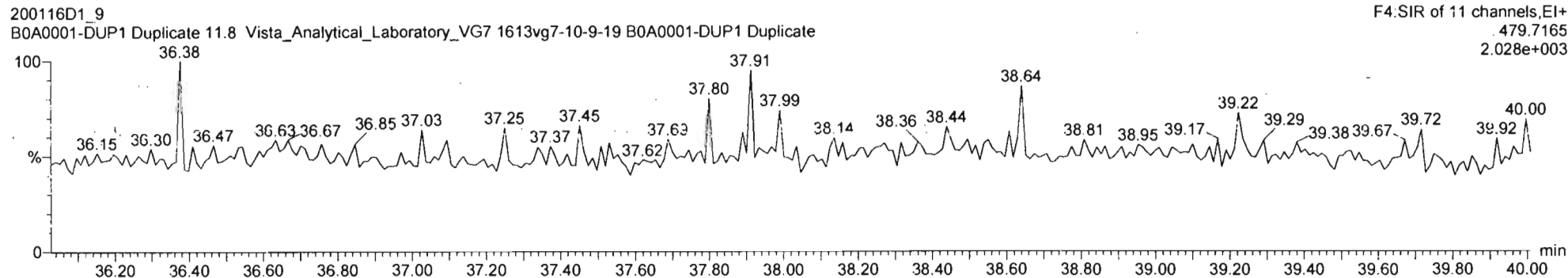
Total Hepta-Furans

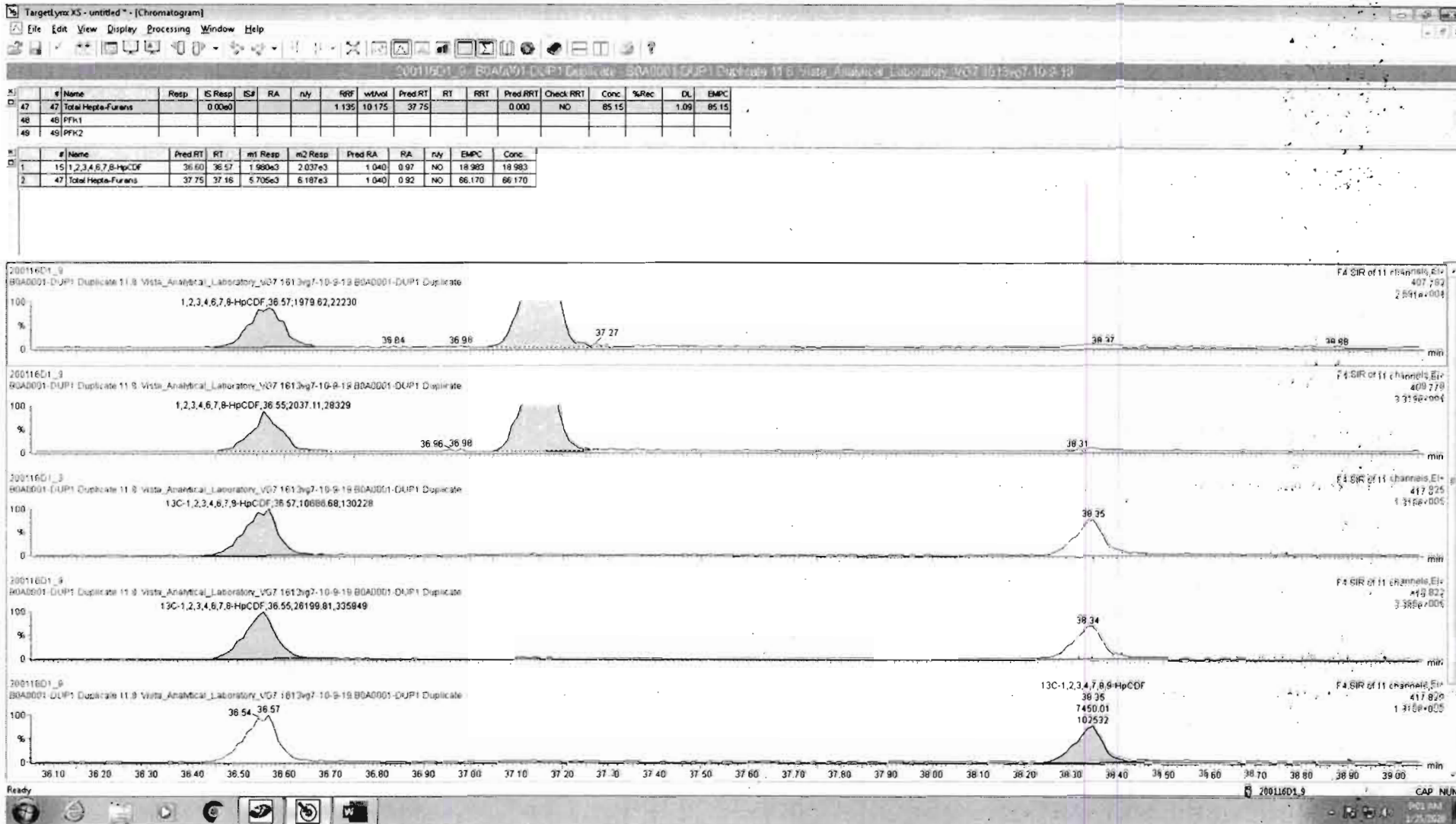


13C-1,2,3,4,6,7,8-HpCDF



DPE4





Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 08:21:08 Pacific Standard Time

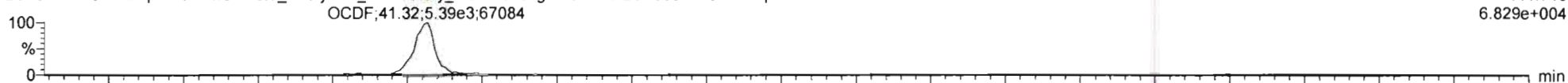
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OCDF

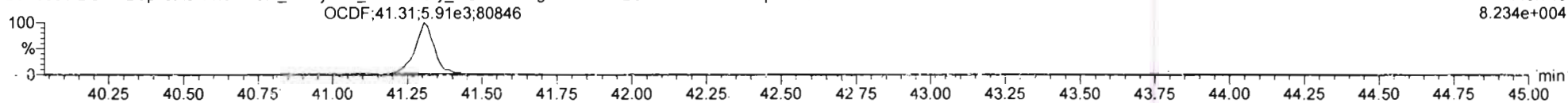
200116D1\_9 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F5:SIR of 11 channels,EI+ 441.743 6.829e+004



200116D1\_9 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

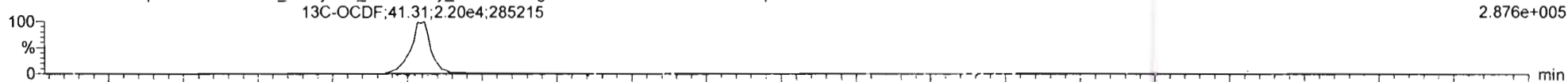
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13C-OCDF

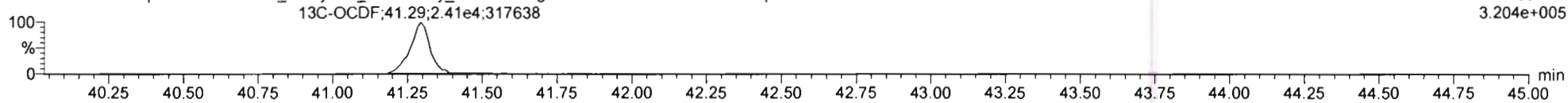
200116D1\_9 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F5:SIR of 11 channels,EI+ 453.7831 2.876e+005



200116D1\_9 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

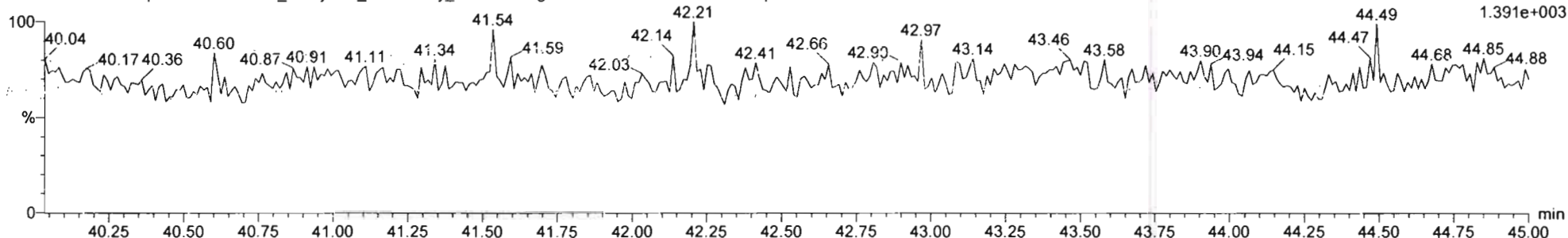
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DPE5

200116D1\_9 B0A0001-DUP1 Duplicate 11.8 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 B0A0001-DUP1 Duplicate

F5:SIR of 11 channels,EI+ 513.6775 1.391e+003



Vista Analytical Laboratory

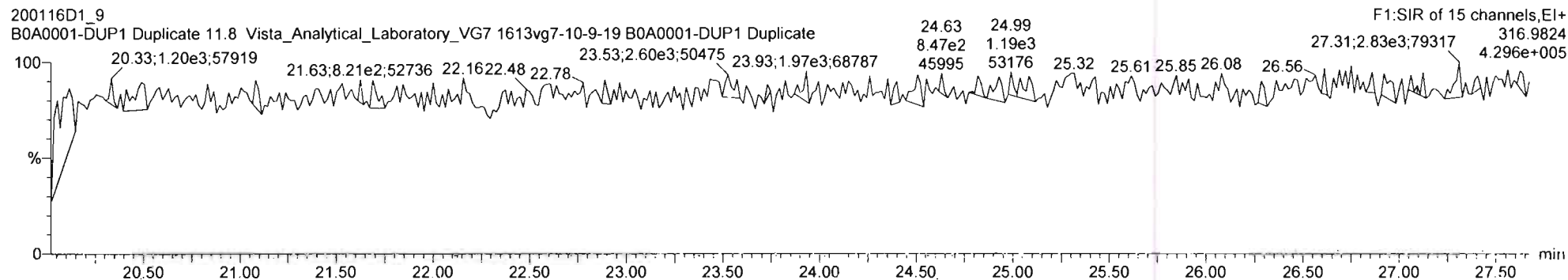
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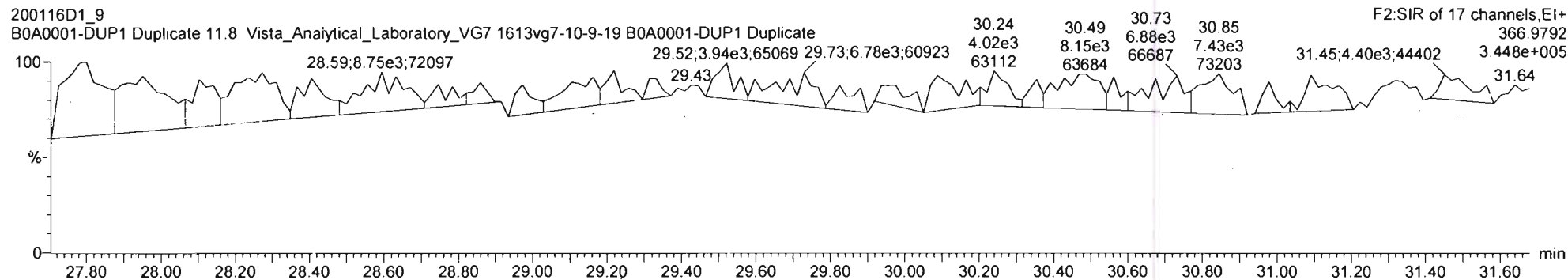
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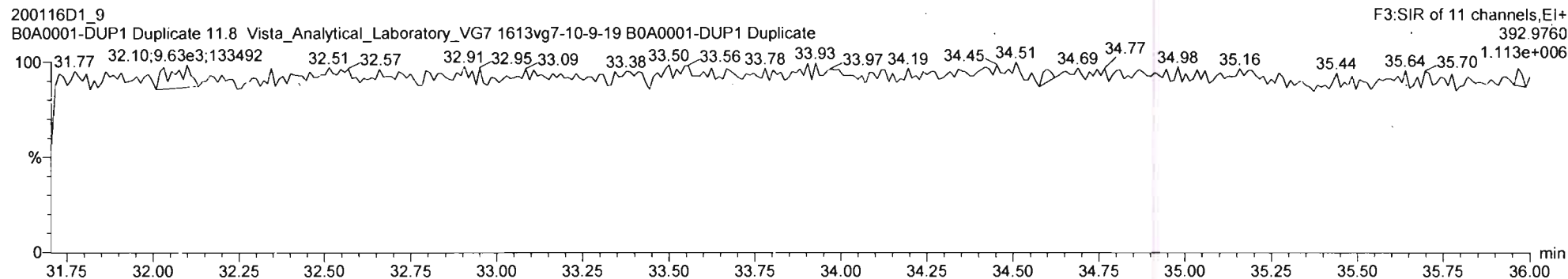
PFK1



PFK2



PFK3



Vista Analytical Laboratory

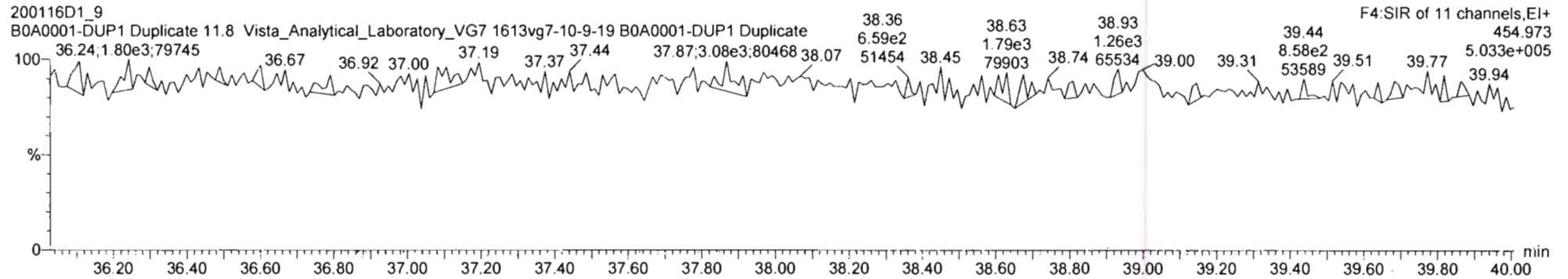
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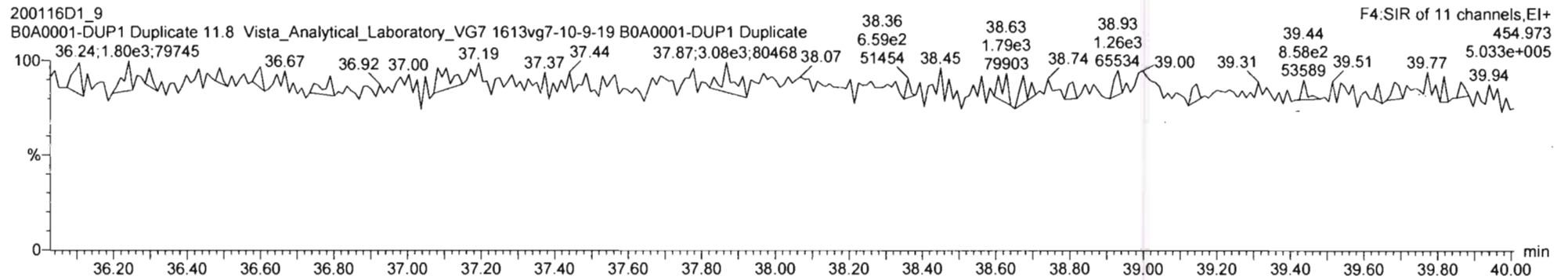
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PFK4



PFK5



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-11.qld

Last Altered: Saturday, January 25, 2020 09:52:07 Pacific Standard Time

Printed: Saturday, January 25, 2020 09:53:24 Pacific Standard Time

GRB 01/25/2020

CT 01/30/2020

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 25 Jan 2020 09:34:56

Name: VG7 200116D1\_11, Date: 16-JAN-2020, Time: 19:20:05, ID: 1904159-02 PDI-013SC-A-03-04-190925,

Description: 1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		9.60e4	10.0166	0.905			1.001		26.05					0.194
2	2 1,2,3,7,8-PeCDD		6.14e4	10.0166	0.903			1.001		30.62					0.503
3	3 1,2,3,4,7,8-HxCDD		4.80e4	10.0166	1.101			1.000		33.92					0.559
4	4 1,2,3,6,7,8-HxCDD		5.24e4	10.0166	0.939			1.000		34.03					0.596
5	5 1,2,3,7,8,9-HxCDD		5.02e4	10.0166	0.961			1.001		34.36					0.667
6	6 1,2,3,4,6,7,8-HpCDD	4.43e2	3.12e4	10.0166	0.979	0.920	NO	1.000	1.000	37.81	37.81	2.8954		2.90	0.938
7	7 OCDD	4.39e3	3.39e4	10.0166	0.959	0.974	NO	1.000	1.000	41.07	41.08	54.012		54.0	1.31
8	8 2,3,7,8-TCDF		1.30e5	10.0166	0.950			1.001		25.27					0.225
9	9 1,2,3,7,8-PeCDF		9.47e4	10.0166	0.960			1.001		29.43					0.176
10	10 2,3,4,7,8-PeCDF		8.67e4	10.0166	1.015			1.001		30.35					0.189
11	11 1,2,3,4,7,8-HxCDF		7.08e4	10.0166	1.177			1.000		33.03					0.356
12	12 1,2,3,6,7,8-HxCDF		7.98e4	10.0166	1.069			1.000		33.16					0.361
13	13 2,3,4,6,7,8-HxCDF		5.82e4	10.0166	1.114			1.001		33.78					0.512
14	14 1,2,3,7,8,9-HxCDF		6.20e4	10.0166	1.062			1.000		34.70					0.570
15	15 1,2,3,4,6,7,8-HpCDF	2.80e2	4.30e4	10.0166	1.128	1.153	NO	1.001	1.000	36.59	36.55	1.1552		1.16	0.586
16	16 1,2,3,4,7,8,9-HpCDF		3.26e4	10.0166	1.280			1.000		38.35					0.633
17	17 OCDF		4.79e4	10.0166	0.947			1.000		41.29					0.841
18	18 13C-2,3,7,8-TCDD	9.60e4	1.03e5	10.0166	1.095	0.808	NO	1.023	1.022	26.04	26.02	170.01	85.1		0.451
19	19 13C-1,2,3,7,8-PeCDD	6.14e4	1.03e5	10.0166	0.881	0.630	NO	1.203	1.202	30.62	30.60	135.24	67.7		0.332
20	20 13C-1,2,3,4,7,8-Hx...	4.80e4	1.19e5	10.0166	0.642	1.261	NO	1.014	1.014	33.90	33.91	125.49	62.9		1.00
21	21 13C-1,2,3,6,7,8-Hx...	5.24e4	1.19e5	10.0166	0.856	1.245	NO	1.017	1.018	34.01	34.03	102.83	51.5		0.751
22	22 13C-1,2,3,7,8,9-Hx...	5.02e4	1.19e5	10.0166	0.807	1.320	NO	1.026	1.027	34.31	34.33	104.46	52.3		0.797
23	23 13C-1,2,3,4,6,7,8-H...	3.12e4	1.19e5	10.0166	0.654	1.041	NO	1.131	1.131	37.81	37.80	80.115	40.1		0.802
24	24 13C-OCDD	3.39e4	1.19e5	10.0166	0.580	0.964	NO	1.228	1.229	41.06	41.07	98.092	24.6		0.506
25	25 13C-2,3,7,8-TCDF	1.30e5	1.70e5	10.0166	1.035	0.749	NO	0.992	0.991	25.25	25.24	147.87	74.1		0.549
26	26 13C-1,2,3,7,8-PeCDF	9.47e4	1.70e5	10.0166	0.854	1.602	NO	1.156	1.155	29.43	29.41	130.34	65.3		1.12
27	27 13C-2,3,4,7,8-PeCDF	8.67e4	1.70e5	10.0166	0.847	1.584	NO	1.192	1.191	30.34	30.32	120.38	60.3		1.13
28	28 13C-1,2,3,4,7,8-Hx...	7.08e4	1.19e5	10.0166	0.832	0.499	NO	0.987	0.988	33.01	33.03	142.90	71.6		1.11
29	29 13C-1,2,3,6,7,8-Hx...	7.98e4	1.19e5	10.0166	1.034	0.523	NO	0.991	0.992	33.12	33.15	129.51	64.9		0.896
30	30 13C-2,3,4,6,7,8-Hx...	5.82e4	1.19e5	10.0166	0.953	0.523	NO	1.009	1.009	33.74	33.75	102.47	51.3		0.972
31	31 13C-1,2,3,7,8,9-Hx...	6.20e4	1.19e5	10.0166	0.828	0.490	NO	1.038	1.038	34.69	34.70	125.78	63.0		1.12

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-11.qld

Last Altered: Saturday, January 25, 2020 09:52:07 Pacific Standard Time

Printed: Saturday, January 25, 2020 09:53:24 Pacific Standard Time

Name: VG7 200116D1\_11, Date: 16-JAN-2020, Time: 19:20:05, ID: 1904159-02 PDI-013SC-A-03-04-190925,  
 Description: 1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	4.30e4	1.19e5	10.0166	0.757	0.406	NO	1.093	1.093	36.53	36.55	95.293	47.7		0.830
33	33 13C-1,2,3,4,7,8,9-H...	3.26e4	1.19e5	10.0166	0.581	0.422	NO	1.147	1.147	38.34	38.35	94.201	47.2		1.08
34	34 13C-OCDF	4.79e4	1.19e5	10.0166	0.689	0.865	NO	1.235	1.235	41.28	41.29	116.75	29.2		0.586
35	35 37Cl-2,3,7,8-TCDD	3.94e4	1.03e5	10.0166	1.198			1.024	1.023	26.06	26.05	63.771	79.8		0.112
36	36 13C-1,2,3,4-TCDD	1.03e5	1.03e5	10.0166	1.000	0.801	NO	1.000	1.000	25.39	25.46	199.67	100.0		0.494
37	37 13C-1,2,3,4-TCDF	1.70e5	1.70e5	10.0166	1.000	0.796	NO	1.000	1.000	23.93	24.00	199.67	100.0		0.568
38	38 13C-1,2,3,4,6,9-Hx...	1.19e5	1.19e5	10.0166	1.000	0.510	NO	1.000	1.000	33.37	33.43	199.67	100.0		0.927
39	39 Total Tetra-Dioxins		9.60e4	10.0166	0.901			0.000		25.50		0.00000		0.0864	0.109
40	40 Total Penta-Dioxins		6.14e4	10.0166	0.872			0.000		30.00		0.00000		0.889	0.359
41	41 Total Hexa-Dioxins		0.00e0	10.0166	0.976			0.000		33.80					0.338
42	42 Total Hepta-Dioxins		3.12e4	10.0166	0.989			0.000		37.75		8.0268		8.03	0.929
43	43 Total Tetra-Furans		1.30e5	10.0166	0.943			0.000		24.00		0.43772		0.438	0.227
44	44 1st Func. Penta-Fur...		0.00e0	10.0166	0.940			0.000		27.63		1.0418		1.04	0.111
45	45 Total Penta-Furans		0.00e0	10.0166	0.940			0.000		30.00		0.00000		0.324	0.0735
46	46 Total Hexa-Furans		0.00e0	10.0166	1.078			0.000		33.00		1.4410		1.44	0.450
47	47 Total Hepta-Furans		0.00e0	10.0166	1.135			0.000		37.75		1.1552		1.16	0.639

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-11.qld

Last Altered: Saturday, January 25, 2020 09:52:07 Pacific Standard Time

Printed: Saturday, January 25, 2020 09:53:24 Pacific Standard Time

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Calibration: 25 Jan 2020 09:34:56

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 Description: 1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	YES	23.98	99.869	42883.613	0.000	MM	0.0000	0.09

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	YES	30.30	125.243	23746.824	0.000	MM	0.0000	0.41
2	40 Total Penta-Dioxins	YES	29.41	238.853	23746.824	0.000	MM	0.0000	0.48

**Hexa-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Hepta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.81	212.286	15909.922	28.405	MM	2.8954	2.90
2	42 Total Hepta-Dioxins	NO	36.96	421.324	15909.922	50.819	MM	5.1315	5.13

**Tetra-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	NO	21.64	121.335	55759.895	4.134	MM	0.4377	0.44

**Penta-Furans function 1**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.05	261.577	55744.783	9.805	bb	1.0418	1.04



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-11.qld

Last Altered: Saturday, January 25, 2020 09:52:07 Pacific Standard Time

Printed: Saturday, January 25, 2020 09:53:24 Pacific Standard Time

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 Description: 1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Penta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	45 Total Penta-Furans	YES	28.52	105.783	55744.783	0.000	MM	0.0000	0.32

**Hexa-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	46 Total Hexa-Furans	NO	32.03	131.582	22831.340	7.495	MM	0.6943	0.69
2	46 Total Hexa-Furans	NO	32.57	145.209	22831.340	8.059	MM	0.7466	0.75

**Hepta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	15 1,2,3,4,6,7,8-HpCDF	NO	36.55	150.207	12409.616	13.048	MM	1.1552	1.16

Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 09:34:56 Pacific Standard Time

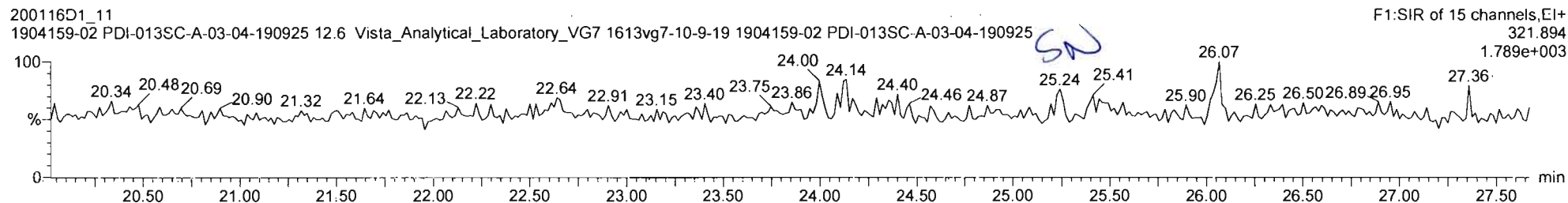
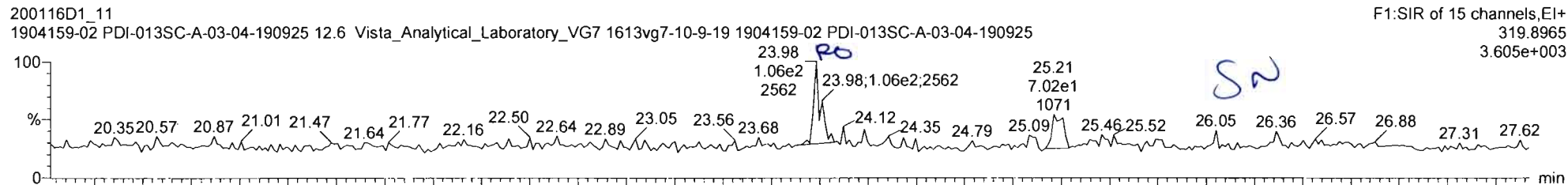
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Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

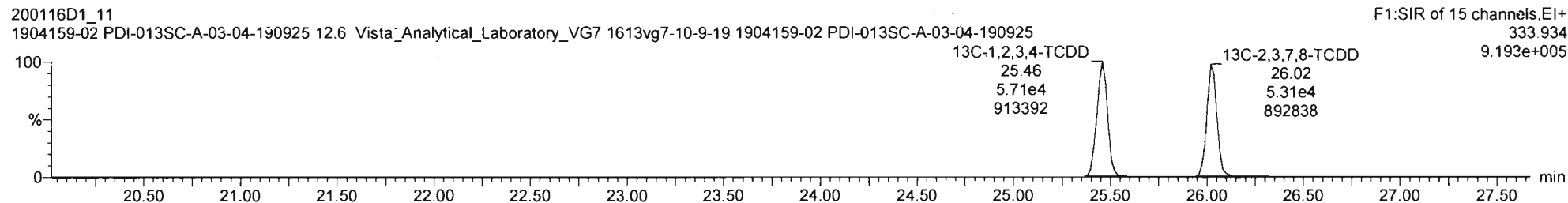
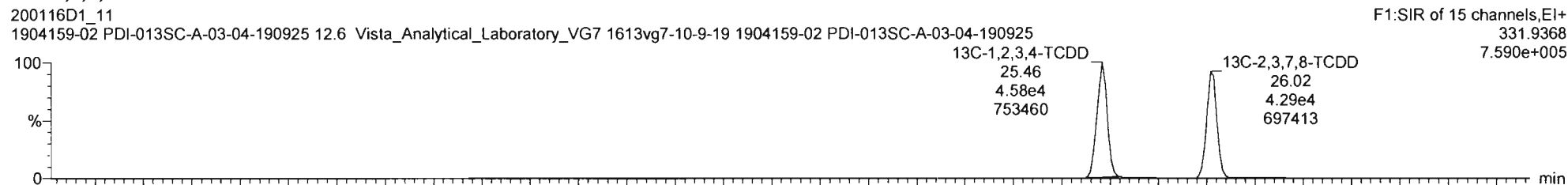
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Total Tetra-Dioxins



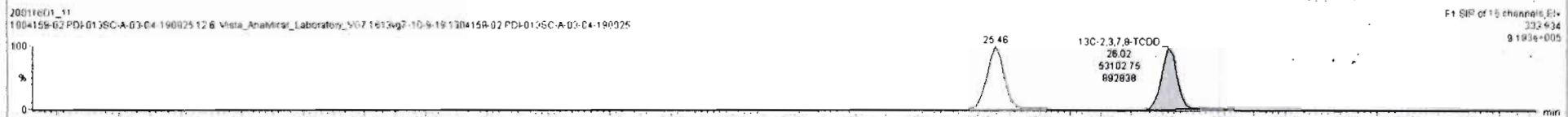
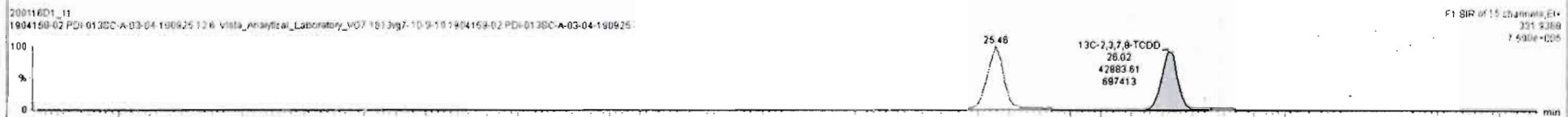
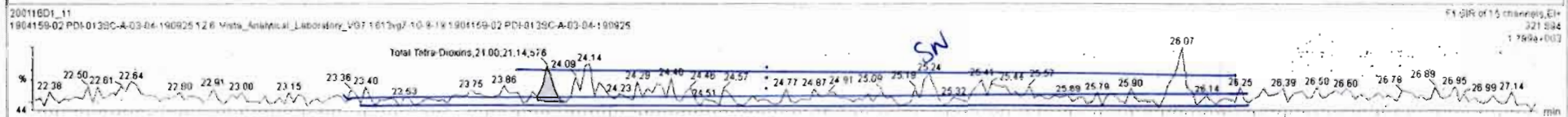
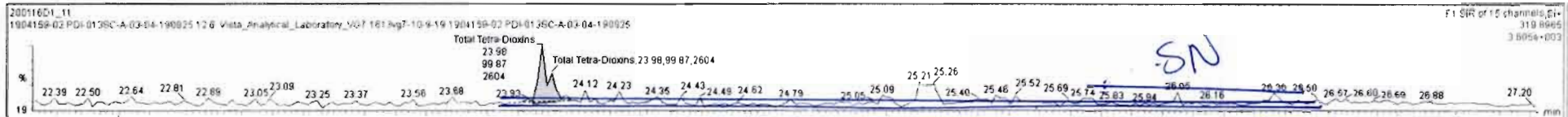
13C-2,3,7,8-TCDD



200116D1\_11 1904159-02 PDI-0135C-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_V07 1613kg7-10-9-19 1904159-02 PDI-0135C-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_V07 1613kg7-10-9-19

Name	Resp	RA	nV	RRF	wAveI	RT	RR1	Conc	%Rec	DL	EMPC
39 Total Tetra-Dioxins					10.017			0.000		0.109	0.0664
40 Total Penta-Dioxins					10.017			0.000		0.359	0.889
41 Total Hexa-Dioxins					10.017					0.338	

Name	RT	m1 Resp	m2 Resp	RA	nV	EMPC	Conc.
1 Total Tetra-Dioxins	23.98	9.987e1	2.114e1	4.72	YES	0.066389	0.00000



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 09:34:56 Pacific Standard Time

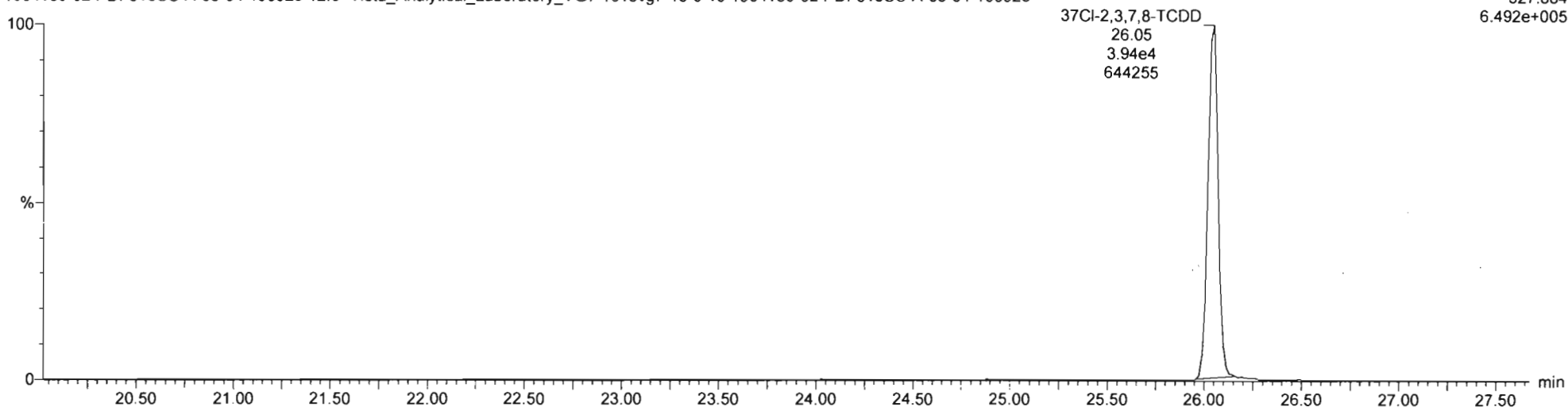
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37Cl-2,3,7,8-TCDD

200116D1\_11  
1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-02 PDI-013SC-A-03-04-190925

F1:SIR of 15 channels,EI+  
327.884  
6.492e+005



13C-1,2,3,4-TCDD

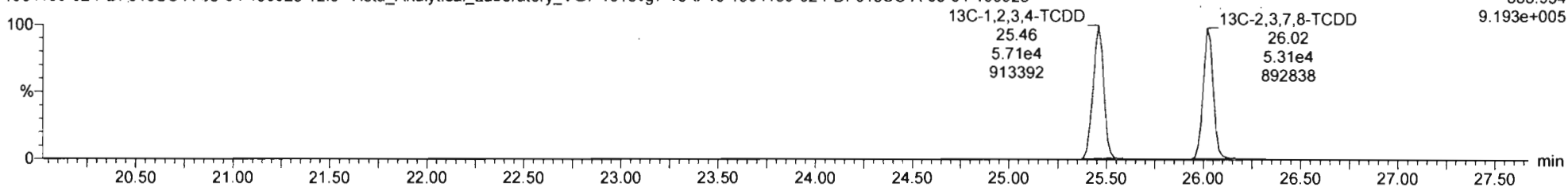
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F1:SIR of 15 channels,EI+  
331.9368  
7.590e+005



200116D1\_11  
1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-02 PDI-013SC-A-03-04-190925

F1:SIR of 15 channels,EI+  
333.934  
9.193e+005



Vista Analytical Laboratory

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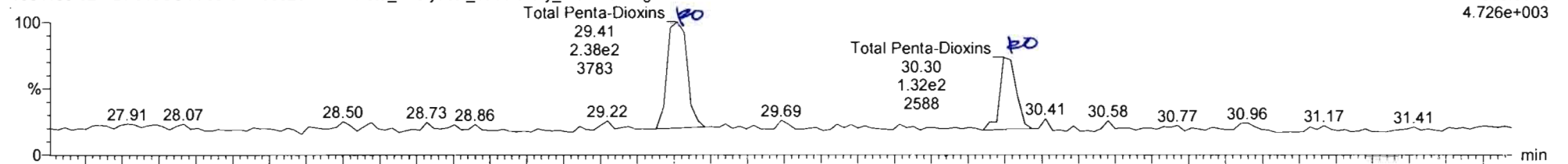
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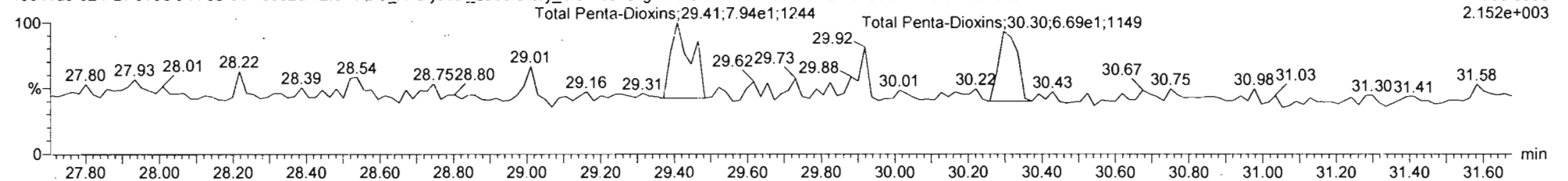
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Total Penta-Dioxins

200116D1\_11 F2:SIR of 17 channels,EI+ 353.8576 4.726e+003  
1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-02 PDI-013SC-A-03-04-190925

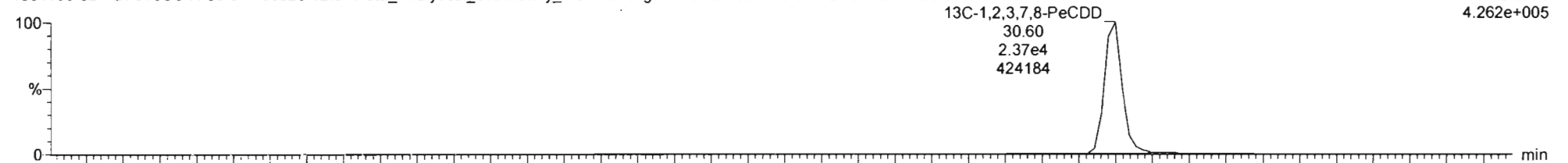


200116D1\_11 F2:SIR of 17 channels,EI+ 355.8550 2.152e+003  
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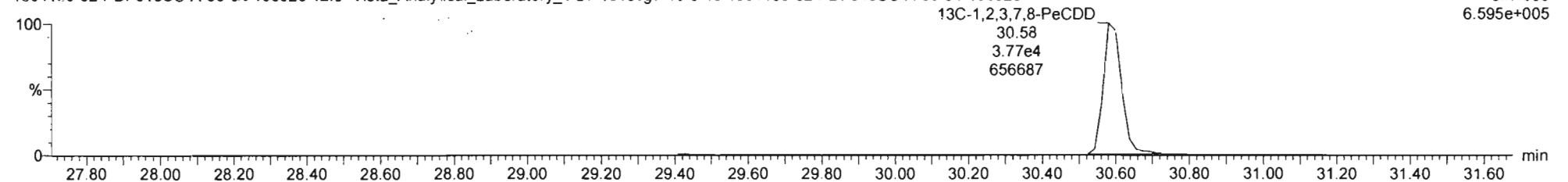


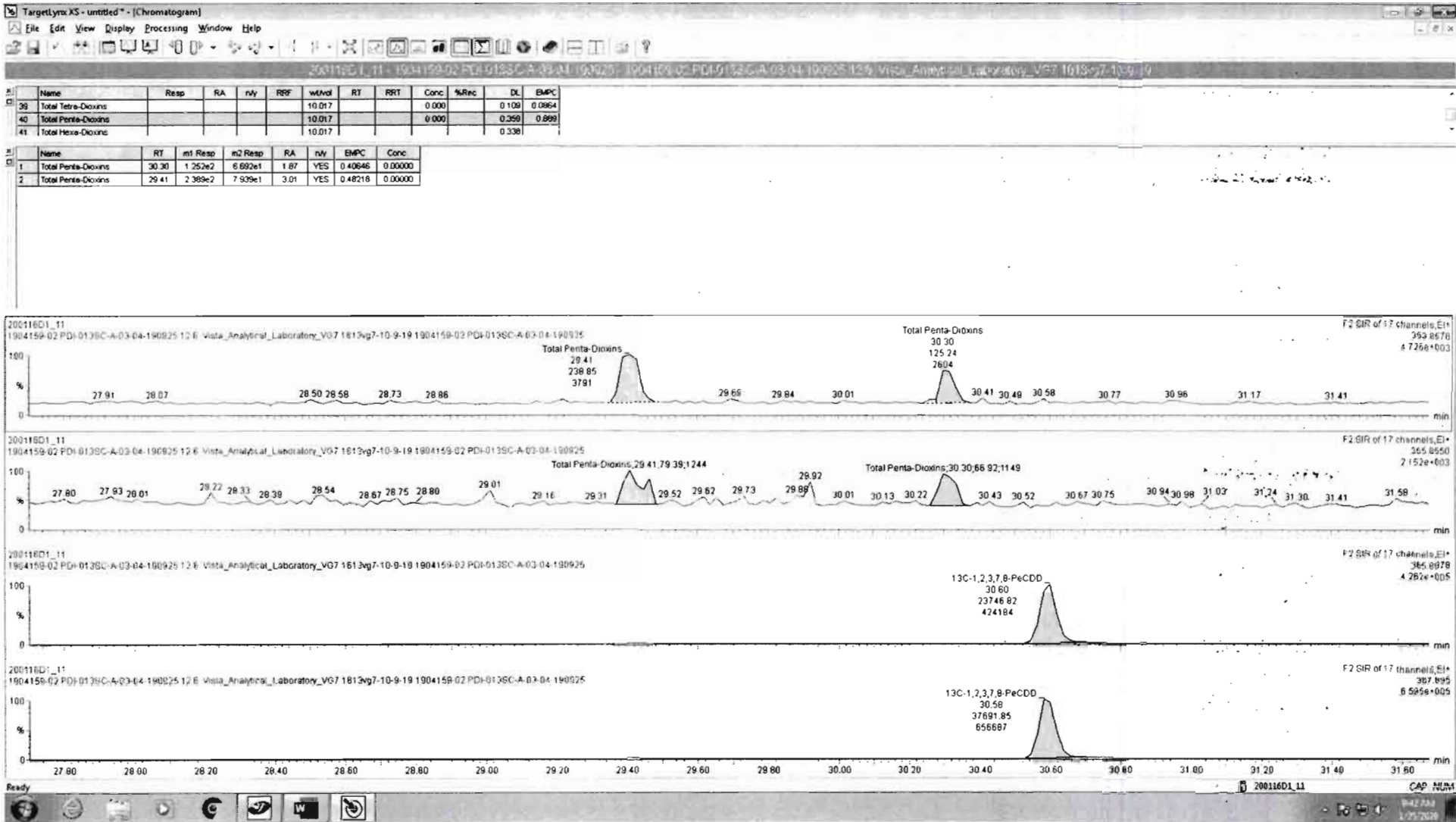
13C-1,2,3,7,8-PeCDD

200116D1\_11 F2:SIR of 17 channels,EI+ 365.8978 4.262e+005  
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200116D1\_11 F2:SIR of 17 channels,EI+ 367.895 6.595e+005  
1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-02 PDI-013SC-A-03-04-190925





Vista Analytical Laboratory

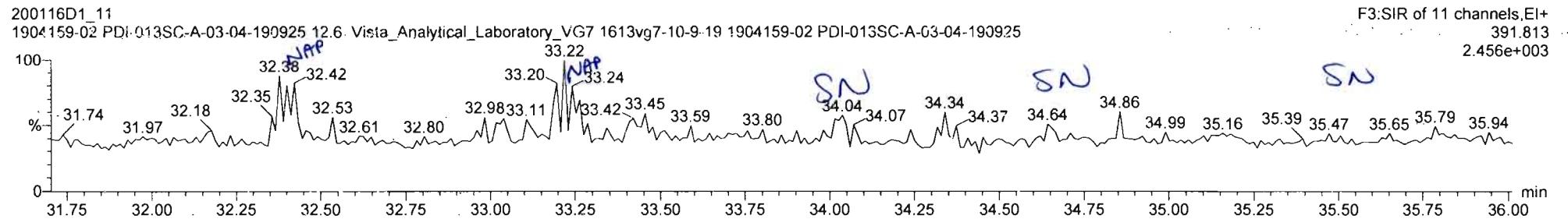
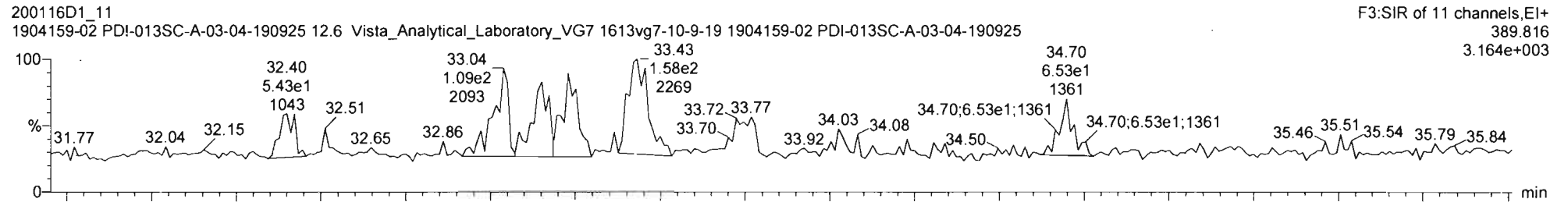
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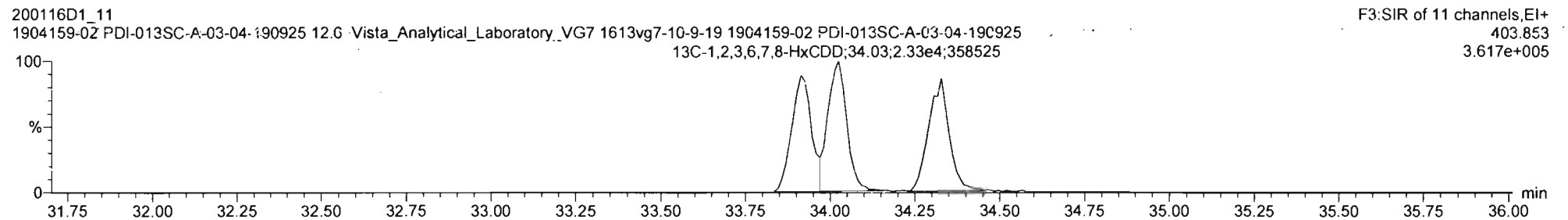
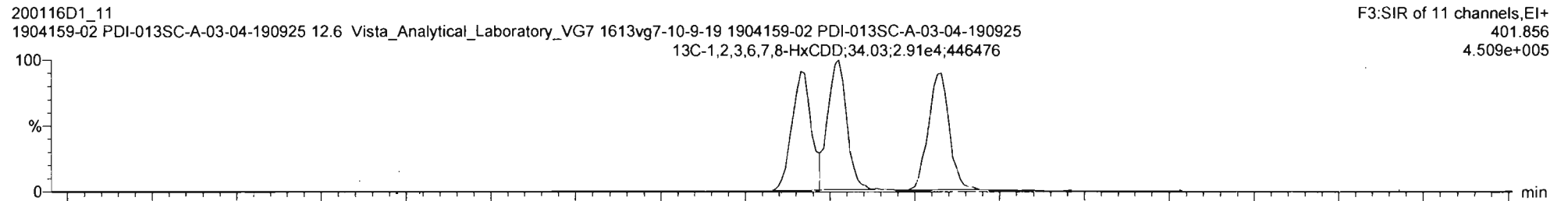
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 Description: 1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Total Hexa-Dioxins**



**13C-1,2,3,4,7,8-HxCDD**



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 09:34:56 Pacific Standard Time

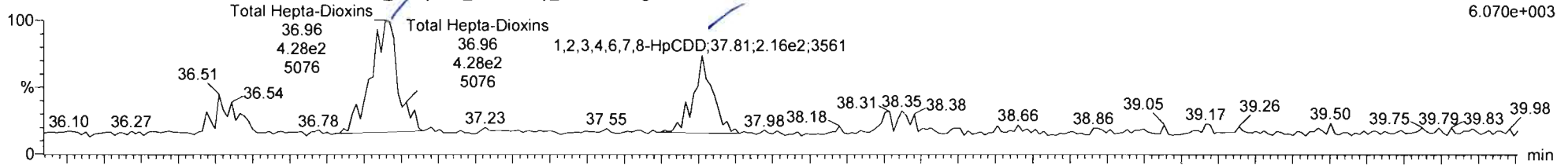
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Total Hepta-Dioxins

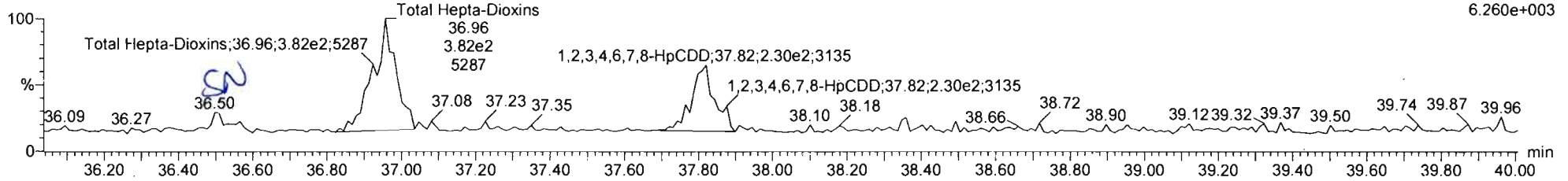
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F4:SIR of 11 channels,EI+ 423.777 6.070e+003



200116D1\_11 1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-02 PDI-013SC-A-03-04-190925

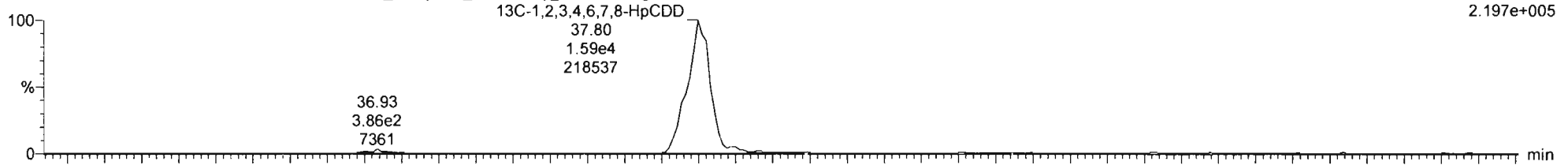
F4:SIR of 11 channels,EI+ 425.774 6.260e+003



13C-1,2,3,4,6,7,8-HpCDD

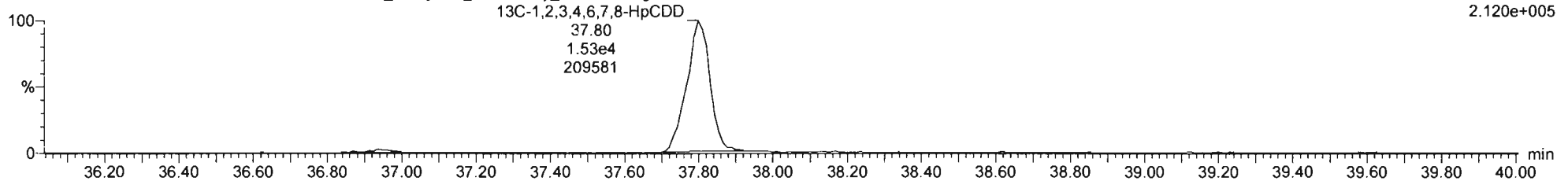
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F4:SIR of 11 channels,EI+ 435.817 2.197e+005

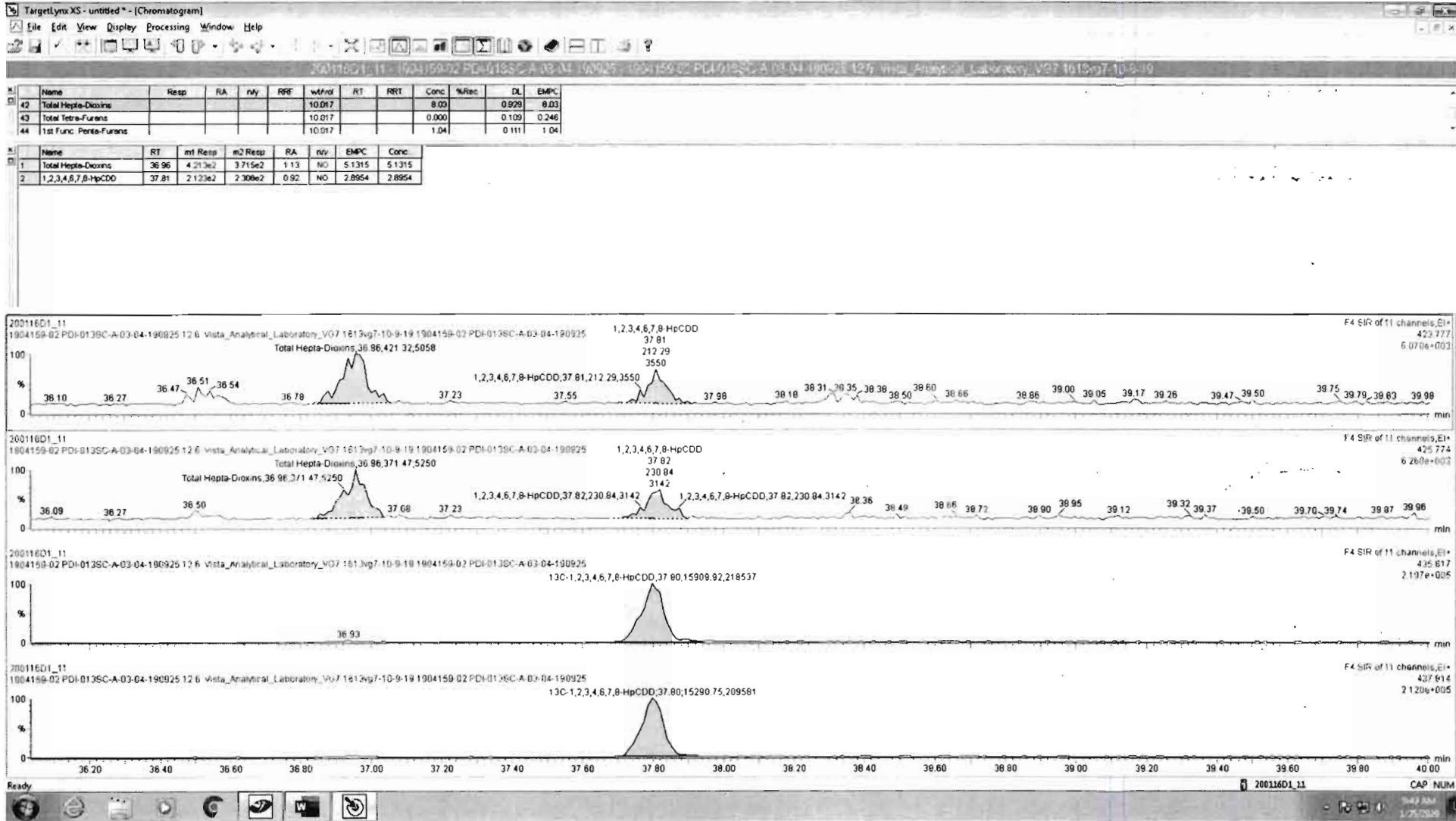


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F4:SIR of 11 channels,EI+ 437.814 2.120e+005





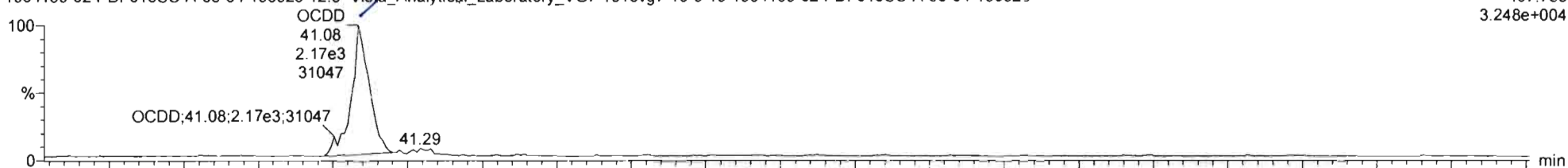


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OCDD

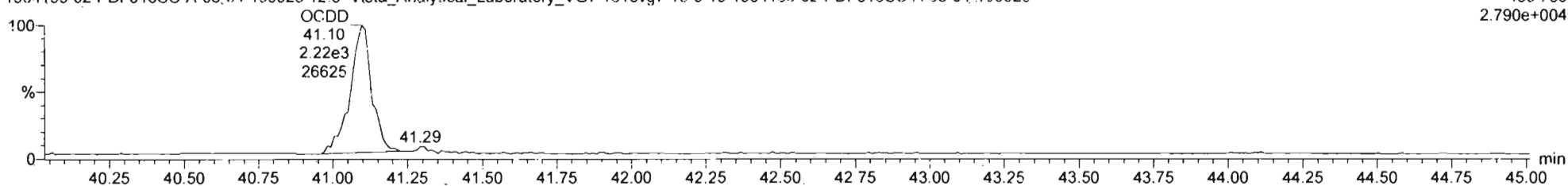
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F5:SIR of 11 channels,EI+  
457.738  
3.248e+004



200116D1\_11  
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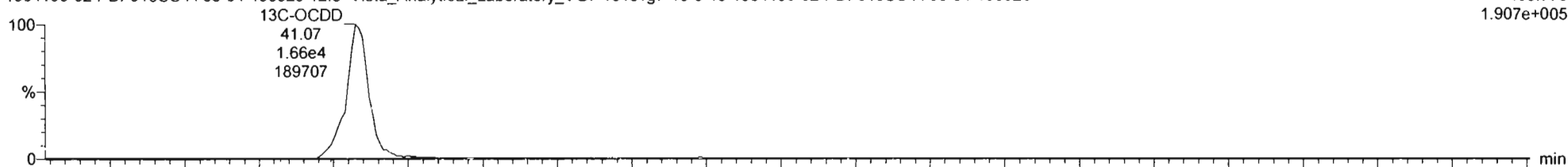
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2.790e+004



13C-OCDD

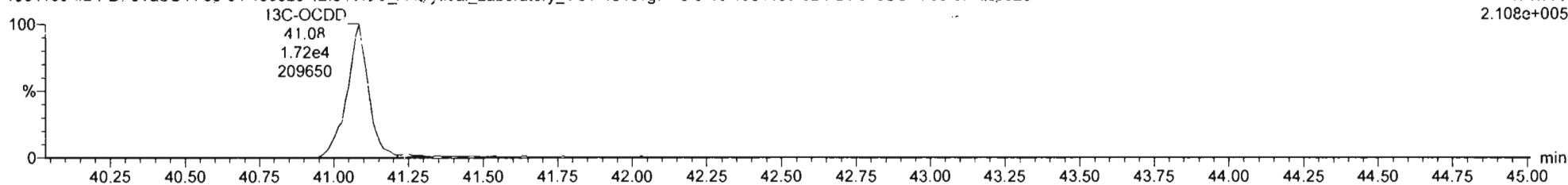
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F5:SIR of 11 channels,EI+  
469.778  
1.907e+005



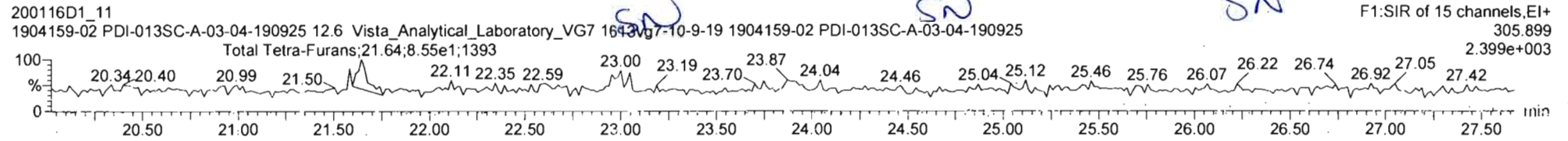
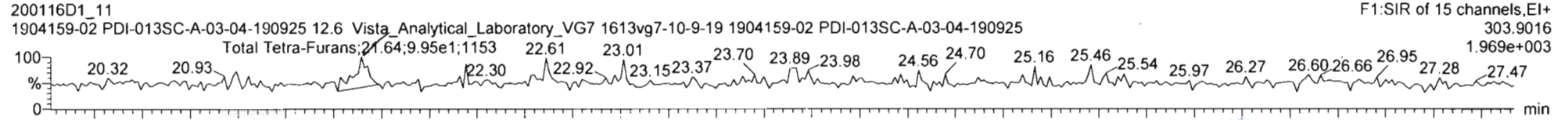
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471.775  
2.108e+005

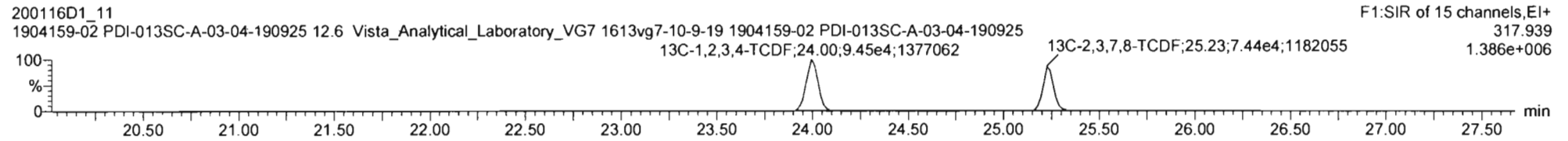
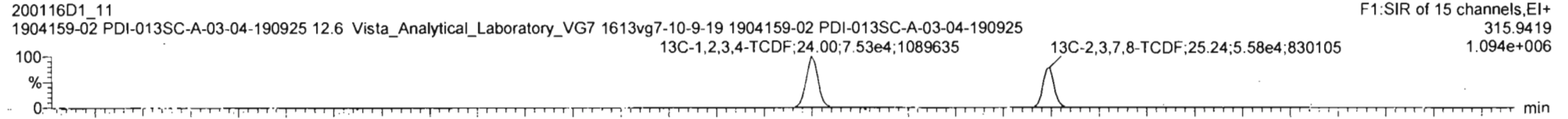


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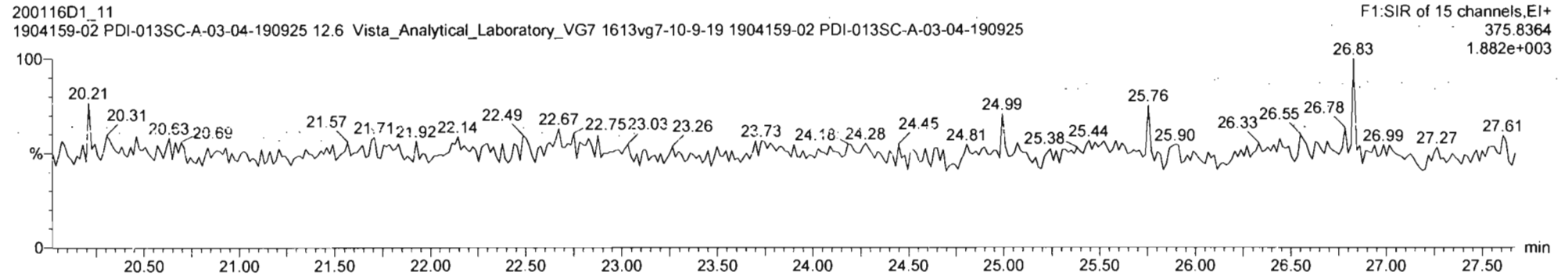
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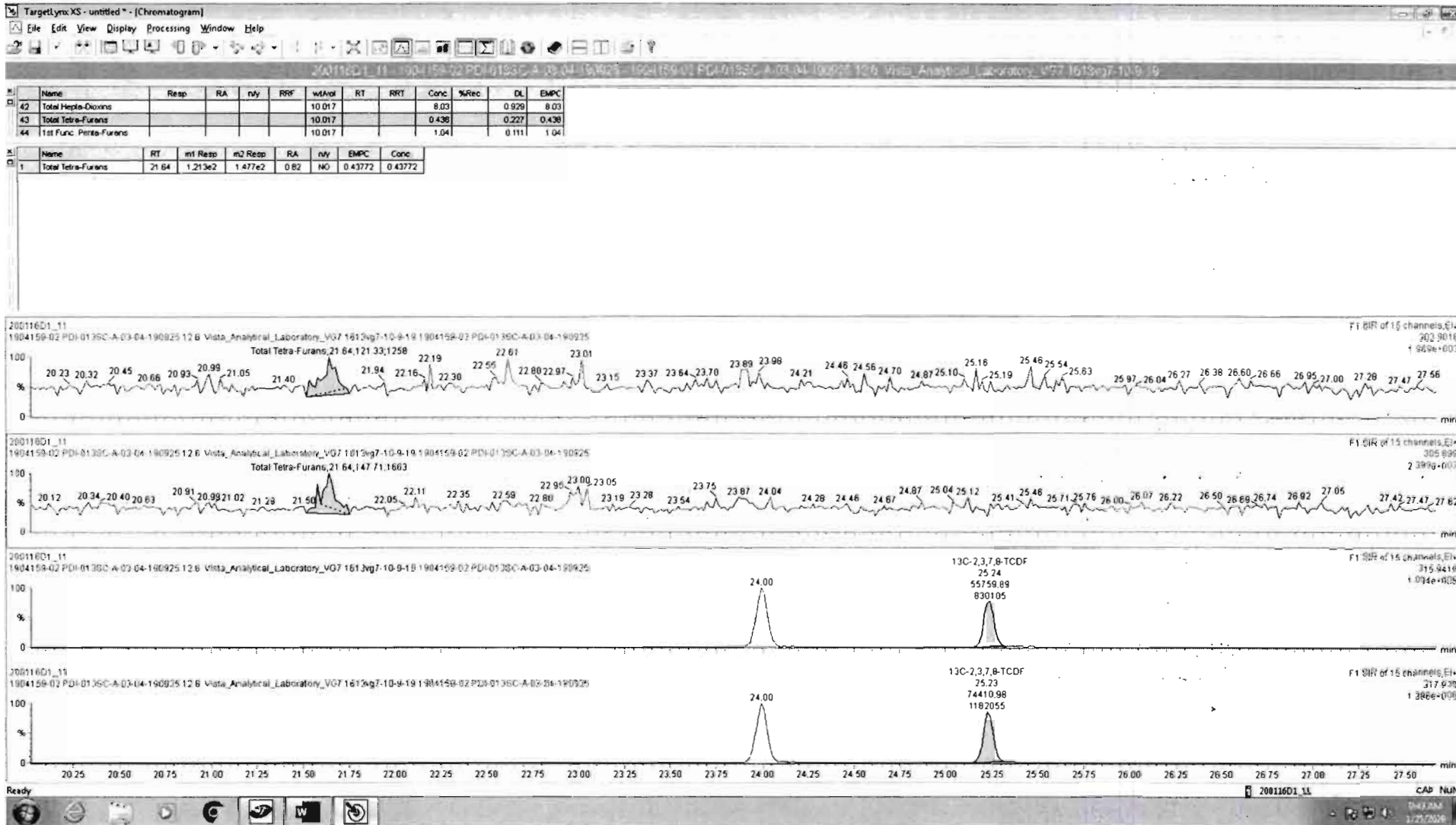


13C-2,3,7,8-TCDF



DPE1





Vista Analytical Laboratory

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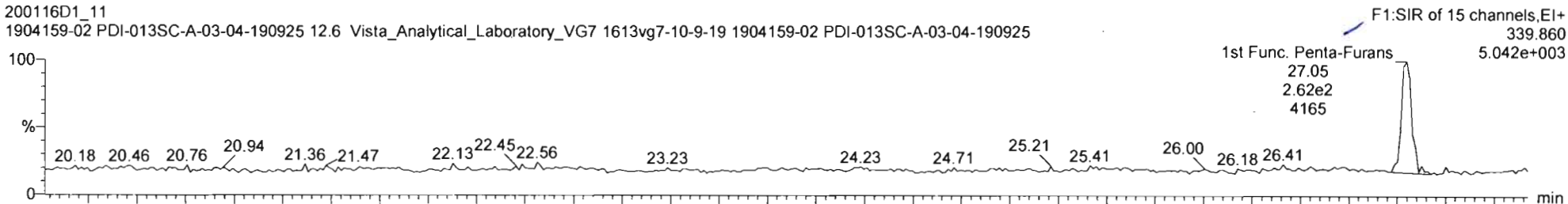
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Printed: Saturday, January 25, 2020 09:35:04 Pacific Standard Time

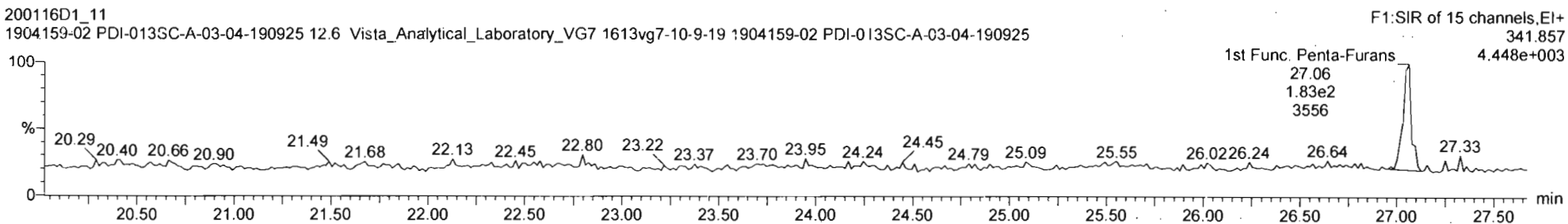
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1st Func. Penta-Furans

200116D1\_11  
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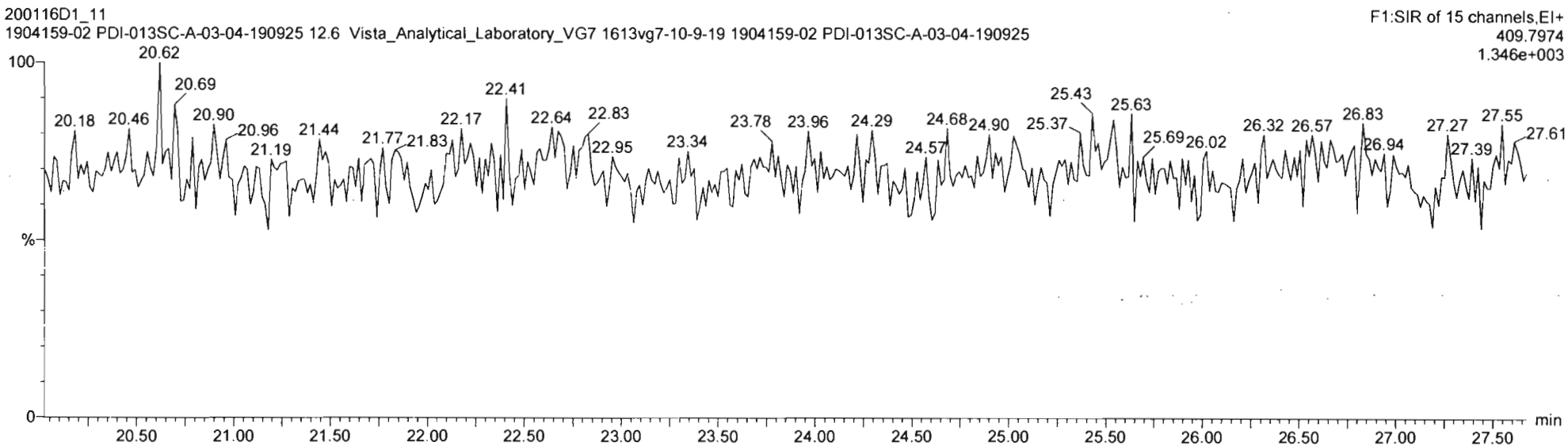


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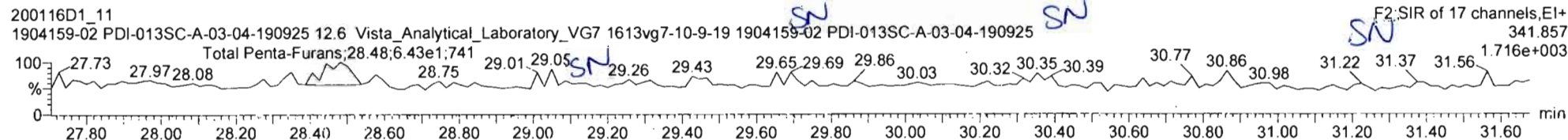
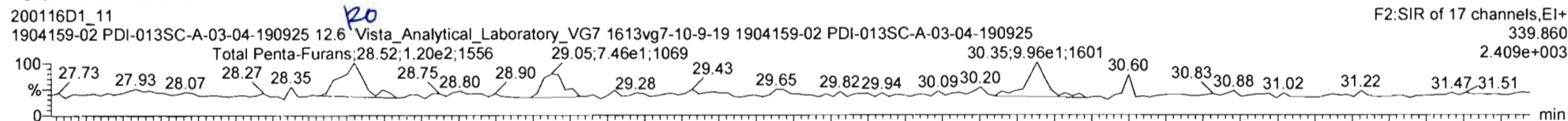
DPE6

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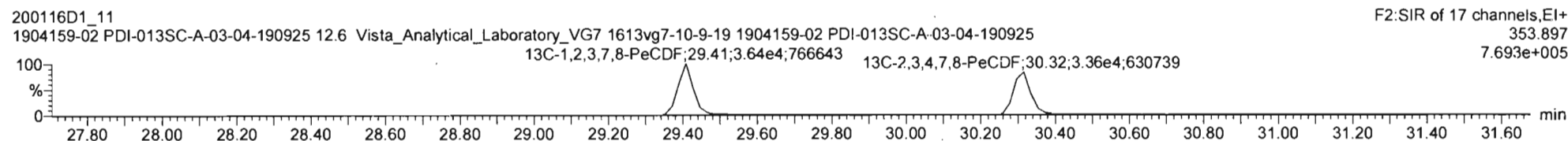
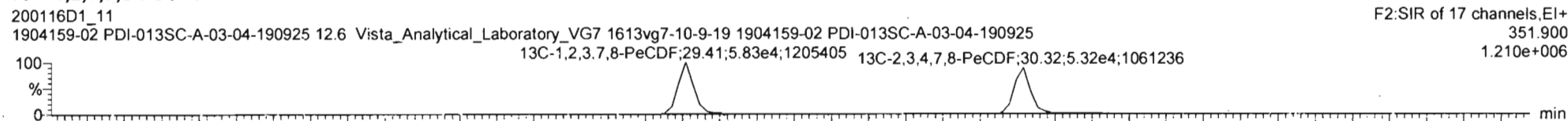


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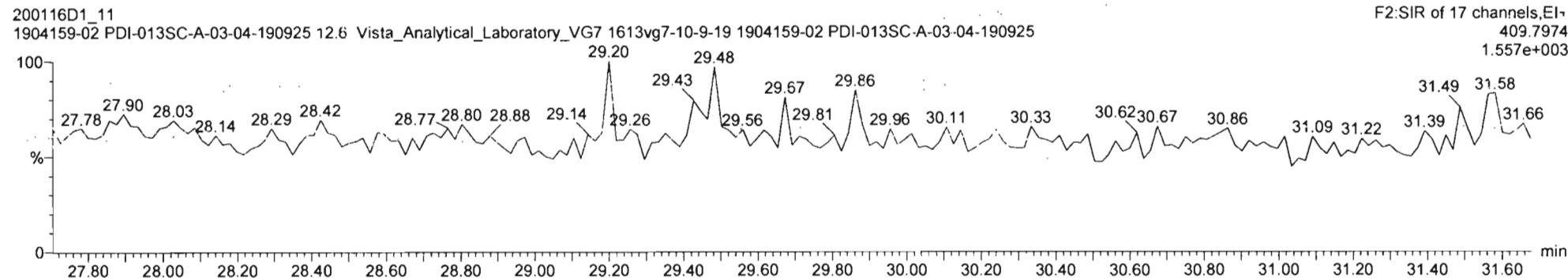
Total Penta-Furans

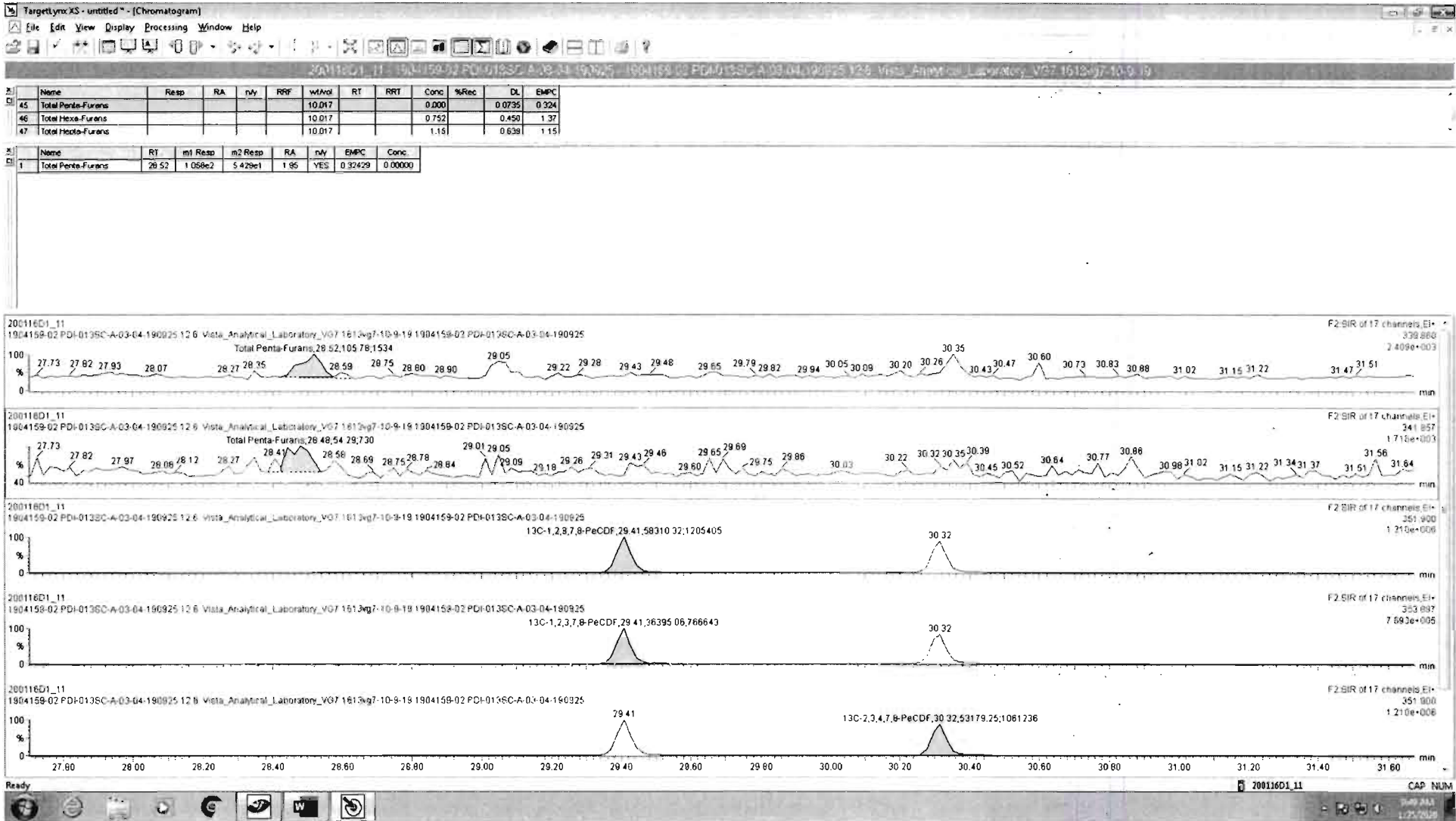


13C-1,2,3,7,8-PeCDF



DPE2





Vista Analytical Laboratory

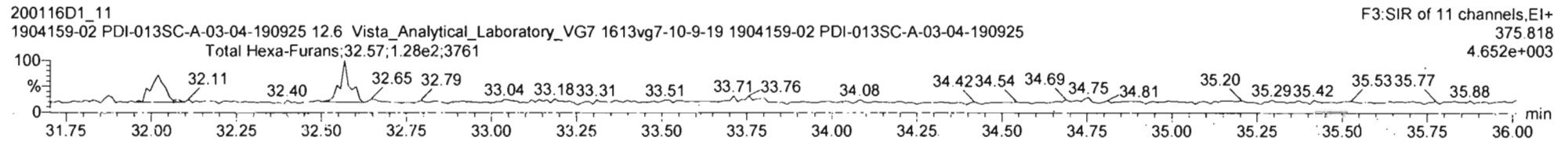
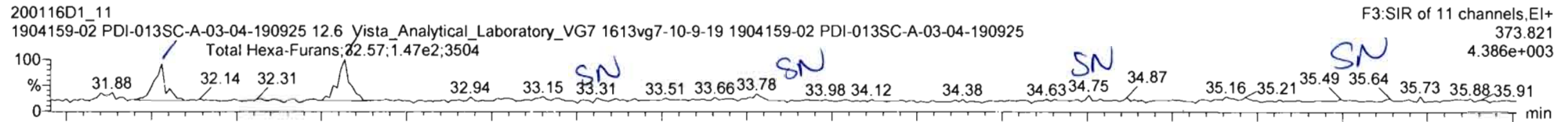
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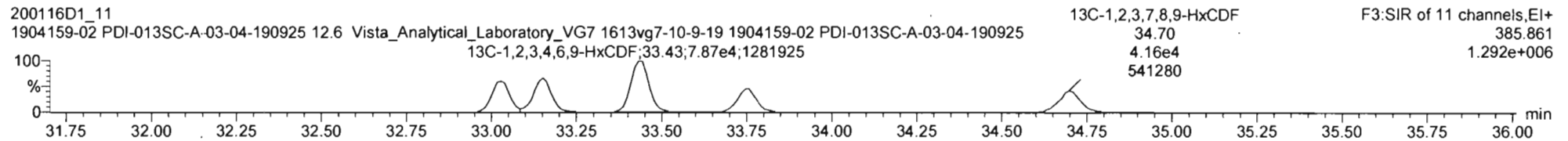
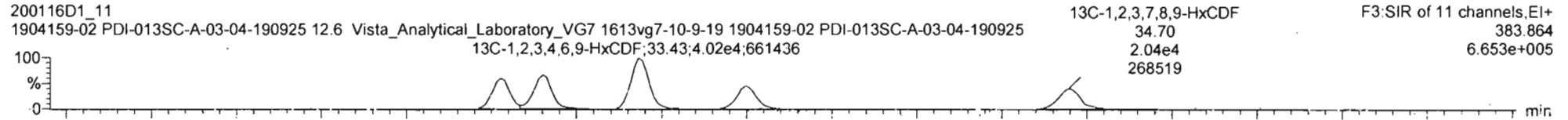
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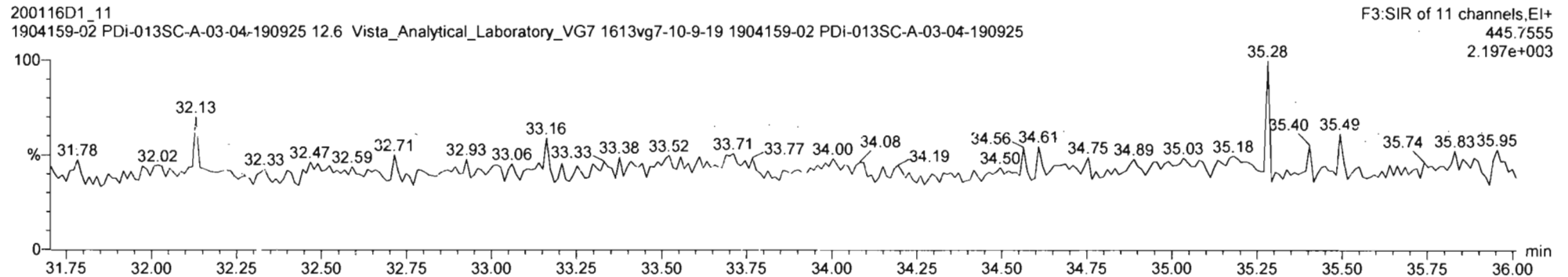
Total Hexa-Furans



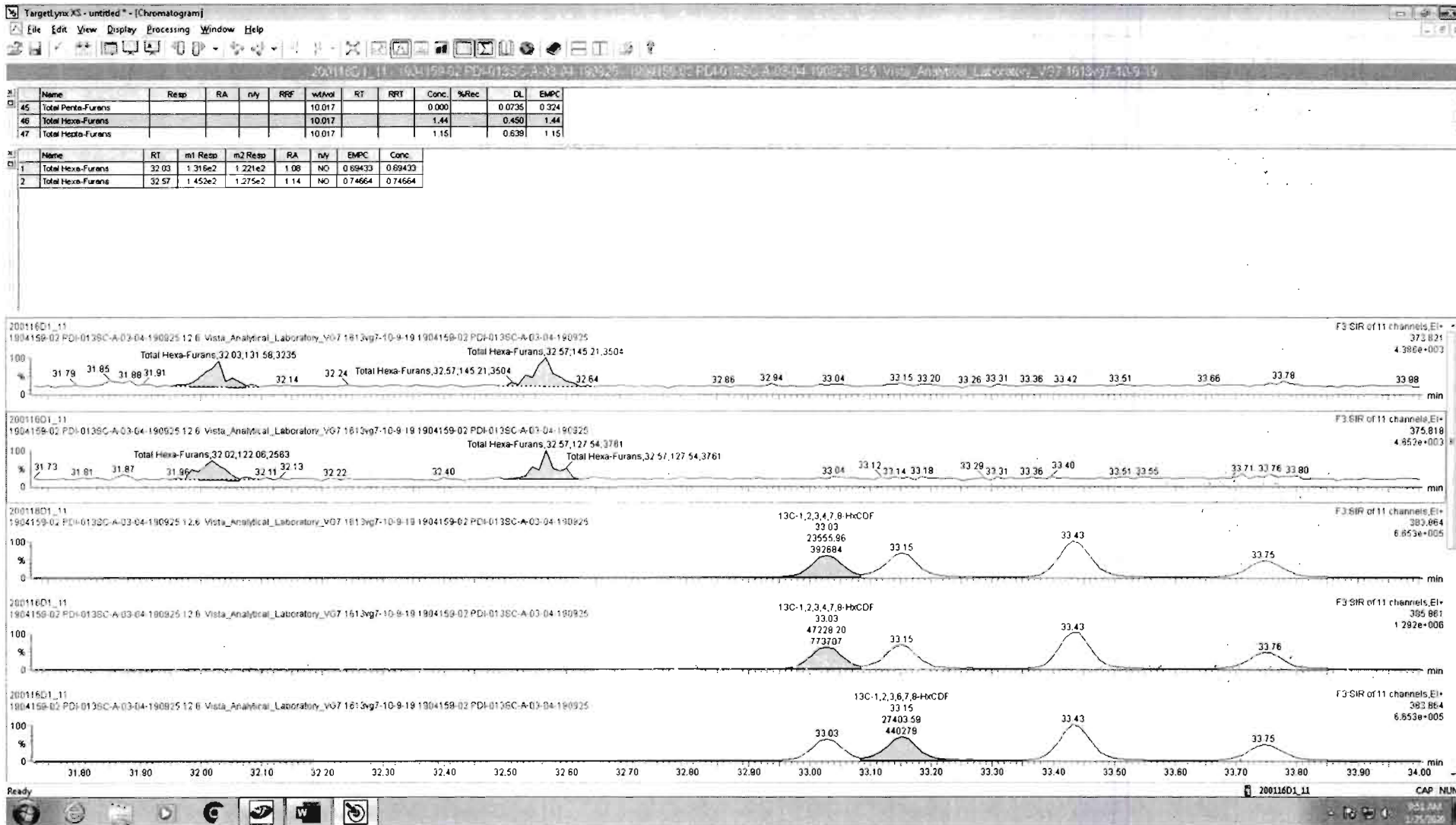
13C-1,2,3,4,7,8-HxCDF



DPE3







Vista Analytical Laboratory

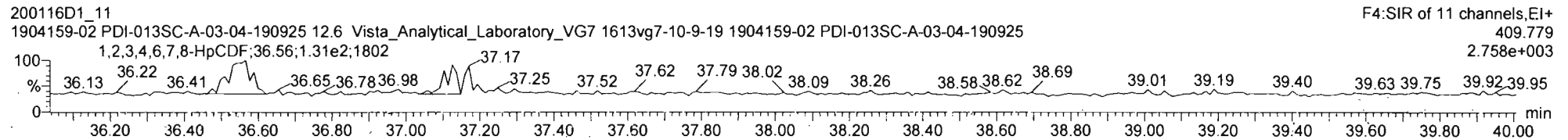
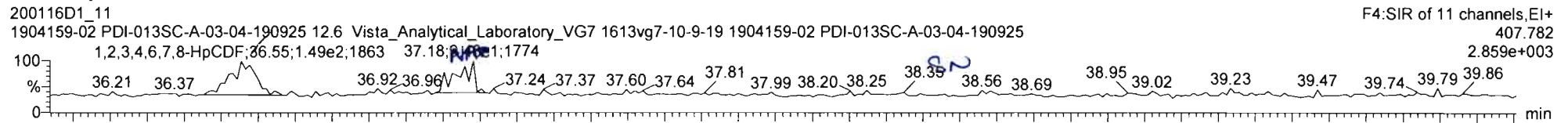
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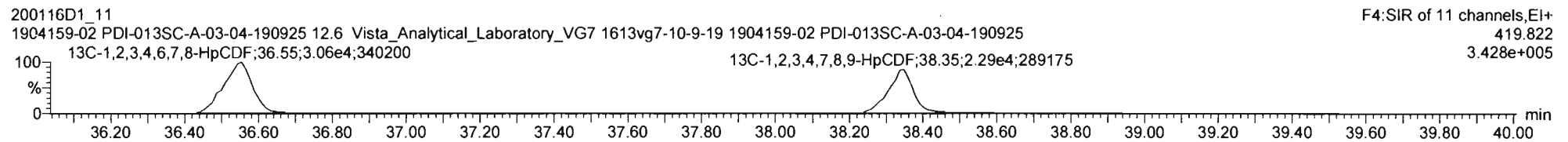
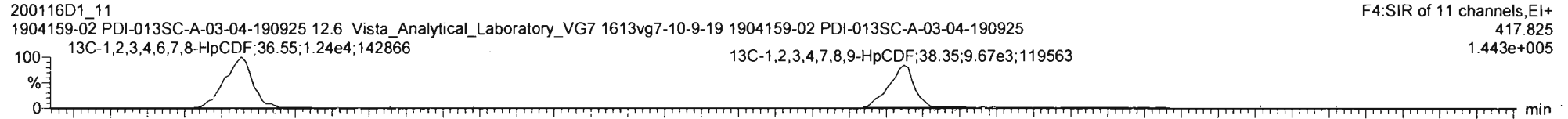
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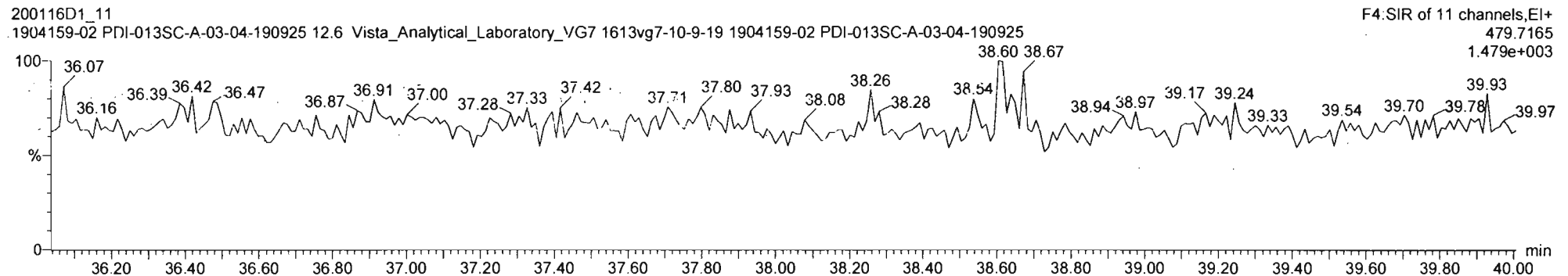
Total Hepta-Furans

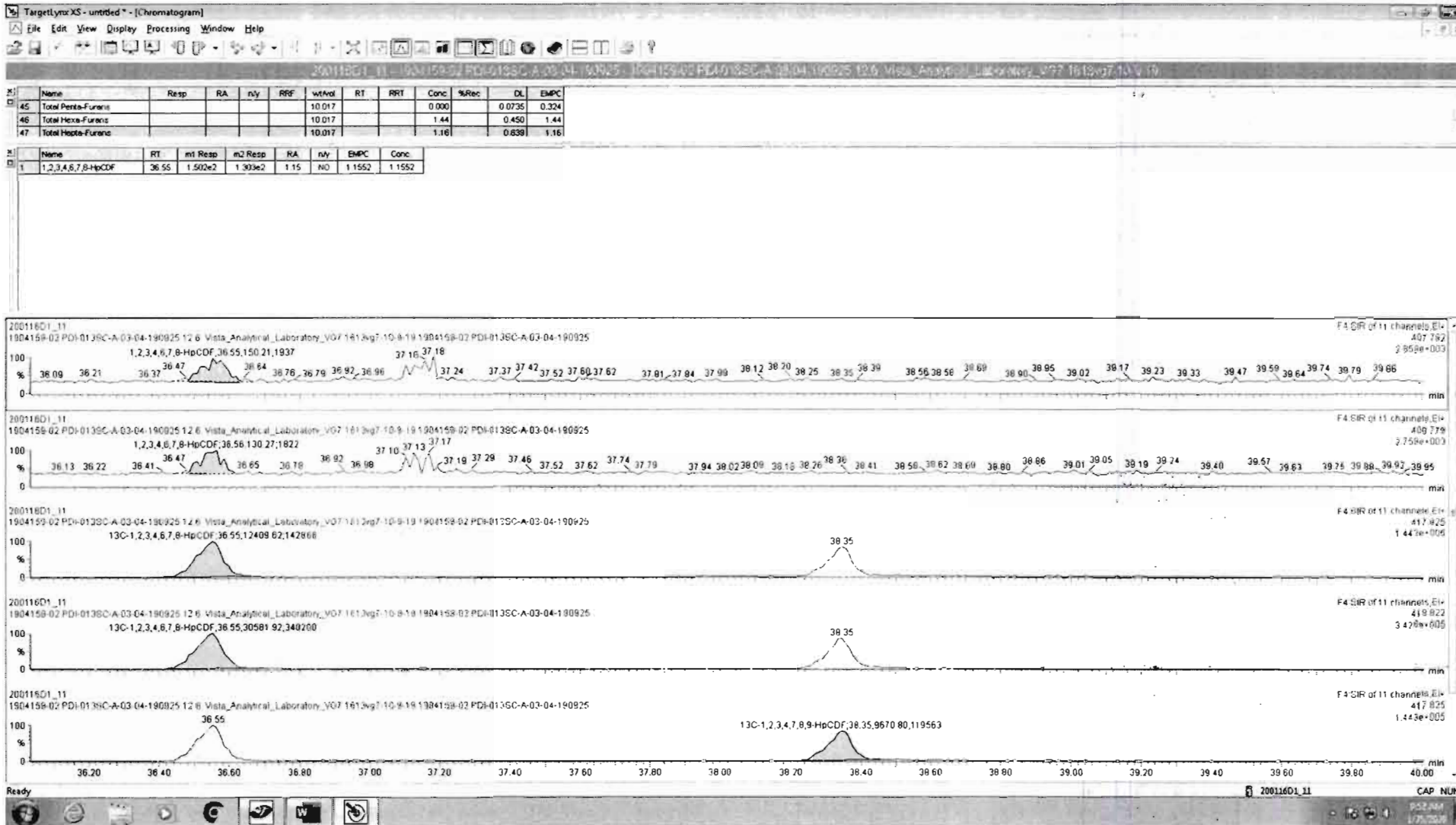


13C-1,2,3,4,6,7,8-HpCDF



DPE4





Vista Analytical Laboratory

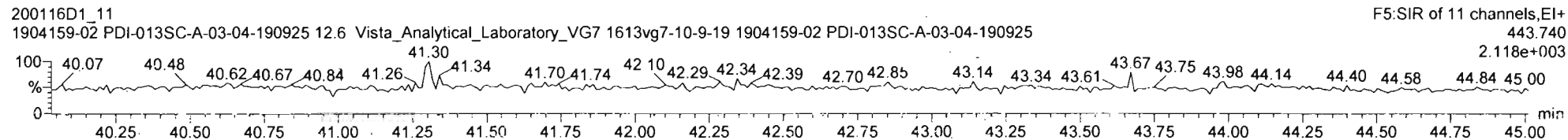
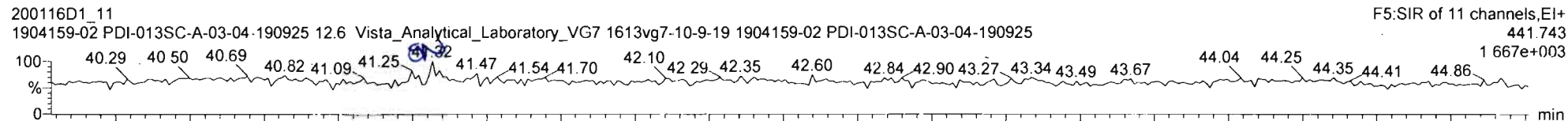
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Last Altered: Saturday, January 25, 2020 09:34:56 Pacific Standard Time

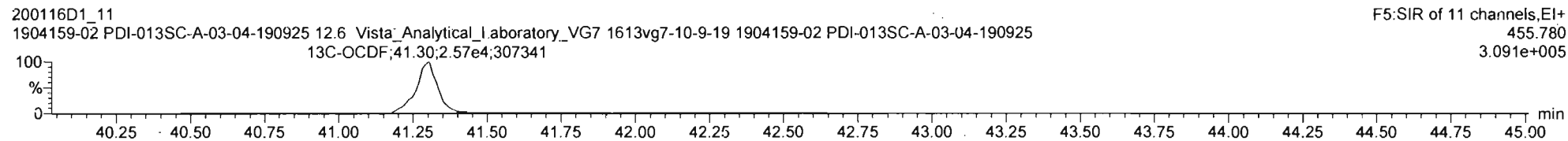
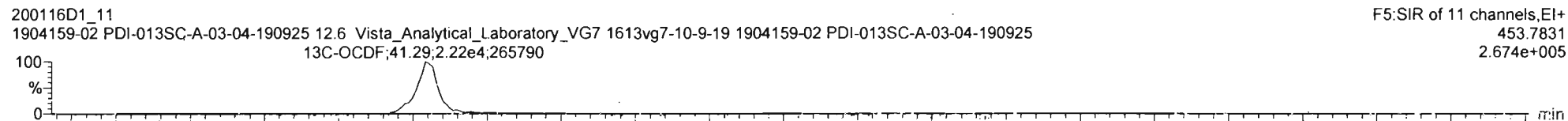
Printed: Saturday, January 25, 2020 09:35:04 Pacific Standard Time

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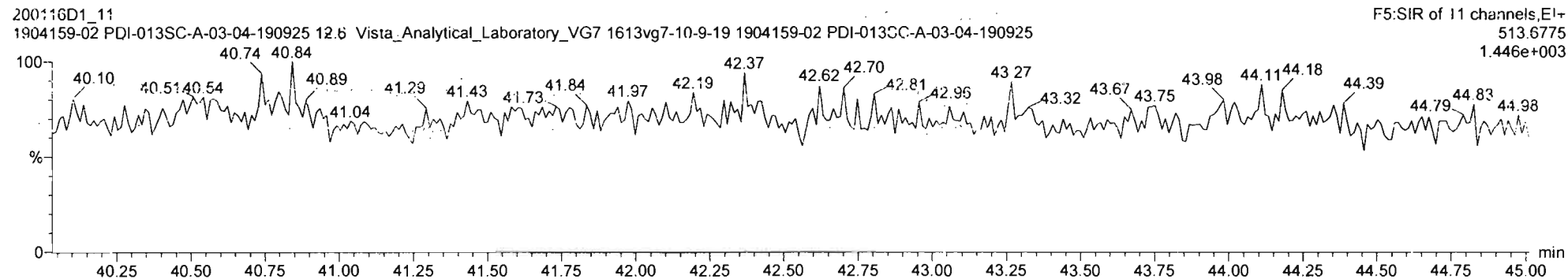
OCDF



13C-OCDF



DPE5



Vista Analytical Laboratory

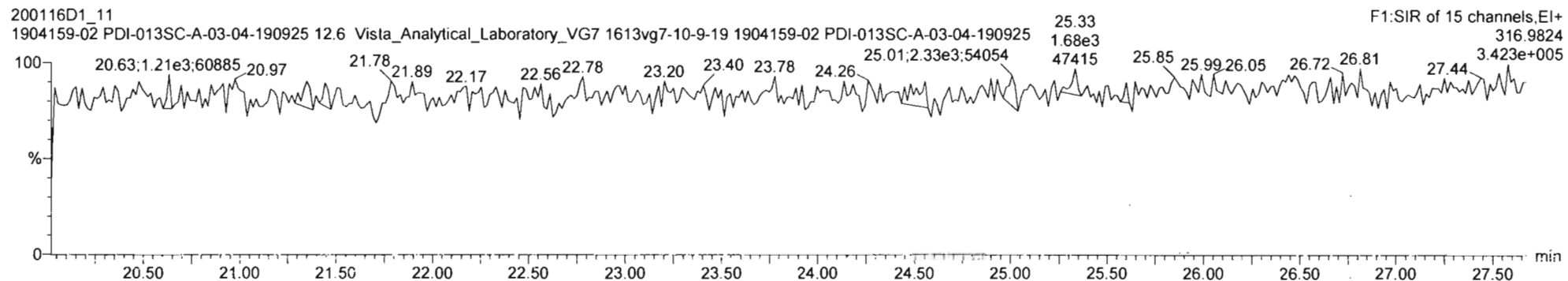
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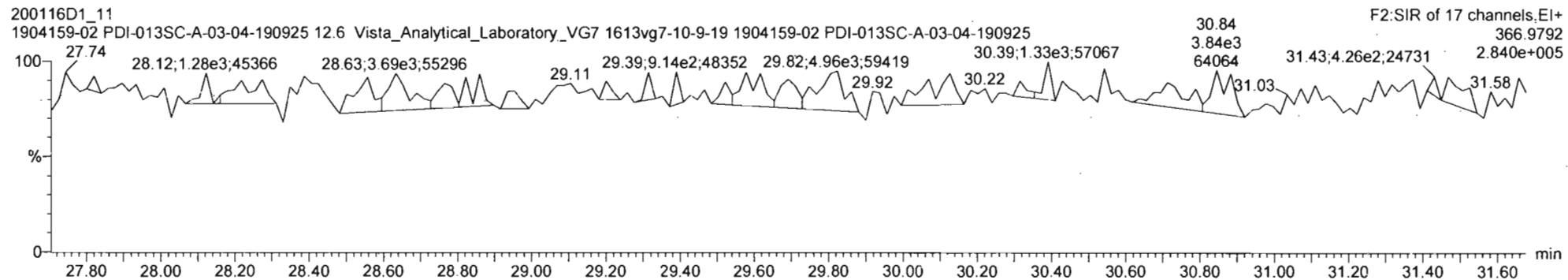
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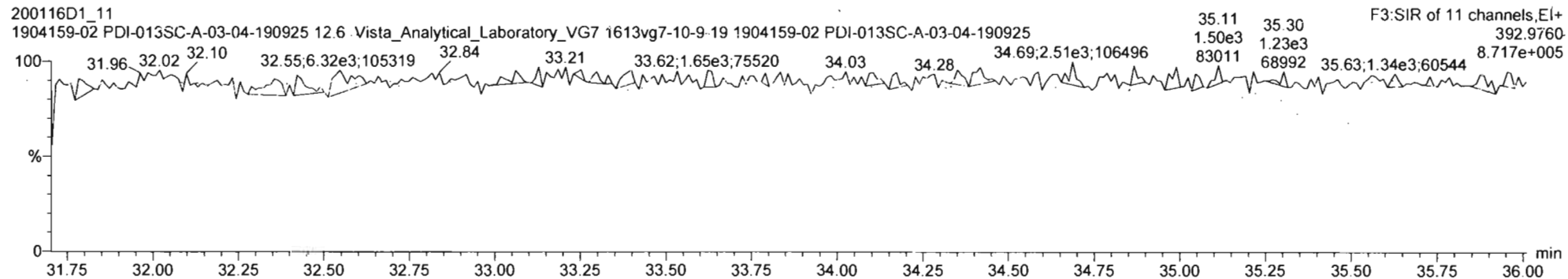
PFK1



PFK2



PFK3



Vista Analytical Laboratory

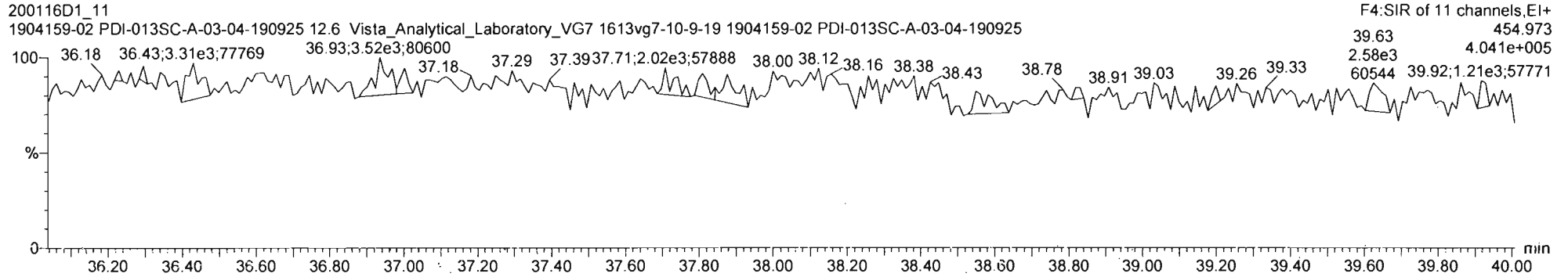
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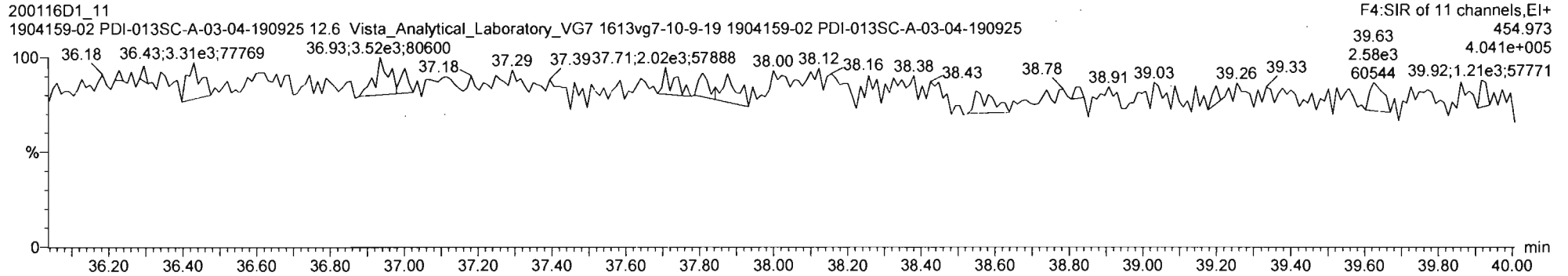
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Description: 1904159-02 PDI-013SC-A-03-04-190925 12.6 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

PFK4



PFK5



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-12B.qld  
 Last Altered: Friday, January 31, 2020 10:52:42 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:14:33 Pacific Standard Time

GEB 01/31/2020

C7 02/03/2020

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 25 Jan 2020 09:54:03

Name: VG7 200116D1\_12, Date: 16-JAN-2020, Time: 20:08:00, ID: 1904159-03 PDI-015SC-A-07-08-191012,  
 Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD	1.24e2	5.12e4	10.1055	0.905	0.617	YES	1.001	1.001	26.25	26.23	0.53080		0.465	0.622
2	2 1,2,3,7,8-PeCDD	3.16e2	5.16e4	10.1055	0.903	0.608	NO	1.001	1.001	30.66	30.66	1.3409		1.34	0.471
3	3 1,2,3,4,7,8-HxCDD	4.87e2	4.89e4	10.1055	1.101	1.095	NO	1.000	1.001	33.97	33.98	1.7879		1.79	1.27
4	4 1,2,3,6,7,8-HxCDD	3.99e3	5.17e4	10.1055	0.939	1.108	NO	1.000	1.001	34.06	34.09	16.276		16.3	1.40
5	5 1,2,3,7,8,9-HxCDD	1.25e3	5.07e4	10.1055	0.961	1.277	NO	1.001	1.000	34.40	34.38	5.0875		5.09	1.40
6	6 1,2,3,4,6,7,8-HpCDD	1.08e5	2.96e4	10.1055	0.979	1.044	NO	1.000	1.001	37.85	37.86	737.30		737	2.45
7	7 OCDD	1.93e5	1.60e4	10.1055	0.959	0.931	NO	1.000	1.000	41.18	41.19	4977.9		4980	6.00
8	8 2,3,7,8-TCDF	6.80e2	6.76e4	10.1055	0.950	0.862	NO	1.001	1.001	25.45	25.44	2.0953 (1.76)		2.10	0.990
9	9 1,2,3,7,8-PeCDF	4.54e2	7.69e4	10.1055	0.960	1.369	NO	1.001	1.001	29.51	29.51	1.2179		1.22	0.354
10	10 2,3,4,7,8-PeCDF	9.18e2	7.23e4	10.1055	1.015	1.526	NO	1.001	1.001	30.41	30.41	2.4746		2.48	0.344
11	11 1,2,3,4,7,8-HxCDF	8.49e2	6.18e4	10.1055	1.177	1.060	NO	1.000	1.001	33.08	33.10	2.3105		2.31	0.417
12	12 1,2,3,6,7,8-HxCDF	3.69e2	7.14e4	10.1055	1.069	1.259	NO	1.000	1.000	33.21	33.21	0.95700		0.957	0.402
13	13 2,3,4,6,7,8-HxCDF	6.24e2	5.43e4	10.1055	1.114	1.119	NO	1.001	1.000	33.84	33.82	2.0435		2.04	0.489
14	14 1,2,3,7,8,9-HxCDF		5.89e4	10.1055	1.062			1.000		34.74					0.589
15	15 1,2,3,4,6,7,8-HpCDF	1.90e4	4.80e4	10.1055	1.128	0.944	NO	1.001	1.001	36.64	36.63	69.629		69.6	0.883
16	16 1,2,3,4,7,8,9-HpCDF	4.92e2	3.06e4	10.1055	1.280	1.043	NO	1.000	1.000	38.37	38.38	2.4874		2.49	0.963
17	17 OCDF	2.48e4	3.93e4	10.1055	0.947	0.919	NO	1.000	1.000	41.39	41.40	263.87		264	1.11
18	18 13C-2,3,7,8-TCDD	5.12e4	1.16e5	10.1055	1.095	0.804	NO	1.023	1.024	26.19	26.21	79.422	40.1		0.416
19	19 13C-1,2,3,7,8-PeCDD	5.16e4	1.16e5	10.1055	0.881	0.662	NO	1.203	1.197	30.80	30.64	99.586	50.3		0.244
20	20 13C-1,2,3,4,7,8-Hx...	4.89e4	1.34e5	10.1055	0.642	1.239	NO	1.014	1.014	33.95	33.96	112.90	57.0		0.565
21	21 13C-1,2,3,6,7,8-Hx...	5.17e4	1.34e5	10.1055	0.856	1.276	NO	1.017	1.017	34.06	34.06	89.449	45.2		0.424
22	22 13C-1,2,3,7,8,9-Hx...	5.07e4	1.34e5	10.1055	0.807	1.239	NO	1.026	1.026	34.36	34.37	93.057	47.0		0.450
23	23 13C-1,2,3,4,6,7,8-H...	2.96e4	1.34e5	10.1055	0.654	0.954	NO	1.131	1.130	37.87	37.84	67.050	33.9		0.497
24	24 13C-OCDD	1.60e4	1.34e5	10.1055	0.580	0.865	NO	1.228	1.230	41.12	41.18	40.988	10.4		0.323
25	25 13C-2,3,7,8-TCDF	6.76e4	1.66e5	10.1055	1.035	0.764	NO	0.992	0.993	25.40	25.42	77.960	39.4		0.519
26	26 13C-1,2,3,7,8-PeCDF	7.69e4	1.66e5	10.1055	0.854	1.620	NO	1.156	1.152	29.60	29.49	107.51	54.3		0.546
27	27 13C-2,3,4,7,8-PeCDF	7.23e4	1.66e5	10.1055	0.847	1.640	NO	1.192	1.186	30.52	30.38	101.97	51.5		0.550
28	28 13C-1,2,3,4,7,8-Hx...	6.18e4	1.34e5	10.1055	0.832	0.512	NO	0.987	0.988	33.06	33.08	110.03	55.6		0.671
29	29 13C-1,2,3,6,7,8-Hx...	7.14e4	1.34e5	10.1055	1.034	0.515	NO	0.991	0.992	33.17	33.20	102.27	51.7		0.540
30	30 13C-2,3,4,6,7,8-Hx...	5.43e4	1.34e5	10.1055	0.953	0.543	NO	1.009	1.010	33.79	33.81	84.350	42.6		0.586
31	31 13C-1,2,3,7,8,9-Hx...	5.89e4	1.34e5	10.1055	0.828	0.491	NO	1.038	1.038	34.75	34.74	105.41	53.3		0.675

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-12B.qld

Last Altered: Friday, January 31, 2020 10:52:42 Pacific Standard Time

Printed: Friday, January 31, 2020 11:14:33 Pacific Standard Time

Name: VG7 200116D1\_12, Date: 16-JAN-2020, Time: 20:08:00, ID: 1904159-03 PDI-015SC-A-07-08-191012,  
 Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	4.80e4	1.34e5	10.1055	0.757	0.413	NO	1.093	1.093	36.59	36.60	93.805	47.4		0.510
33	33 13C-1,2,3,4,7,8,9-H...	3.06e4	1.34e5	10.1055	0.581	0.419	NO	1.147	1.146	38.40	38.37	77.885	39.4		0.665
34	34 13C-OCDF	3.93e4	1.34e5	10.1055	0.689	0.924	NO	1.235	1.236	41.34	41.39	84.466	21.3		0.366
35	35 37Cl-2,3,7,8-TCDD	2.19e4	1.16e5	10.1055	1.198			1.024	1.024	26.21	26.23	31.052	39.2		0.129
36	36 13C-1,2,3,4-TCDD	1.16e5	1.16e5	10.1055	1.000	0.785	NO	1.000	1.000	25.39	25.61	197.91	100.0		0.456
37	37 13C-1,2,3,4-TCDF	1.66e5	1.66e5	10.1055	1.000	0.780	NO	1.000	1.000	23.93	24.22	197.91	100.0		0.537
38	38 13C-1,2,3,4,6,9-Hx...	1.34e5	1.34e5	10.1055	1.000	0.502	NO	1.000	1.000	33.37	33.48	197.91	100.0		0.558
39	39 Total Tetra-Dioxins		5.12e4	10.1055	0.901			0.000		25.50		3.7449		7.29	0.625
40	40 Total Penta-Dioxins		5.16e4	10.1055	0.872			0.000		30.00		11.215		22.0	0.488
41	41 Total Hexa-Dioxins		0.00e0	10.1055	0.976			0.000		33.80		199.48		199	1.39
42	42 Total Hepta-Dioxins		2.96e4	10.1055	0.989			0.000		37.75		1862.3		1860	2.42
43	43 Total Tetra-Furans		6.76e4	10.1055	0.943			0.000		24.00		52.399		56.4	0.998
44	44 1st Func. Penta-Fur...		0.00e0	10.1055	0.940			0.000		27.63		20.949		20.9	0.111
45	45 Total Penta-Furans		0.00e0	10.1055	0.940			0.000		30.00		25.904		28.4	0.367
46	46 Total Hexa-Furans		0.00e0	10.1055	1.078			0.000		33.00		59.522		59.5	0.480
47	47 Total Hepta-Furans		0.00e0	10.1055	1.135			0.000		37.75		255.36		255	0.959



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-12B.qld  
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 Printed: Friday, January 31, 2020 11:14:33 Pacific Standard Time

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Calibration: 25 Jan 2020 09:54:03

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 Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	YES	26.48	104.603	22815.418	0.000	MM	0.0000	0.69
2	1 2,3,7,8-TCDD	YES	26.23	47.402	22815.418	0.000	MM	0.0000	0.47
3	39 Total Tetra-Dioxins	NO	25.97	99.414	22815.418	8.815	MM	0.9682	0.97
4	39 Total Tetra-Dioxins	NO	25.58	82.550	22815.418	6.979	bb	0.7666	0.77
5	39 Total Tetra-Dioxins	YES	25.28	87.973	22815.418	0.000	MM	0.0000	0.87
6	39 Total Tetra-Dioxins	NO	24.70	107.458	22815.418	9.386	db	1.0309	1.03
7	39 Total Tetra-Dioxins	NO	24.64	103.796	22815.418	8.914	bd	0.9791	0.98
8	39 Total Tetra-Dioxins	YES	23.63	112.596	22815.418	0.000	MM	0.0000	0.96
9	39 Total Tetra-Dioxins	YES	22.92	56.941	22815.418	0.000	MM	0.0000	0.56

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	YES	29.79	142.762	20571.906	0.000	db	0.0000	1.34
2	40 Total Penta-Dioxins	NO	29.70	182.039	20571.906	18.061	dd	2.0492	2.05
3	40 Total Penta-Dioxins	YES	29.53	334.225	20571.906	0.000	bd	0.0000	2.22
4	40 Total Penta-Dioxins	YES	29.09	206.884	20571.906	0.000	bb	0.0000	1.85
5	40 Total Penta-Dioxins	NO	28.62	486.057	20571.906	50.101	MM	5.6843	5.68
6	40 Total Penta-Dioxins	NO	31.02	87.812	20571.906	8.422	bb	0.9555	0.96
7	40 Total Penta-Dioxins	NO	30.72	109.645	20571.906	10.443	db	1.1848	1.19
8	2 1,2,3,7,8-PeCDD	NO	30.66	119.443	20571.906	12.232	bd	1.3409	1.34
9	40 Total Penta-Dioxins	YES	30.28	61.017	20571.906	0.000	MM	0.0000	0.44
10	40 Total Penta-Dioxins	NO	29.98	253.275	20571.906	0.000	MM	0.0000	2.94
11	40 Total Penta-Dioxins	NO	30.02	182.458	20571.906	0.000	MM	0.0000	1.96

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-12B.qld  
 Last Altered: Friday, January 31, 2020 10:52:42 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:14:33 Pacific Standard Time

Name: VG7 200116D1\_12, Date: 16-JAN-2020, Time: 20:08:00, ID: 1904159-03 PDI-015SC-A-07-08-191012,  
 Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Dioxins

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	5 1,2,3,7,8,9-HxCDD	NO	34.38	702.236	28037.010	49.422	db	5.0875	5.09
2	41 Total Hexa-Dioxins	NO	34.28	663.081	28025.826	45.064	bd	4.5695	4.57
3	4 1,2,3,6,7,8-HxCDD	NO	34.09	2095.421	28958.844	154.375	db	16.2758	16.28
4	3 1,2,3,4,7,8-HxCDD	NO	33.98	254.502	27081.623	19.898	MM	1.7879	1.79
5	41 Total Hexa-Dioxins	NO	33.39	622.799	28025.826	46.775	MM	4.7430	4.74
6	41 Total Hexa-Dioxins	NO	33.28	10561.071	28025.826	757.137	bd	76.7737	76.77
7	41 Total Hexa-Dioxins	NO	33.02	1393.730	28025.826	100.269	MM	10.1673	10.17
8	41 Total Hexa-Dioxins	NO	32.45	10714.984	28025.826	789.719	bb	80.0775	80.08

Hepta-Dioxins

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.86	55160.867	14449.920	7297.322	bb	737.3044	737.30
2	42 Total Hepta-Dioxins	NO	37.01	83809.914	14449.920	11240.492	bb	1125.0303	1125.03

Tetra-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	NO	24.02	387.995	29269.547	27.667	bd	2.9039	2.90
2	43 Total Tetra-Furans	NO	23.57	149.994	29269.547	10.320	MM	1.0832	1.08
3	43 Total Tetra-Furans	NO	23.38	623.679	29269.547	41.775	MM	4.3847	4.38
4	43 Total Tetra-Furans	NO	22.87	514.883	29269.547	32.746	MM	3.4370	3.44
5	43 Total Tetra-Furans	NO	22.01	2399.407	29269.547	160.768	bb	16.8742	16.87
6	43 Total Tetra-Furans	NO	21.30	721.242	29269.547	46.086	bb	4.8372	4.84
7	43 Total Tetra-Furans	YES	26.87	191.444	29269.547	0.000	MM	0.0000	1.03
8	43 Total Tetra-Furans	YES	26.68	193.718	29269.547	0.000	MM	0.0000	0.86
9	43 Total Tetra-Furans	YES	25.76	204.392	29269.547	0.000	MM	0.0000	1.24
10	8 2,3,7,8-TCDF	NO	25.44	314.582	29269.547	20.118	db	2.0953	2.10
11	43 Total Tetra-Furans	NO	25.34	237.829	29269.547	16.388	dd	1.7201	1.72
12	43 Total Tetra-Furans	NO	25.22	232.074	29269.547	14.820	MM	1.5555	1.55
13	43 Total Tetra-Furans	YES	25.02	139.580	29269.547	0.000	MM	0.0000	0.85
14	43 Total Tetra-Furans	NO	24.69	455.728	29269.547	30.717	bb	3.2241	3.22
15	43 Total Tetra-Furans	NO	24.19	1511.371	29269.547	97.981	db	10.2841	10.28

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-12B.qld

Last Altered: Friday, January 31, 2020 10:52:42 Pacific Standard Time

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Name: VG7 200116D1\_12, Date: 16-JAN-2020, Time: 20:08:00, ID: 1904159-03 PDI-015SC-A-07-08-191012,  
 Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

## Penta-Furans function 1

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.29	4587.429	46242.342	198.915	bb	20.9492	20.95

## Penta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	45 Total Penta-Furans	NO	28.60	2224.361	46242.342	93.075	MM	9.8024	9.80
2	45 Total Penta-Furans	NO	28.49	335.498	46242.342	15.643	MM	1.6475	1.65
3	45 Total Penta-Furans	NO	30.41	551.817	46242.342	0.000	MM	0.0000	2.50
4	45 Total Penta-Furans	NO	29.75	562.317	46242.342	25.490	db	2.6846	2.69
5	9 1,2,3,7,8-PeCDF	NO	29.51	262.670	47548.141	11.820	MM	1.2179	1.22
6	45 Total Penta-Furans	NO	29.34	103.881	46242.342	4.829	MM	0.5086	0.51
7	45 Total Penta-Furans	NO	29.13	1505.607	46242.342	67.413	MM	7.0998	7.10
8	45 Total Penta-Furans	NO	28.98	100.877	46242.342	4.452	MM	0.4689	0.47
9	10 2,3,4,7,8-PeCDF	NO	30.41	554.477	44936.543	25.377	MM	2.4746	2.48

## Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	13 2,3,4,6,7,8-HxCDF	NO	33.82	329.599	19106.648	22.997	MM	2.0435	2.04
2	12 1,2,3,6,7,8-HxCDF	NO	33.21	205.689	24265.877	10.337	bb	0.9570	0.96
3	11 1,2,3,4,7,8-HxCDF	NO	33.10	436.737	20932.369	27.476	MM	2.3105	2.31
4	46 Total Hexa-Furans	NO	32.62	6752.705	20922.725	406.997	bb	37.3746	37.38
5	46 Total Hexa-Furans	NO	32.08	2167.379	20922.725	135.908	MM	12.4804	12.48
6	46 Total Hexa-Furans	NO	31.93	766.594	20922.725	47.432	bb	4.3557	4.36

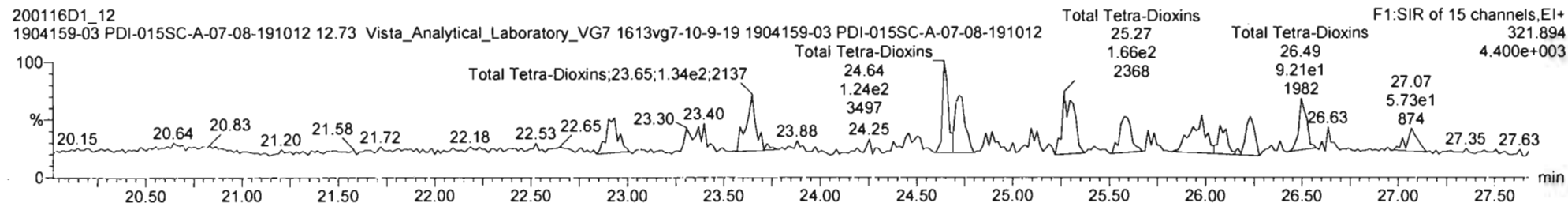
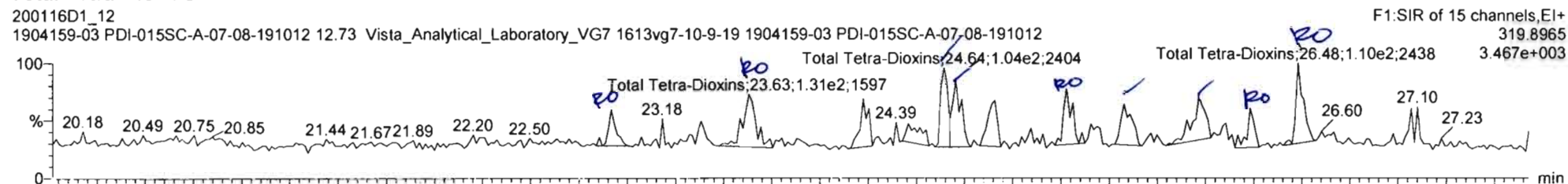
## Hepta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	16 1,2,3,4,7,8,9-HpCDF	NO	38.38	250.966	9030.933	32.172	MM	2.4874	2.49
2	47 Total Hepta-Furans	NO	37.20	19978.469	11523.776	2101.169	bb	183.2413	183.24
3	15 1,2,3,4,6,7,8-HpCDF	NO	36.63	9239.928	14016.618	793.415	bb	69.6288	69.63

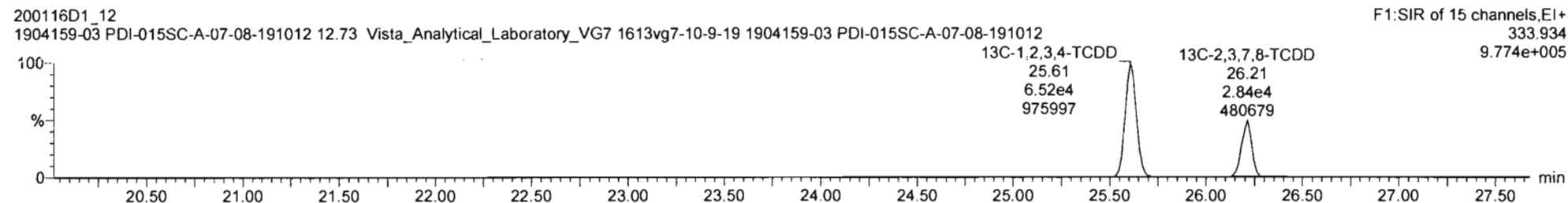
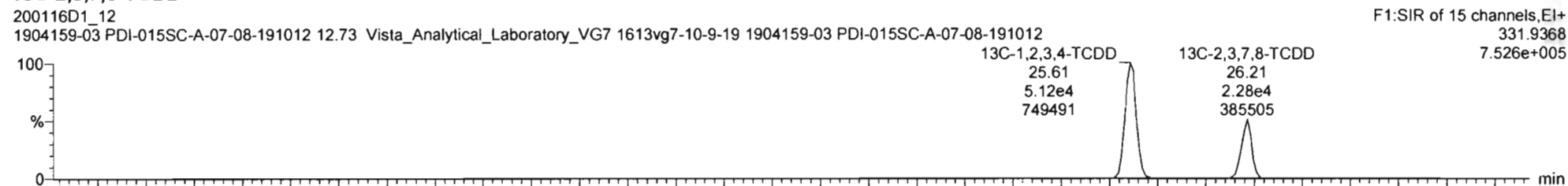
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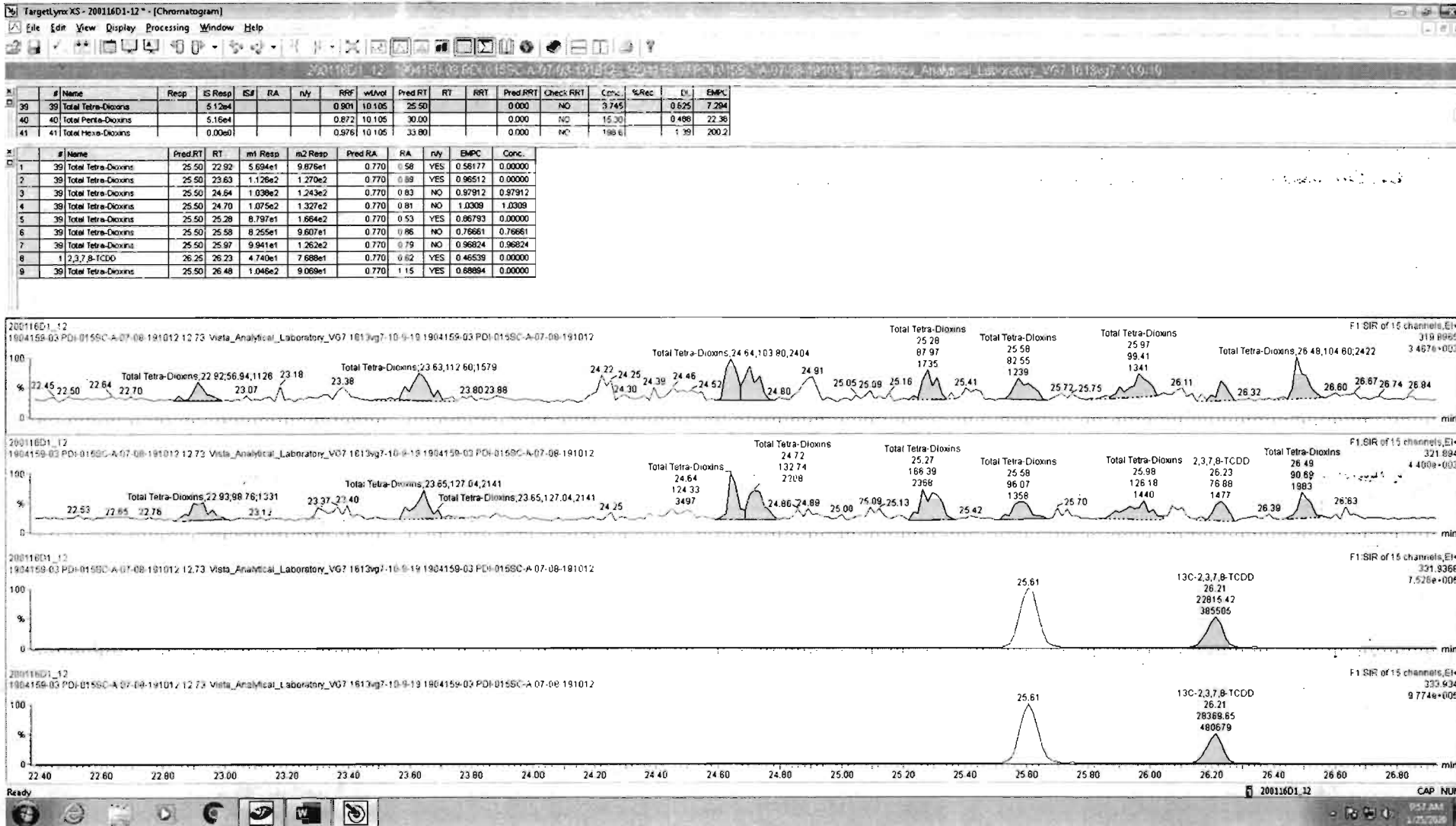
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 Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Total Tetra-Dioxins**



**13C-2,3,7,8-TCDD**





Vista Analytical Laboratory

Dataset: Untitled

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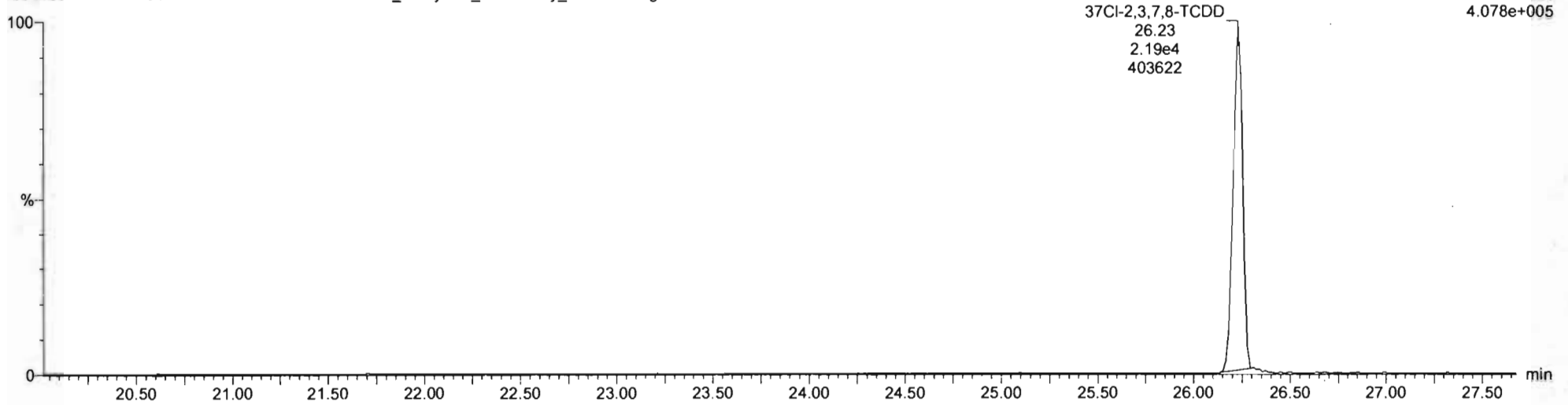
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37Cl-2,3,7,8-TCDD

200116D1\_12

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F1:SIR of 15 channels,EI+  
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4.078e+005

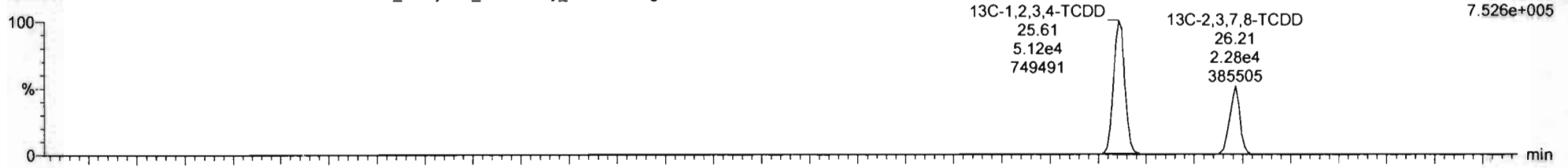


13C-1,2,3,4-TCDD

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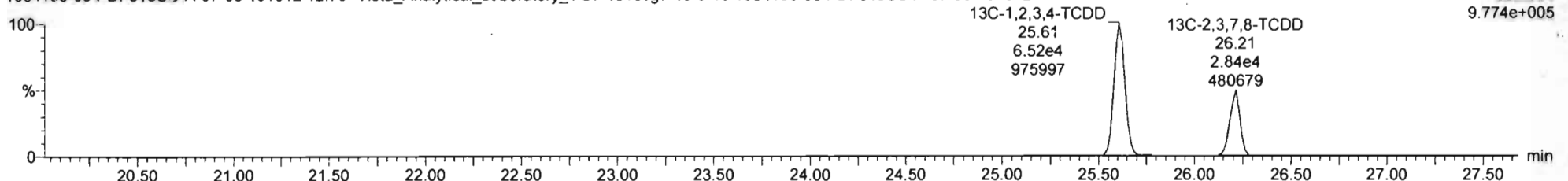
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F1:SIR of 15 channels,EI+  
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9.774e+005



Vista Analytical Laboratory

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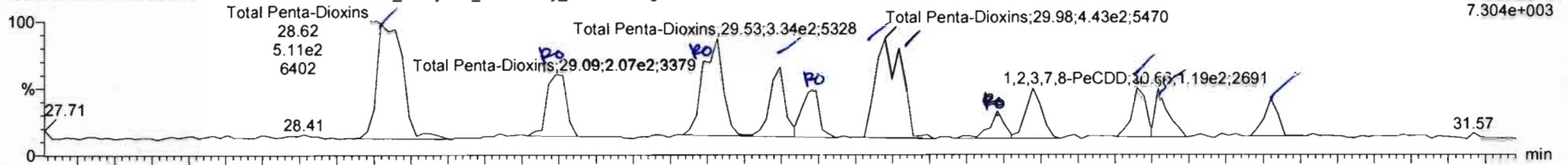
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Total Penta-Dioxins

200116D1\_12

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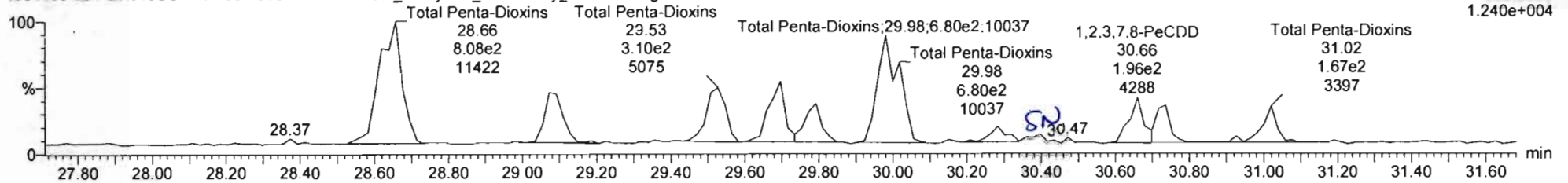
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7.304e+003



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F2:SIR of 17 channels,EI+  
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1.240e+004

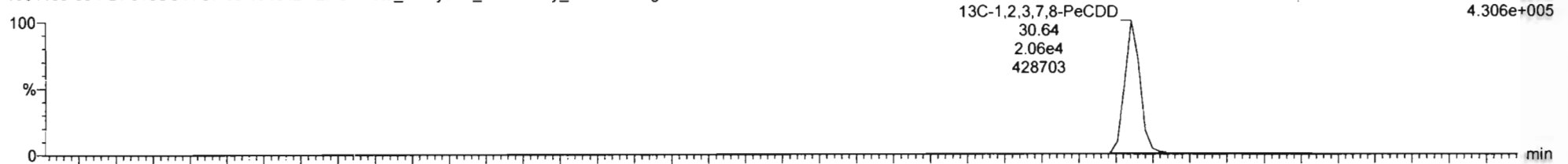


13C-1,2,3,7,8-PeCDD

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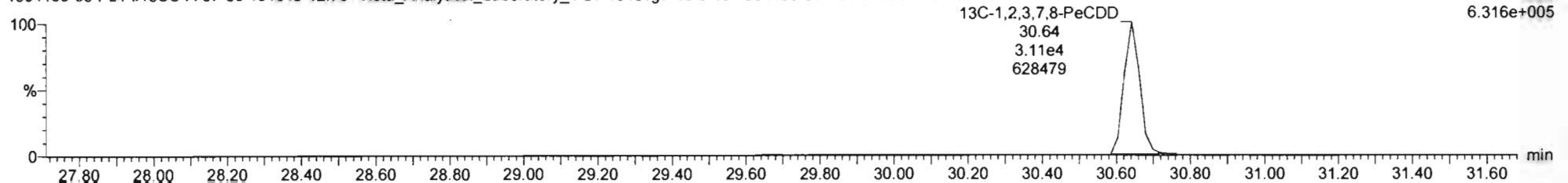
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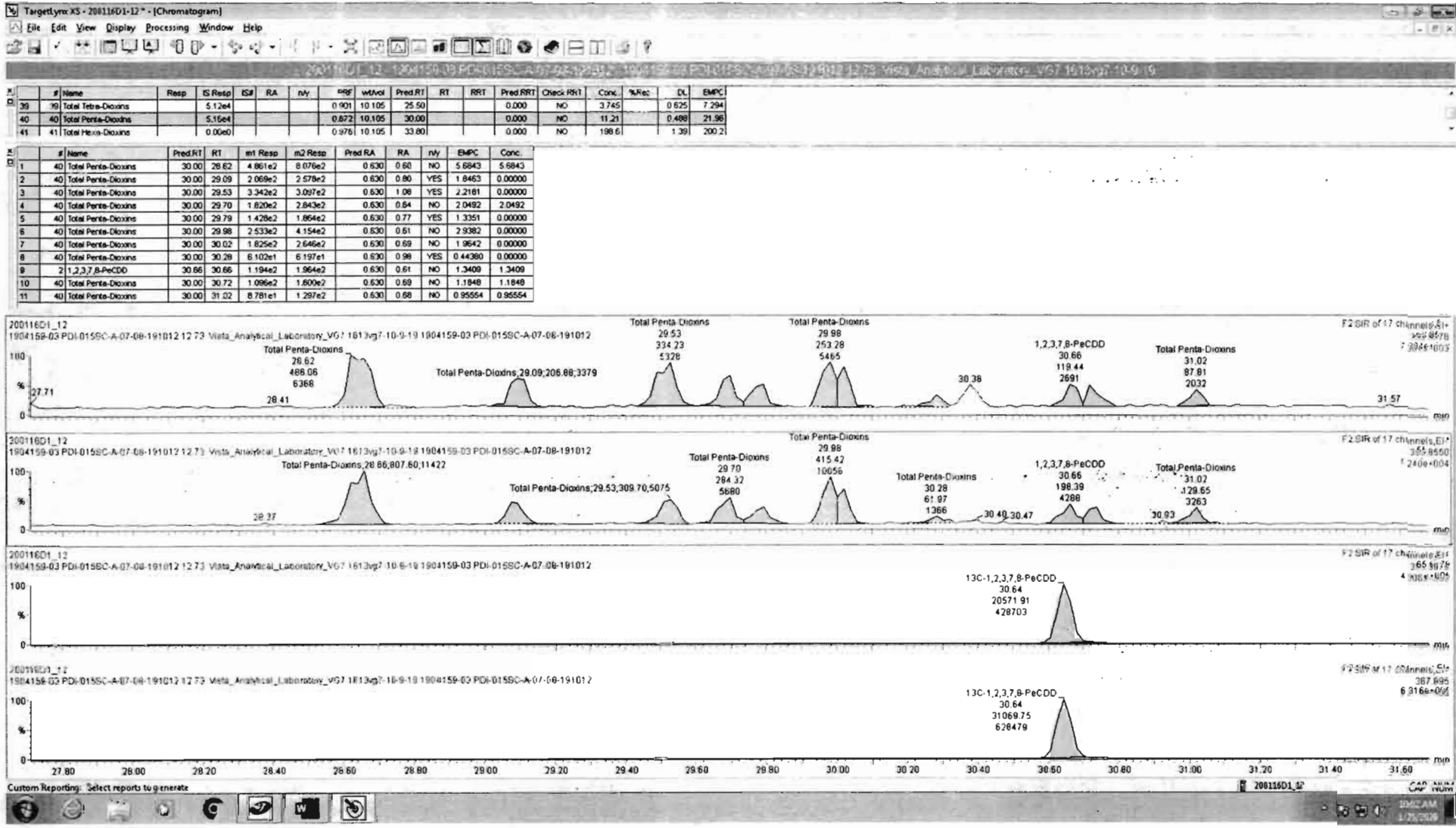


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F2:SIR of 17 channels,EI+  
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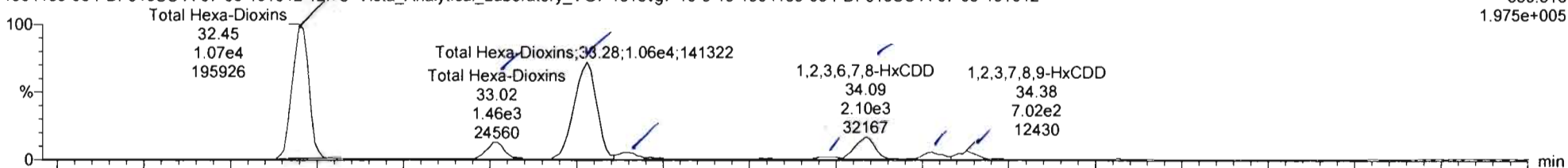
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Total Hexa-Dioxins

200116D1\_12

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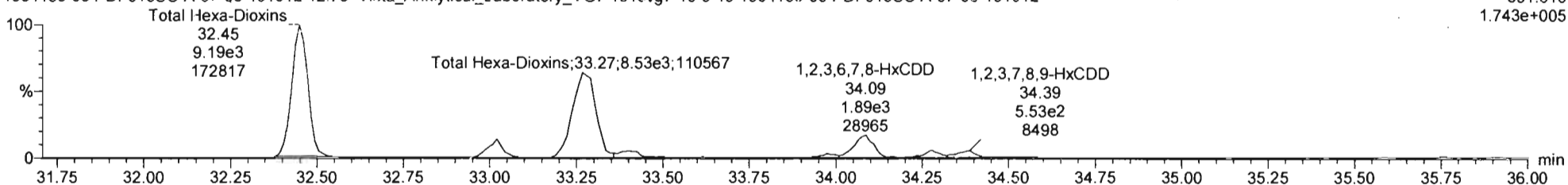
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1.975e+005



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F3:SIR of 11 channels,EI+  
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1.743e+005

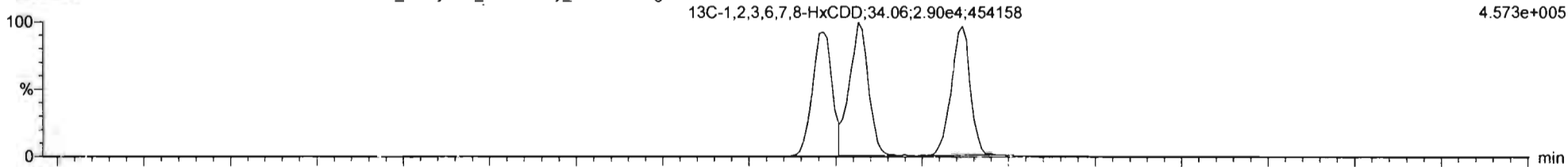


13C-1,2,3,4,7,8-HxCDD

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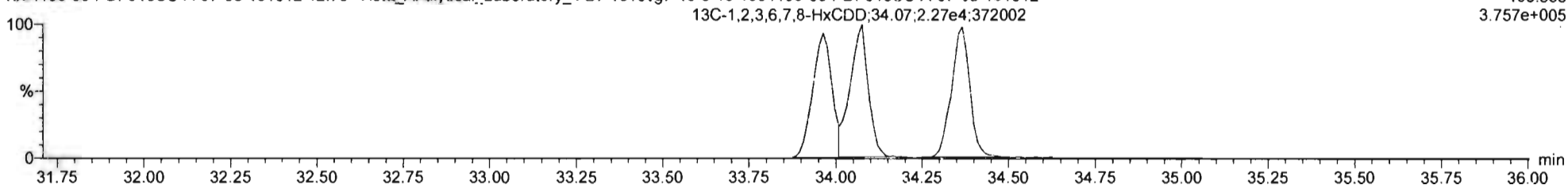
F3:SIR of 11 channels,EI+  
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4.573e+005



200116D1\_12

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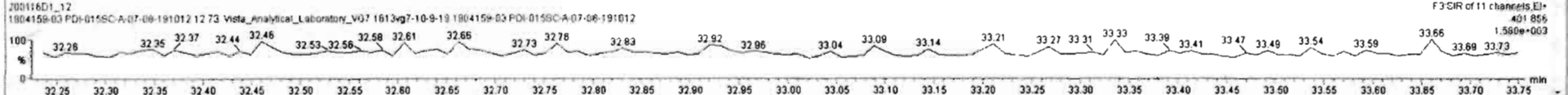
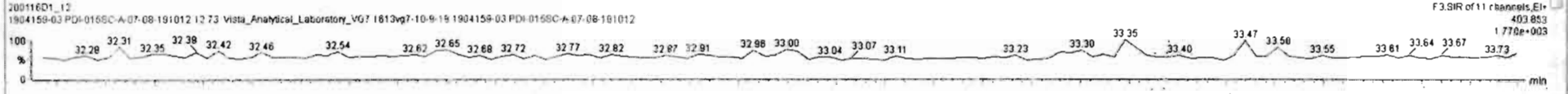
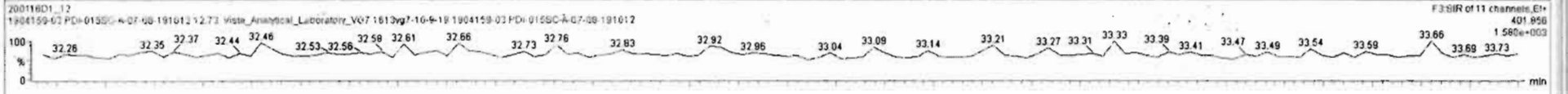
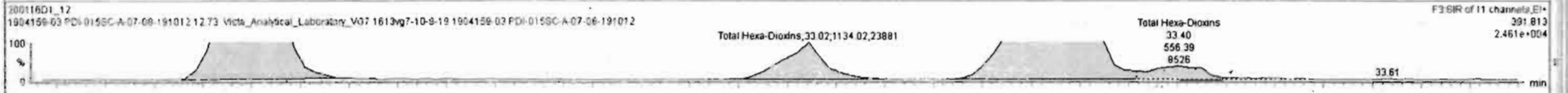
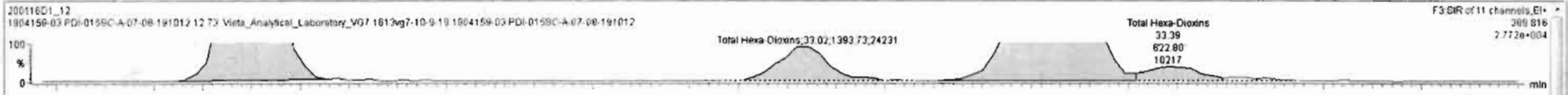
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3.757e+005

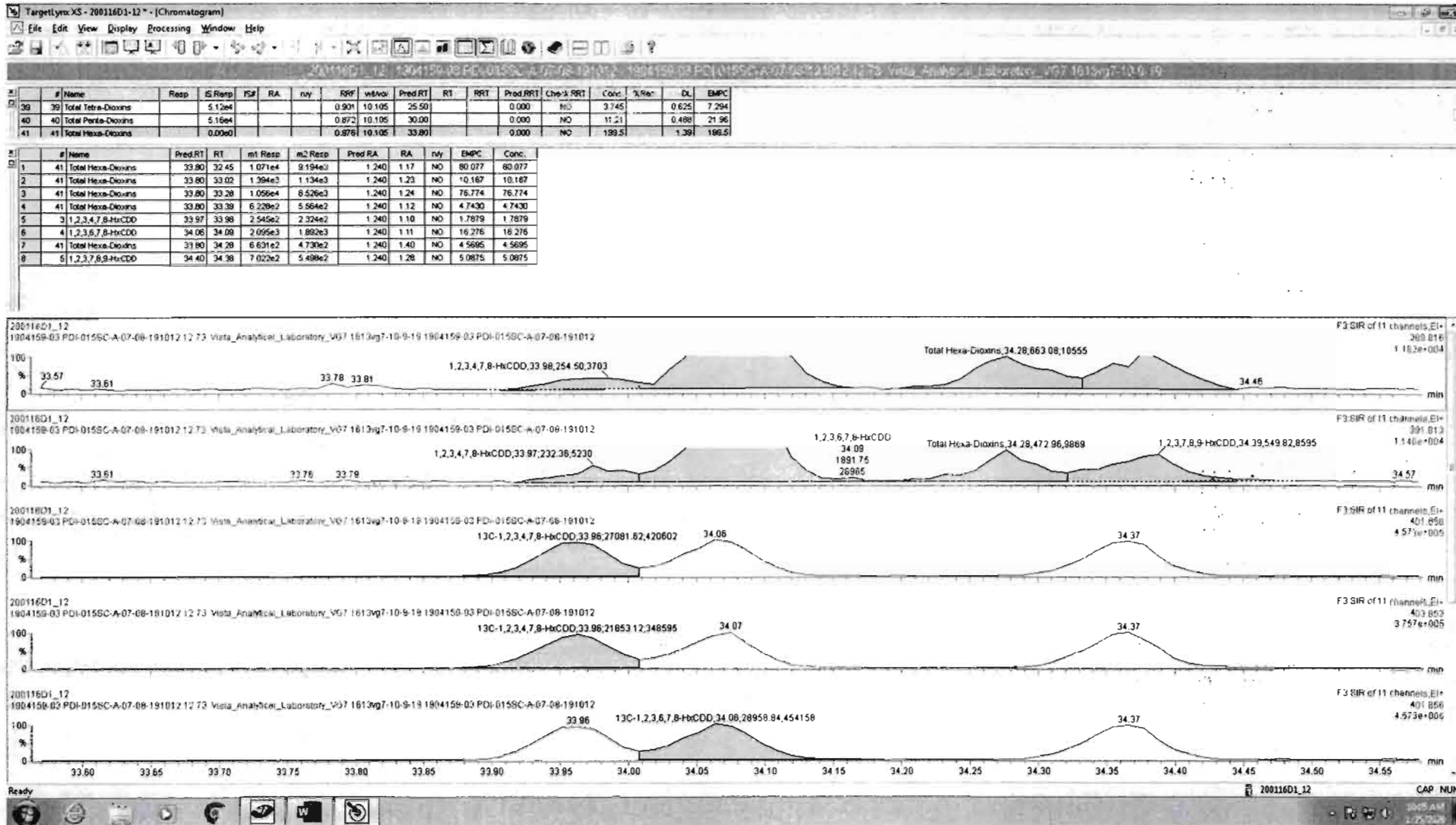


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#	Name	Resp	S Resp	ISF	RA	rvj	RRF	wtVol	Pred RT	RT	RRT	Pred RRT	Check PRT	Conc	%Rec	DL	EMPC
39	Total Tetra-Dioxins		5.12e4				0.901	10.105	25.50			0.000	NO	2.745		0.525	7.294
40	Total Penta-Dioxins		5.16e4				0.872	10.105	30.00			0.000	NO	11.21		0.488	21.96
41	Total Hexa-Dioxins		0.00e0				0.876	10.105	33.80			0.000	NO	197.7		1.39	199.3

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	rvj	EMPC	Conc
1	41 Total Hexa-Dioxins	33.80	32.45	1.071e4	9.194e3	1.240	1.117	NO	80.077	80.077
2	41 Total Hexa-Dioxins	33.80	33.02	1.384e3	1.134e3	1.240	1.23	NO	10.167	10.167
3	41 Total Hexa-Dioxins	33.80	33.28	1.056e4	8.526e3	1.240	1.24	NO	76.774	76.774
4	41 Total Hexa-Dioxins	33.80	33.39	6.228e2	5.584e2	1.240	1.12	NO	4.7430	4.7430
5	3 1,2,3,4,7,8-HxCDD	33.97	33.88	2.426e2	2.324e2	1.240	1.04	YES	1.6094	0.00000
6	4 1,2,3,6,7,8-HxCDD	34.06	34.09	2.095e3	1.892e3	1.240	1.11	NO	16.276	16.276
7	41 Total Hexa-Dioxins	33.80	34.28	6.631e2	4.730e2	1.240	1.40	NO	4.5695	4.5695
8	5 1,2,3,7,8,9-HxCDD	34.40	34.38	7.022e2	5.527e2	1.240	1.27	NO	5.0992	5.0992



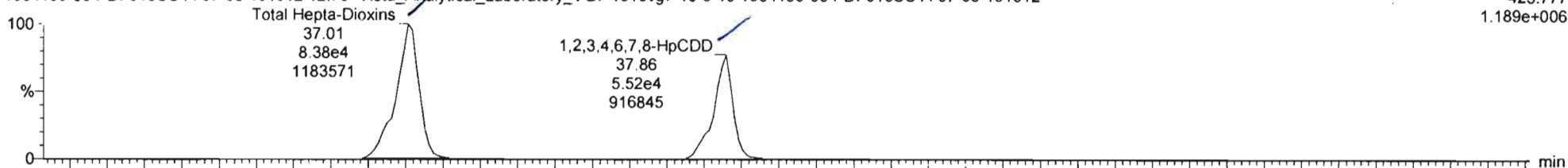


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Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Hepta-Dioxins

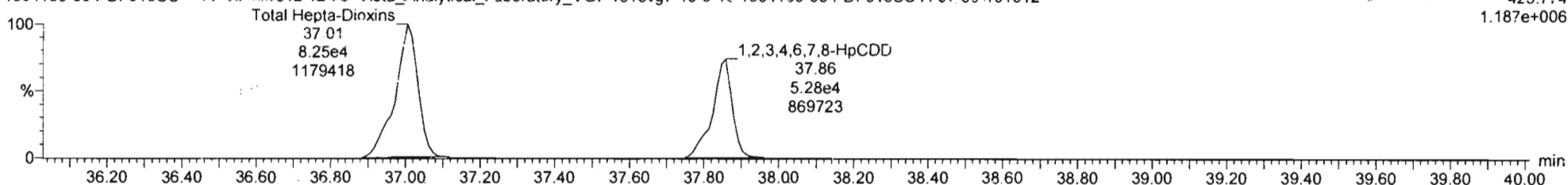
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F4:SIR of 11 channels,EI+  
423.777  
1.189e+006



200116D1\_12  
1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-03 PDI-015SC-A-07-08-191012

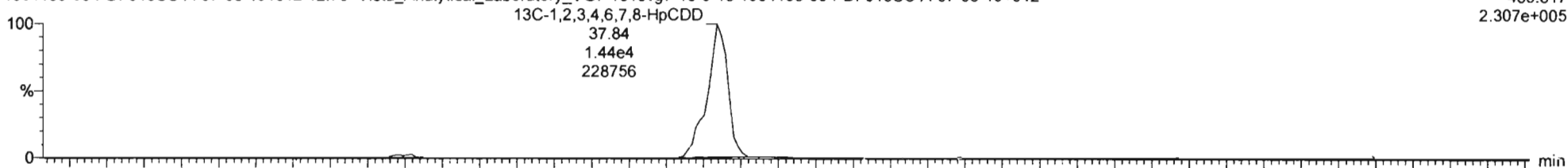
F4:SIR of 11 channels,EI+  
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1.187e+006



13C-1,2,3,4,6,7,8-HpCDD

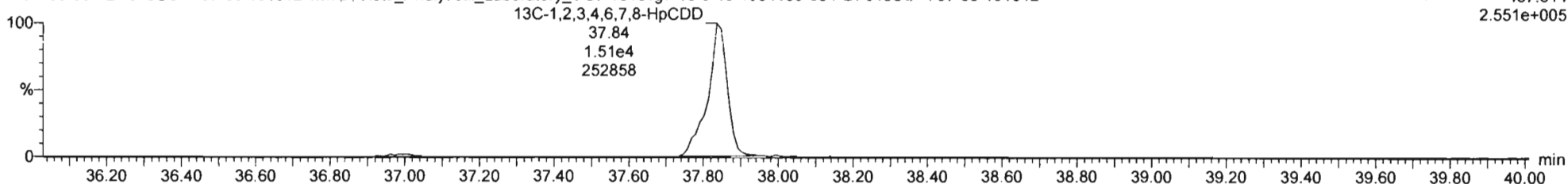
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F4:SIR of 11 channels,EI+  
435.817  
2.307e+005



200116D1\_12  
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F4:SIR of 11 channels,EI+  
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2.551e+005



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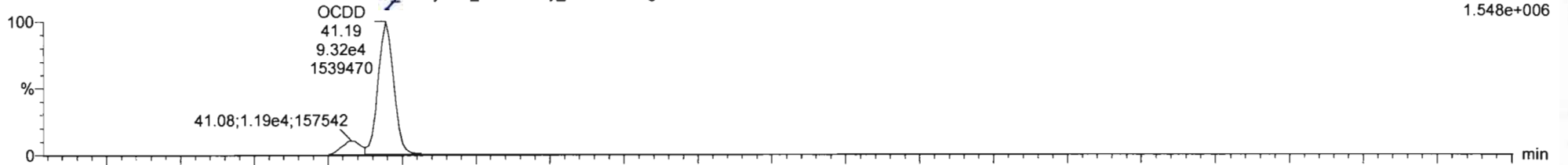
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OCDD

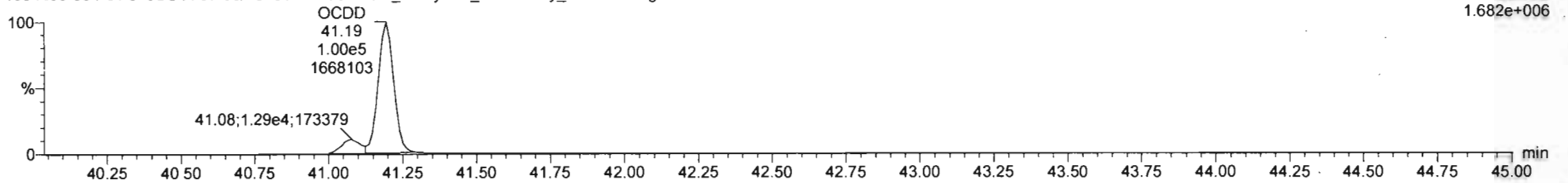
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F5:SIR of 11 channels, EI+  
457.738  
1.548e+006



200116D1\_12  
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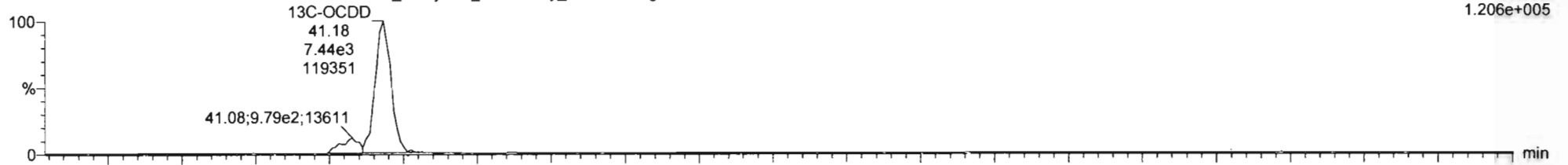
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13C-OCDD

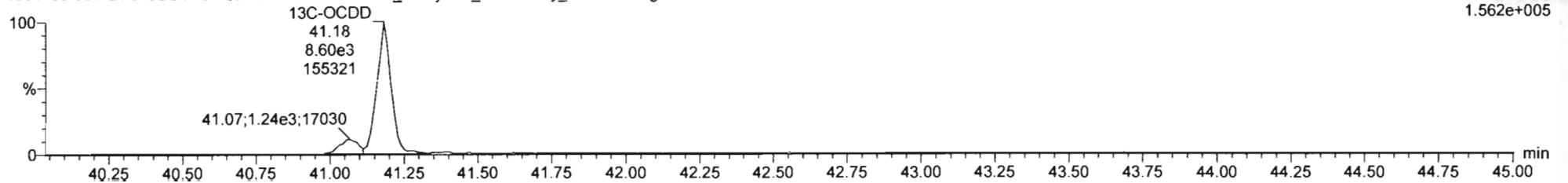
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F5:SIR of 11 channels, EI+  
469.778  
1.206e+005



200116D1\_12  
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F5:SIR of 11 channels, EI+  
471.775  
1.562e+005



Vista Analytical Laboratory

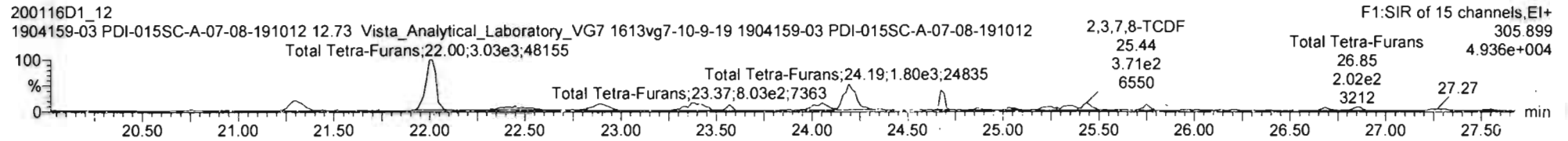
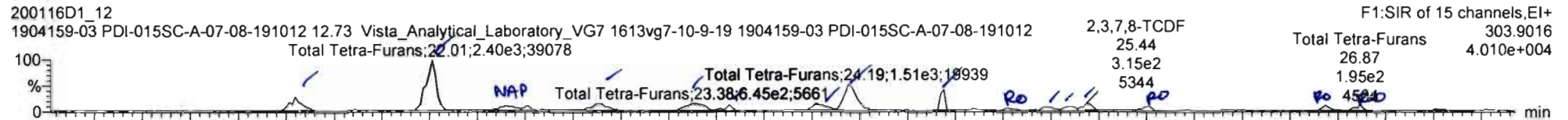
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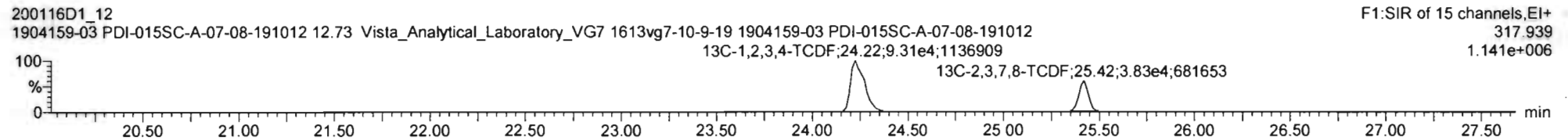
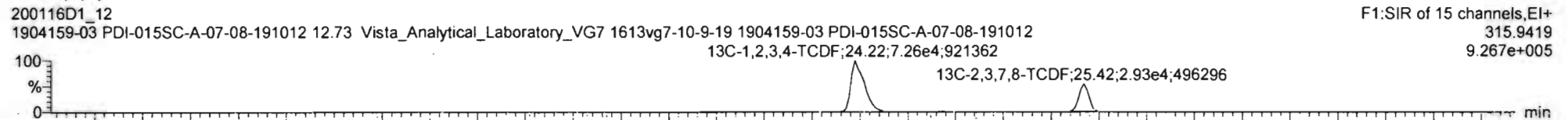
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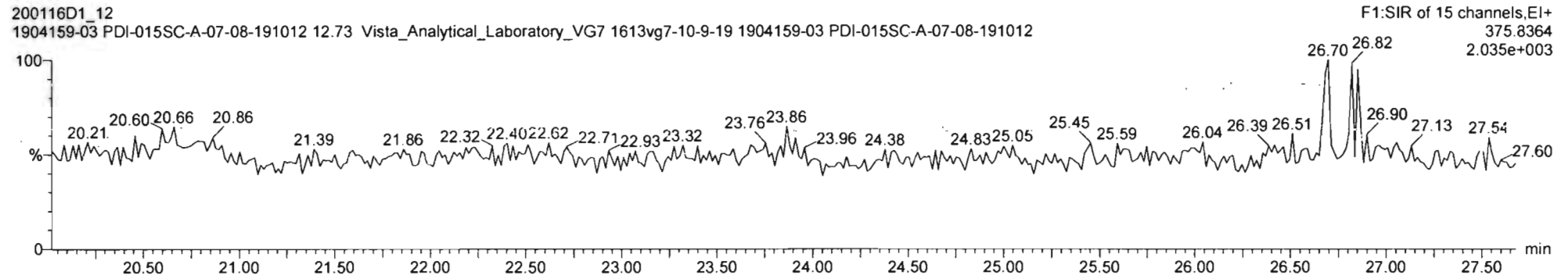
Total Tetra-Furans

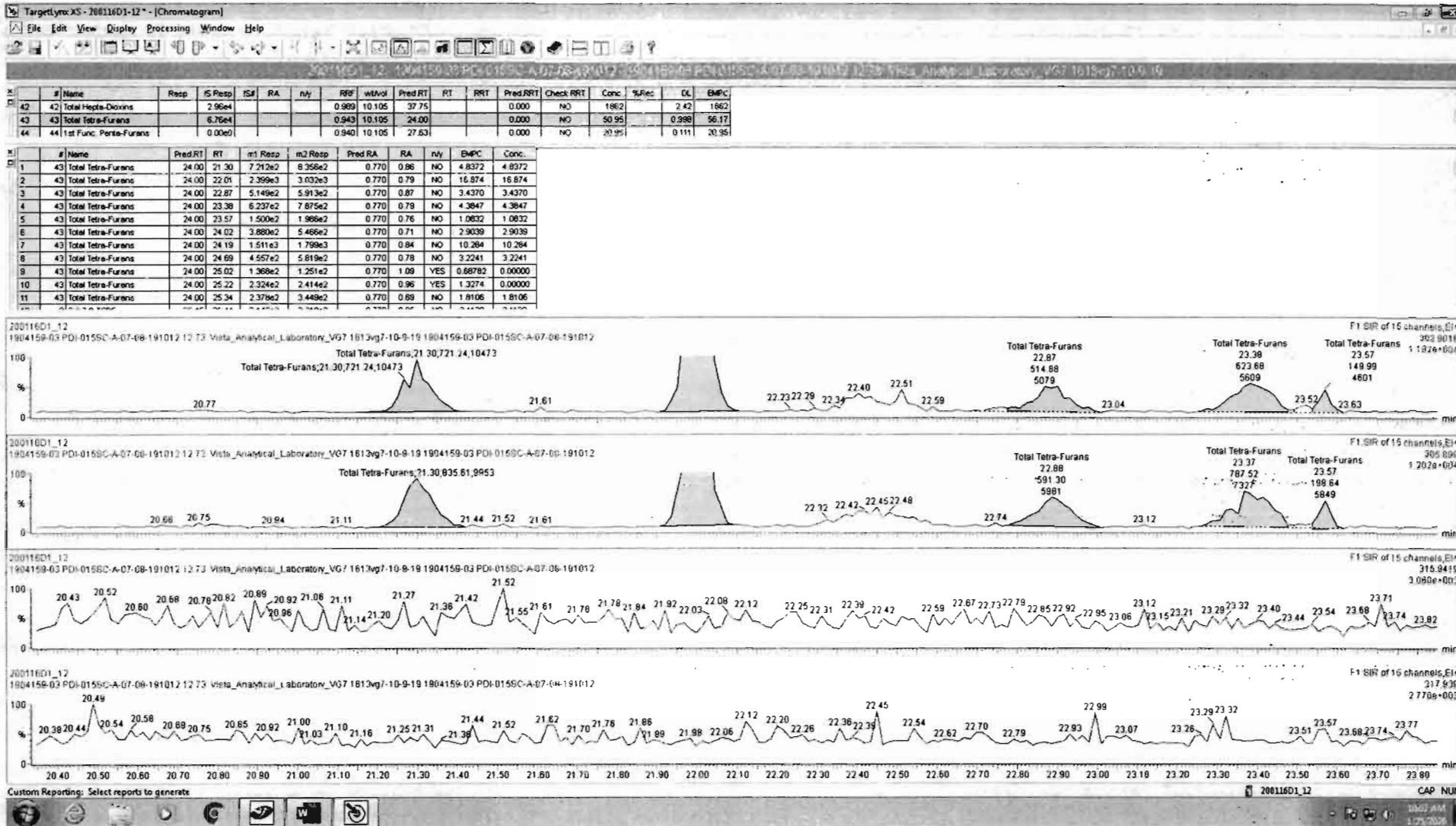


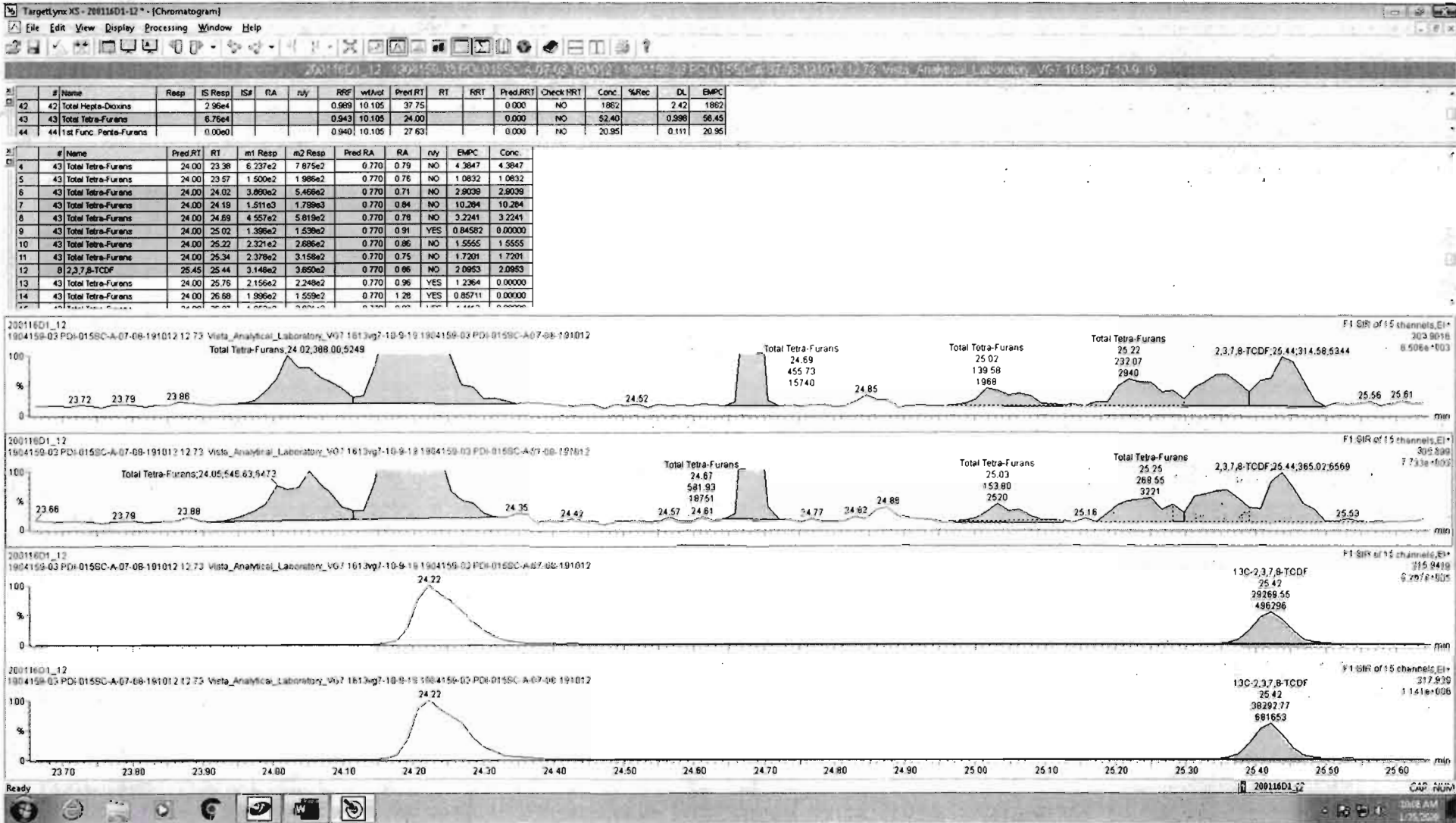
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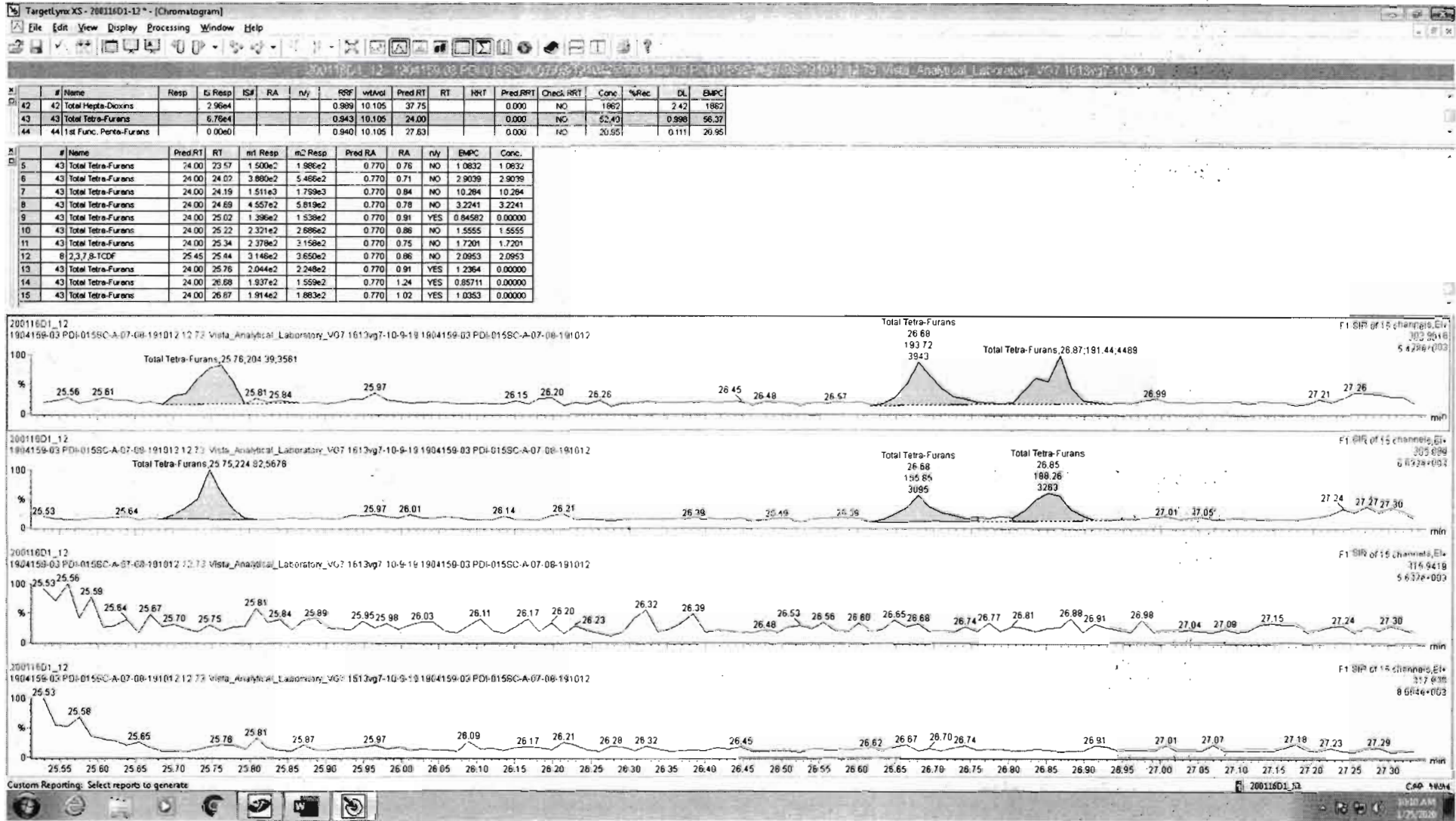
DPE1











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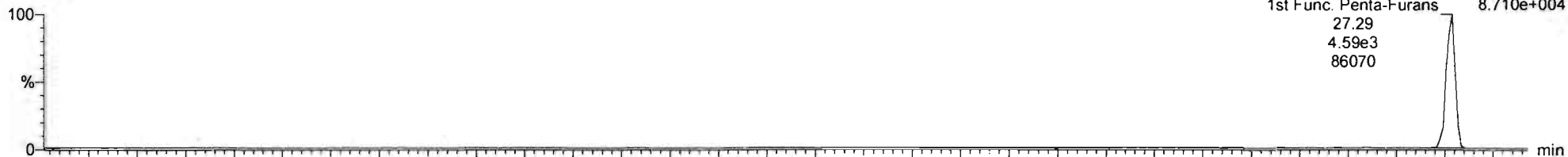
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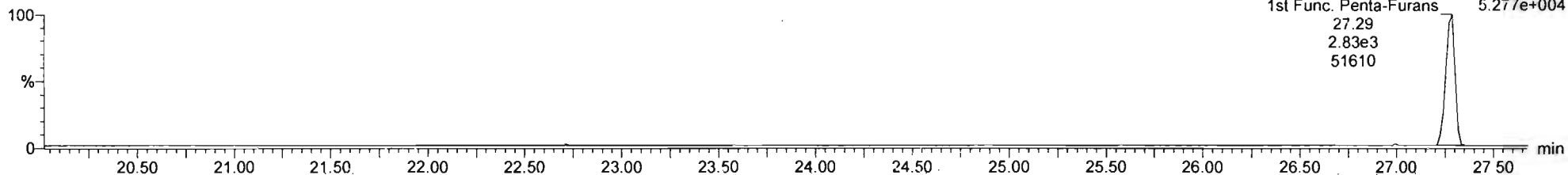
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Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans

200116D1\_12  
1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-03 PDI-015SC-A-07-08-191012

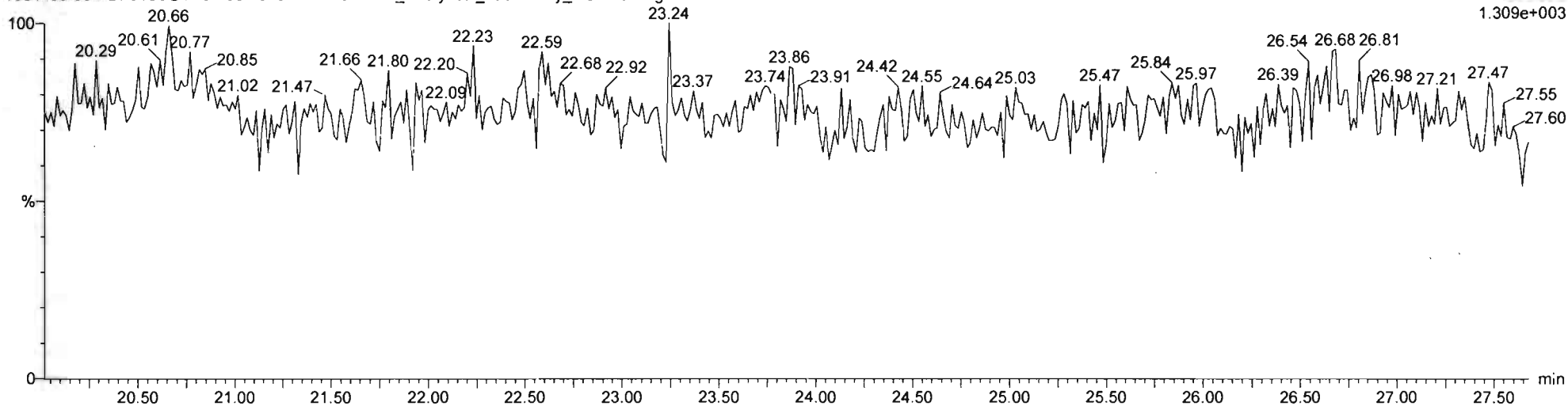


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DPE6

200116D1\_12  
1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-03 PDI-015SC-A-07-08-191012



Vista Analytical Laboratory

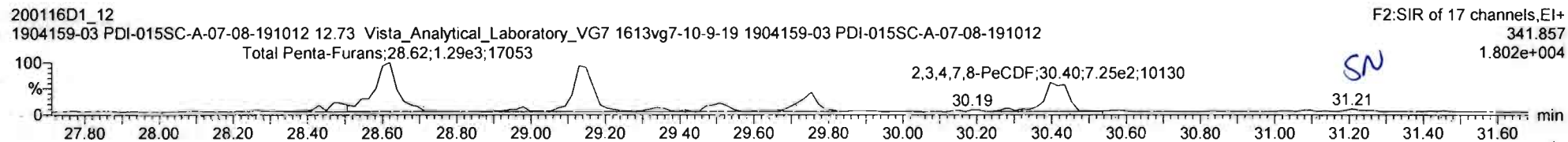
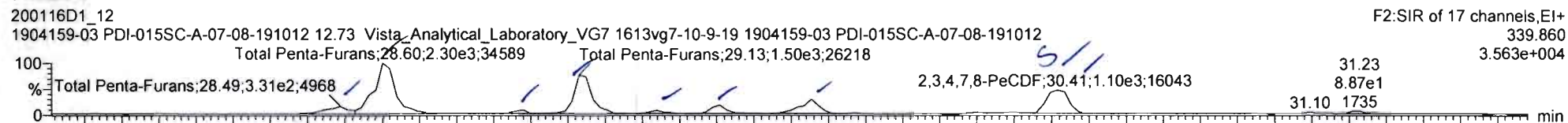
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Last Altered: Saturday, January 25, 2020 09:54:03 Pacific Standard Time

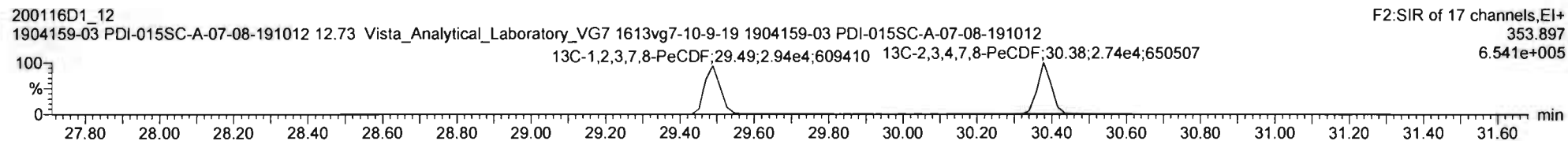
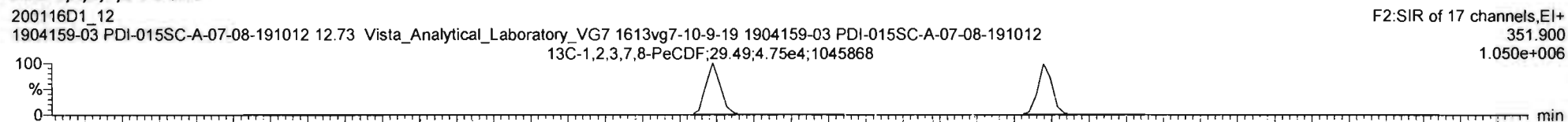
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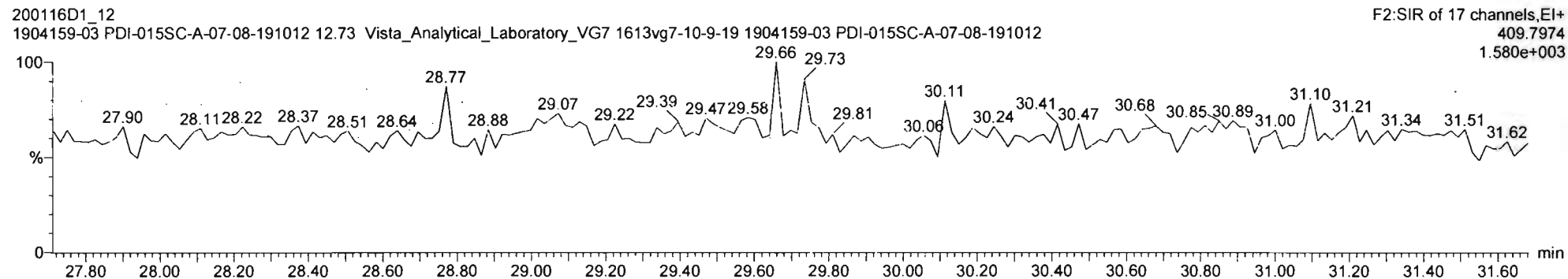
Total Penta-Furans



13C-1,2,3,7,8-PeCDF



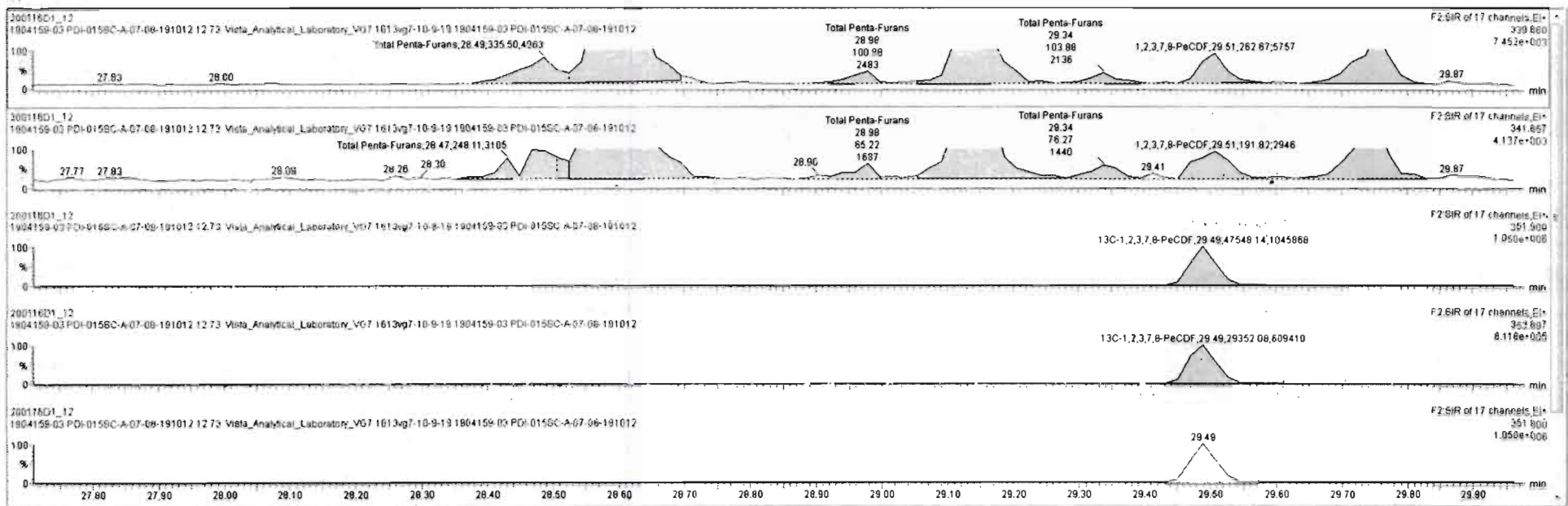
DPE2



20011601\_12 1904159-03 PDI-0158C-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_V07 1613vg7-10-9-19 1904159-03 PDI-0158C-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_V07 1613vg7-10-9-19

#	Name	Resp	IS Resp	IS#	PA	n/y	RS#	wtVol	Pred.RT	RT	RRT	Pred.RRT	Check RRT	Conc	%Rec	DL	EMPC
45	Total Penta-Furans		0.00e0				0.840	10.105	30.00			0.000	NO	28.36		0.367	28.36
46	Total Hexa-Furans		0.00e0				1.078	10.105	33.00			0.000	NO	55.23		0.480	59.16
47	Total Hepta-Furans		0.00e0				1.135	10.105	37.75			0.000	NO	255.3		0.958	255.3

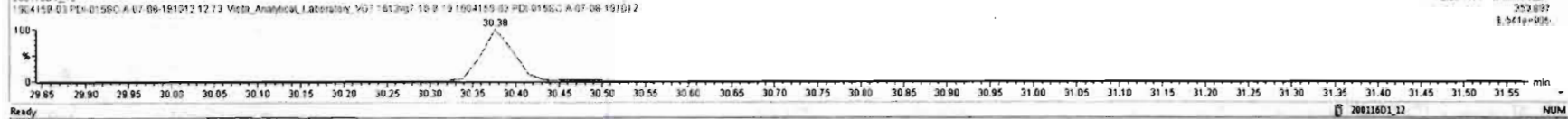
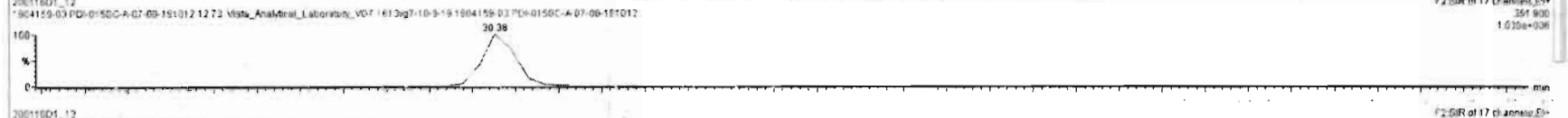
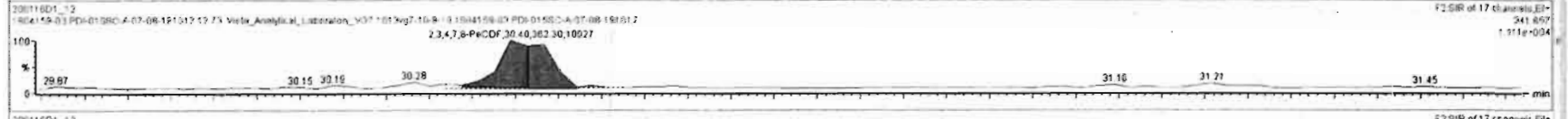
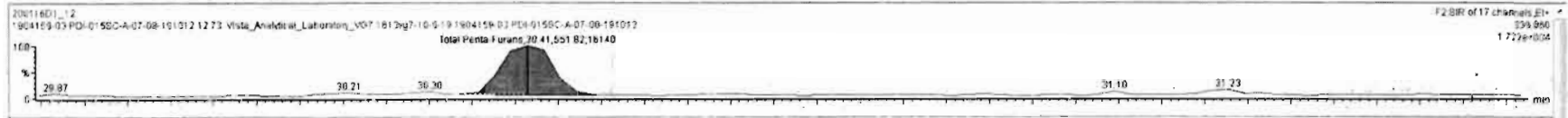
#	Name	Pred.RT	RT	m1 Resp	m2 Resp	Pred.RA	RA	n/y	EMPC	Conc.
1	45 Total Penta-Furans	30.00	28.49	3.355e2	2.481e2	1.550	1.15	NO	1.6475	1.6475
2	45 Total Penta-Furans	30.00	28.60	2.224e3	1.248e3	1.550	1.78	NO	9.8024	9.8024
3	45 Total Penta-Furans	30.00	28.98	1.009e2	6.522e1	1.550	1.55	NO	0.46887	0.46887
4	45 Total Penta-Furans	30.00	29.13	1.506e3	1.009e3	1.550	1.48	NO	7.0598	7.0598
5	45 Total Penta-Furans	30.00	29.34	1.039e2	7.627e1	1.550	1.36	NO	0.50855	0.50855
6	9 1,2,3,7,8-PeCDF	29.51	29.51	2.627e2	1.918e2	1.550	1.37	NO	1.2179	1.2179
7	45 Total Penta-Furans	30.00	29.75	5.623e2	3.887e2	1.550	1.45	NO	2.6846	2.6846
8	10 1,2,3,4,7,8-PeCDF	30.41	30.41	1.102e3	7.249e2	1.550	1.52	NO	4.9254	4.9254



TargetLynx.KS - 20011601-129 - [Chromatogram]  
 File Edit View Display Processing Window Help

#	Name	Resp	RA	nly	RRF	WtVol	Pred RT	RT	Pred R	RRT	RRT Fail	Conc	%Rec	DL	EMPC
45	Total Penta-Furans					10.106	30.00		0.000		NO	25.90		0.367	28.40
46	Total Hexa-Furans					10.106	30.00		0.000		NO	59.52		0.480	59.52
47	Total Hepta-Furans					10.106	37.75		0.000		NO	255.4		0.955	255.4
48	PFK1														
49	PFK2														
50	PFK3														
51	PFK4														
52	PFK5														

#	Name	Pred RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	nly	EMPC	Conc
1	45 Total Penta-Furans	30.00	29.49	3.355e2	2.401e2	1.550	1.30	NO	1.6475	1.6475
2	45 Total Penta-Furans	30.00	29.60	2.224e3	1.246e3	1.550	1.76	NO	9.8024	9.8024
3	45 Total Penta-Furans	30.00	29.98	1.009e2	6.522e1	1.550	1.55	NO	0.46887	0.46887
4	45 Total Penta-Furans	30.00	29.13	1.506e3	1.009e3	1.550	1.45	NO	7.0088	7.0088
5	45 Total Penta-Furans	30.00	29.34	1.029e2	7.627e1	1.550	1.36	NO	0.50855	0.50855
6	9 1,2,3,7,8-PeCDF	29.51	29.51	2.627e2	1.918e2	1.550	1.37	NO	1.2179	1.2179
7	45 Total Penta-Furans	30.00	29.75	5.623e2	3.867e2	1.550	1.45	NO	2.9046	2.9046
8	45 Total Penta-Furans	30.00	30.81	5.518e2	3.324e2	1.550	1.86	NO	2.4952	0.00000
9	10 2,3,4,7,8-PeCDF	30.41	30.41	5.545e2	3.633e2	1.550	1.53	NO	2.4746	2.4746



Ready 20011601\_12 NUM

Vista Analytical Laboratory

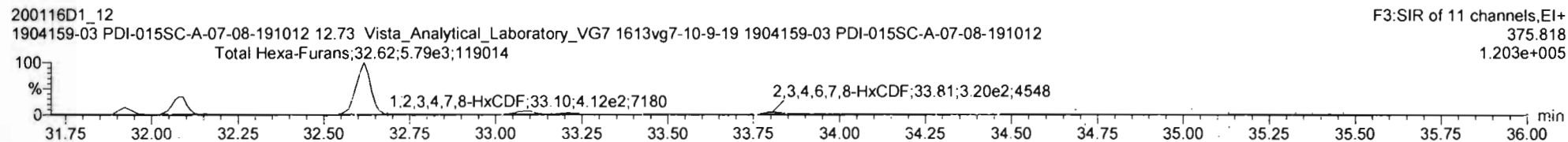
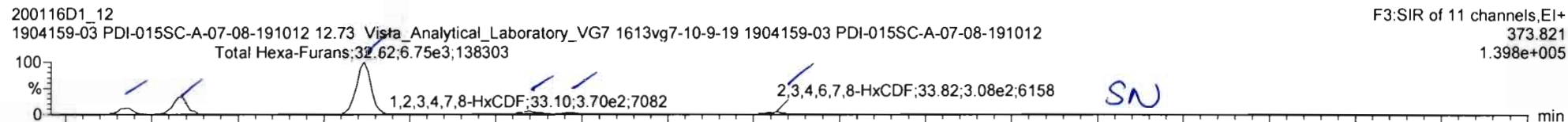
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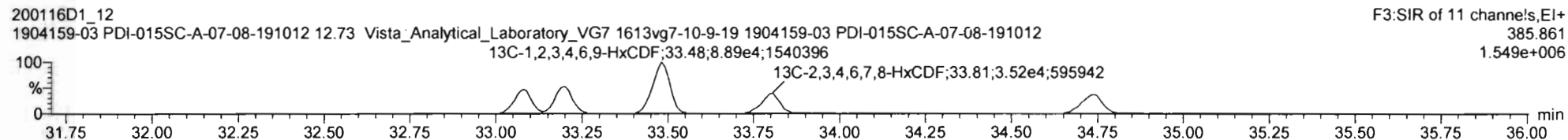
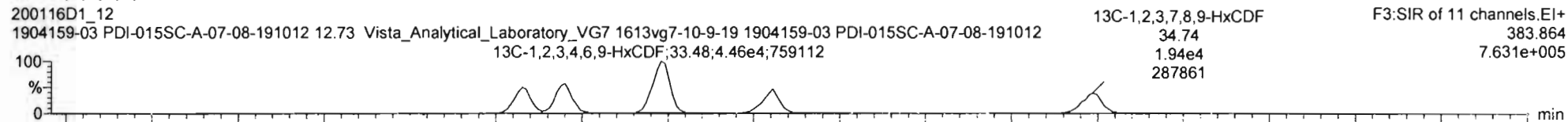
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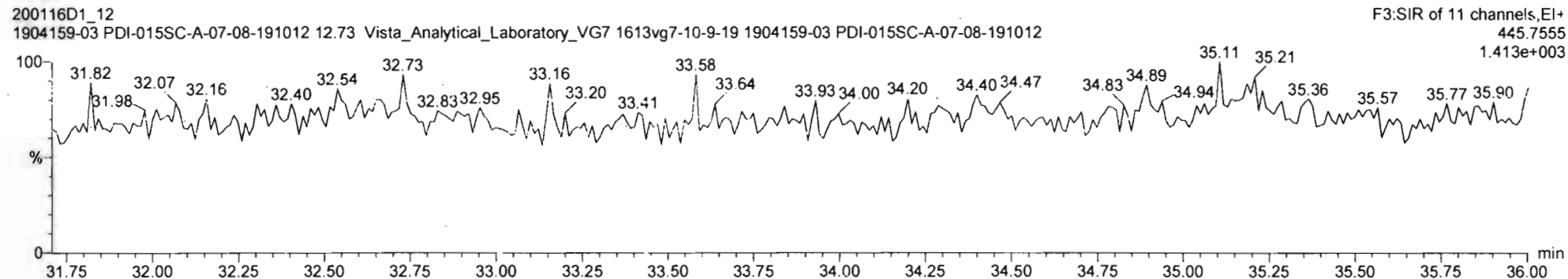
Total Hexa-Furans

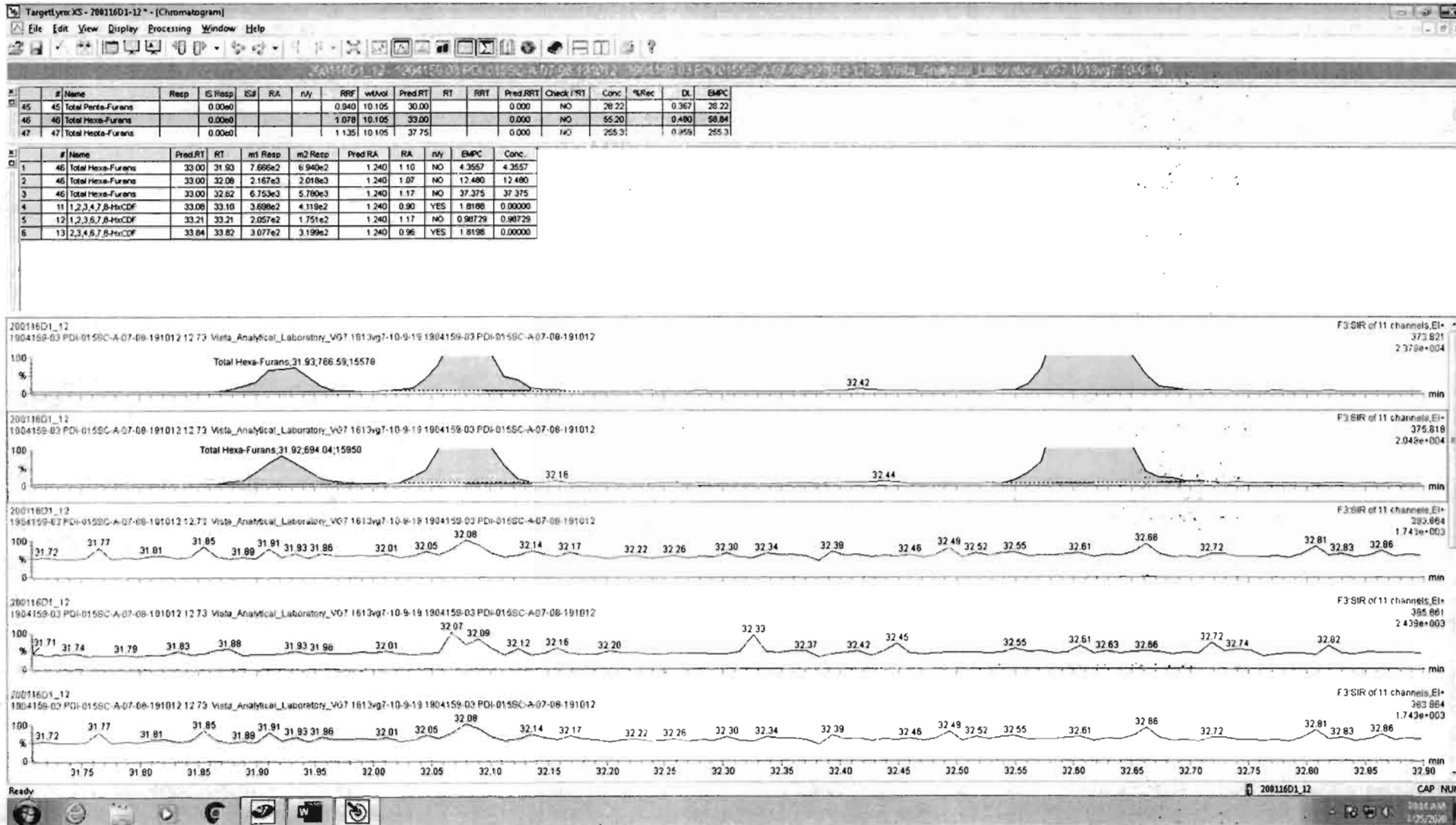


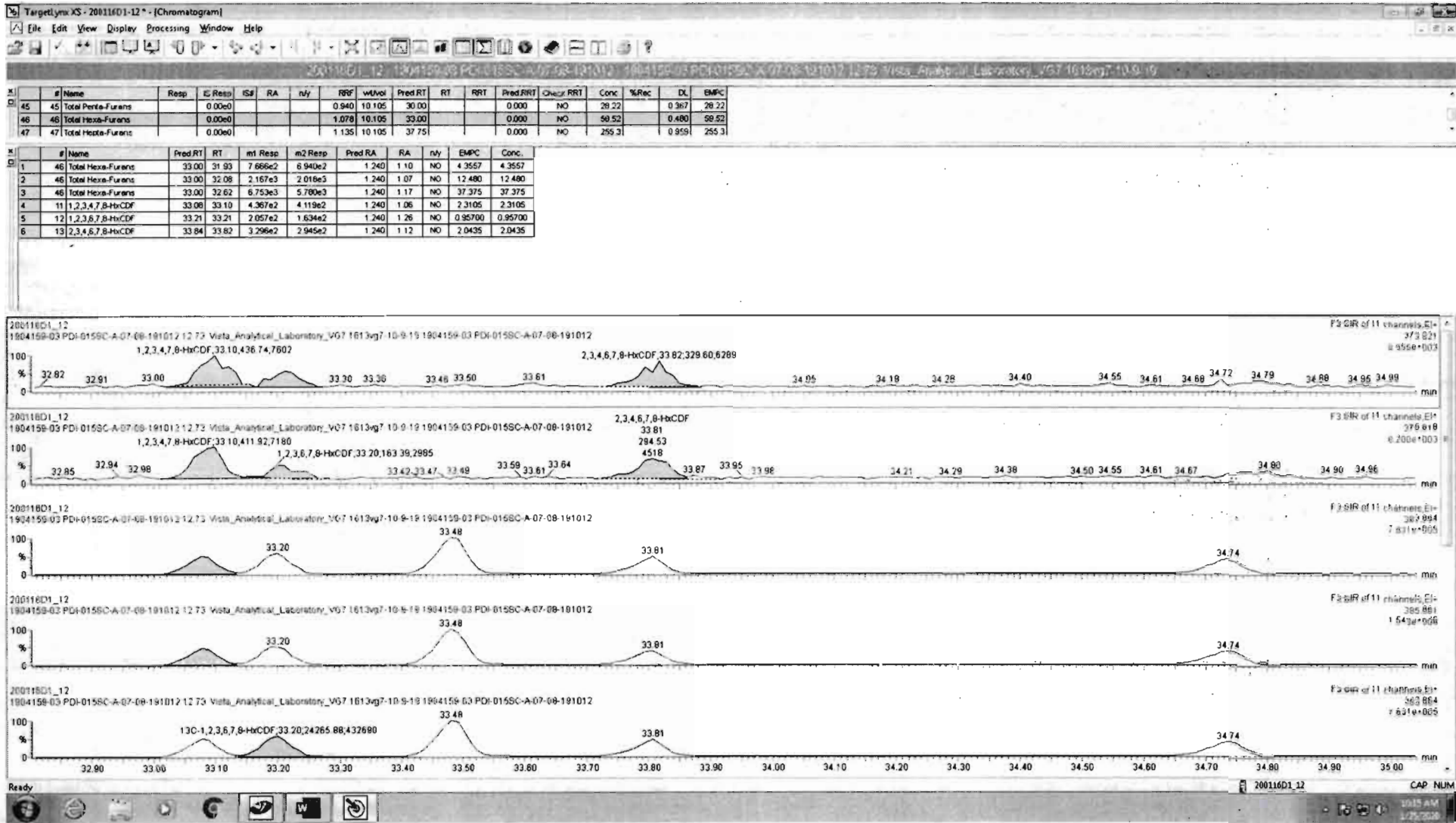
13C-1,2,3,4,7,8-HxCDF



DPE3









Vista Analytical Laboratory

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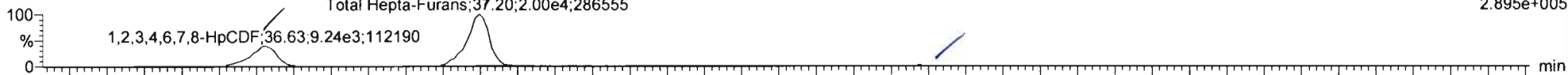
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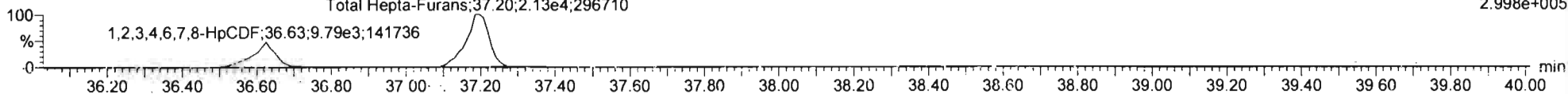
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Total Hepta-Furans

200116D1\_12 F4:SIR of 11 channels, EI+  
1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-03 PDI-015SC-A-07-08-191012  
Total Hepta-Furans; 37.20; 2.00e4; 286555 407.782  
2.895e+005

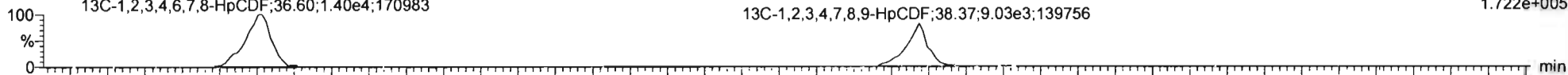


200116D1\_12 F4:SIR of 11 channels, EI+  
1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-03 PDI-015SC-A-07-08-191012  
Total Hepta-Furans; 37.20; 2.13e4; 296710 409.779  
2.998e+005

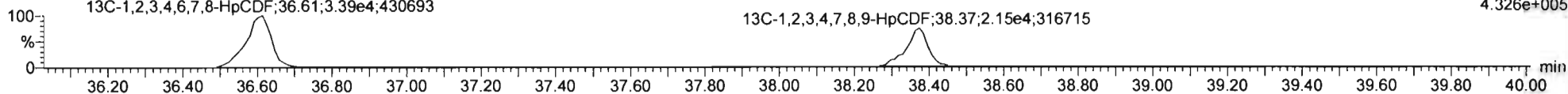


13C-1,2,3,4,6,7,8-HpCDF

200116D1\_12 F4:SIR of 11 channels, EI+  
1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-03 PDI-015SC-A-07-08-191012  
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1.722e+005

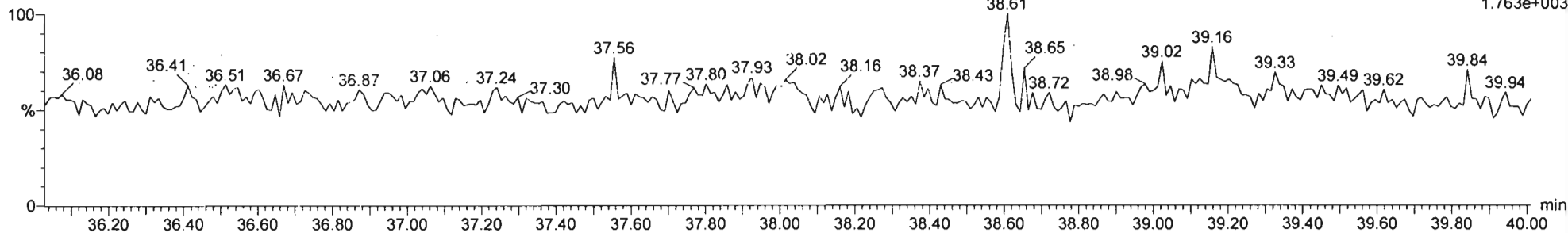


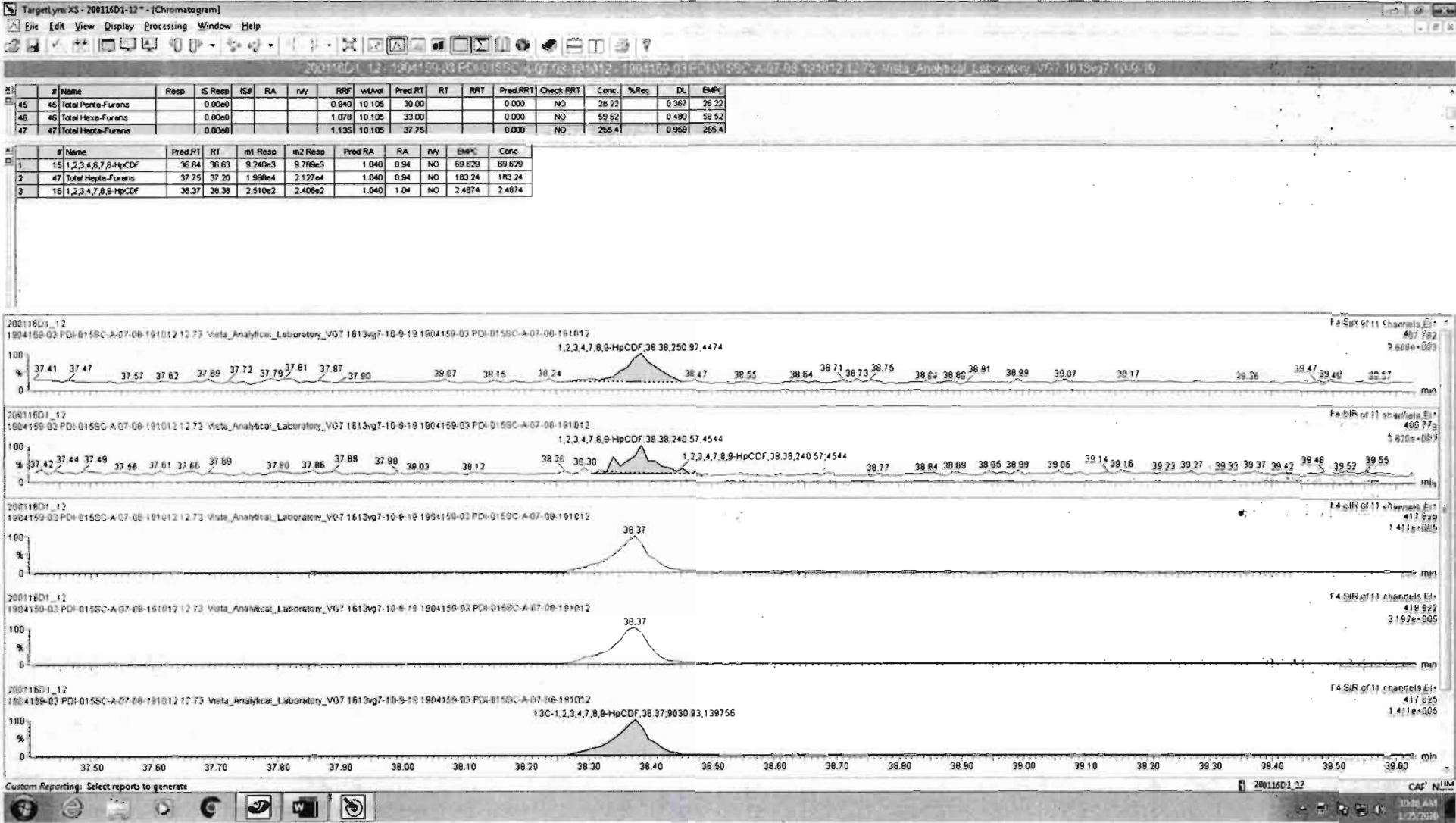
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4.326e+005



DPE4

200116D1\_12 F4:SIR of 11 channels, EI+  
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479.7165  
1.763e+003





Vista Analytical Laboratory

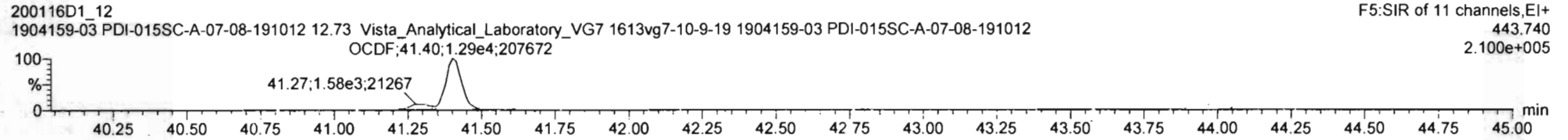
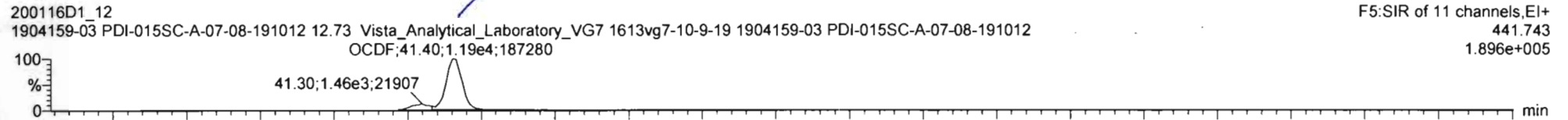
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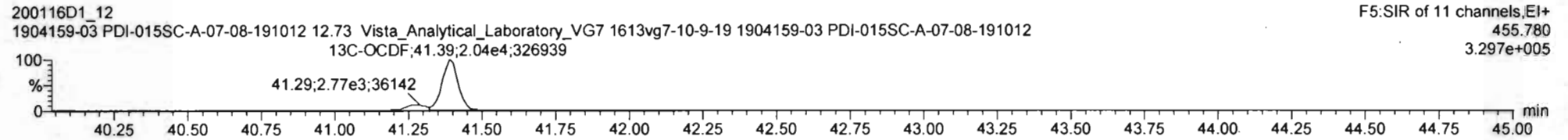
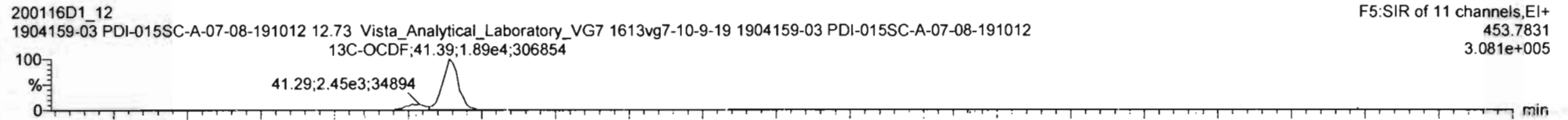
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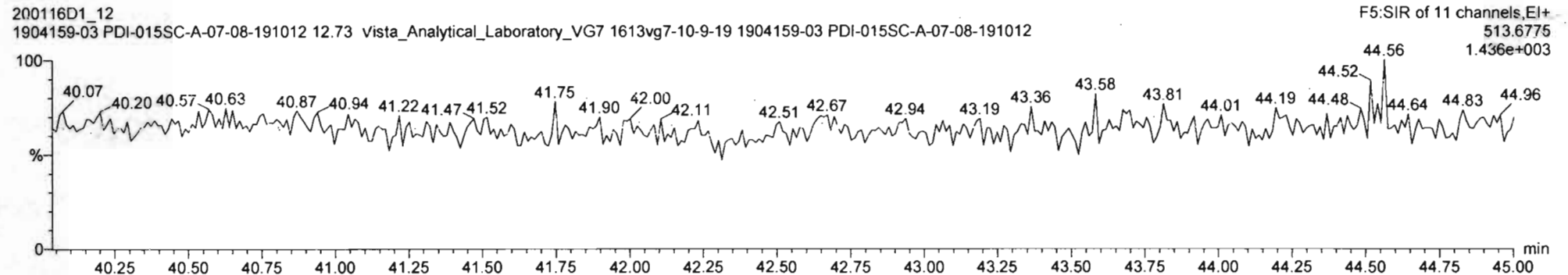
OCDF



13C-OCDF



DPE5



Vista Analytical Laboratory

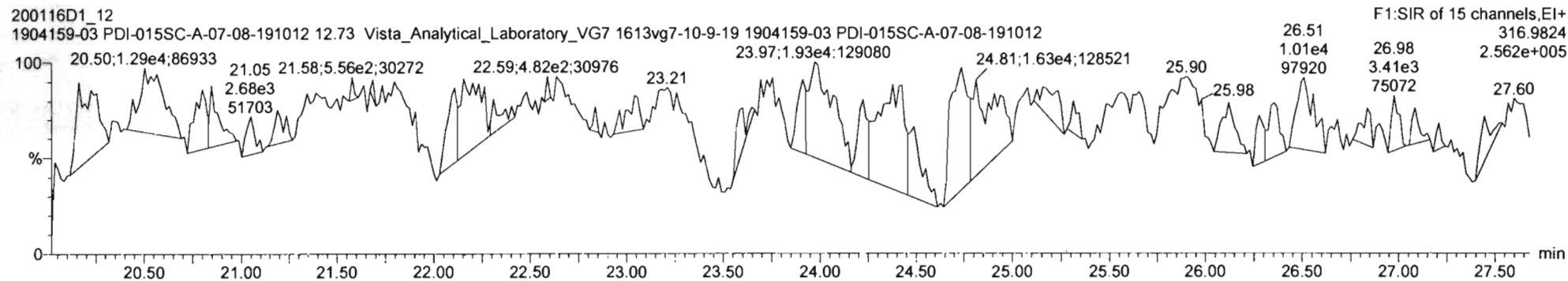
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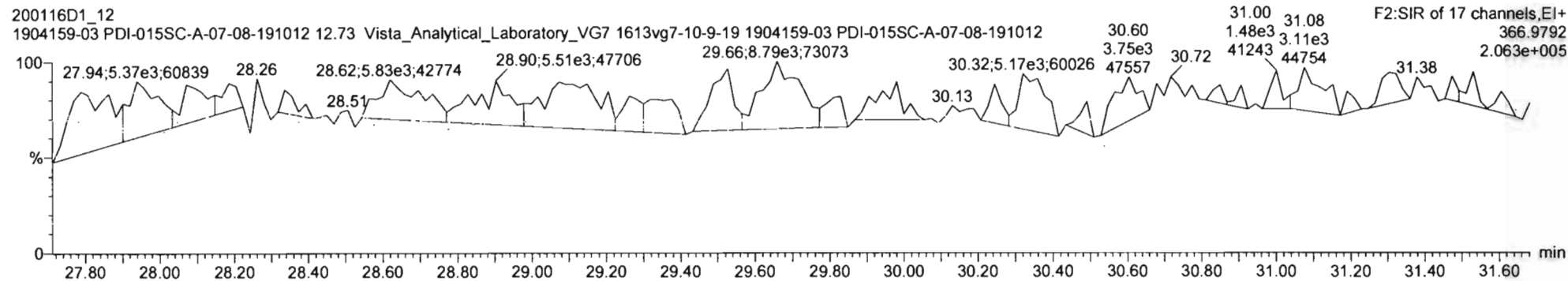
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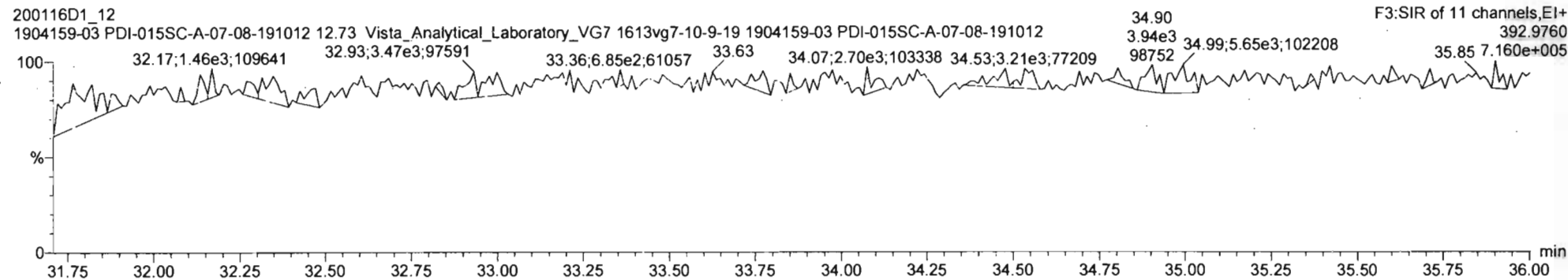
PFK1



PFK2



PFK3



Vista Analytical Laboratory

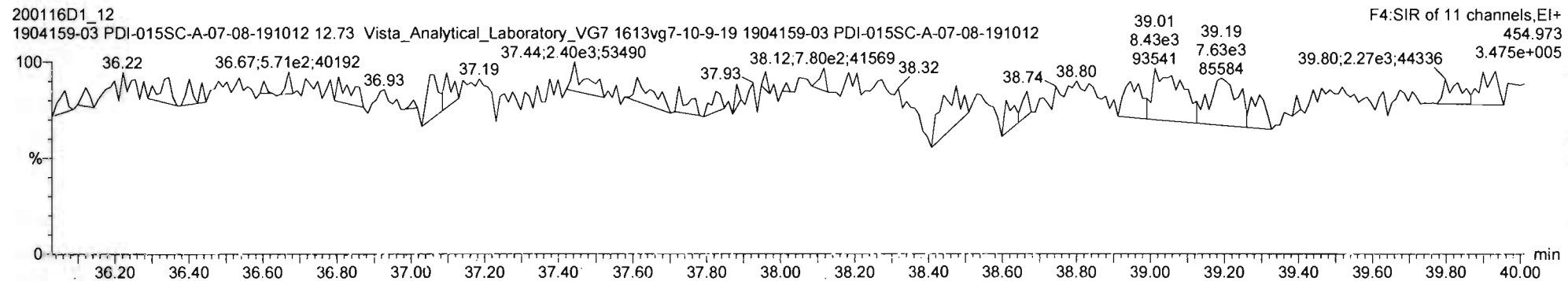
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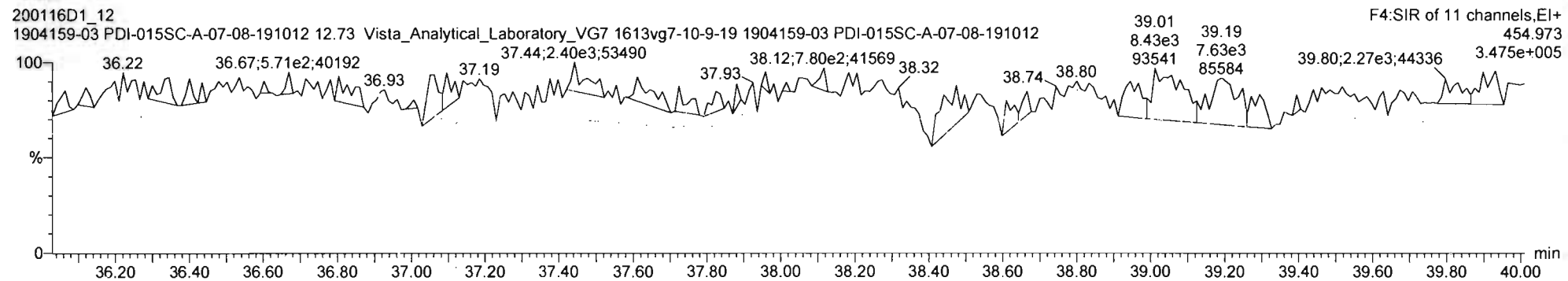
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Description: 1904159-03 PDI-015SC-A-07-08-191012 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

PFK4



PFK5



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-13B.qld  
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*GRB 01/31/2020*

*CT 02/03/2020*

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 25 Jan 2020 10:17:30

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 Description: 1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		1.11e5	10.0731	0.905			1.001		26.05					0.251
2	2 1,2,3,7,8-PeCDD		8.33e4	10.0731	0.903			1.001		30.61					0.287
3	3 1,2,3,4,7,8-HxCDD		8.11e4	10.0731	1.101			1.000		33.93					0.360
4	4 1,2,3,6,7,8-HxCDD		8.85e4	10.0731	0.939			1.000		34.02					0.369
5	5 1,2,3,7,8,9-HxCDD		8.77e4	10.0731	0.961			1.001		34.34					0.398
6	6 1,2,3,4,6,7,8-HpCDD	5.63e2	6.75e4	10.0731	0.979	1.058	NO	1.000	1.000	37.80	37.80	1.6890		1.69	0.397
7	7 OCDD	3.66e3	1.03e5	10.0731	0.959	0.930	NO	1.000	1.000	41.06	41.07	14.749		14.7	0.429
8	8 2,3,7,8-TCDF		1.52e5	10.0731	0.950			1.001		25.25					0.191
9	9 1,2,3,7,8-PeCDF		1.25e5	10.0731	0.960			1.001		29.42					0.159
10	10 2,3,4,7,8-PeCDF		1.19e5	10.0731	1.015			1.001		30.34					0.153
11	11 1,2,3,4,7,8-HxCDF		1.08e5	10.0731	1.177			1.000		33.02					0.124
12	12 1,2,3,6,7,8-HxCDF		1.22e5	10.0731	1.069			1.000		33.15					0.139
13	13 2,3,4,6,7,8-HxCDF		1.13e5	10.0731	1.114			1.001		33.77					0.154
14	14 1,2,3,7,8,9-HxCDF		1.05e5	10.0731	1.062			1.000		34.70					0.206
15	15 1,2,3,4,6,7,8-HpCDF		8.77e4	10.0731	1.128			1.001		36.57					0.214
16	16 1,2,3,4,7,8,9-HpCDF		6.72e4	10.0731	1.280			1.000		38.34					0.205
17	17 OCDF		1.34e5	10.0731	0.947			1.000		41.28					0.364
18	18 13C-2,3,7,8-TCDD	1.11e5	1.05e5	10.0731	1.095	0.748	NO	1.023	1.022	26.04	26.02	192.36	96.9		0.439
19	19 13C-1,2,3,7,8-PeCDD	8.33e4	1.05e5	10.0731	0.881	0.638	NO	1.203	1.202	30.62	30.59	178.61	90.0		0.506
20	20 13C-1,2,3,4,7,8-Hx...	8.11e4	1.22e5	10.0731	0.642	1.271	NO	1.014	1.014	33.90	33.92	205.38	103.4		0.917
21	21 13C-1,2,3,6,7,8-Hx...	8.85e4	1.22e5	10.0731	0.856	1.290	NO	1.017	1.017	34.01	34.02	168.15	84.7		0.688
22	22 13C-1,2,3,7,8,9-Hx...	8.77e4	1.22e5	10.0731	0.807	1.301	NO	1.026	1.026	34.31	34.31	176.70	89.0		0.730
23	23 13C-1,2,3,4,6,7,8-H...	6.75e4	1.22e5	10.0731	0.654	1.032	NO	1.131	1.130	37.81	37.79	167.90	84.6		0.872
24	24 13C-OCDD	1.03e5	1.22e5	10.0731	0.580	0.894	NO	1.228	1.228	41.07	41.06	288.24	72.6		0.636
25	25 13C-2,3,7,8-TCDF	1.52e5	1.64e5	10.0731	1.035	0.796	NO	0.992	0.991	25.25	25.22	177.38	89.3		0.628
26	26 13C-1,2,3,7,8-PeCDF	1.25e5	1.64e5	10.0731	0.854	1.638	NO	1.156	1.155	29.43	29.40	176.84	89.1		0.828
27	27 13C-2,3,4,7,8-PeCDF	1.19e5	1.64e5	10.0731	0.847	1.611	NO	1.192	1.191	30.34	30.31	169.49	85.4		0.835
28	28 13C-1,2,3,4,7,8-Hx...	1.08e5	1.22e5	10.0731	0.832	0.499	NO	0.987	0.988	33.01	33.02	210.67	106.1		1.54
29	29 13C-1,2,3,6,7,8-Hx...	1.22e5	1.22e5	10.0731	1.034	0.516	NO	0.991	0.991	33.13	33.14	192.28	96.8		1.24
30	30 13C-2,3,4,6,7,8-Hx...	1.13e5	1.22e5	10.0731	0.953	0.531	NO	1.009	1.009	33.74	33.74	192.68	97.0		1.35
31	31 13C-1,2,3,7,8,9-Hx...	1.05e5	1.22e5	10.0731	0.828	0.508	NO	1.038	1.038	34.70	34.70	205.35	103.4		1.55

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-13B.qld

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Printed: Friday, January 31, 2020 11:14:44 Pacific Standard Time

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 Description: 1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	8.77e4	1.22e5	10.0731	0.757	0.415	NO	1.093	1.093	36.54	36.53	188.20	94.8		1.27
33	33 13C-1,2,3,4,7,8,9-H...	6.72e4	1.22e5	10.0731	0.581	0.410	NO	1.147	1.147	38.34	38.34	187.86	94.6		1.65
34	34 13C-OCDF	1.34e5	1.22e5	10.0731	0.689	0.928	NO	1.235	1.235	41.29	41.28	316.46	79.7		0.826
35	35 37Cl-2,3,7,8-TCDD	4.72e4	1.05e5	10.0731	1.198			1.024	1.023	26.06	26.03	74.435	93.7		0.210
36	36 13C-1,2,3,4-TCDD	1.05e5	1.05e5	10.0731	1.000	0.808	NO	1.000	1.000	25.39	25.46	198.55	100.0		0.481
37	37 13C-1,2,3,4-TCDF	1.64e5	1.64e5	10.0731	1.000	0.801	NO	1.000	1.000	23.93	23.99	198.55	100.0		0.650
38	38 13C-1,2,3,4,6,9-Hx...	1.22e5	1.22e5	10.0731	1.000	0.514	NO	1.000	1.000	33.37	33.43	198.55	100.0		1.28
39	39 Total Tetra-Dioxins		1.11e5	10.0731	0.901			0.000		25.50		0.00000		1.28	0.128
40	40 Total Penta-Dioxins		8.33e4	10.0731	0.872			0.000		30.00		0.00000		0.414	0.133
41	41 Total Hexa-Dioxins		0.00e0	10.0731	0.976			0.000		33.80		1.6358		1.64	0.384
42	42 Total Hepta-Dioxins		6.75e4	10.0731	0.989			0.000		37.75		4.6050		4.61	0.394
43	43 Total Tetra-Furans		1.52e5	10.0731	0.943			0.000		24.00		0.00000		0.318	0.102
44	44 1st Func. Penta-Fur...		0.00e0	10.0731	0.940			0.000		27.63					0.0420
45	45 Total Penta-Furans		0.00e0	10.0731	0.940			0.000		30.00					0.0806
46	46 Total Hexa-Furans		0.00e0	10.0731	1.078			0.000		33.00					0.0832
47	47 Total Hepta-Furans		0.00e0	10.0731	1.135			0.000		37.75					0.107

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-13B.qld  
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 Printed: Friday, January 31, 2020 11:14:44 Pacific Standard Time

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Calibration: 25 Jan 2020 10:17:30

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 Description: 1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	YES	25.42	57.226	47709.422	0.000	MM	0.0000	0.22
2	39 Total Tetra-Dioxins	YES	24.13	243.851	47709.422	0.000	MM	0.0000	0.88
3	39 Total Tetra-Dioxins	YES	22.97	55.856	47709.422	0.000	bb	0.0000	0.18

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	YES	28.98	67.622	32444.898	0.000	bb	0.0000	0.41

**Hexa-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	41 Total Hexa-Dioxins	NO	32.39	382.763	48271.576	16.080	MM	1.6358	1.64

**Hepta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.80	289.310	34302.211	16.663	MM	1.6890	1.69
2	42 Total Hepta-Dioxins	NO	36.95	462.148	34302.211	29.041	MM	2.9160	2.92

**Tetra-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	YES	21.63	123.218	67214.789	0.000	MM	0.0000	0.32

**Penta-Furans function 1**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D1\200116D1-13B.qld

Last Altered: Friday, January 31, 2020 10:58:33 Pacific Standard Time

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Description: 1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Penta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

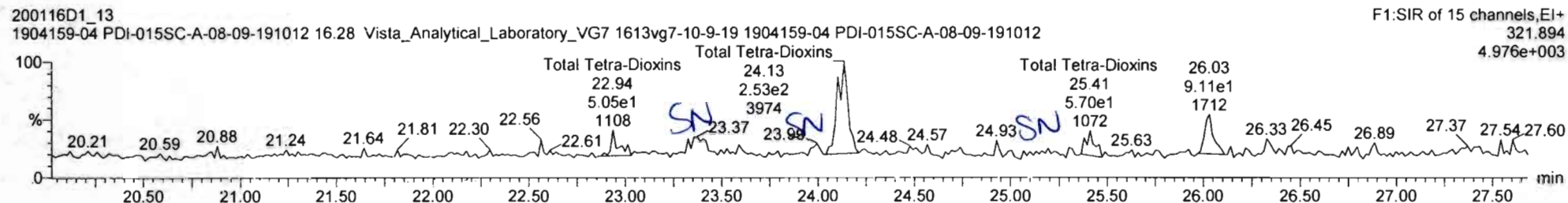
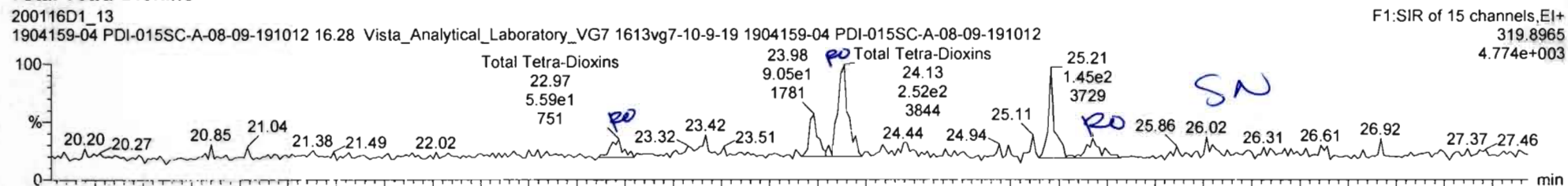
Hepta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
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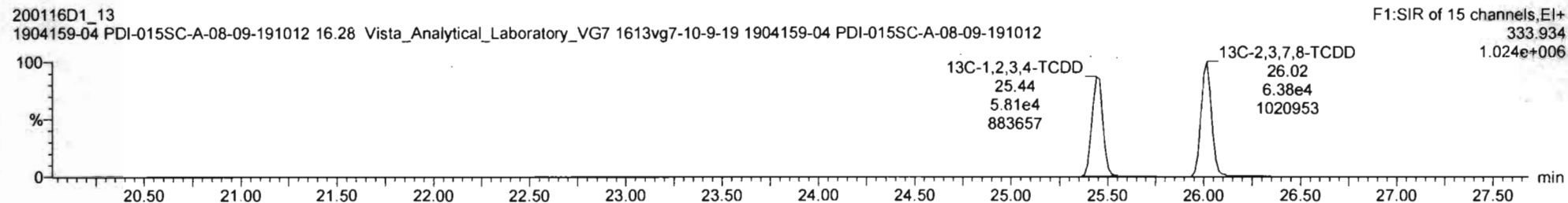
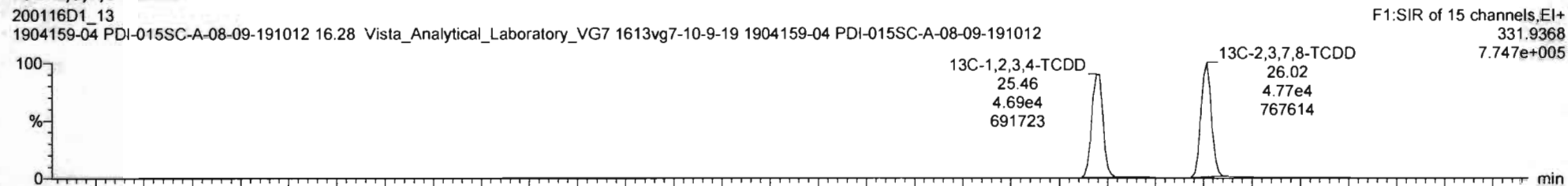
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**Total Tetra-Dioxins**



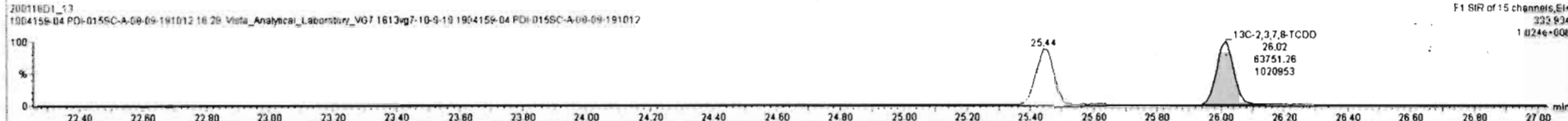
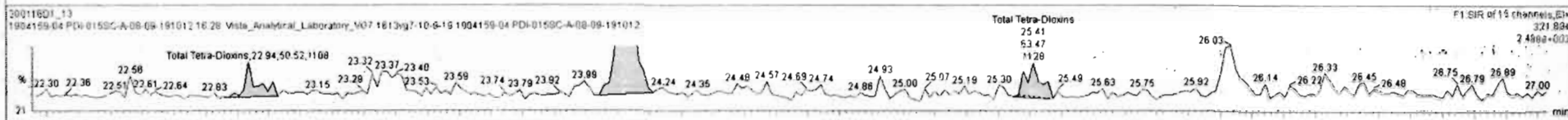
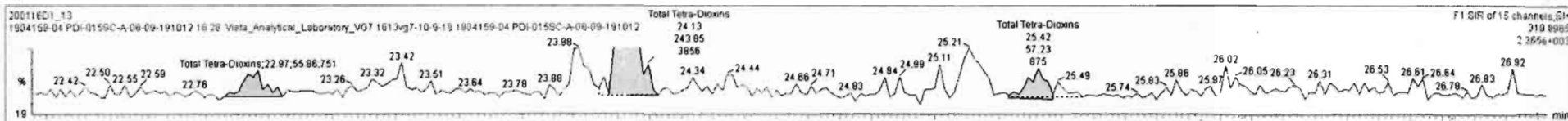
**13C-2,3,7,8-TCDD**



20011601\_13 1904159-04 PDI-0155C-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_V07 1613vg7-10-9-19 1904159-04 PDI-0155C-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_V07 1613vg7-10-9-19

Name	Resp	RA	rvy	RRF	wAwd	RT	RRT	Conc	%Rec	DL	EMPC
39 Total Tetra-Dioxins					10.073			0.000		0.128	1.28
40 Total Penta-Dioxins					10.073			0.000		0.133	1.49
41 Total Hexa-Dioxins					10.073			1.72		0.384	2.14

Name	RT	wf Resp	m2 Resp	RA	rvy	EMPC	Conc
1 Total Tetra-Dioxins	25.42	5.722e1	6.347e1	0.90	YES	0.22214	0.00000
2 Total Tetra-Dioxins	24.13	2.439e2	2.527e2	0.97	YES	0.88432	0.00000
3 Total Tetra-Dioxins	22.97	5.586e1	5.052e1	1.11	YES	0.17682	0.00000



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Last Altered: Saturday, January 25, 2020 10:17:30 Pacific Standard Time

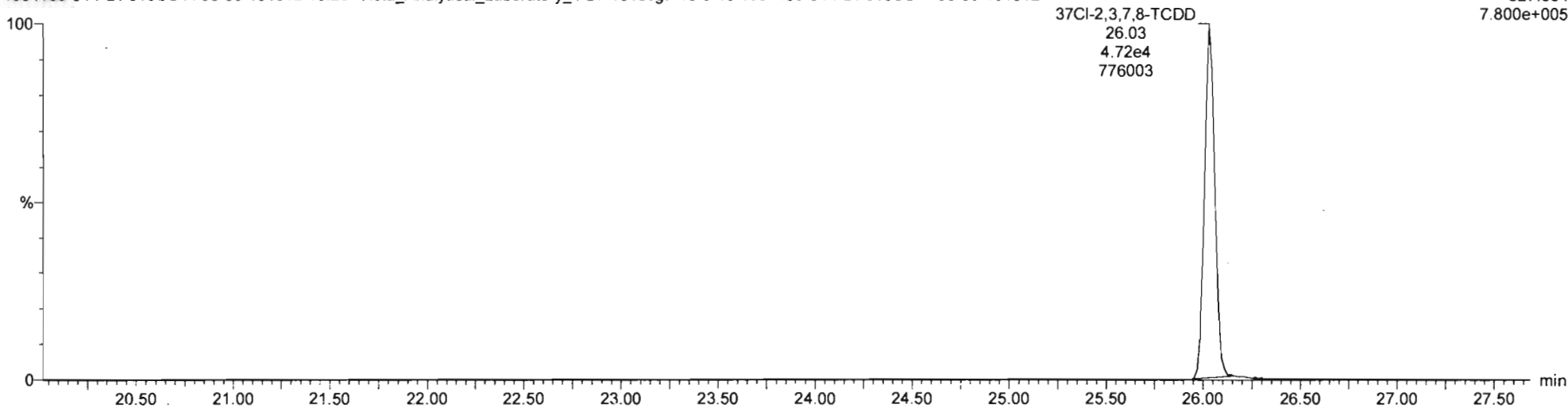
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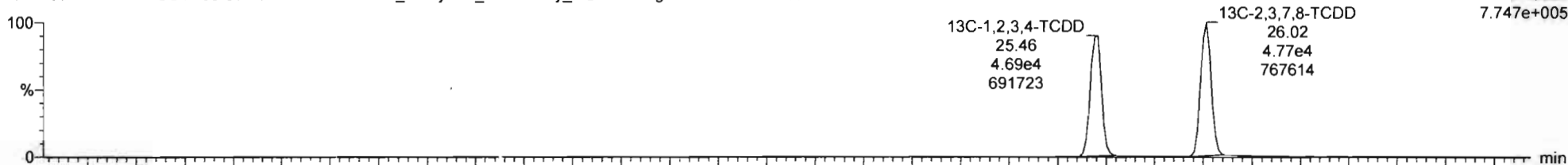
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7.800e+005



13C-1,2,3,4-TCDD

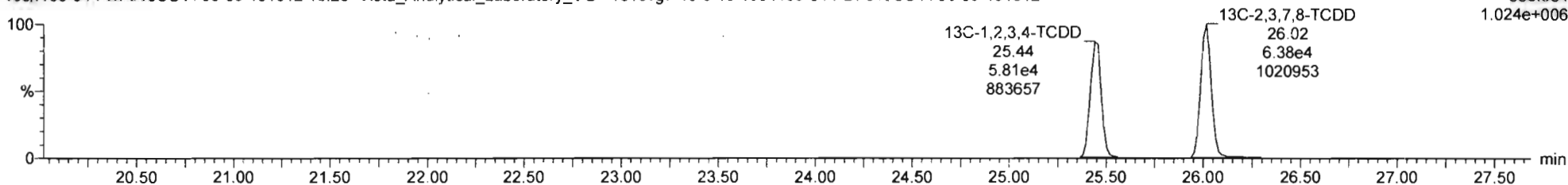
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F1:SIR of 15 channels,EI+  
331.9368  
7.747e+005



200116D1\_13  
1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-04 PDI-015SC-A-08-09-191012

F1:SIR of 15 channels,EI+  
333.934  
1.024e+006



Vista Analytical Laboratory

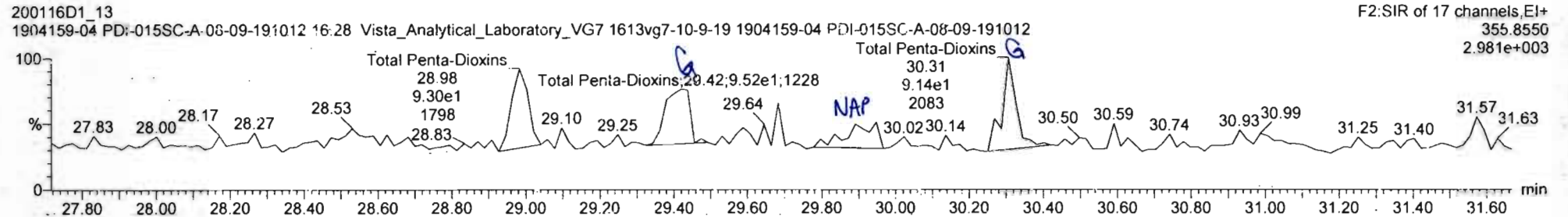
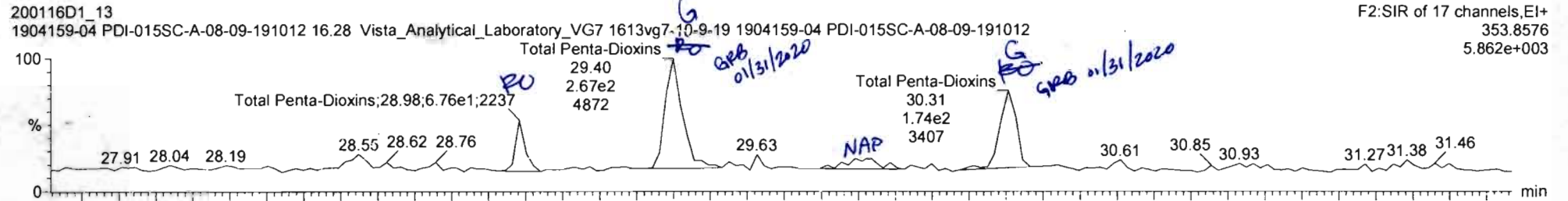
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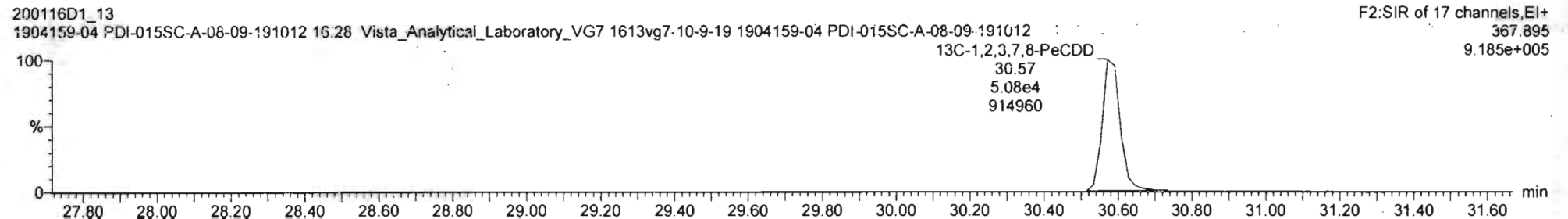
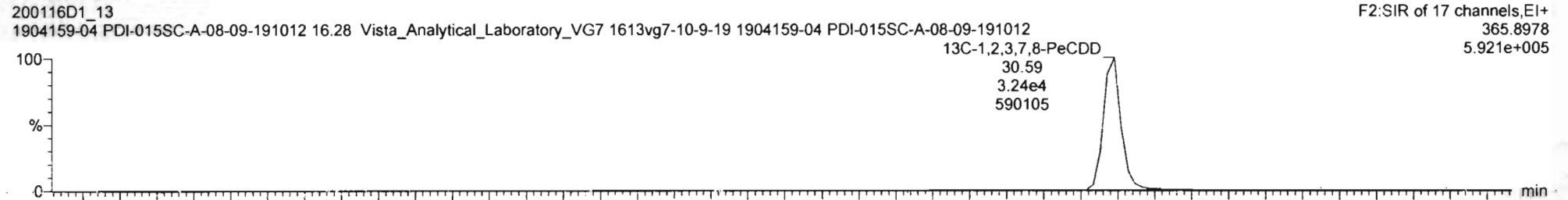
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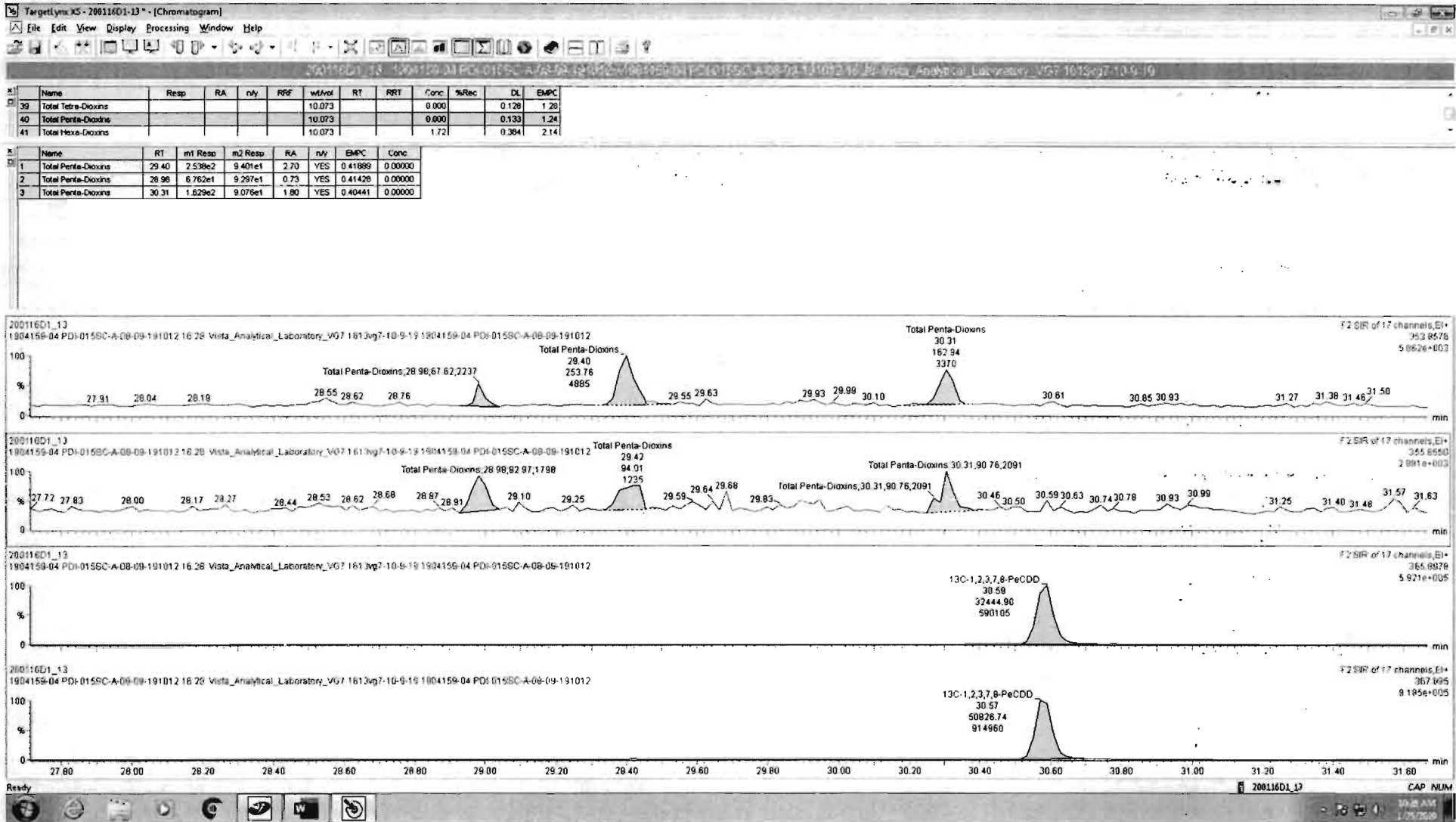
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Total Penta-Dioxins



13C-1,2,3,7,8-PeCDD





Vista Analytical Laboratory

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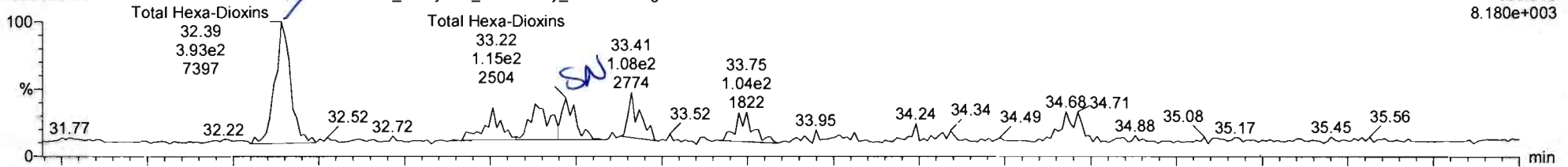
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Total Hexa-Dioxins

200116D1\_13

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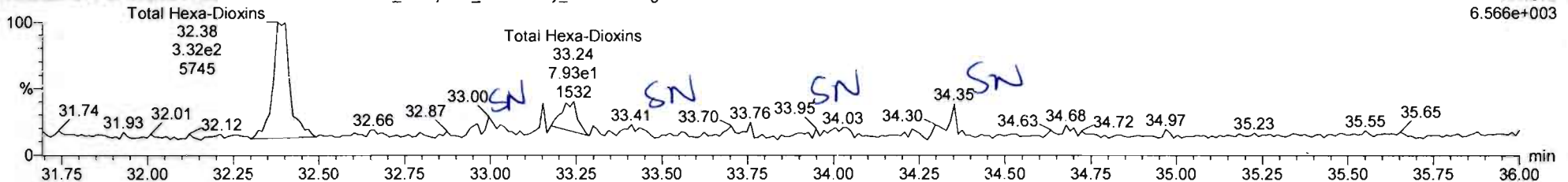
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389.816  
8.180e+003



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F3:SIR of 11 channels,EI+  
391.813  
6.566e+003

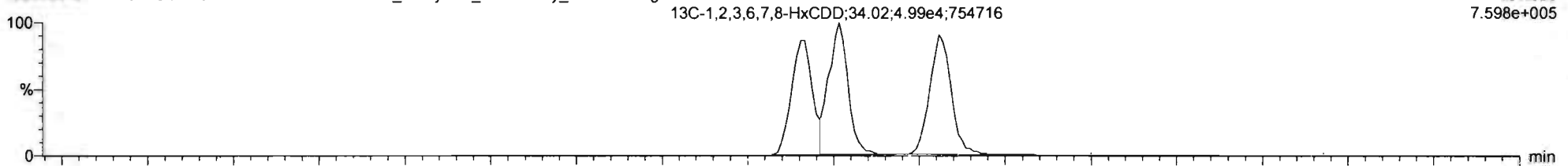


13C-1,2,3,4,7,8-HxCDD

200116D1\_13

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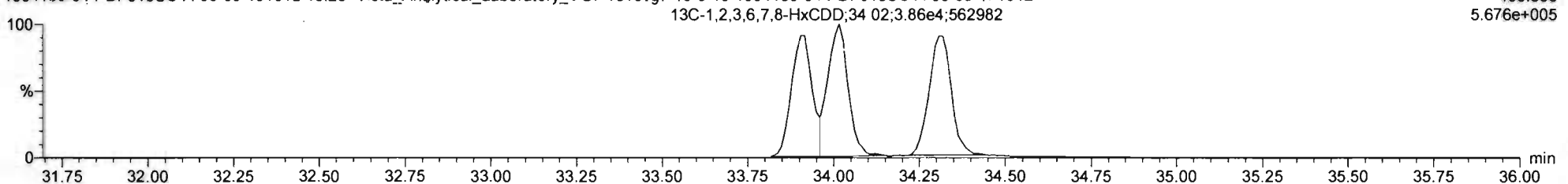
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7.598e+005

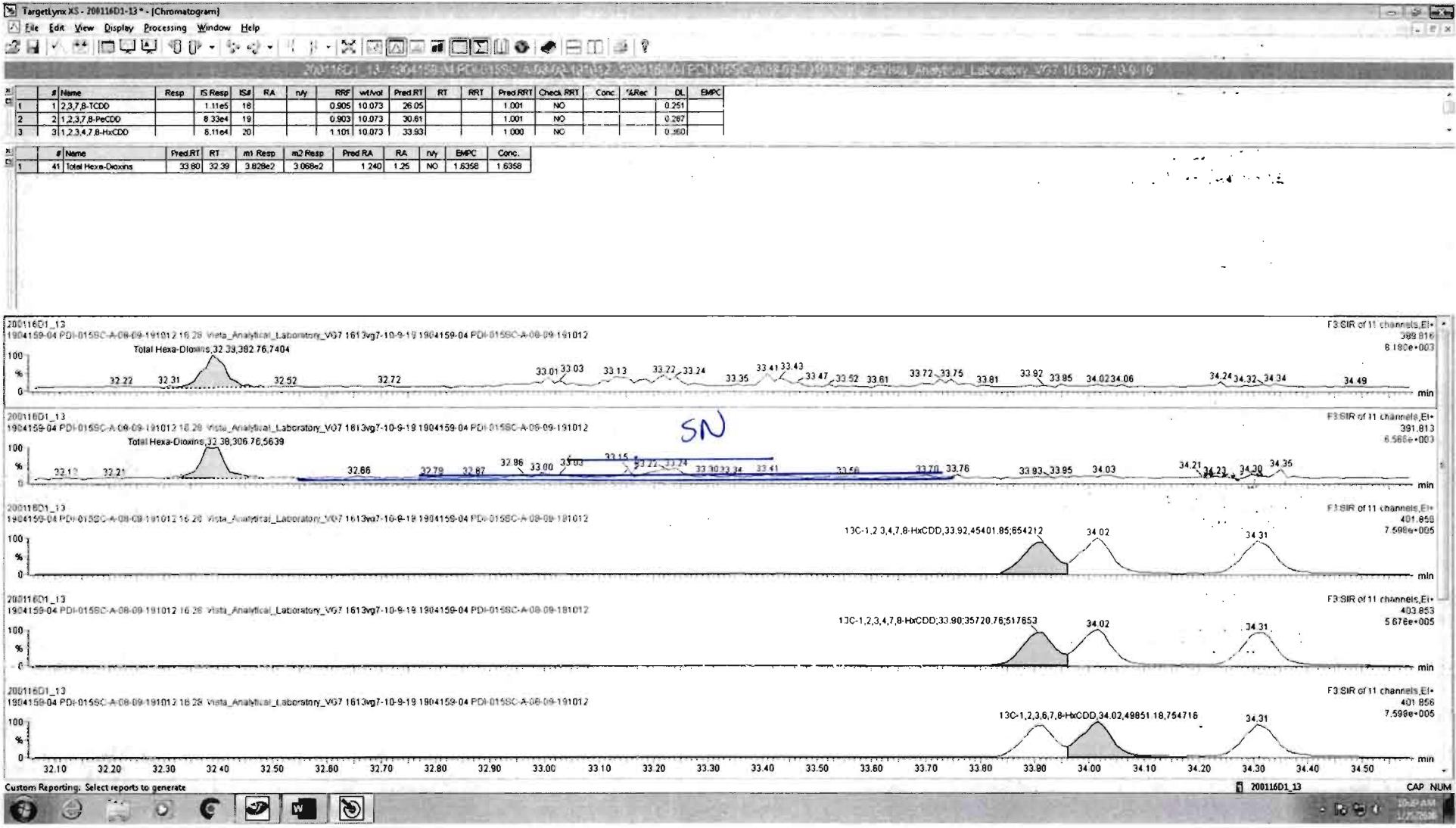


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F3:SIR of 11 channels,EI+  
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5.676e+005







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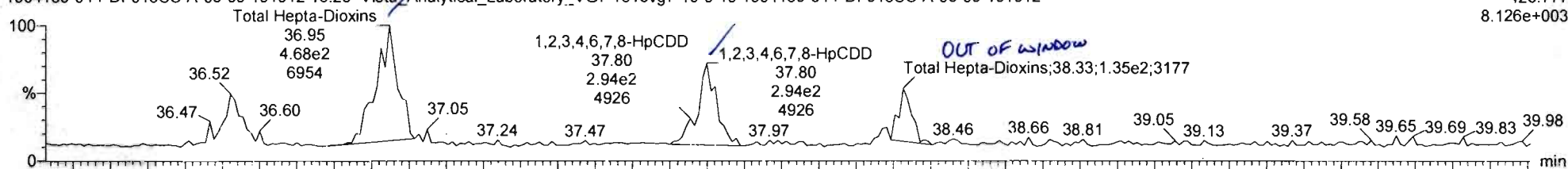
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Total Hepta-Dioxins

200116D1\_13

1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-04 PDI-015SC-A-08-09-191012

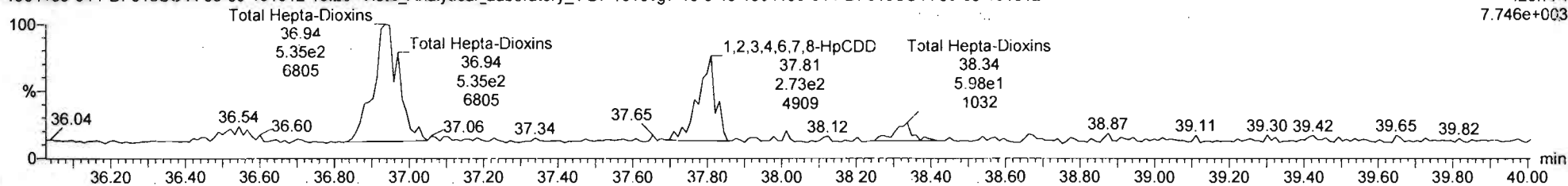
F4:SIR of 11 channels,EI+  
423.777  
8.126e+003



200116D1\_13

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F4:SIR of 11 channels,EI+  
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7.746e+003

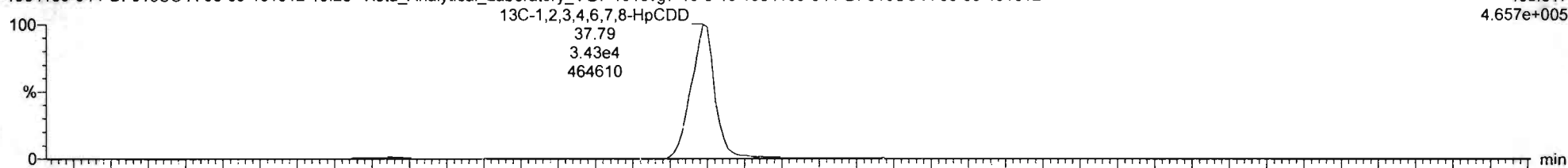


13C-1,2,3,4,6,7,8-HpCDD

200116D1\_13

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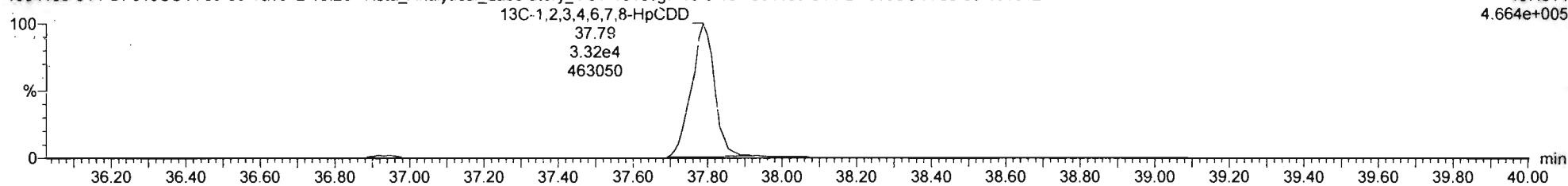
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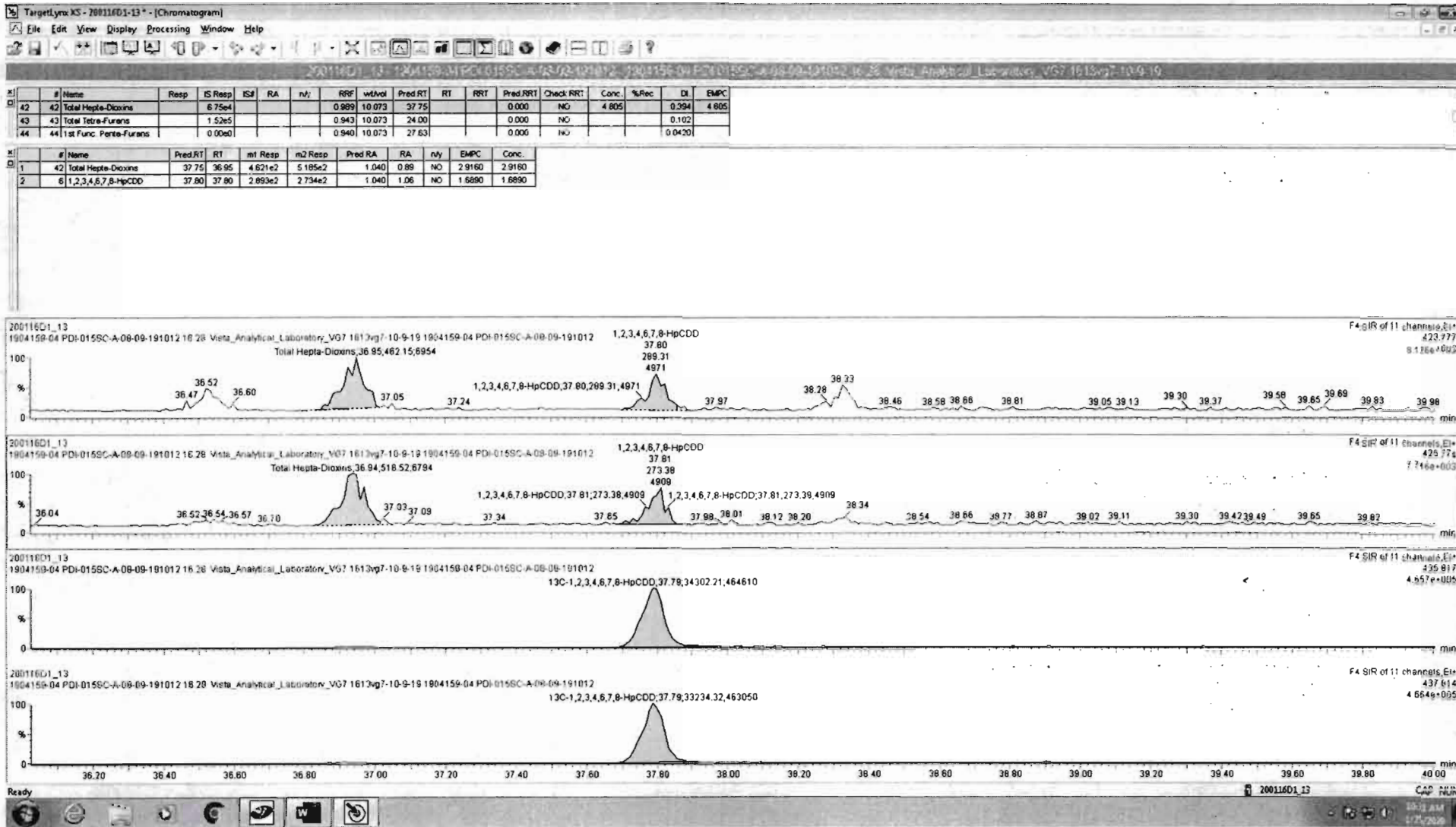


200116D1\_13

1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-04 PDI-015SC-A-08-09-191012

F4:SIR of 11 channels,EI+  
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4.664e+005





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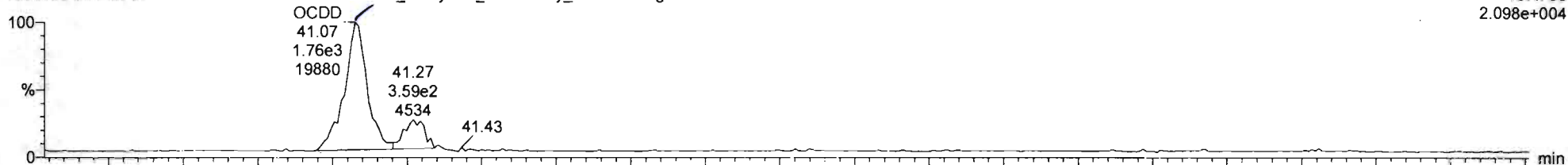
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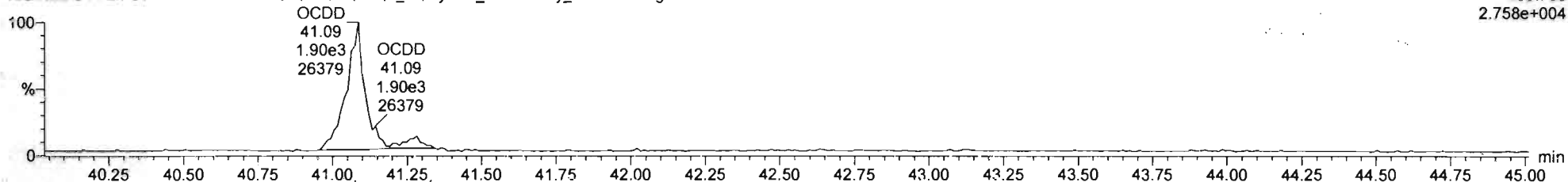
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F5:SIR of 11 channels, EI+  
457.738  
2.098e+004



200116D1\_13  
1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-04 PDI-015SC-A-08-09-191012

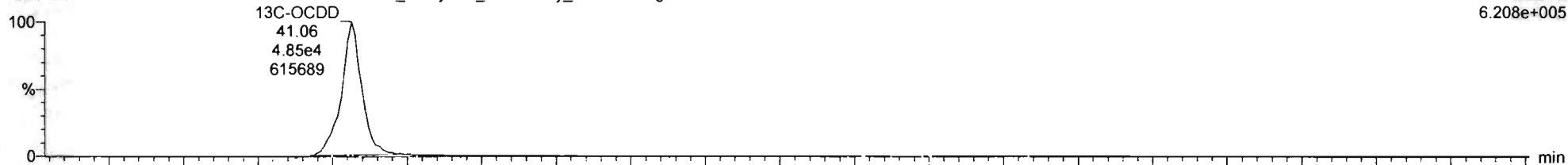
F5:SIR of 11 channels, EI+  
459.735  
2.758e+004



13C-OCDD

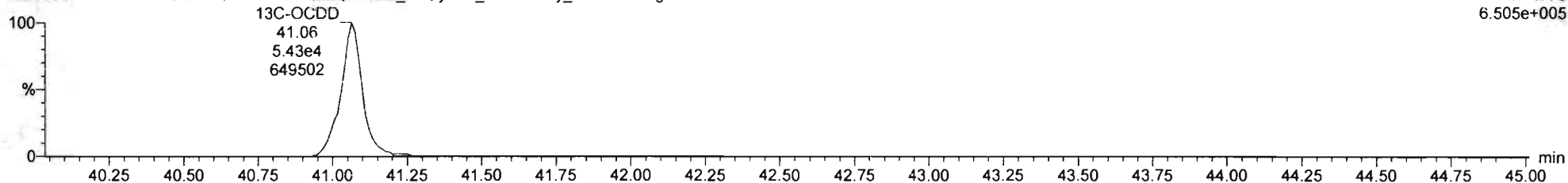
200116D1\_13  
1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-04 PDI-015SC-A-08-09-191012

F5:SIR of 11 channels, EI+  
469.778  
6.208e+005



200116D1\_13  
1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-04 PDI-015SC-A-08-09-191012

F5:SIR of 11 channels, EI+  
471.775  
6.505e+005



Vista Analytical Laboratory

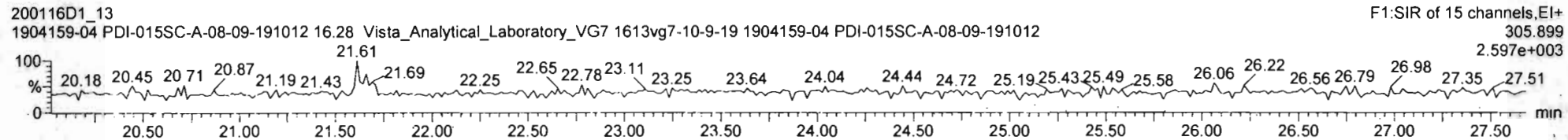
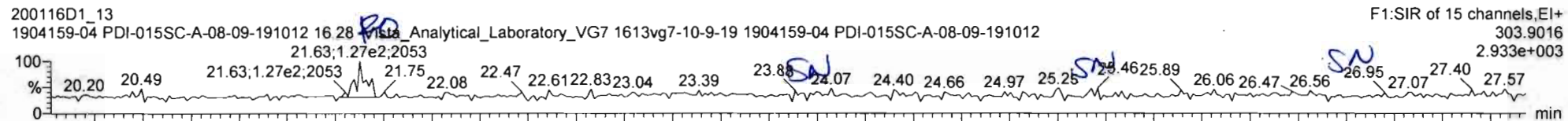
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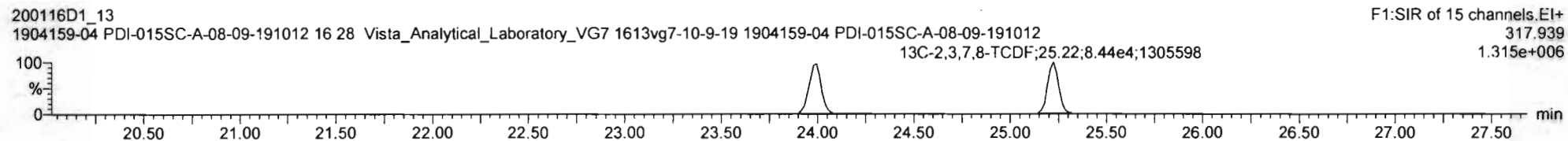
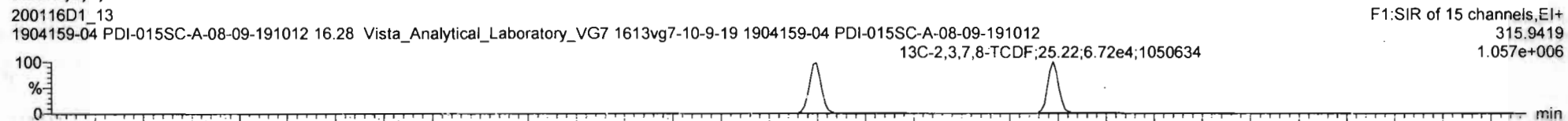
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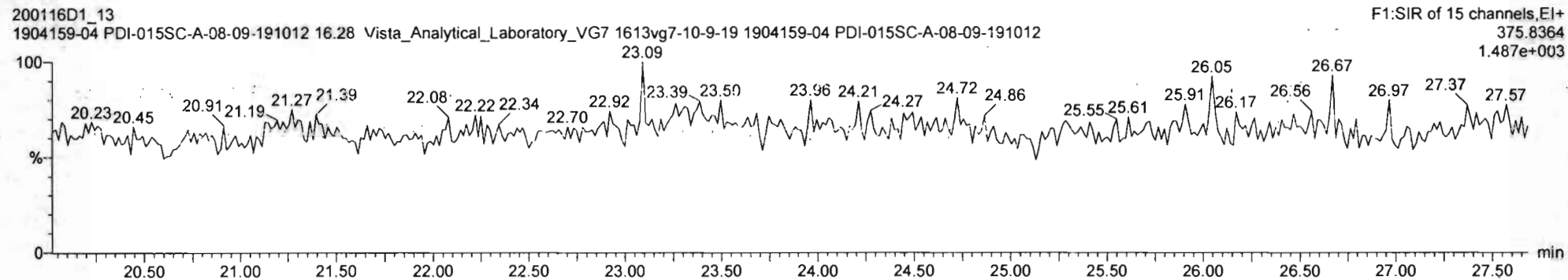
Total Tetra-Furans

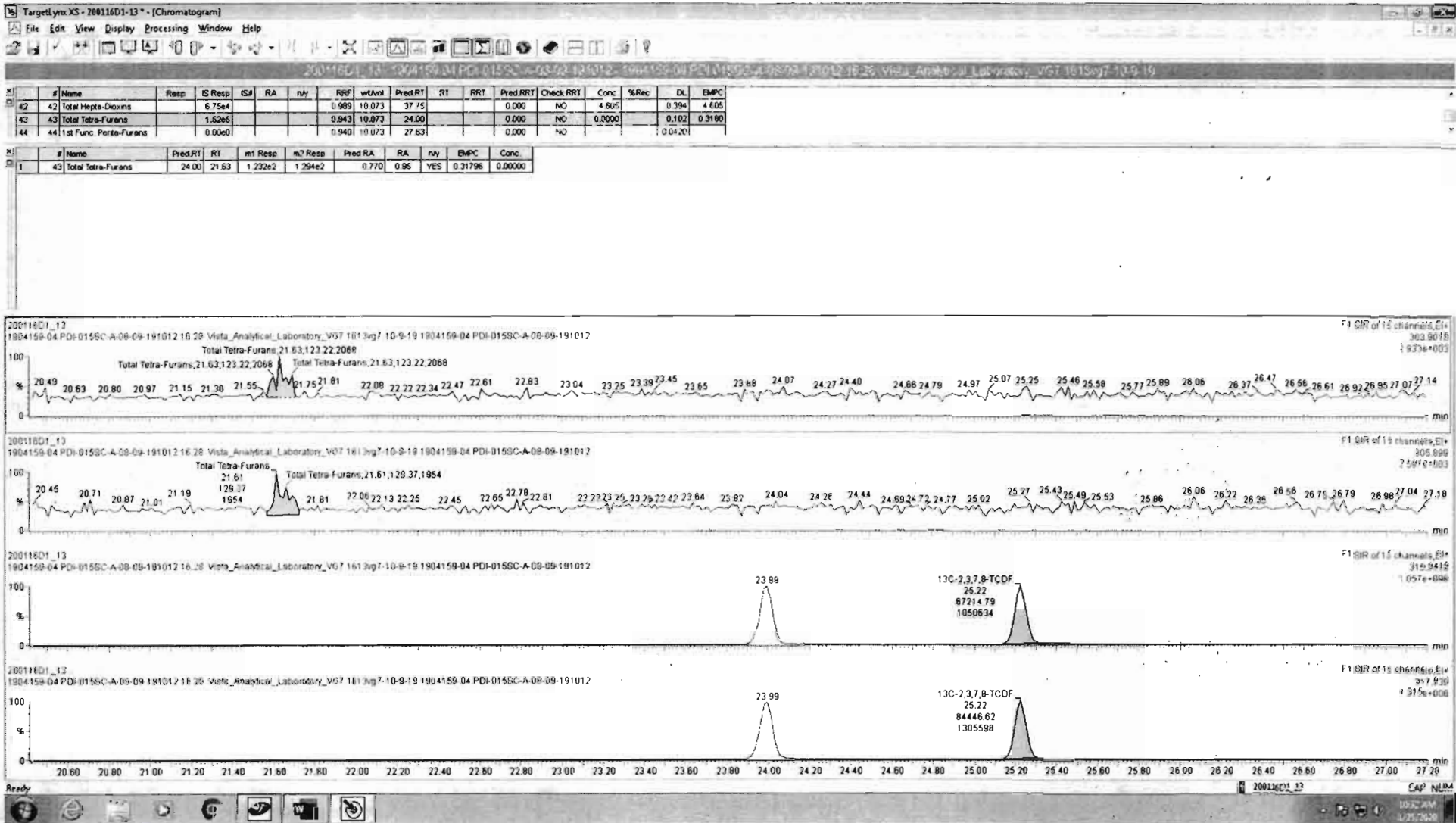


13C-2,3,7,8-TCDF



DPE1





Vista Analytical Laboratory

Dataset: Untitled

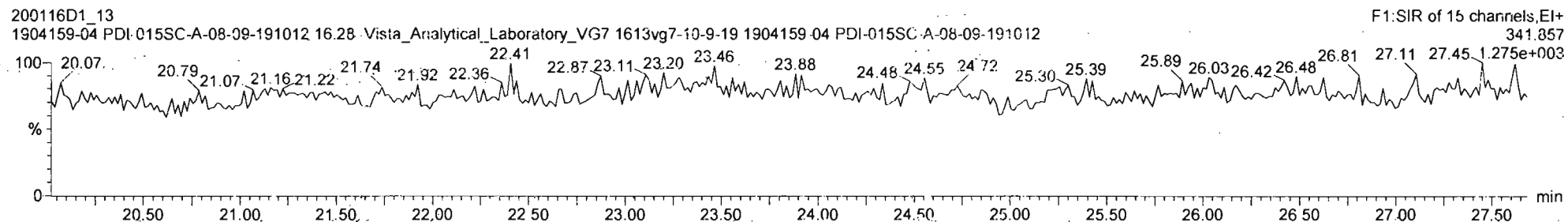
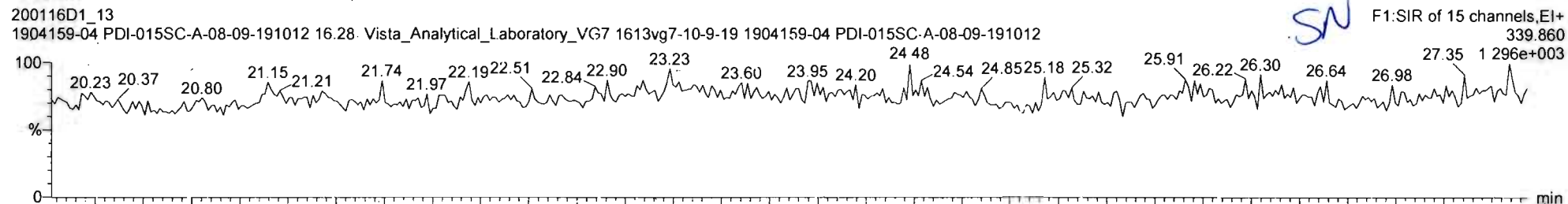
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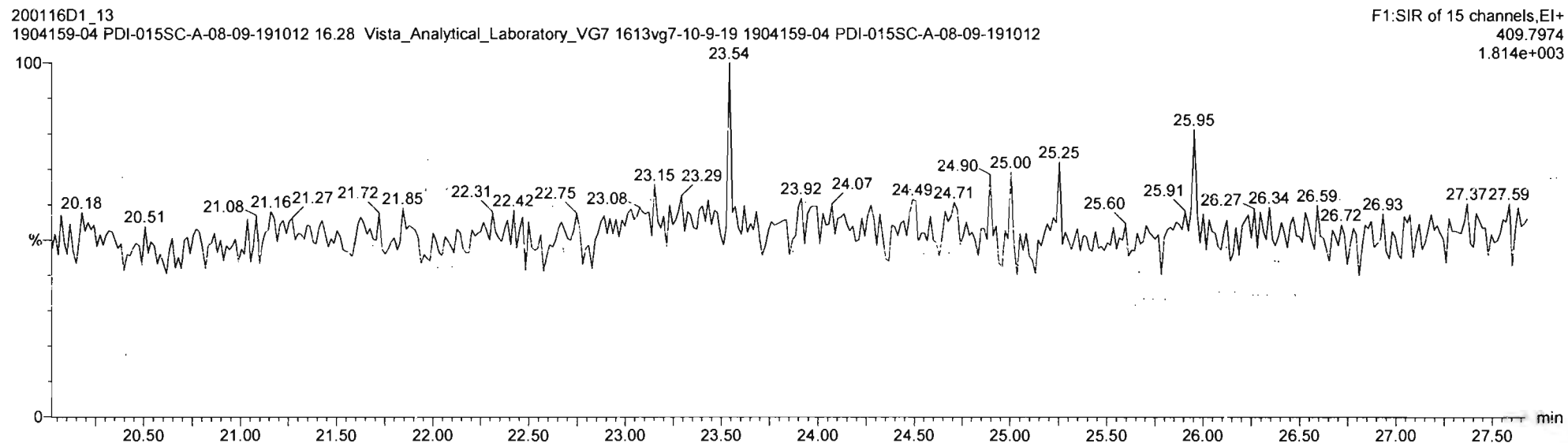
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Description: 1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans



DPE6



Vista Analytical Laboratory

Dataset: Untitled

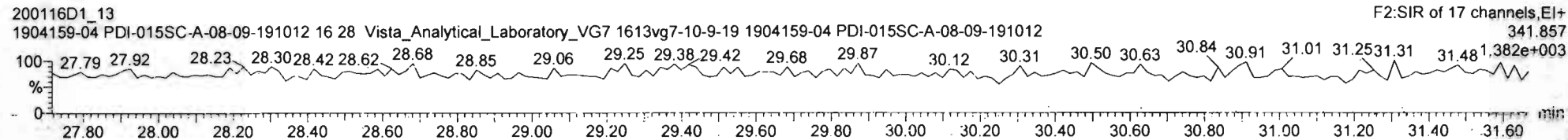
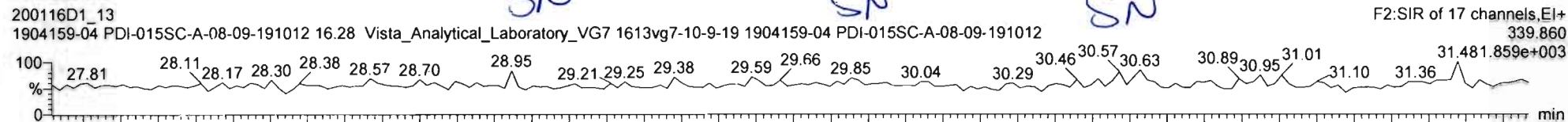
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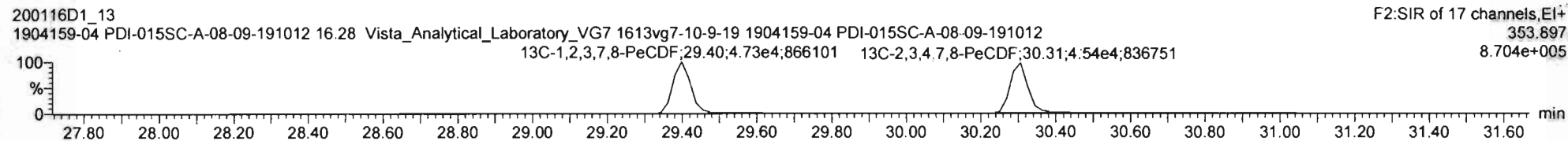
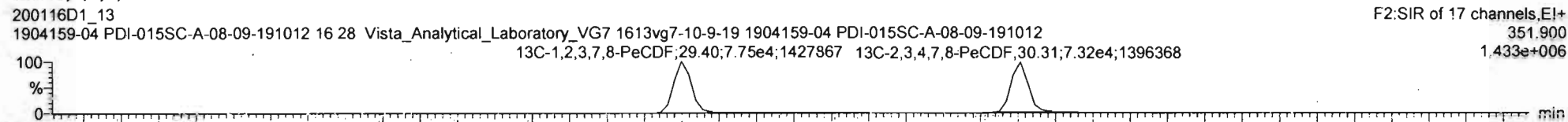
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Total Penta-Furans

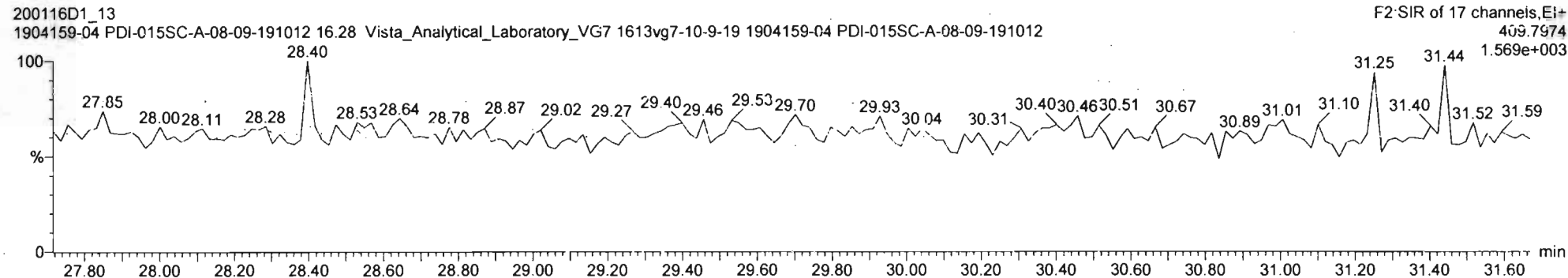
SN SN SN



13C-1,2,3,7,8-PeCDF



DPE2



Vista Analytical Laboratory

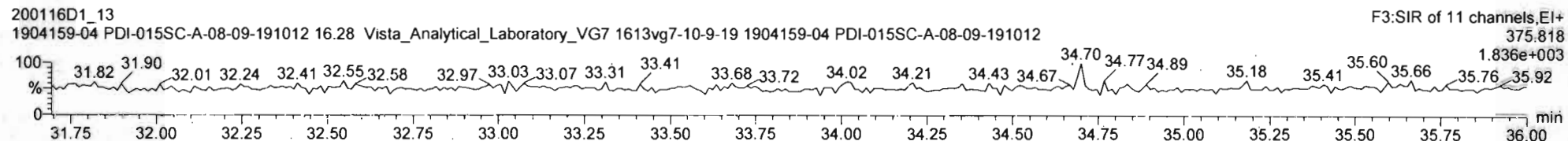
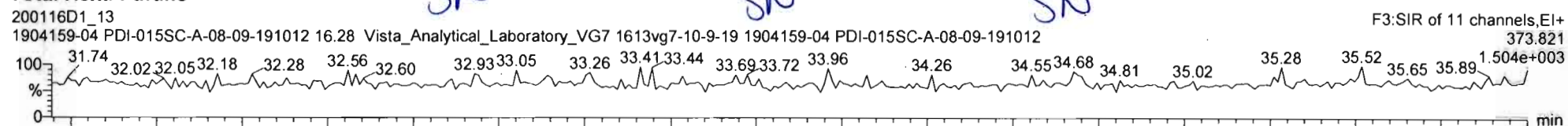
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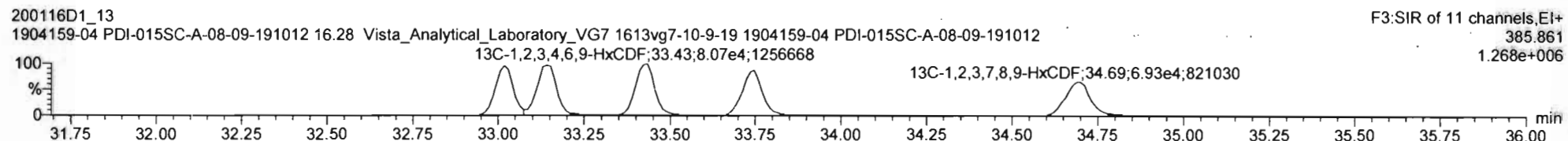
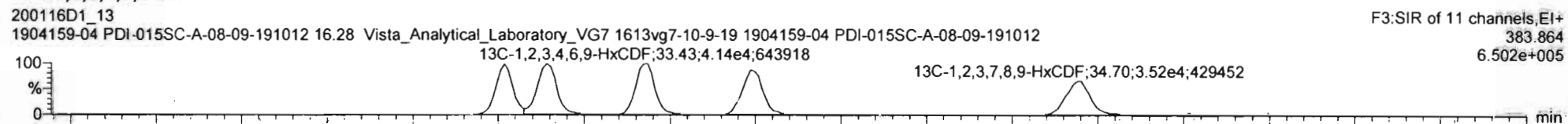
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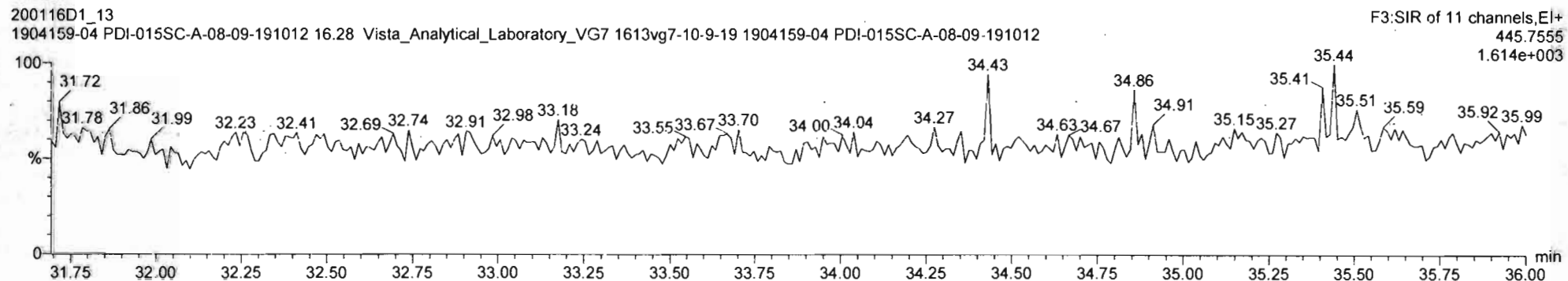
Total Hexa-Furans



13C-1,2,3,4,7,8-HxCDF



DPE3





Vista Analytical Laboratory

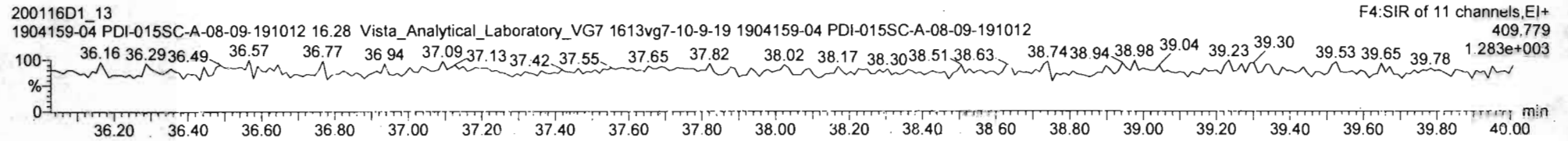
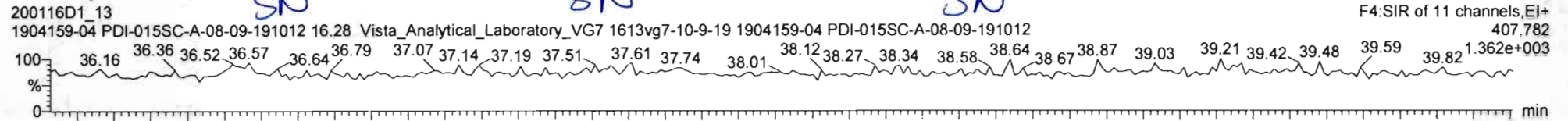
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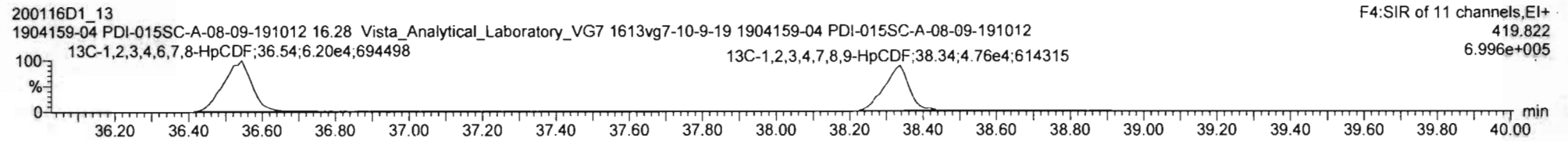
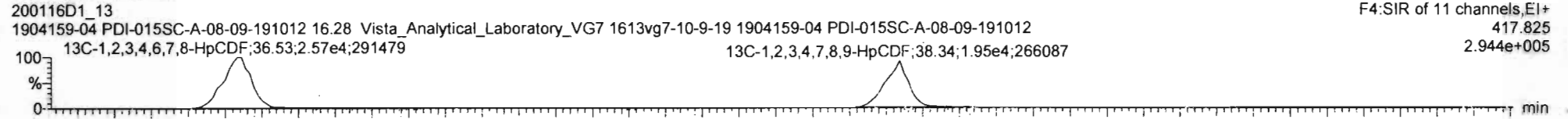
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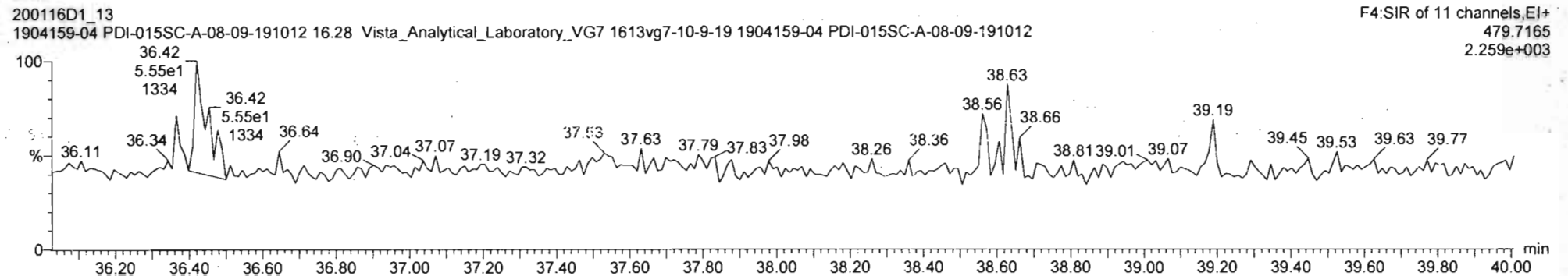
Total Hepta-Furans



13C-1,2,3,4,6,7,8-HpCDF



DPE4



Vista Analytical Laboratory

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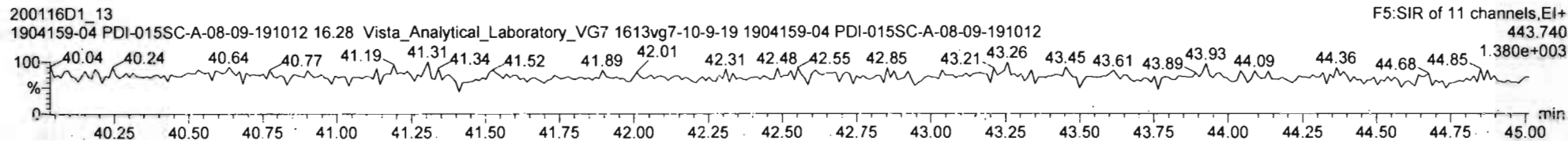
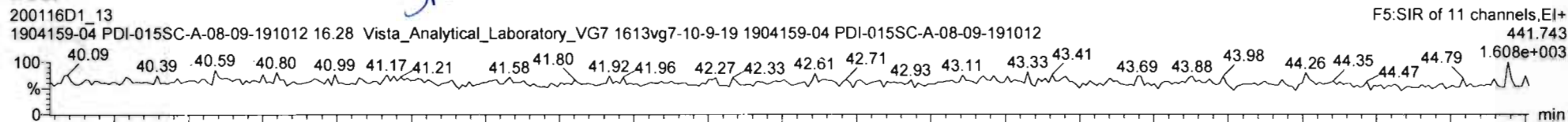
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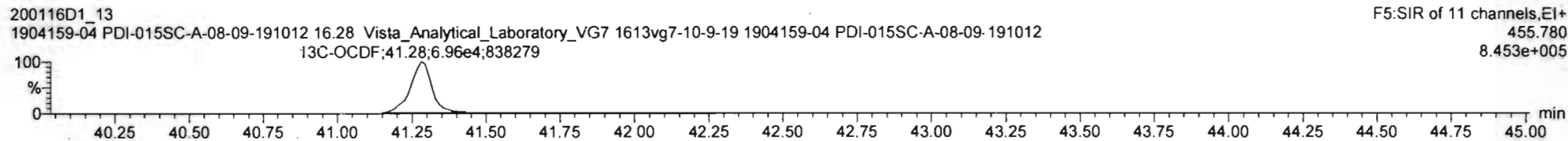
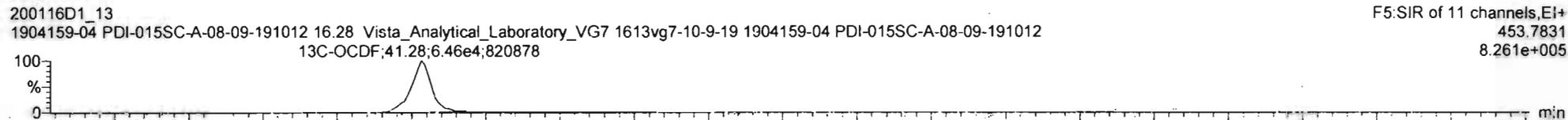
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OCDF

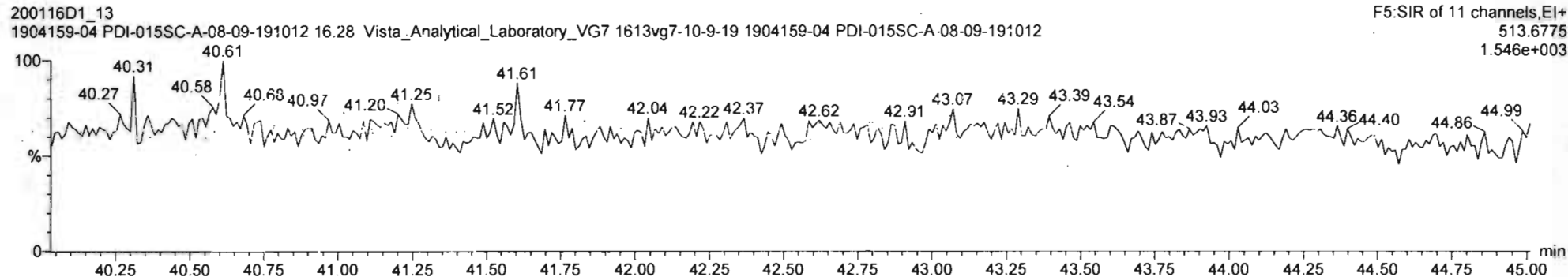
SN



13C-OCDF



DPE5



Vista Analytical Laboratory

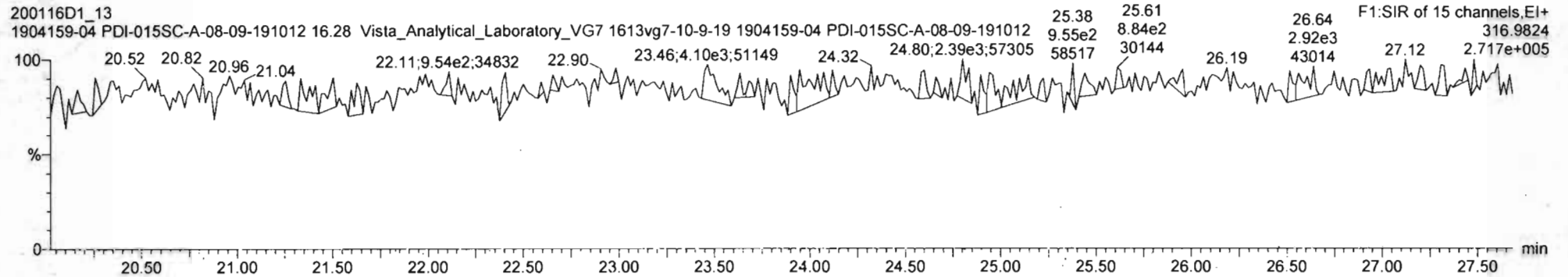
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Last Altered: Saturday, January 25, 2020 10:17:30 Pacific Standard Time

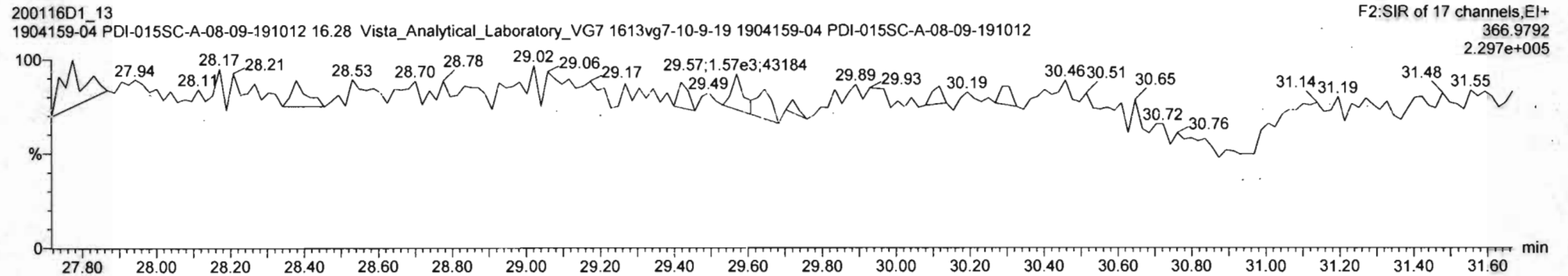
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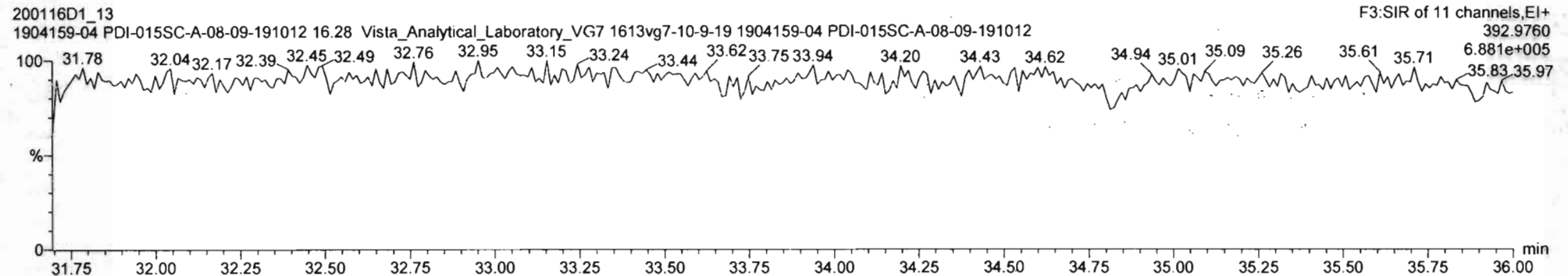
PFK1



PFK2



PFK3



Vista Analytical Laboratory

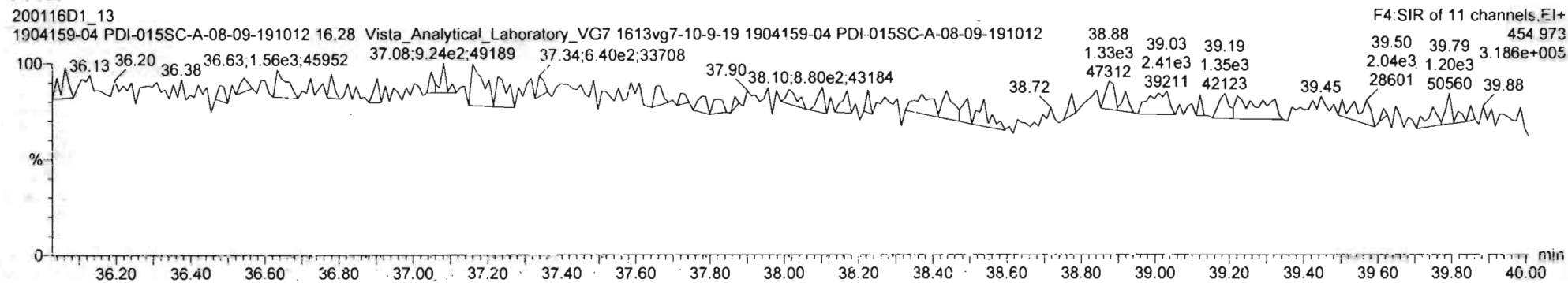
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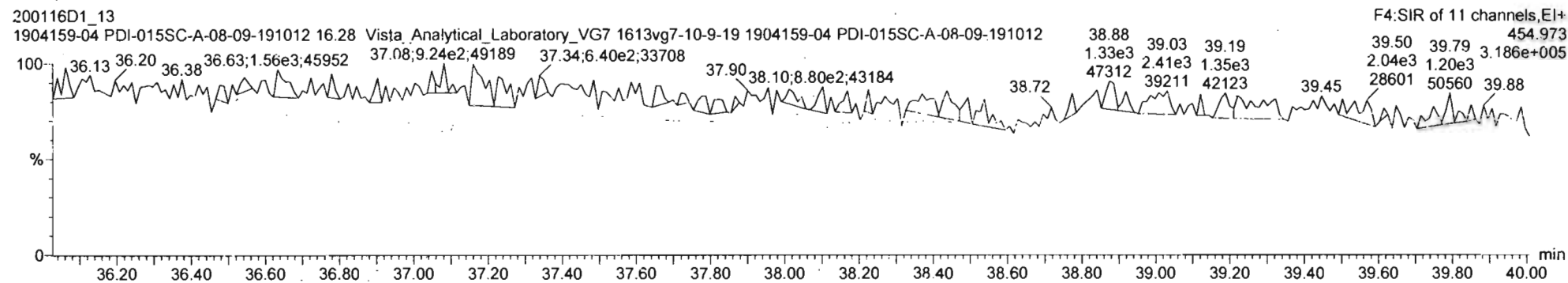
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Description: 1904159-04 PDI-015SC-A-08-09-191012 16.28 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

PFK4



PFK5



Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_3B.qld

Last Altered: Friday, January 31, 2020 12:18:28 Pacific Standard Time  
Printed: Friday, January 31, 2020 12:19:17 Pacific Standard Time

*GPB 01/31/2020*

*C7 02/03/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	7.54e3	0.71	NO	0.824	10.076	25.871	25.87	1.001	1.001	1.0835		0.0529	1.08
2	2 1,2,3,7,8-PeCDD	7.25e3	0.56	NO	0.912	10.076	30.750	30.76	1.001	1.001	1.2697		0.0499	1.27
3	3 1,2,3,4,7,8-HxCDD	4.93e3	1.16	NO	0.870	10.076	34.093	34.10	1.000	1.001	1.1529		0.126	1.15
4	4 1,2,3,6,7,8-HxCDD	2.57e4	1.19	NO	0.784	10.076	34.190	34.20	1.000	1.000	6.1509		0.126	6.15
5	5 1,2,3,7,8,9-HxCDD	1.08e4	1.20	NO	0.798	10.076	34.501	34.48	1.001	1.000	2.5367		0.131	2.54
6	6 1,2,3,4,6,7,8-HpCDD	5.51e5	0.98	NO	0.737	10.076	38.024	38.02	1.000	1.000	210.07		0.576	210
7	7 OCDD	6.44e6	0.86	NO	0.800	10.076	40.995	41.01	1.000	1.000	2956.3		0.421	2960
8	8 2,3,7,8-TCDF	2.24e5	0.71	NO	0.588	10.076	24.997	24.99	1.001	1.001	35.608	(340)	0.0746	35.6
9	9 1,2,3,7,8-PeCDF	4.38e5	1.51	NO	0.826	10.076	29.483	29.48	1.001	1.001	54.746		0.0911	54.7
10	10 2,3,4,7,8-PeCDF	1.82e5	1.52	NO	0.850	10.076	30.468	30.45	1.001	1.001	23.146		0.0911	23.1
11	11 1,2,3,4,7,8-HxCDF	3.81e5	1.16	NO	0.787	10.076	33.210	33.23	1.000	1.001	101.19		0.127	101
12	12 1,2,3,6,7,8-HxCDF	9.82e4	1.17	NO	0.720	10.076	33.348	33.35	1.000	1.000	23.846		0.116	23.8
13	13 2,3,4,6,7,8-HxCDF	2.31e4	1.15	NO	0.766	10.076	33.947	33.93	1.001	1.001	6.4248		0.140	6.42
14	14 1,2,3,7,8,9-HxCDF	1.34e4	1.08	NO	0.709	10.076	34.829	34.87	1.000	1.001	4.4998		0.178	4.50
15	15 1,2,3,4,6,7,8-HpCDF	1.42e5	0.97	NO	0.732	10.076	36.623	36.60	1.001	1.000	63.932		0.212	63.9
16	16 1,2,3,4,7,8,9-HpCDF	2.73e4	0.94	NO	0.816	10.076	38.589	38.60	1.000	1.000	15.648		0.227	15.6
17	17 OCDF	2.16e5	0.82	NO	0.639	10.076	41.187	41.20	1.000	1.000	135.79		0.171	136
18	18 13C-2,3,7,8-TCDD	1.68e6	0.79	NO	1.12	10.076	25.860	25.84	1.026	1.025	179.85	90.6	0.0871	
19	19 13C-1,2,3,7,8-PeCDD	1.24e6	0.63	NO	0.841	10.076	30.633	30.73	1.215	1.219	176.99	89.2	0.164	
20	20 13C-1,2,3,4,7,8-HxCDD	9.75e5	1.25	NO	0.938	10.076	34.086	34.08	1.014	1.014	158.42	79.8	0.218	
21	21 13C-1,2,3,6,7,8-HxCDD	1.06e6	1.22	NO	1.07	10.076	34.186	34.19	1.017	1.017	151.10	76.1	0.192	
22	22 13C-1,2,3,7,8,9-HxCDD	1.06e6	1.24	NO	1.03	10.076	34.489	34.47	1.026	1.025	156.15	78.7	0.198	
23	23 13C-1,2,3,4,6,7,8-HpCDD	7.07e5	1.01	NO	0.710	10.076	38.052	38.01	1.132	1.131	151.77	76.5	0.229	
24	24 13C-OCDD	1.08e6	0.89	NO	0.601	10.076	40.943	40.99	1.218	1.220	273.89	69.0	0.238	
25	25 13C-2,3,7,8-TCDF	2.13e6	0.73	NO	1.04	10.076	25.036	24.97	0.993	0.990	161.07	81.1	0.109	
26	26 13C-1,2,3,7,8-PeCDF	1.92e6	1.55	NO	0.917	10.076	29.397	29.46	1.166	1.169	164.71	83.0	0.270	
27	27 13C-2,3,4,7,8-PeCDF	1.83e6	1.54	NO	0.903	10.076	30.355	30.44	1.204	1.207	159.31	80.3	0.274	
28	28 13C-1,2,3,4,7,8-HxCDF	9.50e5	0.49	NO	0.861	10.076	33.212	33.21	0.988	0.988	168.09	84.7	0.280	
29	29 13C-1,2,3,6,7,8-HxCDF	1.14e6	0.49	NO	1.05	10.076	33.312	33.34	0.991	0.992	165.30	83.3	0.230	
30	30 13C-2,3,4,6,7,8-HxCDF	9.30e5	0.49	NO	0.946	10.076	33.921	33.91	1.009	1.009	149.88	75.5	0.255	
31	31 13C-1,2,3,7,8,9-HxCDF	8.32e5	0.49	NO	0.816	10.076	34.825	34.83	1.036	1.036	155.48	78.3	0.296	

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_3B.qld

Last Altered: Friday, January 31, 2020 12:18:28 Pacific Standard Time

Printed: Friday, January 31, 2020 12:19:17 Pacific Standard Time

Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	6.04e5	0.41	NO	0.589	10.076	36.573	36.59	1.088	1.088	156.27	78.7	0.236	
33	13C-1,2,3,4,7,8,9-HpCDF	4.25e5	0.41	NO	0.448	10.076	38.590	38.59	1.148	1.148	144.40	72.7	0.310	
34	13C-OCDF	9.90e5	0.84	NO	0.586	10.076	41.178	41.19	1.225	1.225	257.55	64.9	0.279	
35	37Cl-2,3,7,8-TCDD	6.70e5			1.09	10.076	25.893	25.85	1.027	1.026	73.892	93.1	0.0313	
36	13C-1,2,3,4-TCDD	1.66e6	0.80	NO	1.00	10.076	25.260	25.21	1.000	1.000	198.49	100	0.0972	
37	13C-1,2,3,4-TCDF	2.53e6	0.75	NO	1.00	10.076	23.860	23.57	1.000	1.000	198.49	100	0.113	
38	13C-1,2,3,4,6,9-HxCDF	1.30e6	0.49	NO	1.00	10.076	33.590	33.62	1.000	1.000	198.49	100	0.241	
39	Total Tetra-Dioxins				0.824	10.076	24.620		0.000		6.7706		0.0529	6.77
40	Total Penta-Dioxins				0.912	10.076	29.960		0.000		7.8352		0.0499	9.87
41	Total Hexa-Dioxins				0.784	10.076	33.635		0.000		71.379		0.133	71.4
42	Total Hepta-Dioxins				0.737	10.076	37.640		0.000		509.49		0.576	509
43	Total Tetra-Furans				0.588	10.076	23.610		0.000		131.37		0.0746	132
44	1st Func Penta-Furans				0.826	10.076	27.090		0.000		14.559		0.0160	14.6
45	Total Penta-Furans				0.826	10.076	29.275		0.000		146.27		0.0924	147
46	Total Hexa-Furans				0.766	10.076	33.555		0.000		193.75		0.134	194
47	Total Hepta-Furans				0.732	10.076	37.835		0.000		168.13		0.229	168

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_3B.qld

Last Altered: Friday, January 31, 2020 12:18:28 Pacific Standard Time

Printed: Friday, January 31, 2020 12:19:17 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	21.98	8.011e4	9.142e4	6.841e3	8.580e3	0.80	NO	1.542e4	2.2154	2.2154	0.0529
2	Total Tetra-Dioxins	22.40	2.684e4	2.669e4	2.052e3	2.535e3	0.81	NO	4.587e3	0.65894	0.65894	0.0529
3	Total Tetra-Dioxins	22.86	8.013e3	9.473e3	7.114e2	8.061e2	0.88	NO	1.518e3	0.21801	0.21801	0.0529
4	Total Tetra-Dioxins	23.76	5.510e3	7.336e3	3.332e2	4.176e2	0.80	NO	7.508e2	0.10786	0.10786	0.0529
5	Total Tetra-Dioxins	23.98	1.429e4	2.112e4	1.195e3	1.784e3	0.67	NO	2.979e3	0.42800	0.42800	0.0529
6	Total Tetra-Dioxins	24.21	1.827e4	3.105e4	1.662e3	2.331e3	0.71	NO	3.993e3	0.57357	0.57357	0.0529
7	Total Tetra-Dioxins	24.42	5.852e3	6.548e3	3.681e2	4.672e2	0.79	NO	8.353e2	0.12001	0.12001	0.0529
8	Total Tetra-Dioxins	24.66	4.968e3	6.584e3	3.399e2	4.132e2	0.82	NO	7.531e2	0.10819	0.10819	0.0529
9	Total Tetra-Dioxins	24.84	5.229e3	8.312e3	3.413e2	5.044e2	0.68	NO	8.457e2	0.12149	0.12149	0.0529
10	Total Tetra-Dioxins	25.20	3.896e3	6.026e3	2.978e2	3.437e2	0.87	NO	6.415e2	0.092151	0.092151	0.0529
11	Total Tetra-Dioxins	25.60	3.114e4	4.113e4	2.429e3	3.248e3	0.75	NO	5.677e3	0.81557	0.81557	0.0529
12	2,3,7,8-TCDD	25.87	4.730e4	6.135e4	3.118e3	4.423e3	0.71	NO	7.542e3	1.0835	1.0835	0.0529
13	Total Tetra-Dioxins	26.20	7.611e3	1.167e4	4.700e2	7.107e2	0.66	NO	1.181e3	0.16962	0.16962	0.0529
14	Total Tetra-Dioxins	26.80	3.599e3	4.907e3	1.715e2	2.345e2	0.73	NO	4.060e2	0.058323	0.058323	0.0529

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.55	9.088e4	1.579e5	7.240e3	1.194e4	0.61	NO	1.918e4	3.3573	3.3573	0.0499
2	Total Penta-Dioxins	29.02	2.445e4	4.383e4	1.143e3	2.230e3	0.51	YES	0.000e0	0.00000	0.51764	0.0499
3	Total Penta-Dioxins	29.51	7.021e4	1.105e5	4.043e3	6.272e3	0.64	NO	1.031e4	1.8052	1.8052	0.0499
4	Total Penta-Dioxins	29.68	4.091e4	6.979e4	2.289e3	3.145e3	0.73	YES	0.000e0	0.00000	0.89733	0.0499
5	Total Penta-Dioxins	29.78	1.874e4	4.031e4	1.161e3	1.812e3	0.64	NO	2.974e3	0.52045	0.52045	0.0499
6	Total Penta-Dioxins	29.97	2.047e4	4.038e4	2.077e3	2.966e3	0.70	NO	5.043e3	0.88262	0.88262	0.0499
7	Total Penta-Dioxins	30.32	9.705e3	1.888e4	4.356e2	9.073e2	0.48	YES	0.000e0	0.00000	0.19727	0.0499
8	1,2,3,7,8-PeCDD	30.76	4.763e4	9.881e4	2.597e3	4.658e3	0.56	NO	7.255e3	1.2697	1.2697	0.0499
9	Total Penta-Dioxins	30.83	1.294e4	1.956e4	6.771e2	7.183e2	0.94	YES	0.000e0	0.00000	0.20492	0.0499
10	Total Penta-Dioxins	31.11	9.478e3	2.223e4	4.754e2	1.040e3	0.46	YES	0.000e0	0.00000	0.21525	0.0499

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_3B.qld

Last Altered: Friday, January 31, 2020 12:18:28 Pacific Standard Time

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Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

**Hexa-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.60	1.641e6	1.342e6	7.292e4	5.904e4	1.23	NO	1.320e5	32.459	32.459	0.133
2	Total Hexa-Dioxins	33.16	1.173e5	1.093e5	6.109e3	5.111e3	1.20	NO	1.122e4	2.7597	2.7597	0.133
3	Total Hexa-Dioxins	33.41	8.952e5	7.164e5	5.577e4	4.583e4	1.22	NO	1.016e5	24.992	24.992	0.133
4	Total Hexa-Dioxins	33.53	3.701e4	3.117e4	1.666e3	1.371e3	1.22	NO	3.036e3	0.74687	0.74687	0.133
5	1,2,3,4,7,8-HxCDD	34.10	4.698e4	5.048e4	2.644e3	2.286e3	1.16	NO	4.930e3	1.1529	1.1529	0.126
6	1,2,3,6,7,8-HxCDD	34.20	2.651e5	2.302e5	1.397e4	1.170e4	1.19	NO	2.567e4	6.1509	6.1509	0.126
7	Total Hexa-Dioxins	34.38	2.390e4	2.296e4	1.236e3	1.129e3	1.09	NO	2.365e3	0.58179	0.58179	0.133
8	1,2,3,7,8,9-HxCDD	34.48	1.048e5	9.326e4	5.869e3	4.905e3	1.20	NO	1.077e4	2.5367	2.5367	0.131

**Hepta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.99	6.188e6	6.197e6	3.907e5	3.954e5	0.99	NO	7.861e5	299.42	299.42	0.576
2	1,2,3,4,6,7,8-HpCDD	38.02	4.782e6	4.829e6	2.734e5	2.781e5	0.98	NO	5.515e5	210.07	210.07	0.576



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Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_3B.qld

Last Altered: Friday, January 31, 2020 12:18:28 Pacific Standard Time

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Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

**Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	19.84	2.397e4	3.618e4	1.979e3	2.921e3	0.68	NO	4.901e3	0.77811	0.77811	0.0746
2	Total Tetra-Furans	20.36	3.185e4	4.004e4	2.498e3	3.369e3	0.74	NO	5.867e3	0.93147	0.93147	0.0746
3	Total Tetra-Furans	20.99	1.744e5	2.561e5	1.652e4	2.401e4	0.69	NO	4.053e4	6.4357	6.4357	0.0746
4	Total Tetra-Furans	21.53	4.842e4	7.042e4	7.295e3	1.008e4	0.72	NO	1.737e4	2.7585	2.7585	0.0746
5	Total Tetra-Furans	21.93	3.062e5	4.177e5	2.812e4	3.928e4	0.72	NO	6.740e4	10.702	10.702	0.0746
6	Total Tetra-Furans	22.43	1.026e5	1.407e5	9.660e3	1.369e4	0.71	NO	2.335e4	3.7079	3.7079	0.0746
7	Total Tetra-Furans	22.59	1.449e4	2.219e4	1.296e3	1.819e3	0.71	NO	3.115e3	0.49458	0.49458	0.0746
8	Total Tetra-Furans	22.77	5.892e4	8.251e4	4.493e3	6.721e3	0.67	NO	1.121e4	1.7805	1.7805	0.0746
9	Total Tetra-Furans	23.19	7.025e3	1.478e4	7.579e2	1.173e3	0.65	YES	0.000e0	0.00000	0.27660	0.0746
10	Total Tetra-Furans	23.33	1.652e4	2.257e4	1.241e3	1.545e3	0.80	NO	2.786e3	0.44241	0.44241	0.0746
11	Total Tetra-Furans	23.58	4.457e5	6.542e5	5.029e4	7.111e4	0.71	NO	1.214e5	19.275	19.275	0.0746
12	Total Tetra-Furans	24.07	1.103e6	1.570e6	8.236e4	1.165e5	0.71	NO	1.989e5	31.578	31.578	0.0746
13	Total Tetra-Furans	24.36	3.417e4	5.235e4	2.633e3	3.876e3	0.68	NO	6.509e3	1.0334	1.0334	0.0746
14	Total Tetra-Furans	24.55	2.841e4	3.850e4	2.031e3	3.091e3	0.66	NO	5.121e3	0.81315	0.81315	0.0746
15	Total Tetra-Furans	24.88	3.135e5	4.592e5	2.264e4	3.293e4	0.69	NO	5.557e4	8.8237	8.8237	0.0746
16	2,3,7,8-TCDF	24.99	1.356e6	1.917e6	9.329e4	1.310e5	0.71	NO	2.243e5	35.608	35.608	0.0746
17	Total Tetra-Furans	25.36	6.639e4	1.010e5	4.754e3	7.107e3	0.67	NO	1.186e4	1.8831	1.8831	0.0746
18	Total Tetra-Furans	25.61	1.843e4	2.888e4	1.079e3	1.563e3	0.69	NO	2.642e3	0.41948	0.41948	0.0746
19	Total Tetra-Furans	26.95	1.799e5	2.126e5	1.110e4	1.350e4	0.82	NO	2.460e4	3.9064	3.9064	0.0746

**Penta-Furans function 1**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.93	1.156e6	7.522e5	7.082e4	4.296e4	1.65	NO	1.138e5	14.559	14.559	0.0160

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_3B.qld

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 Printed: Friday, January 31, 2020 12:19:17 Pacific Standard Time

Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.50	2.538e6	1.652e6	1.644e5	1.072e5	1.53	NO	2.716e5	34.752	34.752	0.0924
2	Total Penta-Furans	29.08	7.147e5	4.785e5	3.982e4	2.643e4	1.51	NO	6.625e4	8.4775	8.4775	0.0924
3	Total Penta-Furans	29.29	5.692e5	3.653e5	2.637e4	1.764e4	1.49	NO	4.401e4	5.6317	5.6317	0.0924
4	1,2,3,7,8-PeCDF	29.48	5.224e6	3.451e6	2.639e5	1.744e5	1.51	NO	4.383e5	54.746	54.746	0.0911
5	Total Penta-Furans	29.74	1.368e6	9.041e5	7.096e4	4.647e4	1.53	NO	1.174e5	15.027	15.027	0.0924
6	2,3,4,7,8-PeCDF	30.45	2.083e6	1.389e6	1.094e5	7.208e4	1.52	NO	1.815e5	23.146	23.146	0.0911
7	Total Penta-Furans	30.48	1.211e6	7.276e5	2.148e4	1.361e4	1.58	NO	3.509e4	4.4896	4.4896	0.0924
8	Total Penta-Furans	31.38	1.031e5	6.228e4	5.671e3	3.175e3	1.79	YES	0.000e0	0.00000	1.0358	0.0924

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Furans	32.06	2.993e5	2.409e5	1.287e4	1.078e4	1.19	NO	2.365e4	6.3659	6.3659	0.134
2	Total Hexa-Furans	32.22	9.444e5	8.170e5	4.331e4	3.690e4	1.17	NO	8.021e4	21.590	21.590	0.134
3	Total Hexa-Furans	32.58	1.511e4	1.461e4	7.689e2	6.546e2	1.17	NO	1.424e3	0.38319	0.38319	0.134
4	Total Hexa-Furans	32.76	1.041e6	8.980e5	4.694e4	4.027e4	1.17	NO	8.721e4	23.474	23.474	0.134
5	Total Hexa-Furans	33.11	3.502e4	3.065e4	1.666e3	1.548e3	1.08	NO	3.214e3	0.86525	0.86525	0.134
6	1,2,3,4,7,8-HxCDF	33.23	4.160e6	3.554e6	2.045e5	1.766e5	1.16	NO	3.811e5	101.19	101.19	0.127
7	1,2,3,6,7,8-HxCDF	33.35	1.130e6	9.576e5	5.289e4	4.534e4	1.17	NO	9.824e4	23.846	23.846	0.116
8	Total Hexa-Furans	33.63	1.493e4	1.672e4	7.800e2	7.459e2	1.05	YES	0.000e0	0.00000	0.37929	0.134
9	2,3,4,6,7,8-HxCDF	33.93	2.572e5	2.210e5	1.232e4	1.076e4	1.15	NO	2.308e4	6.4248	6.4248	0.140
10	1,2,3,7,8,9-HxCDF	34.87	2.630e5	2.361e5	6.943e3	6.427e3	1.08	NO	1.337e4	4.4998	4.4998	0.178
11	Total Hexa-Furans	34.88	2.822e5	2.361e5	1.044e4	8.551e3	1.22	NO	1.899e4	5.1111	5.1111	0.134

**Hepta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.60	1.212e6	1.214e6	7.007e4	7.233e4	0.97	NO	1.424e5	63.932	63.932	0.212
2	Total Hepta-Furans	37.00	1.753e4	1.760e4	1.059e3	1.091e3	0.97	NO	2.150e3	1.1339	1.1339	0.229
3	Total Hepta-Furans	37.20	1.312e6	1.388e6	8.113e4	8.461e4	0.96	NO	1.657e5	87.412	87.412	0.229
4	1,2,3,4,7,8,9-HpCDF	38.60	2.641e5	2.819e5	1.322e4	1.410e4	0.94	NO	2.732e4	15.648	15.648	0.227

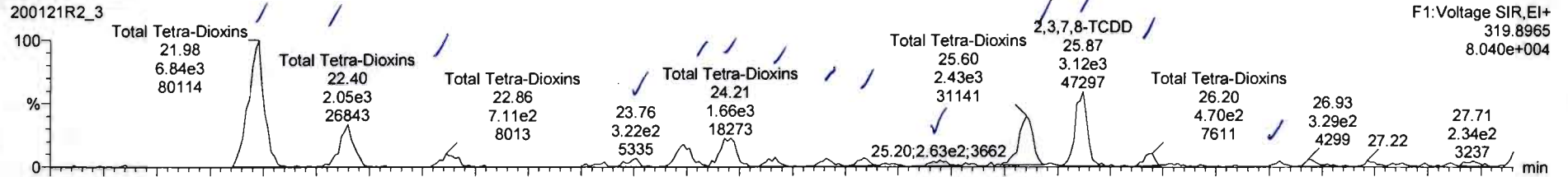
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Printed: Wednesday, January 22, 2020 10:45:28 Pacific Standard Time

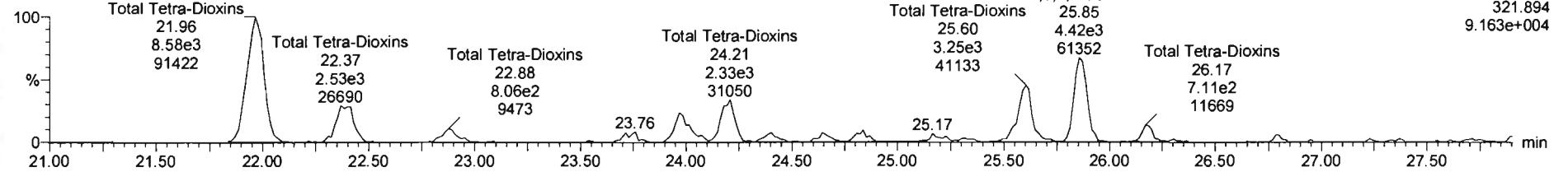
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Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

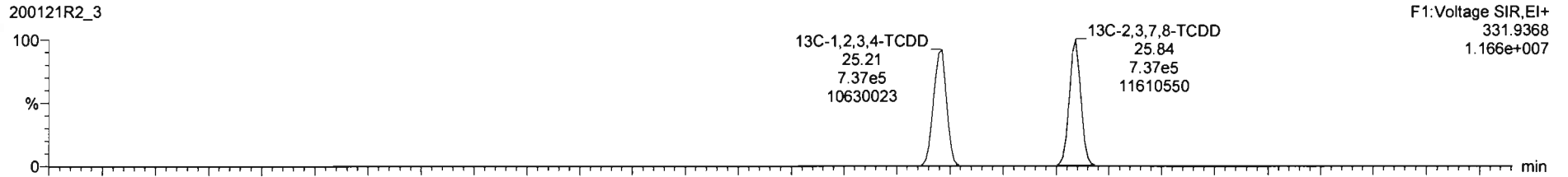
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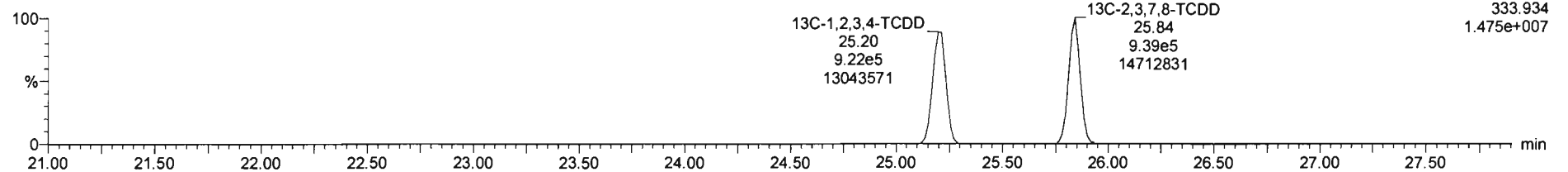
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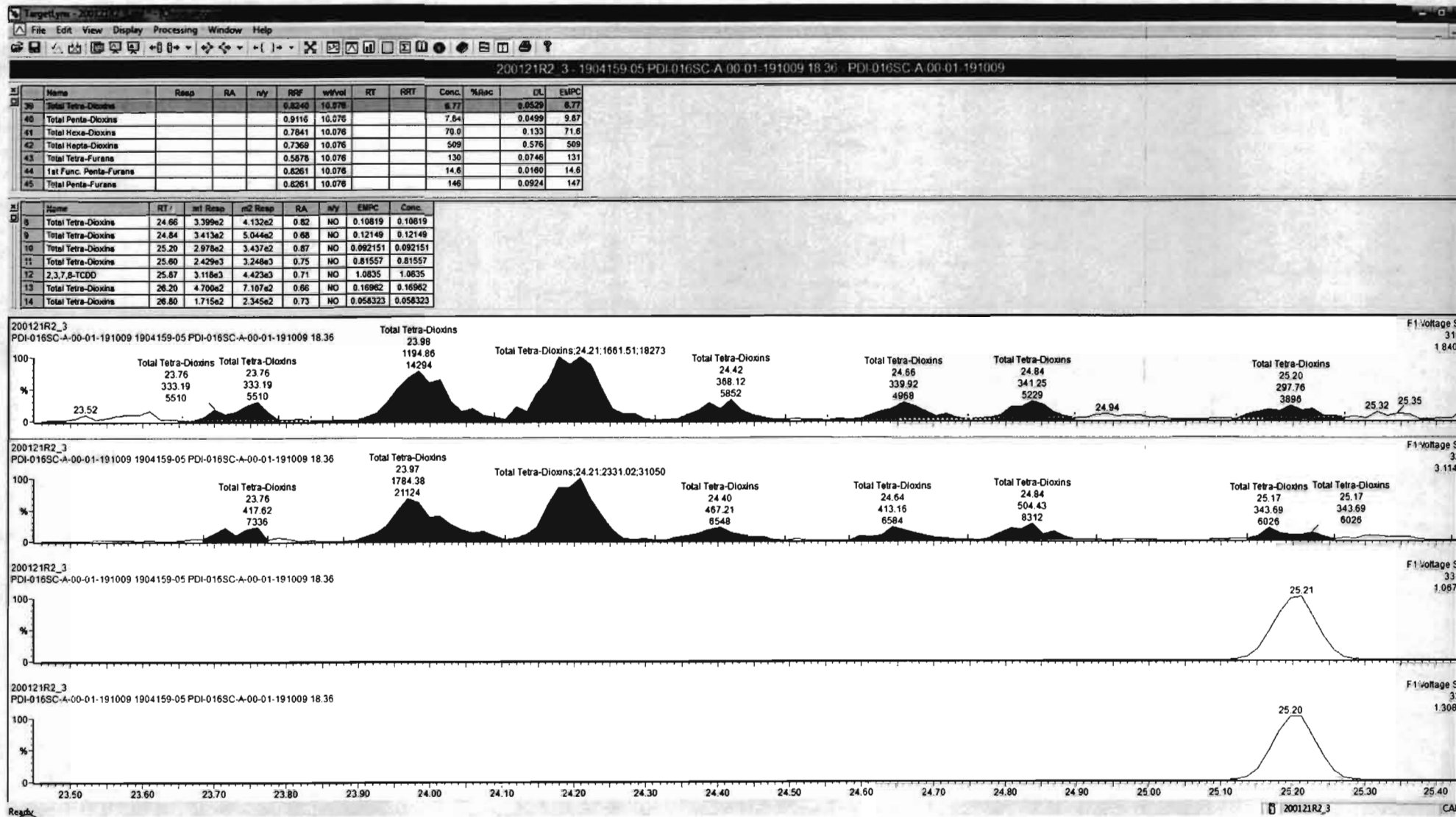


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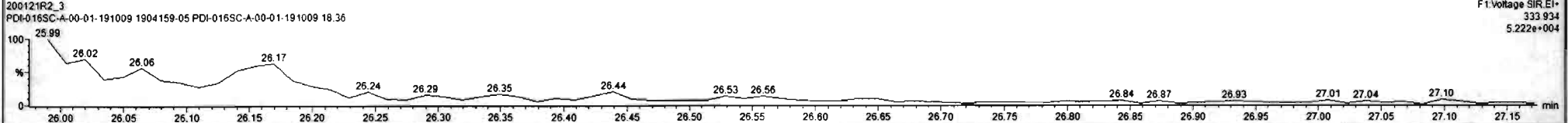
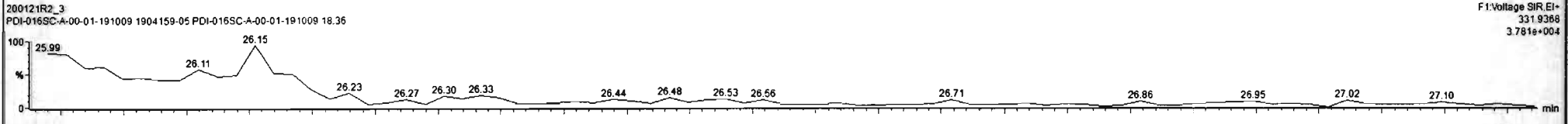
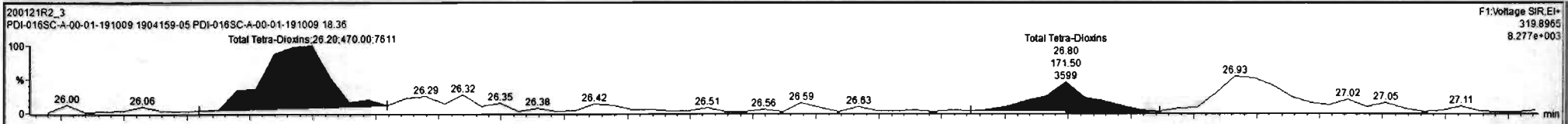
200121R2\_3





Name	Resp	RA	n/y	RRF	wtVcl	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.076			5.77	0.8529	5.77	
40 Total Penta-Dioxins				0.9116	10.076			7.84	0.0499	9.87	
41 Total Hexa-Dioxins				0.7841	10.076			70.9	0.133	71.6	
42 Total Hepta-Dioxins				0.7369	10.076			509	0.576	509	
43 Total Tetra-Furans				0.5878	10.076			130	0.0746	131	
44 Tet Func. Penta-Furans				0.8261	10.076			14.8	0.0160	14.8	
45 Total Penta-Furans				0.8261	10.076			146	0.0924	147	

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
8 Total Tetra-Dioxins	24.66	3.389e2	4.132e2	0.82	NO	0.10819	0.10819
9 Total Tetra-Dioxins	24.84	3.413e2	5.044e2	0.68	NO	0.12149	0.12149
10 Total Tetra-Dioxins	25.20	2.979e2	3.437e2	0.87	NO	0.092151	0.092151
11 Total Tetra-Dioxins	25.60	2.429e3	3.248e3	0.75	NO	0.81557	0.81557
12 2,3,7,8-TCDD	25.87	3.118e3	4.423e3	0.71	NO	1.0835	1.0835
13 Total Tetra-Dioxins	26.20	4.700e2	7.107e2	0.68	NO	0.16962	0.16962
14 Total Tetra-Dioxins	26.80	1.715e2	2.345e2	0.73	NO	0.056323	0.056323



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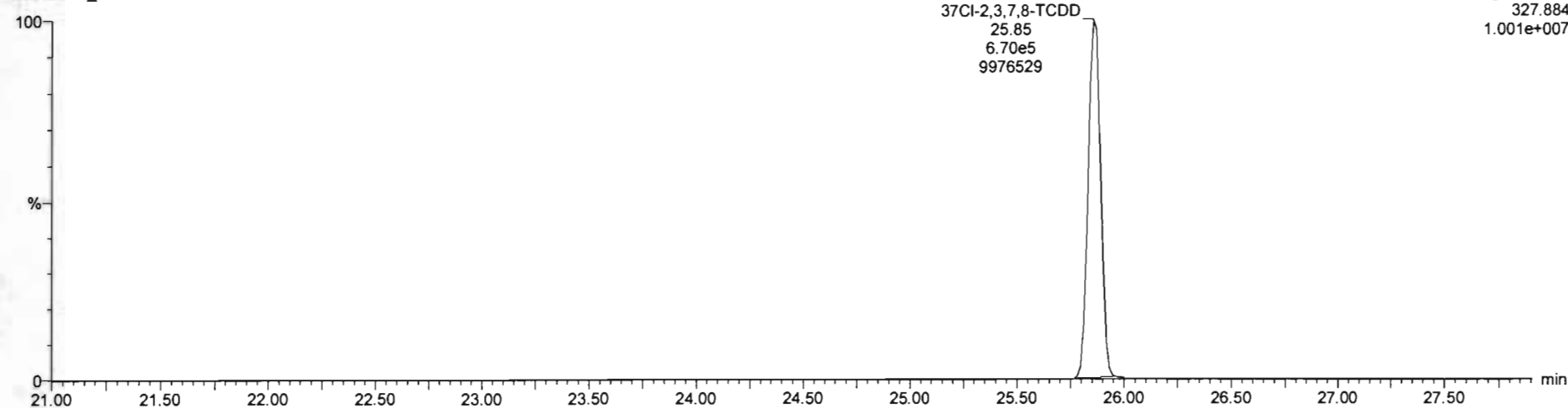
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Printed: Wednesday, January 22, 2020 10:45:28 Pacific Standard Time

Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

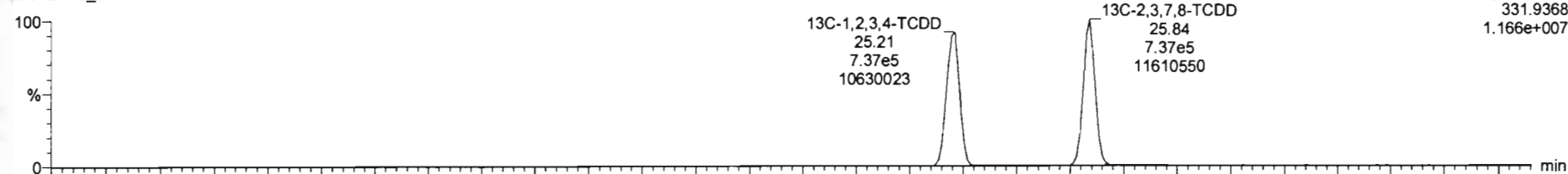
**37Cl-2,3,7,8-TCDD**

200121R2\_3

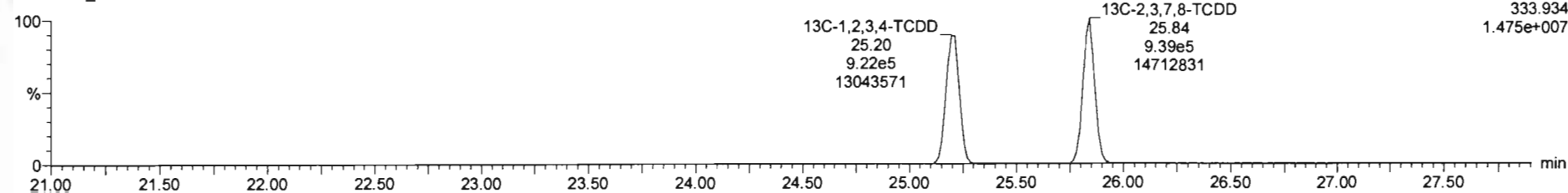


**13C-1,2,3,4-TCDD**

200121R2\_3



200121R2\_3



Dataset: Untitled

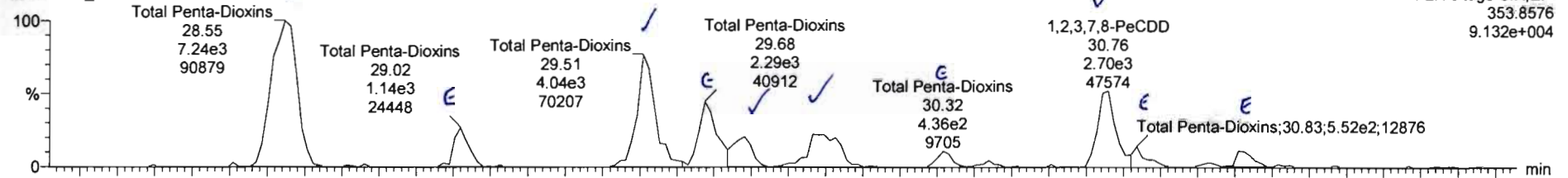
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Printed: Wednesday, January 22, 2020 10:45:28 Pacific Standard Time

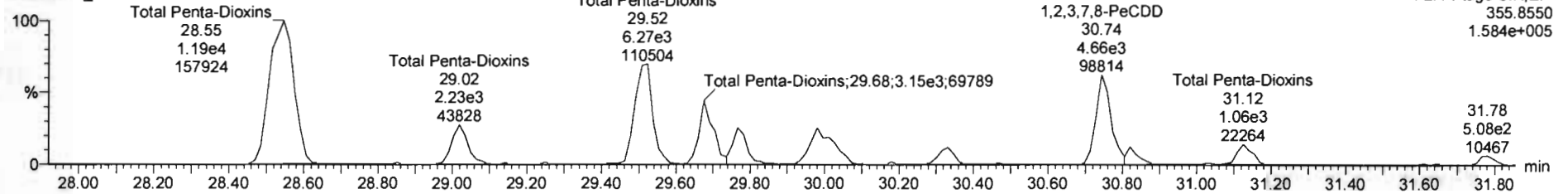
Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

**1,2,3,7,8-PeCDD**

200121R2\_3

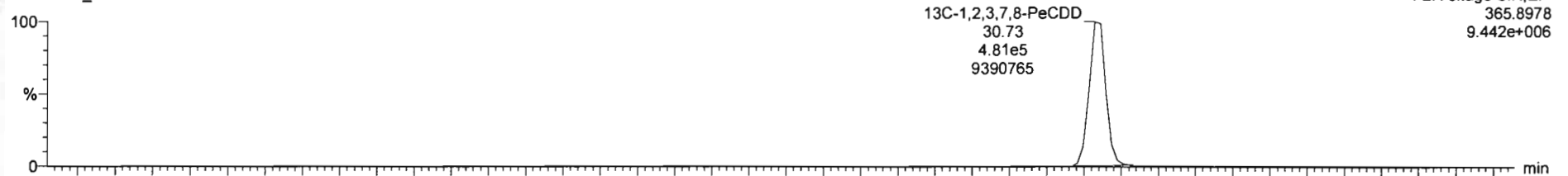


200121R2\_3

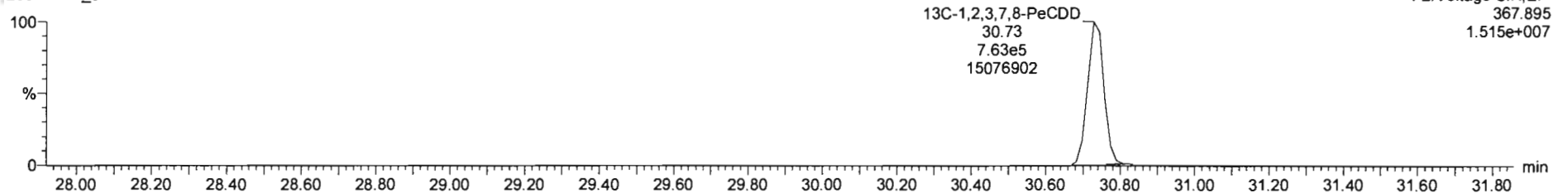


**13C-1,2,3,7,8-PeCDD**

200121R2\_3

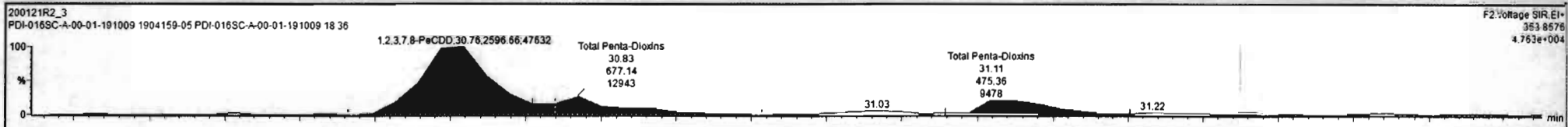


200121R2\_3



Name	Resp	RA	inj	RPF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.076			6.77	0.0529	6.77	
40 Total Penta-Dioxins				0.9116	10.076			7.84	0.0489	8.87	
41 Total Hexa-Dioxins				0.7841	10.076			70.0	0.133	71.6	
42 Total Hepta-Dioxins				0.7369	10.076			509	0.576	509	
43 Total Tetra-Furans				0.5878	10.076			130	0.0746	131	
44 1st Func. Penta-Furans				0.8261	10.076			14.8	0.0160	14.6	
45 Total Penta-Furans				0.8261	10.076			146	0.0924	147	

Name	RT /	m1 Resp	m2 Resp	RA	inj	EMPC	Conc.
1 Total Penta-Dioxins	28.55	7.240e3	1.194e4	0.81	NO	3.3573	3.3573
2 Total Penta-Dioxins	29.02	1.143e3	2.230e3	0.51	YES	0.51764	0.00000
3 Total Penta-Dioxins	29.51	4.043e3	6.272e3	0.84	NO	1.8052	1.8052
4 Total Penta-Dioxins	29.68	2.289e3	3.145e3	0.73	YES	0.89733	0.00000
5 Total Penta-Dioxins	29.78	1.161e3	1.812e3	0.64	NO	0.52045	0.52045
6 Total Penta-Dioxins	29.97	2.077e3	2.966e3	0.70	NO	0.88262	0.88262
7 Total Penta-Dioxins	30.32	4.356e2	9.073e2	0.48	YES	0.19727	0.00000





Dataset: Untitled

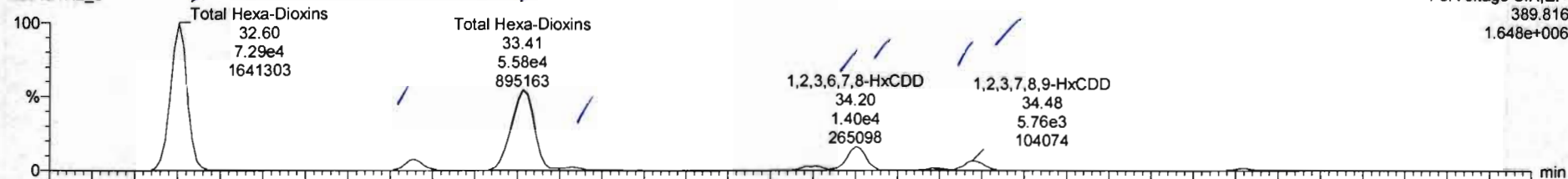
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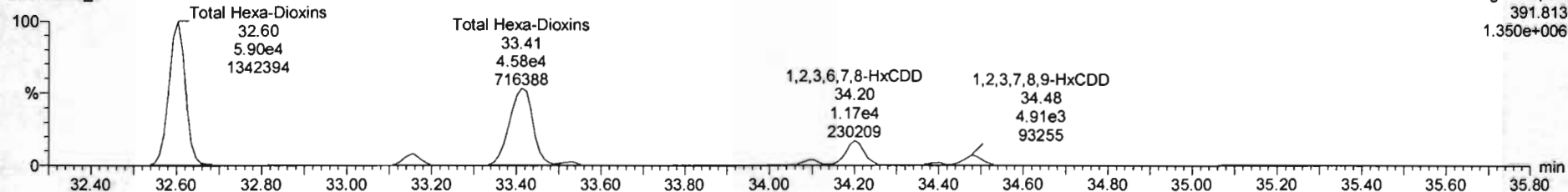
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**1,2,3,4,7,8-HxCDD**

200121R2\_3

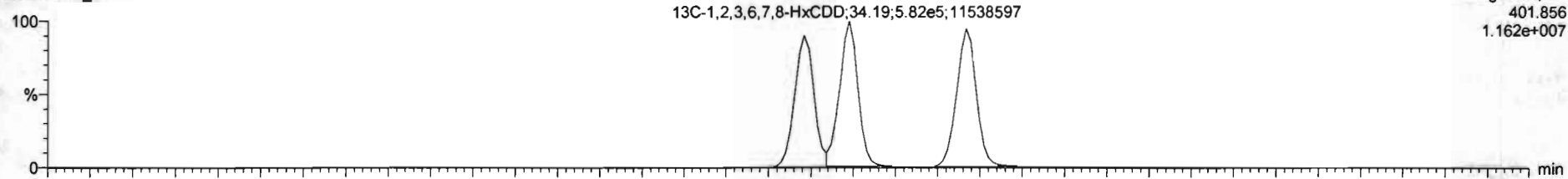


200121R2\_3

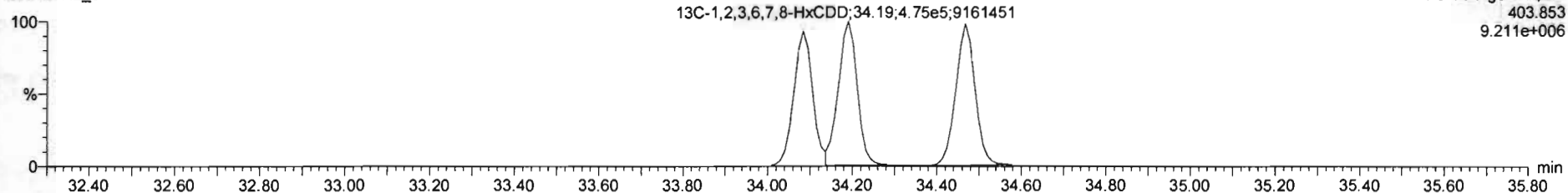


**13C-1,2,3,4,7,8-HxCDD**

200121R2\_3

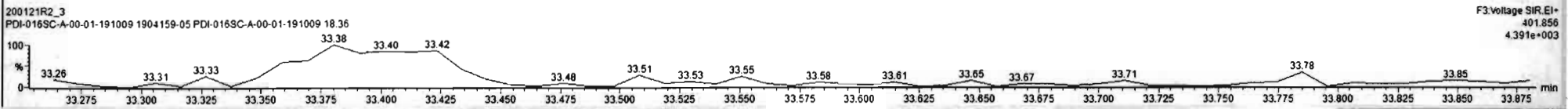
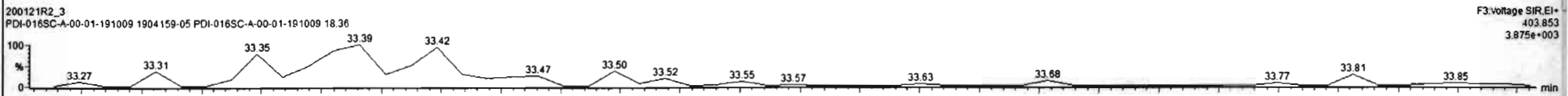
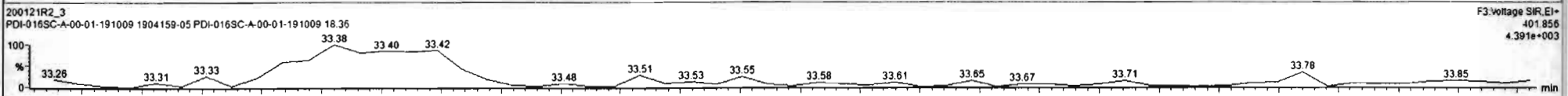
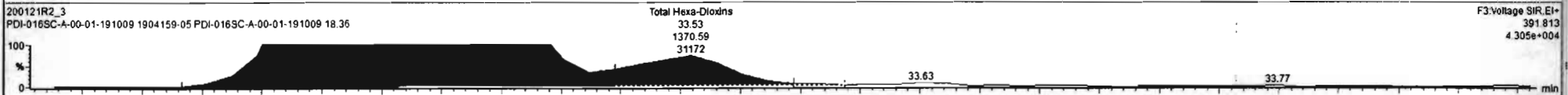
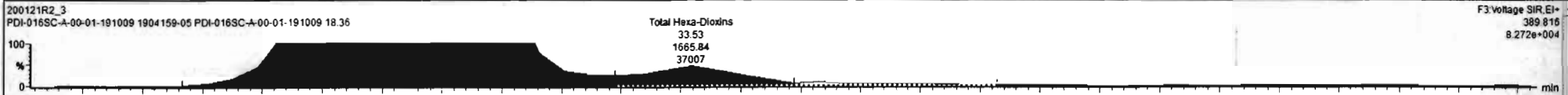


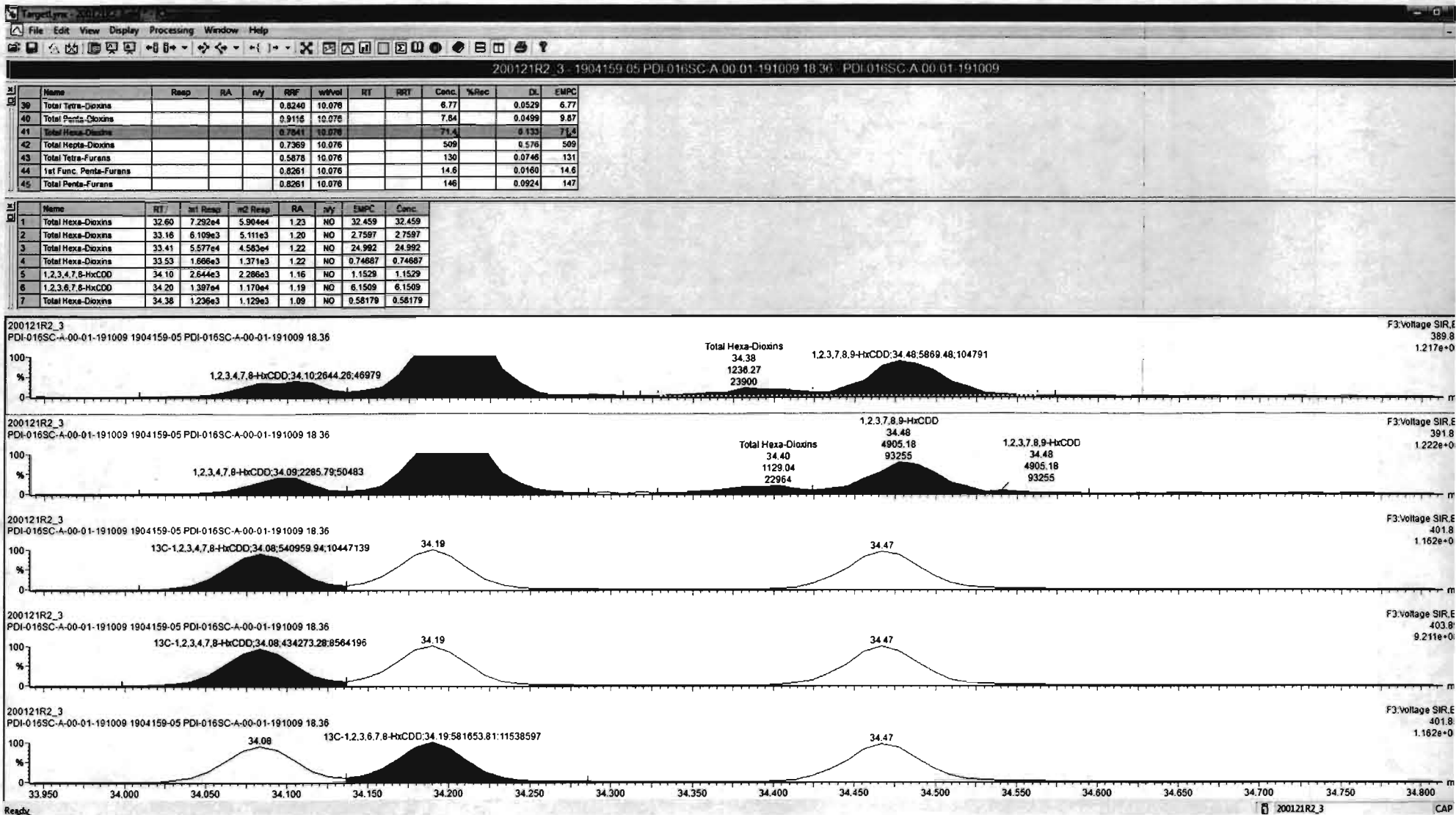
200121R2\_3



#	Name	Resp	RA	rvy	RRF	wVol	RT	RRT	Conc	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.8240	10.076			6.77	0.0529	6.77	
40	Total Penta-Dioxins				0.9116	10.076			7.84	0.0499	9.87	
41	Total Hexa-Dioxins				0.7841	10.076			71.4	0.133	71.4	
42	Total Hepta-Dioxins				0.7369	10.076			509	0.576	509	
43	Total Tetra-Furans				0.5878	10.076			130	0.0746	131	
44	1st Func. Penta-Furans				0.8261	10.076			14.6	0.0160	14.6	
45	Total Penta-Furans				0.8261	10.076			146	0.0924	147	

#	Name	RT	m1 Resp	m2 Resp	RA	rvy	EMPC	Conc
1	Total Hexa-Dioxins	32.60	7.292e4	5.904e4	1.23	NO	32.459	32.459
2	Total Hexa-Dioxins	33.16	6.109e3	5.111e3	1.20	NO	2.7587	2.7597
3	Total Hexa-Dioxins	33.41	5.577e4	4.583e4	1.22	NO	24.992	24.992
4	Total Hexa-Dioxins	33.53	1.666e3	1.371e3	1.22	NO	0.74687	0.74687
5	1,2,3,4,7,8-HxCDD	34.10	2.644e3	2.286e3	1.16	NO	1.1529	1.1529
6	1,2,3,6,7,8-HxCDD	34.20	1.397e4	1.170e4	1.19	NO	6.1509	6.1509
7	Total Hexa-Dioxins	34.38	1.236e3	1.129e3	1.09	NO	0.58179	0.58179





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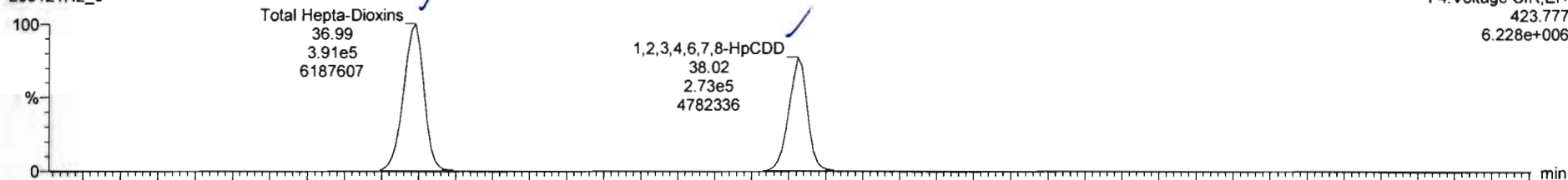
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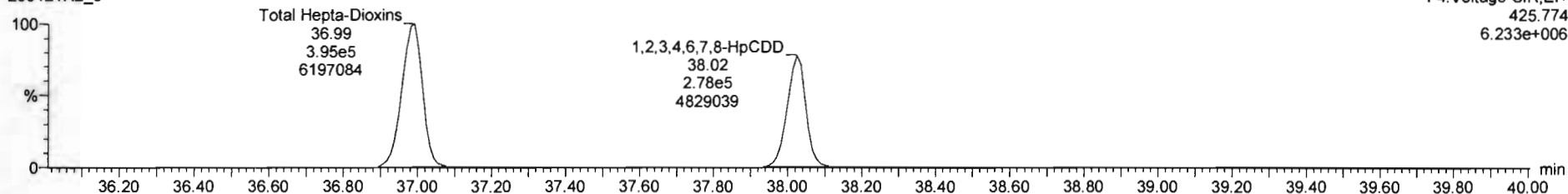
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1,2,3,4,6,7,8-HpCDD

200121R2\_3

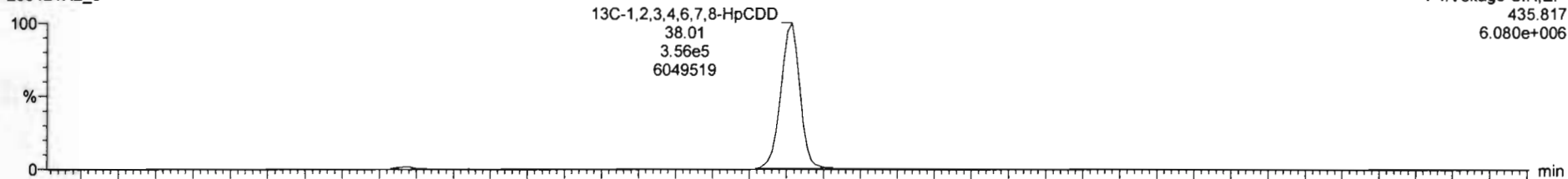


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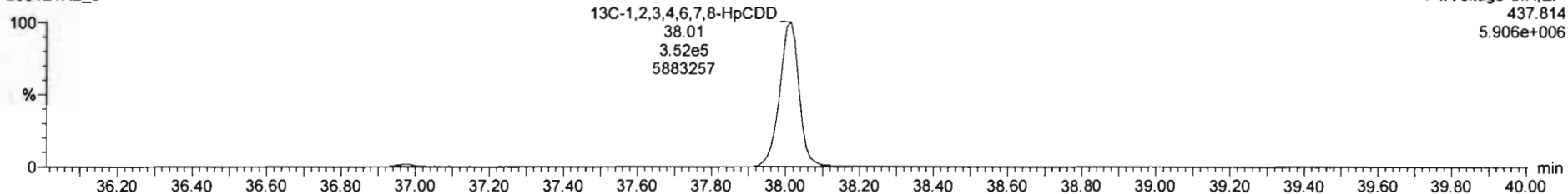


13C-1,2,3,4,6,7,8-HpCDD

200121R2\_3



200121R2\_3



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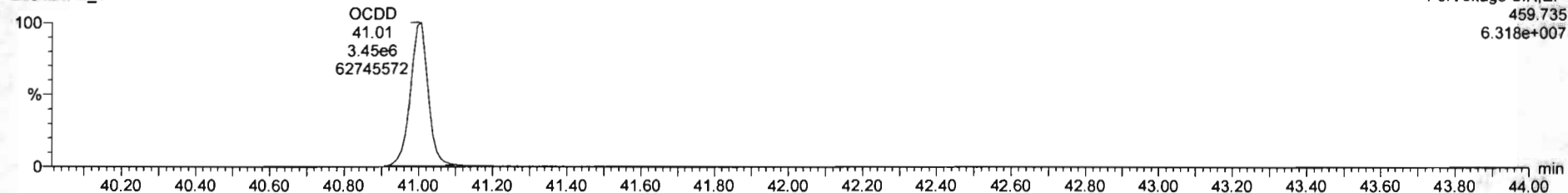
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OCDD

200121R2\_3

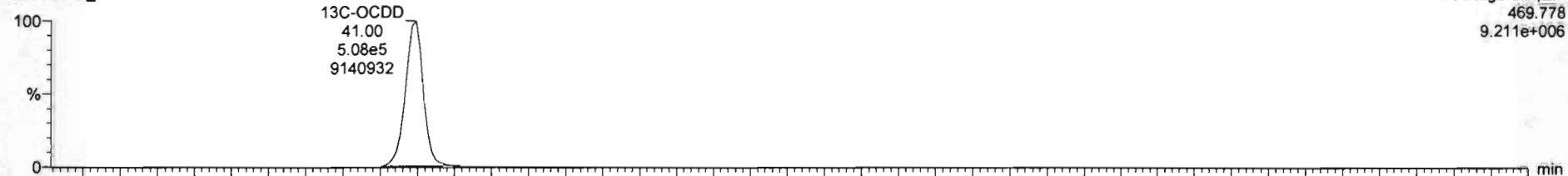


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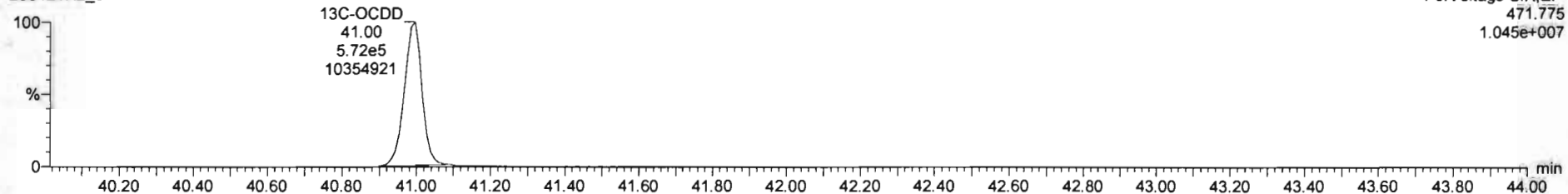


13C-OCDD

200121R2\_3



200121R2\_3



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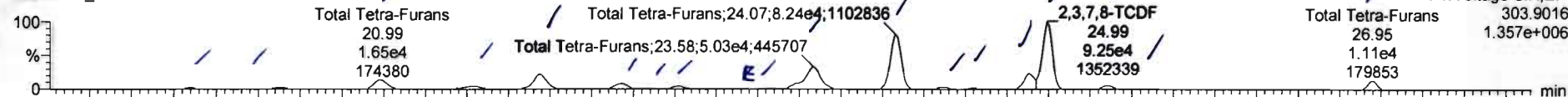
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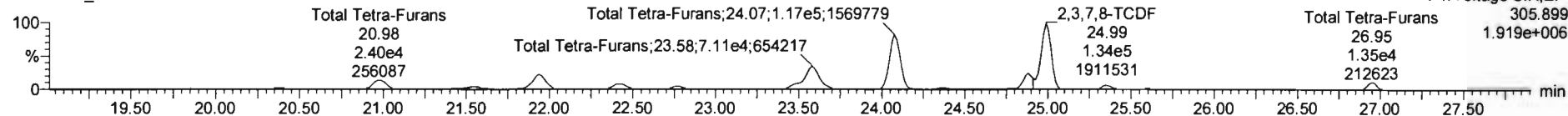
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### 2,3,7,8-TCDF

200121R2\_3

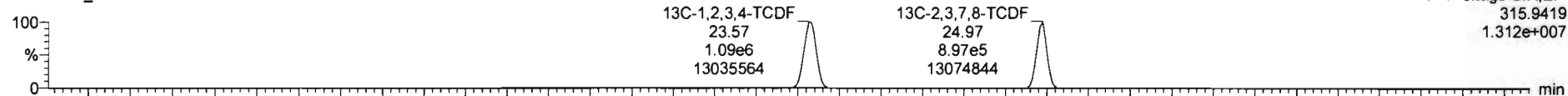


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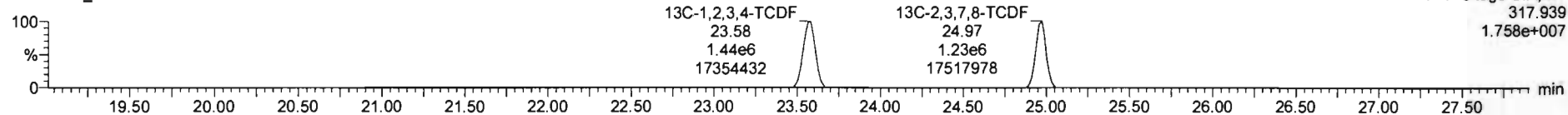


### 13C-2,3,7,8-TCDF

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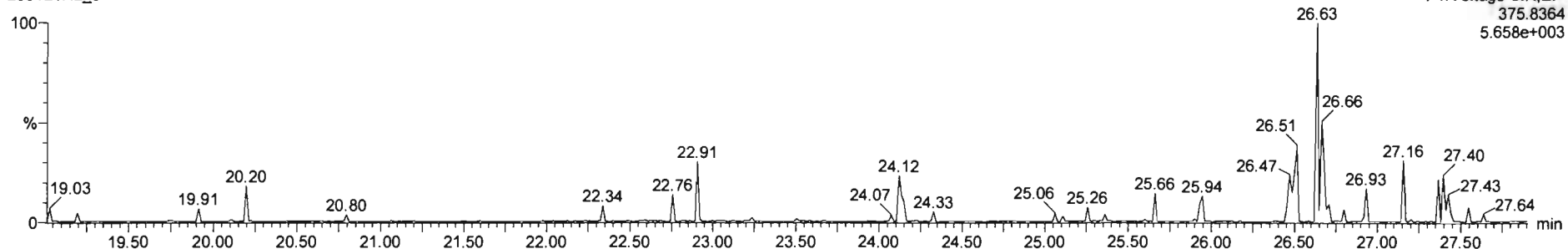


200121R2\_3



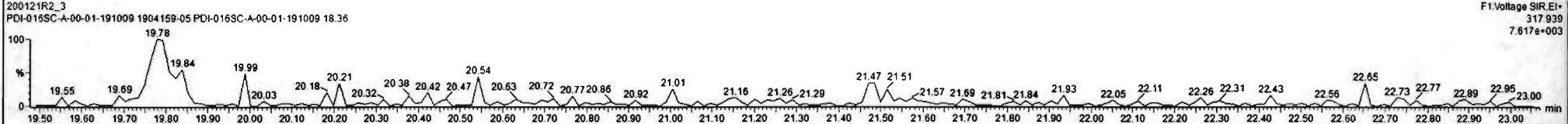
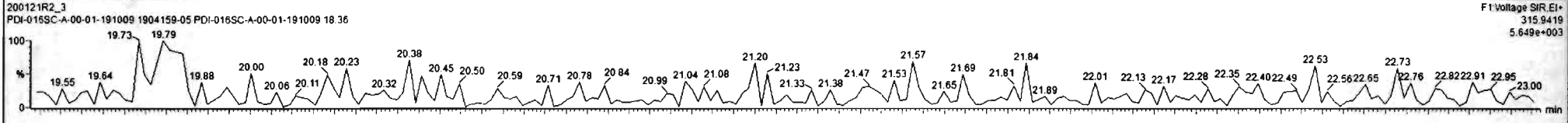
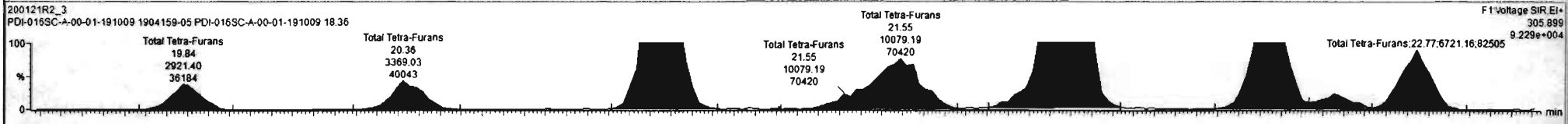
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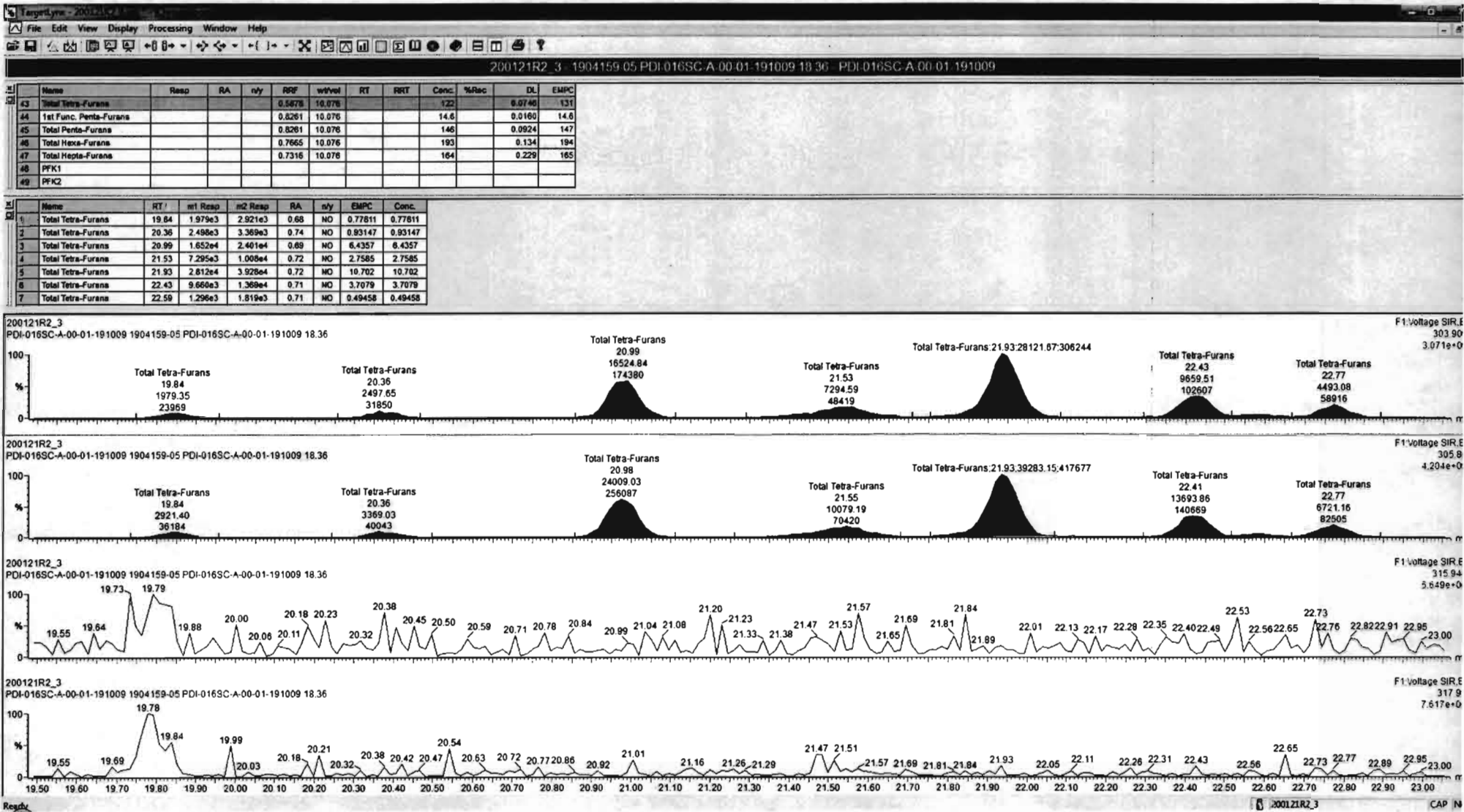
200121R2\_3



#	Name	Resp	RA	nHy	RRF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.5578	10.076			122	0.8746		131
44	1st Func. Penta-Furans				0.8261	10.076			146	0.9160		146
45	Total Penta-Furans				0.8261	10.076			146	0.9924		147
46	Total Hexa-Furans				0.7665	10.076			193	0.134		194
47	Total Hepta-Furans				0.7316	10.076			164	0.229		165
48	PFK1											
49	PFK2											

#	Name	RT /	wt Resp	m2 Resp	RA	nHy	EMPC	Conc.
1	Total Tetra-Furans	19.84	1.979e3	2.921e3	0.68	NO	0.77811	0.77811
2	Total Tetra-Furans	20.36	2.498e3	3.369e3	0.74	NO	0.93147	0.93147
3	Total Tetra-Furans	20.99	1.652e4	2.401e4	0.89	NO	6.4357	6.4357
4	Total Tetra-Furans	21.53	7.295e3	1.008e4	0.72	NO	2.7585	2.7585
5	Total Tetra-Furans	21.93	2.812e4	3.928e4	0.72	NO	10.702	10.702
6	Total Tetra-Furans	22.43	9.880e3	1.369e4	0.71	NO	3.7079	3.7079
7	Total Tetra-Furans	22.59	1.298e3	1.819e3	0.71	NO	0.49458	0.49458

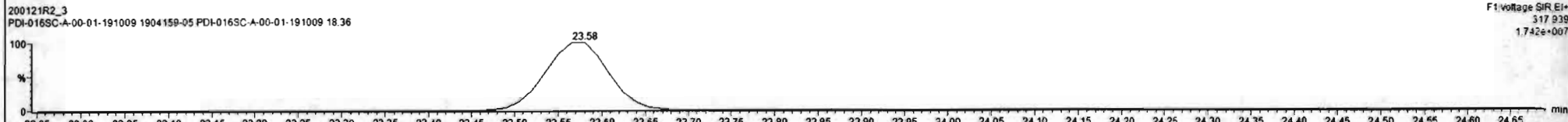
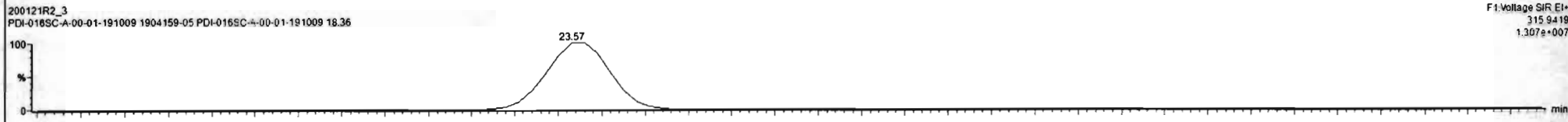
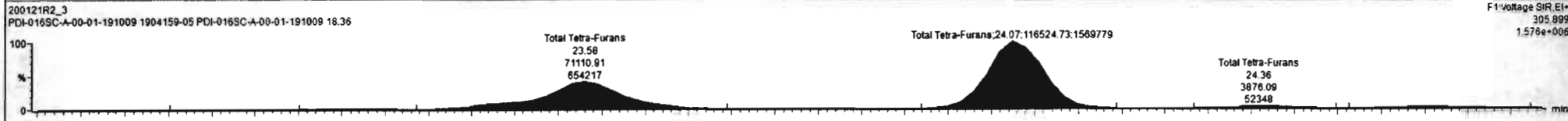
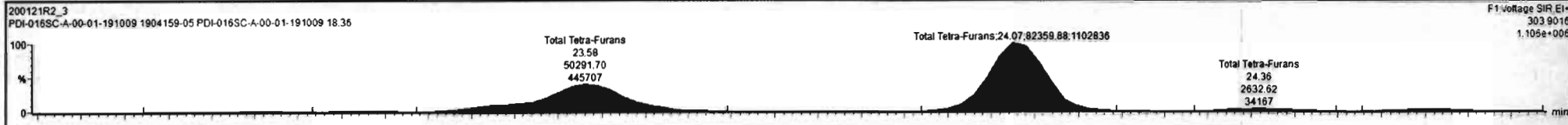






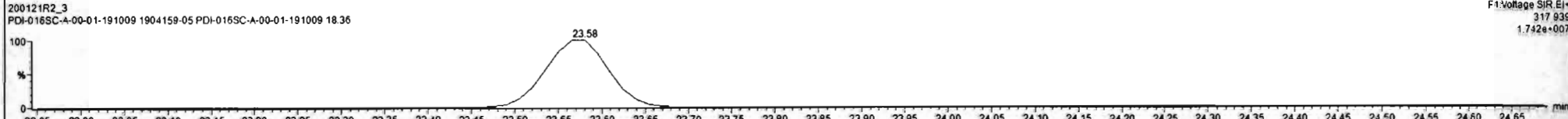
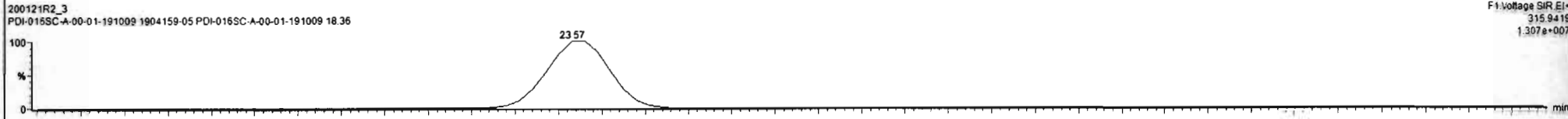
#	Name	Resp	RA	n/y	RF	wtVol	RT	PRT	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.5878	10.076			122		0.9746	131
44	1st Func. Penta-Furans				0.8261	10.076			14.6		0.0160	14.6
45	Total Penta-Furans				0.8261	10.076			146		0.0924	147
46	Total Hexa-Furans				0.7665	10.076			193		0.134	194
47	Total Hepta-Furans				0.7316	10.076			164		0.229	165
48	PFK1											
49	PFK2											

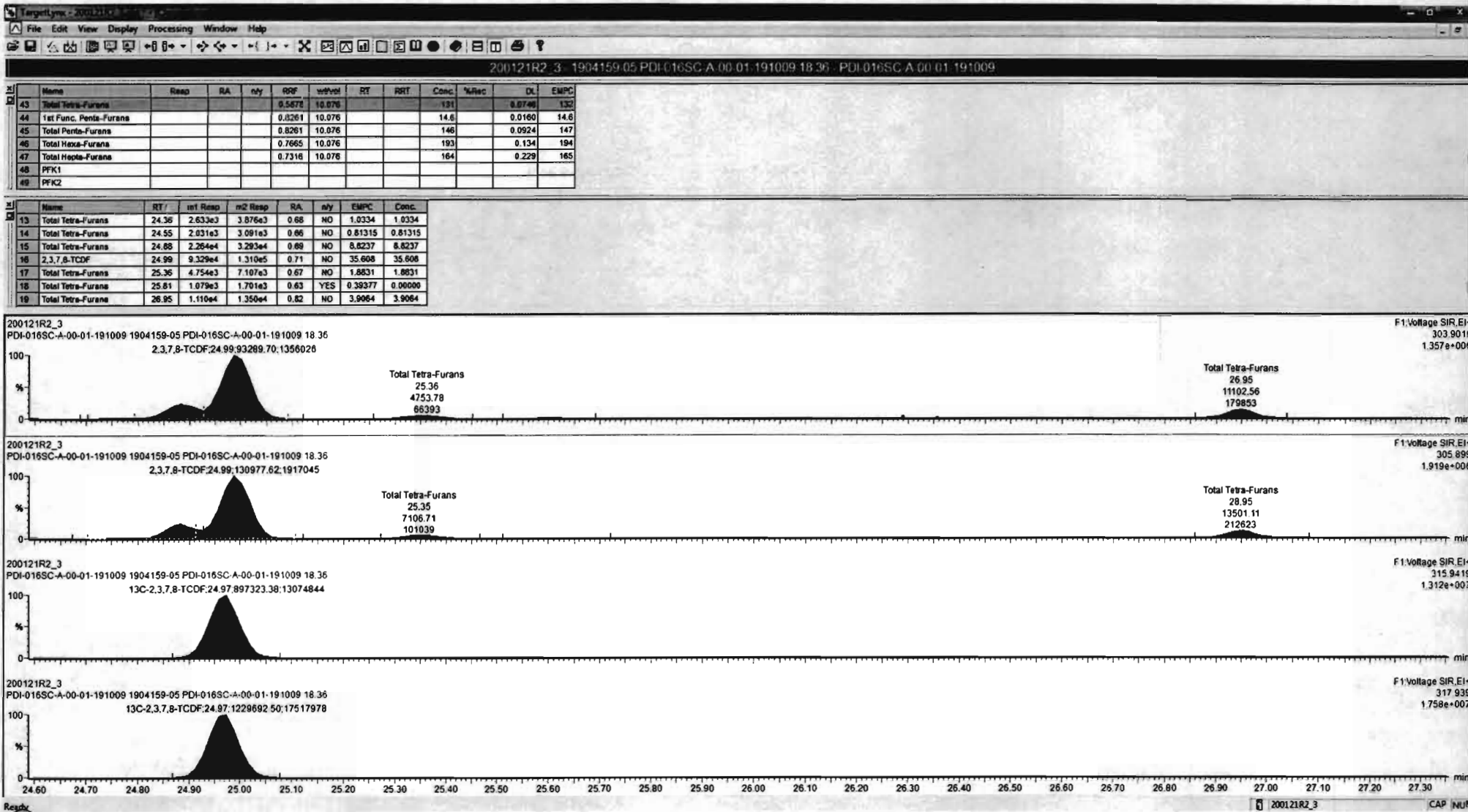
#	Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1	Total Tetra-Furans	19.84	1.979e3	2.921e3	0.68	NO	0.77811	0.77811
2	Total Tetra-Furans	20.36	2.498e3	3.369e3	0.74	NO	0.93147	0.93147
3	Total Tetra-Furans	20.99	1.852e4	2.401e4	0.69	NO	6.4357	6.4357
4	Total Tetra-Furans	21.53	7.295e3	1.006e4	0.72	NO	2.7585	2.7585
5	Total Tetra-Furans	21.93	2.812e4	3.928e4	0.72	NO	10.702	10.702
6	Total Tetra-Furans	22.43	9.660e3	1.369e4	0.71	NO	3.7079	3.7079
7	Total Tetra-Furans	22.59	1.296e3	1.819e3	0.71	NO	0.49458	0.49458

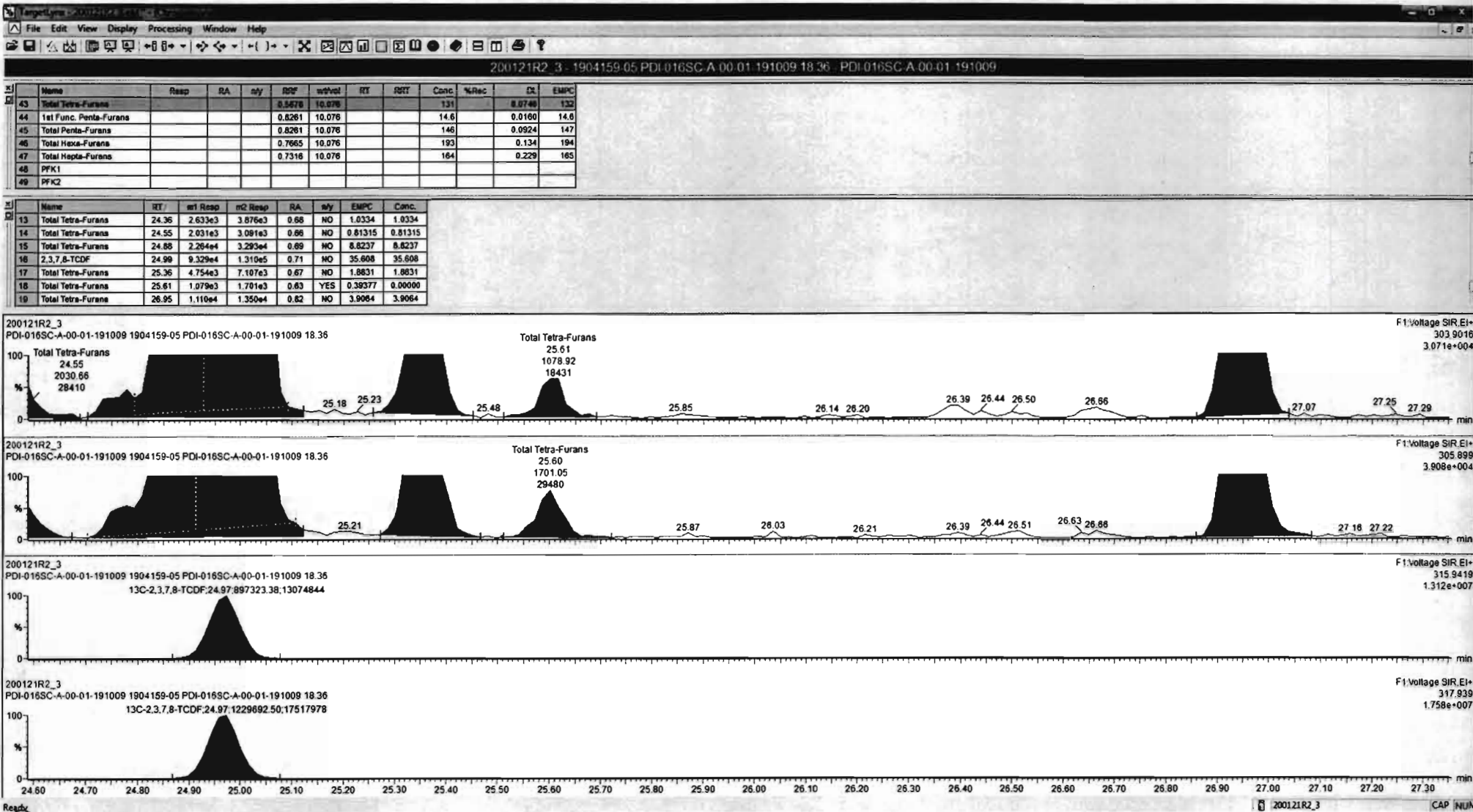


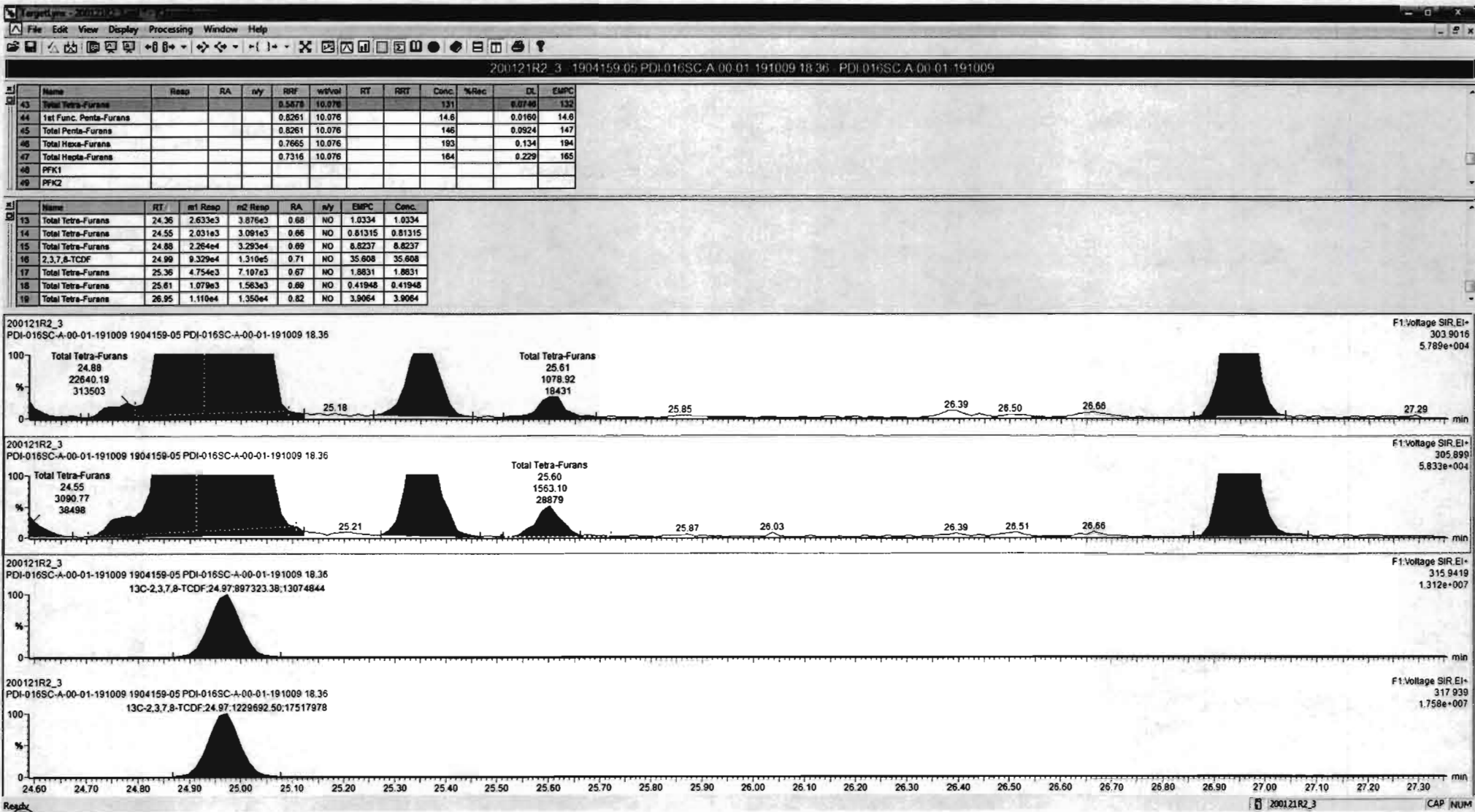
SL	Name	Resp	RA	n/y	RRF	wtVal	RT	RRT	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.5878	10.076			122	0.0746	131	
44	1st Func. Penta-Furans				0.8261	10.076			14.6	0.0160	14.6	
45	Total Penta-Furans				0.8261	10.076			146	0.0924	147	
46	Total Hexa-Furans				0.7665	10.076			193	0.134	194	
47	Total Hepta-Furans				0.7316	10.076			164	0.229	165	
48	PFK1											
49	PFK2											

SL	Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1	Total Tetra-Furans	19.84	1.979e3	2.921e3	0.68	NO	0.77811	0.77811
2	Total Tetra-Furans	20.36	2.496e3	3.369e3	0.74	NO	0.93147	0.93147
3	Total Tetra-Furans	20.99	1.652e4	2.401e4	0.69	NO	6.4357	6.4357
4	Total Tetra-Furans	21.53	7.295e3	1.006e4	0.72	NO	2.7585	2.7585
5	Total Tetra-Furans	21.93	2.812e4	3.926e4	0.72	NO	10.702	10.702
6	Total Tetra-Furans	22.43	9.660e3	1.369e4	0.71	NO	3.7079	3.7079
7	Total Tetra-Furans	22.59	1.296e3	1.819e3	0.71	NO	0.49458	0.49458









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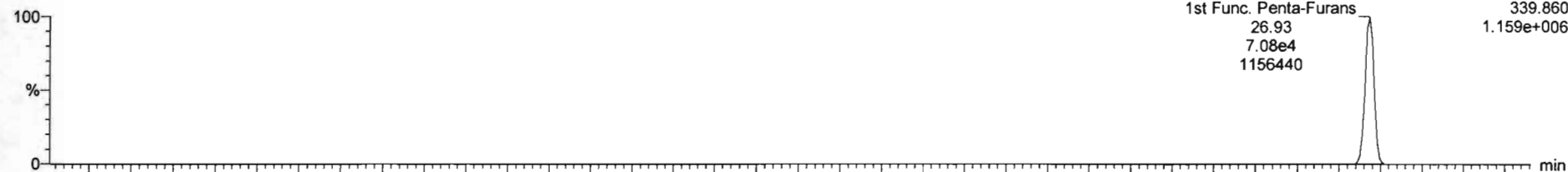
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Printed: Wednesday, January 22, 2020 10:45:28 Pacific Standard Time

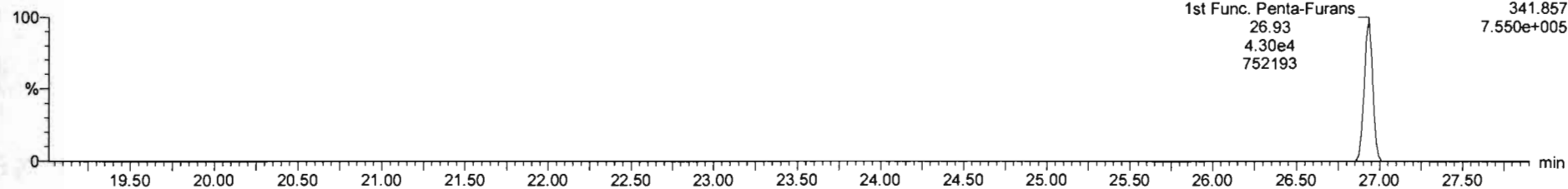
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1st Func. Penta-Furans

200121R2\_3

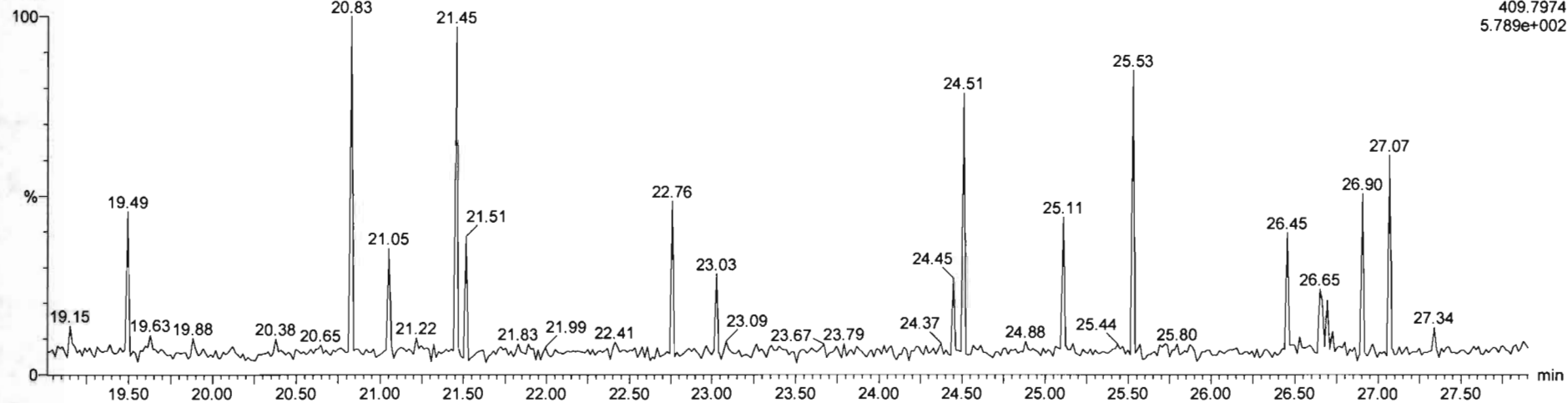


200121R2\_3



DPE6

200121R2\_3



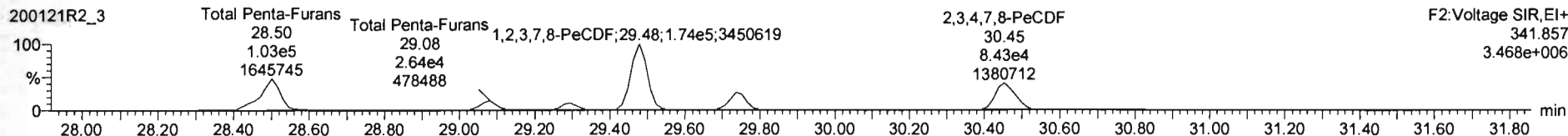
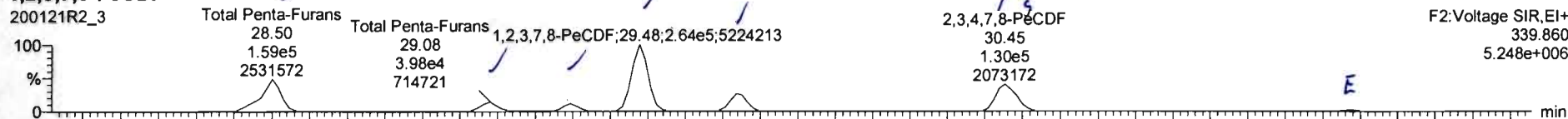
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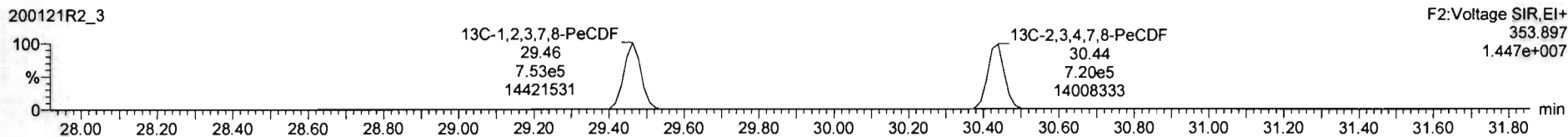
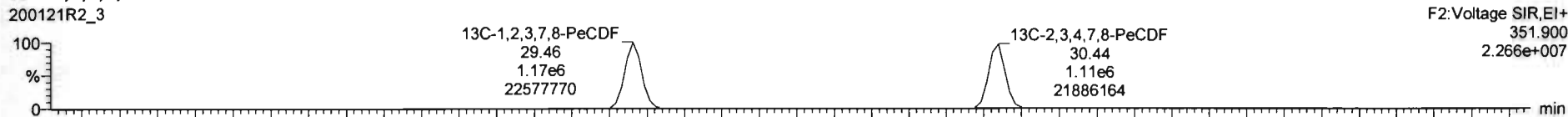
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Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

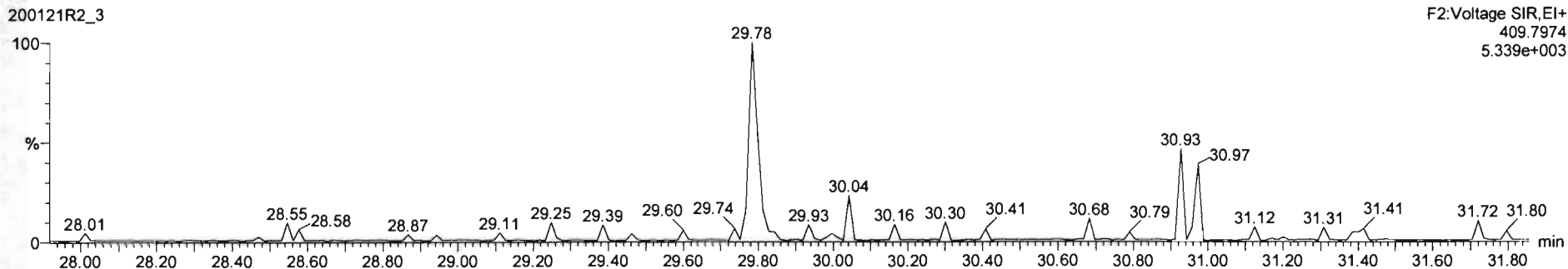
**1,2,3,7,8-PeCDF**



**13C-1,2,3,7,8-PeCDF**



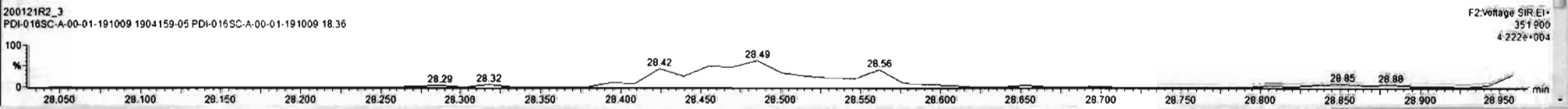
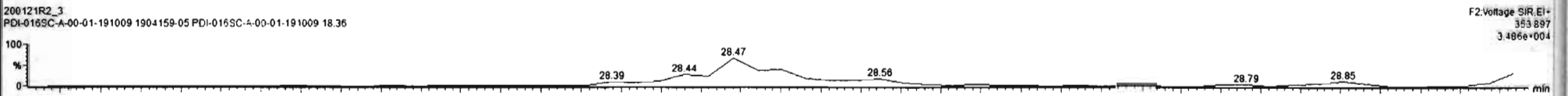
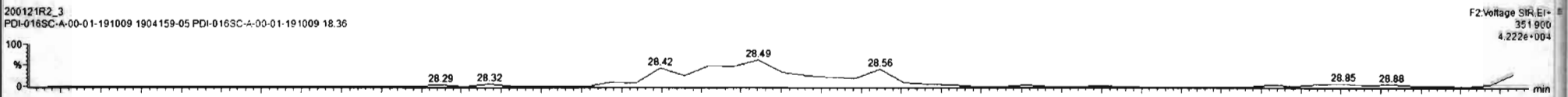
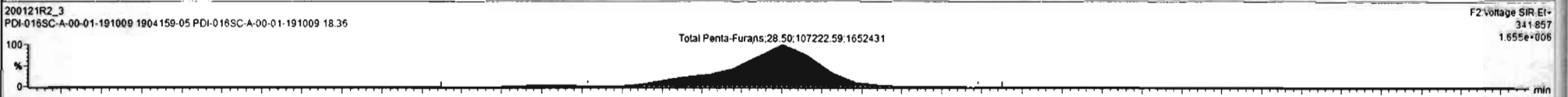
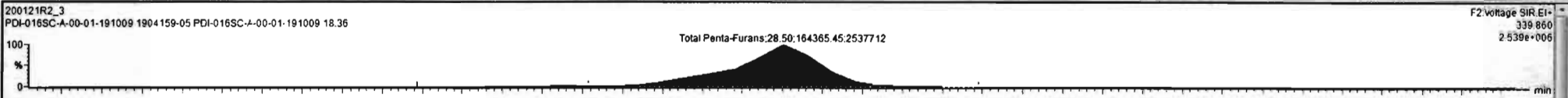
**DPE2**



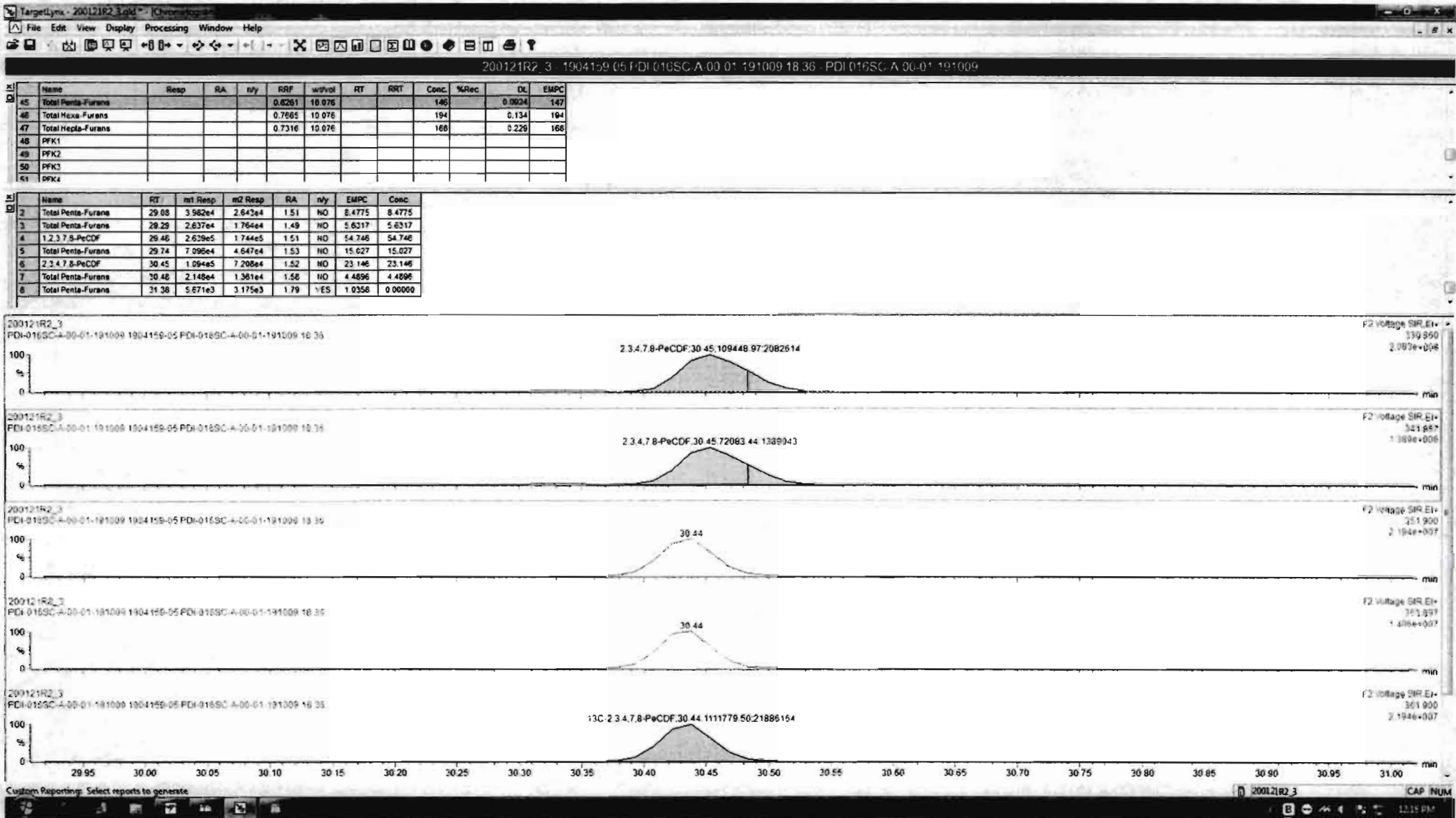
200121R2\_3 - 1904159-05 PDI-016SC-A-00-01-191009 18.36 PDI-016SC-A-00-01-191009

Name	Resp	RA	n/y	RRF	wt%val	RT	RRT	Conc.	%Rec	DL	EMPC
43 Total Tetra-Furans				0.5878	10.076			131	0.0746		132
44 1st Func. Penta-Furans				0.8281	10.076			14.6	0.0160		14.6
45 Total Penta-Furans				0.8281	16.076			147	0.0924		148
46 Total Hexa-Furans				0.7655	10.076			193	0.134		194
47 Total Hepta-Furans				0.7316	10.076			164	0.229		165
48 PFK1											
49 PFK2											

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Penta-Furans	28.50	1.644e5	1.072e5	1.53	NO	34.752	34.752
2 Total Penta-Furans	29.06	3.982e4	2.643e4	1.51	NO	8.4775	8.4775
3 Total Penta-Furans	29.29	2.637e4	1.764e4	1.49	NO	5.6317	5.6317
4 1,2,3,7,8-PeCDF	29.48	2.639e5	1.744e5	1.51	NO	54.748	54.748
5 Total Penta-Furans	29.74	7.096e4	4.647e4	1.53	NO	15.027	15.027
6 Total Penta-Furans	30.45	8.742e4	5.827e4	1.50	NO	18.642	18.642
7 2,3,4,7,8-PeCDF	30.47	4.503e4	2.796e4	1.61	NO	9.3063	9.3063





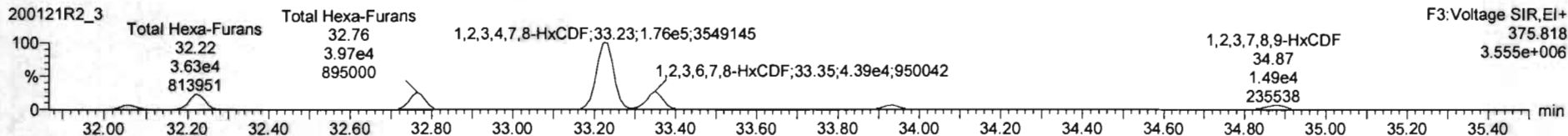
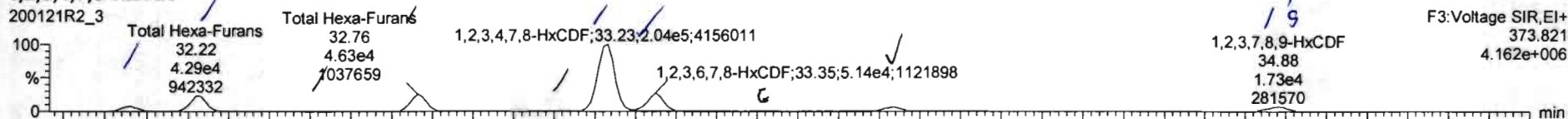


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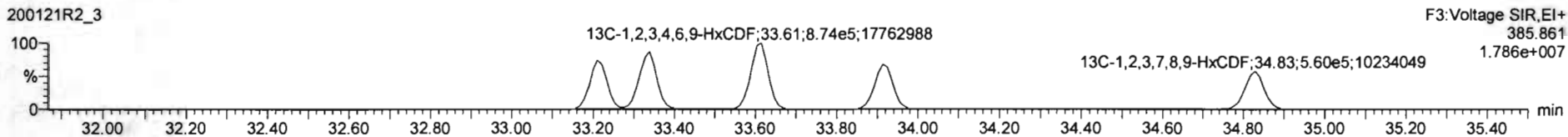
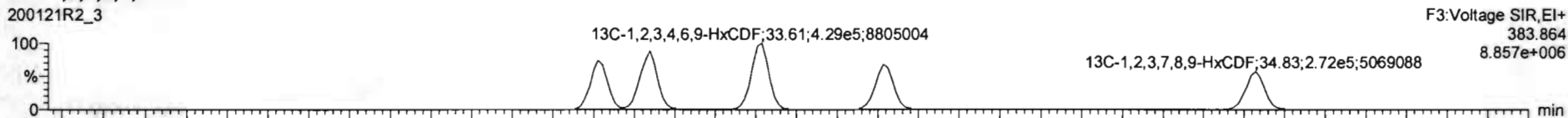
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Printed: Wednesday, January 22, 2020 10:45:28 Pacific Standard Time

Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

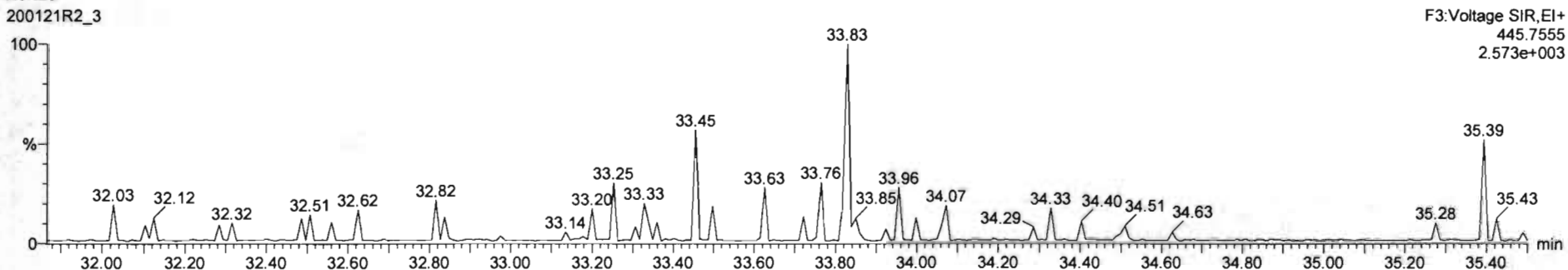
1,2,3,4,7,8-HxCDF

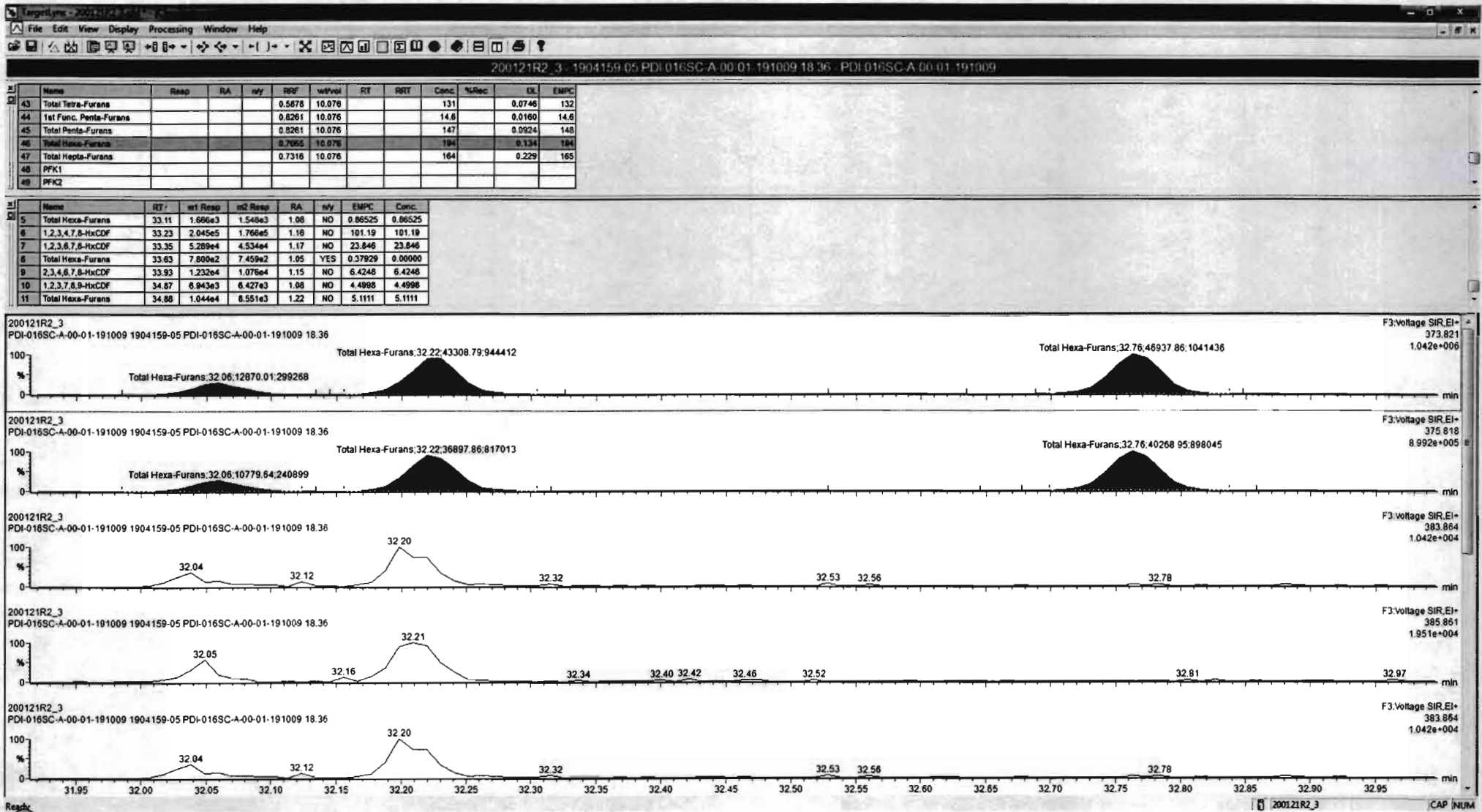


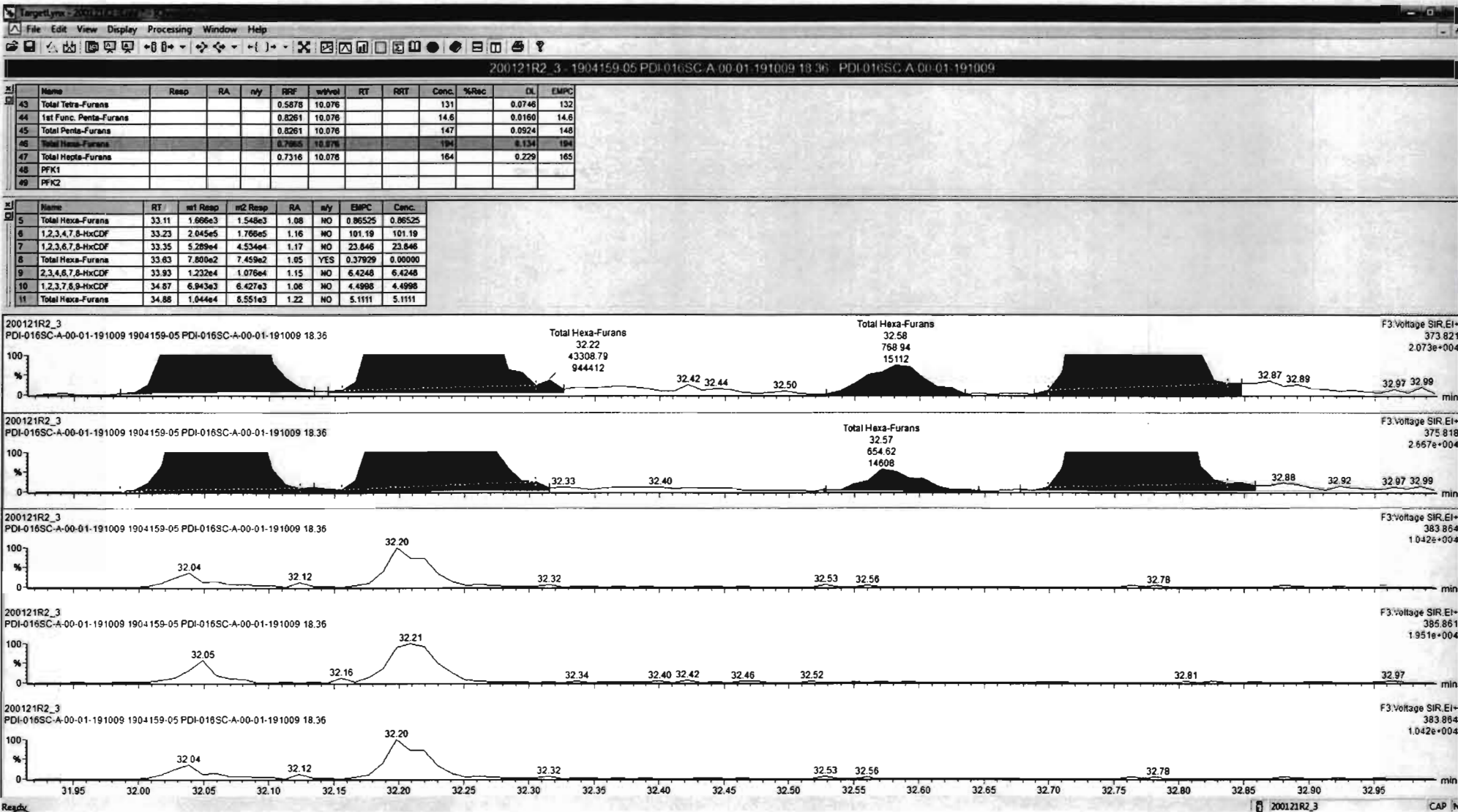
13C-1,2,3,4,7,8-HxCDF



DPE3

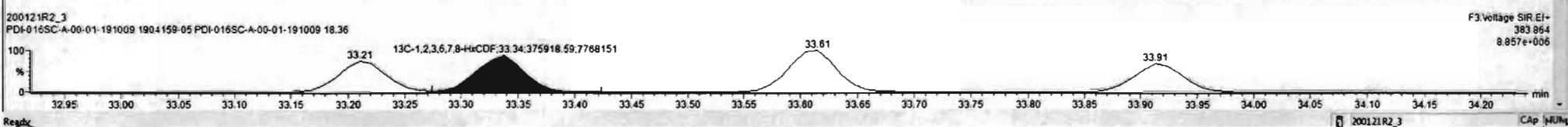
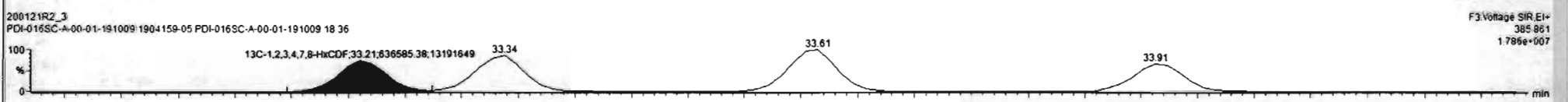
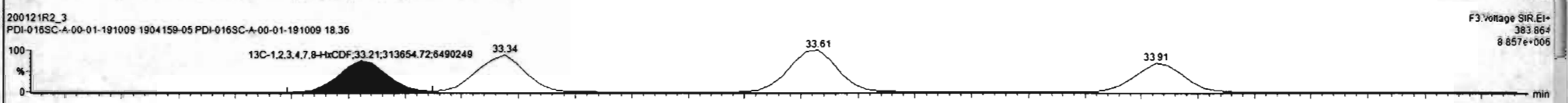
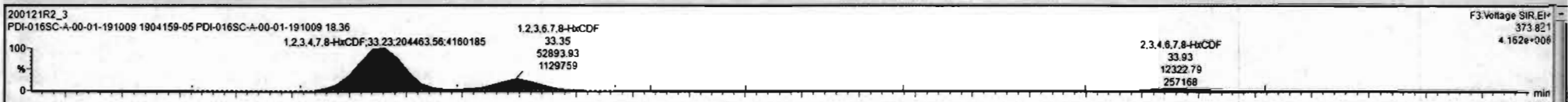






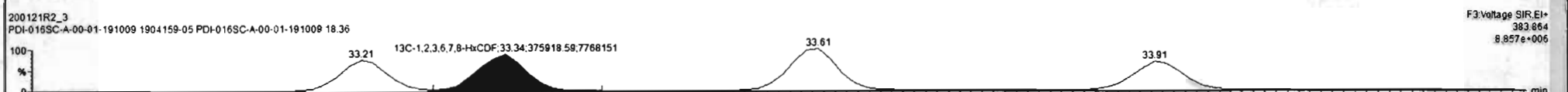
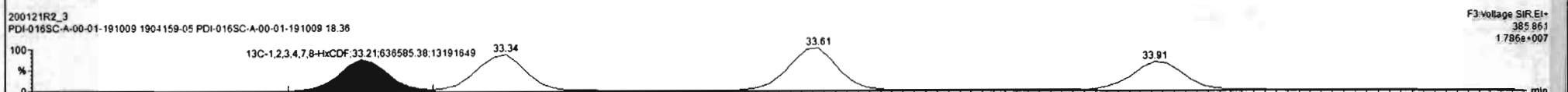
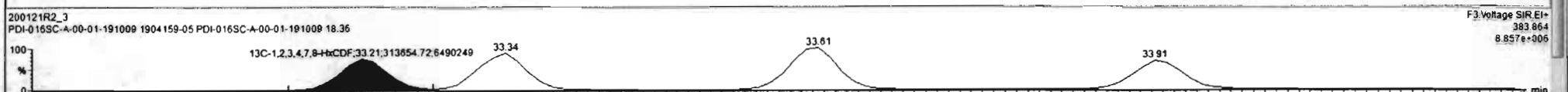
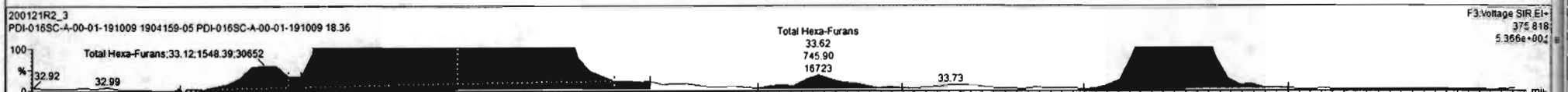
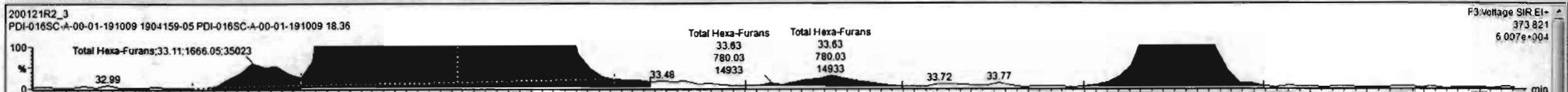
#	Name	Resp	RA	nly	RRF	wVal	RT	RRT	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.5878	10.076			131	0.0746	132	
44	1st Func. Penta-Furans				0.8261	10.076			14.8	0.0160	14.6	
45	Total Penta-Furans				0.8261	10.076			147	0.0924	148	
46	Total Hexa-Furans				0.7088	10.076			194	0.134	194	
47	Total Hepta-Furans				0.7316	10.076			164	0.229	165	
48	PFK1											
49	PFK2											

#	Name	RT	m1 Resp	m2 Resp	RA	nly	EMPC	Conc.
5	Total Hexa-Furans	33.11	1.666e3	1.548e3	1.08	NO	0.86525	0.86525
6	1,2,3,4,7,8-HxCDF	33.23	2.045e5	1.766e5	1.16	NO	101.19	101.19
7	1,2,3,6,7,8-HxCDF	33.35	5.289e4	4.534e4	1.17	NO	23.846	23.846
8	Total Hexa-Furans	33.63	7.800e2	7.459e2	1.05	YES	0.37929	0.00000
9	2,3,4,6,7,8-HxCDF	33.93	1.232e4	1.076e4	1.15	NO	6.4248	6.4248
10	1,2,3,7,8,9-HxCDF	34.87	8.943e3	6.427e3	1.08	NO	4.4988	4.4988
11	Total Hexa-Furans	34.88	1.044e4	8.551e3	1.22	NO	5.1111	5.1111



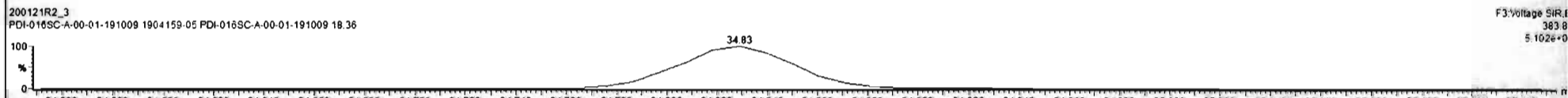
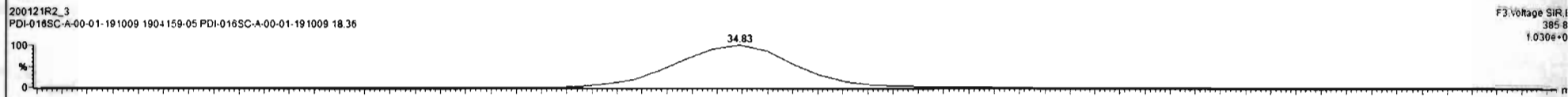
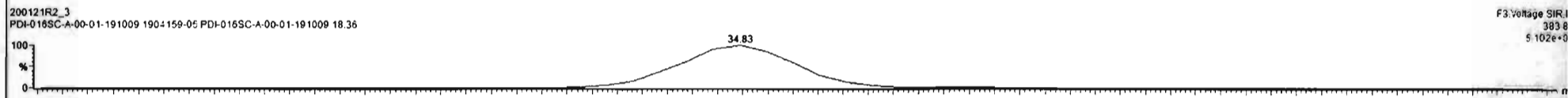
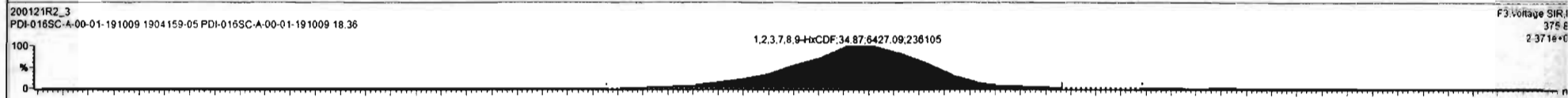
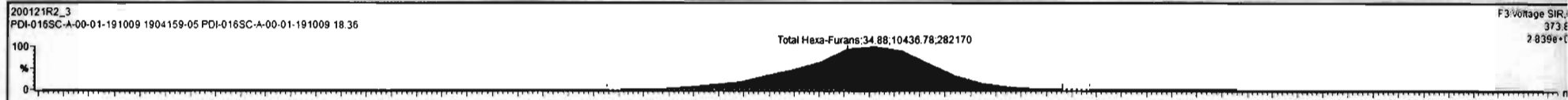
Name	Resp	RA	n/y	RF	wt/wt	RT	RRT	Conc	%Rec	DL	EMPC
43 Total Tetra-Furans				0.5576	10.076			131		0.0746	132
44 1st Func. Penta-Furans				0.8261	10.076			14.6		0.0160	14.6
45 Total Penta-Furans				0.8261	10.076			147		0.0924	148
46 Total Hexa-Furans				0.7665	10.076			194		6.134	194
47 Total Hepta-Furans				0.7316	10.076			164		0.229	165
48 PFK1											
49 PFK2											

Name	RT	sr1 Resp	sr2 Resp	RA	n/y	EMPC	Conc
5 Total Hexa-Furans	33.11	1.666e3	1.548e3	1.08	NO	0.86525	0.86525
6 1,2,3,4,7,8-HxCDF	33.23	2.045e5	1.786e5	1.16	NO	101.19	101.19
7 1,2,3,6,7,8-HxCDF	33.35	5.289e4	4.534e4	1.17	NO	23.846	23.846
8 Total Hexa-Furans	33.63	7.800e2	7.459e2	1.05	YES	0.37929	0.00000
9 2,3,4,6,7,8-HxCDF	33.93	1.232e4	1.076e4	1.15	NO	6.4248	6.4248
10 1,2,3,7,8,9-HxCDF	34.67	6.943e3	6.427e3	1.08	NO	4.4998	4.4998
11 Total Hexa-Furans	34.88	1.044e4	8.551e3	1.22	NO	5.1111	5.1111



Name	Resp	RA	n/y	RRF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
43 Total Tetra-Furans				0.5878	10.078			131	0.0746	132	
44 1st Func. Penta-Furans				0.8261	10.078			14.6	0.0160	14.6	
45 Total Penta-Furans				0.8261	10.078			147	0.0924	148	
46 Total Hexa-Furans				8.7965	10.078			194	8.134	194	
47 Total Hepta-Furans				0.7316	10.078			164	0.229	165	
48 PFK1											
49 PFK2											

Name	RT	arl Resp	m2 Resp	RA	n/y	EMPC	Conc.
5 Total Hexa-Furans	33.11	1.666e3	1.548e3	1.08	NO	0.86525	0.86525
6 1,2,3,4,7,8-HxCDF	33.23	2.045e5	1.786e5	1.16	NO	101.19	101.19
7 1,2,3,6,7,8-HxCDF	33.35	5.289e4	4.534e4	1.17	NO	23.848	23.848
8 Total Hexa-Furans	33.63	7.800e2	7.459e2	1.05	YES	0.37929	0.00000
9 2,3,4,6,7,8-HxCDF	33.93	1.232e4	1.075e4	1.15	NO	6.4248	6.4248
10 1,2,3,7,8,9-HxCDF	34.87	6.943e3	6.427e3	1.08	NO	4.4998	4.4998
11 Total Hexa-Furans	34.88	1.044e4	8.551e3	1.22	NO	5.1111	5.1111



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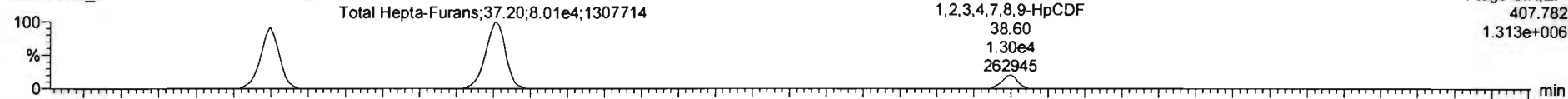
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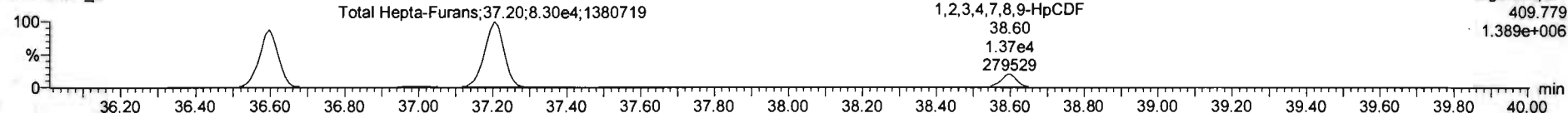
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**1,2,3,4,6,7,8-HpCDF**

200121R2\_3

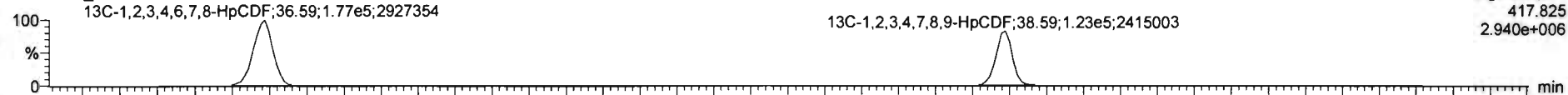


200121R2\_3

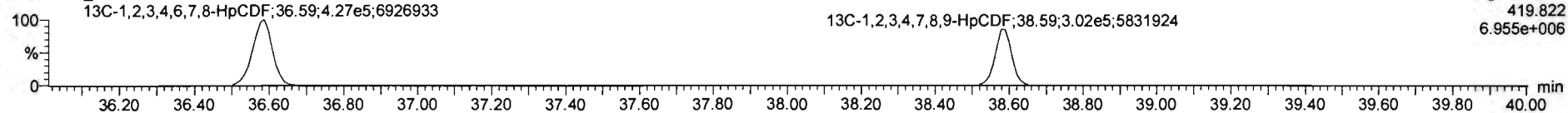


**13C-1,2,3,4,6,7,8-HpCDF**

200121R2\_3

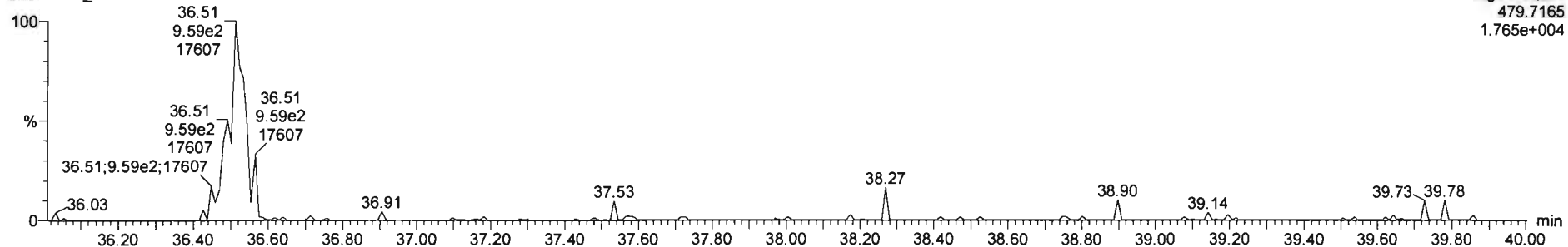


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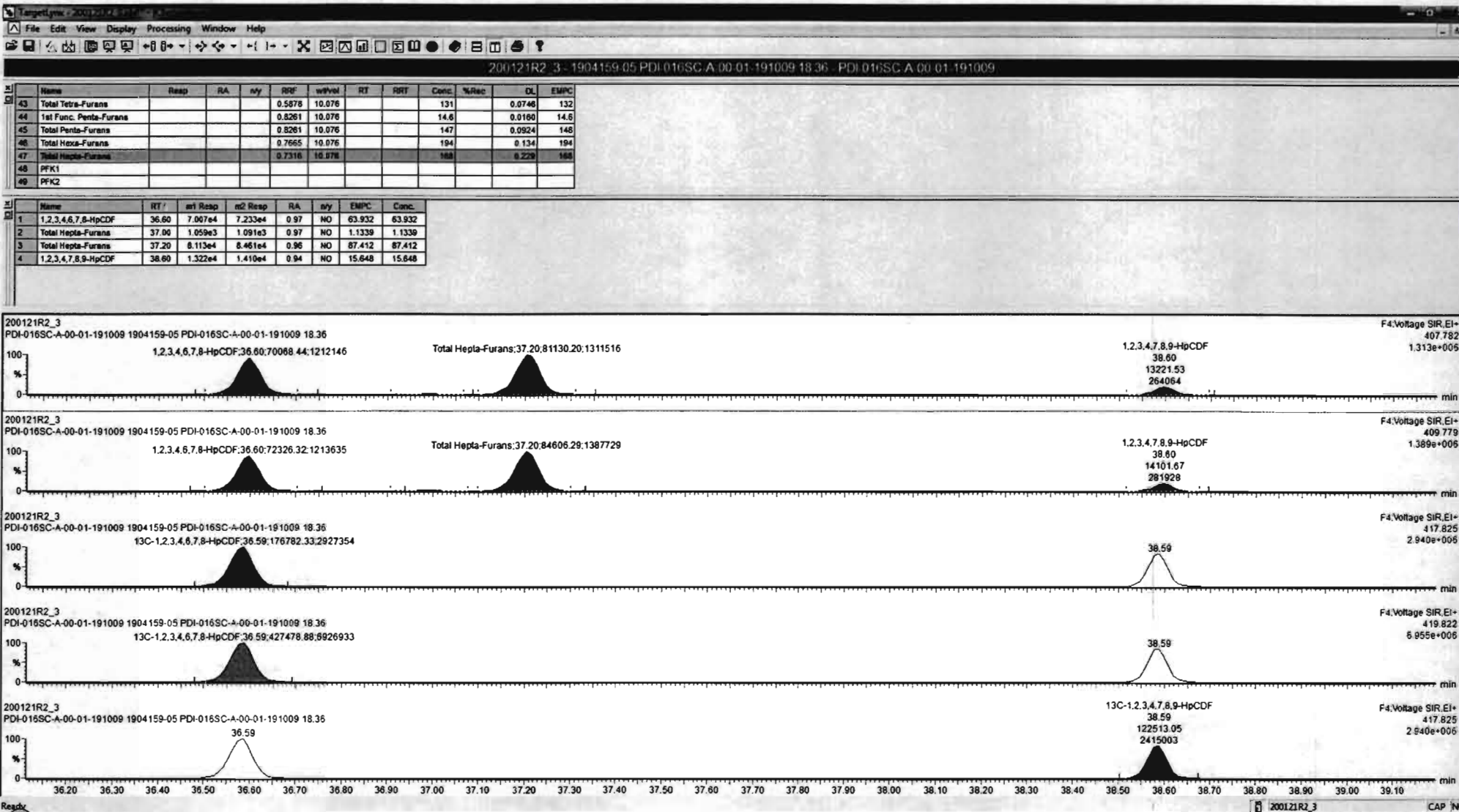


**DPE4**

200121R2\_3

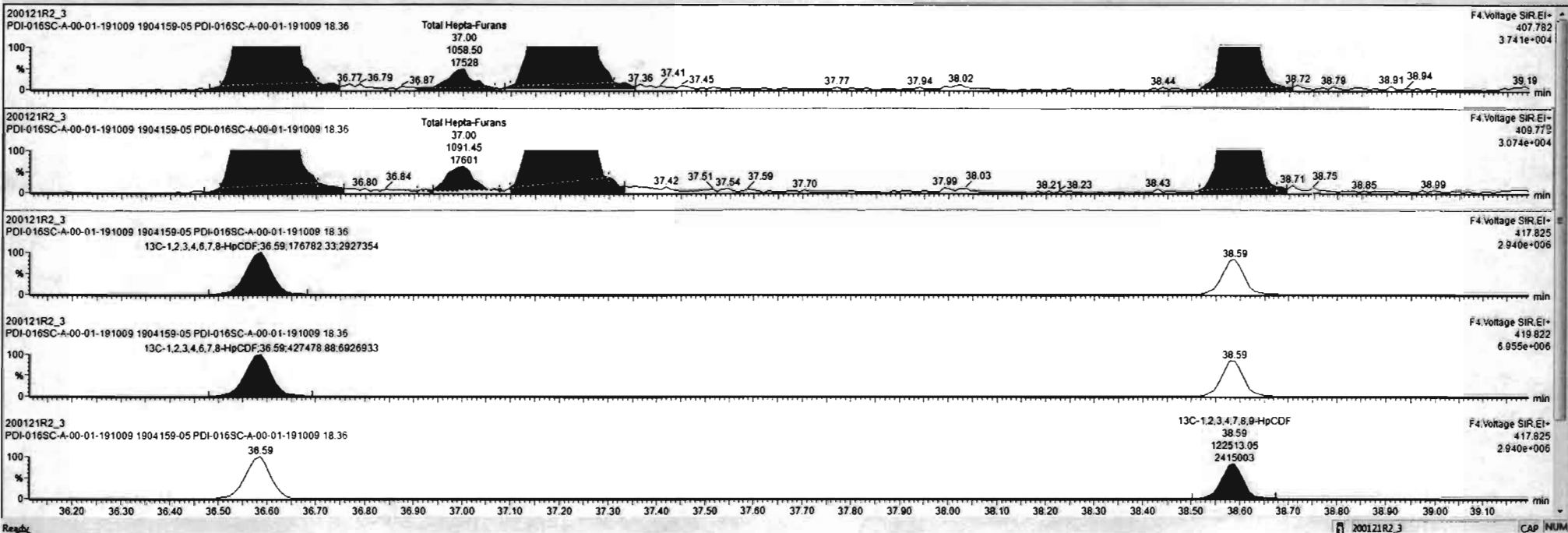






Name	Resp	RA	ny	RPF	wtVol	RT	RRT	Conc	%Rec	DL	EMPC
43 Total Tetra-Furans				0.5878	10.076			131	0.0748	132	
44 1st Func. Penta-Furans				0.8261	10.076			14.6	0.0160	14.6	
45 Total Penta-Furans				0.8261	10.076			147	0.0924	148	
46 Total Hexa-Furans				0.7665	10.076			194	0.134	194	
47 Total Hepta-Furans				0.7318	10.076			168	0.229	168	
48 PFK1											
49 PFK2											

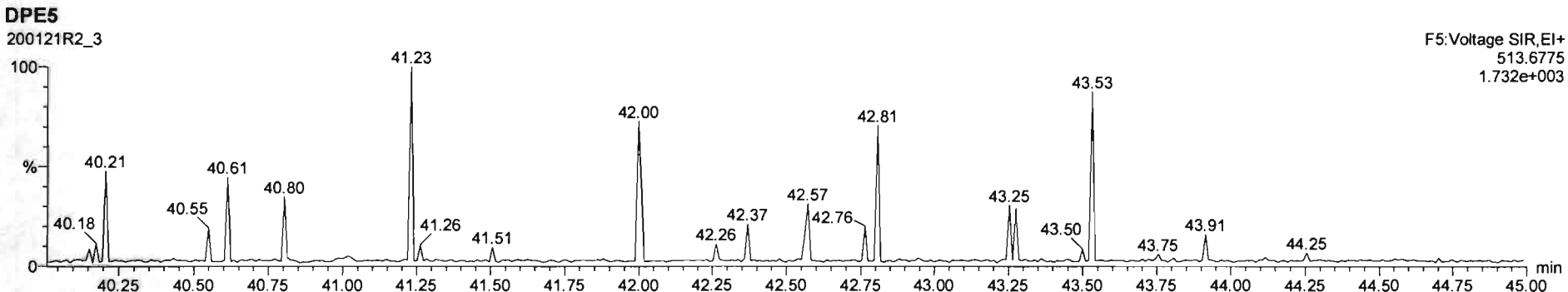
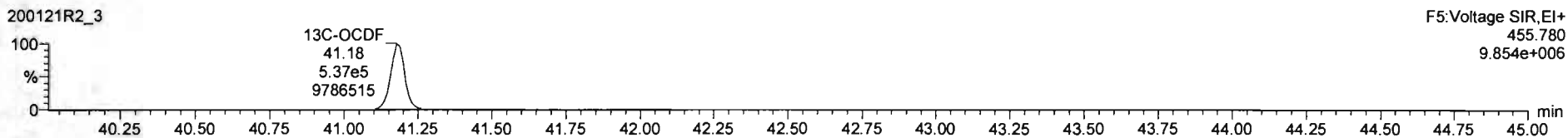
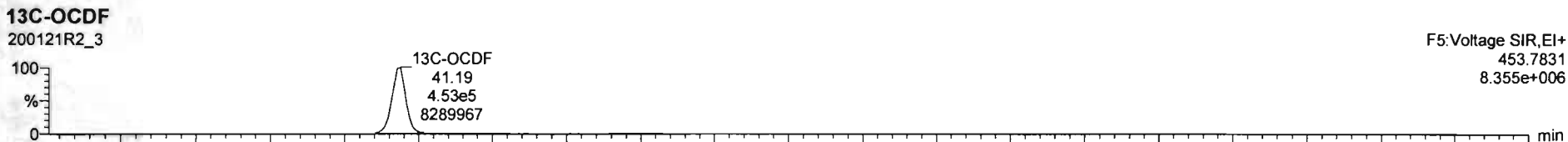
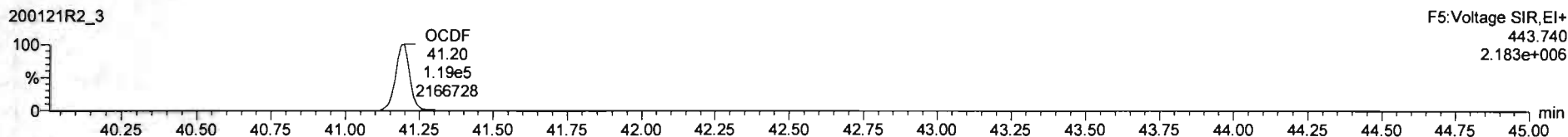
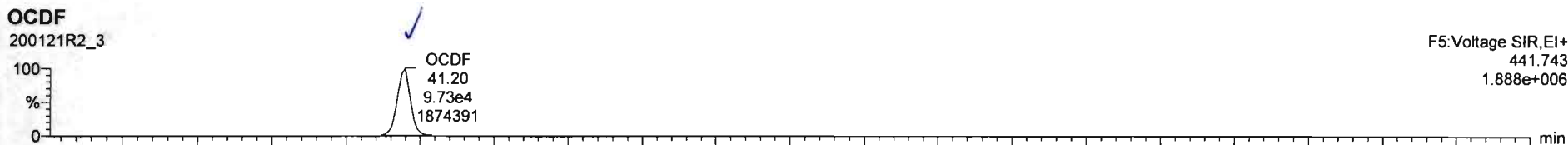
Name	RT /	m1 Resp	m2 Resp	RA	ny	EMPC	Conc.
1 1,2,3,4,6,7,8-HpCDF	36.60	7.007e4	7.233e4	0.97	NO	63.932	63.932
2 Total Hepta-Furans	37.00	1.059e3	1.091e3	0.97	NO	1.1339	1.1339
3 Total Hepta-Furans	37.20	8.113e4	8.461e4	0.96	NO	87.412	87.412
4 1,2,3,4,7,8,9-HpCDF	38.60	1.322e4	1.410e4	0.94	NO	15.648	15.648



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Last Altered: Wednesday, January 22, 2020 10:44:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:45:28 Pacific Standard Time

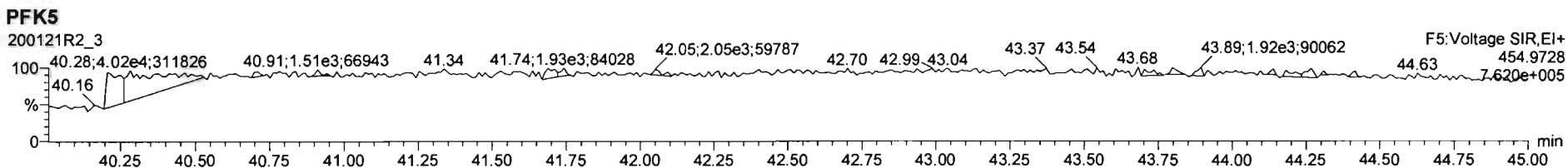
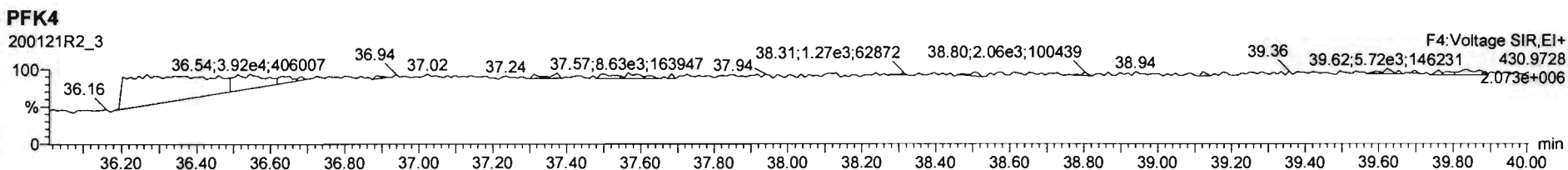
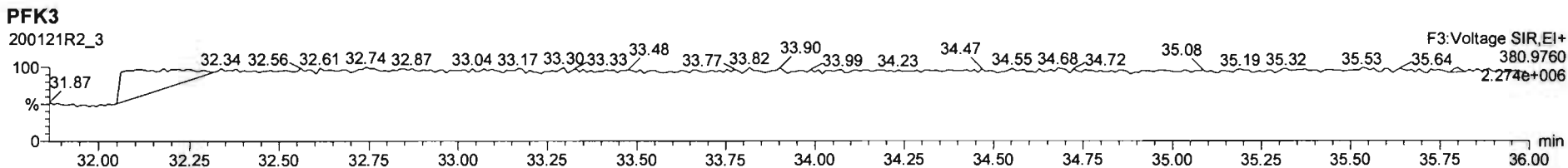
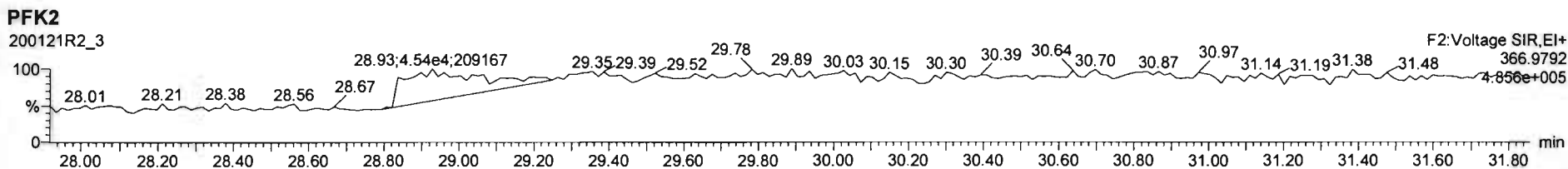
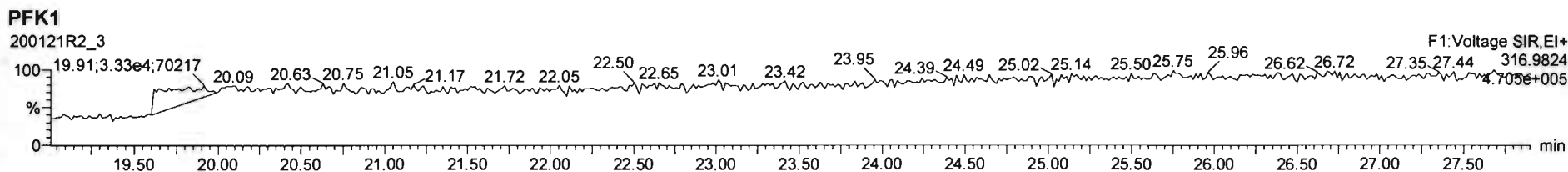
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Name: 200121R2\_3, Date: 22-Jan-2020, Time: 00:30:32, ID: 1904159-05 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-4b.qld

Last Altered: Friday, January 31, 2020 11:11:23 Pacific Standard Time

Printed: Friday, January 31, 2020 11:11:50 Pacific Standard Time

*GPB 01/31/2020*

*C7 02/03/2020*

Method: U:\VG7.pro\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 27 Jan 2020 11:34:37

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Description: 1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		7.43e4	10.0285	0.905			1.001		26.02					0.290
2	2 1,2,3,7,8-PeCDD		5.18e4	10.0285	0.903			1.001		30.59					0.518
3	3 1,2,3,4,7,8-HxCDD		4.03e4	10.0285	1.101			1.000		33.91					0.988
4	4 1,2,3,6,7,8-HxCDD	2.18e2	4.84e4	10.0285	0.939	1.007	YES	1.000	1.001	34.00	34.02	0.95548		0.866	0.987
5	5 1,2,3,7,8,9-HxCDD		4.35e4	10.0285	0.961			1.001		34.34					1.16
6	6 1,2,3,4,6,7,8-HpCDD	9.22e3	4.15e4	10.0285	0.979	1.061	NO	1.000	1.000	37.79	37.79	45.209		45.2	1.08
7	7 OCDD	7.76e4	6.00e4	10.0285	0.959	0.917	NO	1.000	1.001	41.04	41.06	538.53		539	1.28
8	8 2,3,7,8-TCDF	8.32e2	1.13e5	10.0285	0.950	0.733	NO	1.001	1.001	25.22	25.21	1.5476 (1.39)		1.55	0.344
9	9 1,2,3,7,8-PeCDF	1.16e3	9.10e4	10.0285	0.960	1.813	YES	1.001	1.001	29.40	29.40	2.6480		2.40 <i>OK</i>	0.200
10	10 2,3,4,7,8-PeCDF	4.27e2	8.59e4	10.0285	1.015	1.395	NO	1.001	1.001	30.32	30.31	0.97556		0.976	0.190
11	11 1,2,3,4,7,8-HxCDF	1.67e3	6.42e4	10.0285	1.177	1.192	NO	1.000	1.000	33.01	33.02	4.4100		4.41	0.379
12	12 1,2,3,6,7,8-HxCDF	4.66e2	7.07e4	10.0285	1.069	1.280	NO	1.000	1.000	33.15	33.14	1.2295		1.23	0.425
13	13 2,3,4,6,7,8-HxCDF	2.56e2	5.90e4	10.0285	1.114	1.622	YES	1.001	1.000	33.76	33.74	0.77815		0.665 <i>OK</i>	0.463
14	14 1,2,3,7,8,9-HxCDF	1.28e2	4.66e4	10.0285	1.062	1.284	NO	1.000	1.000	34.69	34.71	0.51619		0.516	0.882
15	15 1,2,3,4,6,7,8-HpCDF	1.68e3	4.88e4	10.0285	1.128	1.047	NO	1.001	1.001	36.55	36.54	6.0995		6.10	0.438
16	16 1,2,3,4,7,8,9-HpCDF	3.11e2	3.83e4	10.0285	1.280	0.782	YES	1.000	1.000	38.32	38.32	1.2652		1.09 <i>OK</i>	0.480
17	17 OCDF	3.95e3	8.82e4	10.0285	0.947	0.895	NO	1.000	1.000	41.26	41.27	18.853		18.9	0.414
18	18 13C-2,3,7,8-TCDD	7.43e4	7.23e4	10.0285	1.095	0.769	NO	1.023	1.022	26.01	25.99	187.16	93.8		0.752
19	19 13C-1,2,3,7,8-PeCDD	5.18e4	7.23e4	10.0285	0.881	0.621	NO	1.203	1.202	30.58	30.57	162.20	81.3		0.915
20	20 13C-1,2,3,4,7,8-Hx...	4.03e4	7.28e4	10.0285	0.642	1.312	NO	1.014	1.014	33.88	33.90	171.75	86.1		1.13
21	21 13C-1,2,3,6,7,8-Hx...	4.84e4	7.28e4	10.0285	0.856	1.291	NO	1.017	1.017	34.00	34.00	154.92	77.7		0.845
22	22 13C-1,2,3,7,8,9-Hx...	4.35e4	7.28e4	10.0285	0.807	1.248	NO	1.026	1.026	34.30	34.30	147.80	74.1		0.897
23	23 13C-1,2,3,4,6,7,8-H...	4.15e4	7.28e4	10.0285	0.654	1.065	NO	1.131	1.131	37.79	37.78	173.90	87.2		1.30
24	24 13C-OCDD	6.00e4	7.28e4	10.0285	0.580	0.949	NO	1.228	1.228	41.05	41.04	283.21	71.0		0.946
25	25 13C-2,3,7,8-TCDF	1.13e5	1.23e5	10.0285	1.035	0.828	NO	0.992	0.991	25.22	25.19	176.35	88.4		0.644
26	26 13C-1,2,3,7,8-PeCDF	9.10e4	1.23e5	10.0285	0.854	1.637	NO	1.156	1.156	29.39	29.38	172.42	86.5		0.896
27	27 13C-2,3,4,7,8-PeCDF	8.59e4	1.23e5	10.0285	0.847	1.597	NO	1.192	1.191	30.30	30.29	164.14	82.3		0.903
28	28 13C-1,2,3,4,7,8-Hx...	6.42e4	7.28e4	10.0285	0.832	0.507	NO	0.987	0.988	32.99	33.01	211.45	106.0		1.76
29	29 13C-1,2,3,6,7,8-Hx...	7.07e4	7.28e4	10.0285	1.034	0.517	NO	0.991	0.992	33.11	33.14	187.22	93.9		1.41
30	30 13C-2,3,4,6,7,8-Hx...	5.90e4	7.28e4	10.0285	0.953	0.505	NO	1.009	1.009	33.72	33.73	169.41	84.9		1.53
31	31 13C-1,2,3,7,8,9-Hx...	4.66e4	7.28e4	10.0285	0.828	0.509	NO	1.038	1.038	34.68	34.69	154.12	77.3		1.76

Vista Analytical Laboratory

Dataset: U:\VG7\_PRO\Results\200116D2\200116D2-4b.qld

Last Altered: Friday, January 31, 2020 11:11:23 Pacific Standard Time

Printed: Friday, January 31, 2020 11:11:50 Pacific Standard Time

Name: VG7 200116D2-4, Date: 16-JAN-2020, Time: 01:57:24, ID: 1904159-06 PDI-016SC-A-01-02-191009,  
 Description: 1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	4.88e4	7.28e4	10.0285	0.757	0.431	NO	1.093	1.093	36.52	36.51	176.22	88.4		1.70
33	33 13C-1,2,3,4,7,8,9-H...	3.83e4	7.28e4	10.0285	0.581	0.418	NO	1.147	1.147	38.32	38.32	180.24	90.4		2.21
34	34 13C-OCDF	8.82e4	7.28e4	10.0285	0.689	0.925	NO	1.235	1.235	41.27	41.26	350.55	87.9		1.04
35	35 37Cl-2,3,7,8-TCDD	3.15e4	7.23e4	10.0285	1.198			1.024	1.023	26.03	26.02	72.675	91.1		0.205
36	36 13C-1,2,3,4-TCDD	7.23e4	7.23e4	10.0285	1.000	0.782	NO	1.000	1.000	25.39	25.43	199.43	100.0		0.824
37	37 13C-1,2,3,4-TCDF	1.23e5	1.23e5	10.0285	1.000	0.779	NO	1.000	1.000	23.93	23.95	199.43	100.0		0.666
38	38 13C-1,2,3,4,6,9-Hx...	7.28e4	7.28e4	10.0285	1.000	0.505	NO	1.000	1.000	33.37	33.42	199.43	100.0		1.46
39	39 Total Tetra-Dioxins		7.43e4	10.0285	0.901			0.000		25.50					0.135
40	40 Total Penta-Dioxins		5.18e4	10.0285	0.872			0.000		30.00		0.87530		0.875	0.536
41	41 Total Hexa-Dioxins		0.00e0	10.0285	0.976			0.000		33.80		6.3900		11.9	1.06
42	42 Total Hepta-Dioxins		4.15e4	10.0285	0.989			0.000		37.75		109.68		110	1.07
43	43 Total Tetra-Furans		1.13e5	10.0285	0.943			0.000		24.00		3.7025		4.94	0.347
44	44 1st Func. Penta-Fur...		0.00e0	10.0285	0.940			0.000		27.63		1.6954		1.70	0.107
45	45 Total Penta-Furans		0.00e0	10.0285	0.940			0.000		30.00		4.5314		8.77	0.205
46	46 Total Hexa-Furans		0.00e0	10.0285	1.078			0.000		33.00		13.763		14.4	0.520
47	47 Total Hepta-Furans		0.00e0	10.0285	1.135			0.000		37.75		20.488		21.6	0.468

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-4b.qld

Last Altered: Friday, January 31, 2020 11:11:23 Pacific Standard Time

Printed: Friday, January 31, 2020 11:11:50 Pacific Standard Time

Method: U:\VG7.pro\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 27 Jan 2020 11:34:37

Name: VG7 200116D2-4, Date: 16-JAN-2020, Time: 01:57:24, ID: 1904159-06 PDI-016SC-A-01-02-191009,

Description: 1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Penta-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	NO	28.51	75.448	19836.359	7.656	bb	0.8753	0.88

**Hexa-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	4 1,2,3,6,7,8-HxCDD	YES	34.02	109.201	27271.010	0.000	bb	0.0000	0.87
2	41 Total Hexa-Dioxins	YES	33.22	616.186	24766.829	0.000	bb	0.0000	3.99
3	41 Total Hexa-Dioxins	YES	32.96	75.103	24766.829	0.000	bd	0.0000	0.63
4	41 Total Hexa-Dioxins	NO	32.37	763.784	24766.829	62.537	bb	6.3900	6.39

**Hepta-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.79	4746.882	21415.236	444.043	bb	45.2094	45.21
2	42 Total Hepta-Dioxins	NO	36.94	6705.128	21415.236	639.200	bb	64.4669	64.47

**Tetra-Furans**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	NO	27.03	58.851	51099.418	2.328	bb	0.2462	0.25
2	8 2,3,7,8-TCDF	NO	25.21	351.633	51099.418	14.746	bb	1.5476	1.55
3	43 Total Tetra-Furans	NO	24.40	406.284	51099.418	15.625	bb	1.6526	1.65
4	43 Total Tetra-Furans	YES	23.96	141.300	51099.418	0.000	db	0.0000	0.37
5	43 Total Tetra-Furans	YES	23.84	72.659	51099.418	0.000	bd	0.0000	0.31
6	43 Total Tetra-Furans	NO	22.94	56.210	51099.418	2.421	bb	0.2561	0.26
7	43 Total Tetra-Furans	YES	22.53	187.654	51099.418	0.000	bb	0.0000	0.55

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-4b.qld

Last Altered: Friday, January 31, 2020 11:11:23 Pacific Standard Time

Printed: Friday, January 31, 2020 11:11:50 Pacific Standard Time

Name: VG7 200116D2-4, Date: 16-JAN-2020, Time: 01:57:24, ID: 1904159-06 PDI-016SC-A-01-02-191009,  
 Description: 1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

## Penta-Furans function 1

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.01	430.367	54669.885	15.975	bb	1.6954	1.70

## Penta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	10 2,3,4,7,8-PeCDF	NO	30.31	248.432	52839.195	9.928	MM	0.9756	0.98
2	45 Total Penta-Furans	YES	29.64	316.195	54669.885	0.000	bb	0.0000	0.97
3	9 1,2,3,7,8-PeCDF	YES	29.40	746.626	56500.574	0.000	bb	0.0000	2.40
4	45 Total Penta-Furans	YES	29.23	82.276	54669.885	0.000	bb	0.0000	0.32
5	45 Total Penta-Furans	YES	29.04	140.363	54669.885	0.000	bb	0.0000	0.55
6	45 Total Penta-Furans	NO	28.49	680.893	54669.885	25.494	bb	2.7056	2.71
7	45 Total Penta-Furans	NO	30.32	209.684	54669.885	8.012	MM	0.8503	0.85

## Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	NO	34.71	71.967	15722.067	5.496	MM	0.5162	0.52
2	13 2,3,4,6,7,8-HxCDF	YES	33.74	158.532	19791.506	0.000	MM	0.0000	0.66
3	12 1,2,3,6,7,8-HxCDF	NO	33.14	261.701	24098.664	13.180	db	1.2295	1.23
4	11 1,2,3,4,7,8-HxCDF	NO	33.02	908.802	21599.184	52.044	bd	4.4100	4.41
5	46 Total Hexa-Furans	NO	32.54	665.503	20302.855	42.207	bb	3.9057	3.91
6	46 Total Hexa-Furans	NO	32.00	458.638	20302.855	26.243	db	2.4284	2.43
7	46 Total Hexa-Furans	NO	31.84	167.589	20302.855	9.943	bd	0.9201	0.92
8	46 Total Hexa-Furans	NO	34.74	59.892	20302.855	3.819	MM	0.3534	0.35

## Hepta-Furans

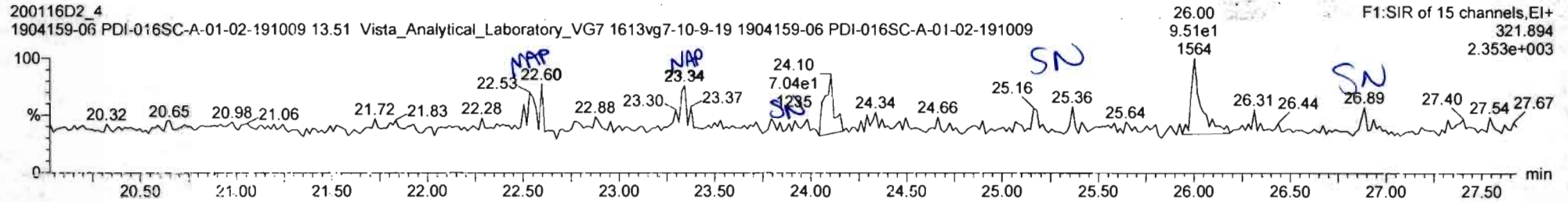
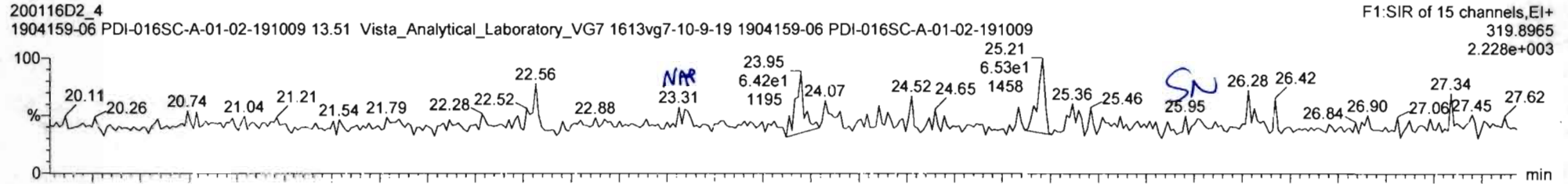
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1	16 1,2,3,4,7,8,9-HpCDF	YES	38.32	136.360	11274.254	0.000	bb	0.0000	1.09
2	47 Total Hepta-Furans	NO	37.12	1838.274	12976.732	163.727	bb	14.3881	14.39
3	15 1,2,3,4,6,7,8-HpCDF	NO	36.54	860.065	14679.209	68.974	bb	6.0995	6.10



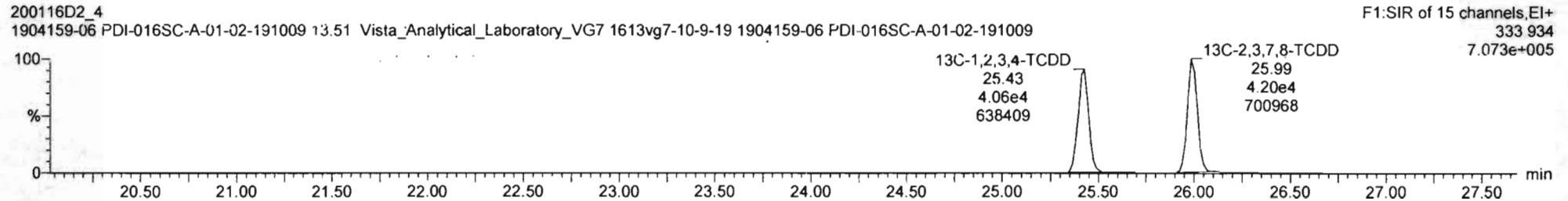
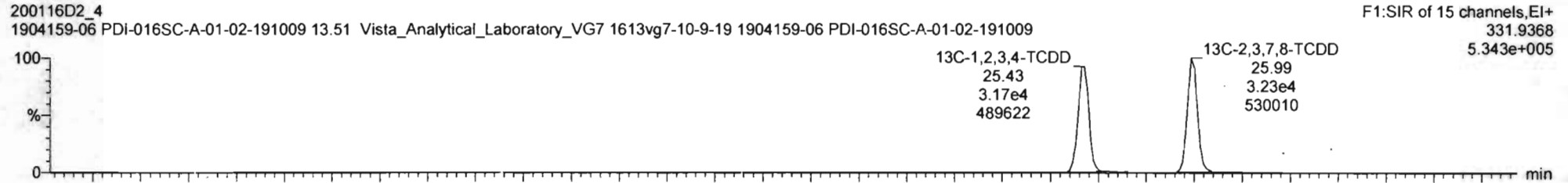
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Description: 1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Tetra-Dioxins



13C-2,3,7,8-TCDD



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 10:35:44 Pacific Standard Time

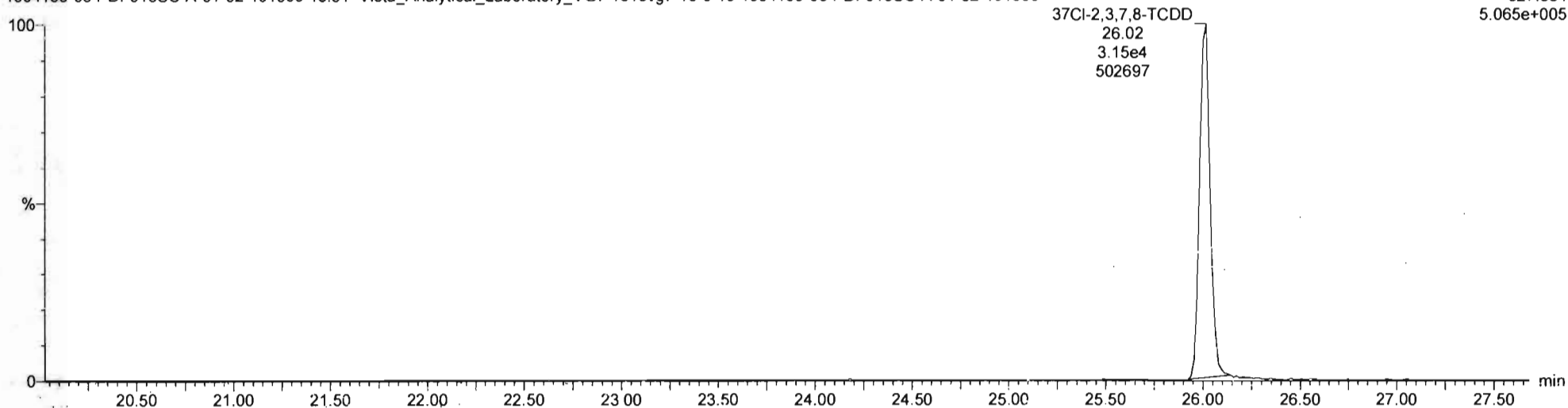
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Description: 1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

37Cl-2,3,7,8-TCDD

200116D2\_4  
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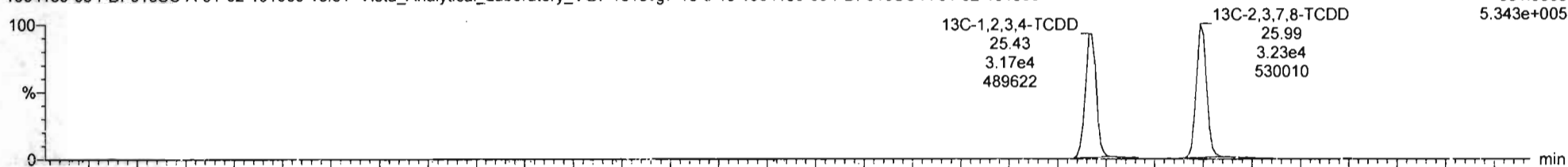
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13C-1,2,3,4-TCDD

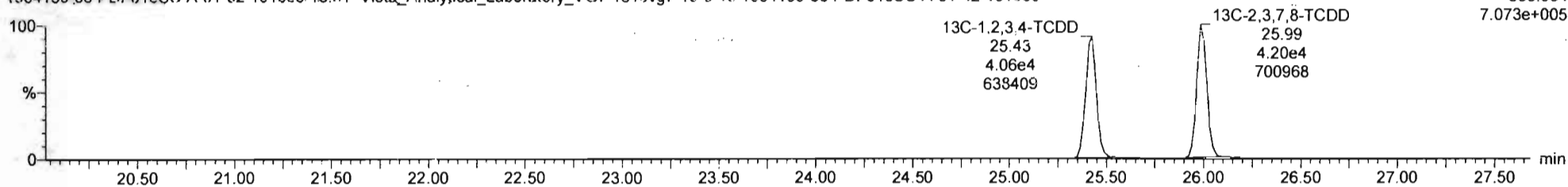
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F1:SIR of 15 channels,EI+  
331.9368  
5.343e+005



200116D2\_4  
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F1:SIR of 15 channels,EI+  
333.934  
7.073e+005



Vista Analytical Laboratory

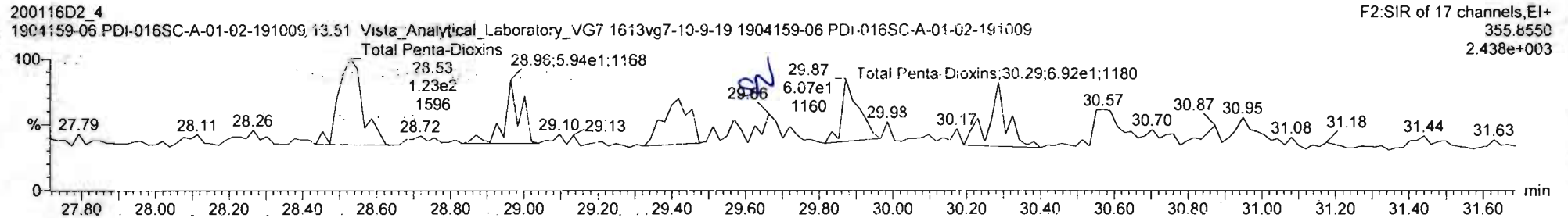
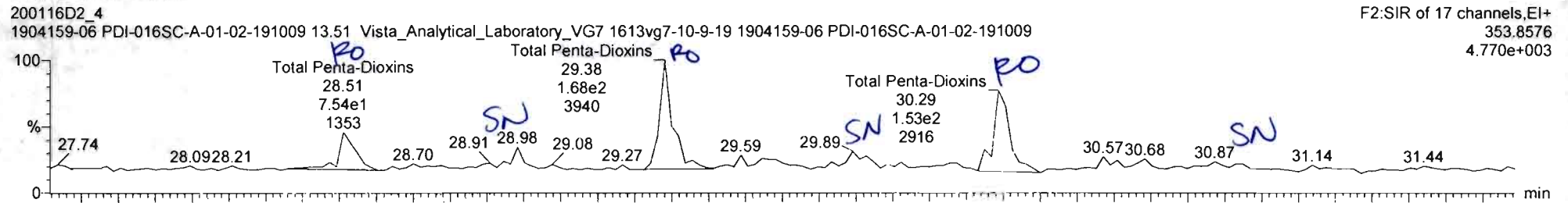
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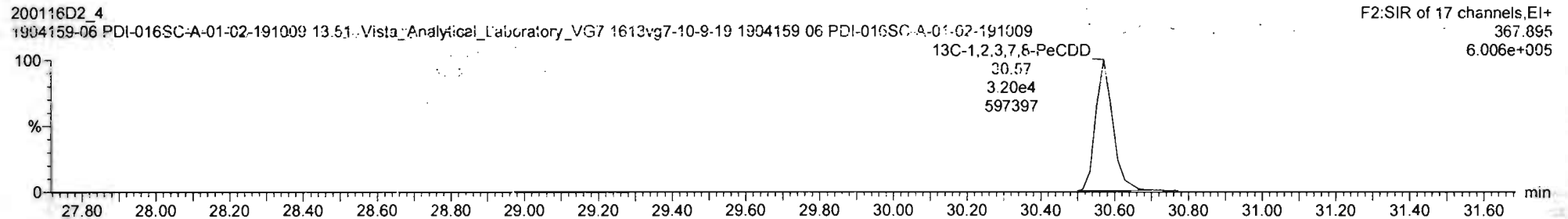
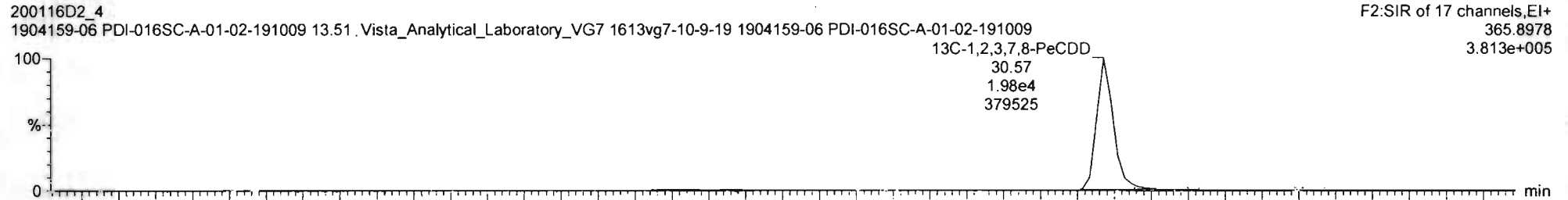
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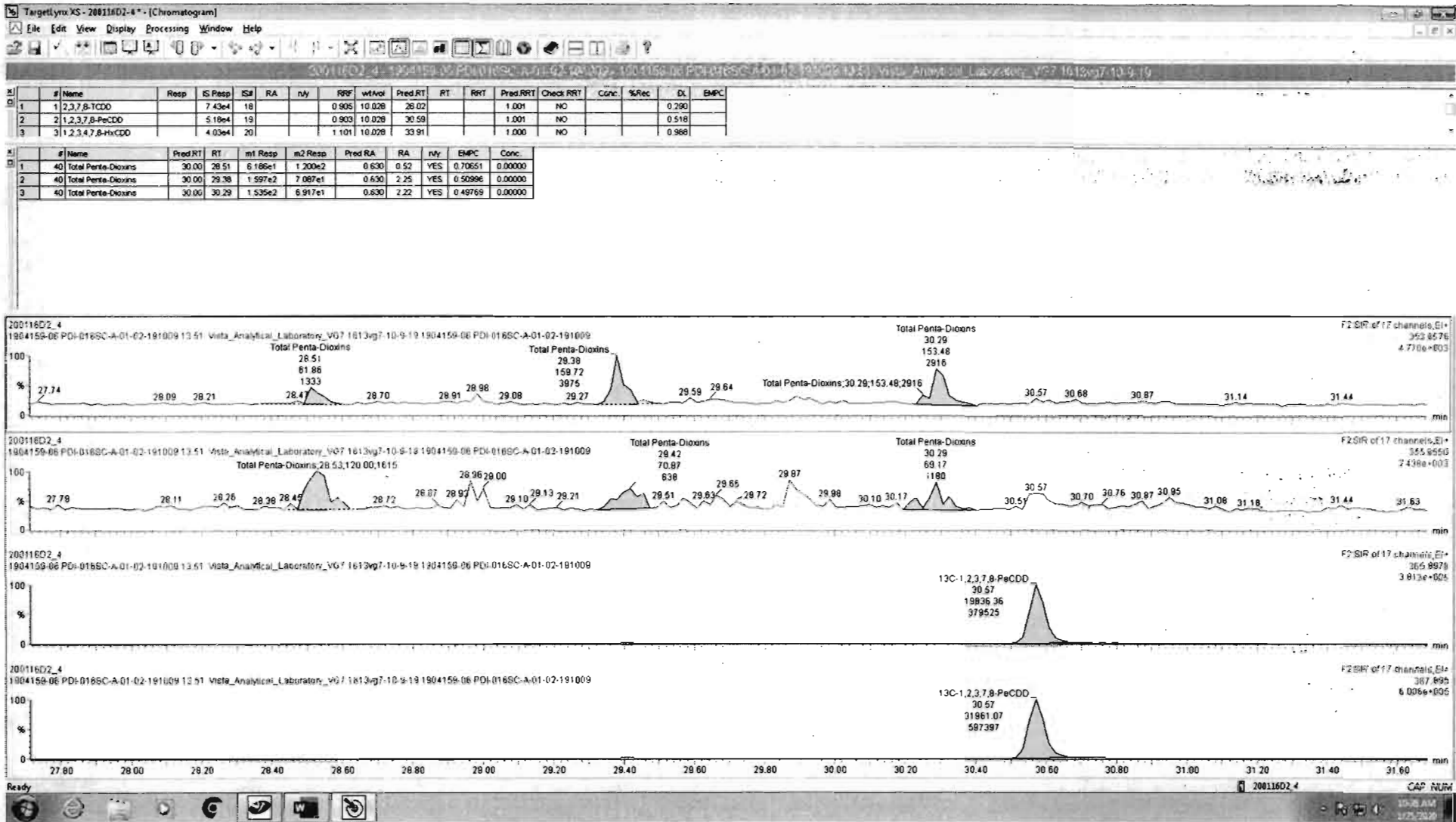
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Total Penta-Dioxins



13C-1,2,3,7,8-PeCDD





Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Saturday, January 25, 2020 10:35:44 Pacific Standard Time

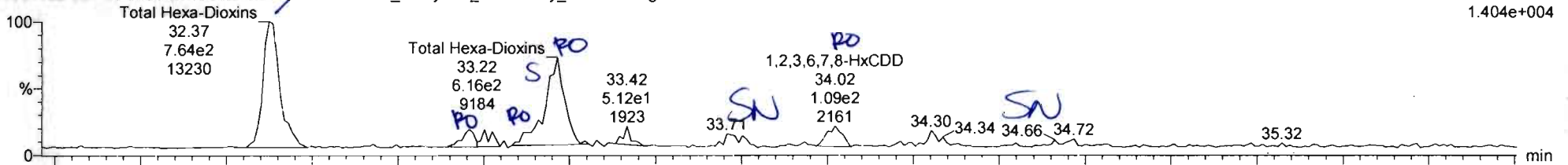
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Total Hexa-Dioxins

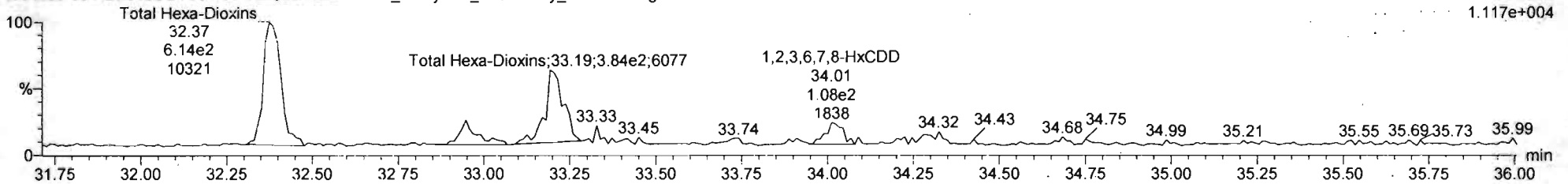
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F3:SIR of 11 channels,EI+  
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1.404e+004



200116D2\_4  
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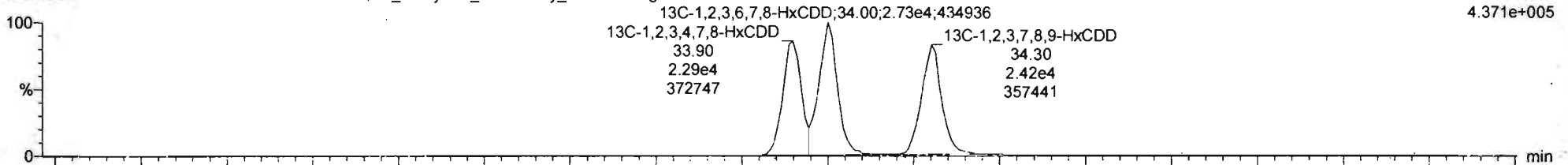
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13C-1,2,3,4,7,8-HxCDD

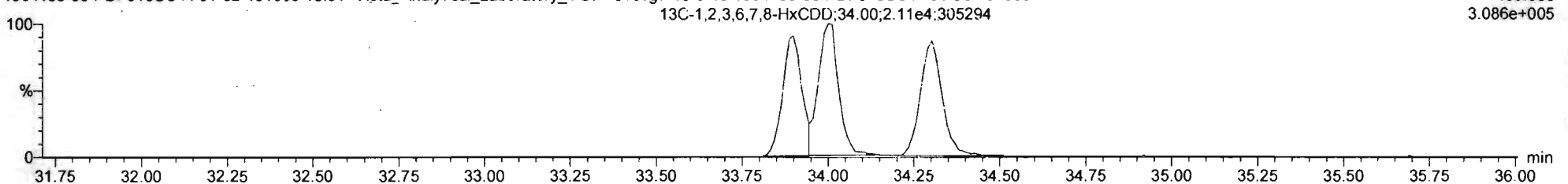
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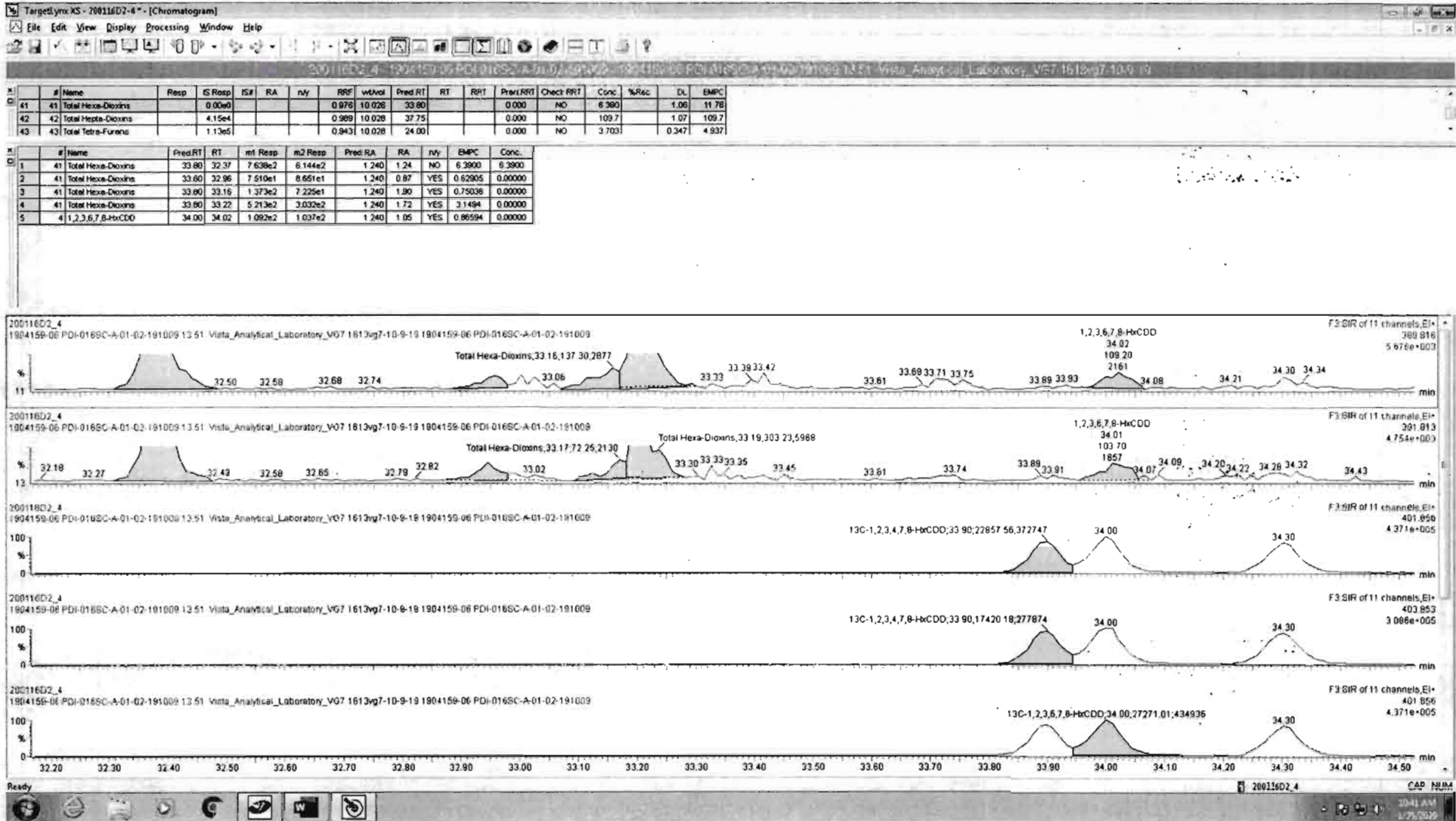
F3:SIR of 11 channels,EI+  
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4.371e+005



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F3:SIR of 11 channels,EI+  
403.853  
3.086e+005





Vista Analytical Laboratory

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Last Altered: Saturday, January 25, 2020 10:35:44 Pacific Standard Time

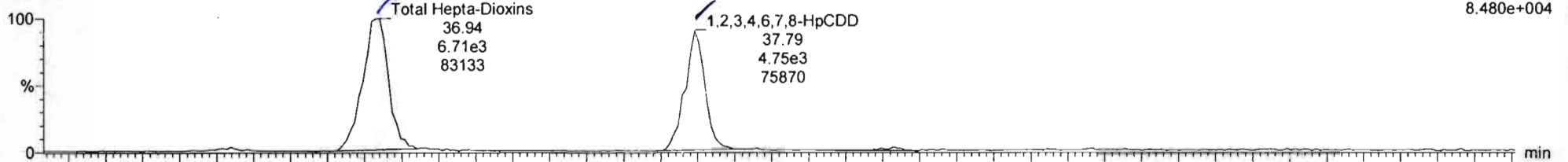
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Total Hepta-Dioxins

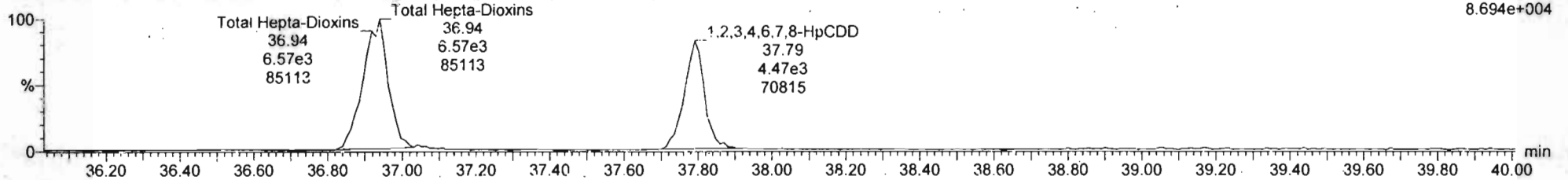
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F4:SIR of 11 channels,EI+  
423.777  
8.480e+004



200116D2\_4  
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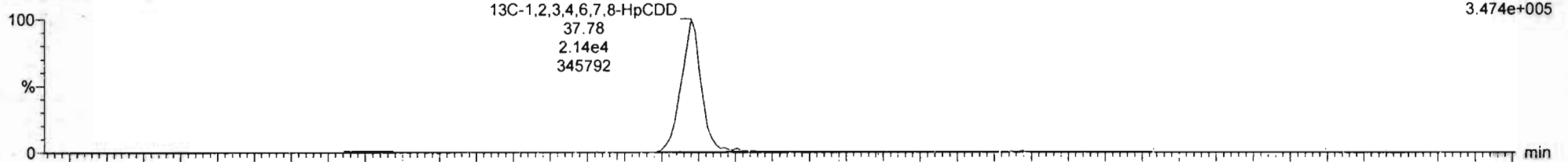
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13C-1,2,3,4,6,7,8-HpCDD

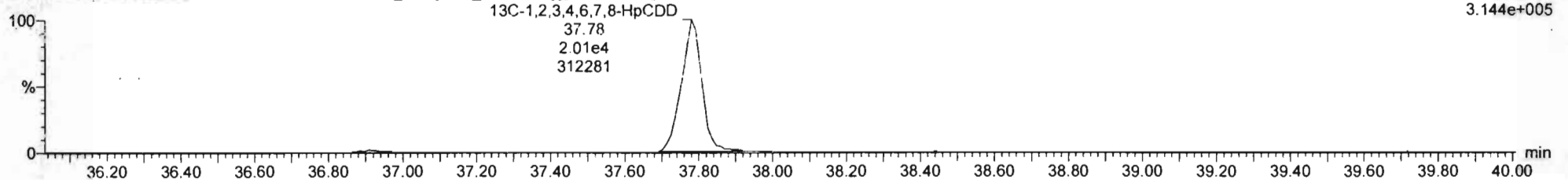
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F4:SIR of 11 channels,EI+  
435.817  
3.474e+005



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F4:SIR of 11 channels,EI+  
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Vista Analytical Laboratory

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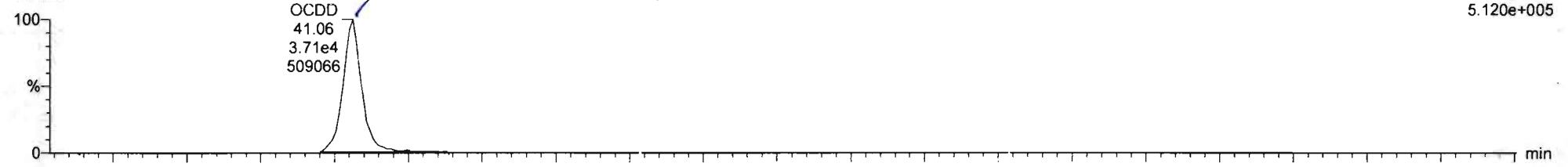
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OCDD

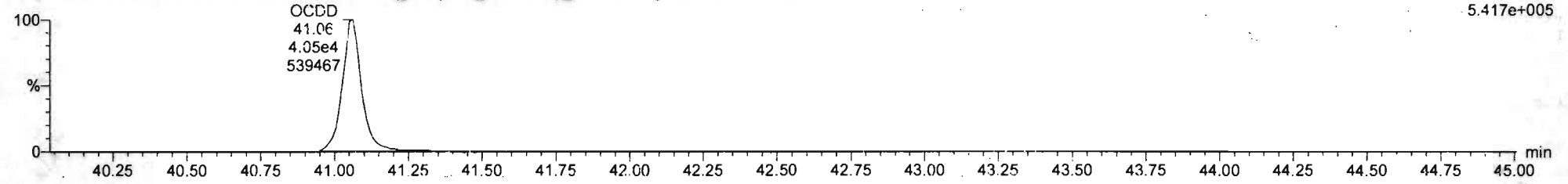
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F5:SIR of 11 channels, EI+  
457.738  
5.120e+005



200116D2\_4  
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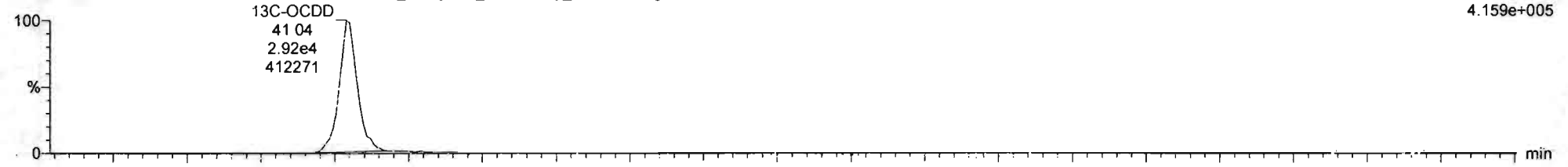
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13C-OCDD

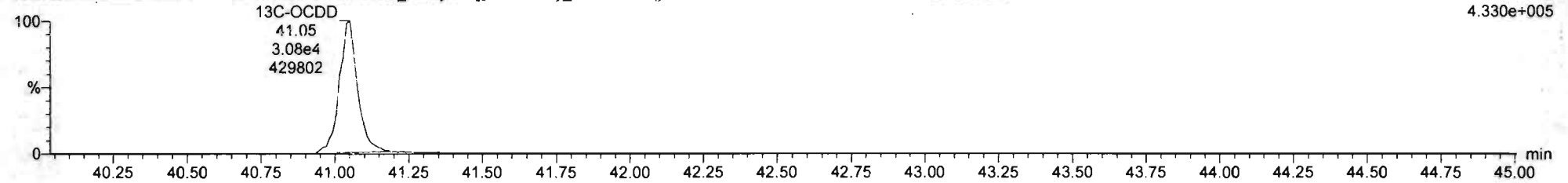
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F5:SIR of 11 channels, EI+  
469.778  
4.159e+005



200116D2\_4  
1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-06 PDI-016SC-A-01-02-191009

F5:SIR of 11 channels, EI+  
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Vista Analytical Laboratory

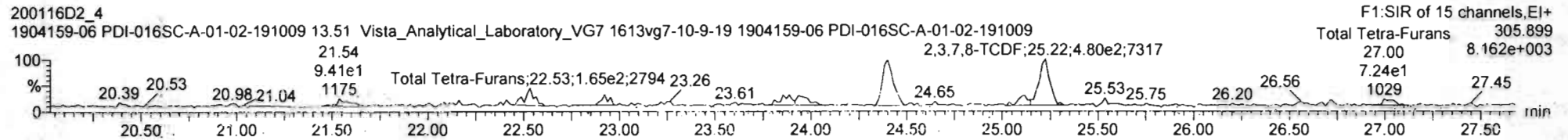
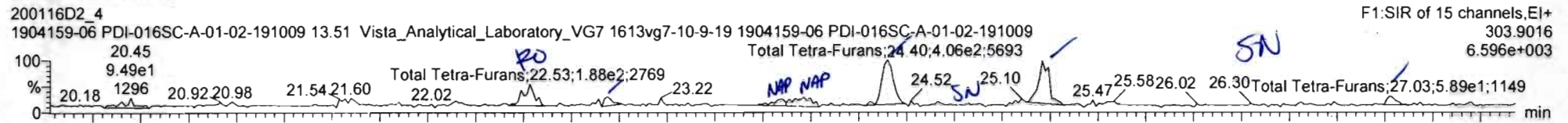
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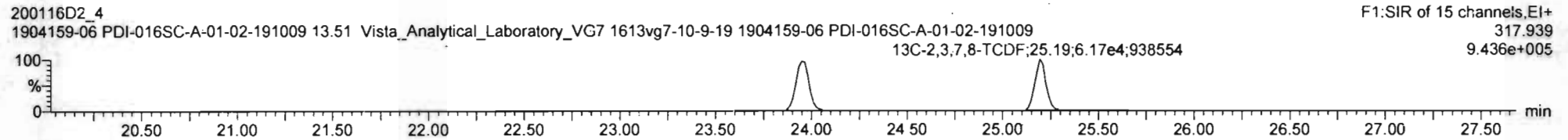
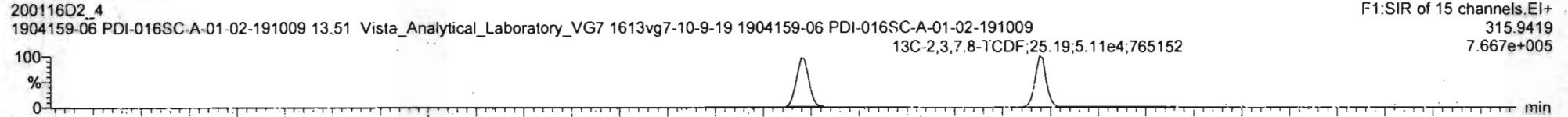
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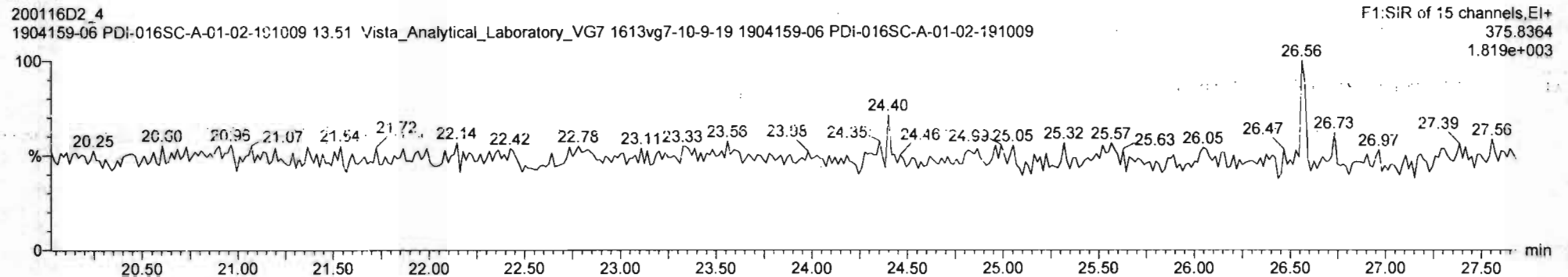
Total Tetra-Furans

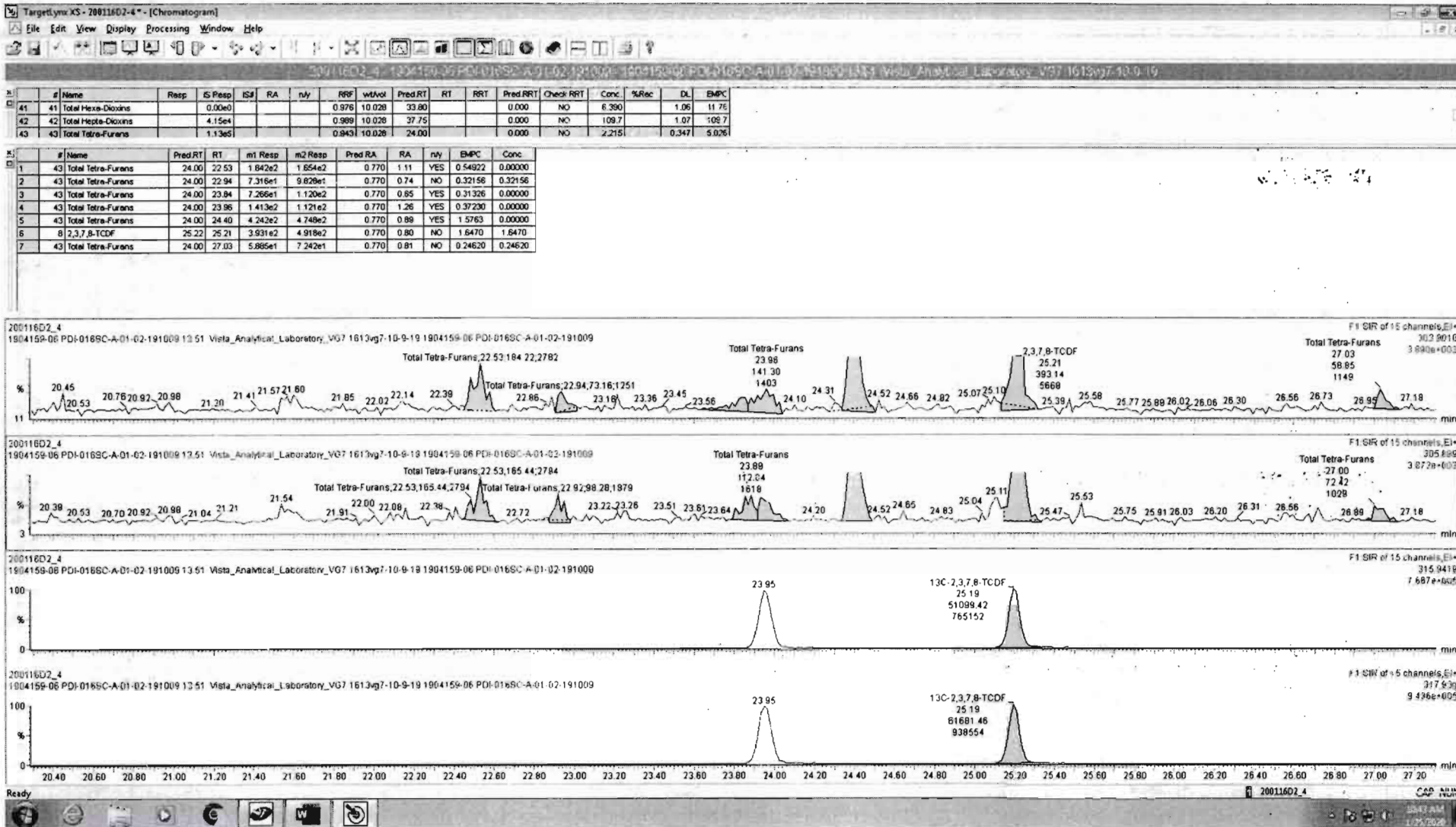


13C-2,3,7,8-TCDF



DPE1





Vista Analytical Laboratory

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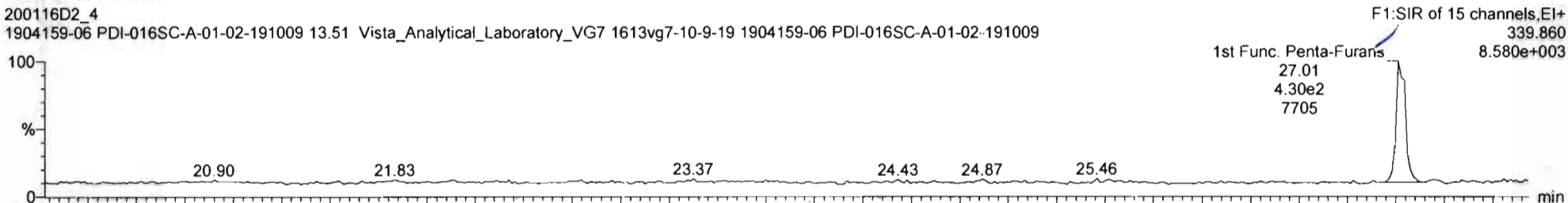
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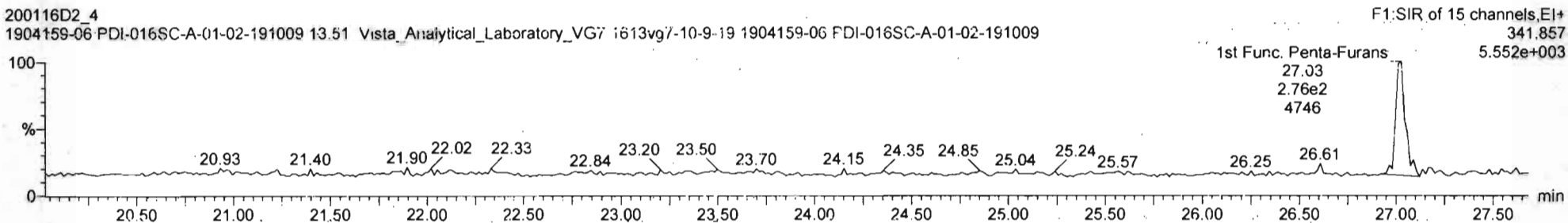
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1st Func. Penta-Furans

200116D2\_4  
1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-06 PDI-016SC-A-01-02-191009

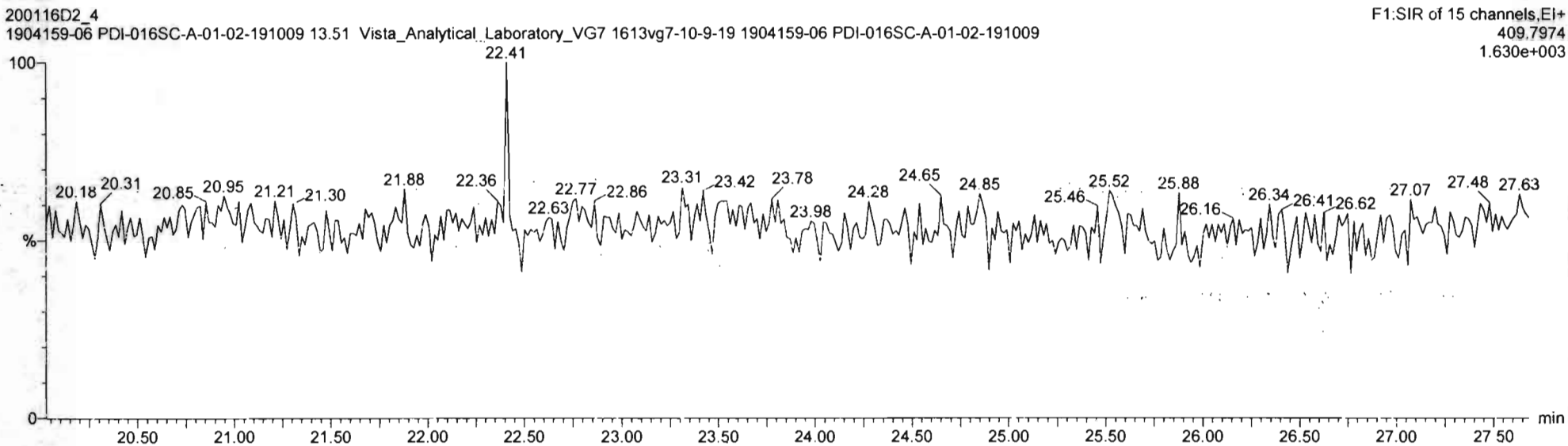


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DPE6

200116D2\_4  
1904159-06 PDI-016SC-A-01-02-191009 13.51 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-06 PDI-016SC-A-01-02-191009



Vista Analytical Laboratory

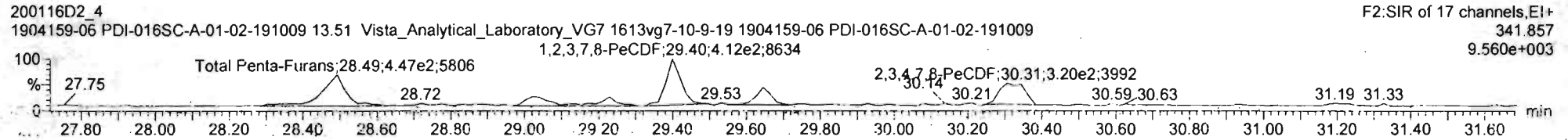
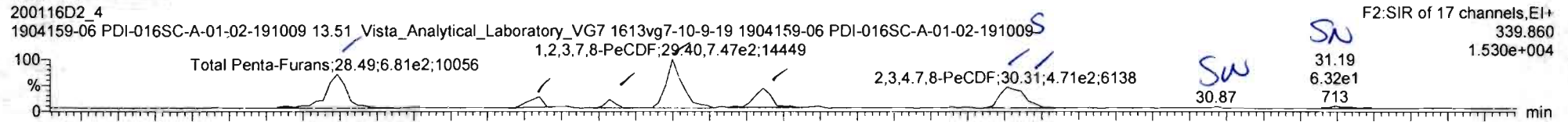
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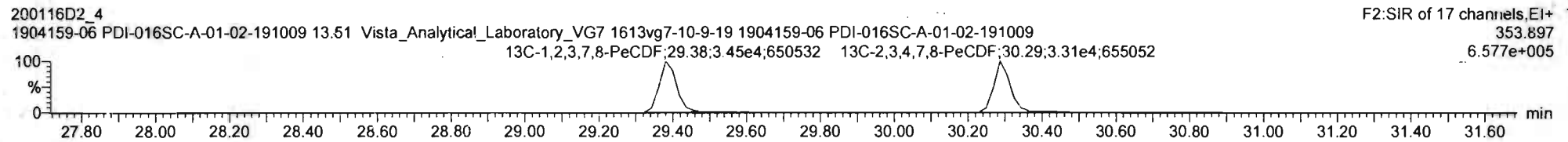
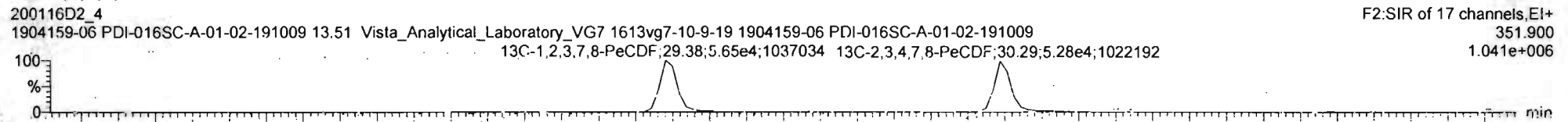
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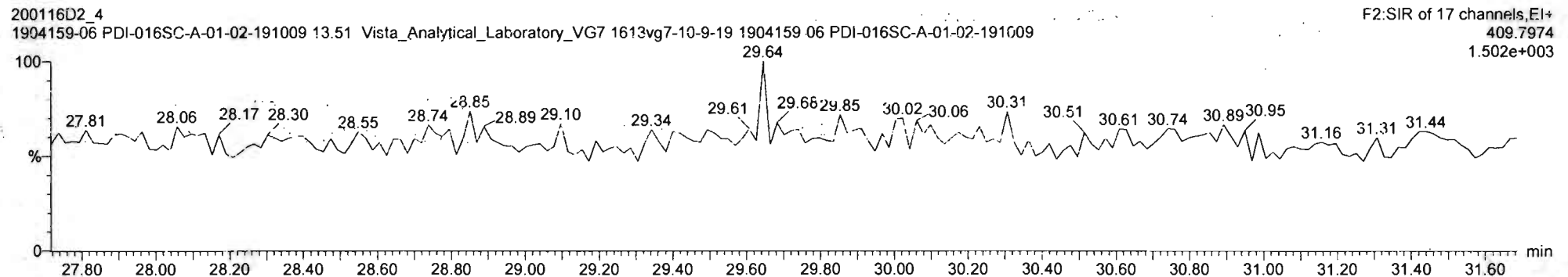
Total Penta-Furans

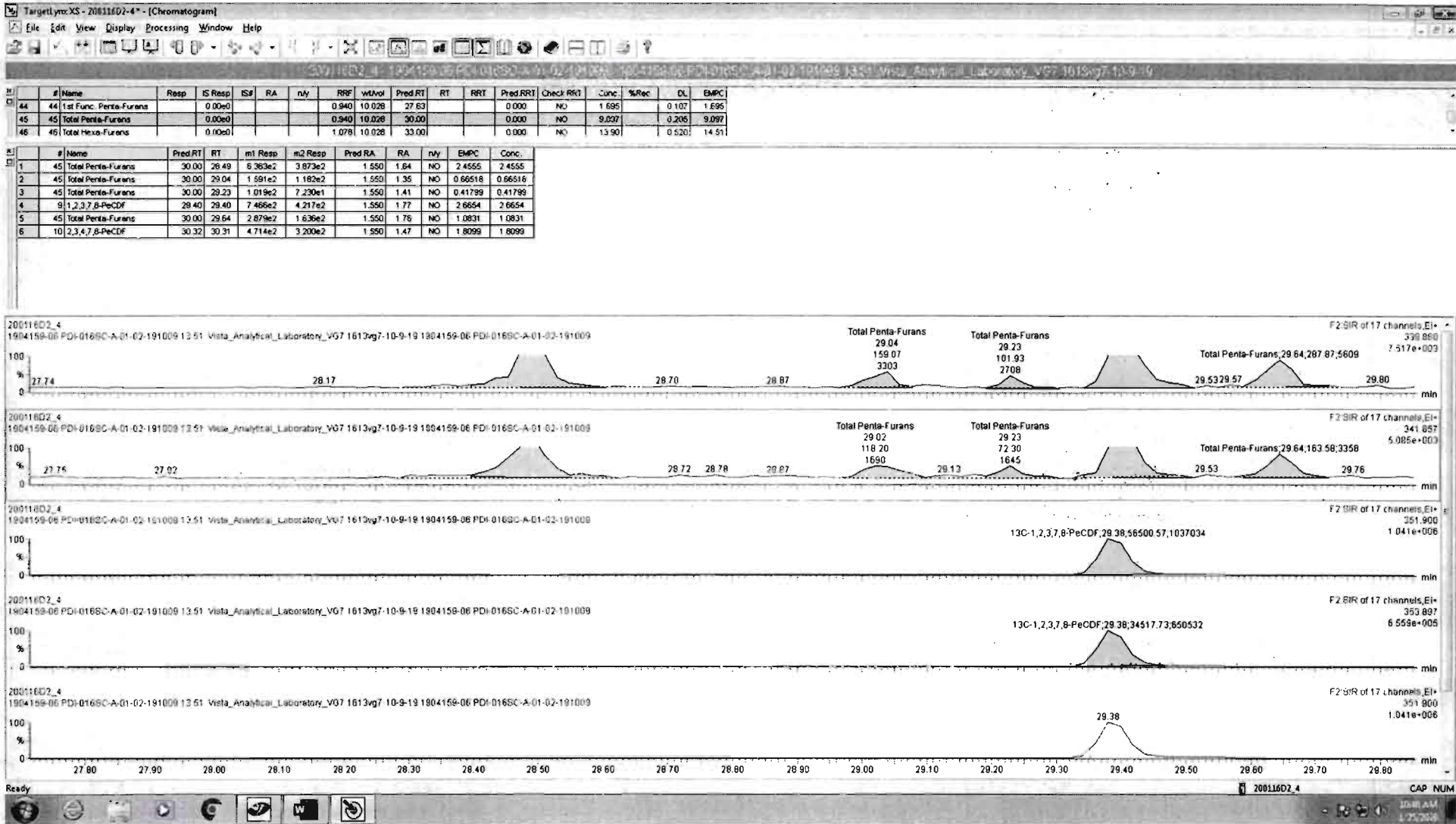


13C-1,2,3,7,8-PeCDF



DPE2

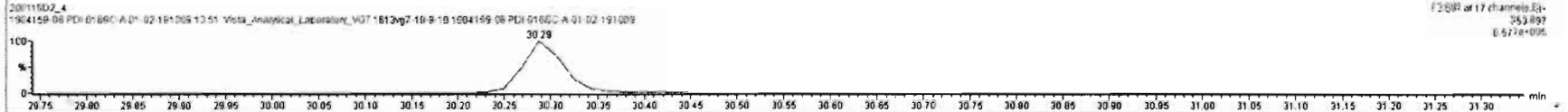
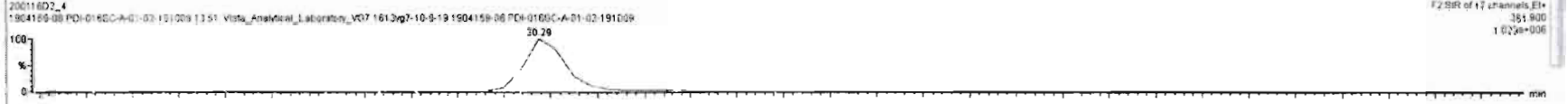
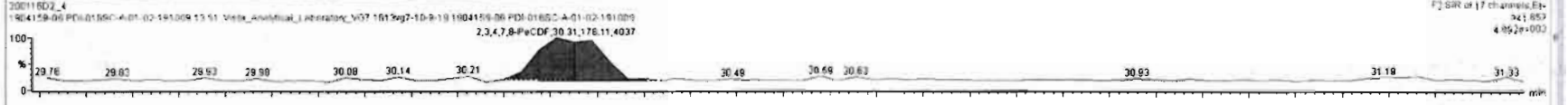
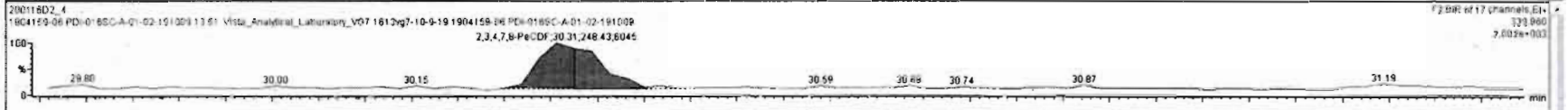




20011602\_4-1904159-06 PDI-0160C-A-01-02-191009-1904159-06 PDI-0160C-A-01-02-191003-1351 Vista\_Analytical\_Laboratory\_V071612vg7-10-9-19

#	Name	Resp	RA	n/y	RRF	mAvol	Prod RT	RT	Pred R	RRT	RRT Fat	Conc	%Rec	DL	EMPC
45	Total Penta-Furans					10.026	30.00		0.000		NO	4.531		0.205	8.772
46	Total Hexa-Furans					10.026	33.00		0.000		NO	13.90		0.520	14.51
47	Total Hepta-Furans					10.026	37.75		0.000		NO	20.49		0.468	21.58
48	PFK1														
49	PFK2														
50	PFK3														
51	PFK4														
52	PFK5														

#	Name	Prod RT	RT	m1 Resp	m2 Resp	Y* Ratio (Prod)	RA	n/y	EMPC	Conc
1	45 Total Penta-Furans	30.00	29.49	6.009e2	4.469e2	1.550	1.52	NO	2.7056	2.7056
2	45 Total Penta-Furans	30.00	29.04	1.404e2	1.239e2	1.550	1.13	YES	0.55400	0.00000
3	45 Total Penta-Furans	30.00	29.23	8.228e1	9.953e1	1.550	0.83	YES	0.32473	0.00000
4	9 1,2,3,7,8-PeCDF	29.40	29.40	7.466e2	4.118e2	1.550	1.81	YES	2.3980	0.00000
5	45 Total Penta-Furans	30.00	29.64	3.162e2	1.579e2	1.550	2.00	YES	0.96601	0.00000
6	10 2,3,4,7,8-PeCDF	30.32	30.31	2.484e2	1.781e2	1.550	1.36	NO	0.97556	0.97556
7	45 Total Penta-Furans	30.00	30.32	2.081e2	1.447e2	1.550	1.45	NO	0.85031	0.85031



Vista Analytical Laboratory

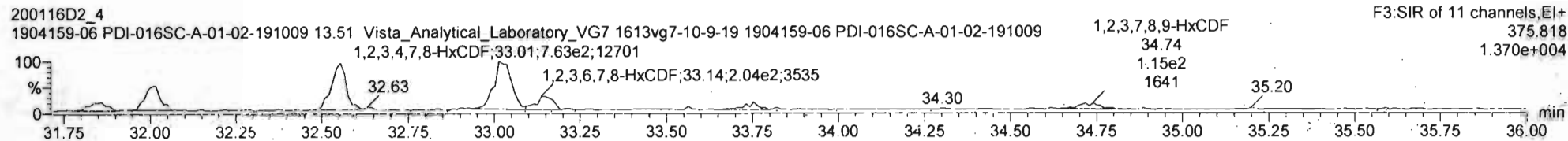
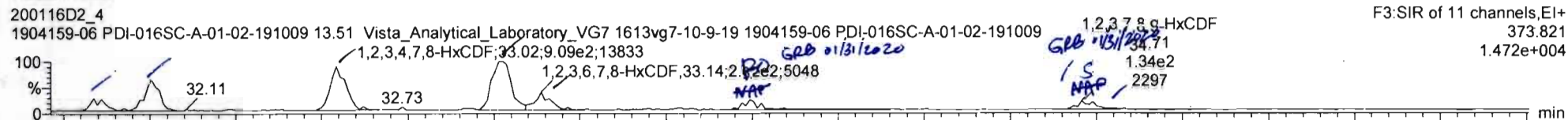
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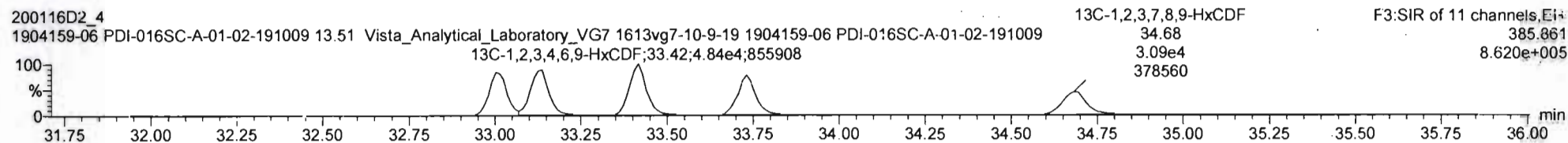
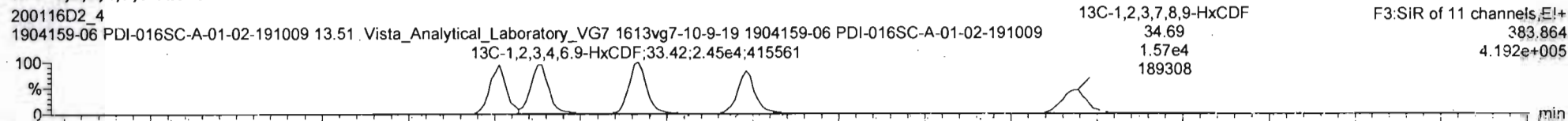
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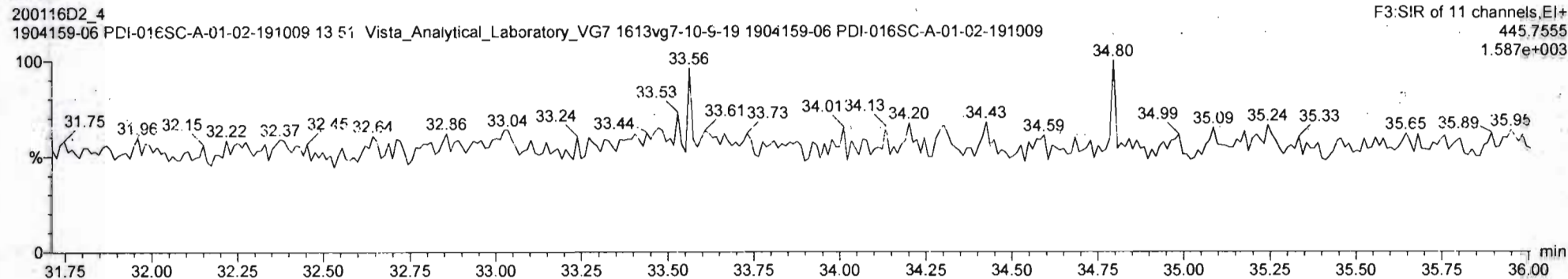
Total Hexa-Furans

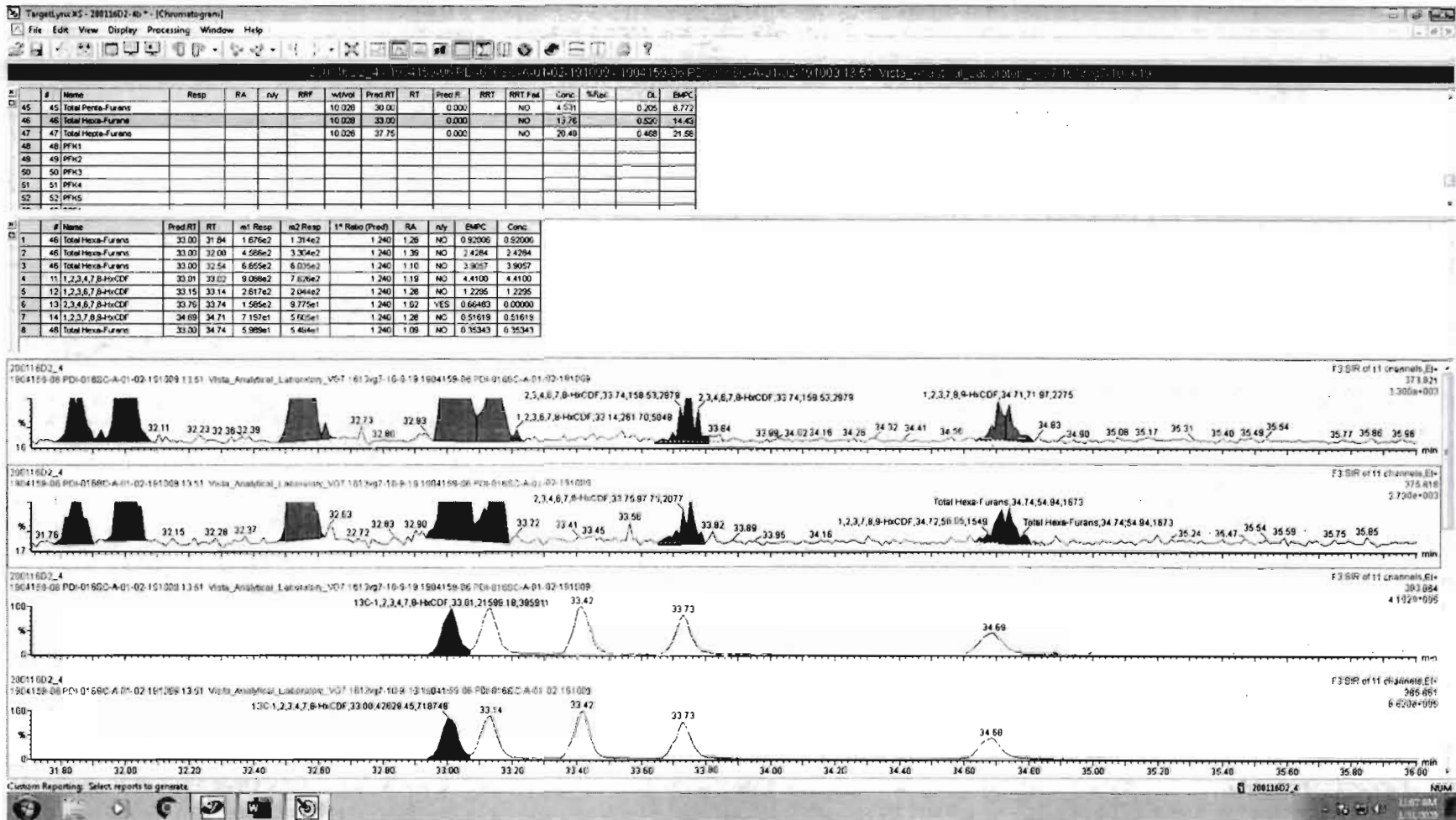


13C-1,2,3,4,7,8-HxCDF



DPE3







Vista Analytical Laboratory

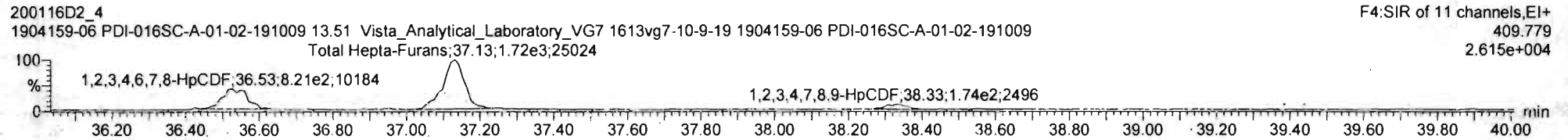
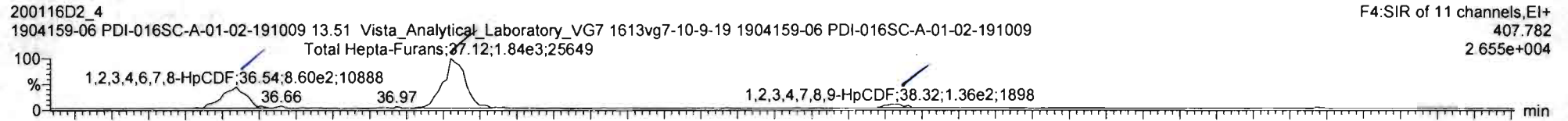
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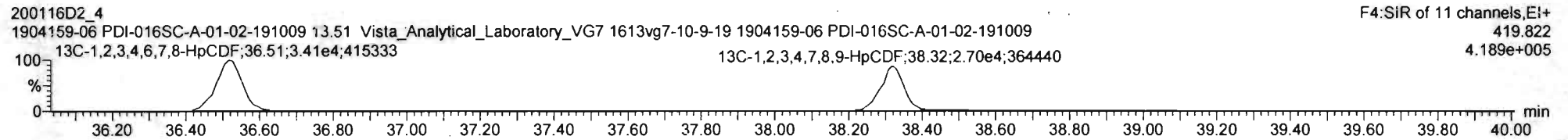
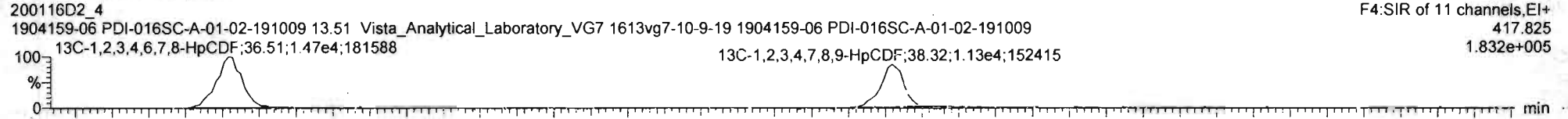
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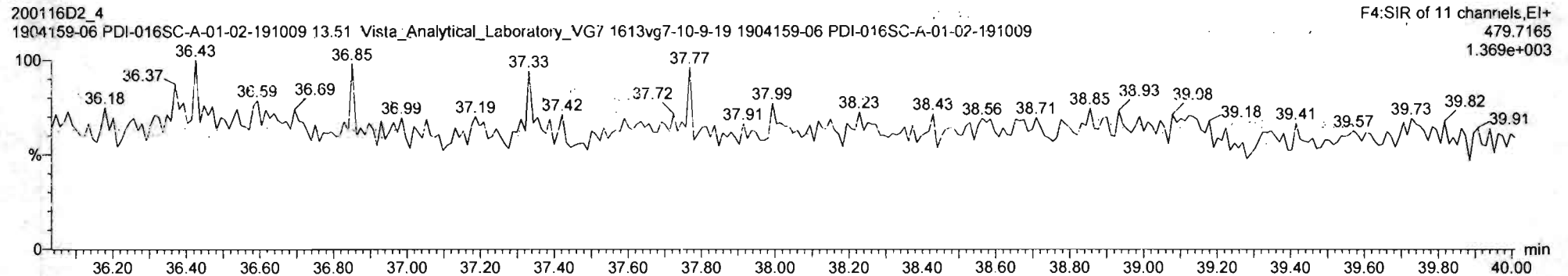
Total Hepta-Furans

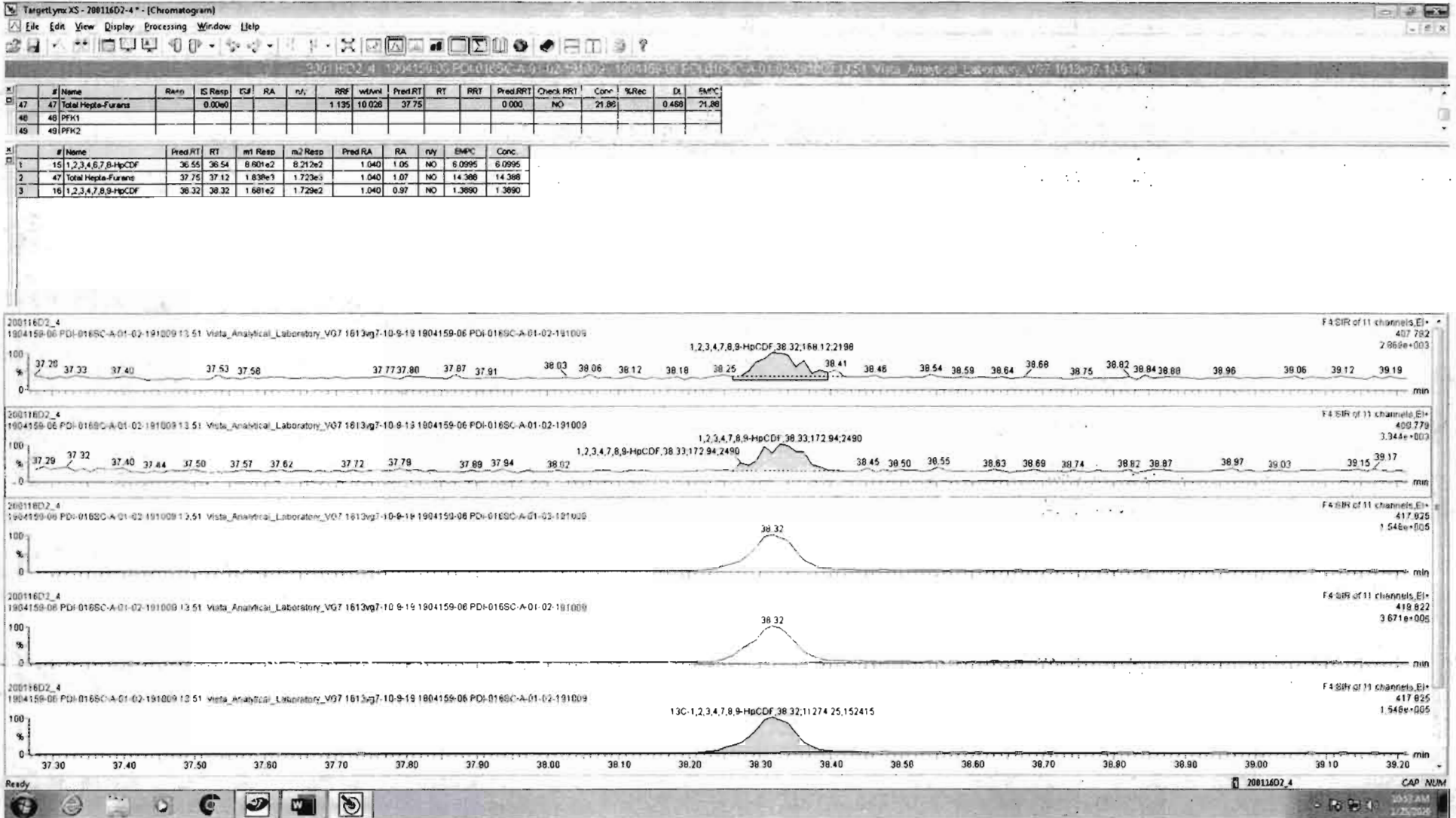


13C-1,2,3,4,6,7,8-HpCDF



DPE4





Vista Analytical Laboratory

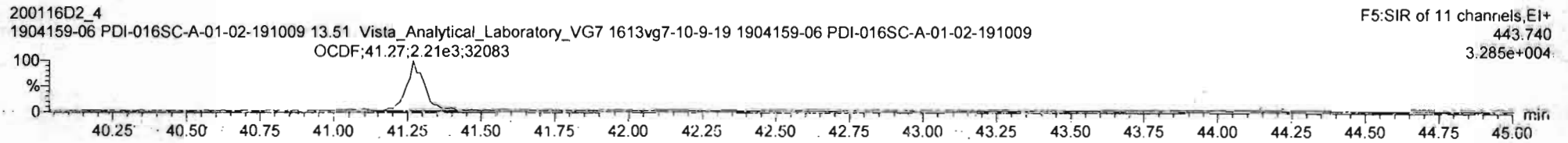
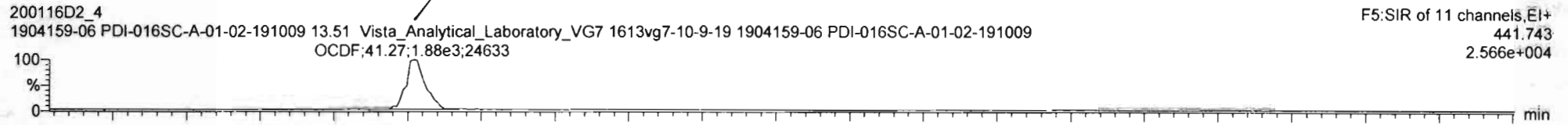
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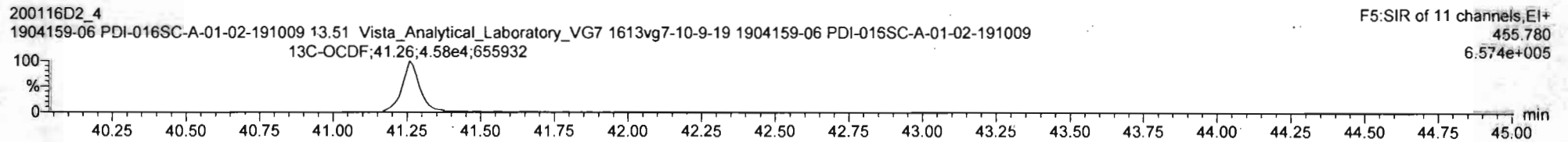
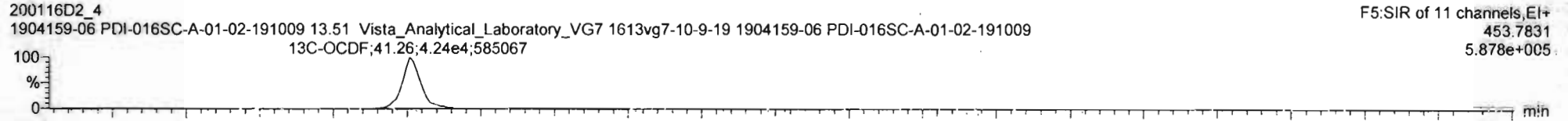
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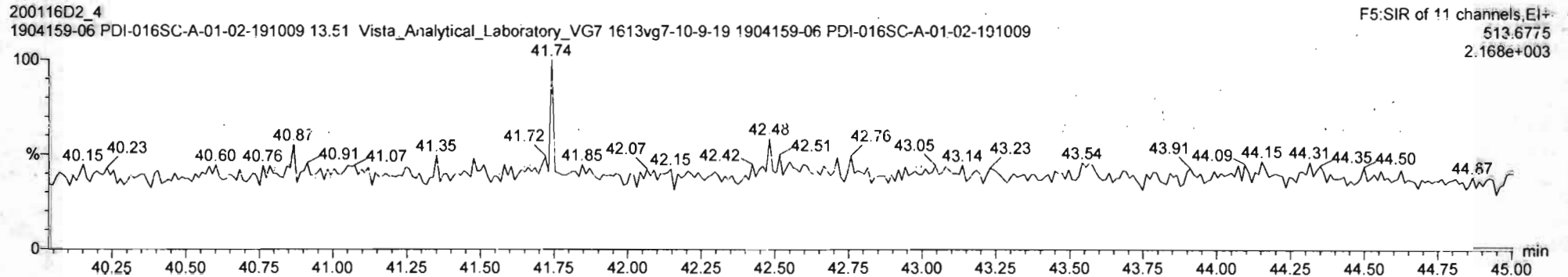
OCDF



13C-OCDF



DPE5



Vista Analytical Laboratory

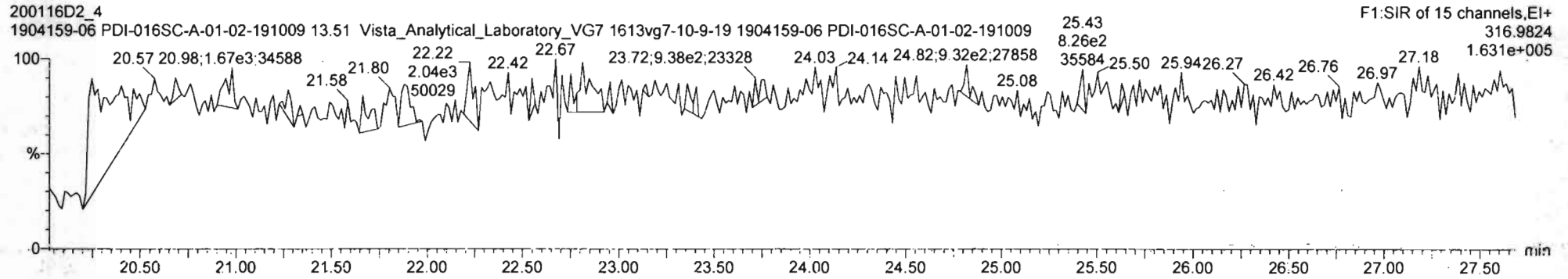
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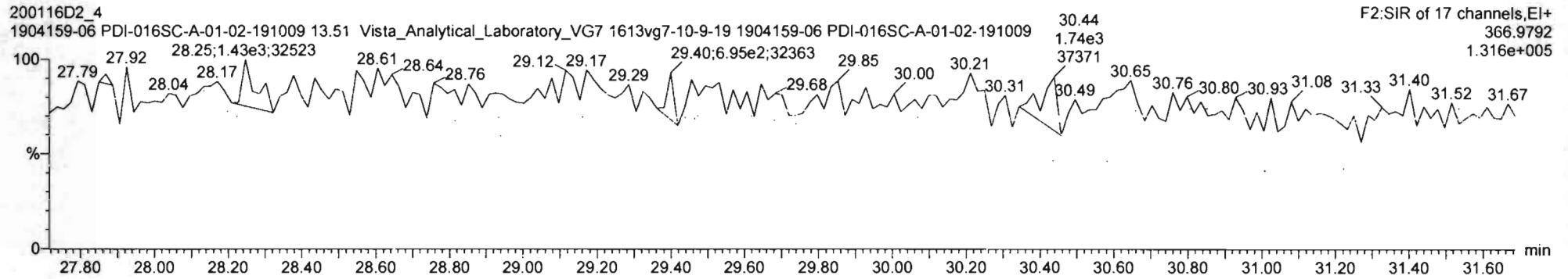
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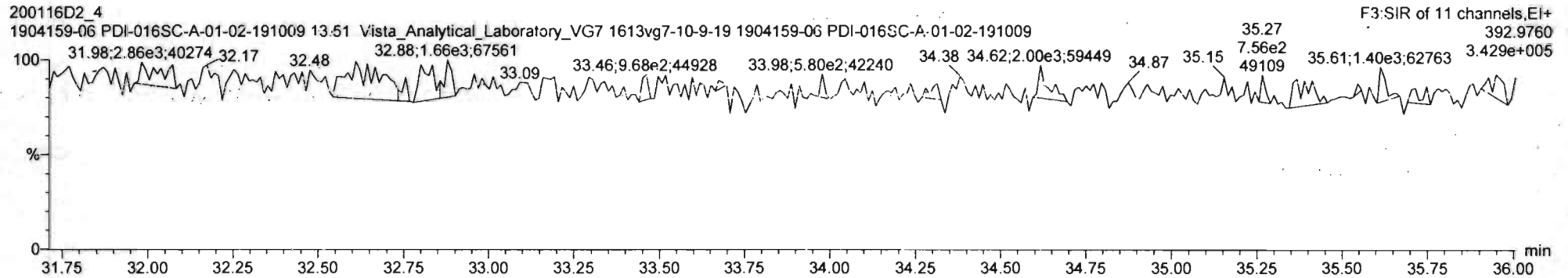
PFK1



PFK2



PFK3



Vista Analytical Laboratory

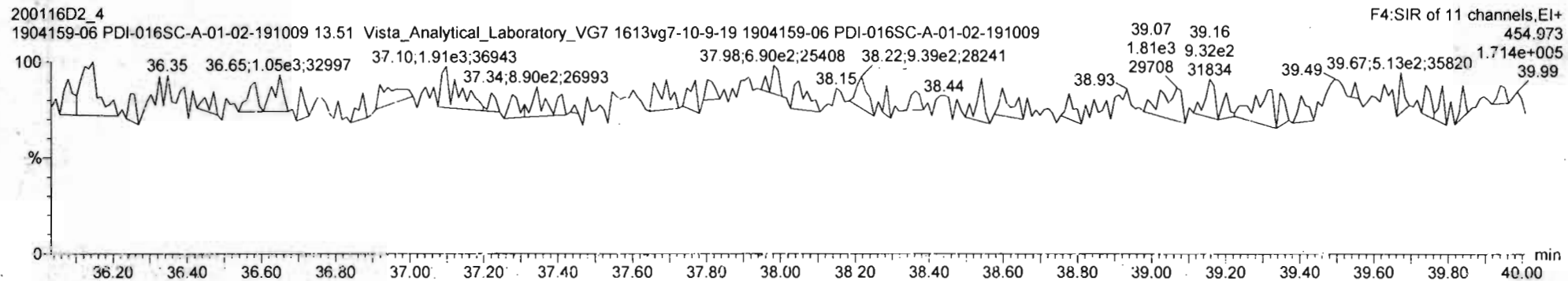
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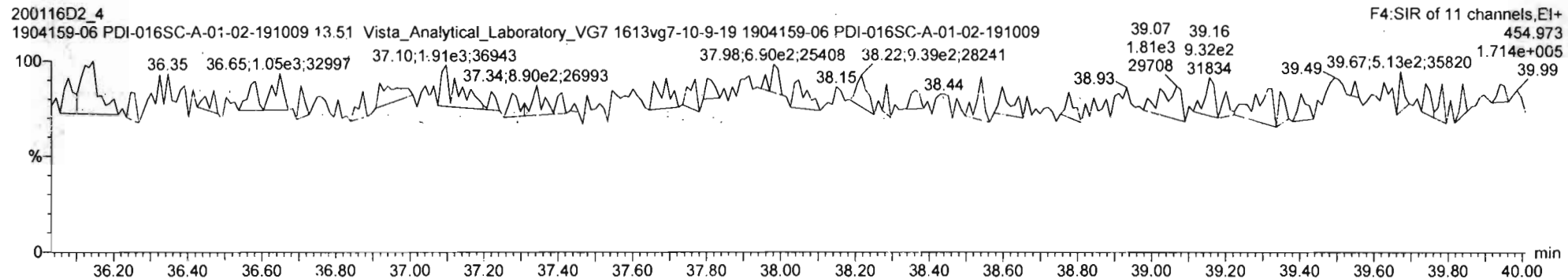
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PFK4



PFK5



Vista Analytical Laboratory

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*BL 02/03/2020*

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Calibration: 28 Jan 2020 07:18:44

Name: VG7 200116D2-5, Date: 17-JAN-2020, Time: 02:45:16, ID: 1904159-07 PDI-018SC-A-06-07-190926,

Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

*xsee DIL*

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD	1.51e2	7.94e4	10.0741	0.905	0.542	YES	1.001	1.001	26.02	26.01	0.41645		0.336	0.356
2	2 1,2,3,7,8-PeCDD	6.69e2	4.97e4	10.0741	0.903	0.708	NO	1.001	1.000	30.58	30.56	2.9565		2.96	0.221
3	3 1,2,3,4,7,8-HxCDD	3.39e2	4.01e4	10.0741	1.101	1.792	YES	1.000	1.001	33.89	33.91	1.5246		1.22	2.14
4	4 1,2,3,6,7,8-HxCDD	5.30e3	4.52e4	10.0741	0.939	1.135	NO	1.000	1.000	34.00	34.00	24.842		24.8	2.38
5	5 1,2,3,7,8,9-HxCDD	1.55e3	4.05e4	10.0741	0.961	1.184	NO	1.001	1.000	34.33	34.31	7.9059		7.91	2.57
6	6 1,2,3,4,6,7,8-HpCDD	7.88e4	2.64e4	10.0741	0.979	1.033	NO	1.000	1.000	37.78	37.78	605.49		605	3.77
7	7 OCDD	4.28e5	2.29e4	10.0741	0.959	0.900	NO	1.000	1.000	41.03	41.04	7738.8		7740	5.54
8	8 2,3,7,8-TCDF	8.60e2	1.10e5	10.0741	0.950	0.869	NO	1.001	1.000	25.23	25.20	1.6295	(1.54)	1.63	0.763
9	9 1,2,3,7,8-PeCDF	1.04e3	9.17e4	10.0741	0.960	1.548	NO	1.001	1.001	29.39	29.39	2.3355		2.34	0.373
10	10 2,3,4,7,8-PeCDF	3.26e3	7.57e4	10.0741	1.015	1.490	NO	1.001	1.001	30.30	30.32	8.4191		8.42	0.416
11	11 1,2,3,4,7,8-HxCDF	5.54e3	6.19e4	10.0741	1.177	1.184	NO	1.000	1.000	33.01	33.02	15.102		15.1	1.01
12	12 1,2,3,6,7,8-HxCDF	6.56e3	6.68e4	10.0741	1.069	1.225	NO	1.000	1.000	33.13	33.13	18.248		18.2	0.971
13	13 2,3,4,6,7,8-HxCDF	6.74e3	5.27e4	10.0741	1.114	1.175	NO	1.001	1.000	33.76	33.73	22.827		22.8	1.36
14	14 1,2,3,7,8,9-HxCDF	4.38e2	5.28e4	10.0741	1.062	1.012	YES	1.000	1.001	34.66	34.69	1.5465		1.41	1.58
15	15 1,2,3,4,6,7,8-HpCDF	1.89e5	3.51e4	10.0741	1.128	0.988	NO	1.001	1.001	36.53	36.52	951.41		951	1.93
16	16 1,2,3,4,7,8,9-HpCDF	1.10e3	2.95e4	10.0741	1.280	0.970	NO	1.000	1.001	38.30	38.32	5.7724		5.77	1.93
17	17 OCDF	3.32e4	4.35e4	10.0741	0.947	0.905	NO	1.000	1.000	41.25	41.26	319.95		320	1.39
18	18 13C-2,3,7,8-TCDD	7.94e4	8.72e4	10.0741	1.095	0.775	NO	1.023	1.023	26.00	25.99	164.96	83.1		0.401
19	19 13C-1,2,3,7,8-PeCDD	4.97e4	8.72e4	10.0741	0.881	0.621	NO	1.203	1.202	30.57	30.56	128.44	64.7		0.374
20	20 13C-1,2,3,4,7,8-Hx...	4.01e4	9.53e4	10.0741	0.642	1.300	NO	1.014	1.014	33.87	33.88	130.08	65.5		0.831
21	21 13C-1,2,3,6,7,8-Hx...	4.52e4	9.53e4	10.0741	0.856	1.266	NO	1.017	1.018	33.99	34.00	109.93	55.4		0.623
22	22 13C-1,2,3,7,8,9-Hx...	4.05e4	9.53e4	10.0741	0.807	1.204	NO	1.026	1.027	34.29	34.29	104.43	52.6		0.661
23	23 13C-1,2,3,4,6,7,8-H...	2.64e4	9.53e4	10.0741	0.654	1.043	NO	1.131	1.131	37.79	37.77	84.044	42.3		0.847
24	24 13C-OCDD	2.29e4	9.53e4	10.0741	0.580	0.900	NO	1.228	1.228	41.04	41.03	82.309	20.7		0.476
25	25 13C-2,3,7,8-TCDF	1.10e5	1.41e5	10.0741	1.035	0.779	NO	0.992	0.991	25.21	25.20	150.16	75.6		0.493
26	26 13C-1,2,3,7,8-PeCDF	9.17e4	1.41e5	10.0741	0.854	1.569	NO	1.156	1.156	29.38	29.37	151.30	76.2		0.841
27	27 13C-2,3,4,7,8-PeCDF	7.57e4	1.41e5	10.0741	0.847	1.598	NO	1.192	1.191	30.29	30.28	125.96	63.4		0.848
28	28 13C-1,2,3,4,7,8-Hx...	6.19e4	9.53e4	10.0741	0.832	0.520	NO	0.987	0.988	32.98	33.01	154.87	78.0		1.20
29	29 13C-1,2,3,6,7,8-Hx...	6.68e4	9.53e4	10.0741	1.034	0.506	NO	0.991	0.991	33.10	33.12	134.41	67.7		0.968
30	30 13C-2,3,4,6,7,8-Hx...	5.27e4	9.53e4	10.0741	0.953	0.510	NO	1.009	1.009	33.72	33.72	115.01	57.9		1.05
31	31 13C-1,2,3,7,8,9-Hx...	5.28e4	9.53e4	10.0741	0.828	0.518	NO	1.038	1.038	34.67	34.66	132.94	67.0		1.21

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-5B.qld

Last Altered: Monday, February 03, 2020 11:55:35 Pacific Standard Time

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Name: VG7 200116D2-5, Date: 17-JAN-2020, Time: 02:45:16, ID: 1904159-07 PDI-018SC-A-06-07-190926,  
 Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	3.51e4	9.53e4	10.0741	0.757	0.407	NO	1.093	1.092	36.51	36.50	96.378	48.5		1.01
33	33 13C-1,2,3,4,7,8,9-H...	2.95e4	9.53e4	10.0741	0.581	0.431	NO	1.147	1.146	38.31	38.30	105.82	53.3		1.32
34	34 13C-OCDF	4.35e4	9.53e4	10.0741	0.689	0.912	NO	1.235	1.235	41.26	41.25	131.38	33.1		0.901
35	35 37Cl-2,3,7,8-TCDD	3.28e4	8.72e4	10.0741	1.198			1.024	1.023	26.02	26.01	62.300	78.5		0.158
36	36 13C-1,2,3,4-TCDD	8.72e4	8.72e4	10.0741	1.000	0.752	NO	1.000	1.000	25.39	25.42	198.53	100.0		0.439
37	37 13C-1,2,3,4-TCDF	1.41e5	1.41e5	10.0741	1.000	0.772	NO	1.000	1.000	23.93	23.96	198.53	100.0		0.510
38	38 13C-1,2,3,4,6,9-Hx...	9.53e4	9.53e4	10.0741	1.000	0.514	NO	1.000	1.000	33.37	33.41	198.53	100.0		1.00
39	39 Total Tetra-Dioxins		7.94e4	10.0741	0.901			0.000		25.50		3.6642		8.04	0.358
40	40 Total Penta-Dioxins		4.97e4	10.0741	0.872			0.000		30.00		34.786		41.5	0.229
41	41 Total Hexa-Dioxins		0.00e0	10.0741	0.976			0.000		33.80		237.50		239	2.41
42	42 Total Hepta-Dioxins		2.64e4	10.0741	0.989			0.000		37.75		1470.2		1470	3.73
43	43 Total Tetra-Furans		1.10e5	10.0741	0.943			0.000		24.00		175.96		181	0.769
44	44 1st Func. Penta-Fur...		0.00e0	10.0741	0.940			0.000		27.63		187.69		188	0.135
45	45 Total Penta-Furans		0.00e0	10.0741	0.940			0.000		30.00		157.39		161	0.412
46	46 Total Hexa-Furans		0.00e0	10.0741	1.078			0.000		33.00		731.49		735	1.23
47	47 Total Hepta-Furans		0.00e0	10.0741	1.135			0.000		37.75		1656.0		1660	2.03

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Dataset: U:\VG7.PRO\Results\200116D2\200116D2-5B.qld

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Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 28 Jan 2020 07:18:44

Name: VG7 200116D2-5, Date: 17-JAN-2020, Time: 02:45:16, ID: 1904159-07 PDI-018SC-A-06-07-190926,

Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	YES	22.54	407.971	34671.773	0.000	MM	0.0000	2.14
2	39 Total Tetra-Dioxins	NO	22.91	195.585	34671.773	11.952	bb	1.3169	1.32
3	39 Total Tetra-Dioxins	NO	23.35	109.056	34671.773	6.156	bb	0.6783	0.68
4	39 Total Tetra-Dioxins	NO	24.30	114.642	34671.773	0.000	bd	0.0000	0.72
5	39 Total Tetra-Dioxins	YES	24.35	178.422	34671.773	0.000	MM	0.0000	0.19
6	39 Total Tetra-Dioxins	NO	24.50	227.736	34671.773	12.469	MM	1.3739	1.37
7	39 Total Tetra-Dioxins	YES	24.66	94.011	34671.773	0.000	MM	0.0000	0.24
8	39 Total Tetra-Dioxins	NO	24.91	46.235	34671.773	2.678	MM	0.2951	0.30
9	39 Total Tetra-Dioxins	YES	25.09	90.190	34671.773	0.000	MM	0.0000	0.39
10	1 2,3,7,8-TCDD	YES	26.01	52.988	34671.773	0.000	bb	0.0000	0.34
11	39 Total Tetra-Dioxins	YES	26.30	85.502	34671.773	0.000	bb	0.0000	0.35

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	NO	28.52	1504.579	19050.189	150.942	bb	17.1787	17.18
2	40 Total Penta-Dioxins	NO	28.98	113.709	19050.189	11.398	bb	1.2972	1.30
3	40 Total Penta-Dioxins	NO	29.41	713.752	19050.189	68.510	MM	7.7971	7.80
4	40 Total Penta-Dioxins	YES	29.58	391.478	19050.189	0.000	MM	0.0000	3.15
5	40 Total Penta-Dioxins	YES	29.67	316.023	19050.189	0.000	MM	0.0000	2.97
6	40 Total Penta-Dioxins	NO	29.90	343.527	19050.189	36.101	MM	4.1086	4.11
7	2 1,2,3,7,8-PeCDD	NO	30.56	277.133	19050.189	26.886	bb	2.9565	2.96
8	40 Total Penta-Dioxins	NO	30.94	119.469	19050.189	12.722	MM	1.4478	1.45
9	40 Total Penta-Dioxins	NO	30.18	42.502	19050.189	0.000	MM	0.0000	0.54



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-5B.qld

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Name: VG7 200116D2-5, Date: 17-JAN-2020, Time: 02:45:16, ID: 1904159-07 PDI-018SC-A-06-07-190926,  
 Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Dioxins

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	41 Total Hexa-Dioxins	NO	32.37	8714.863	23338.516	753.697	bb	76.6632	76.66
2	41 Total Hexa-Dioxins	NO	32.94	1236.413	23338.516	103.541	MM	10.5318	10.53
3	41 Total Hexa-Dioxins	NO	33.21	13122.592	23338.516	1155.700	MM	117.5534	117.55
4	3 1,2,3,4,7,8-HxCDD	YES	33.91	217.775	22675.537	0.000	MM	0.0000	1.22
5	4 1,2,3,6,7,8-HxCDD	NO	34.00	2819.542	25239.762	234.891	db	24.8417	24.84
6	5 1,2,3,7,8,9-HxCDD	NO	34.31	839.577	22100.248	76.562	db	7.9059	7.91

Hepta-Dioxins

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	42 Total Hepta-Dioxins	NO	36.91	57104.660	13476.321	8613.066	bb	864.7463	864.75
2	6 1,2,3,4,6,7,8-HpCDD	NO	37.78	40050.547	13476.321	5974.094	MM	605.4906	605.49

Tetra-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	YES	20.95	1096.519	48291.250	0.000	bb	0.0000	4.05
2	43 Total Tetra-Furans	NO	21.58	8635.473	48291.250	360.994	db	38.0081	38.01
3	43 Total Tetra-Furans	NO	22.53	3362.989	48291.250	132.898	MM	13.9925	13.99
4	43 Total Tetra-Furans	NO	22.93	4697.477	48291.250	191.702	bd	20.1838	20.18
5	43 Total Tetra-Furans	YES	23.72	421.548	48291.250	0.000	dd	0.0000	1.24
6	43 Total Tetra-Furans	NO	23.86	3670.608	48291.250	147.892	MM	15.5711	15.57
7	43 Total Tetra-Furans	NO	24.41	3927.087	48291.250	158.288	MM	16.6657	16.67
8	43 Total Tetra-Furans	NO	25.11	450.351	48291.250	18.405	MM	1.9378	1.94
9	8 2,3,7,8-TCDF	NO	25.20	399.851	48291.250	15.597	db	1.6295	1.63
10	43 Total Tetra-Furans	NO	26.06	680.545	48291.250	29.708	bb	3.1279	3.13
11	43 Total Tetra-Furans	NO	26.55	5381.651	48291.250	221.574	bd	23.3290	23.33
12	43 Total Tetra-Furans	NO	26.72	6369.217	48291.250	258.388	db	27.2049	27.20
13	43 Total Tetra-Furans	NO	27.04	844.109	48291.250	33.522	bd	3.5294	3.53
14	43 Total Tetra-Furans	NO	27.42	2138.391	48291.250	88.591	bb	9.3275	9.33
15	43 Total Tetra-Furans	NO	23.96	320.159	48291.250	13.817	MM	1.4548	1.45

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Name: VG7 200116D2-5, Date: 17-JAN-2020, Time: 02:45:16, ID: 1904159-07 PDI-018SC-A-06-07-190926,  
 Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Penta-Furans function 1

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.02	45786.402	51284.654	1776.636	bb	187.6942	187.69

Penta-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	45 Total Penta-Furans	NO	28.46	15415.057	51284.654	597.007	MM	63.0713	63.07
2	45 Total Penta-Furans	YES	28.69	160.447	51284.654	0.000	bd	0.0000	0.41
3	45 Total Penta-Furans	NO	28.79	238.885	51284.654	9.668	MM	1.0214	1.02
4	45 Total Penta-Furans	NO	29.01	6858.363	51284.654	259.627	bb	27.4285	27.43
5	45 Total Penta-Furans	NO	29.22	460.210	51284.654	17.446	bb	1.8431	1.84
6	9 1,2,3,7,8-PeCDF	NO	29.39	629.506	56003.773	22.596	bb	2.3355	2.34
7	45 Total Penta-Furans	NO	29.64	8574.961	51284.654	328.424	MM	34.6967	34.70
8	45 Total Penta-Furans	YES	29.79	208.334	51284.654	0.000	dd	0.0000	0.87
9	45 Total Penta-Furans	YES	29.86	450.502	51284.654	0.000	db	0.0000	1.52
10	45 Total Penta-Furans	NO	30.20	228.645	51284.654	9.554	dd	1.0093	1.01
11	10 2,3,4,7,8-PeCDF	NO	30.32	1949.589	46565.535	86.069	MM	8.4191	8.42
12	45 Total Penta-Furans	NO	31.03	530.602	51284.654	20.222	dd	2.1363	2.14
13	45 Total Penta-Furans	NO	31.17	934.591	51284.654	37.320	db	3.9427	3.94
14	45 Total Penta-Furans	YES	28.84	92.141	51284.654	0.000	MM	0.0000	0.38
15	45 Total Penta-Furans	NO	30.34	2887.373	51284.654	108.676	MM	11.4811	11.48

Hexa-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	46 Total Hexa-Furans	NO	31.83	21736.402	19846.073	1346.433	bd	124.0288	124.03
2	46 Total Hexa-Furans	NO	32.00	43508.133	19846.073	2728.183	db	251.3109	251.31
3	46 Total Hexa-Furans	NO	32.53	52358.398	19846.073	3229.785	MM	297.5168	297.52
4	11 1,2,3,4,7,8-HxCDF	NO	33.02	3002.119	21151.605	179.039	MM	15.1022	15.10
5	12 1,2,3,6,7,8-HxCDF	NO	33.13	3611.667	22422.316	196.498	db	18.2480	18.25
6	46 Total Hexa-Furans	NO	33.57	429.835	19846.073	26.691	MM	2.4587	2.46
7	13 2,3,4,6,7,8-HxCDF	NO	33.73	3642.489	17782.988	256.080	bb	22.8266	22.83
8	14 1,2,3,7,8,9-HxCDF	YES	34.69	220.088	18027.385	0.000	MM	0.0000	1.41
9	46 Total Hexa-Furans	YES	34.72	427.054	19846.073	0.000	MM	0.0000	2.43

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Dataset: U:\VG7.PRO\Results\200116D2\200116D2-5B.qld

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Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hepta-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	15 1,2,3,4,6,7,8-HpCDF	NO	36.52	94157.875	10151.620	10807.586	MM	951.4131	951.41
2	47 Total Hepta-Furans	NO	37.11	64018.211	9521.979	7988.616	MM	698.8532	698.85
3	16 1,2,3,4,7,8,9-HpCDF	NO	38.32	541.082	8892.338	74.429	bb	5.7724	5.77

Vista Analytical Laboratory

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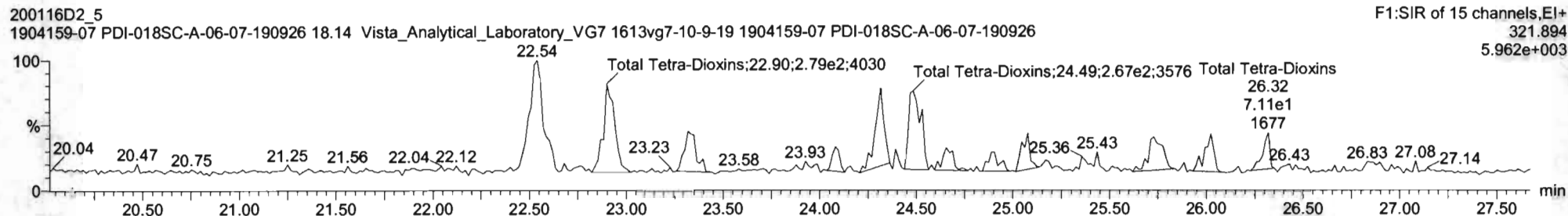
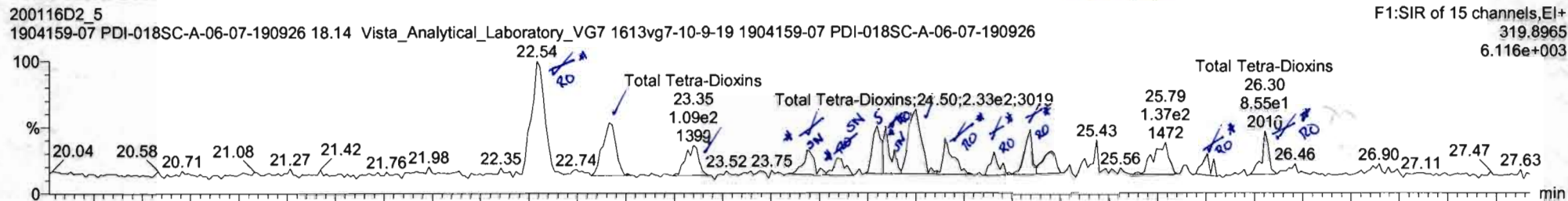
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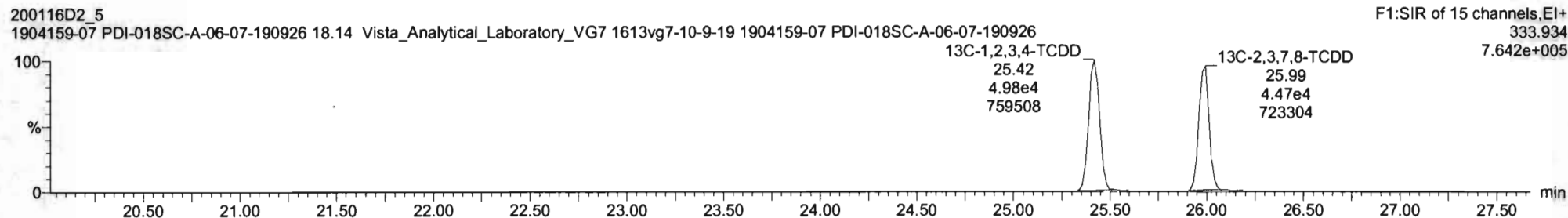
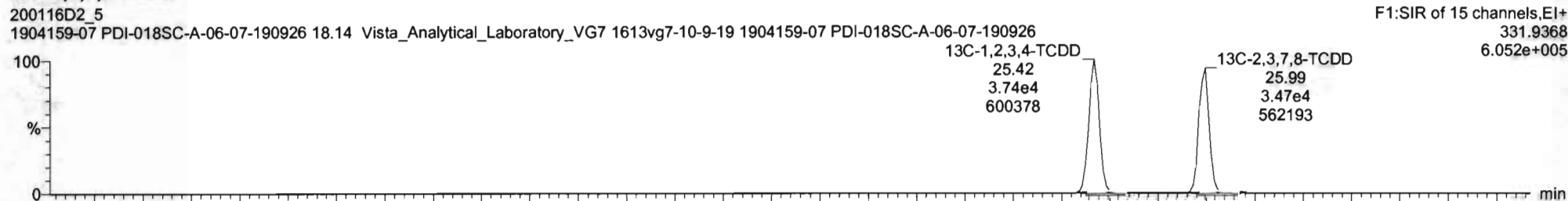
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Total Tetra-Dioxins

# BL on 1/28/20

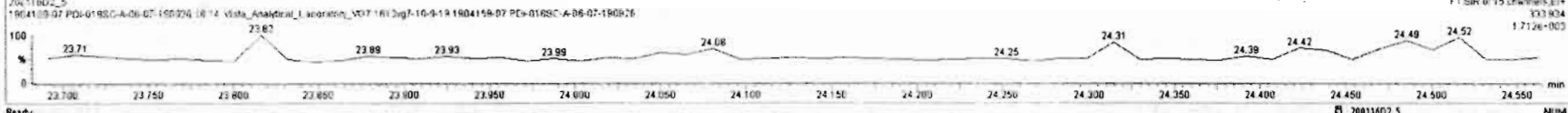
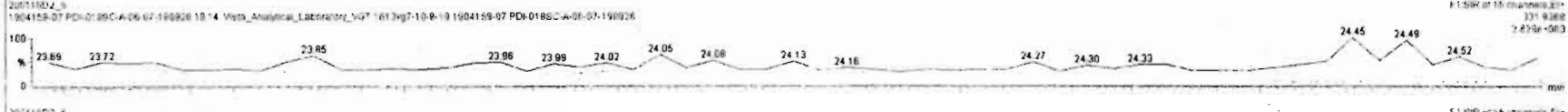
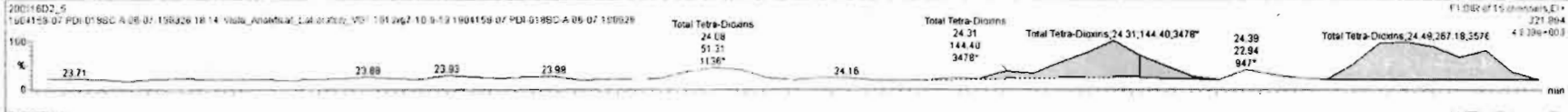


13C-2,3,7,8-TCDD



#	Name	Resp	IS Resp	CF	RA	nly	RRF	wtAol	Pred RT	RT	RRT	Pred RRT	Check ART	Conc	%Ret	DL	EMPC
35	27C-2,3,7,8-TCDD	1.28e4	8.72e4	36			1.199	10.074	26.02	26.01	1.023	1.024	NO	62.30	76.5	0.156	
36	13C-1,2,3,4-TCDF	6.72e4	8.72e4	36	0.75	NO	1.000	10.074	25.39	25.42	1.000	1.000	NO	198.5	100	0.432	
37	13C-1,2,3,4-TCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	198.5	100	0.510	
38	13C-1,2,3,4,6,8-HxCDF	8.53e4	9.53e4	36	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	198.5	100	1.00	
39	Total Tetra-Dioxins		7.94e4				0.801	10.074	25.50			0.000	NO	3.383		0.368	8.163
40	Total Penta-Dioxins		4.91e4				0.872	10.074	33.90			0.000	NO	35.11		0.229	41.70
41	Total Hexa-Dioxins		0.00e0				0.976	10.074	33.90			0.000	NO	237.7		2.41	236.7
42	Total Hepta-Dioxins		2.65e4				0.989	10.074	37.75			0.000	NO	1.464		3.74	1.464

#	Name	Pred RT	RT	wt Resp	wt2 Resp	Pred RA	RA	nly	EMPC	Conc
1	Total Tetra-Dioxins	25.50	22.54	4.090e2	4.363e2	0.770	0.94	YES	2.1436	0.00000
2	Total Tetra-Dioxins	25.50	22.91	1.956e2	2.788e2	0.770	0.70	NO	1.3189	1.3189
3	Total Tetra-Dioxins	25.50	23.35	1.091e2	1.353e2	0.770	0.81	NO	0.67830	0.67830
4	Total Tetra-Dioxins	25.50	24.10	3.017e1	5.131e1	0.770	0.59	YES	0.13255	0.00000
5	Total Tetra-Dioxins	25.50	24.30	1.146e2	1.798e2	0.770	0.64	YES	0.73157	0.00000
6	Total Tetra-Dioxins	25.50	24.50	2.327e2	2.672e2	0.770	0.87	NO	1.3877	1.3877
7	Total Tetra-Dioxins	25.50	24.66	3.677e1	6.903e1	0.770	1.43	YES	0.33916	0.00000
8	Total Tetra-Dioxins	25.50	24.91	5.539e1	6.005e1	0.770	0.92	YES	0.29508	0.00000
9	Total Tetra-Dioxins	25.50	25.09	9.387e1	7.977e1	0.770	1.18	YES	0.39194	0.00000
10	1,2,3,7,8-TCDD	26.02	26.01	5.299e1	9.776e1	0.770	0.54	YES	0.33649	0.00000
11	Total Tetra-Dioxins	25.50	26.30	8.550e1	7.107e1	0.770	1.20	YES	0.34920	0.00000

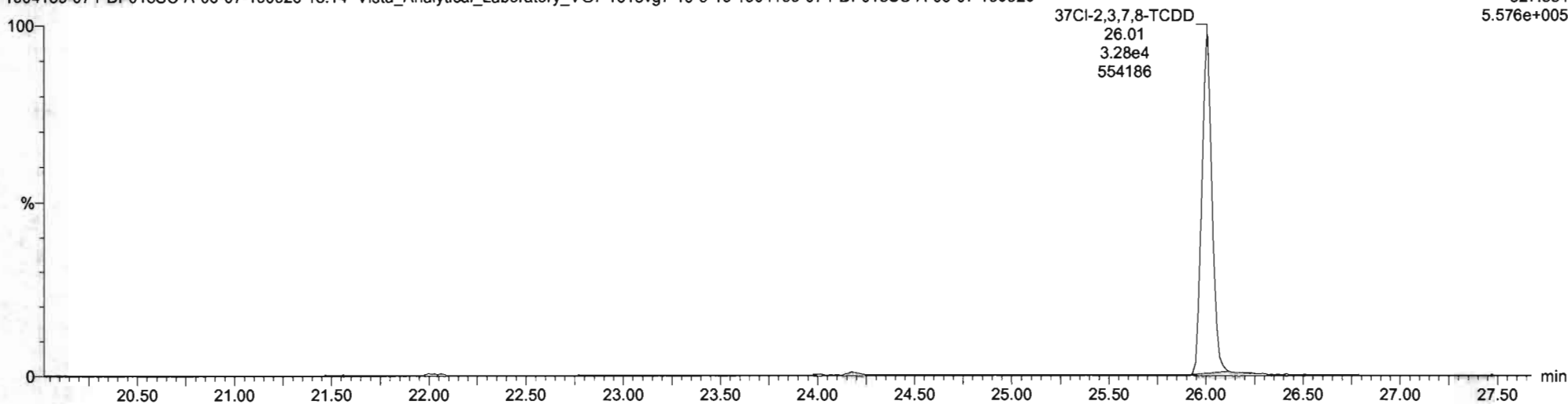


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Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

37Cl-2,3,7,8-TCDD

200116D2\_5  
1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-07 PDI-018SC-A-06-07-190926

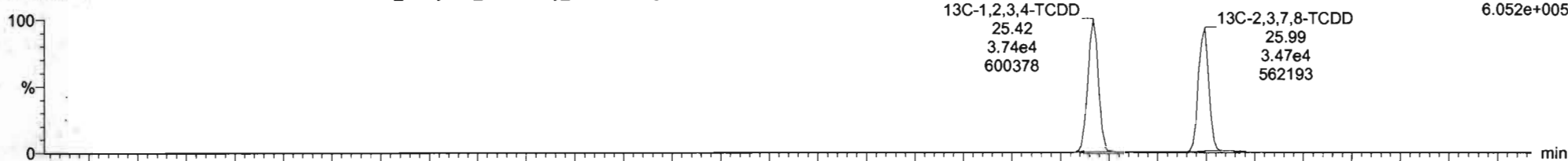
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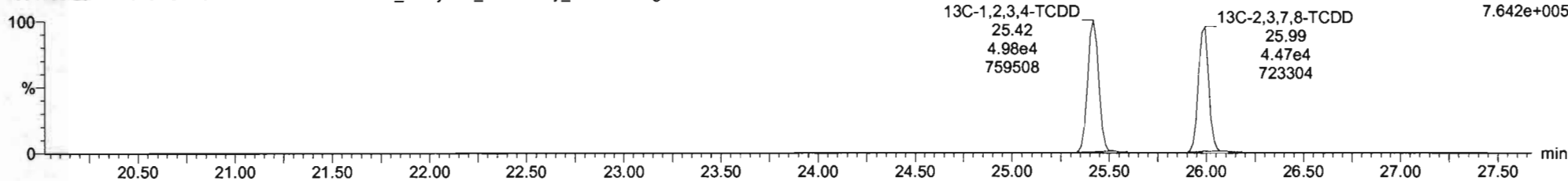
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F1:SIR of 15 channels,EI+  
331.9368  
6.052e+005



200116D2\_5  
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F1:SIR of 15 channels,EI+  
333.934  
7.642e+005



Vista Analytical Laboratory

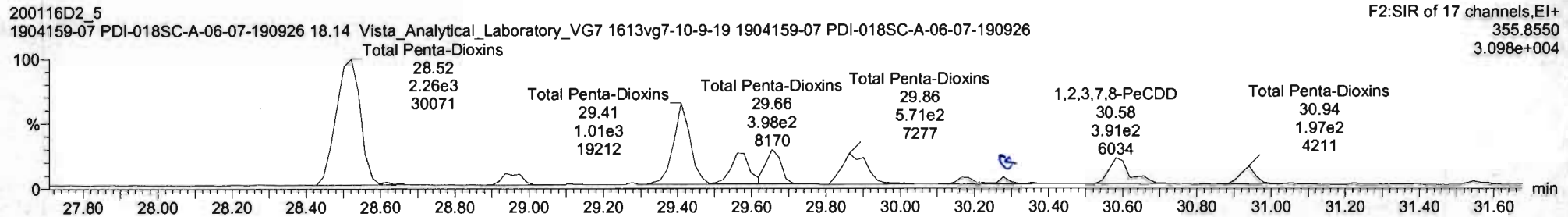
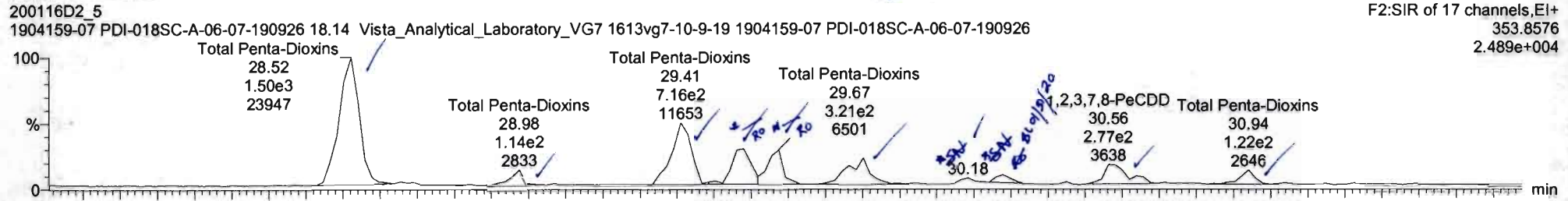
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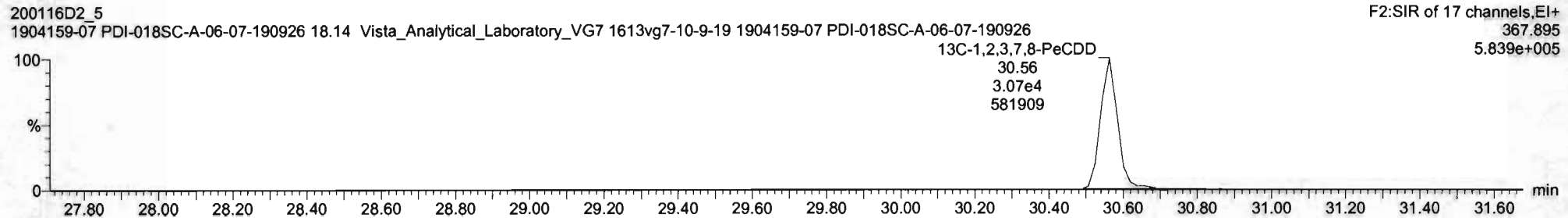
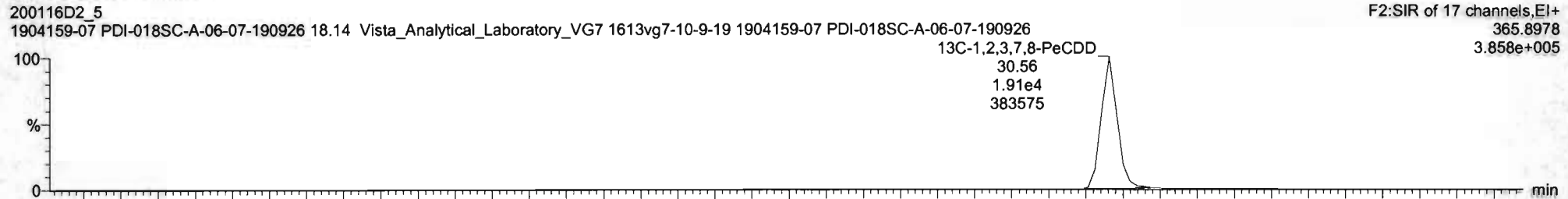
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Total Penta-Dioxins



13C-1,2,3,7,8-PeCDD

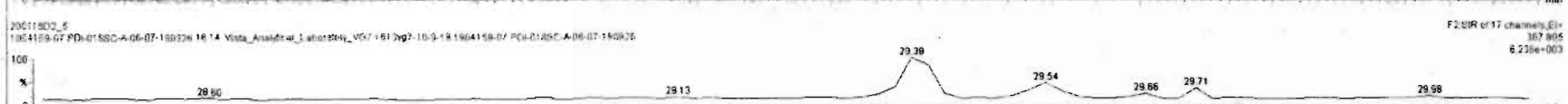
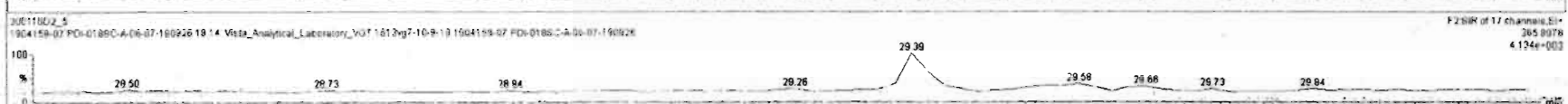
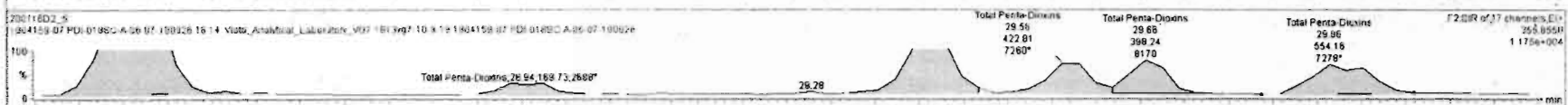
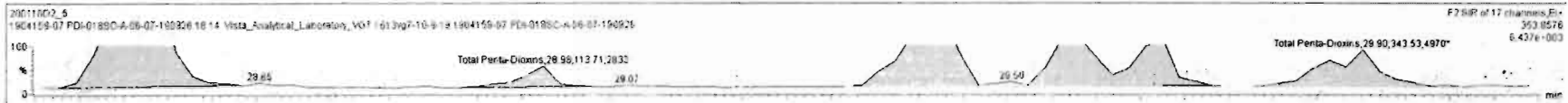


TargetLynx KS - unced - [Chromatogram]  
 File Edit View Display Processing Window Help

20011602\_5

#	Name	Resp	IS Resp	CF	RA	nly	RRF	wtVol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
35	27C-1,2,3,7,8-TCDD	3.28e4	8.72e4	36			1.198	10.074	26.02	26.01	1.023	1.024	NO	62.30	78.5		0.158
36	13C-1,2,3,4-TCDD	8.72e4	8.72e4	36	0.75	NO	1.000	10.074	25.39	25.42	1.000	1.000	NO	198.5	100		0.438
37	13C-1,2,3,4-TCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	198.5	100		0.510
38	13C-1,2,3,4,6,8-HxCDF	9.53e4	9.53e4	38	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	198.5	100		1.00
39	Total Tetra-Dioxins	7.94e4					0.901	10.074	25.50			0.000	NO	3.684			0.358
40	Total Penta-Dioxins	4.87e4					0.872	10.074	30.00			0.000	NO	35.11			0.229
41	Total Hexa-Dioxins	0.00e0					0.976	10.074	33.88			0.000	NO	237.7			2.41
42	Total Hepta-Dioxins	2.65e4					0.989	10.074	37.75			0.000	NO	1.464			3.74

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	40 Total Penta-Dioxins	30.00	29.52	1.505e3	2.257e3	0.630	0.67	NO	17.218	17.218
2	40 Total Penta-Dioxins	30.00	29.98	1.137e2	1.794e2	0.630	0.63	NO	1.3414	1.3414
3	40 Total Penta-Dioxins	30.00	29.41	7.160e2	1.015e3	0.630	0.71	NO	7.9210	7.9210
4	40 Total Penta-Dioxins	30.00	29.58	4.094e2	4.240e2	0.630	0.97	YES	3.1629	0.00000
5	40 Total Penta-Dioxins	30.00	29.67	3.207e2	3.380e2	0.630	0.81	YES	2.9710	0.00000
6	40 Total Penta-Dioxins	30.00	29.90	3.500e2	5.705e2	0.630	0.81	NO	4.2132	4.2132
7	40 Total Penta-Dioxins	30.00	30.28	7.213e1	6.177e1	0.630	1.17	YES	0.46086	0.00000
8	21,2,3,7,8-PeCDD	30.58	30.56	2.771e2	3.914e2	0.630	0.71	NO	2.9585	2.9585
9	40 Total Penta-Dioxins	30.00	30.34	1.218e2	1.969e2	0.630	0.82	NO	1.4586	1.4586



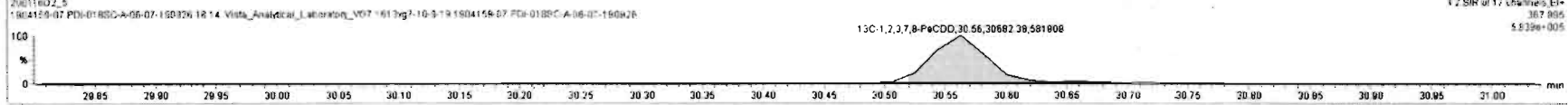
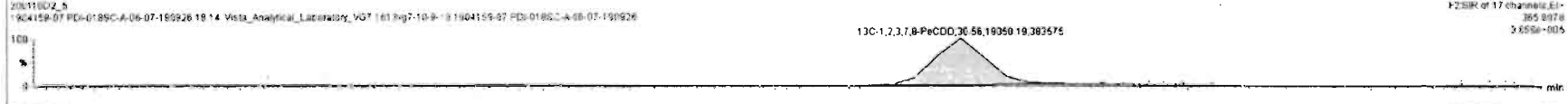
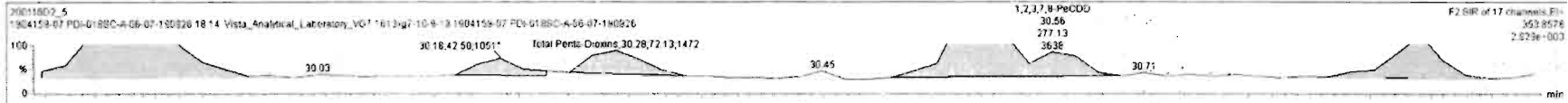
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TargetLynx#5 - unedited\* - [Chromatogram]  
 File Edit View Display Processing Window Help

#	Name	Resp	IS Resp	IS#	RA	nly	RRF	wtVol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
35	35 37C-2,3,7,8-TCDD	5.28e4	8.72e4	36	0.75	NO	1.000	10.074	26.02	26.01	1.023	1.024	NO	82.30	76.5	0.150	
36	36 13C-1,2,3,4-TCDF	8.72e4	8.72e4	36	0.75	NO	1.000	10.074	25.39	25.42	1.000	1.000	NO	189.5	100	0.439	
37	37 13C-1,2,3,4,6,8-HxCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	199.5	100	0.510	
38	38 13C-1,2,3,4,6,8-HxCDF	9.53e4	9.53e4	38	0.81	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	199.5	100	1.00	
39	39 Total Tetra-Dioxins		7.56e4				0.901	10.074	25.50			0.000	NO	3.664		0.358	8.040
40	40 Total Penta-Dioxins		4.97e4				0.872	10.074	30.80			0.000	NO	35.11		0.229	41.70
41	41 Total Hexa-Dioxins		0.00e0				0.976	10.074	33.80			0.000	NO	237.7		2.41	236.7
42	42 Total Hepta-Dioxins		2.65e4				0.989	10.074	37.75			0.000	NO	1464		3.74	1464

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	40 Total Penta-Dioxins	30.00	28.52	1.505e3	2.257e3	0.630	0.67	NO	17.218	17.218
2	40 Total Penta-Dioxins	30.00	28.98	1.137e2	1.794e2	0.630	0.63	NO	1.3414	1.3414
3	40 Total Penta-Dioxins	30.00	29.41	7.160e2	1.015e3	0.630	0.71	NO	7.9210	7.9210
4	40 Total Penta-Dioxins	30.00	29.58	4.094e2	4.240e2	0.630	0.97	YES	3.1629	0.00000
5	40 Total Penta-Dioxins	30.00	29.67	3.207e2	3.982e2	0.630	0.81	YES	2.9710	0.00000
6	40 Total Penta-Dioxins	30.00	29.90	3.500e2	5.705e2	0.630	0.61	NO	4.2132	4.2132
7	40 Total Penta-Dioxins	30.00	30.28	7.213e1	8.177e1	0.630	1.17	YES	0.48086	0.00000
8	21,2,3,7,8-PeCDD	30.58	30.36	2.771e2	3.914e2	0.630	0.71	NO	2.9585	2.9585
9	40 Total Penta-Dioxins	30.00	30.94	1.218e2	1.969e2	0.630	0.62	NO	1.4586	1.4586



Ready 20011602\_5 NUM

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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

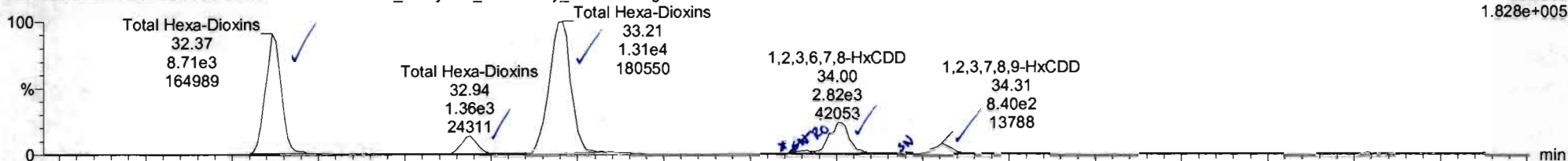
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Total Hexa-Dioxins

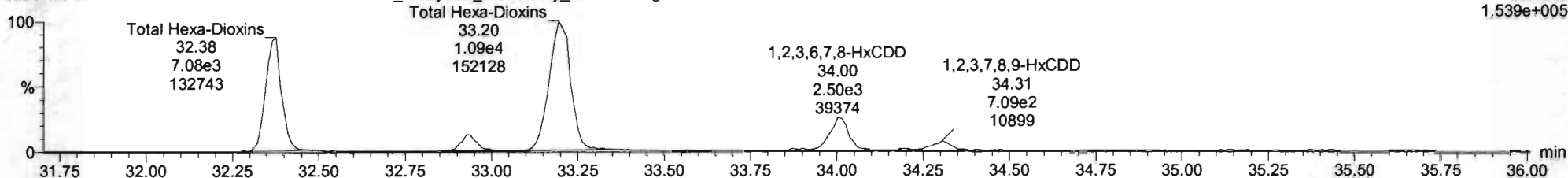
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F3:SIR of 11 channels,EI+  
389.816  
1.828e+005



200116D2\_5  
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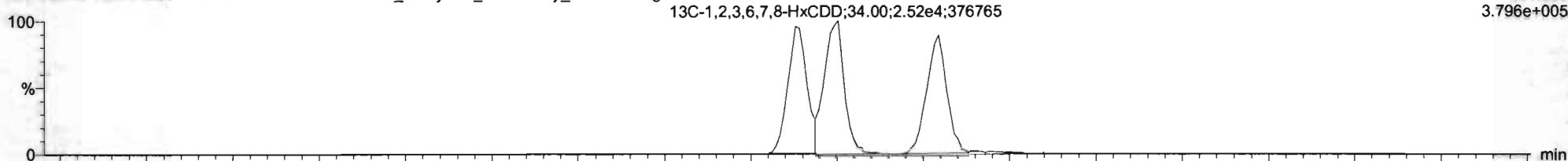
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391.813  
1.539e+005



13C-1,2,3,4,7,8-HxCDD

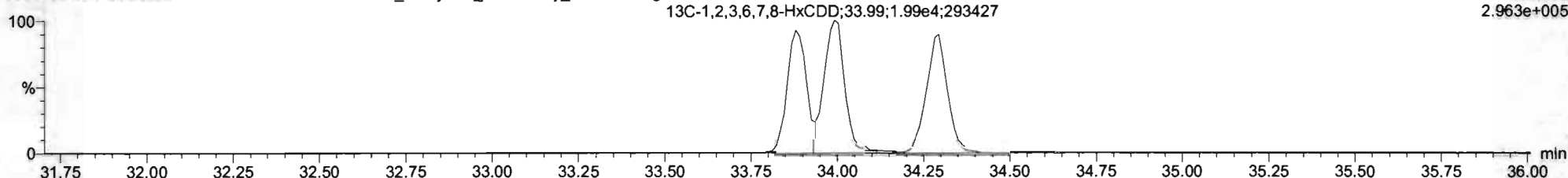
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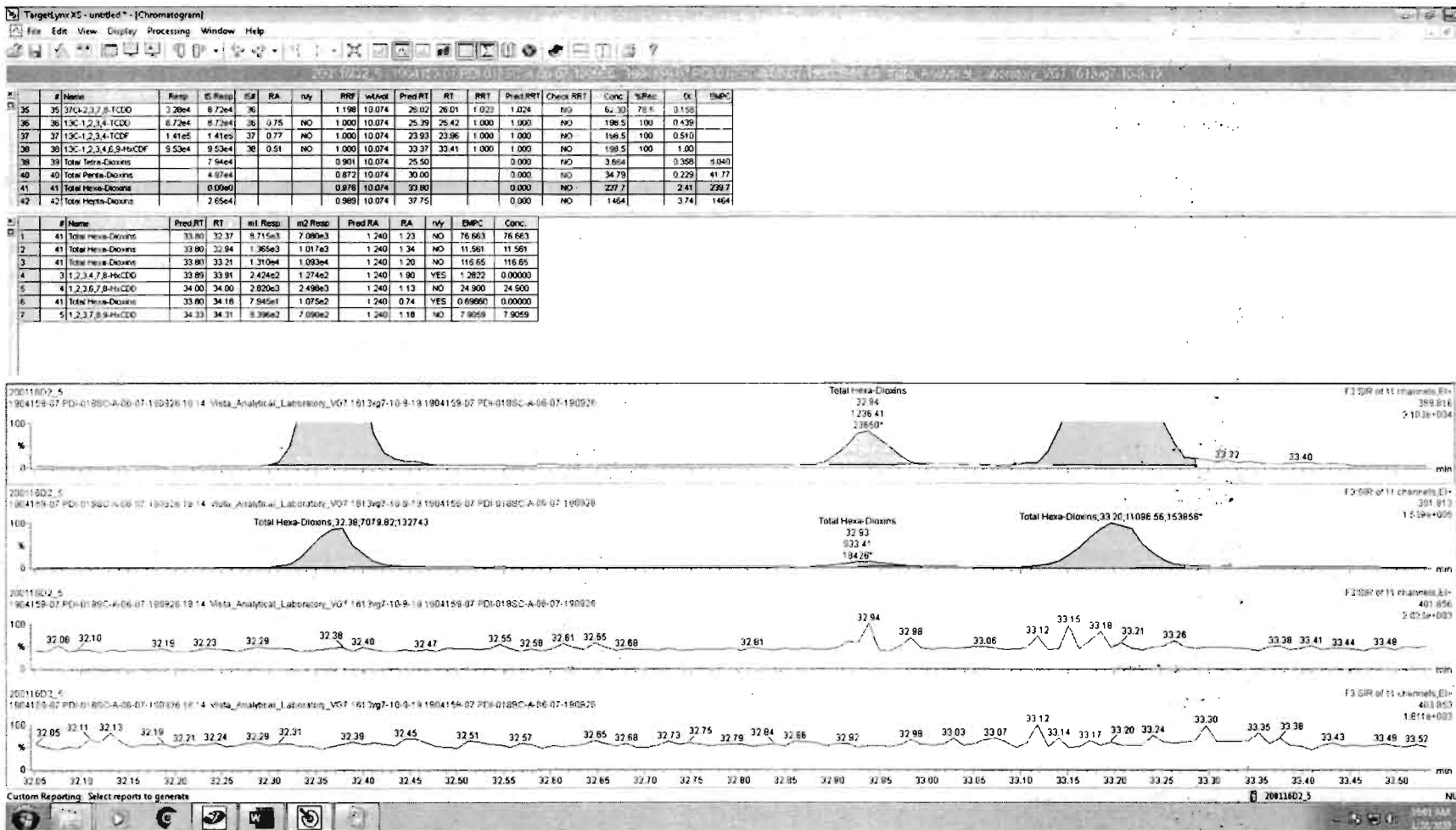
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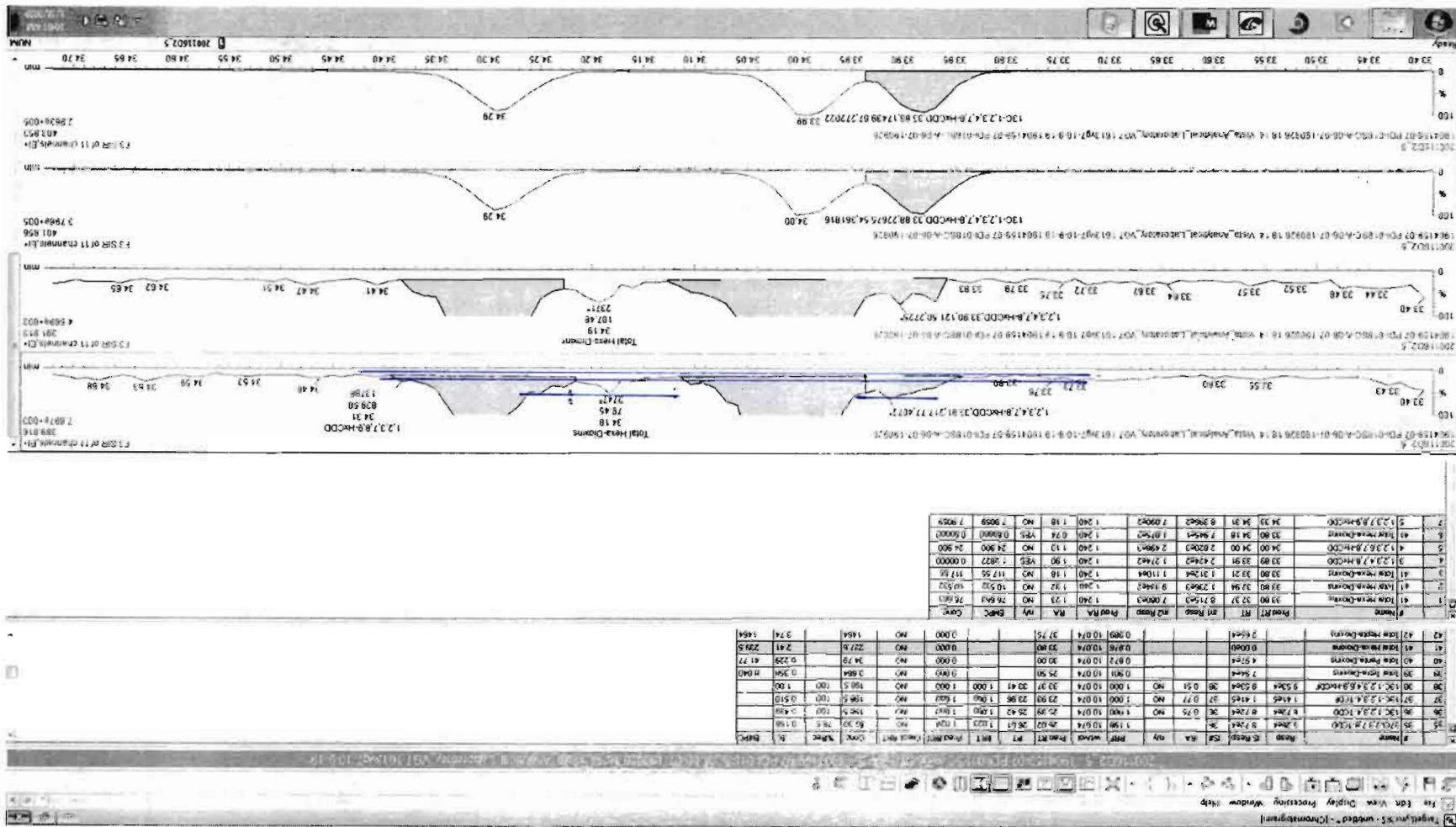


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F3:SIR of 11 channels,EI+  
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Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

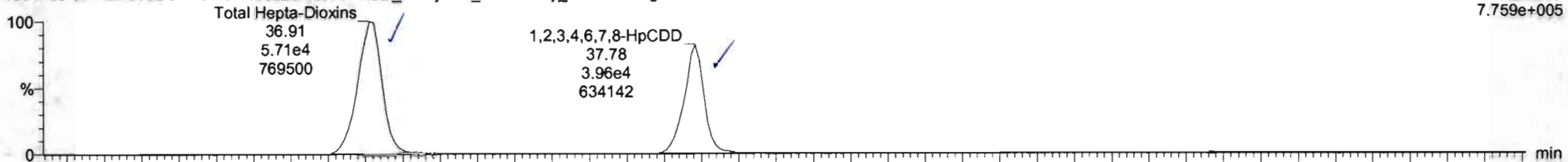
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Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Hepta-Dioxins

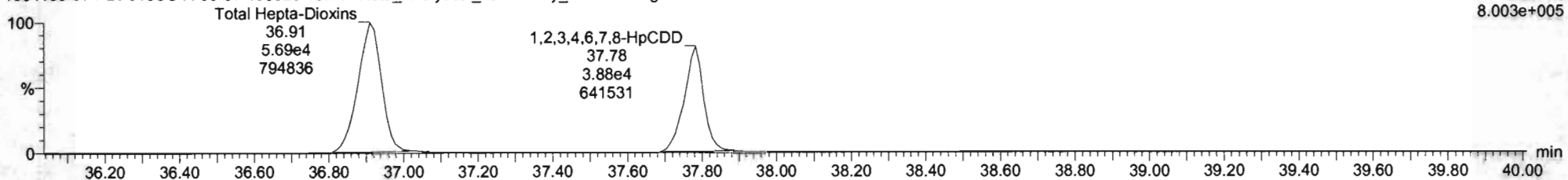
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F4:SIR of 11 channels, EI+  
423.774  
7.759e+005



200116D2\_5  
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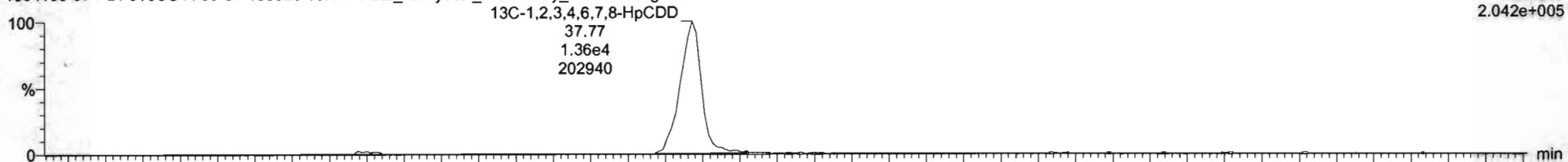
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13C-1,2,3,4,6,7,8-HpCDD

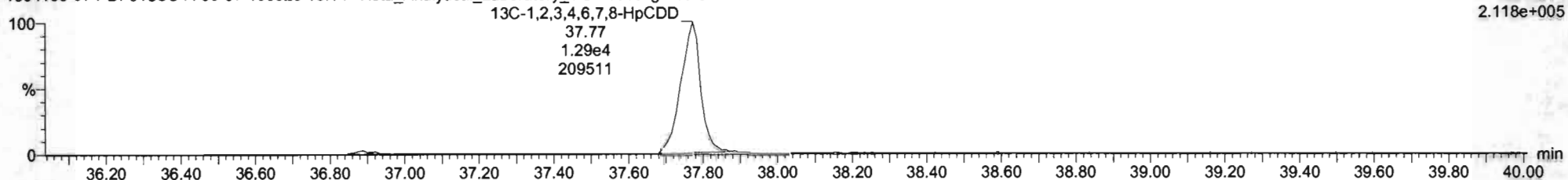
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F4:SIR of 11 channels, EI+  
435.817  
2.042e+005



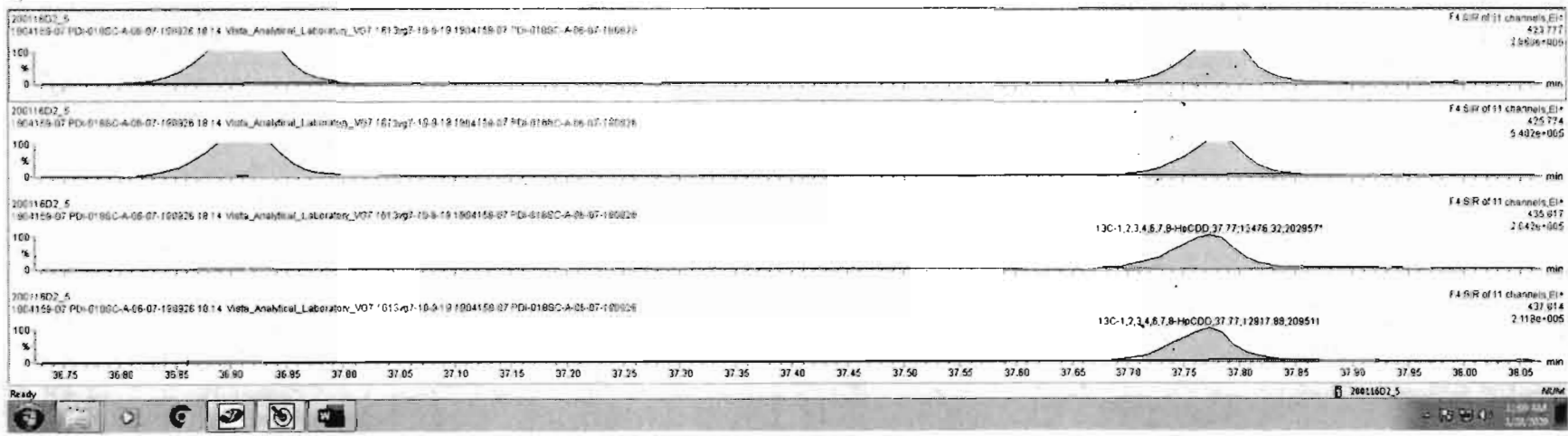
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F4:SIR of 11 channels, EI+  
437.814  
2.118e+005



#	Name	Resp	IS Resp	Ext	RA	nly	RRF	wtAve	Prod RT	RT	RRT	Prod RRT	Check RRT	Conc	UFrac	DL	EMPC
37	13C-1,2,3,4-TCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	198.5	100	0.510	
38	38 13C-1,2,3,4,6,8-HxCDF	9.53e4	9.53e4	38	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	198.5	100	1.00	
39	39 Total Tetra-Dioxins	7.94e4					0.901	10.074	25.50			0.000	NO	3.684		0.358	8.040
40	40 Total Penta-Dioxins	4.97e4					0.872	10.074	30.00			0.000	NO	34.79		0.229	41.77
41	41 Total Hexa-Dioxins	0.00e0					0.876	10.074	33.80			0.000	NO	257.5		2.41	238.7
42	42 Total Hepta-Dioxins	2.65e4					0.888	10.074	37.75			0.000	NO	1.884		3.74	1.464
43	43 Total Tetra-Furans	1.10e5					0.943	10.074	24.00			0.000	NO	179.2		0.769	194.8
44	44 1st Func. Penta-Furans	0.00e0					0.940	10.074	27.63			0.000	NO	187.7		0.135	187.7
45	45 Total Penta-Furans	0.00e0					0.940	10.074	30.00			0.000	NO	160.5		0.412	164.0
46	46 Total Hexa-Furans	0.00e0					1.078	10.074	33.00			0.000	NO	737.4		1.23	238.8
47	47 Total Hepta-Furans	0.00e0					1.135	10.074	37.75			0.000	NO	1632		2.03	1637
48	48 PPA																

#	Name	Prod RT	RT	m1 Resp	m2 Resp	Prod RA	RA	nly	EMPC	Conc
1	42 Total Hepta-Dioxins	37.75	36.91	5.710e4	5.684e4	1.040	1.00	NO	864.12	864.12
2	6 1,2,3,4,6,7,8-HxCDD	37.78	37.78	3.959e4	3.879e4	1.040	1.02	NO	599.58	599.58



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

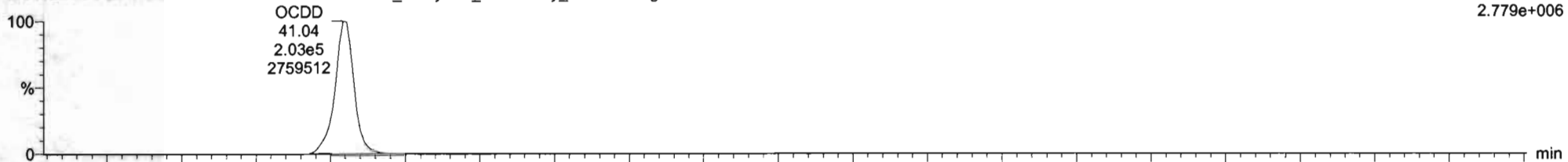
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Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

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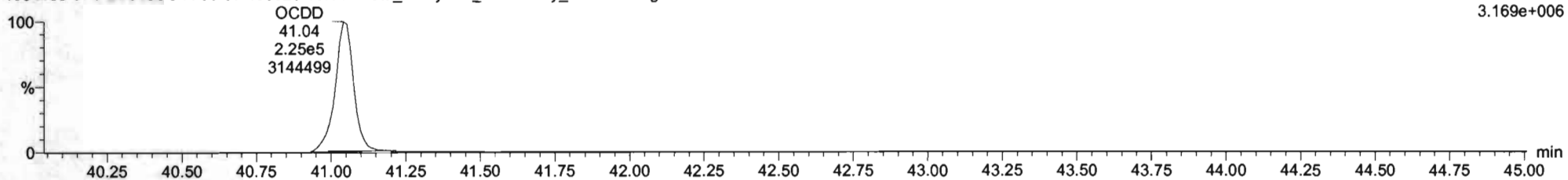
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F5:SIR of 11 channels,EI+  
457.738  
2.779e+006



200116D2\_5  
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13C-OCDD

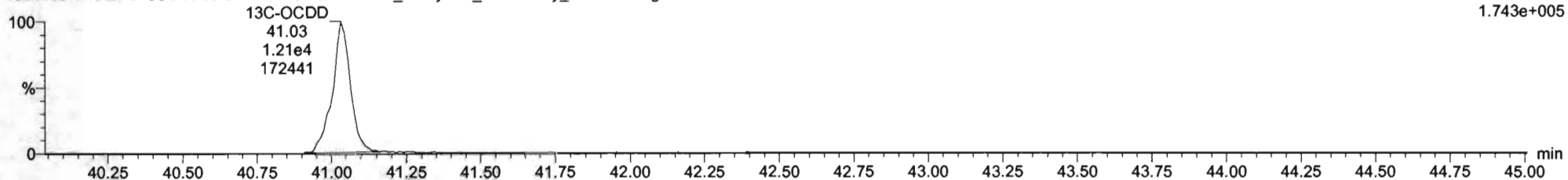
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Vista Analytical Laboratory

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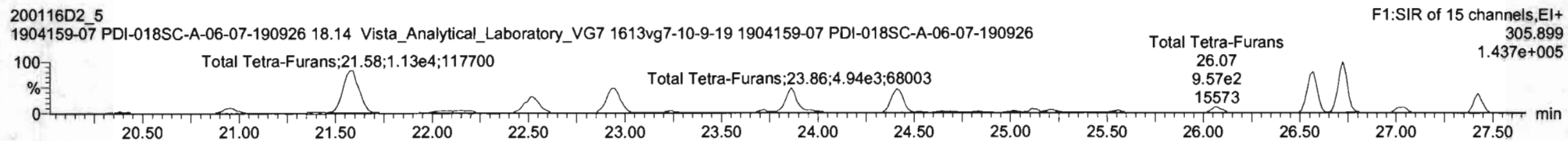
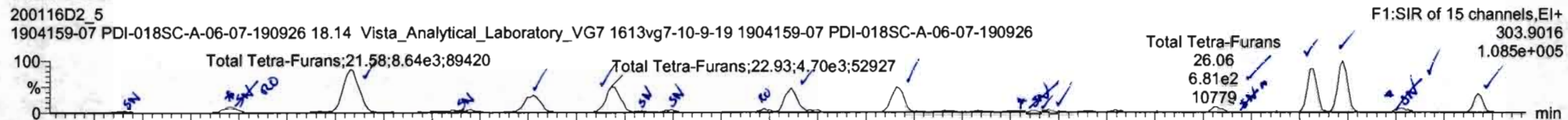
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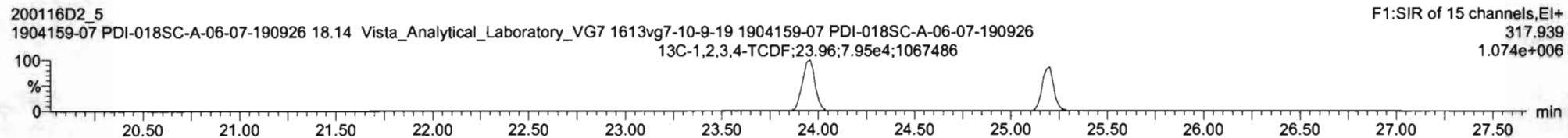
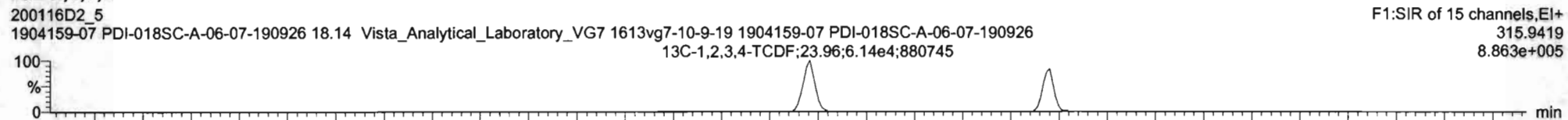
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Total Tetra-Furans

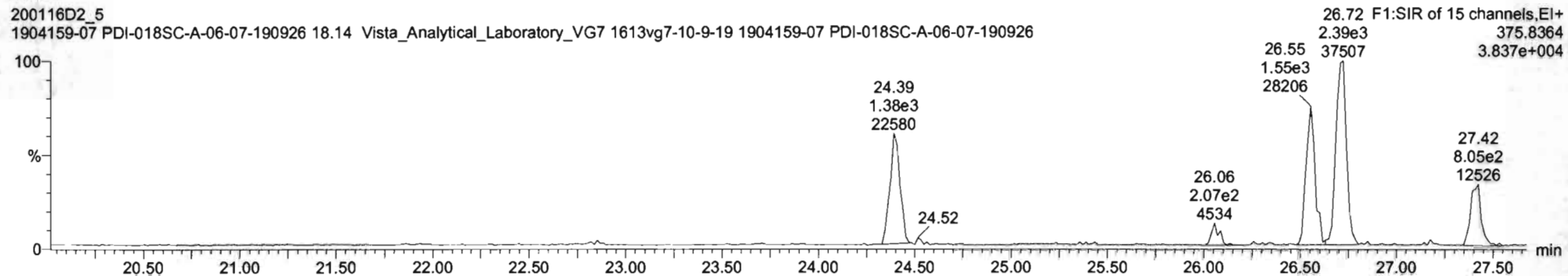
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13C-2,3,7,8-TCDF



DPE1

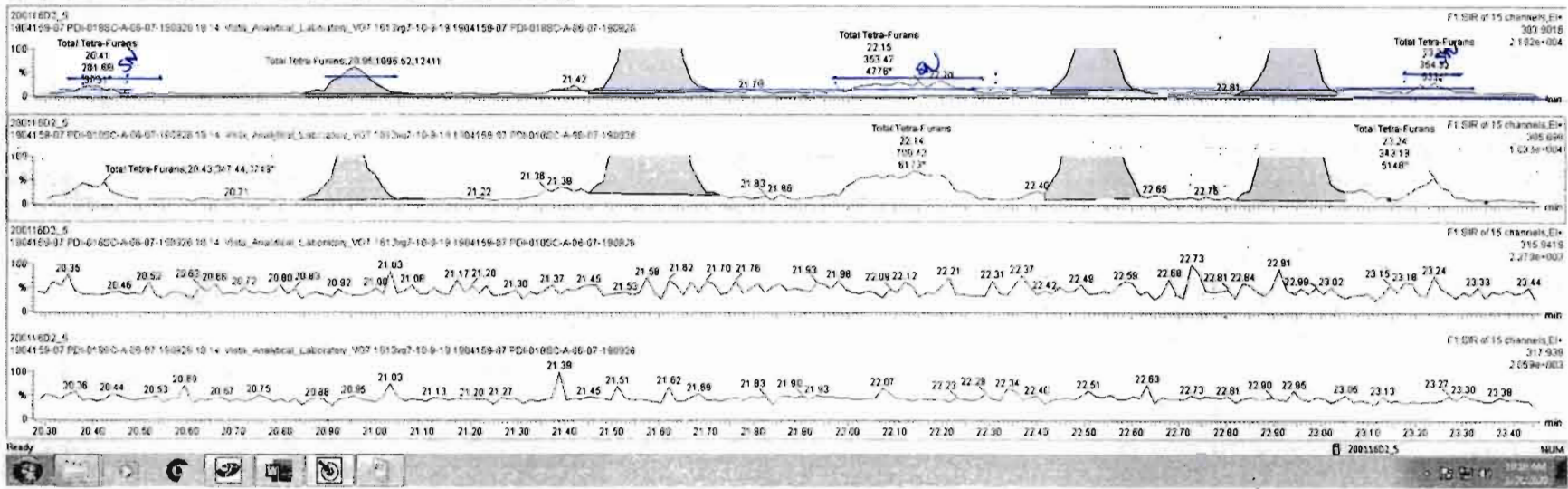




TargetLyn.XS - unfiled - [Chromatogram]  
 File Edit View Display Processing Window Help

#	Name	Resp	IS Resp	IS#	RA	nly	RPF	wtVol	Pred RT	RT	RRT	Check RST	Conc	%Rec	OK	EMPC
41	Total Hexa-Dioxins		0.000				0.976	13.074	33.00			0.000	NO	237.5	2.41	230.7
42	Total Hepta-Dioxins		2.654				0.989	10.074	37.75			0.000	NO	1464	3.74	1464
43	Total Tetra-Furans		1.1045				0.943	10.074	24.00			0.000	NO	179.8	0.763	190.8
44	1st Func. Penta-Furans		0.000				0.940	10.074	27.63			0.000	NO	187.7	0.135	187.7
45	Total Penta-Furans		0.000				0.940	10.074	30.00			0.000	NO	160.5	0.412	164.9
46	Total Hexa-Furans		0.000				1.078	10.074	33.00			0.000	NO	737.4	1.23	738.8
47	Total Hepta-Furans		0.000				1.120	10.074	37.75			0.000	NO	1632	2.03	1637
48	PKX1															

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	Total Tetra-Furans	24.00	20.41	2.817e2	3.474e2	0.770	0.81	NO	1.2015	1.2015
2	Total Tetra-Furans	24.00	20.95	1.087e3	1.198e3	0.770	0.92	YES	4.0505	0.00000
3	Total Tetra-Furans	24.00	21.58	8.635e3	1.127e4	0.770	0.77	NO	38.008	38.008
4	Total Tetra-Furans	24.00	22.06	2.912e2	5.538e2	0.770	0.53	YES	1.2783	0.00000
5	Total Tetra-Furans	24.00	22.15	3.530e2	7.004e2	0.770	0.50	YES	1.5518	0.00000
6	Total Tetra-Furans	24.00	22.53	3.458e3	4.207e3	0.770	0.87	NO	14.325	14.325
7	Total Tetra-Furans	24.00	22.93	4.697e3	5.871e3	0.770	0.80	NO	20.184	20.184
8	Total Tetra-Furans	24.00	23.87	1.802e2	1.267e2	0.770	1.21	YES	0.47236	0.00000
9	Total Tetra-Furans	24.00	23.24	3.643e2	3.432e2	0.770	1.03	YES	1.1601	0.00000
10	Total Tetra-Furans	24.00	22.72	4.215e2	3.216e2	0.770	1.31	YES	1.0873	0.00000
11	Total Tetra-Furans	24.00	23.86	4.050e3	4.942e3	0.770	0.82	NO	17.174	17.174



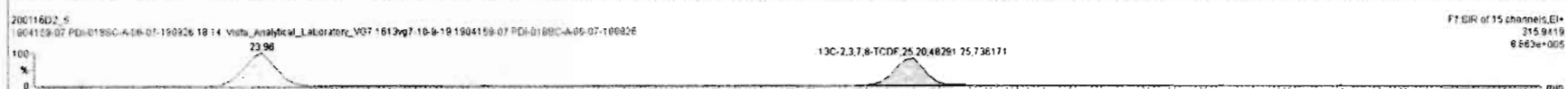
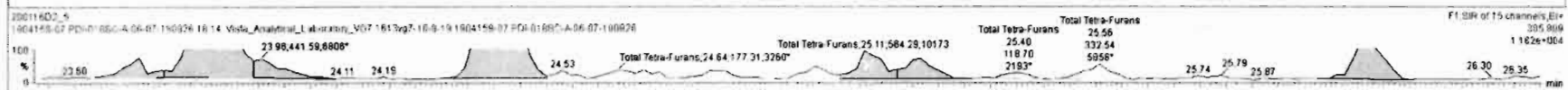
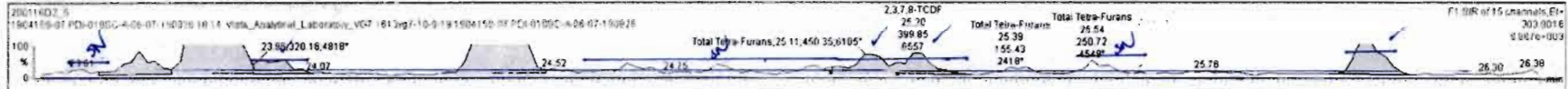
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File Edit View Display Processing Window Help

20011602-5 1904159-07 PDI-0190C-A-06-07-190326 18 14 Vista\_Analytical\_Laboratory\_V07 1613vg7-10-9-19 1904159-07 PDI-0190C-A-06-07-190326

#	Name	Resp	S_Resp	IS#	RA	IS#	RRF	wtAve	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
37	13C-1,2,3,4-TCDF	1.41e5	1.41e5	27	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	198.5	100	0.513	
38	13C-1,2,3,4,8-HxCDF	5.53e4	9.53e4	36	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	198.5	100	1.00	
39	Total Tetra-Dioxins	7.94e4	8.52e4				0.901	10.074	25.50			0.000	NO	3.664		0.358	8.046
40	Total Penta-Dioxins	4.97e4					0.872	10.074	30.00			0.000	NO	34.79		0.229	41.77
41	Total Hexa-Dioxins	0.00e0					0.976	10.074	33.80			0.000	NO	237.5		2.41	236.7
42	Total Hepta-Dioxins	2.64e4					0.989	10.074	37.75			0.000	NO	1470		3.73	1470
43	Total Tetra-Furans	1.10e5					0.843	10.074	24.00			0.000	NO	178.2		0.768	184.8
44	1st Func. Penta-Furans	0.00e0					0.940	10.074	27.63			0.000	NO	187.7		0.135	187.7
45	Total Penta-Furans	0.00e0					0.940	10.074	30.00			0.000	NO	160.5		0.412	164.0
46	Total Hexa-Furans	0.00e0					1.078	10.074	33.00			0.000	NO	737.4		1.23	736.9
47	Total Hepta-Furans	0.00e0					1.135	10.074	37.75			0.000	NO	1632		2.03	1637
48	FFFF																

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	IS#	EMPC	Conc
1	Total Tetra-Furans	24.00	23.85	1.097e3	1.198e3	0.770	0.82	YES	4.0505	0.00000
2	Total Tetra-Furans	24.00	21.58	8.535e3	1.127e4	0.770	0.77	NO	38.008	38.008
3	Total Tetra-Furans	24.00	22.53	3.363e3	3.964e3	0.770	0.85	NO	3.992	13.952
4	Total Tetra-Furans	24.00	22.93	4.697e3	5.871e3	0.770	0.80	NO	20.184	20.184
5	Total Tetra-Furans	24.00	23.72	4.215e2	3.216e2	0.770	1.31	YES	1.0873	0.00000
6	Total Tetra-Furans	24.00	23.86	4.050e3	4.942e3	0.770	0.82	NO	17.174	17.174
7	Total Tetra-Furans	24.00	24.41	4.050e3	4.799e3	0.770	0.84	NO	16.904	16.904
8	Total Tetra-Furans	24.00	24.66	2.242e2	1.773e2	0.770	1.26	YES	0.59039	0.00000
9	Total Tetra-Furans	24.00	24.83	1.497e2	2.176e2	0.770	0.68	NO	0.69951	0.69951
10	Total Tetra-Furans	24.00	25.01	1.036e2	2.423e2	0.770	0.43	YES	0.45453	0.00000
11	Total Tetra-Furans	24.00	25.11	4.809e2	5.643e2	0.770	0.85	NO	1.9961	1.9961



Ready

20011602-5

NUM

Vista Analytical Laboratory

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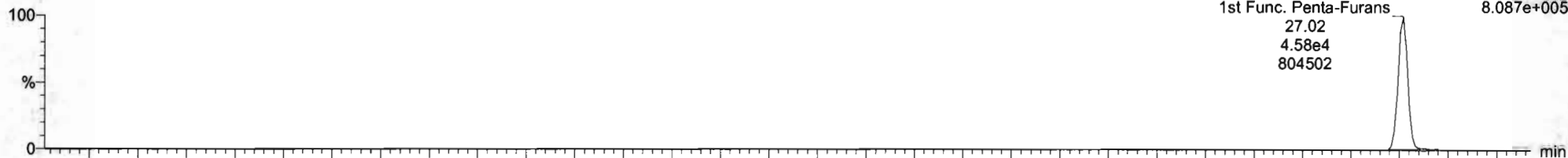
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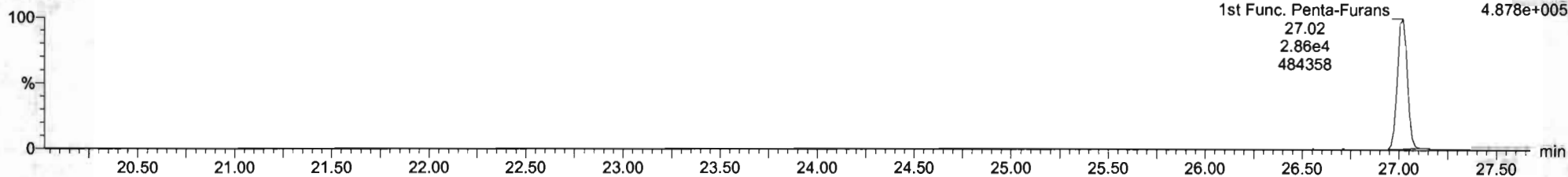
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Description: 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans

200116D2\_5  
1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-07 PDI-018SC-A-06-07-190926

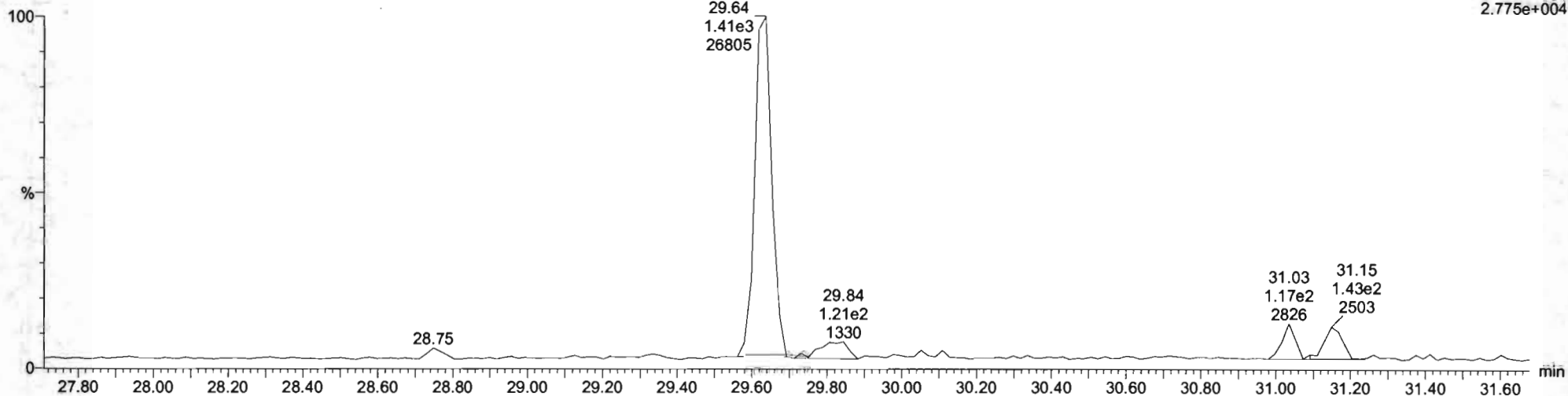


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DPE6

200116D2\_5  
1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-07 PDI-018SC-A-06-07-190926



Vista Analytical Laboratory

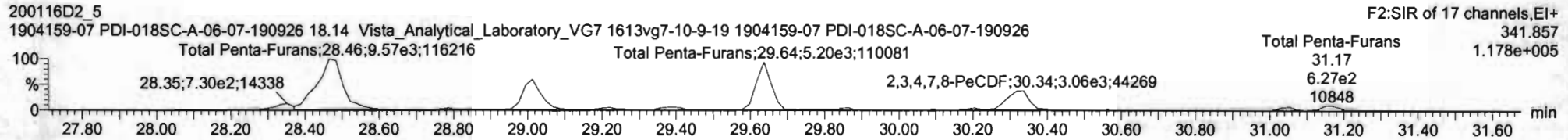
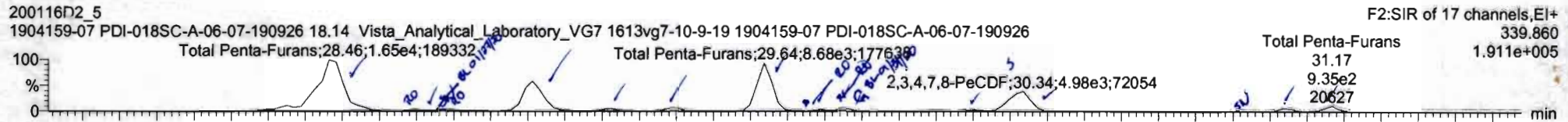
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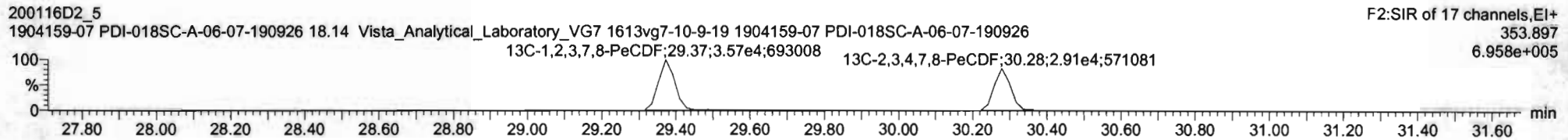
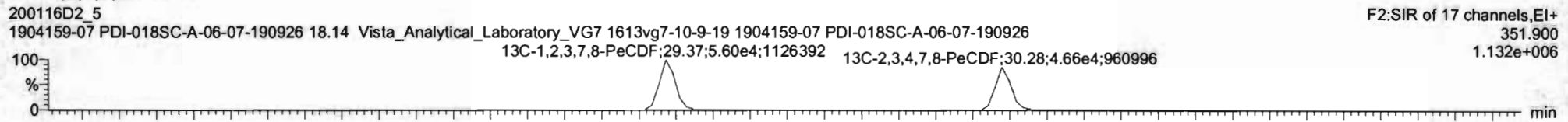
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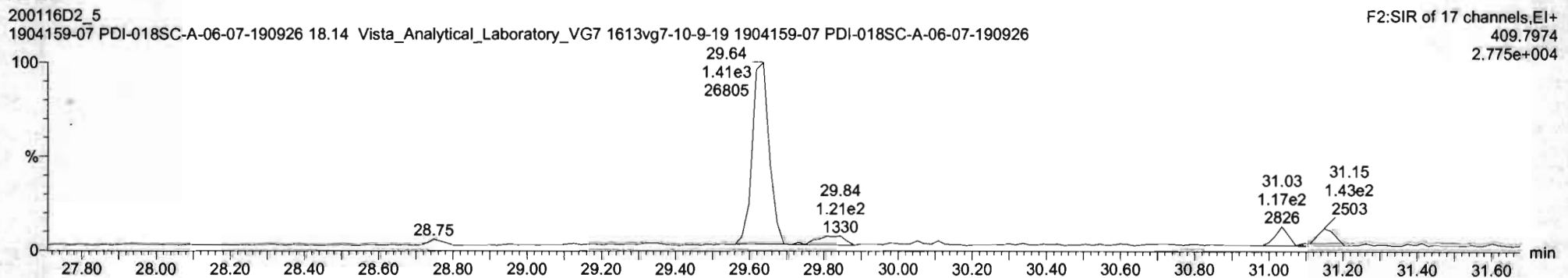
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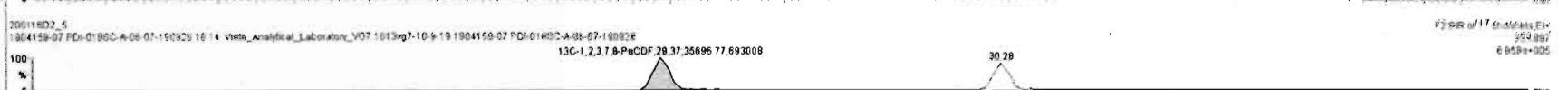
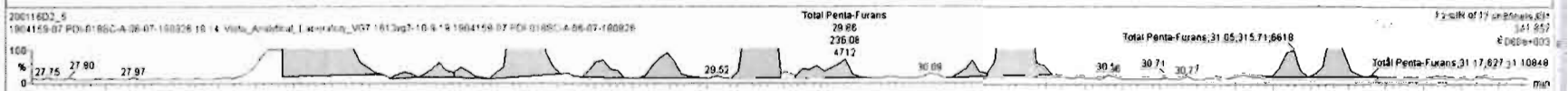
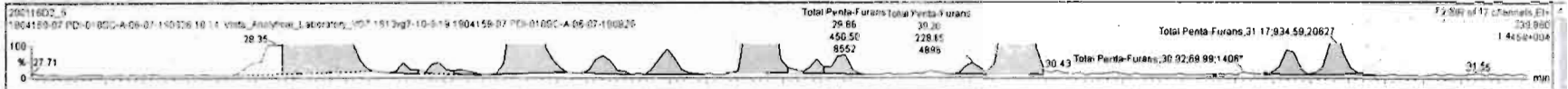


DPE2



#	Name	Resp	IS Resp	Cal	RA	inj	RRF	wtAvail	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	Ls	EMPC
37	13C-1,2,3,4-TCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	198.5	100	0.510	
38	13C-1,2,3,4,6,8-PeCDF	9.53e4	9.53e4	38	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	198.5	100	1.00	
39	Total Tetra-Dioxins								7.94e4	10.074	25.50		0.000	NO	3.664	0.358	8.046
40	Total Penta-Dioxins								4.97e4	10.074	30.00		0.000	NO	34.79	0.229	41.77
41	Total Hexa-Dioxins								0.00e0	10.074	33.80		0.000	NO	237.5	2.41	236.7
42	Total Hepta-Dioxins								2.64e4	10.074	37.75		0.000	NO	1470	3.73	1470
43	Total Tetra-Furans								1.10e5	10.074	24.00		0.000	NO	176.0	0.769	181.3
44	Total Penta-Furans								0.00e0	10.074	27.63		0.000	NO	187.7	0.195	187.3
45	Total Hexa-Furans								0.00e0	10.074	30.00		0.000	NO	168.9	0.412	162.1
46	Total Hepta-Furans								0.00e0	10.074	33.00		0.000	NO	737.4	1.23	739.9
47	Total Octa-Furans								0.00e0	10.074	37.75		0.000	NO	1832	2.03	1837
48	PFKT																

#	Name	Pred RT	RT	ml Resp	ml2 Resp	Pred RA	RA	inj	EMPC	Conc
1	Total Penta-Furans	30.00	28.46	1.542e4	9.571e3	1.550	1.61	NO	63.071	63.071
2	Total Penta-Furans	30.00	28.69	1.604e2	6.344e1	1.550	2.53	YES	0.42833	0.00000
3	Total Penta-Furans	30.00	28.79	2.389e2	1.957e2	1.550	1.44	NO	1.0214	1.0214
4	Total Penta-Furans	30.00	28.84	9.214e1	1.027e2	1.550	0.90	YES	0.38265	0.00000
5	Total Penta-Furans	30.00	29.01	8.858e3	4.007e3	1.550	1.71	NO	27.429	27.429
6	Total Penta-Furans	30.00	29.22	4.602e2	2.698e2	1.550	1.71	NO	1.6431	1.6431
7	1,2,3,7,8-PeCDF	29.38	29.38	6.285e2	4.065e2	1.550	1.55	NO	2.3355	2.3355
8	Total Penta-Furans	30.00	29.64	8.878e3	5.200e3	1.550	1.67	NO	35.034	35.034
9	Total Penta-Furans	30.00	29.79	2.083e2	1.812e2	1.550	1.15	YES	0.86519	0.00000
10	Total Penta-Furans	30.00	29.86	4.505e2	2.361e2	1.550	1.91	YES	1.5196	0.00000
11	Total Penta-Furans	30.00	30.20	2.266e2	1.712e2	1.550	1.34	NO	1.0093	1.0093



20011602-50 1904159-07 PEH-0180C-A-06-07-190426 1904159-07 PEH-0180C-A-06-07-190426 1904159-07 PEH-0180C-A-06-07-190426

#	Name	Resp	IS Resp	IS#	RA	nV	RRF	wt/dL	Pred RT	RT	PRT	Pred PRT	Check PRT	Conc	u/fac	CL	EMC	Primary Flag	No Sp	Peak
40	Total Penta-Furans	4.97e4					0.872	10.074	30.00			0.000	NO	34.79	0.229	41.43			NO	7
41	Total Hexa-Dioxins	0.00e0					0.876	10.074	33.90			0.000	NO	237.5	2.41	238.7			NO	5
42	Total Hepta-Dioxins	2.64e4					0.989	10.074	37.75			0.000	NO	1470	3.73	1470			NO	2
43	Total Tetra-Furans	1.10e5					0.943	10.074	24.00			0.000	NO	176.0	0.788	181.3			NO	13
44	1st Furc. Penta-Furans	0.00e0					0.940	10.074	27.63			0.000	NO	187.7	0.135	187.7			NO	1
45	Total Penta-Furans	0.00e0					0.940	10.074	30.00			0.000	NO	158.0	0.412	161.2			NO	10
46	Total Hexa-Furans	0.00e0					1.078	10.074	33.00			0.000	NO	731.5	1.23	735.3			NO	7
47	Total Hepta-Furans	0.00e0					1.135	10.074	37.75			0.000	NO	1656	2.03	1656			NO	3

#	Name	Pred RT	RT	ret Resp	w2 Resp	Pred RA	RA	nV	EMC	Conc	Primer	* Det
1	Total Penta-Furans	30.00	26.46	1.542e4	9.571e3	1.550	1.61	NO	63.071	63.071	MM	db
2	Total Penta-Furans	30.00	26.89	1.504e2	6.344e1	1.550	2.53	YES	0.46933	0.00000	bd	MM
3	Total Penta-Furans	30.00	26.79	2.309e2	1.657e2	1.550	1.44	NO	1.0214	1.0214	MM	bd
4	Total Penta-Furans	30.00	26.84	9.214e1	1.027e2	1.550	0.90	YES	0.30285	0.00000	MM	MM
5	Total Penta-Furans	30.00	25.01	6.859e3	4.007e3	1.550	1.71	NO	27.429	27.429	bb	bb
6	Total Penta-Furans	30.00	29.22	4.602e2	2.693e2	1.550	1.71	NO	1.8431	1.8431	bb	bb
7	1,2,3,4-PeCDF	29.39	29.39	6.295e2	4.005e2	1.550	1.55	NO	2.3355	2.3355	bb	bb
8	Total Penta-Furans	30.00	29.54	6.575e3	5.170e3	1.550	1.66	NO	34.897	34.897	MM	MM
9	Total Penta-Furans	30.00	29.79	2.083e2	1.615e2	1.550	1.29	YES	0.86519	0.00000	dd	MM



Vista Analytical Laboratory

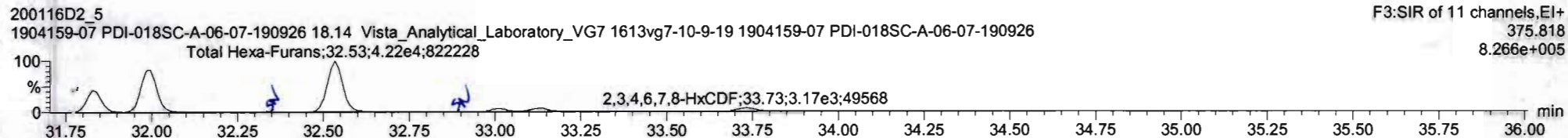
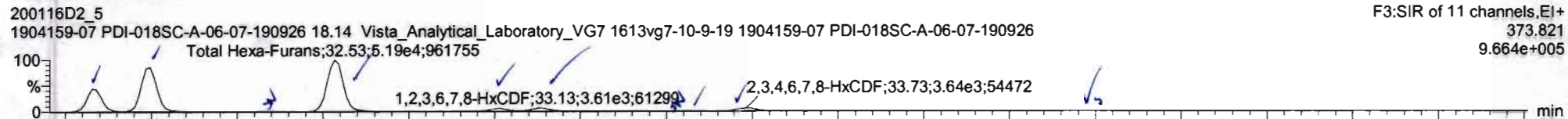
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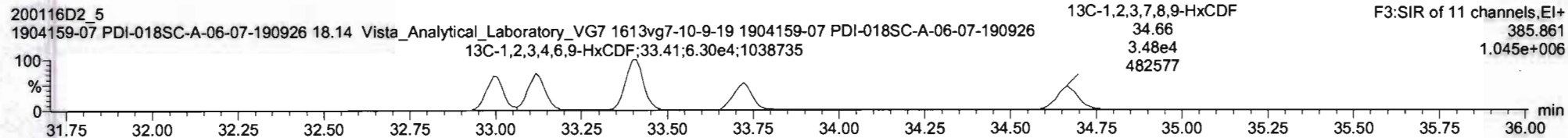
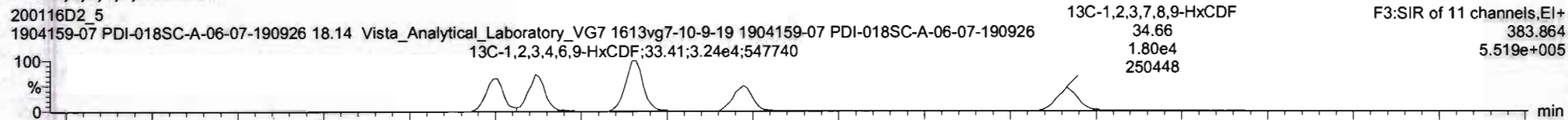
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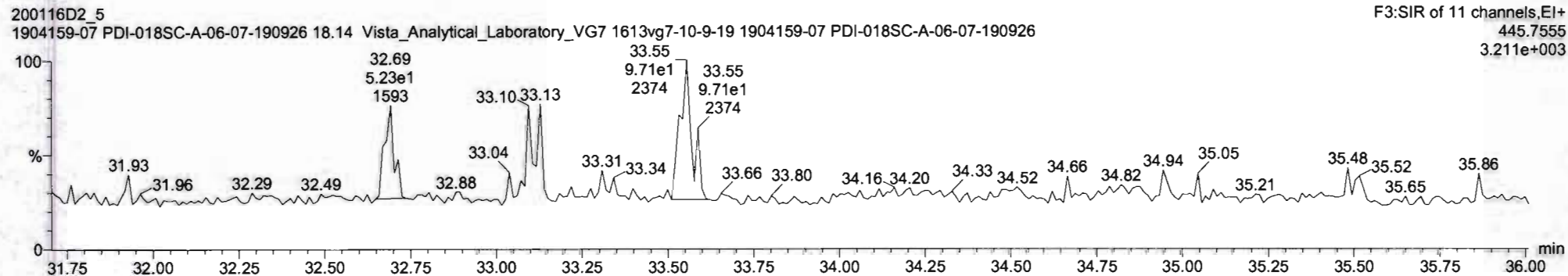
Total Hexa-Furans



13C-1,2,3,4,7,8-HxCDF



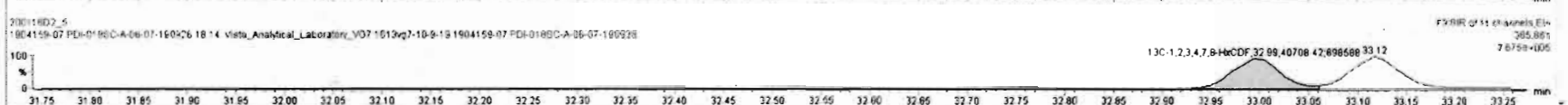
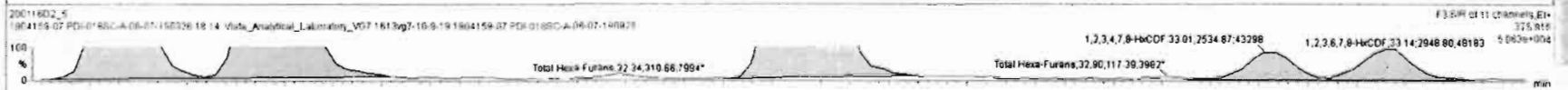
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#	Name	Resp	IS Resp	IS#	RA	n/y	RRF	wtAval	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	uFrac	DL	EMPC
37	13C-1,2,3,4-HxCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.98	1.000	1.000	NO	198.5	100	0.517	
38	13C-1,2,3,4,6,8-HxCDF	9.53e4	9.53e4	38	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	198.5	100	1.00	
39	Total Tetra-Dioxins	7.94e4					0.901	10.074	25.50			0.000	NO	3.664		0.358	8.048
40	Total Penta-Dioxins	4.97e4					0.872	10.074	30.00			0.000	NO	34.79		0.229	41.77
41	Total Hexa-Dioxins	0.00e0					0.876	10.074	33.80			0.000	NO	237.5		2.41	236.7
42	Total Hepta-Dioxins	2.64e4					0.989	10.074	37.75			0.000	NO	1470		3.73	1470
43	Total Tetra-Furans	1.10e5					0.947	10.074	24.00			0.000	NO	176.0		0.769	181.3
44	1st Func. Penta-Furans	0.00e0					0.940	10.074	27.63			0.000	NO	187.7		0.135	187.7
45	Total Penta-Furans	0.00e0					0.940	10.074	30.00			0.000	NO	168.0		0.412	161.2
46	Total Hexa-Furans	0.00e0					1.078	10.074	33.00			0.000	NO	737.4		1.23	739.8
47	Total Hepta-Furans	0.00e0					1.135	10.074	37.75			0.000	NO	1632		2.03	1637
48	PFNT																

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc.
1	Total Hexa-Furans	33.00	31.83	2.174e4	1.787e4	1.240	1.23	NO	124.03	124.03
2	Total Hexa-Furans	33.00	32.00	4.351e4	3.634e4	1.240	1.20	NO	251.31	251.31
3	Total Hexa-Furans	33.00	32.36	3.520e2	3.107e2	1.240	1.13	NO	2.0858	2.0858
4	Total Hexa-Furans	33.00	32.53	5.191e4	4.217e4	1.240	1.23	NO	296.11	296.11
5	Total Hexa-Furans	33.00	32.92	1.942e2	1.174e2	1.240	1.65	YES	0.82762	0.00000
11	1,2,3,4,7,8-HxCDF	33.01	33.02	3.018e3	2.535e3	1.240	1.19	NO	15.144	15.144
7	1,2,3,6,7,8-HxCDF	33.13	33.13	3.612e3	2.949e3	1.240	1.22	NO	18.248	18.248
8	Total Hexa-Furans	33.00	33.43	1.398e2	1.486e2	1.240	0.94	YES	0.79461	0.00003
9	Total Hexa-Furans	33.00	33.57	4.632e2	3.862e2	1.240	1.26	NO	2.6103	2.6103
10	1,2,3,4,6,7,8-HxCDF	33.76	33.73	3.642e3	3.171e3	1.240	1.15	NO	23.066	23.066
11	1,2,3,7,8,9-HxCDF	34.66	34.72	7.131e2	6.500e2	1.240	1.09	NO	4.8342	4.8342

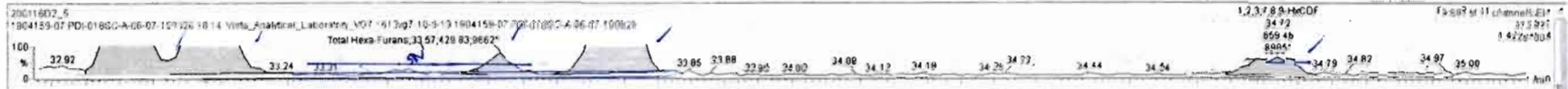




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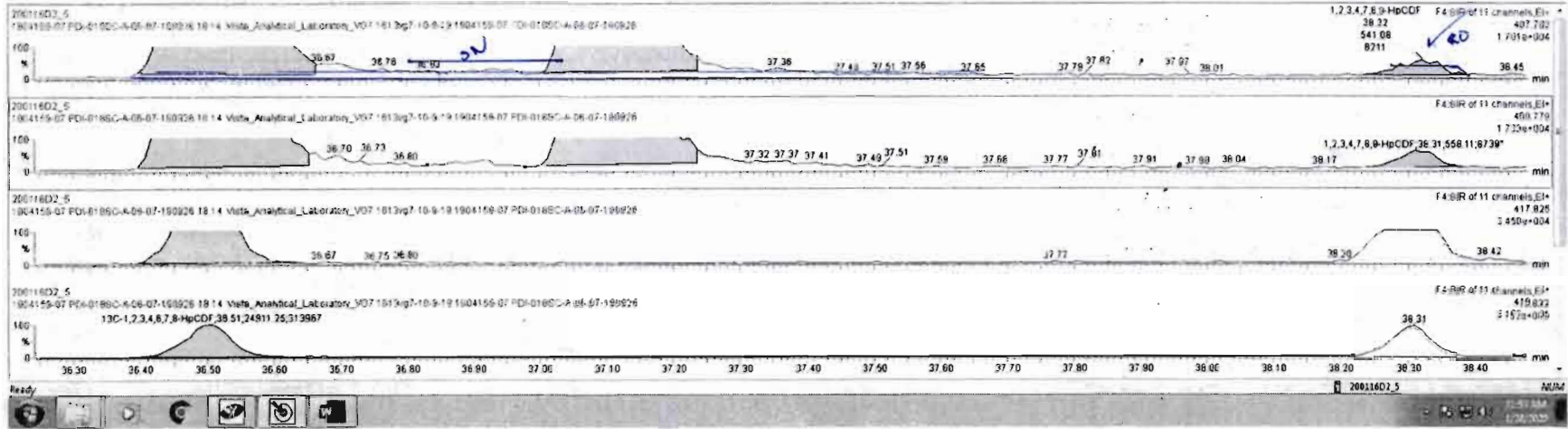
#	Name	Resp	S Resp	ISF	RA	rvy	RRF	ntVol	Prod RT	RT	RRT	Prod RRT	Chem RT	Conc	%Rec	IC	Band
37	13C-1,2,3,4-TCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	198.5	100	0.510	
38	13C-1,2,3,4,6,8-HxCDF	9.53e4	9.53e4	28	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	3.664	100	1.00	
39	Total Tetra-Dioxins	7.94e4					0.901	10.074	25.50			0.000	NO			0.358	8.046
40	Total Penta-Dioxins	4.97e4					0.872	10.074	30.00			0.000	NO	34.79		0.229	41.77
41	Total Hexa-Dioxins	0.00e0					0.976	10.074	33.80			0.000	NO	227.5		2.41	236.7
42	Total Hepta-Dioxins	2.64e4					0.989	10.074	37.75			0.000	NO	1470		3.73	1470
43	Total Tetra-Furans	1.10e5					0.943	10.074	24.00			0.000	NO	176.0		0.769	181.3
44	1st Func. Penta-Furans	0.00e0					0.940	10.074	27.63			0.000	NO	187.7		0.195	187.7
45	Total Penta-Furans	0.00e0					0.840	10.074	30.00			0.000	NO	159.0		0.412	161.2
46	Total Hexa-Furans	0.00e0					1.078	10.074	33.00			0.000	NO	738.8		1.23	738.3
47	Total Hepta-Furans	0.00e0					1.135	10.074	37.75			0.000	NO	1632		2.03	1637
48	(PFK)																

#	Name	Prod RT	RT	nt Resp	m2 Resp	Prod RA	RA	rvy	EMPC	Conc
1	Total Hexa-Furans	33.00	31.83	2.17e4	1.767e4	1.240	1.23	NO	124.03	124.03
2	Total Hexa-Furans	33.00	32.00	4.351e4	3.634e4	1.240	1.20	NO	251.31	251.31
3	Total Hexa-Furans	33.00	32.53	5.236e4	4.217e4	1.240	1.24	NO	297.52	297.52
4	1,2,3,4,7,8-HxCDF	33.01	33.02	3.019e3	2.535e3	1.240	1.19	NO	15.144	15.144
5	1,2,3,6,7,8-HxCDF	33.13	33.13	3.612e3	2.949e3	1.240	1.22	NO	18.248	18.248
6	Total Hexa-Furans	33.00	33.43	1.398e2	1.486e2	1.240	0.94	YES	0.79451	0.00000
7	Total Hexa-Furans	33.00	33.57	4.632e2	3.662e2	1.240	1.26	NO	2.6103	2.6103
8	1,2,3,4,6,7,8-HxCDF	33.76	33.73	3.642e3	3.171e3	1.240	1.15	NO	23.066	23.066
9	1,2,3,7,8,9-HxCDF	34.66	34.72	7.191e2	6.530e2	1.240	1.09	NO	4.8342	4.8342
10	Total Hexa-Furans	33.00	35.52	1.309e2	1.538e2	1.240	0.85	YES	0.74451	0.00000



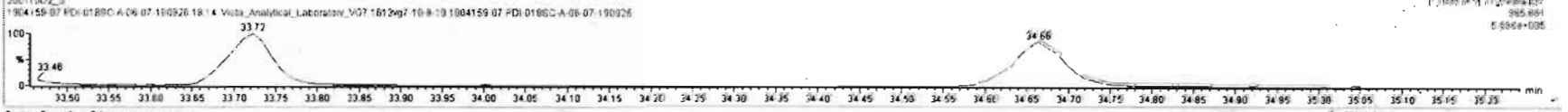
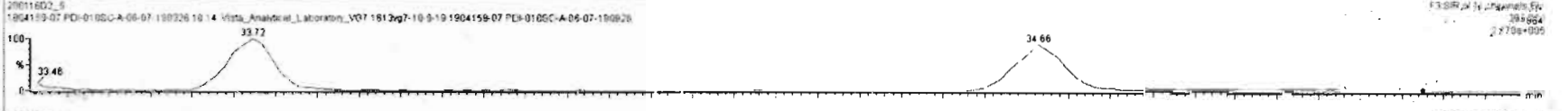
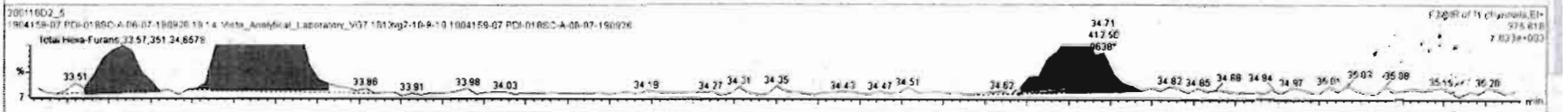
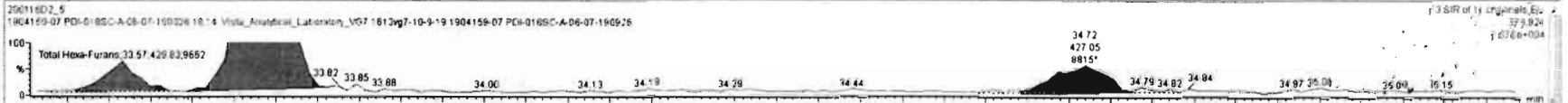
#	Name	Resp	(S Resp)	CF	RA	nly	RRF	wtAval	Pred RT	RT	RRT	thred RRT	Check Rst	Conc	%Rec	CL	EMPC
37	13C-1,2,3,4-TCDF	1.41e5	1.41e5	37	0.77	NO	1.000	10.074	23.93	23.96	1.000	1.000	NO	198.5	100	0.513	
38	13C-1,2,3,4,8,9-HpCDF	9.53e4	9.53e4	38	0.51	NO	1.000	10.074	33.37	33.41	1.000	1.000	NO	198.5	100	1.00	
39	Total Istra-Dioxins	7.94e4					0.901	10.074	25.50			0.000	NO	3.664		0.358	8.046
40	Total Penta-Dioxins	4.97e4					0.872	10.074	30.00			0.000	NO	34.78		0.229	41.77
41	Total Hexa-Dioxins	0.00e0					0.976	10.074	33.80			0.000	NO	237.5		2.41	238.7
42	Total Hepta-Dioxins	2.64e4					0.989	10.074	37.75			0.000	NO	1470		3.73	1470
43	Total Tetra-Furans	1.10e5					0.943	10.074	24.00			0.001	NO	176.0		0.788	181.3
44	1st Func. Penta-Furans	0.00e0					0.940	10.074	27.63			0.000	NO	187.7		0.135	187.7
45	Total Penta-Furans	0.00e0					0.940	10.074	30.00			0.000	NO	158.0		0.412	161.2
46	Total Hexa-Furans	0.00e0					1.078	10.074	33.00			0.000	NO	736.0		1.23	736.0
47	Total Hepta-Furans	0.00e0					1.135	10.074	37.75			0.000	NO	1832		2.03	1832
48	Pfkt																

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	15-1,2,3,4,6,7,8-HpCDF	36.53	36.52	9.29e4	9.36e4	1.040	0.98	NO	938.18	938.18
2	Total Hepta-Furans	37.75	36.93	1.869e2	2.067e2	1.040	0.97	NO	2.1922	2.1922
3	Total Hexa-Furans	37.75	37.11	6.308e4	6.455e4	1.040	0.98	NO	691.26	691.26
4	16-1,2,3,4,7,8,9-HpCDF	38.30	38.32	5.411e2	6.526e2	1.040	0.83	YES	5.5737	0.00000



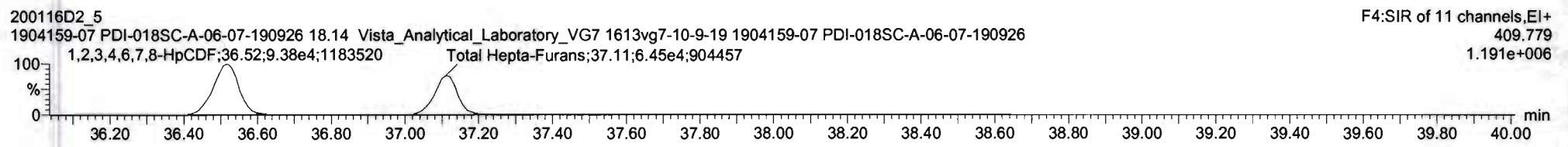
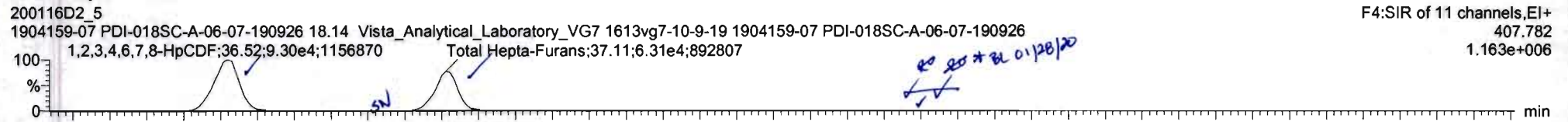
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40	Total Penta-Chlorins	4.97e4			0.872	10.074	30.00		0.000	NO	34.79	0.229	41.45							NO	7
41	Total Hexa-Chlorins	0.00e0			0.976	10.074	33.80		0.000	NO	257.5		2.41	238.7						NO	5
42	Total Hexa-Chlorins	2.64e4			0.985	10.074	37.75		0.000	NO	1470		3.73	1470						NO	2
43	Total Tetra-Furans	1.10e5			0.943	10.074	24.00		0.000	NO	176.0		0.789	181.3						NO	13
44	1st Func. Penta-Furans	0.00e0			0.940	10.074	27.63		0.000	NO	187.7		0.136	187.7						NO	1
45	Total Penta-Furans	0.00e0			0.940	10.074	30.00		0.000	NO	158.0		0.412	161.2						NO	10
46	Total Hexa-Furans	0.00e0			1.078	10.074	33.00		0.000	NO	733.0		1.23	733.0						NO	8
47	Total Hepta-Furans	0.00e0			1.135	10.074	37.75		0.000	NO	1656		2.03	1656						NO	3

#	Name	Pred RT	RT	Int Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc.	Primer	1st Det
1	46 Total Hexa-Furans	33.00	31.83	2.174e4	1.767e4	1.240	1.23	NO	124.03	124.03	bd	bd
2	46 Total Hexa-Furans	33.00	32.03	4.351e4	3.634e4	1.240	1.20	NO	251.31	251.31	db	db
3	46 Total Hexa-Furans	33.00	32.53	5.236e4	4.217e4	1.240	1.24	NO	297.52	297.52	MM	db
4	11 1,2,3,4,7,8-HxCDF	33.01	33.02	3.002e3	2.536e3	1.240	1.18	NO	15.102	15.102	MM	MM
5	12 1,2,3,6,7,8-HxCDF	33.13	33.13	3.612e3	2.949e3	1.240	1.22	NO	18.248	18.248	db	db
6	46 Total Hexa-Furans	33.00	33.57	4.298e2	3.513e2	1.240	1.22	NO	2.4587	2.4587	MM	MM
7	13 2,3,4,6,7,8-HxCDF	33.76	33.73	3.642e3	3.100e3	1.240	1.18	NO	22.827	22.827	bb	MM
8	14 1,2,3,7,8-HxCDF	34.66	34.66	2.201e2	2.023e2	1.240	1.09	NO	1.4948	1.4948	MM	MM

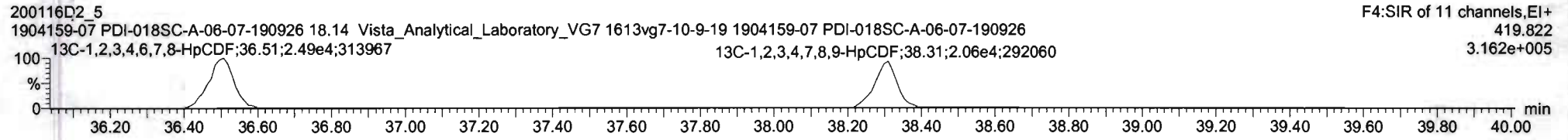
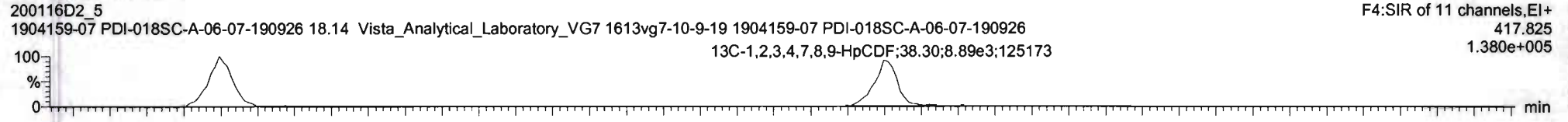


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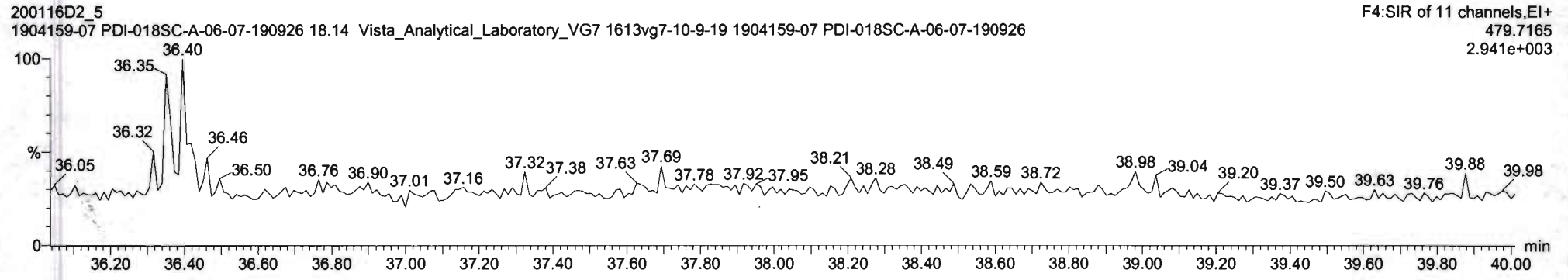
Total Hepta-Furans



13C-1,2,3,4,6,7,8-HpCDF



DPE4



Vista Analytical Laboratory

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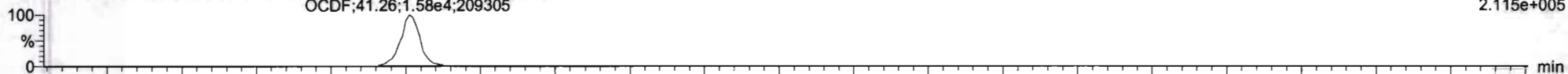
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OCDF

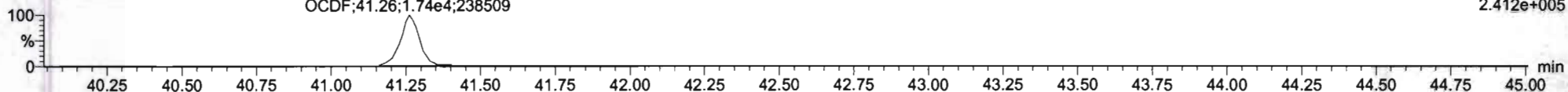
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F5:SIR of 11 channels, EI+ 441.743 2.115e+005



200116D2\_5 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-07 PDI-018SC-A-06-07-190926 OCDF;41.26;1.74e4;238509

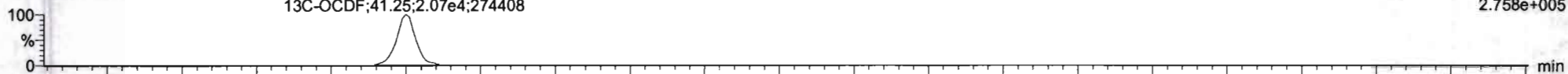
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13C-OCDF

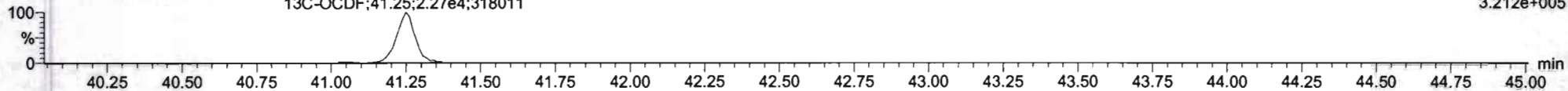
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F5:SIR of 11 channels, EI+ 453.7831 2.758e+005



200116D2\_5 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-07 PDI-018SC-A-06-07-190926 13C-OCDF;41.25;2.27e4;318011

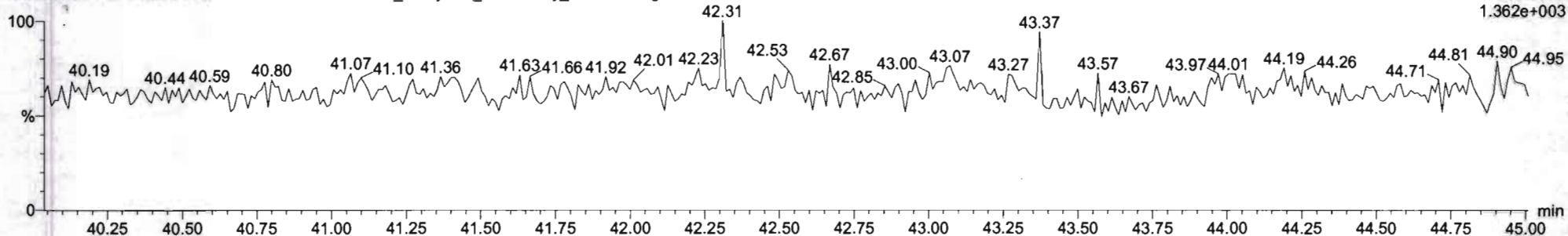
F5:SIR of 11 channels, EI+ 455.780 3.212e+005



DPE5

200116D2\_5 1904159-07 PDI-018SC-A-06-07-190926 18.14 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-07 PDI-018SC-A-06-07-190926

F5:SIR of 11 channels, EI+ 513.6775 1.362e+003



Vista Analytical Laboratory

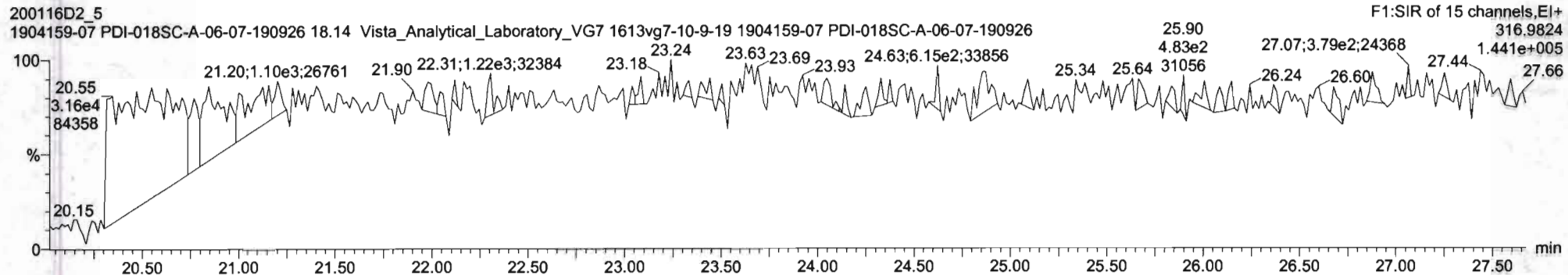
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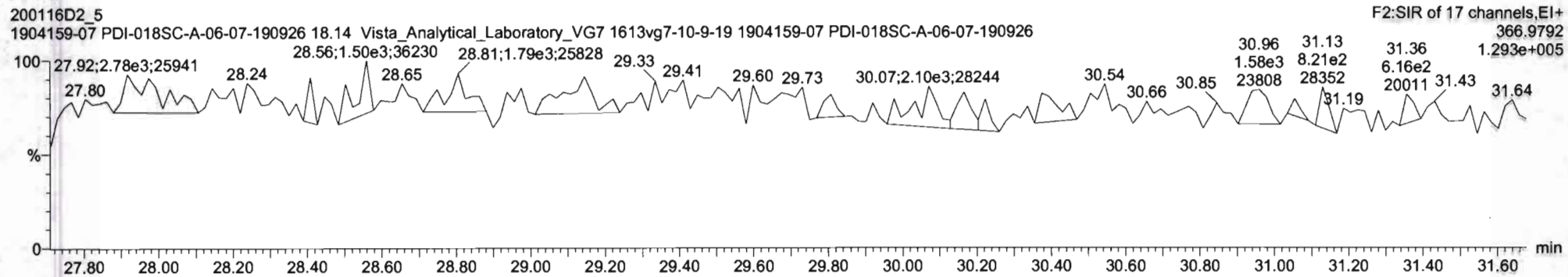
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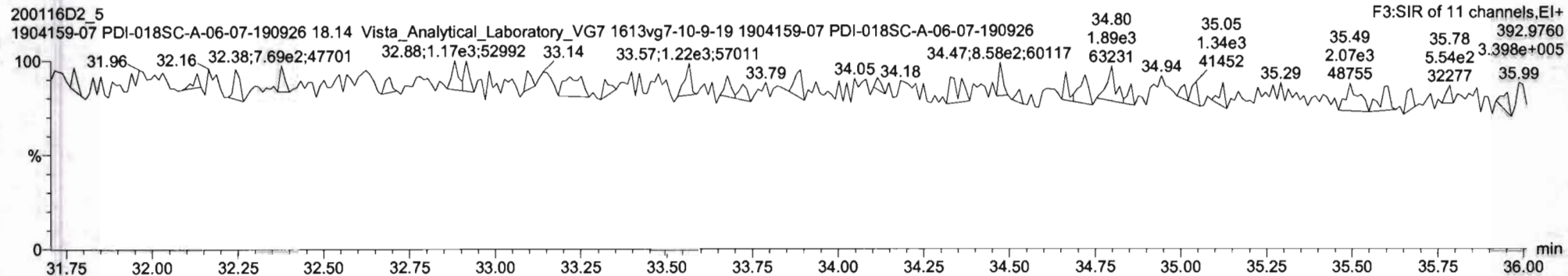
PFK1



PFK2



PFK3



Vista Analytical Laboratory

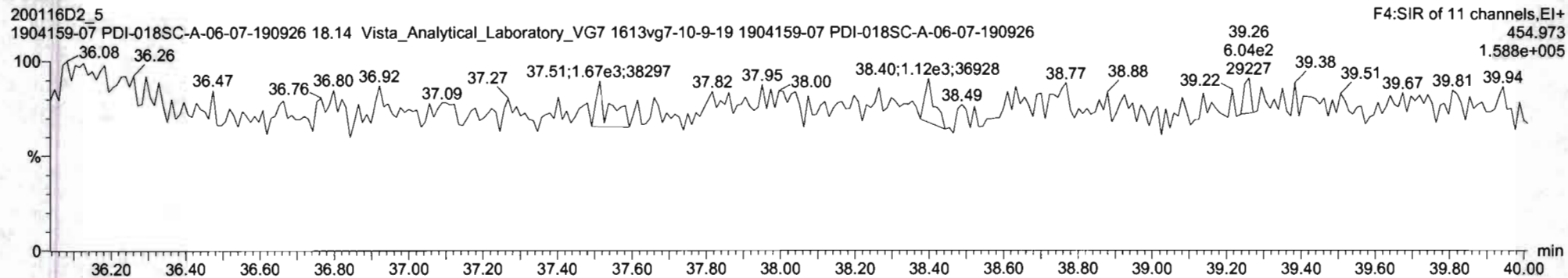
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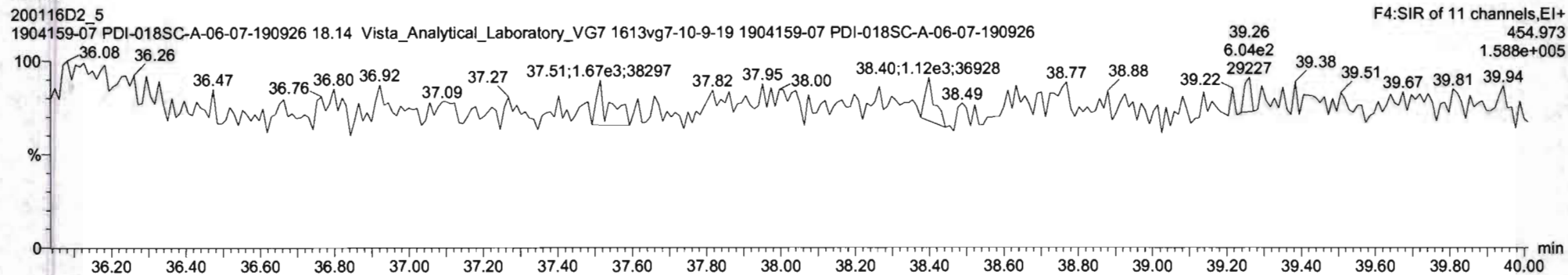
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PFK4



PFK5



Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_4.qld

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*DB 1/22/20*

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*CT 01/30/2020*

Name: 200121R2\_4, Date: 22-Jan-2020, Time: 01:17:31, ID: 1904159-07@5X PDI-018SC-A-06-07-190926 1:5 18.14, Description: PDI-018SC-A-06-07-190926 1:5

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMIPC
1	1 2,3,7,8-TCDD			NO	0.824	10.074	25.871		1.001				0.213	
2	2 1,2,3,7,8-PeCDD			NO	0.912	10.074	30.780		1.001				0.128	
3	3 1,2,3,4,7,8-HxCDD			NO	0.870	10.074	34.115		1.000				0.344	
4	4 1,2,3,6,7,8-HxCDD			NO	0.784	10.074	34.201		1.000				0.360	
5	5 1,2,3,7,8,9-HxCDD			NO	0.798	10.074	34.512		1.001				0.392	
6	6 1,2,3,4,6,7,8-HpCDD			NO	0.737	10.074	38.036		1.000				2.11	
7	7 OCDD	1.80e6	0.86	NO	0.800	10.074	41.006	41.02	1.000	1.000	8336.6		2.78	8340
8	8 2,3,7,8-TCDF			NO	0.588	10.074	24.982		1.001				0.478	
9	9 1,2,3,7,8-PeCDF			NO	0.826	10.074	29.498		1.001				0.287	
10	10 2,3,4,7,8-PeCDF			NO	0.850	10.074	30.484		1.001				0.259	
11	11 1,2,3,4,7,8-HxCDF			NO	0.787	10.074	33.231		1.000				0.610	
12	12 1,2,3,6,7,8-HxCDF			NO	0.720	10.074	33.358		1.000				0.594	
13	13 2,3,4,6,7,8-HxCDF			NO	0.768	10.074	33.968		1.001				0.714	
14	14 1,2,3,7,8,9-HxCDF			NO	0.709	10.074	34.840		1.000				0.893	
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.732	10.074	36.634		1.001				1.17	
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.816	10.074	38.610		1.000				1.11	
17	17 OCDF			NO	0.639	10.074	41.198		1.000				1.05	
18	18 13C-2,3,7,8-TCDD	4.05e5	0.80	NO	1.12	10.074	25.844	25.84	1.026	1.026	162.97	82.1	0.309	
19	19 13C-1,2,3,7,8-PeCDD	2.73e5	0.61	NO	0.841	10.074	30.614	30.76	1.215	1.221	145.86	73.5	0.456	
20	20 13C-1,2,3,4,7,8-HxCDD	1.95e5	1.32	NO	0.938	10.074	34.096	34.10	1.014	1.014	127.94	64.4	0.449	
21	21 13C-1,2,3,6,7,8-HxCDD	2.06e5	1.21	NO	1.07	10.074	34.197	34.20	1.017	1.017	118.87	59.9	0.395	
22	22 13C-1,2,3,7,8,9-HxCDD	1.94e5	1.27	NO	1.03	10.074	34.500	34.48	1.026	1.025	115.72	58.3	0.409	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.10e5	1.05	NO	0.710	10.074	38.064	38.02	1.132	1.131	95.343	48.0	0.454	
24	24 13C-OCDD	1.07e5	0.89	NO	0.801	10.074	40.956	41.01	1.218	1.220	109.77	27.6	0.296	
25	25 13C-2,3,7,8-TCDF	5.12e5	0.72	NO	1.04	10.074	25.020	24.96	0.993	0.990	158.41	79.8	0.399	
26	26 13C-1,2,3,7,8-PeCDF	4.20e5	1.59	NO	0.917	10.074	29.379	29.48	1.166	1.170	146.92	74.0	0.517	
27	27 13C-2,3,4,7,8-PeCDF	3.87e5	1.56	NO	0.903	10.074	30.337	30.45	1.204	1.209	137.51	69.3	0.525	
28	28 13C-1,2,3,4,7,8-HxCDF	1.89e5	0.46	NO	0.861	10.074	33.222	33.23	0.988	0.988	135.06	68.0	0.499	
29	29 13C-1,2,3,6,7,8-HxCDF	2.17e5	0.47	NO	1.05	10.074	33.323	33.35	0.991	0.992	127.37	64.2	0.411	
30	30 13C-2,3,4,6,7,8-HxCDF	1.70e5	0.47	NO	0.946	10.074	33.931	33.93	1.009	1.009	110.60	55.7	0.455	
31	31 13C-1,2,3,7,8,9-HxCDF	1.65e5	0.47	NO	0.816	10.074	34.836	34.84	1.036	1.036	124.22	62.6	0.527	



Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_4.qld

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Printed: Wednesday, January 22, 2020 14:55:22 Pacific Standard Time

Name: 200121R2\_4, Date: 22-Jan-2020, Time: 01:17:31, ID: 1904159-07@5X PDI-018SC-A-06-07-190926 1:5 18.14, Description: PDI-018SC-A-06-07-190926 1:5

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Cqnc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1.09e5	0.40	NO	0.589	10.074	36.584	36.60	1.088	1.088	113.32	57.1	0.703	
33	33 13C-1,2,3,4,7,8,9-HpCDF	9.43e4	0.38	NO	0.448	10.074	38.602	38.61	1.148	1.148	129.26	65.1	0.925	
34	34 13C-OCDF	1.43e5	0.86	NO	0.586	10.074	41.191	41.20	1.225	1.225	149.82	37.7	0.324	
35	35 37Cl-2,3,7,8-TCDD	1.62e5			1.09	10.074	25.877	25.87	1.027	1.027	66.913	84.3	0.0752	
36	36 13C-1,2,3,4-TCDD	4.42e5	0.81	NO	1.00	10.074	25.260	25.20	1.000	1.000	198.53	100	0.345	
37	37 13C-1,2,3,4-TCDF	6.19e5	0.74	NO	1.00	10.074	23.860	23.55	1.000	1.000	198.53	100	0.414	
38	38 13C-1,2,3,4,6,9-HxCDF	3.23e5	0.49	NO	1.00	10.074	33.590	33.63	1.000	1.000	198.53	100	0.430	
39	39 Total Tetra-Dioxins				0.824	10.074	24.620		0.000				0.131	
40	40 Total Penta-Dioxins				0.912	10.074	29.960		0.000				0.0613	
41	41 Total Hexa-Dioxins				0.784	10.074	33.635		0.000				0.189	
42	42 Total Hepta-Dioxins				0.737	10.074	37.640		0.000				1.04	
43	43 Total Tetra-Furans				0.588	10.074	23.610		0.000				0.182	
44	44 1st Func. Penta-Furans				0.826	10.074	27.090		0.000				0.0903	
45	45 Total Penta-Furans				0.826	10.074	29.275		0.000				0.128	
46	46 Total Hexa-Furans				0.766	10.074	33.555		0.000				0.426	
47	47 Total Hepta-Furans				0.732	10.074	37.835		0.000				0.535	

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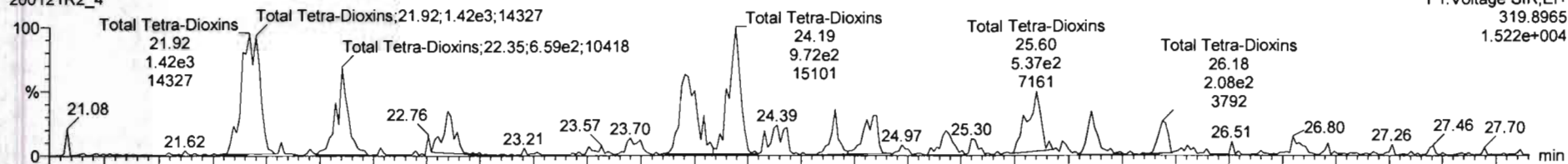
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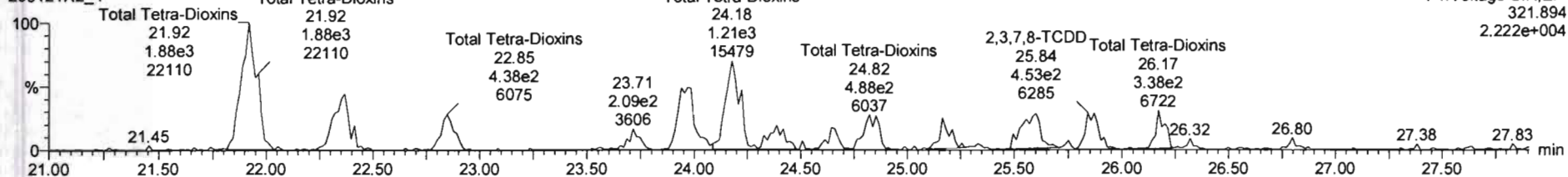
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2,3,7,8-TCDD

200121R2\_4

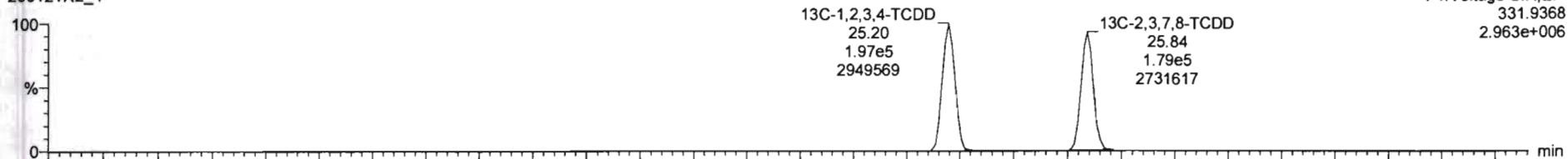


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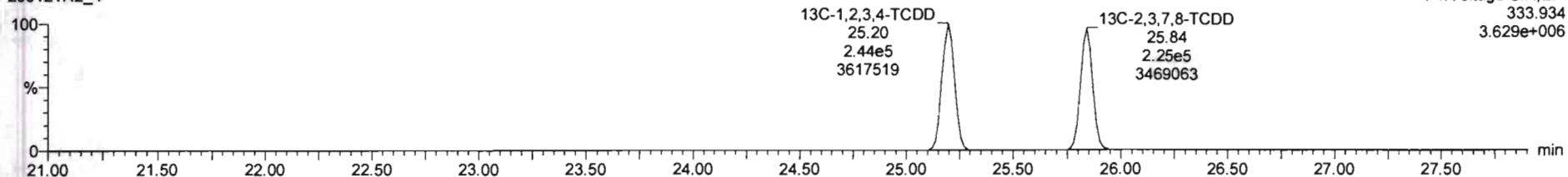


13C-2,3,7,8-TCDD

200121R2\_4



200121R2\_4



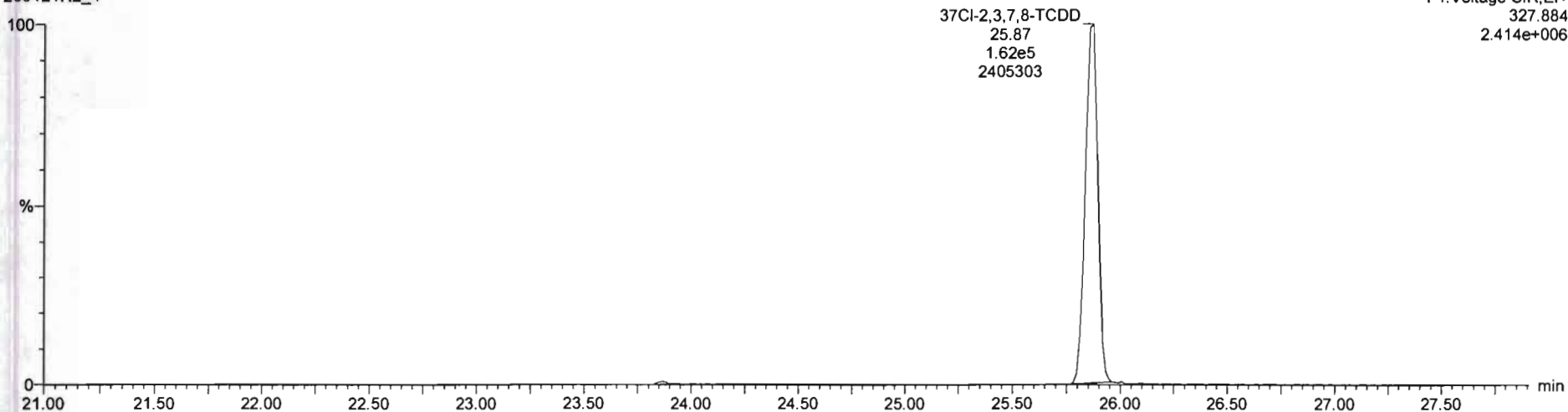
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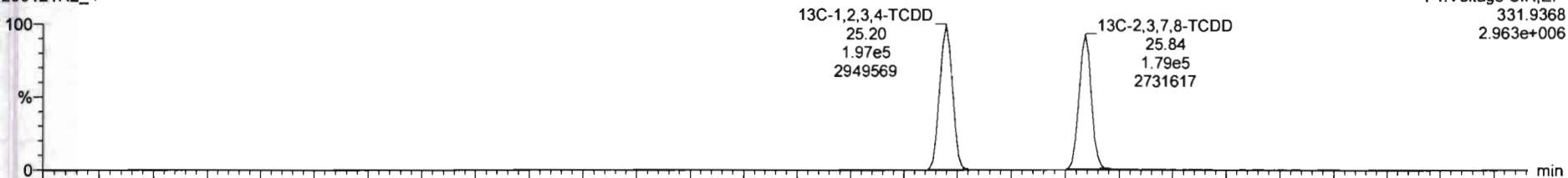
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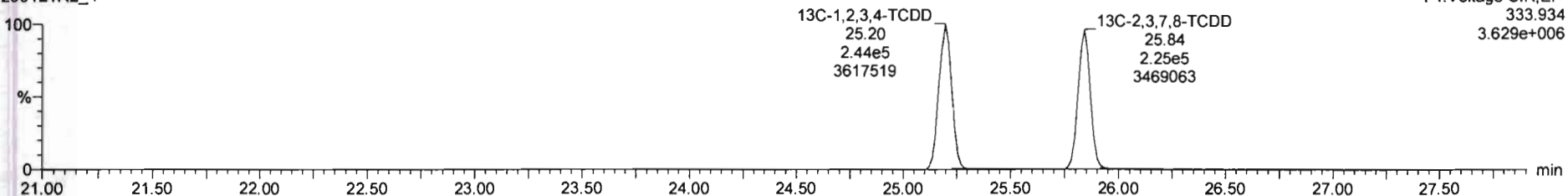


**13C-1,2,3,4-TCDD**

200121R2\_4



200121R2\_4



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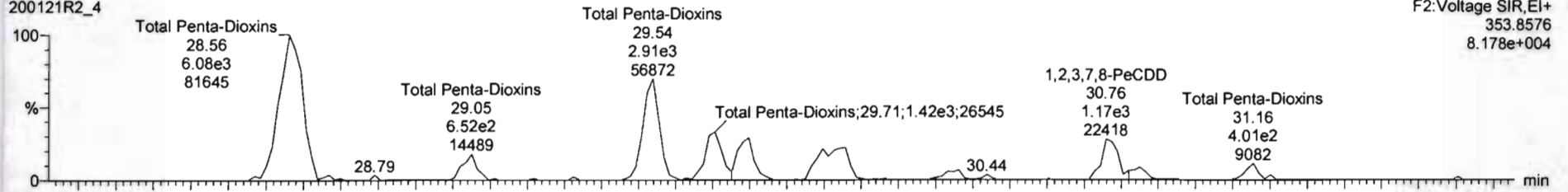
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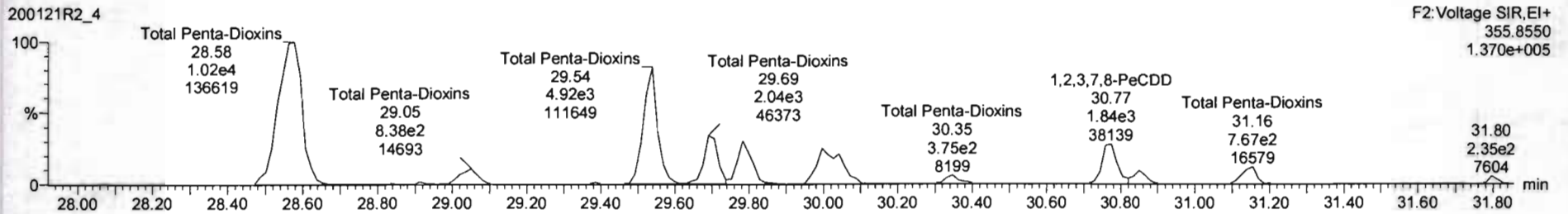
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**1,2,3,7,8-PeCDD**

200121R2\_4

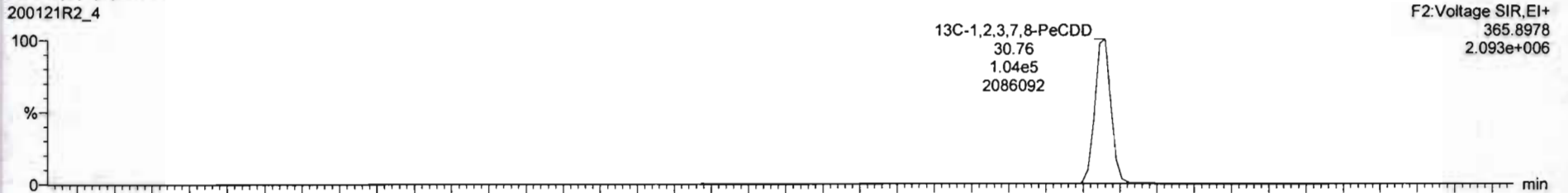


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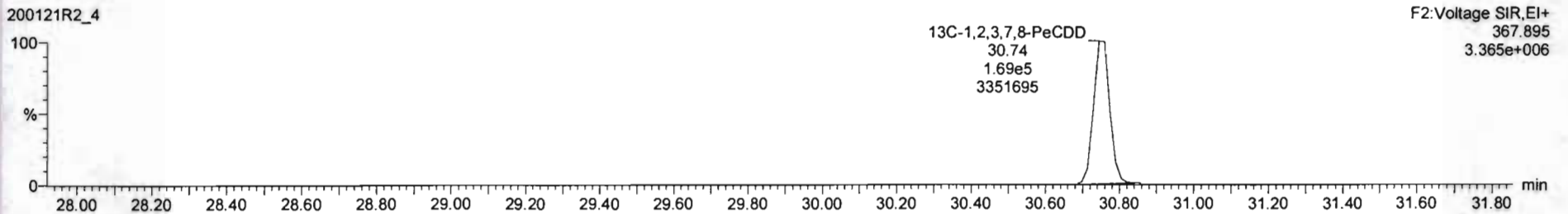


**13C-1,2,3,7,8-PeCDD**

200121R2\_4



200121R2\_4



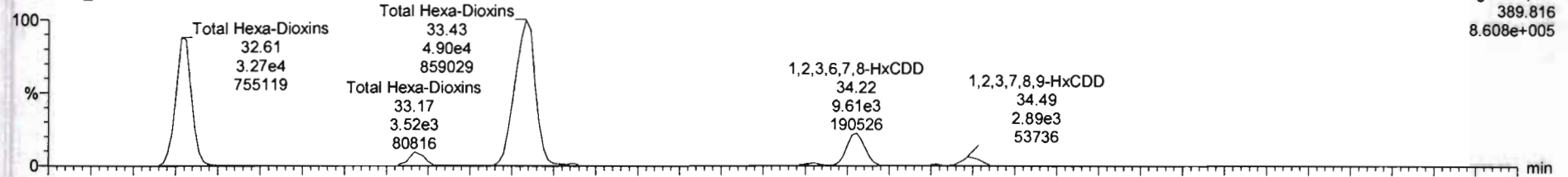
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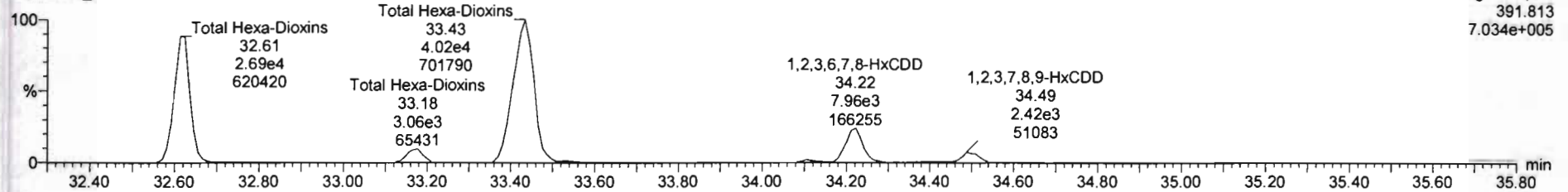
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**1,2,3,4,7,8-HxCDD**

200121R2\_4

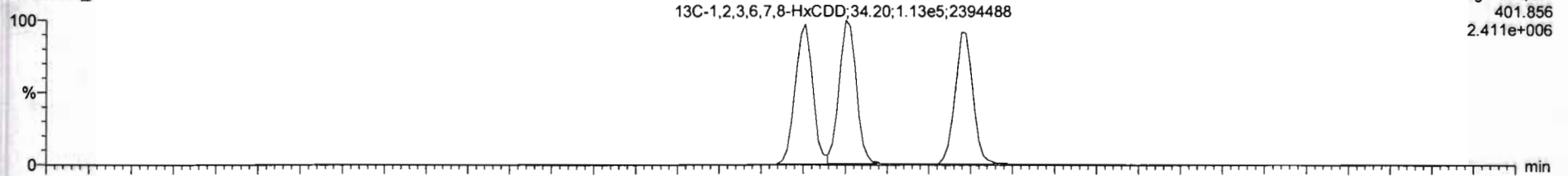


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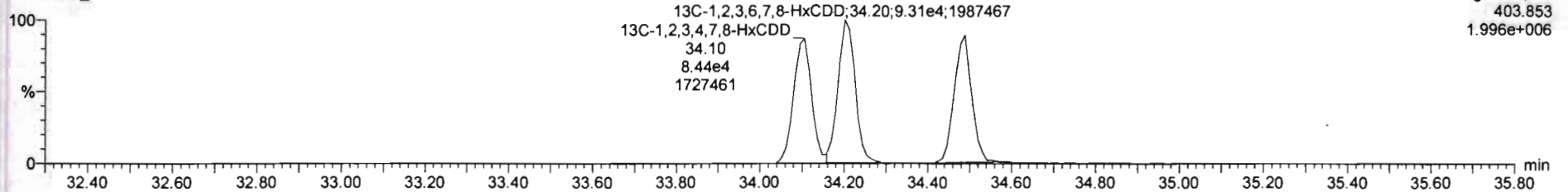


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200121R2\_4



200121R2\_4



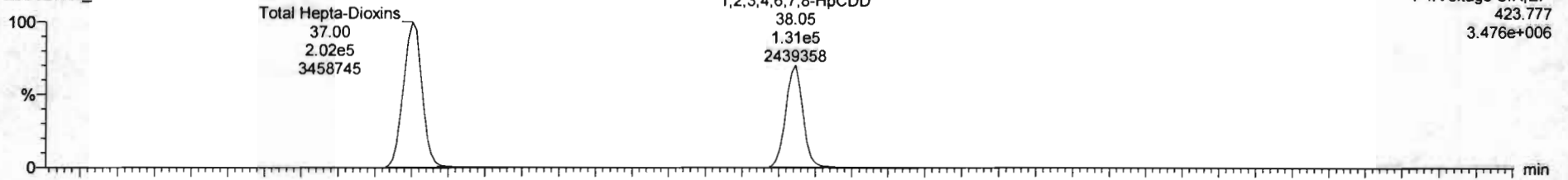
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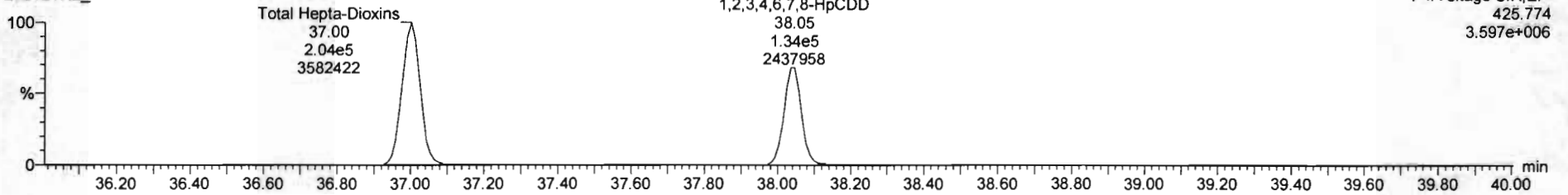
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**1,2,3,4,6,7,8-HpCDD**

200121R2\_4

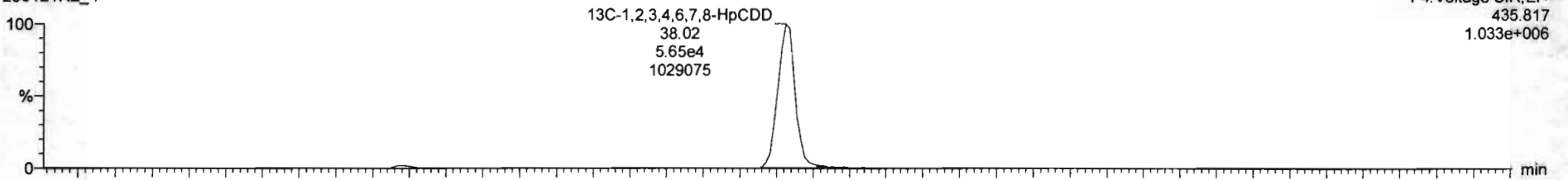


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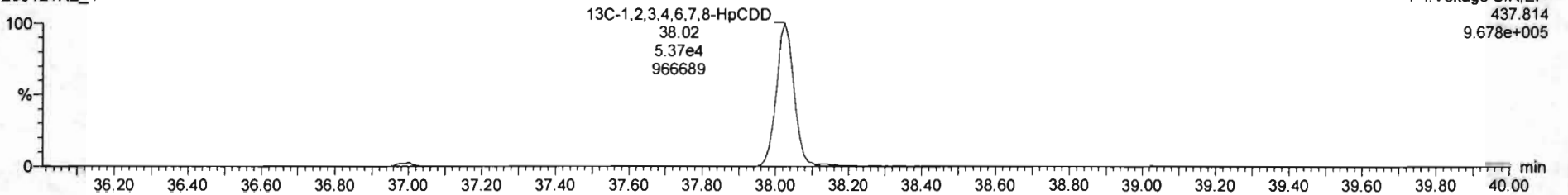


**13C-1,2,3,4,6,7,8-HpCDD**

200121R2\_4



200121R2\_4



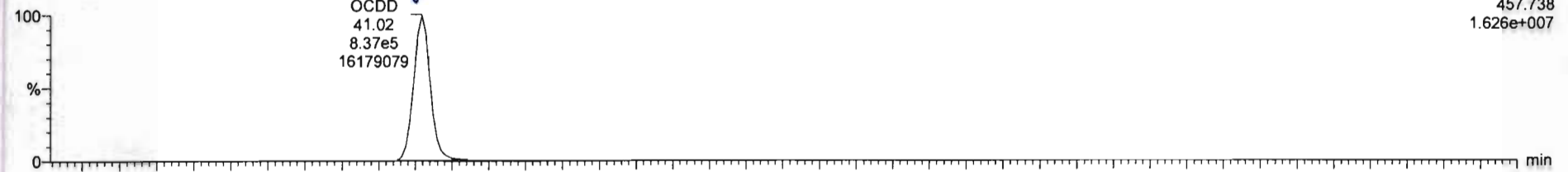
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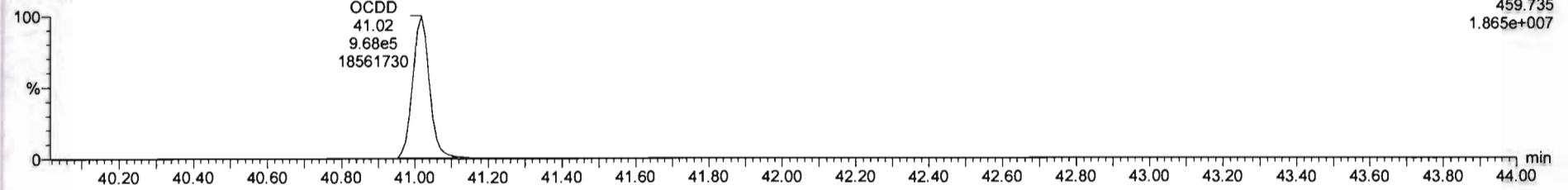
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**OCDD**

200121R2\_4

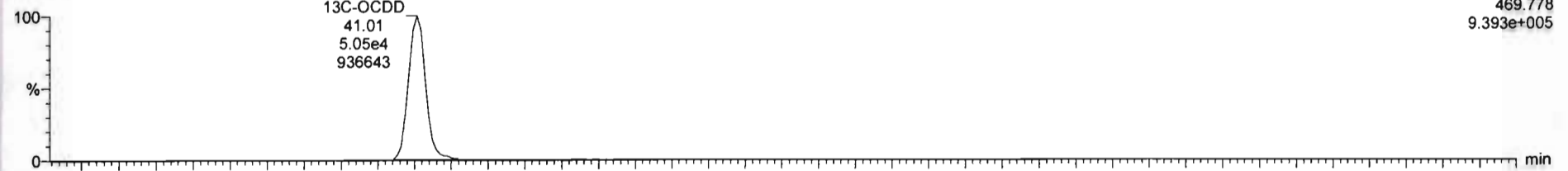


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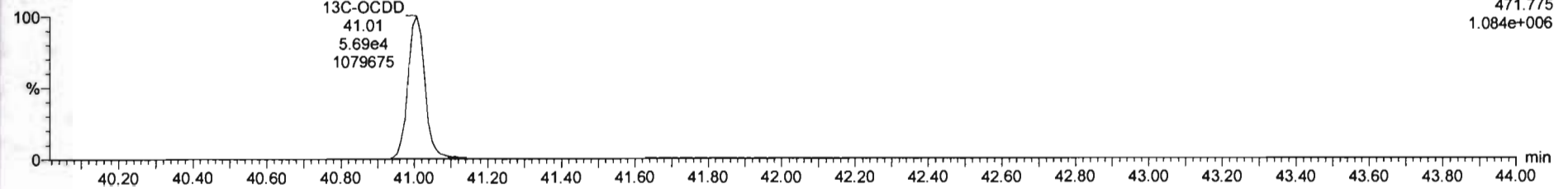


**13C-OCDD**

200121R2\_4



200121R2\_4



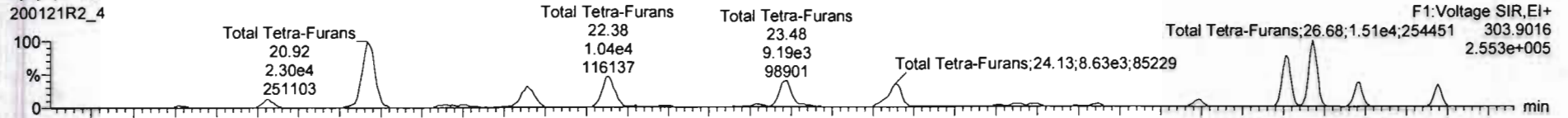
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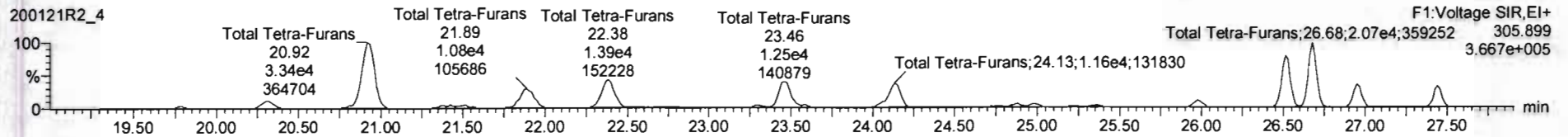
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**2,3,7,8-TCDF**

200121R2\_4

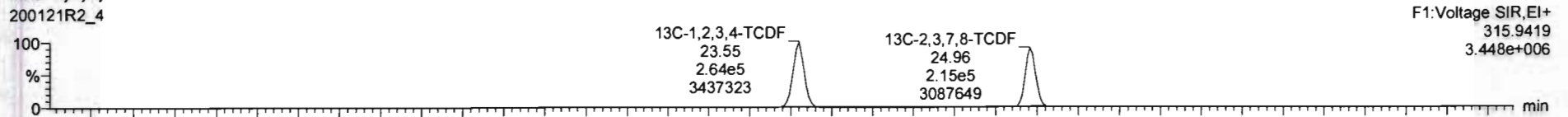


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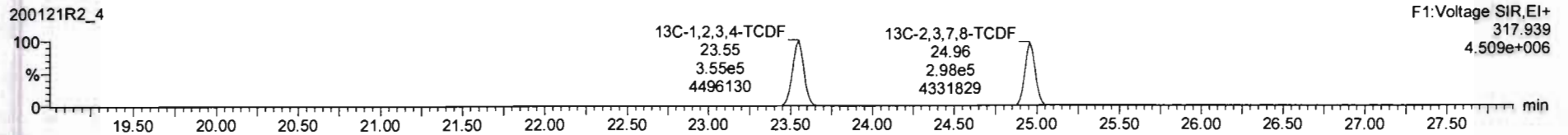


**13C-2,3,7,8-TCDF**

200121R2\_4

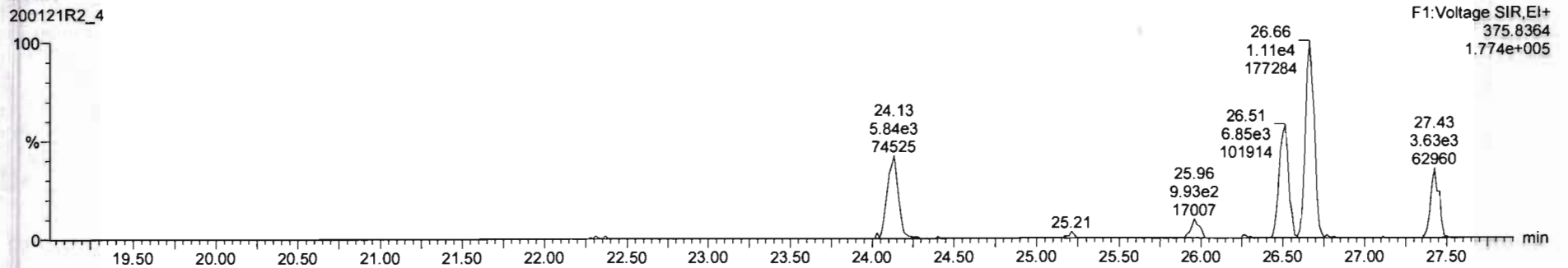


200121R2\_4



**DPE1**

200121R2\_4





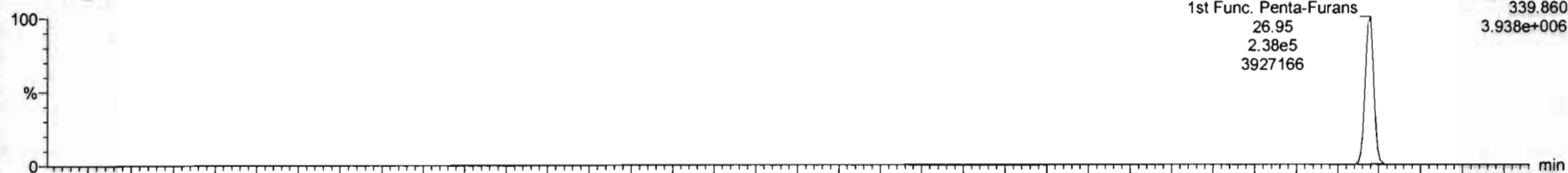
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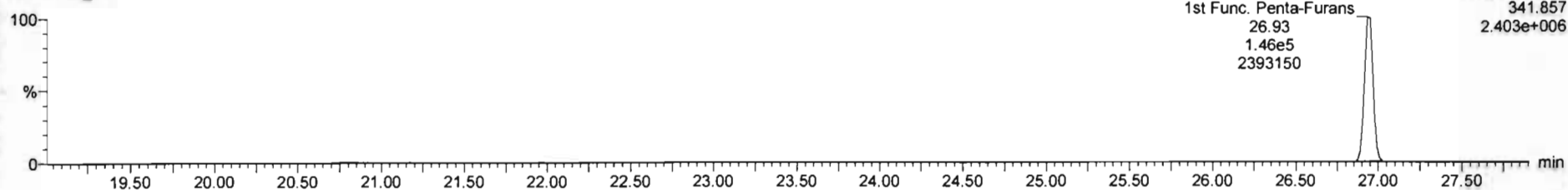
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1st Func. Penta-Furans

200121R2\_4

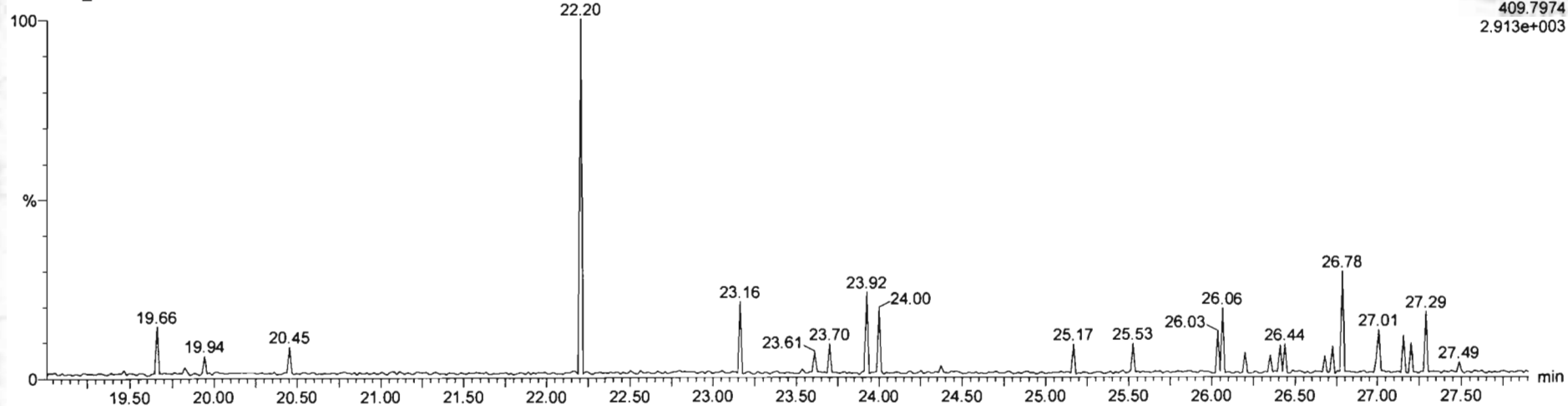


200121R2\_4



DPE6

200121R2\_4



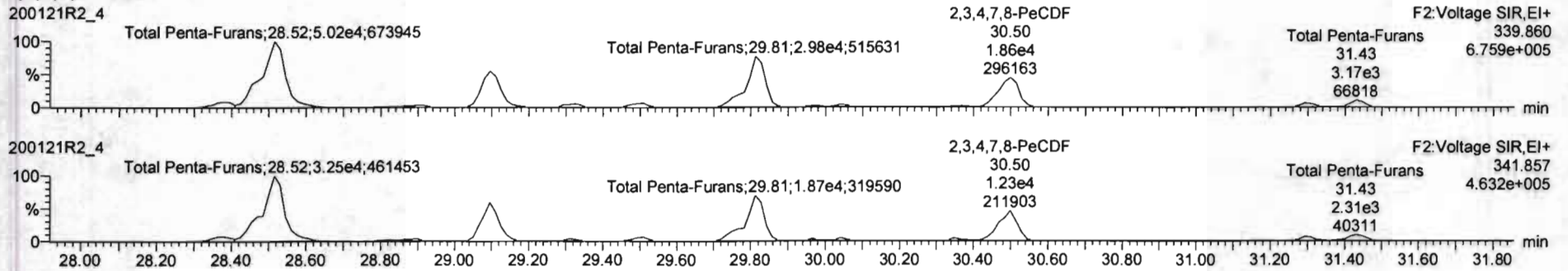
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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

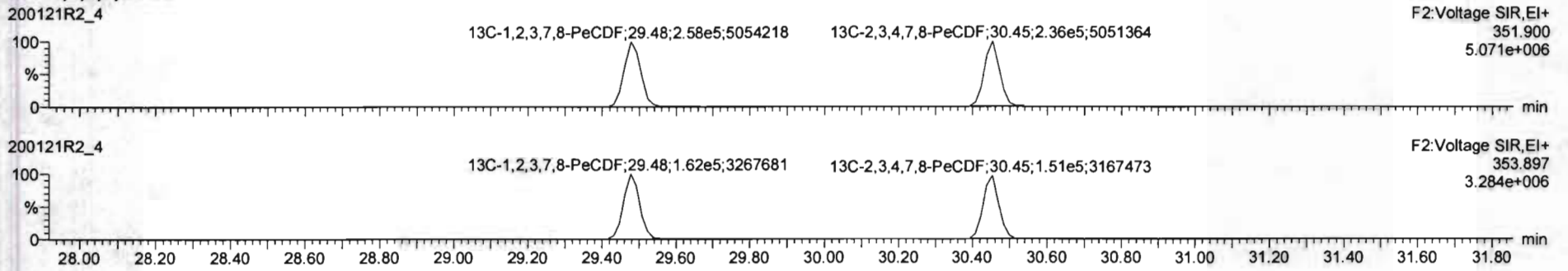
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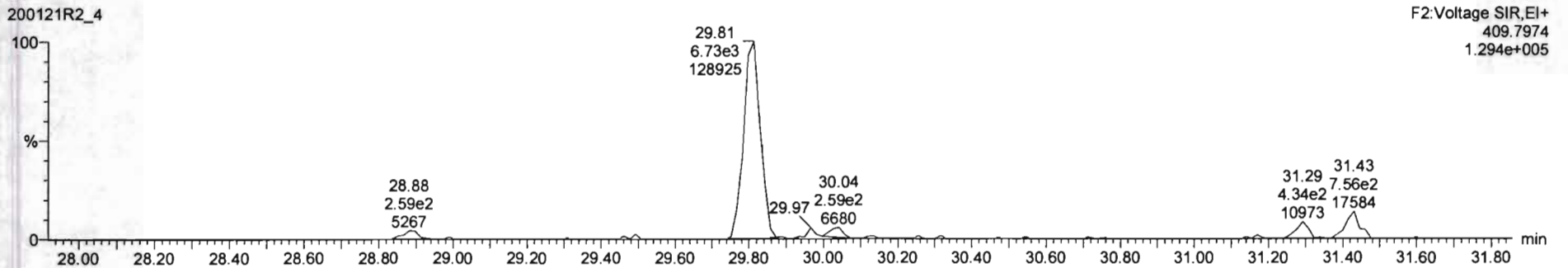
**1,2,3,7,8-PeCDF**



**13C-1,2,3,7,8-PeCDF**



**DPE2**



Dataset: Untitled

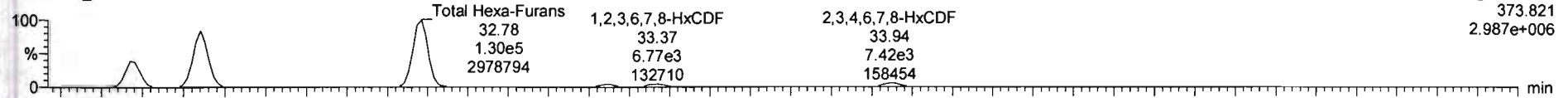
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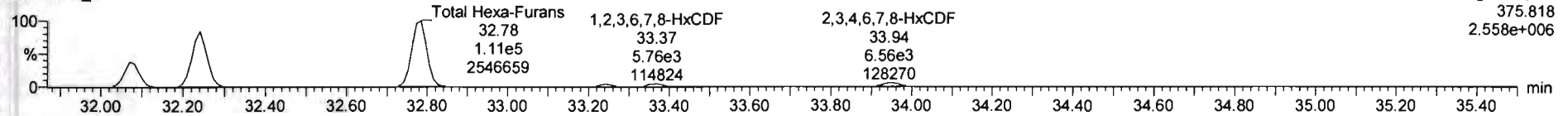
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**1,2,3,4,7,8-HxCDF**

200121R2\_4

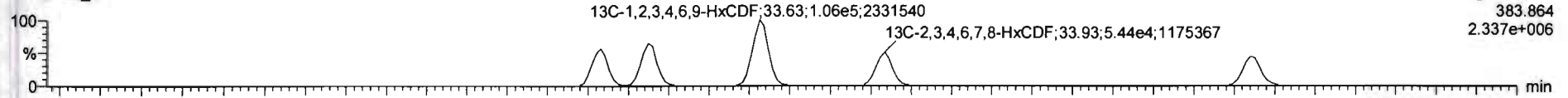


200121R2\_4

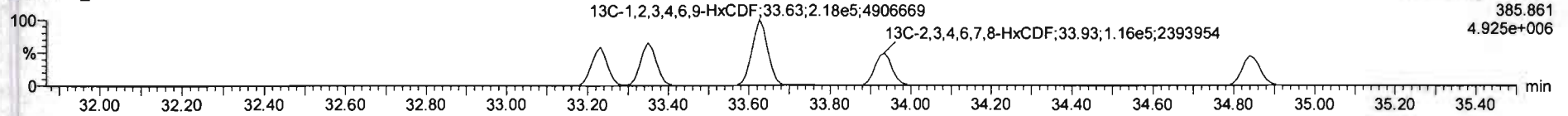


**13C-1,2,3,4,7,8-HxCDF**

200121R2\_4

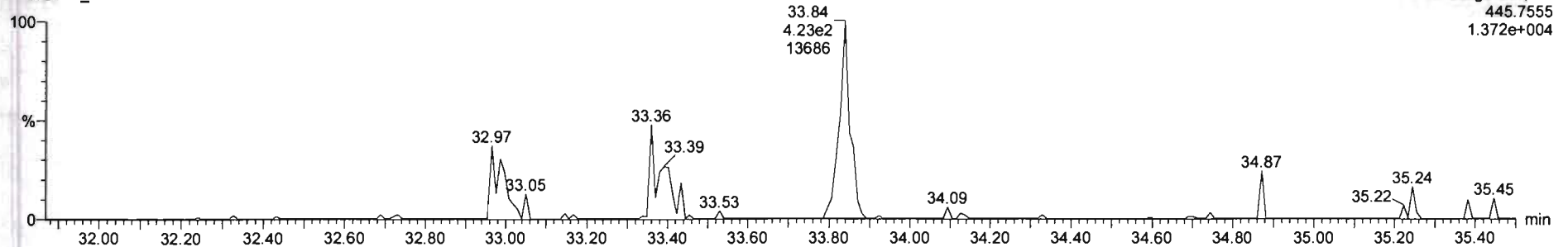


200121R2\_4



**DPE3**

200121R2\_4



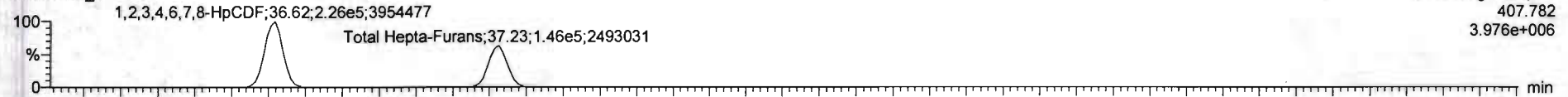
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

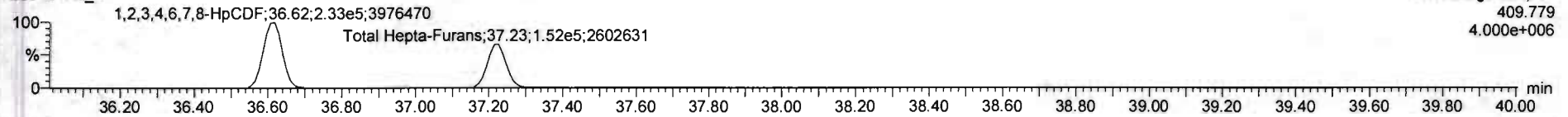
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**1,2,3,4,6,7,8-HpCDF**

200121R2\_4



200121R2\_4

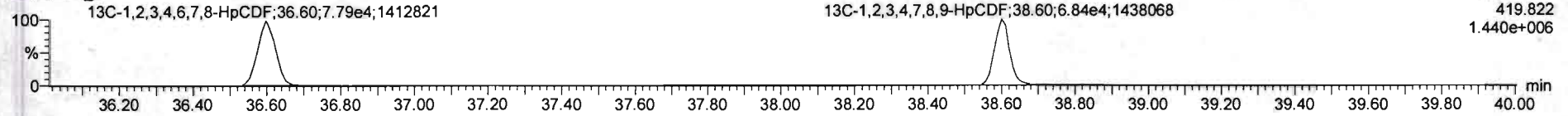


**13C-1,2,3,4,6,7,8-HpCDF**

200121R2\_4

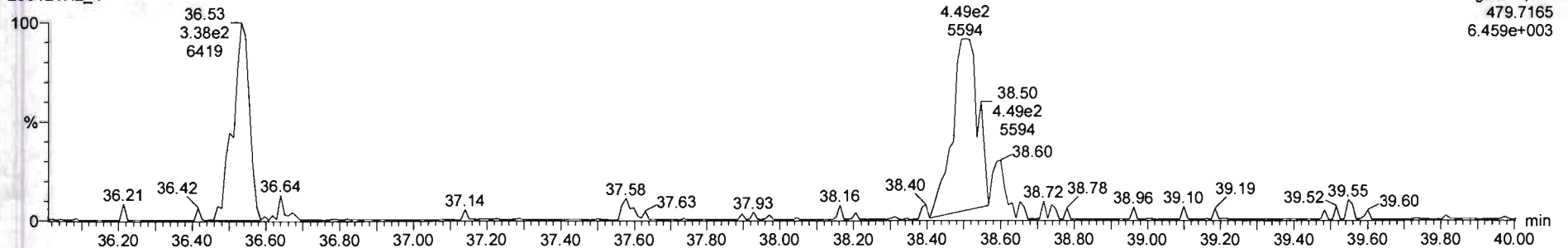


200121R2\_4



**DPE4**

200121R2\_4



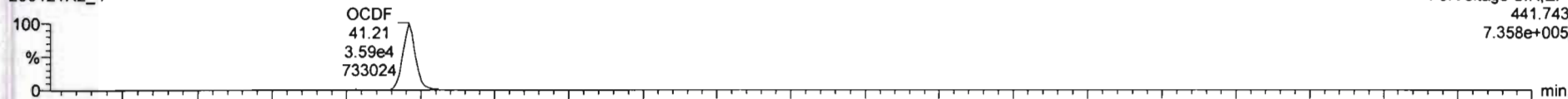
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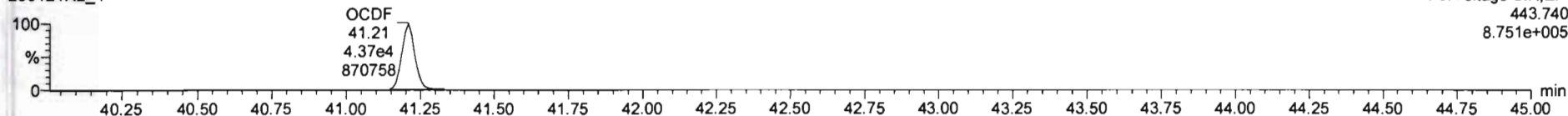
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**OCDF**

200121R2\_4

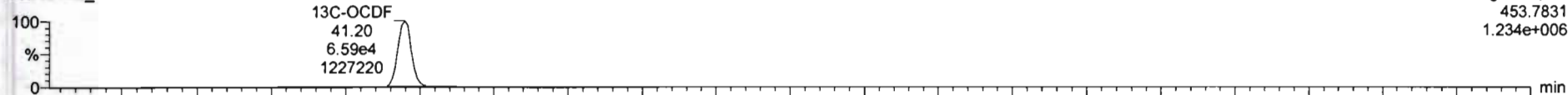


200121R2\_4

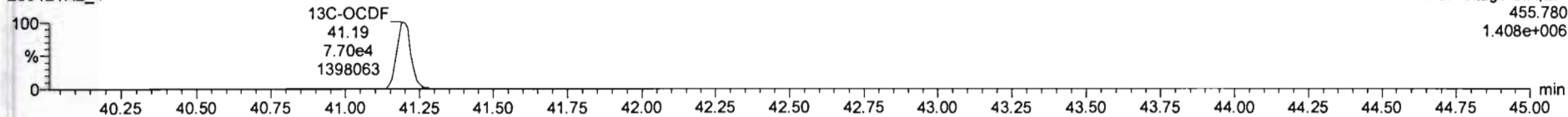


**13C-OCDF**

200121R2\_4

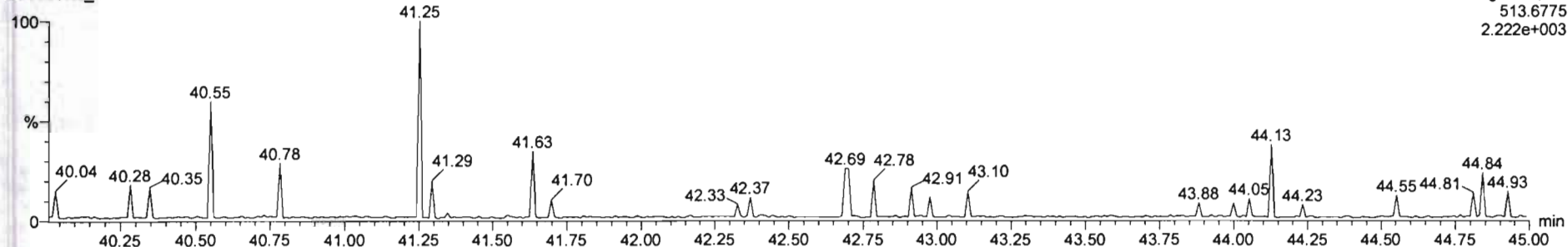


200121R2\_4



**DPE5**

200121R2\_4

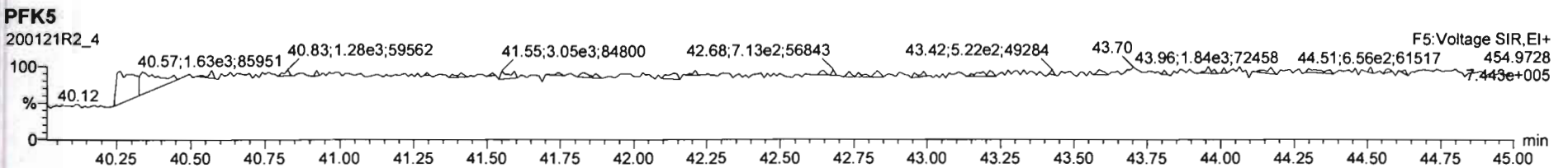
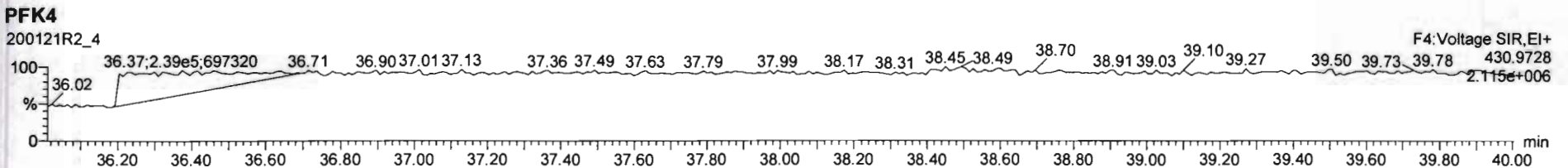
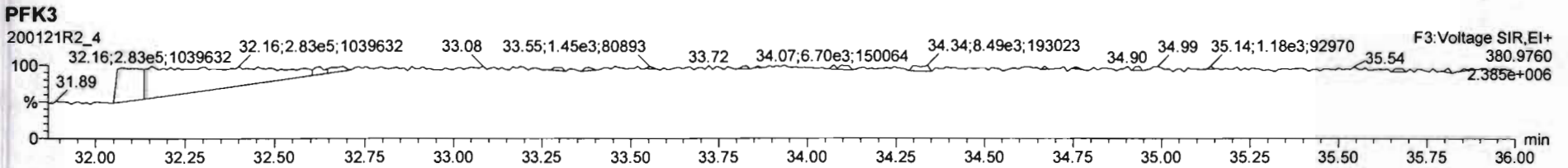
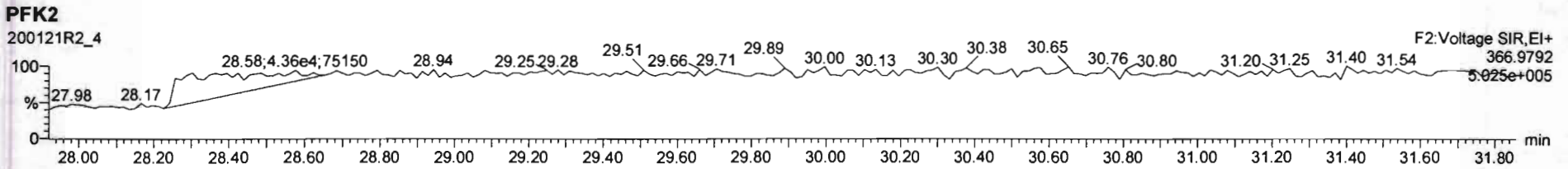
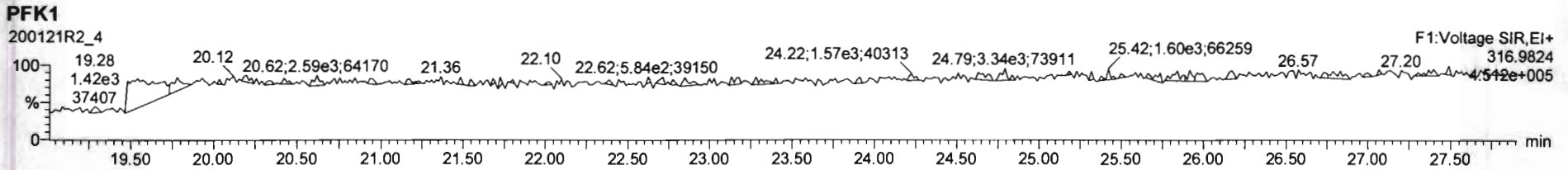


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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_4, Date: 22-Jan-2020, Time: 01:17:31, ID: 1904159-07@5X PDI-018SC-A-06-07-190926 1:5 18.14, Description: PDI-018SC-A-06-07-190926 1:5



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-6B.qld  
 Last Altered: Friday, January 31, 2020 11:56:24 Pacific Standard Time  
 Printed: Friday, January 31, 2020 11:57:14 Pacific Standard Time

GRB 01/31/2020

CT 02/03/2020

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 28 Jan 2020 10:22:20

Name: VG7 200116D2-6, Date: 17-JAN-2020, Time: 03:33:14, ID: 1904159-08 PDI-018SC-A-07-08-190926,  
 Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		4.58e4	10.0486	0.905			1.001		26.02					0.427
2	2 1,2,3,7,8-PeCDD		2.73e4	10.0486	0.903			1.001		30.59					0.803
3	3 1,2,3,4,7,8-HxCDD		3.01e4	10.0486	1.101			1.000		33.90					0.870
4	4 1,2,3,6,7,8-HxCDD	1.05e3	3.36e4	10.0486	0.939	1.109	NO	1.000	1.000	34.00	34.01	6.6364		6.64	0.908
5	5 1,2,3,7,8,9-HxCDD	3.90e2	3.37e4	10.0486	0.961	1.104	NO	1.001	1.000	34.32	34.29	2.3921		2.39	0.931
6	6 1,2,3,4,6,7,8-HpCDD	1.63e4	2.96e4	10.0486	0.979	1.022	NO	1.000	1.000	37.79	37.79	112.36		112	2.13
7	7 OCDD	2.02e5	4.66e4	10.0486	0.959	0.913	NO	1.000	1.000	41.04	41.05	1797.3		1800	1.87
8	8 2,3,7,8-TCDF		8.18e4	10.0486	0.950			1.001		25.22					0.551
9	9 1,2,3,7,8-PeCDF		5.05e4	10.0486	0.960			1.001		29.40					0.537
10	10 2,3,4,7,8-PeCDF	6.11e2	4.15e4	10.0486	1.015	1.638	NO	1.001	1.001	30.32	30.32	2.8878		2.89	0.593
11	11 1,2,3,4,7,8-HxCDF	1.52e3	4.30e4	10.0486	1.177	1.249	NO	1.000	1.000	33.00	33.01	5.9643		5.96	0.969
12	12 1,2,3,6,7,8-HxCDF	2.12e3	4.95e4	10.0486	1.069	1.385	NO	1.000	1.000	33.13	33.12	7.9706		7.97	1.07
13	13 2,3,4,6,7,8-HxCDF	2.19e3	4.29e4	10.0486	1.114	1.288	NO	1.001	1.000	33.76	33.74	9.1314		9.13	1.13
14	14 1,2,3,7,8,9-HxCDF		3.87e4	10.0486	1.062			1.000		34.68					1.73
15	15 1,2,3,4,6,7,8-HpCDF	6.64e4	3.66e4	10.0486	1.128	1.031	NO	1.001	1.001	36.54	36.52	320.15		320	1.48
16	16 1,2,3,4,7,8,9-HpCDF	4.33e2	2.71e4	10.0486	1.280	0.972	NO	1.000	1.000	38.31	38.33	2.4817		2.48	1.45
17	17 OCDF	1.55e4	6.19e4	10.0486	0.947	0.882	NO	1.000	1.001	41.24	41.27	105.47		105	0.907
18	18 13C-2,3,7,8-TCDD	4.58e4	8.50e4	10.0486	1.095	0.740	NO	1.023	1.023	25.99	25.98	97.914	49.2		0.650
19	19 13C-1,2,3,7,8-PeCDD	2.73e4	8.50e4	10.0486	0.881	0.607	NO	1.203	1.203	30.56	30.57	72.480	36.4		0.421
20	20 13C-1,2,3,4,7,8-Hx...	3.01e4	7.75e4	10.0486	0.642	1.339	NO	1.014	1.014	33.87	33.89	120.60	60.6		1.16
21	21 13C-1,2,3,6,7,8-Hx...	3.36e4	7.75e4	10.0486	0.856	1.217	NO	1.017	1.018	33.98	34.00	100.85	50.7		0.871
22	22 13C-1,2,3,7,8,9-Hx...	3.37e4	7.75e4	10.0486	0.807	1.338	NO	1.026	1.026	34.28	34.29	107.42	54.0		0.924
23	23 13C-1,2,3,4,6,7,8-H...	2.96e4	7.75e4	10.0486	0.654	1.073	NO	1.131	1.131	37.78	37.78	116.17	58.4		1.45
24	24 13C-OCDD	4.66e4	7.75e4	10.0486	0.580	0.917	NO	1.228	1.228	41.03	41.04	206.62	51.9		0.837
25	25 13C-2,3,7,8-TCDF	8.18e4	1.27e5	10.0486	1.035	0.800	NO	0.992	0.991	25.20	25.19	124.27	62.4		0.513
26	26 13C-1,2,3,7,8-PeCDF	5.05e4	1.27e5	10.0486	0.854	1.547	NO	1.156	1.156	29.37	29.38	92.937	46.7		0.651
27	27 13C-2,3,4,7,8-PeCDF	4.15e4	1.27e5	10.0486	0.847	1.531	NO	1.192	1.192	30.28	30.29	77.033	38.7		0.656
28	28 13C-1,2,3,4,7,8-Hx...	4.30e4	7.75e4	10.0486	0.832	0.513	NO	0.987	0.988	32.98	33.00	132.91	66.8		1.42
29	29 13C-1,2,3,6,7,8-Hx...	4.95e4	7.75e4	10.0486	1.034	0.517	NO	0.991	0.992	33.10	33.12	123.01	61.8		1.14
30	30 13C-2,3,4,6,7,8-Hx...	4.29e4	7.75e4	10.0486	0.953	0.538	NO	1.009	1.010	33.71	33.73	115.73	58.1		1.24
31	31 13C-1,2,3,7,8,9-Hx...	3.87e4	7.75e4	10.0486	0.828	0.491	NO	1.038	1.038	34.67	34.68	120.24	60.4		1.42

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-6B.qld

Last Altered: Friday, January 31, 2020 11:56:24 Pacific Standard Time

Printed: Friday, January 31, 2020 11:57:14 Pacific Standard Time

Name: VG7 200116D2-6, Date: 17-JAN-2020, Time: 03:33:14, ID: 1904159-08 PDI-018SC-A-07-08-190926,  
 Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	3.66e4	7.75e4	10.0486	0.757	0.428	NO	1.093	1.093	36.50	36.50	124.22	62.4		1.16
33	33 13C-1,2,3,4,7,8,9-H...	2.71e4	7.75e4	10.0486	0.581	0.390	NO	1.147	1.147	38.31	38.31	119.80	60.2		1.52
34	34 13C-OCDF	6.19e4	7.75e4	10.0486	0.689	0.910	NO	1.235	1.235	41.25	41.24	230.63	57.9		0.960
35	35 37Cl-2,3,7,8-TCDD	3.11e4	8.50e4	10.0486	1.198			1.024	1.023	26.01	26.00	60.832	76.4		0.188
36	36 13C-1,2,3,4-TCDD	8.50e4	8.50e4	10.0486	1.000	0.791	NO	1.000	1.000	25.39	25.41	199.03	100.0		0.712
37	37 13C-1,2,3,4-TCDF	1.27e5	1.27e5	10.0486	1.000	0.843	NO	1.000	1.000	23.93	23.95	199.03	100.0		0.530
38	38 13C-1,2,3,4,6,9-Hx...	7.75e4	7.75e4	10.0486	1.000	0.500	NO	1.000	1.000	33.37	33.40	199.03	100.0		1.18
39	39 Total Tetra-Dioxins		4.58e4	10.0486	0.901			0.000		25.50		0.78542		0.785	0.227
40	40 Total Penta-Dioxins		2.73e4	10.0486	0.872			0.000		30.00		7.9993		13.7	0.831
41	41 Total Hexa-Dioxins		0.00e0	10.0486	0.976			0.000		33.80		53.786		53.8	0.922
42	42 Total Hepta-Dioxins		2.96e4	10.0486	0.989			0.000		37.75		253.53		254	2.11
43	43 Total Tetra-Furans		8.18e4	10.0486	0.943			0.000		24.00		24.608		34.5	0.555
44	44 1st Func. Penta-Fur...		0.00e0	10.0486	0.940			0.000		27.63		78.821		78.8	0.272
45	45 Total Penta-Furans		0.00e0	10.0486	0.940			0.000		30.00		49.052		53.2	0.590
46	46 Total Hexa-Furans		0.00e0	10.0486	1.078			0.000		33.00		244.85		245	1.23
47	47 Total Hepta-Furans		0.00e0	10.0486	1.135			0.000		37.75		532.62		533	1.54



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-6B.qld

Last Altered: Friday, January 31, 2020 11:56:24 Pacific Standard Time

Printed: Friday, January 31, 2020 11:57:14 Pacific Standard Time

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Calibration: 28 Jan 2020 10:22:20

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Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	NO	22.55	71.421	19472.441	7.110	MM	0.7854	0.79

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	40 Total Penta-Dioxins	NO	28.53	283.781	10298.650	53.229	MM	6.0733	6.07
2	40 Total Penta-Dioxins	YES	29.40	241.442	10298.650	0.000	MM	0.0000	3.21
3	40 Total Penta-Dioxins	YES	29.87	83.769	10298.650	0.000	MM	0.0000	1.48
4	40 Total Penta-Dioxins	NO	29.59	49.298	10298.650	9.874	MM	1.1266	1.13
5	40 Total Penta-Dioxins	YES	29.68	48.262	10298.650	0.000	MM	0.0000	1.04
6	40 Total Penta-Dioxins	NO	28.94	33.889	10298.650	7.006	MM	0.7994	0.80

**Hexa-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	41 Total Hexa-Dioxins	NO	32.36	1358.149	18328.376	150.808	MM	15.3785	15.38
2	41 Total Hexa-Dioxins	NO	32.94	212.419	18328.376	23.628	MM	2.4094	2.41
3	41 Total Hexa-Dioxins	NO	33.21	2410.645	18328.376	264.481	bb	26.9701	26.97
4	4 1,2,3,6,7,8-HxCDD	NO	34.01	552.641	18434.049	62.592	MM	6.6364	6.64
5	5 1,2,3,7,8,9-HxCDD	NO	34.29	204.464	19298.465	23.107	MM	2.3921	2.39

**Hepta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	42 Total Hepta-Dioxins	NO	36.91	10551.274	15302.184	1402.625	bb	141.1791	141.18
2	6 1,2,3,4,6,7,8-HpCDD	NO	37.79	8262.191	15302.184	1105.764	bb	112.3558	112.36

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-6B.qld

Last Altered: Friday, January 31, 2020 11:56:24 Pacific Standard Time

Printed: Friday, January 31, 2020 11:57:14 Pacific Standard Time

Name: VG7 200116D2-6, Date: 17-JAN-2020, Time: 03:33:14, ID: 1904159-08 PDI-018SC-A-07-08-190926,  
 Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	NO	21.58	706.126	36369.426	0.000	MM	0.0000	4.19
2	43 Total Tetra-Furans	YES	22.52	691.507	36369.426	0.000	bb	0.0000	3.25
3	43 Total Tetra-Furans	NO	22.94	1095.141	36369.426	57.219	bb	6.0397	6.04
4	43 Total Tetra-Furans	NO	23.87	714.687	36369.426	39.669	bd	4.1873	4.19
5	43 Total Tetra-Furans	NO	24.41	868.919	36369.426	46.253	MM	4.8822	4.88
6	43 Total Tetra-Furans	NO	26.08	96.595	36369.426	5.158	bb	0.5445	0.54
7	43 Total Tetra-Furans	NO	26.58	596.466	36369.426	34.137	MM	3.6033	3.60
8	43 Total Tetra-Furans	NO	26.72	756.724	36369.426	40.519	MM	4.2769	4.28
9	43 Total Tetra-Furans	NO	27.03	192.284	36369.426	10.173	bb	1.0738	1.07
10	43 Total Tetra-Furans	YES	21.63	159.461	36369.426	0.000	MM	0.0000	0.95
11	43 Total Tetra-Furans	YES	21.54	254.274	36369.426	0.000	MM	0.0000	1.51

**Penta-Furans function 1**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.01	10182.712	27899.607	744.199	bb	78.8205	78.82

**Penta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	45 Total Penta-Furans	NO	28.47	3428.330	27899.607	238.977	MM	25.3108	25.31
2	45 Total Penta-Furans	NO	29.00	1662.587	27899.607	114.530	bb	12.1302	12.13
3	45 Total Penta-Furans	NO	29.62	1185.567	27899.607	82.357	bb	8.7227	8.72
4	45 Total Penta-Furans	YES	28.36	269.930	27899.607	0.000	MM	0.0000	1.64
5	45 Total Penta-Furans	YES	30.34	426.165	27899.607	0.000	MM	0.0000	2.48
6	10 2,3,4,7,8-PeCDF	NO	30.32	379.588	25117.146	29.448	MM	2.8878	2.89

Vista Analytical Laboratory

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Printed: Friday, January 31, 2020 11:57:14 Pacific Standard Time

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 Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	46 Total Hexa-Furans	NO	31.84	5895.315	14810.247	494.607	bd	45.6768	45.68
2	46 Total Hexa-Furans	NO	31.99	11363.895	14810.247	950.007	MM	87.7329	87.73
3	46 Total Hexa-Furans	NO	32.54	11313.089	14810.247	956.923	bb	88.3716	88.37
4	11 1,2,3,4,7,8-HxCDF	NO	33.01	842.630	14582.520	70.530	dd	5.9643	5.96
5	12 1,2,3,6,7,8-HxCDF	NO	33.12	1231.335	16881.236	85.612	db	7.9706	7.97
6	13 2,3,4,6,7,8-HxCDF	NO	33.74	1234.977	15025.498	102.182	bb	9.1314	9.13

Hepta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	15 1,2,3,4,6,7,8-HpCDF	NO	36.52	33722.793	10981.754	3627.547	bb	320.1482	320.15
2	47 Total Hepta-Furans	NO	37.13	18813.334	9295.565	2394.292	bb	209.9855	209.99
3	16 1,2,3,4,7,8,9-HpCDF	NO	38.33	213.152	7609.375	31.918	MM	2.4817	2.48

Vista Analytical Laboratory

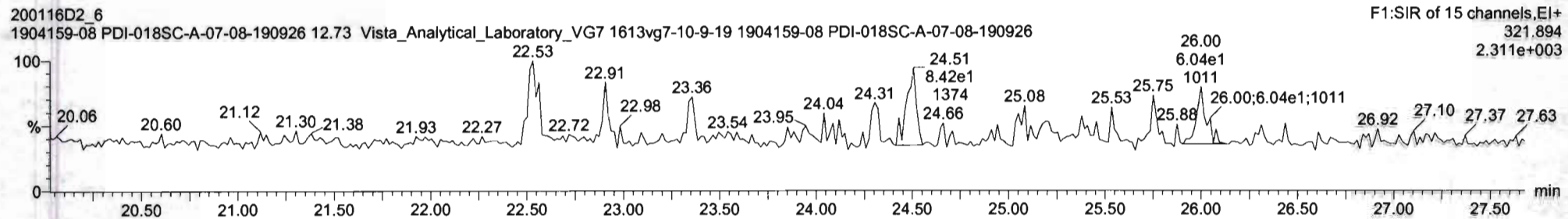
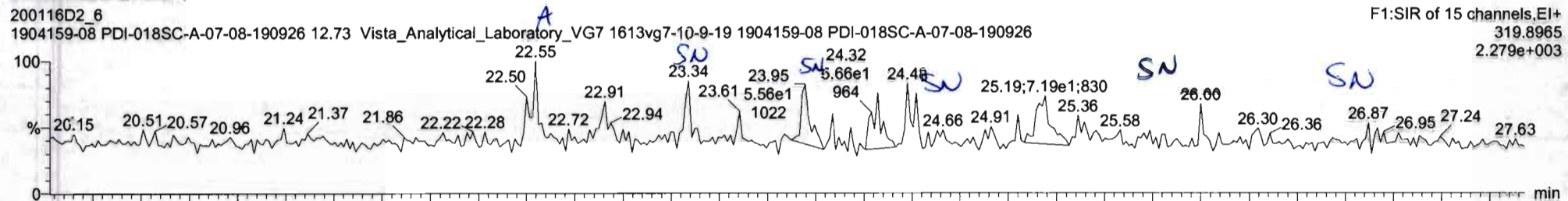
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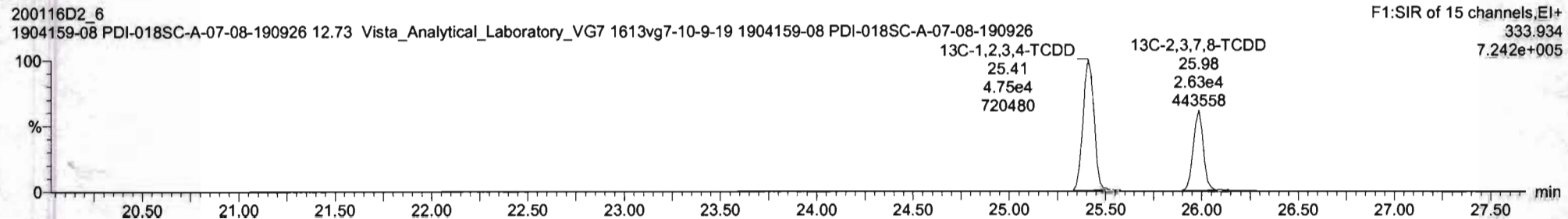
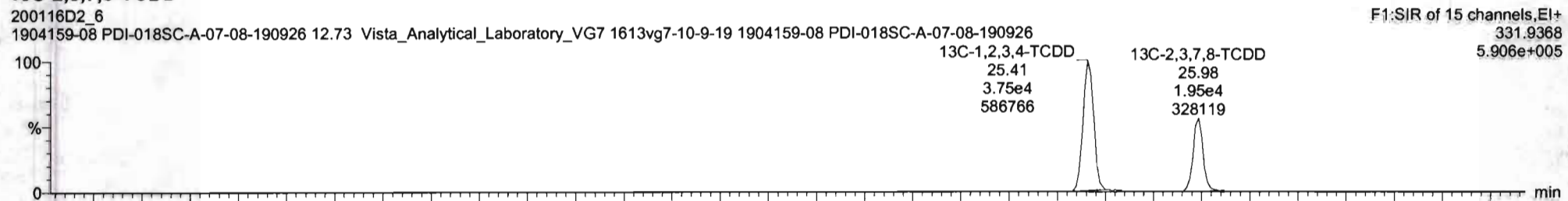
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Name: VG7 200116D2-6, Date: 17-JAN-2020, Time: 03:33:14, ID: 1904159-08 PDI-018SC-A-07-08-190926, Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Tetra-Dioxins

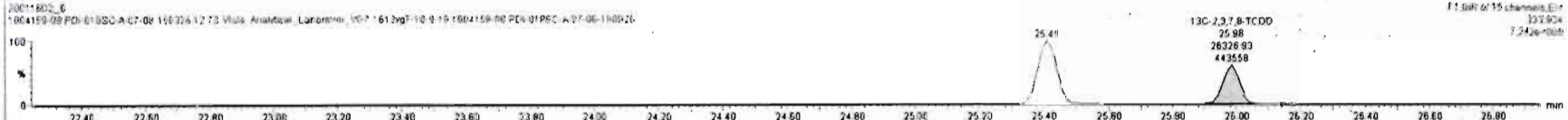
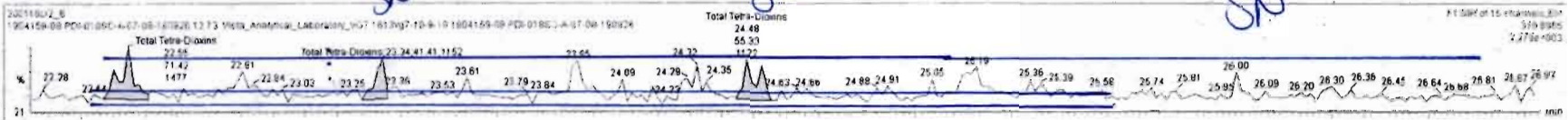


13C-2,3,7,8-TCDD



#	Name	Resp	IS Resp	Elf	RA	nly	RRF	wtAval	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	D	ElbC
39	Total Tetra-Dioxins		4.58e4				0.901	10.049	25.50			0.000	NO	1.427		0.227	1.730
40	Total Penta-Dioxins		2.73e4				0.872	10.049	30.00			0.000	NO	6.197		0.831	12.17
41	Total Hexa-Dioxins		0.00e0				0.976	10.049	33.80			0.000	NO	54.30		0.922	54.30

#	Name	Pred RT	RT	wt Resp	n2 Resp	Pred RA	RA	nly	ElbC	Conc
1	Total Tetra-Dioxins	25.50	22.55	7.142e1	9.140e1	0.770	0.78	NO	0.78542	0.78542
2	Total Tetra-Dioxins	25.50	23.34	4.141e1	3.550e1	0.770	1.17	YES	0.30307	0.00000
3	Total Tetra-Dioxins	25.50	24.48	5.533e1	7.770e1	0.770	0.71	NO	0.64172	0.64172



Vista Analytical Laboratory

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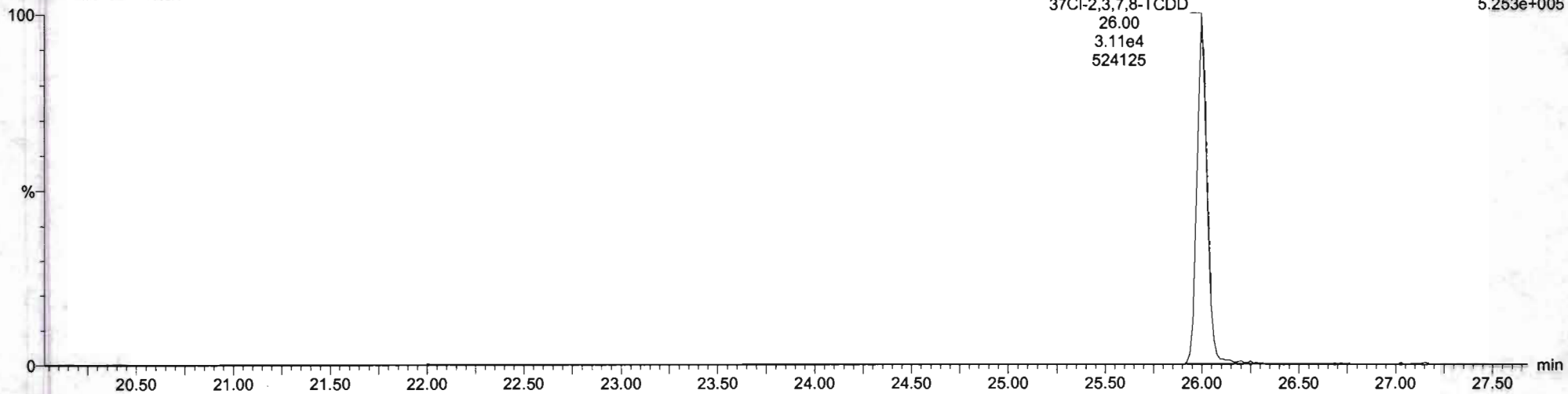
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37Cl-2,3,7,8-TCDD

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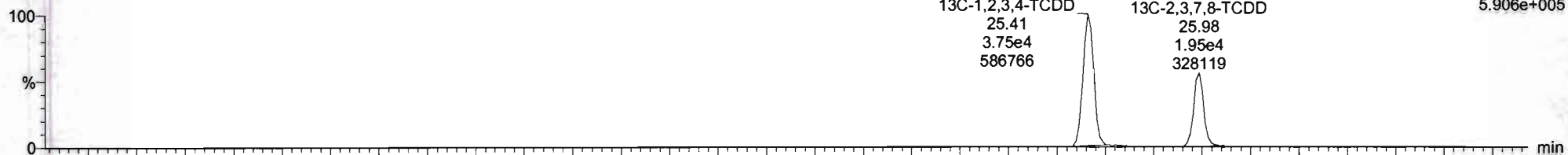
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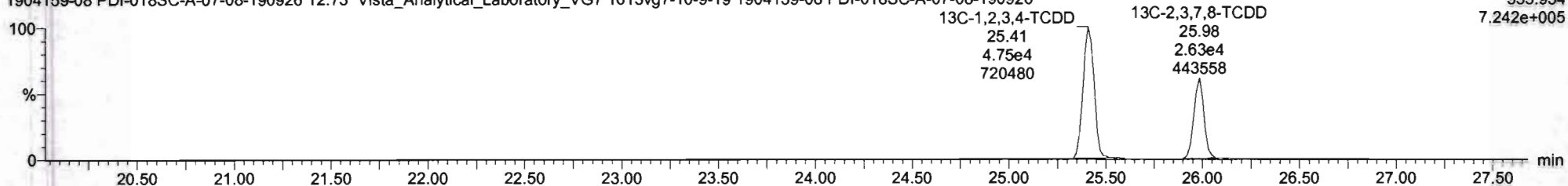
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F1:SIR of 15 channels,EI+  
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5.906e+005



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F1:SIR of 15 channels,EI+  
333.934  
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Vista Analytical Laboratory

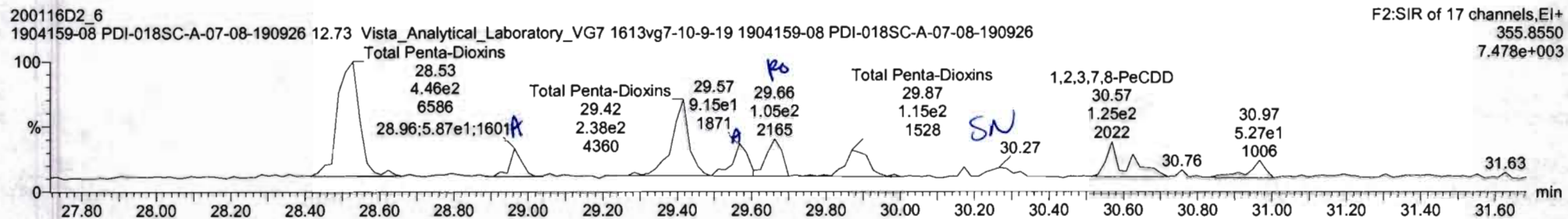
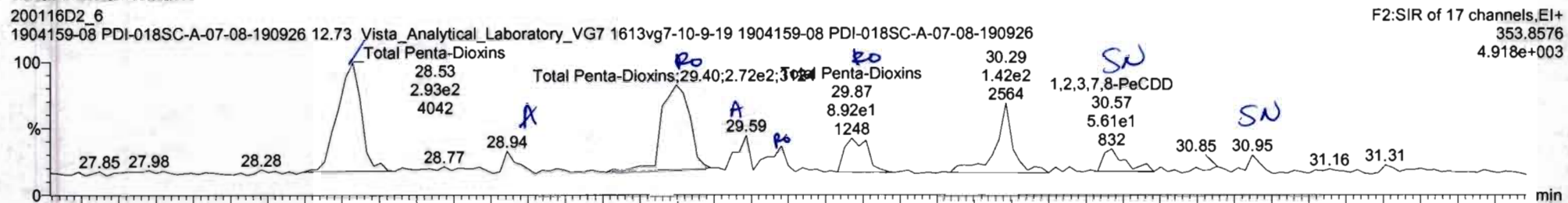
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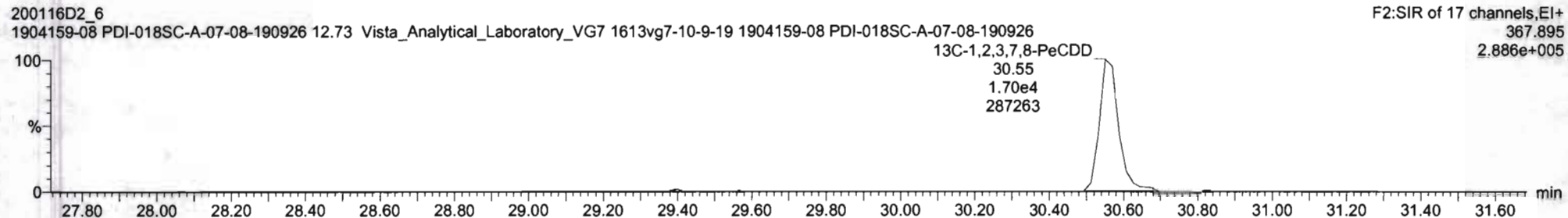
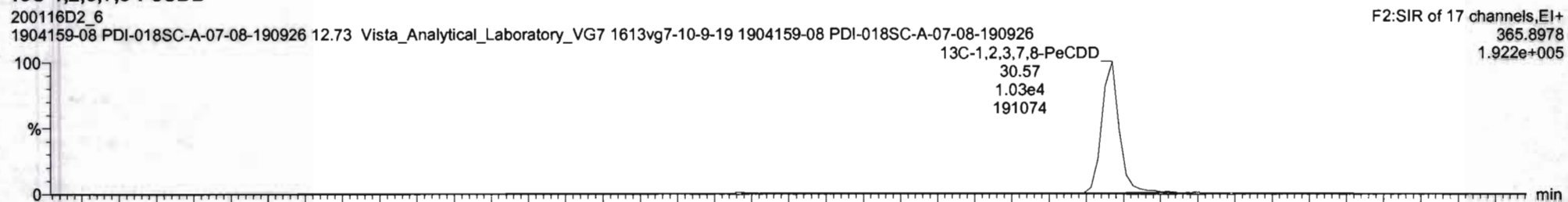
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Total Penta-Dioxins



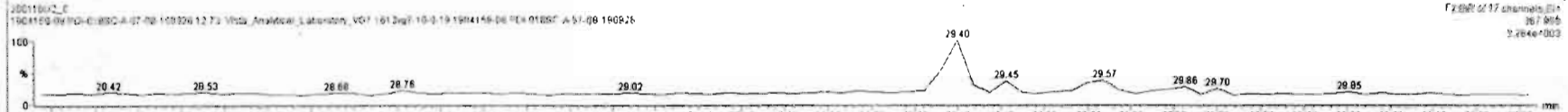
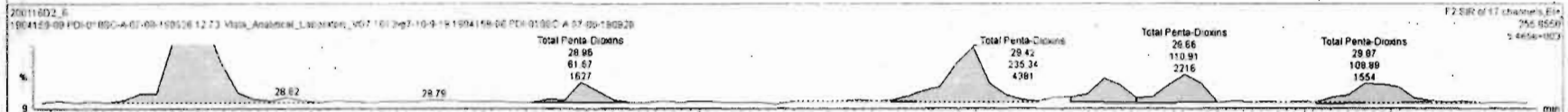
13C-1,2,3,7,8-PeCDD



20011602\_6 1904159-09 PDI-0180C-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_V07 161 Jug 7-10-9-19 1904159-09 PDI-0180C-A-07-08-190926

#	Name	Resp	IS Resp	IS	RA	rv	RRF	relAve	Prod RT	RT	RRT	Prod RRT	Check RRT	Conc	%Rec	IS	EMPC
39	39	Total Tetra-Dioxins	4.58e4				0.901	10.049	25.51			0.000	NO	0.7854	0.227	0.7854	
40	40	Total Penta-Dioxins	2.73e4				0.872	10.049	30.00			0.000	NO	7.800	0.831	14.91	
41	41	Total Hexa-Dioxins	0.00e0				0.976	10.049	33.80			0.000	NO	54.30	0.922	54.30	

#	Name	Prod RT	RT	m1 Resp	m2 Resp	Prod RA	RA	rv	EMPC	Conc
1	40 Total Penta-Dioxins	30.00	28.53	2.839e2	4.423e2	0.630	0.64	NO	6.0733	6.0733
2	40 Total Penta-Dioxins	30.00	28.94	3.309e1	6.107e1	0.630	0.55	NO	0.79937	0.79937
3	40 Total Penta-Dioxins	30.00	29.40	2.414e2	2.355e2	0.630	1.03	YES	1.3068	0.00000
4	40 Total Penta-Dioxins	30.00	29.58	4.637e1	8.539e1	0.630	0.58	NO	1.1266	1.1266
5	40 Total Penta-Dioxins	30.00	29.88	4.836e1	1.109e2	0.630	0.44	YES	1.0445	0.00000
6	40 Total Penta-Dioxins	30.00	29.87	8.377e1	1.089e2	0.630	0.77	YES	1.4847	0.00000
7	2,1,2,7,8-PeCDD	30.50	30.57	5.612e1	1.246e2	0.630	0.45	YES	1.1735	0.00000

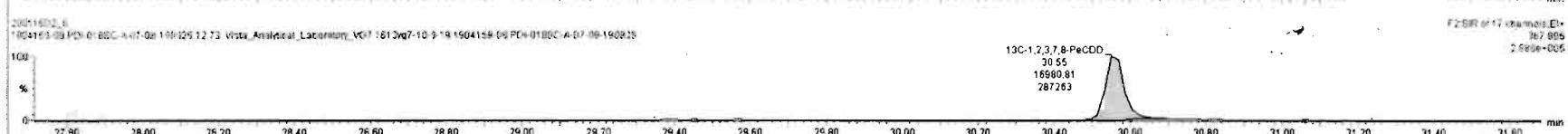
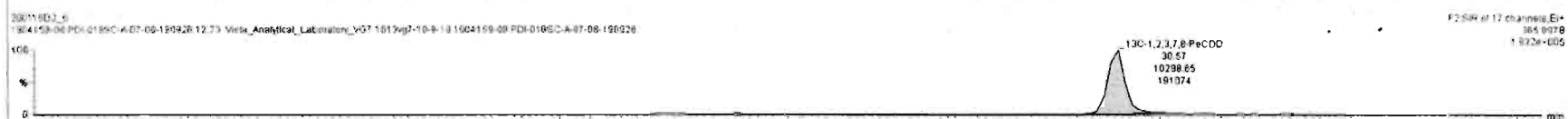
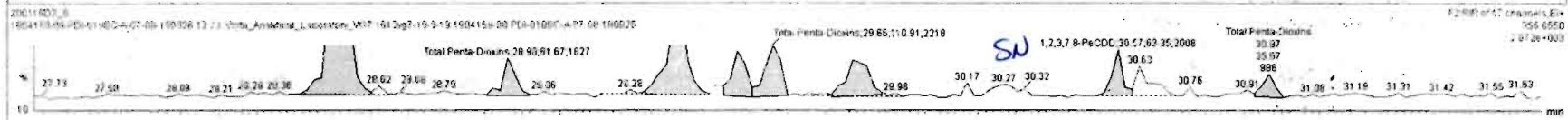
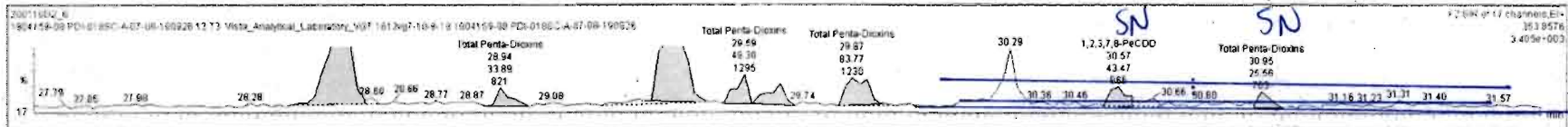




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#	Name	Resp	IS Resp	RI	RA	nly	RRF	wt.Avg	Pred RT	RT	RRT	Pred RRT1	Check RRT	Conc.	%Rec.	Dr.	EMPC
39	Total Tetra-Dioxins	4.78e4					0.901	10.049	25.50			0.000	NO	0.7954	3.227	0.7854	
40	Total Penta-Dioxins	2.73e4					0.872	10.049	30.00			0.000	NO	8.863	0.831	15.11	
41	Total Hexa-Dioxins	0.00e0					0.976	10.049	33.80			0.000	NO	54.30	0.922	54.30	

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc.
1	Total Penta-Dioxins	30.00	28.53	2.838e2	4.423e2	0.630	0.64	NO	6.0733	6.0733
2	Total Penta-Dioxins	30.00	28.94	3.369e1	5.167e1	0.630	0.65	NO	0.79937	0.79937
3	Total Penta-Dioxins	30.00	28.40	2.444e2	2.353e2	0.630	1.03	YES	3.2098	1.00000
4	Total Penta-Dioxins	30.00	28.59	4.830e1	6.538e1	0.630	0.58	NO	1.1268	1.1268
5	Total Penta-Dioxins	30.00	28.60	4.826e1	1.109e2	0.630	0.44	YES	1.9445	0.00000
6	Total Penta-Dioxins	30.00	28.87	8.777e1	1.089e2	0.630	0.77	YES	1.4847	0.00000
7	1,2,3,7,8-PeCDD	30.50	30.57	4.347e1	6.325e1	0.630	0.69	NO	0.86334	0.86334
8	Total Penta-Dioxins	30.00	30.95	2.556e1	3.567e1	0.630	0.72	NO	0.51220	0.00000



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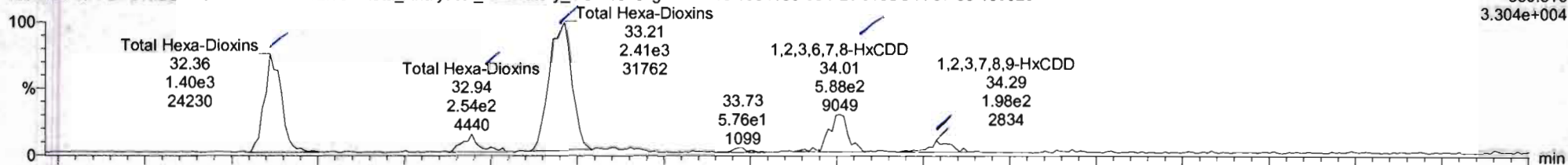
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Total Hexa-Dioxins

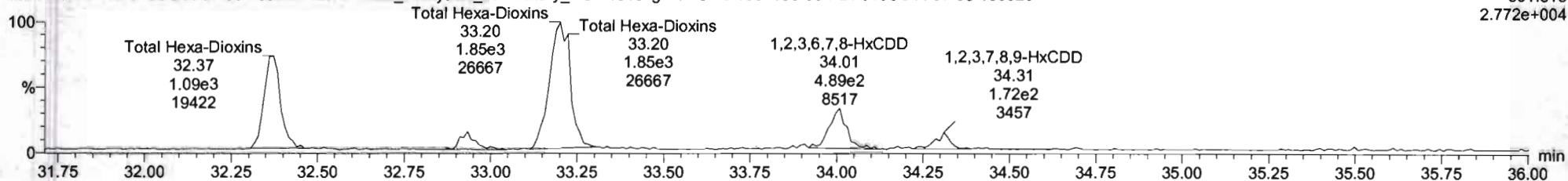
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F3:SIR of 11 channels,EI+  
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3.304e+004



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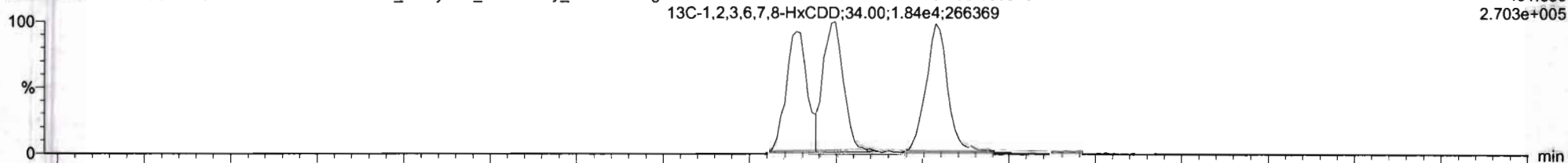
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13C-1,2,3,4,7,8-HxCDD

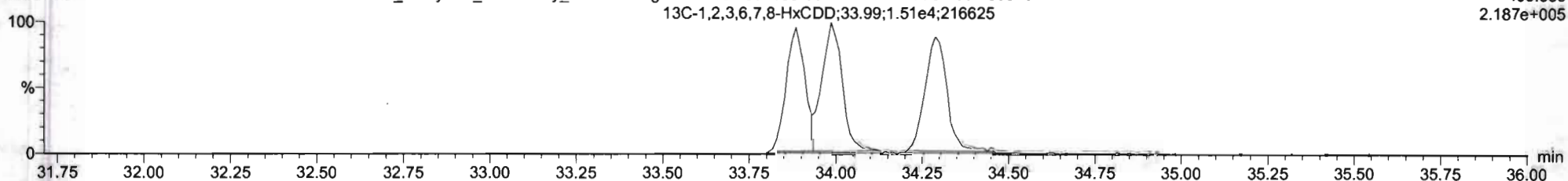
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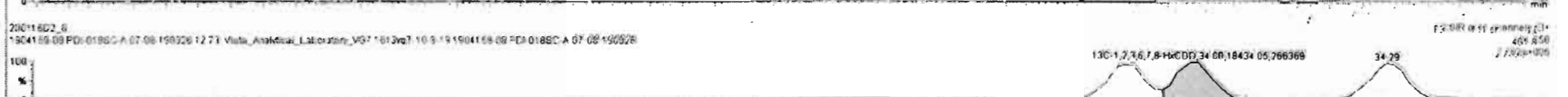
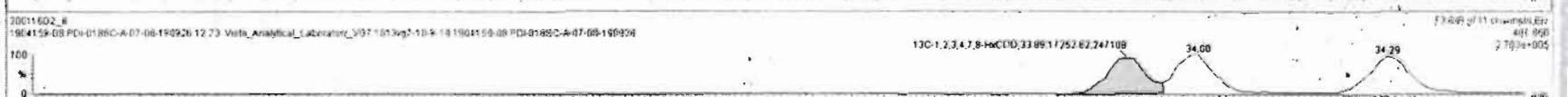
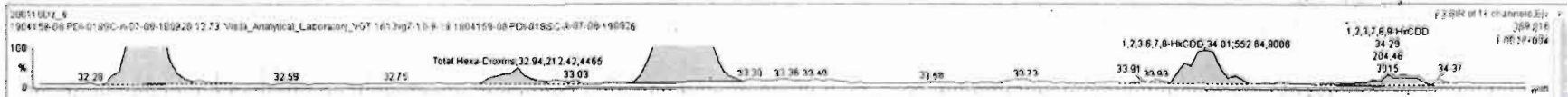
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F3:SIR of 11 channels,EI+  
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2.187e+005



#	Name	Resp	IS Resp	CF	RA	rvy	RRF	wtAvd	Pred RT	RT	RRT	Pred RRT	Check RRT	CPIC	%Pac	IS	EMPC
39	39	Total Tetra-Dioxins	4.58e4				0.901	10.049	25.50			0.000	NO	0.7854		0.227	0.7854
40	40	Total Penta-Dioxins	2.73e4				0.872	10.049	30.00			0.000	NO	7.999		0.621	13.74
41	41	Total Hexa-Dioxins	0.00e0				0.876	10.048	33.80			0.000	NO	53.75		0.922	53.78

#	Name	Pred RT	RT	int Resp	m2 Resp	Pred RA	RA	rvy	EMPC	Conc
1	41 Total Hexa-Dioxins	33.80	32.36	1.358e3	1.091e3	1.240	1.24	NO	15.378	15.378
2	41 Total Hexa-Dioxins	33.80	32.94	2.124e2	1.713e2	1.240	1.24	NO	2.4094	2.4094
3	41 Total Hexa-Dioxins	33.80	33.21	2.411e3	1.895e3	1.240	1.26	NO	26.970	26.970
4	4 1,2,3,6,7,8-HxCDD	34.00	34.01	5.526e2	4.983e2	1.240	1.11	NO	6.6364	6.6364
5	5 1,2,3,7,8,9-HxCDD	34.32	34.29	2.045e2	1.853e2	1.240	1.10	NO	2.3921	2.3921



Vista Analytical Laboratory

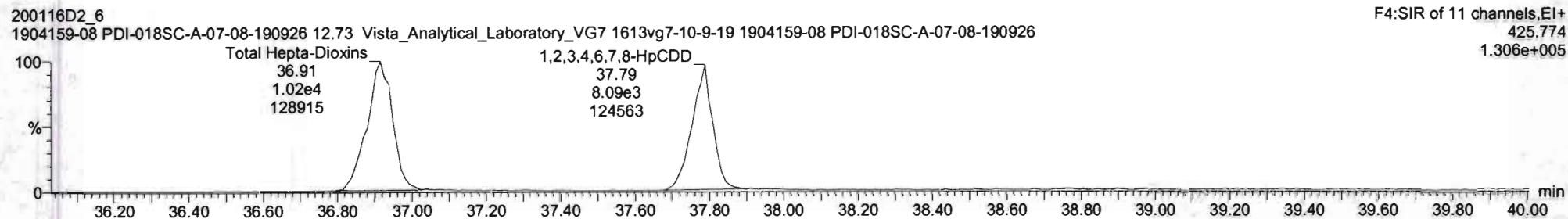
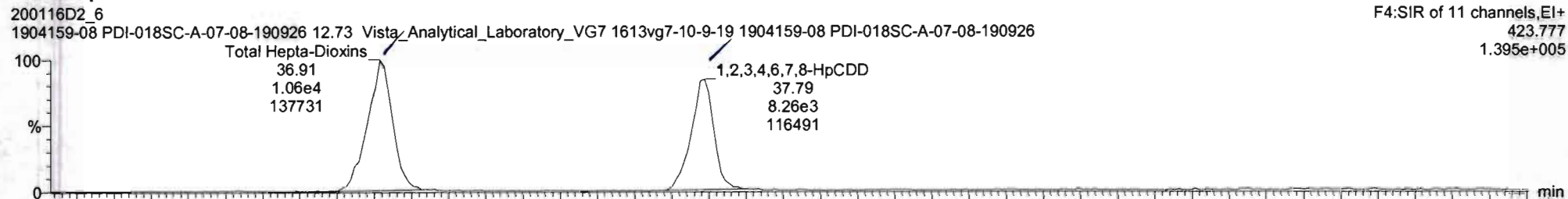
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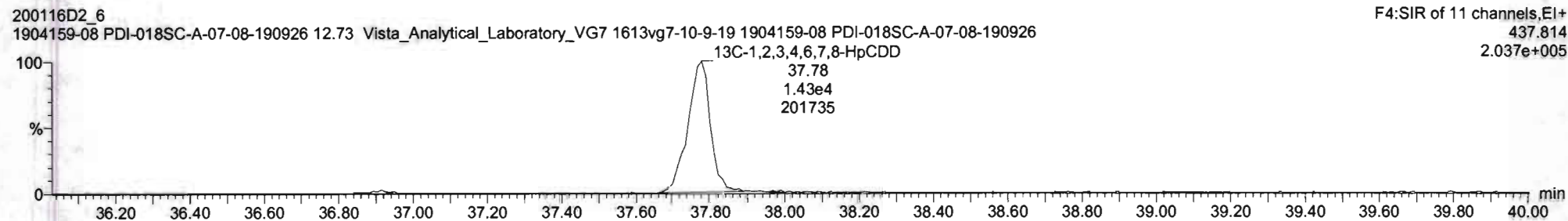
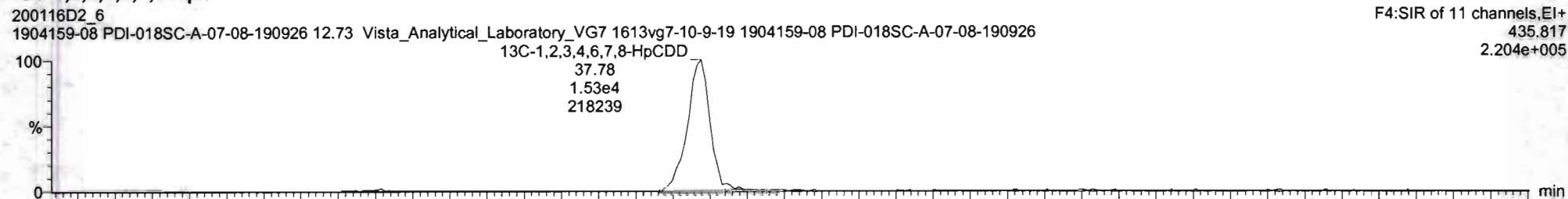
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Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Hepta-Dioxins



13C-1,2,3,4,6,7,8-HpCDD



Vista Analytical Laboratory

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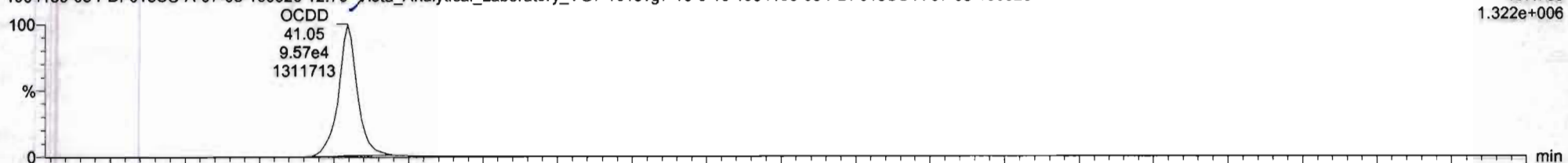
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Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

OCDD

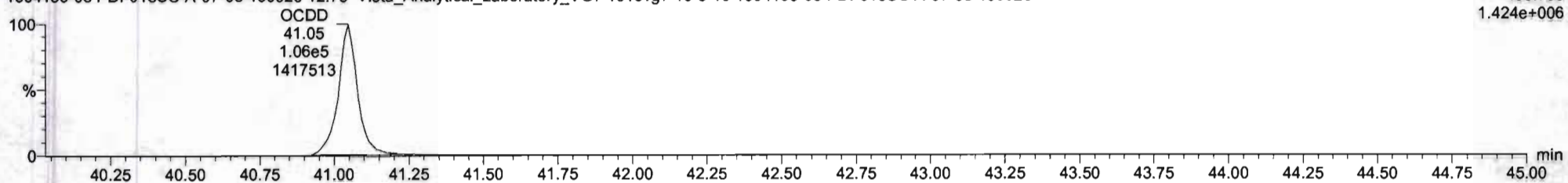
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F5:SIR of 11 channels, EI+  
457.738  
1.322e+006



200116D2\_6  
1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-08 PDI-018SC-A-07-08-190926

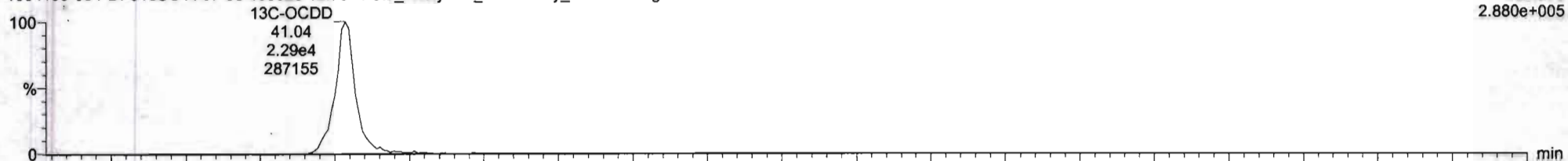
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13C-OCDD

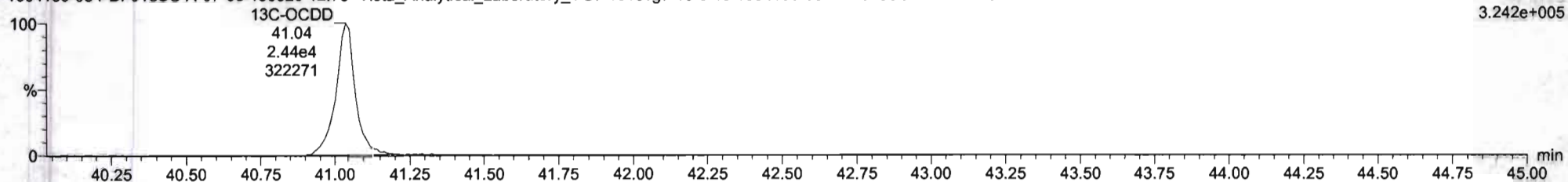
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F5:SIR of 11 channels, EI+  
469.778  
2.880e+005



200116D2\_6  
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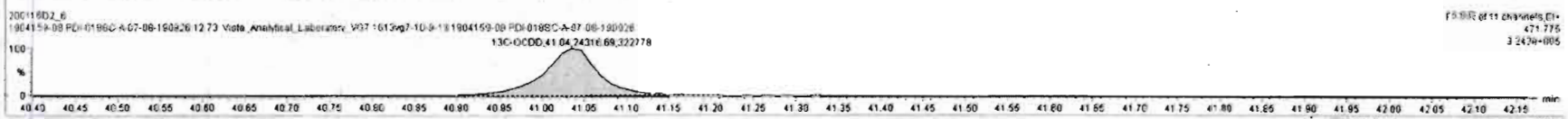
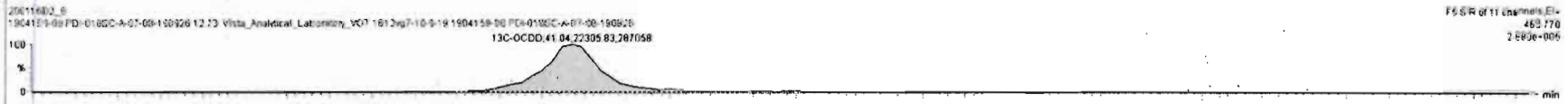
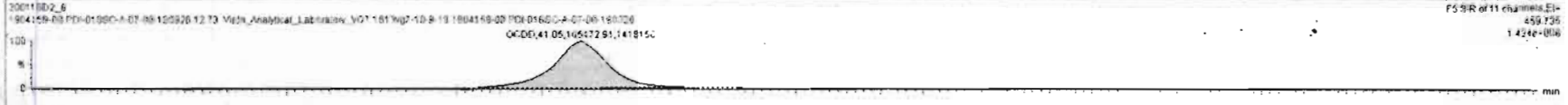
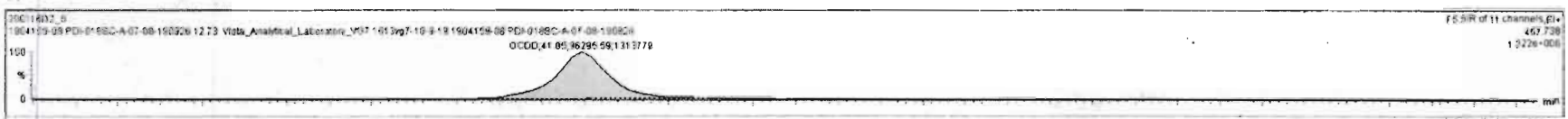
F5:SIR of 11 channels, EI+  
471.775  
3.242e+005



Target.yms.XS - 20011602-4 - [Chromatogram]  
 File Edit View Display Processing Window Help

#	Name	Req	IS Resp	Elr	RA	rvy	RFV	Method	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	Mfnc	DL	EMPC
7	OCDD	2.02e5	4.80e4	24	0.81	NO	0.959	10.049	41.04	41.05	1.000	1.000	NO	1.797		1.87	1.787
8	2,3,7,8-TCDF	2.42e2	8.18e4	25	0.76	NO	0.956	10.049	25.22	25.21	1.001	1.001	NO	0.6194		0.551	0.6194
9	1,2,3,7,8-PeCDF	1.98e3	5.11e4	26	1.30	YES	0.960	10.049	29.40	29.40	1.001	1.001	NO	0.8019		0.536	0.7446
10	1,2,3,4,7,8-PeCDF	1.30e3	4.15e4	27	2.05	YES	1.015	10.049	30.32	30.34	1.002	1.001	NO	6.426		0.583	5.375
11	1,2,3,4,7,8-HxCDF	1.52e3	4.30e4	28	1.25	NO	1.177	10.049	33.00	33.01	1.000	1.000	NO	5.964		0.969	5.964
12	1,2,3,6,7,8-HxCDF	2.12e3	4.95e4	29	1.39	NO	1.069	10.049	33.13	33.12	1.000	1.000	NO	7.971		1.07	7.971
13	2,3,4,6,7,8-HxCDF	2.19e3	4.29e4	30	1.29	NO	1.114	10.049	33.76	33.74	1.000	1.001	NO	8.131		1.13	8.131
14	1,2,3,7,8,9-HxCDF	2.95e2	3.87e4	31	1.18	NO	1.062	10.049	34.68	34.75	1.002	1.000	NO	1.428		1.73	1.428

#	Name	Pred RT	RT	Inf Resp	Inf2 Resp	Pred RA	RA	rvy	EMPC	Conc.
1										



Custom Reporting: Select reports to generate

Vista Analytical Laboratory

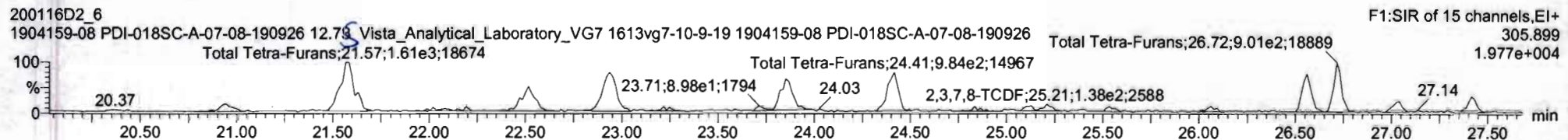
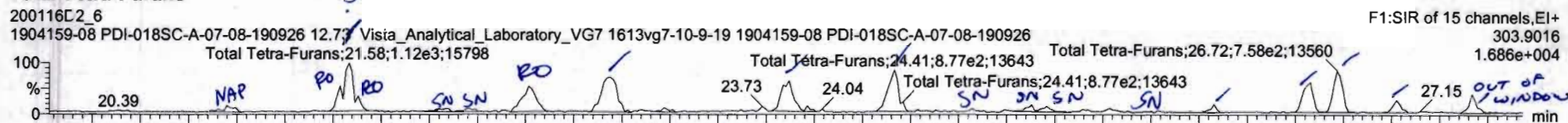
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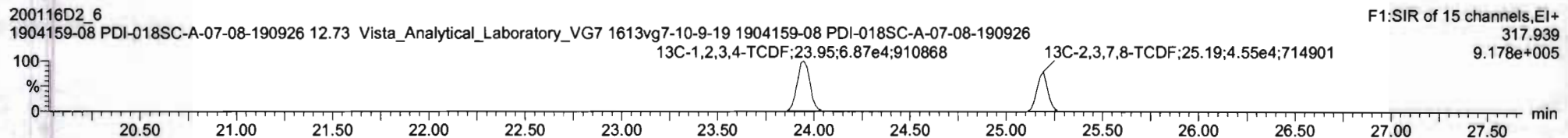
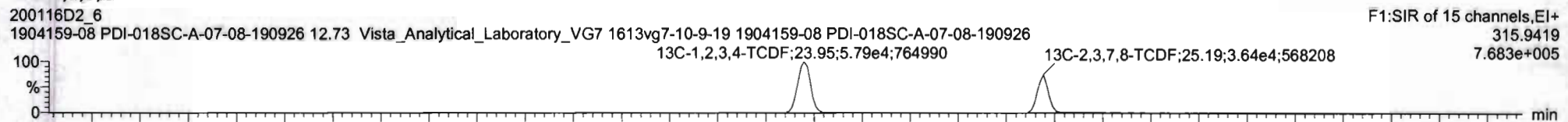
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Name: VG7 200116D2-6, Date: 17-JAN-2020, Time: 03:33:14, ID: 1904159-08 PDI-018SC-A-07-08-190926, Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

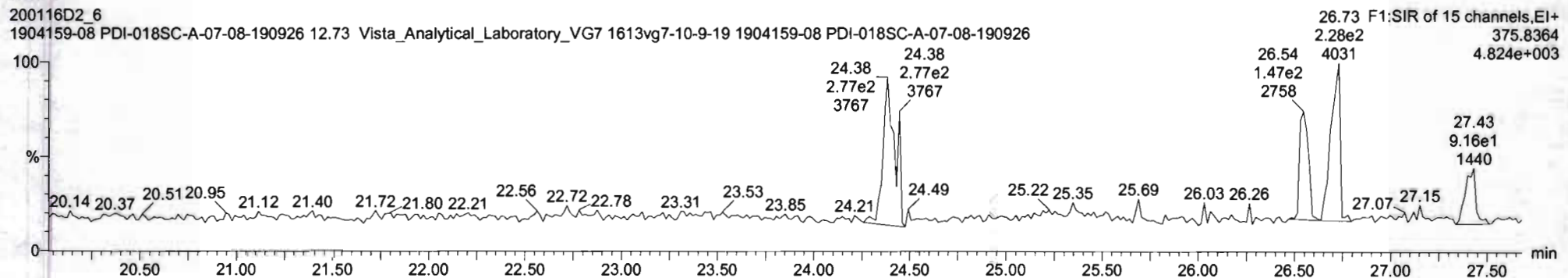
Total Tetra-Furans

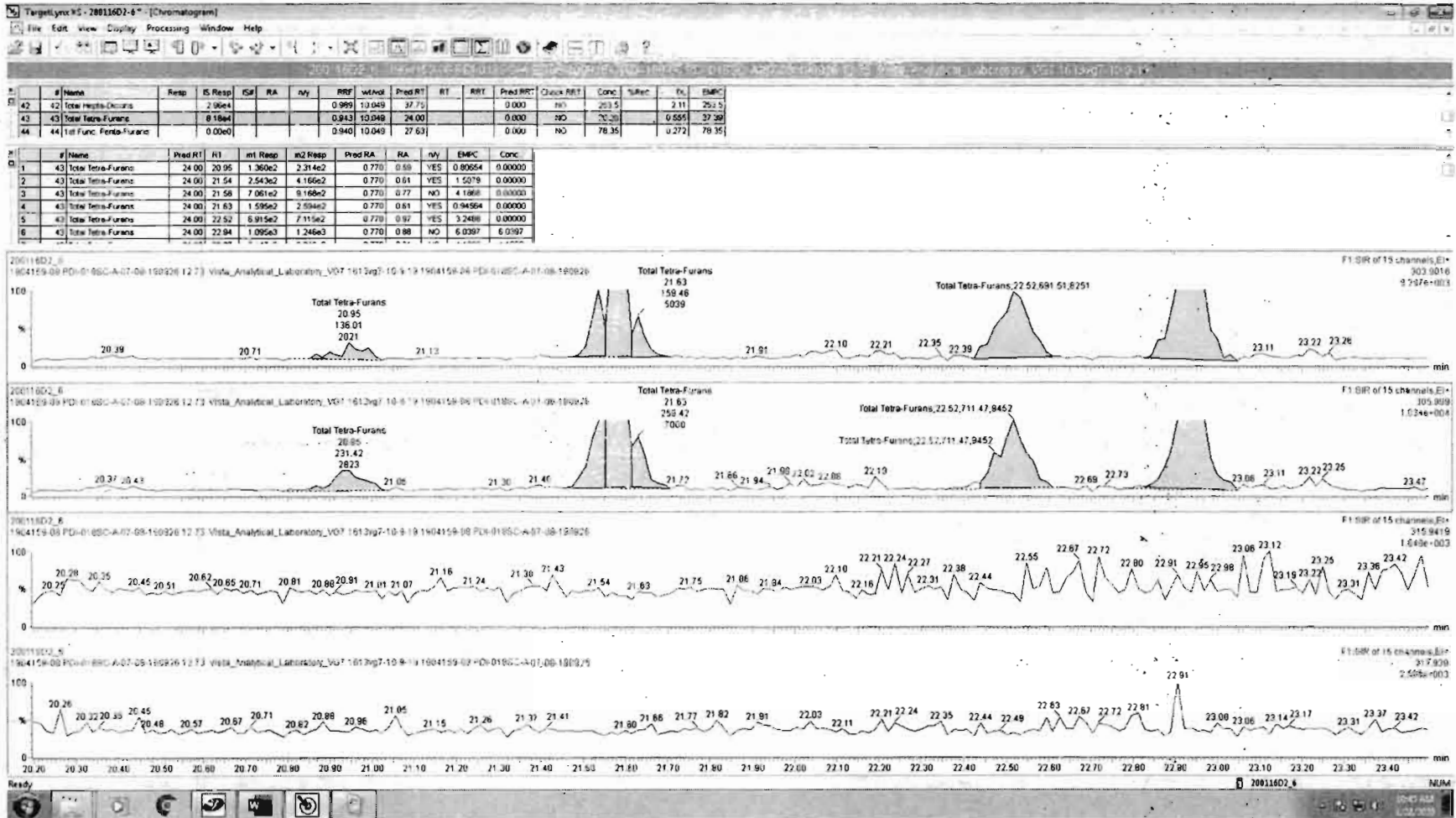


13C-2,3,7,8-TCDF



DPE1



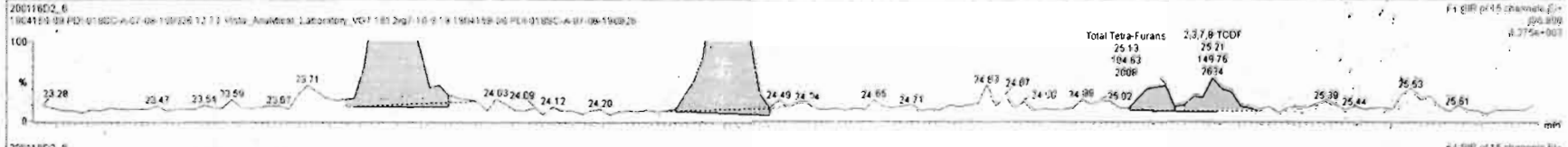
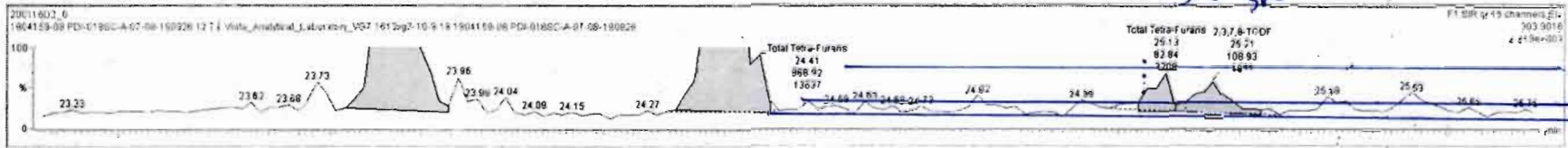




#	Name	Resp	S Resp	CF	RA	n/y	RRF	wtVol	Pred RT	RT	RR1	Pred RRT	Check PR1	Conc	u/fac	EL	EMPC
42	Total Tetra-Furans	7.96E4					0.989	10.049	27.75			0.000	NO	253.5		2.11	253.5
43	Total Tetra-Furans	8.18E4					0.943	10.049	24.00			0.000	NO	27.75		0.555	37.07
44	1st Func. Tetra-Furans	0.00E0					0.940	10.049	27.63			0.000	NO	76.35		0.272	76.35

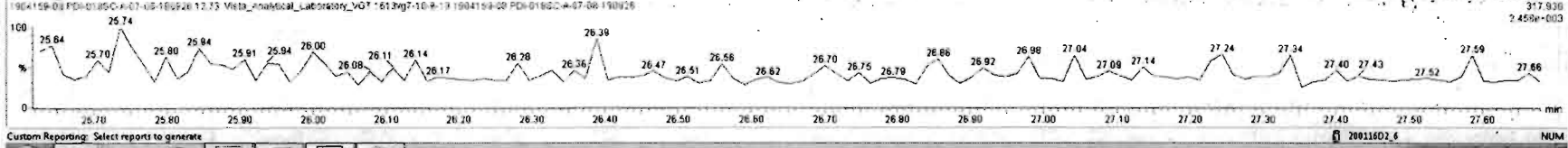
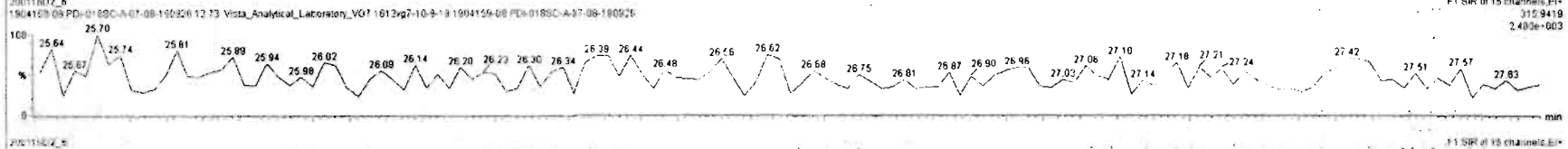
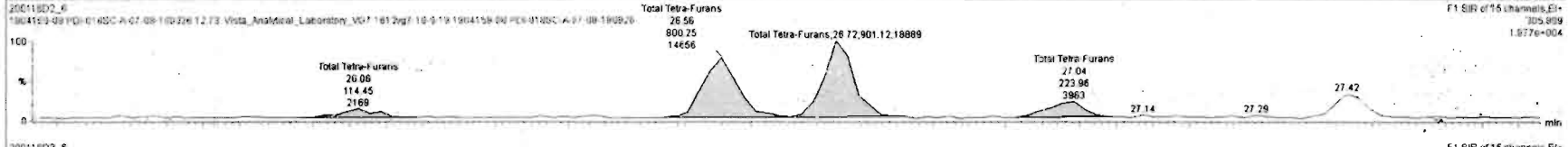
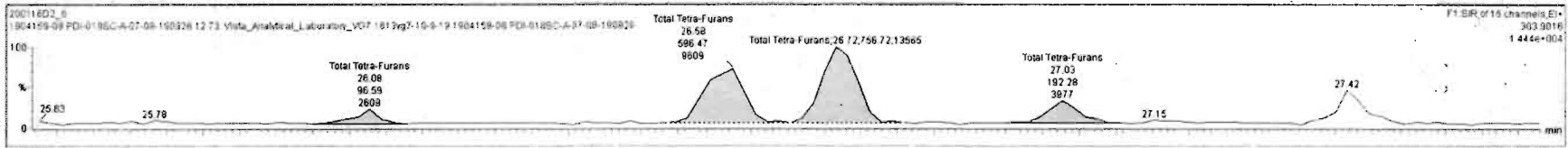
#	Name	Pred RT	RT	Int Resp	w2 Resp	Pred RA	RA	n/y	EMPC	Conc
4	Total Tetra-Furans	24.00	22.52	6.915e3	7.115e2	0.770	0.97	YES	3.2488	0.00000
5	Total Tetra-Furans	24.00	22.94	1.095e3	1.246e3	0.770	0.88	NO	6.0397	0.0397
6	Total Tetra-Furans	24.00	23.87	7.147e2	9.084e2	0.770	0.79	NO	4.1873	4.1873
7	Total Tetra-Furans	24.00	24.41	8.698e2	1.024e3	0.770	0.85	NO	4.6822	4.6822
8	Total Tetra-Furans	24.00	25.13	6.284e1	1.046e2	0.770	0.79	NO	3.4936	0.49364
9	13C-2,3,7,8-TCDF	25.21	25.21	1.099e2	1.496e2	0.770	0.73	NO	0.66223	0.66223



#	Name	Resp	S Resp	Cal	RA	rvy	RRF	wtAnal	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc.	%Inj	DL	EMPC
42	Total Tetra-Furans	2.9e4					0.989	10.049	27.75			0.000	NO	253.5		2.11	251.5
43	Total Tetra-Furans	8.18e4					0.943	10.049	24.00			0.000	NO	24.61		0.555	34.50
44	1st Func. Furans	0.00e0					0.940	10.049	27.63			0.000	NO	76.35		0.272	76.35

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	rvy	EMPC	Conc.
6	Total Tetra-Furans	24.00	23.87	7.147e2	9.084e2	0.770	0.79	NO	4.1873	4.1873
7	Total Tetra-Furans	24.00	24.41	9.698e2	1.024e3	0.770	0.85	NO	4.8822	4.8822
8	Total Tetra-Furans	24.00	25.08	9.859e1	1.144e2	0.770	0.84	NO	0.54445	0.54445
9	Total Tetra-Furans	24.00	25.58	5.985e2	8.003e2	0.770	0.75	NO	3.6033	3.6033
10	Total Tetra-Furans	24.00	26.72	7.587e2	9.011e2	0.770	0.84	NO	4.2789	4.2789
11	Total Tetra-Furans	24.00	27.03	1.923e2	2.240e2	0.770	0.86	NO	1.0738	1.0738



Vista Analytical Laboratory

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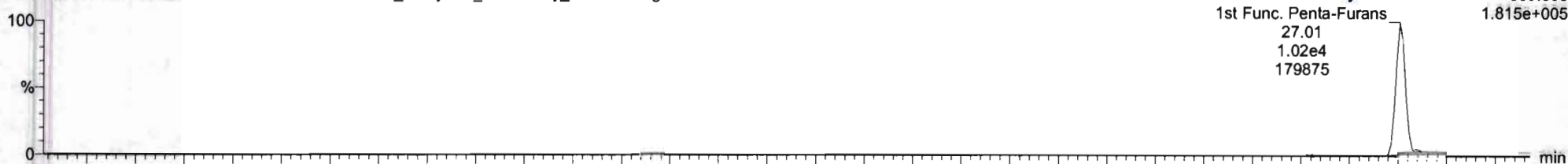
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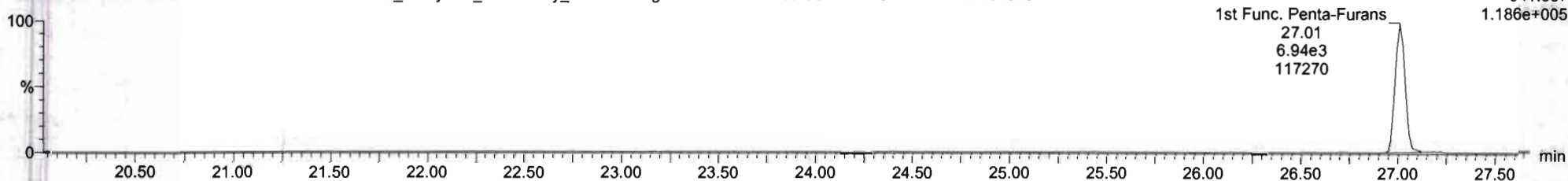
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1st Func. Penta-Furans

200116D2\_6  
1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-08 PDI-018SC-A-07-08-190926

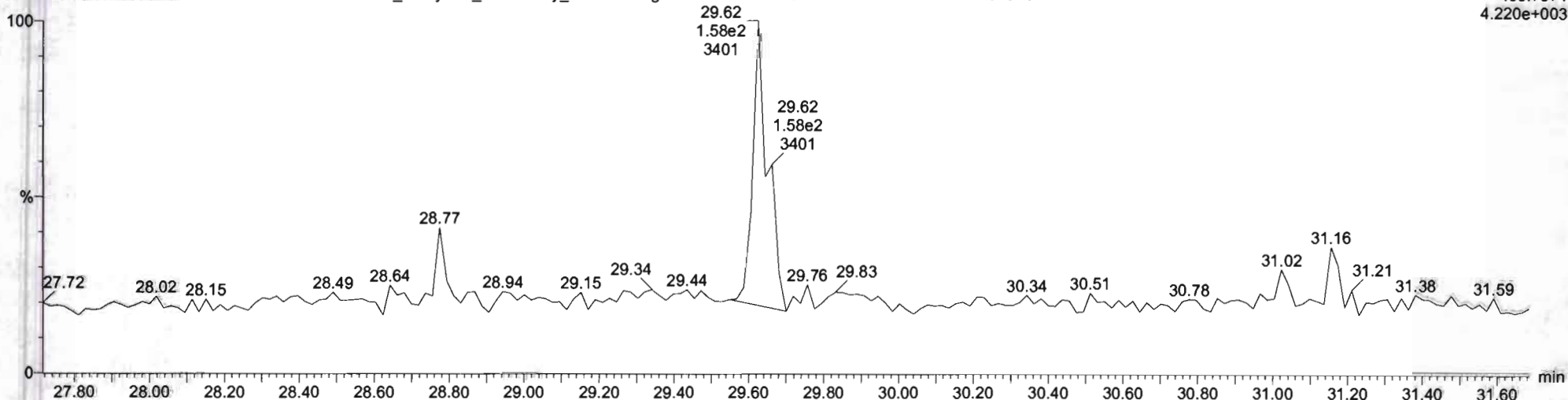


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DPE6

200116D2\_6  
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Vista Analytical Laboratory

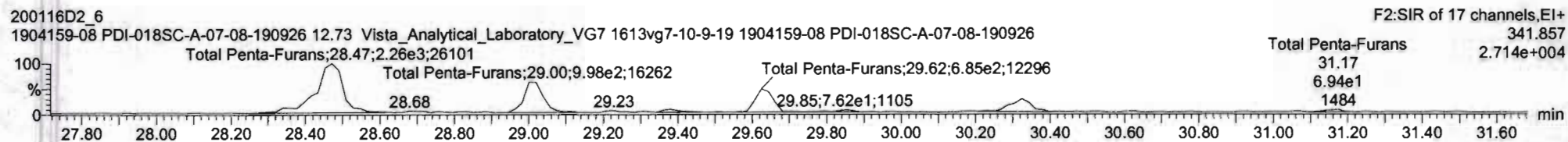
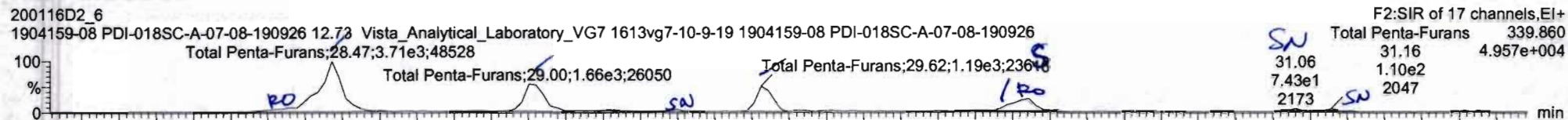
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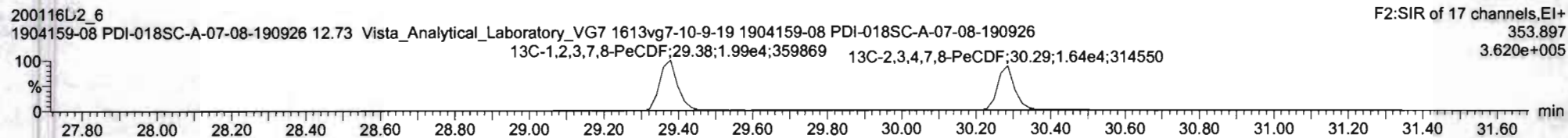
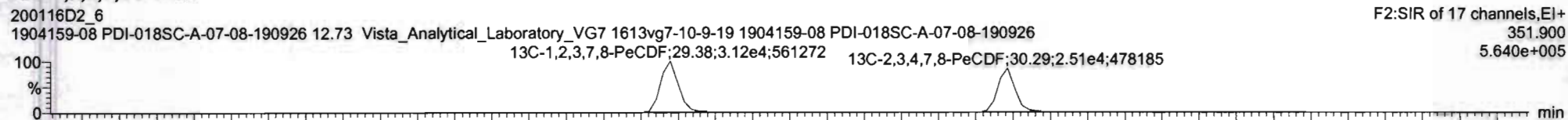
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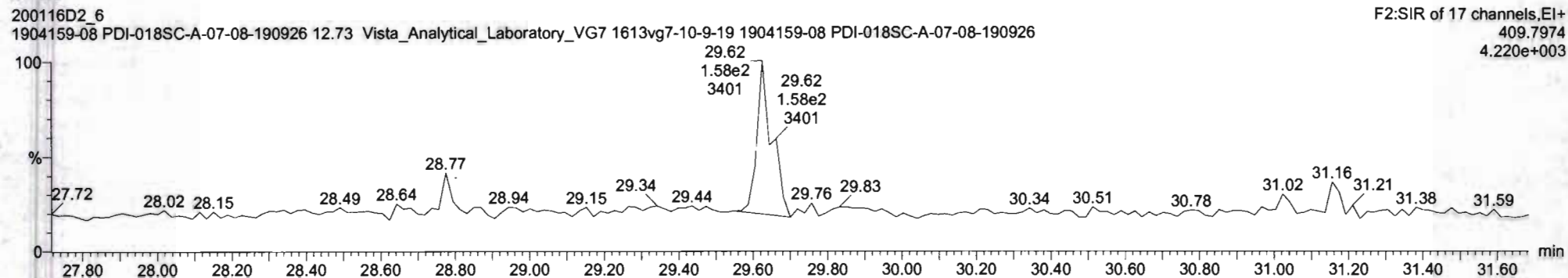
Total Penta-Furans



13C-1,2,3,7,8-PeCDF



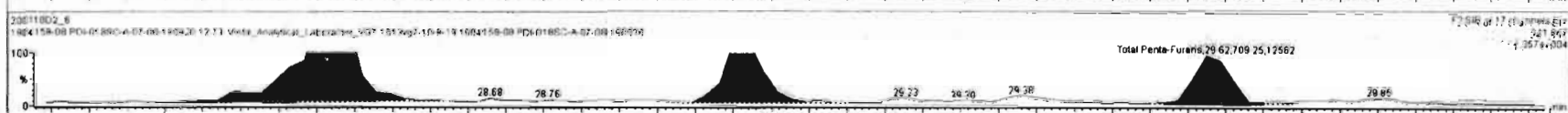
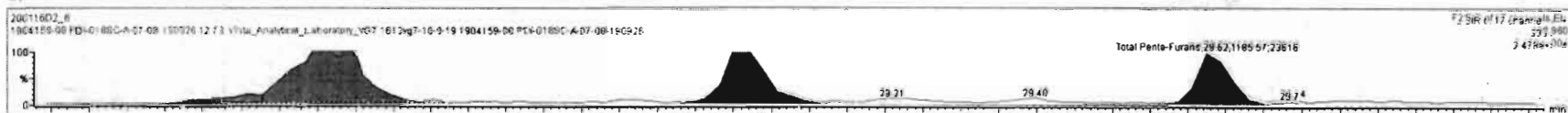
DPE2



20111021-09-01-000-A-07-08 1004159-00 PDI-0185C-A-07-08-150926

#	Name	Resp	S_Resp	Gr	RA	nV	RRF	wtMol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Pec	Dc	EMPC
45	Total Penta-Furans	0.00e0					0.940	10.049	30.00			0.000	NO	46.16		0.980	53.32
46	Total Hexa-Furans	0.00e0					1.078	10.049	33.00			0.000	NO	244.8		1.23	244.8
47	Total Hepta-Furans	0.00e0					1.135	10.049	37.75			0.000	NO	532.6		1.54	532.6
48	PFK1																
49	PFK2																
50	PFK3																
51	PFK4																
52	PFK5																

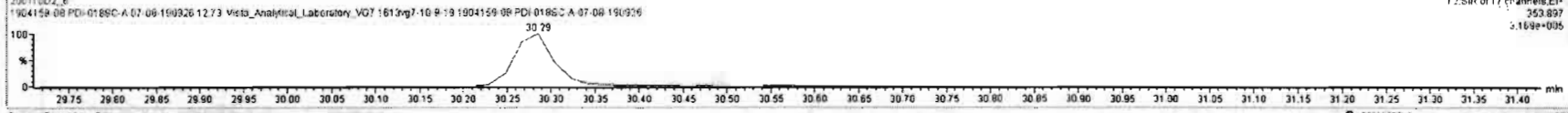
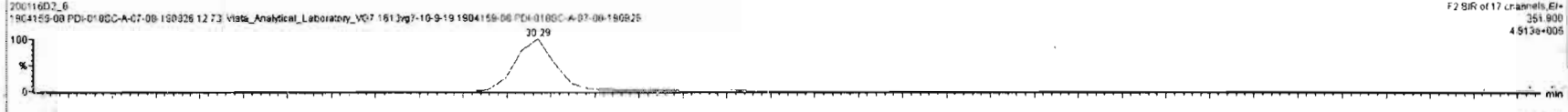
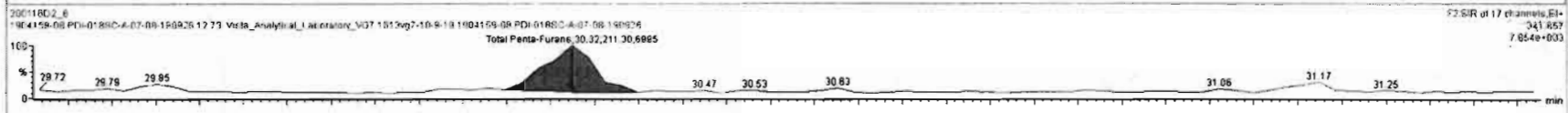
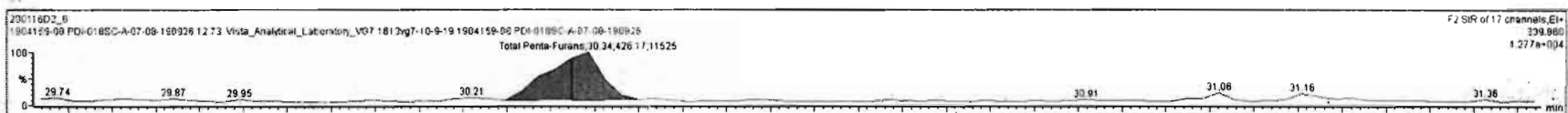
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1	Total Penta-Furans	30.00	29.36	2.699e2	1.399e2	1.550	1.93	YES	1.6420	0.00000
2	Total Penta-Furans	30.00	29.47	3.428e3	2.070e3	1.550	1.66	NO	25.311	25.311
3	Total Penta-Furans	30.00	29.00	1.663e3	9.724e2	1.550	1.71	NO	12.130	12.130
4	Total Penta-Furans	30.00	29.62	1.198e3	7.092e2	1.550	1.67	NO	8.7230	8.7227
5	1,2,3,4,7,8-PeCDF	30.32	30.34	9.197e2	4.575e2	1.550	2.01	YES	5.6110	0.00000



1904159-08 PDI-0185C-A-07-08-190426-1273 Vista\_Analytical\_Laboratory\_V071612vg7-10-9-19 1904159-08 PDI-0185C-A-07-08-190426-1273 Vista\_Analytical\_Laboratory\_V071612vg7-10-9-19

#	Name	Resp	iS Resp	iSf	RA	rly	RRF	wtAvd	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
42	Total Hepta-Furans	2.96e4					0.989	10.049	37.75			0.000	NO	253.5		2.11	253.5
43	Total Tetra-Furans	8.18e4					0.843	10.049	24.00			0.000	NO	24.61		0.555	34.50
44	1st Func. Penta-Furand	0.00e0					0.940	10.049	27.63			0.000	NO	78.82		0.272	78.82
45	Total Penta-Furans	0.00e0					0.840	10.048	30.00			0.000	NO	48.05		0.580	53.17
46	Total Hexa-Furans	0.00e0					1.078	10.049	33.90			0.000	NO	244.8		1.23	244.8
47	Total Hepta-Furans	0.00e0					1.135	10.049	37.75			0.000	NO	532.6		1.54	532.6
48	PFK1																
49	PFK2																

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	rly	EMPC	Conc
1	Total Penta-Furans	30.00	29.36	2.699e2	1.399e2	1.550	1.83	YES	1.6418	0.00000
2	Total Penta-Furans	30.00	29.47	3.429e3	2.070e3	1.550	1.66	NO	25.311	25.311
3	Total Penta-Furans	30.00	29.00	1.663e3	9.724e2	1.550	1.71	NO	12.130	12.130
4	Total Penta-Furans	30.00	29.62	1.188e3	7.092e2	1.550	1.67	NO	8.7227	8.7227
5	10,2,3,4,7,8-PeCDF	30.32	30.32	3.796e2	2.317e2	1.550	1.64	NO	2.8878	2.8878
6	Total Penta-Furans	30.00	30.34	4.262e2	2.113e2	1.550	2.02	YES	2.4884	0.00000



Vista Analytical Laboratory

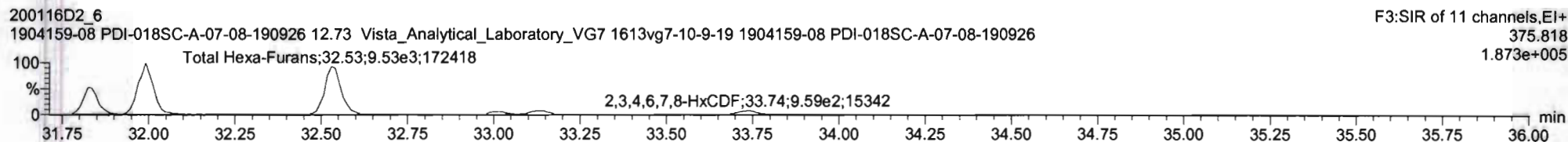
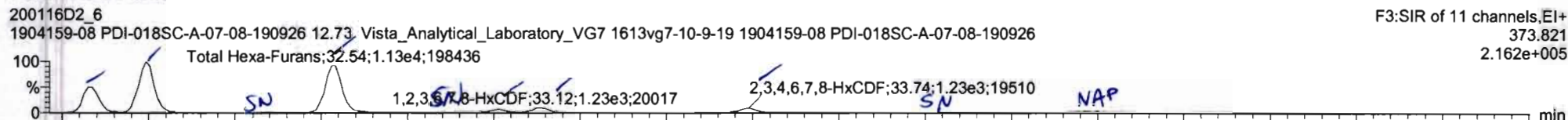
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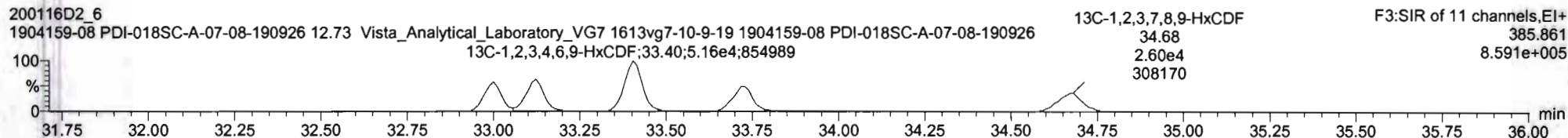
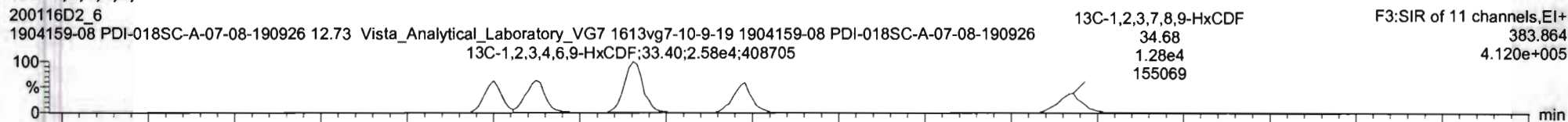
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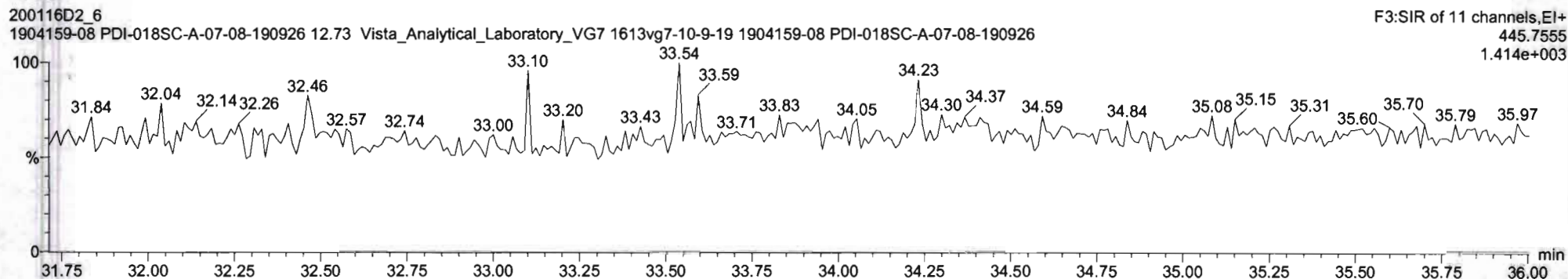
Total Hexa-Furans



13C-1,2,3,4,7,8-HxCDF



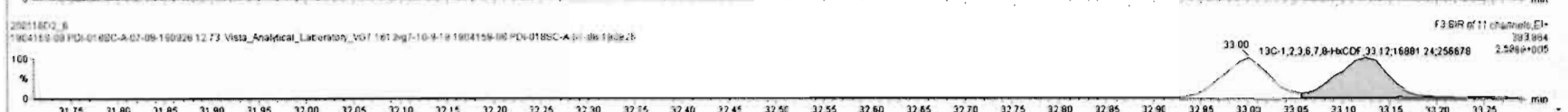
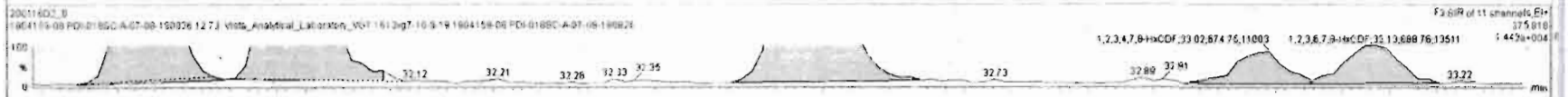
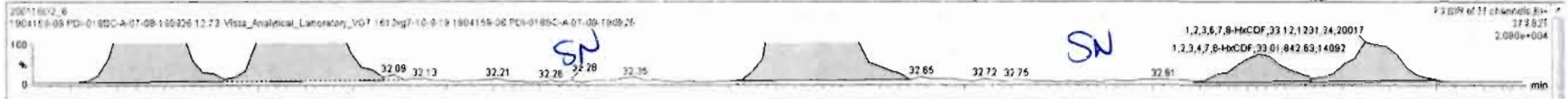
DPE3



1904159-09 PDI-0188C-A-07-09-160926 12.73 Vista\_Analytical\_Laboratory\_V07 1612kg7-10-9-19 1904159-09 PDI-0188C-A-07-09-160926

#	Name	Resp	IS Resp	ISd	RA	RV	RRF	RRFsd	Pred RT	RT	RRT	Pred PRT	Check RR	Conc	%Rec	Dt	EMPC
45	Total Penta-Furans	0.00e0					0.940	10.049	30.00			0.000	NO	46.18	0.990	31.32	
46	Total Hexa-Furans	0.00e0					1.078	10.049	33.00			0.000	NO	248.3	1.22	246.3	
47	Total Hepta-Furans	0.00e0					1.135	10.049	37.75			0.000	NO	530.1	1.54	532.1	

#	Name	Pred RT	RT	rt Resp	rt Resp	Pred RA	RA	RV	EMPC	Conc
1	Total Hexa-Furans	33.00	31.84	5.895e3	4.877e3	1.240	1.21	NO	45.677	45.677
2	Total Hexa-Furans	33.00	31.89	1.136e4	9.327e3	1.240	1.22	NO	87.733	87.733
3	Total Hexa-Furans	33.00	32.54	1.131e4	9.528e3	1.240	1.19	NO	88.372	88.372
4	1,2,3,4,7,8-HxCDF	33.00	33.01	8.426e2	8.747e2	1.240	1.25	NO	5.9643	5.9643
5	1,2,3,6,7,8-HxCDF	33.13	33.12	1.231e1	8.889e2	1.240	1.39	NO	7.9706	7.9706
6	1,2,3,4,6,7,8-HxCDF	33.76	33.74	1.235e3	9.590e2	1.240	1.29	NO	9.1314	9.1314
7	1,2,3,7,8,9-HxCDF	34.68	34.75	1.506e2	1.354e2	1.240	1.18	NO	1.4277	1.4277

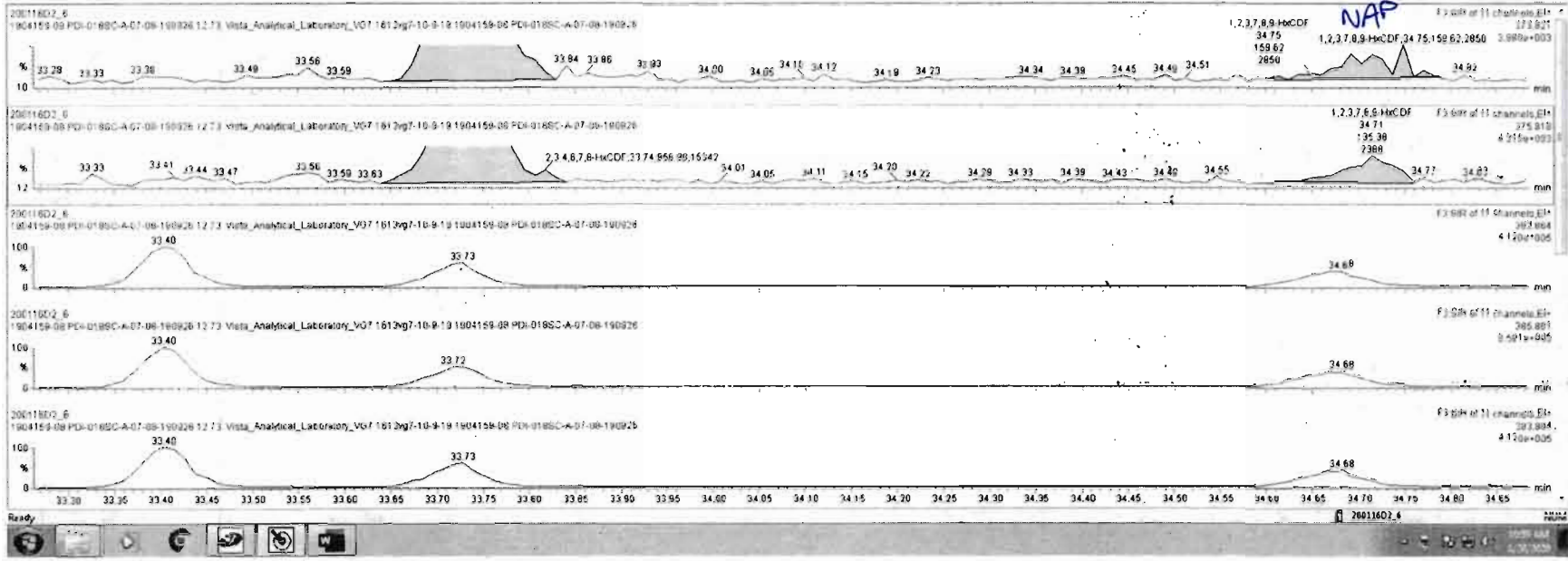




Targetlynx X5 - 20011602-6 - [Chromatogram]  
 File Edit View Display Processing Window Help

#	Name	Resp	IS Resp	CF	RA	rvy	RRF	wtvol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DC	DiPC
45	Total Hexa-Furans	0.00e0					0.940	10.049	30.00			0.000	NO	46.15	0.990	37.32	
46	Total Hexa-Furans	0.00e0					1.076	10.049	33.00			0.000	NO	246.3	1.233	246.3	
47	Total Hepta-Furans	0.00e0					1.135	10.049	37.75			0.000	NO	500.1	1.54	532.1	

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	rvy	EMPC	Conc
1	46 Total Hexa-Furans	33.00	31.64	5.895e3	4.877e3	1.240	1.21	NO	45.677	45.677
2	46 Total Hexa-Furans	33.00	31.99	1.136e4	9.327e3	1.240	1.22	NO	87.733	87.733
3	46 Total Hexa-Furans	33.00	32.54	1.131e4	9.528e3	1.240	1.19	NO	88.372	88.372
4	11 1,2,3,4,7,8-HxCDF	33.00	33.01	8.426e2	6.747e2	1.240	1.25	NO	5.9643	5.9643
5	12 1,2,3,6,7,8-HxCDF	33.13	33.12	1.231e3	8.888e2	1.240	1.39	NO	7.9706	7.9706
6	13 2,3,4,6,7,8-HxCDF	33.76	33.74	1.235e3	9.590e2	1.240	1.29	NO	9.1314	9.1314
7	14 1,2,3,7,8,9-HxCDF	34.68	34.75	1.596e2	1.354e2	1.240	1.18	NO	1.4277	1.4277



Vista Analytical Laboratory

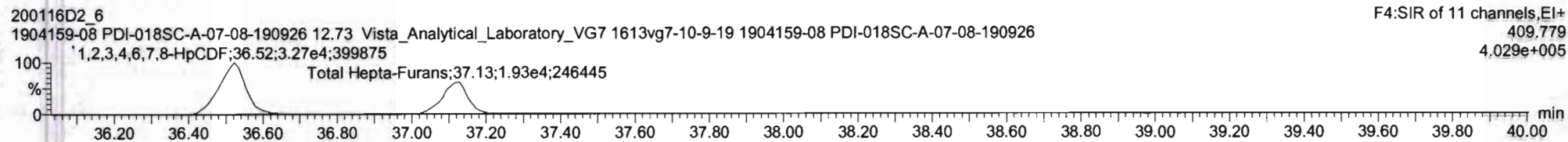
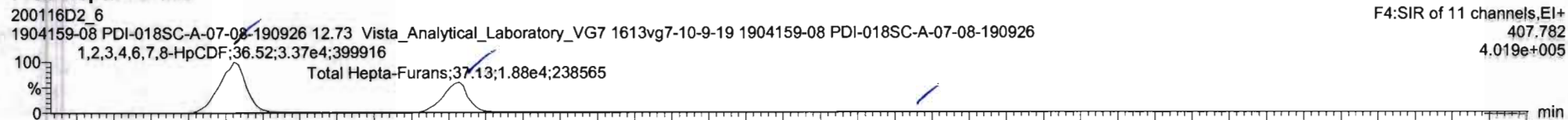
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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

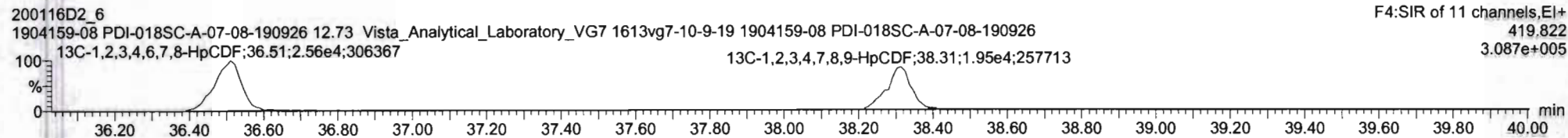
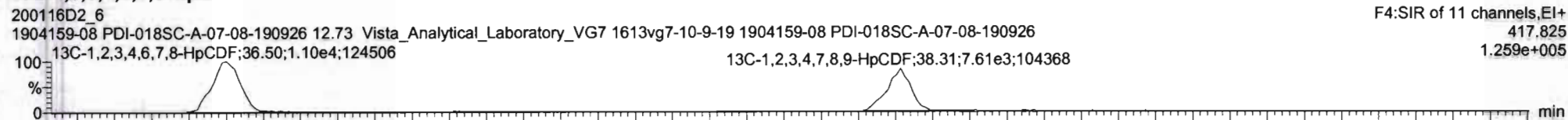
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Description: 1904159-08 PDI-018SC-A-07-08-190926 12.73 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

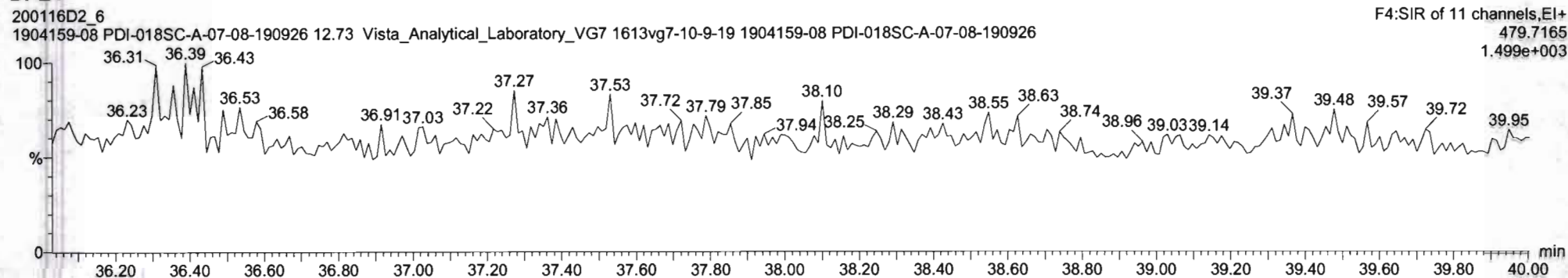
Total Hepta-Furans



13C-1,2,3,4,6,7,8-HpCDF



DPE4





Vista Analytical Laboratory

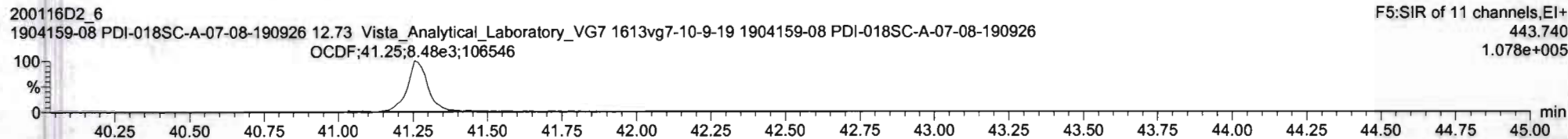
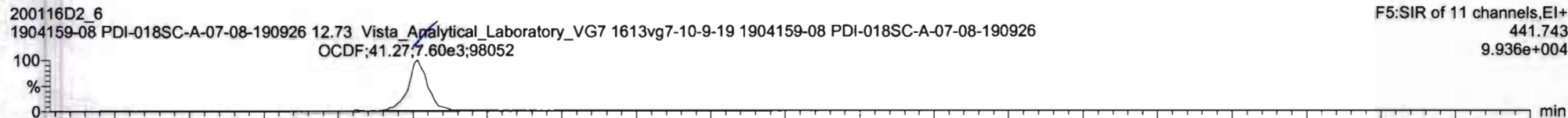
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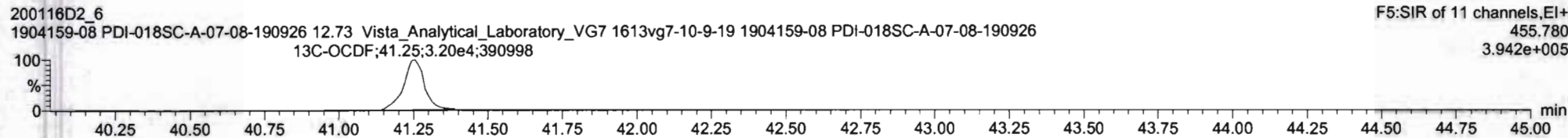
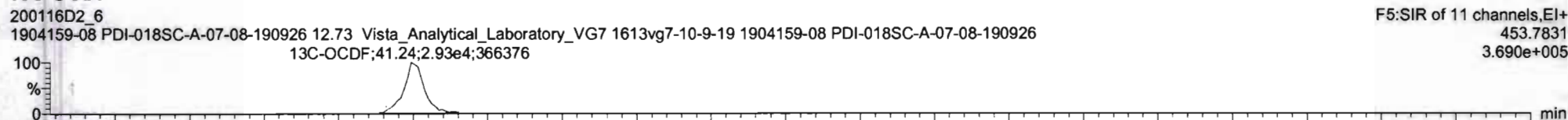
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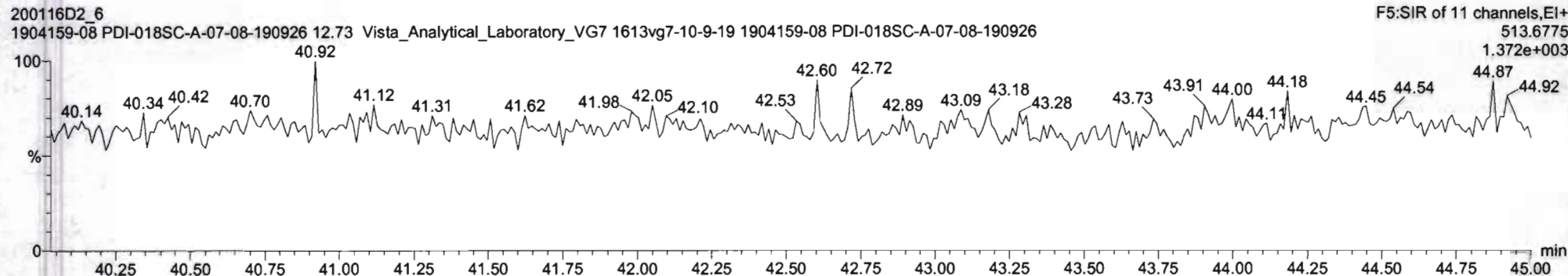
**OCDF**



**13C-OCDF**



**DPE5**



#	Name	Resp	IS Resp	cf	RA	ntf	RRP	wAveI	Pred RT	RT	RR1	Pred RR1	Check RR1	Conc.	%Pnc	Dx	EMPC	
17	17	OCDP	1.55e4	6.19e4	34	0.86	NO	0.947	10.049	41.24	41.27	1.001	1.000	NO	105.5		0.907	105.5
18	18	13C-2,3,7,8-13CDO	4.59e4	8.50e4	36	0.74	NO	1.095	10.049	25.99	25.98	1.023	1.023	NO	97.91	49.2	0.650	
19	19	13C-1,2,3,7,8-13CDO	2.73e4	6.50e4	36	0.61	NO	0.881	10.049	30.56	30.57	1.203	1.203	NO	72.49	36.4	0.421	
20	20	13C-1,2,3,4,7,8-13CDO	3.01e4	7.75e4	36	1.34	NO	0.642	10.049	33.87	33.89	1.014	1.014	NO	120.6	60.6	1.16	
21	21	13C-1,2,3,7,8-13CDO	3.36e4	7.75e4	36	1.22	NO	0.856	10.049	33.96	34.00	1.016	1.017	NO	100.8	50.7	0.871	
22	22	13C-1,2,3,7,8-13CDO	3.37e4	7.75e4	36	1.34	NO	0.807	10.049	34.26	34.29	1.026	1.026	NO	107.4	54.0	0.924	
23	23	13C-1,2,3,4,7,8-13CDO	2.86e4	7.75e4	36	1.07	NO	0.854	10.049	37.78	37.78	1.131	1.131	NO	118.2	58.4	1.45	
24	24	13C-OCDD	4.69e4	7.75e4	36	0.92	NO	0.580	10.049	41.03	41.04	1.228	1.228	NO	206.6	51.9	0.837	

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	ntf	EMPC	Conc.
1										



Vista Analytical Laboratory

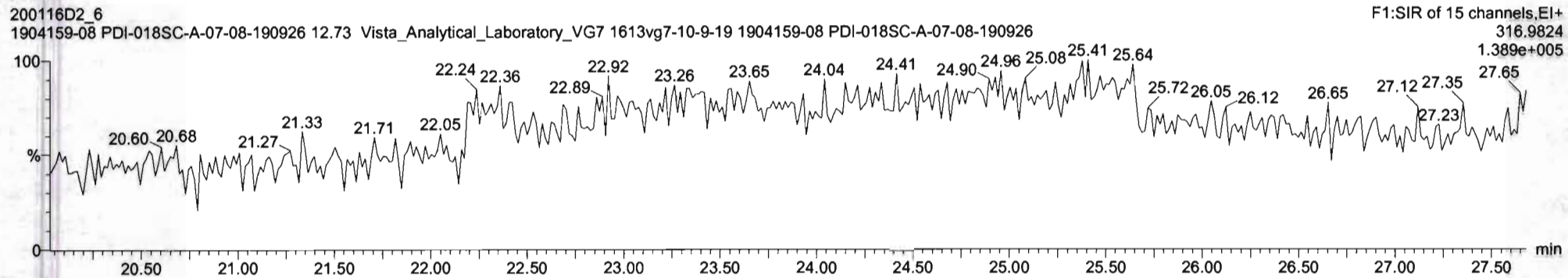
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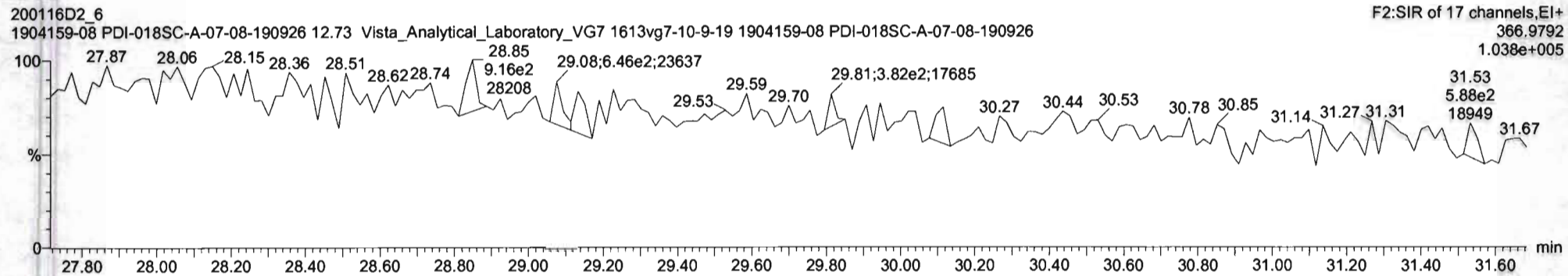
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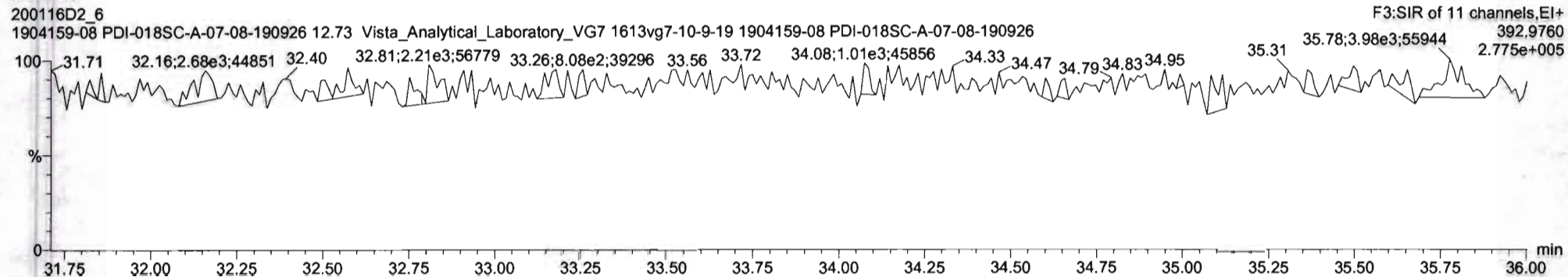
PFK1



PFK2



PFK3



Vista Analytical Laboratory

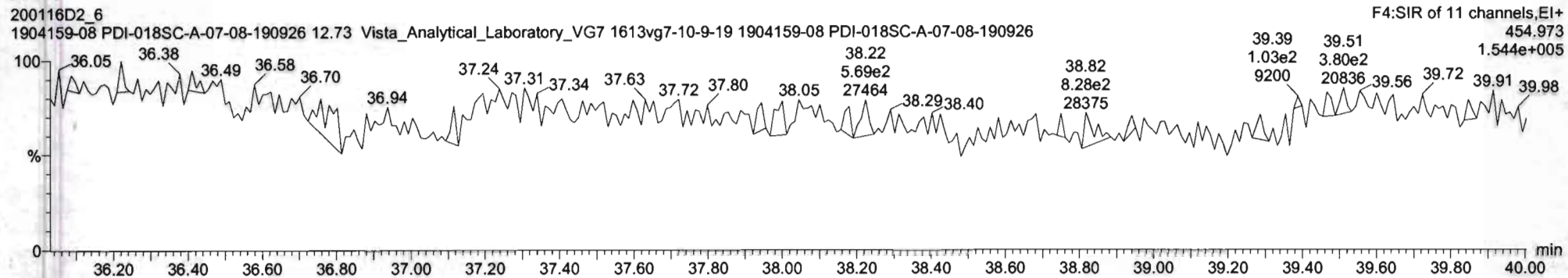
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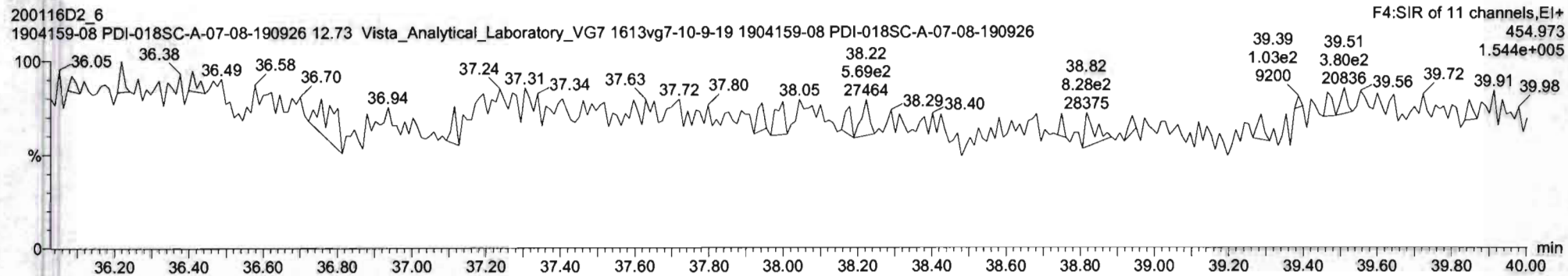
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PFK4



PFK5



Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_5.qld

Last Altered: Wednesday, January 22, 2020 15:06:41 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 15:07:47 Pacific Standard Time

DB 1/22/20

CT 01/31/2020

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_5, Date: 22-Jan-2020, Time: 02:04:31, ID: 1904159-09 PDI-019SC-A-06-07-191008 16.86, Description: PDI-019SC-A-06-07-191008

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	6.47e2	0.13	YES	0.824	10.053	25.856	25.87	1.001	1.002	0.15774		0.0360	0.0410
2	2 1,2,3,7,8-PeCDD			NO	0.912	10.053	30.750		1.001				0.0557	
3	3 1,2,3,4,7,8-HxCDD			NO	0.870	10.053	34.094		1.000				0.0710	
4	4 1,2,3,6,7,8-HxCDD			NO	0.784	10.053	34.179		1.000				0.0736	
5	5 1,2,3,7,8,9-HxCDD	2.90e2	1.42	NO	0.798	10.053	34.501	34.50	1.001	1.001	0.093144		0.0370	0.0931
6	6 1,2,3,4,6,7,8-HpCDD	7.22e2	0.76	YES	0.737	10.053	38.014	38.02	1.000	1.001	0.33512		0.103	0.283
7	7 OCDD	3.25e3	0.84	NO	0.800	10.053	40.985	41.01	1.000	1.001	1.7622		0.0881	1.76
8	8 2,3,7,8-TCDF			NO	0.588	10.053	24.982		1.001				0.0276	
9	9 1,2,3,7,8-PeCDF	3.54e2	1.31	YES	0.826	10.053	29.482	29.46	1.001	1.000	0.067510		0.0254	0.0627
10	10 2,3,4,7,8-PeCDF	2.76e2	1.00	YES	0.850	10.053	30.453	30.44	1.001	1.001	0.053943		0.0236	0.0443
11	11 1,2,3,4,7,8-HxCDF			NO	0.787	10.053	33.210		1.000				0.0598	
12	12 1,2,3,6,7,8-HxCDF			NO	0.720	10.053	33.337		1.000				0.0525	
13	13 2,3,4,6,7,8-HxCDF	1.94e2	1.62	YES	0.766	10.053	33.947	33.91	1.001	1.000	0.071180		0.0289	0.0609
14	14 1,2,3,7,8,9-HxCDF	2.29e2	1.46	YES	0.709	10.053	34.818	34.84	1.000	1.001	0.10310		0.0287	0.0939
15	15 1,2,3,4,6,7,8-HpCDF	2.58e2	1.53	YES	0.732	10.053	36.623	36.61	1.001	1.001	0.14999		0.0456	0.121
16	16 1,2,3,4,7,8,9-HpCDF	1.37e2	1.18	NO	0.816	10.053	38.589	38.61	1.000	1.001	0.092481		0.0440	0.0925
17	17 OCDF	4.90e2	0.82	NO	0.639	10.053	41.188	41.19	1.000	1.000	0.33792		0.0681	0.338
18	18 13C-2,3,7,8-TCDD	9.90e5	0.79	NO	1.12	10.053	25.844	25.83	1.026	1.025	137.43	69.1	0.106	
19	19 13C-1,2,3,7,8-PeCDD	8.00e5	0.64	NO	0.841	10.053	30.614	30.73	1.215	1.220	147.37	74.1	0.189	
20	20 13C-1,2,3,4,7,8-HxCDD	6.90e5	1.26	NO	0.938	10.053	34.074	34.08	1.014	1.014	124.02	62.3	0.155	
21	21 13C-1,2,3,6,7,8-HxCDD	7.37e5	1.24	NO	1.07	10.053	34.175	34.18	1.017	1.017	116.60	58.6	0.136	
22	22 13C-1,2,3,7,8,9-HxCDD	7.76e5	1.23	NO	1.03	10.053	34.478	34.47	1.026	1.026	126.85	63.8	0.141	
23	23 13C-1,2,3,4,6,7,8-HpCDD	5.82e5	1.04	NO	0.710	10.053	38.040	38.00	1.132	1.131	138.03	69.4	0.300	
24	24 13C-OCDD	9.19e5	0.89	NO	0.601	10.053	40.930	40.99	1.218	1.220	257.55	64.7	0.218	
25	25 13C-2,3,7,8-TCDF	1.25e6	0.73	NO	1.04	10.053	25.020	24.96	0.993	0.990	124.05	62.4	0.136	
26	26 13C-1,2,3,7,8-PeCDF	1.26e6	1.55	NO	0.917	10.053	29.379	29.46	1.166	1.169	142.08	71.4	0.280	
27	27 13C-2,3,4,7,8-PeCDF	1.20e6	1.54	NO	0.903	10.053	30.337	30.42	1.204	1.207	136.60	68.7	0.284	
28	28 13C-1,2,3,4,7,8-HxCDF	7.07e5	0.49	NO	0.861	10.053	33.201	33.21	0.988	0.988	138.36	69.5	0.331	
29	29 13C-1,2,3,6,7,8-HxCDF	8.39e5	0.50	NO	1.05	10.053	33.302	33.33	0.991	0.992	135.12	67.9	0.272	
30	30 13C-2,3,4,6,7,8-HxCDF	7.06e5	0.48	NO	0.946	10.053	33.910	33.91	1.009	1.009	125.75	63.2	0.301	
31	31 13C-1,2,3,7,8,9-HxCDF	6.24e5	0.49	NO	0.816	10.053	34.814	34.82	1.036	1.036	128.87	64.8	0.349	



Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_5.qld

Last Altered: Wednesday, January 22, 2020 15:06:41 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 15:07:47 Pacific Standard Time

Name: 200121R2\_5, Date: 22-Jan-2020, Time: 02:04:31, ID: 1904159-09 PDI-019SC-A-06-07-191008 16.86, Description: PDI-019SC-A-06-07-191008

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	4.67e5	0.41	NO	0.589	10.053	36.561	36.59	1.088	1.089	133.60	67.2	0.270	
33	13C-1,2,3,4,7,8,9-HpCDF	3.60e5	0.41	NO	0.448	10.053	38.577	38.59	1.148	1.148	135.54	68.1	0.356	
34	13C-OCDF	9.03e5	0.85	NO	0.586	10.053	41.165	41.19	1.225	1.226	259.71	65.3	0.240	
35	37Cl-2,3,7,8-TCDD	5.73e5			1.09	10.053	25.877	25.86	1.027	1.026	81.707	103	0.0259	
36	13C-1,2,3,4-TCDD	1.28e6	0.81	NO	1.00	10.053	25.260	25.20	1.000	1.000	198.96	100	0.118	
37	13C-1,2,3,4-TCDF	1.93e6	0.74	NO	1.00	10.053	23.860	23.57	1.000	1.000	198.96	100	0.141	
38	13C-1,2,3,4,6,9-HxCDF	1.18e6	0.49	NO	1.00	10.053	33.590	33.60	1.000	1.000	198.96	100	0.285	
39	Total Tetra-Dioxins				0.824	10.053	24.620		0.000		0.12273		0.0360	0.164
40	Total Penta-Dioxins				0.912	10.053	29.960		0.000				0.0320	
41	Total Hexa-Dioxins				0.784	10.053	33.635		0.000		0.25244		0.0398	0.252
42	Total Hepta-Dioxins				0.737	10.053	37.640		0.000		0.34415		0.103	0.627
43	Total Tetra-Furans				0.588	10.053	23.610		0.000				0.0113	
44	1st Func. Penta-Furans				0.826	10.053	27.090		0.000				0.0105	
45	Total Penta-Furans				0.826	10.053	29.275		0.000		0.00000		0.0249	0.107
46	Total Hexa-Furans				0.766	10.053	33.555		0.000		0.00000		0.0291	0.155
47	Total Hepta-Furans				0.732	10.053	37.835		0.000		0.092481		0.0472	0.213

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_5.qld

Last Altered: Wednesday, January 22, 2020 15:06:41 Pacific Standard Time  
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Name: 200121R2\_5, Date: 22-Jan-2020, Time: 02:04:31, ID: 1904159-09 PDI-019SC-A-06-07-191008 16.86, Description: PDI-019SC-A-06-07-191008

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	23.71	2.218e3	3.949e3	2.201e2	2.831e2	0.78	NO	5.032e2	0.12273	0.12273	0.0360
2	2,3,7,8-TCDD	25.87	1.368e3	9.258e3	7.305e1	5.737e2	0.13	YES	6.468e2	0.00000	0.040958	0.0360

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

**Hexa-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.58	6.975e3	5.906e3	2.578e2	2.033e2	1.27	NO	4.611e2	0.15930	0.15930	0.0390
2	1,2,3,7,8,9-HxCDD	34.50	4.640e3	3.838e3	1.700e2	1.200e2	1.42	NO	2.900e2	0.093144	0.093144	0.0370

**Hepta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.99	5.794e3	6.194e3	3.627e2	3.787e2	0.96	NO	7.414e2	0.34415	0.34415	0.103
2	1,2,3,4,6,7,8-HpCDD	38.02	5.870e3	6.674e3	3.108e2	4.112e2	0.76	YES	7.220e2	0.00000	0.28299	0.103

**Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

**Penta-Furans function 1**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

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Printed: Wednesday, January 22, 2020 15:07:47 Pacific Standard Time

Name: 200121R2\_5, Date: 22-Jan-2020, Time: 02:04:31, ID: 1904159-09 PDI-019SC-A-06-07-191008 16.86, Description: PDI-019SC-A-06-07-191008

**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,7,8-PeCDF	29.46	5.270e3	3.248e3	2.003e2	1.532e2	1.31	YES	3.535e2	0.00000	0.062739	0.0254
2	2,3,4,7,8-PeCDF	30.44	2.220e3	2.619e3	1.376e2	1.383e2	1.00	YES	2.759e2	0.00000	0.044274	0.0236

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	2,3,4,6,7,8-HxCDF	33.91	2.007e3	1.833e3	1.196e2	7.397e1	1.62	YES	1.936e2	0.00000	0.060934	0.0289
2	1,2,3,7,8,9-HxCDF	34.84	2.087e3	2.230e3	1.360e2	9.310e1	1.46	YES	2.291e2	0.00000	0.093860	0.0387

**Hepta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.61	2.853e3	2.126e3	1.560e2	1.017e2	1.53	YES	2.577e2	0.00000	0.12079	0.0456
2	1,2,3,4,7,8,9-HpCDF	38.61	1.863e3	2.962e3	7.390e1	6.286e1	1.18	NO	1.368e2	0.092481	0.092481	0.0440

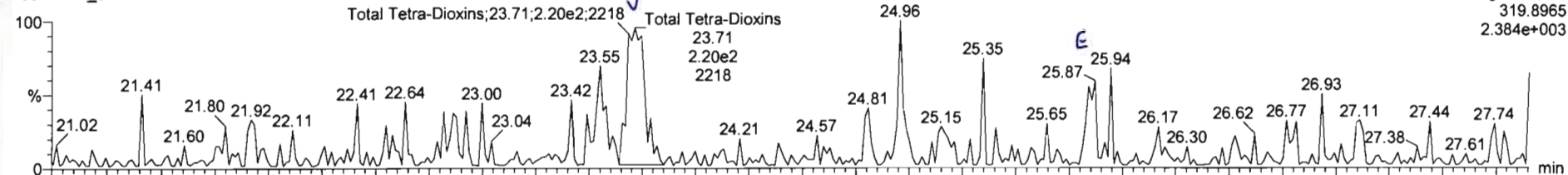
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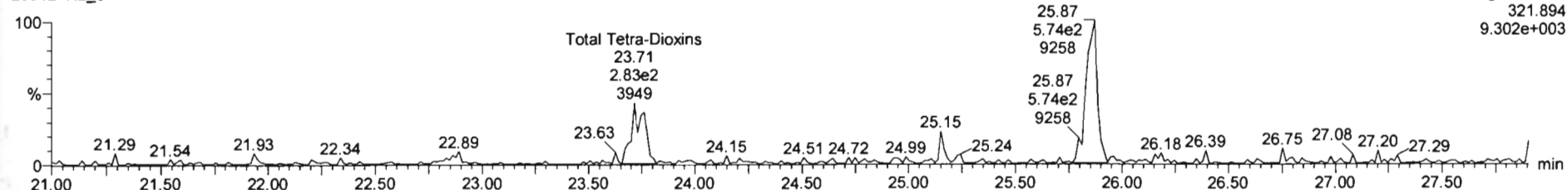
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**2,3,7,8-TCDD**

200121R2\_5

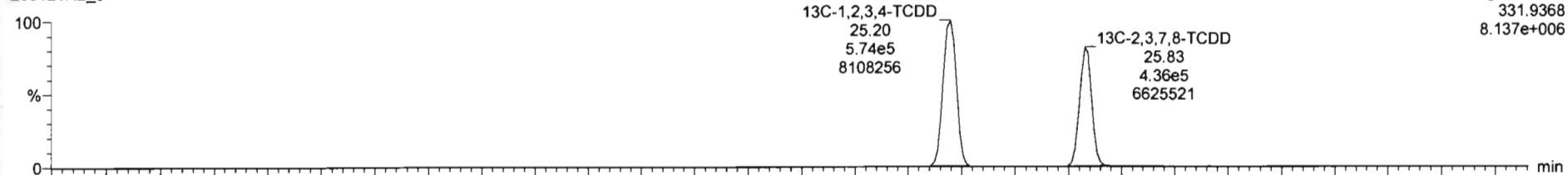


200121R2\_5

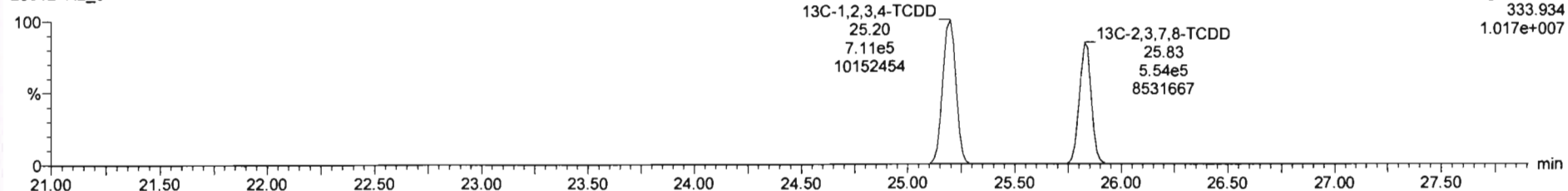


**13C-2,3,7,8-TCDD**

200121R2\_5



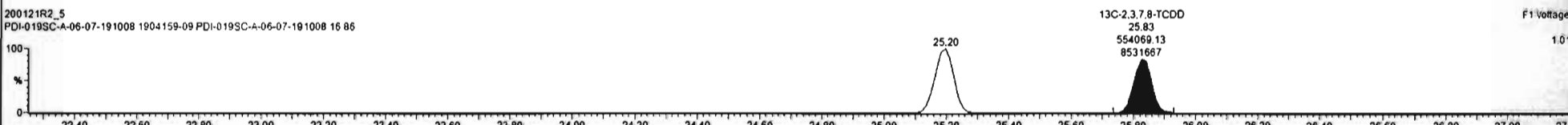
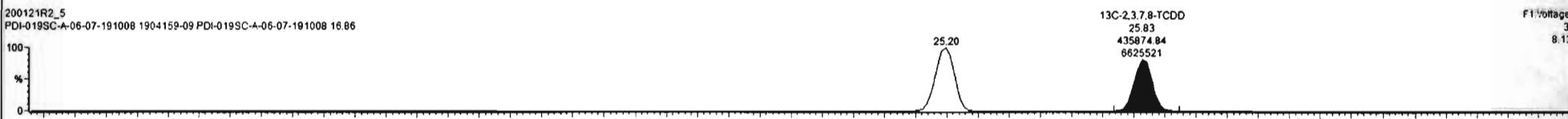
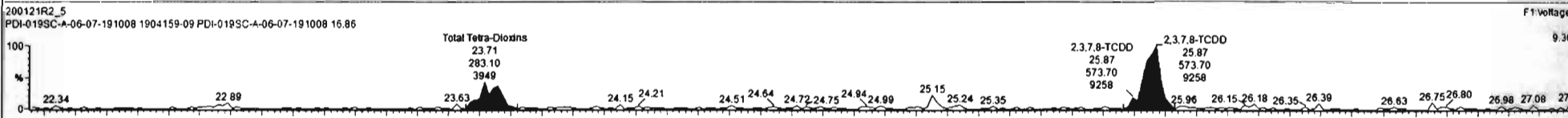
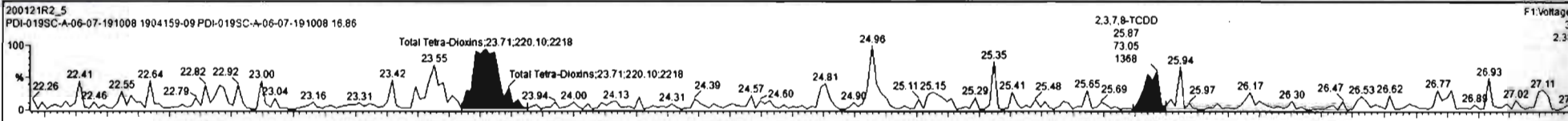
200121R2\_5



200121R2\_5 - 1904159-09 PDI-019SC-A-06-07-191008 16.86 PDI-019SC-A-06-07-191008

Name	Resp	RA	n/y	RF	wfVol	RT	PRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.053			0.123	0.8360	0.164	
40 Total Penta-Dioxins				0.9116	10.053				0.0320		
41 Total Hexa-Dioxins				0.7841	10.053				0.0398		
42 Total Hepta-Dioxins				0.7369	10.053			0.344	0.103	0.627	
43 Total Tetra-Furans				0.5878	10.053				0.0113		
44 1st Func. Penta-Furans				0.8261	10.053				0.0105		
45 Total Penta-Furans				0.8261	10.053				0.0249		
46 Total Hexa-Furans				0.7665	10.053				0.0291		

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Tetra-Dioxine	23.71	2.201e2	2.831e2	0.78	NO	0.12273	0.12273
2 2,3,7,8-TCDD	25.87	7.305e1	5.737e2	0.13	YES	0.040958	0.00000



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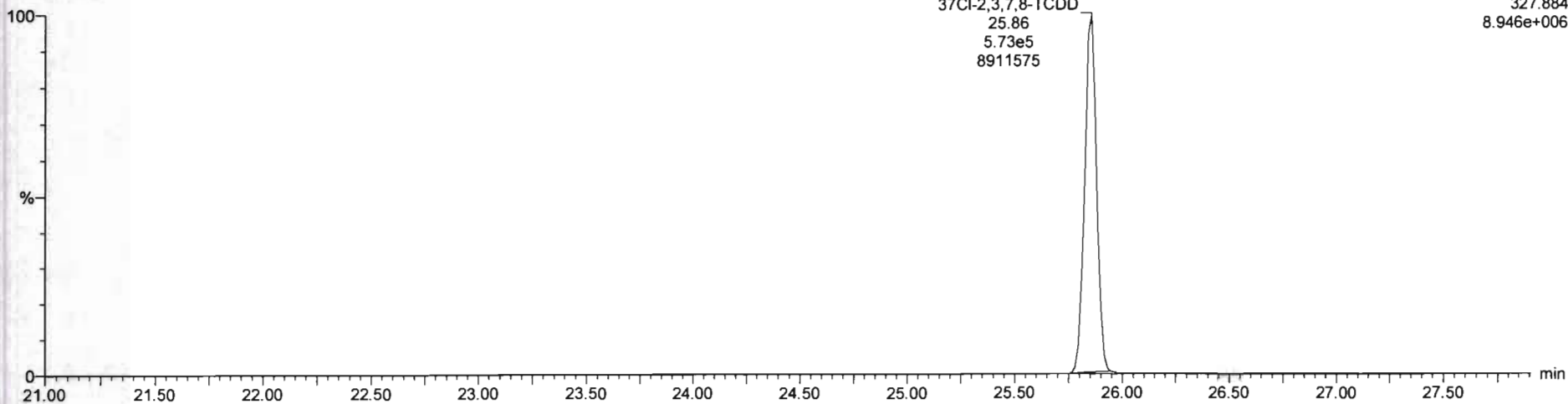
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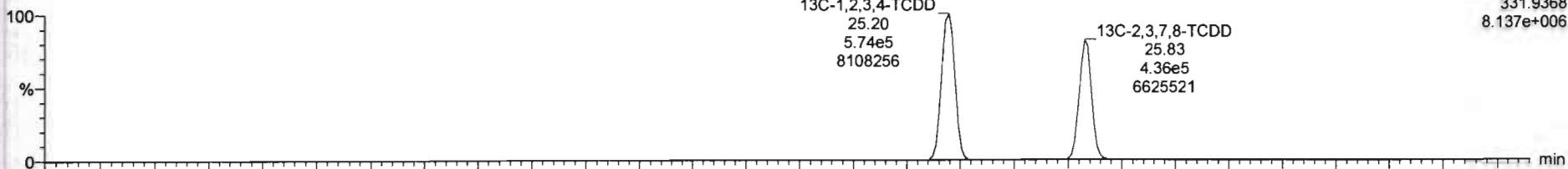
**37Cl-2,3,7,8-TCDD**

200121R2\_5

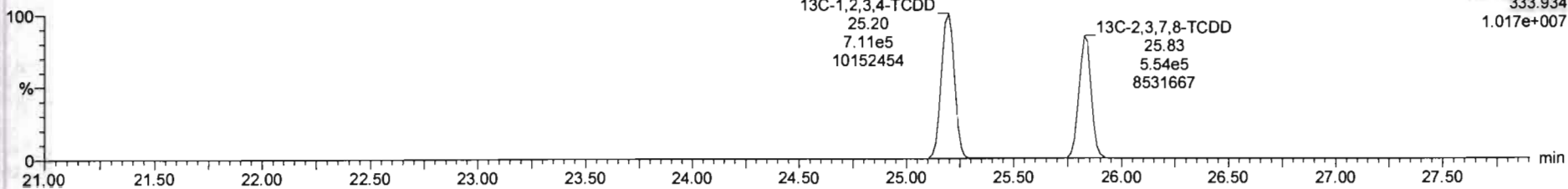


**13C-1,2,3,4-TCDD**

200121R2\_5



200121R2\_5



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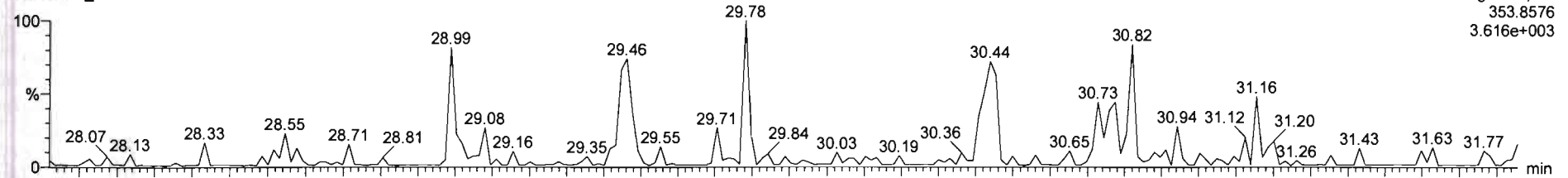
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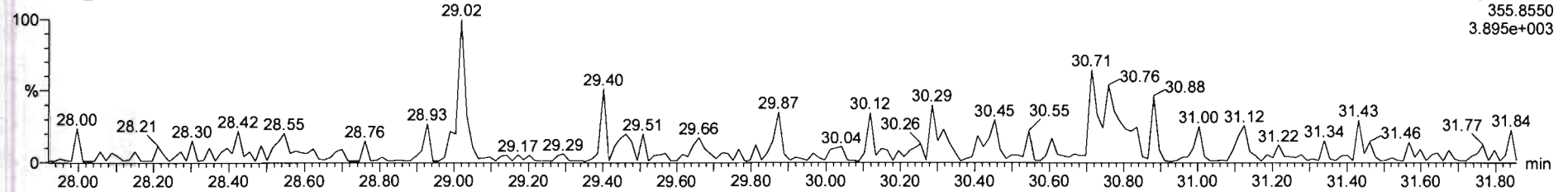
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**1,2,3,7,8-PeCDD**

200121R2\_5

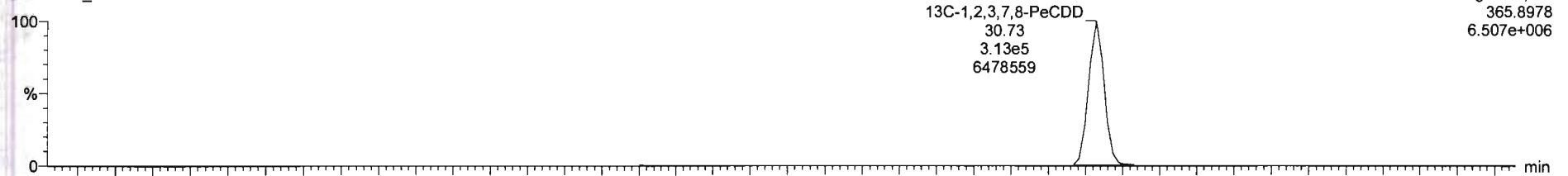


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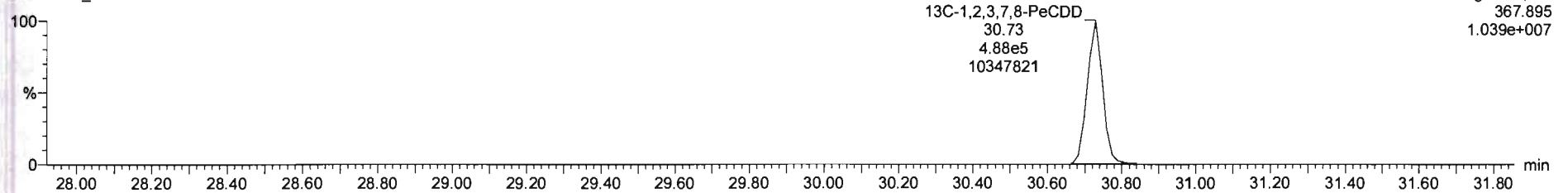


**13C-1,2,3,7,8-PeCDD**

200121R2\_5



200121R2\_5



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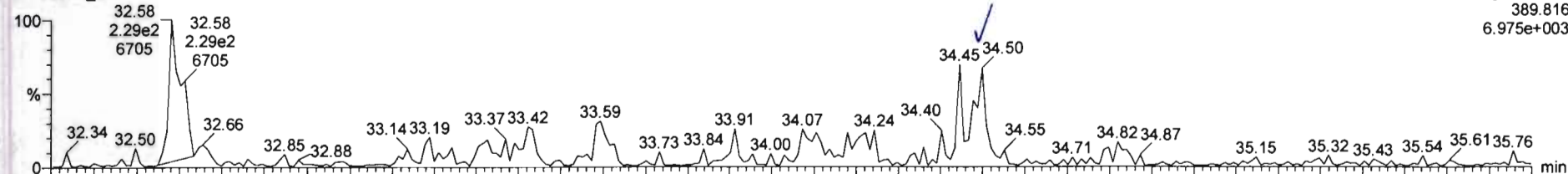
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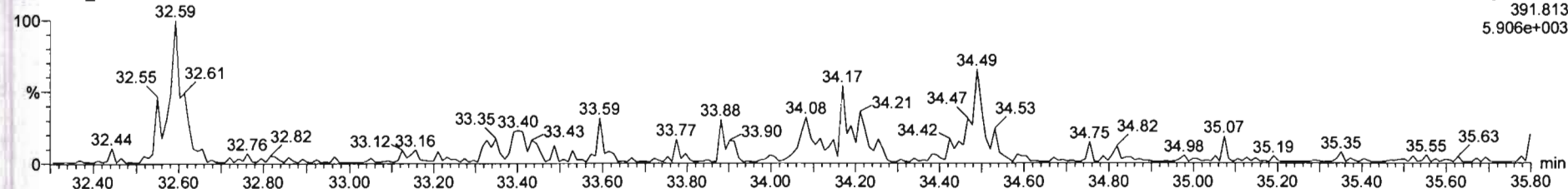
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**1,2,3,4,7,8-HxCDD**

200121R2\_5

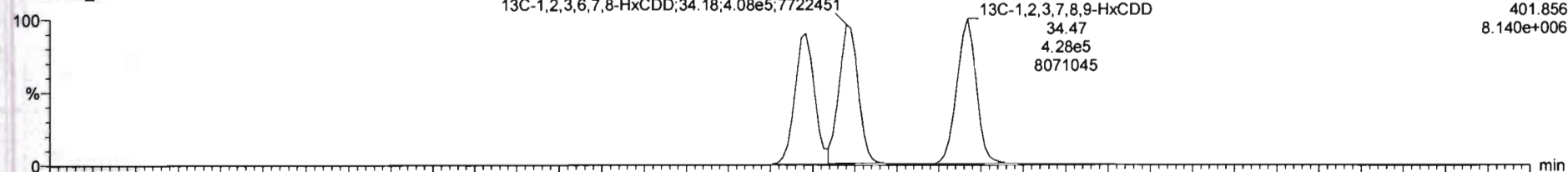


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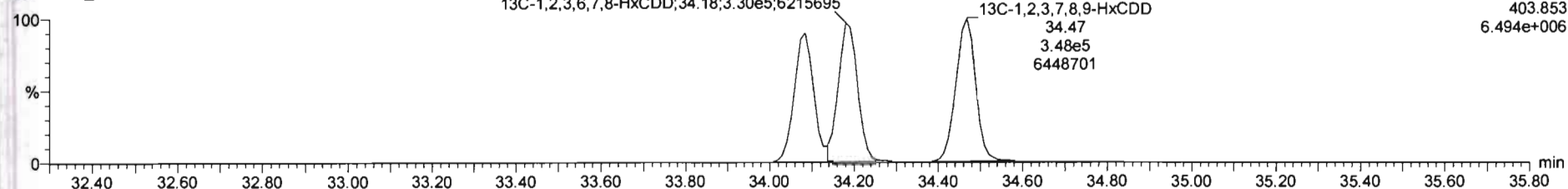


**13C-1,2,3,4,7,8-HxCDD**

200121R2\_5



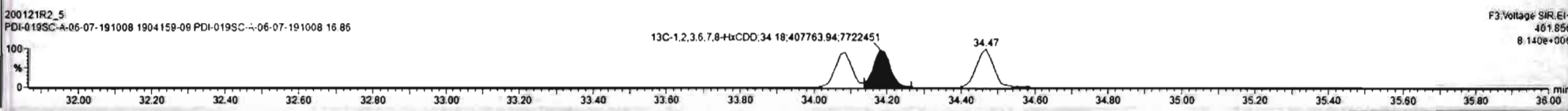
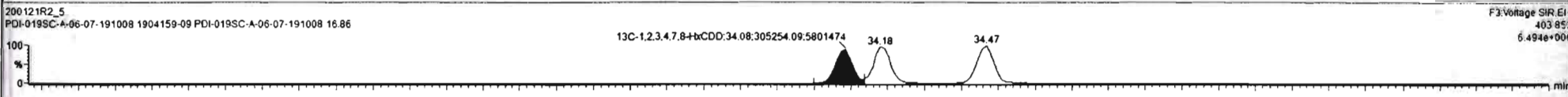
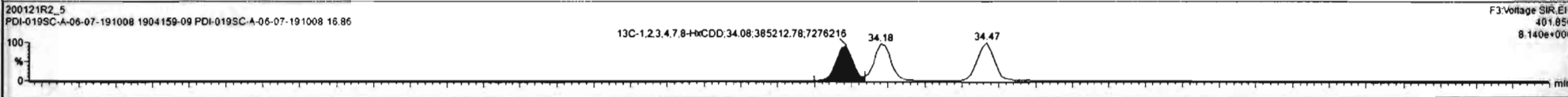
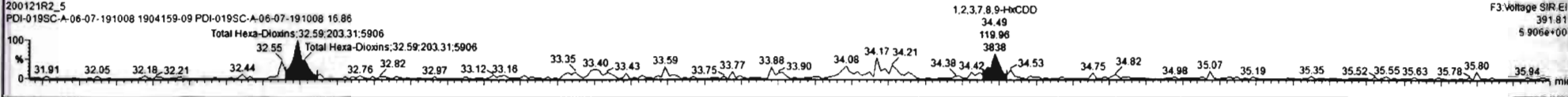
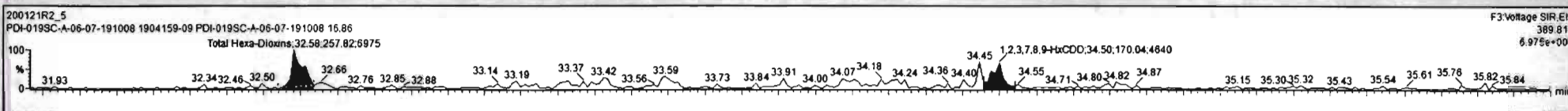
200121R2\_5





Name	Resp	RA	n/y	RRF	wt/wt	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.053			0.123		0.0360	0.164
40 Total Penta-Dioxins				0.9116	10.053					0.0320	
41 Total Hexa-Dioxins				0.7841	10.053			0.252		0.0394	0.252
42 Total Hepta-Dioxins				0.7369	10.053			0.344		0.103	0.627
43 Total Tetra-Furans				0.5878	10.053					0.0113	
44 1st Func. Penta-Furans				0.8261	10.053					0.0105	
45 Total Penta-Furans				0.8261	10.053					0.0249	
46 Total Hexa-Furans				0.7665	10.053					0.0291	

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Hexa-Dioxins	32.58	2.578e2	2.033e2	1.27	NO	0.15930	0.15930
2 1,2,3,7,8,9-HxCDD	34.50	1.700e2	1.200e2	1.42	NO	0.093144	0.093144



Dataset: Untitled

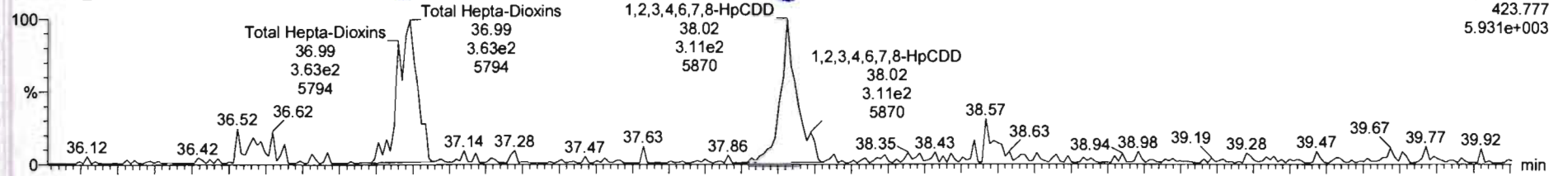
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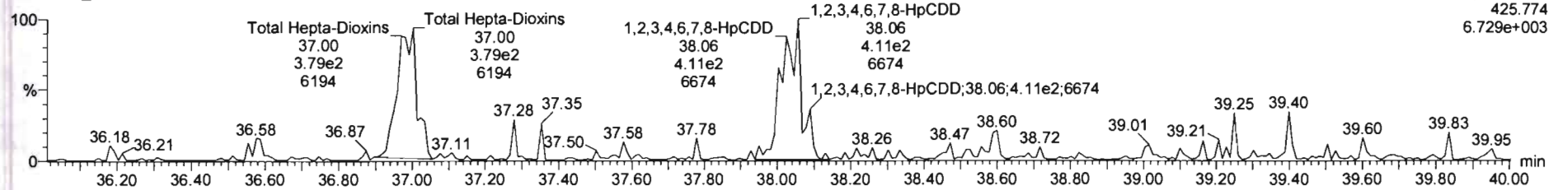
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1,2,3,4,6,7,8-HpCDD

200121R2\_5

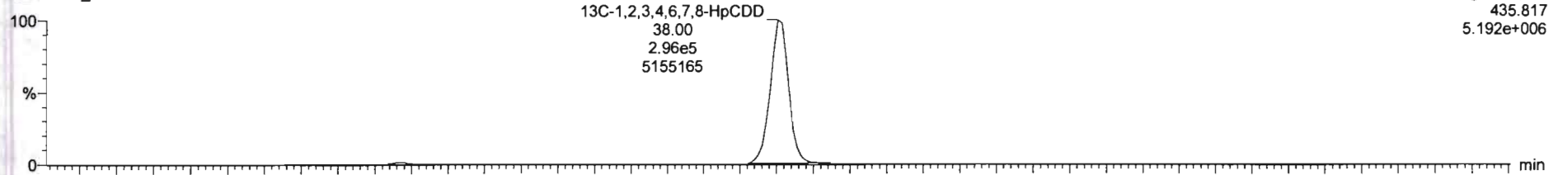


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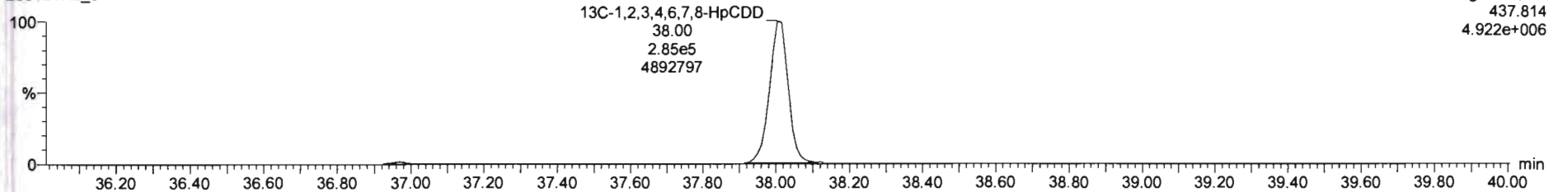


13C-1,2,3,4,6,7,8-HpCDD

200121R2\_5



200121R2\_5



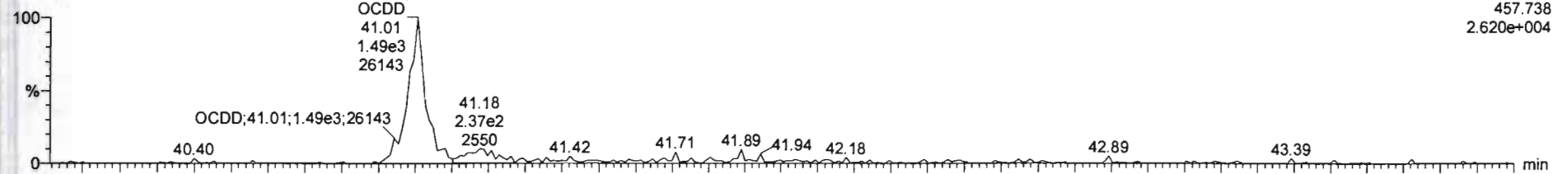
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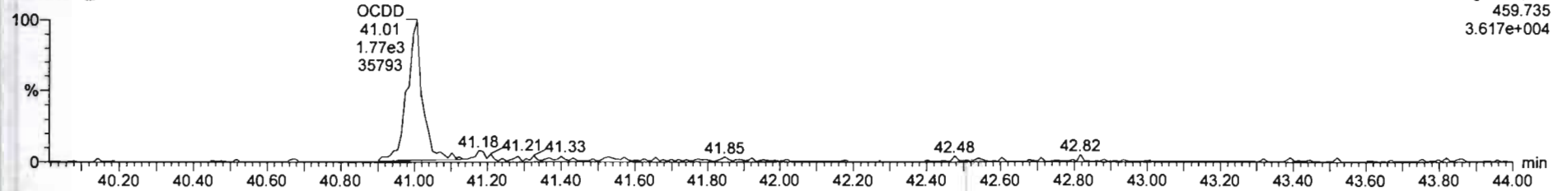
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OCDD

200121R2\_5

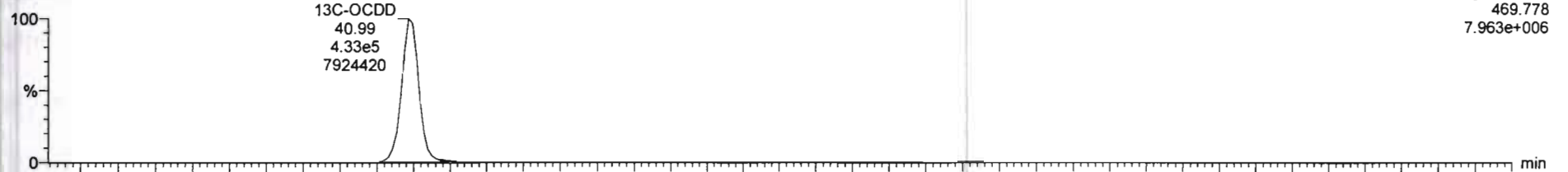


200121R2\_5

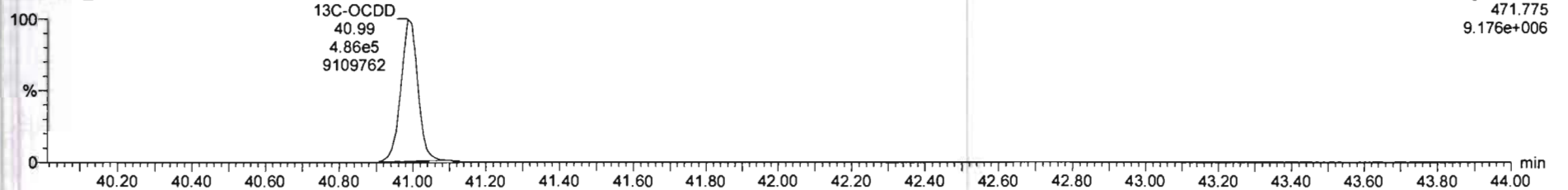


13C-OCDD

200121R2\_5



200121R2\_5



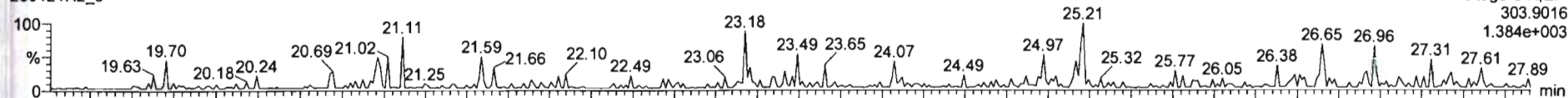
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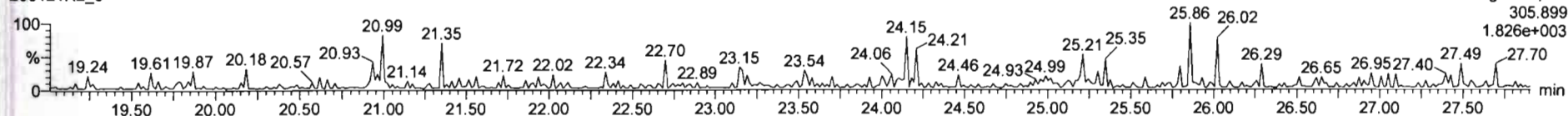
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**2,3,7,8-TCDF**

200121R2\_5

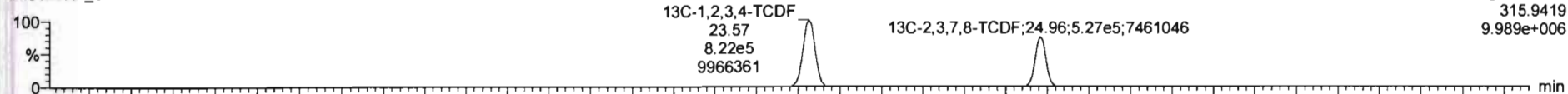


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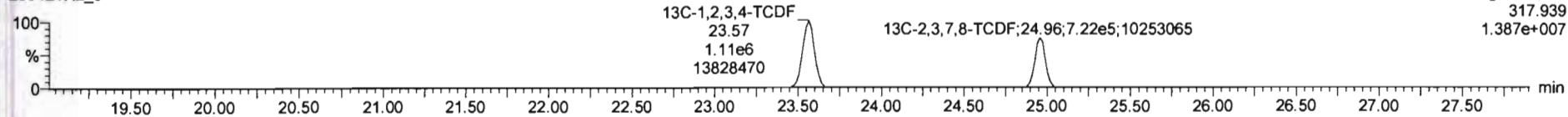


**13C-2,3,7,8-TCDF**

200121R2\_5

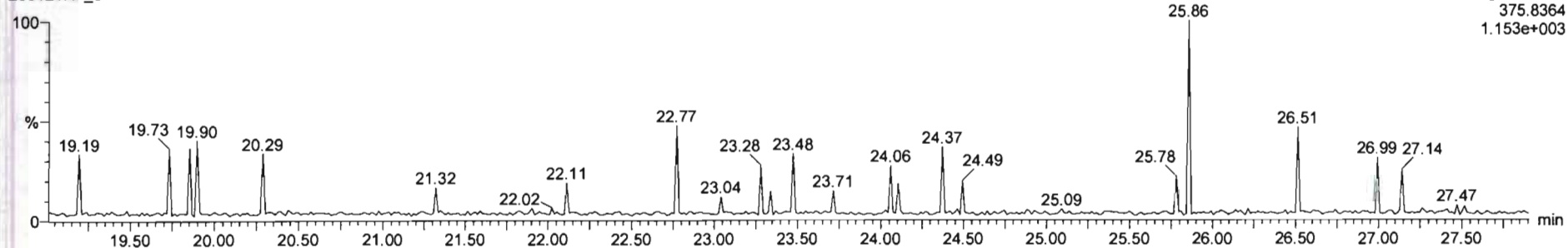


200121R2\_5



**DPE1**

200121R2\_5



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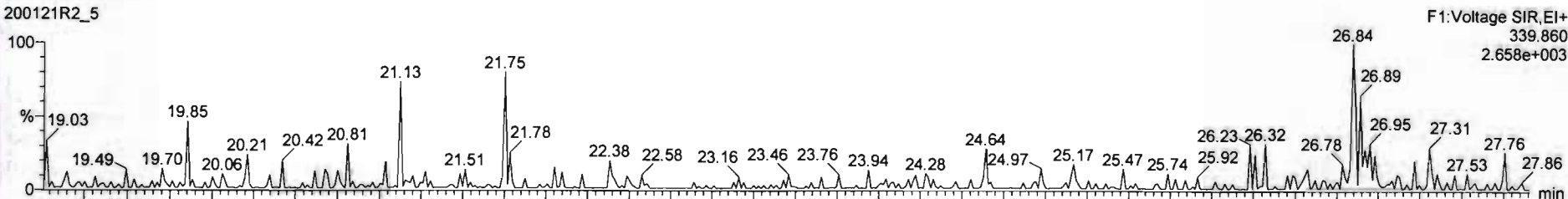
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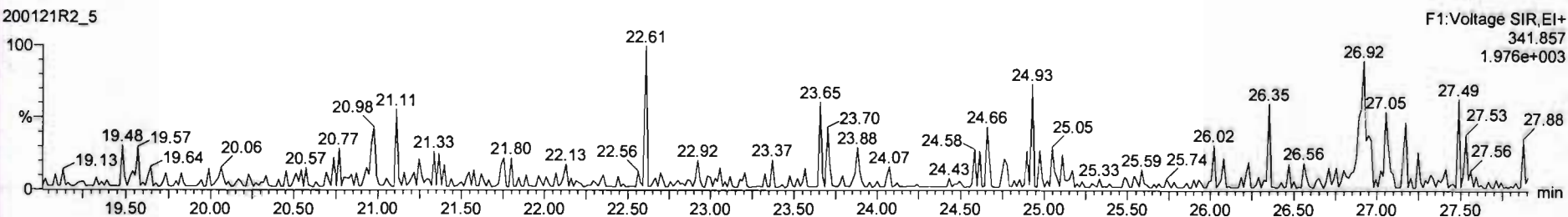
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1st Func. Penta-Furans

200121R2\_5

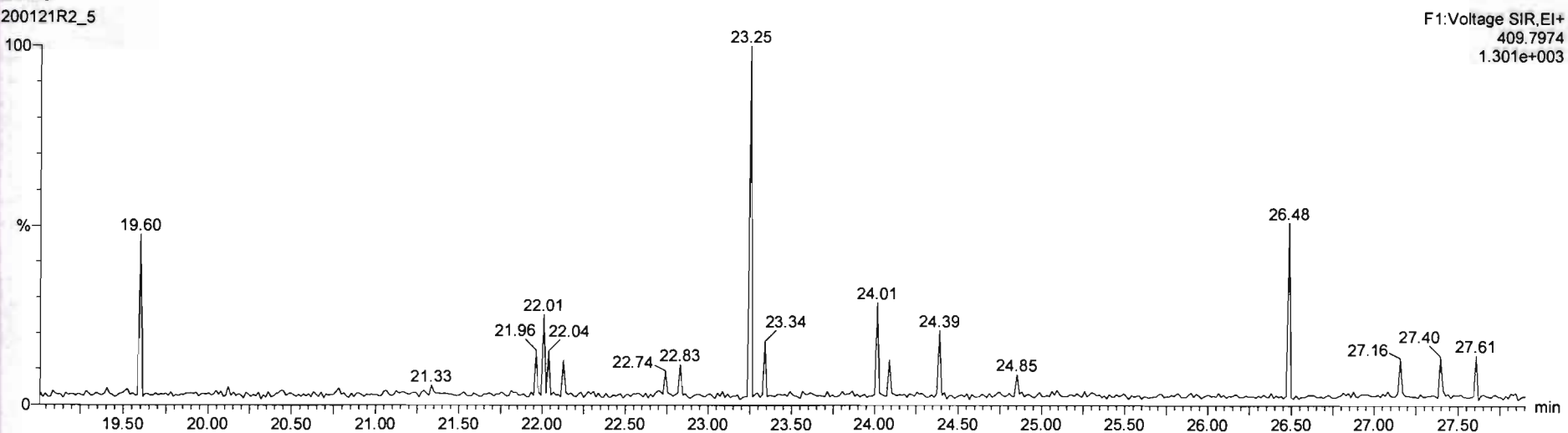


200121R2\_5



DPE6

200121R2\_5



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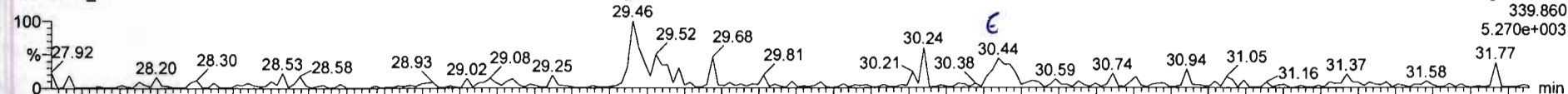
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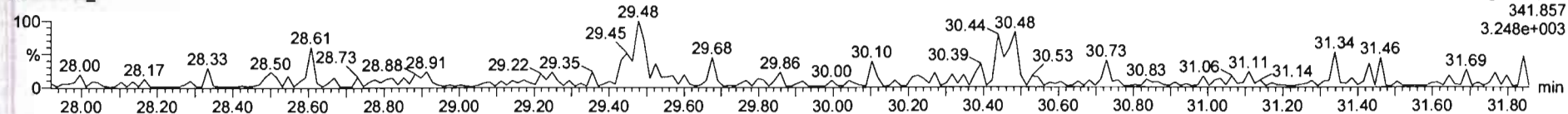
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**1,2,3,7,8-PeCDF**

200121R2\_5

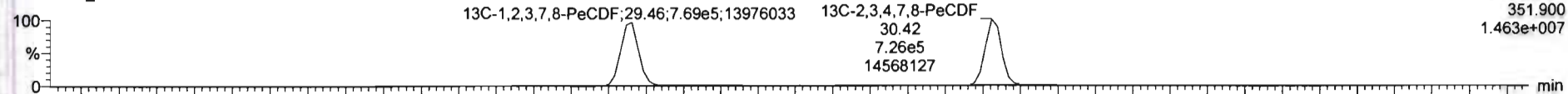


200121R2\_5

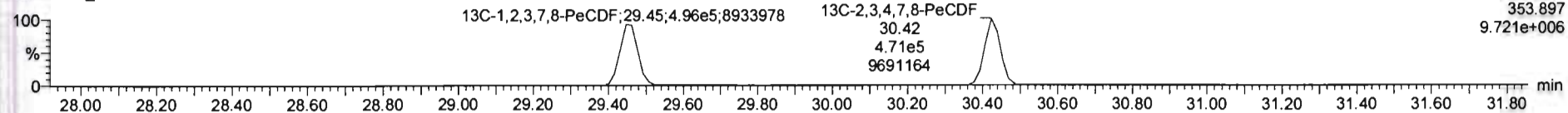


**13C-1,2,3,7,8-PeCDF**

200121R2\_5

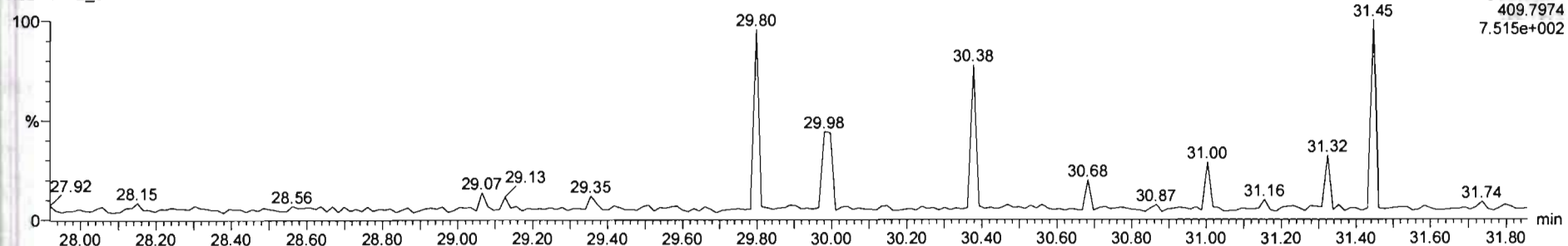


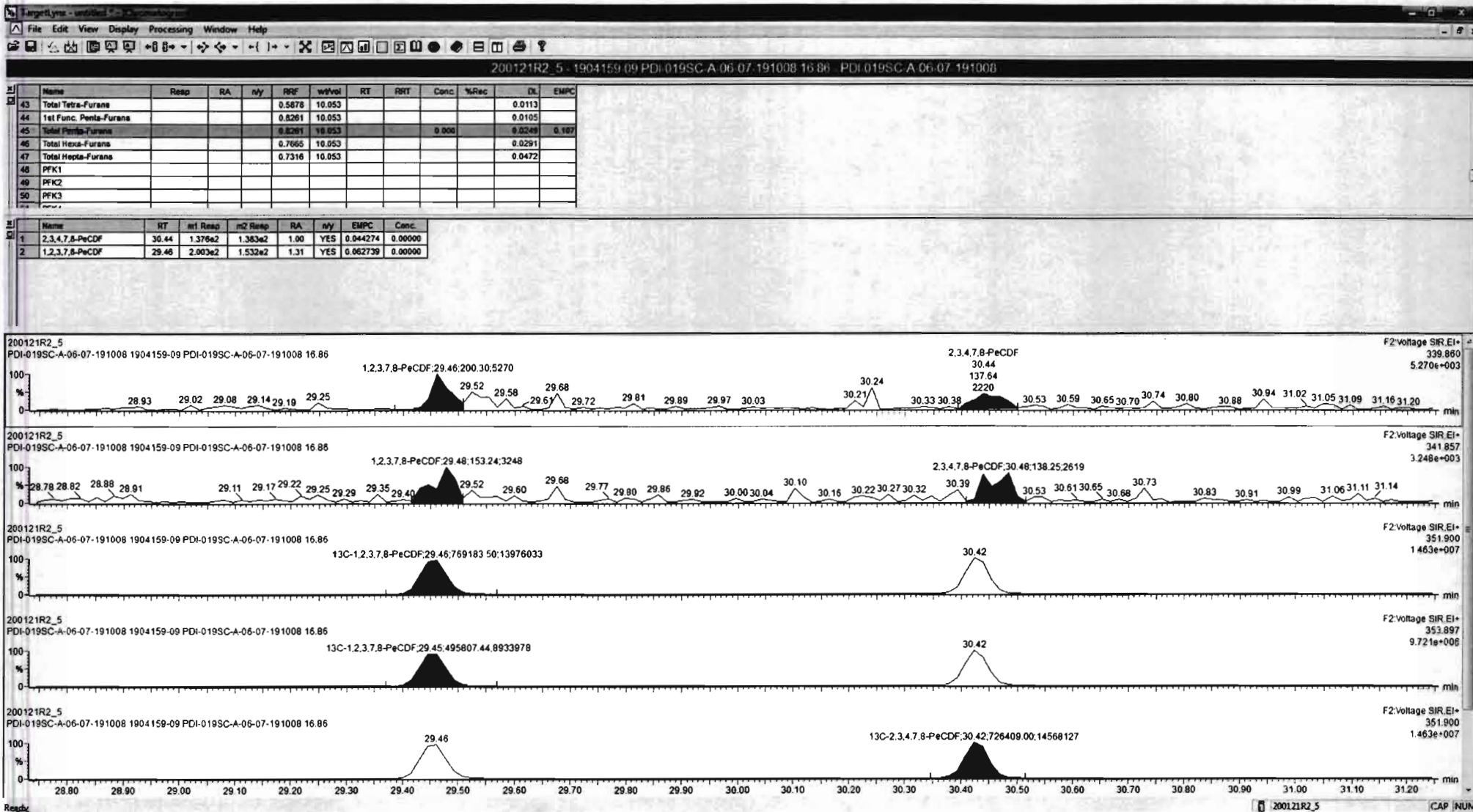
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**DPE2**

200121R2\_5





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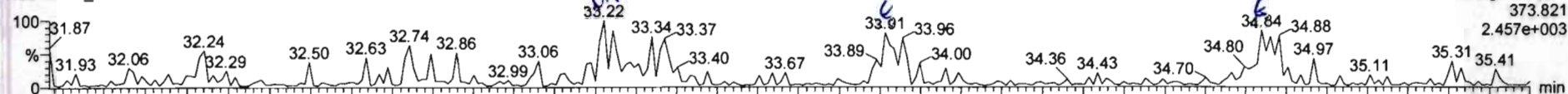
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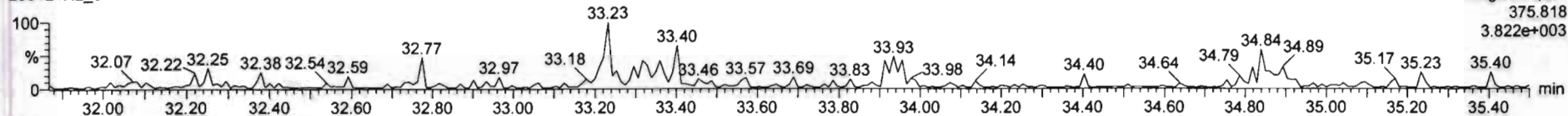
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**1,2,3,4,7,8-HxCDF**

200121R2\_5

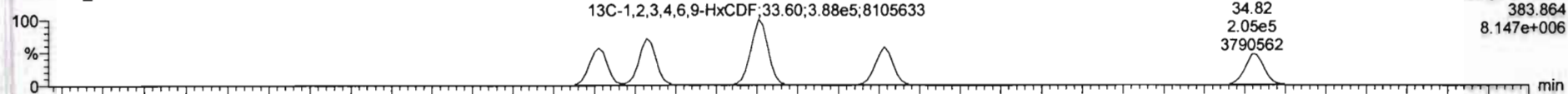


200121R2\_5

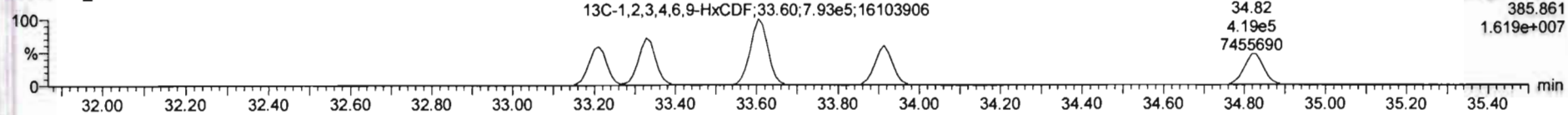


**13C-1,2,3,4,7,8-HxCDF**

200121R2\_5

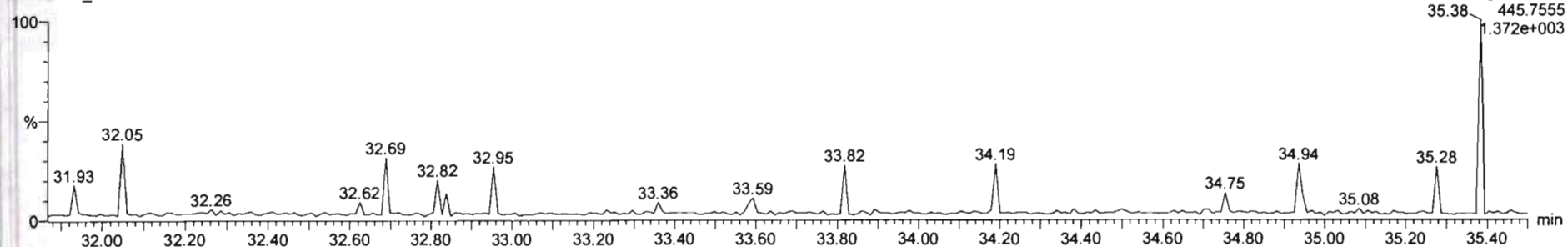


200121R2\_5



**DPE3**

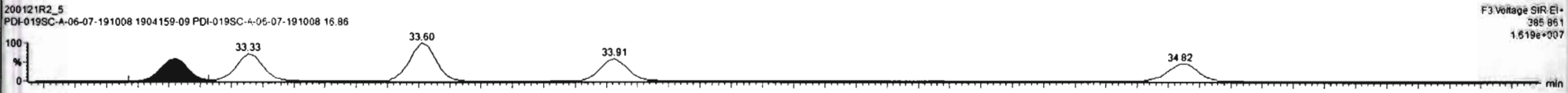
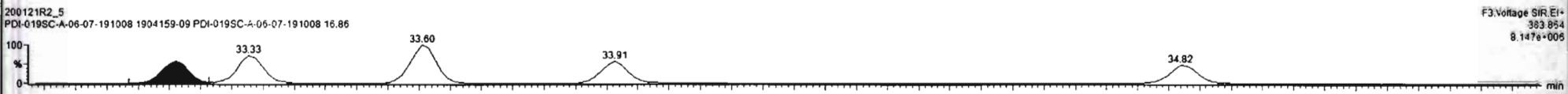
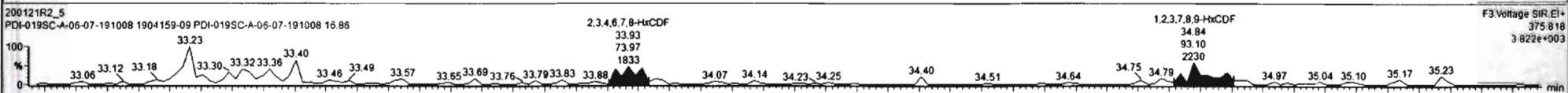
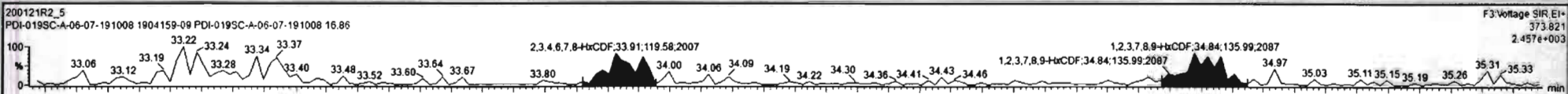
200121R2\_5





Name	Resp	RA	n/y	RRF	wt/Vol	RT	RRT	Conc.	%Rec	DL	EMPC
43 Total Tetra-Furans				0.5878	10.053					0.0113	
44 1st Func. Penta-Furans				0.8261	10.053					0.0105	
45 Total Penta-Furans				0.8261	10.053			0.000	0.0249	0.107	
46 Total Hexa-Furans				2.7955	10.053			0.000	0.0291	0.155	
47 Total Hepta-Furans				0.7316	10.053					0.0472	
48 PFK1											
49 PFK2											
50 PFK3											

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 1,2,3,7,8,9-HxCDF	34.84	1.360e2	9.310e1	1.46	YES	0.093960	0.00000
2 2,3,4,6,7,8-HxCDF	33.91	1.196e2	7.397e1	1.62	YES	0.060934	0.00000



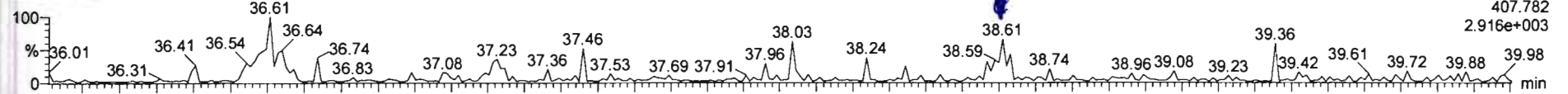
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_5, Date: 22-Jan-2020, Time: 02:04:31, ID: 1904159-09 PDI-019SC-A-06-07-191008 16.86, Description: PDI-019SC-A-06-07-191008

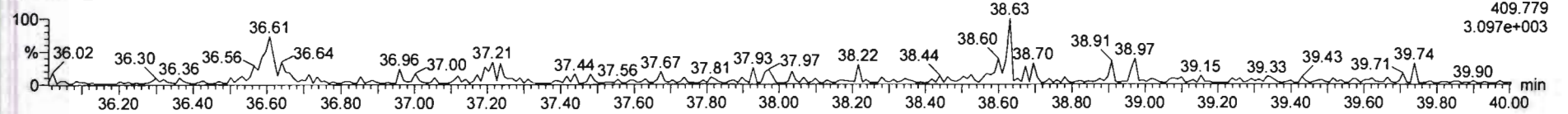
1,2,3,4,6,7,8-HpCDF

200121R2\_5



F4: Voltage SIR, EI+  
407.782  
2.916e+003

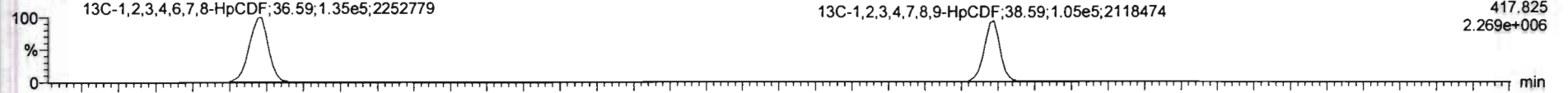
200121R2\_5



F4: Voltage SIR, EI+  
409.779  
3.097e+003

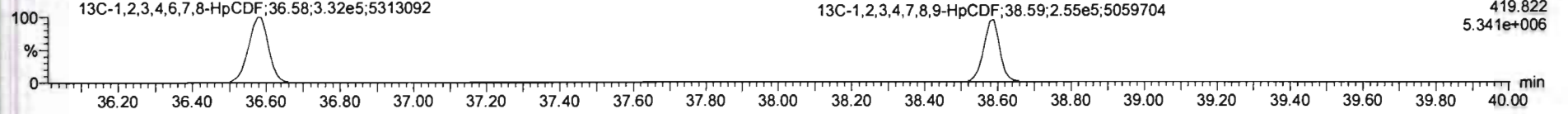
13C-1,2,3,4,6,7,8-HpCDF

200121R2\_5



F4: Voltage SIR, EI+  
417.825  
2.269e+006

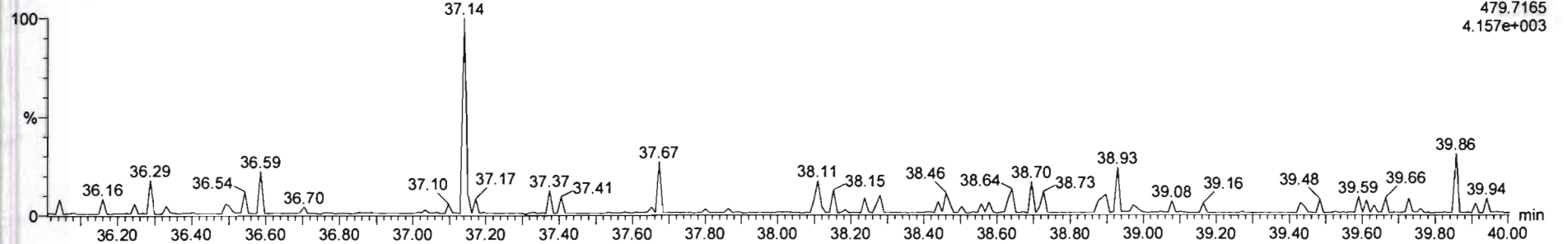
200121R2\_5



F4: Voltage SIR, EI+  
419.822  
5.341e+006

DPE4

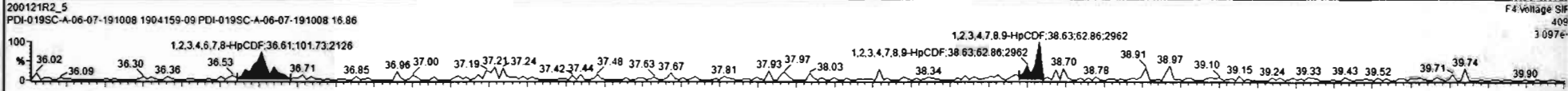
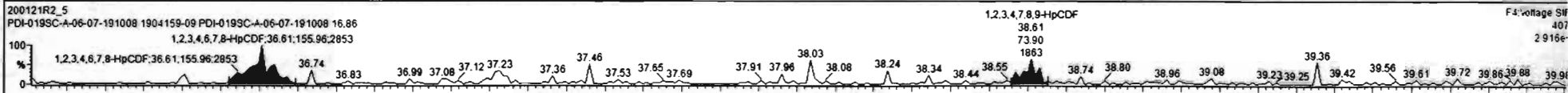
200121R2\_5



F4: Voltage SIR, EI+  
479.7165  
4.157e+003

Name	Resp	RA	n/y	RFB	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
43 Total Tetra-Furans				0.5878	10.053					0.0113	
44 1st Func. Penta-Furans				0.8261	10.053					0.0105	
45 Total Penta-Furans				0.8261	10.053			0.000		0.0249	0.107
46 Total Hexa-Furans				0.7665	10.053			0.000		0.0291	0.155
47 Total Hepta-Furans				0.7316	10.053			0.0025		0.0472	0.213
48 PFK1											
49 PFK2											
50 PFK3											

Name	RT	url Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 1,2,3,4,7,8,9-HpCDF	38.61	7.390e1	6.286e1	1.18	NO	0.002481	0.002481
2 1,2,3,4,6,7,8-HpCDF	38.61	1.560e2	1.017e2	1.53	YES	0.12079	0.00000



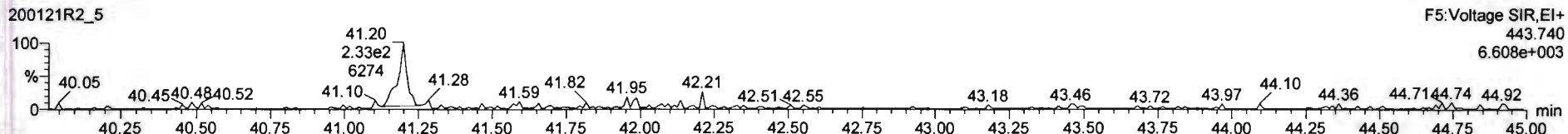
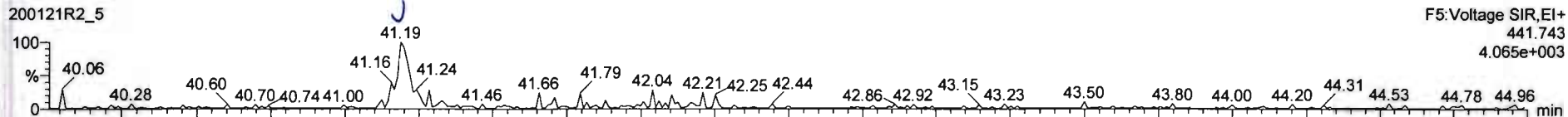
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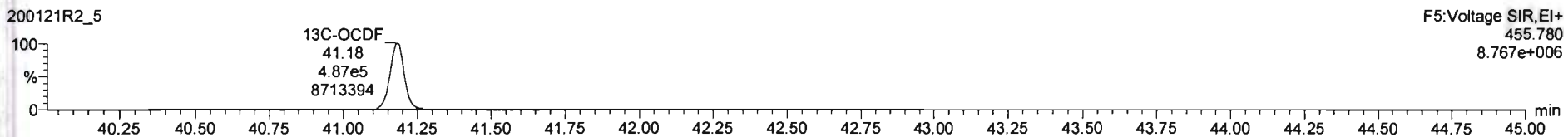
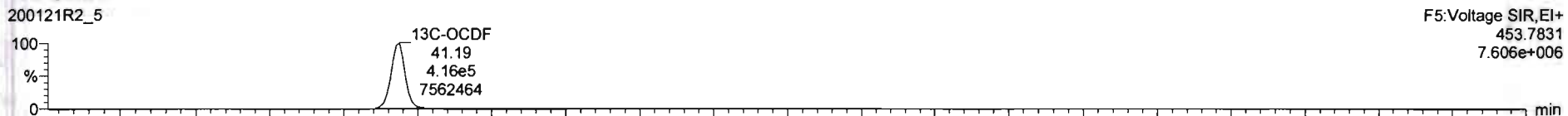
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Name: 200121R2\_5, Date: 22-Jan-2020, Time: 02:04:31, ID: 1904159-09 PDI-019SC-A-06-07-191008 16.86, Description: PDI-019SC-A-06-07-191008

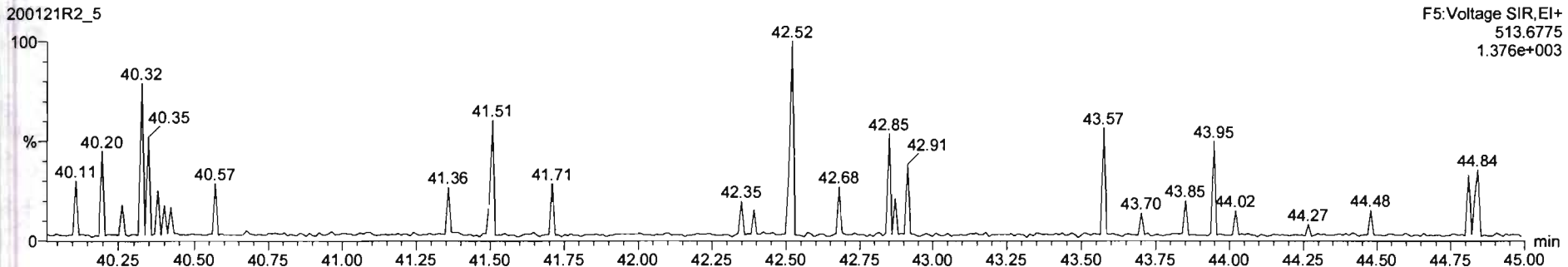
OCDF



13C-OCDF

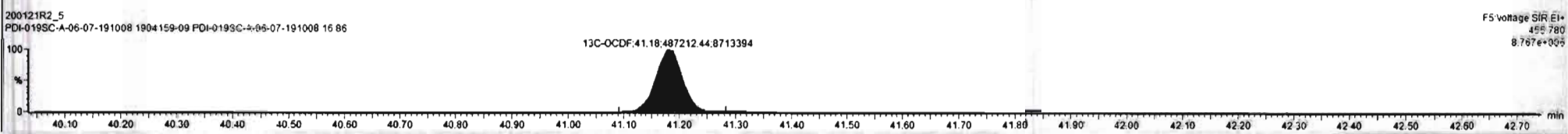
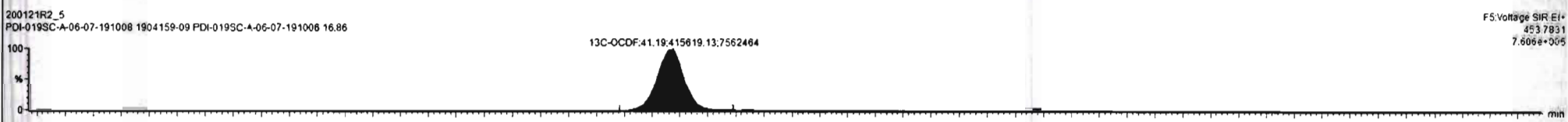
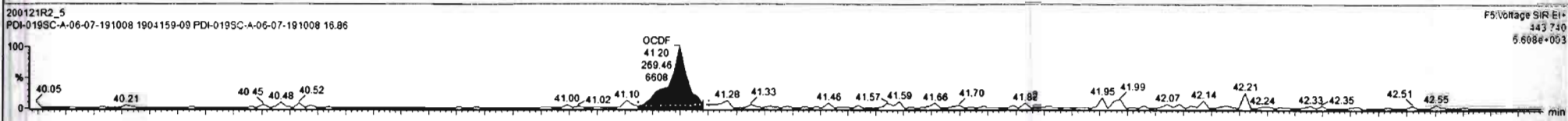
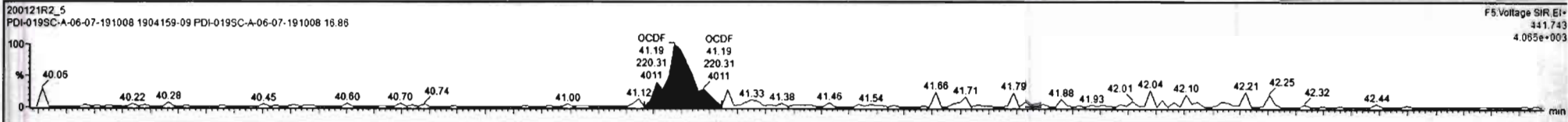


DPE5



Name	Resp	RA	n/y	R/F	wtVal	RT	RRT	Conc.	%Rec	DL	EMPC
17	OCDF	4.90e2	0.82	NO	0.6386	10.053	41.19	1.000	0.338	0.0681	0.338
18	13C-2,3,7,8-TCDD	8.90e5	0.79	NO	1.1157	10.053	25.83	1.025	137	69.1	0.106
19	13C-1,2,3,7,8-PeCDD	8.00e5	0.64	NO	0.8411	10.053	30.73	1.220	147	74.1	0.189
20	13C-1,2,3,4,7,8-HxCDD	6.90e5	1.26	NO	0.9379	10.053	34.08	1.014	124	62.3	0.155
21	13C-1,2,3,6,7,8-HxCDD	7.37e5	1.24	NO	1.0654	10.053	34.18	1.017	117	58.6	0.136
22	13C-1,2,3,7,8,9-HxCDD	7.76e5	1.23	NO	1.0303	10.053	34.47	1.026	127	63.8	0.141
23	13C-1,2,3,4,6,7,8-HpCDD	5.82e5	1.04	NO	0.7099	10.053	38.00	1.131	136	69.4	0.300
24	13C-OCDD	9.19e5	0.89	NO	0.6010	10.053	40.99	1.220	258	64.7	0.218

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.

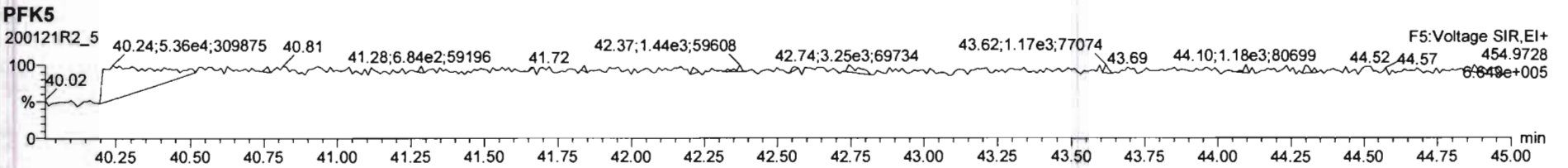
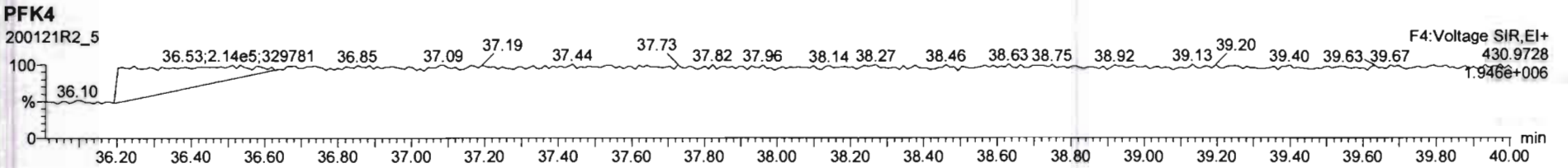
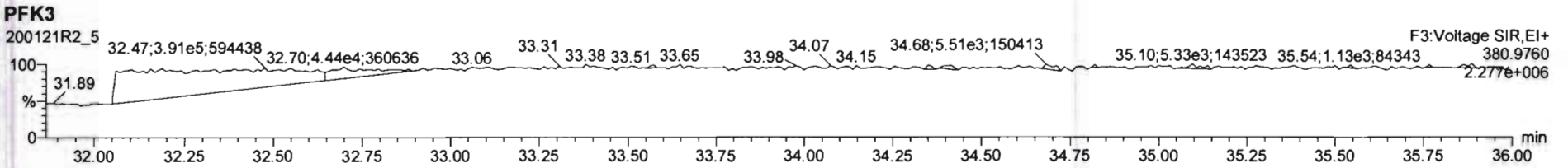
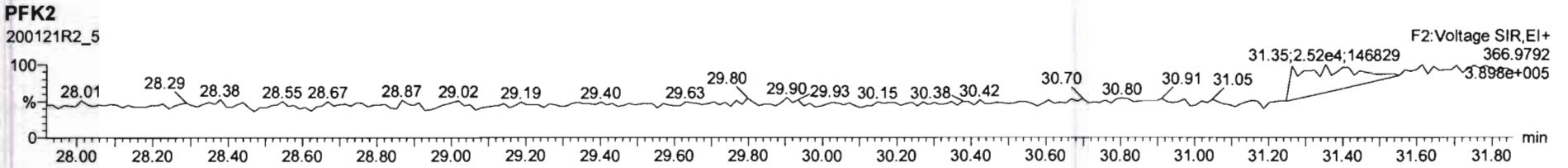
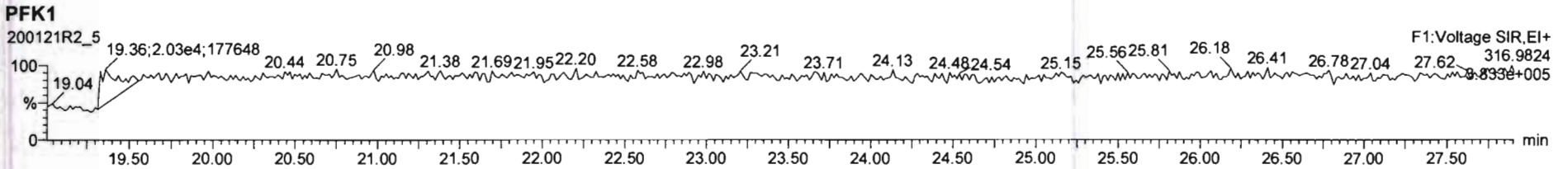


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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_5, Date: 22-Jan-2020, Time: 02:04:31, ID: 1904159-09 PDI-019SC-A-06-07-191008 16.86, Description: PDI-019SC-A-06-07-191008



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-8.qld

Last Altered: Tuesday, January 28, 2020 12:25:51 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:30:19 Pacific Standard Time

GRB 01/28/2020

CT 01/31/2020

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 28 Jan 2020 12:13:35

Name: VG7 200116D2-8, Date: 17-JAN-2020, Time: 05:09:06, ID: 1904159-10 PDI-019SC-A-07-08-191008,  
Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		5.73e4	10.1337	0.905			1.001		26.00					0.237
2	2 1,2,3,7,8-PeCDD		3.91e4	10.1337	0.903			1.001		30.57					0.355
3	3 1,2,3,4,7,8-HxCDD		2.98e4	10.1337	1.101			1.000		33.90					0.425
4	4 1,2,3,6,7,8-HxCDD		3.61e4	10.1337	0.939			1.000		33.99					0.468
5	5 1,2,3,7,8,9-HxCDD		3.43e4	10.1337	0.961			1.001		34.32					0.523
6	6 1,2,3,4,6,7,8-HpCDD		3.19e4	10.1337	0.979			1.000		37.79					0.442
7	7 OCDD		5.23e4	10.1337	0.959			1.000		41.03					0.930
8	8 2,3,7,8-TCDF		8.24e4	10.1337	0.950			1.001		25.20					0.213
9	9 1,2,3,7,8-PeCDF		6.81e4	10.1337	0.960			1.001		29.38					0.157
10	10 2,3,4,7,8-PeCDF		6.37e4	10.1337	1.015			1.001		30.30					0.161
11	11 1,2,3,4,7,8-HxCDF		4.28e4	10.1337	1.177			1.000		33.00					0.242
12	12 1,2,3,6,7,8-HxCDF		5.02e4	10.1337	1.069			1.000		33.12					0.245
13	13 2,3,4,6,7,8-HxCDF		4.55e4	10.1337	1.114			1.001		33.75					0.276
14	14 1,2,3,7,8,9-HxCDF		4.14e4	10.1337	1.062			1.000		34.68					0.470
15	15 1,2,3,4,6,7,8-HpCDF		3.95e4	10.1337	1.128			1.001		36.56					0.407
16	16 1,2,3,4,7,8,9-HpCDF		3.30e4	10.1337	1.280			1.000		38.31					0.360
17	17 OCDF		7.20e4	10.1337	0.947			1.000		41.27					0.511
18	18 13C-2,3,7,8-TCDD	5.73e4	7.64e4	10.1337	1.095	0.775	NO	1.023	1.023	25.97	25.97	135.08	68.4		0.552
19	19 13C-1,2,3,7,8-PeCDD	3.91e4	7.64e4	10.1337	0.881	0.677	NO	1.203	1.203	30.54	30.55	114.61	58.1		0.669
20	20 13C-1,2,3,4,7,8-Hx...	2.98e4	7.24e4	10.1337	0.642	1.225	NO	1.014	1.014	33.87	33.89	126.35	64.0		3.04
21	21 13C-1,2,3,6,7,8-Hx...	3.61e4	7.24e4	10.1337	0.856	1.254	NO	1.017	1.017	33.99	33.99	115.00	58.3		2.28
22	22 13C-1,2,3,7,8,9-Hx...	3.43e4	7.24e4	10.1337	0.807	1.187	NO	1.026	1.026	34.28	34.29	116.05	58.8		2.42
23	23 13C-1,2,3,4,6,7,8-H...	3.19e4	7.24e4	10.1337	0.654	1.048	NO	1.131	1.131	37.78	37.78	133.17	67.5		1.79
24	24 13C-OCDD	5.23e4	7.24e4	10.1337	0.580	0.925	NO	1.228	1.228	41.03	41.03	246.00	62.3		1.27
25	25 13C-2,3,7,8-TCDF	8.24e4	1.04e5	10.1337	1.035	0.779	NO	0.992	0.991	25.19	25.18	151.58	76.8		0.744
26	26 13C-1,2,3,7,8-PeCDF	6.81e4	1.04e5	10.1337	0.854	1.554	NO	1.156	1.156	29.36	29.36	151.81	76.9		1.34
27	27 13C-2,3,4,7,8-PeCDF	6.37e4	1.04e5	10.1337	0.847	1.564	NO	1.192	1.192	30.27	30.27	143.22	72.6		1.36
28	28 13C-1,2,3,4,7,8-Hx...	4.28e4	7.24e4	10.1337	0.832	0.512	NO	0.987	0.988	32.98	33.00	140.32	71.1		2.25
29	29 13C-1,2,3,6,7,8-Hx...	5.02e4	7.24e4	10.1337	1.034	0.504	NO	0.991	0.991	33.10	33.11	132.18	67.0		1.81
30	30 13C-2,3,4,6,7,8-Hx...	4.55e4	7.24e4	10.1337	0.953	0.507	NO	1.009	1.009	33.71	33.72	130.18	66.0		1.96
31	31 13C-1,2,3,7,8,9-Hx...	4.14e4	7.24e4	10.1337	0.828	0.518	NO	1.038	1.038	34.67	34.68	136.30	69.1		2.26

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-8.qld

Last Altered: Tuesday, January 28, 2020 12:25:51 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:30:19 Pacific Standard Time

Name: VG7 200116D2-8, Date: 17-JAN-2020, Time: 05:09:06, ID: 1904159-10 PDI-019SC-A-07-08-191008,  
 Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	3.95e4	7.24e4	10.1337	0.757	0.431	NO	1.093	1.093	36.50	36.52	142.15	72.0		1.84
33	33 13C-1,2,3,4,7,8,9-H...	3.30e4	7.24e4	10.1337	0.581	0.431	NO	1.147	1.147	38.31	38.31	154.96	78.5		2.40
34	34 13C-OCDF	7.20e4	7.24e4	10.1337	0.689	0.843	NO	1.235	1.235	41.25	41.27	285.00	72.2		1.13
35	35 37Cl-2,3,7,8-TCDD	3.65e4	7.64e4	10.1337	1.198			1.024	1.023	25.99	25.99	78.690	99.7		0.172
36	36 13C-1,2,3,4-TCDD	7.64e4	7.64e4	10.1337	1.000	0.774	NO	1.000	1.000	25.39	25.39	197.36	100.0		0.605
37	37 13C-1,2,3,4-TCDF	1.04e5	1.04e5	10.1337	1.000	0.806	NO	1.000	1.000	23.93	23.93	197.36	100.0		0.770
38	38 13C-1,2,3,4,6,9-Hx...	7.24e4	7.24e4	10.1337	1.000	0.526	NO	1.000	1.000	33.37	33.40	197.36	100.0		1.87
39	39 Total Tetra-Dioxins		5.73e4	10.1337	0.901			0.000		25.50					0.122
40	40 Total Penta-Dioxins		3.91e4	10.1337	0.872			0.000		30.00					0.152
41	41 Total Hexa-Dioxins		0.00e0	10.1337	0.976			0.000		33.80					0.238
42	42 Total Hepta-Dioxins		3.19e4	10.1337	0.989			0.000		37.75					0.229
43	43 Total Tetra-Furans		8.24e4	10.1337	0.943			0.000		24.00					0.101
44	44 1st Func. Penta-Fur...		0.00e0	10.1337	0.940			0.000		27.63					0.0665
45	45 Total Penta-Furans		0.00e0	10.1337	0.940			0.000		30.00					0.0789
46	46 Total Hexa-Furans		0.00e0	10.1337	1.078			0.000		33.00					0.150
47	47 Total Hepta-Furans		0.00e0	10.1337	1.135			0.000		37.75					0.197



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-8.qld

Last Altered: Tuesday, January 28, 2020 12:25:51 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:30:19 Pacific Standard Time

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 28 Jan 2020 12:13:35

Name: VG7 200116D2-8, Date: 17-JAN-2020, Time: 05:09:06, ID: 1904159-10 PDI-019SC-A-07-08-191008, Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Tetra-Dioxins

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Penta-Dioxins

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Hexa-Dioxins

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Hepta-Dioxins

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Tetra-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Penta-Furans function 1

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Penta-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-8.qld

Last Altered: Tuesday, January 28, 2020 12:25:51 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:30:19 Pacific Standard Time

Name: VG7 200116D2-8, Date: 17-JAN-2020, Time: 05:09:06, ID: 1904159-10 PDI-019SC-A-07-08-191008,  
Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Hepta-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Vista Analytical Laboratory

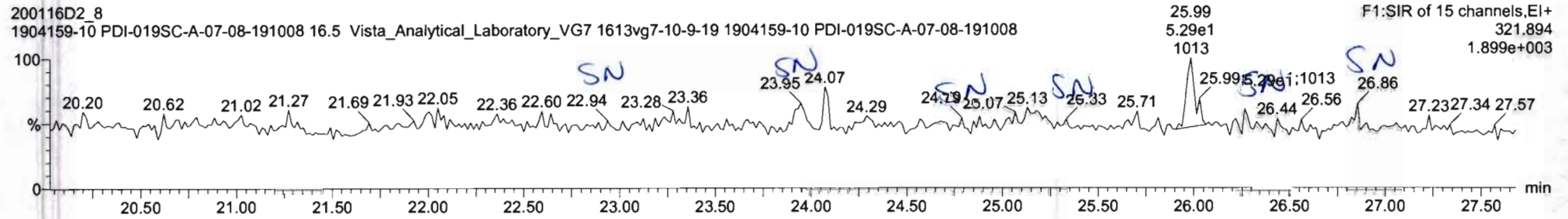
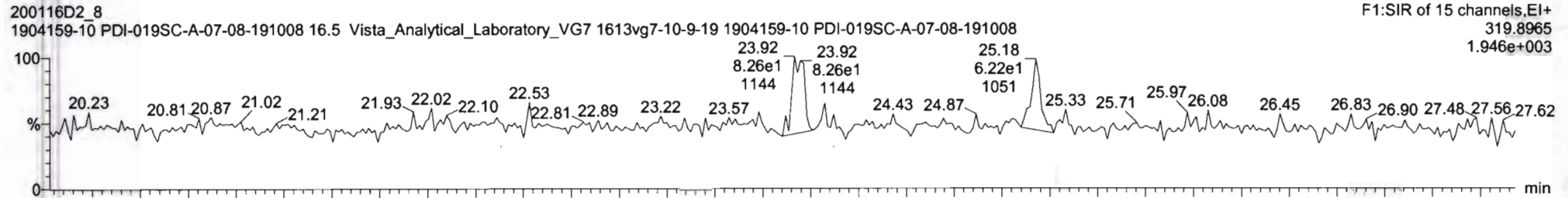
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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

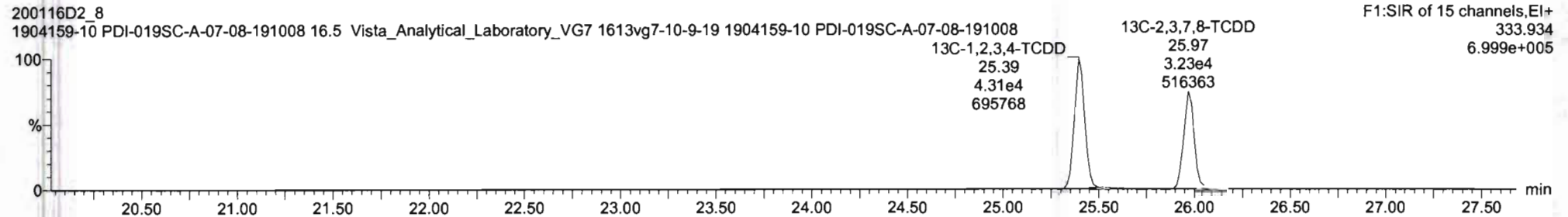
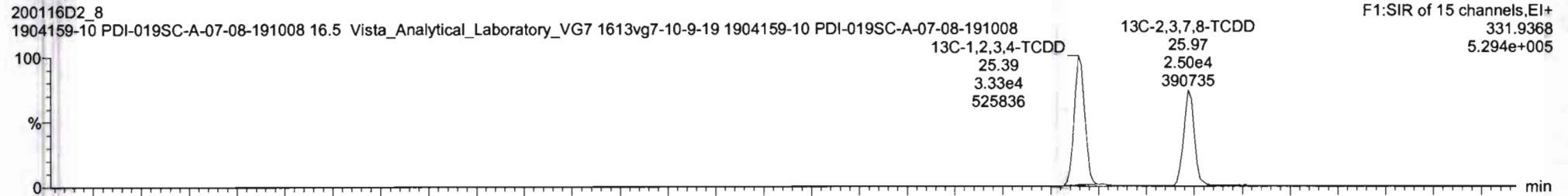
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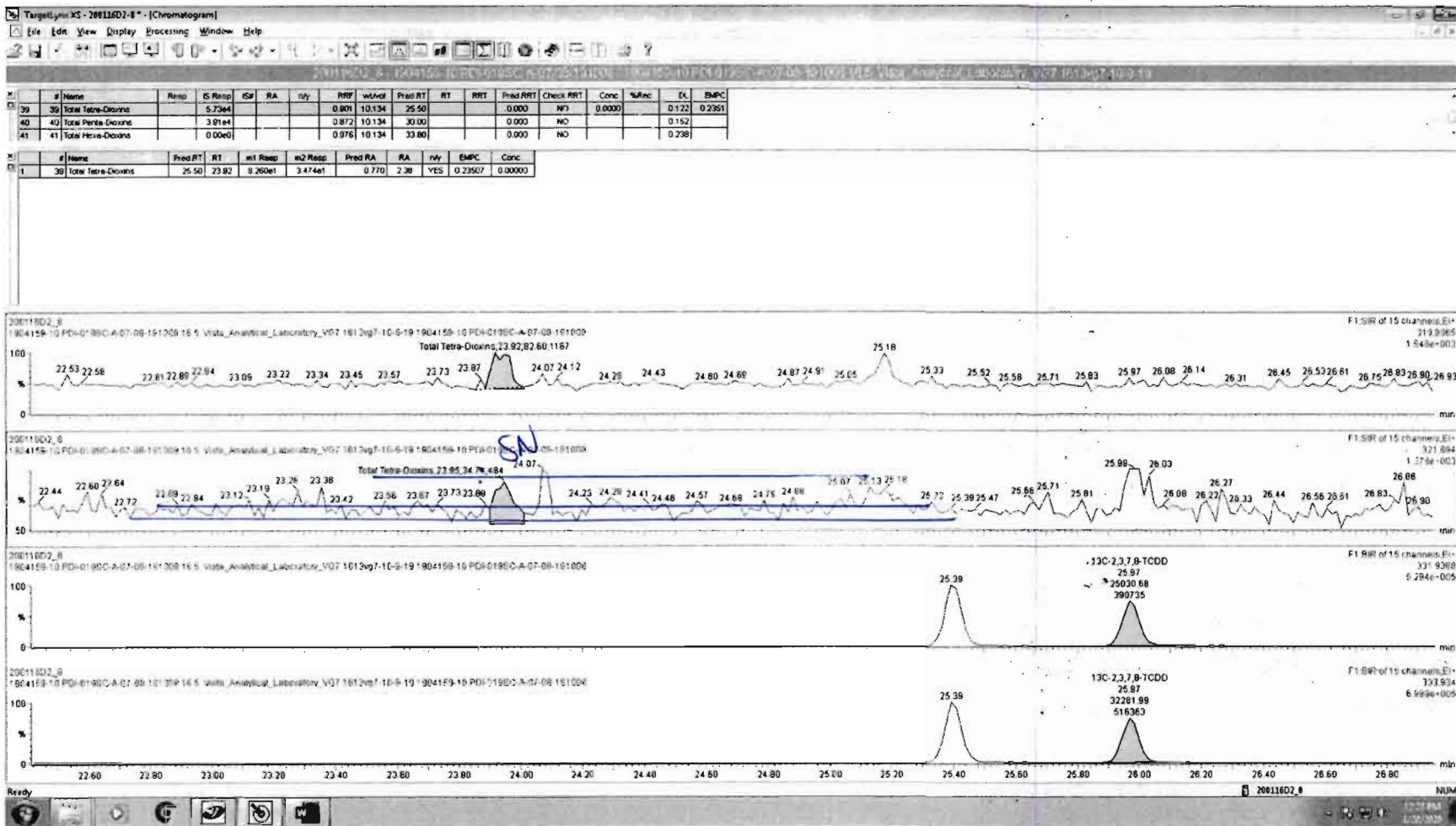
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Total Tetra-Dioxins



13C-2,3,7,8-TCDD





Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

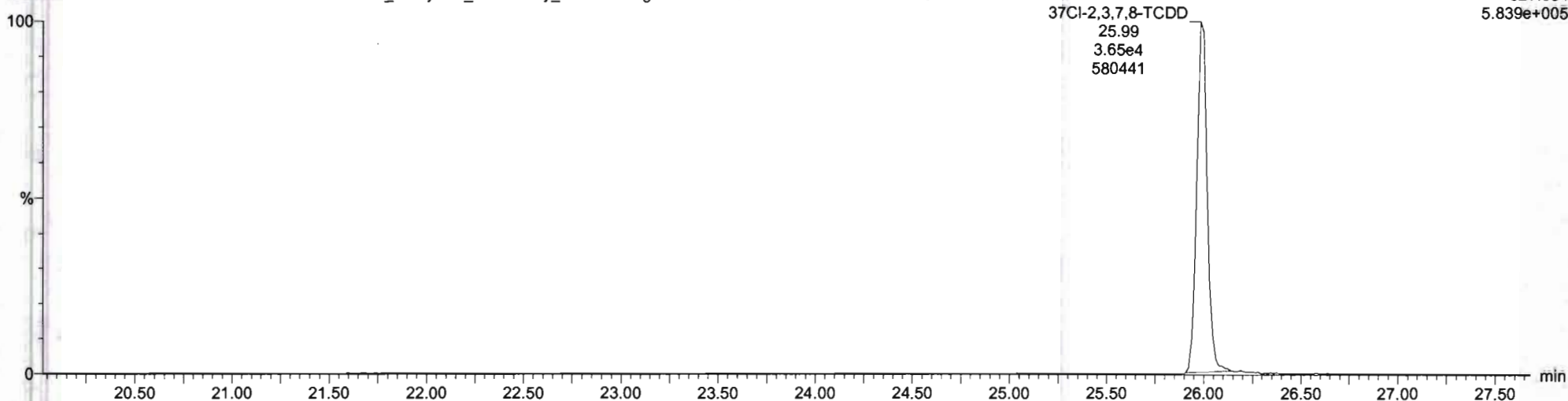
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Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**37Cl-2,3,7,8-TCDD**

200116D2\_8  
1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-10 PDI-019SC-A-07-08-191008

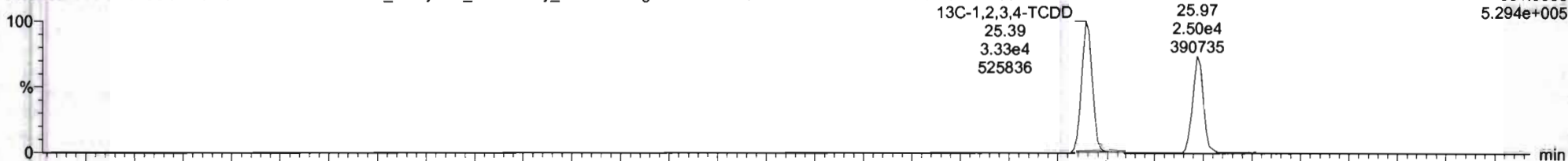
F1:SIR of 15 channels,EI+  
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5.839e+005



**13C-1,2,3,4-TCDD**

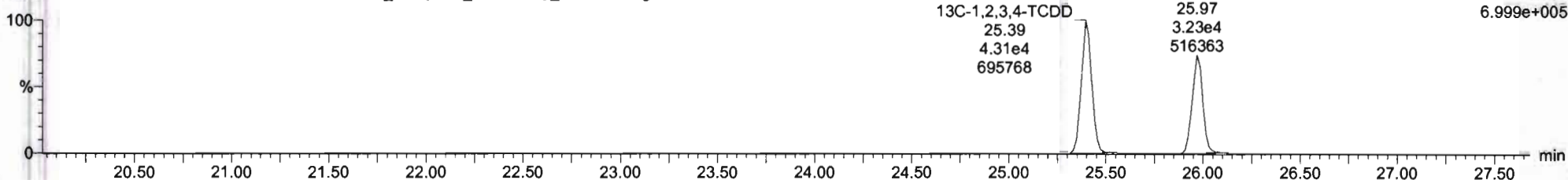
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F1:SIR of 15 channels,EI+  
331.9368  
5.294e+005



200116D2\_8  
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F1:SIR of 15 channels,EI+  
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6.999e+005



Vista Analytical Laboratory

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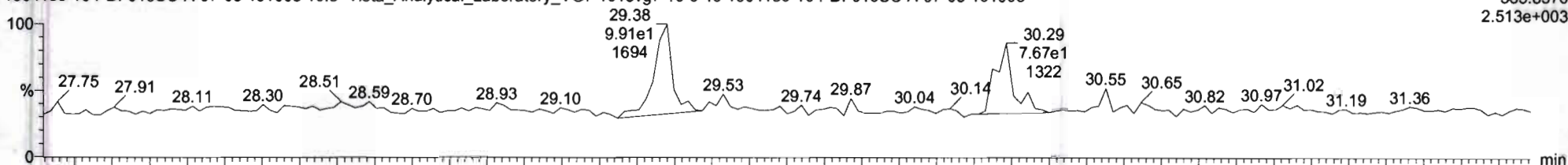
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Name: VG7 200116D2-8, Date: 17-JAN-2020, Time: 05:09:06, ID: 1904159-10 PDI-019SC-A-07-08-191008, Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Penta-Dioxins

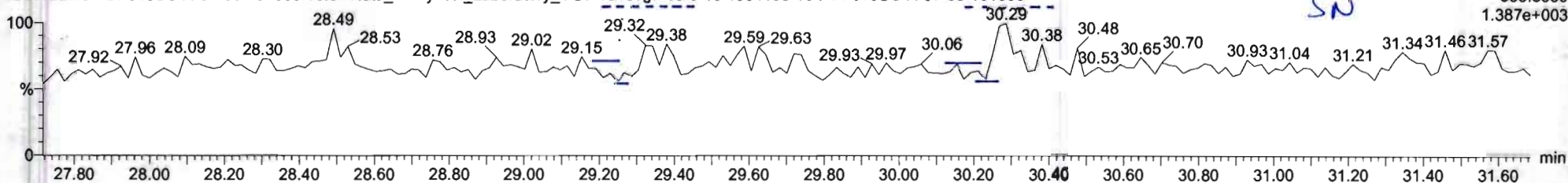
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F2:SIR of 17 channels,EI+ 353.8576 2.513e+003



200116D2\_8 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-10 PDI-019SC-A-07-08-191008

F2:SIR of 17 channels,EI+ 355.8550 1.387e+003



13C-1,2,3,7,8-PeCDD

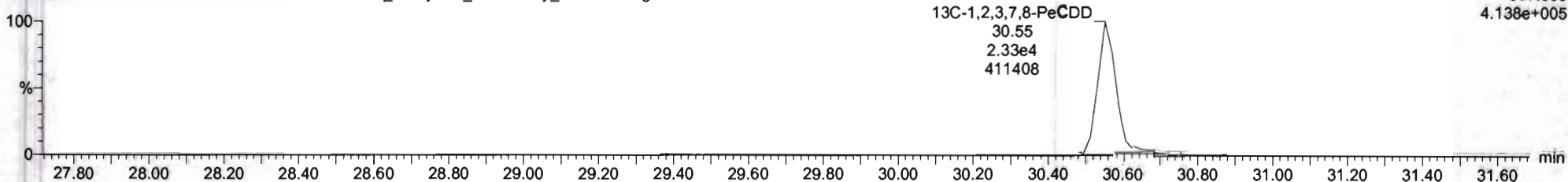
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F2:SIR of 17 channels,EI+ 365.8978 2.628e+005



200116D2\_8 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-10 PDI-019SC-A-07-08-191008

F2:SIR of 17 channels,EI+ 367.895 4.138e+005



Vista Analytical Laboratory

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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

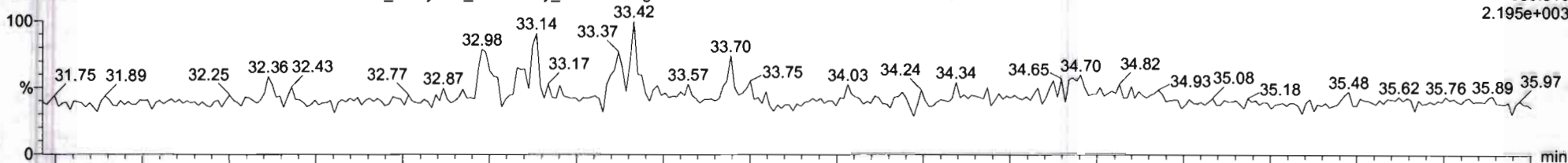
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Total Hexa-Dioxins

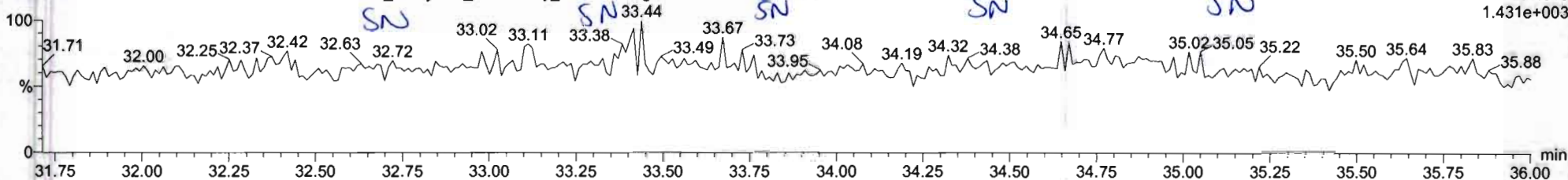
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F3:SIR of 11 channels,EI+  
389.816  
2.195e+003



200116D2\_8  
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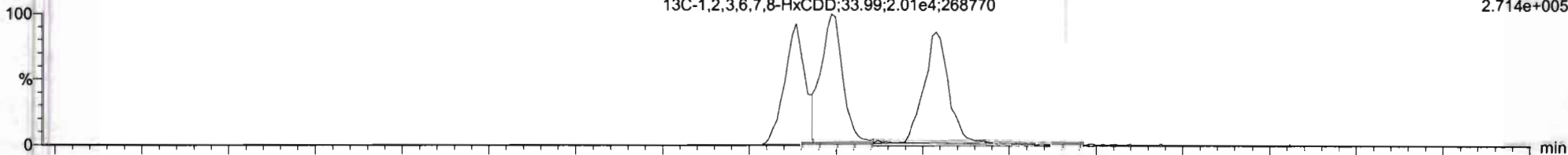
F3:SIR of 11 channels,EI+  
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1.431e+003



13C-1,2,3,4,7,8-HxCDD

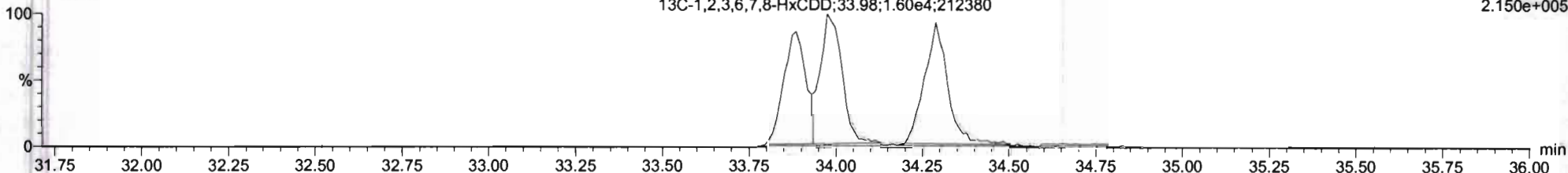
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F3:SIR of 11 channels,EI+  
401.856  
2.714e+005



200116D2\_8  
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13C-1,2,3,6,7,8-HxCDD;33.98;1.60e4;212380

F3:SIR of 11 channels,EI+  
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Vista Analytical Laboratory

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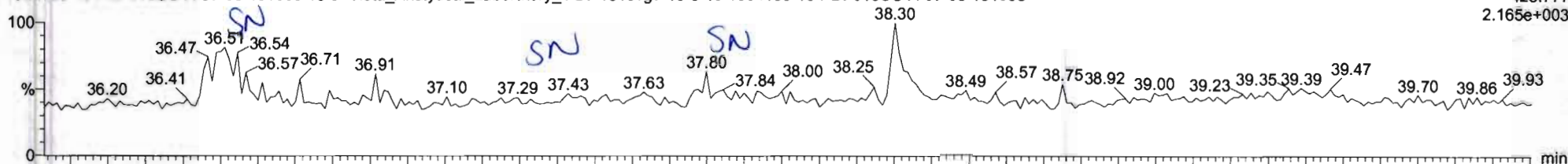
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Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Hepta-Dioxins

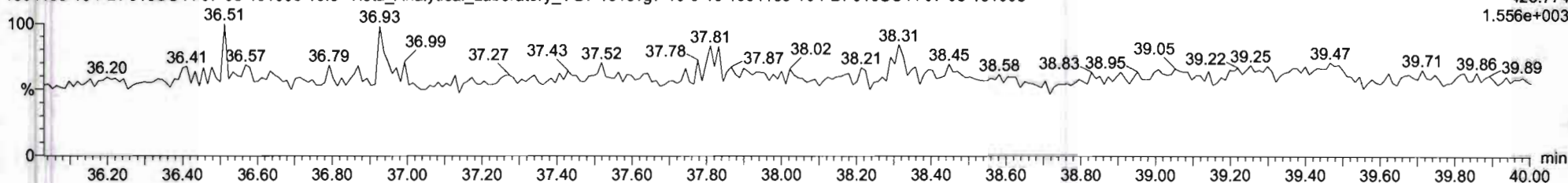
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F4:SIR of 11 channels,EI+  
423.777  
2.165e+003



200116D2\_8  
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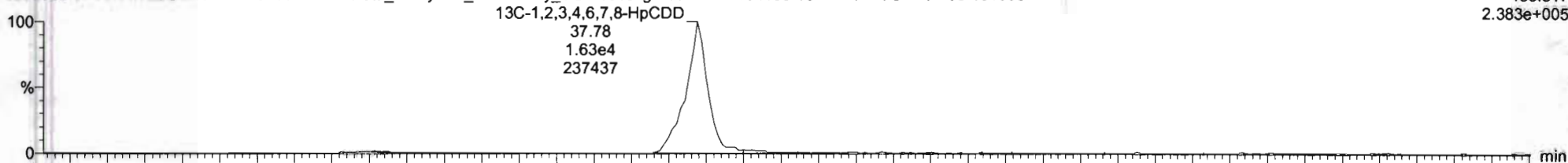
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13C-1,2,3,4,6,7,8-HpCDD

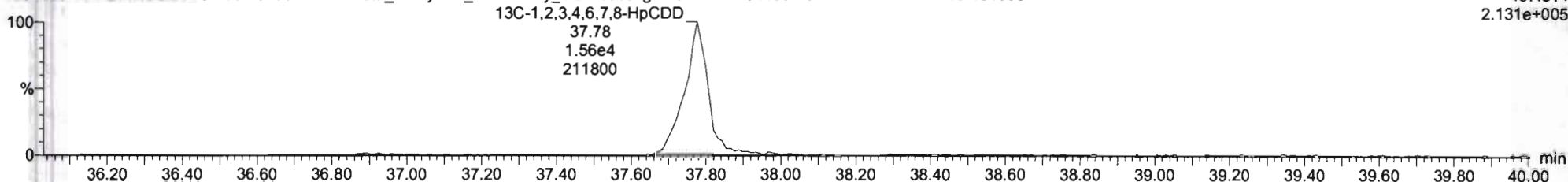
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F4:SIR of 11 channels,EI+  
435.817  
2.383e+005



200116D2\_8  
1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-10 PDI-019SC-A-07-08-191008

F4:SIR of 11 channels,EI+  
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2.131e+005





Vista Analytical Laboratory

Dataset: Untitled

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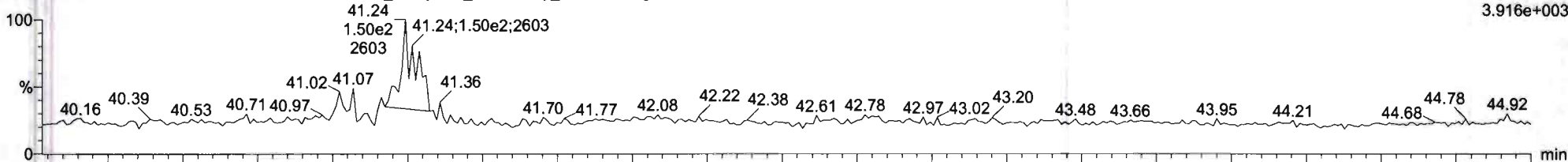
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OCDD

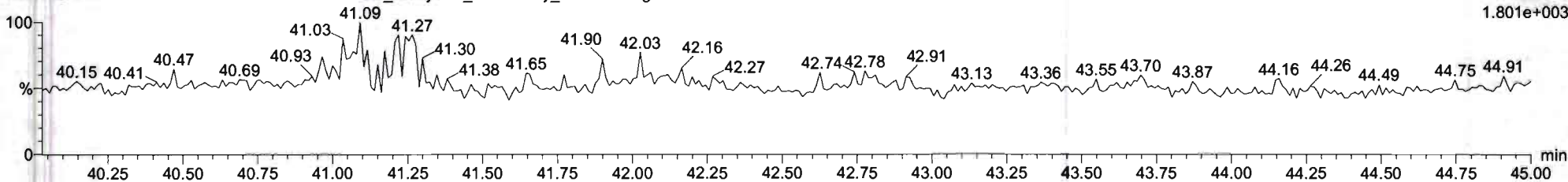
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F5:SIR of 11 channels,EI+  
457.738  
3.916e+003



200116D2\_8  
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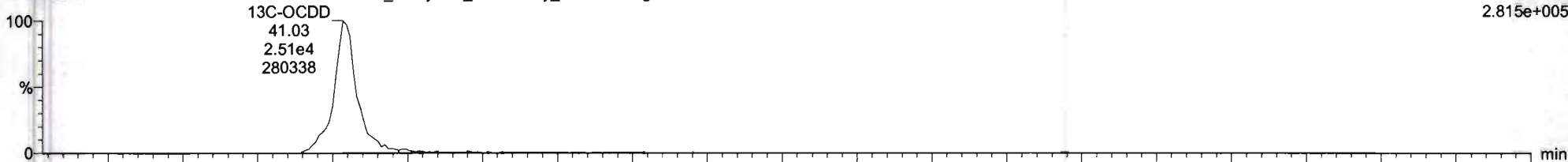
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13C-OCDD

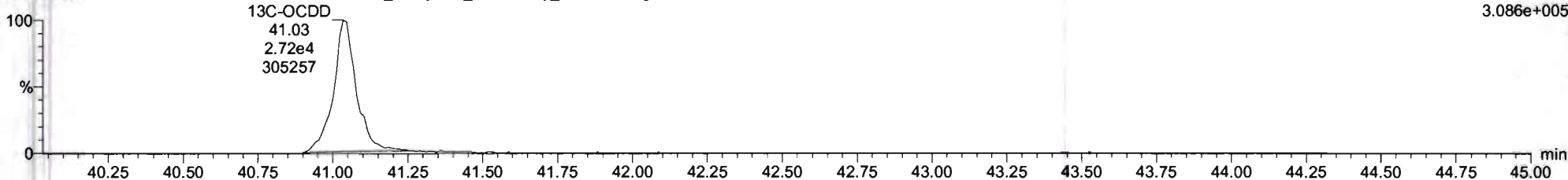
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F5:SIR of 11 channels,EI+  
469.778  
2.815e+005



200116D2\_8  
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F5:SIR of 11 channels,EI+  
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3.086e+005



Vista Analytical Laboratory

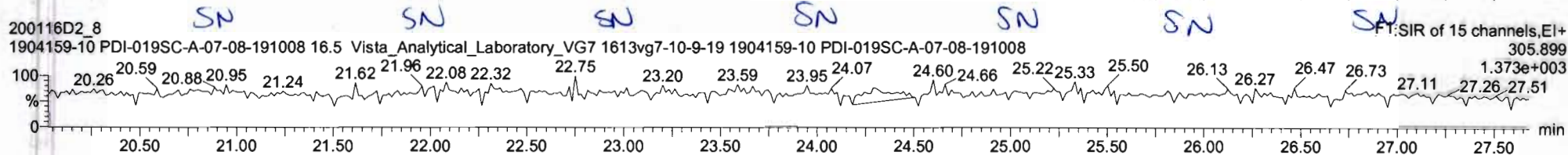
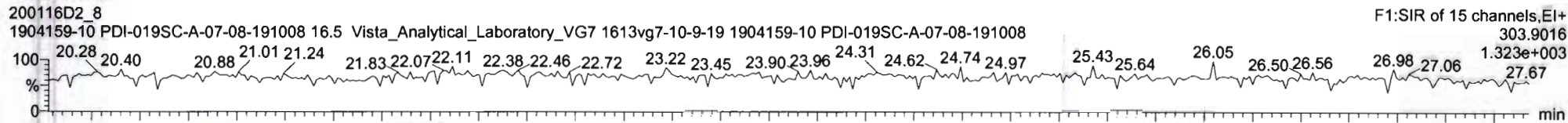
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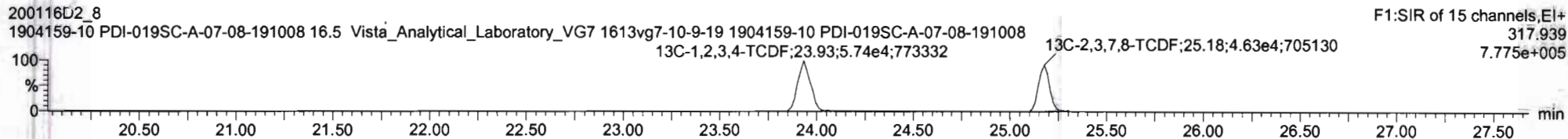
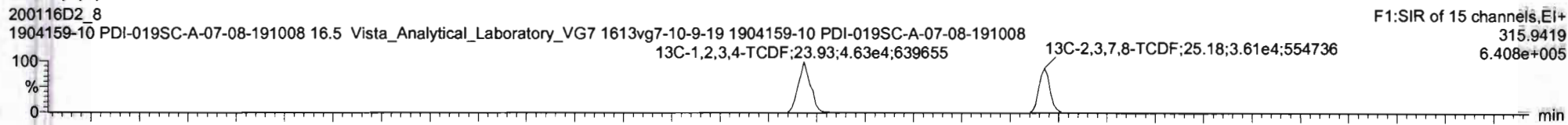
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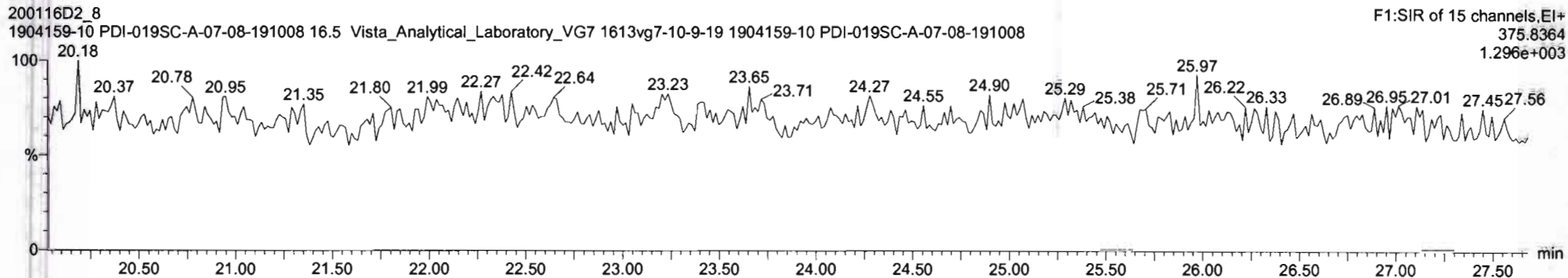
Total Tetra-Furans



13C-2,3,7,8-TCDF



DPE1



Vista Analytical Laboratory

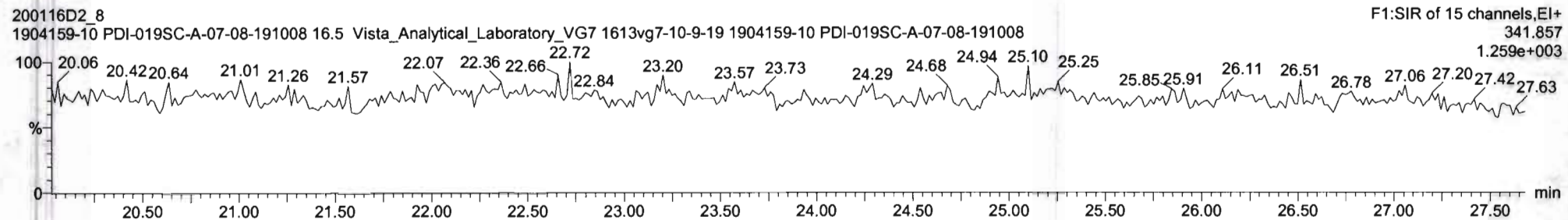
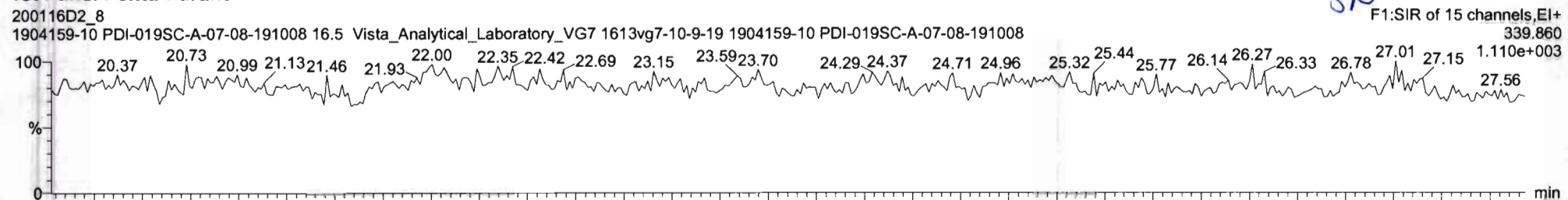
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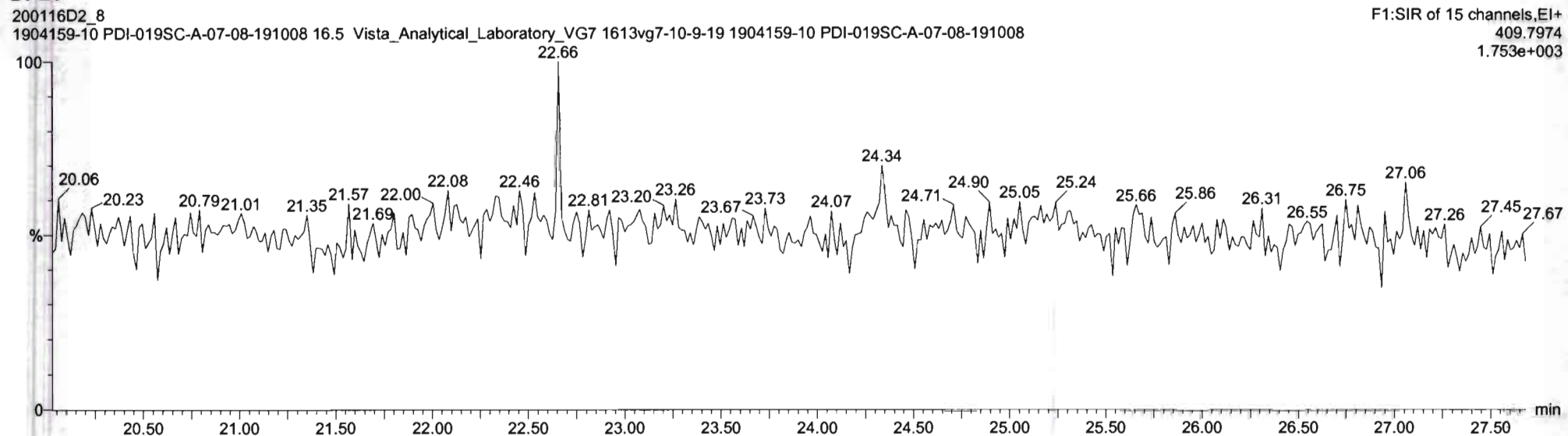
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Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans



DPE6



Vista Analytical Laboratory

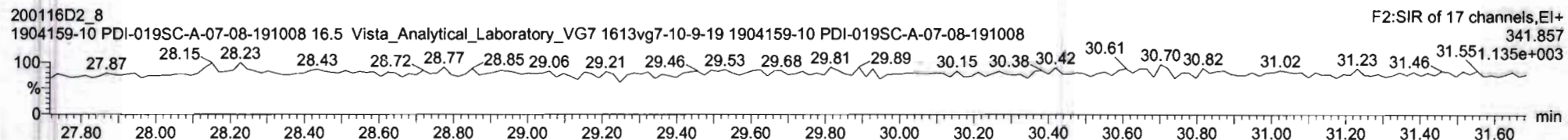
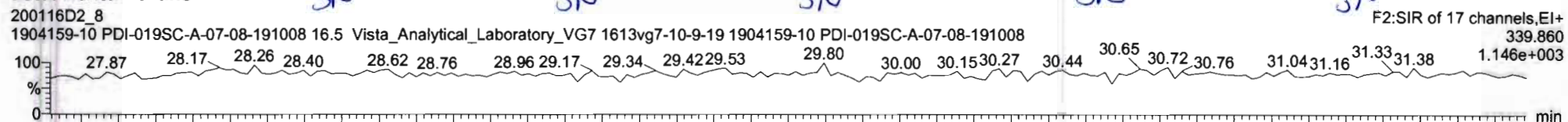
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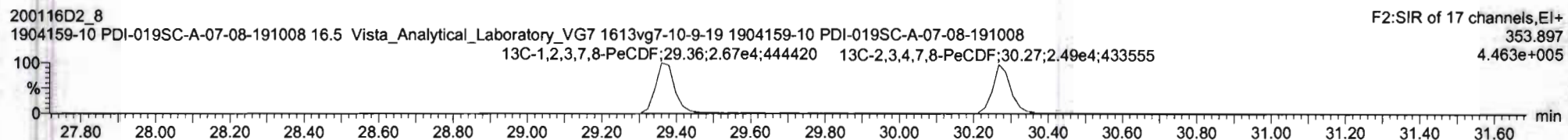
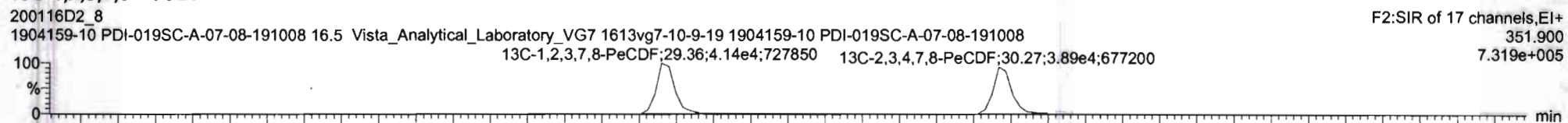
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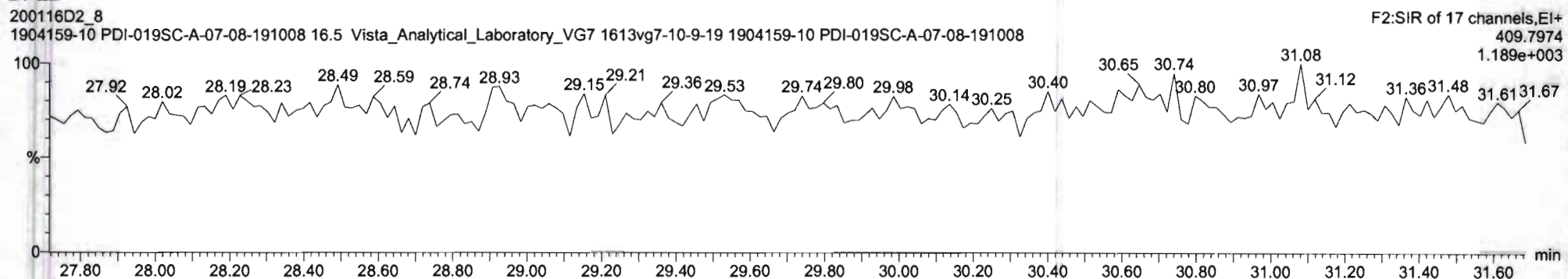
Total Penta-Furans



13C-1,2,3,7,8-PeCDF



DPE2



Vista Analytical Laboratory

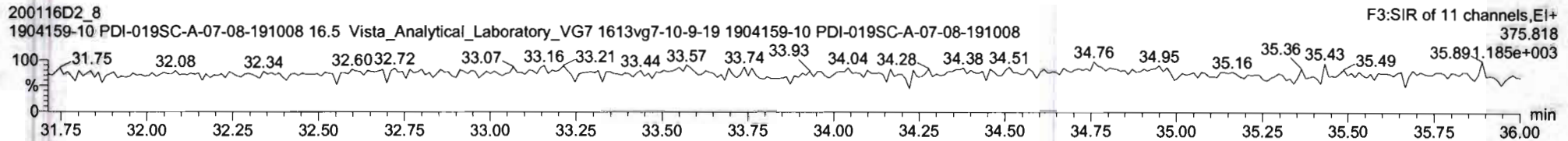
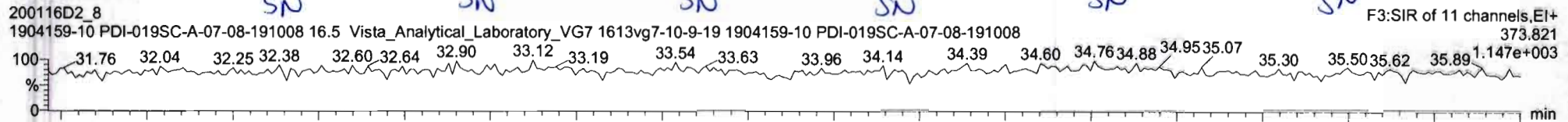
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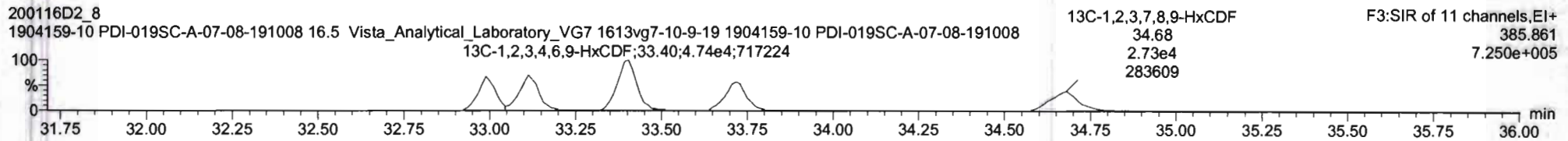
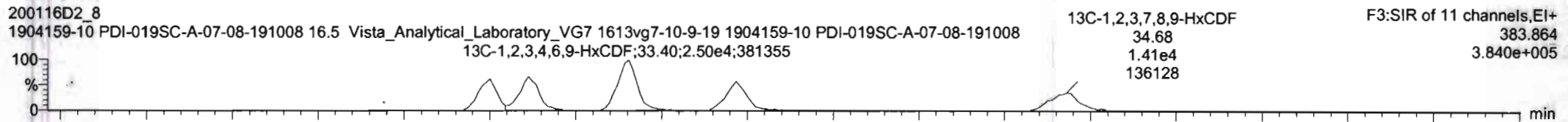
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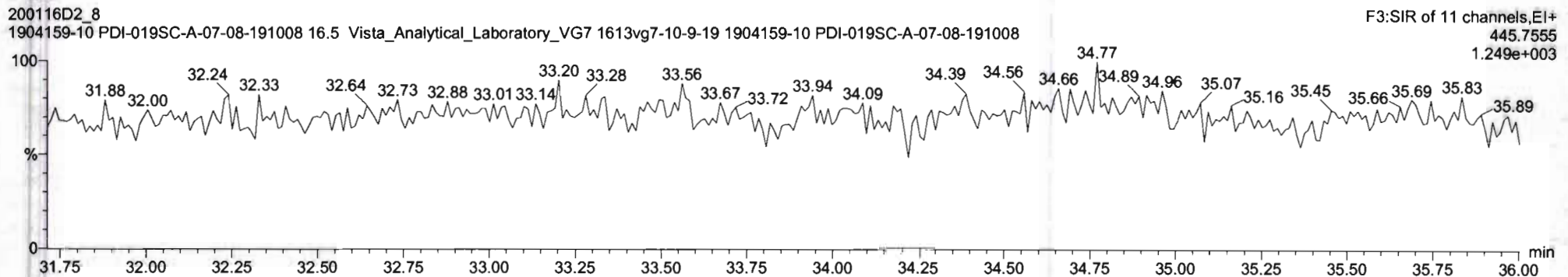
Total Hexa-Furans



13C-1,2,3,4,7,8-HxCDF



DPE3



Vista Analytical Laboratory

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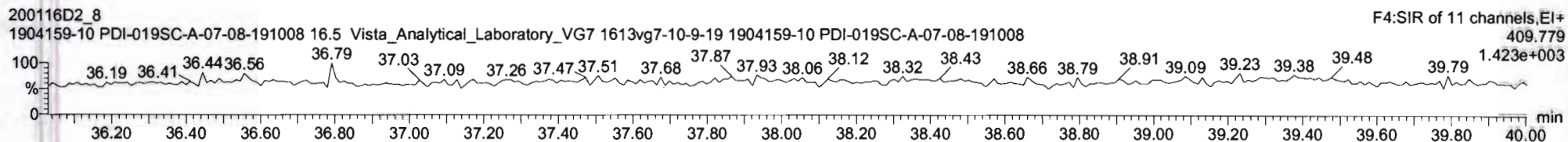
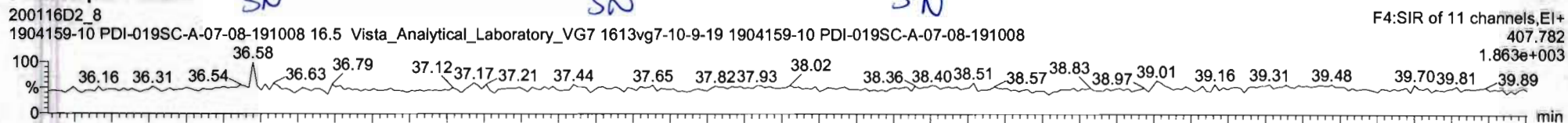
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Total Hepta-Furans

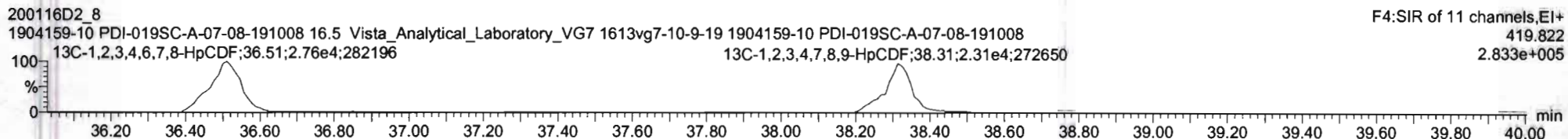
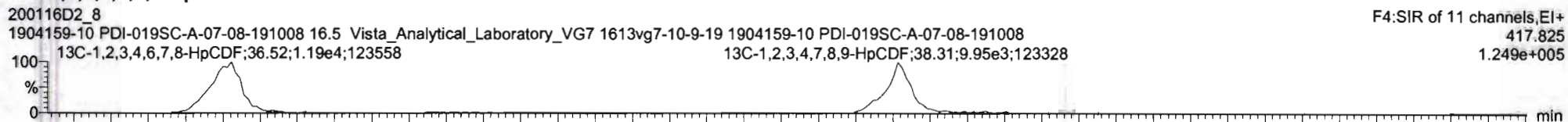
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SN

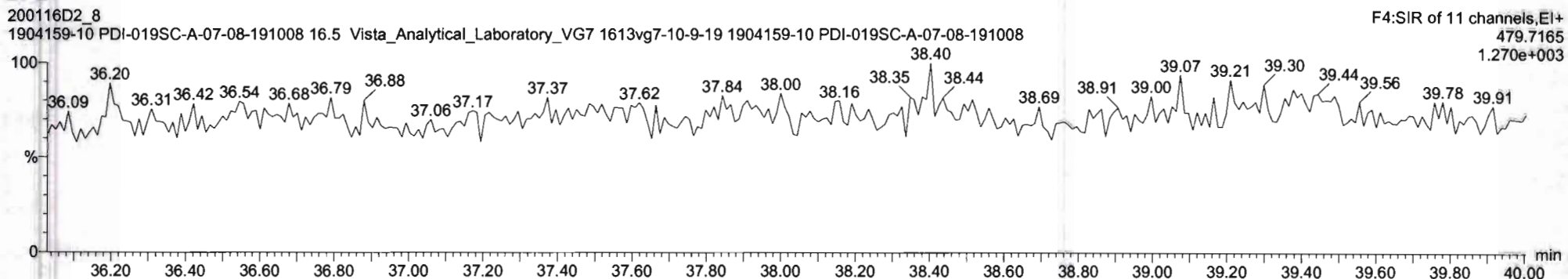
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13C-1,2,3,4,6,7,8-HpCDF



DPE4



Vista Analytical Laboratory

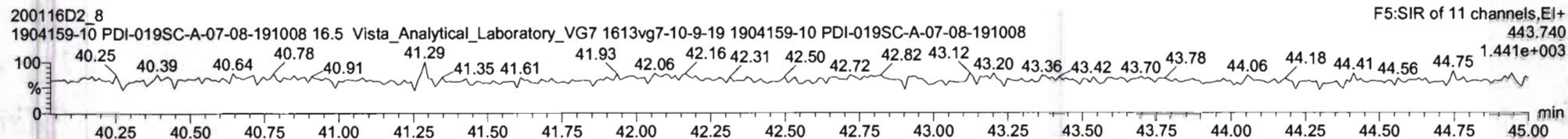
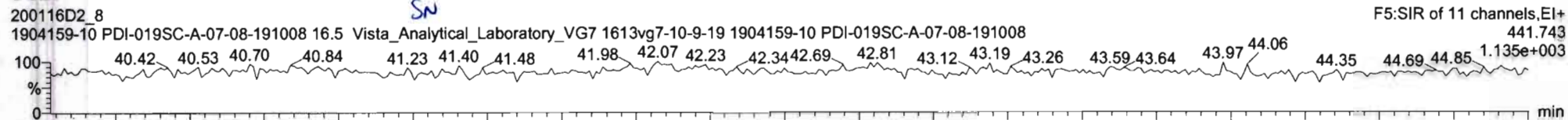
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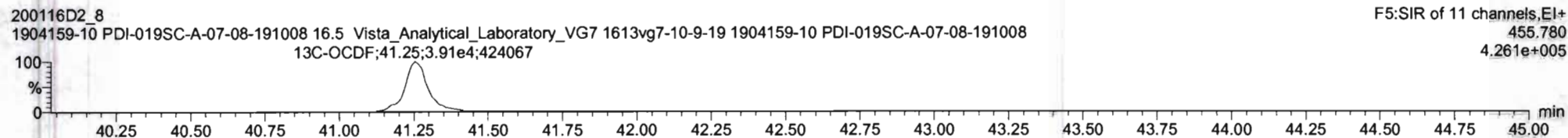
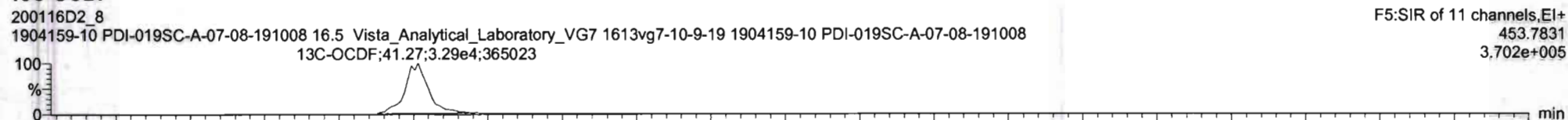
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Name: VG7 200116D2-8, Date: 17-JAN-2020, Time: 05:09:06, ID: 1904159-10 PDI-019SC-A-07-08-191008, Description: 1904159-10 PDI-019SC-A-07-08-191008 16.5 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

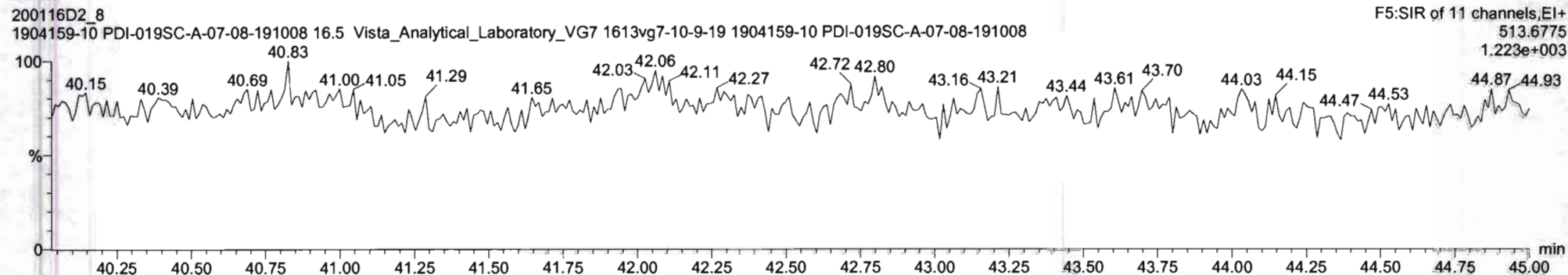
OCDF



13C-OCDF

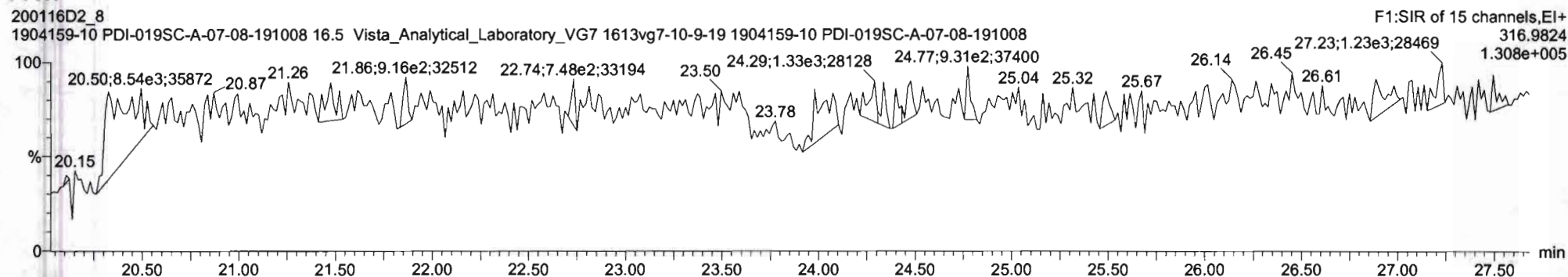


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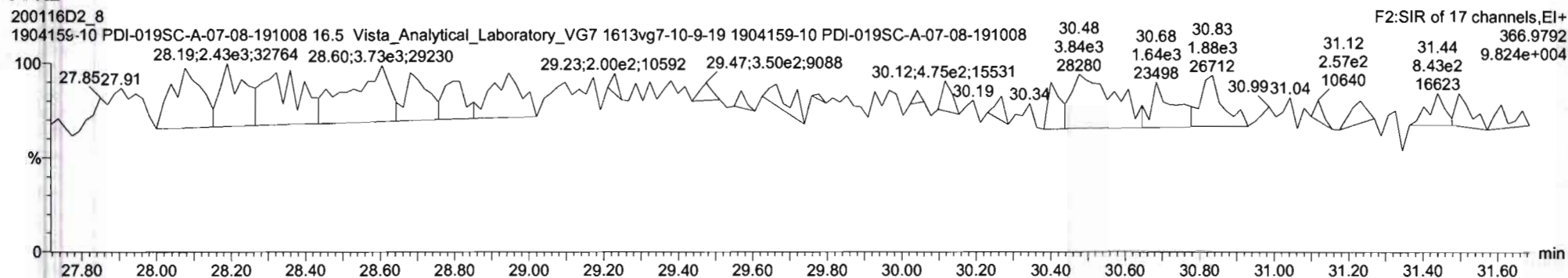


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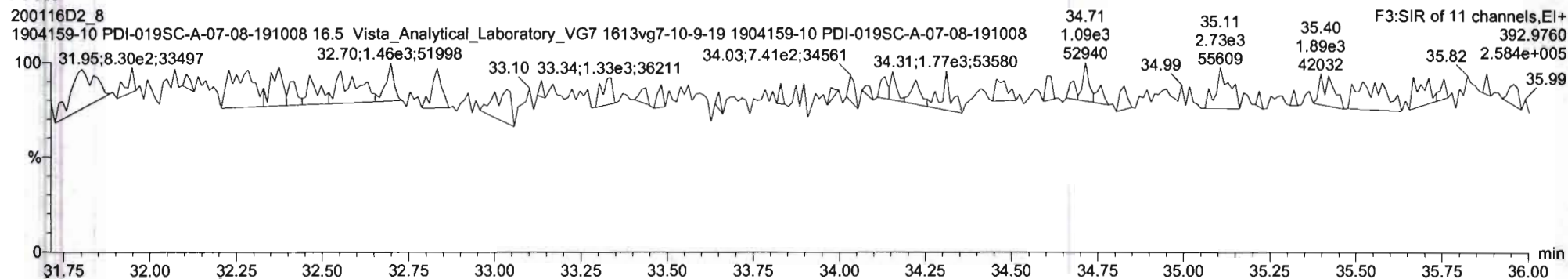
PFK1



PFK2



PFK3





Vista Analytical Laboratory

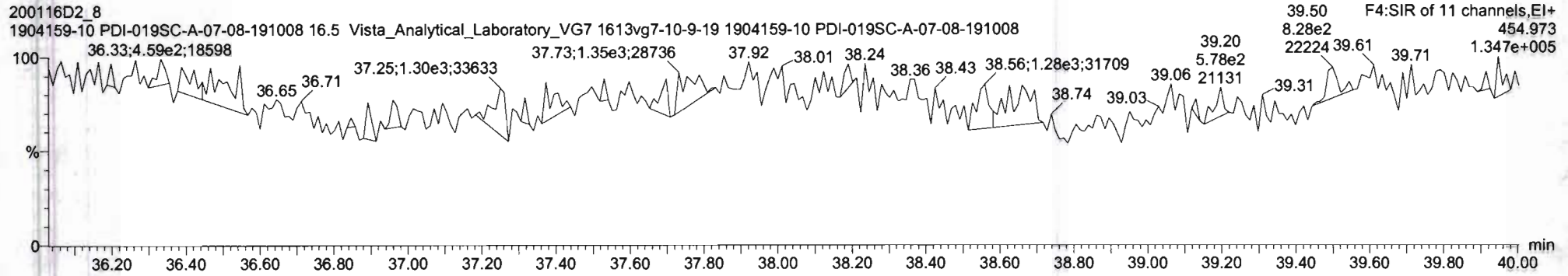
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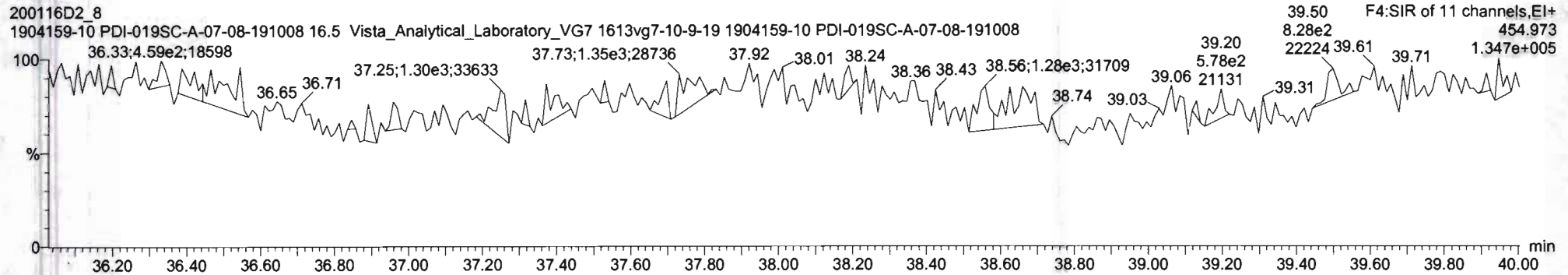
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Name: VG7 200116D2-8, Date: 17-JAN-2020, Time: 05:09:06, ID: 1904159-10 PDI-019SC-A-07-08-191008,  
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PFK4



PFK5



Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_6B.qld

Last Altered: Friday, January 31, 2020 12:31:29 Pacific Standard Time

Printed: Friday, January 31, 2020 12:32:01 Pacific Standard Time

GFB 01/31/2020

C702/03/2020

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Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	4.30e3	0.58	YES	0.824	10.052	25.856	25.84	1.001	1.001	0.96145		0.0747	0.808
2	2 1,2,3,7,8-PeCDD	4.10e3	0.65	NO	0.912	10.052	30.750	30.74	1.001	1.000	1.0146		0.0603	1.01
3	3 1,2,3,4,7,8-HxCDD	2.09e3	1.26	NO	0.870	10.052	34.093	34.10	1.000	1.001	0.64209		0.157	0.642
4	4 1,2,3,6,7,8-HxCDD	1.19e4	1.16	NO	0.784	10.052	34.190	34.20	1.000	1.000	3.7421		0.163	3.74
5	5 1,2,3,7,8,9-HxCDD	4.28e3	1.26	NO	0.798	10.052	34.501	34.47	1.001	1.000	1.3046		0.161	1.30
6	6 1,2,3,4,6,7,8-HpCDD	4.39e5	0.98	NO	0.737	10.052	38.025	38.02	1.000	1.000	184.33		0.519	184
7	7 OCDD	4.09e6	0.87	NO	0.800	10.052	40.996	41.01	1.000	1.000	1936.3		0.406	1940
8	8 2,3,7,8-TCDF	1.07e5	0.70	NO	0.588	10.052	24.982	24.99	1.001	1.001	26.424 (27.15)		0.102	26.4
9	9 1,2,3,7,8-PeCDF	1.75e5	1.53	NO	0.826	10.052	29.483	29.48	1.001	1.001	30.818		0.0992	30.8
10	10 2,3,4,7,8-PeCDF	1.06e5	1.49	NO	0.850	10.052	30.453	30.44	1.001	1.000	19.209		0.0948	19.2
11	11 1,2,3,4,7,8-HxCDF	2.08e5	1.17	NO	0.787	10.052	33.210	33.22	1.000	1.000	66.964		0.154	67.0
12	12 1,2,3,6,7,8-HxCDF	4.46e4	1.14	NO	0.720	10.052	33.337	33.35	1.000	1.001	13.419		0.152	13.4
13	13 2,3,4,6,7,8-HxCDF	9.96e3	1.13	NO	0.766	10.052	33.947	33.93	1.001	1.001	3.4421		0.168	3.44
14	14 1,2,3,7,8,9-HxCDF	6.39e3	1.15	NO	0.709	10.052	34.818	34.87	1.000	1.002	2.6365		0.231	2.64
15	15 1,2,3,4,6,7,8-HpCDF	6.57e4	0.94	NO	0.732	10.052	36.613	36.60	1.001	1.001	36.457		0.189	36.5
16	16 1,2,3,4,7,8,9-HpCDF	1.74e4	1.02	NO	0.816	10.052	38.589	38.60	1.000	1.000	10.679		0.177	10.7
17	17 OCDF	1.47e5	0.83	NO	0.639	10.052	41.187	41.20	1.000	1.000	93.340		0.136	93.3
18	18 13C-2,3,7,8-TCDD	1.08e6	0.80	NO	1.12	10.052	25.845	25.83	1.026	1.025	113.42	57.0	0.112	
19	19 13C-1,2,3,7,8-PeCDD	8.82e5	0.63	NO	0.841	10.052	30.614	30.73	1.215	1.220	123.01	61.8	0.132	
20	20 13C-1,2,3,4,7,8-HxCDD	7.44e5	1.27	NO	0.938	10.052	34.074	34.08	1.014	1.014	97.717	49.1	0.145	
21	21 13C-1,2,3,6,7,8-HxCDD	8.09e5	1.25	NO	1.07	10.052	34.175	34.19	1.017	1.017	93.514	47.0	0.128	
22	22 13C-1,2,3,7,8,9-HxCDD	8.17e5	1.22	NO	1.03	10.052	34.478	34.47	1.026	1.026	97.718	49.1	0.132	
23	23 13C-1,2,3,4,6,7,8-HpCDD	6.42e5	1.05	NO	0.710	10.052	38.040	38.01	1.132	1.131	111.50	56.0	0.207	
24	24 13C-OCDD	1.05e6	0.90	NO	0.601	10.052	40.930	41.00	1.218	1.220	215.43	54.1	0.160	
25	25 13C-2,3,7,8-TCDF	1.37e6	0.75	NO	1.04	10.052	25.021	24.96	0.993	0.990	101.18	50.9	0.104	
26	26 13C-1,2,3,7,8-PeCDF	1.37e6	1.53	NO	0.917	10.052	29.380	29.46	1.166	1.169	114.20	57.4	0.153	
27	27 13C-2,3,4,7,8-PeCDF	1.29e6	1.55	NO	0.903	10.052	30.337	30.42	1.204	1.207	109.37	55.0	0.155	
28	28 13C-1,2,3,4,7,8-HxCDF	7.87e5	0.49	NO	0.861	10.052	33.201	33.21	0.988	0.988	112.55	56.6	0.223	
29	29 13C-1,2,3,6,7,8-HxCDF	9.19e5	0.49	NO	1.05	10.052	33.302	33.33	0.991	0.992	108.13	54.3	0.183	
30	30 13C-2,3,4,6,7,8-HxCDF	7.51e5	0.49	NO	0.946	10.052	33.910	33.91	1.009	1.009	97.890	49.2	0.203	
31	31 13C-1,2,3,7,8,9-HxCDF	6.81e5	0.49	NO	0.816	10.052	34.814	34.82	1.036	1.036	102.89	51.7	0.235	

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_6B.qld

Last Altered: Friday, January 31, 2020 12:31:29 Pacific Standard Time

Printed: Friday, January 31, 2020 12:32:01 Pacific Standard Time

Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	4.90e5	0.40	NO	0.589	10.052	36.561	36.58	1.088	1.088	102.47	51.5	0.230	
33	13C-1,2,3,4,7,8,9-HpCDF	3.97e5	0.40	NO	0.448	10.052	38.577	38.59	1.148	1.148	109.28	54.9	0.302	
34	13C-OCDF	9.84e5	0.85	NO	0.586	10.052	41.165	41.19	1.225	1.226	207.06	52.0	0.163	
35	37Cl-2,3,7,8-TCDD	7.29e5			1.09	10.052	25.877	25.85	1.027	1.026	78.787	99.0	0.0431	
36	13C-1,2,3,4-TCDD	1.70e6	0.81	NO	1.00	10.052	25.260	25.20	1.000	1.000	198.96	100	0.125	
37	13C-1,2,3,4-TCDF	2.60e6	0.74	NO	1.00	10.052	23.860	23.57	1.000	1.000	198.96	100	0.108	
38	13C-1,2,3,4,6,9-HxCDF	1.61e6	0.49	NO	1.00	10.052	33.590	33.60	1.000	1.000	198.96	100	0.192	
39	Total Tetra-Dioxins				0.824	10.052	24.620		0.000		2.1875		0.0747	3.36
40	Total Penta-Dioxins				0.912	10.052	29.960		0.000		4.4797		0.0603	5.51
41	Total Hexa-Dioxins				0.784	10.052	33.635		0.000		43.163		0.167	43.2
42	Total Hepta-Dioxins				0.737	10.052	37.640		0.000		402.15		0.519	402
43	Total Tetra-Furans				0.588	10.052	23.610		0.000		104.47		0.102	106
44	1st Func. Penta-Furans				0.826	10.052	27.090		0.000		7.8836		0.0256	7.88
45	Total Penta-Furans				0.826	10.052	29.275		0.000		75.339		0.0984	97.4
46	Total Hexa-Furans				0.766	10.052	33.555		0.000		117.16		0.168	117
47	Total Hepta-Furans				0.732	10.052	37.835		0.000		103.57		0.193	104

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Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_6B.qld

Last Altered: Friday, January 31, 2020 12:31:29 Pacific Standard Time

Printed: Friday, January 31, 2020 12:32:01 Pacific Standard Time

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Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	21.93	3.037e4	3.635e4	2.845e3	3.535e3	0.80	NO	6.380e3	1.4281	1.4281	0.0747
2	Total Tetra-Dioxins	22.83	2.374e3	4.379e3	1.100e2	1.432e2	0.77	NO	2.532e2	0.056679	0.056679	0.0747
3	Total Tetra-Dioxins	22.89	2.039e3	1.890e3	8.951e1	9.872e1	0.91	YES	0.000e0	0.00000	0.039113	0.0747
4	Total Tetra-Dioxins	23.75	3.255e3	3.102e3	1.678e2	1.608e2	1.04	YES	0.000e0	0.00000	0.063719	0.0747
5	Total Tetra-Dioxins	23.95	7.168e3	8.945e3	4.686e2	5.736e2	0.82	NO	1.042e3	0.23329	0.23329	0.0747
6	Total Tetra-Dioxins	24.18	6.644e3	1.330e4	5.091e2	7.918e2	0.64	YES	0.000e0	0.00000	0.26195	0.0747
7	Total Tetra-Dioxins	25.60	1.228e4	1.639e4	9.696e2	1.128e3	0.86	NO	2.097e3	0.46947	0.46947	0.0747
8	2,3,7,8-TCDD	25.84	2.322e4	4.257e4	1.570e3	2.725e3	0.58	YES	4.295e3	0.00000	0.80801	0.0747

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.55	3.072e4	4.599e4	2.368e3	3.741e3	0.63	NO	6.108e3	1.5116	1.5116	0.0603
2	Total Penta-Dioxins	29.02	9.896e3	1.346e4	5.073e2	7.381e2	0.69	NO	1.245e3	0.30816	0.30816	0.0603
3	Total Penta-Dioxins	29.51	2.487e4	4.650e4	1.656e3	2.711e3	0.61	NO	4.367e3	1.0807	1.0807	0.0603
4	Total Penta-Dioxins	29.68	1.428e4	2.289e4	5.673e2	1.105e3	0.51	YES	0.000e0	0.00000	0.36319	0.0603
5	Total Penta-Dioxins	29.78	7.104e3	1.257e4	4.668e2	6.986e2	0.67	NO	1.165e3	0.28840	0.28840	0.0603
6	Total Penta-Dioxins	30.00	8.819e3	1.808e4	7.318e2	1.443e3	0.51	YES	0.000e0	0.00000	0.46854	0.0603
7	Total Penta-Dioxins	30.32	3.923e3	6.983e3	2.505e2	4.573e2	0.55	NO	7.078e2	0.17514	0.17514	0.0603
8	1,2,3,7,8-PeCDD	30.74	3.545e4	3.966e4	1.609e3	2.491e3	0.65	NO	4.100e3	1.0146	1.0146	0.0603
9	Total Penta-Dioxins	30.83	6.078e3	1.313e4	3.110e2	5.967e2	0.52	YES	0.000e0	0.00000	0.19911	0.0603
10	Total Penta-Dioxins	31.13	3.557e3	7.080e3	1.664e2	2.423e2	0.69	NO	4.086e2	0.10112	0.10112	0.0603

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Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_6B.qld

Last Altered: Friday, January 31, 2020 12:31:29 Pacific Standard Time

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Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

Hexa-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.60	7.010e5	5.624e5	3.218e4	2.612e4	1.23	NO	5.830e4	18.729	18.729	0.167
2	Total Hexa-Dioxins	33.16	8.317e4	5.763e4	3.772e3	2.806e3	1.34	NO	6.578e3	2.1133	2.1133	0.167
3	Total Hexa-Dioxins	33.41	4.242e5	3.292e5	2.655e4	2.141e4	1.24	NO	4.796e4	15.410	15.410	0.167
4	Total Hexa-Dioxins	33.53	2.038e4	2.247e4	1.197e3	9.361e2	1.28	NO	2.133e3	0.68542	0.68542	0.167
5	1,2,3,4,7,8-HxCDD	34.10	2.589e4	1.529e4	1.165e3	9.238e2	1.26	NO	2.089e3	0.64209	0.64209	0.157
6	1,2,3,6,7,8-HxCDD	34.20	1.303e5	1.115e5	6.416e3	5.509e3	1.16	NO	1.192e4	3.7421	3.7421	0.163
7	Total Hexa-Dioxins	34.39	1.815e4	1.556e4	9.029e2	7.660e2	1.18	NO	1.669e3	0.53619	0.53619	0.167
8	1,2,3,7,8,9-HxCDD	34.47	4.000e4	3.666e4	2.382e3	1.896e3	1.26	NO	4.278e3	1.3046	1.3046	0.161

Hepta-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.98	4.078e6	4.132e6	2.572e5	2.611e5	0.99	NO	5.183e5	217.82	217.82	0.519
2	1,2,3,4,6,7,8-HpCDD	38.02	3.738e6	3.800e6	2.174e5	2.212e5	0.98	NO	4.386e5	184.33	184.33	0.519

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_6B.qld

Last Altered: Friday, January 31, 2020 12:31:29 Pacific Standard Time  
 Printed: Friday, January 31, 2020 12:32:01 Pacific Standard Time

Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

**Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	19.82	7.746e3	1.048e4	6.505e2	9.570e2	0.68	NO	1.607e3	0.39741	0.39741	0.102
2	Total Tetra-Furans	20.35	1.219e4	1.295e4	1.063e3	1.219e3	0.87	NO	2.282e3	0.56425	0.56425	0.102
3	Total Tetra-Furans	20.96	6.482e4	8.475e4	5.614e3	7.596e3	0.74	NO	1.321e4	3.2658	3.2658	0.102
4	Total Tetra-Furans	21.51	2.057e4	2.910e4	2.762e3	3.968e3	0.70	NO	0.000e0	0.00000	1.6639	0.102
5	Total Tetra-Furans	21.92	1.666e5	2.467e5	1.607e4	2.288e4	0.70	NO	3.896e4	9.6318	9.6318	0.102
6	Total Tetra-Furans	22.41	5.446e4	7.118e4	4.681e3	6.635e3	0.71	NO	1.132e4	2.7976	2.7976	0.102
7	Total Tetra-Furans	22.77	2.388e4	3.531e4	2.147e3	3.217e3	0.67	NO	5.363e3	1.3259	1.3259	0.102
8	Total Tetra-Furans	23.16	7.418e3	1.066e4	5.268e2	7.661e2	0.69	NO	1.293e3	0.31963	0.31963	0.102
9	Total Tetra-Furans	23.30	3.656e3	7.896e3	2.278e2	5.078e2	0.45	YES	0.000e0	0.00000	0.12944	0.102
10	Total Tetra-Furans	23.48	4.887e4	8.069e4	2.576e3	3.597e3	0.72	NO	6.173e3	1.5261	1.5261	0.102
11	Total Tetra-Furans	23.57	2.667e5	4.031e5	2.470e4	3.589e4	0.69	NO	6.059e4	14.978	14.978	0.102
12	Total Tetra-Furans	24.06	6.165e5	8.514e5	4.529e4	6.465e4	0.70	NO	1.099e5	27.180	27.180	0.102
13	Total Tetra-Furans	24.34	2.734e4	3.750e4	1.736e3	2.619e3	0.66	NO	4.355e3	1.0766	1.0766	0.102
14	Total Tetra-Furans	24.54	1.512e4	1.752e4	1.135e3	1.294e3	0.88	NO	2.429e3	0.60051	0.60051	0.102
15	Total Tetra-Furans	24.78	1.035e4	1.156e4	4.770e2	6.804e2	0.70	NO	1.157e3	0.28615	0.28615	0.102
16	Total Tetra-Furans	24.87	1.950e5	2.917e5	1.355e4	1.983e4	0.68	NO	3.338e4	8.2525	8.2525	0.102
17	2,3,7,8-TCDF	24.99	6.159e5	8.862e5	4.388e4	6.300e4	0.70	NO	1.069e5	26.424	26.424	0.102
18	Total Tetra-Furans	25.35	3.904e4	5.014e4	2.327e3	3.057e3	0.76	NO	5.384e3	1.3310	1.3310	0.102
19	Total Tetra-Furans	25.57	8.786e3	1.348e4	6.148e2	8.797e2	0.70	NO	1.494e3	0.36948	0.36948	0.102
20	Total Tetra-Furans	26.50	1.343e4	1.249e4	6.741e2	7.699e2	0.88	NO	1.444e3	0.35702	0.35702	0.102
21	Total Tetra-Furans	26.65	1.373e4	1.776e4	8.389e2	1.168e3	0.72	NO	2.007e3	0.49624	0.49624	0.102
22	Total Tetra-Furans	26.93	9.202e4	1.222e5	5.806e3	7.484e3	0.78	NO	1.329e4	3.2856	3.2856	0.102

**Penta-Furans function 1**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.92	4.459e5	2.737e5	2.707e4	1.639e4	1.65	NO	4.346e4	7.8836	7.8836	0.0256

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**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.35	4.432e4	2.029e4	2.135e3	1.291e3	1.65	NO	3.427e3	0.62159	0.62159	0.0984
2	Total Penta-Furans	28.45	4.437e5	2.875e5	1.473e4	9.554e3	1.54	NO	0.000e0	0.00000	4.4055	0.0984
3	Total Penta-Furans	28.50	1.009e6	6.479e5	5.961e4	3.773e4	1.58	NO	0.000e0	0.00000	17.655	0.0984
4	Total Penta-Furans	29.07	3.630e5	2.432e5	2.201e4	1.434e4	1.54	NO	3.635e4	6.5932	6.5932	0.0984
5	Total Penta-Furans	29.29	3.556e5	2.643e5	1.777e4	1.241e4	1.43	NO	3.017e4	5.4734	5.4734	0.0984
6	1,2,3,7,8-PeCDF	29.48	2.063e6	1.297e6	1.056e5	6.925e4	1.53	NO	1.749e5	30.818	30.818	0.0992
7	Total Penta-Furans	29.74	7.348e5	4.650e5	3.763e4	2.546e4	1.48	NO	6.309e4	11.444	11.444	0.0984
8	Total Penta-Furans	30.33	3.036e4	1.772e4	9.554e2	6.356e2	1.50	NO	1.591e3	0.28861	0.28861	0.0984
9	2,3,4,7,8-PeCDF	30.44	1.047e6	6.991e5	6.328e4	4.245e4	1.49	NO	1.057e5	19.209	19.209	0.0948
10	Total Penta-Furans	31.37	5.613e4	3.984e4	2.960e3	1.956e3	1.51	NO	4.917e3	0.89183	0.89183	0.0984

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Furans	32.05	1.064e5	9.627e4	5.140e3	4.182e3	1.23	NO	9.323e3	3.0851	3.0851	0.168
2	Total Hexa-Furans	32.22	3.620e5	3.066e5	1.671e4	1.467e4	1.14	NO	3.139e4	10.387	10.387	0.168
3	Total Hexa-Furans	32.58	1.005e4	7.965e3	4.441e2	3.589e2	1.24	NO	8.030e2	0.26574	0.26574	0.168
4	Total Hexa-Furans	32.76	5.170e5	4.603e5	2.253e4	1.929e4	1.17	NO	4.182e4	13.839	13.839	0.168
5	Total Hexa-Furans	33.11	1.763e4	1.502e4	8.187e2	7.418e2	1.10	NO	1.560e3	0.51641	0.51641	0.168
6	1,2,3,4,7,8-HxCDF	33.22	2.267e6	1.989e6	1.122e5	9.612e4	1.17	NO	2.083e5	66.964	66.964	0.154
7	1,2,3,6,7,8-HxCDF	33.35	4.703e5	3.944e5	2.376e4	2.085e4	1.14	NO	4.461e4	13.419	13.419	0.152
8	2,3,4,6,7,8-HxCDF	33.93	1.018e5	9.006e4	5.279e3	4.684e3	1.13	NO	9.962e3	3.4421	3.4421	0.168
9	1,2,3,7,8,9-HxCDF	34.87	1.137e5	9.695e4	3.421e3	2.974e3	1.15	NO	6.395e3	2.6365	2.6365	0.231
10	Total Hexa-Furans	34.88	1.260e5	1.041e5	4.320e3	3.538e3	1.22	NO	7.859e3	2.6006	2.6006	0.168

**Hepta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.60	5.331e5	5.686e5	3.189e4	3.379e4	0.94	NO	6.569e4	36.457	36.457	0.189
2	Total Hepta-Furans	37.20	7.223e5	7.642e5	4.528e4	4.678e4	0.97	NO	9.206e4	56.432	56.432	0.193
3	1,2,3,4,7,8,9-HpCDF	38.60	1.698e5	1.724e5	8.771e3	8.638e3	1.02	NO	1.741e4	10.679	10.679	0.177

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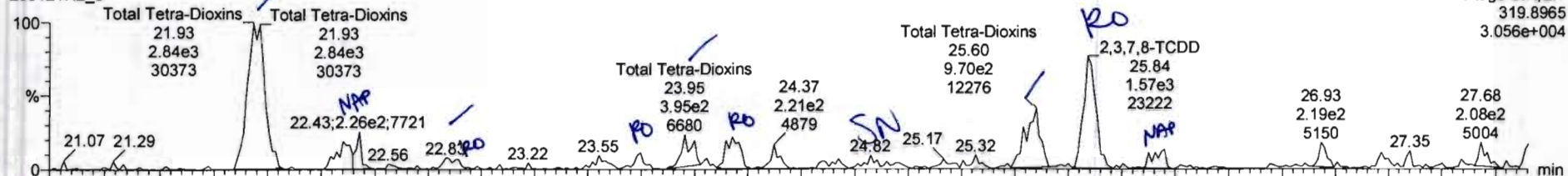
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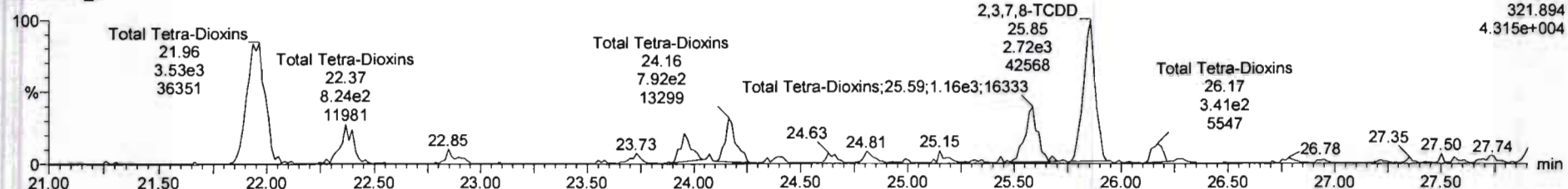
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**2,3,7,8-TCDD**

200121R2\_6

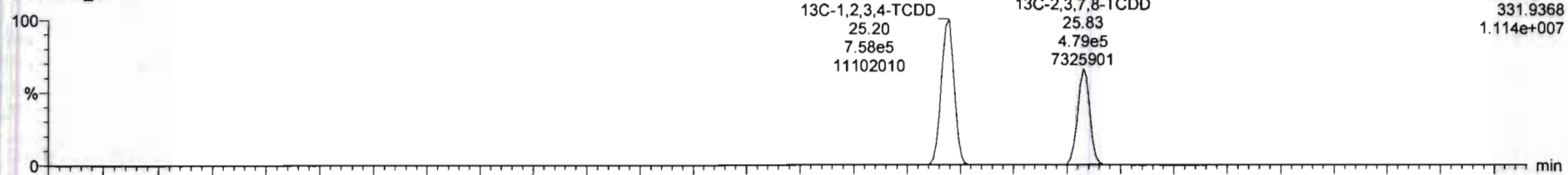


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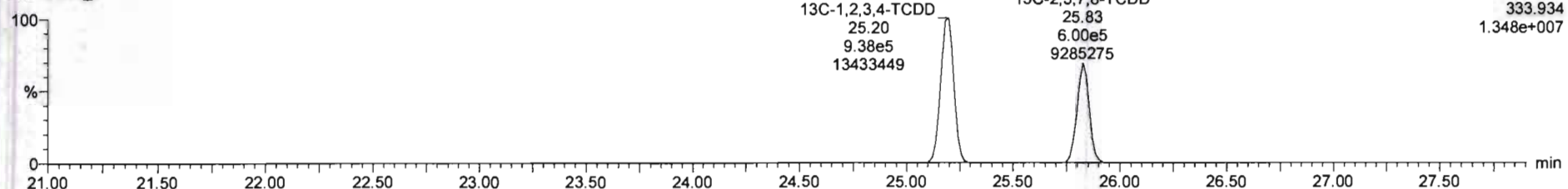


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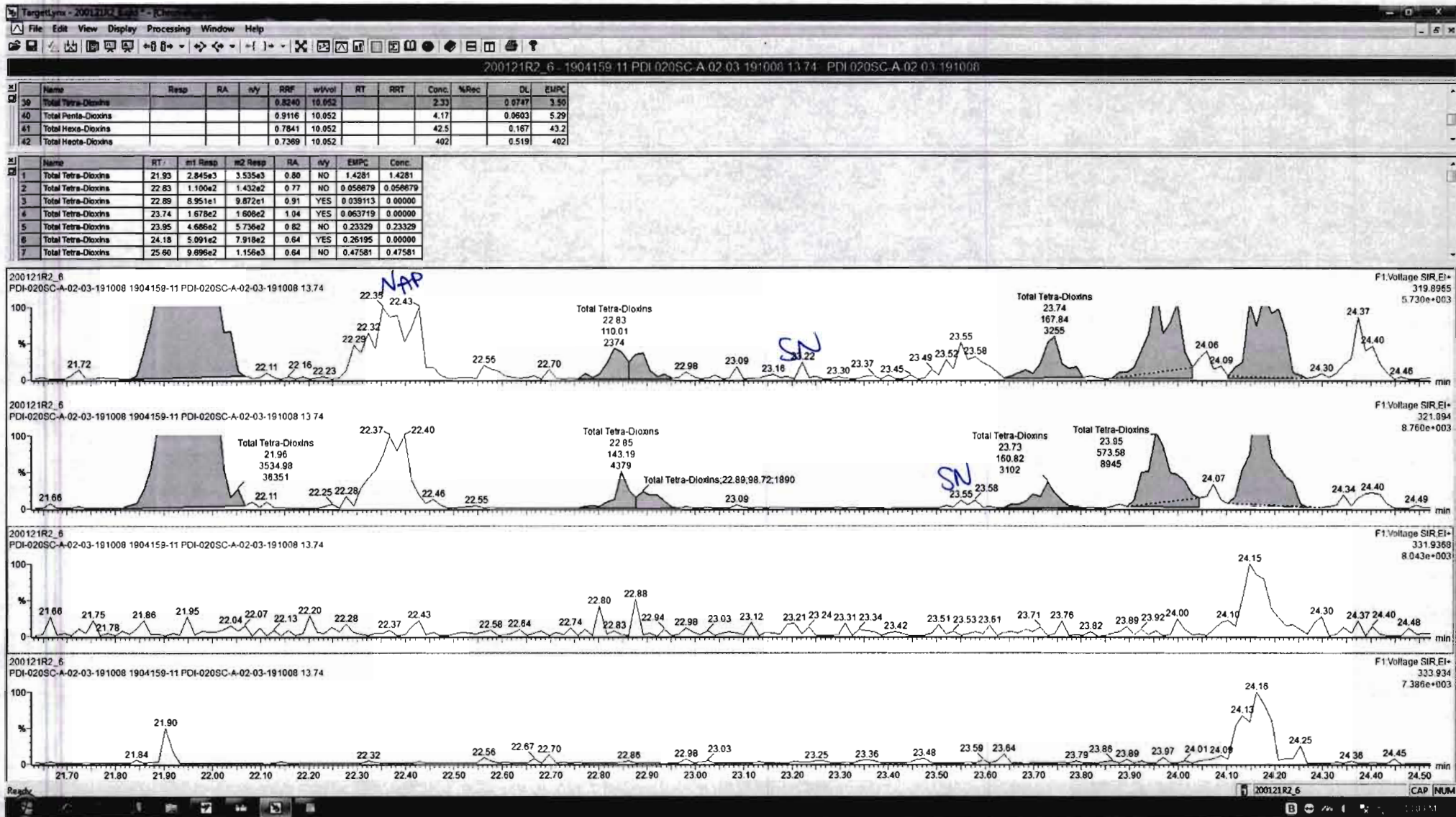
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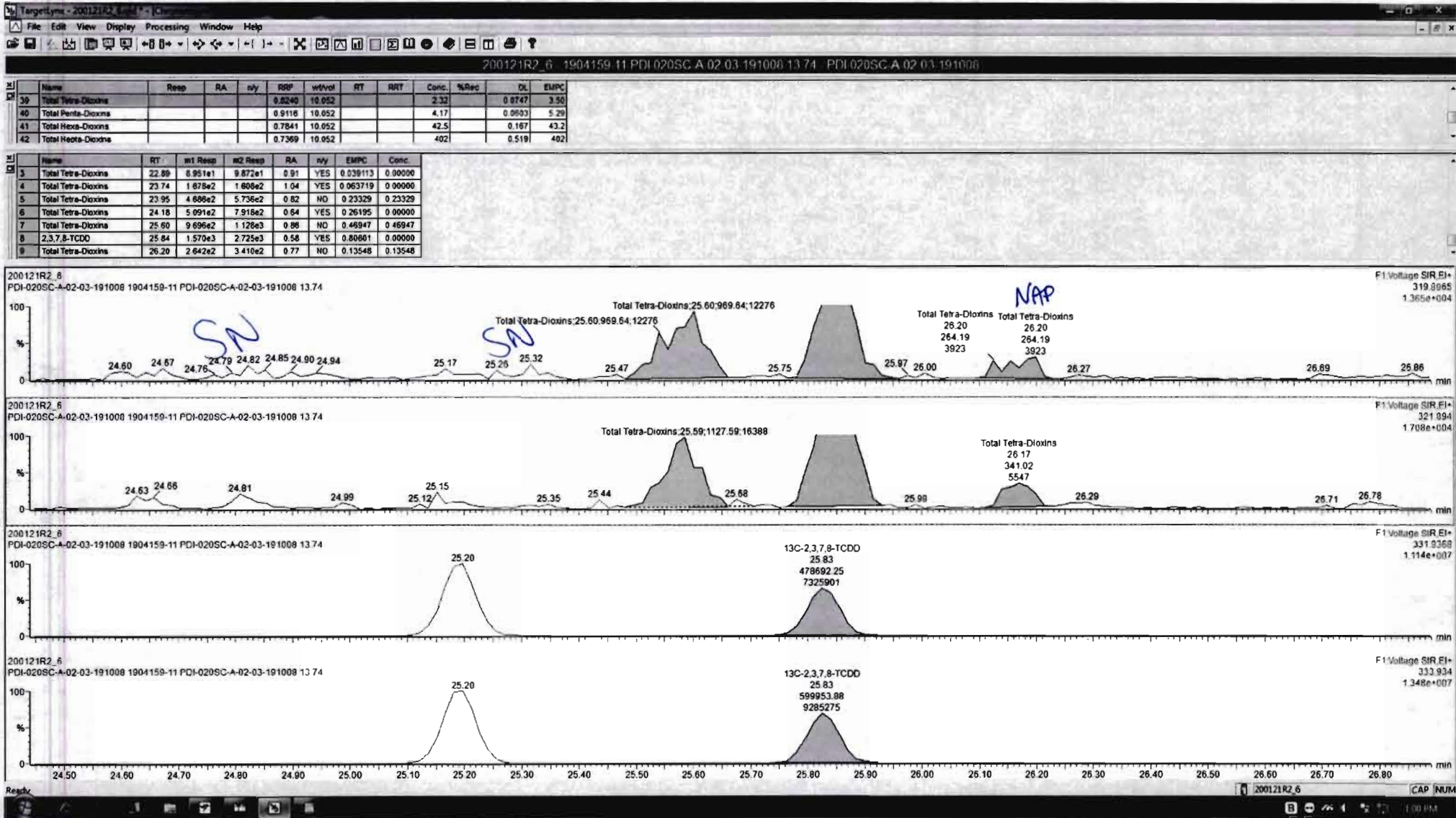


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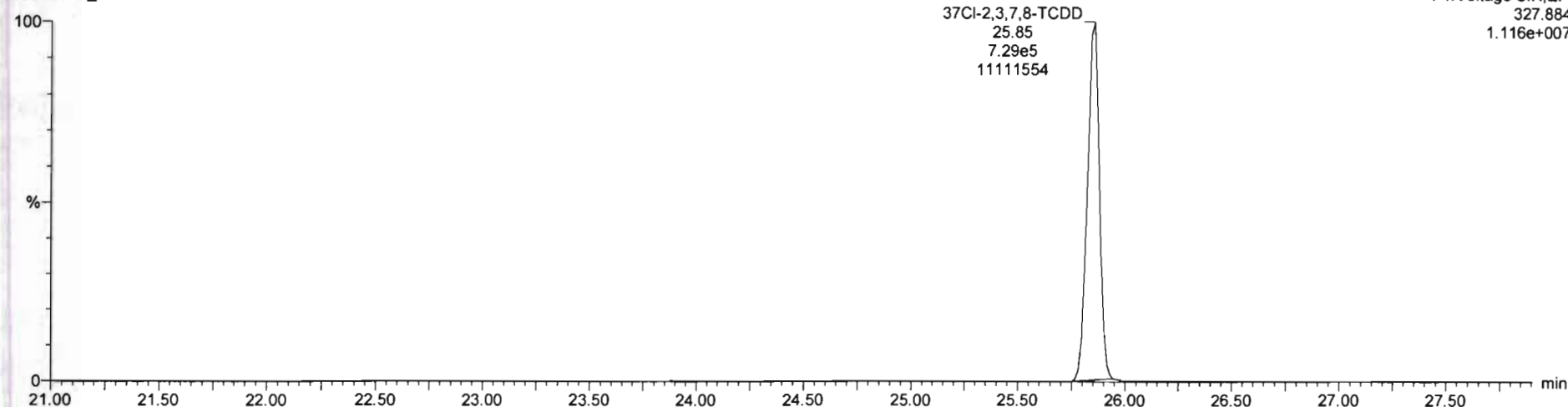
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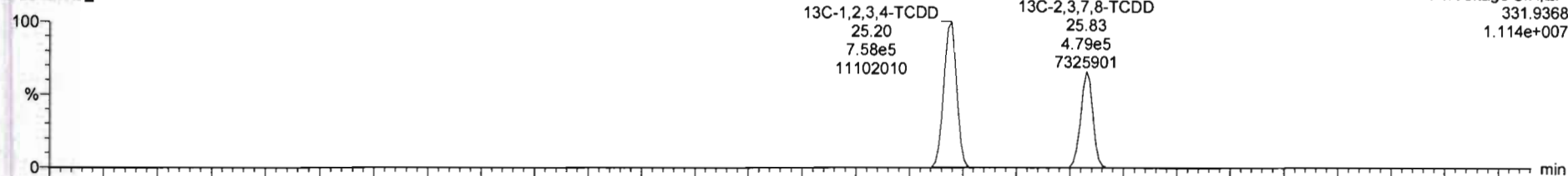
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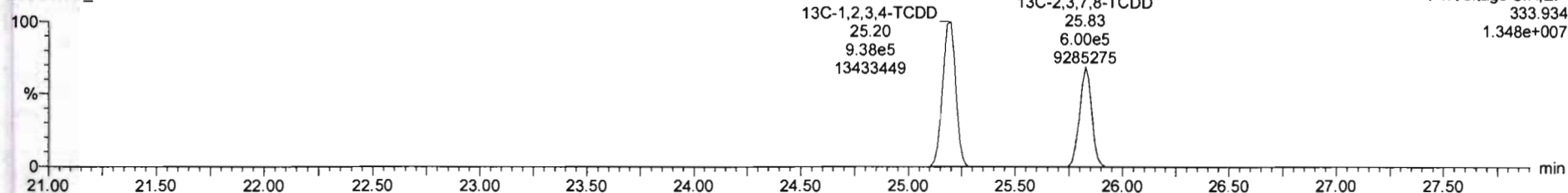


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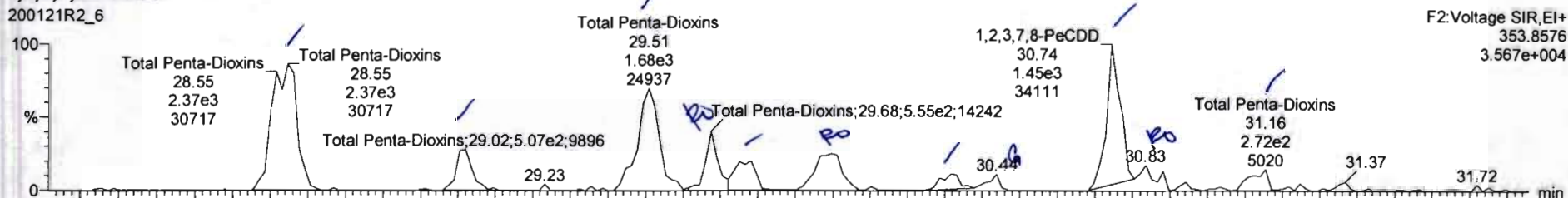
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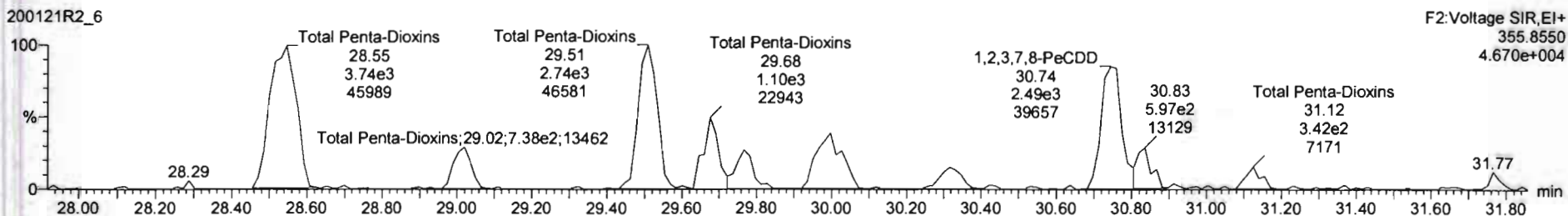
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1,2,3,7,8-PeCDD

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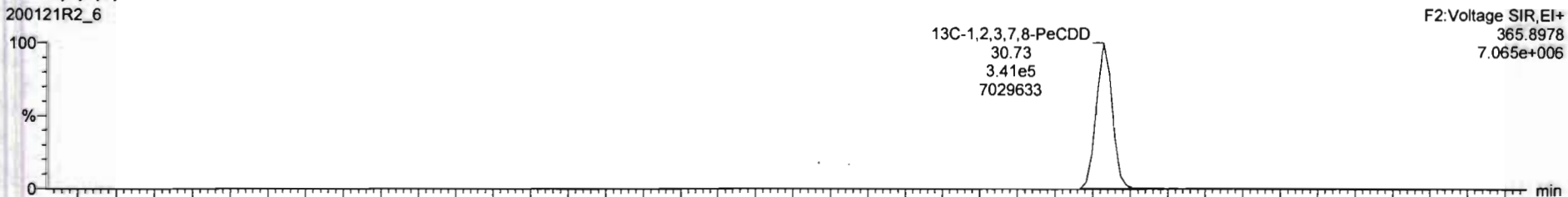


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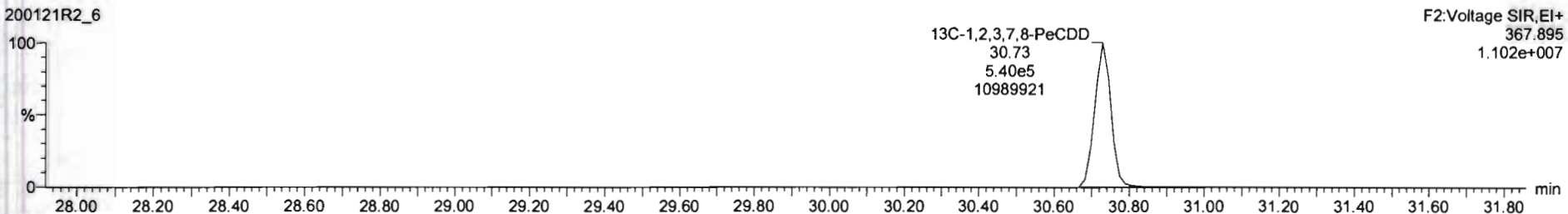


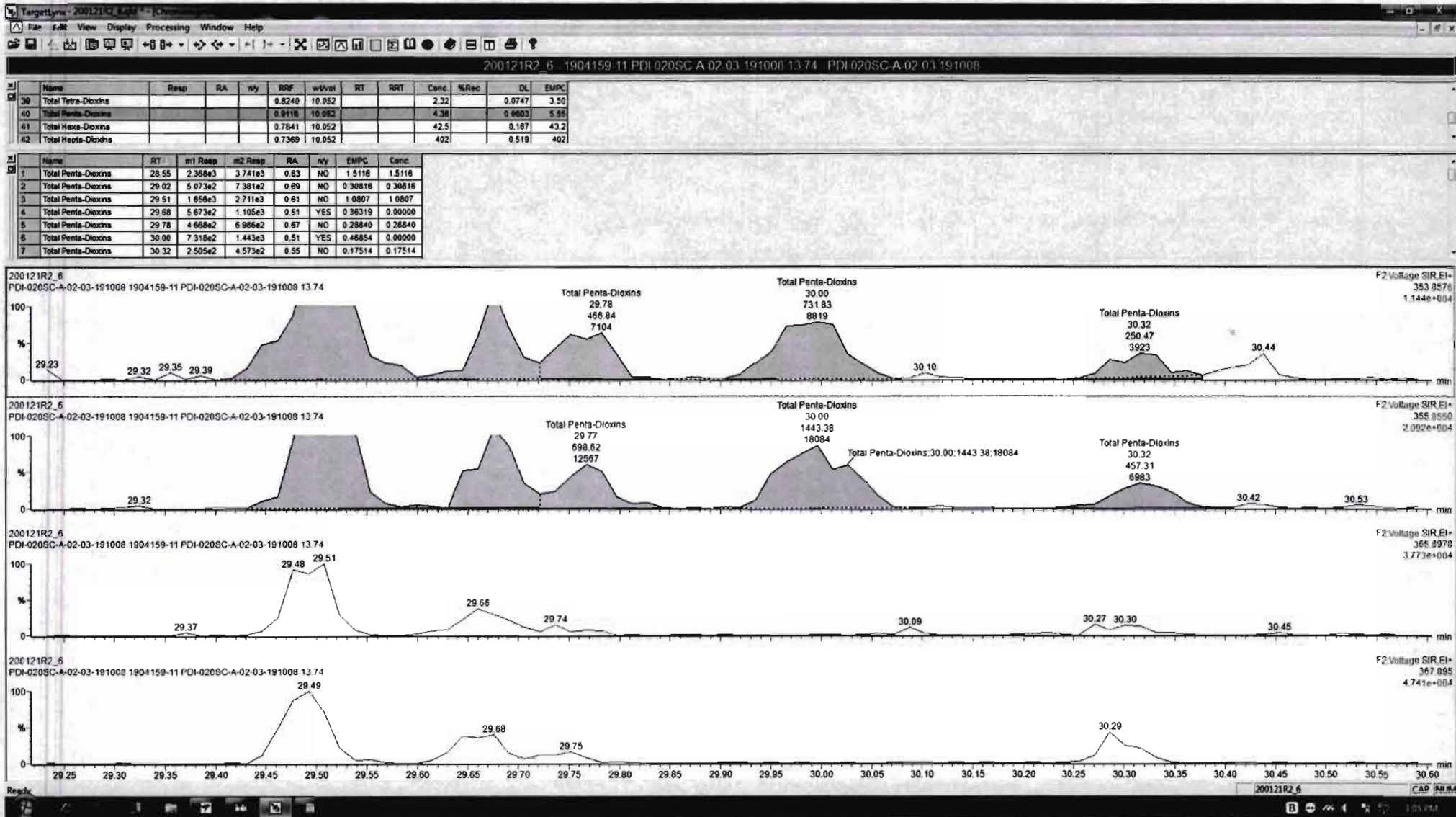
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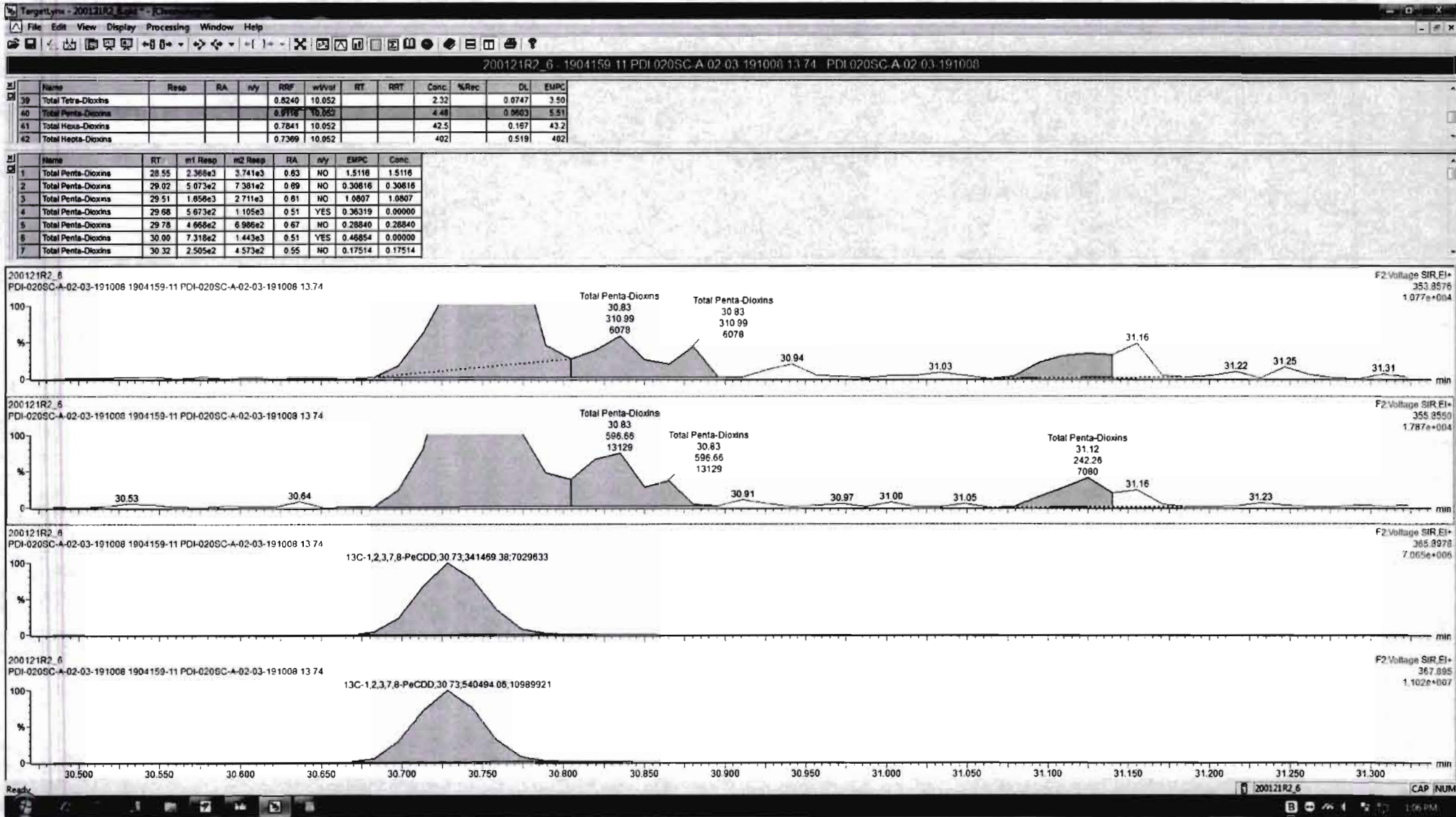
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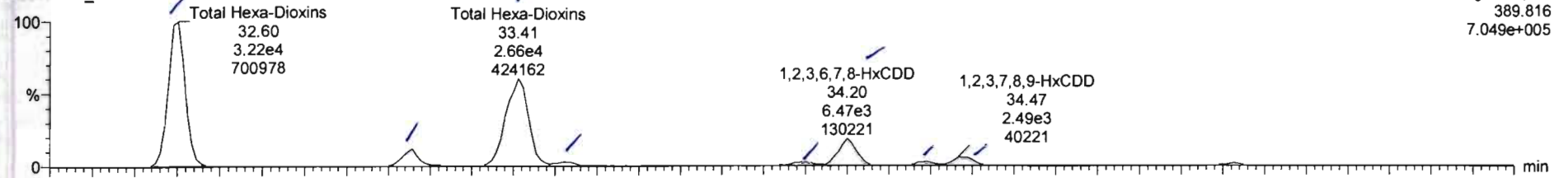
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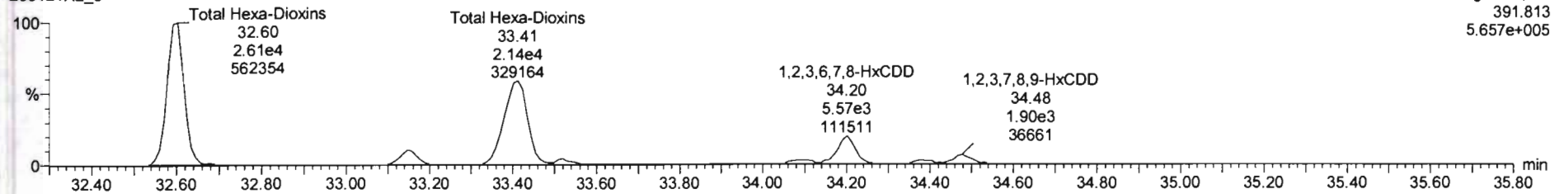
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**1,2,3,4,7,8-HxCDD**

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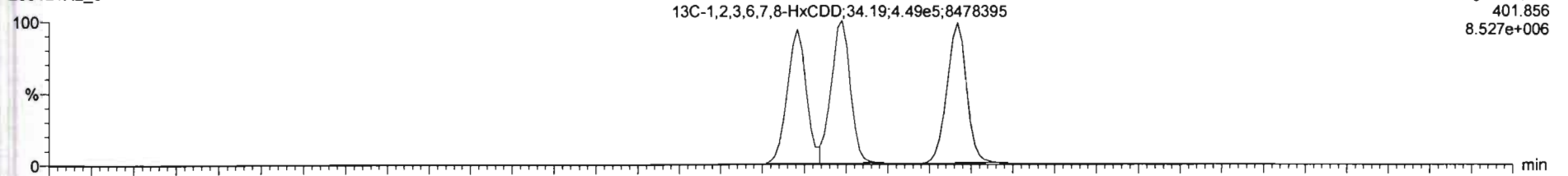


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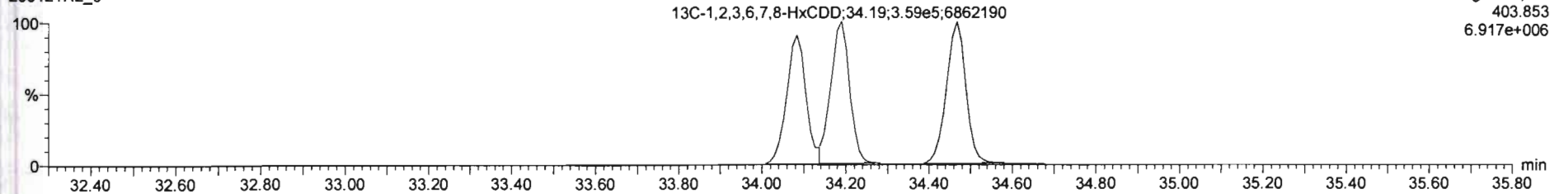


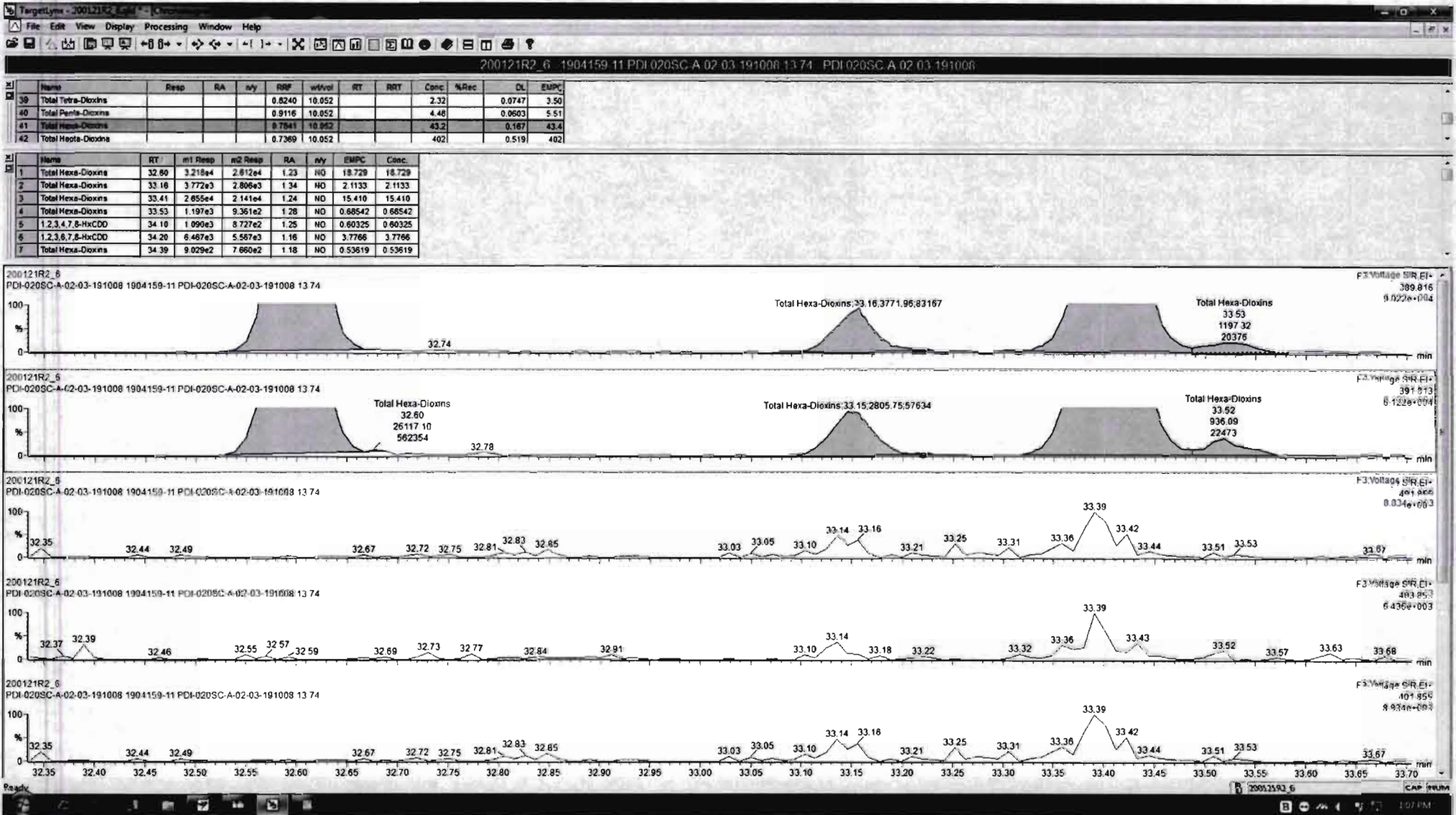
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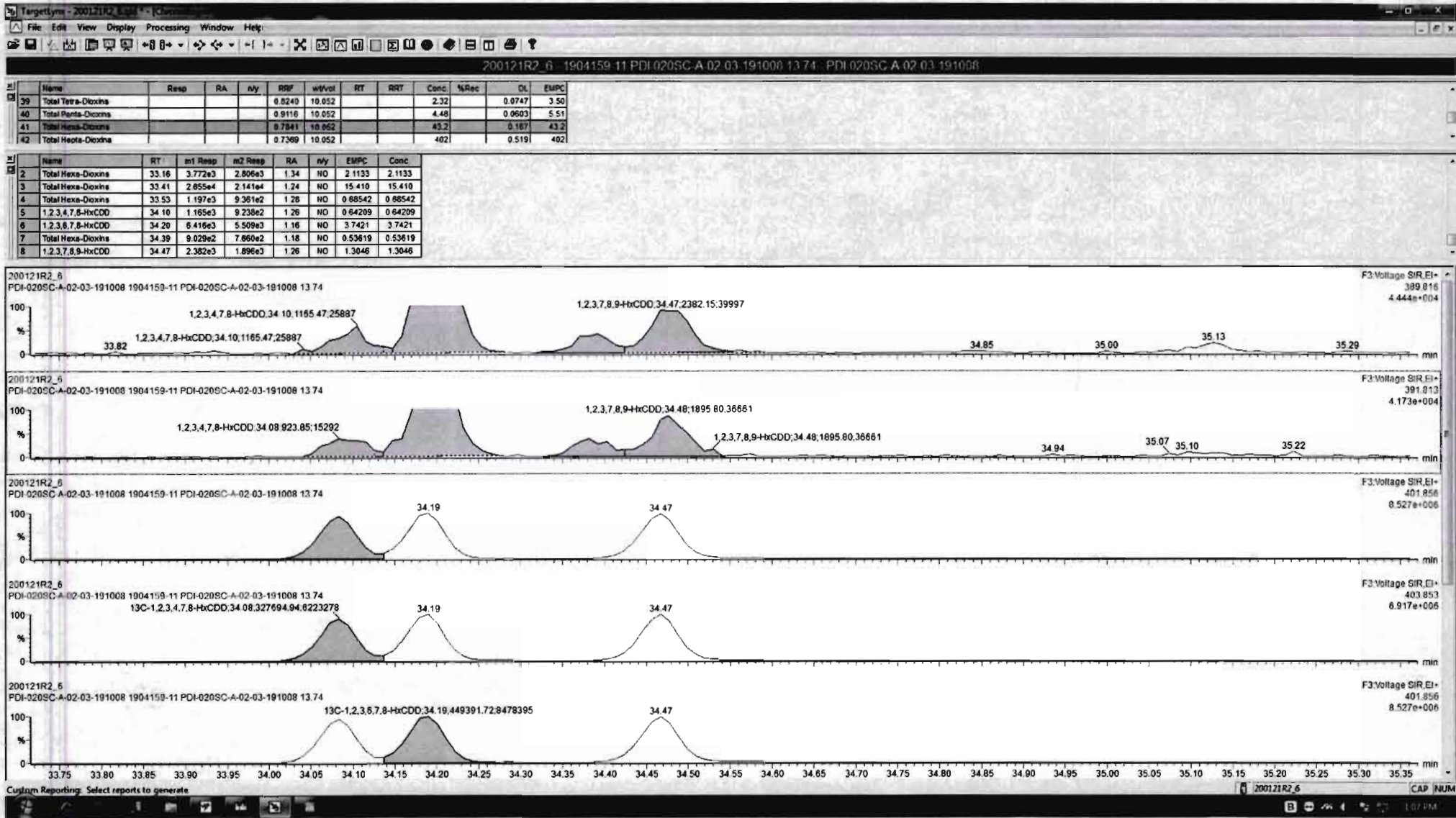


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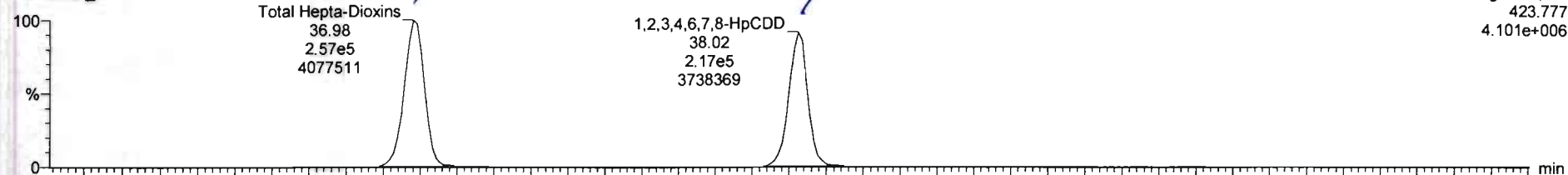
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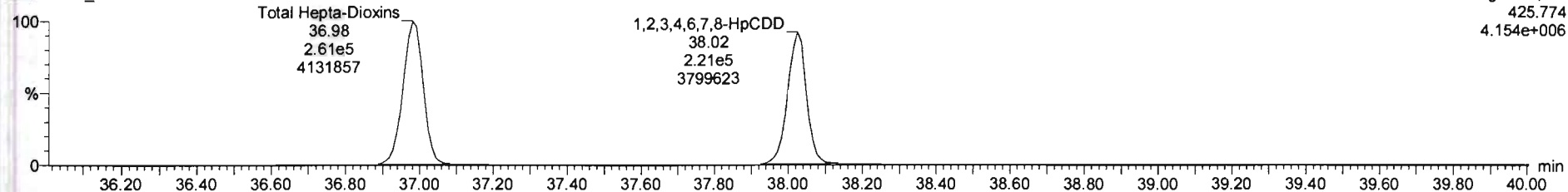
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1,2,3,4,6,7,8-HpCDD

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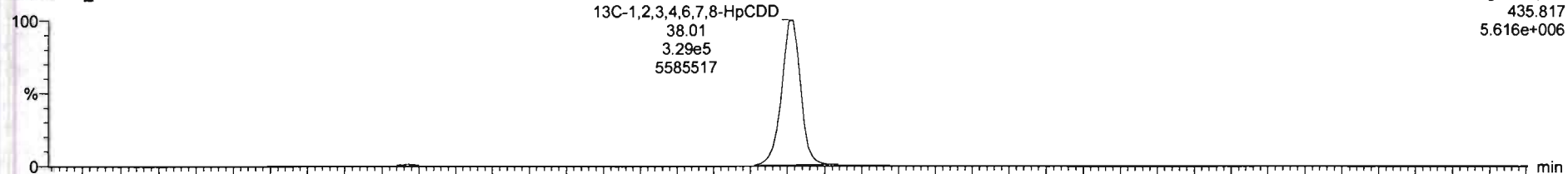


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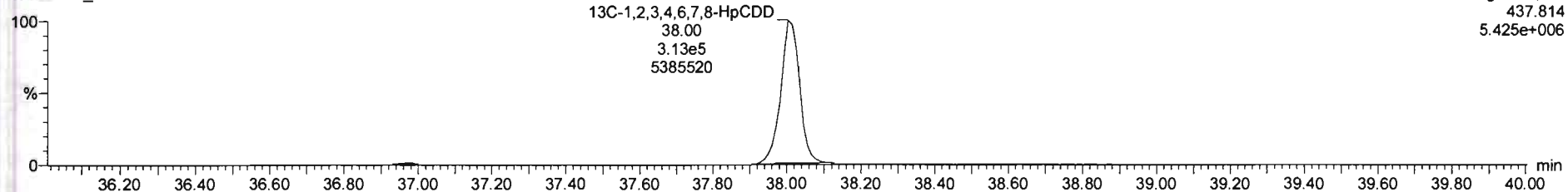


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200121R2\_6



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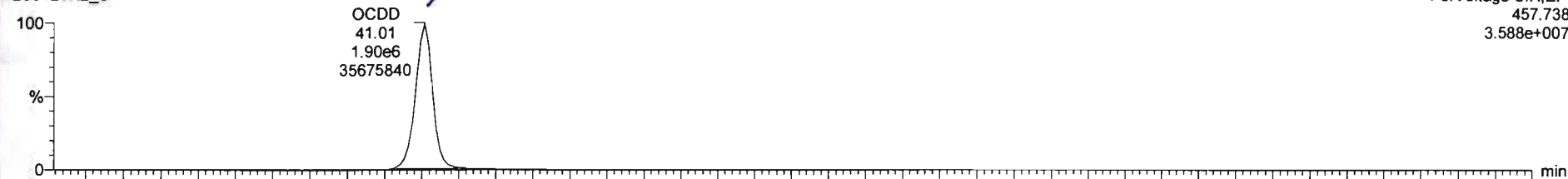
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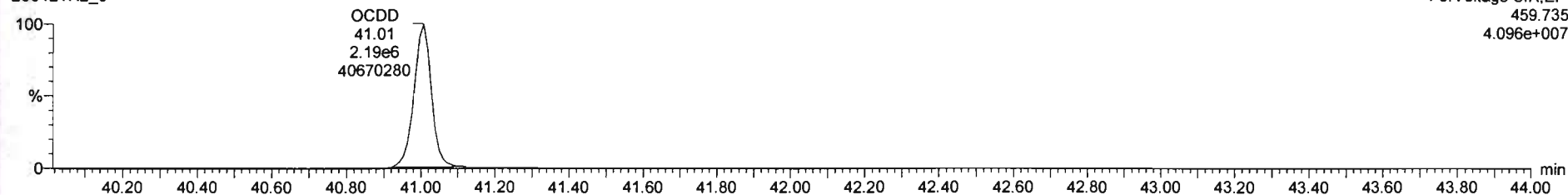
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**OCDD**

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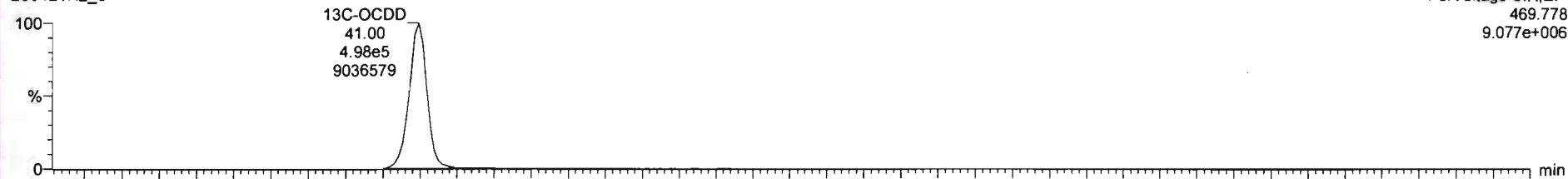


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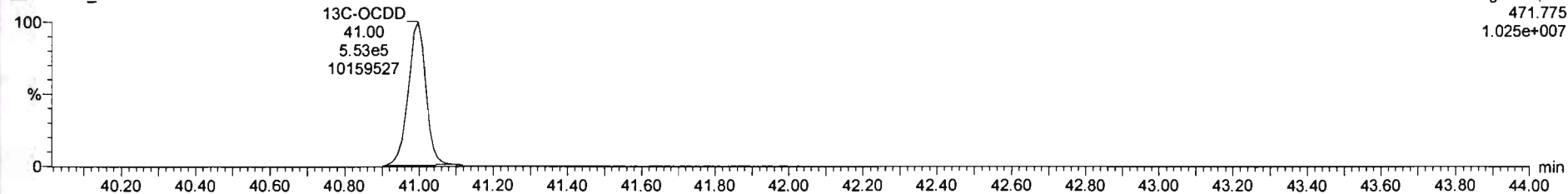


**13C-OCDD**

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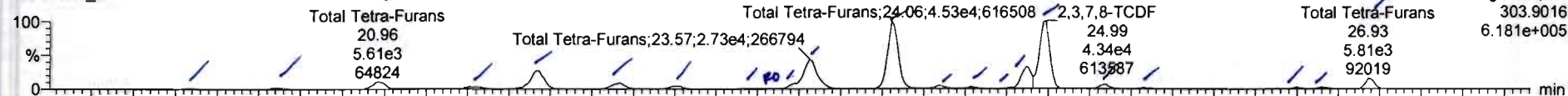
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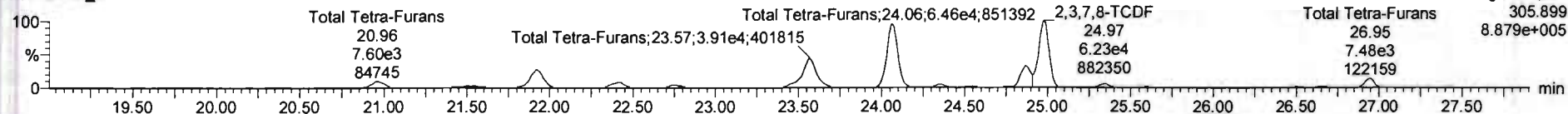
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**2,3,7,8-TCDF**

200121R2\_6

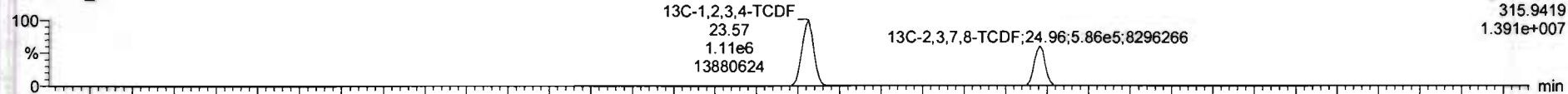


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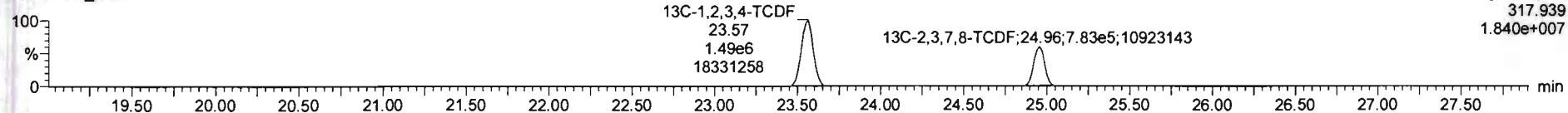


**13C-2,3,7,8-TCDF**

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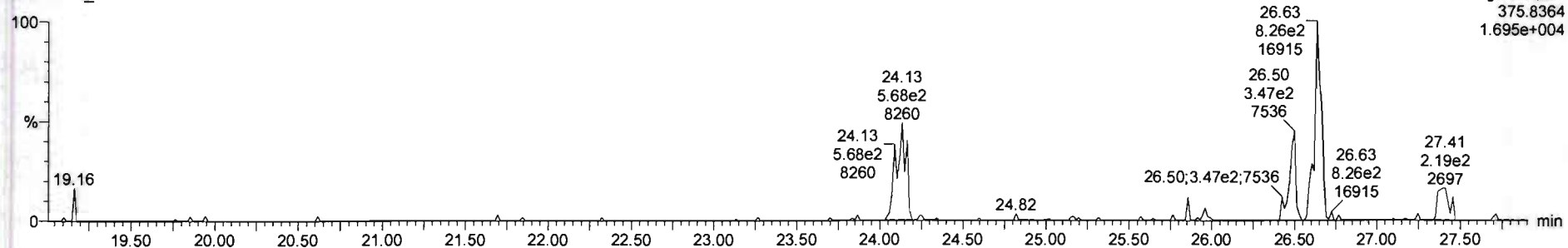


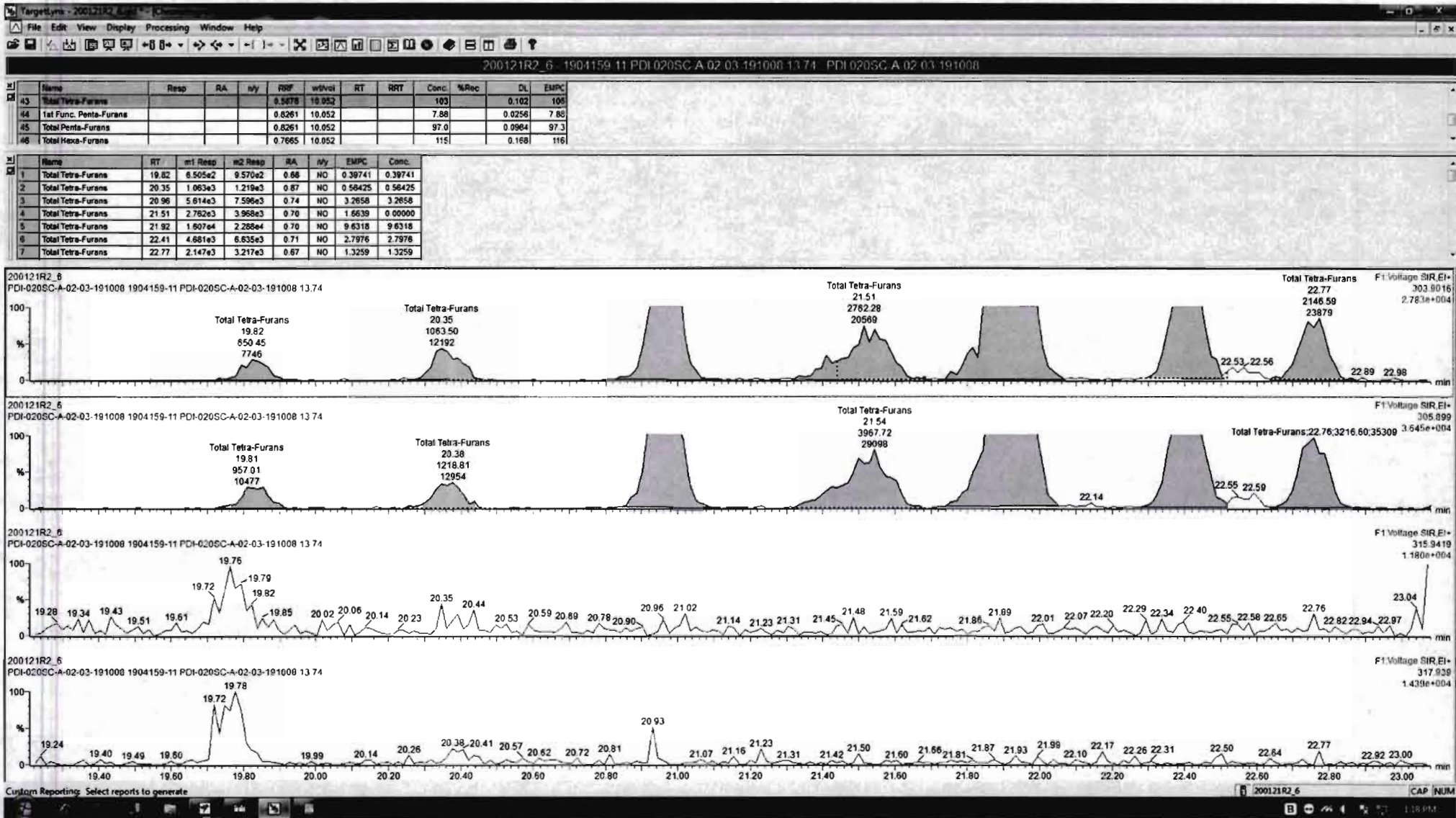
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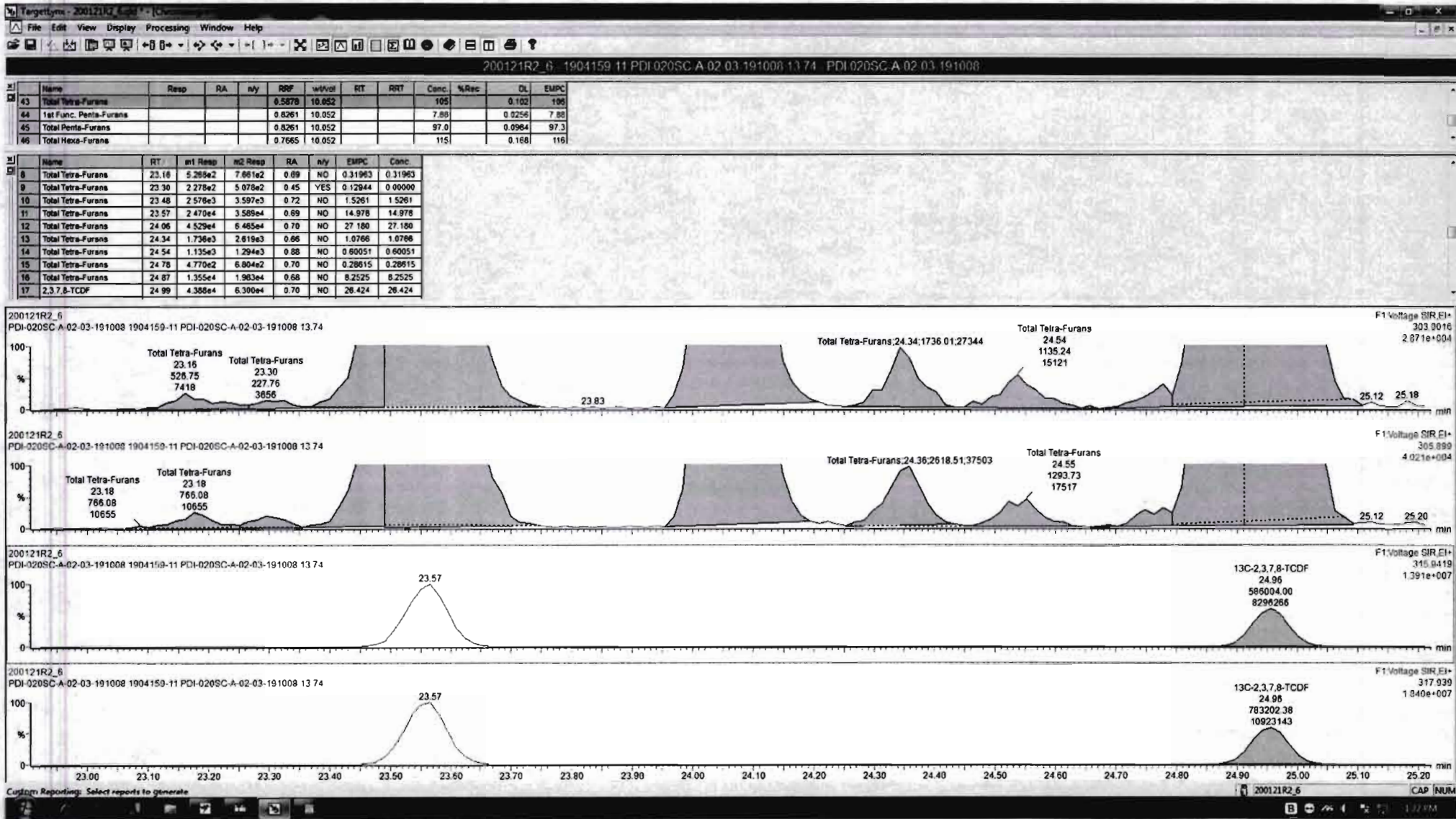


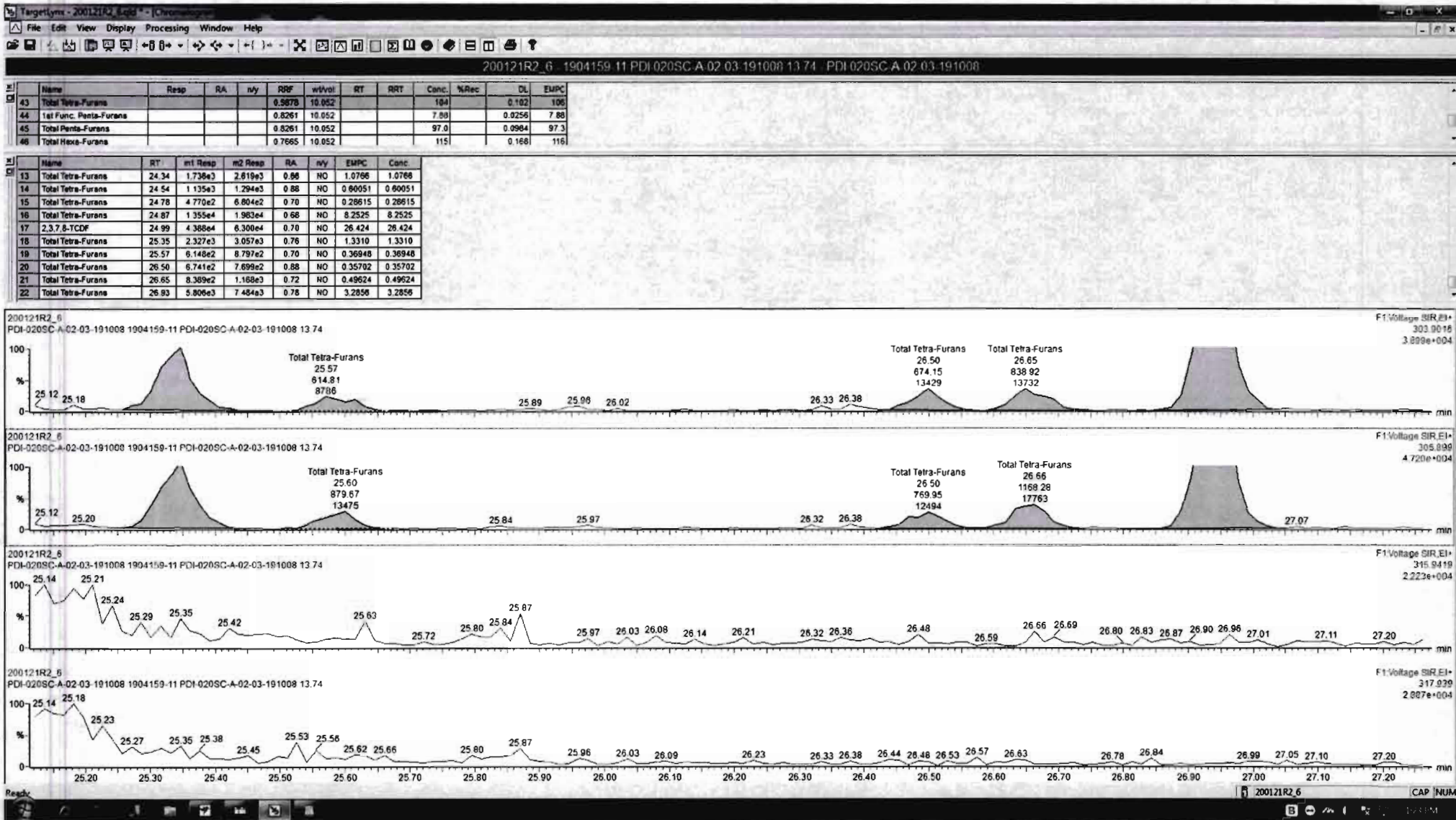
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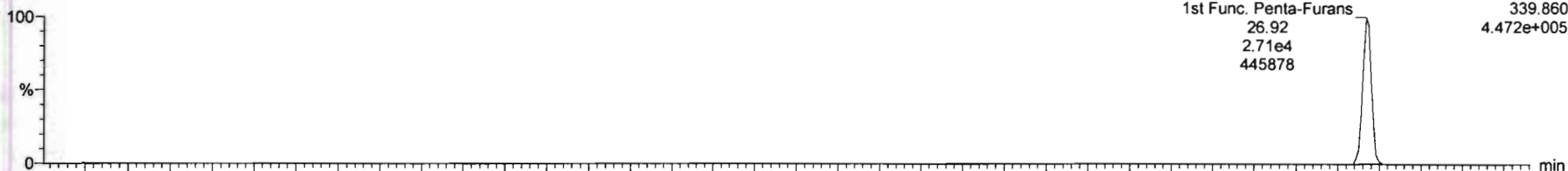
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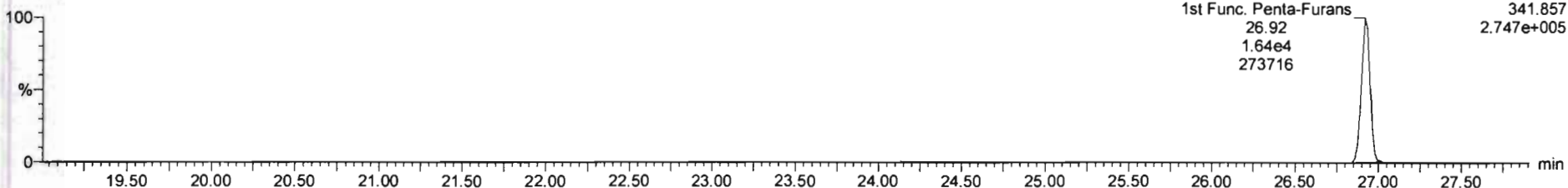
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1st Func. Penta-Furans

200121R2\_6

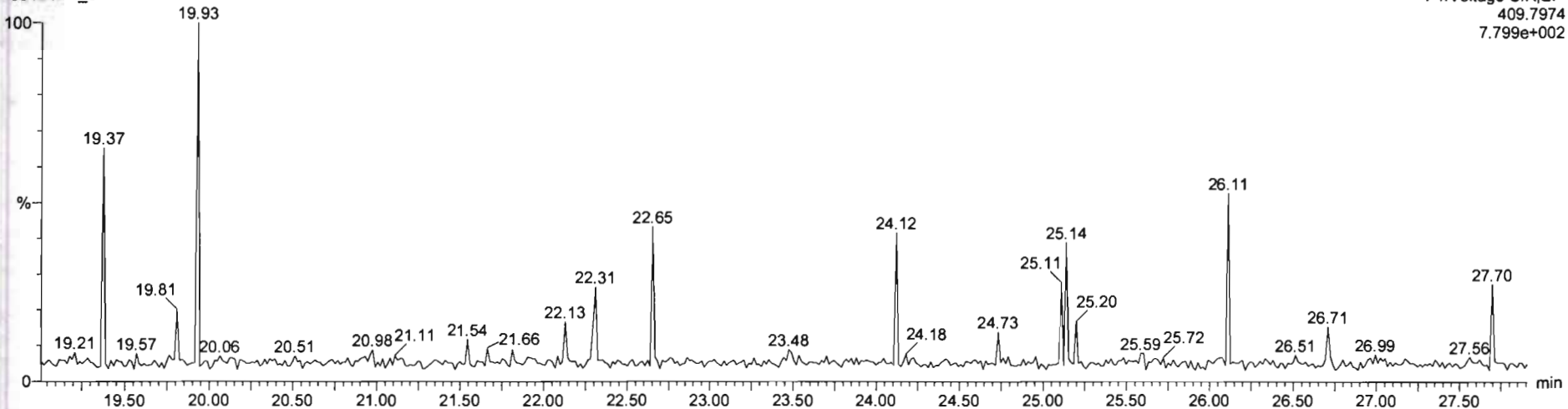


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DPE6

200121R2\_6





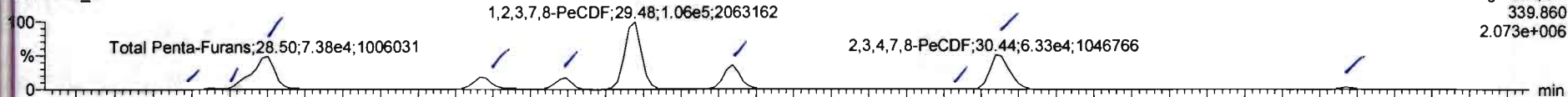
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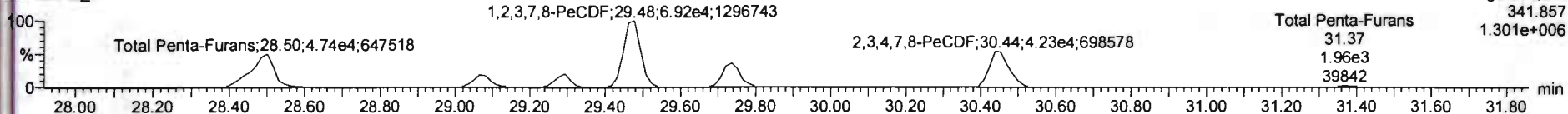
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**1,2,3,7,8-PeCDF**

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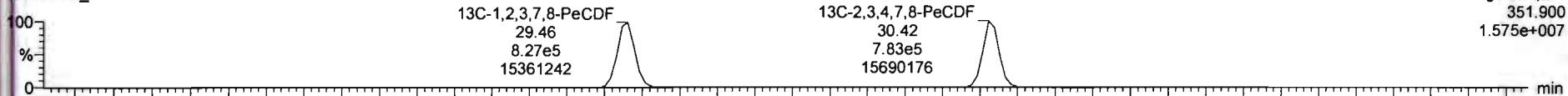


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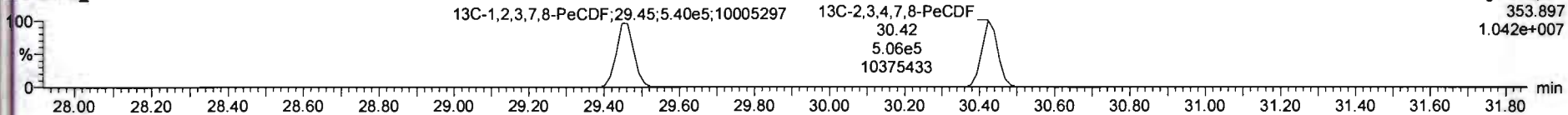


**13C-1,2,3,7,8-PeCDF**

200121R2\_6

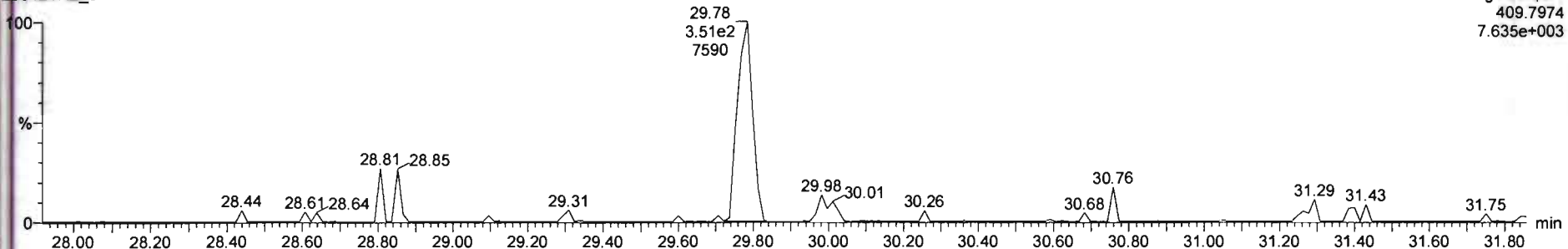


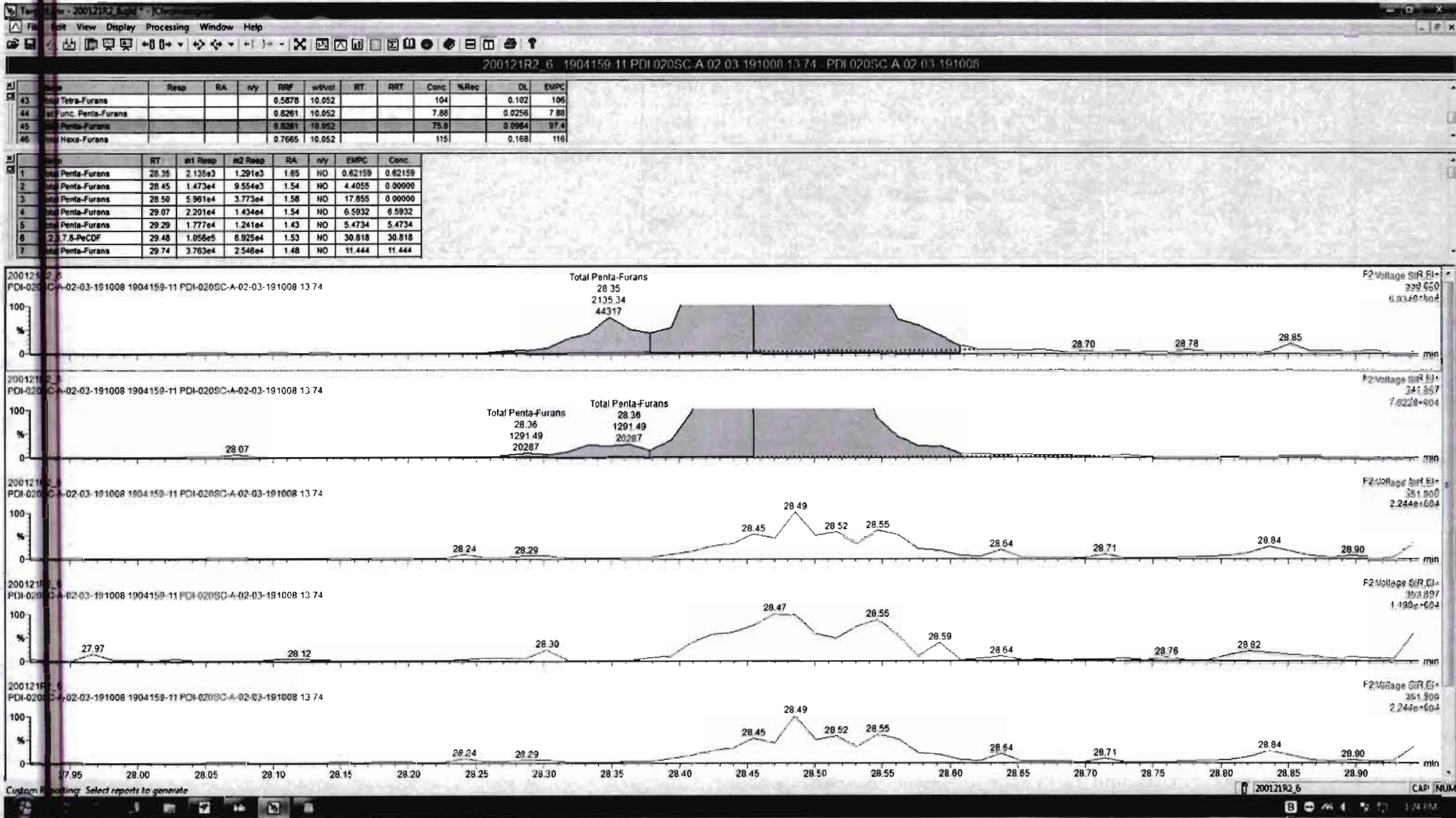
200121R2\_6

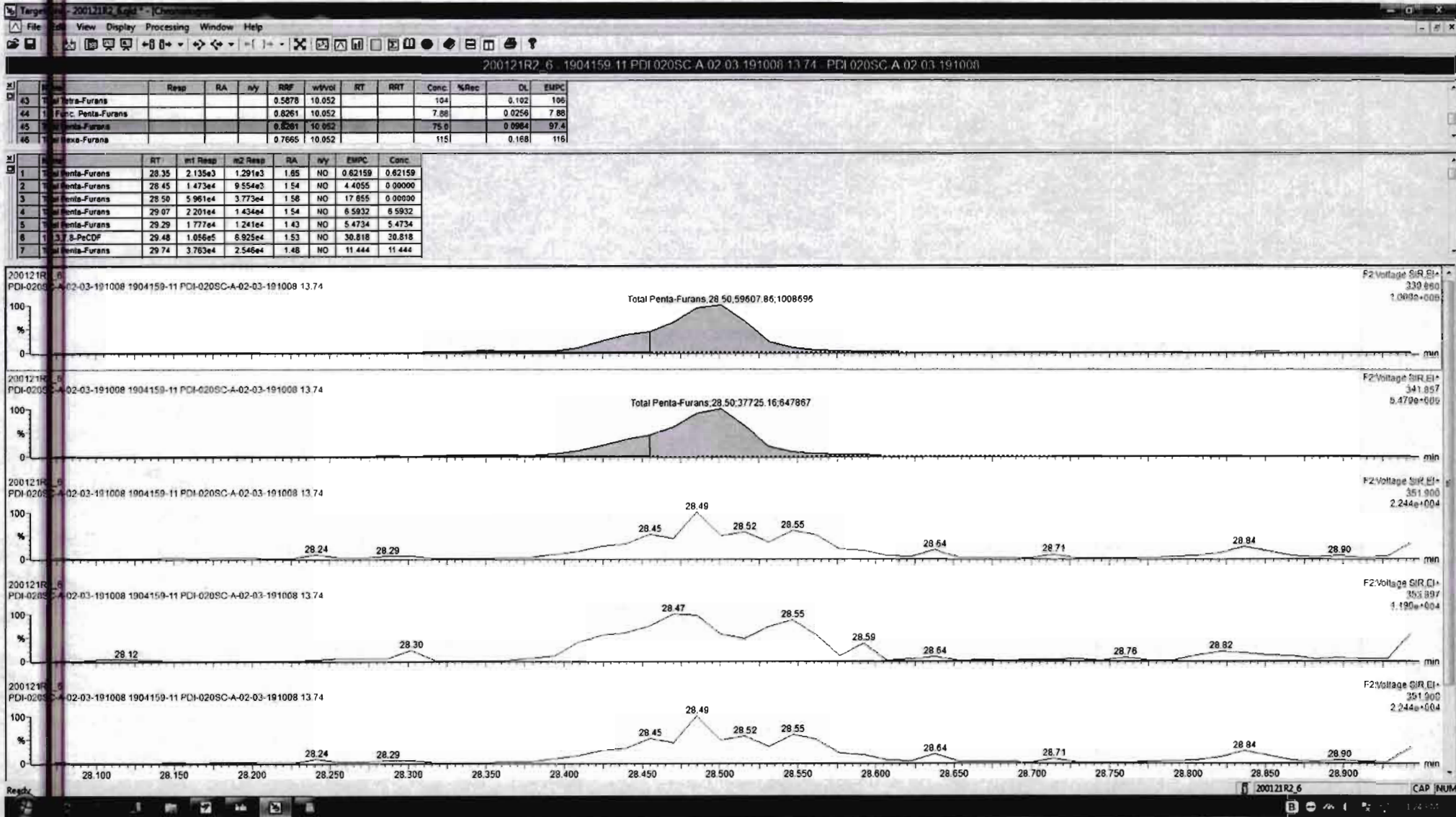


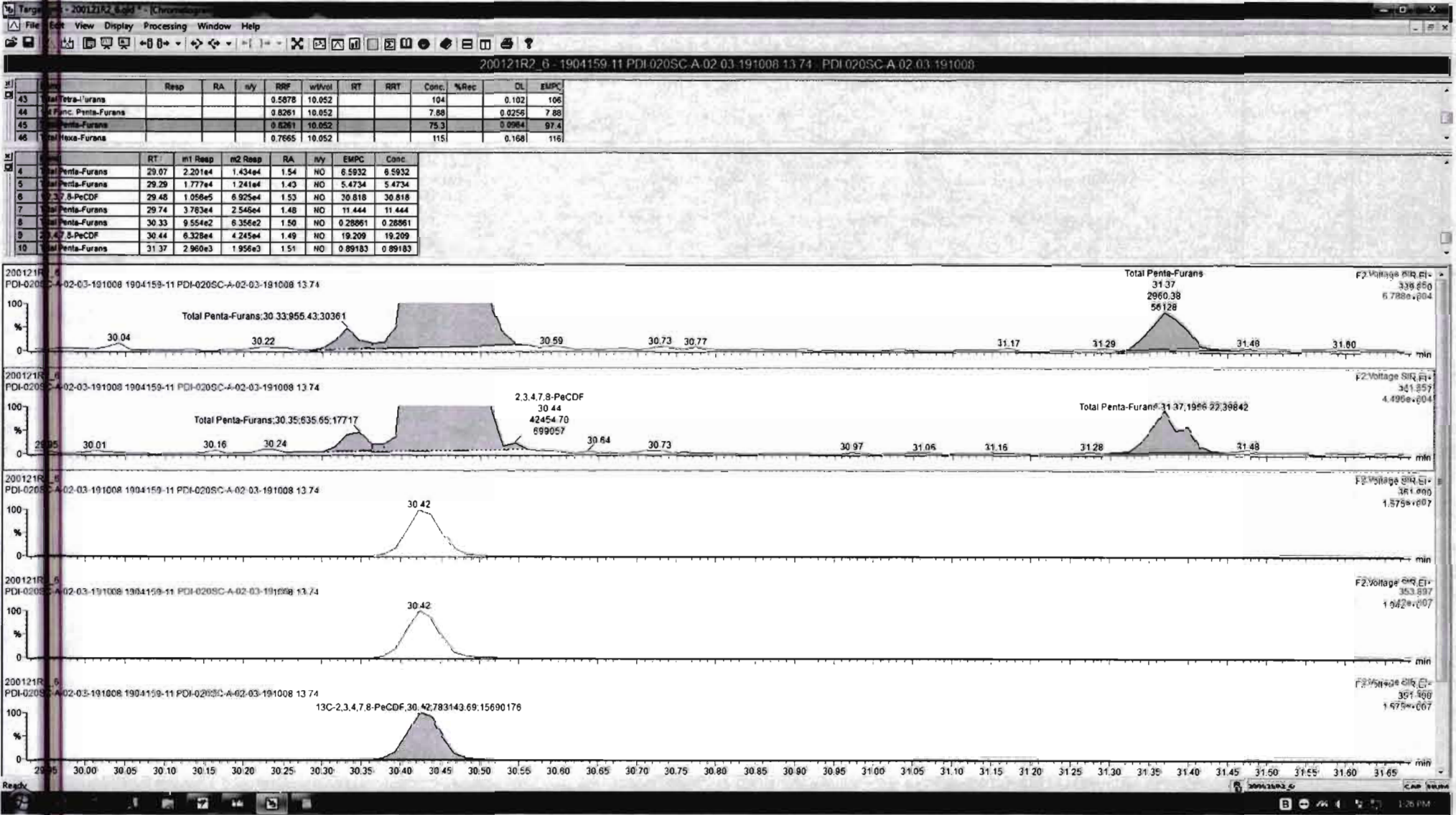
**DPE2**

200121R2\_6







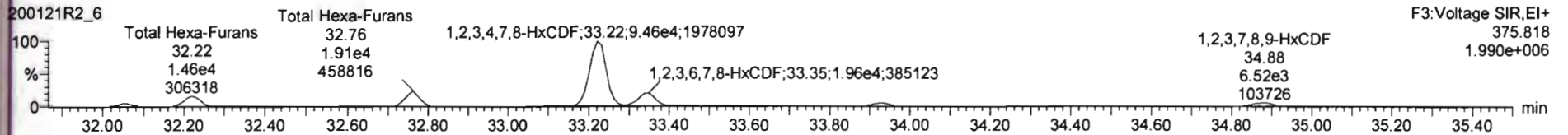
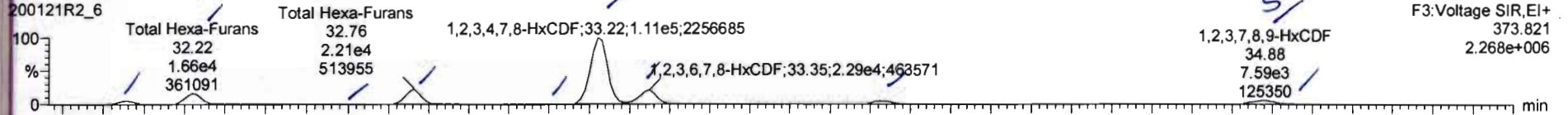


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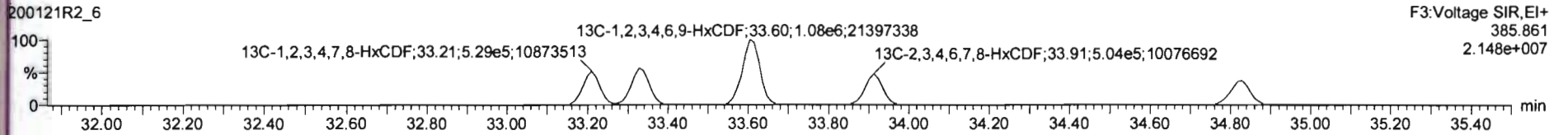
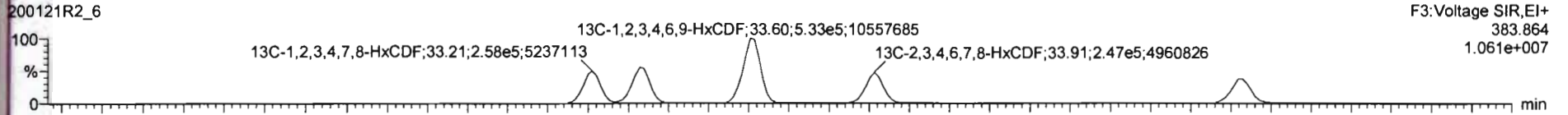
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

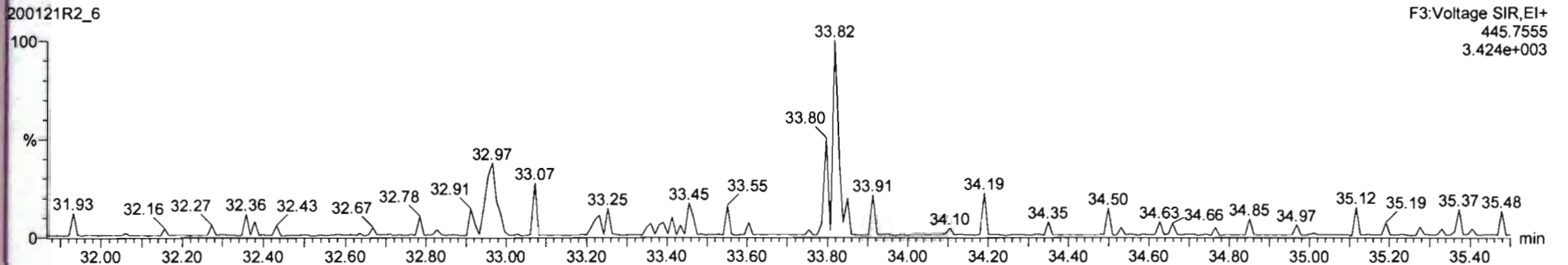
1,2,3,4,7,8-HxCDF

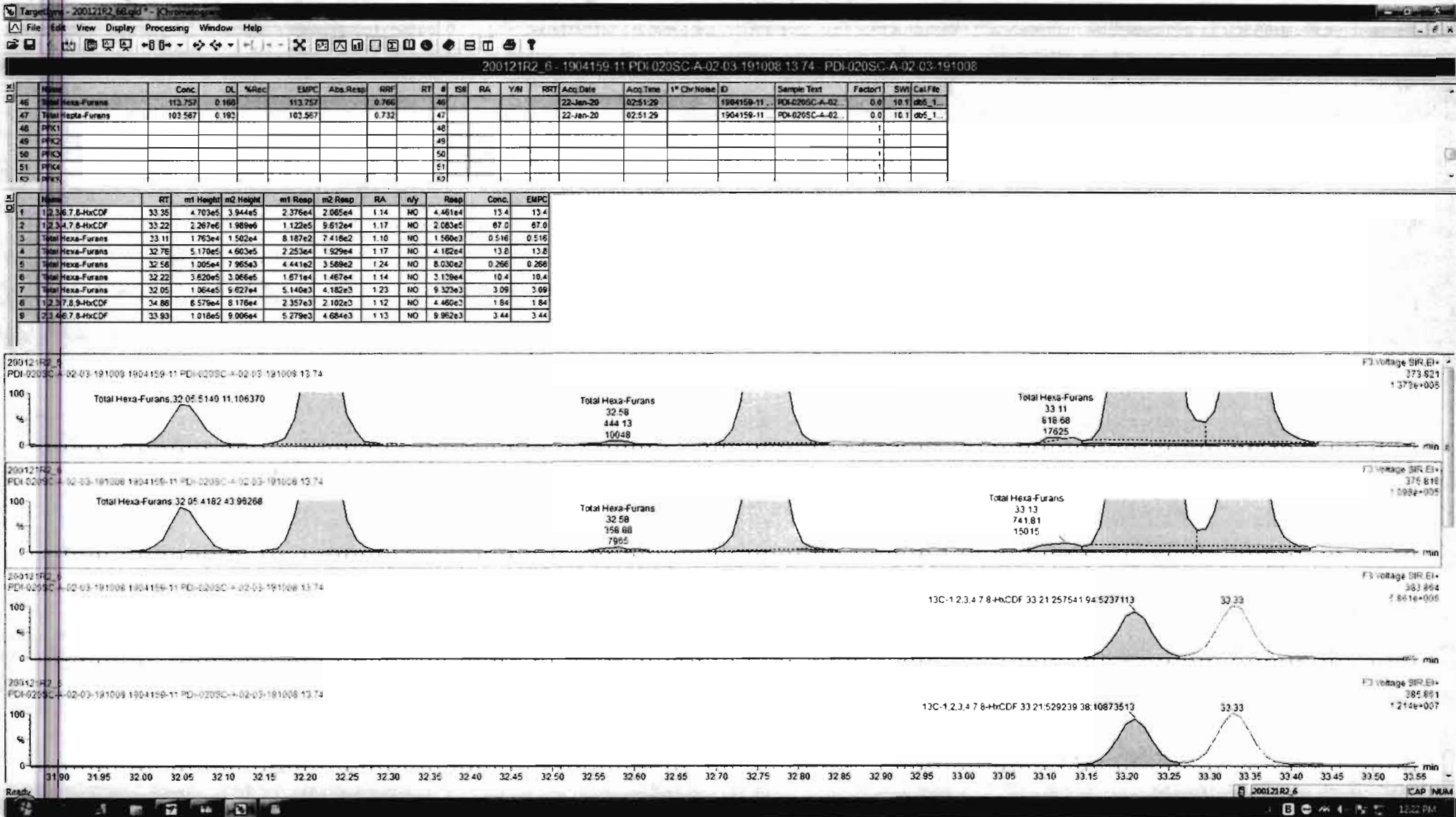


13C-1,2,3,4,7,8-HxCDF



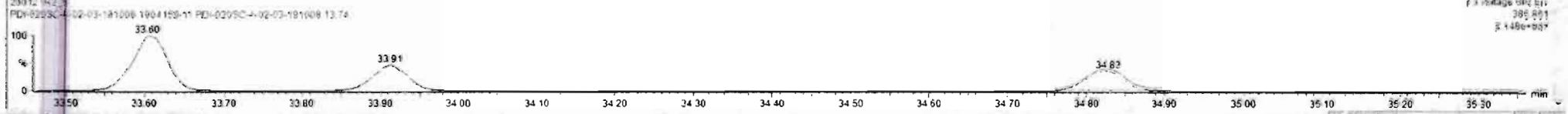
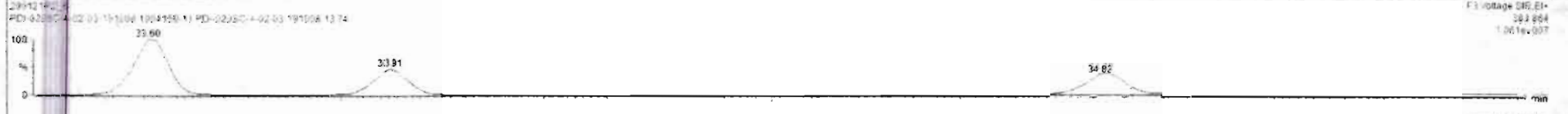
DPE3





Name	Conc	DL	%Rec	EMPC	Abs.Resp	RRF	RT	#	IS#	RA	YN	RRT	Acq Date	Acq Time	% Chr Rows	ID	Sample Text	Factor	Site	Cell File	
46 Total Hexa-Furans	117.155	0.168		117.155		0.766	46						22-Jan-20	02:51:29		1904159-11	PDI-020SC-A-02	0.0	10.1	obs_1...	
47 Total Hexa-Furans	103.567	0.193		103.567		0.732	47						22-Jan-20	02:51:29		1904159-11	PDI-020SC-A-02	0.0	10.1	obs_1...	
48 PFK1							48														
49 PFK2							49														
50 PFK3							50														
51 PFK4							51														
52 PFK5							52														

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC
1 Total Hexa-Furans	32.05	1.064e5	9.627e4	5.140e3	4.182e3	1.23	NO	9.323e3	3.09	3.09
2 Total Hexa-Furans	32.22	3.620e5	3.066e5	1.671e4	1.467e4	1.14	NO	3.139e4	10.4	10.4
3 Total Hexa-Furans	32.58	1.305e4	7.965e3	4.441e2	3.589e2	1.24	NO	6.020e2	0.266	0.266
4 Total Hexa-Furans	32.76	5.170e5	4.603e5	2.253e4	1.929e4	1.17	NO	4.182e4	13.8	13.8
5 Total Hexa-Furans	33.11	1.763e4	1.502e4	6.167e2	7.418e2	1.10	NO	1.560e3	0.516	0.516
6 1,2,3,4,7,8-HxCDF	33.22	2.267e6	1.989e6	1.122e5	9.612e4	1.17	NO	2.082e5	67.0	67.0
7 1,2,3,6,7,8-HxCDF	33.35	4.703e5	3.944e5	2.376e4	2.085e4	1.14	NO	4.461e4	13.4	13.4
8 2,3,4,6,7,8-HxCDF	33.93	1.018e5	9.006e4	5.279e3	4.664e3	1.13	NO	9.962e3	3.44	3.44
9 1,2,3,8,9-HxCDF	34.67	1.137e5	9.695e4	3.421e3	2.974e3	1.15	NO	6.395e3	2.64	2.64
10 Total Hexa-Furans	34.68	1.260e5	1.041e5	4.320e3	3.538e3	1.22	NO	7.859e3	2.60	2.60



Dataset: Untitled

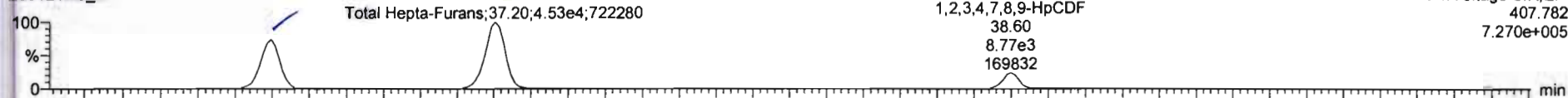
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

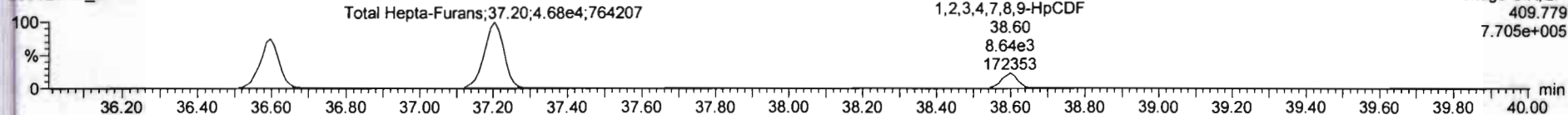
Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

1,2,3,4,6,7,8-HpCDF

200121R2\_6

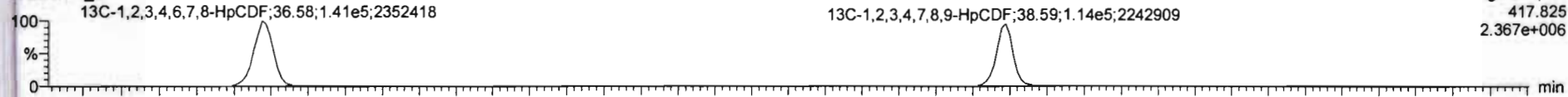


200121R2\_6

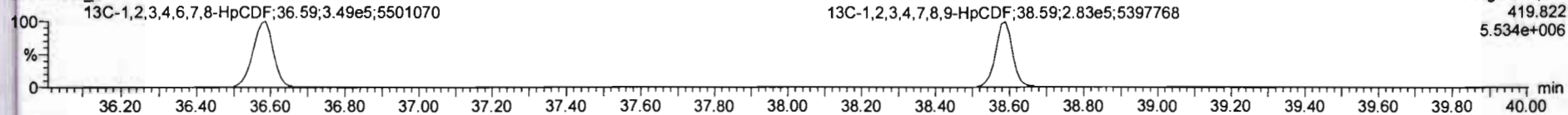


13C-1,2,3,4,6,7,8-HpCDF

200121R2\_6

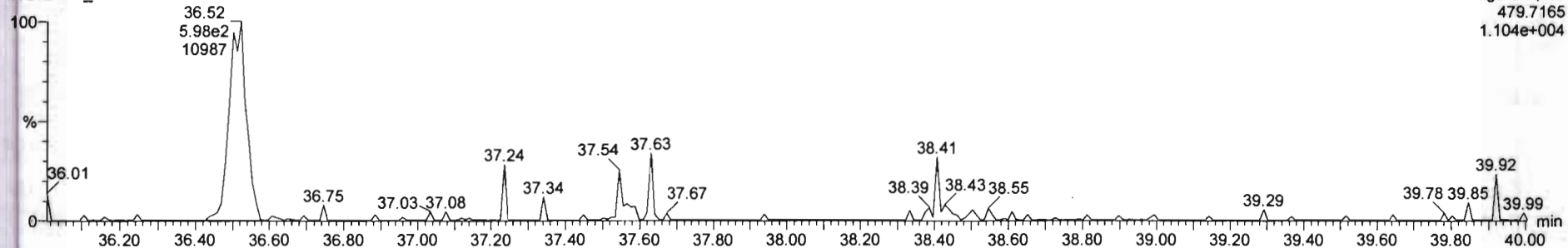


200121R2\_6



DPE4

200121R2\_6



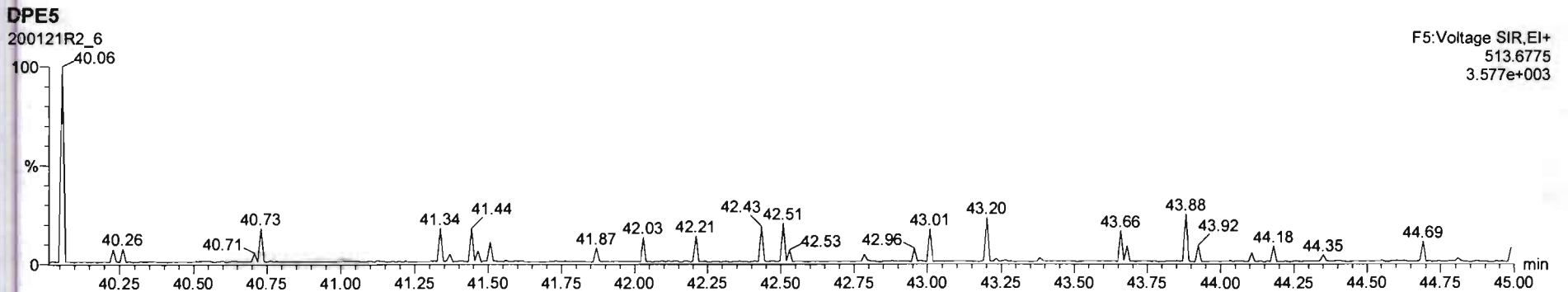
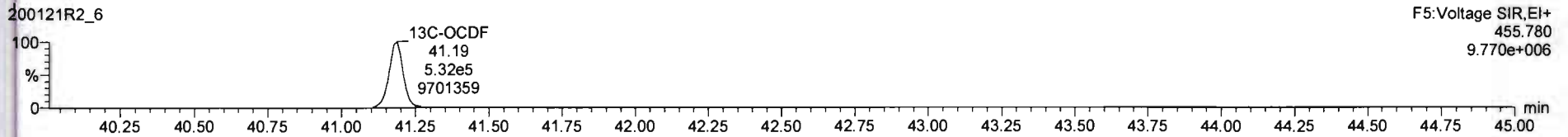
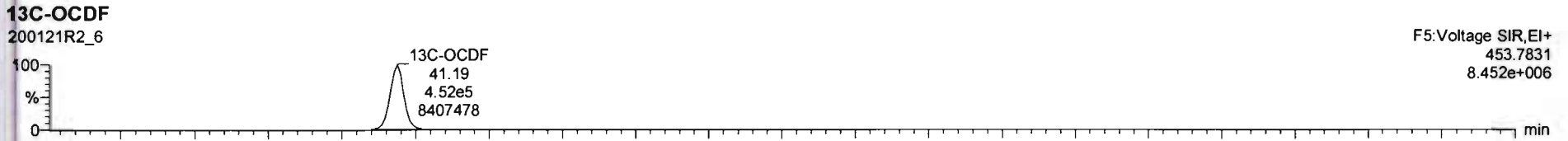
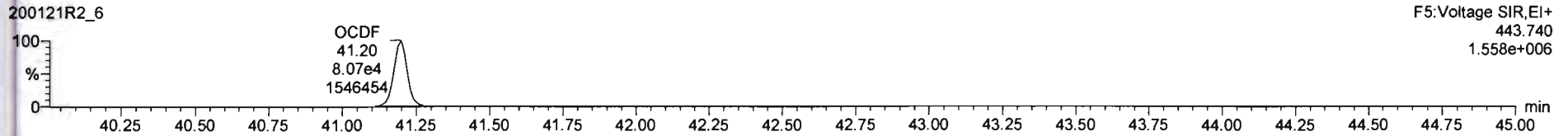
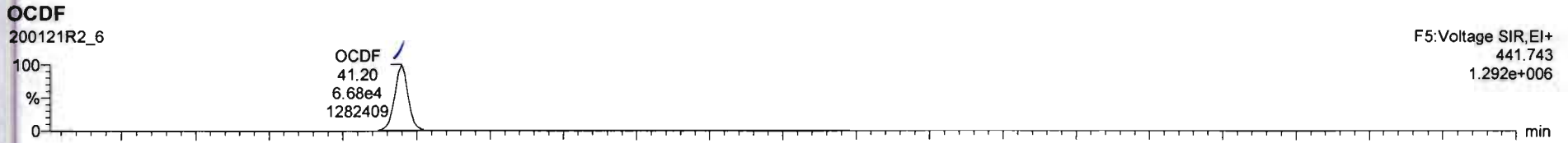


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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

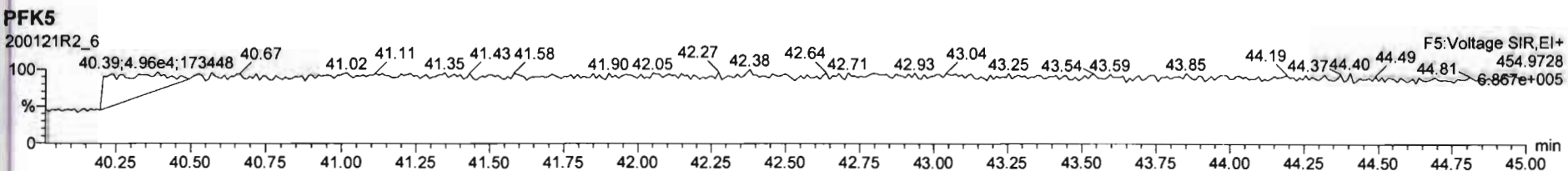
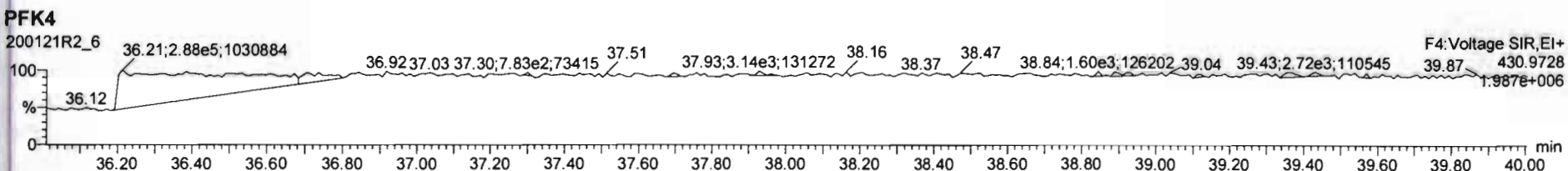
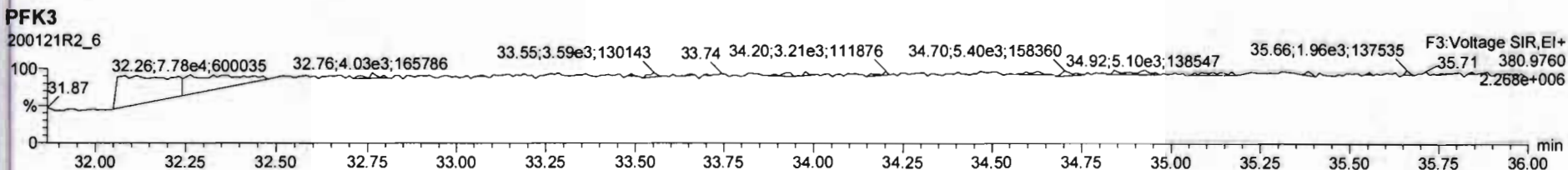
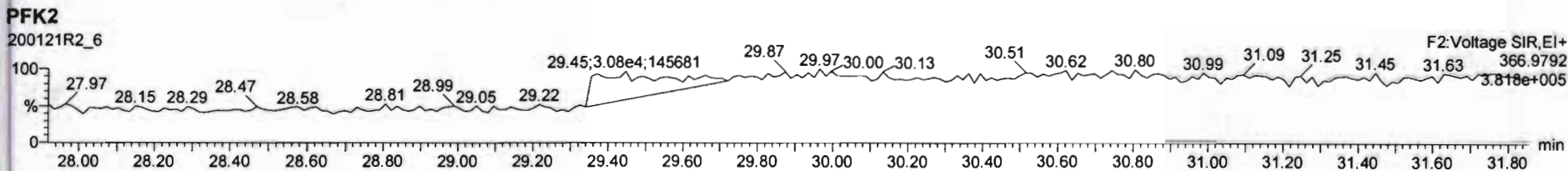
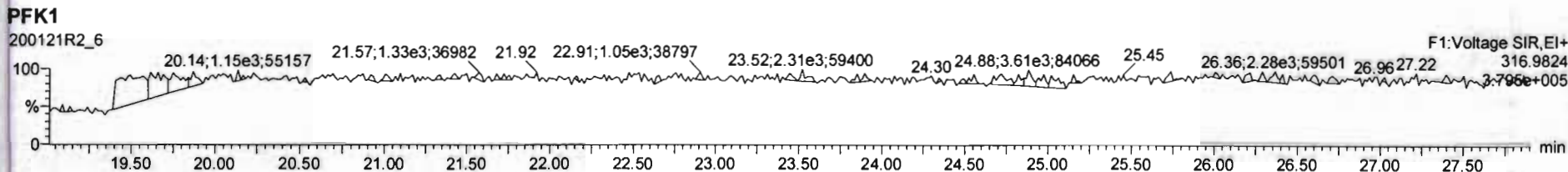


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Name: 200121R2\_6, Date: 22-Jan-2020, Time: 02:51:29, ID: 1904159-11 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-10.qld

Last Altered: Tuesday, January 28, 2020 12:53:01 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:53:22 Pacific Standard Time

GRB 01/28/2020

CT 01/31/2020

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 28 Jan 2020 12:41:06

Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008,

Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		7.02e4	10.0272	0.905			1.001		25.99					0.246
2	2 1,2,3,7,8-PeCDD		3.95e4	10.0272	0.903			1.001		30.57					0.301
3	3 1,2,3,4,7,8-HxCDD		4.37e4	10.0272	1.101			1.000		33.87					0.411
4	4 1,2,3,6,7,8-HxCDD		5.09e4	10.0272	0.939			1.000		33.97					0.434
5	5 1,2,3,7,8,9-HxCDD		4.99e4	10.0272	0.961			1.001		34.31					0.446
6	6 1,2,3,4,6,7,8-HpCDD	6.48e2	4.17e4	10.0272	0.979	0.910	NO	1.000	1.000	37.77	37.76	3.1599		3.16	0.552
7	7 OCDD	6.33e3	6.83e4	10.0272	0.959	0.885	NO	1.000	1.000	41.02	41.03	38.578		38.6	0.940
8	8 2,3,7,8-TCDF		1.05e5	10.0272	0.950			1.001		25.20					0.228
9	9 1,2,3,7,8-PeCDF	7.29e1	7.94e4	10.0272	0.960	1.046	YES	1.001	1.000	29.38	29.36	0.19052		0.160	0.102
10	10 2,3,4,7,8-PeCDF		6.24e4	10.0272	1.015			1.001		30.30					0.247
11	11 1,2,3,4,7,8-HxCDF		6.21e4	10.0272	1.177			1.000		32.99					0.194
12	12 1,2,3,6,7,8-HxCDF		6.99e4	10.0272	1.069			1.000		33.11					0.183
13	13 2,3,4,6,7,8-HxCDF		6.42e4	10.0272	1.114			1.001		33.74					0.222
14	14 1,2,3,7,8,9-HxCDF		5.98e4	10.0272	1.062			1.000		34.66					0.296
15	15 1,2,3,4,6,7,8-HpCDF		5.45e4	10.0272	1.128			1.001		36.53					0.393
16	16 1,2,3,4,7,8,9-HpCDF		3.86e4	10.0272	1.280			1.000		38.29					0.428
17	17 OCDF	3.18e2	1.06e5	10.0272	0.947	0.733	YES	1.000	1.001	41.24	41.26	1.2625		1.13	0.347
18	18 13C-2,3,7,8-TCDD	7.02e4	6.50e4	10.0272	1.095	0.715	NO	1.023	1.022	25.97	25.95	196.70	98.6		0.639
19	19 13C-1,2,3,7,8-PeCDD	3.95e4	6.50e4	10.0272	0.881	0.605	NO	1.203	1.203	30.54	30.55	137.62	69.0		0.481
20	20 13C-1,2,3,4,7,8-Hx...	4.37e4	6.85e4	10.0272	0.642	1.238	NO	1.014	1.014	33.86	33.86	198.34	99.4		1.98
21	21 13C-1,2,3,6,7,8-Hx...	5.09e4	6.85e4	10.0272	0.856	1.247	NO	1.017	1.017	33.97	33.97	173.18	86.8		1.48
22	22 13C-1,2,3,7,8,9-Hx...	4.99e4	6.85e4	10.0272	0.807	1.235	NO	1.026	1.026	34.27	34.28	180.11	90.3		1.57
23	23 13C-1,2,3,4,6,7,8-H...	4.17e4	6.85e4	10.0272	0.654	1.030	NO	1.131	1.131	37.77	37.76	185.91	93.2		1.61
24	24 13C-OCDD	6.83e4	6.85e4	10.0272	0.580	0.958	NO	1.228	1.228	41.02	41.02	342.94	86.0		1.29
25	25 13C-2,3,7,8-TCDF	1.05e5	1.14e5	10.0272	1.035	0.779	NO	0.992	0.991	25.19	25.18	177.29	88.9		0.798
26	26 13C-1,2,3,7,8-PeCDF	7.94e4	1.14e5	10.0272	0.854	1.584	NO	1.156	1.156	29.36	29.36	162.29	81.4		0.849
27	27 13C-2,3,4,7,8-PeCDF	6.24e4	1.14e5	10.0272	0.847	1.586	NO	1.192	1.192	30.26	30.27	128.61	64.5		0.856
28	28 13C-1,2,3,4,7,8-Hx...	6.21e4	6.85e4	10.0272	0.832	0.513	NO	0.987	0.988	32.97	32.99	217.53	109.1		1.64
29	29 13C-1,2,3,6,7,8-Hx...	6.99e4	6.85e4	10.0272	1.034	0.512	NO	0.991	0.991	33.08	33.10	196.78	98.7		1.32
30	30 13C-2,3,4,6,7,8-Hx...	6.42e4	6.85e4	10.0272	0.953	0.501	NO	1.009	1.009	33.70	33.71	196.26	98.4		1.43
31	31 13C-1,2,3,7,8,9-Hx...	5.98e4	6.85e4	10.0272	0.828	0.515	NO	1.038	1.038	34.65	34.66	210.54	105.6		1.65

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-10.qld

Last Altered: Tuesday, January 28, 2020 12:53:01 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:53:22 Pacific Standard Time

Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008,  
 Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	5.45e4	6.85e4	10.0272	0.757	0.428	NO	1.093	1.093	36.49	36.50	209.57	105.1		1.65
33	33 13C-1,2,3,4,7,8,9-H...	3.86e4	6.85e4	10.0272	0.581	0.380	NO	1.147	1.147	38.29	38.29	193.57	97.0		2.15
34	34 13C-OCDF	1.06e5	6.85e4	10.0272	0.689	0.870	NO	1.235	1.235	41.24	41.24	448.94	112.5		1.86
35	35 37Cl-2,3,7,8-TCDD	2.95e4	6.50e4	10.0272	1.198			1.024	1.023	25.99	25.99	75.592	94.7		0.293
36	36 13C-1,2,3,4-TCDD	6.50e4	6.50e4	10.0272	1.000	0.750	NO	1.000	1.000	25.39	25.39	199.46	100.0		0.700
37	37 13C-1,2,3,4-TCDF	1.14e5	1.14e5	10.0272	1.000	0.820	NO	1.000	1.000	23.93	23.92	199.46	100.0		0.825
38	38 13C-1,2,3,4,6,9-Hx...	6.85e4	6.85e4	10.0272	1.000	0.518	NO	1.000	1.000	33.37	33.39	199.46	100.0		1.36
39	39 Total Tetra-Dioxins		7.02e4	10.0272	0.901			0.000		25.50					0.140
40	40 Total Penta-Dioxins		3.95e4	10.0272	0.872			0.000		30.00					0.131
41	41 Total Hexa-Dioxins		0.00e0	10.0272	0.976			0.000		33.80		0.00000		0.341	0.237
42	42 Total Hepta-Dioxins		4.17e4	10.0272	0.989			0.000		37.75		7.9849		7.98	0.547
43	43 Total Tetra-Furans		1.05e5	10.0272	0.943			0.000		24.00					0.102
44	44 1st Func. Penta-Fur...		0.00e0	10.0272	0.940			0.000		27.63					0.0605
45	45 Total Penta-Furans		0.00e0	10.0272	0.940			0.000		30.00		0.00000		0.160	0.118
46	46 Total Hexa-Furans		0.00e0	10.0272	1.078			0.000		33.00					0.101
47	47 Total Hepta-Furans		0.00e0	10.0272	1.135			0.000		37.75					0.208

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-10.qld

Last Altered: Tuesday, January 28, 2020 12:53:01 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:53:22 Pacific Standard Time

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Calibration: 28 Jan 2020 12:41:06

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 Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Penta-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Hexa-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	41 Total Hexa-Dioxins	YES	32.36	53.440	26660.361	0.000	MM	0.0000	0.34

**Hepta-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.76	308.521	21177.551	31.032	MM	3.1599	3.16
2	42 Total Hepta-Dioxins	NO	36.91	521.354	21177.551	47.834	bb	4.8250	4.82

**Tetra-Furans**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-10.qld

Last Altered: Tuesday, January 28, 2020 12:53:01 Pacific Standard Time

Printed: Tuesday, January 28, 2020 12:53:22 Pacific Standard Time

Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008,  
 Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Penta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	9 1,2,3,7,8-PeCDF	YES	29.36	37.253	48700.953	0.000	MM	0.0000	0.16

**Hexa-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Hepta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Vista Analytical Laboratory

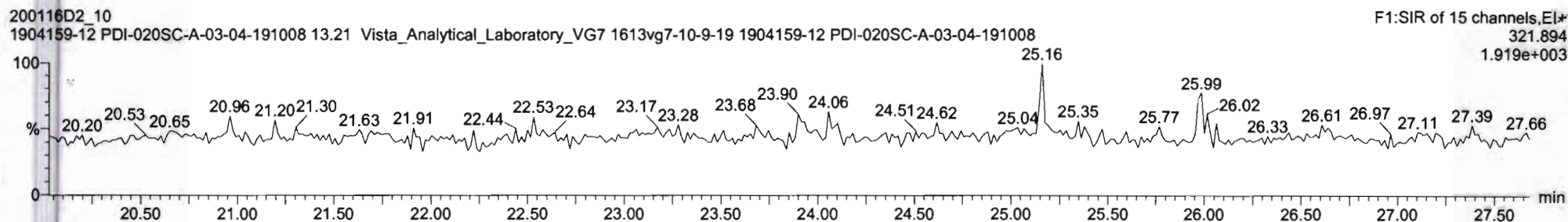
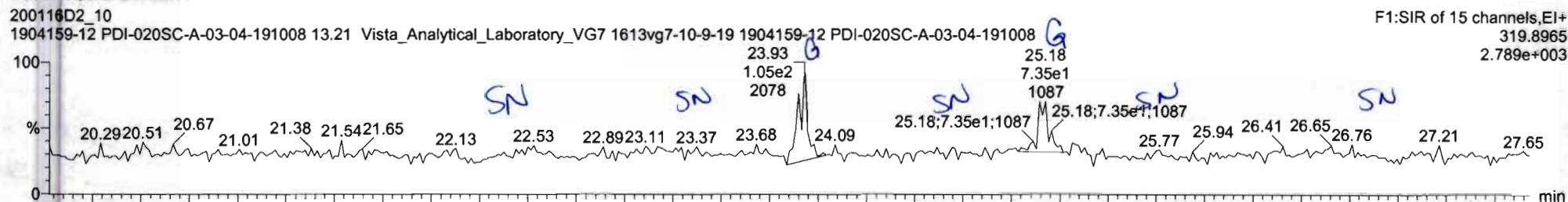
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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

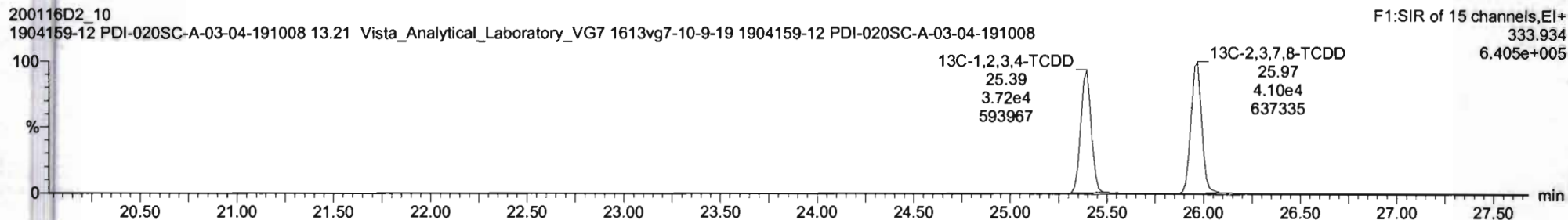
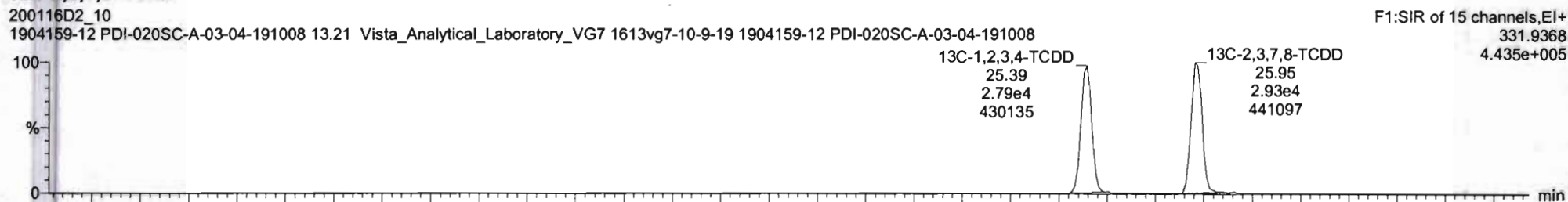
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Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008, Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Tetra-Dioxins



13C-2,3,7,8-TCDD



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

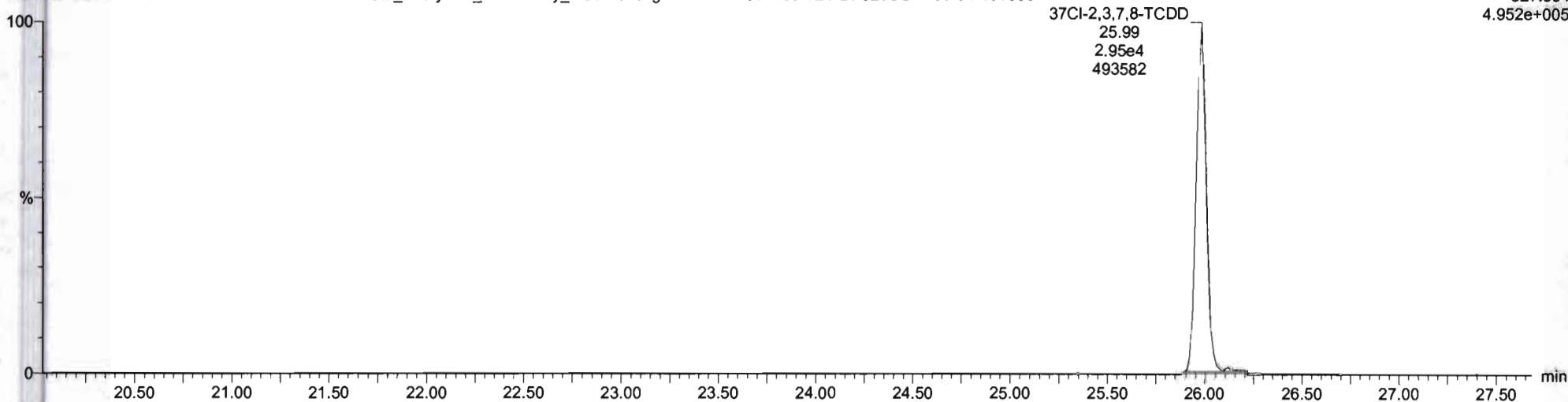
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Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**37Cl-2,3,7,8-TCDD**

200116D2\_10  
1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-12 PDI-020SC-A-03-04-191008

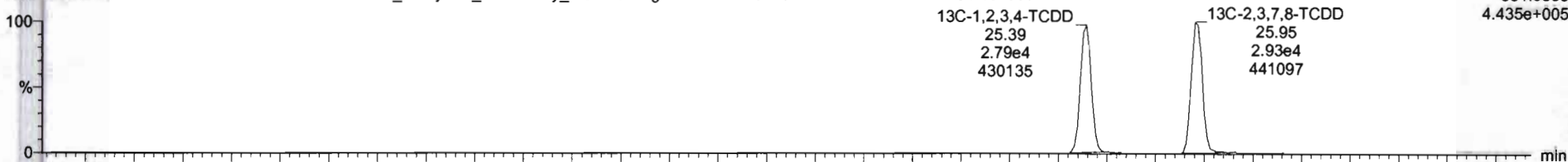
F1:SIR of 15 channels,EI+  
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4.952e+005



**13C-1,2,3,4-TCDD**

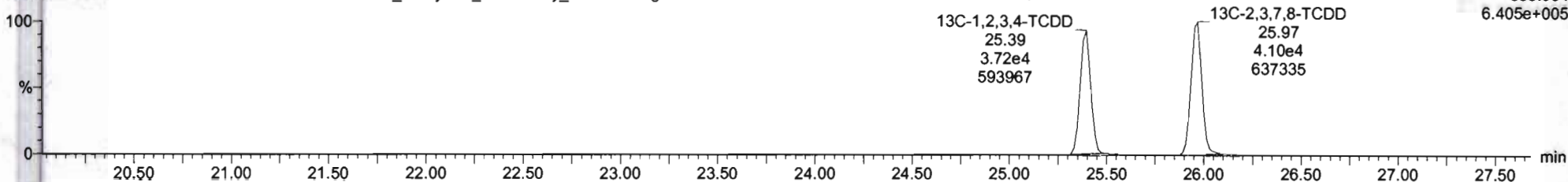
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F1:SIR of 15 channels,EI+  
331.9368  
4.435e+005



200116D2\_10  
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F1:SIR of 15 channels,EI+  
333.934  
6.405e+005





Vista Analytical Laboratory

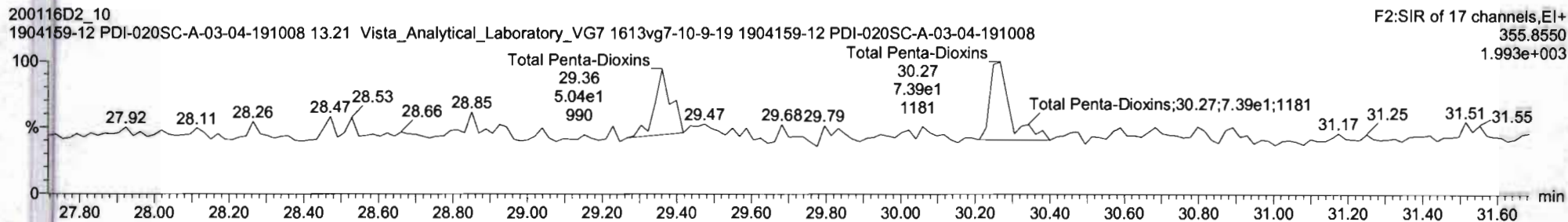
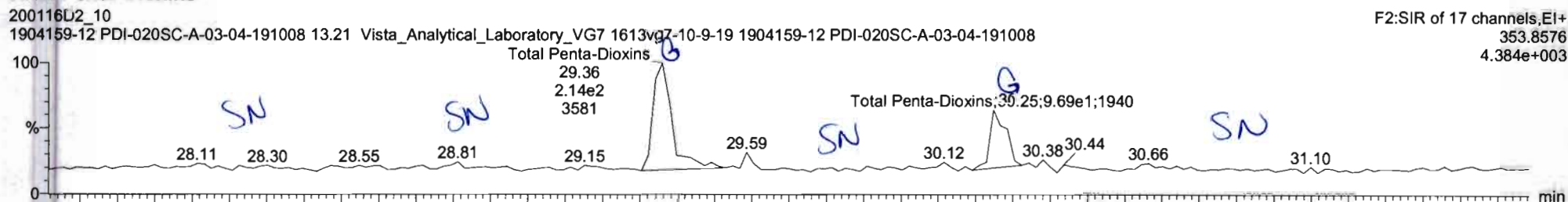
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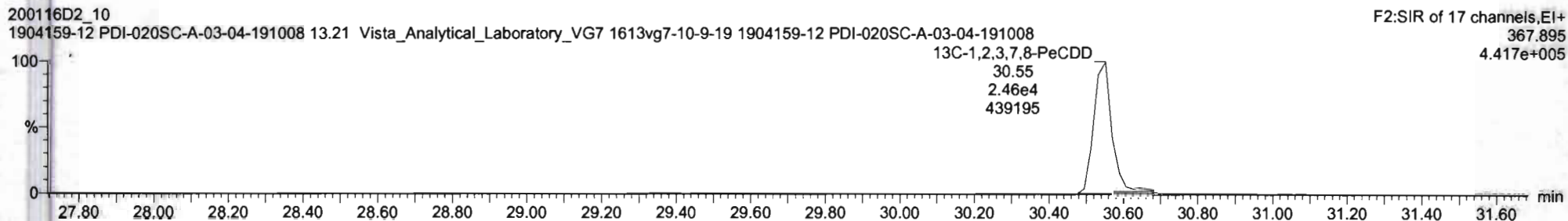
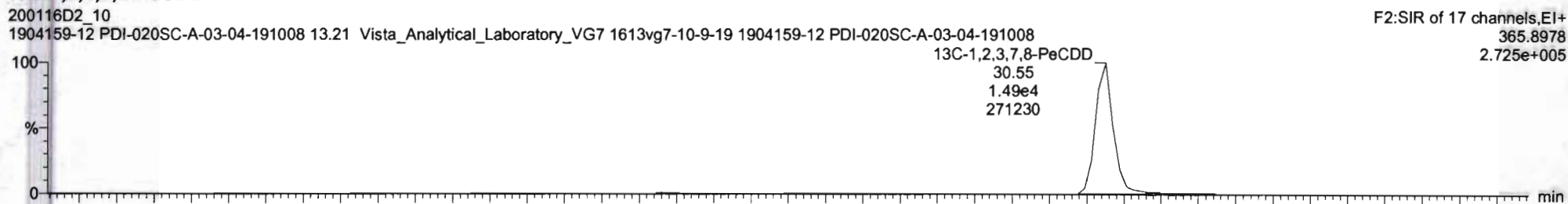
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Total Penta-Dioxins



13C-1,2,3,7,8-PeCDD



Vista Analytical Laboratory

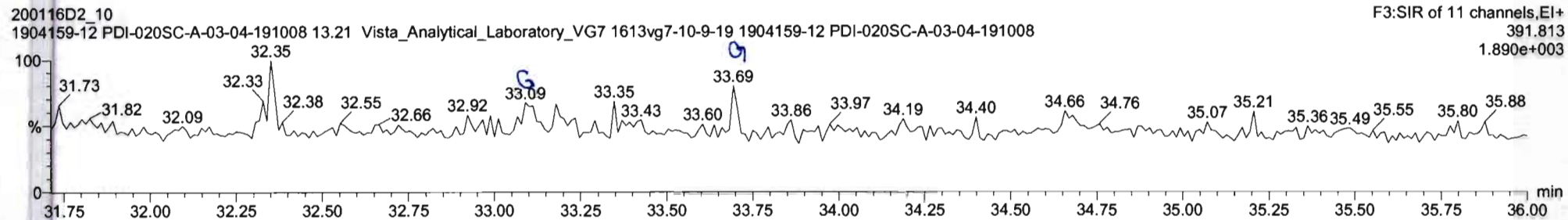
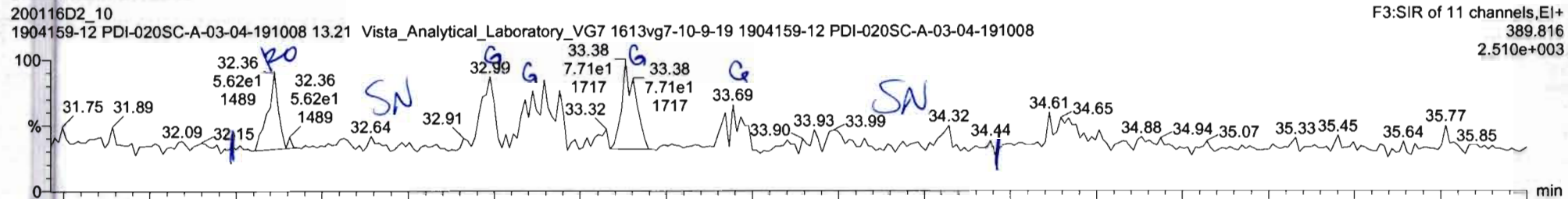
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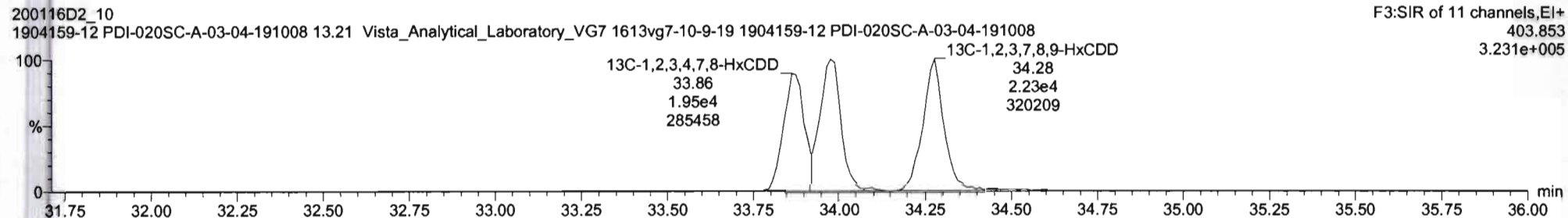
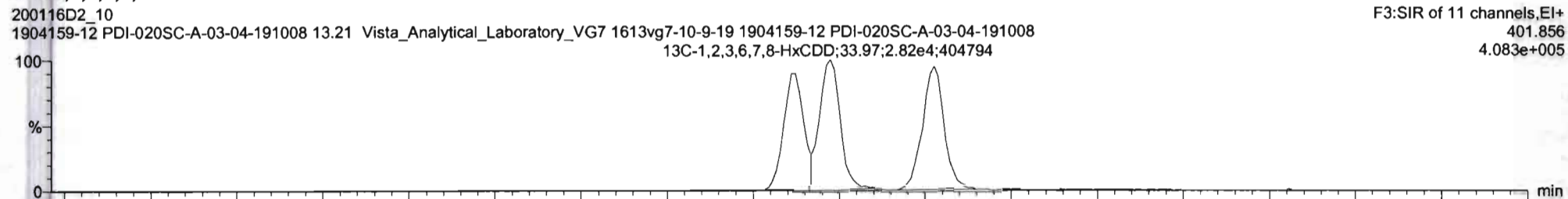
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Total Hexa-Dioxins



13C-1,2,3,4,7,8-HxCDD

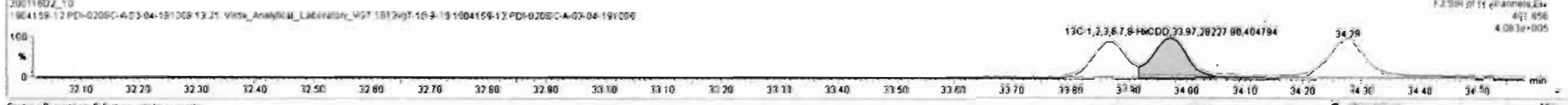
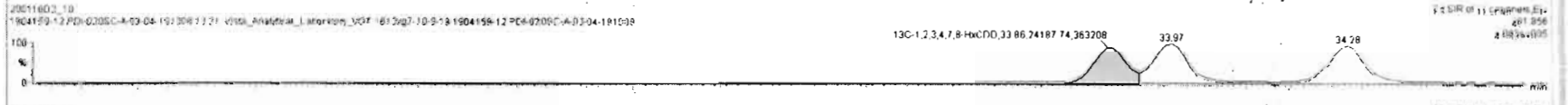
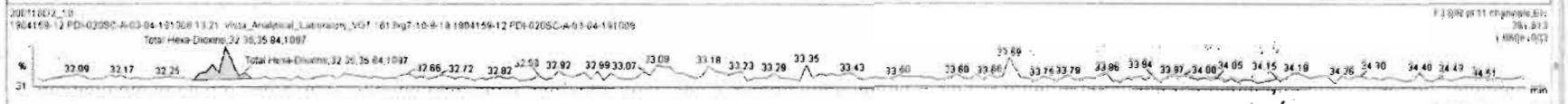
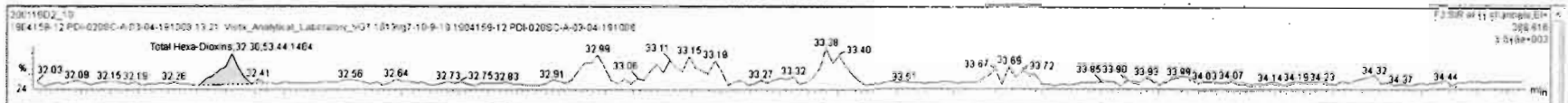


Targetlyn X3 - 20011602-10 - [Chromatogram]

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#	Name	Resp	IS Resp	Cal	RA	nly	RRF	wAve	Pred RT	RT	RRF	Pred RT	Check RRT	Conc	%Rec	DL	EMPC
41	Total Hexa-Chlorins		0.0090				0.876	10.027	33.80			0.000	NO	0.0000		0.267	0.3407
42	Total Hepta-Chlorins		4.17e4				0.988	10.027	37.75			0.000	NO	4.901		0.547	860
43	Total Tetra-Furans		1.05e5				0.943	10.027	24.00			0.000	NO			0.102	

#	Name	Pred RT	RT	Int Resp	n2 Resp	Pred RA	RA	nly	EMPC	Conc
1	41 Total Hexa-Chlorins	33.80	32.36	5.344e1	3.584e1	1.240	1.48	YES	0.34067	0.00000



Custom Reporting: Select reports to generate

20011602-10

11:45 PM 12/24/2003

Vista Analytical Laboratory

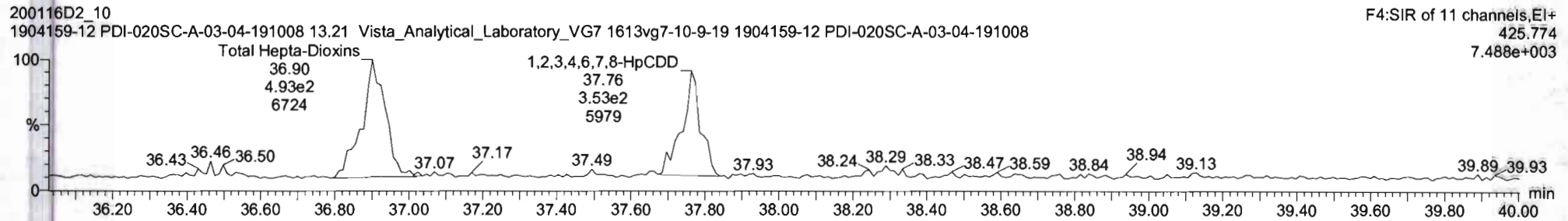
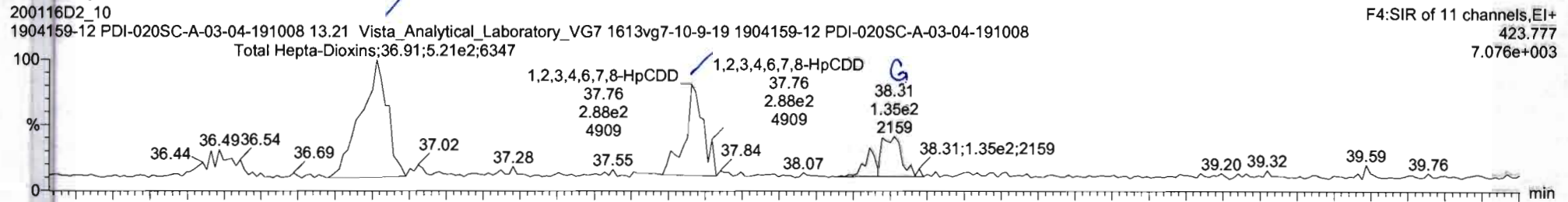
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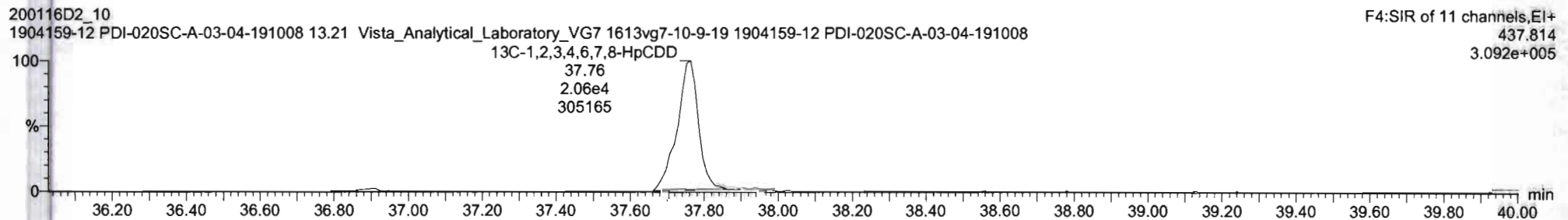
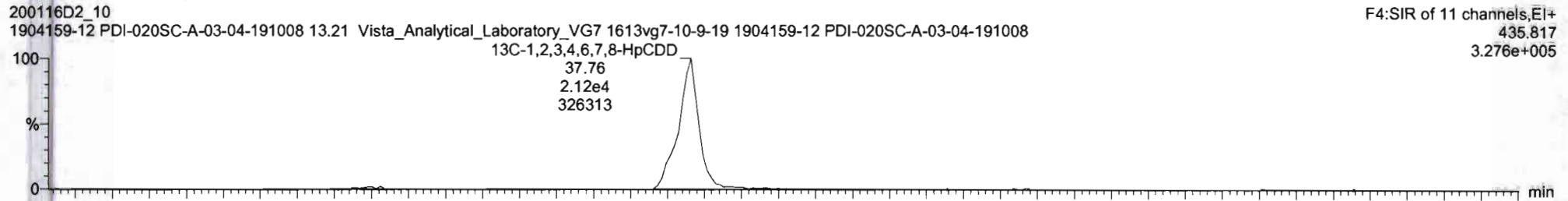
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Total Hepta-Dioxins

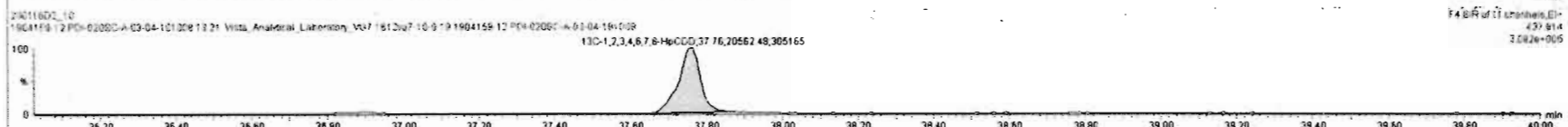
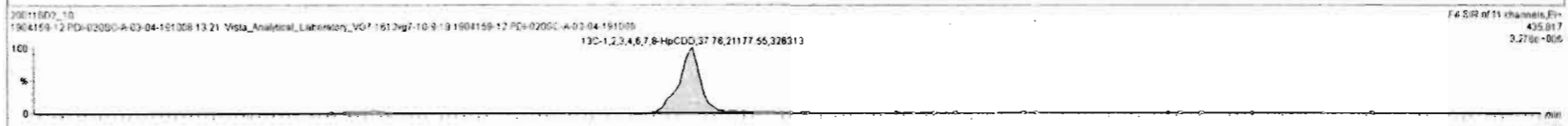
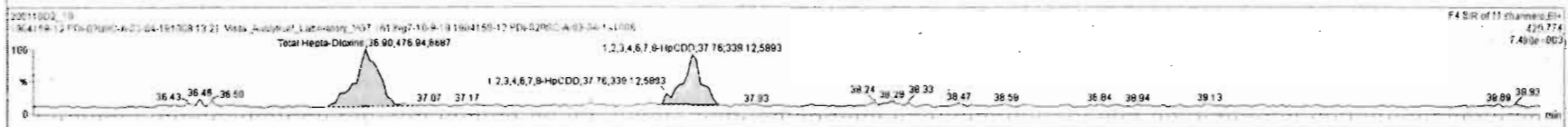
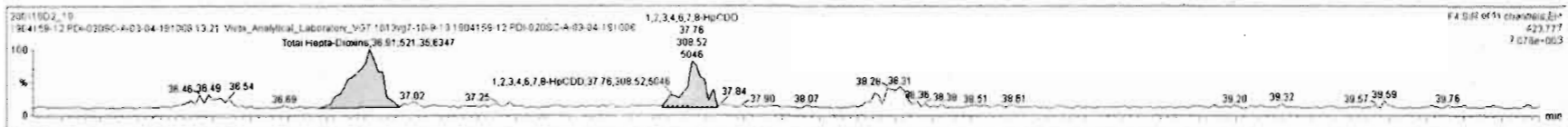


13C-1,2,3,4,6,7,8-HpCDD



#	Name	Resp	IS Resp	Cal	RA	Int	RRF	WtAcc	Pred RT	RT	RRT	Pred RPT	Check RPT	Conc	%Rec	IL	EMPC
41	Total Hepta-Dioxins		0.70e3				0.976	10.027	33.80			0.000	NO	0.0000	0.737	0.3407	
42	Total Hepta-Dioxins		4.17e4				0.986	10.027	37.75			0.000	NO	7.385	0.647	7.985	
43	Total Tetra-Furans		1.05e5				0.943	10.027	24.00			0.000	NO		0.102		

#	Name	Pred RT	RT	Int Resp	IS Resp	Pred RA	RA	Int	EMPC	Conc
1	Total Hepta-Dioxins	37.75	36.91	5.214e2	4.769e2	1.040	1.09	NO	4.8250	4.8250
2	1,2,3,4,6,7,8-HpCDD	37.77	37.76	3.085e2	3.391e2	1.040	0.91	NO	3.1599	3.1599



Vista Analytical Laboratory

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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

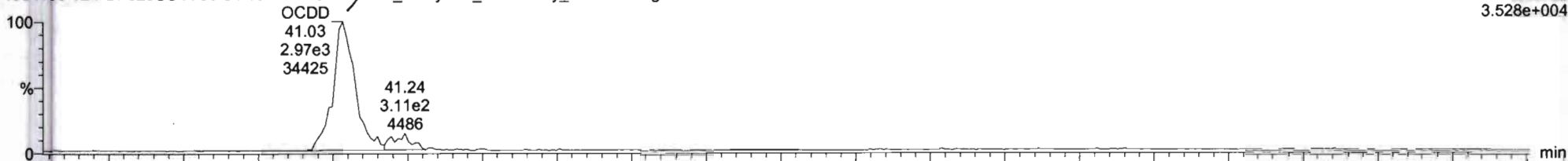
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Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008,  
Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

OCDD

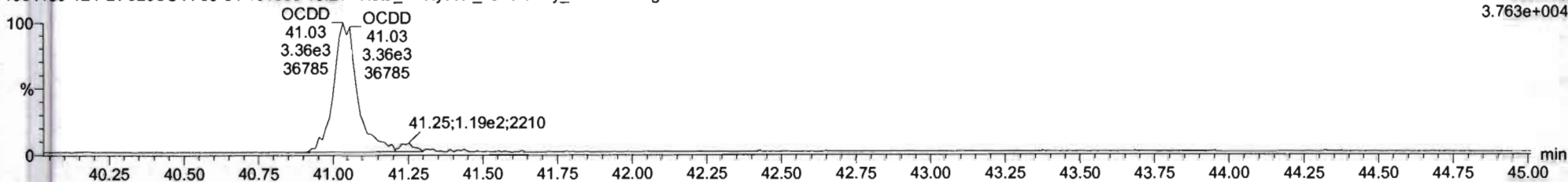
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F5:SIR of 11 channels, EI+  
457.738  
3.528e+004



200116D2\_10  
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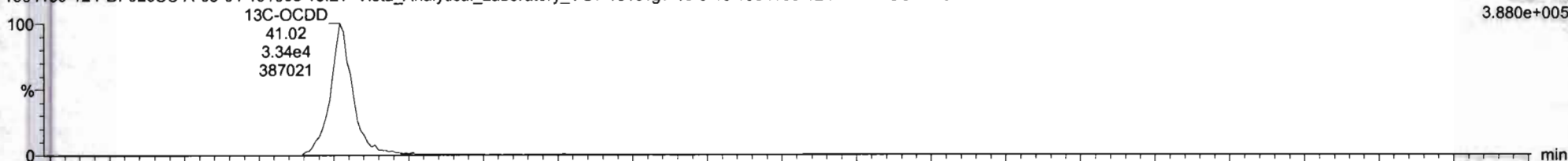
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459.735  
3.763e+004



13C-OCDD

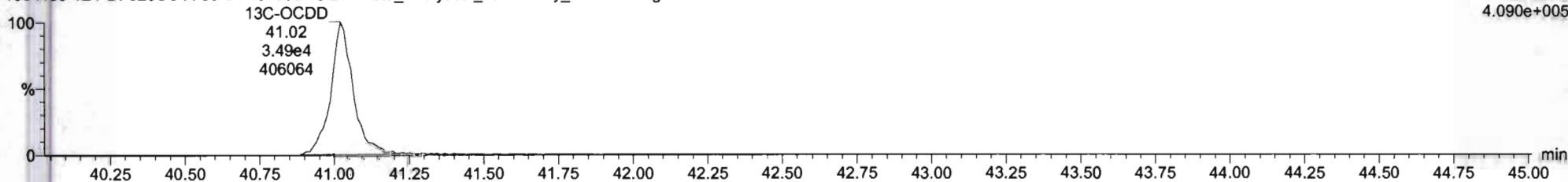
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F5:SIR of 11 channels, EI+  
469.778  
3.880e+005



200116D2\_10  
1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-12 PDI-020SC-A-03-04-191008

F5:SIR of 11 channels, EI+  
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4.090e+005



Vista Analytical Laboratory

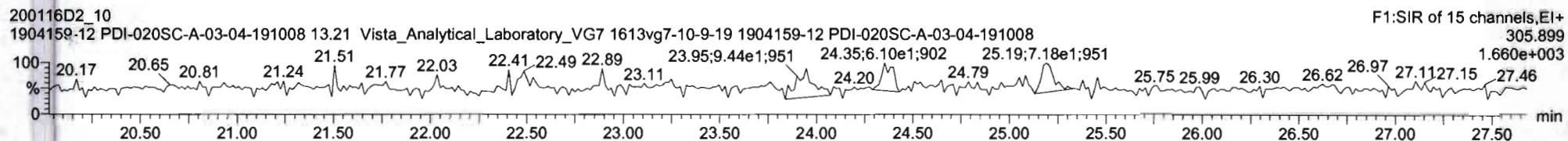
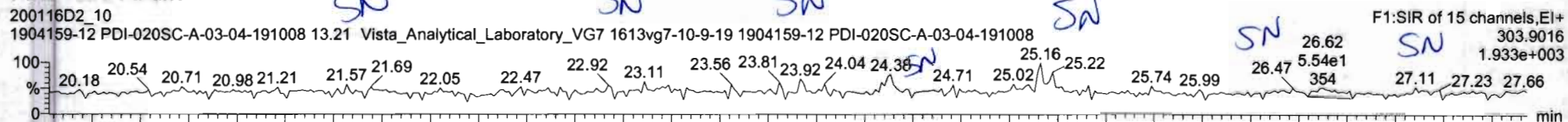
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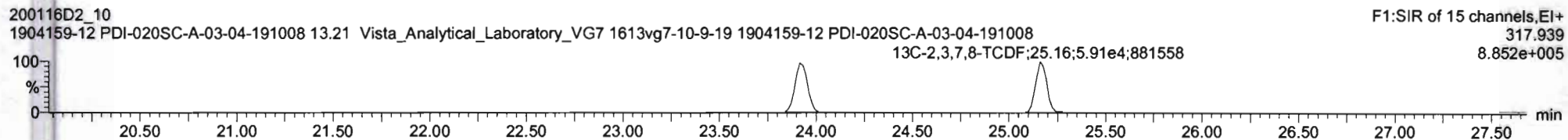
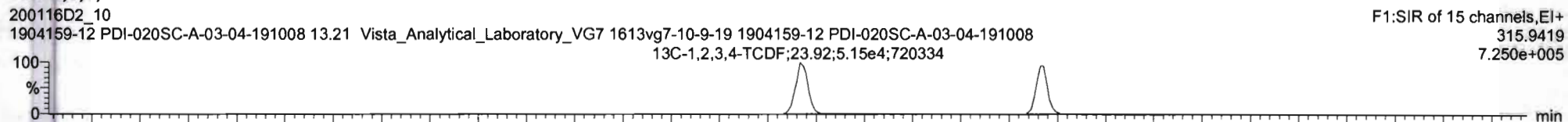
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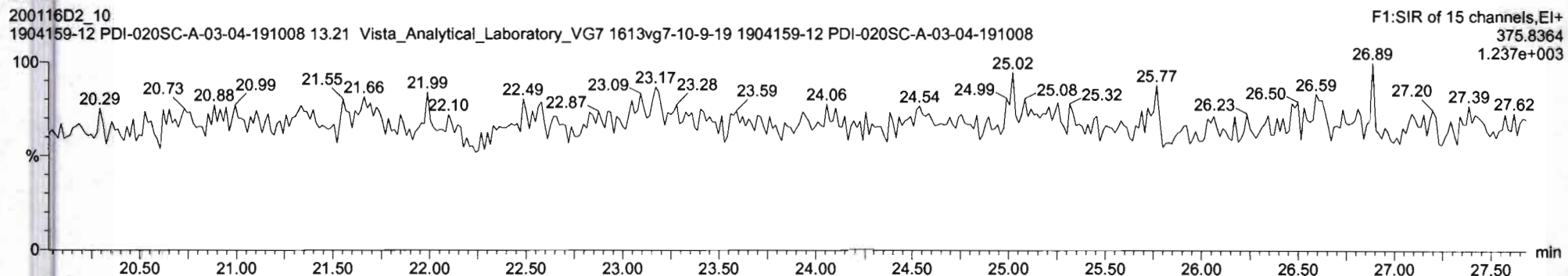
Total Tetra-Furans



13C-2,3,7,8-TCDF



DPE1



Vista Analytical Laboratory

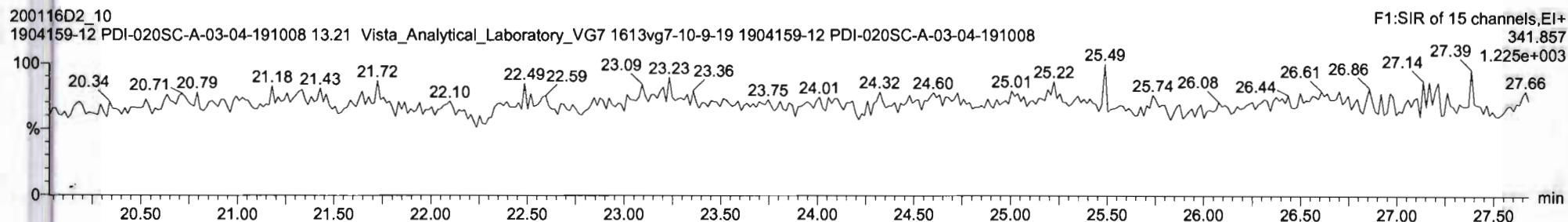
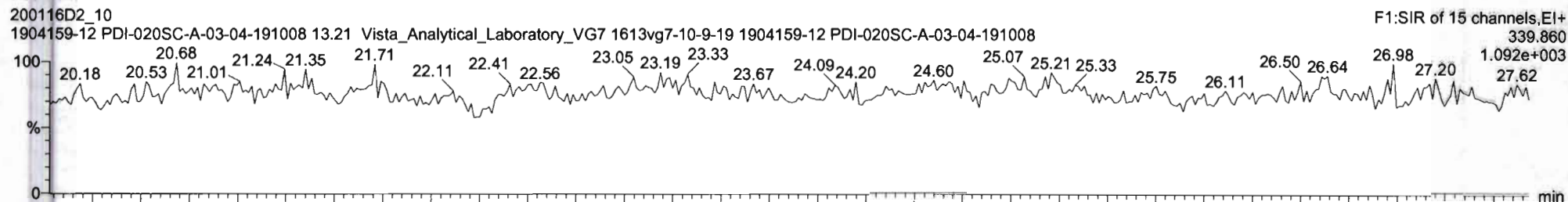
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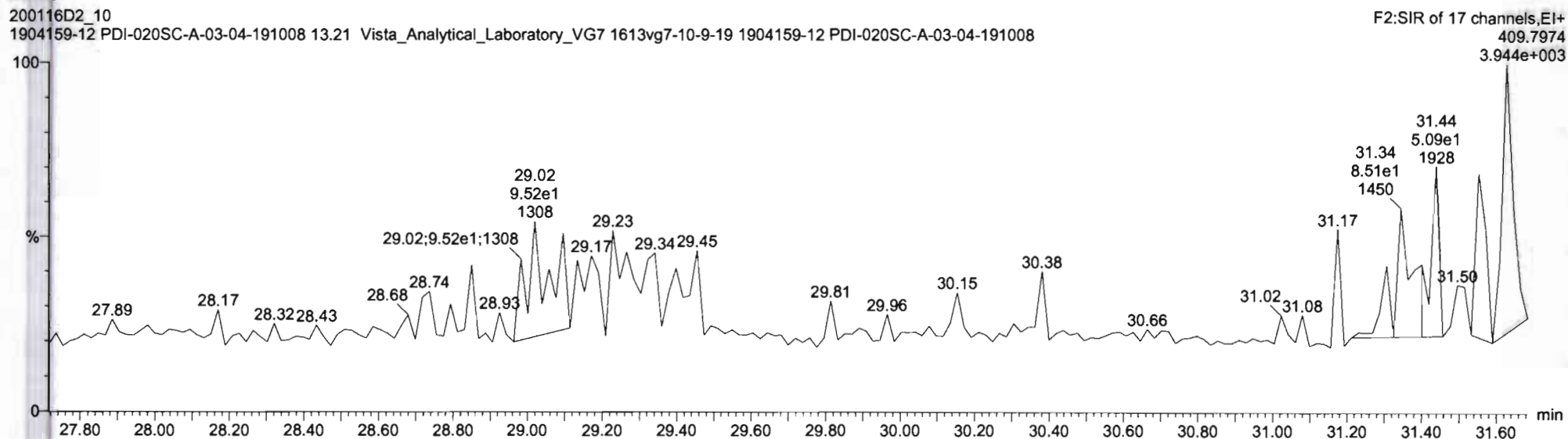
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Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans



DPE6





Vista Analytical Laboratory

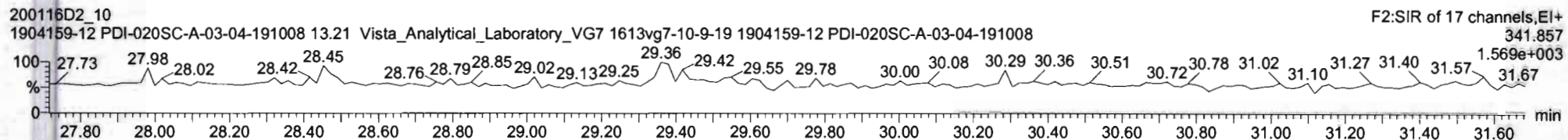
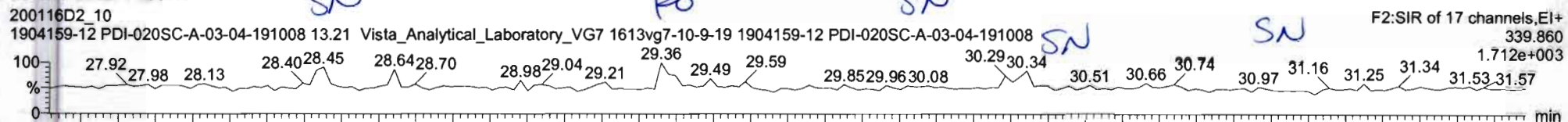
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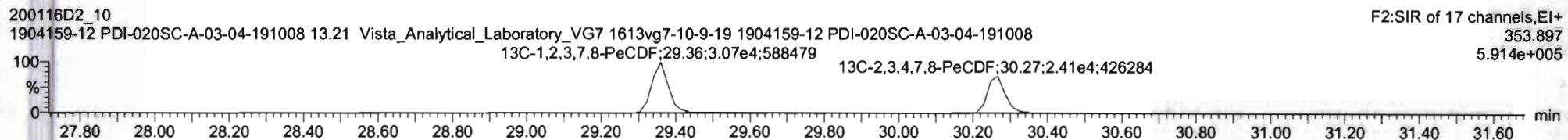
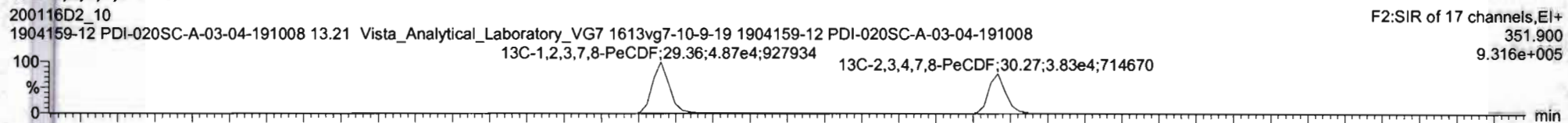
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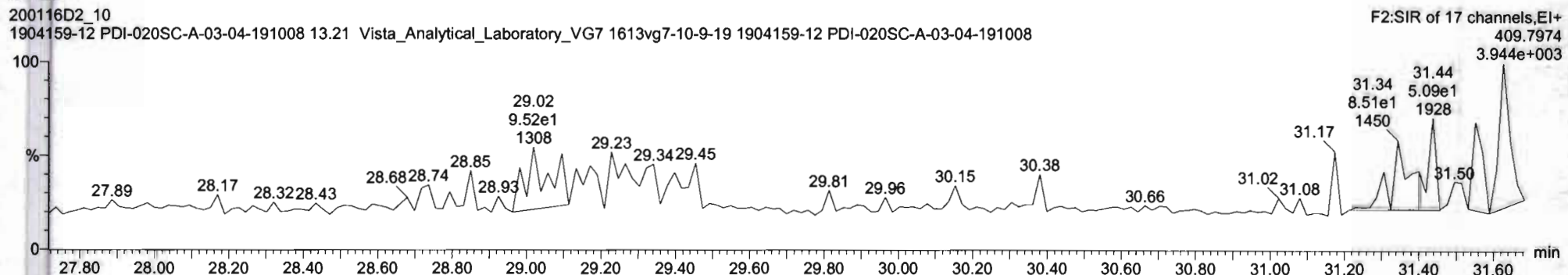
Total Penta-Furans



13C-1,2,3,7,8-PeCDF



DPE2

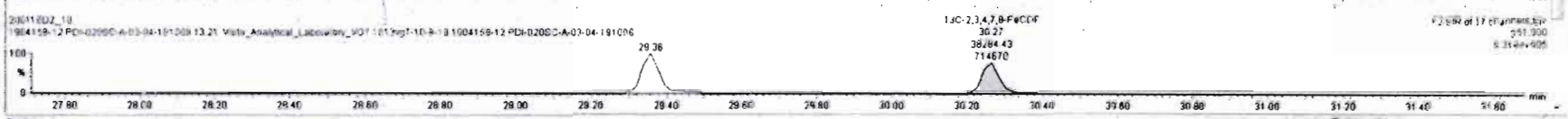
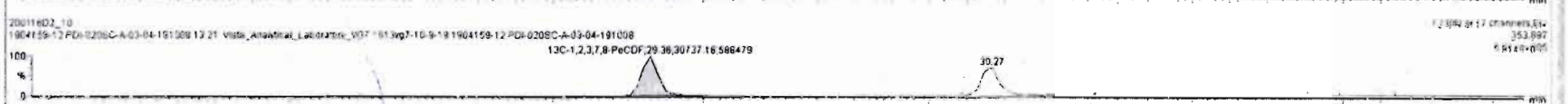
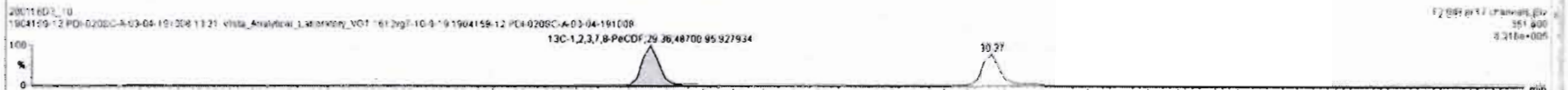
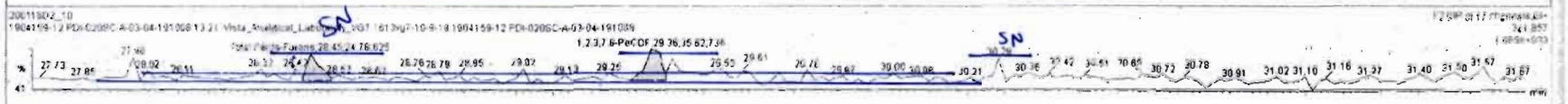
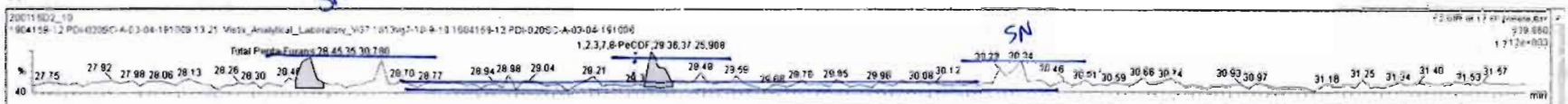


TargetLine\_KS - 201102-10 - [Chromatogram]  
 File Edit View Display Processing Window Help

201102-10 1904159-12 PDI-0205C-A-03-04-191008 13 21 Vista\_Analytical\_Laboratory\_V07 1013q7-10-9-13 1904159-12 PDI-0205C-A-03-04-191008 13 21 Vista\_Analytical\_Laboratory\_V07 1013q7-10-9-13

#	Name	Resp	IS Resp	Cal	RA	nly	RRP	wtVol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	RMPC
43	Total Tetra-Furans		1.05e5		0.943	10.027	24.00					0.000	NO			3.102	
44	Total Penta-Furans		0.00e0		0.940	10.027	27.63					0.000	NO			0.0005	
45	Total Penta-Furans		0.00e0		0.840	10.027	30.00					0.000	NO	0.1796		0.118	0.3400

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	Total Penta-Furans	30.00	28.45	3.530e1	2.479e1	1.550	1.42	NO	0.17981	0.17981
2	1,2,3,7,8-PeCDF	29.38	29.36	3.725e1	3.562e1	1.550	1.05	YES	0.16023	0.00000



Ready 201102-10 13:28 PM

Vista Analytical Laboratory

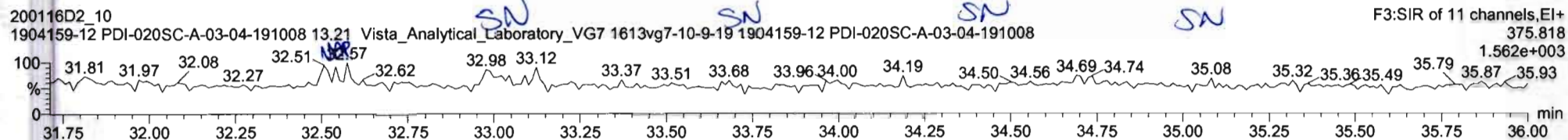
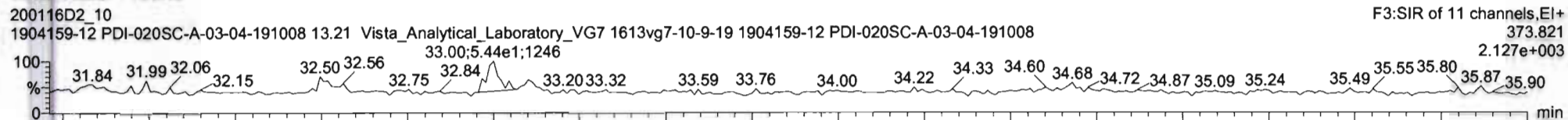
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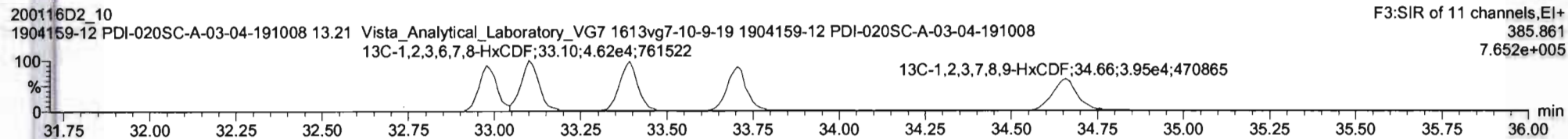
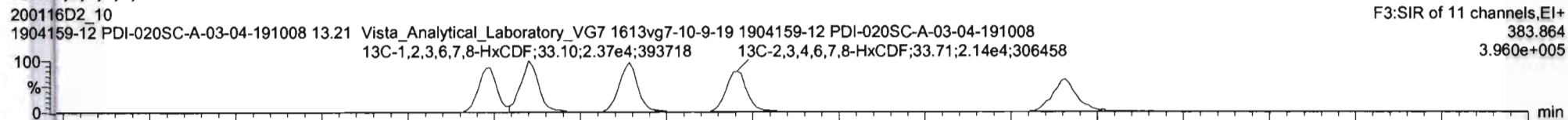
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Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008, Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

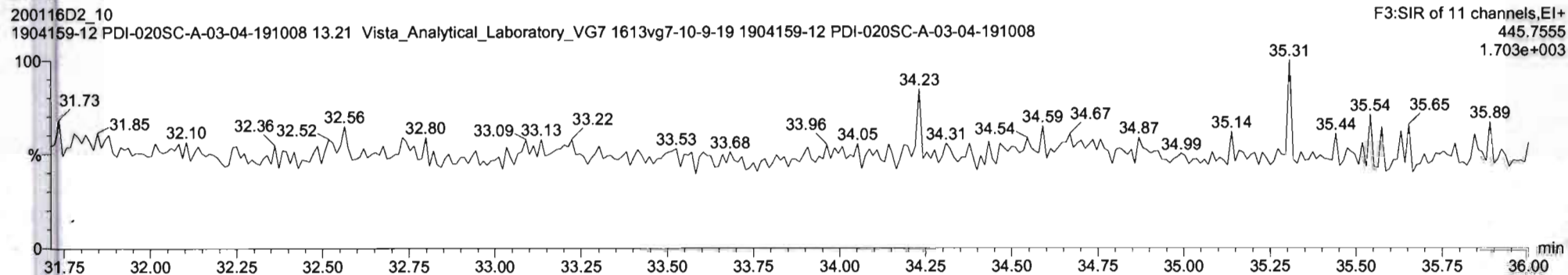
Total Hexa-Furans



13C-1,2,3,4,7,8-HxCDF

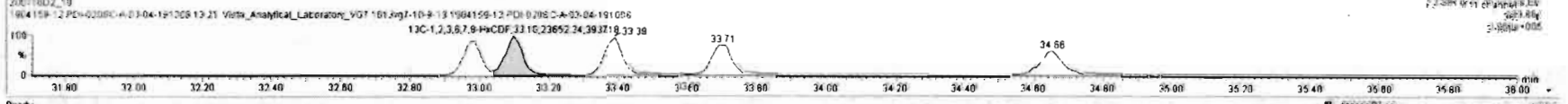
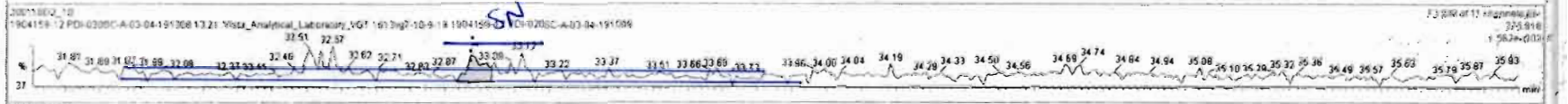
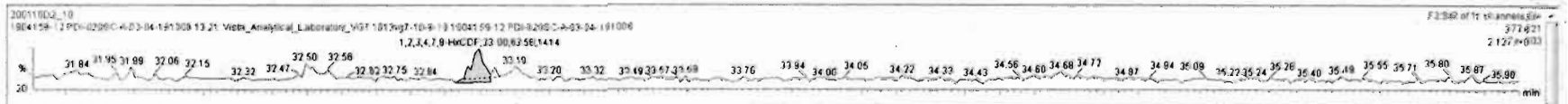


DPE3



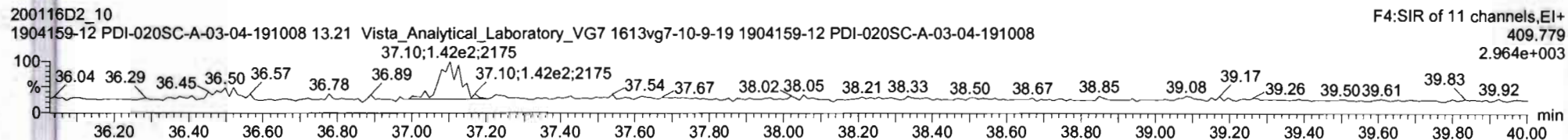
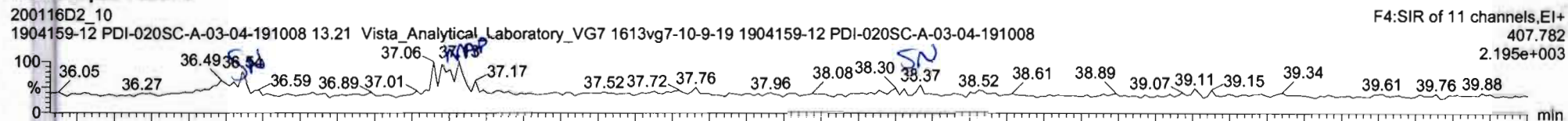
#	Name	Resp	IS Resp	IS#	RA	inj	RRF	wtAvail	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
46	Total Hexa-Furans		0.00e0				1.078	10.027	33.00			0.000	NO	0.0000		0.101	0.2433
47	Total Hepta-Furans		0.00e0				1.135	10.027	37.75			0.000	NO				0.208
48	PFKs																

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	inj	EMPC	Conc
1	1,2,3,4,7,8-HxCDF	32.99	33.00	6.958e1	3.961e1	1.240	1.60	YES	0.24326	0.00000

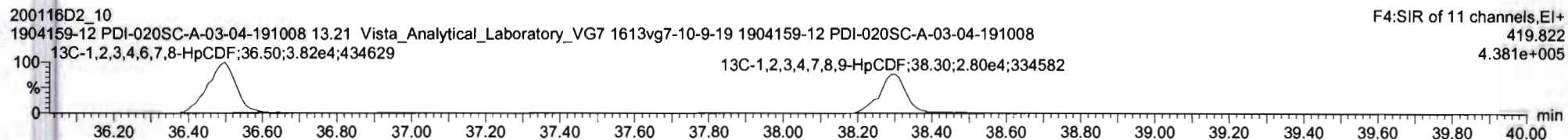
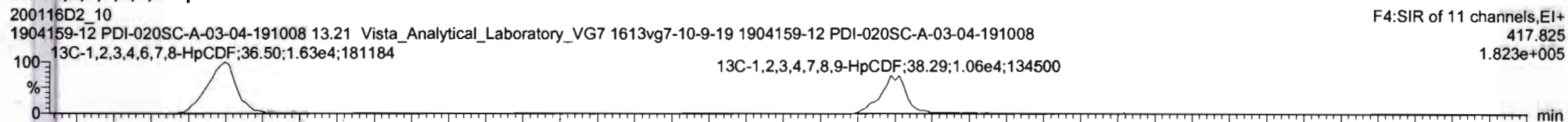


Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008,  
Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

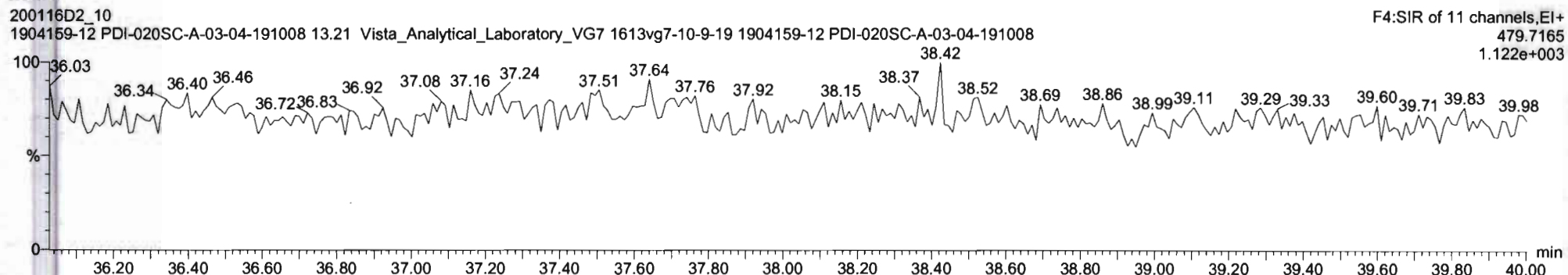
**Total Hepta-Furans**



**13C-1,2,3,4,6,7,8-HpCDF**



**DPE4**



Vista Analytical Laboratory

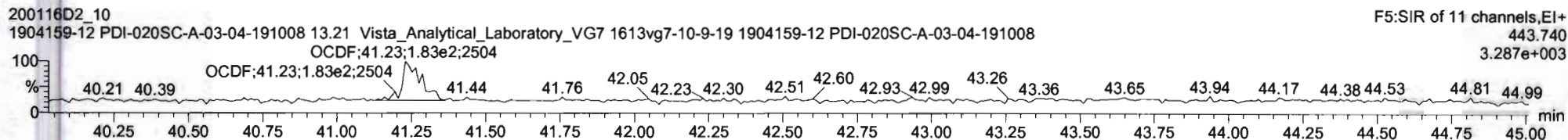
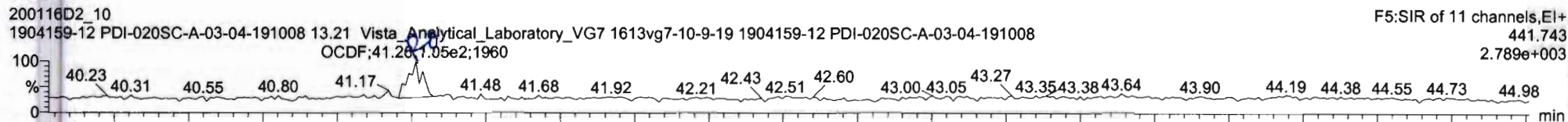
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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

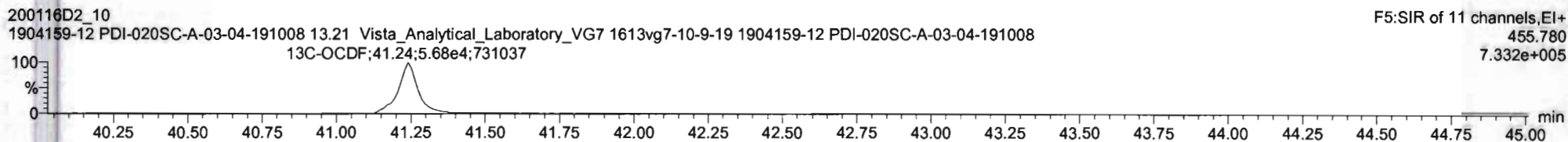
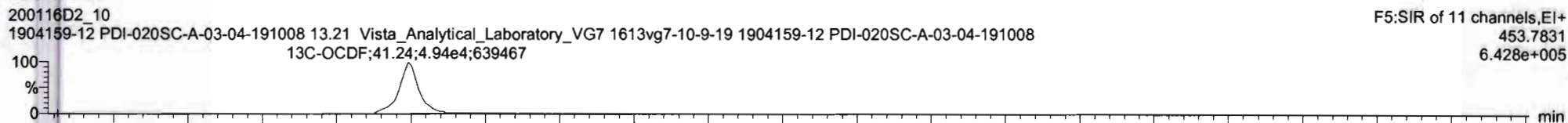
Printed: Monday, January 27, 2020 11:33:46 Pacific Standard Time

Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008, Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

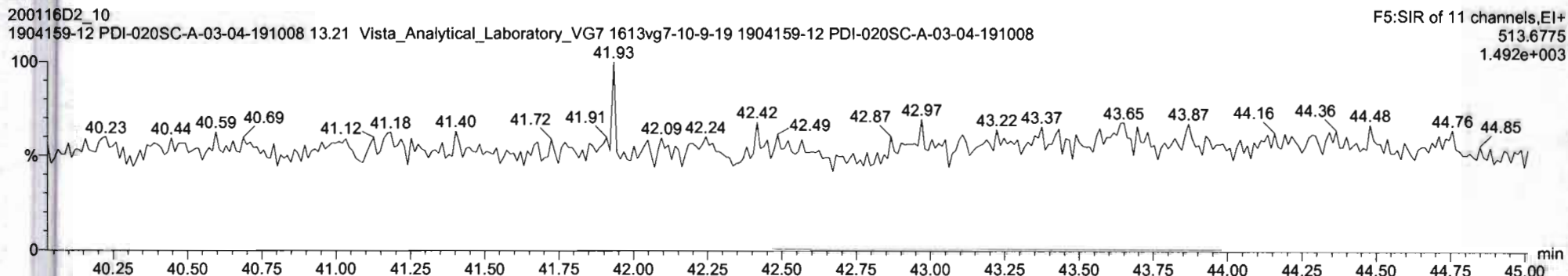
OCDF

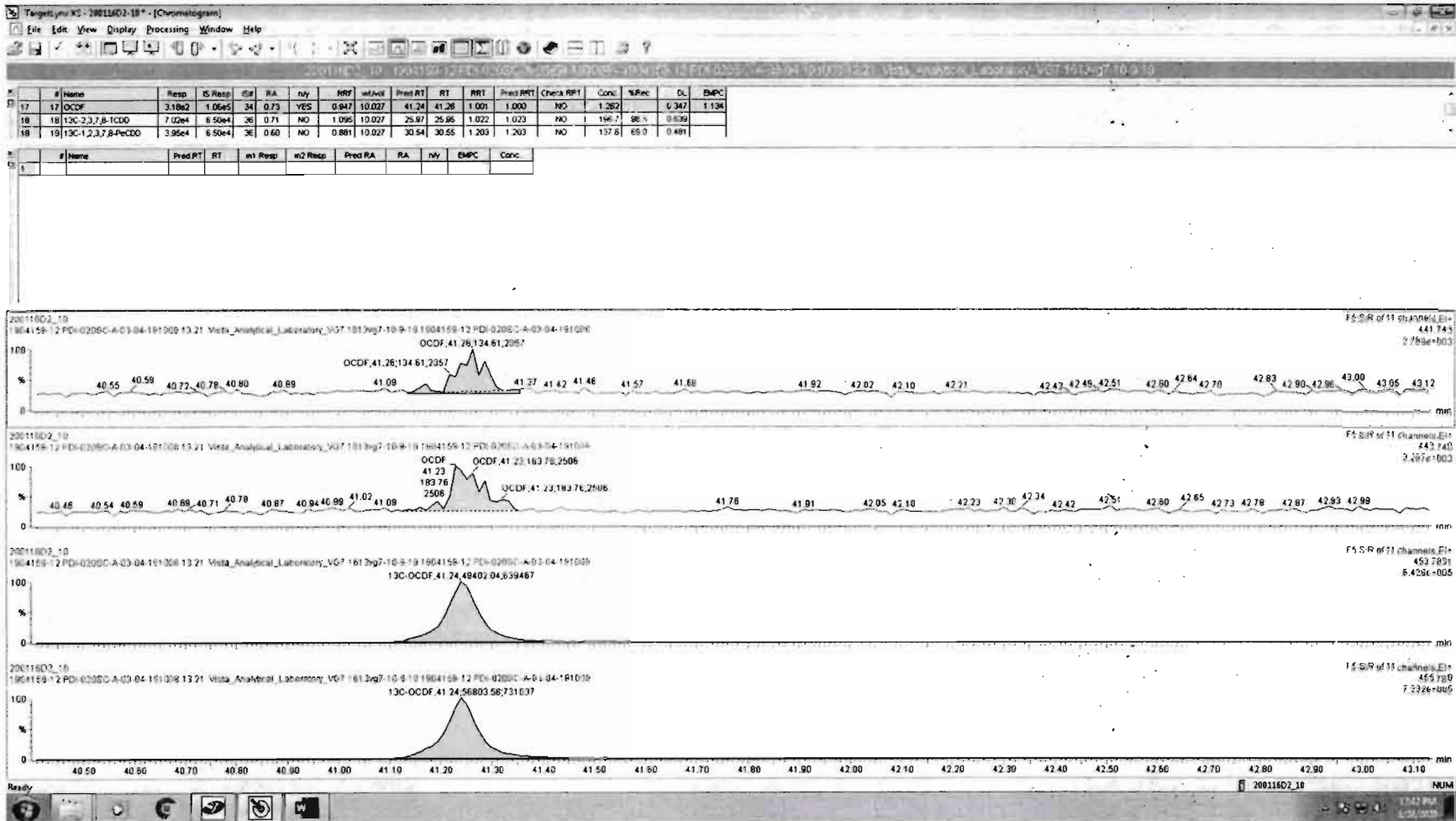


13C-OCDF



DPE5





Vista Analytical Laboratory

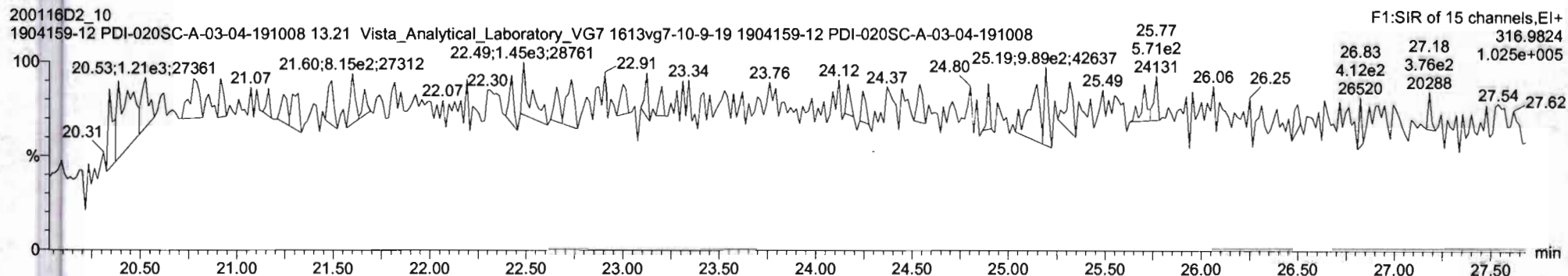
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Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

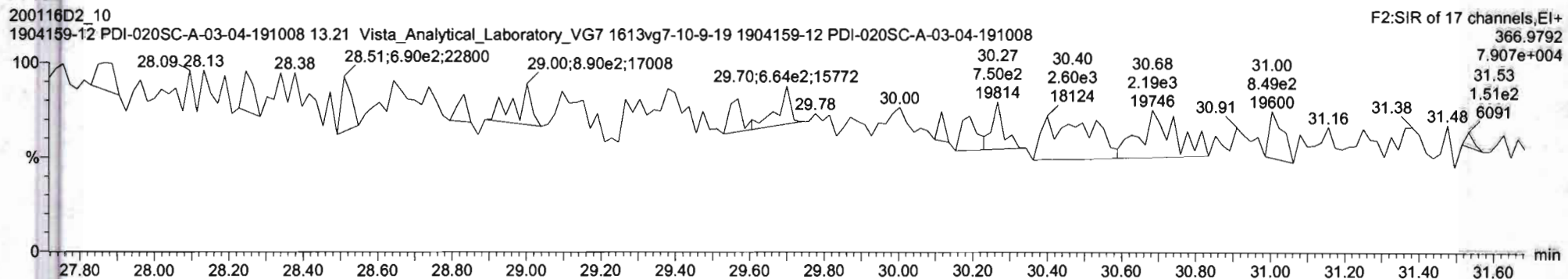
Printed: Monday, January 27, 2020 11:33:46 Pacific Standard Time

Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008,  
Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

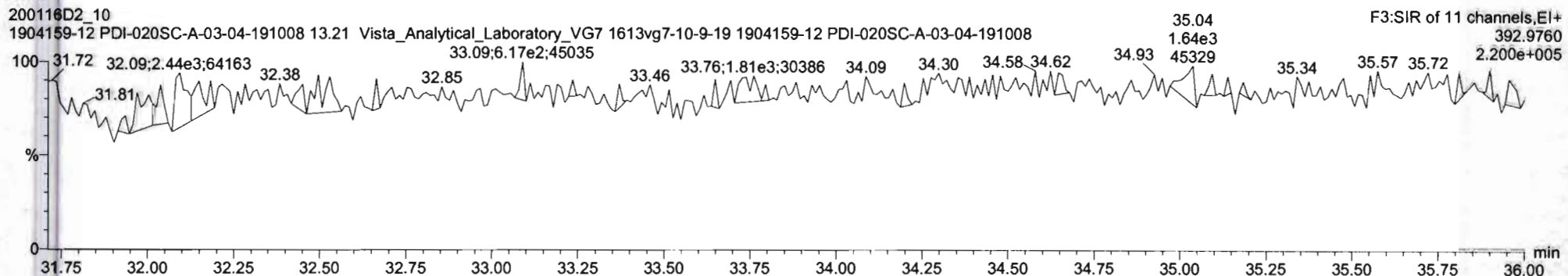
PFK1



PFK2



PFK3





Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

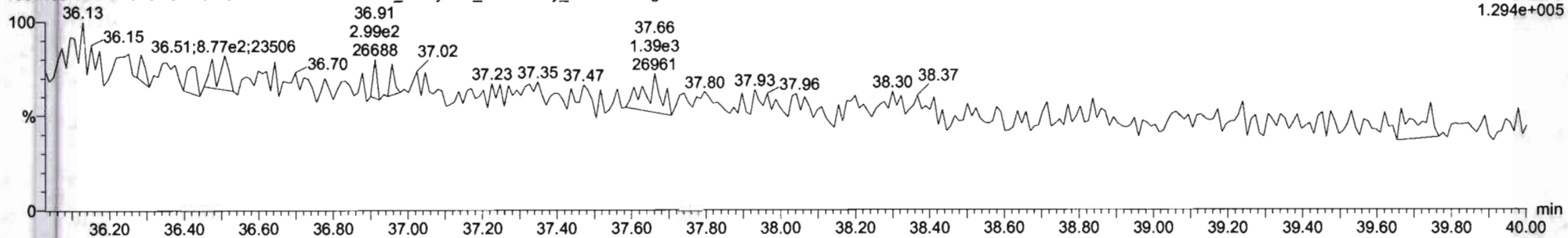
Printed: Monday, January 27, 2020 11:33:46 Pacific Standard Time

Name: VG7 200116D2-10, Date: 17-JAN-2020, Time: 06:44:54, ID: 1904159-12 PDI-020SC-A-03-04-191008,  
Description: 1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

PFK4

200116D2\_10  
1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-12 PDI-020SC-A-03-04-191008

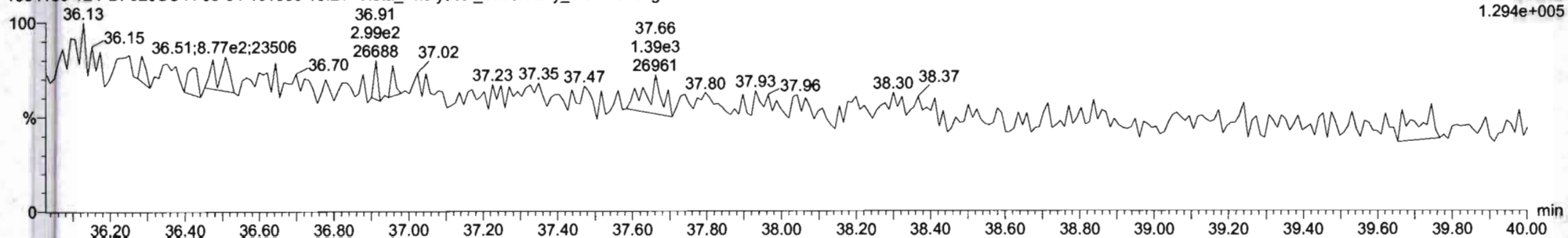
F4:SIR of 11 channels,EI+  
454.973  
1.294e+005



PFK5

200116D2\_10  
1904159-12 PDI-020SC-A-03-04-191008 13.21 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-12 PDI-020SC-A-03-04-191008

F4:SIR of 11 channels,EI+  
454.973  
1.294e+005



Dataset: U:\VG12.PRO\Results\200209R1\200209R1-7.qld

Last Altered: Monday, February 10, 2020 11:36:29 AM Pacific Standard Time  
Printed: Monday, February 10, 2020 11:37:06 AM Pacific Standard Time

GRB 02/10/2020

C7 02/10/2020

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.45e3	0.33	YES	0.988	10.195	25.736	25.70	1.001	1.000	0.20753		0.0915	0.117
2	2 1,2,3,7,8-PeCDD	1.81e3	0.76	YES	0.972	10.195	30.719	30.73	1.001	1.001	0.35557		0.128	0.327
3	3 1,2,3,4,7,8-HxCDD	1.31e3	1.13	NO	1.07	10.195	34.072	34.08	1.000	1.001	0.30562		0.0960	0.306
4	4 1,2,3,6,7,8-HxCDD	1.91e3	1.19	NO	0.921	10.195	34.168	34.17	1.000	1.000	0.45540		0.102	0.455
5	5 1,2,3,7,8,9-HxCDD	1.97e3	1.28	NO	0.918	10.195	34.479	34.46	1.001	1.000	0.50545		0.113	0.505
6	6 1,2,3,4,6,7,8-HpCDD	8.19e3	1.00	NO	0.923	10.195	37.971	37.98	1.000	1.001	2.6160		0.164	2.62
7	7 OCDD	3.74e4	0.86	NO	0.975	10.195	40.985	40.99	1.000	1.000	15.535		0.149	15.5
8	8 2,3,7,8-TCDF			NO	0.802	10.195	24.817		1.001				0.0814	
9	9 1,2,3,7,8-PeCDF			NO	0.907	10.195	29.437		1.001				0.0706	
10	10 2,3,4,7,8-PeCDF	4.06e2	1.57	NO	0.952	10.195	30.422	30.41	1.001	1.001	0.057697		0.0632	0.0577
11	11 1,2,3,4,7,8-HxCDF	6.28e2	1.27	NO	0.862	10.195	33.199	33.23	1.000	1.001	0.14005		0.0973	0.140
12	12 1,2,3,6,7,8-HxCDF			NO	0.841	10.195	33.337		1.000				0.0984	
13	13 2,3,4,6,7,8-HxCDF			NO	0.898	10.195	33.925		1.001				0.0993	
14	14 1,2,3,7,8,9-HxCDF	4.27e2	1.68	YES	0.858	10.195	34.786	34.80	1.000	1.000	0.11051		0.148	0.0923
15	15 1,2,3,4,6,7,8-HpCDF	1.49e3	1.11	NO	0.851	10.195	36.570	36.53	1.001	1.000	0.48644		0.116	0.486
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.980	10.195	38.567		1.000				0.123	
17	17 OCDF	7.62e2	0.72	YES	0.806	10.195	41.166	41.19	1.000	1.001	0.33675		0.173	0.302
18	18 13C-2,3,7,8-TCDD	1.39e6	0.79	NO	1.20	10.195	25.706	25.70	1.026	1.026	167.20	85.2	0.216	
19	19 13C-1,2,3,7,8-PeCDD	1.03e6	0.64	NO	0.967	10.195	30.450	30.70	1.215	1.225	154.29	78.6	0.345	
20	20 13C-1,2,3,4,7,8-HxCDD	7.84e5	1.27	NO	0.874	10.195	34.063	34.06	1.014	1.014	130.45	66.5	0.275	
21	21 13C-1,2,3,6,7,8-HxCDD	8.92e5	1.26	NO	1.05	10.195	34.164	34.17	1.017	1.017	124.06	63.2	0.230	
22	22 13C-1,2,3,7,8,9-HxCDD	8.33e5	1.26	NO	0.974	10.195	34.466	34.44	1.026	1.025	124.29	63.4	0.246	
23	23 13C-1,2,3,4,6,7,8-HpCDD	6.65e5	1.02	NO	0.747	10.195	38.027	37.96	1.132	1.130	129.44	66.0	0.328	
24	24 13C-OCDD	9.69e5	0.93	NO	0.707	10.195	40.916	40.99	1.218	1.220	199.48	50.8	0.229	
25	25 13C-2,3,7,8-TCDF	1.93e6	0.78	NO	1.07	10.195	24.887	24.79	0.993	0.989	163.77	83.5	0.308	
26	26 13C-1,2,3,7,8-PeCDF	1.53e6	1.58	NO	1.00	10.195	29.222	29.42	1.166	1.174	137.56	70.1	0.274	
27	27 13C-2,3,4,7,8-PeCDF	1.45e6	1.56	NO	0.962	10.195	30.175	30.39	1.204	1.213	136.23	69.4	0.286	
28	28 13C-1,2,3,4,7,8-HxCDF	1.02e6	0.52	NO	1.05	10.195	33.190	33.20	0.988	0.988	141.30	72.0	0.326	
29	29 13C-1,2,3,6,7,8-HxCDF	1.10e6	0.52	NO	1.19	10.195	33.291	33.33	0.991	0.992	134.08	68.3	0.287	
30	30 13C-2,3,4,6,7,8-HxCDF	1.01e6	0.52	NO	1.07	10.195	33.899	33.89	1.009	1.009	137.26	70.0	0.321	
31	31 13C-1,2,3,7,8,9-HxCDF	8.83e5	0.52	NO	0.922	10.195	34.802	34.79	1.036	1.036	139.25	71.0	0.371	

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-7.qld

Last Altered: Monday, February 10, 2020 11:36:29 AM Pacific Standard Time

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Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	7.04e5	0.45	NO	0.767	10.195	36.549	36.53	1.088	1.088	133.40	68.0	0.344	
33	33 13C-1,2,3,4,7,8,9-HpCDF	5.36e5	0.43	NO	0.552	10.195	38.565	38.57	1.148	1.148	141.20	72.0	0.478	
34	34 13C-OCDF	1.10e6	0.88	NO	0.789	10.195	41.151	41.17	1.225	1.225	201.86	51.4	0.237	
35	35 37Cl-2,3,7,8-TCDD	5.34e5			1.18	10.195	25.739	25.72	1.027	1.026	65.554	83.5	0.0731	
36	36 13C-1,2,3,4-TCDD	1.36e6	0.81	NO	1.00	10.195	25.080	25.06	1.000	1.000	196.18	100	0.259	
37	37 13C-1,2,3,4-TCDF	2.17e6	0.79	NO	1.00	10.195	23.420	23.35	1.000	1.000	196.18	100	0.328	
38	38 13C-1,2,3,4,6,9-HxCDF	1.35e6	0.52	NO	1.00	10.195	33.520	33.59	1.000	1.000	196.18	100	0.342	
39	39 Total Tetra-Dioxins				0.988	10.195	24.620		0.000		0.48305		0.0915	0.879
40	40 Total Penta-Dioxins				0.972	10.195	29.960		0.000		2.1314		0.126	3.15
41	41 Total Hexa-Dioxins				0.921	10.195	33.635		0.000		6.0926		0.109	6.09
42	42 Total Hepta-Dioxins				0.923	10.195	37.640		0.000		5.9983		0.164	6.00
43	43 Total Tetra-Furans				0.802	10.195	23.610		0.000		0.47909		0.0814	0.539
44	44 1st Func. Penta-Furans				0.907	10.195	27.090		0.000		0.36064		0.0387	0.361
45	45 Total Penta-Furans				0.907	10.195	29.275		0.000		0.057697		0.0685	0.391
46	46 Total Hexa-Furans				0.898	10.195	33.555		0.000		0.46529		0.104	0.808
47	47 Total Hepta-Furans				0.851	10.195	37.835		0.000		0.78885		0.127	0.789

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Dataset: U:\VG12.PRO\Results\200209R1\200209R1-7.qld

Last Altered: Monday, February 10, 2020 11:36:29 AM Pacific Standard Time

Printed: Monday, February 10, 2020 11:37:06 AM Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	22.62	7.565e3	4.076e3	4.681e2	4.158e2	1.13	YES	0.000e0	0.00000	0.10538	0.0915
2	Total Tetra-Dioxins	23.52	1.497e4	1.278e4	8.876e2	1.146e3	0.77	NO	2.033e3	0.29109	0.29109	0.0915
3	Total Tetra-Dioxins	24.01	3.436e3	5.527e3	3.645e2	3.359e2	1.09	YES	0.000e0	0.00000	0.085127	0.0915
4	Total Tetra-Dioxins	25.03	4.165e3	6.942e3	3.472e2	4.627e2	0.75	NO	8.099e2	0.11596	0.11596	0.0915
5	2,3,7,8-TCDD	25.70	4.368e3	1.711e4	3.562e2	1.093e3	0.33	YES	1.449e3	0.00000	0.11723	0.0915
6	Total Tetra-Dioxins	26.05	4.571e3	5.511e3	3.685e2	3.494e2	1.05	YES	0.000e0	0.00000	0.088546	0.0915
7	Total Tetra-Dioxins	26.69	4.273e3	5.383e3	2.382e2	2.926e2	0.81	NO	5.308e2	0.075995	0.075995	0.0915

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.50	1.541e4	2.068e4	8.480e2	1.457e3	0.58	NO	2.305e3	0.45064	0.45064	0.126
2	Total Penta-Dioxins	28.96	9.528e3	1.691e4	5.636e2	9.292e2	0.61	NO	1.493e3	0.29184	0.29184	0.126
3	Total Penta-Dioxins	29.07	9.215e3	3.143e4	5.330e2	2.184e3	0.24	YES	0.000e0	0.00000	0.26961	0.126
4	Total Penta-Dioxins	29.46	1.052e4	1.740e4	6.065e2	9.783e2	0.62	NO	1.585e3	0.30984	0.30984	0.126
5	Total Penta-Dioxins	29.63	8.665e3	2.030e4	4.718e2	1.007e3	0.47	YES	0.000e0	0.00000	0.23862	0.126
6	Total Penta-Dioxins	29.74	1.127e4	1.189e4	6.448e2	9.192e2	0.70	NO	1.564e3	0.30577	0.30577	0.126
7	Total Penta-Dioxins	29.95	1.163e4	1.869e4	9.908e2	1.614e3	0.61	NO	2.605e3	0.50929	0.50929	0.126
8	Total Penta-Dioxins	30.27	5.233e3	6.840e3	2.778e2	4.769e2	0.58	NO	7.547e2	0.14755	0.14755	0.126
9	1,2,3,7,8-PeCDD	30.73	1.332e4	1.951e4	7.816e2	1.027e3	0.76	YES	1.809e3	0.00000	0.32723	0.126
10	Total Penta-Dioxins	30.79	5.921e3	7.598e3	2.426e2	3.530e2	0.69	NO	5.956e2	0.11644	0.11644	0.126
11	Total Penta-Dioxins	31.09	6.495e3	1.631e4	3.609e2	9.830e2	0.37	YES	0.000e0	0.00000	0.18253	0.126

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-7.qld

Last Altered: Monday, February 10, 2020 11:36:29 AM Pacific Standard Time

Printed: Monday, February 10, 2020 11:37:06 AM Pacific Standard Time

Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

Hexa-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.60	6.899e4	6.571e4	3.770e3	3.249e3	1.16	NO	7.019e3	1.7868	1.7868	0.109
2	Total Hexa-Dioxins	33.15	1.893e4	1.600e4	1.016e3	7.906e2	1.29	NO	1.807e3	0.45997	0.45997	0.109
3	Total Hexa-Dioxins	33.40	6.357e4	4.990e4	4.139e3	3.328e3	1.24	NO	7.466e3	1.9008	1.9008	0.109
4	Total Hexa-Dioxins	33.53	9.514e3	1.072e4	5.933e2	4.648e2	1.28	NO	1.058e3	0.26937	0.26937	0.109
5	1,2,3,4,7,8-HxCDD	34.08	1.353e4	1.100e4	6.943e2	6.139e2	1.13	NO	1.308e3	0.30562	0.30562	0.0960
6	1,2,3,6,7,8-HxCDD	34.17	1.536e4	1.600e4	1.036e3	8.728e2	1.19	NO	1.908e3	0.45540	0.45540	0.102
7	Total Hexa-Dioxins	34.36	1.717e4	1.326e4	8.661e2	7.409e2	1.17	NO	1.607e3	0.40912	0.40912	0.109
8	1,2,3,7,8,9-HxCDD	34.46	1.803e4	1.418e4	1.105e3	8.658e2	1.28	NO	1.971e3	0.50545	0.50545	0.113

Hepta-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.93	6.965e4	7.009e4	5.350e3	5.238e3	1.02	NO	1.059e4	3.3823	3.3823	0.164
2	1,2,3,4,6,7,8-HpCDD	37.98	5.467e4	5.085e4	4.100e3	4.090e3	1.00	NO	8.189e3	2.6160	2.6160	0.164

Tetra-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	20.75	8.843e3	1.109e4	7.550e2	1.036e3	0.73	NO	1.791e3	0.22664	0.22664	0.0814
2	Total Tetra-Furans	22.17	4.197e3	5.524e3	3.166e2	4.086e2	0.77	NO	7.252e2	0.091759	0.091759	0.0814
3	Total Tetra-Furans	23.25	3.599e3	5.394e3	3.069e2	3.662e2	0.84	NO	6.731e2	0.085172	0.085172	0.0814
4	Total Tetra-Furans	23.88	2.738e3	3.836e3	2.071e2	3.587e2	0.58	YES	0.000e0	0.00000	0.060249	0.0814
5	Total Tetra-Furans	24.45	2.992e3	7.397e3	2.612e2	3.356e2	0.78	NO	5.968e2	0.075519	0.075519	0.0814

Penta-Furans function 1

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.84	1.991e4	1.617e4	1.424e3	1.060e3	1.34	NO	2.484e3	0.36064	0.36064	0.0387

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-7.qld

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Printed: Monday, February 10, 2020 11:37:06 AM Pacific Standard Time

Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

## Penta-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.44	9.285e3	6.898e3	6.713e2	5.899e2	1.14	YES	0.000e0	0.00000	0.16032	0.0685
2	Total Penta-Furans	29.02	8.163e3	1.241e4	4.672e2	1.027e3	0.46	YES	0.000e0	0.00000	0.11155	0.0685
3	2,3,4,7,8-PeCDF	30.41	5.692e3	6.169e3	2.479e2	1.584e2	1.57	NO	4.063e2	0.057697	0.057697	0.0632
4	Total Penta-Furans	30.45	6.093e3	8.288e3	2.577e2	2.321e2	1.11	YES	0.000e0	0.00000	0.061556	0.0685

## Hexa-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Furans	32.05	4.061e3	2.787e3	2.217e2	1.634e2	1.36	NO	3.851e2	0.083956	0.083956	0.104
2	Total Hexa-Furans	32.23	9.456e3	9.333e3	4.560e2	5.399e2	0.84	YES	0.000e0	0.00000	0.17960	0.104
3	Total Hexa-Furans	32.75	1.167e4	9.922e3	6.085e2	4.982e2	1.22	NO	1.107e3	0.24129	0.24129	0.104
4	1,2,3,4,7,8-HxCDF	33.23	4.574e3	4.203e3	3.508e2	2.770e2	1.27	NO	6.278e2	0.14005	0.14005	0.0973
5	1,2,3,7,8,9-HxCDF	34.80	6.348e3	3.389e3	2.676e2	1.592e2	1.68	YES	4.269e2	0.00000	0.092335	0.143
6	Total Hexa-Furans	34.83	5.292e3	3.058e3	2.246e2	1.456e2	1.54	YES	0.000e0	0.00000	0.071114	0.104

## Hepta-Furans

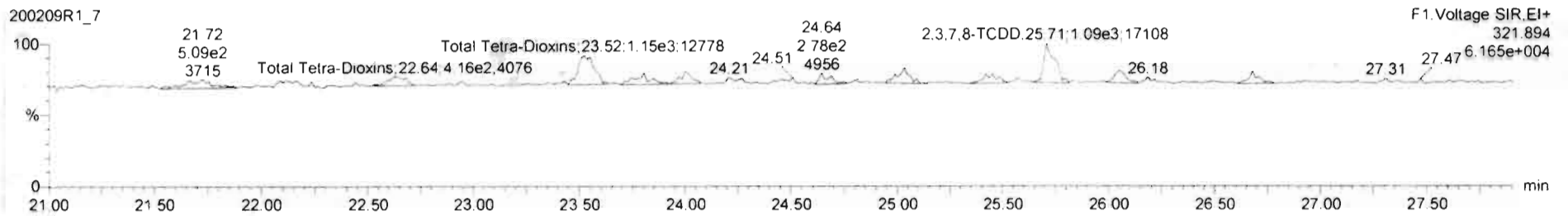
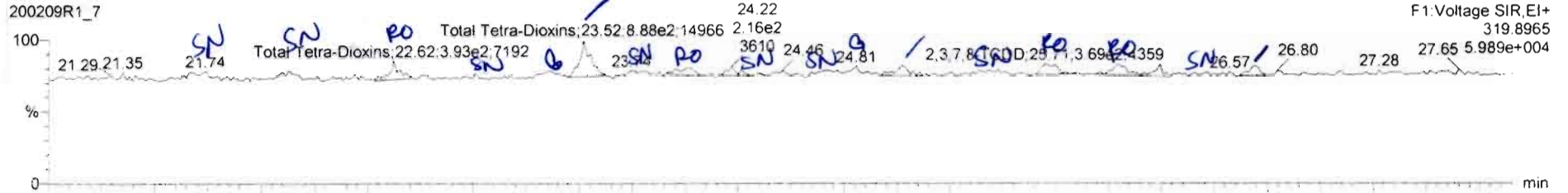
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1	1,2,3,4,6,7,8-HpCDF	36.53	1.296e4	8.176e3	7.810e2	7.045e2	1.11	NO	1.486e3	0.48644	0.48644	0.116
2	Total Hepta-Furans	37.12	5.759e3	5.330e3	4.011e2	4.126e2	0.97	NO	8.136e2	0.30241	0.30241	0.127

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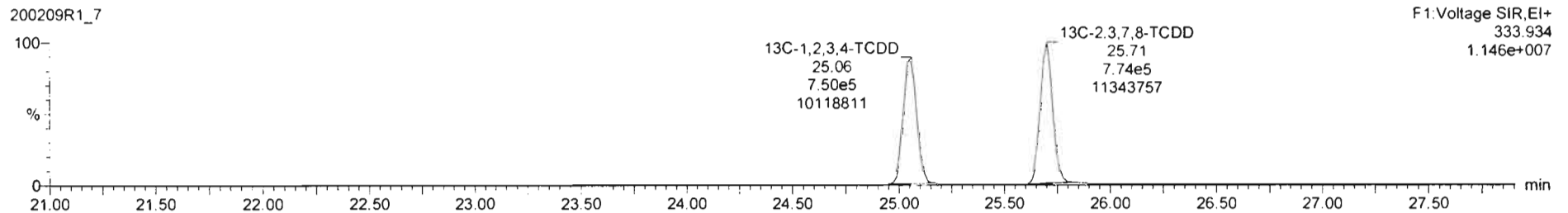
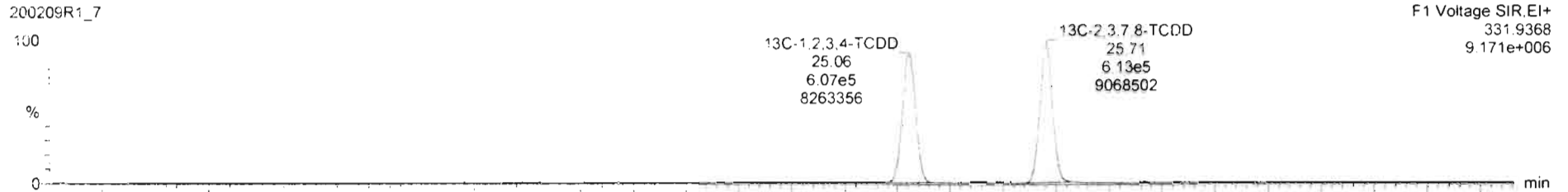
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2,3,7,8-TCDD

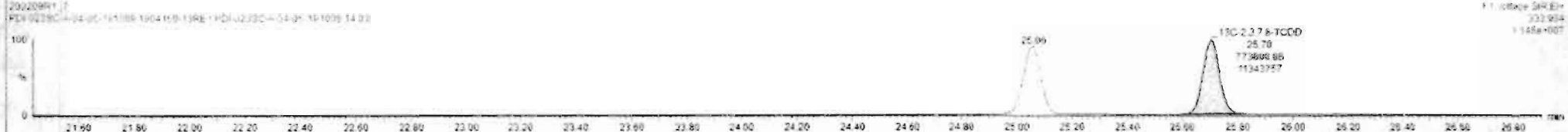
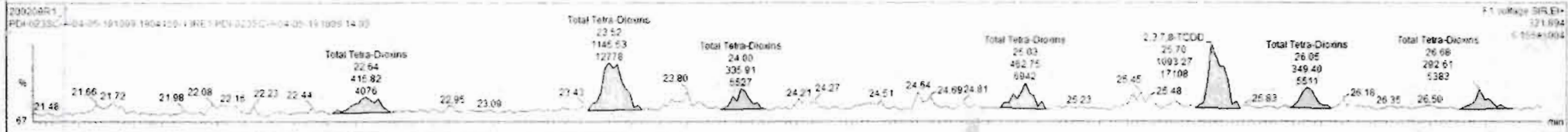
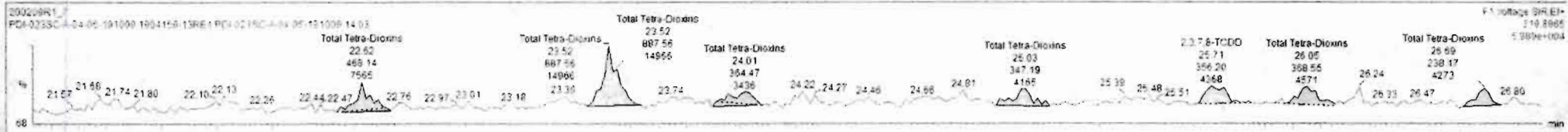


13C-2,3,7,8-TCDD



Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.9881	10.195			0.483		0.0915	0.879

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Tetra-Dioxins	22.62	4.681e2	1.158e3	1.13	YES	0.10538	0.00000
2 Total Tetra-Dioxins	23.52	6.876e2	1.145e3	0.77	NO	0.29109	0.29109
3 Total Tetra-Dioxins	24.01	3.645e2	3.359e2	1.05	YES	0.085127	0.00000
4 Total Tetra-Dioxins	25.03	3.472e2	4.627e2	0.75	NO	0.11596	0.11596
5 2,3,7,8-TCDD	25.71	3.582e2	1.093e3	0.33	YES	0.11723	0.00000
6 Total Tetra-Dioxins	26.05	3.885e2	3.494e2	1.05	YES	0.065548	0.00000
7 Total Tetra-Dioxins	26.69	2.382e2	2.926e2	0.81	NO	0.075995	0.075995





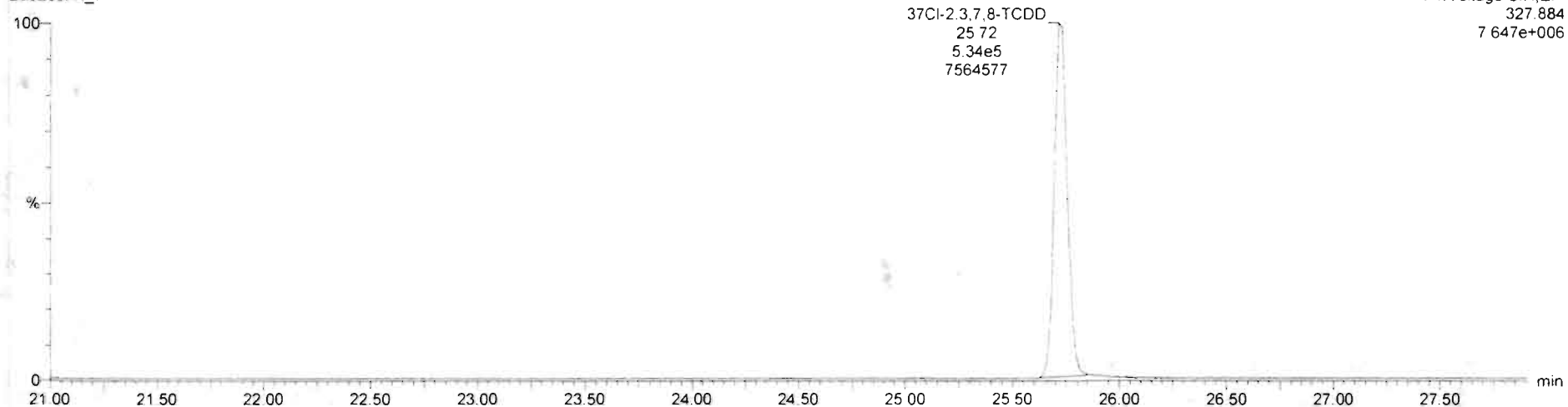
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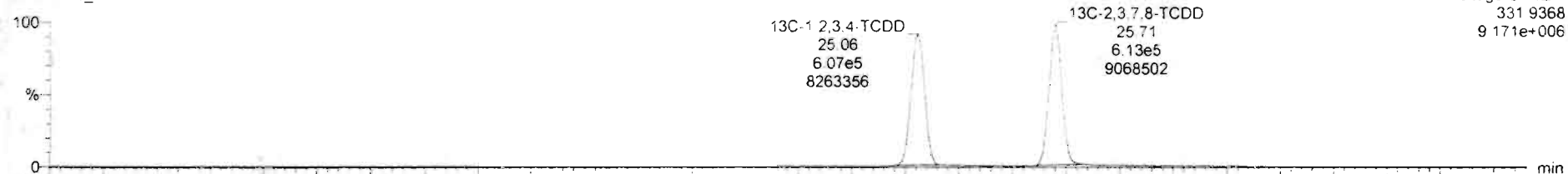
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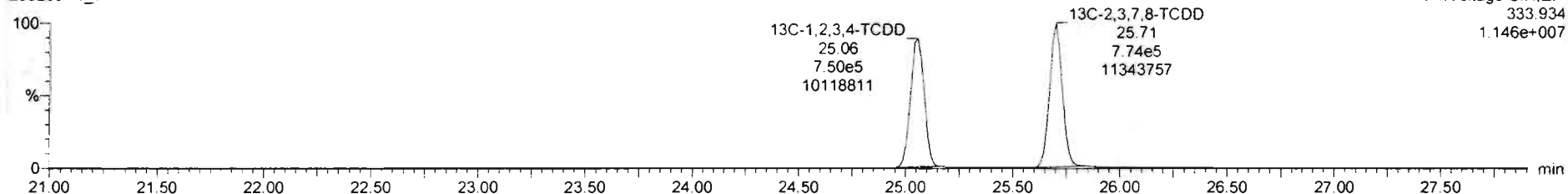


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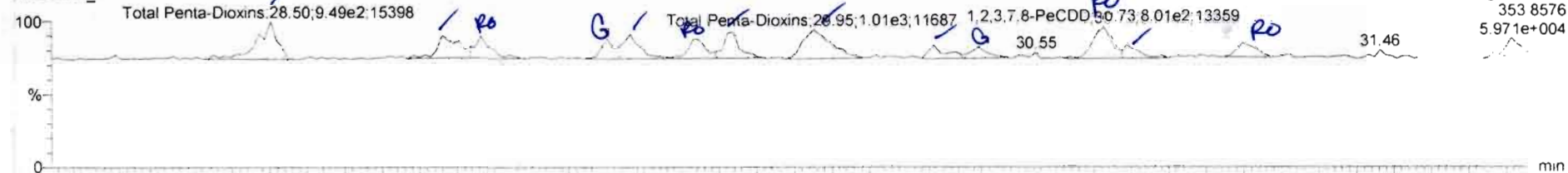
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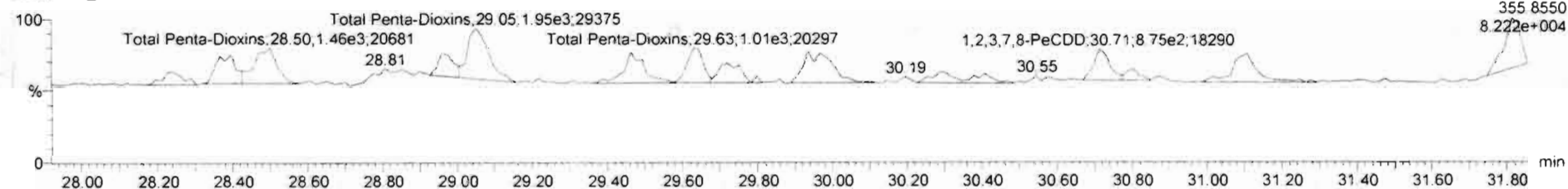
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1,2,3,7,8-PeCDD

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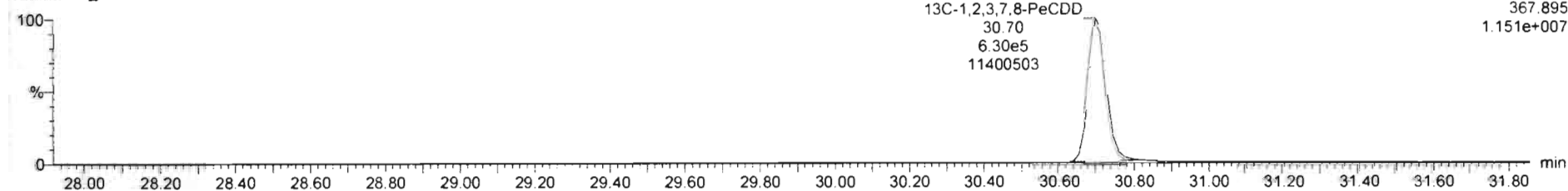


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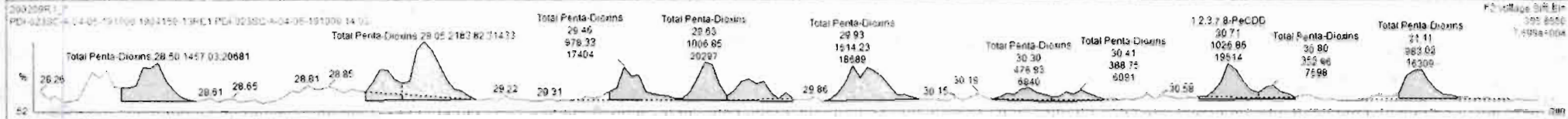
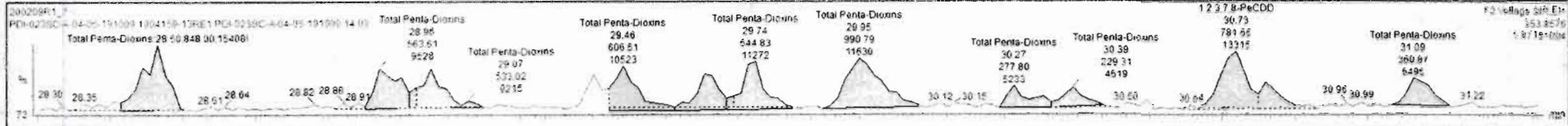


200209R1\_7



Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc.	%Rec	DL	EMPC
40	Total Penta-Dioxins			0.9723	10.195			2.25		0.126	3.27

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.	
1	Total Penta-Dioxins	28.50	6.420e2	1.457e3	0.58	NO	0.45064	0.45064
2	Total Penta-Dioxins	28.96	5.636e2	9.292e2	0.61	NO	0.29184	0.29184
3	Total Penta-Dioxins	29.07	5.230e2	2.184e3	0.24	YES	0.26961	0.00000
4	Total Penta-Dioxins	29.46	6.065e2	9.783e2	0.62	NO	0.30964	0.30964
5	Total Penta-Dioxins	29.63	4.718e2	1.607e3	0.47	YES	0.22862	0.00000
6	Total Penta-Dioxins	29.74	6.448e2	9.192e2	0.70	NO	0.30577	0.30577
7	Total Penta-Dioxins	29.95	6.908e2	1.614e3	0.61	NO	0.50929	0.50929
8	Total Penta-Dioxins	30.27	2.778e2	4.766e2	0.58	NO	0.14755	0.14755
9	Total Penta-Dioxins	30.39	2.793e2	3.887e2	0.59	NO	0.12683	0.12683
10	1,2,3,7,8-PeCDD	30.73	7.818e2	1.027e3	0.76	YES	0.32723	0.00000
11	Total Penta-Dioxins	30.75	2.426e2	3.536e2	0.69	NO	0.11644	0.11644
12	Total Penta-Dioxins	31.09	3.609e2	6.620e2	0.37	YES	0.18253	0.00000



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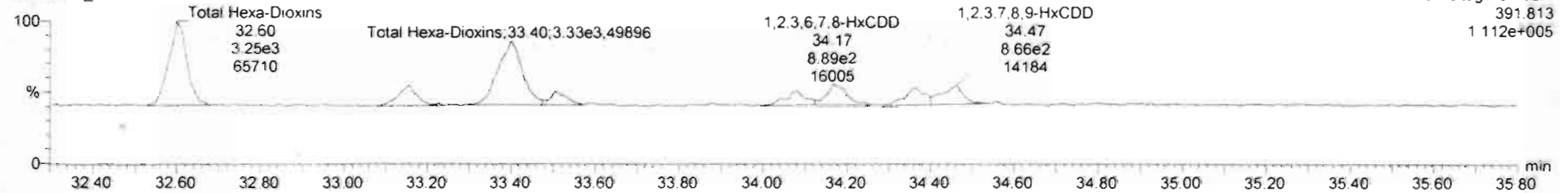
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**1,2,3,4,7,8-HxCDD**

200209R1\_7

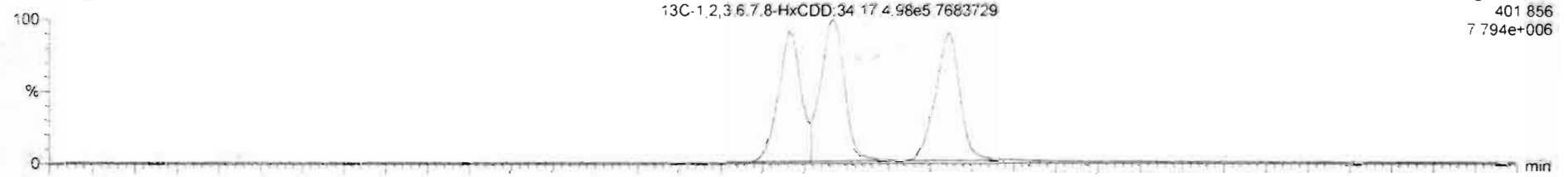


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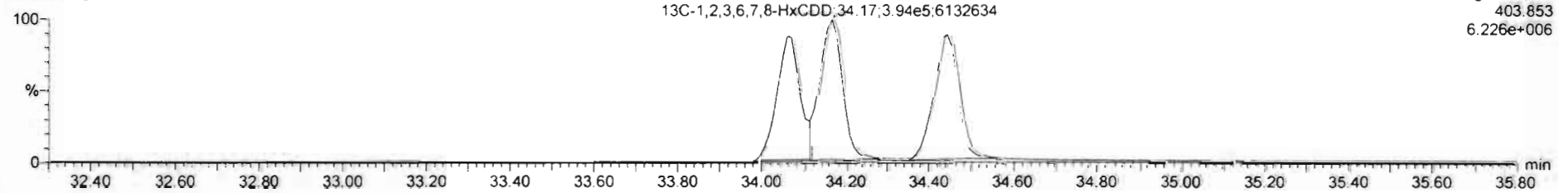


**13C-1,2,3,4,7,8-HxCDD**

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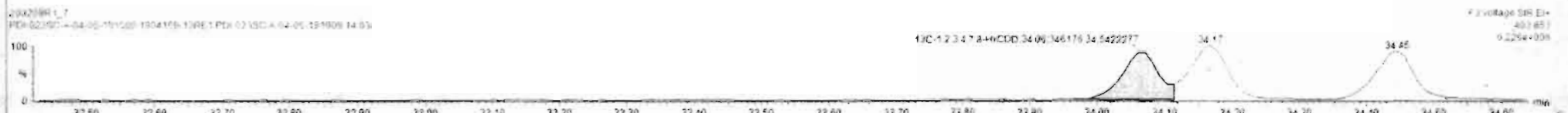
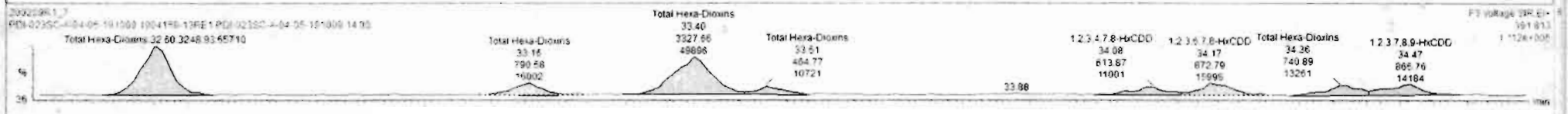
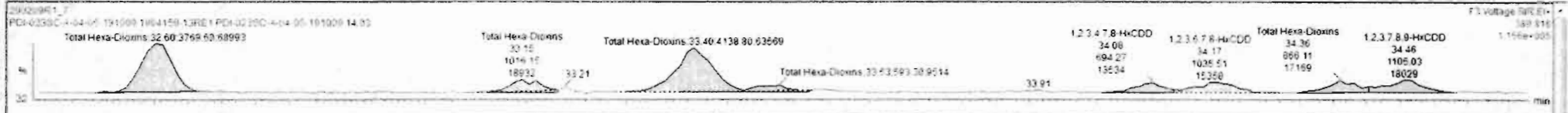


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Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc	%Rec	DL	EMPC
40 Total Penta-Dioxins				0.9723	10.195			2.13		0.126	3.15

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc
1 Total Hexa-Dioxins	32.50	3.770e3	1.249e3	1.16	NO	1.7868	1.7268
2 Total Hexa-Dioxins	33.15	1.016e2	7.906e2	1.29	NO	0.45997	0.45997
3 Total Hexa-Dioxins	33.40	4.139e3	3.328e2	1.24	NO	1.9008	1.9008
4 Total Hexa-Dioxins	33.53	5.923e2	4.648e2	1.28	NO	0.26937	0.26937
5 1,2,3,4,7,8-HxCDD	34.08	6.543e2	6.139e2	1.13	NO	0.30562	0.30562
6 1,2,3,6,7,8-HxCDD	34.17	1.036e2	6.728e2	1.19	NO	0.45540	0.45540
7 Total Hexa-Dioxins	34.36	8.661e2	7.499e2	1.17	NO	0.40912	0.40912
8 1,2,3,7,8,9-HxCDD	34.46	1.105e3	8.658e2	1.2E	NO	0.50545	0.50545



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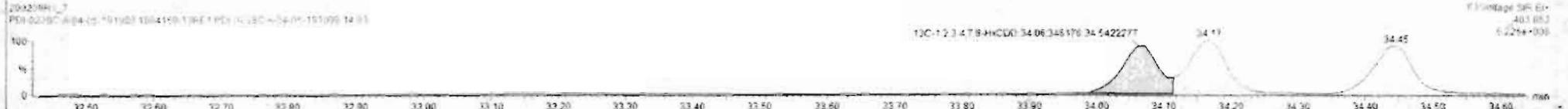
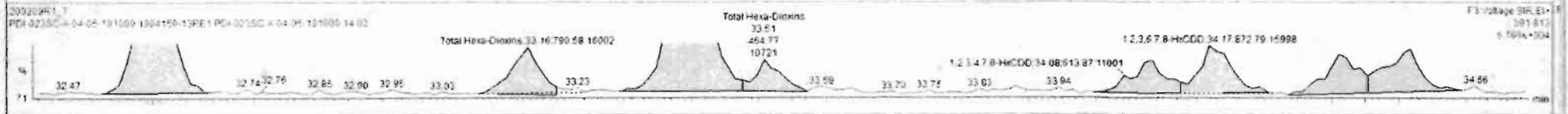
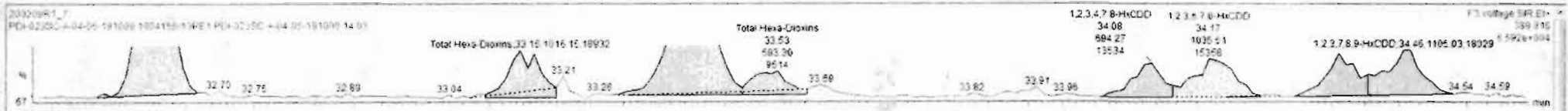
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200209R1\_7 1904159-13RE1 PDI:023SC-A-04-05-191009 14 03 - PDI:023SC-A-04-05-191009

Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc.	%Rec	DL	EMPC
40 Total Penta-Dioxins				0.9723	10.195			2.13		0.126	3.15

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Hexa-Dioxins	32.50	3.770e3	3.249e3	1.16	NO	1.7868	1.7868
2 Total Hexa-Dioxins	33.15	1.016e3	7.906e2	1.29	NO	0.45967	0.45967
3 Total Hexa-Dioxins	33.40	4.139e3	3.328e3	1.24	NO	1.9008	1.9008
4 Total Hexa-Dioxins	33.53	5.933e2	4.645e2	1.28	NO	0.26937	0.26937
5 1,2,3,4,7,8-HxCDD	34.06	6.943e2	6.139e2	1.13	NO	0.30562	0.30562
6 1,2,3,6,7,8-HxCDD	34.17	1.036e3	6.728e2	1.19	NO	0.45540	0.45540
7 Total Hexa-Dioxins	34.36	8.661e2	7.409e2	1.17	NO	0.40912	0.40912
8 1,2,3,7,8,9-HxCDD	34.46	1.105e3	8.658e2	1.26	NO	0.50545	0.50545



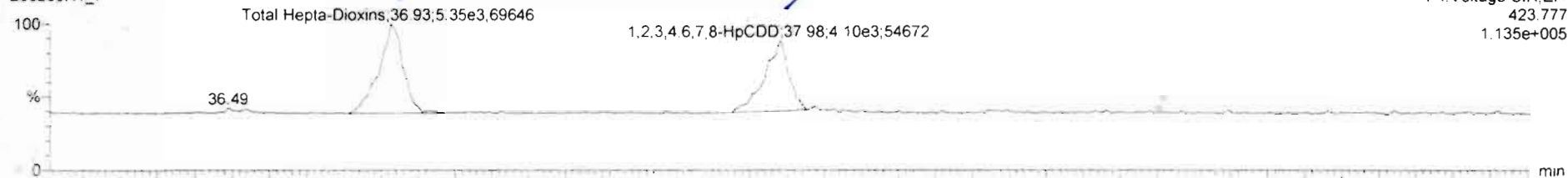
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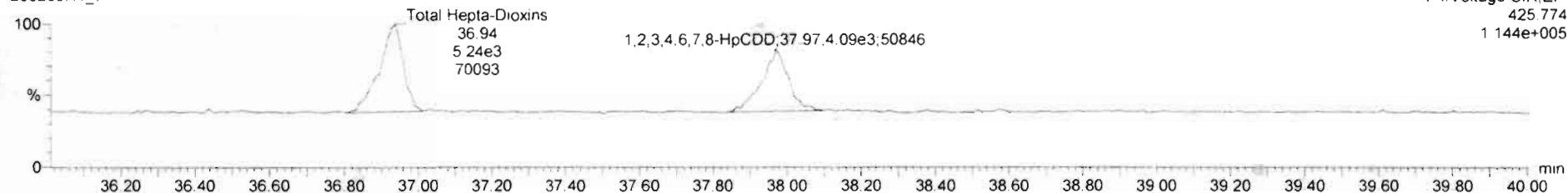
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1,2,3,4,6,7,8-HpCDD

200209R1\_7

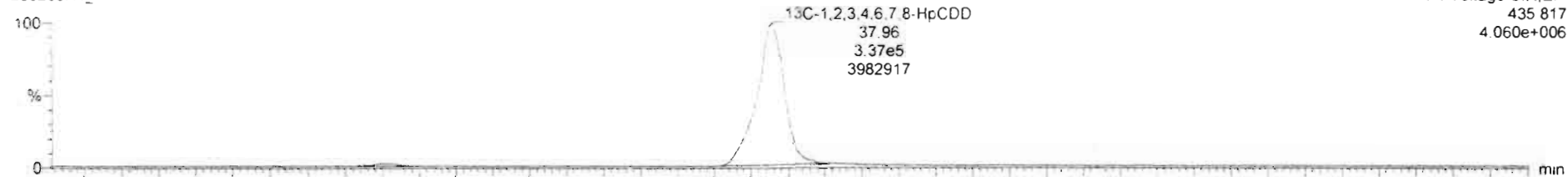


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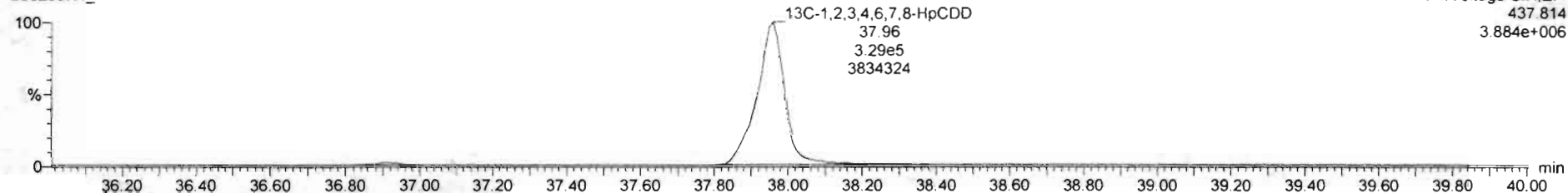


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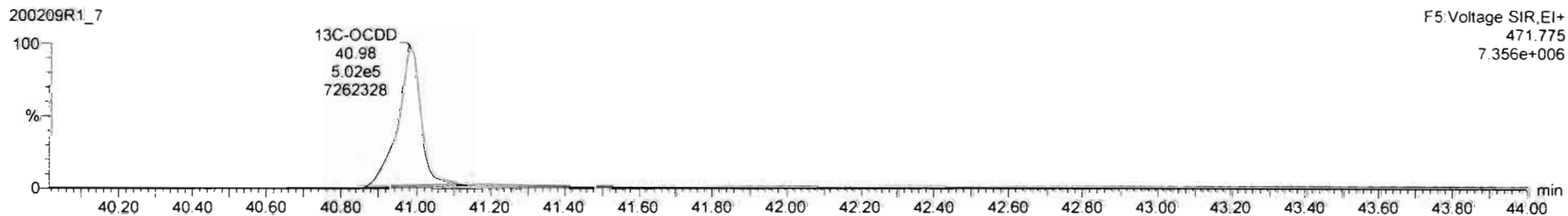
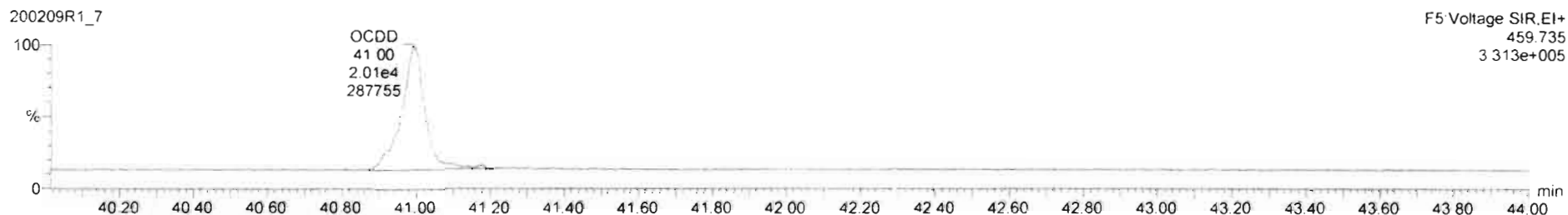
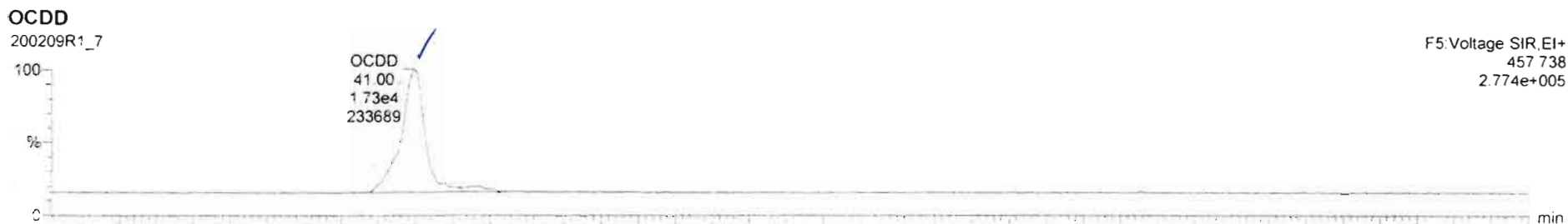


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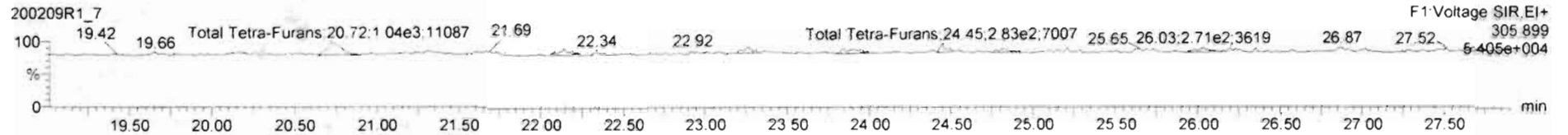
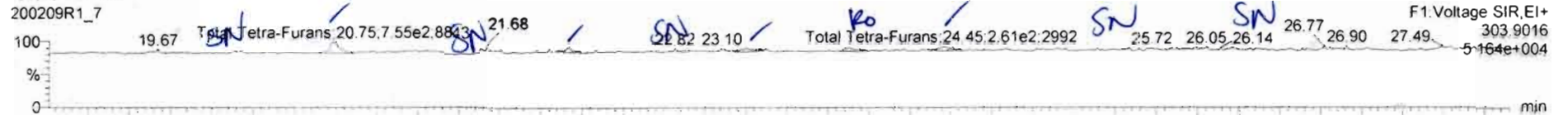
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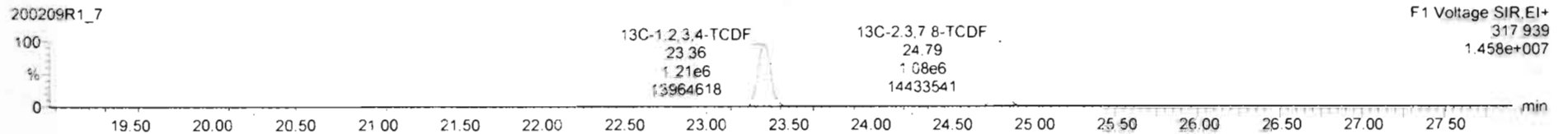
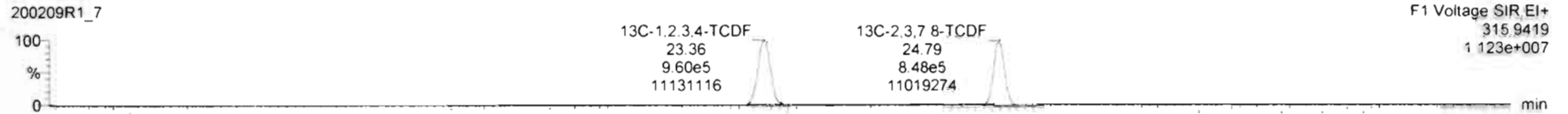
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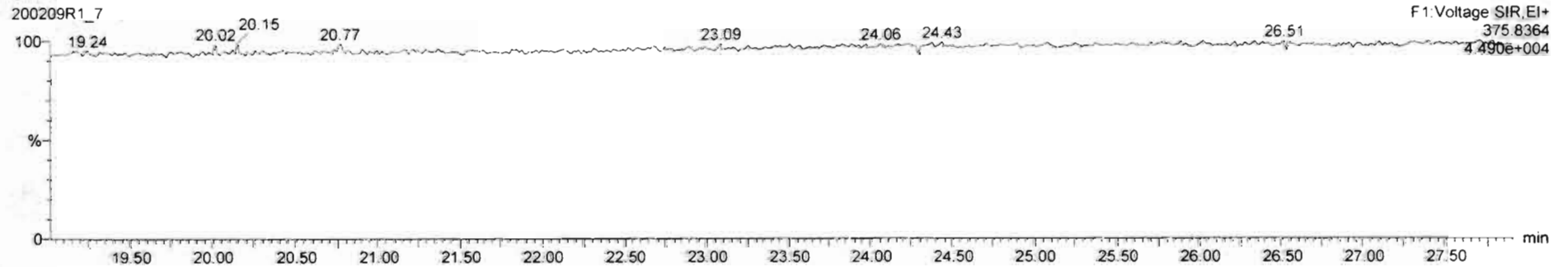
2,3,7,8-TCDF

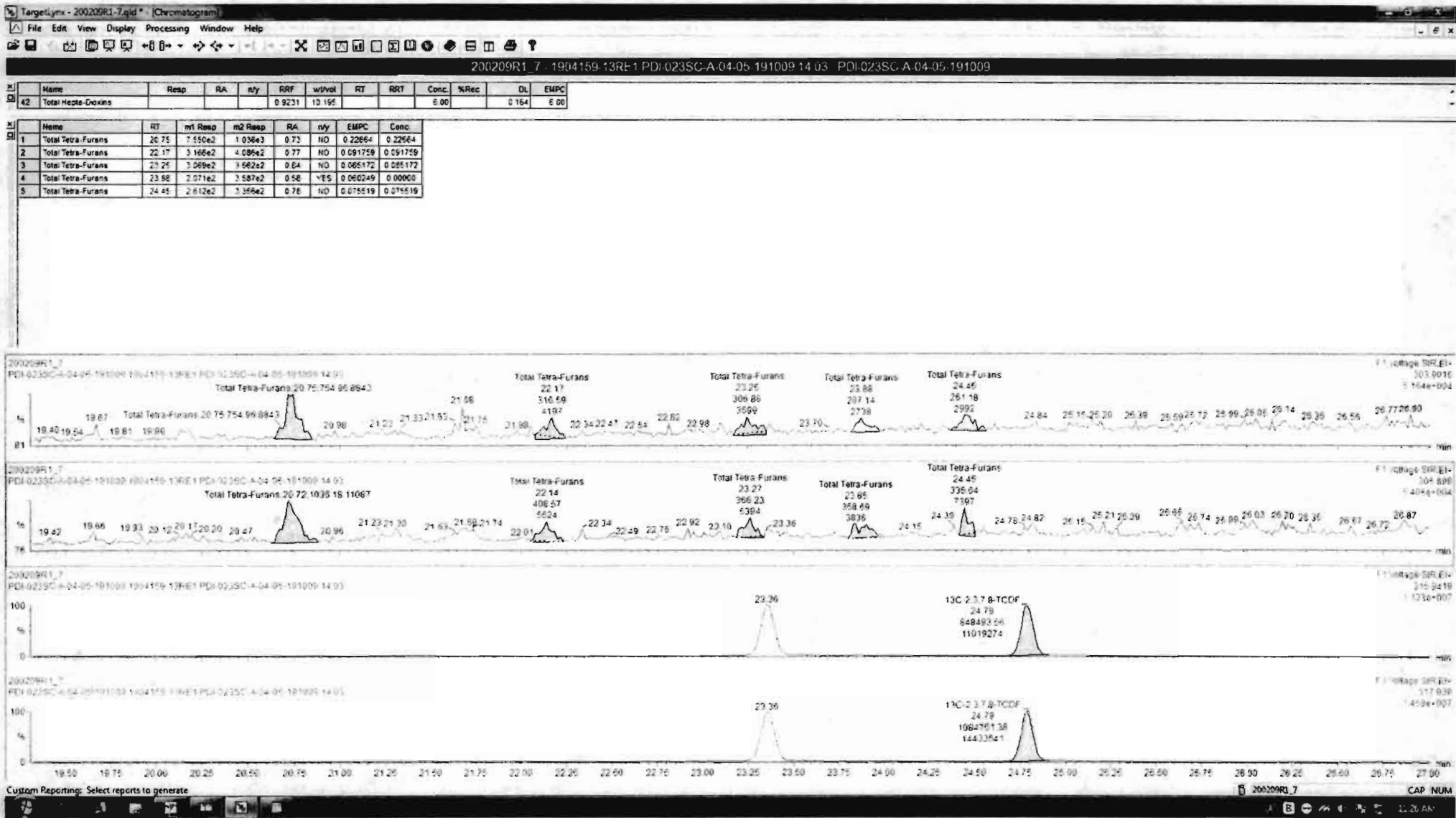


13C-2,3,7,8-TCDF



DPE1



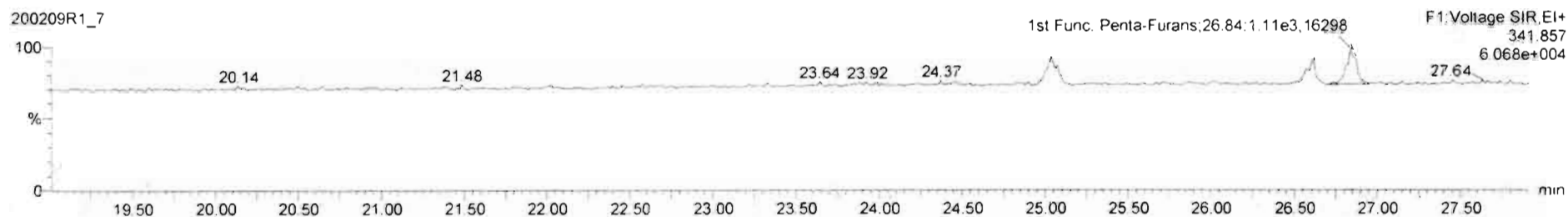
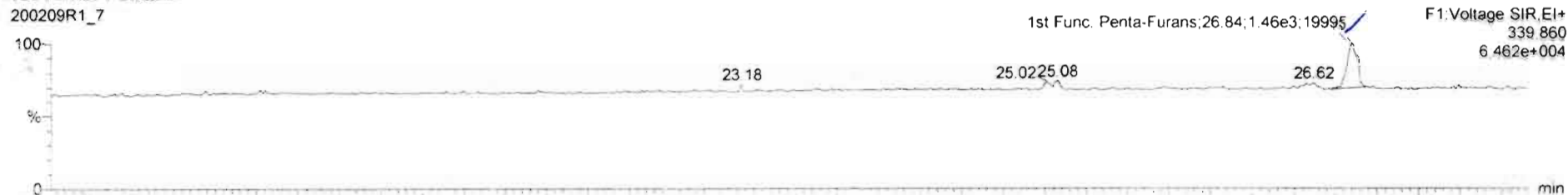


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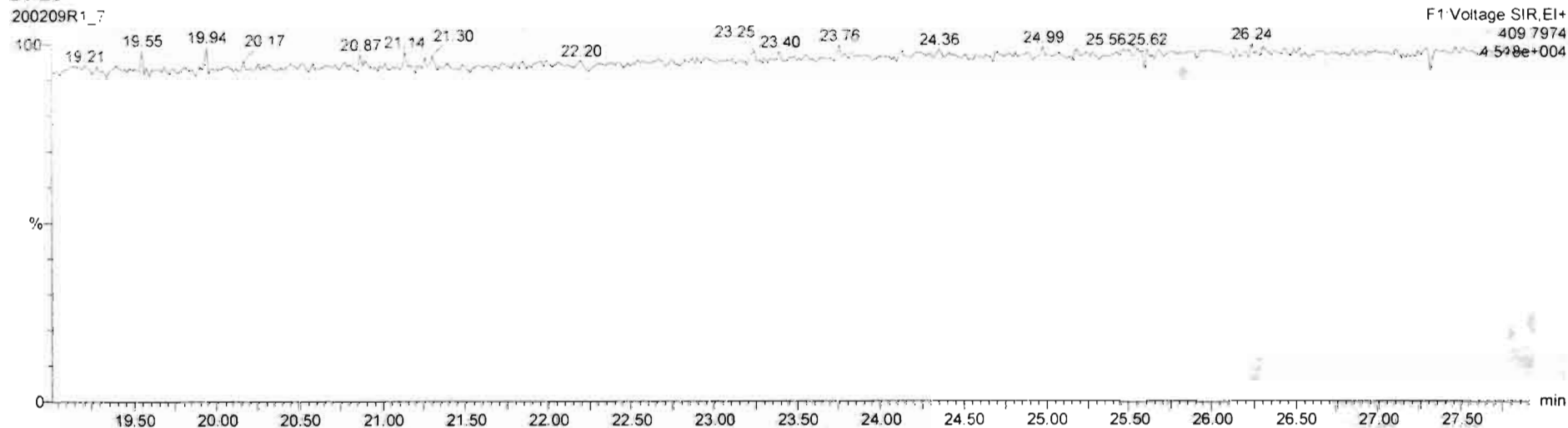
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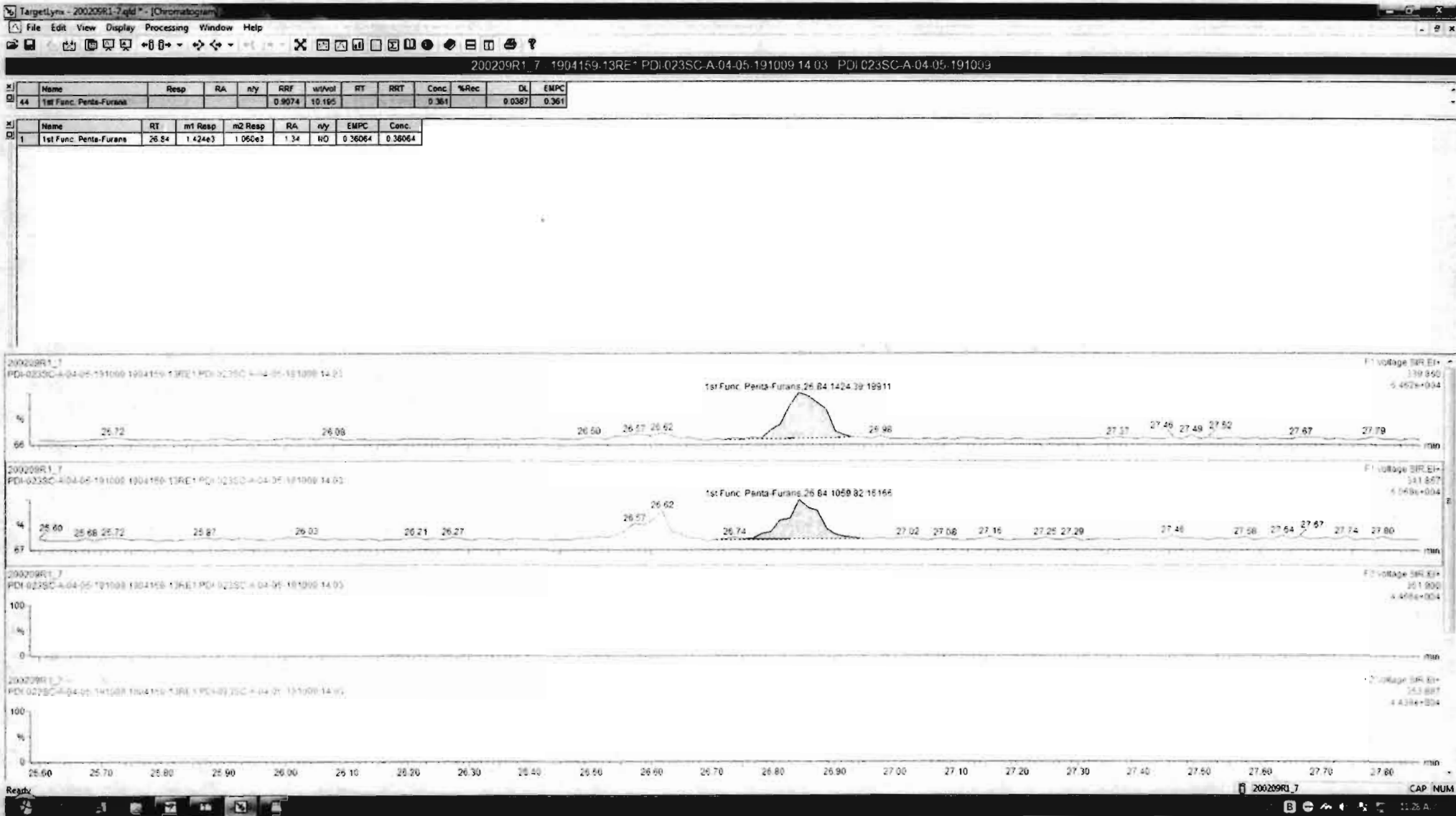
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1st Func. Penta-Furans



DPE6



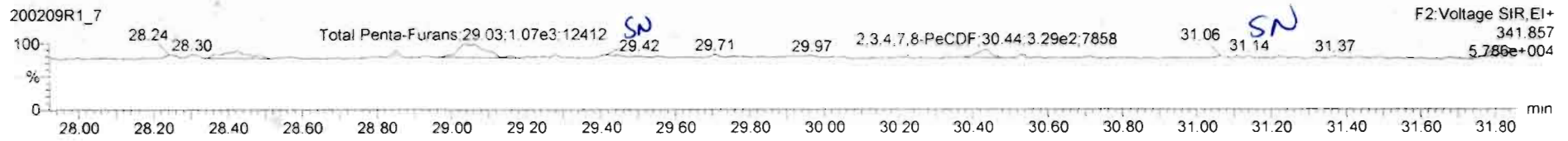
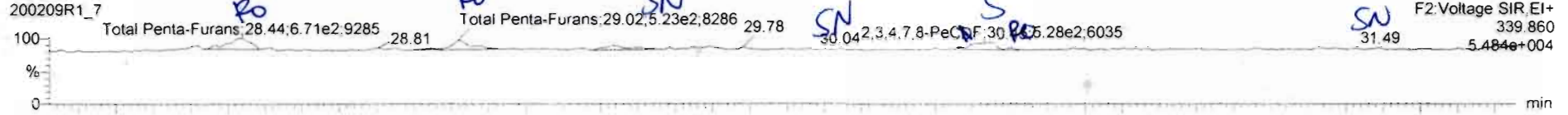


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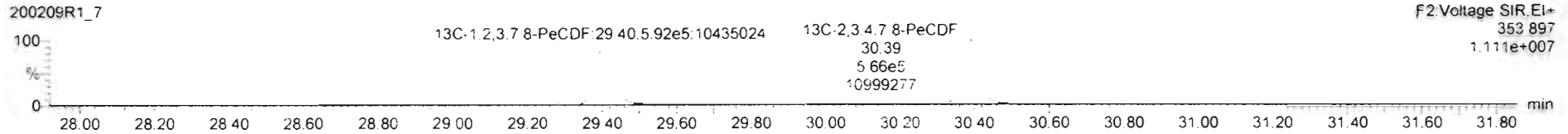
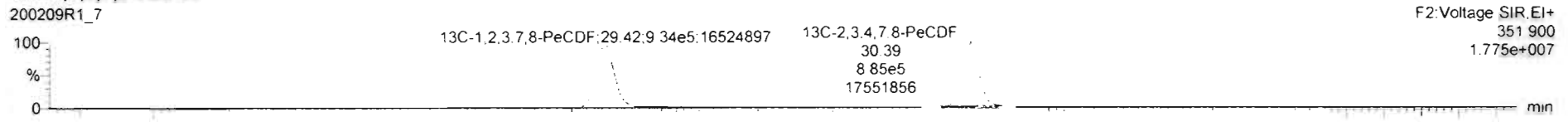
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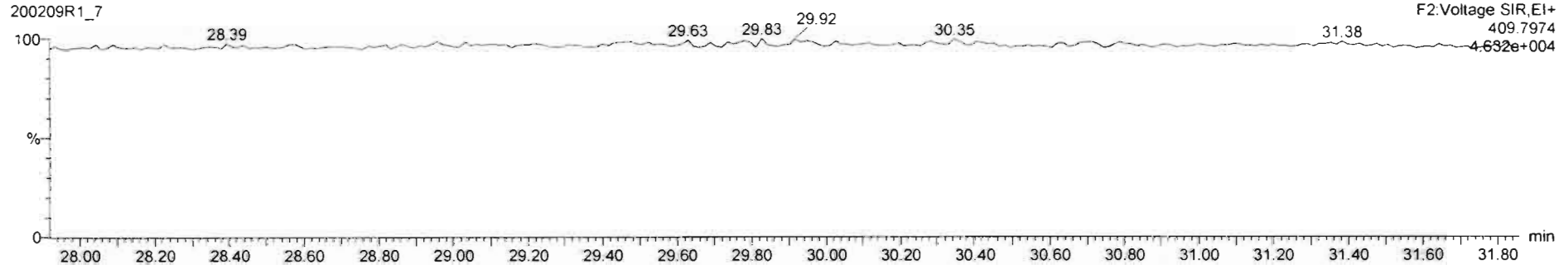
1,2,3,7,8-PeCDF

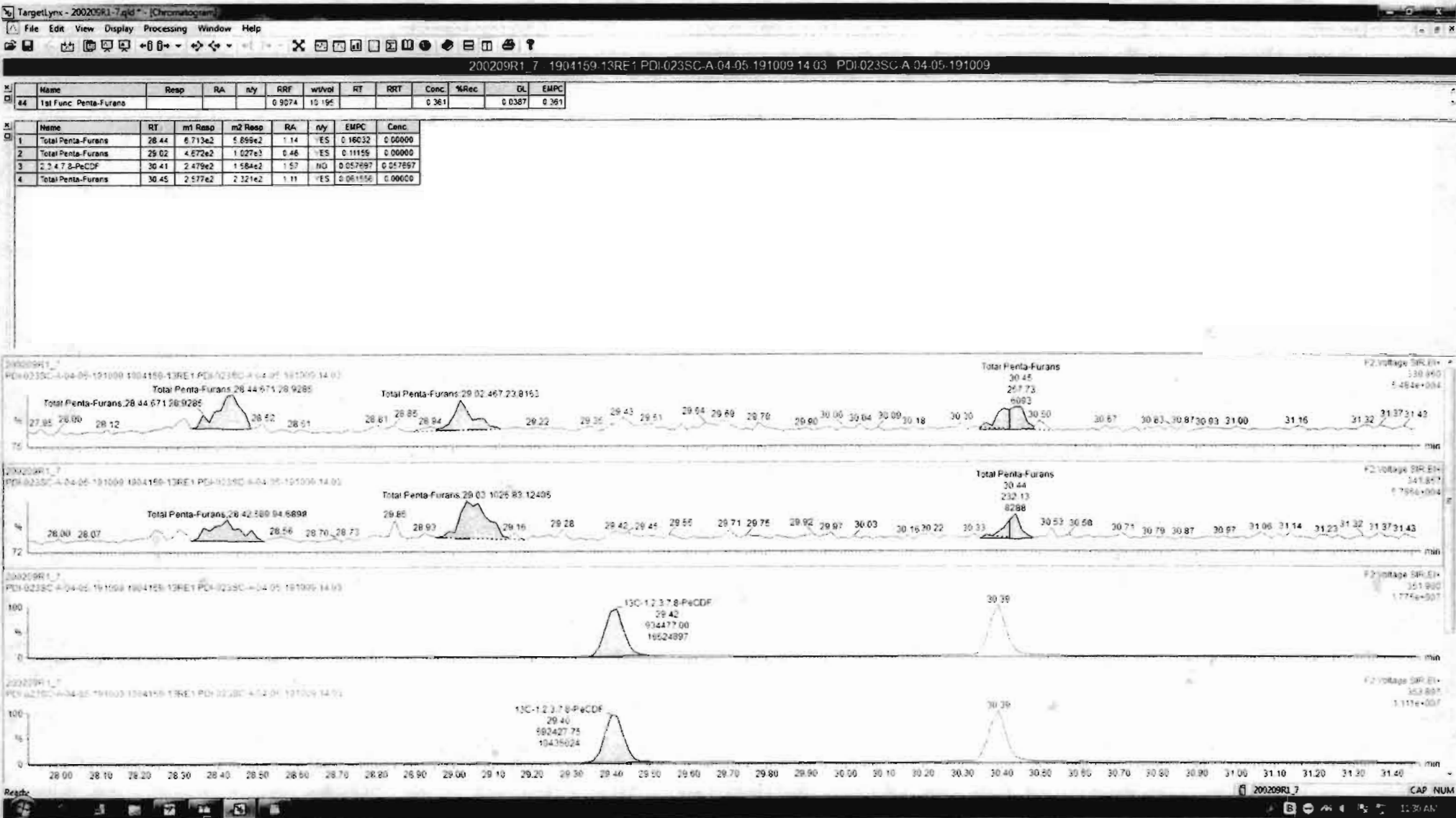


13C-1,2,3,7,8-PeCDF



DPE2



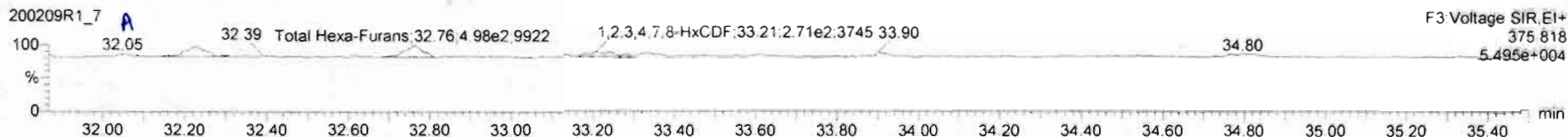
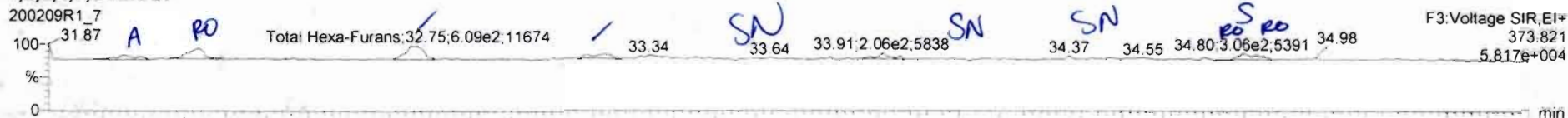


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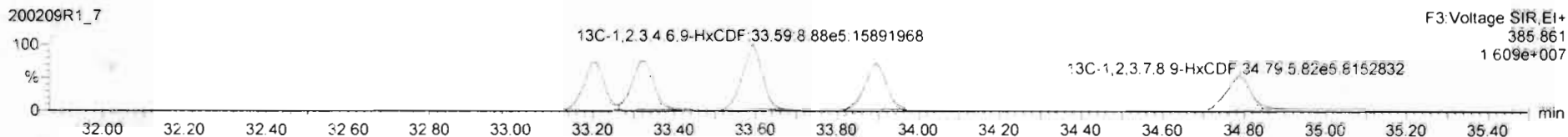
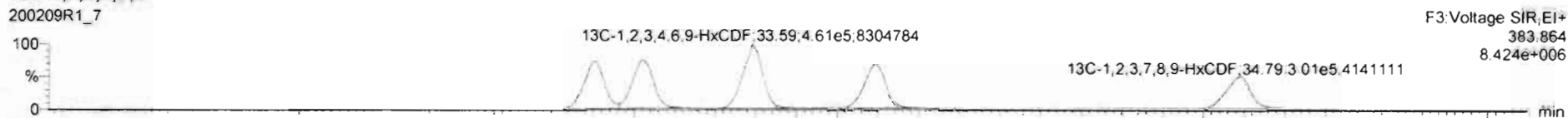
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Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

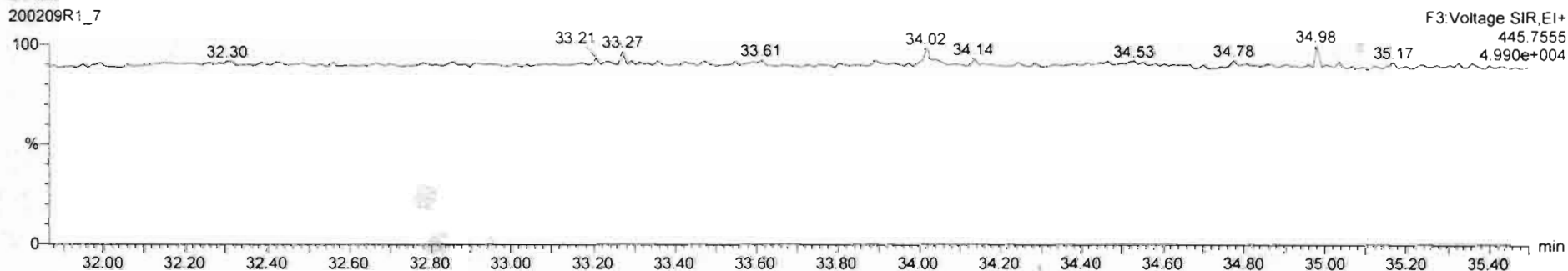
1,2,3,4,7,8-HxCDF



13C-1,2,3,4,7,8-HxCDF

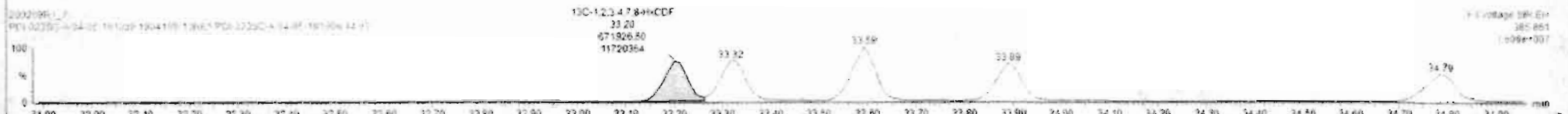
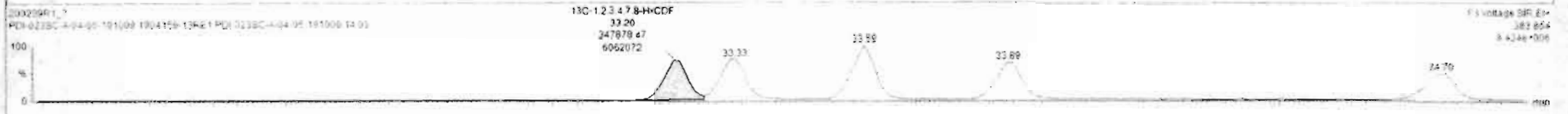
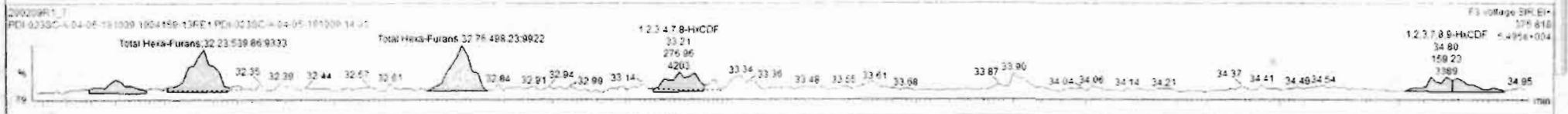


DPE3



Name	Resp	RA	n/y	RRF	wt/Vol	RT	RRT	Conc	%Rec	DL	EMPC
46	Total Hexa-Furans			0.8082	10.195			0.465		0.104	0.808

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc
1	Total Hexa-Furans	32.05	2.21762	1.634e2	1.36	NO	0.083958
2	Total Hexa-Furans	32.23	4.560e2	5.399e2	0.84	ES	0.17960
3	Total Hexa-Furans	32.75	5.085e2	4.982e2	1.22	NO	0.24129
4	1,2,3,4,7,8-HxCDF	32.23	3.508e2	2.770e2	1.27	NO	0.14005
5	1,2,3,7,8,9-HxCDF	34.80	2.676e2	1.592e2	1.68	ES	0.092735
6	Total Hexa-Furans	34.83	2.246e2	1.456e2	1.54	ES	0.071114



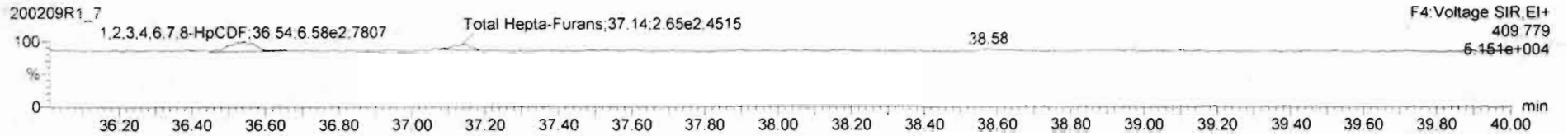
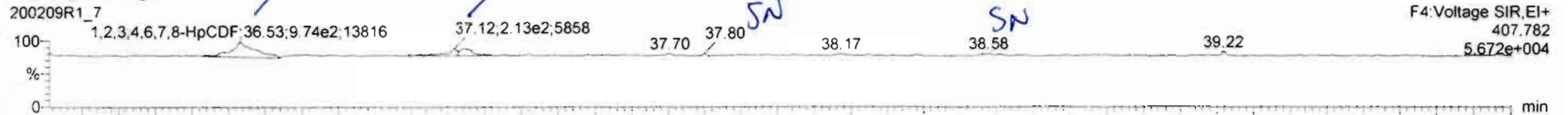


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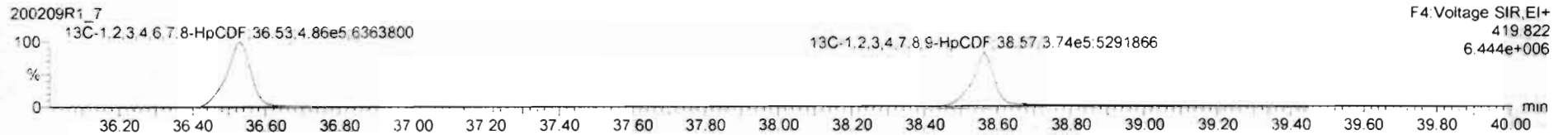
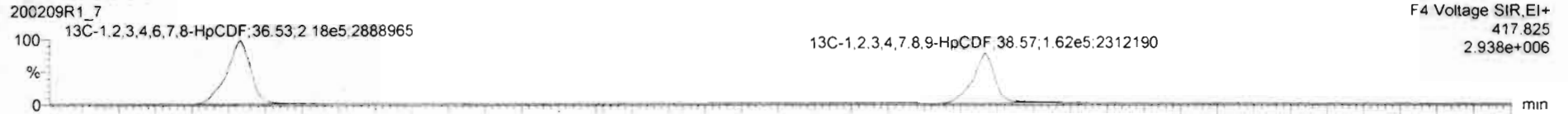
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Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

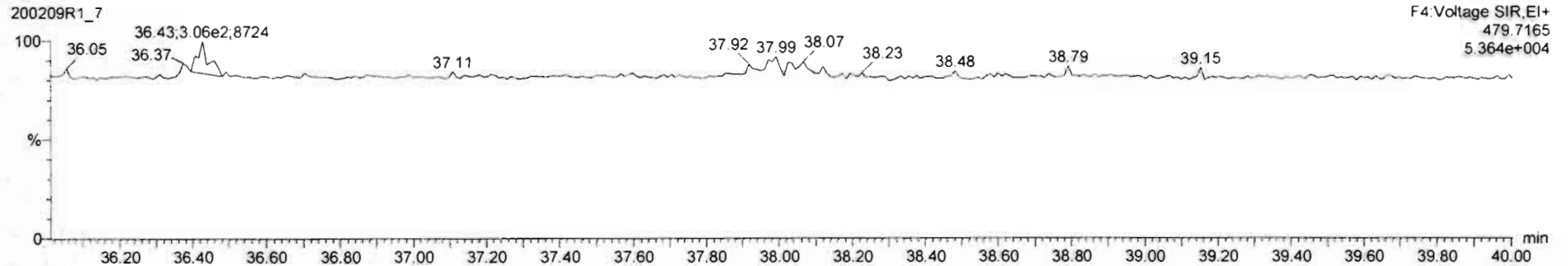
1,2,3,4,6,7,8-HpCDF



13C-1,2,3,4,6,7,8-HpCDF



DPE4



TargetLynx - 200209R1\_7.qid - Chromatogram

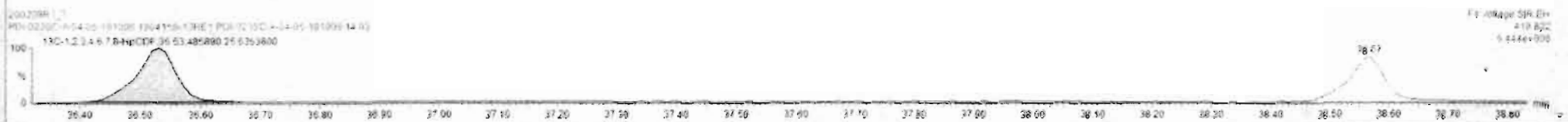
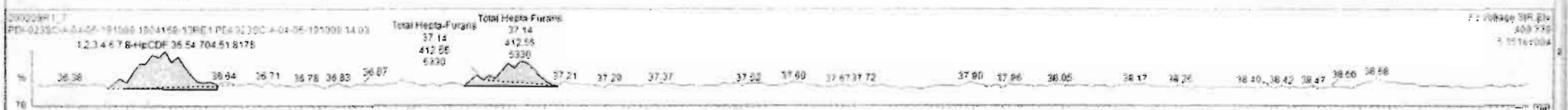
File Edit View Display Processing Window Help

200209R1\_7\_1904159-13RE1.PDI-023SC.A-04-05-191009-14-03\_PDI-023SC.A-04-05-191009

Name	Resp	RA	n/y	RRF	wtVol	RT	RRT	Conc	%Rec	DL	EMPC
46	Total Hexa-Furans			0.8562	10.19%			0.46%		0.104	0.808

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc
1	1.2, 3.4, 6.7, 8-HpCDF	36.53	7.810e2	7.045e2	1.11	NO	0.48644
2	Total Hepta-Furans	37.12	4.011e2	4.125e2	0.97	NO	0.30241

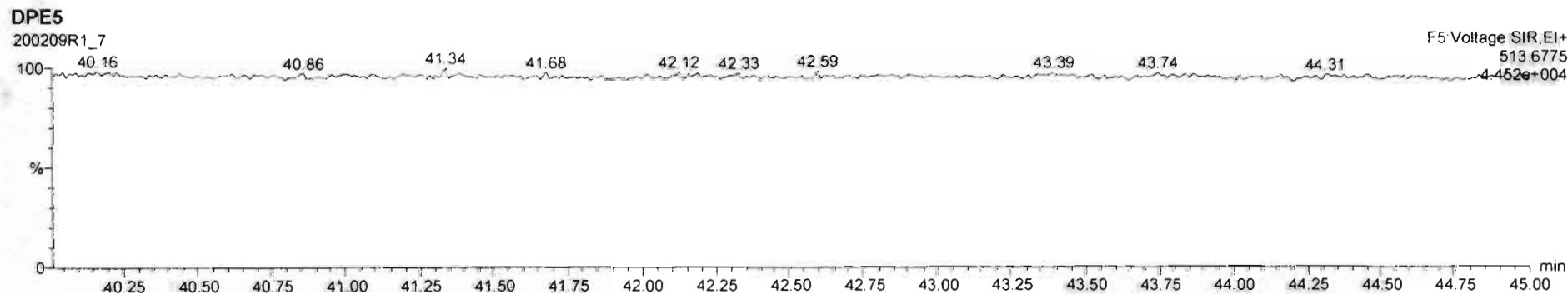
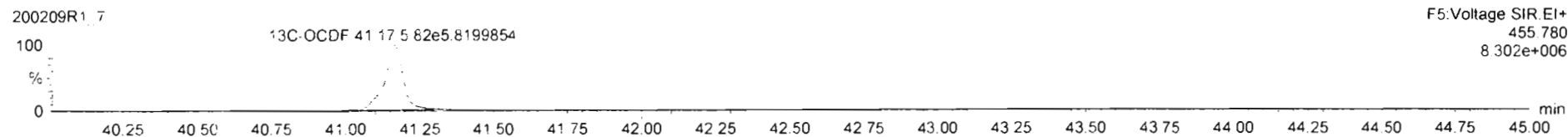
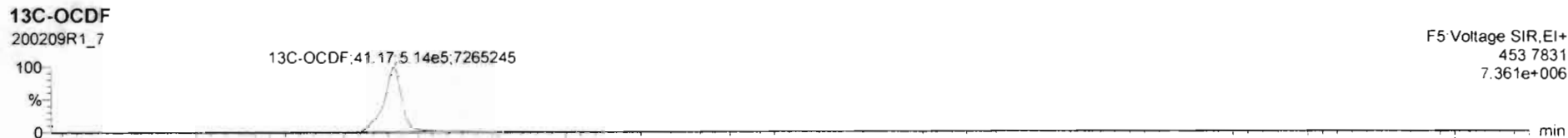
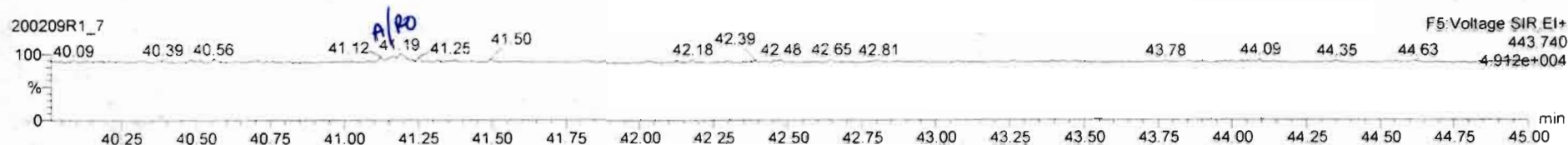
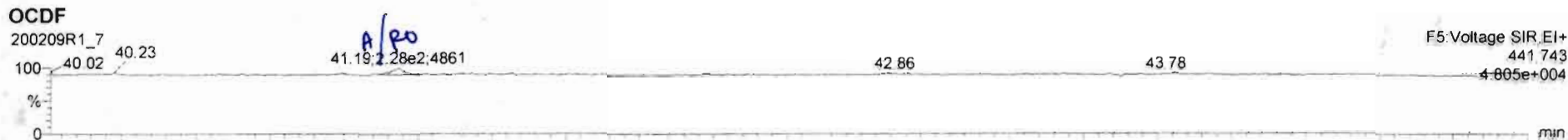


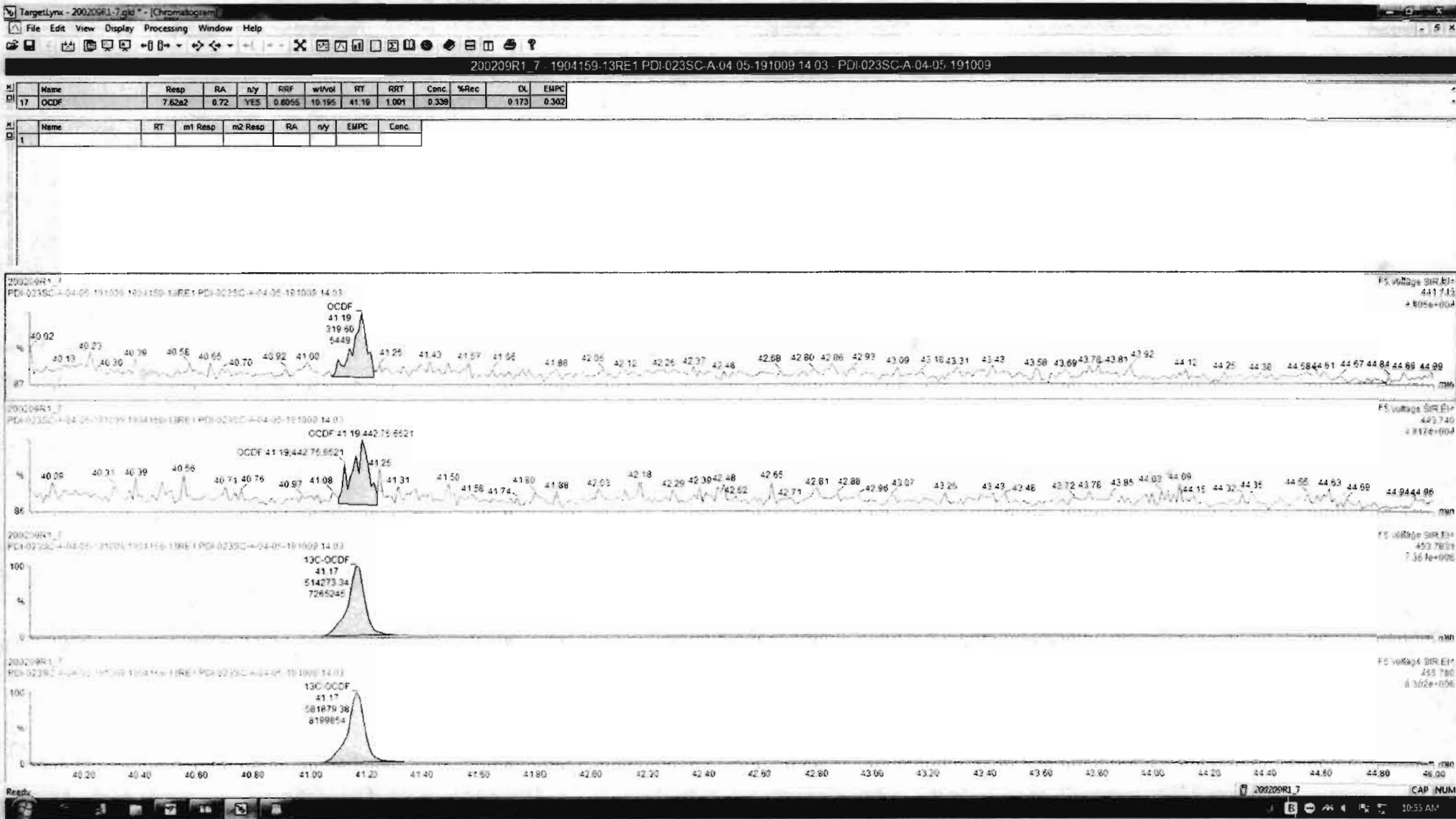
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Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009

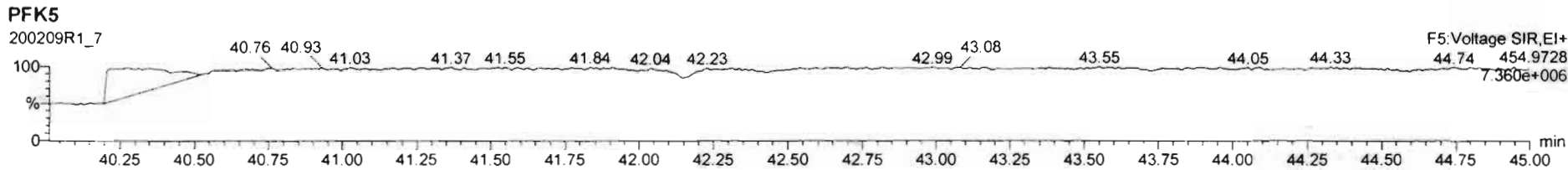
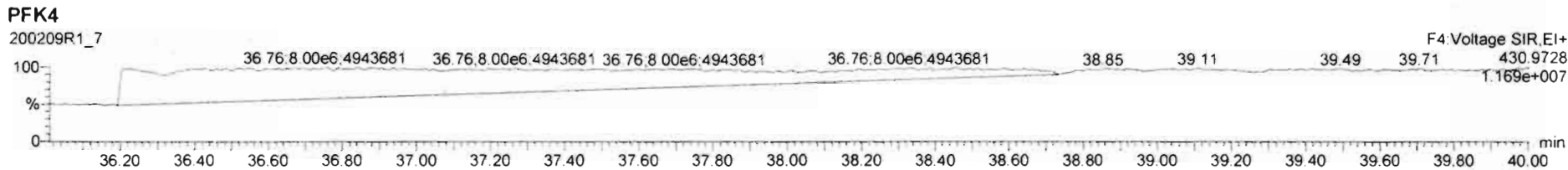
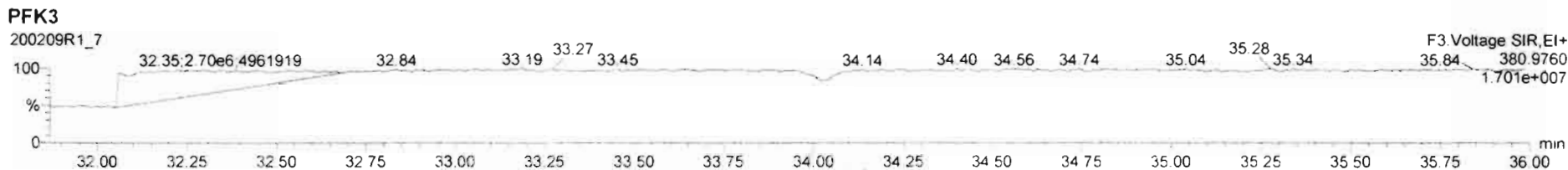
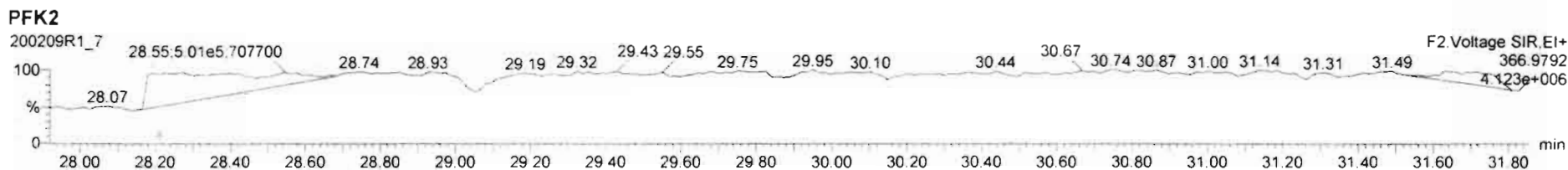
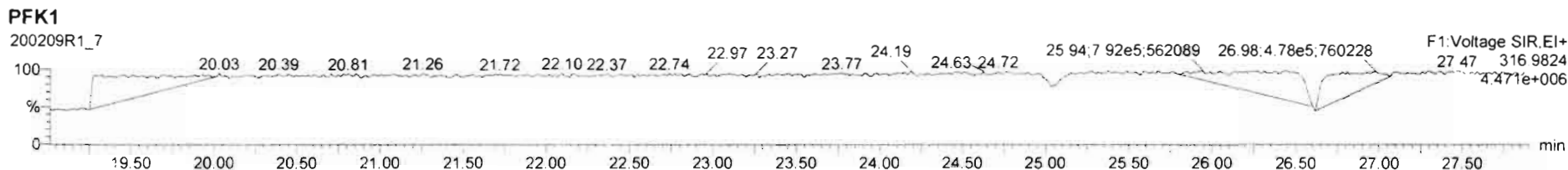




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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_7, Date: 09-Feb-2020, Time: 16:50:33, ID: 1904159-13RE1 PDI-023SC-A-04-05-191009 14.03, Description: PDI-023SC-A-04-05-191009



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-12.qld

Last Altered: Tuesday, January 28, 2020 14:36:46 Pacific Standard Time

Printed: Tuesday, January 28, 2020 14:37:02 Pacific Standard Time

*GPB 01/28/2020*

*CTG 1/31/2020*

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 28 Jan 2020 12:54:04

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Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		3.57e4	10.0133	0.905			1.001		26.02					0.388
2	2 1,2,3,7,8-PeCDD		3.11e4	10.0133	0.903			1.001		30.58					0.356
3	3 1,2,3,4,7,8-HxCDD		2.32e4	10.0133	1.101			1.000		33.90					0.499
4	4 1,2,3,6,7,8-HxCDD		2.50e4	10.0133	0.939			1.000		33.99					0.598
5	5 1,2,3,7,8,9-HxCDD		2.13e4	10.0133	0.961			1.001		34.33					0.724
6	6 1,2,3,4,6,7,8-HpCDD		1.56e4	10.0133	0.979			1.000		37.79					0.876
7	7 OCDD	1.13e2	2.16e4	10.0133	0.959	0.539	YES	1.000	1.000	41.05	41.05	2.1755		1.62	1.48
8	8 2,3,7,8-TCDF		4.99e4	10.0133	0.950			1.001		25.21					0.361
9	9 1,2,3,7,8-PeCDF		5.80e4	10.0133	0.960			1.001		29.39					0.180
10	10 2,3,4,7,8-PeCDF		4.70e4	10.0133	1.015			1.001		30.31					0.212
11	11 1,2,3,4,7,8-HxCDF		3.12e4	10.0133	1.177			1.000		33.00					0.306
12	12 1,2,3,6,7,8-HxCDF		3.47e4	10.0133	1.069			1.000		33.13					0.334
13	13 2,3,4,6,7,8-HxCDF		2.74e4	10.0133	1.114			1.001		33.75					0.421
14	14 1,2,3,7,8,9-HxCDF		2.76e4	10.0133	1.062			1.000		34.68					0.525
15	15 1,2,3,4,6,7,8-HpCDF		2.22e4	10.0133	1.128			1.001		36.55					0.465
16	16 1,2,3,4,7,8,9-HpCDF		1.52e4	10.0133	1.280			1.000		38.31					0.584
17	17 OCDF		2.94e4	10.0133	0.947			1.000		41.25					0.967
18	18 13C-2,3,7,8-TCDD	3.57e4	4.61e4	10.0133	1.095	0.885	NO	1.023	1.023	26.00	25.99	141.30	70.7		0.723
19	19 13C-1,2,3,7,8-PeCDD	3.11e4	4.61e4	10.0133	0.881	0.625	NO	1.203	1.202	30.57	30.56	152.77	76.5		0.898
20	20 13C-1,2,3,4,7,8-Hx...	2.32e4	7.45e4	10.0133	0.642	1.257	NO	1.014	1.014	33.87	33.89	96.853	48.5		0.925
21	21 13C-1,2,3,6,7,8-Hx...	2.50e4	7.45e4	10.0133	0.856	1.241	NO	1.017	1.017	33.99	33.99	78.236	39.2		0.694
22	22 13C-1,2,3,7,8,9-Hx...	2.13e4	7.45e4	10.0133	0.807	1.139	NO	1.026	1.027	34.28	34.30	70.861	35.5		0.736
23	23 13C-1,2,3,4,6,7,8-H...	1.56e4	7.45e4	10.0133	0.654	1.032	NO	1.131	1.131	37.78	37.78	63.760	31.9		0.870
24	24 13C-OCDD	2.16e4	7.45e4	10.0133	0.580	0.917	NO	1.228	1.229	41.03	41.05	100.03	25.0		0.767
25	25 13C-2,3,7,8-TCDF	4.99e4	8.12e4	10.0133	1.035	0.680	NO	0.992	0.991	25.21	25.18	118.52	59.3		0.721
26	26 13C-1,2,3,7,8-PeCDF	5.80e4	8.12e4	10.0133	0.854	1.621	NC	1.156	1.156	29.38	29.37	166.95	83.6		1.13
27	27 13C-2,3,4,7,8-PeCDF	4.70e4	8.12e4	10.0133	0.847	1.523	NO	1.192	1.191	30.29	30.28	136.54	68.4		1.14
28	28 13C-1,2,3,4,7,8-Hx...	3.12e4	7.45e4	10.0133	0.832	0.503	NO	0.987	0.988	32.98	33.00	100.56	50.3		1.40
29	29 13C-1,2,3,6,7,8-Hx...	3.47e4	7.45e4	10.0133	1.034	0.485	NO	0.991	0.992	33.10	33.12	89.919	45.0		1.12
30	30 13C-2,3,4,6,7,8-Hx...	2.74e4	7.45e4	10.0133	0.953	0.515	NO	1.009	1.009	33.71	33.72	77.086	38.6		1.22
31	31 13C-1,2,3,7,8,9-Hx...	2.76e4	7.45e4	10.0133	0.828	0.544	NO	1.038	1.038	34.67	34.68	89.217	44.7		1.40

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-12.qld

Last Altered: Tuesday, January 28, 2020 14:36:46 Pacific Standard Time

Printed: Tuesday, January 28, 2020 14:37:02 Pacific Standard Time

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 Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	2.22e4	7.45e4	10.0133	0.757	0.451	NO	1.093	1.093	36.50	36.51	78.683	39.4		1.08
33	33 13C-1,2,3,4,7,8,9-H...	1.52e4	7.45e4	10.0133	0.581	0.382	NO	1.147	1.147	38.31	38.31	70.301	35.2		1.41
34	34 13C-OCDF	2.94e4	7.45e4	10.0133	0.689	0.979	NO	1.235	1.235	41.25	41.25	114.46	28.7		0.562
35	35 37Cl-2,3,7,8-TCDD	1.41e4	4.61e4	10.0133	1.198			1.024	1.023	26.02	26.01	51.150	64.0		0.187
36	36 13C-1,2,3,4-TCDD	4.61e4	4.61e4	10.0133	1.000	0.882	NO	1.000	1.000	25.39	25.42	199.73	100.0		0.792
37	37 13C-1,2,3,4-TCDF	8.12e4	8.12e4	10.0133	1.000	0.735	NO	1.000	1.000	23.93	23.95	199.73	100.0		0.746
38	38 13C-1,2,3,4,6,9-Hx...	7.45e4	7.45e4	10.0133	1.000	0.491	NO	1.000	1.000	33.37	33.40	199.73	100.0		1.16
39	39 Total Tetra-Dioxins		3.57e4	10.0133	0.901			0.000		25.50					0.206
40	40 Total Penta-Dioxins		3.11e4	10.0133	0.872			0.000		30.00					0.158
41	41 Total Hexa-Dioxins		0.00e0	10.0133	0.976			0.000		33.80		0.00000		0.218	0.352
42	42 Total Hepta-Dioxins		1.56e4	10.0133	0.989			0.000		37.75					0.515
43	43 Total Tetra-Furans		4.99e4	10.0133	0.943			0.000		24.00					0.176
44	44 1st Func. Penta-Fur...		0.00e0	10.0133	0.940			0.000		27.63					0.0818
45	45 Total Penta-Furans		0.00e0	10.0133	0.940			0.000		30.00					0.0880
46	46 Total Hexa-Furans		0.00e0	10.0133	1.078			0.000		33.00					0.200
47	47 Total Hepta-Furans		0.00e0	10.0133	1.135			0.000		37.75					0.245

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-12.qld

Last Altered: Tuesday, January 28, 2020 14:36:46 Pacific Standard Time

Printed: Tuesday, January 28, 2020 14:37:02 Pacific Standard Time

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Calibration: 28 Jan 2020 12:54:04

Name: VG7 200116D2-12, Date: 17-JAN-2020, Time: 08:20:46, ID: 1904159-14 PDI-023SC-A-05-06-191009,

Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Penta-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Hexa-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	41 Total Hexa-Dioxins	YES	32.37	21.719	12701.181	0.000	MM	0.0000	0.22

**Hepta-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Tetra-Furans**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Penta-Furans**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-12.qld

Last Altered: Tuesday, January 28, 2020 14:36:46 Pacific Standard Time

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Name: VG7 200116D2-12, Date: 17-JAN-2020, Time: 08:20:46, ID: 1904159-14 PDI-023SC-A-05-06-191009,  
Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Hepta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

Vista Analytical Laboratory

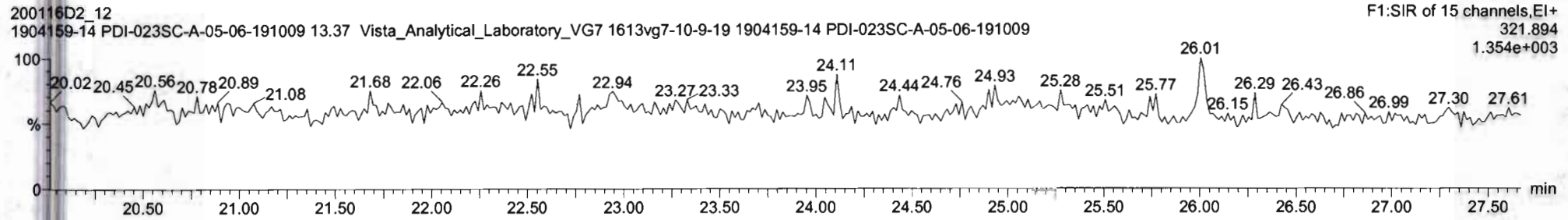
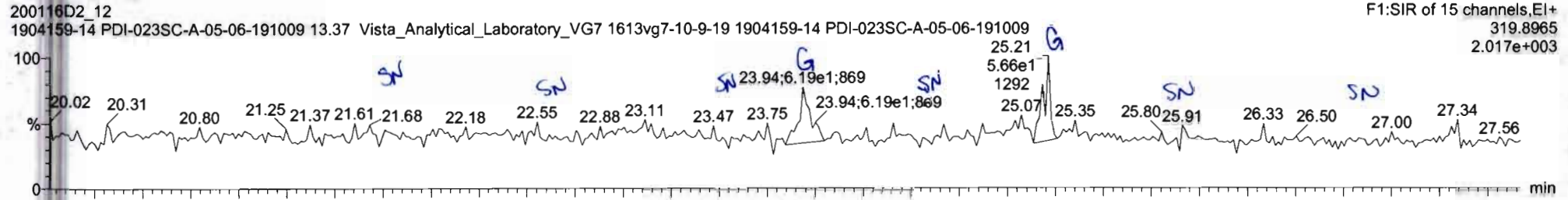
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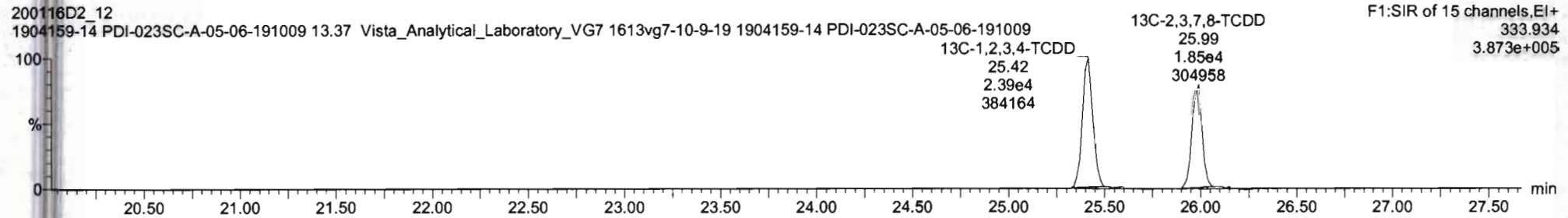
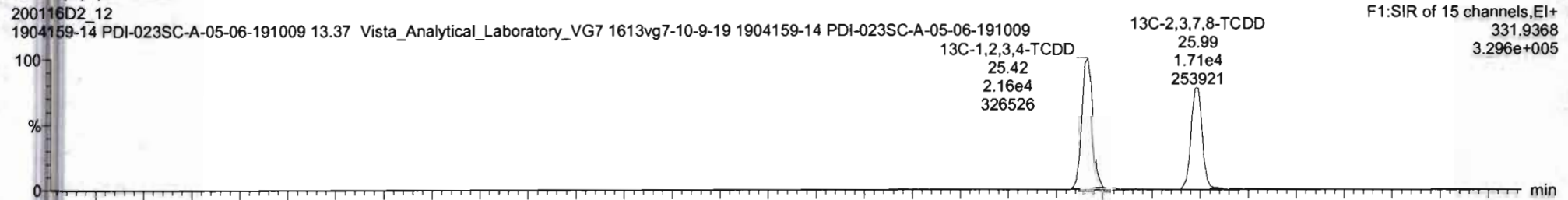
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Total Tetra-Dioxins



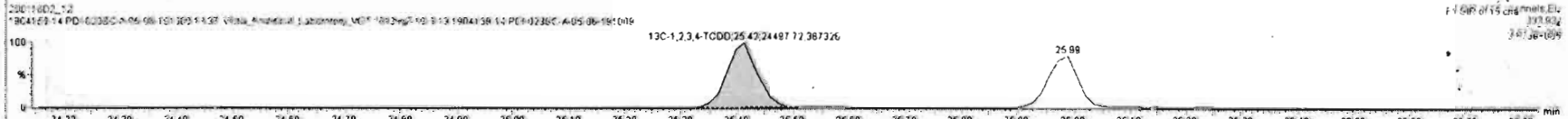
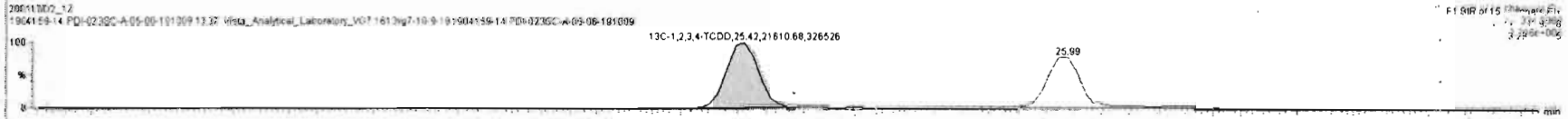
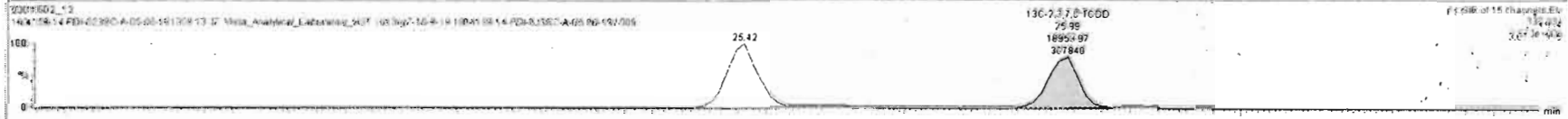
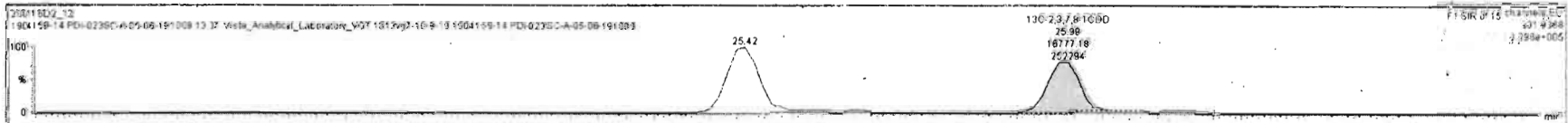
13C-2,3,7,8-TCDD



20011602\_12-1301159-14 PDI-0236C-A-05-09-191009-13 Vista\_Analytical\_Laboratory\_V07 1612kg7-10-9-19 1904159-14 PDI-0236C-A-05-09-191009

#	Name	Resp	S Resp	ISF	RA	n/y	PRF	wAcid	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
18	13C-2,3,7,8-TCDD	3.57e4	4.81e4	3E	0.89	NO	1.095	10.013	26.00	25.99	1.023	1.023	NO	141.3	70.7	0.723	
19	13C-1,2,3,7,8-PeCDD	3.11e4	4.81e4	2E	0.63	NO	0.801	10.013	30.57	30.56	1.202	1.203	NO	152.8	76.5	0.898	
20	13C-1,2,3,4,7,8-HxCDD	2.32e4	7.45e4	3E	1.26	NO	0.642	10.013	33.87	33.89	1.014	1.014	NO	86.85	48.5	0.925	

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc
18										



Vista Analytical Laboratory

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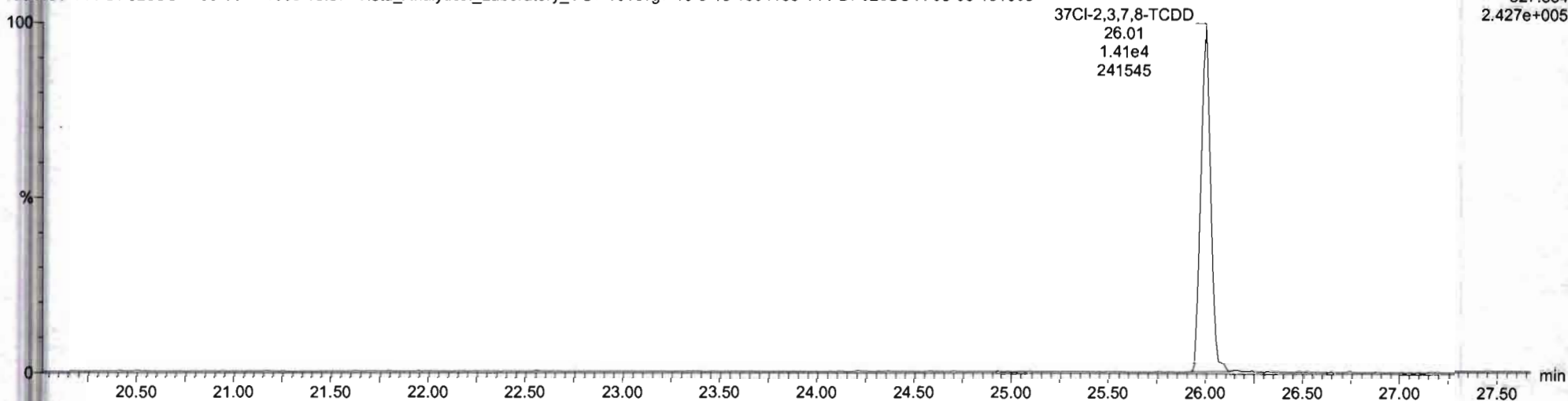
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Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

37Cl-2,3,7,8-TCDD

200116D2\_12  
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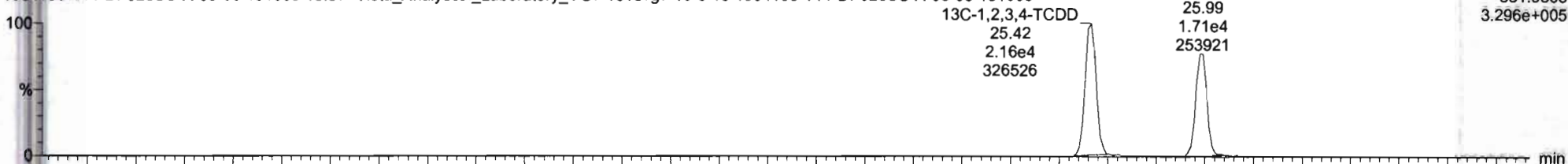
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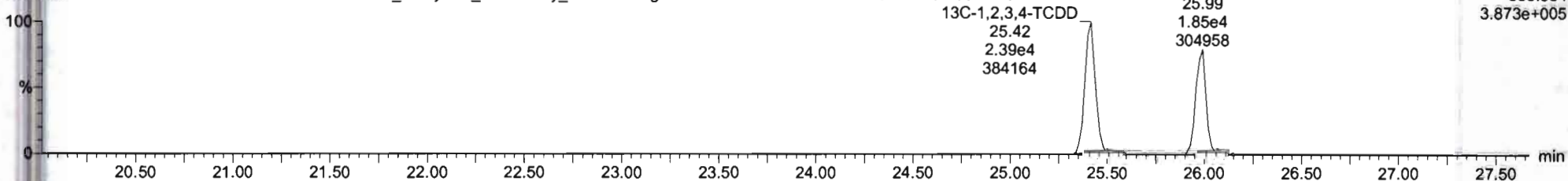
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F1:SIR of 15 channels,EI+  
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3.296e+005



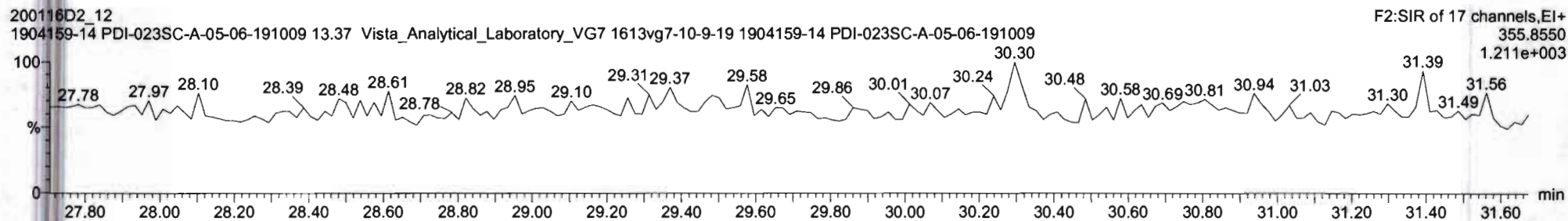
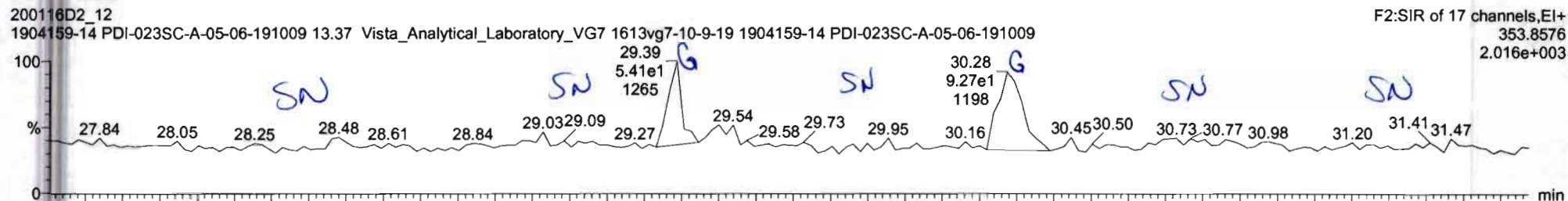
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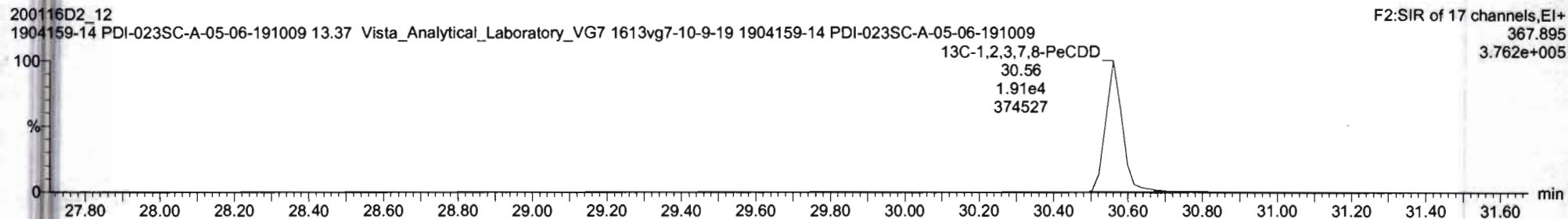
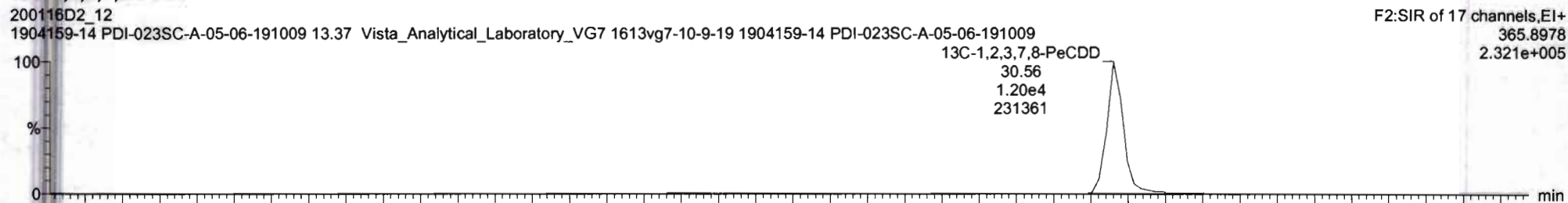


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Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Penta-Dioxins



13C-1,2,3,7,8-PeCDD



Vista Analytical Laboratory

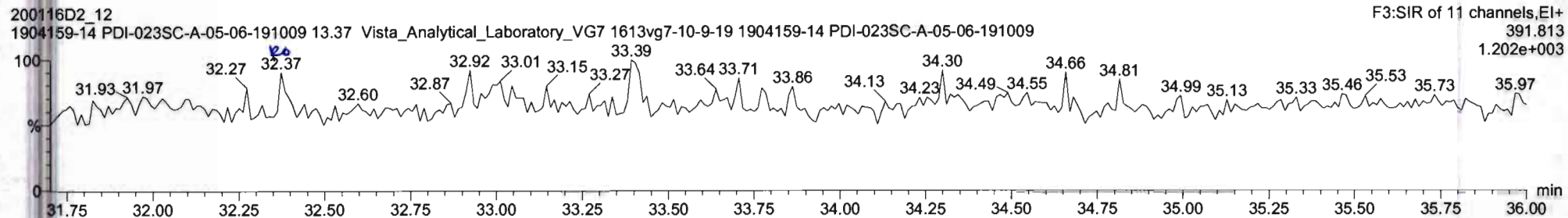
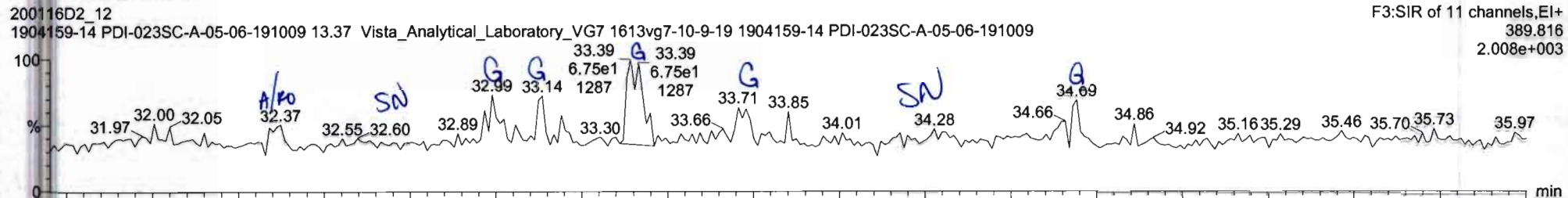
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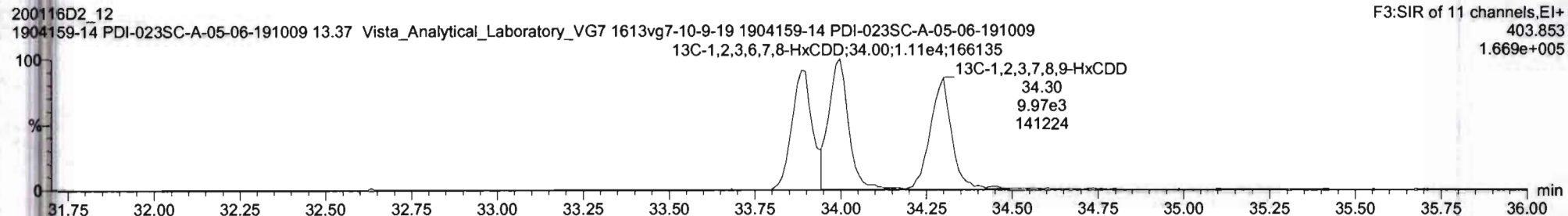
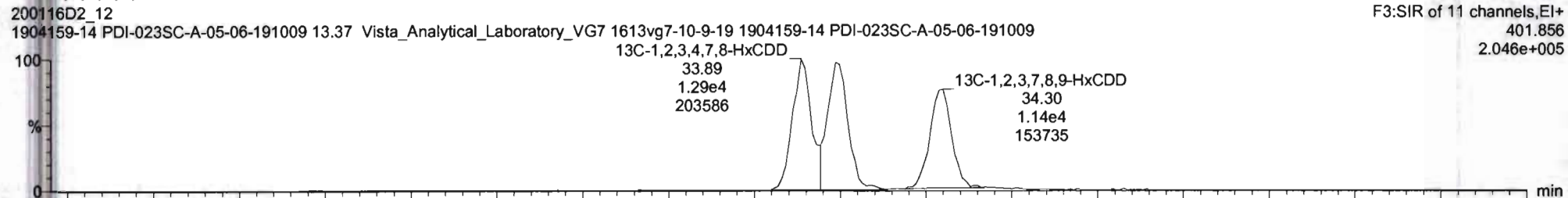
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Total Hexa-Dioxins



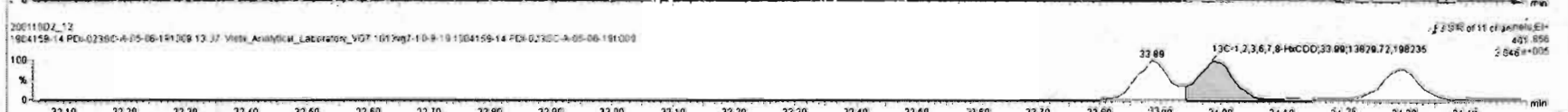
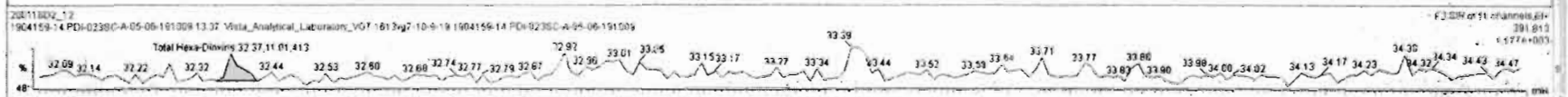
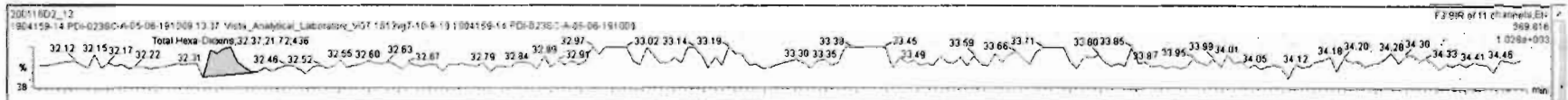
13C-1,2,3,4,7,8-HxCDD



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#	Name	Resp	S_Resp	Cal	RA	rvy	RRF	vdvdx	Pred RT	RT	RRT	PredRRT	Check RRT	Conc	N/NR0	DL	EMPC
41	Total Hexa-Chlorins	0.0040					0.976	10.013	33.80			0.000	NO	0.0000		0.352	0.2179
42	Total Hepta-Chlorins	1.56e4					0.989	10.013	37.75			0.000	NO			0.615	
43	Total Tetra-Furans	4.99e4					0.943	10.013	24.00			0.000	NO			0.176	

#	Name	Pred RT	RT	nt Resp	nt2 Resp	Pred RA	RA	rvy	EMPC	Conc
41	Total Hexa-Chlorins	33.80	32.37	2.172e1	1.101e1	1.240	1.97	YES	0.21791	0.00000



Vista Analytical Laboratory

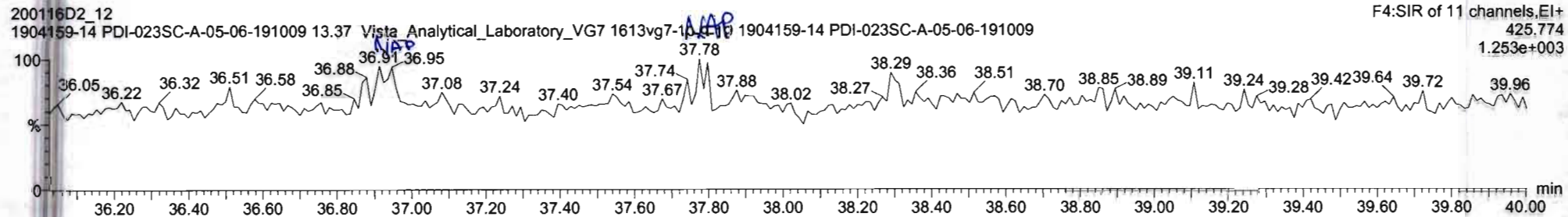
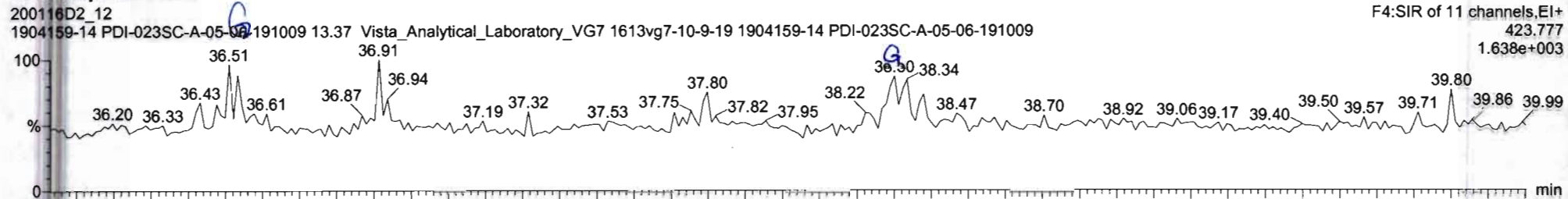
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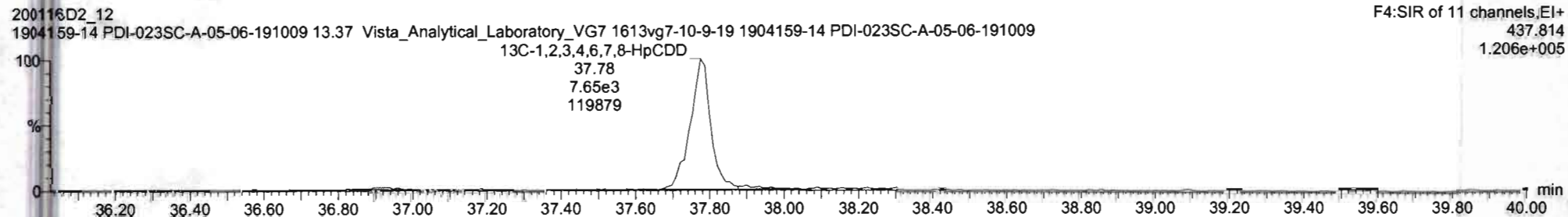
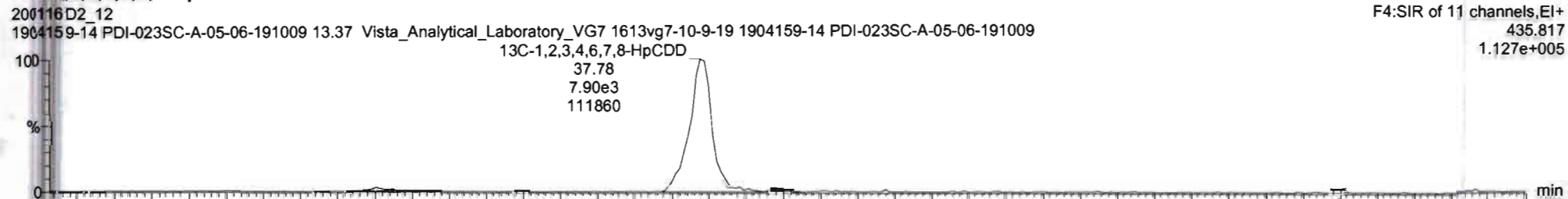
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Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Hepta-Dioxins



13C-1,2,3,4,6,7,8-HpCDD





Vista Analytical Laboratory

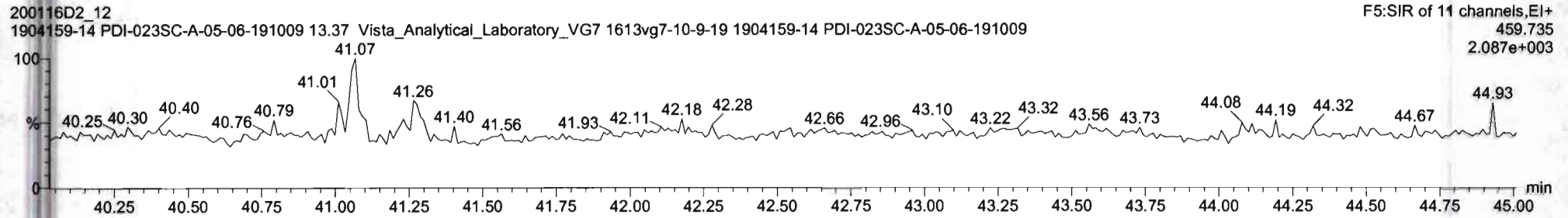
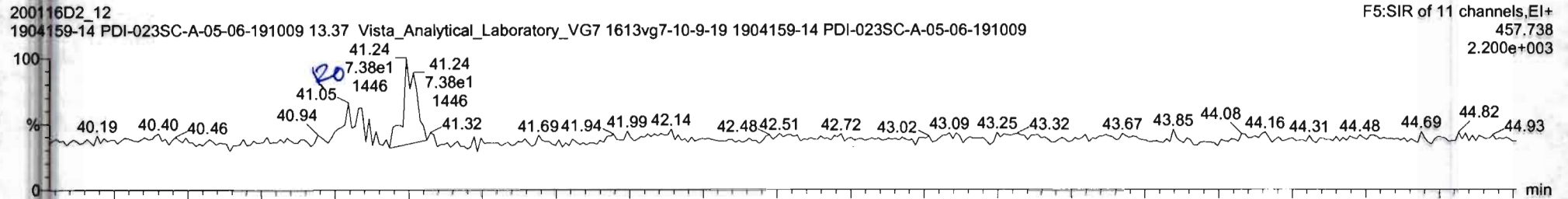
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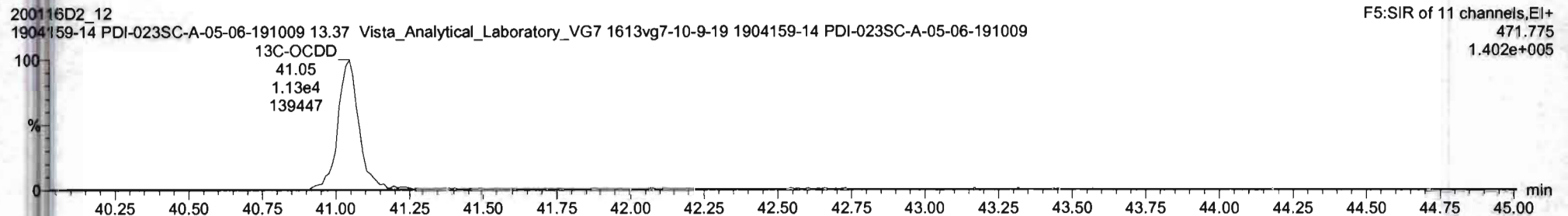
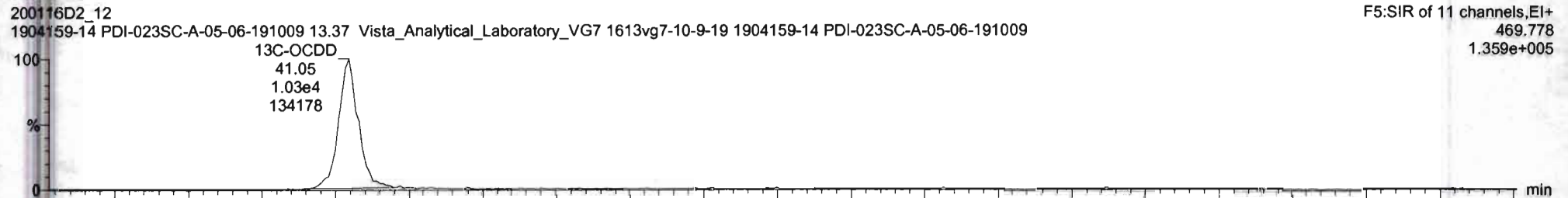
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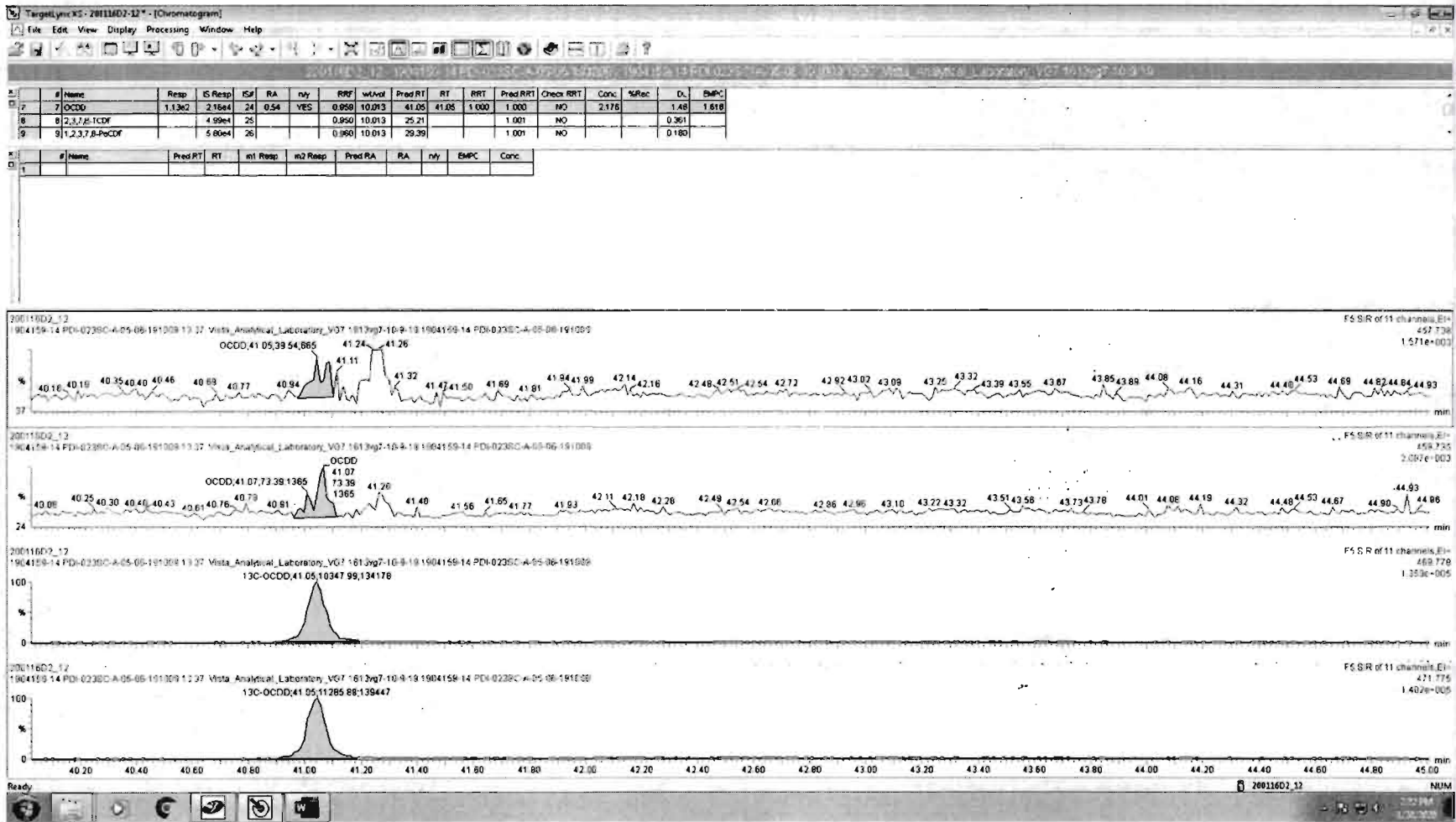
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OCDD



13C-OCDD





Vista Analytical Laboratory

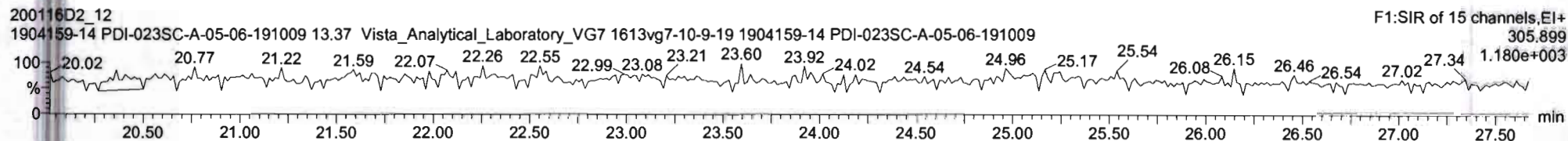
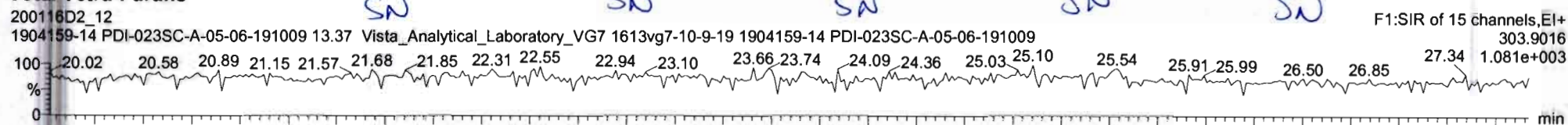
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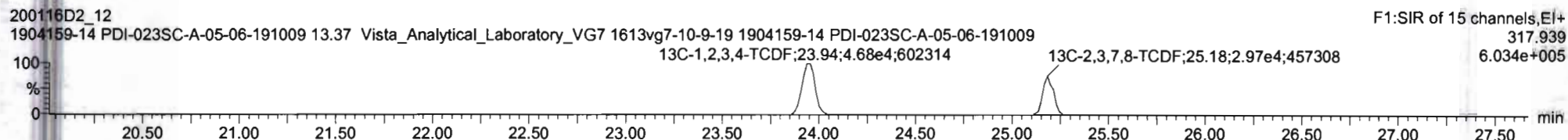
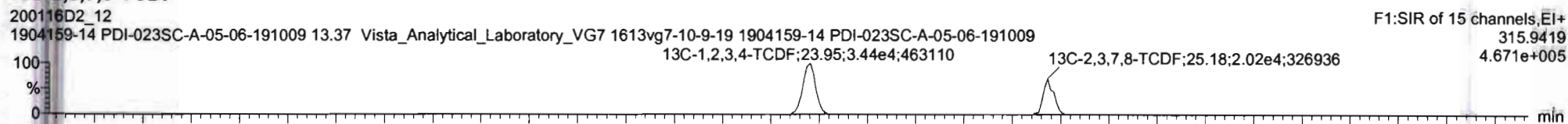
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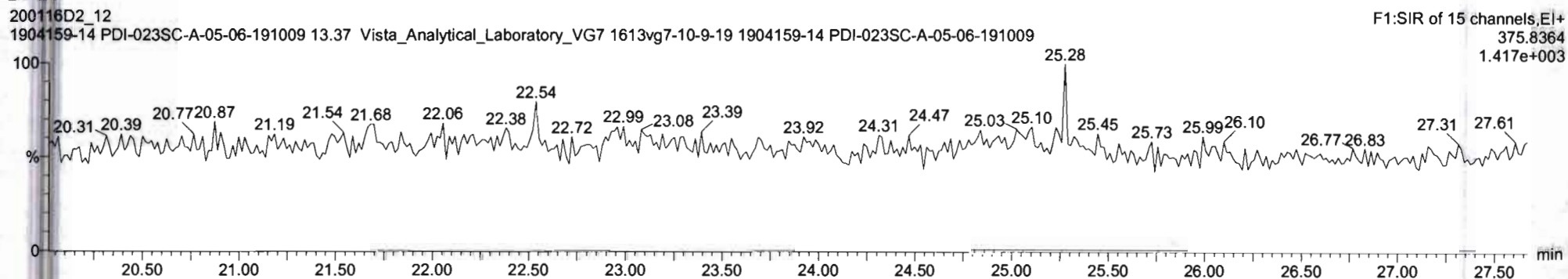
Total Tetra-Furans



13C-2,3,7,8-TCDF



DPE1



Vista Analytical Laboratory

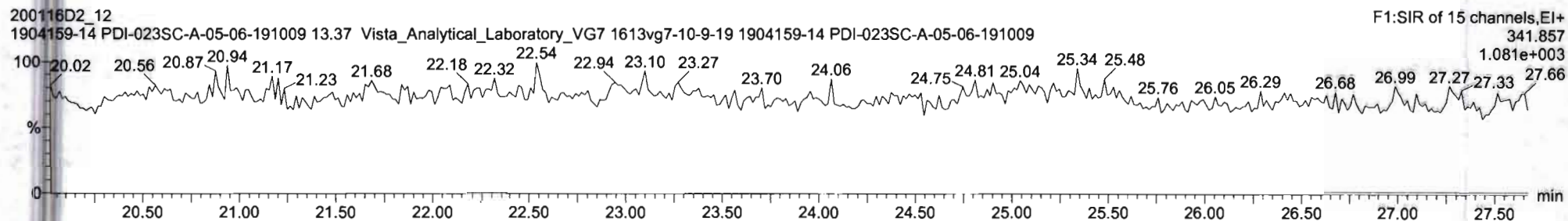
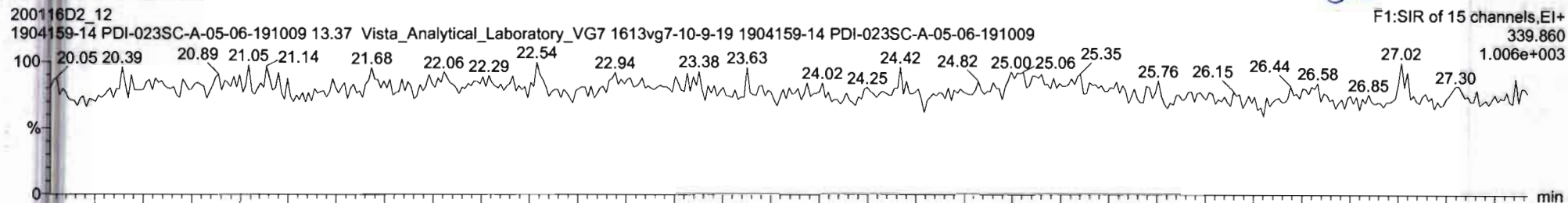
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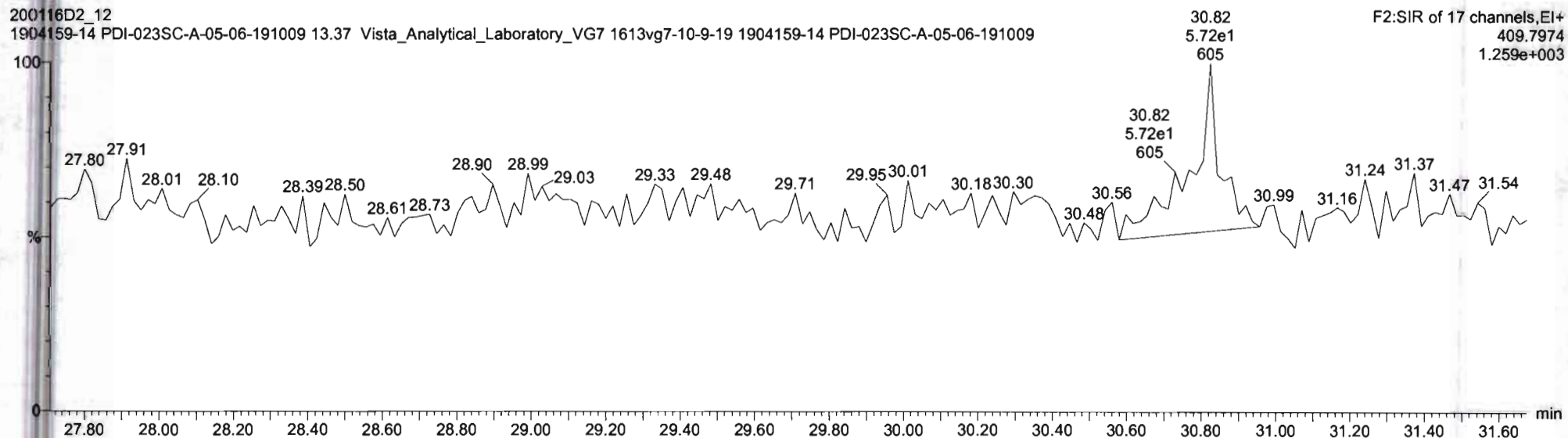
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Description: 1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans



DP/E6



Vista Analytical Laboratory

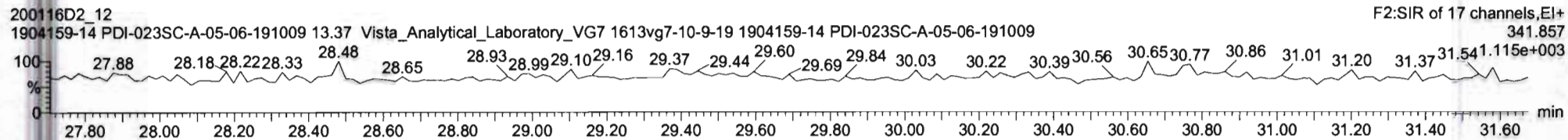
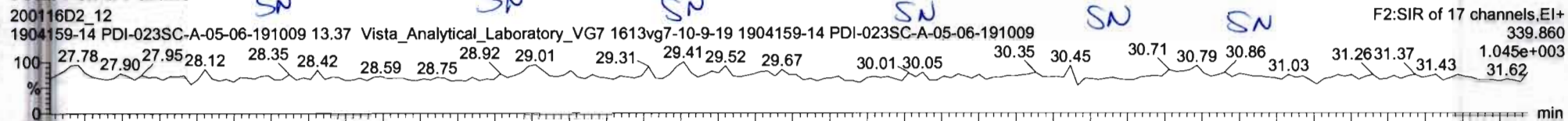
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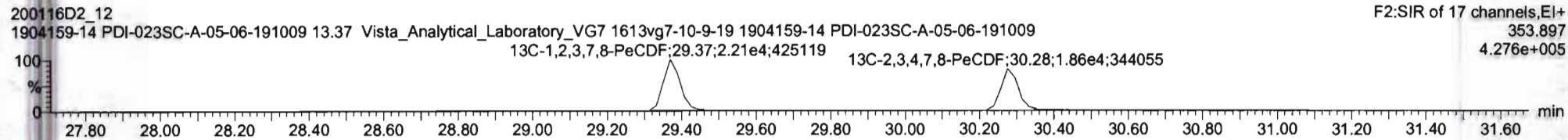
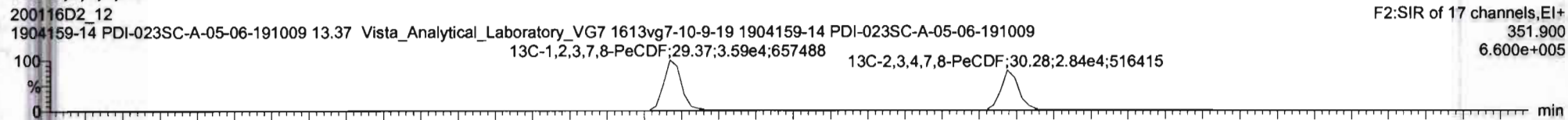
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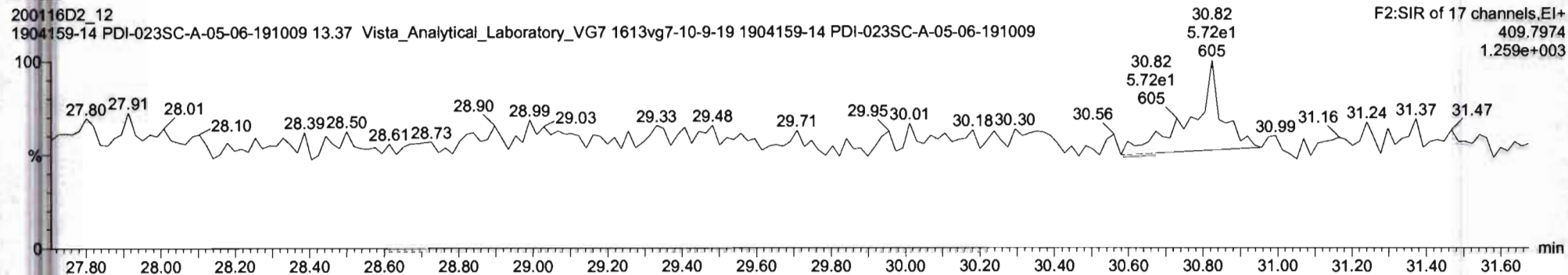
Total Penta-Furans



13C-1,2,3,7,8-PeCDF



DPE2



Vista Analytical Laboratory

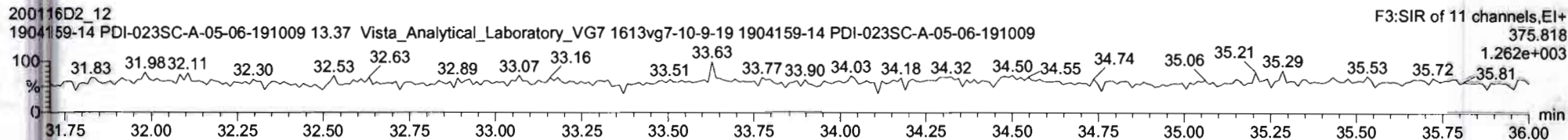
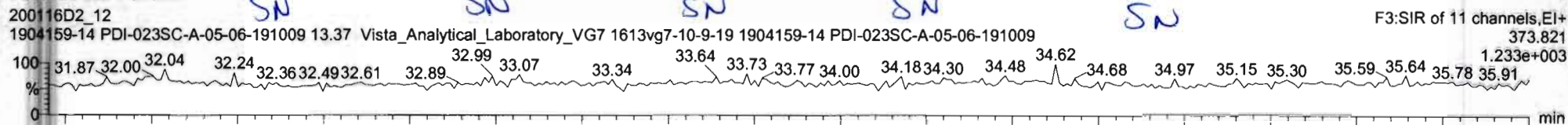
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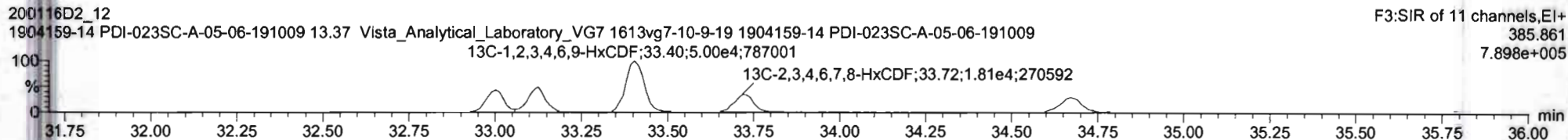
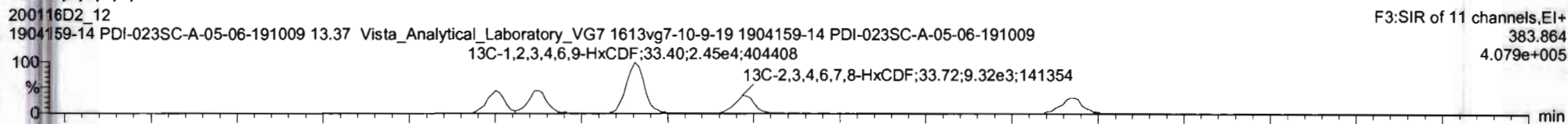
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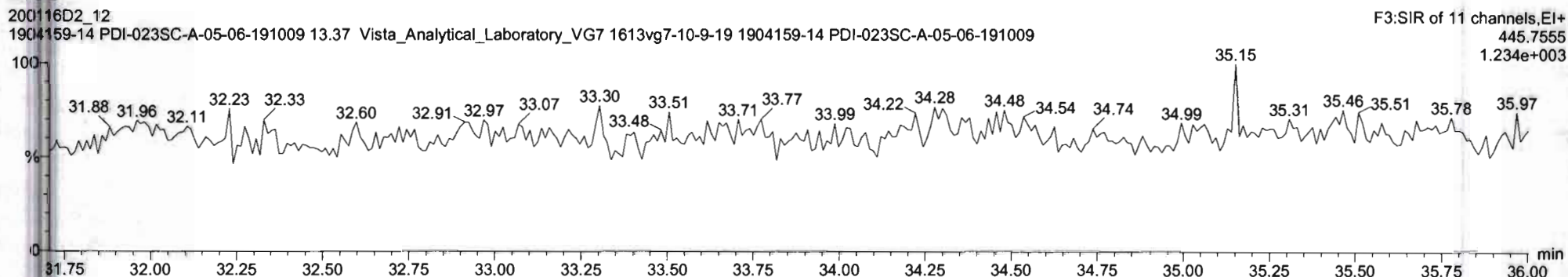
Total Hexa-Furans



13C-1,2,3,4,7,8-HxCDF



DIPE3



Vista Analytical Laboratory

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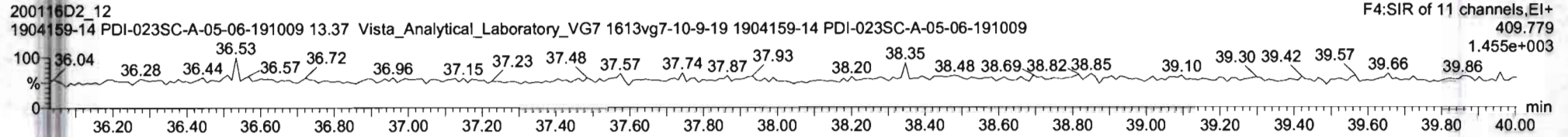
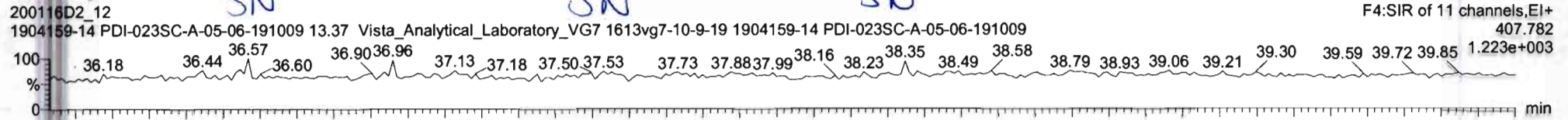
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Total Hepta-Furans

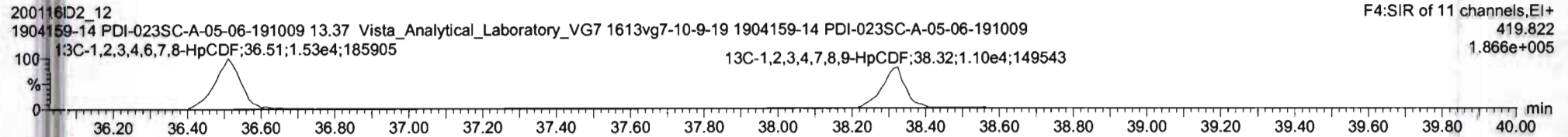
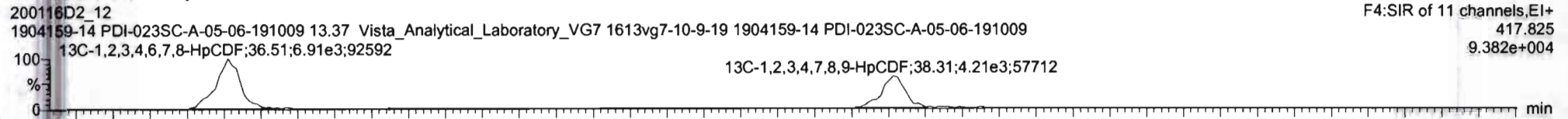
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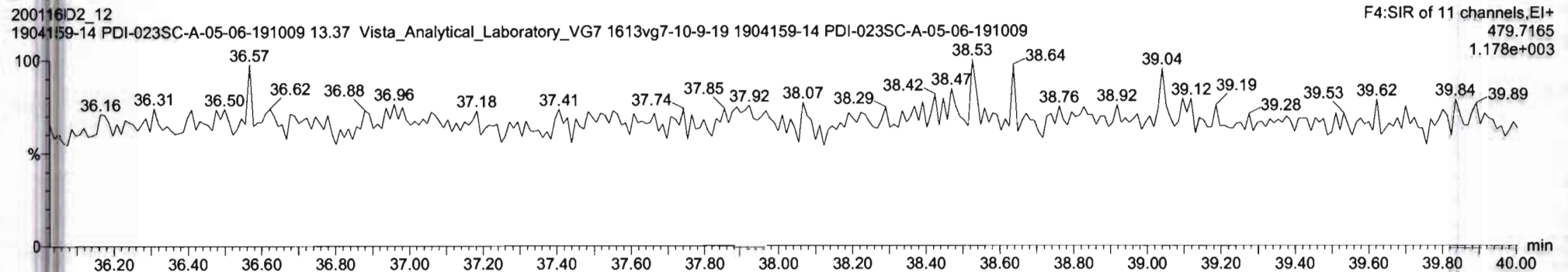
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13C-1,2,3,4,6,7,8-HpCDF



DPE4



Vista Analytical Laboratory

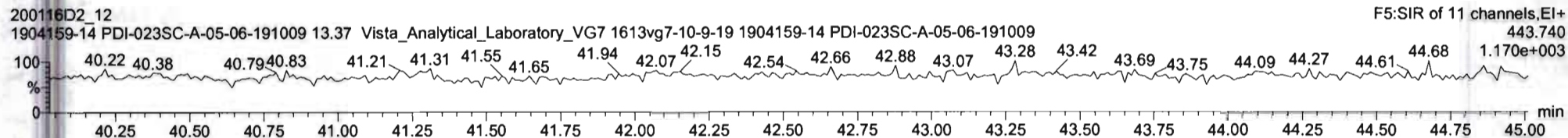
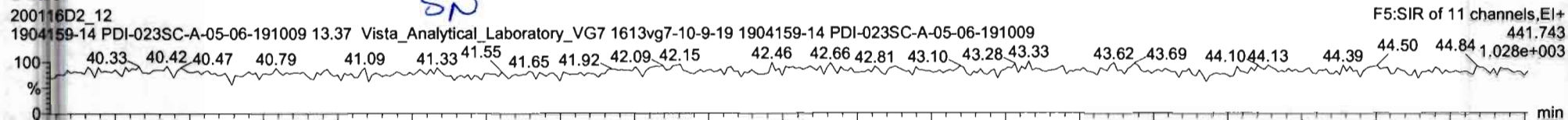
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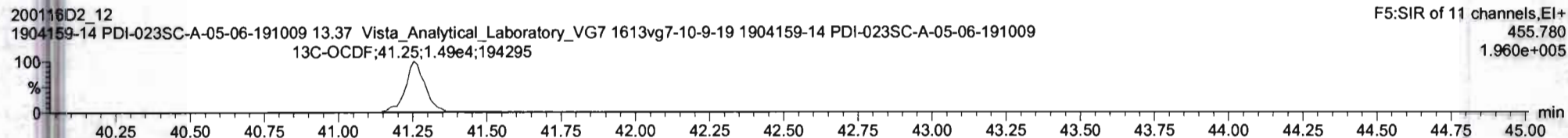
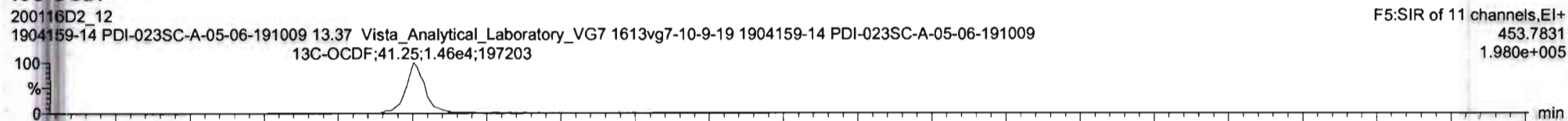
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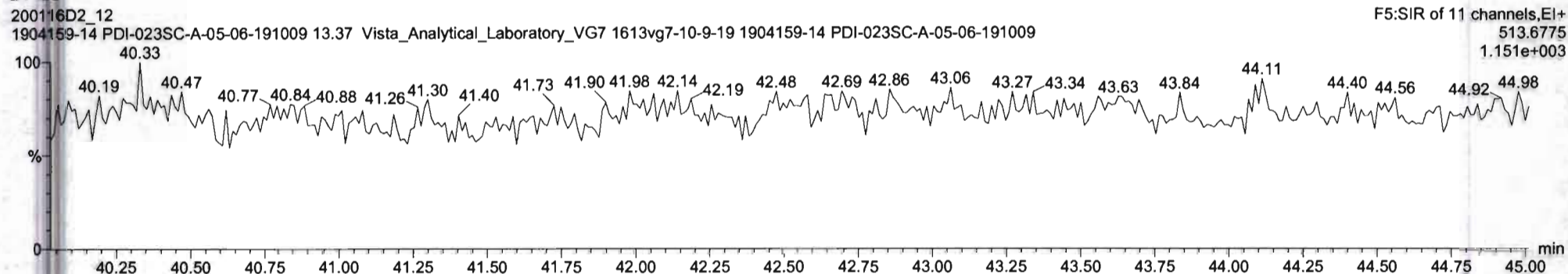
OCDF



13C-OCDF



DPE5





Vista Analytical Laboratory

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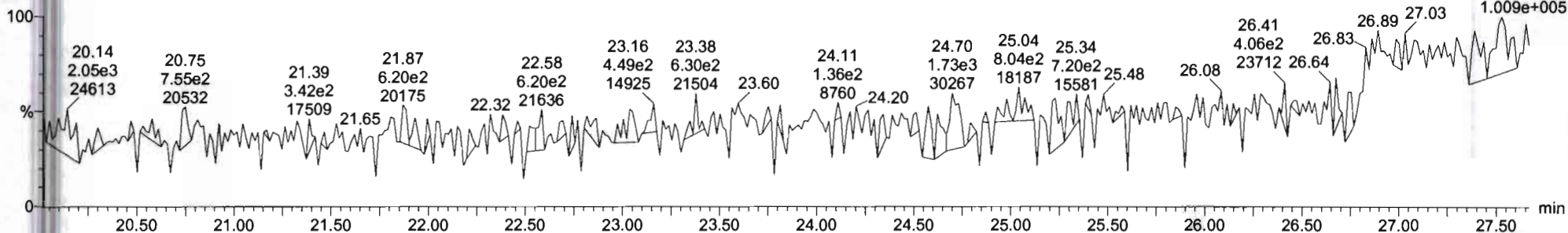
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PFK1

200116D2\_12  
1904159-14 PDI-023SC-A-05-06-191009 13.37 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-14 PDI-023SC-A-05-06-191009

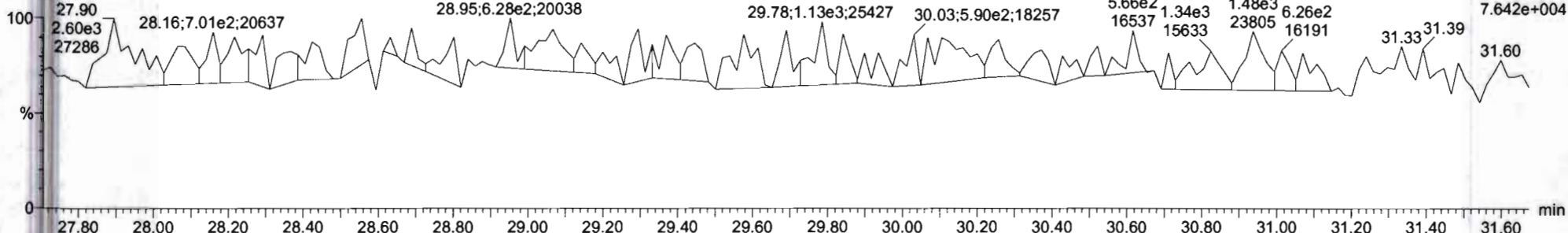
F1:SIR of 15 channels,EI+  
316.9824  
1.009e+005



PFK2

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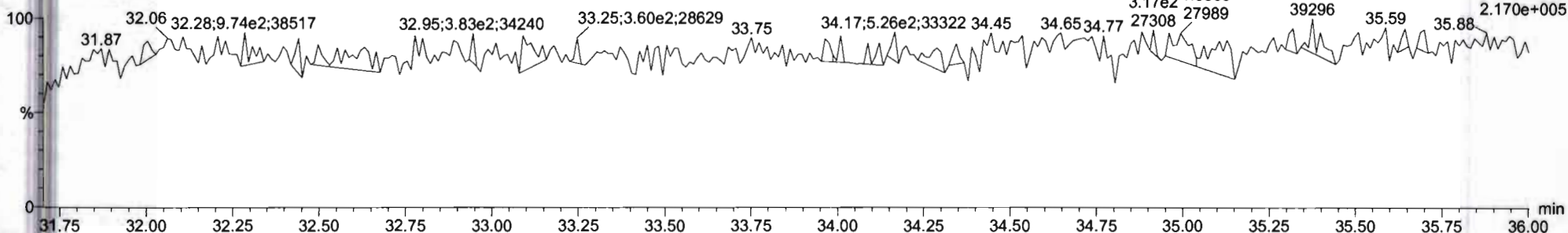
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366.9792  
7.642e+004



PFK3

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F3:SIR of 11 channels,EI+  
392.9760  
2.170e+005



Vista Analytical Laboratory

Dataset: Untitled

Last Altered: Monday, January 27, 2020 11:32:43 Pacific Standard Time

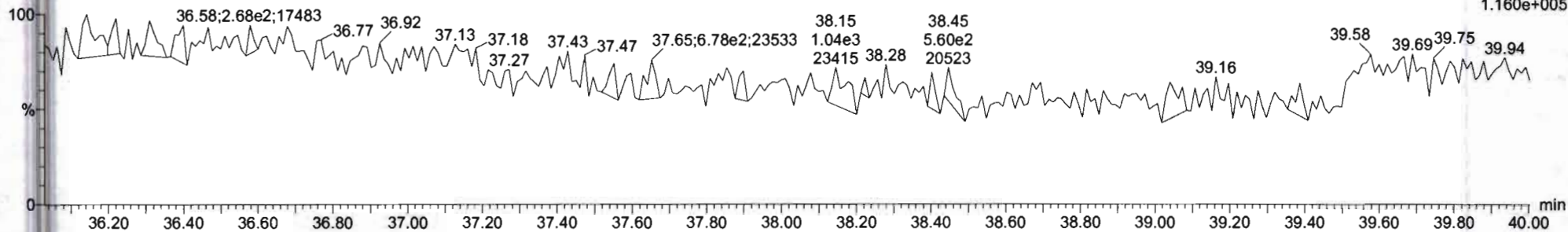
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PFK4

200116D2\_12  
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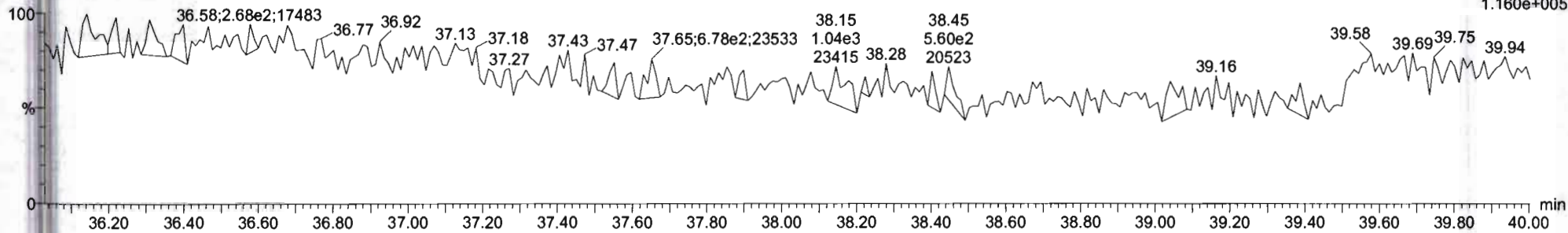
F4:SIR of 11 channels, EI+  
454.973  
1.160e+005



PFK5

200116D2\_12  
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F4:SIR of 11 channels, EI+  
454.973  
1.160e+005



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-13B.qld  
 Last Altered: Monday, February 03, 2020 12:38:30 Pacific Standard Time  
 Printed: Monday, February 03, 2020 12:38:43 Pacific Standard Time

*GRB 02/03/2020*

*CT 02/03/2020*

Method: U:\VG7.PRO\MethDB\1613VG7-1-10-20.mdb 14 Jan 2020 16:27:50

Calibration: 28 Jan 2020 14:35:14

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 Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD	3.21e2	4.31e4	10.0921	0.905	0.871	NO	1.001	1.001	26.01	26.01	1.6298		1.63	0.442
2	2 1,2,3,7,8-PeCDD	1.88e2	4.11e4	10.0921	0.903	0.543	NO	1.001	1.001	30.58	30.58	1.0007		1.00	0.421
3	3 1,2,3,4,7,8-HxCDD	1.72e2	3.16e4	10.0921	1.101	1.106	NO	1.000	1.001	33.90	33.91	0.97902		0.979	0.921
4	4 1,2,3,6,7,8-HxCDD	7.54e2	3.65e4	10.0921	0.939	1.130	NO	1.000	1.000	33.99	34.00	4.3668		4.37	0.961
5	5 1,2,3,7,8,9-HxCDD	2.54e2	3.38e4	10.0921	0.961	1.405	NO	1.001	1.000	34.32	34.29	1.5498		1.55	1.11
6	6 1,2,3,4,6,7,8-HpCDD	1.39e4	2.77e4	10.0921	0.979	1.020	NO	1.000	1.000	37.78	37.78	101.24		101	2.16
7	7 OCDD	1.11e5	4.09e4	10.0921	0.959	0.955	NO	1.090	1.001	41.02	41.05	1121.2		1120	2.63
3	8 2,3,7,8-TCDF	6.97e3	6.25e4	10.0921	0.950	0.822	NO	1.001	1.001	25.22	25.21	23.278	(17.6)	23.3	0.893
9	9 1,2,3,7,8-PeCDF	1.07e4	7.72e4	10.0921	0.960	1.617	NO	1.001	1.001	29.39	29.39	28.676		28.7	0.360
10	10 2,3,4,7,8-PeCDF	3.33e3	6.67e4	10.0921	1.015	1.637	NO	1.001	1.001	30.31	30.30	9.7653		9.77	0.384
11	11 1,2,3,4,7,8-HxCDF	1.50e4	5.06e4	10.0921	1.177	1.191	NO	1.000	1.000	33.00	33.01	49.774		49.8	0.552
12	12 1,2,3,6,7,8-HxCDF	3.85e3	5.34e4	10.0921	1.069	1.227	NO	1.000	1.001	33.12	33.14	13.381		13.4	0.577
13	13 2,3,4,6,7,8-HxCDF	9.37e2	4.52e4	10.0921	1.114	1.279	NO	1.001	1.000	33.75	33.73	3.6857		3.69	0.694
14	14 1,2,3,7,8,9-HxCDF	1.12e3	4.13e4	10.0921	1.062	1.122	NO	1.000	1.001	34.67	34.71	5.0657		5.07	0.954
15	15 1,2,3,4,6,7,8-HpCDF	6.97e3	3.57e4	10.0921	1.128	1.047	NO	1.001	1.000	36.55	36.52	34.306		34.3	0.925
16	16 1,2,3,4,7,8,9-HpCDF	1.55e3	2.58e4	10.0921	1.280	1.127	NO	1.000	1.000	38.31	38.32	9.3228		9.32	0.964
17	17 OCDF	1.10e4	4.97e4	10.0921	0.947	0.901	NO	1.000	1.000	41.25	41.25	92.414		92.4	0.860
18	18 13C-2,3,7,8-TCDD	4.31e4	5.28e4	10.0921	1.095	0.742	NO	1.023	1.022	26.00	25.98	147.62	74.5		0.645
19	19 13C-1,2,3,7,8-PeCDD	4.11e4	5.28e4	10.0921	0.881	0.615	NO	1.203	1.202	30.57	30.56	175.14	88.4		0.729
20	20 13C-1,2,3,4,7,8-Hx...	3.16e4	7.85e4	10.0921	0.642	1.288	NO	1.014	1.014	33.87	33.89	124.26	62.7		0.823
21	21 13C-1,2,3,6,7,8-Hx...	3.65e4	7.85e4	10.0921	0.856	1.293	NO	1.017	1.017	33.99	33.99	107.58	54.3		0.618
22	22 13C-1,2,3,7,8,9-Hx...	3.38e4	7.85e4	10.0921	0.807	1.235	NO	1.026	1.026	34.28	34.29	105.78	53.4		0.656
23	23 13C-1,2,3,4,6,7,8-H...	2.77e4	7.85e4	10.0921	0.654	1.021	NO	1.131	1.131	37.78	37.76	106.93	54.0		1.03
24	24 13C-OCDD	4.09e4	7.85e4	10.0921	0.580	0.982	NO	1.228	1.228	41.03	41.02	178.16	44.9		0.837
25	25 13C-2,3,7,8-TCDF	6.25e4	9.01e4	10.0921	1.035	0.814	NO	0.992	0.991	25.21	25.20	132.72	67.0		0.829
26	26 13C-1,2,3,7,8-PeCDF	7.72e4	9.01e4	10.0921	0.854	1.537	NO	1.156	1.156	29.38	29.37	198.84	100.3		1.51
27	27 13C-2,3,4,7,8-PeCDF	6.67e4	9.01e4	10.0921	0.847	1.540	NO	1.192	1.191	30.29	30.28	173.07	87.3		1.52
28	28 13C-1,2,3,4,7,8-Hx...	5.06e4	7.85e4	10.0921	0.832	0.517	NO	0.987	0.988	32.98	33.00	153.72	77.6		1.18
29	29 13C-1,2,3,6,7,8-Hx...	5.34e4	7.85e4	10.0921	1.034	0.506	NO	0.991	0.991	33.10	33.11	130.35	65.8		0.952
30	30 13C-2,3,4,6,7,8-Hx...	4.52e4	7.85e4	10.0921	0.953	0.514	NO	1.009	1.009	33.71	33.72	119.77	60.4		1.03
31	31 13C-1,2,3,7,8,9-Hx...	4.13e4	7.85e4	10.0921	0.828	0.489	NO	1.038	1.038	34.67	34.67	126.04	63.6		1.19

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-13B.qld

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Printed: Monday, February 03, 2020 12:38:43 Pacific Standard Time

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 Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	3.57e4	7.85e4	10.0921	0.757	0.447	NO	1.093	1.093	36.50	36.51	118.93	60.0		1.25
33	33 13C-1,2,3,4,7,8,9-H...	2.58e4	7.85e4	10.0921	0.581	0.401	NO	1.147	1.147	38.31	38.31	111.9e	56.5		1.63
34	34 13C-OCDF	4.97e4	7.85e4	10.0921	0.689	0.967	NO	1.235	1.235	41.25	41.25	182.22	46.0		0.865
35	35 37Cl-2,3,7,8-TCDD	1.82e4	5.28e4	10.0921	1.198			1.024	1.023	26.02	26.01	56.969	71.9		0.221
36	36 13C-1,2,3,4-TCDD	5.28e4	5.28e4	10.0921	1.000	0.706	NO	1.000	1.000	25.39	25.42	198.18	100.0		0.707
37	37 13C-1,2,3,4-TCDF	9.01e4	9.01e4	10.0921	1.000	0.857	NO	1.000	1.000	23.93	23.95	198.18	100.0		0.858
38	38 13C-1,2,3,4,6,9-Hx...	7.85e4	7.85e4	10.0921	1.000	0.519	NO	1.000	1.000	33.37	33.40	198.18	100.0		0.984
39	39 Total Tetra-Dioxins		4.31e4	10.0921	0.901			0.000		25.50		4.8662		7.35	0.444
40	40 Total Penta-Dioxins		4.11e4	10.0921	0.872			0.000		30.00		2.5940		5.53	0.436
41	41 Total Hexa-Dioxins		0.00e0	10.0921	0.976			0.000		33.80		32.620		32.6	1.02
42	42 Total Hepta-Dioxins		2.77e4	10.0921	0.989			0.000		37.75		214.62		215	2.14
43	43 Total Tetra-Furans		6.25e4	10.0921	0.943			0.000		24.00		81.263		99.3	0.900
44	44 1st Func. Penta-Fur...		0.00e0	10.0921	0.940			0.000		27.63		4.3157		4.32	0.148
45	45 Total Penta-Furans		0.00e0	10.0921	0.940			0.000		30.00		59.733		86.5	0.389
46	46 Total Hexa-Furans		0.00e0	10.0921	1.078			0.000		33.00		101.19		102	0.695
47	47 Total Hepta-Furans		0.00e0	10.0921	1.135			0.000		37.75		86.915		86.9	0.990

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-13B.qld  
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 Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	1 2,3,7,8-TCDD	NO	26.01	149.359	18357.613	14.891	bb	1.6298	1.63
2	39 Total Tetra-Dioxins	NO	25.77	78.321	18357.613	7.798	bb	0.8577	0.86
3	39 Total Tetra-Dioxins	YES	24.48	58.402	18357.613	0.000	bb	0.0000	0.50
4	39 Total Tetra-Dioxins	NO	22.54	189.158	18357.613	21.627	bb	2.3787	2.38
5	39 Total Tetra-Dioxins	YES	22.91	110.225	18357.613	0.000	MM	0.0000	1.10
6	39 Total Tetra-Dioxins	YES	24.27	91.322	18357.613	0.000	MM	0.0000	0.89

**Penta-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	2 1,2,3,7,8-PeCDD	NO	30.58	65.986	15662.122	9.116	MM	1.0007	1.00
2	40 Total Penta-Dioxins	YES	29.56	56.344	15662.122	0.000	MM	0.0000	0.47
3	40 Total Penta-Dioxins	NO	29.43	77.971	15662.122	10.417	MM	1.1834	1.18
4	40 Total Penta-Dioxins	YES	28.52	153.298	15662.122	0.000	MM	0.0000	1.77
5	40 Total Penta-Dioxins	YES	28.93	24.701	15662.122	0.000	MM	0.0000	0.29
6	40 Total Penta-Dioxins	NO	30.18	26.018	15662.122	3.608	MM	0.4099	0.41
7	40 Total Penta-Dioxins	YES	29.69	35.613	15662.122	0.000	MM	0.0000	0.40

**Hexa-Dioxins**

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	4 1,2,3,6,7,8-HxCDD	NO	34.00	400.037	20554.934	41.364	MM	4.3668	4.37
2	41 Total Hexa-Dioxins	NO	33.21	1026.784	19008.749	111.616	MM	11.3328	11.33
3	41 Total Hexa-Dioxins	NO	32.93	157.409	19008.749	17.029	MM	1.7291	1.73
4	41 Total Hexa-Dioxins	NO	32.37	1185.375	19008.749	124.706	MM	12.6620	12.66
5	5 1,2,3,7,8,9-HxCDD	NO	34.29	148.440	18677.463	15.036	MM	1.5498	1.55
6	3 1,2,3,4,7,8-HxCDD	NO	33.91	90.315	17793.850	10.881	MM	0.9790	0.98

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-13B.qld  
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 Printed: Monday, February 03, 2020 12:38:43 Pacific Standard Time

Name: VG7 200116D2-13, Date: 17-JAN-2020, Time: 09:08:41, ID: 1904159-15 PDI-024SC-A-02-03-190927,  
 Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Hepta-Dioxins

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.78	6996.933	13992.468	1000.688	bd	101.2415	101.24
2	42 Total Hepta-Dioxins	NO	36.91	7957.432	13992.468	1131.292	bb	113.3783	113.38

Tetra-Furans

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	NO	22.51	982.474	28029.393	73.645	bb	7.7401	7.74
2	43 Total Tetra-Furans	NO	22.18	82.162	28029.393	5.909	MM	0.6210	0.62
3	43 Total Tetra-Furans	NO	22.13	100.511	28029.393	0.000	MM	0.0000	0.73
4	43 Total Tetra-Furans	NO	22.06	105.121	28029.393	7.270	bd	0.7640	0.76
5	43 Total Tetra-Furans	YES	21.59	1419.474	28029.393	0.000	MM	0.0000	10.98
6	43 Total Tetra-Furans	NO	20.94	47.912	28029.393	3.474	MM	0.3651	0.37
7	43 Total Tetra-Furans	NO	20.39	226.979	28029.393	15.574	bb	1.6369	1.64
8	43 Total Tetra-Furans	NO	27.02	426.968	28029.393	29.430	bb	3.0931	3.09
9	43 Total Tetra-Furans	NO	25.56	192.979	28029.393	14.588	bb	1.5332	1.53
10	8 2,3,7,8-TCDF	NO	25.21	3144.520	28029.393	223.198	MM	23.2777	23.28
11	43 Total Tetra-Furans	YES	25.10	1058.403	28029.393	0.000	MM	0.0000	6.35
12	43 Total Tetra-Furans	NO	24.83	120.858	28029.393	9.206	bb	0.9675	0.97
13	43 Total Tetra-Furans	NO	24.62	138.678	28029.393	10.570	MM	1.1109	1.11
14	43 Total Tetra-Furans	NO	24.39	2534.078	28029.393	181.476	bb	19.0730	19.07
15	43 Total Tetra-Furans	NO	23.94	2018.124	28029.393	138.962	MM	14.6049	14.60
16	43 Total Tetra-Furans	NO	23.85	331.888	28029.393	23.205	dd	2.4388	2.44
17	43 Total Tetra-Furans	NO	23.25	192.330	28029.393	14.040	bb	1.4756	1.48
18	43 Total Tetra-Furans	NO	22.93	353.830	28029.393	24.370	bb	2.5613	2.56

Penta-Furans function 1

#	Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.02	919.768	43604.338	40.924	bb	4.3157	4.32

Vista Analytical Laboratory

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 Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

## Penta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	45 Total Penta-Furans	NO	31.16	163.908	43604.338	7.348	bb	0.7749	0.77
2	10 2,3,4,7,8-PeCDF	NO	30.30	2069.568	40418.492	100.011	MM	9.7653	9.77
3	45 Total Penta-Furans	NO	29.63	1672.787	43604.338	72.696	MM	7.6663	7.67
4	9 1,2,3,7,8-PeCDF	NO	29.39	6631.119	46790.184	277.936	bb	28.6756	28.68
5	45 Total Penta-Furans	NO	29.22	954.196	43604.338	43.126	db	4.5479	4.55
6	45 Total Penta-Furans	NO	29.01	1758.231	43604.338	78.737	MM	8.3034	8.30
7	45 Total Penta-Furans	NO	28.48	2755.510	43604.338	0.000	MM	0.0000	12.86
8	45 Total Penta-Furans	YES	30.31	1275.961	43604.338	0.000	MM	0.0000	5.09
9	45 Total Penta-Furans	NO	28.52	235.778	43604.338	0.000	MM	0.0000	1.13
10	45 Total Penta-Furans	NO	28.44	1568.521	43604.338	0.000	MM	0.0000	7.21
11	45 Total Penta-Furans	YES	28.35	137.573	43604.338	0.000	MM	0.0000	0.51

## Hexa-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	NO	34.71	592.747	13570.354	54.273	MM	5.0657	5.07
2	13 2,3,4,6,7,8-HxCDF	NO	33.73	525.641	15355.622	41.422	MM	3.6857	3.69
3	12 1,2,3,6,7,8-HxCDF	NO	33.14	2123.649	17935.223	144.349	db	13.3812	13.38
4	11 1,2,3,4,7,8-HxCDF	NO	33.01	8137.188	17257.809	591.131	bd	49.7738	49.77
5	46 Total Hexa-Furans	NO	32.53	1929.228	16029.752	146.905	MM	13.5082	13.51
6	46 Total Hexa-Furans	NO	31.98	1517.432	16029.752	119.295	MM	10.9695	10.97
7	46 Total Hexa-Furans	NO	31.83	657.780	16029.752	52.313	bb	4.8103	4.81
8	46 Total Hexa-Furans	YES	34.75	99.788	16029.752	0.000	MM	0.0000	0.45

## Hepta-Furans

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	47 Total Hepta-Furans	NO	37.10	3720.333	9192.758	495.691	bb	43.2862	43.29
2	15 1,2,3,4,6,7,8-HpCDF	NO	36.52	3562.968	11014.047	390.393	bb	34.3058	34.31
3	16 1,2,3,4,7,8,9-HpCDF	NO	38.32	822.242	7371.470	120.421	bb	9.3228	9.32

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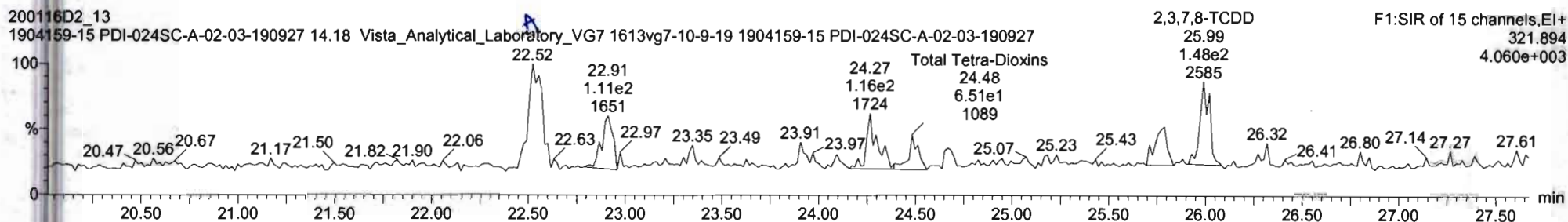
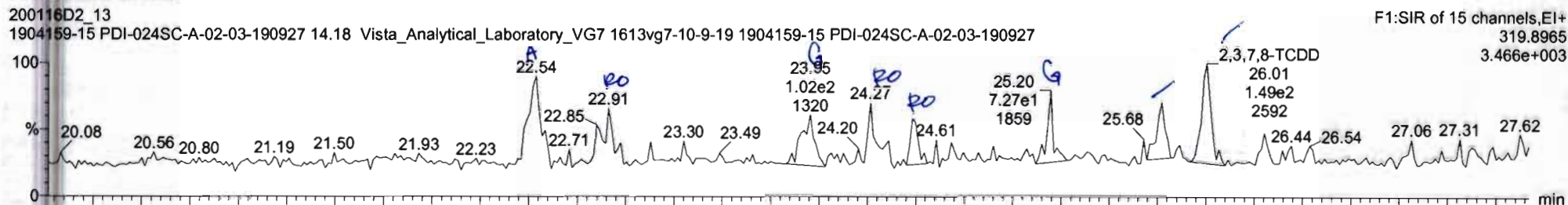
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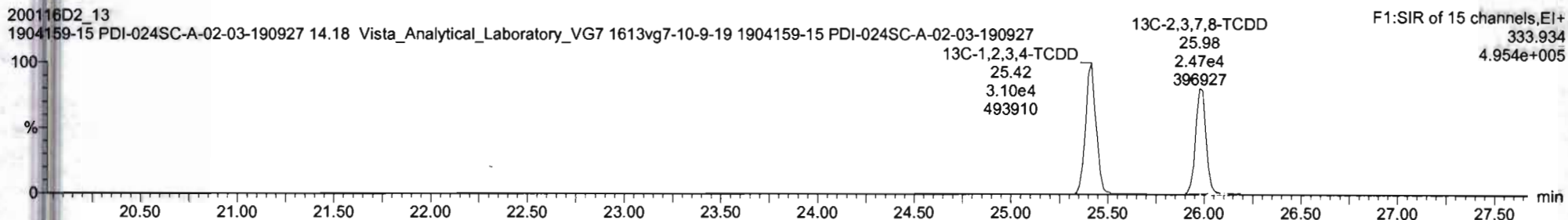
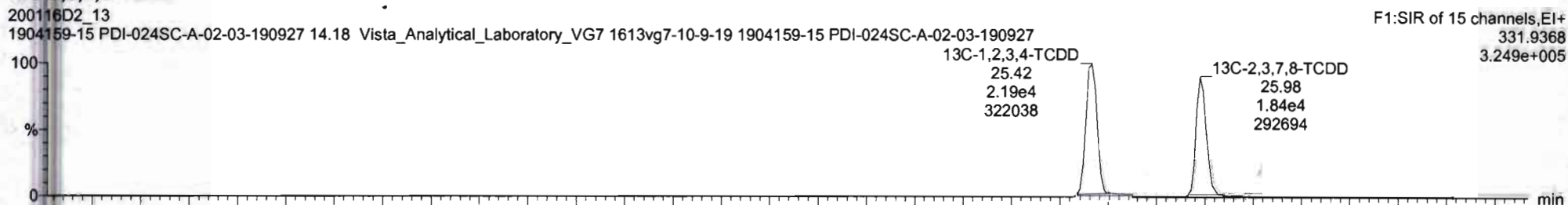
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Total Tetra-Dioxins



13C-2,3,7,8-TCDD

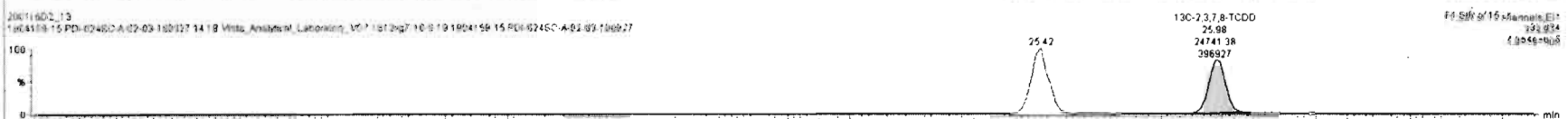
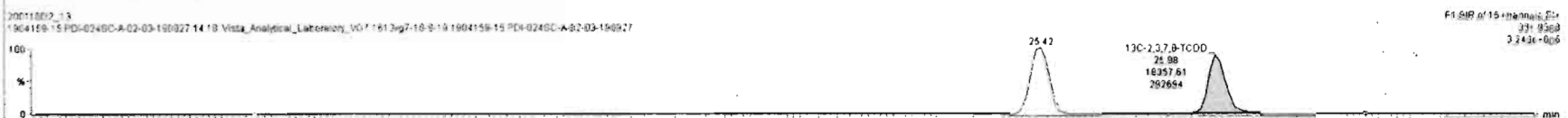
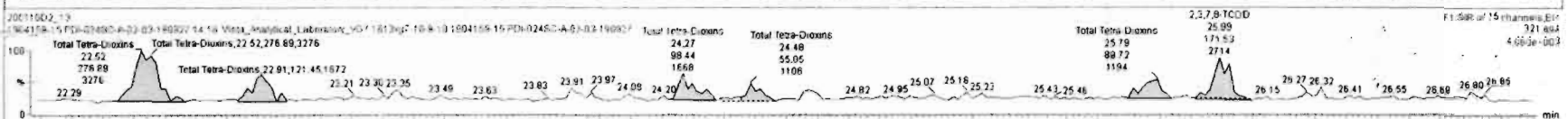
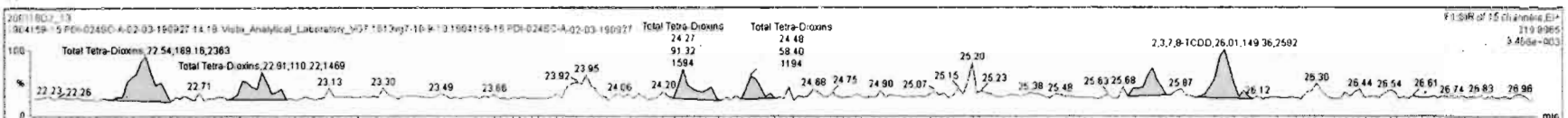




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#	Name	Resp	iS Resp	Cal	RA	rvy	RRF	wtAvail	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
39	Total Tetra-Dioxins		4.31e4				0.901	10.082	25.50		0.000	NO	NO	4.866		0.444	7.350
40	Total Penta-Dioxins		4.11e4				0.872	10.082	30.00		0.000	NO	NO	0.0000		0.235	4.915
41	Total Hexa-Dioxins		0.00e0				0.976	10.092	33.80		0.000	NO	NO	24.06		1.02	30.31

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	rvy	EMPC	Conc
1	Total Tetra-Dioxins	25.50	22.54	1.952e2	2.769e2	0.770	0.88	NO	2.3797	2.3797
2	Total Tetra-Dioxins	25.50	22.91	1.102e2	1.215e2	0.770	0.91	YES	1.0972	0.00000
3	Total Tetra-Dioxins	25.50	24.27	8.132e1	9.044e1	0.770	0.83	YES	0.80929	0.00000
4	Total Tetra-Dioxins	25.50	24.48	5.840e1	5.505e1	0.770	1.06	YES	0.48732	0.00000
5	Total Tetra-Dioxins	25.50	25.77	7.832e1	8.972e1	0.770	0.87	NO	0.85768	0.85768
6	1,2,3,7,8-TCDD	26.01	26.01	1.494e2	1.715e2	0.770	0.87	NO	1.6296	1.6296



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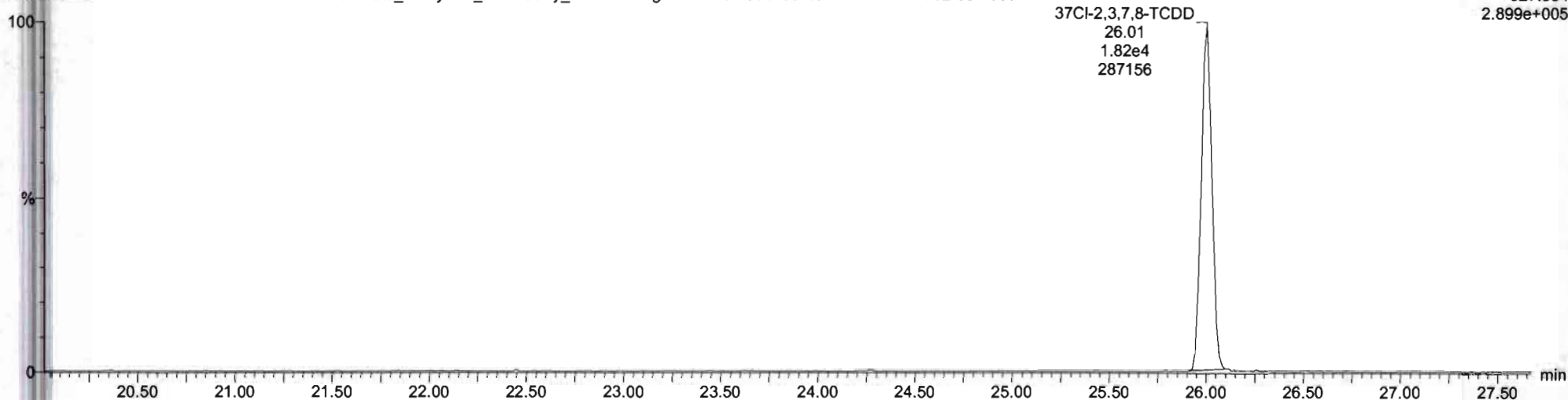
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37Cl-2,3,7,8-TCDD

200116D2\_13  
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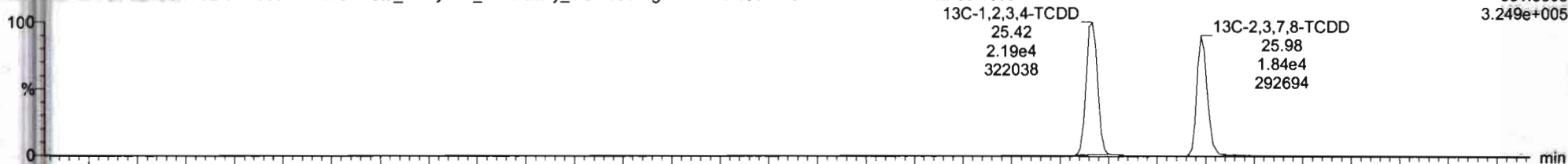
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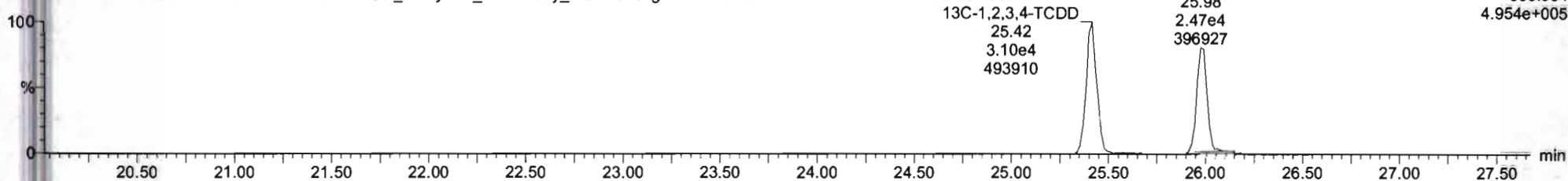
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F1:SIR of 15 channels,EI+  
331.9368  
3.249e+005



200116D2\_13  
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F1:SIR of 15 channels,EI+  
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Vista Analytical Laboratory

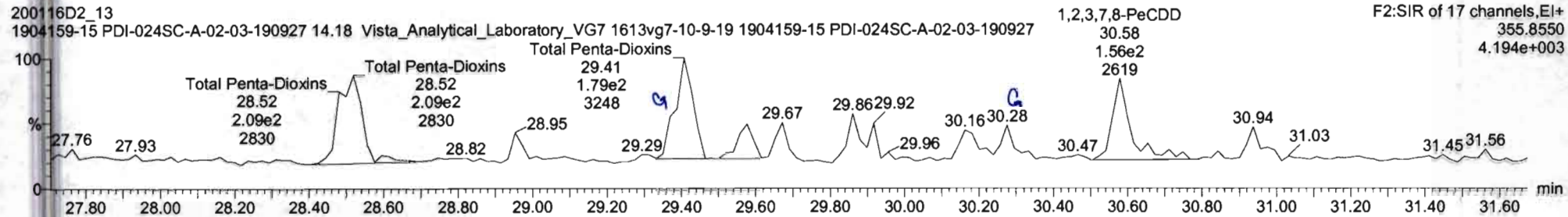
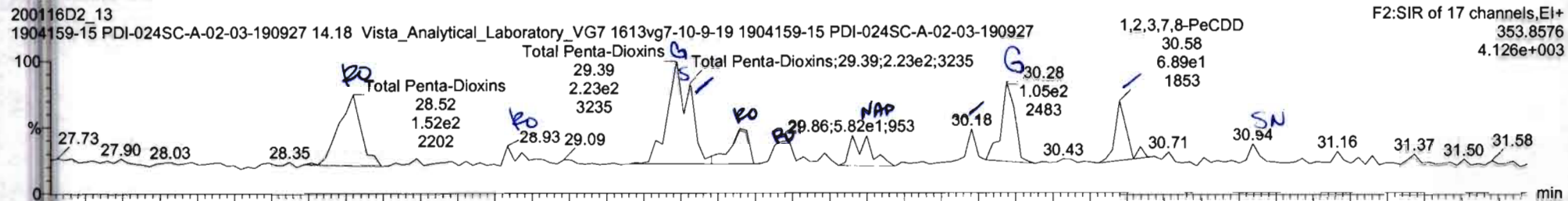
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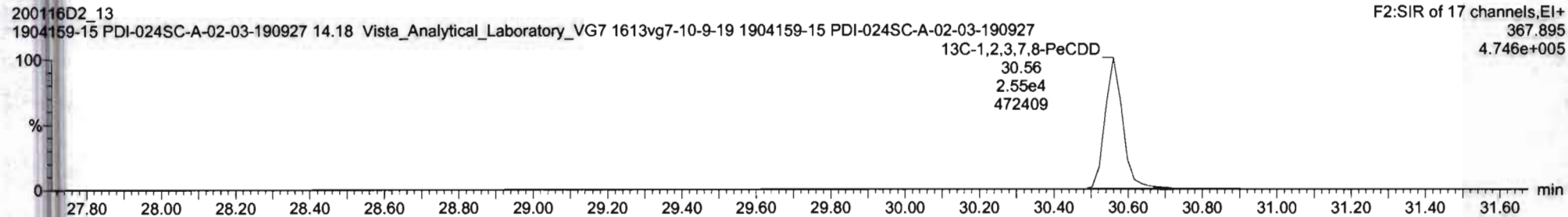
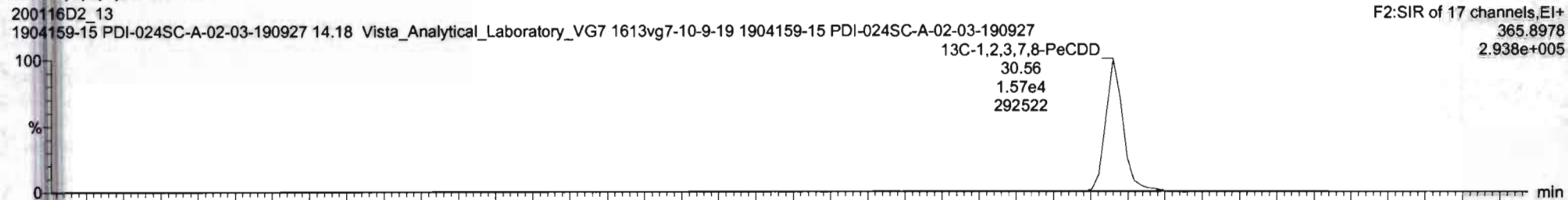
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Total Penta-Dioxins



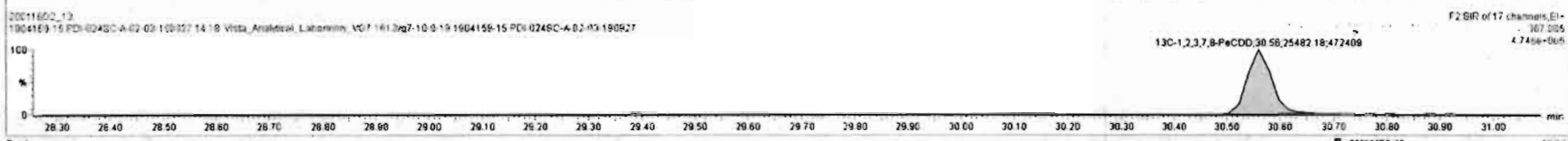
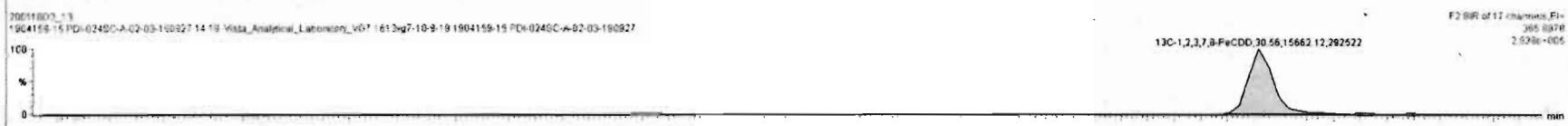
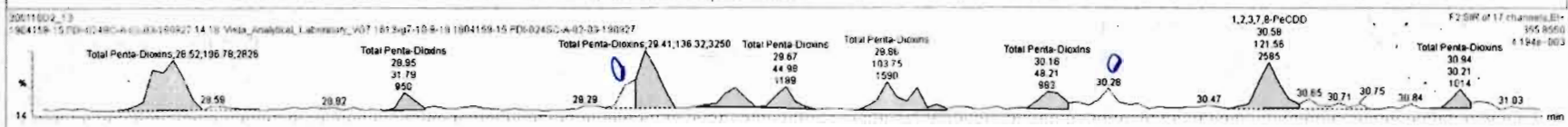
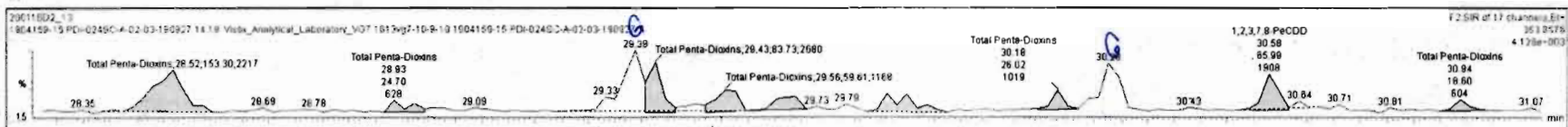
13C-1,2,3,7,8-PeCDD



20011602-13-124159-15 PDI-0245C-A-02-03-190927 14:18 Vista\_Analytical\_Laboratory\_V07 1613q7-10-9-19 1904159-15 PDI-0245C-A-02-03-190927

#	Name	Resp	S Resp	CFI	RA	nly	RRF	wtAval	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	Mult	DL	EMPC
39	Total Tetra-Dioxins	4.31e4					0.901	10.092	25.50			0.000	NO	4.958		0.444	7.350
40	Total Penta-Dioxins	6.11e4					0.872	10.082	20.00			0.000	NO	3.800		0.438	6.741
41	Total Hexa-Dioxins	0.00e0					0.976	10.092	33.80			0.000	NO	24.08		1.02	30.31

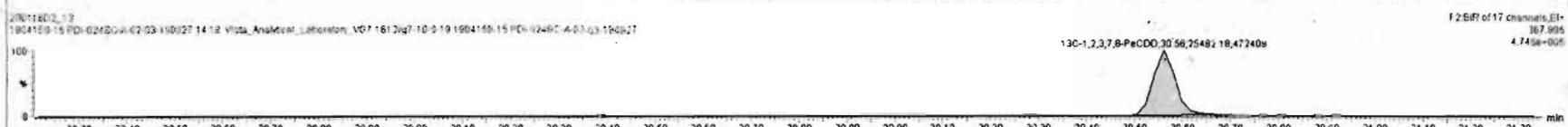
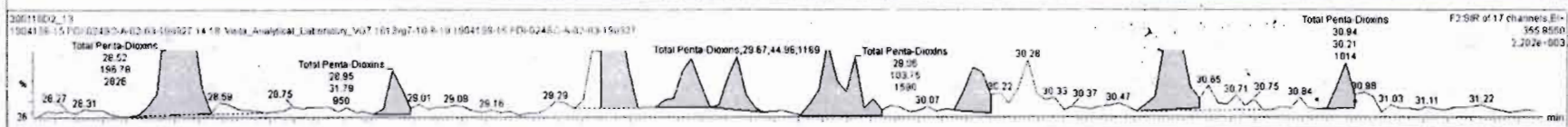
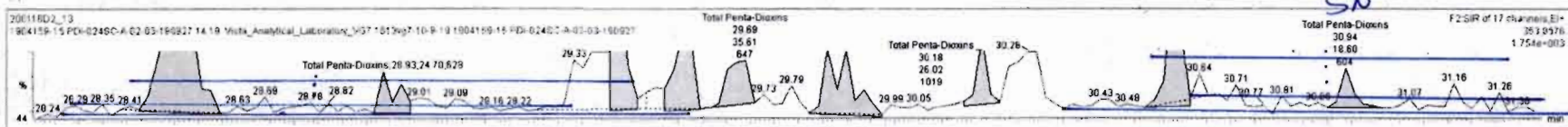
#	Name	Pred RT	RT	wt Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	Total Penta-Dioxins	30.00	29.52	1.533e2	1.958e2	0.630	0.78	YES	1.7713	0.00000
2	Total Penta-Dioxins	30.00	29.33	2.470e1	3.179e1	0.630	0.78	YES	0.28611	0.00000
3	Total Penta-Dioxins	30.00	29.43	8.073e1	1.303e2	0.630	0.61	NO	1.2152	1.2152
4	Total Penta-Dioxins	30.00	29.56	5.961e1	5.220e1	0.630	1.14	YES	0.46905	0.00000
5	Total Penta-Dioxins	30.00	29.69	3.561e1	4.448e1	0.630	0.79	YES	0.40480	0.00000
6	Total Penta-Dioxins	30.00	29.96	6.156e1	1.037e2	0.630	0.59	NO	0.91345	0.91345
7	Total Penta-Dioxins	30.00	30.18	2.602e1	4.821e1	0.630	0.54	NO	0.40982	0.40982
8	1,2,3,7,8-PeCDD	30.58	30.58	6.599e1	1.215e2	0.630	0.54	NO	1.0007	1.0007
9	Total Penta-Dioxins	30.00	30.94	1.969e1	3.021e1	0.630	0.62	NO	0.26955	0.26955



20011602\_13 1904159-15 PDI-0245C-A-02-03-190927 14 18 Vista\_Analytical\_Laboratory\_V07 1813q7-10-9-19 1904159-15 PDI-0245C-A-02-03-190927 14 18 Vista\_Analytical\_Laboratory\_V07 1813q7-10-9-19

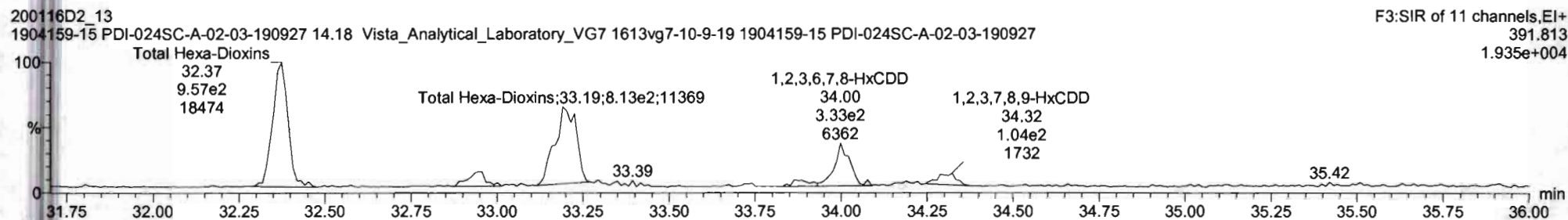
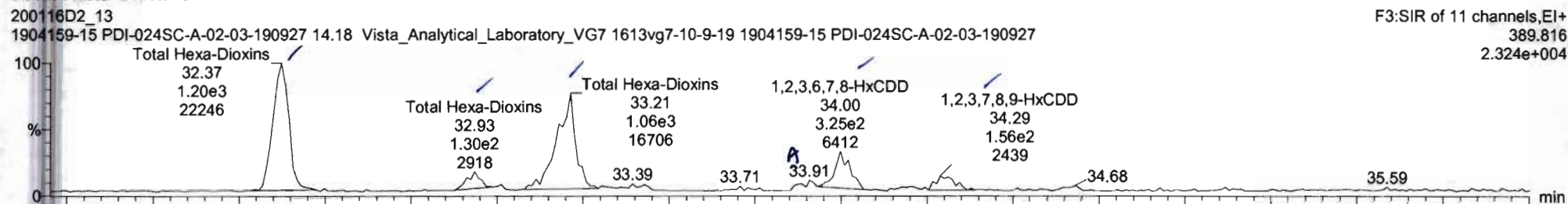
#	Name	Resp	iS Resp	iS#	RA	n/y	RRF	wtAvol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	u/fac	DL	EMPC
39	Total Tetra-Dioxins		4.31e4				0.901	10.092	25.50			0.000	NO	4.895	0.444	7.350	
40	Total Penta-Dioxins		4.11e4				0.872	10.082	30.00			0.000	NO	3.777	0.438	6.709	
41	Total Hexa-Dioxins		0.00e0				0.976	10.092	33.80			0.000	NO	24.06	1.02	30.31	

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc
1	Total Penta-Dioxins	30.00	29.52	1.539e2	1.968e2	0.630	0.78	YES	1.7713	0.00000
2	Total Penta-Dioxins	30.00	29.93	2.470e1	3.179e1	0.630	0.78	YES	0.28611	0.00000
3	Total Penta-Dioxins	30.00	29.43	7.797e1	1.263e2	0.630	0.57	NO	1.1834	1.1634
4	Total Penta-Dioxins	30.00	29.56	5.634e1	5.220e1	0.630	1.06	YES	0.49965	0.00000
5	Total Penta-Dioxins	30.00	29.68	3.561e1	4.486e1	0.630	0.79	YES	0.40490	0.00000
6	Total Penta-Dioxins	30.00	29.86	6.166e1	1.027e2	0.630	0.59	NO	0.91345	0.91345
7	Total Penta-Dioxins	30.00	30.18	2.602e1	4.621e1	0.630	0.54	NO	0.40992	0.40992
8	1,2,3,7,8-PeCDD	30.58	30.58	6.699e1	1.216e2	0.630	0.54	NO	1.0007	1.0007
9	Total Penta-Dioxins	30.00	30.94	1.860e1	3.021e1	0.630	0.62	NO	0.26955	0.26955

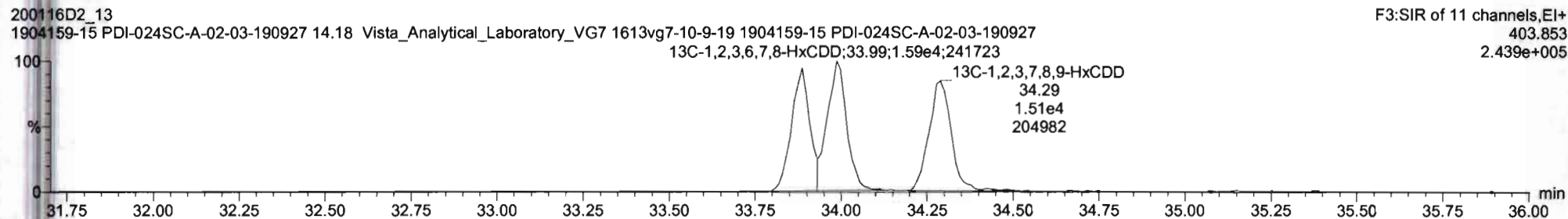
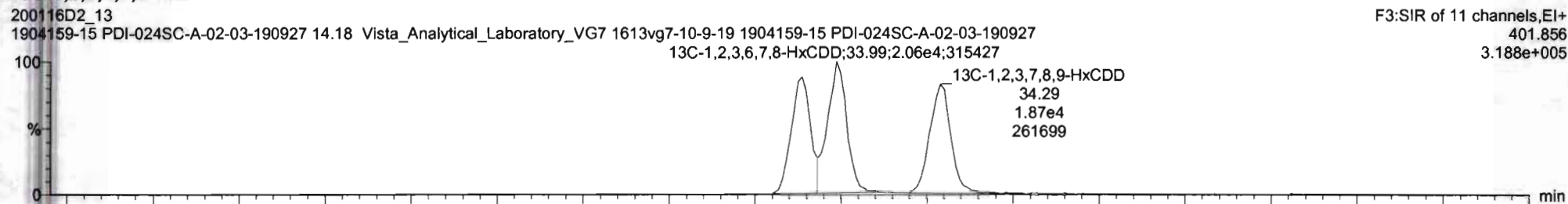


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**Total Hexa-Dioxins**



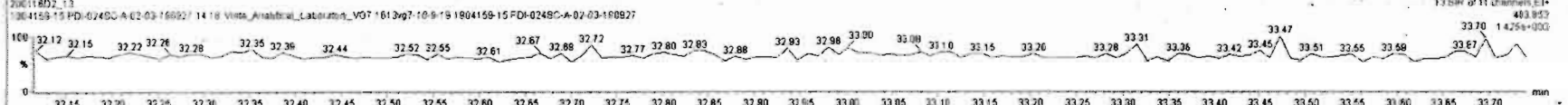
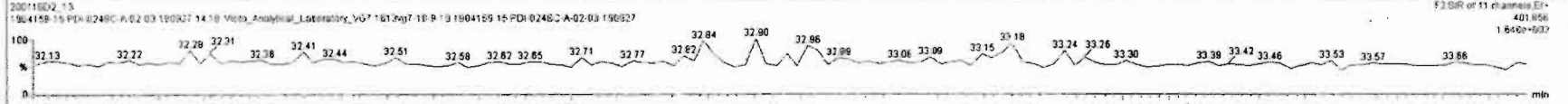
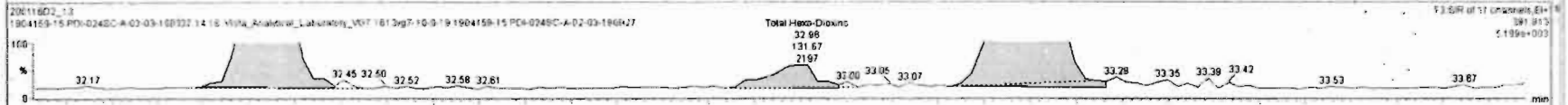
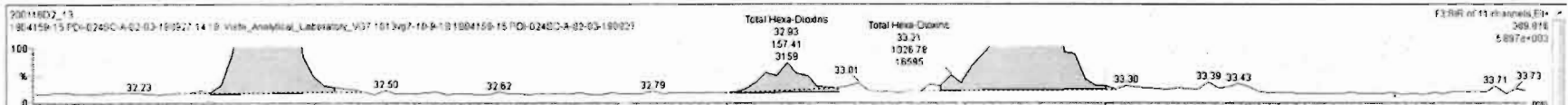
**13C-1,2,3,4,7,8-HxCDD**



20011602-13-1904159-15-PDI-0248C-A-02-03-180927 1904159-15-PDI-0248C-A-02-03-180927-15-Vista\_Analytical\_Laboratory\_V071613vg7-10-9-19

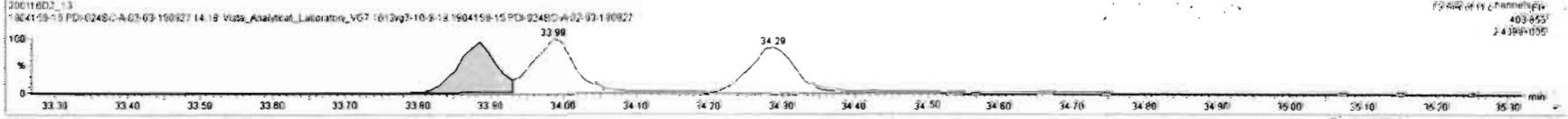
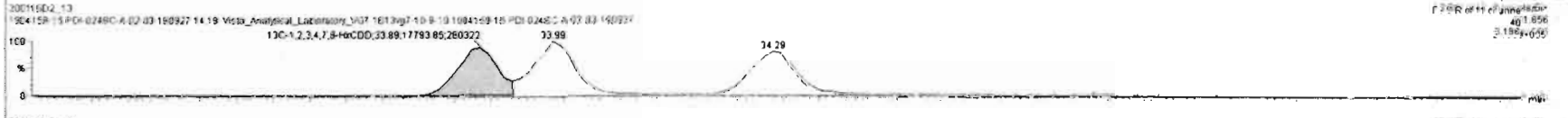
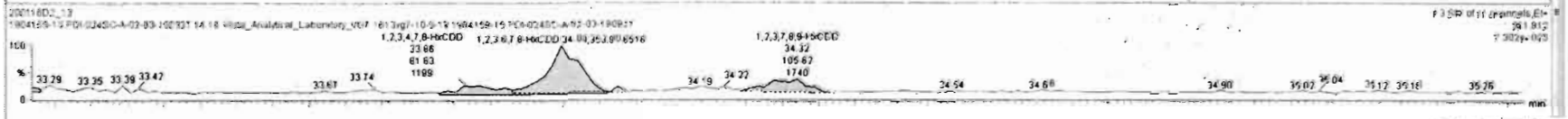
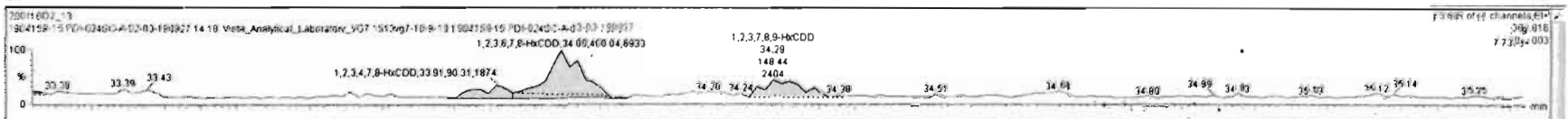
#	Name	Resp	S Resp	RA	RA	nly	RRF	wtAvail	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	RMDC
41	Total Hexa-Dioxins		0.00e0				0.976	10.082	33.80			0.000	NO	25.72		1.02	30.55
42	Total Hepta-Dioxins		2.77e4				0.899	10.092	37.75			0.000	NO	214.6		2.14	214.6
43	Total Tetra-Furans		6.25e4				0.943	10.092	24.00			0.000	NO	76.94		0.800	97.77

#	Name	Pred RT	RT	wt Resp	wt Resp	Pred RA	RA	nly	RMDC	Conc
1	41 Total Hexa-Dioxins	33.80	33.37	1.185e3	9.315e2	1.240	1.27	NO	12.662	12.952
2	41 Total Hexa-Dioxins	33.80	33.93	1.574e2	1.317e2	1.240	1.20	NO	1.7291	1.7291
3	41 Total Hexa-Dioxins	33.80	33.21	1.027e3	8.679e2	1.240	1.18	NO	11.333	11.333
4	4 1,2,3,6,7,8-HxCDD	33.99	34.00	3.251e2	3.331e2	1.240	0.98	YES	3.4015	0.00000
5	5 1,2,3,7,8,9-HxCDD	34.32	34.28	1.960e2	1.039e2	1.240	1.50	YES	1.4198	0.00000



#	Name	Retp	S. Resp	Clf	RA	n/y	RRF	WtVol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	Cl	EMPC
41	Total Hexa-Dioxins	0.000	10.082		0.878		10.082	33.80				0.000	NO	32.82		1.02	30.62
42	Total Hepta-Dioxins	2.77e4			0.998		10.082	37.75				0.000	NO	214.6		2.14	214.6
43	Total Tetra-Furans	6.26e4			0.943		10.082	24.00				0.000	NO	76.94		0.900	97.77

#	Name	Pred RT	RT	mt Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc
1	41 Total Hexa-Dioxins	33.80	33.37	1.185e3	9.315e2	1.240	1.27	NO	12.662	12.662
2	41 Total Hexa-Dioxins	33.80	33.93	1.574e2	1.317e2	1.240	1.20	NO	1.7291	1.7291
3	41 Total Hexa-Dioxins	33.80	33.21	1.027e3	8.679e2	1.240	1.18	NO	11.333	11.333
4	3 1,2,3,4,7,8-HxCDD	33.90	33.91	9.031e1	8.163e1	1.240	1.11	NO	0.91902	0.91902
5	4 1,2,3,6,7,8-HxCDD	33.90	34.00	4.009e2	3.539e2	1.240	1.13	NO	4.3668	4.3668
6	5 1,2,3,7,8,9-HxCDD	34.32	34.29	1.484e2	1.095e2	1.240	1.41	NO	1.5498	1.5498





Vista Analytical Laboratory

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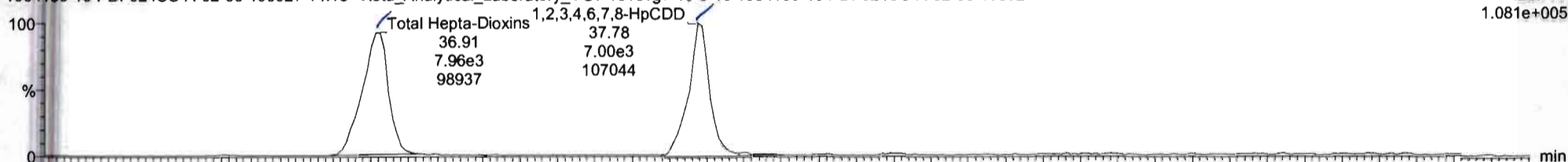
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Total Hepta-Dioxins

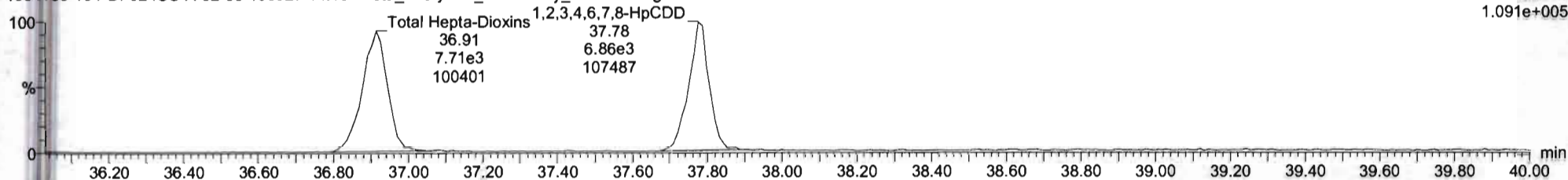
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F4:SIR of 11 channels, EI+ 423.777 1.081e+005



200116D2\_13 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-15 PDI-024SC-A-02-03-190927

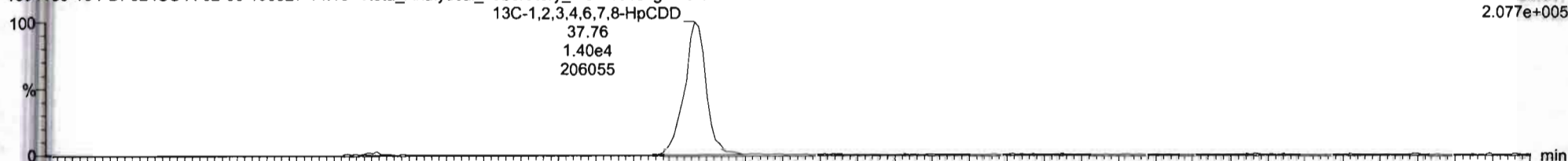
F4:SIR of 11 channels, EI+ 425.774 1.091e+005



13C-1,2,3,4,6,7,8-HpCDD

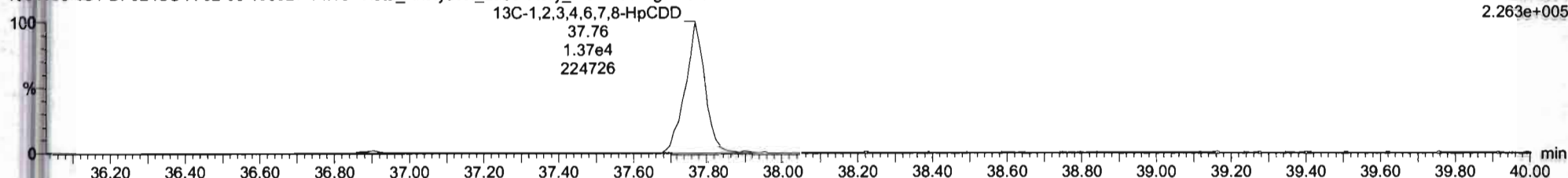
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F4:SIR of 11 channels, EI+ 435.817 2.077e+005



200116D2\_13 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-15 PDI-024SC-A-02-03-190927

F4:SIR of 11 channels, EI+ 437.814 2.263e+005



Vista Analytical Laboratory

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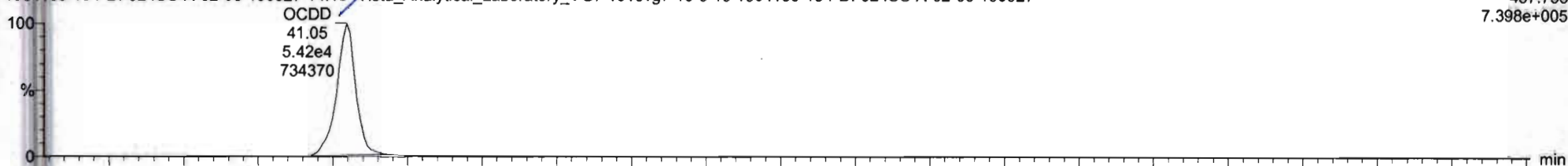
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OCDD

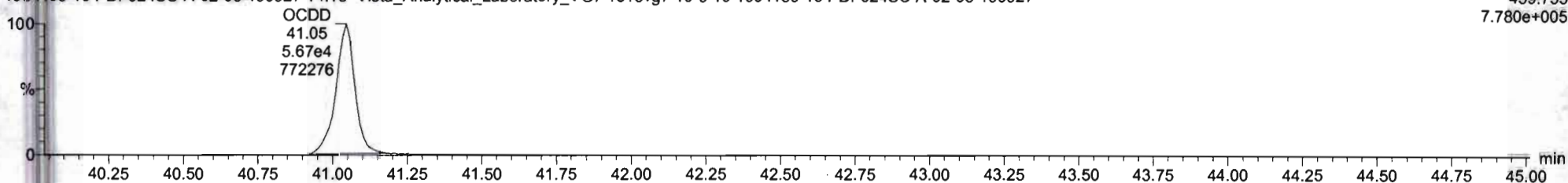
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F5:SIR of 11 channels,EI+  
457.738  
7.398e+005



200116D2\_13  
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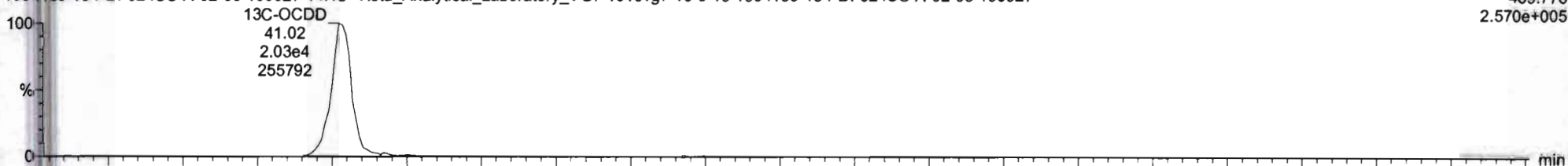
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13C-OCDD

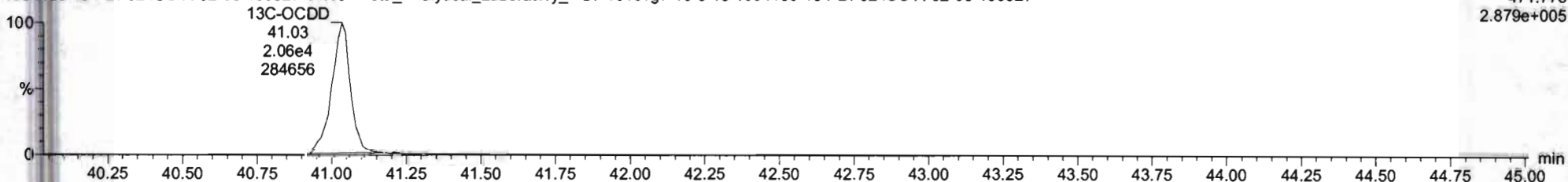
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F5:SIR of 11 channels,EI+  
469.778  
2.570e+005



200116D2\_13  
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F5:SIR of 11 channels,EI+  
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Vista Analytical Laboratory

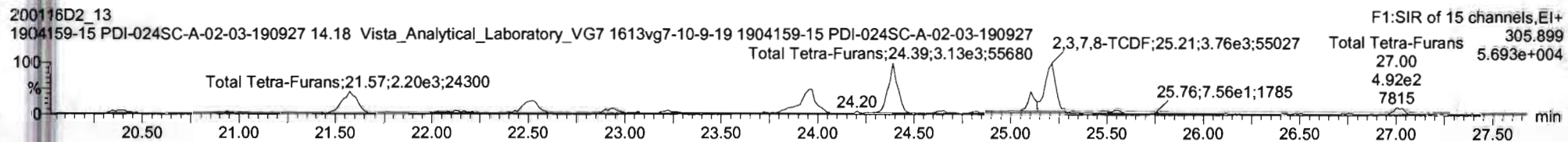
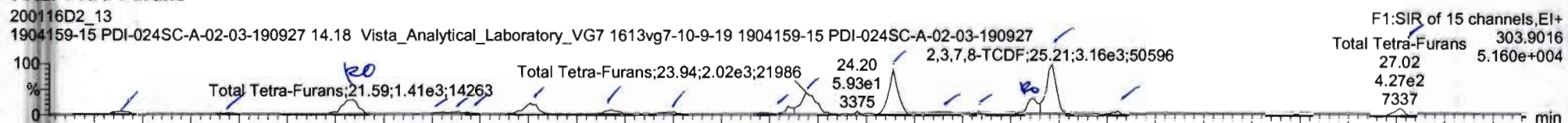
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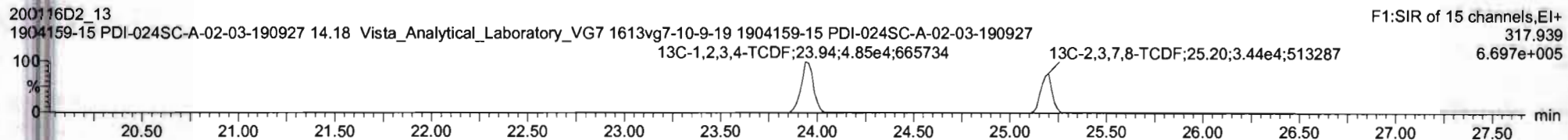
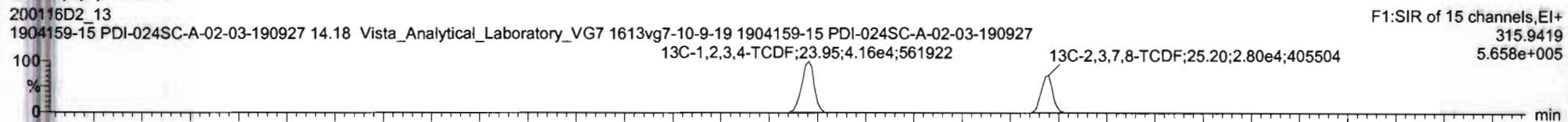
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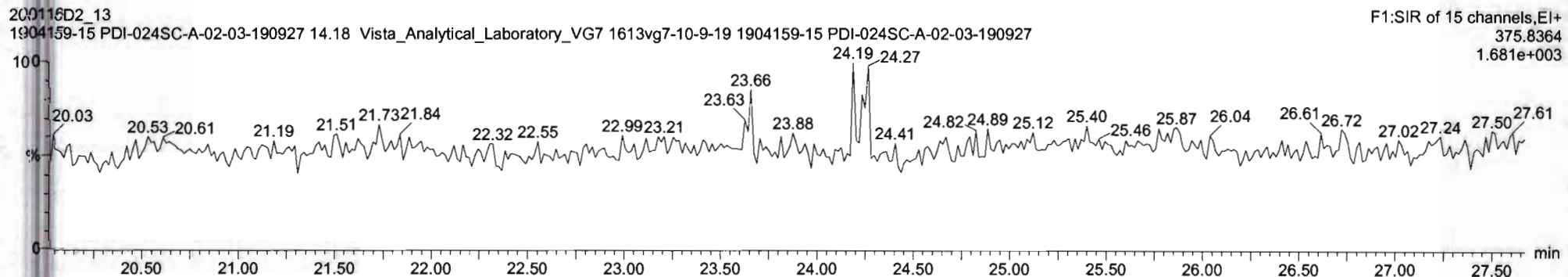
Total Tetra-Furans

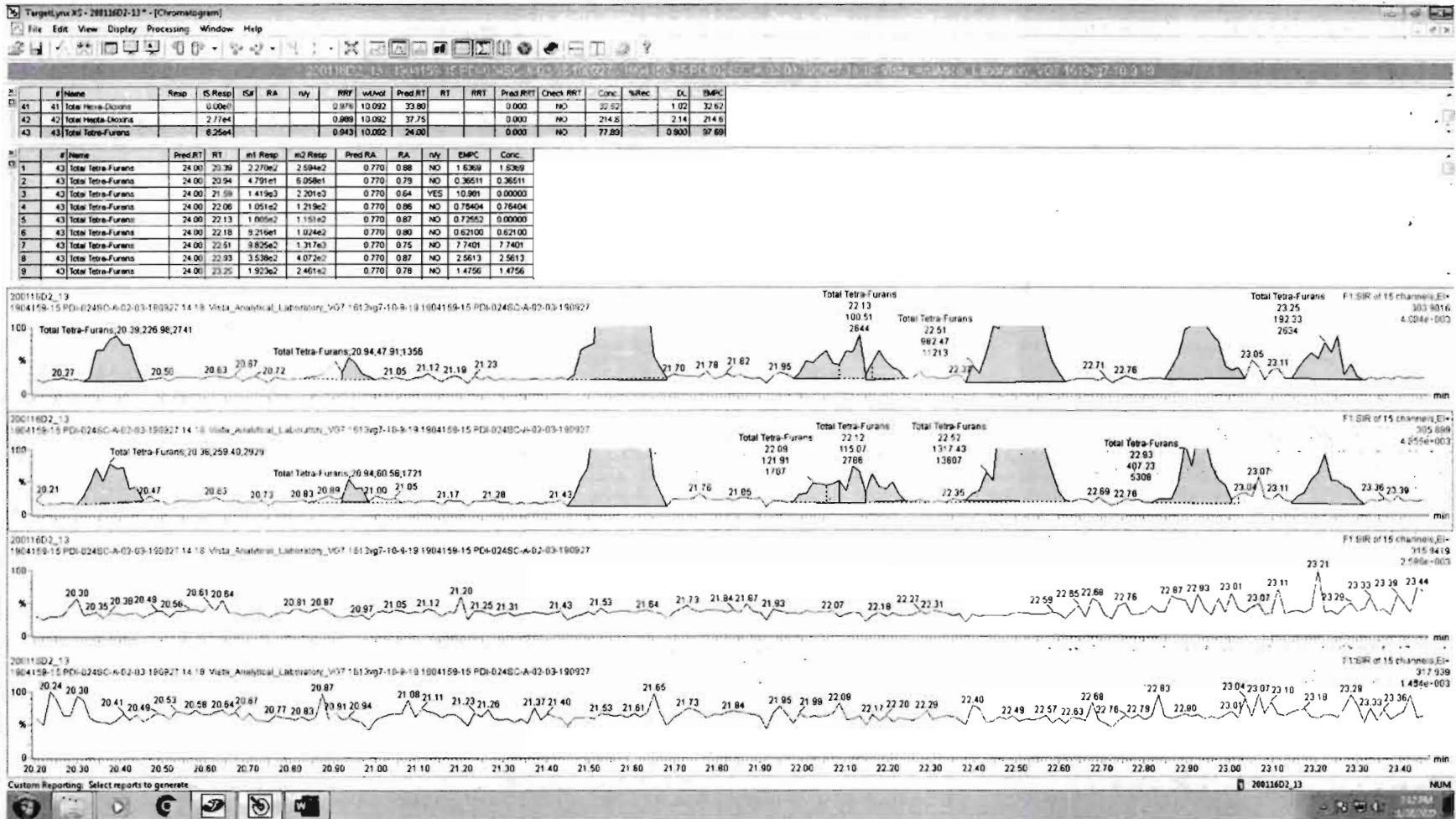


13C-2,3,7,8-TCDF



DPE1

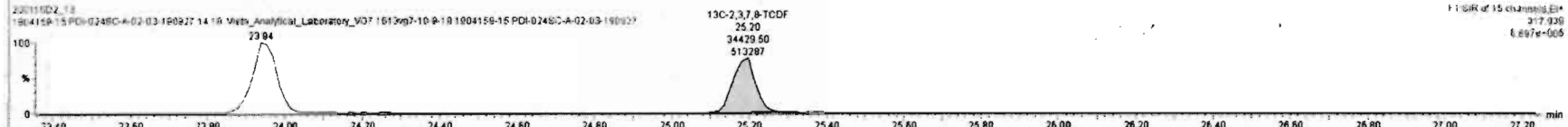
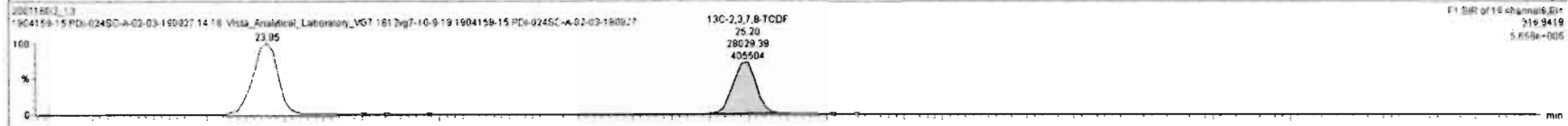
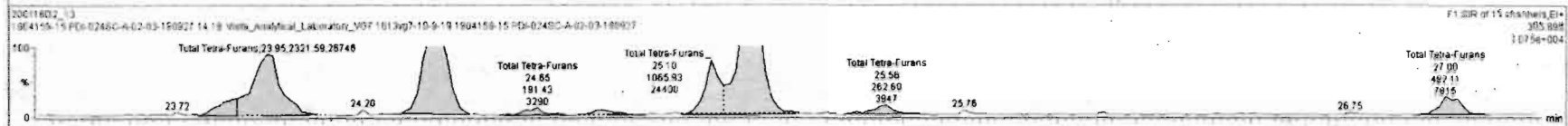
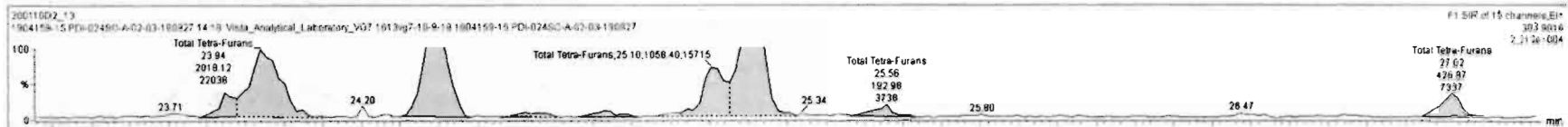


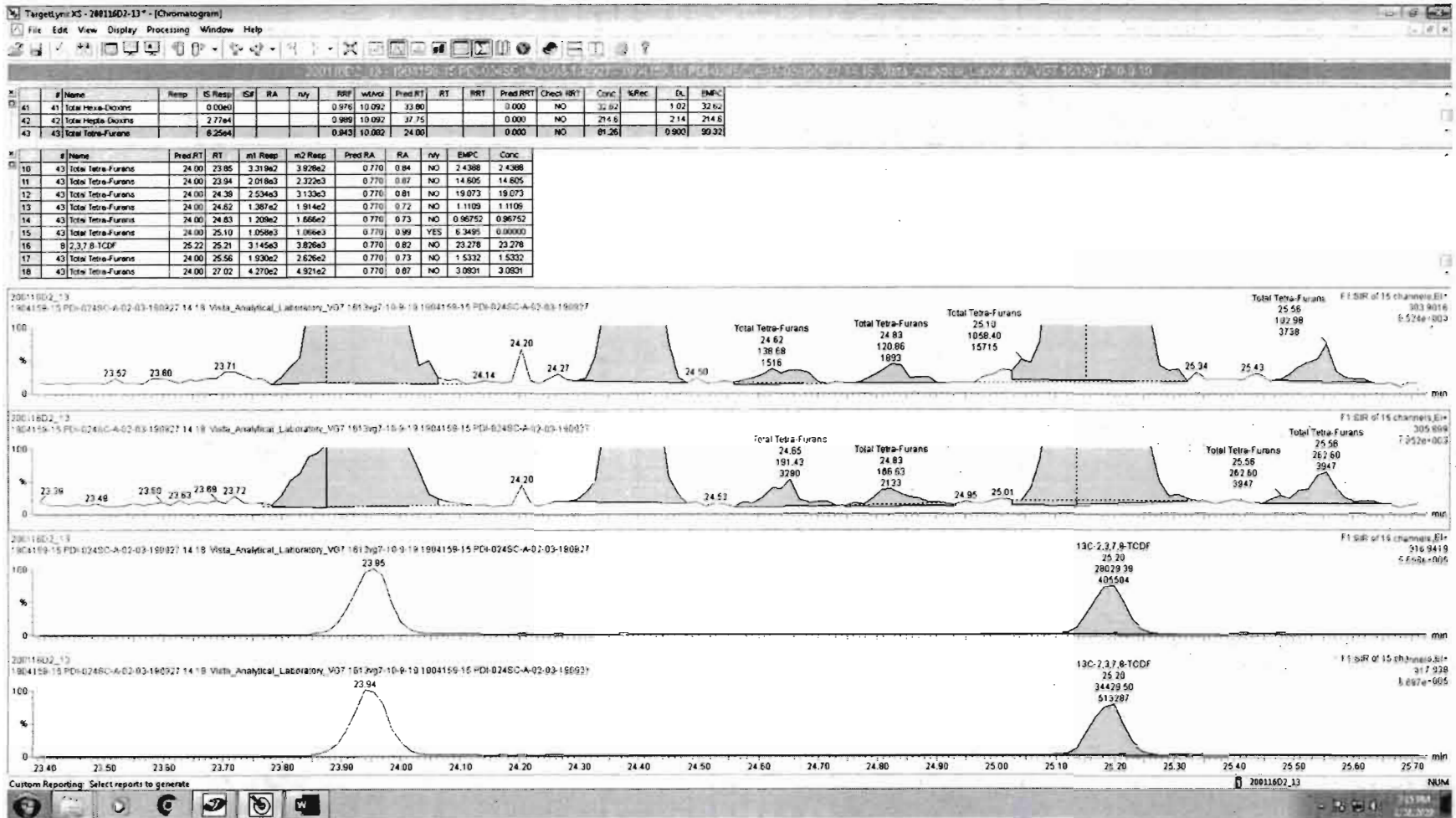


20011602\_13 1904158-15 PDI-0245C-A-02-03-190927 14 18 Vista\_Analytical\_Laboratory\_V07 1613mg7-10-9-18 1904158-15 PDI-0245C-A-02-03-190927

#	Name	Resp	IS Resp	Sur	RA	RV	RRF	wtAval	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	D	EMPC
41	Total Hexa-Chlorins		0.00e0				0.976	10.092	33.80			0.000	NO	32.82		1.02	32.82
42	Total Hepta-Chlorins		2.77e1				0.989	10.092	37.75			0.000	NO	214.8		2.14	214.8
43	Total Tetra-Furans		6.25e4				0.843	10.002	24.00			0.000	NO	81.26		0.800	99.32

#	Name	Pred RT	RT	ml Resp	ml Resp	Pred RA	RA	RV	EMPC	Conc
10	Total Tetra-Furans	24.00	23.86	3.319e2	3.928e2	0.770	0.84	NO	2.4388	2.4388
11	Total Tetra-Furans	24.00	23.94	2.018e3	2.322e3	0.770	0.87	NO	14.605	14.605
12	Total Tetra-Furans	24.00	24.39	2.534e3	3.133e3	0.770	0.81	NO	19.073	19.073
13	Total Tetra-Furans	24.00	24.62	1.307e2	1.914e2	0.770	0.72	NO	1.1109	1.1109
14	Total Tetra-Furans	24.00	24.83	1.209e2	1.666e2	0.770	0.73	NO	0.96752	0.96752
15	Total Tetra-Furans	24.00	25.10	1.058e3	1.066e3	0.770	0.99	YES	6.3495	0.00000
16	13C-2,3,7,8-TCDF	25.21	25.21	3.145e3	3.826e3	0.770	0.82	NO	23.278	23.278
17	Total Tetra-Furans	24.00	25.56	1.930e2	2.626e2	0.770	0.73	NO	1.5332	1.5332
18	Total Tetra-Furans	24.00	27.02	4.270e2	4.921e2	0.770	0.87	NO	3.0931	3.0931





Vista Analytical Laboratory

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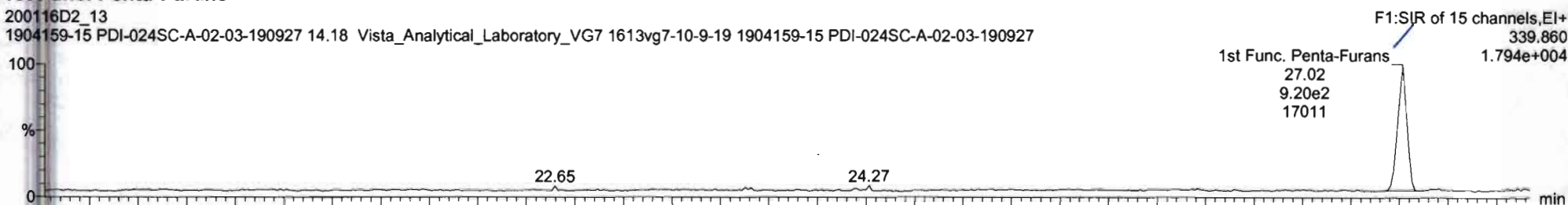
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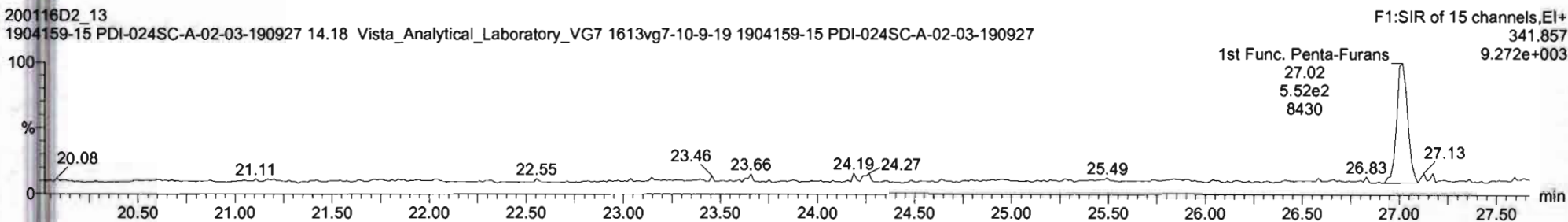
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1st Func. Penta-Furans

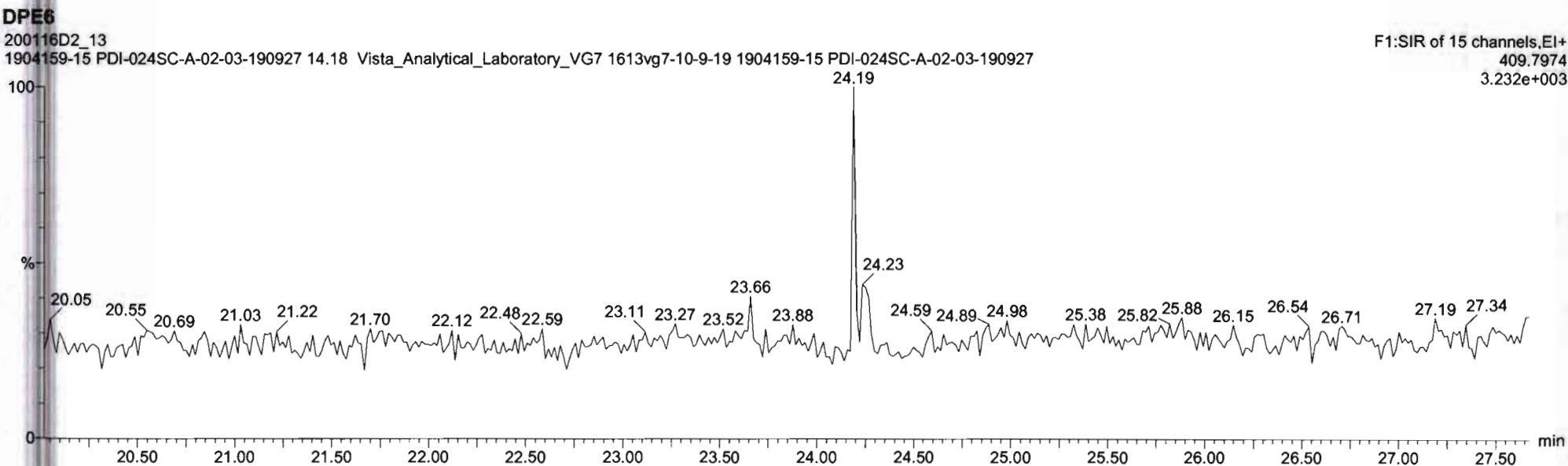
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200116D2\_13  
1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-15 PDI-024SC-A-02-03-190927



DPE6  
200116D2\_13  
1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-15 PDI-024SC-A-02-03-190927



Vista Analytical Laboratory

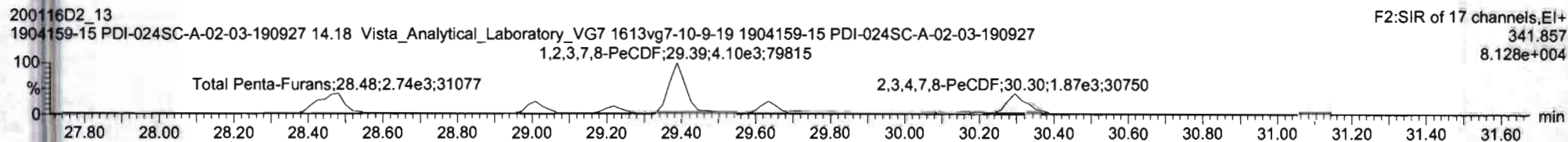
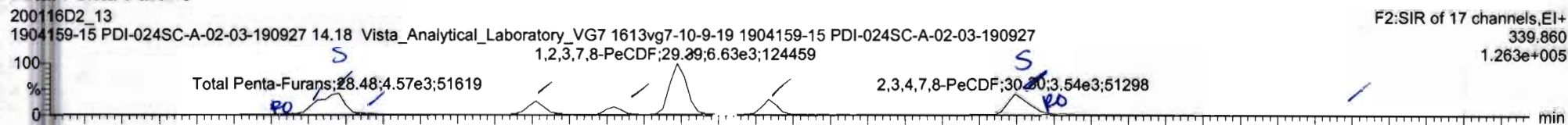
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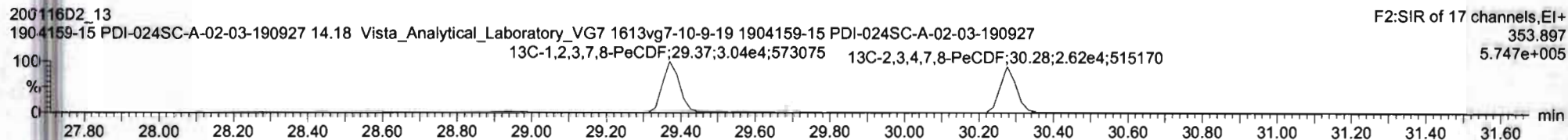
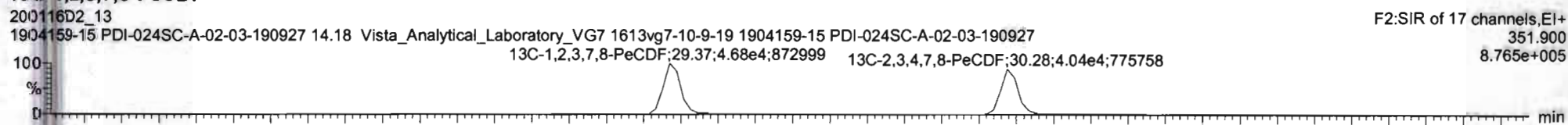
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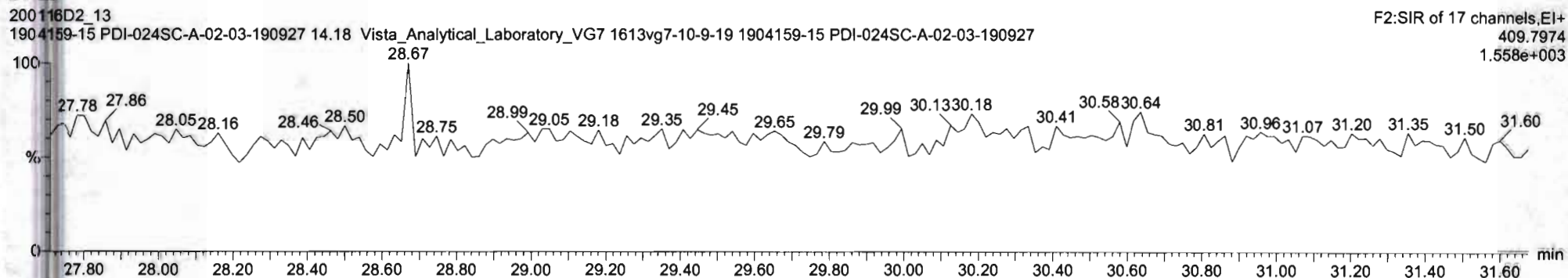
Total Penta-Furans



13C-1,2,3,7,8-PeCDF



DPE2

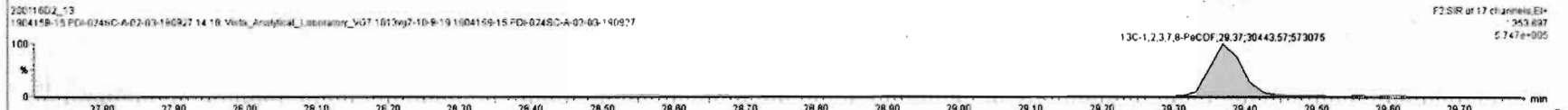




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#	Name	Resp	IS Resp	Ext	RA	rv	RRF	wtAwt	Prod RT	RT	RRT	ThedRRT	Check RRT	Conc	%Rec	DL	EMPC
44	44 1st Func Penta-Furans	0.00e0					0.940	10.092	27.63			0.000	NO	4.316		0.148	4.316
45	45 Total Penta-Furans	0.00e0					0.940	10.092	30.00			0.000	NO	48.97		0.380	95.62
46	46 Total Hexa-Furans	0.00e0					1.078	10.092	33.00			0.000	NO	101.8		0.695	101.8
47	47 Total Hepta-Furans	0.00e0					1.135	10.092	37.75			0.000	NO	86.91		0.980	86.91
48	48 PFK1																
49	49 PFK2																
50	50 PFK3																
51	51 PFK4																

#	Name	Prod RT	RT	wt Resp	is2 Resp	Prod RA	RA	rv	EMPC	Conc
1	45 Total Penta-Furans	30.00	29.35	1.375e2	6.806e1	1.550	2.02	YES	0.50876	0.00000
2	45 Total Penta-Furans	30.00	28.44	1.569e3	8.899e2	1.550	1.76	NO	7.2088	0.00000
3	45 Total Penta-Furans	30.00	29.48	2.756e3	1.631e3	1.550	1.69	NO	12.859	0.00000
4	45 Total Penta-Furans	30.00	28.52	2.359e2	1.509e2	1.550	1.56	NO	1.1334	0.00000
5	45 Total Penta-Furans	30.00	29.01	1.759e3	1.074e3	1.550	1.64	NO	8.3034	8.3034
6	45 Total Penta-Furans	30.00	29.22	9.542e2	5.972e2	1.550	1.60	NO	4.5479	4.5479
7	9 1,2,3,7,8-PeCDF	29.39	29.30	6.631e3	4.102e3	1.550	1.62	NO	28.676	28.676
8	45 Total Penta-Furans	30.00	29.63	1.673e3	9.424e2	1.550	1.77	NO	7.6663	7.6663
9	10 1,2,3,4,7,8-PeCDF	30.31	30.30	3.538e3	1.867e3	1.550	1.90	YES	13.944	0.00000



20011602-13B - 1904159-15 PDI-0245C-A-02-03-190927 14 18 Vista\_Analytical\_Laboratory\_V07 1612xg7-10-9-19 1904159-15 PDI-0245C-A-02-03-190927

#	Name	Resp	IS Resp	ISF	RA	nly	RRF	wtVol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
45	Total Penta-Furans	0.0060					0.940	10.092	30.00			0.000	NO	59.73	0.389	86.53	
46	Total Hepta-Furans	0.0060					1.078	10.092	33.00			0.000	NO	101.9	0.495	109.4	
47	Total Hepta-Furans	0.0060					1.135	10.092	37.75			0.000	NO	86.91	0.993	86.91	
48	PFK1																
49	PFK2																
50	PFK3																
51	PFK4																
52	PKS																

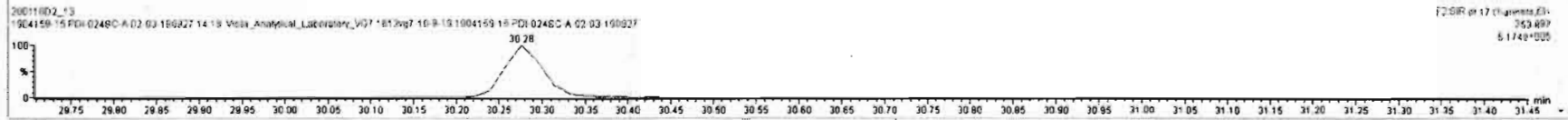
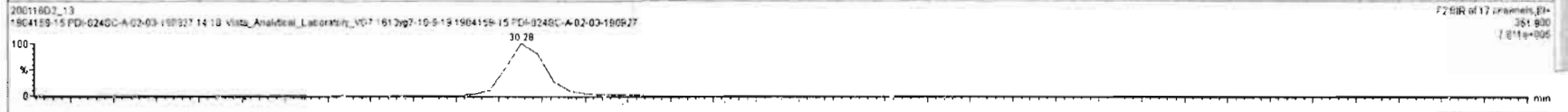
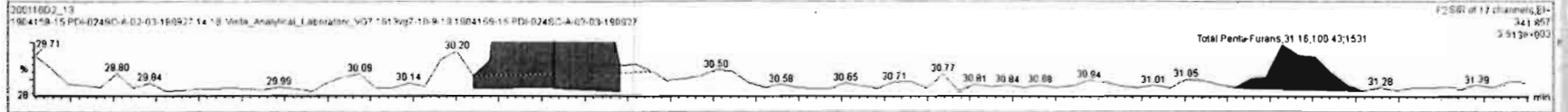
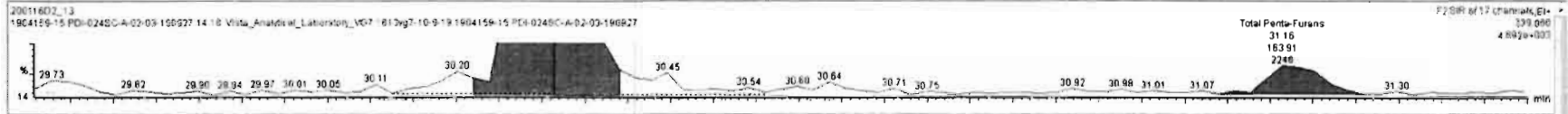
#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
3	45 Total Penta-Furans	30.00	29.46	2.756e3	1.631e3	1.550	1.69	NO	12.859	0.00000
4	45 Total Penta-Furans	30.00	29.52	2.358e2	1.509e2	1.550	1.56	NO	1.1334	0.00000
5	45 Total Penta-Furans	30.00	29.01	1.758e3	1.074e3	1.550	1.64	NO	8.3034	8.3034
6	45 Total Penta-Furans	30.00	29.22	9.542e2	5.972e2	1.550	1.80	NO	4.5479	4.5479
7	9 1,2,3,7,8-PeCDF	29.39	29.39	6.631e3	4.102e3	1.550	1.62	NO	26.676	26.676
8	45 Total Penta-Furans	30.00	29.63	1.673e3	9.424e2	1.550	1.77	NO	7.6663	7.6663
9	10 2,3,4,7,8-PeCDF	30.31	30.30	2.070e3	1.264e3	1.550	1.64	NO	9.7653	9.7653
10	45 Total Penta-Furans	30.00	30.31	1.276e3	8.807e2	1.550	1.87	YES	5.0861	0.00000
11	45 Total Penta-Furans	30.00	31.18	1.639e2	1.004e2	1.550	1.83	NO	0.77488	0.77488



20011602\_13 1904159-15 PDI-0248C-A-02-03-190927 1904159-15 PDI-0248C-A-02-03-190927 14 18 Vista\_Analytical\_Laboratory\_V07 1613vg7-10-9-19 1904159-15 PDI-0248C-A-02-03-190927

#	Name	Resp	IS Resp	ISr	RA	nly	RRT	intStd	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Sec	DL	EMPC
45	Total Penta-Furans	0.00e0					0.940	10.092	30.00			0.000	NO	59.73		0.299	96.53
46	Total Hexa-Furans	0.00e0					1.078	10.092	33.00			0.000	NO	101.9		0.695	101.9
47	Total Hepta-Furans	0.00e0					1.135	10.092	37.75			0.000	NO	86.31		0.990	86.01
48	PFK1																
49	PFK2																
50	PFK3																
51	PFK4																
52	PFK5																

#	Name	Pred RT	RT	int Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
3	45 Total Penta-Furans	30.00	29.48	2.756e3	1.631e3	1.550	1.69	NO	12.059	0.00000
4	45 Total Penta-Furans	30.00	29.52	2.358e2	1.509e2	1.550	1.56	NO	1.1334	0.00000
5	45 Total Penta-Furans	30.00	29.01	1.758e3	1.074e3	1.550	1.64	NO	8.3034	8.3034
6	45 Total Penta-Furans	30.00	29.22	9.542e2	5.972e2	1.550	1.60	NO	4.5479	4.5479
7	9 1,2,3,7,8-PeCDF	29.39	29.39	6.631e3	4.102e3	1.550	1.62	NO	28.676	28.676
8	45 Total Penta-Furans	30.00	29.63	1.673e3	9.424e2	1.550	1.77	NO	7.6663	7.6663
9	10 2,3,4,7,8-PeCDF	30.31	30.30	2.070e3	1.264e3	1.550	1.64	NO	9.7653	9.7653
10	45 Total Penta-Furans	30.00	30.31	1.276e3	6.807e2	1.550	1.87	YES	5.0881	0.00000
11	45 Total Penta-Furans	30.00	31.16	1.639e2	1.004e2	1.550	1.63	NO	0.77488	0.77488



Vista Analytical Laboratory

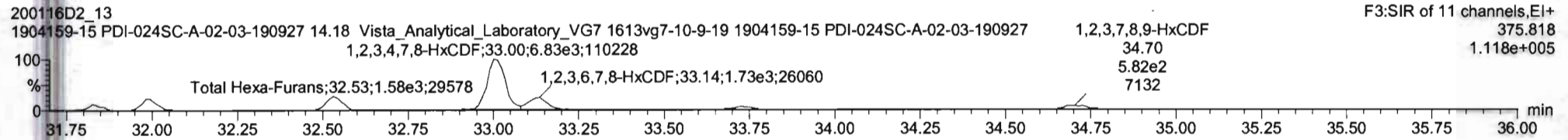
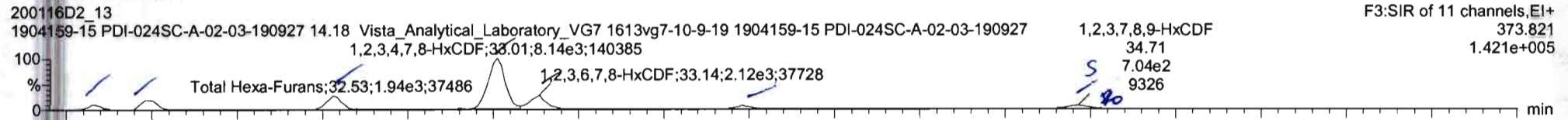
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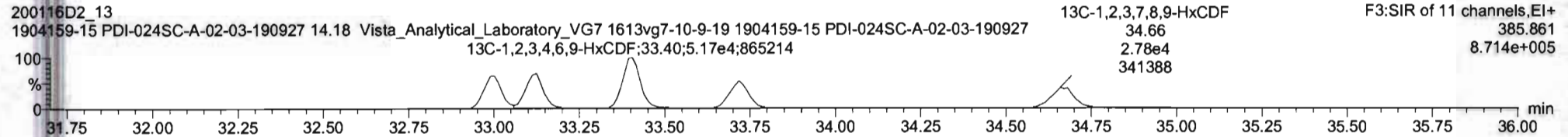
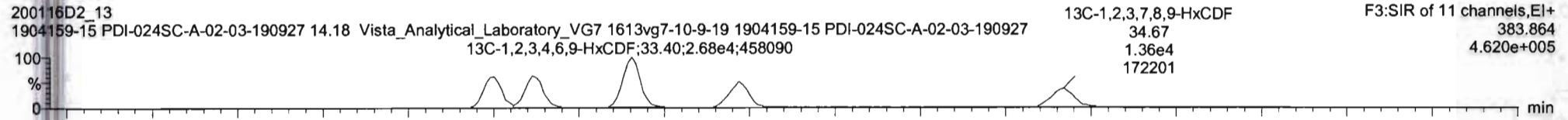
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Name: VG7 200116D2-13, Date: 17-JAN-2020, Time: 09:08:41, ID: 1904159-15 PDI-024SC-A-02-03-190927, Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

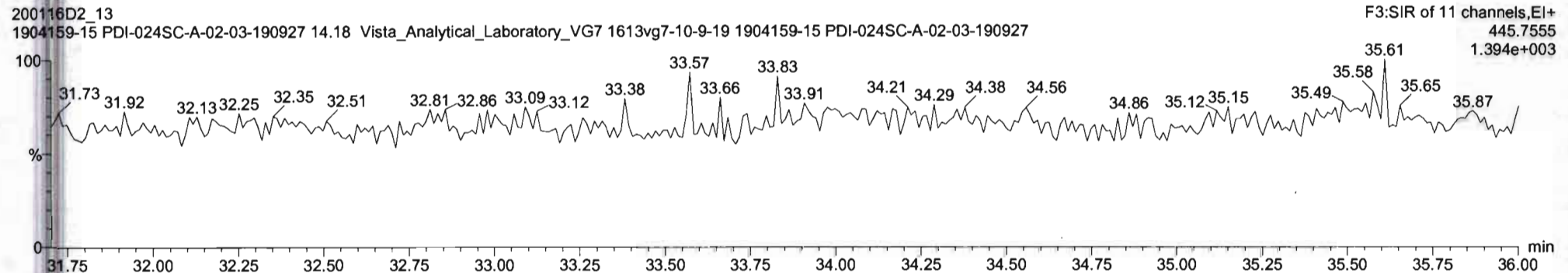
Total Hexa-Furans



13C-1,2,3,4,7,8-HxCDF



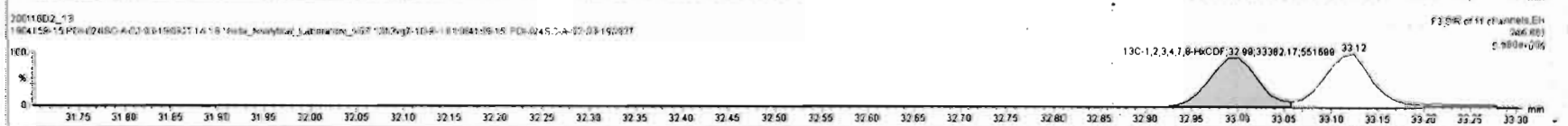
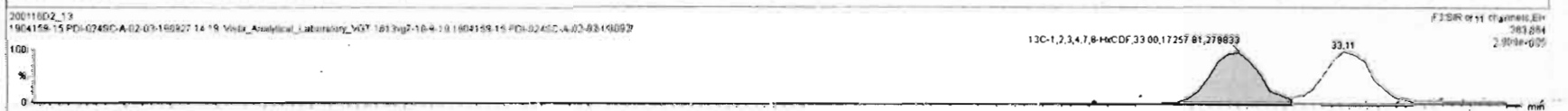
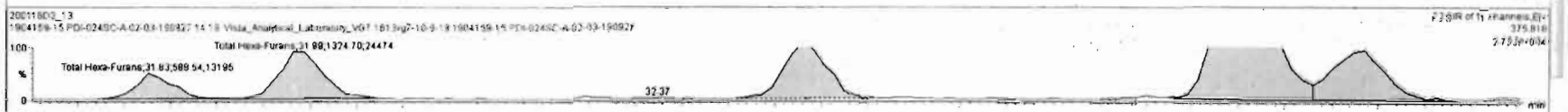
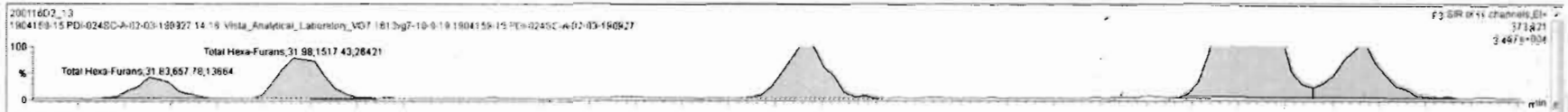
DPE3



20011602-13: 1904159-15 PDI-0245C-A-02-03-190927 14 19 1904159-15 PDI-0245C-A-02-03-190927 14 19 1904159-15 PDI-0245C-A-02-03-190927

#	Name	Resp	IS Resp	ISF	RA	ISY	RRF	wtAve	Pred RT	RT	FRT	Pred RRT	Chex RRT	Conc	Ytrec	DL	EMPC
44	44 1st Func. Penta-Furans	0.00e0					0.940	10.092	27.63			0.000	NO	4.316	0.148	4.316	
45	45 Total Penta-Furans	0.00e0					0.940	10.092	30.00			0.000	NO	66.87	0.369	67.58	
46	46 Total Hexa-Furans	0.00e0					1.078	10.092	33.00			0.000	NO	101.8	0.695	101.8	
47	47 Total Hepta-Furans	0.00e0					1.135	10.092	37.75			0.000	NO	86.91	0.990	86.91	
48	48 PPK1																
49	49 PPK2																
50	50 PPK3																
51	51 PPK4																

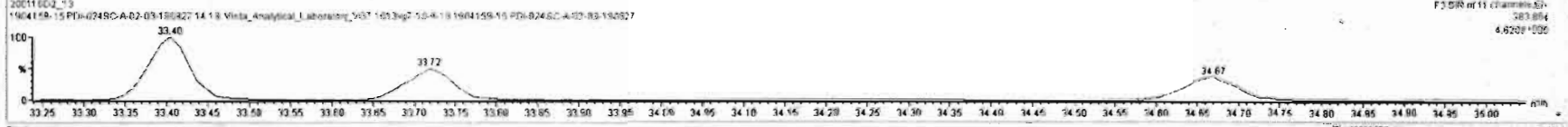
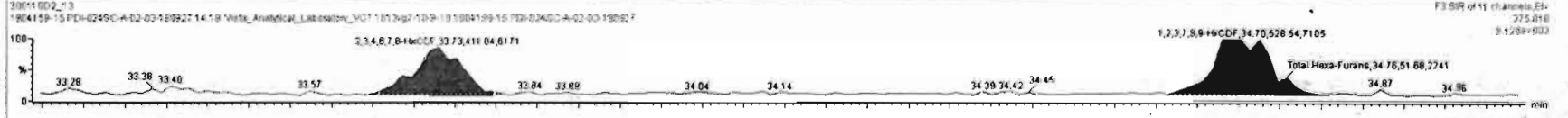
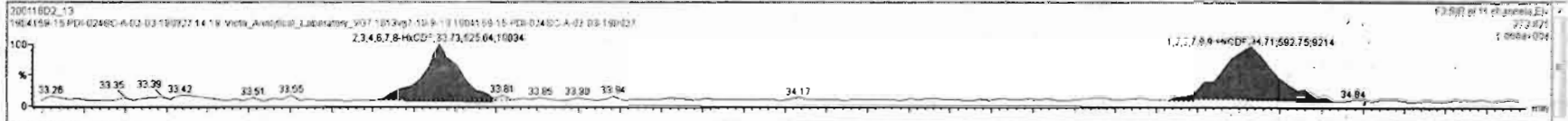
#	Name	Pred RT	RT	wt Resp	IS2 Resp	Pred RA	RA	ISY	EMPC	Conc.
1	46 Total Hexa-Furans	33.00	31.83	5.579e2	5.895e2	1.240	1.12	NO	4.8103	4.8103
2	46 Total Hexa-Furans	33.00	31.98	1.517e3	1.325e3	1.240	1.15	NO	10.989	10.969
3	46 Total Hexa-Furans	33.00	32.53	1.929e3	1.571e3	1.240	1.23	NO	13.506	13.508
4	11 1,2,3,4,7,8-HxCDF	33.00	33.01	8.137e3	6.830e3	1.240	1.19	NO	48.774	48.774
5	12 1,2,3,6,7,8-HxCDF	33.12	33.14	2.124e3	1.731e3	1.240	1.23	NO	13.381	13.381
6	13 2,3,4,6,7,8-HxCDF	33.75	33.73	5.176e2	3.961e2	1.240	1.31	NO	3.5953	3.5953
7	14 1,2,3,7,8,9-HxCDF	34.67	34.71	7.039e2	5.815e2	1.240	1.21	NO	5.8073	5.8073



20011602\_13 - 1904159-15 PDI-0245C-A-02-03-190927 - 1904159-15 PDI-0245C-A-02-03-190927 14 18 Vista\_Analytical\_Laboratory\_V07\_1013q7-10-9-10

#	Name	Conc.	DL	%Rec	EMPC	Atts Resp	RPF	RT	#	RF	RA	VM	RRT	Acq Date	Acq Time	1 <sup>st</sup> Ch Noise	ID	Sample Text	Factor1	SNW	Cal File
1	2,3,7,8-TCDD	1.62982	0.442		1.62982	3.20962		26.01	1	18	0.871	NO	1.001	17-JAN-20	09:08:41	213.377	1904159-15	1904159-15 PDI...	0.0	10.1	
2	1,2,3,7,8-PeCDD	1.00088	0.421		1.00088	1.87562		30.58	2	19	0.543	NO	1.001	17-JAN-20	09:08:41	226.327	1904159-15	1904159-15 PDI...	0.0	10.1	
3	1,2,3,4,7,8-HxCDD	0.979016	0.921		0.979016	1.71962		33.91	3	20	1.106	NO	1.001	17-JAN-20	09:08:41	441.826	1904159-15	1904159-15 PDI...	0.0	10.1	
4	1,2,3,6,7,8-HxCDD	4.36693	0.961		4.36693	7.53962		34.00	4	21	1.130	NO	1.000	17-JAN-20	09:08:41	441.826	1904159-15	1904159-15 PDI...	0.0	10.1	
5	1,2,3,7,8,9-HxCDD	1.54981	1.11		1.54981	2.54162		34.29	5	22	1.405	NO	1.010	17-JAN-20	09:08:41	441.826	1904159-15	1904159-15 PDI...	0.0	10.1	
6	1,2,3,4,6,7,8-HpCDD	101.241	2.18		101.241	1.38664		37.78	6	23	1.020	NO	1.010	17-JAN-20	09:08:41	678.629	1904159-15	1904159-15 PDI...	0.0	10.1	
7	OCDD	1121.26	2.62		1121.26	1.10985		41.05	7	24	0.955	NO	1.010	17-JAN-20	09:08:41	633.343	1904159-15	1904159-15 PDI...	0.0	10.1	
8	2,3,7,8-TCDF	23.2777	0.893		23.2777	6.97063		25.21	8	25	0.822	NO	1.001	17-JAN-20	09:08:41	705.881	1904159-15	1904159-15 PDI...	0.0	10.1	
9	1,2,3,7,8-HxCDF	58.6366	0.961		58.6366	1.27764		30.91	9	26	1.473	NO	1.001	17-JAN-20	09:08:41	340.879	1904159-15	1904159-15 PDI...	0.0	10.1	

#	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	rvy	Resp	Conc.	EMPC
1	1,2,3,7,8-HxCDF	34.71	9.214e3	7.105e3	5.027e2	5.285e2	1.12	NO	1.121e3	5.07	5.07
2	2,3,4,6,7,8-HxCDF	33.73	1.003e4	8.171e3	6.256e2	4.110e2	1.26	NO	9.307e2	3.09	3.08
3	1,2,3,6,7,8-HxCDF	33.14	3.773e4	2.899e4	2.124e3	1.731e3	1.23	NO	3.855e3	13.4	13.4
4	1,2,3,4,7,8-HxCDF	33.01	1.484e5	1.102e5	8.137e3	6.830e3	1.19	NO	1.487e4	48.8	48.8
5	Total Hexa-Furans	32.53	3.742e4	2.951e4	1.829e3	1.571e3	1.23	NO	3.580e3	13.5	13.5
6	Total Hexa-Furans	31.96	2.842e4	2.447e4	1.517e3	1.325e3	1.15	NO	2.842e3	11.0	11.0
7	Total Hexa-Furans	31.83	1.366e4	1.320e4	6.578e2	5.885e2	1.12	NO	1.246e3	4.81	4.81
8	Total Hexa-Furans	34.75	3.744e3	2.241e3	9.979e1	5.168e1	1.93	YES	0.000e0	0.000	0.447



Vista Analytical Laboratory

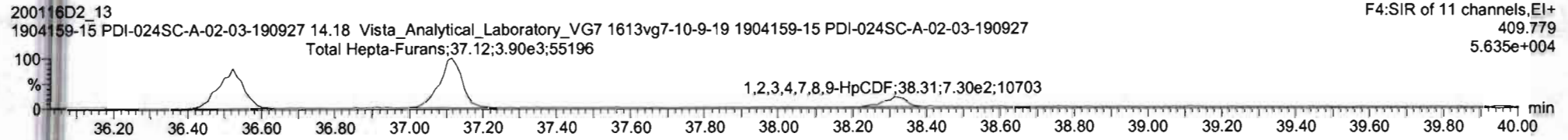
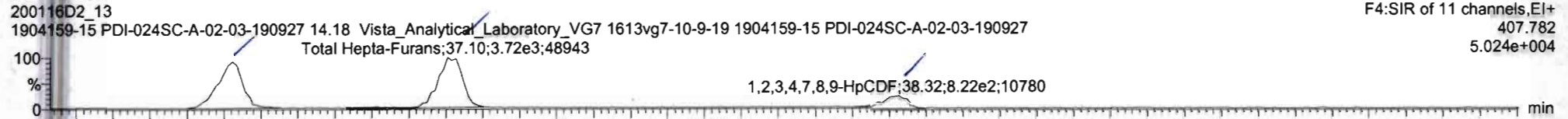
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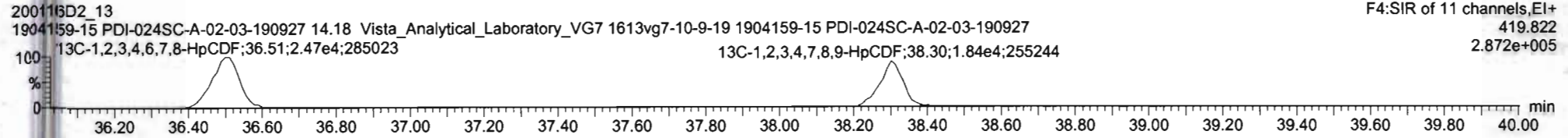
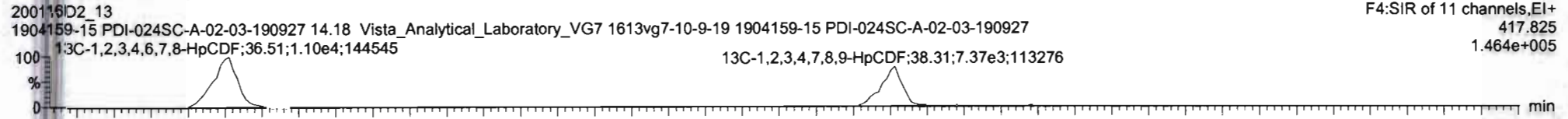
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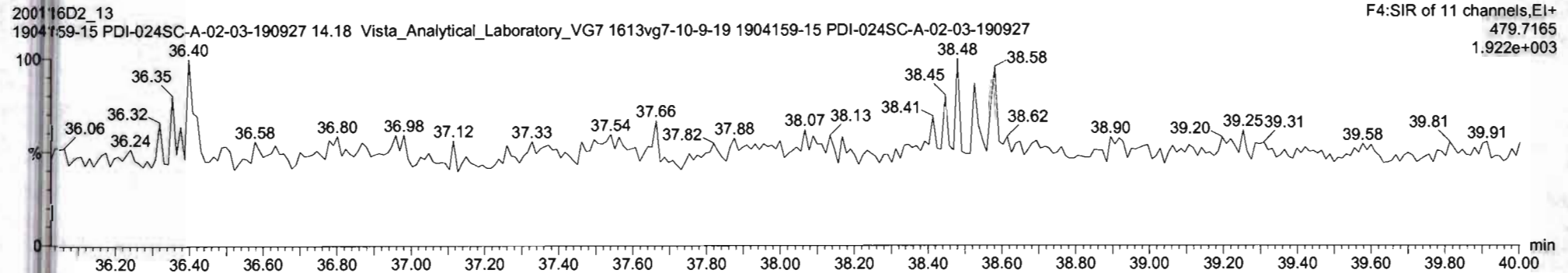
Total Hepta-Furans



13C-1,2,3,4,6,7,8-HpCDF



DPE4



Vista Analytical Laboratory

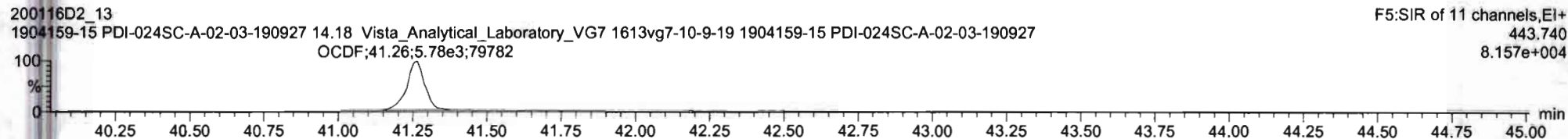
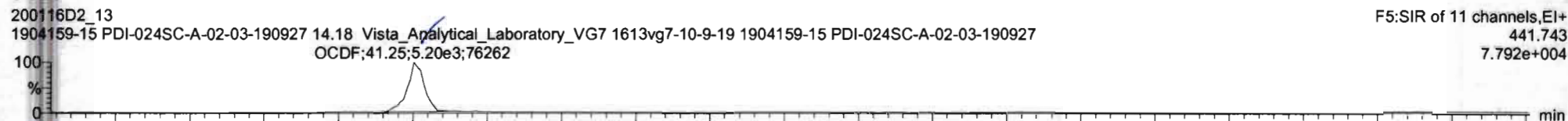
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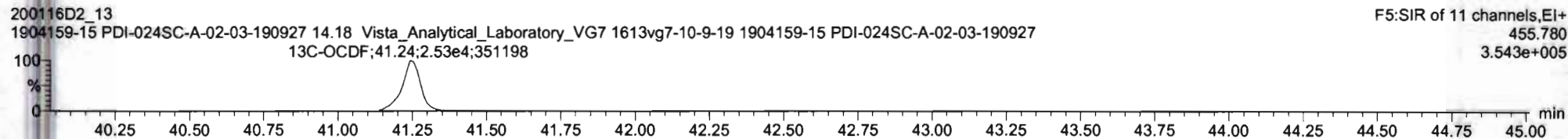
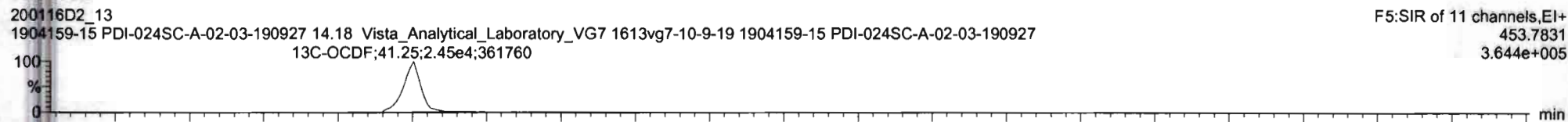
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Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

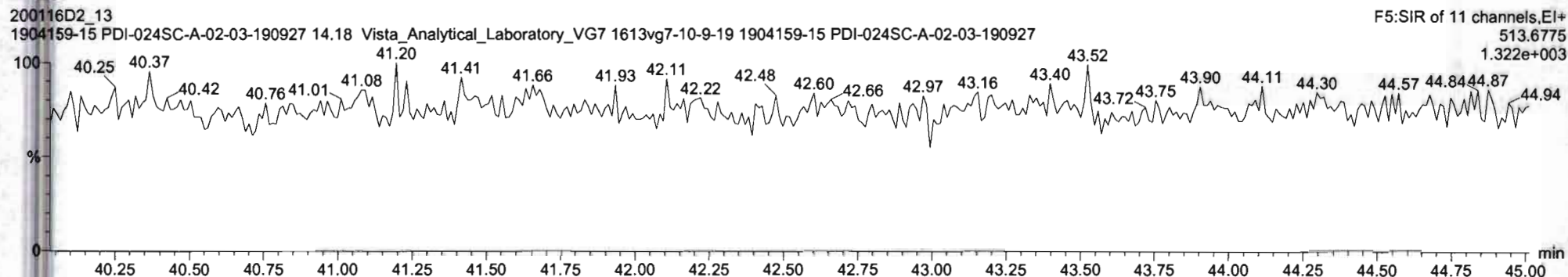
OCDF



13C-OCDF



DPE5





Vista Analytical Laboratory

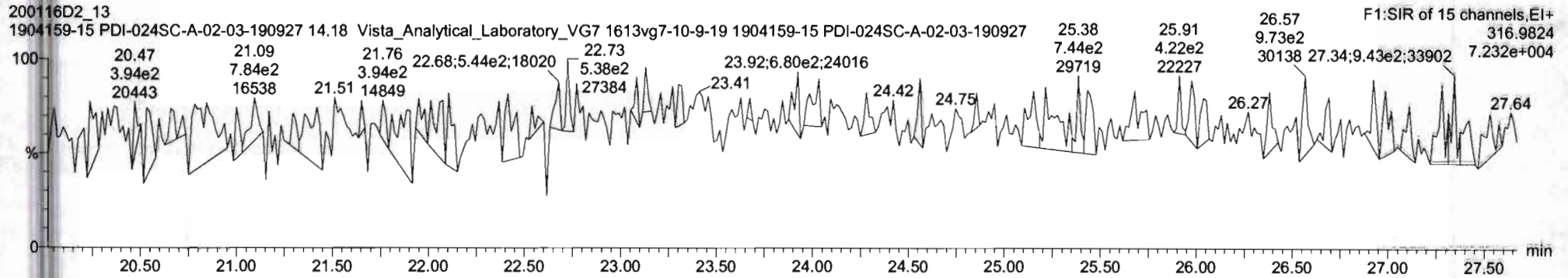
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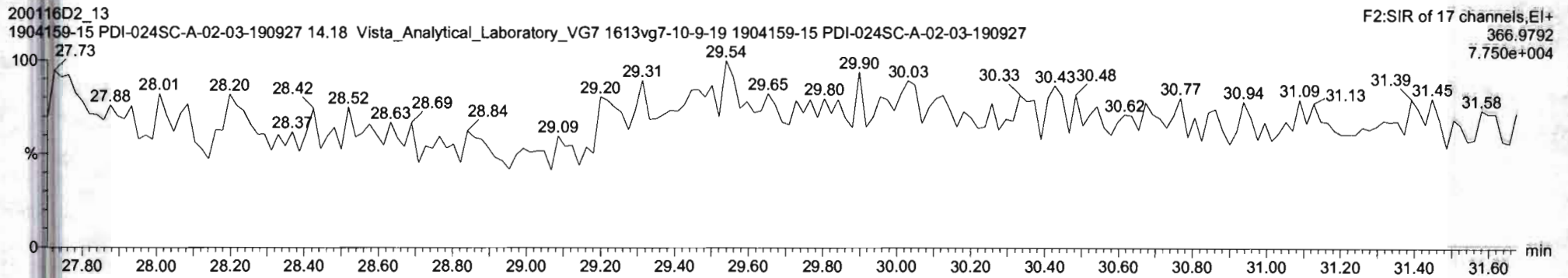
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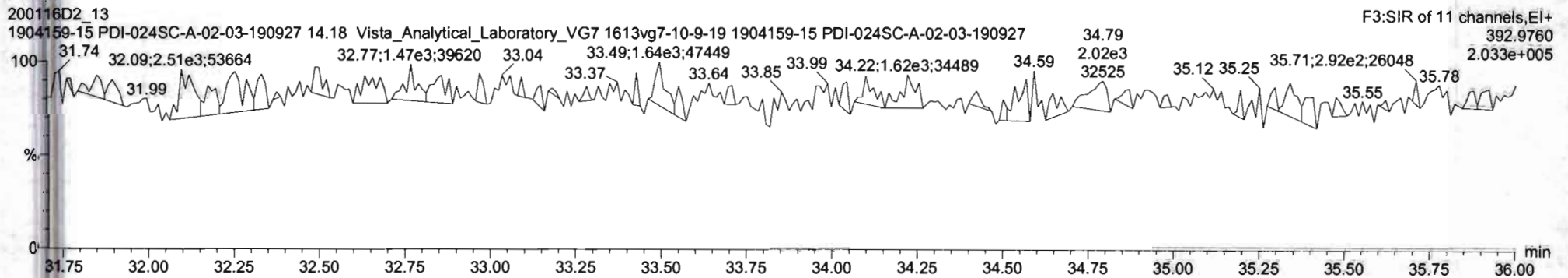
PFK1



PFK2



PFK3



Vista Analytical Laboratory

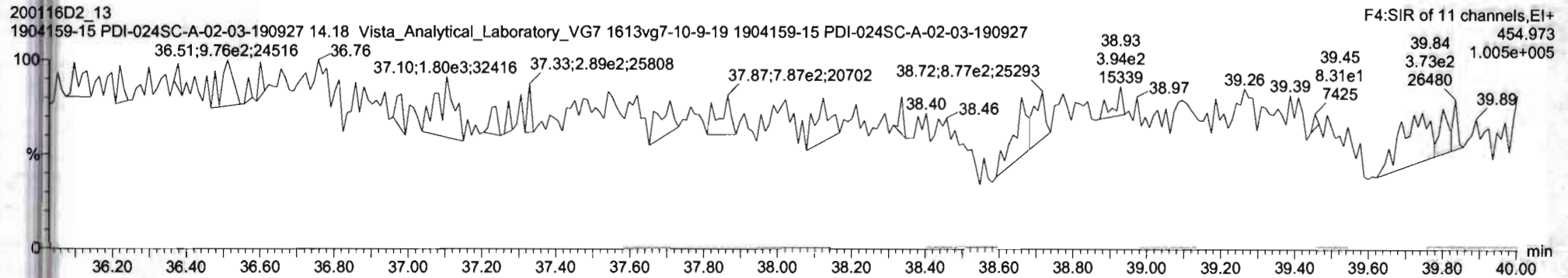
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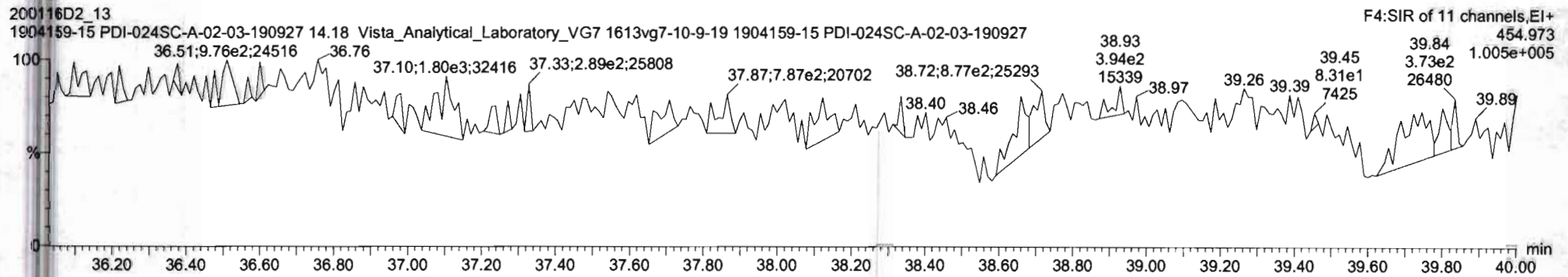
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Description: 1904159-15 PDI-024SC-A-02-03-190927 14.18 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

PFK4



PFK5



Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-14B.qld

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GRB 01/31/2020

C1 02/03/2020

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Calibration: 28 Jan 2020 15:35:20

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Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
1	1 2,3,7,8-TCDD		6.29e4	10.0406	0.905			1.001		26.01					0.331
2	2 1,2,3,7,8-PeCDD		3.73e4	10.0406	0.903			1.001		30.58					0.425
3	3 1,2,3,4,7,8-HxCDD		3.19e4	10.0406	1.101			1.000		33.90					0.833
4	4 1,2,3,6,7,8-HxCDD	9.49e2	3.83e4	10.0406	0.939	1.393	NO	1.000	1.001	33.99	34.01	5.2608		5.26	0.874
5	5 1,2,3,7,8,9-HxCDD		3.36e4	10.0406	0.961			1.001		34.32					1.02
6	6 1,2,3,4,6,7,8-HpCDD	2.13e4	2.27e4	10.0406	0.979	1.021	NO	1.000	1.000	37.78	37.78	190.90		191	2.88
7	7 OCDD	2.33e5	3.96e4	10.0406	0.959	0.902	NO	1.000	1.000	41.03	41.05	2443.2		2440	2.99
8	8 2,3,7,8-TCDF	9.07e2	8.71e4	10.0406	0.950	0.669	NO	1.001	1.001	25.21	25.20	2.1830 (1.825)		2.18	0.353
9	9 1,2,3,7,8-PeCDF	1.30e3	6.64e4	10.0406	0.960	1.781	NO	1.001	1.001	29.39	29.39	4.0578		4.06	0.292
10	10 2,3,4,7,8-PeCDF	6.13e2	5.48e4	10.0406	1.015	1.661	NO	1.001	1.001	30.31	30.31	2.1947		2.19	0.342
11	11 1,2,3,4,7,8-HxCDF	1.99e3	4.66e4	10.0406	1.177	1.156	NO	1.000	1.001	32.99	33.01	7.2361		7.24	0.463
12	12 1,2,3,6,7,8-HxCDF	6.37e2	5.13e4	10.0406	1.069	1.119	NO	1.000	1.000	33.12	33.12	2.3154		2.32	0.454
13	13 2,3,4,6,7,8-HxCDF	3.40e2	4.26e4	10.0406	1.114	1.076	NO	1.001	1.000	33.74	33.72	1.4253		1.43	0.583
14	14 1,2,3,7,8,9-HxCDF	1.22e2	4.03e4	10.0406	1.062	1.329	NO	1.000	1.000	34.68	34.67	0.56695		0.567	0.776
15	15 1,2,3,4,6,7,8-HpCDF	3.79e3	3.01e4	10.0406	1.128	1.022	NO	1.001	1.000	36.54	36.51	22.279		22.3	1.04
16	16 1,2,3,4,7,8,9-HpCDF	3.64e2	2.05e4	10.0406	1.280	1.186	NO	1.000	1.000	38.31	38.30	2.7585		2.76	1.15
17	17 OCDF	9.92e3	4.66e4	10.0406	0.947	0.864	NO	1.000	1.001	41.24	41.27	89.515		89.5	0.937
18	18 13C-2,3,7,8-TCDD	6.29e4	7.84e4	10.0406	1.095	0.753	NO	1.023	1.022	25.99	25.98	145.87	73.2		0.588
19	19 13C-1,2,3,7,8-PeCDD	3.73e4	7.84e4	10.0406	0.881	0.630	NO	1.203	1.202	30.57	30.56	107.45	53.9		0.404
20	20 13C-1,2,3,4,7,8-Hx...	3.19e4	8.44e4	10.0406	0.642	1.286	NO	1.014	1.014	33.87	33.89	117.17	58.8		0.869
21	21 13C-1,2,3,6,7,8-Hx...	3.83e4	8.44e4	10.0406	0.856	1.230	NO	1.017	1.017	33.99	33.99	105.57	53.0		0.652
22	22 13C-1,2,3,7,8,9-Hx...	3.36e4	8.44e4	10.0406	0.807	1.199	NO	1.026	1.026	34.28	34.29	98.144	49.3		0.692
23	23 13C-1,2,3,4,6,7,8-H...	2.27e4	8.44e4	10.0406	0.654	1.026	NO	1.131	1.131	37.78	37.76	81.852	41.1		0.880
24	24 13C-OCDD	3.96e4	8.44e4	10.0406	0.580	0.931	NO	1.228	1.228	41.03	41.03	161.26	40.5		0.820
25	25 13C-2,3,7,8-TCDF	8.71e4	7.69e4	10.0406	1.035	0.810	NO	0.992	0.991	25.21	25.18	217.93	109.4		0.747
26	26 13C-1,2,3,7,8-PeCDF	6.64e4	7.69e4	10.0406	0.854	1.583	NO	1.156	1.156	29.38	29.37	201.46	101.1		1.20
27	27 13C-2,3,4,7,8-PeCDF	5.48e4	7.69e4	10.0406	0.847	1.525	NO	1.192	1.191	30.29	30.28	167.55	84.1		1.21
28	28 13C-1,2,3,4,7,8-Hx...	4.66e4	8.44e4	10.0406	0.832	0.524	NO	0.987	0.988	32.98	32.99	132.04	66.3		1.64
29	29 13C-1,2,3,6,7,8-Hx...	5.13e4	8.44e4	10.0406	1.034	0.515	NO	0.991	0.991	33.10	33.11	116.98	58.7		1.32
30	30 13C-2,3,4,6,7,8-Hx...	4.26e4	8.44e4	10.0406	0.953	0.515	NO	1.009	1.009	33.71	33.71	105.47	52.9		1.43
31	31 13C-1,2,3,7,8,9-Hx...	4.03e4	8.44e4	10.0406	0.828	0.487	NO	1.038	1.038	34.67	34.68	114.81	57.6		1.65

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-14B.qld

Last Altered: Friday, January 31, 2020 12:12:46 Pacific Standard Time

Printed: Friday, January 31, 2020 12:13:14 Pacific Standard Time

Name: VG7 200116D2-14, Date: 17-JAN-2020, Time: 09:56:38, ID: 1904159-16 PDI-024SC-A-03-04-190927,  
 Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

#	Name	Area	IS Area	Wt./Vol.	RRF	RA	Y/N	Pred...	RRT	Pred.RT	RT	Conc.	%Rec	EMPC	DL
32	32 13C-1,2,3,4,6,7,8-H...	3.01e4	8.44e4	10.0406	0.757	0.442	NO	1.093	1.093	36.50	36.50	93.706	47.0		0.900
33	33 13C-1,2,3,4,7,8,9-H...	2.05e4	8.44e4	10.0406	0.581	0.374	NO	1.147	1.147	38.31	38.31	83.293	41.8		1.17
34	34 13C-OCDF	4.66e4	8.44e4	10.0406	0.689	0.869	NO	1.235	1.235	41.25	41.24	159.59	40.1		0.877
35	35 37Cl-2,3,7,8-TCDD	2.63e4	7.84e4	10.0406	1.198			1.024	1.023	26.02	26.01	55.669	69.9		0.224
36	36 13C-1,2,3,4-TCDD	7.84e4	7.84e4	10.0406	1.000	0.792	NO	1.000	1.000	25.39	25.42	199.19	100.0		0.644
37	37 13C-1,2,3,4-TCDF	7.69e4	7.69e4	10.0406	1.000	0.768	NO	1.000	1.000	23.93	23.95	199.19	100.0		0.774
38	38 13C-1,2,3,4,6,9-Hx...	8.44e4	8.44e4	10.0406	1.000	0.514	NO	1.000	1.000	33.37	33.40	199.19	100.0		1.37
39	39 Total Tetra-Dioxins		6.29e4	10.0406	0.901			0.000		25.50		0.46862		0.469	0.333
40	40 Total Penta-Dioxins		3.73e4	10.0406	0.872			0.000		30.00					0.203
41	41 Total Hexa-Dioxins		0.00e0	10.0406	0.976			0.000		33.80		27.064		27.1	0.923
42	42 Total Hepta-Dioxins		2.27e4	10.0406	0.989			0.000		37.75		396.86		397	2.85
43	43 Total Tetra-Furans		8.71e4	10.0406	0.943			0.000		24.00		3.0219		5.56	0.355
44	44 1st Func. Penta-Fur...		0.00e0	10.0406	0.940			0.000		27.63		3.4925		3.49	0.144
45	45 Total Penta-Furans		0.00e0	10.0406	0.940			0.000		30.00		13.034		14.6	0.331
46	46 Total Hexa-Furans		0.00e0	10.0406	1.078			0.000		33.00		52.733		52.7	0.570
47	47 Total Hepta-Furans		0.00e0	10.0406	1.135			0.000		37.75		100.44		100	1.14

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-14B.qld  
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 Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Tetra-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	39 Total Tetra-Dioxins	NO	24.09	57.216	27035.664	4.239	db	0.4686	0.47

**Penta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1									

**Hexa-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	4 1,2,3,6,7,8-HxCDD	NO	34.01	552.570	21120.666	49.578	bb	5.2608	5.26
2	41 Total Hexa-Dioxins	NO	33.20	1042.659	19119.825	109.738	MM	11.1993	11.20
3	41 Total Hexa-Dioxins	NO	32.95	168.425	19119.825	17.168	MM	1.7521	1.75
4	41 Total Hexa-Dioxins	NO	32.36	801.069	19119.825	86.736	MM	8.8518	8.85

**Hepta-Dioxins**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	NO	37.78	10760.083	11488.919	1877.263	bb	190.8993	190.90
2	42 Total Hepta-Dioxins	NO	36.91	11770.788	11488.919	2044.584	bb	205.9585	205.96

**Tetra-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	43 Total Tetra-Furans	YES	21.59	158.399	38982.305	0.000	MM	0.0000	0.67
2	8 2,3,7,8-TCDF	NO	25.20	363.378	38982.305	20.825	db	2.1830	2.18
3	43 Total Tetra-Furans	NO	25.10	160.213	38982.305	7.941	bd	0.8389	0.84
4	43 Total Tetra-Furans	YES	24.37	392.013	38982.305	0.000	bb	0.0000	1.87

Vista Analytical Laboratory

Dataset: U:\VG7.PRO\Results\200116D2\200116D2-14B.qld  
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Name: VG7 200116D2-14, Date: 17-JAN-2020, Time: 09:56:38, ID: 1904159-16 PDI-024SC-A-03-04-190927,  
 Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

**Penta-Furans function 1**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	44 1st Func. Penta-Furans	NO	27.02	598.383	36913.436	32.949	bb	3.4925	3.49

**Penta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	45 Total Penta-Furans	YES	29.01	176.684	36913.436	0.000	MM	0.0000	1.02
2	45 Total Penta-Furans	NO	28.46	786.411	36913.436	41.428	MM	4.3913	4.39
3	10 2,3,4,7,8-PeCDF	NO	30.31	382.521	33103.371	22.363	MM	2.1947	2.19
4	45 Total Penta-Furans	NO	29.63	295.269	36913.436	16.446	bb	1.7432	1.74
5	9 1,2,3,7,8-PeCDF	NO	29.39	832.496	40723.500	39.129	MM	4.0578	4.06
6	45 Total Penta-Furans	NO	29.22	117.163	36913.436	6.102	bb	0.6468	0.65
7	45 Total Penta-Furans	YES	30.33	119.826	36913.436	0.000	MM	0.0000	0.59

**Hexa-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	46 Total Hexa-Furans	NO	31.99	1289.765	15278.763	102.284	MM	9.4534	9.45
2	46 Total Hexa-Furans	NO	31.84	471.027	15278.763	39.192	bb	3.6222	3.62
3	14 1,2,3,7,8,9-HxCDF	NO	34.67	69.461	13193.450	6.043	MM	0.5669	0.57
4	13 2,3,4,6,7,8-HxCDF	NO	33.72	176.042	14490.703	15.937	bb	1.4253	1.43
5	12 1,2,3,6,7,8-HxCDF	NO	33.12	336.582	17430.572	24.850	MM	2.3154	2.32
6	11 1,2,3,4,7,8-HxCDF	NO	33.01	1067.025	16000.325	85.500	bd	7.2361	7.24
7	46 Total Hexa-Furans	NO	32.52	3564.281	15278.763	291.941	MM	26.9822	26.98
8	46 Total Hexa-Furans	NO	34.73	158.770	15278.763	12.239	MM	1.1311	1.13

**Hepta-Furans**

	# Name	N/Y	RT	Area	IS Area	Response	Primary Flags	Conc.	EMPC
1	16 1,2,3,4,7,8,9-HpCDF	NO	38.30	197.381	5587.939	35.450	MM	2.7585	2.76
2	47 Total Hepta-Furans	NO	37.12	5441.263	7408.933	859.092	bb	75.4046	75.40
3	15 1,2,3,4,6,7,8-HpCDF	NO	36.51	1918.031	9229.927	252.236	bb	22.2788	22.28

Vista Analytical Laboratory

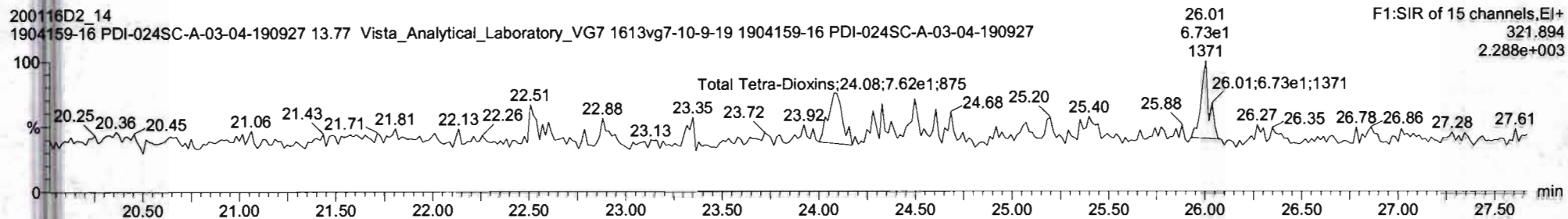
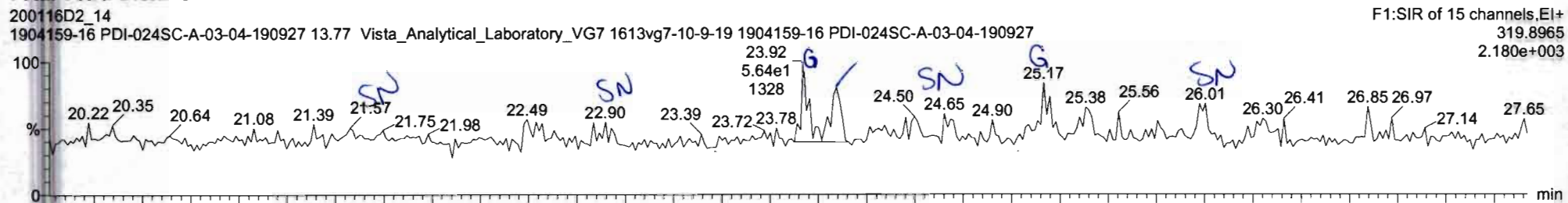
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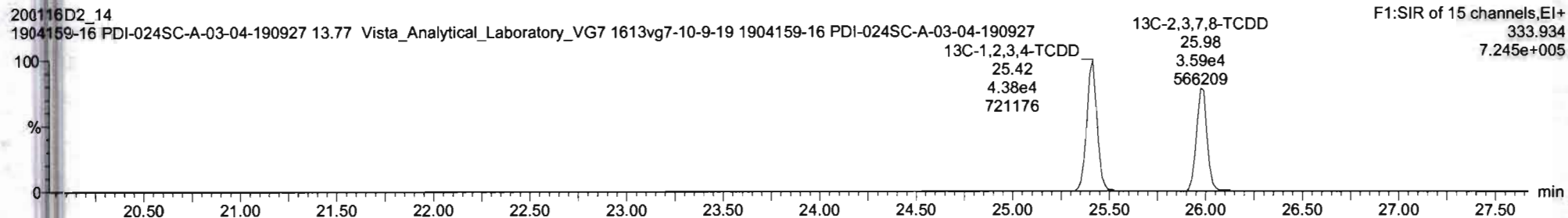
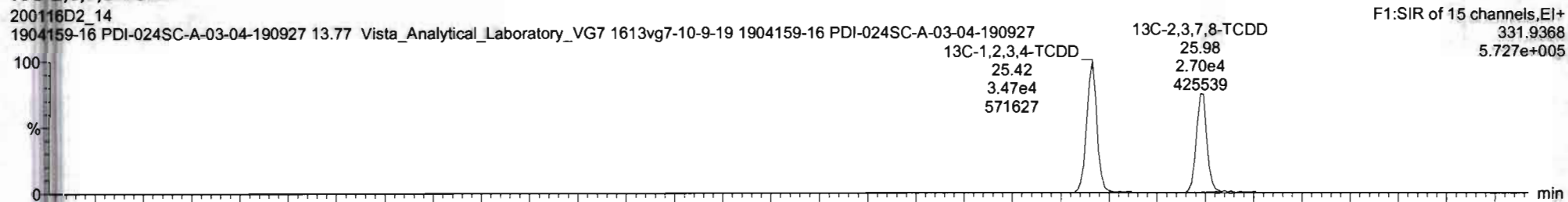
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Total Tetra-Dioxins



13C-2,3,7,8-TCDD







Vista Analytical Laboratory

Dataset: Untitled

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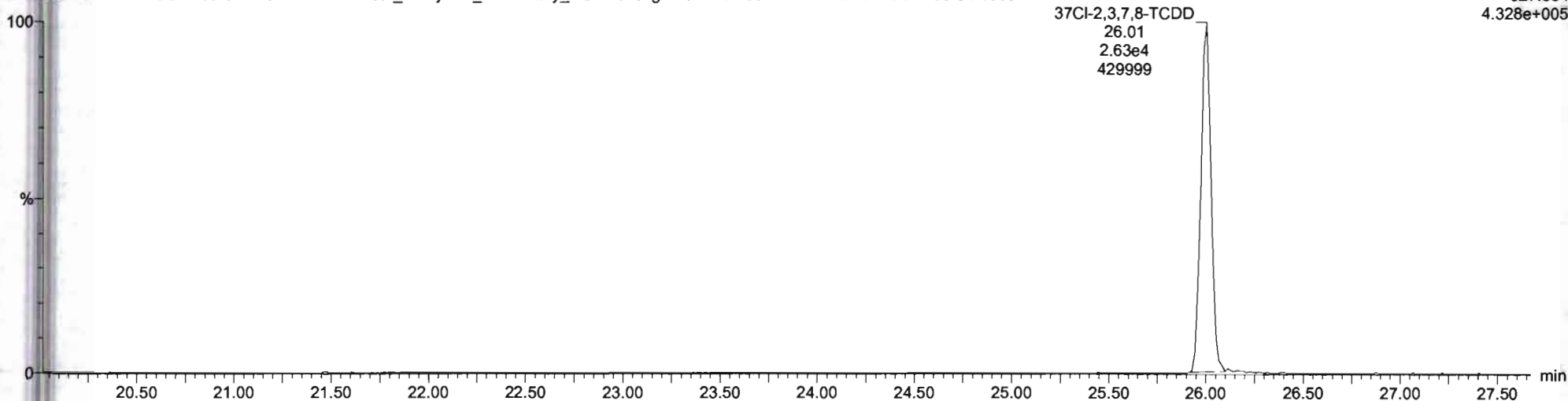
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**37Cl-2,3,7,8-TCDD**

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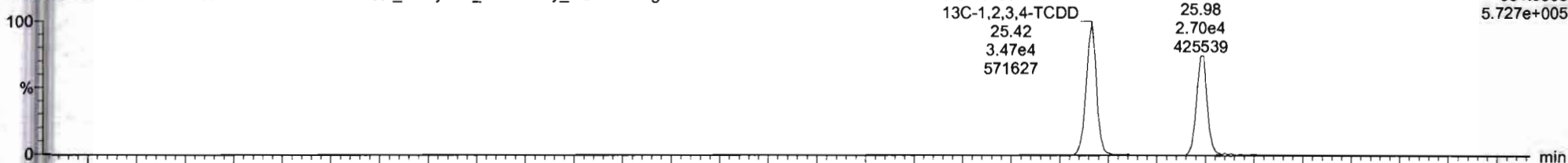
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**13C-1,2,3,4-TCDD**

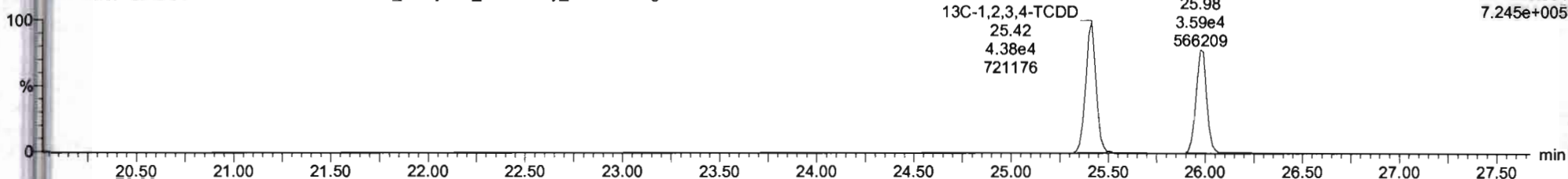
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F1:SIR of 15 channels,EI+  
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F1:SIR of 15 channels,EI+  
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Vista Analytical Laboratory

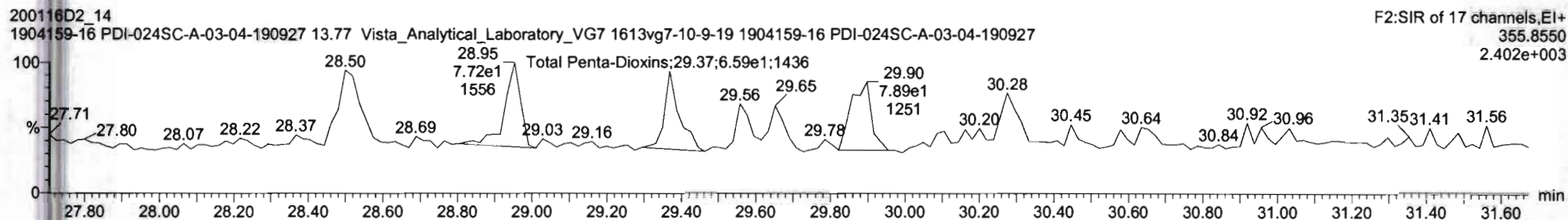
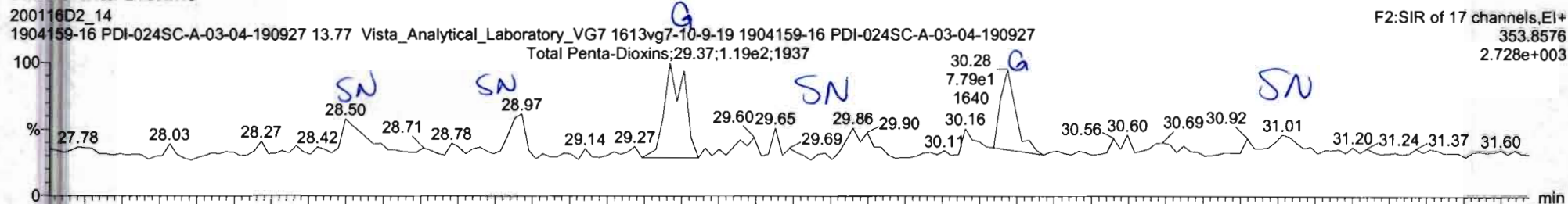
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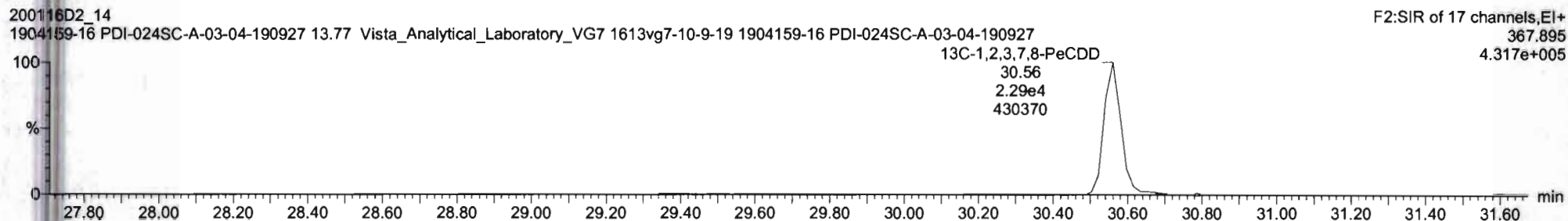
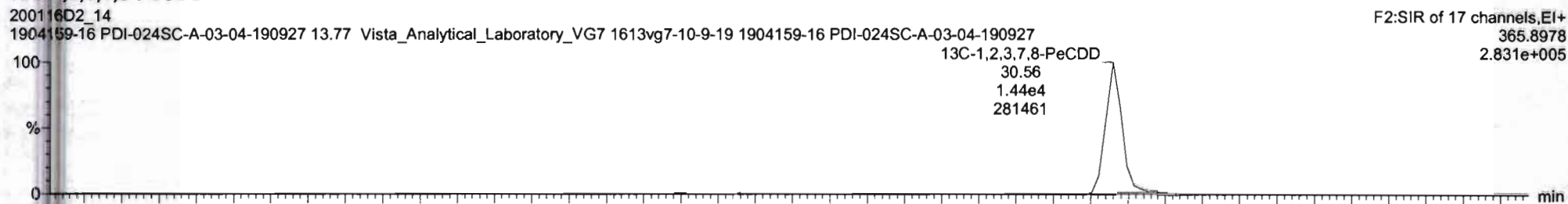
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Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Penta-Dioxins



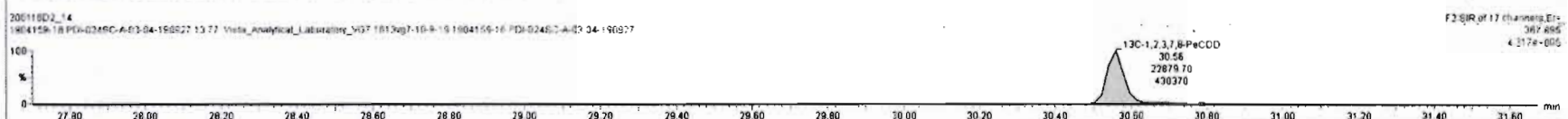
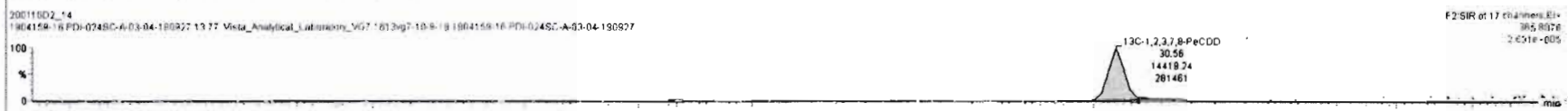
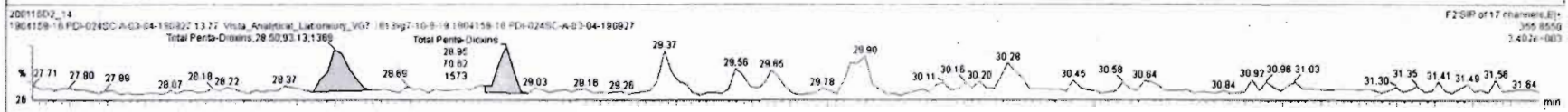
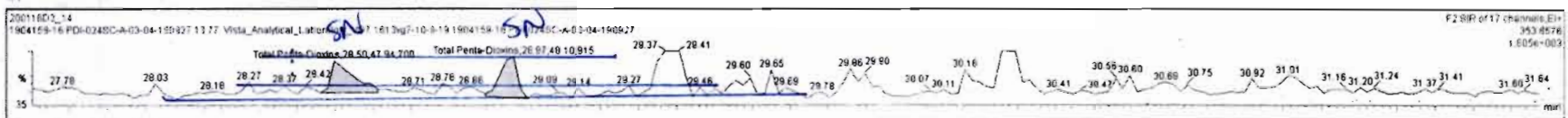
13C-1,2,3,7,8-PeCDD



200116D2-14 12/4/15 16:00:00

#	Name	Resp	IS Resp	Cal	RA	n/y	RRF	Vol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc.	%Rec	DL	EMPC
40	Total Penta-Dioxins		3.73e4				0.872	10.041	30.00			0.000	NO	0.7260	0.440	1.488	
41	Total Hexa-Dioxins		0.00e0				0.976	10.041	33.00			0.000	NO	24.95	0.923	25.58	
42	Total Hepta-Dioxins		2.27e4				0.999	10.041	37.75			0.000	NO	306.9	2.85	306.9	
43	Total Tetra-Furans		0.71e4				0.943	10.041	24.00			0.000	NO	3.089	0.355	6.603	
44	1st Func. Penta-Furans		0.00e0				0.940	10.041	27.53			0.000	NO	3.492	0.144	3.492	
45	Total Penta-Furans		0.00e0				0.940	10.041	30.00			0.000	NO	10.13	0.331	14.90	
46	Total Hexa-Furans		0.00e0				1.078	10.041	33.00			0.000	NO	52.42	0.570	52.97	
47	Total Hepta-Furans		0.00e0				1.135	10.041	37.75			0.000	NO	97.43	1.13	99.12	

#	Name	Pred RT	RT	Int Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc.
1	Total Penta Dioxine	30.00	29.50	4.794e1	9.313e1	0.630	0.51	YES	0.75938	0.00000
2	Total Penta-Dioxine	30.00	29.97	4.810e1	7.062e1	0.630	0.68	NO	0.72603	0.72693



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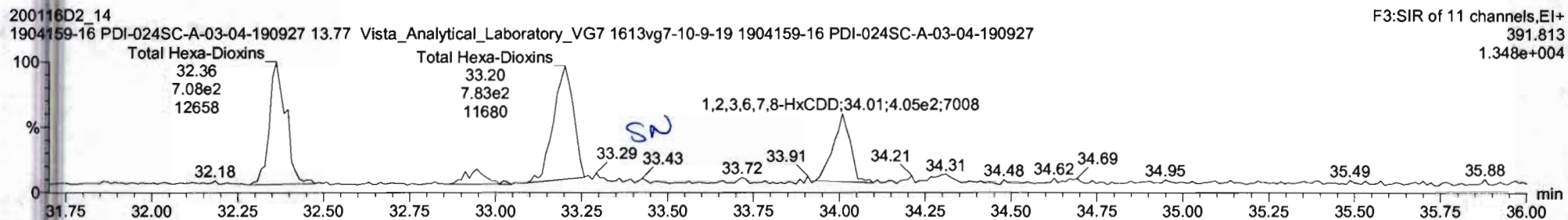
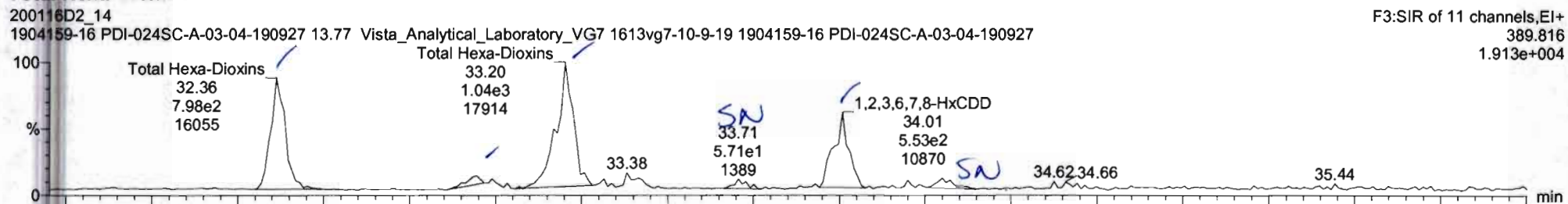
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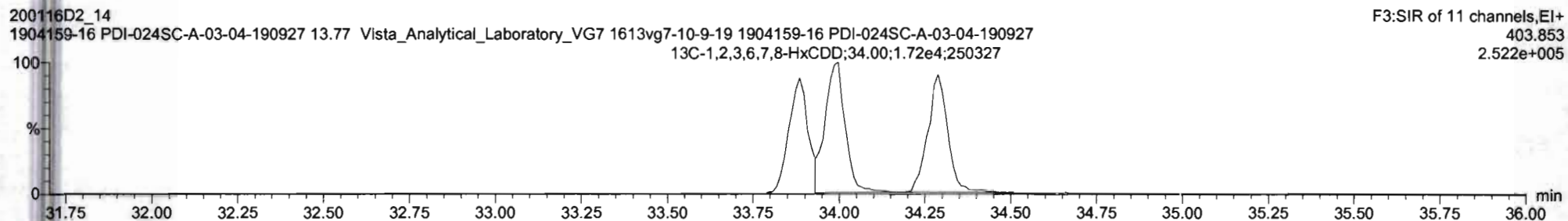
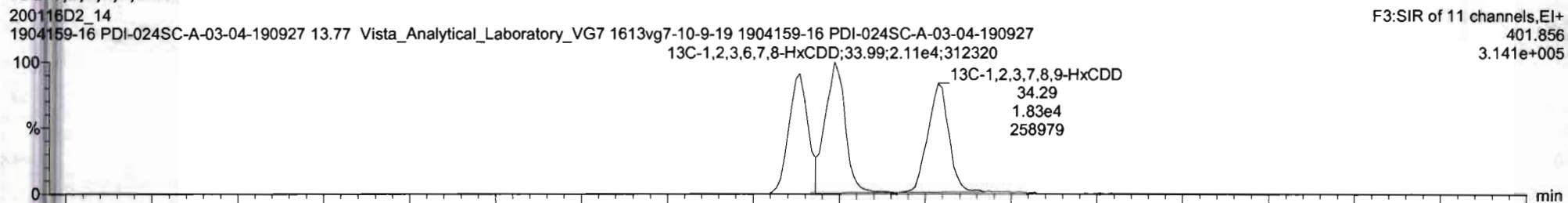
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Name: VG7 200116D2-14, Date: 17-JAN-2020, Time: 09:56:38, ID: 1904159-16 PDI-024SC-A-03-04-190927, Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Hexa-Dioxins



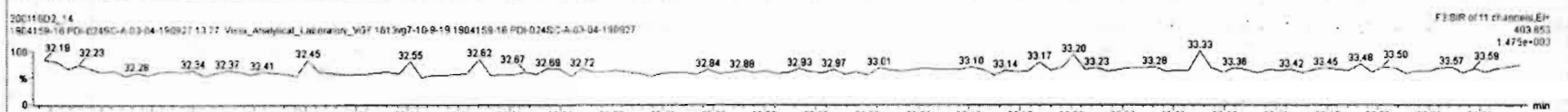
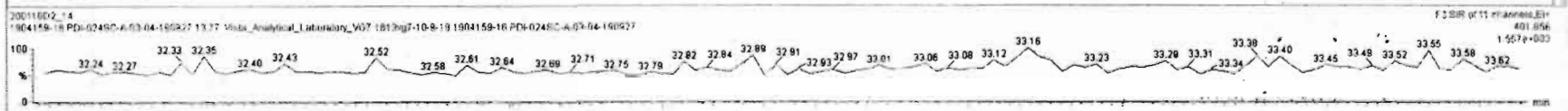
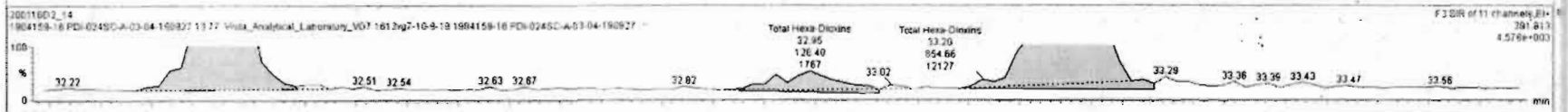
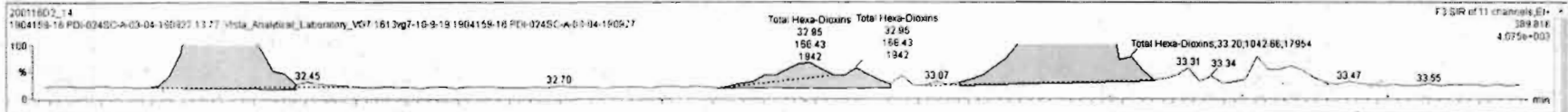
13C-1,2,3,4,7,8-HxCDD



20011602\_14 1904159-16 PDI-0245C-A-03-04-190927 13:27 Vista\_Analytical\_Laboratory\_V07 1613q7-10-9-19 1904159-16 PDI-0245C-A-03-04-190927

#	Name	Resp	IS Resp	FSR	RA	n/y	RRF	wt/val	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Area	Dc	EMPC
40	Total Penta-Dioxins		3.73e4				0.872	10.041	30.00			0.000	NO		0.203		
41	Total Hexa-Dioxins		0.00e0				0.876	10.041	33.80			0.000	NO	27.11	0.823	27.11	
42	Total Hepta-Dioxins		2.27e4				0.989	10.041	37.75			0.000	NO	356.9	2.85	356.9	
43	Total Tetra-Furans		8.71e4				0.943	10.041	24.00			0.000	NO	3.099	0.355	6.603	
44	1st Func. Penta-Furans		0.00e0				0.940	10.041	27.63			0.000	NO	3.492	0.144	3.492	
45	Total Penta-Furans		0.00e0				0.940	10.041	30.00			0.000	NO	10.13	0.331	14.90	
46	Total Hexa-Furans		0.00e0				1.076	10.041	33.00			0.000	NO	52.42	0.670	52.99	
47	Total Hepta-Furans		0.00e0				1.135	10.041	37.75			0.000	NO	97.43	1.13	99.12	

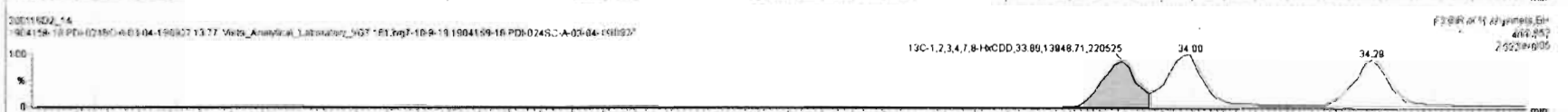
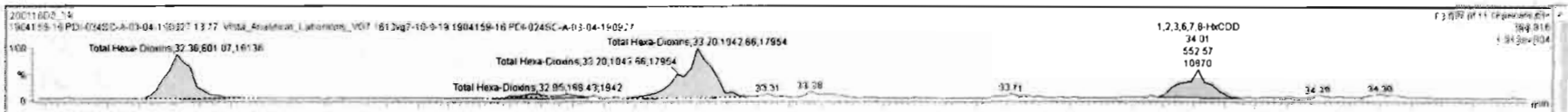
#	Name	Pred RT	RT	int Resp	int2 Resp	Pred RA	RA	n/y	EMPC	Conc.
1	41 Total Hexa-Dioxins	33.80	32.36	8.011e2	6.999e2	1.240	1.15	NO	8.8518	8.8518
2	41 Total Hexa-Dioxins	33.80	32.95	1.684e2	1.284e2	1.240	1.31	NO	1.7521	1.7521
3	41 Total Hexa-Dioxins	33.80	33.20	1.043e3	8.547e2	1.240	1.22	NO	11.190	11.190
4	4 1,2,3,6,7,8-HxCDD	33.80	34.01	5.526e2	4.046e2	1.240	1.37	NO	5.3055	5.3055



20011602-14 1904159-16 PDI-0245C-A-03-04-150927 13.77 Vials\_Analytical\_Laboratory\_V07 1612vg7-10-9-19 1904159-16 PDI-0245C-A-03-04-150927 13.77 Vials\_Analytical\_Laboratory\_V07 1612vg7-10-9-19

#	Name	Resp	IS Resp	RA	RA	RV	RRF	wt/Avol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	Dx	Int-C
40	Total Penta-Dioxin	3.73e4					0.872	10.041	30.00			0.000	NO				0.203
41	Total Hexa-Dioxins	0.00e0					0.976	10.041	33.80			0.000	NO	27.06	0.923		27.06
42	Total Hepta-Dioxins	2.27e4					0.989	10.041	37.75			0.000	NO	396.9	2.85		396.9
43	Total Tetra-Furans	8.71e4					0.943	10.041	24.00			0.000	NO	3.069	0.355		6.603
44	1st Func. Penta-Furans	0.00e0					0.940	10.041	27.63			0.000	NO	3.492	0.144		3.492
45	Total Penta-Furans	0.00e0					0.940	10.041	30.00			0.000	NO	10.13	0.331		14.90
46	Total Hexa-Furans	0.00e0					1.078	10.041	33.00			0.000	NO	52.42	0.570		52.97
47	Total Hepta-Furans	0.00e0					1.135	10.041	37.75			0.000	NO	97.43	1.13		99.12

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	RV	EMPC	Conc
1	Total Hexa-Dioxins	33.80	32.36	8.011e2	5.885e2	1.240	1.15	NO	8.8518	8.8518
2	Total Hexa-Dioxins	33.80	32.95	1.584e2	1.284e2	1.240	1.31	NO	1.7521	1.7521
3	Total Hexa-Dioxins	33.80	32.20	1.043e3	8.547e2	1.240	1.22	NO	11.199	11.199
4	1,2,3,6,7,8-HxCDD	33.80	34.01	5.526e2	3.965e2	1.240	1.39	NO	5.2608	5.2608



Vista Analytical Laboratory

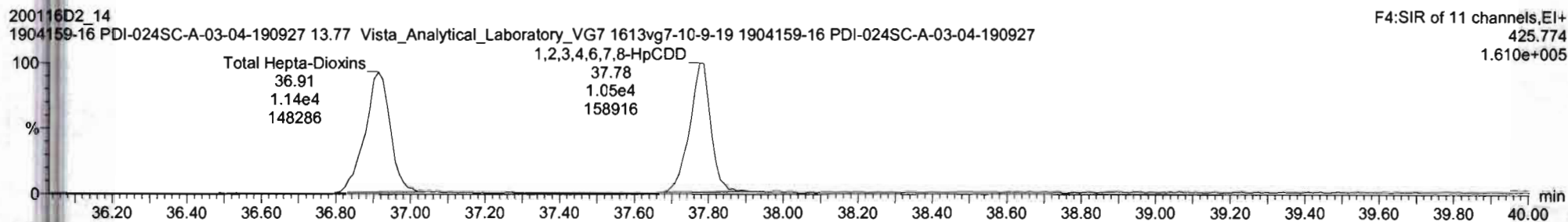
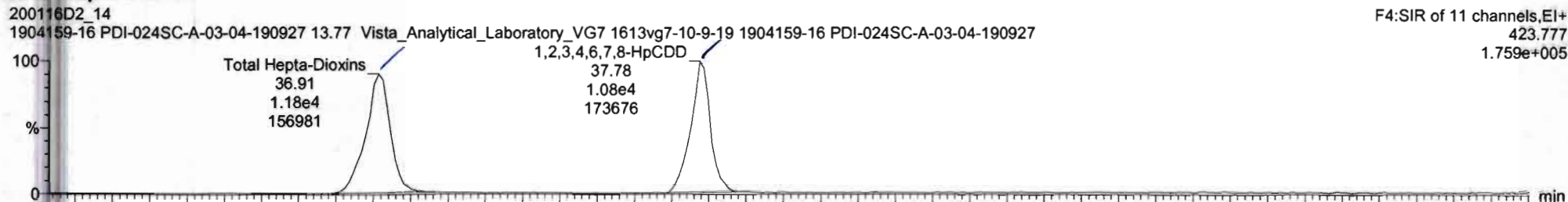
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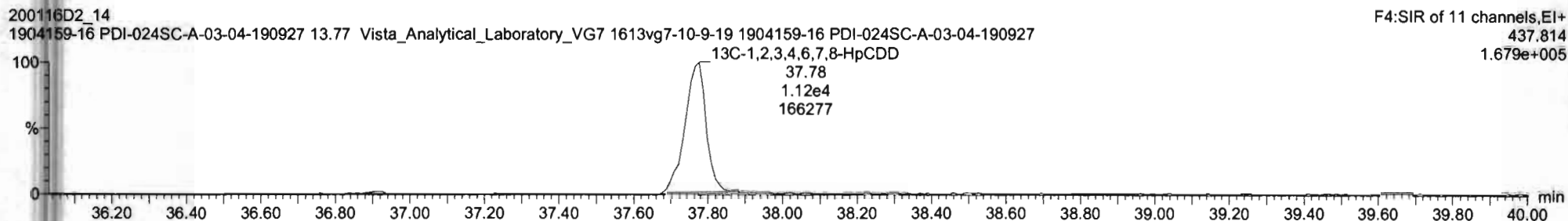
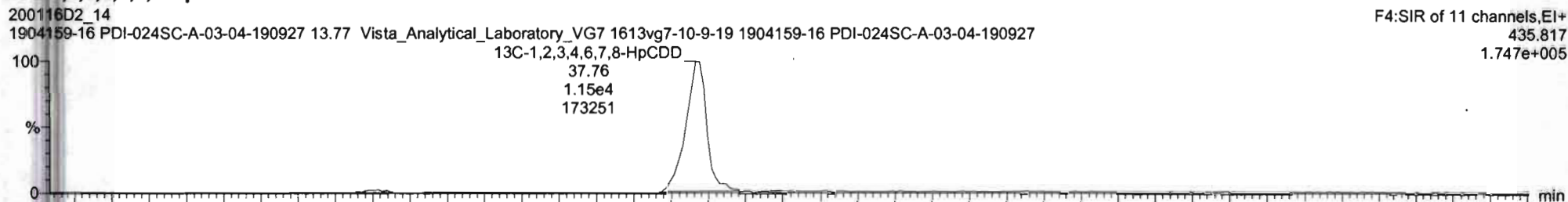
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Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

Total Hepta-Dioxins



13C-1,2,3,4,6,7,8-HpCDD



Vista Analytical Laboratory

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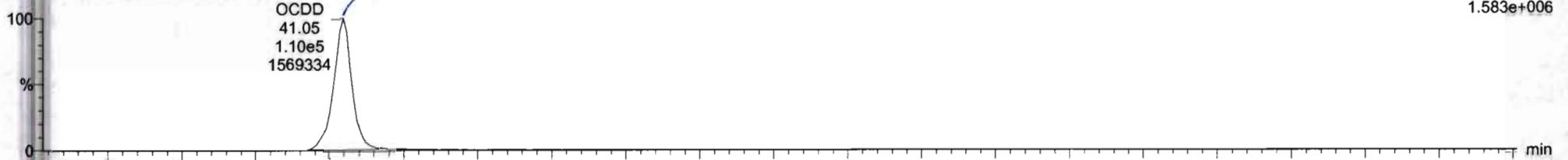
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OCDD

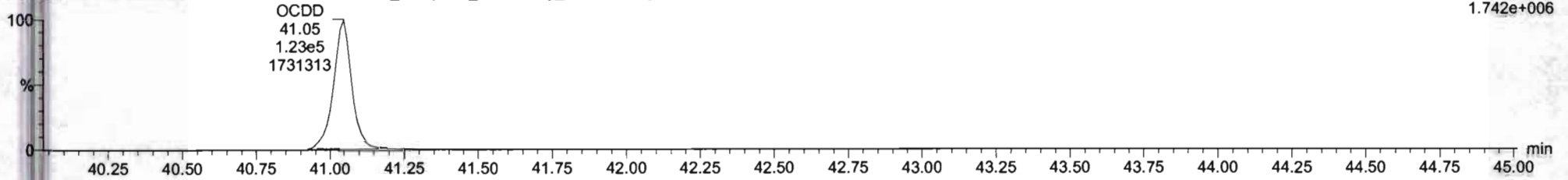
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F5:SIR of 11 channels, EI+  
457.738  
1.583e+006



200116D2\_14  
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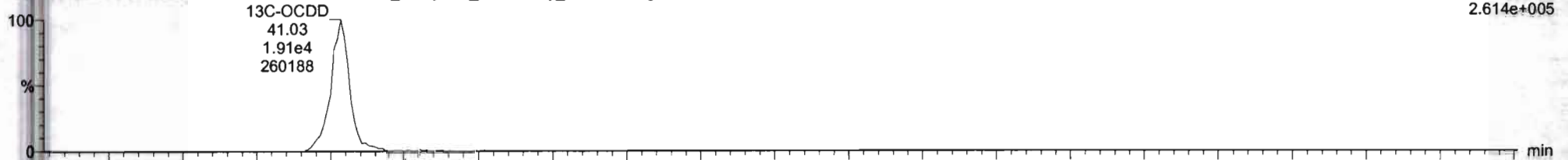
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13C-OCDD

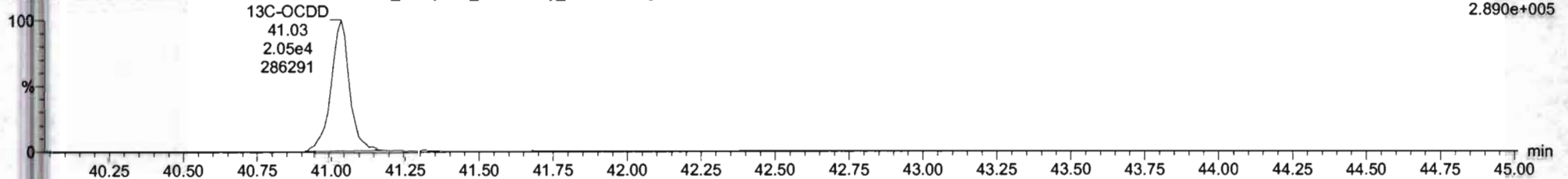
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F5:SIR of 11 channels, EI+  
469.778  
2.614e+005



200116D2\_14  
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F5:SIR of 11 channels, EI+  
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Vista Analytical Laboratory

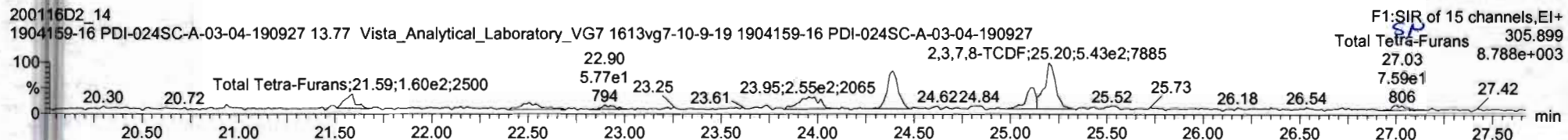
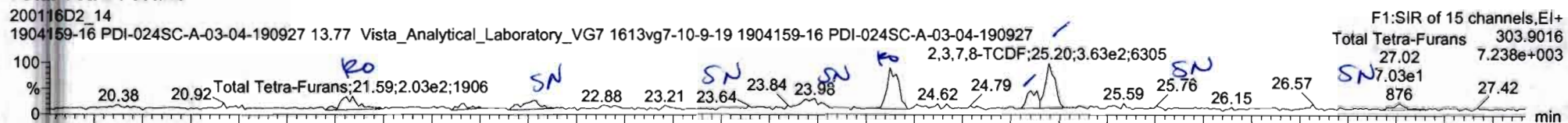
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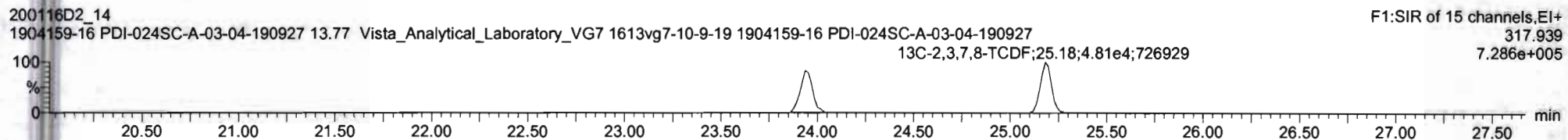
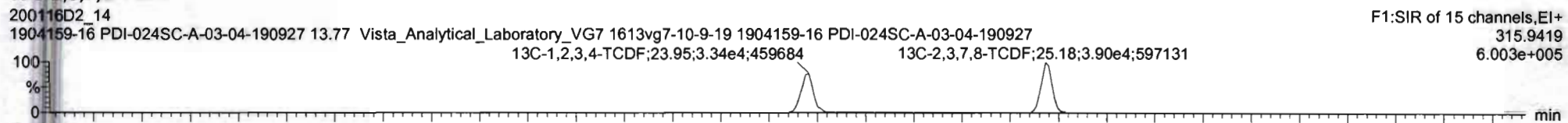
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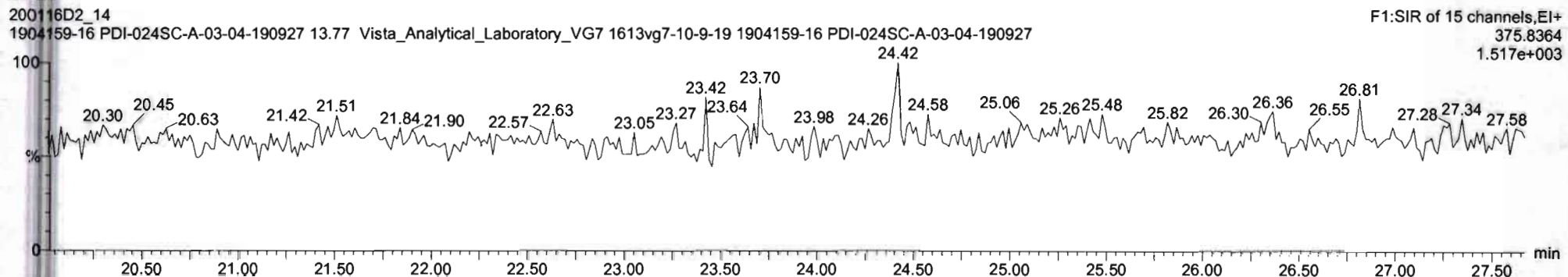
Total Tetra-Furans



13C-2,3,7,8-TCDF

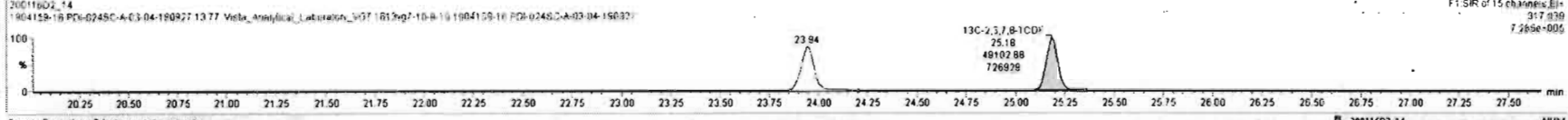
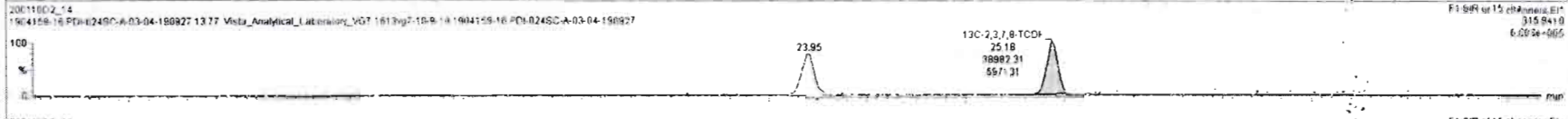
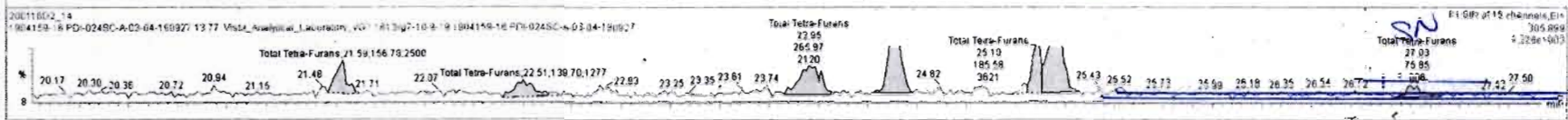
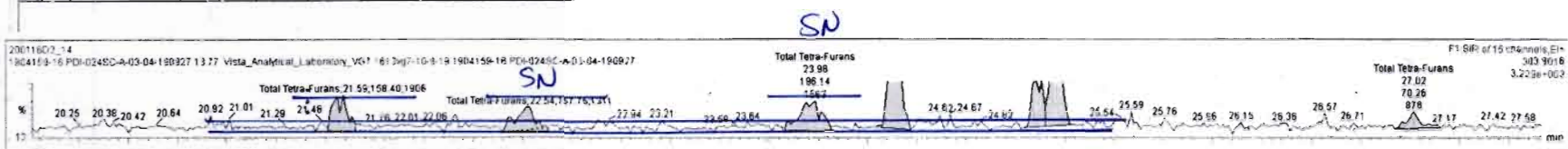


DPE1



#	Name	Resp	IS Resp	CF	RA	n/y	RRF	wt/Vol	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
40	Total Penta-Dioxins	3.73e4					0.872	10.041	30.00			0.000	NO			0.203	
41	Total Hexa-Dioxins	0.00e0					0.976	10.041	33.90			0.000	NO	27.06		0.923	27.06
42	Total Hepta-Dioxins	2.27e4					0.989	10.041	37.75			0.000	NO	306.9		2.85	306.9
43	Total Tetra-Furans	8.71e4					0.943	10.041	24.00			0.000	NO	4.143		0.355	7.609
44	1st Func. Penta-Furans	0.00e0					0.940	10.041	27.63			0.000	NO	3.492		0.144	3.492
45	Total Penta-Furans	0.00e0					0.940	10.041	33.00			0.000	NO	10.13		0.331	14.90
46	Total Hexa-Furans	0.00e0					1.078	10.041	33.00			0.000	NO	52.42		0.570	52.97
47	Total Hepta-Furans	0.00e0					1.135	10.041	37.75			0.000	NO	97.43		1.13	99.12

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc.
1	Total Tetra-Furans	24.00	21.58	1.584e2	1.568e2	0.770	1.01	YES	0.67322	0.00000
2	Total Tetra-Furans	24.00	22.54	1.577e2	1.397e2	0.770	1.13	YES	0.59991	0.00000
3	Total Tetra-Furans	24.00	23.98	1.961e2	2.660e2	0.770	0.74	NO	1.1211	1.1211
4	Total Tetra-Furans	24.00	24.37	3.920e2	4.346e2	0.770	0.90	YES	1.8663	0.00000
5	Total Tetra-Furans	24.00	25.10	1.602e2	1.856e2	0.770	0.86	NO	0.83862	0.83862
6	2,3,7,8-TCDF	25.21	25.20	3.634e2	5.434e2	0.770	0.67	NO	2.1830	2.1830
7	Total Tetra-Furans	24.00	27.02	7.026e1	7.585e1	0.770	0.93	YES	0.32572	0.00000



Vista Analytical Laboratory

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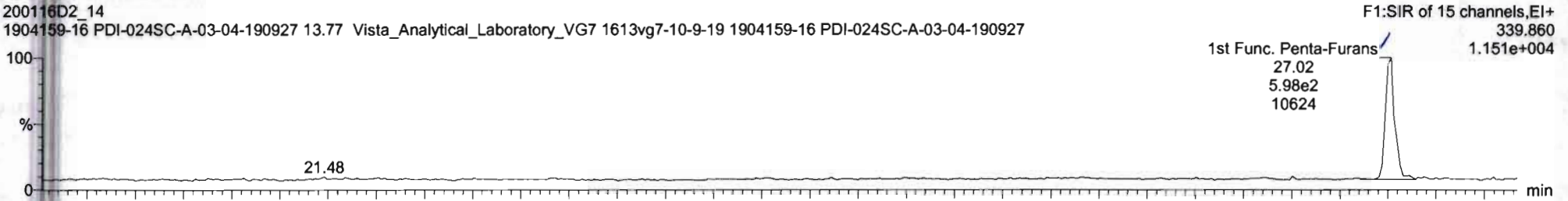
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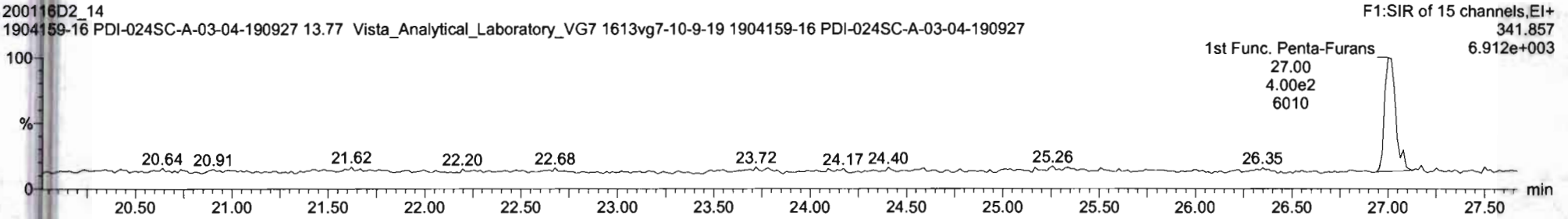
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Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

1st Func. Penta-Furans

200116D2\_14  
1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19 1904159-16 PDI-024SC-A-03-04-190927

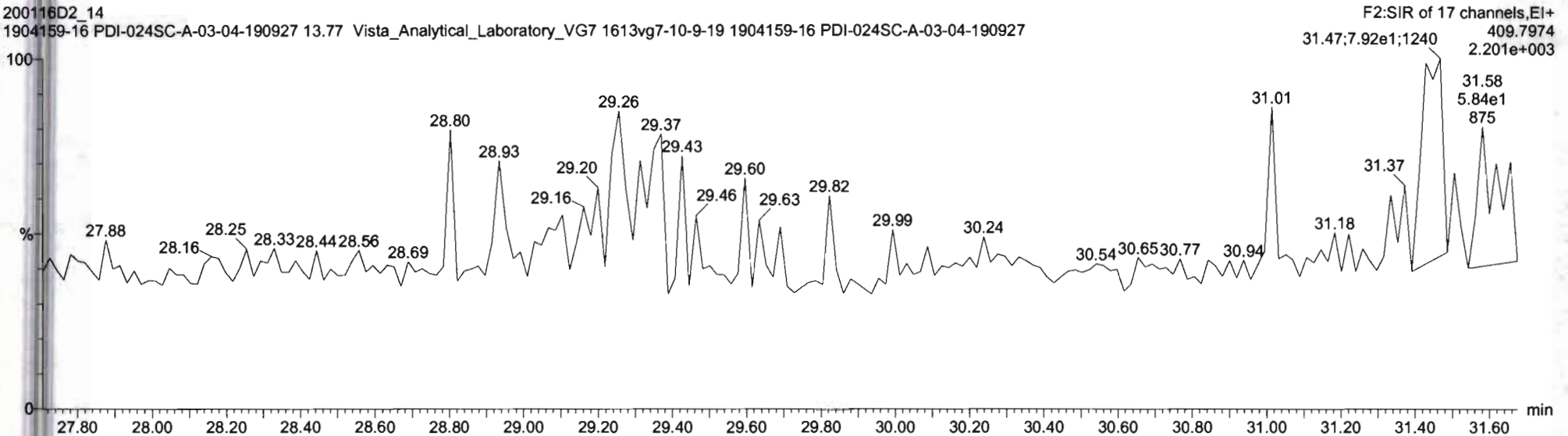


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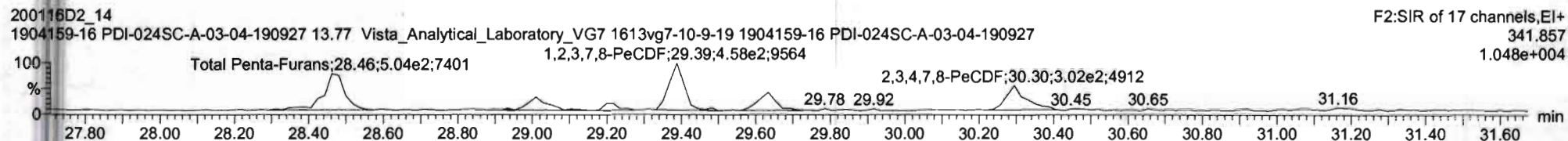
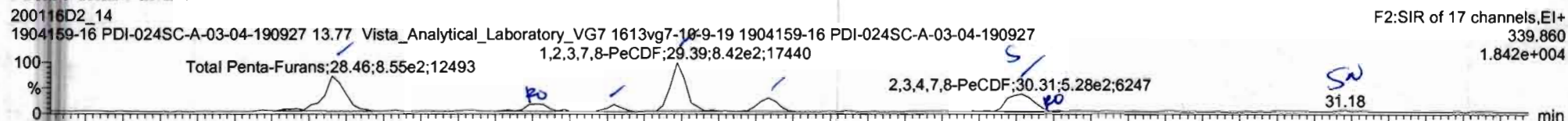
DPE6

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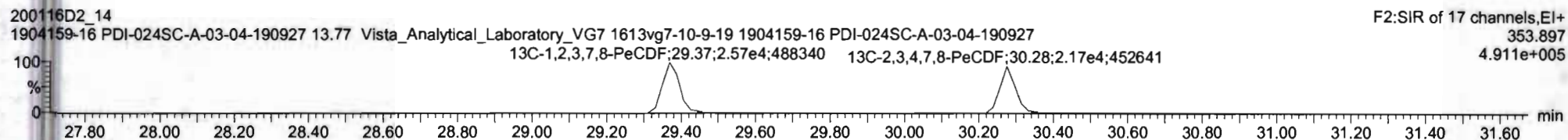
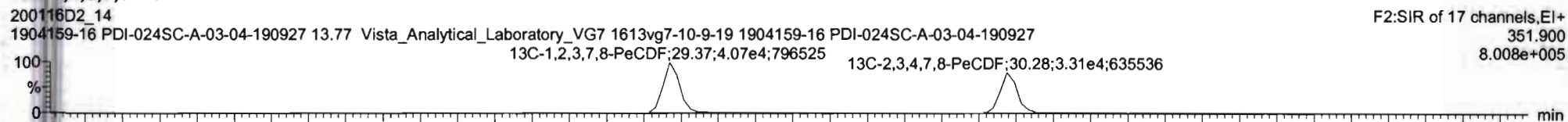


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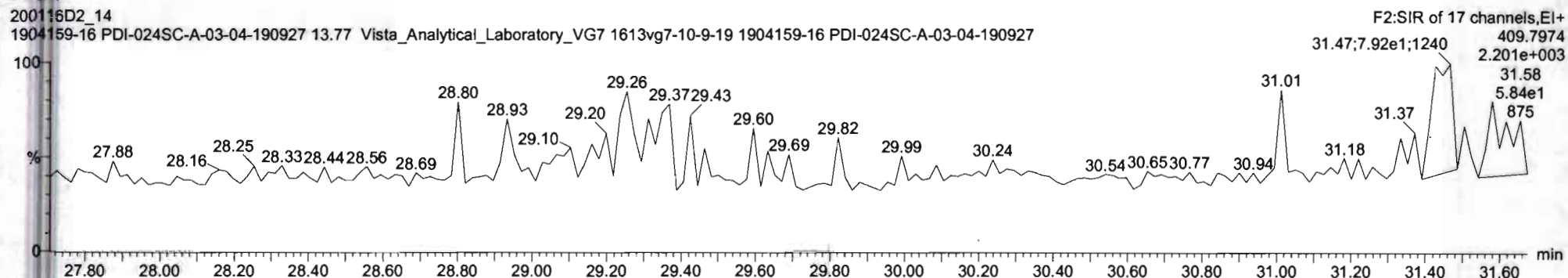
**Total Penta-Furans**



**13C-1,2,3,7,8-PeCDF**

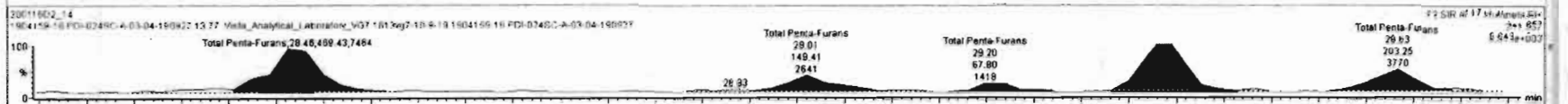


**DPE2**



Name	Conc	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	IS#	RA	Y/N	RRT	Acq Date	Acq Time	1 <sup>st</sup> Chk House ID	Sample Text	Factor1	SM	Ca File
45 Total Penta-Furans	13.7643	0.331		14.7810			45						17-JAN-20	09:58:38	1904159-16	1904159-16 PDI...	0.0	10.0	
46 Total Hexa-Furans	51.6040	0.570		51.6040			46						17-JAN-20	09:58:38	1904159-16	1904159-16 PDI...	0.0	10.0	
47 Total Hepta-Furans	100.442	1.14		100.442			47						17-JAN-20	09:58:38	1904159-16	1904159-16 PDI...	0.0	10.0	
48 PPK1							48								1904159-16				
49 PPK2							49								1904159-16				
50 PPK3							50								1904159-16				
51 PPK4							51								1904159-16				
52 PPK5							52								1904159-16				

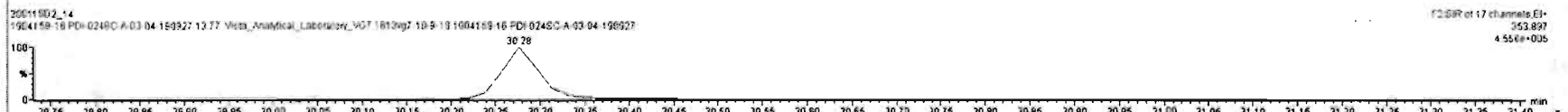
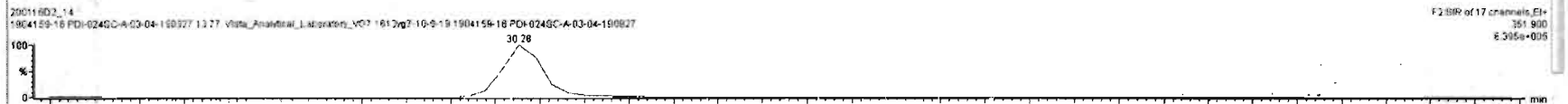
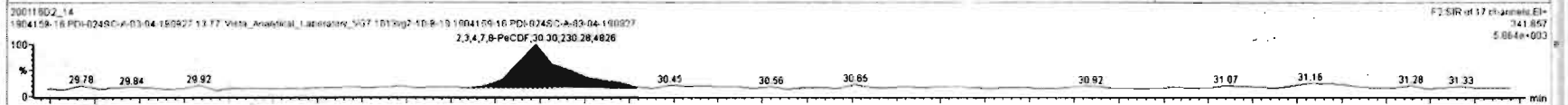
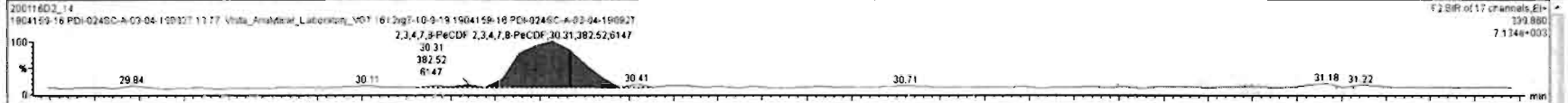
Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc	EMPC
1 Total Penta-Furans	29.01	2.588e3	2.641e3	1.767e2	1.484e2	1.18	YES	0.000e0	0.000	1.02
2 Total Penta-Furans	28.46	1.229e4	7.464e3	7.864e2	4.694e2	1.68	NO	1.256e3	4.39	4.39
3 1,2,3,7,8-PeCDF	30.31	6.263e3	4.912e3	5.145e2	3.022e2	1.70	NO	8.168e2	2.93	2.92
4 Total Penta-Furans	29.63	4.749e3	3.770e3	2.953e2	2.033e2	1.45	NO	4.985e2	1.74	1.74
5 1,2,3,7,8-PeCDF	29.35	1.744e4	9.721e3	8.325e2	4.675e2	1.78	NO	1.300e3	4.06	4.06
6 Total Penta-Furans	29.22	2.443e3	1.418e3	1.172e2	6.780e1	1.73	NO	1.850e2	0.647	0.647



20011602-14 1904159-16 PDI-0245C-A-03-04-150927 13.77 Vieta\_Analytical\_Laboratory\_V07 16120g7-10-9-19 1904159-16 PDI-0245C-A-03-04-190927

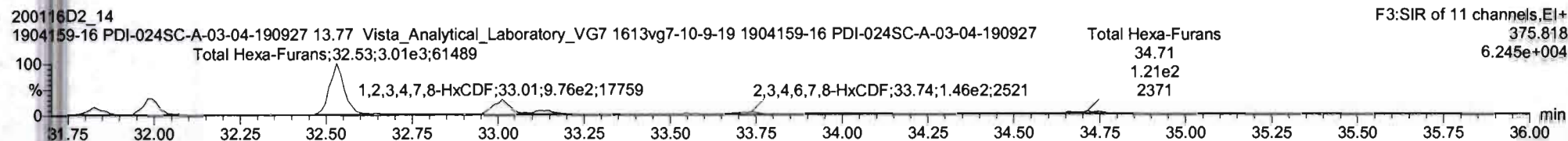
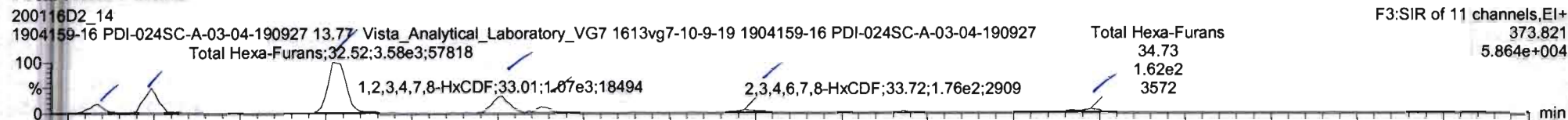
#	Name	Resp	IS Resp	IS#	RA	nly	RRF	wtAval	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
1	1,2,3,7,8-TCDD		6.29e4	16			0.905	10.041	26.01			1.001	NO			0.331	
2	1,2,3,7,8-PeCDD		3.73e4	19			0.903	10.041	30.58			1.001	NO			3.425	
3	1,2,3,4,7,8-HxCDD		3.19e4	20			1.101	10.041	33.90			1.000	NO			0.833	
4	1,2,3,6,7,8-HxCDD	9.49e2	3.63e4	21	1.39	NO	0.939	10.041	33.99	34.01	1.001	1.000	NO	5.261		0.874	5.261
5	1,2,3,7,8-HxCDD		3.36e4	22			0.961	10.041	34.32			1.001	NO			1.02	
6	1,2,3,4,6,7,8-HpCDD	2.13e4	2.27e4	23	1.02	NO	0.979	10.041	37.78	37.78	1.000	1.000	NO	190.9		2.88	190.9
7	OCDD	2.33e5	3.96e4	24	0.80	NO	0.959	10.041	41.03	41.05	1.000	1.000	NO	2443		2.99	2443
8	2,3,7,8-TCDF	9.07e2	8.71e4	25	0.67	NO	0.950	10.041	25.21	25.20	1.001	1.001	NO	2.183		0.353	2.183

#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	nly	EMPC	Conc
1	45 Total Penta-Furans	30.00	29.46	7.864e2	4.694e2	1.550	1.68	NO	4.3913	4.3513
2	45 Total Penta-Furans	30.00	29.01	1.767e2	1.494e2	1.550	1.18	YES	1.0184	0.00000
3	45 Total Penta-Furans	30.00	29.22	1.172e2	8.780e1	1.550	1.73	NO	0.64677	0.64677
4	9 1,2,3,7,8-PeCDF	29.39	29.39	8.325e2	4.875e2	1.550	1.78	NO	4.0578	4.0578
5	45 Total Penta-Furans	30.00	29.63	2.953e2	2.033e2	1.550	1.45	NO	1.7432	1.7432
6	10 2,3,4,7,8-PeCDF	30.31	30.31	3.825e2	2.303e2	1.550	1.66	NO	2.1947	2.1947
7	45 Total Penta-Furans	30.00	30.33	1.196e2	8.599e1	1.550	1.82	YES	0.99839	0.00000

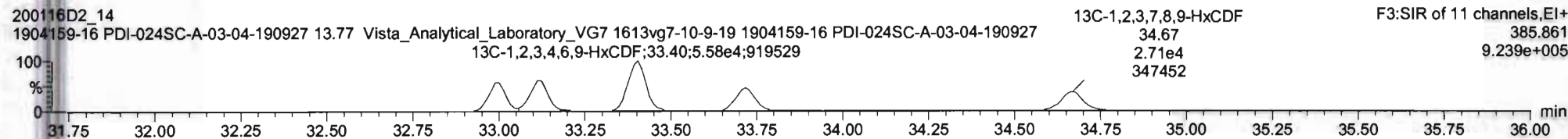
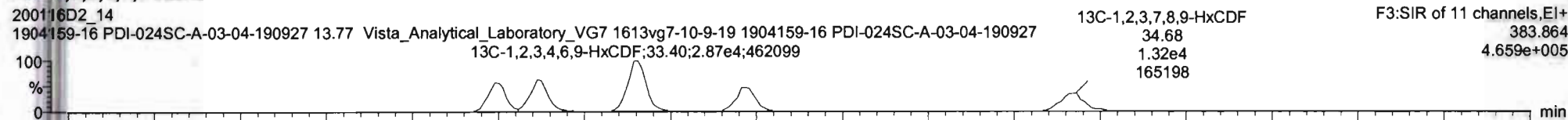


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 Description: 1904159-16 PDI-024SC-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_VG7 1613vg7-10-9-19

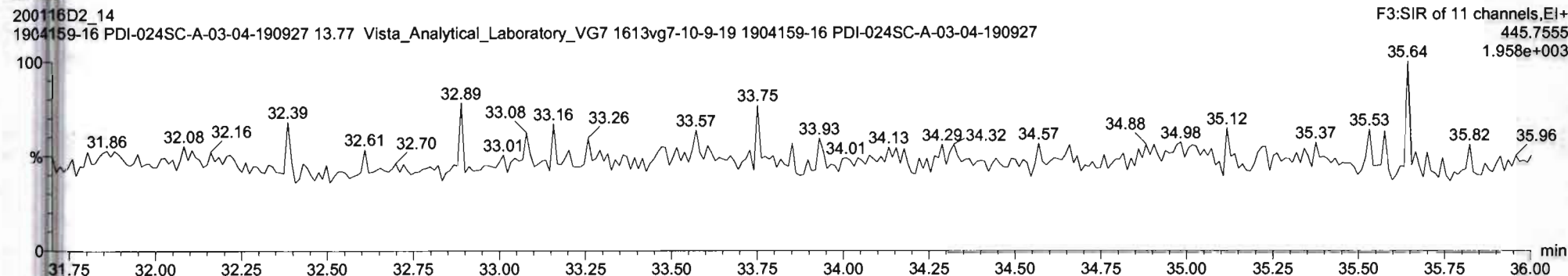
**Total Hexa-Furans**



**13C-1,2,3,4,7,8-HxCDF**



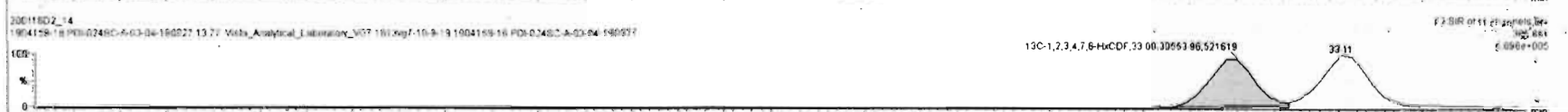
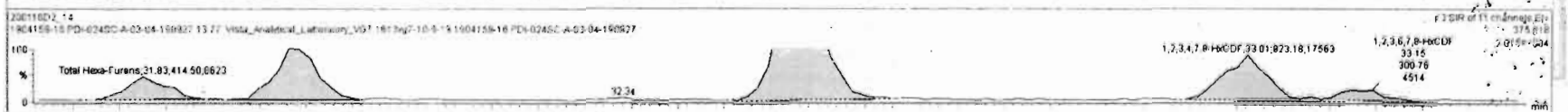
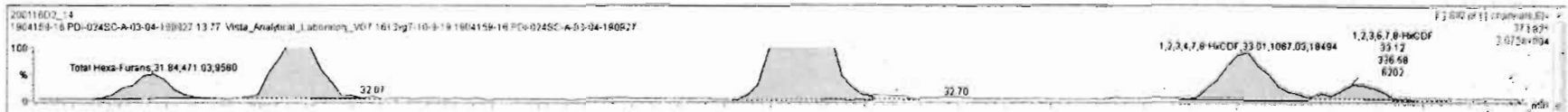
**DPE3**



200116D2\_14 1904159-18 PDI-0245C-A-03-04-180927-13 77 Vista\_Analytical\_Laboratory\_V07 1613g7-10-9-18 1904159-18 PDI-0245C-A-03-04-180927

#	Name	Resp	IS Resp	CSF	RA	nV	RRF	wtAval	Pred RT	RT	RRT	Pred RRT	Check Rpt	Conc	WtAcc	EL	EMPC
40	Total Penta-Dioxins	3.73e4					0.872	10.041	20.00			0.000	NO			0.203	
41	Total Hexa-Dioxins	0.00e0					0.976	10.041	21.80			0.000	NO	27.36		0.923	27.06
42	Total Hepta-Dioxins	2.27e4					0.989	10.041	37.75			0.000	NO	396.9		2.85	396.9
43	Total Tetra-Furans	0.71e4					0.843	10.041	24.00			0.000	NO	3.022		0.355	5.561
44	1st Func. Penta-Furans	0.00e0					0.940	10.041	27.63			0.000	NO	3.497		0.144	3.492
45	Total Penta-Furans	0.00e0					0.940	10.041	30.00			0.000	NO	13.75		0.331	14.78
46	Total Hexa-Furans	0.00e0					1.078	10.041	33.00			0.000	NO	62.12		0.670	62.67
47	Total Hepta-Furans	0.00e0					1.135	10.041	37.75			0.000	NO	97.43		1.13	99.12

#	Name	Pred RT	RT	wt Resp	nD Resp	Pred RA	RA	nV	EMPC	Conc	
46	Total Hexa-Furans	33.00	31.84	4.710e2	4.145e2	1.240	1.14	NO	3.6222	3.6722	
46	Total Hexa-Furans	33.00	31.99	1.290e3	1.021e3	1.240	1.26	NO	8.4534	8.4534	
3	46	Total Hexa-Furans	33.00	32.52	3.564e3	3.022e3	1.240	1.18	NO	26.982	26.982
4	11	1,2,3,4,7,8-HxCDF	32.99	33.01	1.867e3	9.252e2	1.240	1.16	NO	7.2381	7.2911
5	12	1,2,3,6,7,8-HxCDF	33.12	33.12	3.366e2	3.009e2	1.240	1.12	NO	2.3154	2.3154
6	13	2,3,4,5,7,8-HxCDF	33.74	33.72	1.760e2	1.485e2	1.240	1.20	NO	1.3634	1.3634
7	14	1,2,3,7,8,9-HxCDF	34.68	34.67	8.136e1	5.278e1	1.240	1.73	YES	0.5600	0.0000
6	46	Total Hexa-Furans	33.00	34.73	1.615e2	1.207e2	1.240	1.34	NO	1.1545	1.1545

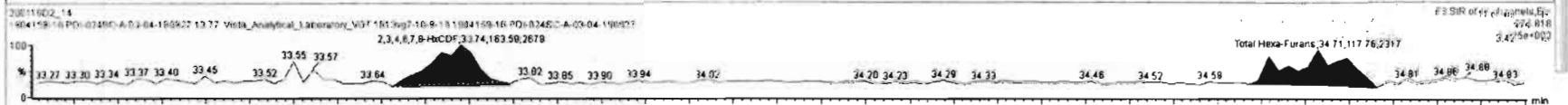




201102-14-1904159-16 PC4-0245C-A-03-04-190927 1812g7-10-9-191904159-16 PC4-0245C-A-03-04-190927 13.77 Vista\_Analytical\_Laboratory\_V07 1612g7-10-9-19

#	Name	Resp	Cs Resp	Cal	RA	n/y	RRF	wAdj	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	Dx	EMPC
46	Total Hexa-Furans		0.00e0				1.078	10.041	33.00			0.000	NO	52.73		0.670	52.73
47	Total Hepta-Furans		0.00e0				1.135	10.041	37.75			0.000	NO	100.4		1.14	100.4
48	PFK1																
49	PFK2																
50	PFK3																
51	PFK4																
52	PFK5																
53	DPE1																

#	Name	Pred RT	RT	Int Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc
1	Total Hexa-Furans	33.00	31.84	4.710e2	4.145e2	1.240	1.14	NO	3.6222	3.6222
2	Total Hexa-Furans	33.00	31.90	1.290e3	1.021e3	1.240	1.26	NO	9.4534	9.4534
3	Total Hexa-Furans	33.00	32.52	3.564e3	3.032e3	1.240	1.18	NO	26.982	26.982
4	1,2,3,4,7,8-HxCDF	32.99	33.01	1.067e3	8.232e2	1.240	1.16	NO	7.2361	7.2361
5	1,2,3,6,7,8-HxCDF	33.12	33.12	3.366e2	3.008e2	1.240	1.12	NO	2.3154	2.3154
6	1,3,2,3,6,7,8-HxCDF	33.74	33.72	1.760e2	1.606e2	1.240	1.08	NO	1.4253	1.4253
7	1,2,3,7,8,9-HxCDF	34.08	34.07	6.946e1	5.229e1	1.240	1.33	NO	0.56695	0.56695
8	Total Hexa-Furans	33.00	34.73	1.500e2	1.179e2	1.240	1.35	NO	1.1311	1.1311



Vista Analytical Laboratory

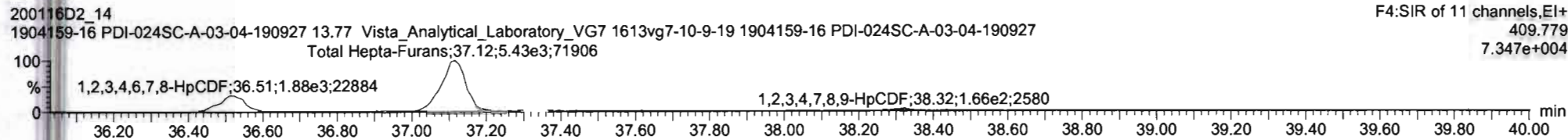
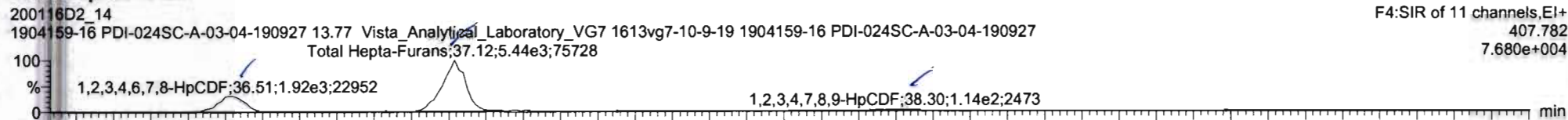
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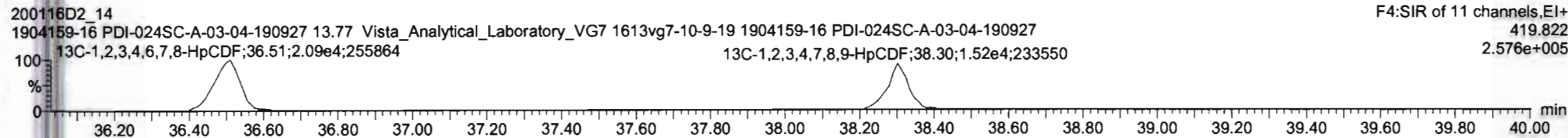
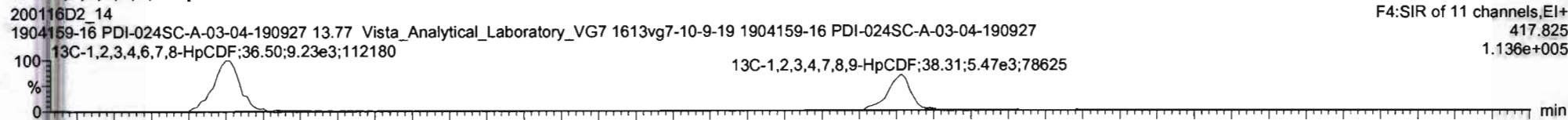
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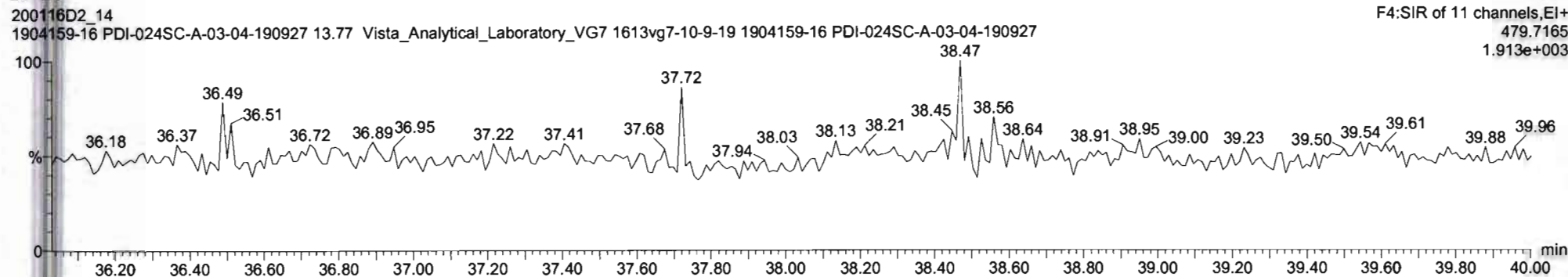
Total Hepta-Furans



13C-1,2,3,4,6,7,8-HpCDF

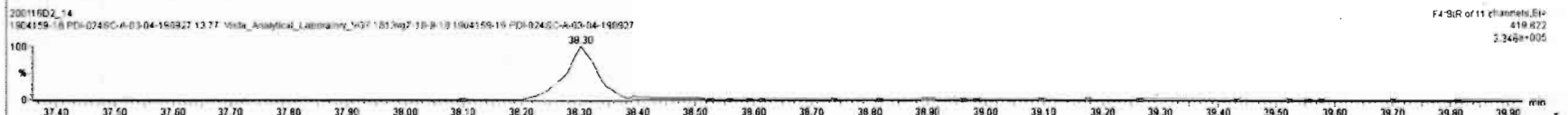
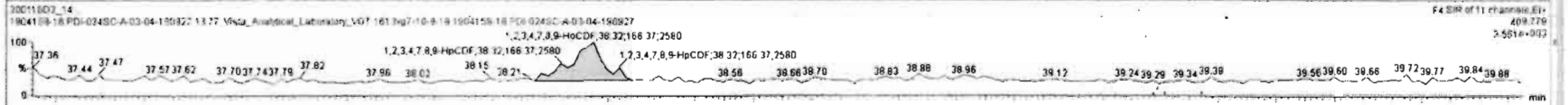
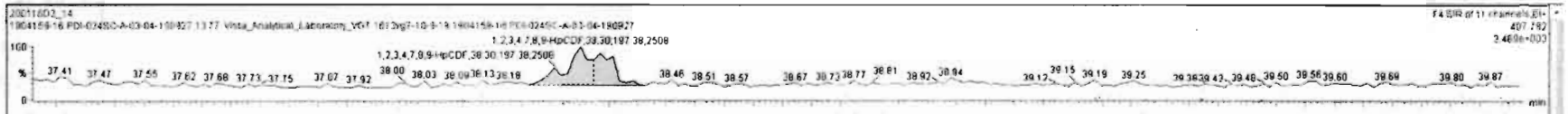


DPE4



#	Name	Resp	IS Resp	Cal	RA	n/y	RRF	wtAvt	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
40	Total Penta-Chlorins		3.73e4				0.872	10.041	30.00			0.000	NO		0.203		
41	Total Hexa-Chlorins		0.00e0				0.976	10.041	33.80			0.000	NO	27.06	0.923	27.06	
42	Total Hepta-Chlorins		2.27e4				0.989	10.041	37.75			0.000	NO	366.9	2.85	396.9	
43	Total Tetra-Furans		8.71e4				0.943	10.041	24.00			0.000	NO	3.022	0.355	5.561	
44	1st Func. Furans-Furans		0.00e0				0.940	10.041	27.83			0.000	NO	3.492	0.144	3.492	
45	Total Penta-Furans		0.00e0				0.940	10.041	30.00			0.000	NO	13.75	0.331	14.78	
46	Total Hexa-Furans		0.00e0				1.078	13.061	33.00			0.000	NO	51.80	0.570	51.80	
47	Total Hepta-Furans		0.00e0				1.135	10.041	37.75			0.000	NO	100.2	1.13	100.2	

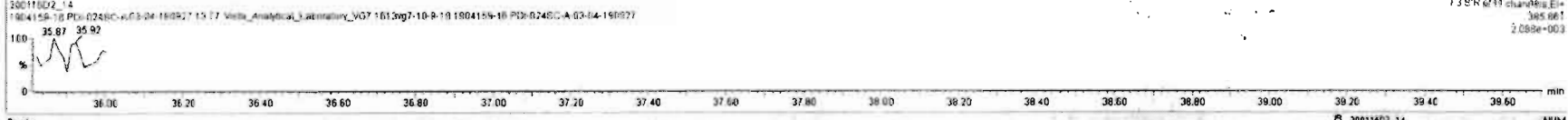
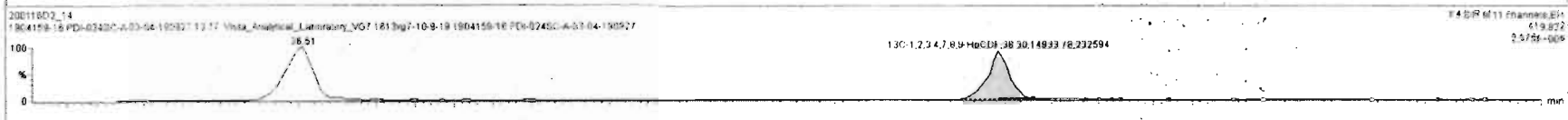
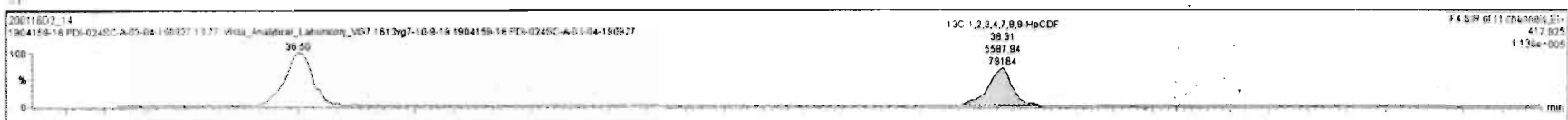
#	Name	Pred RT	RT	m1 Resp	m2 Resp	Pred RA	RA	n/y	EMPC	Conc.
1	15 1,2,3,4,7,8-HpCDF	36.54	36.51	1.918e3	1.877e3	1.040	1.02	NO	22.278	22.278
2	47 Total Hepta-Furans	37.75	37.12	5.441e3	5.429e3	1.040	1.00	NO	75.149	75.149
3	10 1,2,3,4,7,8,9-HpCDF	38.31	38.30	1.974e2	1.664e2	1.040	1.19	NO	2.7356	2.7356



20011602\_14: 1904159-16 PDI-0245C-A-03-04-190927 13.77 Vials\_Analytical\_Laboratory\_V07 1613vg7-10-9-19 1904159-16 PDI-0245C-A-03-04-190927

#	Name	Resp	IS Resp	RF	RA	rvy	RRF	intAve	Pred RT	RT	RRT	Pred RRT	Check RRT	Conc	%Rec	DL	EMPC
33	13C-1,2,3,4,7,8,9-HpCDF	2.96e4	8.44e4	38	0.37	NO	0.581	10.041	36.31	36.21	1.147	1.147	NO	85.28	41.6	1.17	
34	13C-OCDF	4.68e4	8.44e4	38	0.87	NO	0.889	10.041	41.25	41.24	1.235	1.235	NO	159.6	40.1	0.677	
35	3PO-2,3,7,8-TCDD	2.63e4	7.84e4	36			1.198	10.041	26.02	26.01	1.023	1.024	NO	55.67	69.9	0.224	
36	13C-1,2,3,4-TCDD	7.94e4	7.84e4	36	0.79	NO	1.000	10.041	25.39	25.42	1.000	1.000	NO	199.2	100	0.644	
37	13C-1,2,3,4-TCDF	7.69e4	7.84e4	37	0.77	NO	1.000	10.041	23.93	23.95	1.000	1.000	NO	199.2	100	0.774	
38	13C-1,2,3,4,6,9-HxCDF	6.44e4	8.44e4	36	0.51	NO	1.000	10.041	33.37	33.40	1.000	1.000	NO	199.2	100	1.37	
39	Total Tetra-Chlorins	6.29e4					0.901	10.041	25.50				0.000	0.4996		0.353	0.4686
40	Total Penta-Chlorins	3.73e4					0.872	10.041	30.00				0.000			0.203	

#	Name	Pred RT	RT	int Resp	int2 Resp	Pred RA	RA	rvy	EMPC	Conc.
1										



Vista Analytical Laboratory

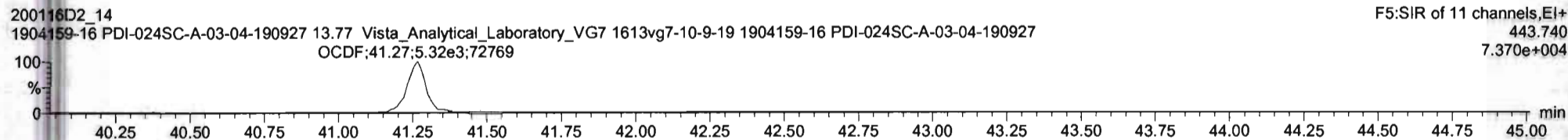
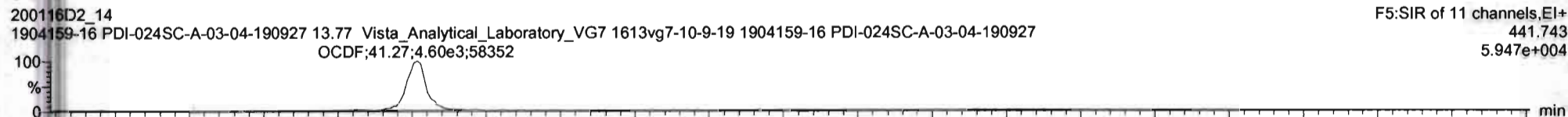
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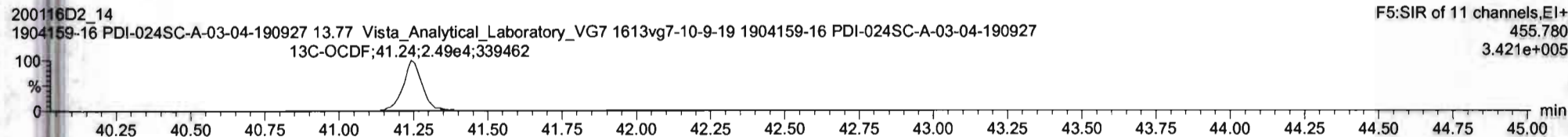
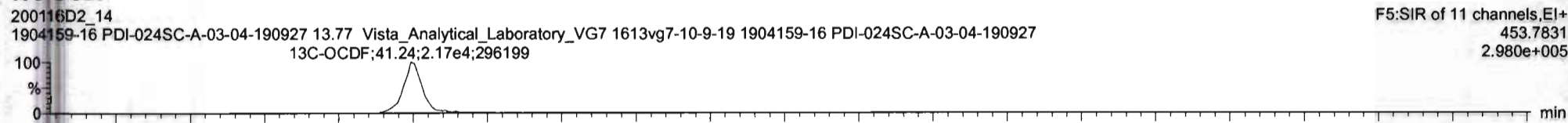
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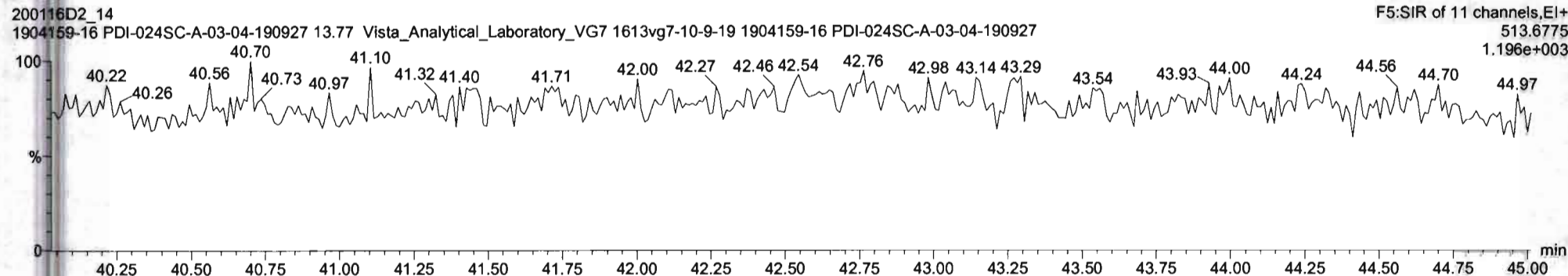
OCDF



13C-OCDF



DPE5



Vista Analytical Laboratory

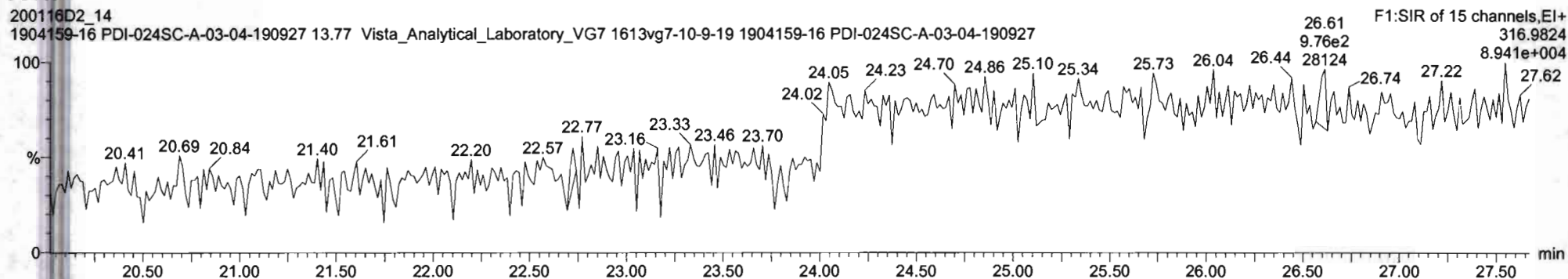
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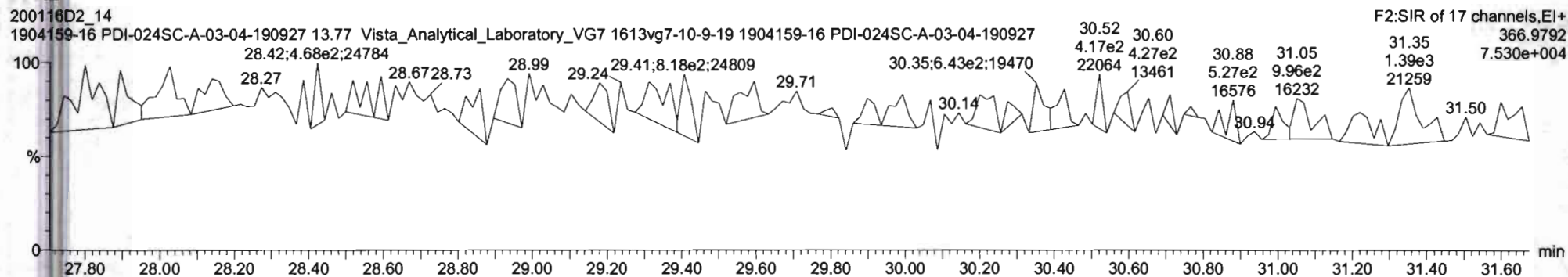
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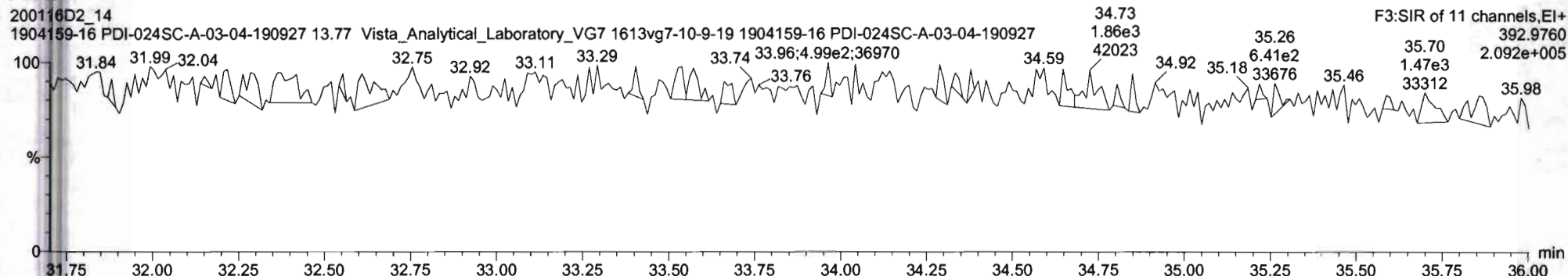
PFK1



PFK2



PFK3



Vista Analytical Laboratory

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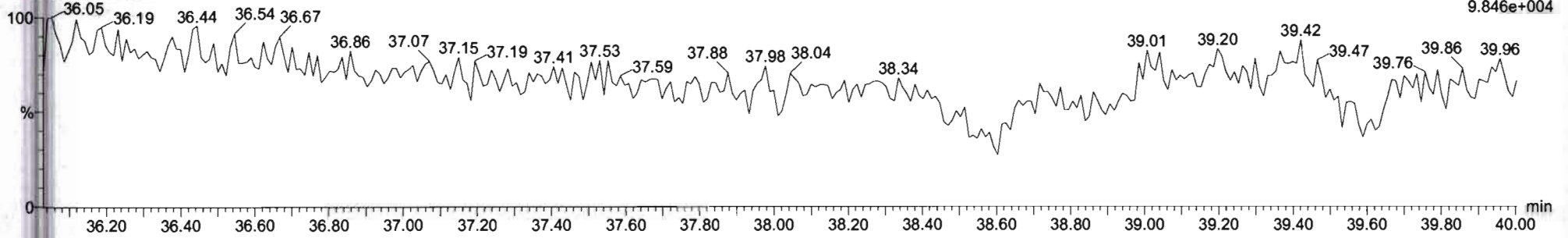
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**PFK4**

200116D2\_14  
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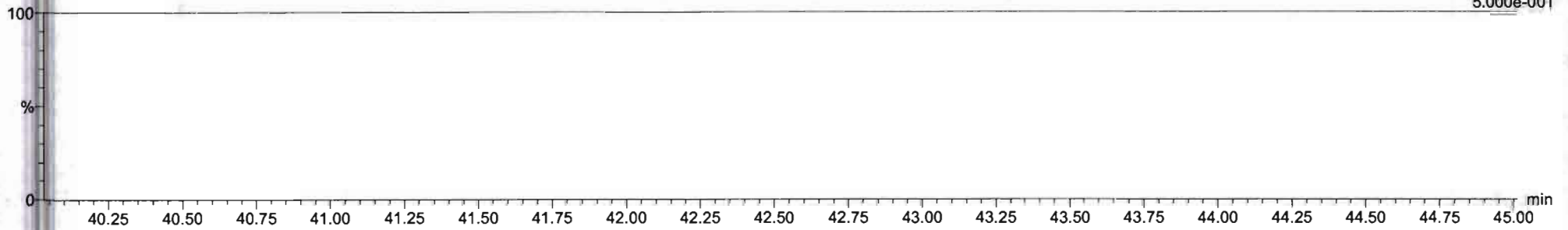
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**PFK5**

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GPB 01/31/2020

CT 02/03/2020

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Name: 200121R2\_8, Date: 22-Jan-2020, Time: 04:25:28, ID: 1904159-17 PDI-025SC-A-02-03-190927 12.88, Description: PDI-025SC-A-02-03-190927

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.49e3	0.36	YES	0.824	10.092	25.856	25.87	1.001	1.002	0.20466		0.0326	0.125
2	2 1,2,3,7,8-PeCDD	6.85e2	0.62	NO	0.912	10.092	30.750	30.74	1.001	1.000	0.11202		0.0565	0.112
3	3 1,2,3,4,7,8-HxCDD	9.79e2	1.12	NO	0.870	10.092	34.083	34.10	1.000	1.001	0.20155		0.0524	0.202
4	4 1,2,3,6,7,8-HxCDD	3.48e3	1.40	NO	0.784	10.092	34.179	34.20	1.000	1.001	0.71977		0.0533	0.720
5	5 1,2,3,7,8,9-HxCDD	2.00e3	1.15	NO	0.798	10.092	34.490	34.48	1.001	1.001	0.42098		0.0567	0.421
6	6 1,2,3,4,6,7,8-HpCDD	8.75e4	0.98	NO	0.737	10.092	38.014	38.01	1.000	1.000	29.500		0.160	29.5
7	7 OCDD	3.69e5	0.84	NO	0.800	10.092	40.985	41.00	1.000	1.000	146.40		0.185	146
8	8 2,3,7,8-TCDF	3.76e3	0.69	NO	0.588	10.092	24.982	24.97	1.001	1.001	0.55769		0.0408	0.558
9	9 1,2,3,7,8-PeCDF	5.44e3	1.59	NO	0.826	10.092	29.483	29.46	1.001	1.000	0.63655		0.0433	0.637
10	10 2,3,4,7,8-PeCDF	2.48e3	1.39	NO	0.850	10.092	30.453	30.44	1.001	1.000	0.30298		0.0412	0.303
11	11 1,2,3,4,7,8-HxCDF	3.77e3	1.27	NO	0.787	10.092	33.210	33.22	1.000	1.000	0.85310		0.0374	0.853
12	12 1,2,3,6,7,8-HxCDF	1.18e3	1.35	NO	0.720	10.092	33.337	33.34	1.000	1.000	0.25083		0.0358	0.251
13	13 2,3,4,6,7,8-HxCDF	4.29e2	1.50	YES	0.766	10.092	33.947	33.93	1.001	1.001	0.10609		0.0426	0.0949
14	14 1,2,3,7,8,9-HxCDF	4.80e2	1.20	NO	0.709	10.092	34.818	34.86	1.000	1.001	0.13833		0.0554	0.138
15	15 1,2,3,4,6,7,8-HpCDF	2.00e3	0.84	YES	0.732	10.092	36.613	36.60	1.001	1.001	0.78136		0.0449	0.701
16	16 1,2,3,4,7,8,9-HpCDF	4.54e2	1.03	NO	0.816	10.092	38.578	38.58	1.000	1.000	0.20387		0.0472	0.204
17	17 OCDF	4.60e3	0.79	NO	0.639	10.092	41.177	41.19	1.000	1.000	2.3825		0.0780	2.38
18	18 13C-2,3,7,8-TCDD	1.75e6	0.80	NO	1.12	10.092	25.845	25.83	1.026	1.025	177.46	89.5	0.0894	
19	19 13C-1,2,3,7,8-PeCDD	1.33e6	0.64	NO	0.841	10.092	30.614	30.73	1.215	1.220	178.78	90.2	0.118	
20	20 13C-1,2,3,4,7,8-HxCDD	1.11e6	1.26	NO	0.938	10.092	34.074	34.07	1.014	1.014	147.89	74.6	0.195	
21	21 13C-1,2,3,6,7,8-HxCDD	1.22e6	1.24	NO	1.07	10.092	34.175	34.18	1.017	1.017	144.00	72.7	0.172	
22	22 13C-1,2,3,7,8,9-HxCDD	1.18e6	1.22	NO	1.03	10.092	34.478	34.46	1.026	1.025	143.77	72.5	0.178	
23	23 13C-1,2,3,4,6,7,8-HpCDD	7.98e5	1.04	NO	0.710	10.092	38.040	38.00	1.132	1.131	140.98	71.1	0.233	
24	24 13C-OCDD	1.25e6	0.87	NO	0.601	10.092	40.930	40.99	1.218	1.220	260.77	65.8	0.208	
25	25 13C-2,3,7,8-TCDF	2.27e6	0.73	NO	1.04	10.092	25.021	24.96	0.993	0.990	149.40	75.4	0.105	
26	26 13C-1,2,3,7,8-PeCDF	2.05e6	1.55	NO	0.917	10.092	29.380	29.46	1.166	1.169	152.41	76.9	0.240	
27	27 13C-2,3,4,7,8-PeCDF	1.91e6	1.53	NO	0.903	10.092	30.337	30.42	1.204	1.207	144.32	72.8	0.243	
28	28 13C-1,2,3,4,7,8-HxCDF	1.11e6	0.50	NO	0.861	10.092	33.201	33.21	0.988	0.988	162.32	81.9	0.213	
29	29 13C-1,2,3,6,7,8-HxCDF	1.29e6	0.49	NO	1.05	10.092	33.302	33.33	0.991	0.992	155.01	78.2	0.176	
30	30 13C-2,3,4,6,7,8-HxCDF	1.05e6	0.49	NO	0.946	10.092	33.910	33.91	1.009	1.009	138.72	70.0	0.194	
31	31 13C-1,2,3,7,8,9-HxCDF	9.70e5	0.49	NO	0.816	10.092	34.814	34.82	1.036	1.036	149.18	75.3	0.225	



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#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	6.95e5	0.41	NO	0.589	10.092	36.561	36.58	1.088	1.088	147.89	74.6	0.240	
33	13C-1,2,3,4,7,8,9-HpCDF	5.41e5	0.41	NO	0.448	10.092	38.577	38.58	1.148	1.148	151.47	76.4	0.316	
34	13C-OCDF	1.20e6	0.85	NO	0.586	10.092	41.165	41.18	1.225	1.225	256.64	64.7	0.193	
35	37Cl-2,3,7,8-TCDD	7.40e5			1.09	10.092	25.877	25.85	1.027	1.026	77.103	97.3	0.0246	
36	13C-1,2,3,4-TCDD	1.75e6	0.80	NO	1.00	10.092	25.260	25.20	1.000	1.000	198.18	100	0.0997	
37	13C-1,2,3,4-TCDF	2.91e6	0.75	NO	1.00	10.092	23.860	23.57	1.000	1.000	198.18	100	0.109	
38	13C-1,2,3,4,6,9-HxCDF	1.58e6	0.49	NO	1.00	10.092	33.590	33.60	1.000	1.000	198.18	100	0.184	
39	Total Tetra-Dioxins				0.824	10.092	24.620		0.000		0.00000		0.0193	0.492
40	Total Penta-Dioxins				0.912	10.092	29.960		0.000		1.5594		0.0565	2.08
41	Total Hexa-Dioxins				0.784	10.092	33.635		0.000		15.865		0.0563	15.9
42	Total Hepta-Dioxins				0.737	10.092	37.640		0.000		58.608		0.160	58.6
43	Total Tetra-Furans				0.588	10.092	23.610		0.000		3.7107		0.0408	3.80
44	1st Func. Penta-Furans				0.826	10.092	27.090		0.000		0.31991		0.0104	0.320
45	Total Penta-Furans				0.826	10.092	29.275		0.000		1.7909		0.0428	2.47
46	Total Hexa-Furans				0.766	10.092	33.555		0.000		1.6225		0.0410	2.11
47	Total Hepta-Furans				0.732	10.092	37.835		0.000		1.5999		0.0511	2.30

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Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

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**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	21.96	4.095e3	7.404e3	3.805e2	6.177e2	0.62	YES	0.000e0	0.00000	0.12020	0.0326
2	Total Tetra-Dioxins	22.38	3.014e3	3.936e3	1.968e2	3.163e2	0.62	YES	0.000e0	0.00000	0.062184	0.0326
3	Total Tetra-Dioxins	23.72	9.824e3	7.509e3	5.537e2	5.801e2	0.95	YES	0.000e0	0.00000	0.14111	0.0326
4	Total Tetra-Dioxins	24.21	2.966e3	3.971e3	2.043e2	1.814e2	1.13	YES	0.000e0	0.00000	0.044122	0.0326
5	2,3,7,8-TCDD	25.87	4.376e3	1.652e4	3.943e2	1.095e3	0.36	YES	1.489e3	0.00000	0.12456	0.0326

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.52	3.733e4	5.044e4	2.680e3	3.984e3	0.67	NO	6.664e3	1.0899	1.0899	0.0565
2	Total Penta-Dioxins	29.02	9.335e3	1.733e4	3.828e2	6.484e2	0.59	NO	1.031e3	0.16865	0.16865	0.0565
3	Total Penta-Dioxins	29.52	1.091e4	2.017e4	8.385e2	1.082e3	0.77	YES	0.000e0	0.00000	0.28851	0.0565
4	Total Penta-Dioxins	29.66	4.630e3	8.569e3	2.377e2	3.176e2	0.75	YES	0.000e0	0.00000	0.084668	0.0565
5	Total Penta-Dioxins	29.78	5.894e3	1.447e4	2.920e2	6.073e2	0.48	YES	0.000e0	0.00000	0.12357	0.0565
6	Total Penta-Dioxins	30.03	3.625e3	7.845e3	3.095e2	4.542e2	0.68	NO	7.637e2	0.12490	0.12490	0.0565
7	Total Penta-Dioxins	30.32	1.809e3	3.722e3	5.860e1	1.385e2	0.42	YES	0.000e0	0.00000	0.024797	0.0565
8	1,2,3,7,8-PeCDD	30.74	7.415e3	8.194e3	2.620e2	4.230e2	0.62	NO	6.850e2	0.11202	0.11202	0.0565
9	Total Penta-Dioxins	30.82	1.918e3	3.231e3	7.622e1	1.160e2	0.66	NO	1.923e2	0.031444	0.031444	0.0565
10	Total Penta-Dioxins	31.11	1.710e3	2.160e3	8.058e1	1.179e2	0.68	NO	1.984e2	0.032452	0.032452	0.0565

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Hexa-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.59	5.133e5	3.912e5	2.118e4	1.730e4	1.22	NO	3.848e4	8.3126	8.3126	0.0563
2	Total Hexa-Dioxins	33.15	4.941e4	4.498e4	2.383e3	2.077e3	1.15	NO	4.460e3	0.96359	0.96359	0.0563
3	Total Hexa-Dioxins	33.40	1.864e5	1.620e5	1.243e4	1.065e4	1.17	NO	2.308e4	4.9857	4.9857	0.0563
4	Total Hexa-Dioxins	33.52	9.137e3	6.030e3	3.050e2	2.822e2	1.08	NO	5.872e2	0.12687	0.12687	0.0563
5	1,2,3,4,7,8-HxCDD	34.10	9.288e3	9.808e3	5.172e2	4.616e2	1.12	NO	9.788e2	0.20155	0.20155	0.0524
6	1,2,3,6,7,8-HxCDD	34.20	3.831e4	2.668e4	2.030e3	1.453e3	1.40	NO	3.483e3	0.71977	0.71977	0.0533
7	Total Hexa-Dioxins	34.38	7.817e3	6.358e3	3.207e2	3.011e2	1.07	NO	6.219e2	0.13435	0.13435	0.0563
8	1,2,3,7,8,9-HxCDD	34.48	2.359e4	1.758e4	1.070e3	9.332e2	1.15	NO	2.003e3	0.42098	0.42098	0.0567

Hepta-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.98	7.056e5	6.968e5	4.311e4	4.326e4	1.00	NO	8.636e4	29.109	29.109	0.160
2	1,2,3,4,6,7,8-HpCDD	38.01	7.525e5	7.774e5	4.343e4	4.410e4	0.98	NO	8.752e4	29.500	29.500	0.160

Tetra-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	20.96	1.380e4	2.019e4	1.190e3	1.745e3	0.68	NO	2.935e3	0.43538	0.43538	0.0408
2	Total Tetra-Furans	21.90	9.096e3	1.326e4	8.537e2	1.197e3	0.71	NO	2.051e3	0.30419	0.30419	0.0408
3	Total Tetra-Furans	22.40	3.799e3	4.143e3	3.274e2	3.763e2	0.87	NO	7.037e2	0.10439	0.10439	0.0408
4	Total Tetra-Furans	23.58	3.340e4	4.890e4	3.387e3	5.101e3	0.66	NO	8.488e3	1.2591	1.2591	0.0408
5	Total Tetra-Furans	24.04	1.731e4	2.552e4	1.296e3	1.857e3	0.70	NO	3.153e3	0.46778	0.46778	0.0408
6	Total Tetra-Furans	24.57	2.973e3	4.723e3	1.974e2	2.820e2	0.70	NO	4.795e2	0.071123	0.071123	0.0408
7	Total Tetra-Furans	24.88	2.087e4	3.023e4	1.407e3	2.039e3	0.69	NO	3.445e3	0.5111C	0.5111C	0.0408
8	2,3,7,8-TCDF	24.97	2.577e4	3.149e4	1.534e3	2.226e3	0.69	NO	3.760e3	0.55769	0.55769	0.0408
9	Total Tetra-Furans	25.35	5.197e3	3.070e3	1.587e2	1.673e2	0.95	YES	0.000e0	0.00000	0.043929	0.0408
10	Total Tetra-Furans	26.93	3.399e3	5.409e3	1.447e2	2.657e2	0.54	YES	0.000e0	0.00000	0.049357	0.0408

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**Penta-Furans function 1**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.92	2.728e4	1.682e4	1.603e3	1.039e3	1.54	NO	2.642e3	0.31991	0.31991	0.0104

**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.45	3.162e4	2.380e4	1.813e3	1.370e3	1.32	NO	0.000e0	0.00000	0.38538	0.0428
2	Total Penta-Furans	28.49	3.357e4	2.362e4	1.665e3	9.764e2	1.71	NO	2.642e3	0.31986	0.31986	0.0428
3	Total Penta-Furans	29.07	4.147e4	2.538e4	2.358e3	1.478e3	1.60	NO	3.836e3	0.46449	0.46449	0.0428
4	Total Penta-Furans	29.29	1.147e4	1.186e4	6.612e2	5.324e2	1.24	YES	0.000e0	0.00000	0.13172	0.0428
5	1,2,3,7,8-PeCDF	29.46	6.594e4	4.907e4	3.344e3	2.098e3	1.59	NO	5.442e3	0.63655	0.63655	0.0433
6	Total Penta-Furans	29.72	1.575e4	1.634e4	7.879e2	7.204e2	1.09	YES	0.000e0	0.00000	0.15696	0.0428
7	Total Penta-Furans	30.33	5.447e3	4.382e3	1.464e2	8.375e1	1.75	NO	2.301e2	0.027863	0.027863	0.0428
8	2,3,4,7,8-PeCDF	30.44	2.686e4	1.854e4	1.446e3	1.038e3	1.39	NO	2.484e3	0.30298	0.30298	0.0412
9	Total Penta-Furans	30.48	8.280e3	6.655e3	1.841e2	1.390e2	1.32	NO	3.231e2	0.039118	0.039118	0.0428
10	Total Penta-Furans	30.94	1.474e3	1.844e3	2.266e1	2.812e1	0.81	YES	0.000e0	0.00000	0.00451	0.0428

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Furans	32.07	4.657e3	7.204e3	2.209e2	2.628e2	0.84	YES	0.000e0	0.00000	0.093293	0.0410
2	Total Hexa-Furans	32.22	1.505e4	1.480e4	6.400e2	6.366e2	1.01	YES	0.000e0	0.00000	0.27029	0.0410
3	Total Hexa-Furans	32.76	1.895e4	1.519e4	8.457e2	7.804e2	1.08	NO	1.626e3	0.38020	0.38020	0.0410
4	1,2,3,4,7,8-HxCDF	33.22	4.180e4	3.483e4	2.113e3	1.661e3	1.27	NO	3.774e3	0.85310	0.85310	0.0374
5	1,2,3,6,7,8-HxCDF	33.34	1.403e4	8.986e3	6.770e2	5.019e2	1.35	NO	1.179e3	0.25083	0.25083	0.0358
6	2,3,4,6,7,8-HxCDF	33.93	5.578e3	3.562e3	2.577e2	1.714e2	1.50	YES	4.291e2	0.00000	0.094943	0.0436
7	1,2,3,7,8,9-HxCDF	34.86	5.461e3	4.048e3	2.618e2	2.180e2	1.20	NO	4.798e2	0.13833	0.13833	0.0554
8	Total Hexa-Furans	34.88	2.662e3	2.648e3	6.483e1	7.119e1	0.91	YES	0.000e0	0.00000	0.027379	0.0410

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Hepta-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.60	1.833e4	1.772e4	9.169e2	1.087e3	0.84	YES	2.004e3	0.00000	0.70138	0.0499
2	Total Hepta-Furans	37.20	3.061e4	2.669e4	1.624e3	1.559e3	1.04	NO	3.184e3	1.3960	1.3960	0.0511
3	1,2,3,4,7,8,9-HpCDF	38.58	3.572e3	5.004e3	2.301e2	2.242e2	1.03	NO	4.543e2	0.20387	0.20387	0.0472

Dataset: Untitled

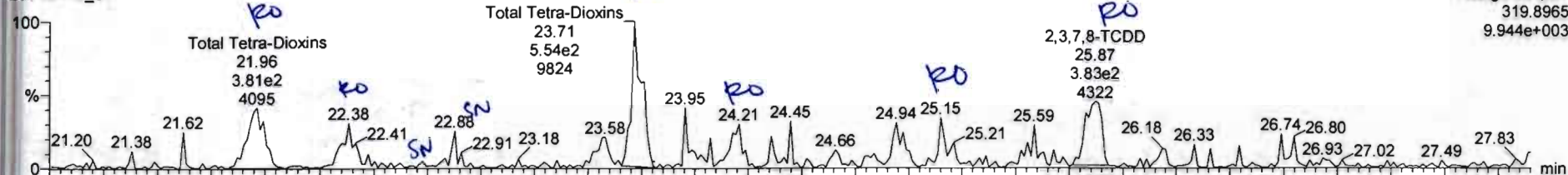
Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_8, Date: 22-Jan-2020, Time: 04:25:28, ID: 1904159-17 PDI-025SC-A-02-03-190927 12.88, Description: PDI-025SC-A-02-03-190927

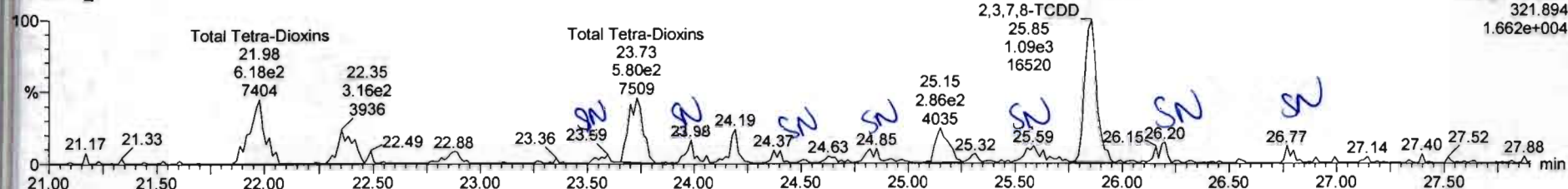
2,3,7,8-TCDD

200121R2\_8



F1: Voltage SIR, EI+  
319.8965  
9.944e+003

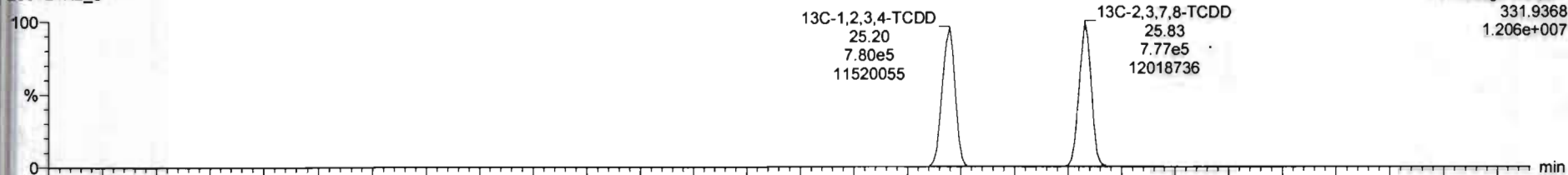
200121R2\_8



F1: Voltage SIR, EI+  
321.894  
1.662e+004

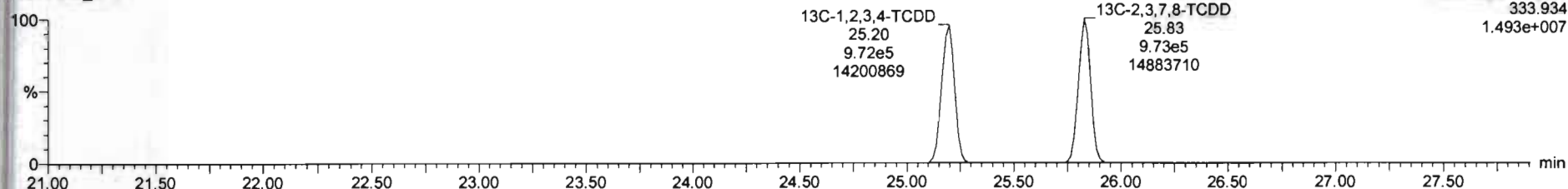
13C-2,3,7,8-TCDD

200121R2\_8

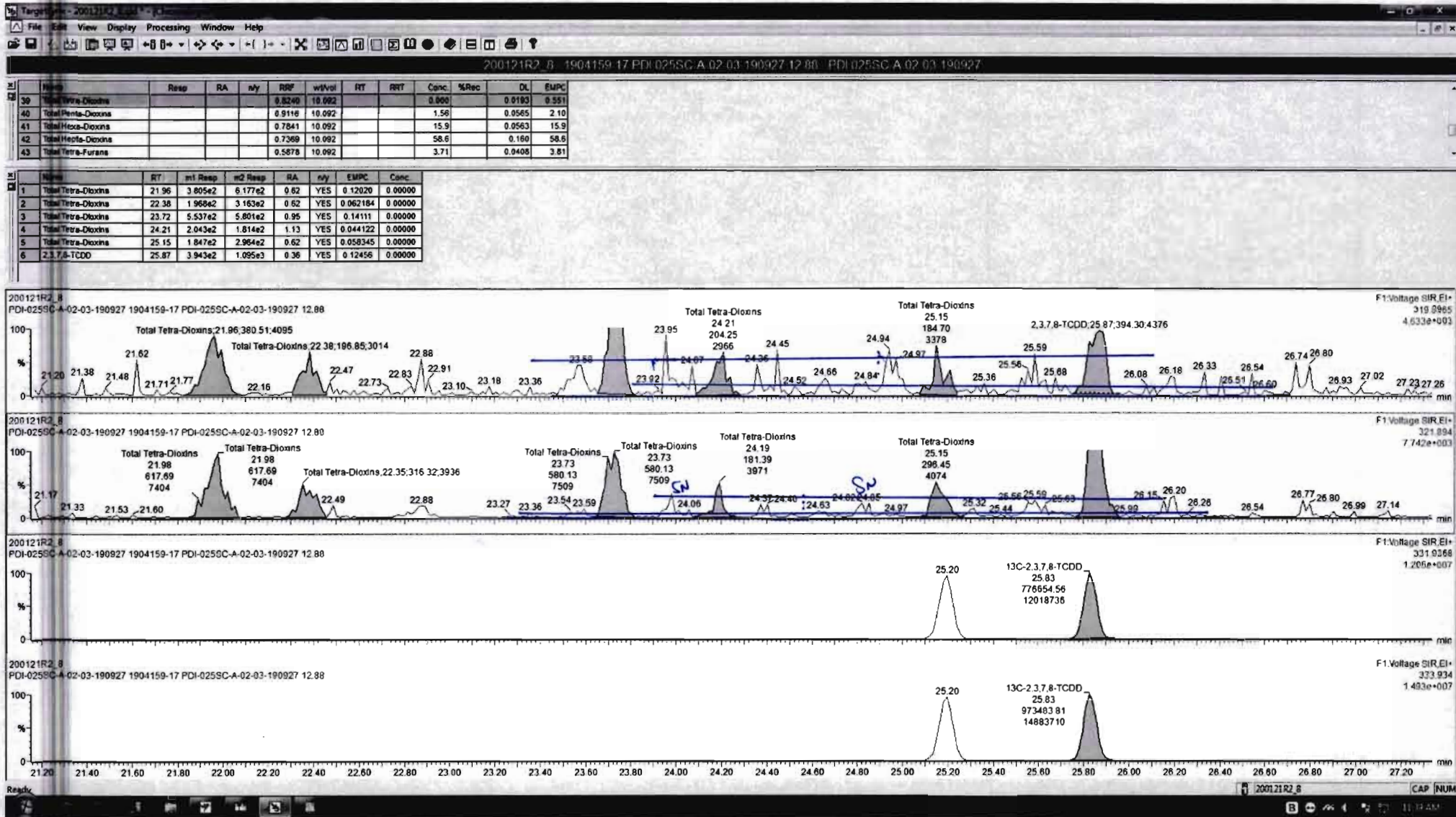


F1: Voltage SIR, EI+  
331.9368  
1.206e+007

200121R2\_8



F1: Voltage SIR, EI+  
333.934  
1.493e+007



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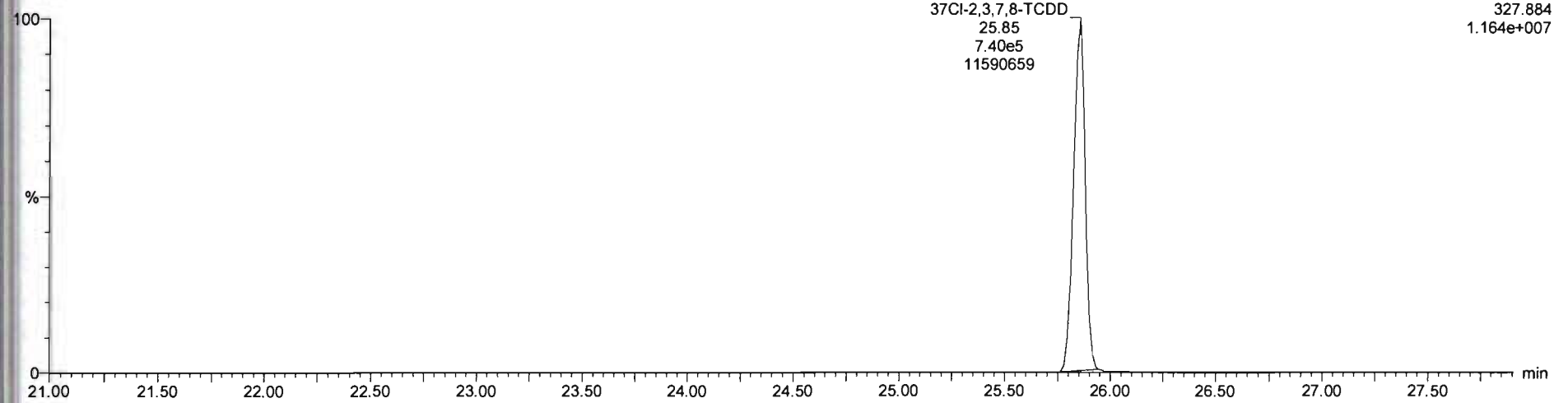
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Name: 200121R2\_8, Date: 22-Jan-2020, Time: 04:25:28, ID: 1904159-17 PDI-025SC-A-02-03-190927 12.88, Description: PDI-025SC-A-02-03-190927

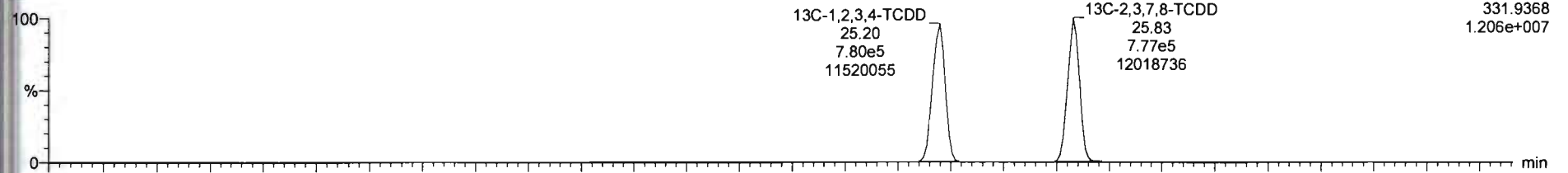
**37Cl-2,3,7,8-TCDD**

200121R2\_8

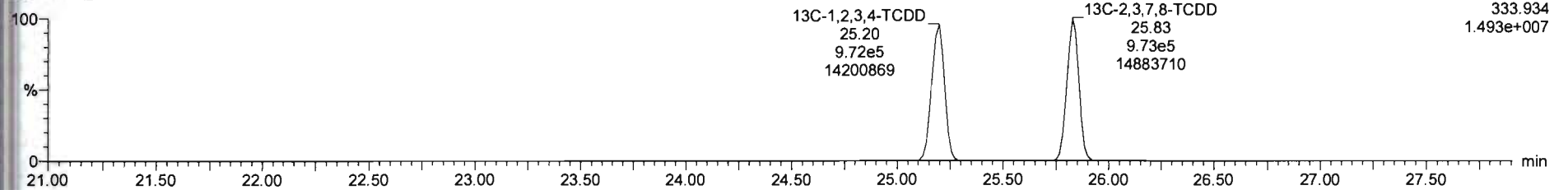


**13C-1,2,3,4-TCDD**

200121R2\_8



200121R2\_8





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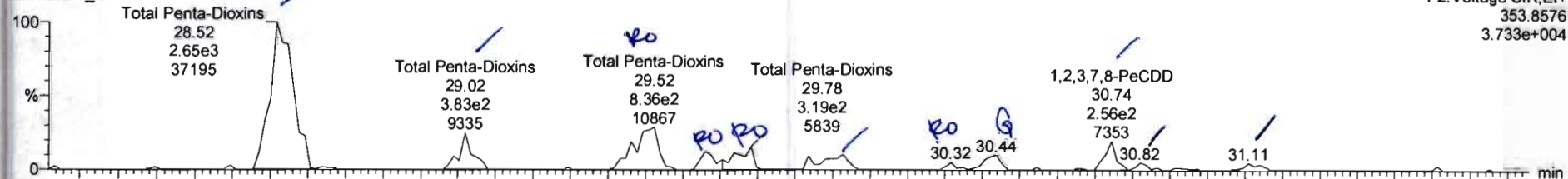
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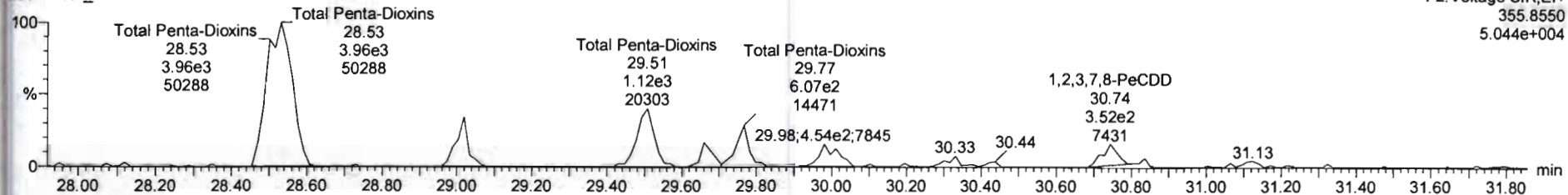
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1,2,3,7,8-PeCDD

200121R2\_8

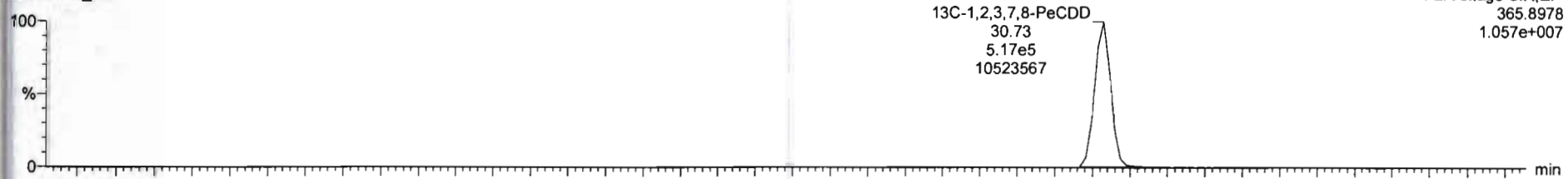


200121R2\_8

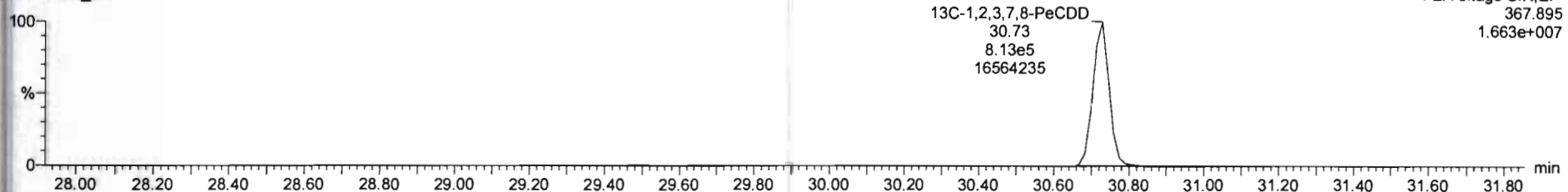


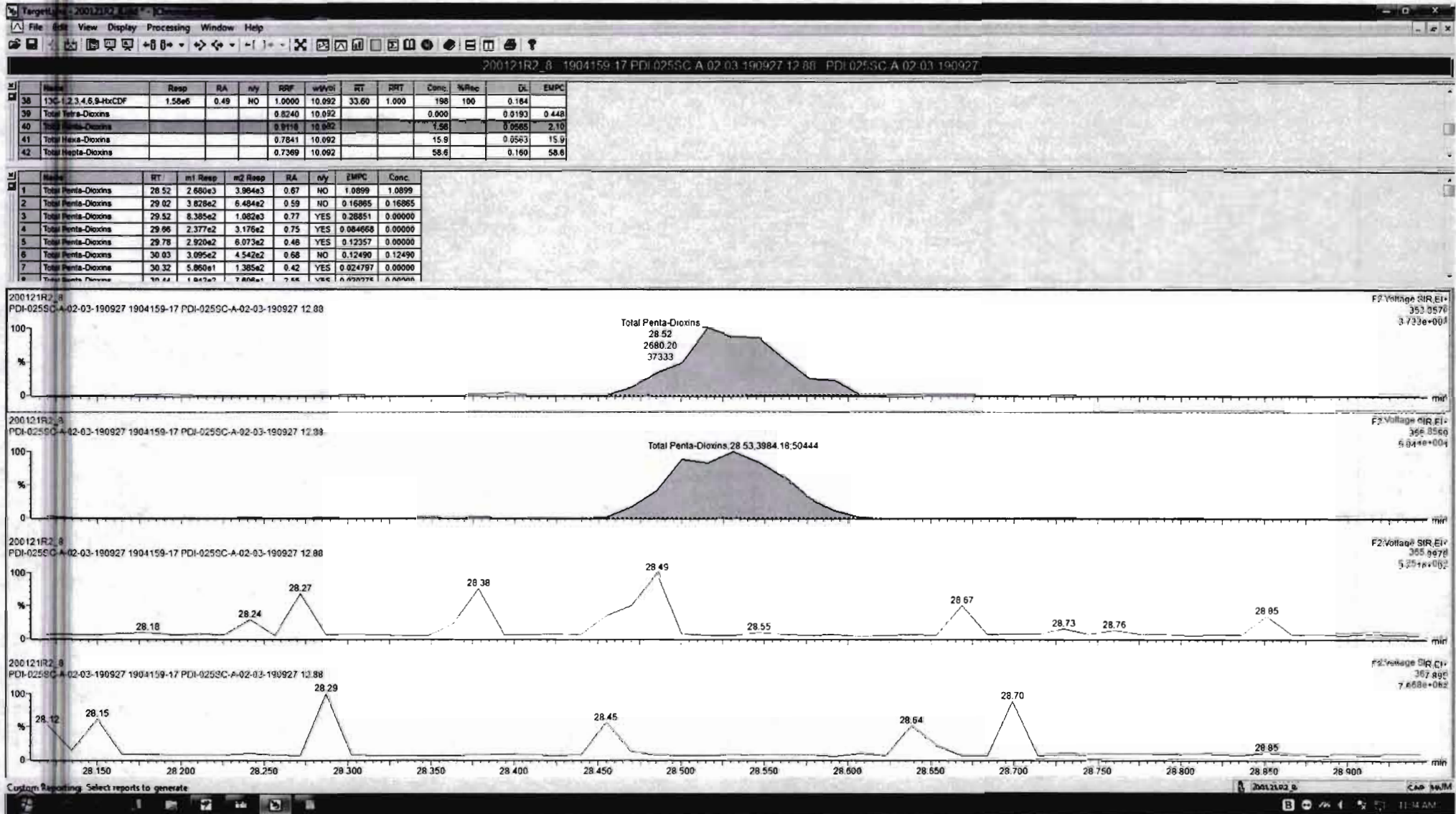
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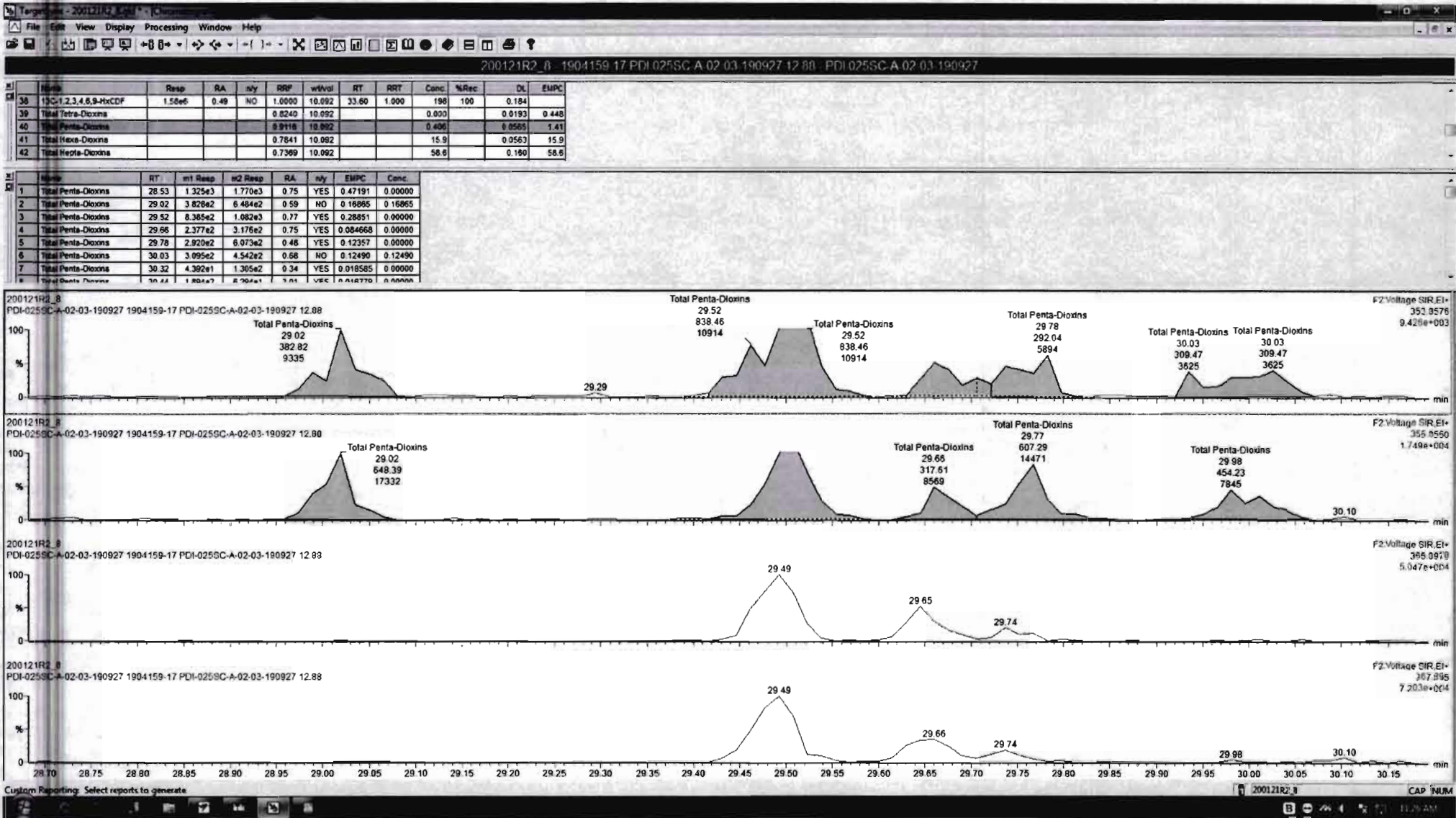
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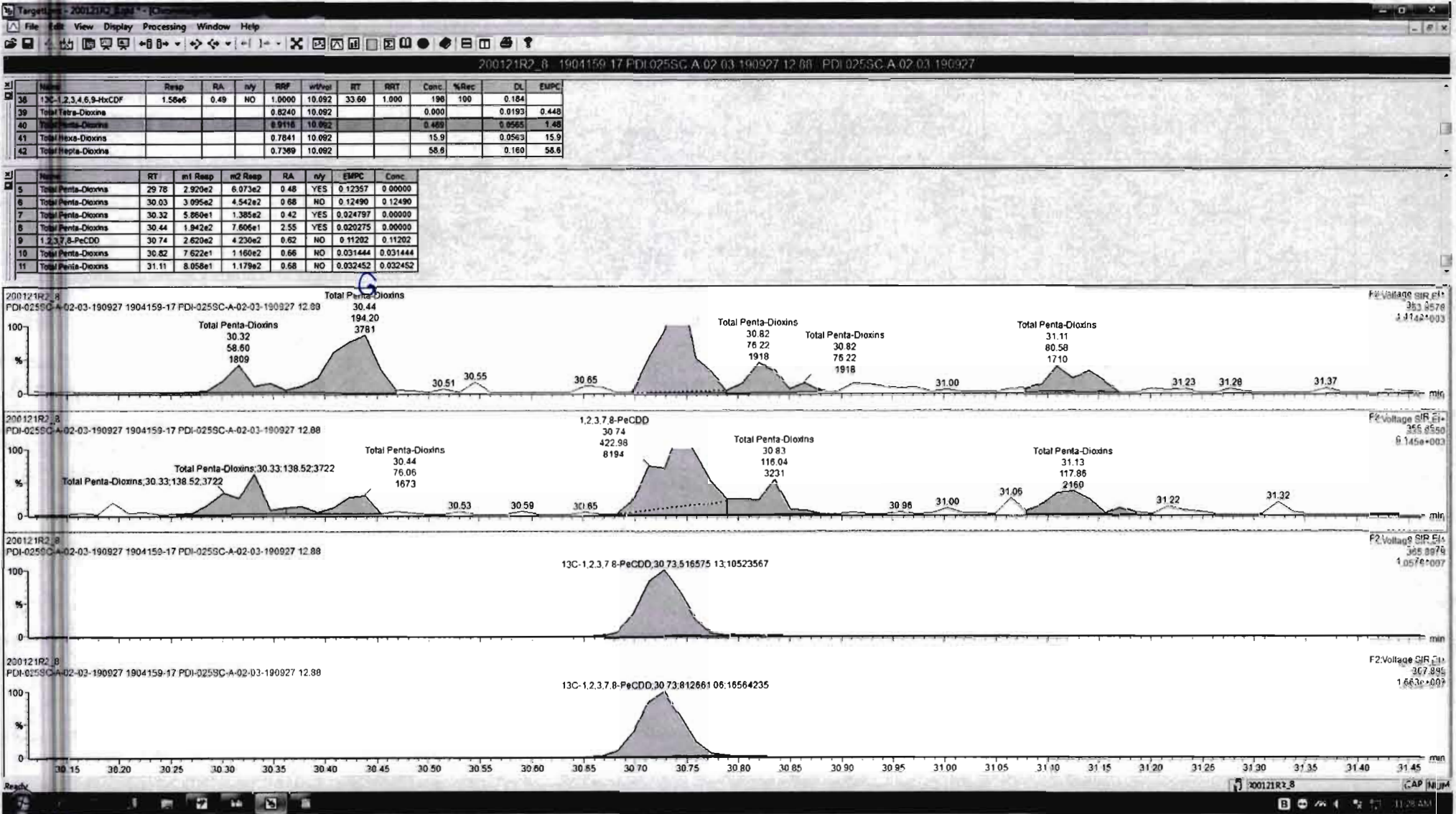


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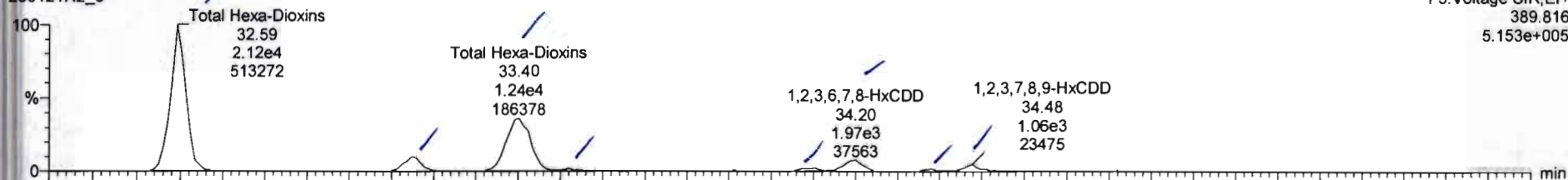
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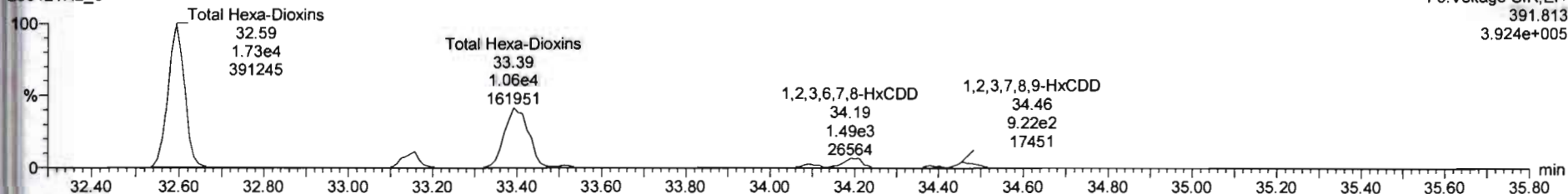
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1,2,3,4,7,8-HxCDD

200121R2\_8

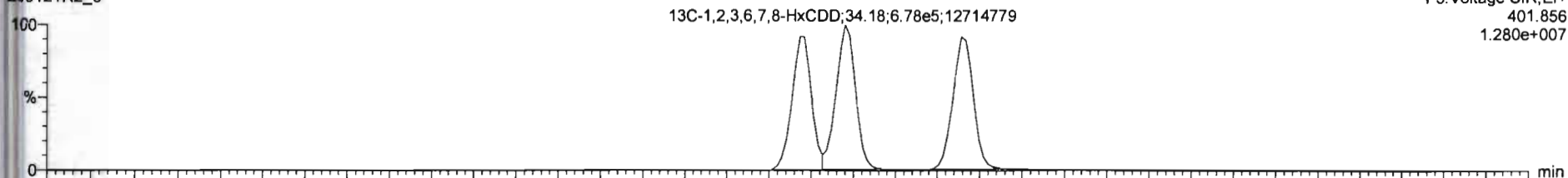


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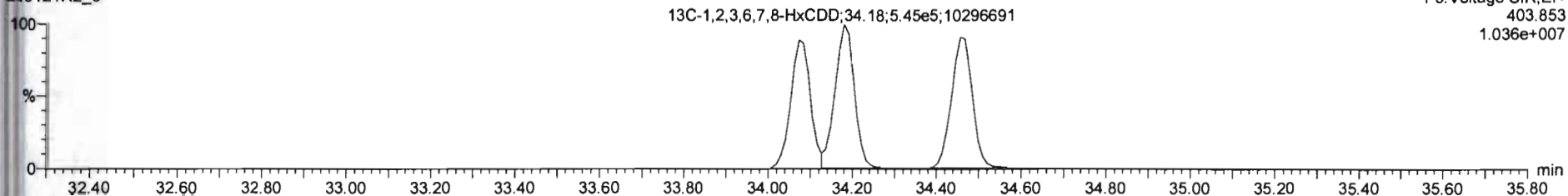


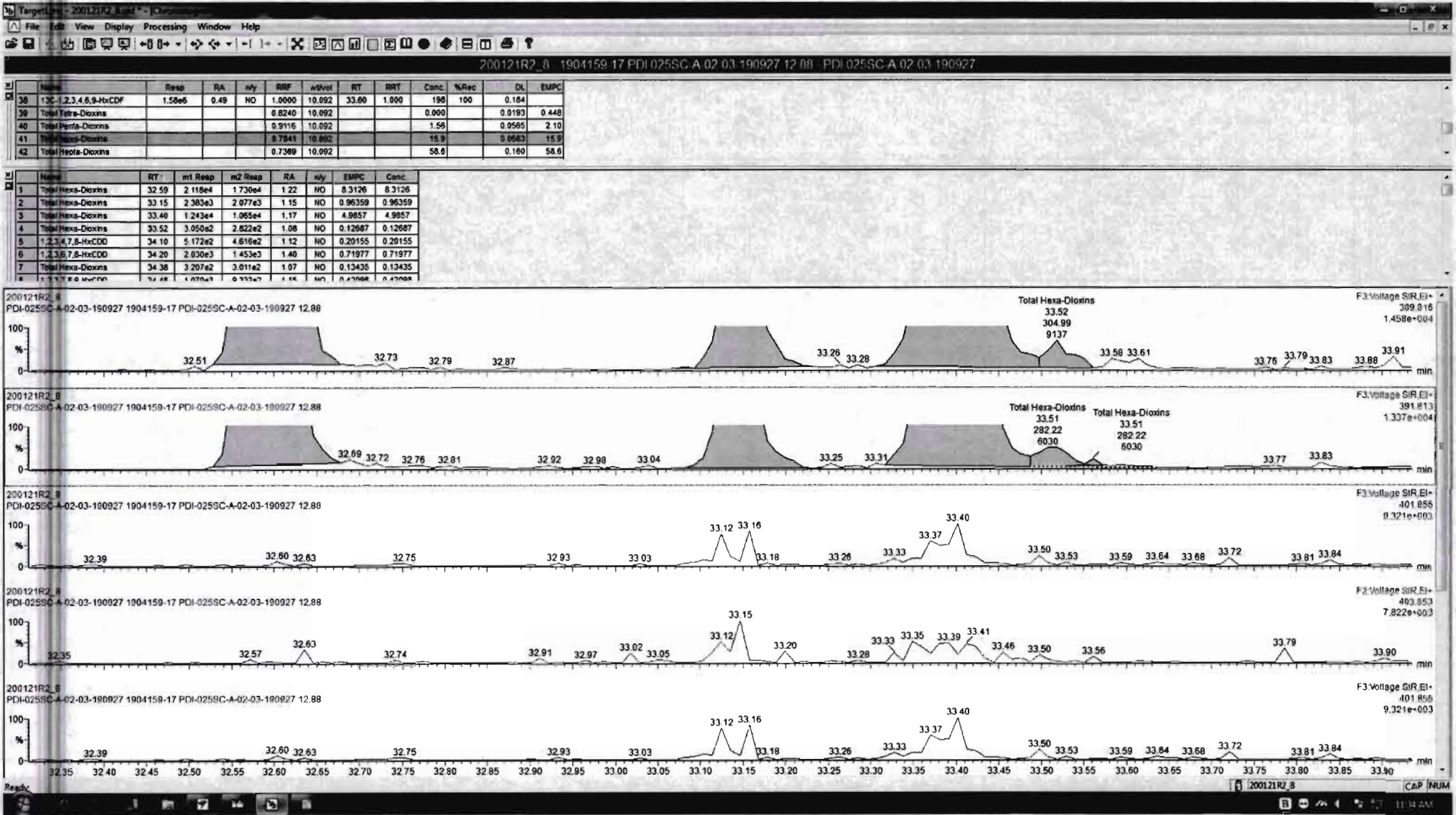
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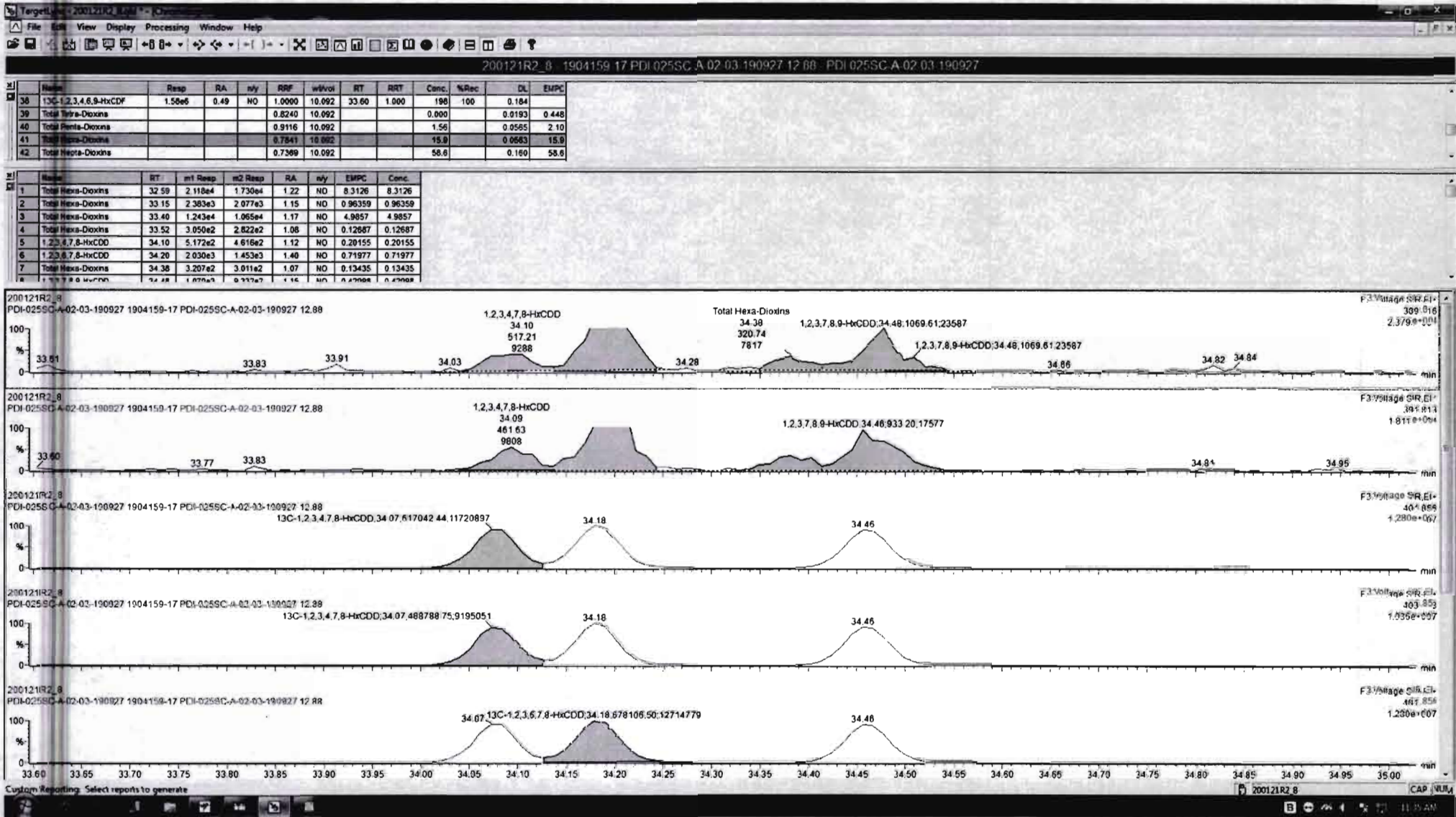
200121R2\_8



200121R2\_8







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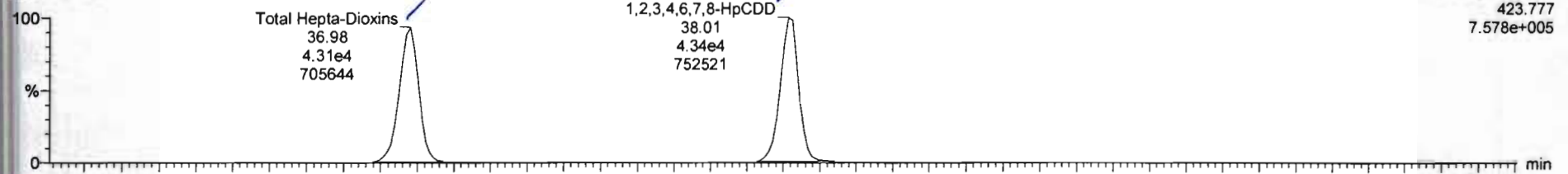
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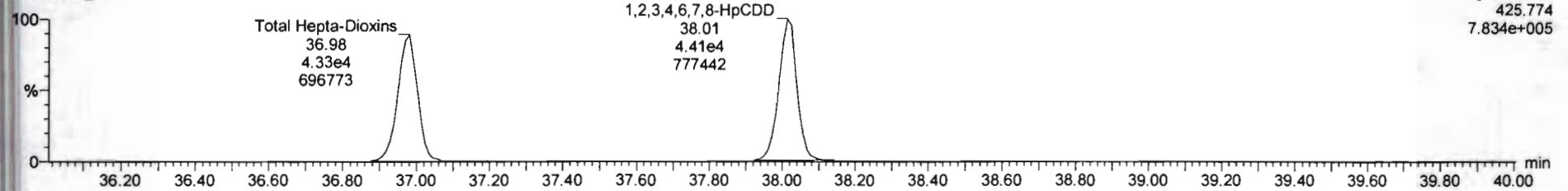
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**1,2,3,4,6,7,8-HpCDD**

200121R2\_8

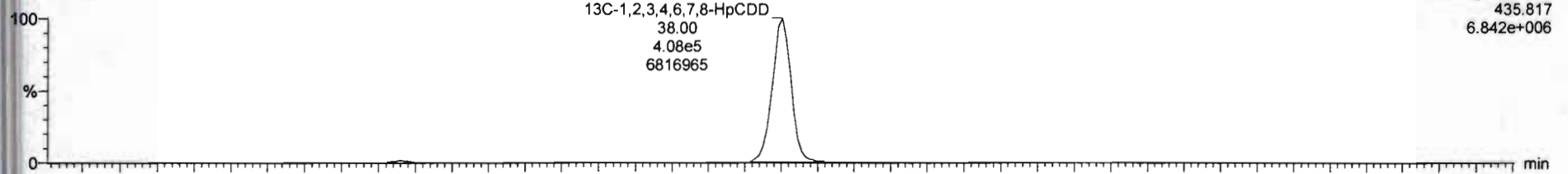


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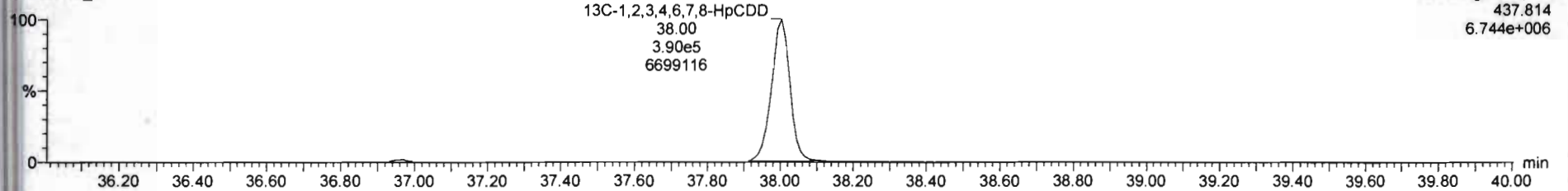


**13C-1,2,3,4,6,7,8-HpCDD**

200121R2\_8



200121R2\_8





Dataset: Untitled

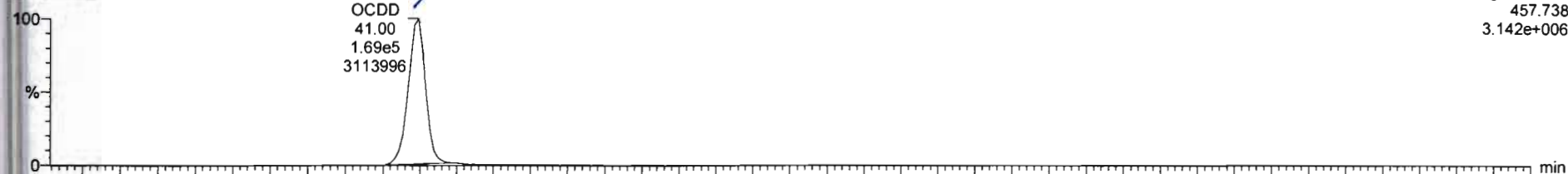
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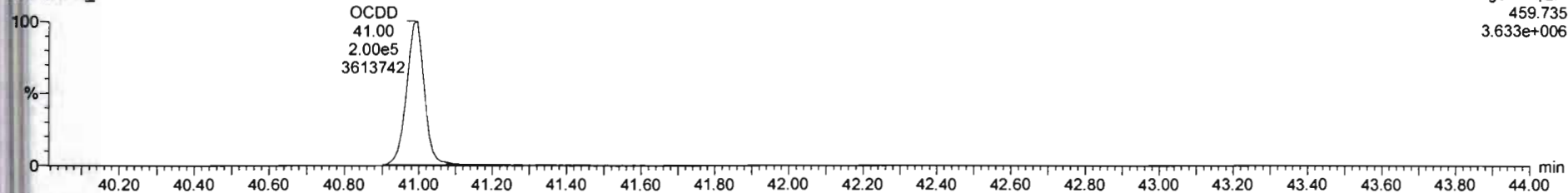
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**OCDD**

200121R2\_8

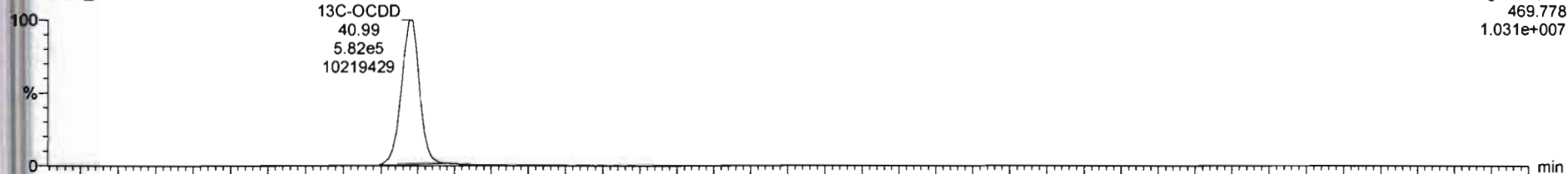


200121R2\_8

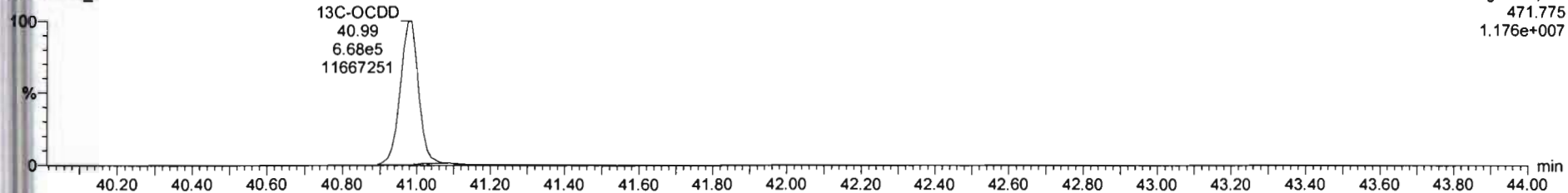


**13C-OCDD**

200121R2\_8



200121R2\_8



Dataset: Untitled

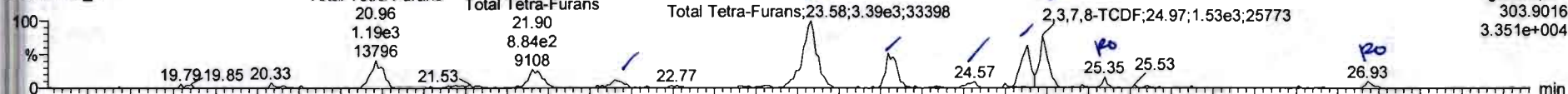
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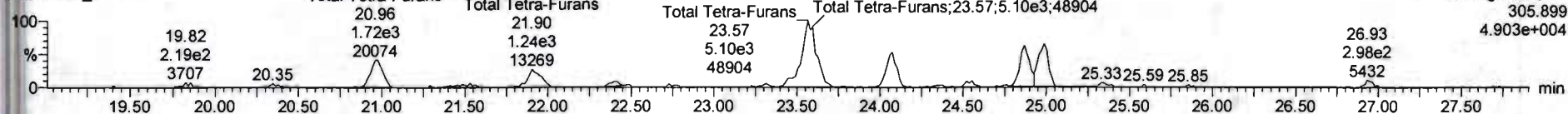
**2,3,7,8-TCDF**

200121R2\_8



F1:Voltage SIR,EI+  
303.9016  
3.351e+004

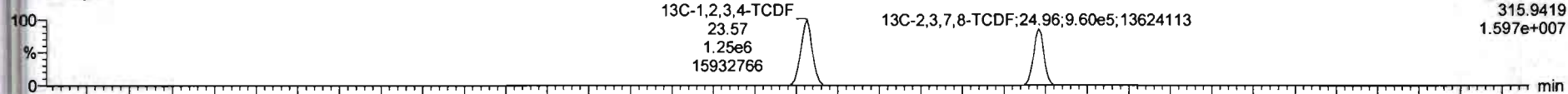
200121R2\_8



F1:Voltage SIR,EI+  
305.899  
4.903e+004

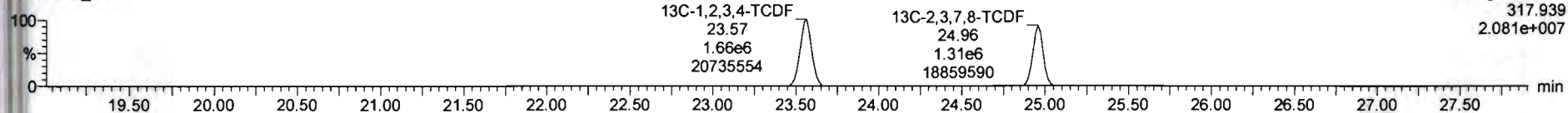
**13C-2,3,7,8-TCDF**

200121R2\_8



F1:Voltage SIR,EI+  
315.9419  
1.597e+007

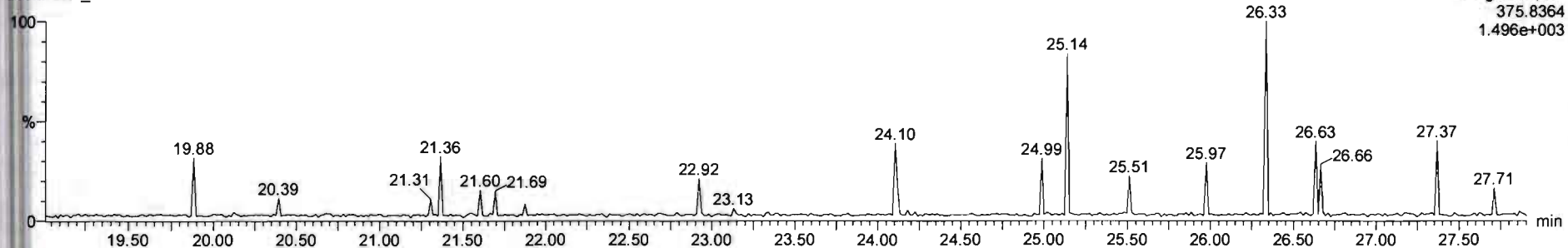
200121R2\_8



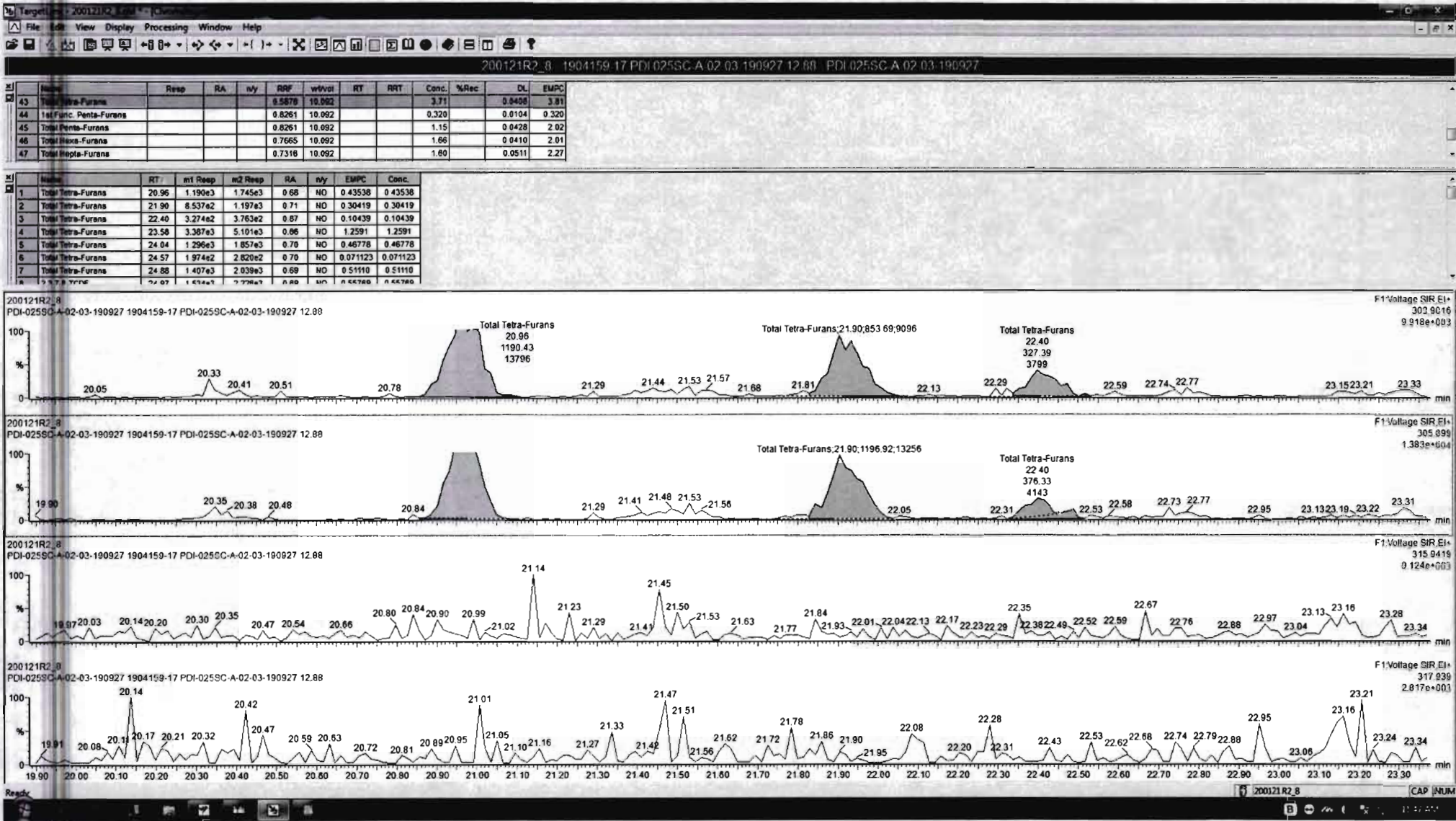
F1:Voltage SIR,EI+  
317.939  
2.081e+007

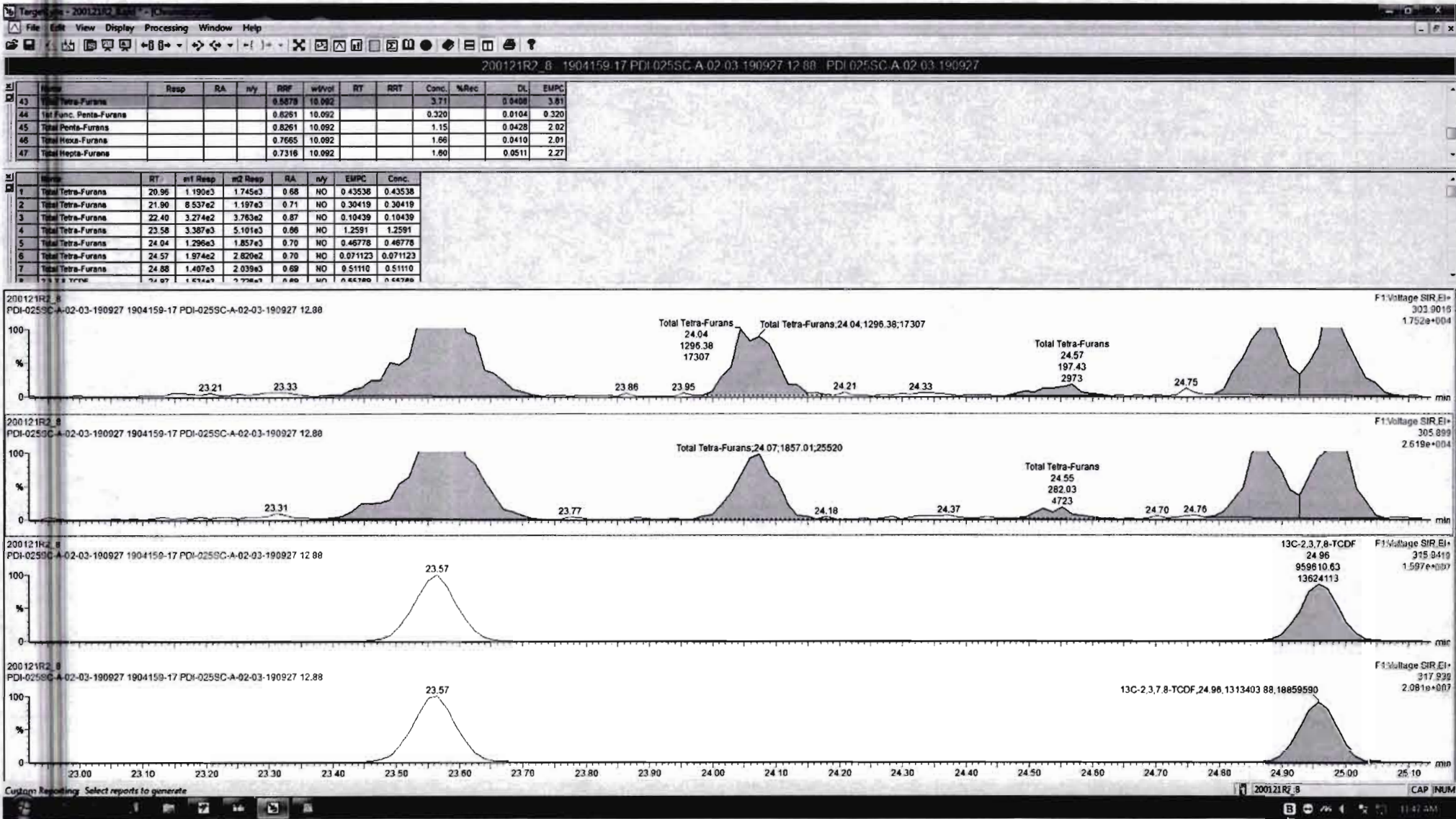
**DPE1**

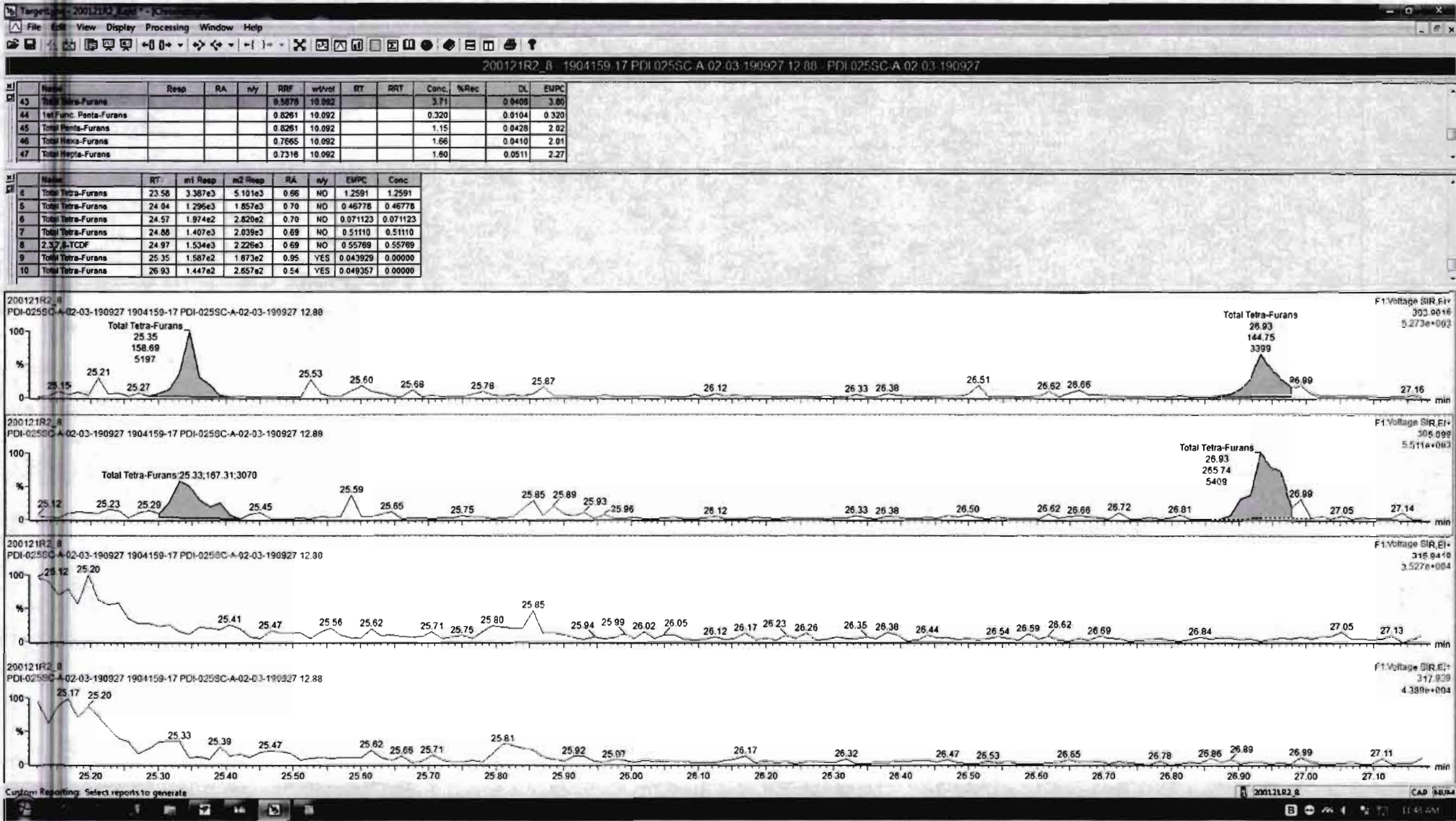
200121R2\_8



F1:Voltage SIR,EI+  
375.8364  
1.496e+003







Dataset: Untitled

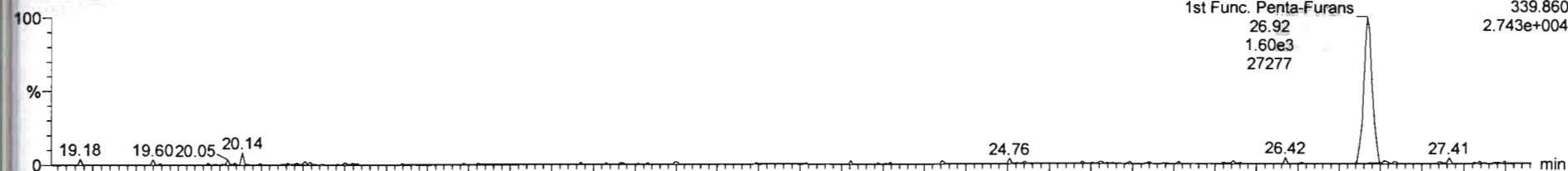
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

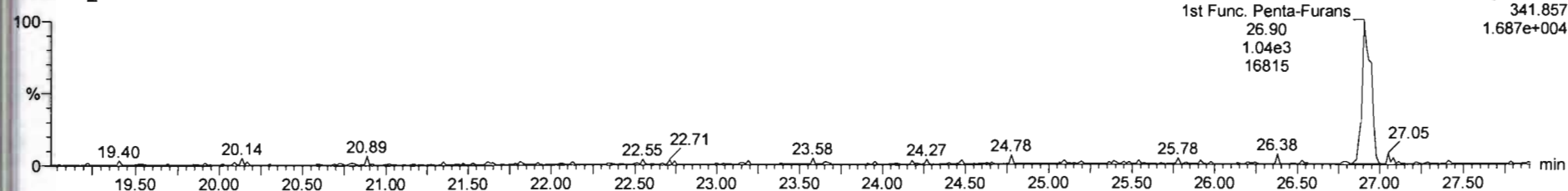
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1st Func. Penta-Furans

200121R2\_8

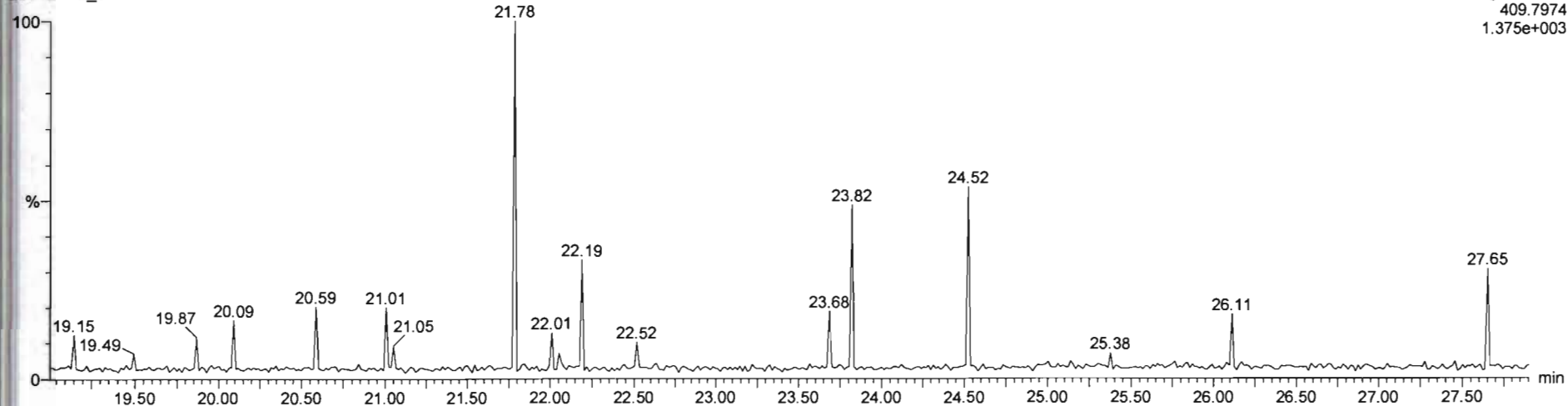


200121R2\_8



DPE6

200121R2\_8



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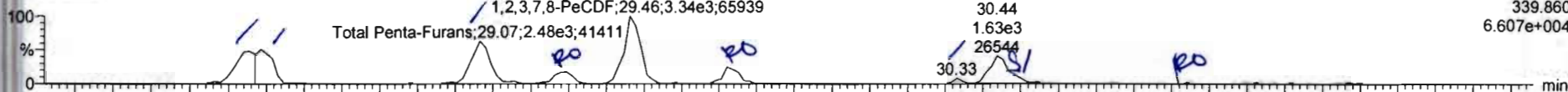
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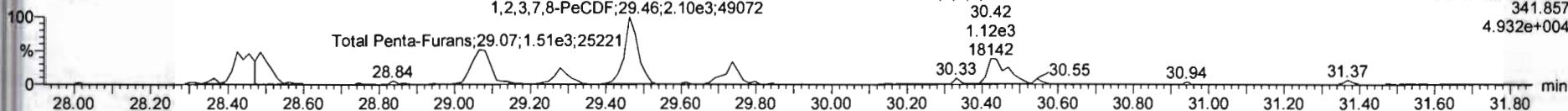
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**1,2,3,7,8-PeCDF**

200121R2\_8

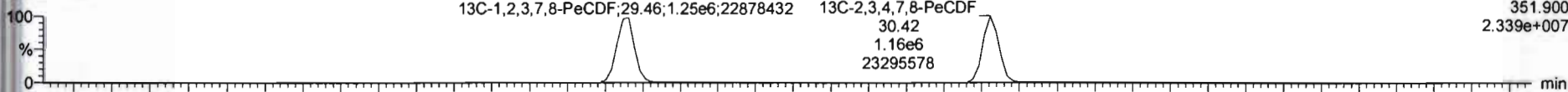


200121R2\_8

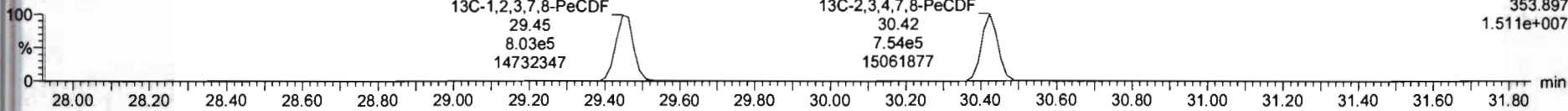


**13C-1,2,3,7,8-PeCDF**

200121R2\_8

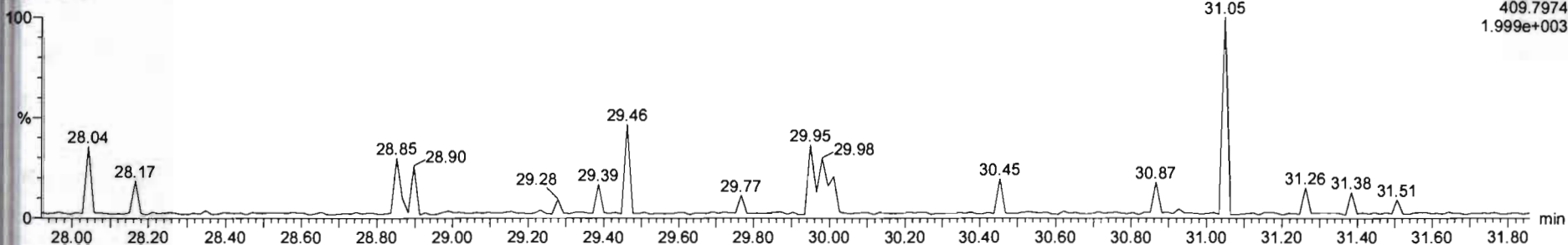


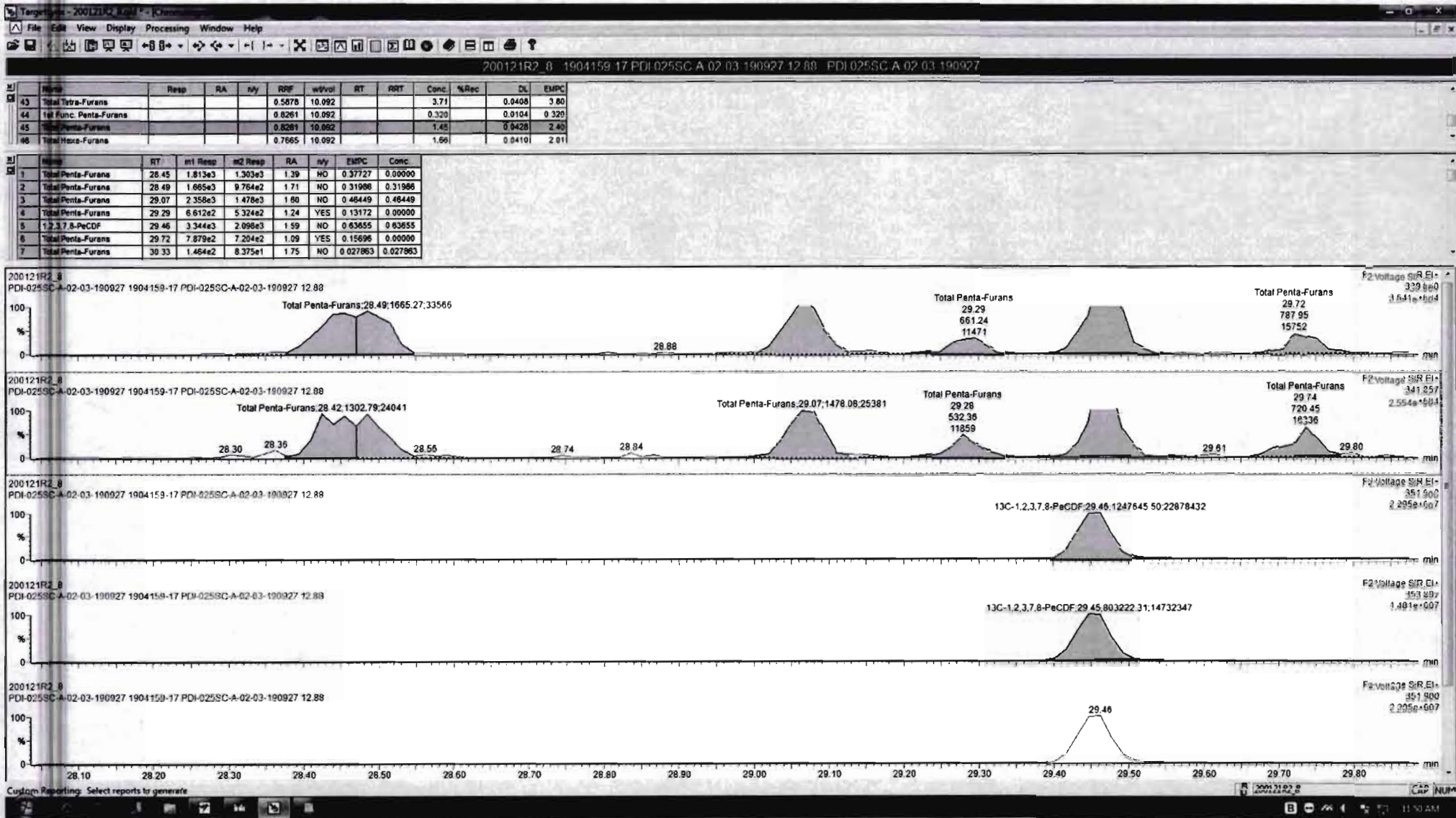
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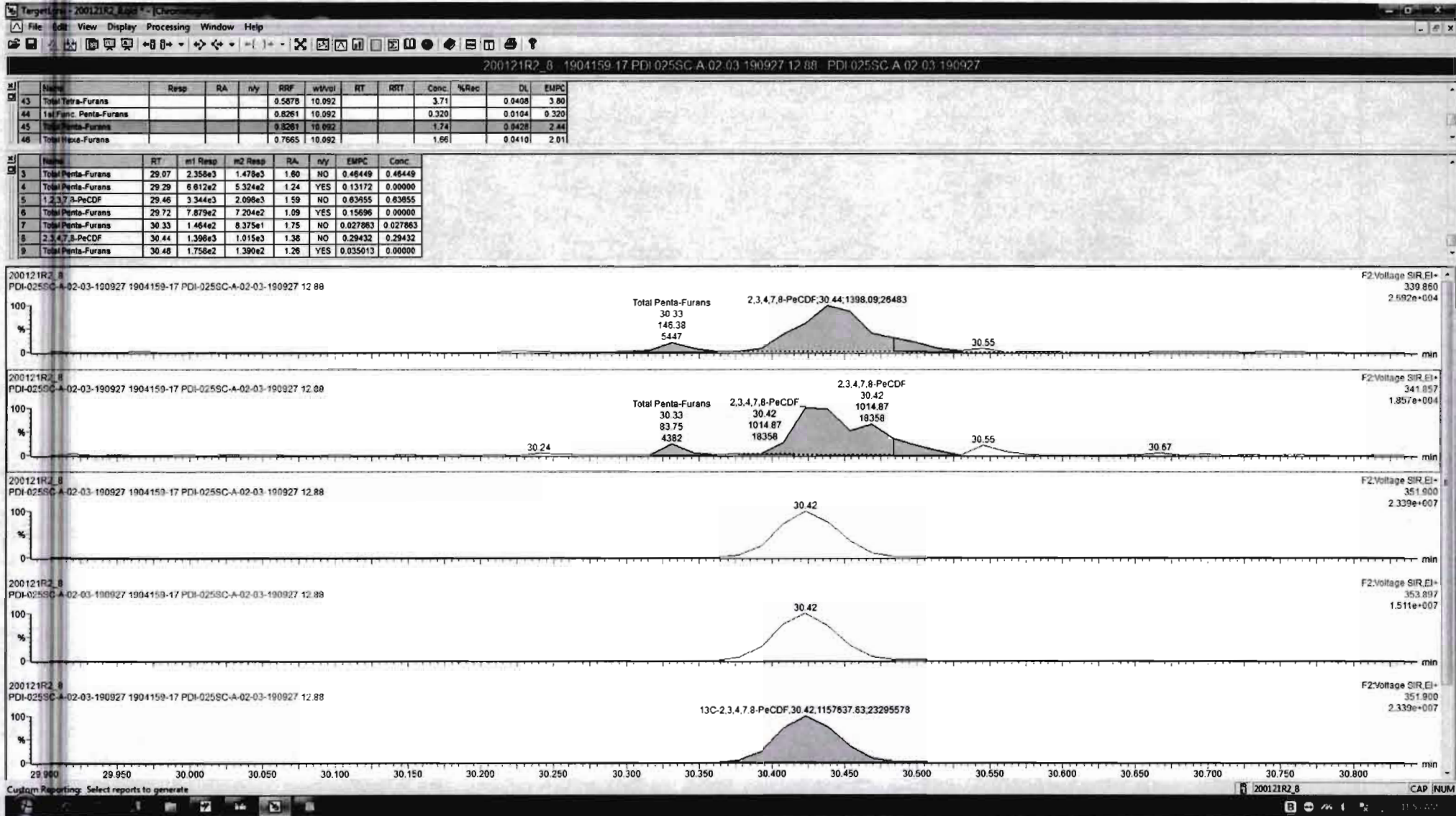
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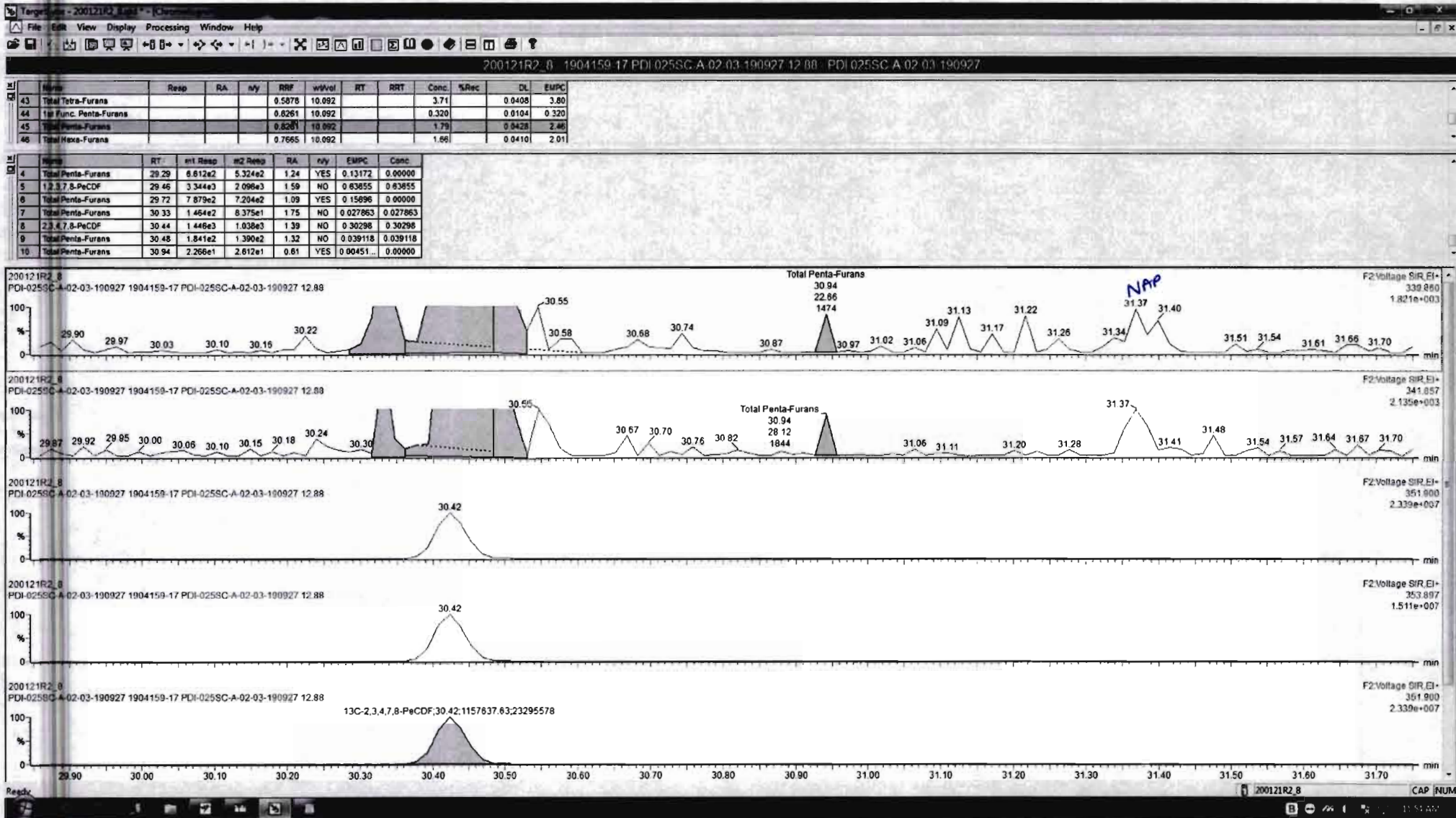
200121R2\_8









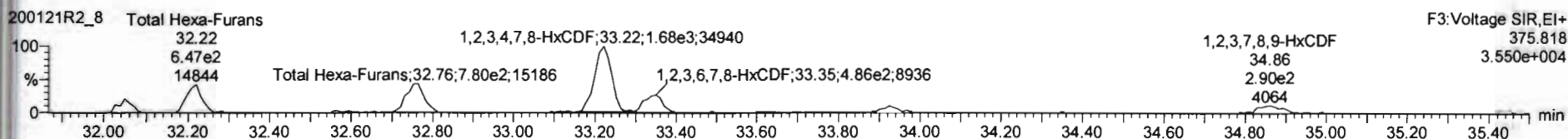
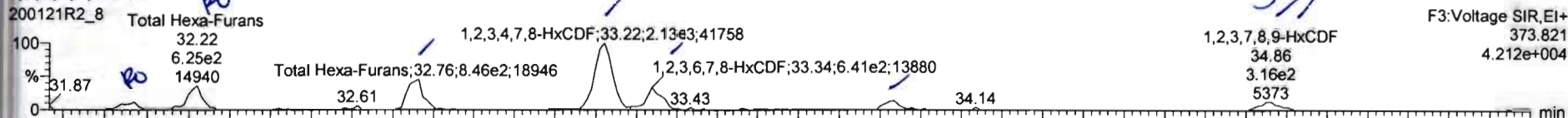


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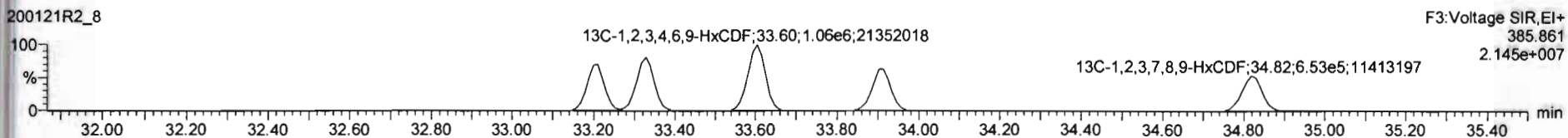
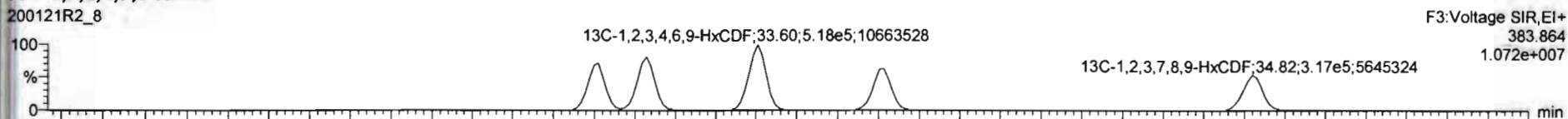
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_8, Date: 22-Jan-2020, Time: 04:25:28, ID: 1904159-17 PDI-025SC-A-02-03-190927 12.88, Description: PDI-025SC-A-02-03-190927

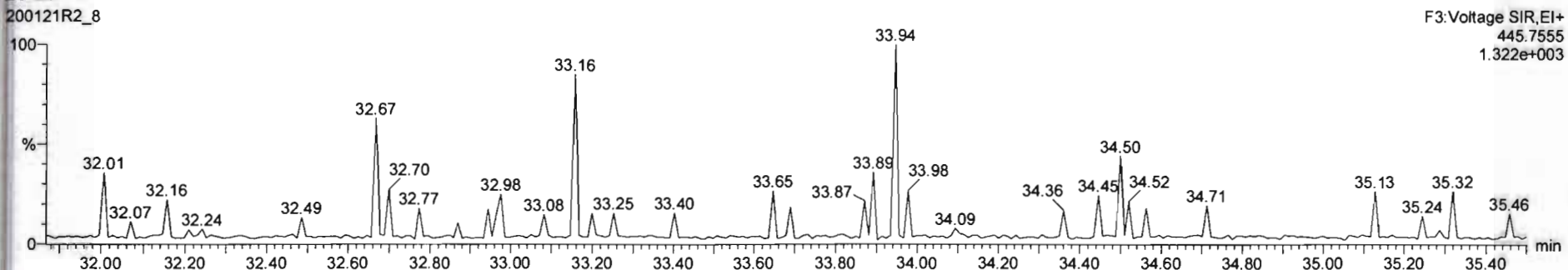
1,2,3,4,7,8-HxCDF

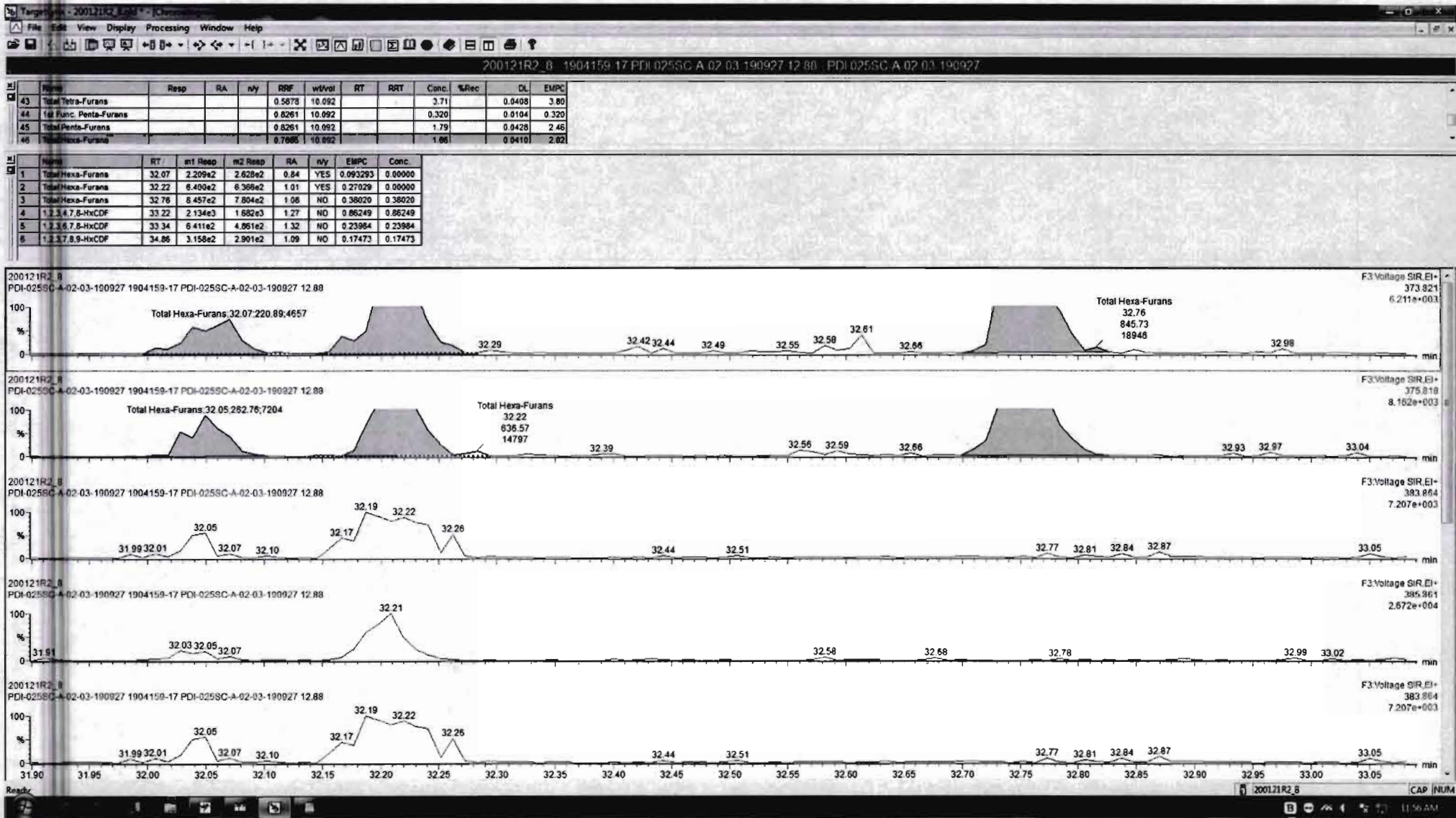


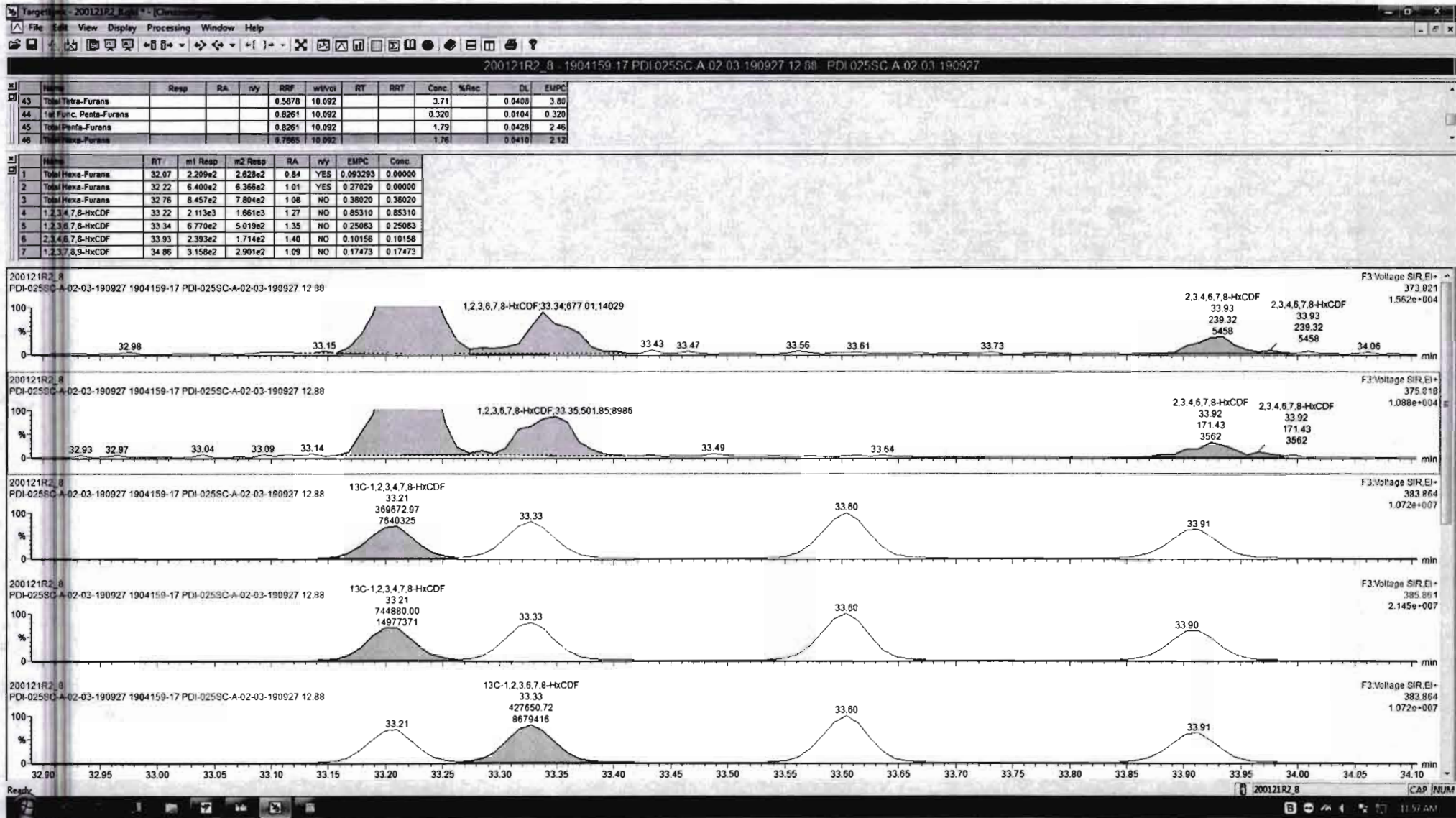
13C-1,2,3,4,7,8-HxCDF



DPE3



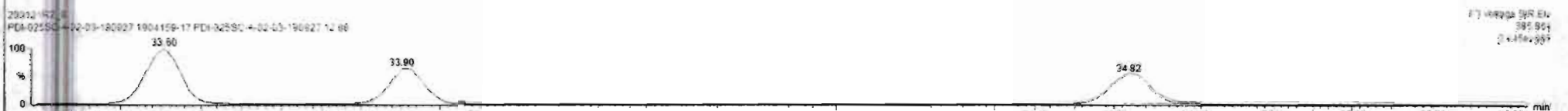
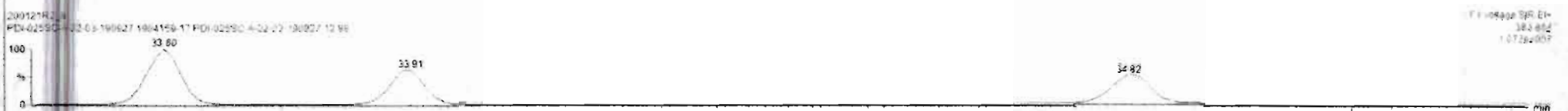




200121R2\_8 - 1904159-17-PDI-025SC-A-02-03-190927-12-88 - PDI-025SC-A-02-03-190927

#	Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc	%Rec	DL	EMPC
1	2,3,7,8-TCDD	1.49e3	0.36	YES	0.8240	10.092	25.87	1.002	0.206		0.0326	0.125
2	1,2,3,7,8-PeCDD	6.85e2	0.62	NO	0.9116	10.092	30.74	1.000	0.112		0.0561	0.112
3	1,2,3,4,7,8-HxCDD	9.79e2	1.12	NO	0.8704	10.092	34.10	1.001	0.202		0.0524	0.202
4	1,2,3,6,7,8-HxCDD	3.46e3	1.40	NO	0.7841	10.092	34.20	1.001	0.720		0.0533	0.720
5	1,2,3,7,8,9-HxCDD	2.06e3	1.15	NO	0.7985	10.092	34.48	1.001	0.421		0.0567	0.421
6	1,2,3,4,6,7,8-HpCDD	8.75e4	0.98	NO	0.7369	10.092	36.01	1.000	29.5		0.160	29.5
7	OCDF	1.46e4	0.84	NO	0.8000	10.092	41.00	1.000	146		0.184	146

#	Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc
1	1,2,3,7,8-HxCDF	34.86	2.610e2	2.180e2	1.20	NO	0.13833	0.13833
2	2,3,4,6,7,8-HxCDF	33.93	2.577e2	1.714e2	1.50	YES	0.094943	0.00000
3	1,2,3,6,7,8-HxCDF	33.34	6.770e2	5.019e2	1.35	NO	0.25083	0.25083
4	1,2,3,4,7,8-HxCDF	33.22	2.113e3	1.661e3	1.27	NO	0.85310	0.85310
5	Total Hexa-Furans	32.76	8.457e2	7.804e2	1.08	NO	0.36020	0.36020
6	Total Hexa-Furans	32.22	6.400e2	6.366e2	1.01	YES	0.27029	0.00000
7	Total Hexa-Furans	32.07	2.206e2	2.626e2	0.84	YES	0.093293	0.00000
8	Total Hexa-Furans	34.68	5.482e1	7.119e1	0.91	YES	0.027375	0.00000



Dataset: Untitled

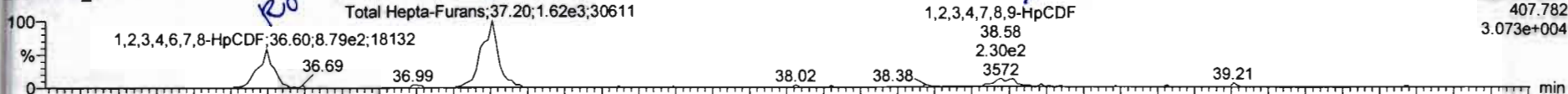
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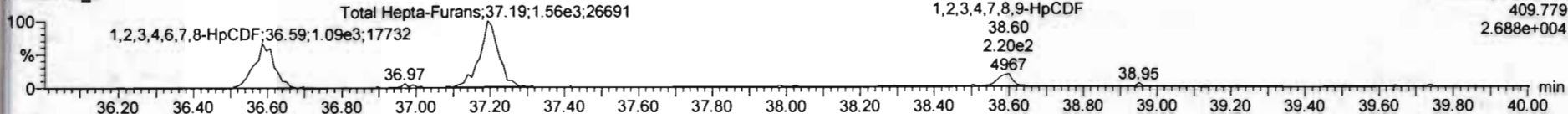
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1,2,3,4,6,7,8-HpCDF

200121R2\_8

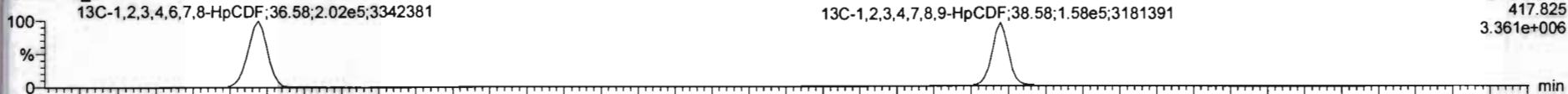


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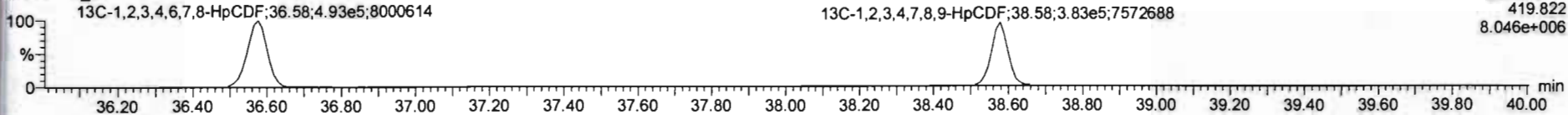


13C-1,2,3,4,6,7,8-HpCDF

200121R2\_8

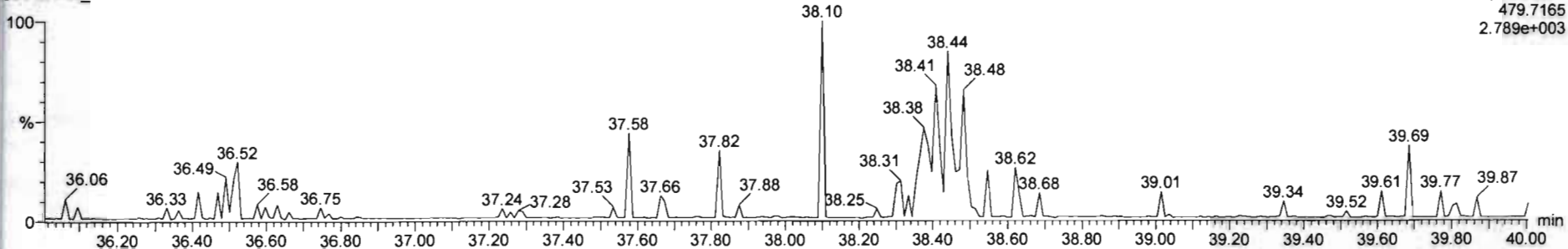


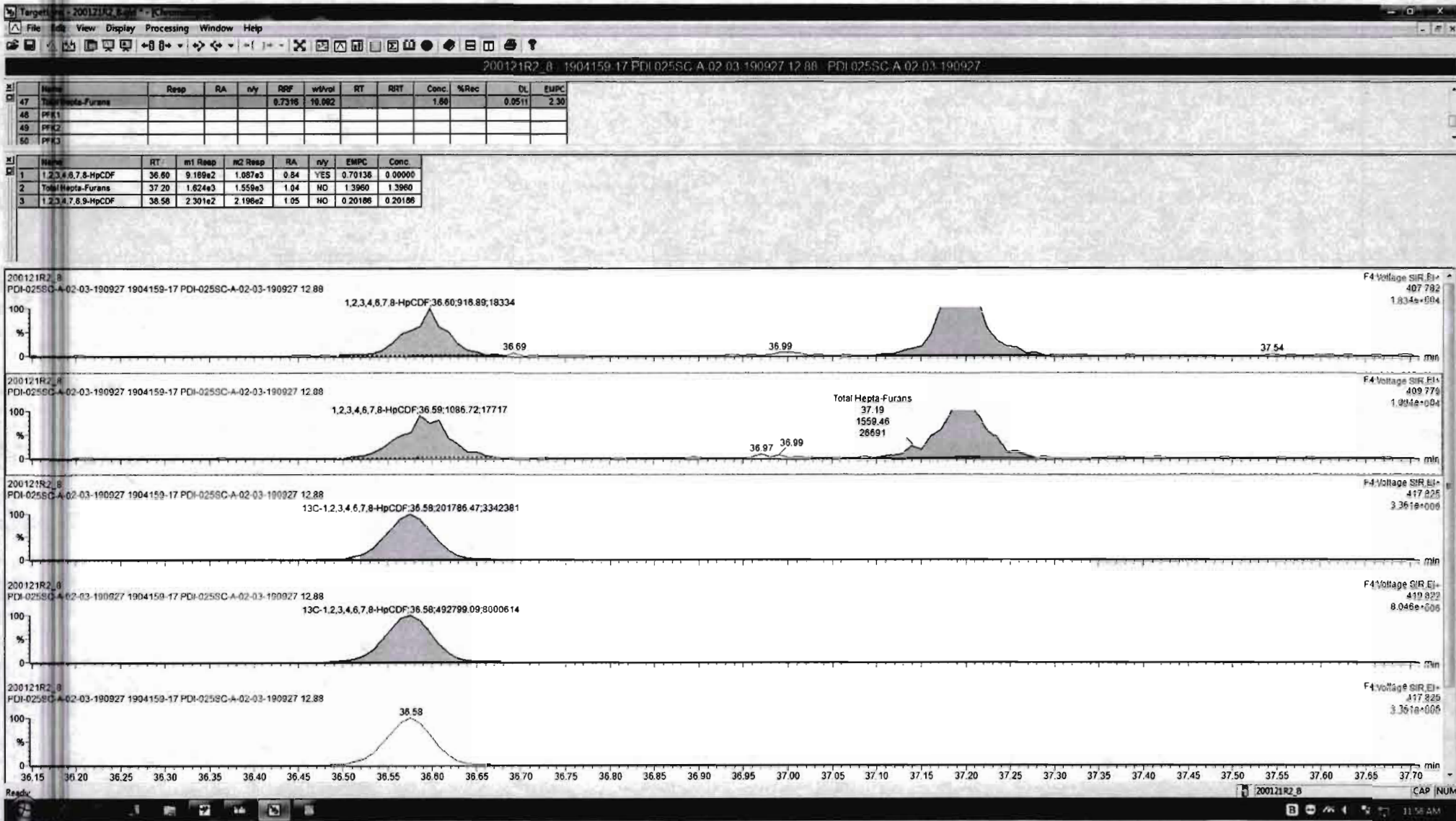
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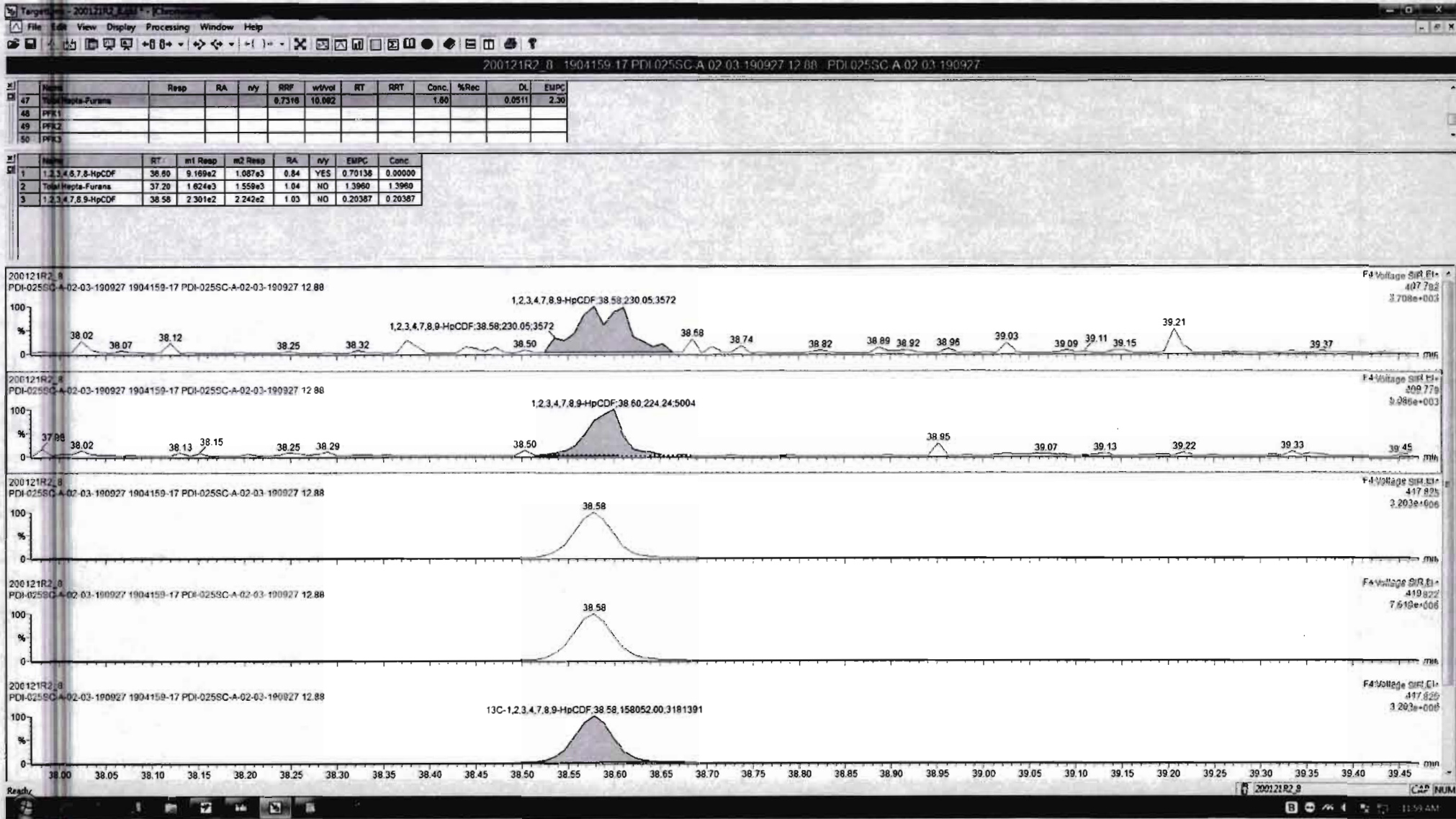
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200121R2\_8









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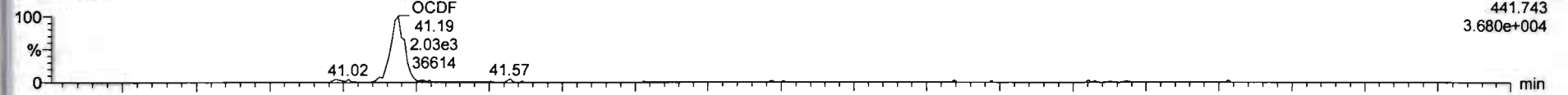
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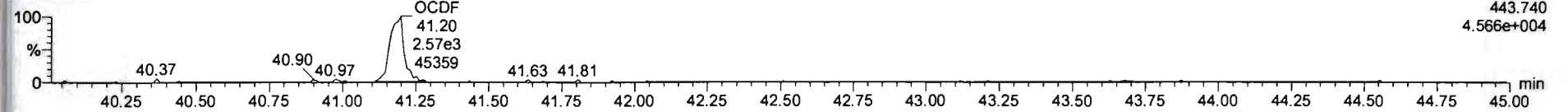
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OCDF

200121R2\_8

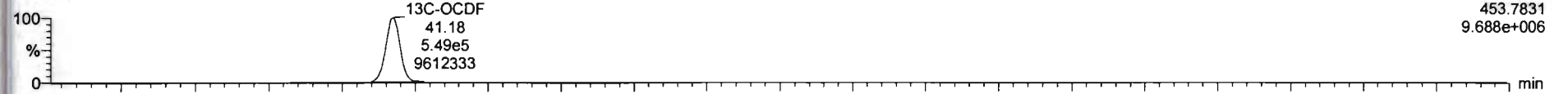


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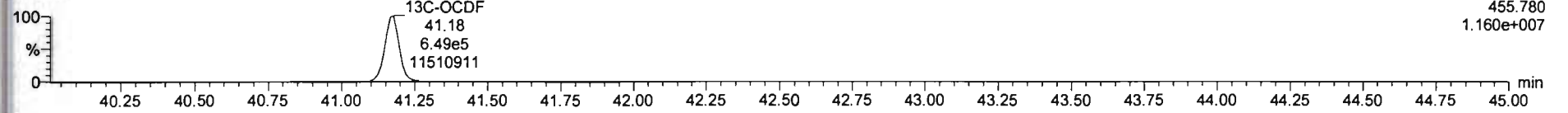


13C-OCDF

200121R2\_8

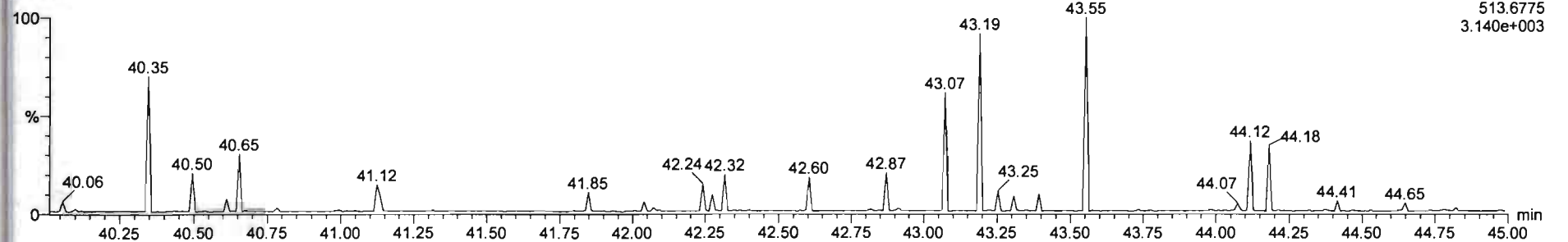


200121R2\_8



DPE5

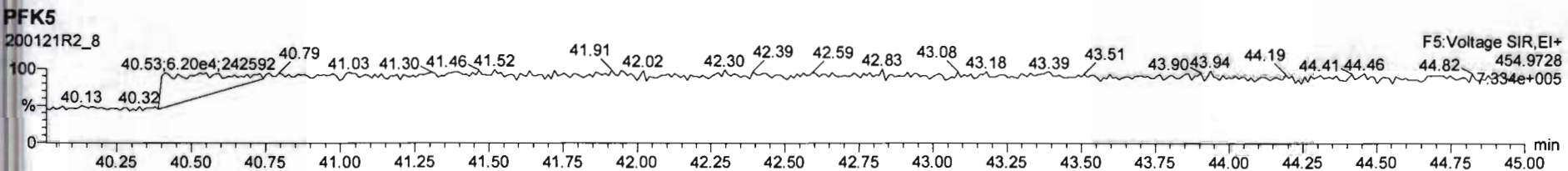
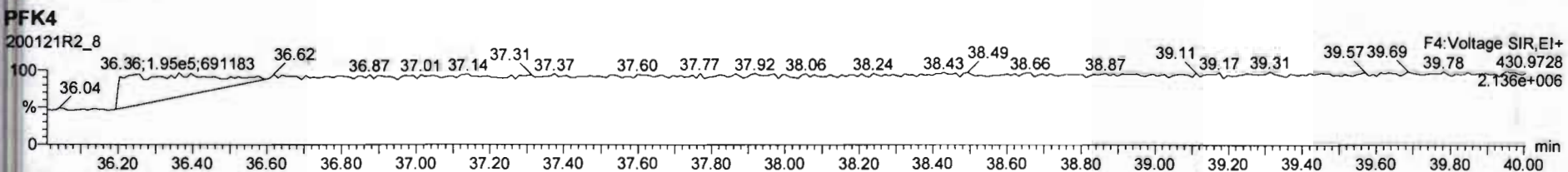
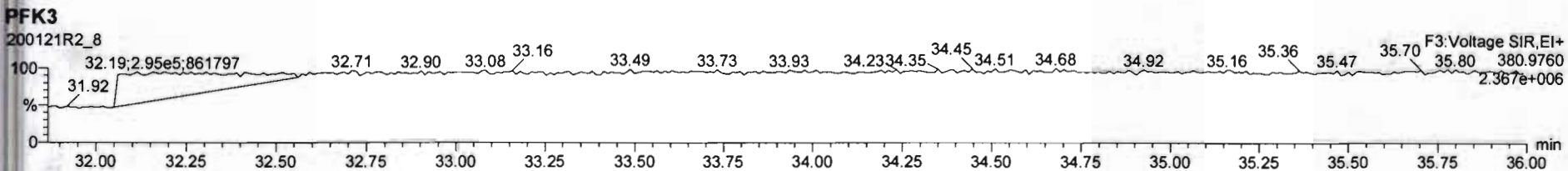
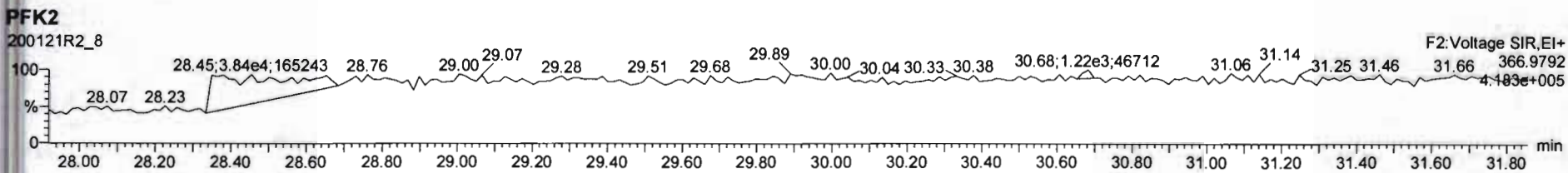
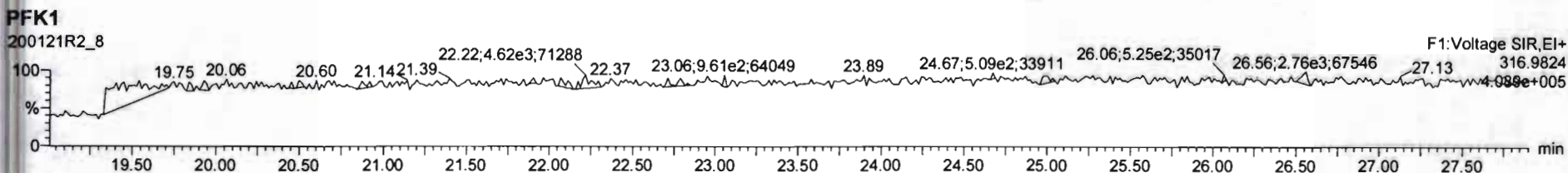
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Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_9.qld

Last Altered: Thursday, January 23, 2020 11:33:24 Pacific Standard Time  
Printed: Monday, February 03, 2020 14:51:50 Pacific Standard Time

*GPB 02/03/2020*

*C 02/10/2020*

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Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	2.07e3	0.47	YES	0.824	10.089	25.871	25.87	1.001	1.001	0.23554		0.0278	0.173
2	2 1,2,3,7,8-PeCDD	6.18e2	0.65	NO	0.912	10.089	30.750	30.74	1.001	1.000	0.079939		0.0329	0.0800
3	3 1,2,3,4,7,8-HxCDD			NO	0.870	10.089	34.093		1.000				0.0423	
4	4 1,2,3,6,7,8-HxCDD	6.58e2	1.06	NO	0.784	10.089	34.190	34.20	1.000	1.000	0.10134		0.0422	0.101
5	5 1,2,3,7,8,9-HxCDD	1.34e3	1.28	NO	0.798	10.089	34.501	34.48	1.001	1.000	0.20409		0.0435	0.204
6	6 1,2,3,4,6,7,8-HpCDD	6.60e3	1.02	NO	0.737	10.089	38.024	38.02	1.000	1.000	1.4665		0.0691	1.47
7	7 OCDD	6.18e4	0.84	NO	0.800	10.089	40.985	40.99	1.000	1.000	12.905		0.0507	12.9
8	8 2,3,7,8-TCDF			NO	0.588	10.089	24.997		1.001				0.0165	
9	9 1,2,3,7,8-PeCDF	2.03e2	2.13	YES	0.826	10.089	29.483	29.49	1.001	1.001	0.019398		0.0125	0.0160
10	10 2,3,4,7,8-PeCDF			NO	0.850	10.089	30.468		1.001				0.0208	
11	11 1,2,3,4,7,8-HxCDF	2.49e2	1.47	YES	0.787	10.089	33.221	33.22	1.000	1.000	0.044523		0.0100	0.0400
12	12 1,2,3,6,7,8-HxCDF			NO	0.720	10.089	33.348		1.000				0.0199	
13	13 2,3,4,6,7,8-HxCDF			NO	0.766	10.089	33.947		1.001				0.0222	
14	14 1,2,3,7,8,9-HxCDF			NO	0.709	10.089	34.829		1.000				0.0296	
15	15 1,2,3,4,6,7,8-HpCDF	2.66e2	0.87	YES	0.732	10.089	36.623	36.58	1.001	1.000	0.068452		0.0136	0.0620
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.816	10.089	38.589		1.000				0.0260	
17	17 OCDF	5.62e2	1.12	YES	0.639	10.089	41.187	41.19	1.000	1.000	0.14506		0.0255	0.130
18	18 13C-2,3,7,8-TCDD	2.12e6	0.79	NO	1.12	10.089	25.859	25.84	1.026	1.025	194.75	98.2	0.119	
19	19 13C-1,2,3,7,8-PeCDD	1.68e6	0.63	NO	0.841	10.089	30.631	30.73	1.215	1.219	205.32	104	0.151	
20	20 13C-1,2,3,4,7,8-HxCDD	1.47e6	1.25	NO	0.938	10.089	34.086	34.08	1.014	1.014	182.06	91.8	0.137	
21	21 13C-1,2,3,6,7,8-HxCDD	1.64e6	1.24	NO	1.07	10.089	34.186	34.19	1.017	1.017	179.43	90.5	0.120	
22	22 13C-1,2,3,7,8,9-HxCDD	1.63e6	1.23	NO	1.03	10.089	34.489	34.47	1.026	1.025	184.44	93.0	0.124	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.21e6	1.03	NO	0.710	10.089	38.052	38.01	1.132	1.131	198.39	100	0.276	
24	24 13C-OCDD	2.37e6	0.88	NO	0.601	10.089	40.943	40.99	1.218	1.219	459.40	116	0.207	
25	25 13C-2,3,7,8-TCDF	2.80e6	0.73	NO	1.04	10.089	25.035	24.97	0.993	0.990	171.75	86.6	0.0891	
26	26 13C-1,2,3,7,8-PeCDF	2.51e6	1.55	NO	0.917	10.089	29.396	29.46	1.166	1.169	174.32	87.9	0.132	
27	27 13C-2,3,4,7,8-PeCDF	2.49e6	1.55	NO	0.903	10.089	30.354	30.44	1.204	1.207	175.44	88.5	0.134	
28	28 13C-1,2,3,4,7,8-HxCDF	1.41e6	0.49	NO	0.861	10.089	33.212	33.22	0.988	0.988	190.76	96.2	0.284	
29	29 13C-1,2,3,6,7,8-HxCDF	1.67e6	0.50	NO	1.05	10.089	33.312	33.34	0.991	0.992	185.26	93.5	0.234	
30	30 13C-2,3,4,6,7,8-HxCDF	1.50e6	0.50	NO	0.946	10.089	33.921	33.91	1.009	1.009	184.81	93.2	0.259	
31	31 13C-1,2,3,7,8,9-HxCDF	1.30e6	0.49	NO	0.816	10.089	34.825	34.83	1.036	1.036	185.59	93.6	0.300	

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_9.qld

Last Altered: Thursday, January 23, 2020 11:33:24 Pacific Standard Time

Printed: Monday, February 03, 2020 14:51:50 Pacific Standard Time

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	1.05e6	0.41	NO	0.589	10.089	36.573	36.59	1.088	1.088	208.34	105	0.294	
33	13C-1,2,3,4,7,8,9-HpCDF	9.13e5	0.41	NO	0.448	10.089	38.590	38.59	1.148	1.148	237.33	120	0.387	
34	13C-OCDF	2.40e6	0.85	NO	0.586	10.089	41.178	41.19	1.225	1.225	477.93	121	0.240	
35	37Cl-2,3,7,8-TCDD	8.95e5			1.09	10.089	25.892	25.85	1.027	1.026	84.628	107	0.0222	
36	13C-1,2,3,4-TCDD	1.93e6	0.81	NO	1.00	10.089	25.260	25.21	1.000	1.000	198.24	100	0.133	
37	13C-1,2,3,4-TCDF	3.11e6	0.74	NO	1.00	10.089	23.860	23.58	1.000	1.000	198.24	100	0.0923	
38	13C-1,2,3,4,6,9-HxCDF	1.70e6	0.49	NO	1.00	10.089	33.590	33.62	1.000	1.000	198.24	100	0.245	
39	Total Tetra-Dioxins				0.824	10.089	24.620		0.000		0.54004		0.0278	0.772
40	Total Penta-Dioxins				0.912	10.089	29.960		0.000		0.35795		0.0329	0.666
41	Total Hexa-Dioxins				0.784	10.089	33.635		0.000		2.2843		0.0444	2.28
42	Total Hepta-Dioxins				0.737	10.089	37.640		0.000		4.1735		0.0691	4.17
43	Total Tetra-Furans				0.588	10.089	23.610		0.000				0.00808	
44	1st Func. Penta-Furans				0.826	10.089	27.090		0.000				0.00568	
45	Total Penta-Furans				0.826	10.089	29.275		0.000		0.00000		0.0122	0.0160
46	Total Hexa-Furans				0.766	10.089	33.555		0.000		0.00000		0.0102	0.0400
47	Total Hepta-Furans				0.732	10.089	37.835		0.000		0.00000		0.0133	0.0620

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Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_9.qld

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Printed: Monday, February 03, 2020 14:51:50 Pacific Standard Time

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Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	22.89	3.082e3	5.016e3	2.240e2	3.717e2	0.60	YES	0.000e0	0.00000	0.059000	0.0278
2	Total Tetra-Dioxins	23.75	2.071e4	2.938e4	1.604e3	2.036e3	0.79	NO	3.640e3	0.41372	0.41400	0.0278
3	Total Tetra-Dioxins	25.18	6.011e3	1.291e4	4.455e2	6.657e2	0.67	NO	1.111e3	0.12631	0.12600	0.0278
4	2,3,7,8-TCDD	25.87	1.047e4	2.597e4	6.622e2	1.410e3	0.47	YES	2.072e3	0.00000	0.17300	0.0278

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.55	4.547e3	8.723e3	2.026e2	3.867e2	0.52	YES	0.000e0	0.00000	0.068000	0.0329
2	Total Penta-Dioxins	29.03	1.342e4	1.912e4	6.811e2	9.605e2	0.71	NO	1.642e3	0.21220	0.21200	0.0329
3	Total Penta-Dioxins	29.25	1.043e3	8.650e2	1.771e1	1.441e1	1.23	YES	0.000e0	0.00000	0.00300...	0.0329
4	Total Penta-Dioxins	29.55	1.034e3	6.580e2	2.660e1	1.603e1	1.66	YES	0.000e0	0.00000	0.00300...	0.0329
5	Total Penta-Dioxins	29.69	3.010e3	7.012e3	1.110e2	2.044e2	0.54	NO	0.000e0	0.00000	0.041000	0.0329
6	Total Penta-Dioxins	29.74	9.290e2	1.787e3	3.404e1	4.696e1	0.73	YES	0.000e0	0.00000	0.010000	0.0329
7	Total Penta-Dioxins	29.77	3.208e3	3.268e3	1.045e2	1.574e2	0.66	NO	0.000e0	0.00000	0.034000	0.0329
8	Total Penta-Dioxins	29.97	6.198e3	8.807e3	1.984e2	3.107e2	0.64	NO	5.092e2	0.065817	0.066000	0.0329
9	Total Penta-Dioxins	30.03	5.810e3	1.157e4	3.188e2	5.533e2	0.58	NO	0.000e0	0.00000	0.11300	0.0329
10	1,2,3,7,8-PeCDD	30.74	4.212e3	5.740e3	2.436e2	3.748e2	0.65	NO	6.184e2	0.079939	0.080000	0.0329
11	Total Penta-Dioxins	30.83	1.636e3	2.731e3	3.643e1	7.379e1	0.49	YES	0.000e0	0.00000	0.012000	0.0329
12	Total Penta-Dioxins	31.08	6.270e2	1.478e3	1.188e1	2.665e1	0.45	YES	0.000e0	0.00000	0.00400...	0.0329
13	Total Penta-Dioxins	31.14	1.639e3	2.809e3	6.004e1	1.648e2	0.36	YES	0.000e0	0.00000	0.020000	0.0329

**Hexa-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.60	1.121e5	9.326e4	4.936e3	4.026e3	1.23	NO	8.962e3	1.4338	1.4340	0.0444
2	Total Hexa-Dioxins	33.41	3.050e4	2.657e4	1.813e3	1.594e3	1.14	NO	3.407e3	0.54508	0.54500	0.0444
3	1,2,3,6,7,8-HxCDD	34.20	7.327e3	7.115e3	3.394e2	3.189e2	1.06	NO	6.582e2	0.10134	0.10100	0.0422
4	1,2,3,7,8,9-HxCDD	34.48	1.355e4	1.170e4	7.532e2	5.886e2	1.28	NO	1.342e3	0.20409	0.20400	0.0435

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Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_9.qld

Last Altered: Thursday, January 23, 2020 11:33:24 Pacific Standard Time

Printed: Monday, February 03, 2020 14:51:50 Pacific Standard Time

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

**Hepta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.98	1.026e5	9.646e4	6.240e3	5.935e3	1.05	NO	1.217e4	2.7070	2.7070	0.0691
2	1,2,3,4,6,7,8-HpCDD	38.02	5.396e4	5.899e4	3.336e3	3.260e3	1.02	NO	6.596e3	1.4665	1.4670	0.0691

**Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

**Penta-Furans function 1**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,7,8-PeCDF	29.49	3.518e3	1.140e3	1.381e2	6.479e1	2.13	YES	2.029e2	0.00000	0.016000	0.0125

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,7,8-HxCDF	33.22	2.609e3	2.033e3	1.483e2	1.010e2	1.47	YES	2.494e2	0.00000	0.040000	0.0100

**Hepta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.58	2.192e3	3.487e3	1.239e2	1.424e2	0.87	YES	2.664e2	0.00000	0.062000	0.0136

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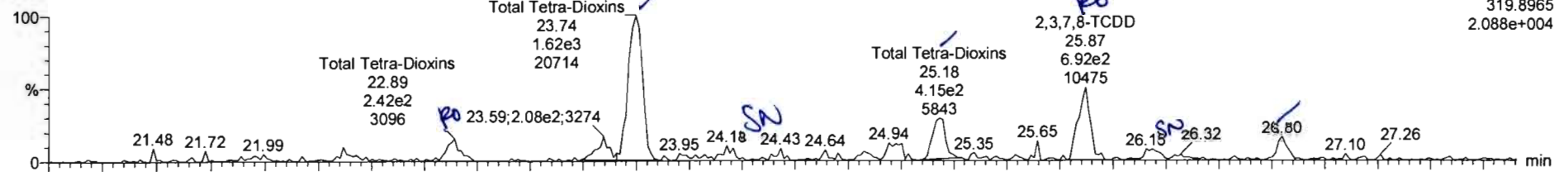
Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

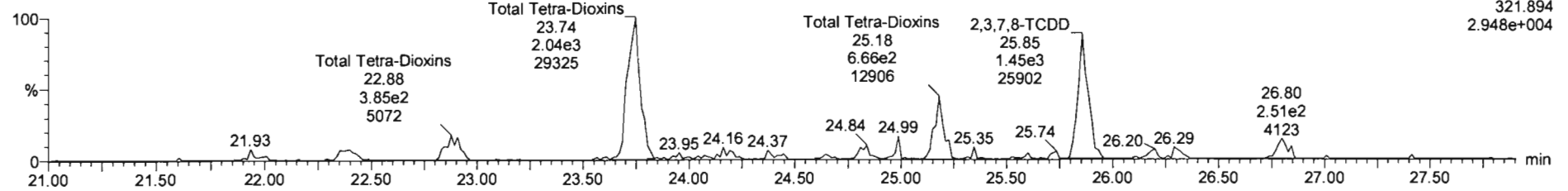
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**2,3,7,8-TCDD**

200121R2\_9

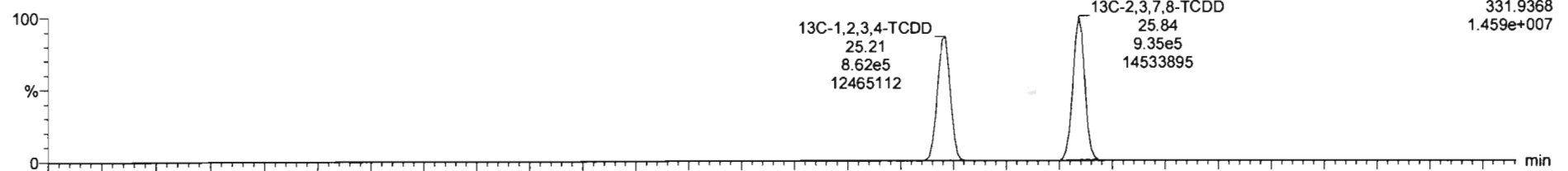


200121R2\_9

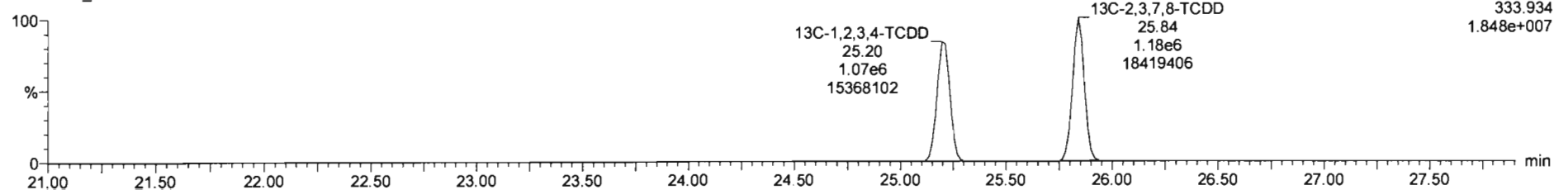


**13C-2,3,7,8-TCDD**

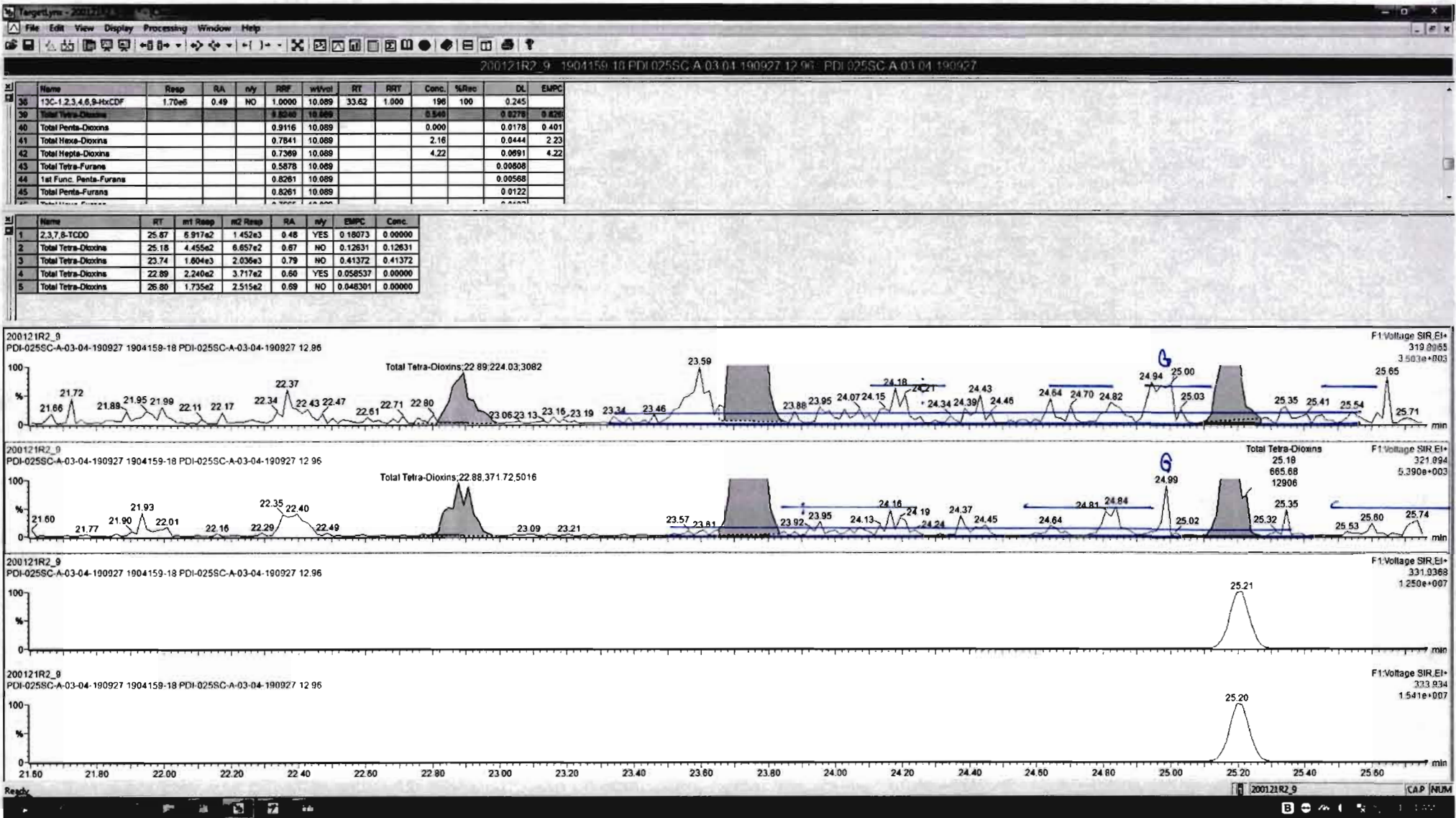
200121R2\_9

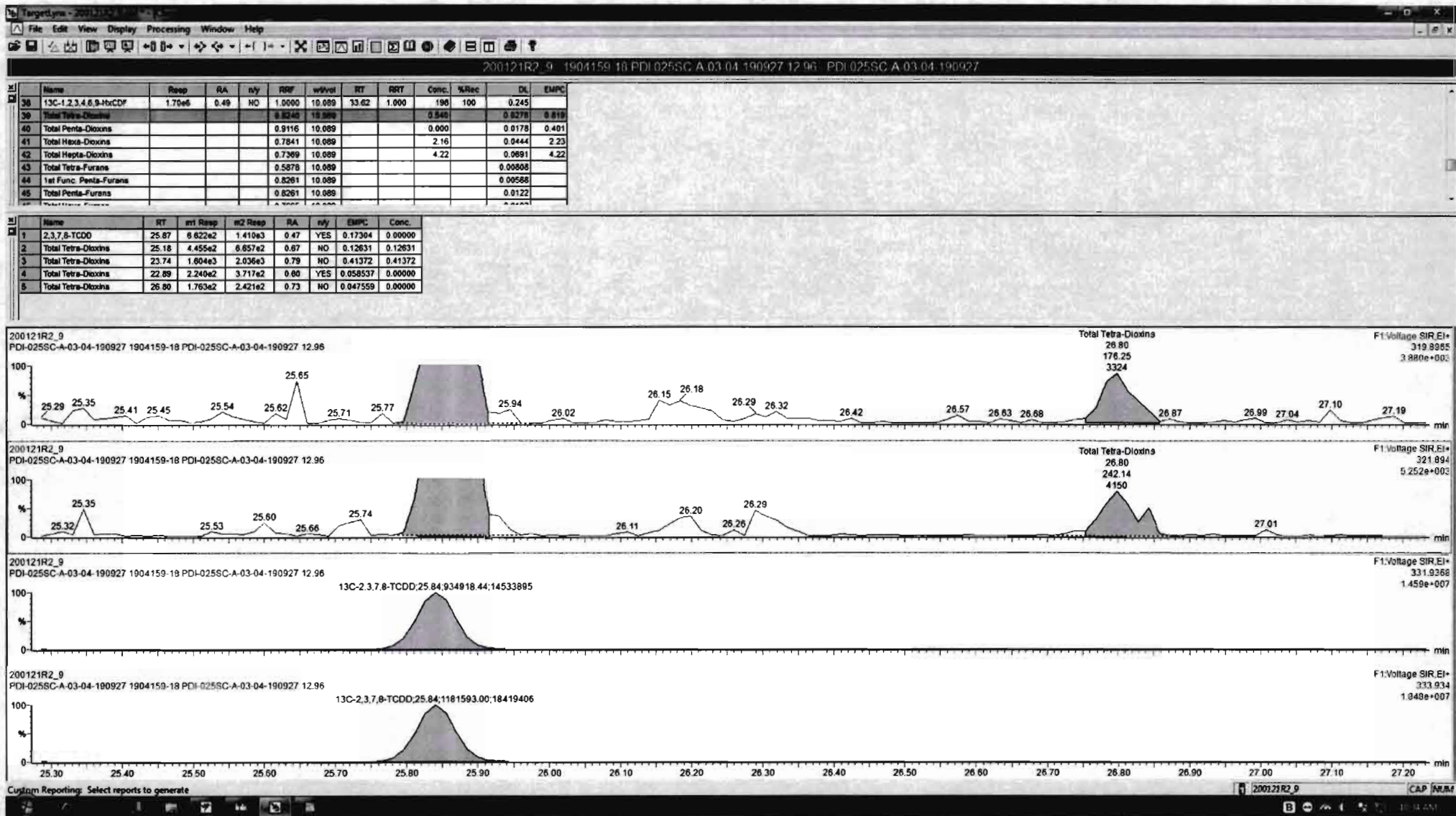


200121R2\_9









Dataset: Untitled

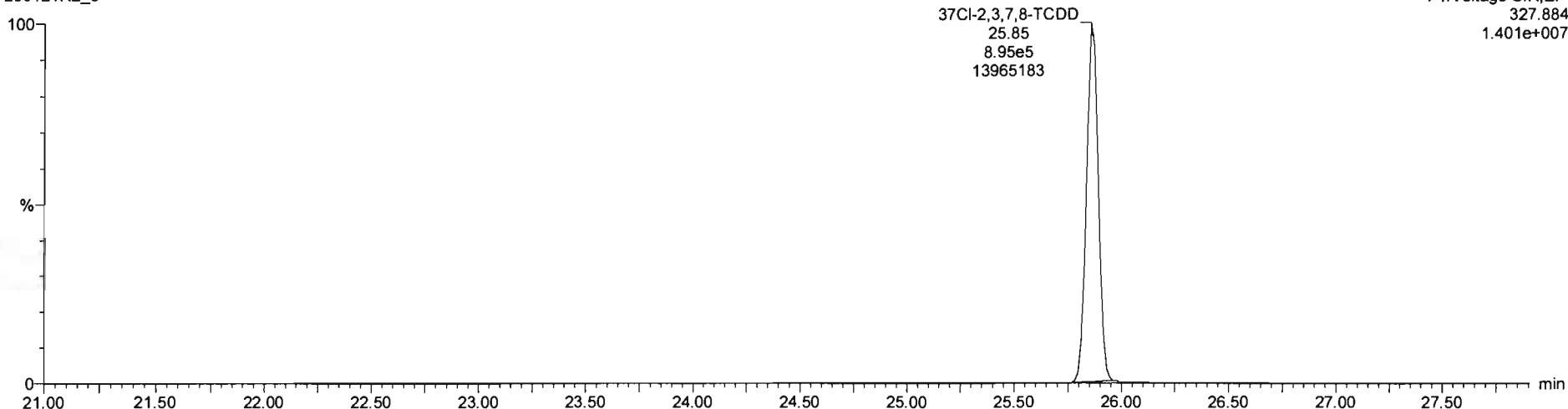
Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

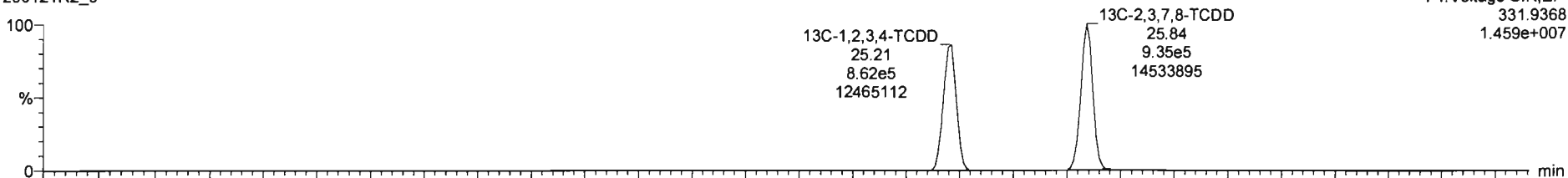
**37Cl-2,3,7,8-TCDD**

200121R2\_9

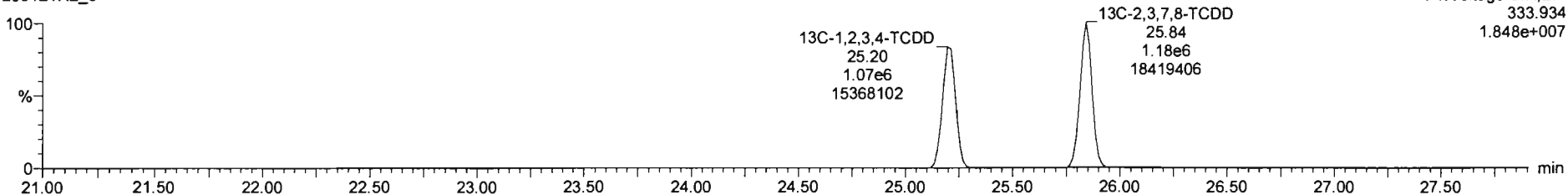


**13C-1,2,3,4-TCDD**

200121R2\_9



200121R2\_9



Dataset: Untitled

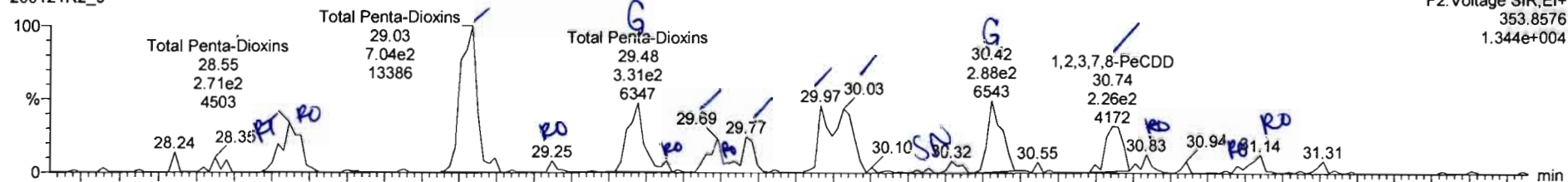
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

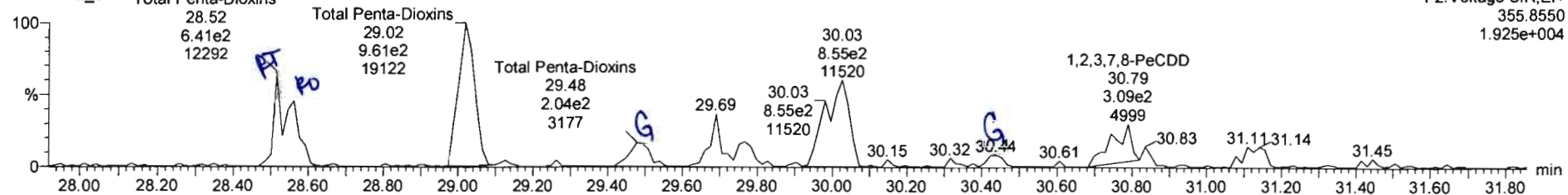
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1,2,3,7,8-PeCDD

200121R2\_9

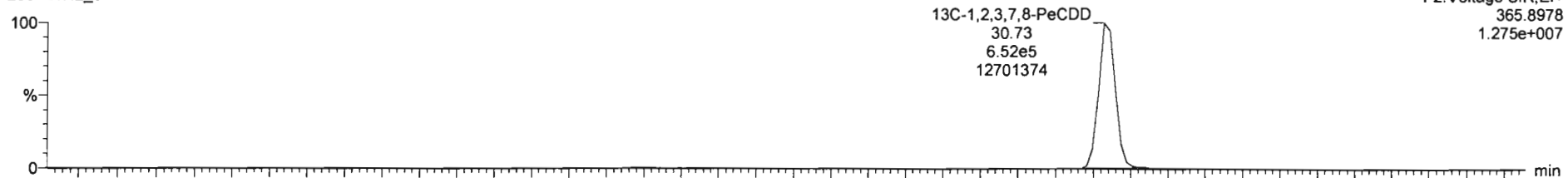


200121R2\_9

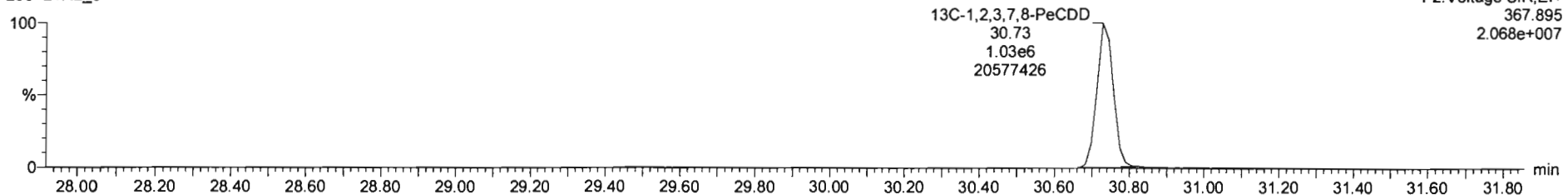


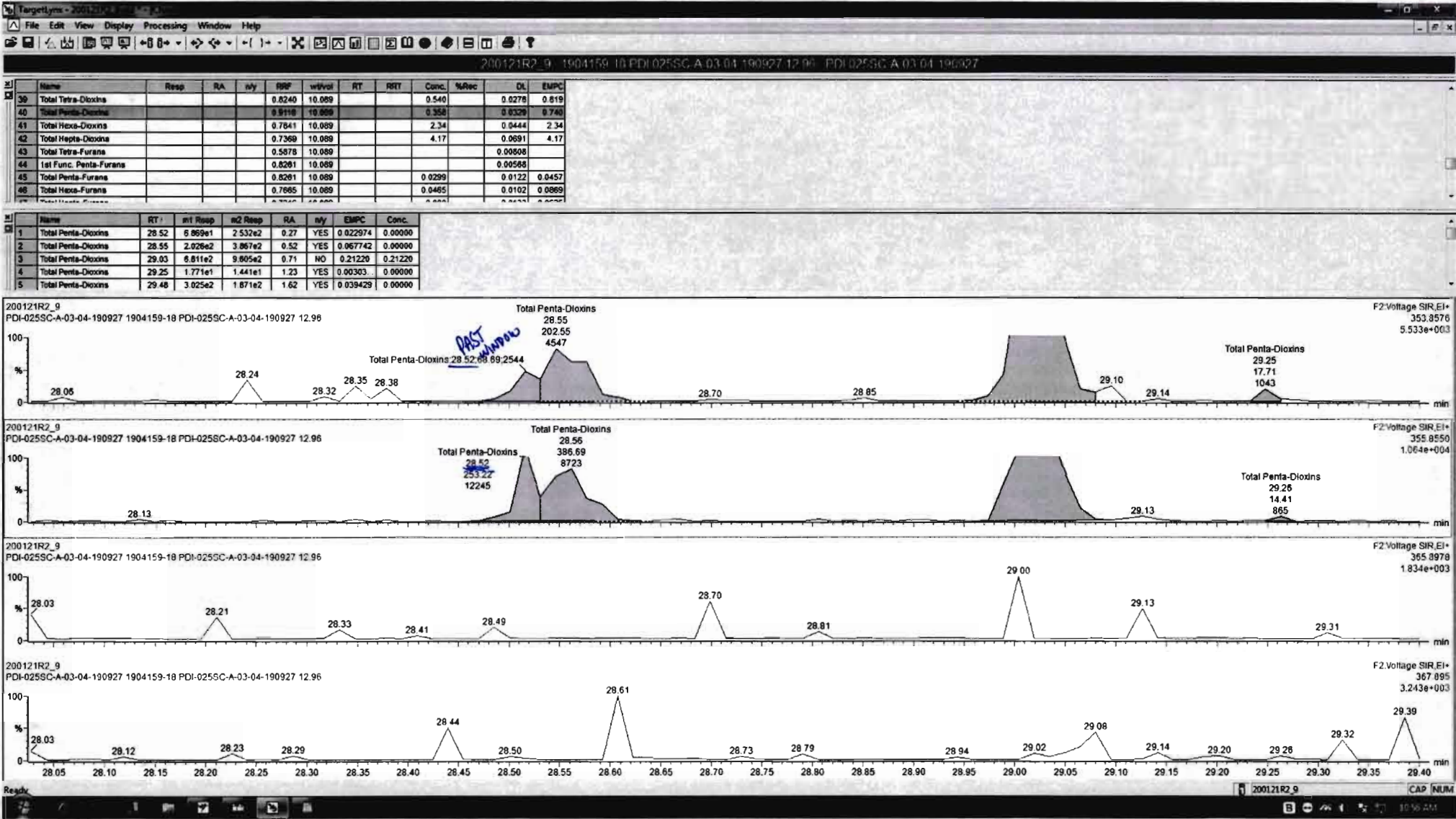
13C-1,2,3,7,8-PeCDD

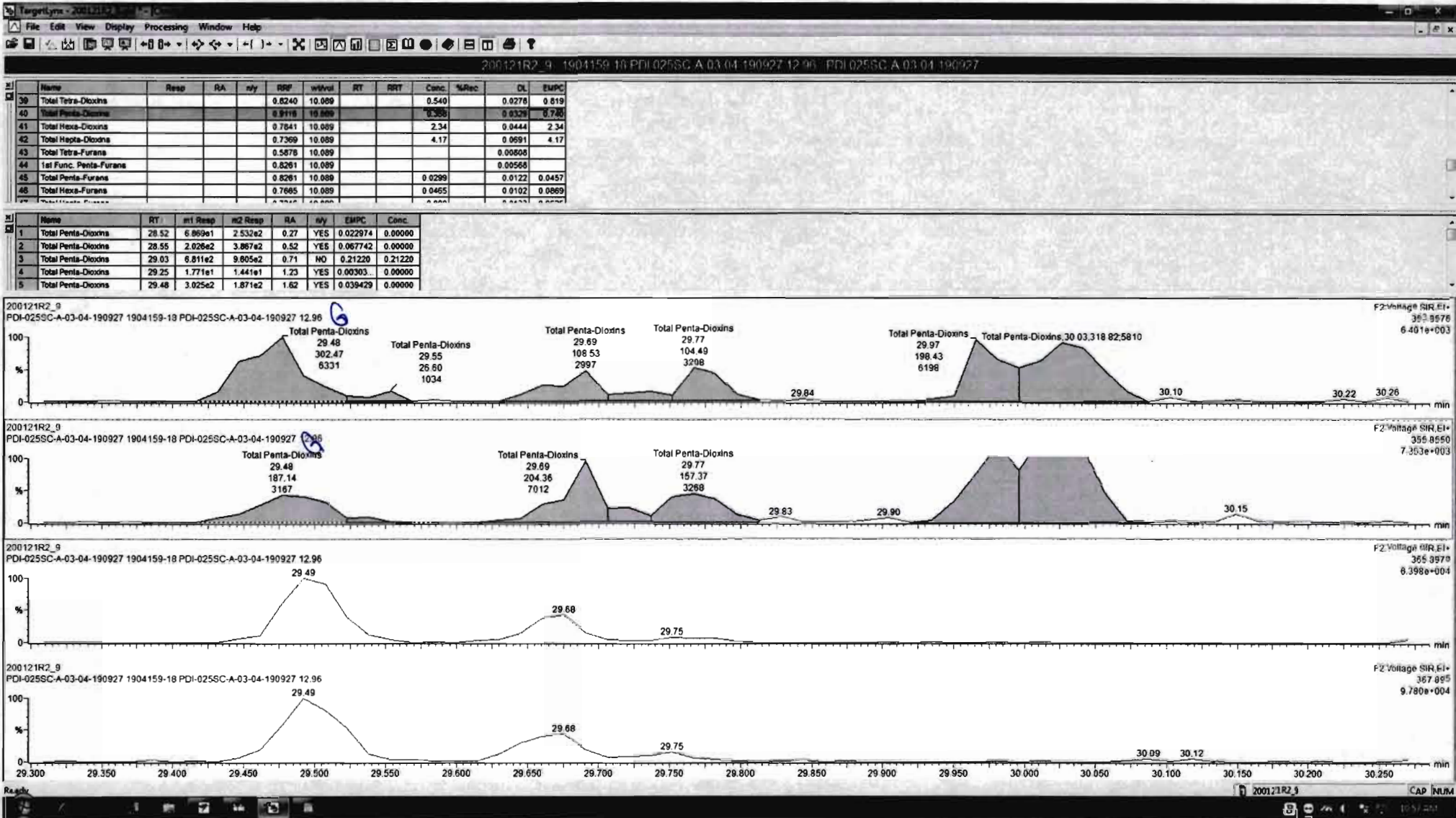
200121R2\_9

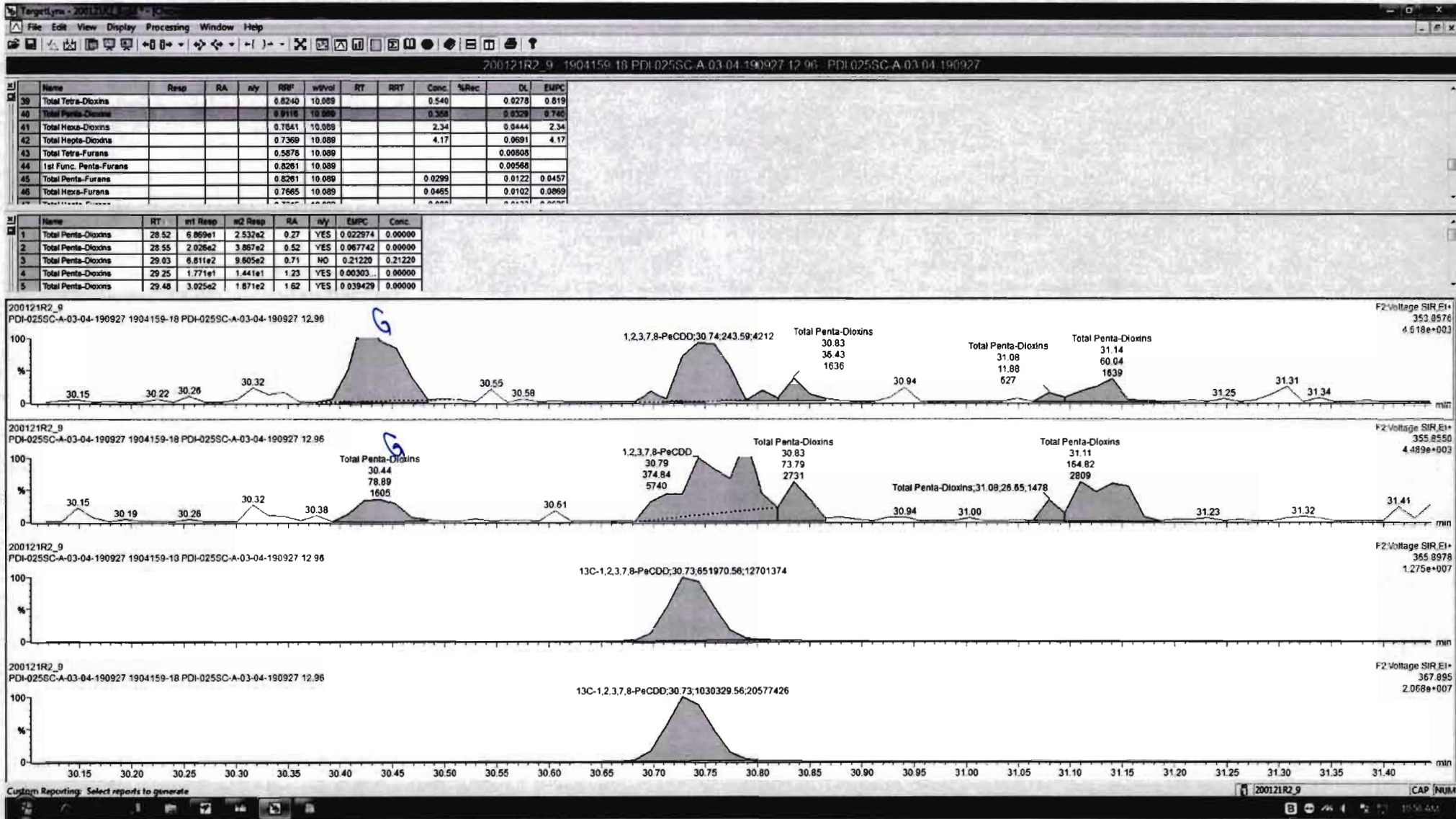


200121R2\_9









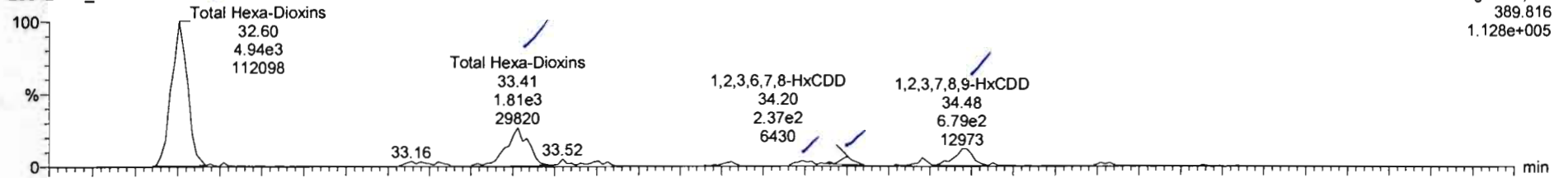
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

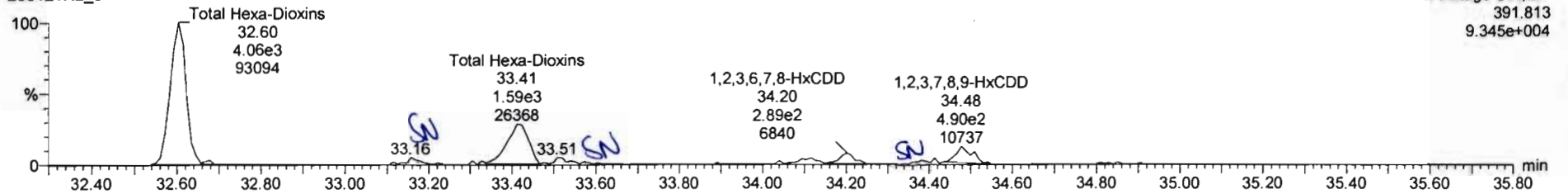
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**1,2,3,4,7,8-HxCDD**

200121R2\_9

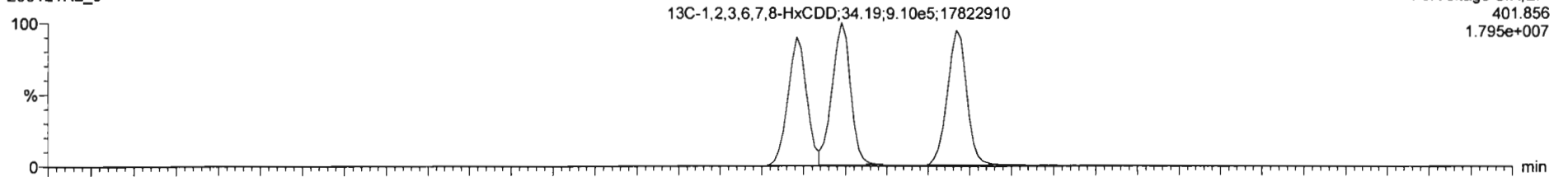


200121R2\_9

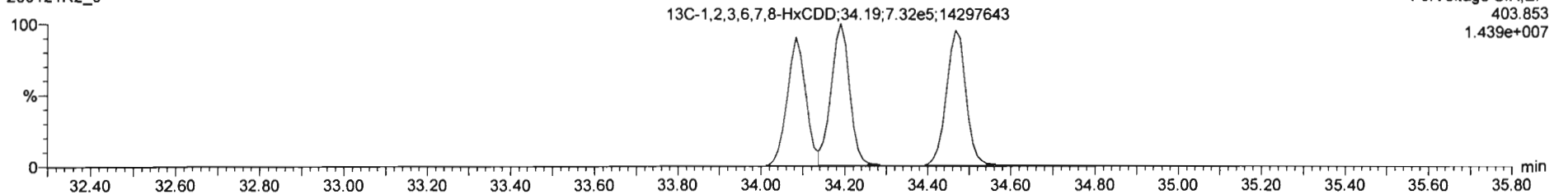


**13C-1,2,3,4,7,8-HxCDD**

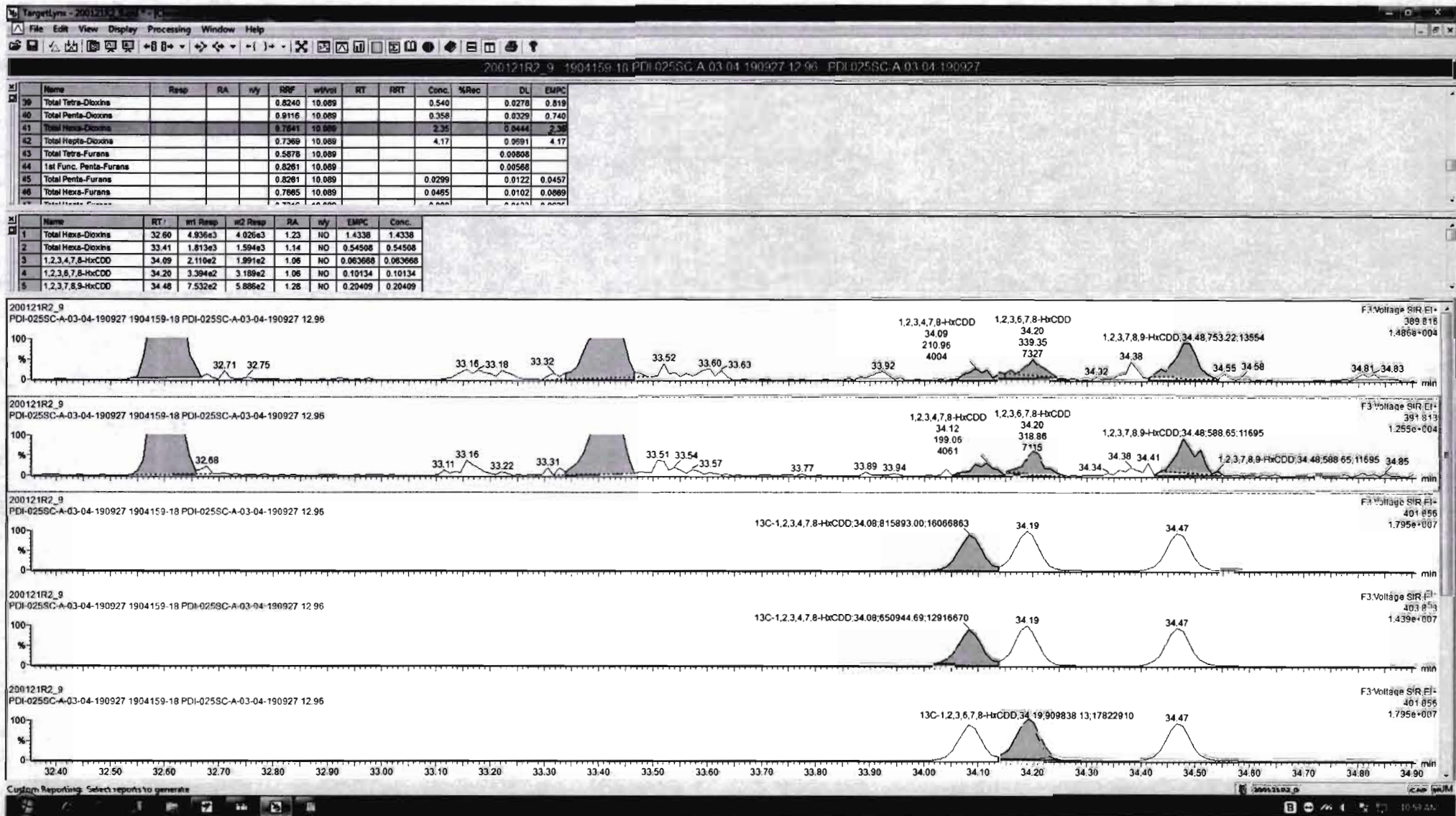
200121R2\_9



200121R2\_9







Dataset: Untitled

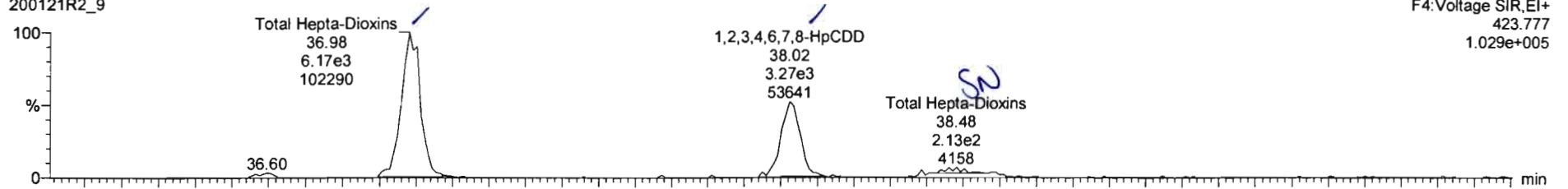
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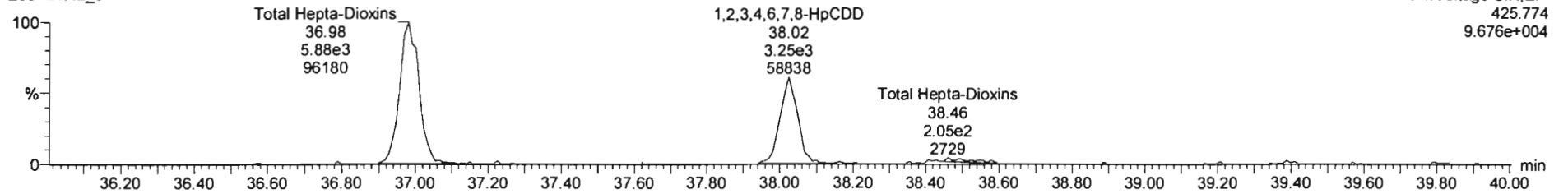
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**1,2,3,4,6,7,8-HpCDD**

200121R2\_9

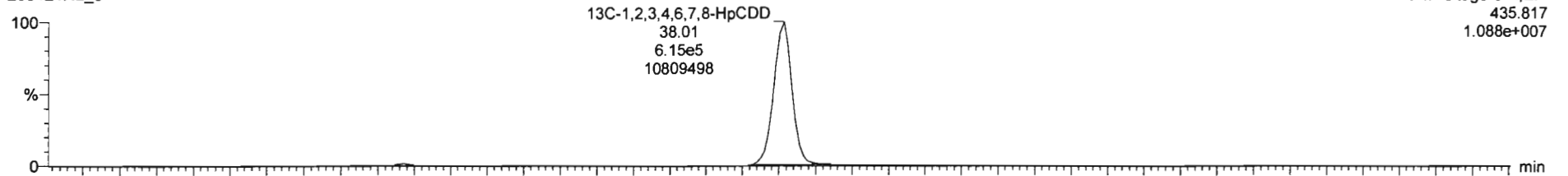


200121R2\_9

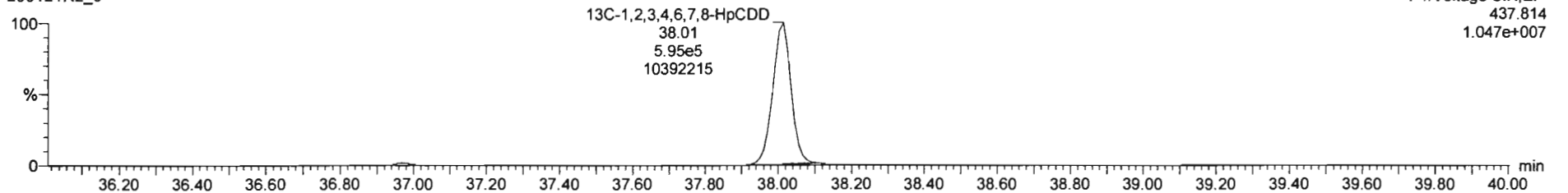


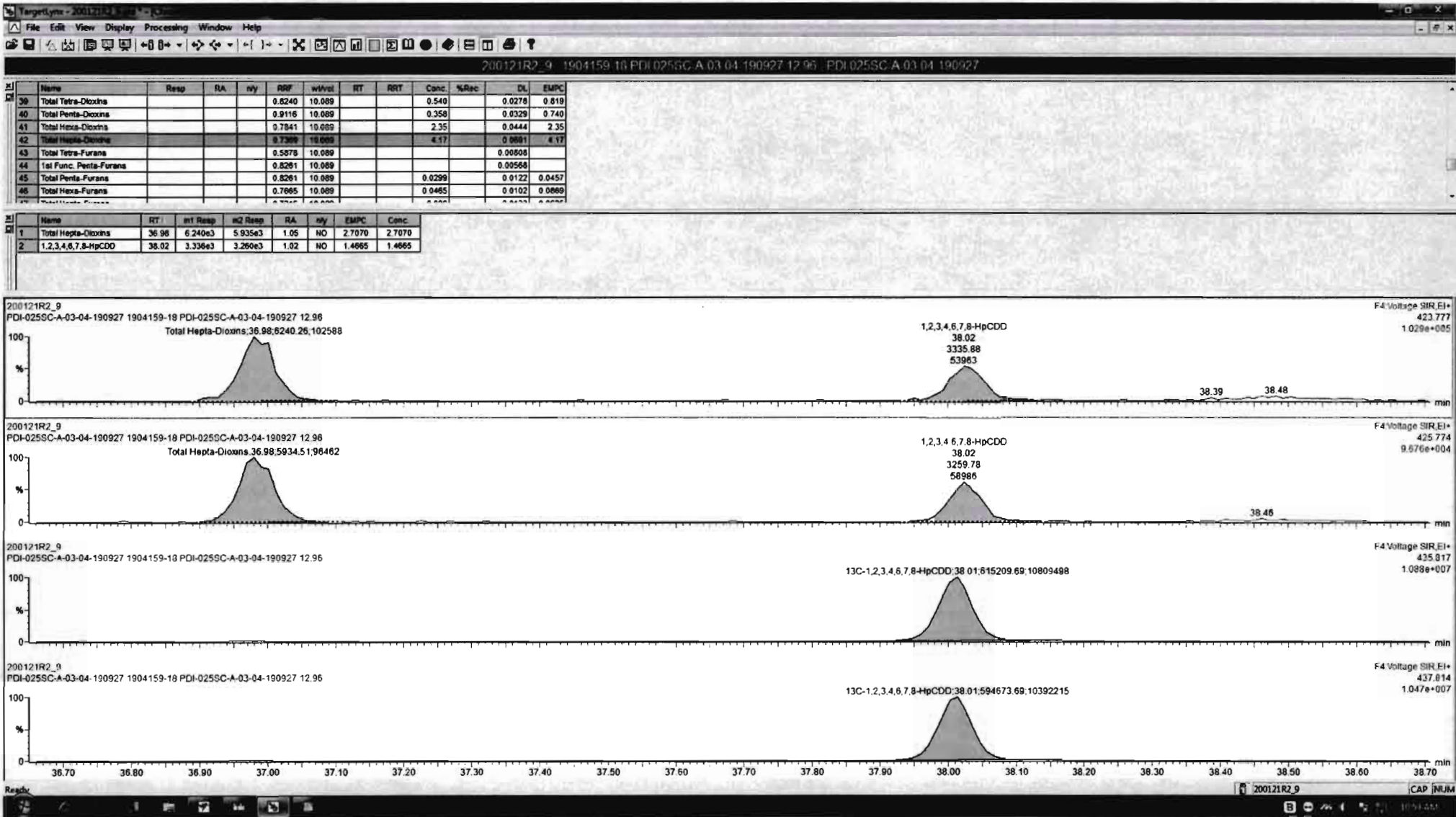
**13C-1,2,3,4,6,7,8-HpCDD**

200121R2\_9



200121R2\_9





Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

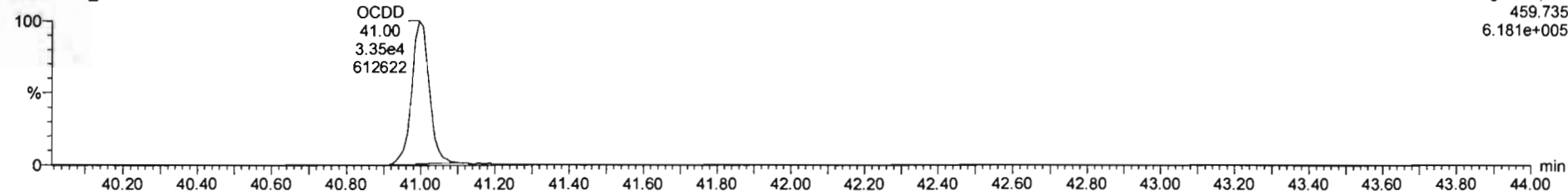
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OCDD

200121R2\_9



200121R2\_9

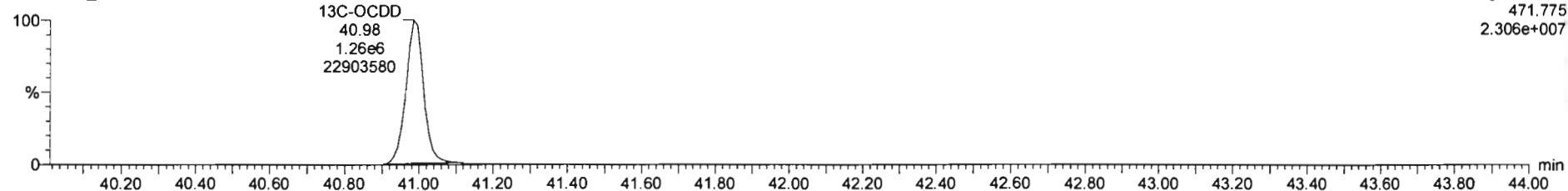


13C-OCDD

200121R2\_9



200121R2\_9



Dataset: Untitled

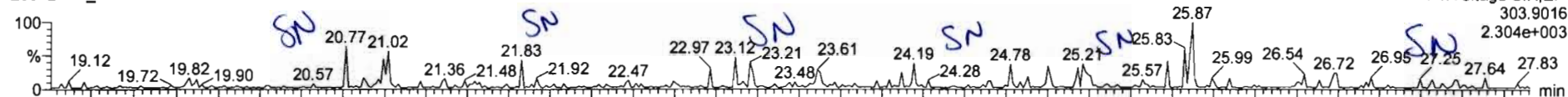
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

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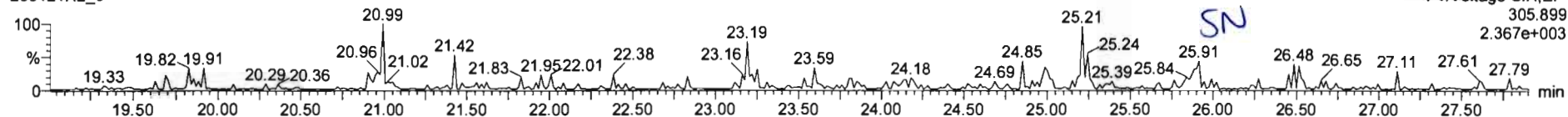
**2,3,7,8-TCDF**

200121R2\_9



F1:Voltage SIR,EI+  
303.9016  
2.304e+003

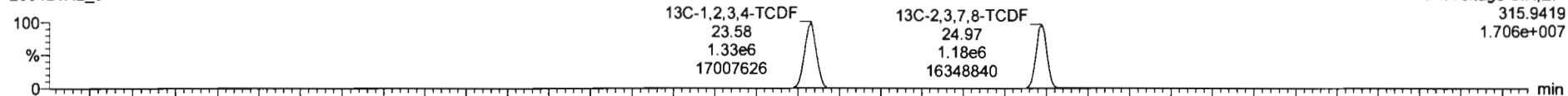
200121R2\_9



F1:Voltage SIR,EI+  
305.899  
2.367e+003

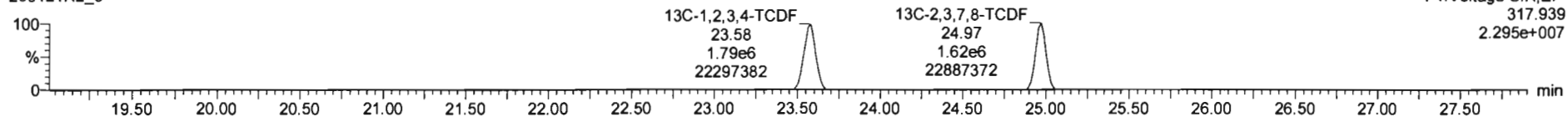
**13C-2,3,7,8-TCDF**

200121R2\_9



F1:Voltage SIR,EI+  
315.9419  
1.706e+007

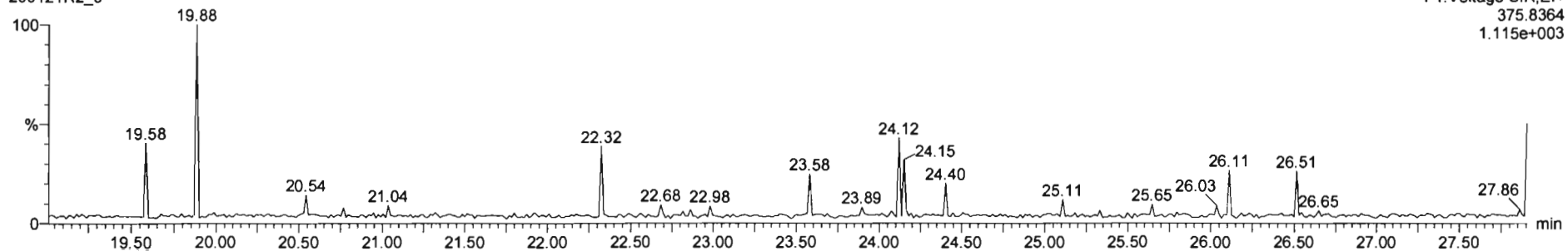
200121R2\_9



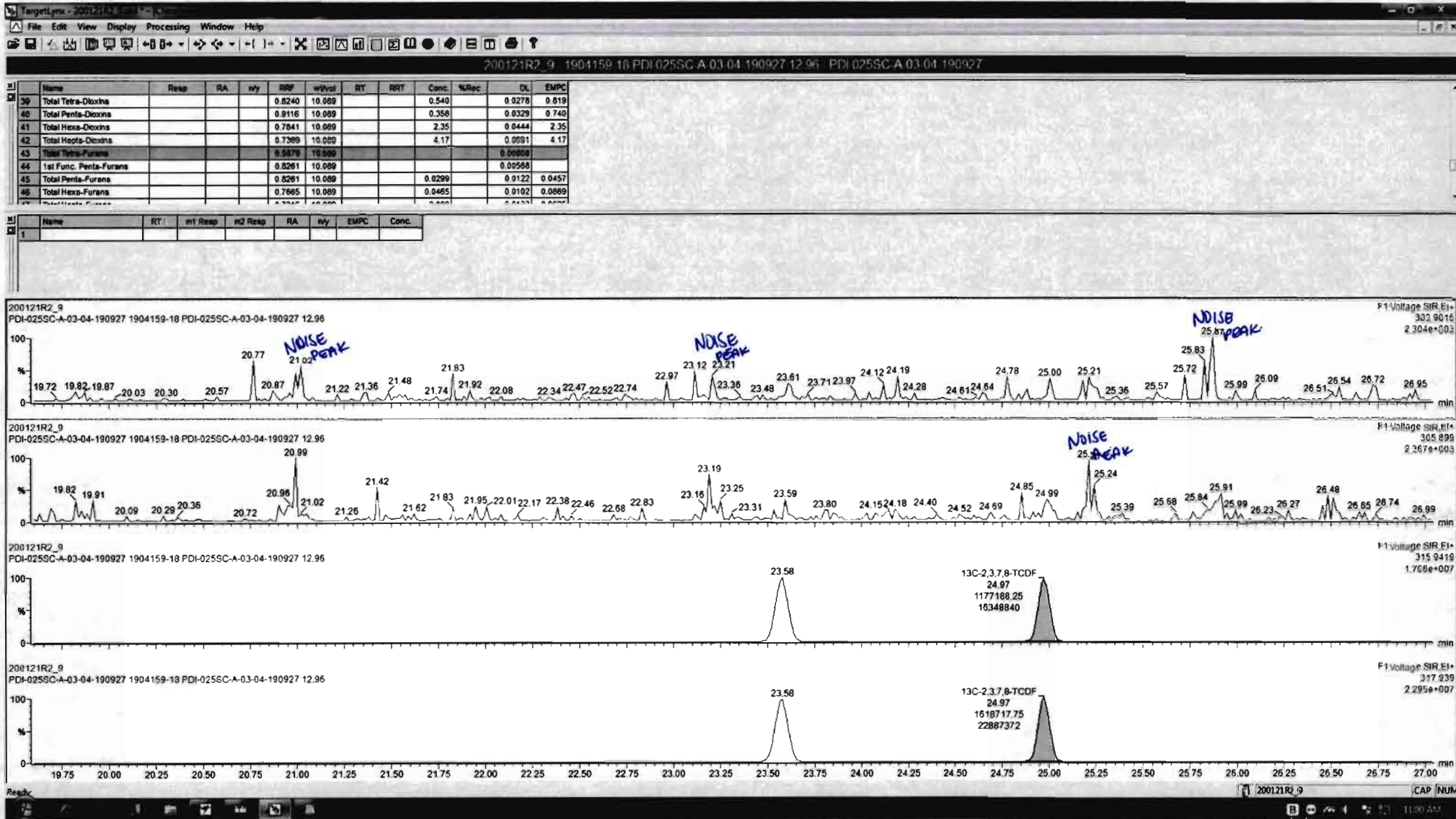
F1:Voltage SIR,EI+  
317.939  
2.295e+007

**DPE1**

200121R2\_9



F1:Voltage SIR,EI+  
375.8364  
1.115e+003



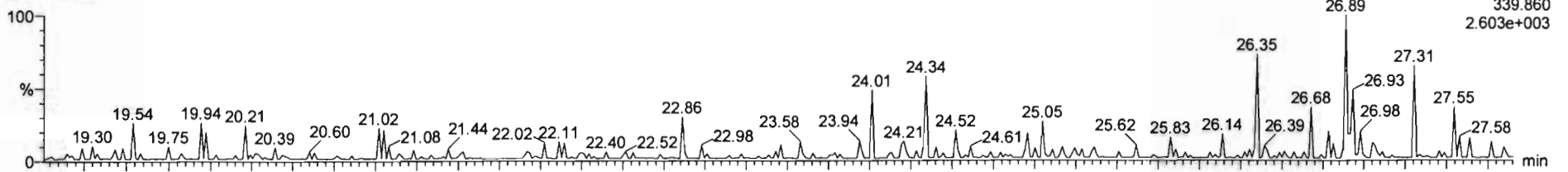
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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

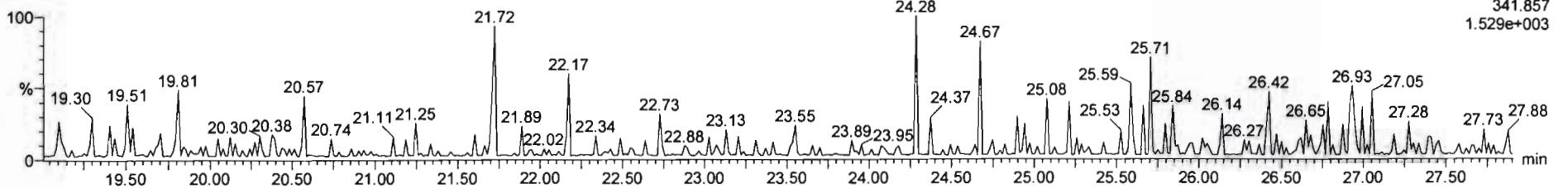
Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

1st Func. Penta-Furans

200121R2\_9

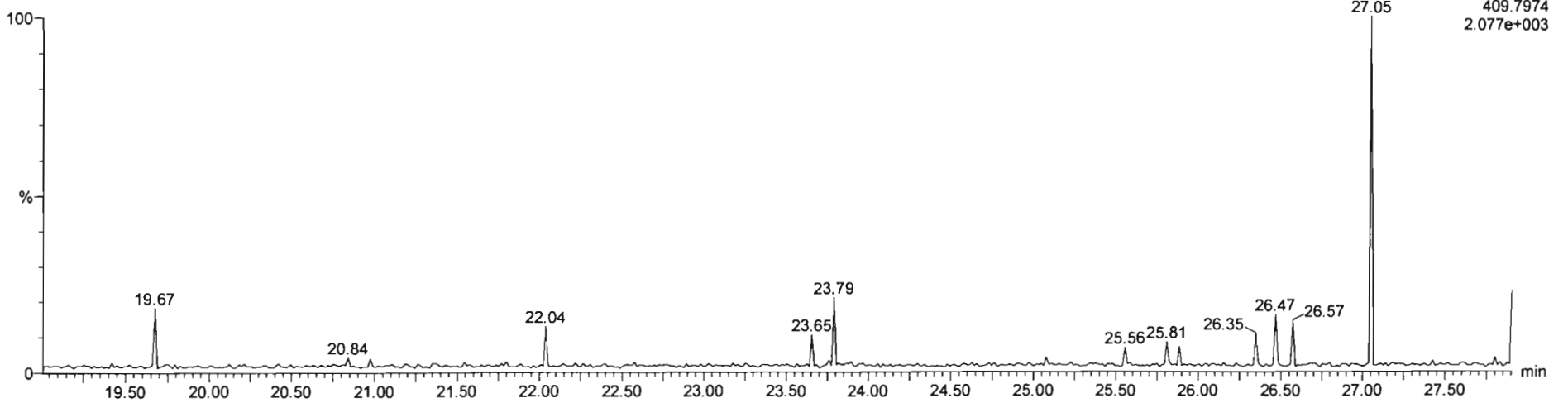


200121R2\_9



DPE6

200121R2\_9

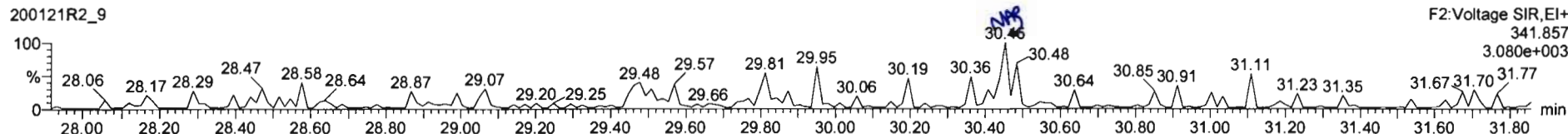
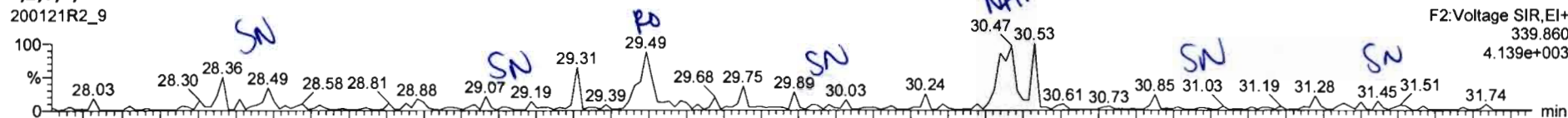


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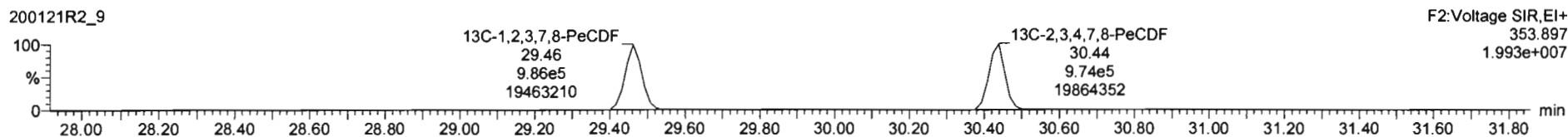
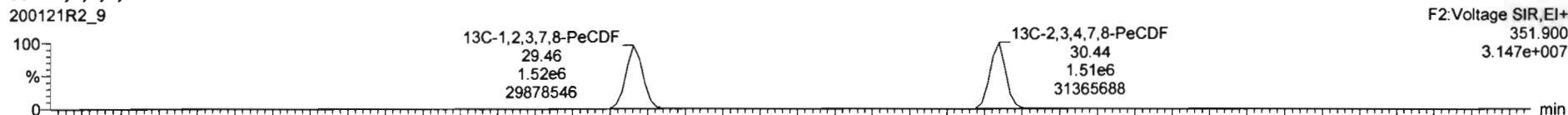
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

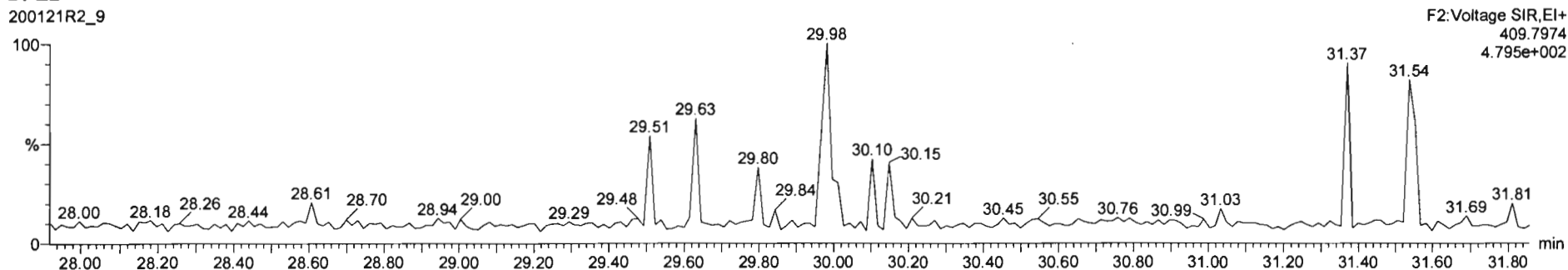
**1,2,3,7,8-PeCDF**



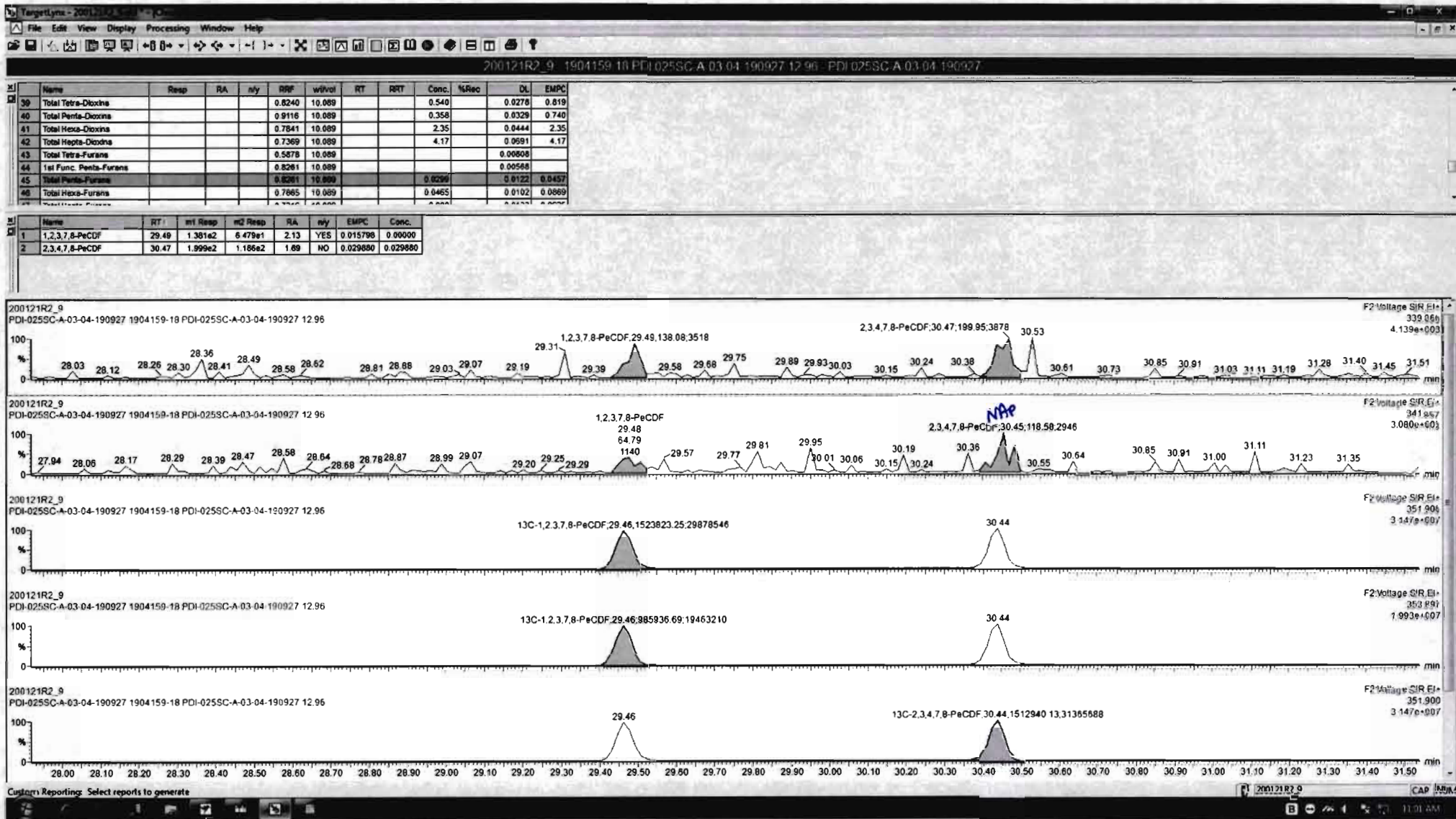
**13C-1,2,3,7,8-PeCDF**



**DPE2**







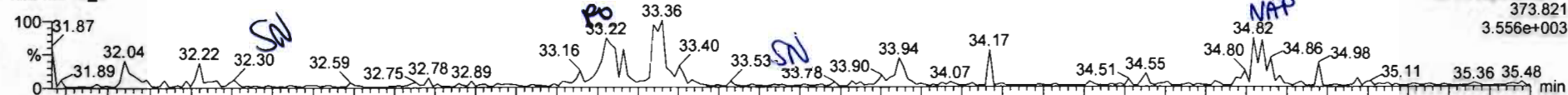
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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

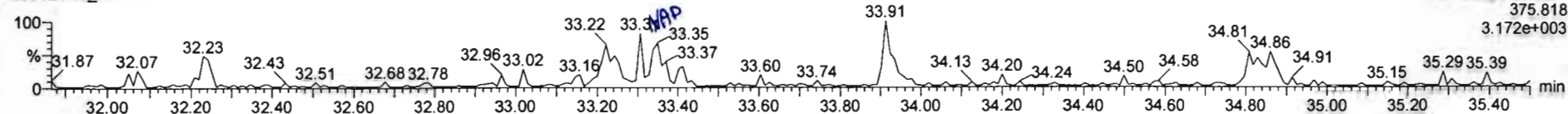
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**1,2,3,4,7,8-HxCDF**

200121R2\_9

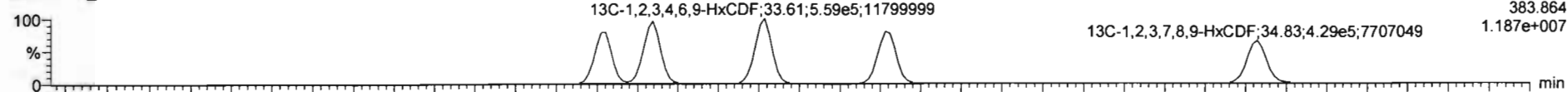


200121R2\_9

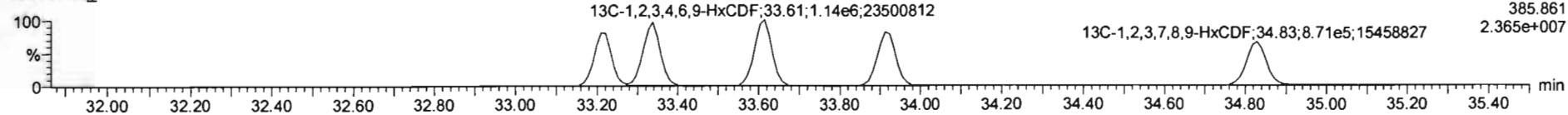


**13C-1,2,3,4,7,8-HxCDF**

200121R2\_9

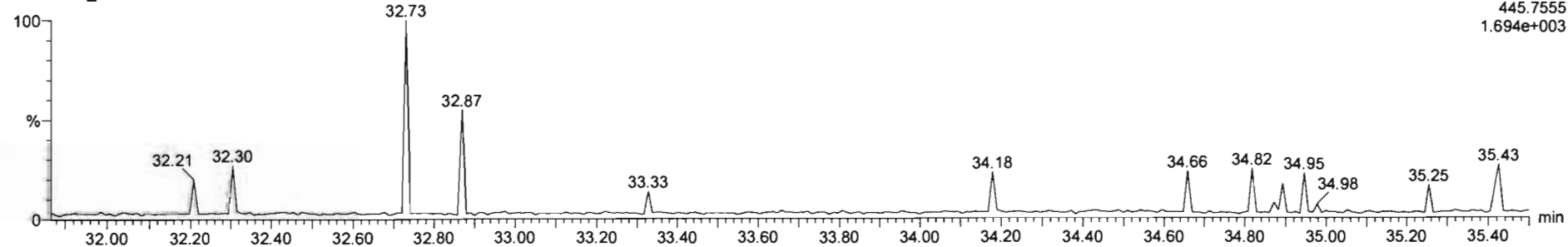


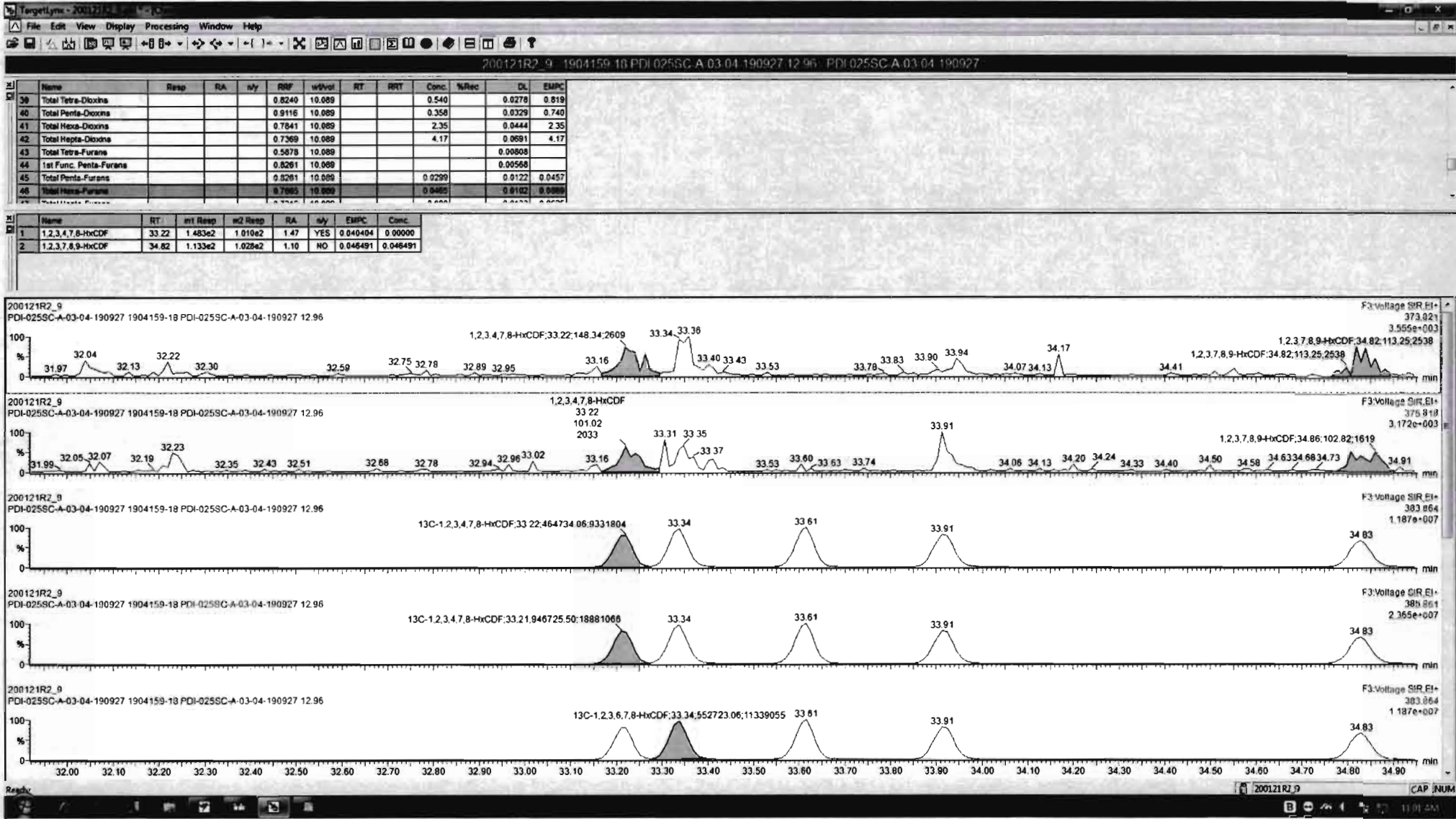
200121R2\_9



**DPE3**

200121R2\_9





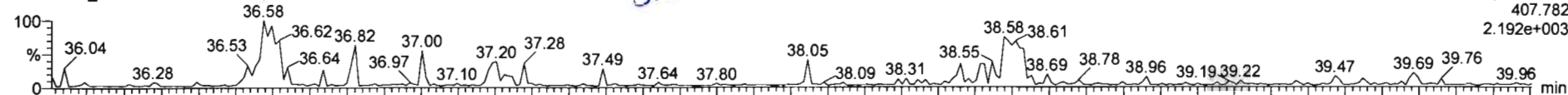
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927

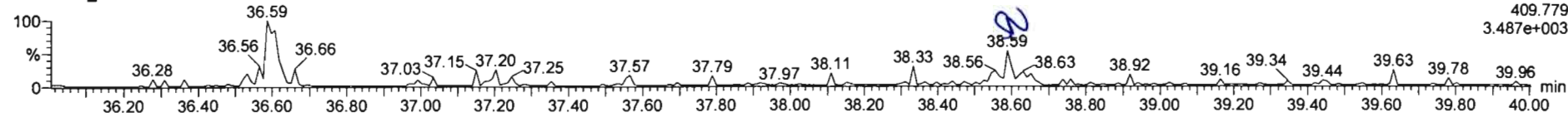
1,2,3,4,6,7,8-HpCDF

200121R2\_9



F4: Voltage SIR, EI+  
407.782  
2.192e+003

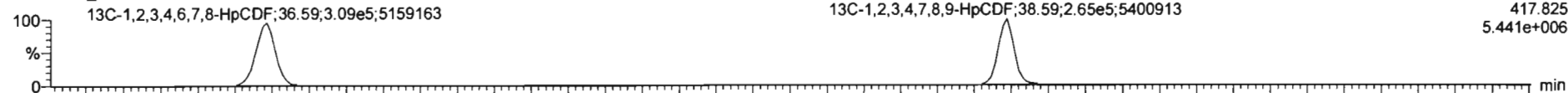
200121R2\_9



F4: Voltage SIR, EI+  
409.779  
3.487e+003

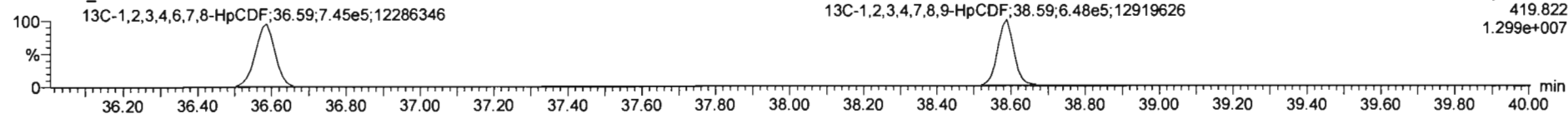
13C-1,2,3,4,6,7,8-HpCDF

200121R2\_9



F4: Voltage SIR, EI+  
417.825  
5.441e+006

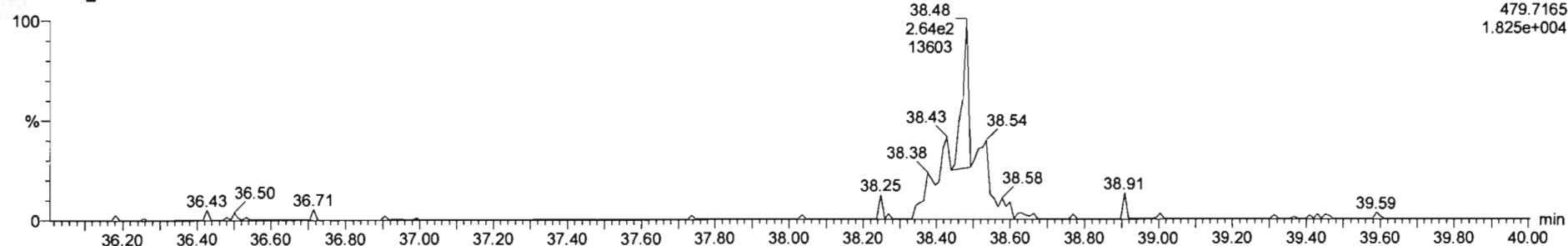
200121R2\_9



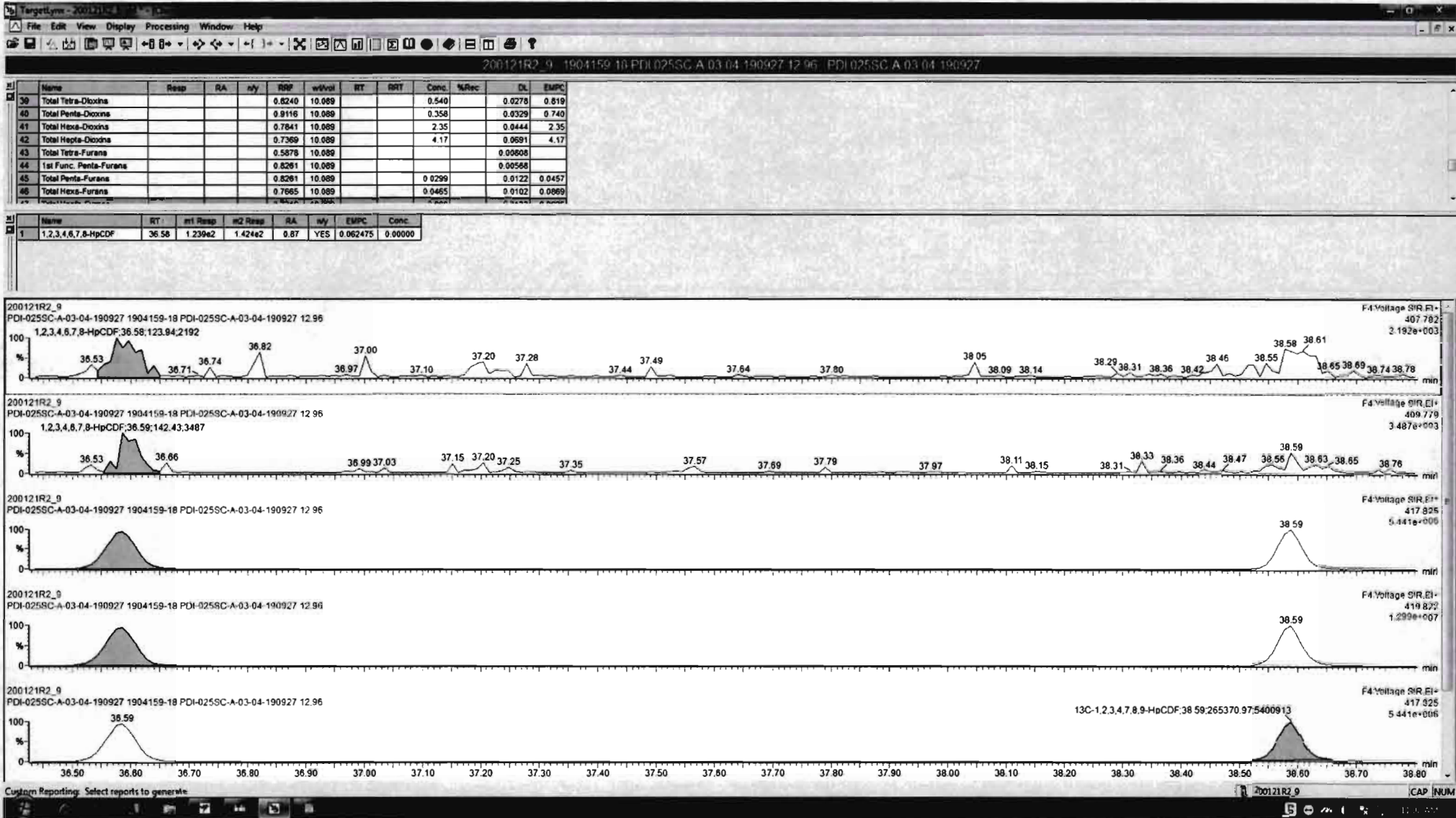
F4: Voltage SIR, EI+  
419.822  
1.299e+007

DPE4

200121R2\_9



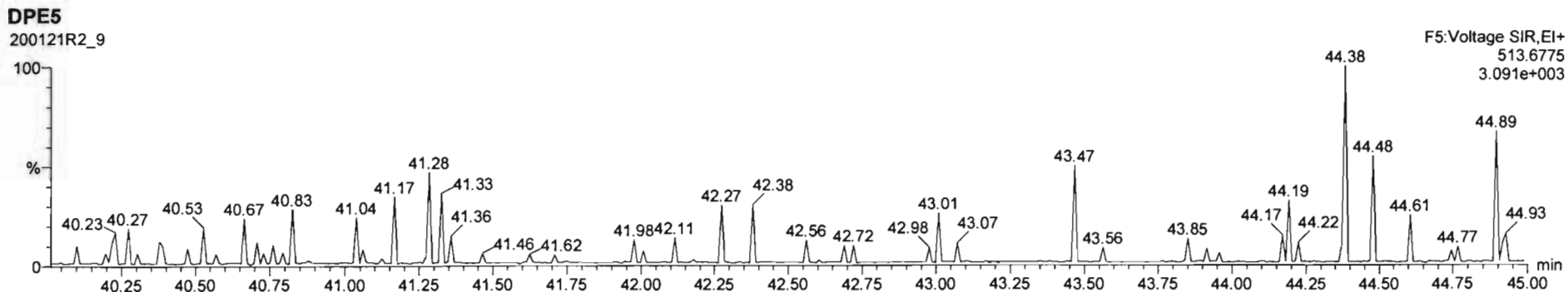
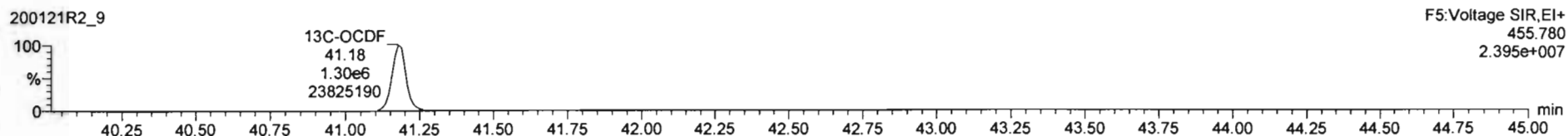
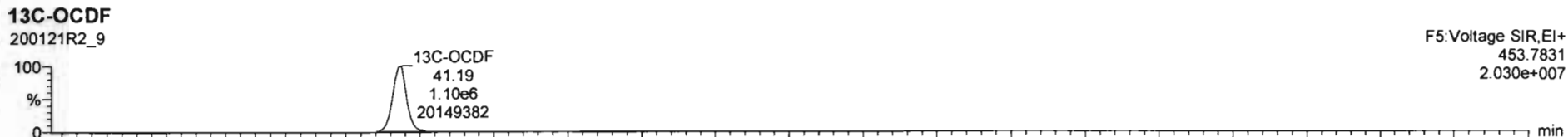
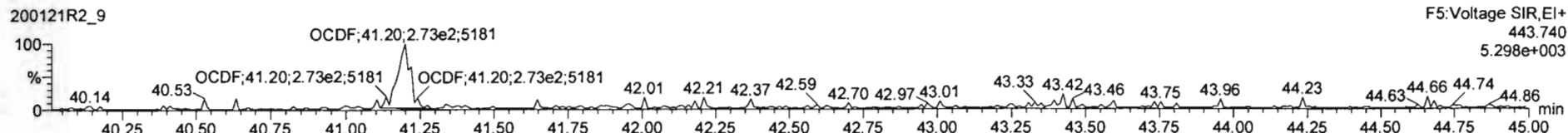
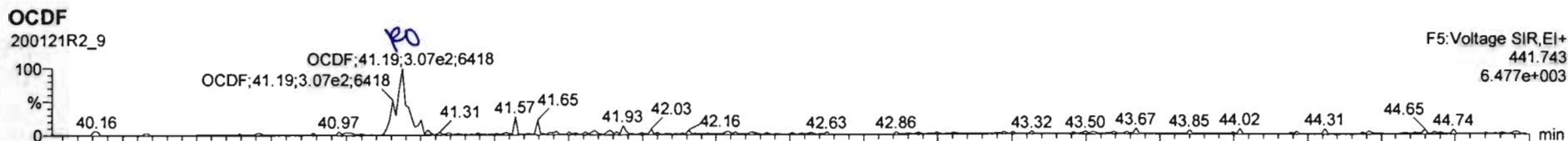
F4: Voltage SIR, EI+  
479.7165  
1.825e+004

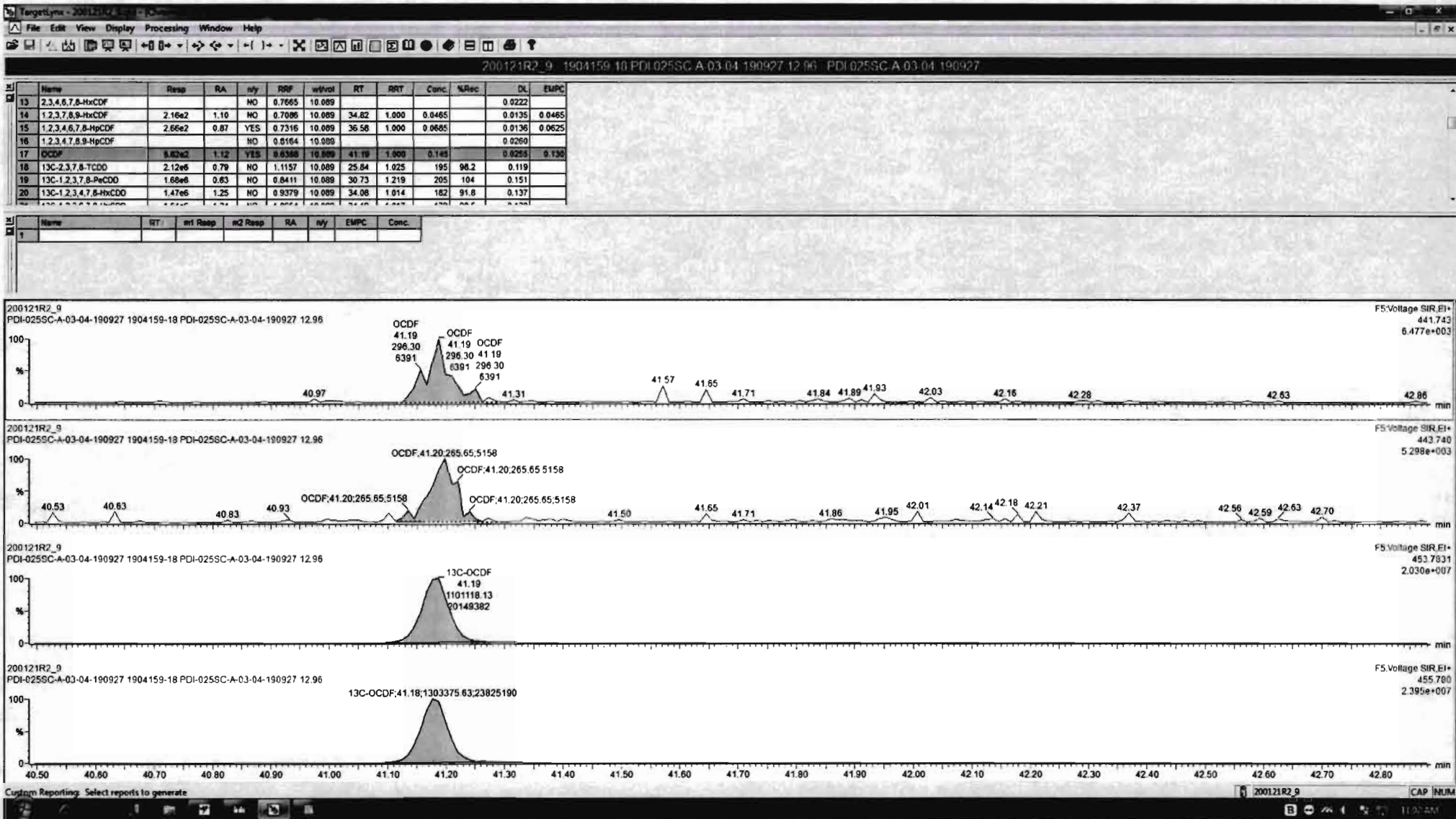


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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927



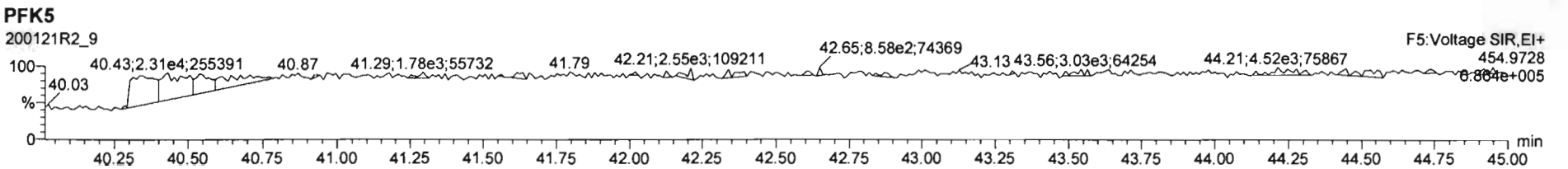
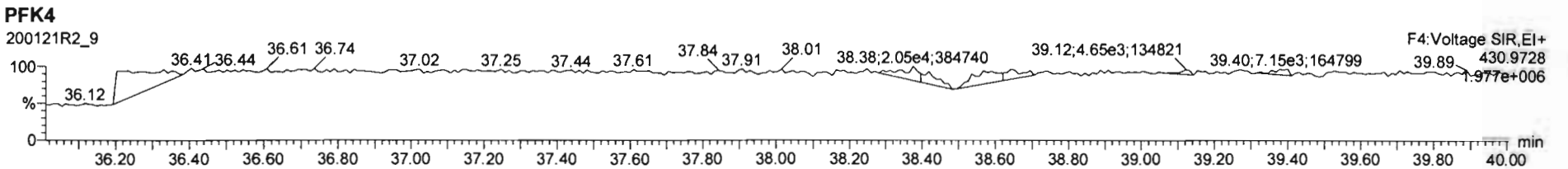
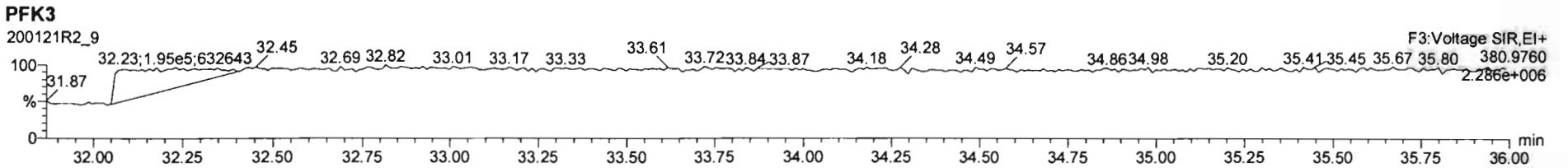
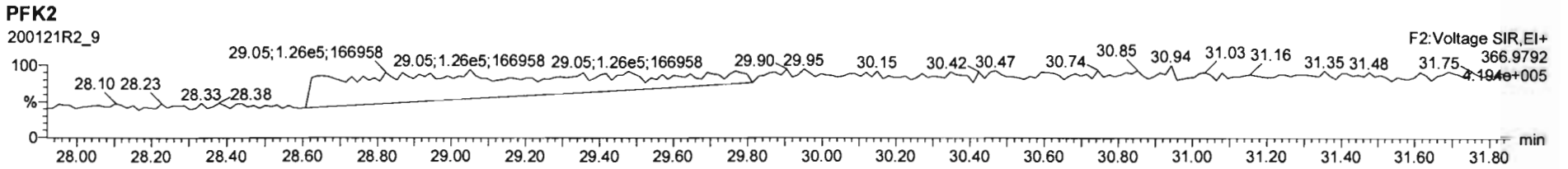
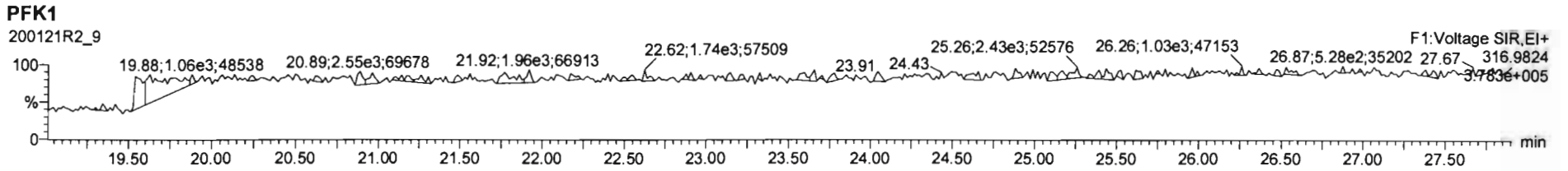


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Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_9, Date: 22-Jan-2020, Time: 05:12:26, ID: 1904159-18 PDI-025SC-A-03-04-190927 12.96, Description: PDI-025SC-A-03-04-190927





Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_10.qld

Last Altered: Wednesday, January 22, 2020 17:54:40 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 17:56:36 Pacific Standard Time

*DB 1/22/20*  
*CT 01/31/2020*

Method: Untitled 21 Jan 2020 11:10:24

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_10, Date: 22-Jan-2020, Time: 05:59:24, ID: 1904159-19 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	5.03e3	0.62	YES	0.824	10.037 ✓	25.871	25.85	1.001	1.001	0.69556		0.0499	0.615
2	2 1,2,3,7,8-PeCDD	4.02e3	0.72	NO	0.912	10.037	30.750	30.74	1.001	1.001	0.66200		0.0698	0.662
3	3 1,2,3,4,7,8-HxCDD	1.61e3	1.09	NO	0.870	10.037	34.093	34.10	1.000	1.001	0.32148		0.0719	0.321
4	4 1,2,3,6,7,8-HxCDD	7.17e3	1.18	NO	0.784	10.037	34.190	34.20	1.000	1.000	1.4695		0.0727	1.47
5	5 1,2,3,7,8,9-HxCDD	3.32e3	1.07	NO	0.798	10.037	34.501	34.49	1.001	1.001	0.69860		0.0763	0.699
6	6 1,2,3,4,6,7,8-HpCDD	1.37e5	0.99	NO	0.737	10.037	38.025	38.02	1.000	1.000	42.770		0.287	42.8
7	7 OCDD	1.47e6	0.86	NO	0.800	10.037	40.996	41.01	1.000	1.000	490.45		0.272	490
8	8 2,3,7,8-TCDF	9.93e4	0.71	NO	0.588	10.037	24.982	24.99	1.001	1.001	14.813 (12,63)		0.0756	14.8
9	9 1,2,3,7,8-PeCDF	1.32e5	1.58	NO	0.826	10.037	29.483	29.48	1.001	1.001	15.678		0.0737	15.7
10	10 2,3,4,7,8-PeCDF	5.02e4	1.49	NO	0.850	10.037	30.448	30.45	1.001	1.001	6.0086		0.0722	6.01
11	11 1,2,3,4,7,8-HxCDF	1.45e5	1.17	NO	0.787	10.037	33.210	33.23	1.000	1.001	33.086		0.0742	33.1
12	12 1,2,3,6,7,8-HxCDF	3.87e4	1.14	NO	0.720	10.037	33.348	33.35	1.000	1.000	7.8522		0.0703	7.85
13	13 2,3,4,6,7,8-HxCDF	7.52e3	1.20	NO	0.766	10.037	33.947	33.92	1.001	1.000	1.7510		0.0776	1.75
14	14 1,2,3,7,8,9-HxCDF	3.81e3	1.10	NO	0.709	10.037	34.829	34.86	1.000	1.001	1.0589		0.100	1.06
15	15 1,2,3,4,6,7,8-HpCDF	5.07e4	0.97	NO	0.732	10.037	36.623	36.60	1.001	1.000	18.939		0.168	18.9
16	16 1,2,3,4,7,8,9-HpCDF	1.61e4	0.95	NO	0.816	10.037	38.589	38.60	1.000	1.000	6.3686		0.145	6.37
17	17 OCDF	9.89e4	0.80	NO	0.639	10.037	41.188	41.20	1.000	1.000	43.714		0.151	43.7
18	18 13C-2,3,7,8-TCDD	1.75e6	0.80	NO	1.12	10.037	25.845	25.84	1.026	1.026	185.12	92.9	0.123	
19	19 13C-1,2,3,7,8-PeCDD	1.33e6	0.63	NO	0.841	10.037	30.614	30.73	1.215	1.220	186.41	93.6	0.118	
20	20 13C-1,2,3,4,7,8-HxCDD	1.14e6	1.24	NO	0.938	10.037	34.086	34.08	1.014	1.014	160.16	80.4	0.179	
21	21 13C-1,2,3,6,7,8-HxCDD	1.24e6	1.24	NO	1.07	10.037	34.186	34.19	1.017	1.017	152.84	76.7	0.157	
22	22 13C-1,2,3,7,8,9-HxCDD	1.19e6	1.22	NO	1.03	10.037	34.489	34.47	1.026	1.025	151.41	76.0	0.163	
23	23 13C-1,2,3,4,6,7,8-HpCDD	8.64e5	1.05	NO	0.710	10.037	38.052	38.01	1.132	1.131	159.99	80.3	0.257	
24	24 13C-OCDD	1.49e6	0.88	NO	0.601	10.037	40.943	41.00	1.218	1.220	325.62	81.7	0.232	
25	25 13C-2,3,7,8-TCDF	2.27e6	0.73	NO	1.04	10.037	25.021	24.96	0.993	0.990	161.45	81.0	0.100	
26	26 13C-1,2,3,7,8-PeCDF	2.03e6	1.53	NO	0.917	10.037	29.380	29.46	1.166	1.169	163.28	81.9	0.209	
27	27 13C-2,3,4,7,8-PeCDF	1.96e6	1.55	NO	0.903	10.037	30.377	30.44	1.204	1.208	159.68	80.1	0.212	
28	28 13C-1,2,3,4,7,8-HxCDF	1.11e6	0.49	NO	0.861	10.037	33.212	33.21	0.988	0.988	169.53	85.1	0.243	
29	29 13C-1,2,3,6,7,8-HxCDF	1.29e6	0.50	NO	1.05	10.037	33.312	33.34	0.991	0.992	162.47	81.5	0.200	
30	30 13C-2,3,4,6,7,8-HxCDF	1.12e6	0.49	NO	0.946	10.037	33.921	33.91	1.009	1.009	155.04	77.8	0.221	
31	31 13C-1,2,3,7,8,9-HxCDF	1.01e6	0.48	NO	0.816	10.037	34.825	34.83	1.036	1.036	162.78	81.7	0.256	

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Name: 200121R2\_10, Date: 22-Jan-2020, Time: 05:59:24, ID: 1904159-19 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	7.29e5	0.41	NO	0.589	10.037	36.573	36.59	1.088	1.088	162.49	81.5	0.296	
33	13C-1,2,3,4,7,8,9-HpCDF	6.19e5	0.42	NO	0.448	10.037	38.590	38.59	1.148	1.148	181.45	91.1	0.390	
34	13C-OCDF	1.41e6	0.84	NO	0.586	10.037	41.178	41.19	1.225	1.225	316.62	79.5	0.152	
35	37Cl-2,3,7,8-TCDD	7.30e5			1.09	10.037	25.877	25.85	1.027	1.026	79.312	99.5	0.0272	
36	13C-1,2,3,4-TCDD	1.69e6	0.80	NO	1.00	10.037	25.260	25.20	1.000	1.000	199.25	100	0.138	
37	13C-1,2,3,4-TCDF	2.71e6	0.75	NO	1.00	10.037	23.860	23.57	1.000	1.000	199.25	100	0.104	
38	13C-1,2,3,4,6,9-HxCDF	1.52e6	0.50	NO	1.00	10.037	33.590	33.62	1.000	1.000	199.25	100	0.209	
39	Total Tetra-Dioxins				0.824	10.037	24.620		0.000		1.4795		0.0499	2.43
40	Total Penta-Dioxins				0.912	10.037	29.960		0.000		2.3152		0.0698	2.91
41	Total Hexa-Dioxins				0.784	10.037	33.635		0.000		12.898		0.0766	12.9
42	Total Hepta-Dioxins				0.737	10.037	37.640		0.000		90.186		0.287	90.2
43	Total Tetra-Furans				0.588	10.037	23.610		0.000		49.467		0.0756	50.0
44	1st Func. Penta-Furans				0.826	10.037	27.090		0.000		2.7631		0.0129	2.76
45	Total Penta-Furans				0.826	10.037	29.275		0.000		40.549		0.0740	42.9
46	Total Hexa-Furans				0.766	10.037	33.555		0.000		57.144		0.0773	57.4
47	Total Hepta-Furans				0.732	10.037	37.835		0.000		43.452		0.165	43.8

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Name: 200121R2\_10, Date: 22-Jan-2020, Time: 05:59:24, ID: 1904159-19 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	21.98	1.474e4	2.194e4	1.366e3	1.963e3	0.70	NO	3.329e3	0.45997	0.45997	0.0499
2	Total Tetra-Dioxins	22.40	4.247e3	6.518e3	3.528e2	5.673e2	0.62	YES	0.000e0	0.00000	0.11205	0.0499
3	Total Tetra-Dioxins	22.88	1.934e3	5.696e3	1.540e2	2.402e2	0.64	YES	0.000e0	0.00000	0.048918	0.0499
4	Total Tetra-Dioxins	23.72	8.001e3	9.707e3	5.221e2	6.484e2	0.81	NO	1.170e3	0.16174	0.16174	0.0499
5	Total Tetra-Dioxins	24.00	6.928e3	7.084e3	4.833e2	5.280e2	0.92	YES	0.000e0	0.00000	0.12915	0.0499
6	Total Tetra-Dioxins	24.19	1.038e4	1.306e4	7.399e2	9.072e2	0.82	NO	1.647e3	0.22760	0.22760	0.0499
7	Total Tetra-Dioxins	24.42	2.470e3	3.669e3	1.398e2	1.790e2	0.78	NO	3.188e2	0.044059	0.044059	0.0499
8	Total Tetra-Dioxins	24.84	2.798e3	4.954e3	1.494e2	2.289e2	0.65	YES	0.000e0	0.00000	0.047463	0.0499
9	Total Tetra-Dioxins	25.18	3.808e3	2.801e3	1.840e2	2.103e2	0.87	NO	3.943e2	0.054482	0.054482	0.0499
10	Total Tetra-Dioxins	25.60	1.560e4	1.883e4	1.269e3	1.525e3	0.83	NO	2.794e3	0.38610	0.38610	0.0499
11	2,3,7,8-TCDD	25.85	2.898e4	4.730e4	1.935e3	3.099e3	0.62	YES	5.034e3	0.00000	0.61451	0.0499
12	Total Tetra-Dioxins	26.18	8.787e3	1.040e4	4.833e2	5.703e2	0.85	NO	1.054e3	0.14560	0.14560	0.0499

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.52	1.803e4	2.617e4	1.424e3	2.292e3	0.62	NO	3.716e3	0.61137	0.61137	0.0698
2	Total Penta-Dioxins	29.03	5.556e3	1.280e4	3.484e2	6.511e2	0.54	YES	0.000e0	0.00000	0.14832	0.0698
3	Total Penta-Dioxins	29.51	2.268e4	3.389e4	1.383e3	1.963e3	0.70	NO	3.346e3	0.55052	0.55052	0.0698
4	Total Penta-Dioxins	29.68	1.312e4	2.536e4	5.409e2	8.625e2	0.63	NO	1.403e3	0.23089	0.23089	0.0698
5	Total Penta-Dioxins	29.77	8.148e3	1.294e4	3.735e2	5.245e2	0.71	NO	8.980e2	0.14773	0.14773	0.0698
6	Total Penta-Dioxins	29.98	9.461e3	1.761e4	7.680e2	9.948e2	0.77	YES	0.000e0	0.00000	0.26676	0.0698
7	Total Penta-Dioxins	30.33	5.849e3	9.399e3	2.498e2	4.863e2	0.51	YES	0.000e0	0.00000	0.10633	0.0698
8	1,2,3,7,8-PeCDD	30.74	3.033e4	4.825e4	1.688e3	2.336e3	0.72	NO	4.024e3	0.66200	0.66200	0.0698
9	Total Penta-Dioxins	30.83	4.941e3	5.580e3	2.114e2	2.675e2	0.79	YES	0.000e0	0.00000	0.071723	0.0698
10	Total Penta-Dioxins	31.13	4.618e3	1.056e4	2.817e2	4.032e2	0.70	NO	6.849e2	0.11267	0.11267	0.0698

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Hexa-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.60	2.259e5	2.116e5	1.143e4	1.001e4	1.14	NO	2.145e4	4.5796	4.5796	0.0766
2	Total Hexa-Dioxins	33.16	3.991e4	3.507e4	2.217e3	1.612e3	1.38	NO	3.829e3	0.81768	0.81768	0.0766
3	Total Hexa-Dioxins	33.42	1.779e5	1.500e5	1.185e4	9.610e3	1.23	NO	2.146e4	4.5837	4.5837	0.0766
4	Total Hexa-Dioxins	33.52	8.629e3	1.060e4	5.662e2	4.759e2	1.19	NO	1.042e3	0.22255	0.22255	0.0766
5	1,2,3,4,7,8-HxCDD	34.10	1.657e4	1.428e4	8.392e2	7.665e2	1.09	NO	1.606e3	0.32148	0.32148	0.0719
6	1,2,3,6,7,8-HxCDD	34.20	8.439e4	6.142e4	3.885e3	3.282e3	1.18	NO	7.167e3	1.4695	1.4695	0.0727
7	Total Hexa-Dioxins	34.38	1.155e4	1.031e4	5.494e2	4.089e2	1.34	NO	9.584e2	0.20465	0.20465	0.0766
8	1,2,3,7,8,9-HxCDD	34.49	3.017e4	2.754e4	1.721e3	1.603e3	1.07	NO	3.324e3	0.69860	0.69860	0.0763

Hepta-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.99	1.113e6	1.164e6	7.529e4	7.632e4	0.99	NO	1.516e5	47.416	47.416	0.287
2	1,2,3,4,6,7,8-HpCDD	38.02	1.128e6	1.148e6	6.809e4	6.866e4	0.99	NO	1.367e5	42.770	42.770	0.287

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**Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	19.84	6.800e3	1.005e4	4.807e2	6.740e2	0.71	NO	1.155e3	0.17227	0.17227	0.0756
2	Total Tetra-Furans	20.36	9.275e3	1.173e4	7.543e2	9.500e2	0.79	NO	1.704e3	0.25424	0.25424	0.0756
3	Total Tetra-Furans	20.98	7.061e4	8.681e4	5.474e3	7.345e3	0.75	NO	1.282e4	1.9122	1.9122	0.0756
4	Total Tetra-Furans	21.56	1.426e4	2.018e4	2.105e3	2.712e3	0.78	NO	4.816e3	0.71851	0.71851	0.0756
5	Total Tetra-Furans	21.93	1.076e5	1.367e5	1.051e4	1.396e4	0.75	NO	2.447e4	3.6499	3.6499	0.0756
6	Total Tetra-Furans	22.43	3.123e4	3.837e4	2.831e3	3.836e3	0.74	NO	6.667e3	0.99458	0.99458	0.0756
7	Total Tetra-Furans	22.56	7.349e3	8.666e3	4.284e2	5.501e2	0.78	NO	9.785e2	0.14597	0.14597	0.0756
8	Total Tetra-Furans	22.77	2.431e4	3.087e4	2.068e3	2.817e3	0.73	NO	4.886e3	0.72883	0.72883	0.0756
9	Total Tetra-Furans	23.19	3.639e3	7.933e3	3.079e2	5.480e2	0.56	YES	0.000e0	0.00000	0.10560	0.0756
10	Total Tetra-Furans	23.58	1.712e5	2.265e5	1.794e4	2.455e4	0.73	NO	4.249e4	6.3385	6.3385	0.0756
11	Total Tetra-Furans	24.07	4.793e5	6.755e5	3.520e4	5.007e4	0.70	NO	8.527e4	12.721	12.721	0.0756
12	Total Tetra-Furans	24.36	2.188e4	3.196e4	1.434e3	2.115e3	0.68	NO	3.550e3	0.52953	0.52953	0.0756
13	Total Tetra-Furans	24.55	1.057e4	1.304e4	7.252e2	1.232e3	0.59	YES	0.000e0	0.00000	0.24868	0.0756
14	Total Tetra-Furans	24.88	1.289e5	1.796e5	9.788e3	1.404e4	0.70	NO	2.383e4	3.5552	3.5552	0.0756
15	2,3,7,8-TCDF	24.99	5.638e5	7.964e5	4.130e4	5.800e4	0.71	NO	9.929e4	14.813	14.813	0.0756
16	Total Tetra-Furans	25.35	3.646e4	4.840e4	2.396e3	3.448e3	0.70	NO	5.844e3	0.87182	0.87182	0.0756
17	Total Tetra-Furans	25.60	1.058e4	1.630e4	5.540e2	1.009e3	0.55	YES	0.000e0	0.00000	0.18998	0.0756
18	Total Tetra-Furans	26.95	9.345e4	1.326e5	6.209e3	7.608e3	0.82	NO	1.382e4	2.0613	2.0613	0.0756

**Penta-Furans function 1**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.93	2.419e5	1.426e5	1.423e4	8.621e3	1.65	NO	2.285e4	2.7631	2.7631	0.0129

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**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.50	6.482e5	4.186e5	4.677e4	3.018e4	1.55	NO	7.695e4	9.3044	9.3044	0.0740
2	Total Penta-Furans	29.07	2.275e5	1.623e5	1.341e4	9.120e3	1.47	NO	2.253e4	2.7239	2.7239	0.0740
3	Total Penta-Furans	29.29	2.056e5	1.279e5	9.772e3	6.570e3	1.49	NO	1.634e4	1.9760	1.9760	0.0740
4	1,2,3,7,8-PeCDF	29.48	1.692e6	1.041e6	8.098e4	5.114e4	1.58	NO	1.321e5	15.678	15.678	0.0737
5	Total Penta-Furans	29.74	4.523e5	2.771e5	2.332e4	1.368e4	1.70	NO	3.700e4	4.4738	4.4738	0.0740
6	2,3,4,7,8-PeCDF	30.45	7.074e5	4.646e5	3.004e4	2.012e4	1.49	NO	5.015e4	6.0086	6.0086	0.0722
7	Total Penta-Furans	30.47	5.021e5	3.297e5	1.202e4	7.016e3	1.71	NO	0.000e0	0.00000	2.3023	0.0740
8	Total Penta-Furans	31.37	3.659e4	2.709e4	1.913e3	1.259e3	1.52	NO	3.172e3	0.38348	0.38348	0.0740

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Furans	32.06	7.891e4	6.260e4	4.026e3	3.183e3	1.26	NO	7.208e3	1.6538	1.6538	0.0773
2	Total Hexa-Furans	32.22	2.458e5	2.176e5	1.127e4	9.828e3	1.15	NO	2.110e4	4.8408	4.8408	0.0773
3	Total Hexa-Furans	32.59	5.519e3	4.915e3	2.650e2	2.192e2	1.21	NO	4.842e2	0.1110e	0.1110e	0.0773
4	Total Hexa-Furans	32.77	2.445e5	1.983e5	1.156e4	9.444e3	1.22	NO	2.101e4	4.8201	4.8201	0.0773
5	Total Hexa-Furans	33.11	1.080e4	1.180e4	5.226e2	5.285e2	0.99	YES	0.000e0	0.00000	0.21659	0.0773
6	1,2,3,4,7,8-HxCDF	33.23	1.547e6	1.292e6	7.824e4	6.694e4	1.17	NO	1.452e5	33.086	33.086	0.0742
7	1,2,3,6,7,8-HxCDF	33.35	3.737e5	3.391e5	1.960e4	1.713e4	1.14	NO	3.673e4	7.8522	7.8522	0.0703
8	Total Hexa-Furans	33.63	7.052e3	5.916e3	3.172e2	2.710e2	1.17	NO	5.882e2	0.13495	0.13495	0.0773
9	2,3,4,6,7,8-HxCDF	33.92	7.402e4	6.417e4	4.101e3	3.416e3	1.20	NO	7.516e3	1.7510	1.7510	0.0776
10	1,2,3,7,8,9-HxCDF	34.86	7.008e4	6.782e4	1.990e3	1.816e3	1.10	NO	3.805e3	1.0589	1.0589	0.100
11	Total Hexa-Furans	34.88	9.348e4	8.256e4	4.201e3	3.798e3	1.11	NO	7.998e3	1.8351	1.8351	0.0773

**Hepta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.60	3.838e5	3.917e5	2.496e4	2.571e4	0.97	NO	5.067e4	18.939	18.939	0.168
2	Total Hepta-Furans	36.99	6.879e3	8.274e3	3.863e2	4.577e2	0.84	YES	0.000e0	0.00000	0.30635	0.165
3	Total Hepta-Furans	37.20	3.189e5	3.528e5	2.179e4	2.309e4	0.94	NO	4.488e4	18.144	18.144	0.165
4	1,2,3,4,7,8,9-HpCDF	38.60	1.472e5	1.554e5	7.881e3	8.262e3	0.95	NO	1.614e4	6.3686	6.3686	0.145

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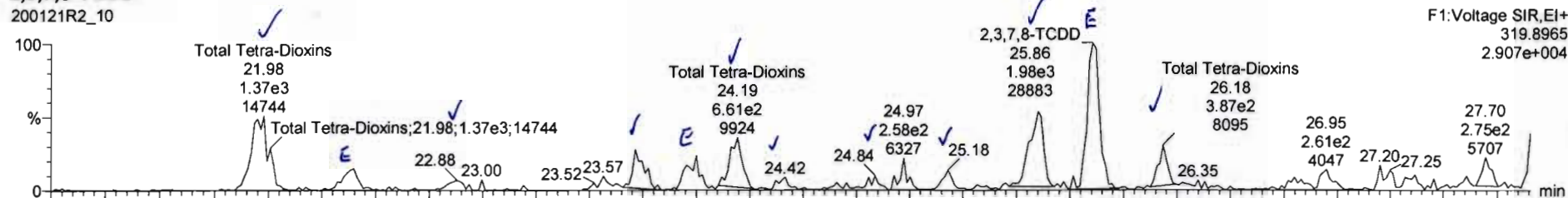
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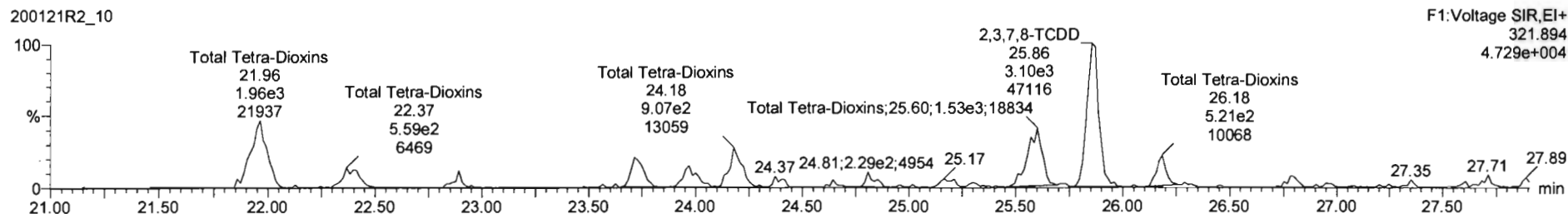
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2,3,7,8-TCDD

200121R2\_10

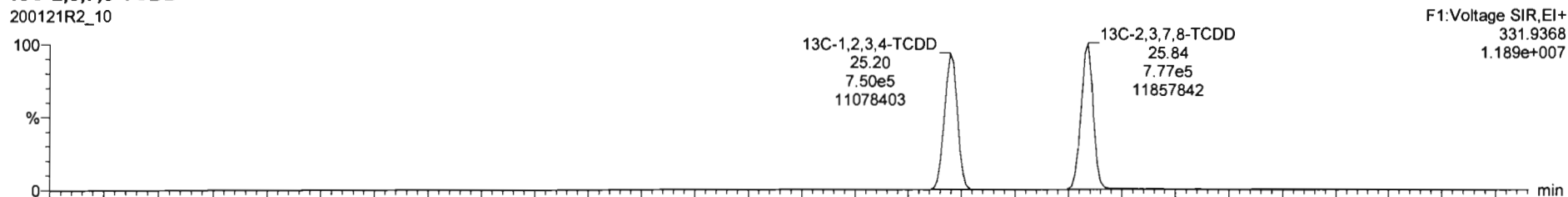


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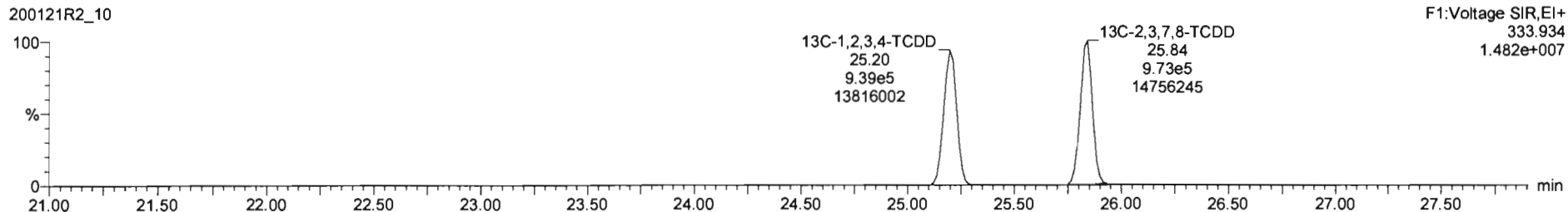


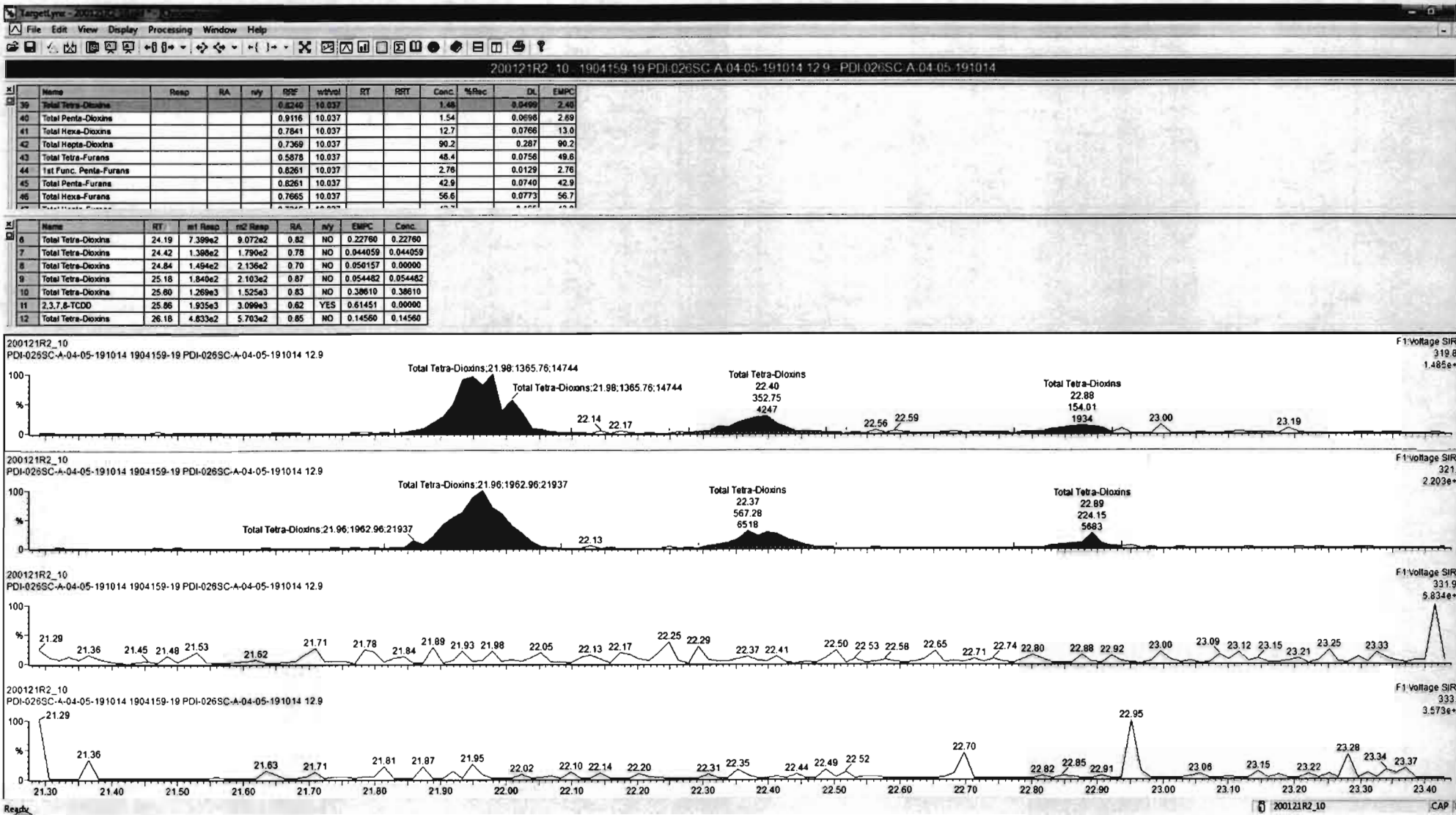
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200121R2\_10



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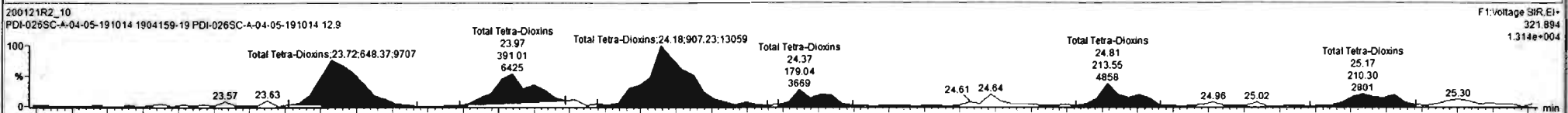
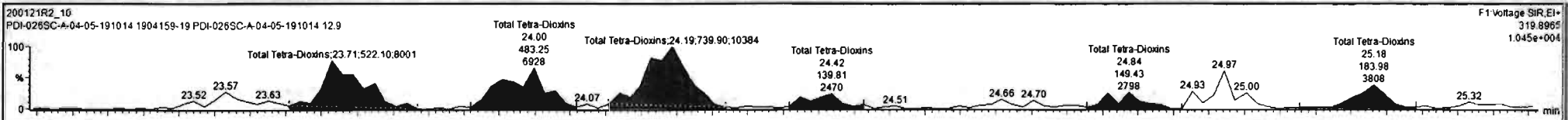






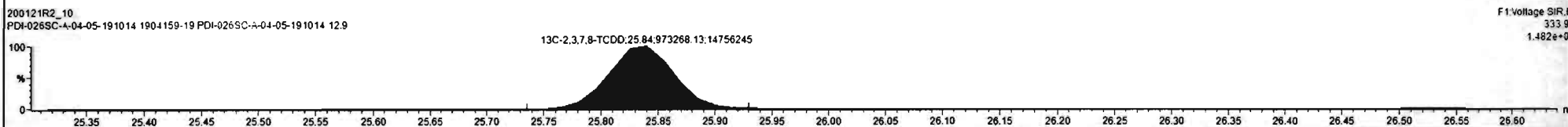
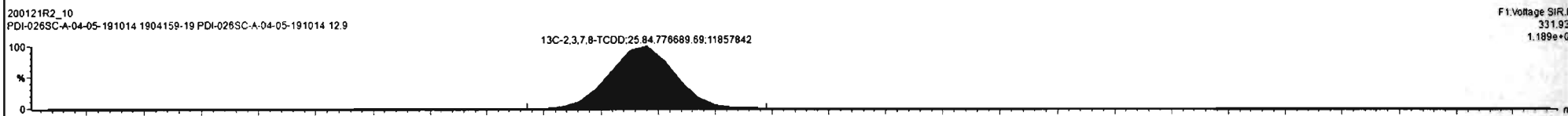
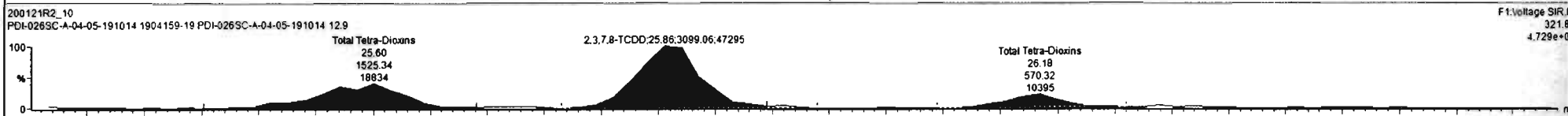
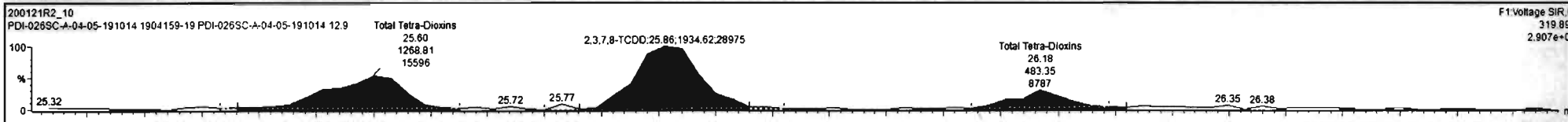
Name	Resp	RA	n/y	RRF	wtPct	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48	0.9499	2.40	
40 Total Penta-Dioxins				0.9116	10.037			1.54	0.0696	2.69	
41 Total Hexa-Dioxins				0.7841	10.037			12.7	0.0766	13.0	
42 Total Hepta-Dioxins				0.7369	10.037			90.2	0.287	90.2	
43 Total Tetra-Furans				0.5878	10.037			48.4	0.0756	49.6	
44 1st Func. Penta-Furans				0.8261	10.037			2.76	0.0129	2.76	
45 Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46 Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
6 Total Tetra-Dioxins	24.19	7.39e2	9.07e2	0.82	NO	0.22780	0.22780
7 Total Tetra-Dioxins	24.42	1.398e2	1.790e2	0.78	NO	0.044059	0.044059
8 Total Tetra-Dioxins	24.84	1.494e2	2.136e2	0.70	NO	0.050157	0.00090
9 Total Tetra-Dioxins	25.18	1.840e2	2.103e2	0.87	NO	0.054482	0.054482
10 Total Tetra-Dioxins	25.60	1.269e3	1.525e3	0.83	NO	0.38610	0.38610
11 2,3,7,8-TCDD	25.86	1.935e3	3.099e3	0.82	YES	0.61451	0.00000
12 Total Tetra-Dioxins	26.18	4.833e2	5.703e2	0.85	NO	0.14560	0.14560



#	Name	Resp	RA	n/y	RF	w/val	RT	RTT	Conc	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.8240	10.037			1.48		0.0499	2.40
40	Total Penta-Dioxins				0.9116	10.037			1.54		0.0688	2.69
41	Total Hexa-Dioxins				0.7841	10.037			12.7		0.0766	13.0
42	Total Hepta-Dioxins				0.7369	10.037			90.2		0.287	90.2
43	Total Tetra-Furans				0.5878	10.037			48.4		0.0756	49.6
44	1st Func. Penta-Furans				0.8261	10.037			2.76		0.0129	2.76
45	Total Penta-Furans				0.8261	10.037			42.9		0.0740	42.9
46	Total Hexa-Furans				0.7665	10.037			56.6		0.0773	56.7

#	Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc
6	Total Tetra-Dioxins	24.19	7.399e2	9.072e2	0.82	NO	0.22760	0.22760
7	Total Tetra-Dioxins	24.42	1.398e2	1.790e2	0.78	NO	0.044059	0.044059
8	Total Tetra-Dioxins	24.84	1.494e2	2.136e2	0.70	NO	0.050157	0.00000
9	Total Tetra-Dioxins	25.18	1.840e2	2.103e2	0.87	NO	0.054482	0.054482
10	Total Tetra-Dioxins	25.60	1.269e3	1.525e3	0.83	NO	0.38610	0.38610
11	2,3,7,8-TCDD	25.86	1.935e3	3.099e3	0.62	YES	0.61451	0.00000
12	Total Tetra-Dioxins	26.18	4.833e2	5.703e2	0.85	NO	0.14560	0.14560



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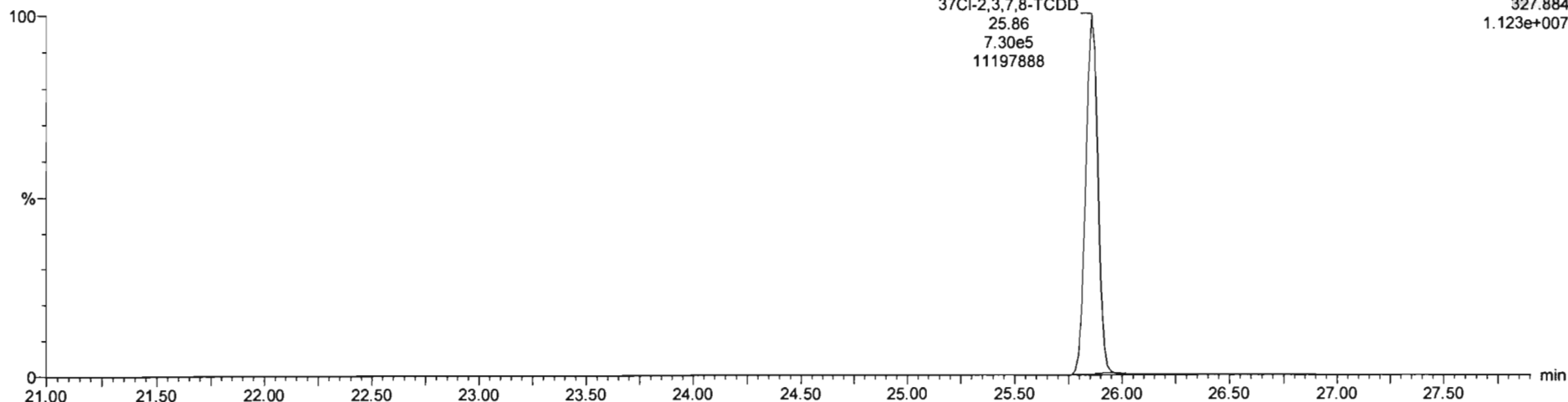
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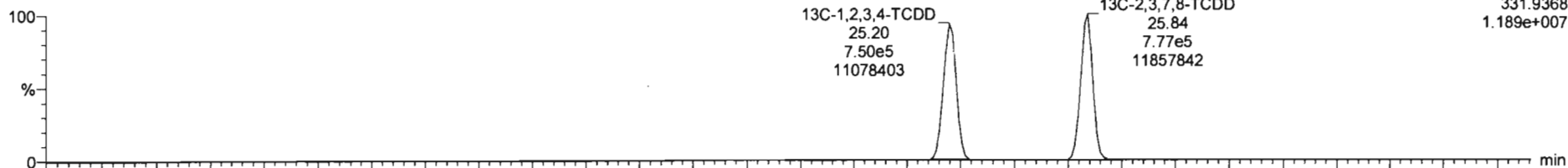
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200121R2\_10

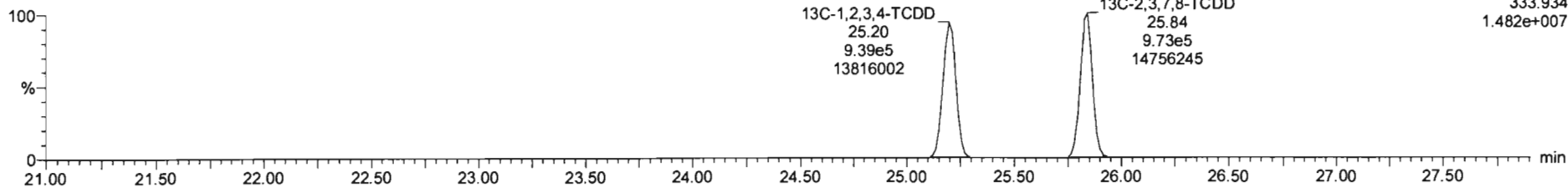


**13C-1,2,3,4-TCDD**

200121R2\_10



200121R2\_10



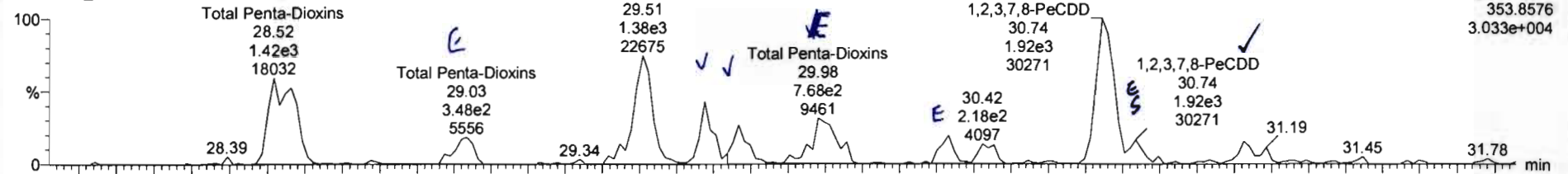
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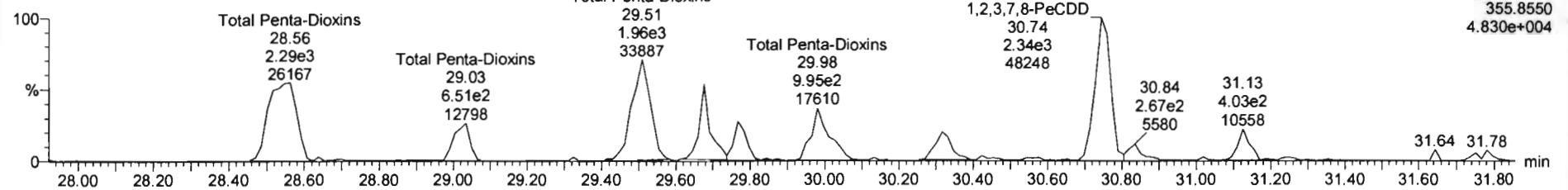
1,2,3,7,8-PeCDD

200121R2\_10



F2:Voltage SIR,EI+  
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3.033e+004

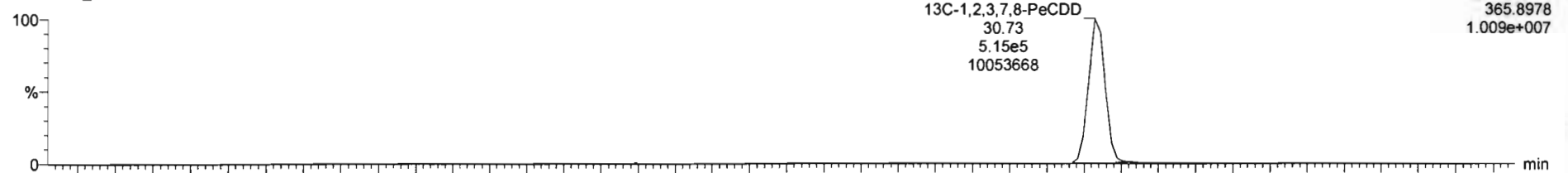
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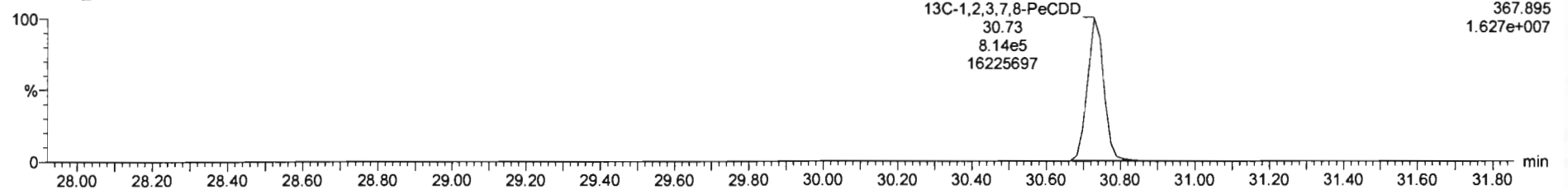
13C-1,2,3,7,8-PeCDD

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F2:Voltage SIR,EI+  
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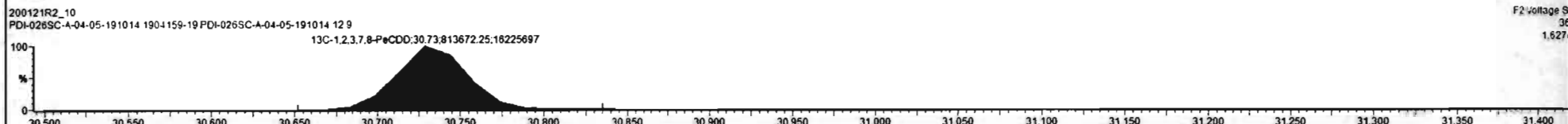
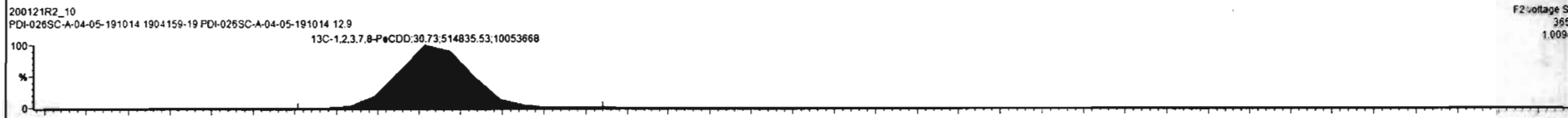
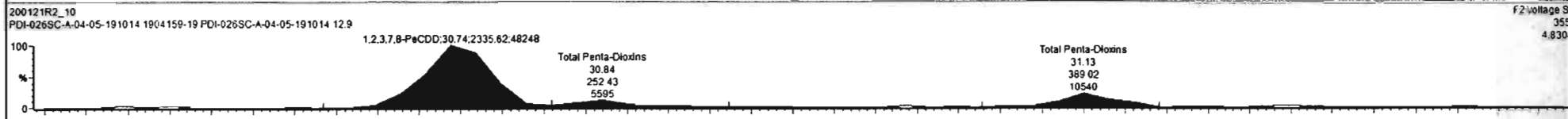
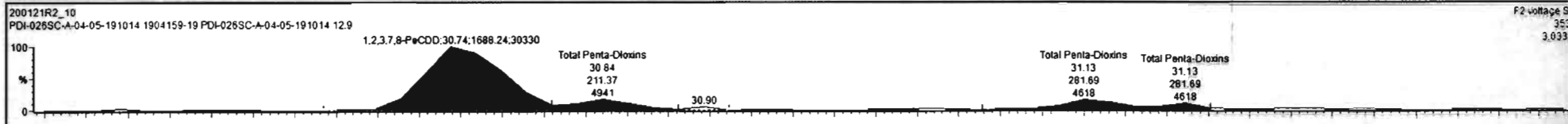
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F2:Voltage SIR,EI+  
367.895  
1.627e+007

Name	Resp	RA	nly	RRF	wtVal	RT	RRT	Conc	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.40	
40 Total Penta-Dioxins				0.9118	10.037			2.31	0.0896	2.90	
41 Total Hexa-Dioxins				0.7841	10.037			12.7	0.0766	13.0	
42 Total Hepta-Dioxins				0.7369	10.037			90.2	0.287	90.2	
43 Total Tetra-Furans				0.5878	10.037			48.4	0.0756	49.6	
44 1st Func. Penta-Furans				0.8261	10.037			2.78	0.0129	2.78	
45 Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46 Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

Name	RT	m1 Resp	m2 Resp	RA	nly	EMPC	Conc
4 Total Penta-Dioxins	29.68	5.409e2	8.625e2	0.63	NO	0.23089	0.23089
5 Total Penta-Dioxins	29.77	3.735e2	5.245e2	0.71	NO	0.14773	0.14773
6 Total Penta-Dioxins	29.98	7.680e2	9.948e2	0.77	YES	0.29876	0.00000
7 Total Penta-Dioxins	30.33	2.486e2	4.863e2	0.51	YES	0.10633	0.00000
8 1,2,3,7,8-PeCDD	30.74	1.688e3	2.336e3	0.72	NO	0.66200	0.66200
9 Total Penta-Dioxins	30.84	2.114e2	2.524e2	0.84	YES	0.067692	0.00000
10 Total Penta-Dioxins	31.13	2.817e2	3.890e2	0.72	NO	0.11034	0.11034



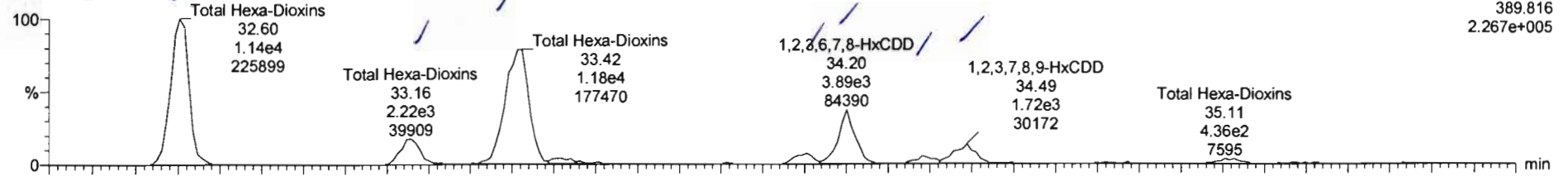
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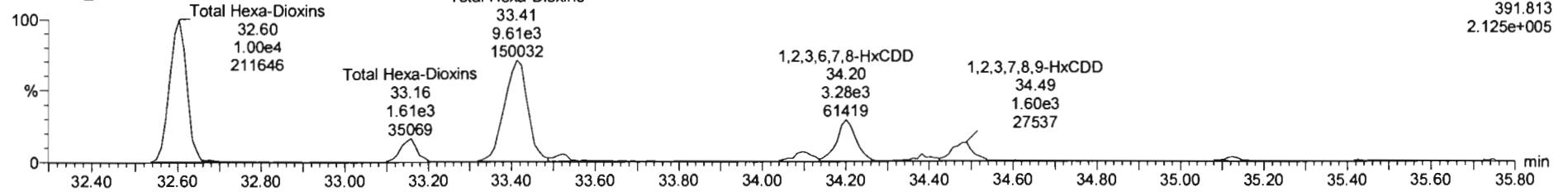
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**1,2,3,4,7,8-HxCDD**

200121R2\_10

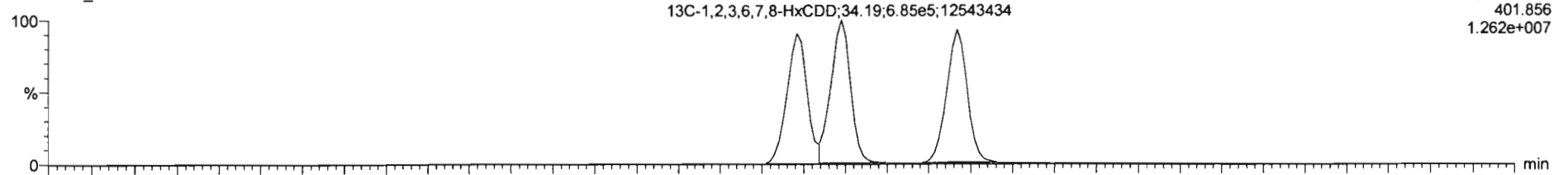


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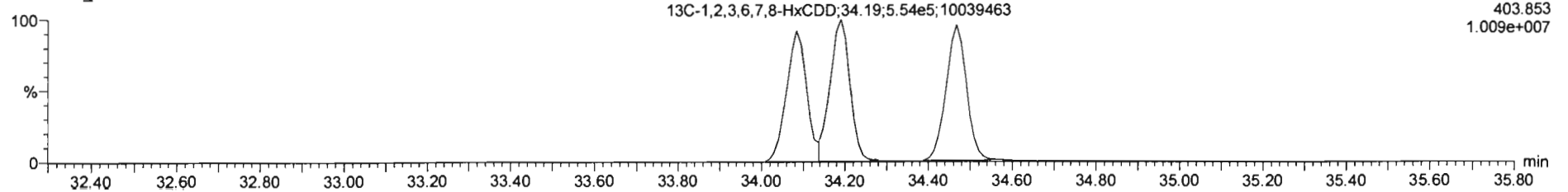


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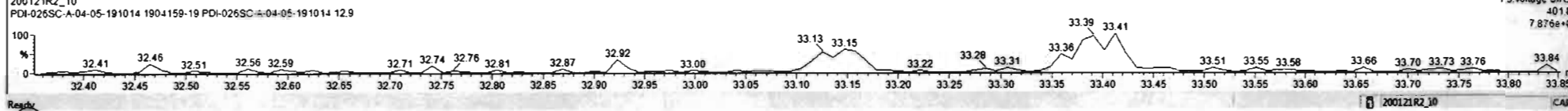
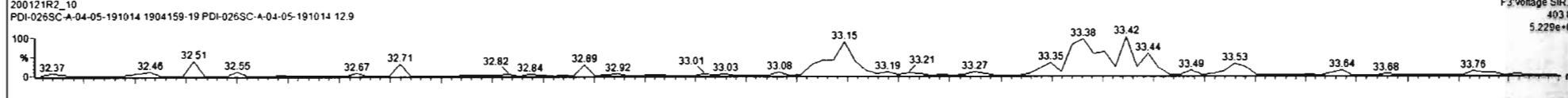
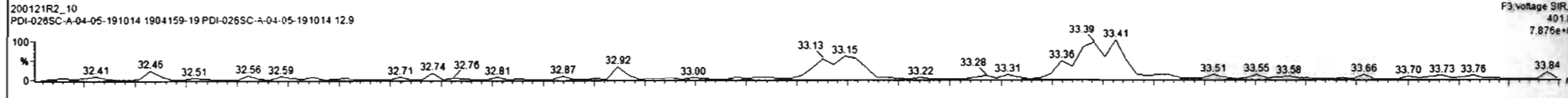
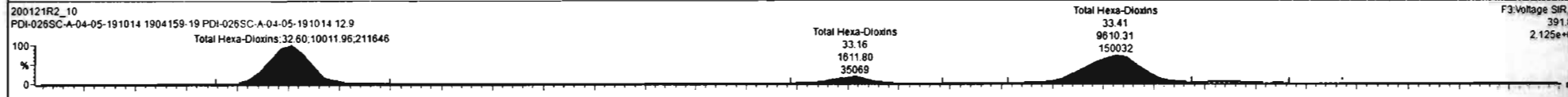
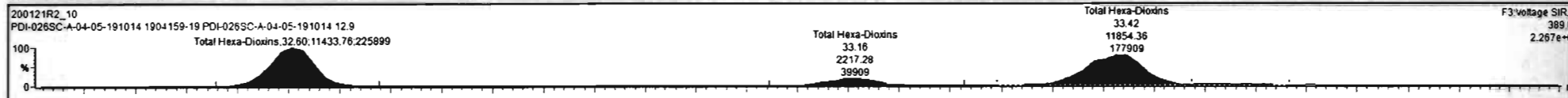


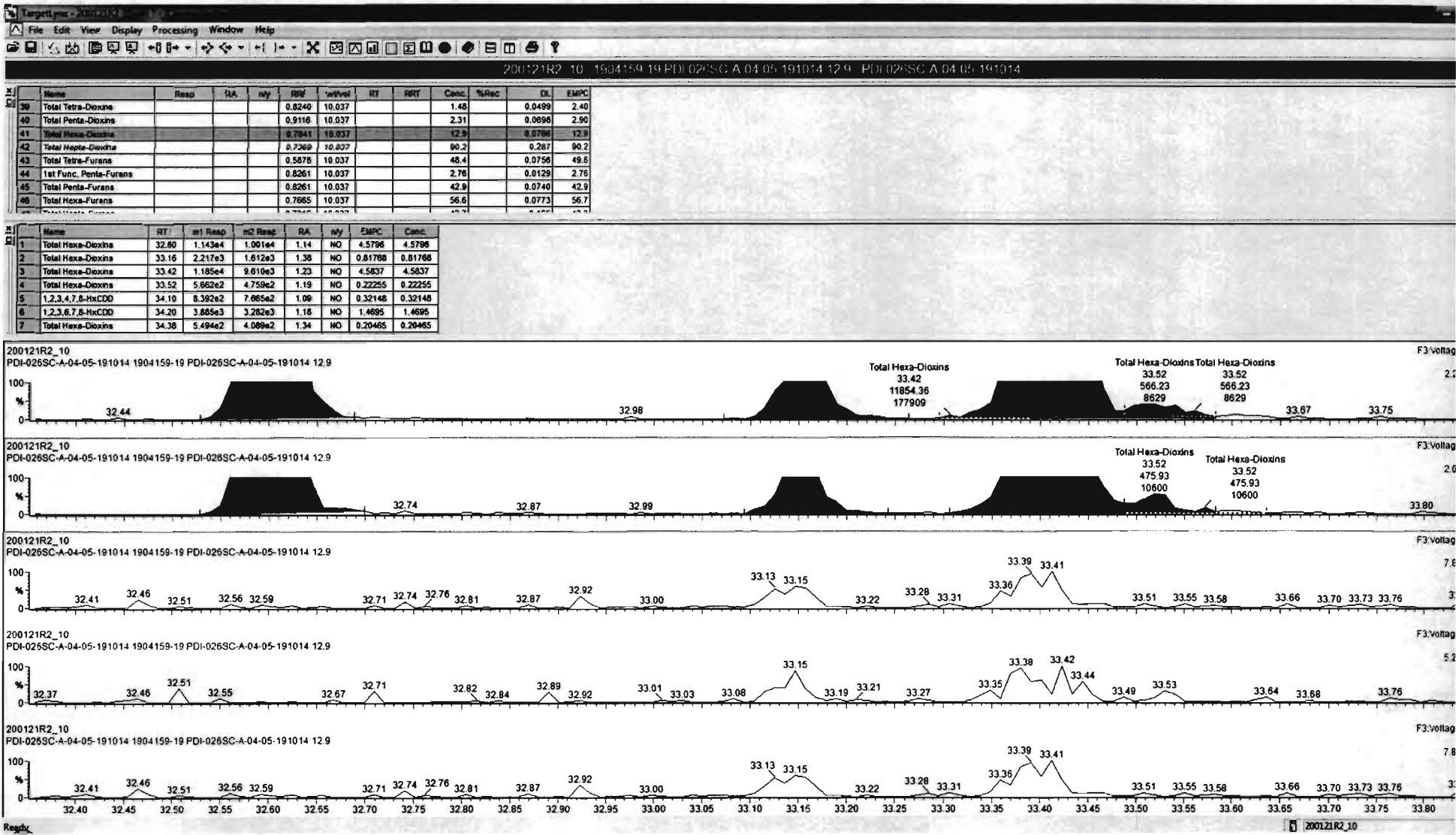
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Name	Resp	RA	rvy	RfF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.40	
40 Total Penta-Dioxins				0.9116	10.037			2.31	0.0698	2.90	
41 Total Hexa-Dioxins				0.7841	10.037			12.9	0.3708	12.9	
42 Total Hepta-Dioxins				0.7369	10.037			90.2	0.287	90.2	
43 Total Tetra-Furans				0.5878	10.037			48.4	0.0758	48.8	
44 1st Func. Penta-Furans				0.6261	10.037			2.78	0.0129	2.78	
45 Total Penta-Furans				0.6261	10.037			42.9	0.0740	42.9	
46 Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

Name	RT	m1 Resp	m2 Resp	RA	rvy	EMPC	Conc.
1 Total Hexa-Dioxins	32.60	1.143e4	1.001e4	1.14	NO	4.5796	4.5796
2 Total Hexa-Dioxins	33.16	2.217e3	1.812e3	1.38	NO	0.81768	0.81768
3 Total Hexa-Dioxins	33.42	1.185e4	9.610e3	1.23	NO	4.5837	4.5837
4 Total Hexa-Dioxins	33.52	5.862e2	4.759e2	1.19	NO	0.22255	0.22255
5 1,2,3,4,7,8-HxCDD	34.10	8.392e2	7.665e2	1.09	NO	0.32148	0.32148
6 1,2,3,6,7,8-HxCDD	34.20	3.885e3	3.282e3	1.18	NO	1.4895	1.4895
7 Total Hexa-Dioxins	34.38	5.494e2	4.089e2	1.34	NO	0.20465	0.20465



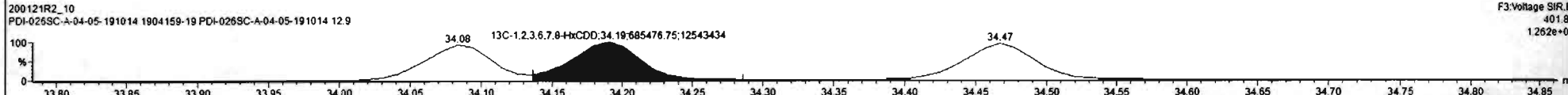
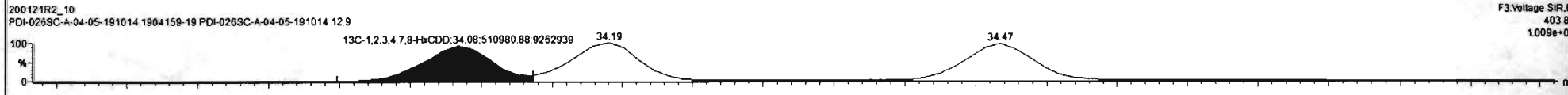
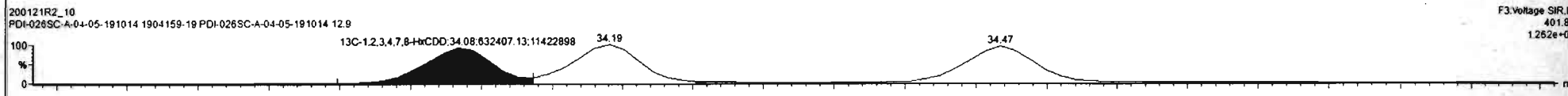
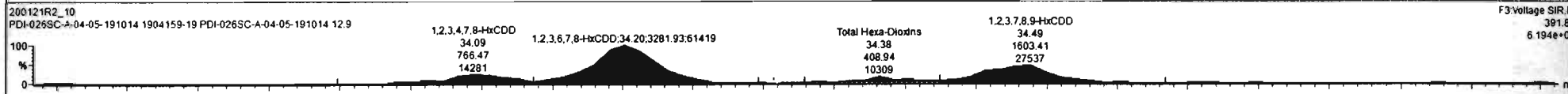
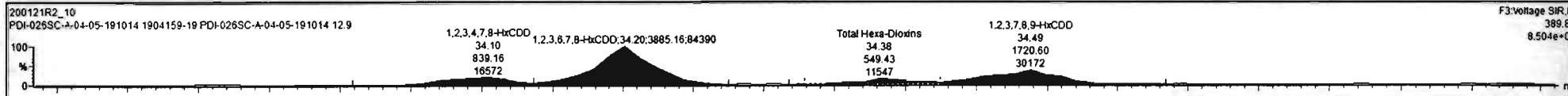


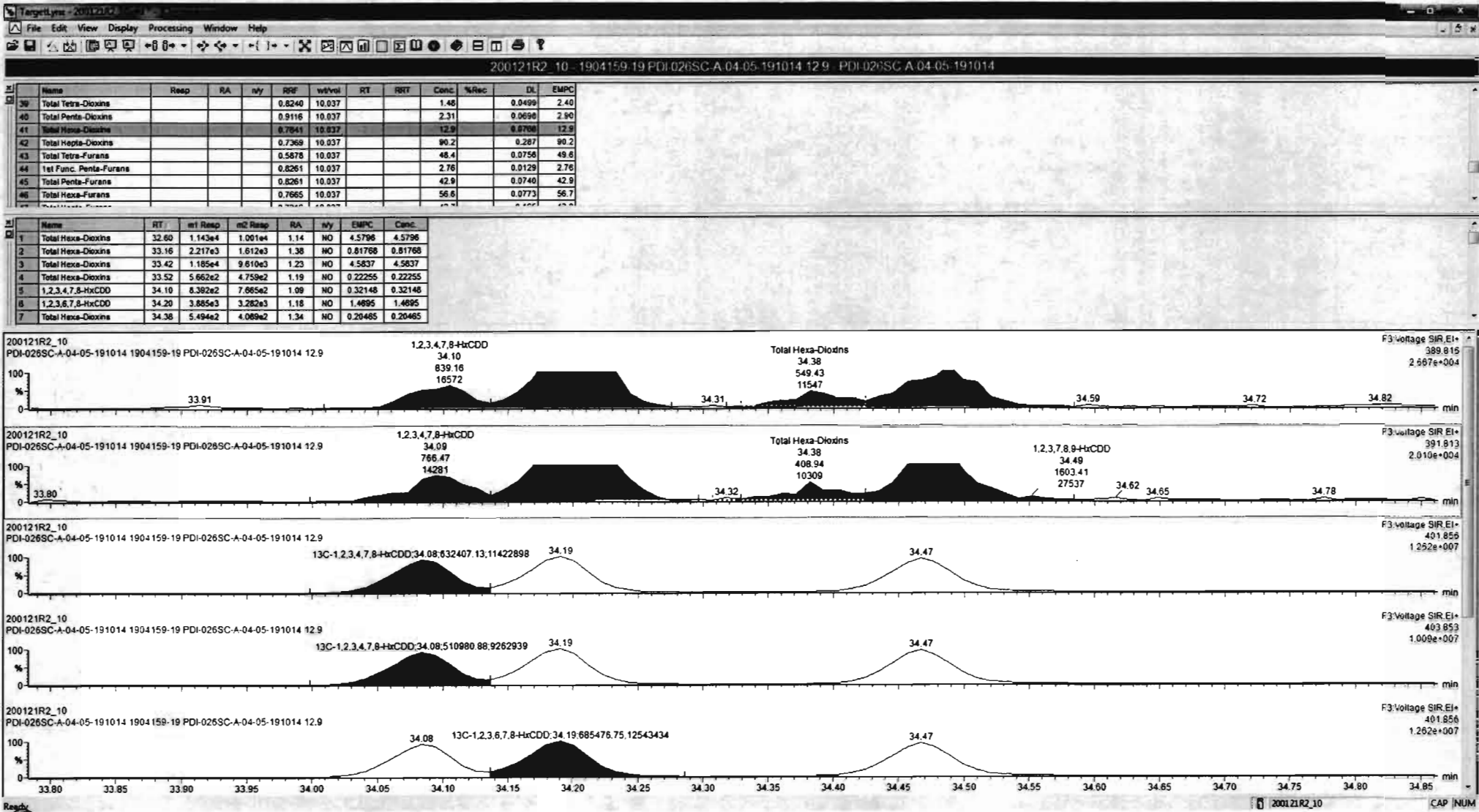


200121R2\_10 - 1904159-19 PDI-026SC-A-04-05-191014 12.9 - PDI-026SC-A-04-05-191014

Name	Resp	RA	rvy	RPF	wVvol	RT	RRT	Conc	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.40	
40 Total Penta-Dioxins				0.9116	10.037			2.31	0.0696	2.90	
41 Total Hexa-Dioxins				0.7941	10.037			12.9	0.0766	12.9	
42 Total Hepta-Dioxins				0.7369	10.037			90.2	0.287	90.2	
43 Total Tetra-Furans				0.5876	10.037			48.4	0.0756	49.6	
44 1st Func. Penta-Furans				0.8261	10.037			2.76	0.0129	2.76	
45 Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46 Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

Name	RT	m1 Resp	m2 Resp	RA	rvy	EMPC	Conc.
1 Total Hexa-Dioxins	32.60	1.143e4	1.001e4	1.14	NO	4.5798	4.5798
2 Total Hexa-Dioxins	33.16	2.217e3	1.612e3	1.38	NO	0.81768	0.81768
3 Total Hexa-Dioxins	33.42	1.185e4	9.610e3	1.23	NO	4.5837	4.5837
4 Total Hexa-Dioxins	33.52	5.662e2	4.759e2	1.19	NO	0.22255	0.22255
5 1,2,3,4,7,8-HxCDD	34.10	6.382e2	7.665e2	1.09	NO	0.32148	0.32148
6 1,2,3,6,7,8-HxCDD	34.20	3.885e3	3.282e3	1.18	NO	1.4895	1.4895
7 Total Hexa-Dioxins	34.36	5.494e2	4.089e2	1.34	NO	0.20465	0.20465

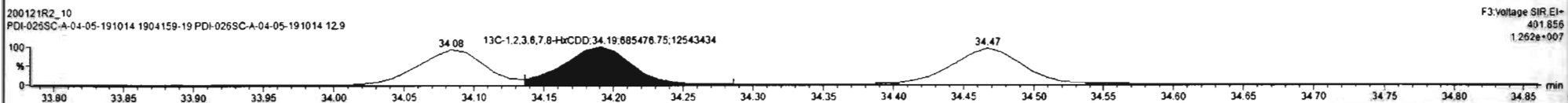
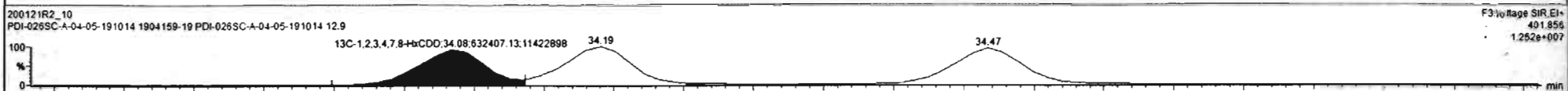
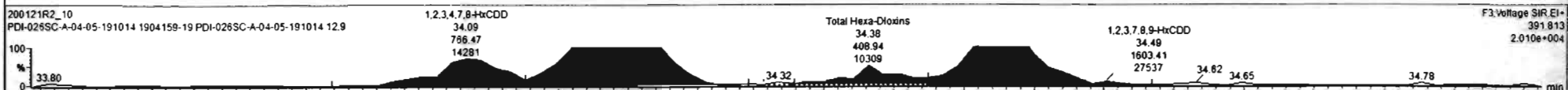
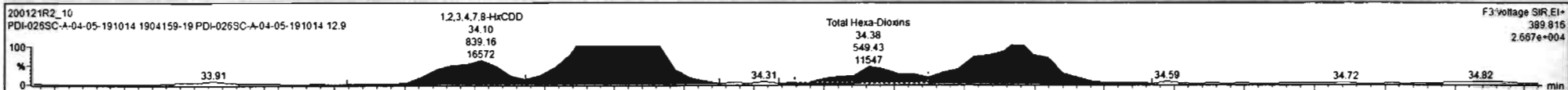




200121R2\_10 - 1904159-19 PDI-026SC-A-04-05-191014 12.9 - PDI-026SC-A-04-05-191014

SI	Name	Resp	RA	n/y	RF	w/vol	RT	RRT	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.40	
40	Total Penta-Dioxins				0.9116	10.037			2.31	0.0696	2.90	
41	Total Hexa-Dioxins				0.7041	10.037			12.9	0.0766	12.9	
42	Total Hepta-Dioxins				0.7369	10.037			90.2	0.287	90.2	
43	Total Tetra-Furans				0.5876	10.037			48.4	0.0756	49.6	
44	1st Func. Penta-Furans				0.8261	10.037			2.76	0.0129	2.76	
45	Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46	Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

SI	Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1	Total Hexa-Dioxins	32.80	1.143e4	1.001e4	1.14	NO	4.5796	4.5796
2	Total Hexa-Dioxins	33.16	2.217e3	1.612e3	1.38	NO	0.81768	0.81768
3	Total Hexa-Dioxins	33.42	1.185e4	9.619e3	1.23	NO	4.5837	4.5837
4	Total Hexa-Dioxins	33.52	5.662e2	4.759e2	1.19	NO	0.22255	0.22255
5	1,2,3,4,7,8-HxCDD	34.10	8.392e2	7.665e2	1.09	NO	0.32148	0.32148
6	1,2,3,6,7,8-HxCDD	34.20	3.885e3	3.282e3	1.18	NO	1.4695	1.4695
7	Total Hexa-Dioxins	34.38	5.494e2	4.089e2	1.34	NO	0.20465	0.20465



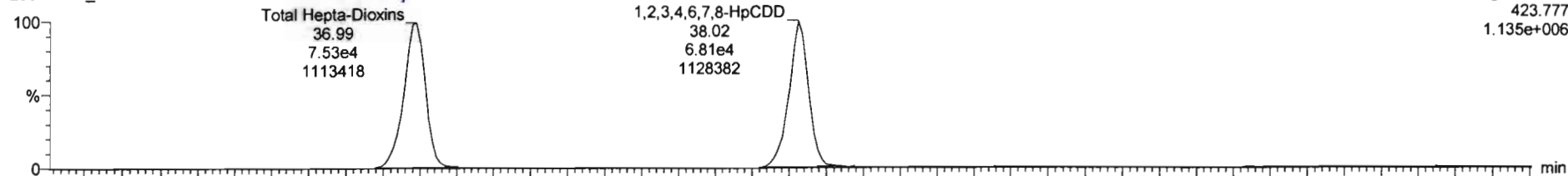
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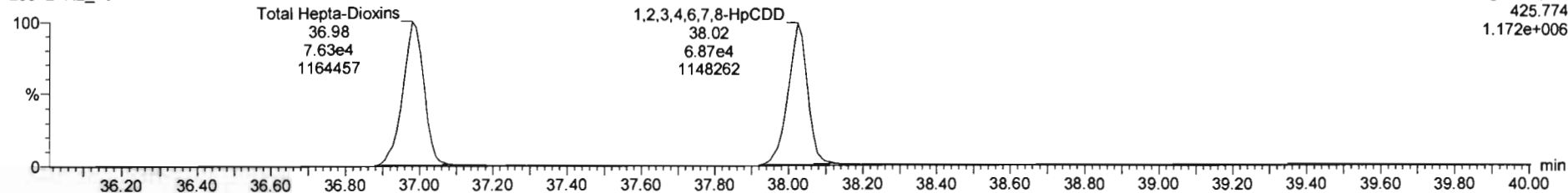
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**1,2,3,4,6,7,8-HpCDD**

200121R2\_10

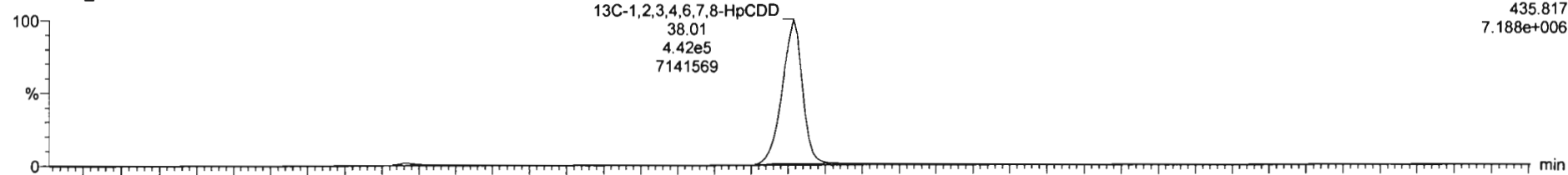


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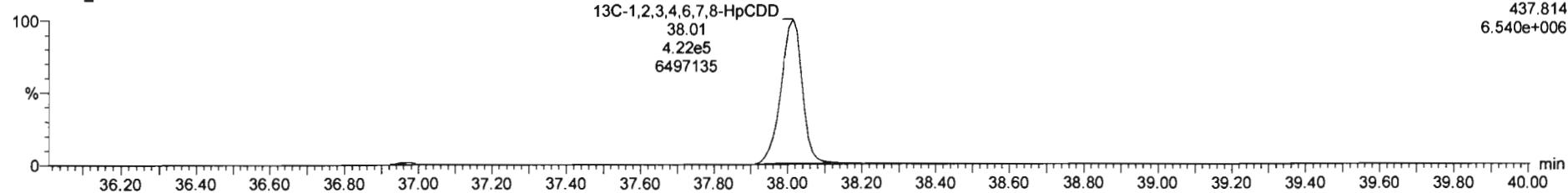


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200121R2\_10



200121R2\_10



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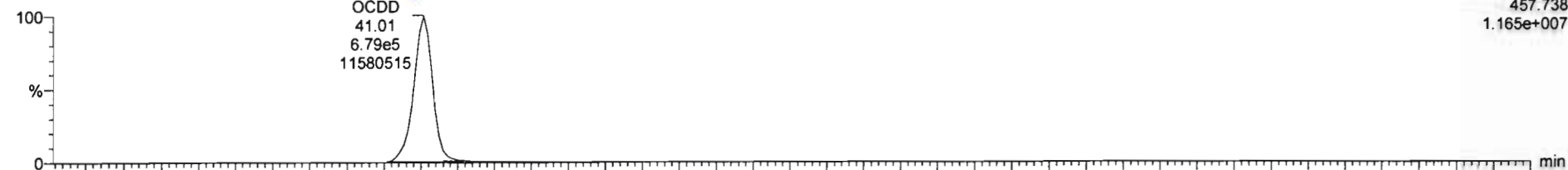
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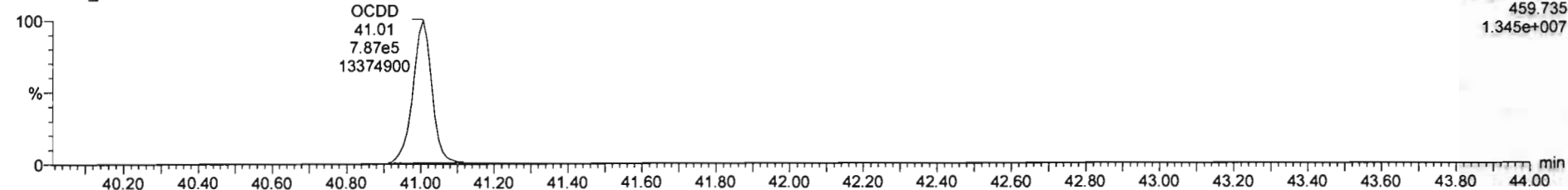
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**OCDD**

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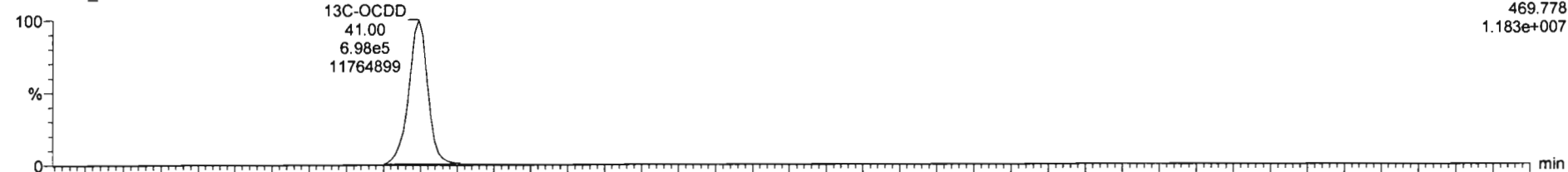


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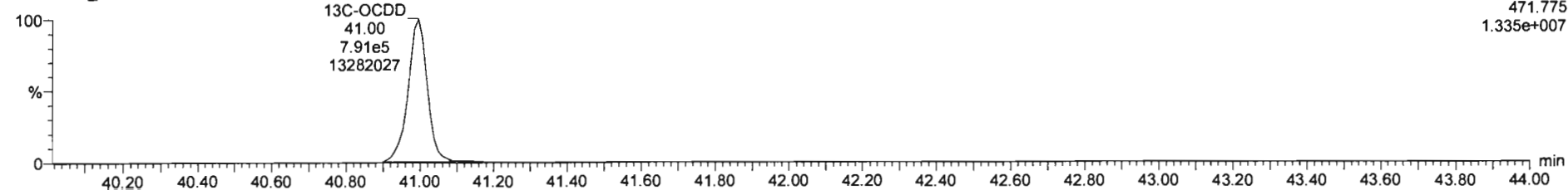


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200121R2\_10



200121R2\_10



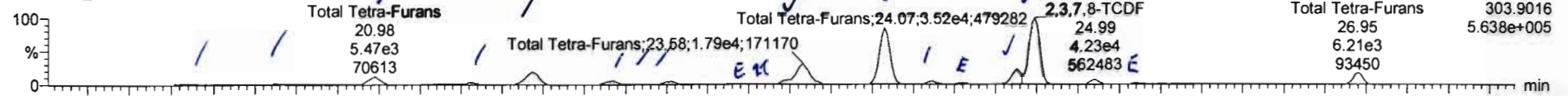
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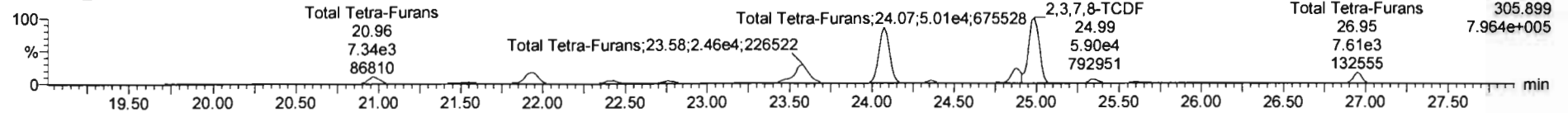
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**2,3,7,8-TCDF**

200121R2\_10

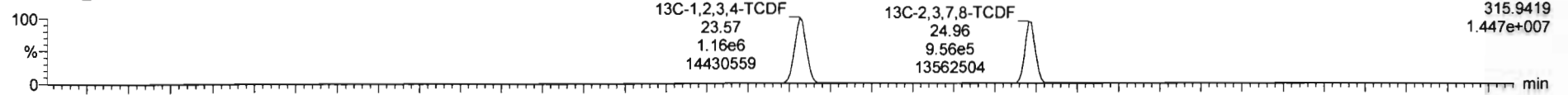


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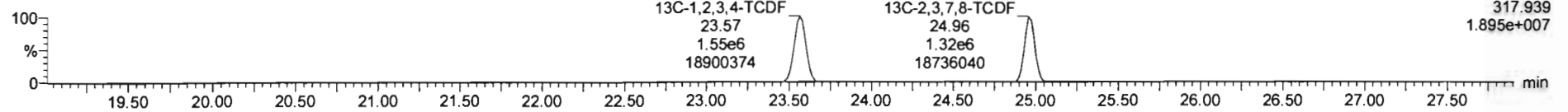


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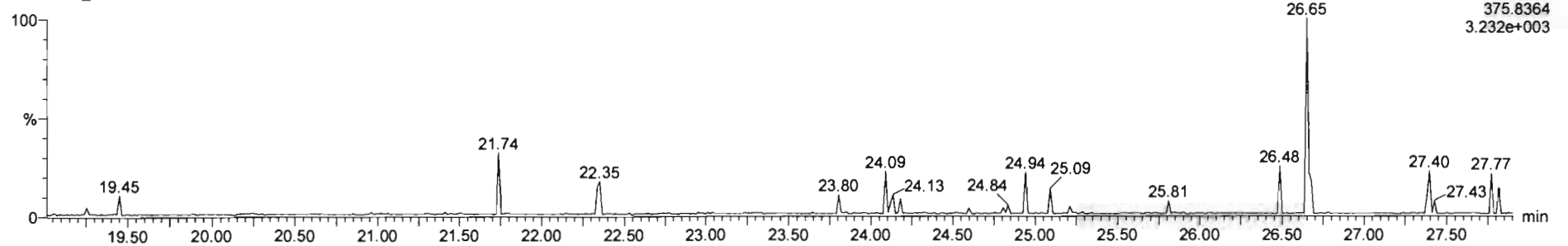


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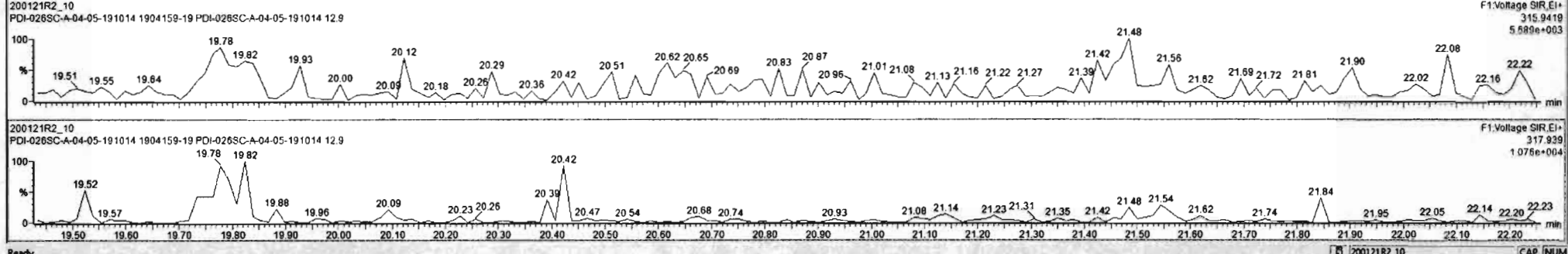
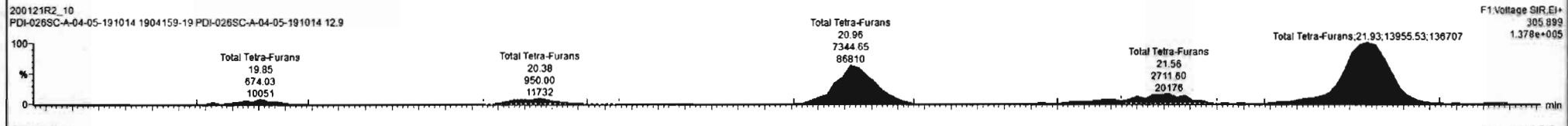
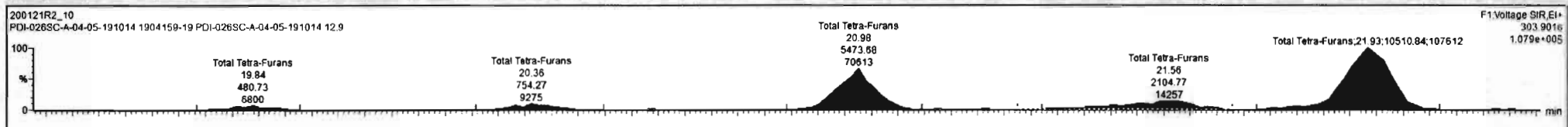
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200121R2\_10

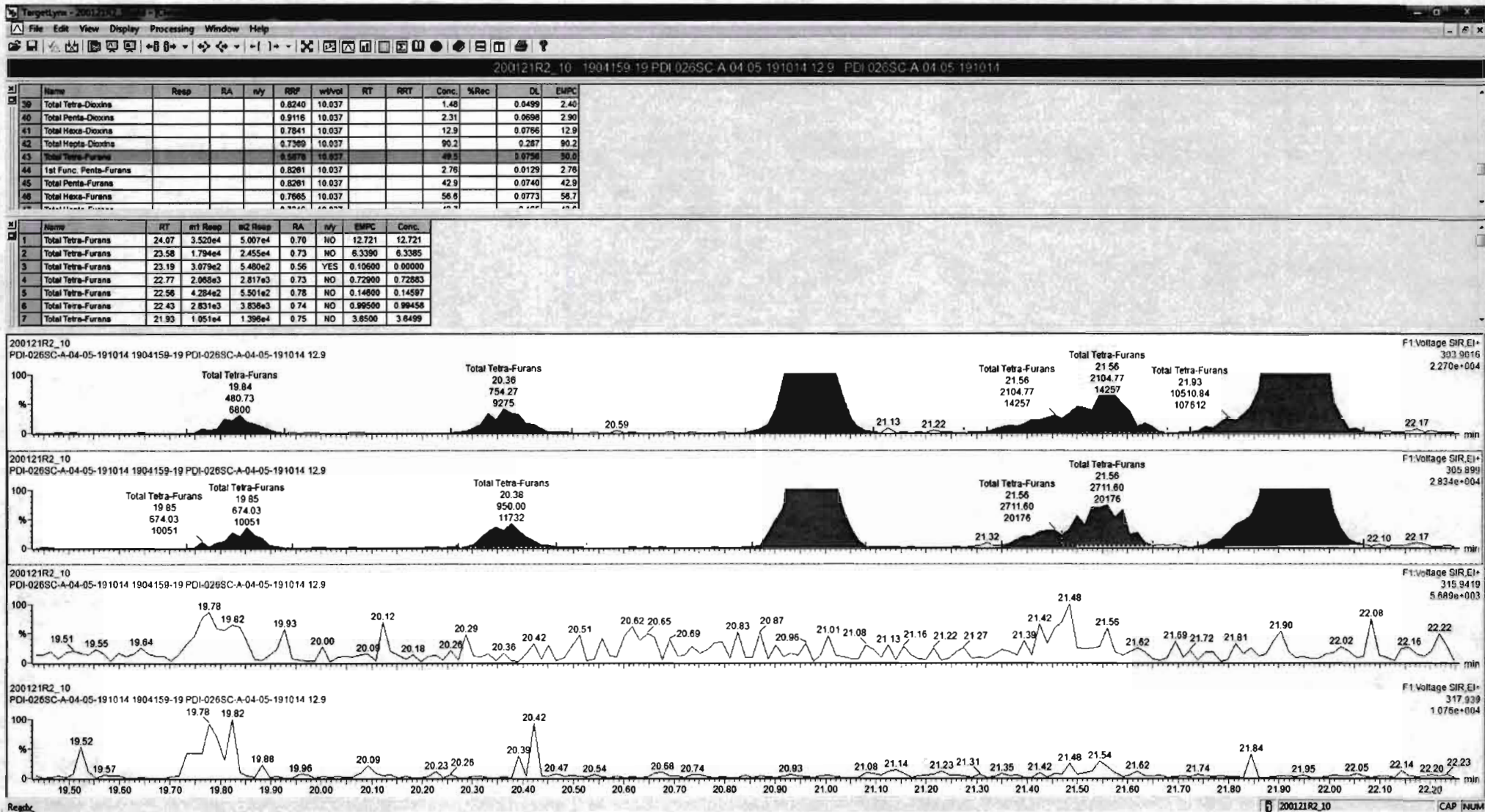


Name	Resp	RA	rs/y	R/R	wt/rd	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.40	
40 Total Penta-Dioxins				0.9116	10.037			2.31	0.0698	2.90	
41 Total Hexa-Dioxins				0.7841	10.037			12.9	0.0786	12.9	
42 Total Hepta-Dioxins				0.7389	10.037			90.2	0.287	90.2	
43 Total Tetra-Furans				0.5878	10.037			49.5	0.0796	59.0	
44 1st Func. Penta-Furans				0.8261	10.037			2.78	0.0129	2.78	
45 Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46 Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

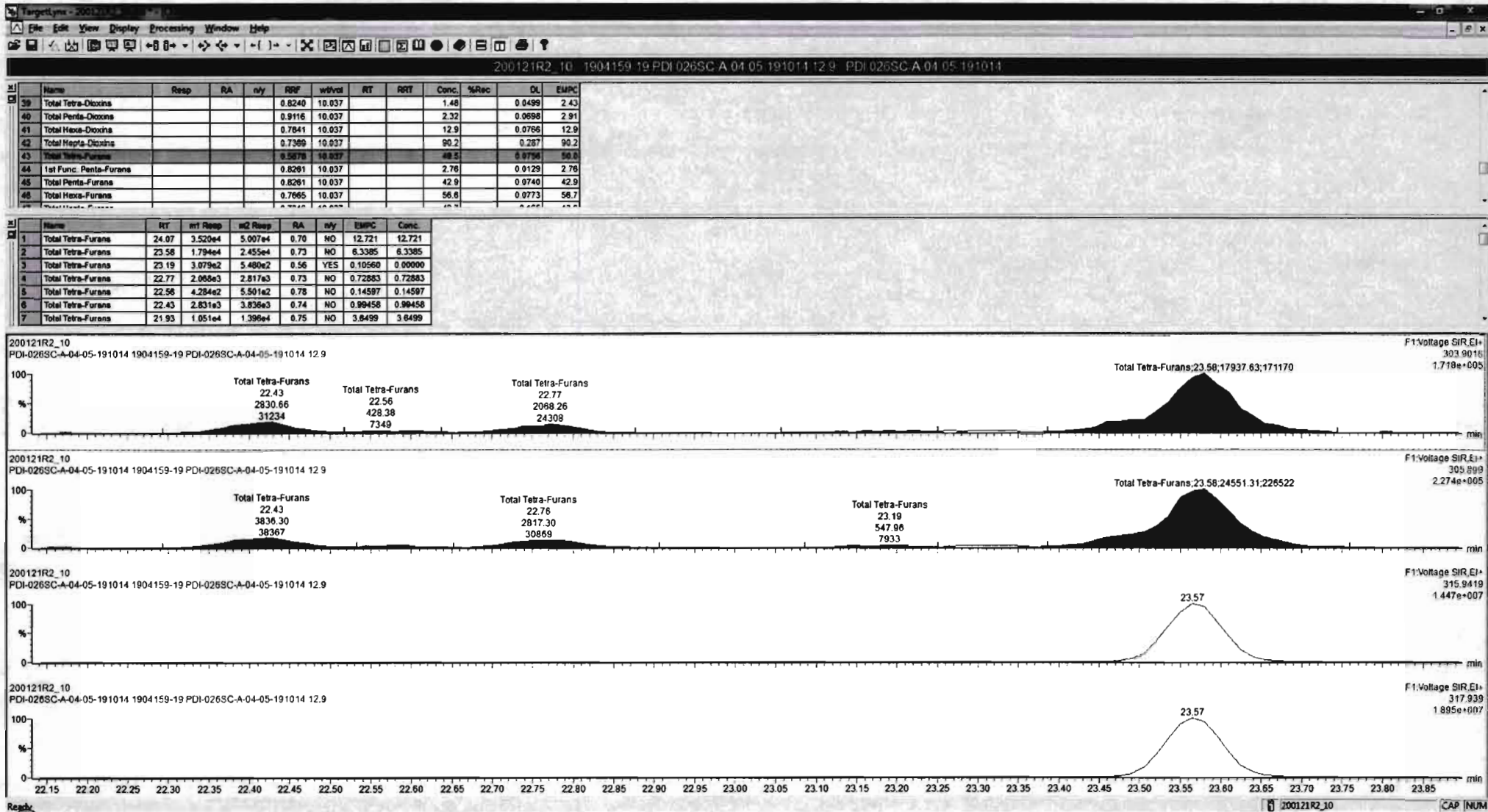
Name	RT	int Resp	std Resp	RA	rs/y	EMPC	Conc.
1 Total Tetra-Furans	24.07	3.520e4	5.007e4	0.70	NO	12.721	12.721
2 Total Tetra-Furans	23.58	1.794e4	2.455e4	0.73	NO	6.3390	8.3385
3 Total Tetra-Furans	23.19	3.079e2	5.480e2	0.58	YES	0.19600	0.00090
4 Total Tetra-Furans	22.77	2.069e3	2.817e3	0.73	NO	0.72900	0.72843
5 Total Tetra-Furans	22.58	4.284e2	5.501e2	0.78	NO	0.14800	0.14587
6 Total Tetra-Furans	22.43	2.831e3	3.836e3	0.74	NO	0.99500	0.99458
7 Total Tetra-Furans	21.93	1.051e4	1.398e4	0.75	NO	3.6500	3.6499



Ready 200121R2\_10 CAP NUM

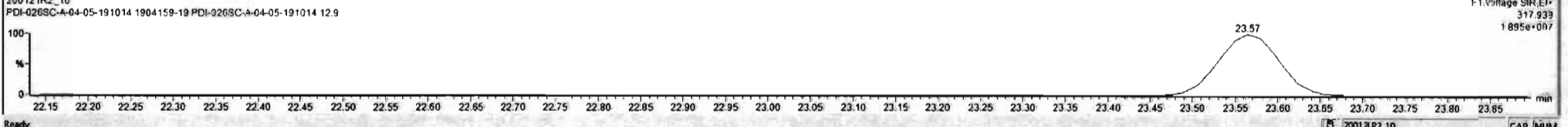
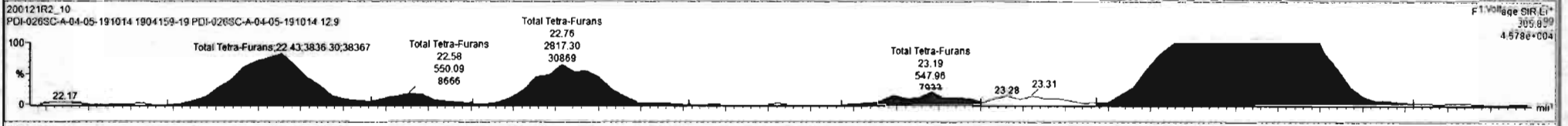
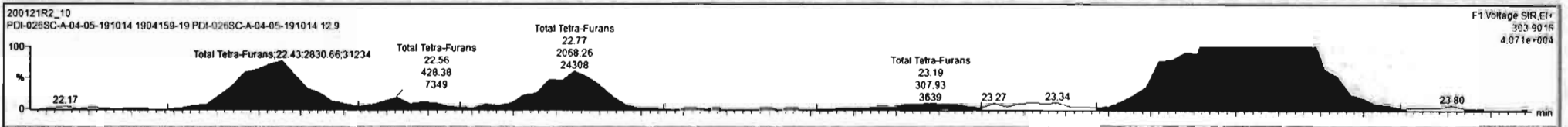






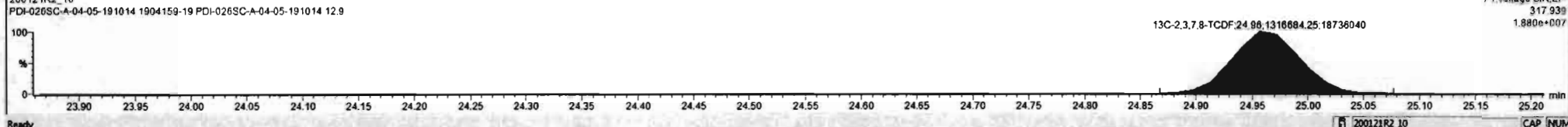
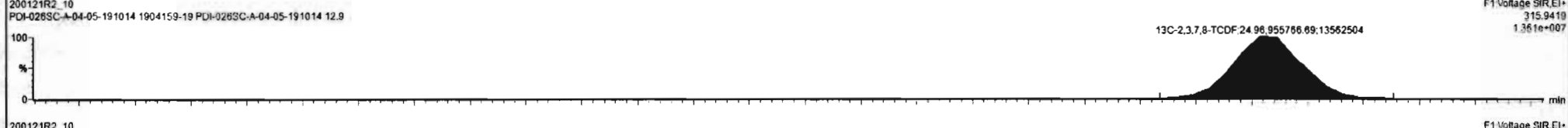
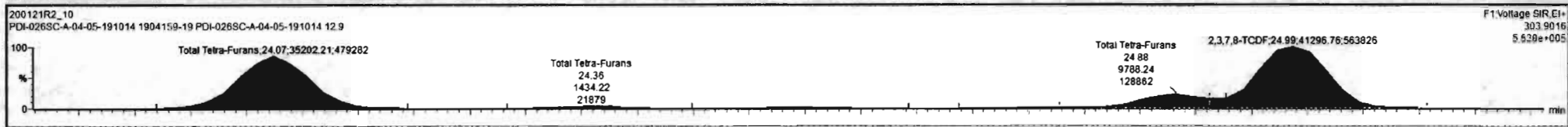
Name	Resp	RA	rvy	RF	wFwd	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48		0.0499	2.43
40 Total Penta-Dioxins				0.9116	10.037			2.32		0.0698	2.91
41 Total Hexa-Dioxins				0.7841	10.037			12.9		0.0786	12.9
42 Total Hepta-Dioxins				0.7589	10.037			90.2		0.287	90.2
43 Total Tetra-Furans				0.8878	10.037			49.5		0.0758	30.0
44 1st Func. Penta-Furans				0.8281	10.037			2.78		0.0129	2.78
45 Total Penta-Furans				0.8281	10.037			42.9		0.0740	42.9
46 Total Hexa-Furans				0.7655	10.037			56.6		0.0773	56.7

Name	RT	m1 Resp	m2 Resp	RA	rvy	EMPC	Conc.
1 Total Tetra-Furans	24.07	3.520e4	5.007e4	0.70	NO	12.721	12.721
2 Total Tetra-Furans	23.58	1.794e4	2.455e4	0.73	NO	6.3385	6.3385
3 Total Tetra-Furans	23.19	3.079e2	5.480e2	0.56	YES	0.10560	0.00000
4 Total Tetra-Furans	22.77	2.058e3	2.817e3	0.73	NO	0.72883	0.72883
5 Total Tetra-Furans	22.56	4.284e2	5.501e2	0.78	NO	0.14597	0.14597
6 Total Tetra-Furans	22.43	2.831e3	3.836e3	0.74	NO	0.89458	0.89458
7 Total Tetra-Furans	21.93	1.051e4	1.396e4	0.75	NO	3.6499	3.6499



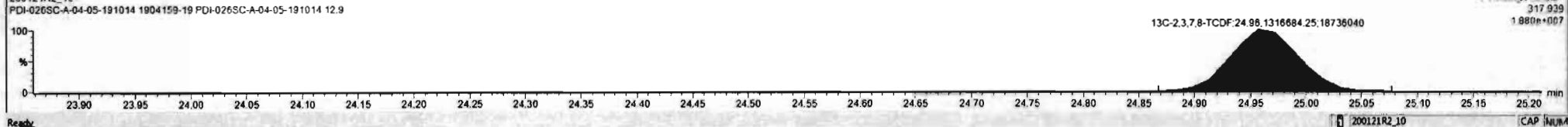
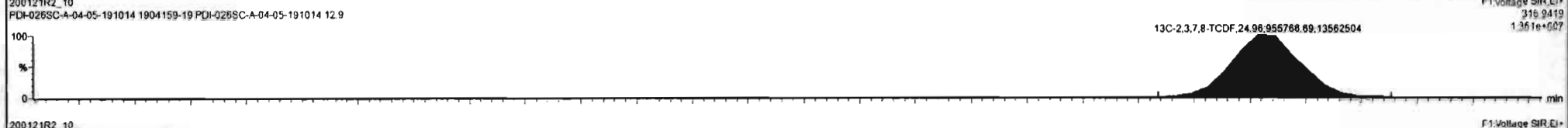
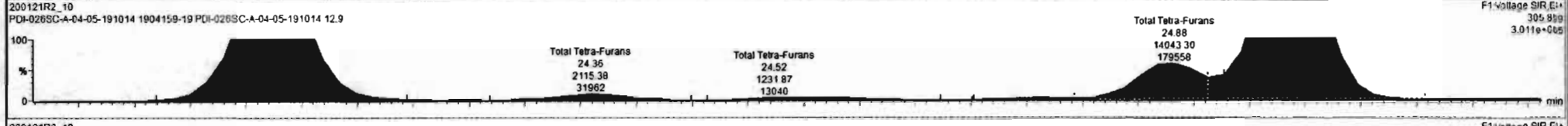
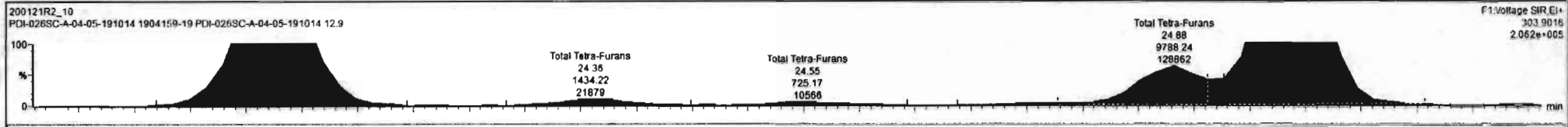
Name	Resp	RA	nly	RRF	wtvol	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.43	
40 Total Penta-Dioxins				0.9116	10.037			2.32	0.0698	2.91	
41 Total Hexa-Dioxins				0.7841	10.037			12.9	0.0766	12.9	
42 Total Hepta-Dioxins				0.7369	10.037			90.2	0.287	90.2	
43 Total Tetra-Furans				0.3878	10.037			49.5	0.0758	50.0	
44 1st Func. Penta-Furans				0.8261	10.037			2.78	0.0129	2.78	
45 Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46 Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

Name	RT	m1 Resp	m2 Resp	RA	nly	EMPC	Conc.
1 Total Tetra-Furans	24.07	3.520e4	5.007e4	0.70	NO	12.721	12.721
2 Total Tetra-Furans	23.58	1.794e4	2.455e4	0.73	NO	6.3385	6.3385
3 Total Tetra-Furans	23.19	3.079e2	5.480e2	0.56	YES	0.10560	0.00000
4 Total Tetra-Furans	22.77	2.068e3	2.817e3	0.73	NO	0.72883	0.72883
5 Total Tetra-Furans	22.56	4.284e2	5.501e2	0.78	NO	0.14597	0.14597
6 Total Tetra-Furans	22.43	2.831e3	3.836e3	0.74	NO	0.99458	0.99458
7 Total Tetra-Furans	21.93	1.051e4	1.398e4	0.75	NO	3.6499	3.6499



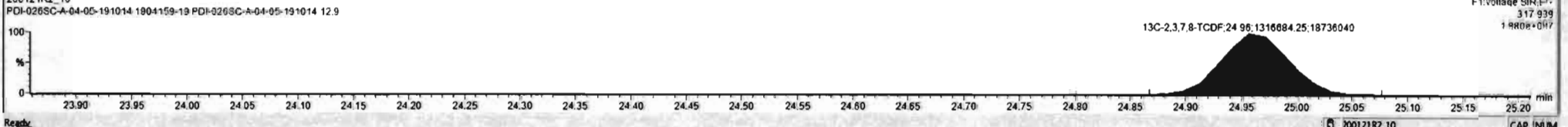
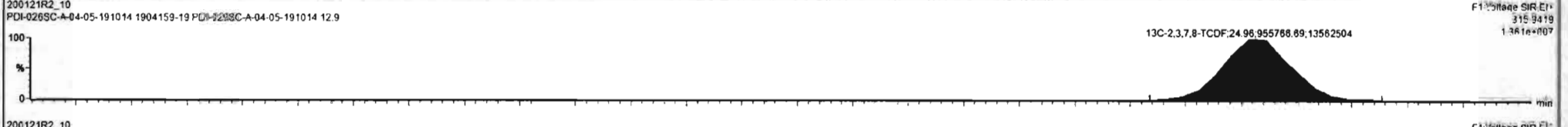
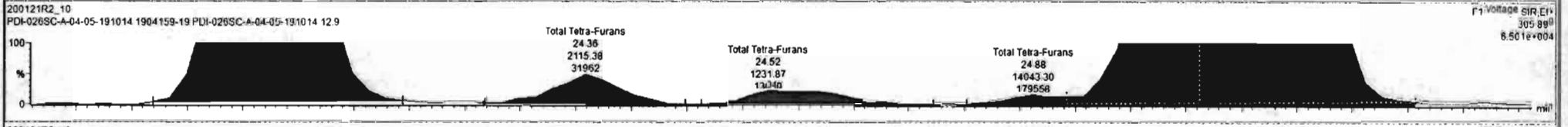
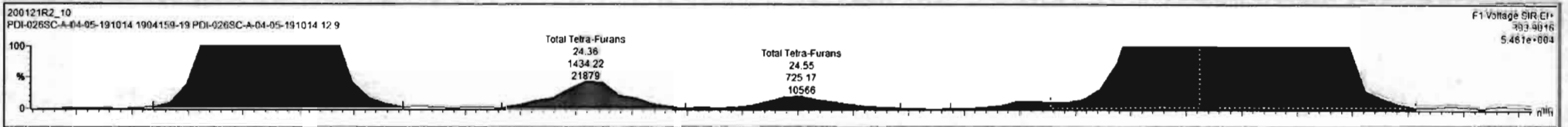
Name	Resp	RA	n/y	RRF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
30 Total Tetra-Dioxins				0.8240	10.037			1.46		0.0499	2.43
40 Total Penta-Dioxins				0.9116	10.037			2.32		0.0698	2.91
41 Total Hexa-Dioxins				0.7841	10.037			12.9		0.0766	12.9
42 Total Hepta-Dioxins				0.7369	10.037			90.2		0.287	90.2
43 Total Tetra-Furans				0.5878	10.937			49.5		0.0756	50.8
44 1st Func. Penta-Furans				0.8281	10.037			2.76		0.0129	2.76
45 Total Penta-Furans				0.8281	10.037			42.9		0.0740	42.9
46 Total Hexa-Furans				0.7665	10.037			56.6		0.0773	56.7

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Tetra-Furans	24.07	3.520e4	5.007e4	0.70	NO	12.721	12.721
2 Total Tetra-Furans	23.58	1.794e4	2.455e4	0.73	NO	6.3385	6.3385
3 Total Tetra-Furans	23.19	3.079e2	5.480e2	0.56	YES	0.10560	0.00000
4 Total Tetra-Furans	22.77	2.068e3	2.817e3	0.73	NO	0.72883	0.72883
5 Total Tetra-Furans	22.56	4.284e2	5.501e2	0.78	NO	0.14597	0.14597
6 Total Tetra-Furans	22.43	2.831e3	3.836e3	0.74	NO	0.99458	0.99458
7 Total Tetra-Furans	21.93	1.051e4	1.398e4	0.75	NO	3.6499	3.6499



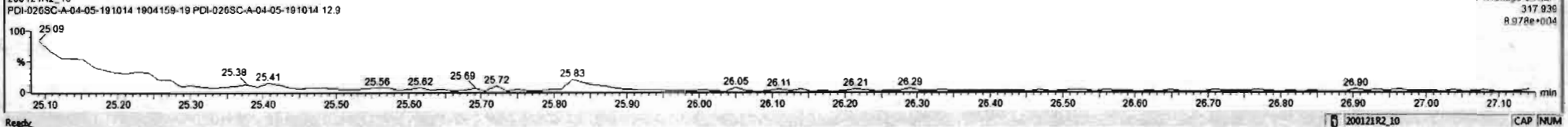
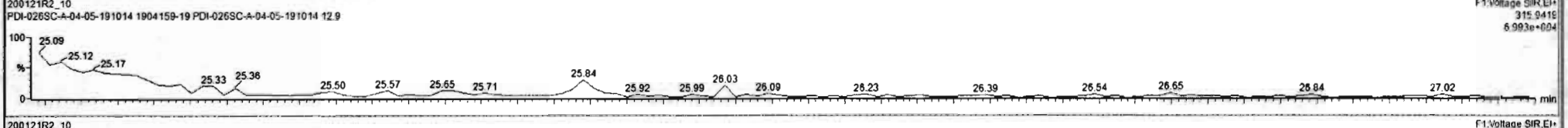
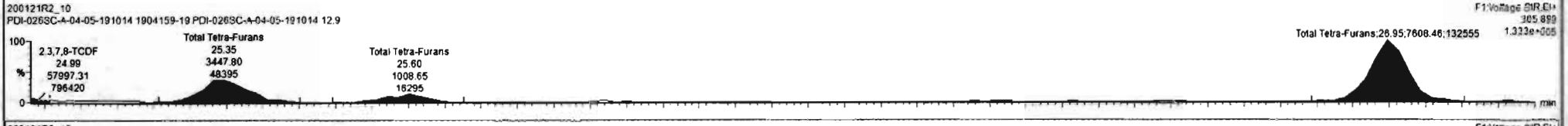
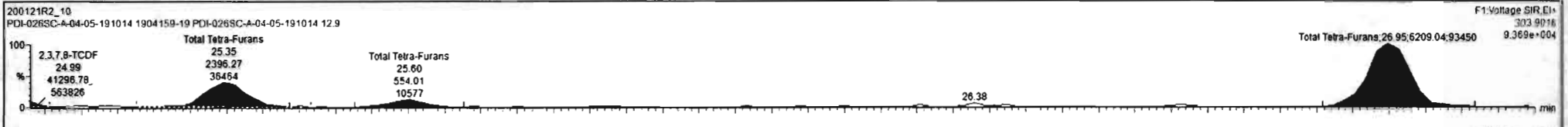
#	Name	Resp	RA	rvy	RRF	w9Vol	RT	RRT	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.43	
40	Total Penta-Dioxins				0.9116	10.037			2.32	0.0698	2.91	
41	Total Hexa-Dioxins				0.7841	10.037			12.9	0.0766	12.9	
42	Total Hepta-Dioxins				0.7360	10.037			90.2	0.287	90.2	
43	Total Tetra-Furans				0.5878	10.037			48.5	0.0758	58.0	
44	1st Func. Penta-Furans				0.8261	10.037			2.76	0.0129	2.76	
45	Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46	Total Hexa-Furans				0.7665	10.037			56.6	0.0773	56.7	

#	Name	RT	int Resp	m2 Resp	RA	rvy	EMPC	Conc.
1	Total Tetra-Furans	24.07	3.520e4	5.007e4	0.70	NO	12.721	12.721
2	Total Tetra-Furans	23.58	1.794e4	2.455e4	0.73	NO	6.3385	6.3385
3	Total Tetra-Furans	23.19	3.079e2	5.480e2	0.56	YES	0.10560	0.00000
4	Total Tetra-Furans	22.77	2.068e3	2.817e3	0.73	NO	0.72883	0.72883
5	Total Tetra-Furans	22.58	4.284e2	5.501e2	0.78	NO	0.14597	0.14597
6	Total Tetra-Furans	22.43	2.831e3	3.836e3	0.74	NO	0.99458	0.99458
7	Total Tetra-Furans	21.93	1.051e4	1.396e4	0.75	NO	3.6499	3.6499



Name	Resp	RA	n/y	RRF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.037			1.48	0.0499	2.43	
40 Total Penta-Dioxins				0.9116	10.037			2.32	0.0690	2.91	
41 Total Hexa-Dioxins				0.7841	10.037			12.9	0.0766	12.9	
42 Total Hepta-Dioxins				0.7399	10.037			90.2	0.287	90.2	
43 Total Tetra-Furans				0.5879	18.037			49.1	0.0736	50.0	
44 1st Func. Penta-Furans				0.8261	10.037			2.76	0.0129	2.76	
45 Total Penta-Furans				0.8261	10.037			42.9	0.0740	42.9	
46 Total Hexa-Furans				0.7865	10.037			56.6	0.0773	56.7	

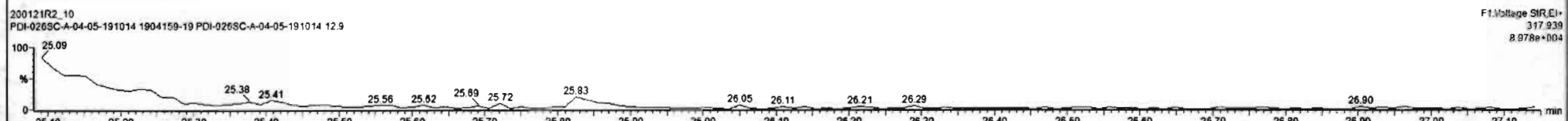
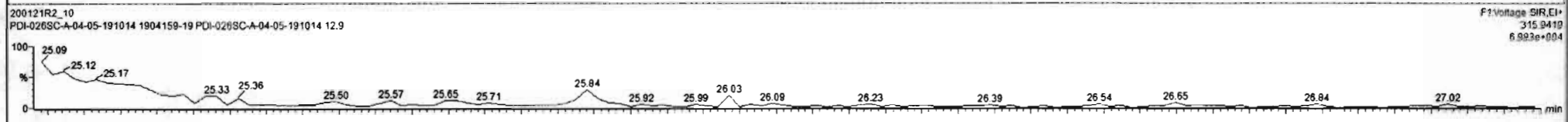
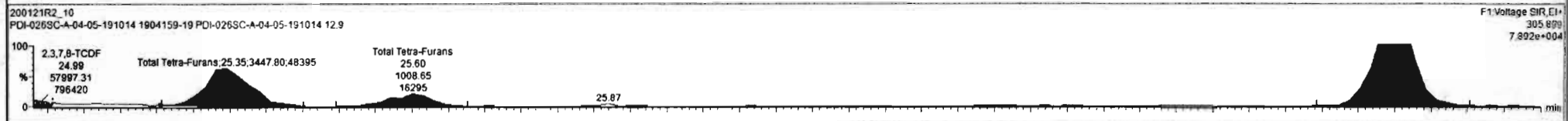
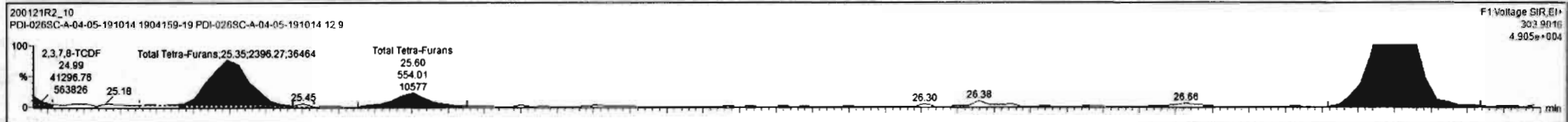
Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Tetra-Furans	24.07	3.520e4	5.007e4	0.70	NO	12.721	12.721
2 Total Tetra-Furans	23.58	1.794e4	2.455e4	0.73	NO	6.3385	8.3385
3 Total Tetra-Furans	23.19	3.079e2	5.480e2	0.56	YES	0.10560	0.00000
4 Total Tetra-Furans	22.77	2.088e3	2.817e3	0.73	NO	0.72883	0.72883
5 Total Tetra-Furans	22.56	4.284e2	5.501e2	0.78	NO	0.14597	0.14597
6 Total Tetra-Furans	22.43	2.831e3	3.836e3	0.74	NO	0.89458	0.99458
7 Total Tetra-Furans	21.93	1.051e4	1.396e4	0.75	NO	3.6499	3.6499



Name	Resp	RA	n/y	IRF	w/vol	RT	RRT	Conc.	%Rec	DL	EMPC
30	Total Tetra-Dioxins			0.8240	10.037			1.48		0.0499	2.43
40	Total Penta-Dioxins			0.9116	10.037			2.32		0.0696	2.91
41	Total Hexa-Dioxins			0.7841	10.037			12.9		0.0766	12.9
42	Total Hepta-Dioxins			0.7399	10.037			90.2		0.287	90.2
43	Total Tetra-Furans			0.5876	10.037			49.5		0.0756	59.0
44	1st Func. Penta-Furans			0.8291	10.037			2.78		0.0129	2.76
45	Total Penta-Furans			0.8291	10.037			42.9		0.0740	42.9
46	Total Hexa-Furans			0.7665	10.037			56.6		0.0773	56.7

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.	
1	Total Tetra-Furans	24.07	3.520e4	5.007e4	0.70	NO	12.721	12.721
2	Total Tetra-Furans	23.58	1.794e4	2.455e4	0.73	NO	6.3385	6.3385
3	Total Tetra-Furans	23.19	3.079e2	5.480e2	0.56	YES	0.10560	0.00000
4	Total Tetra-Furans	22.77	2.088e3	2.817e3	0.73	NO	0.72883	0.72883
5	Total Tetra-Furans	22.56	4.284e2	5.501e2	0.78	NO	0.14597	0.14597
6	Total Tetra-Furans	22.43	2.831e3	3.836e3	0.74	NO	0.99458	0.99458
7	Total Tetra-Furans	21.93	1.051e4	1.396e4	0.75	NO	3.6499	3.6499



200121R2\_10 CAP NUM

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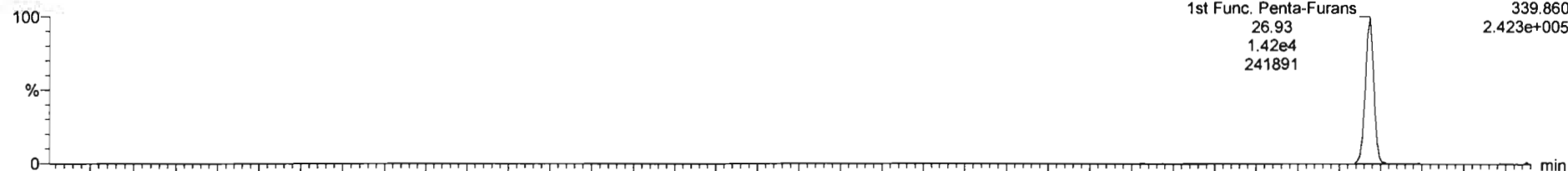
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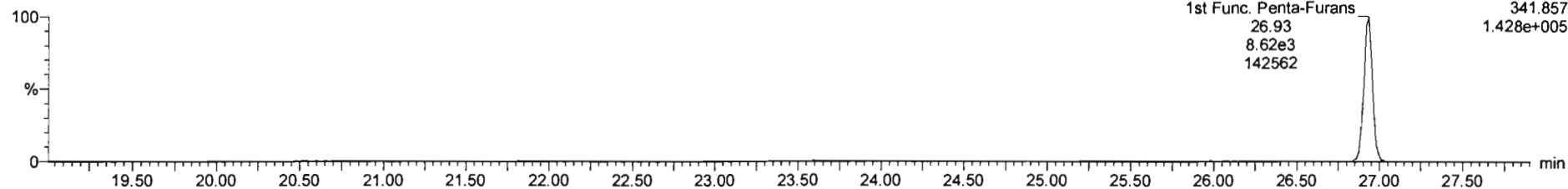
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1st Func. Penta-Furans

200121R2\_10

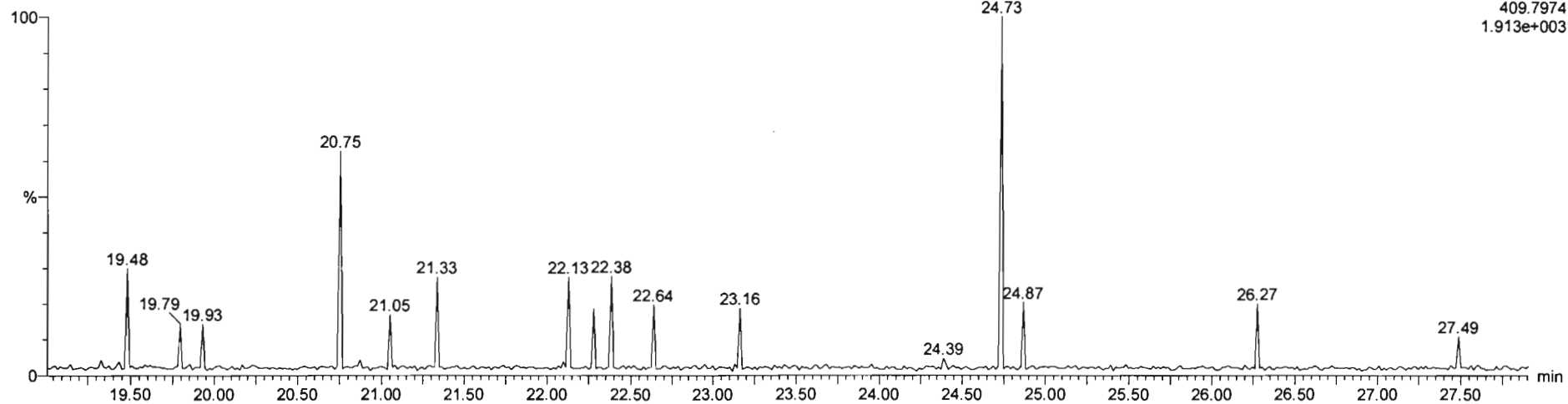


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DPE6

200121R2\_10





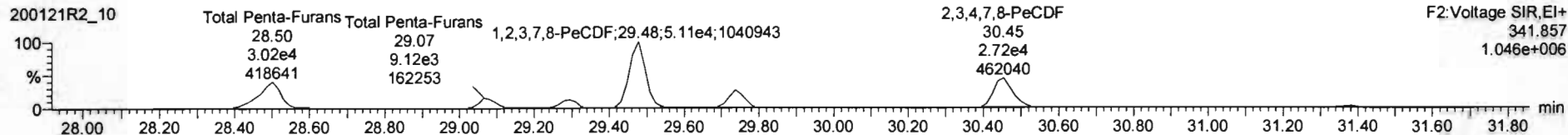
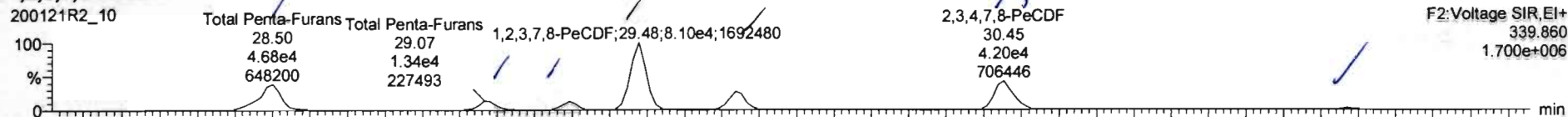
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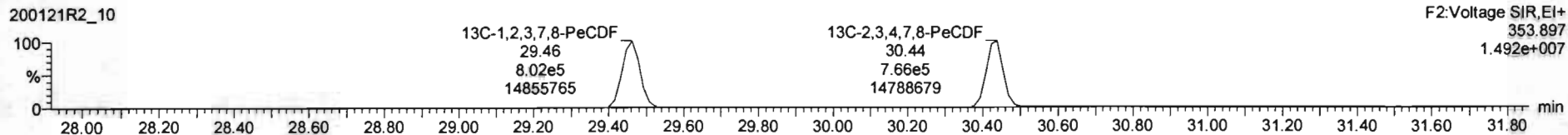
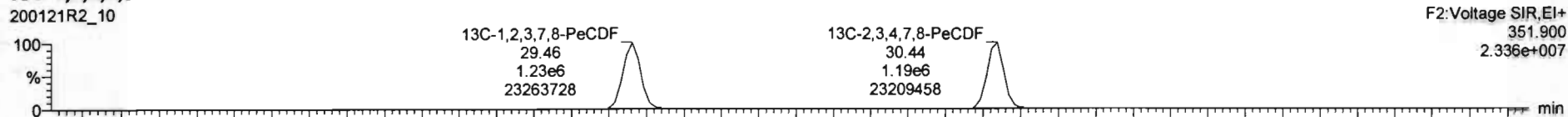
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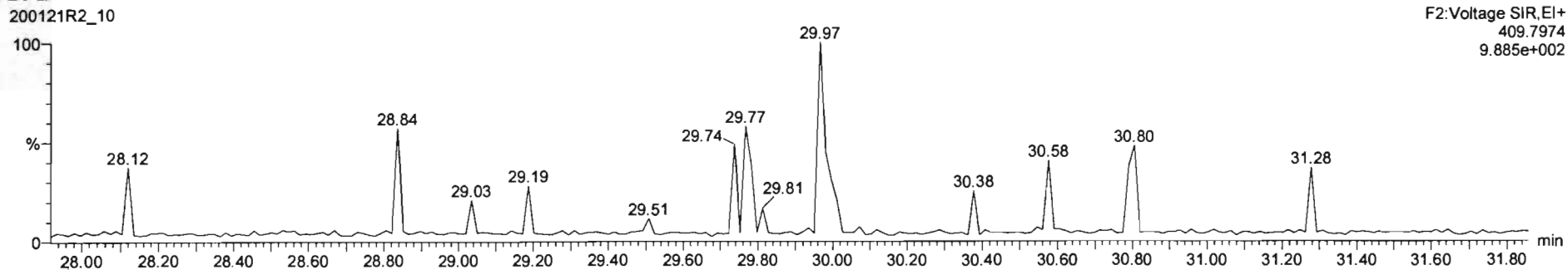
**1,2,3,7,8-PeCDF**



**13C-1,2,3,7,8-PeCDF**

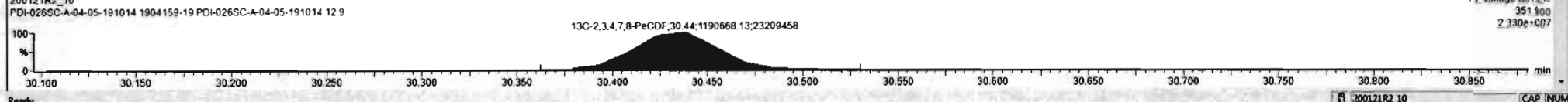
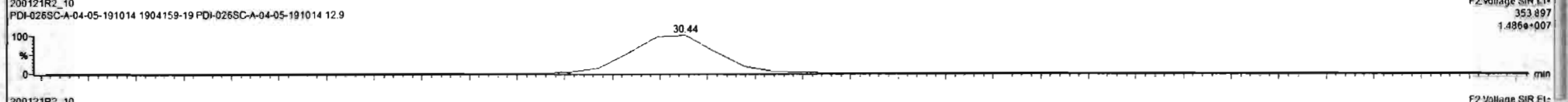
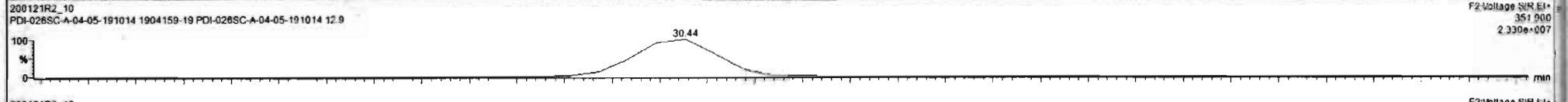
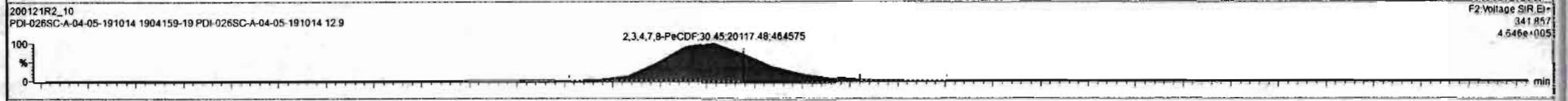
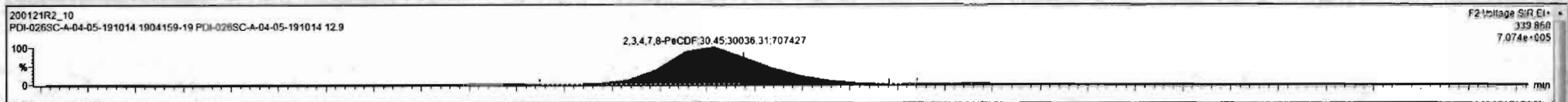


**DPE2**



#	Name	Resp	RA	ivly	RF	wVol	RT	RRT	Conc	%Rec	DL	EMPC
1	2,3,7,8-TCDD	5.07e3	8.82	YES	8.82e8	18.037	25.88	1.001	0.598	0.8488	0.815	
2	1,2,3,7,8-PeCDD	4.82e3	6.72	NO	8.9118	18.037	30.74	1.001	0.682	0.0698	0.682	
3	1,2,3,4,7,8-HxCDD	1.81e3	1.89	NO	8.8784	18.037	34.19	1.001	0.321	0.0719	0.321	
4	1,2,3,6,7,8-HxCDD	7.17e3	1.18	NO	8.7841	18.037	34.38	1.996	1.47	0.8727	1.47	
5	1,2,3,7,8,9-HxCDD	3.32e3	1.87	NO	8.7985	18.037	34.49	1.881	0.898	0.6783	0.699	
6	1,2,3,4,6,7,8-HpCDD	1.37e5	8.98	NO	8.7389	18.037	36.02	1.900	42.8	0.287	42.8	
7	OCDD	1.47e8	8.88	NO	8.8000	18.037	41.01	1.900	480	0.272	480	
8	2,3,7,8-TCDF	8.95e4	8.71	NO	8.5878	18.037	24.89	1.881	14.8	0.6758	14.8	

#	Name	RT	m1 Resp	m2 Resp	RA	ivly	EMPC	Conc
1	Total Penta-Furans	28.50	4.877e4	3.018e4	1.55	NO	9.3044	9.3044
2	Total Penta-Furans	29.07	1.341e4	9.120e3	1.47	NO	2.7239	2.7239
3	Total Penta-Furans	29.29	9.772e3	6.570e3	1.49	NO	1.9760	1.9760
4	1,2,3,7,8-PeCDF	29.48	8.086e4	5.114e4	1.58	NO	15.878	15.878
5	Total Penta-Furans	29.74	2.332e4	1.388e4	1.70	NO	4.4738	4.4738
6	2,3,4,7,8-PeCDF	30.45	3.904e4	2.012e4	1.49	NO	6.0088	6.0088
7	Total Penta-Furans	30.47	1.202e4	7.018e3	1.71	NO	2.3023	0.00000



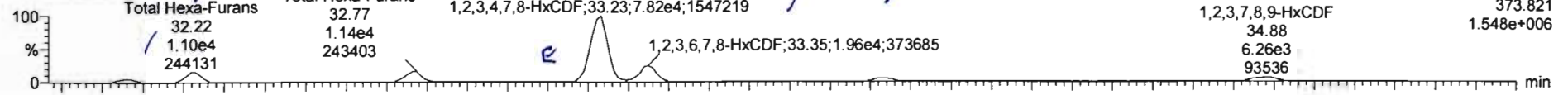
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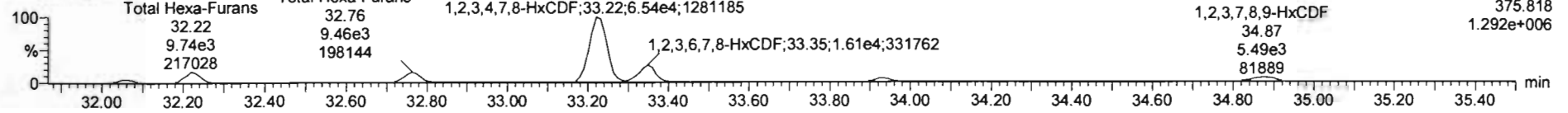
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**1,2,3,4,7,8-HxCDF**

200121R2\_10

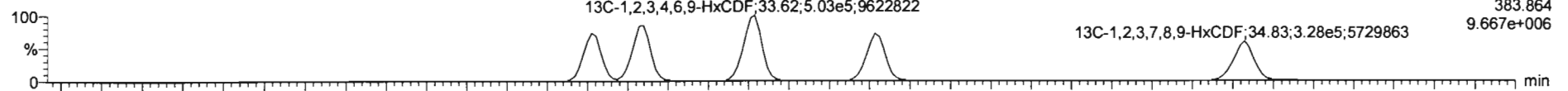


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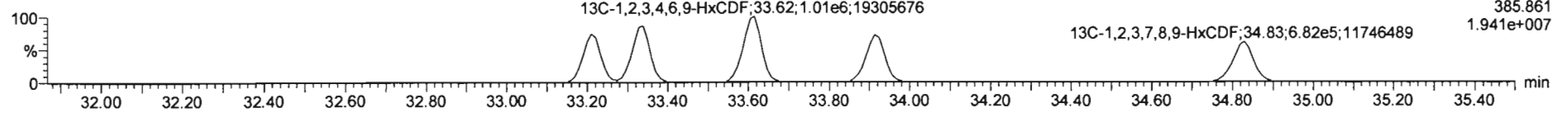


**13C-1,2,3,4,7,8-HxCDF**

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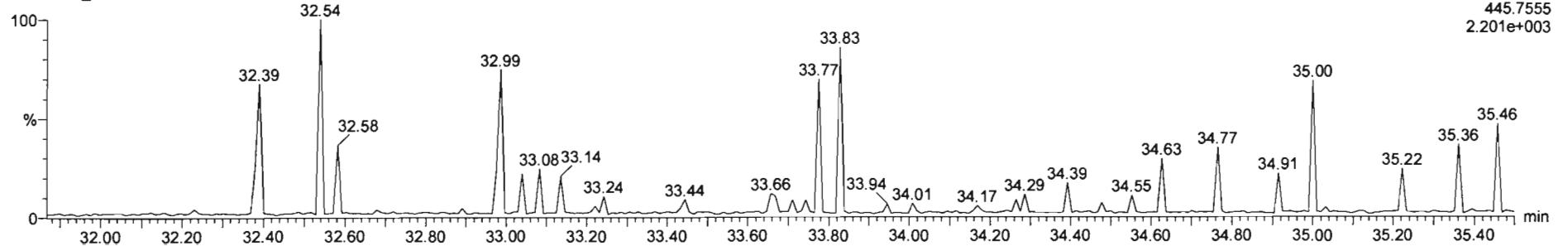


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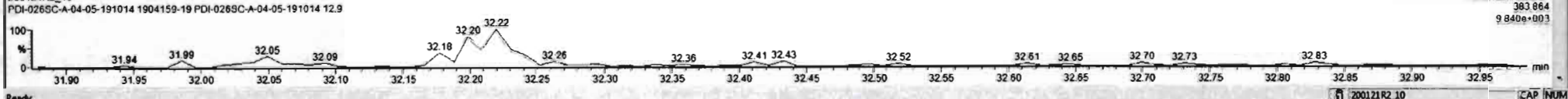
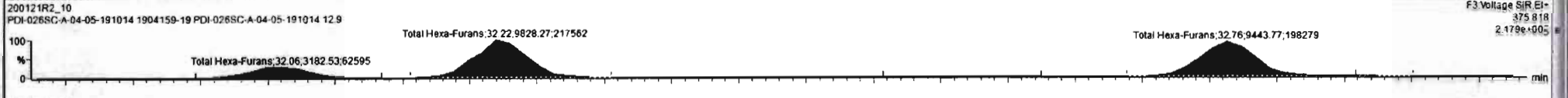
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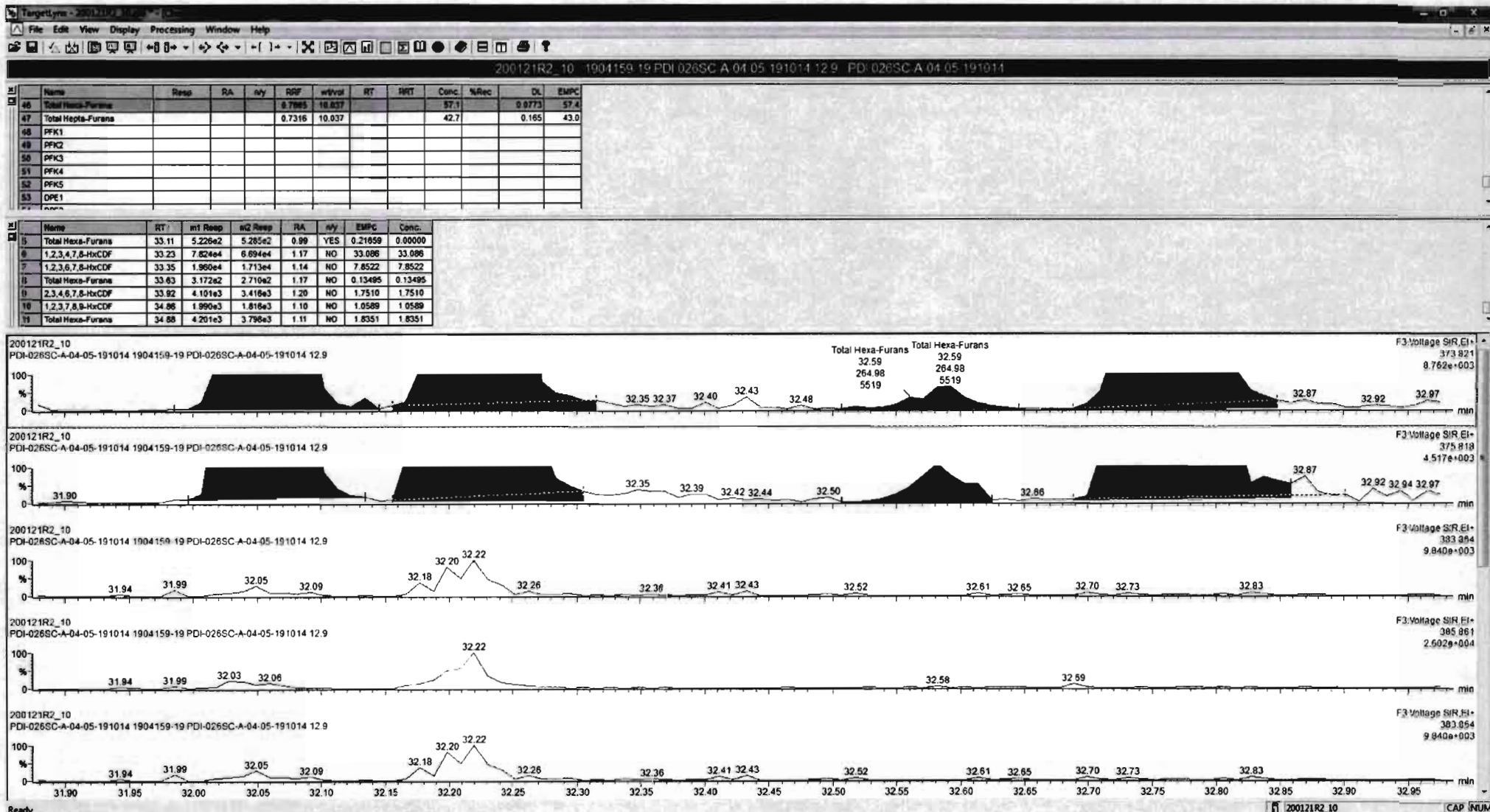
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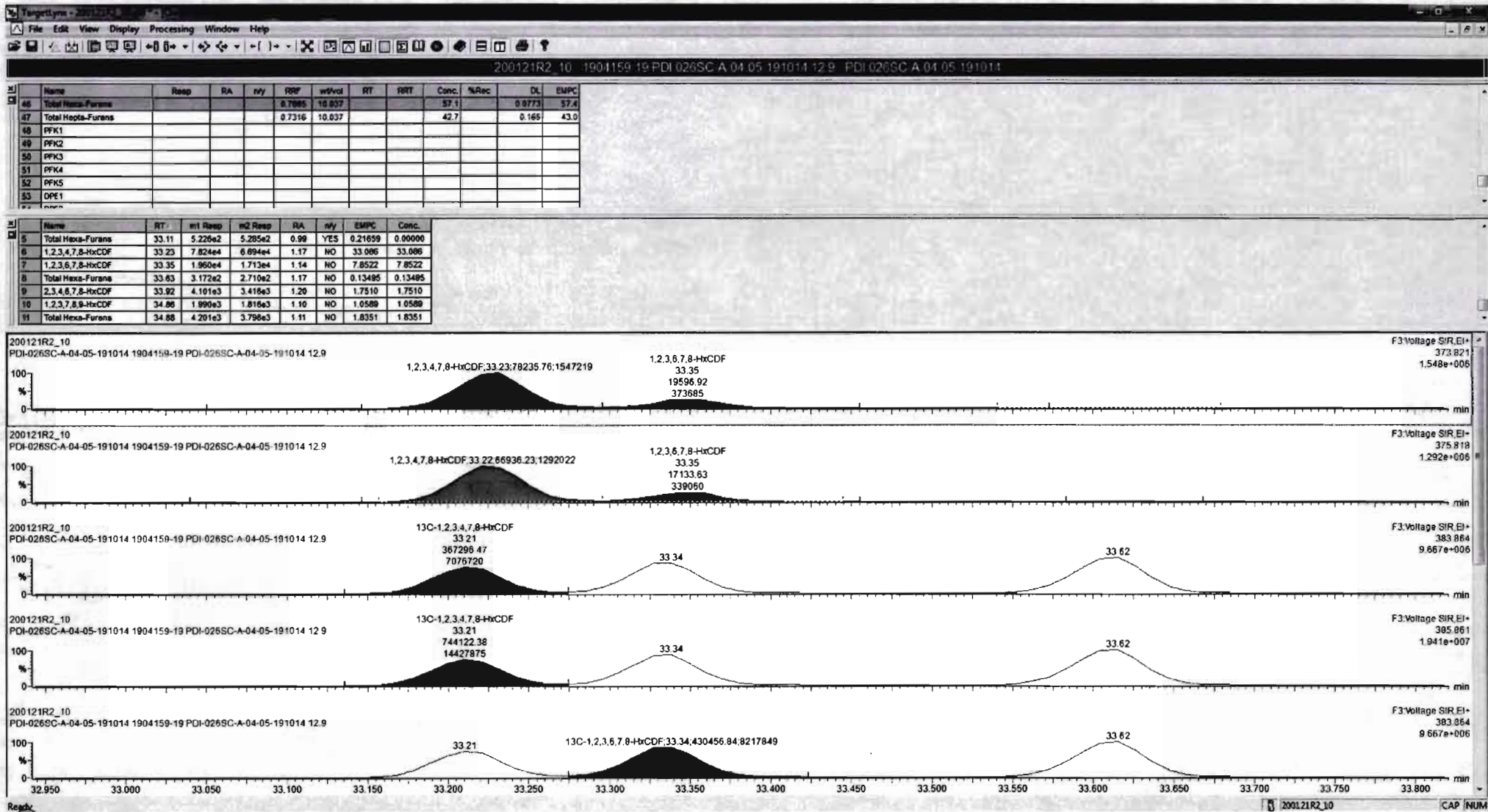


Name	Resp	RA	n/y	RF	wt/Vol	RT	RRT	Conc.	%Rec	DL	EMPC
46 Total Hexa-Furans				6.7883	10.037			57.1		0.8773	57.4
47 Total Hepta-Furans				0.7318	10.037			42.7		0.185	43.0
48 PFK1											
49 PFK2											
50 PFK3											
51 PFK4											
52 PFK5											
53 DPE1											

Name	RT	Int Resp	u2 Resp	RA	n/y	EMPC	Conc.
5 Total Hexa-Furans	33.11	5.226e2	5.285e2	0.99	YES	0.21659	0.00000
6 1,2,3,4,7,8-HxCDF	33.23	7.824e4	6.694e4	1.17	NO	33.086	33.086
7 1,2,3,6,7,8-HxCDF	33.35	1.960e4	1.713e4	1.14	NO	7.8522	7.8522
8 Total Hexa-Furans	33.63	3.172e2	2.710e2	1.17	NO	0.13495	0.13495
9 2,3,4,6,7,8-HxCDF	33.82	4.101e3	3.416e3	1.20	NO	1.7510	1.7510
10 1,2,3,7,8-HxCDF	34.88	1.990e3	1.816e3	1.10	NO	1.0589	1.0589
11 Total Hexa-Furans	34.88	4.201e3	3.798e3	1.11	NO	1.8351	1.8351

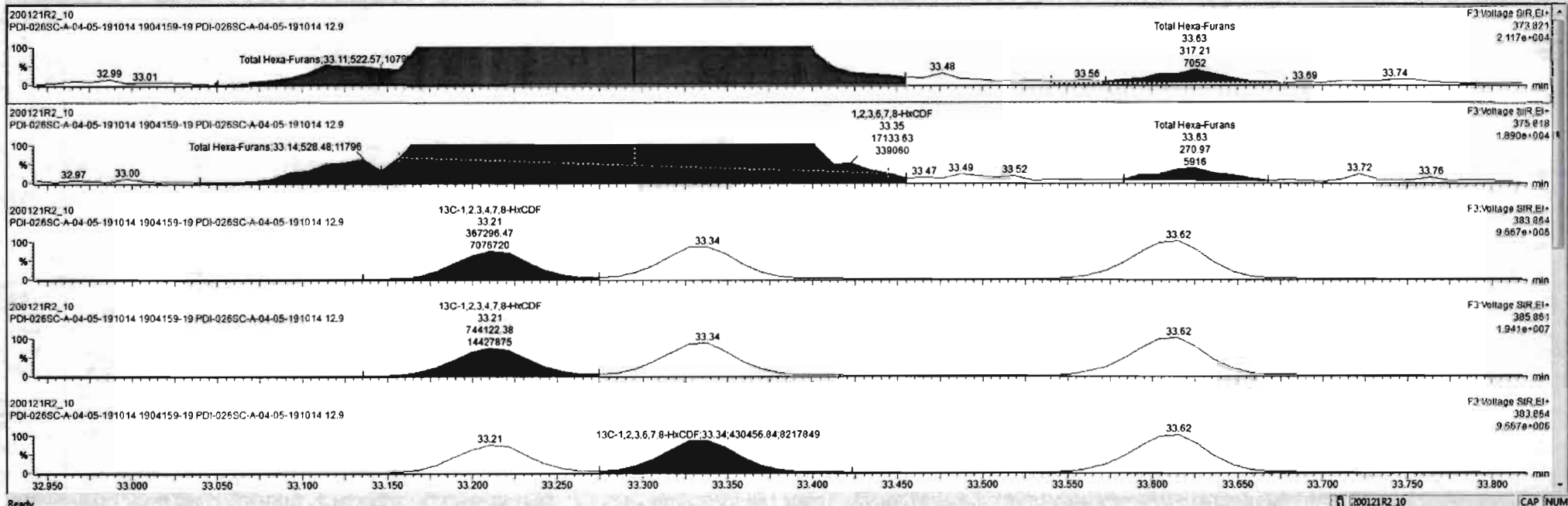






#	Name	Resp	RA	ny	RF	wtvol	RT	RRT	Conc	%Rec	DL	EMPC
46	Total Hexa-Furans				8.7985	18.037			57.1	9.9773	57.4	
47	Total Hepta-Furans				0.7316	10.037			42.7	0.165	43.0	
48	PFK1											
49	PFK2											
50	PFK3											
51	PFK4											
52	PFK5											
53	DPE1											

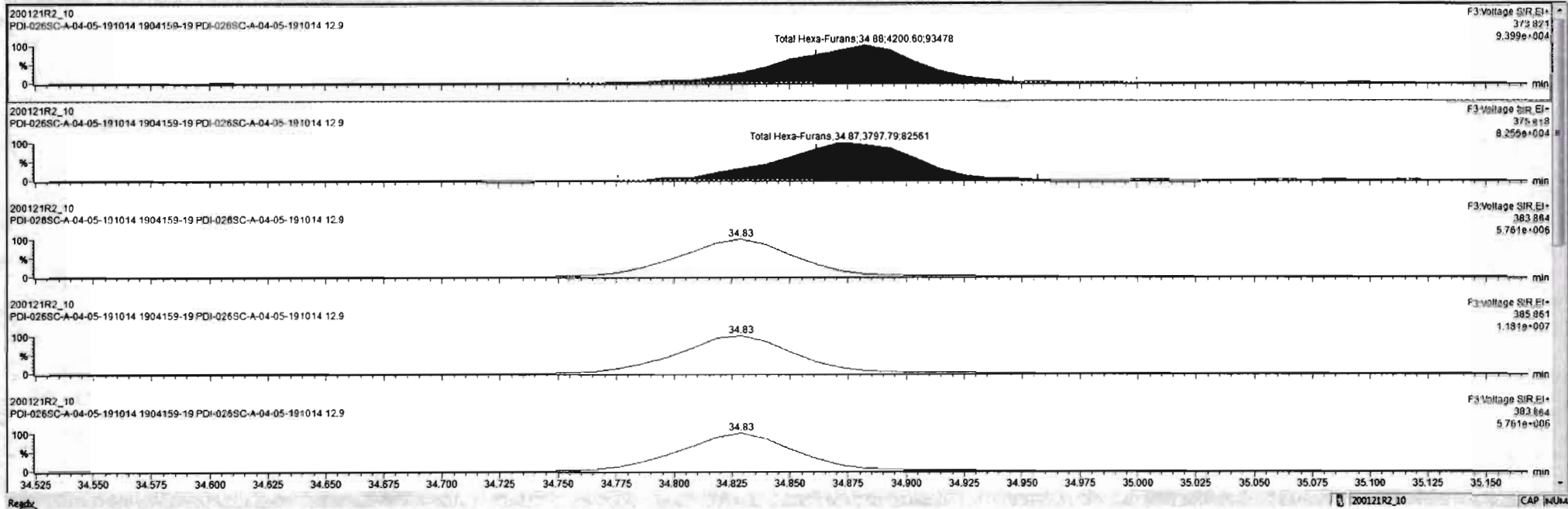
#	Name	RT	m1 Resp	m2 Resp	RA	ny	EMPC	Conc
5	Total Hexa-Furans	33.11	5.226e2	5.285e2	0.99	YES	0.21659	0.00000
6	1,2,3,4,7,8-HxCDF	33.23	7.824e4	6.694e4	1.17	NO	33.086	33.086
7	1,2,3,6,7,8-HxCDF	33.35	1.960e4	1.713e4	1.14	NO	7.8522	7.8522
8	Total Hexa-Furans	33.63	3.172e2	2.710e2	1.17	NO	0.13495	0.13495
9	2,3,4,6,7,8-HxCDF	33.82	4.101e3	3.416e3	1.20	NO	1.7510	1.7510
10	1,2,3,7,8-HxCDF	34.86	1.990e3	1.816e3	1.10	NO	1.0589	1.0589
11	Total Hexa-Furans	34.88	4.201e3	3.798e3	1.11	NO	1.8351	1.8351



Name	Resp	RA	rv	RRF	wt/vol	RT	PRT	Conc.	%Rec	DL	EMPC
46 Total Hexa-Furans				8.7985	18.037			57.1	0.9773	57.6	
47 Total Hepta-Furans				0.7316	10.037			42.7	0.185	43.0	
48 PFK1											
49 PFK2											
50 PFK3											
51 PFK4											
52 PFK5											
53 DPE1											

Name	RT	m1 Resp	m2 Resp	RA	rv	EMPC	Conc.
5 Total Hexa-Furans	33.11	5.226e2	5.285e2	0.99	YES	0.21659	0.00000
6 1,2,3,4,7,8-HxCDF	33.23	7.824e4	6.694e4	1.17	NO	33.086	33.086
7 1,2,3,6,7,8-HxCDF	33.35	1.960e4	1.713e4	1.14	NO	7.8522	7.8522
8 Total Hexa-Furans	33.83	3.172e2	2.710e2	1.17	NO	0.13495	0.13495
9 2,3,4,6,7,8-HxCDF	33.82	4.101e3	3.416e3	1.20	NO	1.7510	1.7510
10 1,2,3,7,8,9-HxCDF	34.86	1.890e3	1.818e3	1.10	NO	1.0589	1.0589
11 Total Hexa-Furans	34.88	4.201e3	3.796e3	1.11	NO	1.8351	1.8351





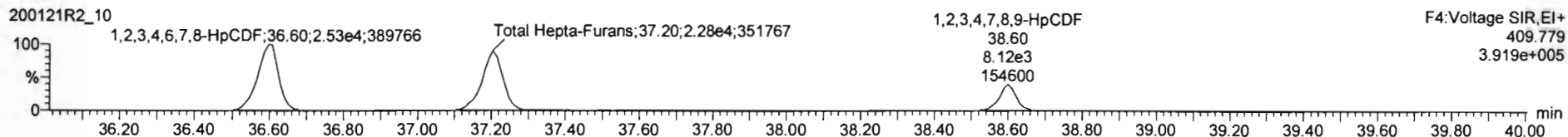
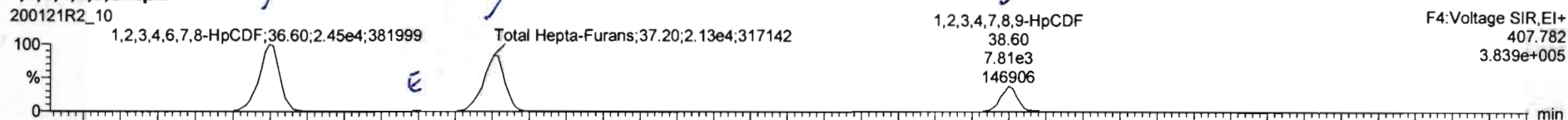
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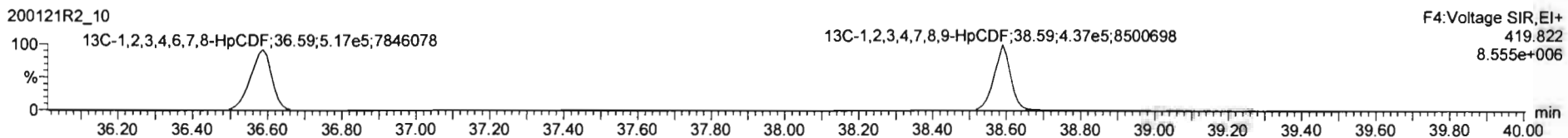
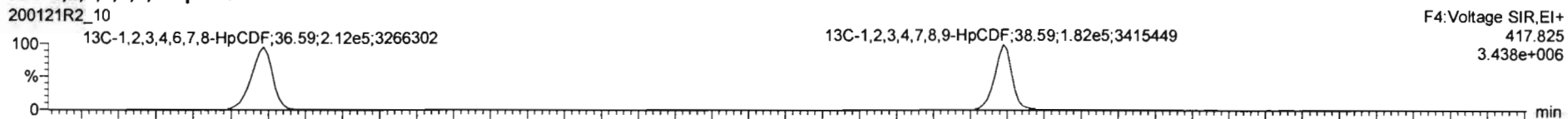
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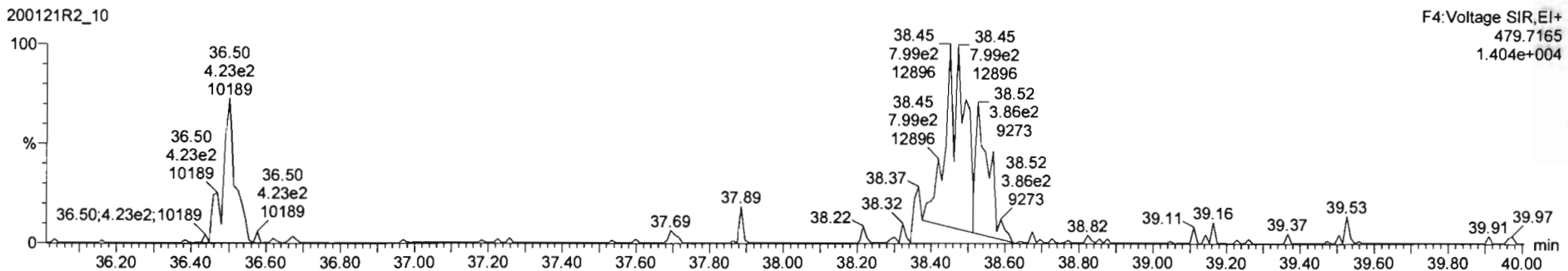
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13C-1,2,3,4,6,7,8-HpCDF



DPE4

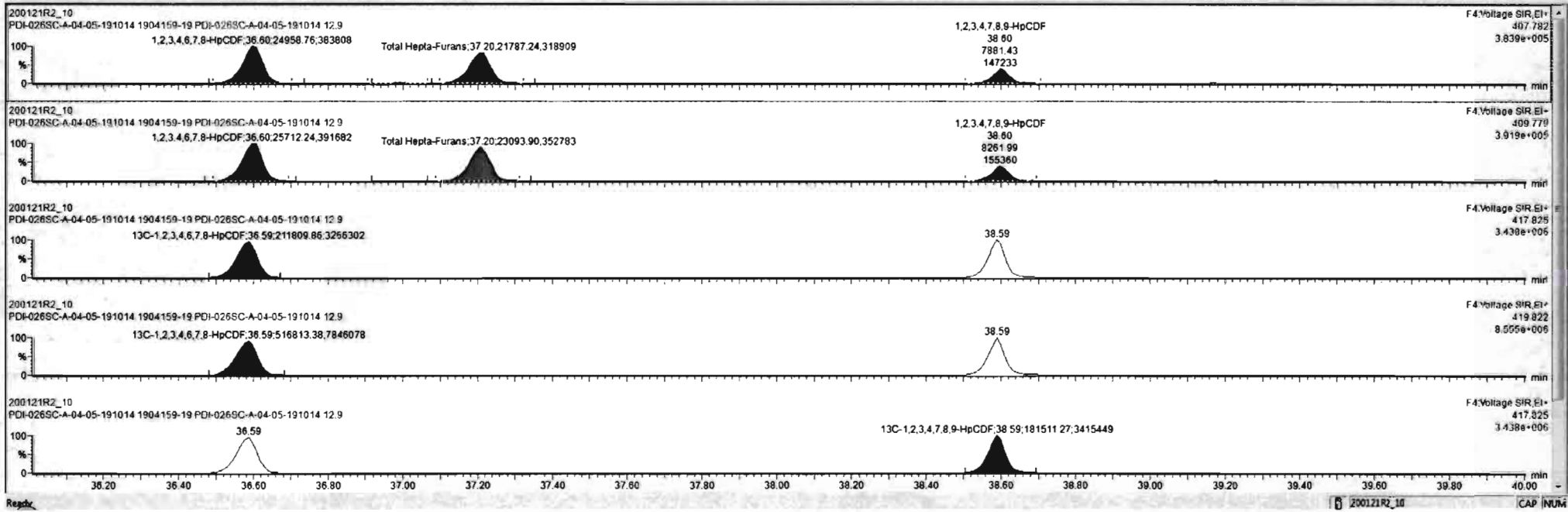


200121R2\_10 1904159-19 PDI-026SC-A 04-05-191014 12.9 PDI-026SC-A 04-05-191011

Name	Resp	RA	n/y	RRP	wt/Vol	RT	RRT	Conc.	%Rec	DL	EMPC
46 Total Hexa-Furans				0.7665	10.037			57.1	0.0773	57.4	
47 Total Hepta-Furans				0.7318	10.037			43.5	0.185	43.8	
48 PFK1											
49 PFK2											
50 PFK3											
51 PFK4											
52 PFK5											
53 DPE1											

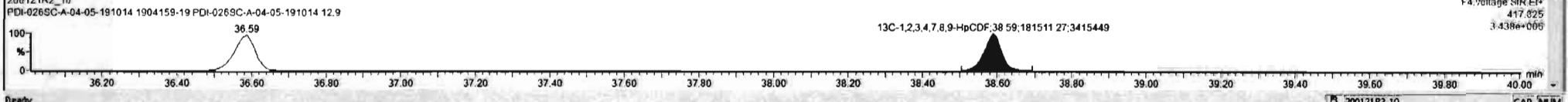
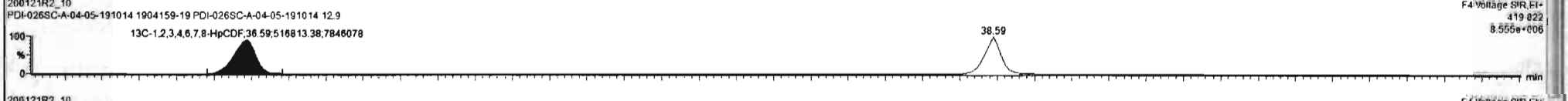
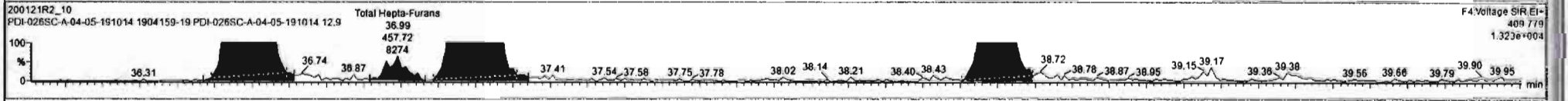
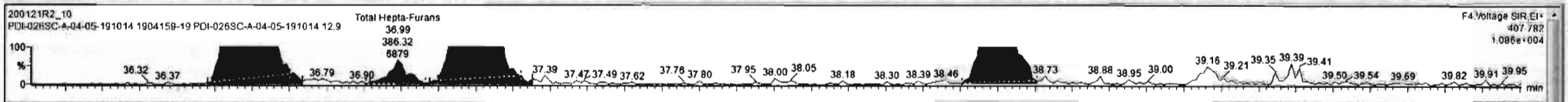
  

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 1,2,3,4,6,7,8-HpCDF	36.60	2.498e4	2.571e4	0.97	NO	18.939	18.939
2 Total Hepta-Furans	36.99	3.863e2	4.577e2	0.84	YES	0.30635	0.00000
3 Total Hepta-Furans	37.20	2.179e4	2.309e4	0.94	NO	18.144	18.144
4 1,2,3,4,7,8,9-HpCDF	38.60	7.881e3	8.262e3	0.95	NO	6.3688	8.3688



Name	Resp	RA	nY	RRF	wtVol	RT	RR7	Conc	%Rec	DL	EMPC
46 Total Hepta-Furans				0.7665	18.037			57.1		0.6773	57.4
47 Total Hepta-Furans				0.7318	18.037			43.5		0.165	43.8
48 PFK1											
49 PFK2											
50 PFK3											
51 PFK4											
52 PFK5											
53 OPE1											

Name	RT	m1 Resp	m2 Resp	RA	nY	EMPC	Conc.
1 1,2,3,4,6,7,8-HpCDF	36.60	2.496e4	2.571e4	0.97	NO	18.939	18.939
2 Total Hepta-Furans	36.99	3.863e2	4.577e2	0.84	YES	0.30635	0.00000
3 Total Hepta-Furans	37.20	2.179e4	2.309e4	0.94	NO	18.144	18.144
4 1,2,3,4,7,8,9-HpCDF	38.60	7.881e3	8.262e3	0.95	NO	6.3668	6.3668

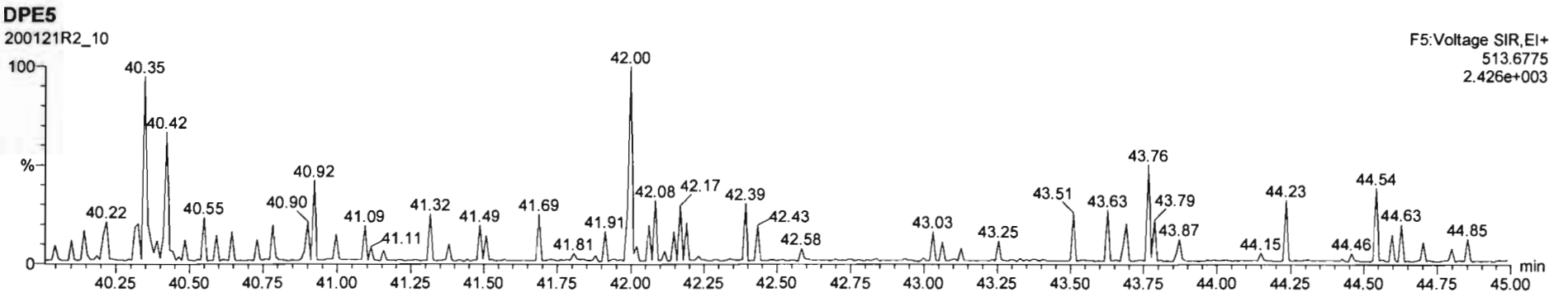
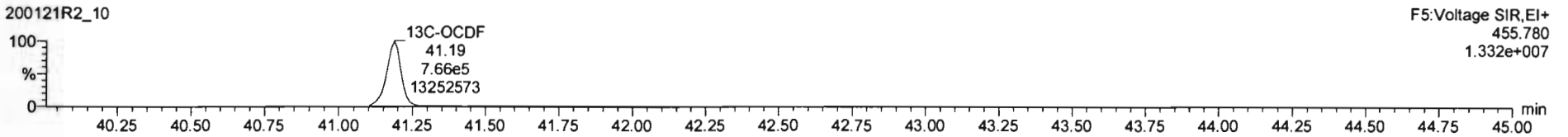
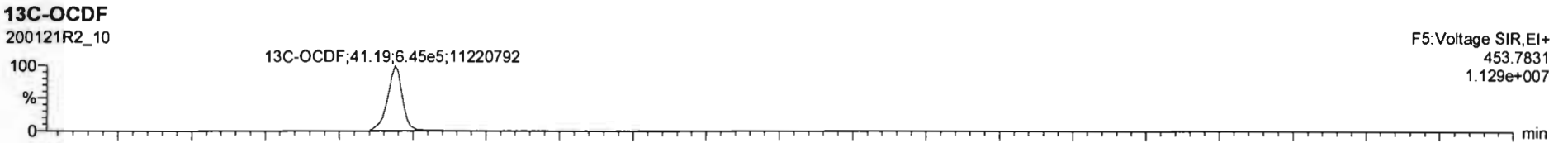
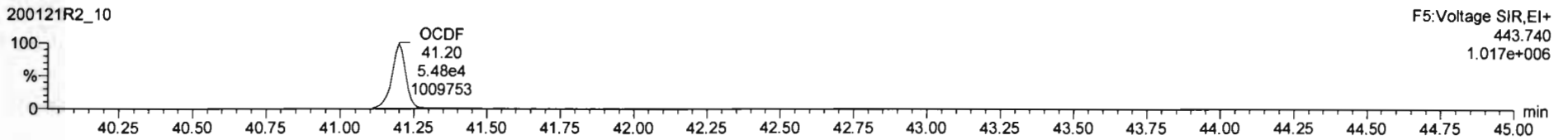
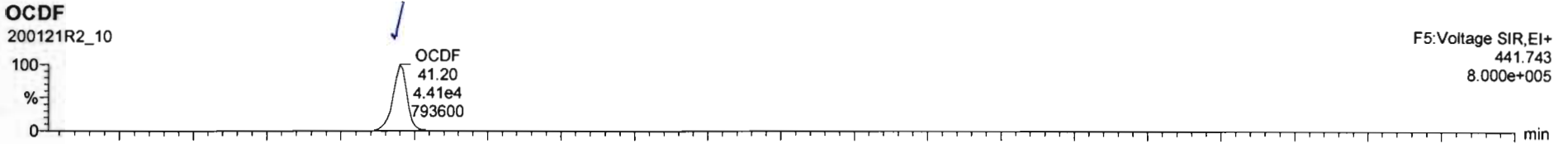


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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_10, Date: 22-Jan-2020, Time: 05:59:24, ID: 1904159-19 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014



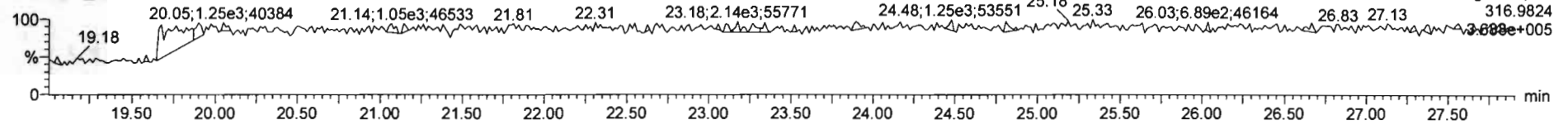
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Name: 200121R2\_10, Date: 22-Jan-2020, Time: 05:59:24, ID: 1904159-19 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014

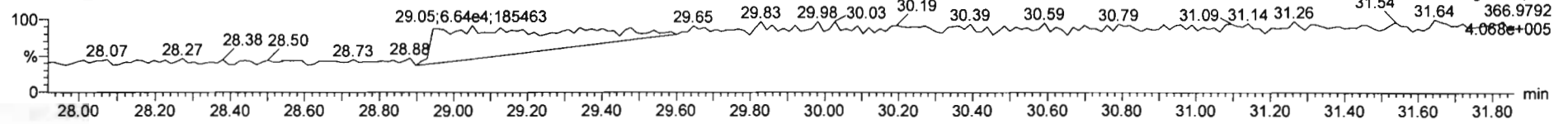
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200121R2\_10



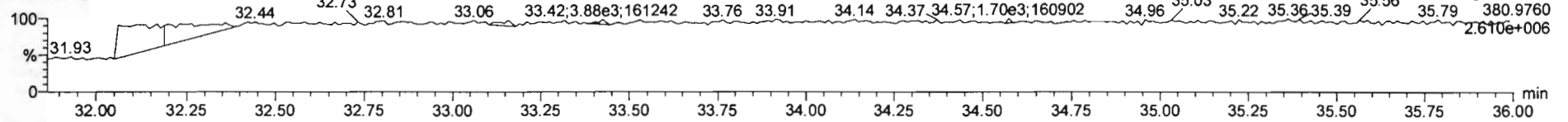
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200121R2\_10



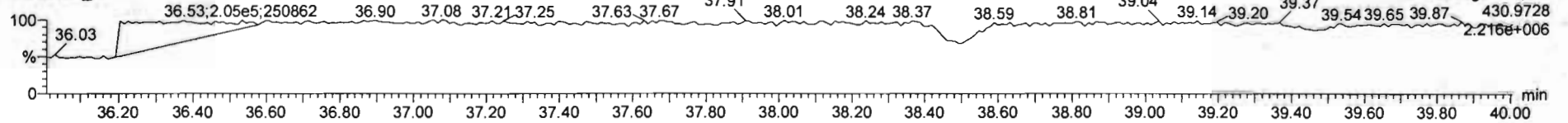
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200121R2\_10



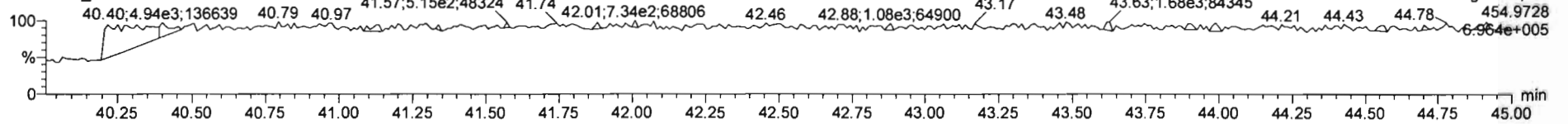
PFK4

200121R2\_10



PFK5

200121R2\_10



Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_11.qld

Last Altered: Wednesday, January 22, 2020 16:21:41 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 16:22:26 Pacific Standard Time

*DB 1/22/20*

*CT 01/31/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.35e3	0.24	YES	0.824	10.030	25.871	25.84	1.001	1.000	0.17829		0.0343	0.0759
2	2 1,2,3,7,8-PeCDD	5.84e2	0.44	YES	0.912	10.030	30.750	30.76	1.001	1.001	0.082923		0.0321	0.0659
3	3 1,2,3,4,7,8-HxCDD	4.28e2	0.99	YES	0.870	10.030	34.083	34.10	1.000	1.001	0.072881		0.0459	0.0654
4	4 1,2,3,6,7,8-HxCDD	7.01e2	1.12	NO	0.784	10.030	34.179	34.20	1.000	1.001	0.11664		0.0454	0.117
5	5 1,2,3,7,8,9-HxCDD	1.14e3	1.10	NO	0.798	10.030	34.501	34.48	1.001	1.000	0.18469		0.0445	0.185
6	6 1,2,3,4,6,7,8-HpCDD	7.08e3	0.93	NO	0.737	10.030	38.014	38.02	1.000	1.001	1.5837		0.0540	1.58
7	7 OCDD	6.01e4	0.87	NO	0.800	10.030	40.985	41.00	1.000	1.000	13.733		0.0428	13.7
8	8 2,3,7,8-TCDF			NO	0.588	10.030	24.982		1.001				0.0175	
9	9 1,2,3,7,8-PeCDF			NO	0.826	10.030	29.482		1.001				0.0178	
10	10 2,3,4,7,8-PeCDF	2.83e2	0.83	YES	0.850	10.030	30.453	30.45	1.001	1.001	0.028995		0.0403	0.0216
11	11 1,2,3,4,7,8-HxCDF	1.74e2	1.49	YES	0.787	10.030	33.210	33.23	1.000	1.001	0.031861		0.00821	0.0287
12	12 1,2,3,6,7,8-HxCDF	1.57e2	1.16	NO	0.720	10.030	33.337	33.35	1.000	1.001	0.026967		0.00795	0.0270
13	13 2,3,4,6,7,8-HxCDF			NO	0.766	10.030	33.947		1.001				0.0169	
14	14 1,2,3,7,8,9-HxCDF	2.43e2	0.68	YES	0.709	10.030	34.818	34.84	1.000	1.001	0.054398		0.0217	0.0397
15	15 1,2,3,4,6,7,8-HpCDF	1.93e2	0.78	YES	0.732	10.030	36.612	36.62	1.001	1.001	0.053202		0.0193	0.0458
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.816	10.030	38.578		1.000				0.0268	
17	17 OCDF	3.54e2	0.72	YES	0.639	10.030	41.176	41.19	1.000	1.000	0.10412		0.0219	0.0927
18	18 13C-2,3,7,8-TCDD	1.88e6	0.80	NO	1.12	10.030	25.844	25.84	1.026	1.026	199.07	99.8	0.116	
19	19 13C-1,2,3,7,8-PeCDD	1.54e6	0.63	NO	0.841	10.030	30.614	30.73	1.215	1.220	216.34	108	0.230	
20	20 13C-1,2,3,4,7,8-HxCDD	1.35e6	1.25	NO	0.938	10.030	34.074	34.07	1.014	1.014	179.82	90.2	0.159	
21	21 13C-1,2,3,6,7,8-HxCDD	1.53e6	1.25	NO	1.07	10.030	34.175	34.18	1.017	1.017	179.89	90.2	0.140	
22	22 13C-1,2,3,7,8,9-HxCDD	1.54e6	1.23	NO	1.03	10.030	34.478	34.47	1.026	1.026	186.96	93.8	0.145	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.21e6	1.04	NO	0.710	10.030	38.040	38.00	1.132	1.131	213.57	107	0.266	
24	24 13C-OCDD	2.18e6	0.88	NO	0.601	10.030	40.929	40.98	1.218	1.220	455.04	114	0.247	
25	25 13C-2,3,7,8-TCDF	2.50e6	0.73	NO	1.04	10.030	25.020	24.96	0.993	0.990	173.59	87.1	0.106	
26	26 13C-1,2,3,7,8-PeCDF	2.29e6	1.55	NO	0.917	10.030	29.379	29.46	1.166	1.169	180.14	90.3	0.190	
27	27 13C-2,3,4,7,8-PeCDF	2.29e6	1.54	NO	0.903	10.030	30.336	30.42	1.204	1.207	182.88	91.7	0.193	
28	28 13C-1,2,3,4,7,8-HxCDF	1.39e6	0.50	NO	0.861	10.030	33.201	33.21	0.988	0.988	201.87	101	0.292	
29	29 13C-1,2,3,6,7,8-HxCDF	1.61e6	0.49	NO	1.05	10.030	33.301	33.33	0.991	0.992	193.26	96.9	0.240	
30	30 13C-2,3,4,6,7,8-HxCDF	1.40e6	0.50	NO	0.946	10.030	33.910	33.91	1.009	1.009	185.89	93.2	0.266	
31	31 13C-1,2,3,7,8,9-HxCDF	1.26e6	0.49	NO	0.816	10.030	34.814	34.82	1.036	1.036	193.35	97.0	0.308	

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_11.qld

Last Altered: Wednesday, January 22, 2020 16:21:41 Pacific Standard Time

Printed: Wednesday, January 22, 2020 16:22:26 Pacific Standard Time

Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	9.88e5	0.41	NO	0.589	10.030	36.561	36.58	1.088	1.088	210.16	105	0.323	
33	33 13C-1,2,3,4,7,8,9-HpCDF	8.74e5	0.41	NO	0.448	10.030	38.577	38.58	1.148	1.148	244.62	123	0.425	
34	34 13C-OCDF	2.12e6	0.86	NO	0.586	10.030	41.165	41.18	1.225	1.225	454.49	114	0.218	
35	35 37Cl-2,3,7,8-TCDD	7.69e5			1.09	10.030	25.877	25.85	1.027	1.026	83.659	105	0.0248	
36	36 13C-1,2,3,4-TCDD	1.69e6	0.81	NO	1.00	10.030	25.260	25.20	1.000	1.000	199.40	100	0.129	
37	37 13C-1,2,3,4-TCDF	2.77e6	0.74	NO	1.00	10.030	23.860	23.57	1.000	1.000	199.40	100	0.110	
38	38 13C-1,2,3,4,6,9-HxCDF	1.59e6	0.49	NO	1.00	10.030	33.590	33.60	1.000	1.000	199.40	100	0.252	
39	39 Total Tetra-Dioxins				0.824	10.030	24.620		0.000		0.078689		0.0313	0.155
40	40 Total Penta-Dioxins				0.912	10.030	29.960		0.000		0.26687		0.0321	0.524
41	41 Total Hexa-Dioxins				0.784	10.030	33.635		0.000		2.1832		0.0471	2.25
42	42 Total Hepta-Dioxins				0.737	10.030	37.640		0.000		4.2786		0.0540	4.28
43	43 Total Tetra-Furans				0.588	10.030	23.610		0.000				0.00733	
44	44 1st Func. Penta-Furans				0.826	10.030	27.090		0.000				0.00422	
45	45 Total Penta-Furans				0.826	10.030	29.275		0.000		0.00000		0.0107	0.0216
46	46 Total Hexa-Furans				0.766	10.030	33.555		0.000		0.026967		0.00880	0.0953
47	47 Total Hepta-Furans				0.732	10.030	37.835		0.000		0.00000		0.0187	0.0458

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_11.qld

Last Altered: Wednesday, January 22, 2020 16:21:41 Pacific Standard Time

Printed: Wednesday, January 22, 2020 16:22:26 Pacific Standard Time

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Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	25.18	3.379e3	5.761e3	2.458e2	3.658e2	0.67	NO	6.116e2	0.078689	0.078689	0.0313
2	2,3,7,8-TCDD	25.84	4.330e3	1.689e4	2.566e2	1.090e3	0.24	YES	1.347e3	0.00000	0.075883	0.0313

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.58	3.284e3	6.799e3	2.884e2	4.796e2	0.60	NO	7.680e2	0.10901	0.10901	0.0321
2	Total Penta-Dioxins	29.02	1.029e4	1.568e4	4.105e2	7.017e2	0.59	NO	1.112e3	0.15786	0.15786	0.0321
3	Total Penta-Dioxins	30.03	6.571e3	1.185e4	4.498e2	6.894e2	0.65	NO	0.000e0	0.00000	0.16170	0.0321
4	Total Penta-Dioxins	30.42	5.872e3	3.874e3	3.251e2	1.264e2	2.57	YES	0.000e0	0.00000	0.029240	0.0321
5	1,2,3,7,8-PeCDD	30.76	5.932e3	8.909e3	1.795e2	4.048e2	0.44	YES	5.842e2	0.00000	0.065903	0.0321

**Hexa-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.59	8.809e4	7.338e4	3.912e3	3.204e3	1.22	NO	7.117e3	1.2305	1.2305	0.0471
2	Total Hexa-Dioxins	33.15	6.061e3	6.360e3	2.902e2	2.323e2	1.25	NO	5.225e2	0.090336	0.090336	0.0471
3	Total Hexa-Dioxins	33.41	3.052e4	2.021e4	1.890e3	1.355e3	1.39	NO	3.245e3	0.56107	0.56107	0.0471
4	1,2,3,4,7,8-HxCDD	34.10	4.748e3	5.715e3	2.125e2	2.156e2	0.99	YES	4.282e2	0.00000	0.065351	0.0459
5	1,2,3,6,7,8-HxCDD	34.20	8.084e3	7.347e3	3.706e2	3.309e2	1.12	NO	7.015e2	0.11664	0.11664	0.0454
6	1,2,3,7,8,9-HxCDD	34.48	1.329e4	1.325e4	5.958e2	5.410e2	1.10	NO	1.137e3	0.18469	0.18469	0.0445

**Hepta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.98	9.312e4	1.023e5	5.853e3	6.197e3	0.94	NO	1.205e4	2.6948	2.6948	0.0540
2	1,2,3,4,6,7,8-HpCDD	38.02	6.470e4	6.501e4	3.403e3	3.678e3	0.93	NO	7.082e3	1.5837	1.5837	0.0540



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Dataset: U:\VG12.PRO\Results\200121R2\200121R2\_11.qld

Last Altered: Wednesday, January 22, 2020 16:21:41 Pacific Standard Time

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Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014

**Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

**Penta-Furans function 1**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1												

**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	2,3,4,7,8-PeCDF	30.45	4.293e3	5.382e3	1.281e2	1.548e2	0.83	YES	2.829e2	0.00000	0.021606	0.0103

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,7,8-HxCDF	33.23	3.195e3	1.785e3	1.044e2	7.003e1	1.49	YES	1.744e2	0.00000	0.028657	0.00821
2	1,2,3,6,7,8-HxCDF	33.35	1.247e3	1.945e3	8.428e1	7.292e1	1.16	NO	1.572e2	0.026967	0.026967	0.00795
3	1,2,3,7,8,9-HxCDF	34.84	2.989e3	2.391e3	9.828e1	1.450e2	0.68	YES	2.433e2	0.00000	0.039700	0.0117

**Hepta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.62	1.945e3	2.241e3	8.470e1	1.085e2	0.78	YES	1.932e2	0.00000	0.045830	0.0193

Dataset: Untitled

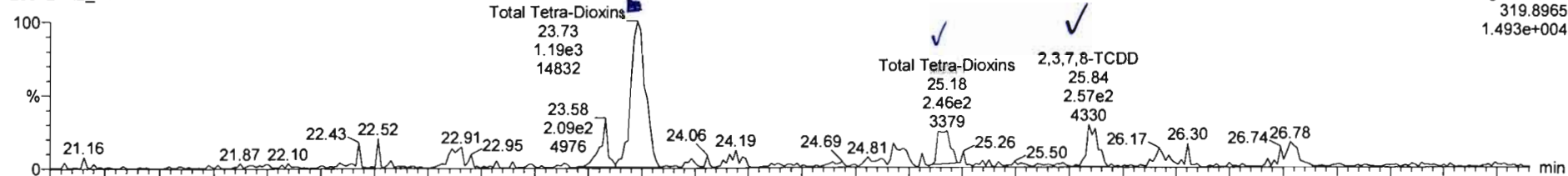
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

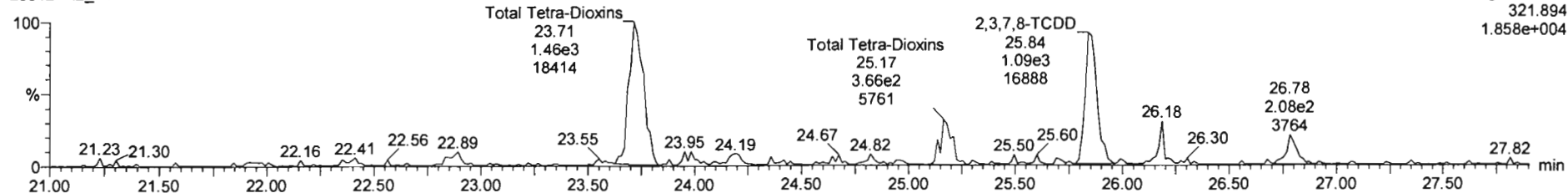
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**2,3,7,8-TCDD**

200121R2\_11

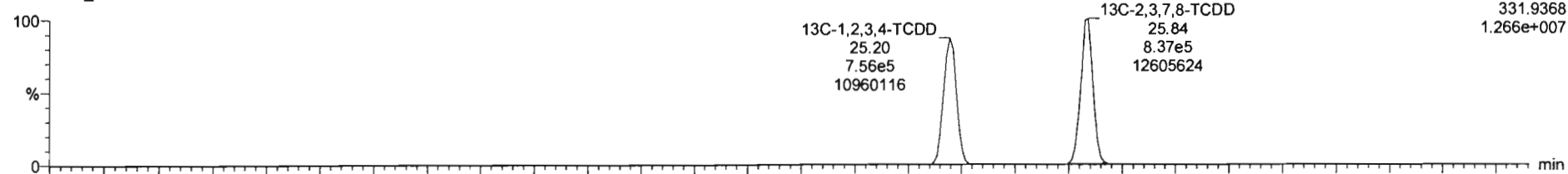


200121R2\_11

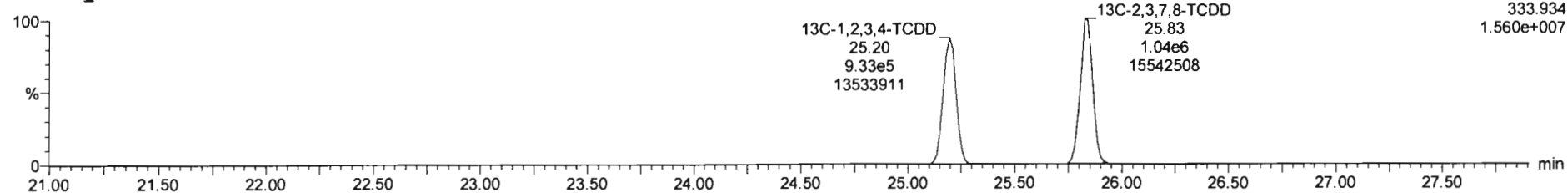


**13C-2,3,7,8-TCDD**

200121R2\_11



200121R2\_11



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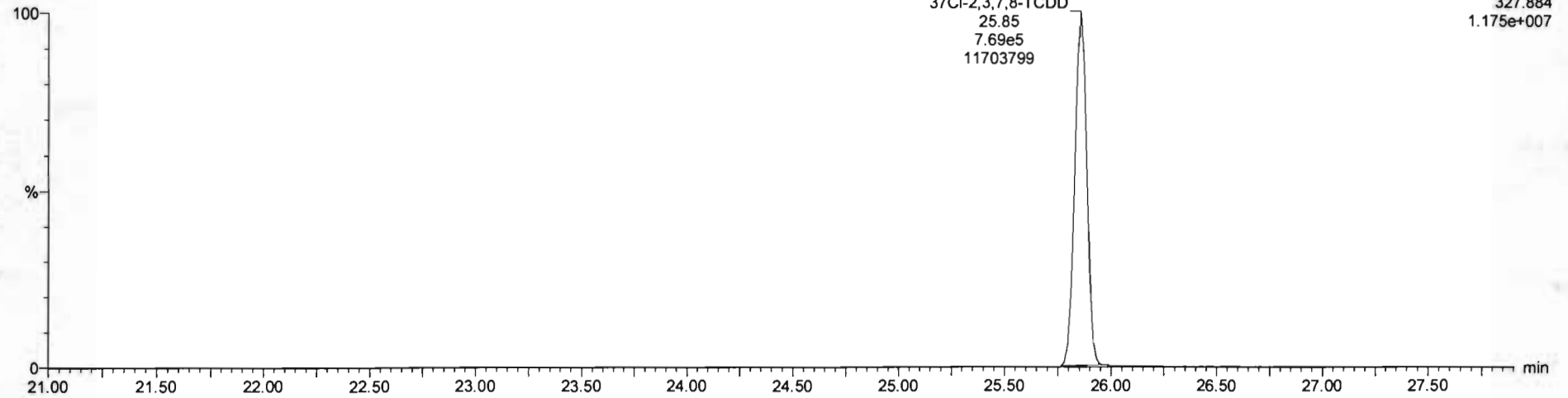
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Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014

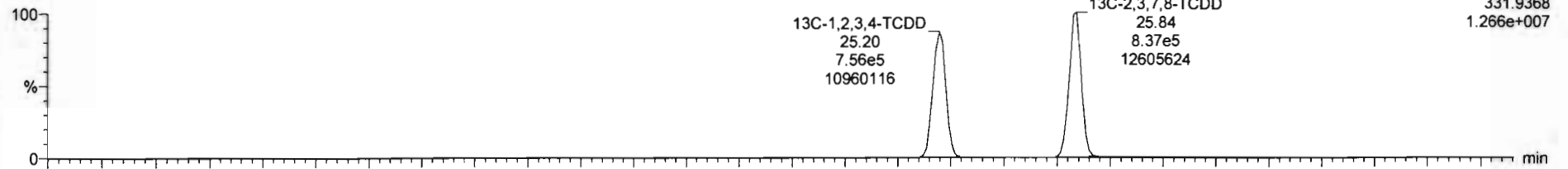
**37Cl-2,3,7,8-TCDD**

200121R2\_11

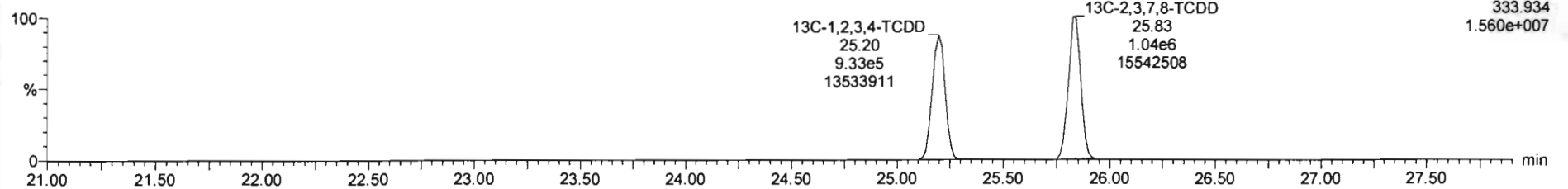


**13C-1,2,3,4-TCDD**

200121R2\_11



200121R2\_11



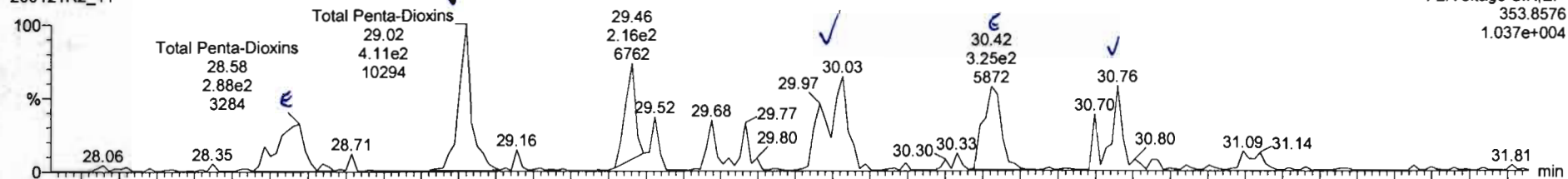
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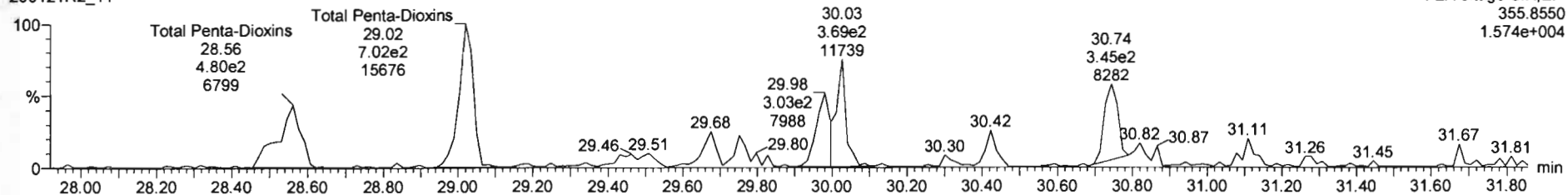
1,2,3,7,8-PeCDD

200121R2\_11



F2:Voltage SIR,EI+  
353.8576  
1.037e+004

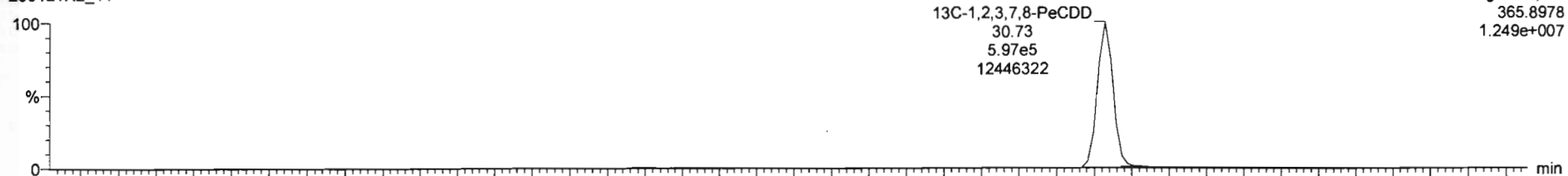
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355.8550  
1.574e+004

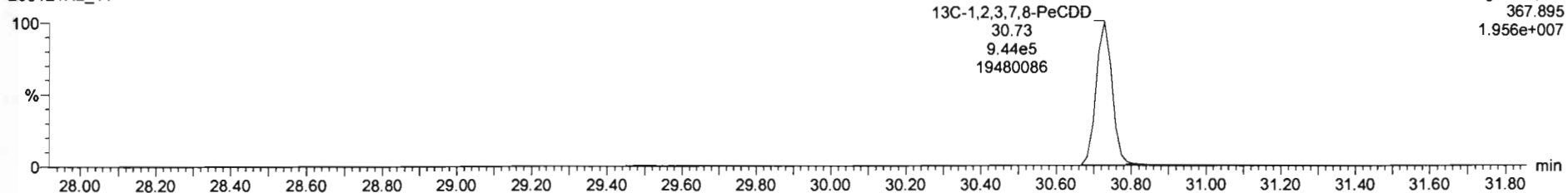
13C-1,2,3,7,8-PeCDD

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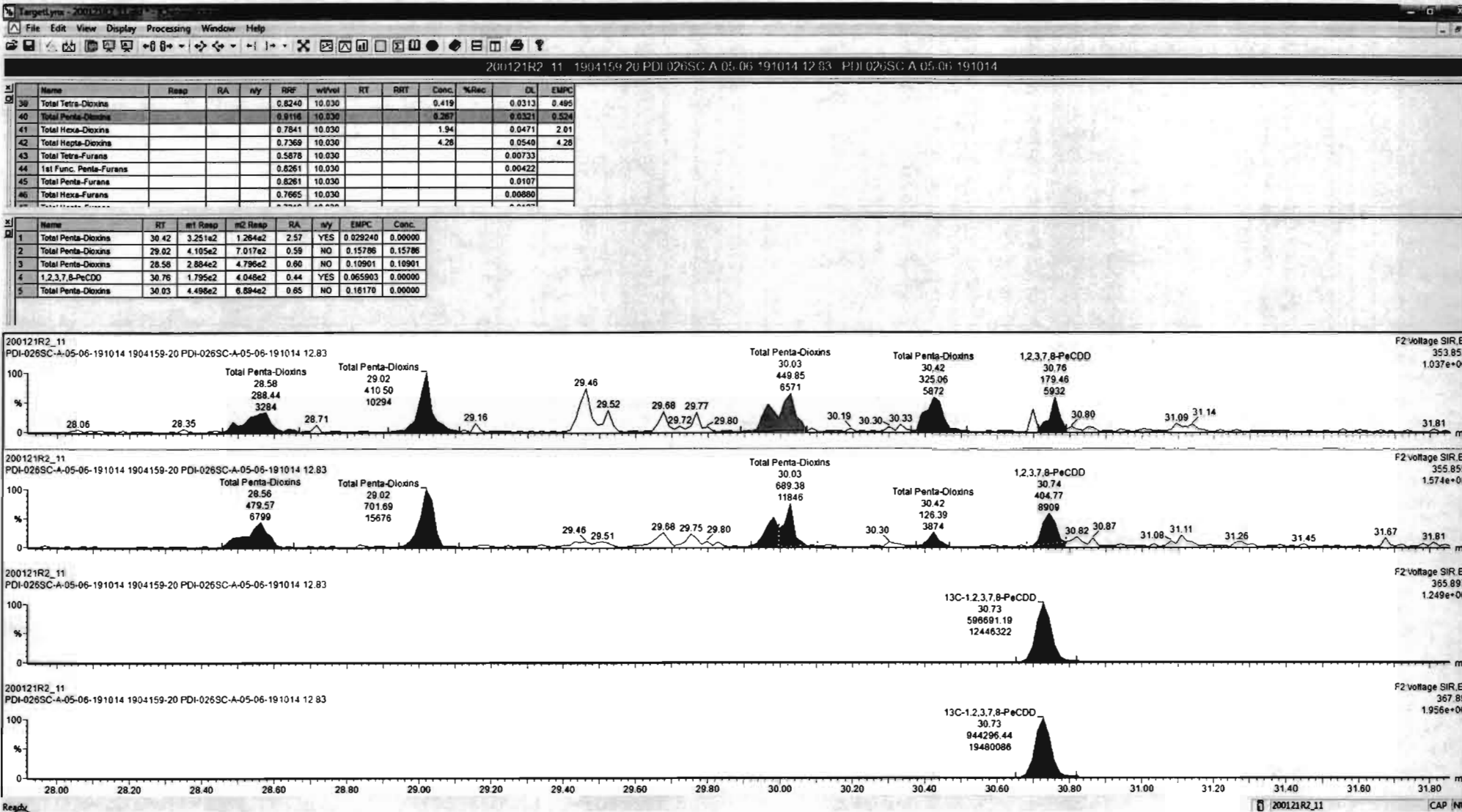


F2:Voltage SIR,EI+  
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200121R2\_11



F2:Voltage SIR,EI+  
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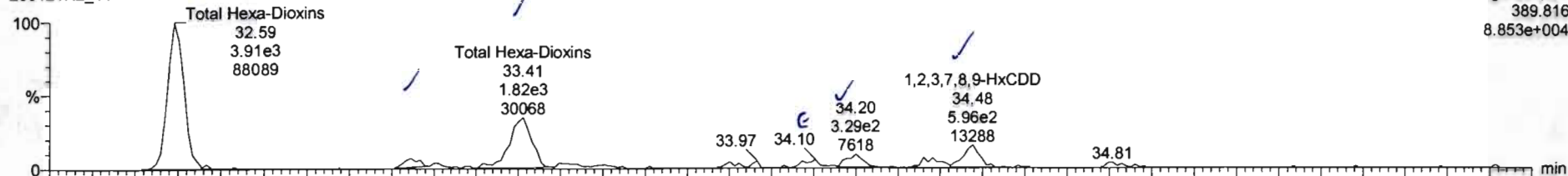
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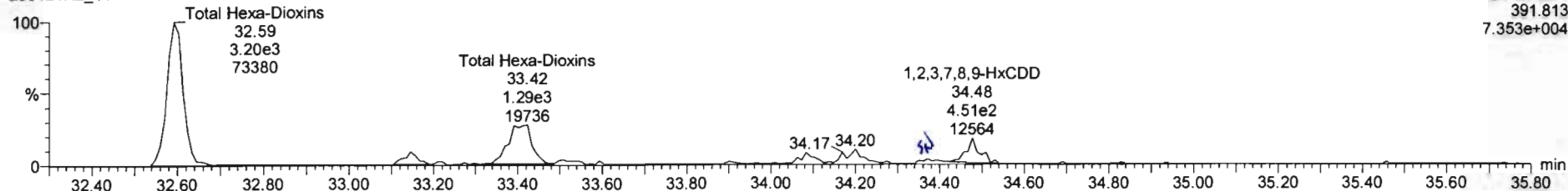
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**1,2,3,4,7,8-HxCDD**

200121R2\_11

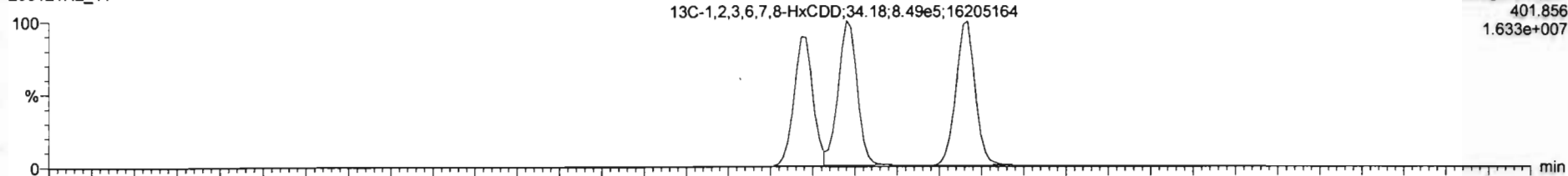


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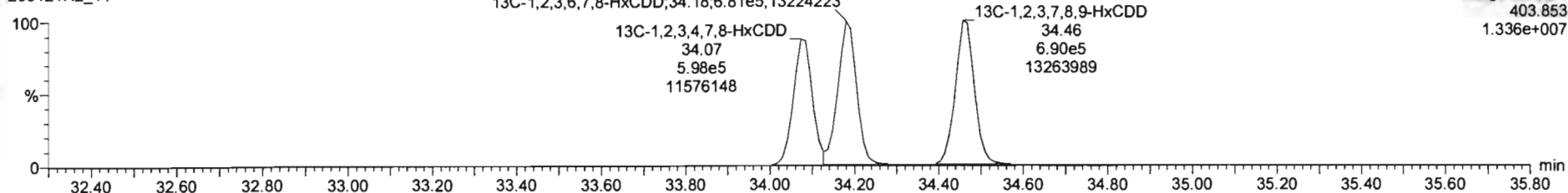


**13C-1,2,3,4,7,8-HxCDD**

200121R2\_11



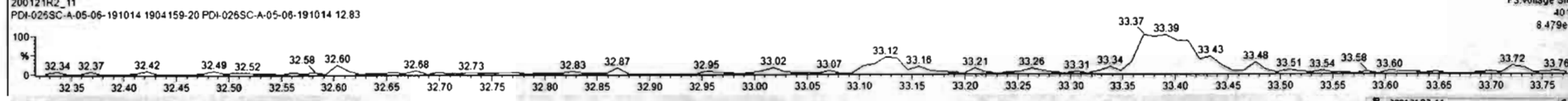
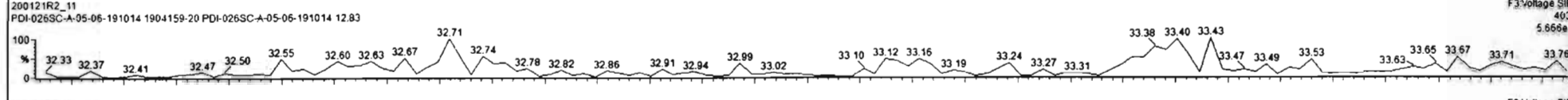
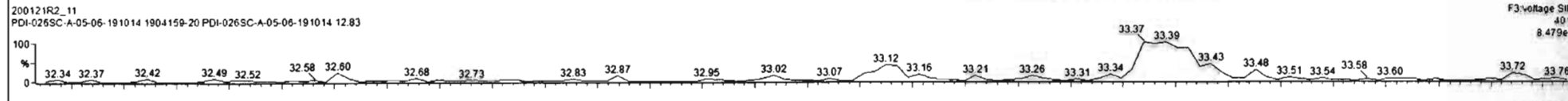
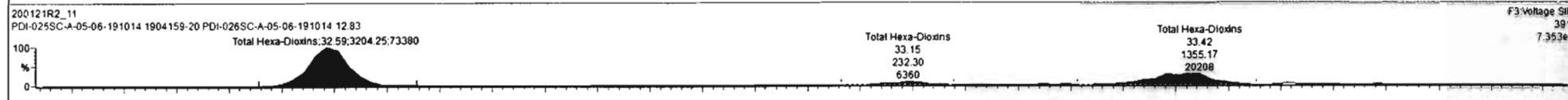
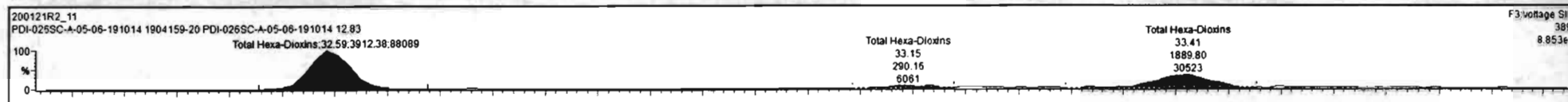
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200121R2\_11 - 1904159-20 PDI-026SC-A-05-06-191014 12.83 - PDI-026SC-A-05-06-191014

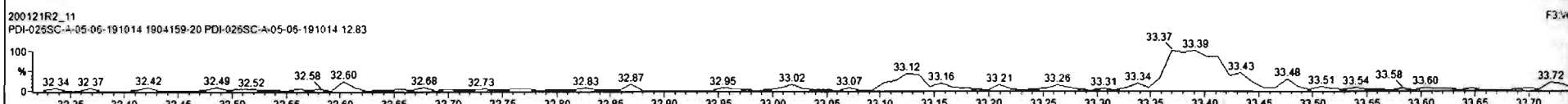
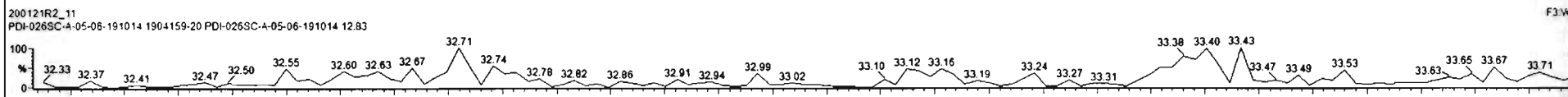
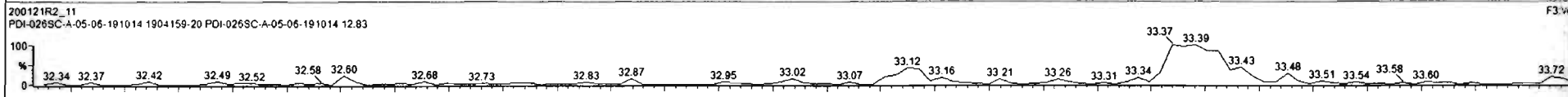
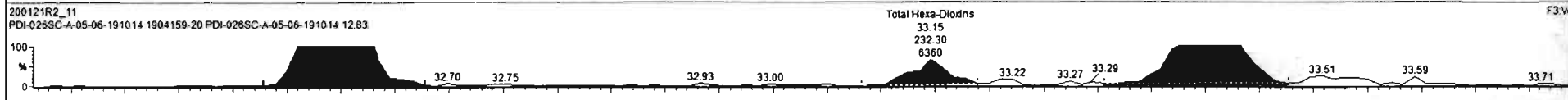
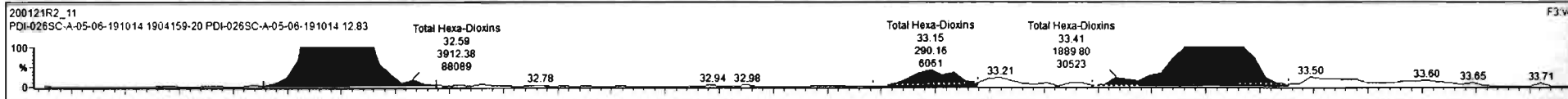
Name	Resp	RA	rvy	RRF	wfval	RT	RRT	Conc	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.030			0.0787		0.0313	0.155
40 Total Penta-Dioxins				0.9116	10.030			0.267		0.0321	0.524
41 Total Hexa-Dioxins				0.7841	10.030			2.18		0.0471	2.25
42 Total Hepta-Dioxins				0.7369	10.030			4.28		0.0540	4.28
43 Total Tetra-Furans				0.5878	10.030					0.00733	
44 1st Func. Penta-Furans				0.8261	10.030					0.00422	
45 Total Penta-Furans				0.8261	10.030					0.0107	
46 Total Hexa-Furans				0.7665	10.030					0.00880	

Name	RT	m1 Resp	m2 Resp	RA	rvy	EMPC	Conc.
1 Total Hexa-Dioxins	32.59	3.912e3	3.204e3	1.22	NO	1.2305	1.2305
2 Total Hexa-Dioxins	33.15	2.902e2	2.323e2	1.25	NO	0.090336	0.090336
3 Total Hexa-Dioxins	33.41	1.896e3	1.355e3	1.39	NO	0.58107	0.58107
4 1,2,3,4,7,8-HxCDD	34.10	2.125e2	2.156e2	0.99	YES	0.065351	0.00000
5 1,2,3,6,7,8-HxCDD	34.20	3.709e2	3.309e2	1.12	NO	0.11664	0.11664
6 1,2,3,7,8,9-HxCDD	34.48	5.958e2	5.410e2	1.10	NO	0.18489	0.18489



Name	Resp	RA	n/y	RRF	wt/Vol	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.030			0.0787		0.0313	0.155
40 Total Penta-Dioxins				0.9116	10.030			0.267		0.0321	0.524
41 Total Hexa-Dioxins				0.7841	18.030			2.18		0.0471	2.25
42 Total Hepta-Dioxins				0.7369	10.030			4.28		0.0540	4.28
43 Total Tetra-Furans				0.5878	10.030					0.00733	
44 1st Func. Penta-Furans				0.8261	10.030					0.00422	
45 Total Penta-Furans				0.8261	10.030					0.0107	
46 Total Hexa-Furans				0.7685	10.030					0.00860	

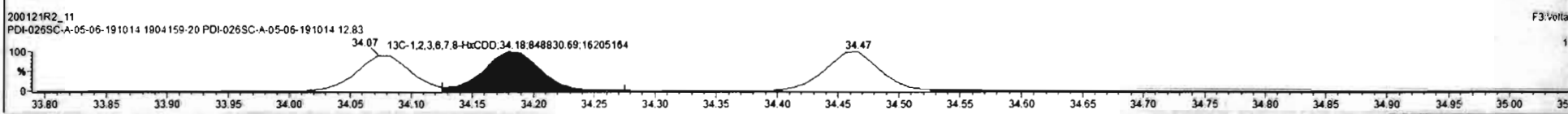
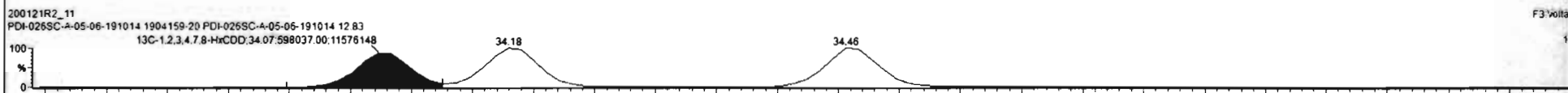
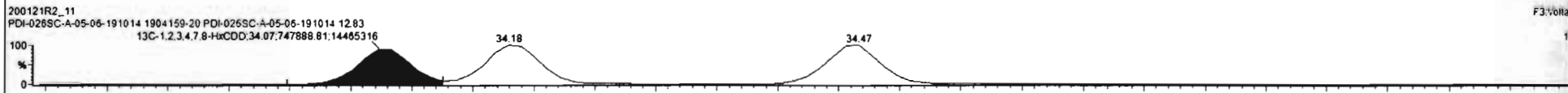
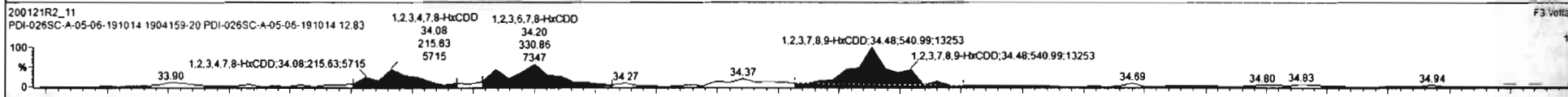
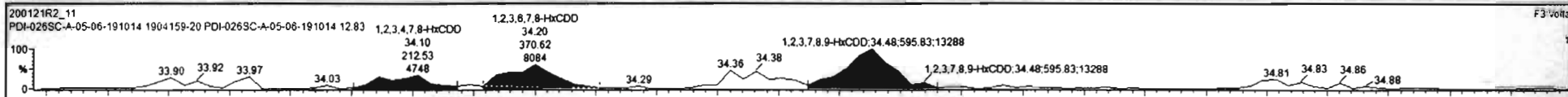
Name	RT	wt Resp	mc Resp	RA	n/y	EMPC	Conc.
1 Total Hexa-Dioxins	32.59	3.912e3	3.204e3	1.22	NO	1.2305	1.2305
2 Total Hexa-Dioxins	33.15	2.902e2	2.323e2	1.25	NO	0.090336	0.090336
3 Total Hexa-Dioxins	33.41	1.890e3	1.355e3	1.39	NO	0.56107	0.56107
4 1,2,3,4,7,8-HxCDD	34.10	2.125e2	2.156e2	0.99	YES	0.065351	0.00000
5 1,2,3,6,7,8-HxCDD	34.20	3.706e2	3.309e2	1.12	NO	0.11664	0.11664
6 1,2,3,7,8,9-HxCDD	34.48	5.958e2	5.410e2	1.10	NO	0.18489	0.18489





Name	Resp	RA	n/y	RRF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
39 Total Tetra-Dioxins				0.8240	10.030			0.0787		0.0313	0.155
40 Total Penta-Dioxins				0.9116	10.030			0.287		0.0321	0.524
41 Total Hexa-Dioxins				0.7841	10.030			2.18		0.0471	2.25
42 Total Hepta-Dioxins				0.7369	10.030			4.28		0.0540	4.28
43 Total Tetra-Furans				0.5878	10.030					0.00733	
44 1st Func. Penta-Furans				0.8281	10.030					0.00422	
45 Total Penta-Furans				0.8281	10.030					0.0107	
46 Total Hexa-Furans				0.7665	10.030					0.00880	

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Hexa-Dioxins	32.59	3.912e3	3.204e3	1.22	NO	1.2305	1.2305
2 Total Hexa-Dioxins	33.15	2.902e2	2.323e2	1.25	NO	0.090338	0.090336
3 Total Hexa-Dioxins	33.41	1.890e3	1.355e3	1.39	NO	0.58107	0.58107
4 1,2,3,4,7,8-HxCDD	34.10	2.125e2	2.156e2	0.99	YES	0.065351	0.00000
5 1,2,3,6,7,8-HxCDD	34.20	3.708e2	3.309e2	1.12	NO	0.11664	0.11664
6 1,2,3,7,8,9-HxCDD	34.48	5.956e2	5.410e2	1.10	NO	0.18469	0.18469



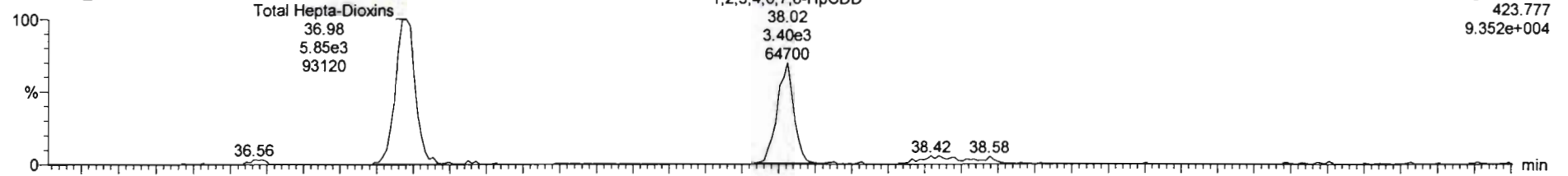
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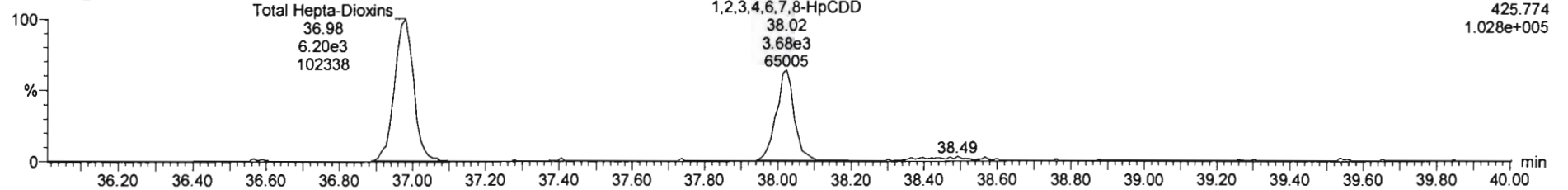
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**1,2,3,4,6,7,8-HpCDD**

200121R2\_11

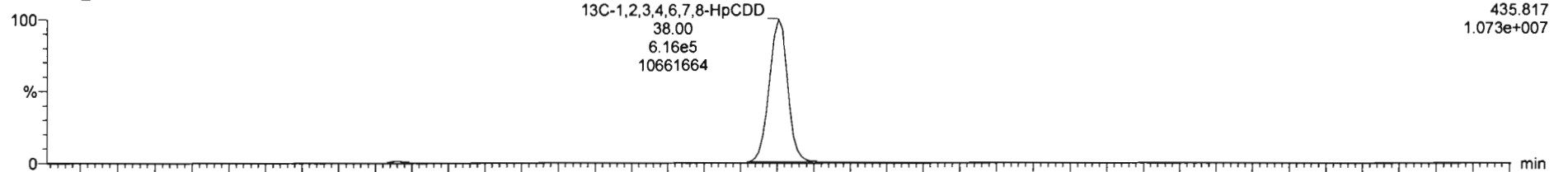


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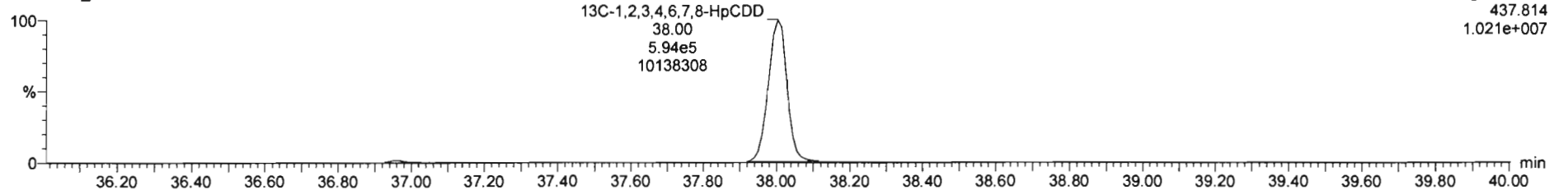


**13C-1,2,3,4,6,7,8-HpCDD**

200121R2\_11



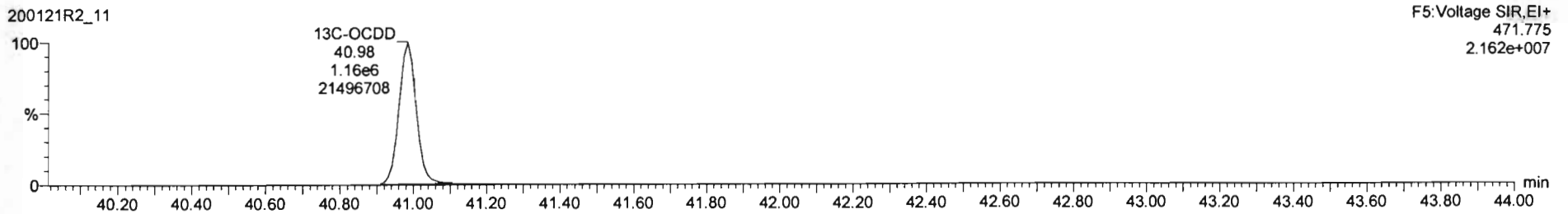
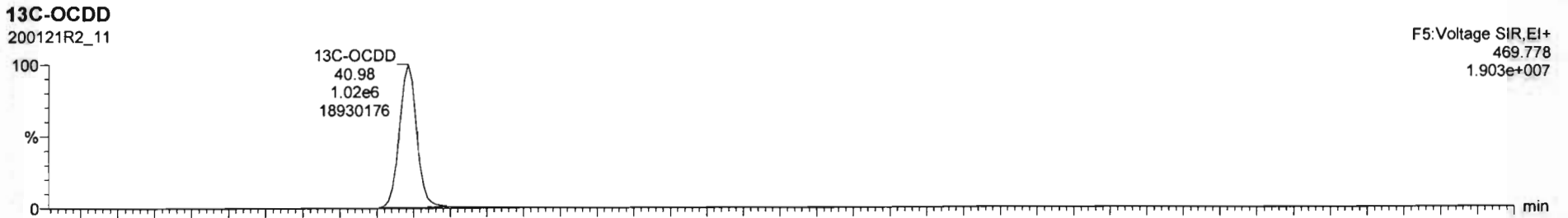
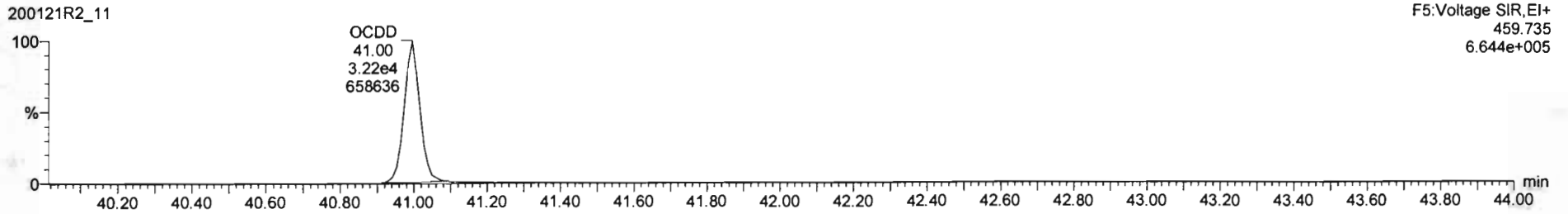
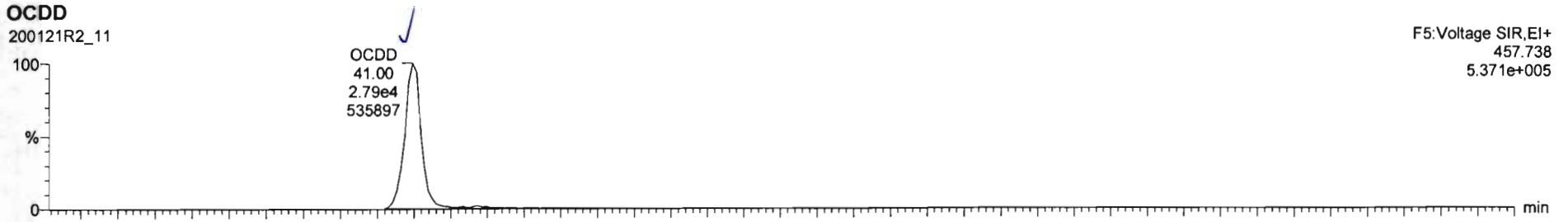
200121R2\_11



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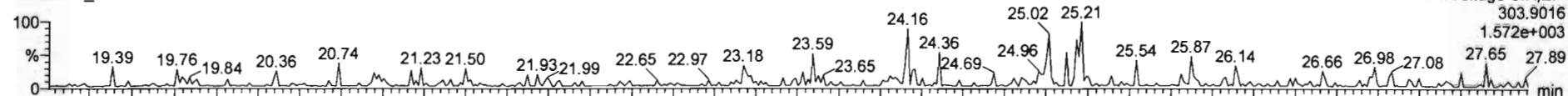
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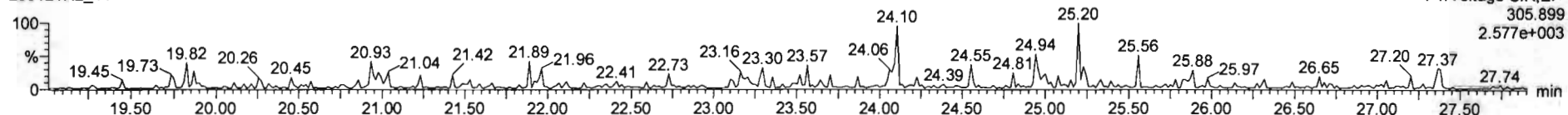
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**2,3,7,8-TCDF**

200121R2\_11

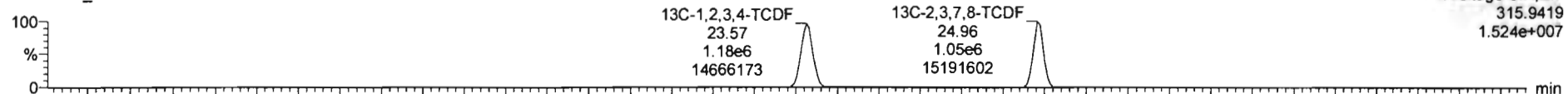


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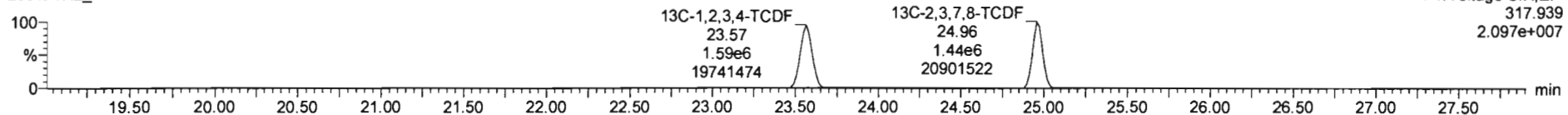


**13C-2,3,7,8-TCDF**

200121R2\_11

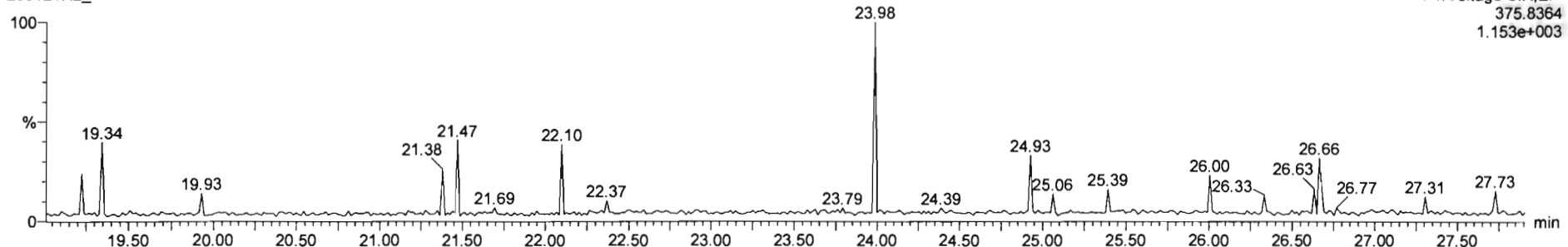


200121R2\_11



**DPE1**

200121R2\_11



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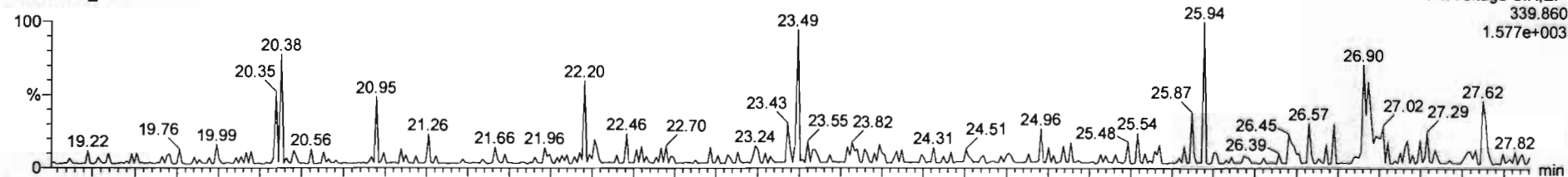
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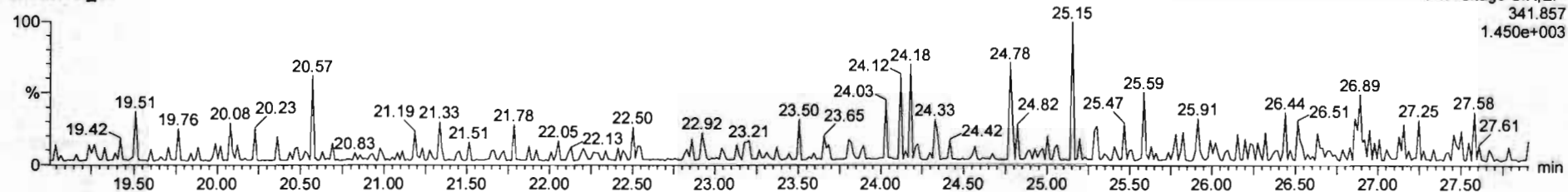
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1st Func. Penta-Furans

200121R2\_11

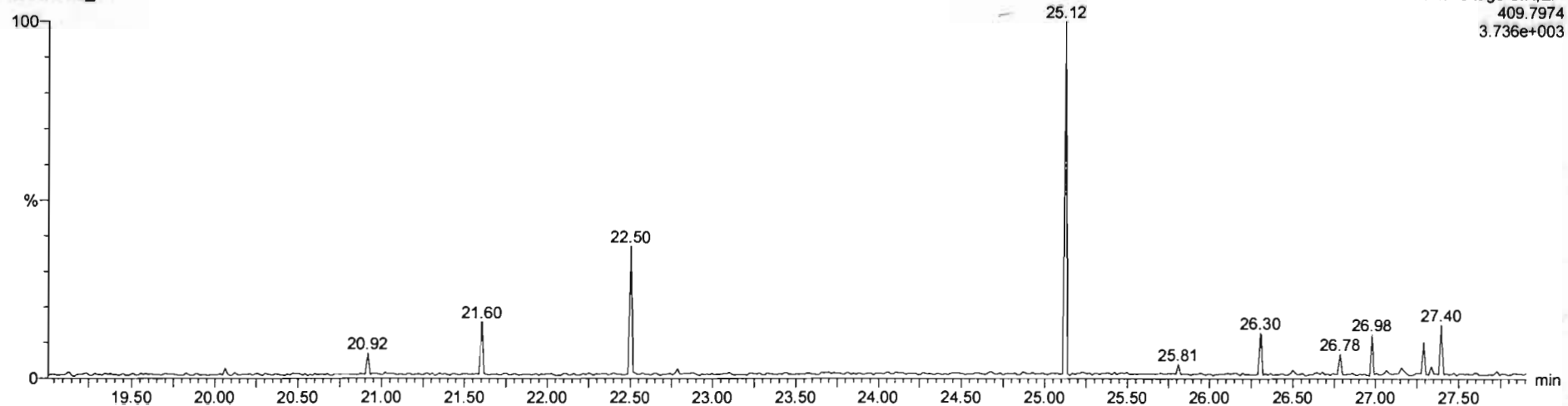


200121R2\_11



DPE6

200121R2\_11



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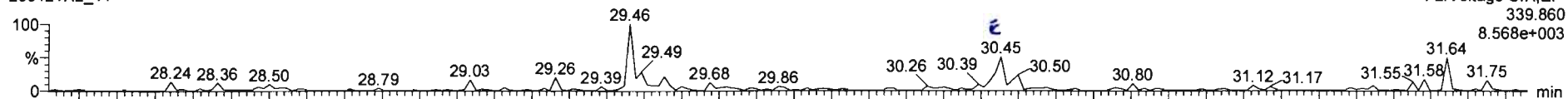
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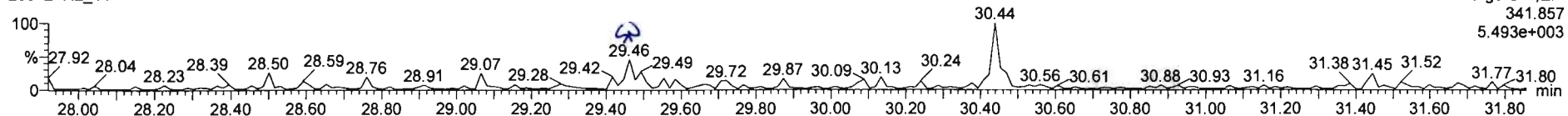
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**1,2,3,7,8-PeCDF**

200121R2\_11

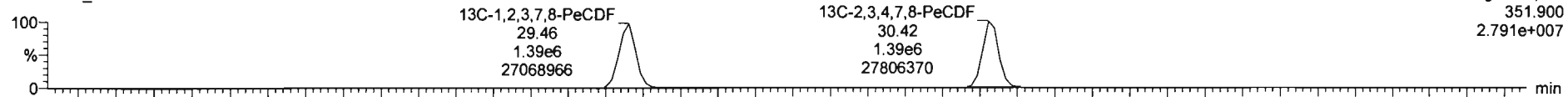


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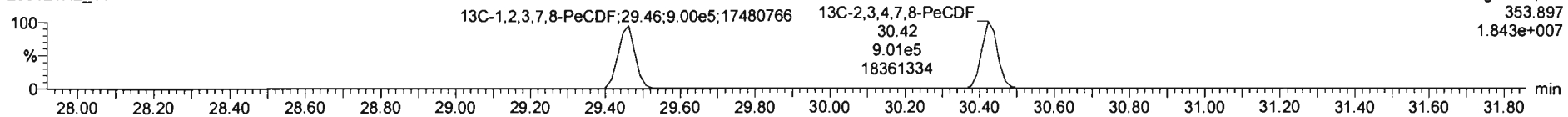


**13C-1,2,3,7,8-PeCDF**

200121R2\_11

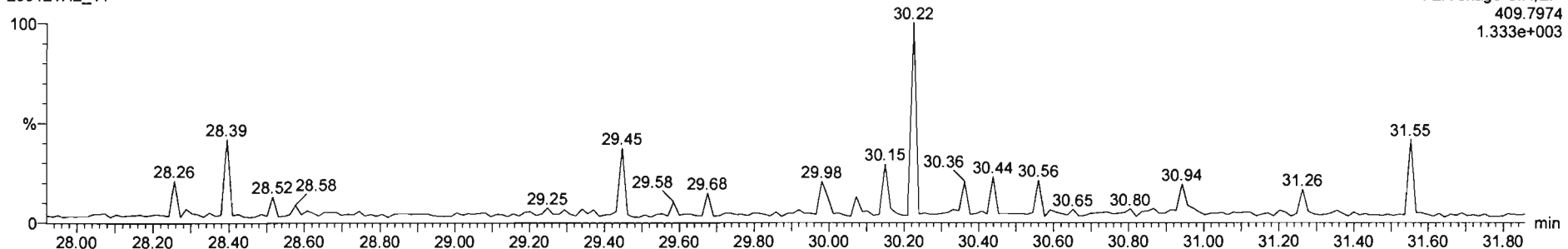


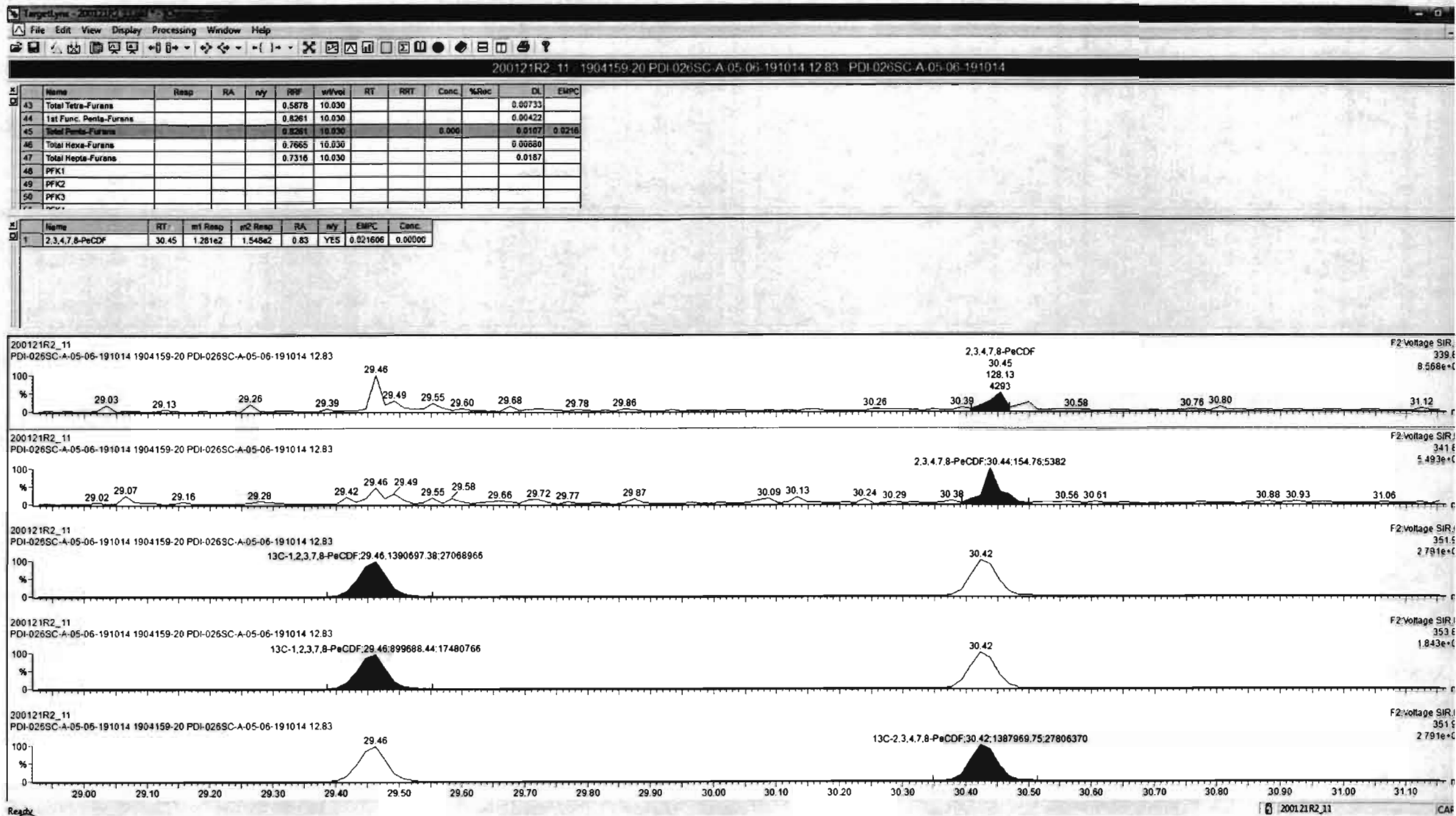
200121R2\_11



**DPE2**

200121R2\_11





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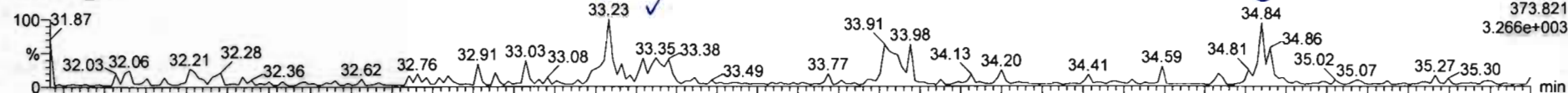
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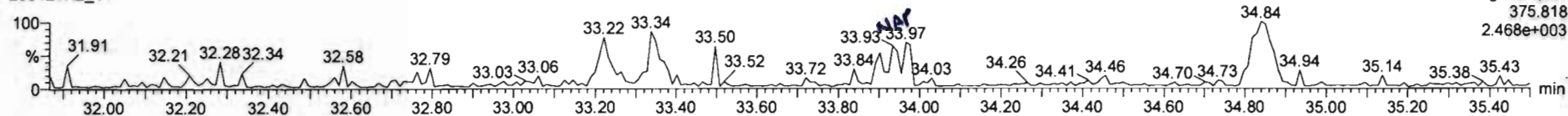
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**1,2,3,4,7,8-HxCDF**

200121R2\_11

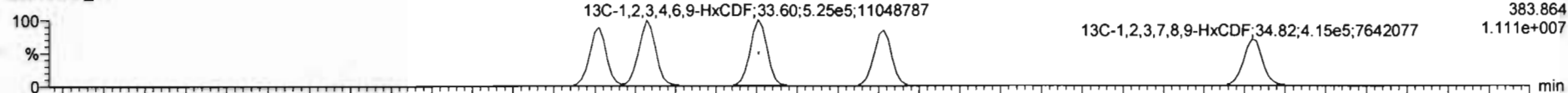


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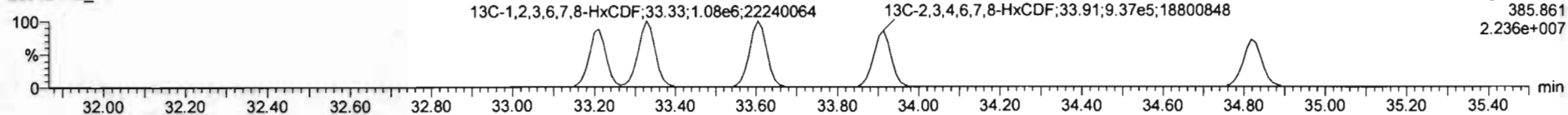


**13C-1,2,3,4,7,8-HxCDF**

200121R2\_11

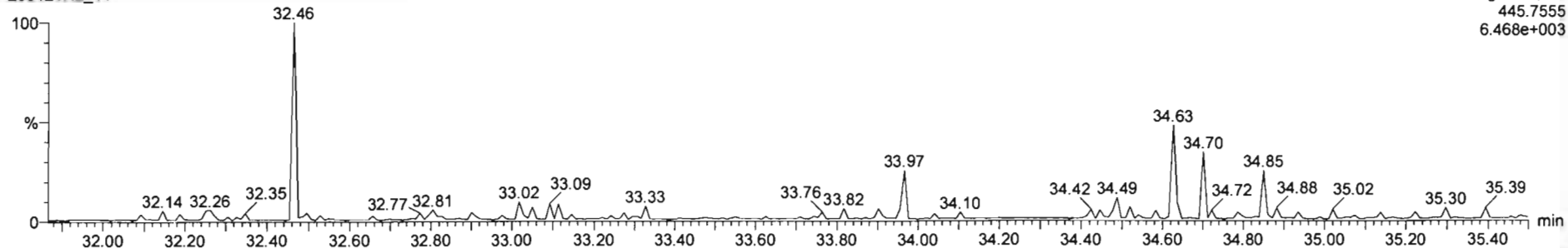


200121R2\_11

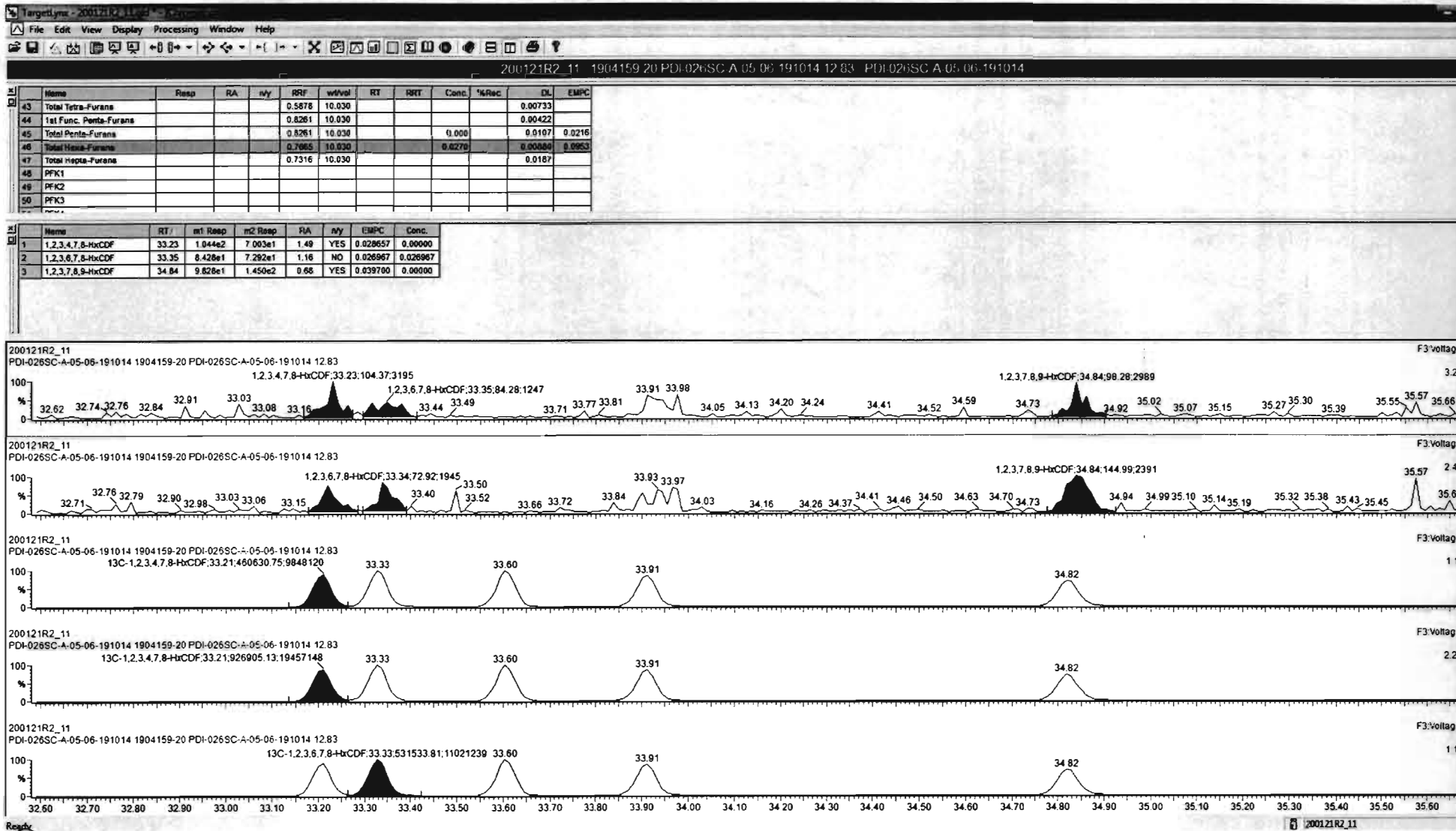


**DPE3**

200121R2\_11







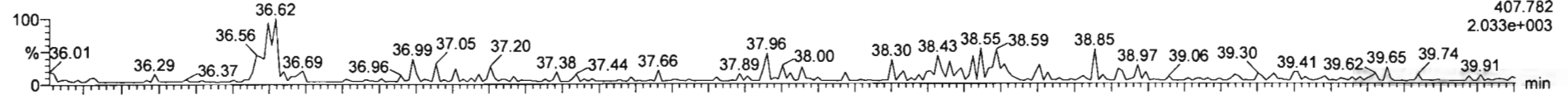
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

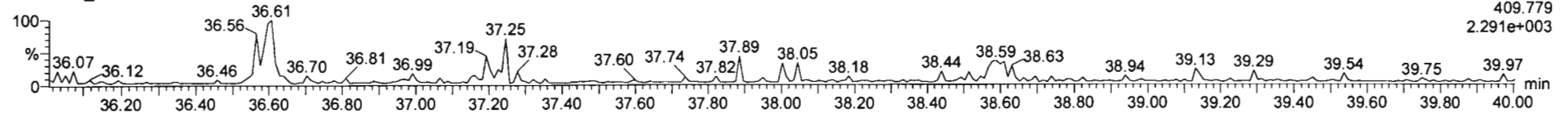
Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014

1,2,3,4,6,7,8-HpCDF

200121R2\_11

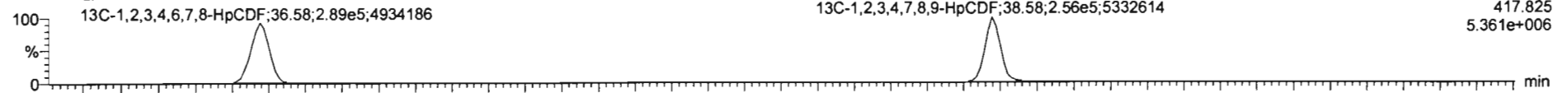


200121R2\_11

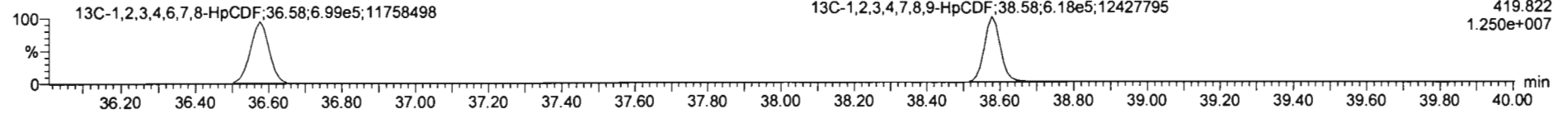


13C-1,2,3,4,6,7,8-HpCDF

200121R2\_11

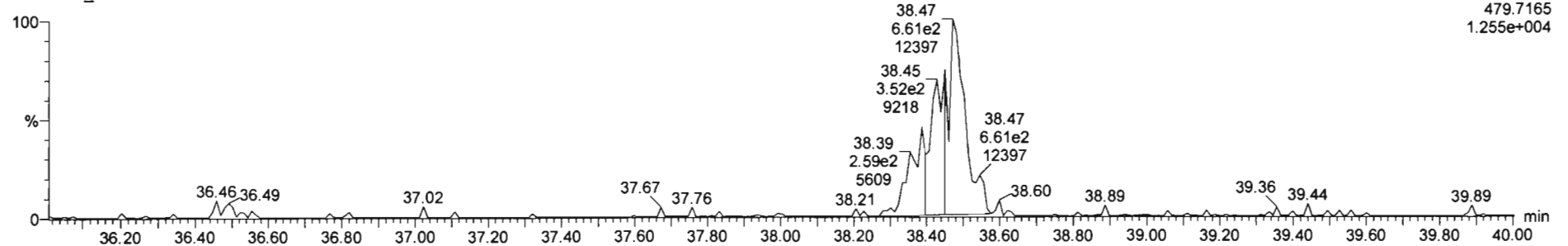


200121R2\_11



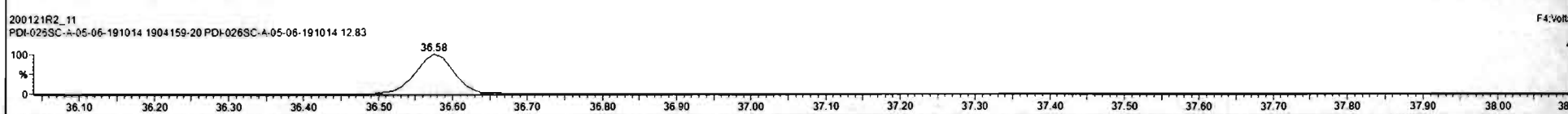
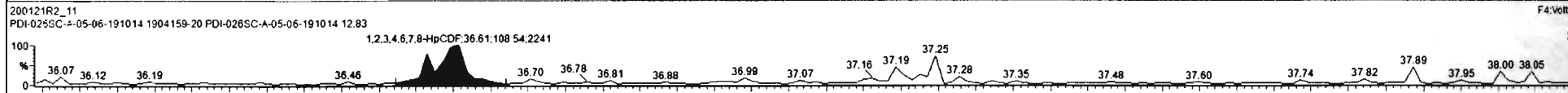
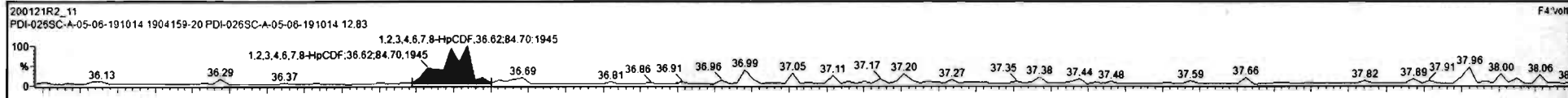
DPE4

200121R2\_11



#	Name	Resp	RA	n/y	RF	wtVol	RT	RRT	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.5878	10.030					0.00733	
44	1st Func. Penta-Furans				0.8261	10.030					0.00423	
45	Total Penta-Furans				0.8261	10.030			0.000		0.0107	0.0216
46	Total Hexa-Furans				0.7665	10.030			0.0270		0.00580	0.0953
47	Total Hepta-Furans				0.7318	10.030			0.000		0.0187	0.0458
48	PFK1											
49	PFK2											
50	PFK3											

#	Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1	1,2,3,4,6,7,8-HpCDF	36.82	8.470e1	1.085e2	0.78	YES	0.045830	0.00000



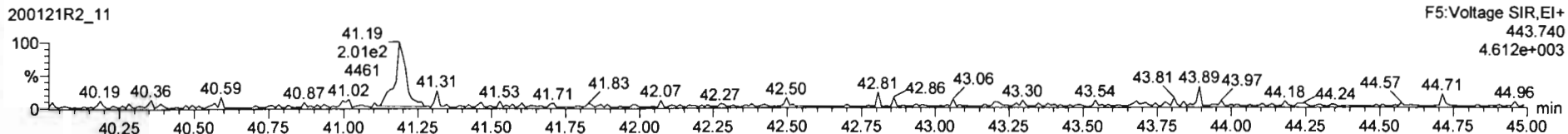
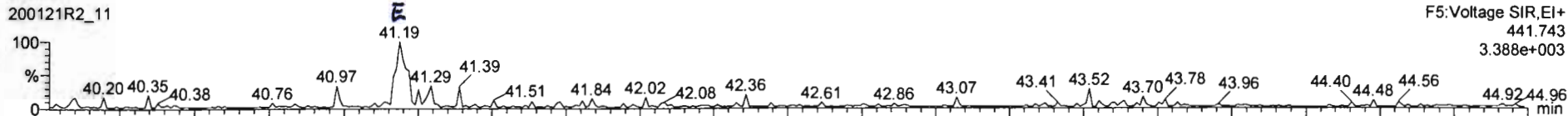
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

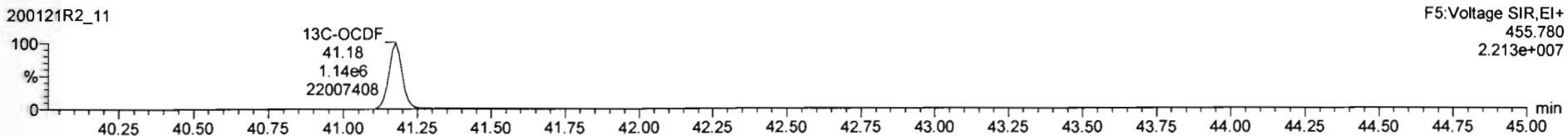
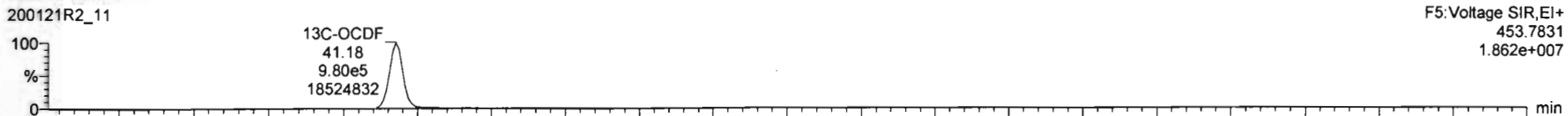
Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014

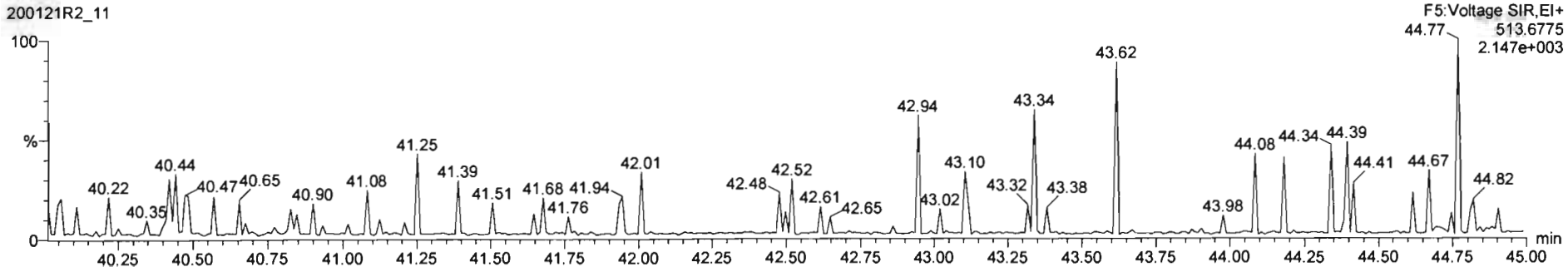
OCDF



13C-OCDF



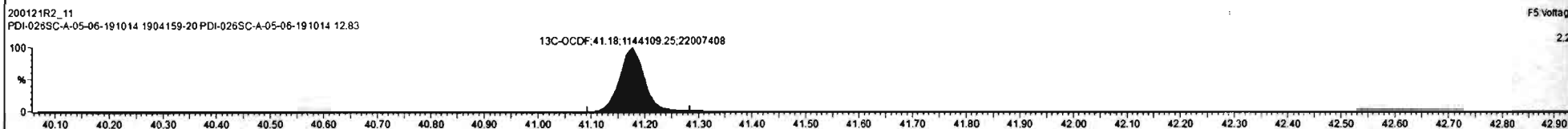
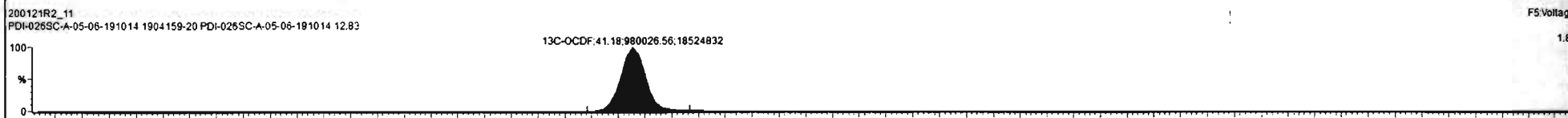
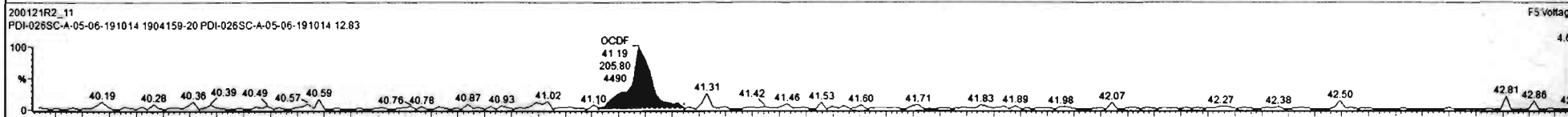
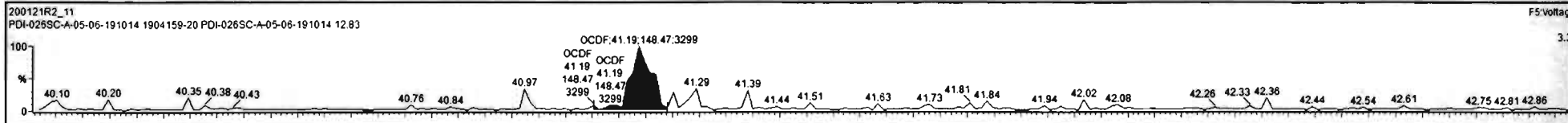
DPE5



200121R2\_11 - 1904159.20 PDI-026SC-A-05-06-191014 12.83 - PDI-026SC-A-05-06-191014

Name	Resp	RA	rvj	RF	wVol	RT	RRT	Conc	%Rec	DL	EMPC
17 OCDF	3.54e2	0.72	YES	0.0388	10.030	41.19	1.000	0.104		0.0219	0.0027
18 13C-2,3,7,8-TCDD	1.66e6	0.80	NO	1.1157	10.030	25.84	1.026	199	99.8	0.116	
19 13C-1,2,3,7,8-PeCDD	1.54e6	0.63	NO	0.8411	10.030	30.73	1.220	216	108	0.230	
20 13C-1,2,3,4,7,8-HxCDD	1.35e6	1.25	NO	0.9379	10.030	34.07	1.014	160	90.2	0.159	
21 13C-1,2,3,6,7,8-HxCDD	1.53e6	1.25	NO	1.0654	10.030	34.18	1.017	160	90.2	0.140	
22 13C-1,2,3,7,8,9-HxCDD	1.54e6	1.23	NO	1.0303	10.030	34.47	1.026	187	93.8	0.145	
23 13C-1,2,3,4,6,7,8-HpCDD	1.21e6	1.04	NO	0.7099	10.030	38.00	1.131	214	107	0.266	
24 13C-OCDD	2.18e6	0.88	NO	0.6010	10.030	40.98	1.220	455	114	0.247	

Name	RT	m1 Resp	m2 Resp	RA	rvj	EMPC	Conc.
1							



Ret: 40.10 40.20 40.30 40.40 40.50 40.60 40.70 40.80 40.90 41.00 41.10 41.20 41.30 41.40 41.50 41.60 41.70 41.80 41.90 42.00 42.10 42.20 42.30 42.40 42.50 42.60 42.70 42.80 42.90

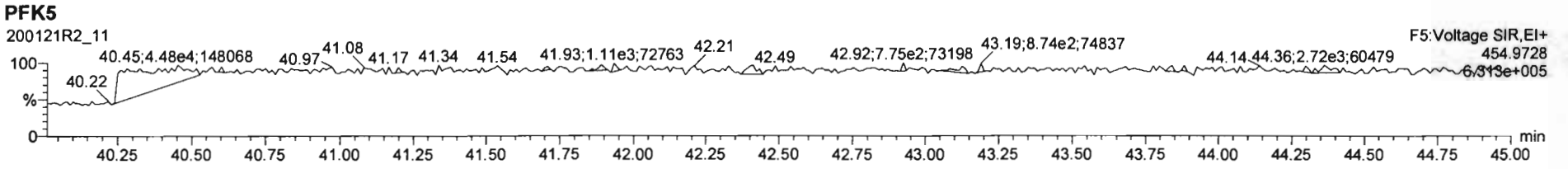
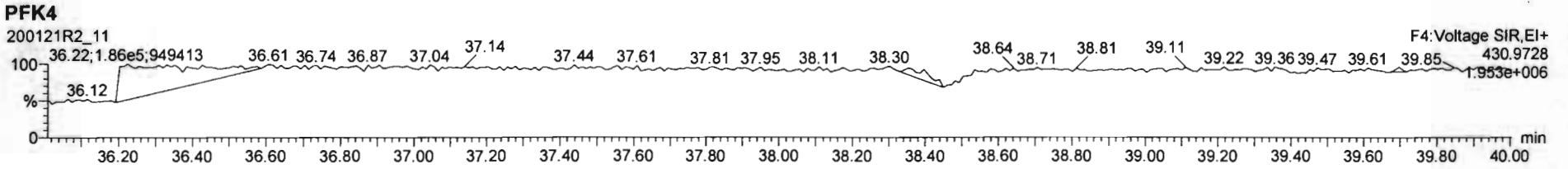
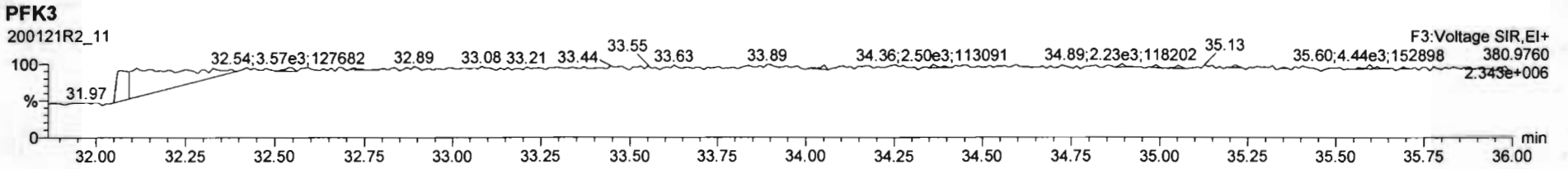
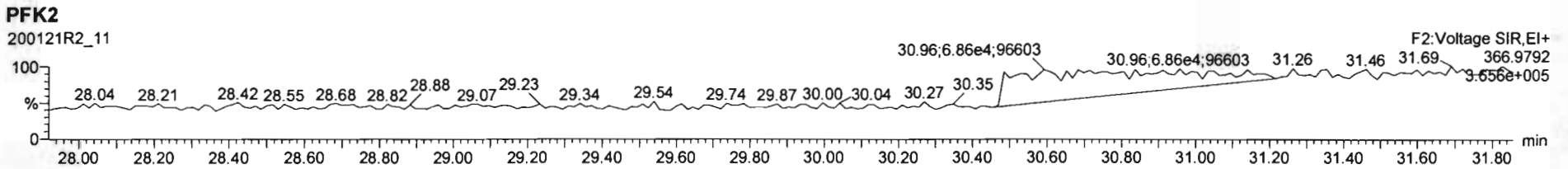
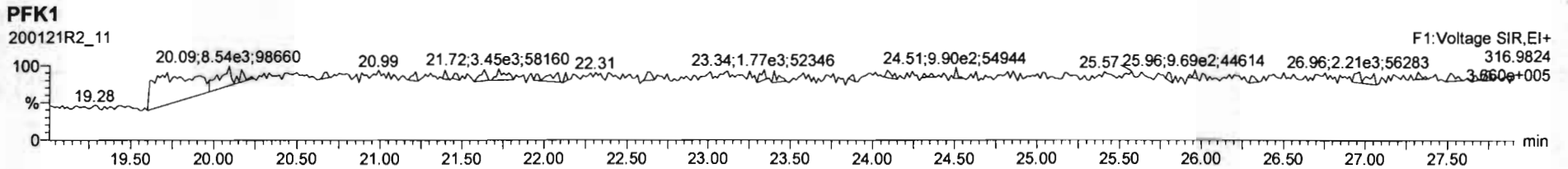
200121R2\_11

Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 10:47:26 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:47:50 Pacific Standard Time

Name: 200121R2\_11, Date: 22-Jan-2020, Time: 06:46:24, ID: 1904159-20 PDI-026SC-A-05-06-191014 12.83, Description: PDI-026SC-A-05-06-191014



## CONFIRMATION

Dataset: U:\VG11.PRO\Results\200131K1\200131K1-14.qld

Last Altered: Saturday, February 01, 2020 08:46:55 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:47:13 Pacific Standard Time

*Hz 2-1-2020*

*CT 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_14, Date: 31-Jan-2020, Time: 16:54:44, ID: 1904159-01RE1 PDI-013SC-A-02-03-190925 11.74, Description: PDI-013SC-A-02-03-190925

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	1.20e4	0.71	NO	1.04	10.123	16.40	1.8296		0.115
2	13C-2,3,7,8-TCDF	1.25e6	0.77	NO	1.02	10.123	16.39	114.91	58.2	0.182
3	13C-1,2,3,4-TCDF	2.11e6	0.79	NO	1.00	10.123	14.49	197.57	100	0.186
4	13C-1,2,3,4-TCDD	7.59e5	0.78	NO		10.123	15.06			

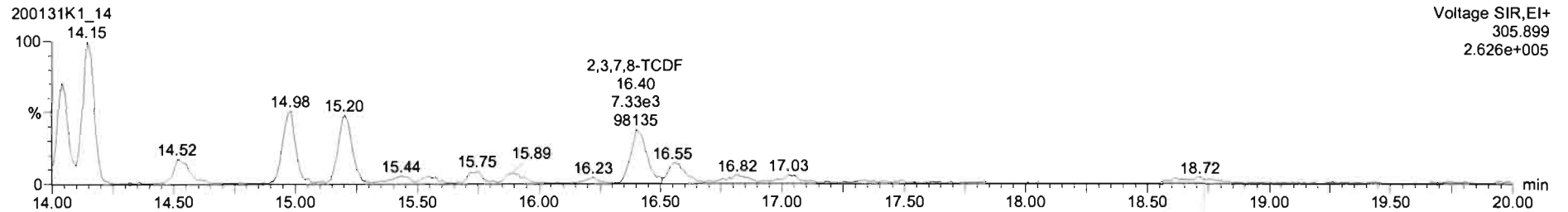
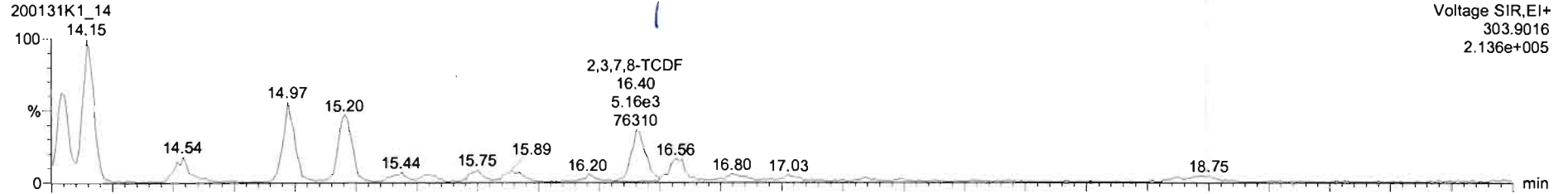


Dataset: Untitled

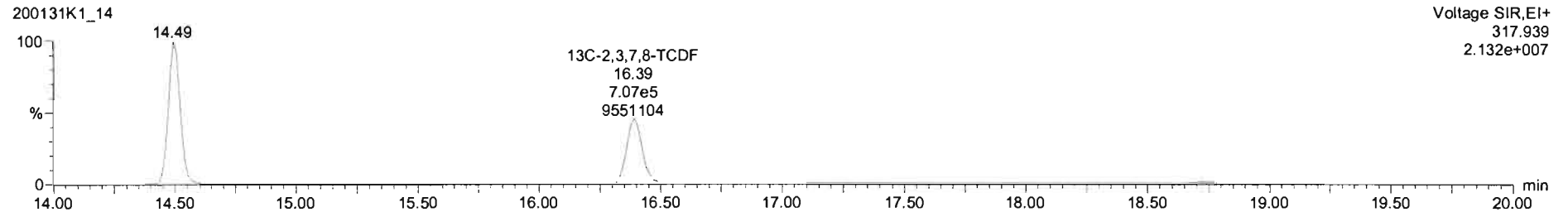
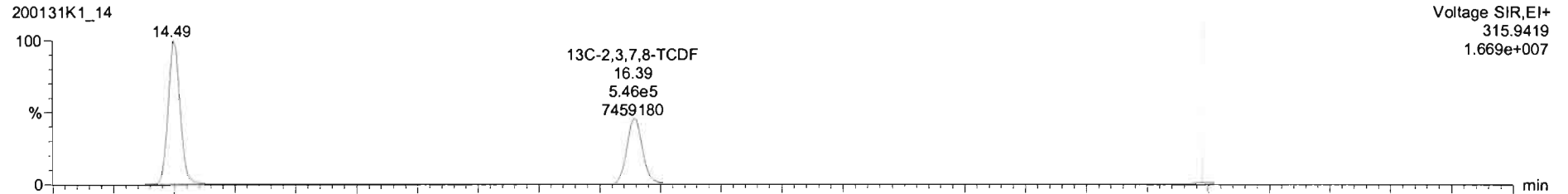
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_14, Date: 31-Jan-2020, Time: 16:54:44, ID: 1904159-01RE1 PDI-013SC-A-02-03-190925 11.74, Description: PDI-013SC-A-02-03-190925

**2,3,7,8-TCDF**

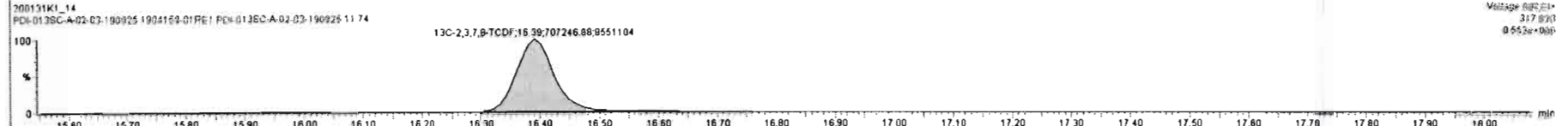
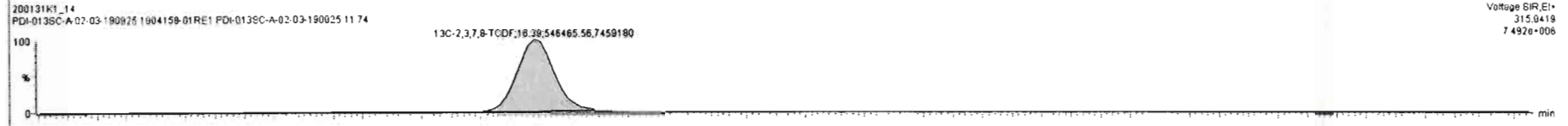
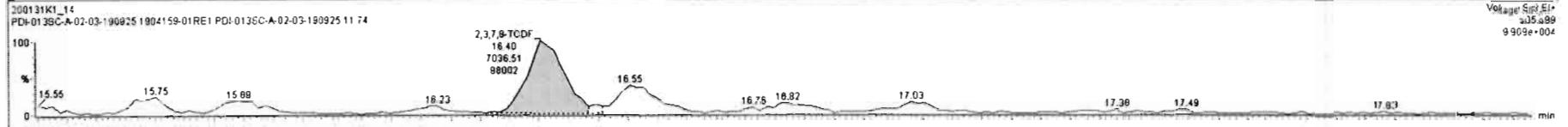
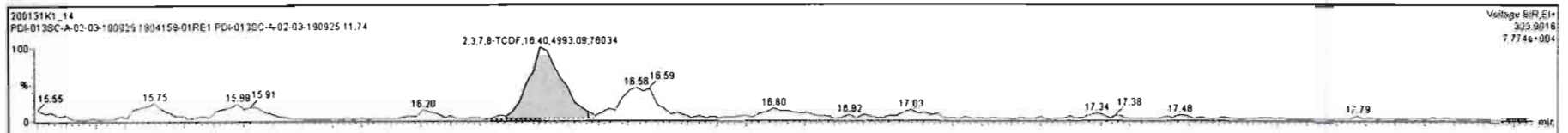


**13C-2,3,7,8-TCDF**



200131K1\_14: 1904159-01RE1 FID:0135C-A:02-03-190925 11:74 FID:0135C-A:02-03-190925

#	Name	Resp	RA	ntly	RRF	wtAval	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	1.20e4	0.71	NO	1.04	10.123	16.40	1.83		0.115
2	13C-2,3,7,8-TCDF	1.25e6	0.77	NO	1.02	10.123	16.39	115	58.2	0.182
3	13C-1,2,3,4-TCDF	2.11e6	0.79	NO	1.00	10.123	14.49	198	100	0.186
4	13C-1,2,3,4-TCDD	7.59e5	0.78	NO		10.123	15.06			
5	SIPK1						1.000			
6	DPE1						1.000			



Dataset: Untitled

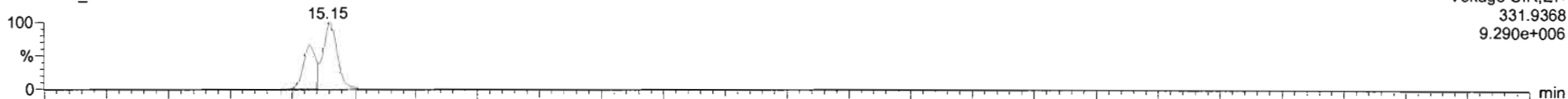
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time

Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

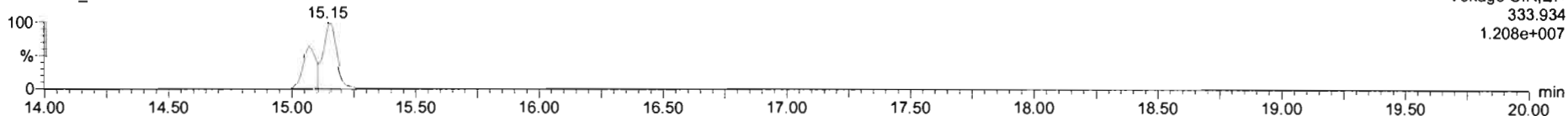
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### 13C-1,2,3,4-TCDD

200131K1\_14

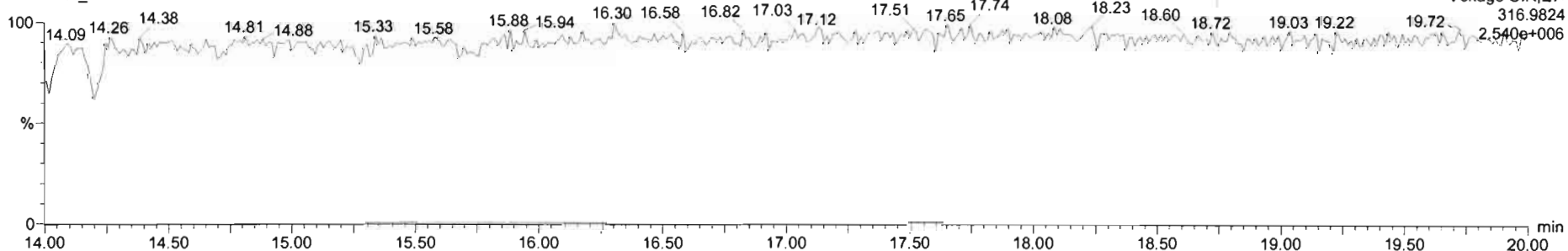


200131K1\_14



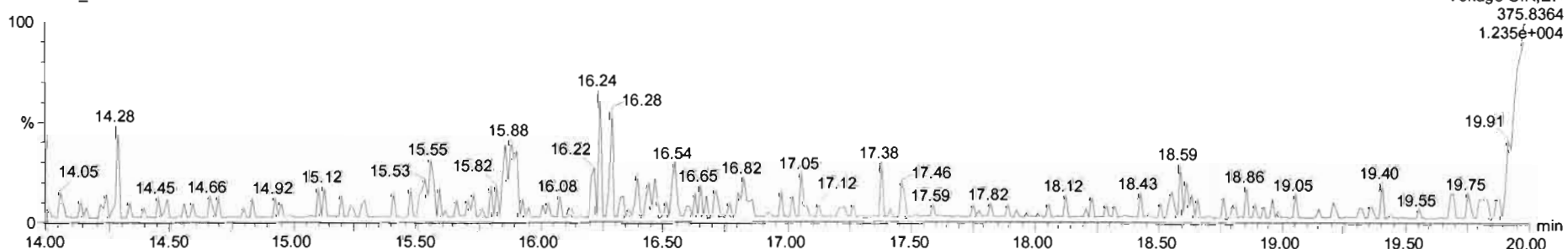
### PFK1

200131K1\_14



### DPE1

200131K1\_14



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-13.qld

Last Altered: Saturday, February 01, 2020 08:45:34 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:45:51 Pacific Standard Time

*HZ 2-1-2020*

*C1 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_13, Date: 31-Jan-2020, Time: 16:23:24, ID: B0A0001-DUP1 Duplicate, Description: Duplicate

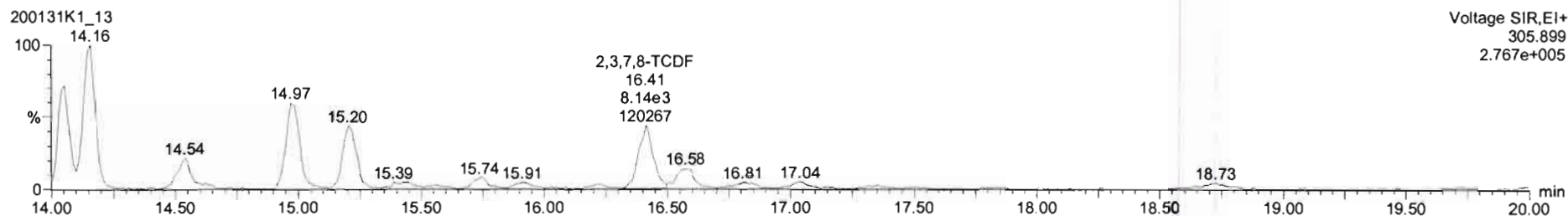
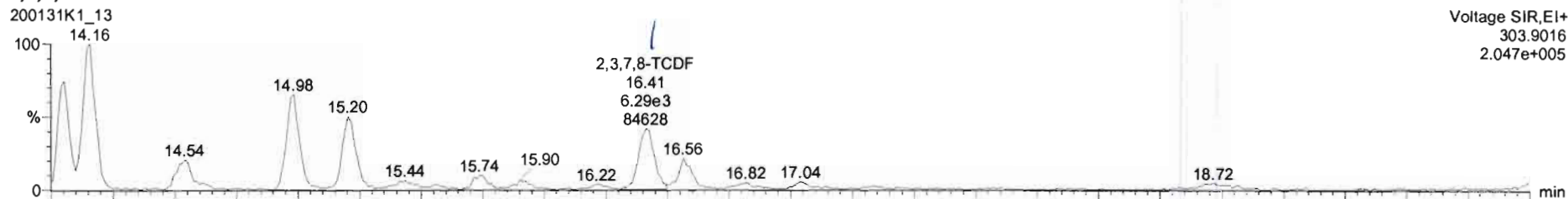
#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	1.44e4	0.77	NO	1.04	10.175 ✓	16.41	1.6751		0.112
2	2 13C-2,3,7,8-TCDF	1.63e6	0.79	NO	1.02	10.175	16.40	110.25	56.1	0.147
3	3 13C-1,2,3,4-TCDF	2.85e6	0.78	NO	1.00	10.175	14.51	196.57	100	0.150
4	4 13C-1,2,3,4-TCDD	1.12e6	0.79	NO		10.175	15.08			

Dataset: Untitled

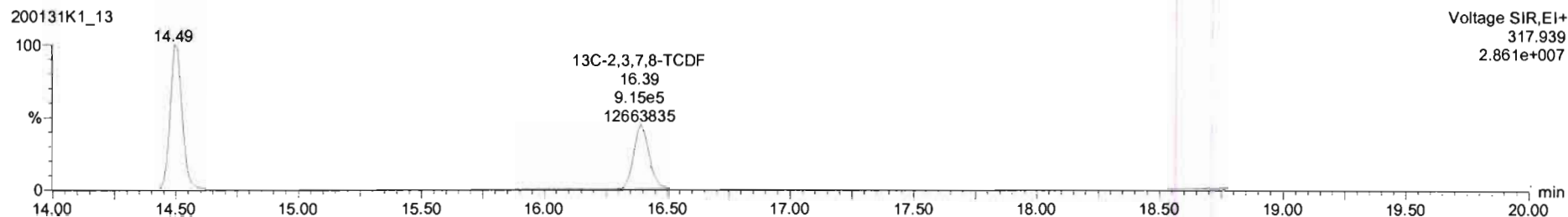
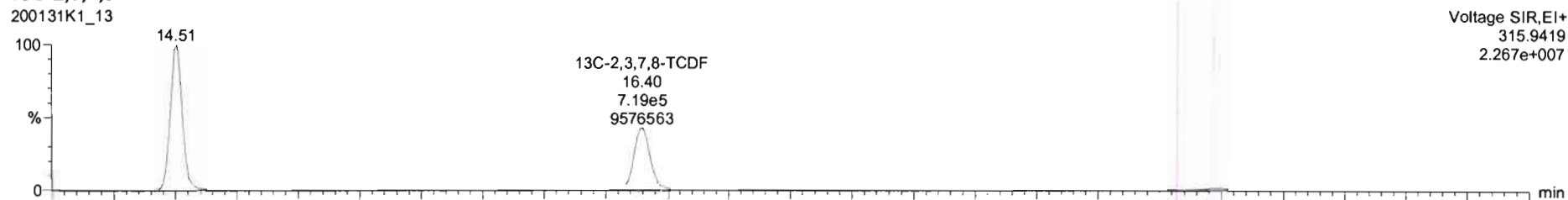
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_13, Date: 31-Jan-2020, Time: 16:23:24, ID: B0A0001-DUP1 Duplicate, Description: Duplicate

2,3,7,8-TCDF



13C-2,3,7,8-TCDF



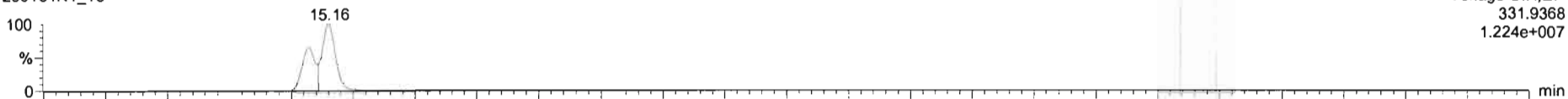
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

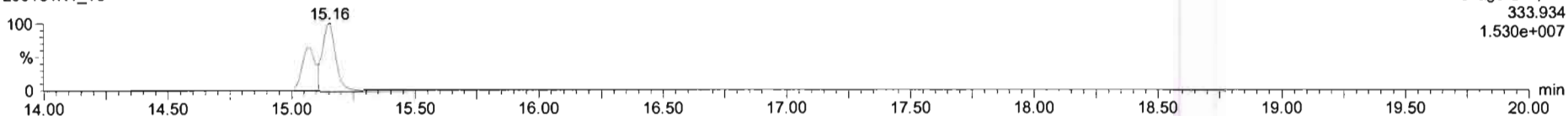
Name: 200131K1\_13, Date: 31-Jan-2020, Time: 16:23:24, ID: B0A0001-DUP1 Duplicate, Description: Duplicate

**13C-1,2,3,4-TCDD**

200131K1\_13

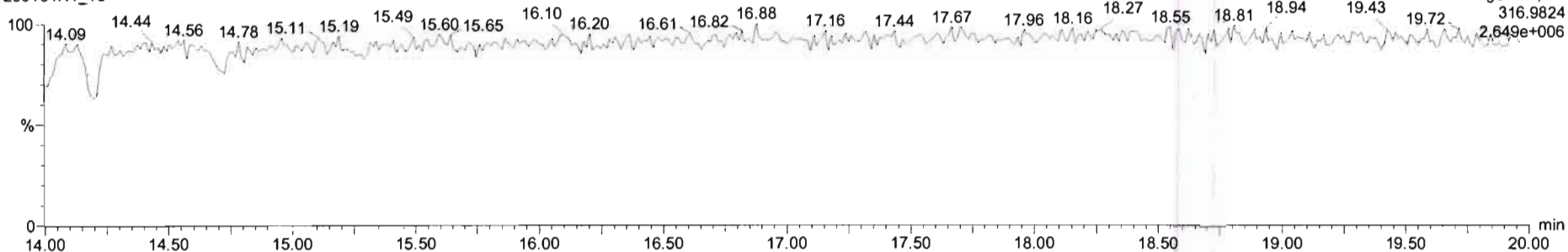


200131K1\_13



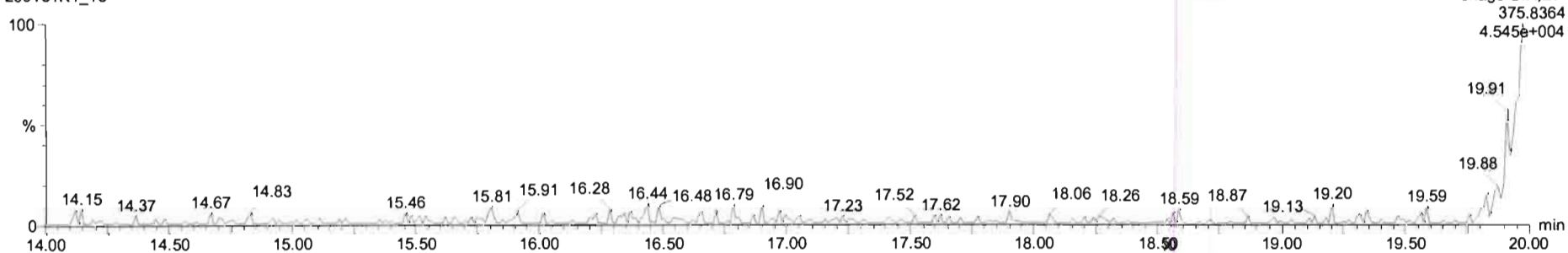
**PFK1**

200131K1\_13



**DPE1**

200131K1\_13



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-15.qld

Last Altered: Saturday, February 01, 2020 08:48:50 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:48:56 Pacific Standard Time

*Feb 1 2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_15, Date: 31-Jan-2020, Time: 17:26:05, ID: 1904159-03RE1 PDI-015SC-A-07-08-191012 12.73, Description: PDI-015SC-A-07-08-191012

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	9.89e3	0.67	NO	1.04	10.105 ✓	16.56	1.7631		0.237
2	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	1.02	10.105	16.54	74.931	37.9	0.189
3	13C-1,2,3,4-TCDF	2.77e6	0.79	NO	1.00	10.105	14.66	197.91	100	0.193

Dataset: Untitled

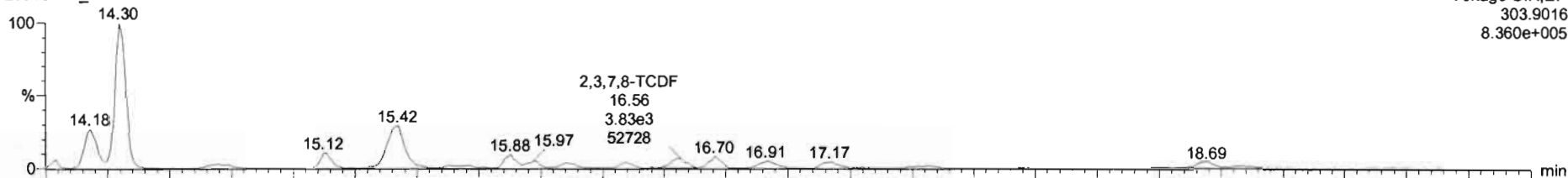
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_15, Date: 31-Jan-2020, Time: 17:26:05, ID: 1904159-03RE1 PDI-015SC-A-07-08-191012 12.73, Description: PDI-015SC-A-07-08-191012

2,3,7,8-TCDF

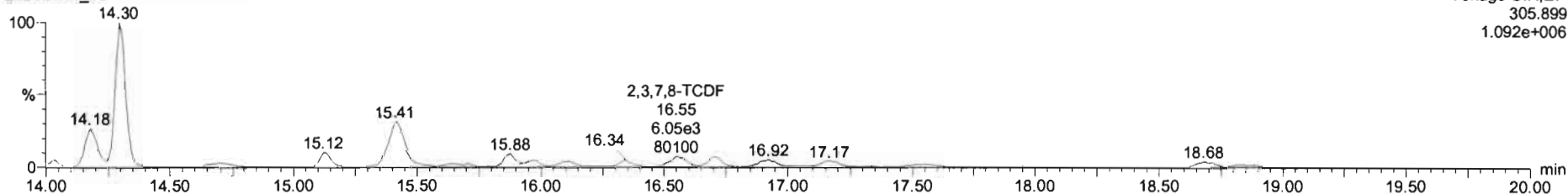
200131K1\_15

Voltage SIR,EI+  
303.9016  
8.360e+005



200131K1\_15

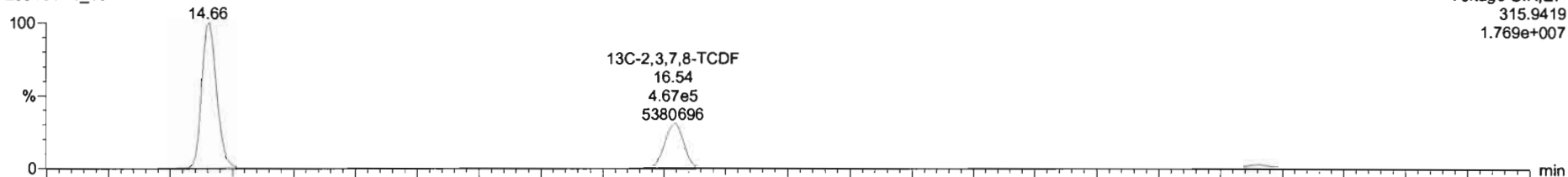
Voltage SIR,EI+  
305.899  
1.092e+006



13C-2,3,7,8-TCDF

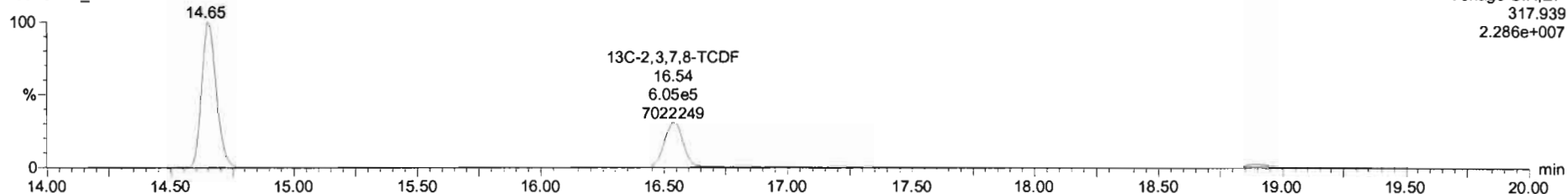
200131K1\_15

Voltage SIR,EI+  
315.9419  
1.769e+007



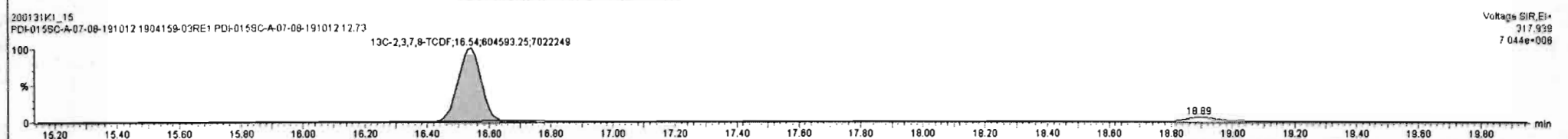
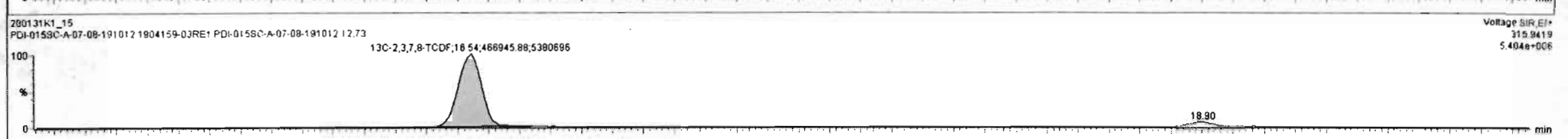
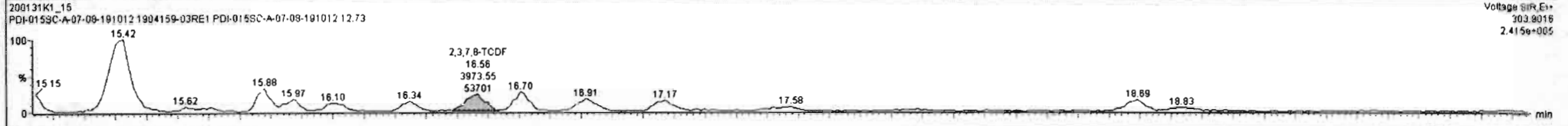
200131K1\_15

Voltage SIR,EI+  
317.939  
2.286e+007





#	Name	Resp	RA	n/y	RRF	wlVol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	9.89e3	0.57	NO	1.04	10.105	16.56	1.78		0.237
2	13C-2,3,7,8-TCDF	1.07e6	0.77	NO	1.02	10.105	16.54	74.9	37.9	0.189
3	13C-1,2,3,4-TCDF	2.77e6	0.79	NO	1.00	10.105	14.66	198	100	0.193
4	13C-1,2,3,4-TCDD			NO		10.105				
5	PPK1					1.000				
6	DPE1					1.000				



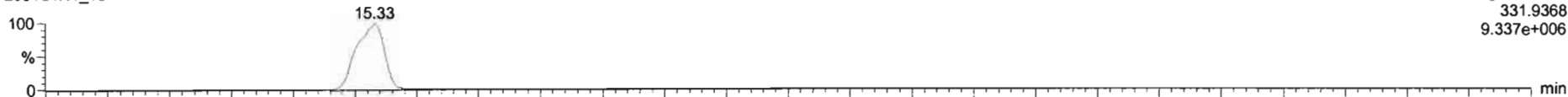
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

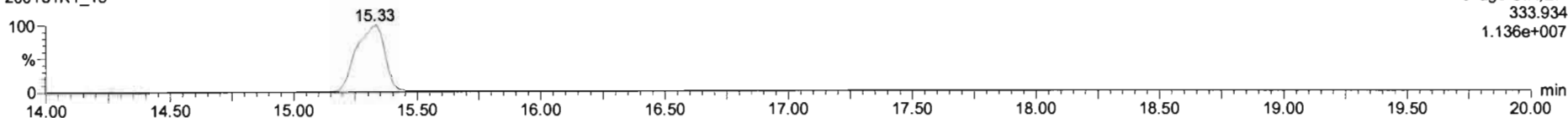
Name: 200131K1\_15, Date: 31-Jan-2020, Time: 17:26:05, ID: 1904159-03RE1 PDI-015SC-A-07-08-191012 12.73, Description: PDI-015SC-A-07-08-191012

13C-1,2,3,4-TCDD

200131K1\_15

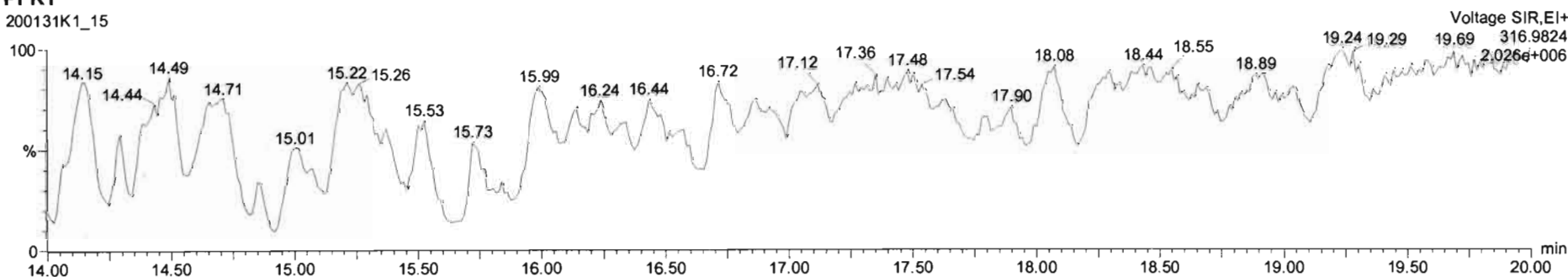


200131K1\_15



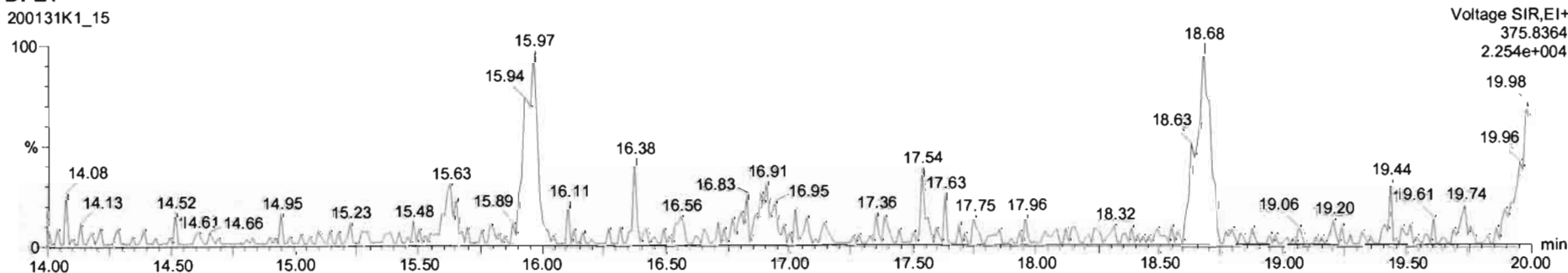
PFK1

200131K1\_15



DPE1

200131K1\_15



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-25.qld

Last Altered: Saturday, February 01, 2020 08:59:49 Pacific Standard Time

Printed: Saturday, February 01, 2020 09:00:26 Pacific Standard Time

*Hc 2-1-2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_25, Date: 31-Jan-2020, Time: 22:41:56, ID: 1904159-05RE1 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1 2,3,7,8-TCDF	2.65e5	0.77	NO	1.04	10.076	16.41	29.986		0.125
2 13C-2,3,7,8-TCDF	1.69e6	0.78	NO	1.02	10.076	16.40	165.39	83.3	0.210
3 13C-1,2,3,4-TCDF	1.98e6	0.80	NO	1.00	10.076	14.49	198.49	100	0.215
4 13C-1,2,3,4-TCDD	1.11e6	0.78	NO		10.076	15.06			

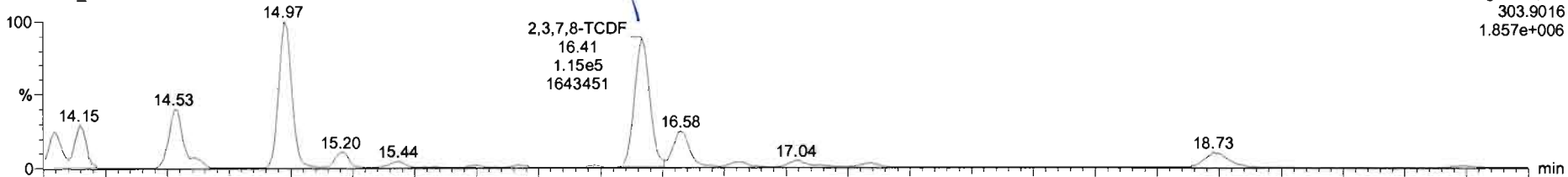
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

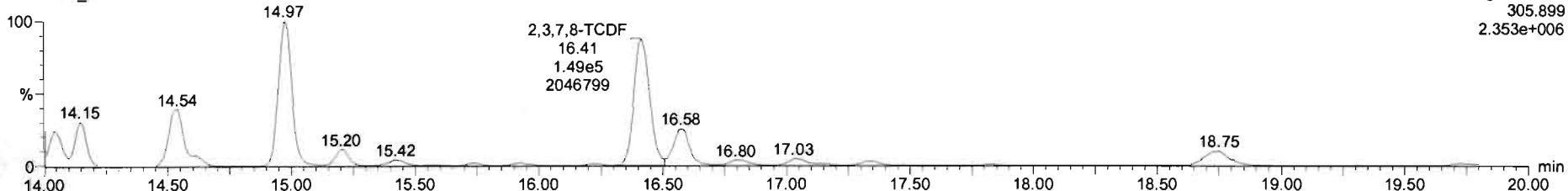
Name: 200131K1\_25, Date: 31-Jan-2020, Time: 22:41:56, ID: 1904159-05RE1 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

**2,3,7,8-TCDF**

200131K1\_25

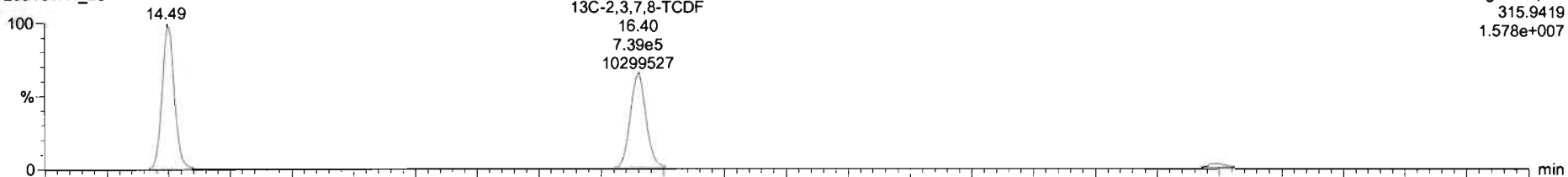


200131K1\_25

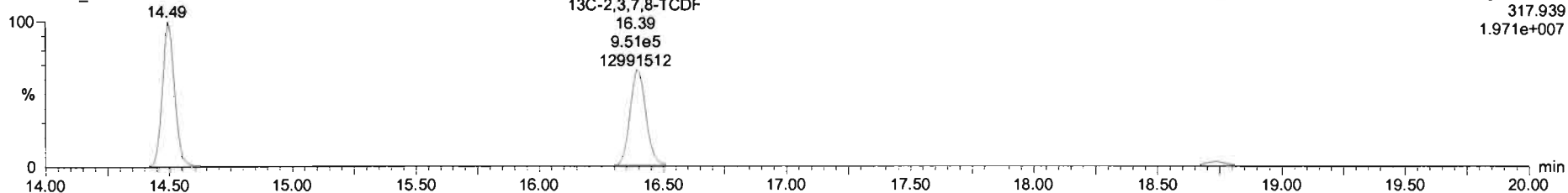


**13C-2,3,7,8-TCDF**

200131K1\_25



200131K1\_25



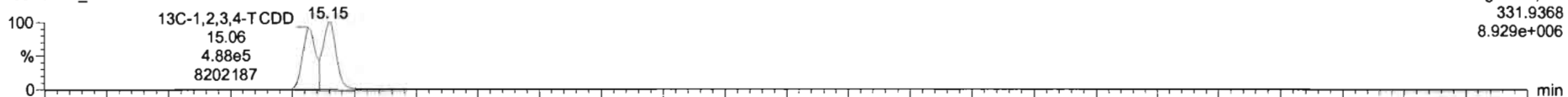
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

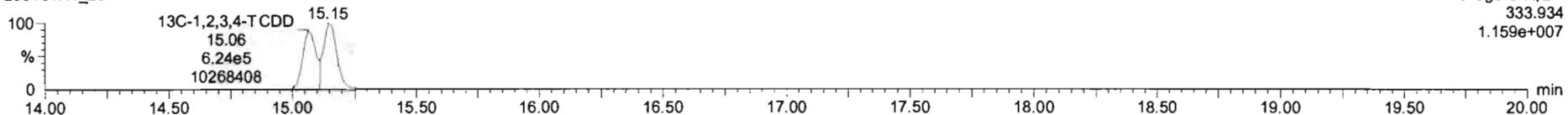
Name: 200131K1\_25, Date: 31-Jan-2020, Time: 22:41:56, ID: 1904159-05RE1 PDI-016SC-A-00-01-191009 18.36, Description: PDI-016SC-A-00-01-191009

**13C-1,2,3,4-TCDD**

200131K1\_25

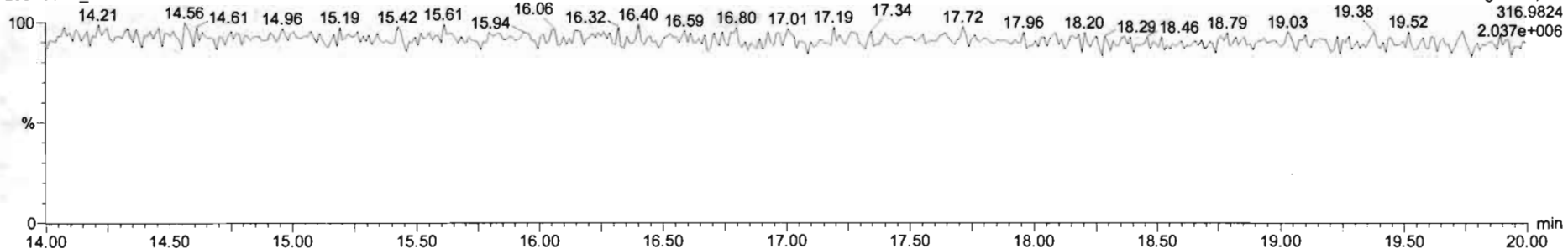


200131K1\_25



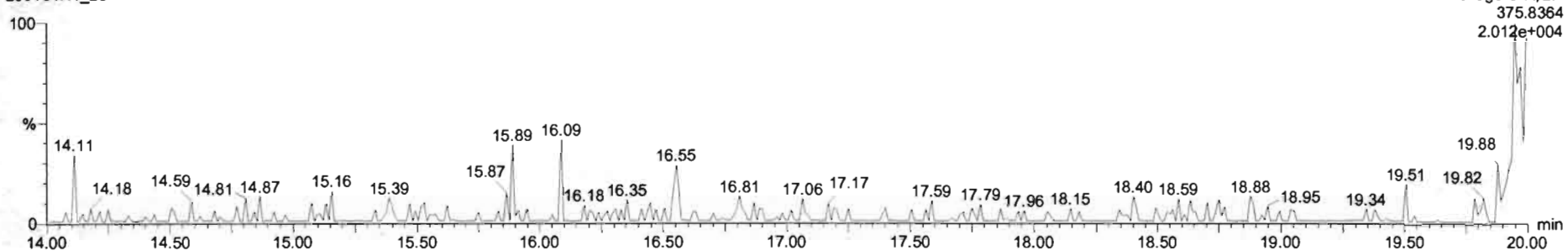
**PFK1**

200131K1\_25



**DPE1**

200131K1\_25



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-16.qld

Last Altered: Saturday, February 01, 2020 08:49:47 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:50:07 Pacific Standard Time

*H2 1-2020*

*C7 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_16, Date: 31-Jan-2020, Time: 17:57:25, ID: 1904159-06RE1 PDI-016SC-A-01-02-191009 13.51, Description: PDI-016SC-A-01-02-191009

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	1.23e4	0.79	NO	1.04	10.028	16.39	1.3879		0.115
2	13C-2,3,7,8-TCDF	1.71e6	0.81	NO	1.02	10.028	16.37	189.02	94.8	0.258
3	13C-1,2,3,4-TCDF	1.76e6	0.80	NO	1.00	10.028	14.47	199.43	100	0.264
4	13C-1,2,3,4-TCDD	1.19e6	0.81	NO		10.028	15.12			

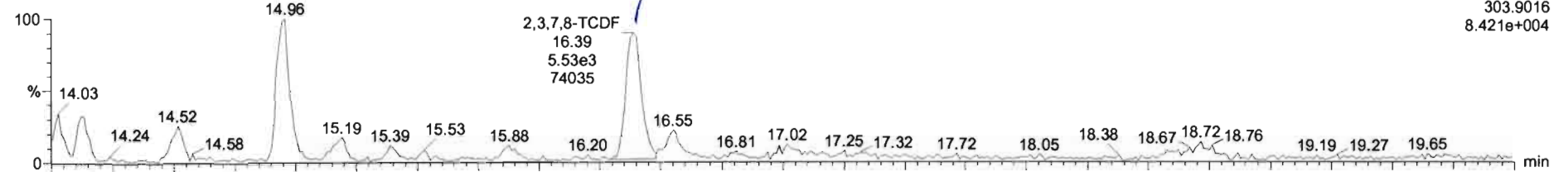
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

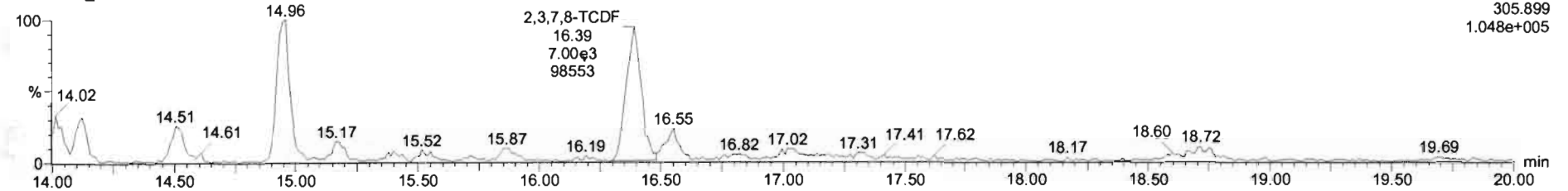
Name: 200131K1\_16, Date: 31-Jan-2020, Time: 17:57:25, ID: 1904159-06RE1 PDI-016SC-A-01-02-191009 13.51, Description: PDI-016SC-A-01-02-191009

**2,3,7,8-TCDF**

200131K1\_16

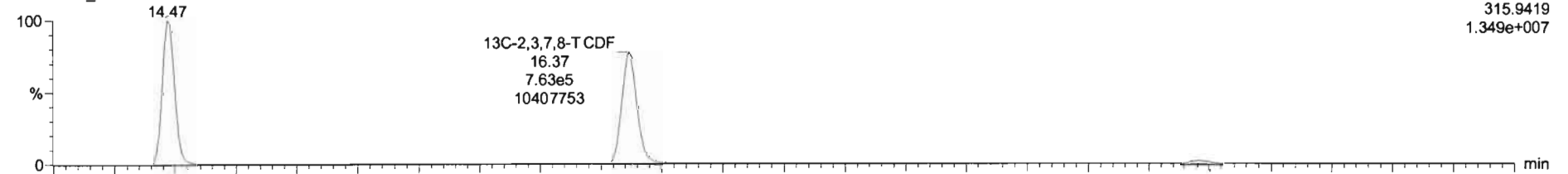


200131K1\_16

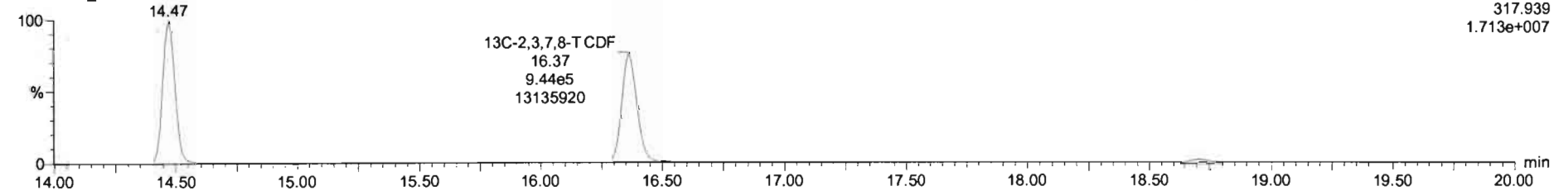


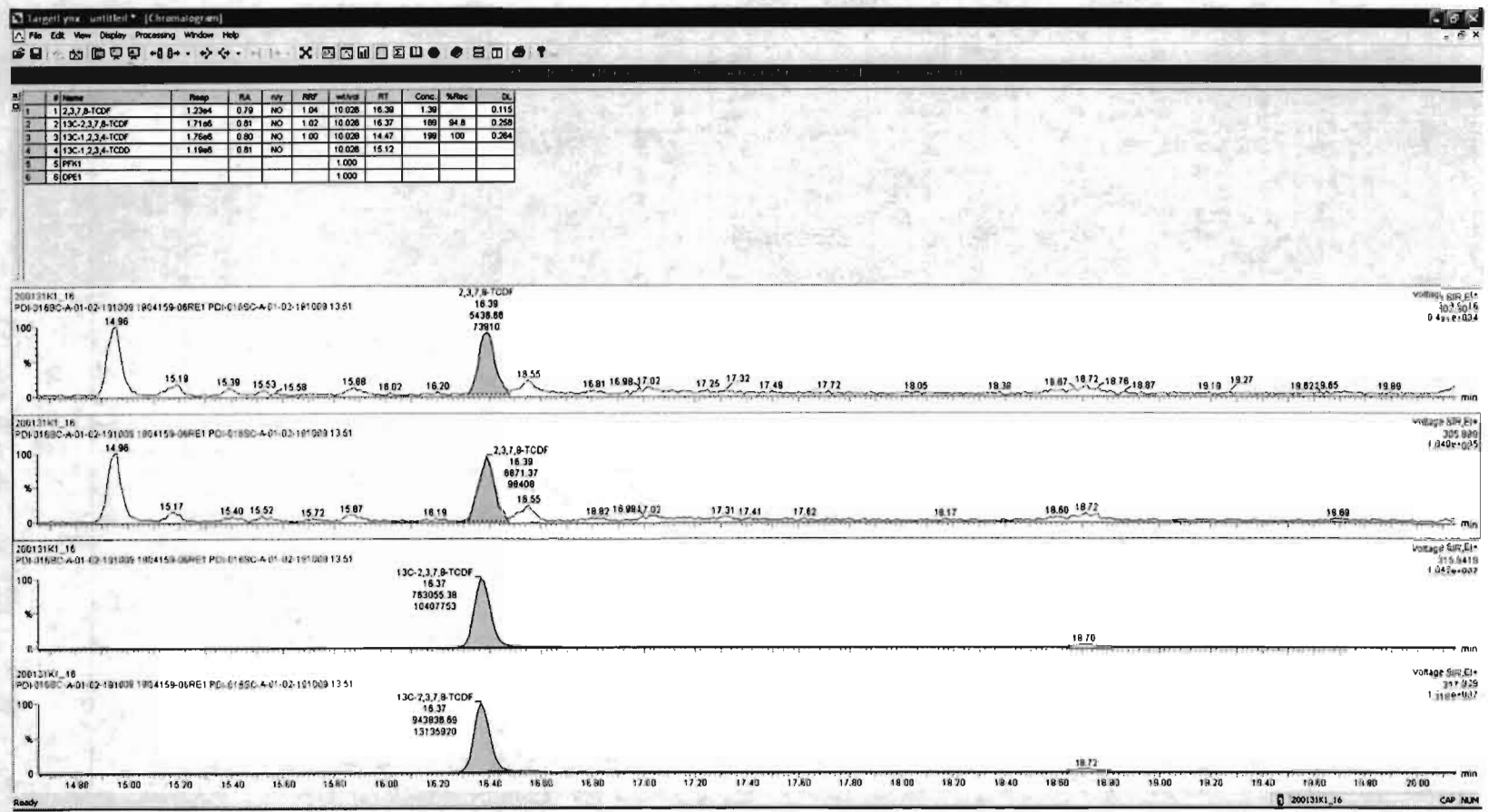
**13C-2,3,7,8-TCDF**

200131K1\_16



200131K1\_16







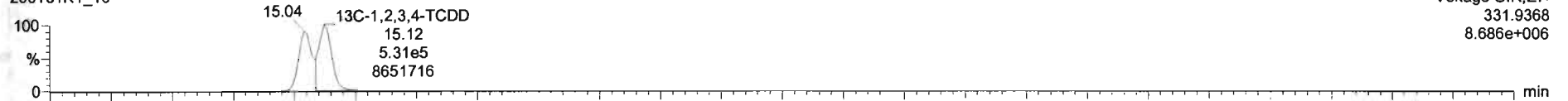
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

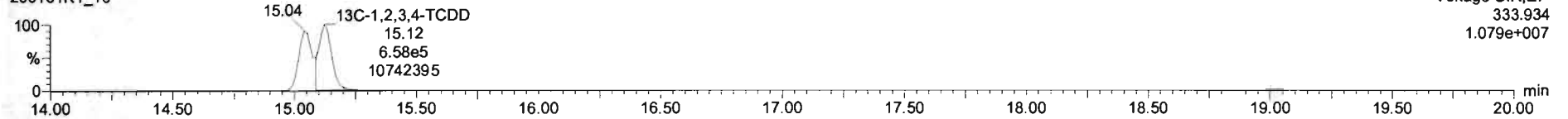
Name: 200131K1\_16, Date: 31-Jan-2020, Time: 17:57:25, ID: 1904159-06RE1 PDI-016SC-A-01-02-191009 13.51, Description: PDI-016SC-A-01-02-191009

13C-1,2,3,4-TCDD

200131K1\_16

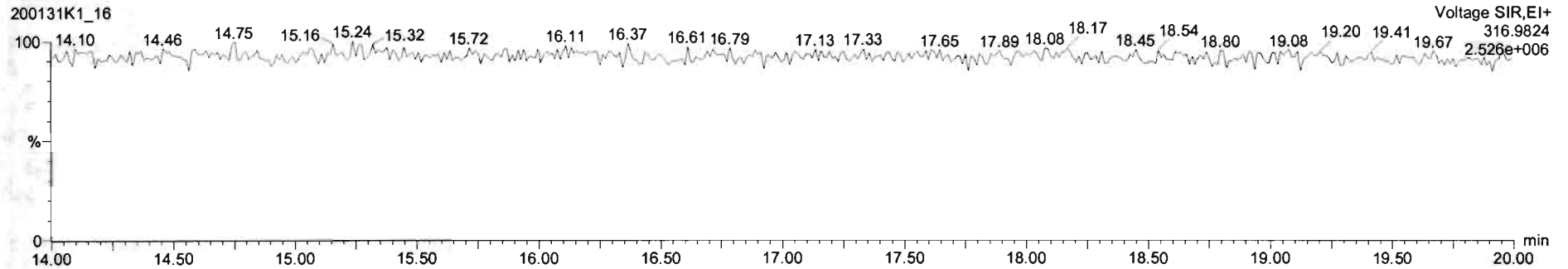


200131K1\_16



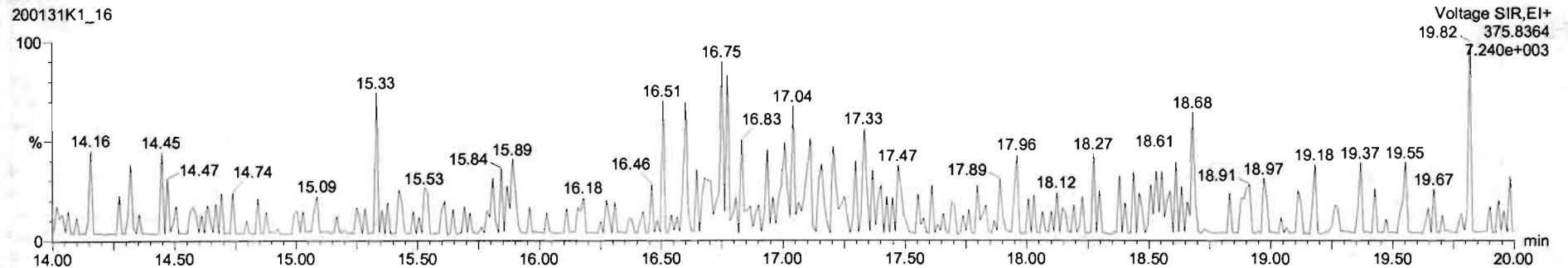
PFK1

200131K1\_16



DPE1

200131K1\_16



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-17.qld

Last Altered: Saturday, February 01, 2020 08:50:21 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:51:11 Pacific Standard Time

*HL 2-1-2020*

*CT 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_17, Date: 31-Jan-2020, Time: 18:30:13, ID: 1904159-07RE1 PDI-018SC-A-06-07-190926 18.14, Description: PDI-018SC-A-06-07-190926

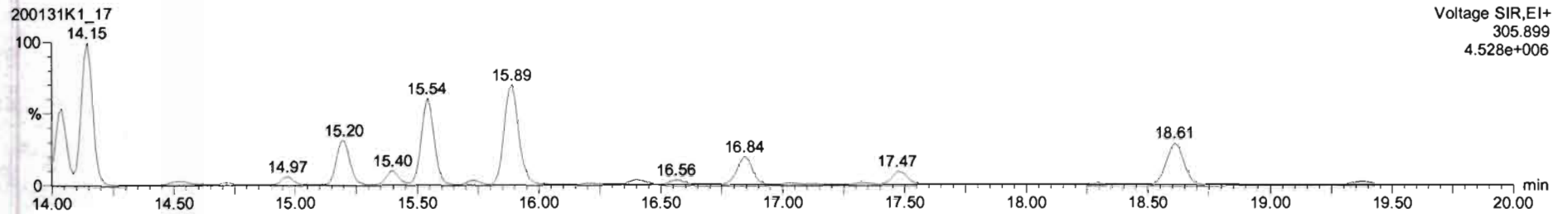
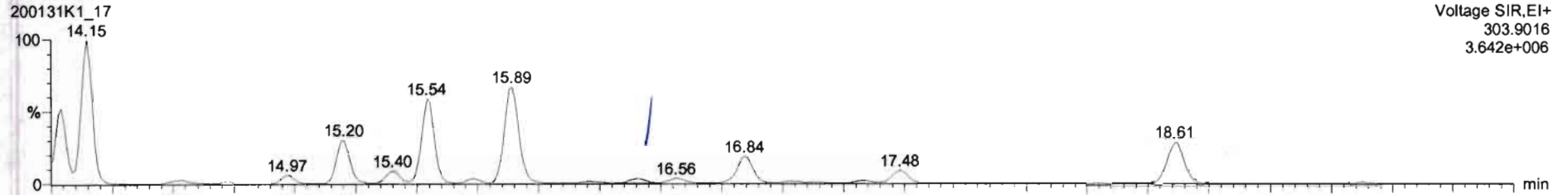
#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	1.81e4	0.83	NO	1.04	10.074	16.41	1.5418		0.182
2	2 13C-2,3,7,8-TCDF	2.25e6	0.78	NO	1.02	10.074	16.39	159.91	80.5	0.181
3	3 13C-1,2,3,4-TCDF	2.73e6	0.79	NO	1.00	10.074	14.49	198.53	100	0.186
4	4 13C-1,2,3,4-TCDD	1.43e6	0.79	NO		10.074	15.06			

Dataset: Untitled

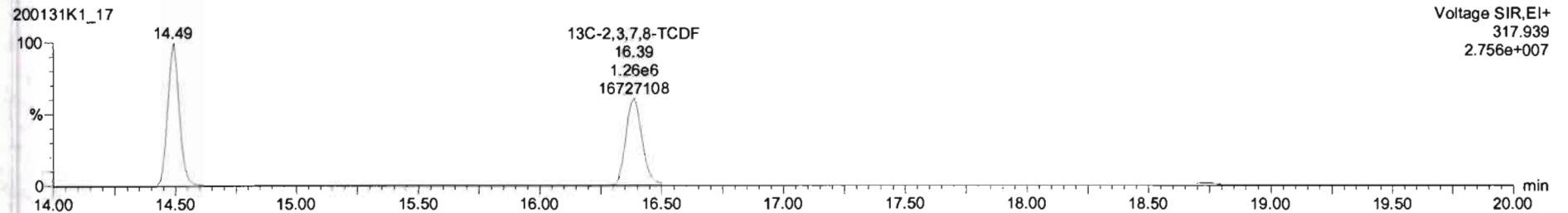
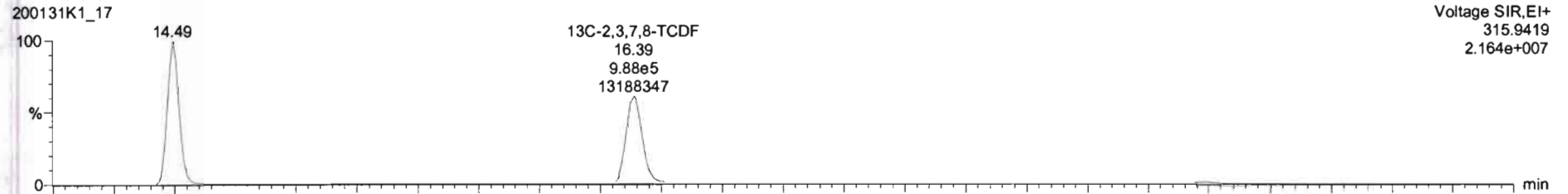
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

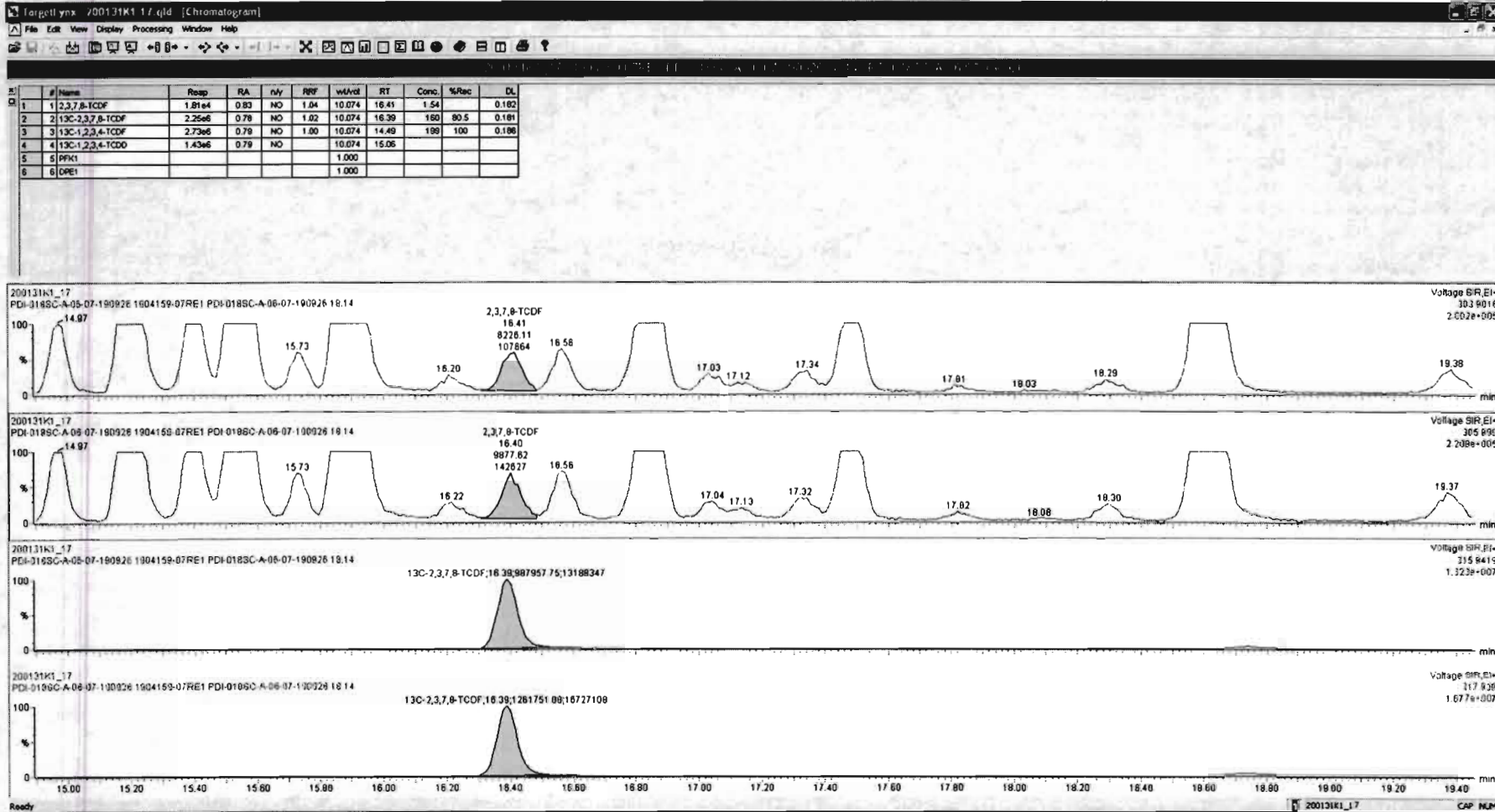
Name: 200131K1\_17, Date: 31-Jan-2020, Time: 18:30:13, ID: 1904159-07RE1 PDI-018SC-A-06-07-190926 18.14, Description: PDI-018SC-A-06-07-190926

2,3,7,8-TCDF



13C-2,3,7,8-TCDF





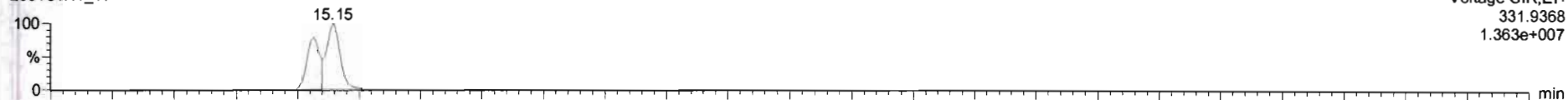
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

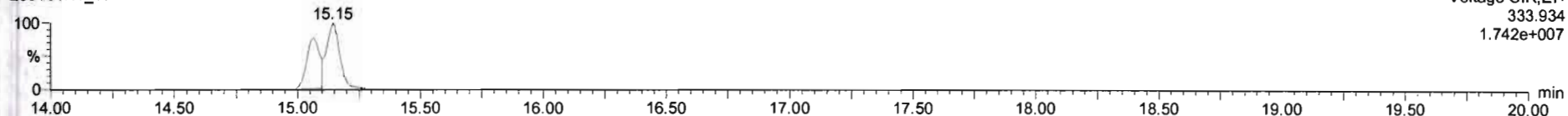
Name: 200131K1\_17, Date: 31-Jan-2020, Time: 18:30:13, ID: 1904159-07RE1 PDI-018SC-A-06-07-190926 18.14, Description: PDI-018SC-A-06-07-190926

13C-1,2,3,4-TCDD

200131K1\_17

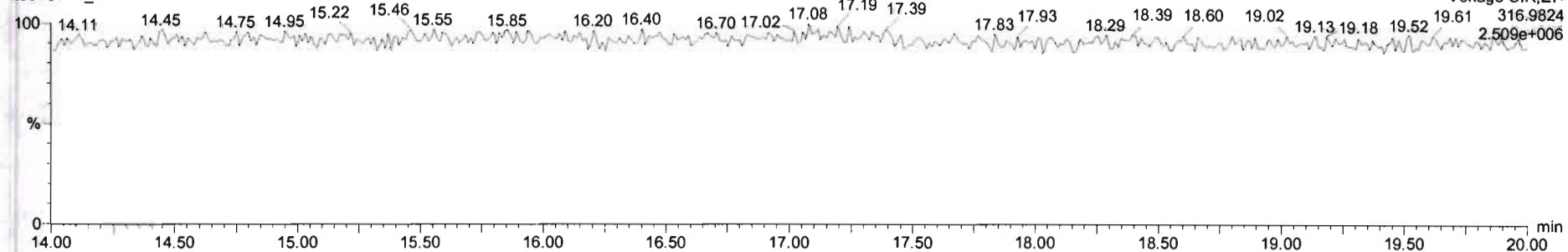


200131K1\_17



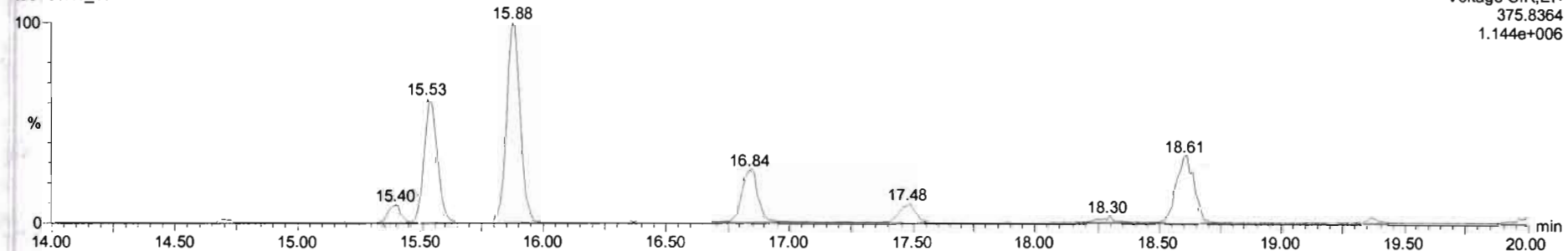
PFK1

200131K1\_17



DPE1

200131K1\_17



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-23.qld

Last Altered: Saturday, February 01, 2020 08:58:39 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:58:53 Pacific Standard Time

*Hc 2.1.2020*

*C1 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_23, Date: 31-Jan-2020, Time: 21:37:30, ID: 1904159-11RE1 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	9.51e4	0.76	NO	1.04	10.052	16.40	22.150		0.281
2	2 13C-2,3,7,8-TCDF	8.25e5	0.77	NO	1.02	10.052	16.38	113.23	56.9	0.301
3	3 13C-1,2,3,4-TCDF	1.42e6	0.80	NO	1.00	10.052	14.48	198.96	100	0.308
4	4 13C-1,2,3,4-TCDD	9.40e5	0.78	NO		10.052	15.13			

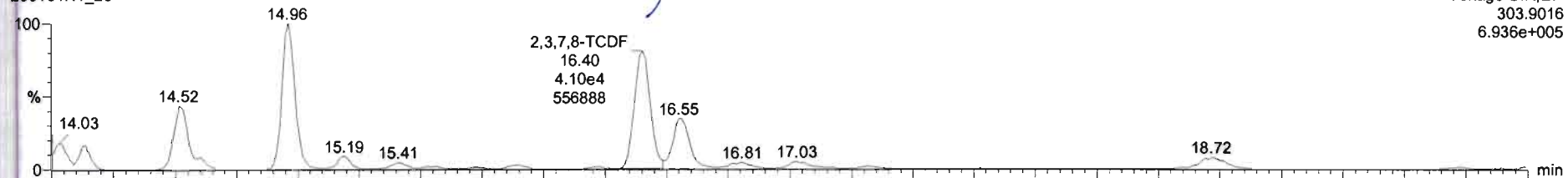
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_23, Date: 31-Jan-2020, Time: 21:37:30, ID: 1904159-11RE1 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

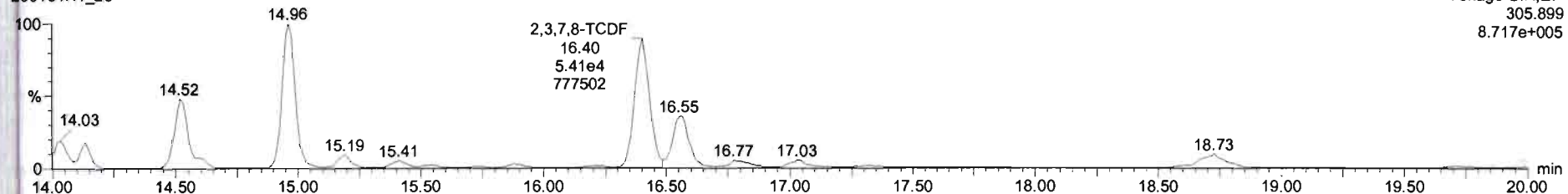
**2,3,7,8-TCDF**

200131K1\_23



Voltage SIR,EI+  
303.9016  
6.936e+005

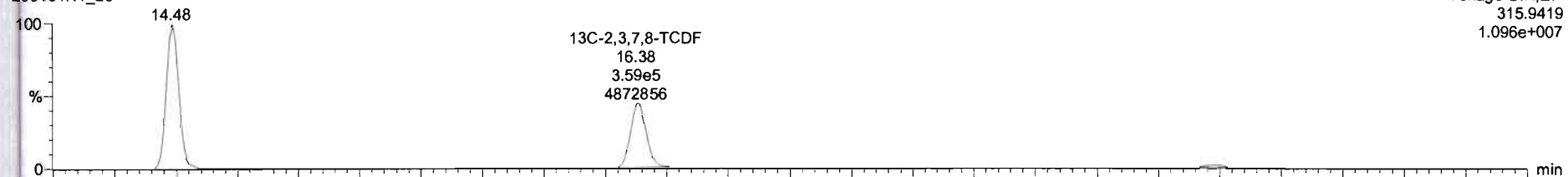
200131K1\_23



Voltage SIR,EI+  
305.899  
8.717e+005

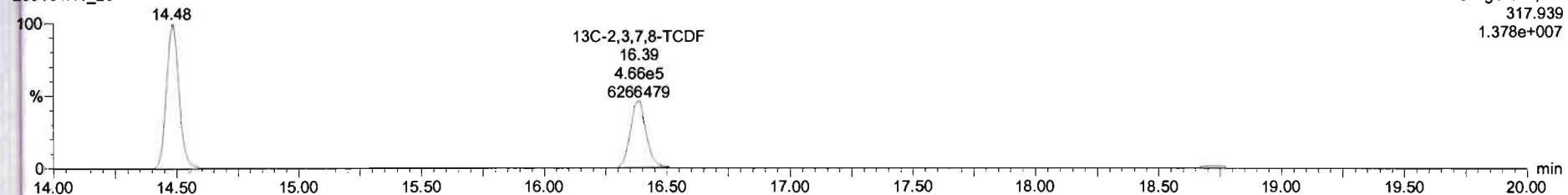
**13C-2,3,7,8-TCDF**

200131K1\_23



Voltage SIR,EI+  
315.9419  
1.096e+007

200131K1\_23



Voltage SIR,EI+  
317.939  
1.378e+007

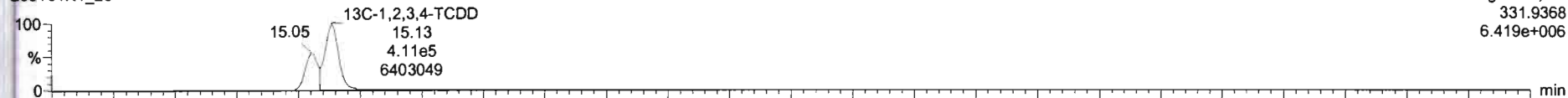
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

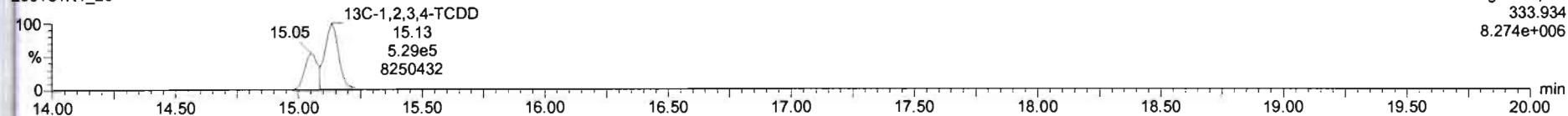
Name: 200131K1\_23, Date: 31-Jan-2020, Time: 21:37:30, ID: 1904159-11RE1 PDI-020SC-A-02-03-191008 13.74, Description: PDI-020SC-A-02-03-191008

**13C-1,2,3,4-TCDD**

200131K1\_23

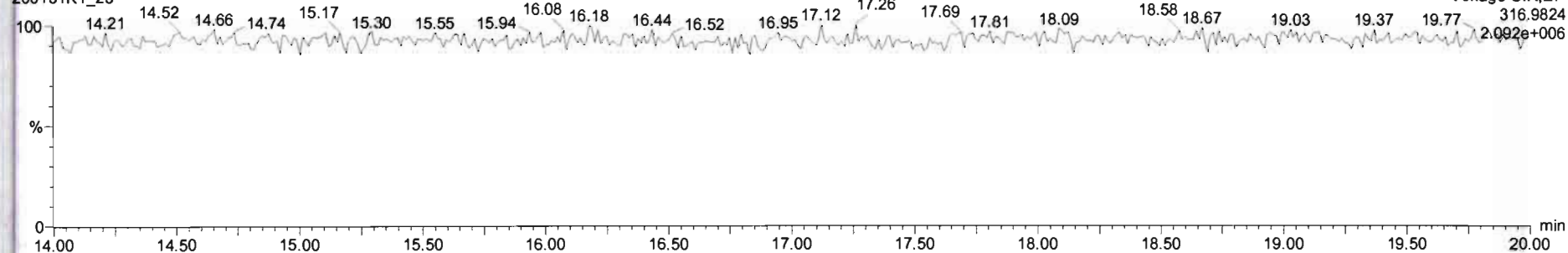


200131K1\_23



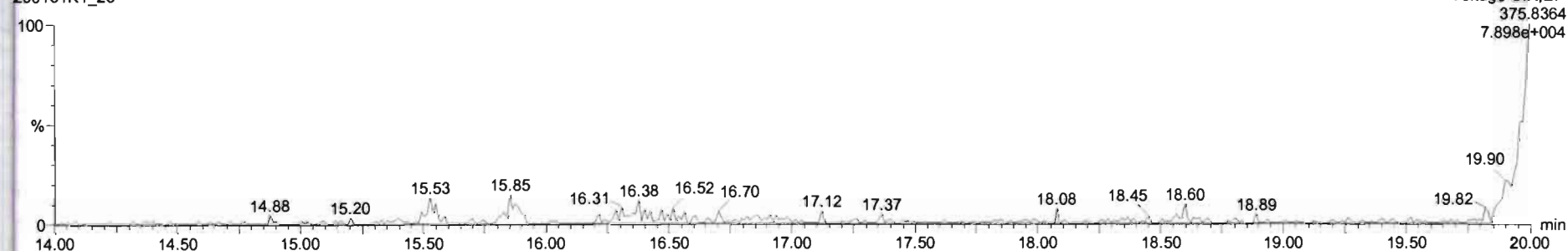
**PFK1**

200131K1\_23



**DPE1**

200131K1\_23





Dataset: U:\VG11.PRO\Results\200131K1\200131K1-24.qld

Last Altered: Saturday, February 01, 2020 08:59:25 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:59:42 Pacific Standard Time

*HC 2-1-2020*

*CT 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_24, Date: 31-Jan-2020, Time: 22:10:18, ID: 1904159-15RE1 PDI-024SC-A-02-03-190927 14.18, Description: PDI-024SC-A-02-03-190927

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	8.42e4	0.77	NO	1.04	10.092	16.40	17.645		0.197
2	13C-2,3,7,8-TCDF	9.13e5	0.78	NO	1.02	10.092	16.38	129.28	65.2	0.271
3	13C-1,2,3,4-TCDF	1.37e6	0.79	NO	1.00	10.092	14.48	198.18	100	0.277
4	13C-1,2,3,4-TCDD	9.07e5	0.79	NO		10.092	15.13			

Dataset: Untitled

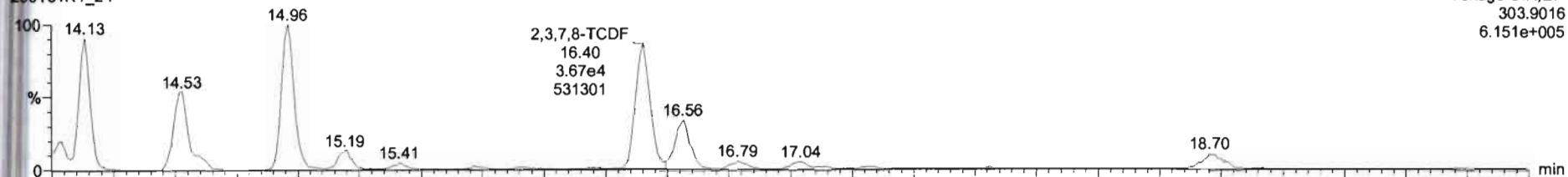
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_24, Date: 31-Jan-2020, Time: 22:10:18, ID: 1904159-15RE1 PDI-024SC-A-02-03-190927 14.18, Description: PDI-024SC-A-02-03-190927

2,3,7,8-TCDF

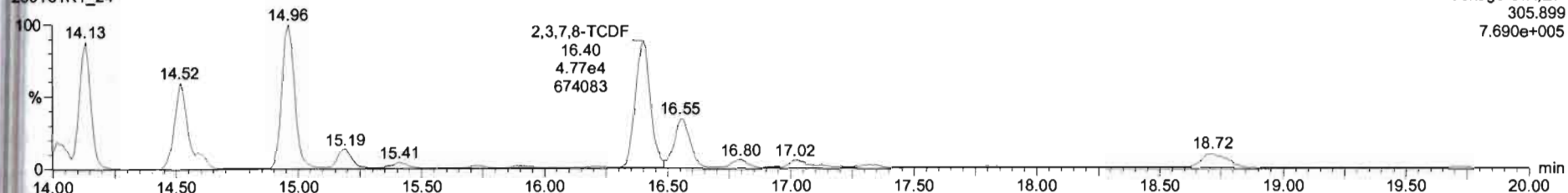
200131K1\_24

Voltage SIR,EI+  
303.9016  
6.151e+005



200131K1\_24

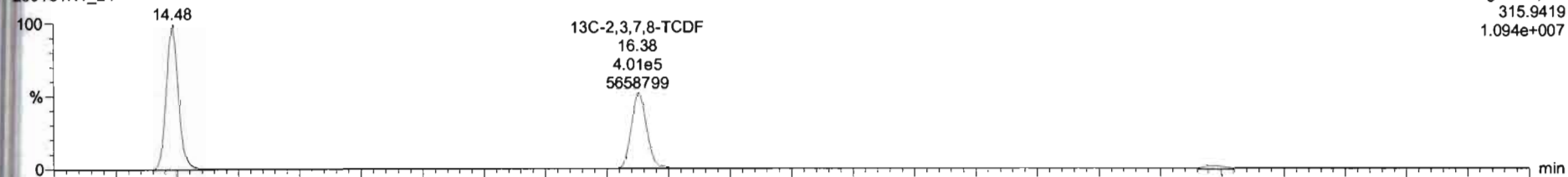
Voltage SIR,EI+  
305.899  
7.690e+005



13C-2,3,7,8-TCDF

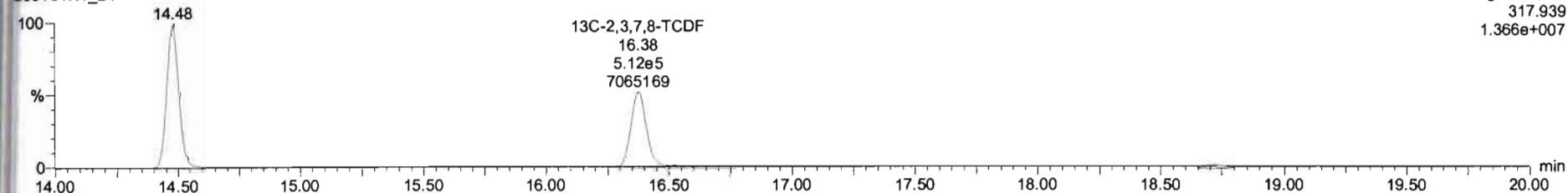
200131K1\_24

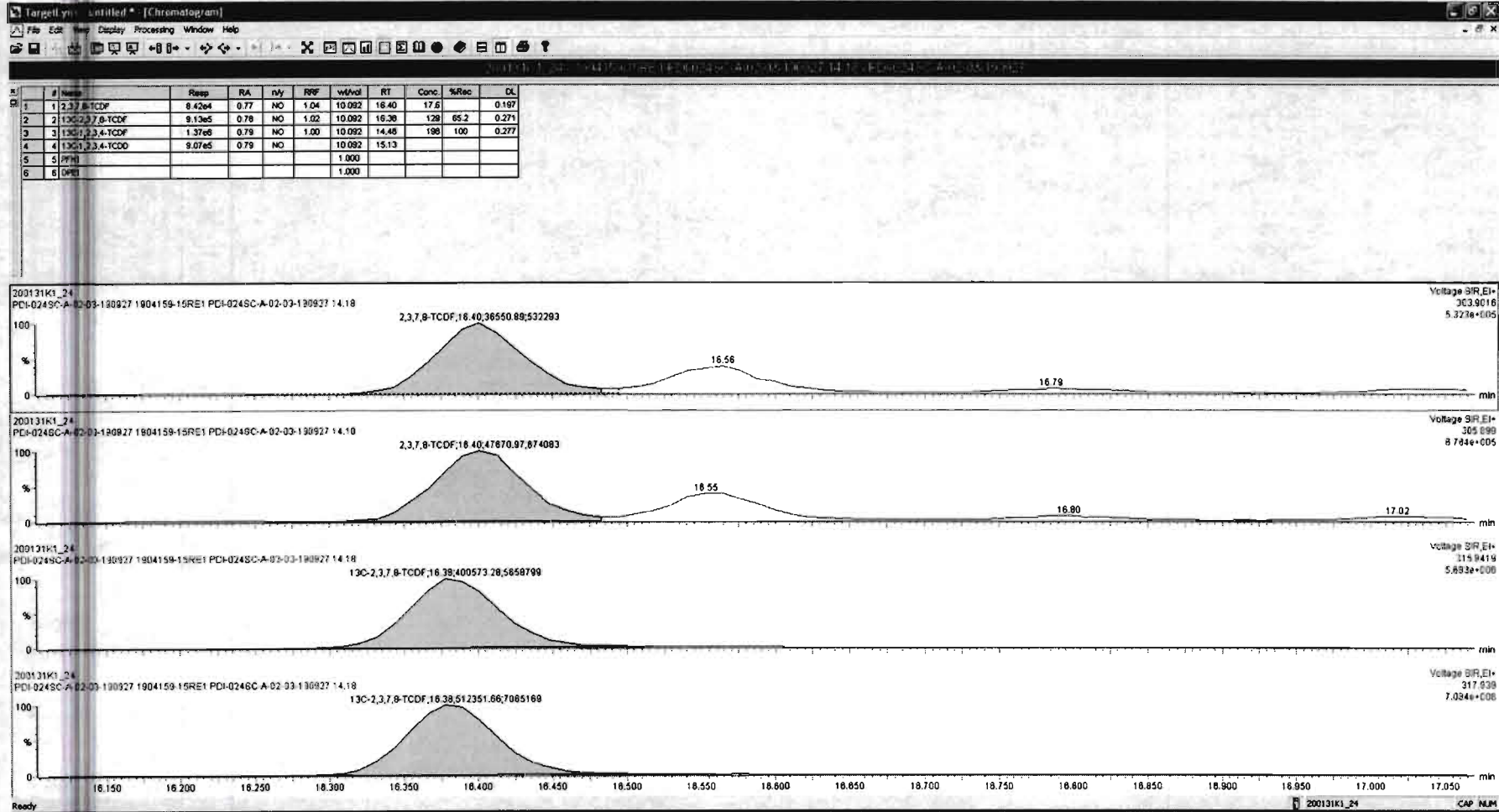
Voltage SIR,EI+  
315.9419  
1.094e+007



200131K1\_24

Voltage SIR,EI+  
317.939  
1.366e+007





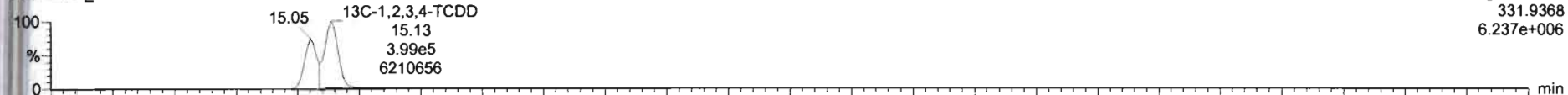
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

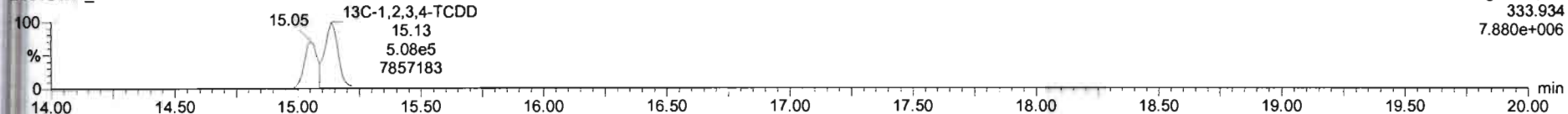
Name: 200131K1\_24, Date: 31-Jan-2020, Time: 22:10:18, ID: 1904159-15RE1 PDI-024SC-A-02-03-190927 14.18, Description: PDI-024SC-A-02-03-190927

**13C-1,2,3,4-TCDD**

200131K1\_24

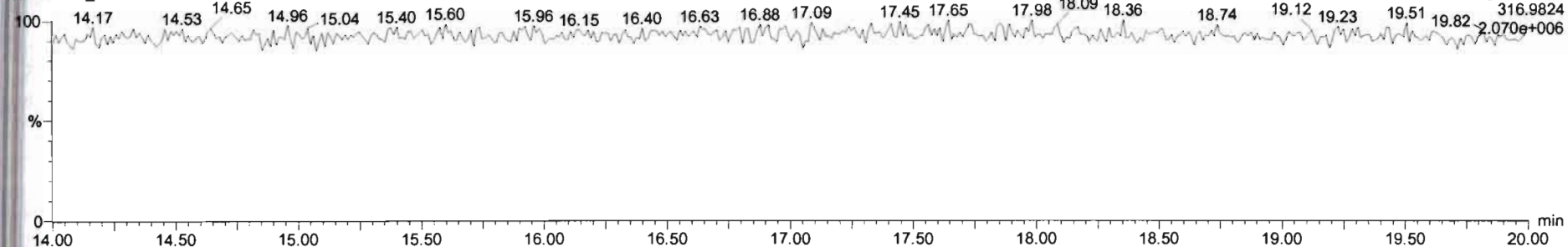


200131K1\_24



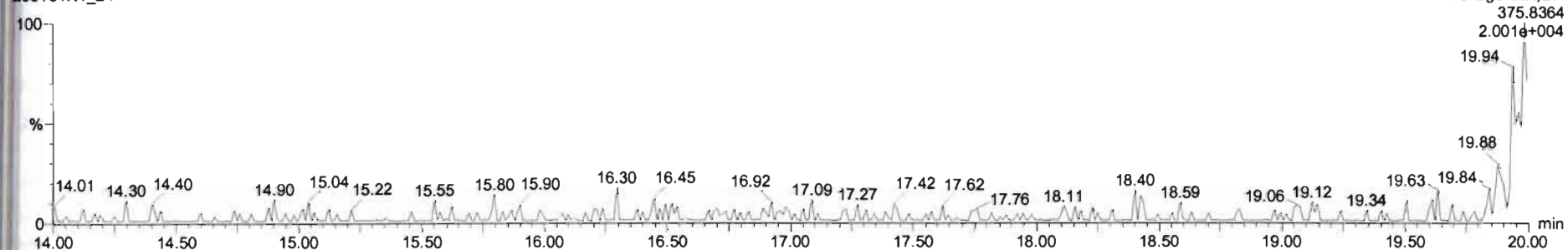
**PFK1**

200131K1\_24



**DPE1**

200131K1\_24



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-18.qld

Last Altered: Saturday, February 01, 2020 08:51:55 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:52:20 Pacific Standard Time

*HL 2.1.2020*

*CT 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_18, Date: 31-Jan-2020, Time: 19:00:33, ID: 1904159-16RE1 PDI-024SC-A-03-04-190927 13.77, Description: PDI-024SC-A-03-04-190927

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	1.62e4	0.82	NO	1.04	10.041	16.41	1.8254		0.188
2	13C-2,3,7,8-TCDF	1.71e6	0.78	NO	1.02	10.041	16.39	132.49	66.5	0.227
3	13C-1,2,3,4-TCDF	2.51e6	0.79	NO	1.00	10.041	14.49	199.19	100	0.232
4	13C-1,2,3,4-TCDD	1.08e6	0.78	NO		10.041	15.06			

Dataset: Untitled

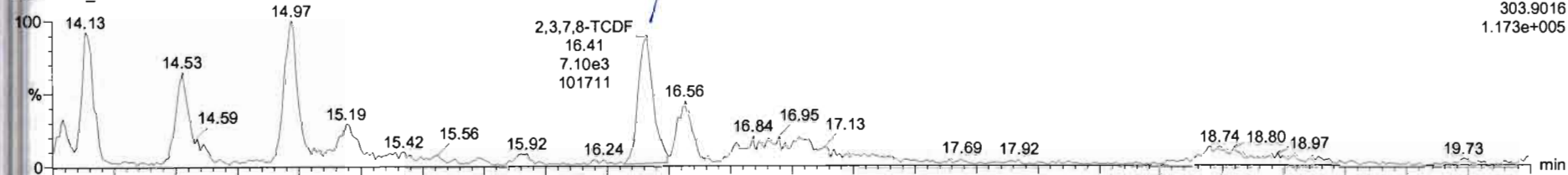
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time

Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

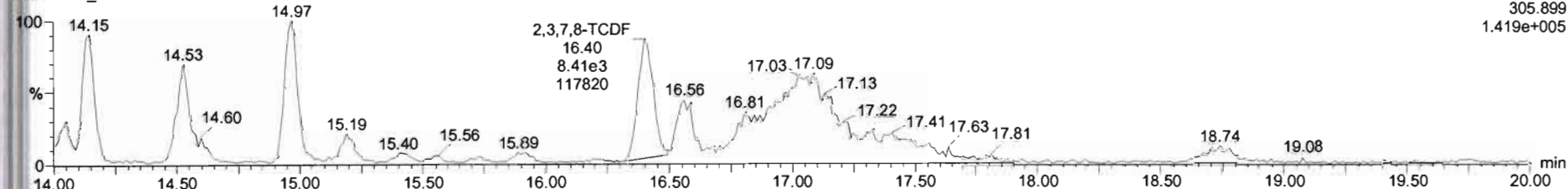
Name: 200131K1\_18, Date: 31-Jan-2020, Time: 19:00:33, ID: 1904159-16RE1 PDI-024SC-A-03-04-190927 13.77, Description: PDI-024SC-A-03-04-190927

2,3,7,8-TCDF

200131K1\_18

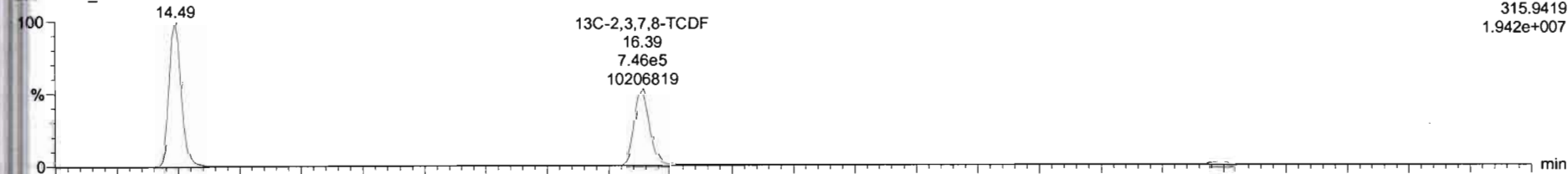


200131K1\_18

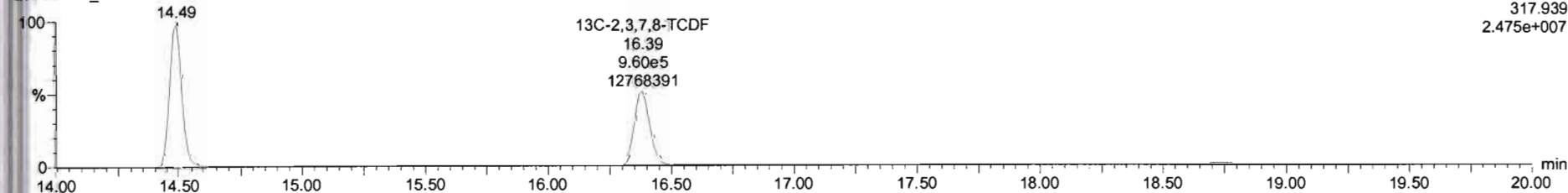


13C-2,3,7,8-TCDF

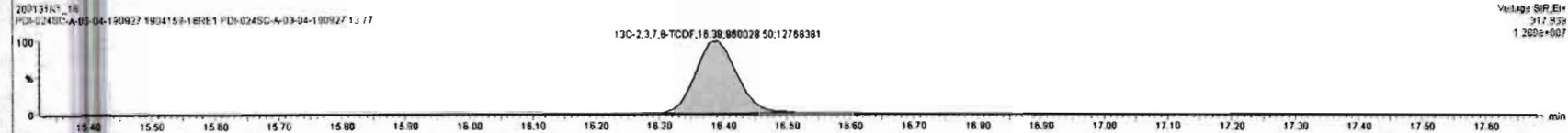
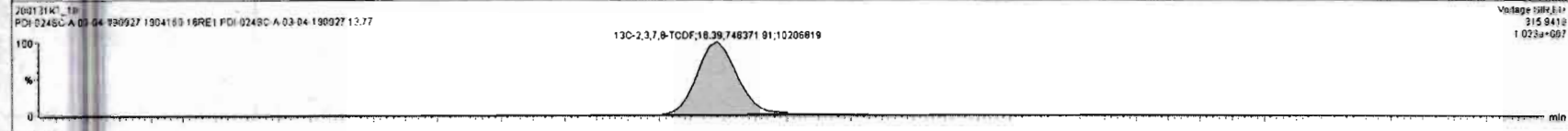
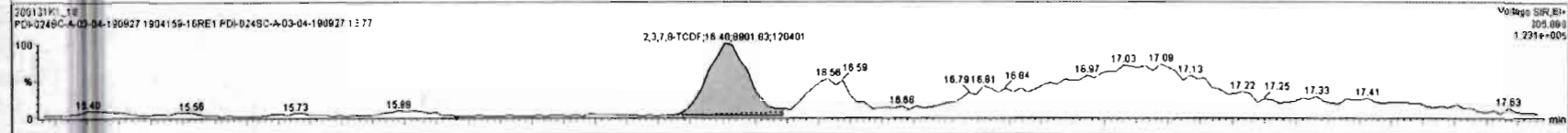
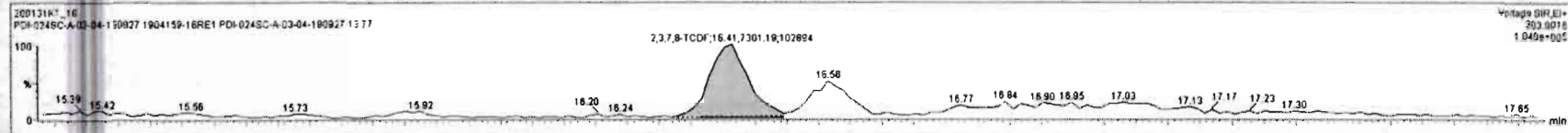
200131K1\_18



200131K1\_18



#	Name	Resp	RA	n/y	RF	wtWtd	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	1.82e4	0.82	NO	1.04	10.041	16.41	1.83		0.188
2	2 1,2,3,7,8-TCDF	1.71e6	0.78	NO	1.02	10.041	16.39	132	88.5	0.227
3	3 1,2,3,4,7,8-TCDF	2.51e6	0.78	NO	1.00	10.041	14.48	180	100	0.232
4	4 1,2,3,4,7,8-TCDF	1.08e6	0.78	NO		10.041	15.08			
5	5 PPH					1.000				
6	6 OPH					1.000				



Ready 200131K1\_16 CAP NUM

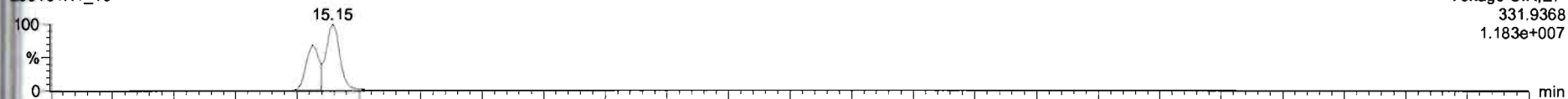
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_18, Date: 31-Jan-2020, Time: 19:00:33, ID: 1904159-16RE1 PDI-024SC-A-03-04-190927 13.77, Description: PDI-024SC-A-03-04-190927

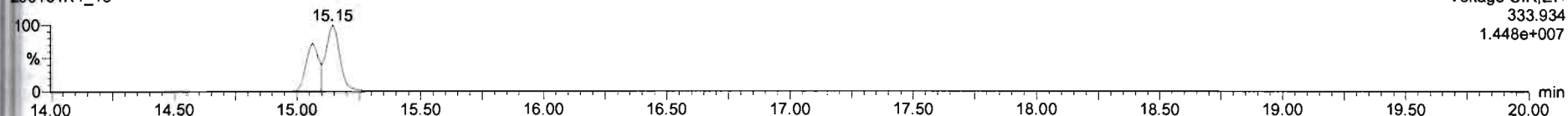
**13C-1,2,3,4-TCDD**

200131K1\_18



Voltage SIR,EI+  
331.9368  
1.183e+007

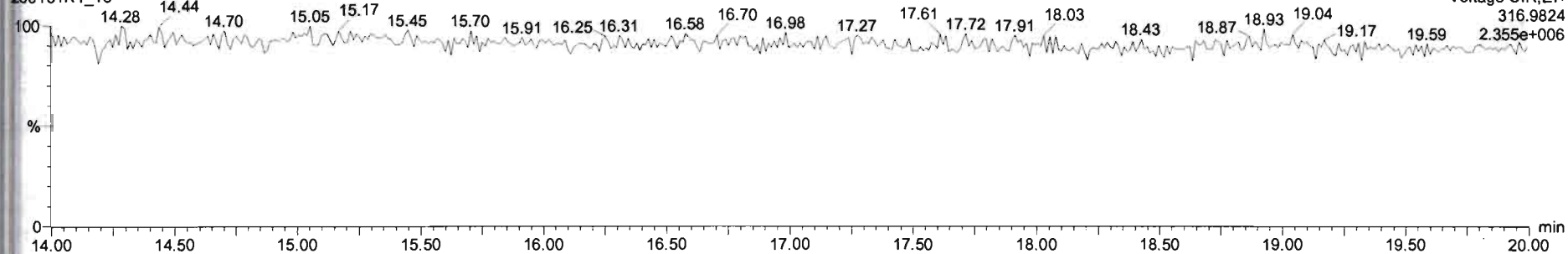
200131K1\_18



Voltage SIR,EI+  
333.934  
1.448e+007

**PFK1**

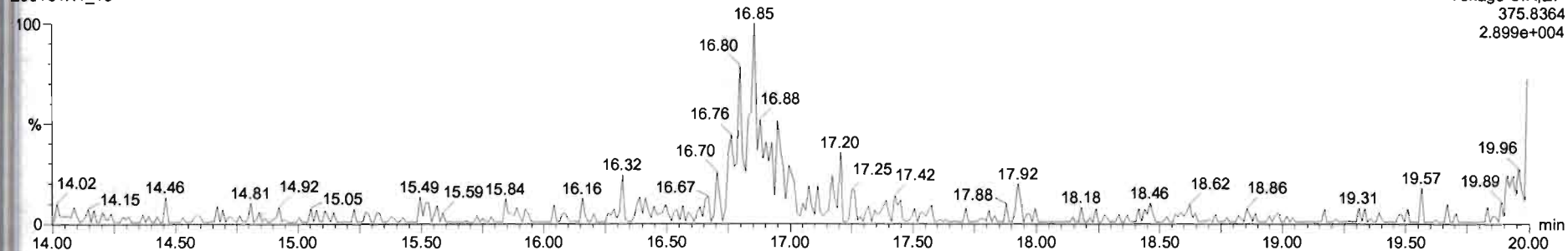
200131K1\_18



Voltage SIR,EI+  
316.9824  
2.355e+006

**DPE1**

200131K1\_18



Voltage SIR,EI+  
375.8364  
2.899e+004



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-19.qld

Last Altered: Saturday, February 01, 2020 08:54:50 Pacific Standard Time  
Printed: Monday, February 03, 2020 16:30:41 Pacific Standard Time

*HL 2.3.2020 C. 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36  
Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_19, Date: 31-Jan-2020, Time: 19:32:58, ID: 1904159-17RE1 PDI-025SC-A-02-03-190927 12.88, Description: PDI-025SC-A-02-03-190927

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDF	2.77e3	1.00	YES	1.04	10.092	16.408	16.39	1.000	1.001	0.51104		0.354	0.453
2	2 13C-2,3,7,8-TCDF	1.04e6	0.78	NO	1.02	10.092	16.372	16.38	1.133	1.131	160.37	80.9	0.335	
3	3 13C-1,2,3,4-TCDF	1.25e6	0.80	NO	1.00	10.092	14.450	14.48	1.000	1.000	198.18	100	0.343	
4	4 13C-1,2,3,4-TCDD	8.11e5	0.81	NO		10.092	15.100	15.13	1.030	0.000				

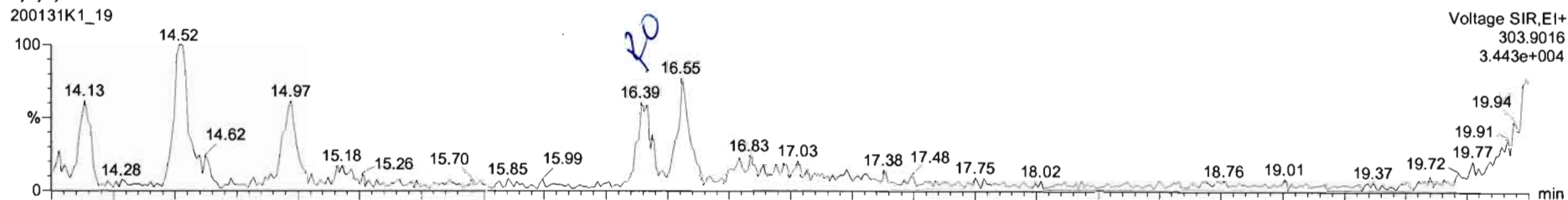
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_19, Date: 31-Jan-2020, Time: 19:32:58, ID: 1904159-17RE1 PDI-025SC-A-02-03-190927 12.88, Description: PDI-025SC-A-02-03-190927

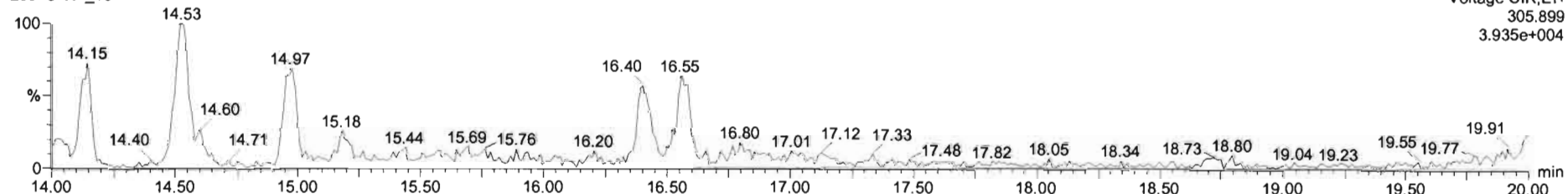
2,3,7,8-TCDF

200131K1\_19



Voltage SIR,EI+  
303.9016  
3.443e+004

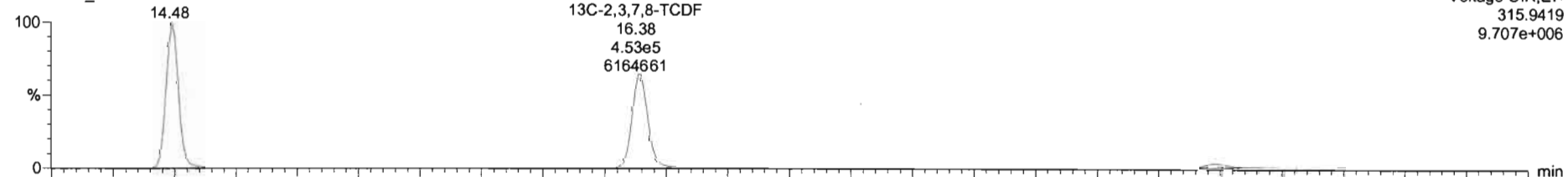
200131K1\_19



Voltage SIR,EI+  
305.899  
3.935e+004

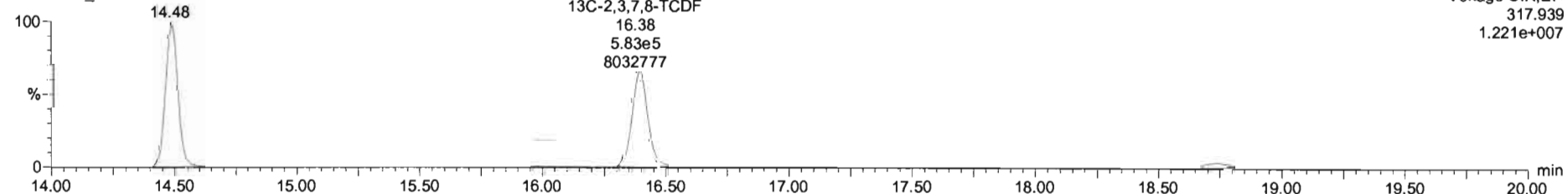
13C-2,3,7,8-TCDF

200131K1\_19



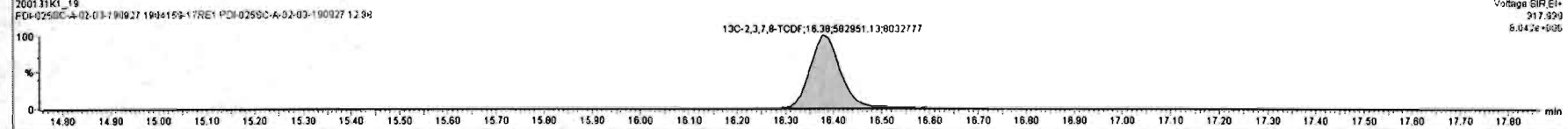
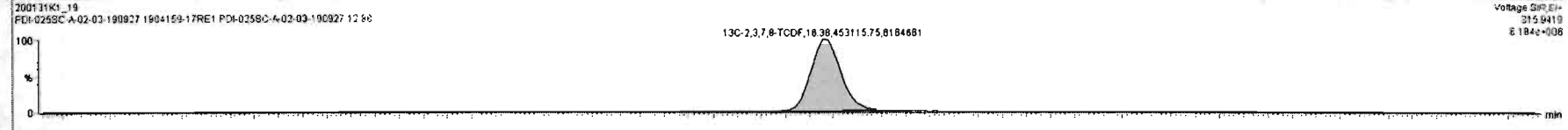
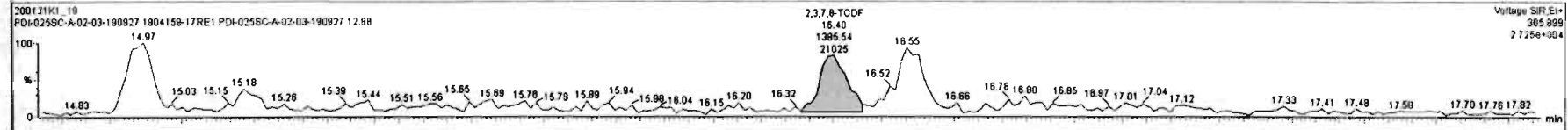
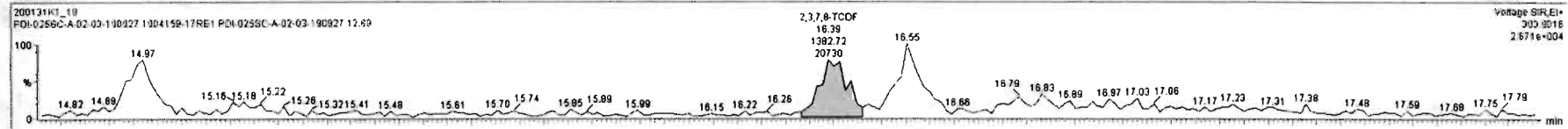
Voltage SIR,EI+  
315.9419  
9.707e+006

200131K1\_19



Voltage SIR,EI+  
317.939  
1.221e+007

#	Name	Resp	RA	n/y	RRF	wt/wt	RT	Conc	%Rec	DL
1	2,3,7,8-TCDF	2.77e3	1.00	YES	1.04	10.092	16.39	0.511		0.354
2	13C-2,3,7,8-TCDF	1.04e6	0.78	NO	1.02	10.092	16.38	160	80.9	0.335
3	13C-1,2,3,4-TCDF	1.25e6	0.80	NO	1.00	10.092	14.48	198	100	0.343
4	13C-1,2,3,4-TCDD	8.11e5	0.81	NO		10.092	15.13			
5	PFK1					1.000				
6	DPE1					1.000				



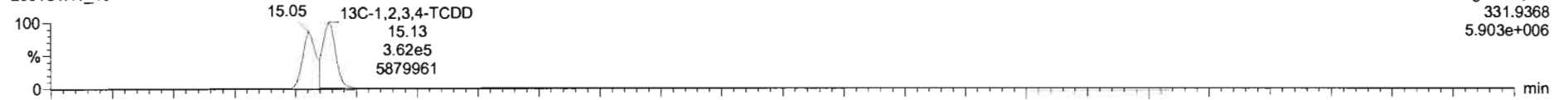
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

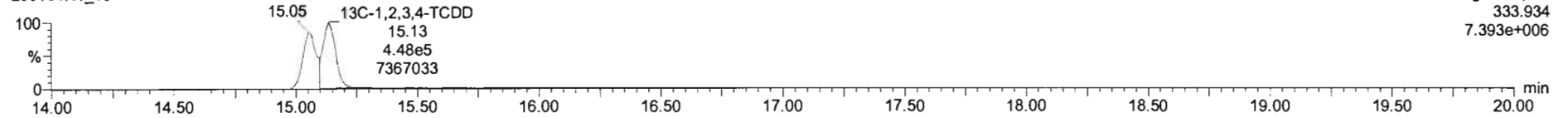
Name: 200131K1\_19, Date: 31-Jan-2020, Time: 19:32:58, ID: 1904159-17RE1 PDI-025SC-A-02-03-190927 12.88, Description: PDI-025SC-A-02-03-190927

**13C-1,2,3,4-TCDD**

200131K1\_19

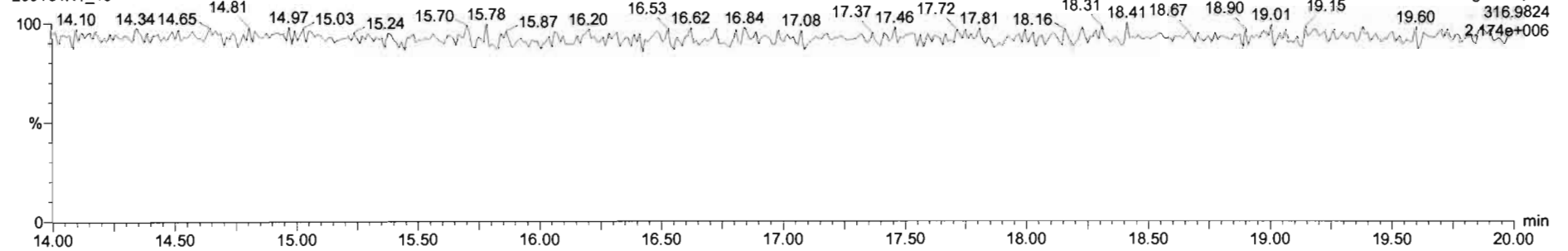


200131K1\_19



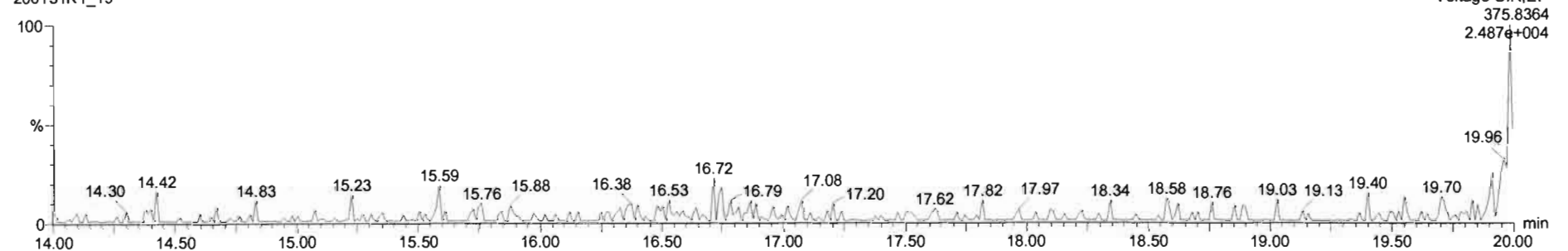
**PFK1**

200131K1\_19



**DPE1**

200131K1\_19



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-20.qld

Last Altered: Saturday, February 01, 2020 08:55:18 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:55:54 Pacific Standard Time

*HL 2-1-2020**CT 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_20, Date: 31-Jan-2020, Time: 20:03:17, ID: 1904159-19RE1 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014

	#-Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	1.16e5	0.78	NO	1.04	10.037	16.41	12.626		0.163
2	2 13C-2,3,7,8-TCDF	1.77e6	0.78	NO	1.02	10.037	16.39	169.77	85.2	0.393
3	3 13C-1,2,3,4-TCDF	2.04e6	0.79	NO	1.00	10.037	14.49	199.25	100	0.402
4	4 13C-1,2,3,4-TCDD	1.13e6	0.79	NO		10.037	15.06			

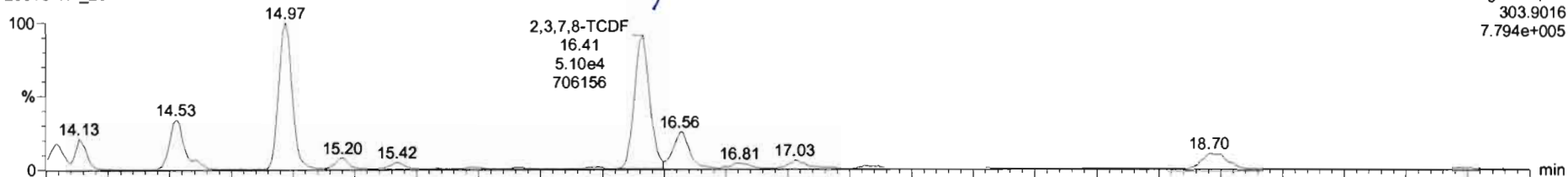
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_20, Date: 31-Jan-2020, Time: 20:03:17, ID: 1904159-19RE1 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014

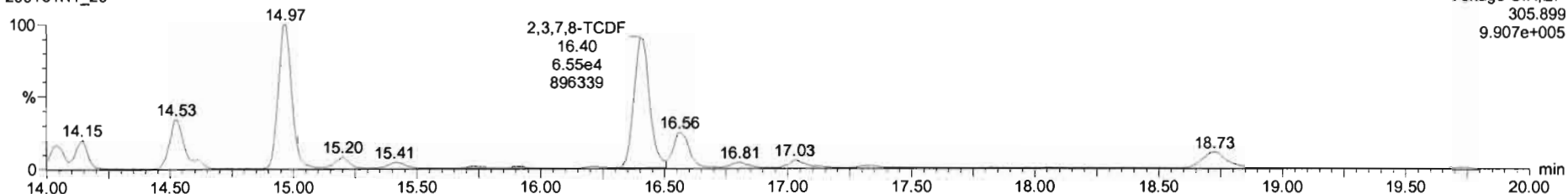
2,3,7,8-TCDF

200131K1\_20



Voltage SIR,EI+  
303.9016  
7.794e+005

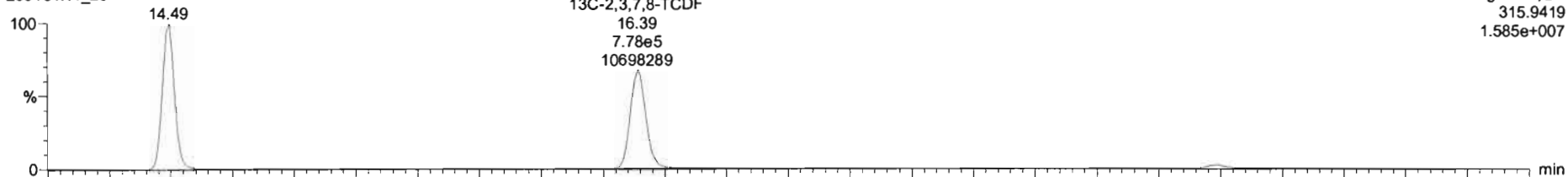
200131K1\_20



Voltage SIR,EI+  
305.899  
9.907e+005

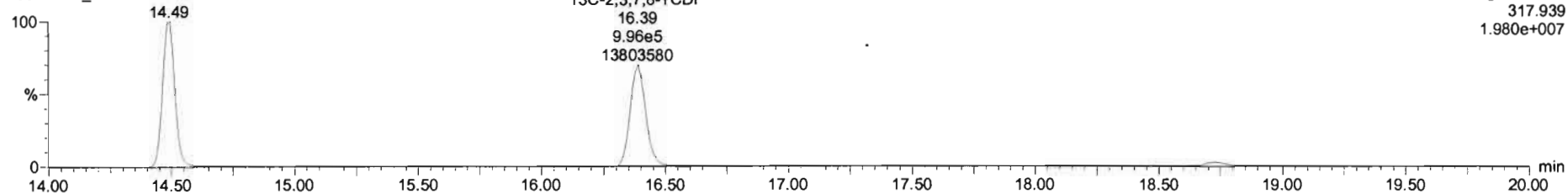
13C-2,3,7,8-TCDF

200131K1\_20



Voltage SIR,EI+  
315.9419  
1.585e+007

200131K1\_20



Voltage SIR,EI+  
317.939  
1.980e+007

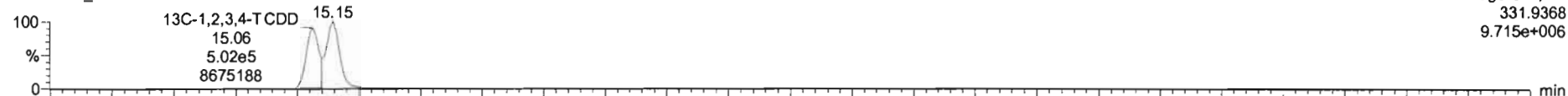
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

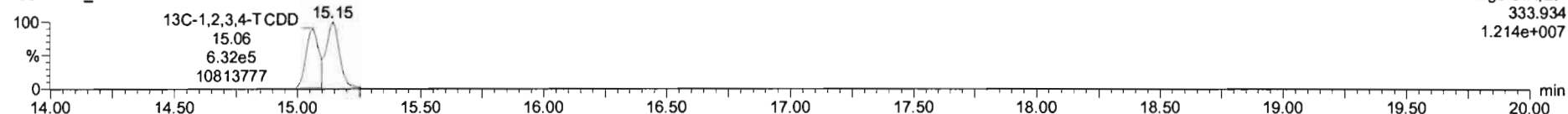
Name: 200131K1\_20, Date: 31-Jan-2020, Time: 20:03:17, ID: 1904159-19RE1 PDI-026SC-A-04-05-191014 12.9, Description: PDI-026SC-A-04-05-191014

13C-1,2,3,4-TCDD

200131K1\_20

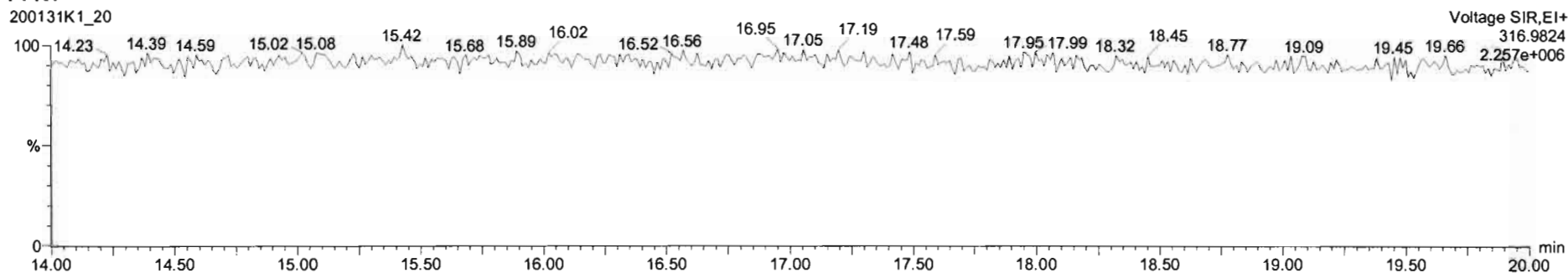


200131K1\_20



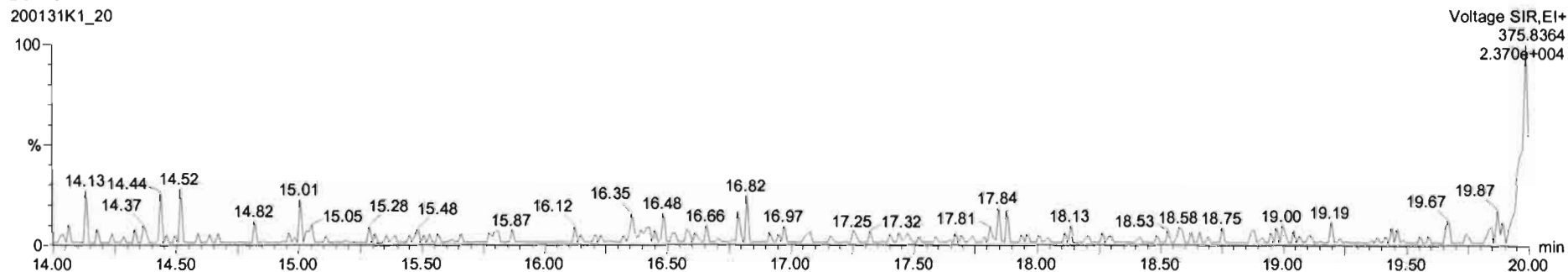
PFK1

200131K1\_20



DPE1

200131K1\_20



**CONTINUING CALIBRATION**



# HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

**Beg. Calibration ID:** ST200116D1-1

**Reviewed By:** CT 02/17/2020

*Initials & Date*

**End Calibration ID:** NA

	<u>Beg.</u>	<u>End</u>		<u>Beg.</u>	<u>End</u>
<b>Ion abundance within QC limits?</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NA	<b>Mass resolution <math>\geq</math></b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Concentrations within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 5k <input type="checkbox"/> 6-8K <input type="checkbox"/> 8K <input checked="" type="checkbox"/> 10K		
<b>TCDD/TCDF Valleys &lt;25%</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1614   1699   429   1613/1668/8280		
<b>First and last eluters present?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Intergrated peaks display correctly?</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> NA
<b>Retention Times within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>GC Break &lt;20%</b>	<input checked="" type="checkbox"/> NA	
<b>Verification Std. named correctly?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b><u>8280 CS1 End Standard:</u></b>		
<b>(ST-Year-Month-Day-VG ID)</b>			<b>- Ratios within limits, S/N &lt;2.5:1, CS1 within 12 hours</b>	<input checked="" type="checkbox"/> NA	
<b>Forms signed and dated?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Comments:</b>		
<b>Correct ICAL referenced?</b>	<u>DB</u>	<u>          </u>			
<b><u>Run Log:</u></b>					
<b>- Correct instrument listed?</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Y			
<b>- Samples within 12 hour clock?</b>	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N			
<b>- Bottle position verified?</b>	<input checked="" type="checkbox"/> DB	<u>          </u>			

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST200116D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-SMS

VER Data Filename: 200116D1 S#1 Analysis Date: 16-JAN-20 Time: 11:21:47

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC.	CONC.
	FORMING	ABUND.	LIMITS		FOUND	RANGE (3)
	RATIO (1)	RATIO	(2)			(ng/mL)
2,3,7,8-TCDD	M/M+2	0.80	0.65-0.89	y	12.1	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.66	0.54-0.72	y	51.8	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	51.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.15	1.05-1.43	y	54.0	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.24	1.05-1.43	y	53.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	52.7	43.0 - 58.0
OCDD	M+2/M+4	0.88	0.76-1.02	y	107	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.75	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	1.60	1.32-1.78	y	56.9	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	54.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.17	1.05-1.43	y	48.4	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	48.2	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	50.1	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.23	1.05-1.43	y	49.5	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.99	0.88-1.20	y	49.1	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.99	0.88-1.20	y	47.0	43.0 - 58.0
OCDF	M+2/M+4	0.91	0.76-1.02	y	97.5	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: 1/16/20

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: 200116D1 S#1 Analysis Date: 16-JAN-20 Time: 11:21:47

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	111	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	1.31	1.05-1.43	y	102	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.27	1.05-1.43	y	94.6	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.22	1.05-1.43	y	97.9	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	101	72.0 - 138.0
13C-OCDD	M/M+2	0.92	0.76-1.02	y	201	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.80	0.65-0.89	y	104	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	99.2	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.61	1.32-1.78	y	101	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	113	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.52	0.43-0.59	y	107	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.49	0.43-0.59	y	105	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	107	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	108	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	118	77.0 - 129.0
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	223	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.99	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: 1/16/20

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: 200116D1 S#1 Analysis Date: 16-JAN-20 Time: 11:21:47

ZB-5MS IS Data Filename: 200116D1 S#1 Analysis Date: 16-JAN-20 Time: 11:21:47

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)	22:35	1,3,6,8-TCDF (F)	20:26
1,2,8,9-TCDD (L)	26:55	1,2,8,9-TCDF (L)	27:04
1,2,4,7,9-PeCDD (F)	28:33	1,3,4,6,8-PeCDF (F)	27:02
1,2,3,8,9-PeCDD (L)	30:59	1,2,3,8,9-PeCDF (L)	31:13
1,2,4,6,7,9-HxCDD (F)	32:24	1,2,3,4,6,8-HxCDF (F)	31:52
1,2,3,7,8,9-HxCDD (L)	34:21	1,2,3,7,8,9-HxCDF (L)	34:44
1,2,3,4,6,7,9-HpCDD (F)	36:58	1,2,3,4,6,7,8-HpCDF (F)	36:34
1,2,3,4,6,7,8-HpCDD (L)	37:49	1,2,3,4,7,8,9-HpCDF (L)	38:22

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

‡ VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

<25‡

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

Analyst: DB

Date: 1/16/20

FORM 6A  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-SMS

VER Data Filename: 200116D1 S#1 Analysis Date: 16-JAN-20 Time: 11:21:47

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

LABELLED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.202	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	1.155	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.191	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: 1/16/20

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-SMS

VER Data Filename: 200116D1 S#1 Analysis Date: 16-JAN-20 Time: 11:21:47

NATIVE ANALYTES	RETENTION TIME REFERENCE	RRT	RRT QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.001	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.001	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	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	1.001	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

LABELLED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.991	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.038	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.027	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	1.147	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	1.235	1.091-1.371

Analyst: DB

Date: 1/16/20

Client ID: 1613 CS3 19I1604  
Lab ID: ST200116D1-1

Filename: 200116D1 S:1 Acq:16-JAN-20 11:21:47  
GC Column ID: ZB-SMS ICal: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST200116D1-1  
EndCAL: NA

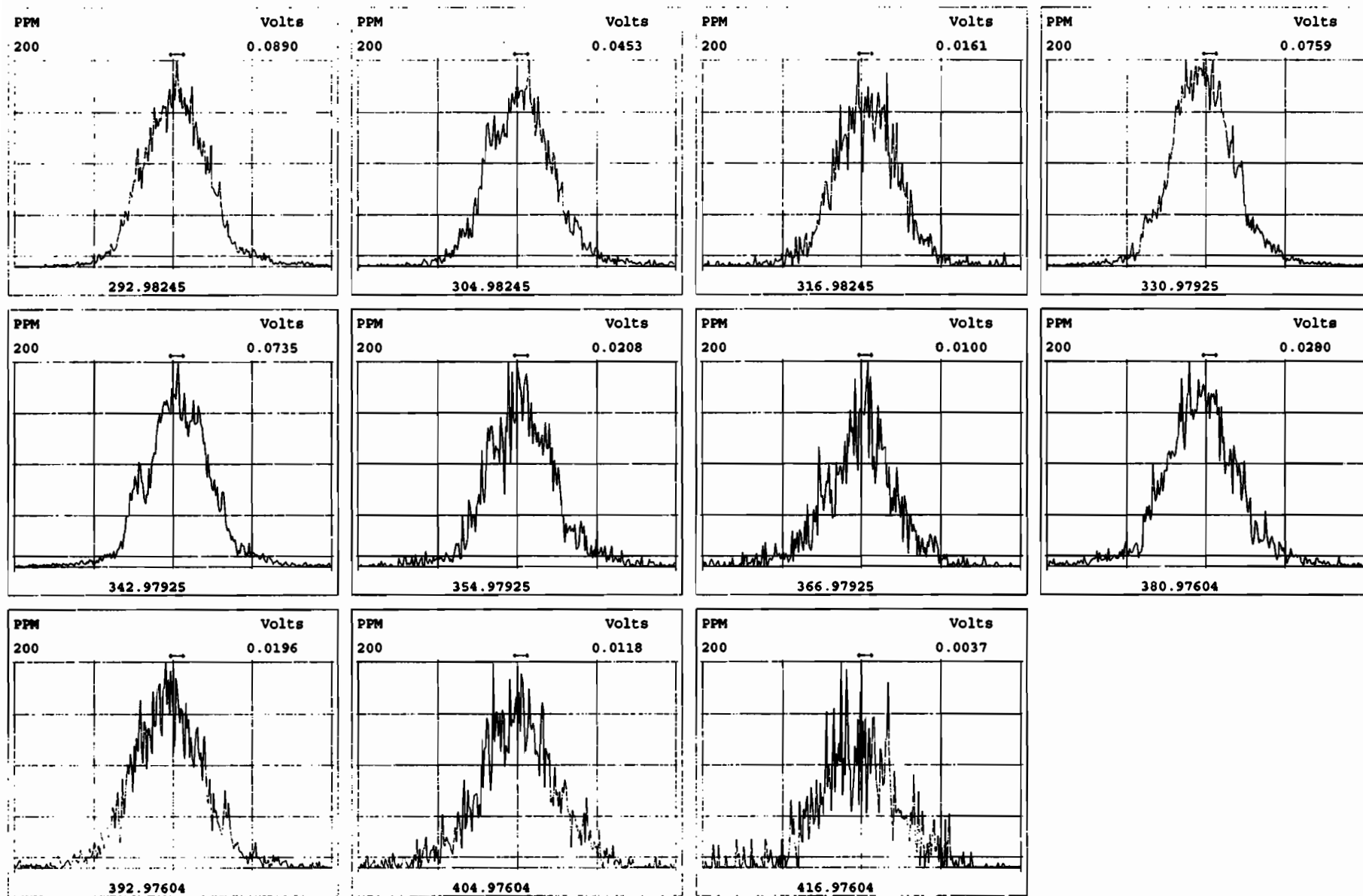
Name	Resp	RA	RRP	RT	Conc	Qual	noise	Pac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	5.73e+05	0.80 y	0.91	26:03	12.089		*	2.5	*	Total Tetra-Dioxins	93.2	95.2	*	*	
1,2,3,7,8-PeCDD	1.88e+06	0.66 y	0.90	30:37	51.841		*	2.5	*	Total Penta-Dioxins	220	221	*	*	
1,2,3,4,7,8-HxCDD	2.01e+06	1.27 y	1.10	33:56	51.907		*	2.5	*	Total Hexa-Dioxins	252	254	*	*	
1,2,3,6,7,8-HxCDD	2.19e+06	1.15 y	0.94	34:03	53.967		*	2.5	*	Total Hepta-Dioxins	137	139	*	*	
1,2,3,7,8,9-HxCDD	2.17e+06	1.24 y	0.96	34:21	53.382		*	2.5	*	Total Tetra-Furans	43.9	45.9	*	*	
1,2,3,4,6,7,8-HpCDD	1.82e+06	1.02 y	0.98	37:49	52.746		*	2.5	*	Total Penta-Furans	261.03	261.60	*	*	
OCDD	3.19e+06	0.88 y	0.96	41:06	106.80		*	2.5	*	Total Hexa-Furans	276	277	*	*	
										Total Hepta-Furans	96.6	98.3	*	*	
2,3,7,8-TCDF	7.80e+05	0.75 y	0.95	25:15	10.110		*	2.5	*						
1,2,3,7,8-PeCDF	3.49e+06	1.60 y	0.96	29:26	56.900		*	2.5	*						
2,3,4,7,8-PeCDF	3.58e+06	1.61 y	1.01	30:20	54.675		*	2.5	*						
1,2,3,4,7,8-HxCDF	2.87e+06	1.17 y	1.18	33:02	48.418		*	2.5	*						
1,2,3,6,7,8-HxCDF	3.05e+06	1.21 y	1.07	33:10	48.180		*	2.5	*						
2,3,4,6,7,8-HxCDF	2.98e+06	1.21 y	1.11	33:47	50.057		*	2.5	*						
1,2,3,7,8,9-HxCDF	2.49e+06	1.23 y	1.06	34:44	49.481		*	2.5	*						
1,2,3,4,6,7,8-HpCDF	2.41e+06	0.99 y	1.13	36:34	49.051		*	2.5	*						
1,2,3,4,7,8,9-HpCDF	2.21e+06	0.99 y	1.28	38:22	47.042		*	2.5	*						
OCDF	3.80e+06	0.91 y	0.95	41:19	97.528		*	2.5	*						
IS	13C-2,3,7,8-TCDD	5.24e+06	0.81 y	1.10	26:02	110.80				Rec			Qual		
										111					
IS	13C-1,2,3,7,8-PeCDD	4.01e+06	0.64 y	0.88	30:36	105.54				106					
IS	13C-1,2,3,4,7,8-HxCDD	3.51e+06	1.31 y	0.64	33:55	102.29				102					
IS	13C-1,2,3,6,7,8-HxCDD	4.33e+06	1.27 y	0.86	34:02	94.570				94.6					
IS	13C-1,2,3,7,8,9-HxCDD	4.22e+06	1.22 y	0.81	34:20	97.940				97.9					
IS	13C-1,2,3,4,6,7,8-HpCDD	3.52e+06	1.04 y	0.65	37:48	100.64				101					
IS	13C-OCDD	6.22e+06	0.92 y	0.58	41:05	200.79				100					
IS	13C-2,3,7,8-TCDF	8.12e+06	0.80 y	1.03	25:14	104.20				104					
IS	13C-1,2,3,7,8-PeCDF	6.38e+06	1.63 y	0.85	29:25	99.201				99.2					
IS	13C-2,3,4,7,8-PeCDF	6.46e+06	1.61 y	0.85	30:19	101.24				101					
IS	13C-1,2,3,4,7,8-HxCDF	5.03e+06	0.50 y	0.83	33:02	113.11				113					
IS	13C-1,2,3,6,7,8-HxCDF	5.93e+06	0.52 y	1.03	33:09	107.20				107					
IS	13C-2,3,4,6,7,8-HxCDF	5.35e+06	0.49 y	0.95	33:46	104.87				105					
IS	13C-1,2,3,7,8,9-HxCDF	4.74e+06	0.51 y	0.83	34:43	107.04				107					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.36e+06	0.43 y	0.76	36:33	107.75				108					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.67e+06	0.43 y	0.58	38:21	118.03				118					
IS	13C-OCDF	8.23e+06	0.90 y	0.69	41:18	223.26				112					
C/Up	37Cl-2,3,7,8-TCDD	5.16e+05		1.20	26:03	9.9868				99.9					
RS/RT	13C-1,2,3,4-TCDD	4.32e+06	0.84 y	1.00	25:27	100.00									
RS	13C-1,2,3,4-TCDF	7.53e+06	0.80 y	1.00	23:60	100.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	5.35e+06	0.51 y	1.00	33:27	100.00									

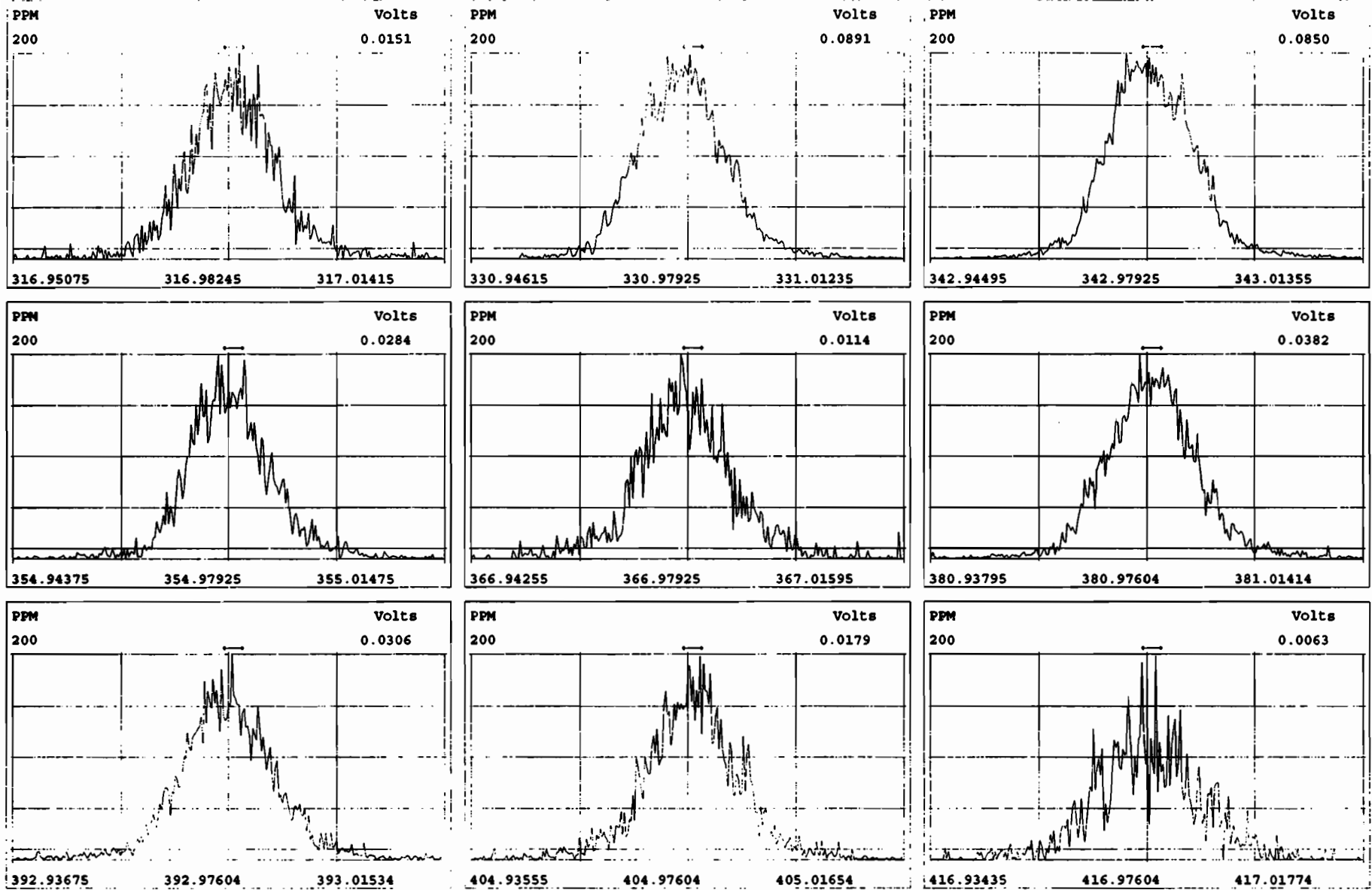
Integrations  
by DB  
Analyst: DB  
Reviewed  
by CT  
Analyst: CT  
Date: 1/16/20  
Date: 01/17/2020

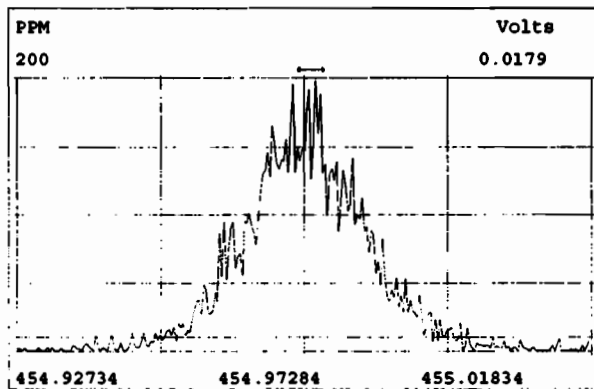
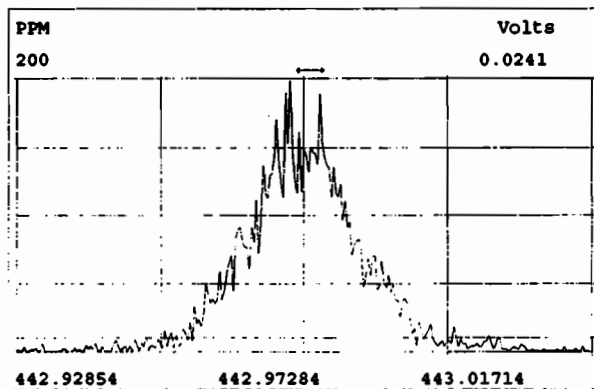
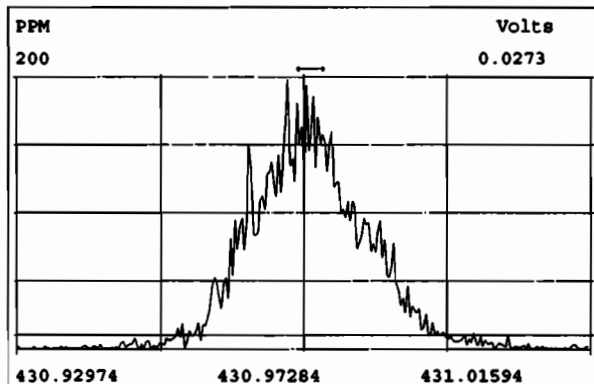
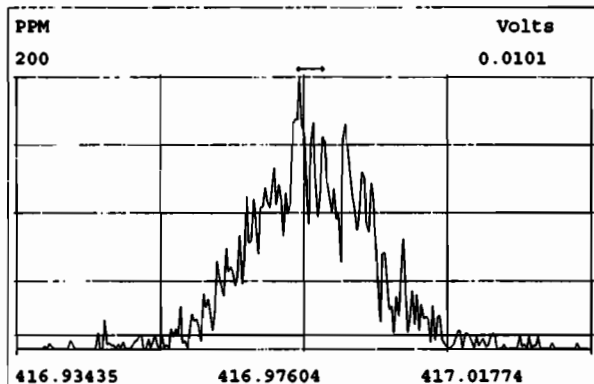
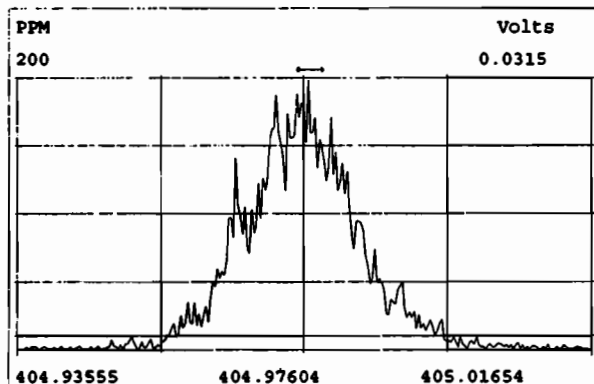
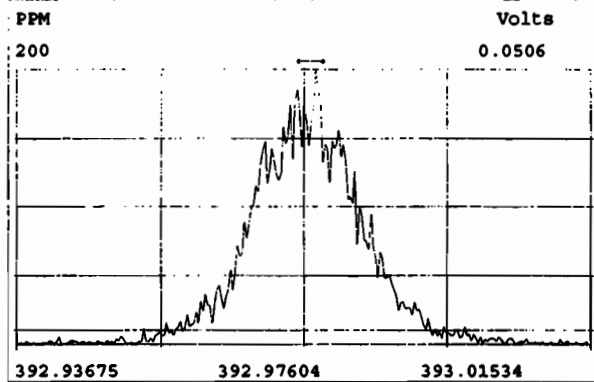
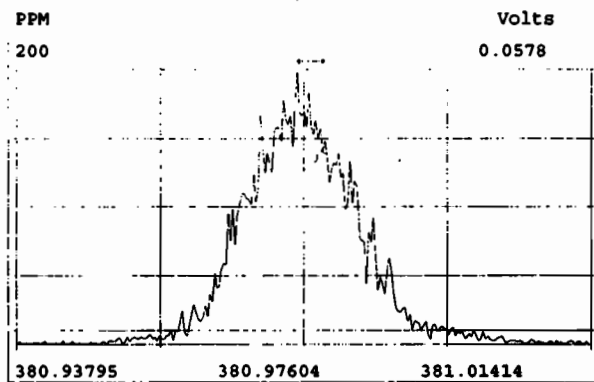
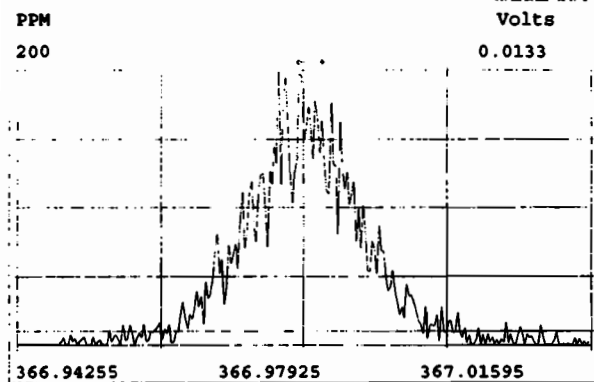
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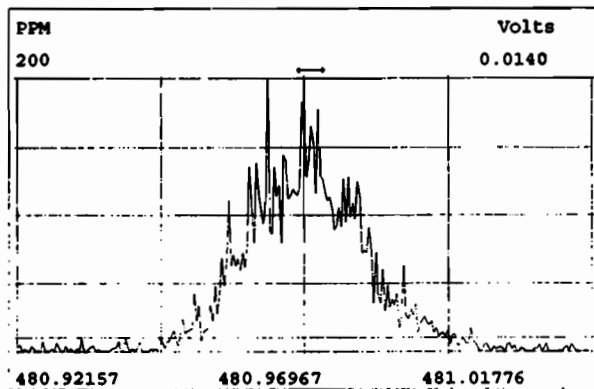
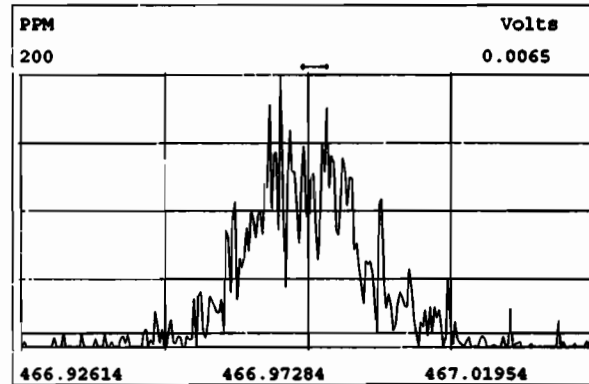
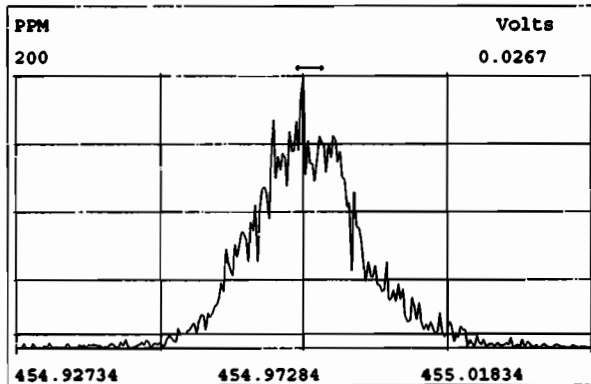
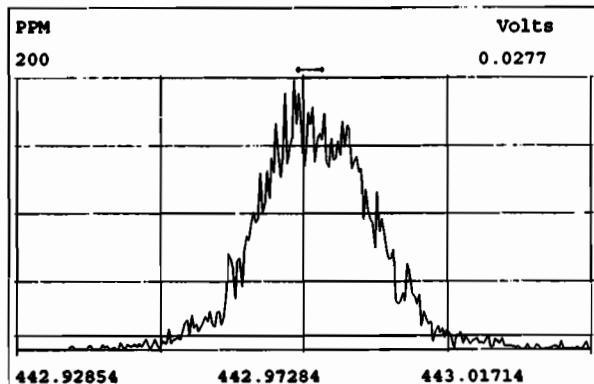
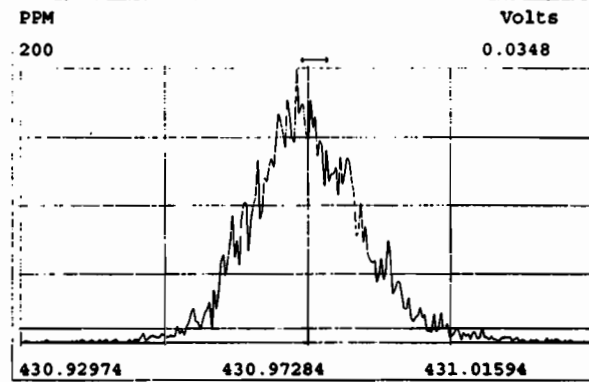
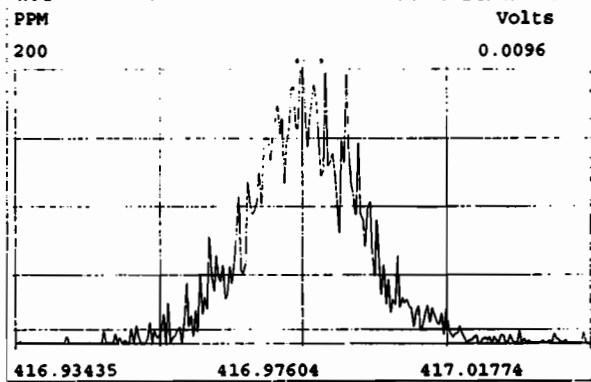
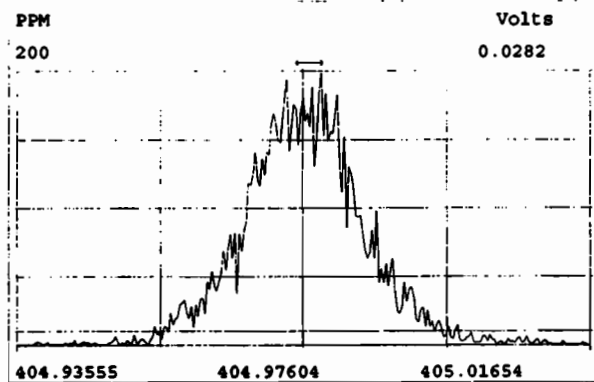
Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
200116D1	1	ST200116D1-1	DB	16-JAN-20	11:21:47	ST200116D1-1	NA
200116D1	2	B9L0285-BS1	DB	16-JAN-20	12:09:41	ST200116D1-1	NA
200116D1	3	B0A0001-BS1	DB	16-JAN-20	12:57:38	ST200116D1-1	NA
200116D1	4	SOLVENT BLANK	DB	16-JAN-20	13:45:21	ST200116D1-1	NA
200116D1	5	B9L0285-BLK1	DB	16-JAN-20	14:33:06	ST200116D1-1	NA
200116D1	6	B0A0001-BLK1	DB	16-JAN-20	15:20:52	ST200116D1-1	NA
200116D1	7	1904219-01	DB	16-JAN-20	16:08:37	ST200116D1-1	NA
200116D1	8	1904264-01	DB	16-JAN-20	16:56:22	ST200116D1-1	NA
200116D1	9	B0A0001-DUP1	DB	16-JAN-20	17:44:17	ST200116D1-1	NA
200116D1	10	1904159-01	DB	16-JAN-20	18:32:11	ST200116D1-1	NA
200116D1	11	1904159-02	DB	16-JAN-20	19:20:05	ST200116D1-1	NA
200116D1	12	1904159-03	DB	16-JAN-20	20:08:00	ST200116D1-1	NA
200116D1	13	1904159-04	DB	16-JAN-20	20:55:44	ST200116D1-1	NA
200116D1	14	1904279-01	DB	16-JAN-20	21:43:33	ST200116D1-1	NA
200116D1	15	1904279-02	DB	16-JAN-20	22:31:28	ST200116D1-1	NA





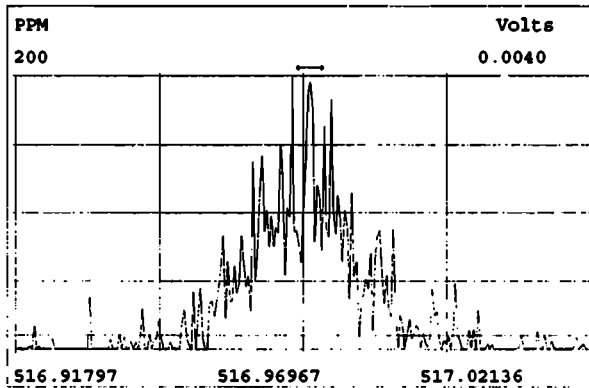
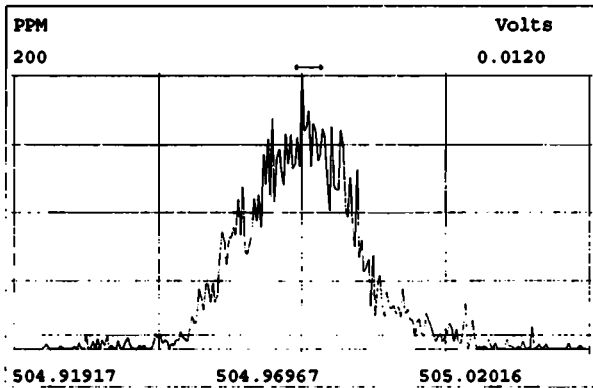
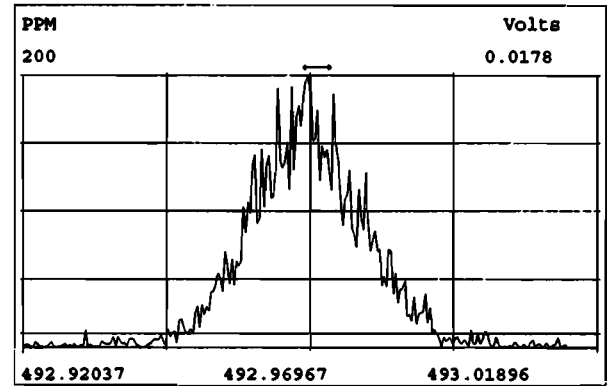
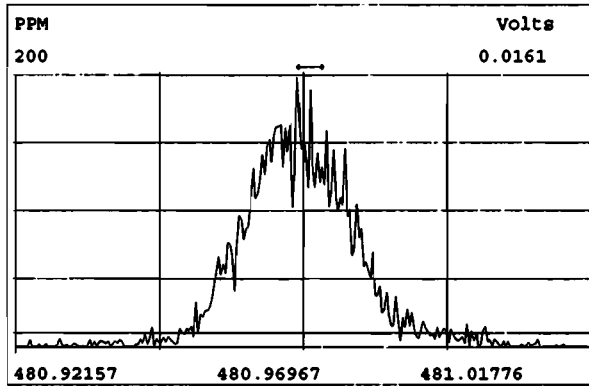
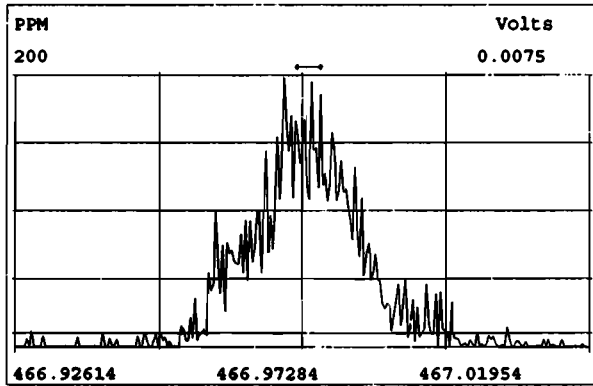
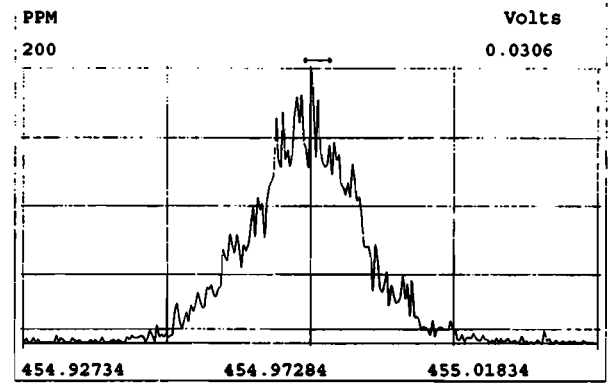
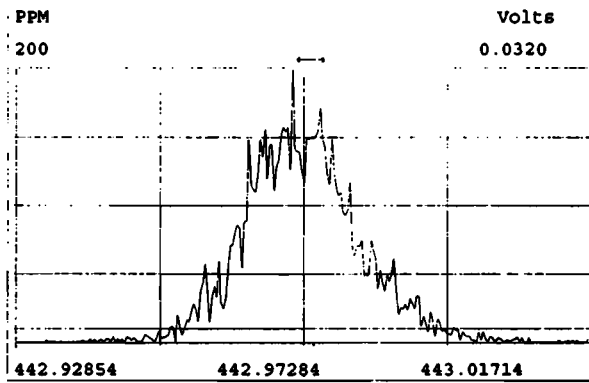
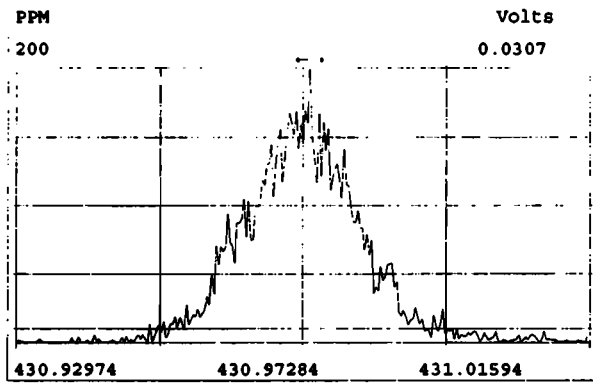




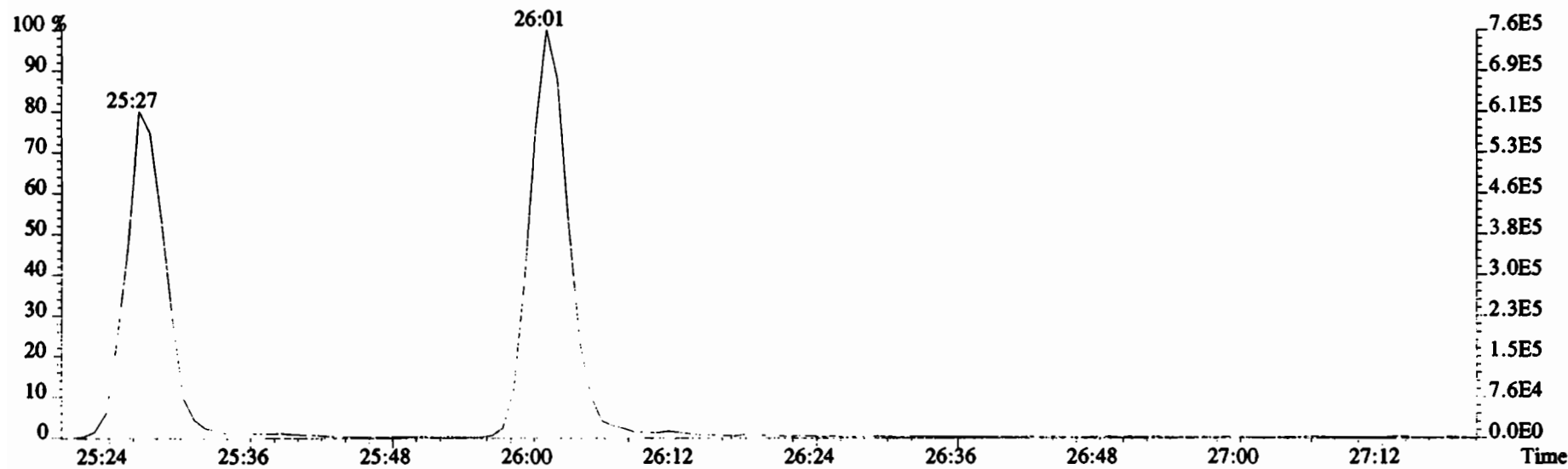
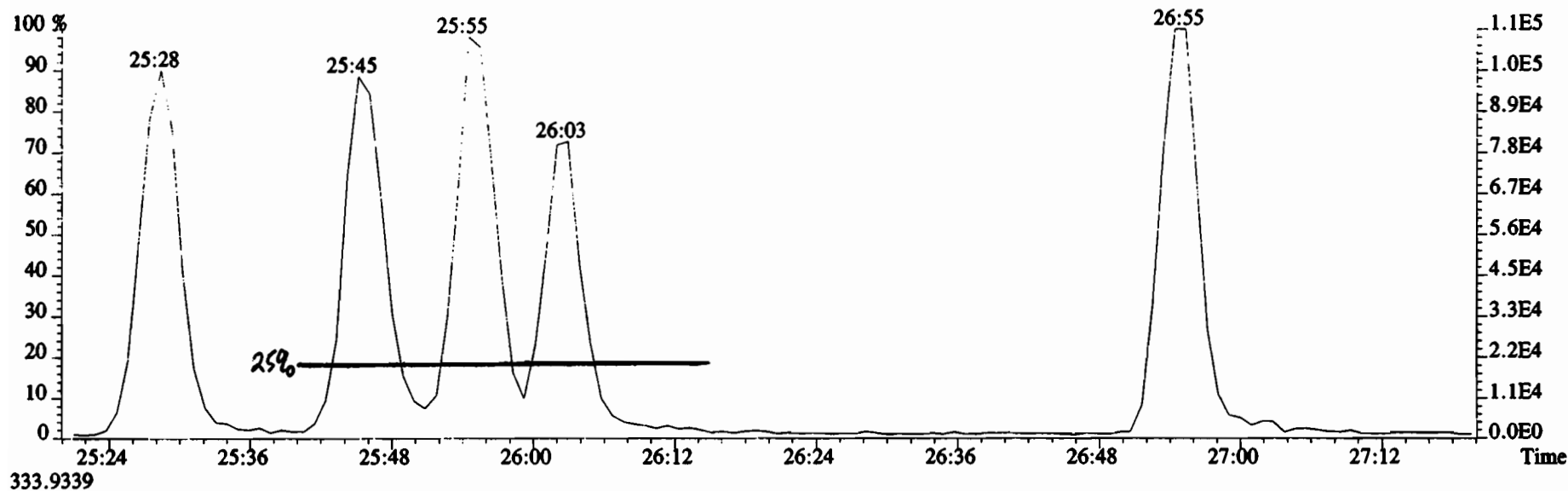


Peak Locate Examination:16-JAN-2020:11:21 File:200116D1

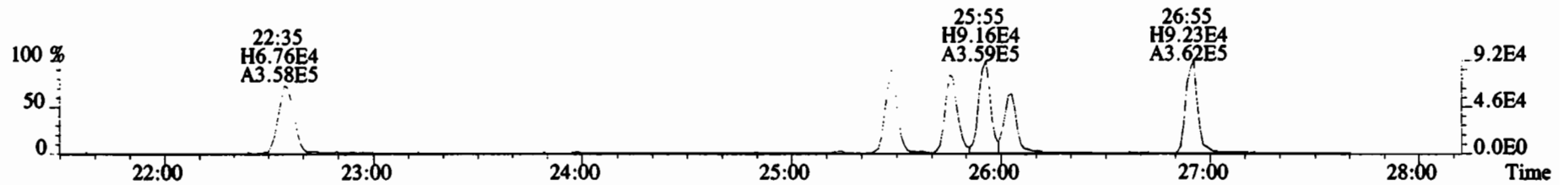
Experiment:OCDD\_DB5 Function:5 Reference:PFK



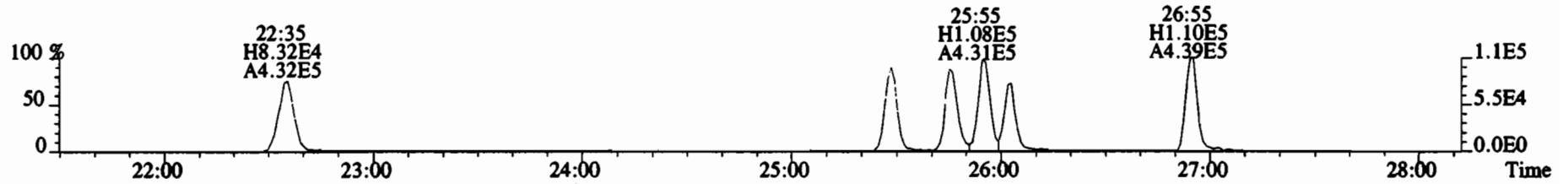
File:200116D1 #1-492 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
321.8936



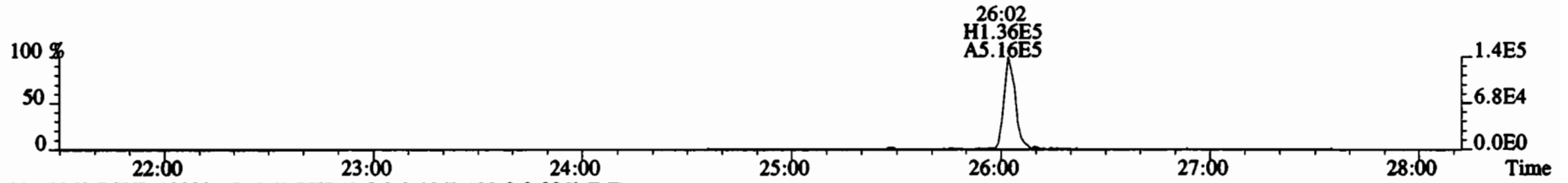
File:200116D1 #1-492 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



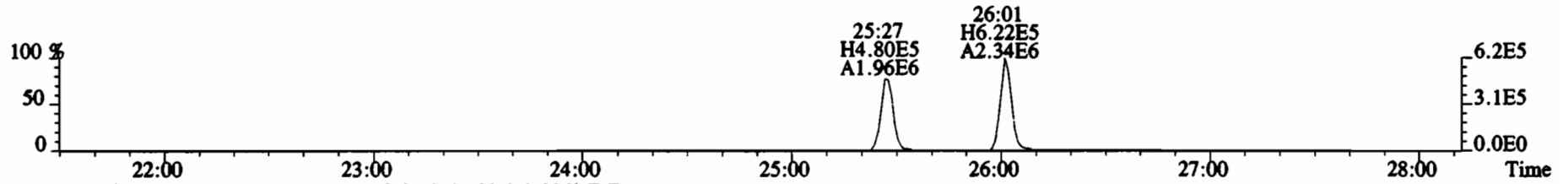
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



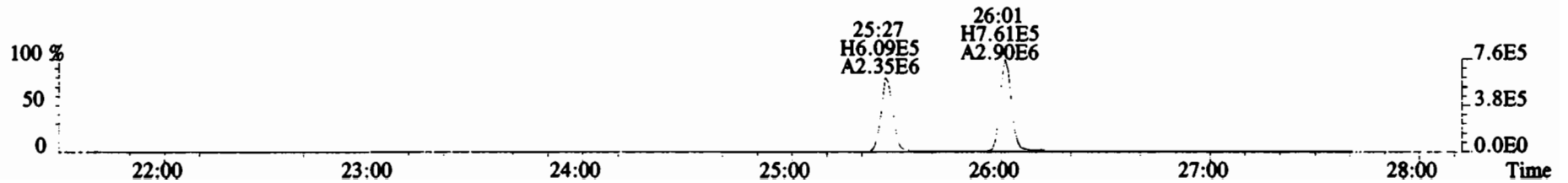
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



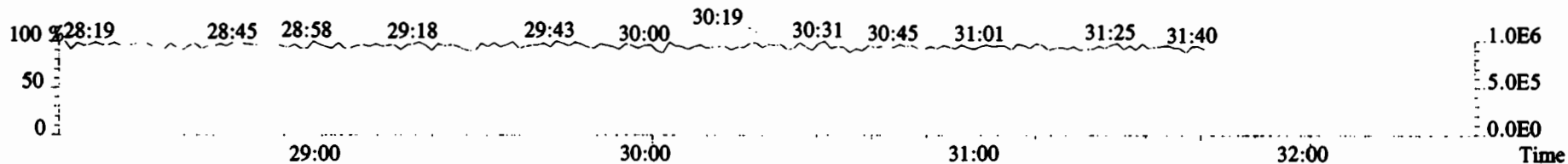
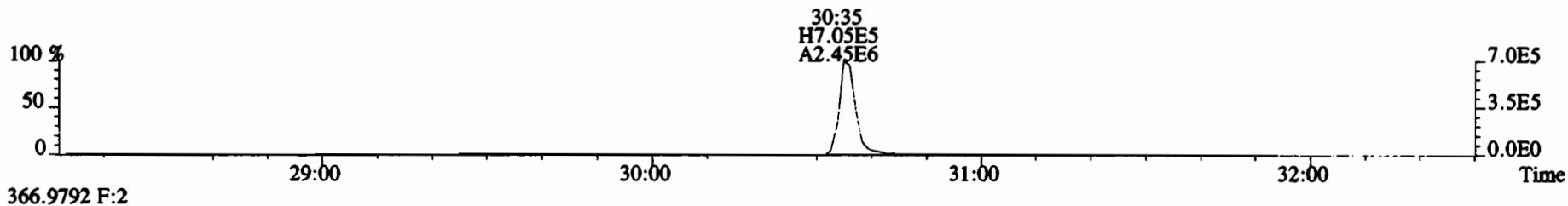
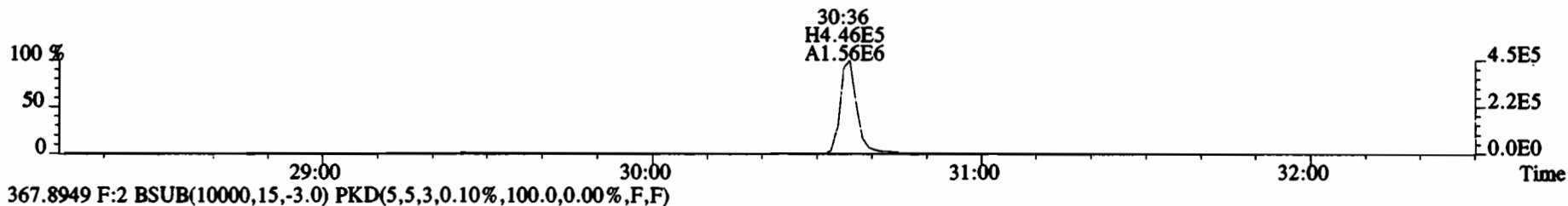
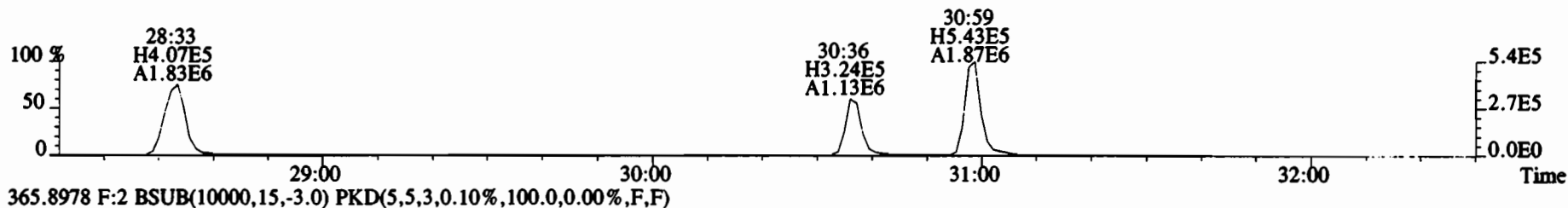
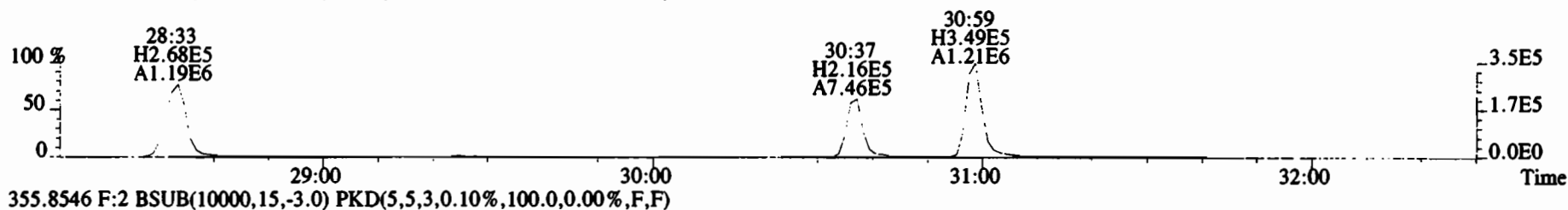
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

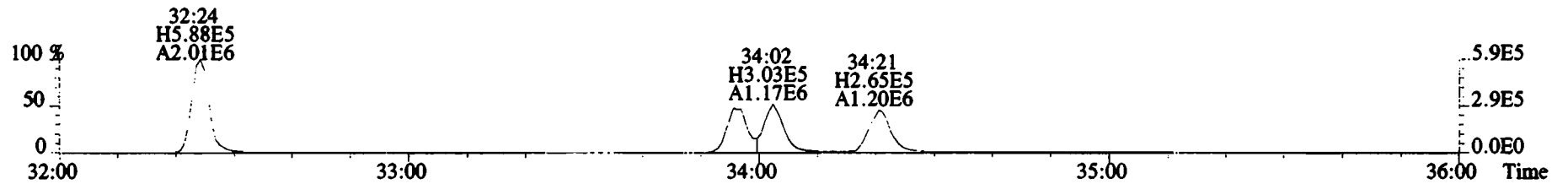


File:200116D1 #1-211 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

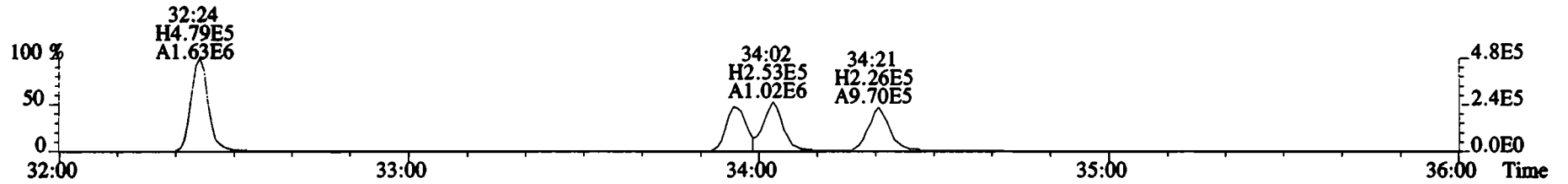




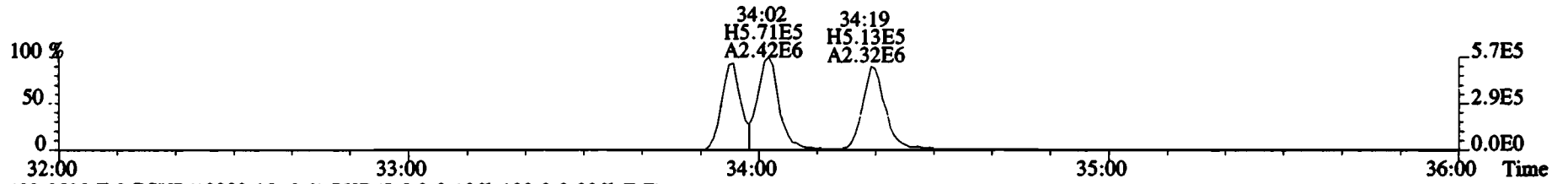
File:200116D1 #1-384 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



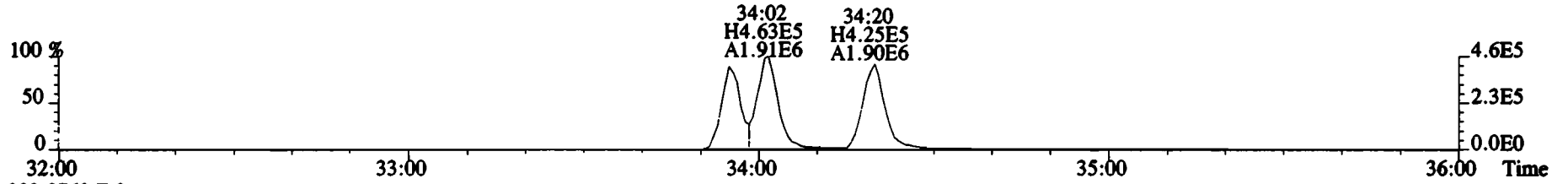
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



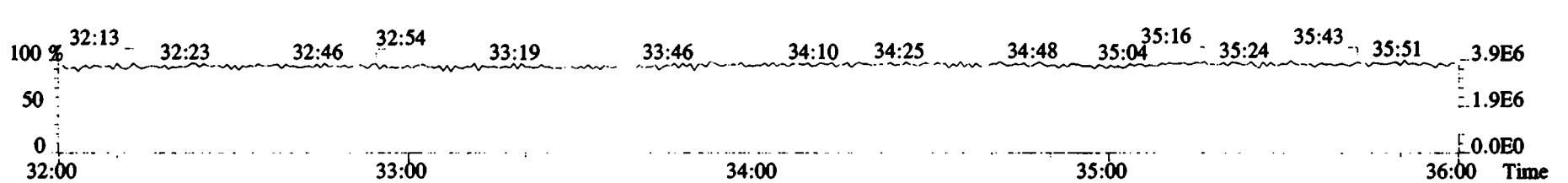
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



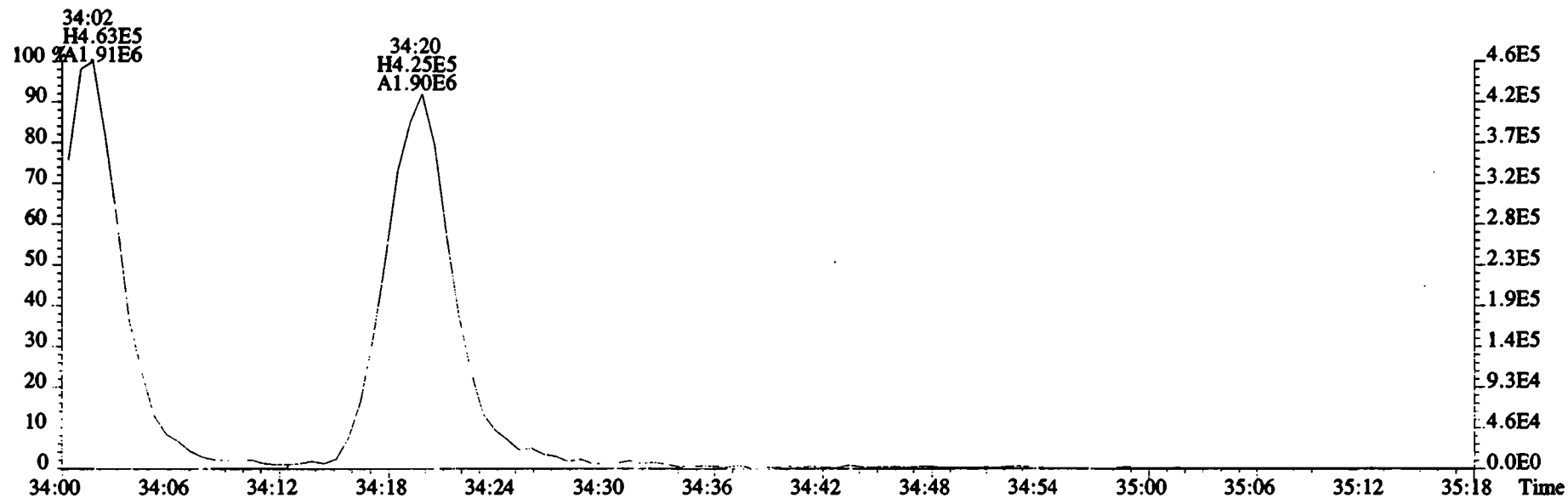
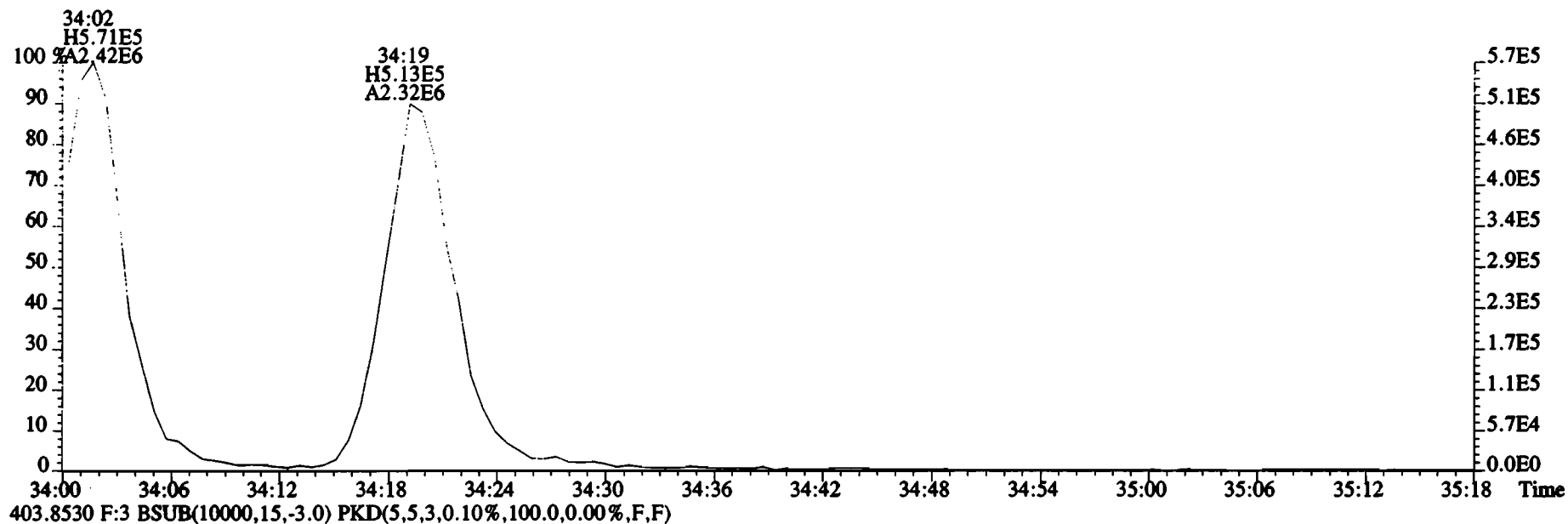
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



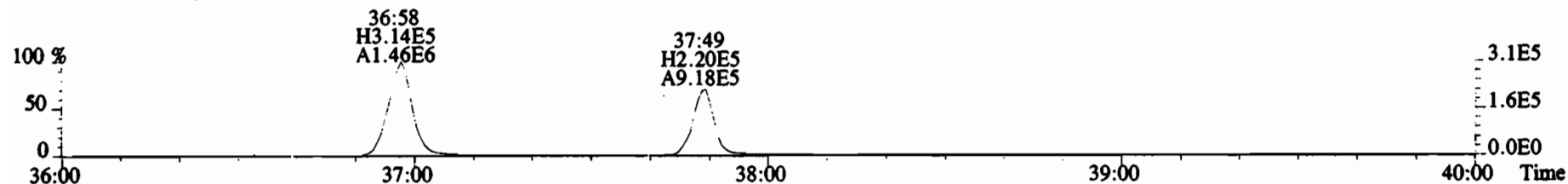
392.9760 F:3



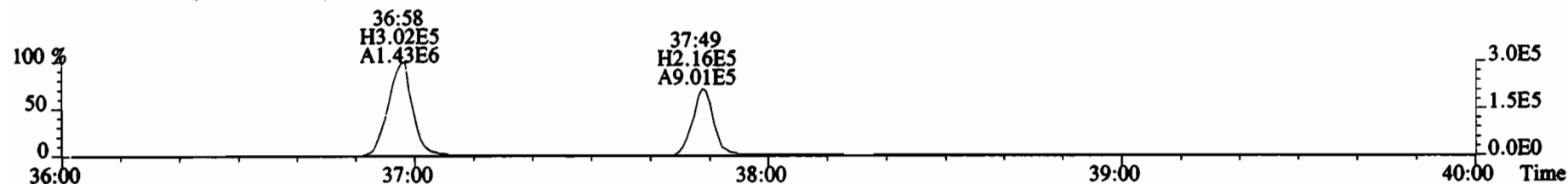
File:200116D1 #1-384 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST200116D1-1 1613 CS3 19I1604 Exp:OCDD\_DB5  
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



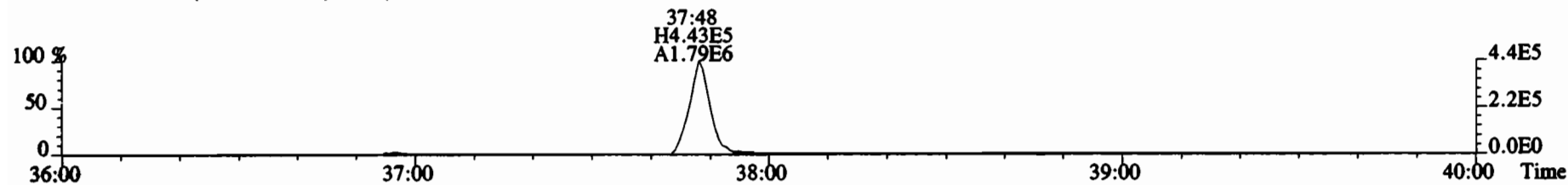
File:200116D1 #1-356 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



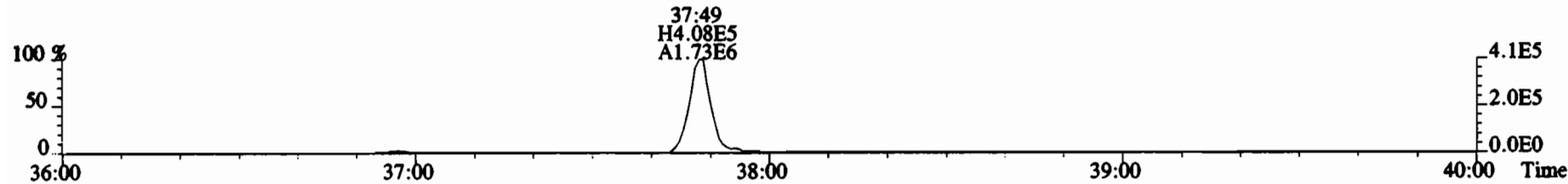
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



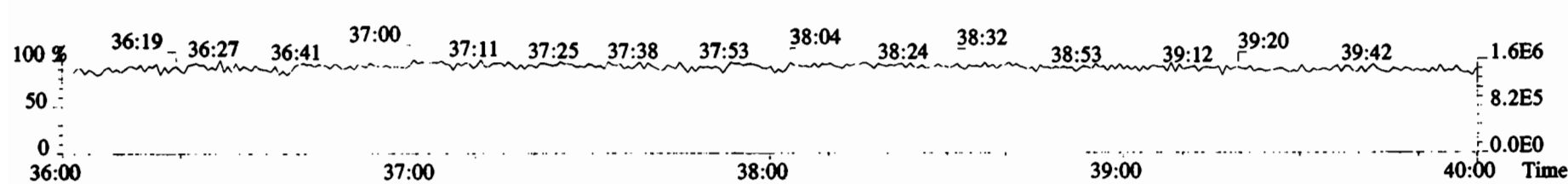
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



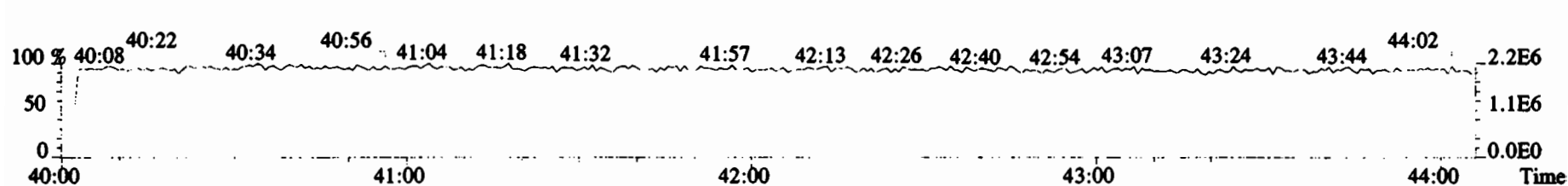
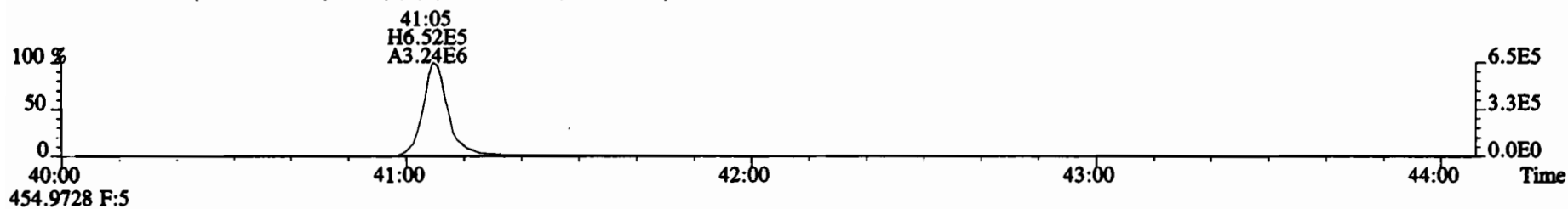
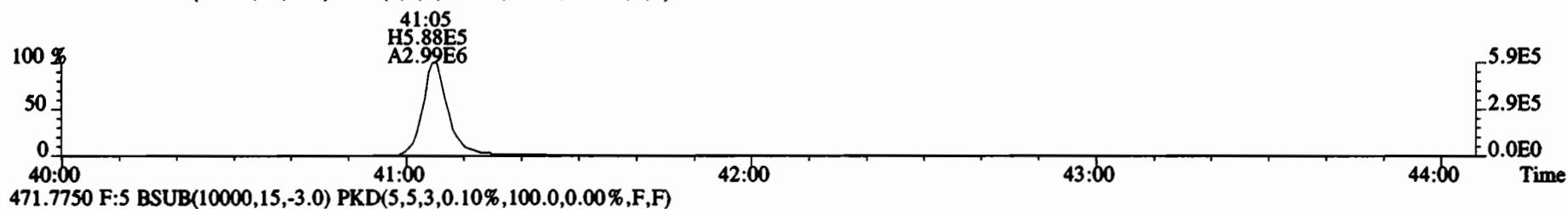
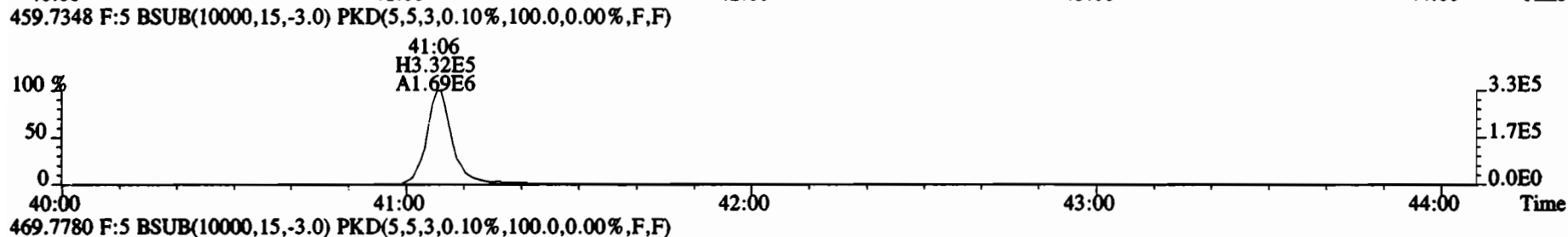
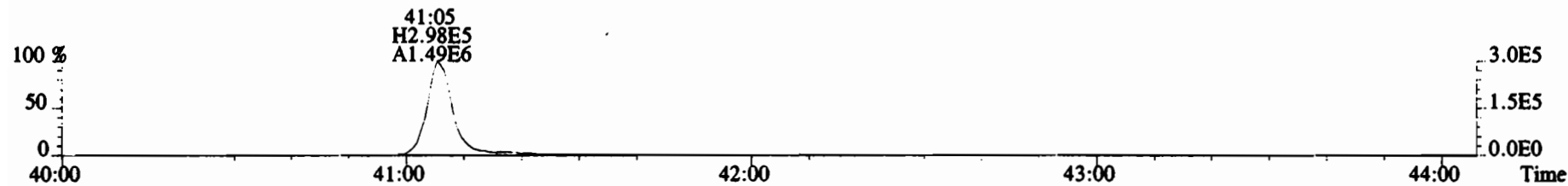
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



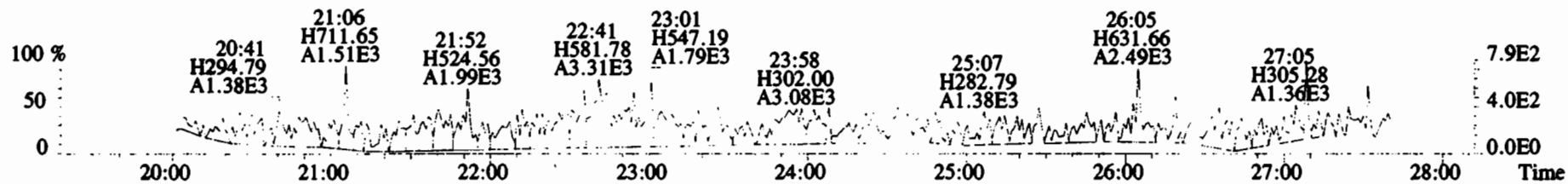
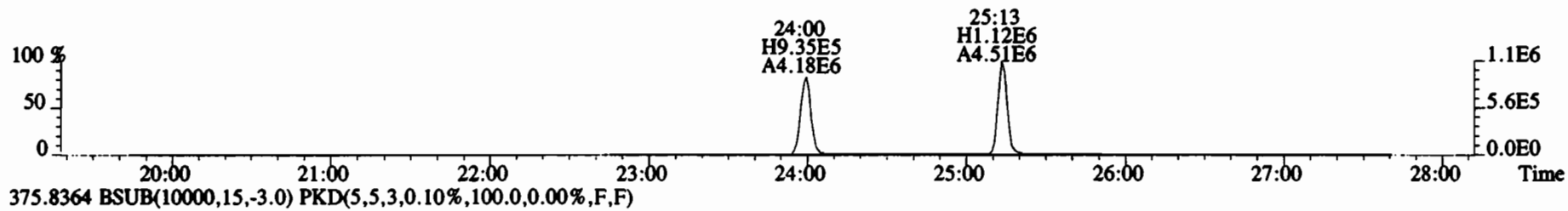
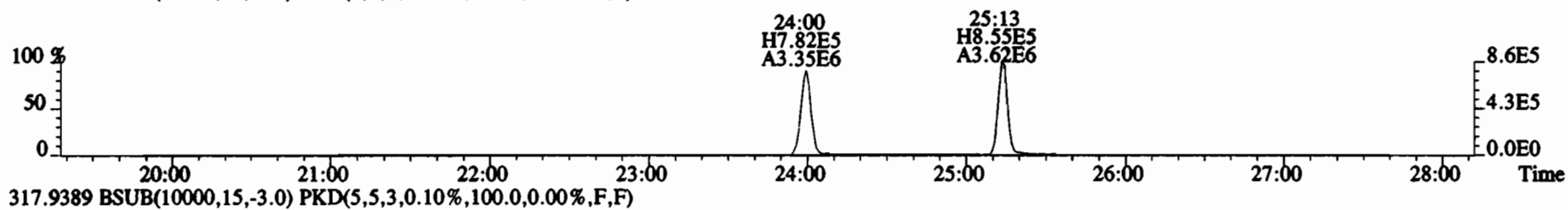
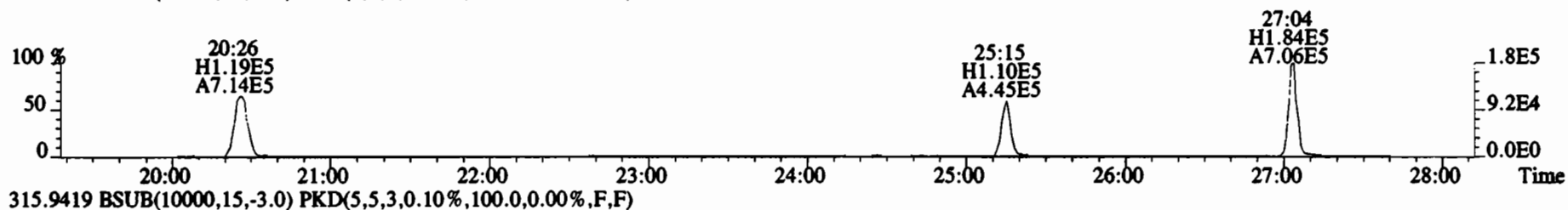
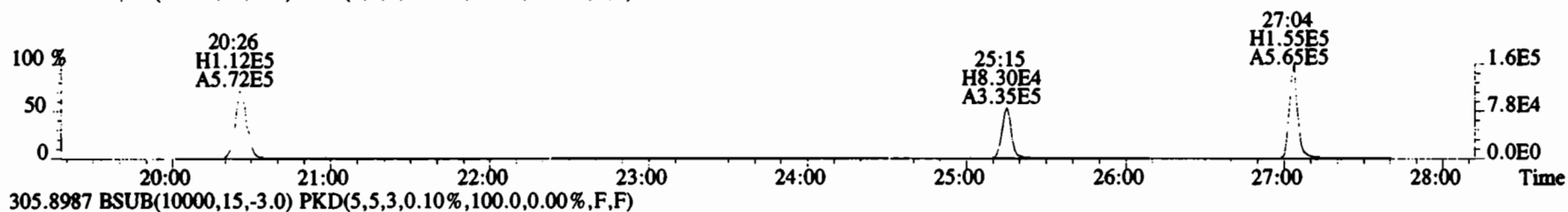
454.9728 F:4



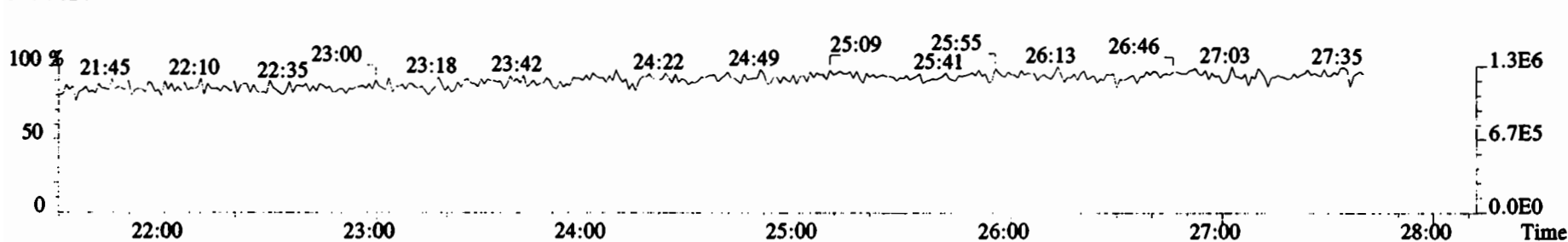
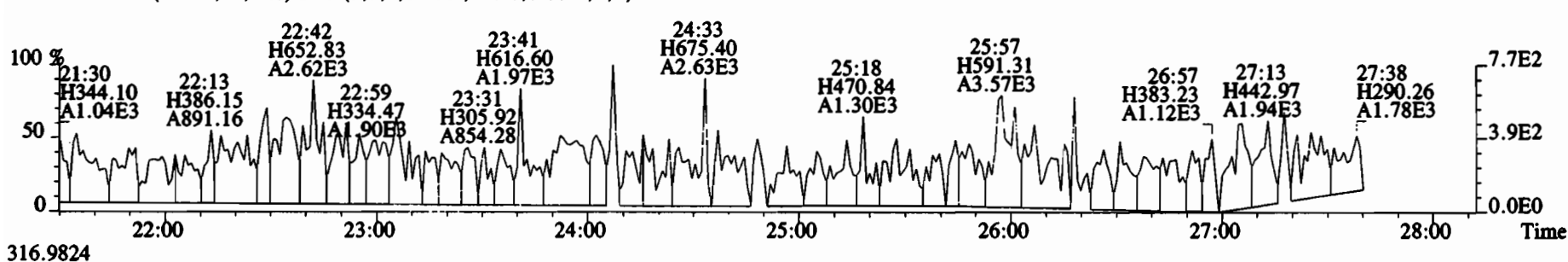
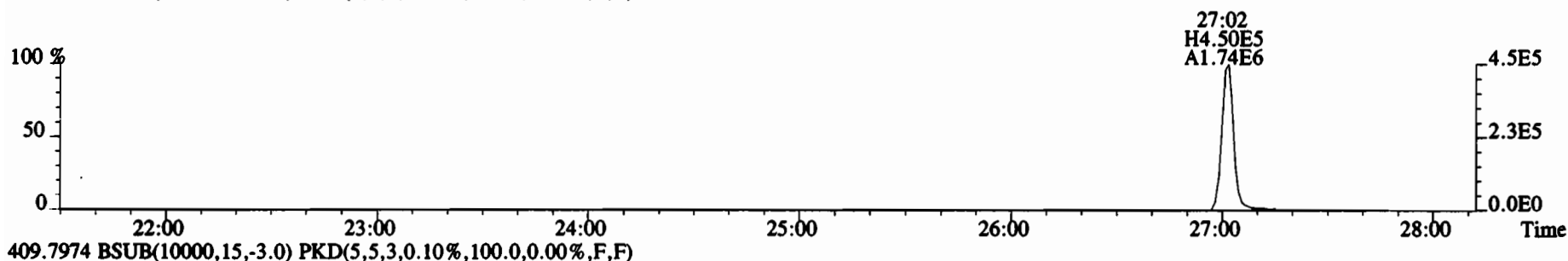
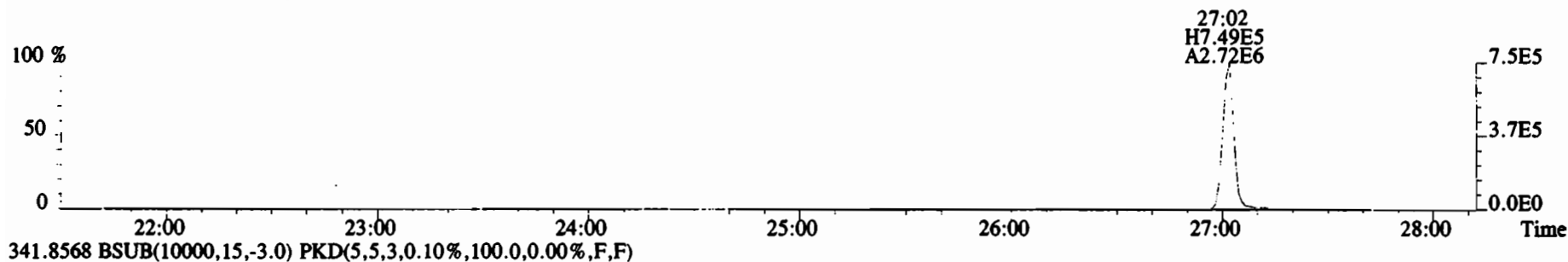
File:200116D1 #1-431 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



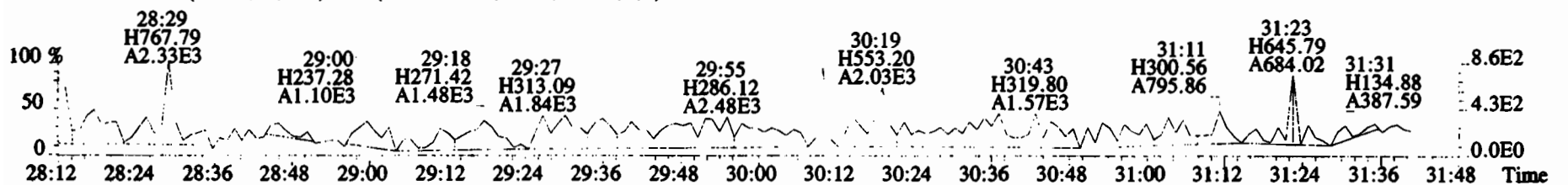
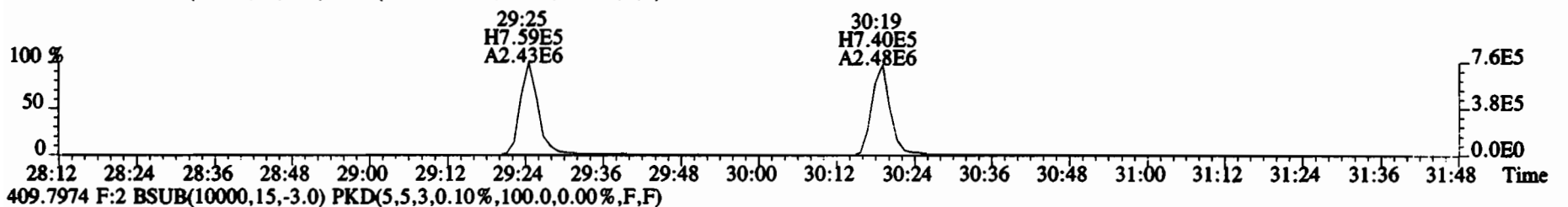
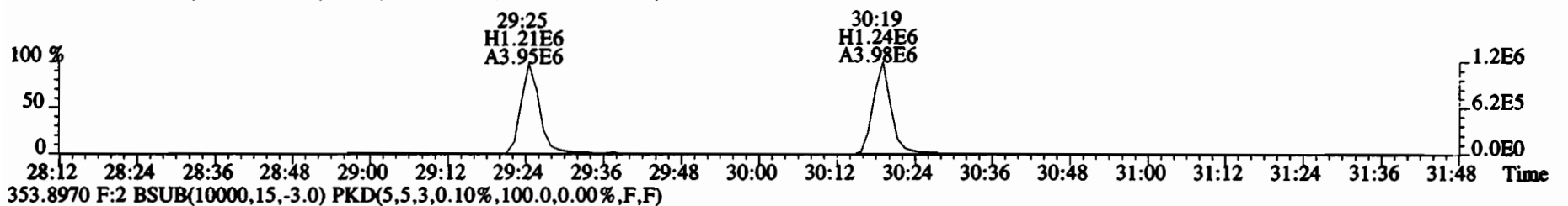
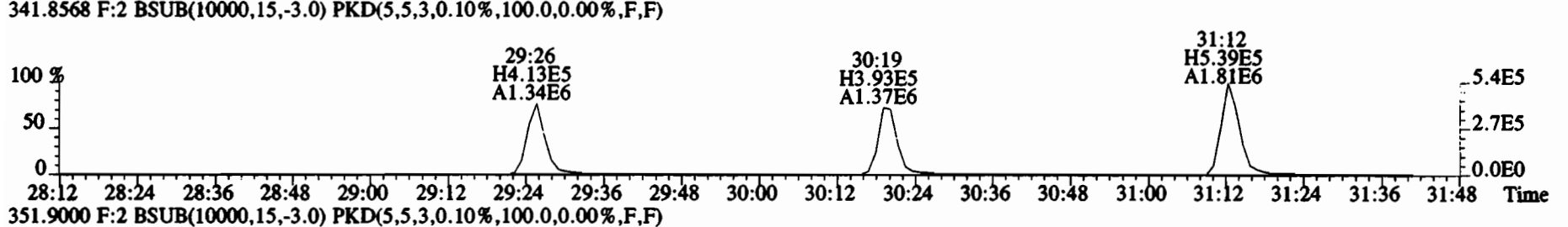
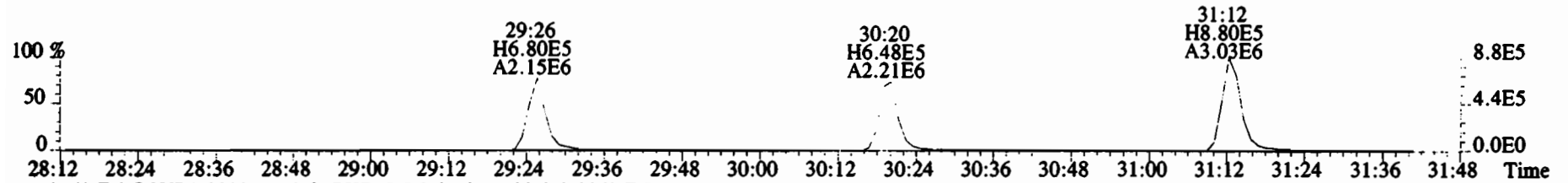
File:200116D1 #1-492 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



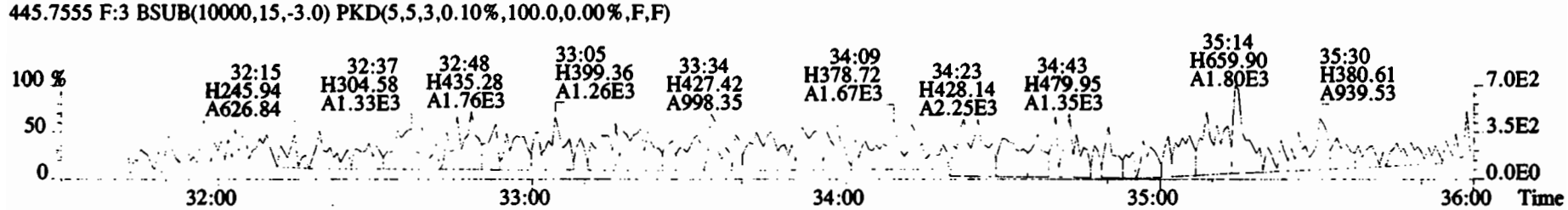
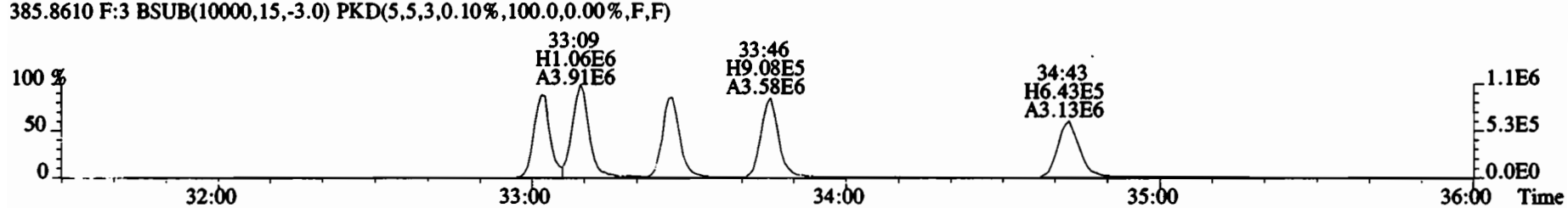
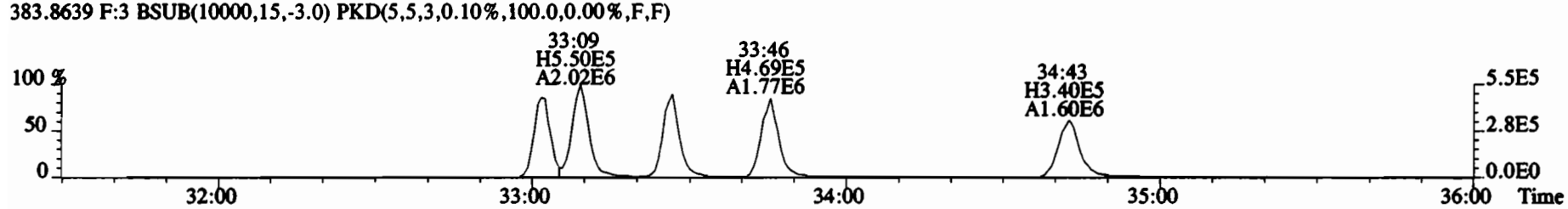
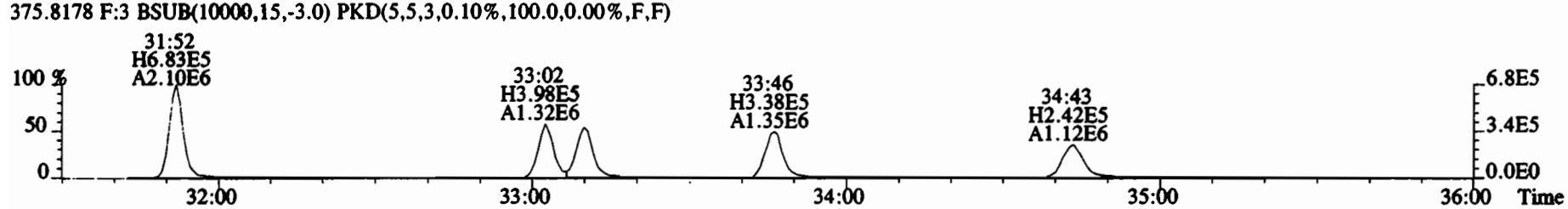
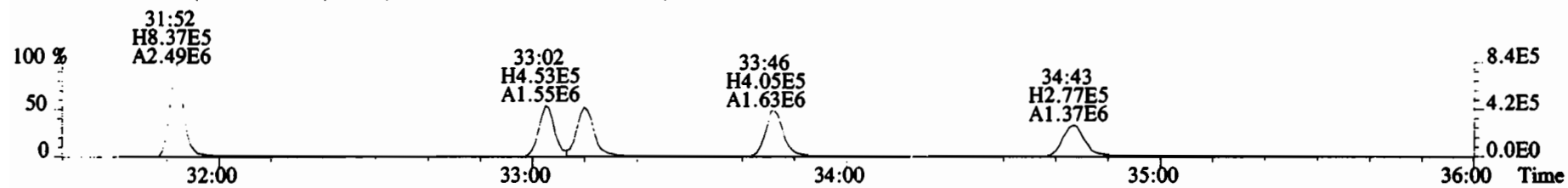
File:200116D1 #1-492 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text: Vista Analytical Laboratory VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:200116D1 #1-211 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

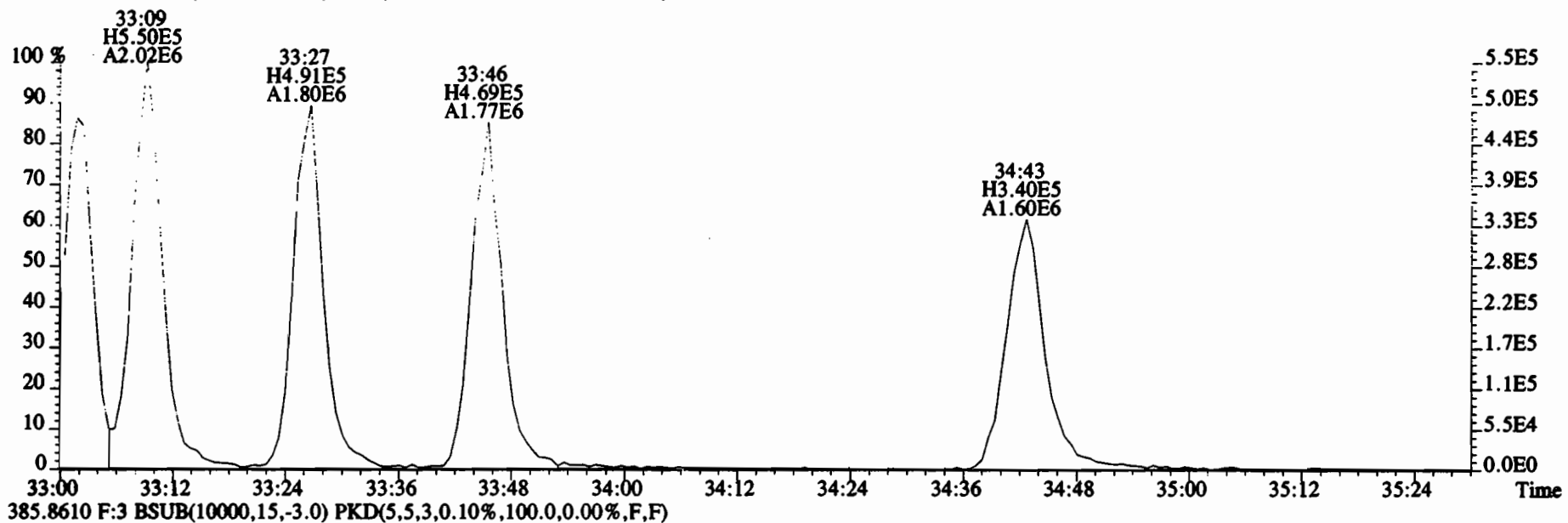


File:200116D1 #1-384 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

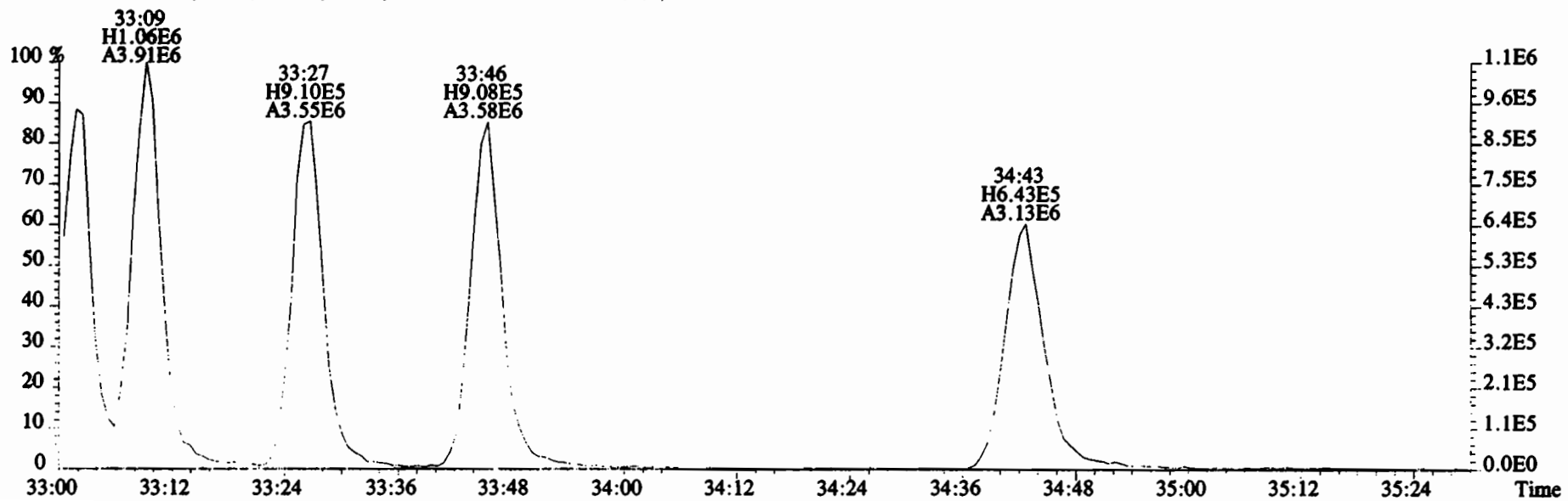




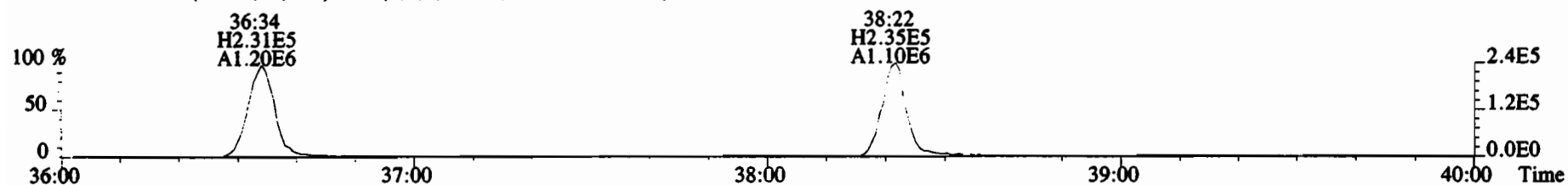
File:200116D1 #1-384 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text: Vista Analytical Laboratory VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



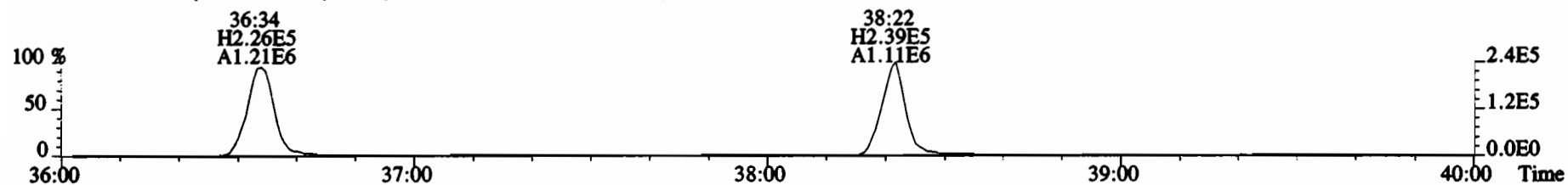
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



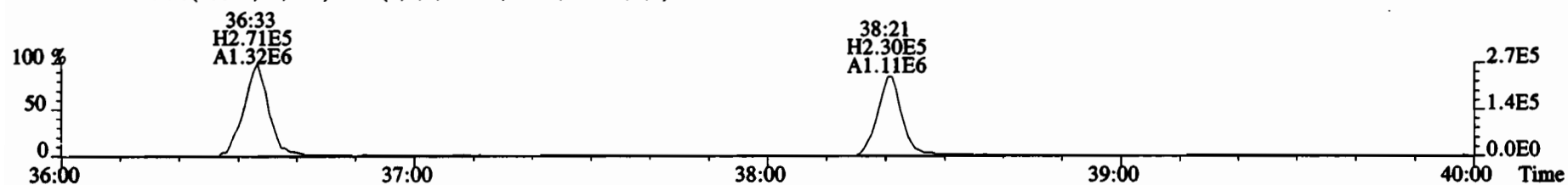
File:200116D1 #1-356 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical Laboratory\_VG7 Text:ST200116D1-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



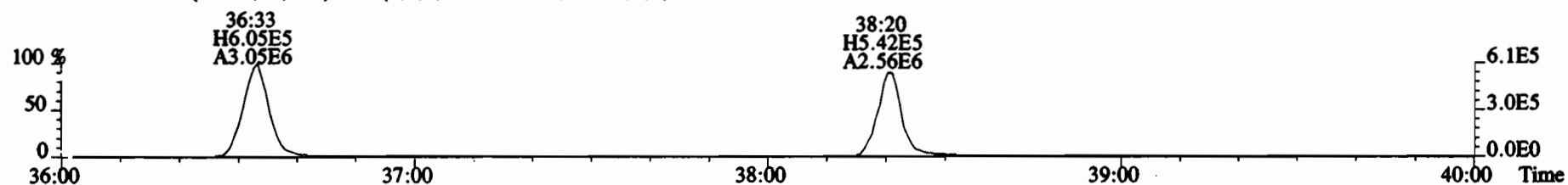
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



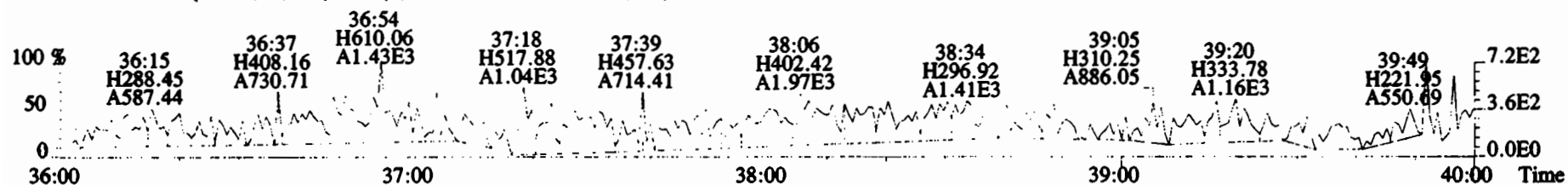
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



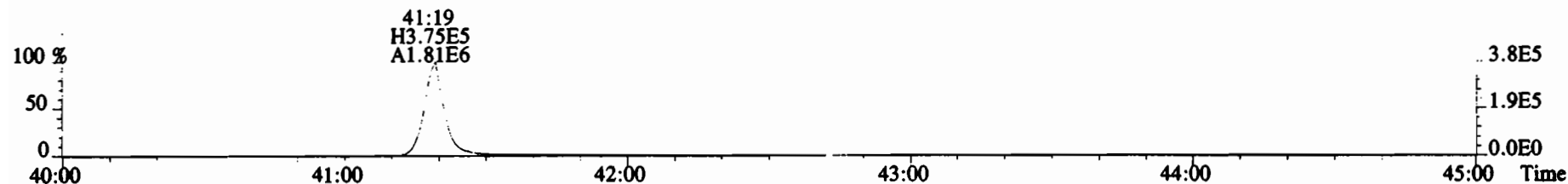
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



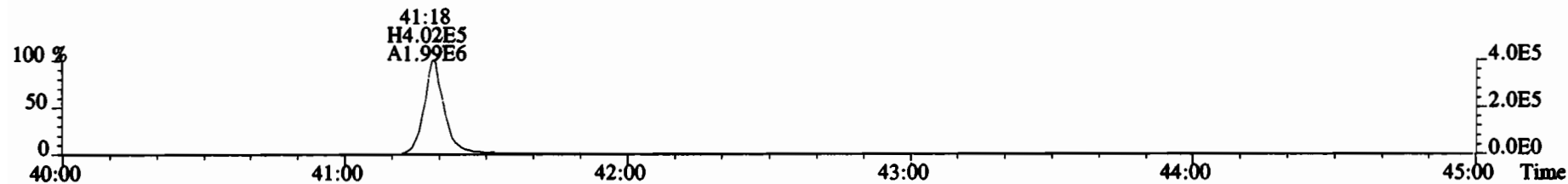
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



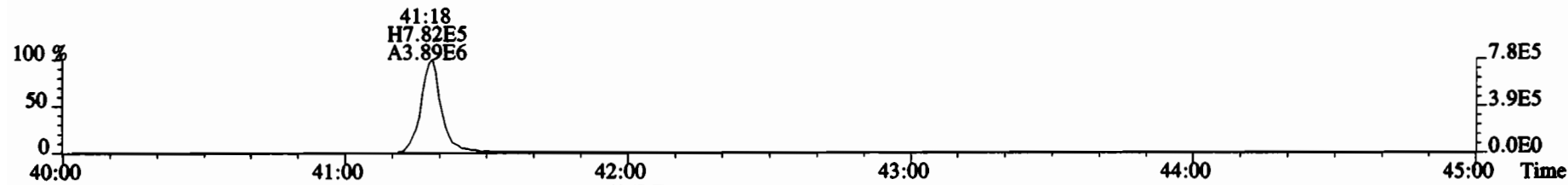
File:200116D1 #1-431 Acq:16-JAN-2020 11:21:47 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D1-1 1613 CS3-1911604 Exp:OCDD\_DB5  
 441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



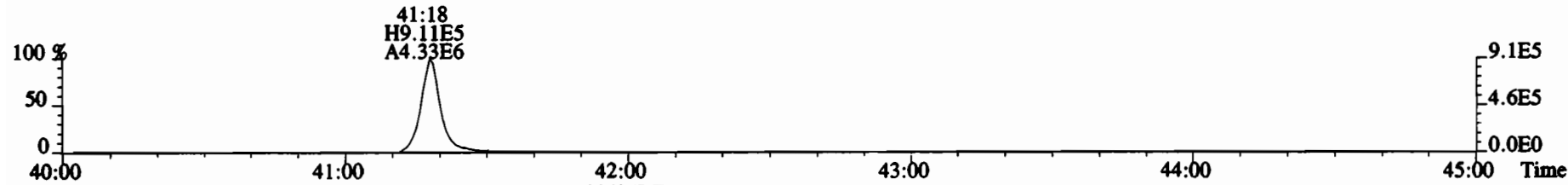
443.7398 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



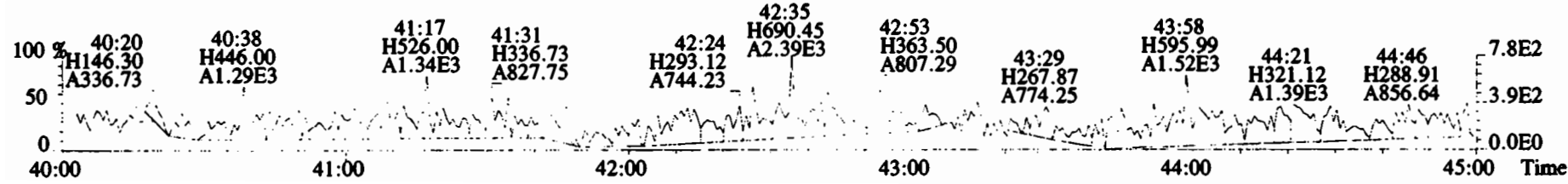
453.7831 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

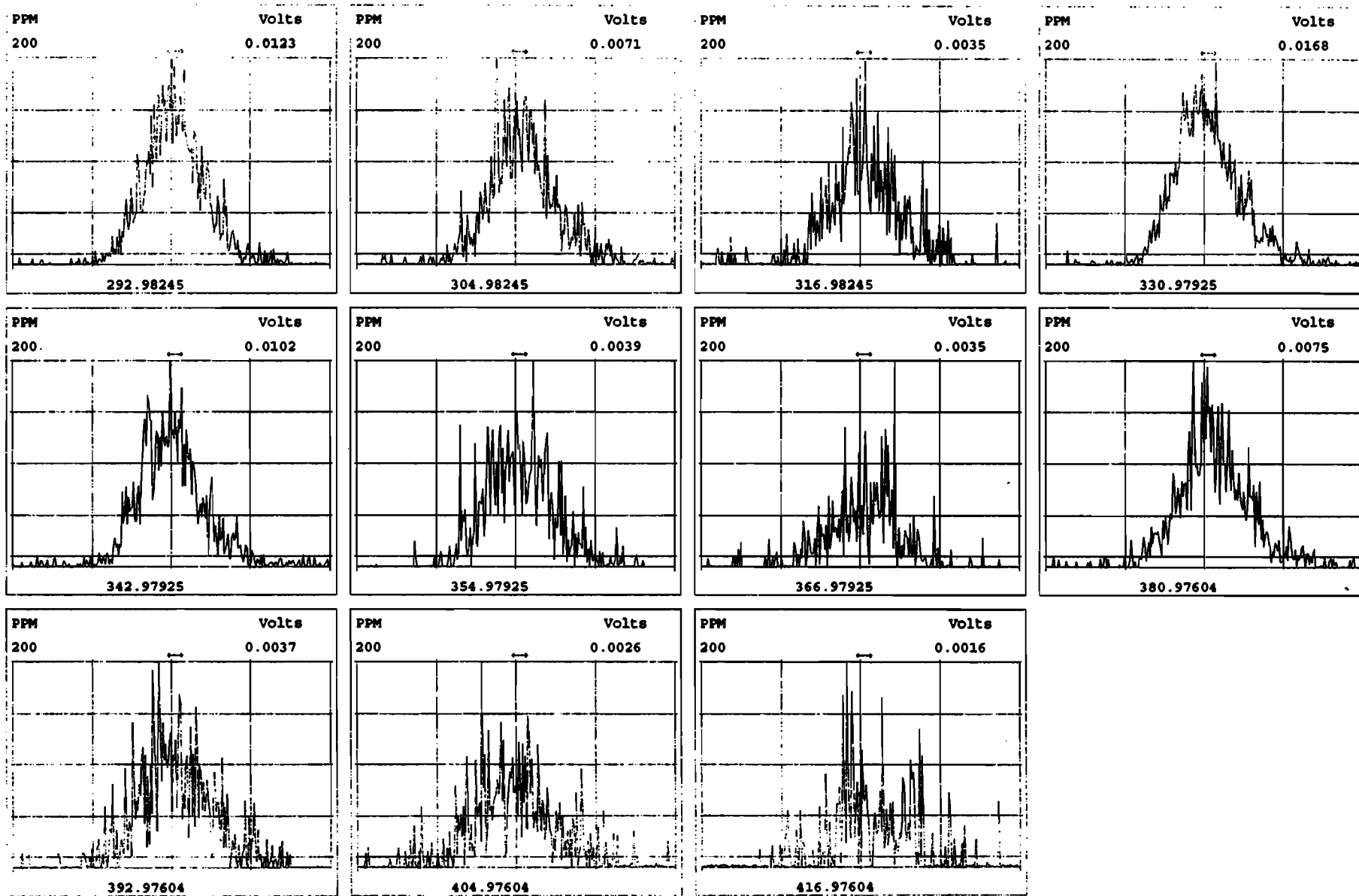


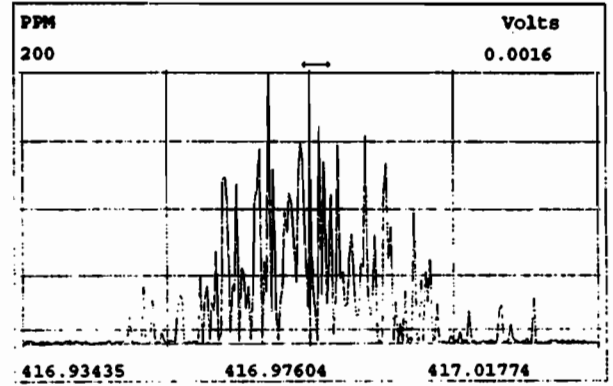
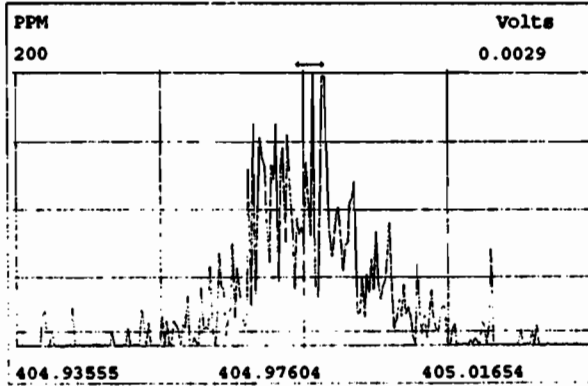
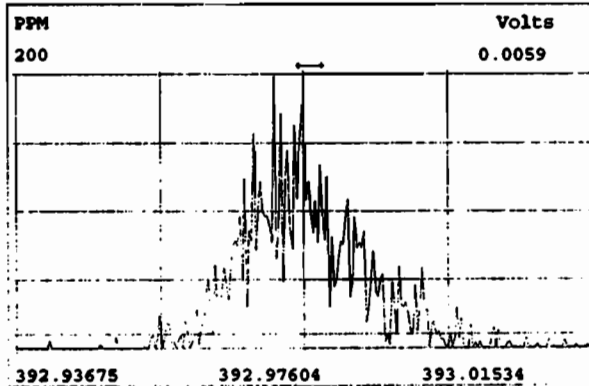
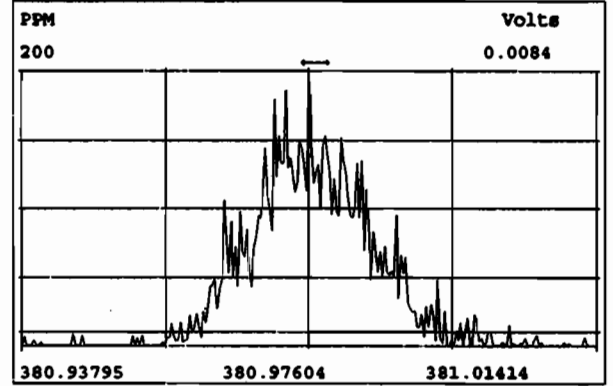
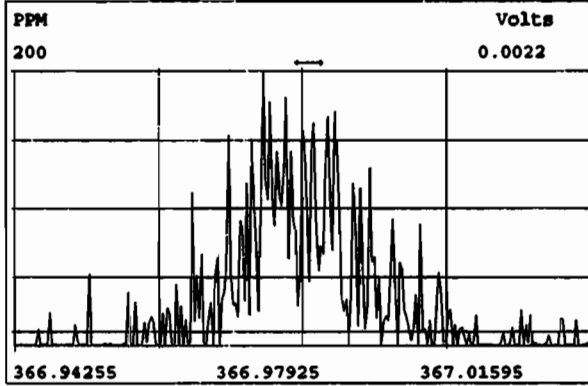
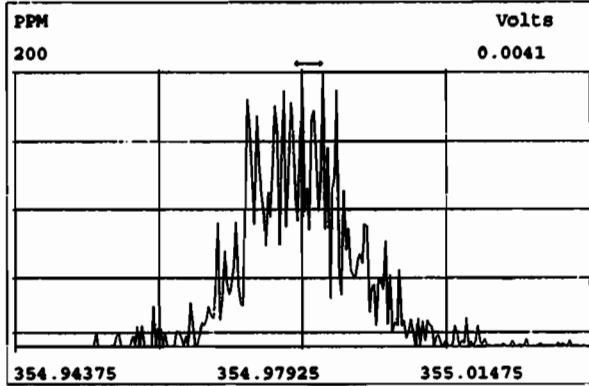
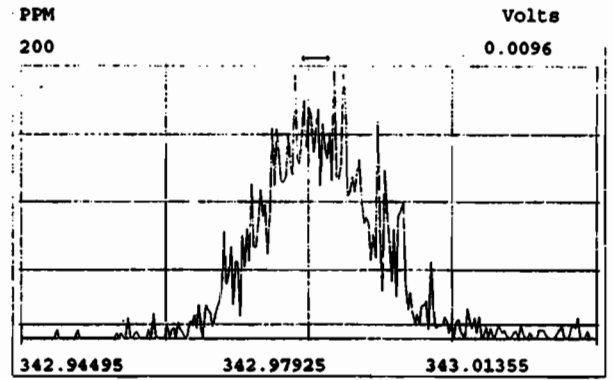
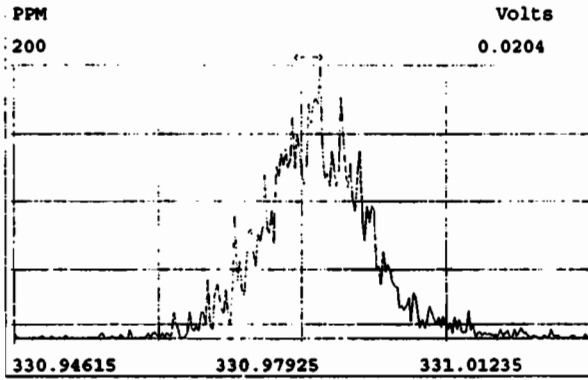
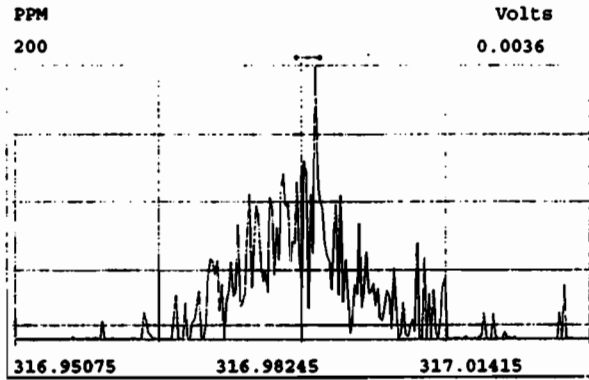
513.6775 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

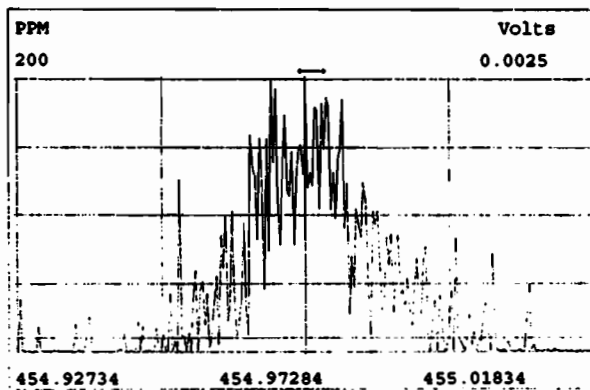
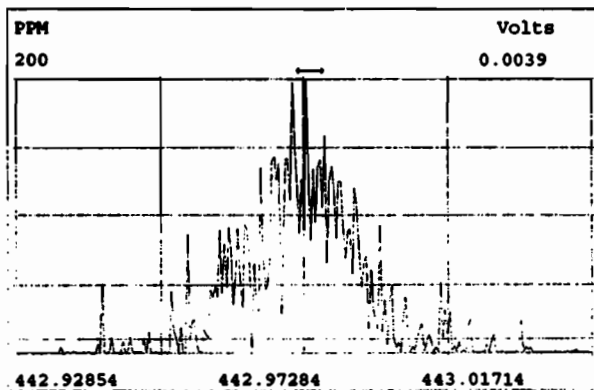
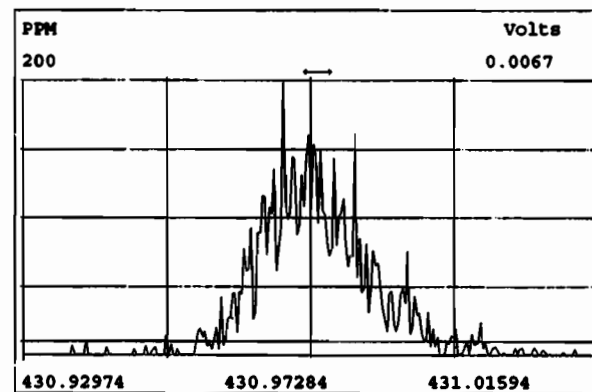
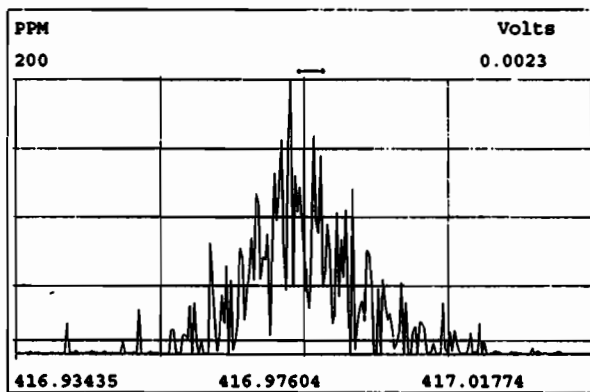
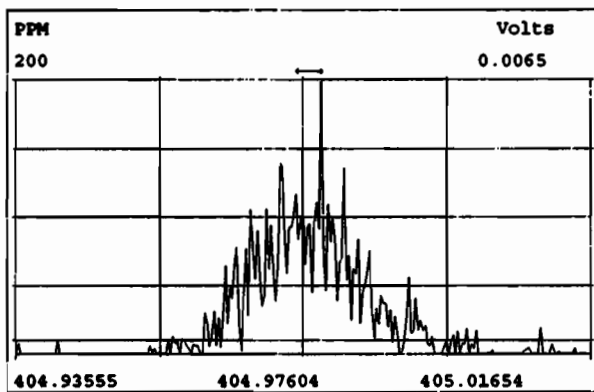
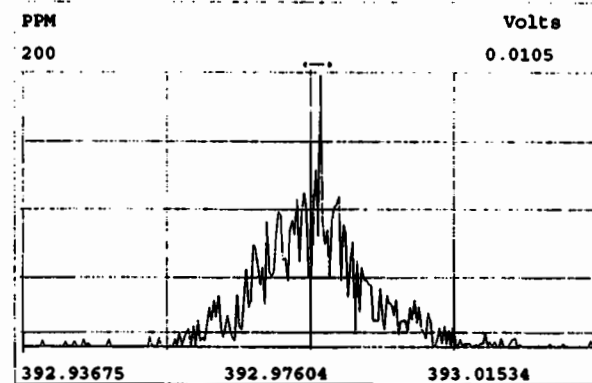
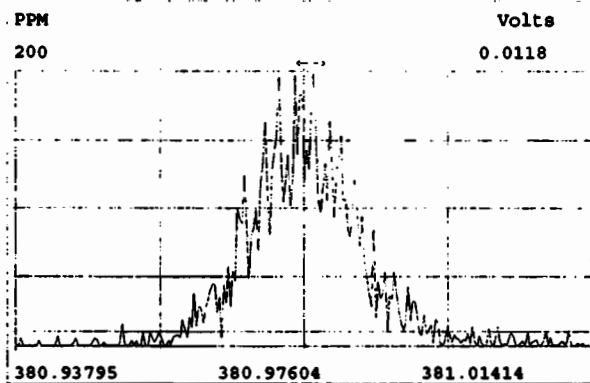
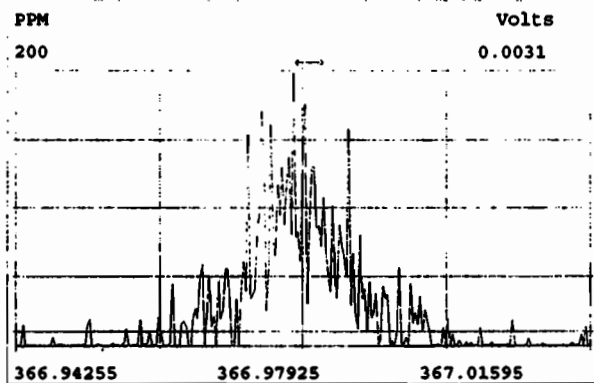


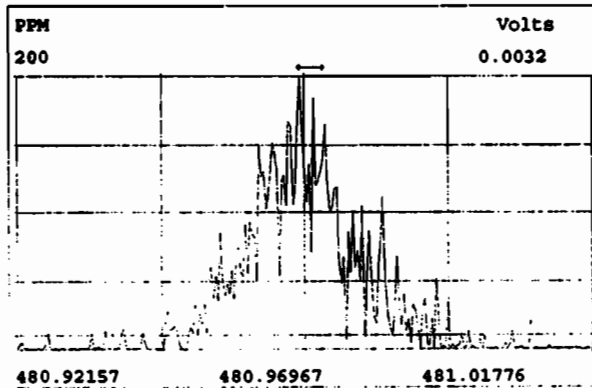
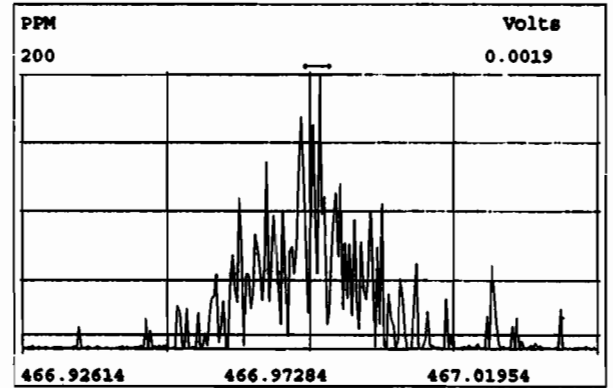
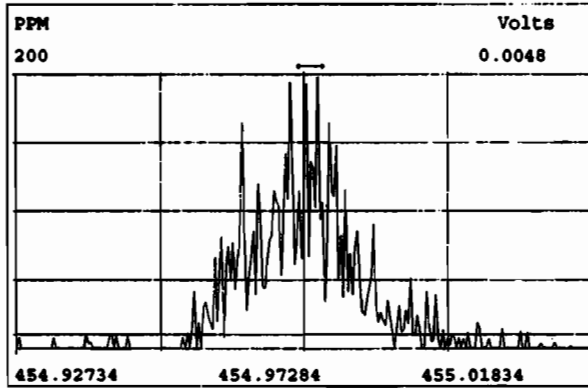
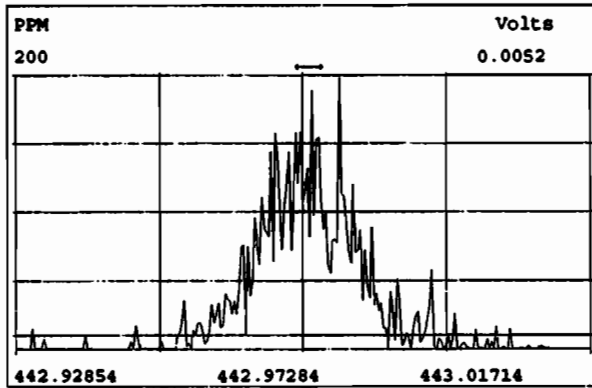
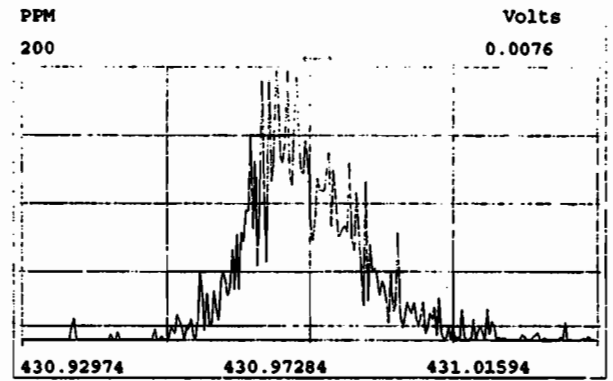
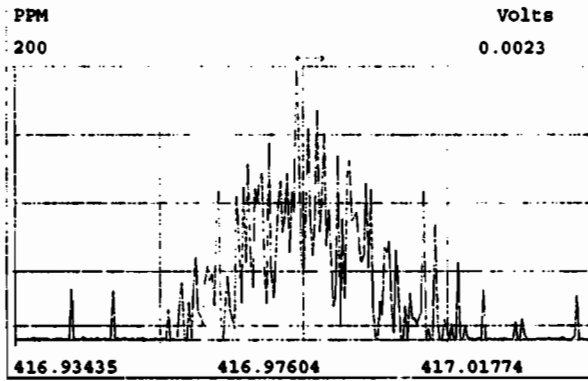
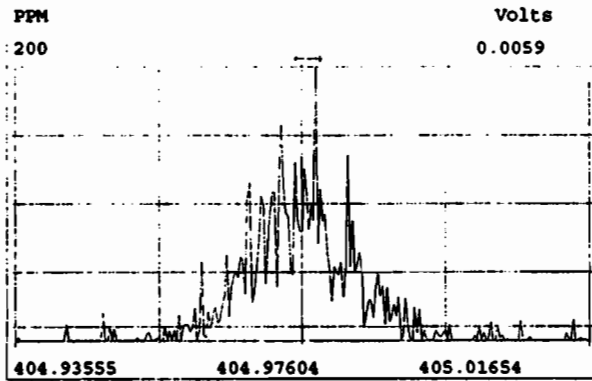
Peak Locate Examination:16-JAN-2020:23:29 File:RBS\_CHECK

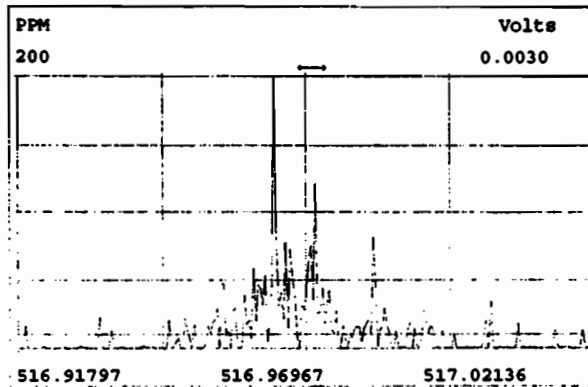
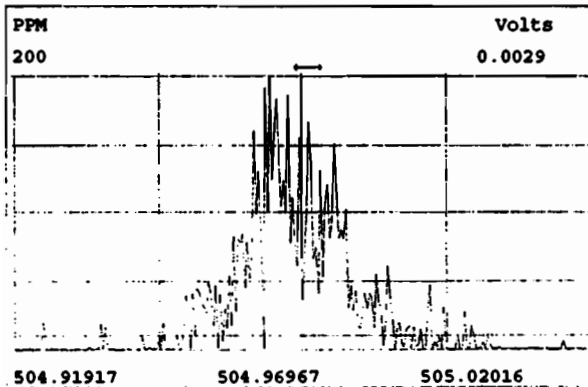
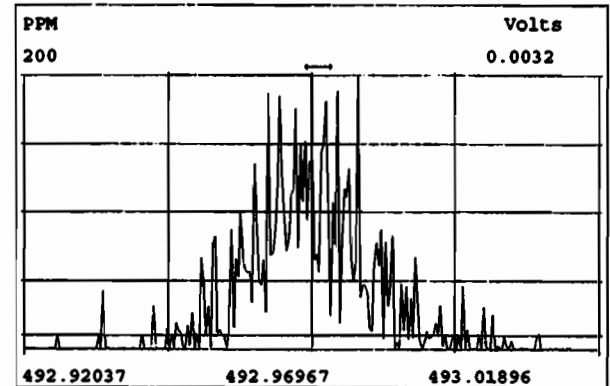
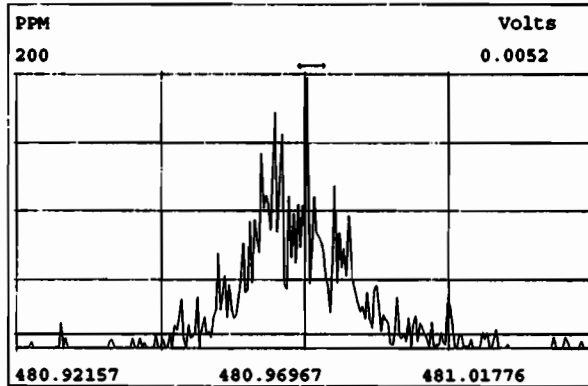
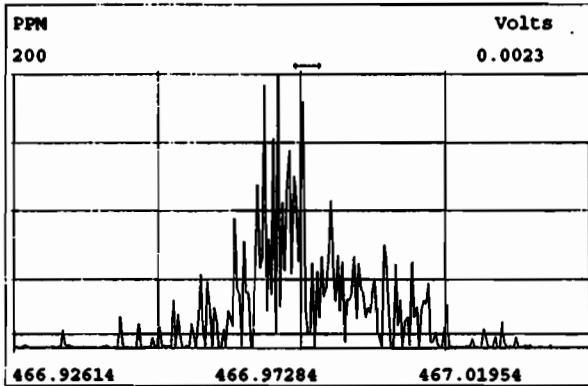
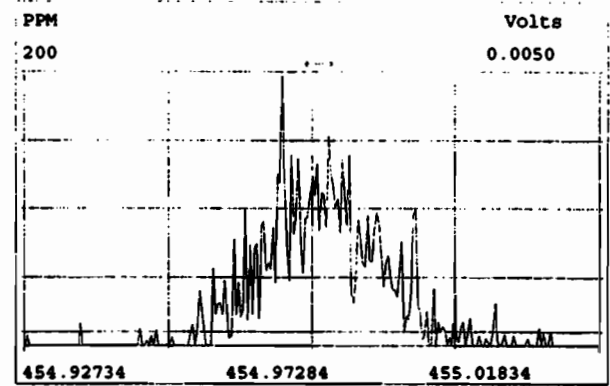
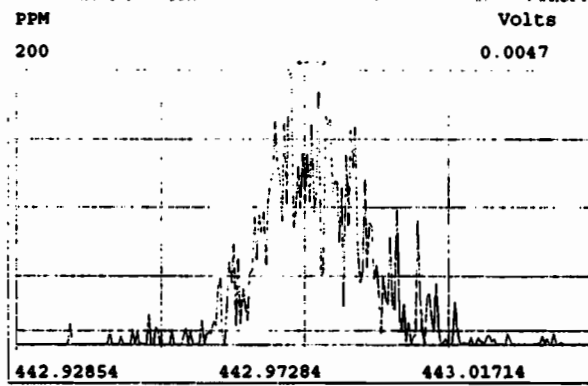
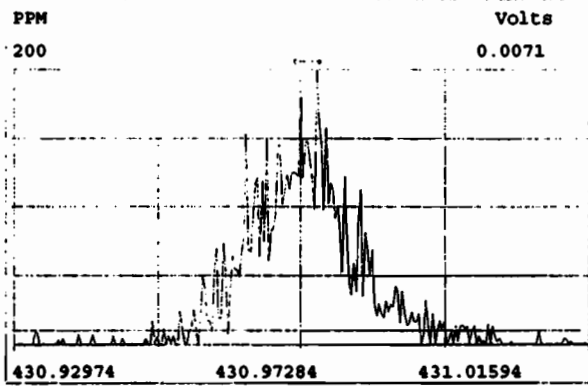
Experiment:OCDD\_DB5 Function:1 Reference:PFK













# HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

**Beg. Calibration ID:** ST2001672-1

**Reviewed By:** CT 01/20/2020  
*Initials & Date*

**End Calibration ID:** NA

	<u>Beg.</u>	<u>End</u>
<b>Ion abundance within QC limits?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
<b>Concentrations within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>TCDD/TCDF Valleys &lt;25%</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>First and last eluters present?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Retention Times within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Verification Std. named correctly?</b> (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Forms signed and dated?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Correct ICAL referenced?</b>	<u>DB</u>	<u>                    </u>
<b><u>Run Log:</u></b>		
- Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/> V
- Samples within 12 hour clock?	<input checked="" type="checkbox"/> Y	N
- Bottle position verified?	<u>DB</u>	<u>                    </u>

	<u>Beg.</u>	<u>End</u>
<b>Mass resolution <math>\geq</math></b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> 5k <input type="checkbox"/> 6-8K <input type="checkbox"/> 8K <input checked="" type="checkbox"/> 10K 1614    1699    429    1613/1668/8280		
<b>Intergrated peaks display correctly?</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>GC Break &lt;20%</b>		<input type="checkbox"/> NA
<b><u>8280 CS1 End Standard:</u></b>		
- Ratios within limits, S/N <2.5:1, CS1 within 12 hours		<input type="checkbox"/> NA

**Comments:**

FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: ST200116D2-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-SMS

VER Data Filename: 200116D2 S#1 Analysis Date: 16-JAN-20 Time: 23:33:36

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC. FOUND	CONC. RANGE (3) (ng/mL)
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			
2,3,7,8-TCDD	M/M+2	0.81	0.65-0.89	y	11.2	7.8 - 12.9
1,2,3,7,8-PeCDD	M/M+2	0.65	0.54-0.72	y	54.2	8.2 - 12.3 (4) 39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	51.3	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.18	1.05-1.43	y	54.3	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.21	1.05-1.43	y	53.7	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.04	0.88-1.20	y	52.8	43.0 - 58.0
OCDD	M+2/M+4	0.91	0.76-1.02	y	106	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.79	0.65-0.89	y	10.4	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.73	1.32-1.78	y	54.9	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.65	1.32-1.78	y	52.6	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.19	1.05-1.43	y	48.6	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	49.4	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.21	1.05-1.43	y	50.5	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.21	1.05-1.43	y	48.8	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.00	0.88-1.20	y	47.7	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.01	0.88-1.20	y	47.2	43.0 - 58.0
OCDF	M+2/M+4	0.88	0.76-1.02	y	99.7	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 1/17/20

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: 200116D2 S#1 Analysis Date: 16-JAN-20 Time: 23:33:36

LABELLED COMPOUNDS	M/Z'S FORMING RATIO (1)	ION ABUND. RATIO	QC LIMITS (2)	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
13C-2,3,7,8-TCDD	M/M+2	0.77	0.65-0.89	y	112	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	99.1	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.29	1.05-1.43	y	103	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.26	1.05-1.43	y	93.8	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.25	1.05-1.43	y	97.9	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.05	0.88-1.20	y	90.8	72.0 - 138.0
13C-OCDD	M/M+2	0.93	0.76-1.02	y	187	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.81	0.65-0.89	y	113	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.55	1.32-1.78	y	104	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.63	1.32-1.78	y	110	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	114	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.50	0.43-0.59	y	105	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	106	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.52	0.43-0.59	y	110	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.44	0.37-0.51	y	106	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.43	0.37-0.51	y	104	77.0 - 129.0
13C-OCDF	M+2/M+4	0.90	0.76-1.02	y	202	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: 1/17/20

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: 200116D2 S#1 Analysis Date: 16-JAN-20 Time: 23:33:36

ZB-5MS IS Data Filename: 200116D2 S#1 Analysis Date: 16-JAN-20 Time: 23:33:36

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)	22:32	1,3,6,8-TCDF (F)	20:23
1,2,8,9-TCDD (L)	26:53	1,2,8,9-TCDF (L)	27:01
1,2,4,7,9-PeCDD (F)	28:31	1,3,4,6,8-PeCDF (F)	26:59
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)	32:23	1,2,3,4,6,8-HxCDF (F)	31:50
1,2,3,7,8,9-HxCDD (L)	34:19	1,2,3,7,8,9-HxCDF (L)	34:42
1,2,3,4,6,7,9-HpCDD (F)	36:55	1,2,3,4,6,7,8-HpCDF (F)	36:32
1,2,3,4,6,7,8-HpCDD (L)	37:47	1,2,3,4,7,8,9-HpCDF (L)	38:20

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

\* VALLEY HEIGHT  
BETWEEN  
COMPARED PEAKS (1)

<25\*

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

Analyst: DB

Date: 1/17/20

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: 200116D2 #1 Analysis Date: 16-JAN-20 Time: 23:33:36

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.001	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002

LABELED COMPOUNDS

13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.023	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.203	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	1.156	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.192	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: 1/17/20

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: 200116D2 S#1 Analysis Date: 16-JAN-20 Time: 23:33:36

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.001	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.000	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.000	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.001	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.001	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.988	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.992	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.009	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.038	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.017	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	1.147	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.131	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	1.235	1.091-1.371

Analyst: DB

Date: 1/17/20

Client ID: 1613 CS3 19I1604  
Lab ID: ST200116D2-1

Filename: 200116D2 S:1 Acq:16-JAN-20 23:33:36  
GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

ConCal: ST200116D2-1  
EndCAL: NA

Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	5.85e+05	0.81 y	0.91	26:00	11.160			* 2.5	*	Total Tetra-Dioxins	89.3	90.3		*	*
1,2,3,7,8-PeCDD	2.02e+06	0.65 y	0.90	30:35	54.203			* 2.5	*	Total Penta-Dioxins	238	239		*	*
1,2,3,4,7,8-HxCDD	2.03e+06	1.26 y	1.10	33:54	51.335			* 2.5	*	Total Hexa-Dioxins	251	252		*	*
1,2,3,6,7,8-HxCDD	2.22e+06	1.18 y	0.94	34:01	54.301			* 2.5	*	Total Hepta-Dioxins	139	140		*	*
1,2,3,7,8,9-HxCDD	2.22e+06	1.21 y	0.96	34:19	53.724			* 2.5	*	Total Tetra-Furans	46.7	47.9		*	*
1,2,3,4,6,7,8-HpCDD	1.67e+06	1.04 y	0.98	37:47	52.805			* 2.5	*	Total Penta-Furans	255.59	257.05		*	*
OCDD	2.98e+06	0.91 y	0.96	41:04	105.79			* 2.5	*	Total Hexa-Furans	277	279		*	*
										Total Hepta-Furans	95.9	97.5		*	*
2,3,7,8-TCDF	8.29e+05	0.79 y	0.95	25:12	10.413			* 2.5	*						
1,2,3,7,8-PeCDF	3.36e+06	1.73 y	0.96	29:24	54.917			* 2.5	*						
2,3,4,7,8-PeCDF	3.56e+06	1.65 y	1.01	30:18	52.581			* 2.5	*						
1,2,3,4,7,8-HxCDF	2.96e+06	1.19 y	1.18	33:01	48.592			* 2.5	*						
1,2,3,6,7,8-HxCDF	3.13e+06	1.21 y	1.07	33:08	49.401			* 2.5	*						
2,3,4,6,7,8-HxCDF	3.08e+06	1.21 y	1.11	33:44	50.485			* 2.5	*						
1,2,3,7,8,9-HxCDF	2.57e+06	1.21 y	1.06	34:42	48.842			* 2.5	*						
1,2,3,4,6,7,8-HpCDF	2.35e+06	1.00 y	1.13	36:32	47.700			* 2.5	*						
1,2,3,4,7,8,9-HpCDF	1.98e+06	1.01 y	1.28	38:20	47.164			* 2.5	*						
OCDF	3.58e+06	0.88 y	0.95	41:17	99.706			* 2.5	*						
IS	13C-2,3,7,8-TCDD	5.79e+06	0.77 y	1.10	25:59	111.71				Rec					
IS	13C-1,2,3,7,8-PeCDD	4.13e+06	0.63 y	0.88	30:34	99.129				112					
IS	13C-1,2,3,4,7,8-HxCDD	3.59e+06	1.29 y	0.64	33:53	102.95				99.1					
IS	13C-1,2,3,6,7,8-HxCDD	4.36e+06	1.26 y	0.86	33:60	93.813				103					
IS	13C-1,2,3,7,8,9-HxCDD	4.29e+06	1.25 y	0.81	34:18	97.909				93.8					
IS	13C-1,2,3,4,6,7,8-HpCDD	3.23e+06	1.05 y	0.65	37:47	90.828				97.9					
IS	13C-OCDD	5.88e+06	0.93 y	0.58	41:03	186.56				90.8					
IS	13C-2,3,7,8-TCDF	8.38e+06	0.81 y	1.03	25:11	112.97				93.3					
IS	13C-1,2,3,7,8-PeCDF	6.38e+06	1.55 y	0.85	29:23	104.12				113					
IS	13C-2,3,4,7,8-PeCDF	6.66e+06	1.63 y	0.85	30:17	109.70				104					
IS	13C-1,2,3,4,7,8-HxCDF	5.17e+06	0.50 y	0.83	32:60	114.42				110					
IS	13C-1,2,3,6,7,8-HxCDF	5.93e+06	0.50 y	1.03	33:08	105.42				114					
IS	13C-2,3,4,6,7,8-HxCDF	5.47e+06	0.51 y	0.95	33:43	105.57				105					
IS	13C-1,2,3,7,8,9-HxCDF	4.96e+06	0.52 y	0.83	34:41	110.26				106					
IS	13C-1,2,3,4,6,7,8-HpCDF	4.37e+06	0.44 y	0.76	36:31	106.09				110					
IS	13C-1,2,3,4,7,8,9-HpCDF	3.29e+06	0.43 y	0.58	38:19	104.03				106					
IS	13C-OCDF	7.58e+06	0.90 y	0.69	41:16	202.21				104					
C/Up	37C1-2,3,7,8-TCDD	5.80e+05		1.20	26:01	10.227				101					
RS/RT	13C-1,2,3,4-TCDD	4.73e+06	0.80 y	1.00	25:25	100.00									
RS	13C-1,2,3,4-TCDF	7.17e+06	0.82 y	1.00	23:57	100.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	5.44e+06	0.49 y	1.00	33:25	100.00									

Integrations Reviewed  
by Analyst: DB by Analyst: CT  
Date: 1/17/20 Date: 01/20/2020

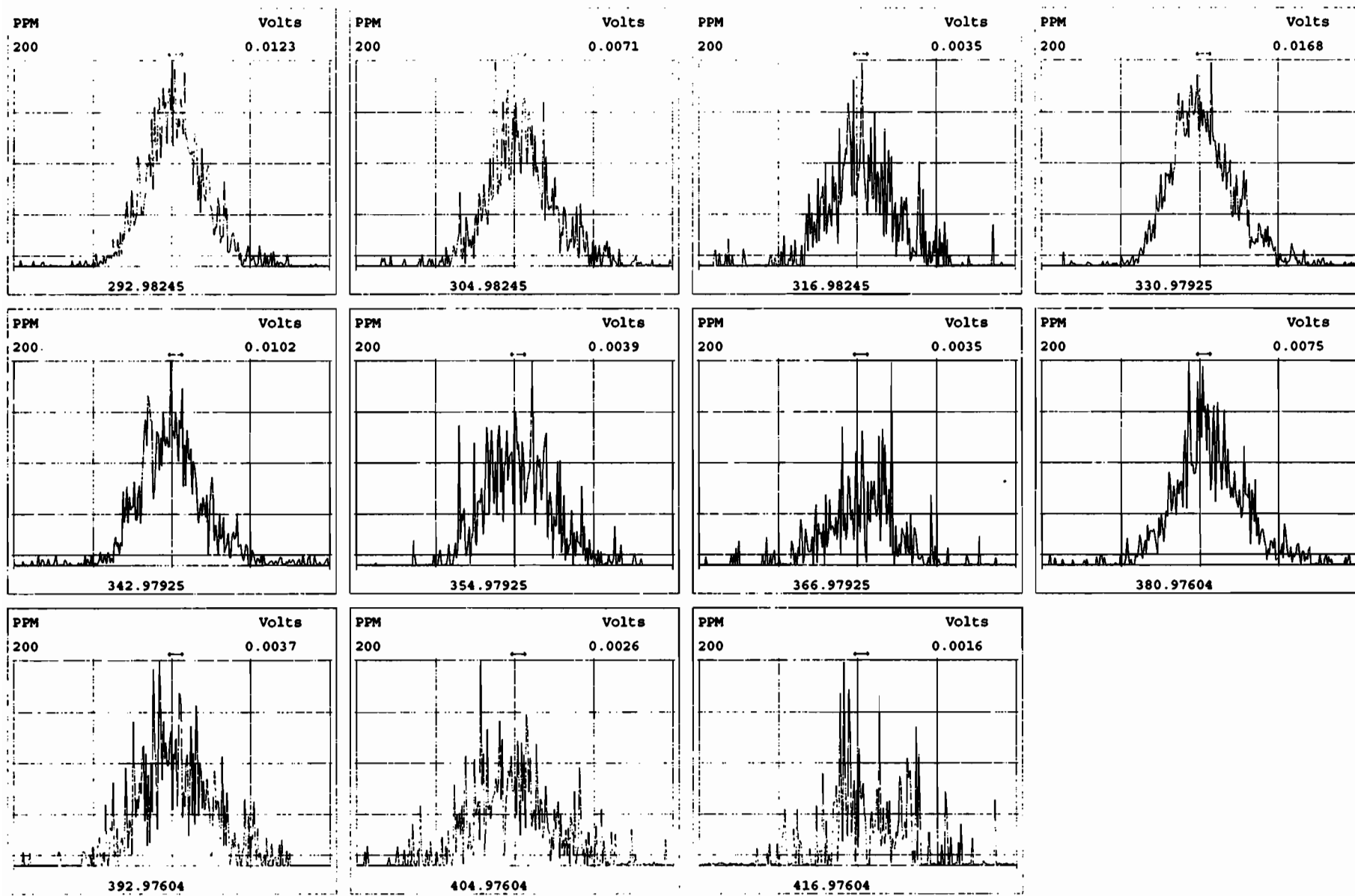
Vista Analytical Laboratory - Injection Log Run file: 200116D2 Instrument ID: VG-7 GC Column ID: ZB-5MS

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200116D2	6	1904159-08	DB	17-JAN-20	03:33:14	ST200116D2-1	NA
200116D2	7	1904159-09	DB	17-JAN-20	04:21:09	ST200116D2-1	NA
200116D2	8	1904159-10	DB	17-JAN-20	05:09:06	ST200116D2-1	NA
200116D2	9	1904159-11	DB	17-JAN-20	05:56:58	ST200116D2-1	NA
200116D2	10	1904159-12	DB	17-JAN-20	06:44:54	ST200116D2-1	NA
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200116D2	14	1904159-16	DB	17-JAN-20	09:56:38	ST200116D2-1	NA
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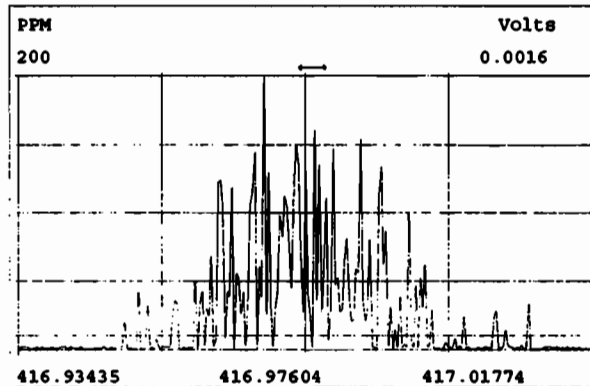
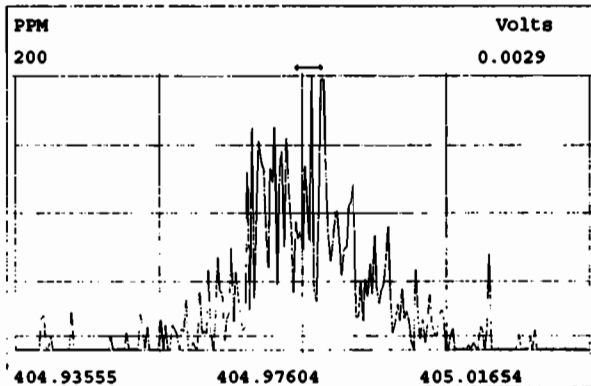
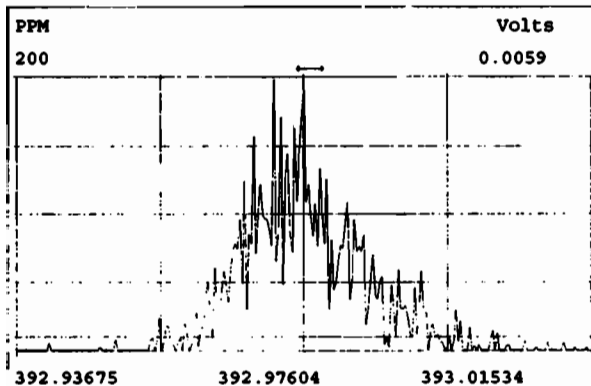
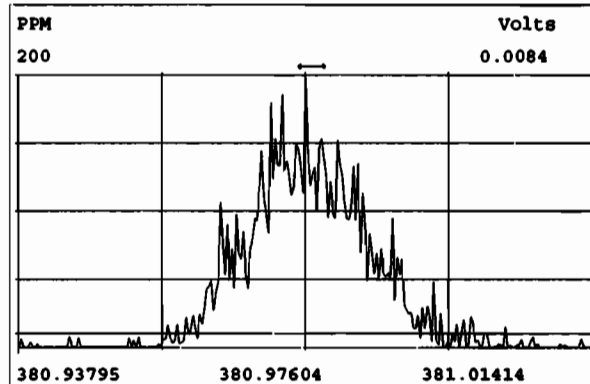
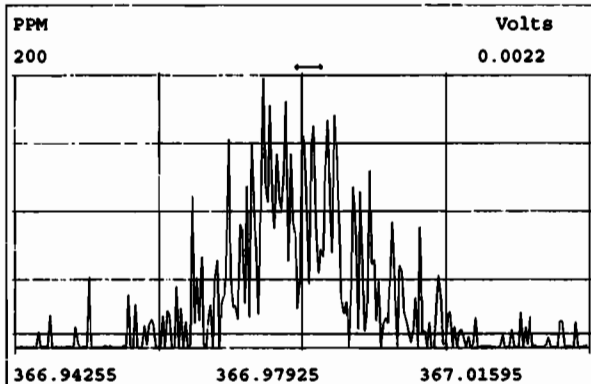
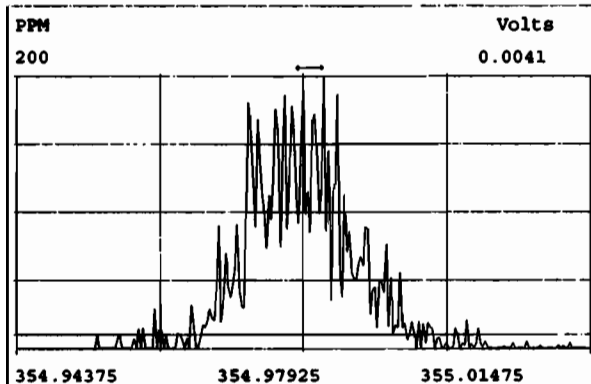
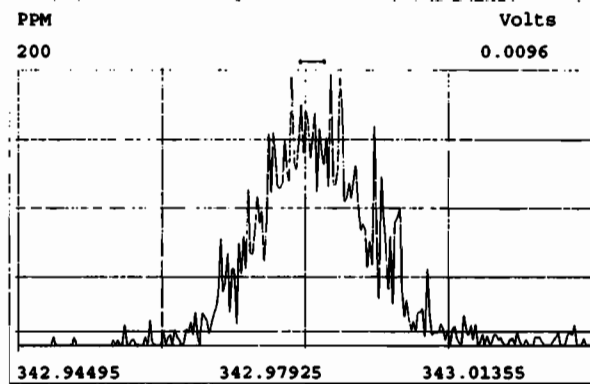
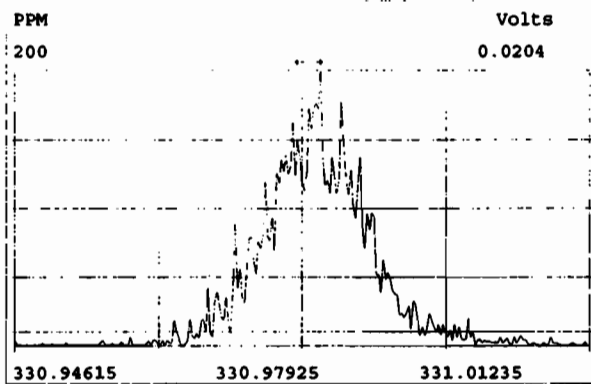
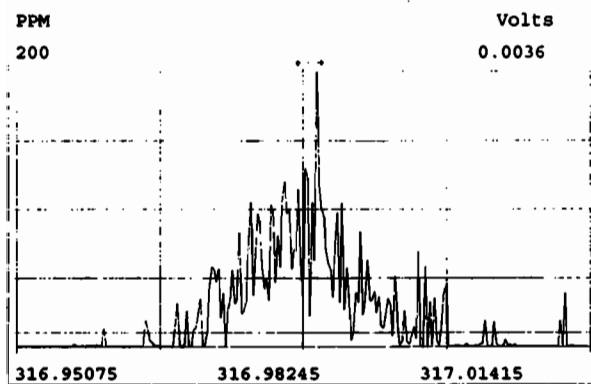
Peak Locate Examination:16-JAN-2020:23:29 File:RBS\_CHECK

Experiment:OCDD\_DB5 Function:1 Reference:PFK



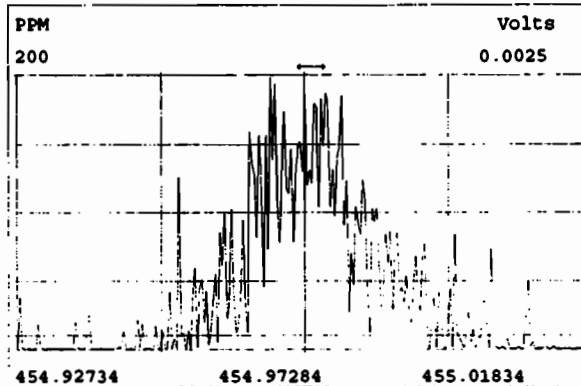
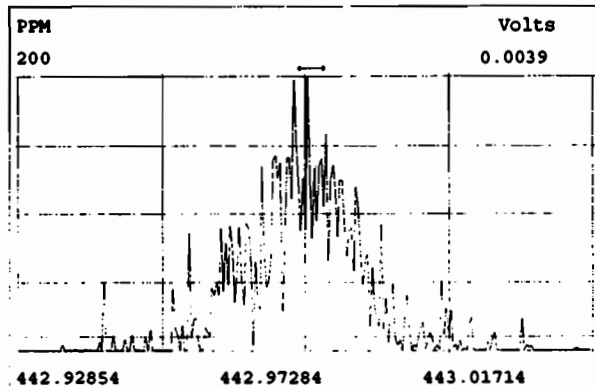
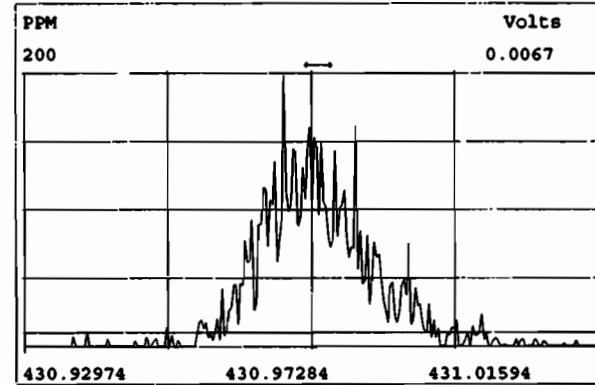
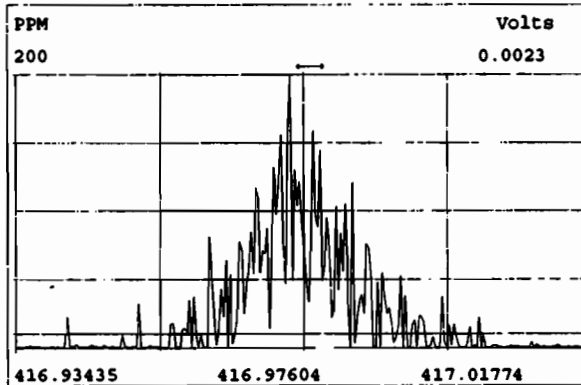
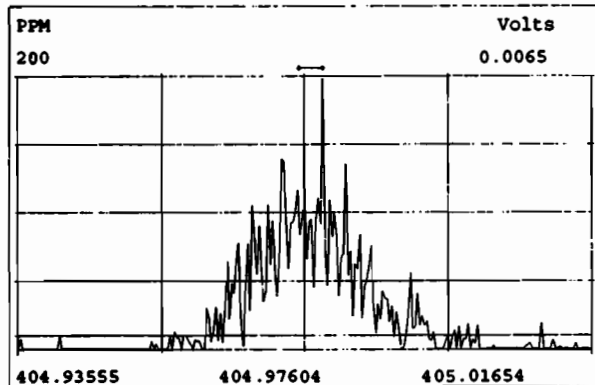
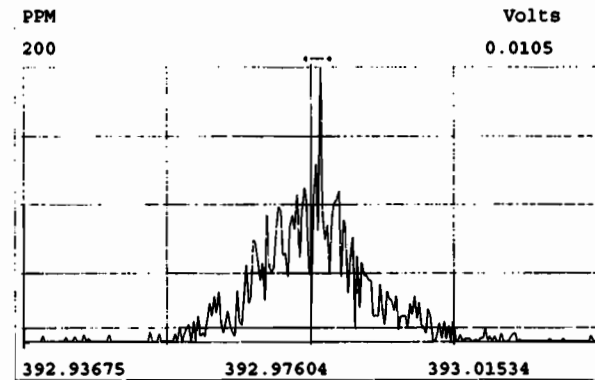
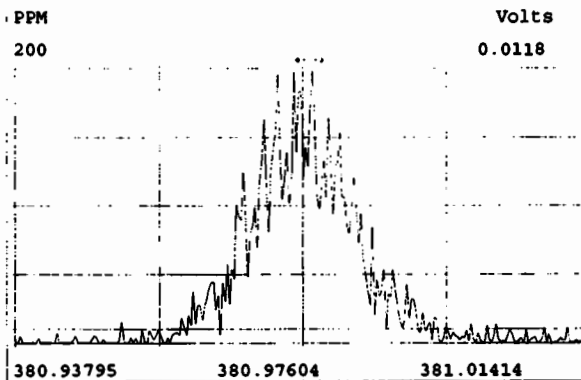
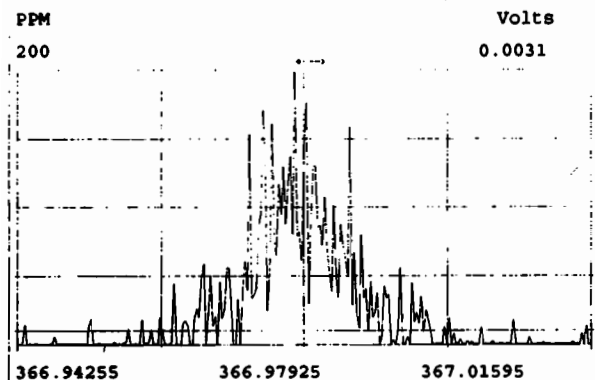
Peak Locate Examination:16-JAN-2020:23:30 File:RES\_CHECK

Experiment:OCDD\_DB5 Function:2 Reference:PFK



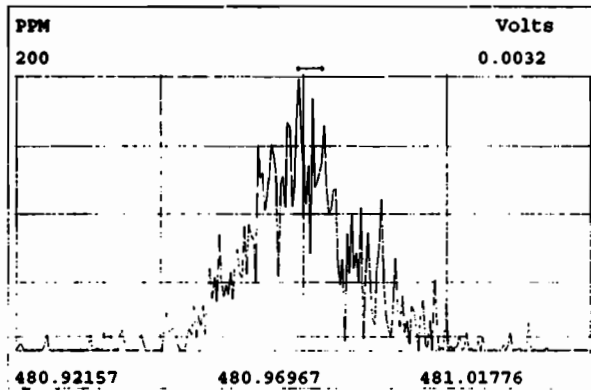
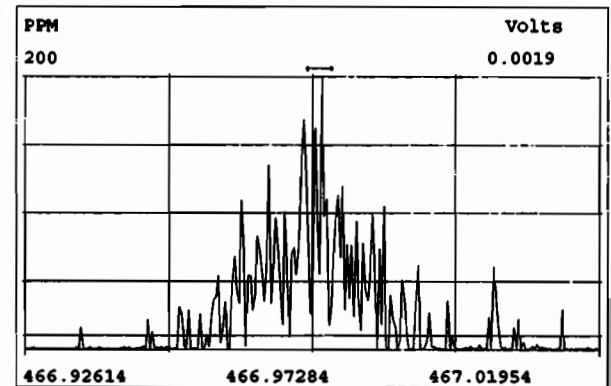
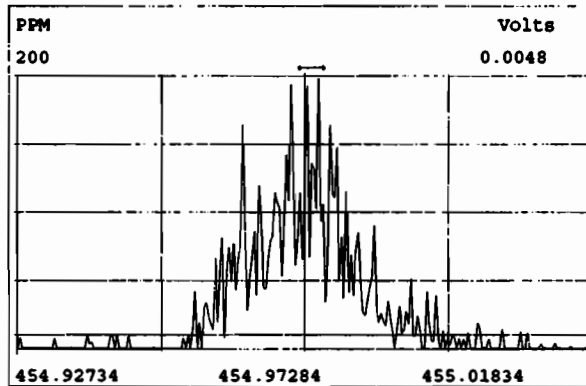
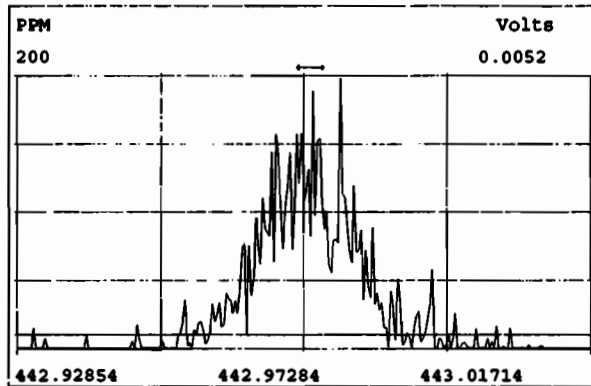
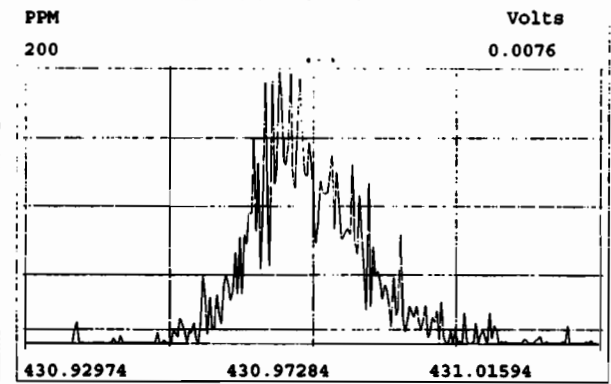
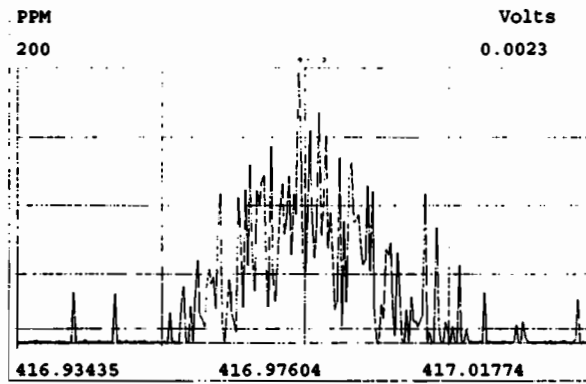
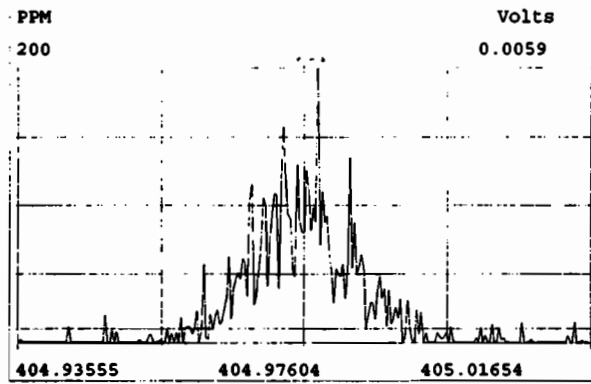
Peak Locate Examination:16-JAN-2020:23:30 File:RES\_CHECK

Experiment:OCDD\_DB5 Function:3 Reference:PFK



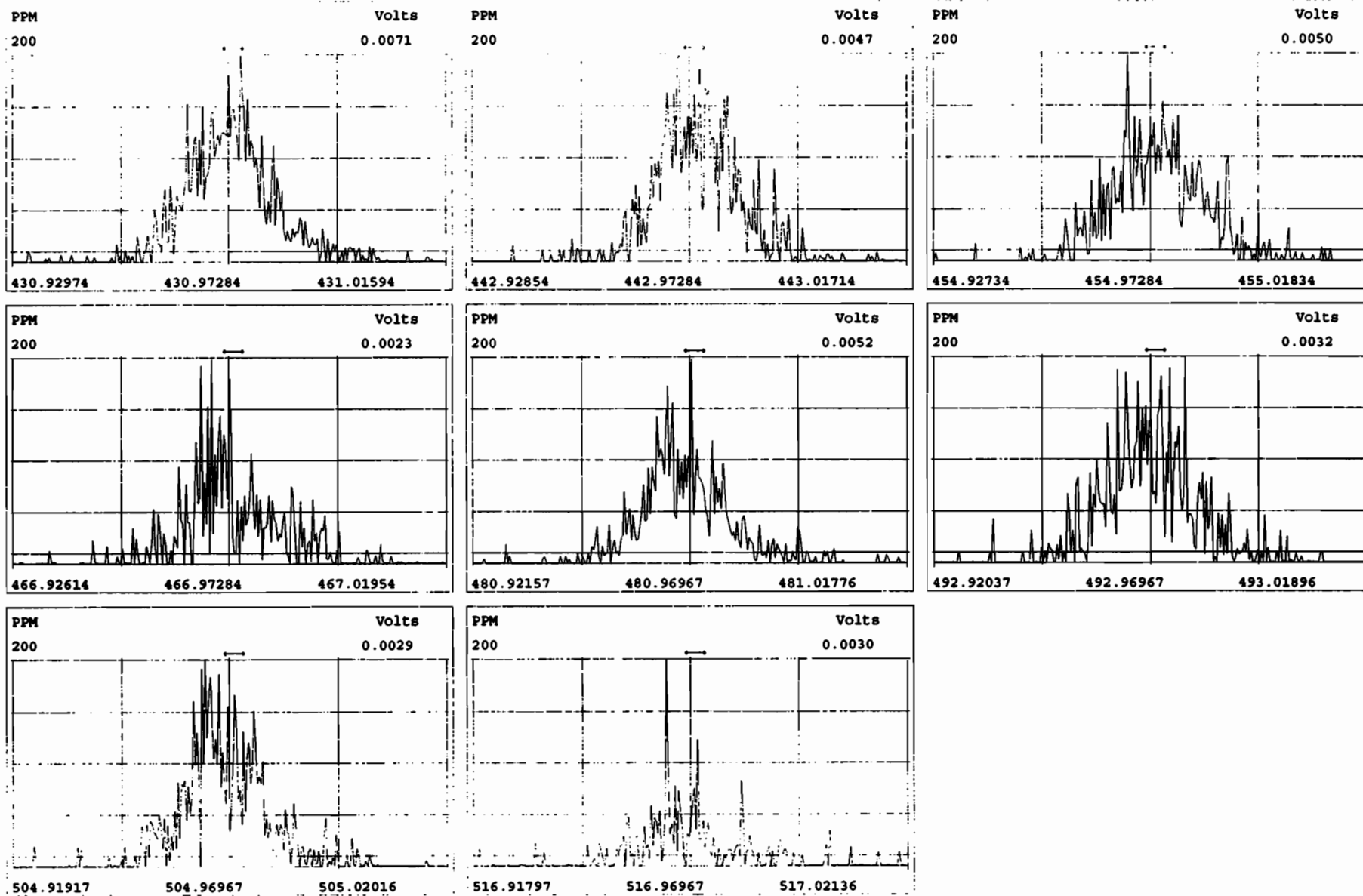
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Experiment:OCDD\_DB5 Function:4 Reference:PFK

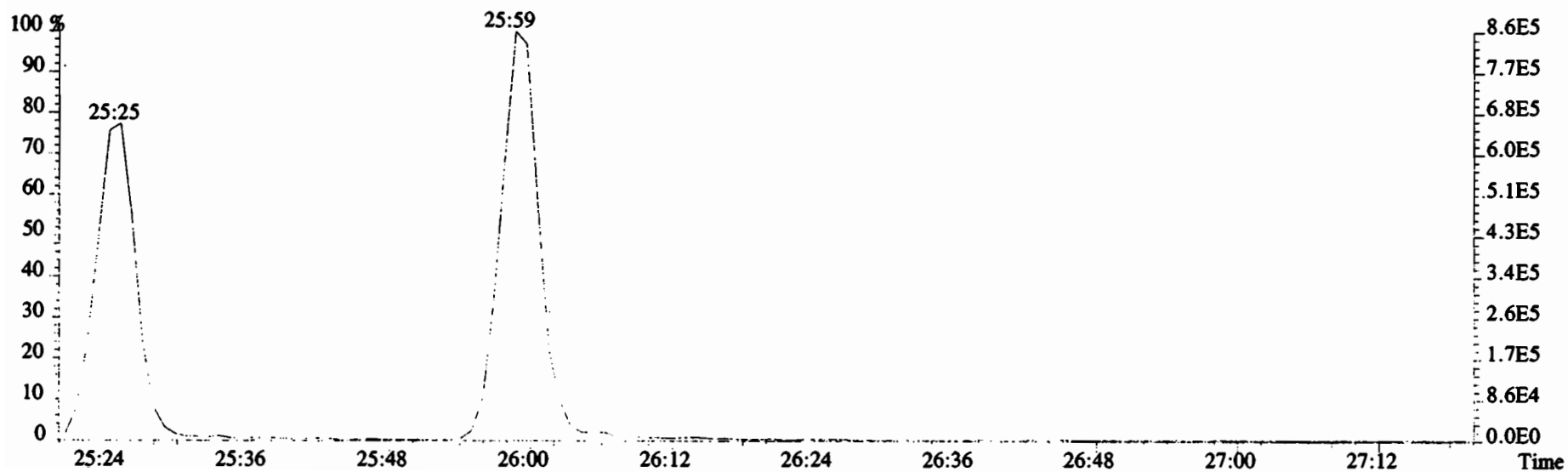
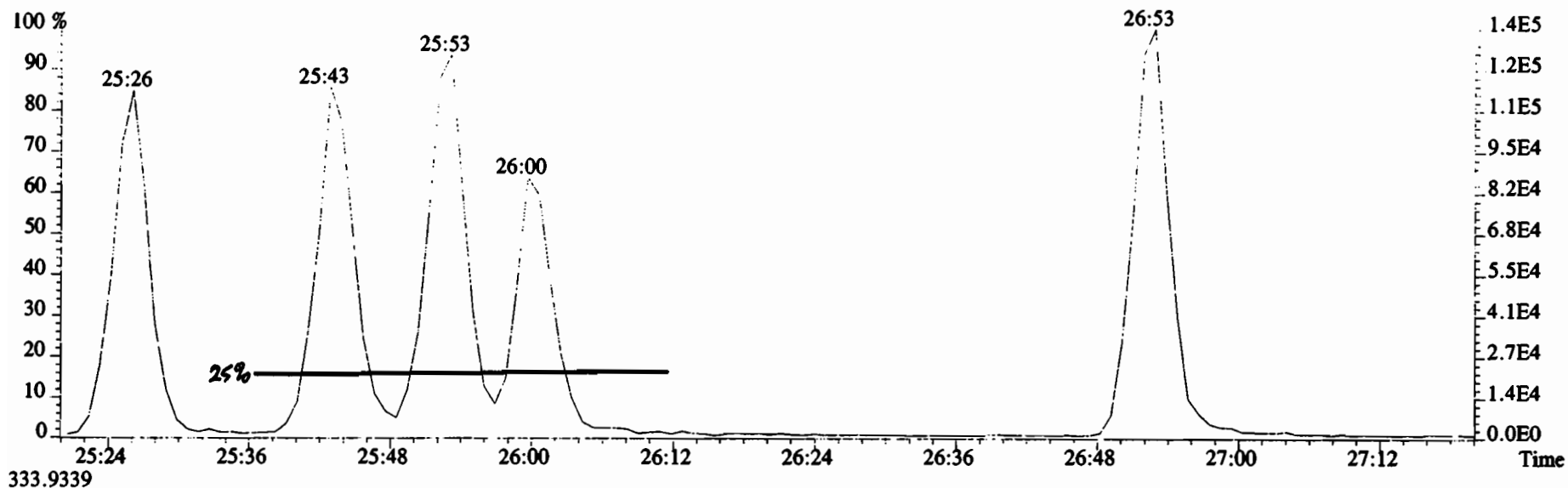


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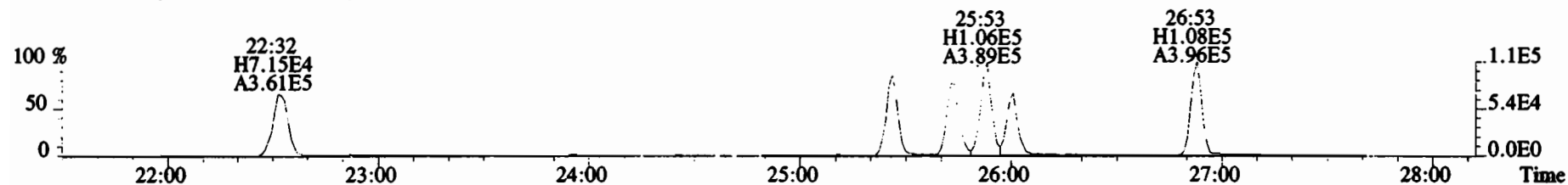
Experiment:OCDD\_DB5 Function:5 Reference:PFK



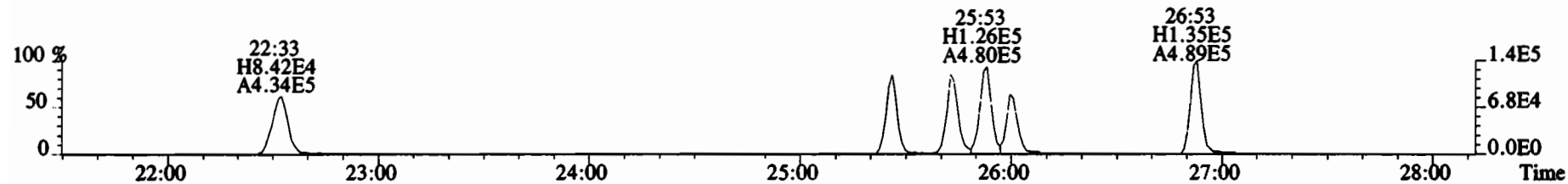
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Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
321.8936



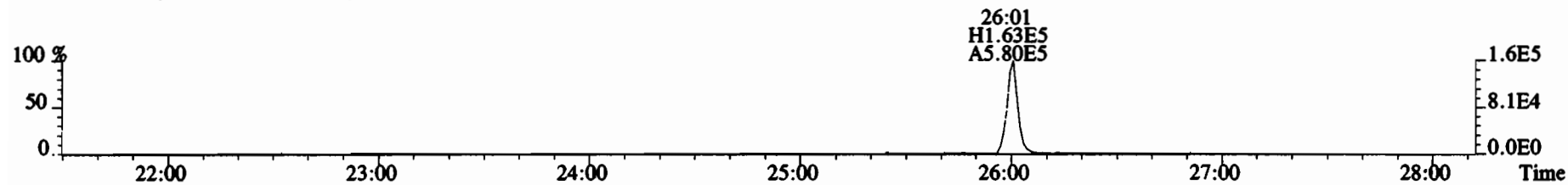
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Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
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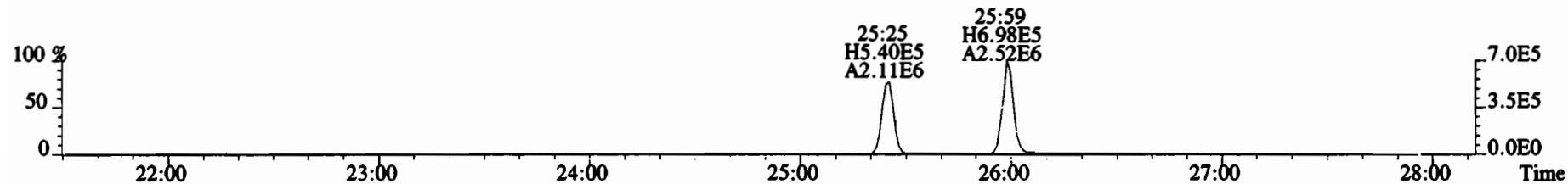
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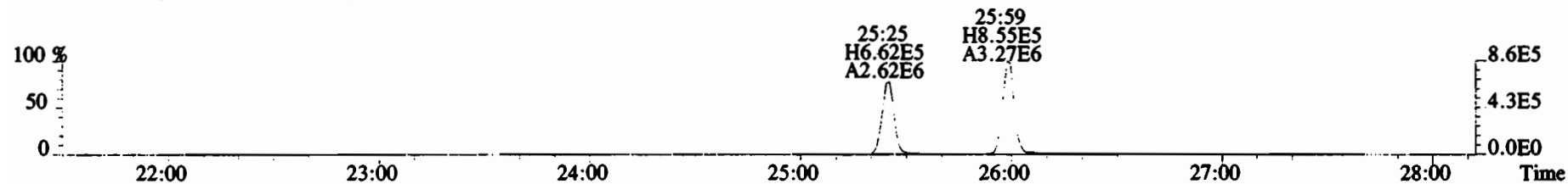
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331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

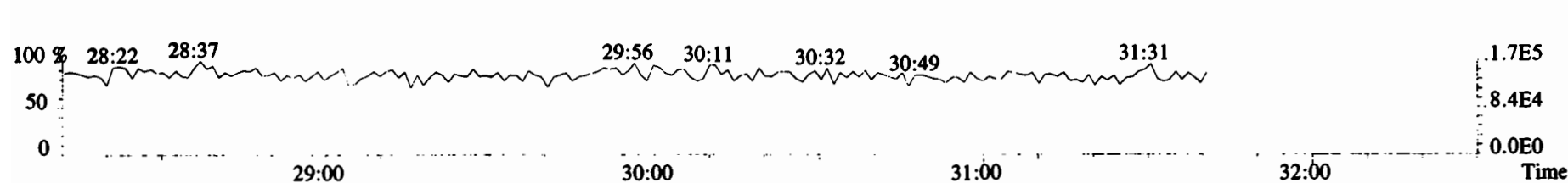
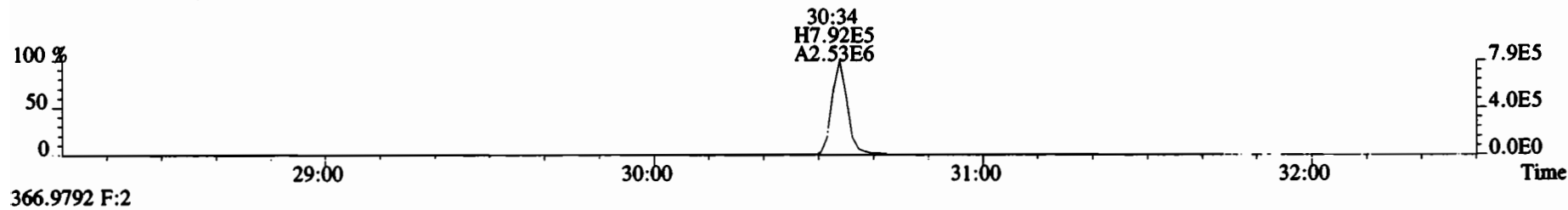
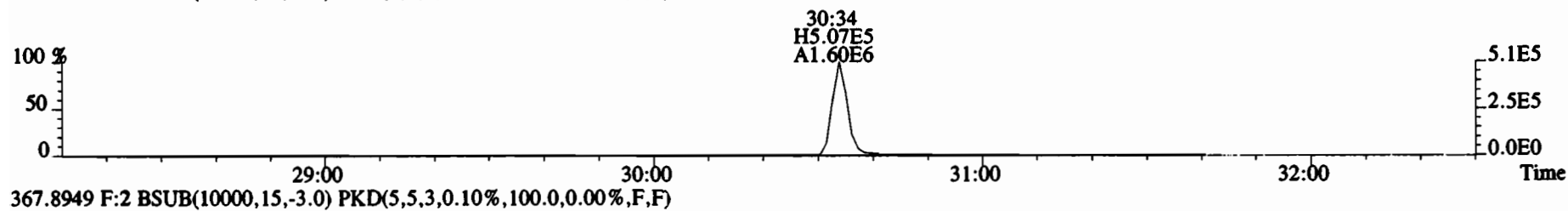
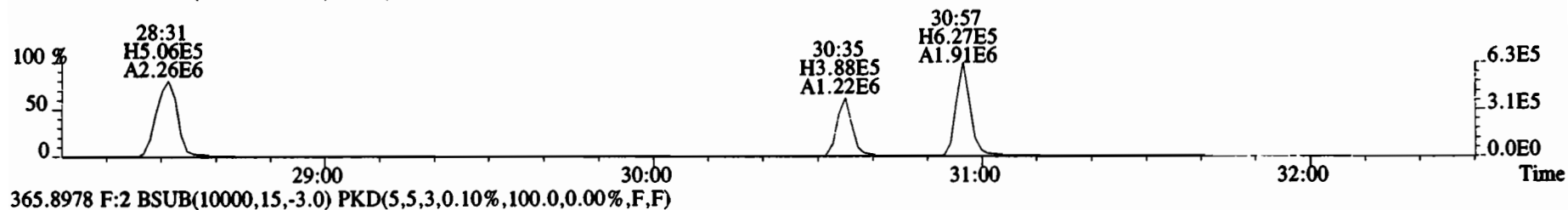
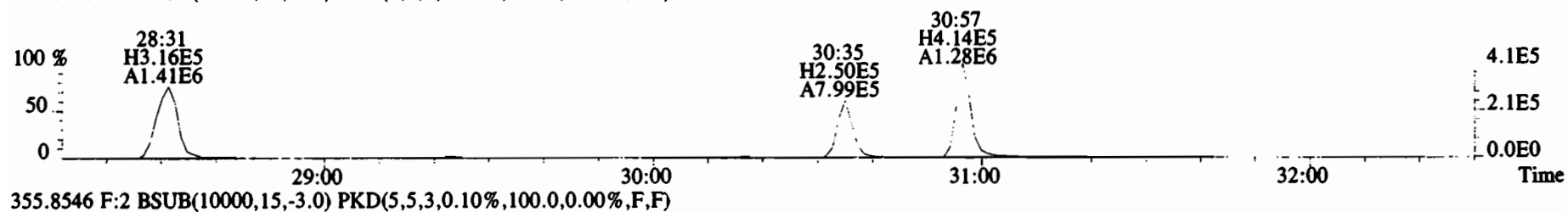


333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



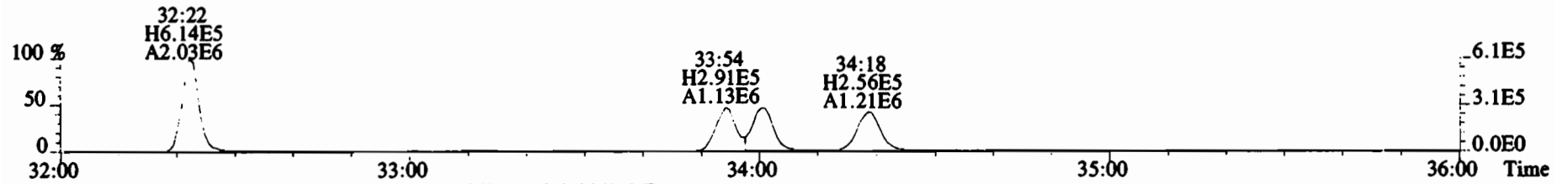
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

File:200116D2 #1-211 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

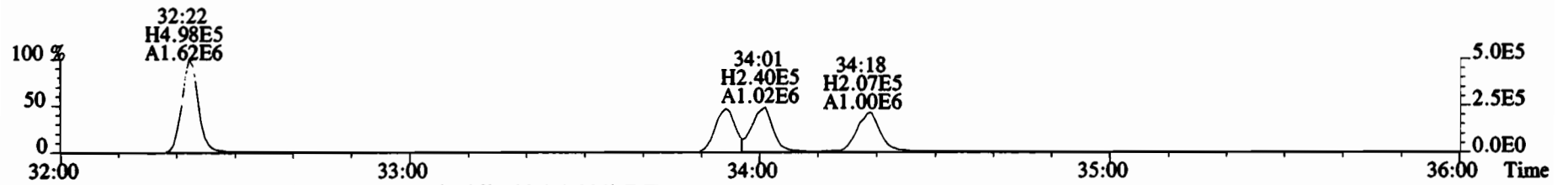




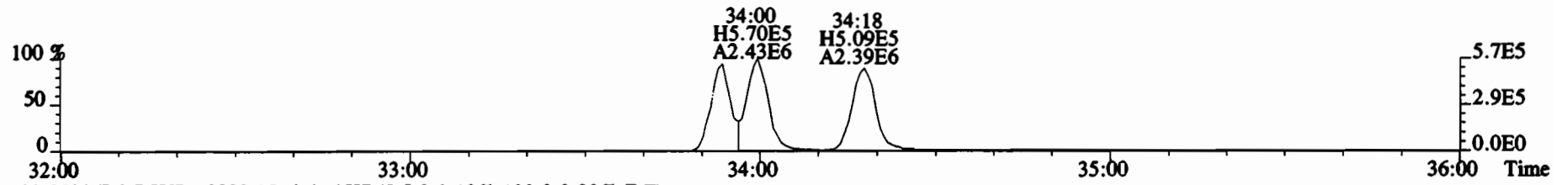
File:200116D2 #1-384 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



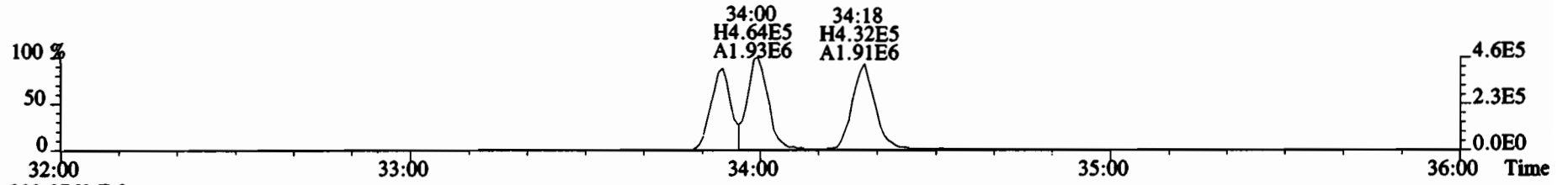
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



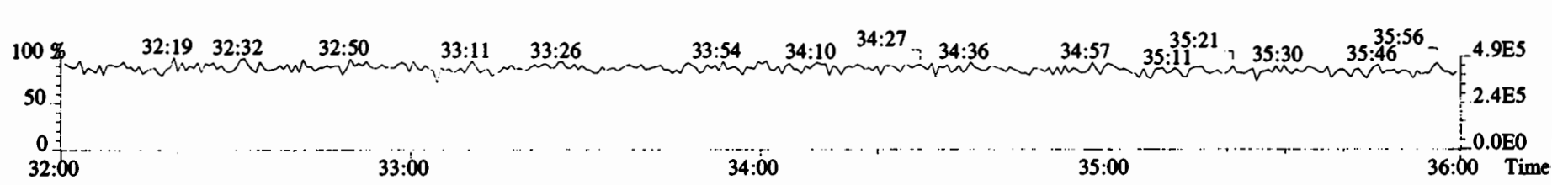
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



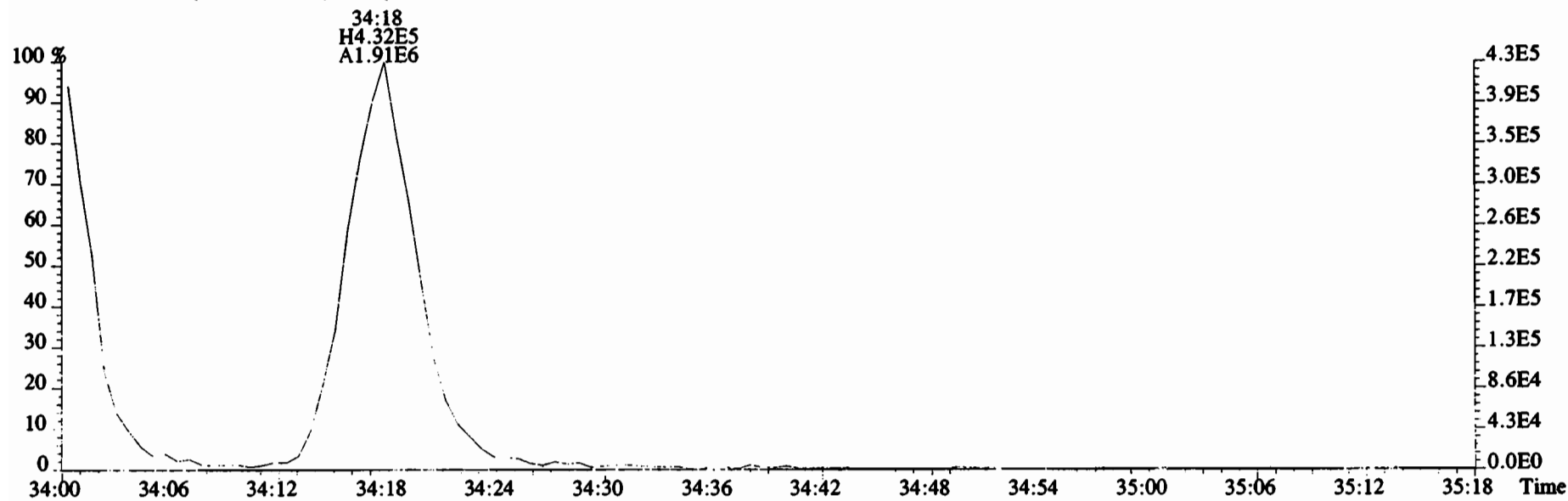
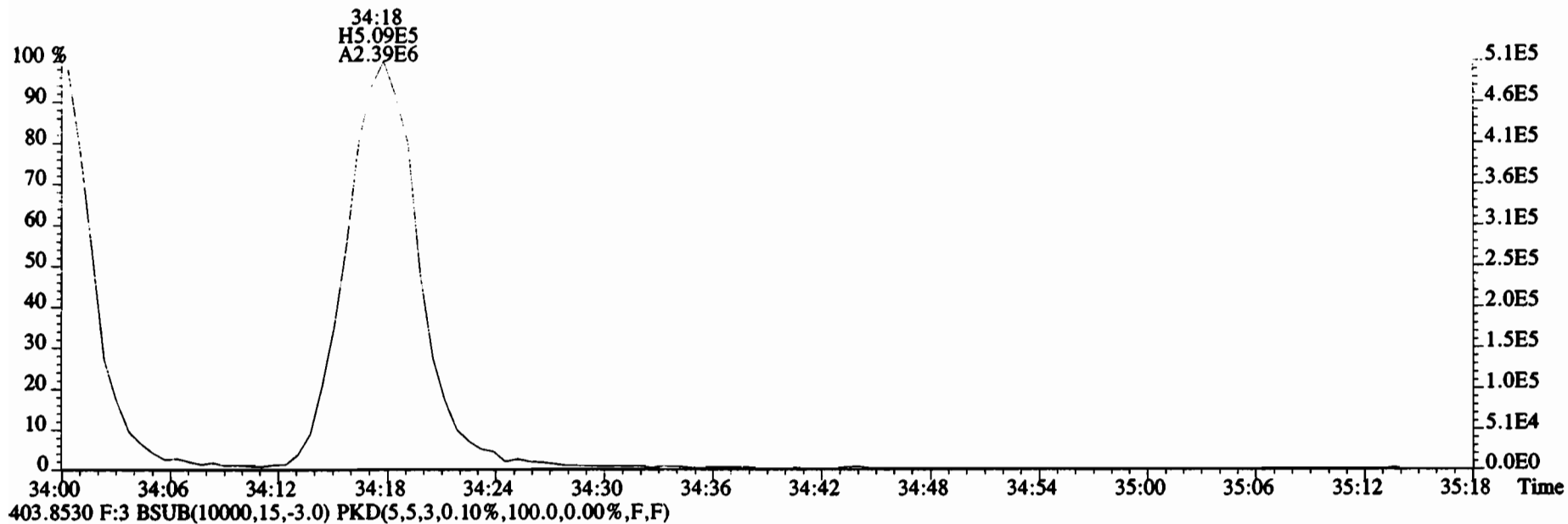
403.8530 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



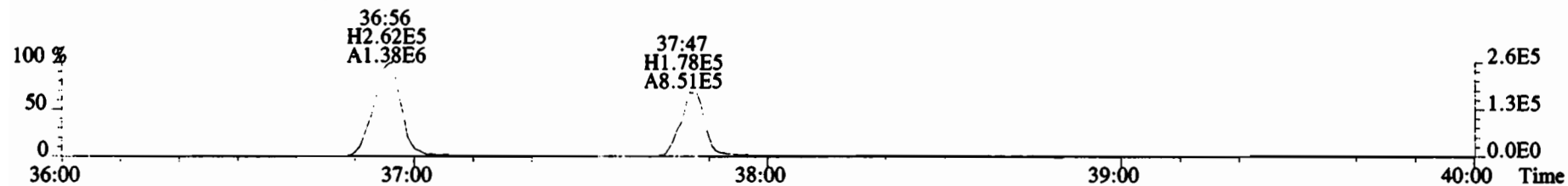
392.9760 F:3



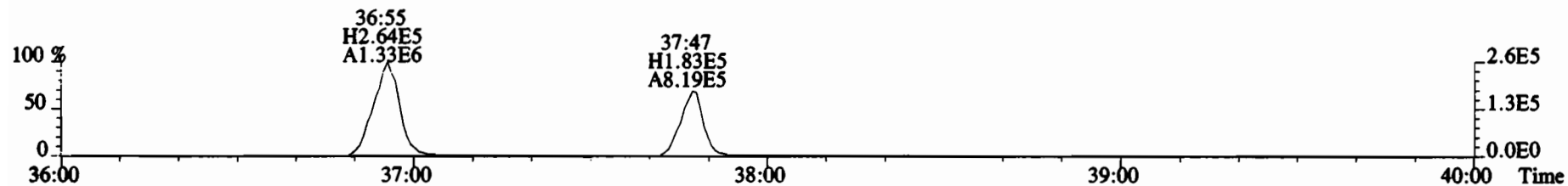
File:200116D2 #1-384 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



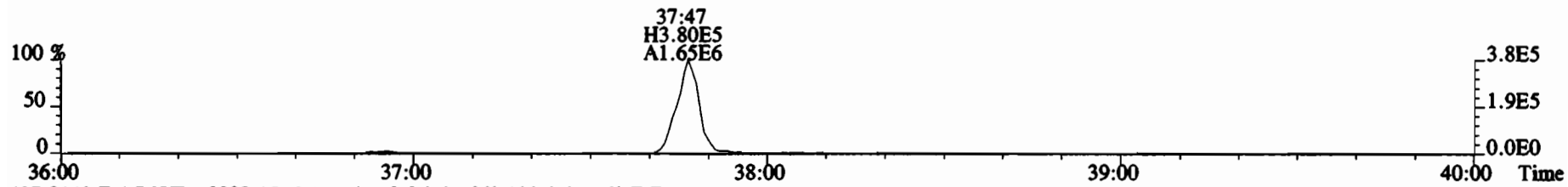
File:200116D2 #1-356 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



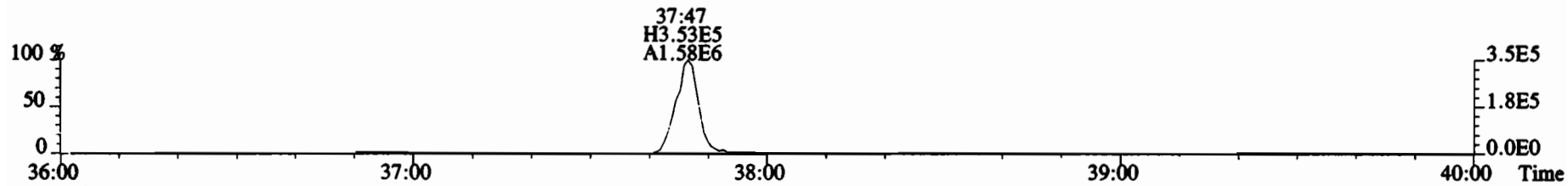
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



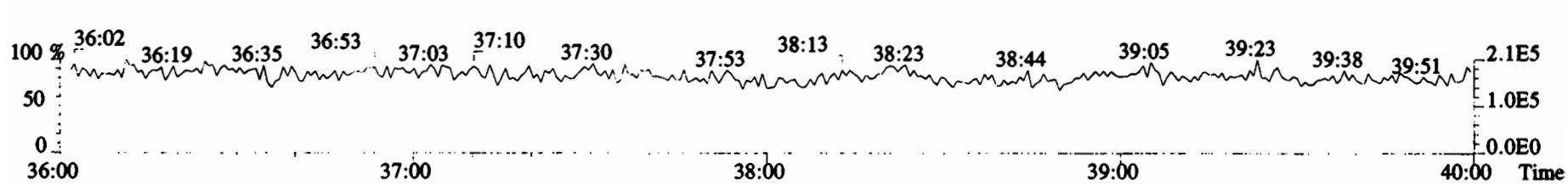
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



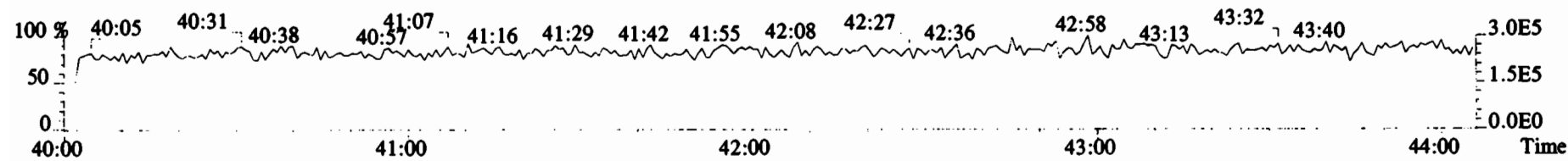
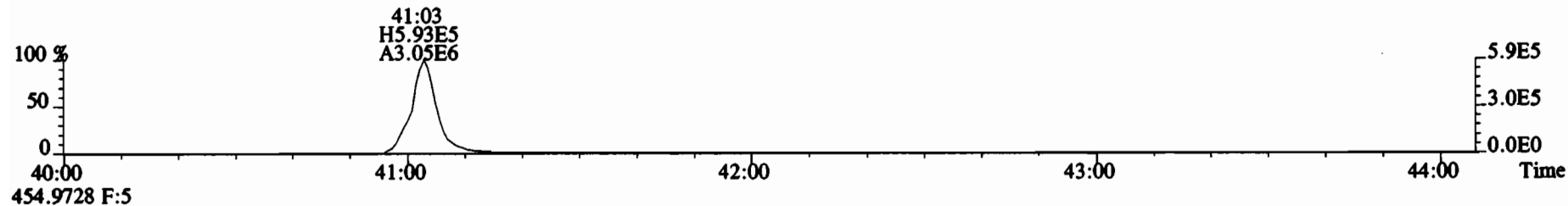
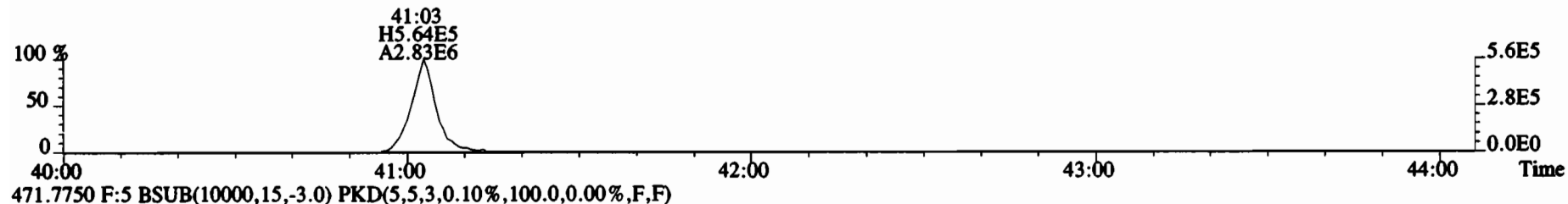
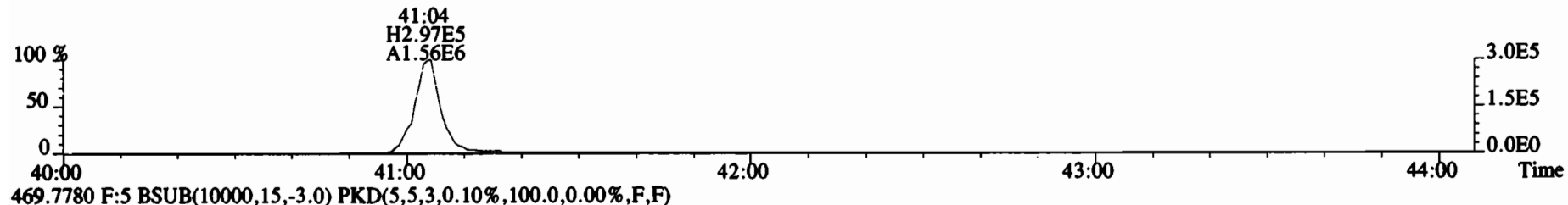
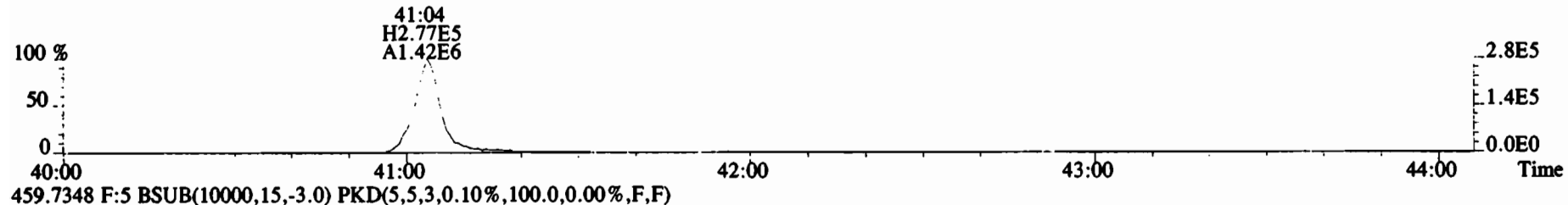
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



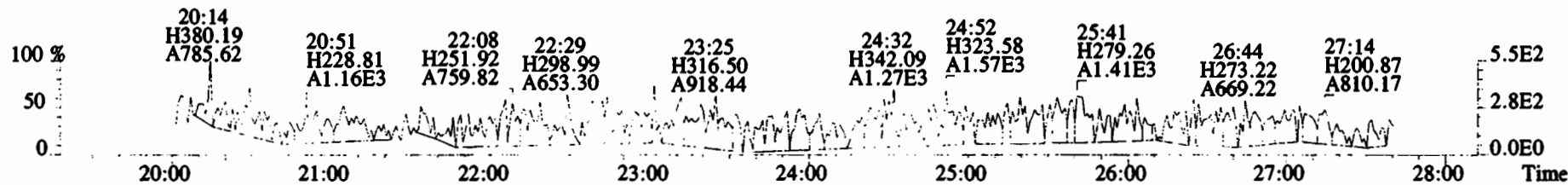
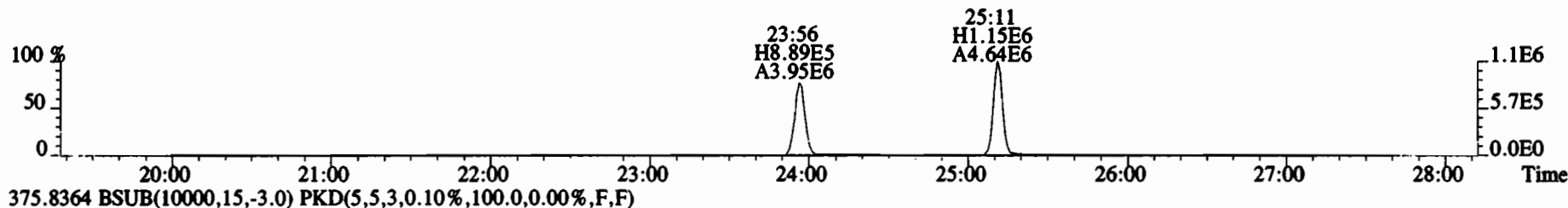
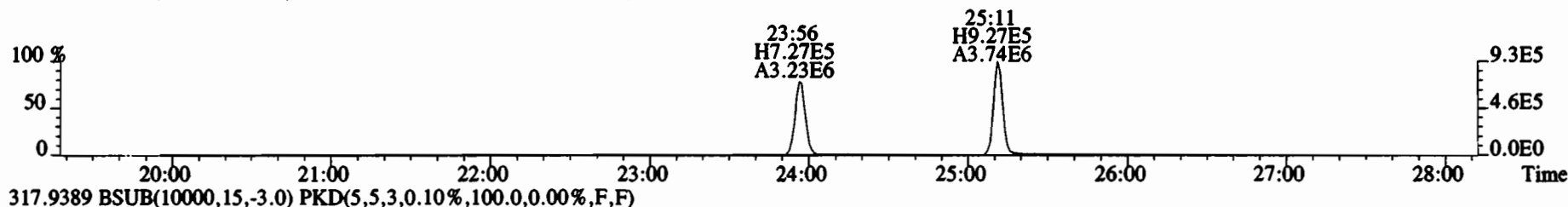
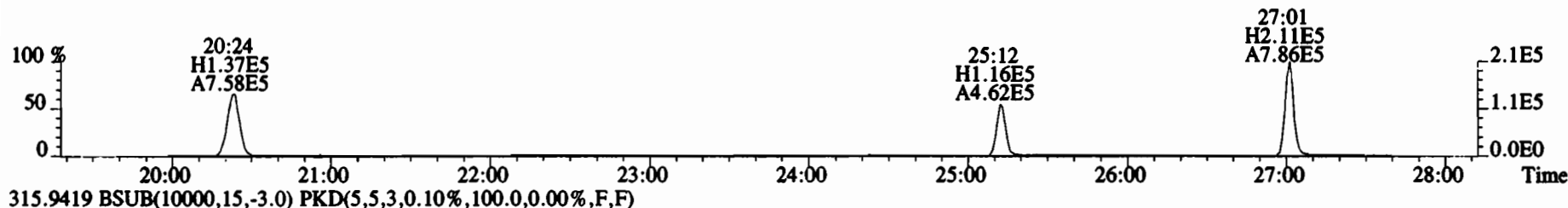
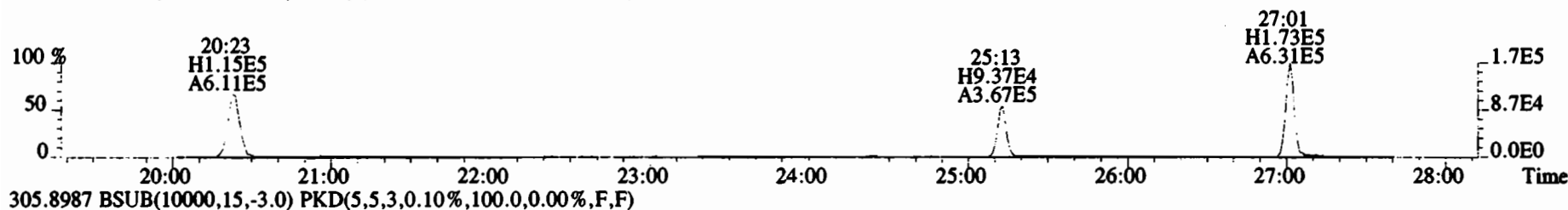
454.9728 F:4



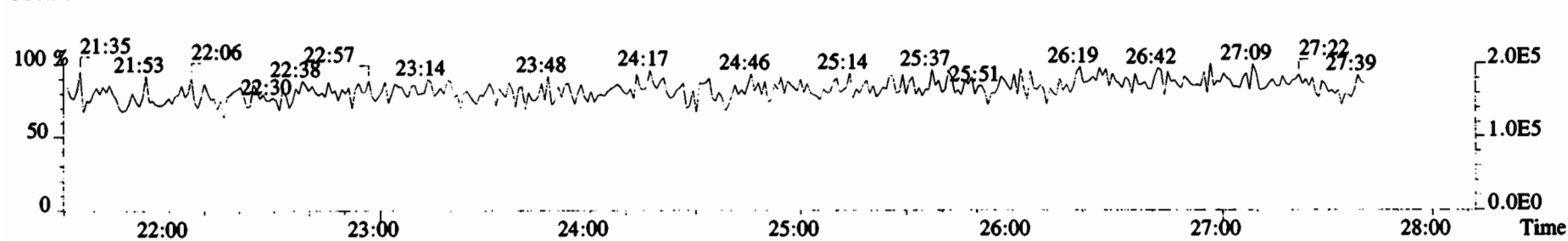
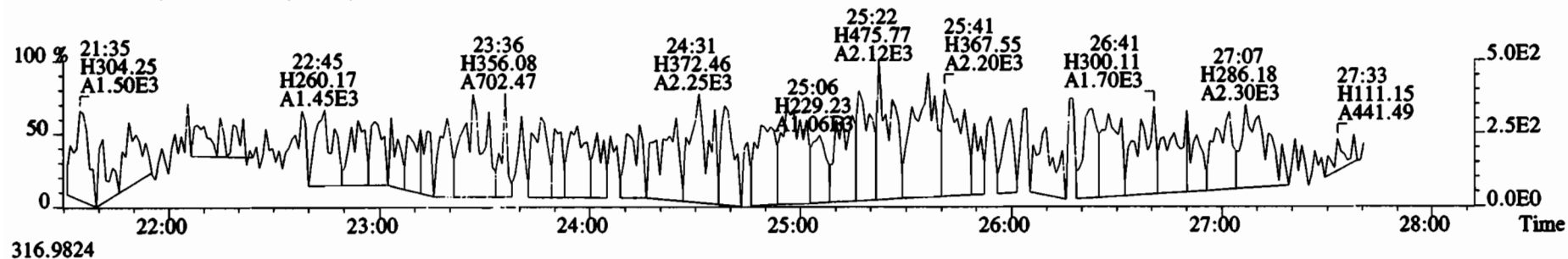
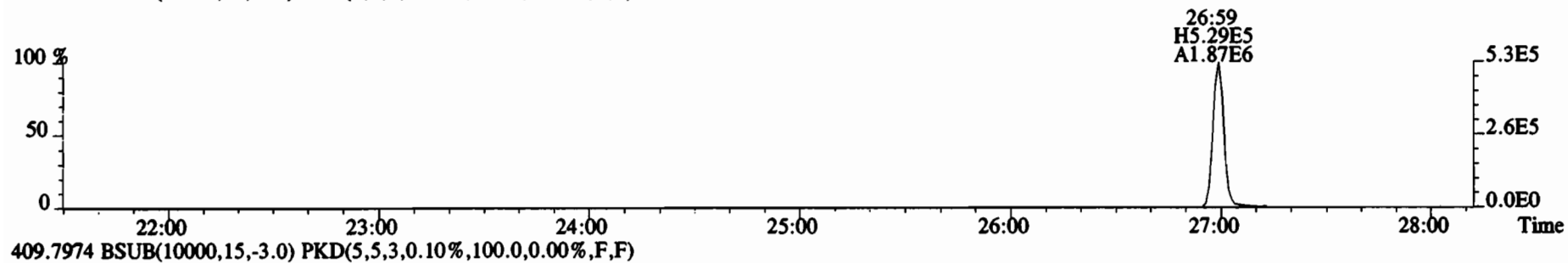
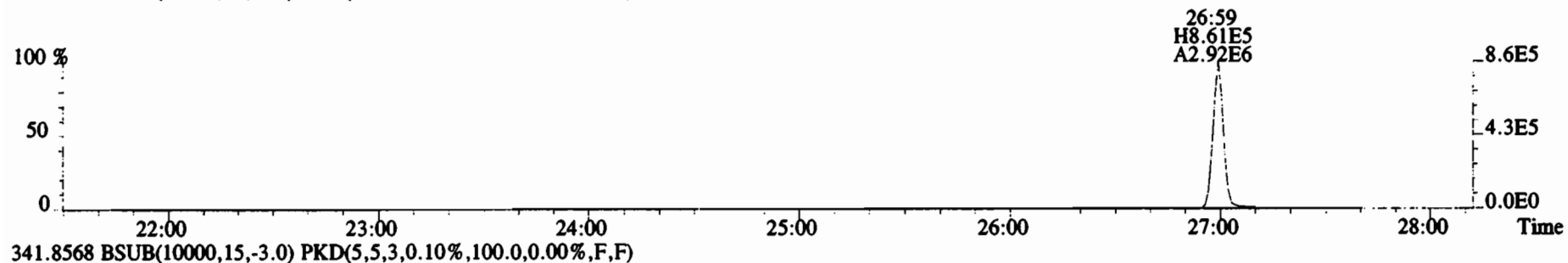
File:200116D2 #1-432 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



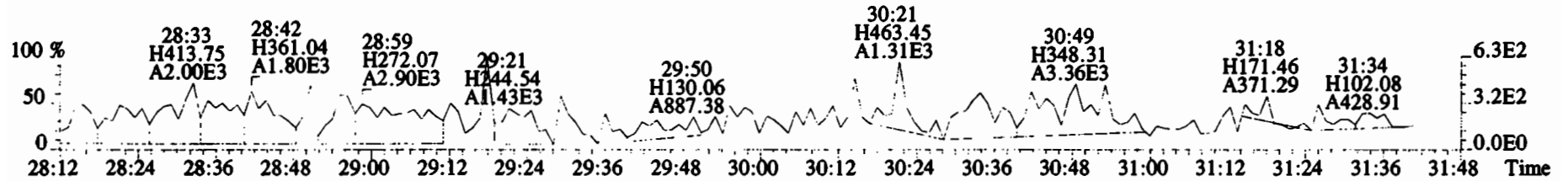
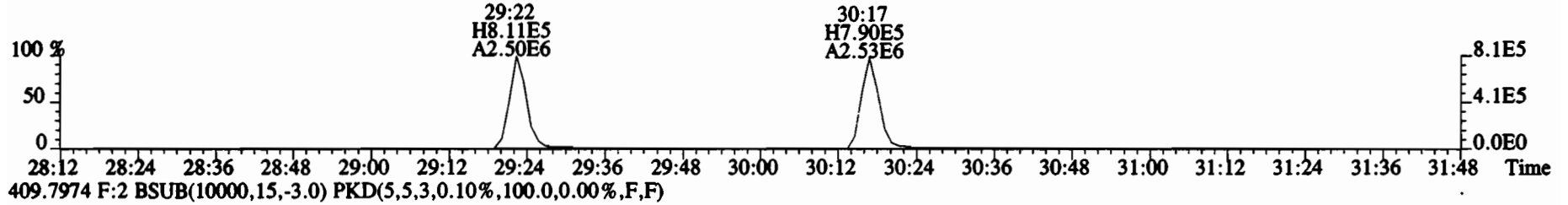
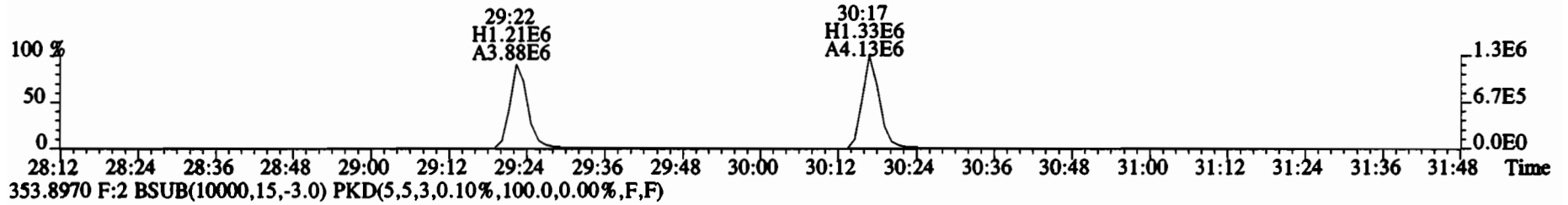
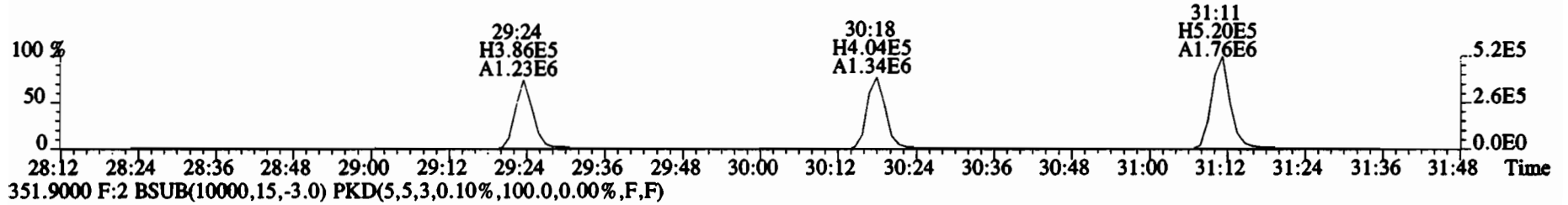
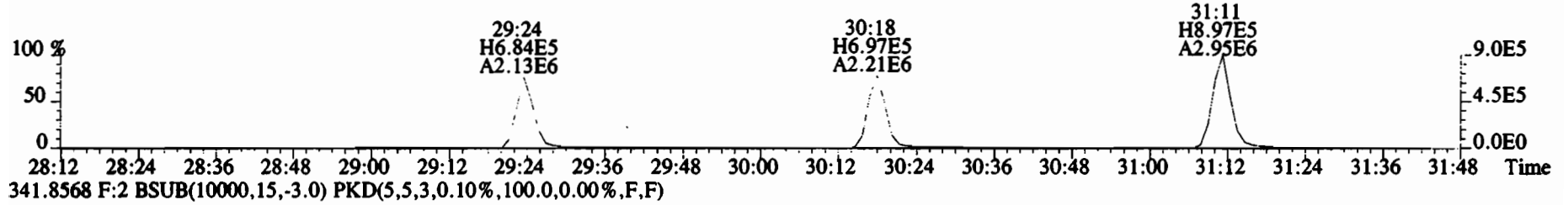
File:200116D2 #1-493 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



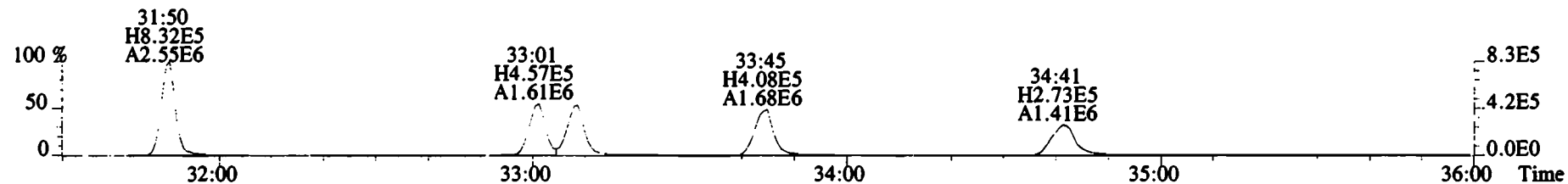
File:200116D2 #1-493 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



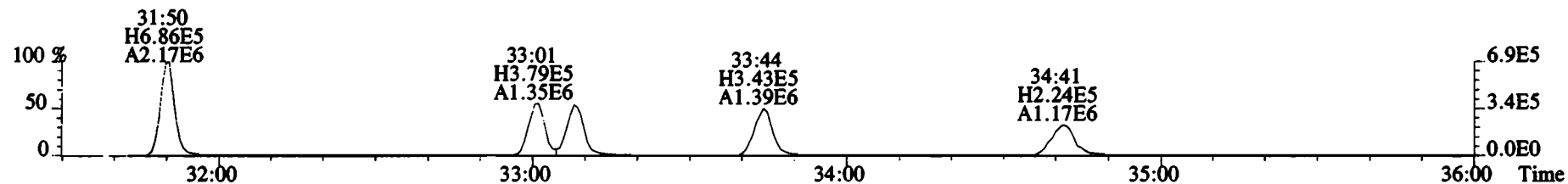
File:200116D2 #1-211 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



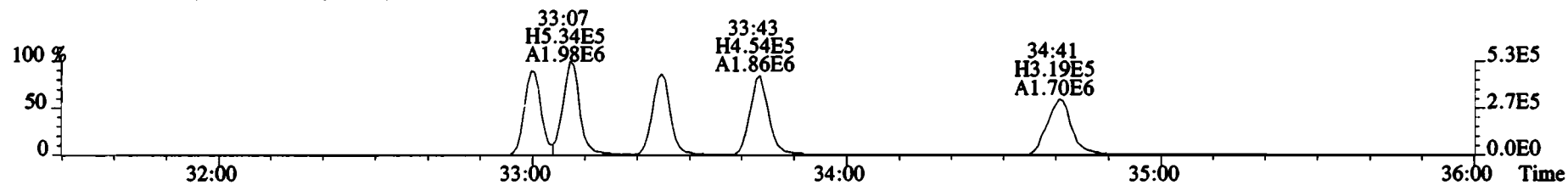
File:200116D2 #1-384 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



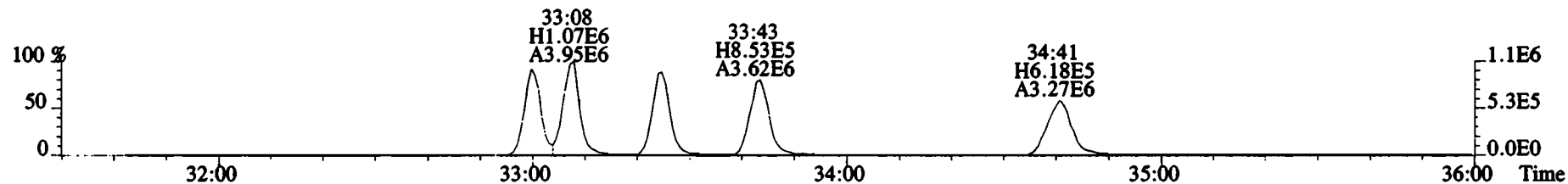
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



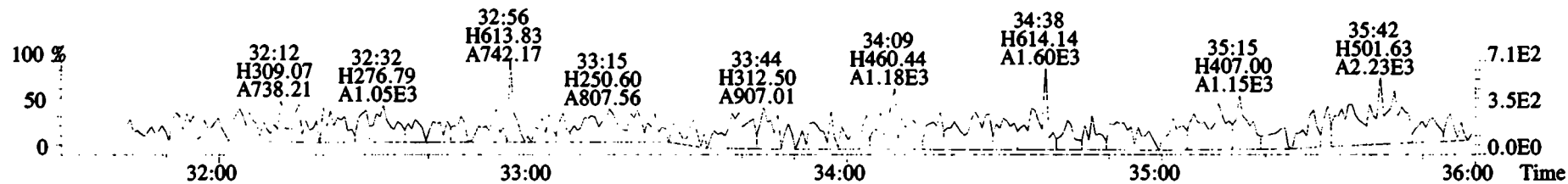
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

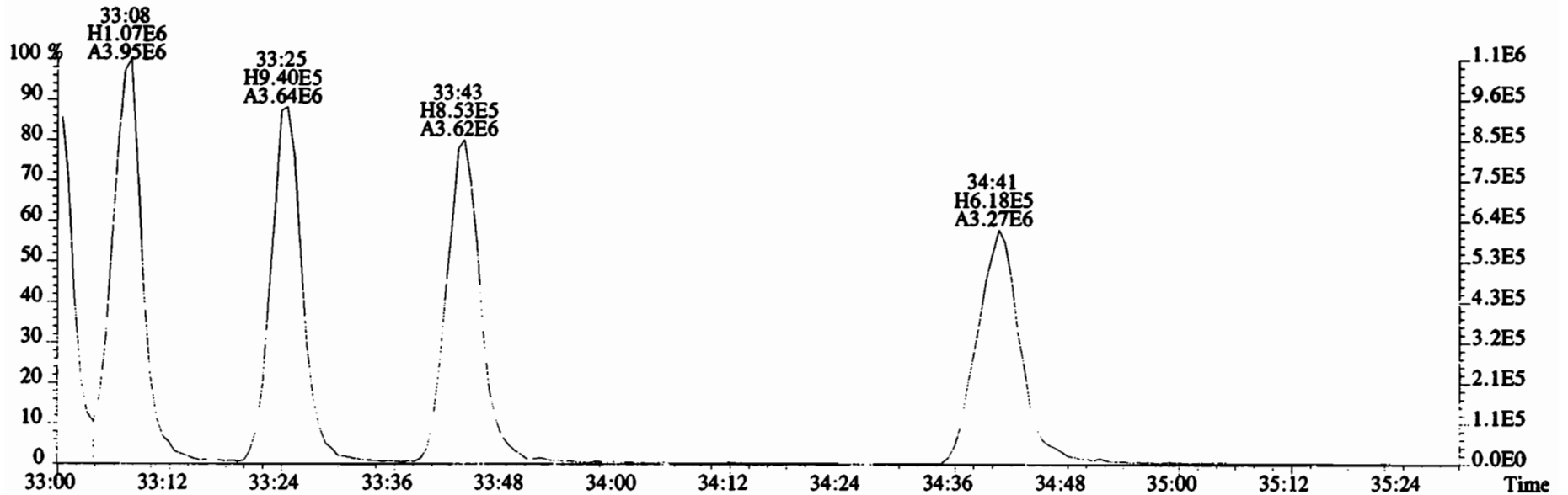
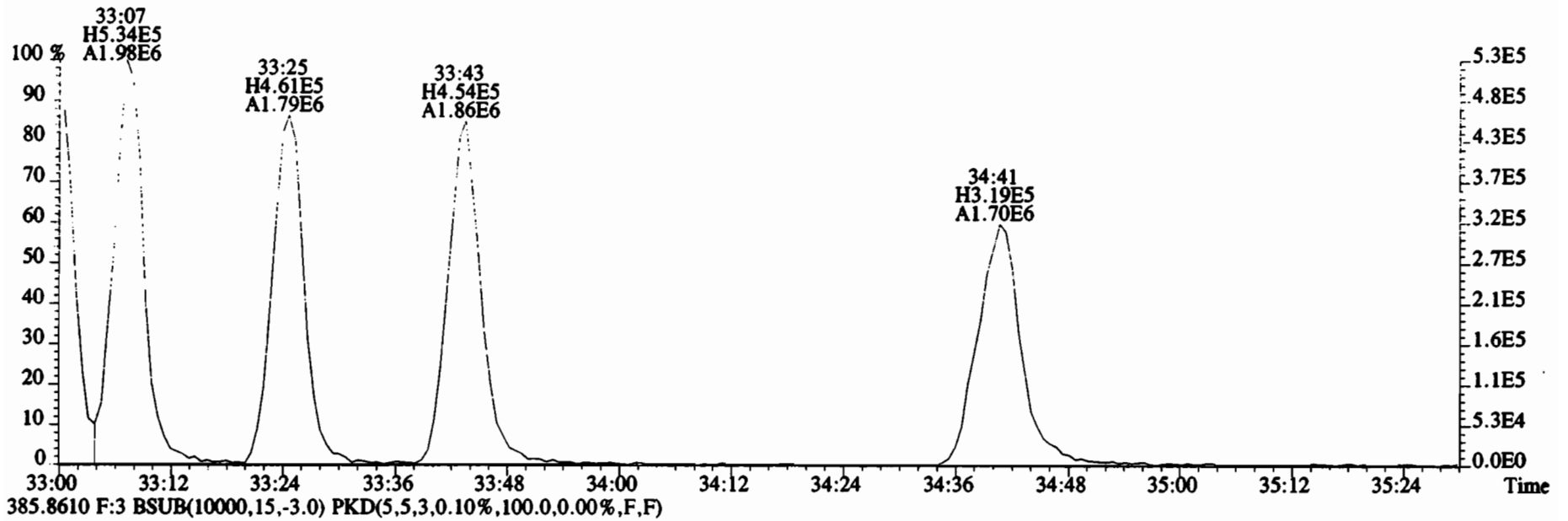


445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

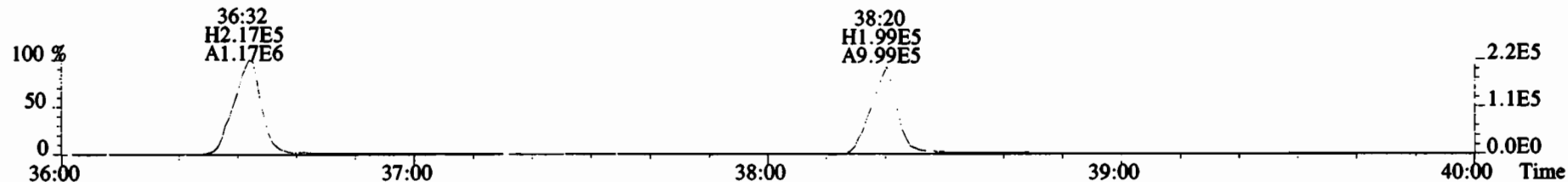




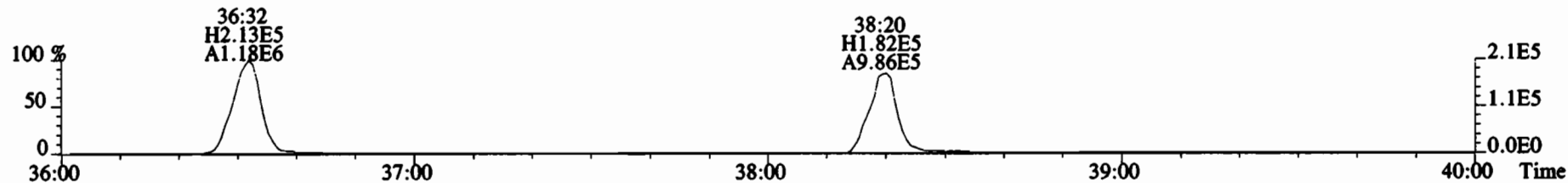
File:200116D2 #1-384 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



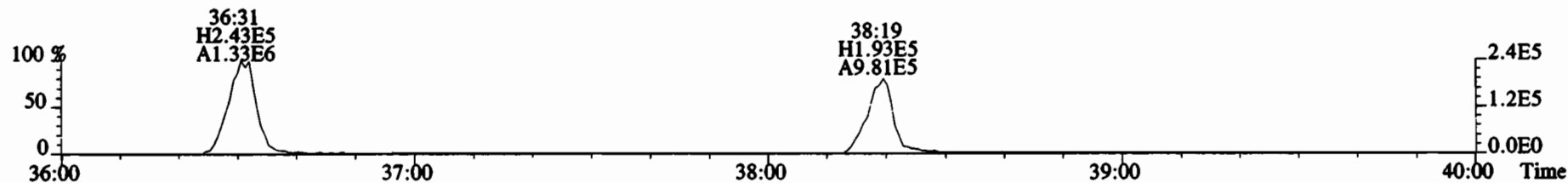
File:200116D2 #1-356 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
 407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



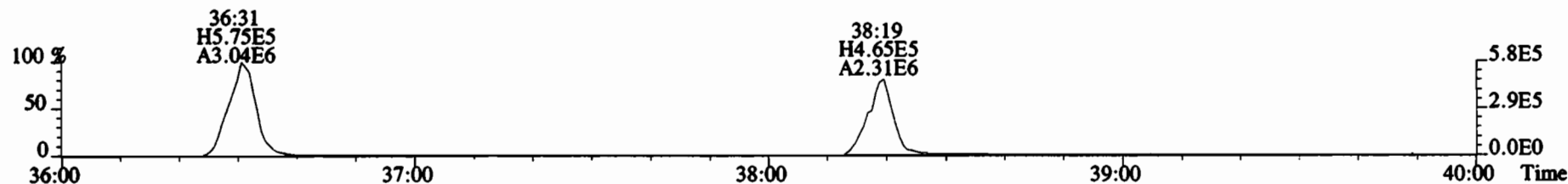
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



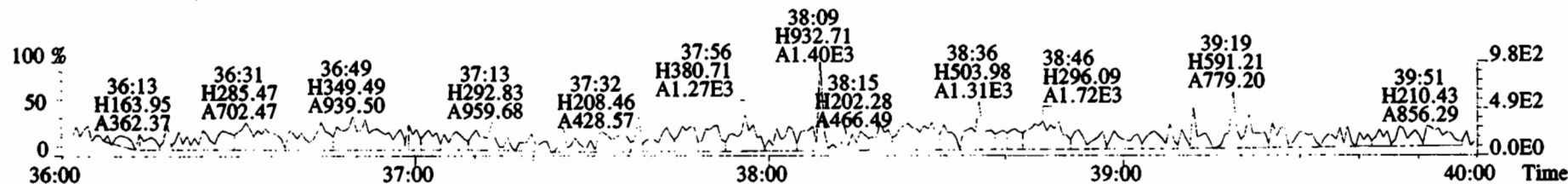
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



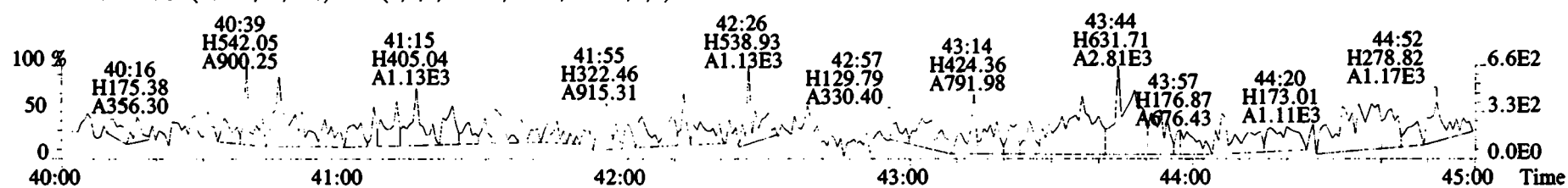
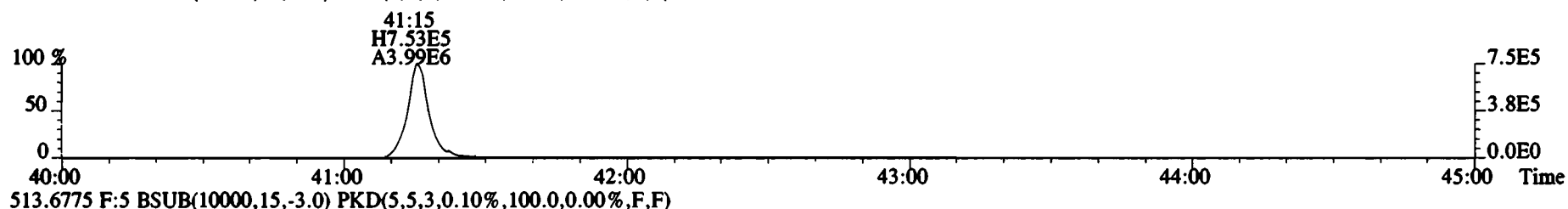
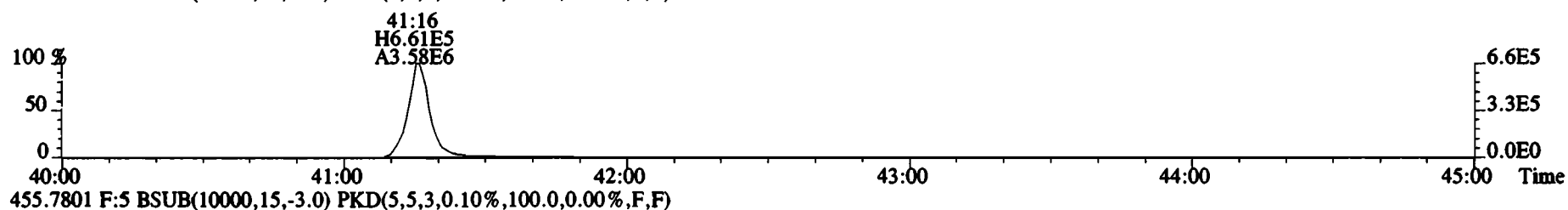
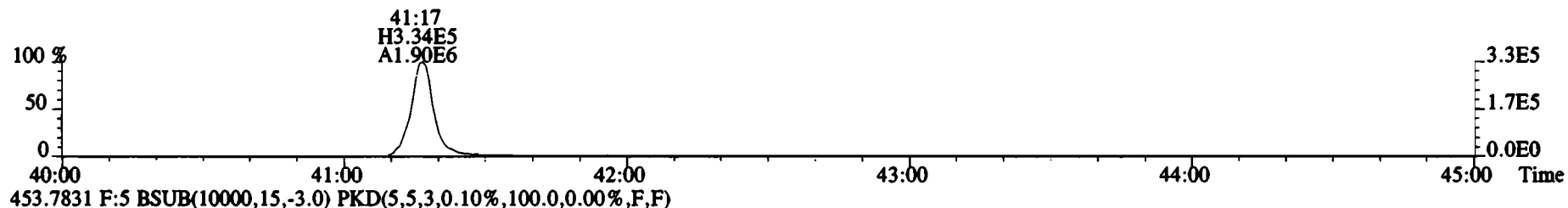
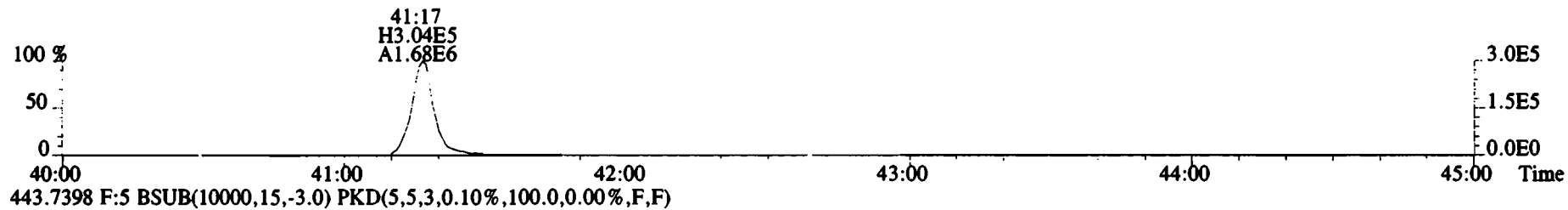
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

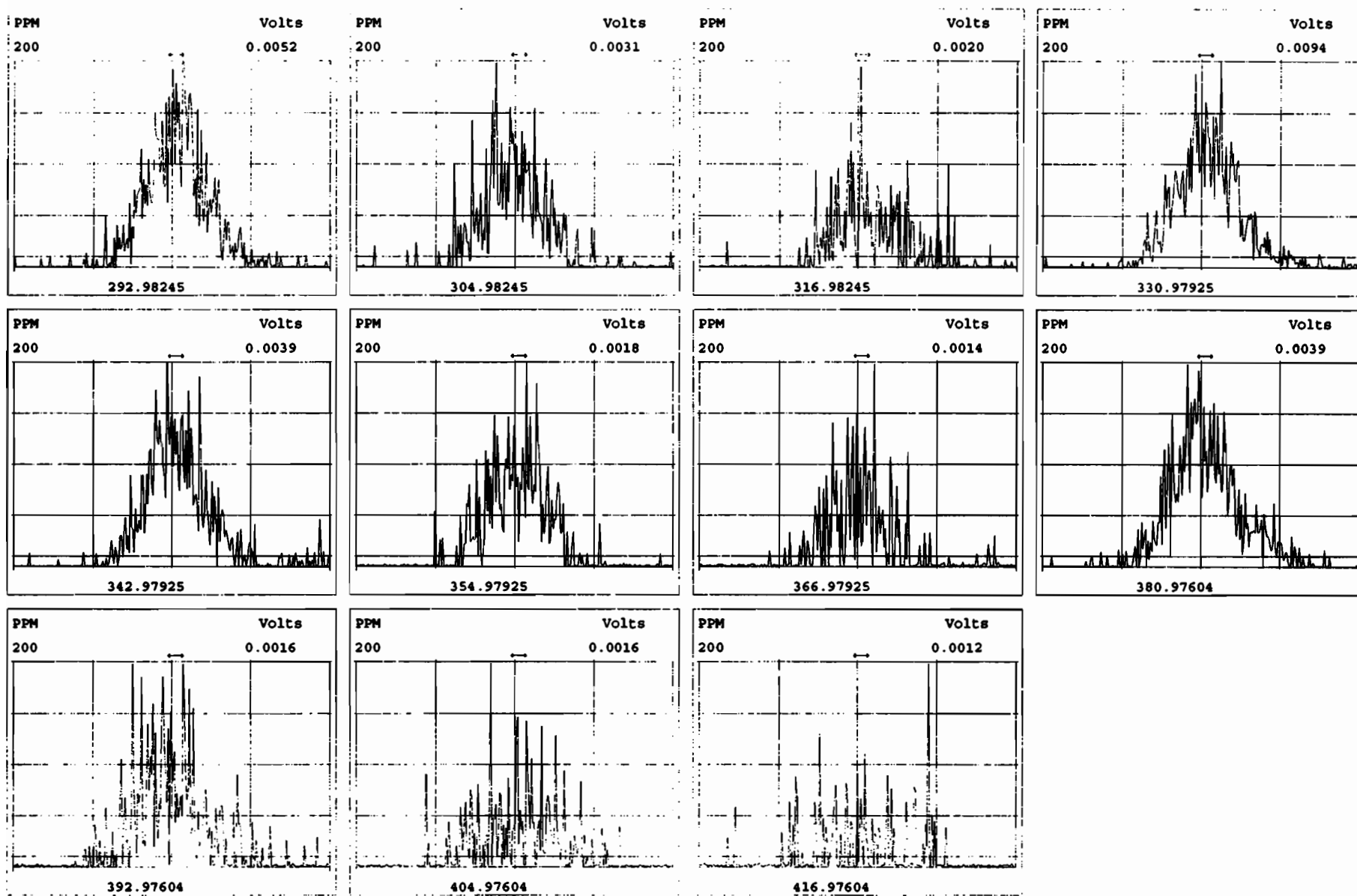


File:200116D2 #1-432 Acq:16-JAN-2020 23:33:36 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST200116D2-1 1613 CS3 1911604 Exp:OCDD\_DB5  
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



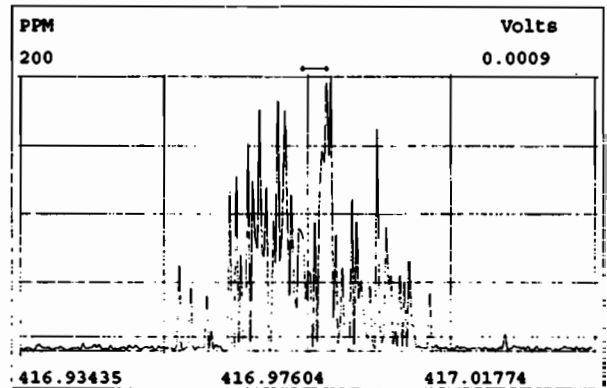
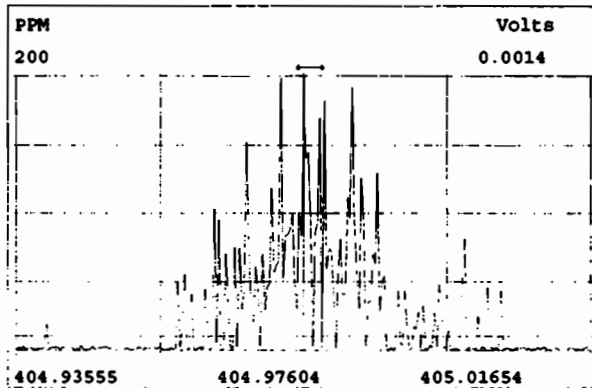
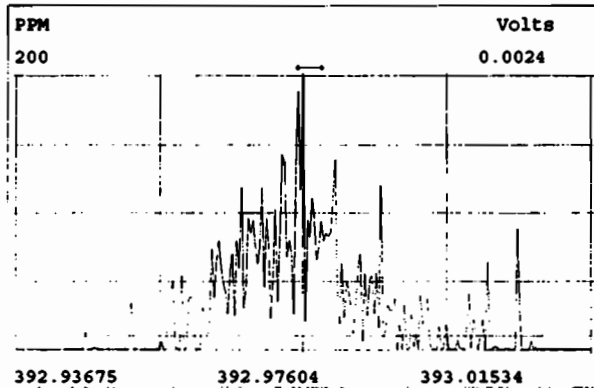
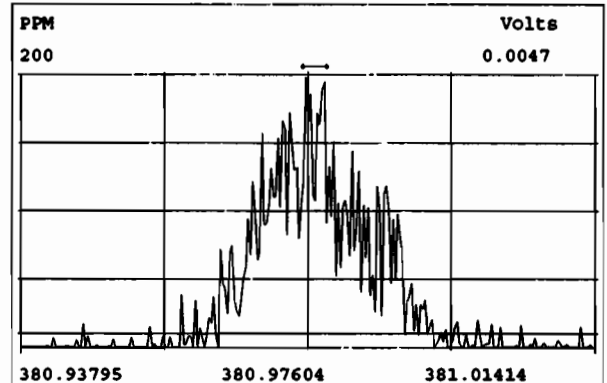
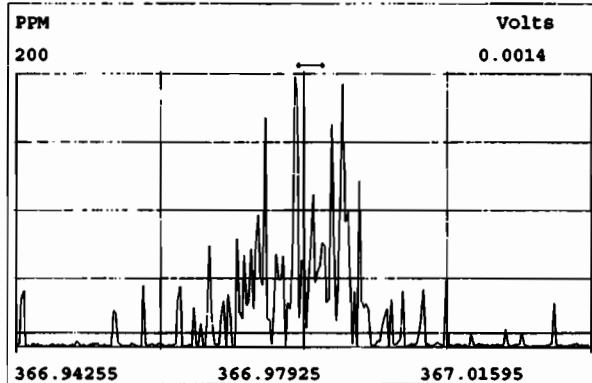
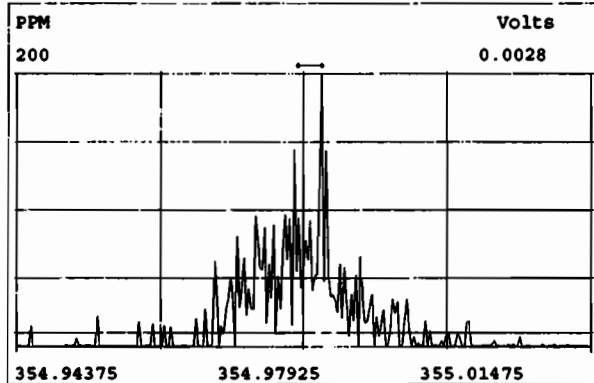
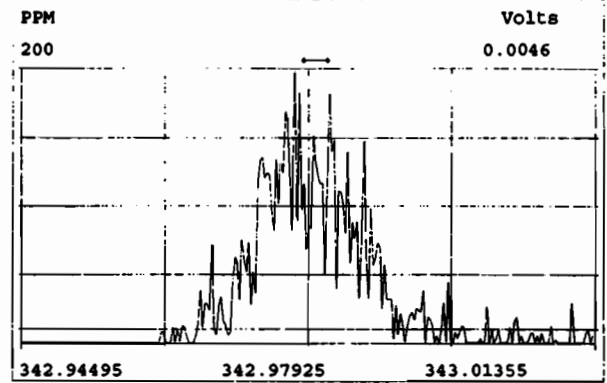
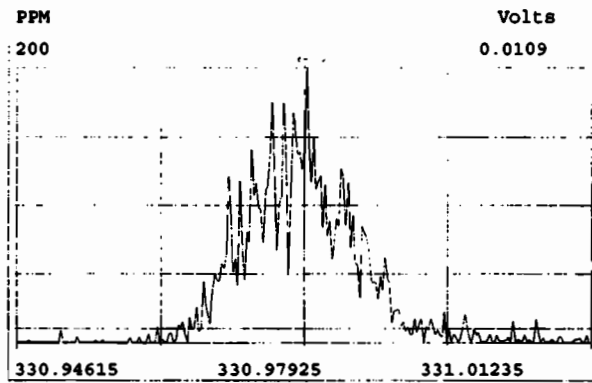
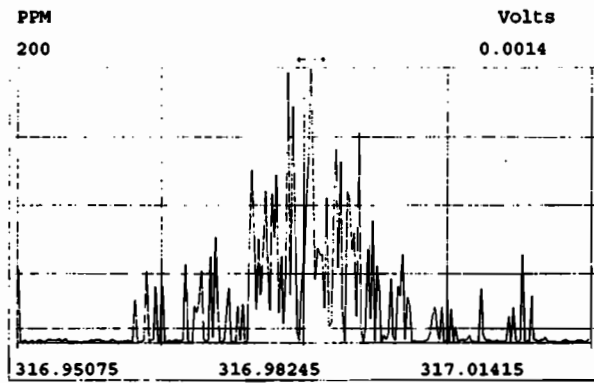
Peak Locate Examination:17-JAN-2020:11:42 File:RES\_CHECK

Experiment:OCDD\_DB5 Function:1 Reference:PFK



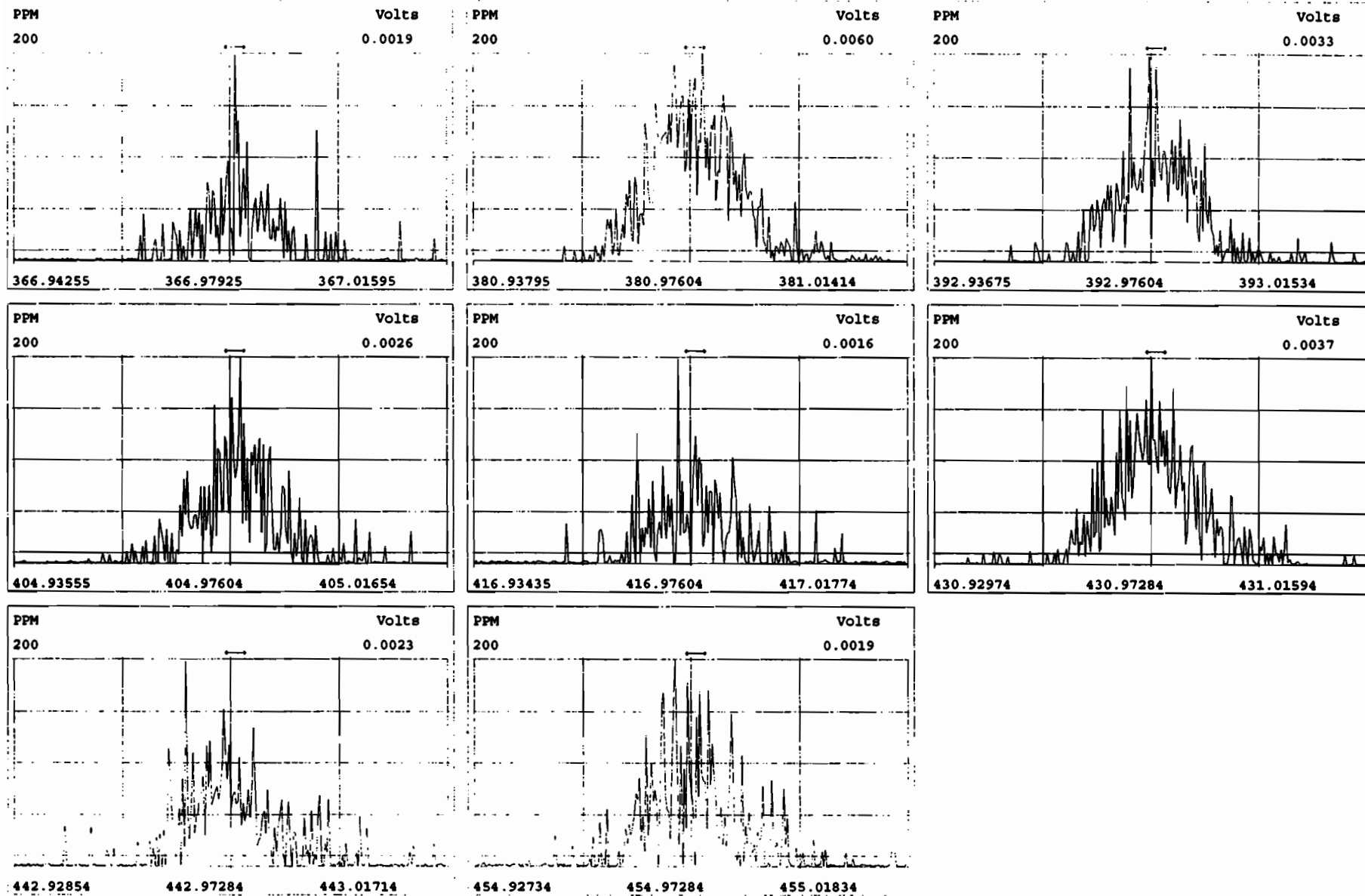
Peak Locate Examination:17-JAN-2020:11:43 File:RES\_CHECK

Experiment:OCDD\_DB5 Function:2 Reference:PFK



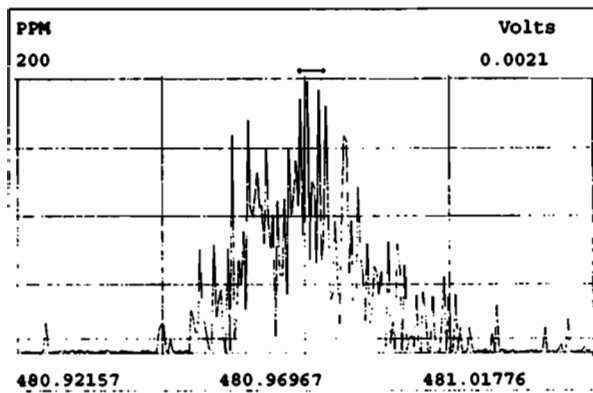
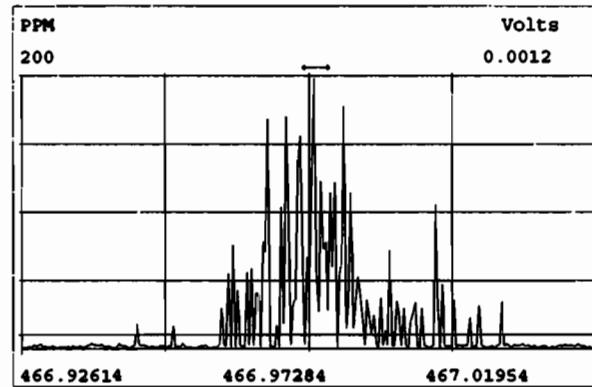
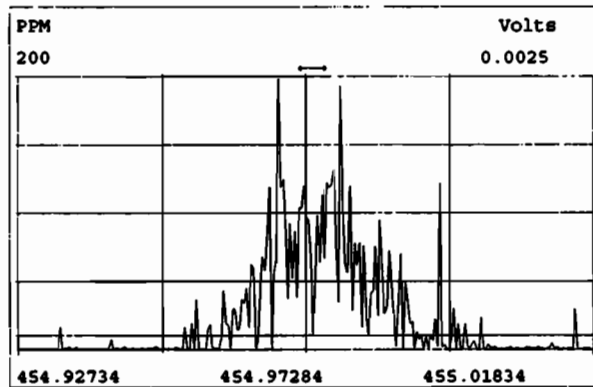
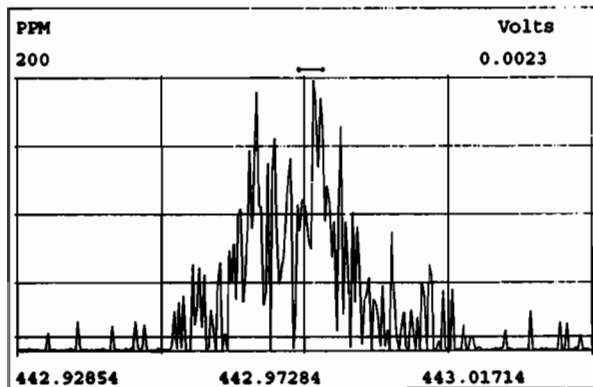
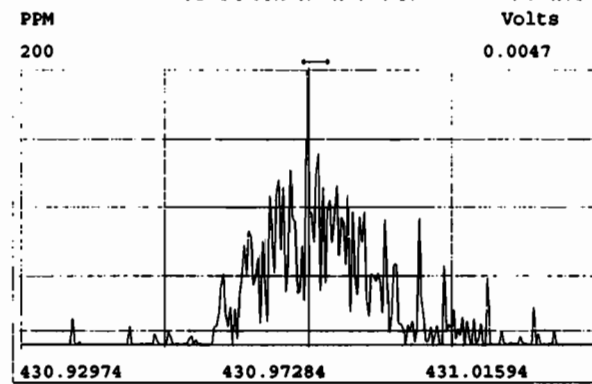
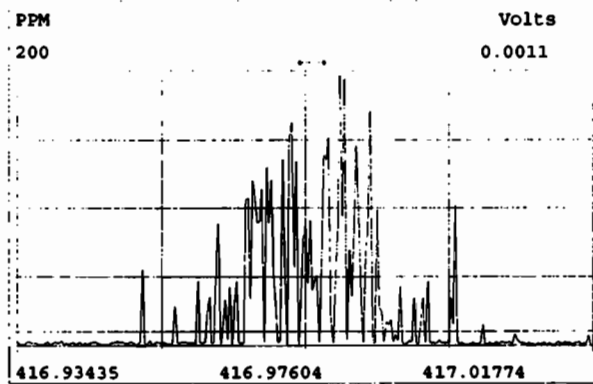
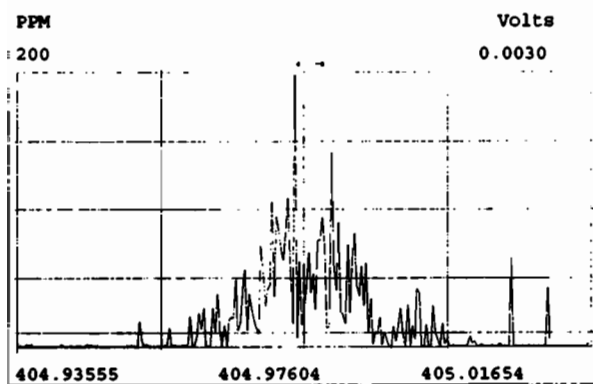
Peak Locate Examination:17-JAN-2020:11:44 File:RES\_CHECK

Experiment:OCDD\_DB5 Function:3 Reference:PFK



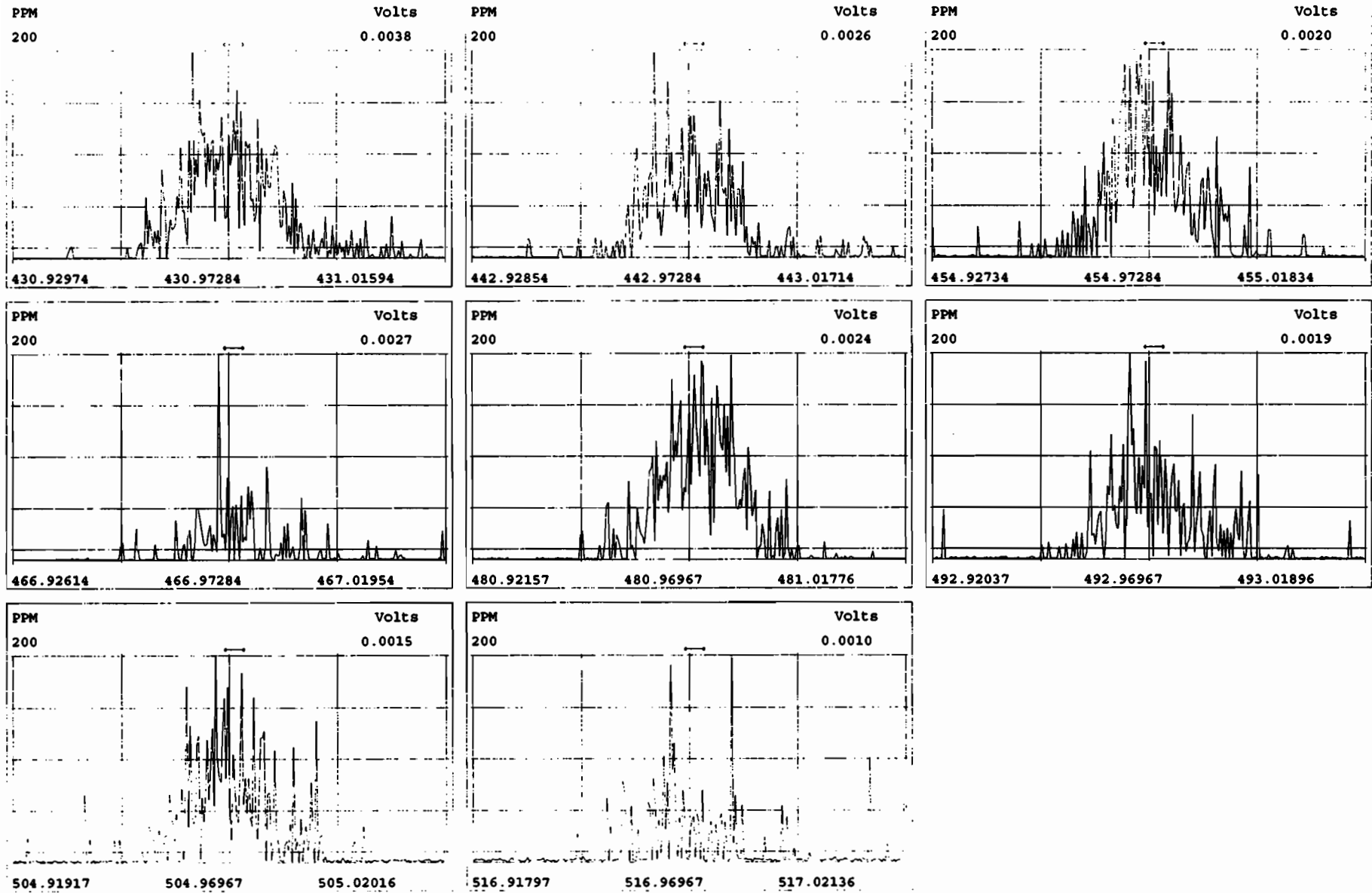
Peak Locate Examination:17-JAN-2020:11:45 File:RES\_CHECK

Experiment:OCDD\_DB5 Function:4 Reference:PFK



Peak Locate Examination:17-JAN-2020:11:46 File:RES\_CHECK

Experiment:OCDD\_DB5 Function:5 Reference:PFK





**HRMS CALIBRATION STANDARDS REVIEW CHECKLIST**

**Beg. Calibration ID:** ST200121R2-1

**Reviewed By:** CT 01/23/2020  
*Initials & Date*

**End Calibration ID:** NA

	<u>Beg.</u>	<u>End</u>
<b>Ion abundance within QC limits?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <u>NA</u>
<b>Concentrations within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>TCDD/TCDF Valleys &lt;25%</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>First and last eluters present?</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Retention Times within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Verification Std. named correctly?</b> (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Forms signed and dated?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Correct ICAL referenced?</b>	<u>DB</u>	<input type="checkbox"/>
<b><u>Run Log:</u></b>		
- Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/> <u>H</u>
- Samples within 12 hour clock?	<u>(Y)</u>	N
- Bottle position verified?	<u>DB</u>	

	<u>Beg.</u>	<u>End</u>
<b>Mass resolution ≥</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> 5k <input type="checkbox"/> 6-8K <input type="checkbox"/> 8K <input checked="" type="checkbox"/> 10K 1614    1699    429    1613/1668/8280		
<b>Intergrated peaks display correctly?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <u>NA</u>
<b>GC Break &lt;20%</b>		<input type="checkbox"/> <u>NA</u>
<b><u>8280 CS1 End Standard:</u></b>		
- Ratios within limits, S/N <2.5:1, CS1 within 12 hours		<input type="checkbox"/> <u>NA</u>

**Comments:**

Dataset: U:\VG12.PRO\Results\200122R2\200122R2\_1.qld

Last Altered: Wednesday, January 22, 2020 16:52:28 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 17:25:53 Pacific Standard Time

DB 1/22/20

CT01/23/2020

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200122R2\_1, Date: 22-Jan-2020, Time: 16:06:05, ID: ST200121R2\_1 1613 CS3 191604, Description: 1613 CS3 191604

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	9.63e4	0.75	NO	0.824	1.000	25.841	25.84	1.001	1.001	9.9606	99.6	0.0527	9.96
2	2 1,2,3,7,8-PeCDD	4.05e5	0.60	NO	0.912	1.000	30.750	30.74	1.001	1.000	50.445	101	0.0835	50.4
3	3 1,2,3,4,7,8-HxCDD	3.22e5	1.23	NO	0.870	1.000	34.072	34.08	1.000	1.001	53.979	108	0.112	54.0
4	4 1,2,3,6,7,8-HxCDD	3.22e5	1.20	NO	0.784	1.000	34.168	34.18	1.000	1.000	51.028	102	0.105	51.0
5	5 1,2,3,7,8,9-HxCDD	3.04e5	1.21	NO	0.798	1.000	34.479	34.47	1.001	1.001	51.501	103	0.117	51.5
6	6 1,2,3,4,6,7,8-HpCDD	1.97e5	1.00	NO	0.737	1.000	38.003	38.00	1.000	1.000	50.229	100	0.176	50.2
7	7 OCDD	4.36e5	0.85	NO	0.800	1.000	40.974	40.98	1.000	1.000	103.67	104	0.0873	104
8	8 2,3,7,8-TCDF	8.75e4	0.71	NO	0.588	1.000	24.967	24.97	1.001	1.001	10.196	102	0.0596	10.2
9	9 1,2,3,7,8-PeCDF	5.54e5	1.51	NO	0.826	1.000	29.467	29.46	1.001	1.001	52.248	104	0.0962	52.2
10	10 2,3,4,7,8-PeCDF	5.61e5	1.53	NO	0.850	1.000	30.453	30.44	1.001	1.001	52.032	104	0.0908	52.0
11	11 1,2,3,4,7,8-HxCDF	2.74e5	1.19	NO	0.787	1.000	33.199	33.21	1.000	1.000	52.377	105	0.145	52.4
12	12 1,2,3,6,7,8-HxCDF	3.07e5	1.16	NO	0.720	1.000	33.326	33.34	1.000	1.001	52.909	106	0.132	52.9
13	13 2,3,4,6,7,8-HxCDF	2.92e5	1.17	NO	0.766	1.000	33.936	33.91	1.001	1.000	53.789	108	0.144	53.8
14	14 1,2,3,7,8,9-HxCDF	2.26e5	1.18	NO	0.709	1.000	34.807	34.83	1.000	1.001	53.135	106	0.211	53.1
15	15 1,2,3,4,6,7,8-HpCDF	1.86e5	0.96	NO	0.732	1.000	36.601	36.58	1.001	1.000	53.557	107	0.161	53.6
16	16 1,2,3,4,7,8,9-HpCDF	1.49e5	0.96	NO	0.816	1.000	38.567	38.58	1.000	1.000	53.603	107	0.166	53.6
17	17 OCDF	3.41e5	0.82	NO	0.639	1.000	41.165	41.18	1.000	1.000	104.27	104	0.0775	104
18	18 13C-2,3,7,8-TCDD	1.17e6	0.78	NO	1.12	1.000	25.829	25.81	1.026	1.025	106.89	107	0.102	
19	19 13C-1,2,3,7,8-PeCDD	8.81e5	0.64	NO	0.841	1.000	30.596	30.73	1.215	1.220	106.37	106	0.0820	
20	20 13C-1,2,3,4,7,8-HxCDD	6.86e5	1.23	NO	0.938	1.000	34.063	34.06	1.014	1.014	101.06	101	0.141	
21	21 13C-1,2,3,6,7,8-HxCDD	8.05e5	1.22	NO	1.07	1.000	34.164	34.17	1.017	1.017	104.41	104	0.124	
22	22 13C-1,2,3,7,8,9-HxCDD	7.40e5	1.19	NO	1.03	1.000	34.466	34.44	1.026	1.025	99.187	99.2	0.128	
23	23 13C-1,2,3,4,6,7,8-HpCDD	5.32e5	1.02	NO	0.710	1.000	38.027	37.99	1.132	1.131	103.43	103	0.204	
24	24 13C-OCDD	1.05e6	0.86	NO	0.601	1.000	40.916	40.97	1.218	1.220	241.90	121	0.229	
25	25 13C-2,3,7,8-TCDF	1.46e6	0.71	NO	1.04	1.000	25.005	24.94	0.993	0.990	104.33	104	0.141	
26	26 13C-1,2,3,7,8-PeCDF	1.28e6	1.51	NO	0.917	1.000	29.362	29.45	1.166	1.169	103.78	104	0.202	
27	27 13C-2,3,4,7,8-PeCDF	1.27e6	1.51	NO	0.903	1.000	30.319	30.42	1.204	1.208	104.09	104	0.205	
28	28 13C-1,2,3,4,7,8-HxCDF	6.65e5	0.48	NO	0.861	1.000	33.190	33.20	0.988	0.988	106.61	107	0.326	
29	29 13C-1,2,3,6,7,8-HxCDF	8.06e5	0.49	NO	1.05	1.000	33.291	33.32	0.991	0.992	106.33	106	0.268	
30	30 13C-2,3,4,6,7,8-HxCDF	7.09e5	0.48	NO	0.946	1.000	33.899	33.90	1.009	1.009	103.52	104	0.297	
31	31 13C-1,2,3,7,8,9-HxCDF	6.00e5	0.48	NO	0.816	1.000	34.802	34.81	1.036	1.036	101.57	102	0.344	

Dataset: U:\VG12.PRO\Results\200122R2\200122R2\_1.qld

Last Altered: Wednesday, January 22, 2020 16:52:28 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 17:25:53 Pacific Standard Time

Name: 200122R2\_1, Date: 22-Jan-2020, Time: 16:06:05, ID: ST200121R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	4.74e5	0.39	NO	0.589	1.000	36.549	36.56	1.088	1.088	111.05	111	0.214	
33	13C-1,2,3,4,7,8,9-HpCDF	3.41e5	0.40	NO	0.448	1.000	38.565	38.57	1.148	1.148	105.02	105	0.281	
34	13C-OCDF	1.02e6	0.82	NO	0.586	1.000	41.151	41.17	1.225	1.225	241.56	121	0.185	
35	37Cl-2,3,7,8-TCDD	1.07e5			1.09	1.000	25.861	25.84	1.027	1.026	9.9999	100	0.0380	
36	13C-1,2,3,4-TCDD	9.84e5	0.79	NO	1.00	1.000	25.260	25.18	1.000	1.000	100.00	100	0.114	
37	13C-1,2,3,4-TCDF	1.35e6	0.73	NO	1.00	1.000	23.860	23.53	1.000	1.000	100.00	100	0.147	
38	13C-1,2,3,4,6,9-HxCDF	7.24e5	0.49	NO	1.00	1.000	33.590	33.59	1.000	1.000	100.00	100	0.281	

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Thursday, January 23, 2020 09:57:58 Pacific Standard Time

Printed: Thursday, January 23, 2020 09:59:16 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Compound name: 2,3,7,8-TCDD

	Name	iD	Acq.Date	Acq.Time
1	200122R2_1	ST200121R2_1 1613 CS3 19I1604	22-Jan-20	16:06:05
2	200122R2_2	B9L0194-BS1 OPR 10	22-Jan-20	17:01:04
3	200122R2_3	SOLVENT BLANK	22-Jan-20	17:47:14
4	200122R2_4	B9L0194-BLK1 Method Blank 10	22-Jan-20	18:34:10
5	200122R2_5	1904160-01 PDI-029SC-A-00-01-191009 16.02	22-Jan-20	19:21:07
6	200122R2_6	B9L0194-DUP1 Duplicate 16.07	22-Jan-20	20:08:07
7	200122R2_7	1904160-02 PDI-029SC-A-01-02-191009 11.3	22-Jan-20	20:55:06
8	200122R2_8	1904160-03 PDI-030SC-A-01-02-190929 10.87	22-Jan-20	21:42:03
9	200122R2_9	1904160-04 PDI-032SC-A-01-02-191010 11.11	22-Jan-20	22:29:02
10	200122R2_10	1904160-05 PDI-033SC-A-04-05-191008 12.61	22-Jan-20	23:15:58
11	200122R2_11	1904160-06 PDI-033SC-A-05-06-191008 10.92	23-Jan-20	00:02:54
12	200122R2_12	1904160-07 PDI-035SC-A-03-04-191010 11.9	23-Jan-20	00:49:55
13	200122R2_13	1904160-08 PDI-035SC-A-04-05-191010 12.69	23-Jan-20	01:36:54
14	200122R2_14	1904160-09 PDI-036SC-A-00-01-190929 11.48	23-Jan-20	02:23:51
15	200122R2_15	1904160-10 PDI-036SC-A-01-02-190929 11.08	23-Jan-20	03:10:46

Dataset: Untitled

Last Altered: Thursday, January 23, 2020 15:01:30 Pacific Standard Time

Printed: Thursday, January 23, 2020 15:02:01 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

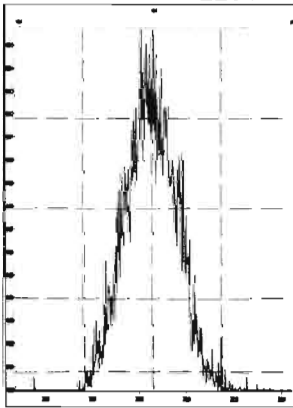
Name: 200122R2\_1, Date: 22-Jan-2020, Time: 16:06:05, ID: ST200121R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

#	Name	RT
1	1,3,6,8-TCDD (First)	21.92
2	1,2,8,9-TCDD (Last)	26.78
3	1,2,4,7,9-PeCDD (First)	28.55
4	1,2,3,8,9-PeCDD (Last)	31.11
5	1,2,4,6,7,9-HxCDD (First)	32.58
6	1,2,3,7,8,9-HxCDD (Last)	34.47
7	1,2,3,4,6,7,9-HpCDD (First)	36.96
8	1,2,3,4,6,7,8-HpCDD (Last)	38.00
9	1,3,6,8-TCDF (First)	19.79
10	1,2,8,9-TCDF (Last)	26.93
11	1,3,4,6,8-PeCDF (First)	26.89
12	1,2,3,8,9-PeCDF (Last)	31.35
13	1,2,3,4,6,8-HxCDF (First)	32.05
14	1,2,3,7,8,9-HxCDF (Last)	34.83
15	1,2,3,4,6,7,8-HpCDF (First)	36.58
16	1,2,3,4,7,8,9-HpCDF (Last)	38.58

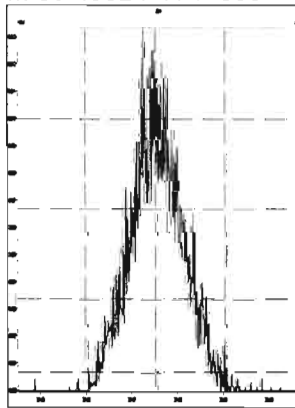
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Printed: Wednesday, January 22, 2020 16:02:41 Pacific Standard Time

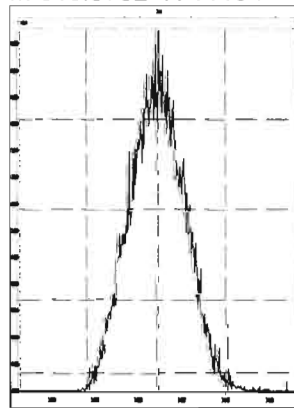
M 292.9824 R 12251



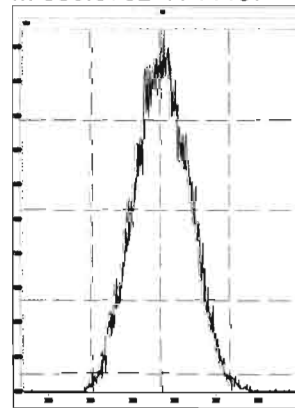
M 304.9824 R 11899



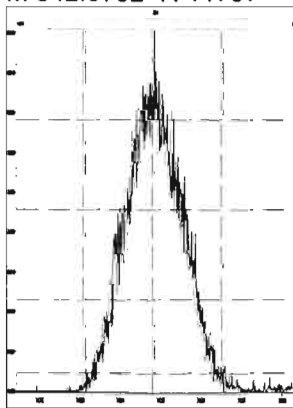
M 318.9792 R 11164



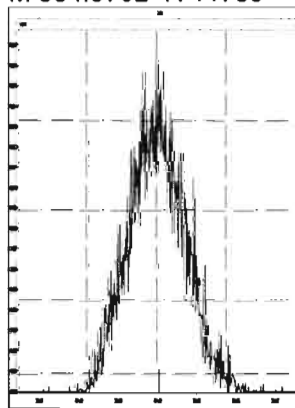
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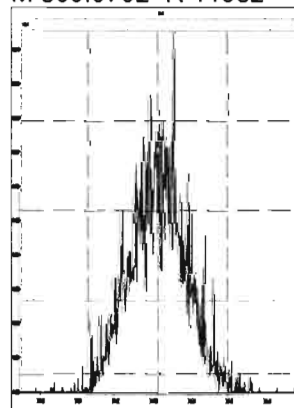
M 342.9792 R 11797



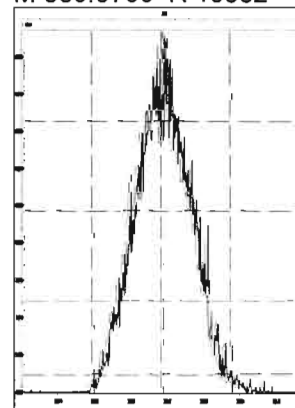
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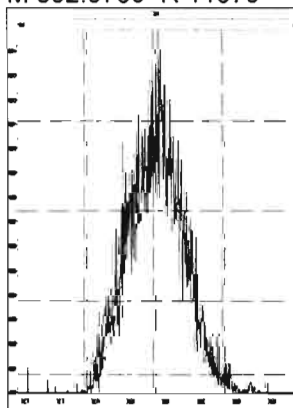
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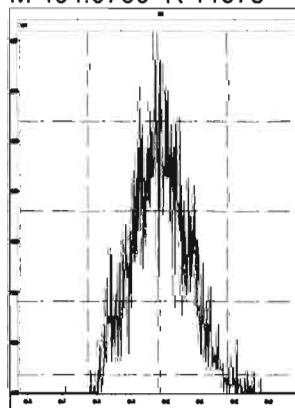
M 380.9760 R 10682



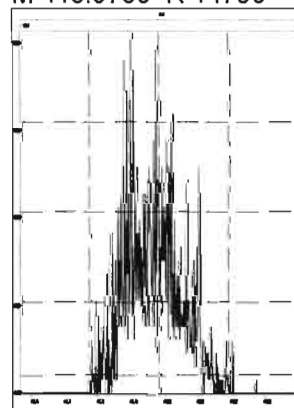
M 392.9760 R 11679



M 404.9760 R 11573



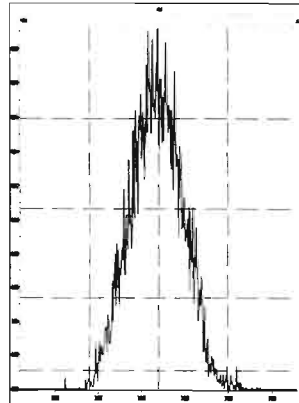
M 416.9760 R 14790



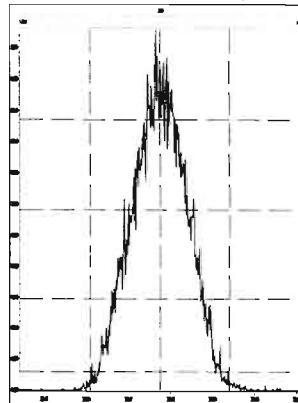
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Wednesday, January 22, 2020 16:03:23 Pacific Standard Time

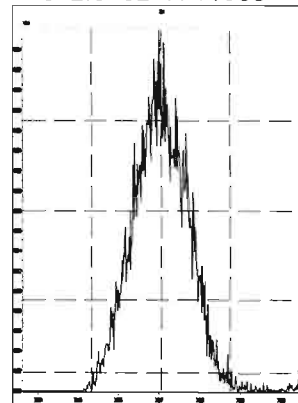
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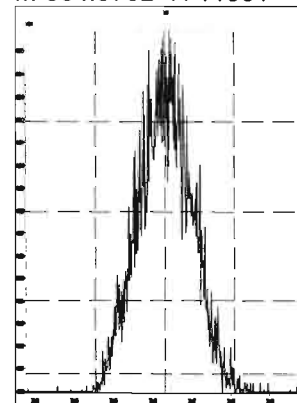
M 330.9792 R 11207



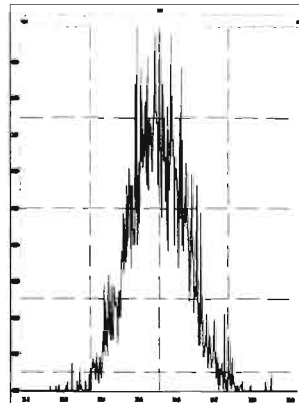
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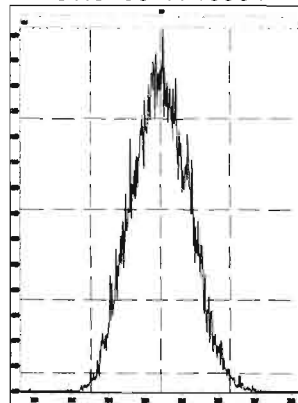
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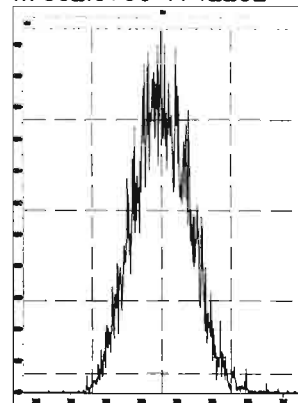
M 366.9792 R 11849



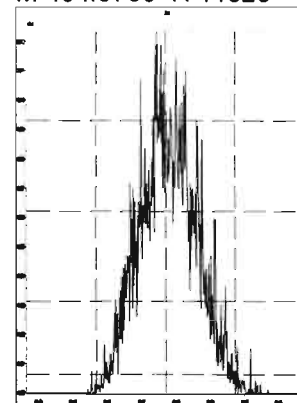
M 380.9760 R 10964



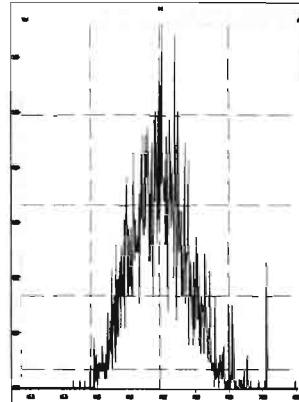
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M 404.9760 R 11628



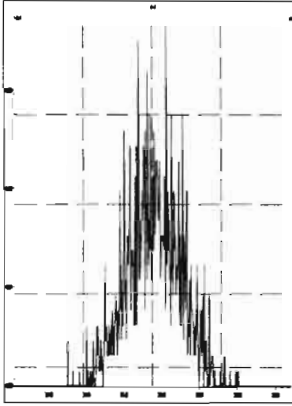
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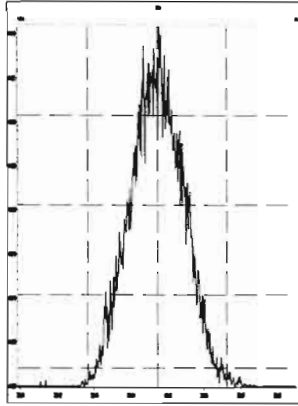
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Printed: Wednesday, January 22, 2020 16:04:12 Pacific Standard Time

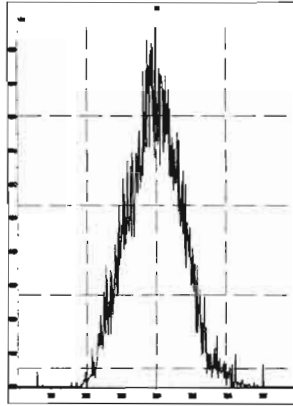
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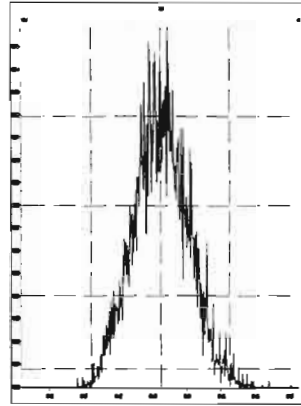
M 380.9760 R 11520



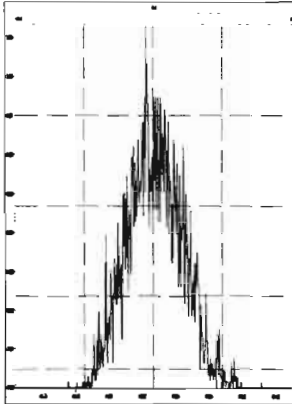
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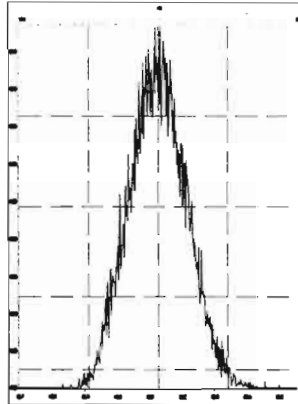
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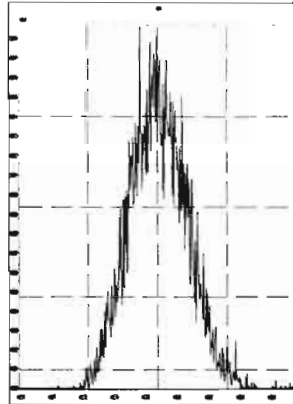
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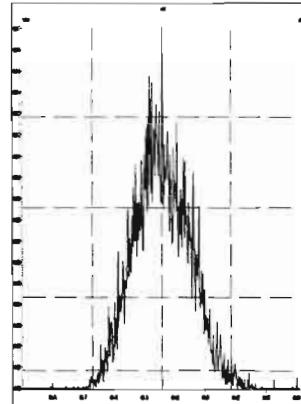
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M 442.9728 R 11110



M 454.9728 R 11417

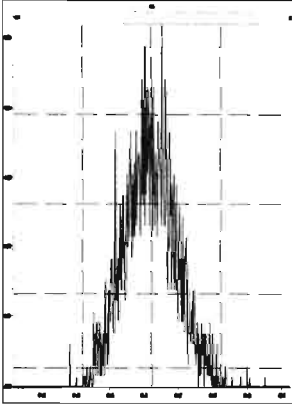




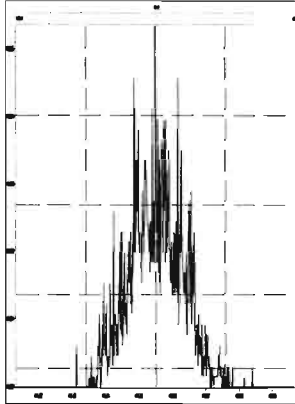
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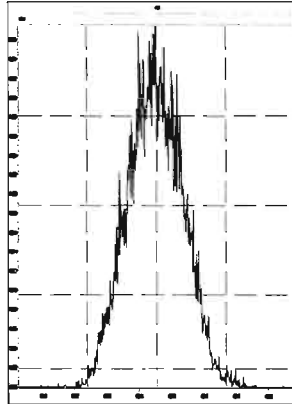
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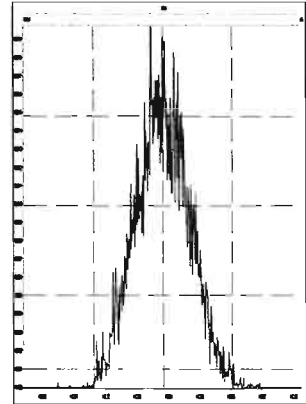
M 416.9760 R 14534



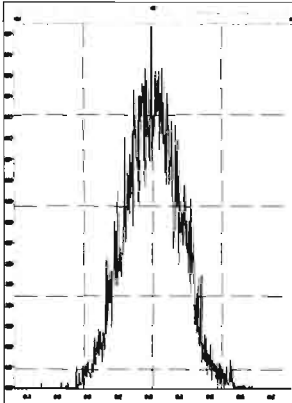
M 430.9728 R 11209



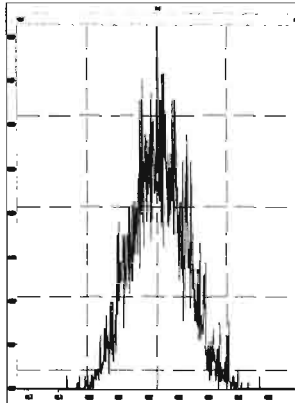
M 442.9728 R 11574



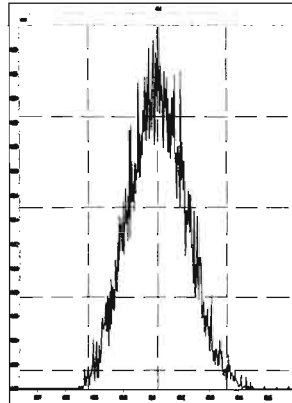
M 454.9728 R 11523



M 466.9728 R 12377



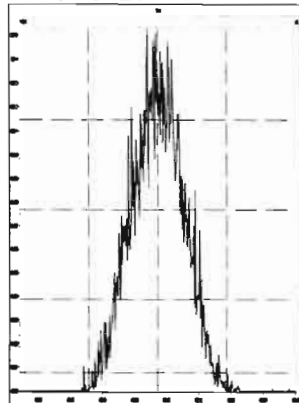
M 480.9696 R 11160



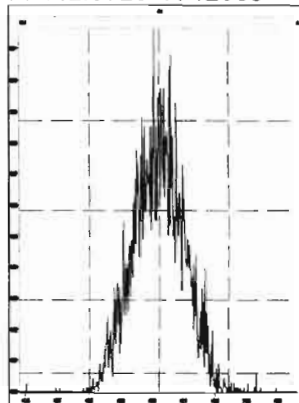
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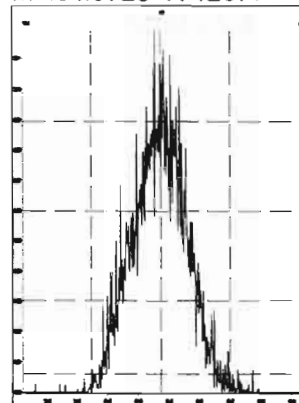
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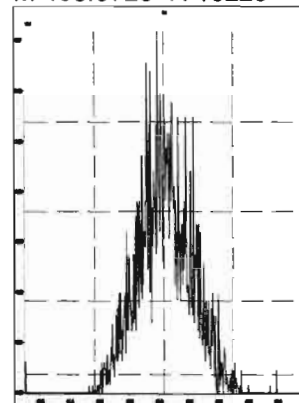
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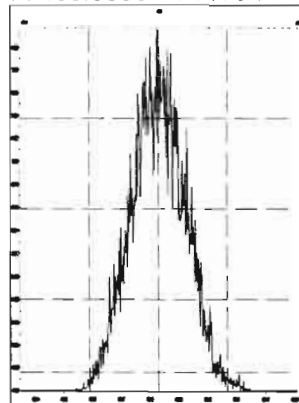
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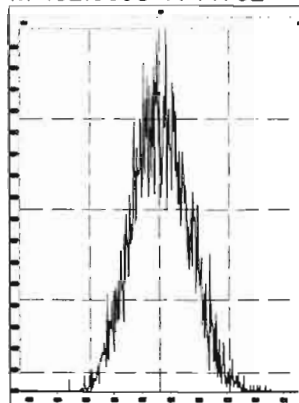
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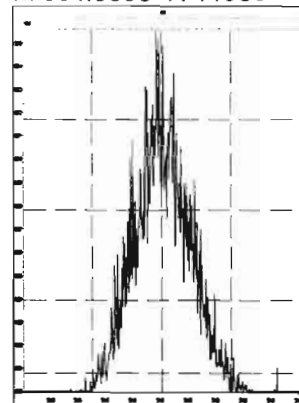
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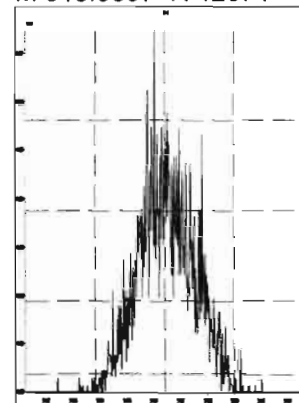
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M 504.9696 R 11960



M 516.9697 R 12074



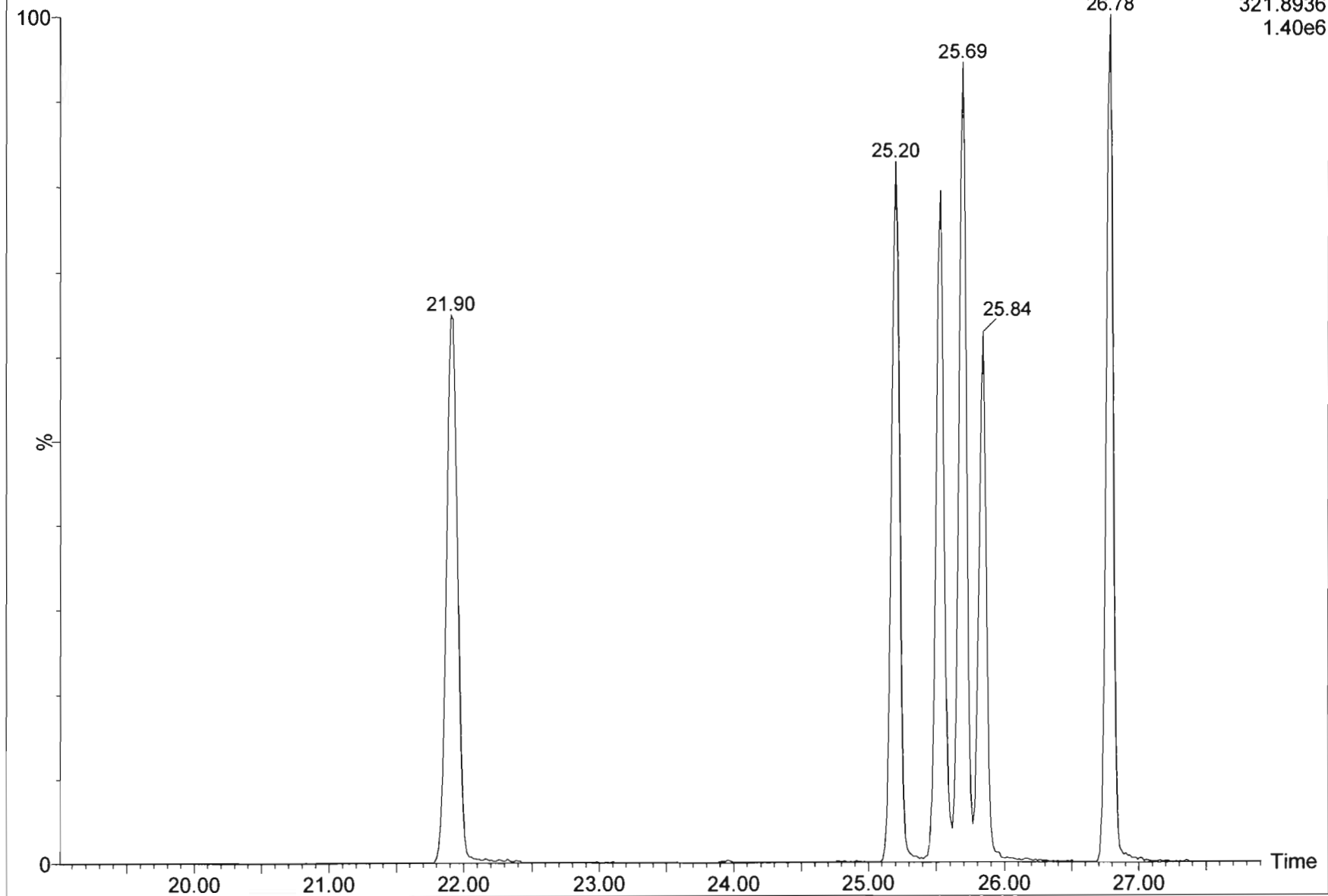
1613 CS3 19I1604

200122R2\_1

1: Voltage SIR 14 Channels EI+

321.8936

1.40e6



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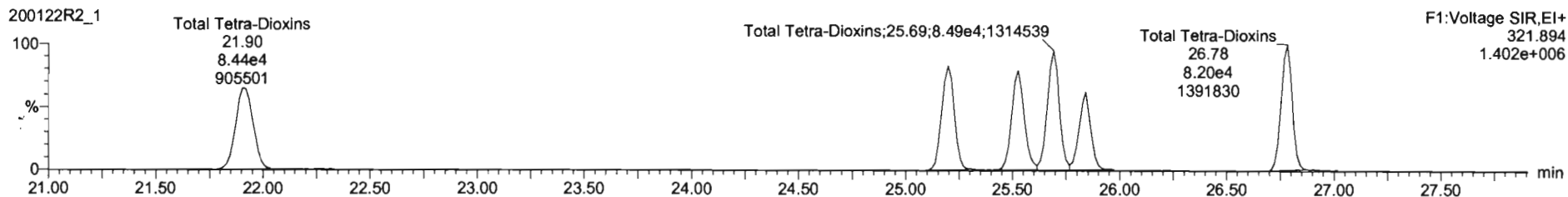
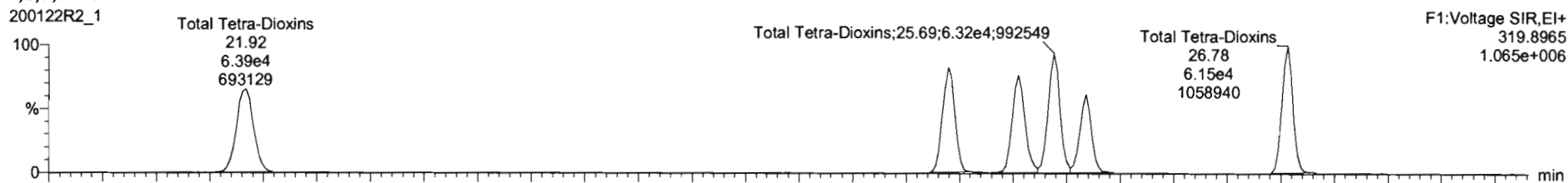
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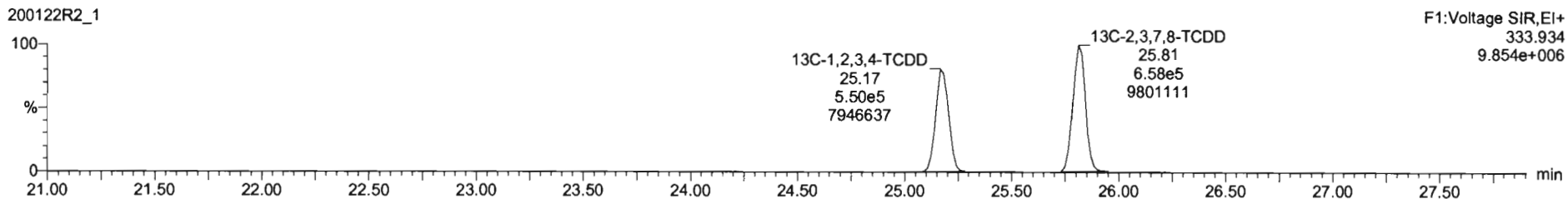
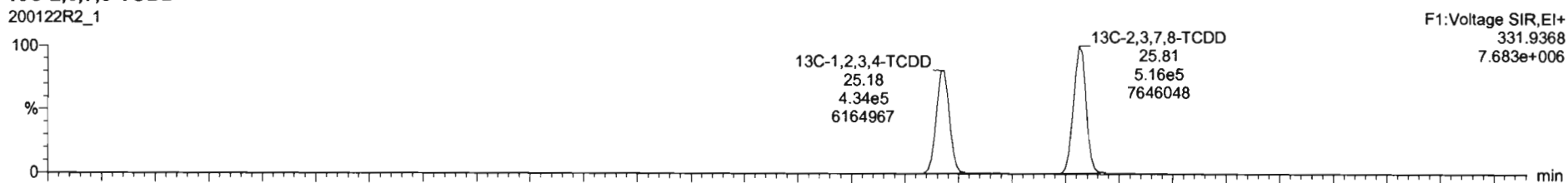
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**2,3,7,8-TCDD**



**13C-2,3,7,8-TCDD**



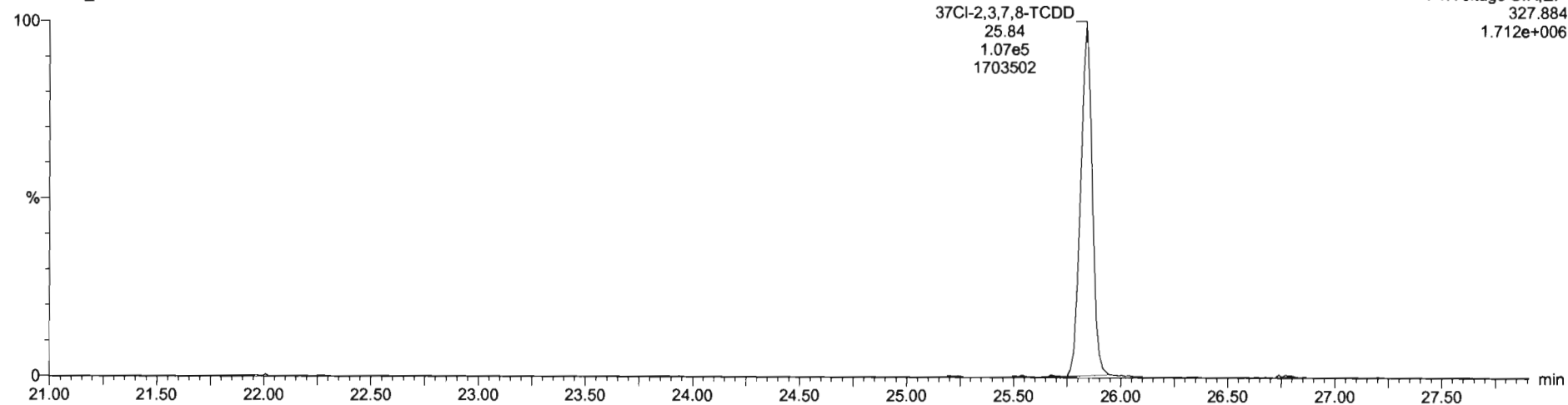
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Last Altered: Wednesday, January 22, 2020 16:52:28 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 17:23:44 Pacific Standard Time

Name: 200122R2\_1, Date: 22-Jan-2020, Time: 16:06:05, ID: ST200121R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

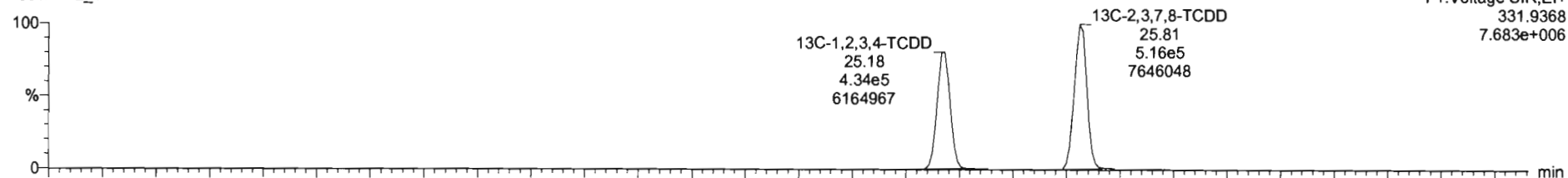
**37Cl-2,3,7,8-TCDD**

200122R2\_1

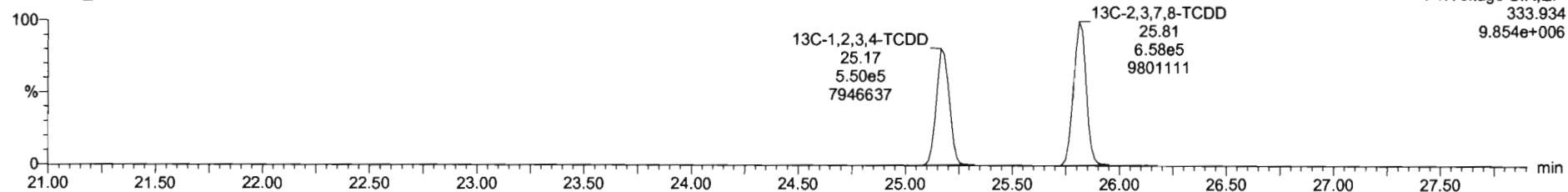


**13C-1,2,3,4-TCDD**

200122R2\_1



200122R2\_1

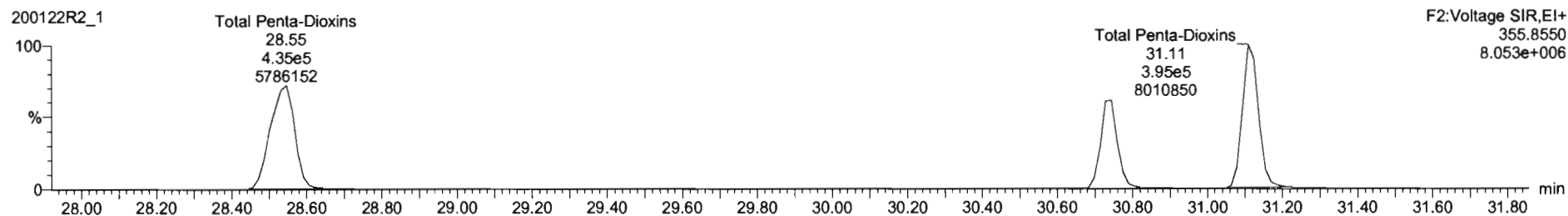
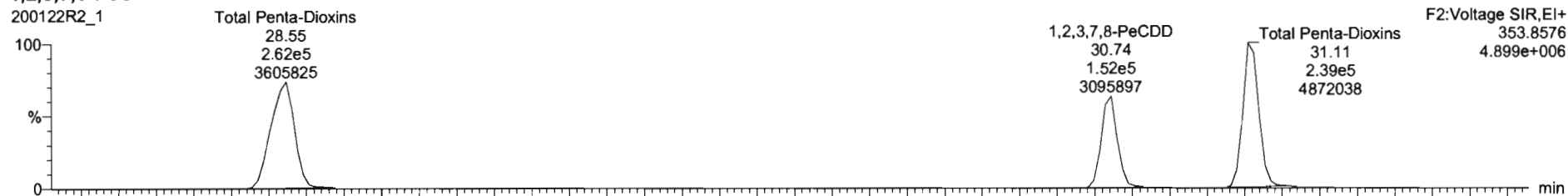


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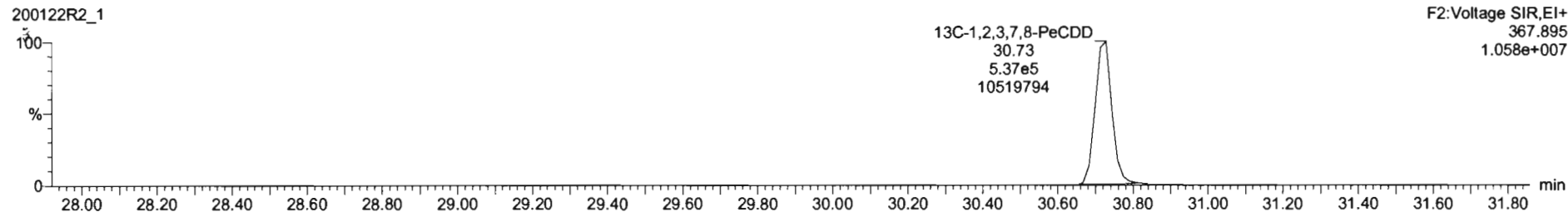
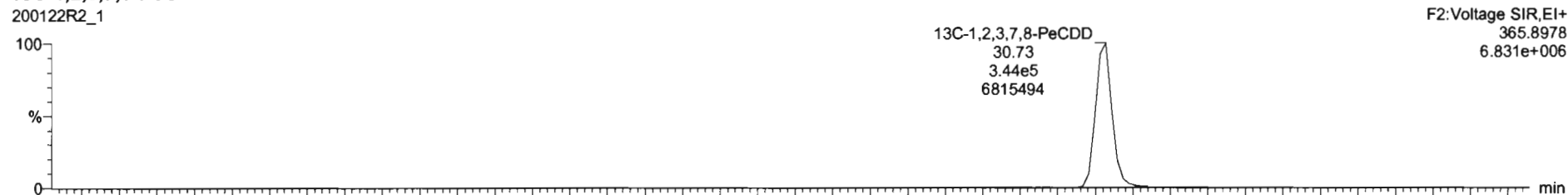
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**1,2,3,7,8-PeCDD**



**13C-1,2,3,7,8-PeCDD**



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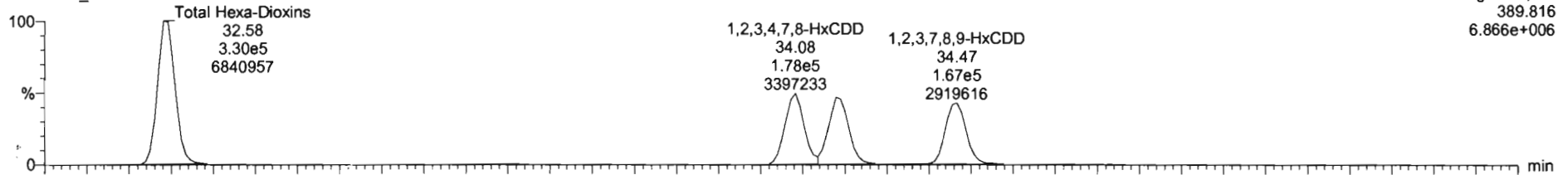
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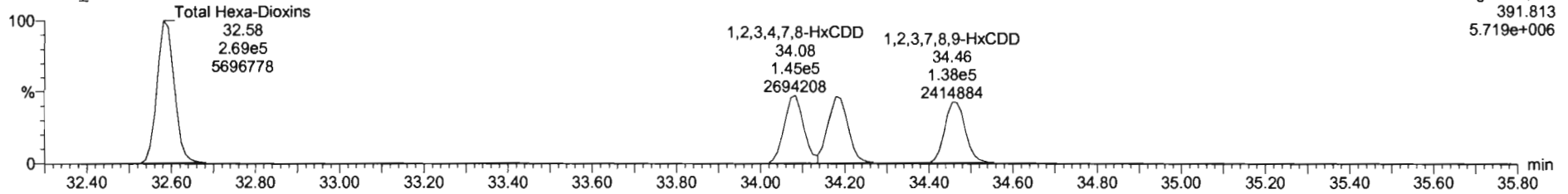
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**1,2,3,4,7,8-HxCDD**

200122R2\_1

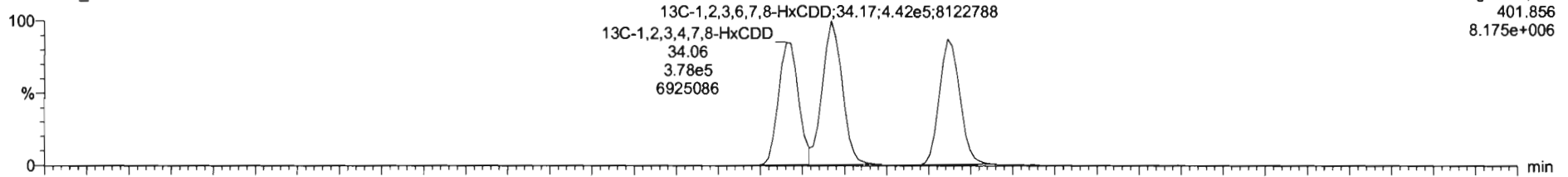


200122R2\_1

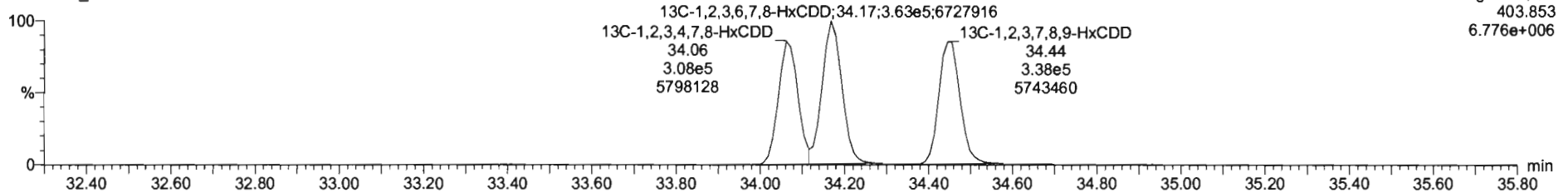


**13C-1,2,3,4,7,8-HxCDD**

200122R2\_1



200122R2\_1



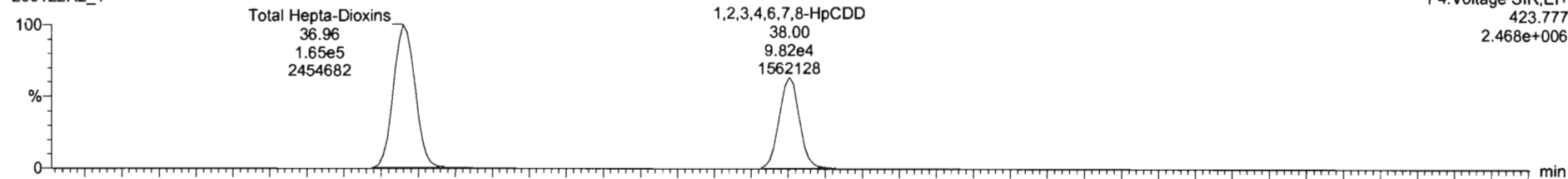
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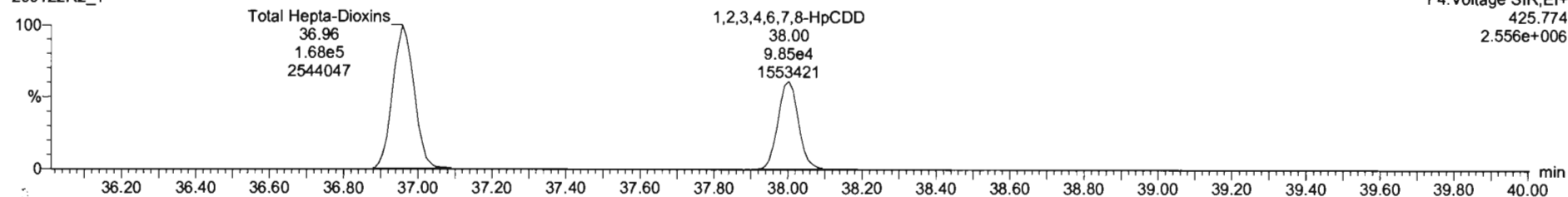
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1,2,3,4,6,7,8-HpCDD

200122R2\_1

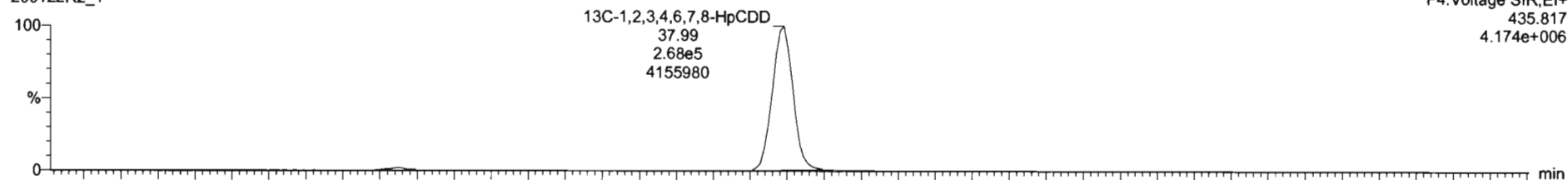


200122R2\_1

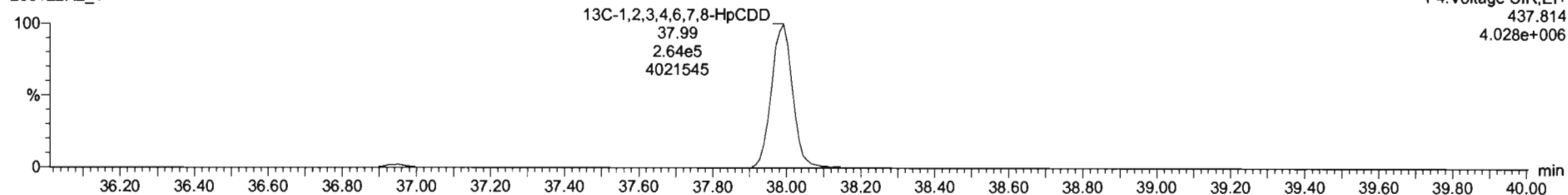


13C-1,2,3,4,6,7,8-HpCDD

200122R2\_1



200122R2\_1



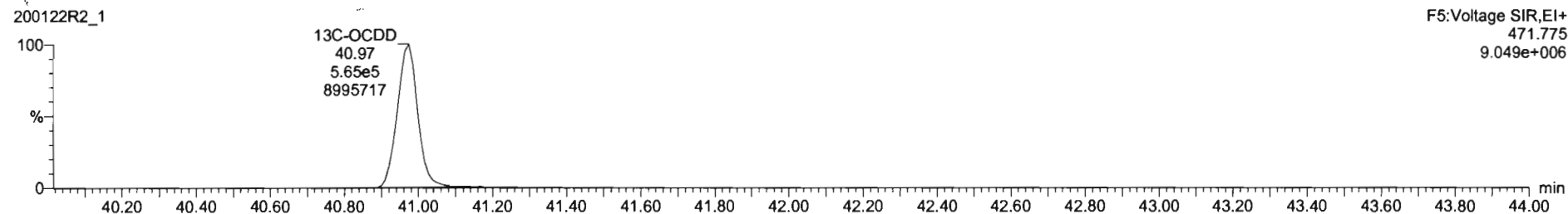
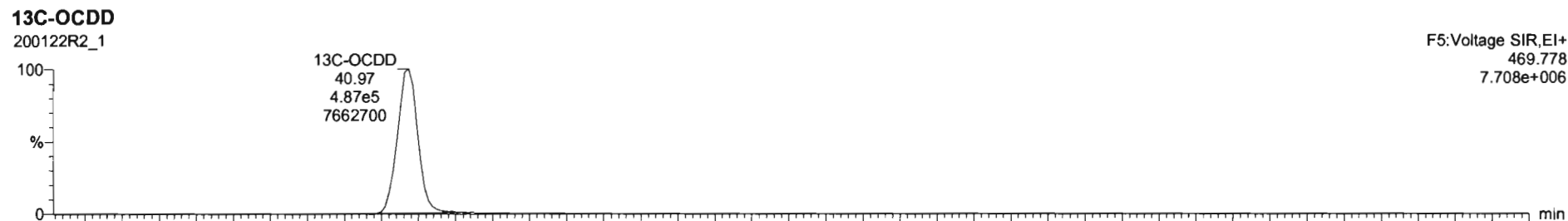
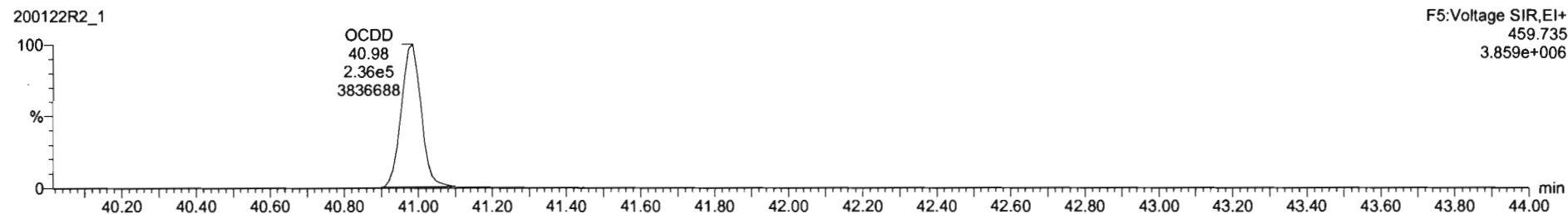
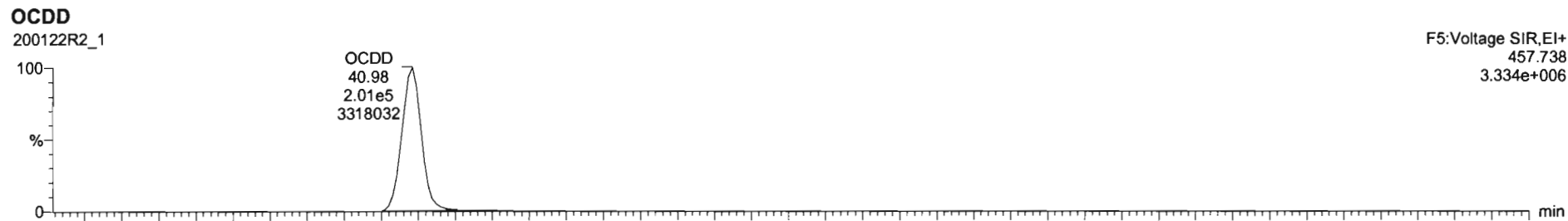


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Printed: Wednesday, January 22, 2020 17:23:44 Pacific Standard Time

Name: 200122R2\_1, Date: 22-Jan-2020, Time: 16:06:05, ID: ST200121R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604



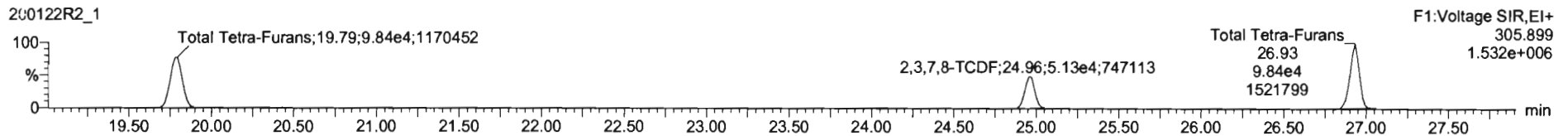
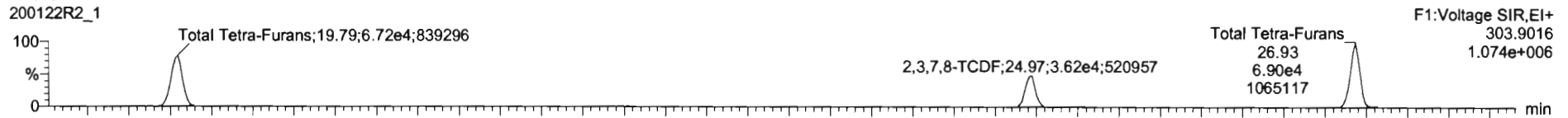
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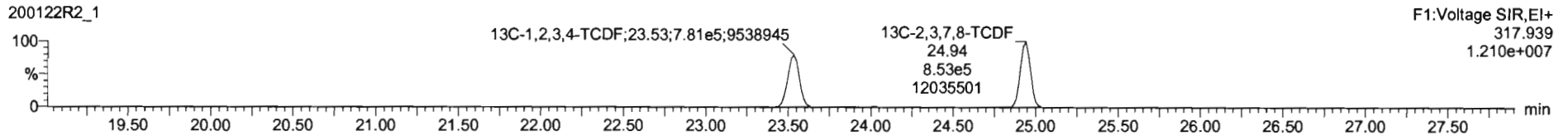
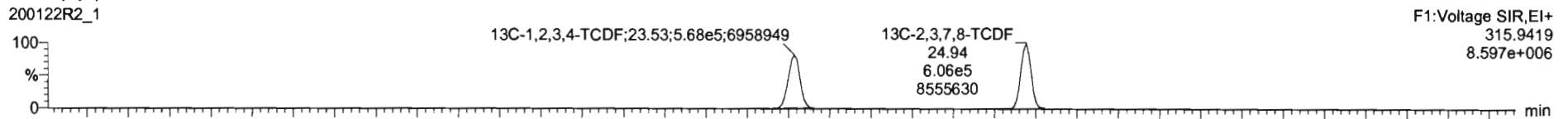
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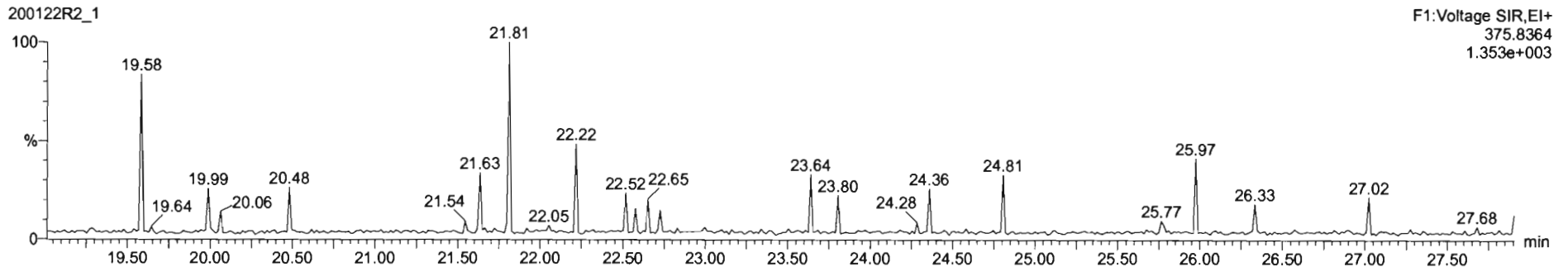
**2,3,7,8-TCDF**



**13C-2,3,7,8-TCDF**



**DPE1**



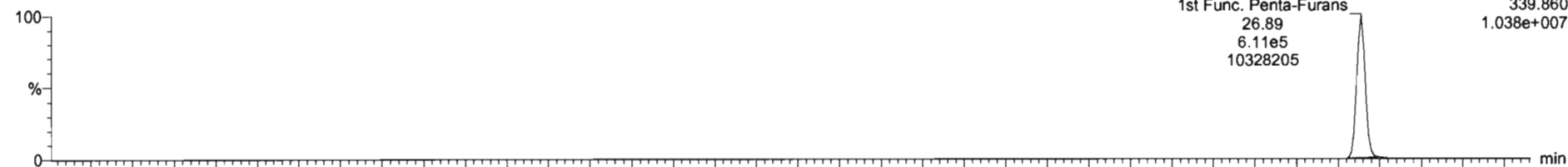
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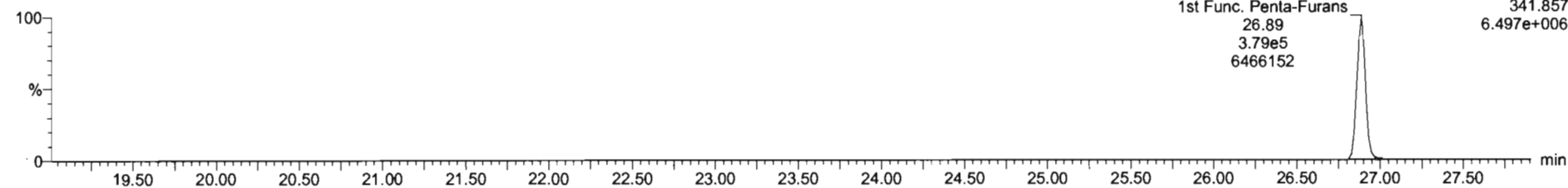
Name: 200122R2\_1, Date: 22-Jan-2020, Time: 16:06:05, ID: ST200121R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

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200122R2\_1

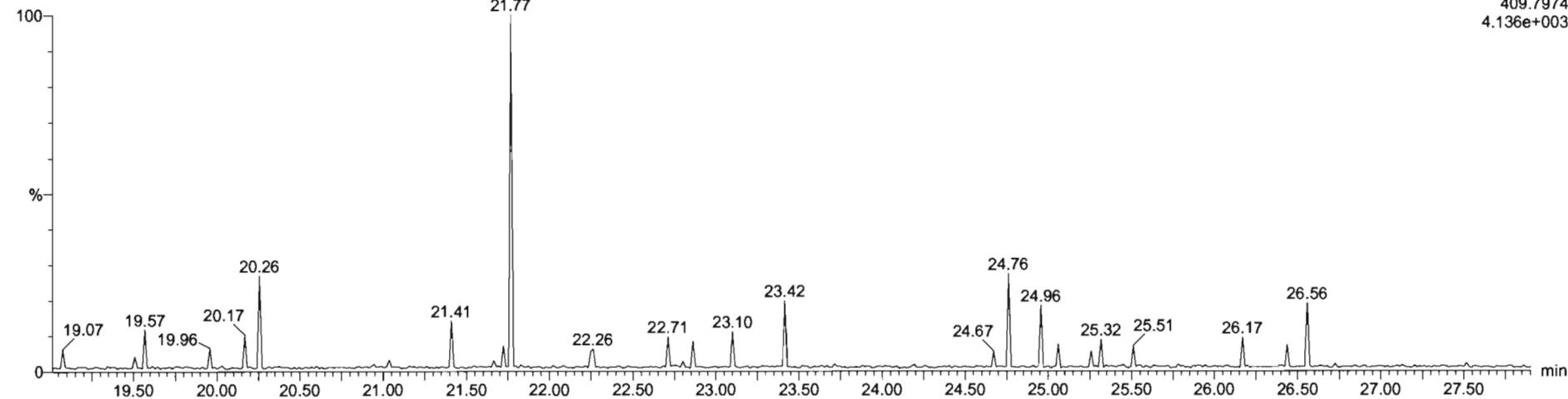


200122R2\_1



DPE6

200122R2\_1



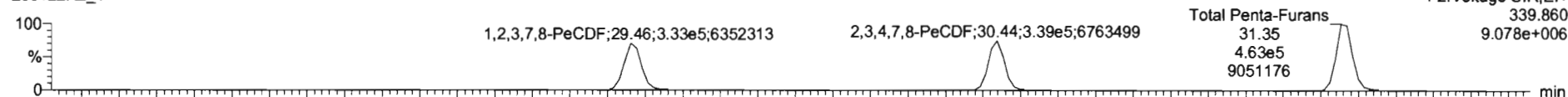
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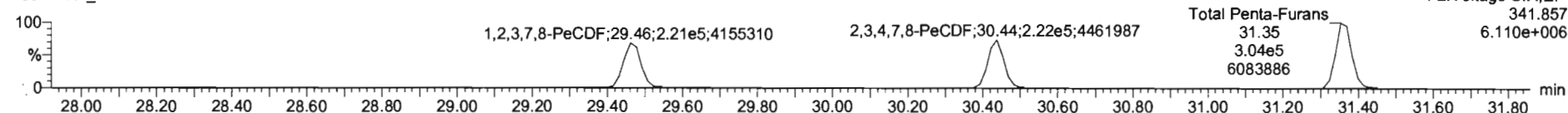
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**1,2,3,7,8-PeCDF**

200122R2\_1

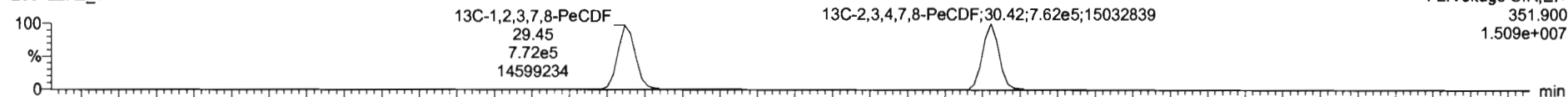


200122R2\_1

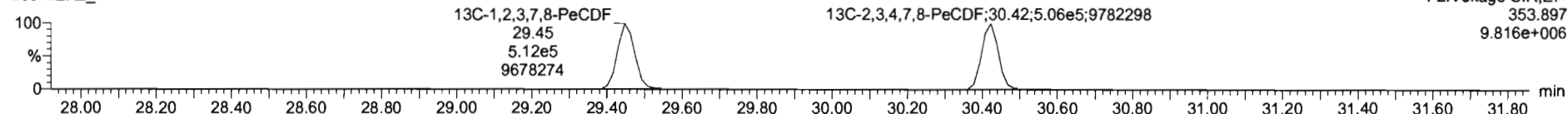


**13C-1,2,3,7,8-PeCDF**

200122R2\_1

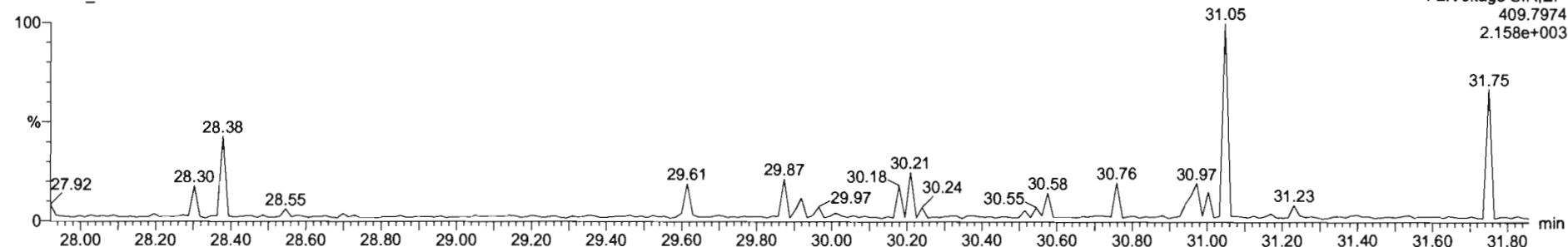


200122R2\_1



**DPE2**

200122R2\_1

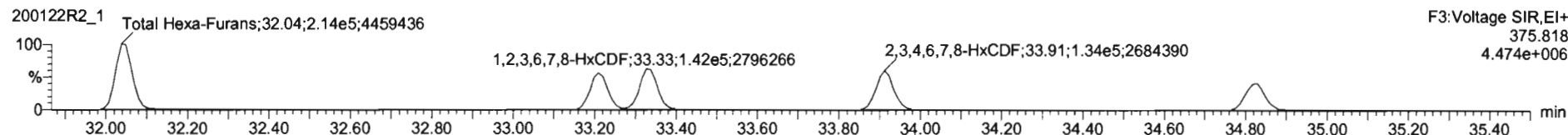
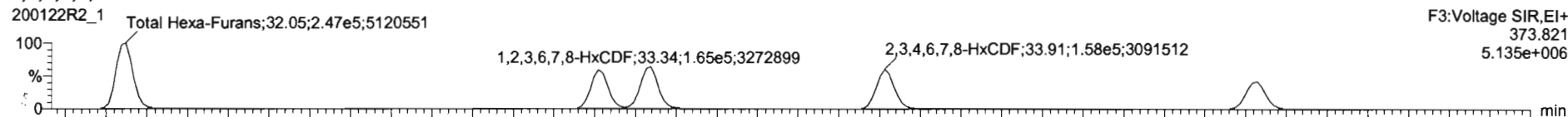


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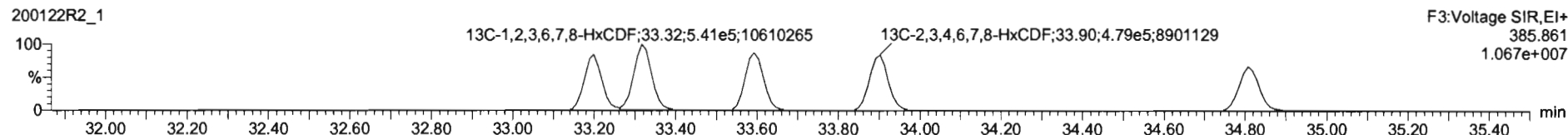
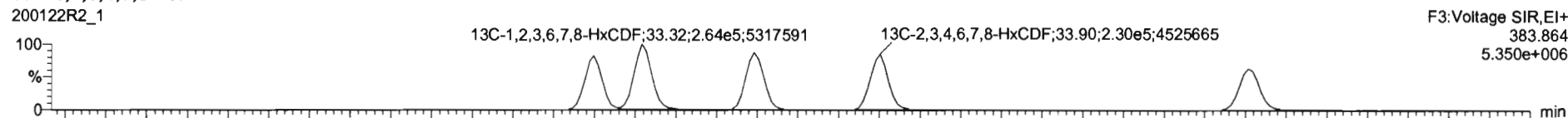
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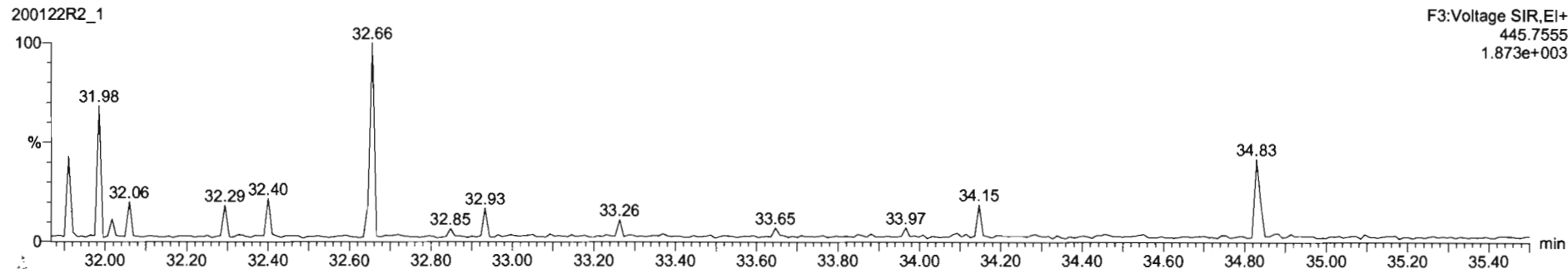
**1,2,3,4,7,8-HxCDF**



**13C-1,2,3,4,7,8-HxCDF**



**DPE3**

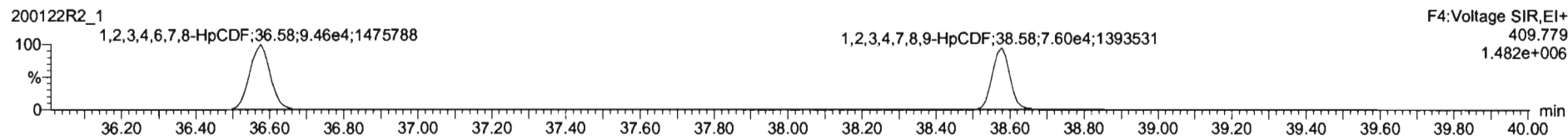
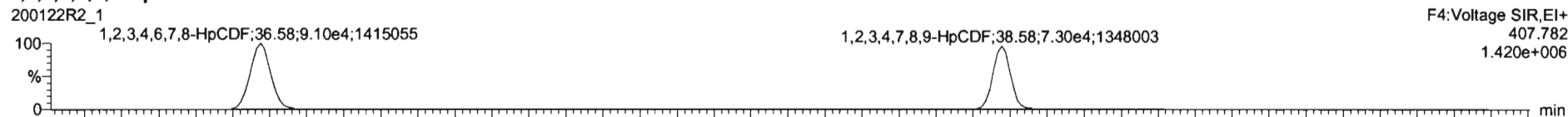


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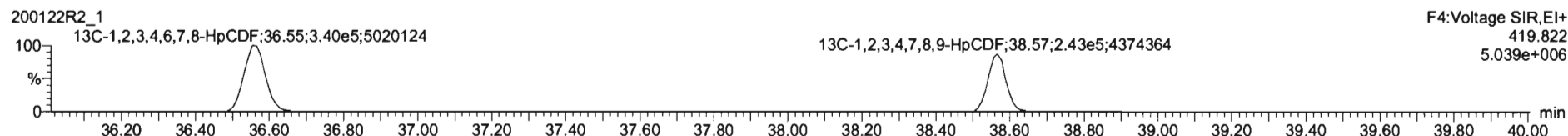
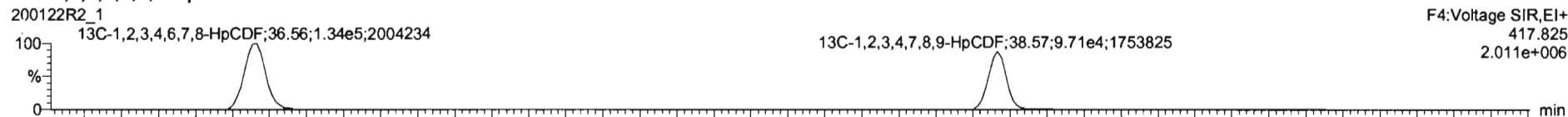
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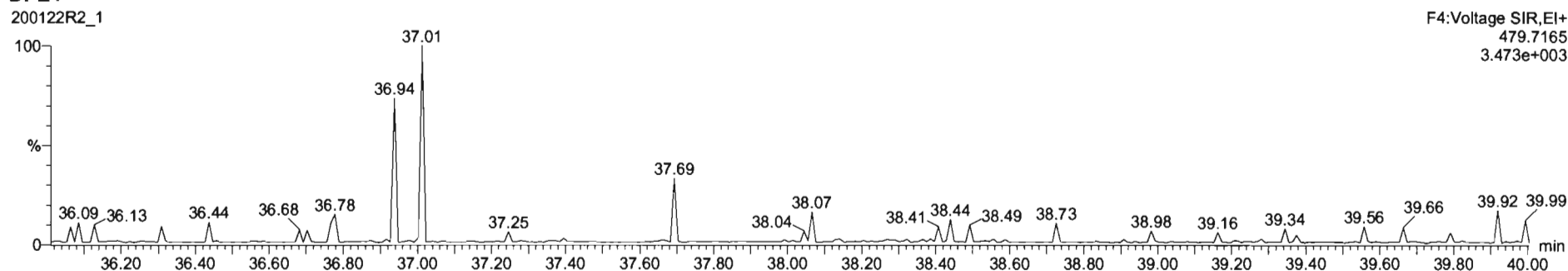
**1,2,3,4,6,7,8-HpCDF**



**<sup>13</sup>C-1,2,3,4,6,7,8-HpCDF**



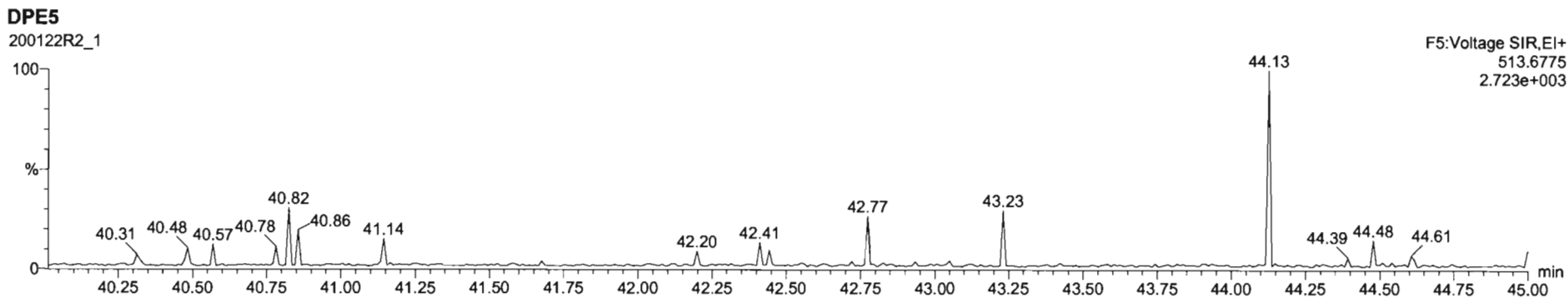
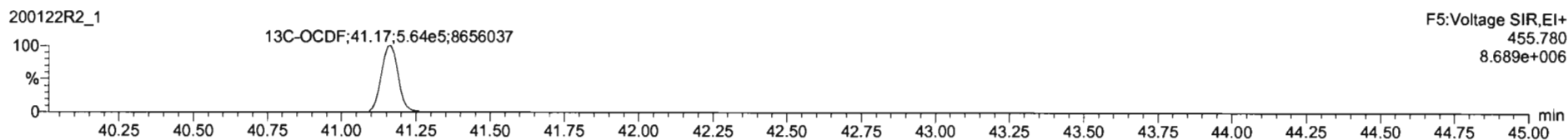
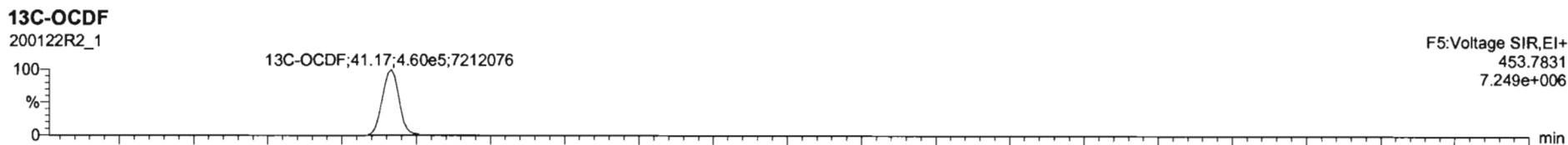
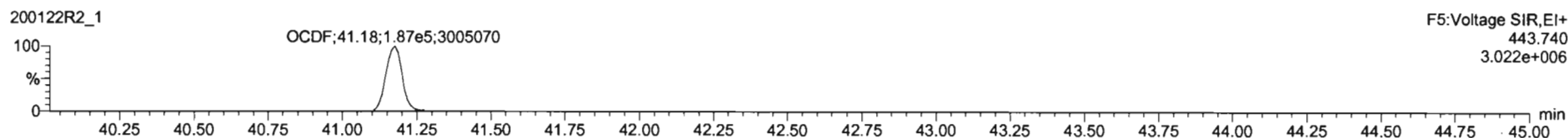
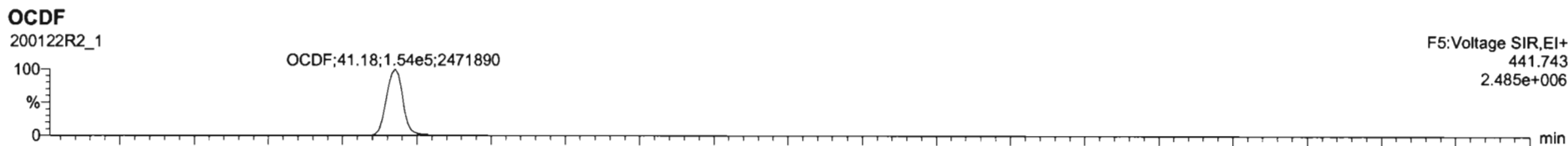
**DPE4**



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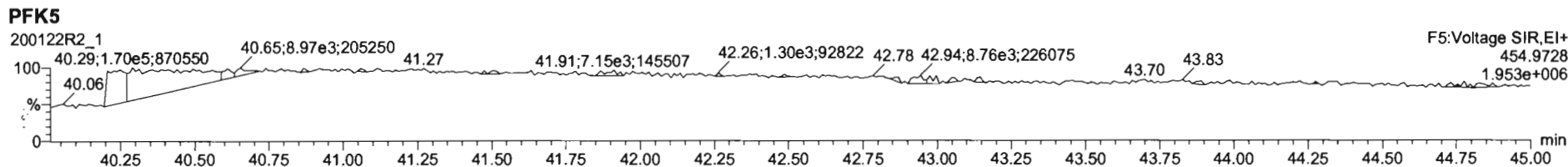
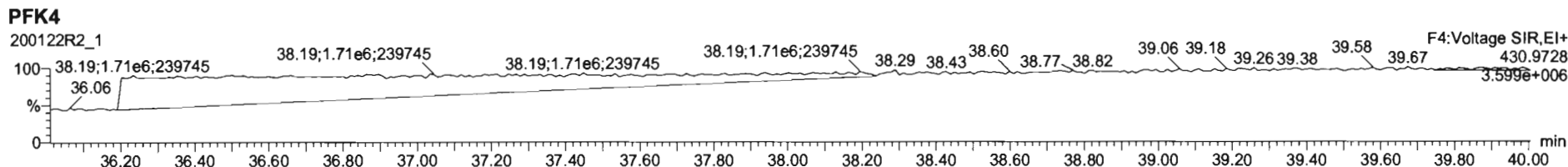
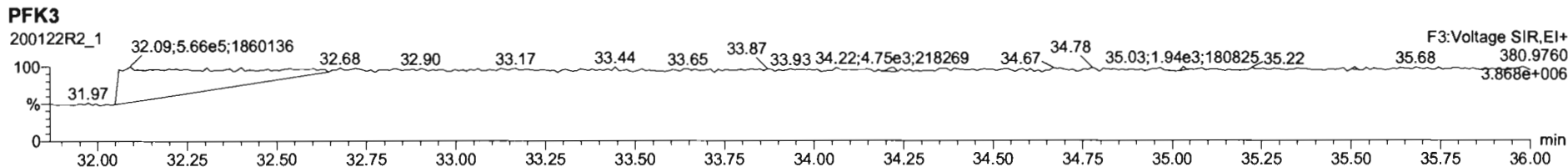
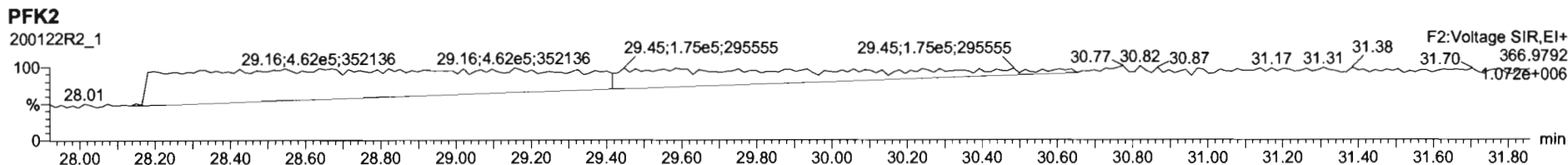
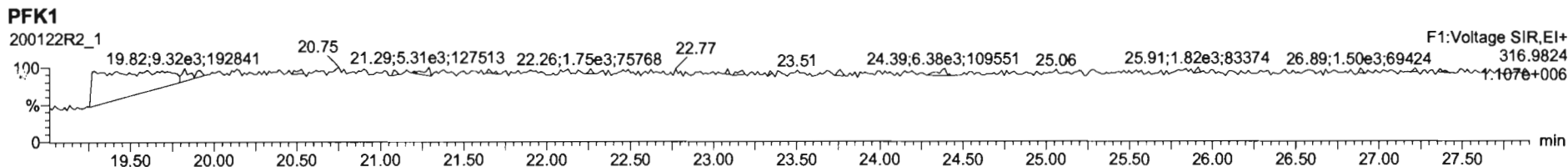
Name: 200122R2\_1, Date: 22-Jan-2020, Time: 16:06:05, ID: ST200121R2\_1 1613 CS3 191604, Description: 1613 CS3 191604



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 16:52:28 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 17:23:44 Pacific Standard Time

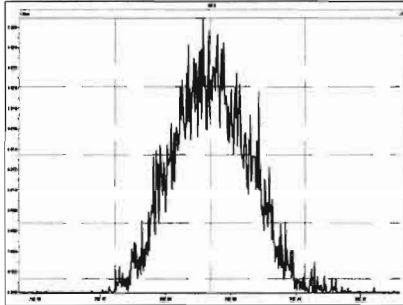
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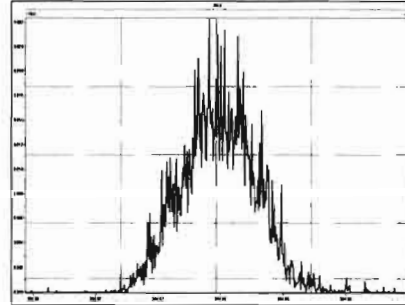


Printed: Thursday, January 23, 2020 04:06:34 Pacific Standard Time

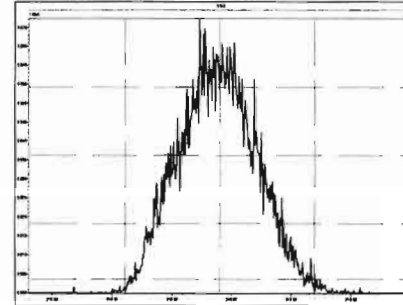
M 292.9824 R 12032



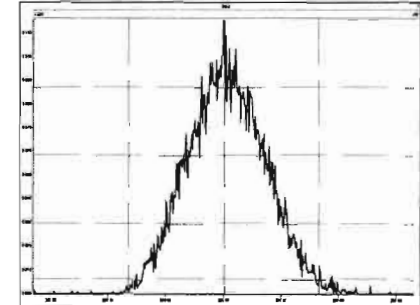
M 304.9824 R 12453



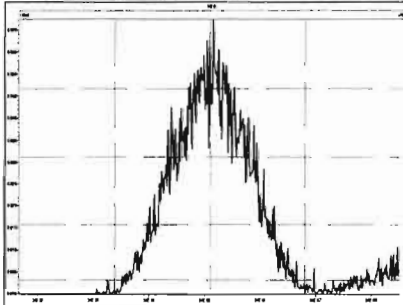
M 318.9792 R 11286



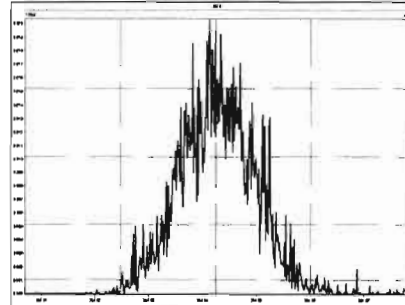
M 330.9792 R 11043



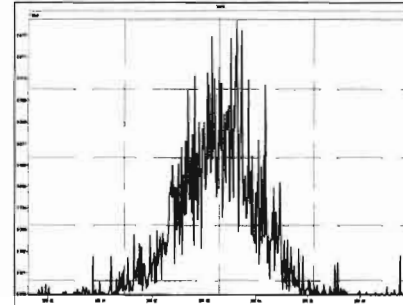
M 342.9792 R 11467



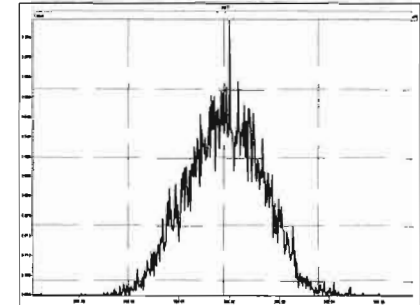
M 354.9792 R 12437



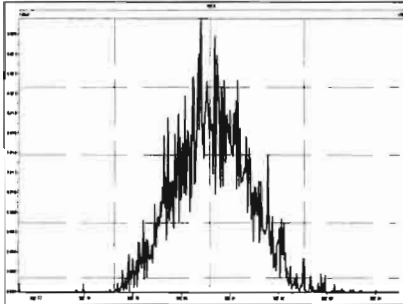
M 366.9792 R 13782



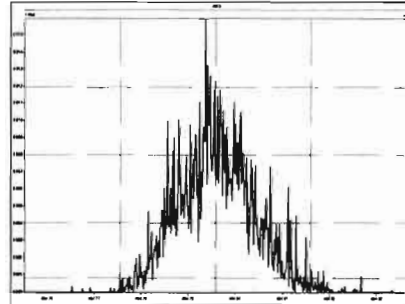
M 380.9760 R 12285



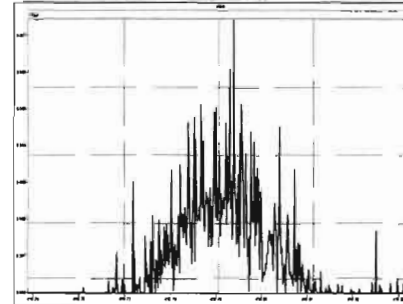
M 392.9760 R 11962



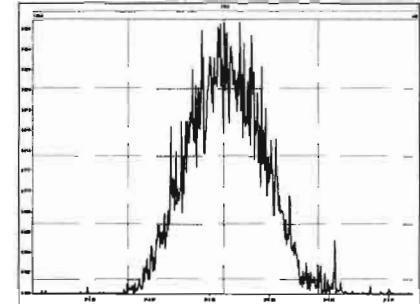
M 404.9760 R 13522



M 416.9760 R 20690

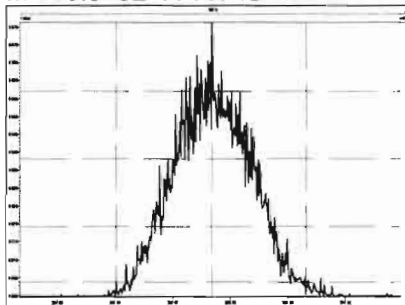


M 318.9792 R 12135

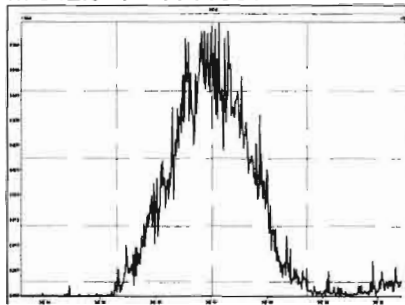


Printed: Thursday, January 23, 2020 04:06:34 Pacific Standard Time

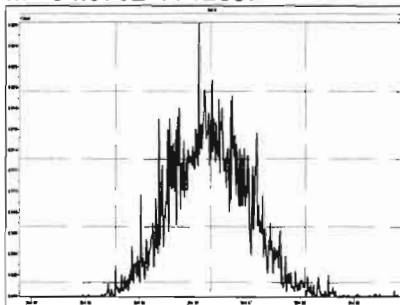
M 330.9792 R 11743



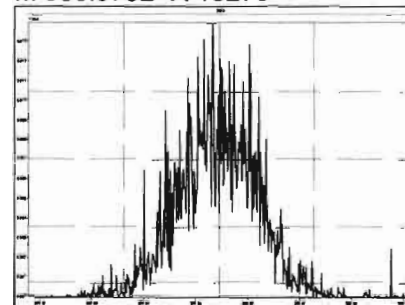
M 342.9792 R 11831



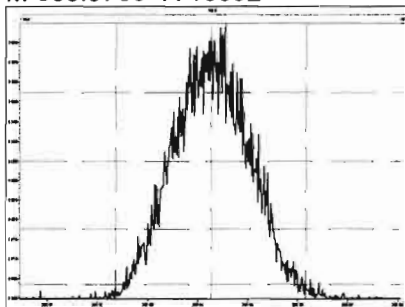
M 354.9792 R 12687



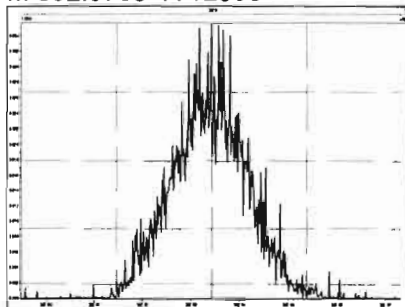
M 366.9792 R 13273



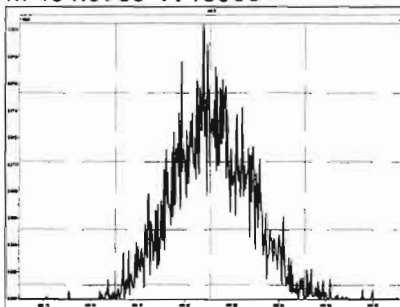
M 380.9760 R 10992



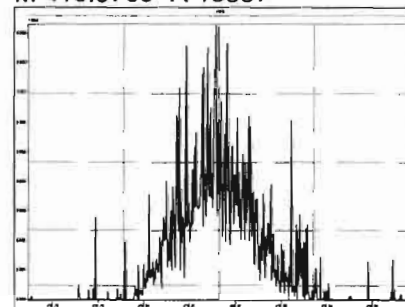
M 392.9760 R 12005



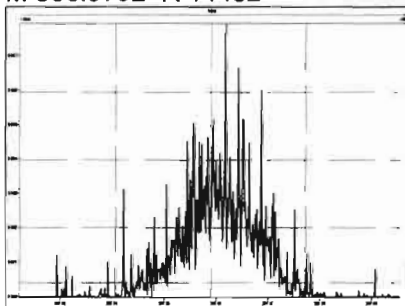
M 404.9760 R 13066



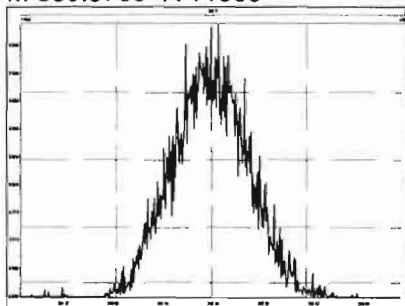
M 416.9760 R 13337



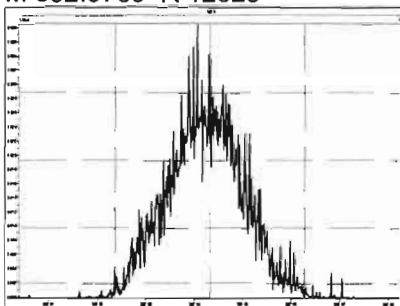
M 366.9792 R 14452



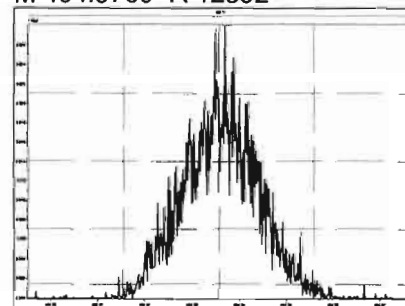
M 380.9760 R 11869



M 392.9760 R 12628

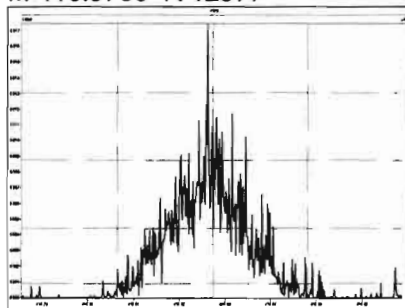


M 404.9760 R 12392

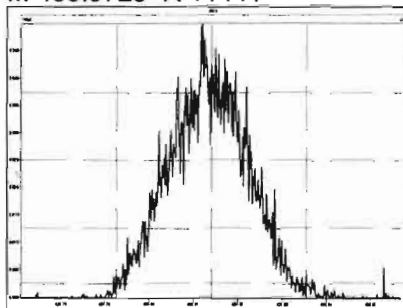


Printed: Thursday, January 23, 2020 04:06:34 Pacific Standard Time

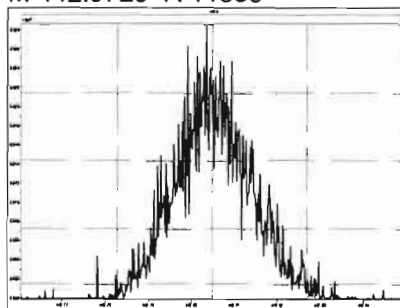
M 416.9760 R 12877



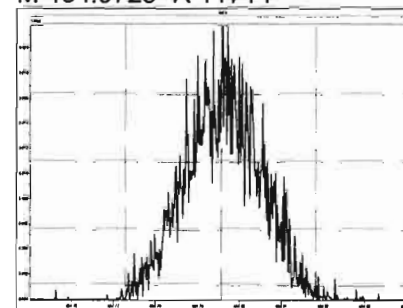
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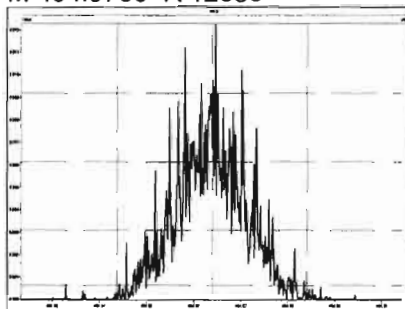
M 442.9728 R 11358



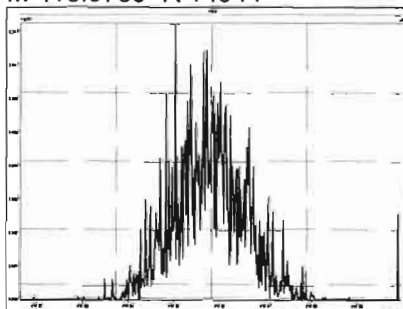
M 454.9728 R 11714



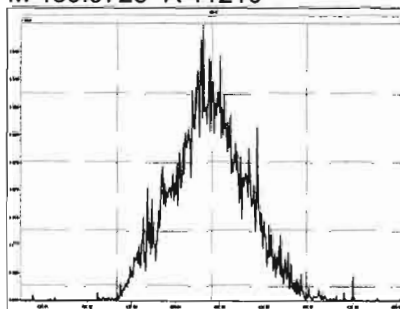
M 404.9760 R 12636



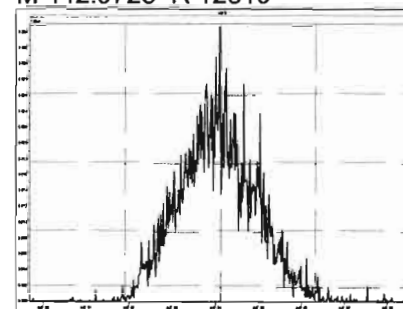
M 416.9760 R 14044



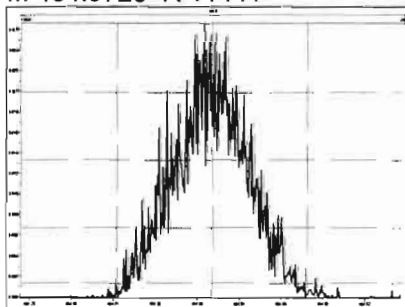
M 430.9728 R 11210



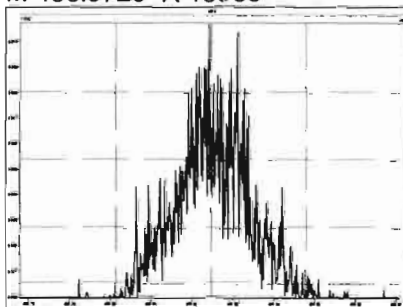
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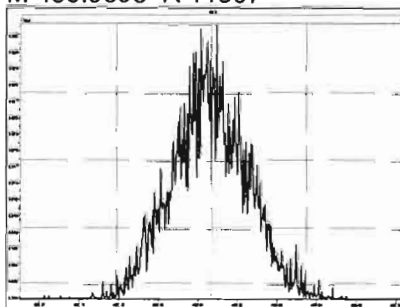
M 454.9728 R 11441



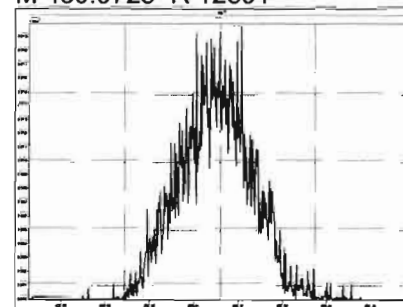
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M 480.9696 R 11507

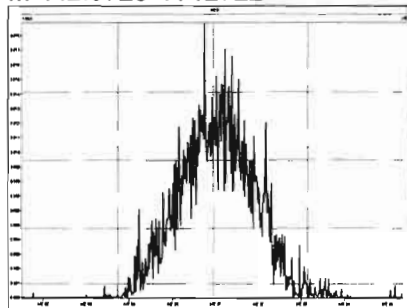


M 430.9728 R 12891

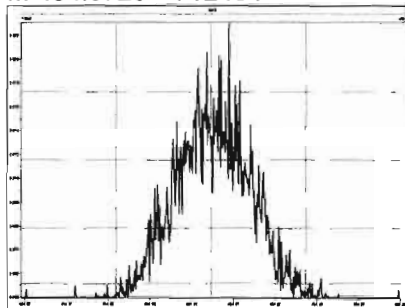


Printed: Thursday, January 23, 2020 04:06:34 Pacific Standard Time

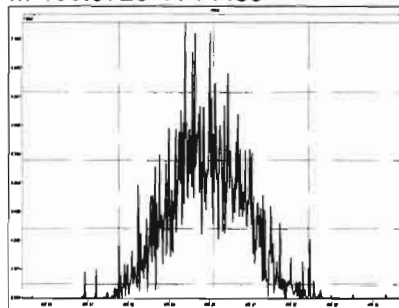
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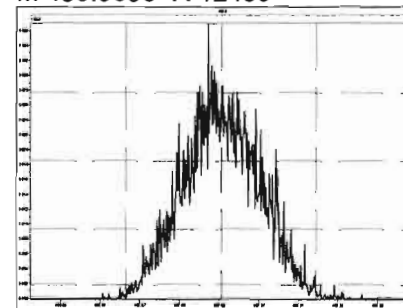
M 454.9728 R 12434



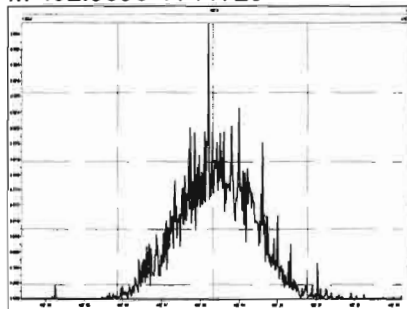
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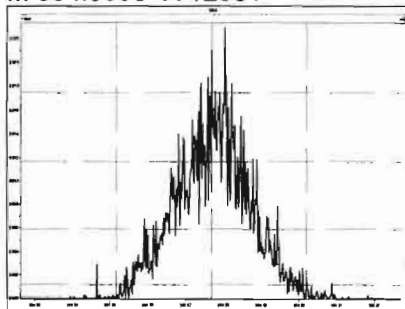
M 480.9696 R 12489



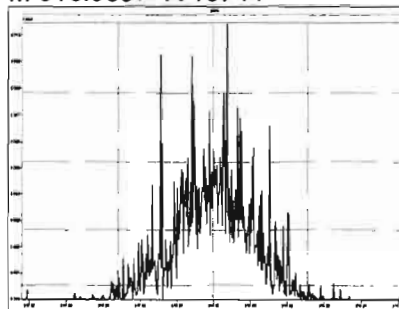
M 492.9696 R 11720



M 504.9696 R 12081



M 516.9697 R 16744



# HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

**Beg. Calibration ID:** ST20020914-1

**Reviewed By:** CT 02/10/2020  
*Initials & Date*

**End Calibration ID:** NA

	<u>Beg.</u>	<u>End</u>
<b>Ion abundance within QC limits?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
<b>Concentrations within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>TCDD/TCDF Valleys &lt;25%</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>First and last eluters present?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Retention Times within criteria?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Verification Std. named correctly?</b> (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Forms signed and dated?</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Correct ICAL referenced?</b>	<u>GRB</u>	<input type="checkbox"/>
<b><u>Run Log:</u></b>		
- Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/> ↓
- Samples within 12 hour clock?	<u>(Y)</u>	N
- Bottle position verified?	<u>GRB</u>	<input type="checkbox"/>

**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

	<u>Beg.</u>	<u>End</u>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (A)
	<input type="checkbox"/>	<input type="checkbox"/> NA
	<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
	<input type="checkbox"/>	<input type="checkbox"/> NA

**Comments:**

(A) END RES CHECK HAD PFK DRAIN RESULTING IN SOME MASSES <10K RESOLUTION.

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-1.qld

Last Altered: Monday, February 10, 2020 09:34:37 Pacific Standard Time

Printed: Monday, February 10, 2020 09:35:11 Pacific Standard Time

*GRB 02/10/2020*

*C: 02/10/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

#	Name	Resp	IS Resp	RA	n/y	RRF	Pred.RT	RT	RT Flag	Pred.RRT	RRT	Conc.	%Rec	STD out
1	1 2,3,7,8-TCDD	1.51e5	1.61e6	0.79	NO	0.988	25.72	25.70	NO	1.001	1.001	9.4943	94.9	NO
2	2 1,2,3,7,8-PeCDD	5.51e5	1.22e6	0.64	NO	0.972	30.72	30.71	NO	1.001	1.000	46.325	92.7	NO
3	3 1,2,3,4,7,8-HxCDD	5.96e5	1.08e6	1.24	NO	1.07	34.06	34.06	NO	1.000	1.000	51.533	103	NO
4	4 1,2,3,6,7,8-HxCDD	5.97e5	1.35e6	1.24	NO	0.921	34.16	34.17	NO	1.000	1.000	48.129	96.3	NO
5	5 1,2,3,7,8,9-HxCDD	5.51e5	1.21e6	1.22	NO	0.918	34.47	34.44	NO	1.001	1.000	49.567	99.1	NO
6	6 1,2,3,4,6,7,8-HpCDD	4.50e5	9.71e5	1.04	NO	0.923	37.96	37.96	NO	1.000	1.000	50.226	100	NO
7	7 OCDD	8.75e5	1.82e6	0.89	NO	0.975	40.97	40.99	NO	1.000	1.000	98.747	98.7	NO
8	8 2,3,7,8-TCDF	1.85e5	2.22e6	0.77	NO	0.802	24.80	24.79	NO	1.001	1.001	10.391	104	NO
9	9 1,2,3,7,8-PeCDF	8.12e5	1.77e6	1.53	NO	0.907	29.42	29.42	NO	1.001	1.001	50.662	101	NO
10	10 2,3,4,7,8-PeCDF	8.37e5	1.75e6	1.56	NO	0.952	30.41	30.39	NO	1.001	1.000	50.132	100	NO
11	11 1,2,3,4,7,8-HxCDF	6.09e5	1.28e6	1.20	NO	0.862	33.19	33.20	NO	1.000	1.000	55.094	110	NO
12	12 1,2,3,6,7,8-HxCDF	6.61e5	1.38e6	1.22	NO	0.841	33.33	33.33	NO	1.000	1.000	56.883	114	NO
13	13 2,3,4,6,7,8-HxCDF	7.33e5	1.44e6	1.22	NO	0.898	33.91	33.89	NO	1.001	1.000	56.735	113	NO
14	14 1,2,3,7,8,9-HxCDF	5.69e5	1.20e6	1.20	NO	0.858	34.78	34.79	NO	1.000	1.000	55.086	110	NO
15	15 1,2,3,4,6,7,8-HpCDF	5.06e5	1.09e6	1.00	NO	0.851	36.55	36.52	NO	1.001	1.000	54.345	109	NO
16	16 1,2,3,4,7,8,9-HpCDF	4.40e5	7.86e5	1.00	NO	0.980	38.56	38.57	NO	1.000	1.000	57.068	114	NO
17	17 OCDF	9.36e5	2.12e6	0.88	NO	0.806	41.15	41.17	NO	1.000	1.000	109.72	110	NO
18	18 13C-2,3,7,8-TCDD	1.61e6	1.36e6	0.78	NO	1.20	25.69	25.69	NO	1.026	1.026	98.298	98.3	NO
19	19 13C-1,2,3,7,8-PeCDD	1.22e6	1.36e6	0.63	NO	0.967	30.43	30.70	NO	1.215	1.226	92.911	92.9	NO
20	20 13C-1,2,3,4,7,8-HxCDD	1.08e6	1.27e6	1.29	NO	0.874	34.05	34.05	NO	1.014	1.014	97.095	97.1	NO
21	21 13C-1,2,3,6,7,8-HxCDD	1.35e6	1.27e6	1.27	NO	1.05	34.15	34.16	NO	1.017	1.017	101.22	101	NO
22	22 13C-1,2,3,7,8,9-HxCDD	1.21e6	1.27e6	1.23	NO	0.974	34.46	34.44	NO	1.026	1.025	97.544	97.5	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	9.71e5	1.27e6	1.05	NO	0.747	38.02	37.95	NO	1.132	1.130	102.07	102	NO
24	24 13C-OCDD	1.82e6	1.27e6	0.89	NO	0.707	40.90	40.97	NO	1.218	1.220	202.25	101	NO
25	25 13C-2,3,7,8-TCDF	2.22e6	2.07e6	0.78	NO	1.07	24.87	24.78	NO	0.993	0.989	100.76	101	NO
26	26 13C-1,2,3,7,8-PeCDF	1.77e6	2.07e6	1.55	NO	1.00	29.20	29.40	NO	1.166	1.174	85.300	85.3	NO
27	27 13C-2,3,4,7,8-PeCDF	1.75e6	2.07e6	1.59	NO	0.962	30.16	30.38	NO	1.204	1.213	88.244	88.2	NO
28	28 13C-1,2,3,4,7,8-HxCDF	1.28e6	1.27e6	0.51	NO	1.05	33.18	33.19	NO	0.988	0.988	95.972	96.0	NO
29	29 13C-1,2,3,6,7,8-HxCDF	1.38e6	1.27e6	0.51	NO	1.19	33.28	33.32	NO	0.991	0.992	91.238	91.2	NO
30	30 13C-2,3,4,6,7,8-HxCDF	1.44e6	1.27e6	0.51	NO	1.07	33.89	33.88	NO	1.009	1.009	105.94	106	NO
31	31 13C-1,2,3,7,8,9-HxCDF	1.20e6	1.27e6	0.52	NO	0.922	34.79	34.78	NO	1.036	1.035	102.49	102	NO

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-1.qld

Last Altered: Monday, February 10, 2020 09:34:37 Pacific Standard Time

Printed: Monday, February 10, 2020 09:35:11 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

#	Name	Resp	IS Resp	RA	n/y	RRF	Pred.RT	RT	RT Flag	Pred.RRT	RRT	Conc.	%Rec	STD out
32	13C-1,2,3,4,6,7,8-HpCDF	1.09e6	1.27e6	0.45	NO	0.767	36.54	36.51	NO	1.088	1.087	112.10	112	NO
33	13C-1,2,3,4,7,8,9-HpCDF	7.86e5	1.27e6	0.44	NO	0.552	38.55	38.56	NO	1.148	1.148	111.84	112	NO
34	13C-OCDF	2.12e6	1.27e6	0.88	NO	0.789	41.14	41.15	NO	1.225	1.225	210.71	105	NO
35	37Cl-2,3,7,8-TCDD	1.58e5	1.36e6			1.18	25.72	25.70	NO	1.027	1.026	9.8732	98.7	NO
36	13C-1,2,3,4-TCDD	1.36e6	1.36e6	0.79	NO	1.00	25.08	25.05	NO	1.000	1.000	100.00	100	NO
37	13C-1,2,3,4-TCDF	2.07e6	2.07e6	0.79	NO	1.00	23.42	23.34	NO	1.000	1.000	100.00	100	NO
38	13C-1,2,3,4,6,9-HxCDF	1.27e6	1.27e6	0.52	NO	1.00	33.52	33.58	NO	1.000	1.000	100.00	100	YES <i>ok</i>
39	Total Tetra-Dioxins		1.61e6			0.988	24.62		NO	0.000		84.488		NO
40	Total Penta-Dioxins		1.22e6			0.972	29.96		NO	0.000		201.96		NO
41	Total Hexa-Dioxins		0.00e0			0.921	33.63		NO	0.000		236.53		NO
42	Total Hepta-Dioxins		9.71e5			0.923	37.64		NO	0.000		131.52		NO
43	Total Tetra-Furans		2.22e6			0.802	23.61		NO	0.000		50.599		NO
44	1st Func. Penta-Furans		0.00e0			0.907	27.09		NO	0.000		90.747		NO
45	Total Penta-Furans		0.00e0			0.907	29.27		NO	0.000		175.40		NO
46	Total Hexa-Furans		0.00e0			0.898	33.56		NO	0.000		311.51		NO
47	Total Hepta-Furans		0.00e0			0.851	37.83		NO	0.000		111.66		NO

Dataset: U:\VG12.PRO\Results\200209R1\200209R1-CPSM.qld

Last Altered: Monday, February 10, 2020 09:16:09 Pacific Standard Time

Printed: Monday, February 10, 2020 09:17:14 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26

Calibration: U:\VG12.PRO\CurveDB\ldb5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

#	Name	RT
1	1 1,3,6,8-TCDD (First)	21.68
2	2 1,2,8,9-TCDD (Last)	26.68
3	3 1,2,4,7,9-PeCDD (First)	28.49
4	4 1,2,3,8,9-PeCDD (Last)	31.09
5	5 1,2,4,6,7,9-HxCDD (First)	32.59
6	6 1,2,3,7,8,9-HxCDD (Last)	34.45
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.92
8	8 1,2,3,4,6,7,8-HpCDD (Last)	37.96
9	9 1,3,6,8-TCDF (First)	19.63
10	10 1,2,8,9-TCDF (Last)	26.81
11	11 1,3,4,6,8-PeCDF (First)	26.80
12	12 1,2,3,8,9-PeCDF (Last)	31.32
13	13 1,2,3,4,6,8-HxCDF (First)	32.04
14	14 1,2,3,7,8,9-HxCDF (Last)	34.79
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.52
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.57



Dataset: Untitled

Last Altered: Monday, February 10, 2020 09:41:17 Pacific Standard Time

Printed: Monday, February 10, 2020 09:41:33 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

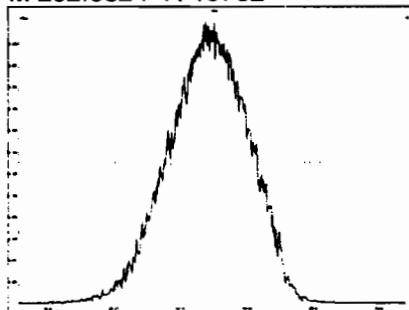
Compound name: 2,3,7,8-TCDD

	Name	ID	Acq.Date	Acq.Time
1	200209R1_1	ST200209R1_1 1613 CS3 19L2305	09-Feb-20	12:06:17
2	200209R1_2	B0B0017-BS1 OPR 10	09-Feb-20	12:55:24
3	200209R1_3	B0A0228-BS1 OPR 10	09-Feb-20	13:41:39
4	200209R1_4	SOLVENT BLANK	09-Feb-20	14:28:55
5	200209R1_5	B0B0017-BLK1 Method Blank 10	09-Feb-20	15:16:07
6	200209R1_6	B0A0228-BLK1 Method Blank 10	09-Feb-20	16:03:19
7	200209R1_7	1904159-13RE1 PDI-023SC-A-04-05-191009 ...	09-Feb-20	16:50:33
8	200209R1_8	1903826-07 PDI-083SC-B-04-06-191022 16.87	09-Feb-20	17:37:43
9	200209R1_9	1903826-09 PDI-099SC-B-00-02-191022 16.73	09-Feb-20	18:24:56
10	200209R1_10	1903826-10 PDI-099SC-B-02-04-191022 18.07	09-Feb-20	19:12:06
11	200209R1_11	1903826-11 PDI-099SC-B-04-06-191022 18.19	09-Feb-20	19:59:17
12	200209R1_12	1903826-12 PDI-099SC-B-06-08-191022 17.63	09-Feb-20	20:46:28
13	200209R1_13	1903738-01 PDI-059SC-B-00-02-191016 18.8	09-Feb-20	21:33:39
14	200209R1_14	1903826-05 PDI-083SC-B-00-02-191022 18.22	09-Feb-20	22:20:50
15	200209R1_15	1903826-05@5X PDI-083SC-B-00-02-191022 ...	09-Feb-20	23:08:03

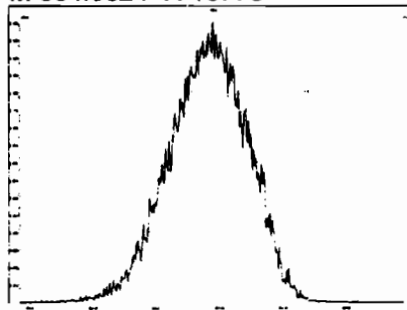
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Sunday, February 09, 2020 12:02:41 Pacific Standard Time

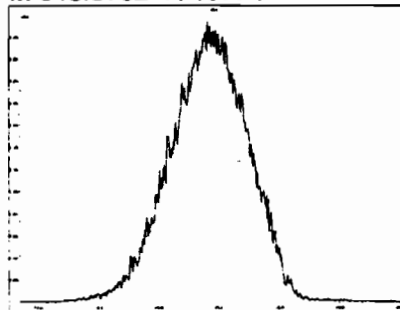
M 292.9824 R 10732



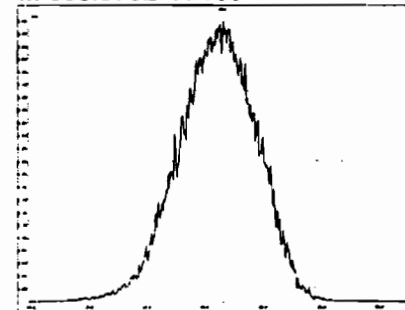
M 304.9824 R 10776



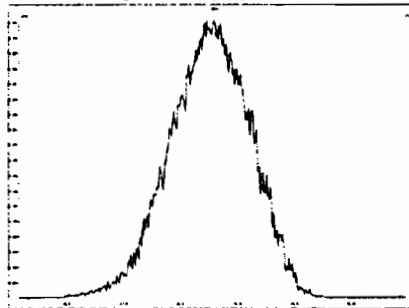
M 318.9792 R 10774



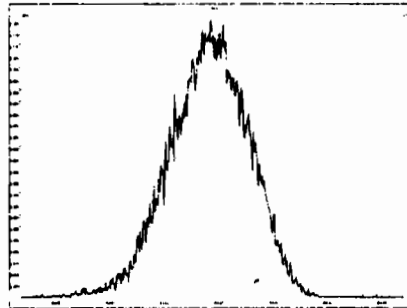
M 330.9792 R 10961



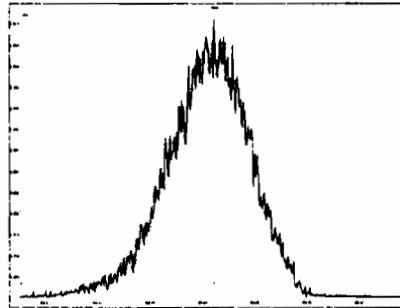
M 342.9792 R 10464



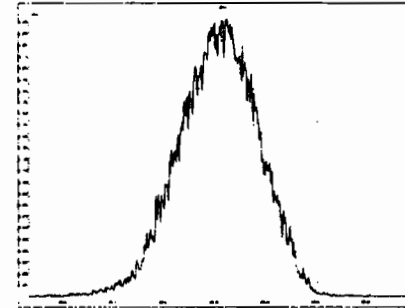
M 354.9792 R 10640



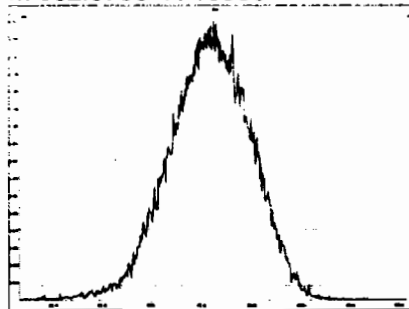
M 366.9792 R 10246



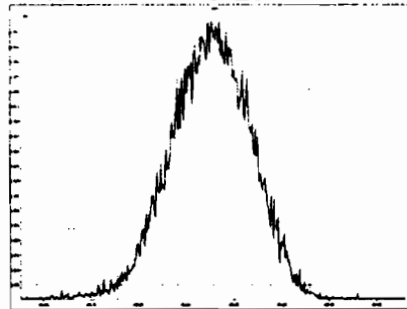
M 380.9760 R 10547



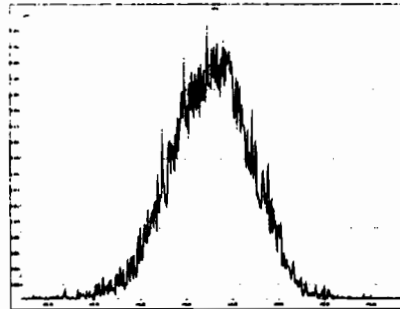
M 392.9760 R 10635



M 404.9760 R 10729



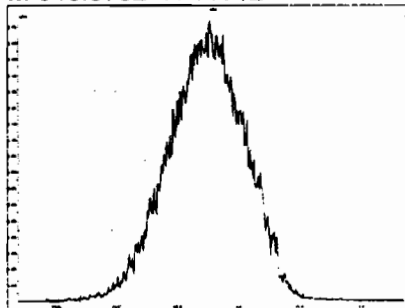
M 416.9760 R 10868



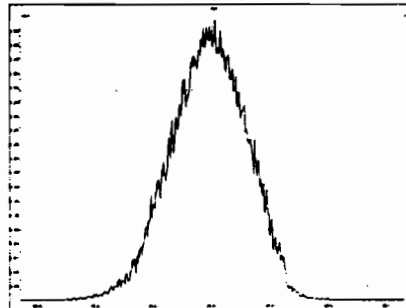
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Sunday, February 09, 2020 12:03:20 Pacific Standard Time

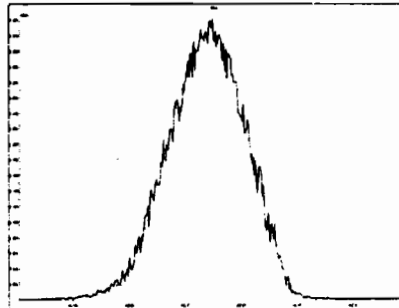
M 318.9792 R 11012



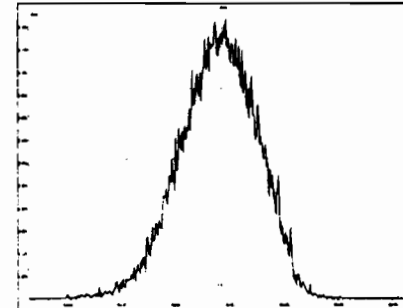
M 330.9792 R 11258



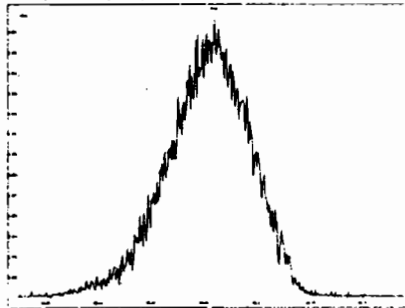
M 342.9792 R 10683



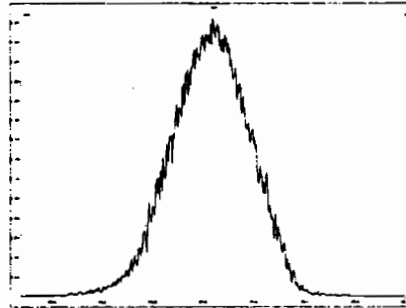
M 354.9792 R 10968



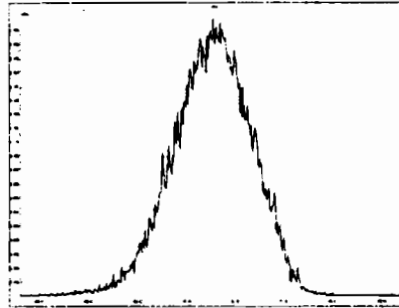
M 366.9792 R 10081



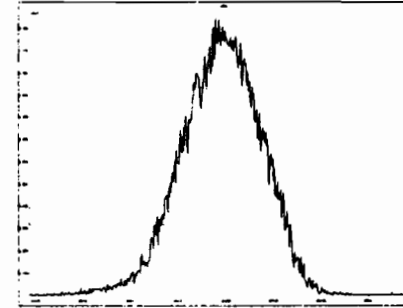
M 380.9760 R 10729



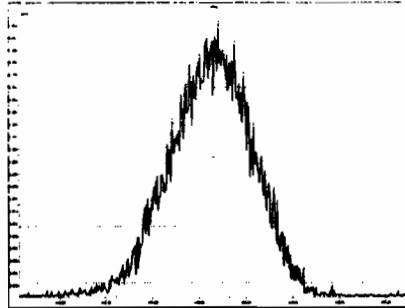
M 392.9760 R 10458



M 404.9760 R 11211



M 416.9760 R 10079



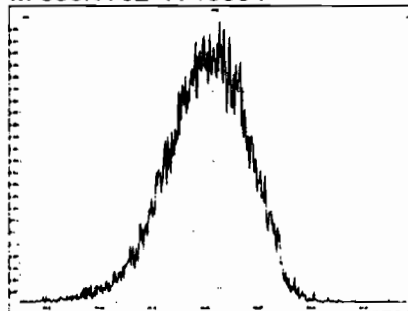
Experiment Calibration Report

MassLynx 4.1 SCN815

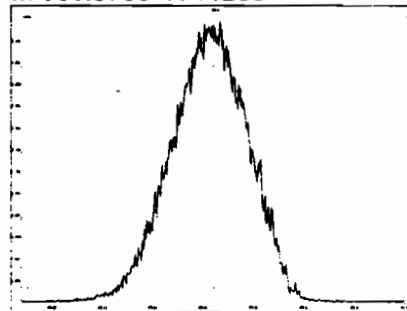
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Sunday, February 09, 2020 12:04:02 Pacific Standard Time

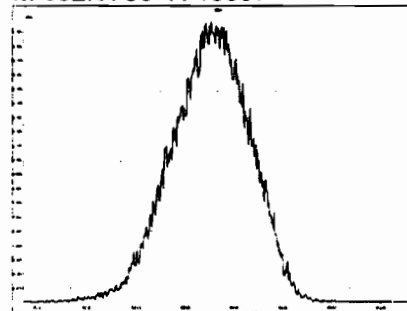
M 366.9792 R 10684



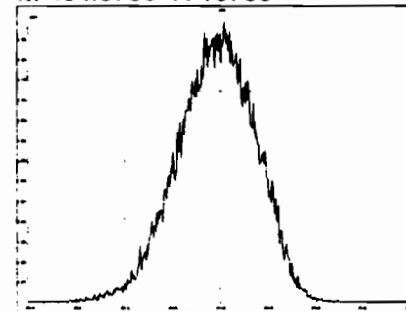
M 380.9760 R 11260



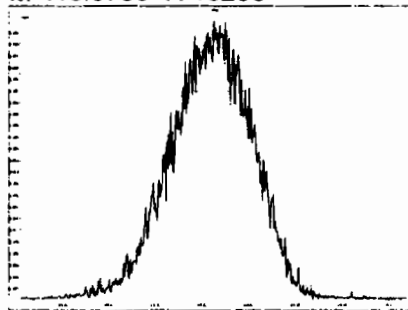
M 392.9760 R 10867



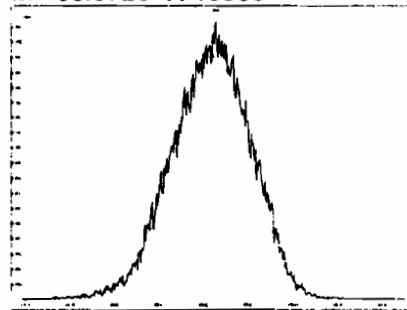
M 404.9760 R 10730



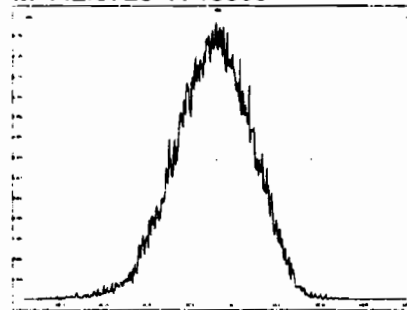
M 416.9760 R 10290



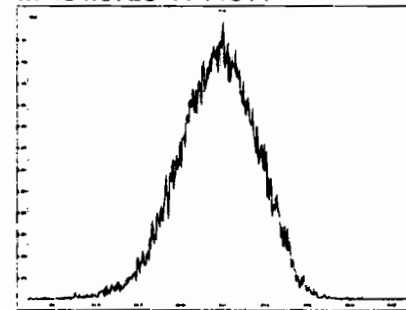
M 430.9728 R 10639



M 442.9728 R 10638



M 454.9728 R 11011



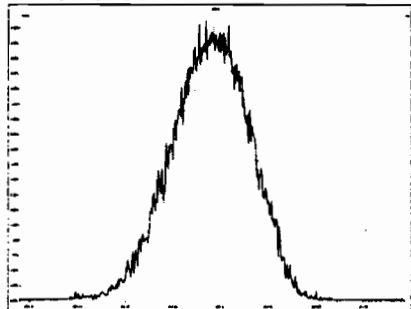
Experiment Calibration Report

MassLynx 4.1 SCN815

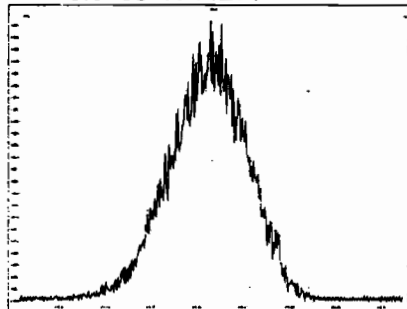
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Sunday, February 09, 2020 12:04:49 Pacific Standard Time

M 404.9760 R 10870



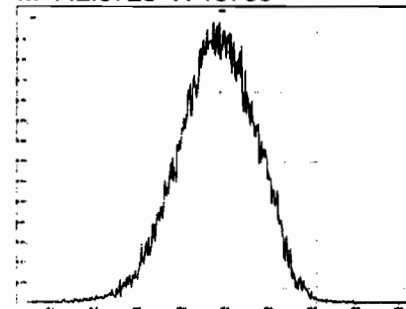
M 416.9760 R 11265



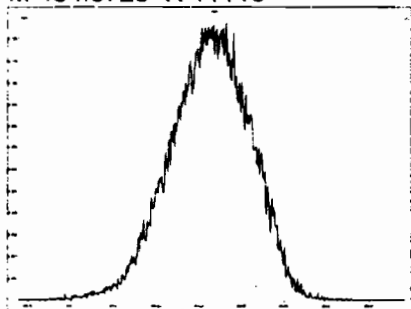
M 430.9728 R 11011



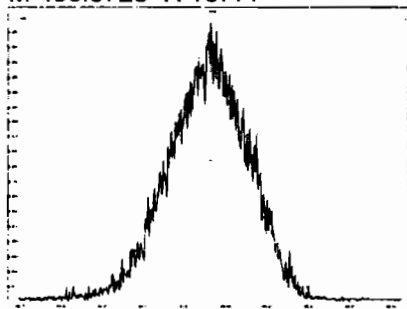
M 442.9728 R 10730



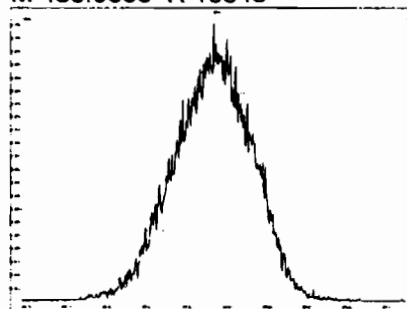
M 454.9728 R 11110



M 466.9728 R 10777



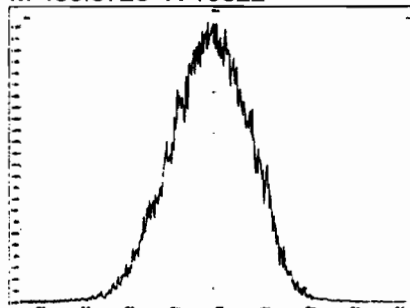
M 480.9696 R 10548



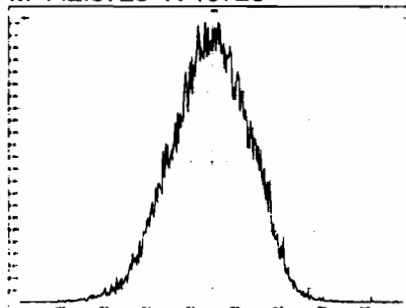
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Sunday, February 09, 2020 12:05:51 Pacific Standard Time

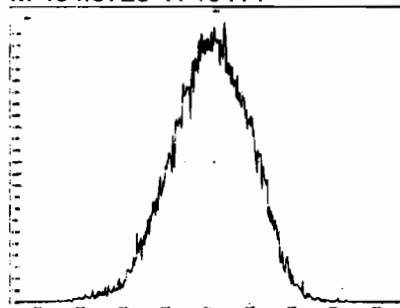
M 430.9728 R 10822



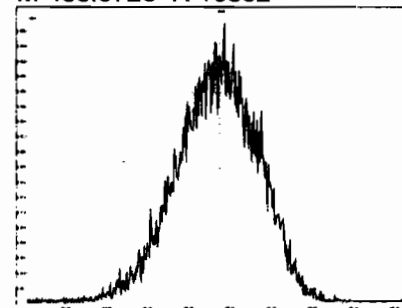
M 442.9728 R 10728



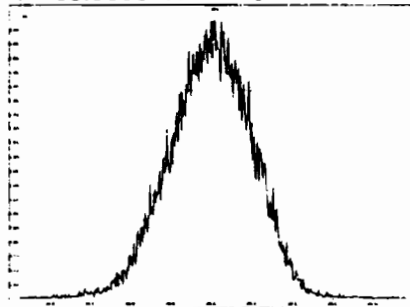
M 454.9728 R 10414



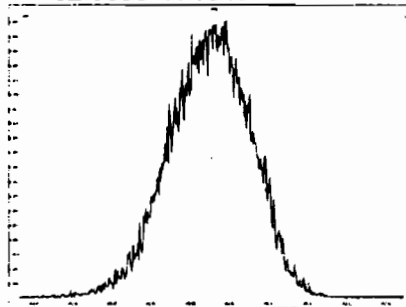
M 466.9728 R 10592



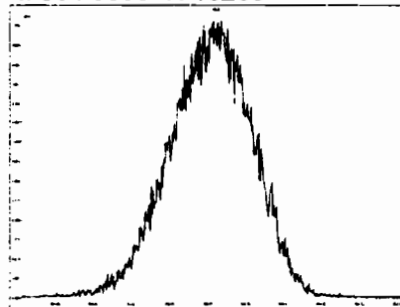
M 480.9696 R 10640



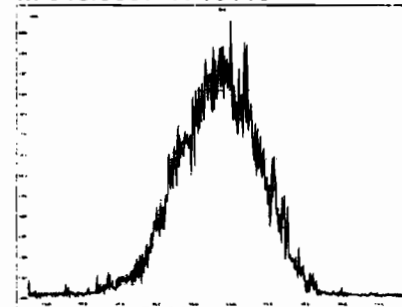
M 492.9696 R 10460



M 504.9696 R 10203



M 516.9697 R 10119



Dataset: U:\VG12.PRO\Results\200209R1\200209R1-CPSM.qld

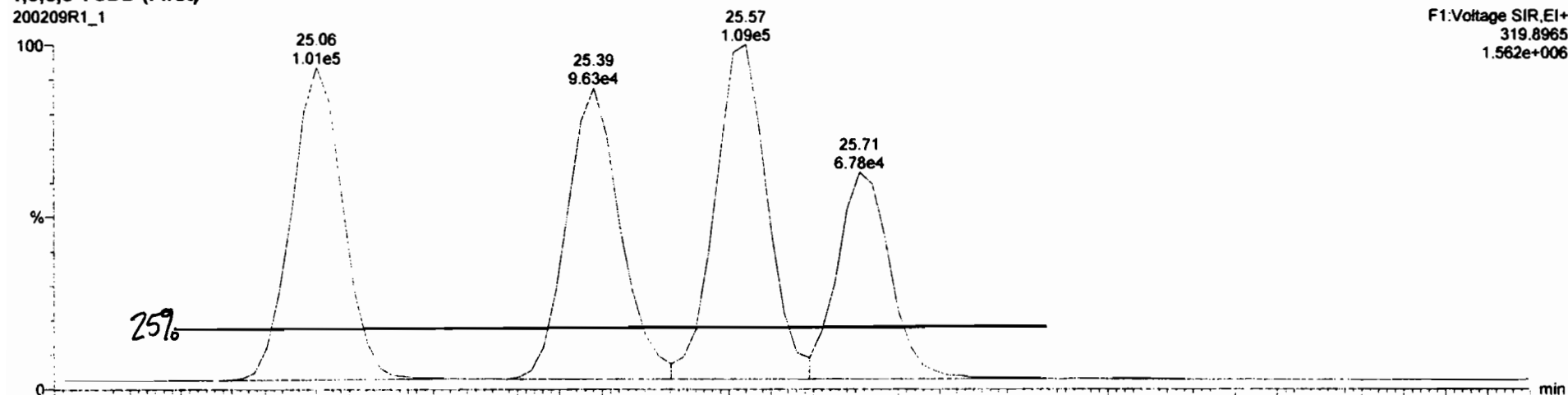
Last Altered: Monday, February 10, 2020 09:16:09 Pacific Standard Time  
Printed: Monday, February 10, 2020 09:17:14 Pacific Standard Time

GRB 02/10/2020

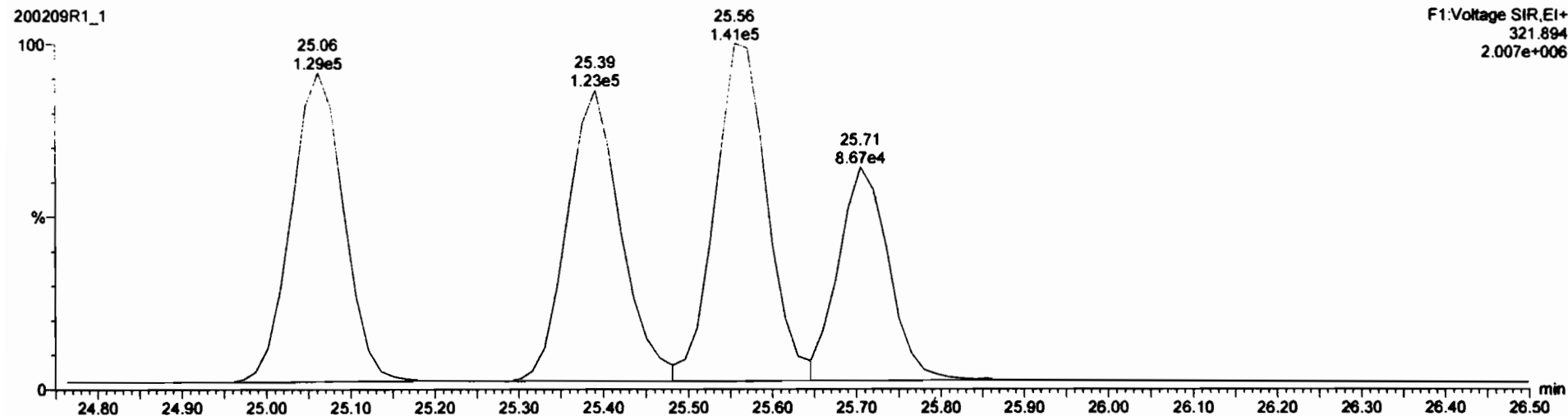
Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26  
Calibration: U:\VG12.PRO\CurveDB\cb5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

1,3,6,8-TCDD (First)  
200209R1\_1



200209R1\_1



Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

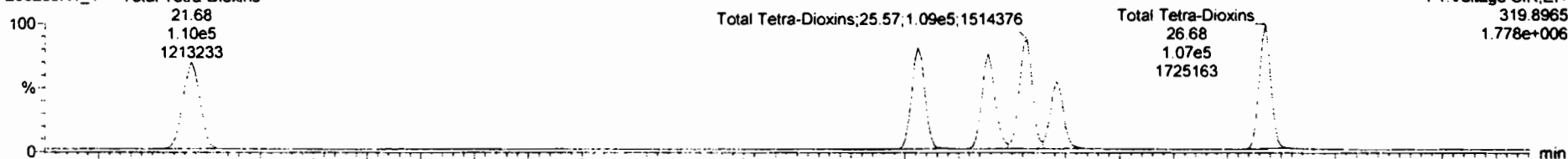
Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

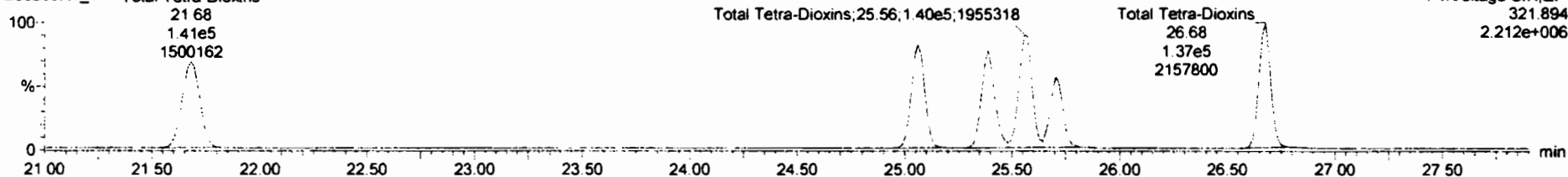
Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

**2,3,7,8-TCDD**

200209R1\_1 Total Tetra-Dioxins

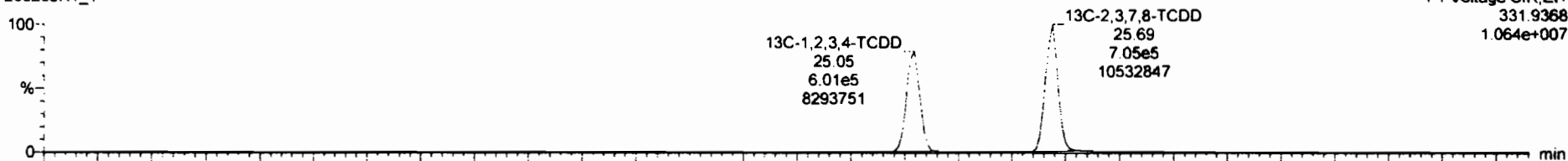


200209R1\_1 Total Tetra-Dioxins

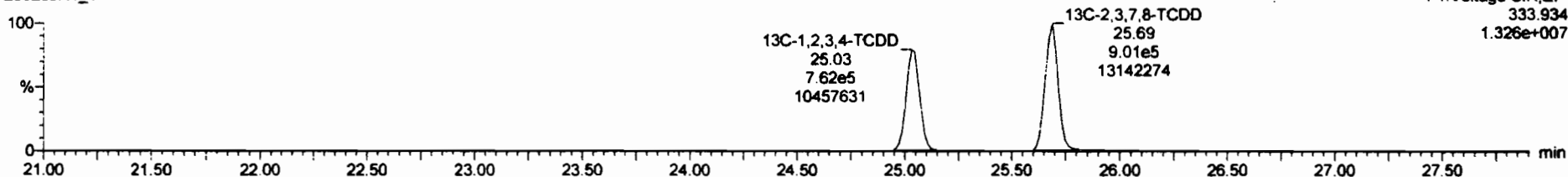


**13C-2,3,7,8-TCDD**

200209R1\_1



200209R1\_1





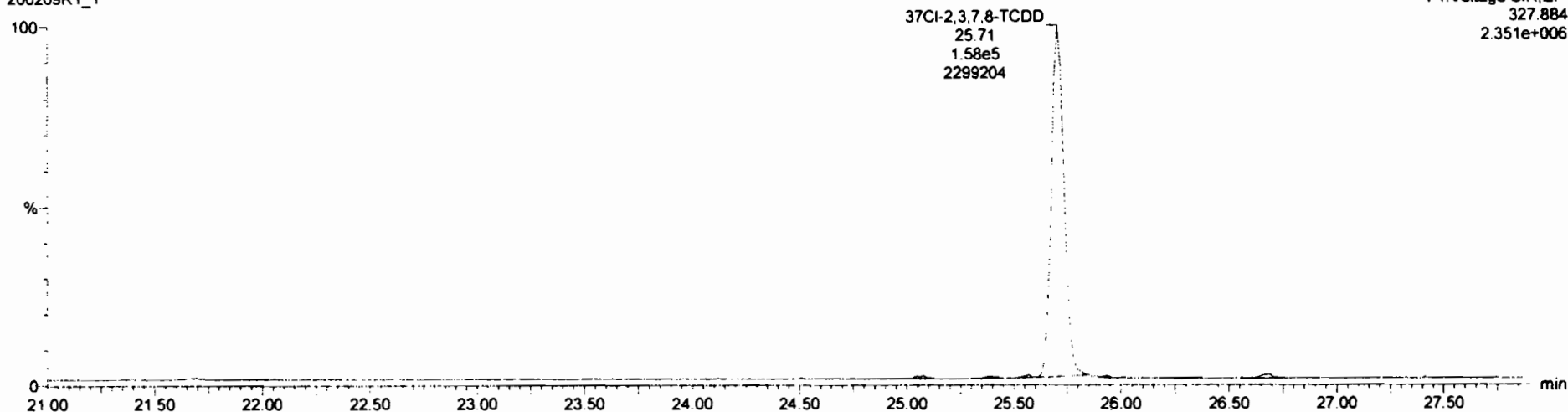
Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

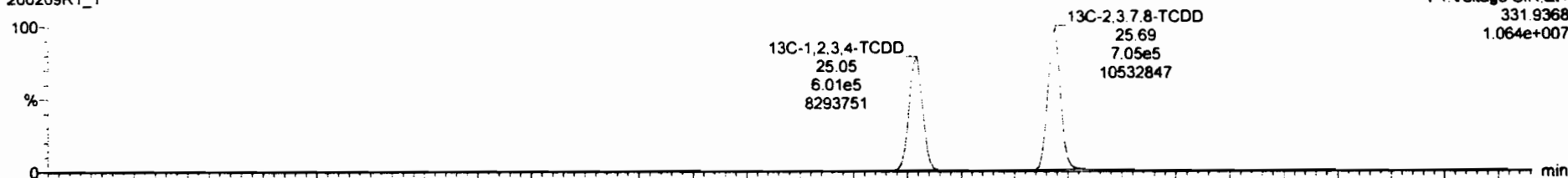
**37Cl-2,3,7,8-TCDD**

200209R1\_1

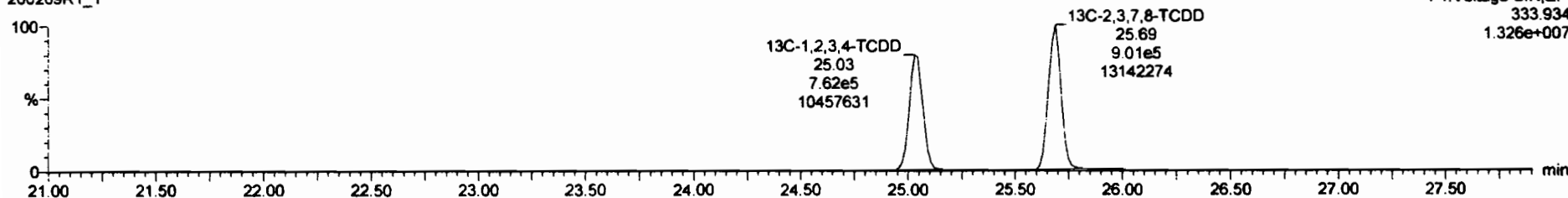


**13C-1,2,3,4-TCDD**

200209R1\_1



200209R1\_1



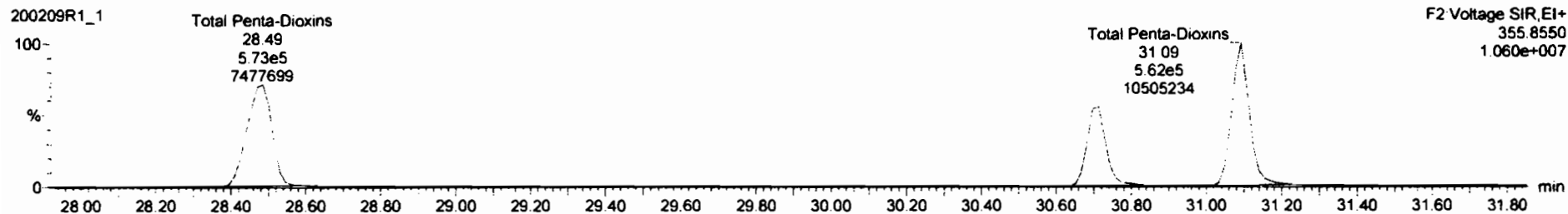
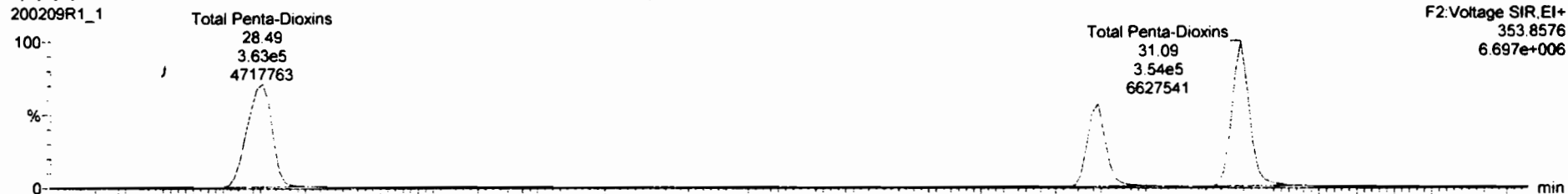
Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

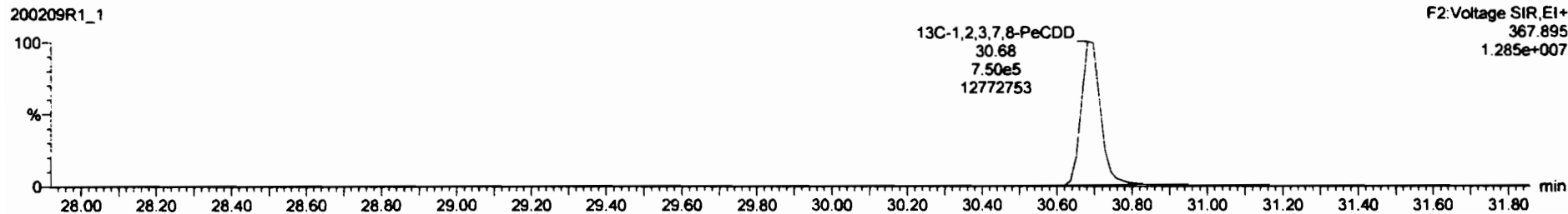
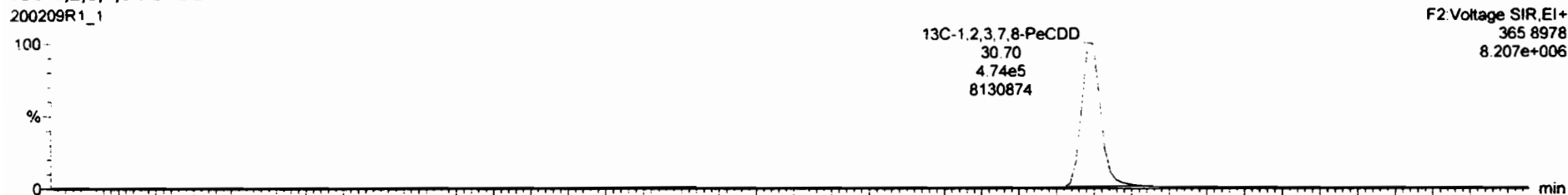
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

**1,2,3,7,8-PeCDD**



**13C-1,2,3,7,8-PeCDD**



Dataset: Untitled

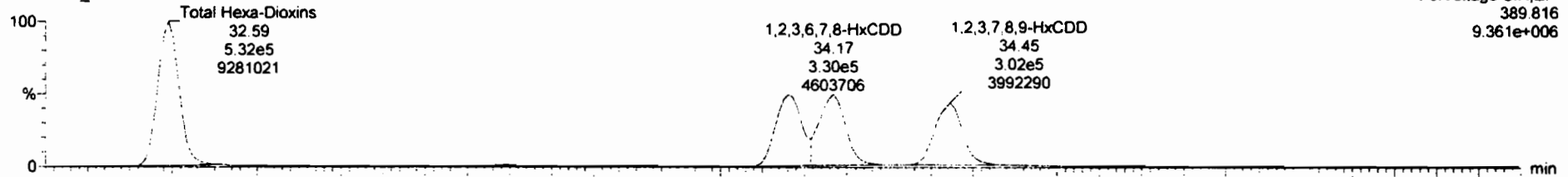
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

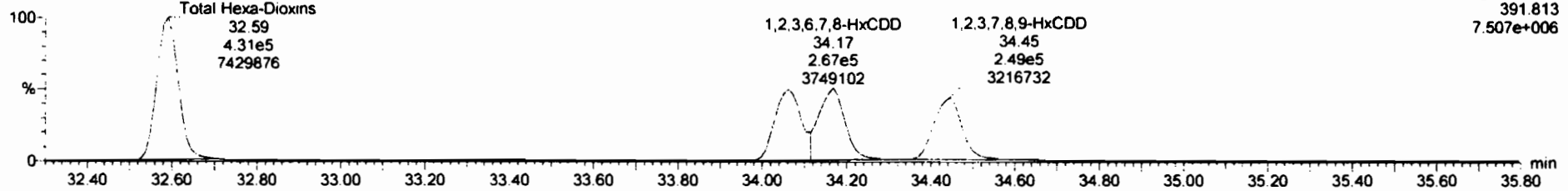
Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

1,2,3,4,7,8-HxCDD

200209R1\_1

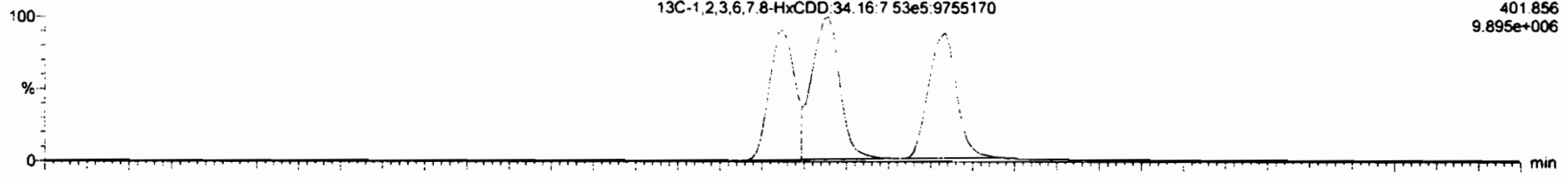


200209R1\_1

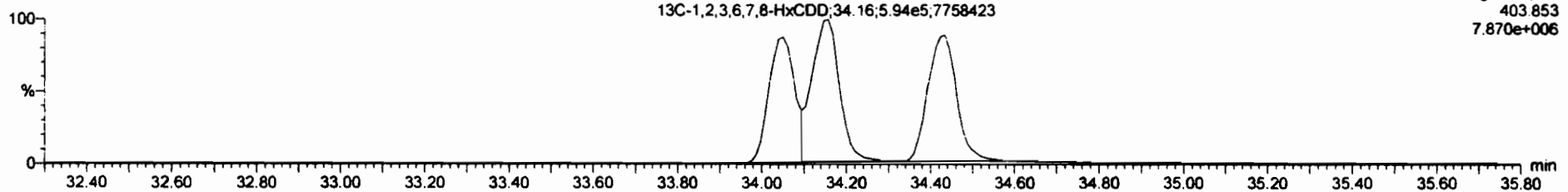


13C-1,2,3,4,7,8-HxCDD

200209R1\_1



200209R1\_1



Dataset: Untitled

Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

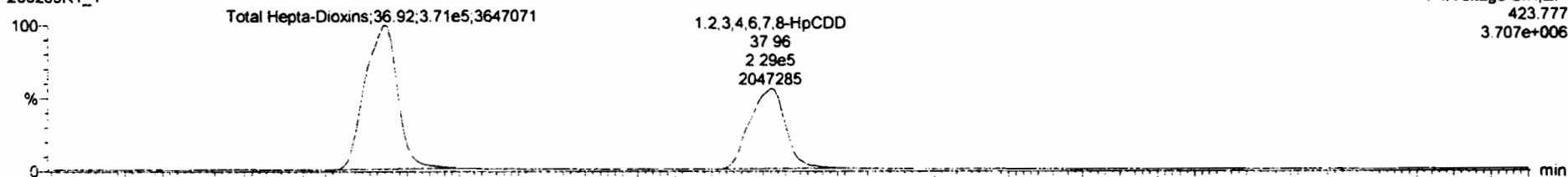
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1,2,3,4,6,7,8-HpCDD

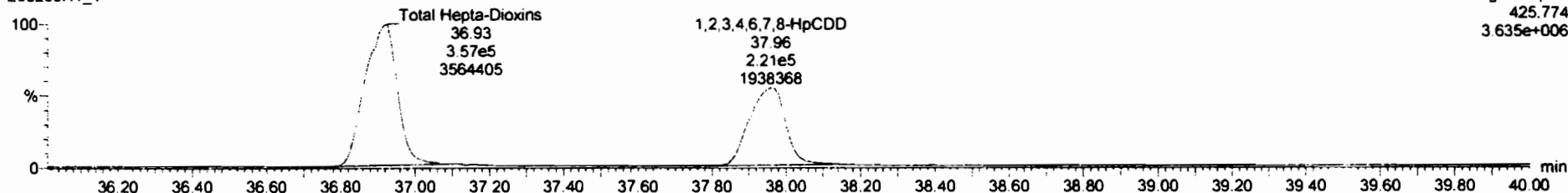
200209R1\_1

F4:Voltage SIR,EI+  
423.777  
3.707e+006



200209R1\_1

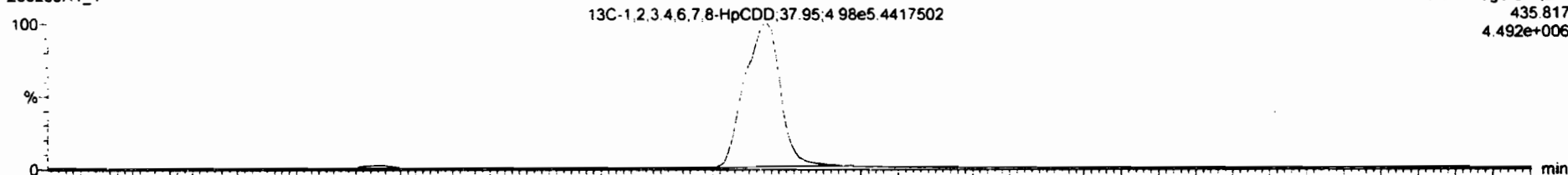
F4:Voltage SIR,EI+  
425.774  
3.635e+006



13C-1,2,3,4,6,7,8-HpCDD

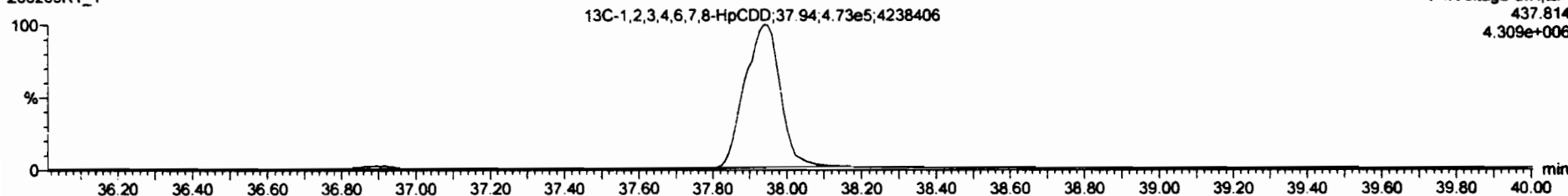
200209R1\_1

F4:Voltage SIR,EI+  
435.817  
4.492e+006



200209R1\_1

F4:Voltage SIR,EI+  
437.814  
4.309e+006



Dataset: Untitled

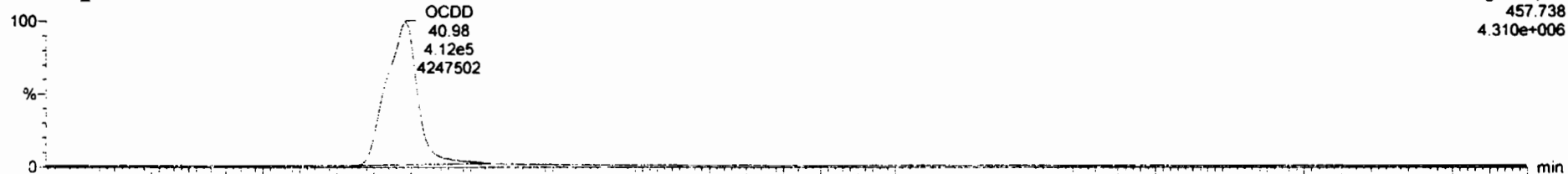
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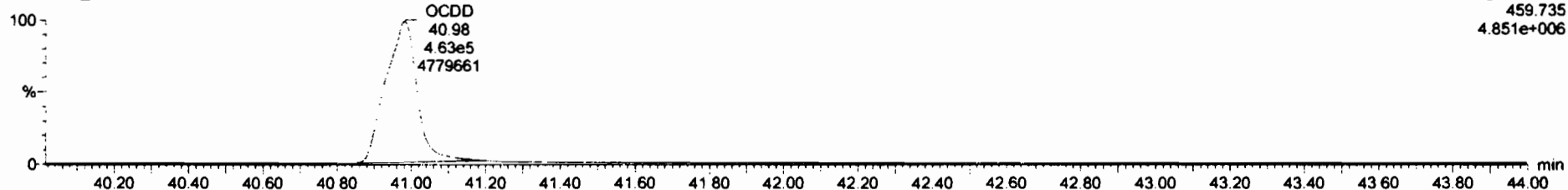
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**OCDD**

200209R1\_1

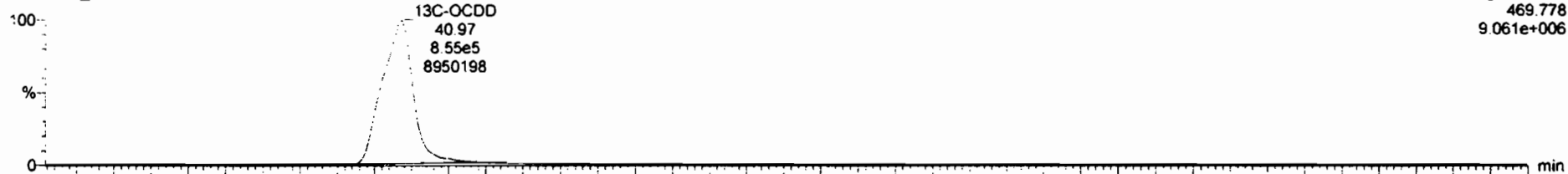


200209R1\_1

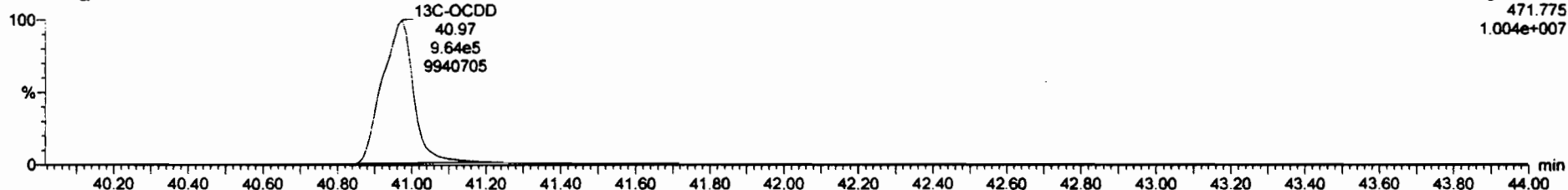


**13C-OCDD**

200209R1\_1



200209R1\_1

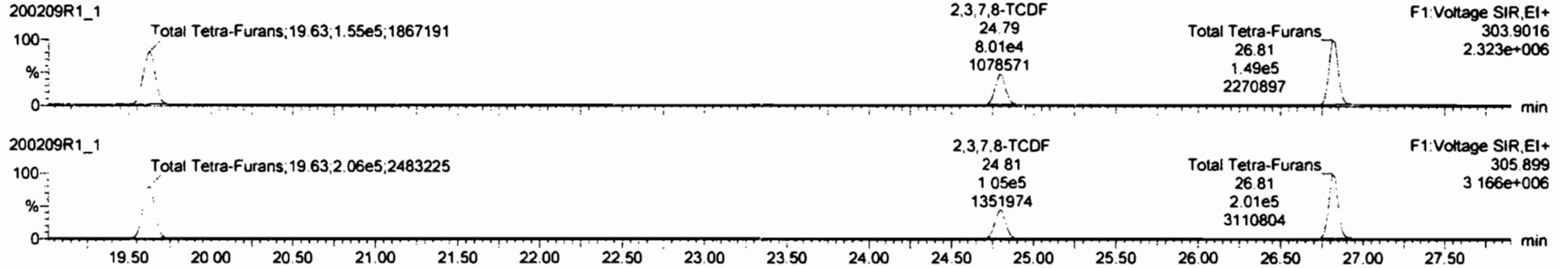


Dataset: Untitled

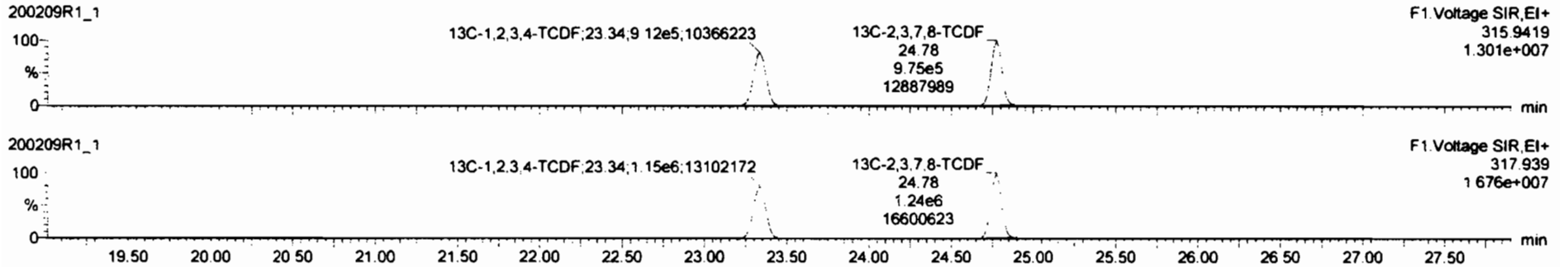
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

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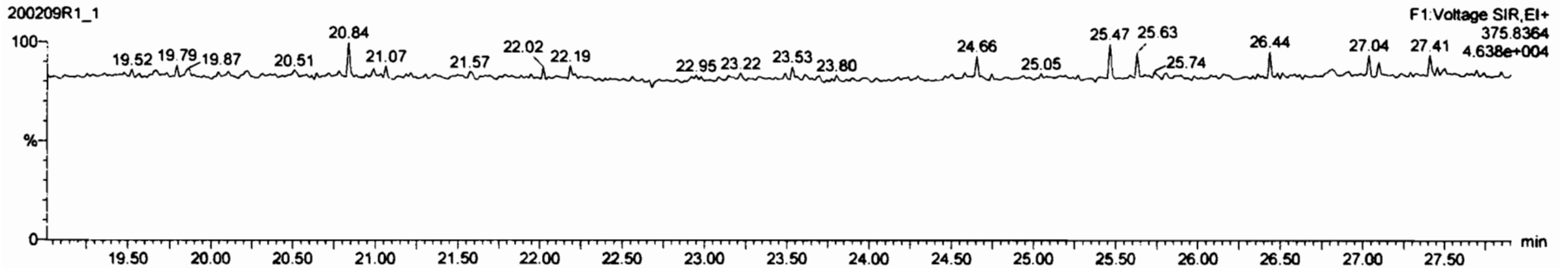
**2,3,7,8-TCDF**



**13C-2,3,7,8-TCDF**



**DPE1**



Dataset: Untitled

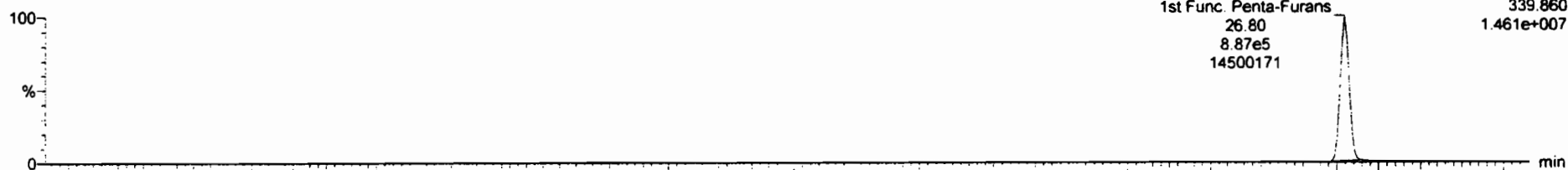
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

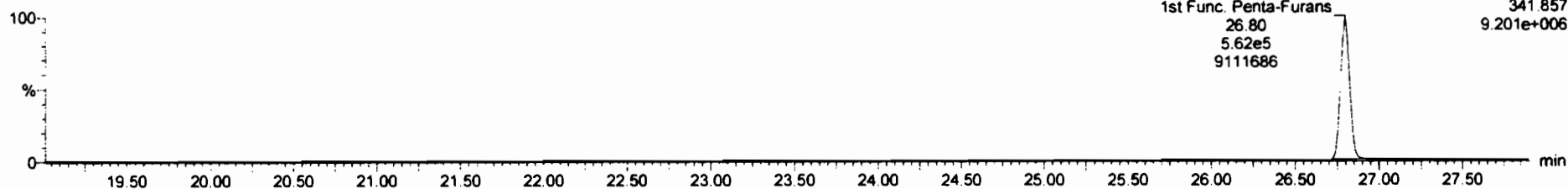
Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

1st Func. Penta-Furans

200209R1\_1

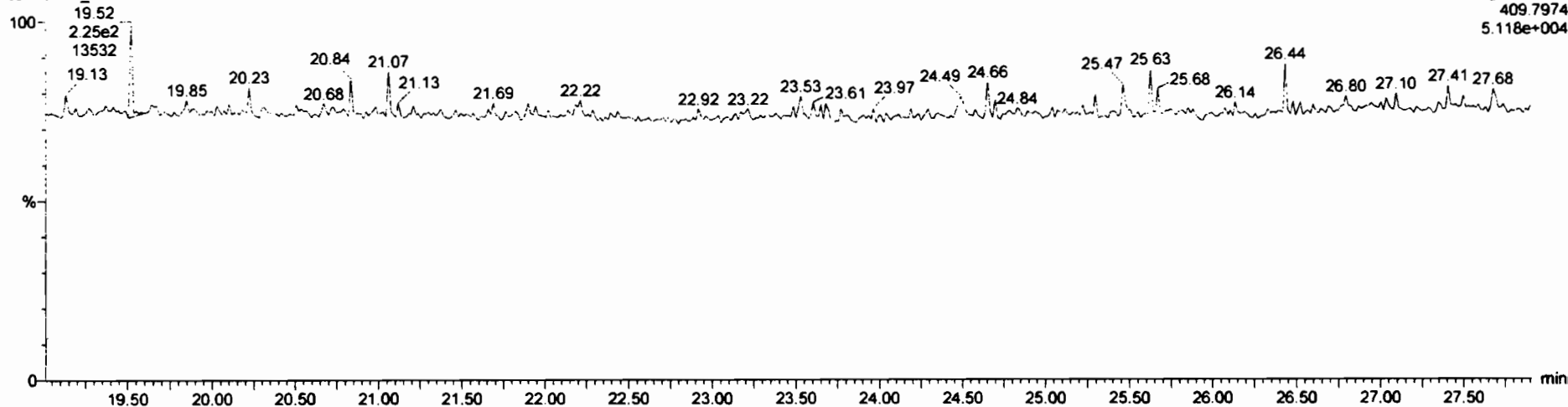


200209R1\_1



DPE6

200209R1\_1

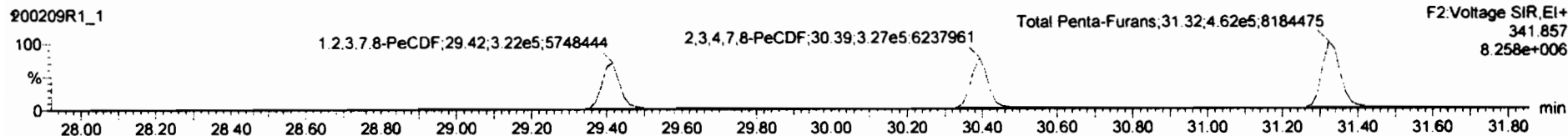
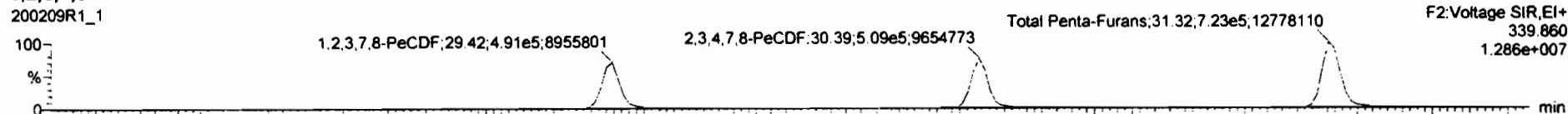


Dataset: Untitled

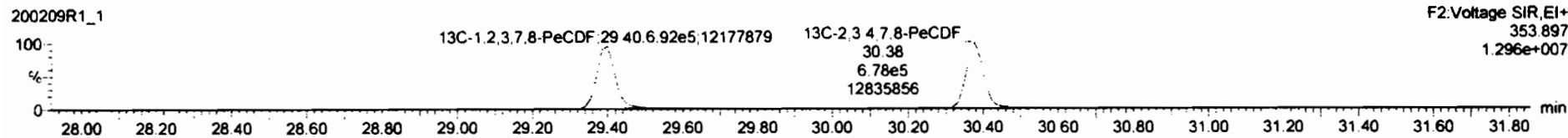
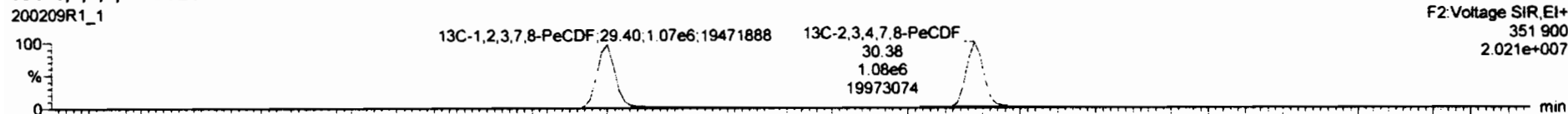
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Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

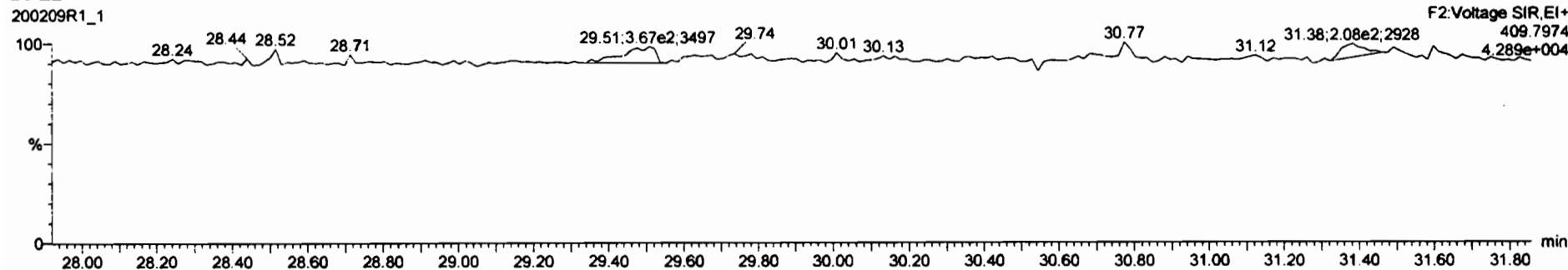
**1,2,3,7,8-PeCDF**



**13C-1,2,3,7,8-PeCDF**

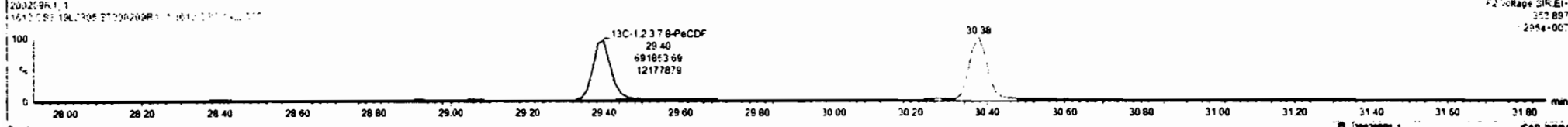
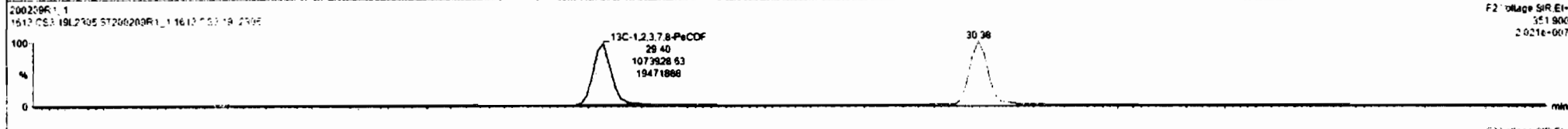
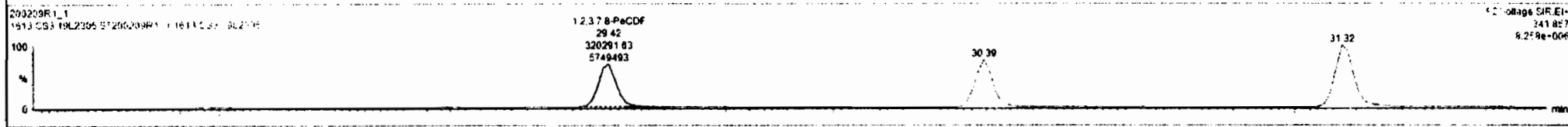


**DPE2**





#	Name	Resp	IS Resp	Pres/A	IS	adj	WF	Pres/DT	RT	RT Prop	Pres/DT	WF	Comp	Area	SPB est
1	1,2,3,7,8-TCDD	1.51e5	1.61e6	0.77	0.79	NO	0.0081	25.72	25.70	NO	1.001	1.001	9.49	94.9	NO
2	1,2,3,4,7,8-PeCDD	5.51e5	1.22e6	0.63	0.84	NO	0.0723	30.72	30.71	NO	1.001	1.000	46.3	92.7	NO
3	1,2,3,4,7,8-HxCDD	5.96e5	1.08e6	1.24	1.24	NO	1.0708	34.06	34.06	NO	1.000	1.000	51.5	103	NO
4	1,2,3,6,7,8-HxCDD	5.97e5	1.35e6	1.24	1.24	NO	0.8211	34.16	34.17	NO	1.000	1.000	48.1	96.3	NO
5	1,2,3,7,8,9-HxCDD	5.51e5	1.21e6	1.24	1.22	NO	0.9182	34.47	34.44	NO	1.001	1.000	49.6	99.1	NO
6	1,2,3,4,6,7,8-HpCDD	4.50e5	9.71e5	1.04	1.04	NO	0.9231	37.66	37.66	NO	1.000	1.000	50.2	100	NO
7	OCDD	8.75e5	1.82e6	0.88	0.89	NO	0.8746	40.97	40.99	NO	1.000	1.000	86.7	96.7	NO
8	1,2,3,7,8-TCDF	1.85e5	2.22e6	0.77	0.77	NO	0.8620	24.80	24.78	NO	1.001	1.001	18.4	104	NO
9	1,2,3,4,7,8-PeCDF	8.37e5	1.75e6	1.55	1.55	NO	0.8518	30.41	30.36	NO	1.001	1.000	56.1	100	NO
10	1,2,3,4,7,8-HxCDF	6.08e5	1.28e6	1.24	1.20	NO	0.8623	33.18	33.20	NO	1.000	1.000	56.1	110	NO
11	1,2,3,6,7,8-HxCDF	6.81e5	1.38e6	1.24	1.22	NO	0.8414	33.33	33.33	NO	1.000	1.000	56.9	114	NO
12	1,2,3,4,6,7,8-HpCDF	7.33e5	1.44e6	1.24	1.22	NO	0.8982	33.91	33.88	NO	1.001	1.000	56.7	113	NO
13	1,2,3,7,8,9-HxCDF	5.68e5	1.20e6	1.24	1.20	NO	0.8578	34.78	34.79	NO	1.000	1.000	56.1	110	NO
14	1,2,3,4,6,7,8-HpCDF	5.06e5	1.09e6	1.04	1.00	NO	0.8511	36.55	36.52	NO	1.001	1.000	54.3	100	NO
15	1,2,3,4,7,8,9-HpCDF	4.47e5	7.96e5	1.04	1.00	NO	0.9799	38.58	38.57	NO	1.000	1.000	57.3	115	NO
16	OCDF	9.38e5	2.12e6	0.88	0.88	NO	0.8955	41.15	41.17	NO	1.000	1.000	110	110	NO



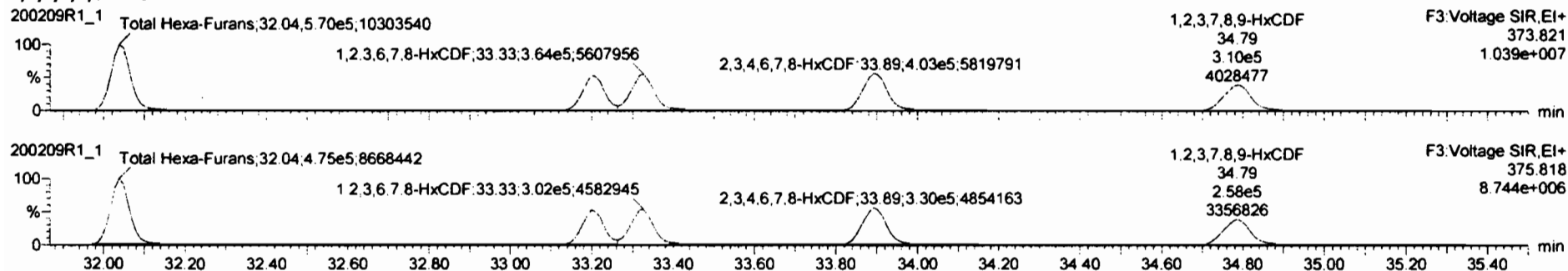
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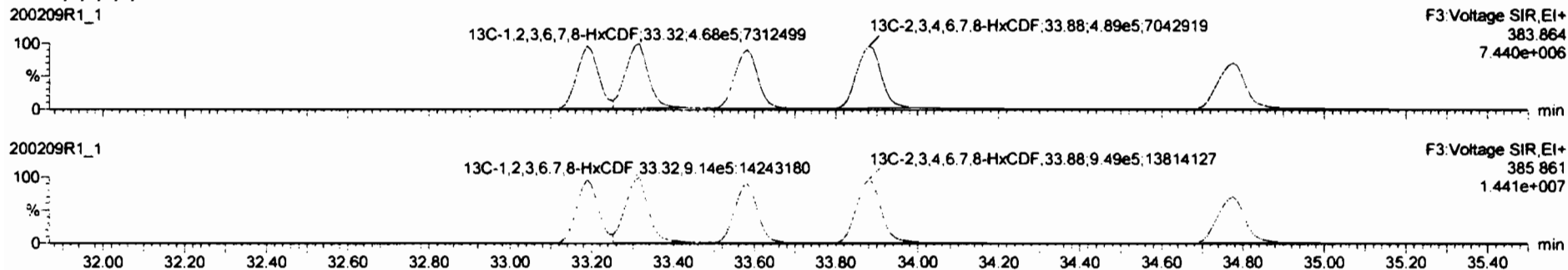
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

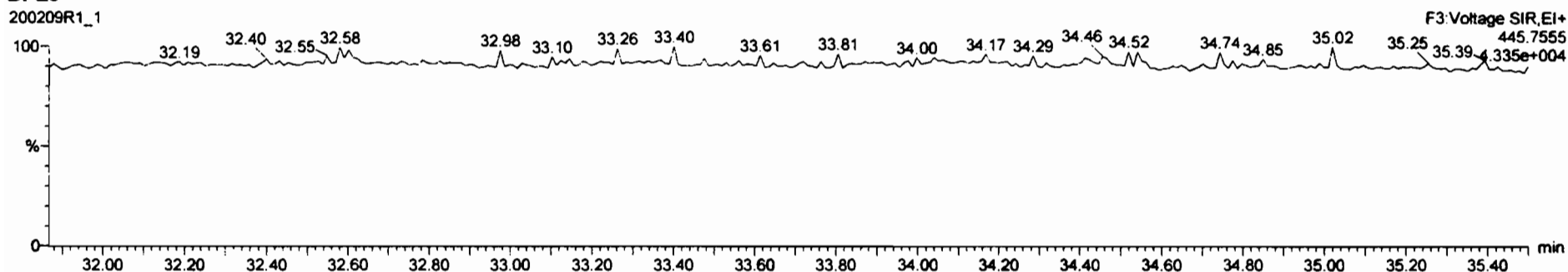
### 1,2,3,4,7,8-HxCDF



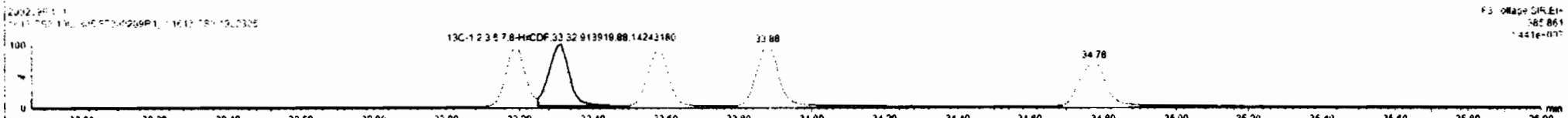
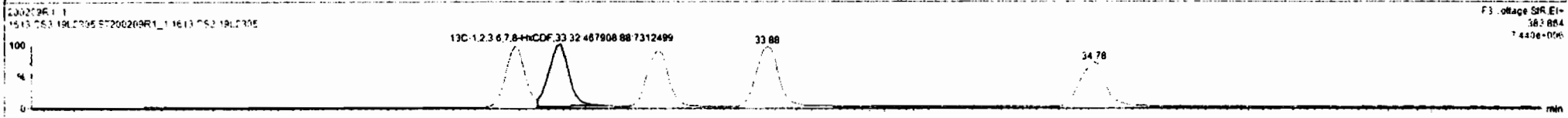
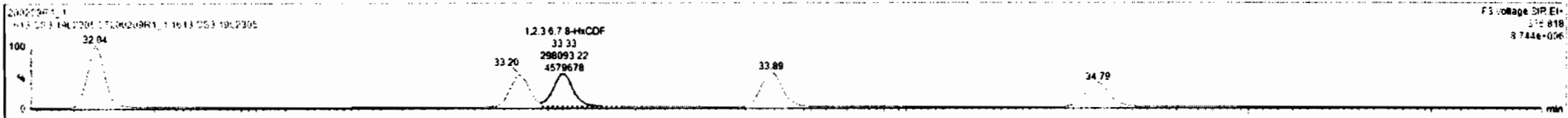
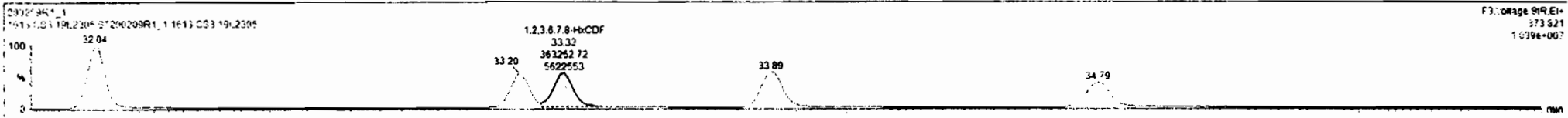
### 13C-1,2,3,4,7,8-HxCDF



### DPE3



#	#	Name	Stng	AS Rang	Post RA	RA	Qty	RF	PostRF	RF	RT Flag	Post.MTC	RF	Comp	100ac	STD out
1	1	2,3,7,8-TCDD	1.51e5	1.61e5	0.77	0.79	NO	0.0881	25.72	25.70	NO	1.001	1.001	9.46	94.9	NO
2	2	1,2,3,7,8-PeCDD	5.51e5	1.22e5	0.83	0.84	NO	0.9723	30.72	30.71	NO	1.001	1.000	48.3	92.7	NO
3	3	1,2,3,4,7,8-HxCDD	5.98e5	1.08e5	1.24	1.24	NO	1.0708	34.08	34.08	NO	1.000	1.000	51.5	103	NO
4	4	1,2,3,6,7,8-HxCDD	5.97e5	1.35e5	1.24	1.24	NO	0.9211	34.16	34.17	NO	1.000	1.000	48.1	98.3	NO
5	5	1,2,3,7,8,9-HxCDD	5.51e5	1.21e5	1.24	1.22	NO	0.9182	34.47	34.44	NO	1.001	1.000	49.6	99.1	NO
6	6	1,2,3,4,6,7,8-HpCDD	4.50e5	9.71e5	1.04	1.04	NO	0.9231	37.98	37.98	NO	1.000	1.000	50.2	100	NO
7	7	OCDD	8.75e5	1.82e5	0.89	0.89	NO	0.9748	40.97	40.99	NO	1.000	1.000	98.7	98.7	NO
8	8	2,3,7,8-TCDF	1.85e5	2.22e5	0.77	0.77	NO	0.0820	24.80	24.79	NO	1.001	1.001	10.4	104	NO
9	9	1,2,3,7,8-PeCDF	8.12e5	1.77e5	1.55	1.53	NO	0.9874	29.42	29.42	NO	1.001	1.001	58.7	101	NO
10	10	1,2,3,4,7,8-HxCDF	8.37e5	1.75e5	1.55	1.56	NO	0.9516	30.41	30.38	NO	1.001	1.000	50.1	100	NO
11	11	1,2,3,4,7,8,9-HxCDF	8.08e5	1.28e5	1.24	1.20	NO	0.8623	33.19	33.20	NO	1.000	1.000	55.1	110	NO
12	12	OCDF	9.36e5	2.12e5	0.89	0.88	NO	0.8955	41.15	41.17	NO	1.000	1.000	110	110	NO
13	13	2,3,4,6,7,8-HxCDF	7.23e5	1.44e5	1.24	1.22	NO	0.8982	33.91	33.88	NO	1.001	1.000	58.7	113	NO
14	14	1,2,3,7,8,9-HxCDF	5.09e5	1.20e5	1.24	1.20	NO	0.8578	34.78	34.78	NO	1.000	1.000	55.1	110	NO
15	15	1,2,3,4,6,7,8-HpCDF	5.06e5	1.09e5	1.04	1.00	NO	0.8511	38.55	38.52	NO	1.001	1.000	54.3	109	NO
16	16	1,2,3,4,7,8,9-HxCDF	4.47e5	7.96e5	1.04	1.00	NO	0.9799	38.58	38.57	NO	1.000	1.000	57.3	115	NO
17	17	OCDF	9.36e5	2.12e5	0.89	0.88	NO	0.8955	41.15	41.17	NO	1.000	1.000	110	110	NO

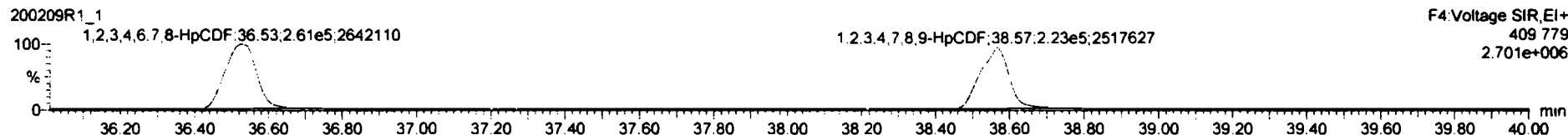
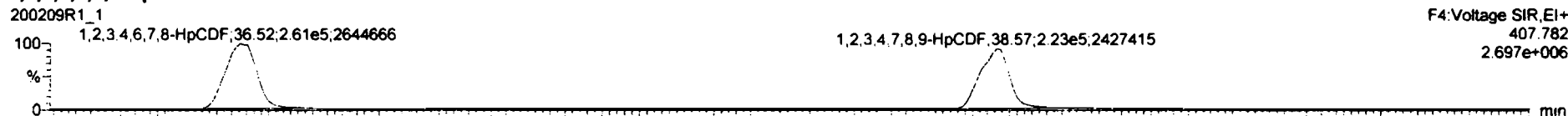


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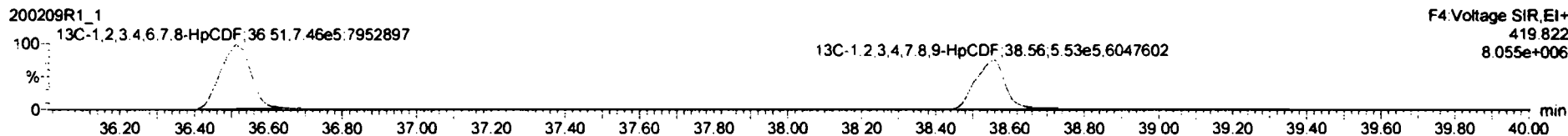
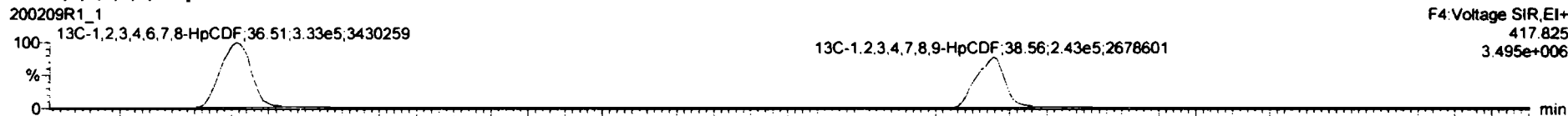
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

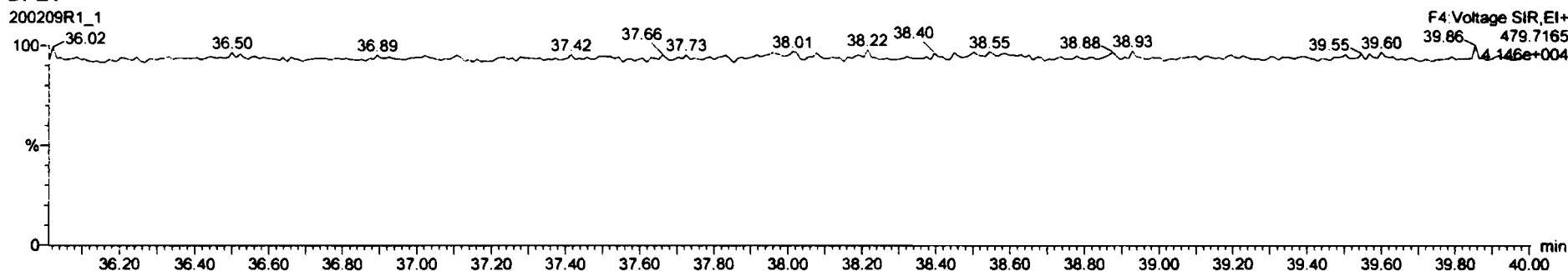
**1,2,3,4,6,7,8-HpCDF**



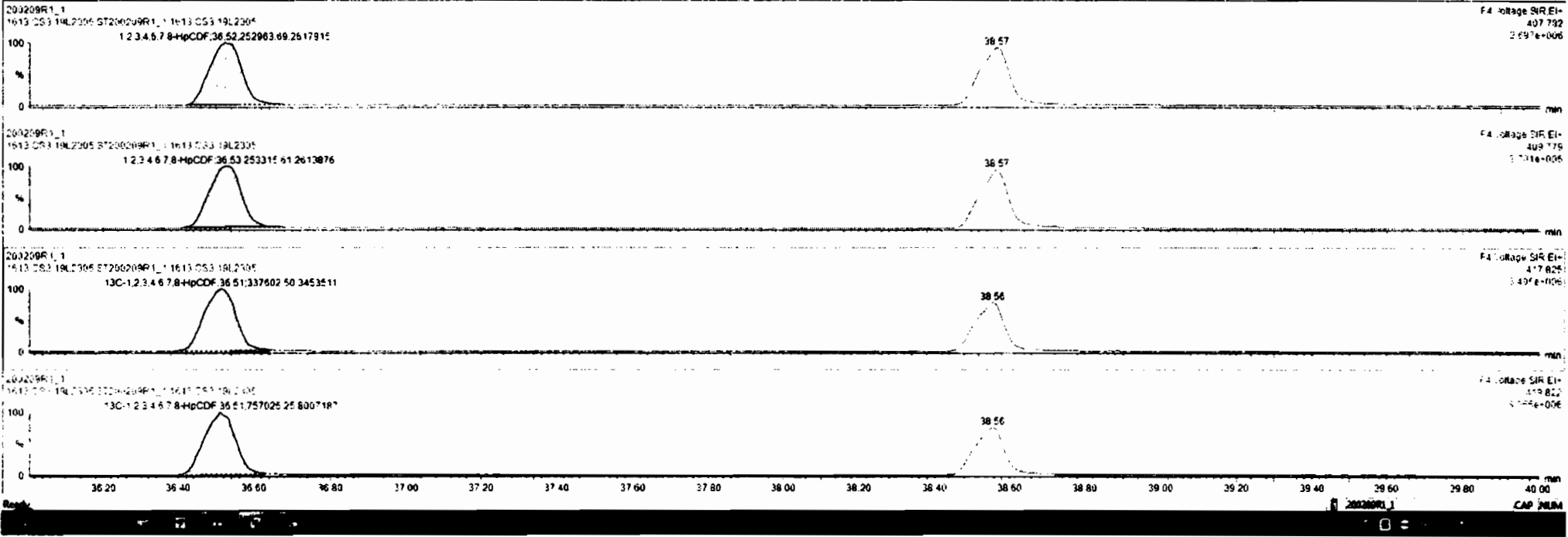
**13C-1,2,3,4,6,7,8-HpCDF**

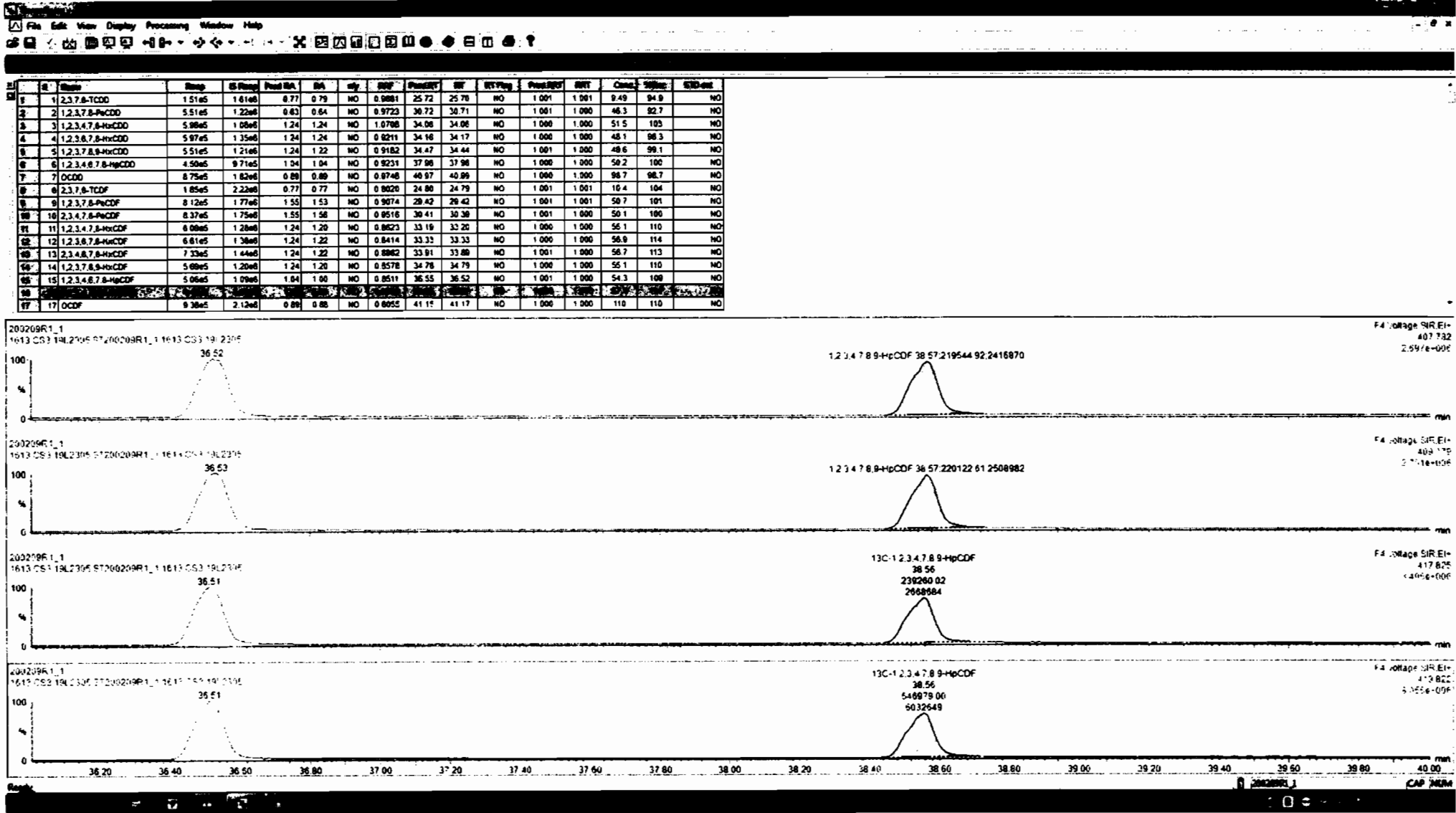


**DPE4**



#	Name	Resp	Q-Range	Prod RA	RA	Qty	RF	Prod/RF	RF	RF Flag	Prod/RF	RF	Comp	ISRec	STD out
1	2,3,7,8-TCDD	1.51e5	1.61e5	0.77	0.79	NO	0.9881	25.72	25.70	NO	1.001	1.001	9.48	94.9	NO
2	1,2,3,7,8-PeCDD	5.51e5	1.22e5	0.83	0.64	NO	0.9723	36.72	30.71	NO	1.001	1.000	46.3	82.7	NO
3	1,2,3,4,7,8-HxCDD	5.08e5	1.88e5	1.24	1.24	NO	1.0708	34.08	34.08	NO	1.000	1.000	51.5	103	NO
4	1,2,3,6,7,8-HxCDD	5.97e5	1.35e5	1.24	1.24	NO	0.9211	34.16	34.17	NO	1.000	1.000	48.1	96.3	NO
5	1,2,3,7,8-HxCDD	5.51e5	1.21e5	1.24	1.22	NO	0.9182	34.47	34.44	NO	1.001	1.000	49.6	99.1	NO
6	1,2,3,4,6,7,8-HpCDD	4.50e5	9.71e5	1.04	1.04	NO	0.9211	37.88	37.96	NO	1.000	1.000	50.2	100	NO
7	OCDD	8.75e5	1.82e5	0.89	0.89	NO	0.9748	40.97	40.99	NO	1.000	1.000	98.7	98.7	NO
8	2,3,7,8-TCDF	1.85e5	2.22e5	0.77	0.77	NO	0.9820	24.80	24.79	NO	1.001	1.001	10.4	104	NO
9	1,2,3,7,8-PeCDF	8.12e5	1.77e5	1.55	1.53	NO	0.9074	29.42	29.42	NO	1.001	1.001	50.7	101	NO
10	2,3,4,7,8-PeCDF	8.37e5	1.75e5	1.55	1.56	NO	0.9516	30.41	30.38	NO	1.001	1.000	50.1	100	NO
11	1,2,3,4,7,8-HxCDF	6.09e5	1.20e5	1.24	1.20	NO	0.8823	33.19	33.20	NO	1.000	1.000	55.1	110	NO
12	1,2,3,6,7,8-HxCDF	6.81e5	1.38e5	1.24	1.22	NO	0.8414	33.33	33.33	NO	1.000	1.000	56.9	114	NO
13	2,3,4,6,7,8-HxCDF	7.33e5	1.44e5	1.24	1.22	NO	0.8962	33.91	33.89	NO	1.001	1.000	58.7	113	NO
14	1,2,3,7,8-HxCDF	5.08e5	1.20e5	1.24	1.20	NO	0.8578	34.78	34.79	NO	1.000	1.000	55.1	110	NO
15	1,2,3,4,7,8-PeCDF	4.47e5	7.98e5	1.04	1.00	NO	0.9799	38.58	38.57	NO	1.000	1.000	57.3	115	NO
17	OCDF	9.38e5	2.12e5	0.89	0.88	NO	0.8955	41.15	41.17	NO	1.000	1.000	110	110	NO



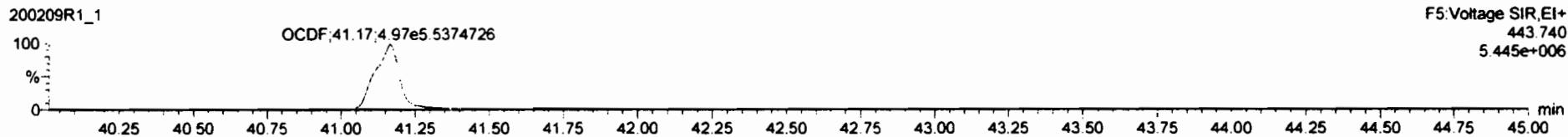
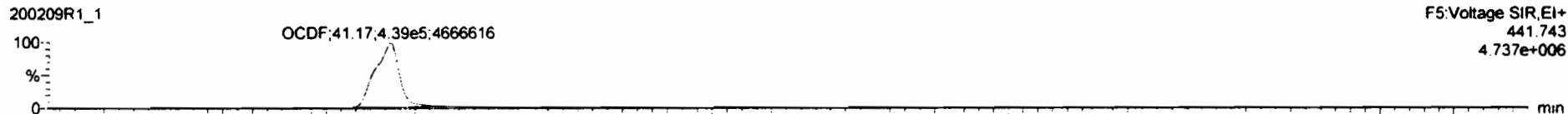


Dataset: Untitled

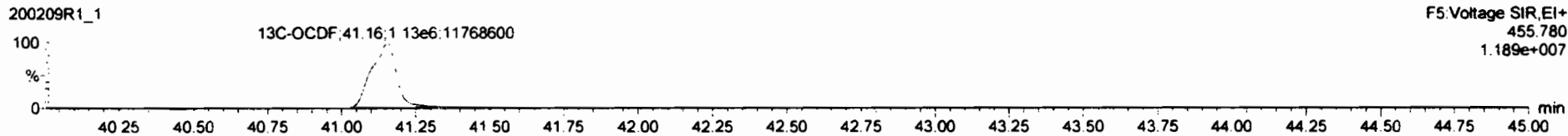
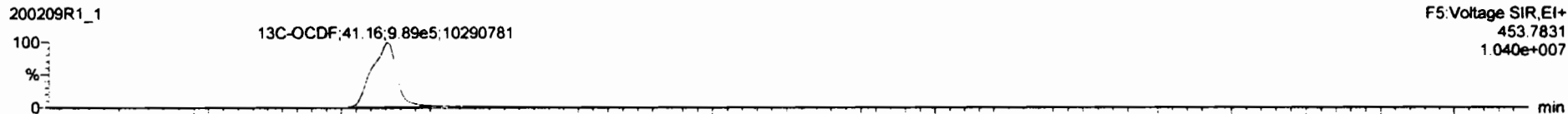
Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time  
Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

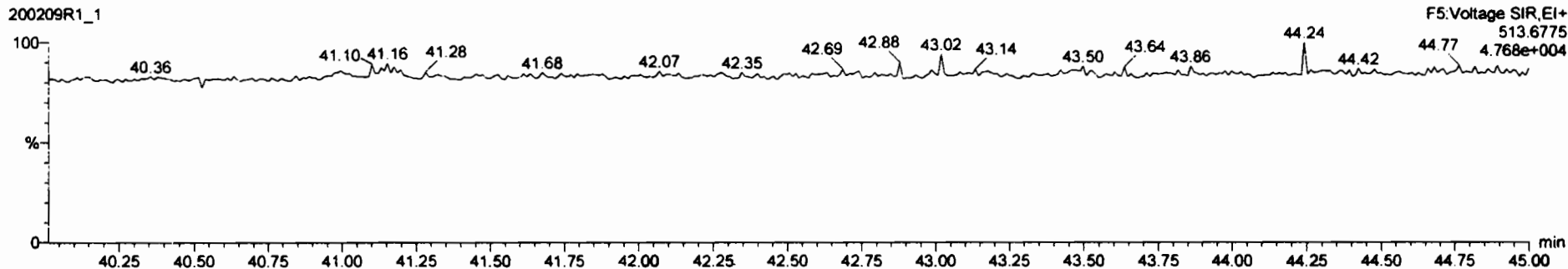
**OCDF**



**13C-OCDF**



**DPE5**

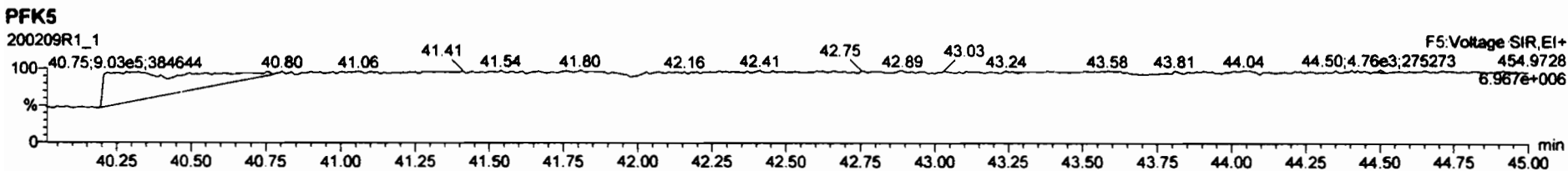
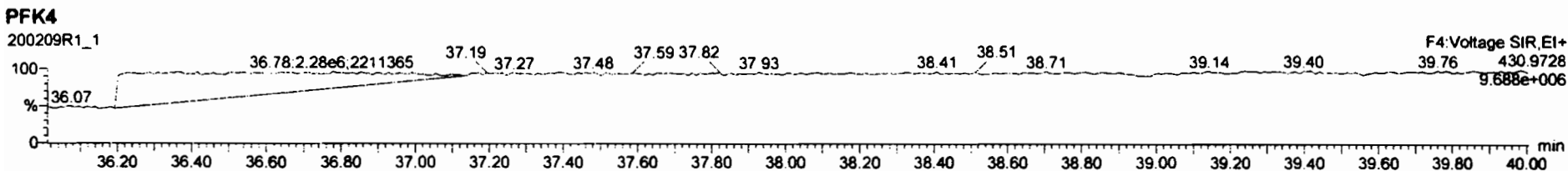
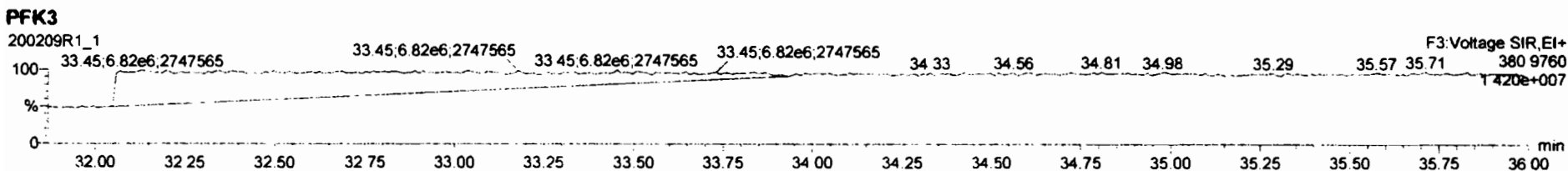
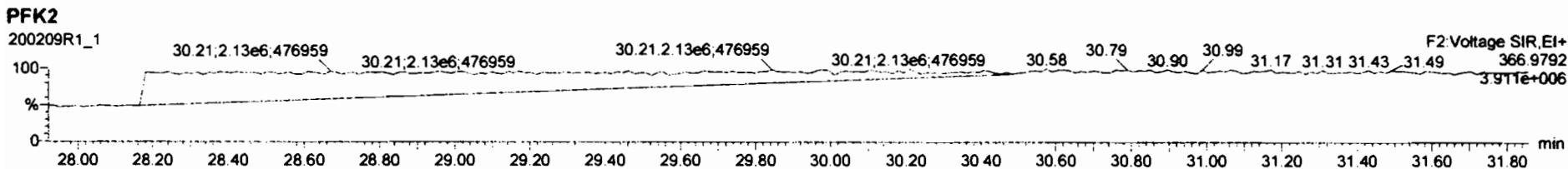
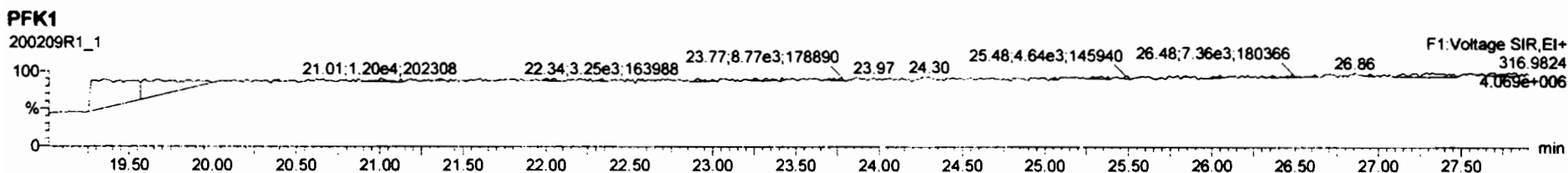


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Last Altered: Monday, February 10, 2020 08:17:40 Pacific Standard Time

Printed: Monday, February 10, 2020 08:17:56 Pacific Standard Time

Name: 200209R1\_1, Date: 09-Feb-2020, Time: 12:06:17, ID: ST200209R1\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305





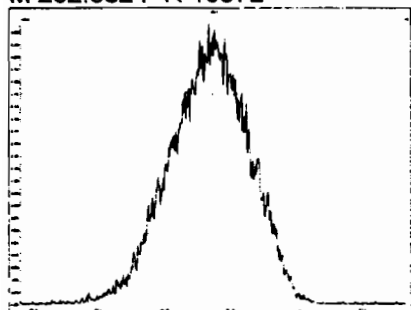
Resolution Check Report

MassLynx 4.1 SCN815

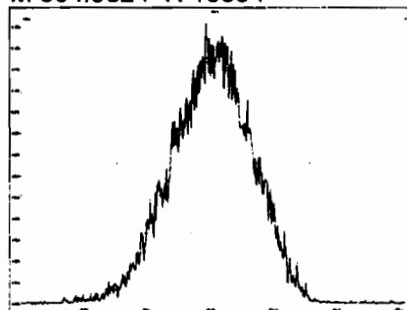
(A) PFK DRAIN

Printed: Monday, February 10, 2020 00:04:07 Pacific Standard Time

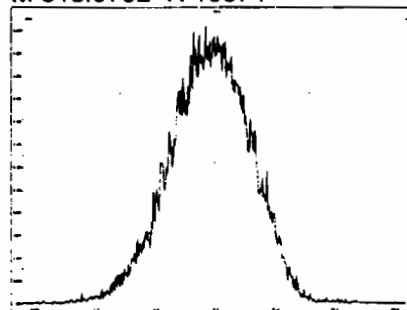
M 292.9824 R 10572



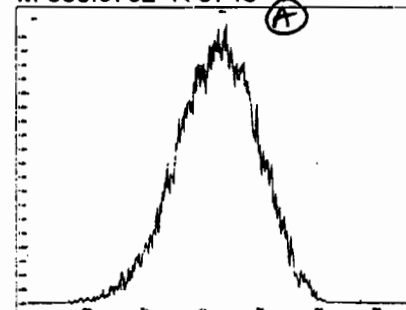
M 304.9824 R 10594



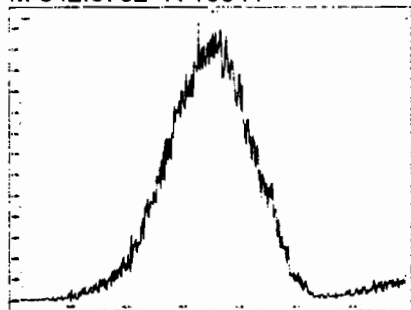
M 318.9792 R 10374



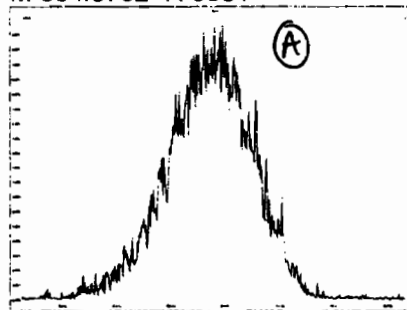
M 330.9792 R 9746 (A)



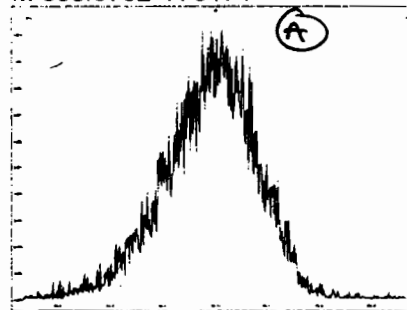
M 342.9792 R 10041



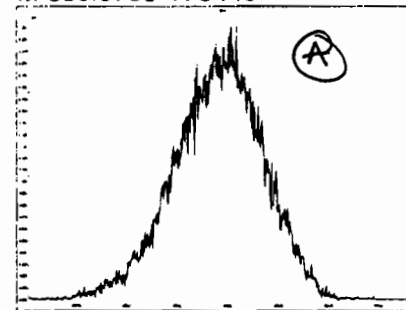
M 354.9792 R 9831 (A)



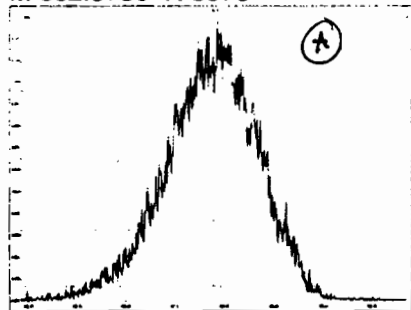
M 366.9792 R 9174 (A)



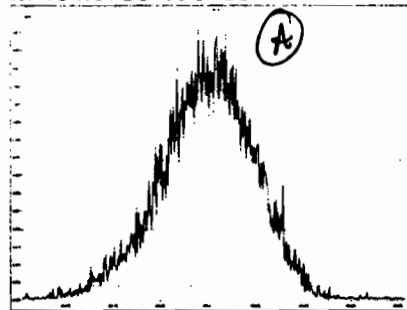
M 380.9760 R 9440 (A)



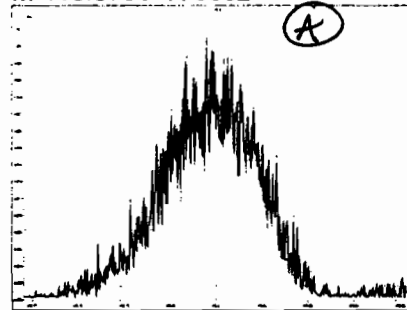
M 392.9760 R 8976 (A)



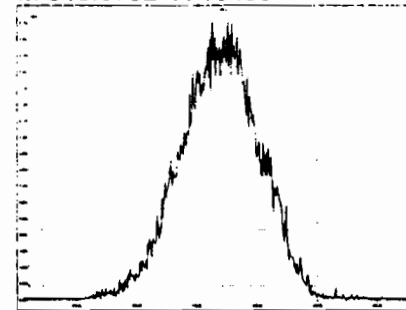
M 404.9760 R 9266 (A)



M 416.9760 R 9362 (A)

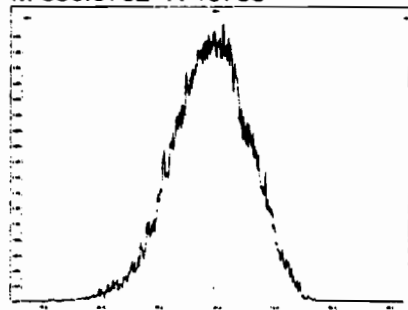


M 318.9792 R 10460

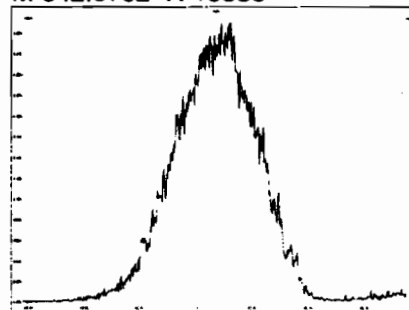


Printed: Monday, February 10, 2020 00:04:07 Pacific Standard Time

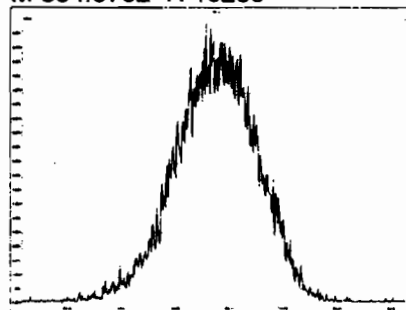
M 330.9792 R 10706



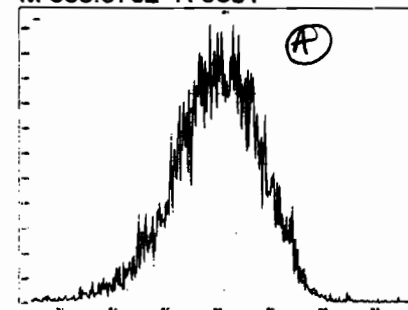
M 342.9792 R 10333



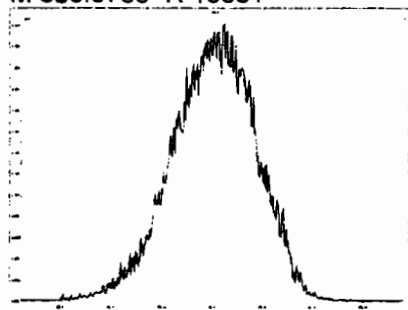
M 354.9792 R 10259



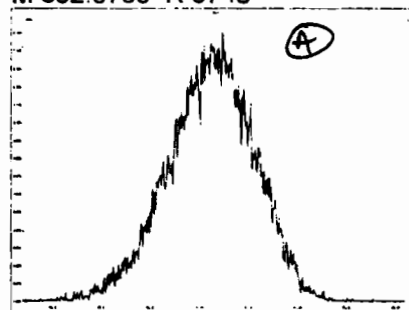
M 366.9792 R 9381



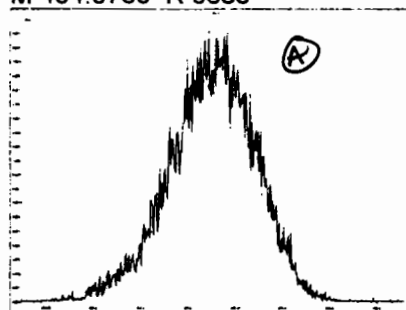
M 380.9760 R 10061



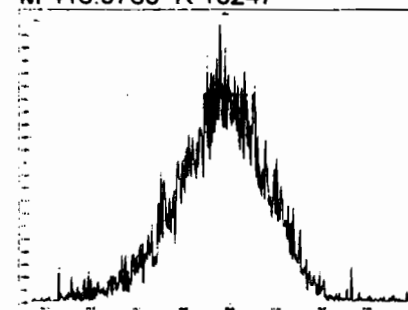
M 392.9760 R 9748



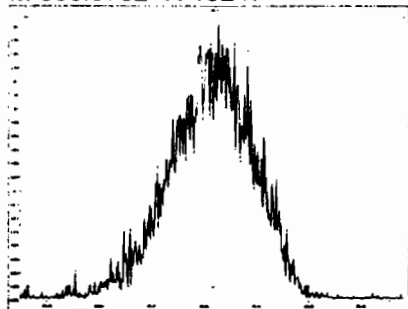
M 404.9760 R 9635



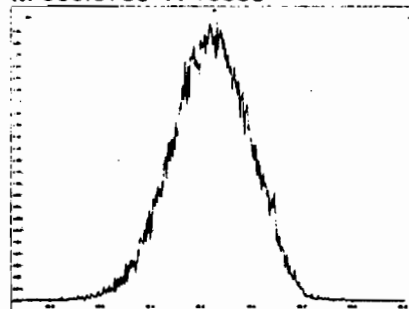
M 416.9760 R 10247



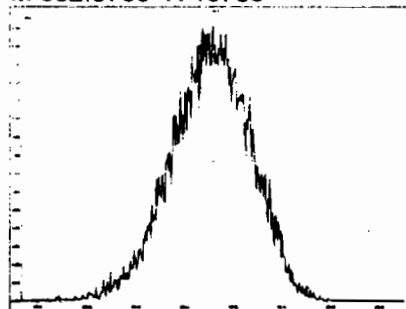
M 366.9792 R 10247



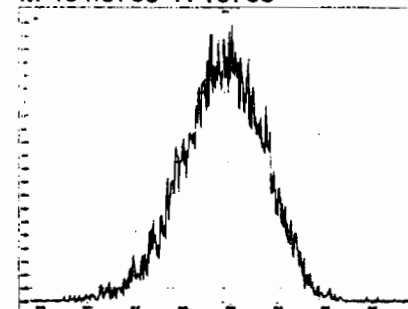
M 380.9760 R 10639



M 392.9760 R 10753

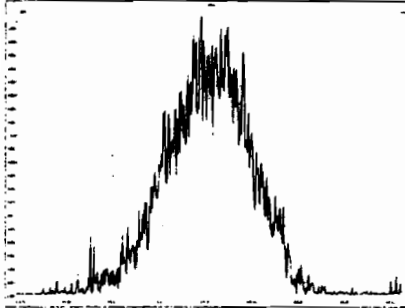


M 404.9760 R 10706

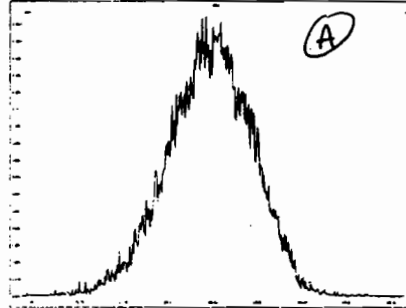


Printed: Monday, February 10, 2020 00:04:07 Pacific Standard Time

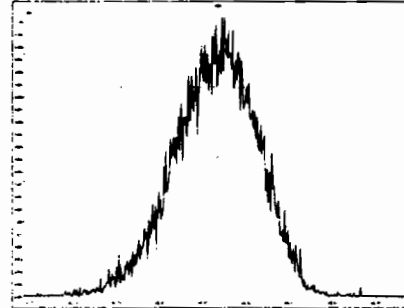
M 416.9760 R 10486



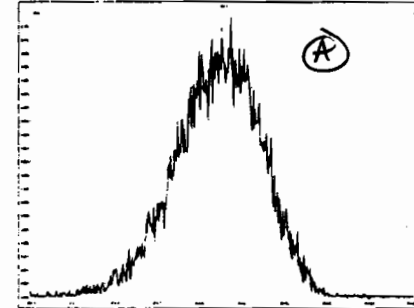
M 430.9728 R 9928



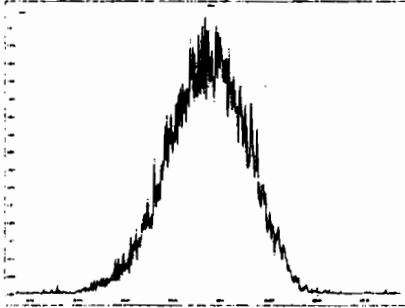
M 442.9728 R 10062



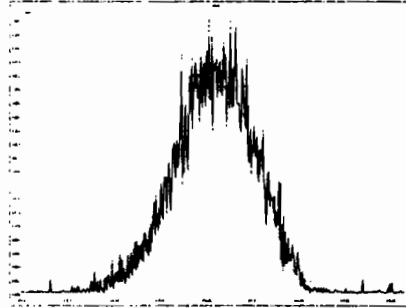
M 454.9728 R 9770



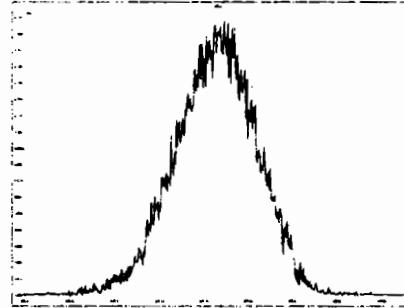
M 404.9760 R 10593



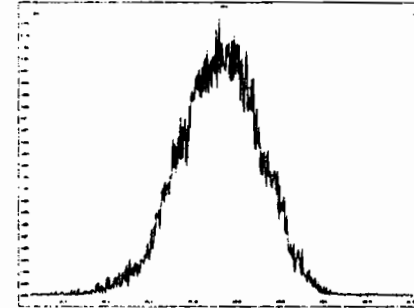
M 416.9760 R 10736



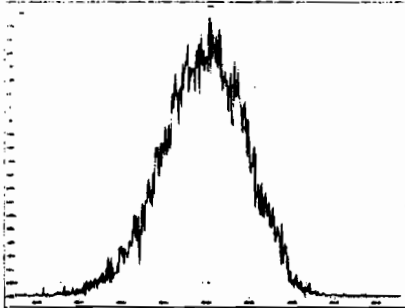
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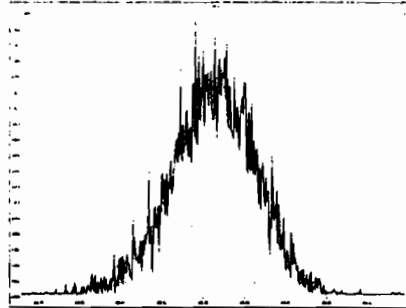
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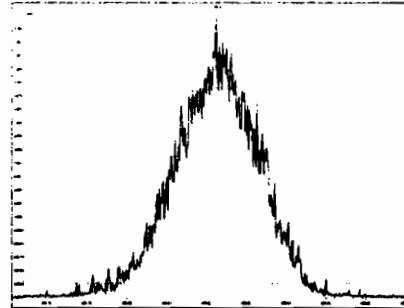
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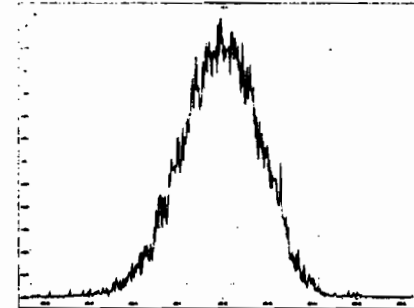
M 466.9728 R 10657



M 480.9696 R 10332

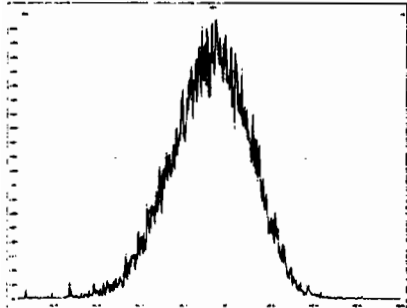


M 430.9728 R 10549

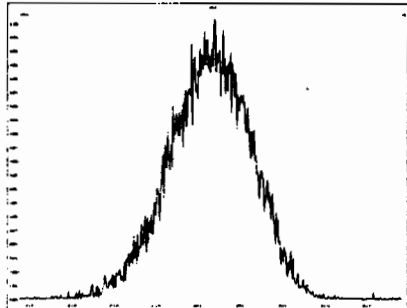


Printed: Monday, February 10, 2020 00:04:07 Pacific Standard Time

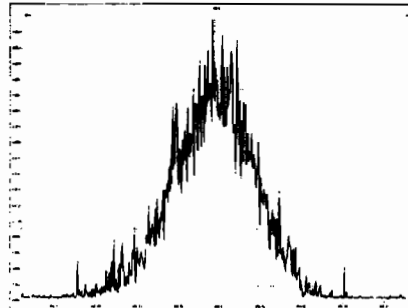
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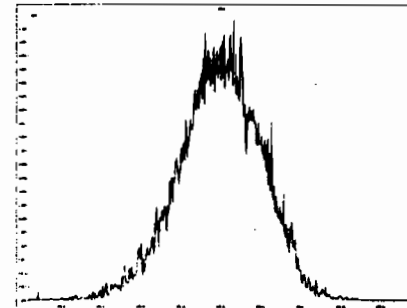
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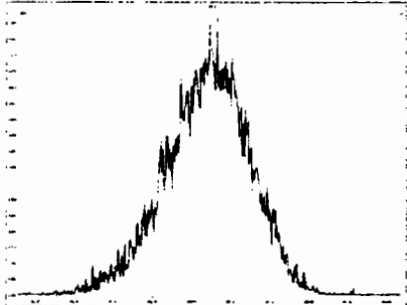
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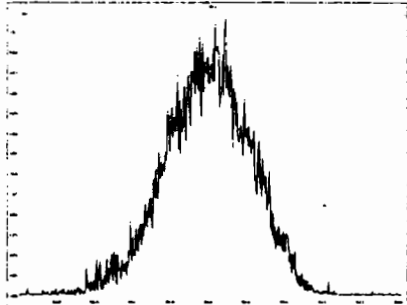
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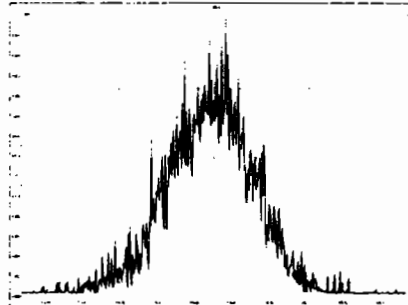
M 492.9696 R 10270



M 504.9696 R 10109



M 516.9697 R 10519



## **INITIAL CALIBRATION**

Data filename: 191009D1  
 Samp# 1 0.25 Samp# 2 0.50 Samp# 3 2.0 Samp# 4 10 Samp# 5 40 Samp# 6 300

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
2,3,7,8-TCDD	0.9053	7.55 %	0.84	0.83	0.87	0.99	0.92	0.98
1,2,3,7,8-PeCDD	0.9027	4.95 %	0.86	0.87	0.88	0.88	0.96	0.96
1,2,3,4,7,8-HxCDD	1.1013	3.97 %	1.12	1.13	1.03	1.08	1.09	1.15
1,2,3,6,7,8-HxCDD	0.9386	7.68 %	0.83	0.88	1.01	0.92	0.98	1.00
1,2,3,7,8,9-HxCDD	0.9613	4.62 %	0.95	0.90	0.93	0.95	1.00	1.03
1,2,3,4,6,7,8-HpCDD	0.9794	5.84 %	0.90	0.97	0.95	0.96	1.03	1.06
OCDD	0.9585	4.07 %	0.93	0.94	0.92	0.94	1.01	1.01
2,3,7,8-TCDF	0.9501	8.27 %	1.09	0.90	0.89	0.89	0.95	0.99
1,2,3,7,8-PeCDF	0.9603	4.05 %	0.94	0.94	0.92	0.95	1.00	1.01
2,3,4,7,8-PeCDF	1.0148	3.01 %	1.00	0.99	1.00	1.00	1.03	1.07
1,2,3,4,7,8-HxCDF	1.1768	4.35 %	1.23	1.11	1.15	1.14	1.20	1.24
1,2,3,6,7,8-HxCDF	1.0689	3.63 %	1.01	1.07	1.06	1.05	1.12	1.11
2,3,4,6,7,8-HxCDF	1.1136	5.58 %	1.06	1.03	1.12	1.11	1.16	1.20
1,2,3,7,8,9-HxCDF	1.0616	3.91 %	1.05	1.02	1.02	1.06	1.08	1.13
1,2,3,4,6,7,8-HpCDF	1.1276	3.90 %	1.13	1.13	1.06	1.10	1.17	1.18
1,2,3,4,7,8,9-HpCDF	1.2799	3.29 %	1.30	1.24	1.25	1.25	1.31	1.34
OCDF	0.9472	3.80 %	0.95	0.92	0.91	0.92	1.00	0.98
13C-2,3,7,8-TCDD	1.0954	1.91 %	1.11	1.08	1.06	1.10	1.12	1.11
13C-1,2,3,7,8-PeCDD	0.8814	5.11 %	0.89	0.86	0.83	0.86	0.89	0.96
13C-1,2,3,4,7,8-HxCDD	0.6421	10.35 %	0.65	0.60	0.58	0.61	0.65	0.77
13C-1,2,3,6,7,8-HxCDD	0.8555	4.13 %	0.86	0.87	0.82	0.87	0.80	0.90
13C-1,2,3,7,8,9-HxCDD	0.8066	5.57 %	0.84	0.80	0.76	0.80	0.76	0.88
13C-1,2,3,4,6,7,8-HpCDD	0.6539	9.07 %	0.70	0.63	0.59	0.62	0.63	0.75
13C-OCDD	0.5797	10.98 %	0.60	0.52	0.53	0.55	0.59	0.69
13C-2,3,7,8-TCDF	1.0349	1.62 %	1.04	1.00	1.03	1.05	1.04	1.04
13C-1,2,3,7,8-PeCDF	0.8542	4.58 %	0.84	0.82	0.82	0.87	0.86	0.92
13C-2,3,4,7,8-PeCDF	0.8471	3.79 %	0.81	0.84	0.83	0.84	0.85	0.91
13C-1,2,3,4,7,8-HxCDF	0.8317	8.50 %	0.76	0.80	0.79	0.86	0.83	0.96
13C-1,2,3,6,7,8-HxCDF	1.0344	5.35 %	1.00	1.03	1.03	1.03	0.98	1.14
13C-2,3,4,6,7,8-HxCDF	0.9533	6.17 %	0.94	0.94	0.90	0.93	0.93	1.07
13C-1,2,3,7,8,9-HxCDF	0.8277	8.68 %	0.82	0.80	0.77	0.78	0.83	0.96
13C-1,2,3,4,6,7,8-HpCDF	0.7575	6.47 %	0.76	0.73	0.72	0.75	0.73	0.85
13C-1,2,3,4,7,8,9-HpCDF	0.5812	8.97 %	0.62	0.54	0.52	0.55	0.58	0.66
13C-OCDF	0.6890	12.48 %	0.69	0.62	0.62	0.65	0.72	0.85
37Cl-2,3,7,8-TCDD	1.1977	8.83 %	1.40	1.16	1.16	1.11	1.15	1.21
13C-1,2,3,4-TCDD	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4-TCDF	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00
13C-1,2,3,4,6,9-HxCDF	1.0000	0.00 %	1.00	1.00	1.00	1.00	1.00	1.00

DB CT  
 10/10/19 10/10/19

Filename: 191009D1 S: 1 Acquired: 9-OCT-19 16:13:04  
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:  
 Sample text: ST191009D1-1 1613 CS0 19C2201

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.25	1.97e+04	0.80 y	26:32	-	0.84
2	Unk	1,2,3,7,8-PeCDD	1.25	8.06e+04	0.62 y	30:54	-	0.86
3	Unk	1,2,3,4,7,8-HxCDD	1.25	7.34e+04	1.23 y	34:16	-	1.12
4	Unk	1,2,3,6,7,8-HxCDD	1.25	7.23e+04	1.12 y	34:23	-	0.83
5	Unk	1,2,3,7,8,9-HxCDD	1.25	8.01e+04	1.19 y	34:43	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	1.25	6.39e+04	1.06 y	38:05	-	0.90
7	Unk	OCDD	2.50	1.14e+05	0.95 y	41:28	-	0.93
8	Unk	2,3,7,8-TCDF	0.25	3.62e+04	0.85 y	25:49	-	1.09
9	Unk	1,2,3,7,8-PeCDF	1.25	1.26e+05	1.52 y	29:46	-	0.94
10	Unk	2,3,4,7,8-PeCDF	1.25	1.31e+05	1.52 y	30:40	-	1.00
11	Unk	1,2,3,4,7,8-HxCDF	1.25	9.36e+04	1.22 y	33:22	-	1.23
12	Unk	1,2,3,6,7,8-HxCDF	1.25	1.02e+05	1.11 y	33:29	-	1.01
13	Unk	2,3,4,6,7,8-HxCDF	1.25	1.01e+05	1.30 y	34:07	-	1.06
14	Unk	1,2,3,7,8,9-HxCDF	1.25	8.74e+04	1.10 y	35:08	-	1.05
15	Unk	1,2,3,4,6,7,8-HpCDF	1.25	8.63e+04	1.01 y	36:57	-	1.13
16	Unk	1,2,3,4,7,8,9-HpCDF	1.25	8.18e+04	1.14 y	38:40	-	1.30
17	Unk	OCDF	2.50	1.32e+05	0.94 y	41:43	-	0.95
36	IS	13C-2,3,7,8-TCDD	100.00	9.40e+06	0.78 y	26:32	-	1.11
37	IS	13C-1,2,3,7,8-PeCDD	100.00	7.48e+06	0.62 y	30:55	-	0.89
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	5.24e+06	1.19 y	34:15	-	0.65
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.96e+06	1.32 y	34:22	-	0.86
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	6.74e+06	1.31 y	34:42	-	0.84
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	5.68e+06	1.05 y	38:05	-	0.70
42	IS	13C-OCDD	200.00	9.75e+06	0.88 y	41:28	-	0.60
43	IS	13C-2,3,7,8-TCDF	100.00	1.33e+07	0.79 y	25:49	-	1.04
44	IS	13C-1,2,3,7,8-PeCDF	100.00	1.07e+07	1.58 y	29:46	-	0.84
45	IS	13C-2,3,4,7,8-PeCDF	100.00	1.05e+07	1.58 y	30:39	-	0.81
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	6.11e+06	0.51 y	33:21	-	0.76
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	8.04e+06	0.50 y	33:29	-	1.00
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	7.61e+06	0.50 y	34:07	-	0.94
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	6.66e+06	0.48 y	35:07	-	0.82
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	6.12e+06	0.42 y	36:57	-	0.76
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	5.02e+06	0.45 y	38:41	-	0.62
52	IS	13C-OCDF	200.00	1.11e+07	0.90 y	41:43	-	0.69
53	C/Up	37Cl-2,3,7,8-TCDD	0.25	2.97e+04		26:33	-	1.40
54	RS/RT	13C-1,2,3,4-TCDD	100.00	8.45e+06	0.80 y	25:59	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.28e+07	0.79 y	24:39	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	8.07e+06	0.52 y	33:47	-	1.00

DB  
10/10/14

Filename: 191009D1 S: 2 Acquired: 9-OCT-19 17:00:45  
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:  
 Sample text: ST191009D1-2 1613 CS1 19C2202

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	0.50	3.54e+04	0.78 y	26:34	-	0.83
2	Unk	1,2,3,7,8-PeCDD	2.50	1.46e+05	0.60 y	30:56	-	0.87
3	Unk	1,2,3,4,7,8-HxCDD	2.50	1.25e+05	1.20 y	34:16	-	1.13
4	Unk	1,2,3,6,7,8-HxCDD	2.50	1.40e+05	1.22 y	34:23	-	0.88
5	Unk	1,2,3,7,8,9-HxCDD	2.50	1.33e+05	1.15 y	34:43	-	0.90
6	Unk	1,2,3,4,6,7,8-HpCDD	2.50	1.13e+05	0.97 y	38:06	-	0.97
7	Unk	OCDD	5.00	1.78e+05	0.90 y	41:28	-	0.94
8	Unk	2,3,7,8-TCDF	0.50	5.25e+04	0.74 y	25:51	-	0.90
9	Unk	1,2,3,7,8-PeCDF	2.50	2.25e+05	1.59 y	29:48	-	0.94
10	Unk	2,3,4,7,8-PeCDF	2.50	2.42e+05	1.50 y	30:40	-	0.99
11	Unk	1,2,3,4,7,8-HxCDF	2.50	1.62e+05	1.16 y	33:22	-	1.11
12	Unk	1,2,3,6,7,8-HxCDF	2.50	2.03e+05	1.20 y	33:30	-	1.07
13	Unk	2,3,4,6,7,8-HxCDF	2.50	1.79e+05	1.30 y	34:07	-	1.03
14	Unk	1,2,3,7,8,9-HxCDF	2.50	1.49e+05	1.24 y	35:08	-	1.02
15	Unk	1,2,3,4,6,7,8-HpCDF	2.50	1.51e+05	0.91 y	36:57	-	1.13
16	Unk	1,2,3,4,7,8,9-HpCDF	2.50	1.23e+05	0.94 y	38:41	-	1.24
17	Unk	OCDF	5.00	2.09e+05	0.91 y	41:43	-	0.92
36	IS	13C-2,3,7,8-TCDD	100.00	8.50e+06	0.78 y	26:34	-	1.08
37	IS	13C-1,2,3,7,8-PeCDD	100.00	6.74e+06	0.63 y	30:56	-	0.86
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	4.41e+06	1.38 y	34:16	-	0.60
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.35e+06	1.20 y	34:23	-	0.87
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	5.87e+06	1.26 y	34:42	-	0.80
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	4.64e+06	1.05 y	38:05	-	0.63
42	IS	13C-OCDD	200.00	7.58e+06	0.89 y	41:28	-	0.52
43	IS	13C-2,3,7,8-TCDF	100.00	1.17e+07	0.80 y	25:51	-	1.00
44	IS	13C-1,2,3,7,8-PeCDF	100.00	9.60e+06	1.59 y	29:48	-	0.82
45	IS	13C-2,3,4,7,8-PeCDF	100.00	9.80e+06	1.58 y	30:40	-	0.84
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.84e+06	0.52 y	33:21	-	0.80
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	7.58e+06	0.51 y	33:29	-	1.03
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	6.92e+06	0.51 y	34:07	-	0.94
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.84e+06	0.49 y	35:08	-	0.80
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	5.38e+06	0.43 y	36:57	-	0.73
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.99e+06	0.43 y	38:41	-	0.54
52	IS	13C-OCDF	200.00	9.05e+06	0.88 y	41:43	-	0.62
53	C/Up	37Cl-2,3,7,8-TCDD	0.50	4.55e+04		26:34	-	1.16
54	RS/RT	13C-1,2,3,4-TCDD	100.00	7.86e+06	0.77 y	26:01	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.17e+07	0.83 y	24:41	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	7.33e+06	0.52 y	33:47	-	1.00

DB  
10/10/19



Filename: 191009D1 S: 3 Acquired: 9-OCT-19 17:48:27  
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:  
 Sample text: ST191009D1-3 1613 CS2 19C2203

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	2.00	1.35e+05	0.74 y	26:33	-	0.87
2	Unk	1,2,3,7,8-PeCDD	10.00	5.33e+05	0.64 y	30:56	-	0.88
3	Unk	1,2,3,4,7,8-HxCDD	10.00	3.94e+05	1.22 y	34:16	-	1.03
4	Unk	1,2,3,6,7,8-HxCDD	10.00	5.50e+05	1.25 y	34:23	-	1.01
5	Unk	1,2,3,7,8,9-HxCDD	10.00	4.71e+05	1.36 y	34:43	-	0.93
6	Unk	1,2,3,4,6,7,8-HpCDD	10.00	3.70e+05	1.02 y	38:06	-	0.95
7	Unk	OCDD	20.00	6.41e+05	0.90 y	41:29	-	0.92
8	Unk	2,3,7,8-TCDF	2.00	1.90e+05	0.83 y	25:49	-	0.89
9	Unk	1,2,3,7,8-PeCDF	10.00	7.88e+05	1.58 y	29:47	-	0.92
10	Unk	2,3,4,7,8-PeCDF	10.00	8.71e+05	1.56 y	30:40	-	1.00
11	Unk	1,2,3,4,7,8-HxCDF	10.00	6.02e+05	1.14 y	33:22	-	1.15
12	Unk	1,2,3,6,7,8-HxCDF	10.00	7.20e+05	1.27 y	33:30	-	1.06
13	Unk	2,3,4,6,7,8-HxCDF	10.00	6.66e+05	1.26 y	34:08	-	1.12
14	Unk	1,2,3,7,8,9-HxCDF	10.00	5.16e+05	1.16 y	35:08	-	1.02
15	Unk	1,2,3,4,6,7,8-HpCDF	10.00	5.02e+05	1.05 y	36:57	-	1.06
16	Unk	1,2,3,4,7,8,9-HpCDF	10.00	4.31e+05	1.08 y	38:41	-	1.25
17	Unk	OCDF	20.00	7.38e+05	0.91 y	41:44	-	0.91
36	IS	13C-2,3,7,8-TCDD	100.00	7.73e+06	0.78 y	26:33	-	1.06
37	IS	13C-1,2,3,7,8-PeCDD	100.00	6.03e+06	0.62 y	30:55	-	0.83
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	3.81e+06	1.24 y	34:15	-	0.58
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	5.44e+06	1.28 y	34:22	-	0.82
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	5.03e+06	1.21 y	34:42	-	0.76
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	3.89e+06	1.09 y	38:05	-	0.59
42	IS	13C-OCDD	200.00	6.97e+06	0.90 y	41:28	-	0.53
43	IS	13C-2,3,7,8-TCDF	100.00	1.08e+07	0.82 y	25:49	-	1.03
44	IS	13C-1,2,3,7,8-PeCDF	100.00	8.55e+06	1.59 y	29:47	-	0.82
45	IS	13C-2,3,4,7,8-PeCDF	100.00	8.70e+06	1.59 y	30:40	-	0.83
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	5.22e+06	0.49 y	33:21	-	0.79
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	6.80e+06	0.51 y	33:29	-	1.03
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	5.93e+06	0.52 y	34:07	-	0.90
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.05e+06	0.51 y	35:08	-	0.77
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	4.73e+06	0.44 y	36:57	-	0.72
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.46e+06	0.45 y	38:41	-	0.52
52	IS	13C-OCDF	200.00	8.15e+06	0.92 y	41:44	-	0.62
53	C/Up	37Cl-2,3,7,8-TCDD	2.00	1.69e+05		26:33	-	1.16
54	RS/RT	13C-1,2,3,4-TCDD	100.00	7.29e+06	0.77 y	25:59	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.04e+07	0.82 y	24:39	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	6.60e+06	0.52 y	33:47	-	1.00

DB  
10/10/19

Filename: 191009D1 S: 4 Acquired: 9-OCT-19 18:36:09  
 Run: 191009D1 Analyte: Cal: 1613VG7-10-9-19 Results:  
 Sample text: ST191009D1-4 1613 CS3 19C2204

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	10.00	8.37e+05	0.80 y	26:35	-	0.99
2	Unk	1,2,3,7,8-PeCDD	50.00	2.94e+06	0.61 y	30:56	-	0.88
3	Unk	1,2,3,4,7,8-HxCDD	50.00	2.38e+06	1.21 y	34:16	-	1.08
4	Unk	1,2,3,6,7,8-HxCDD	50.00	2.90e+06	1.19 y	34:23	-	0.92
5	Unk	1,2,3,7,8,9-HxCDD	50.00	2.74e+06	1.24 y	34:42	-	0.95
6	Unk	1,2,3,4,6,7,8-HpCDD	50.00	2.15e+06	1.03 y	38:05	-	0.96
7	Unk	OCDD	100.00	3.73e+06	0.91 y	41:28	-	0.94
8	Unk	2,3,7,8-TCDF	10.00	1.05e+06	0.80 y	25:51	-	0.89
9	Unk	1,2,3,7,8-PeCDF	50.00	4.65e+06	1.59 y	29:47	-	0.95
10	Unk	2,3,4,7,8-PeCDF	50.00	4.70e+06	1.68 y	30:40	-	1.00
11	Unk	1,2,3,4,7,8-HxCDF	50.00	3.52e+06	1.24 y	33:21	-	1.14
12	Unk	1,2,3,6,7,8-HxCDF	50.00	3.92e+06	1.25 y	33:29	-	1.05
13	Unk	2,3,4,6,7,8-HxCDF	50.00	3.74e+06	1.22 y	34:07	-	1.11
14	Unk	1,2,3,7,8,9-HxCDF	50.00	3.00e+06	1.19 y	35:07	-	1.06
15	Unk	1,2,3,4,6,7,8-HpCDF	50.00	2.97e+06	1.04 y	36:57	-	1.10
16	Unk	1,2,3,4,7,8,9-HpCDF	50.00	2.49e+06	1.07 y	38:41	-	1.25
17	Unk	OCDF	100.00	4.33e+06	0.91 y	41:43	-	0.92
36	IS	13C-2,3,7,8-TCDD	100.00	8.46e+06	0.74 y	26:33	-	1.10
37	IS	13C-1,2,3,7,8-PeCDD	100.00	6.66e+06	0.62 y	30:55	-	0.86
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	4.42e+06	1.25 y	34:15	-	0.61
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.30e+06	1.28 y	34:22	-	0.87
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	5.76e+06	1.27 y	34:41	-	0.80
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	4.47e+06	1.05 y	38:05	-	0.62
42	IS	13C-OCDD	200.00	7.90e+06	0.94 y	41:27	-	0.55
43	IS	13C-2,3,7,8-TCDF	100.00	1.18e+07	0.79 y	25:50	-	1.05
44	IS	13C-1,2,3,7,8-PeCDF	100.00	9.79e+06	1.62 y	29:47	-	0.87
45	IS	13C-2,3,4,7,8-PeCDF	100.00	9.43e+06	1.61 y	30:39	-	0.84
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	6.19e+06	0.50 y	33:21	-	0.86
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	7.47e+06	0.51 y	33:29	-	1.03
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	6.75e+06	0.49 y	34:06	-	0.93
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	5.64e+06	0.49 y	35:07	-	0.78
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	5.40e+06	0.43 y	36:55	-	0.75
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	3.99e+06	0.44 y	38:40	-	0.55
52	IS	13C-OCDF	200.00	9.37e+06	0.89 y	41:43	-	0.65
53	C/Up	37Cl-2,3,7,8-TCDD	10.00	8.56e+05		26:35	-	1.11
54	RS/RT	13C-1,2,3,4-TCDD	100.00	7.70e+06	0.75 y	26:00	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.13e+07	0.82 y	24:41	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	7.23e+06	0.51 y	33:47	-	1.00

DB

10/10/19

Filename: 191009D1 S: 5      Acquired: 9-OCT-19 19:23:46  
Run: 191009D1    Analyte:            Cal: 1613VG7-10-9-19      Results:  
Sample text: ST191009D1-5 1613 CS4 19C2205

	Typ	Name	Amount	Resp	RA	RT	RF	RRF
1	Unk	2,3,7,8-TCDD	40.00	3.53e+06	0.81 y	26:35	-	0.92
2	Unk	1,2,3,7,8-PeCDD	200.00	1.48e+07	0.63 y	30:55	-	0.96
3	Unk	1,2,3,4,7,8-HxCDD	200.00	1.19e+07	1.19 y	34:15	-	1.09
4	Unk	1,2,3,6,7,8-HxCDD	200.00	1.34e+07	1.20 y	34:22	-	0.98
5	Unk	1,2,3,7,8,9-HxCDD	200.00	1.30e+07	1.18 y	34:41	-	1.00
6	Unk	1,2,3,4,6,7,8-HpCDD	200.00	1.10e+07	1.03 y	38:04	-	1.03
7	Unk	OCDD	400.00	2.03e+07	0.91 y	41:26	-	1.01
8	Unk	2,3,7,8-TCDF	40.00	5.17e+06	0.77 y	25:52	-	0.95
9	Unk	1,2,3,7,8-PeCDF	200.00	2.24e+07	1.58 y	29:47	-	1.00
10	Unk	2,3,4,7,8-PeCDF	200.00	2.29e+07	1.55 y	30:40	-	1.03
11	Unk	1,2,3,4,7,8-HxCDF	200.00	1.69e+07	1.21 y	33:21	-	1.20
12	Unk	1,2,3,6,7,8-HxCDF	200.00	1.85e+07	1.21 y	33:29	-	1.12
13	Unk	2,3,4,6,7,8-HxCDF	200.00	1.83e+07	1.21 y	34:06	-	1.16
14	Unk	1,2,3,7,8,9-HxCDF	200.00	1.53e+07	1.22 y	35:06	-	1.08
15	Unk	1,2,3,4,6,7,8-HpCDF	200.00	1.46e+07	1.04 y	36:56	-	1.17
16	Unk	1,2,3,4,7,8,9-HpCDF	200.00	1.30e+07	1.05 y	38:39	-	1.31
17	Unk	OCDF	400.00	2.42e+07	0.91 y	41:41	-	1.00
36	IS	13C-2,3,7,8-TCDD	100.00	9.63e+06	0.75 y	26:34	-	1.12
37	IS	13C-1,2,3,7,8-PeCDD	100.00	7.72e+06	0.63 y	30:54	-	0.89
38	IS	13C-1,2,3,4,7,8-HxCDD	100.00	5.48e+06	1.31 y	34:14	-	0.65
39	IS	13C-1,2,3,6,7,8-HxCDD	100.00	6.83e+06	1.22 y	34:21	-	0.80
40	IS	13C-1,2,3,7,8,9-HxCDD	100.00	6.48e+06	1.26 y	34:40	-	0.76
41	IS	13C-1,2,3,4,6,7,8-HpCDD	100.00	5.36e+06	1.08 y	38:03	-	0.63
42	IS	13C-OCDD	200.00	1.01e+07	0.91 y	41:25	-	0.59
43	IS	13C-2,3,7,8-TCDF	100.00	1.36e+07	0.80 y	25:51	-	1.04
44	IS	13C-1,2,3,7,8-PeCDF	100.00	1.12e+07	1.57 y	29:46	-	0.86
45	IS	13C-2,3,4,7,8-PeCDF	100.00	1.11e+07	1.52 y	30:39	-	0.85
46	IS	13C-1,2,3,4,7,8-HxCDF	100.00	7.05e+06	0.50 y	33:20	-	0.83
47	IS	13C-1,2,3,6,7,8-HxCDF	100.00	8.28e+06	0.49 y	33:28	-	0.98
48	IS	13C-2,3,4,6,7,8-HxCDF	100.00	7.90e+06	0.51 y	34:05	-	0.93
49	IS	13C-1,2,3,7,8,9-HxCDF	100.00	7.08e+06	0.51 y	35:06	-	0.83
50	IS	13C-1,2,3,4,6,7,8-HpCDF	100.00	6.23e+06	0.46 y	36:55	-	0.73
51	IS	13C-1,2,3,4,7,8,9-HpCDF	100.00	4.95e+06	0.44 y	38:38	-	0.58
52	IS	13C-OCDF	200.00	1.22e+07	0.90 y	41:40	-	0.72
53	C/Up	37Cl-2,3,7,8-TCDD	40.00	3.96e+06		26:35	-	1.15
54	RS/RT	13C-1,2,3,4-TCDD	100.00	8.64e+06	0.78 y	26:00	-	1.00
55	RS	13C-1,2,3,4-TCDF	100.00	1.30e+07	0.83 y	24:41	-	1.00
56	RS/RT	13C-1,2,3,4,6,9-HxCDF	100.00	8.48e+06	0.51 y	33:46	-	1.00

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

Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6
0.25	0.50	2.0	10	40	300

Name	Mean RRF	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6
Total Tetra-Dioxins	0.9053	7.55 %	0.84	0.83	0.87	0.99	0.92	0.98
TCDD EMPC	0.9053	7.55 %	0.84	0.83	0.87	0.99	0.92	0.98
Total Penta-Dioxins	0.9027	4.95 %	0.86	0.87	0.88	0.88	0.96	0.96
PeCDD EMPC	0.9027	4.95 %	0.86	0.87	0.88	0.88	0.96	0.96
Total Hexa-Dioxins	0.9918	4.02 %	0.95	0.96	0.99	0.97	1.02	1.06
HxCDD EMPC	0.9918	4.02 %	0.95	0.96	0.99	0.97	1.02	1.06
Total Hepta-Dioxins	0.9794	5.84 %	0.90	0.97	0.95	0.96	1.03	1.06
HpCDD EMPC	0.9794	5.84 %	0.90	0.97	0.95	0.96	1.03	1.06
Total Tetra-Furans	0.9501	8.27 %	1.09	0.90	0.89	0.89	0.95	0.99
TCDF EMPC	0.9501	8.27 %	1.09	0.90	0.89	0.89	0.95	0.99
1st Func. Penta-Furans	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
1st Func. PeCDF EMPC	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
Total Penta-Furans	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
PeCDF EMPC	0.9875	3.40 %	0.97	0.96	0.96	0.97	1.02	1.04
Total Hexa-Furans	1.1033	3.70 %	1.08	1.06	1.09	1.09	1.14	1.17
HxCDF EMPC	1.1033	3.70 %	1.08	1.06	1.09	1.09	1.14	1.17
Total Hepta-Furans	1.1937	3.56 %	1.21	1.17	1.14	1.16	1.23	1.25
HpCDF EMPC	1.1937	3.56 %	1.21	1.17	1.14	1.16	1.23	1.25

DB  
10/10/19

Run: 191009D1

Analyte:

Cal: 1613VG7-10-9-19

Inst. ID: VG-7

Data filename: 191009D1

		Samp# 1	Samp# 2	Samp# 3	Samp# 4	Samp# 5	Samp# 6	
		0.25	0.50	2.0	10	40	300	
	RRT Limits							
Name	Lower	Upper	RRT#1	RRT#2	RRT#3	RRT#4	RRT#5	RRT#6
2,3,7,8-TCDD	0.999	-1.002	1.000	1.000	1.000	1.001	1.001	1.001
1,2,3,7,8-PeCDD	0.999	-1.002	0.999	1.000	1.001	1.001	1.001	1.001
1,2,3,4,7,8-HxCDD	0.999	-1.001	1.000	1.000	1.001	1.000	1.000	1.000
1,2,3,6,7,8-HxCDD	0.998	-1.004	1.000	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDD	0.998	-1.004	1.001	1.000	1.000	1.000	1.001	1.001
1,2,3,4,6,7,8-HpCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDD	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
2,3,7,8-TCDF	0.999	-1.003	1.000	1.000	1.000	1.001	1.001	1.001
1,2,3,7,8-PeCDF	0.999	-1.002	1.000	1.000	1.000	1.000	1.000	1.001
2,3,4,7,8-PeCDF	0.999	-1.002	1.000	1.000	1.000	1.001	1.001	1.001
1,2,3,4,7,8-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,6,7,8-HxCDF	0.997	-1.005	1.000	1.000	1.001	1.000	1.000	1.000
2,3,4,6,7,8-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.001	1.001	1.000
1,2,3,7,8,9-HxCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
1,2,3,4,6,7,8-HpCDF	0.999	-1.001	1.000	1.000	1.000	1.001	1.000	1.000
1,2,3,4,7,8,9-HpCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
OCDF	0.999	-1.001	1.000	1.000	1.000	1.000	1.000	1.000
13C-2,3,7,8-TCDD	0.976	-1.043	1.022	1.022	1.022	1.021	1.021	1.021
13C-1,2,3,7,8-PeCDD	1.000	-1.567	1.190	1.189	1.190	1.189	1.188	1.188
13C-1,2,3,4,7,8-HxCDD	1.002	-1.026	1.014	1.014	1.014	1.014	1.014	1.014
13C-1,2,3,6,7,8-HxCDD	1.007	-1.029	1.017	1.018	1.018	1.017	1.017	1.018
13C-1,2,3,7,8,9-HxCDD	1.014	-1.038	1.027	1.027	1.027	1.027	1.027	1.027
13C-1,2,3,4,6,7,8-HpCDD	1.117	-1.141	1.127	1.127	1.128	1.127	1.127	1.127
13C-OCDD	1.085	-1.365	1.227	1.227	1.228	1.227	1.227	1.227
13C-2,3,7,8-TCDF	0.923	-1.103	0.994	0.994	0.994	0.994	0.994	0.994
13C-1,2,3,7,8-PeCDF	1.000	-1.425	1.146	1.146	1.146	1.145	1.145	1.144
13C-2,3,4,7,8-PeCDF	1.011	-1.526	1.180	1.179	1.180	1.179	1.178	1.178
13C-1,2,3,4,7,8-HxCDF	0.975	-1.001	0.987	0.987	0.987	0.987	0.987	0.987
13C-1,2,3,6,7,8-HxCDF	0.979	-1.005	0.991	0.991	0.991	0.991	0.991	0.991
13C-2,3,4,6,7,8-HxCDF	1.001	-1.020	1.010	1.010	1.010	1.009	1.009	1.010
13C-1,2,3,7,8,9-HxCDF	1.002	-1.072	1.040	1.040	1.040	1.039	1.039	1.039
13C-1,2,3,4,6,7,8-HpCDF	1.069	-1.111	1.093	1.093	1.094	1.093	1.093	1.093
13C-1,2,3,4,7,8,9-HpCDF	1.098	-1.192	1.145	1.145	1.145	1.145	1.144	1.144
13C-OCDF	1.091	-1.371	1.235	1.234	1.235	1.235	1.234	1.234
37Cl-2,3,7,8-TCDD	0.989	-1.052	1.022	1.021	1.022	1.022	1.022	1.022
13C-1,2,3,4-TCDD	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4-TCDF	0.000	-0.000	*	*	*	*	*	*
13C-1,2,3,4,6,9-HxCDF	0.000	-0.000	*	*	*	*	*	*

D)B  
10/10/19

FORM 5  
 PCDD/PCDF RT WINDOW AND ISOMER SPECIFICITY STANDARDS

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Instrument ID: VG-7 Initial Calibration Date: 10-9-19

RT Window Data Filename: 191009D1 S#4 Analysis Date: 9-OCT-19 Time: 18:36:09

ZB-5MS IS Data Filename: 191009D1 S#4 Analysis Date: 9-OCT-19 Time: 18:36:09

DB\_225 IS Data Filename: Analysis Date: Time:

ZB-5MS RT WINDOW DEFINING STANDARDS RESULTS

ISOMERS	ABSOLUTE RT	ISOMERS	ABSOLUTE RT
1,3,6,8-TCDD (F)	23:24	1,3,6,8-TCDF (F)	21:25
1,2,8,9-TCDD (L)	27:24	1,2,8,9-TCDF (L)	27:33
1,2,4,7,9-PeCDD (F)	28:55	1,3,4,6,8-PeCDF (F)	27:28
1,2,3,8,9-PeCDD (L)	31:17	1,2,3,8,9-PeCDF (L)	31:32
1,2,4,6,7,9-HxCDD (F)	32:41	1,2,3,4,6,8-HxCDF (F)	32:08
1,2,3,7,8,9-HxCDD (L)	34:42	1,2,3,7,8,9-HxCDF (L)	35:07
1,2,3,4,6,7,9-HpCDD (F)	37:16	1,2,3,4,6,7,8-HpCDF (F)	36:57
1,2,3,4,6,7,8-HpCDD (L)	38:05	1,2,3,4,7,8,9-HpCDF (L)	38:41

(F) = First eluting isomer (ZB-5MS); (L) = Last eluting isomer (ZB-5MS).

=====

ISOMER SPECIFICITY (IS) TEST STANDARD RESULTS

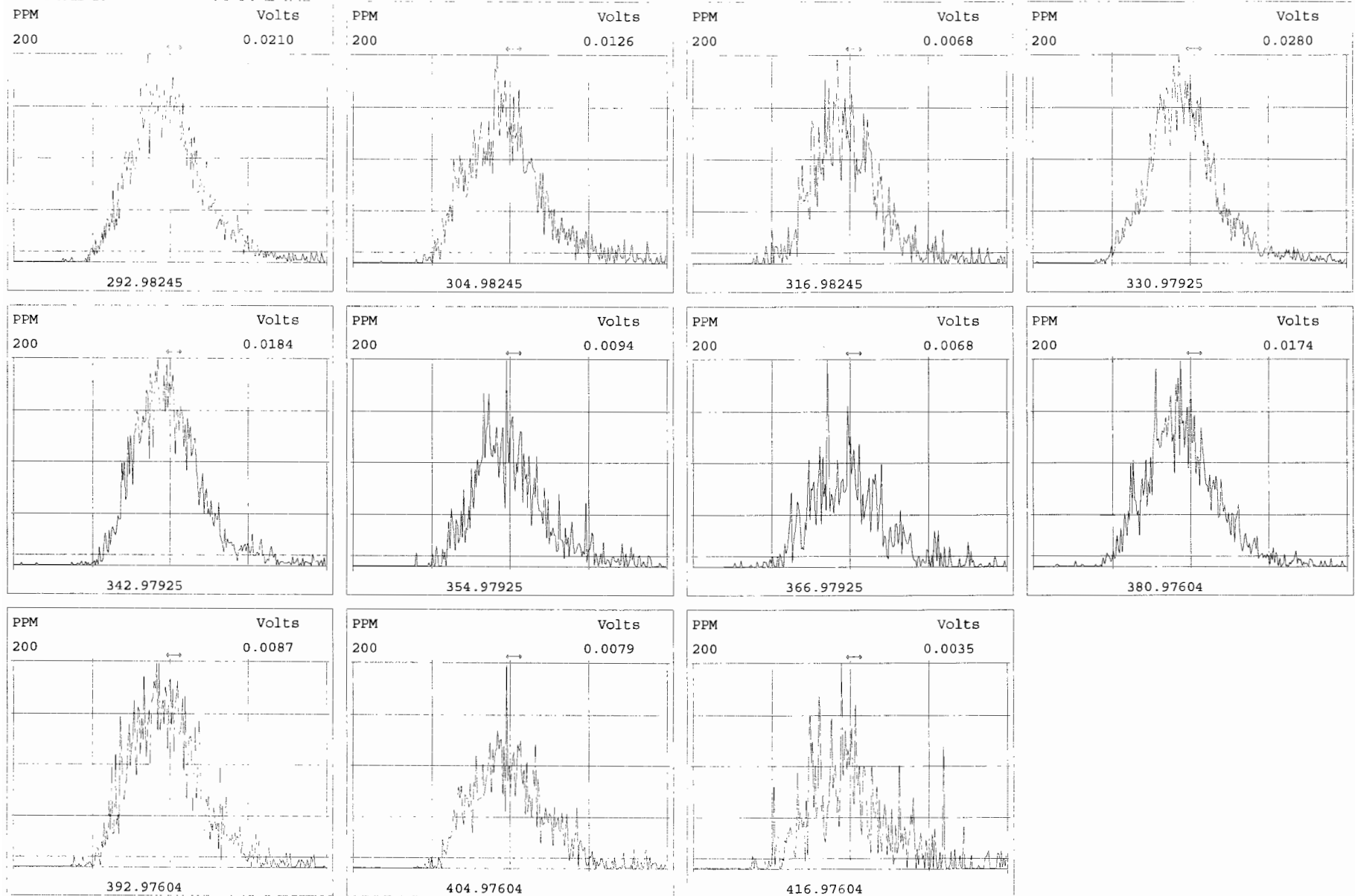
% VALLEY HEIGHT  
 BETWEEN  
 COMPARED PEAKS (1)

<25%

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

Analyst: DB

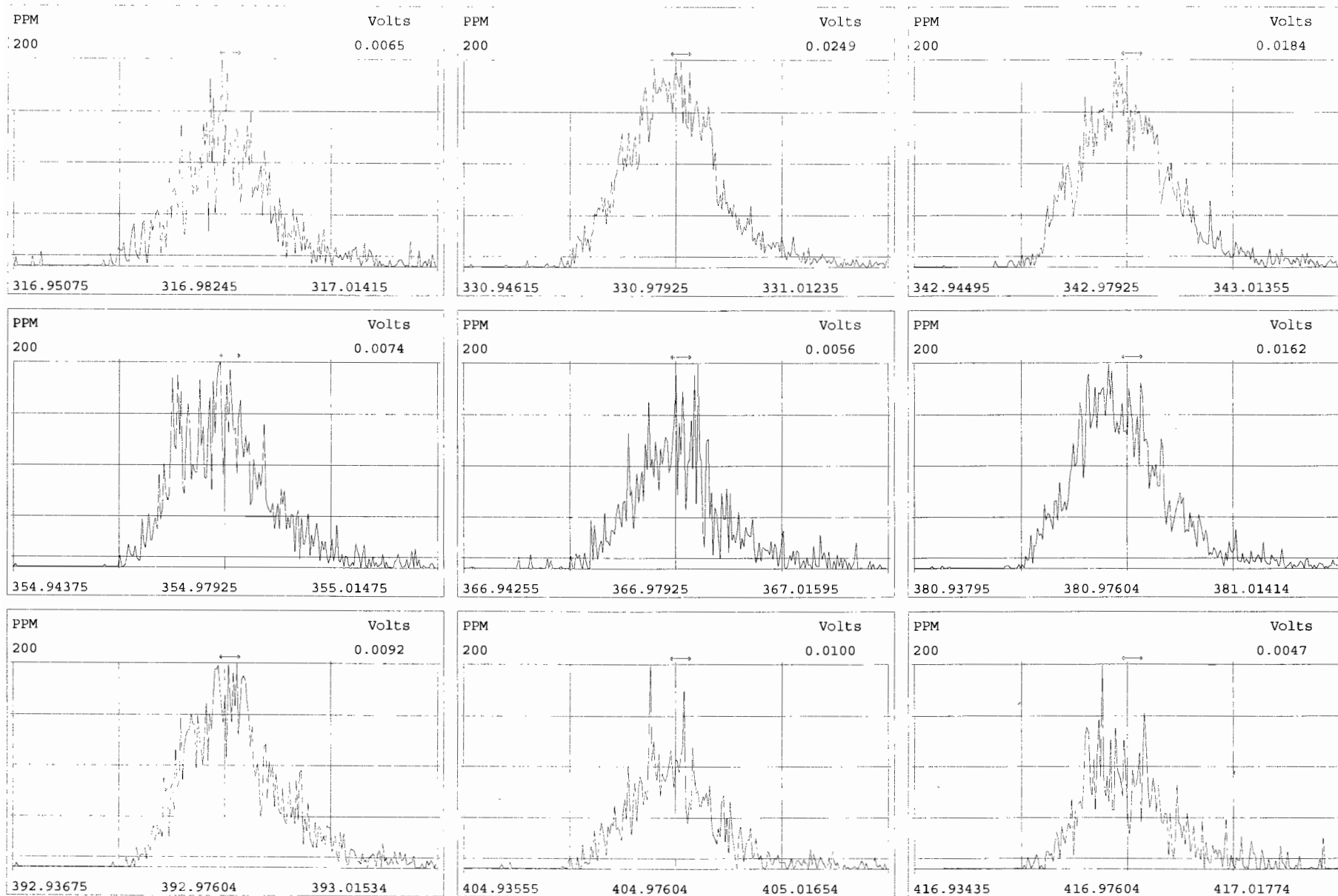
Date: 10/10/19





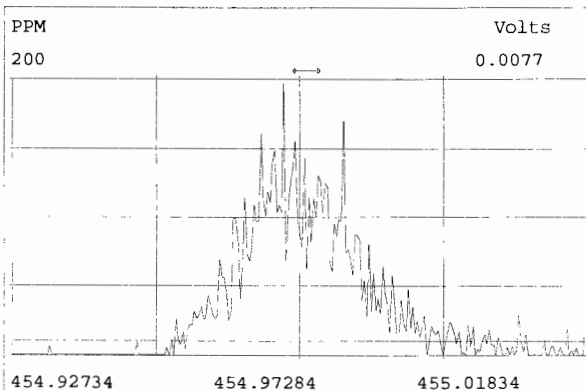
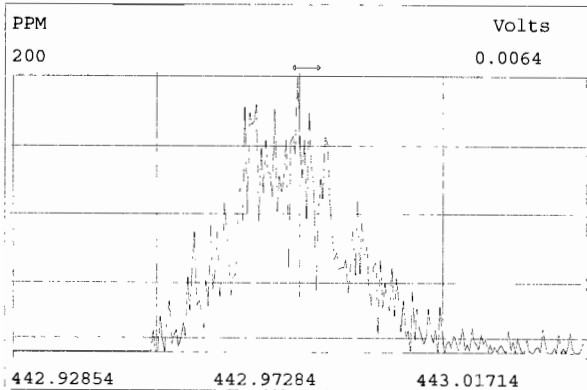
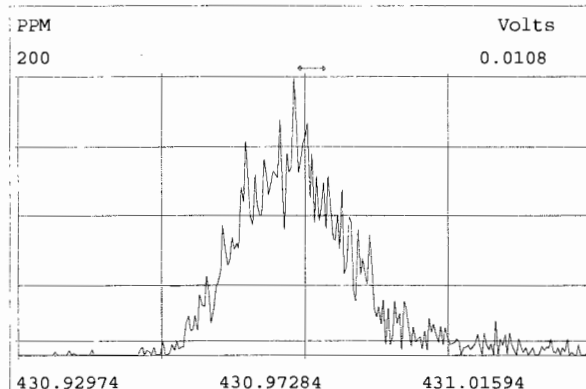
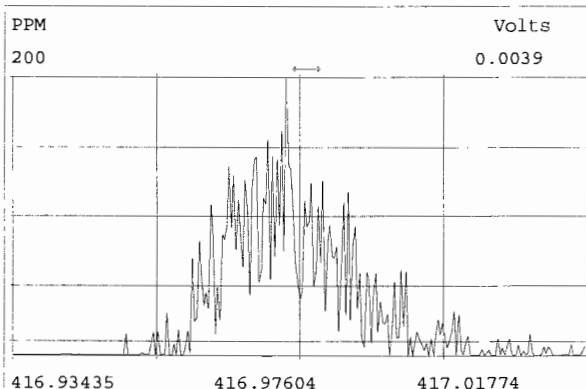
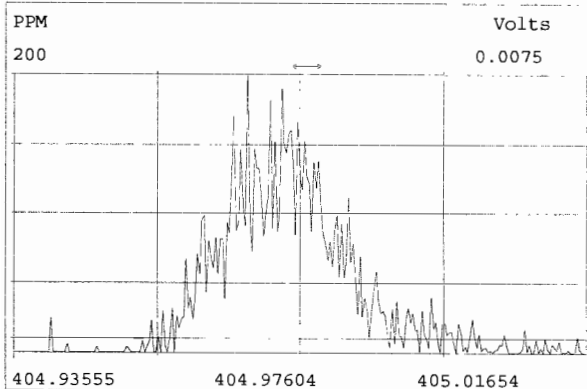
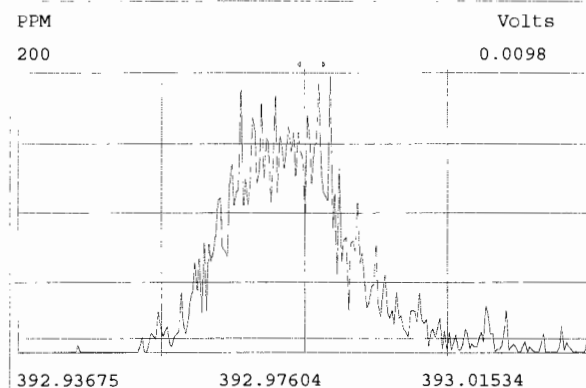
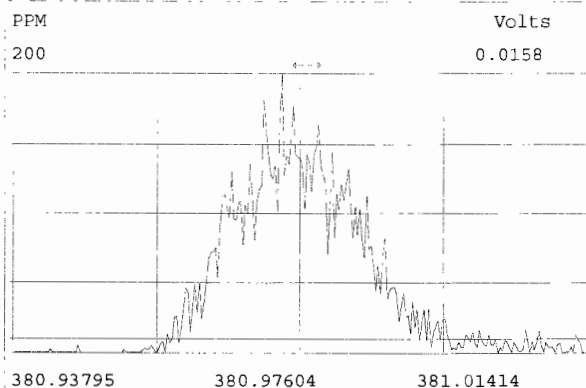
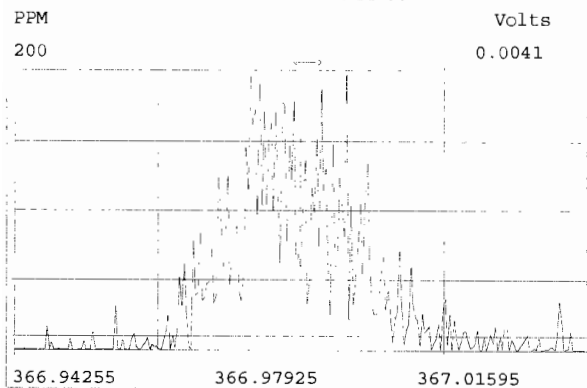
Peak Locate Examination: 9-OCT-2019:16:10 File:191009D1

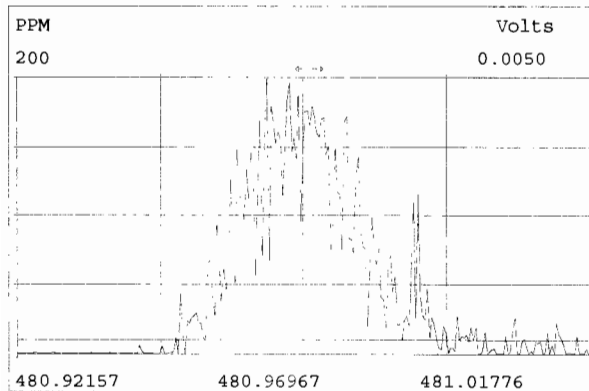
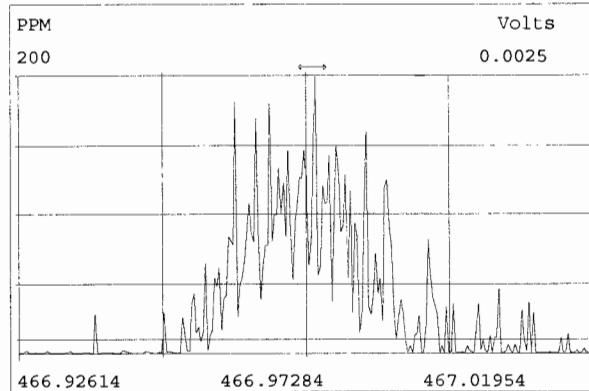
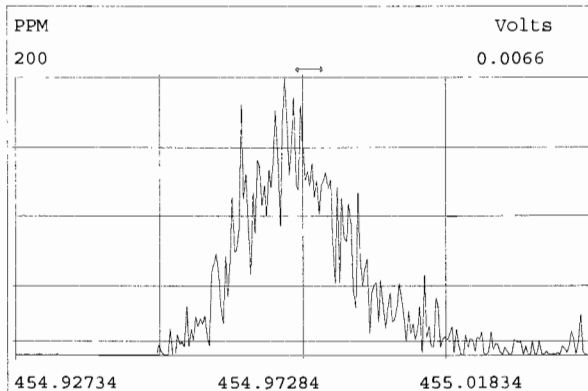
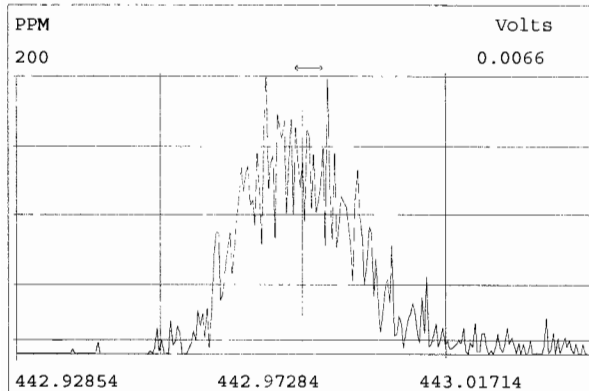
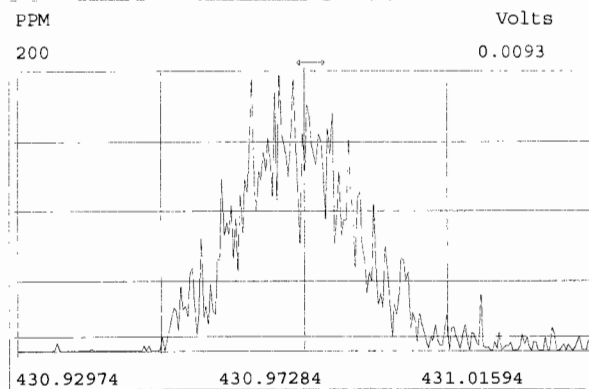
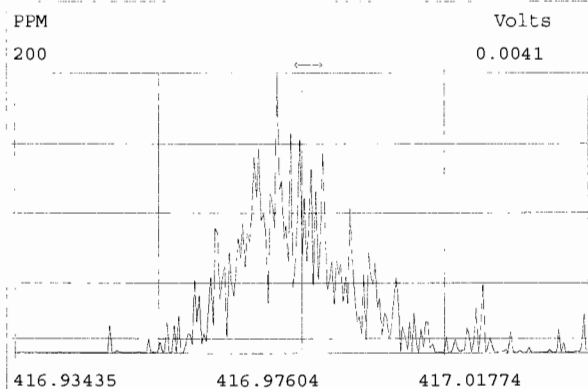
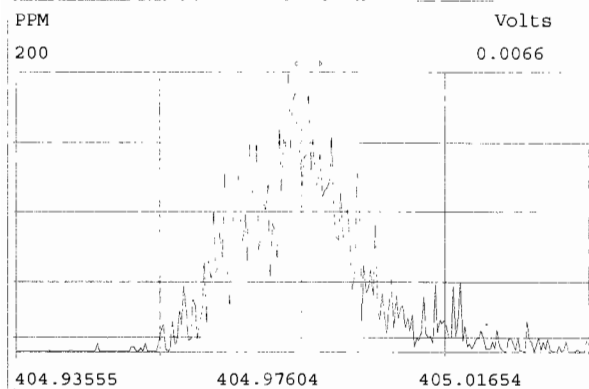
Experiment:OCDD\_DB5 Function:2 Reference:PFK

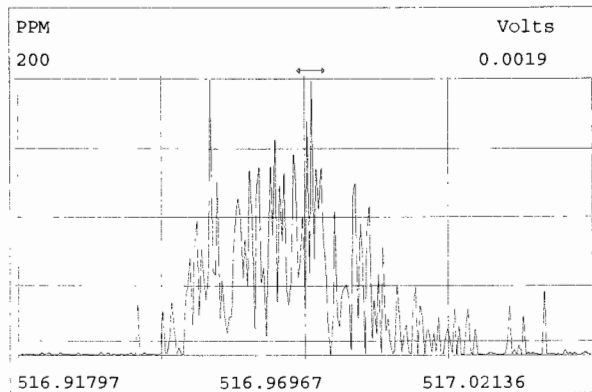
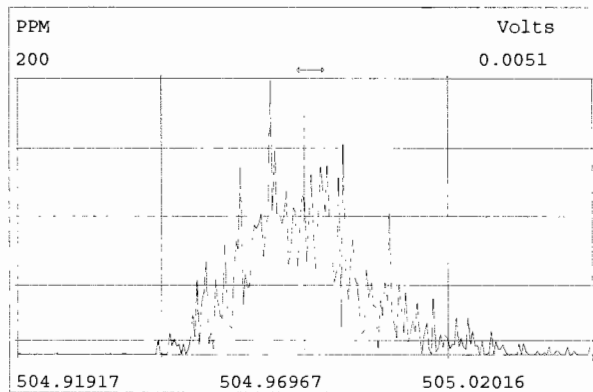
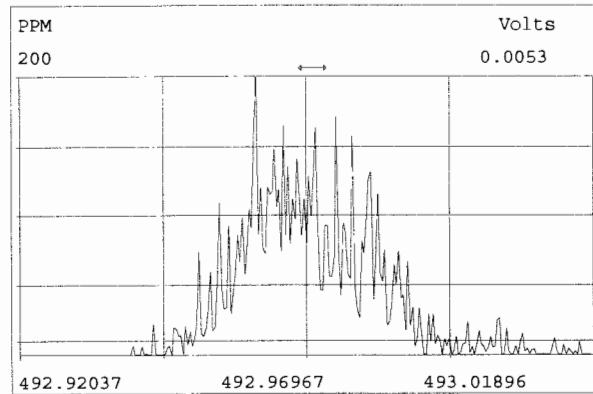
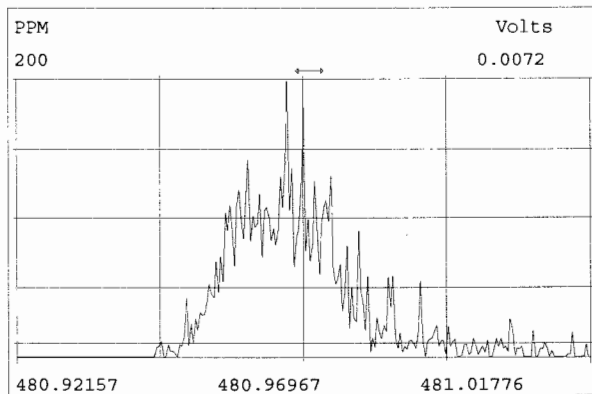
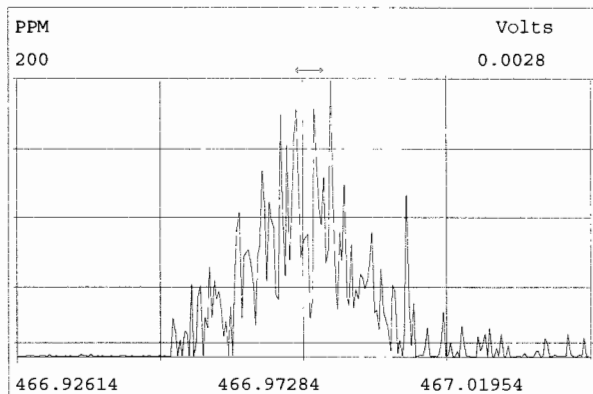
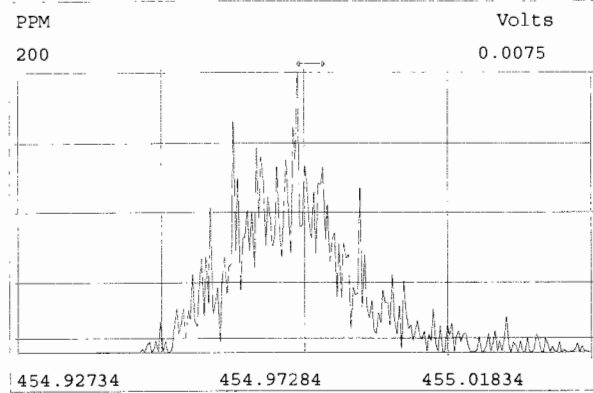
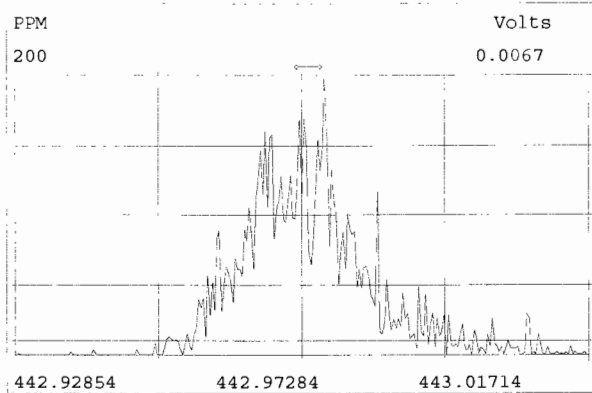
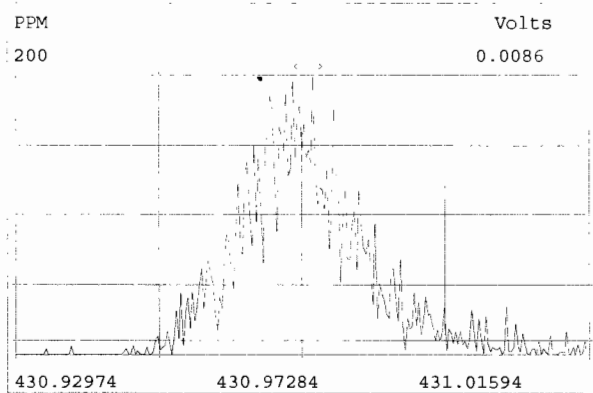


Peak Locate Examination: 9-OCT-2019:16:11 File:191009D1

Experiment:OCDD\_DB5 Function:3 Reference:PFK



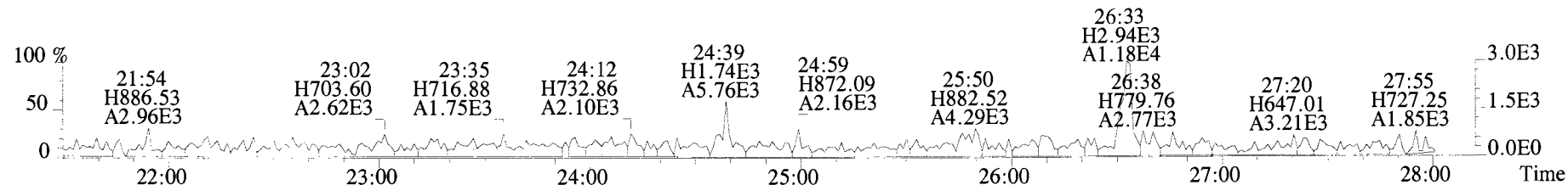




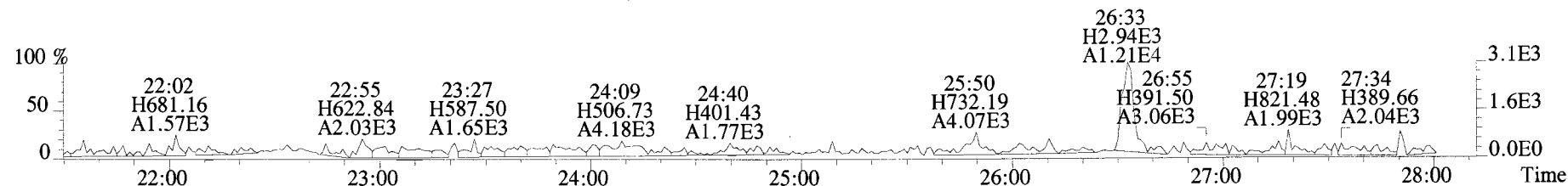
Vista Analytical Laboratory - Injection Log Run file: 191009D1 Instrument ID: VG-7 GC Column ID: ZB-5MS

Data file	S#	Sample ID	Analyst	Acq date	Acq time	CCal	ECal
191009D1	1	ST191009D1-1	DB	9-OCT-19	16:13:04	ST191009D1-4	NA
191009D1	2	ST191009D1-2	DB	9-OCT-19	17:00:45	ST191009D1-4	NA
191009D1	3	ST191009D1-3	DB	9-OCT-19	17:48:27	ST191009D1-4	NA
191009D1	4	ST191009D1-4	DB	9-OCT-19	18:36:09	ST191009D1-4	NA
191009D1	5	ST191009D1-5	DB	9-OCT-19	19:23:46	ST191009D1-4	NA
191009D1	6	ST191009D1-6	DB	9-OCT-19	20:11:17	ST191009D1-4	NA
191009D1	7	SOLVENT BLANK	DB	9-OCT-19	20:58:57	ST191009D1-4	NA
191009D1	8	SS191009D1-1	DB	9-OCT-19	21:46:34	ST191009D1-4	NA
191009D1	9	B9J0001-BS1	DB	9-OCT-19	22:34:09	ST191009D1-4	NA
191009D1	10	SOLVENT BLANK	DB	9-OCT-19	23:21:45	ST191009D1-4	NA
191009D1	11	B9J0001-BLK1	DB	10-OCT-19	00:09:30	ST191009D1-4	NA
191009D1	12	QC191007D1-1	DB	10-OCT-19	00:57:00	ST191009D1-4	NA
191009D1	13	1903285-08	DB	10-OCT-19	01:44:36	ST191009D1-4	NA
191009D1	14	1903285-09	DB	10-OCT-19	02:32:11	ST191009D1-4	NA
191009D1	15	1903285-10	DB	10-OCT-19	03:19:47	ST191009D1-4	NA
191009D1	16	1903103-02@5X	DB	10-OCT-19	04:07:23	ST191009D1-4	NA
191009D1	17	1903103-01@5X	DB	10-OCT-19	04:54:54	ST191009D1-4	NA
191009D1	18	B9I0240-DUP1@5X	DB	10-OCT-19	05:42:38	ST191009D1-4	NA

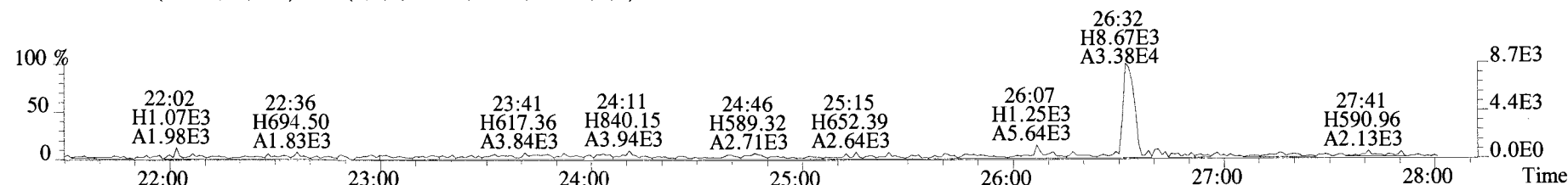
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
319.8965 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



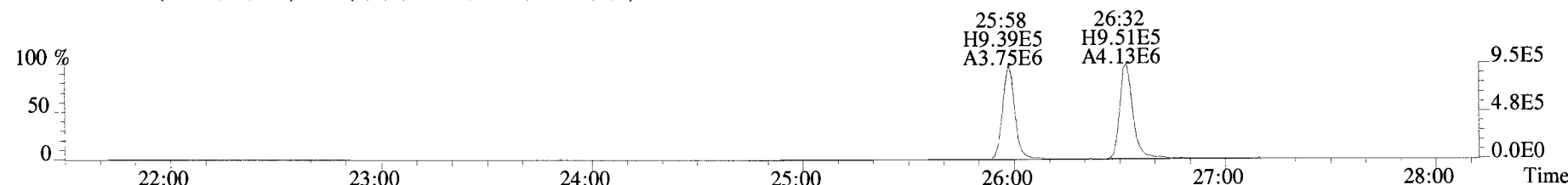
321.8936 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



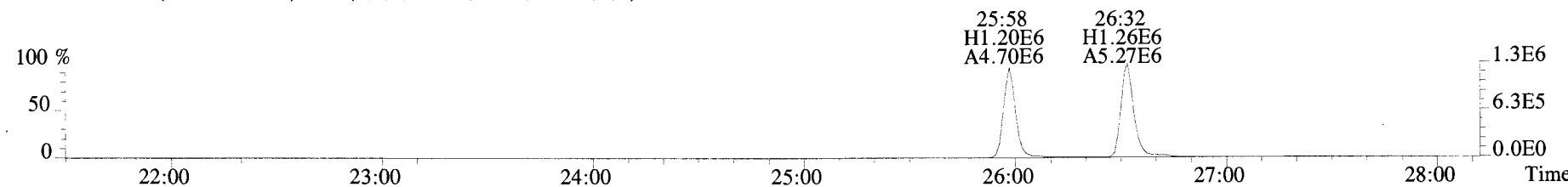
327.8847 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



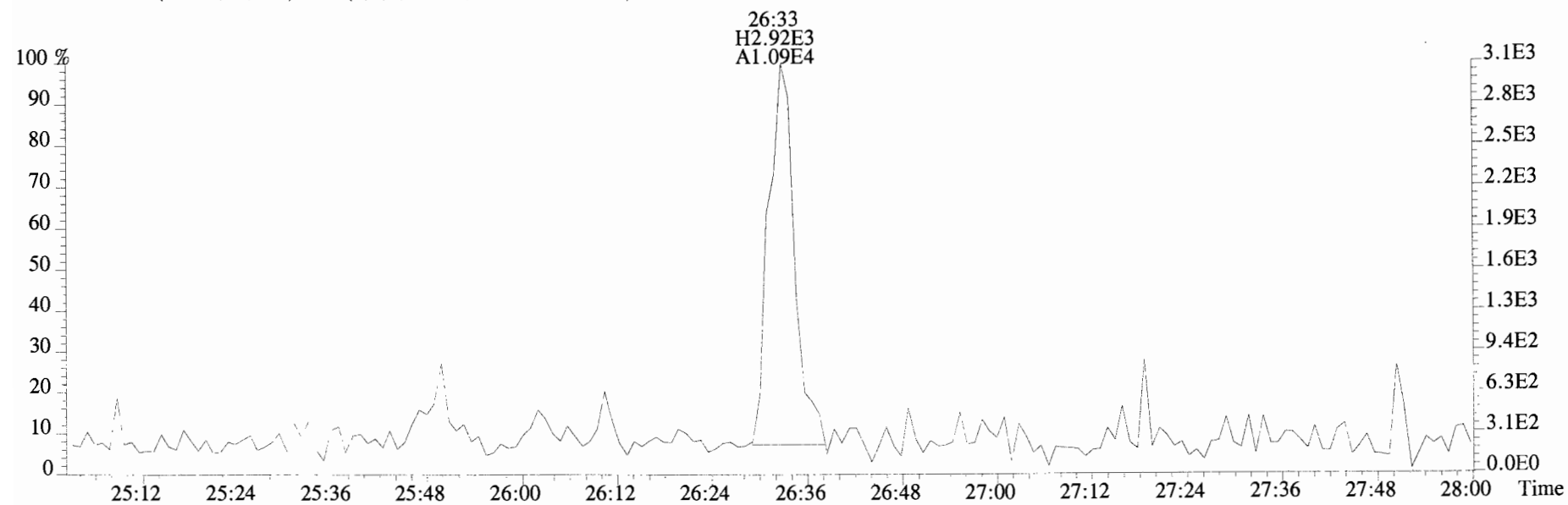
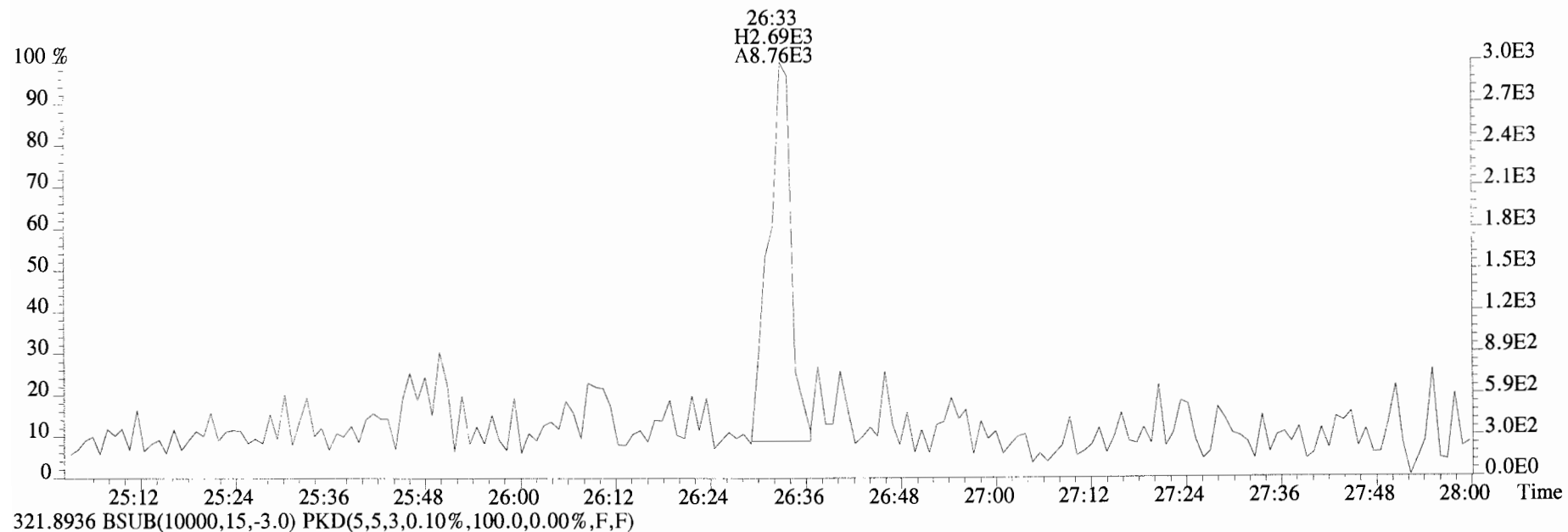
331.9368 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



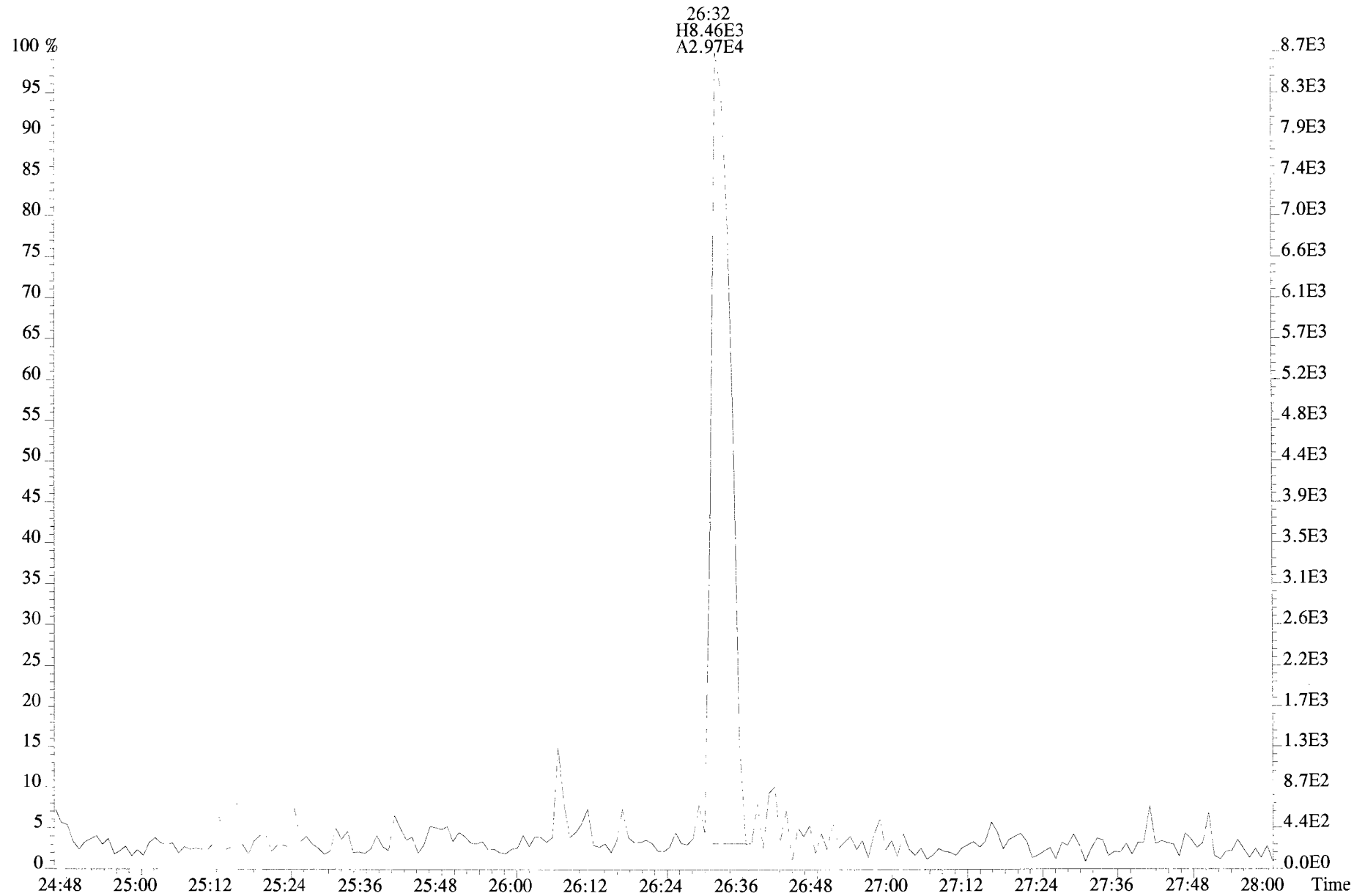
333.9339 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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)

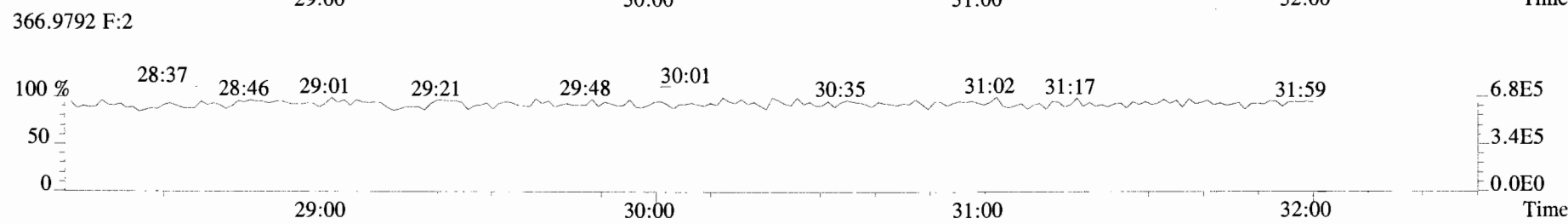
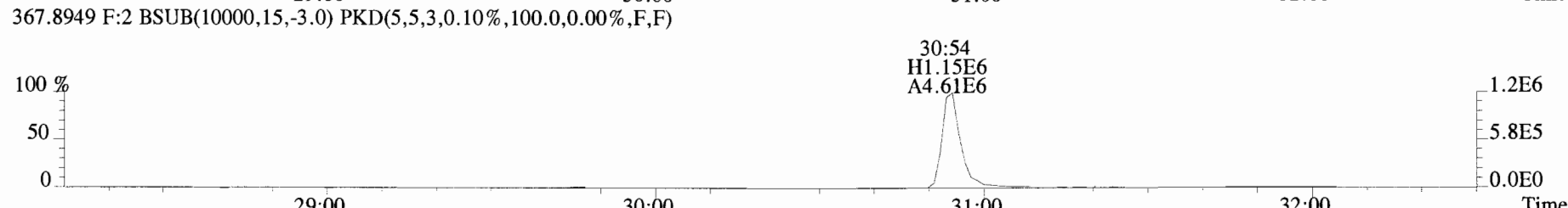
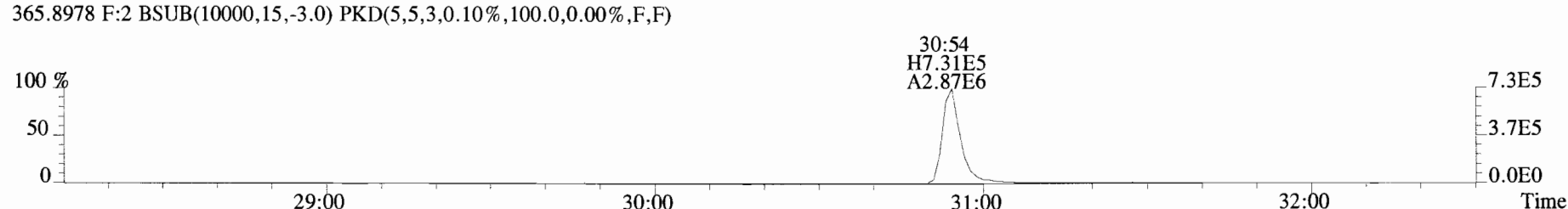
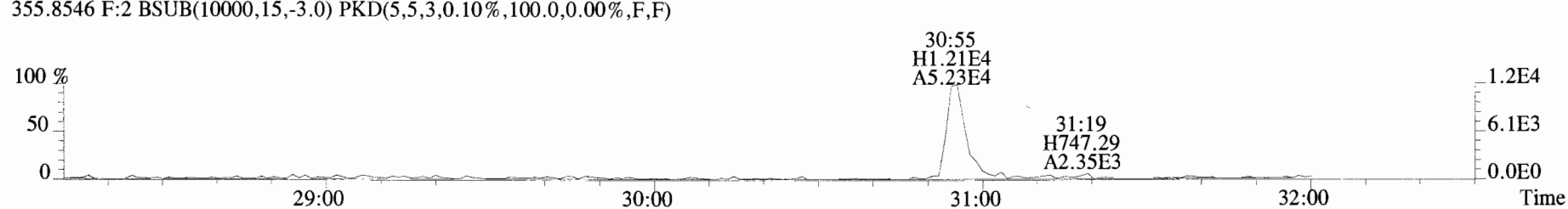
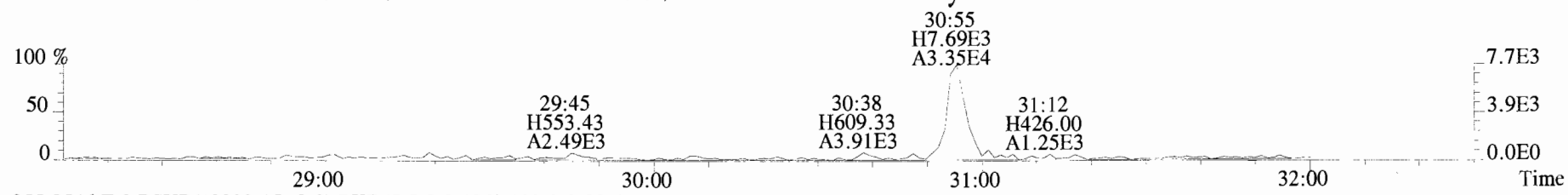


File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
327.8847 BSUB(10000,15,-3.0)

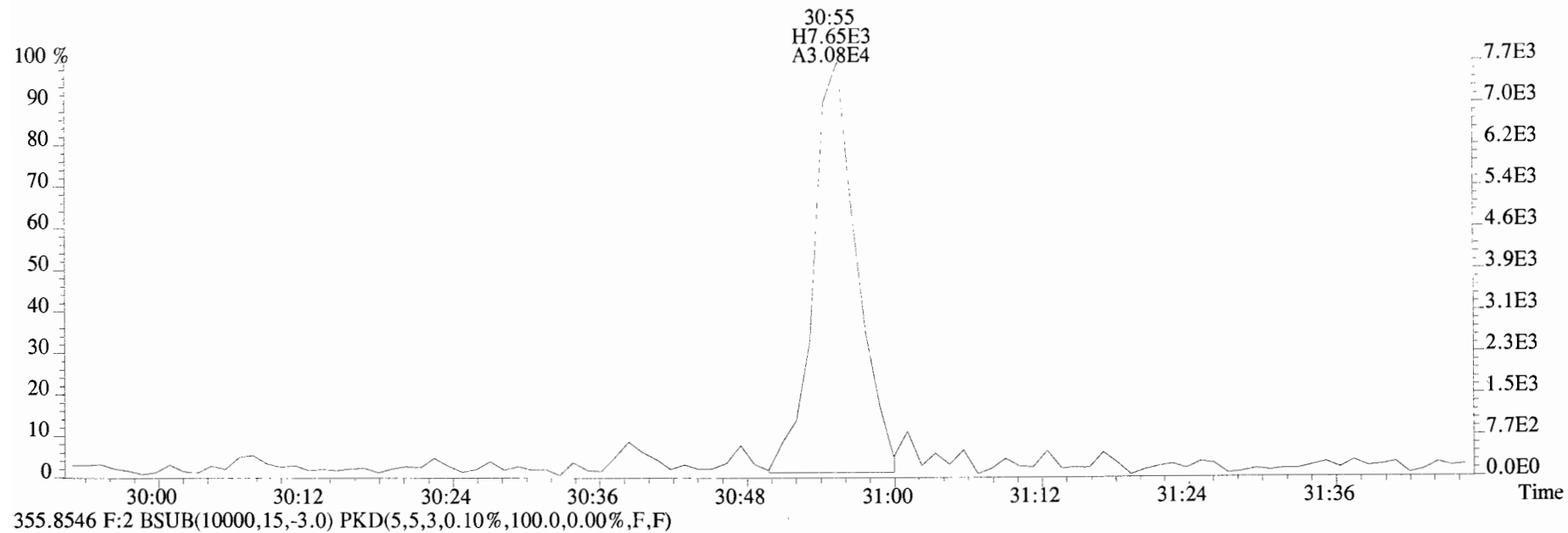




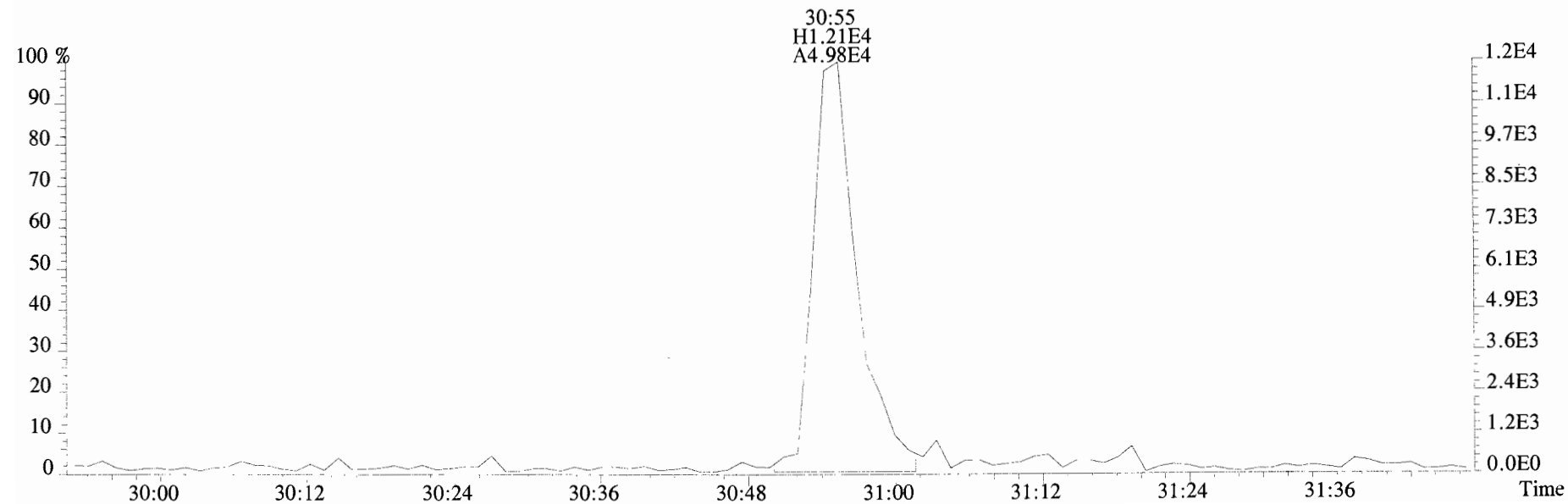
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



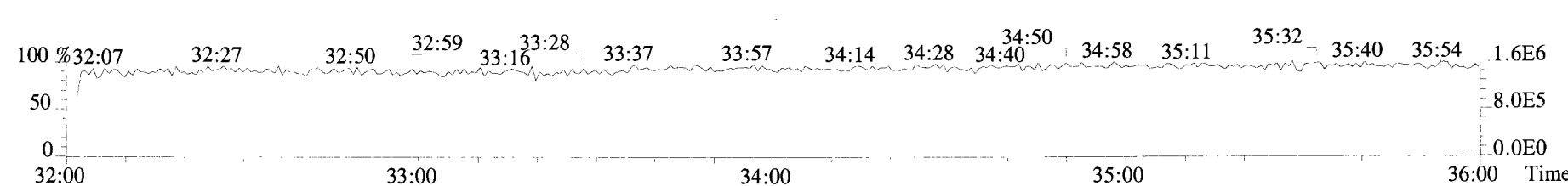
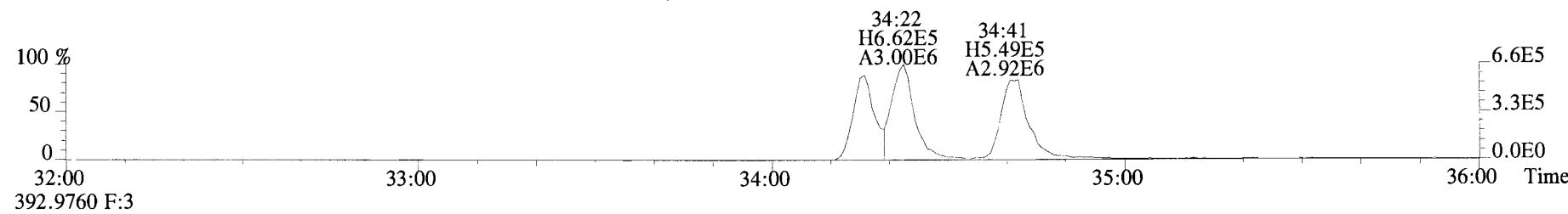
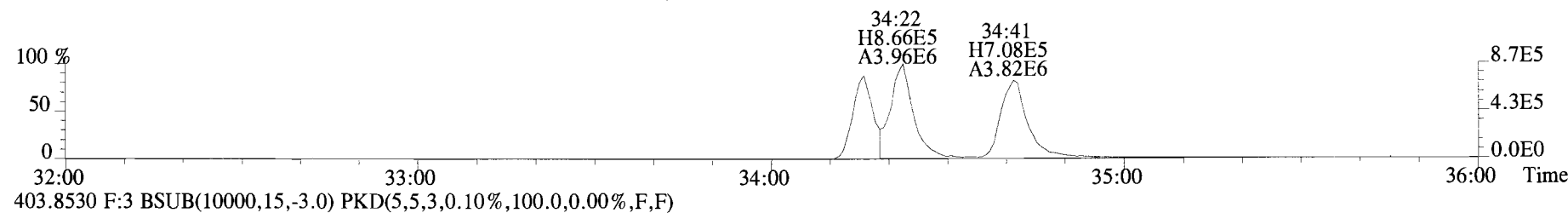
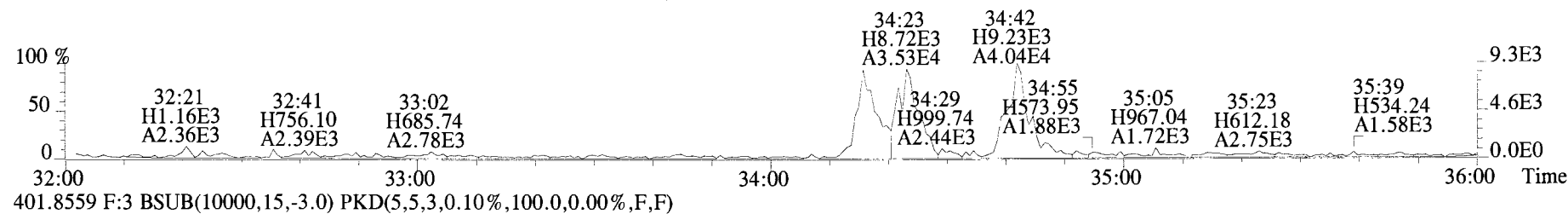
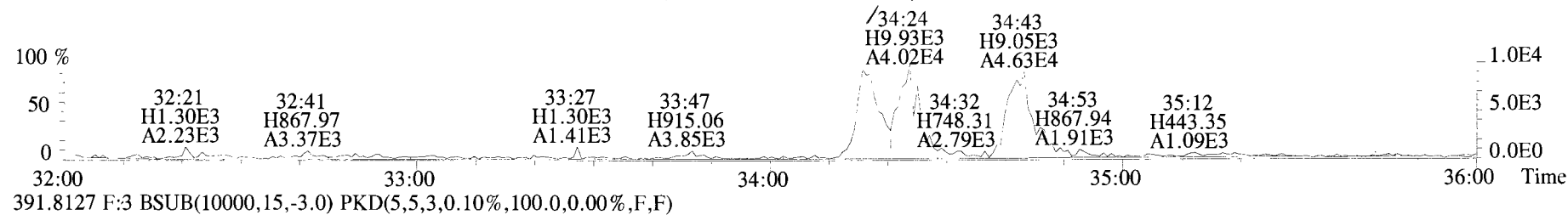
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
353.8576 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



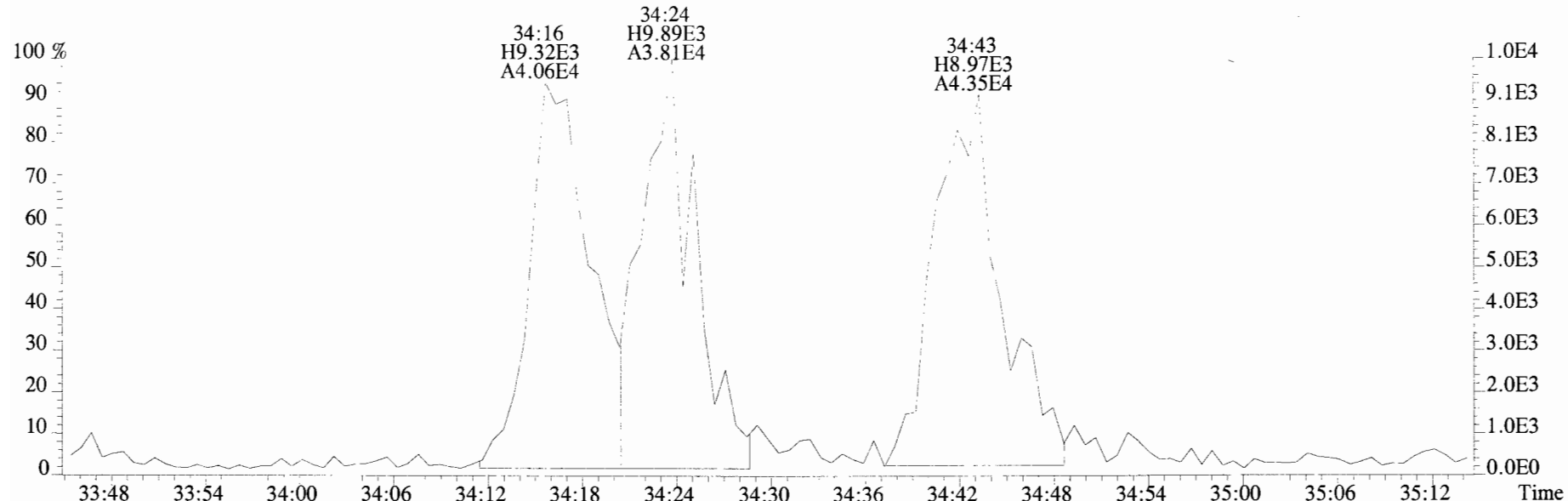
355.8546 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



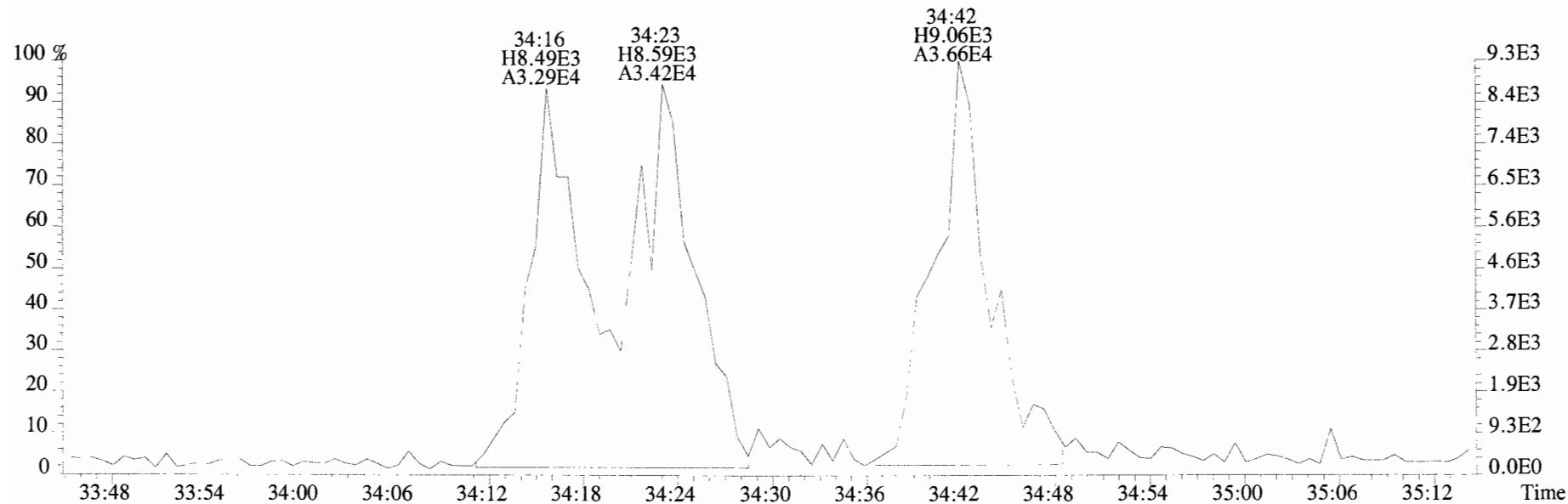
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
 389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



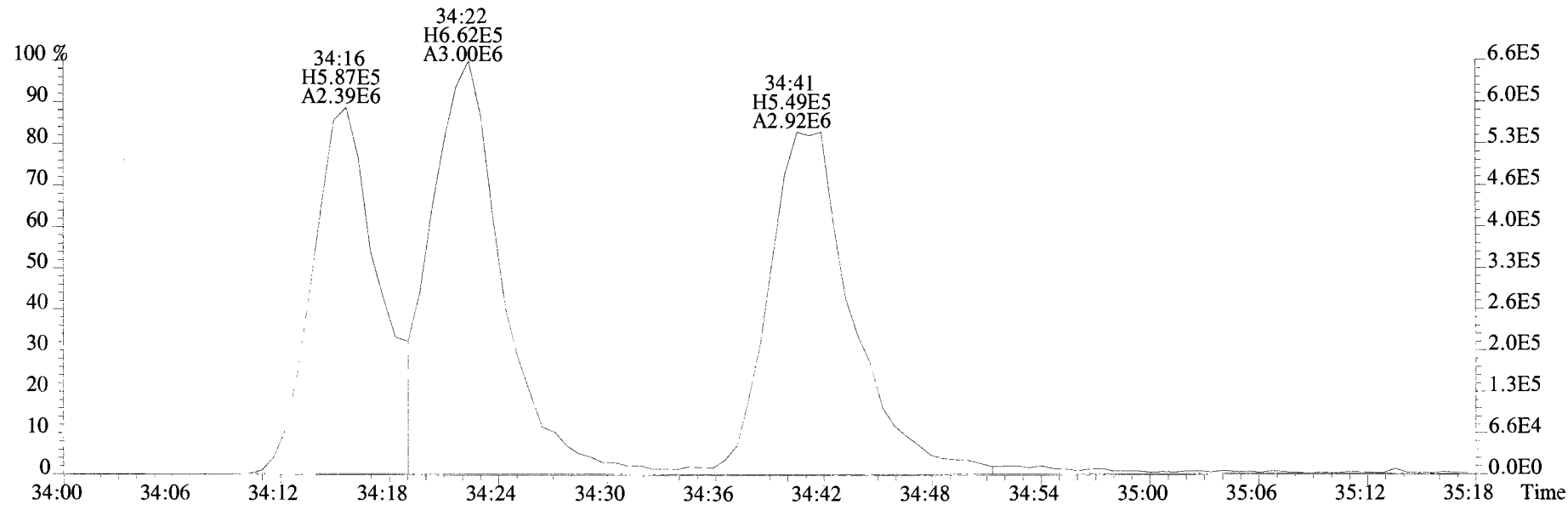
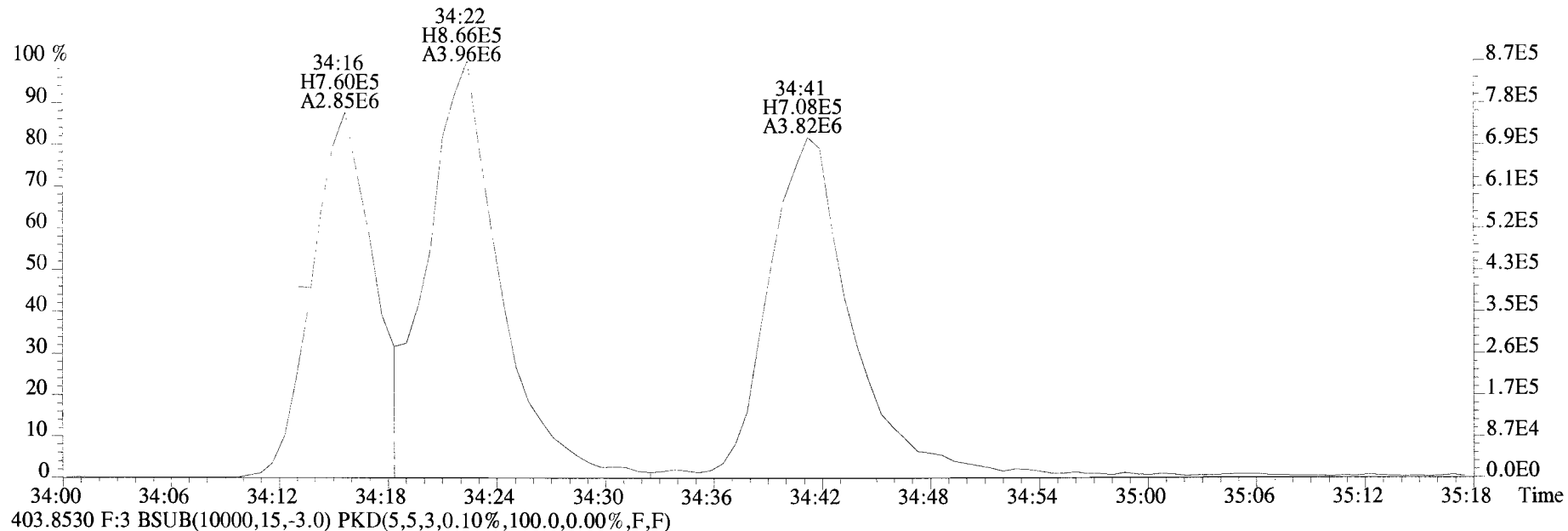
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
389.8156 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



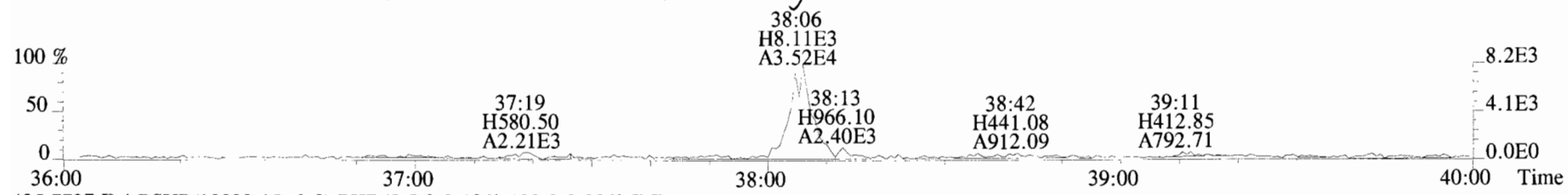
391.8127 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



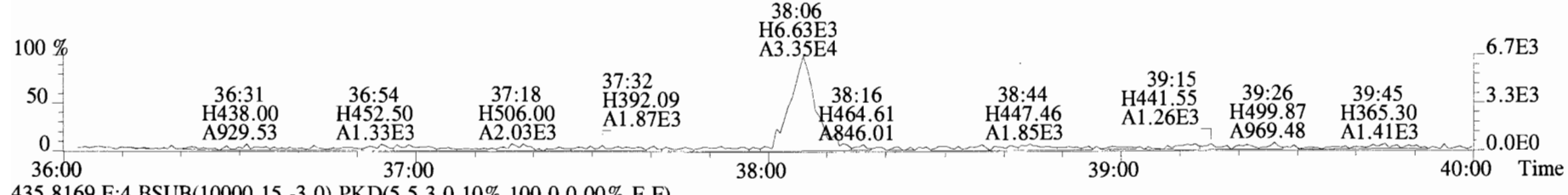
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
401.8559 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



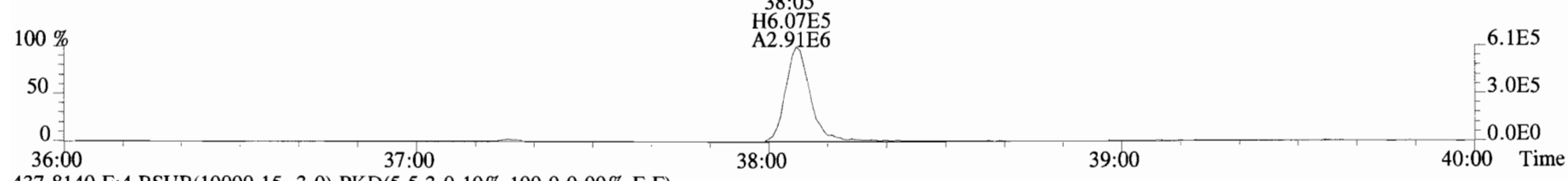
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
 423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



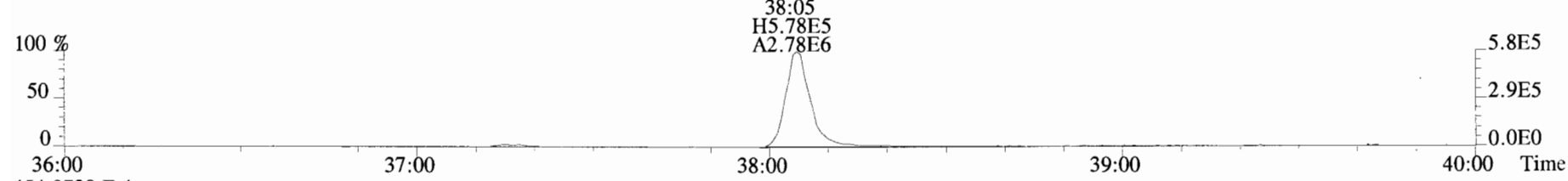
425.7737 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



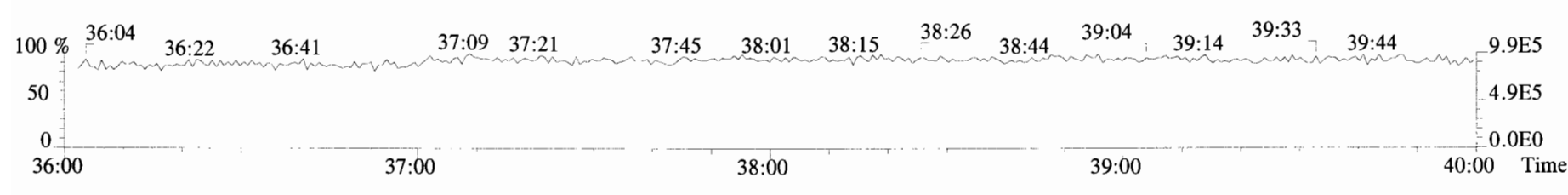
435.8169 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



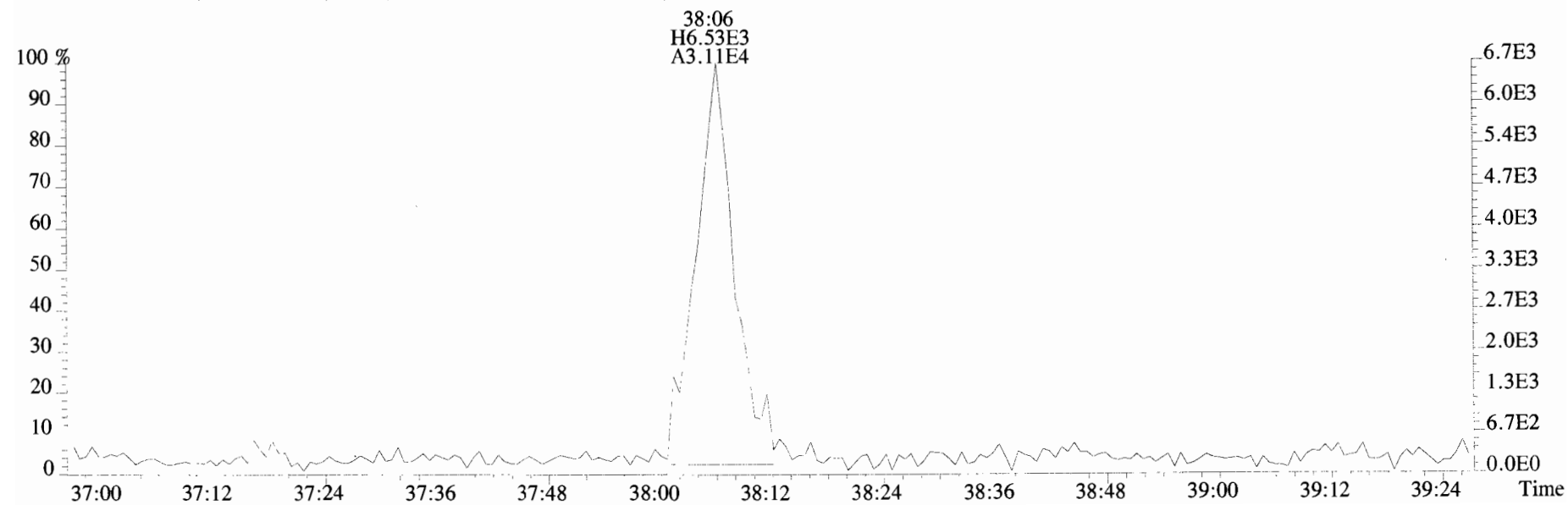
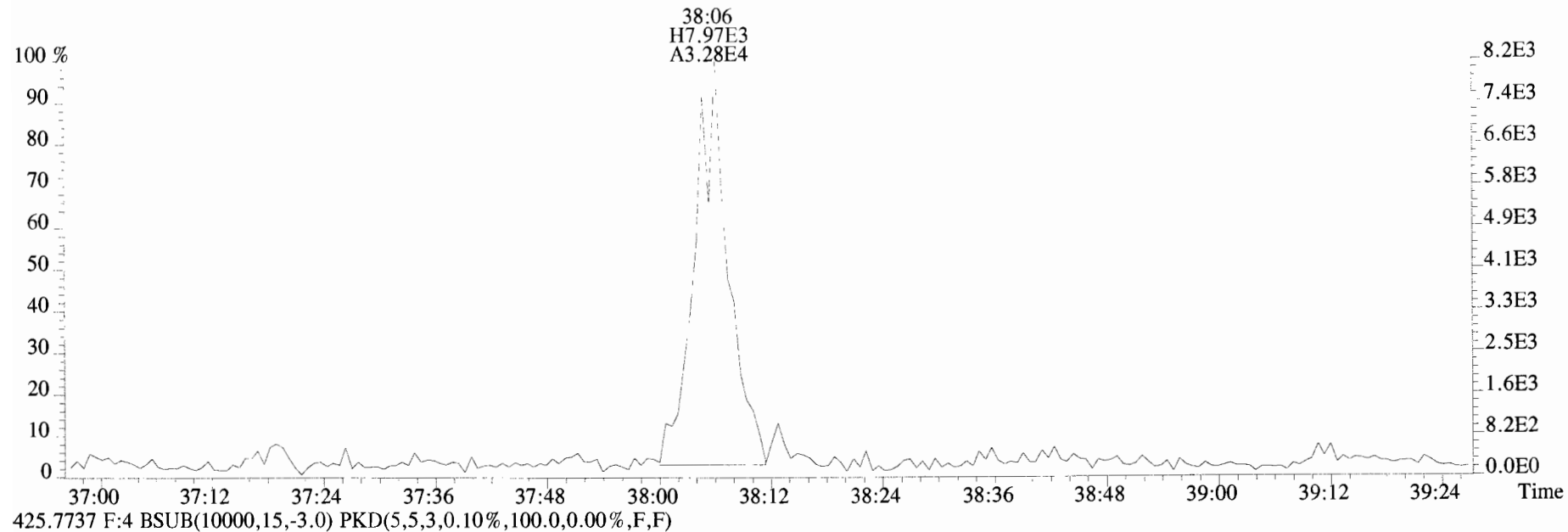
437.8140 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



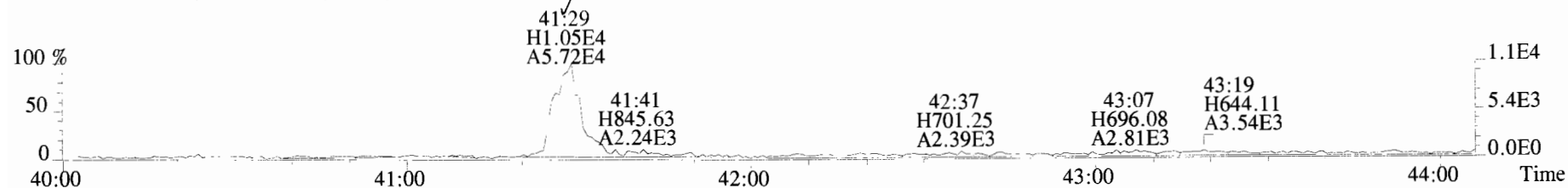
454.9728 F:4



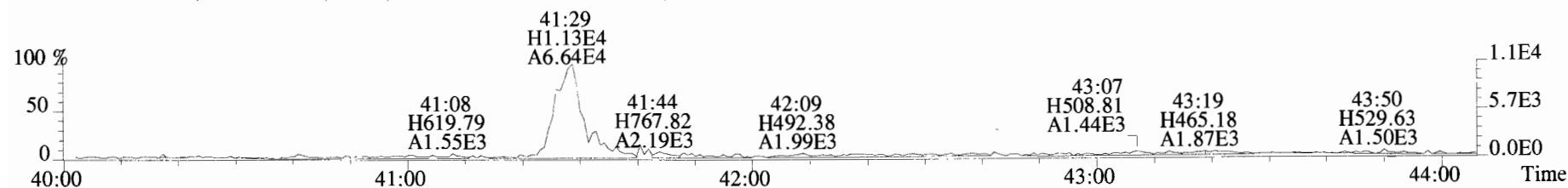
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
423.7767 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



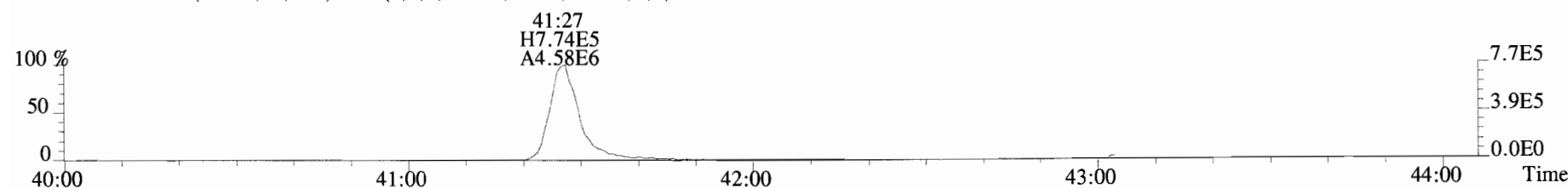
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



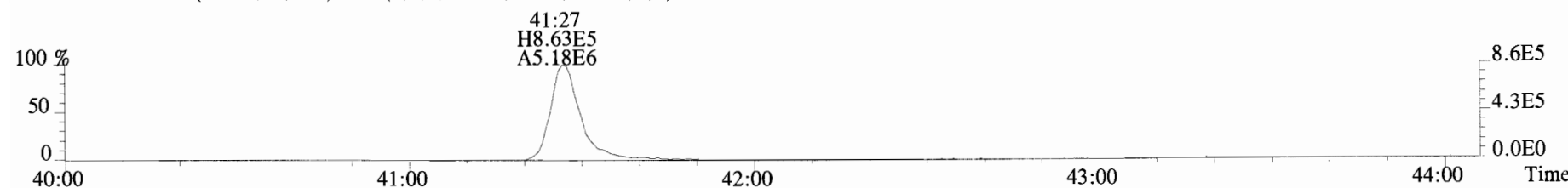
459.7348 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



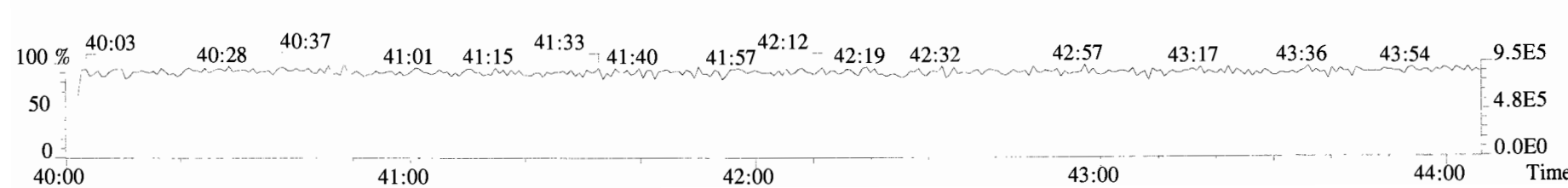
469.7780 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

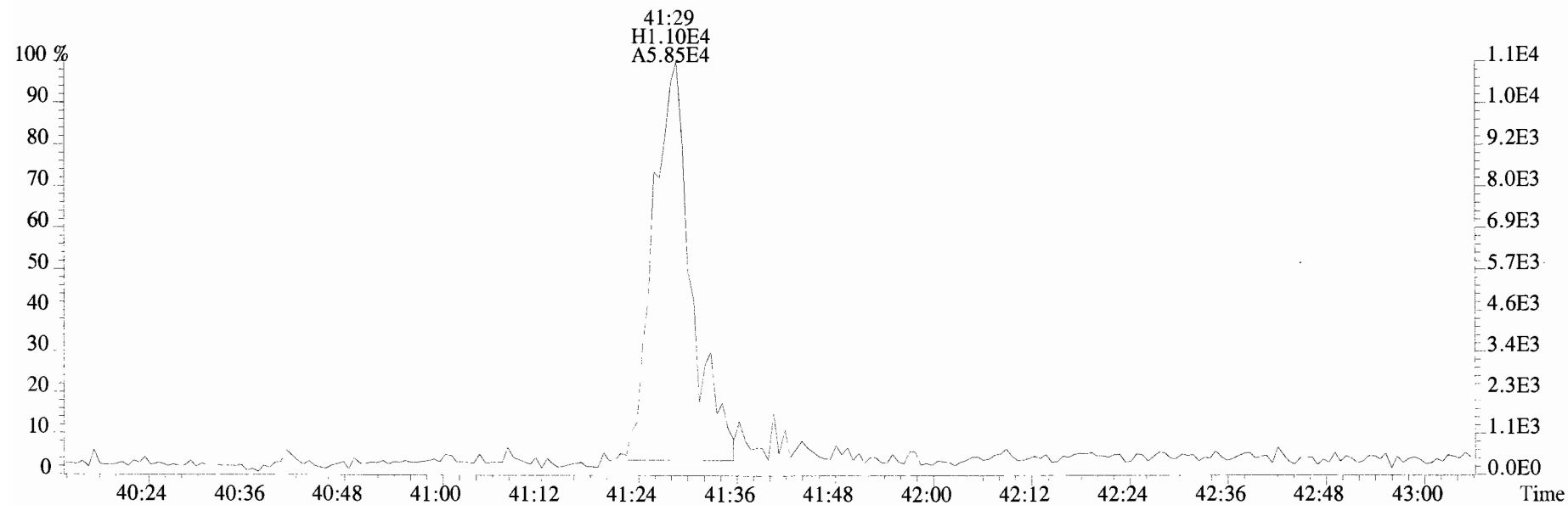
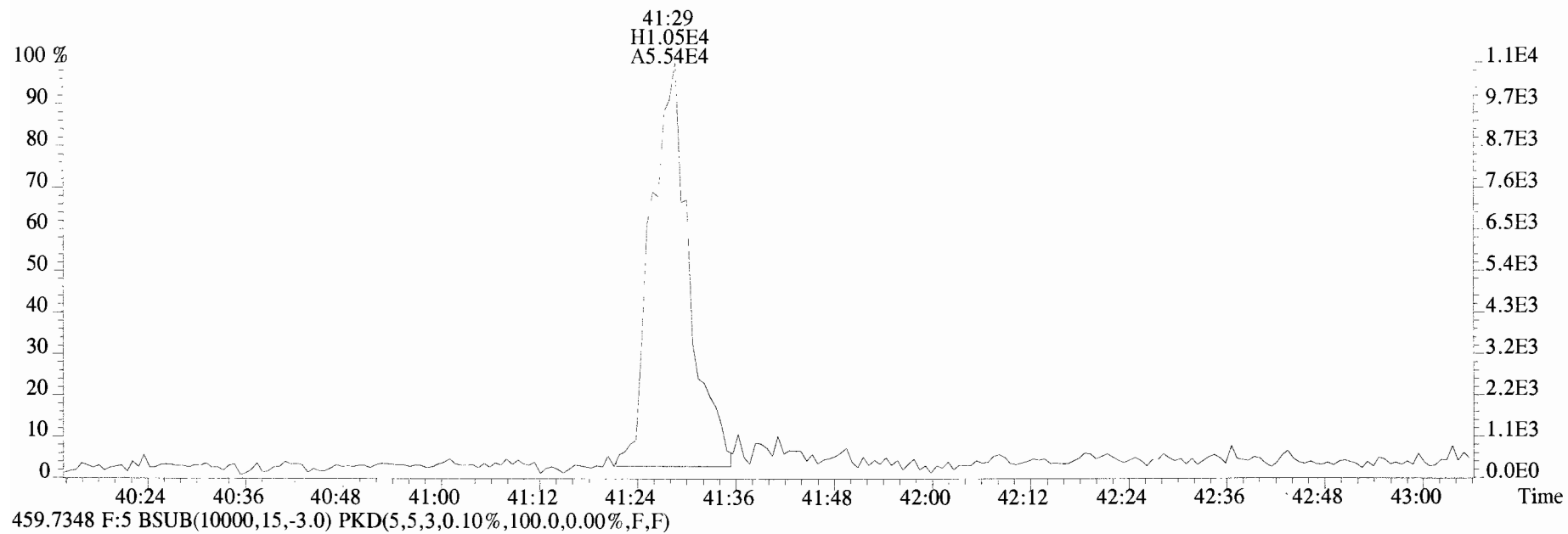


454.9728 F:5

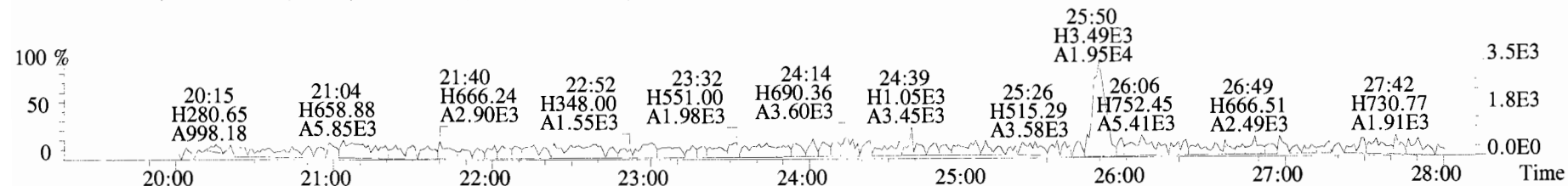




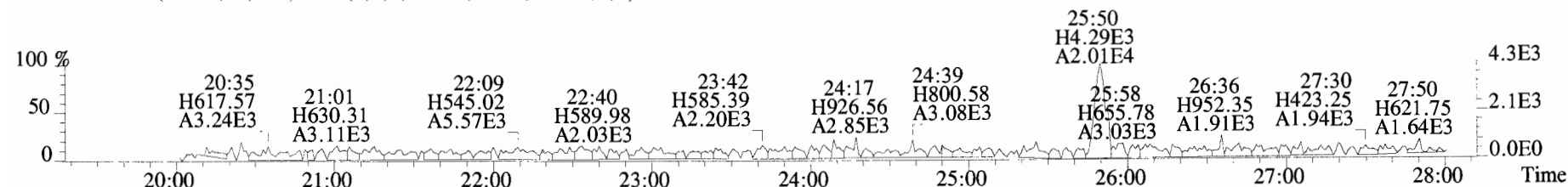
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
457.7377 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



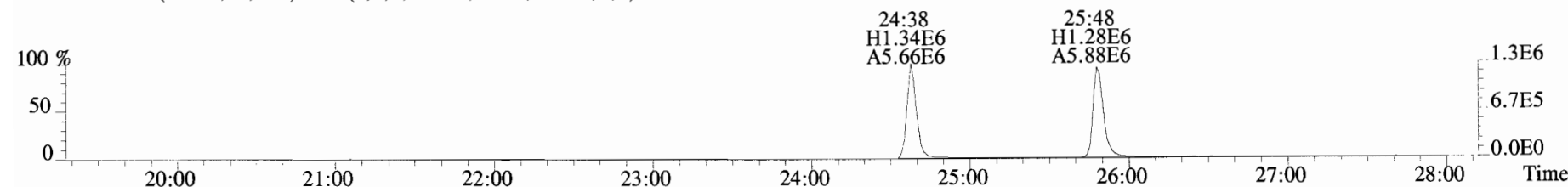
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



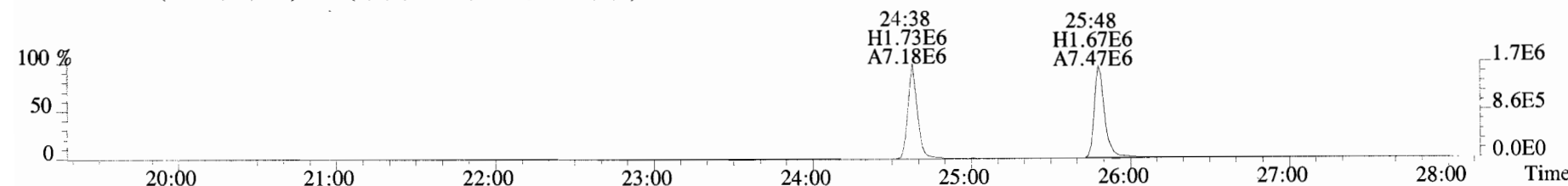
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



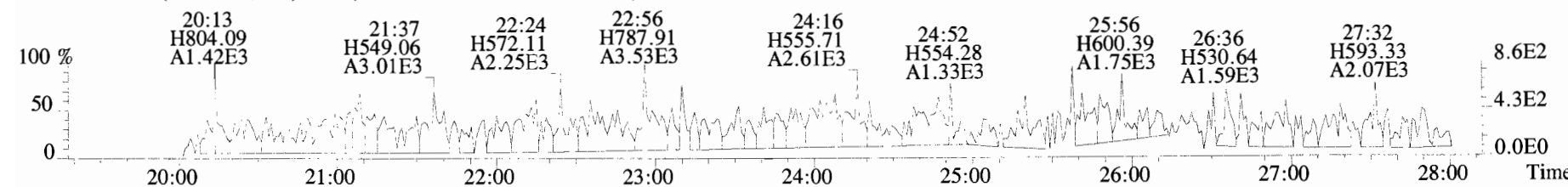
315.9419 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



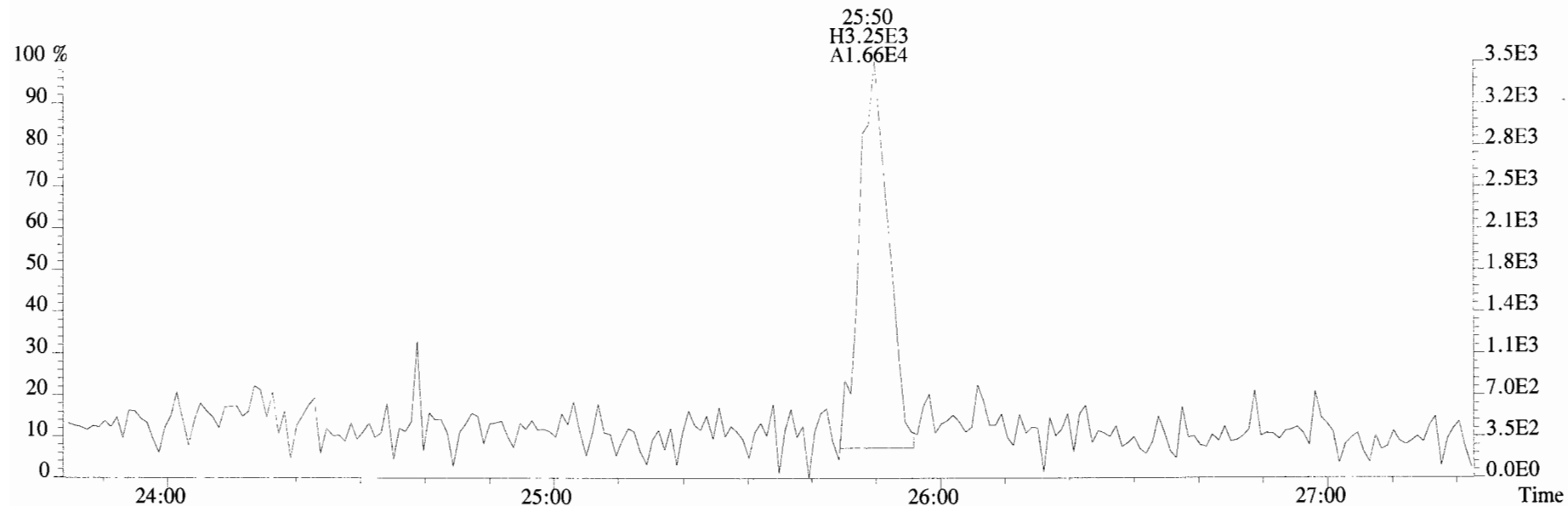
317.9389 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



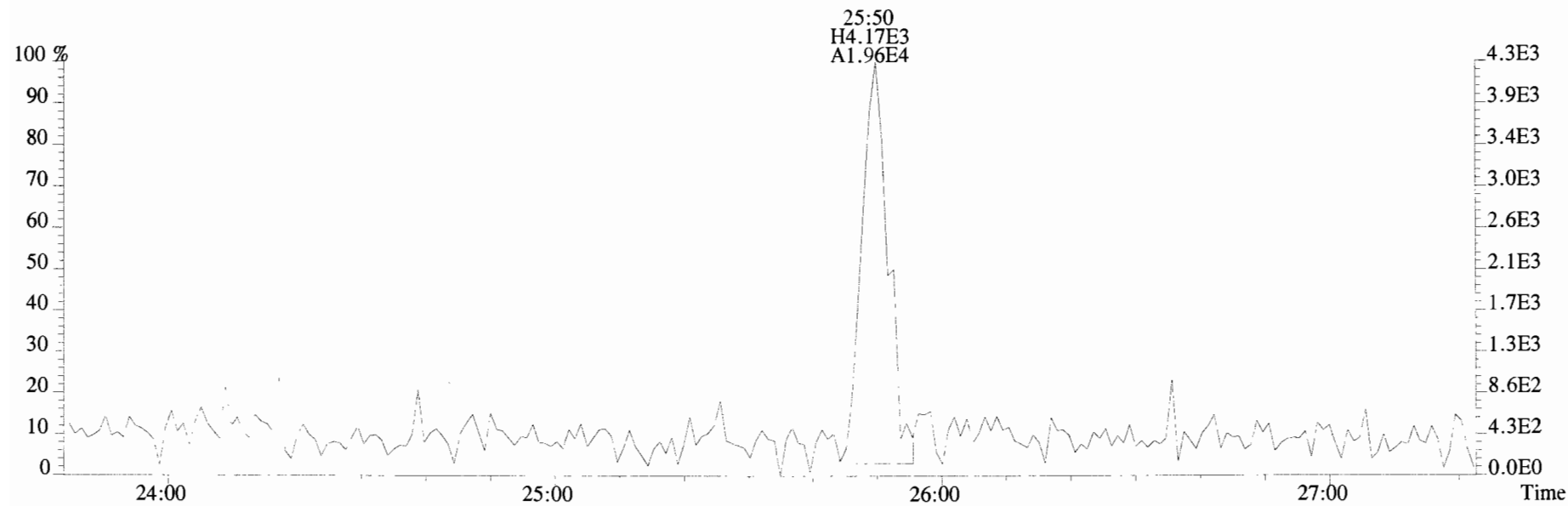
375.8364 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



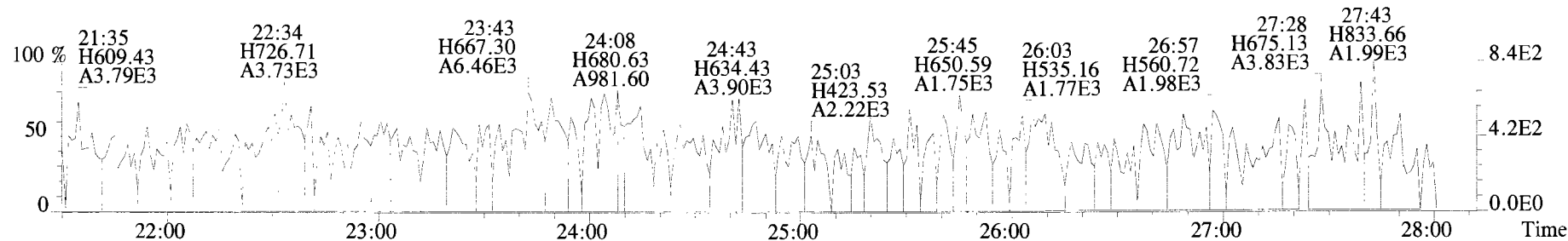
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
303.9016 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



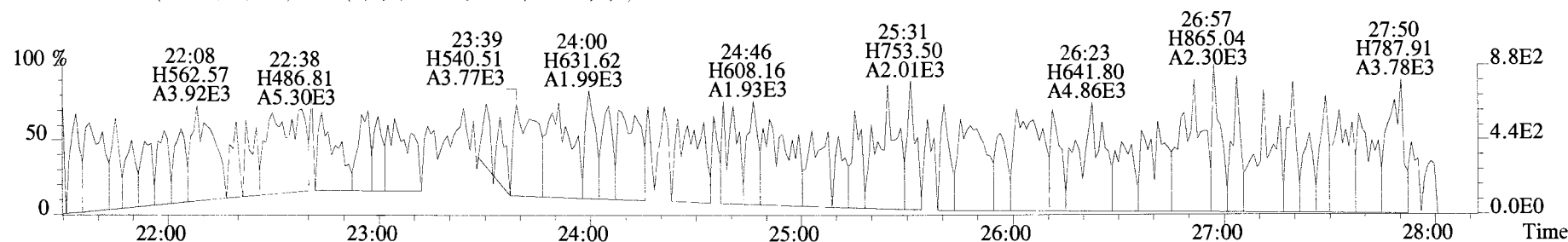
305.8987 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



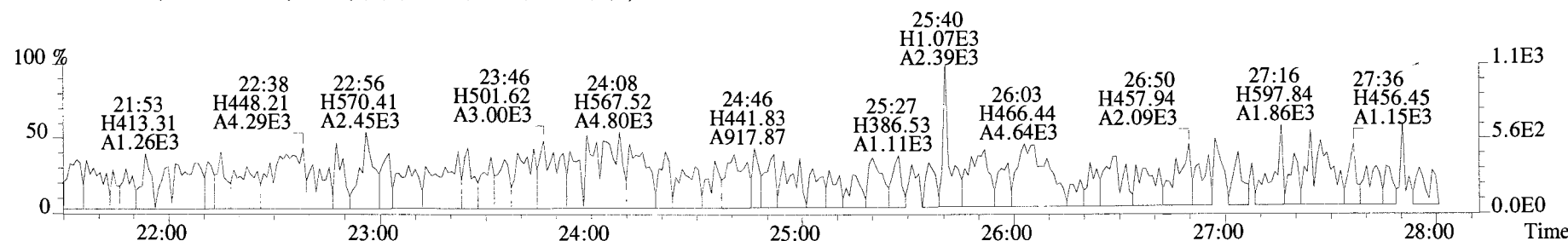
File:191009D1 #1-514 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
339.8597 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



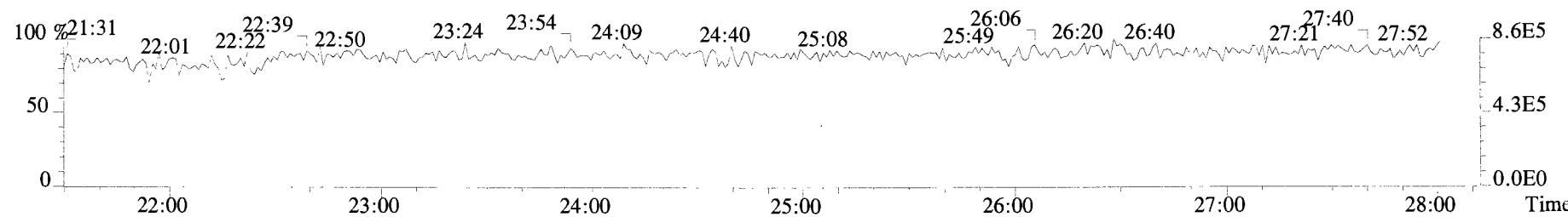
341.8568 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



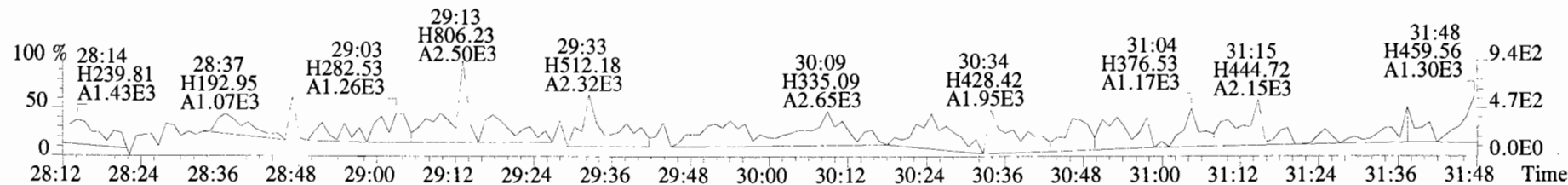
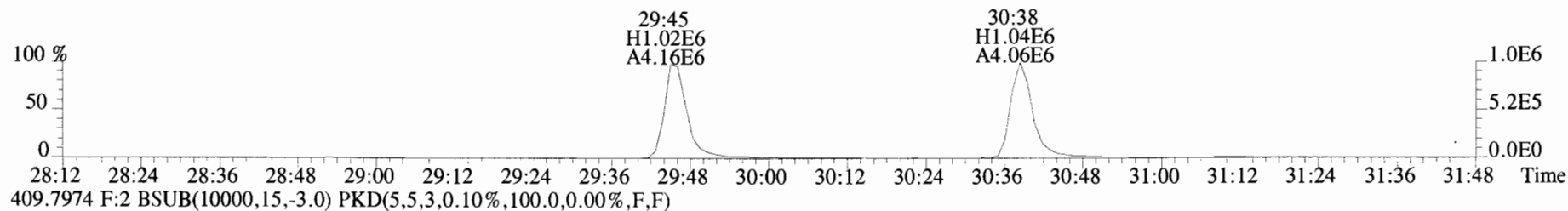
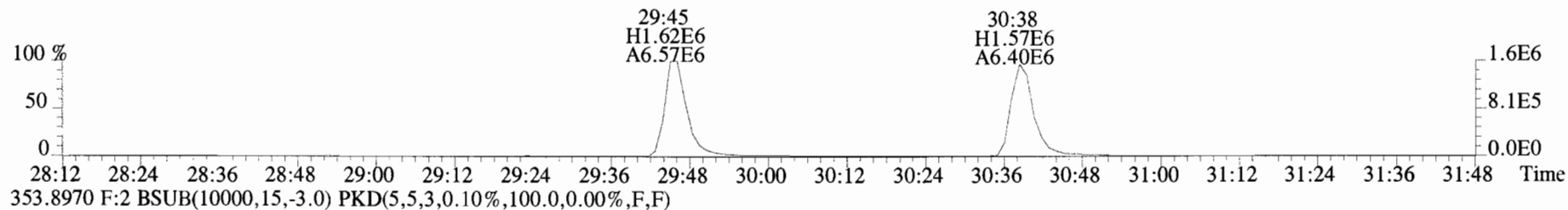
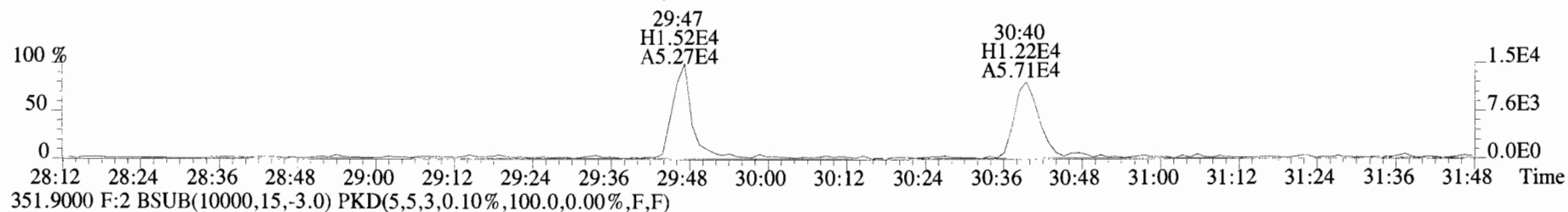
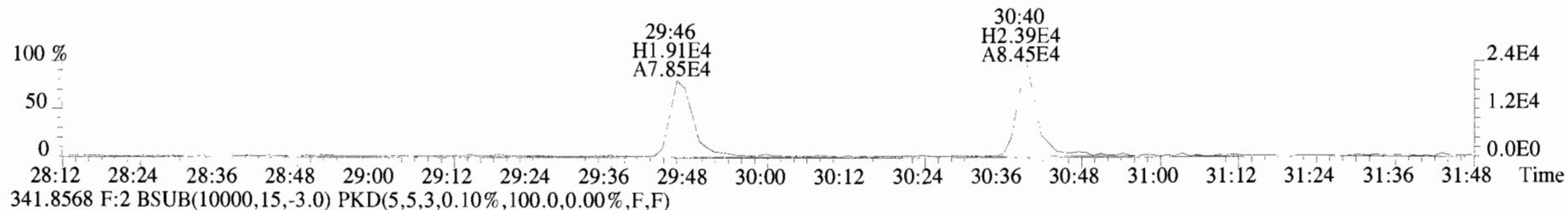
409.7974 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



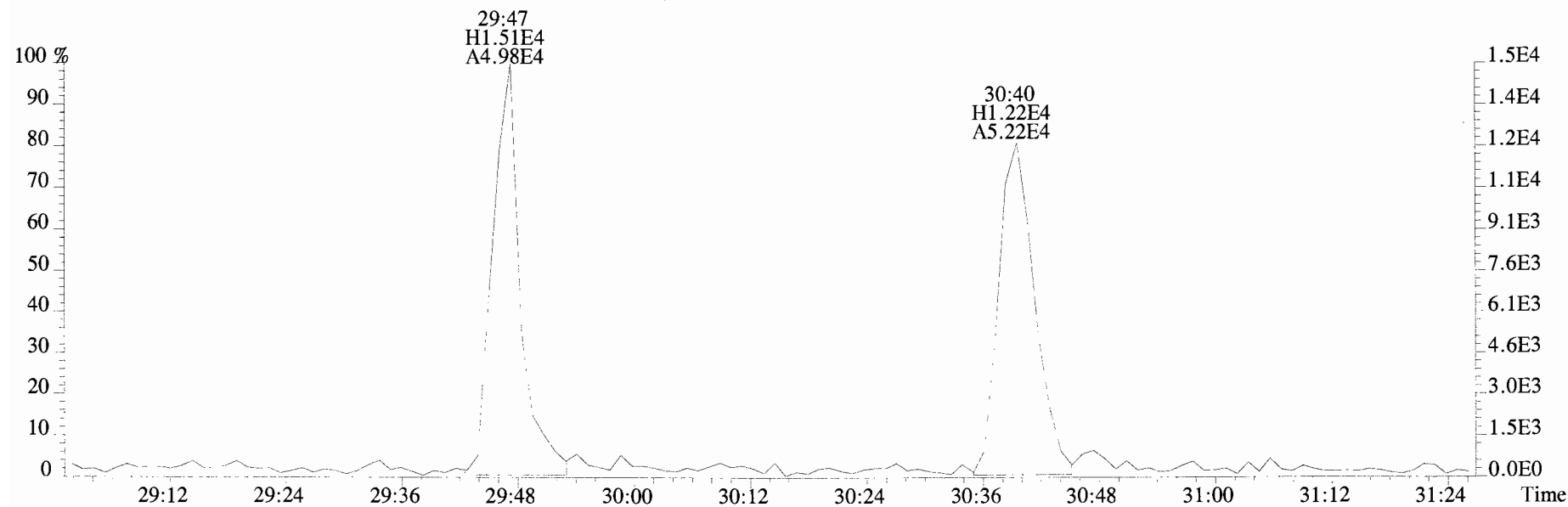
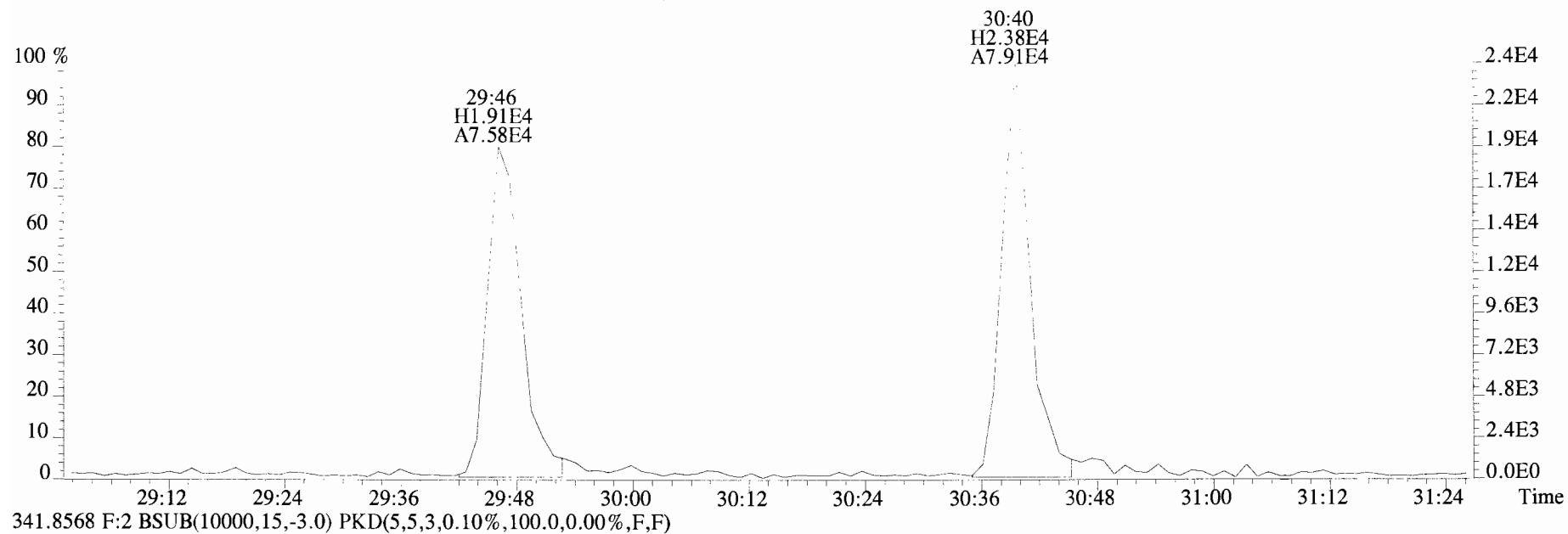
316.9824



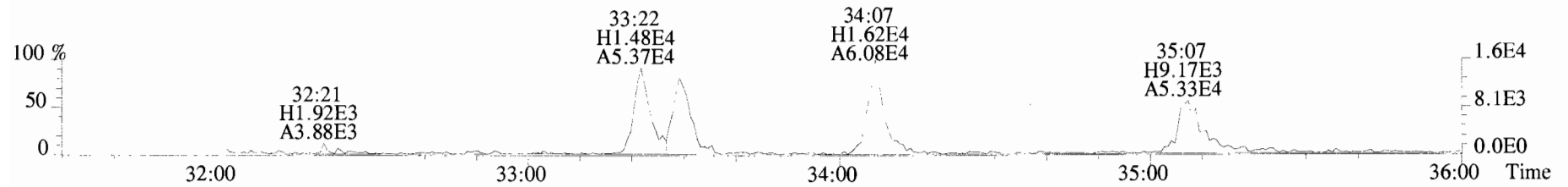
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



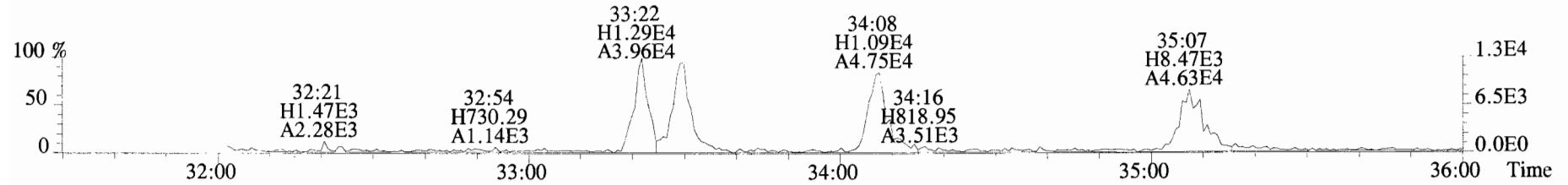
File:191009D1 #1-210 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
339.8597 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



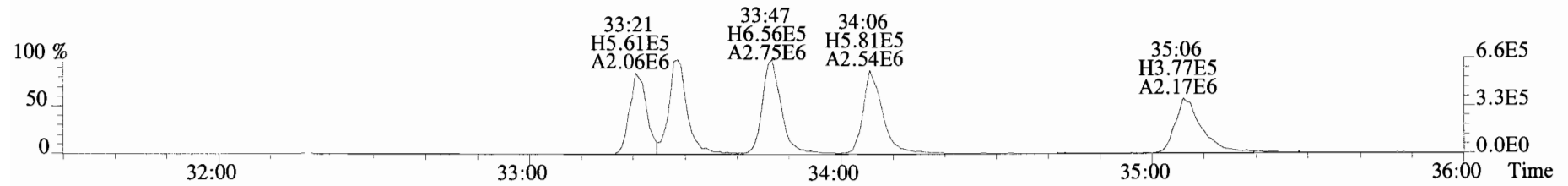
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
 373.8207 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



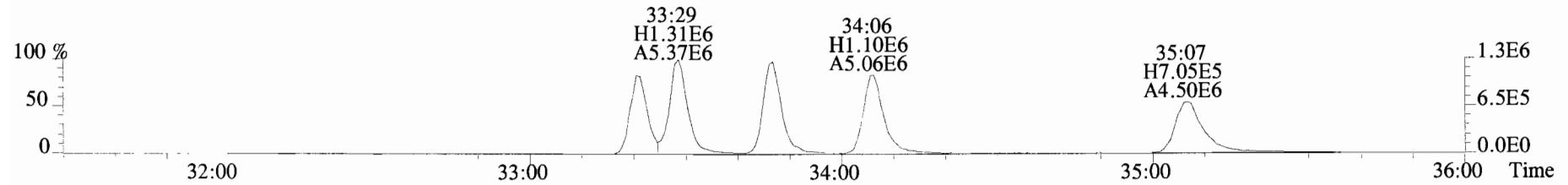
375.8178 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



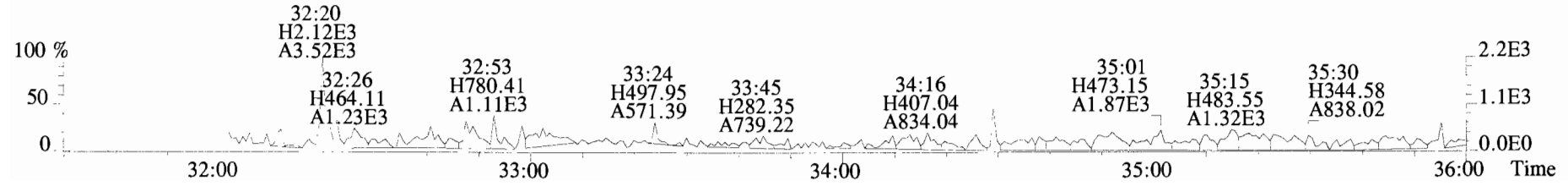
383.8639 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



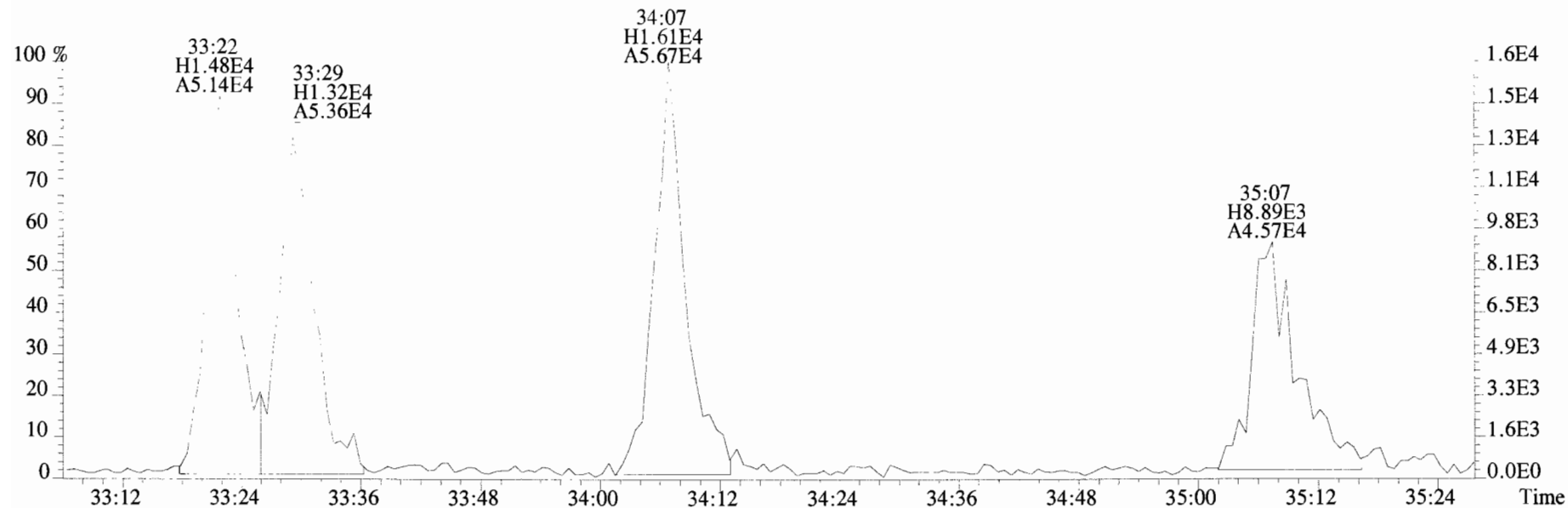
385.8610 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



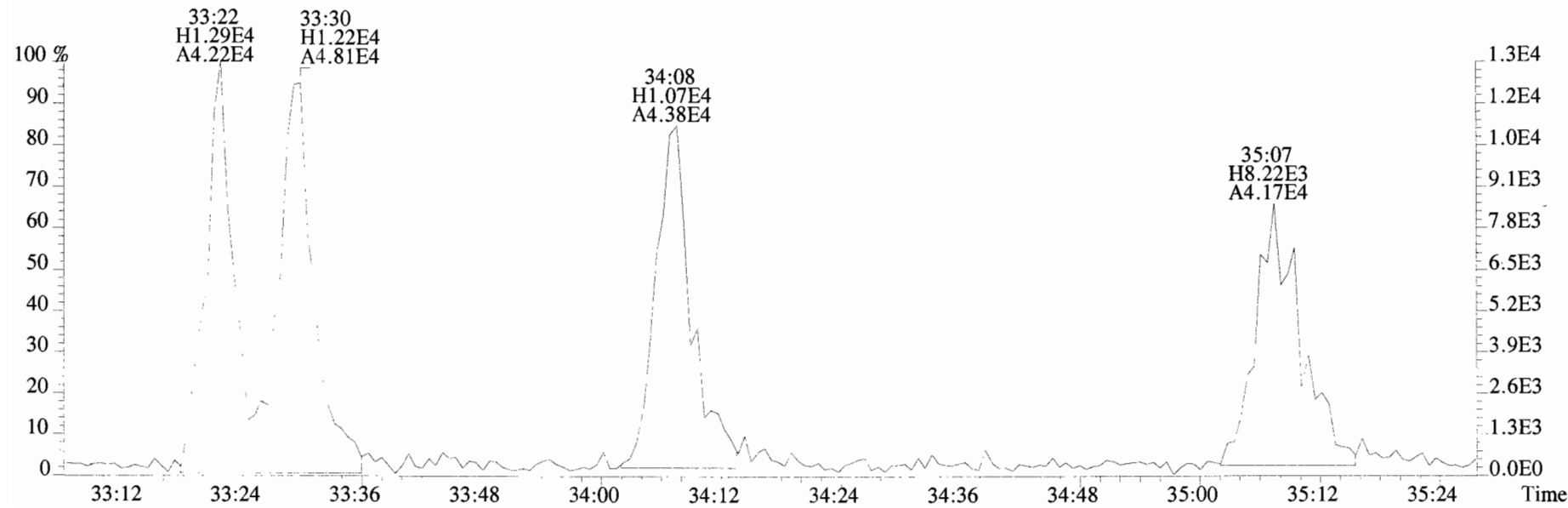
445.7555 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical\_Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
373.8207 F:3 BSUB(10000,15,-3.0)

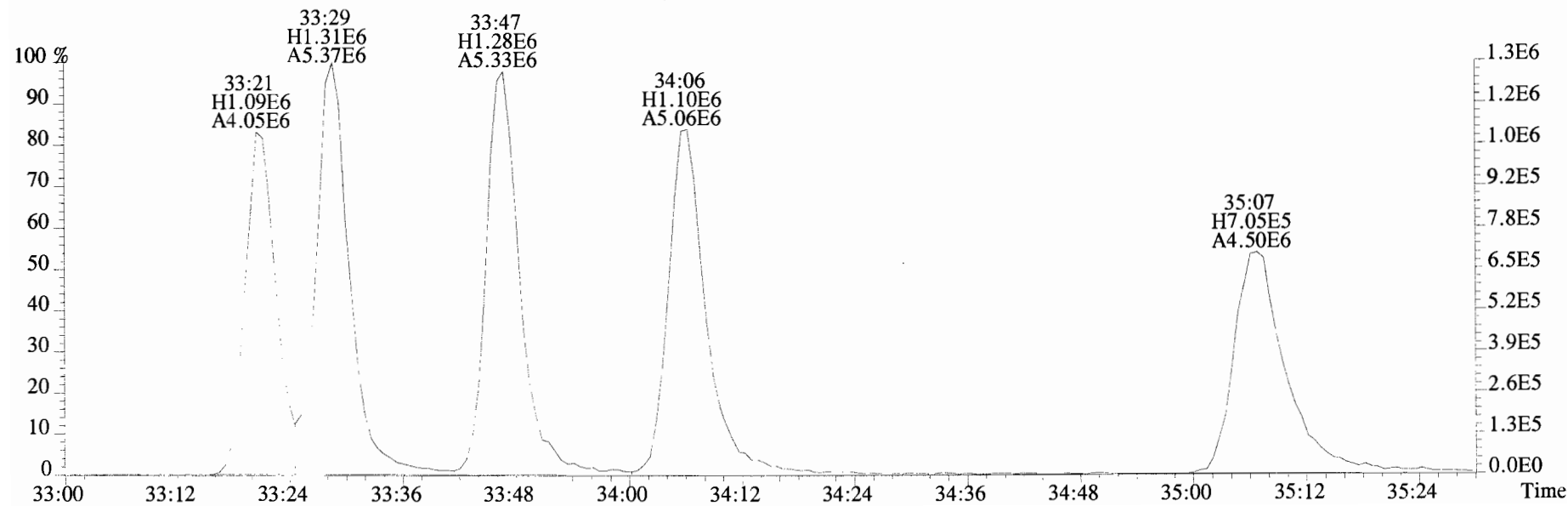
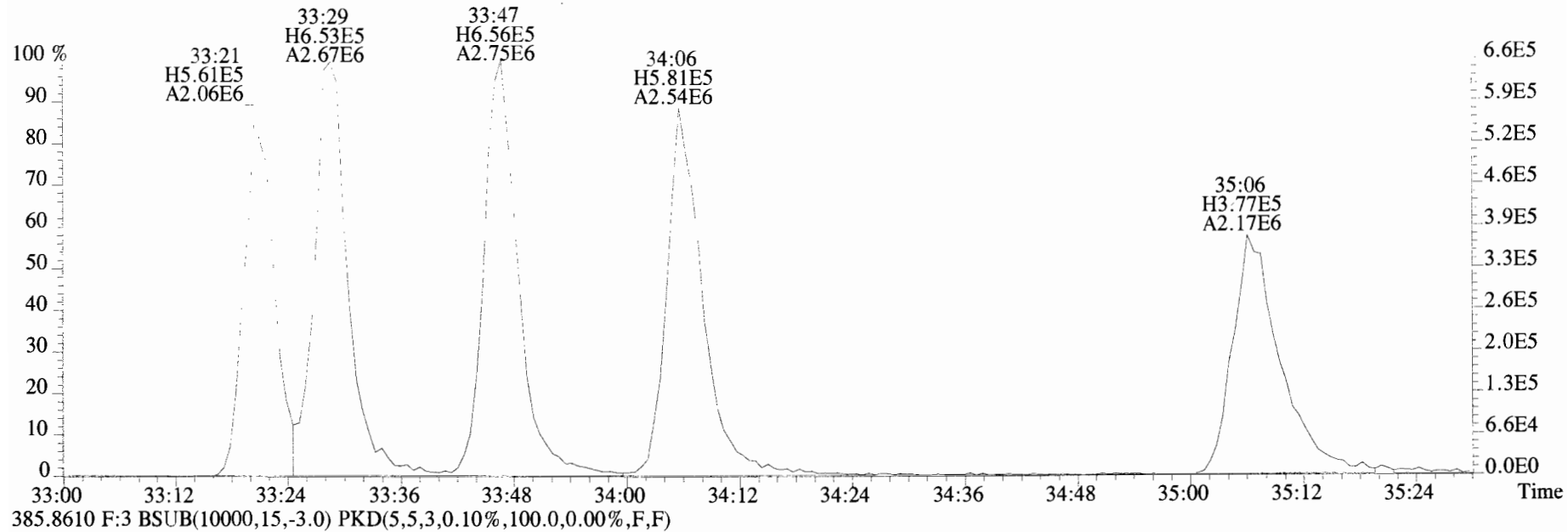


375.8178 F:3 BSUB(10000,15,-3.0)

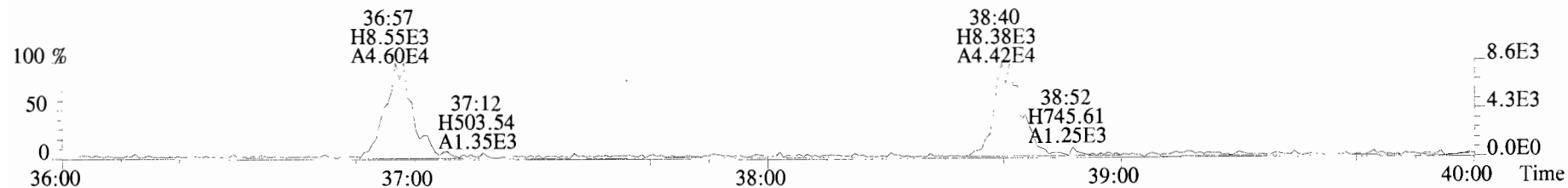




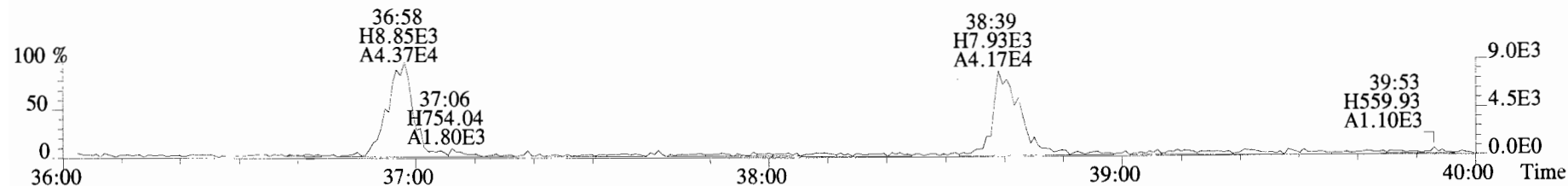
File:191009D1 #1-356 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
383.8639 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



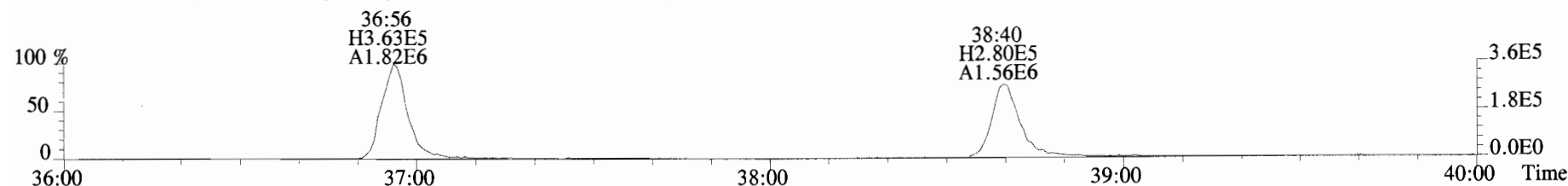
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



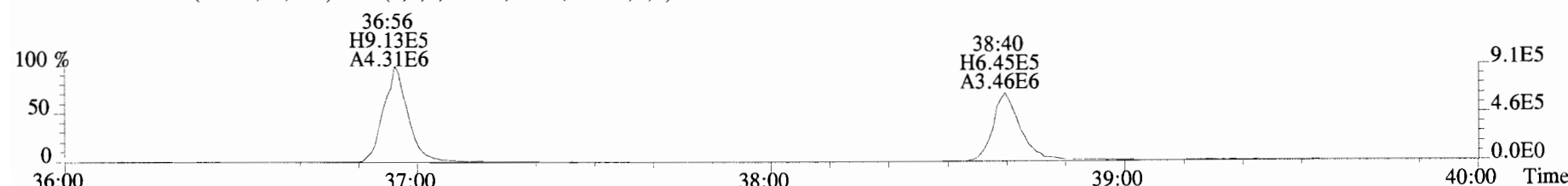
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



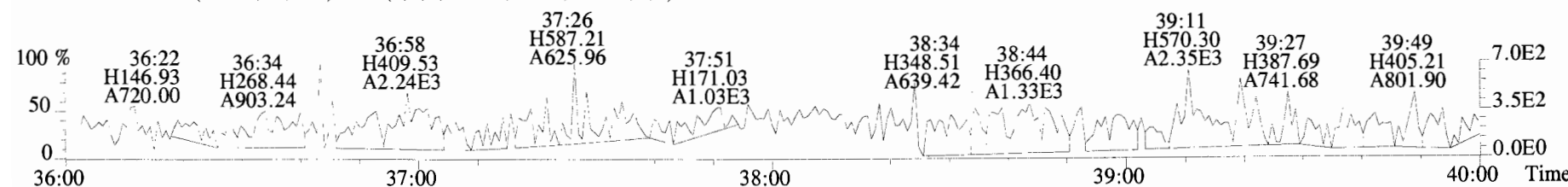
417.8253 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



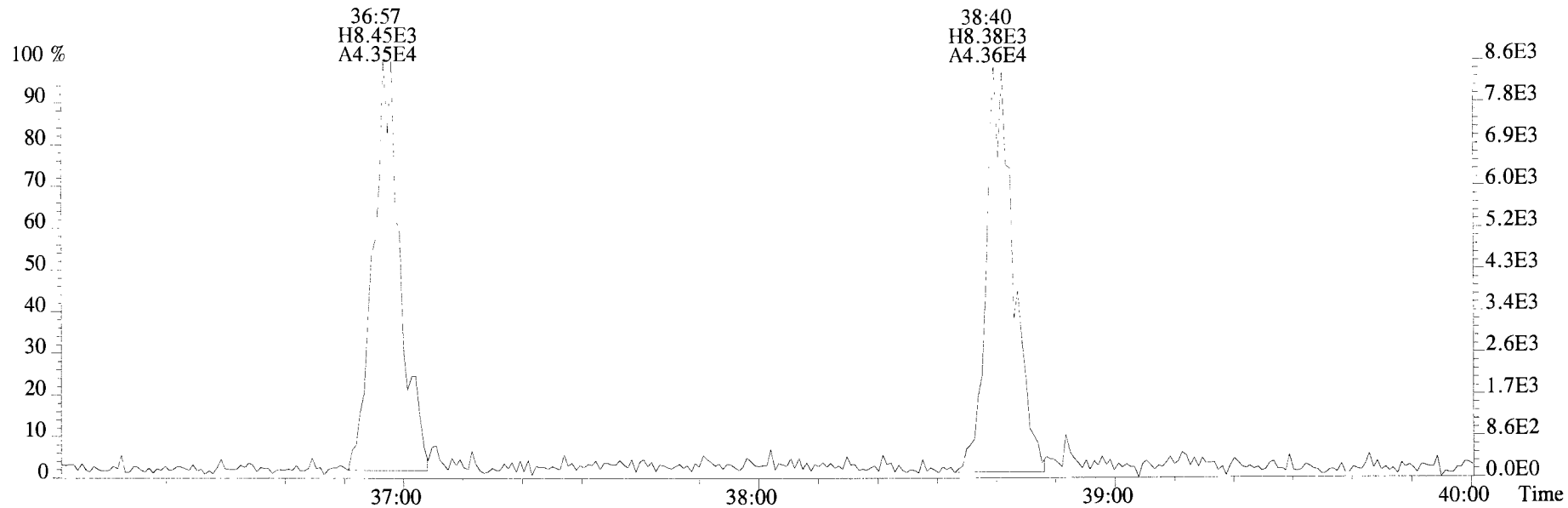
419.8220 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



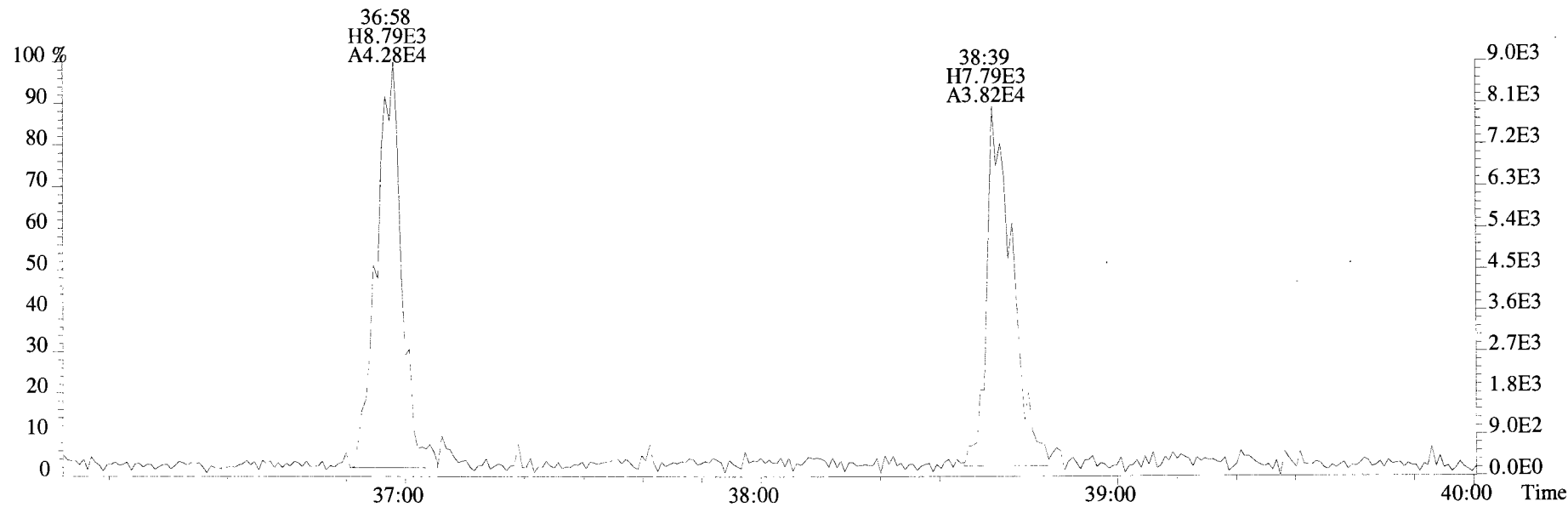
479.7165 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



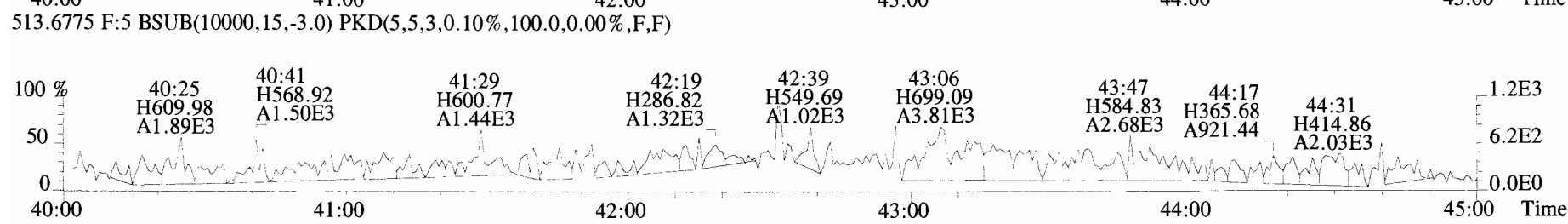
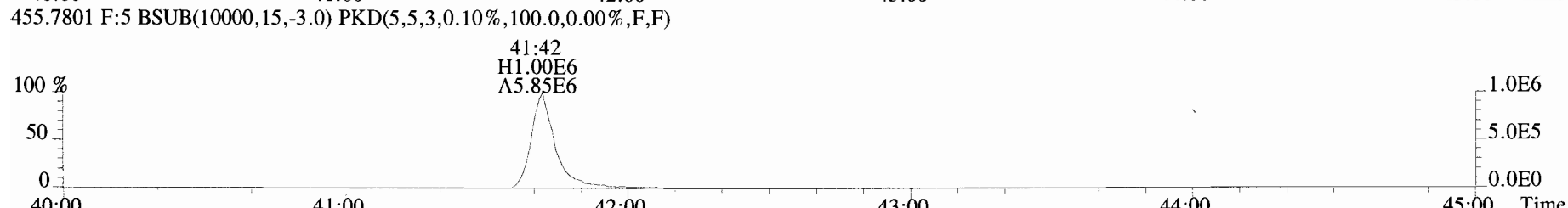
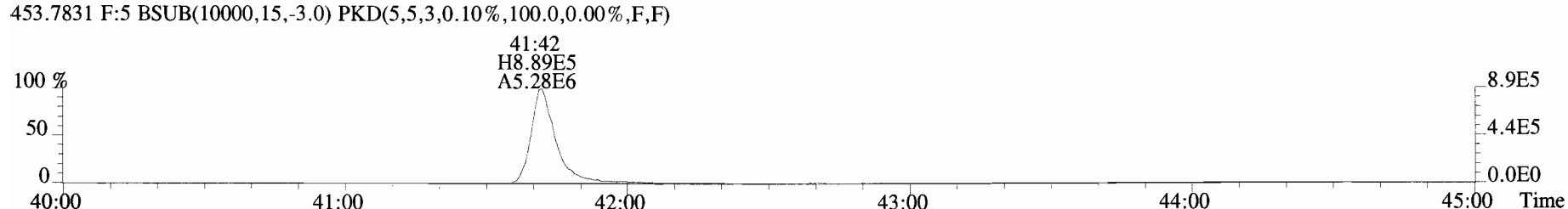
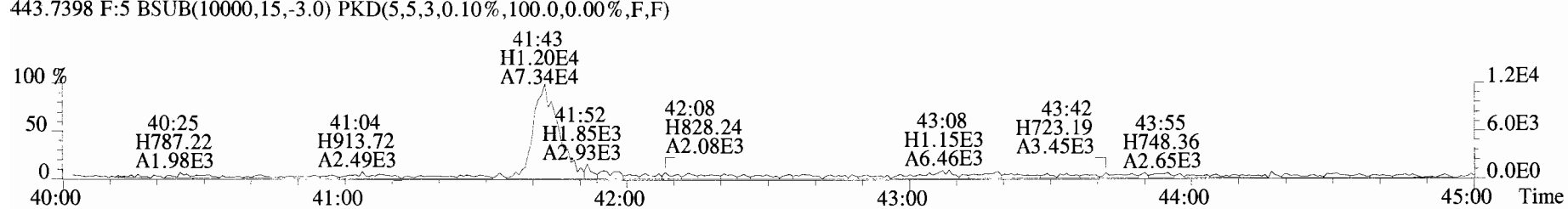
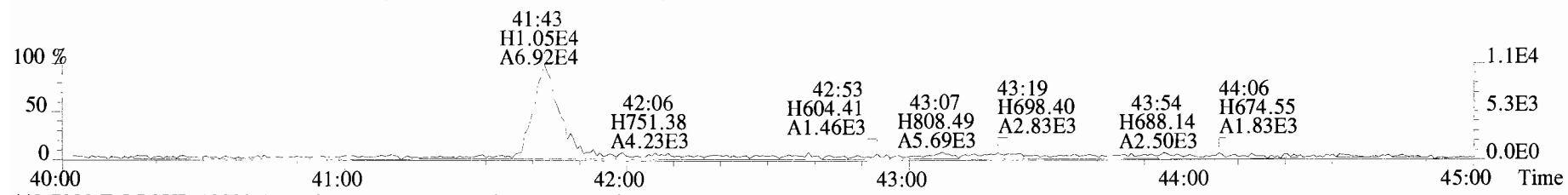
File:191009D1 #1-355 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
407.7818 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



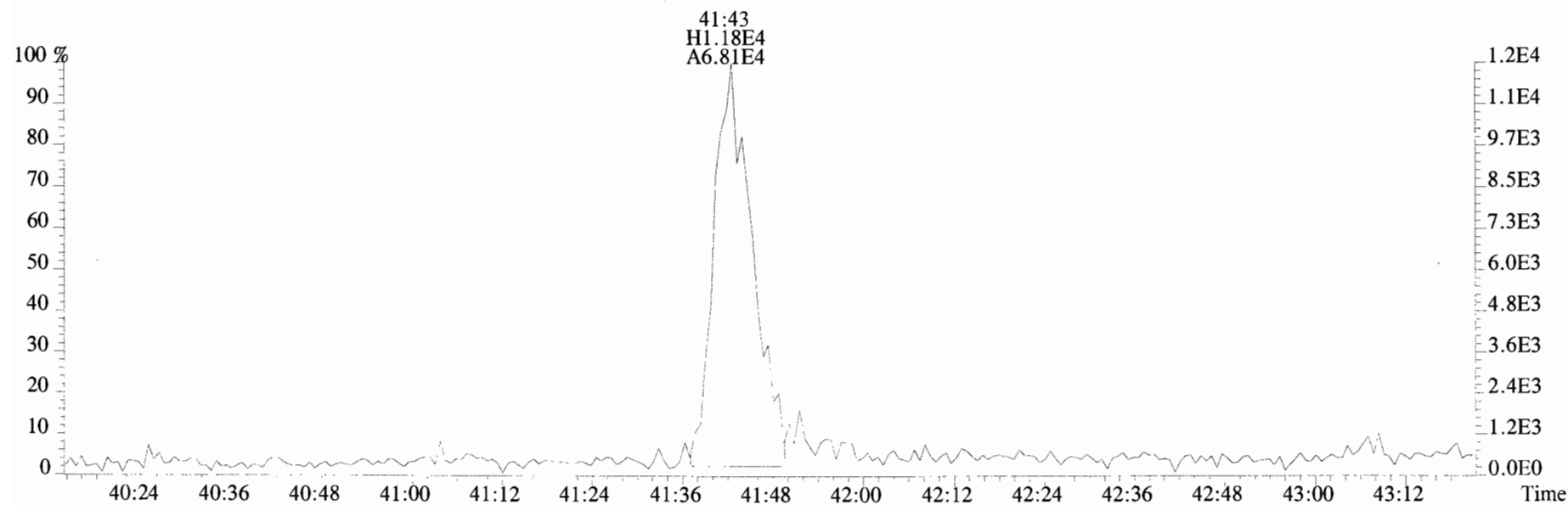
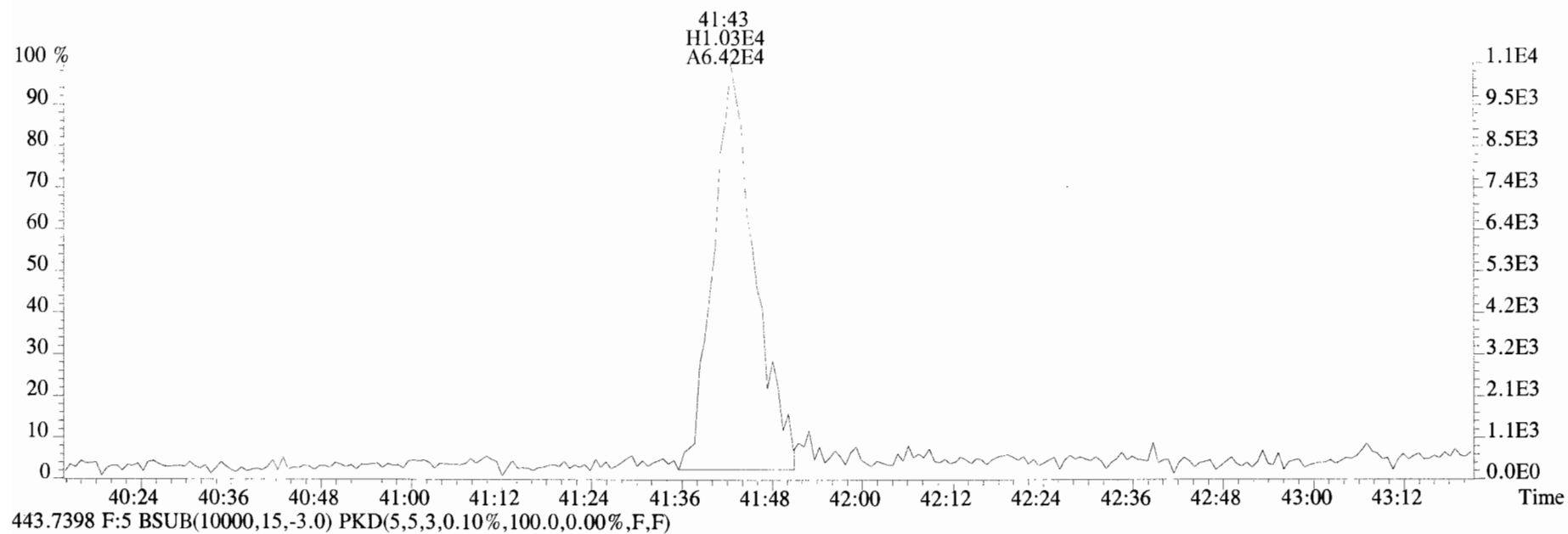
409.7788 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



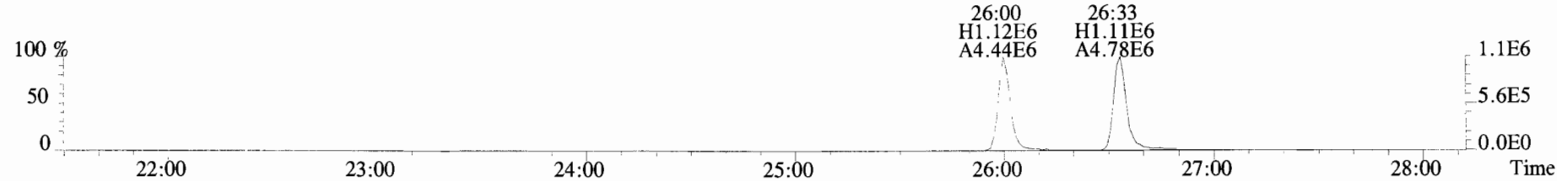
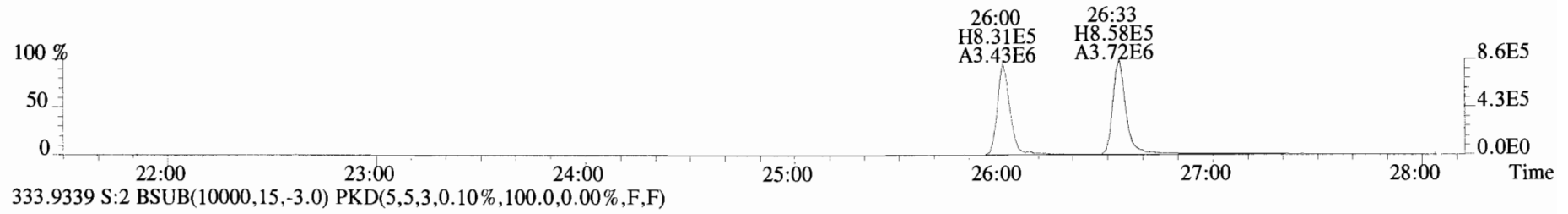
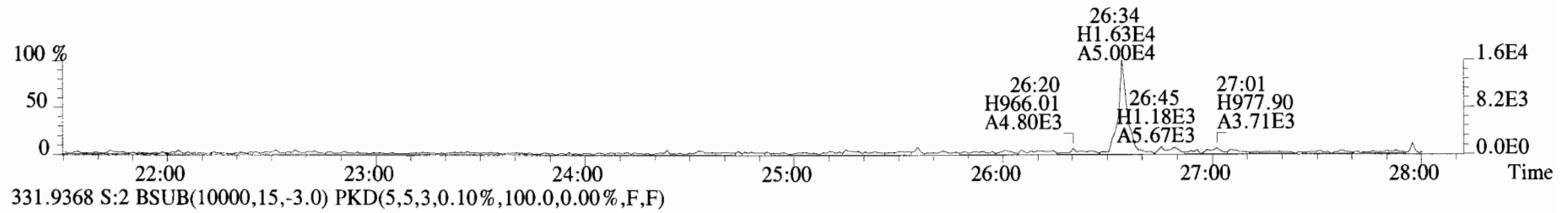
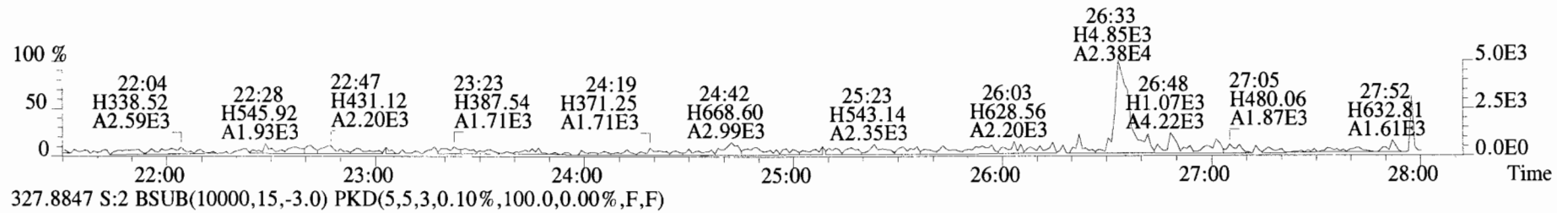
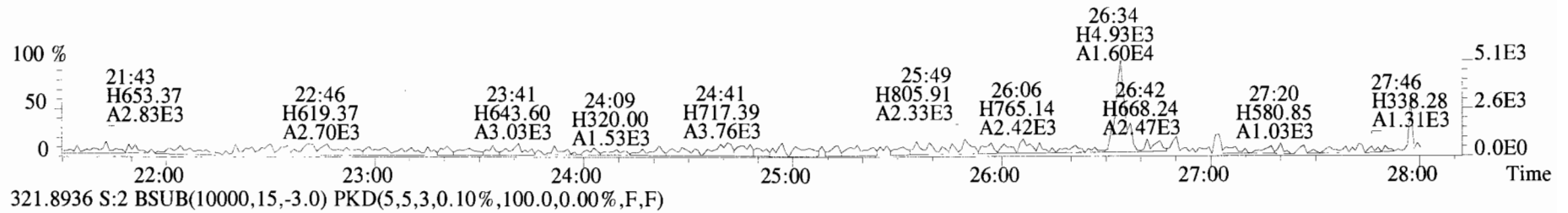
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
 441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



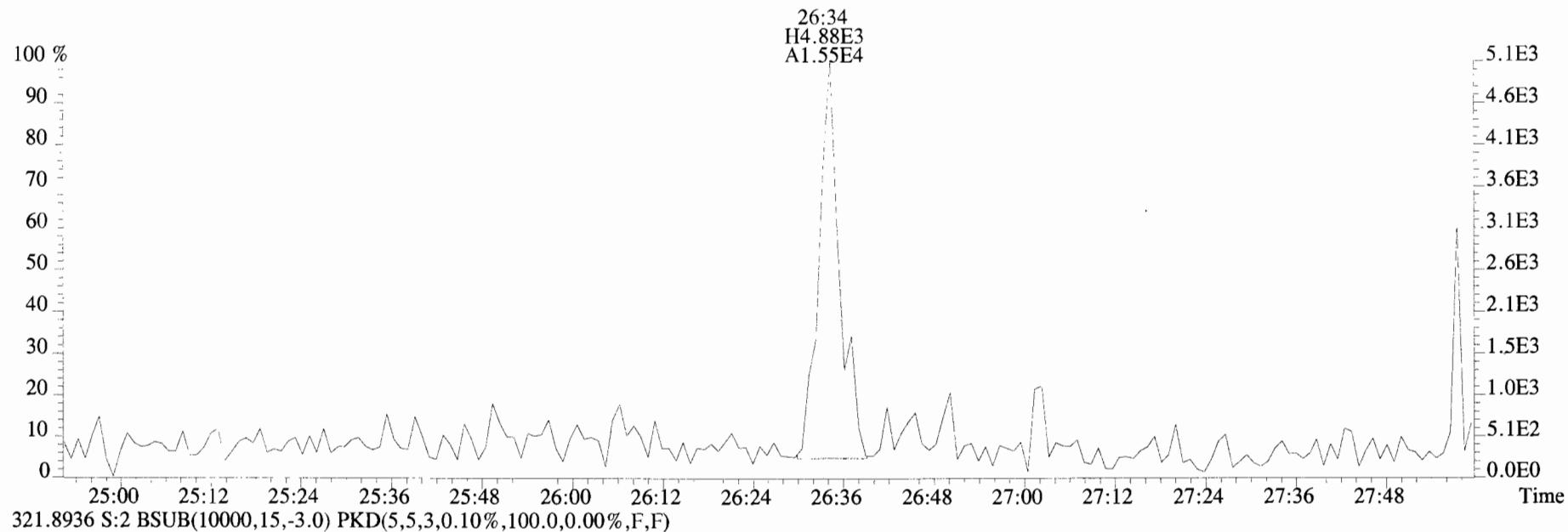
File:191009D1 #1-432 Acq: 9-OCT-2019 16:13:04 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#1 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-1 1613 CS0 19C2201 Exp:OCDD\_DB5  
441.7428 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



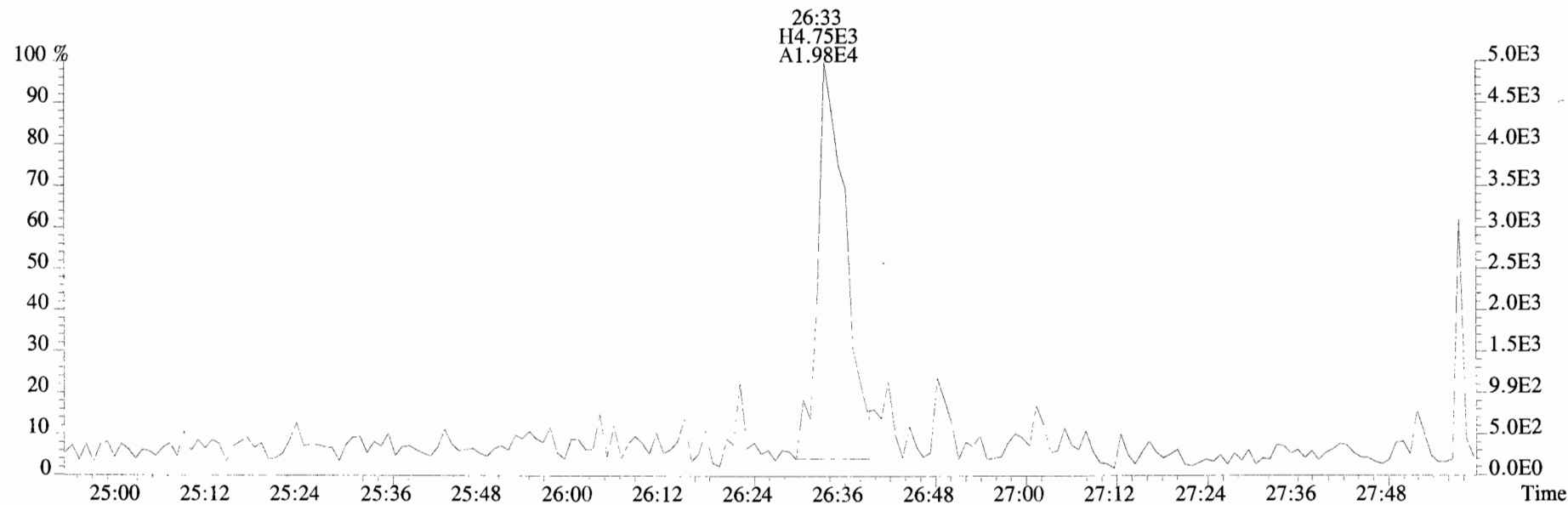
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



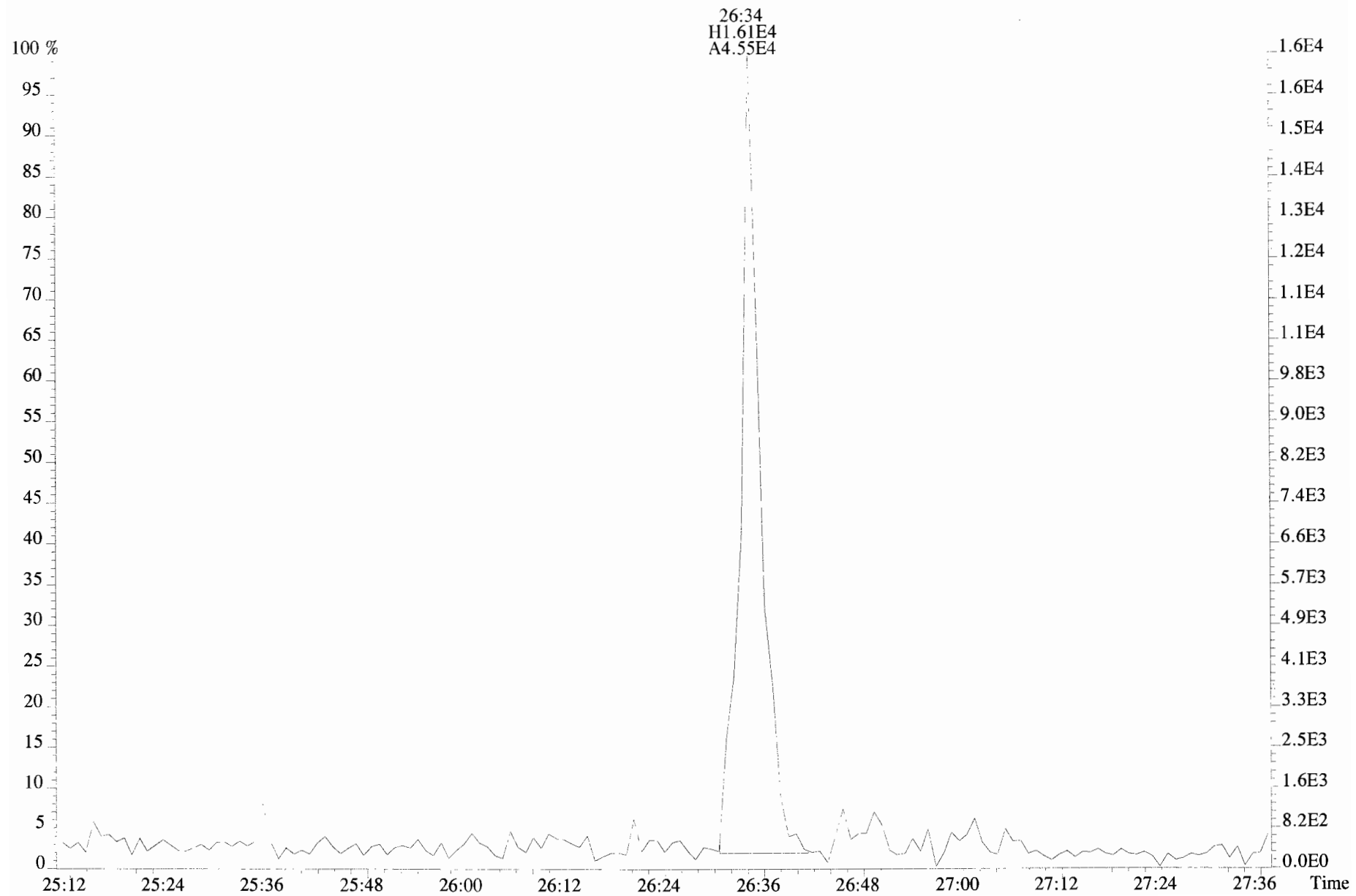
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
319.8965 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

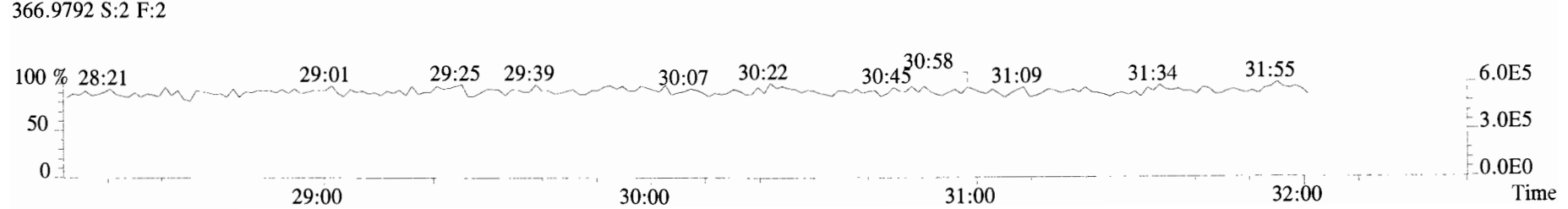
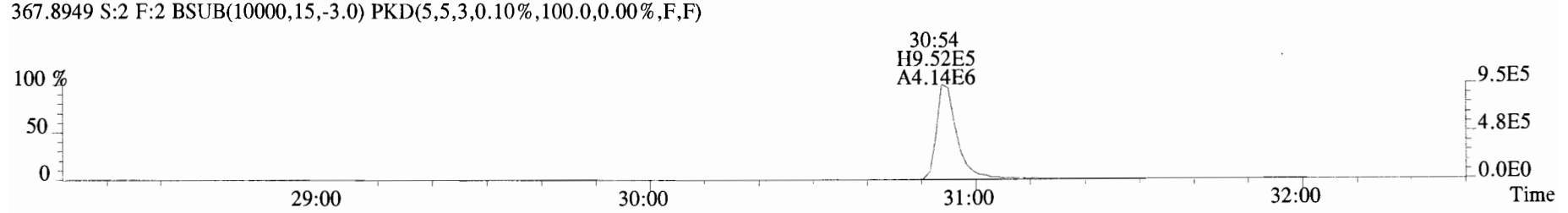
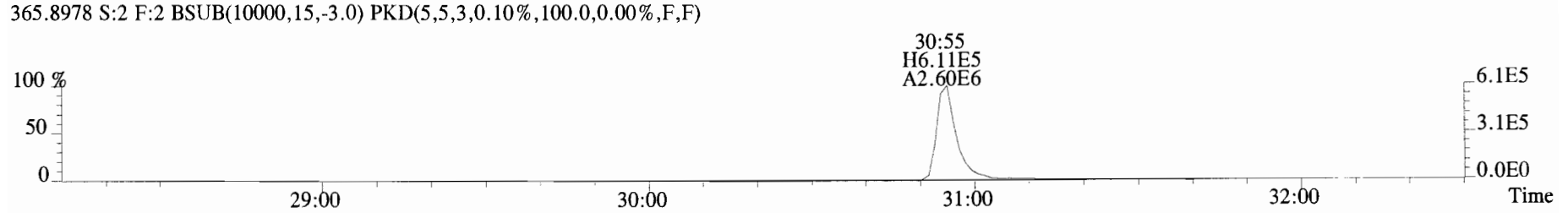
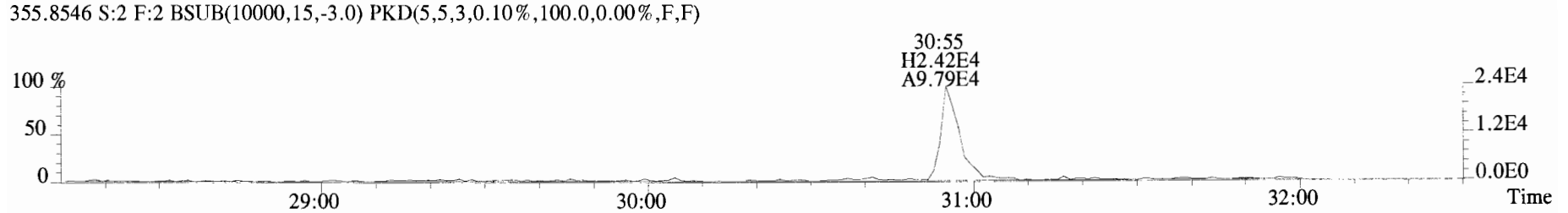
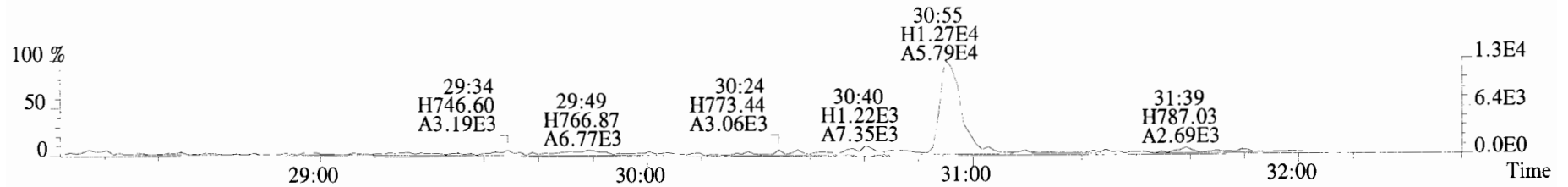


File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
327.8847 S:2 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

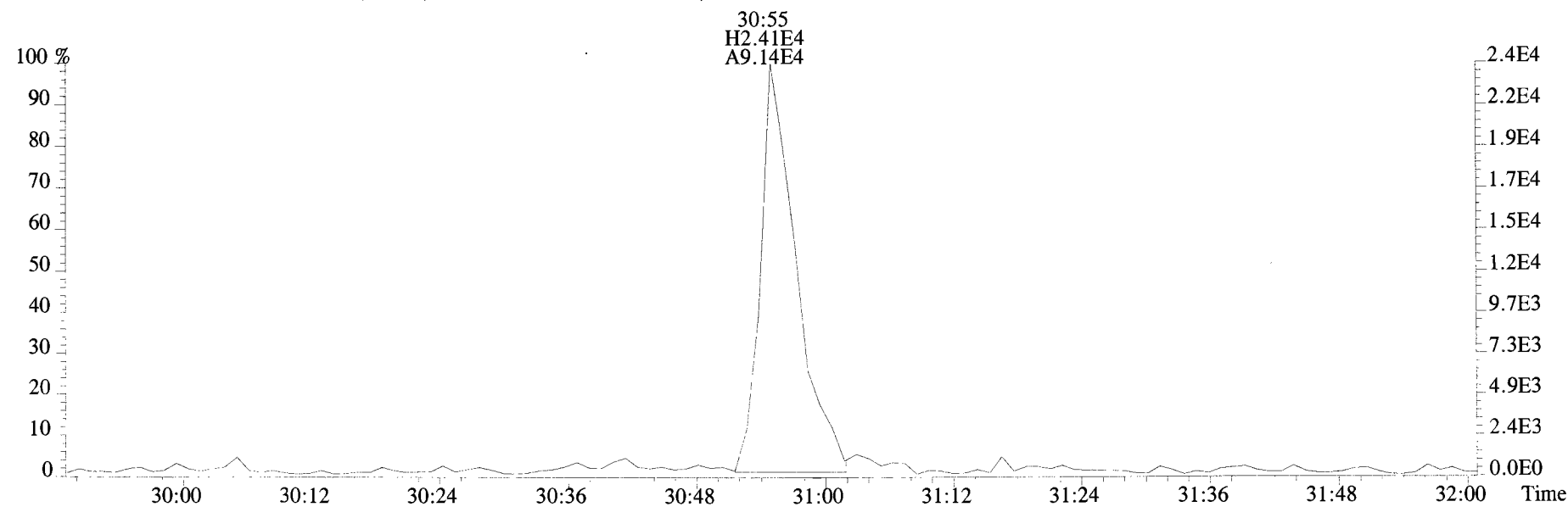
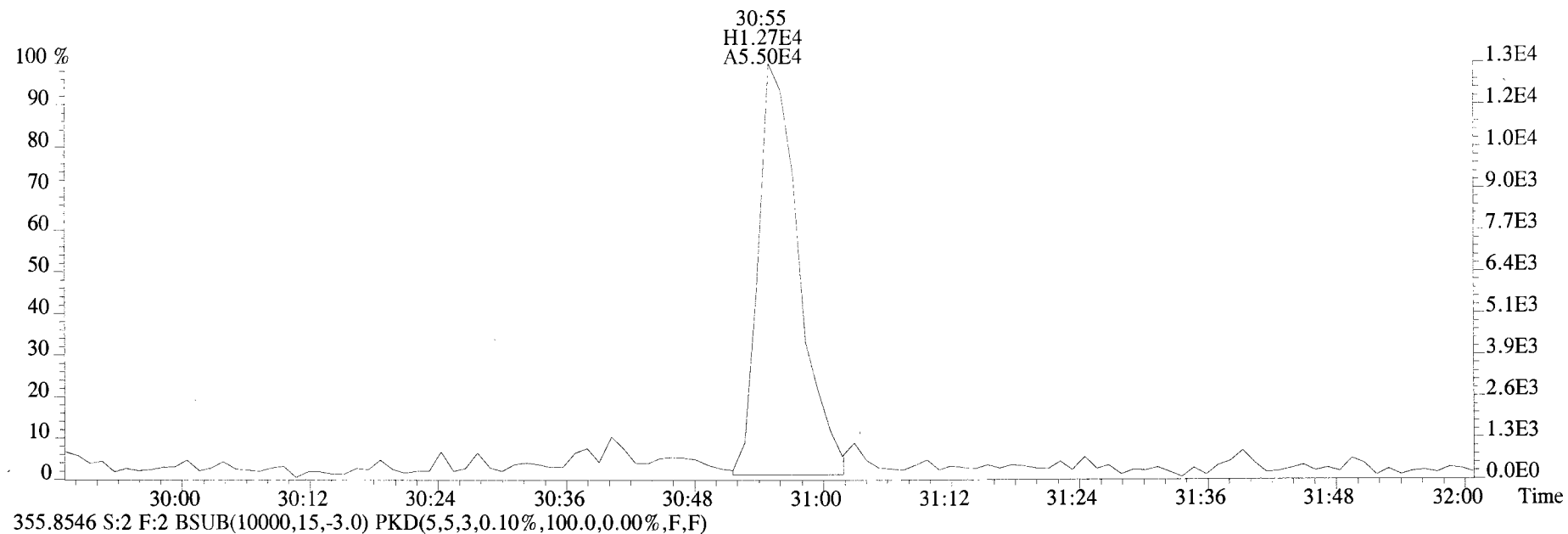




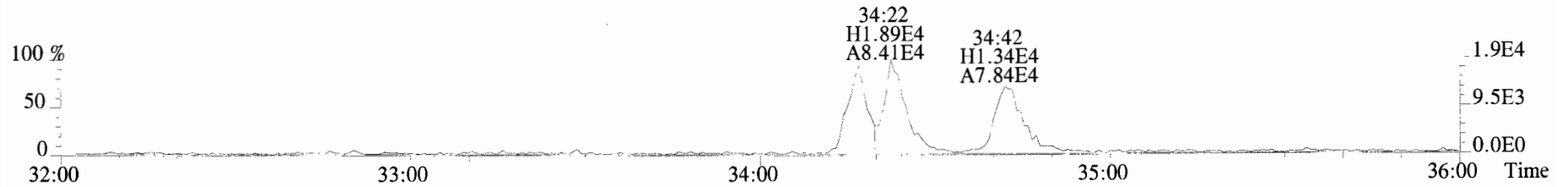
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text: Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



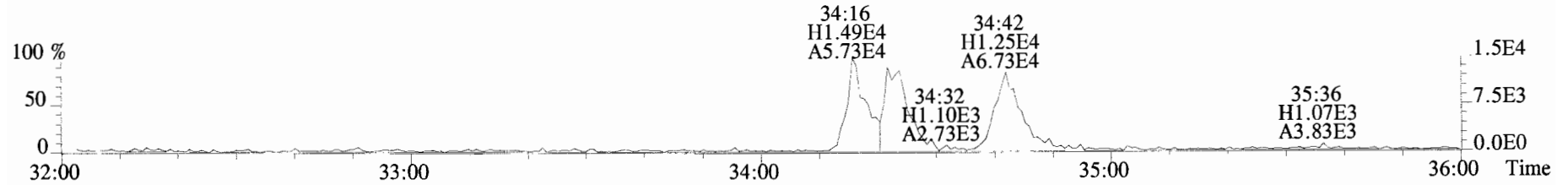
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
353.8576 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



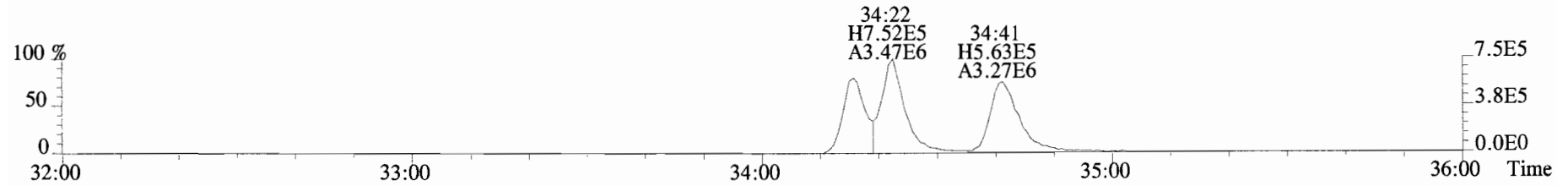
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



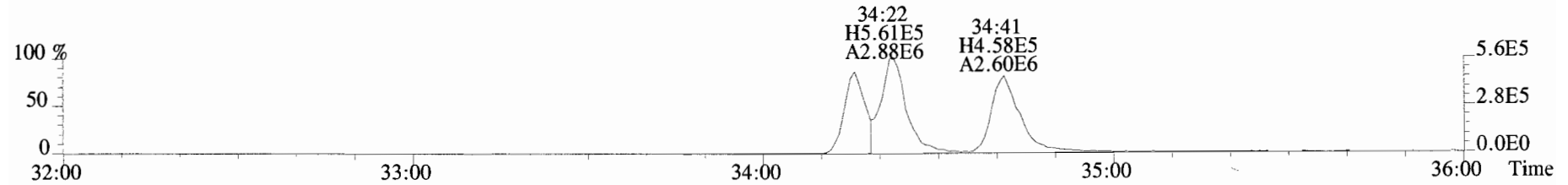
391.8127 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



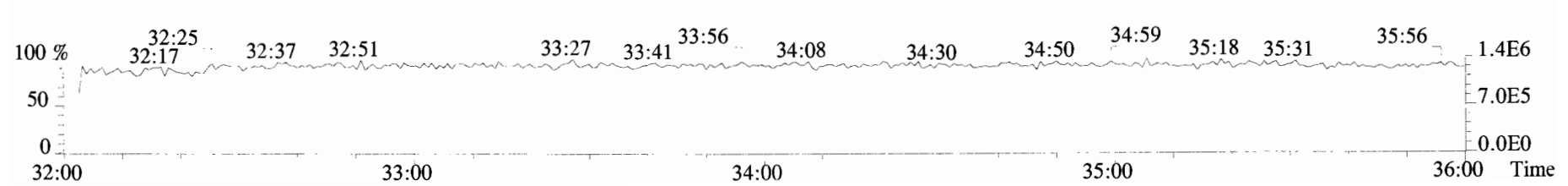
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



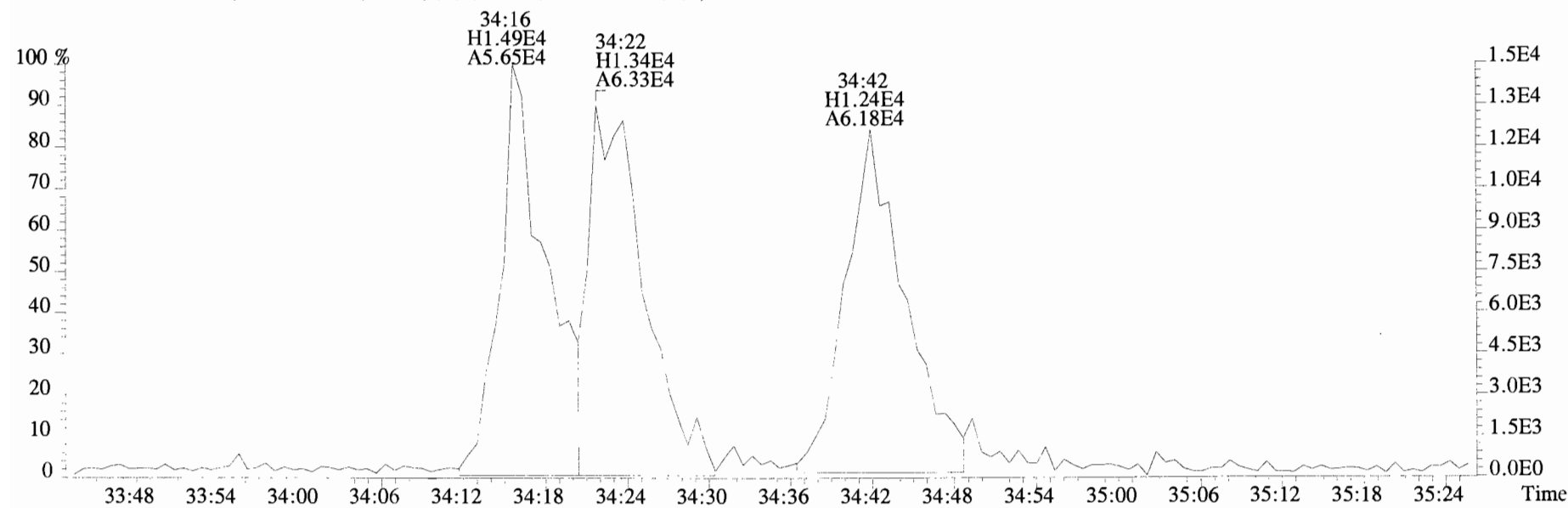
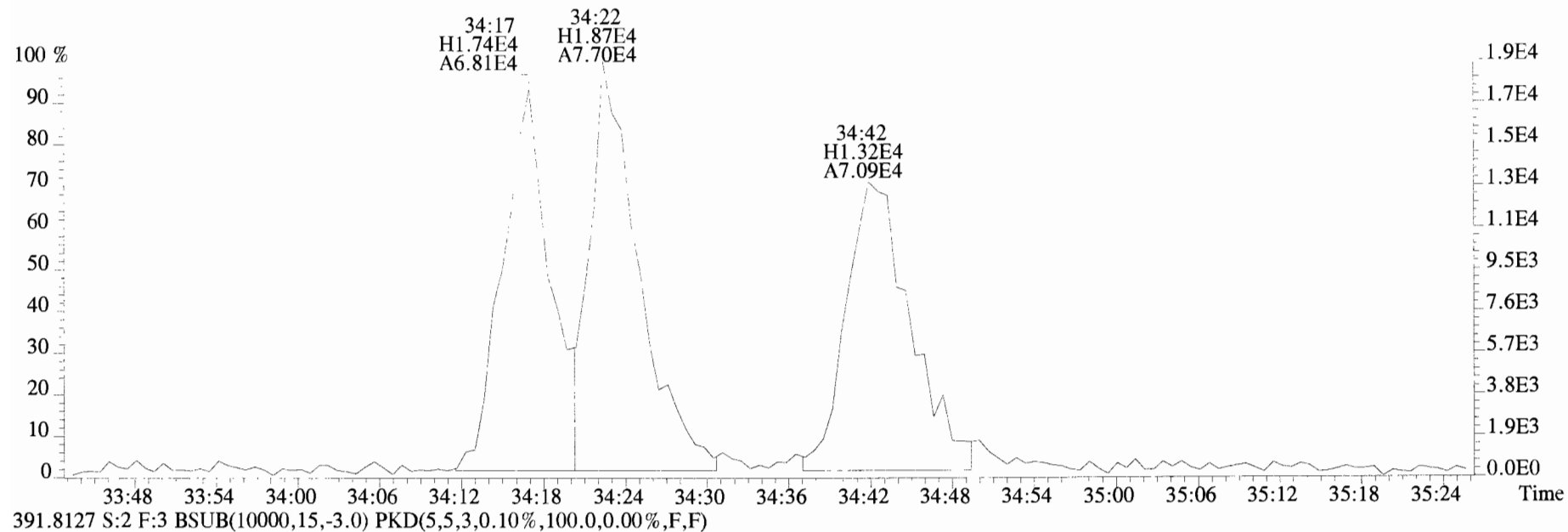
403.8530 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



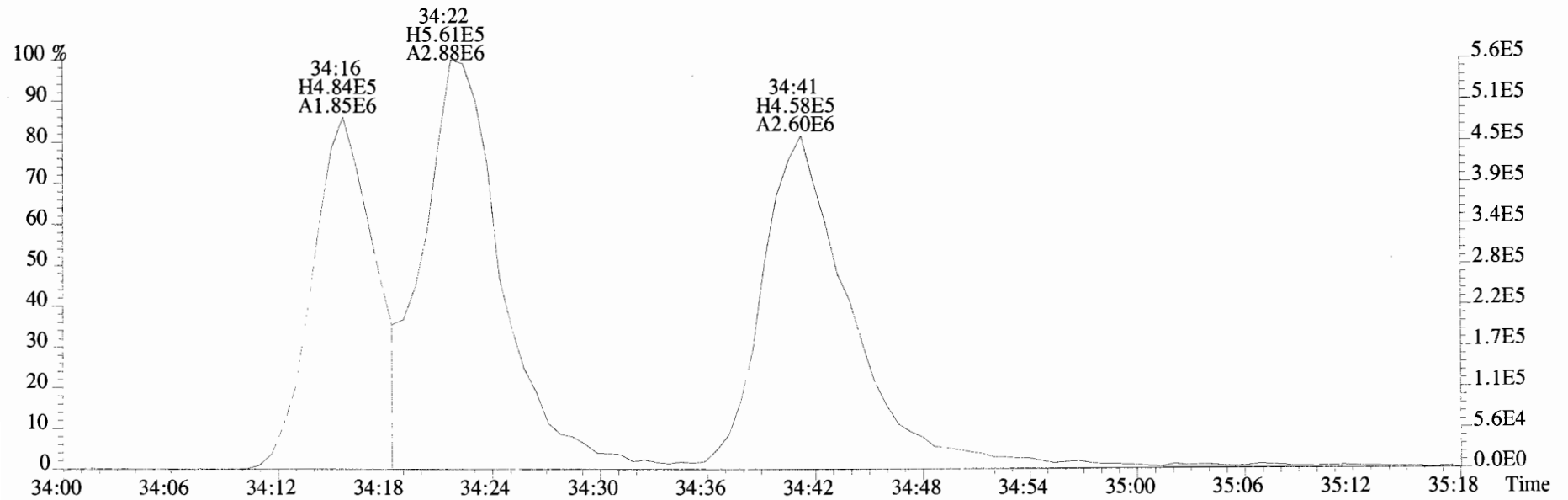
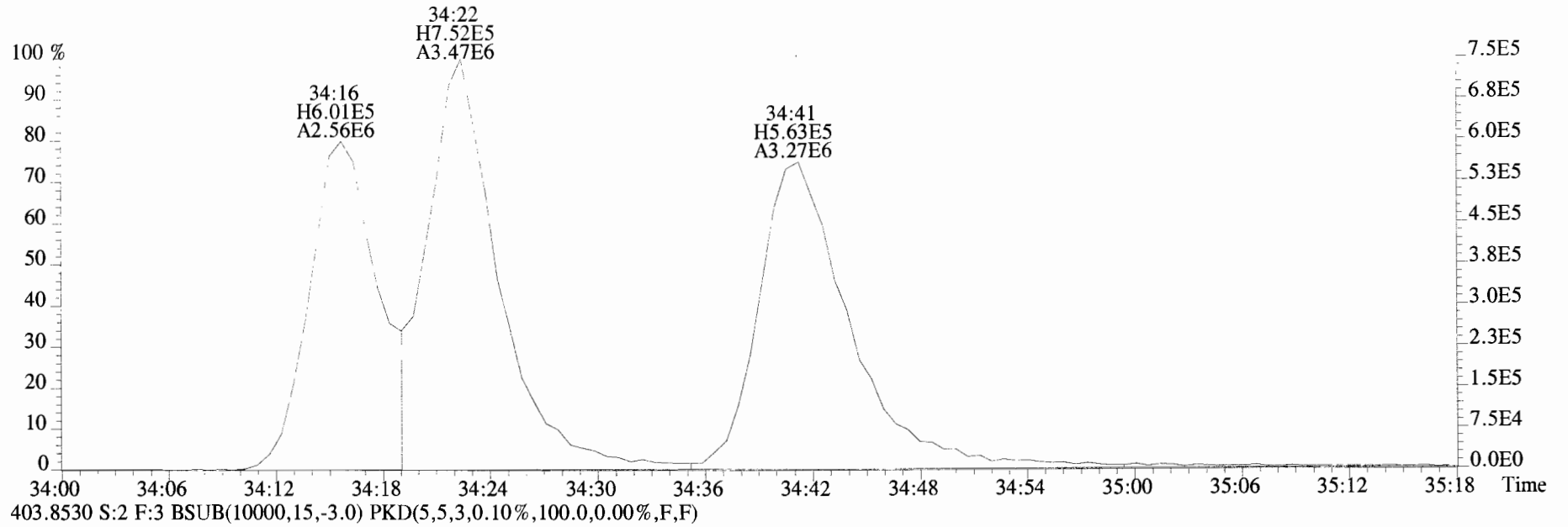
392.9760 S:2 F:3



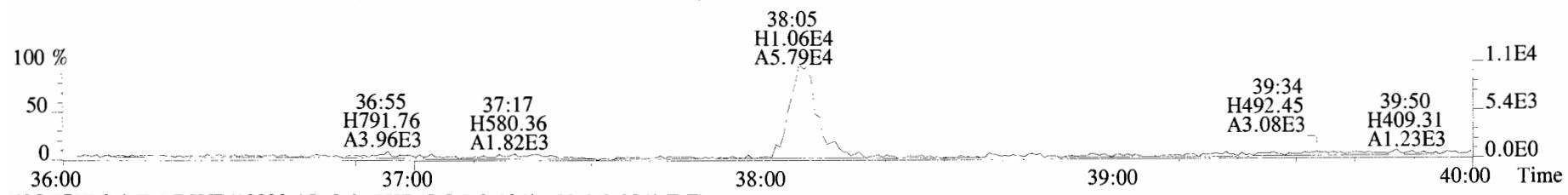
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
389.8156 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



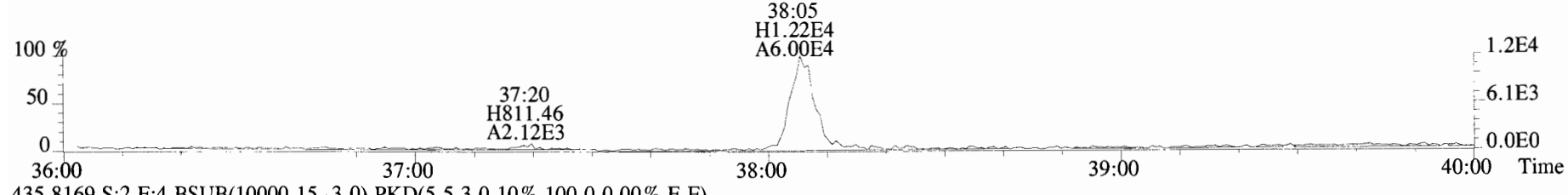
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
401.8559 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



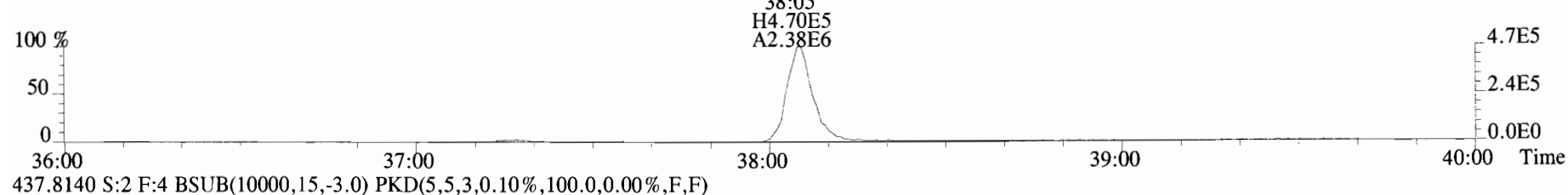
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
423.7767 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



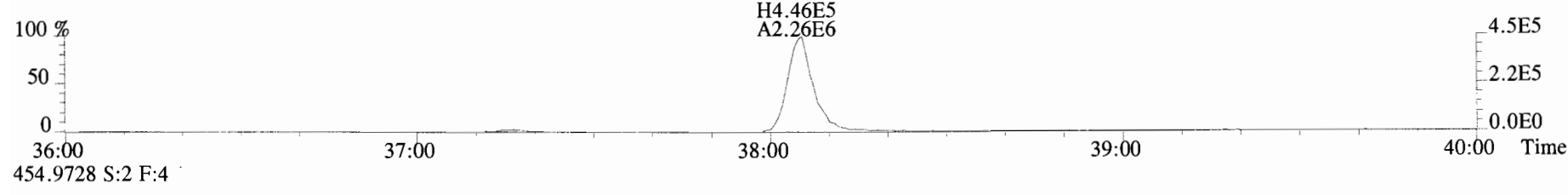
425.7737 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



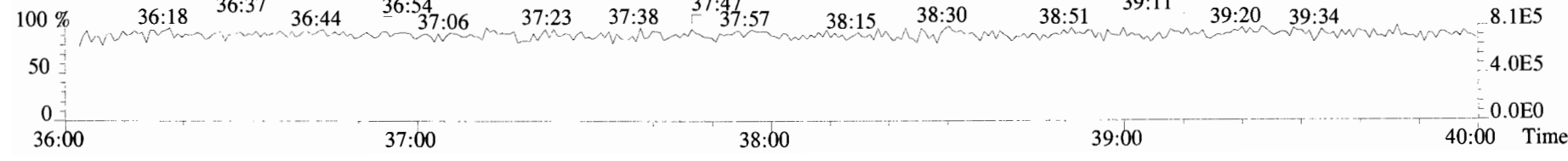
435.8169 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



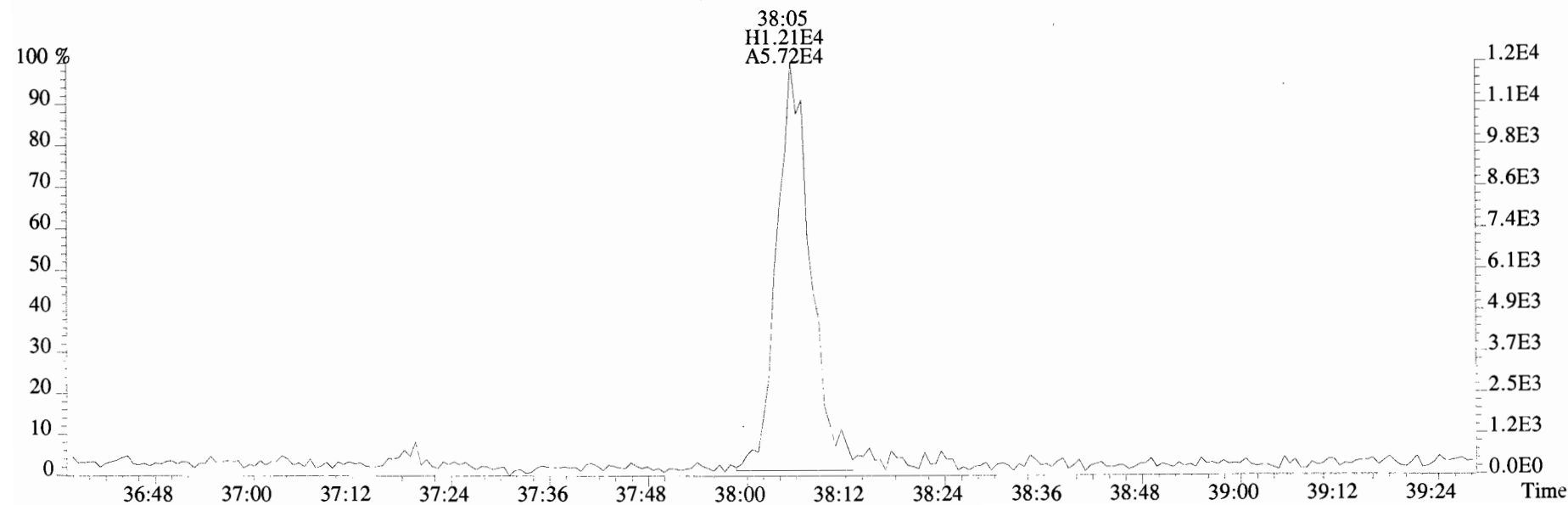
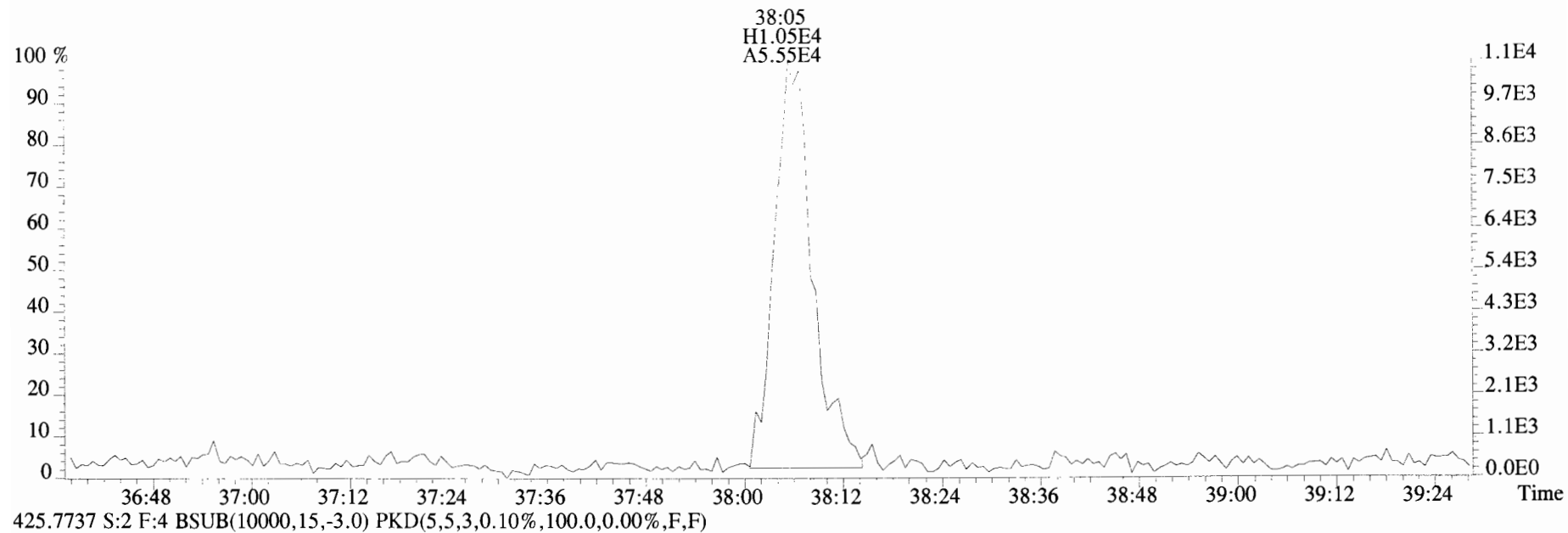
437.8140 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



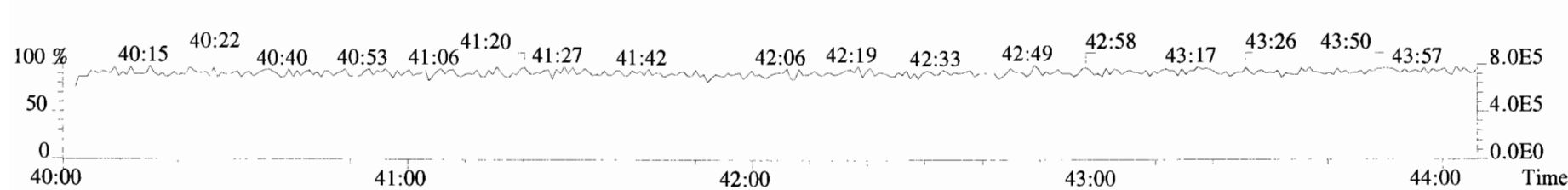
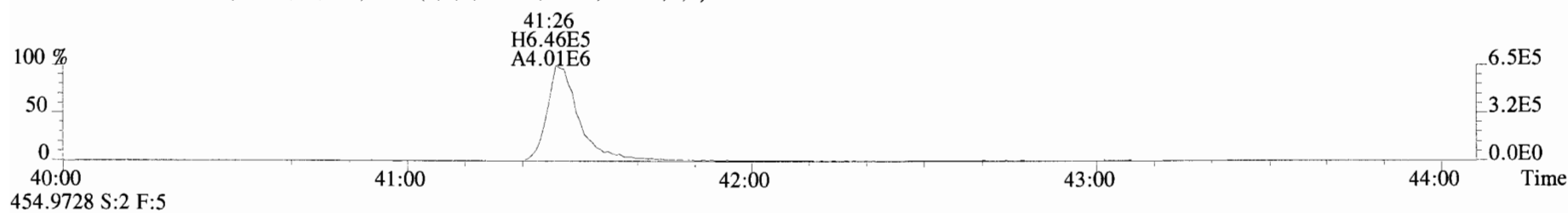
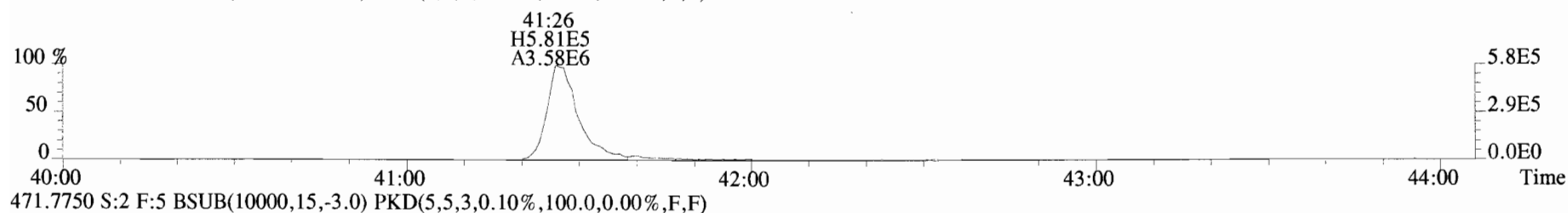
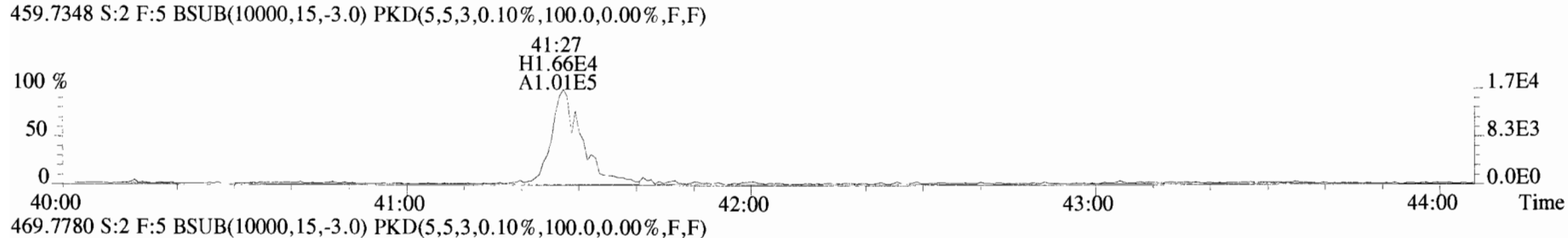
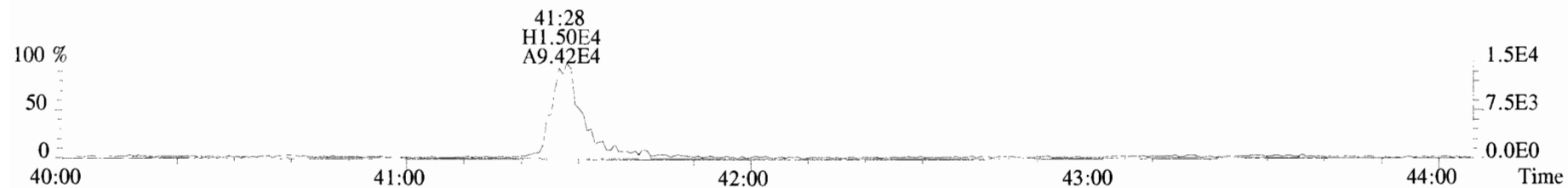
454.9728 S:2 F:4



File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
423.7767 S:2 F:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

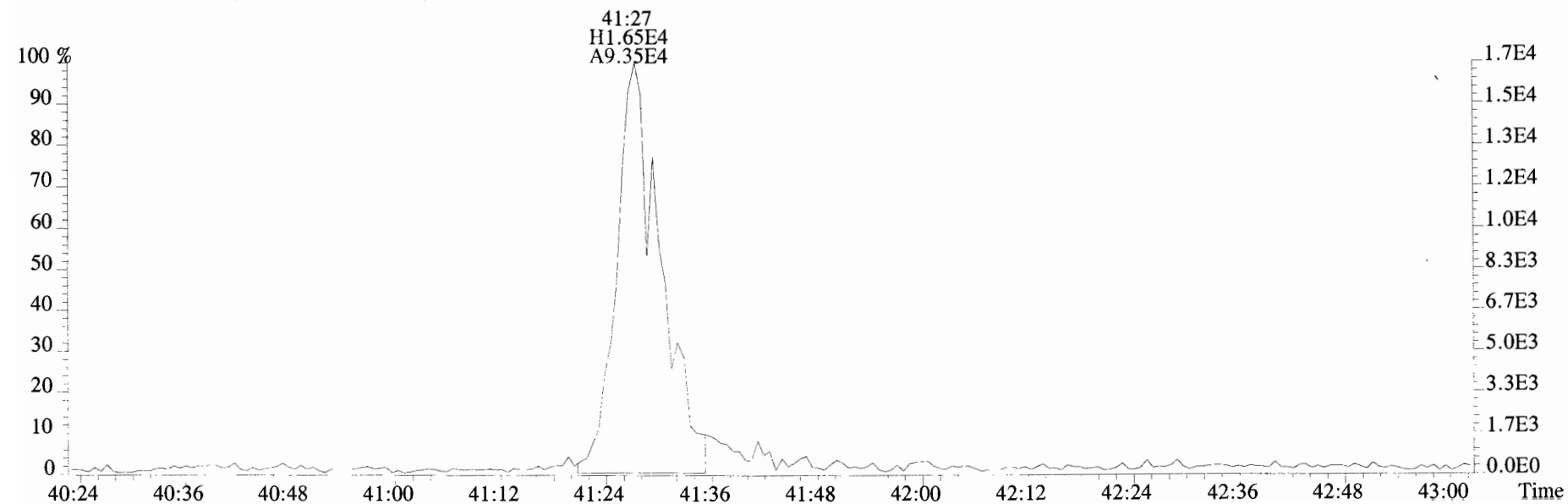
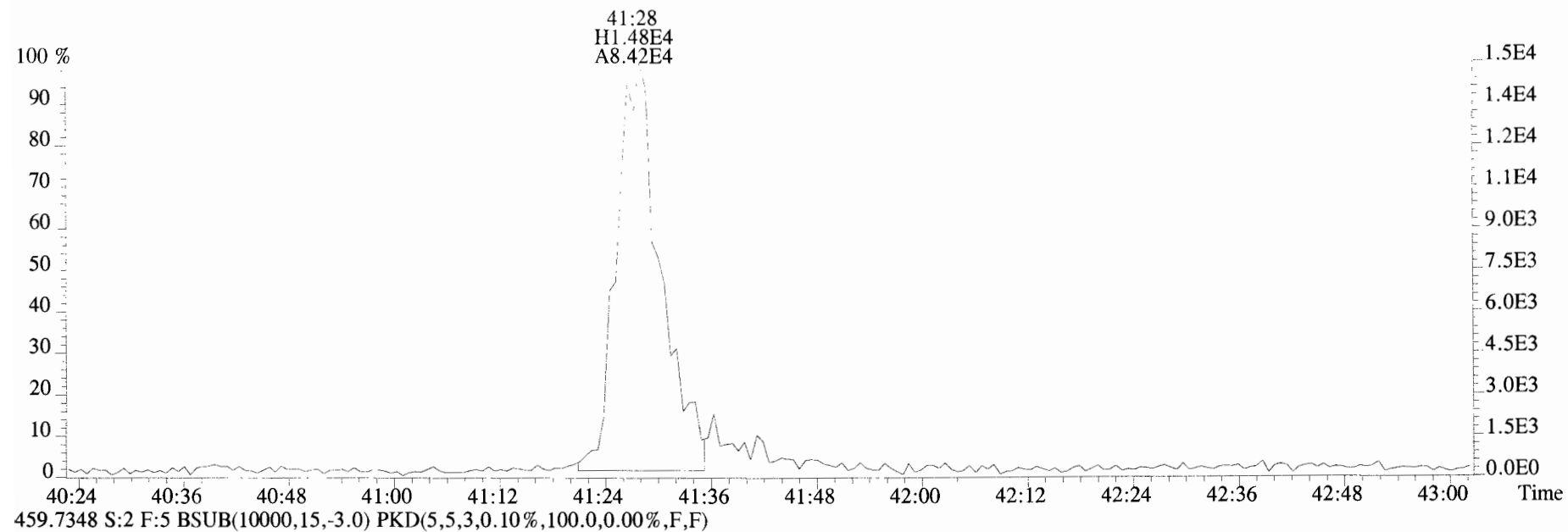


File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

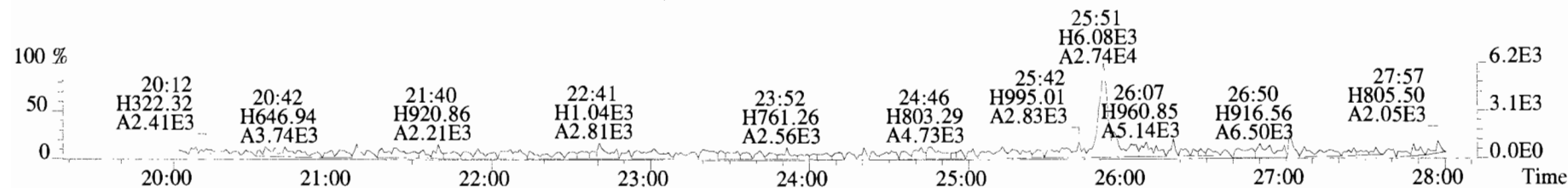




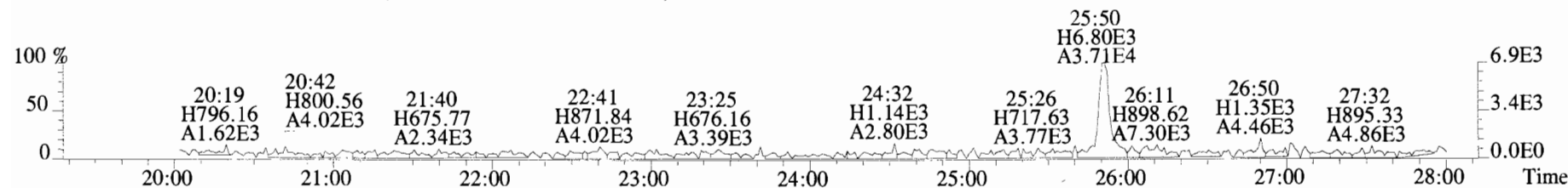
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
457.7377 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



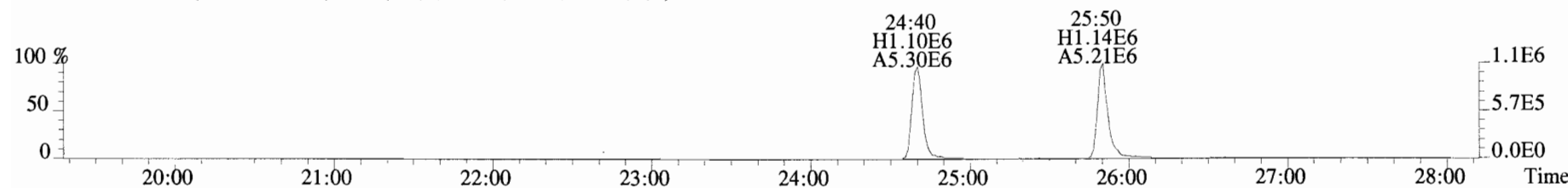
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



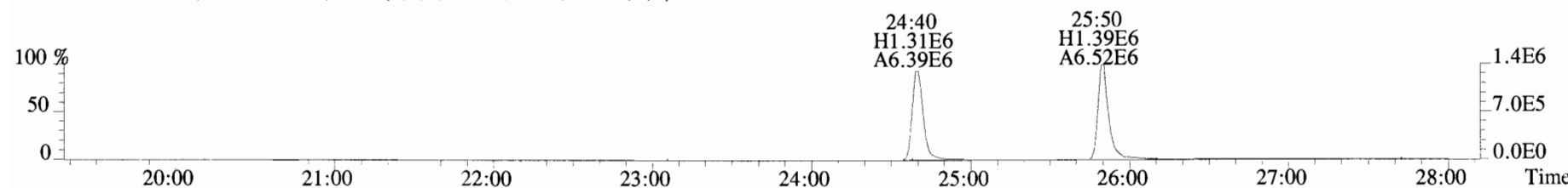
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



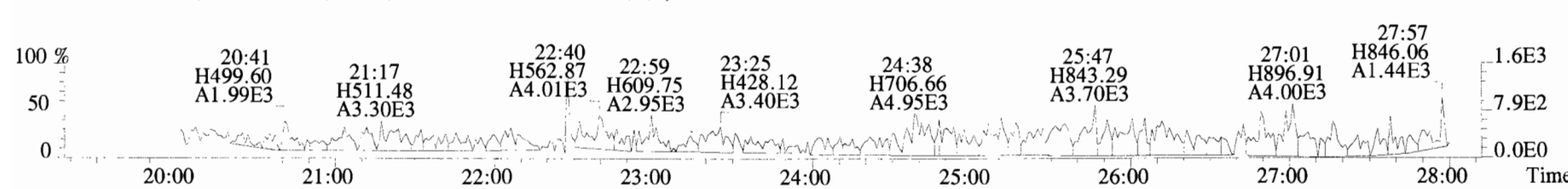
315.9419 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



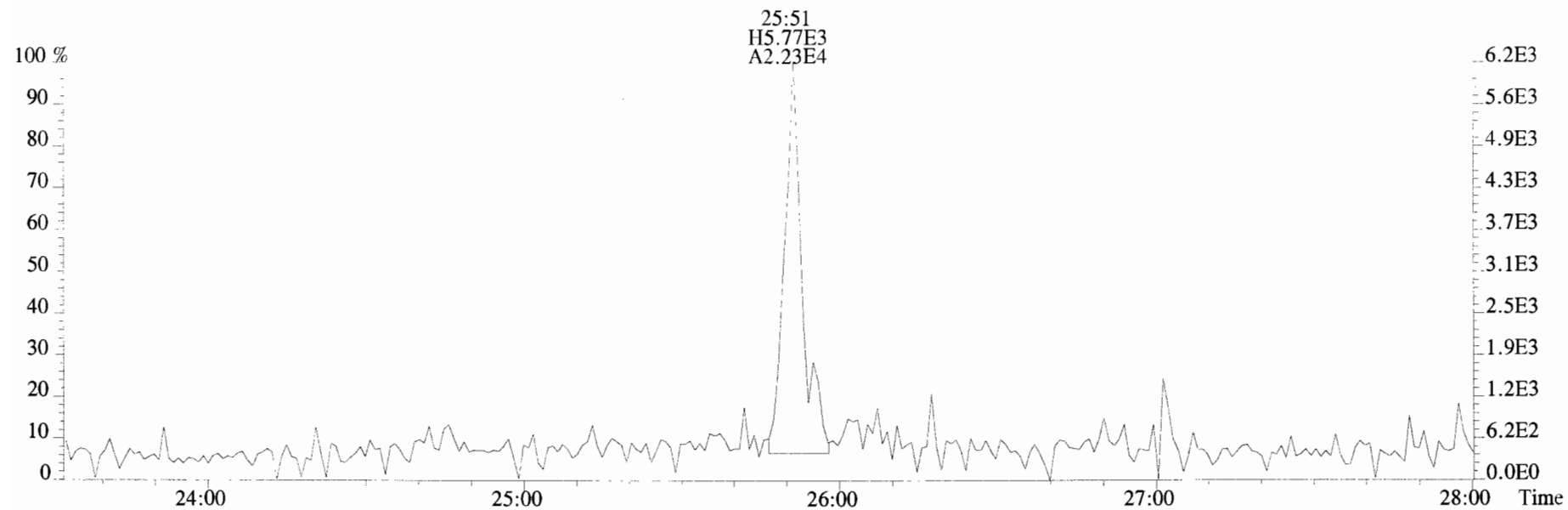
317.9389 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



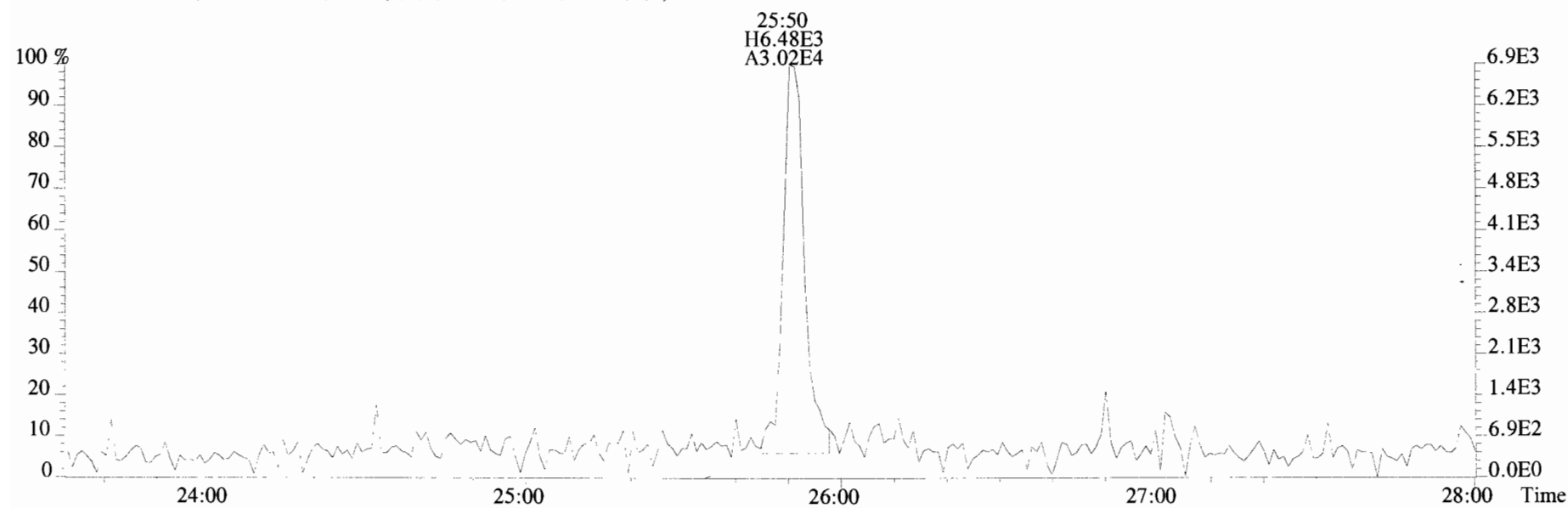
375.8364 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



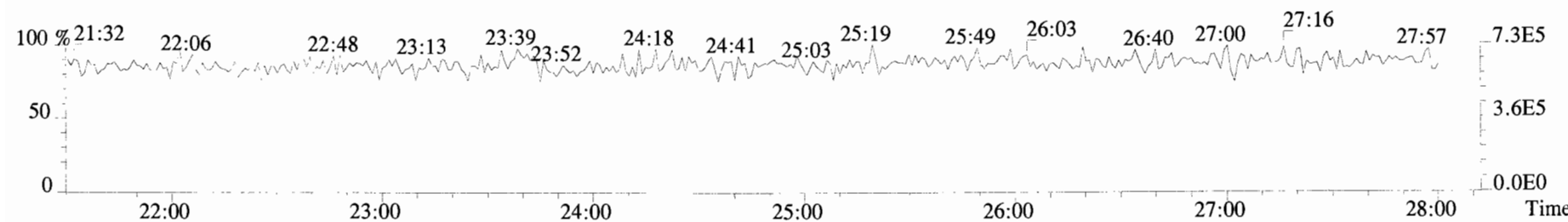
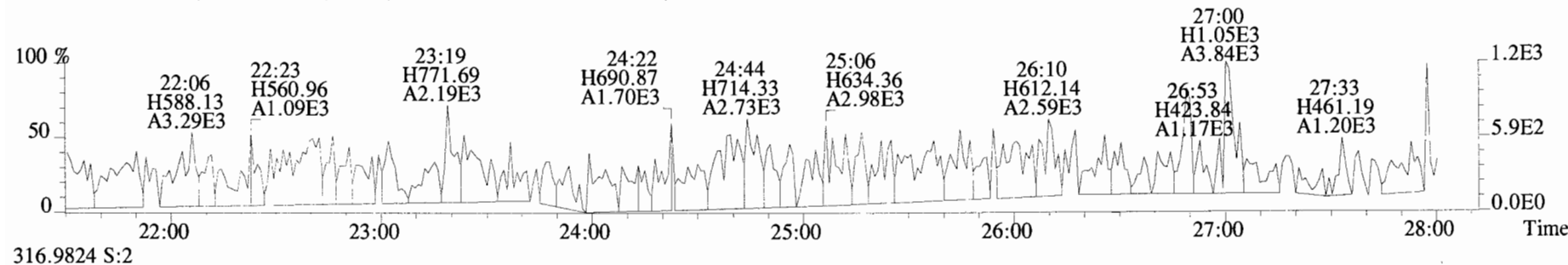
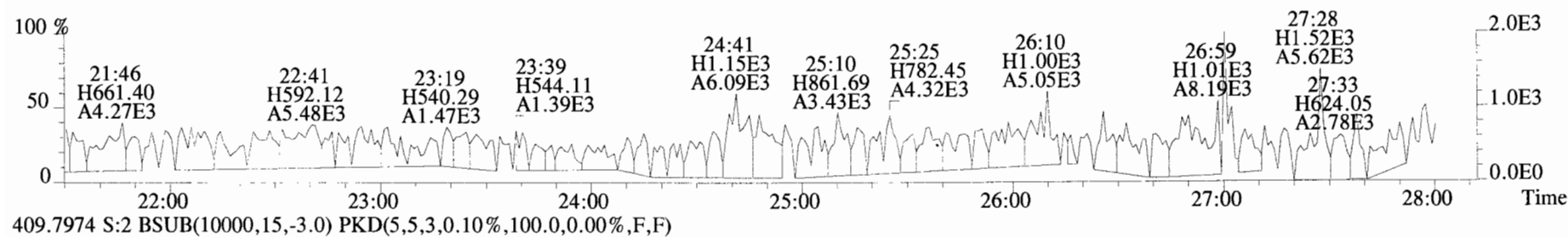
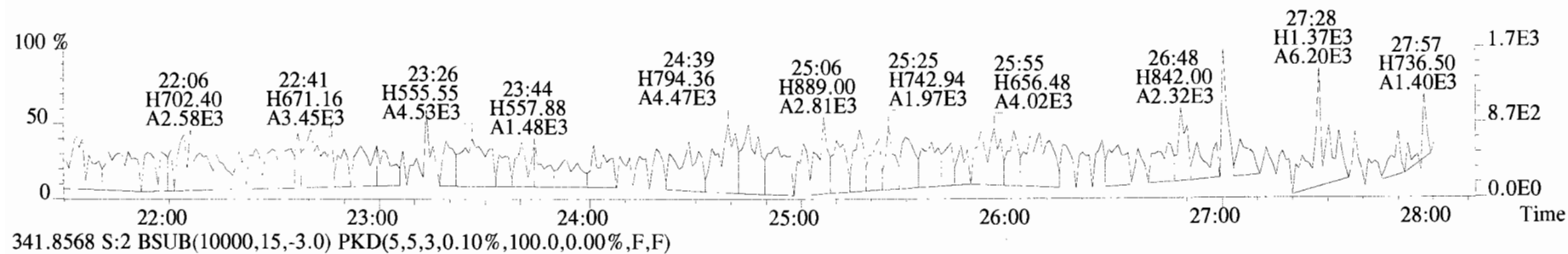
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
303.9016 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



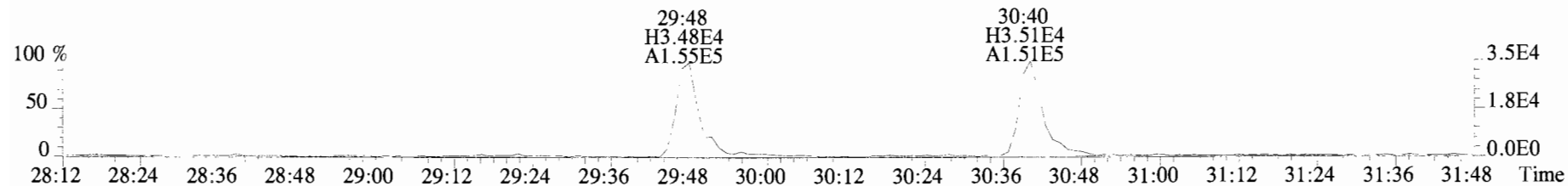
305.8987 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



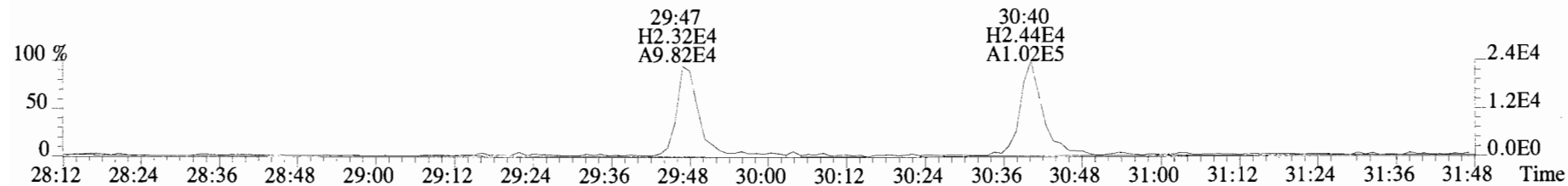
File:191009D1 #1-513 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
 339.8597 S:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



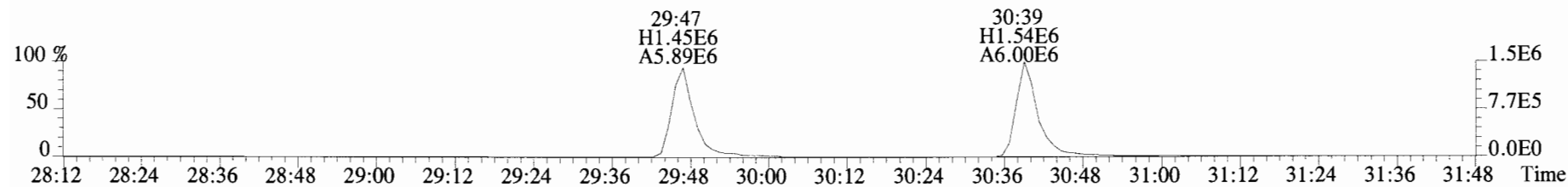
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



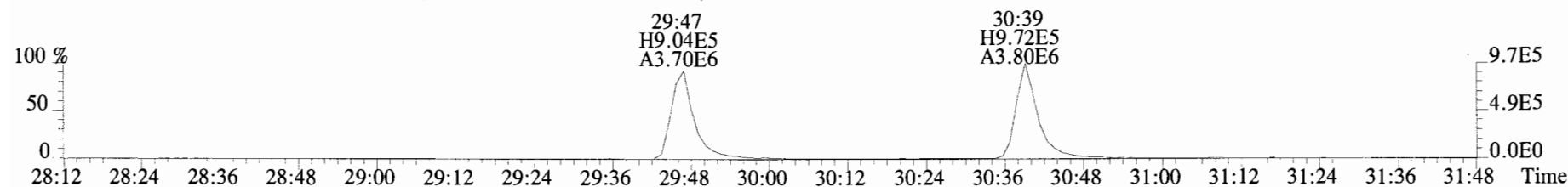
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



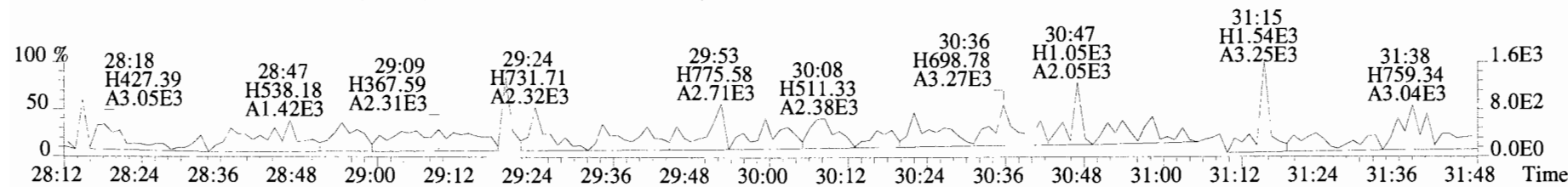
351.9000 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



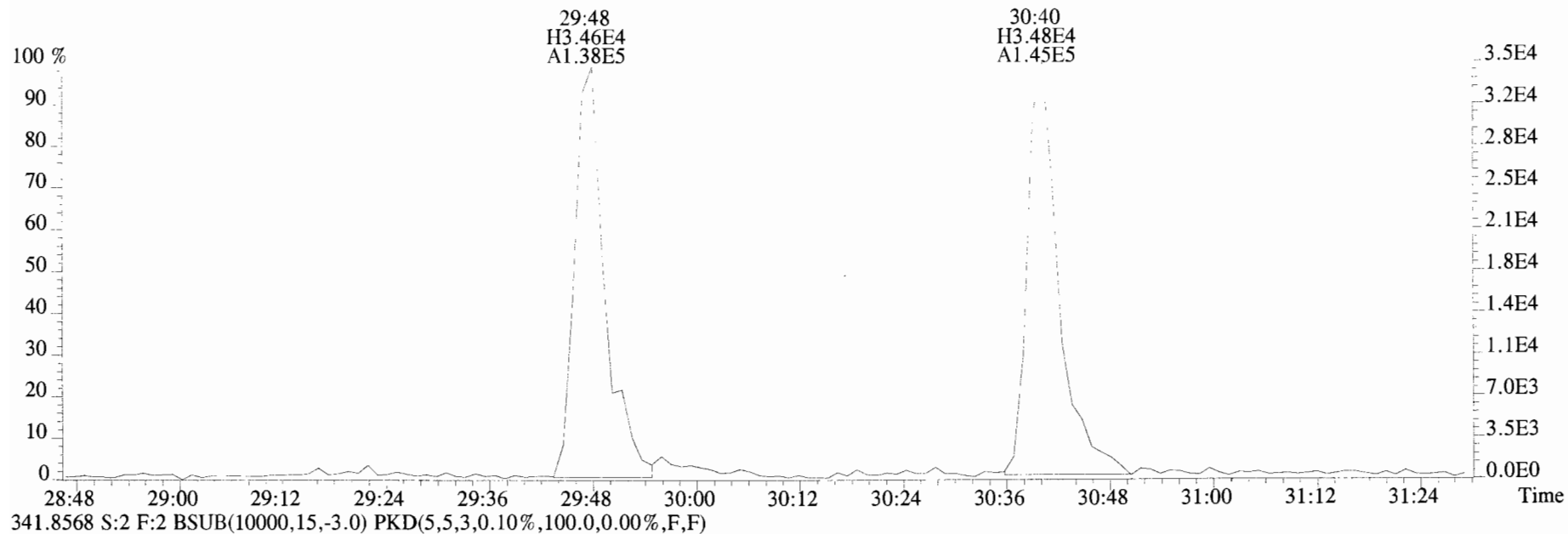
353.8970 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



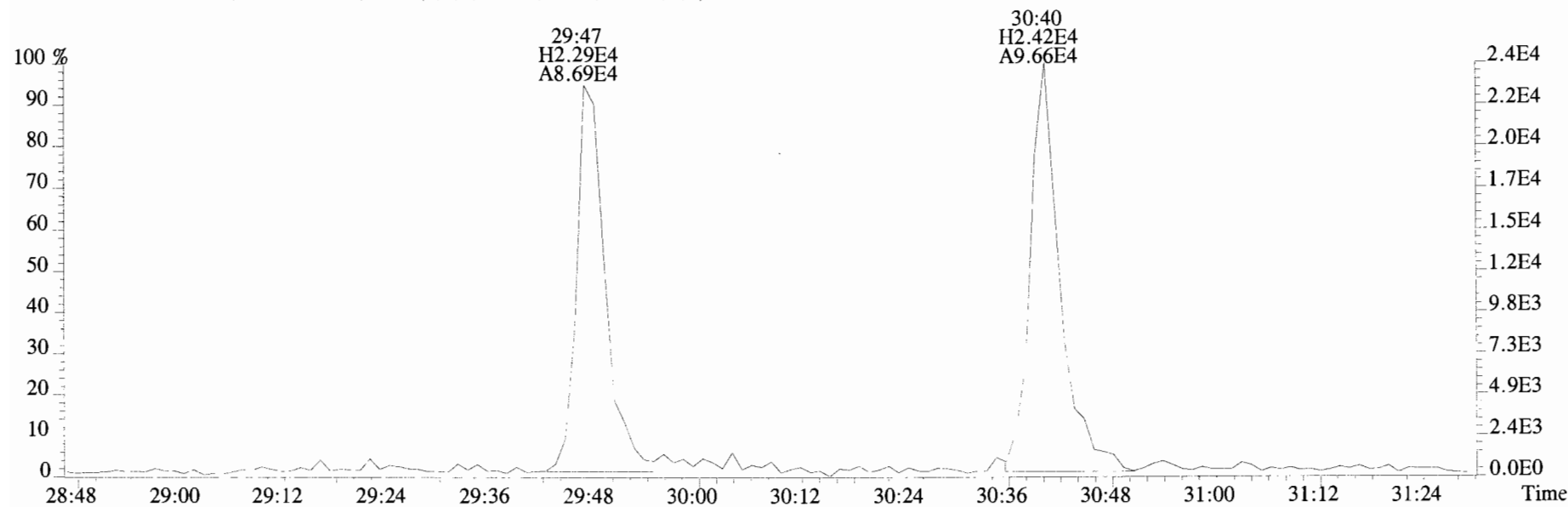
409.7974 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



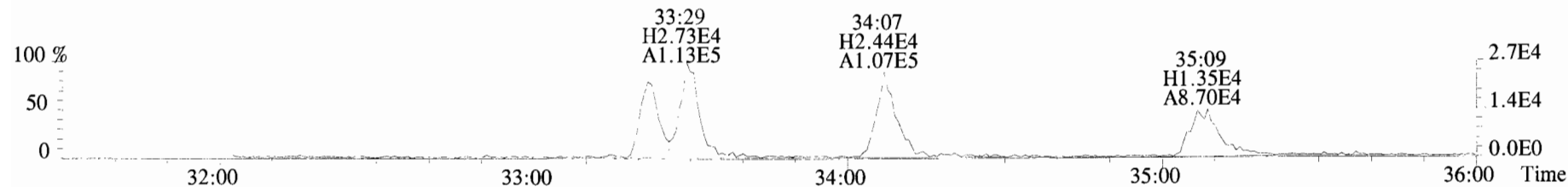
File:191009D1 #1-211 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
339.8597 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



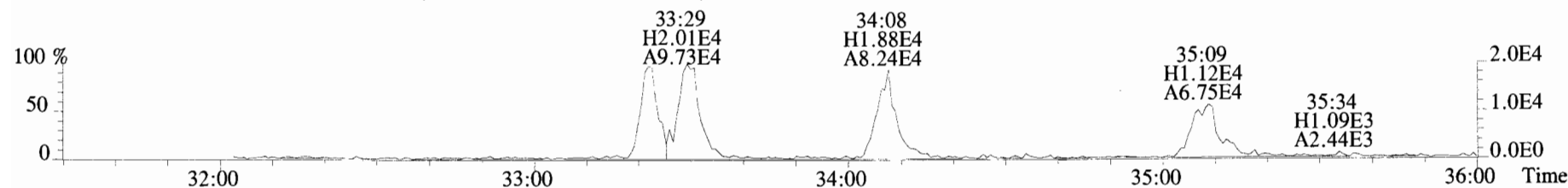
341.8568 S:2 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



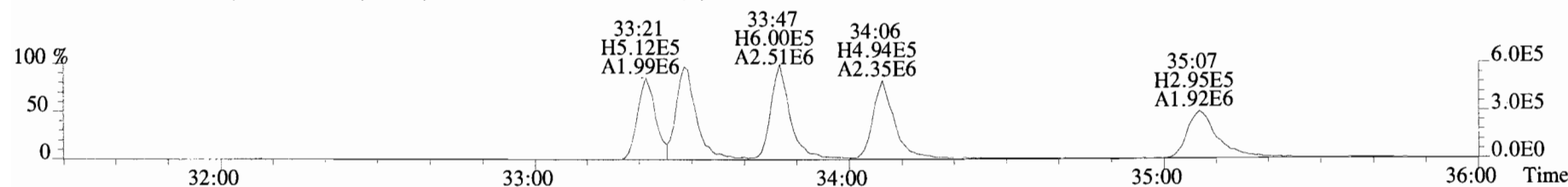
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
 373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



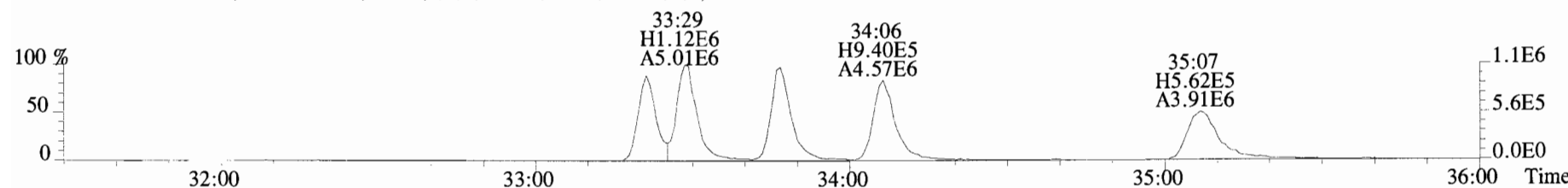
375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



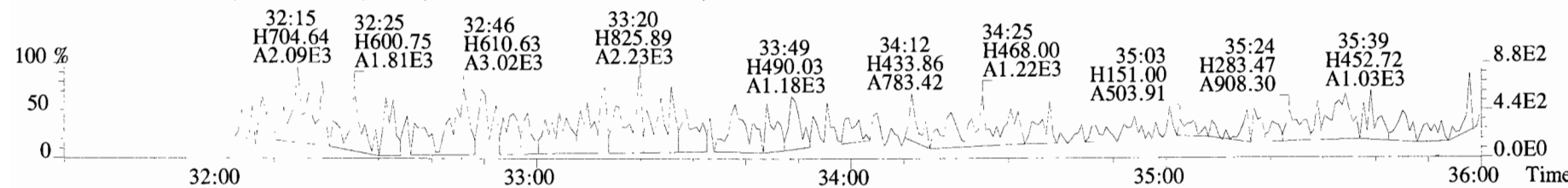
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



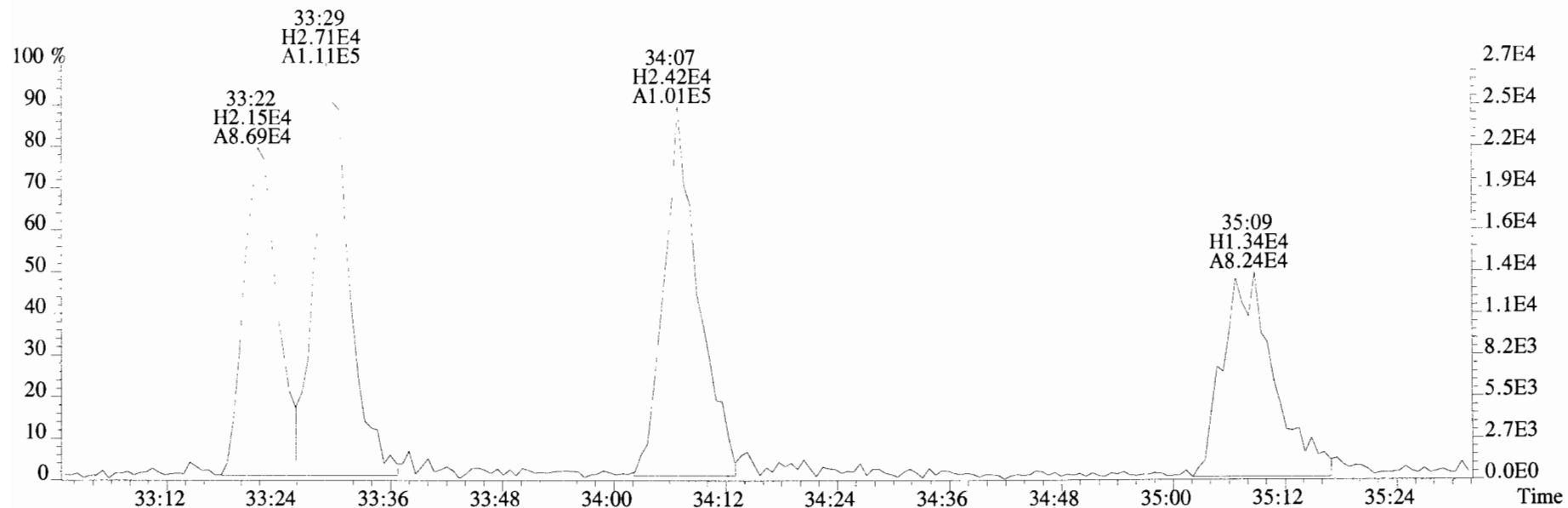
385.8610 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



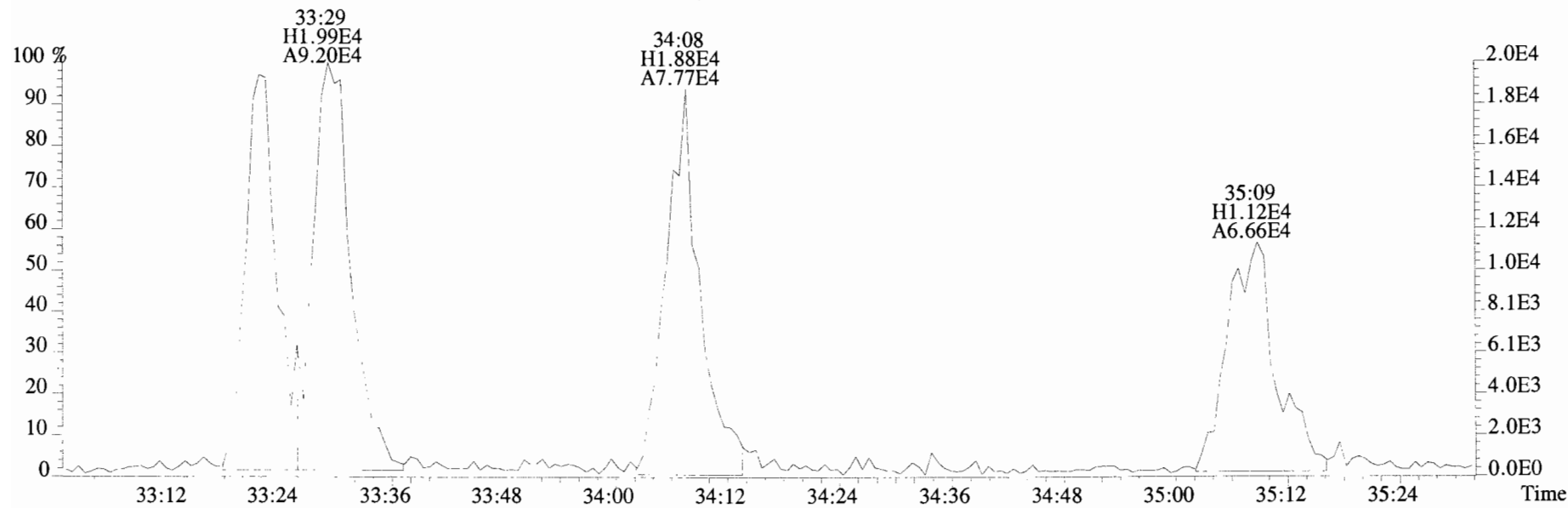
445.7555 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
373.8207 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

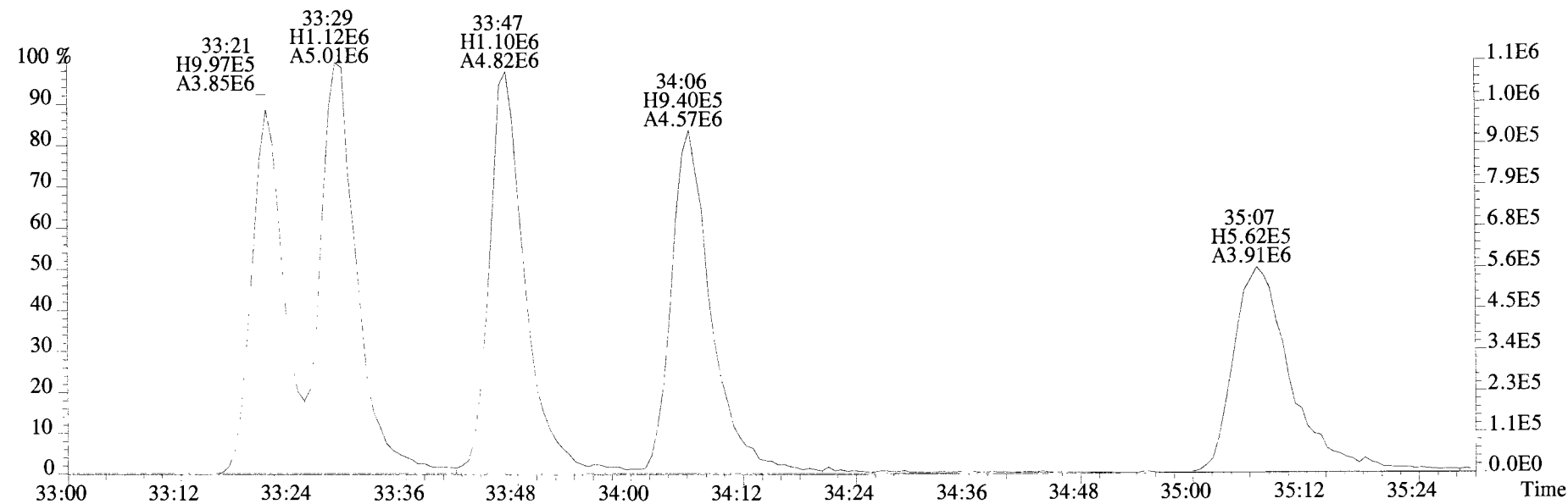
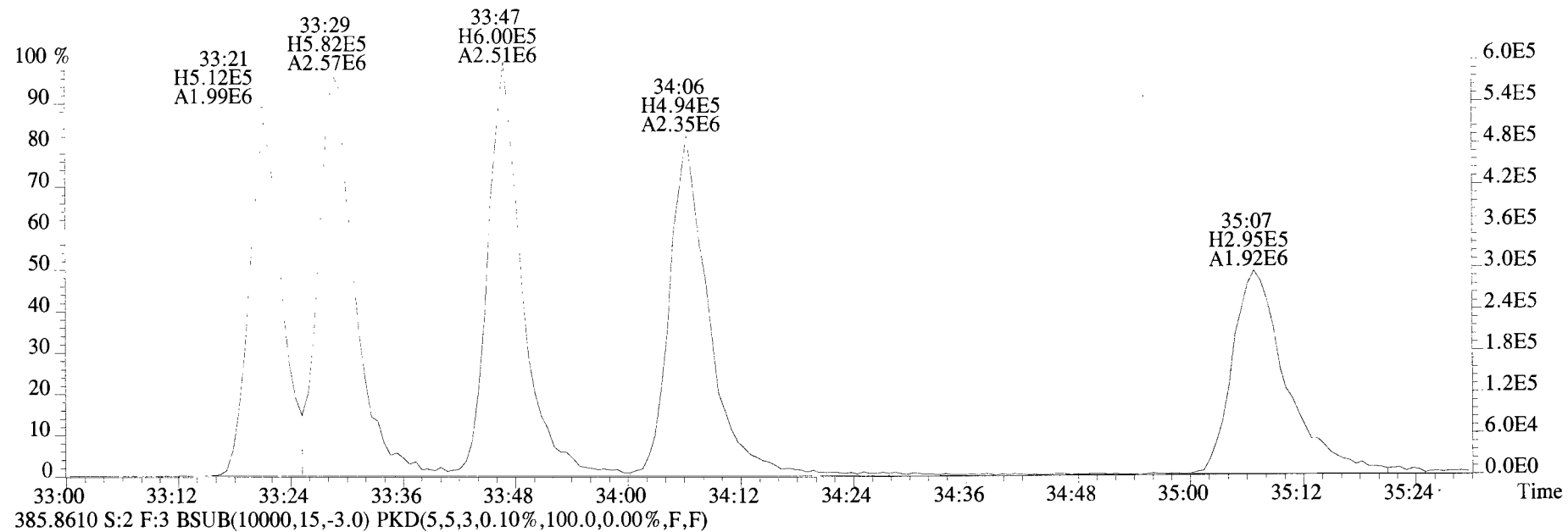


375.8178 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

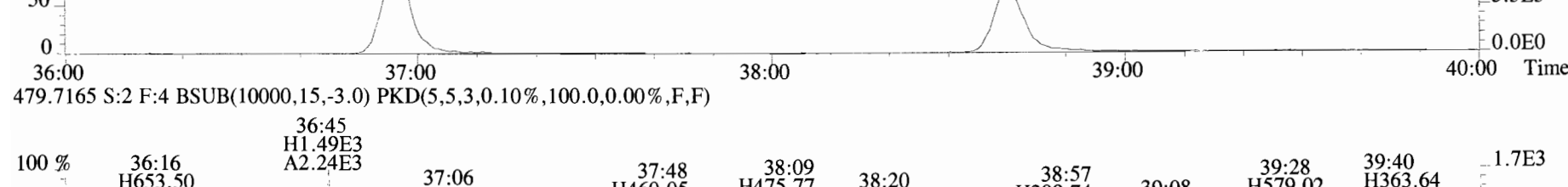
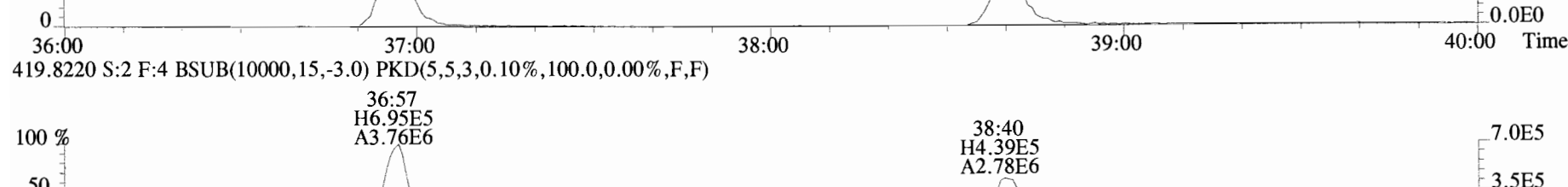
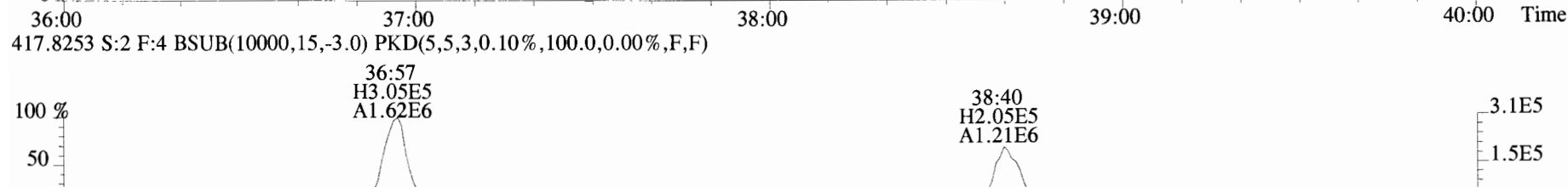
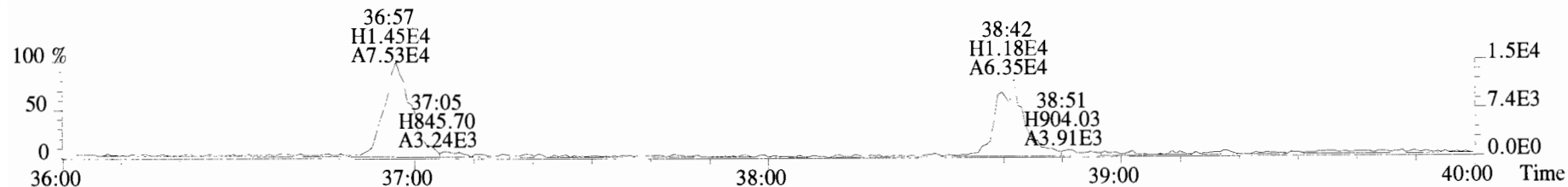




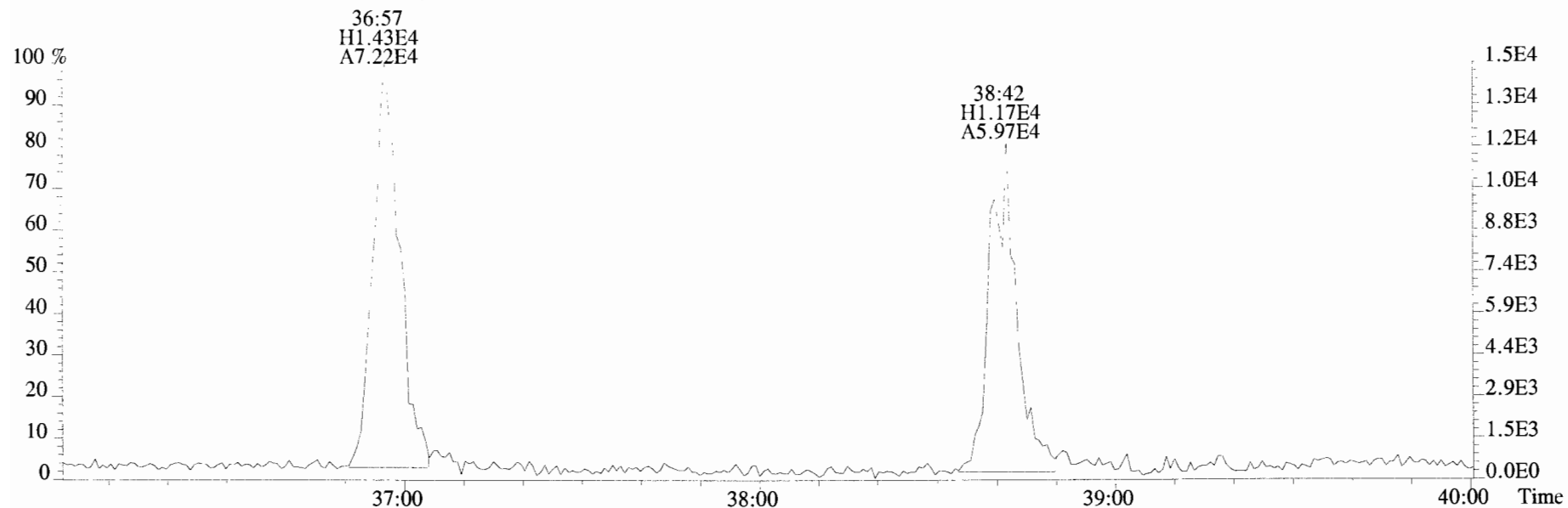
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
383.8639 S:2 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



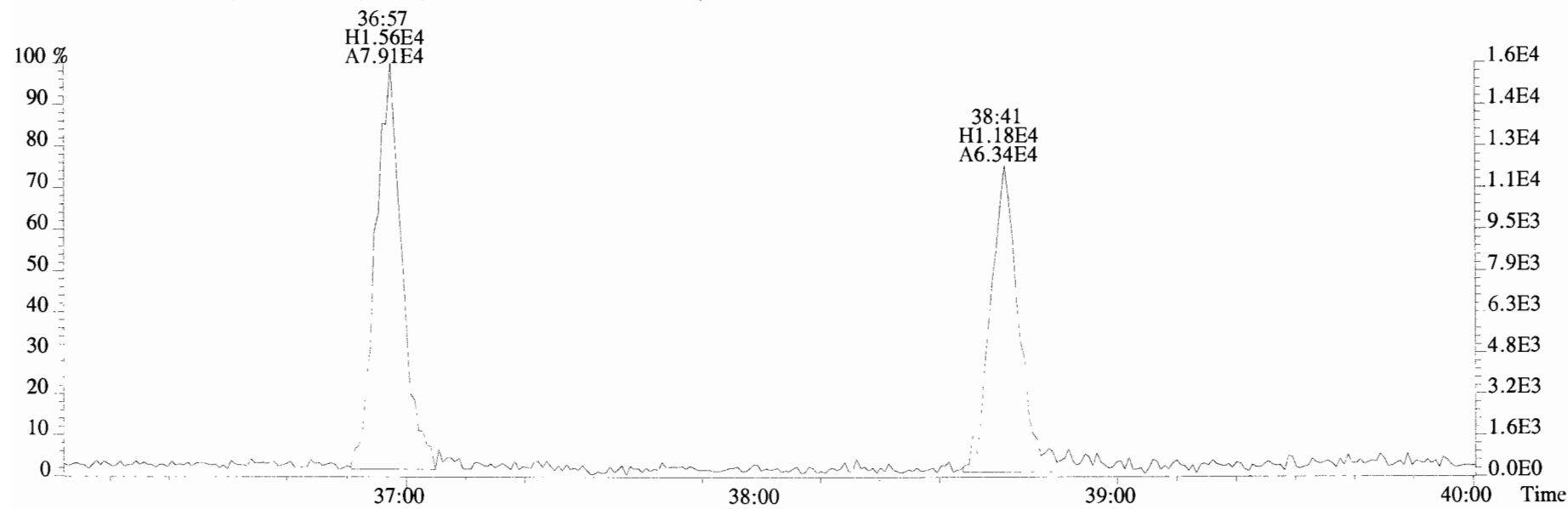
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text: Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
 407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



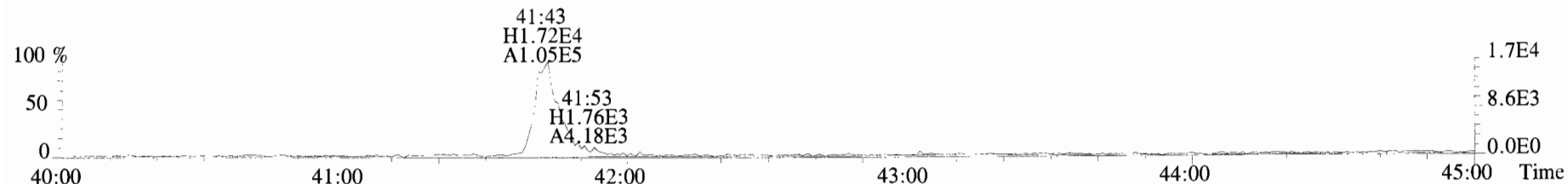
File:191009D1 #1-355 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
407.7818 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



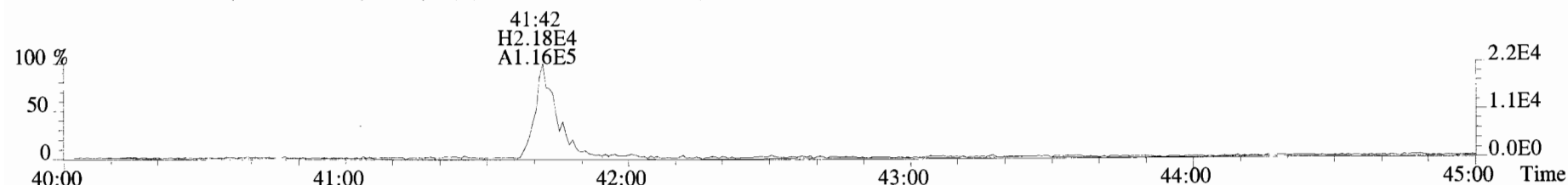
409.7788 S:2 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



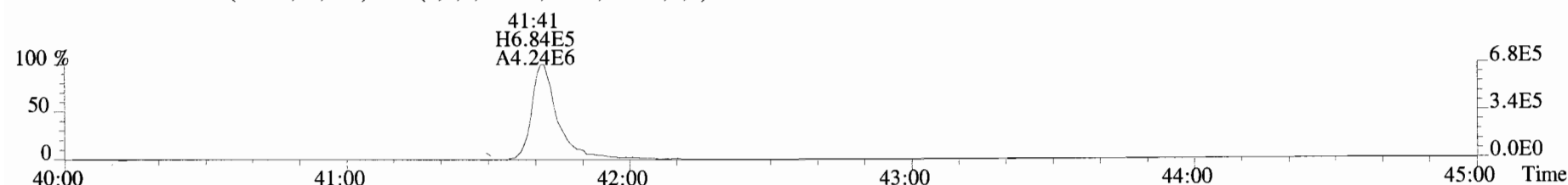
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#2 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
 441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



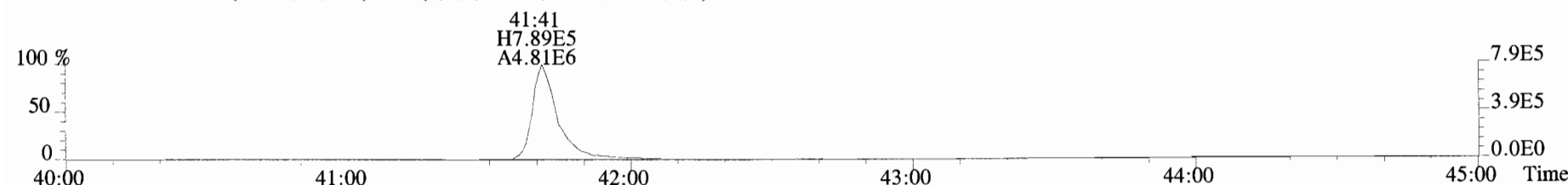
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



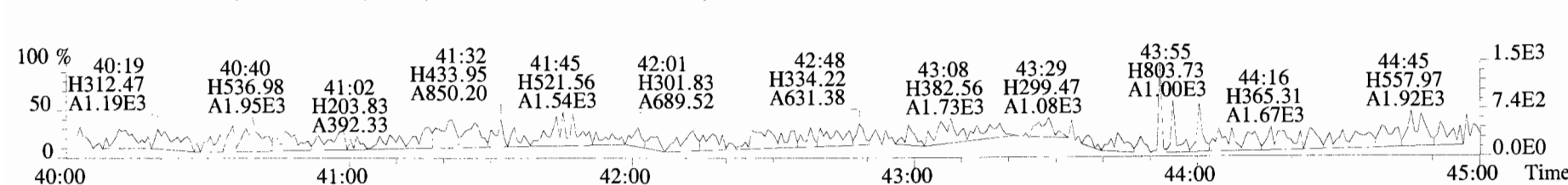
453.7831 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



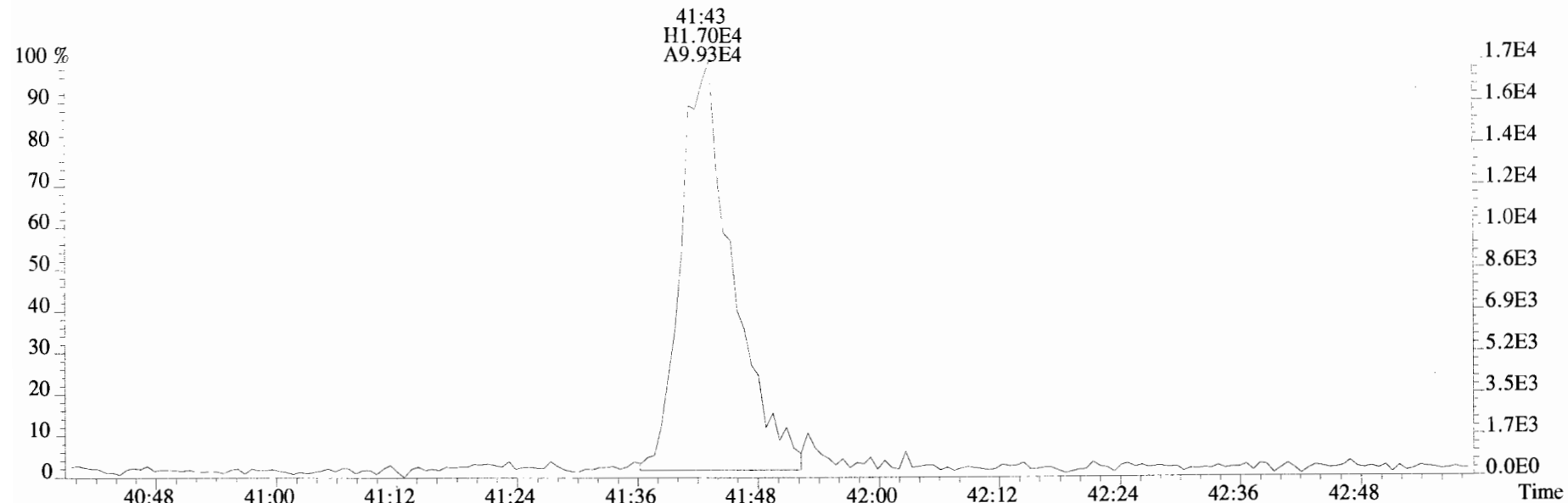
455.7801 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



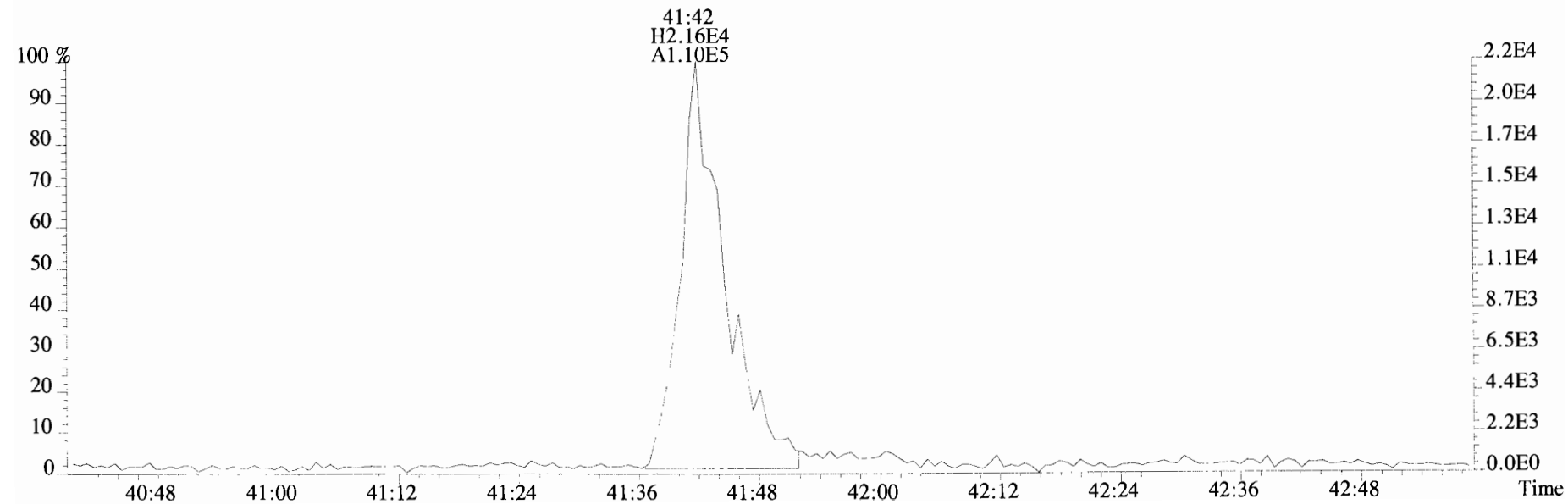
513.6775 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



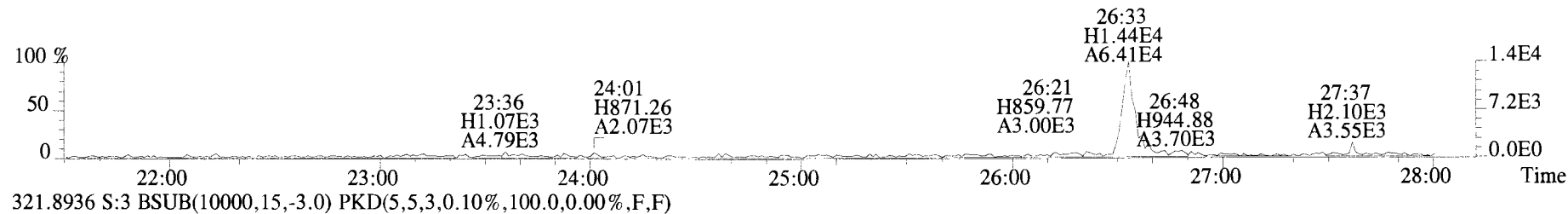
File:191009D1 #1-432 Acq: 9-OCT-2019 17:00:45 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#2 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-2 1613 CS1 19C2202 Exp:OCDD\_DB5  
441.7428 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



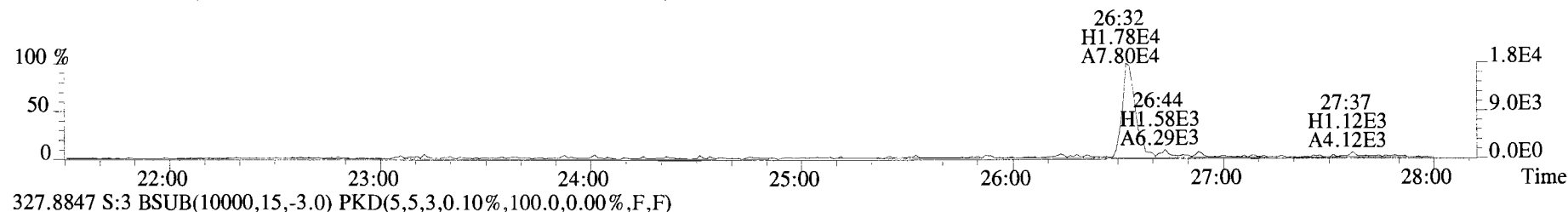
443.7398 S:2 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



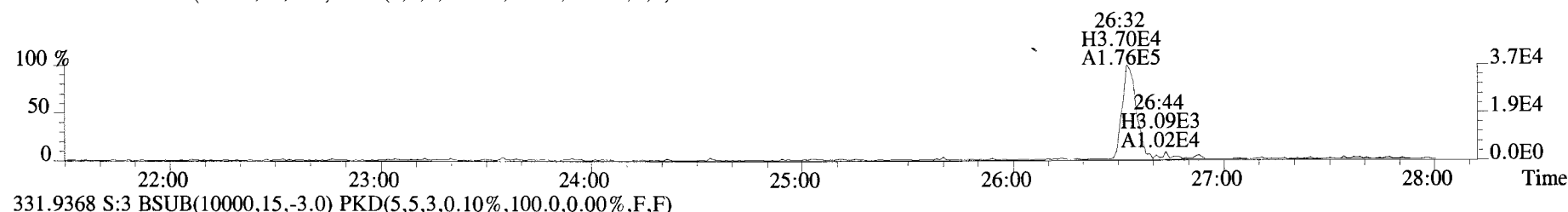
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



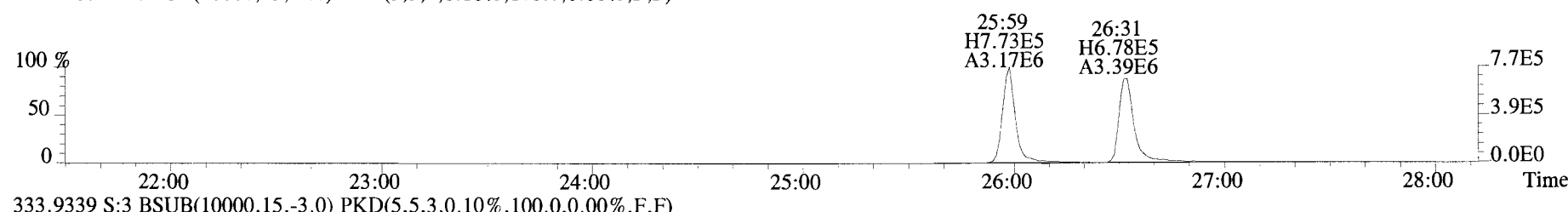
321.8936 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



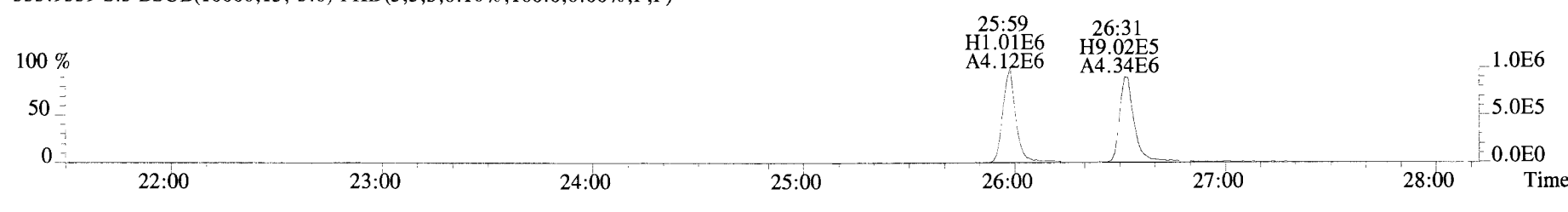
327.8847 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



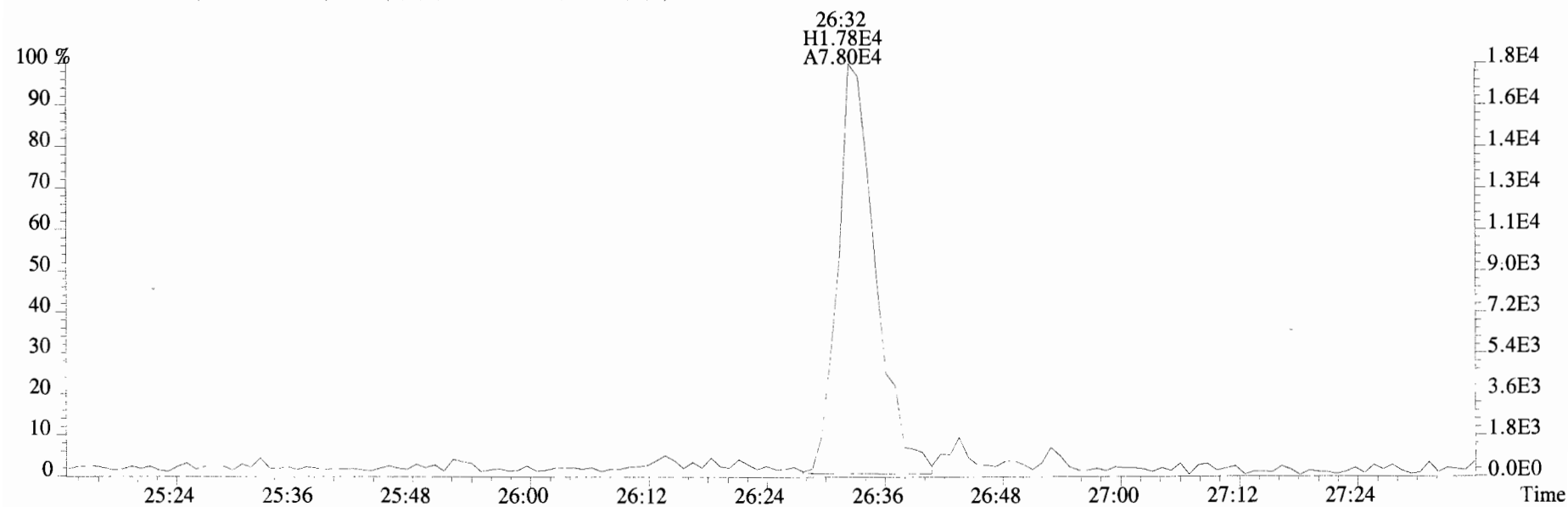
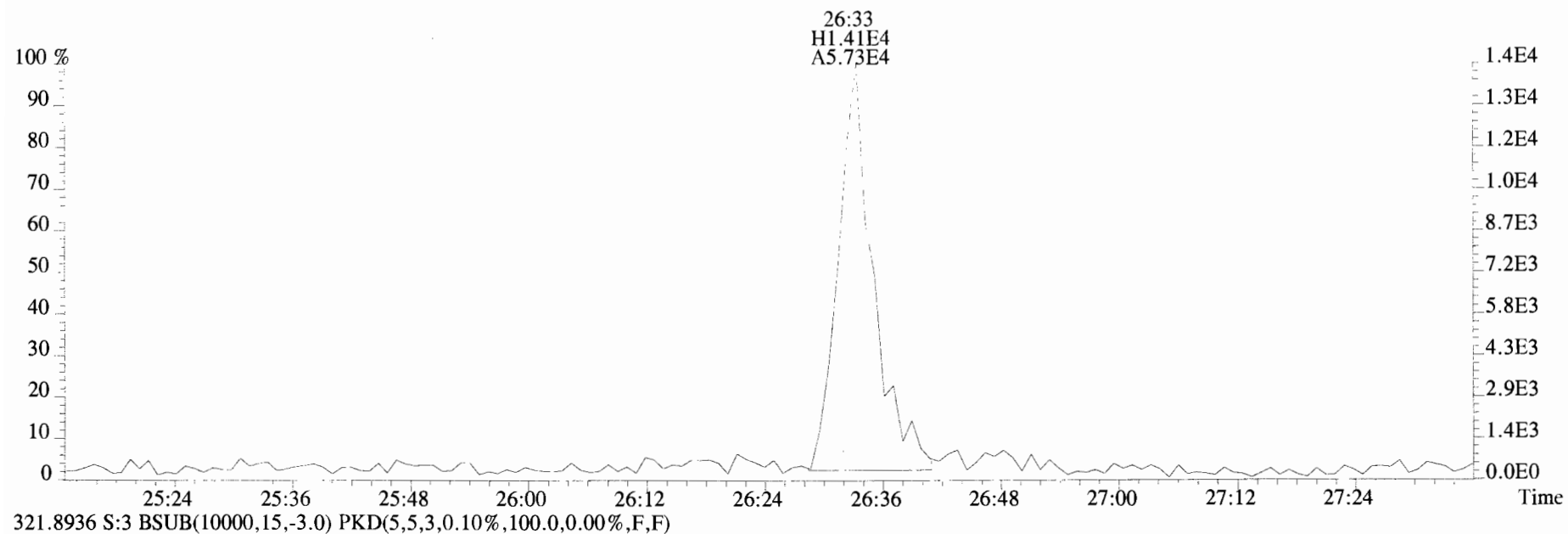
331.9368 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



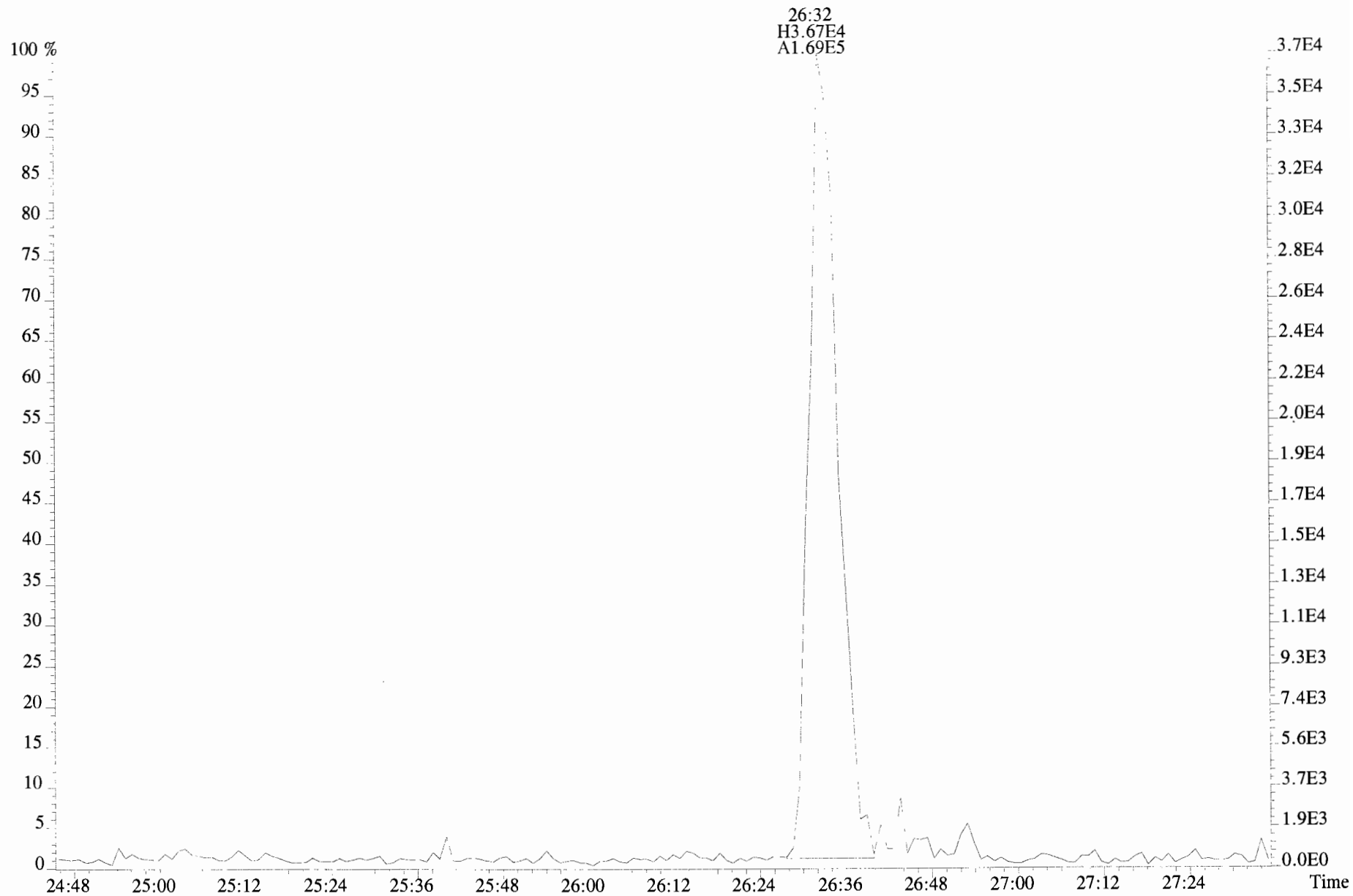
333.9339 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
319.8965 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

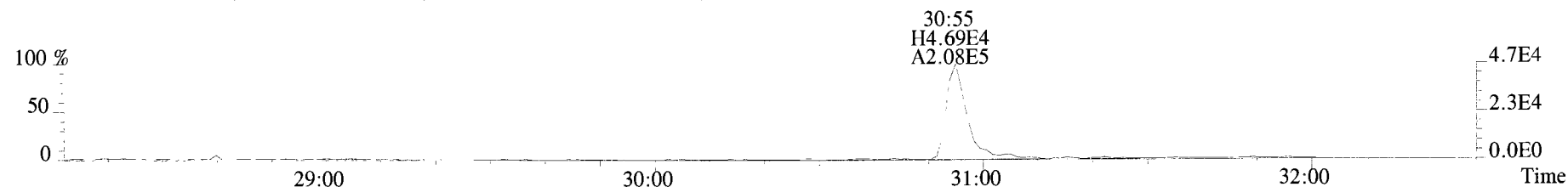


File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
327.8847 S:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

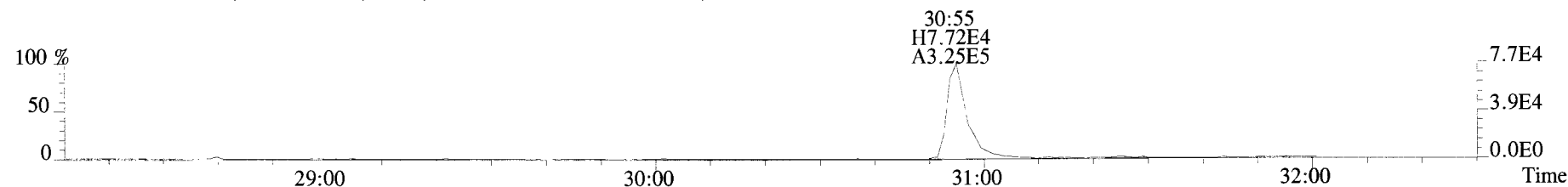




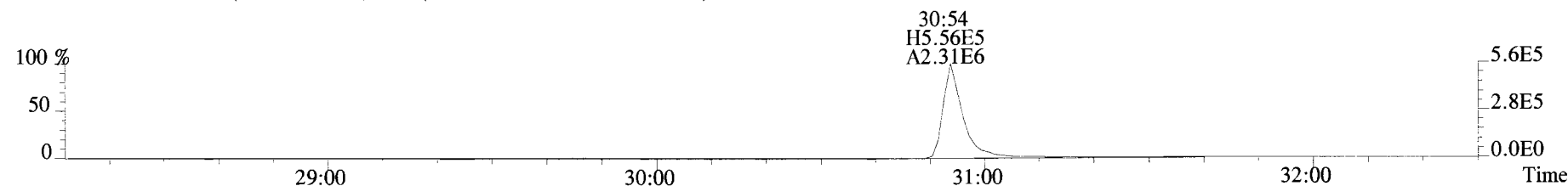
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
353.8576 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



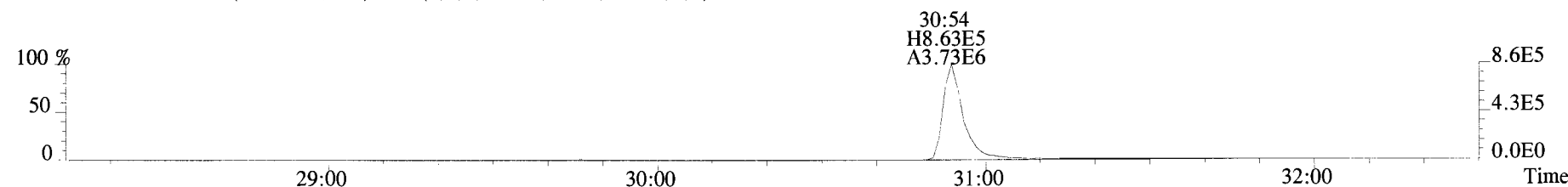
355.8546 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



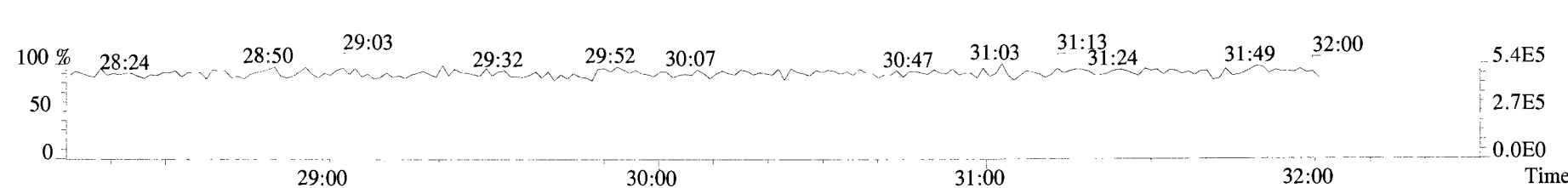
365.8978 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



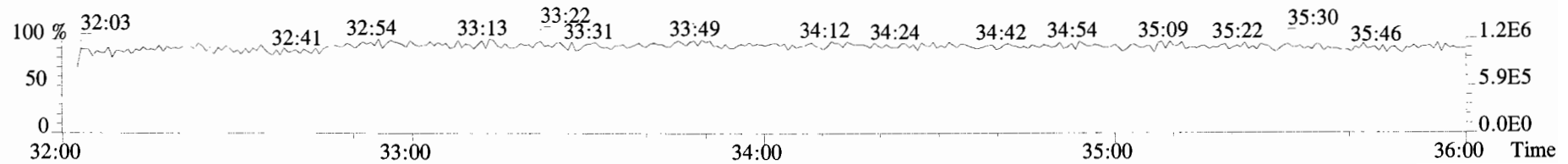
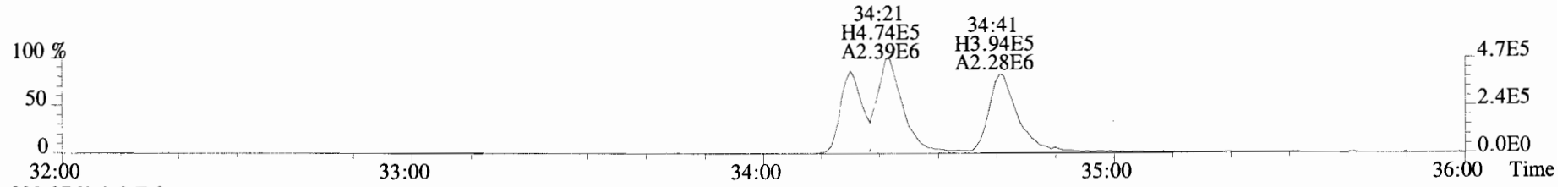
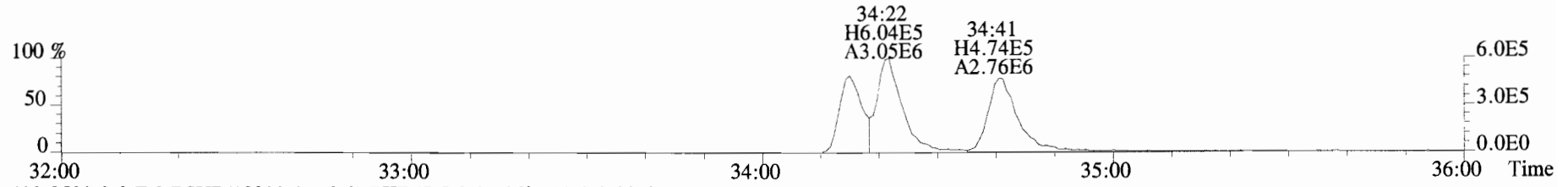
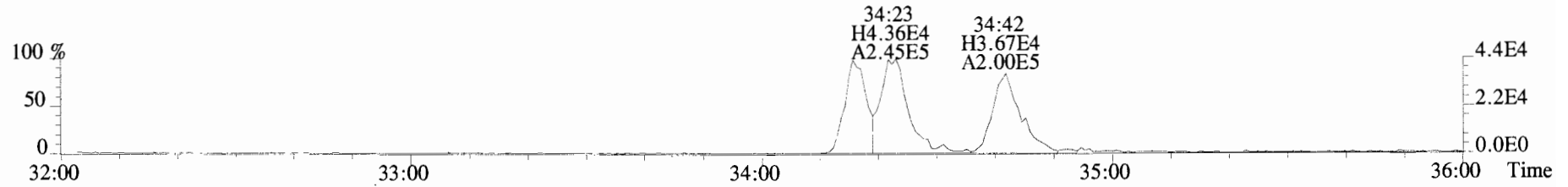
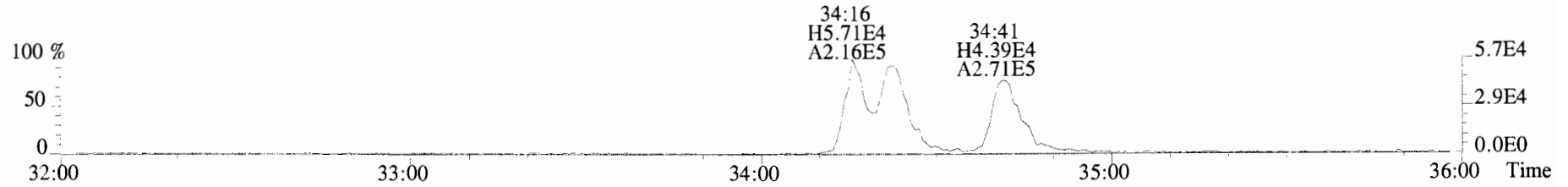
367.8949 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



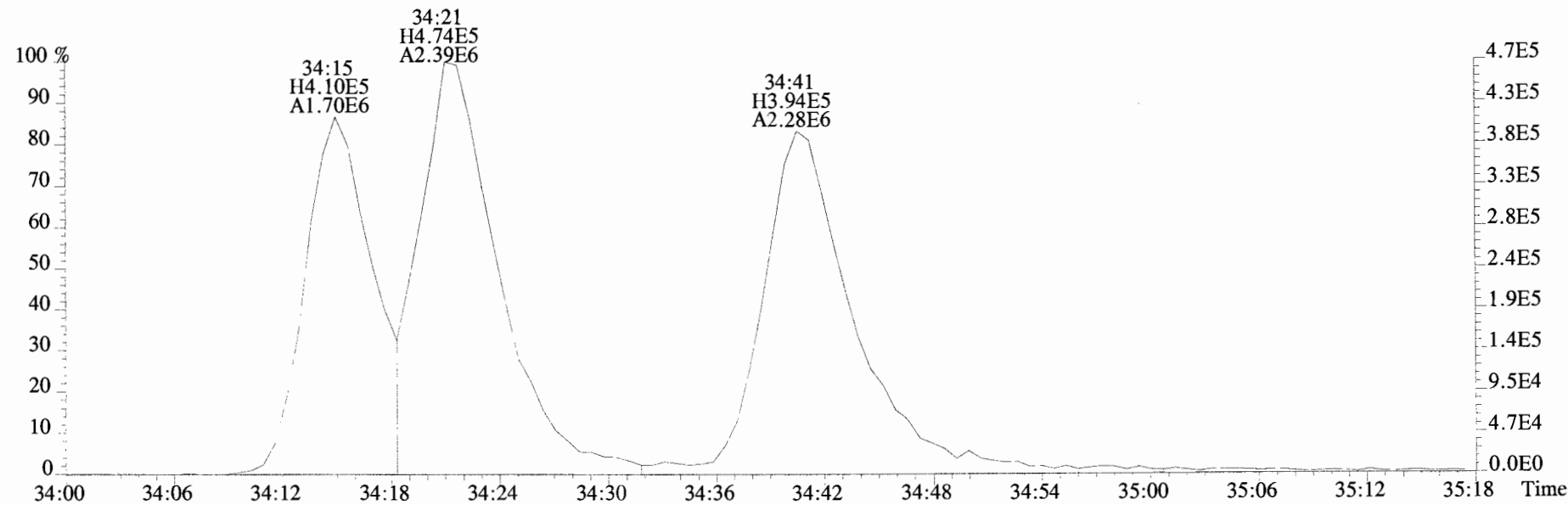
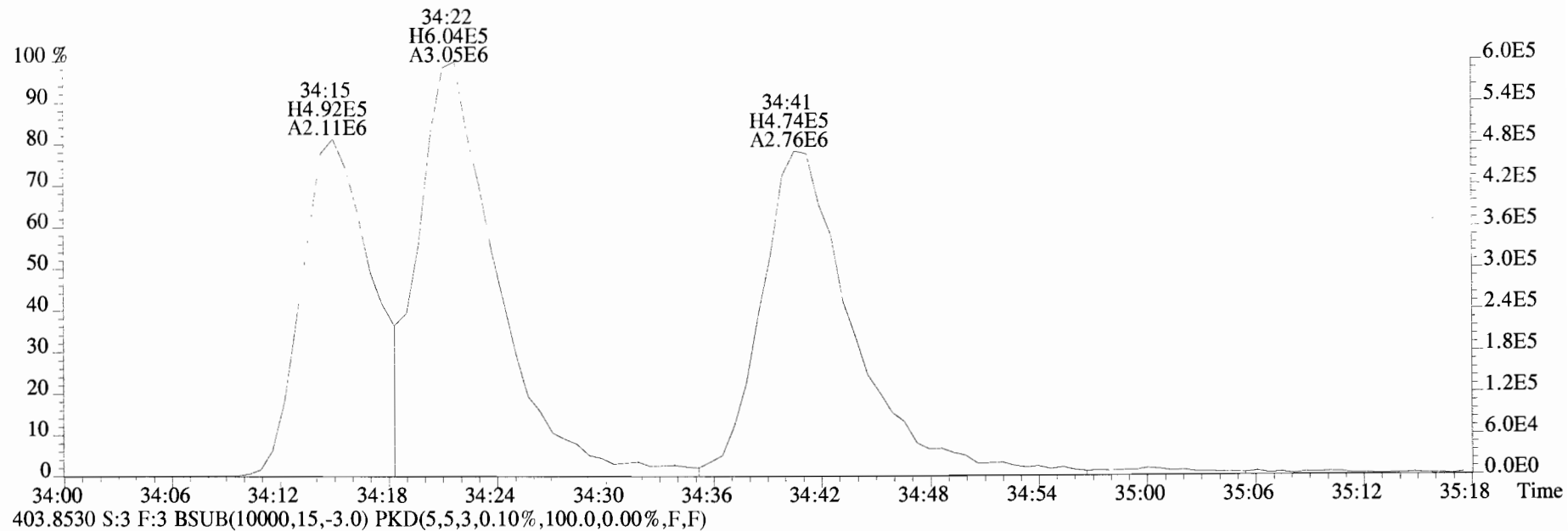
366.9792 S:3 F:2



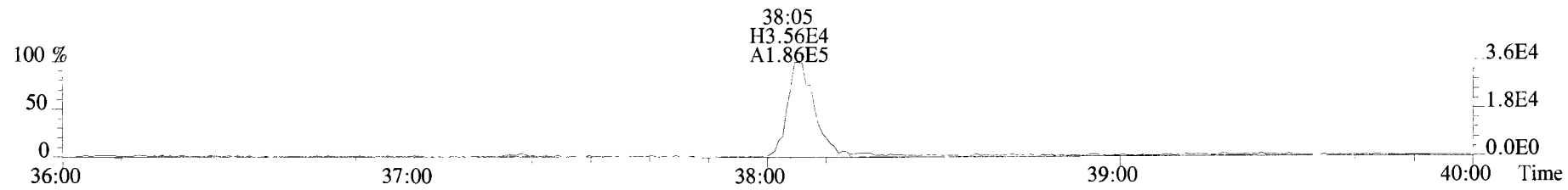
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
389.8156 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



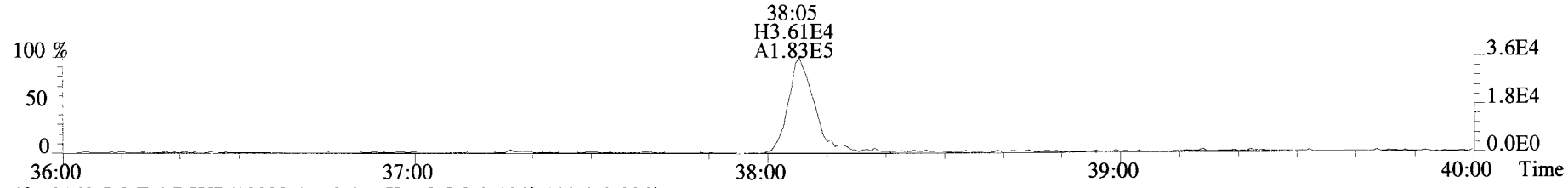
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text: Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
401.8559 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



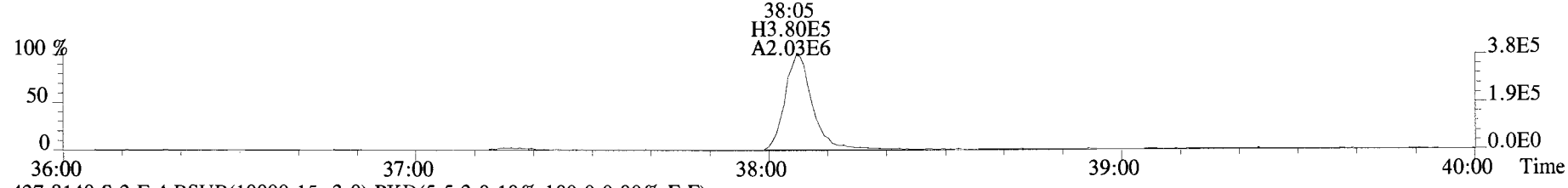
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
423.7767 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



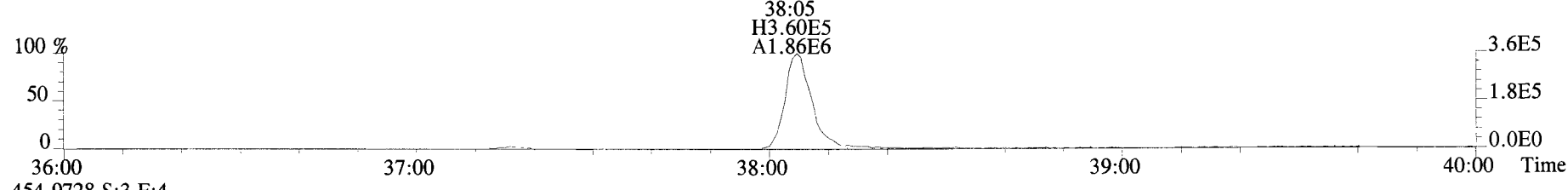
425.7737 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



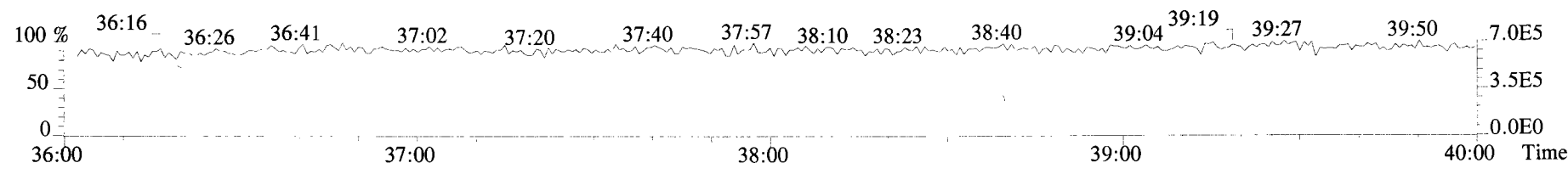
435.8169 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



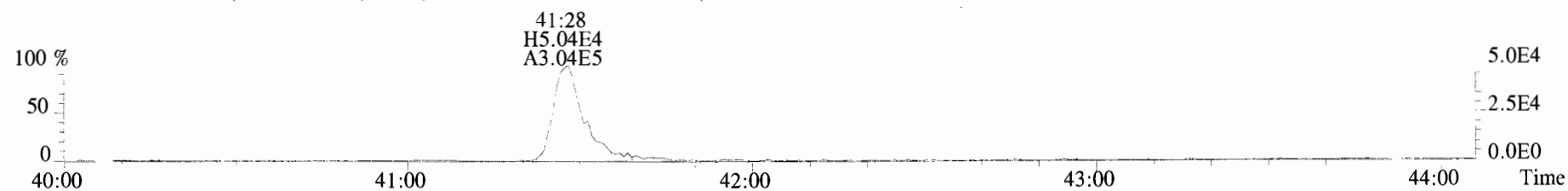
437.8140 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



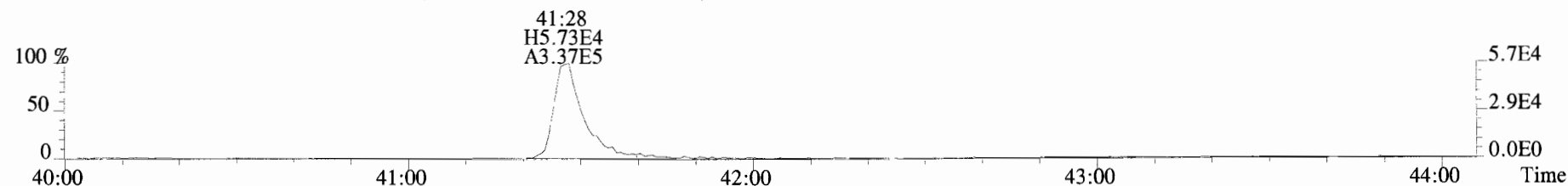
454.9728 S:3 F:4



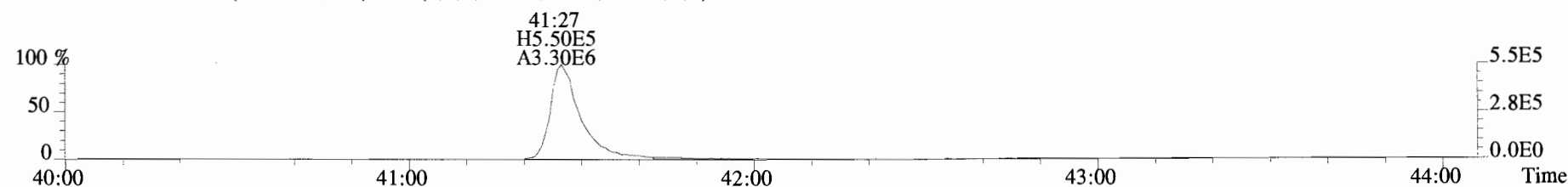
File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
457.7377 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



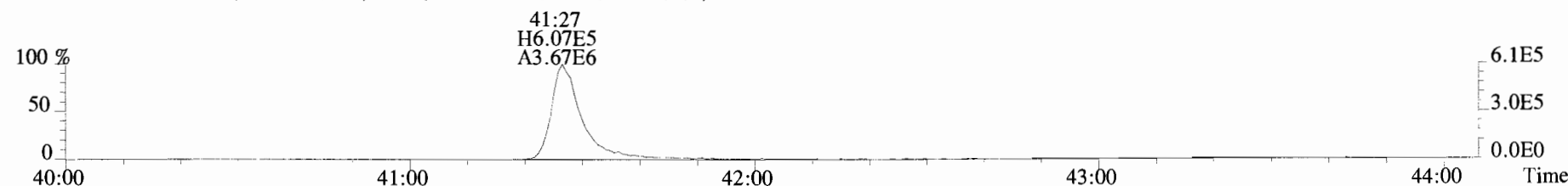
459.7348 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



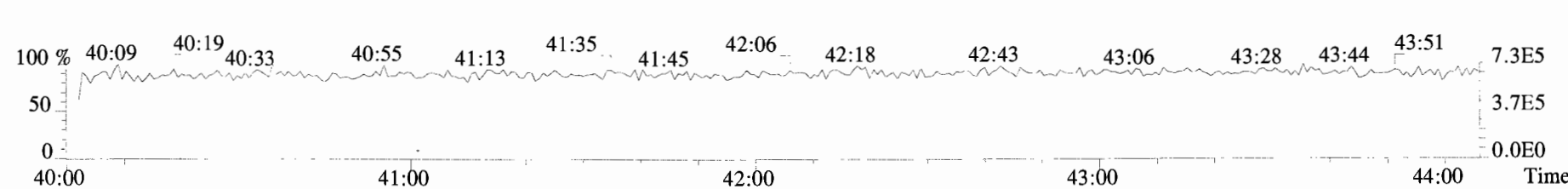
469.7780 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



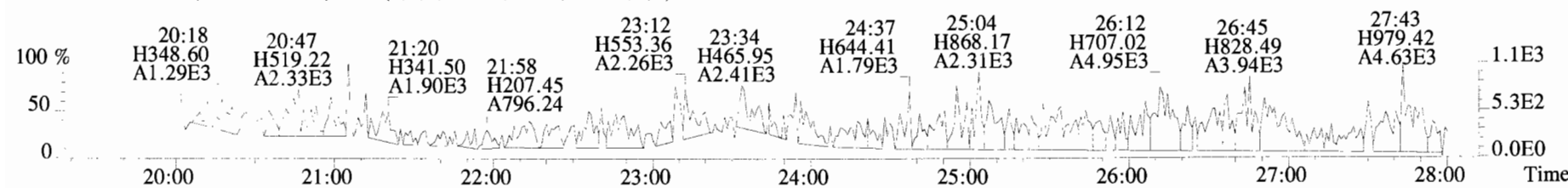
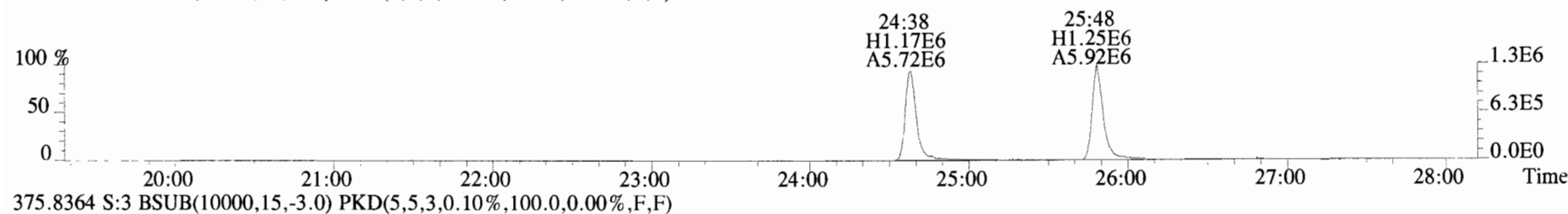
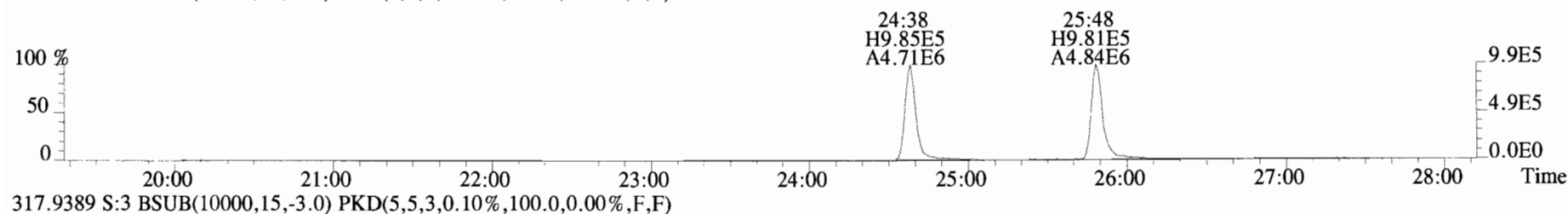
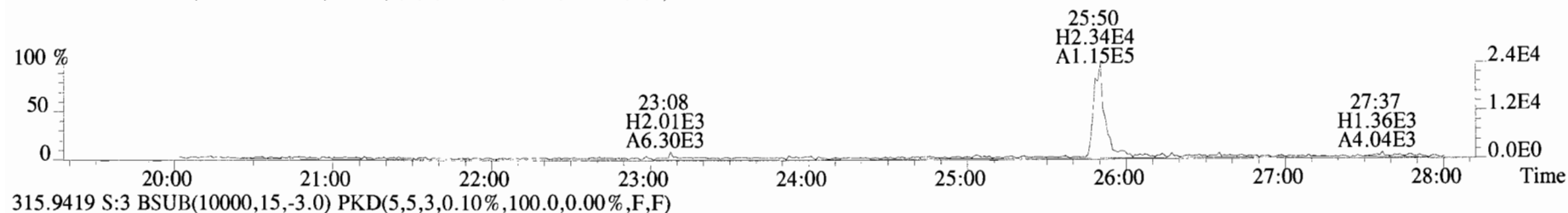
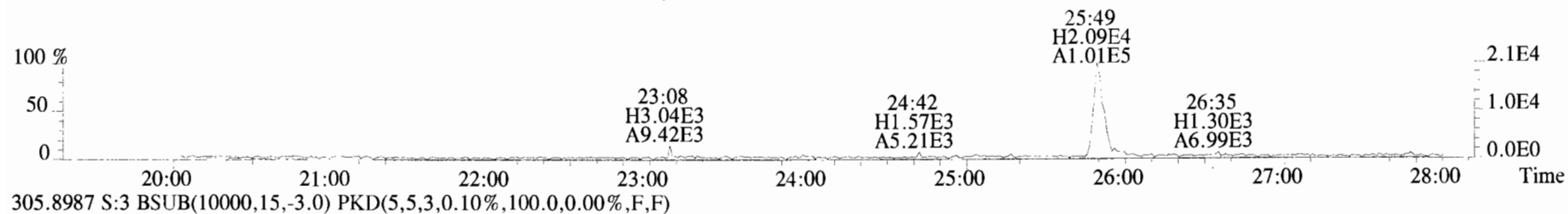
471.7750 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



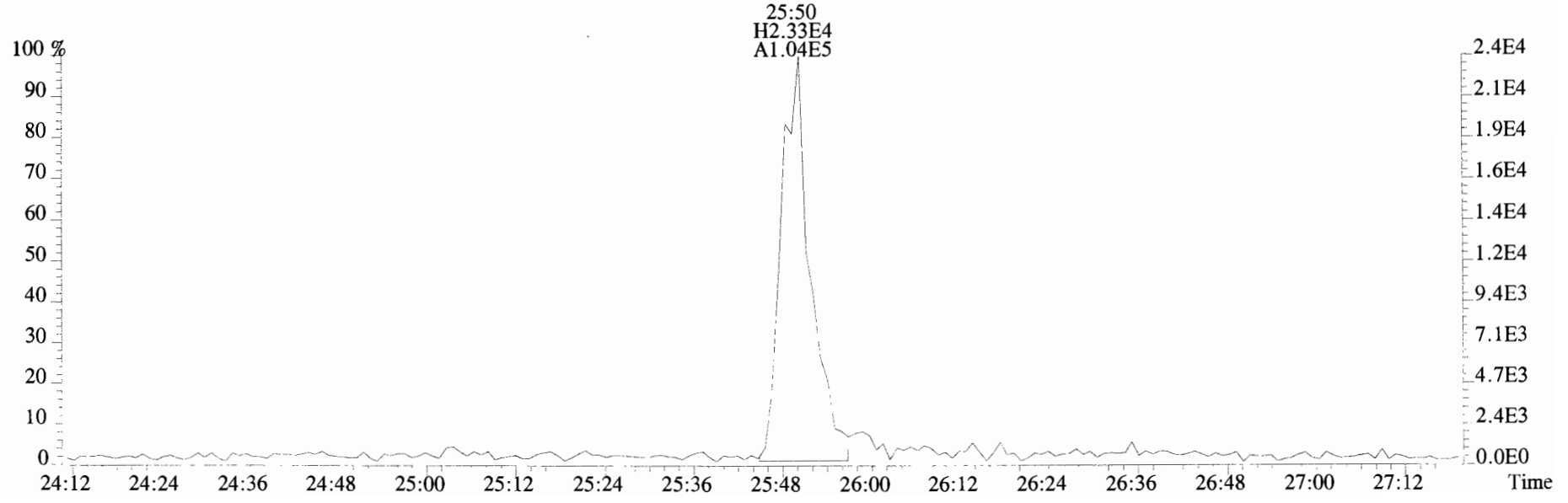
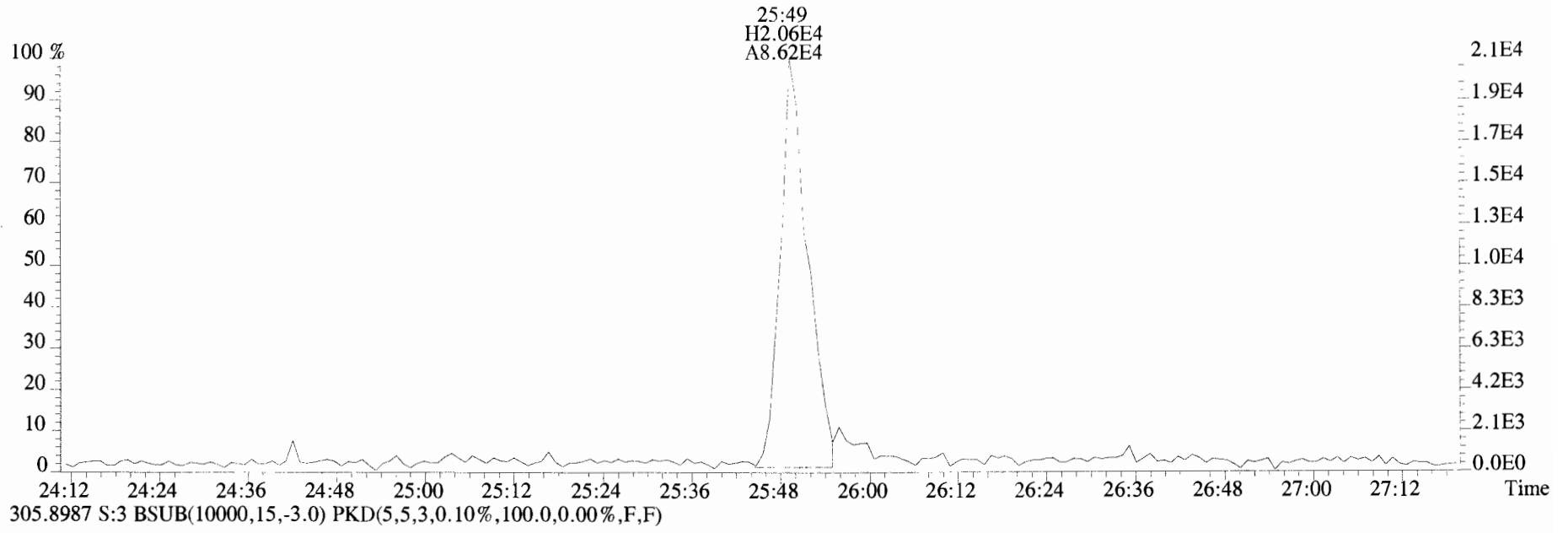
454.9728 S:3 F:5



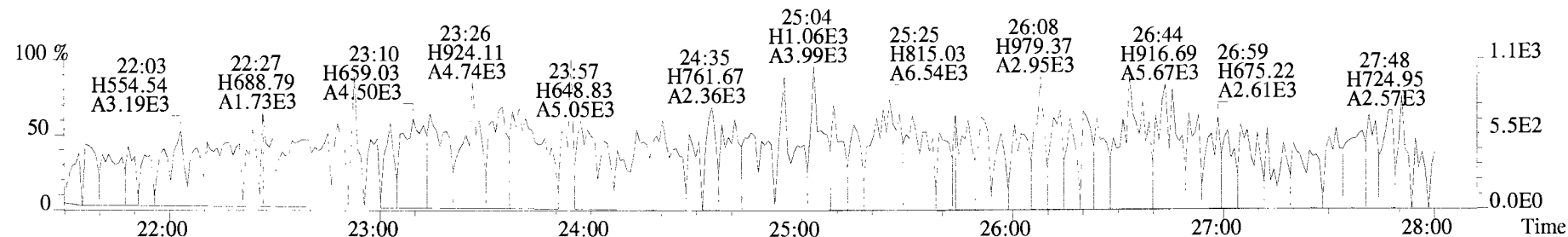
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



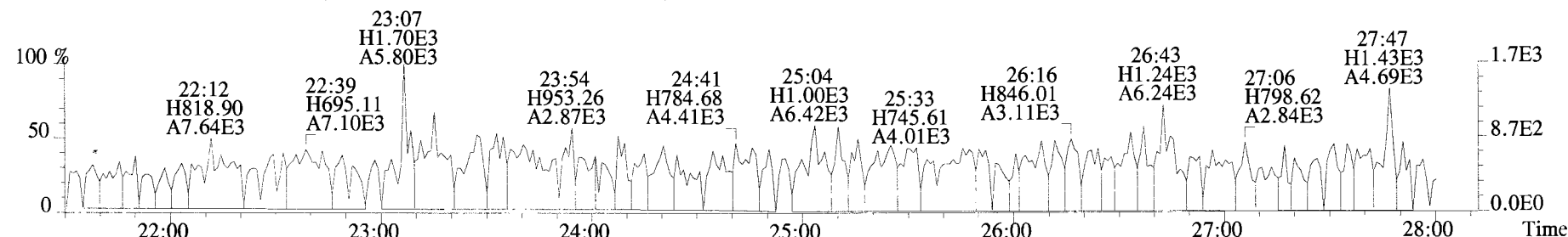
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
303.9016 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



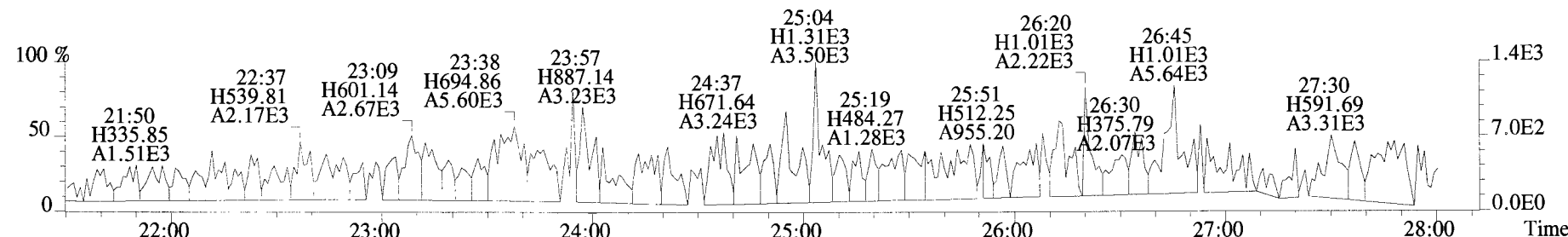
File:191009D1 #1-513 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
 339.8597 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



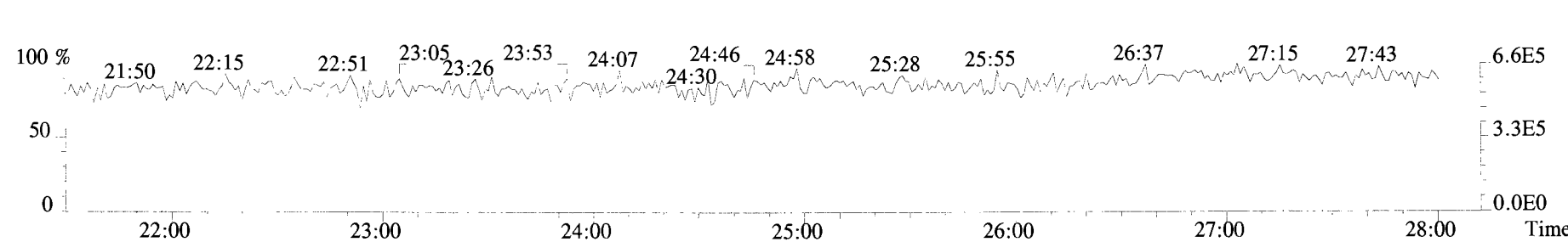
341.8568 S:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

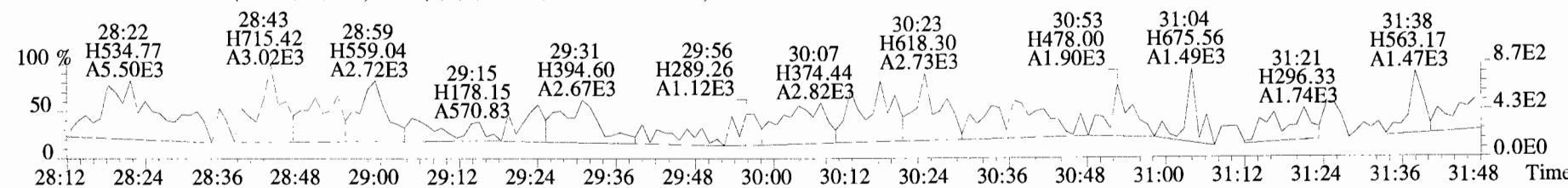
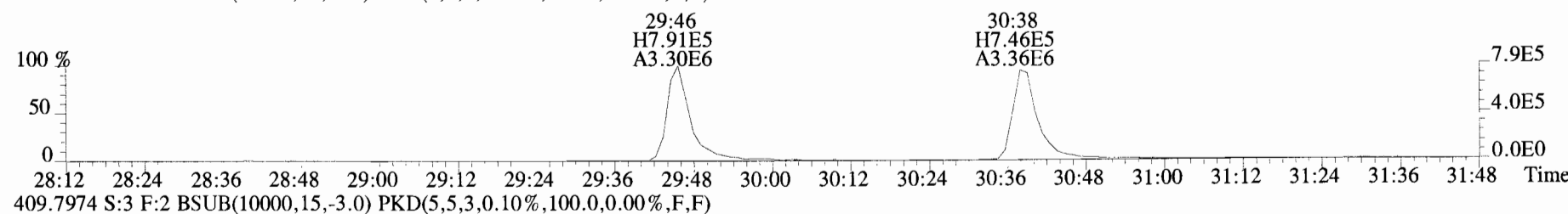
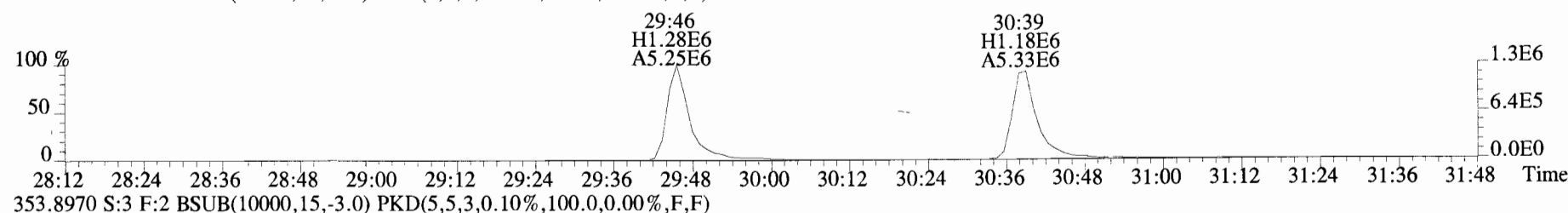
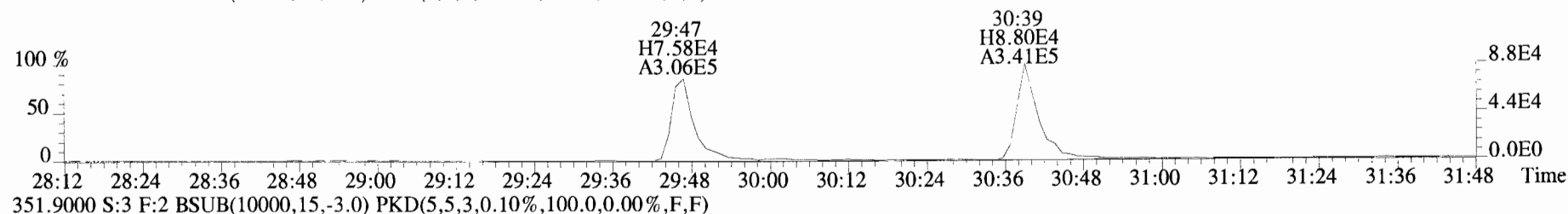
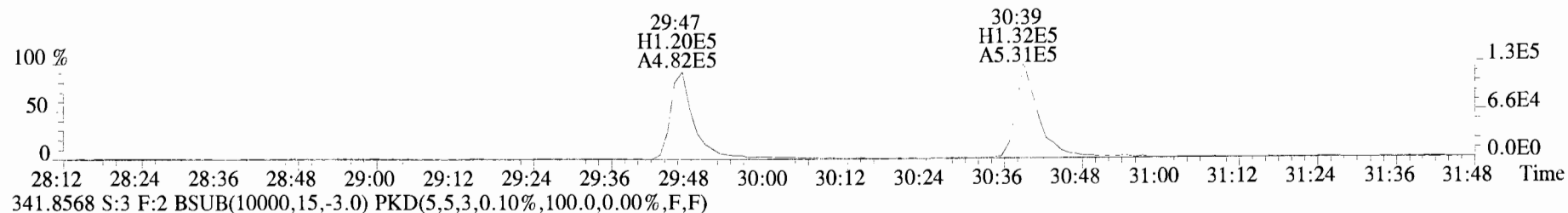


316.9824 S:3

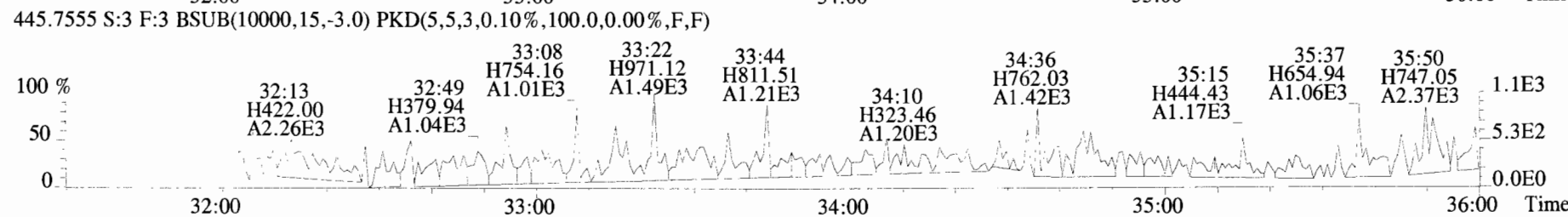
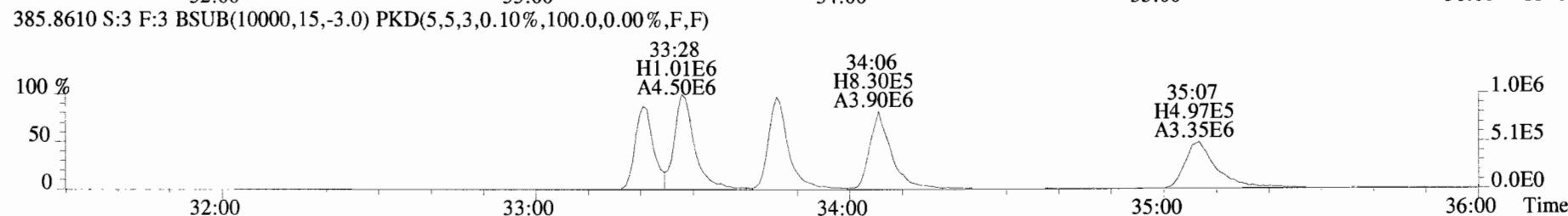
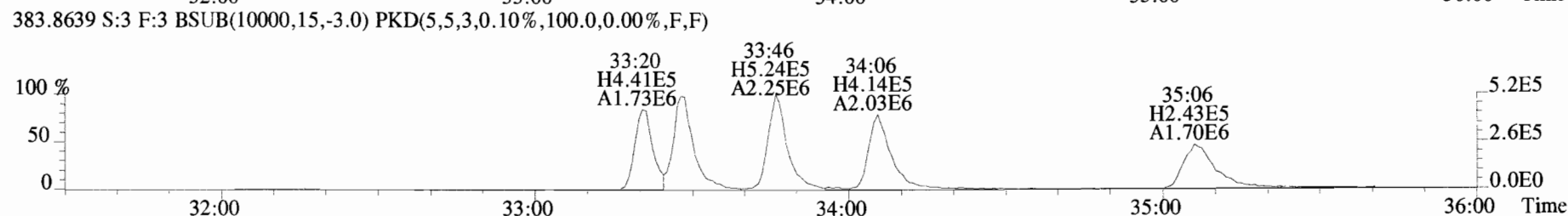
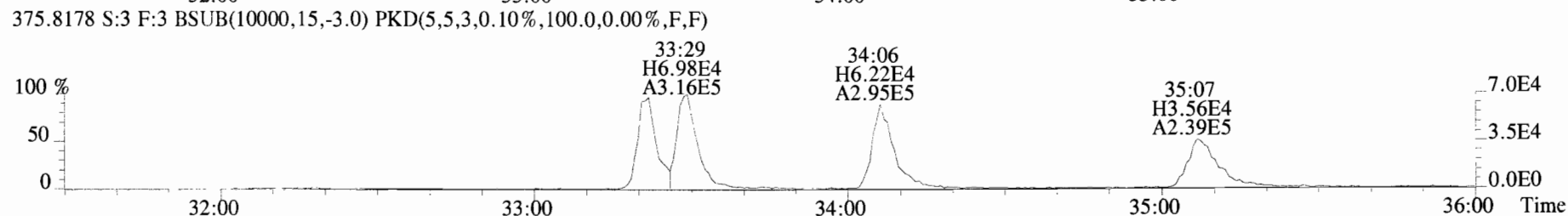
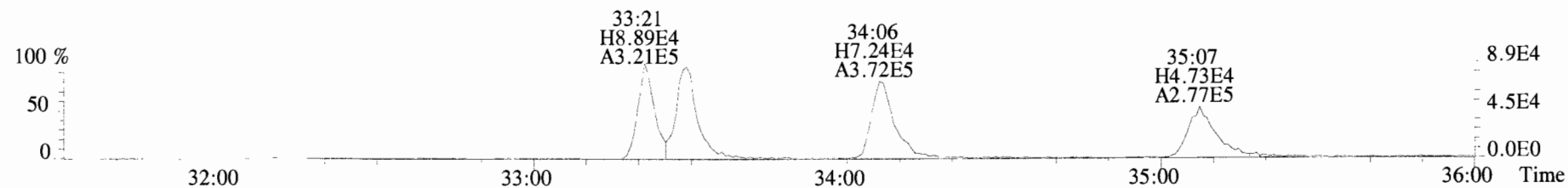




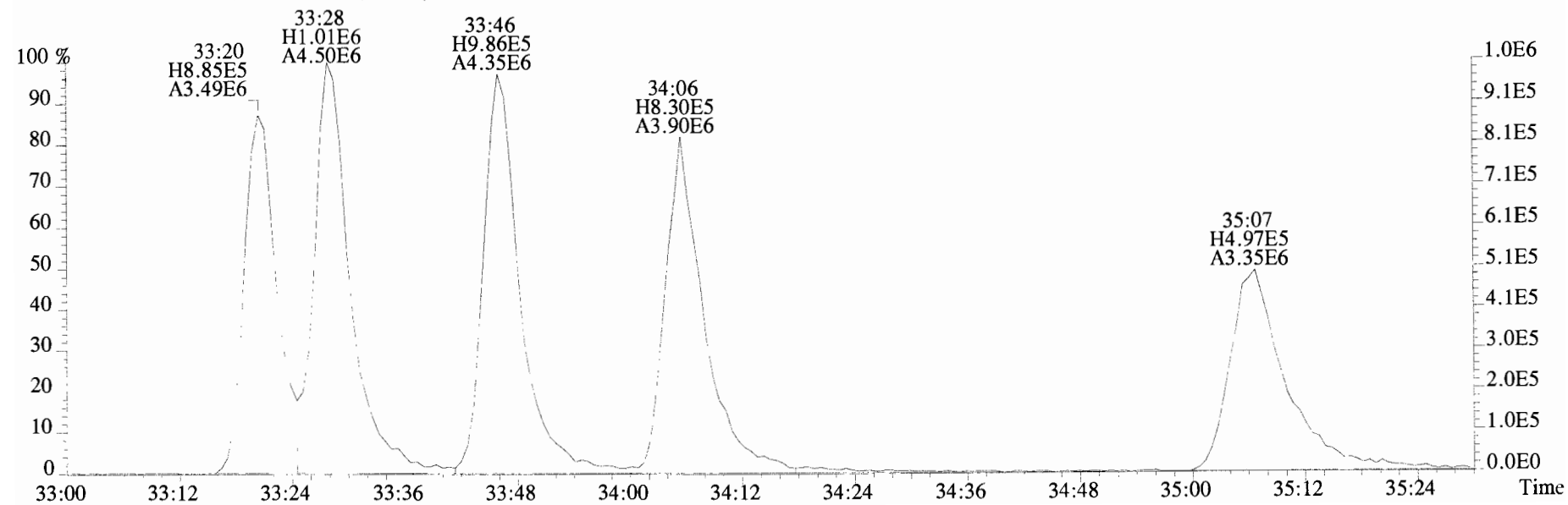
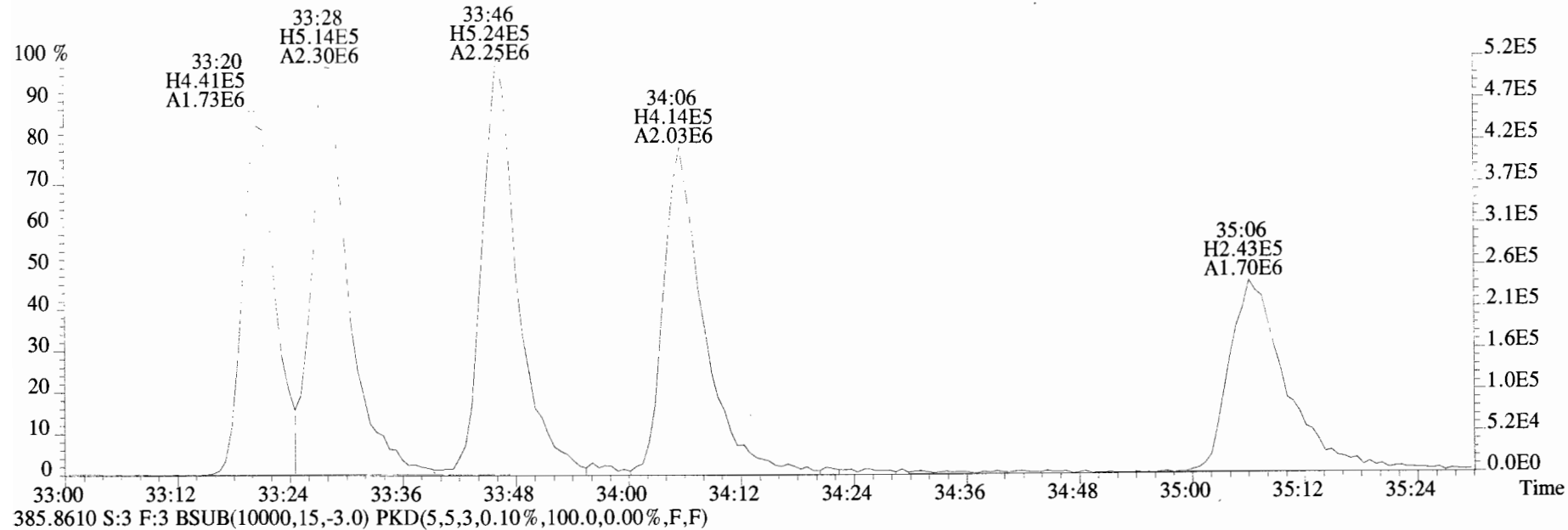
File:191009D1 #1-211 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
339.8597 S:3 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



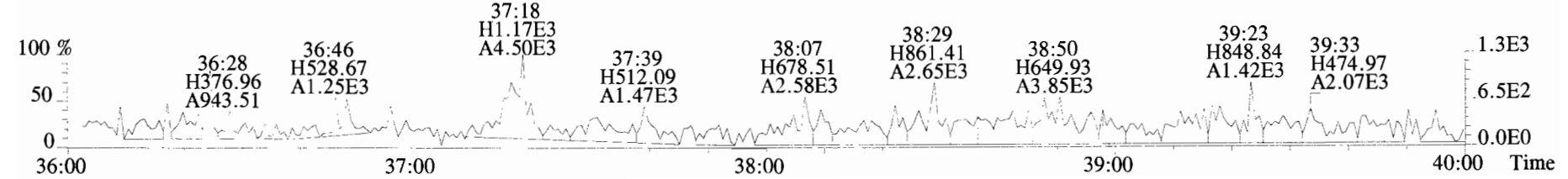
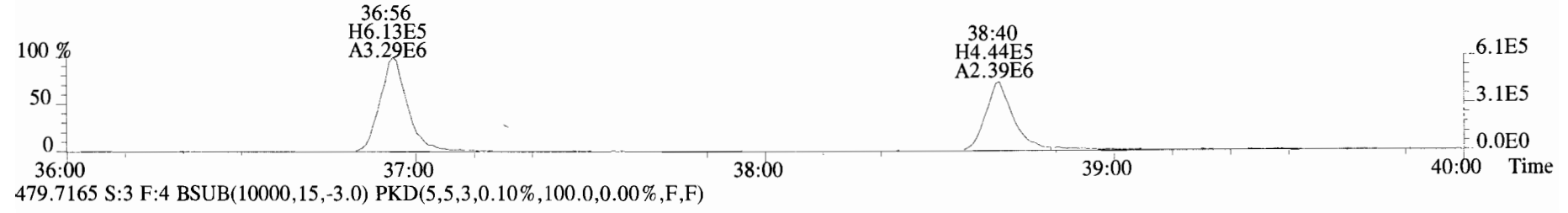
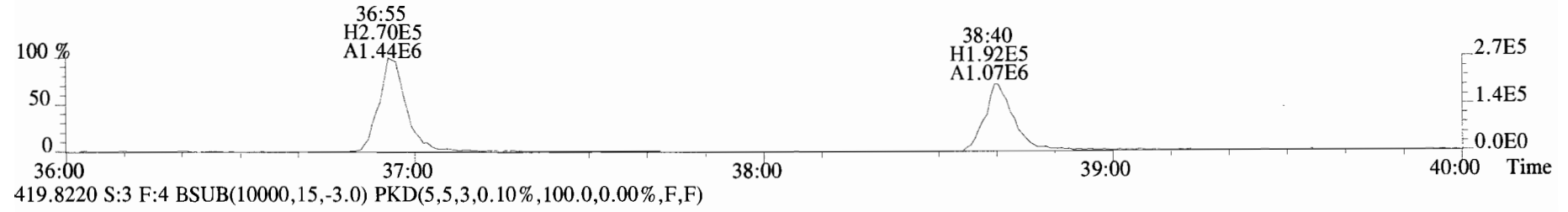
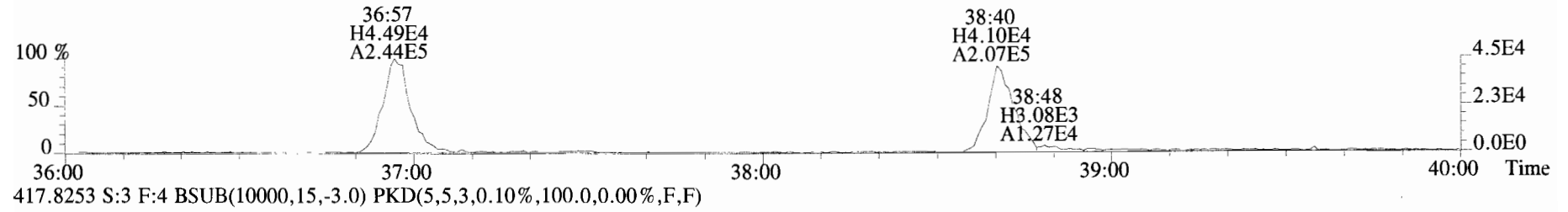
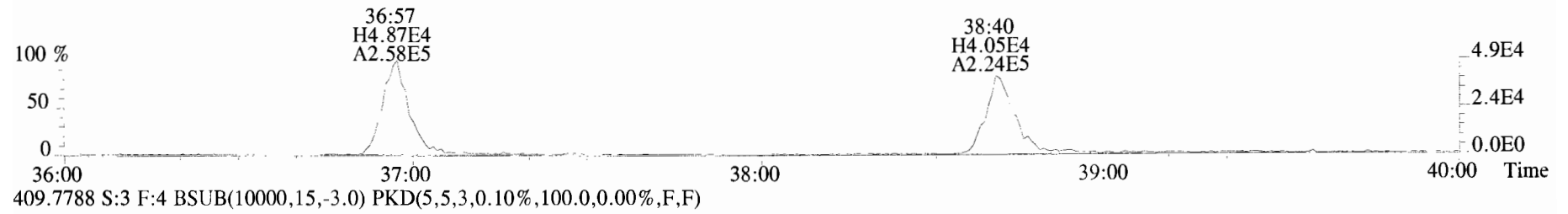
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
373.8207 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



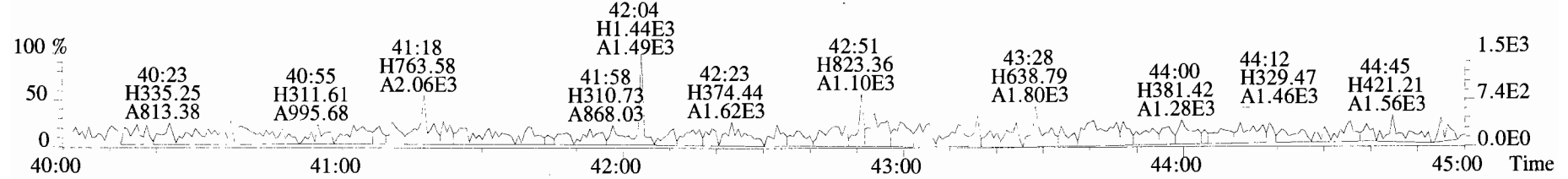
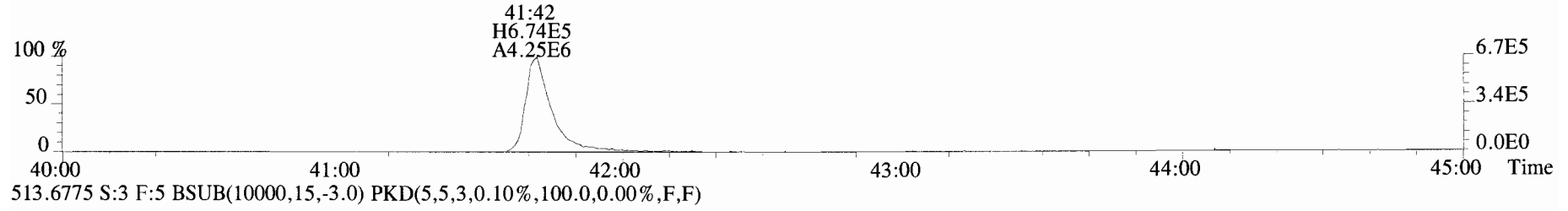
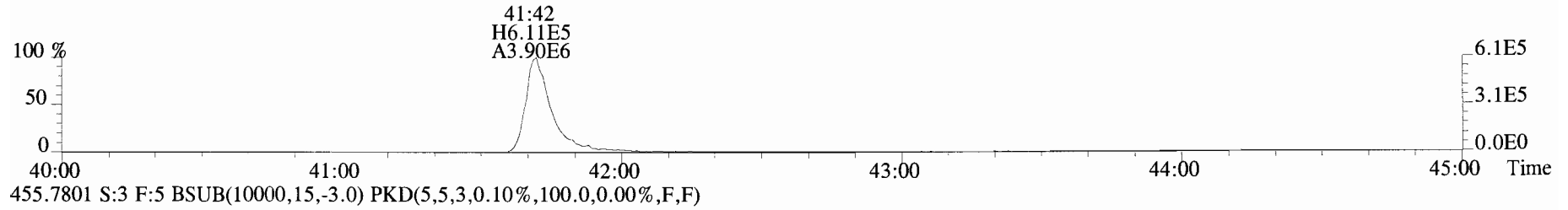
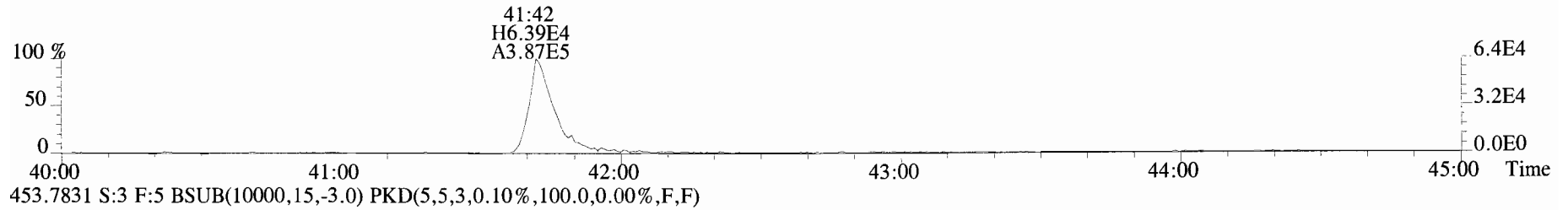
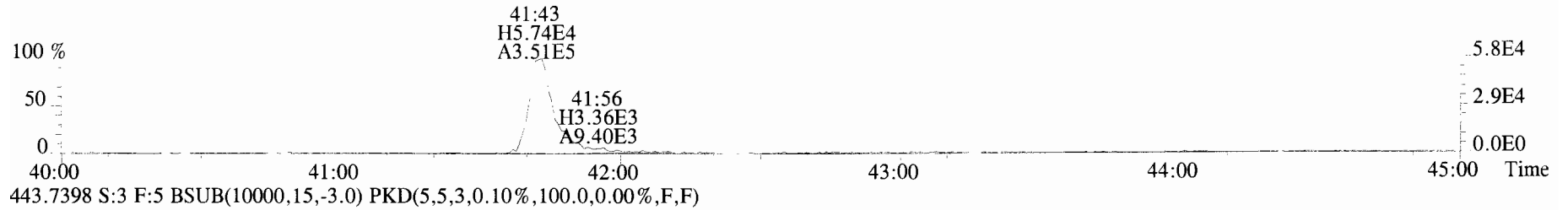
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
383.8639 S:3 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



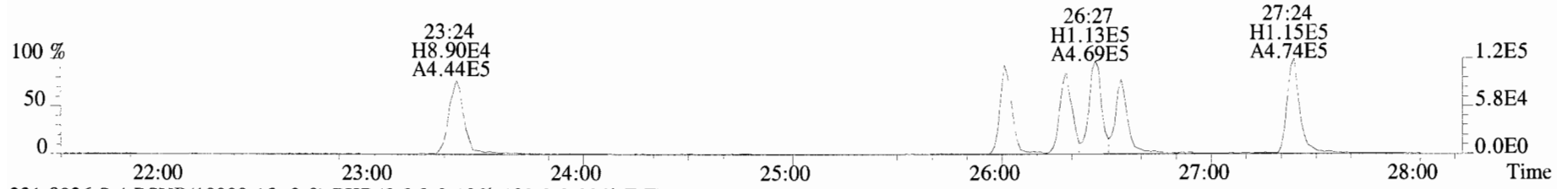
File:191009D1 #1-355 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
407.7818 S:3 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



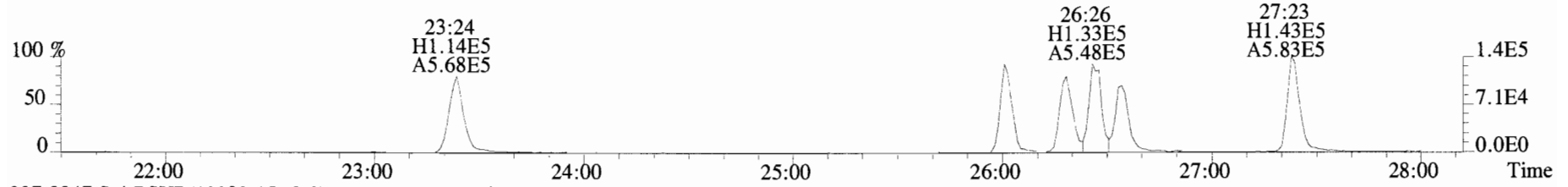
File:191009D1 #1-432 Acq: 9-OCT-2019 17:48:27 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#3 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-3 1613 CS2 19C2203 Exp:OCDD\_DB5  
441.7428 S:3 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



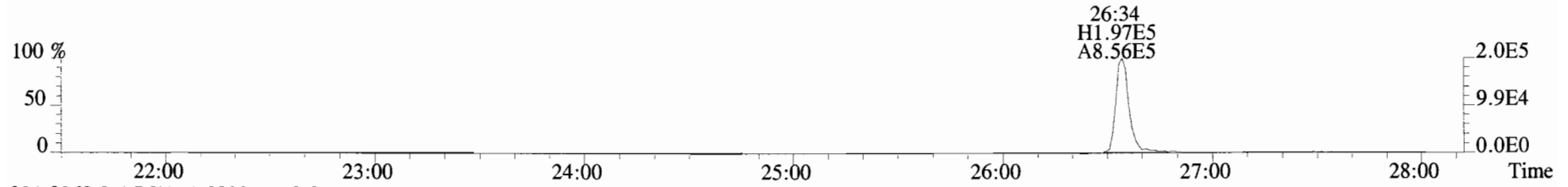
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
319.8965 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



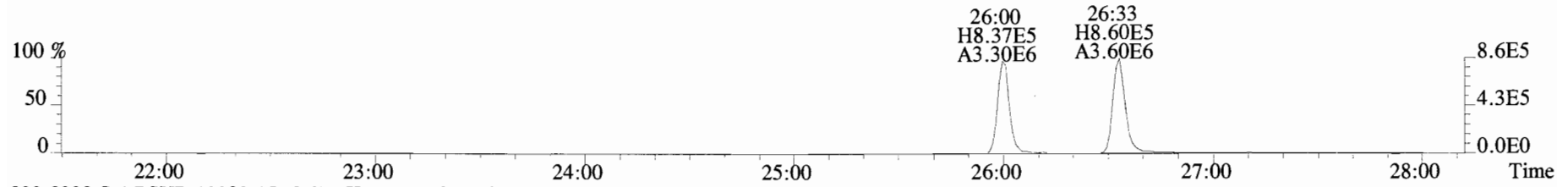
321.8936 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



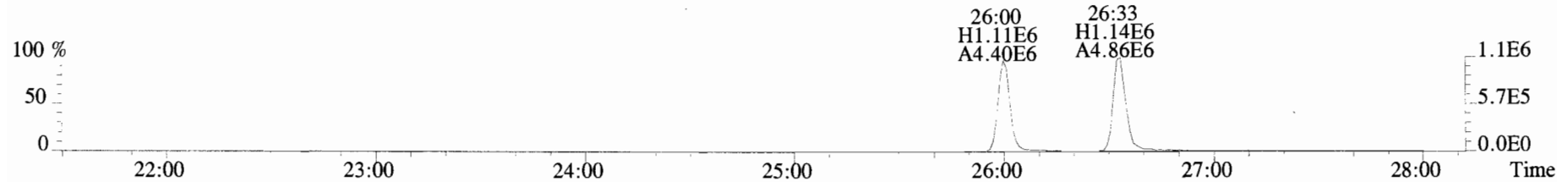
327.8847 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



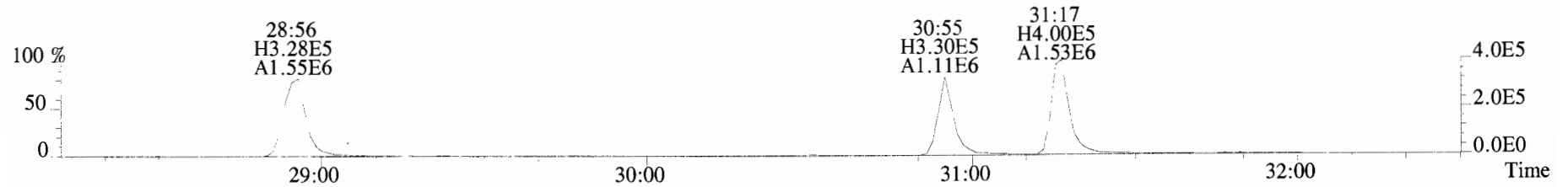
331.9368 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



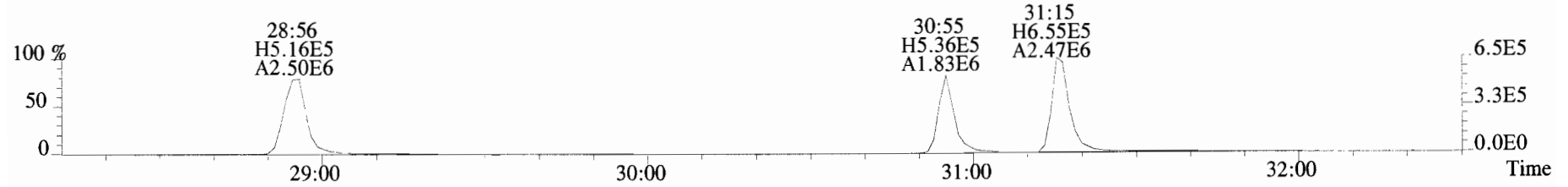
333.9339 S:4 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



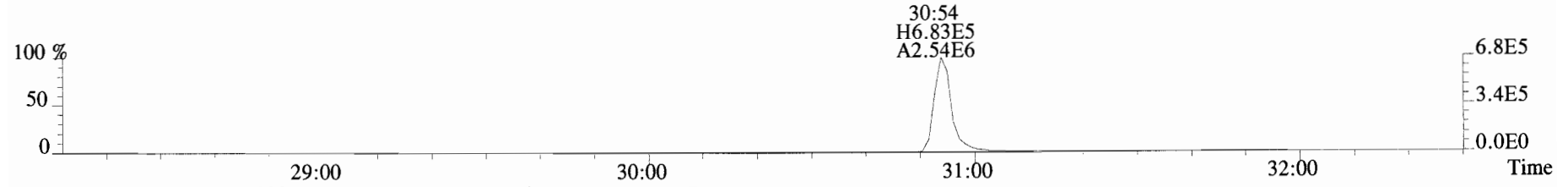
File:191009D1 #1-211 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical\_Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
353.8576 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



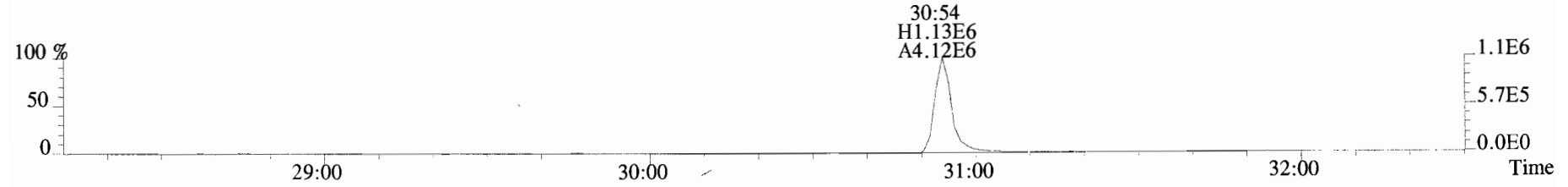
355.8546 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



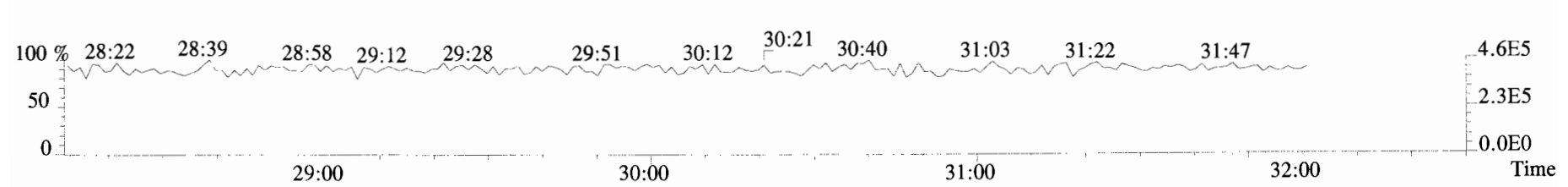
365.8978 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



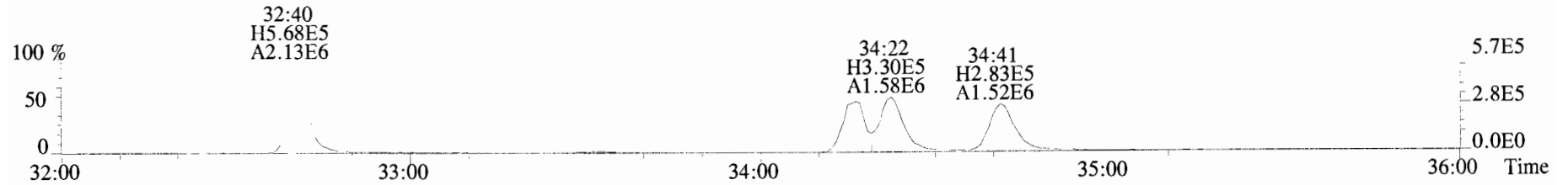
367.8949 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



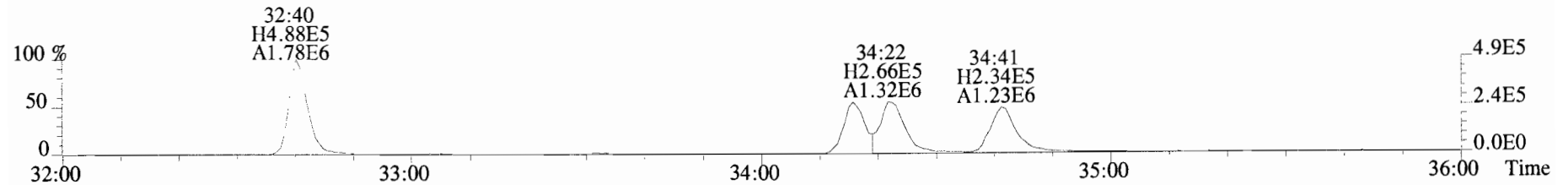
366.9792 S:4 F:2



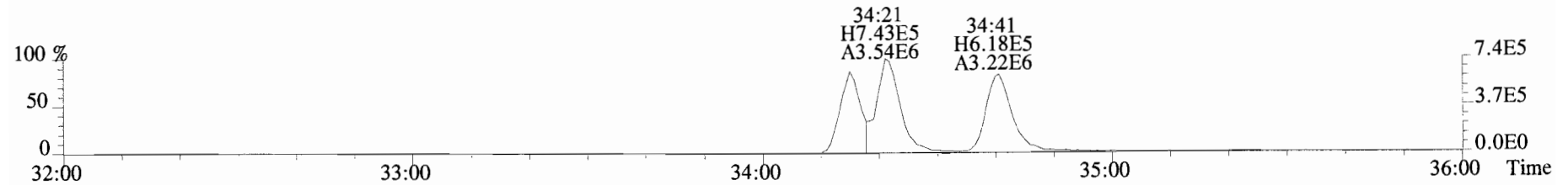
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
389.8156 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



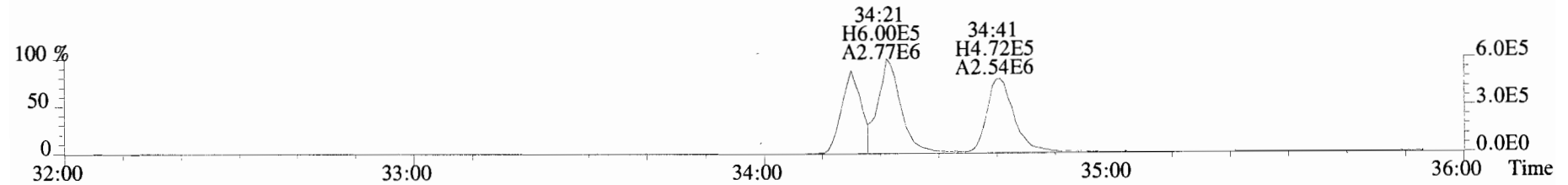
391.8127 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



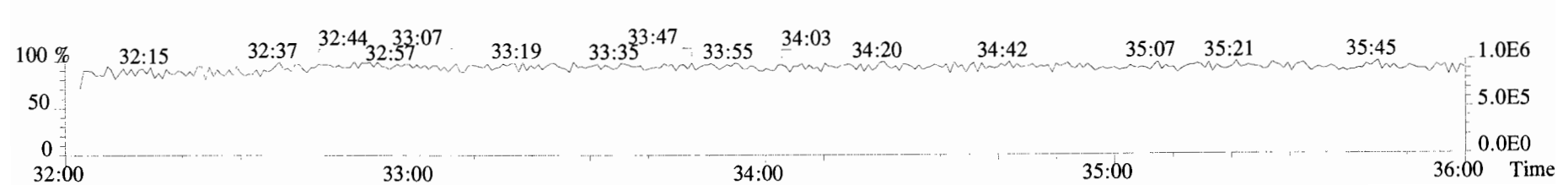
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

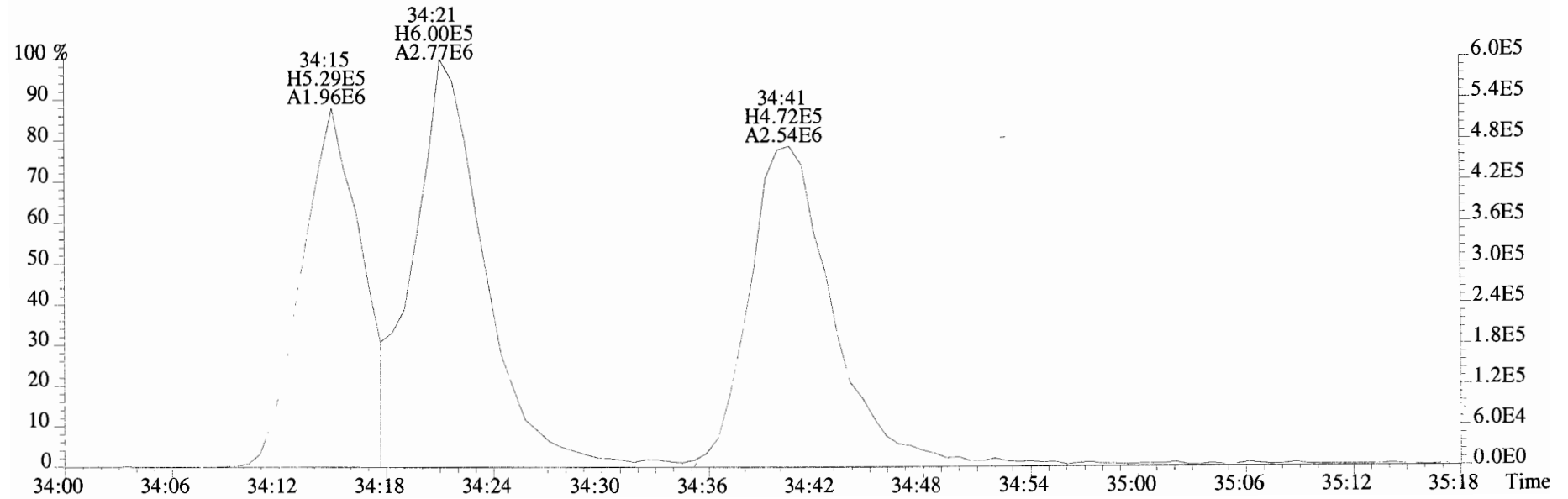
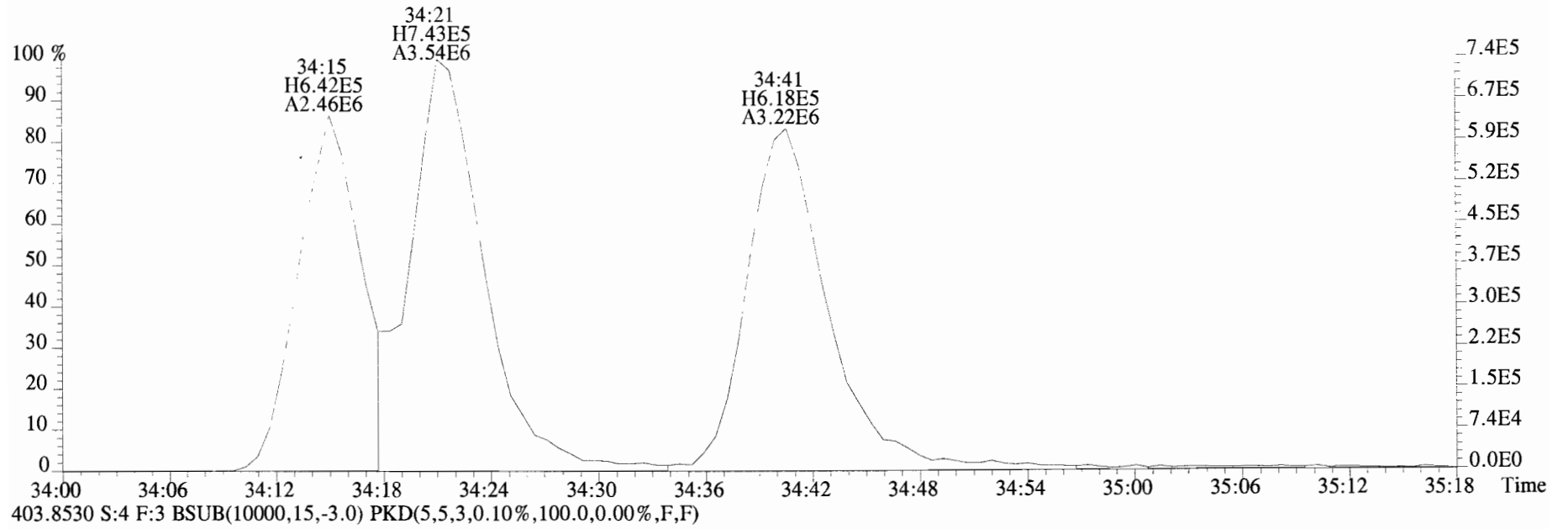


392.9760 S:4 F:3

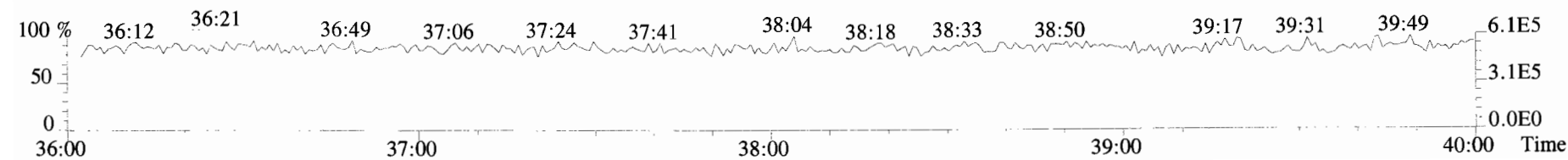
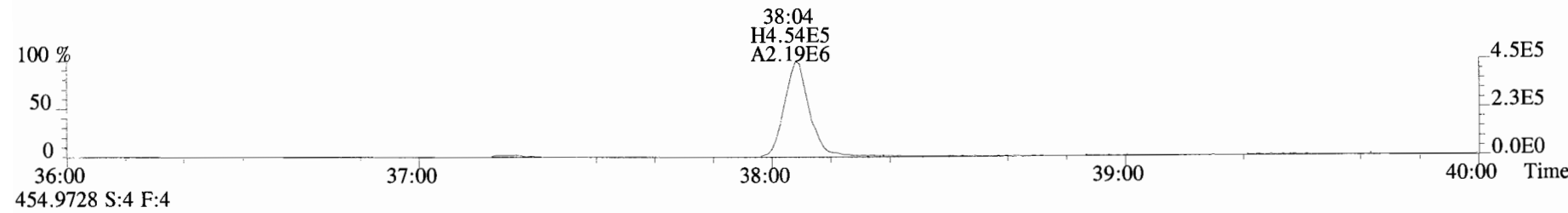
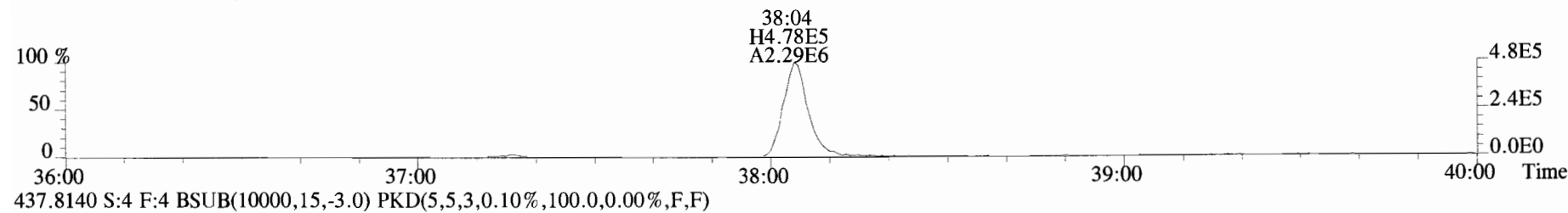
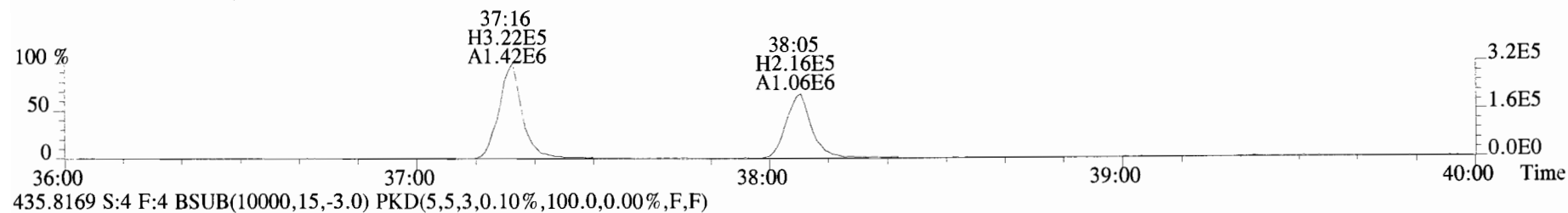
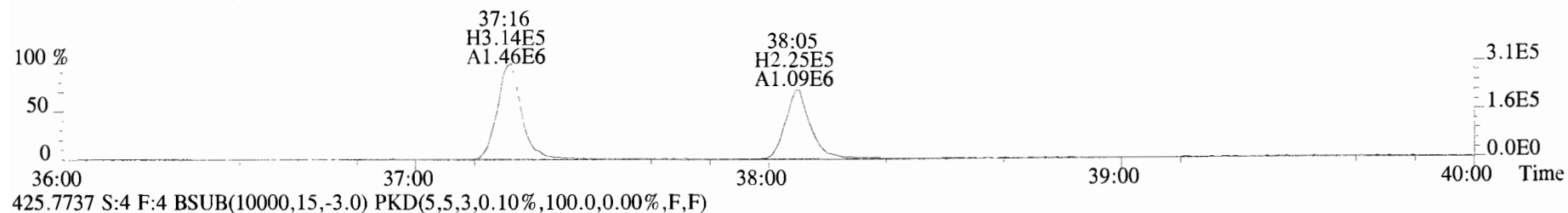




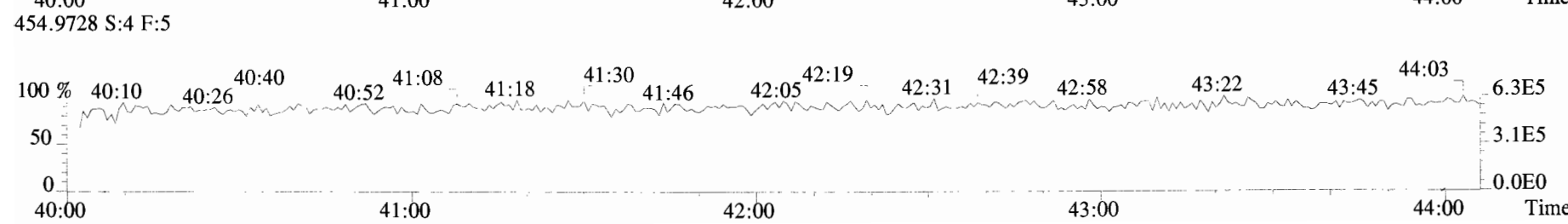
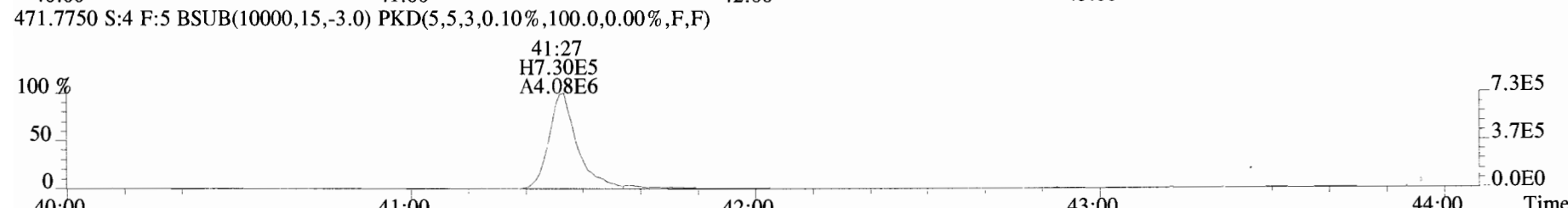
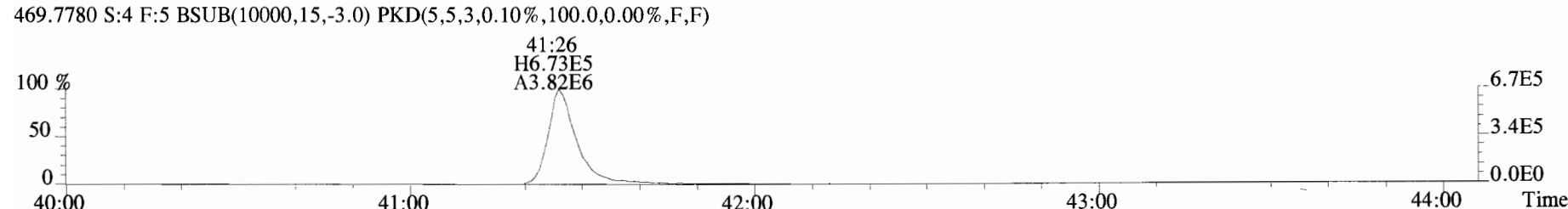
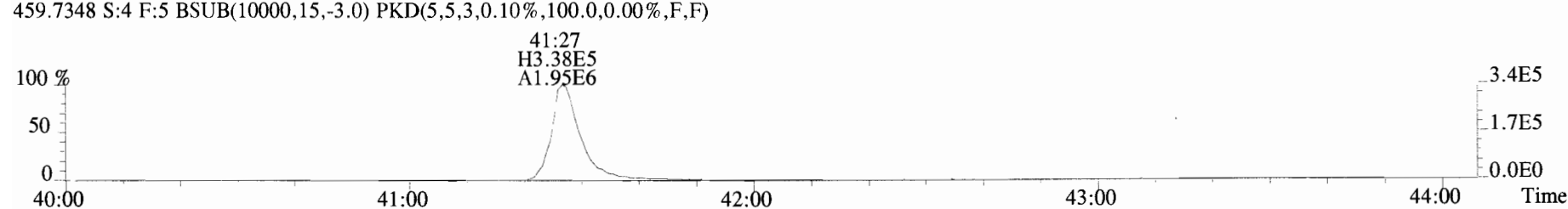
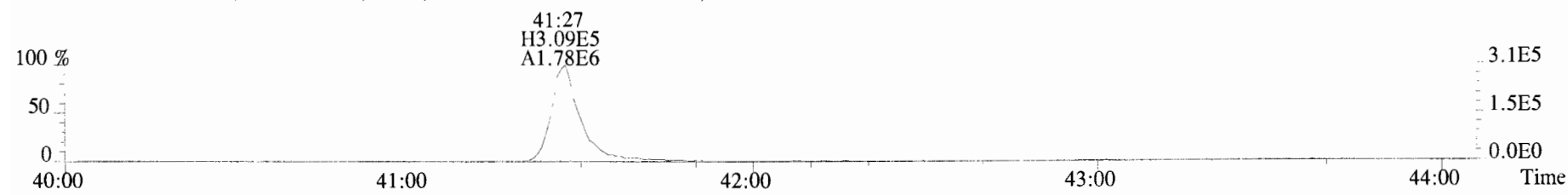
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
401.8559 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



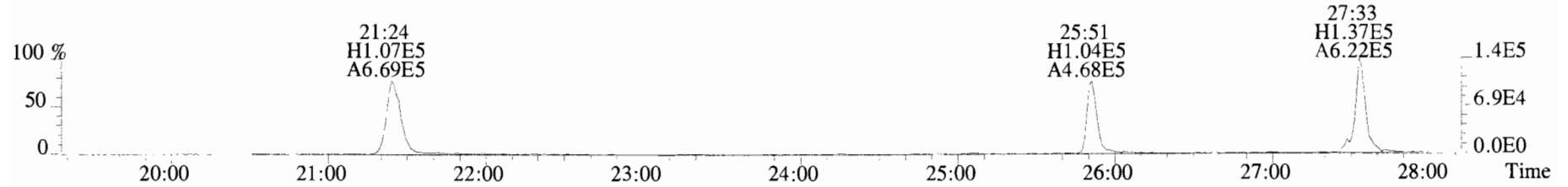
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
423.7767 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



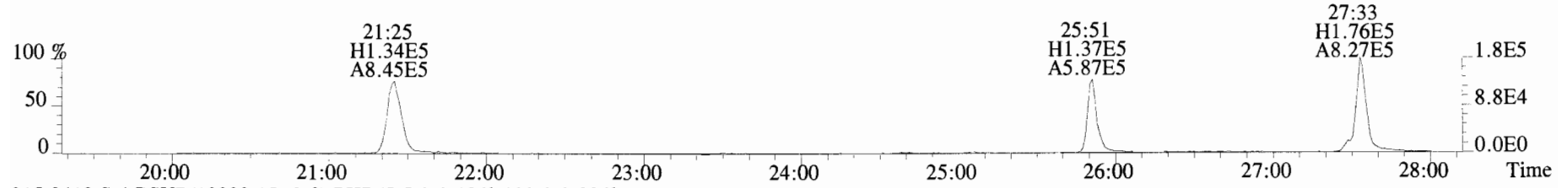
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
457.7377 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



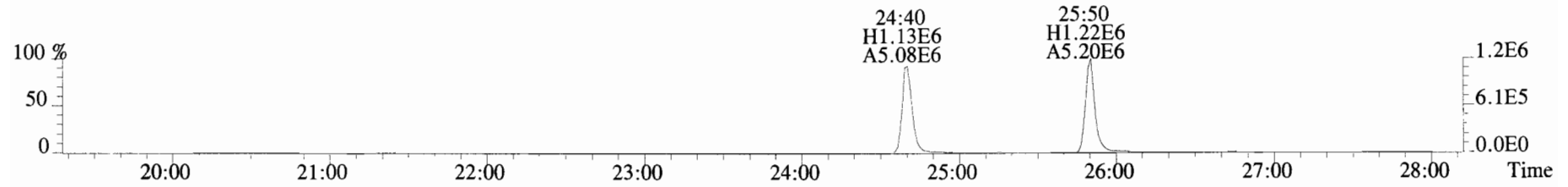
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
 303.9016 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



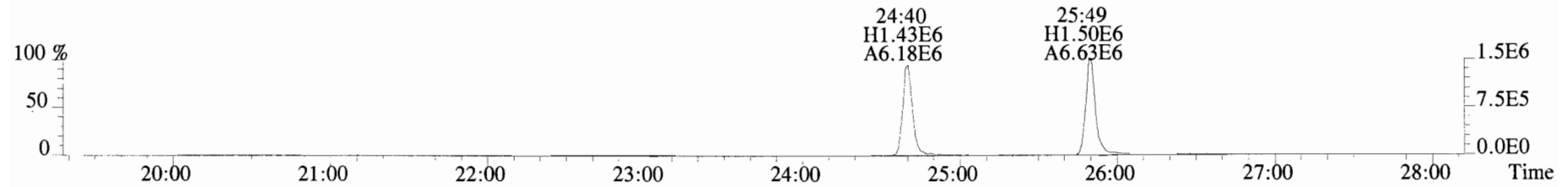
305.8987 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



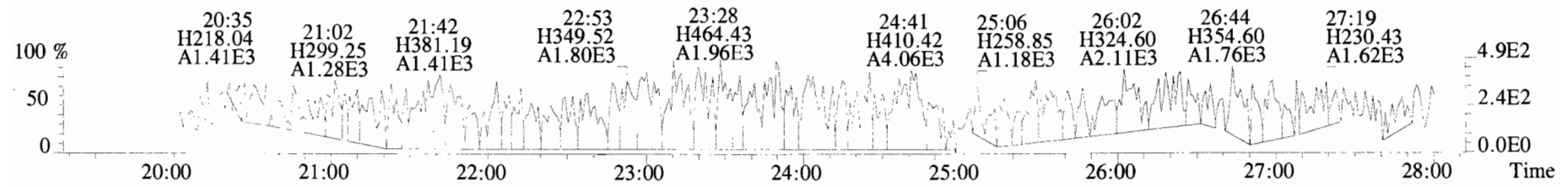
315.9419 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



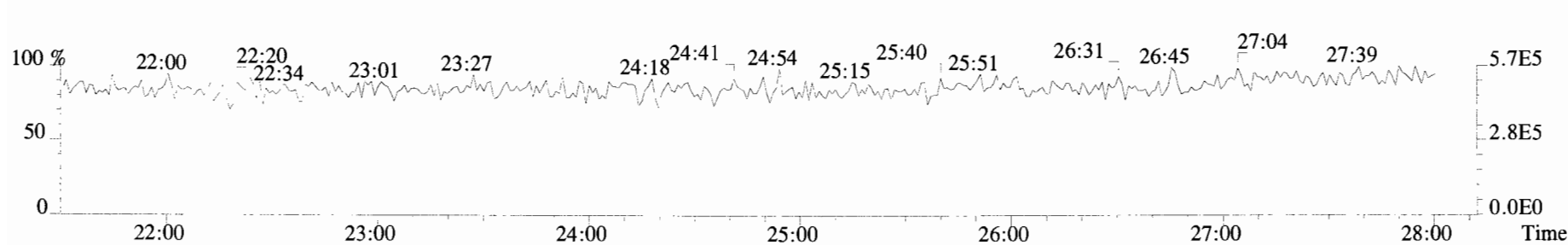
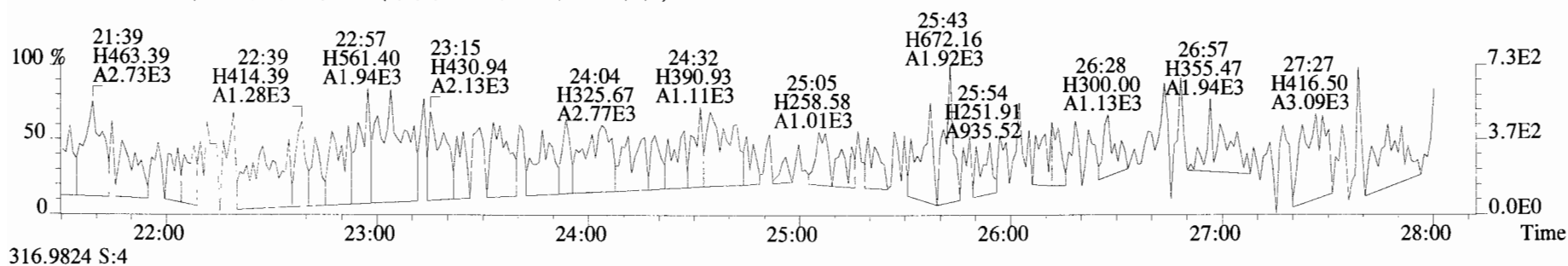
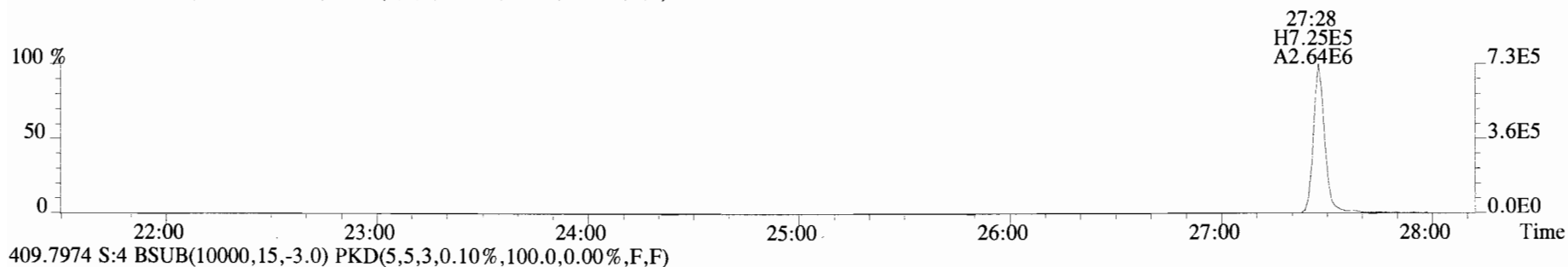
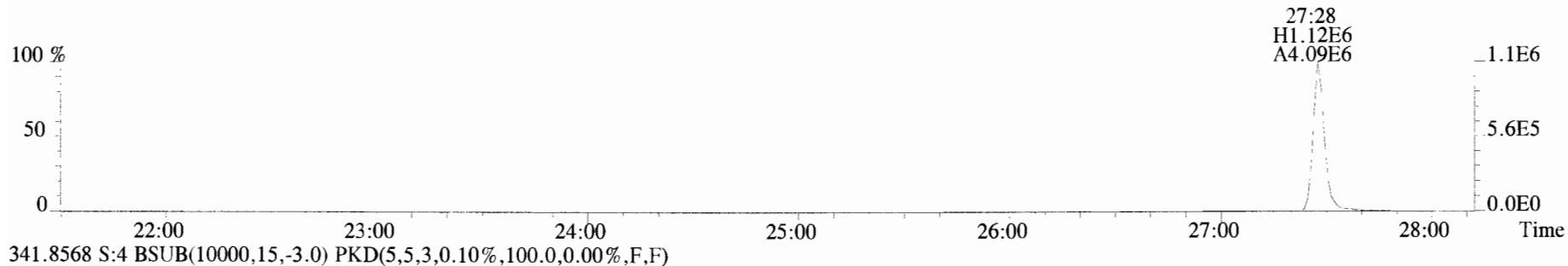
317.9389 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



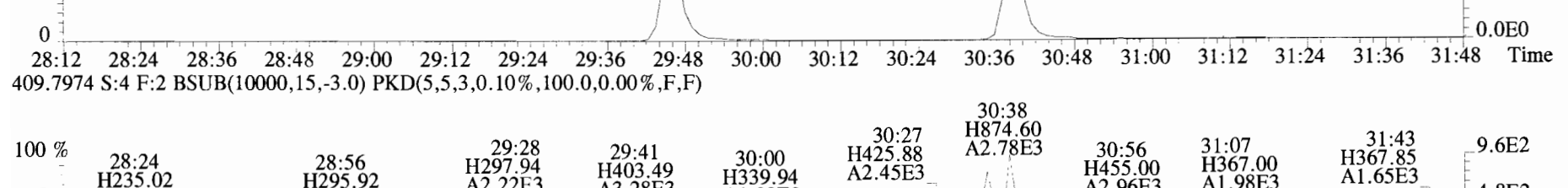
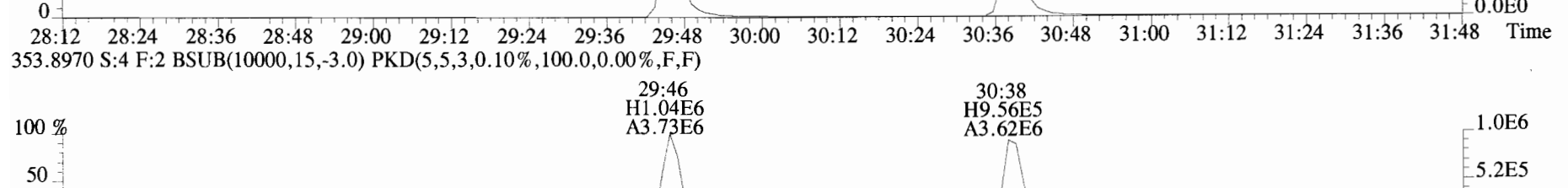
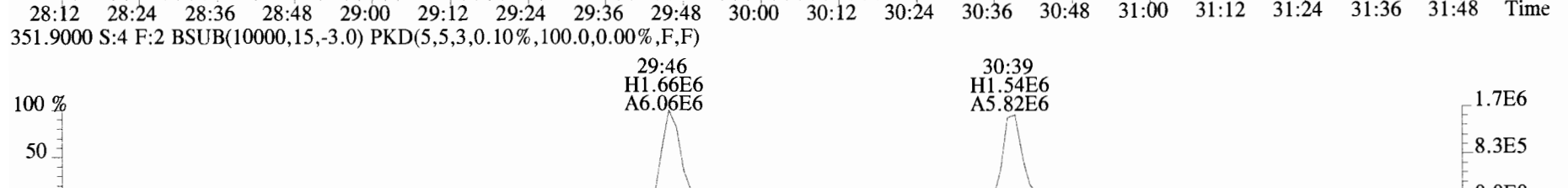
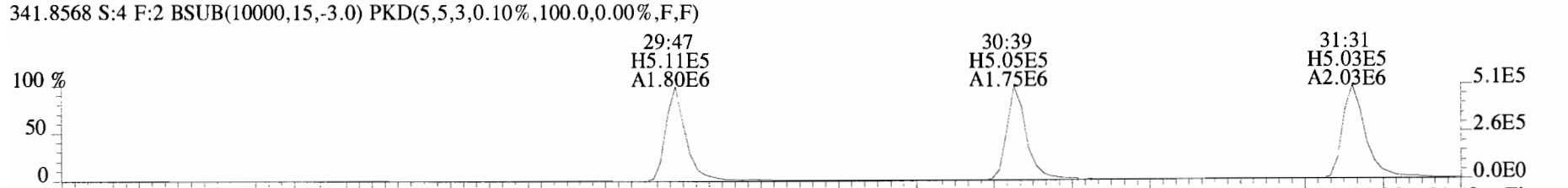
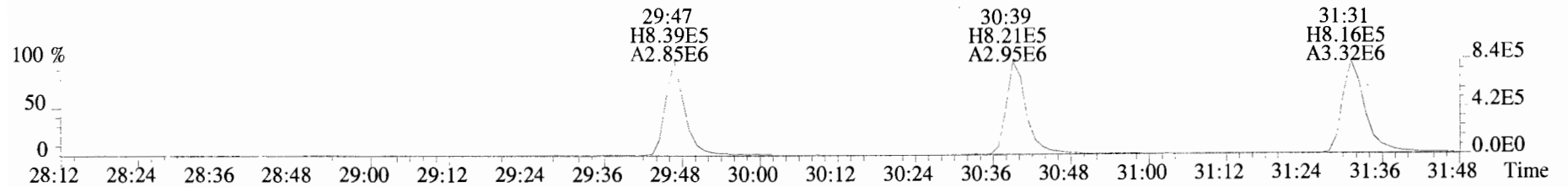
375.8364 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



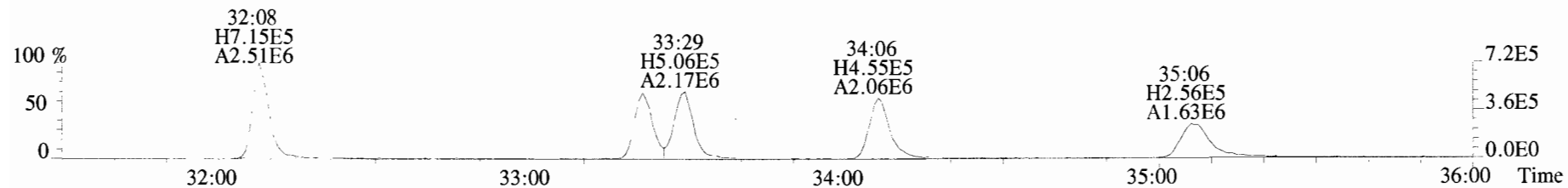
File:191009D1 #1-513 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
339.8597 S:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



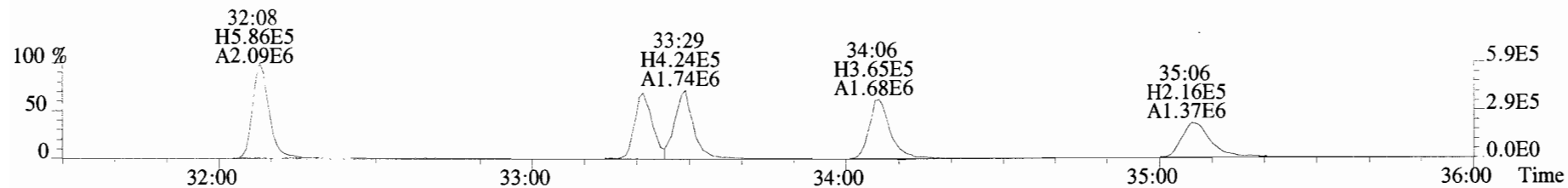
File:191009D1 #1-211 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
339.8597 S:4 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



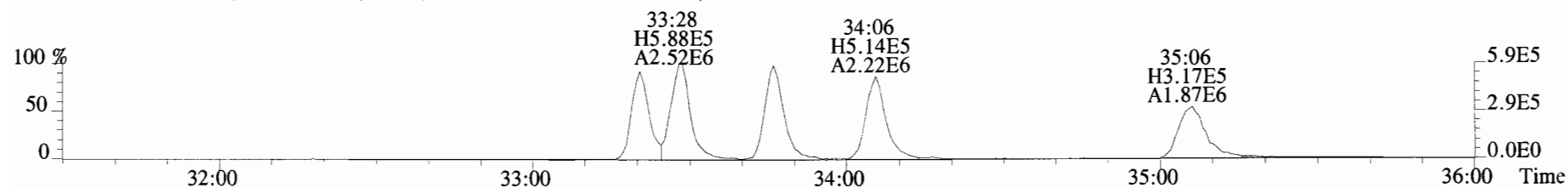
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
 373.8207 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



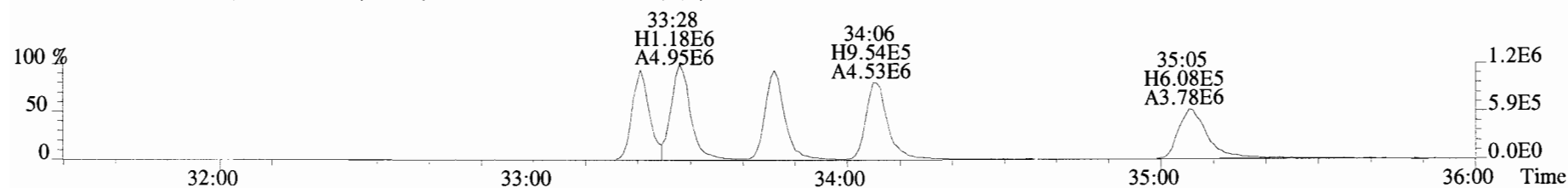
375.8178 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



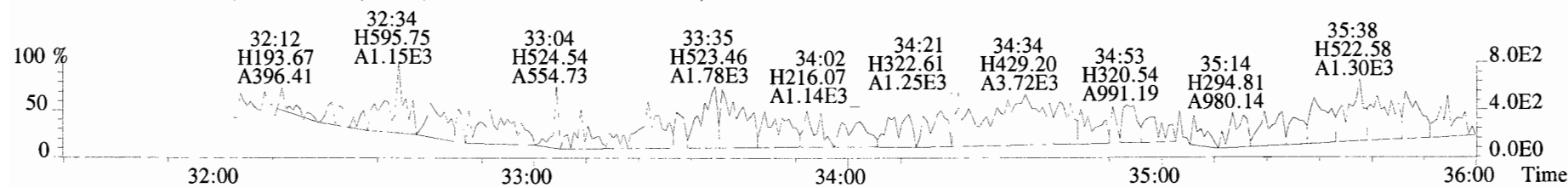
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



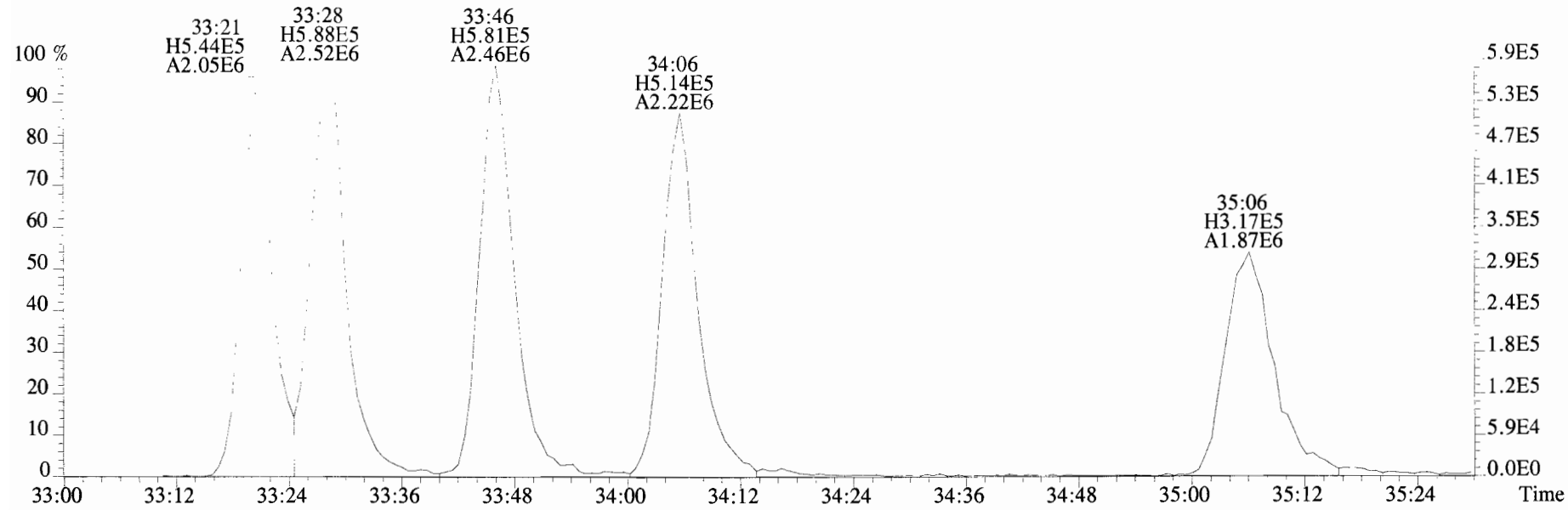
385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



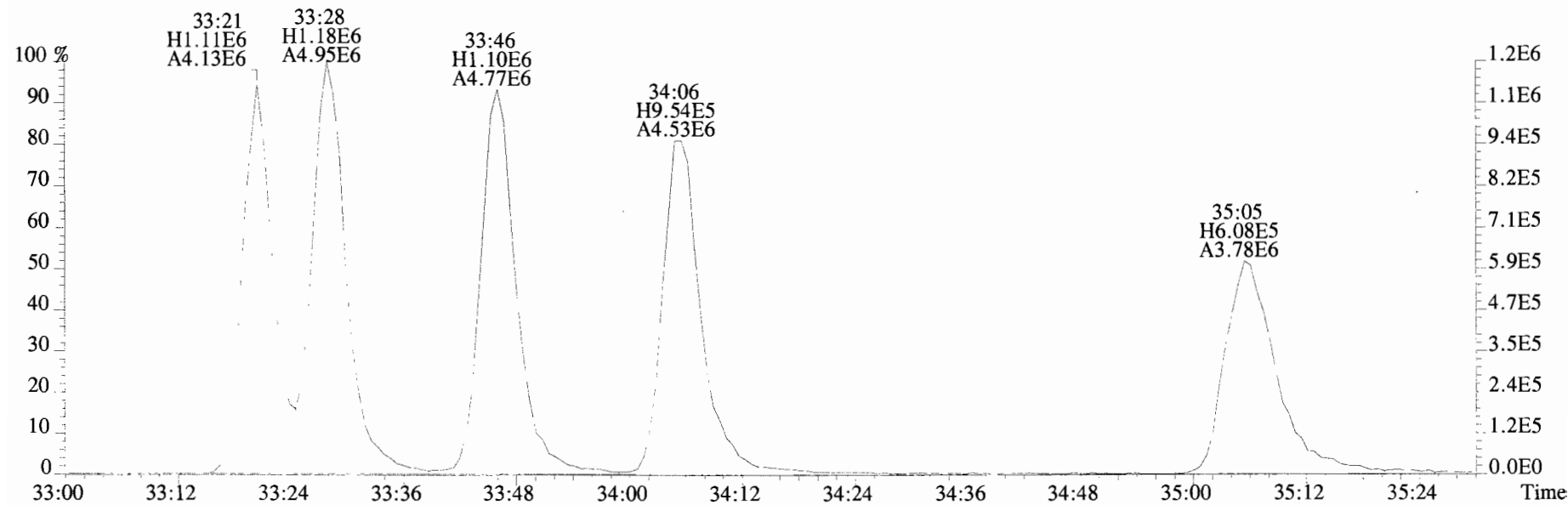
445.7555 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
383.8639 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

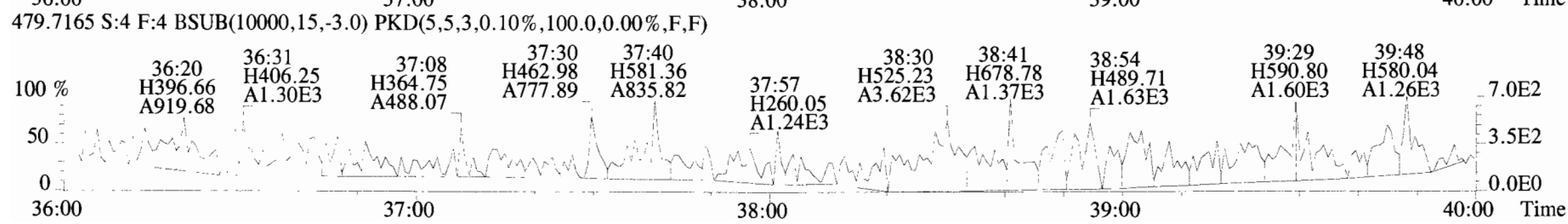
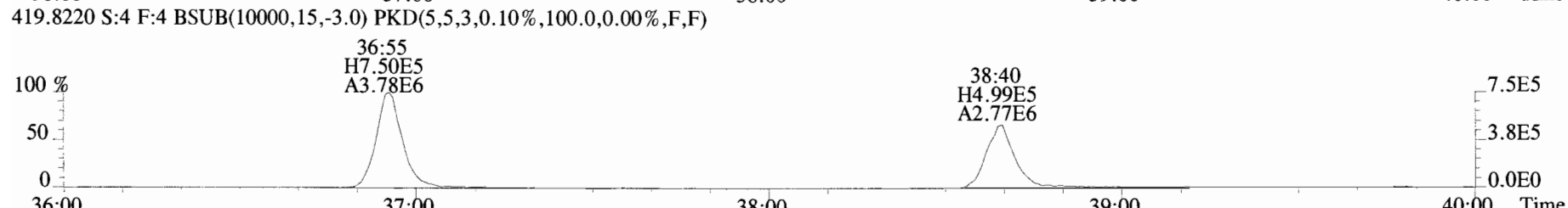
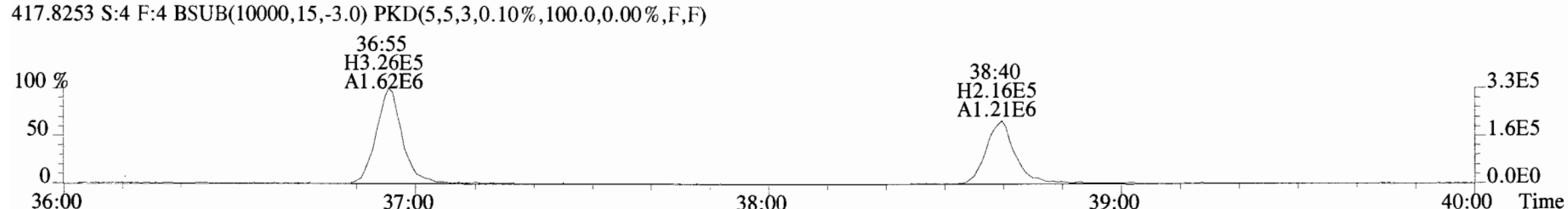
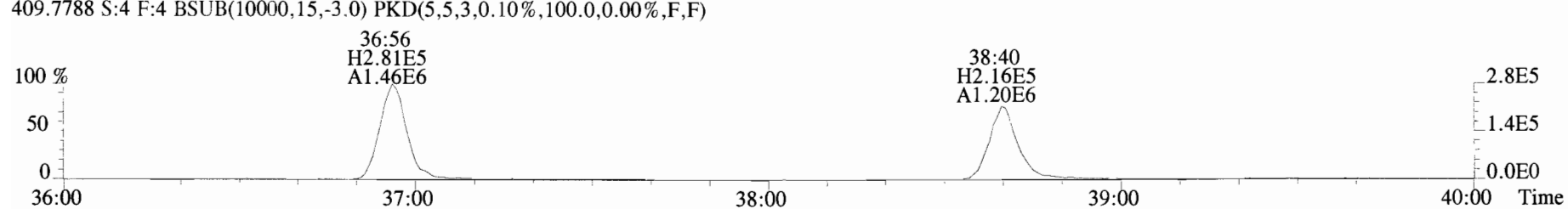
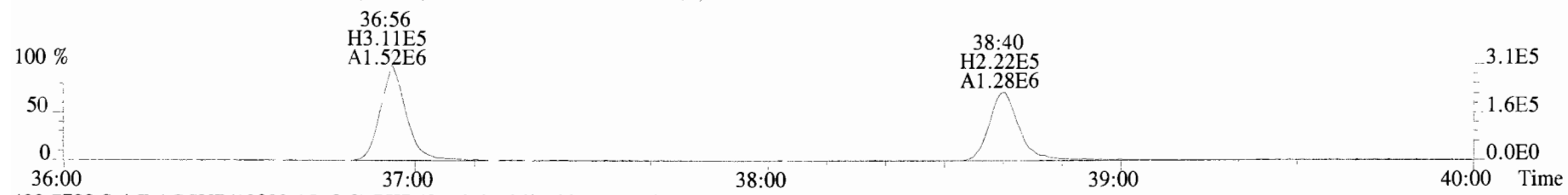


385.8610 S:4 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

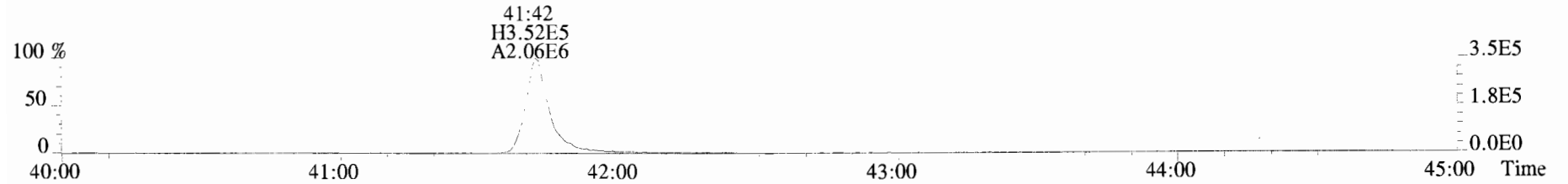




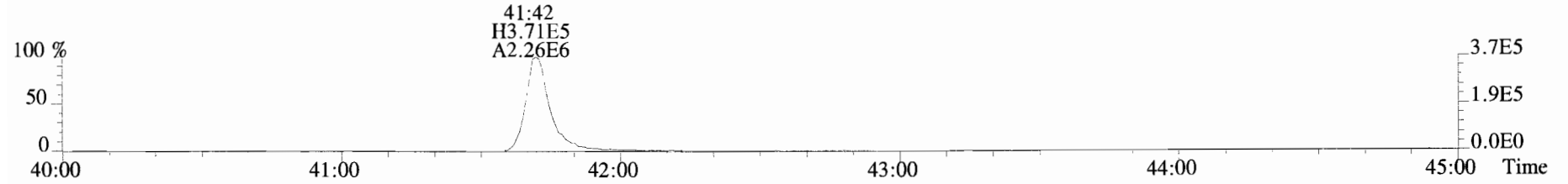
File:191009D1 #1-355 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#4 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
 407.7818 S:4 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



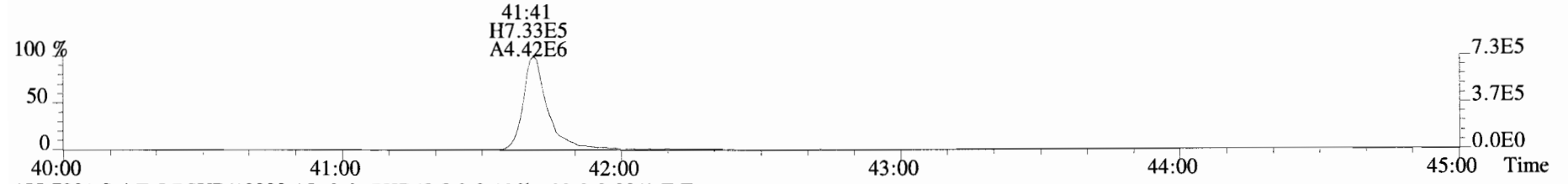
File:191009D1 #1-432 Acq: 9-OCT-2019 18:36:09 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#4 File Text:Vista Analytical\_Laboratory\_VG7 Text:ST191009D1-4 1613 CS3 19C2204 Exp:OCDD\_DB5  
441.7428 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



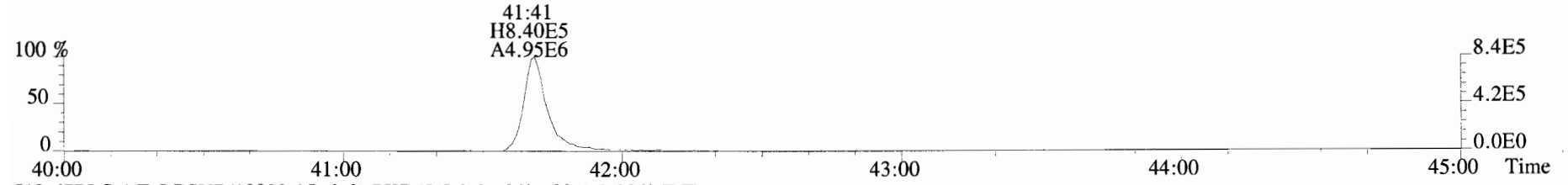
443.7398 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



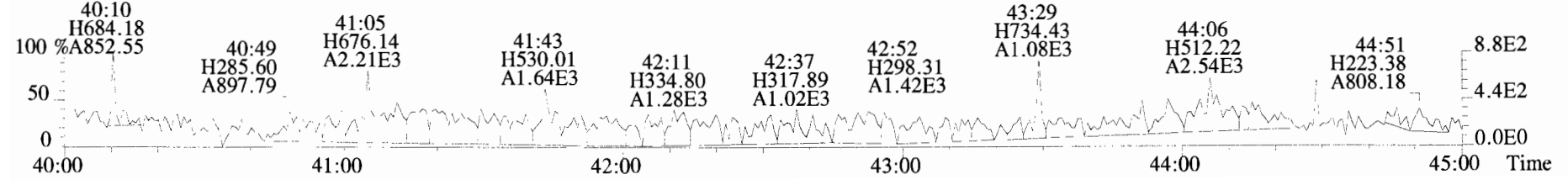
453.7831 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



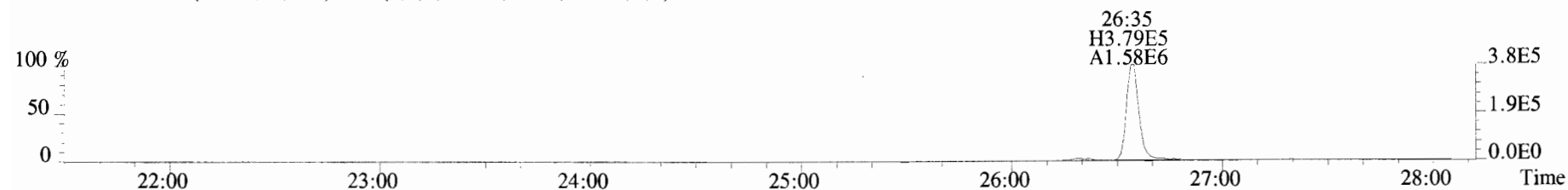
455.7801 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



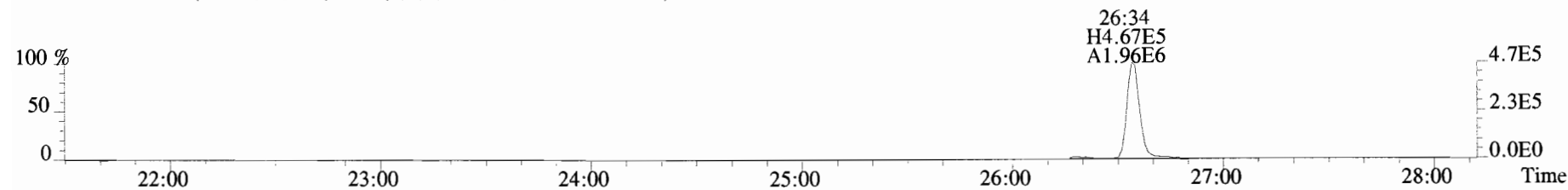
513.6775 S:4 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



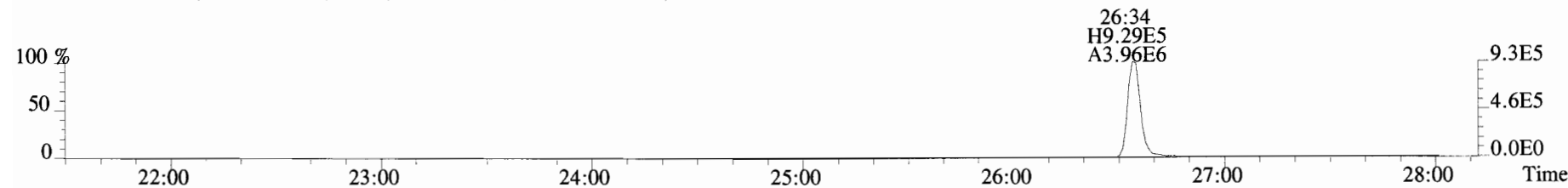
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
319.8965 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



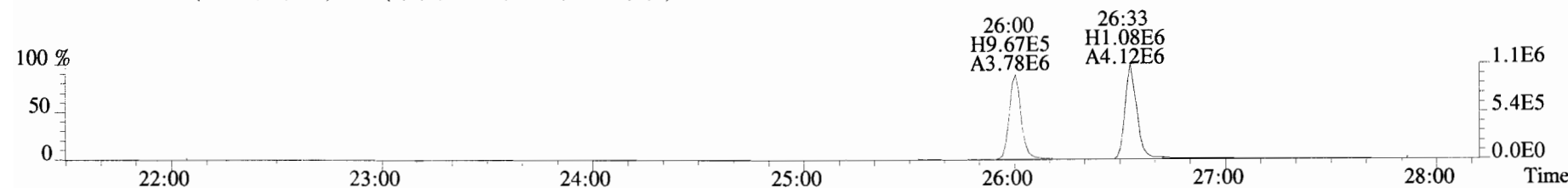
321.8936 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



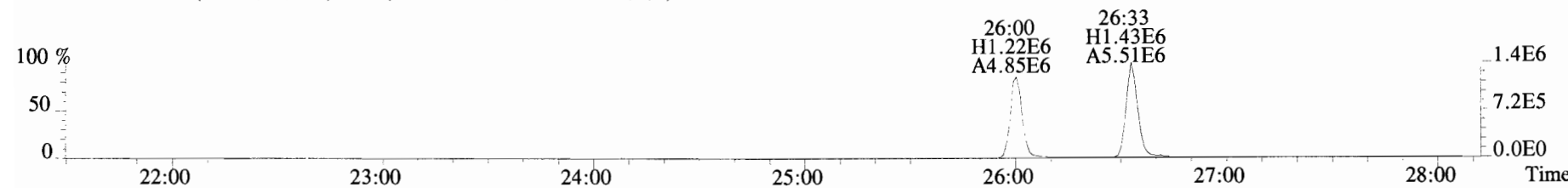
327.8847 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



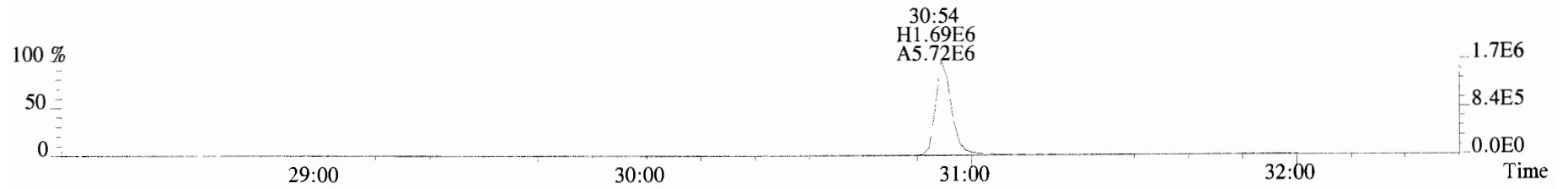
331.9368 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



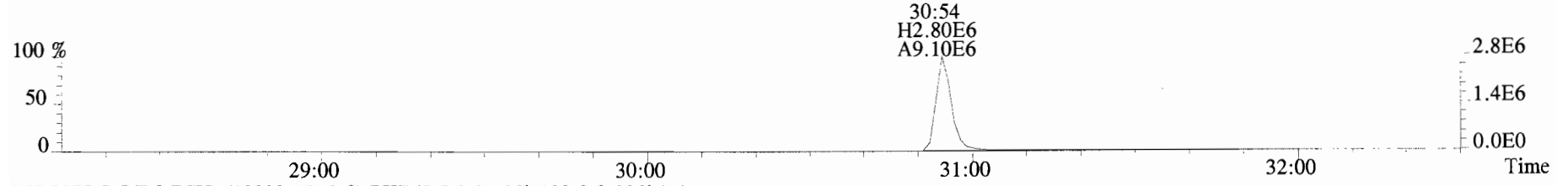
333.9339 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



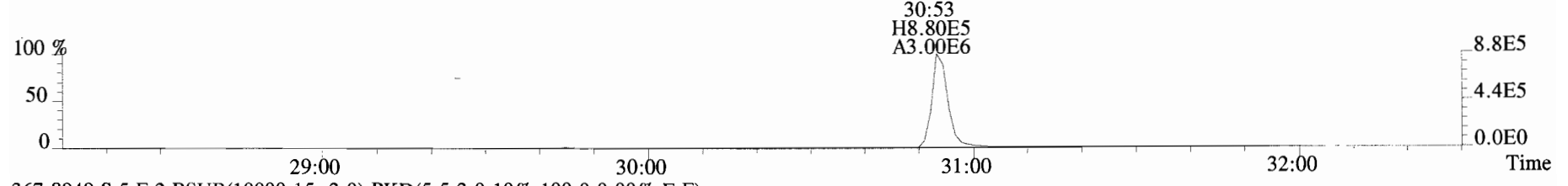
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
353.8576 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



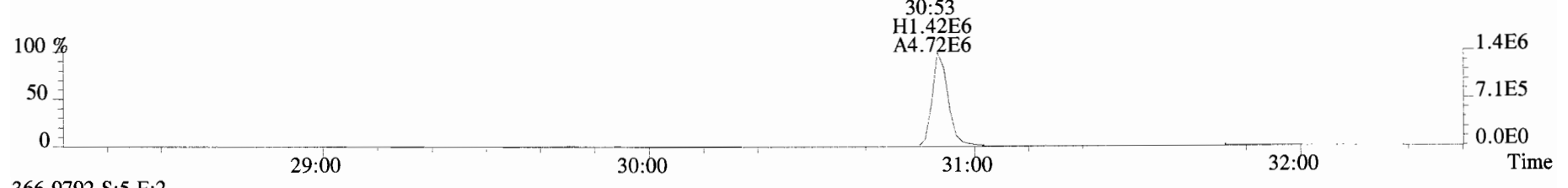
355.8546 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



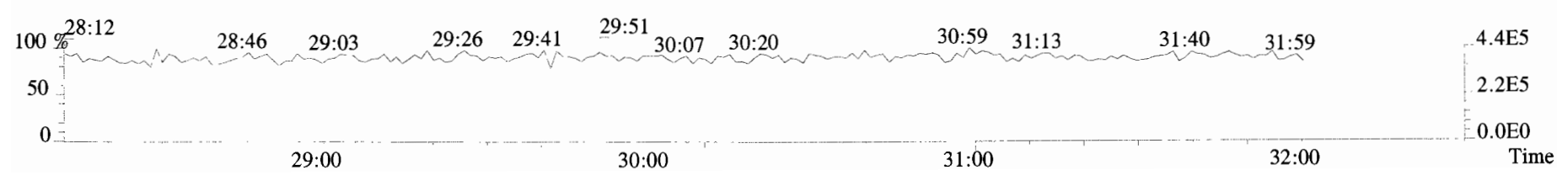
365.8978 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



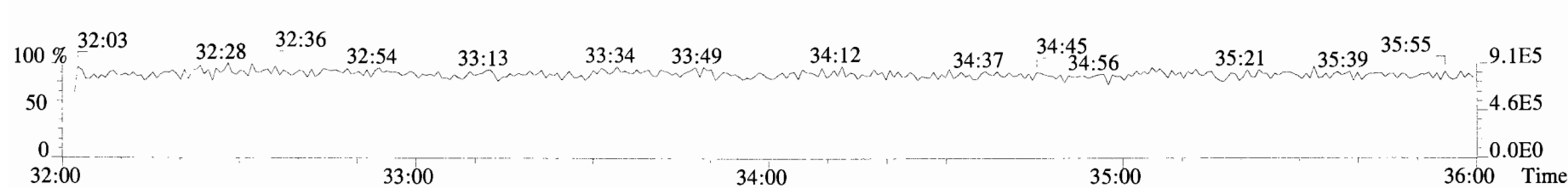
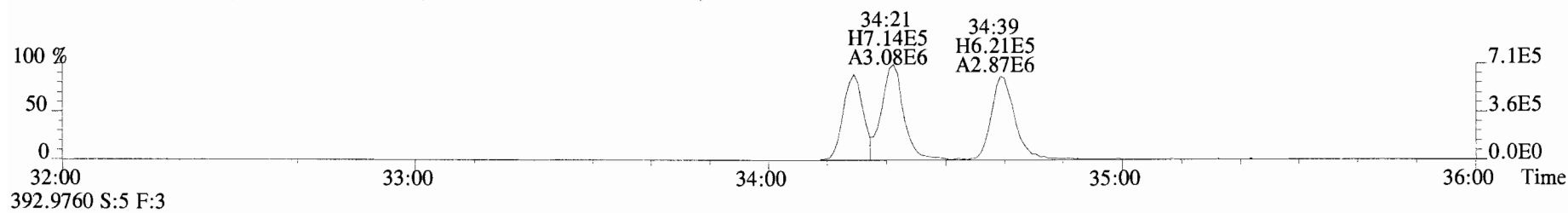
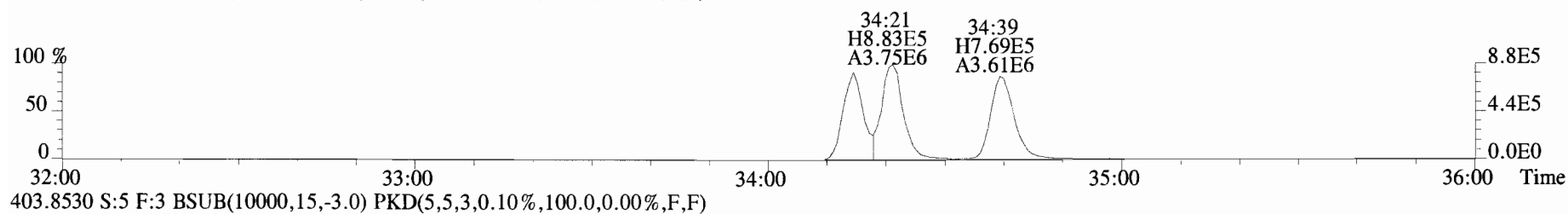
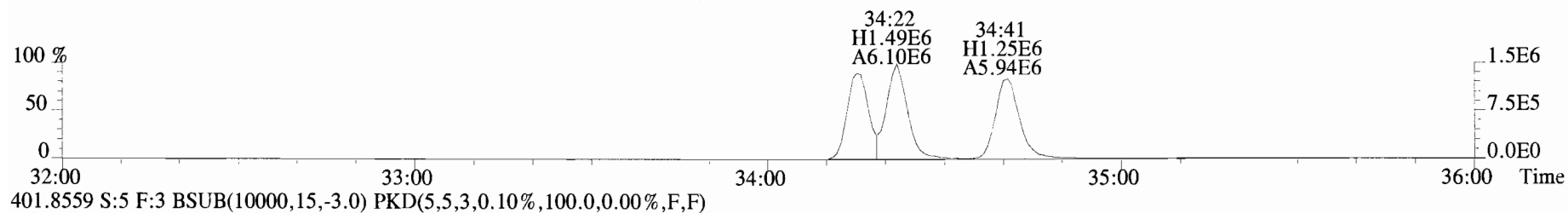
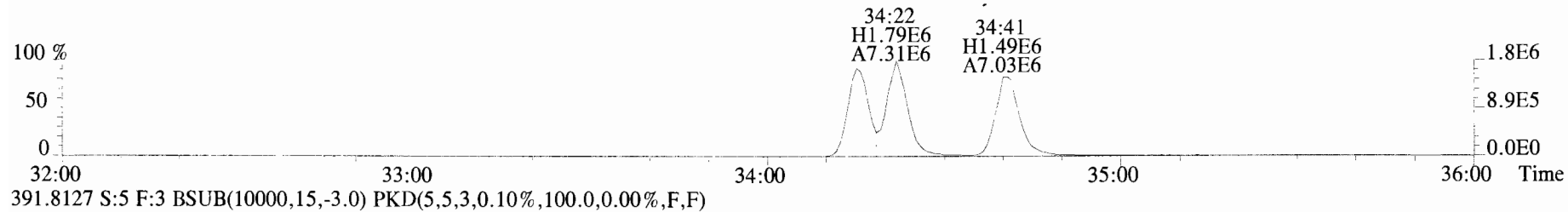
367.8949 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



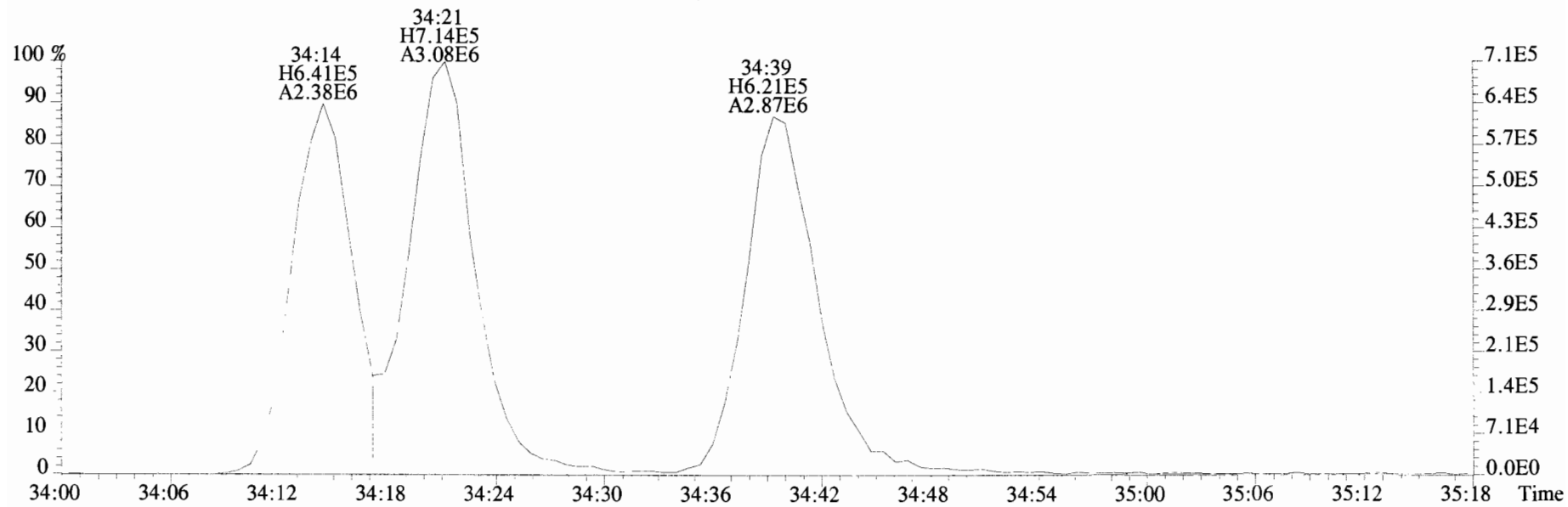
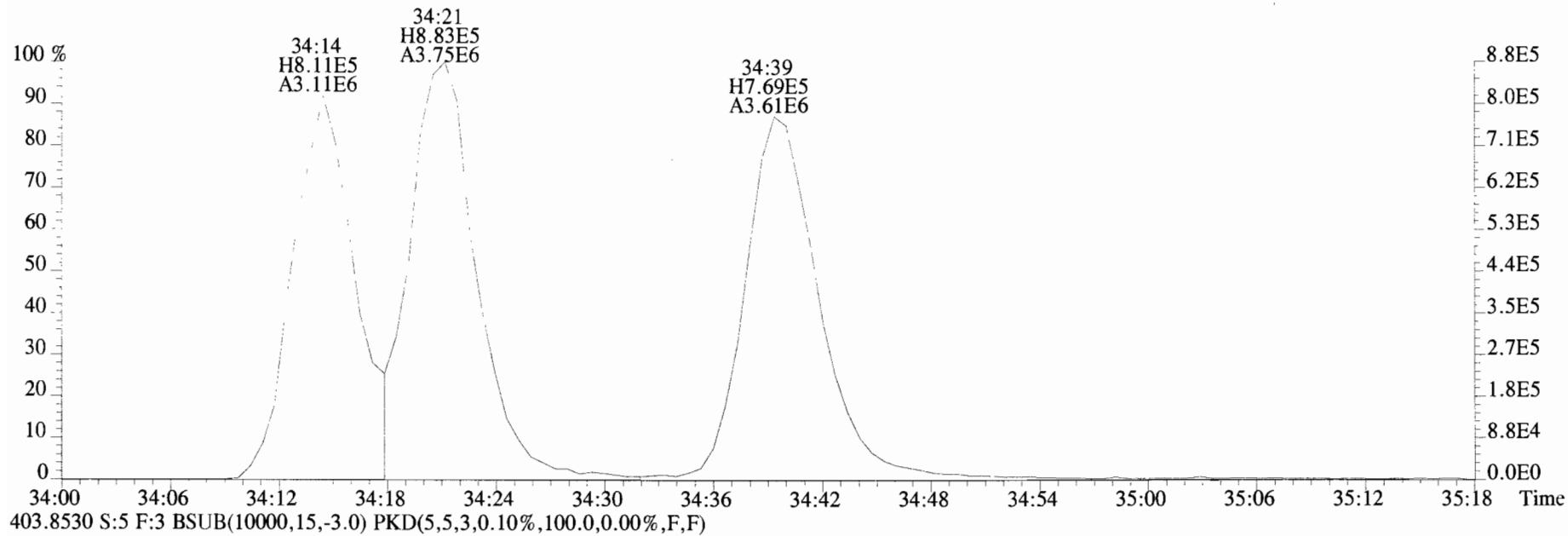
366.9792 S:5 F:2



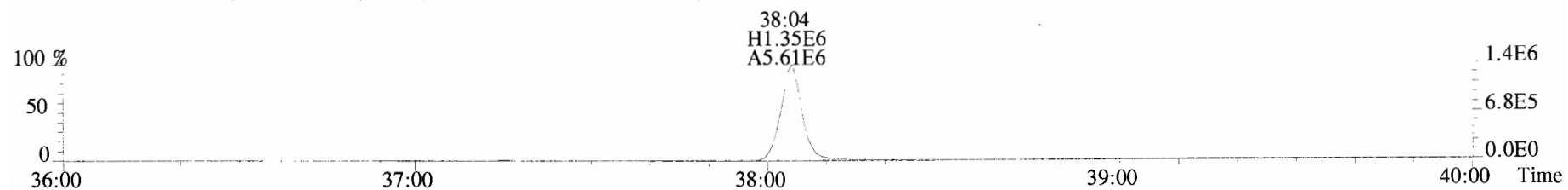
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
389.8156 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



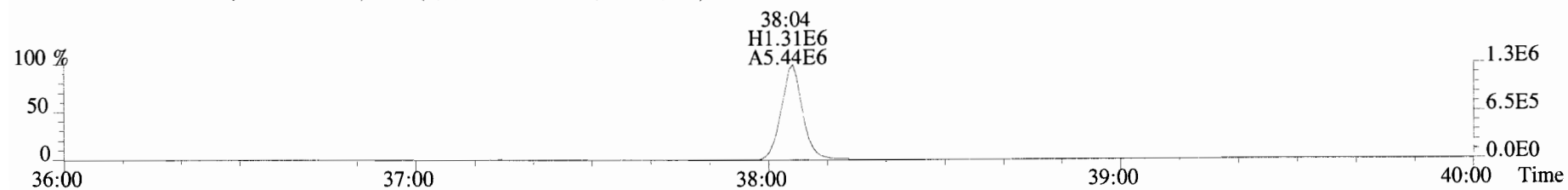
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text: Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
401.8559 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



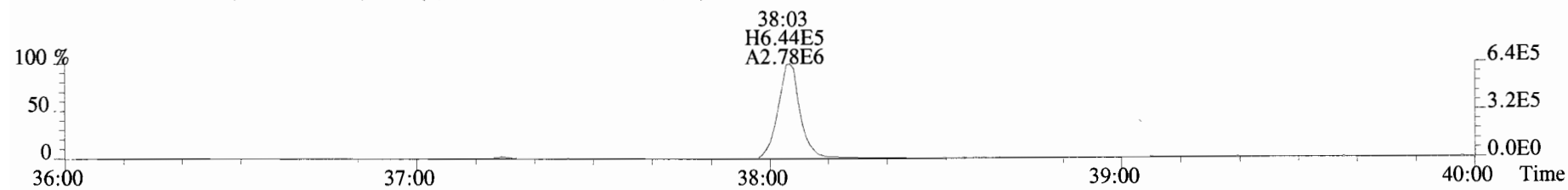
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
423.7767 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



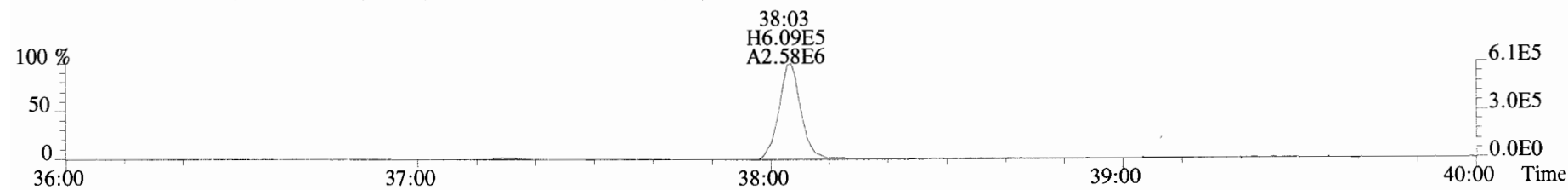
425.7737 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



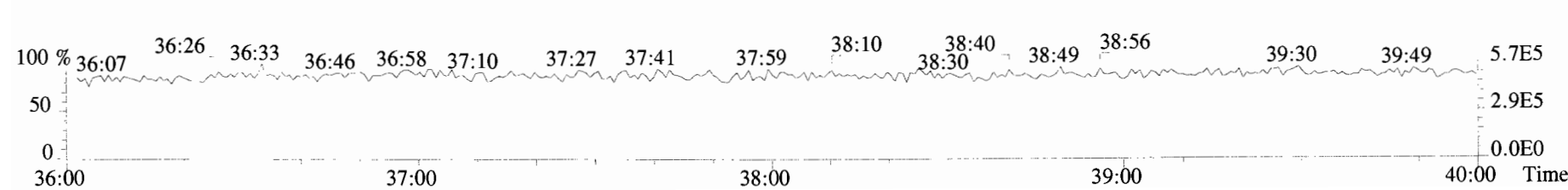
435.8169 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



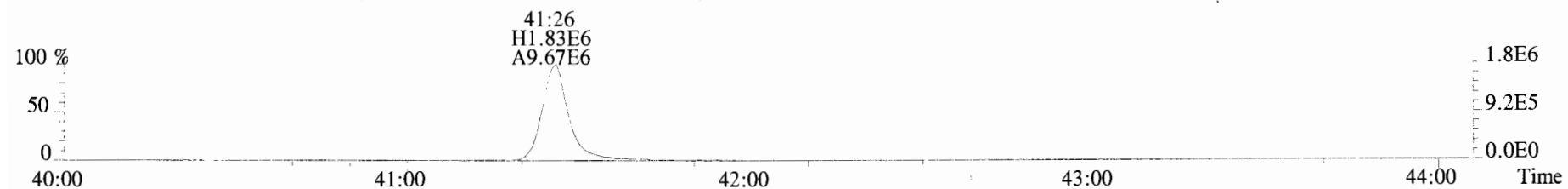
437.8140 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



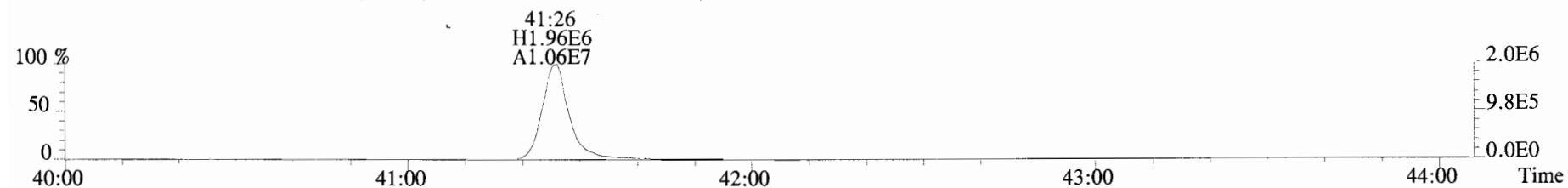
454.9728 S:5 F:4



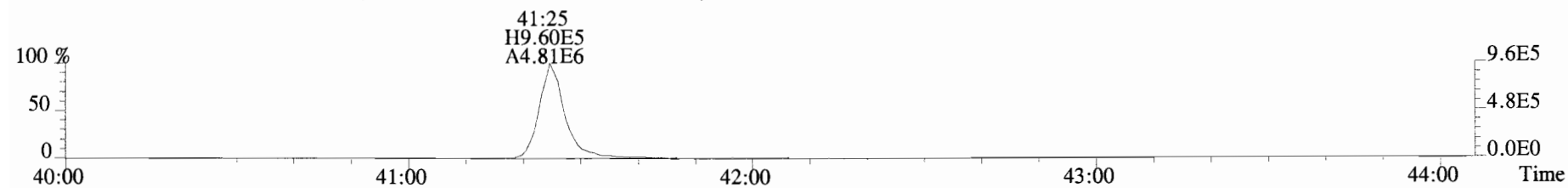
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
457.7377 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



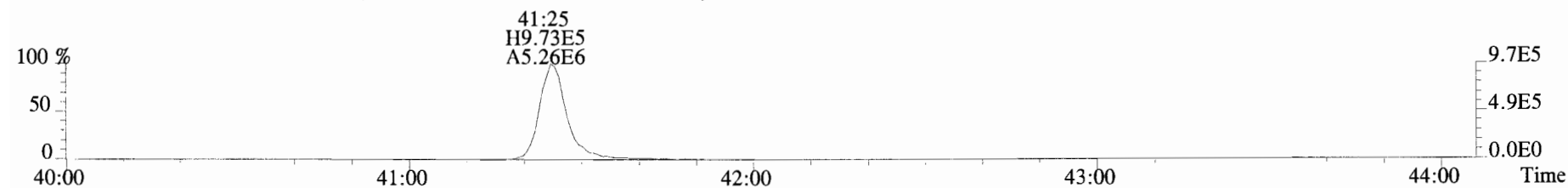
459.7348 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



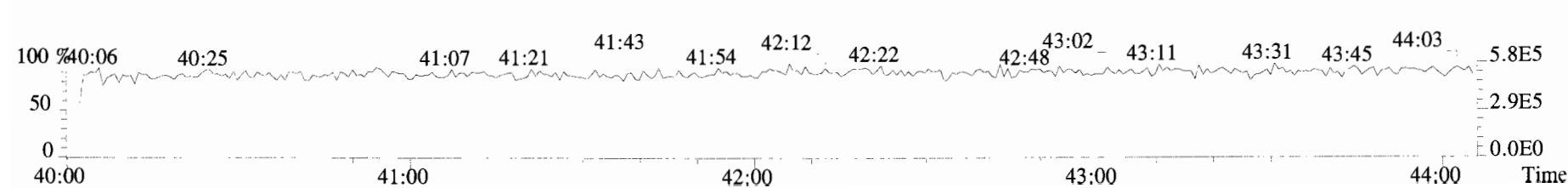
469.7780 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

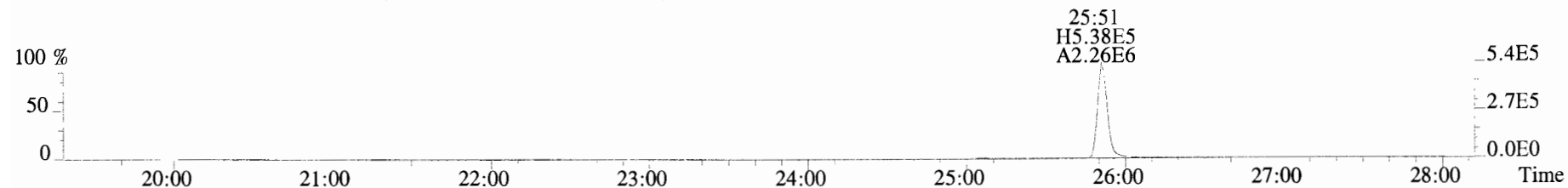


454.9728 S:5 F:5

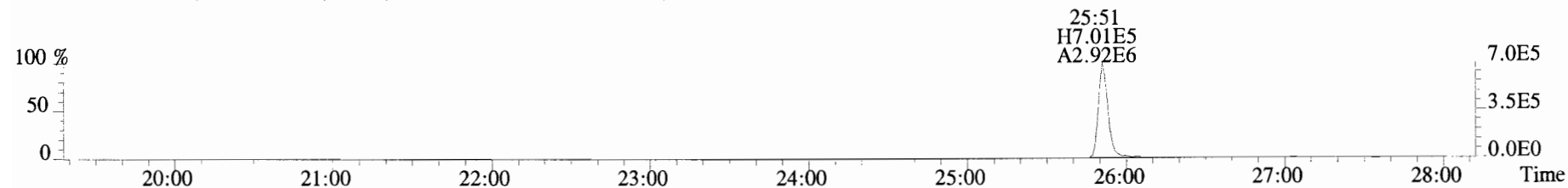




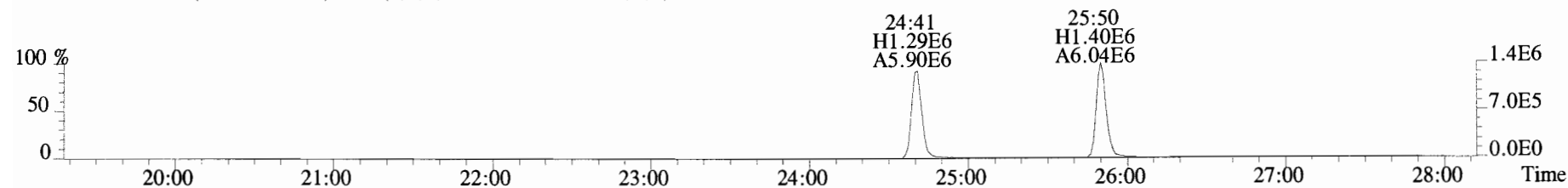
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
303.9016 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



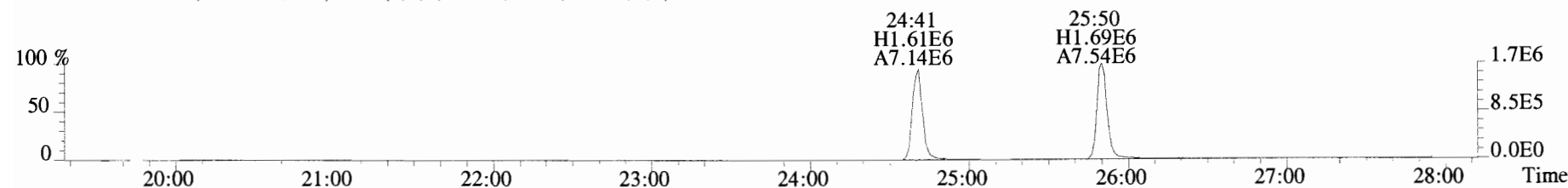
305.8987 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



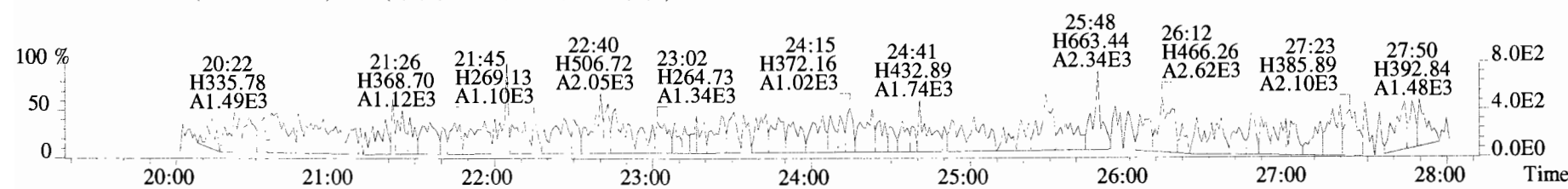
315.9419 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



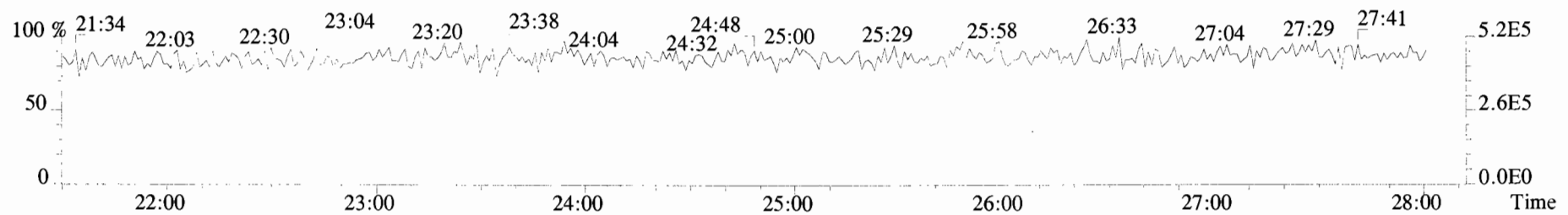
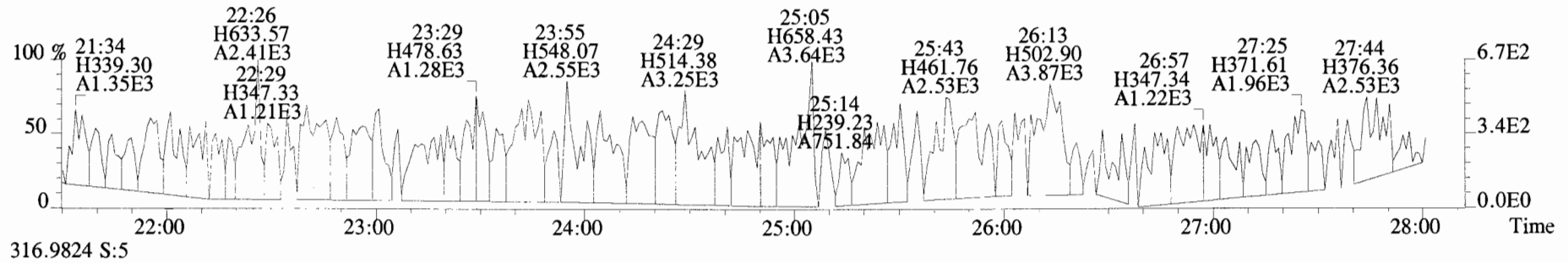
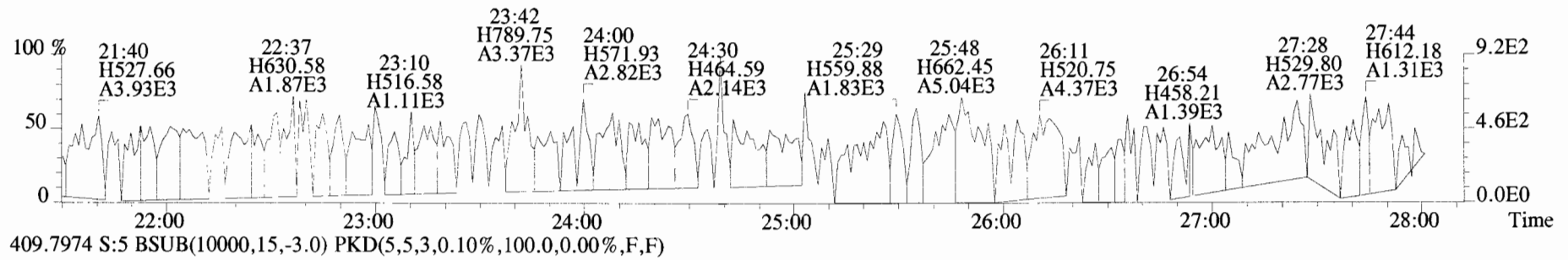
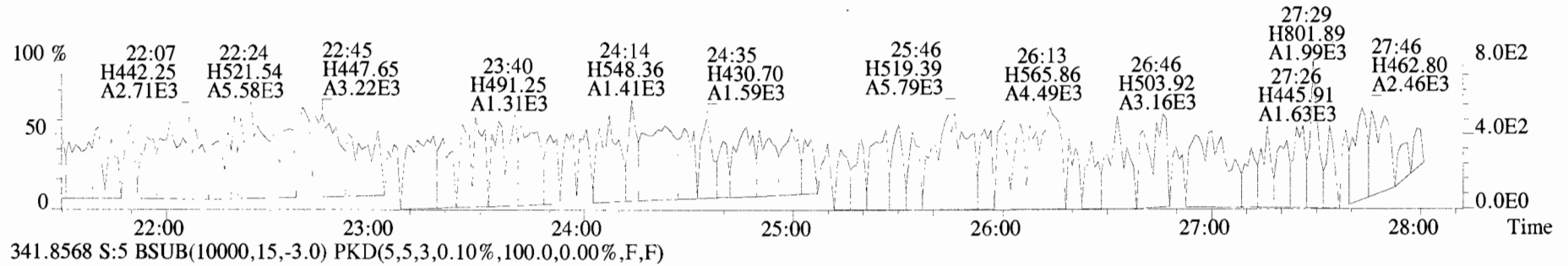
317.9389 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



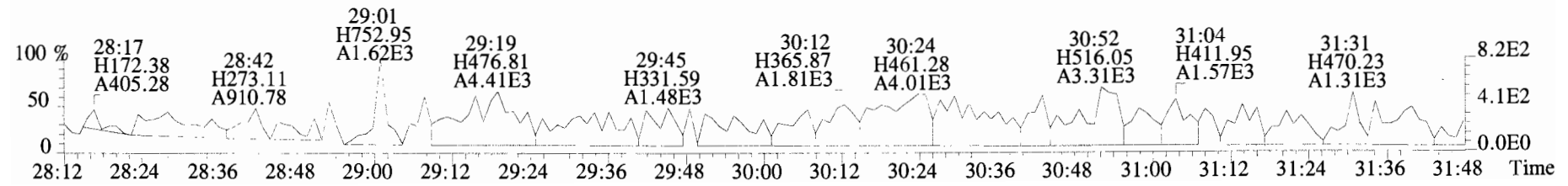
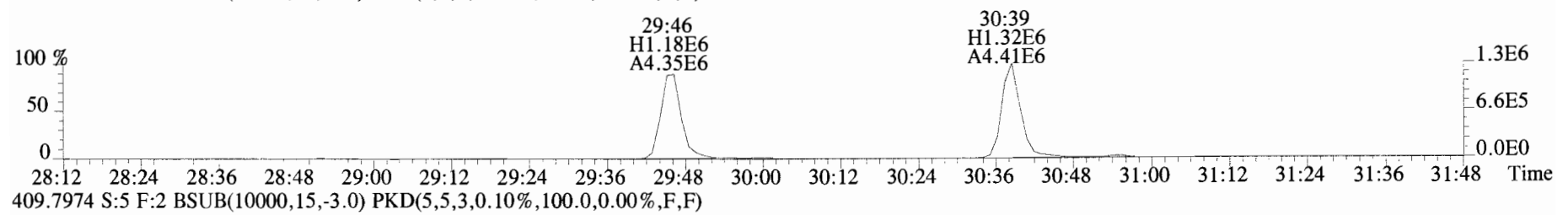
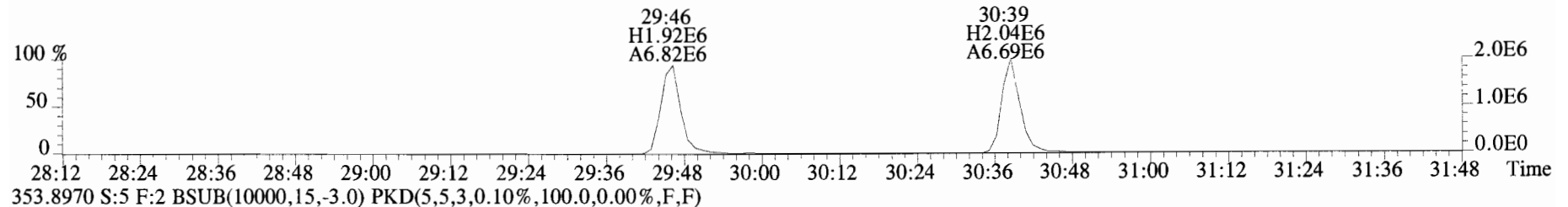
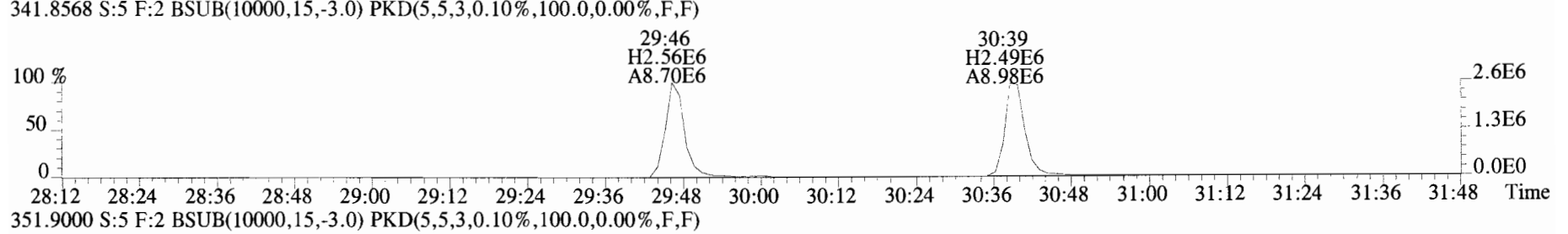
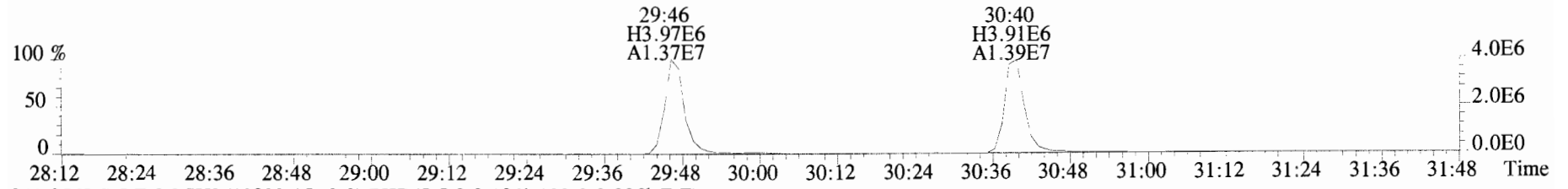
375.8364 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



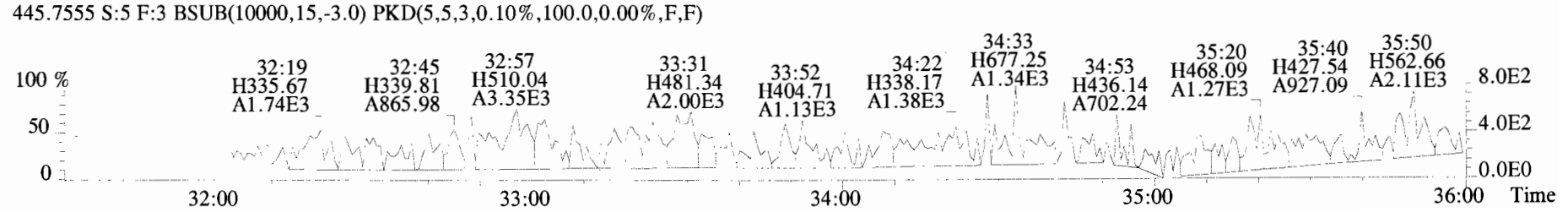
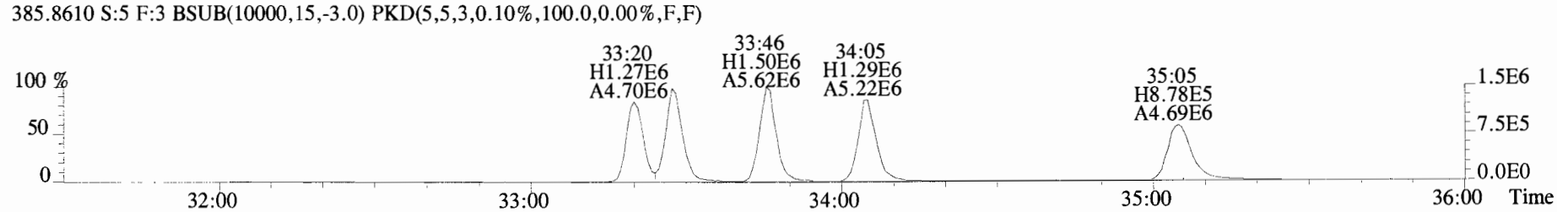
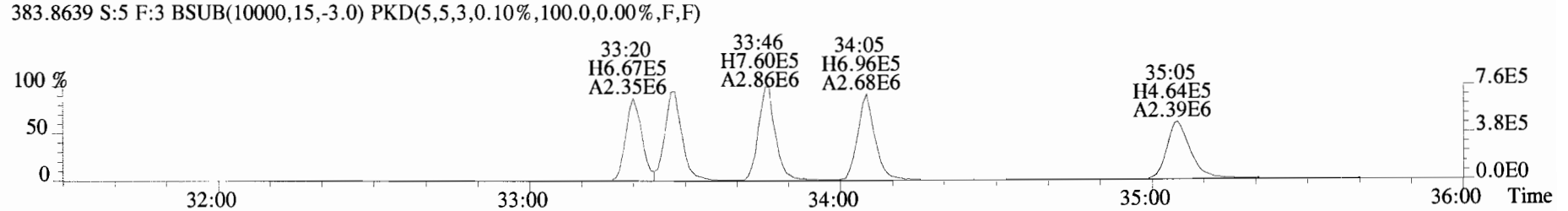
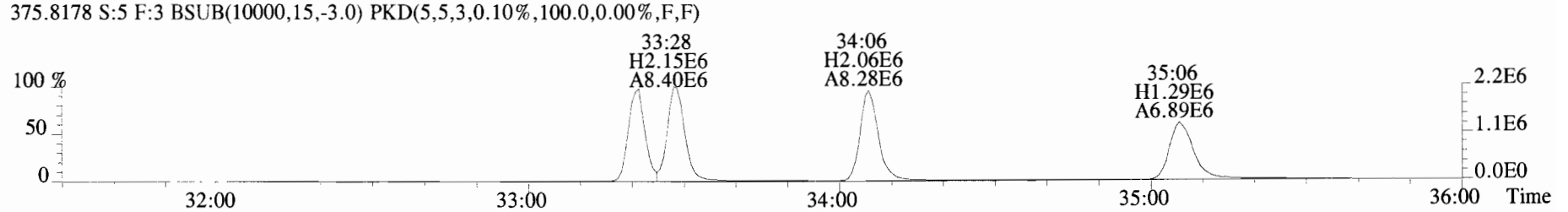
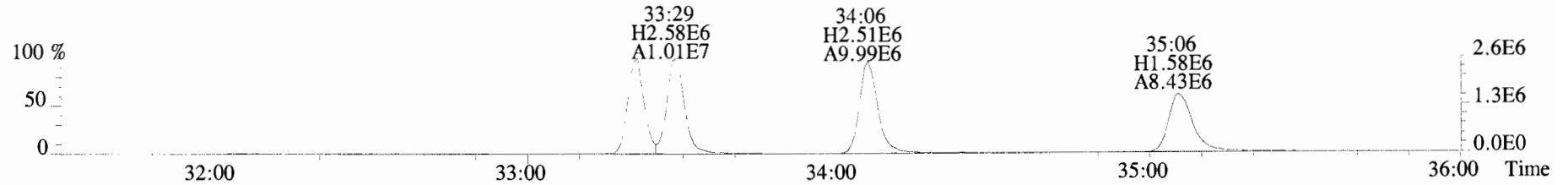
File:191009D1 #1-514 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#5 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
 339.8597 S:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



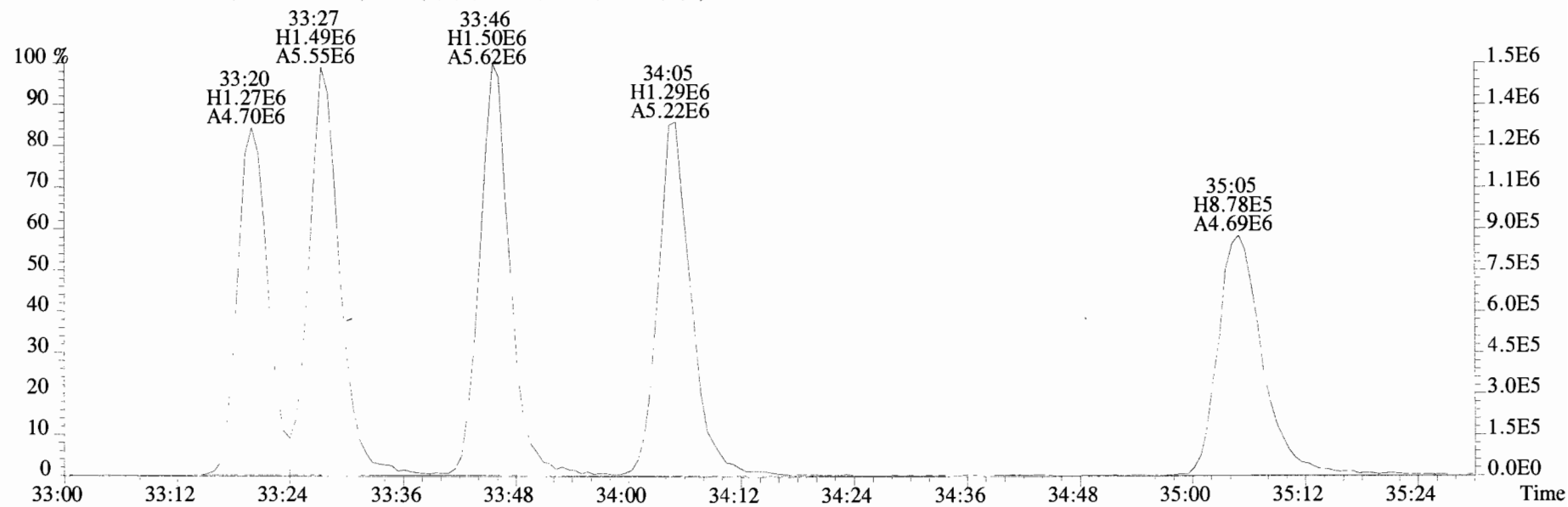
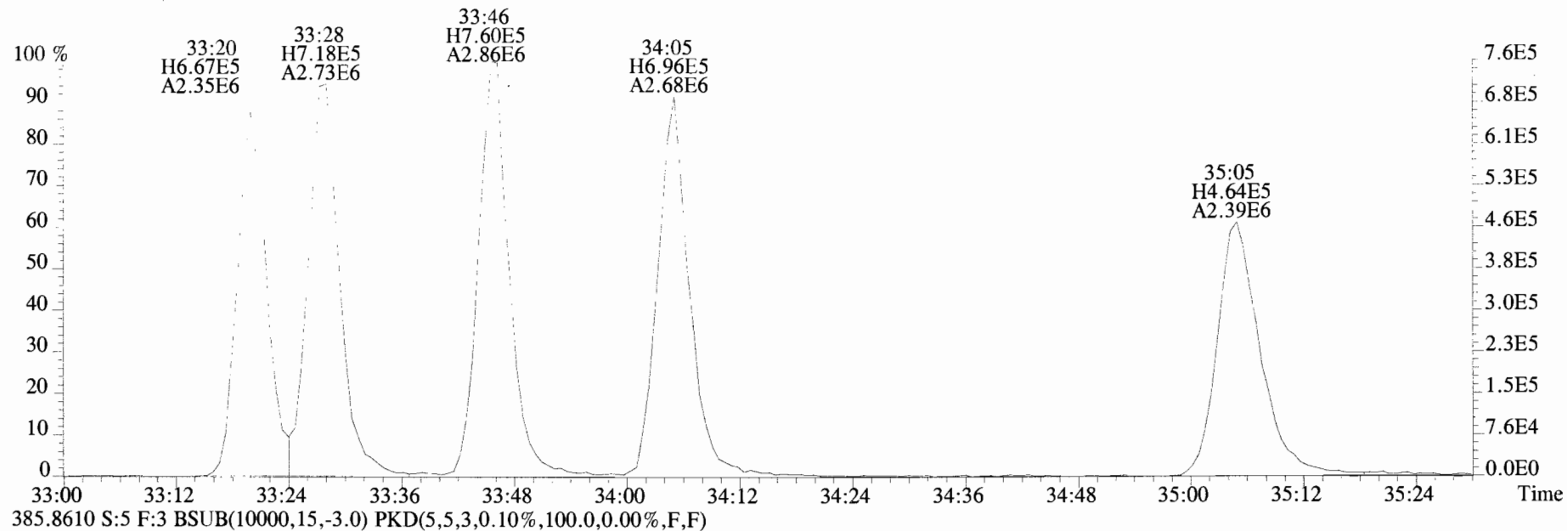
File:191009D1 #1-210 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
339.8597 S:5 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



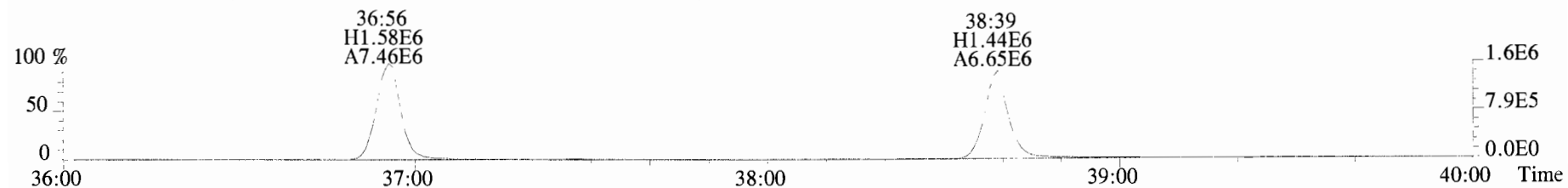
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#5 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
 373.8207 S:5 F:3 BSub(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



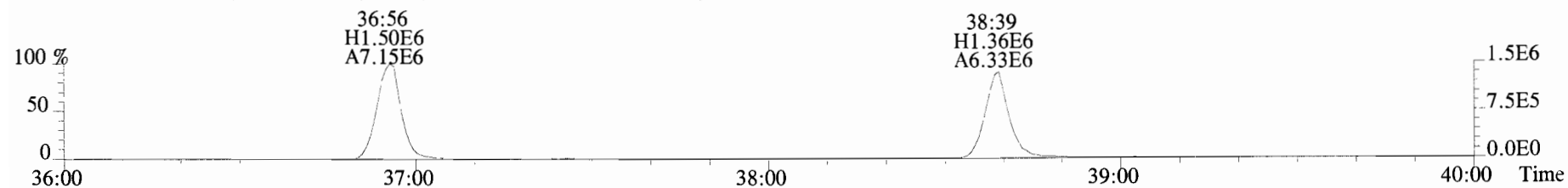
File:191009D1 #1-355 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
383.8639 S:5 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



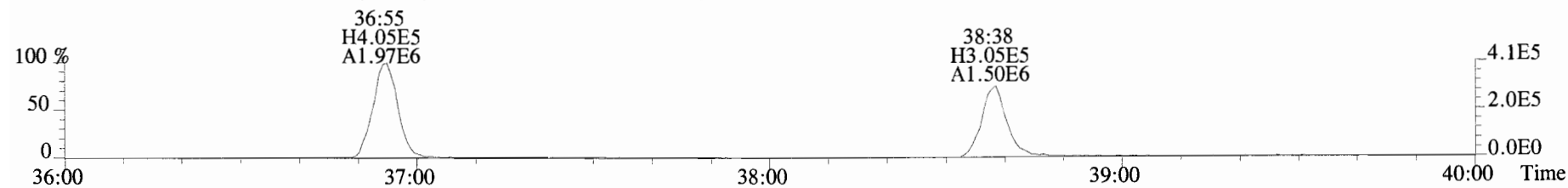
File:191009D1 #1-356 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
407.7818 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



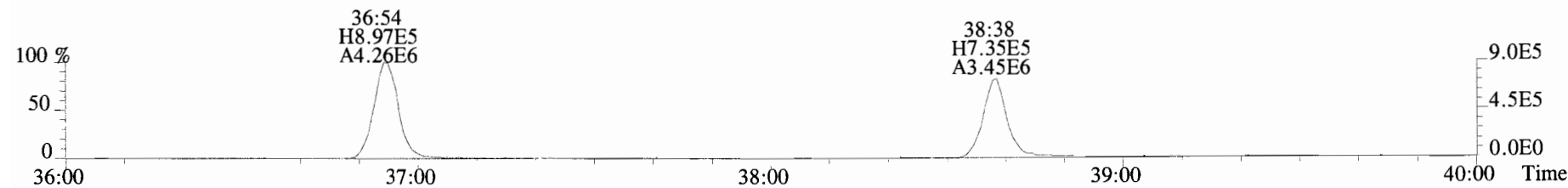
409.7788 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



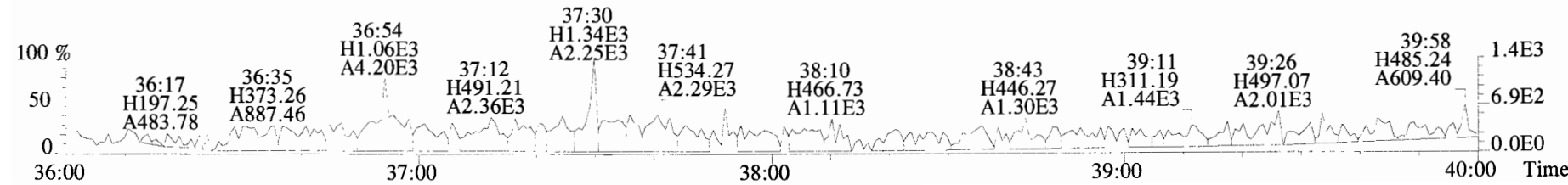
417.8253 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



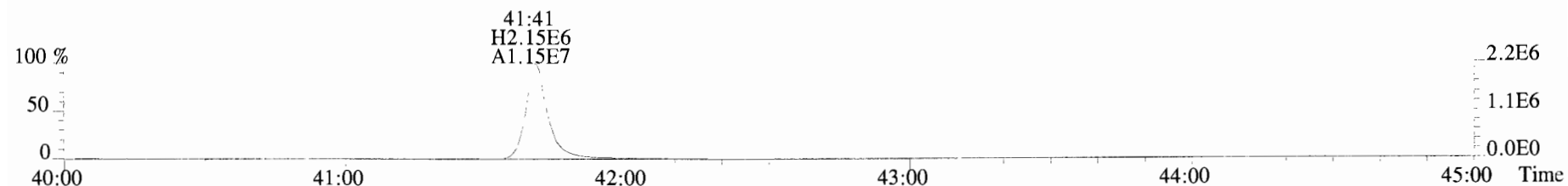
419.8220 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



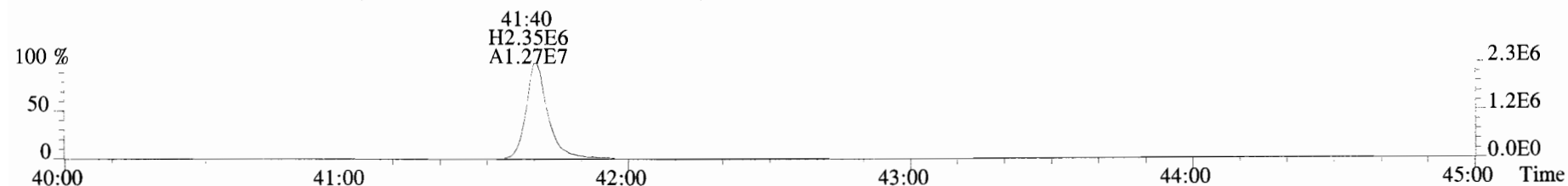
479.7165 S:5 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



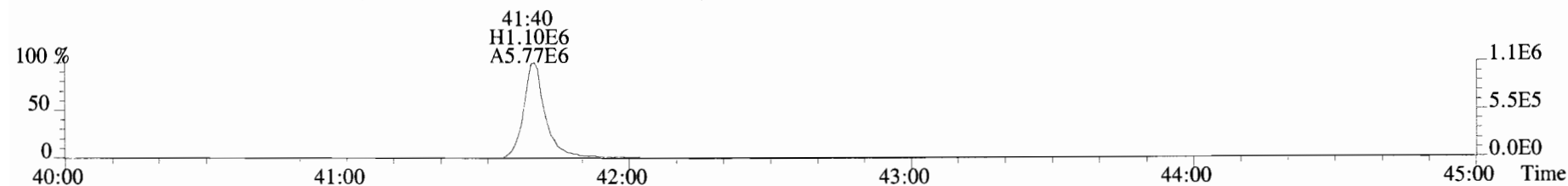
File:191009D1 #1-431 Acq: 9-OCT-2019 19:23:46 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#5 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-5 1613 CS4 19C2205 Exp:OCDD\_DB5  
441.7428 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



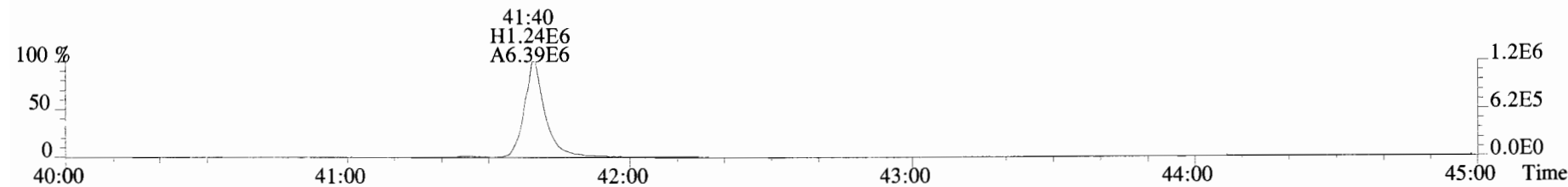
443.7398 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



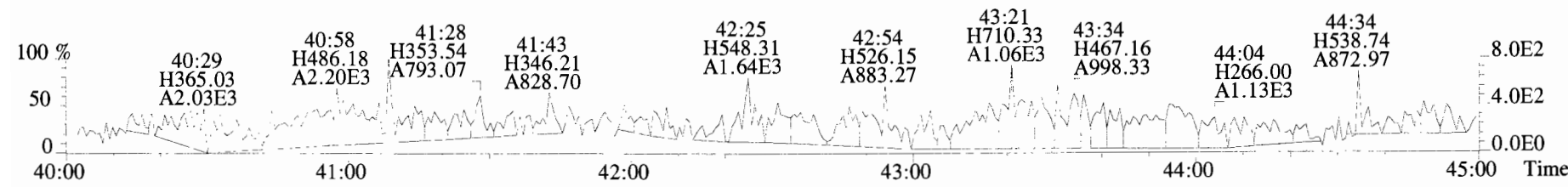
453.7831 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



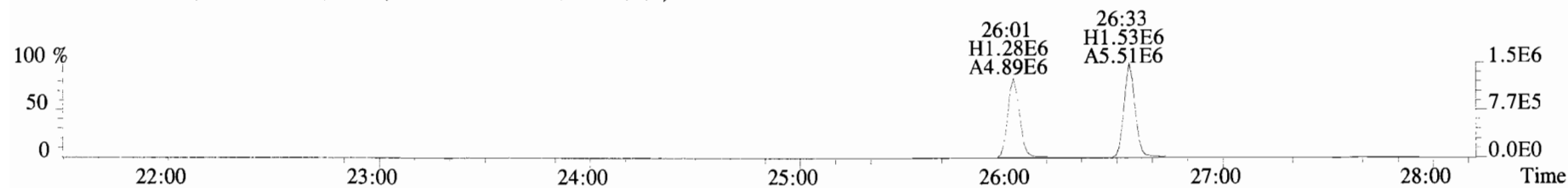
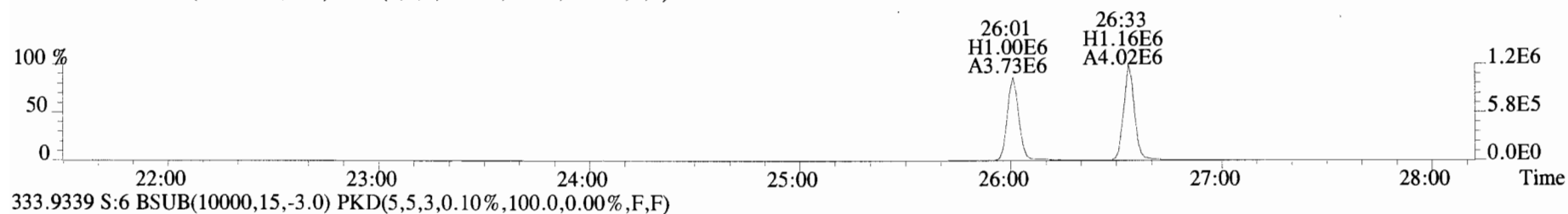
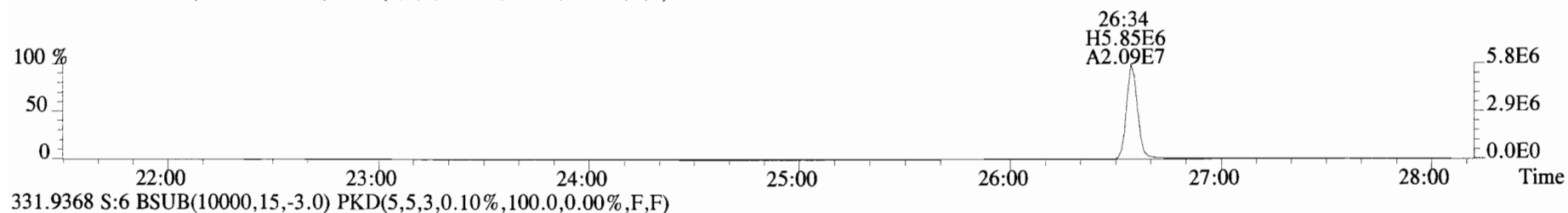
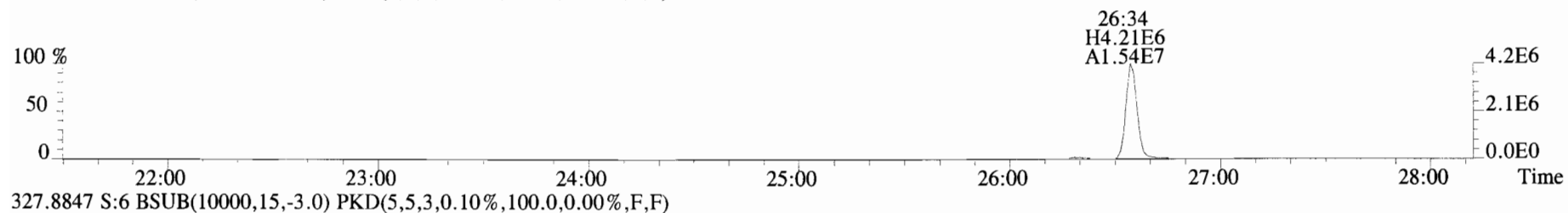
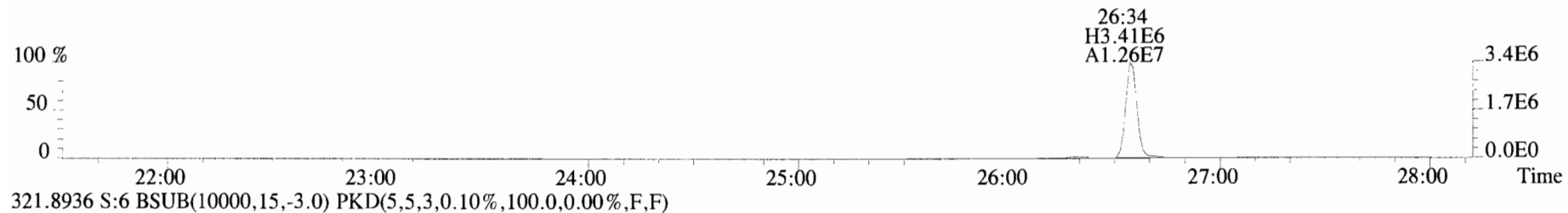
455.7801 S:5 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

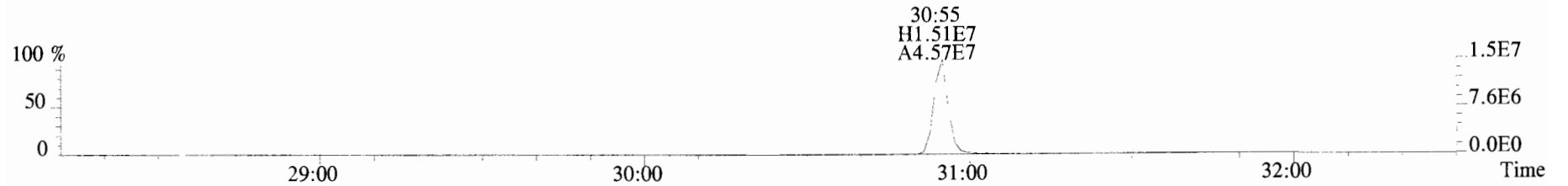


File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
319.8965 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

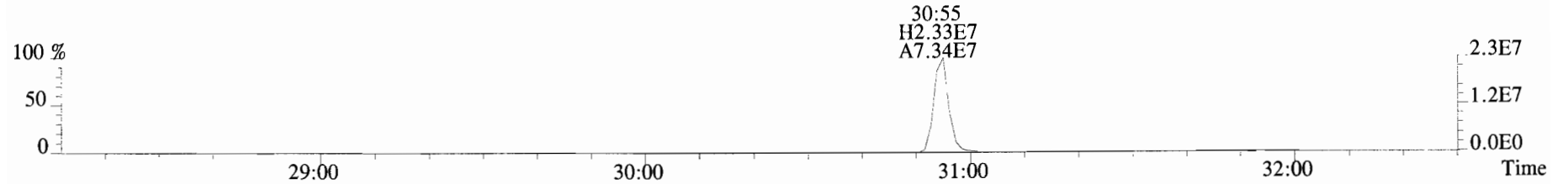




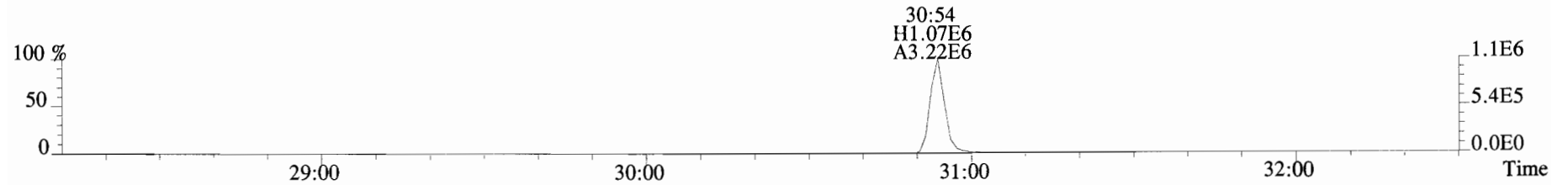
File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
353.8576 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



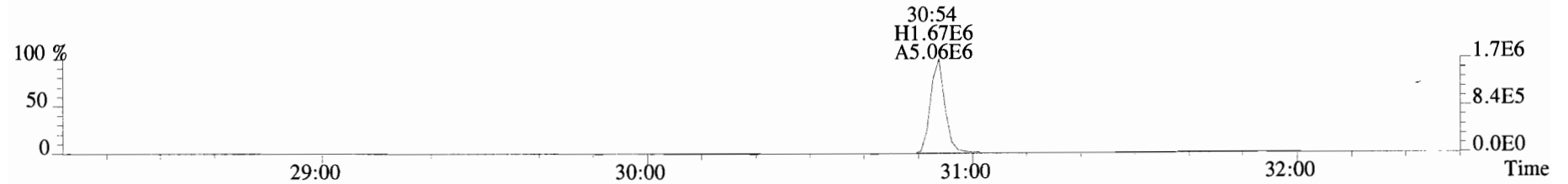
355.8546 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



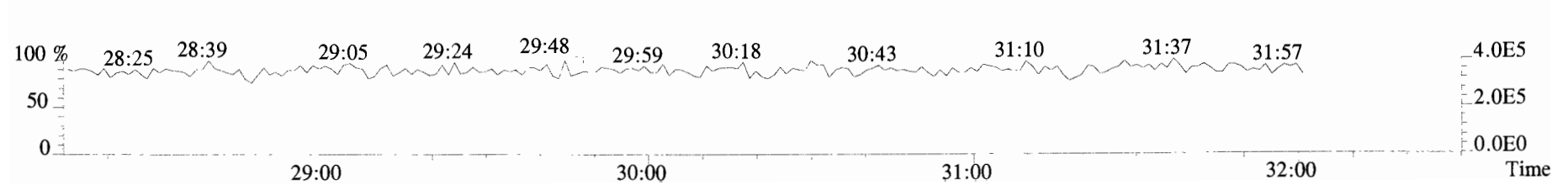
365.8978 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



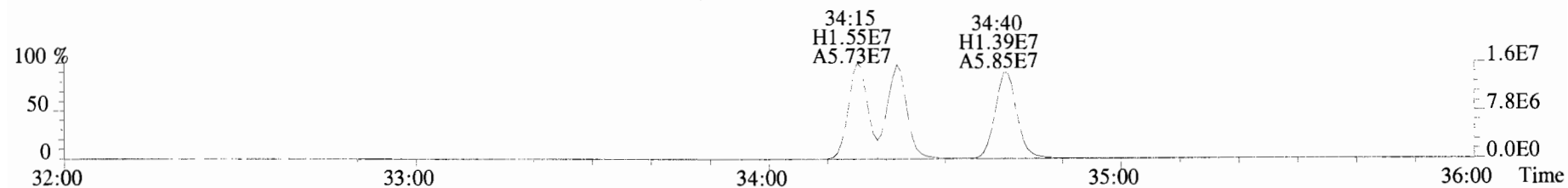
367.8949 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



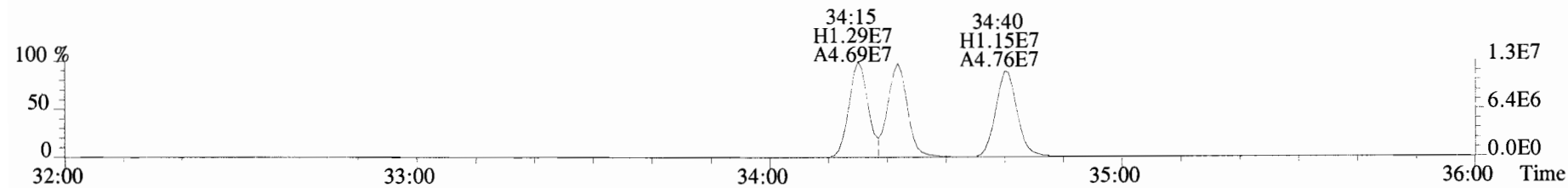
366.9792 S:6 F:2



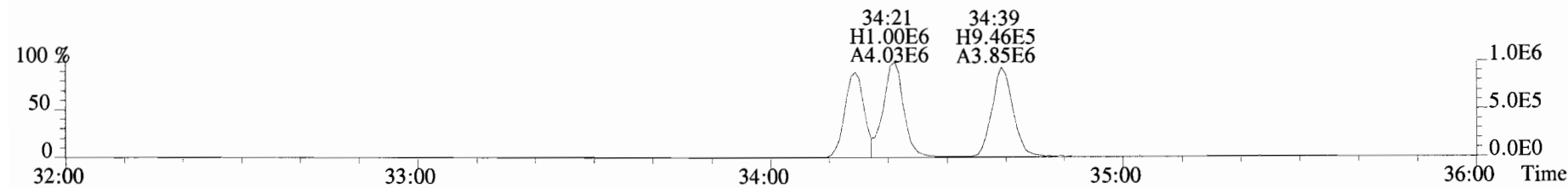
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
389.8156 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



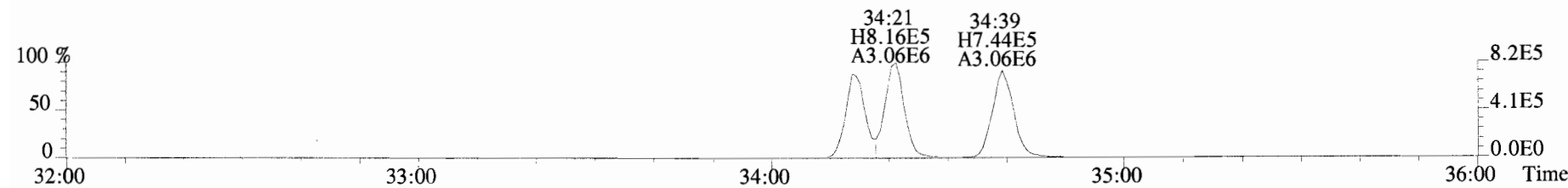
391.8127 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



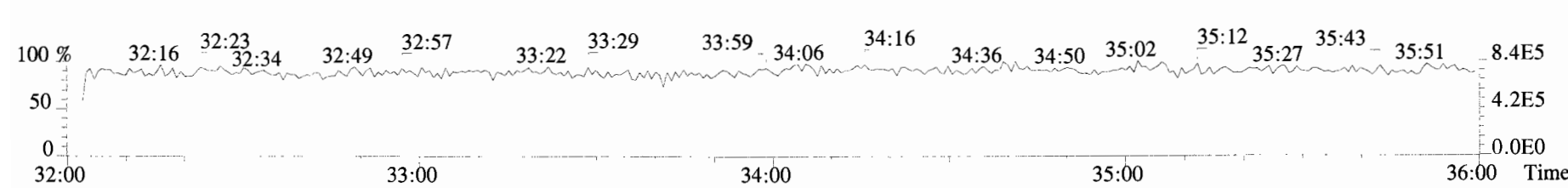
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



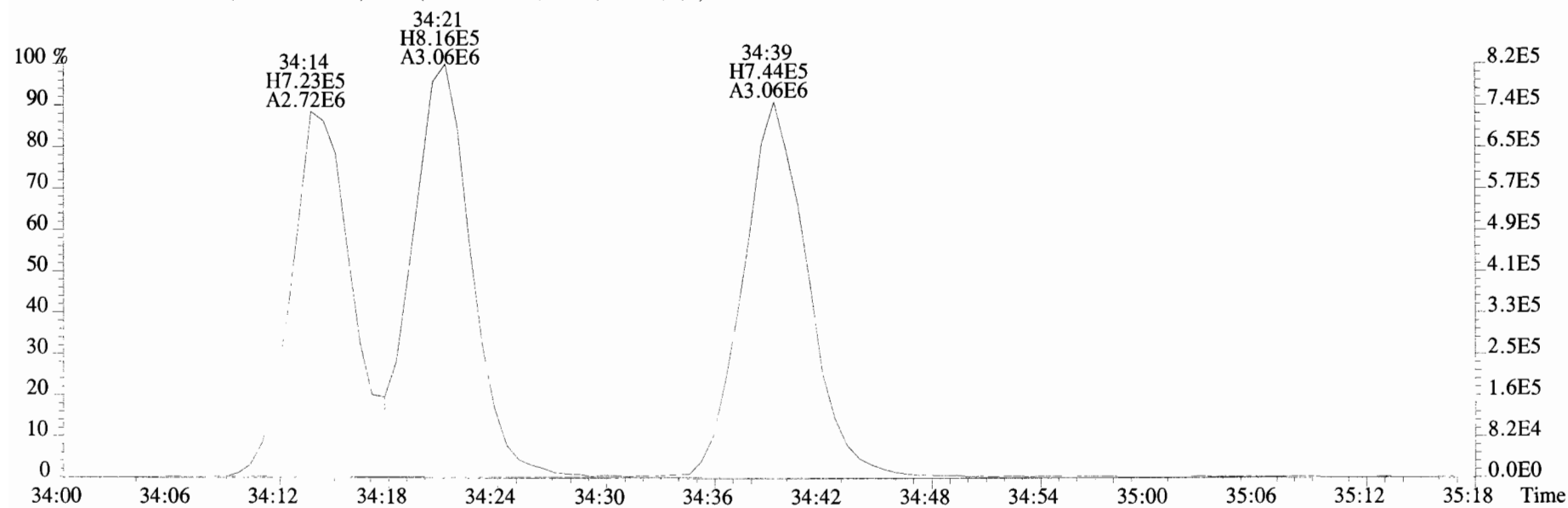
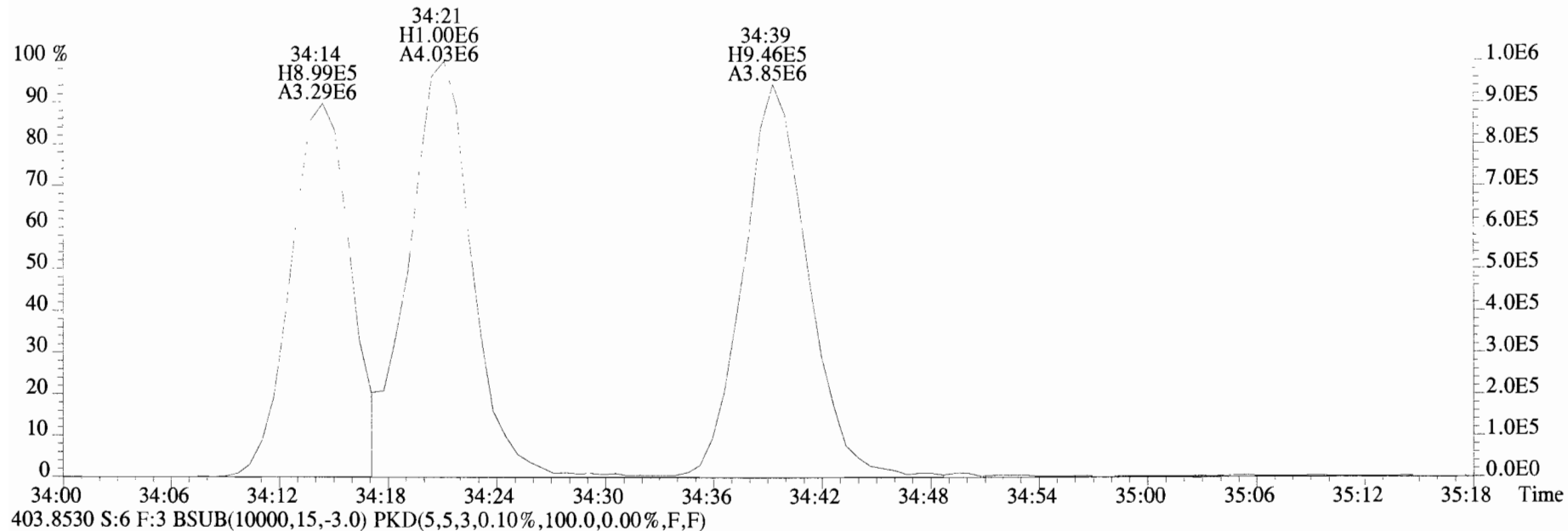
403.8530 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



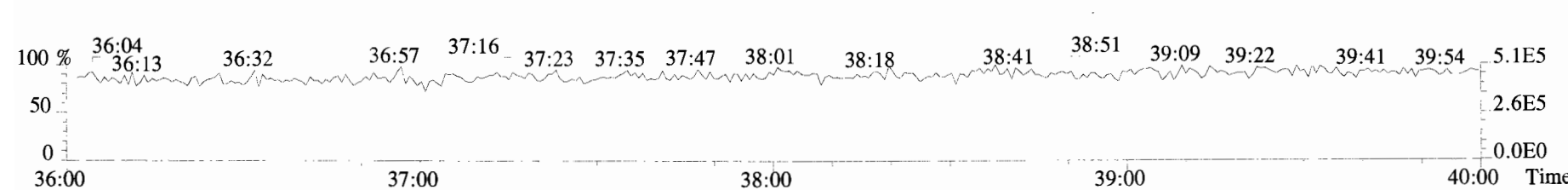
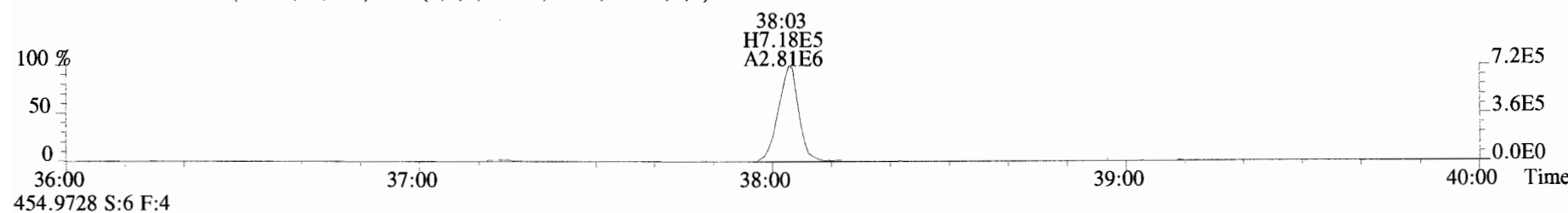
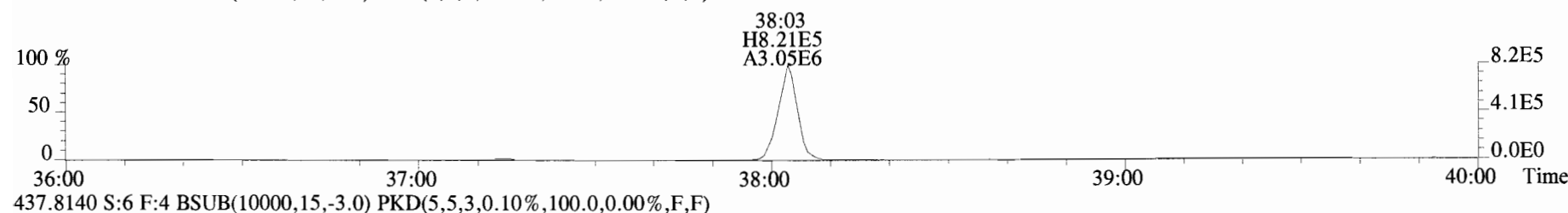
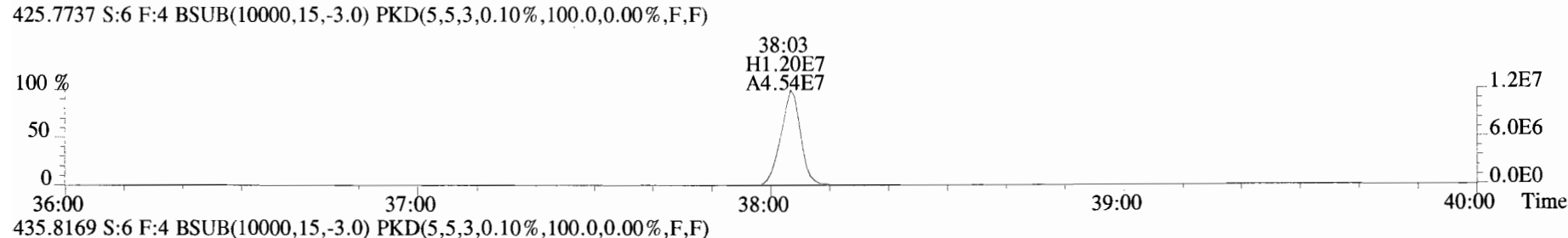
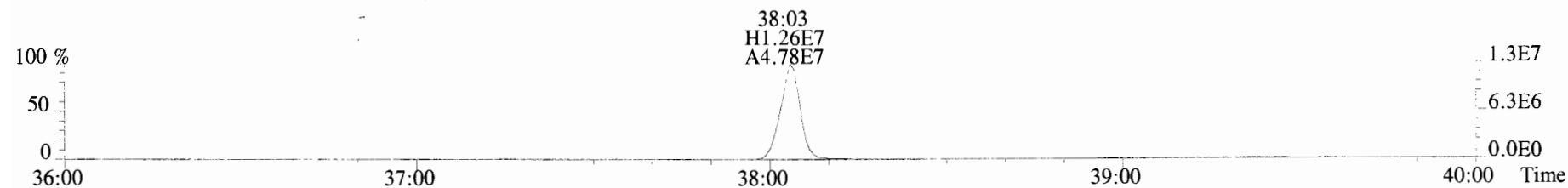
392.9760 S:6 F:3



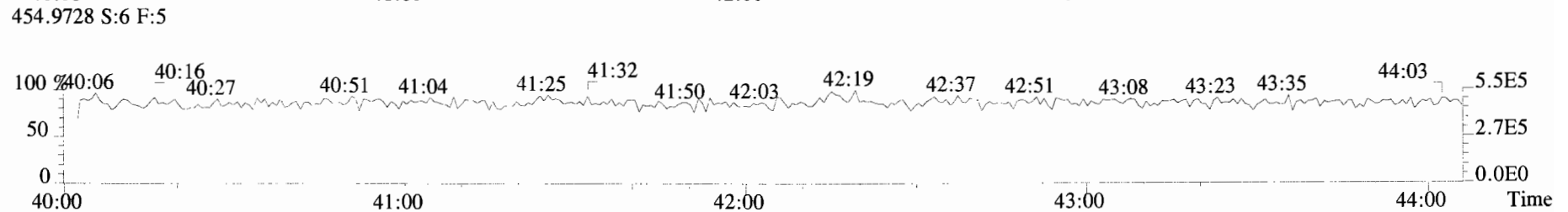
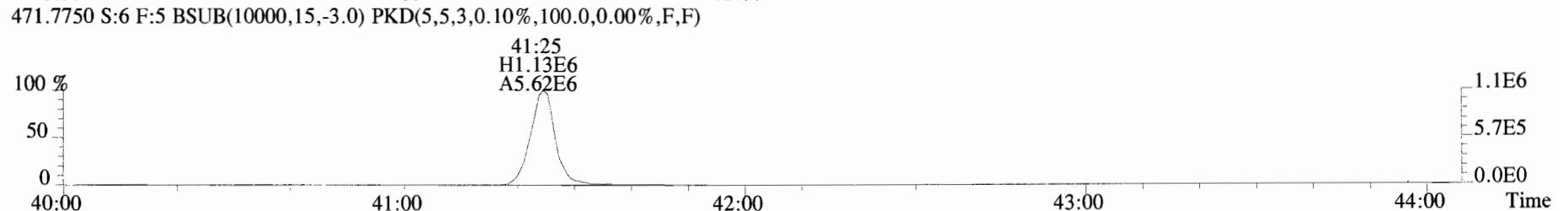
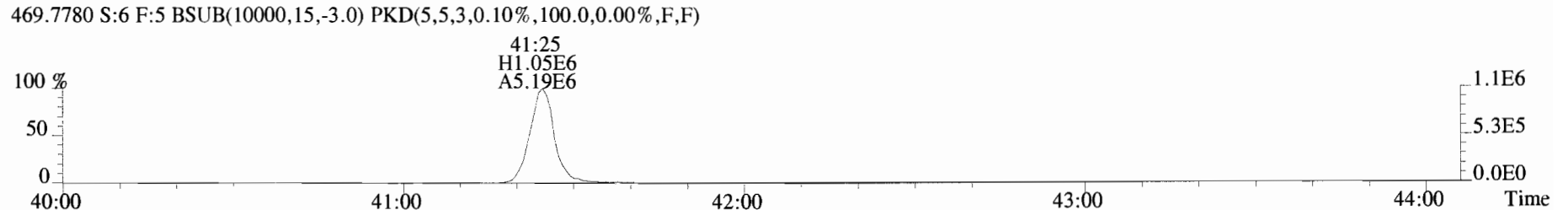
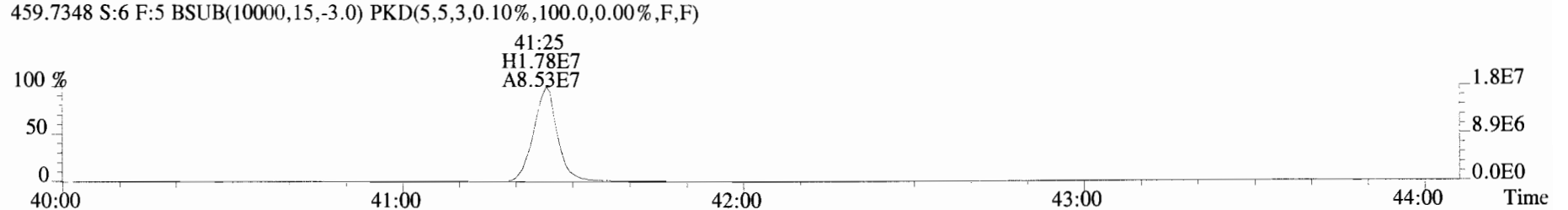
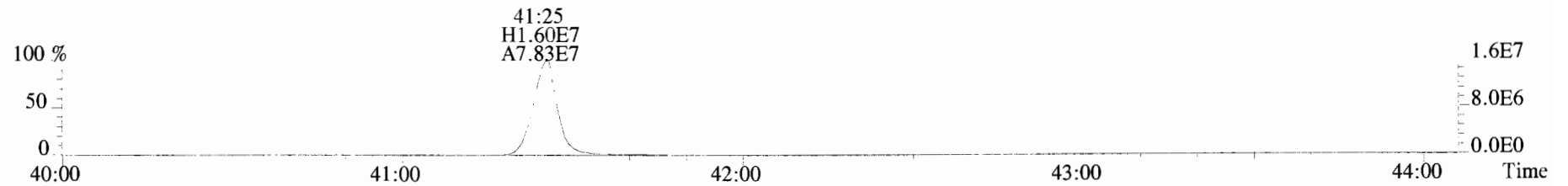
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
401.8559 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



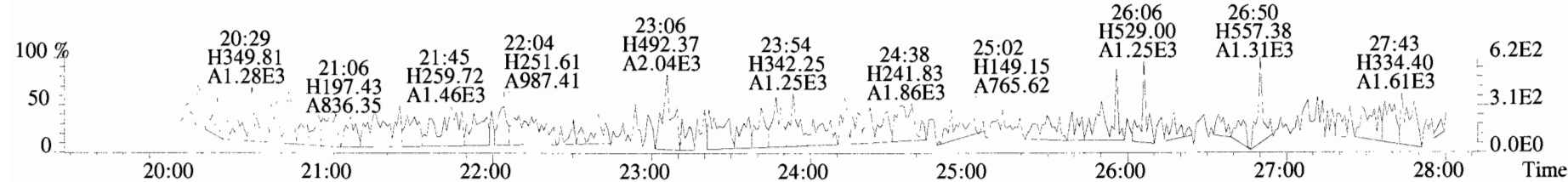
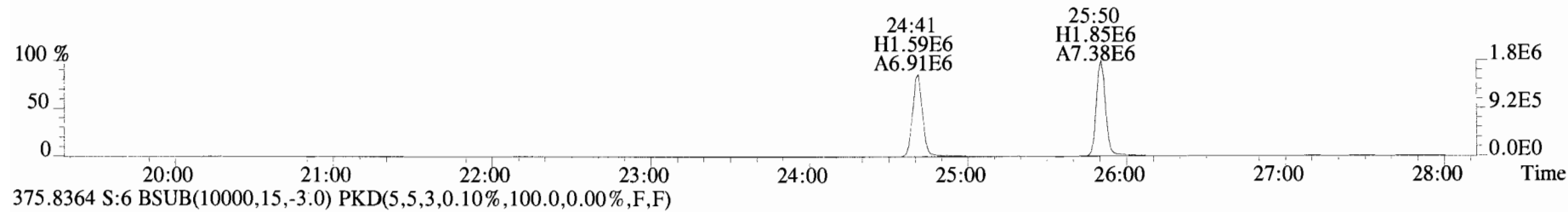
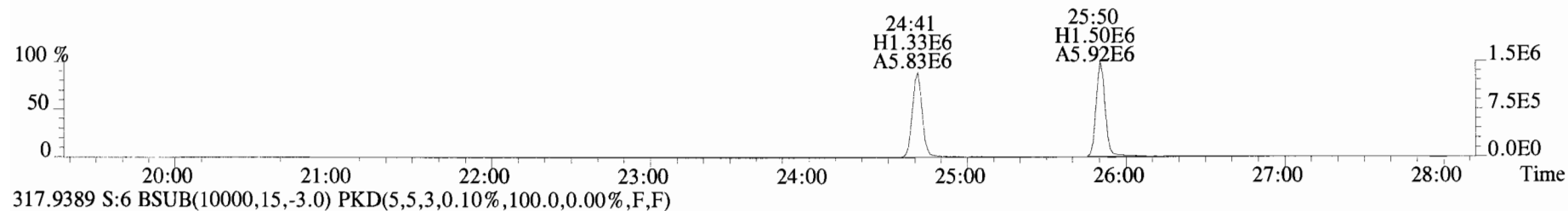
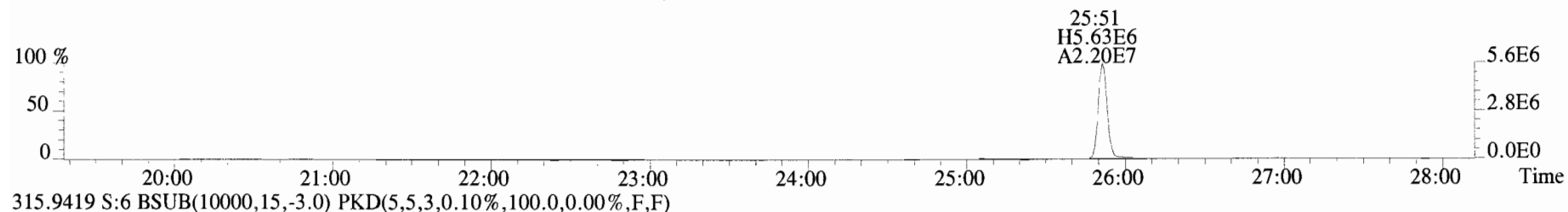
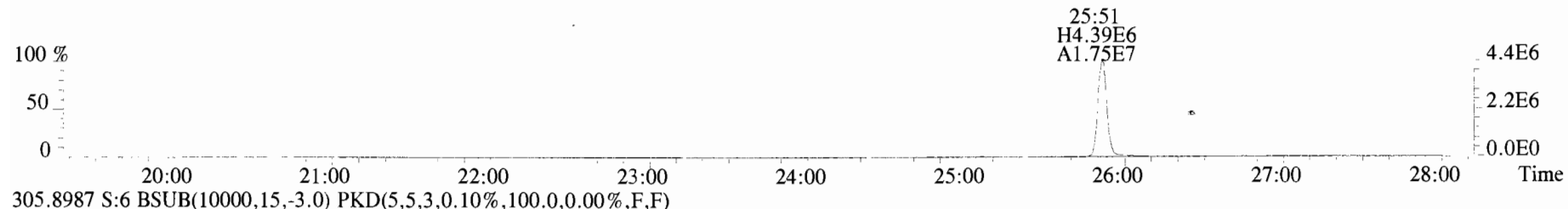
File:191009D1 #1-356 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
423.7767 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



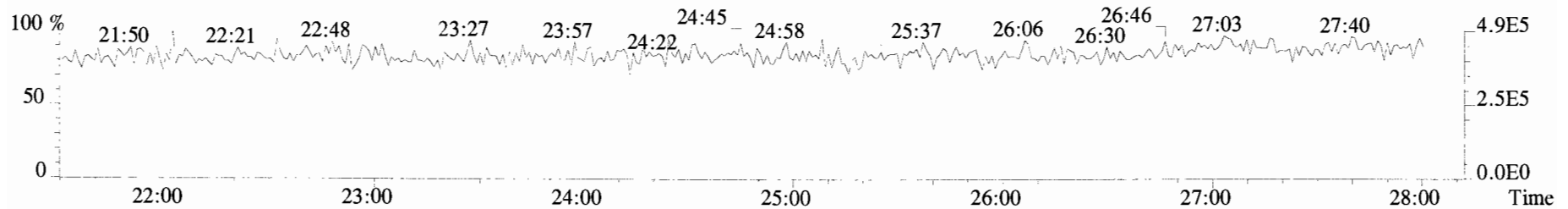
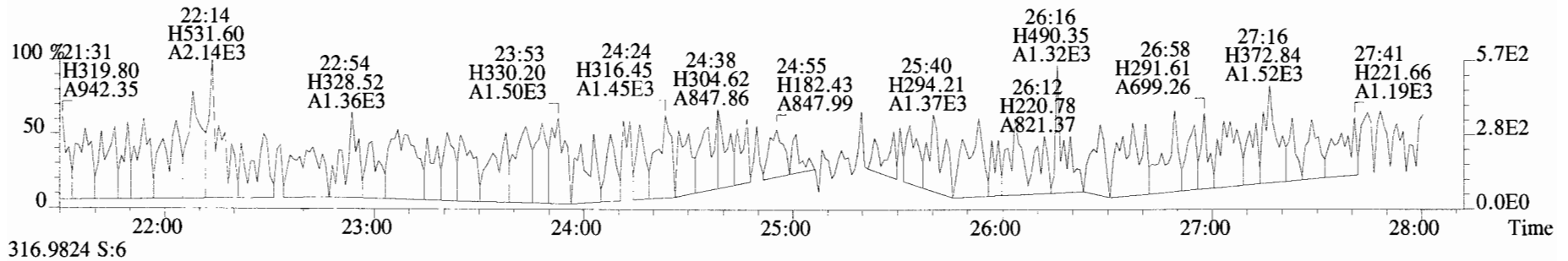
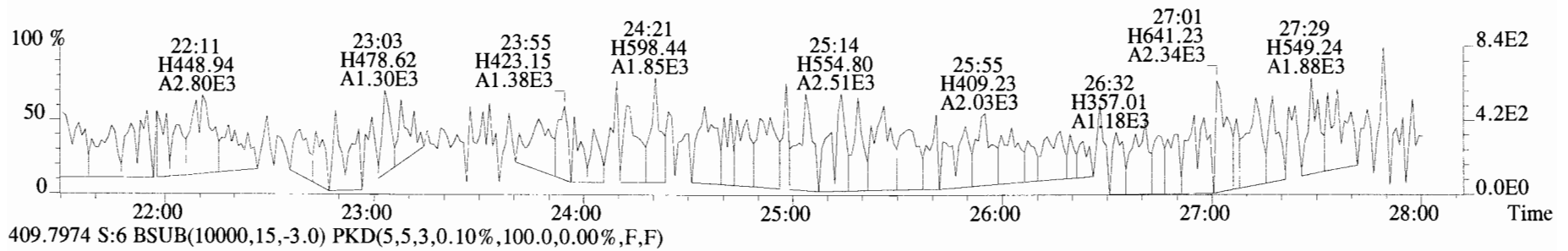
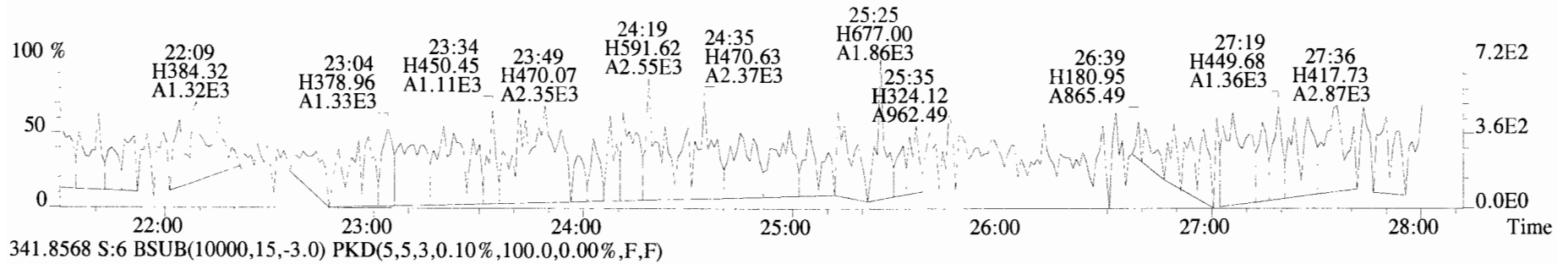
File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
457.7377 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



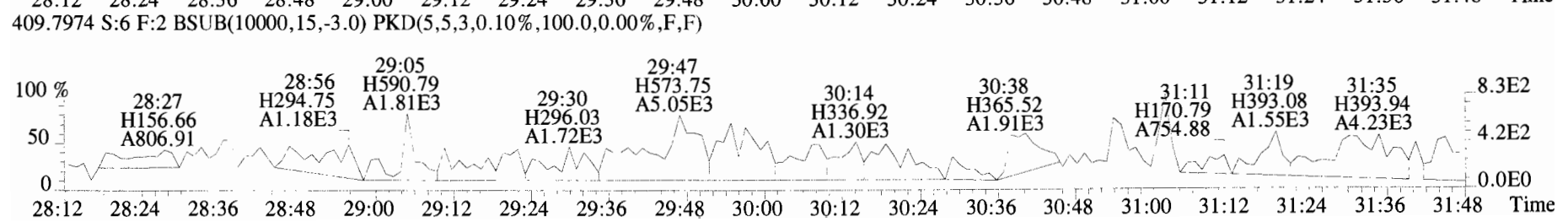
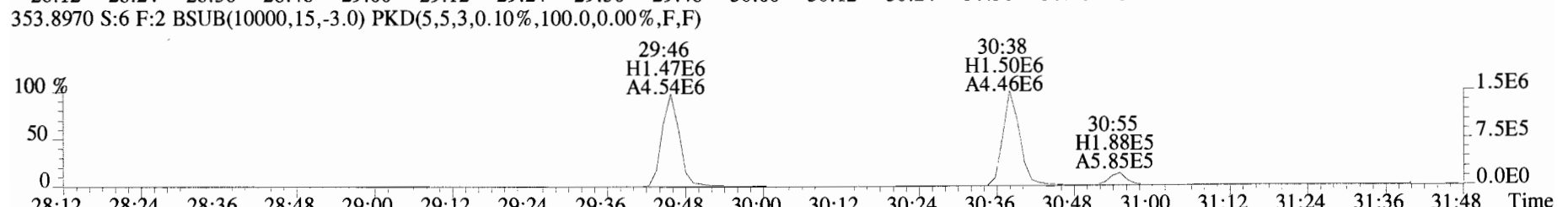
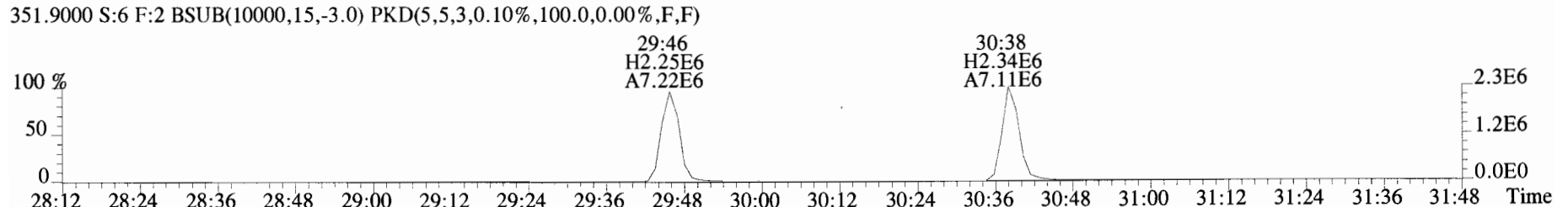
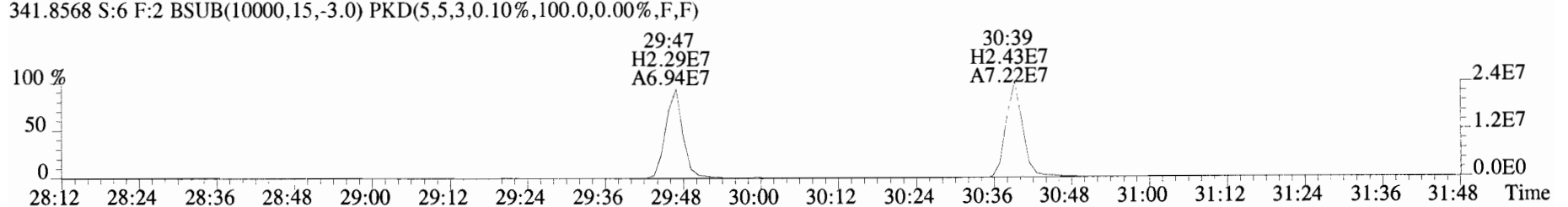
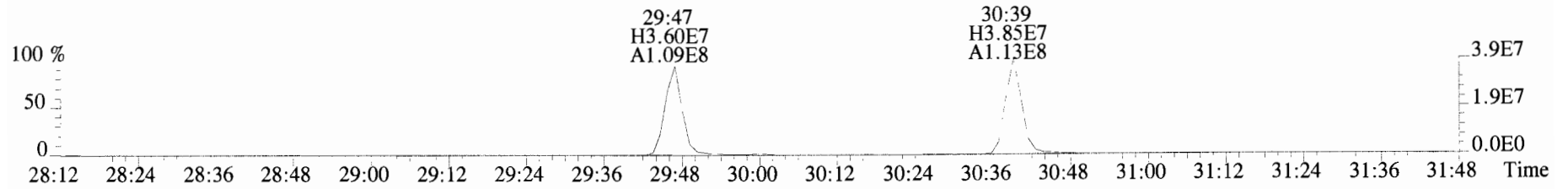
File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
303.9016 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-513 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
339.8597 S:6 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

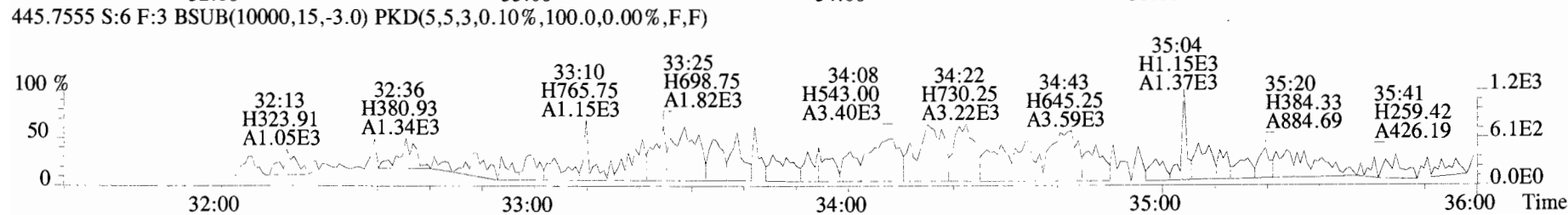
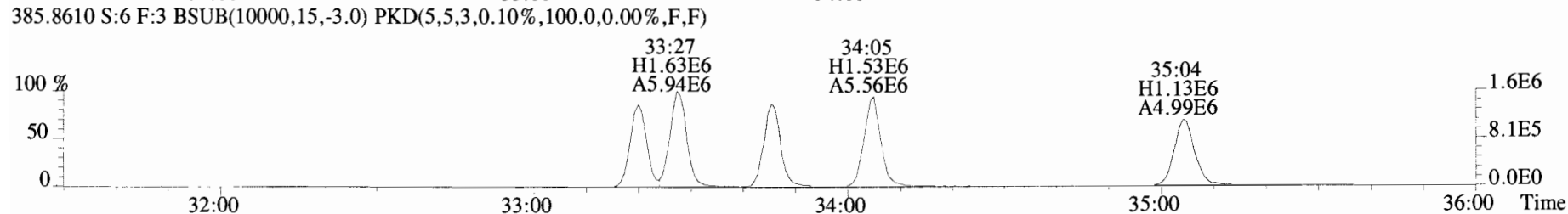
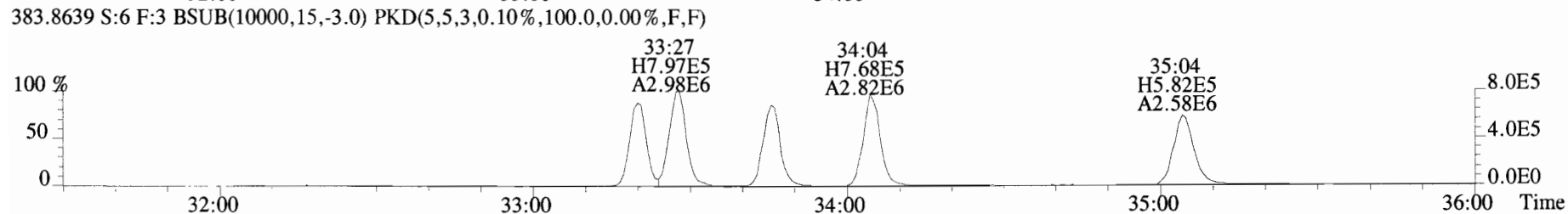
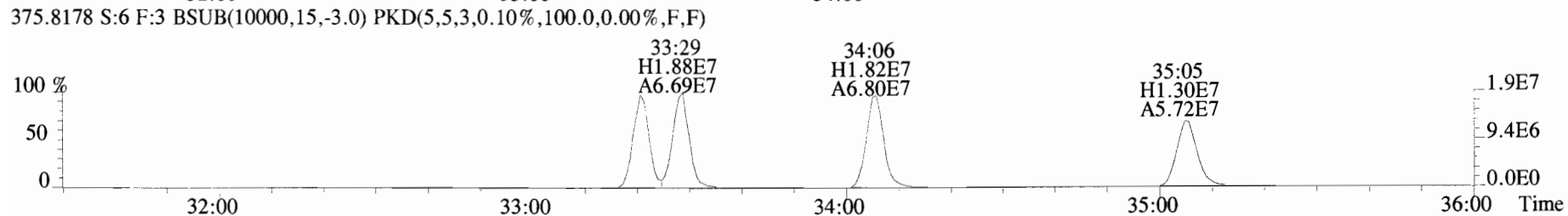
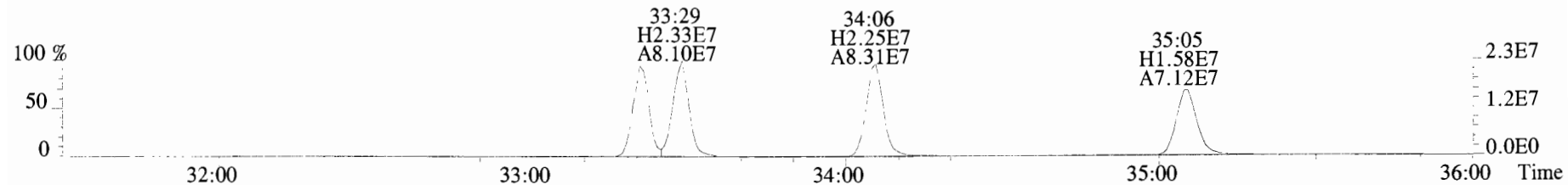


File:191009D1 #1-211 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
339.8597 S:6 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

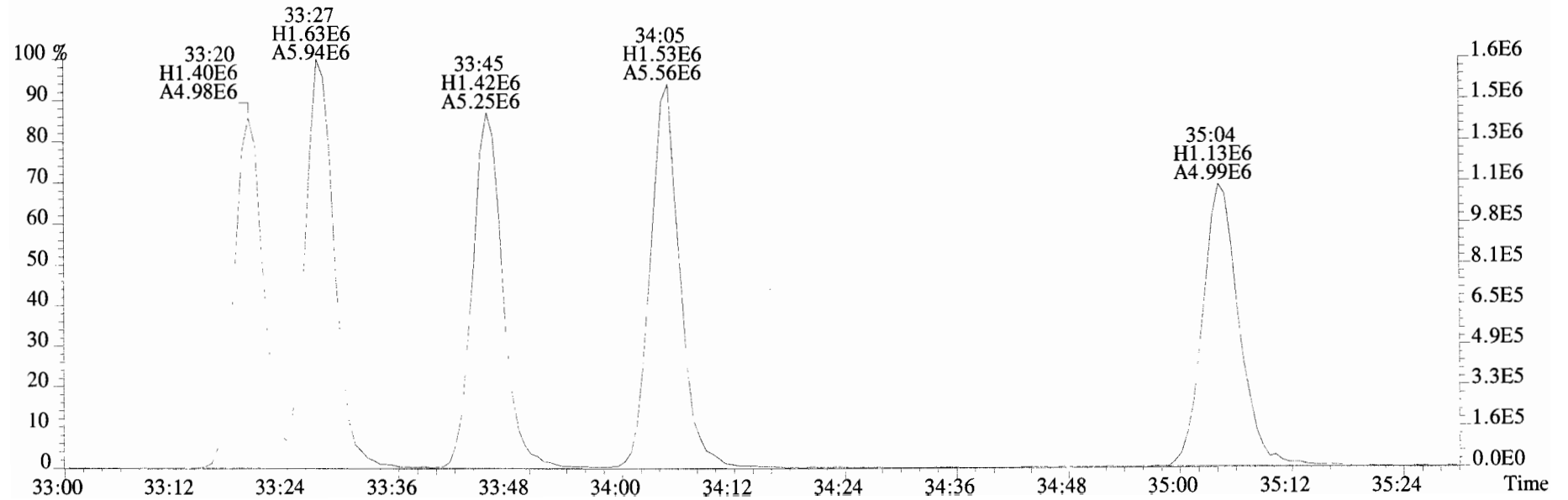
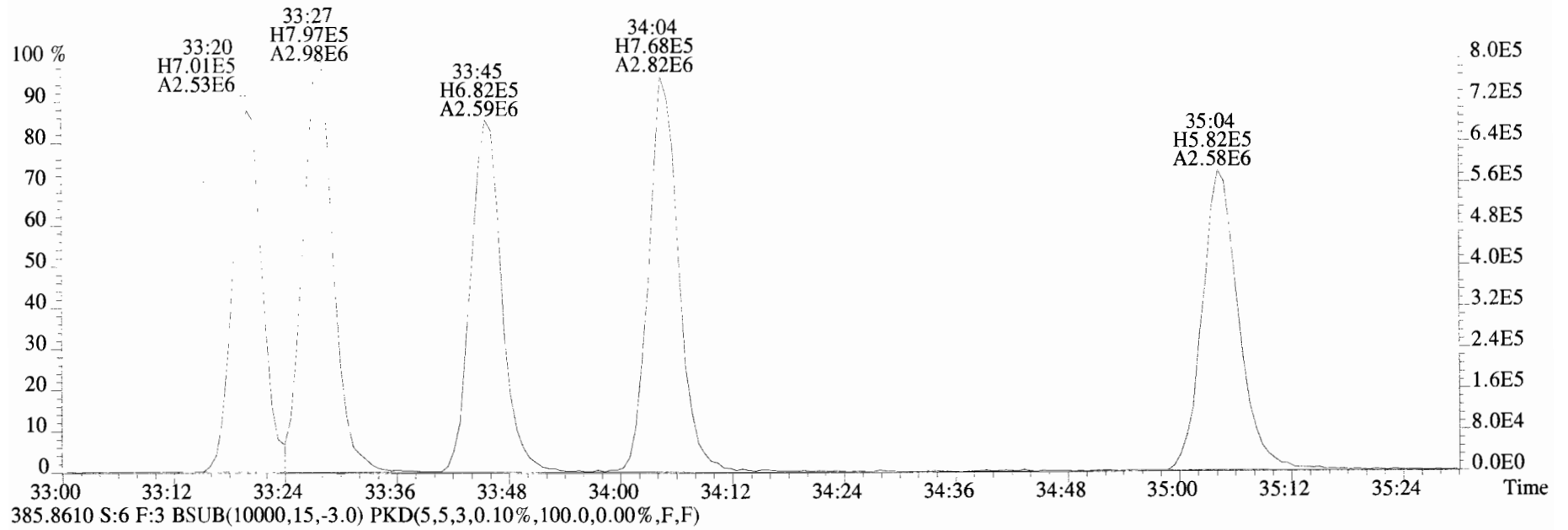




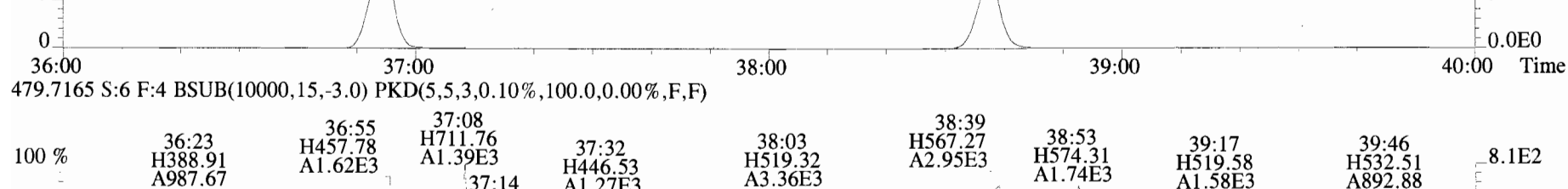
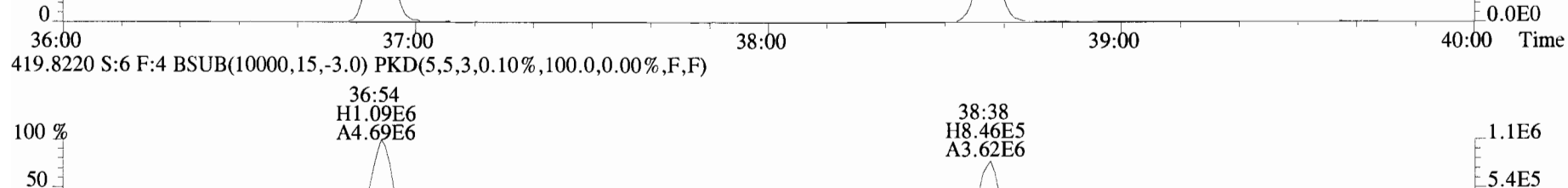
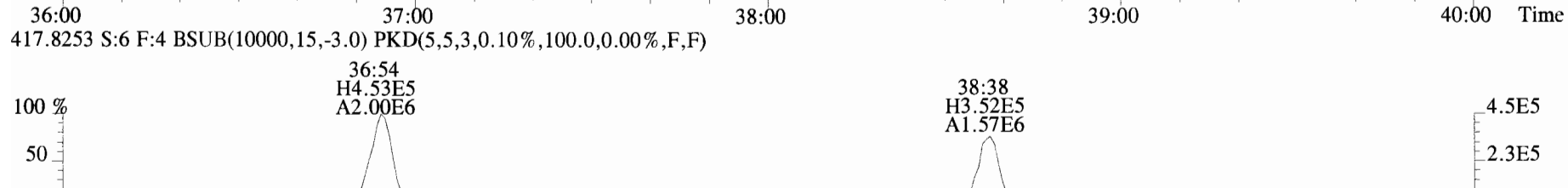
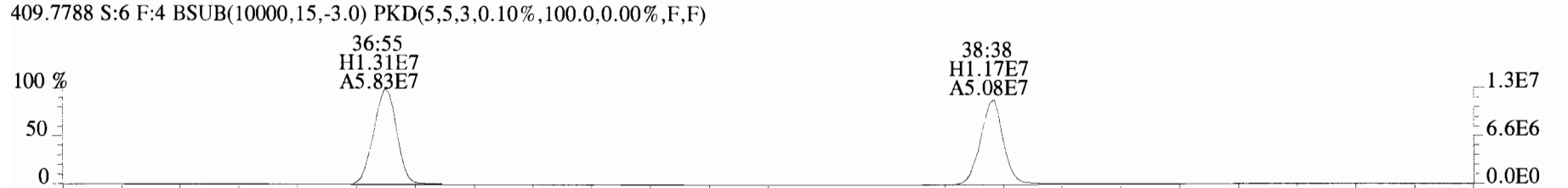
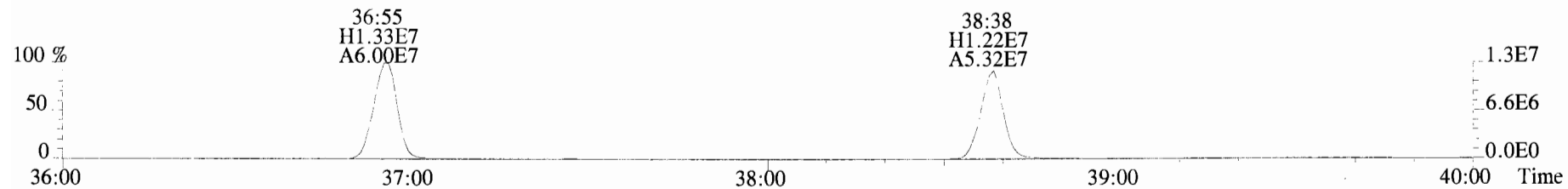
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
 373.8207 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



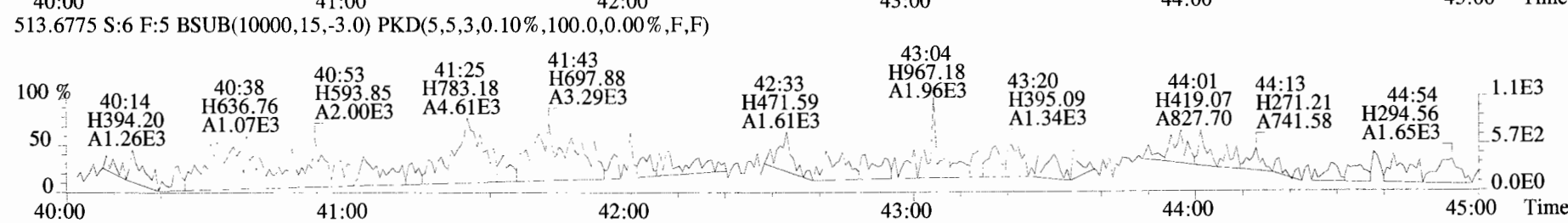
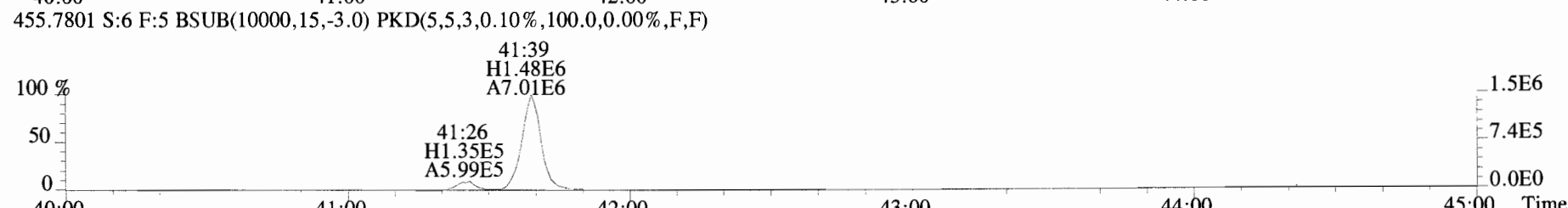
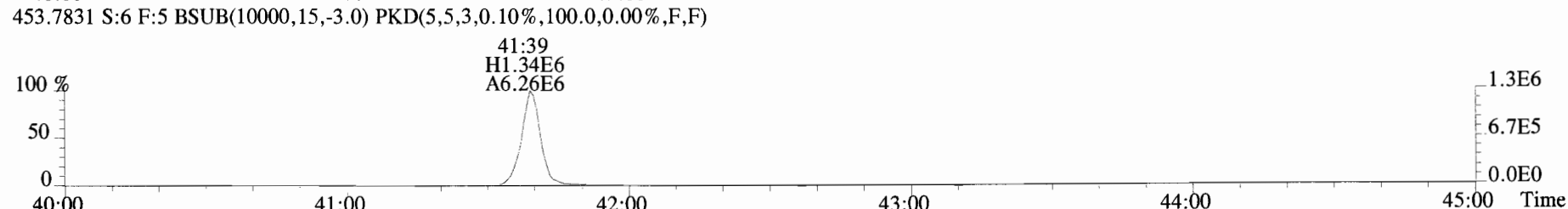
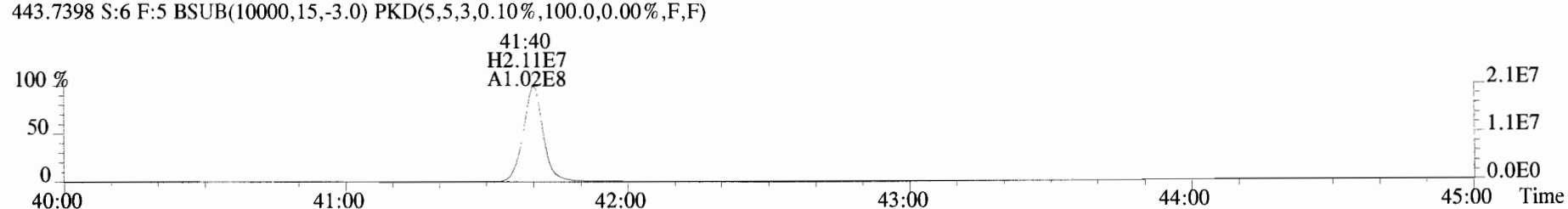
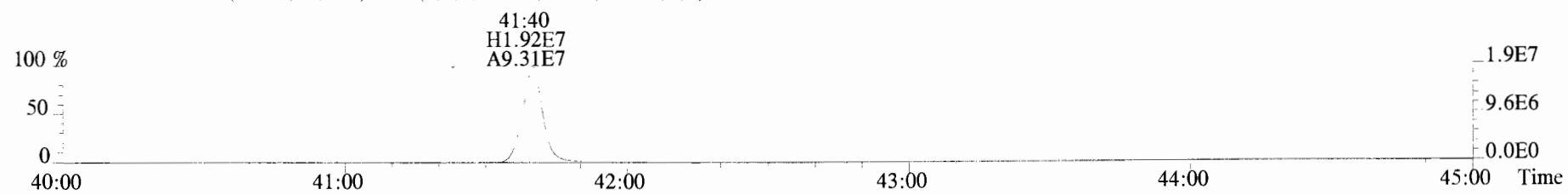
File:191009D1 #1-354 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
383.8639 S:6 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-356 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#6 File Text:Vista Analytical Laboratory VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
 407.7818 S:6 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

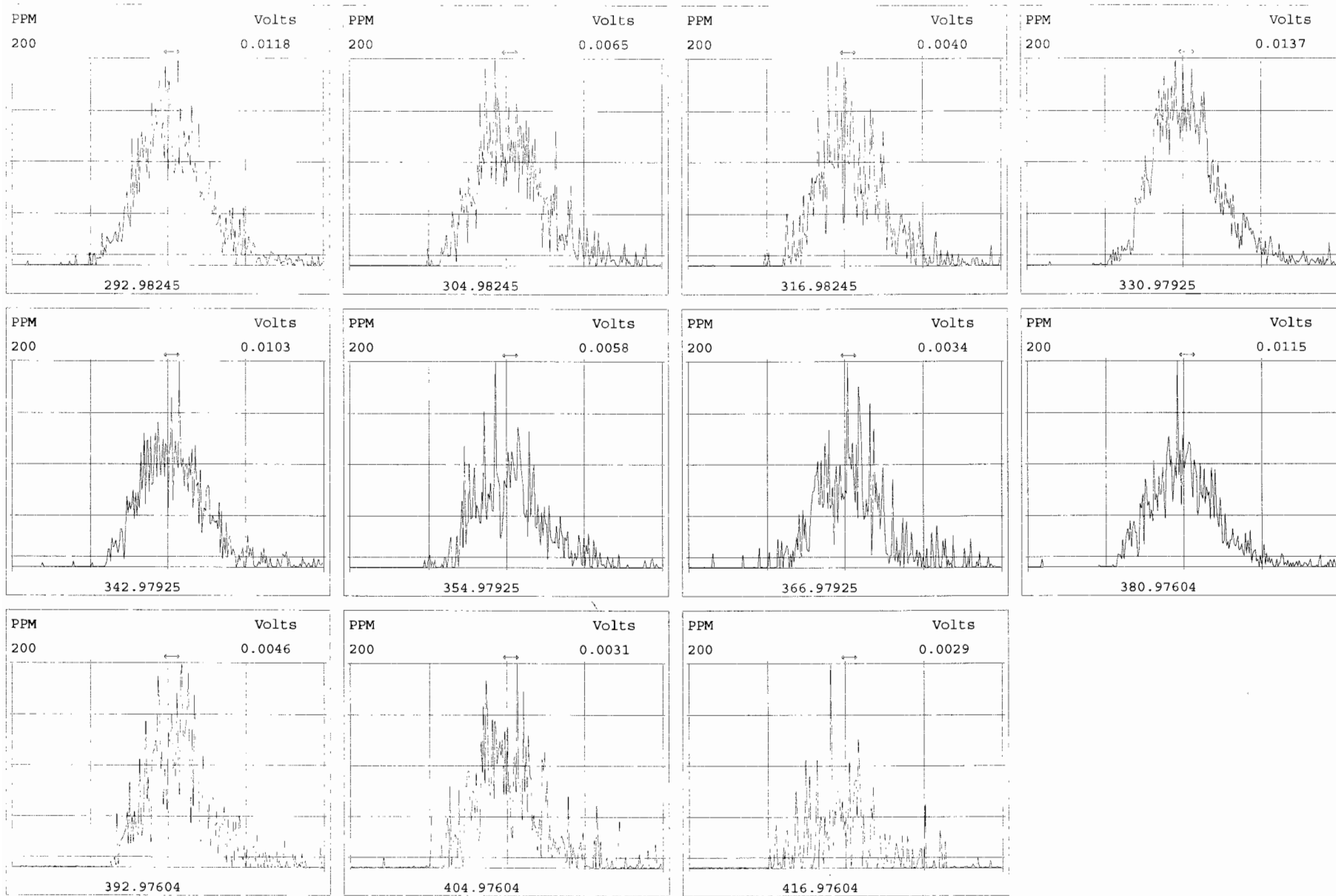


File:191009D1 #1-431 Acq: 9-OCT-2019 20:11:17 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#6 File Text:Vista Analytical Laboratory\_VG7 Text:ST191009D1-6 1613 CS5 19C2206 Exp:OCDD\_DB5  
441.7428 S:6 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



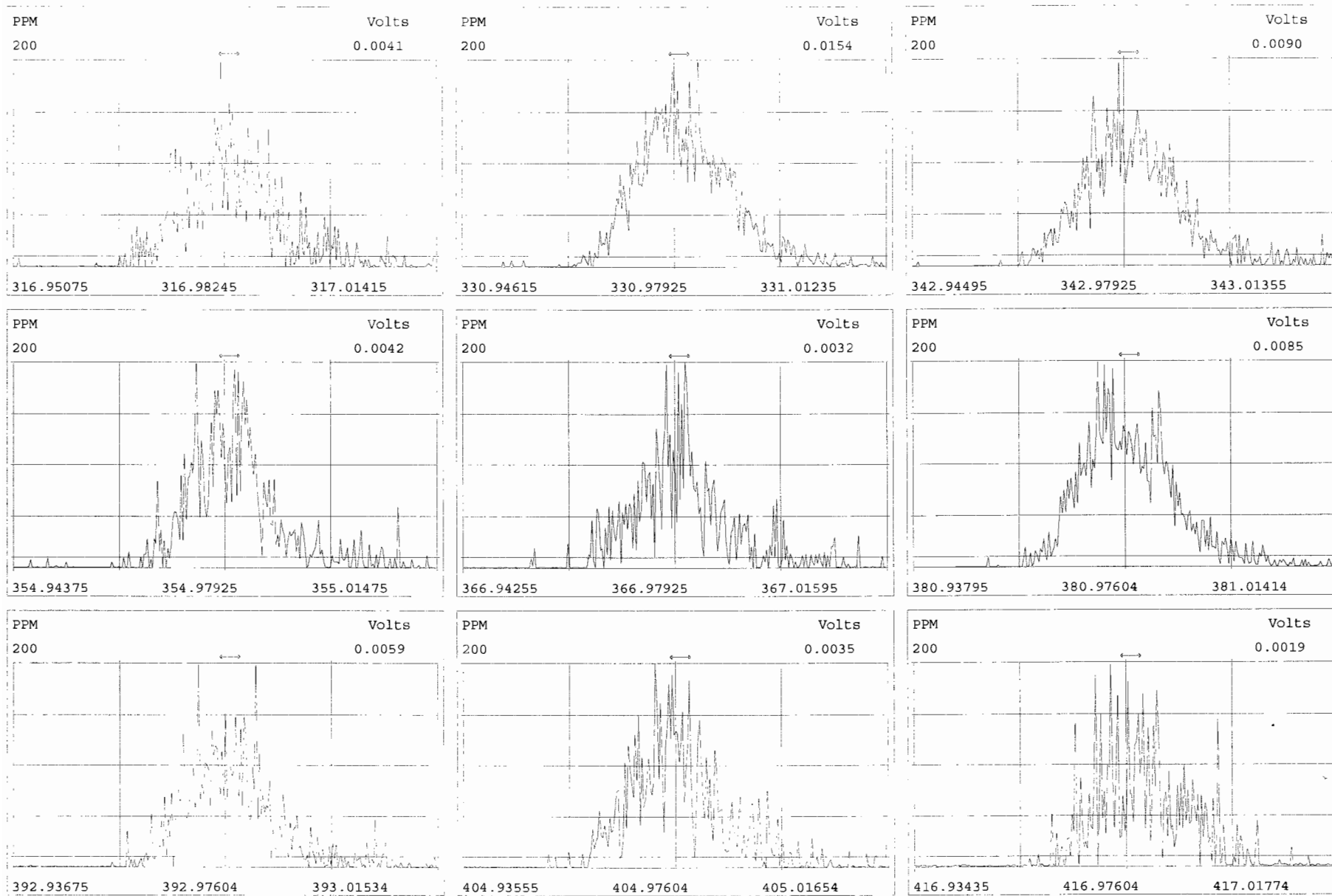
Peak Locate Examination:10-OCT-2019:06:40 File:RES\_CHECK

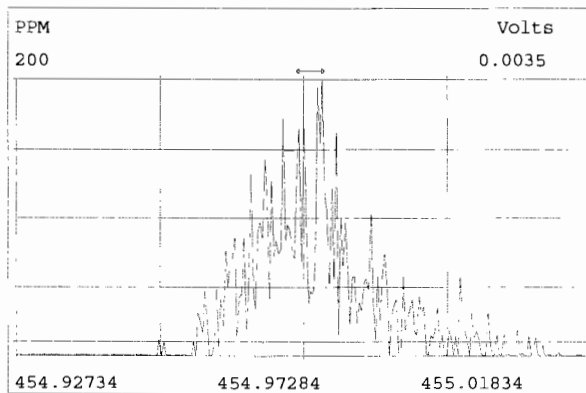
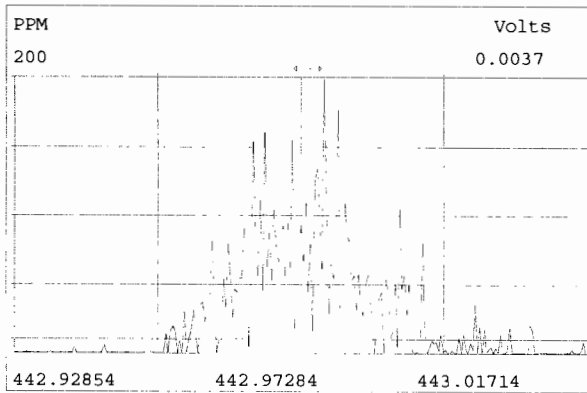
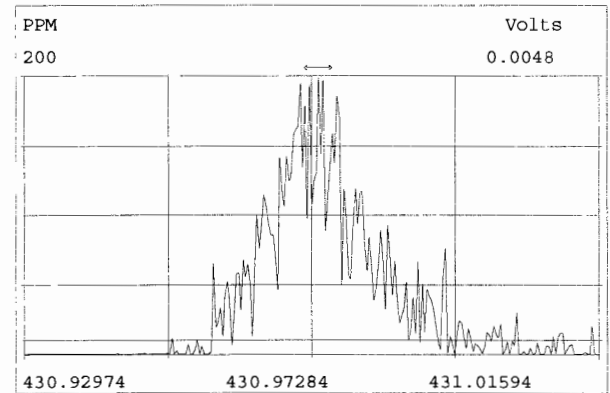
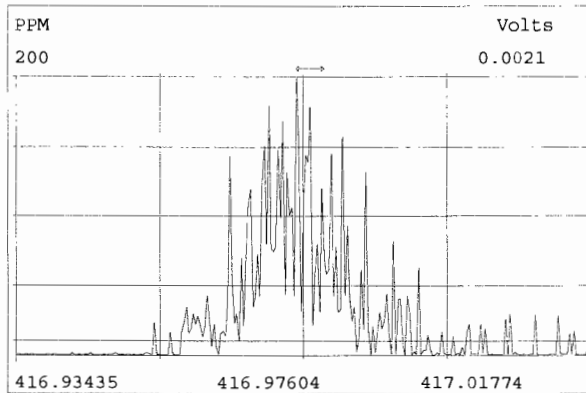
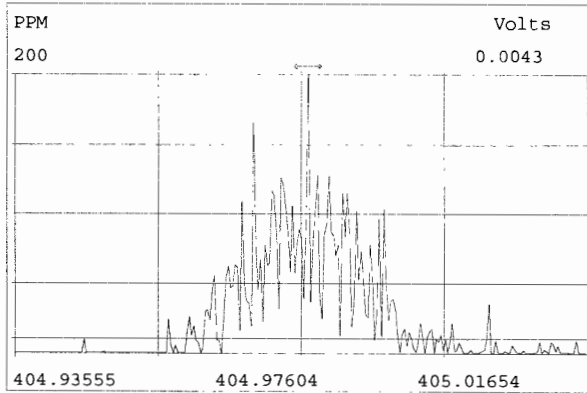
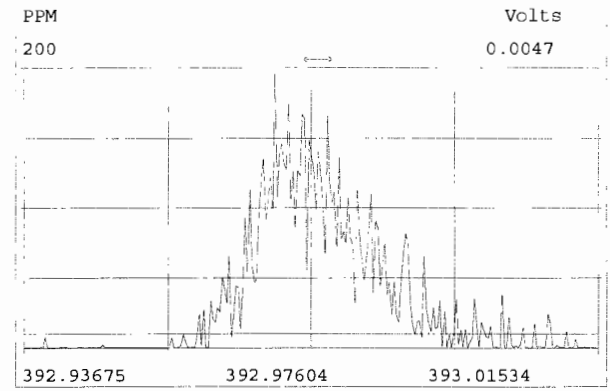
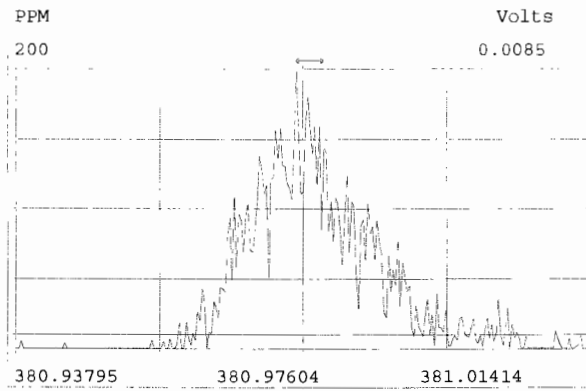
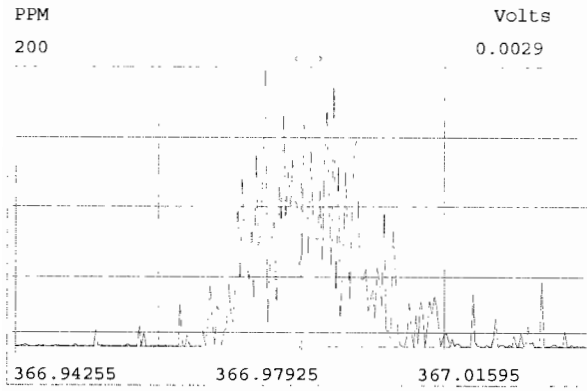
Experiment:OCDD\_DB5 Function:1 Reference:PFK

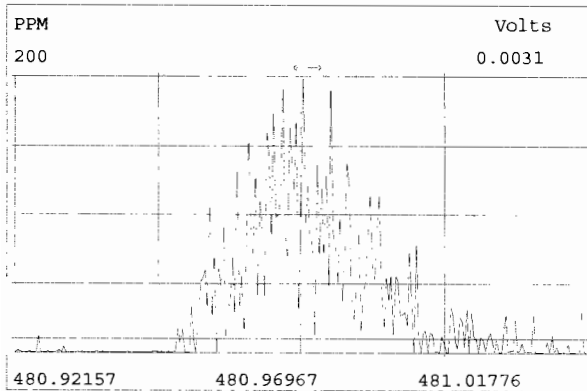
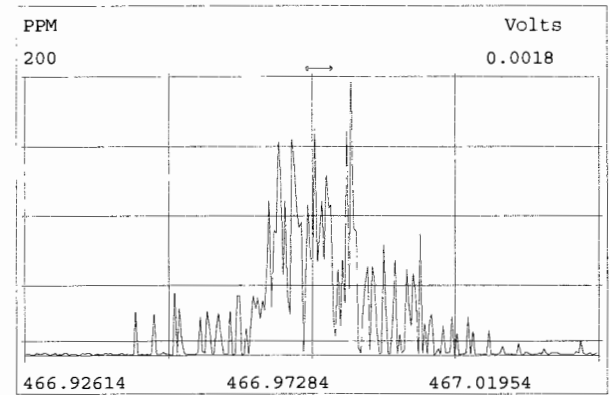
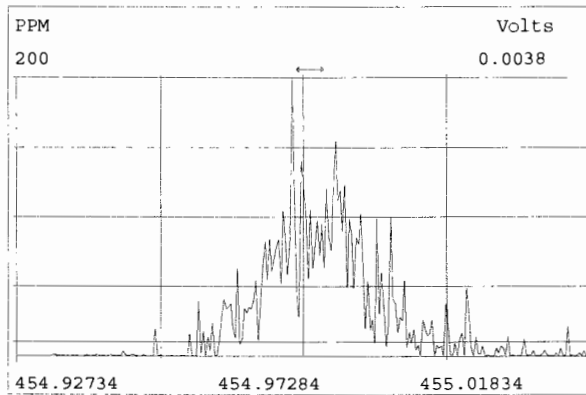
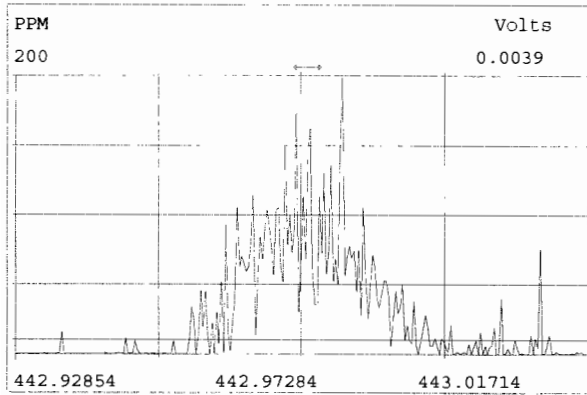
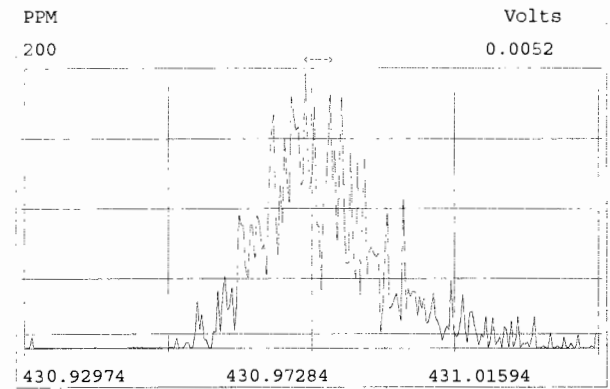
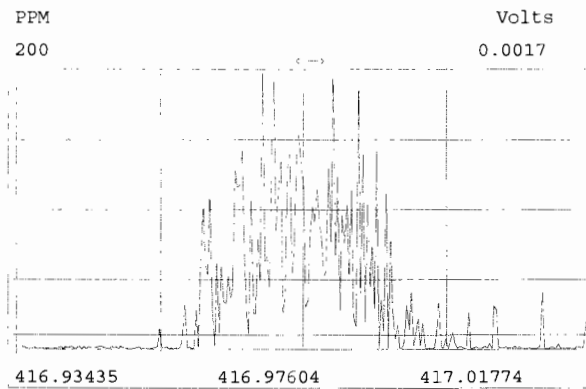
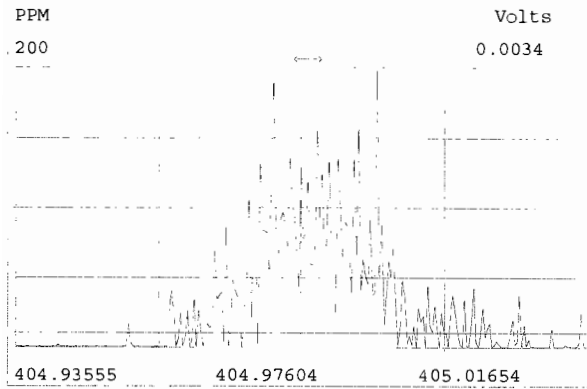


Peak Locate Examination:10-OCT-2019:06:41 File:RES\_CHECK

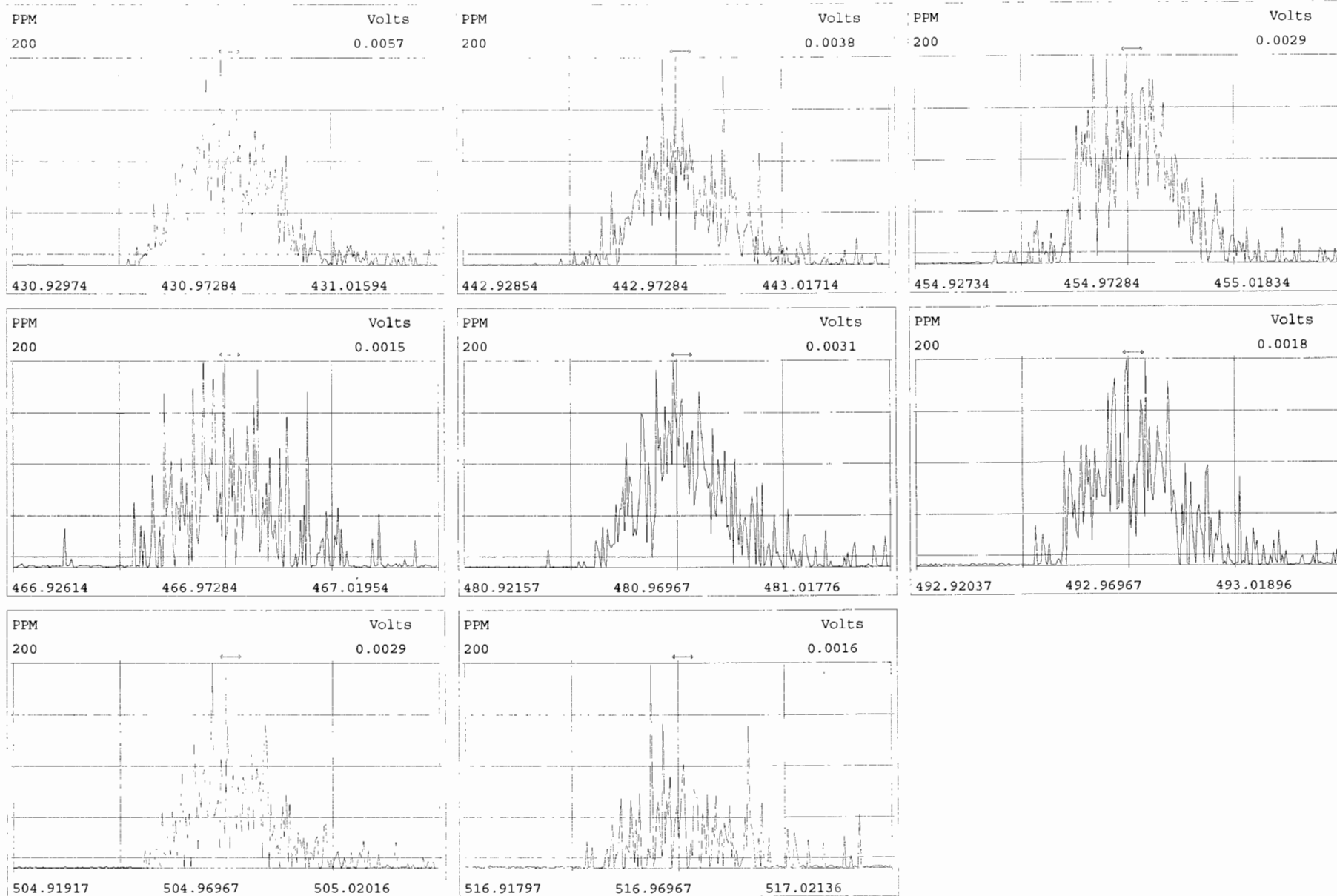
Experiment:OCDD\_DB5 Function:2 Reference:PFK











FORM 4A  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

CCAL ID: SS191009D1-1

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

NATIVE ANALYTES	M/Z'S	ION	QC	Pass	CONC.	CONC.
	FORMING	ABUND.	LIMITS		FOUND	RANGE (3)
	RATIO (1)	RATIO	(2)		FOUND	(ng/mL)
2,3,7,8-TCDD	M/M+2	0.83	0.65-0.89	y	10.2	7.8 - 12.9 8.2 - 12.3 (4)
1,2,3,7,8-PeCDD	M/M+2	0.63	0.54-0.72	y	51.3	39.0 - 65.0
1,2,3,4,7,8-HxCDD	M+2/M+4	1.31	1.05-1.43	y	48.9	39.0 - 64.0
1,2,3,6,7,8-HxCDD	M+2/M+4	1.18	1.05-1.43	y	52.4	39.0 - 64.0
1,2,3,7,8,9-HxCDD	M+2/M+4	1.17	1.05-1.43	y	50.4	41.0 - 61.0
1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.02	0.88-1.20	y	51.9	43.0 - 58.0
OCDD	M+2/M+4	0.92	0.76-1.02	y	105	79.0 - 126.0
2,3,7,8-TCDF	M/M+2	0.78	0.65-0.89	y	10.3	8.4 - 12.0 8.6 - 11.6 (4)
1,2,3,7,8-PeCDF	M+2/M+4	1.54	1.32-1.78	y	50.2	41.0 - 60.0
2,3,4,7,8-PeCDF	M+2/M+4	1.60	1.32-1.78	y	56.7	41.0 - 61.0
1,2,3,4,7,8-HxCDF	M+2/M+4	1.22	1.05-1.43	y	51.1	45.0 - 56.0
1,2,3,6,7,8-HxCDF	M+2/M+4	1.23	1.05-1.43	y	51.5	44.0 - 57.0
2,3,4,6,7,8-HxCDF	M+2/M+4	1.20	1.05-1.43	y	51.5	44.0 - 57.0
1,2,3,7,8,9-HxCDF	M+2/M+4	1.24	1.05-1.43	y	50.9	45.0 - 56.0
1,2,3,4,6,7,8-HpCDF	M+2/M+4	1.05	0.88-1.20	y	53.0	45.0 - 55.0
1,2,3,4,7,8,9-HpCDF	M+2/M+4	1.05	0.88-1.20	y	50.2	43.0 - 58.0
OCDF	M+2/M+4	0.92	0.76-1.02	y	102	63.0 - 159.0

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified in Table 9, Method 1613.

(3) Contract-required concentration range as specified in Table 6, Method 1613.

(4) Contract-required concentration range as specified in Table 6a, Method 1613, for tetras only.

Analyst: DB

Date: 10/10/19

FORM 4B  
PCDD/PCDF CALIBRATION VERIFICATION

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7

GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

LABELED COMPOUNDS	M/Z'S	ION	QC	Pass	CONC. FOUND	CONC. RANGE (ng/mL)
	FORMING RATIO (1)	ABUND. RATIO	LIMITS (2)			
13C-2,3,7,8-TCDD	M/M+2	0.72	0.65-0.89	y	100	82.0 - 121.0
13C-1,2,3,7,8-PeCDD	M/M+2	0.64	0.54-0.72	y	101	62.0 - 160.0
13C-1,2,3,4,7,8-HxCDD	M+2/M+4	1.23	1.05-1.43	y	95.9	85.0 - 117.0
13C-1,2,3,6,7,8-HxCDD	M+2/M+4	1.25	1.05-1.43	y	95.6	85.0 - 118.0
13C-1,2,3,7,8,9-HxCDD	M+2/M+4	1.26	1.05-1.43	y	94.3	85.0 - 118.0
13C-1,2,3,4,6,7,8-HpCDD	M+2/M+4	1.06	0.88-1.20	y	91.7	72.0 - 138.0
13C-OCDD	M/M+2	0.92	0.76-1.02	y	190	96.0 - 415.0
13C-2,3,7,8-TCDF	M+2/M+4	0.78	0.65-0.89	y	97.2	71.0 - 140.0
13C-1,2,3,7,8-PeCDF	M+2/M+4	1.62	1.32-1.78	y	97.4	76.0 - 130.0
13C-2,3,4,7,8-PeCDF	M+2/M+4	1.59	1.32-1.78	y	96.6	77.0 - 130.0
13C-1,2,3,4,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	102	76.0 - 131.0
13C-1,2,3,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	101	70.0 - 143.0
13C-2,3,4,6,7,8-HxCDF	M/M+2	0.51	0.43-0.59	y	97.1	73.0 - 137.0
13C-1,2,3,7,8,9-HxCDF	M/M+2	0.51	0.43-0.59	y	99.0	74.0 - 135.0
13C-1,2,3,4,6,7,8-HpCDF	M+2/M+4	0.43	0.37-0.51	y	96.6	78.0 - 129.0
13C-1,2,3,4,7,8,9-HpCDF	M+2/M+4	0.44	0.37-0.51	y	102	77.0 - 129.0
13C-OCDF	M+2/M+4	0.88	0.76-1.02	y	197	96.0 - 415.0
CLEANUP STANDARD (3)						
37Cl-2,3,7,8-TCDD					9.08	7.9 - 12.7

(1) See Table 8, Method 1613, for m/z specifications.

(2) Ion Abundance Ratio Control Limits as specified

(3) No ion abundance ratio; report concentration found.

Analyst: DB

Date: 10/10/19

FORM 6A  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

Compounds Using 13C-1234-TCDD as RT Internal Standard

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
2,3,7,8-TCDD	13C-2,3,7,8-TCDD	1.001	0.999-1.002
1,2,3,7,8-PeCDD	13C-1,2,3,7,8-PeCDD	1.000	0.999-1.002
2,3,7,8-TCDF	13C-2,3,7,8-TCDF	1.001	0.999-1.003
1,2,3,7,8-PeCDF	13C-1,2,3,7,8-PeCDF	1.000	0.999-1.002
2,3,4,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	1.000	0.999-1.002
LABELED COMPOUNDS			
13C-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.976-1.043
13C-1,2,3,7,8-PeCDD	13C-1,2,3,4-TCDD	1.189	1.000-1.567
13C-2,3,7,8-TCDF	13C-1,2,3,4-TCDD	0.994	0.923-1.103
13C-1,2,3,7,8-PeCDF	13C-1,2,3,4-TCDD	1.145	1.000-1.425
13C-2,3,4,7,8-PeCDF	13C-1,2,3,4-TCDD	1.179	1.011-1.526
37Cl-2,3,7,8-TCDD	13C-1,2,3,4-TCDD	1.022	0.989-1.052

Analyst: DB

Date: 10/10/19

FORM 6B  
PCDD/PCDF RELATIVE RETENTION TIMES

Lab Name: Vista Analytical Laboratory Episode No.:

Contract No.: SAS No.:

Initial Calibration Date: 10-9-19

Instrument ID: VG-7 GC Column ID: ZB-5MS

VER Data Filename: 191009D1 S#8 Analysis Date: 9-OCT-19 Time: 21:46:34

NATIVE ANALYTES	RETENTION TIME	RRT	RRT
	REFERENCE		QC LIMITS (1)
1,2,3,4,7,8-HxCDF	13C-1,2,3,4,7,8-HxCDF	1.000	0.999-1.001
1,2,3,6,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	1.000	0.997-1.005
2,3,4,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	1.000	0.999-1.001
1,2,3,7,8,9-HxCDF	13C-1,2,3,7,8,9-HxCDF	1.001	0.999-1.001
1,2,3,4,7,8-HxCDD	13C-1,2,3,4,7,8-HxCDD	1.001	0.999-1.001
1,2,3,6,7,8-HxCDD	13C-1,2,3,6,7,8-HxCDD	1.000	0.998-1.004
1,2,3,7,8,9-HxCDD	13C-1,2,3,7,8,9-HxCDD	1.001	0.998-1.004
1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,7,8-HpCDF	1.000	0.999-1.001
1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,7,8-HpCDD	1.000	0.999-1.001
1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,7,8,9-HpCDF	1.000	0.999-1.001
OCDD	13C-OCDD	1.000	0.999-1.001
OCDF	13C-OCDF	1.000	0.999-1.001

LABELED COMPOUNDS

13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.987	0.975-1.001
13C-1,2,3,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	0.991	0.979-1.005
13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.010	1.001-1.020
13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,9-HxCDF	1.040	1.002-1.072
13C-1,2,3,4,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.014	1.002-1.026
13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.018	1.007-1.029
13C-1,2,3,7,8,9-HxCDD	13C-1,2,3,4,6,9-HxCDF	1.027	1.014-1.038
13C-1,2,3,4,6,7,8-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.093	1.069-1.111
13C-1,2,3,4,7,8,9-HpCDF	13C-1,2,3,4,6,9-HxCDF	1.145	1.098-1.192
13C-1,2,3,4,6,7,8-HpCDD	13C-1,2,3,4,6,9-HxCDF	1.127	1.117-1.141
13C-OCDD	13C-1,2,3,4,6,9-HxCDF	1.227	1.085-1.365
13C-OCDF	13C-1,2,3,4,6,9-HxCDF	1.235	1.091-1.371

Analyst: DB

Date: 10/10/19

Client ID: 1613 SSS 19C2207  
Lab ID: SS191009D1-1

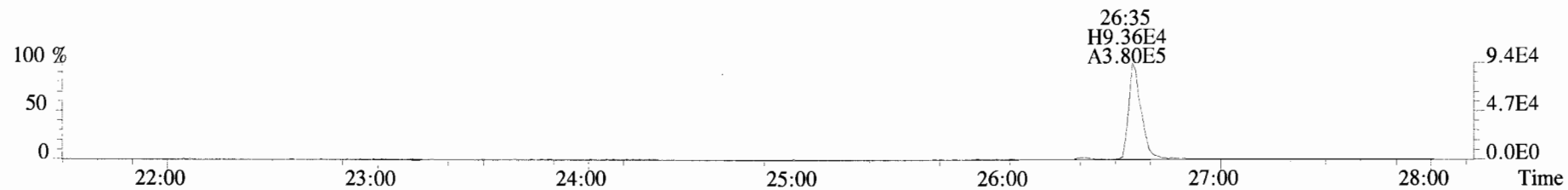
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GC Column ID: ZB-5MS ICal: 1613VG7-10-9-19 wt/vol: 1.000

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EndCAL: NA

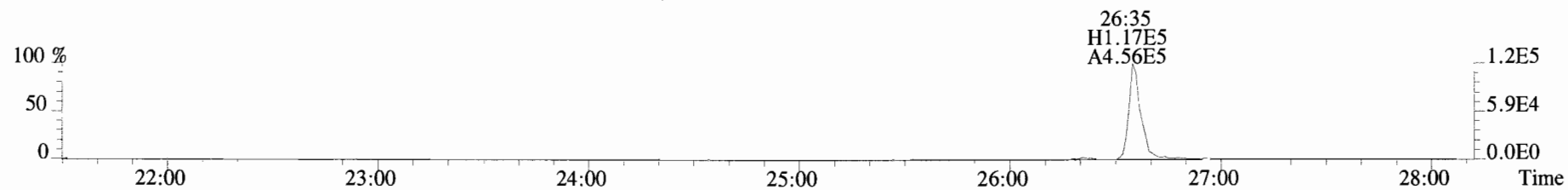
Name	Resp	RA	RRF	RT	Conc	Qual	noise	Fac	DL	Name	Conc	EMPC	Qual	noise	DL
2,3,7,8-TCDD	8.36e+05	0.83 y	0.91	26:36	10.234		* 2.5		*	Total Tetra-Dioxins	10.4	11.4		*	*
1,2,3,7,8-PeCDD	3.38e+06	0.63 y	0.90	30:57	51.323		* 2.5		*	Total Penta-Dioxins	51.4	51.7		*	*
1,2,3,4,7,8-HxCDD	2.55e+06	1.31 y	1.10	34:18	48.909		* 2.5		*	Total Hexa-Dioxins	153	153		*	*
1,2,3,6,7,8-HxCDD	3.09e+06	1.18 y	0.94	34:24	52.378		* 2.5		*	Total Hepta-Dioxins	53.5	54.4		*	*
1,2,3,7,8,9-HxCDD	2.83e+06	1.17 y	0.96	34:44	50.434		* 2.5		*	Total Tetra-Furans	10.7	11.4		*	*
1,2,3,4,6,7,8-HpCDD	2.34e+06	1.02 y	0.98	38:07	51.915		* 2.5		*	Total Penta-Furans	110.38	111.73		*	*
OCDD	4.27e+06	0.92 y	0.96	41:30	105.37		* 2.5		*	Total Hexa-Furans	205	207		*	*
										Total Hepta-Furans	104	106		*	*
2,3,7,8-TCDF	1.24e+06	0.78 y	0.95	25:53	10.342		* 2.5		*						
1,2,3,7,8-PeCDF	5.03e+06	1.54 y	0.96	29:48	50.200		* 2.5		*						
2,3,4,7,8-PeCDF	5.90e+06	1.60 y	1.01	30:42	56.719		* 2.5		*						
1,2,3,4,7,8-HxCDF	3.94e+06	1.22 y	1.18	33:23	51.086		* 2.5		*						
1,2,3,6,7,8-HxCDF	4.44e+06	1.23 y	1.07	33:31	51.491		* 2.5		*						
2,3,4,6,7,8-HxCDF	4.08e+06	1.20 y	1.11	34:08	51.474		* 2.5		*						
1,2,3,7,8,9-HxCDF	3.40e+06	1.24 y	1.06	35:10	50.903		* 2.5		*						
1,2,3,4,6,7,8-HpCDF	3.36e+06	1.05 y	1.13	36:58	53.010		* 2.5		*						
1,2,3,4,7,8,9-HpCDF	2.94e+06	1.05 y	1.28	38:42	50.216		* 2.5		*						
OCDF	5.04e+06	0.92 y	0.95	41:45	102.23		* 2.5		*						
IS	13C-2,3,7,8-TCDD	9.02e+06	0.72 y	1.10	26:35	100.49				Rec	Qual				
IS	13C-1,2,3,7,8-PeCDD	7.29e+06	0.64 y	0.88	30:56	100.87				100					
IS	13C-1,2,3,4,7,8-HxCDD	4.73e+06	1.23 y	0.64	34:16	95.948				101					
IS	13C-1,2,3,6,7,8-HxCDD	6.28e+06	1.25 y	0.86	34:24	95.558				95.9					
IS	13C-1,2,3,7,8,9-HxCDD	5.85e+06	1.26 y	0.81	34:43	94.306				95.6					
IS	13C-1,2,3,4,6,7,8-HpCDD	4.61e+06	1.06 y	0.65	38:06	91.680				94.3					
IS	13C-OCDD	8.45e+06	0.92 y	0.58	41:29	189.68				91.7					
IS	13C-2,3,7,8-TCDF	1.26e+07	0.78 y	1.03	25:52	97.199				94.8					
IS	13C-1,2,3,7,8-PeCDF	1.04e+07	1.62 y	0.85	29:48	97.425				97.2					
IS	13C-2,3,4,7,8-PeCDF	1.03e+07	1.59 y	0.85	30:41	96.649				97.4					
IS	13C-1,2,3,4,7,8-HxCDF	6.55e+06	0.51 y	0.83	33:22	102.43				96.6					
IS	13C-1,2,3,6,7,8-HxCDF	8.06e+06	0.51 y	1.03	33:30	101.42				102					
IS	13C-2,3,4,6,7,8-HxCDF	7.11e+06	0.51 y	0.95	34:08	97.073				101					
IS	13C-1,2,3,7,8,9-HxCDF	6.30e+06	0.51 y	0.83	35:09	98.999				97.1					
IS	13C-1,2,3,4,6,7,8-HpCDF	5.62e+06	0.43 y	0.76	36:57	96.588				99.0					
IS	13C-1,2,3,4,7,8,9-HpCDF	4.58e+06	0.44 y	0.58	38:42	102.46				96.6					
IS	13C-OCDF	1.04e+07	0.88 y	0.69	41:44	196.65				102					
C/Up	37Cl-2,3,7,8-TCDD	8.91e+05		1.20	26:36	9.0817				98.3					
RS/RT	13C-1,2,3,4-TCDD	8.20e+06	0.76 y	1.00	26:01	100.00									
RS	13C-1,2,3,4-TCDF	1.25e+07	0.82 y	1.00	24:42	100.00									
RS/RT	13C-1,2,3,4,6,9-HxCDF	7.68e+06	0.50 y	1.00	33:48	100.00									

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

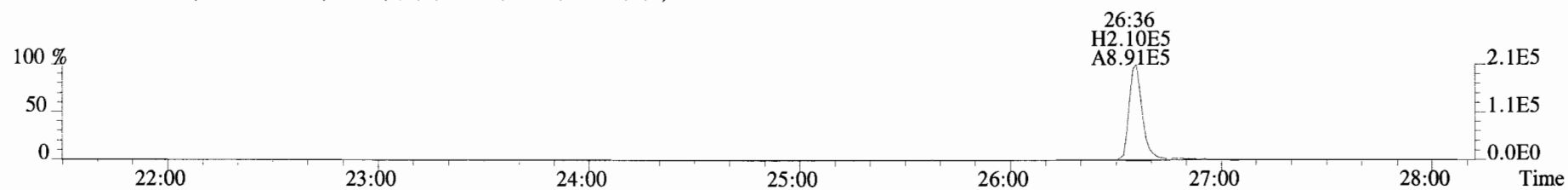
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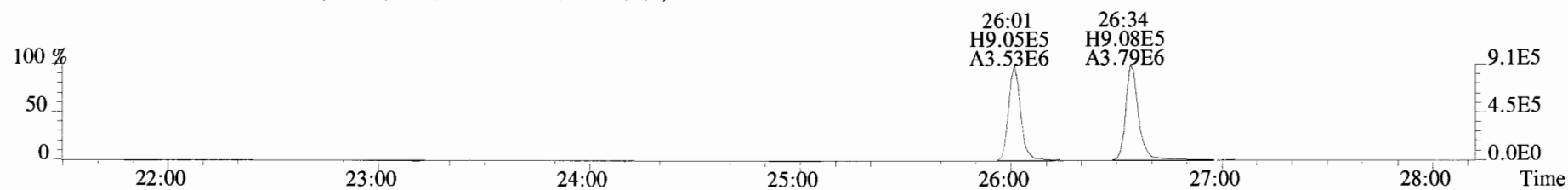
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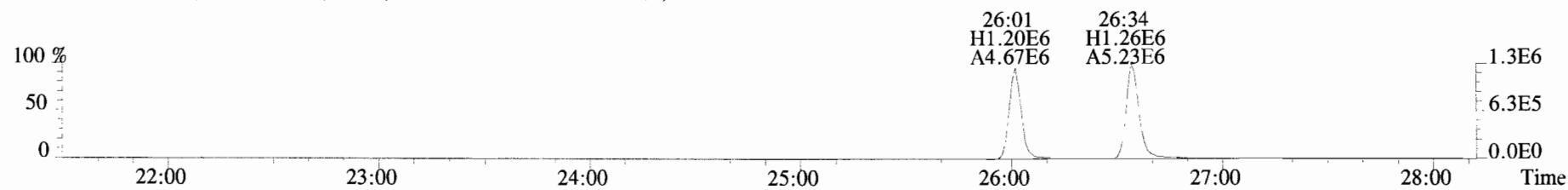
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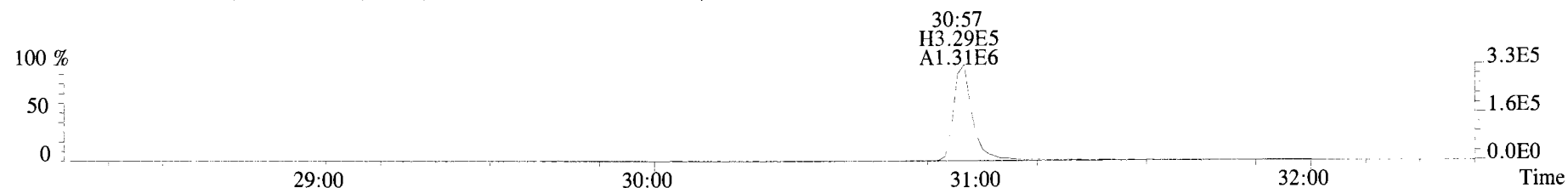
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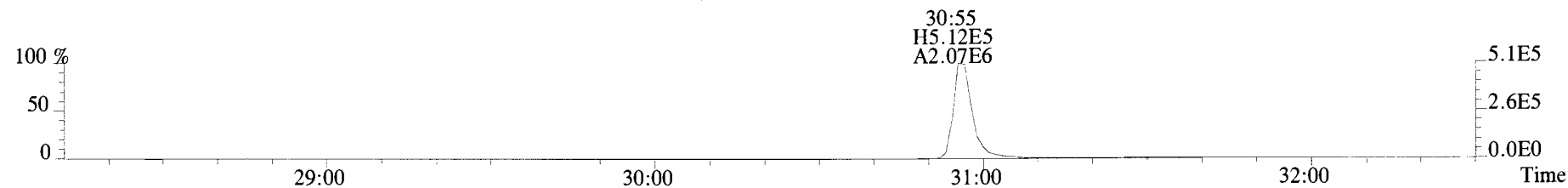
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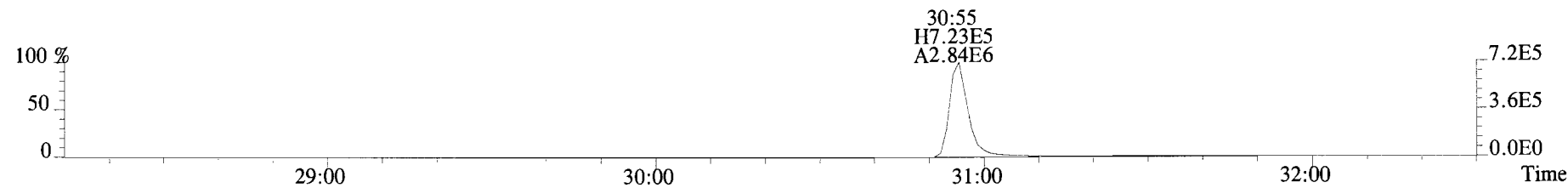
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Sample#8 File Text: Vista Analytical Laboratory VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
353.8576 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



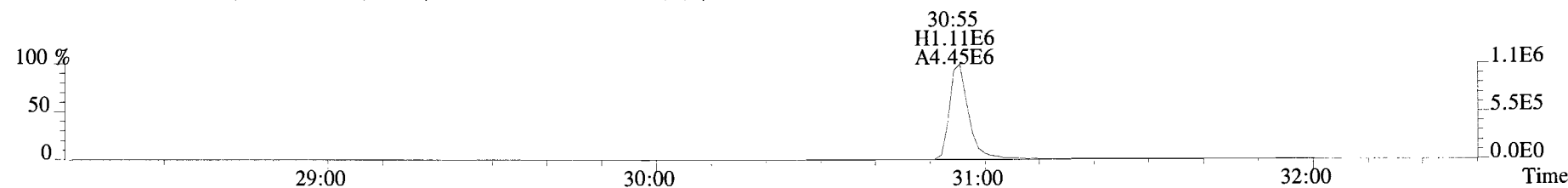
355.8546 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



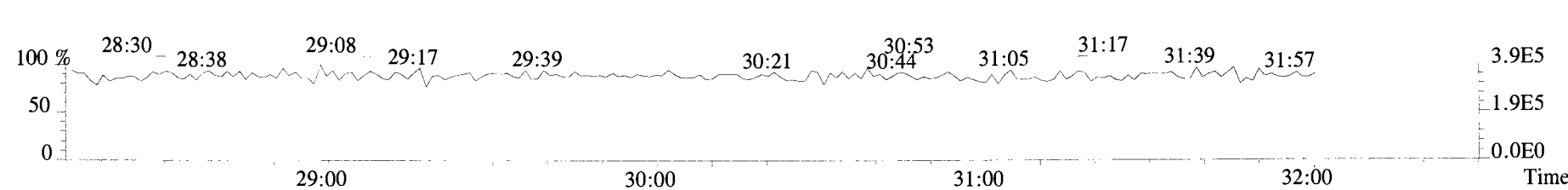
365.8978 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

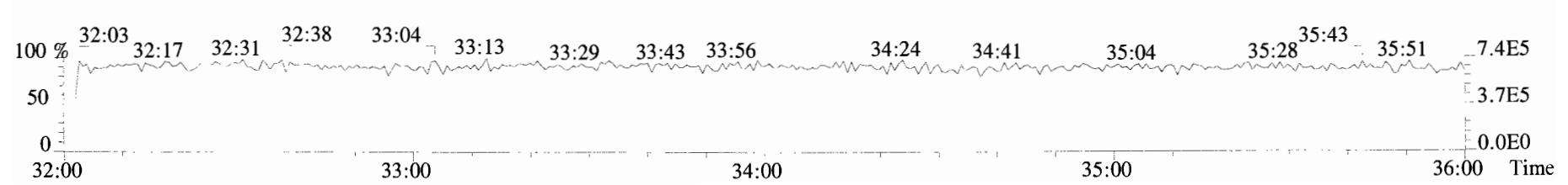
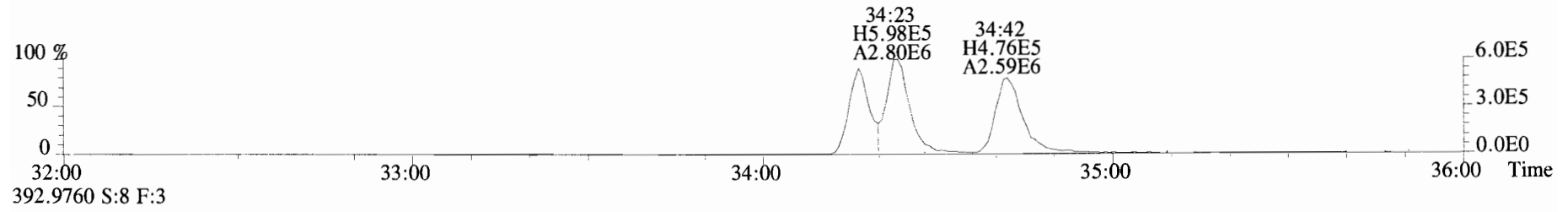
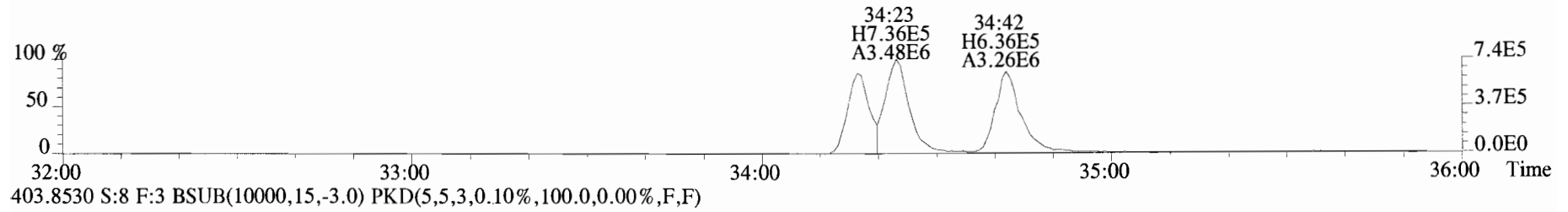
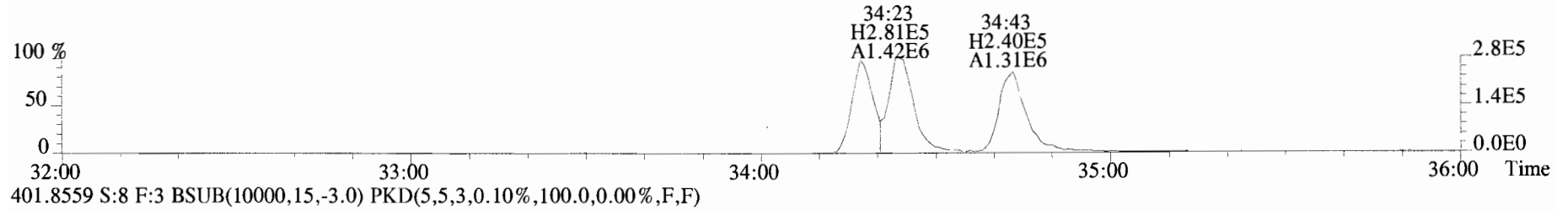
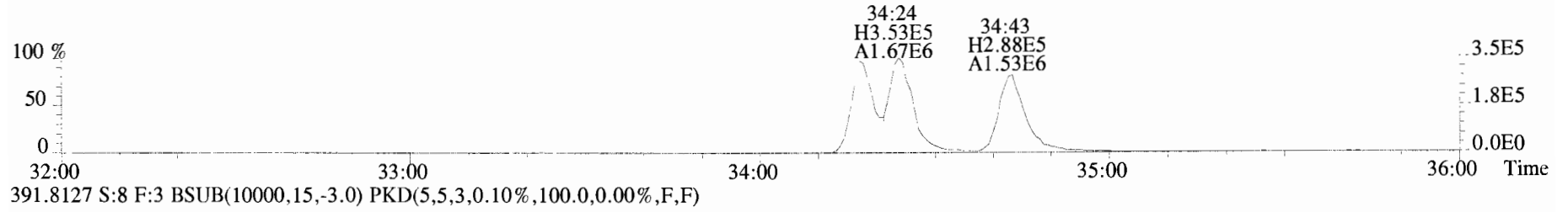


366.9792 S:8 F:2

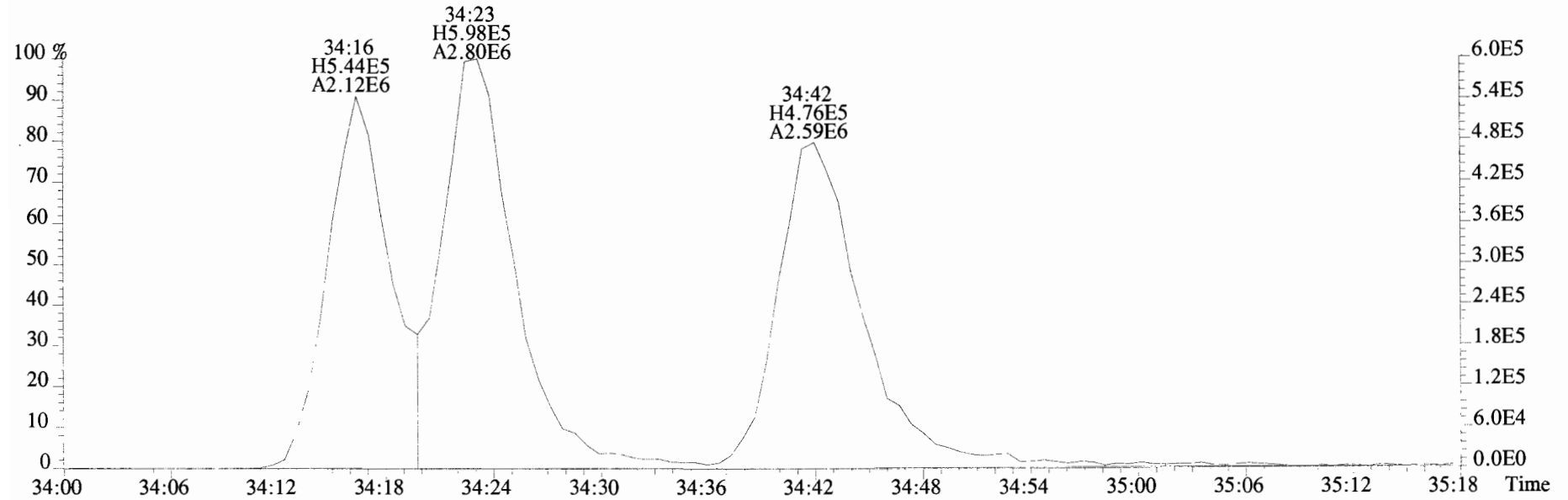
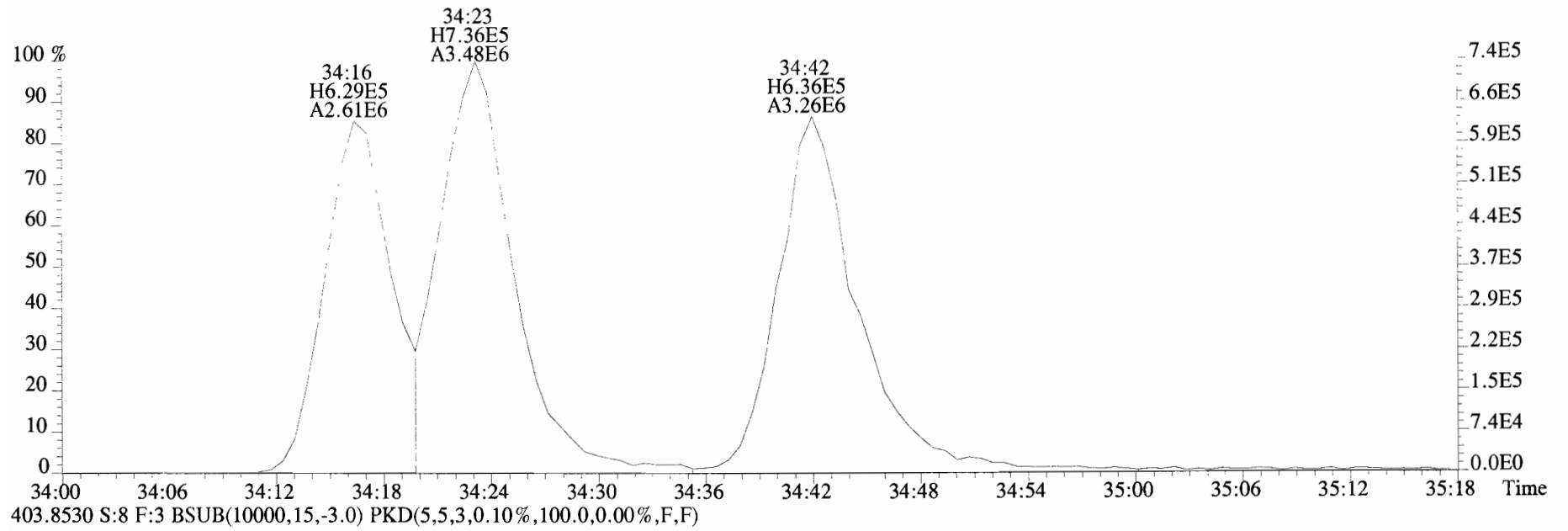




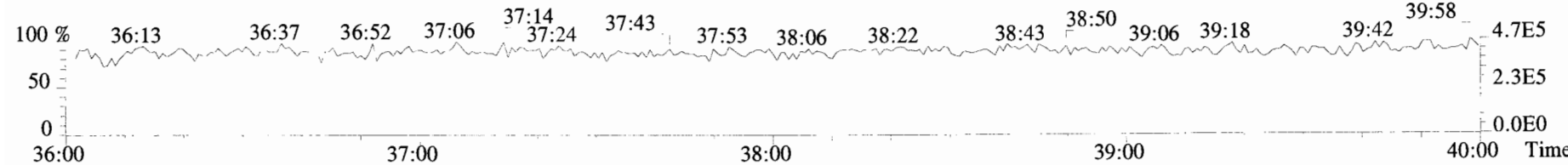
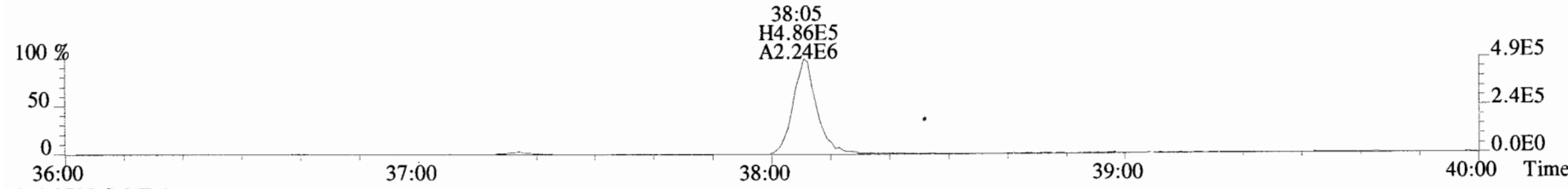
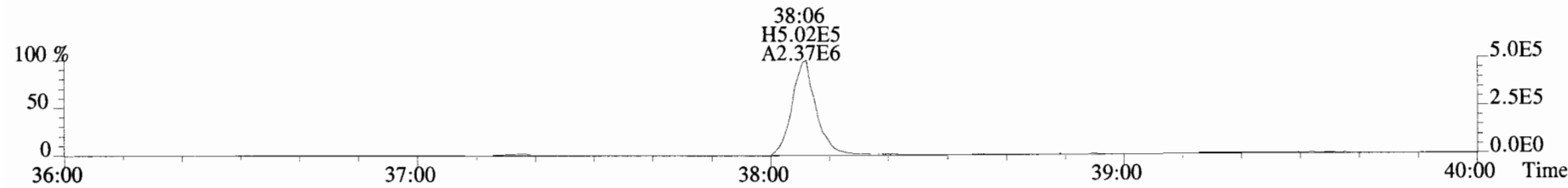
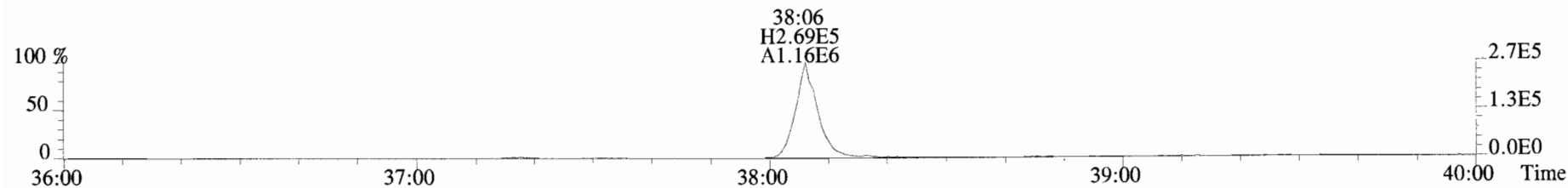
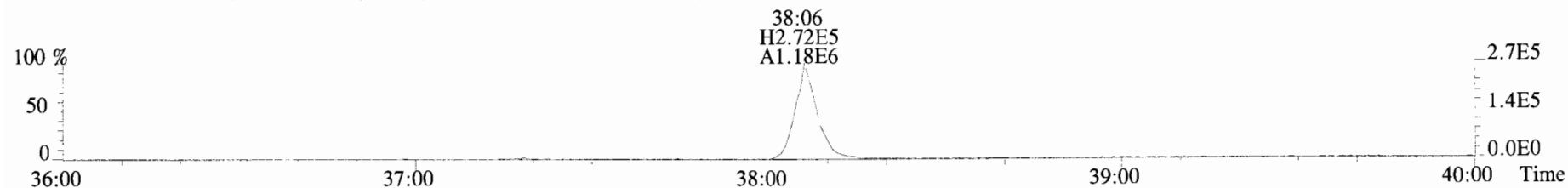
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
389.8156 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



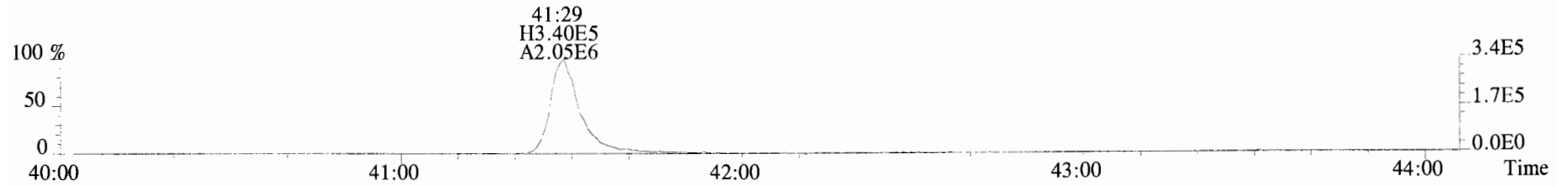
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista Analytical Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
401.8559 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



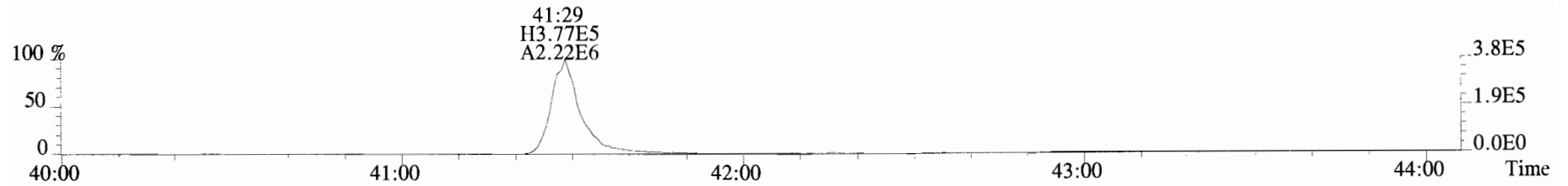
File:191009D1 #1-356 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista Analytical Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
423.7767 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



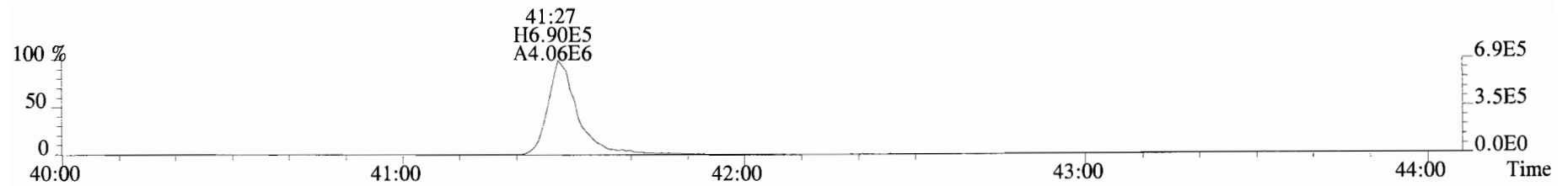
File:191009D1 #1-431 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
457.7377 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



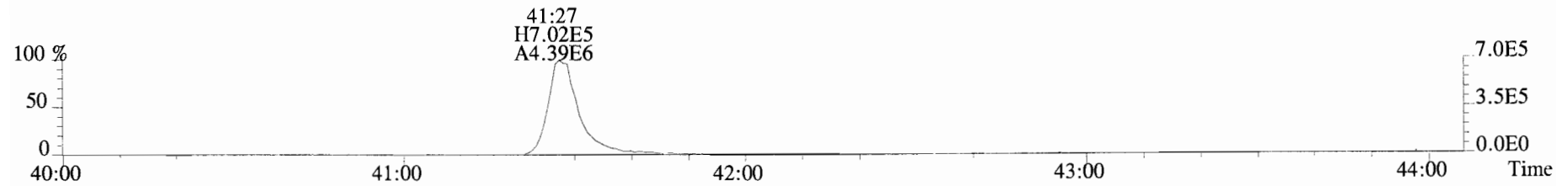
459.7348 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



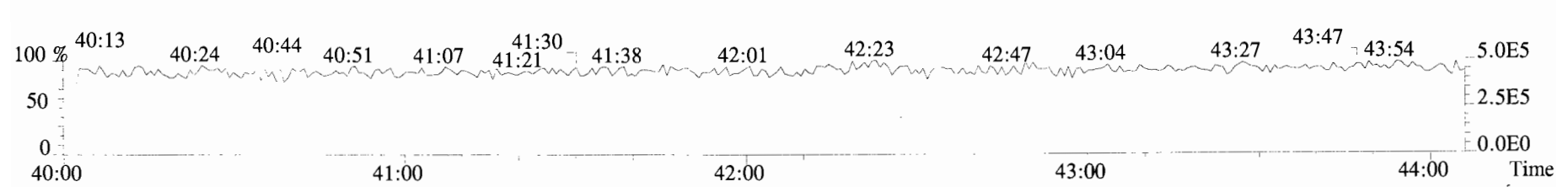
469.7780 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



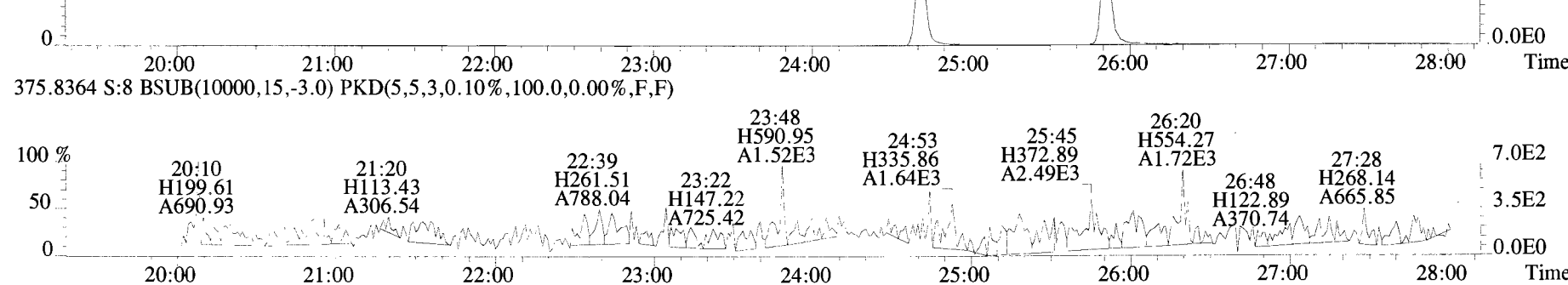
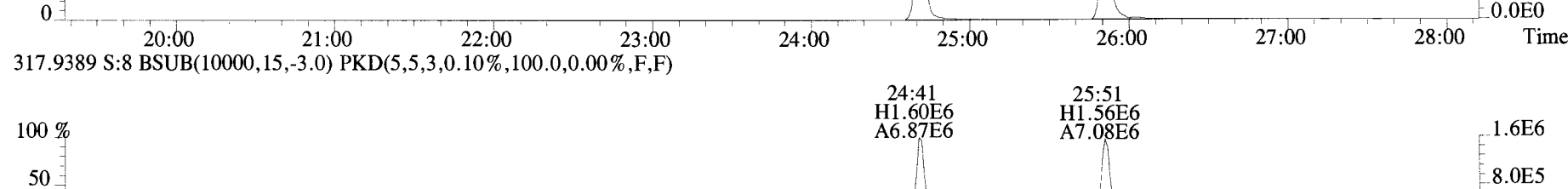
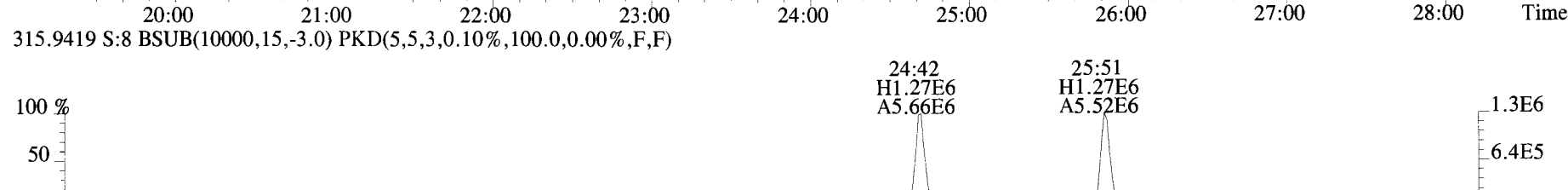
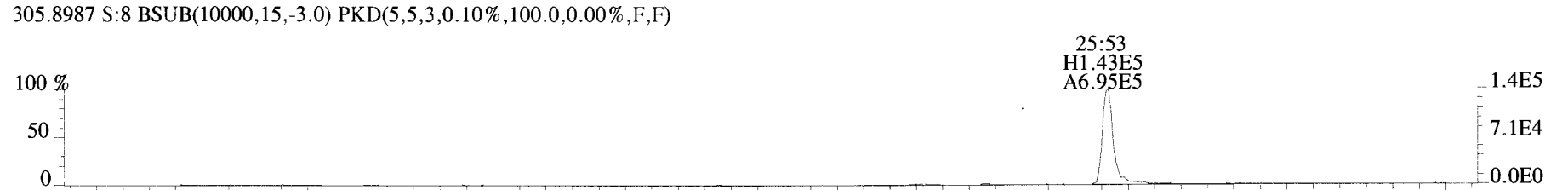
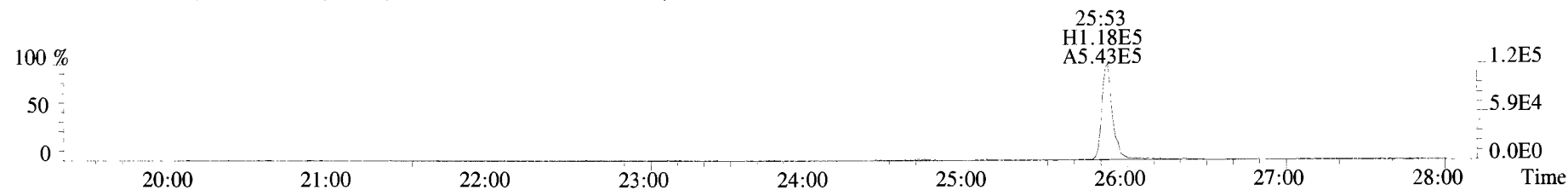
471.7750 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



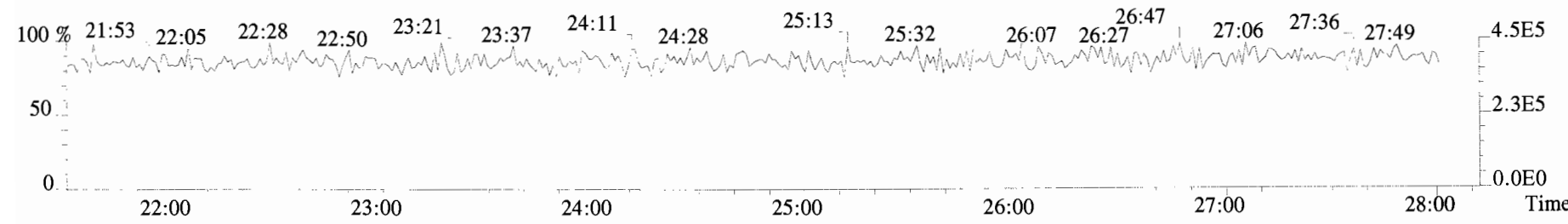
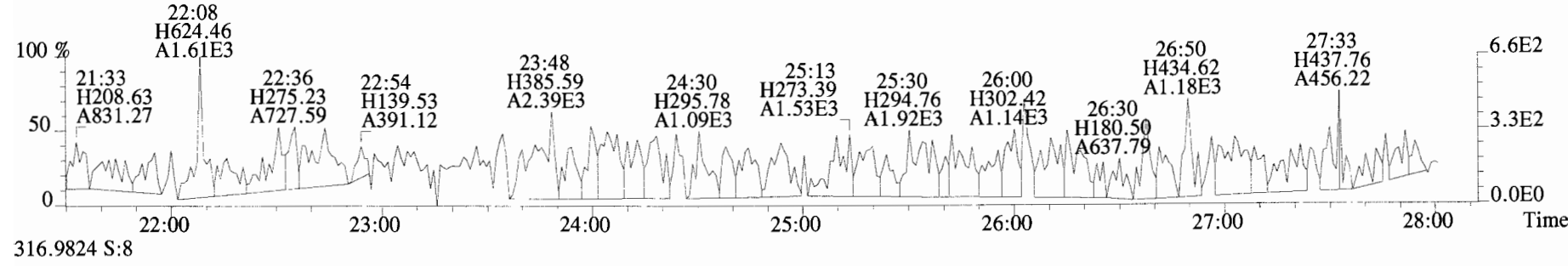
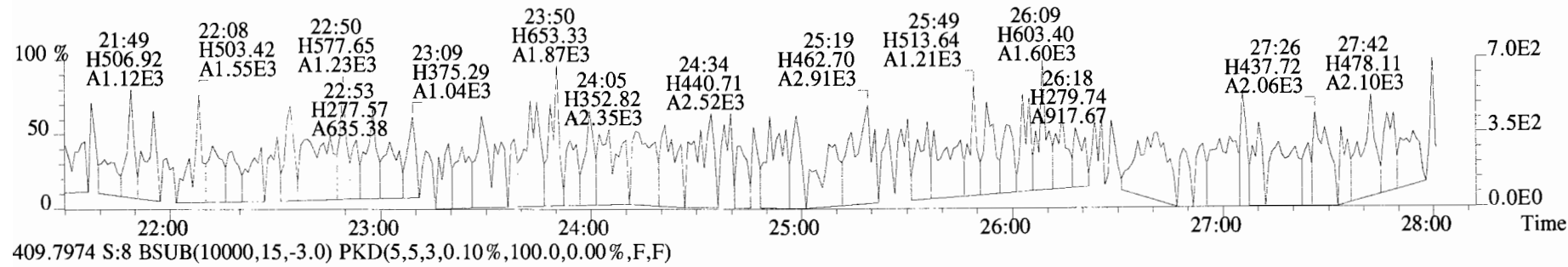
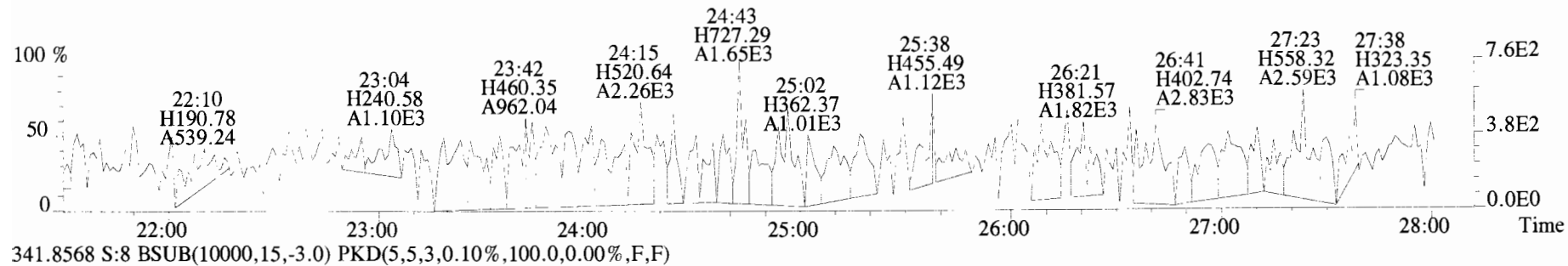
454.9728 S:8 F:5



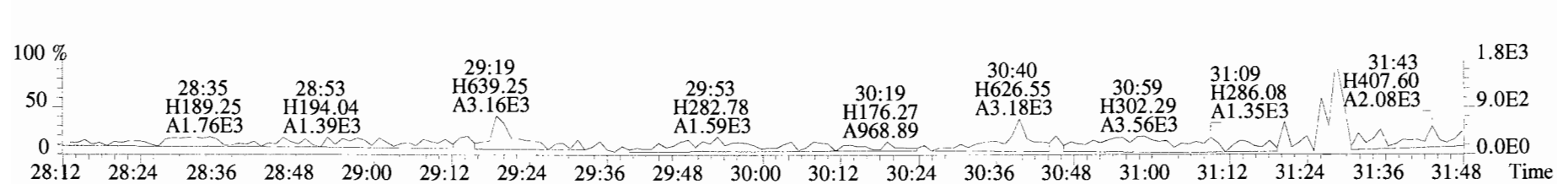
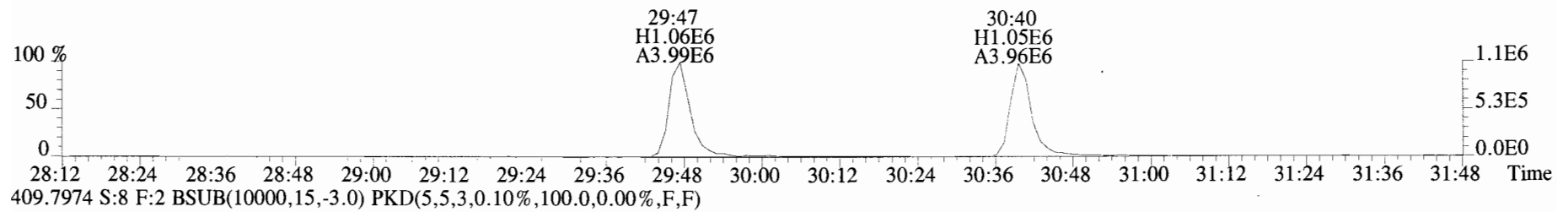
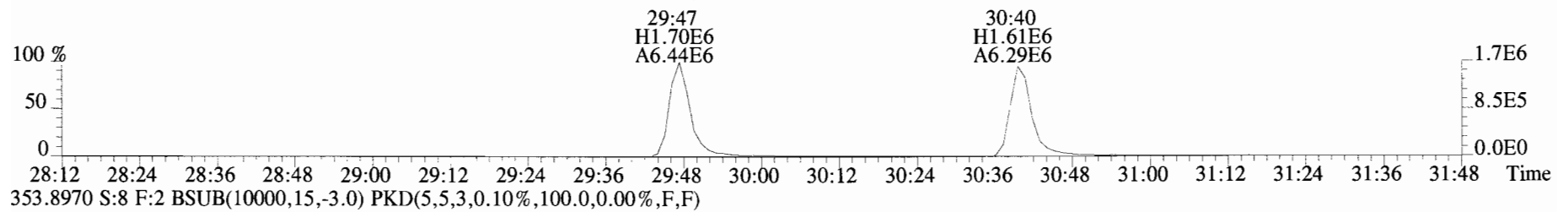
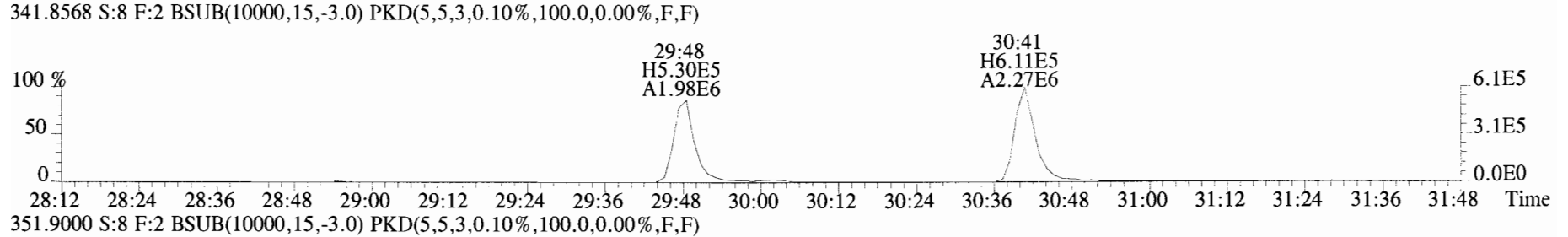
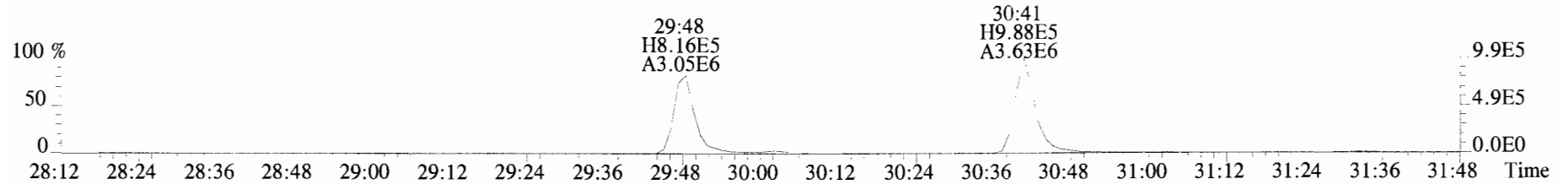
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#8 File Text:Vista Analytical Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
 303.9016 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



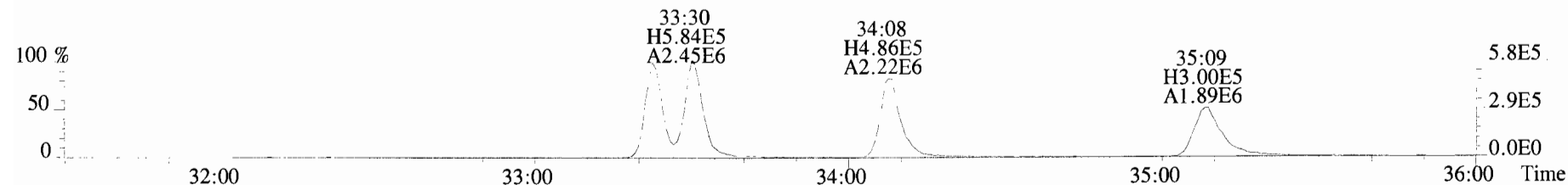
File:191009D1 #1-514 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#8 File Text:Vista Analytical Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
 339.8597 S:8 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



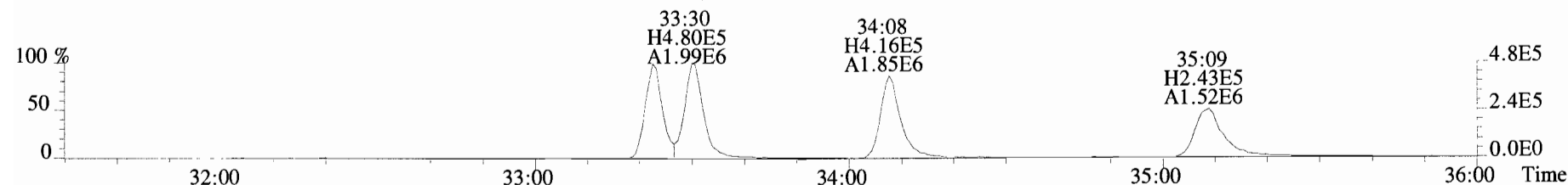
File:191009D1 #1-210 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
339.8597 S:8 F:2 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



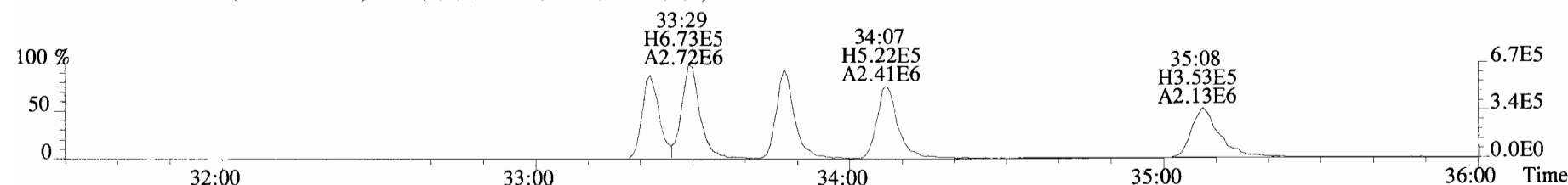
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
 Sample#8 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
 373.8207 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



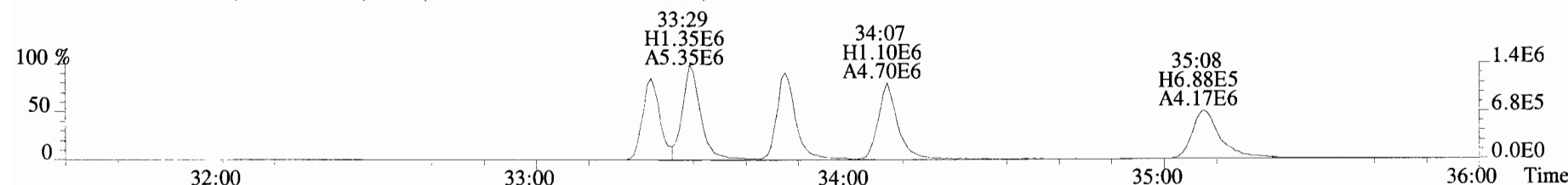
375.8178 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



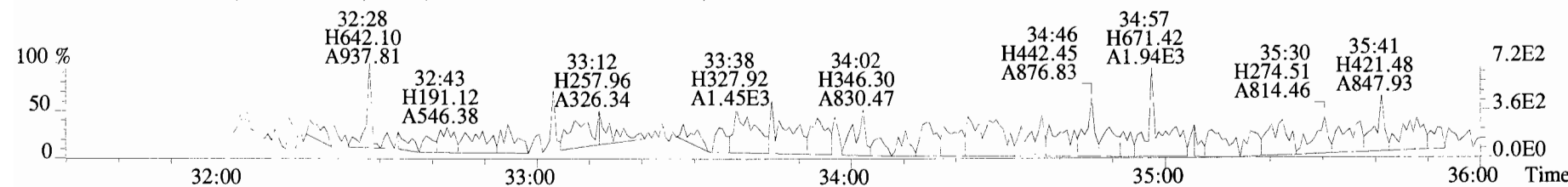
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



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

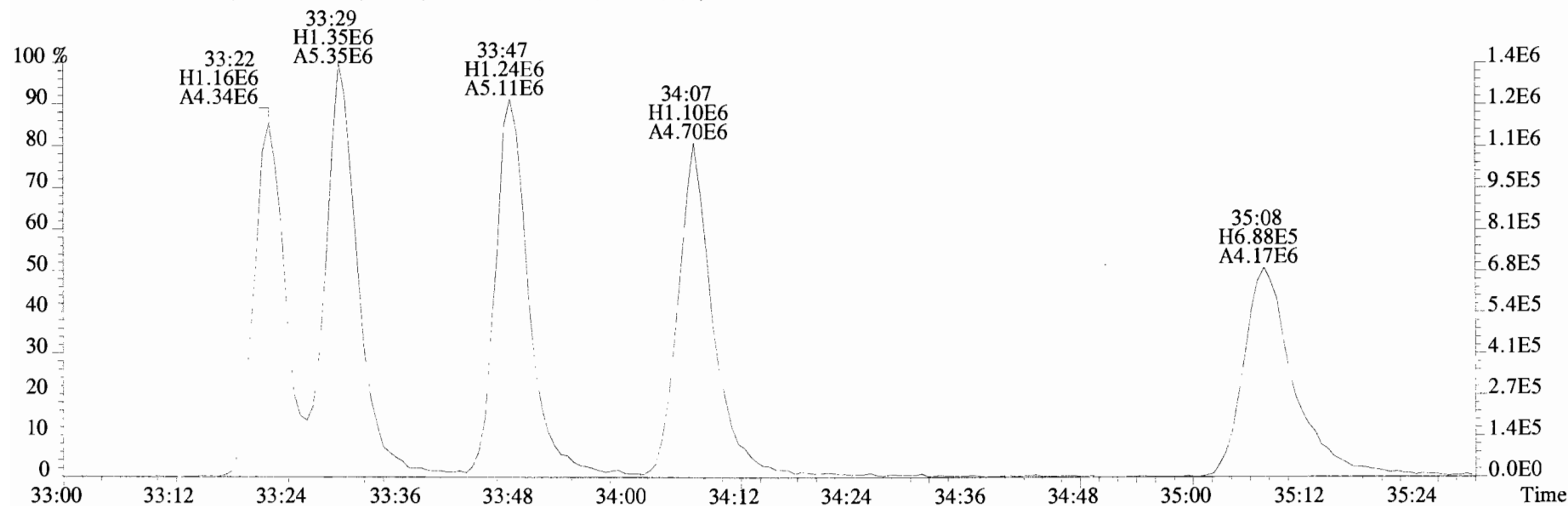
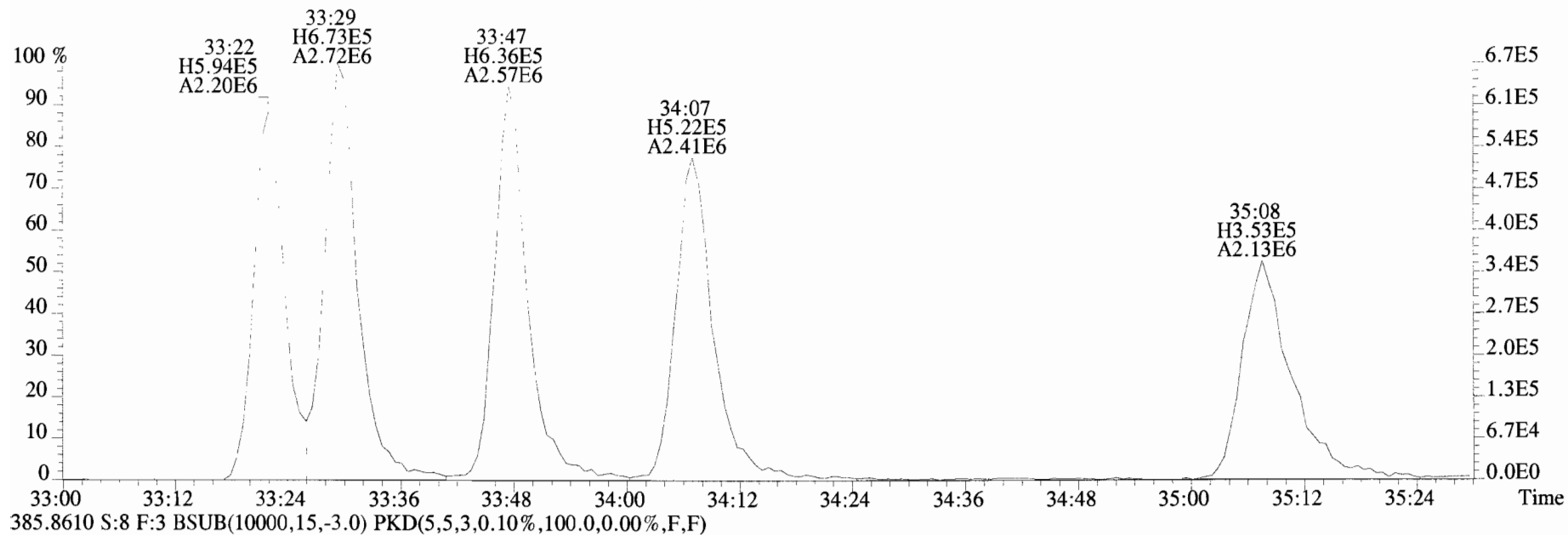


445.7555 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)

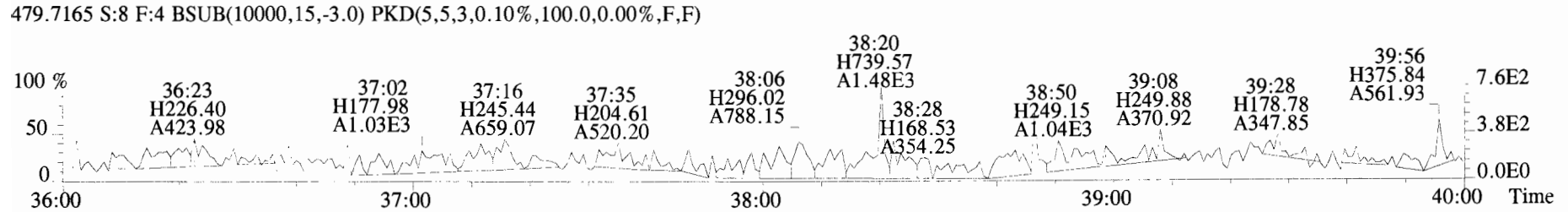
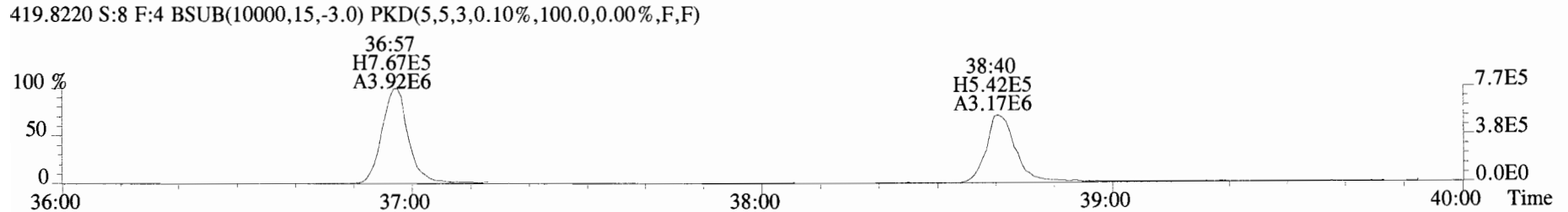
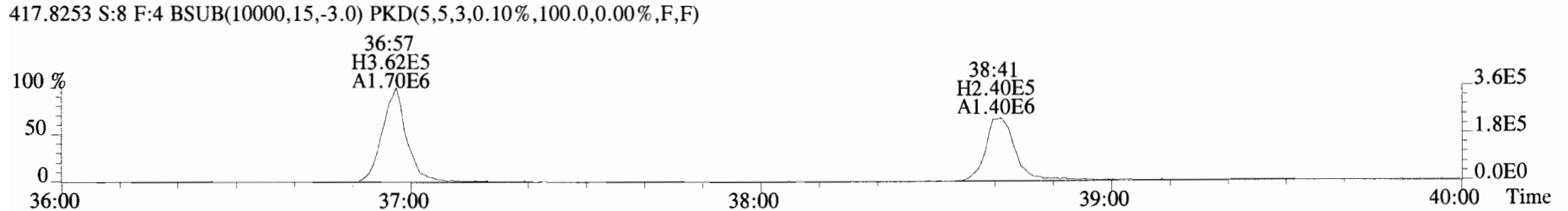
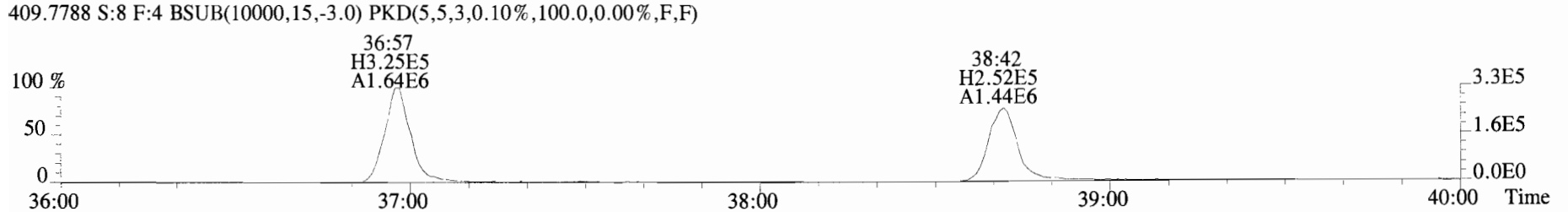
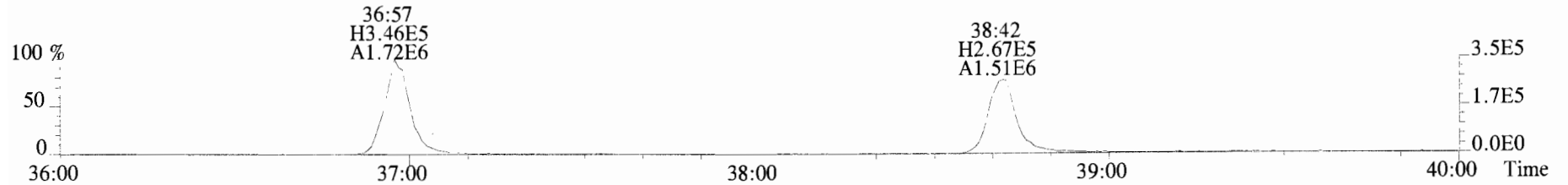




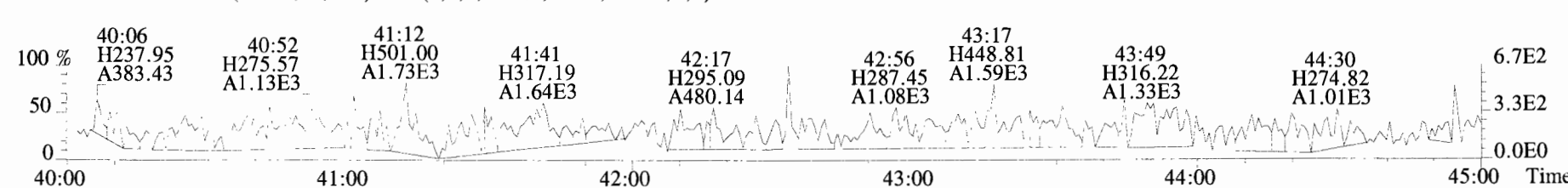
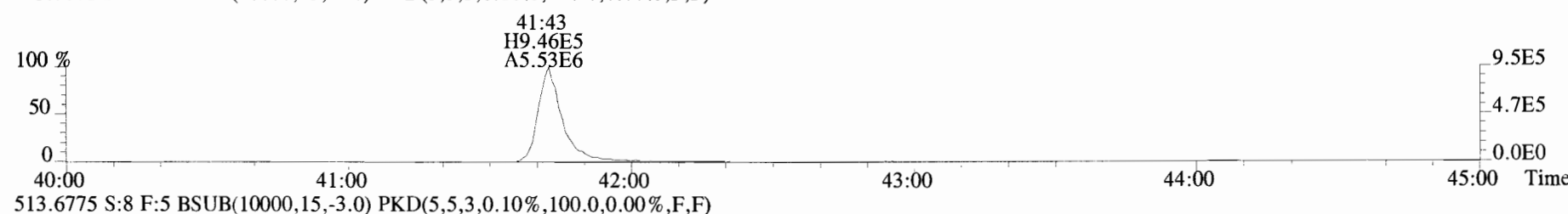
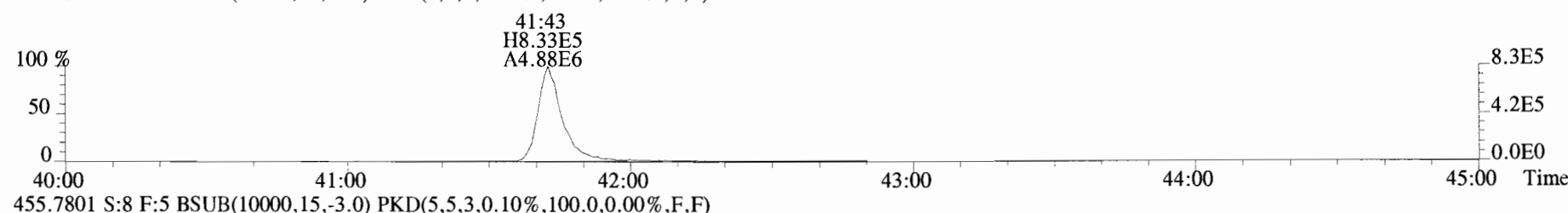
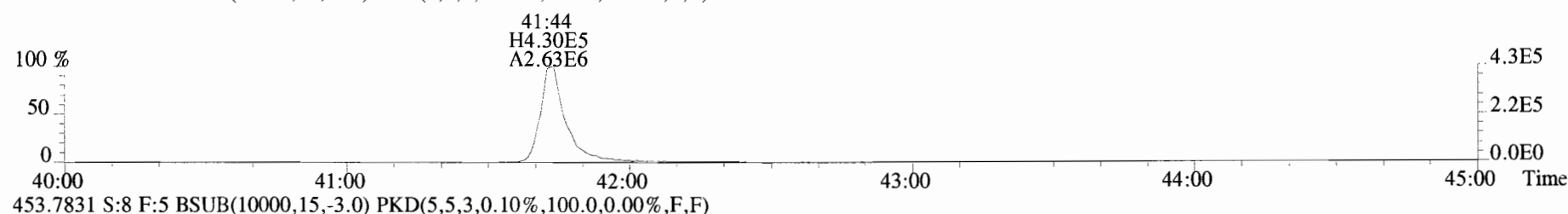
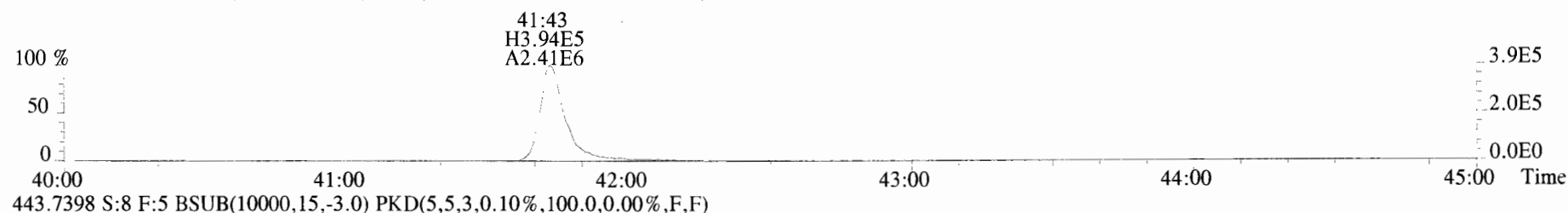
File:191009D1 #1-355 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista Analytical Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
383.8639 S:8 F:3 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-356 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista Analytical Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
407.7818 S:8 F:4 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



File:191009D1 #1-431 Acq: 9-OCT-2019 21:46:34 GC EI+ Voltage SIR Autospec-UltimaE  
Sample#8 File Text:Vista\_Analytical\_Laboratory\_VG7 Text:SS191009D1-1 1613 SSS 19C2207 Exp:OCDD\_DB5  
441.7428 S:8 F:5 BSUB(10000,15,-3.0) PKD(5,5,3,0.10%,100.0,0.00%,F,F)



Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

DB 1/22/20

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
 Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

C1 01/22/2020

Compound name: 2,3,7,8-TCDD  
 Response Factor: 0.824003  
 RRF SD: 0.106482, Relative SD: 12.9225  
 Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	0.250	0.68	NO	25.85	1.000	3.58e3	1.96e6	0.222	-11.3	0.731	MM
2	200121R1_2	0.500	0.77	NO	25.85	1.001	7.18e3	1.99e6	0.437	-12.6	0.720	bb
3	200121R1_3	2.00	0.75	NO	25.89	1.001	3.33e4	2.18e6	1.85	-7.4	0.763	bb
4	200121R1_4	10.0	0.75	NO	25.85	1.001	1.39e5	1.68e6	10.0	0.3	0.827	db
5	200121R1_5	40.0	0.76	NO	25.87	1.001	8.97e5	2.41e6	45.3	13.1	0.932	bb
6	200121R1_6	300	0.77	NO	25.89	1.001	7.61e6	2.61e6	354	17.9	0.971	bb

Compound name: 1,2,3,7,8-PeCDD  
 Response Factor: 0.911647  
 RRF SD: 0.0797461, Relative SD: 8.74747  
 Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	0.64	NO	30.76	1.000	1.49e4	1.48e6	1.10	-11.6	0.806	bb
2	200121R1_2	2.50	0.59	NO	30.74	1.000	3.07e4	1.46e6	2.31	-7.5	0.843	bb
3	200121R1_3	10.0	0.58	NO	30.76	1.000	1.42e5	1.60e6	9.73	-2.7	0.887	bb
4	200121R1_4	50.0	0.63	NO	30.76	1.000	5.59e5	1.19e6	51.5	3.0	0.939	bb
5	200121R1_5	200	0.62	NO	30.76	1.000	3.69e6	1.86e6	218	9.0	0.993	bb
6	200121R1_6	1500	0.63	NO	30.77	1.000	3.22e7	2.15e6	1650	9.8	1.00	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 1,2,3,4,7,8-HxCDD**

Response Factor: 0.870361

RRF SD: 0.1132, Relative SD: 13.0061

Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.23	NO	34.12	1.000	1.09e4	1.15e6	1.09	-12.5	0.762	bd
2	200121R1_2	2.50	1.22	NO	34.10	1.001	2.10e4	1.15e6	2.11	-15.7	0.734	bd
3	200121R1_3	10.0	1.20	NO	34.10	1.000	1.06e5	1.28e6	9.54	-4.6	0.830	bd
4	200121R1_4	50.0	1.24	NO	34.10	1.001	4.27e5	9.39e5	52.2	4.4	0.908	bd
5	200121R1_5	200	1.19	NO	34.10	1.000	2.99e6	1.51e6	228	13.8	0.990	bd
6	200121R1_6	1500	1.20	NO	34.12	1.000	2.69e7	1.80e6	1720	14.6	0.998	bd

**Compound name: 1,2,3,6,7,8-HxCDD**

Response Factor: 0.784064

RRF SD: 0.0638384, Relative SD: 8.14199

Response type: Internal Std ( Ref 21 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.14	NO	34.21	1.000	1.19e4	1.30e6	1.17	-6.8	0.731	db
2	200121R1_2	2.50	1.19	NO	34.20	1.000	2.26e4	1.28e6	2.24	-10.3	0.703	db
3	200121R1_3	10.0	1.20	NO	34.21	1.000	1.08e5	1.43e6	9.65	-3.5	0.756	db
4	200121R1_4	50.0	1.19	NO	34.21	1.001	4.29e5	1.07e6	51.4	2.8	0.806	db
5	200121R1_5	200	1.20	NO	34.21	1.001	3.00e6	1.76e6	217	8.7	0.852	db
6	200121R1_6	1500	1.20	NO	34.22	1.000	2.63e7	2.05e6	1640	9.1	0.856	db

**Compound name: 1,2,3,7,8,9-HxCDD**

Response Factor: 0.798497

RRF SD: 0.0803566, Relative SD: 10.0635

Response type: Internal Std ( Ref 22 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.17	NO	34.51	1.001	1.14e4	1.21e6	1.18	-5.6	0.754	bb
2	200121R1_2	2.50	1.15	NO	34.49	1.000	2.18e4	1.26e6	2.18	-13.0	0.695	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 1,2,3,7,8,9-HxCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	10.0	1.22	NO	34.50	1.001	1.06e5	1.43e6	9.33	-6.7	0.745	bb
4	200121R1_4	50.0	1.22	NO	34.49	1.001	4.28e5	1.04e6	51.3	2.6	0.820	db
5	200121R1_5	200	1.21	NO	34.49	1.000	2.97e6	1.68e6	222	10.8	0.885	bb
6	200121R1_6	1500	1.19	NO	34.50	1.000	2.63e7	1.96e6	1680	11.8	0.893	bb

**Compound name: 1,2,3,4,6,7,8-HpCDD**

Response Factor: 0.736928  
 RRF SD: 0.0903282, Relative SD: 12.2574  
 Response type: Internal Std ( Ref 23 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	0.96	NO	38.05	1.001	7.79e3	9.17e5	1.15	-7.8	0.679	bb
2	200121R1_2	2.50	1.05	NO	38.02	1.000	1.43e4	9.02e5	2.15	-13.8	0.635	bb
3	200121R1_3	10.0	1.00	NO	38.05	1.001	6.21e4	9.27e5	9.09	-9.1	0.670	bb
4	200121R1_4	50.0	0.99	NO	38.03	1.001	2.40e5	6.36e5	51.1	2.3	0.754	bb
5	200121R1_5	200	1.00	NO	38.03	1.001	1.97e6	1.19e6	225	12.6	0.830	bb
6	200121R1_6	1500	0.99	NO	38.05	1.000	1.77e7	1.38e6	1740	15.9	0.854	bb

**Compound name: OCDD**

Response Factor: 0.799993  
 RRF SD: 0.0791297, Relative SD: 9.8913  
 Response type: Internal Std ( Ref 24 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	2.50	0.86	NO	41.03	1.001	1.42e4	1.53e6	2.32	-7.3	0.742	bb
2	200121R1_2	5.00	0.86	NO	41.01	1.001	2.69e4	1.51e6	4.45	-11.0	0.712	bd
3	200121R1_3	20.0	0.86	NO	41.02	1.000	1.12e5	1.50e6	18.7	-6.3	0.750	bb
4	200121R1_4	100	0.86	NO	41.01	1.000	3.71e5	9.18e5	101	1.0	0.808	bb
5	200121R1_5	400	0.85	NO	41.02	1.000	3.62e6	2.03e6	446	11.6	0.893	bb
6	200121R1_6	3000	0.86	NO	41.03	1.000	3.66e7	2.72e6	3360	11.9	0.895	bb

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**Compound name: 2,3,7,8-TCDF**

Response Factor: 0.587758

RRF SD: 0.0889725, Relative SD: 15.1376

Response type: Internal Std ( Ref 25 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	0.250	0.73	NO	25.00	1.001	3.29e3	2.47e6	0.226	-9.5	0.532	bb
2	200121R1_2	0.500	0.68	NO	24.99	1.001	6.15e3	2.53e6	0.414	-17.2	0.487	bb
3	200121R1_3	2.00	0.69	NO	25.02	1.001	2.93e4	2.77e6	1.80	-10.2	0.528	bb
4	200121R1_4	10.0	0.69	NO	24.99	1.001	1.29e5	2.15e6	10.2	1.5	0.597	bb
5	200121R1_5	40.0	0.71	NO	24.99	1.001	8.09e5	3.02e6	45.6	14.0	0.670	bb
6	200121R1_6	300	0.72	NO	25.02	1.001	6.94e6	3.24e6	364	21.4	0.714	bb

**Compound name: 1,2,3,7,8-PeCDF**

Response Factor: 0.826078

RRF SD: 0.0786342, Relative SD: 9.51897

Response type: Internal Std ( Ref 26 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.56	NO	29.49	1.001	2.06e4	2.18e6	1.14	-8.7	0.754	bb
2	200121R1_2	2.50	1.47	NO	29.48	1.001	3.89e4	2.14e6	2.20	-12.0	0.727	bb
3	200121R1_3	10.0	1.55	NO	29.49	1.001	1.94e5	2.43e6	9.65	-3.5	0.797	bb
4	200121R1_4	50.0	1.52	NO	29.48	1.001	7.65e5	1.78e6	51.9	3.8	0.857	bb
5	200121R1_5	200	1.50	NO	29.48	1.001	4.89e6	2.70e6	219	9.6	0.906	bb
6	200121R1_6	1500	1.50	NO	29.49	1.001	4.35e7	3.17e6	1660	10.7	0.915	bb

**Compound name: 2,3,4,7,8-PeCDF**

Response Factor: 0.84982

RRF SD: 0.0827911, Relative SD: 9.74219

Response type: Internal Std ( Ref 27 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.55	NO	30.47	1.001	2.06e4	2.15e6	1.13	-9.7	0.768	bb
2	200121R1_2	2.50	1.51	NO	30.45	1.000	3.96e4	2.12e6	2.19	-12.3	0.746	bb

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**Compound name: 2,3,4,7,8-PeCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	10.0	1.56	NO	30.45	1.000	1.98e5	2.38e6	9.81	-1.9	0.834	bb
4	200121R1_4	50.0	1.51	NO	30.45	1.001	7.59e5	1.74e6	51.5	2.9	0.875	bb
5	200121R1_5	200	1.49	NO	30.45	1.001	4.95e6	2.65e6	220	10.0	0.934	bb
6	200121R1_6	1500	1.50	NO	30.47	1.001	4.46e7	3.15e6	1660	10.9	0.943	bb

**Compound name: 1,2,3,4,7,8-HxCDF**

Response Factor: 0.786631

RRF SD: 0.109057, Relative SD: 13.8638

Response type: Internal Std ( Ref 28 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.15	NO	33.24	1.000	9.08e3	1.07e6	1.08	-13.6	0.680	bd
2	200121R1_2	2.50	1.11	NO	33.23	1.001	1.74e4	1.06e6	2.09	-16.3	0.659	bd
3	200121R1_3	10.0	1.18	NO	33.24	1.001	8.87e4	1.19e6	9.50	-5.0	0.747	bd
4	200121R1_4	50.0	1.17	NO	33.23	1.000	3.55e5	8.64e5	52.2	4.4	0.821	bd
5	200121R1_5	200	1.16	NO	33.23	1.000	2.46e6	1.37e6	229	14.4	0.900	bd
6	200121R1_6	1500	1.14	NO	33.24	1.000	2.22e7	1.62e6	1740	16.1	0.914	bd

**Compound name: 1,2,3,6,7,8-HxCDF**

Response Factor: 0.720113

RRF SD: 0.0803142, Relative SD: 11.153

Response type: Internal Std ( Ref 29 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.11	NO	33.36	1.000	1.06e4	1.29e6	1.14	-9.1	0.655	db
2	200121R1_2	2.50	1.20	NO	33.35	1.000	1.95e4	1.27e6	2.13	-14.8	0.614	db
3	200121R1_3	10.0	1.17	NO	33.36	1.000	9.98e4	1.45e6	9.57	-4.3	0.689	db
4	200121R1_4	50.0	1.15	NO	33.35	1.000	3.92e5	1.04e6	52.3	4.6	0.753	db
5	200121R1_5	200	1.15	NO	33.36	1.001	2.68e6	1.68e6	221	10.7	0.797	db
6	200121R1_6	1500	1.15	NO	33.37	1.001	2.42e7	1.98e6	1690	12.9	0.813	db



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**Compound name: 2,3,4,6,7,8-HxCDF**

Response Factor: 0.766474  
 RRF SD: 0.103369, Relative SD: 13.4863  
 Response type: Internal Std ( Ref 30 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.19	NO	33.94	1.000	9.43e3	1.16e6	1.06	-15.1	0.651	bb
2	200121R1_2	2.50	1.14	NO	33.93	1.001	1.84e4	1.14e6	2.11	-15.4	0.648	bb
3	200121R1_3	10.0	1.17	NO	33.94	1.001	9.67e4	1.31e6	9.66	-3.4	0.740	bb
4	200121R1_4	50.0	1.16	NO	33.93	1.001	3.84e5	9.50e5	52.8	5.6	0.809	bb
5	200121R1_5	200	1.15	NO	33.93	1.000	2.65e6	1.51e6	228	14.2	0.875	bb
6	200121R1_6	1500	1.14	NO	33.94	1.000	2.38e7	1.82e6	1710	14.2	0.875	bb

**Compound name: 1,2,3,7,8,9-HxCDF**

Response Factor: 0.708637  
 RRF SD: 0.0936, Relative SD: 13.2084  
 Response type: Internal Std ( Ref 31 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.15	NO	34.86	1.001	7.60e3	9.61e5	1.12	-10.8	0.632	bb
2	200121R1_2	2.50	1.14	NO	34.85	1.001	1.48e4	9.89e5	2.12	-15.3	0.600	bb
3	200121R1_3	10.0	1.21	NO	34.85	1.000	7.28e4	1.12e6	9.19	-8.1	0.651	bb
4	200121R1_4	50.0	1.17	NO	34.85	1.001	3.08e5	8.31e5	52.3	4.6	0.741	bb
5	200121R1_5	200	1.15	NO	34.85	1.000	2.14e6	1.33e6	228	14.0	0.808	bb
6	200121R1_6	1500	1.16	NO	34.86	1.000	1.93e7	1.57e6	1730	15.5	0.819	bb

**Compound name: 1,2,3,4,6,7,8-HpCDF**

Response Factor: 0.731638  
 RRF SD: 0.111983, Relative SD: 15.3058  
 Response type: Internal Std ( Ref 32 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	0.90	NO	36.61	1.000	5.75e3	7.08e5	1.11	-11.3	0.649	MM
2	200121R1_2	2.50	1.01	NO	36.61	1.001	1.09e4	7.21e5	2.06	-17.5	0.604	bb

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**Compound name: 1,2,3,4,6,7,8-HpCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	10.0	0.96	NO	36.62	1.001	5.24e4	8.04e5	8.91	-10.9	0.652	bb
4	200121R1_4	50.0	0.98	NO	36.60	1.000	2.23e5	5.77e5	52.7	5.4	0.771	bb
5	200121R1_5	200	0.96	NO	36.61	1.000	1.62e6	9.59e5	231	15.4	0.844	bb
6	200121R1_6	1500	0.97	NO	36.62	1.000	1.50e7	1.15e6	1780	18.8	0.869	bb

**Compound name: 1,2,3,4,7,8,9-HpCDF**

Response Factor: 0.816406

RRF SD: 0.124425, Relative SD: 15.2406

Response type: Internal Std ( Ref 33 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.08	NO	38.61	1.000	4.66e3	5.25e5	1.09	-13.0	0.710	bb
2	200121R1_2	2.50	0.93	NO	38.60	1.000	9.58e3	5.53e5	2.12	-15.1	0.693	bb
3	200121R1_3	10.0	0.93	NO	38.61	1.000	4.30e4	5.88e5	8.96	-10.4	0.731	bb
4	200121R1_4	50.0	0.95	NO	38.60	1.000	1.84e5	4.40e5	51.2	2.5	0.837	bb
5	200121R1_5	200	0.96	NO	38.61	1.001	1.37e6	7.10e5	236	18.1	0.964	bb
6	200121R1_6	1500	0.97	NO	38.62	1.000	1.35e7	9.33e5	1770	17.9	0.963	bb

**Compound name: OCDF**

Response Factor: 0.638789

RRF SD: 0.0810198, Relative SD: 12.6833

Response type: Internal Std ( Ref 34 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	2.50	0.86	NO	41.22	1.000	1.03e4	1.48e6	2.17	-13.1	0.555	bb
2	200121R1_2	5.00	0.86	NO	41.20	1.000	2.07e4	1.50e6	4.33	-13.4	0.553	bb
3	200121R1_3	20.0	0.80	NO	41.21	1.000	8.44e4	1.41e6	18.8	-6.2	0.599	bb
4	200121R1_4	100	0.84	NO	41.20	1.000	2.96e5	8.88e5	104	4.5	0.667	bb
5	200121R1_5	400	0.84	NO	41.21	1.000	2.87e6	1.98e6	455	13.6	0.726	bb
6	200121R1_6	3000	0.84	NO	41.23	1.000	2.97e7	2.70e6	3430	14.5	0.731	bb

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**Compound name: 13C-2,3,7,8-TCDD**

Response Factor: 1.11572

RRF SD: 0.045003, Relative SD: 4.03353

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.78	NO	25.85	1.026	1.96e6	1.80e6	97.8	-2.2	1.09	bb
2	200121R1_2	100	0.79	NO	25.84	1.025	1.99e6	1.83e6	97.7	-2.3	1.09	bb
3	200121R1_3	100	0.78	NO	25.85	1.025	2.18e6	2.01e6	97.2	-2.8	1.08	bb
4	200121R1_4	100	0.79	NO	25.84	1.026	1.68e6	1.42e6	106	5.6	1.18	bb
5	200121R1_5	100	0.78	NO	25.84	1.025	2.41e6	2.23e6	96.9	-3.1	1.08	bb
6	200121R1_6	100	0.79	NO	25.86	1.025	2.61e6	2.23e6	105	4.7	1.17	bb

**Compound name: 13C-1,2,3,7,8-PeCDD**

Response Factor: 0.841144

RRF SD: 0.0616639, Relative SD: 7.33095

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.64	NO	30.74	1.219	1.48e6	1.80e6	97.7	-2.3	0.822	bb
2	200121R1_2	100	0.63	NO	30.74	1.219	1.46e6	1.83e6	94.6	-5.4	0.795	bb
3	200121R1_3	100	0.63	NO	30.74	1.219	1.60e6	2.01e6	94.6	-5.4	0.796	bb
4	200121R1_4	100	0.65	NO	30.74	1.220	1.19e6	1.42e6	99.6	-0.4	0.838	bb
5	200121R1_5	100	0.63	NO	30.74	1.219	1.86e6	2.23e6	99.2	-0.8	0.834	bb
6	200121R1_6	100	0.64	NO	30.76	1.219	2.15e6	2.23e6	114	14.3	0.961	bb

**Compound name: 13C-1,2,3,4,7,8-HxCDD**

Response Factor: 0.937941

RRF SD: 0.0670362, Relative SD: 7.14717

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.26	NO	34.10	1.014	1.15e6	1.28e6	95.1	-4.9	0.892	bd
2	200121R1_2	100	1.26	NO	34.08	1.014	1.15e6	1.28e6	95.8	-4.2	0.898	bd

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**Compound name: 13C-1,2,3,4,7,8-HxCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	100	1.26	NO	34.09	1.014	1.28e6	1.44e6	94.6	-5.4	0.888	bd
4	200121R1_4	100	1.26	NO	34.08	1.014	9.39e5	9.71e5	103	3.1	0.967	bd
5	200121R1_5	100	1.24	NO	34.09	1.014	1.51e6	1.64e6	98.2	-1.8	0.921	bd
6	200121R1_6	100	1.25	NO	34.10	1.014	1.80e6	1.69e6	113	13.1	1.06	bd

**Compound name: 13C-1,2,3,6,7,8-HxCDD**

Response Factor: 1.06543

RRF SD: 0.0819846, Relative SD: 7.69496

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.24	NO	34.20	1.017	1.30e6	1.28e6	94.9	-5.1	1.01	db
2	200121R1_2	100	1.24	NO	34.19	1.017	1.28e6	1.28e6	94.4	-5.6	1.01	db
3	200121R1_3	100	1.24	NO	34.20	1.017	1.43e6	1.44e6	93.4	-6.6	0.995	db
4	200121R1_4	100	1.25	NO	34.19	1.017	1.07e6	9.71e5	103	3.0	1.10	db
5	200121R1_5	100	1.24	NO	34.19	1.017	1.76e6	1.64e6	101	0.7	1.07	db
6	200121R1_6	100	1.25	NO	34.21	1.017	2.05e6	1.69e6	114	13.7	1.21	db

**Compound name: 13C-1,2,3,7,8,9-HxCDD**

Response Factor: 1.03027

RRF SD: 0.0777089, Relative SD: 7.54257

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.23	NO	34.48	1.025	1.21e6	1.28e6	91.7	-8.3	0.945	bb
2	200121R1_2	100	1.24	NO	34.48	1.026	1.26e6	1.28e6	95.6	-4.4	0.985	bb
3	200121R1_3	100	1.22	NO	34.48	1.025	1.43e6	1.44e6	96.2	-3.8	0.991	bb
4	200121R1_4	100	1.22	NO	34.47	1.025	1.04e6	9.71e5	104	4.4	1.08	bb
5	200121R1_5	100	1.23	NO	34.48	1.026	1.68e6	1.64e6	99.4	-0.6	1.02	bb
6	200121R1_6	100	1.23	NO	34.49	1.026	1.96e6	1.69e6	113	12.7	1.16	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

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**Compound name: 13C-1,2,3,4,6,7,8-HpCDD**

Response Factor: 0.709925

RRF SD: 0.0610429, Relative SD: 8.5985

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.04	NO	38.02	1.131	9.17e5	1.28e6	101	0.6	0.714	bb
2	200121R1_2	100	1.02	NO	38.01	1.131	9.02e5	1.28e6	99.4	-0.6	0.706	bb
3	200121R1_3	100	1.03	NO	38.02	1.131	9.27e5	1.44e6	90.8	-9.2	0.645	bb
4	200121R1_4	100	1.00	NO	38.01	1.131	6.36e5	9.71e5	92.2	-7.8	0.654	bb
5	200121R1_5	100	1.03	NO	38.01	1.131	1.19e6	1.64e6	102	2.2	0.726	bb
6	200121R1_6	100	1.02	NO	38.03	1.131	1.38e6	1.69e6	115	14.8	0.815	bb

**Compound name: 13C-OCDD**

Response Factor: 0.600957

RRF SD: 0.113803, Relative SD: 18.9369

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	200	0.88	NO	41.01	1.220	1.53e6	1.28e6	198	-0.9	0.596	bb
2	200121R1_2	200	0.88	NO	40.98	1.219	1.51e6	1.28e6	197	-1.4	0.592	bb
3	200121R1_3	200	0.88	NO	41.01	1.220	1.50e6	1.44e6	174	-13.2	0.521	bb
4	200121R1_4	200	0.89	NO	41.00	1.220	9.18e5	9.71e5	157	-21.3	0.473	bb
5	200121R1_5	200	0.88	NO	41.01	1.220	2.03e6	1.64e6	206	3.0	0.619	bb
6	200121R1_6	200	0.88	NO	41.03	1.220	2.72e6	1.69e6	268	33.9	0.805	bb

**Compound name: 13C-2,3,7,8-TCDF**

Response Factor: 1.03665

RRF SD: 0.0391627, Relative SD: 3.7778

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.74	NO	24.97	0.991	2.47e6	2.48e6	96.4	-3.6	0.999	bb
2	200121R1_2	100	0.73	NO	24.97	0.991	2.53e6	2.52e6	96.8	-3.2	1.00	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

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**Compound name: 13C-2,3,7,8-TCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	100	0.74	NO	24.99	0.991	2.77e6	2.71e6	98.6	-1.4	1.02	bb
4	200121R1_4	100	0.73	NO	24.96	0.990	2.15e6	1.99e6	105	4.6	1.08	bb
5	200121R1_5	100	0.73	NO	24.97	0.991	3.02e6	2.95e6	98.8	-1.2	1.02	bb
6	200121R1_6	100	0.73	NO	24.99	0.991	3.24e6	2.98e6	105	4.9	1.09	bb

**Compound name: 13C-1,2,3,7,8-PeCDF**

Response Factor: 0.916847

RRF SD: 0.0754197, Relative SD: 8.22599

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.55	NO	29.48	1.169	2.18e6	2.48e6	96.2	-3.8	0.882	bb
2	200121R1_2	100	1.54	NO	29.46	1.169	2.14e6	2.52e6	92.5	-7.5	0.848	bb
3	200121R1_3	100	1.55	NO	29.48	1.169	2.43e6	2.71e6	97.6	-2.4	0.895	bb
4	200121R1_4	100	1.55	NO	29.46	1.169	1.78e6	1.99e6	97.9	-2.1	0.898	bb
5	200121R1_5	100	1.53	NO	29.46	1.169	2.70e6	2.95e6	99.7	-0.3	0.914	bb
6	200121R1_6	100	1.54	NO	29.48	1.169	3.17e6	2.98e6	116	16.0	1.06	bb

**Compound name: 13C-2,3,4,7,8-PeCDF**

Response Factor: 0.902658

RRF SD: 0.0778583, Relative SD: 8.62544

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.55	NO	30.44	1.207	2.15e6	2.48e6	96.0	-4.0	0.867	bb
2	200121R1_2	100	1.55	NO	30.44	1.207	2.12e6	2.52e6	93.4	-6.6	0.843	bb
3	200121R1_3	100	1.57	NO	30.45	1.207	2.38e6	2.71e6	97.1	-2.9	0.877	bb
4	200121R1_4	100	1.53	NO	30.44	1.208	1.74e6	1.99e6	96.8	-3.2	0.874	bb
5	200121R1_5	100	1.55	NO	30.44	1.207	2.65e6	2.95e6	99.5	-0.5	0.898	bb
6	200121R1_6	100	1.54	NO	30.45	1.207	3.15e6	2.98e6	117	17.1	1.06	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

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**Compound name: 13C-1,2,3,4,7,8-HxCDF**

Response Factor: 0.861328

RRF SD: 0.0533731, Relative SD: 6.1966

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.49	NO	33.23	0.988	1.07e6	1.28e6	96.7	-3.3	0.833	bd
2	200121R1_2	100	0.49	NO	33.21	0.988	1.06e6	1.28e6	96.0	-4.0	0.826	bd
3	200121R1_3	100	0.49	NO	33.22	0.988	1.19e6	1.44e6	95.8	-4.2	0.825	bd
4	200121R1_4	100	0.48	NO	33.22	0.988	8.64e5	9.71e5	103	3.3	0.890	bd
5	200121R1_5	100	0.49	NO	33.22	0.988	1.37e6	1.64e6	97.0	-3.0	0.835	bd
6	200121R1_6	100	0.49	NO	33.23	0.988	1.62e6	1.69e6	111	11.3	0.958	bd

**Compound name: 13C-1,2,3,6,7,8-HxCDF**

Response Factor: 1.04669

RRF SD: 0.067318, Relative SD: 6.43153

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.49	NO	33.35	0.992	1.29e6	1.28e6	96.3	-3.7	1.01	db
2	200121R1_2	100	0.49	NO	33.34	0.992	1.27e6	1.28e6	95.1	-4.9	0.996	db
3	200121R1_3	100	0.49	NO	33.35	0.992	1.45e6	1.44e6	96.2	-3.8	1.01	db
4	200121R1_4	100	0.49	NO	33.34	0.992	1.04e6	9.71e5	102	2.4	1.07	db
5	200121R1_5	100	0.49	NO	33.34	0.992	1.68e6	1.64e6	97.9	-2.1	1.02	db
6	200121R1_6	100	0.50	NO	33.35	0.992	1.98e6	1.69e6	112	12.0	1.17	db

**Compound name: 13C-2,3,4,6,7,8-HxCDF**

Response Factor: 0.945665

RRF SD: 0.0695985, Relative SD: 7.35974

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.49	NO	33.93	1.009	1.16e6	1.28e6	95.4	-4.6	0.902	bb
2	200121R1_2	100	0.49	NO	33.91	1.009	1.14e6	1.28e6	94.1	-5.9	0.889	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

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**Compound name: 13C-2,3,4,6,7,8-HxCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	100	0.49	NO	33.92	1.009	1.31e6	1.44e6	96.0	-4.0	0.908	bb
4	200121R1_4	100	0.49	NO	33.91	1.009	9.50e5	9.71e5	103	3.5	0.978	bb
5	200121R1_5	100	0.49	NO	33.92	1.009	1.51e6	1.64e6	97.6	-2.4	0.923	bb
6	200121R1_6	100	0.49	NO	33.93	1.009	1.82e6	1.69e6	113	13.4	1.07	bb

**Compound name: 13C-1,2,3,7,8,9-HxCDF**

Response Factor: 0.815567

RRF SD: 0.0668162, Relative SD: 8.19261

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.48	NO	34.84	1.036	9.61e5	1.28e6	91.8	-8.2	0.748	bb
2	200121R1_2	100	0.48	NO	34.83	1.036	9.89e5	1.28e6	94.9	-5.1	0.774	bb
3	200121R1_3	100	0.48	NO	34.84	1.036	1.12e6	1.44e6	95.3	-4.7	0.777	bb
4	200121R1_4	100	0.48	NO	34.83	1.036	8.31e5	9.71e5	105	4.9	0.856	bb
5	200121R1_5	100	0.49	NO	34.84	1.036	1.33e6	1.64e6	99.2	-0.8	0.809	bb
6	200121R1_6	100	0.49	NO	34.85	1.036	1.57e6	1.69e6	114	13.9	0.929	bb

**Compound name: 13C-1,2,3,4,6,7,8-HpCDF**

Response Factor: 0.589153

RRF SD: 0.047443, Relative SD: 8.05274

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.41	NO	36.60	1.088	7.08e5	1.28e6	93.7	-6.3	0.552	bb
2	200121R1_2	100	0.41	NO	36.59	1.088	7.21e5	1.28e6	95.8	-4.2	0.565	bb
3	200121R1_3	100	0.41	NO	36.60	1.088	8.04e5	1.44e6	94.9	-5.1	0.559	bd
4	200121R1_4	100	0.41	NO	36.59	1.088	5.77e5	9.71e5	101	0.9	0.594	bb
5	200121R1_5	100	0.41	NO	36.60	1.089	9.59e5	1.64e6	99.3	-0.7	0.585	bb
6	200121R1_6	100	0.41	NO	36.61	1.089	1.15e6	1.69e6	115	15.5	0.680	bb



Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

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**Compound name: 13C-1,2,3,4,7,8,9-HpCDF**

Response Factor: 0.447956

RRF SD: 0.0532865, Relative SD: 11.8955

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.41	NO	38.60	1.148	5.25e5	1.28e6	91.2	-8.8	0.409	bd
2	200121R1_2	100	0.40	NO	38.59	1.148	5.53e5	1.28e6	96.7	-3.3	0.433	bb
3	200121R1_3	100	0.41	NO	38.60	1.148	5.88e5	1.44e6	91.3	-8.7	0.409	bb
4	200121R1_4	100	0.41	NO	38.59	1.148	4.40e5	9.71e5	101	1.1	0.453	bb
5	200121R1_5	100	0.41	NO	38.59	1.148	7.10e5	1.64e6	96.7	-3.3	0.433	bb
6	200121R1_6	100	0.42	NO	38.61	1.148	9.33e5	1.69e6	123	23.1	0.551	bb

**Compound name: 13C-OCDF**

Response Factor: 0.585674

RRF SD: 0.119724, Relative SD: 20.4422

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	200	0.85	NO	41.21	1.226	1.48e6	1.28e6	197	-1.3	0.578	bb
2	200121R1_2	200	0.84	NO	41.19	1.225	1.50e6	1.28e6	200	0.1	0.586	bb
3	200121R1_3	200	0.84	NO	41.20	1.225	1.41e6	1.44e6	167	-16.4	0.490	bb
4	200121R1_4	200	0.84	NO	41.19	1.225	8.88e5	9.71e5	156	-21.9	0.457	bb
5	200121R1_5	200	0.84	NO	41.20	1.226	1.98e6	1.64e6	206	3.0	0.603	bb
6	200121R1_6	200	0.84	NO	41.22	1.226	2.70e6	1.69e6	273	36.5	0.799	bb

**Compound name: 37Cl-2,3,7,8-TCDD**

Response Factor: 1.08568

RRF SD: 0.146073, Relative SD: 13.4545

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	0.250			25.87	1.026	4.03e3	1.80e6	0.207	-17.3	0.898	bb
2	200121R1_2	0.500			25.87	1.026	8.79e3	1.83e6	0.442	-11.5	0.961	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
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**Compound name: 37Cl-2,3,7,8-TCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	2.00			25.87	1.026	4.39e4	2.01e6	2.01	0.4	1.09	bb
4	200121R1_4	10.0			25.85	1.026	1.56e5	1.42e6	10.1	1.0	1.10	bb
5	200121R1_5	40.0			25.87	1.026	1.03e6	2.23e6	42.7	6.7	1.16	bb
6	200121R1_6	200			25.89	1.026	5.85e6	2.23e6	241	20.6	1.31	bb

**Compound name: 13C-1,2,3,4-TCDD**

Response Factor: 1

RRF SD: 9.93014e-017, Relative SD: 9.93014e-015

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.80	NO	25.21	1.000	1.80e6	1.80e6	100	0.0	1.00	bb
2	200121R1_2	100	0.80	NO	25.21	1.000	1.83e6	1.83e6	100	0.0	1.00	bb
3	200121R1_3	100	0.80	NO	25.23	1.000	2.01e6	2.01e6	100	0.0	1.00	bb
4	200121R1_4	100	0.80	NO	25.20	1.000	1.42e6	1.42e6	100	0.0	1.00	bb
5	200121R1_5	100	0.80	NO	25.21	1.000	2.23e6	2.23e6	100	0.0	1.00	bb
6	200121R1_6	100	0.80	NO	25.23	1.000	2.23e6	2.23e6	100	0.0	1.00	bb

**Compound name: 13C-1,2,3,4-TCDF**

Response Factor: 1

RRF SD: 9.93014e-017, Relative SD: 9.93014e-015

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.74	NO	23.58	1.000	2.48e6	2.48e6	100	0.0	1.00	bb
2	200121R1_2	100	0.75	NO	23.58	1.000	2.52e6	2.52e6	100	0.0	1.00	bb
3	200121R1_3	100	0.74	NO	23.59	1.000	2.71e6	2.71e6	100	0.0	1.00	bb
4	200121R1_4	100	0.74	NO	23.57	1.000	1.99e6	1.99e6	100	0.0	1.00	bb
5	200121R1_5	100	0.75	NO	23.58	1.000	2.95e6	2.95e6	100	0.0	1.00	bb
6	200121R1_6	100	0.75	NO	23.59	1.000	2.98e6	2.98e6	100	0.0	1.00	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

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**Compound name: 13C-1,2,3,4,6,9-HxCDF**

Response Factor: 1

RRF SD: 9.93014e-017, Relative SD: 9.93014e-015

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.48	NO	33.63	1.000	1.28e6	1.28e6	100	0.0	1.00	bb
2	200121R1_2	100	0.49	NO	33.61	1.000	1.28e6	1.28e6	100	0.0	1.00	bb
3	200121R1_3	100	0.48	NO	33.63	1.000	1.44e6	1.44e6	100	0.0	1.00	bb
4	200121R1_4	100	0.49	NO	33.61	1.000	9.71e5	9.71e5	100	0.0	1.00	bb
5	200121R1_5	100	0.50	NO	33.61	1.000	1.64e6	1.64e6	100	0.0	1.00	bb
6	200121R1_6	100	0.49	NO	33.63	1.000	1.69e6	1.69e6	100	0.0	1.00	bb

Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 11:16:46 Pacific Standard Time

Printed: Wednesday, January 22, 2020 11:17:01 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 22 Jan 2020 11:16:40

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 19I1604, Description: 1613 CS3 19I1604

#	Name	RT
1	1,3,6,8-TCDD (First)	21.95
2	1,2,8,9-TCDD (Last)	26.80
3	1,2,4,7,9-PeCDD (First)	28.55
4	1,2,3,8,9-PeCDD (Last)	31.14
5	1,2,4,6,7,9-HxCDD (First)	32.60
6	1,2,3,7,8,9-HxCDD (Last)	34.49
7	1,2,3,4,6,7,9-HpCDD (First)	36.99
8	1,2,3,4,6,7,8-HpCDD (Last)	38.03
9	1,3,6,8-TCDF (First)	19.82
10	1,2,8,9-TCDF (Last)	26.95
11	1,3,4,6,8-PeCDF (First)	26.90
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.06
14	1,2,3,7,8,9-HxCDF (Last)	34.85
15	1,2,3,4,6,7,8-HpCDF (First)	36.60
16	1,2,3,4,7,8,9-HpCDF (Last)	38.60

Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:56:31 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:56:54 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

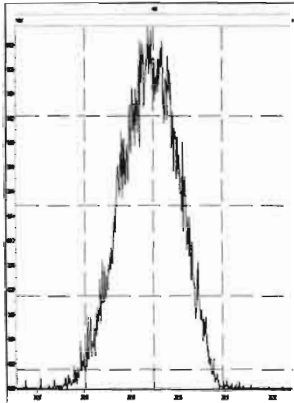
Compound name: 2,3,7,8-TCDD

	Name	ID	Acq.Date	Acq.Time
1	200121R1_1	ST200121R1_1 1613 CS0 19C2201	21-Jan-20	14:11:21
2	200121R1_2	ST200121R1_2 1613 CS1 19C2202	21-Jan-20	14:58:26
3	200121R1_3	ST200121R1_3 1613 CS2 19C2203	21-Jan-20	15:45:27
4	200121R1_4	ST200121R1_4 1613 CS3 19I1604	21-Jan-20	16:32:26
5	200121R1_5	ST200121R1_5 1613 CS4 19C2205	21-Jan-20	17:19:23
6	200121R1_6	ST200121R1_6 1613 CS5 19C2206	21-Jan-20	18:06:23
7	200121R1_7	SOLVENT BLANK	21-Jan-20	18:53:23
8	200121R1_8	SS200121R1_1 1613 SSS 19C2207	21-Jan-20	19:40:22
9	200121R1_9	SOLVENT BLANK	21-Jan-20	20:27:20
10	200121R1_10	QC200121D1_1 HRMS-191231-1 1613 BLK-1	21-Jan-20	21:14:18
11	200121R1_11	QC200121D1_2 HRMS-191231-2 1613 BS-1	21-Jan-20	22:01:20

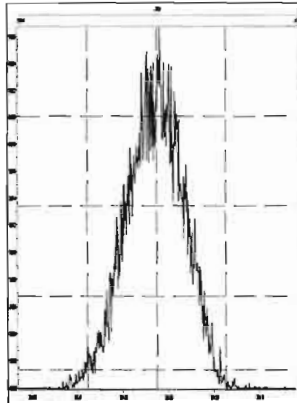
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, January 21, 2020 14:06:23 Pacific Standard Time

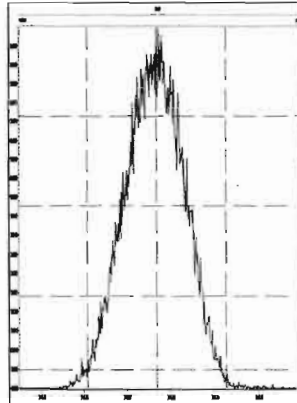
M 292.9824 R 10962



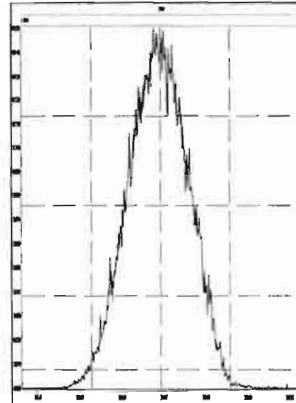
M 304.9824 R 10373



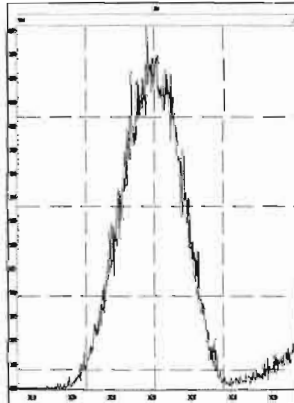
M 318.9792 R 10334



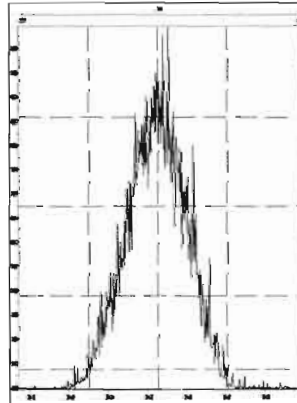
M 330.9792 R 10123



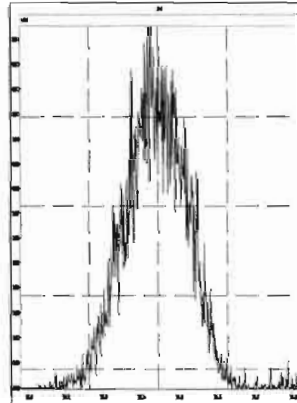
M 342.9792 R 10040



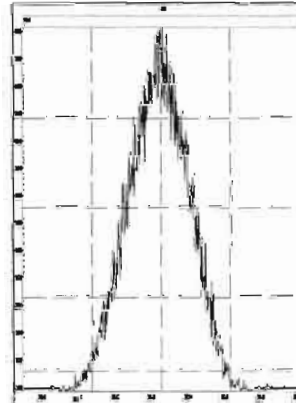
M 354.9792 R 10458



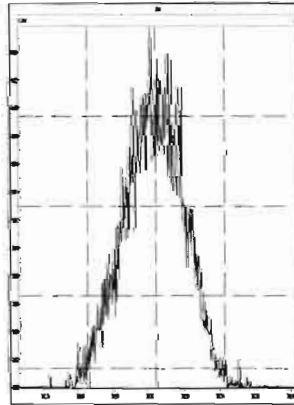
M 366.9792 R 11062



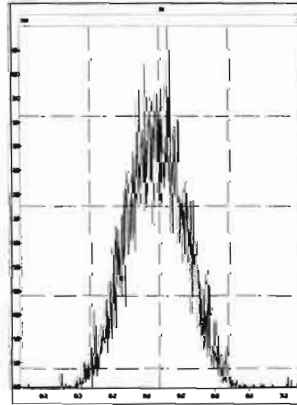
M 380.9760 R 10463



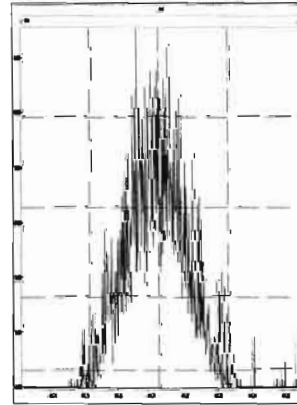
M 392.9760 R 10546



M 404.9760 R 11363



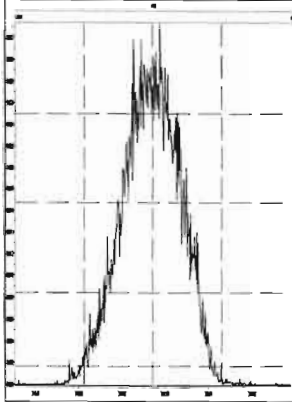
M 416.9760 R 11064



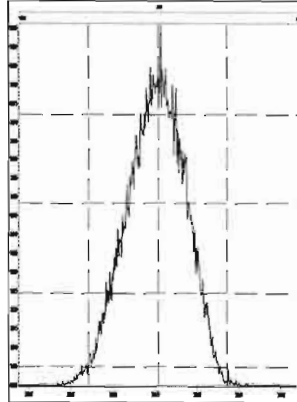
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Tuesday, January 21, 2020 14:06:59 Pacific Standard Time

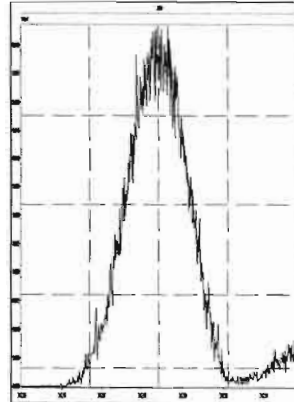
M 318.9792 R 10459



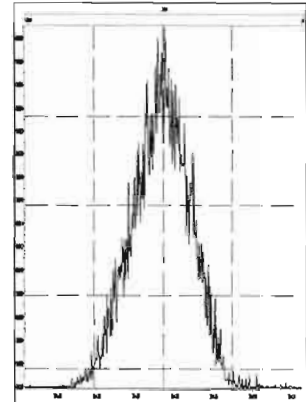
M 330.9792 R 10595



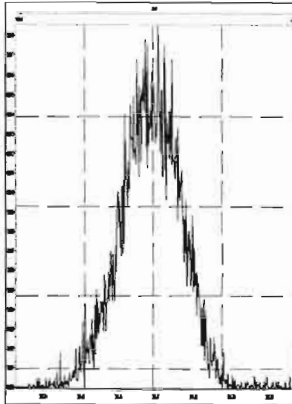
M 342.9792 R 10204



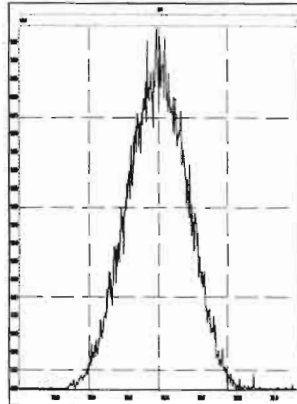
M 354.9792 R 10507



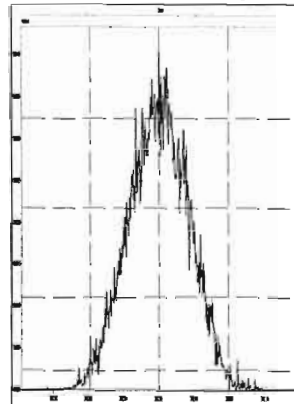
M 366.9792 R 11112



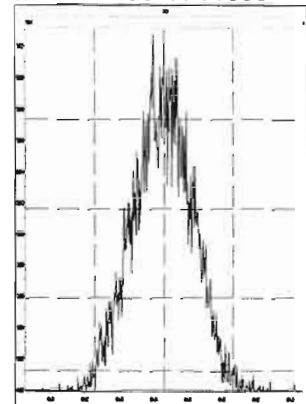
M 380.9760 R 9999



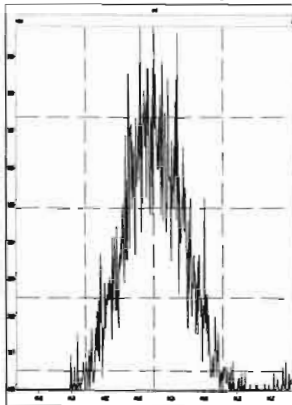
M 392.9760 R 10160



M 404.9760 R 11009



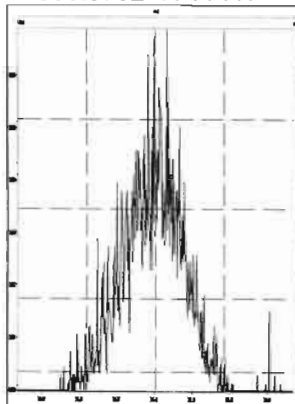
M 416.9760 R 11311



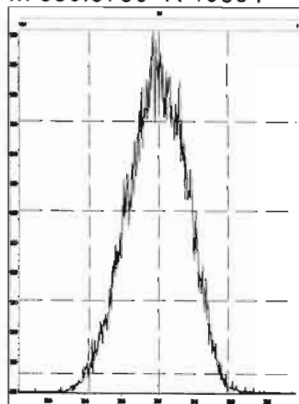
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Tuesday, January 21, 2020 14:08:02 Pacific Standard Time

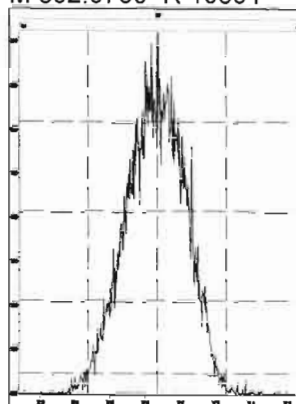
M 366.9792 R 11417



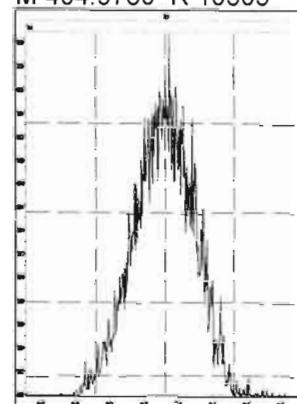
M 380.9760 R 10504



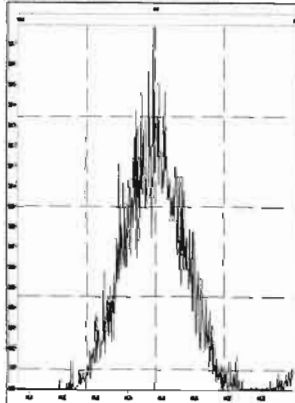
M 392.9760 R 10591



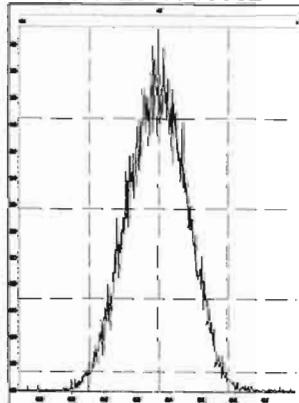
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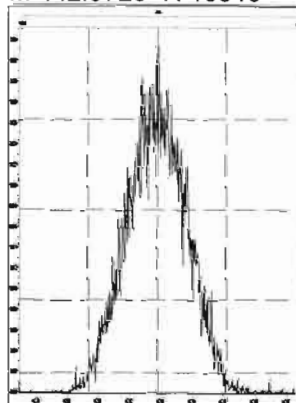
M 416.9760 R 11311



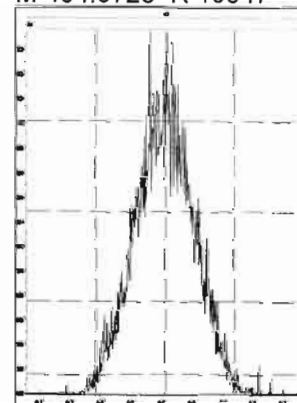
M 430.9728 R 10082



M 442.9728 R 10819



M 454.9728 R 10547

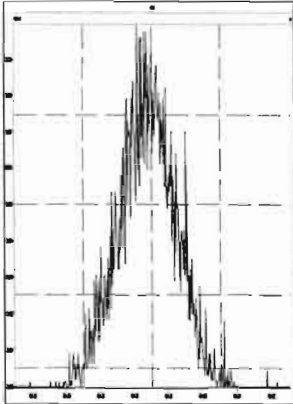




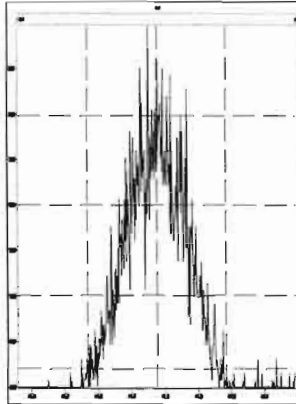
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Printed: Tuesday, January 21, 2020 14:09:20 Pacific Standard Time

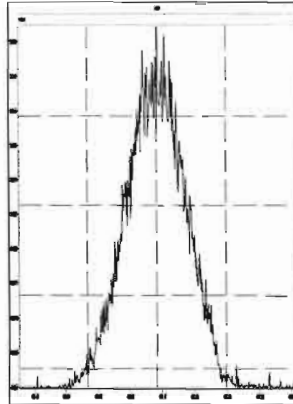
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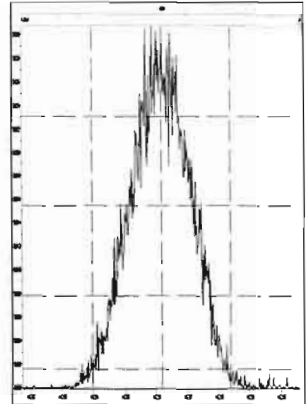
M 416.9760 R 12195



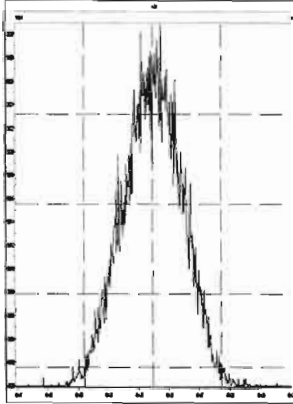
M 430.9728 R 10637



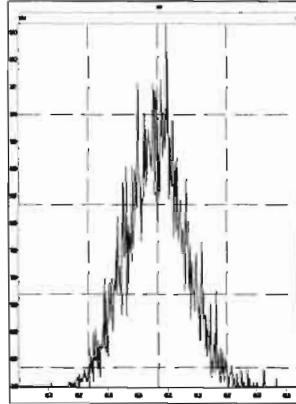
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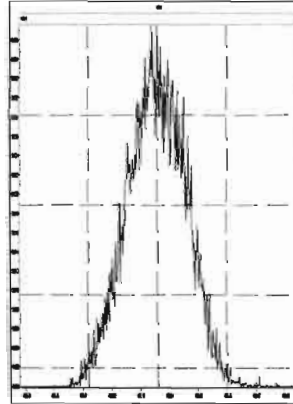
M 454.9728 R 10592



M 466.9728 R 12498



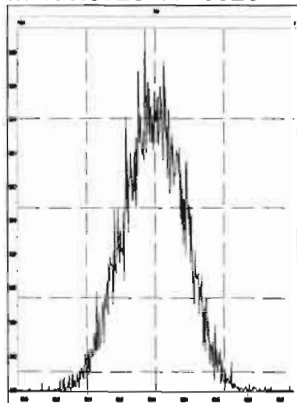
M 480.9696 R 10635



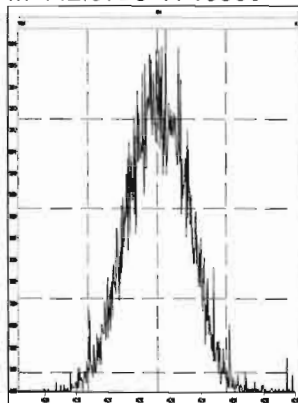
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Tuesday, January 21, 2020 14:10:41 Pacific Standard Time

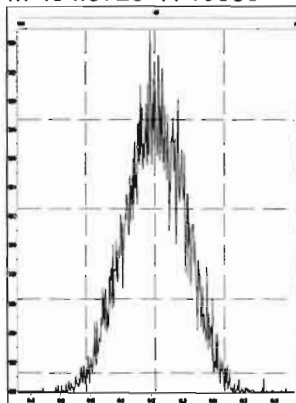
M 430.9728 R 10823



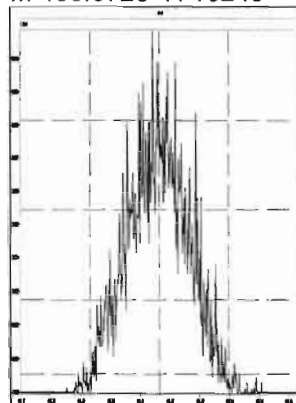
M 442.9728 R 10868



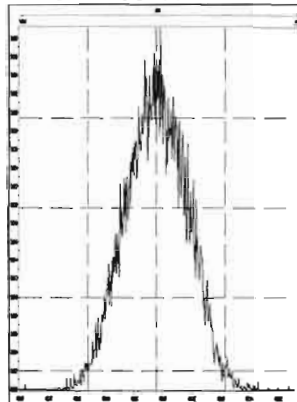
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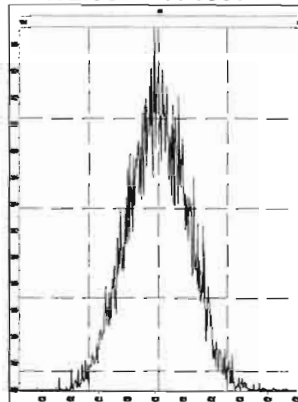
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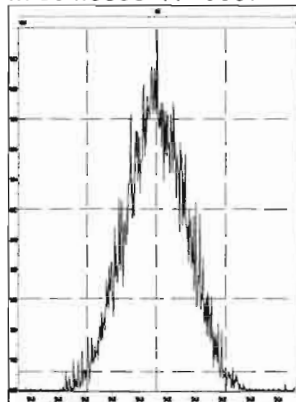
M 480.9696 R 10002



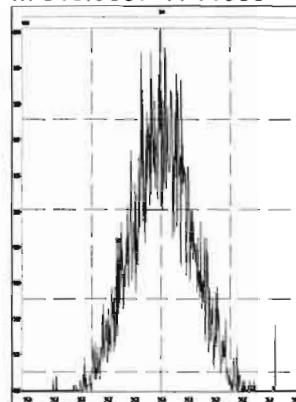
M 492.9696 R 10371



M 504.9696 R 10637



M 516.9697 R 11066



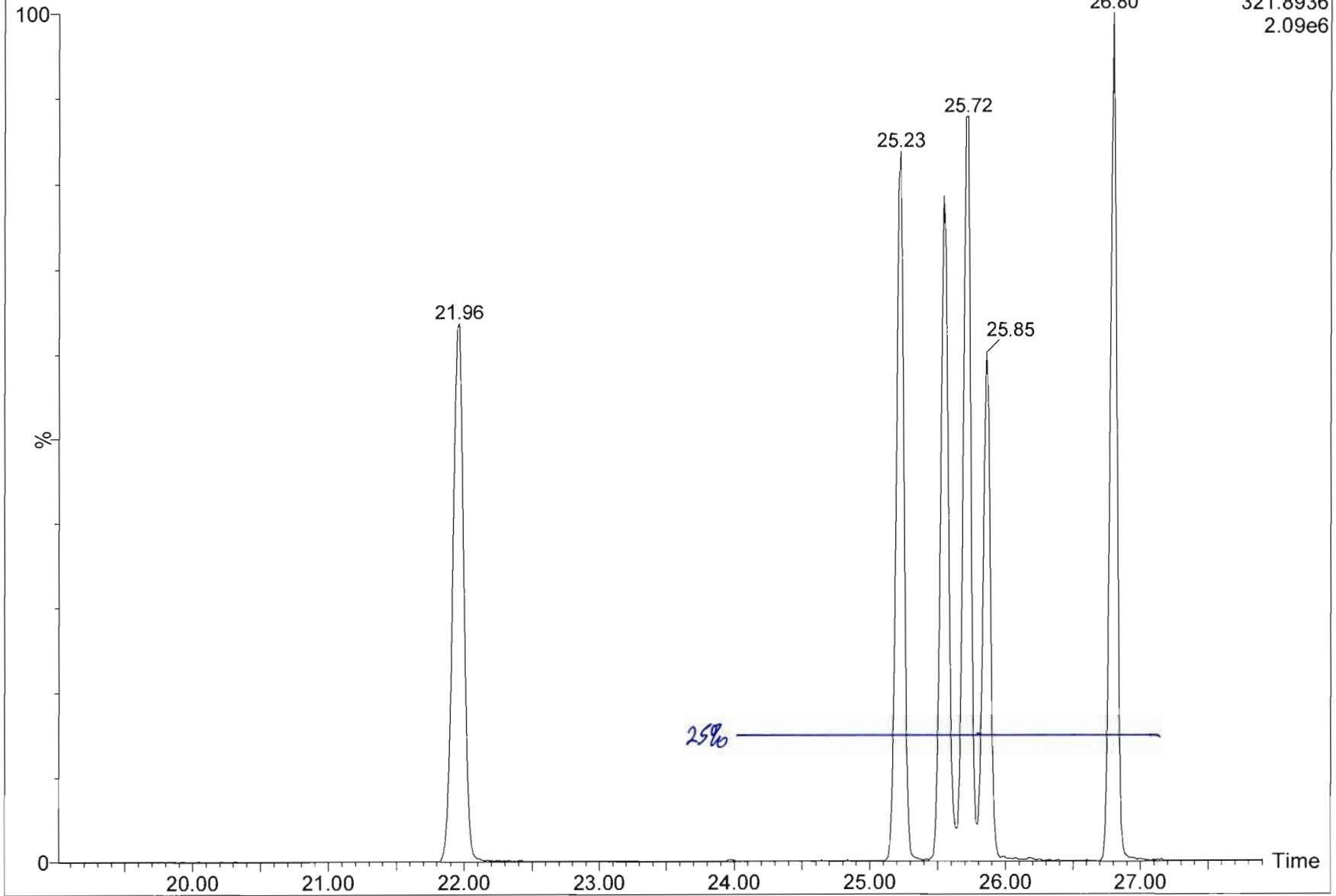
1613 CS3 1911604

200121R1\_4

1: Voltage SIR 14 Channels EI+

321.8936

2.09e6



Dataset: Untitled

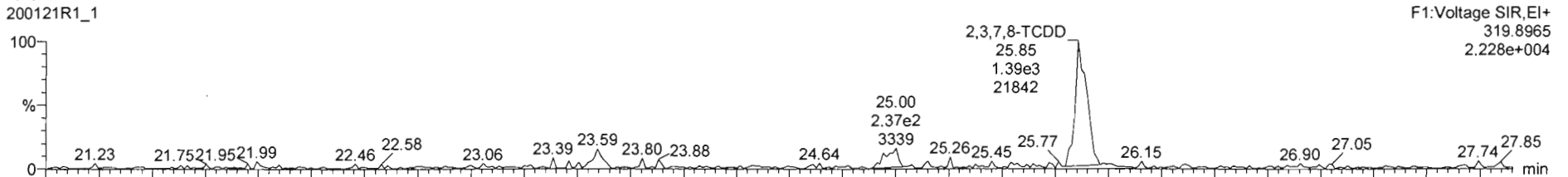
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: 22 Jan 2020 09:03:58

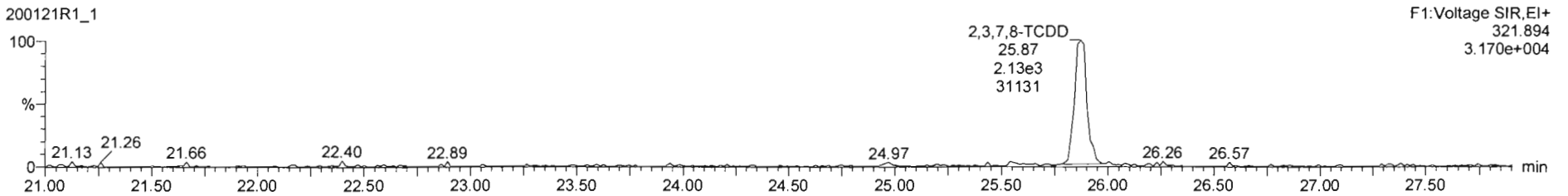
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**2,3,7,8-TCDD**

200121R1\_1

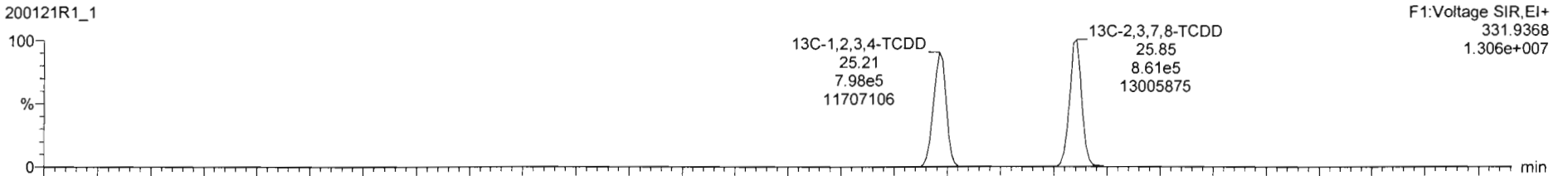


200121R1\_1

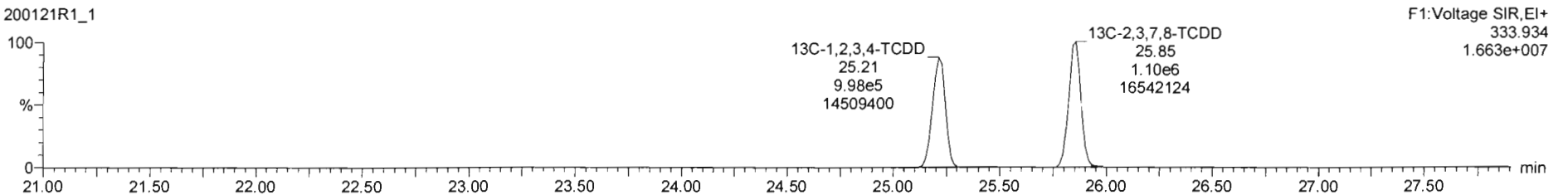


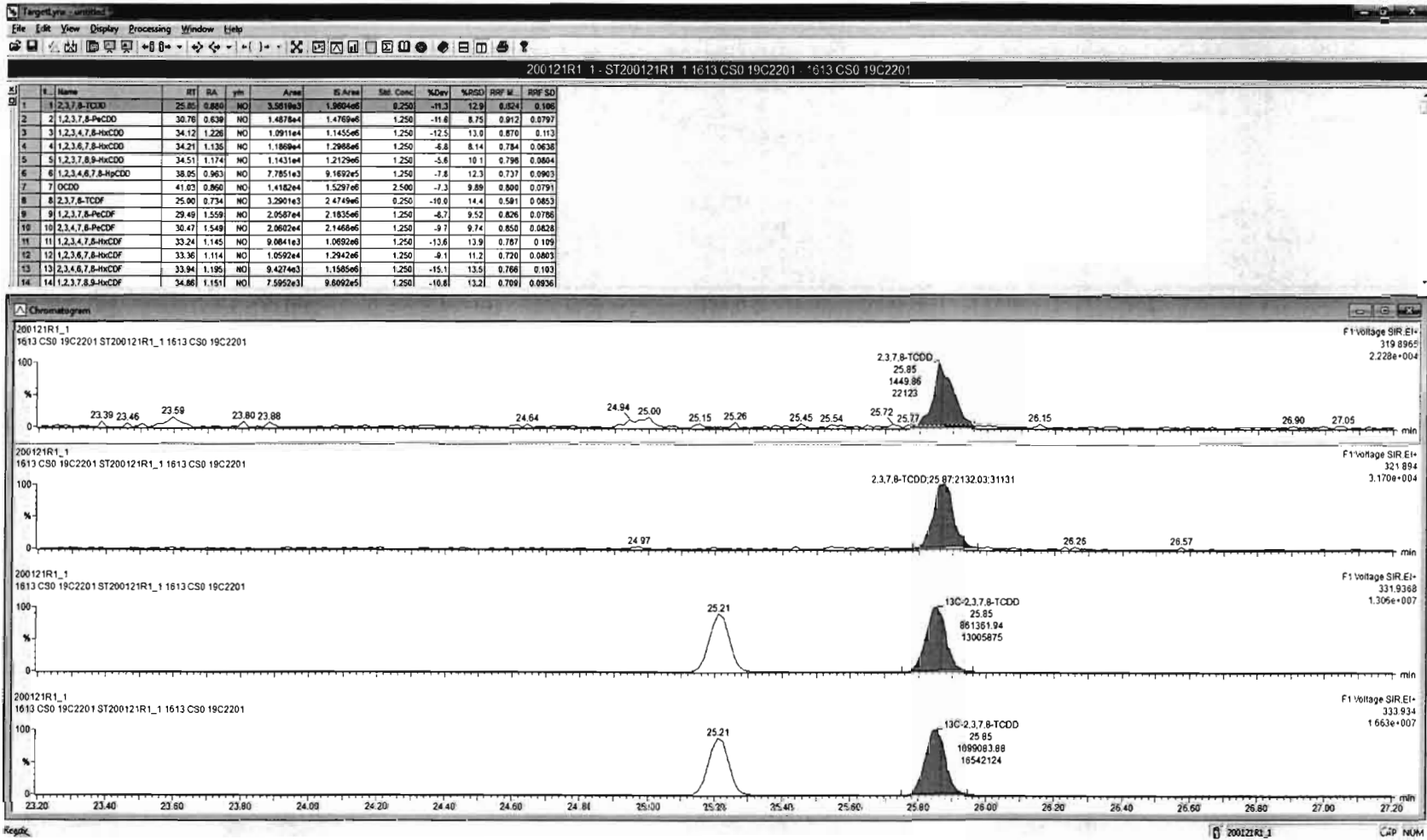
**13C-2,3,7,8-TCDD**

200121R1\_1



200121R1\_1





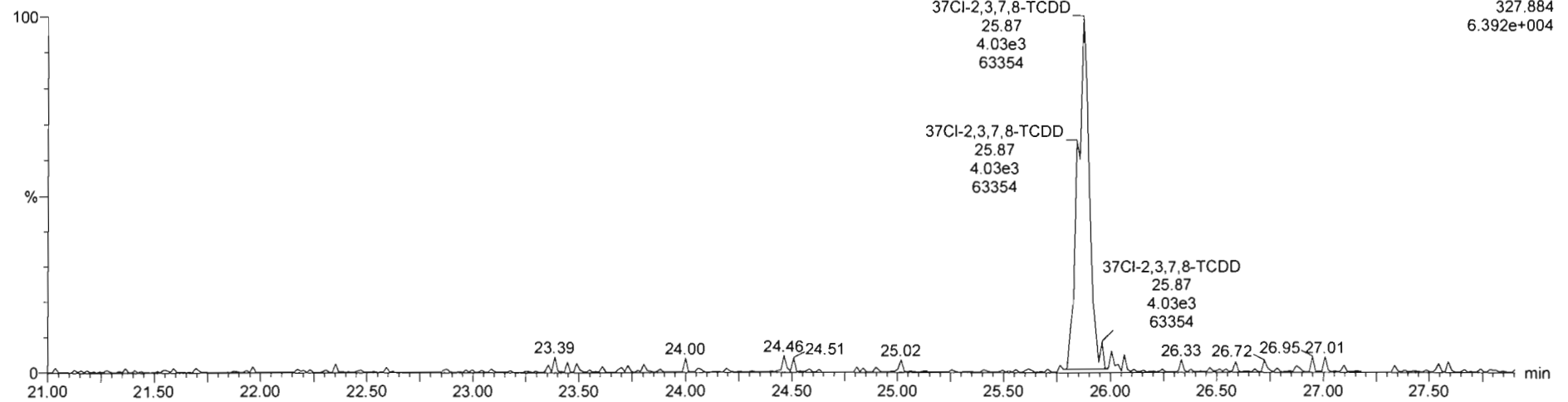
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_1, Date: 21-Jan-2020, Time: 14:11:21, ID: ST200121R1\_1 1613 CS0 19C2201, Description: 1613 CS0 19C2201

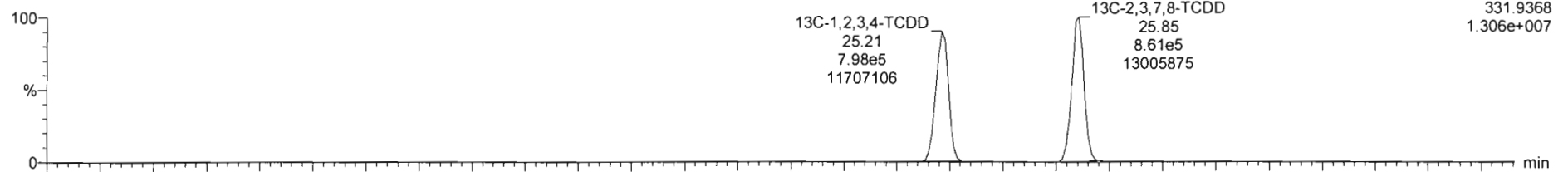
**37Cl-2,3,7,8-TCDD**

200121R1\_1

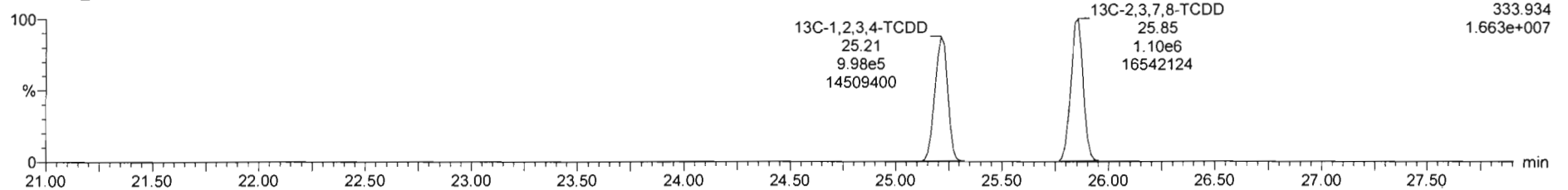


**13C-1,2,3,4-TCDD**

200121R1\_1



200121R1\_1



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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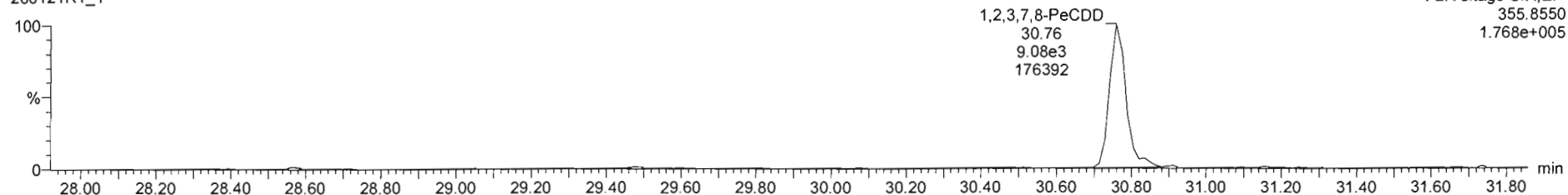
**1,2,3,7,8-PeCDD**

200121R1\_1



F2:Voltage SIR,EI+  
353.8576  
1.155e+005

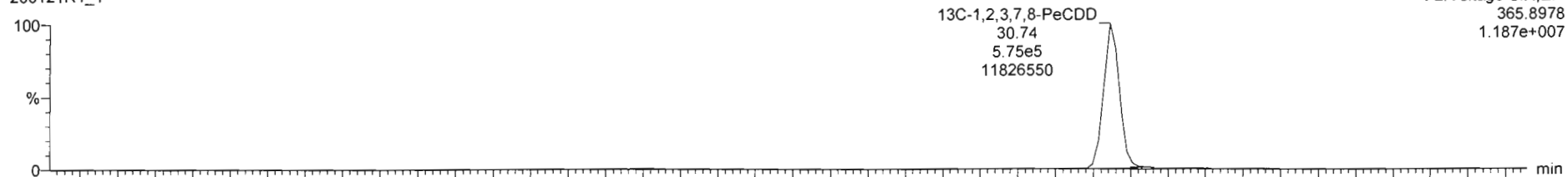
200121R1\_1



F2:Voltage SIR,EI+  
355.8550  
1.768e+005

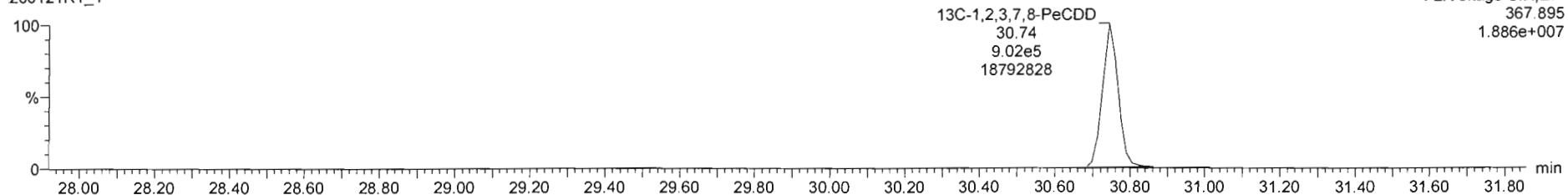
**13C-1,2,3,7,8-PeCDD**

200121R1\_1



F2:Voltage SIR,EI+  
365.8978  
1.187e+007

200121R1\_1



F2:Voltage SIR,EI+  
367.895  
1.886e+007

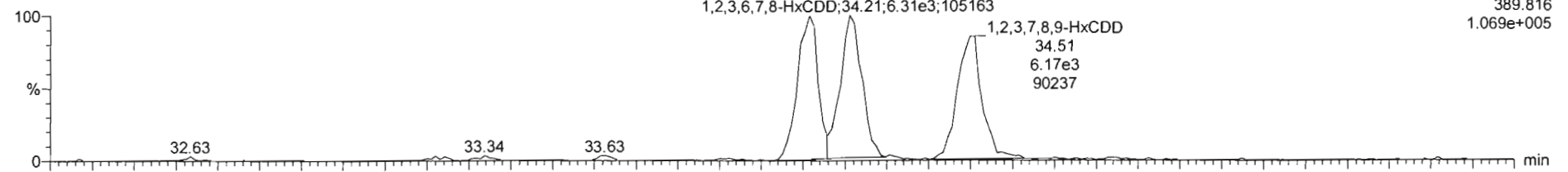
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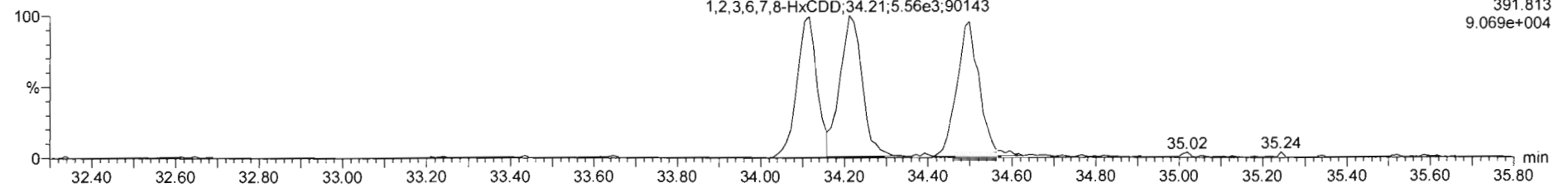
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1,2,3,4,7,8-HxCDD

200121R1\_1

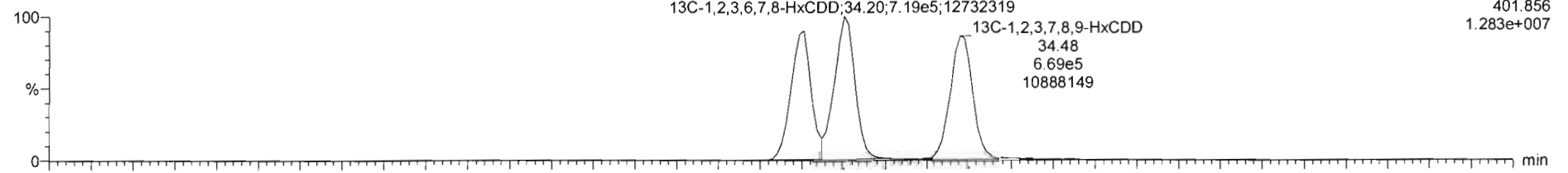


200121R1\_1

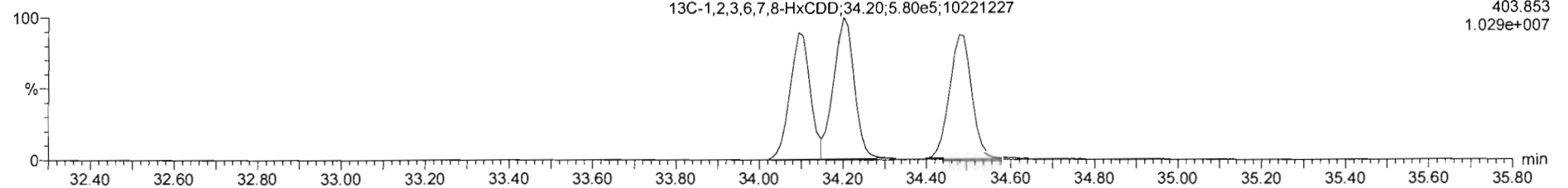


13C-1,2,3,4,7,8-HxCDD

200121R1\_1



200121R1\_1





Dataset: Untitled

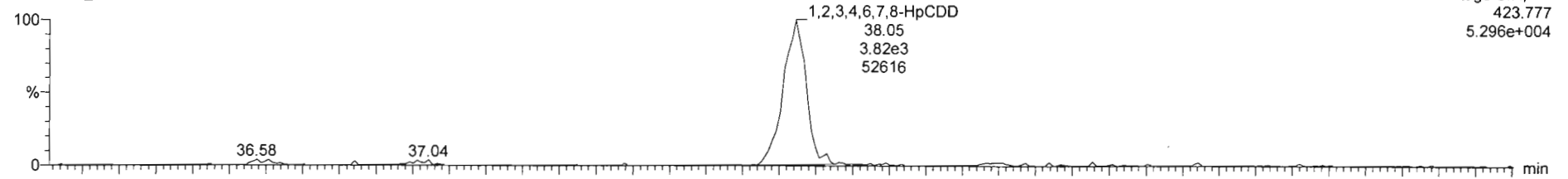
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

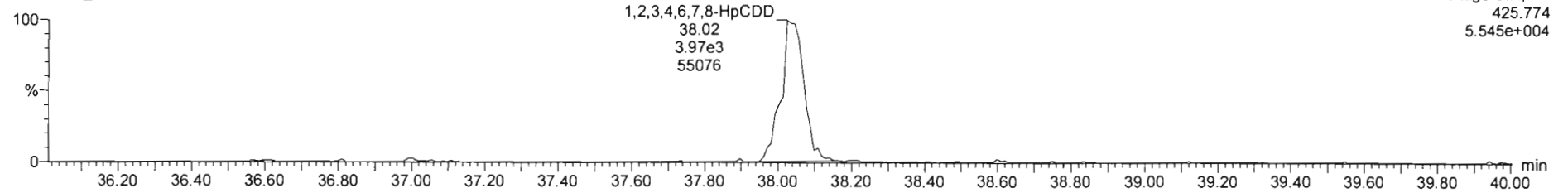
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1,2,3,4,6,7,8-HpCDD

200121R1\_1

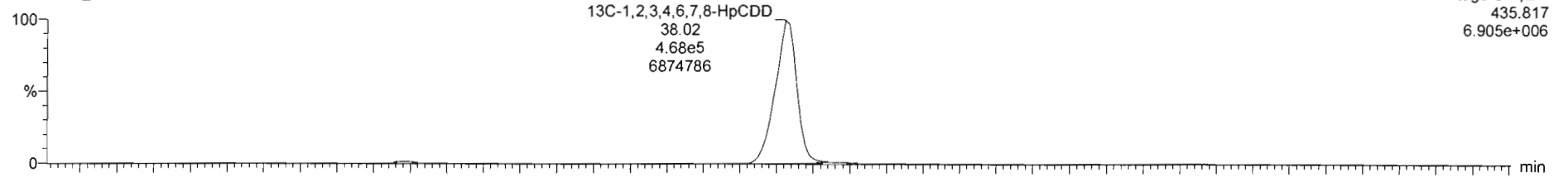


200121R1\_1

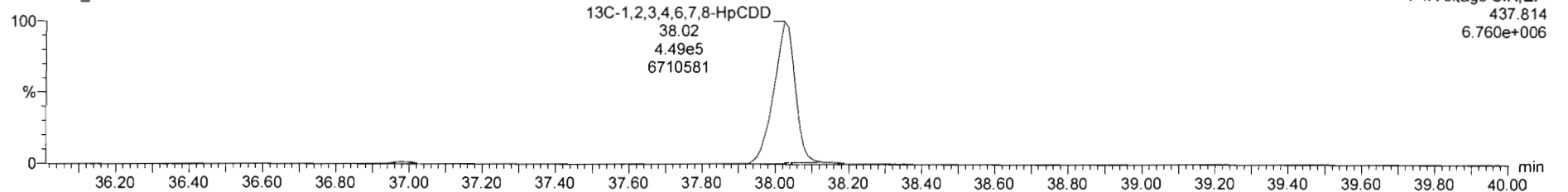


13C-1,2,3,4,6,7,8-HpCDD

200121R1\_1



200121R1\_1



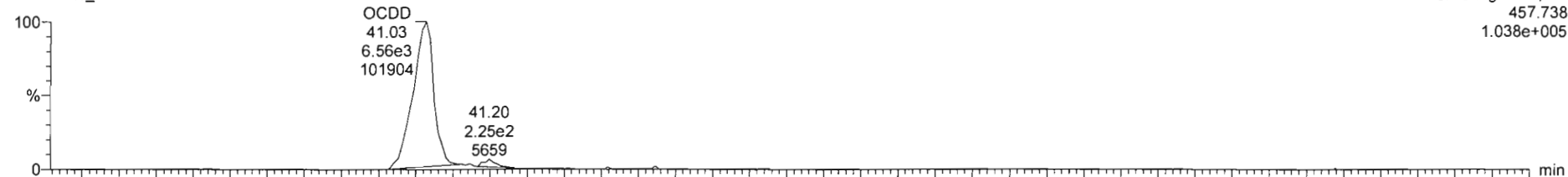
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

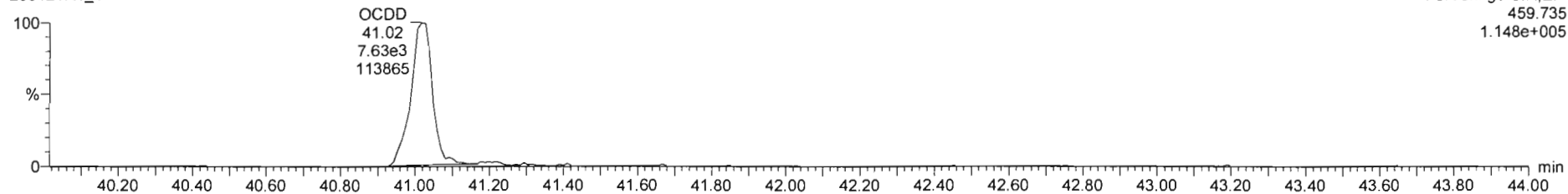
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OCDD

200121R1\_1

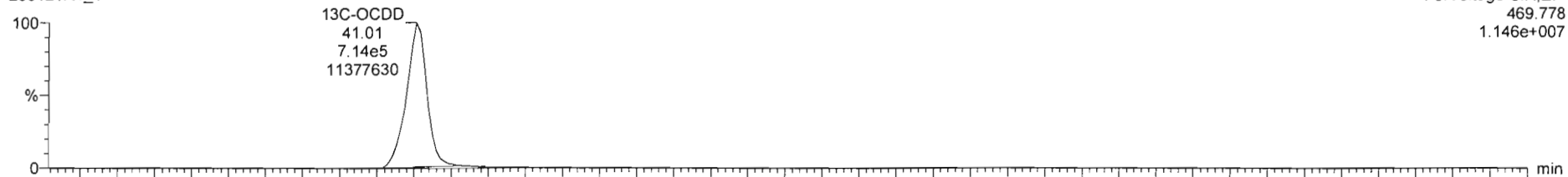


200121R1\_1

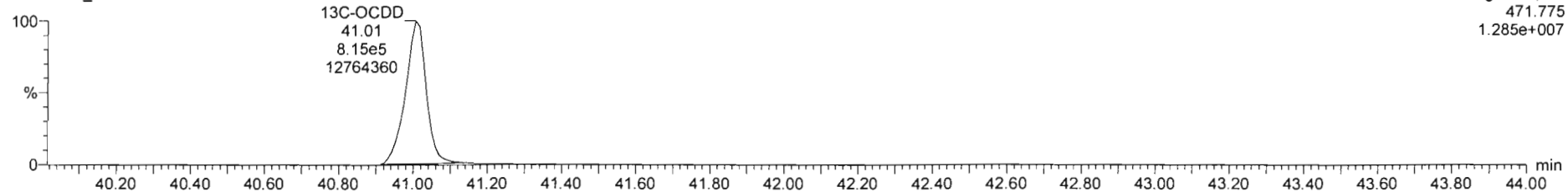


13C-OCDD

200121R1\_1



200121R1\_1



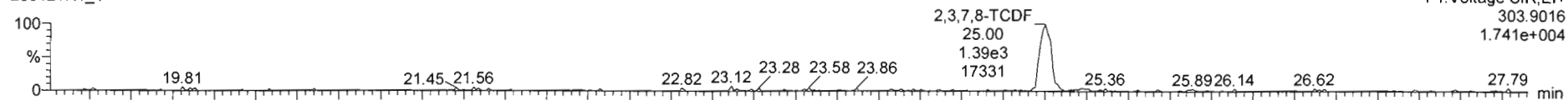
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_1, Date: 21-Jan-2020, Time: 14:11:21, ID: ST200121R1\_1 1613 CS0 19C2201, Description: 1613 CS0 19C2201

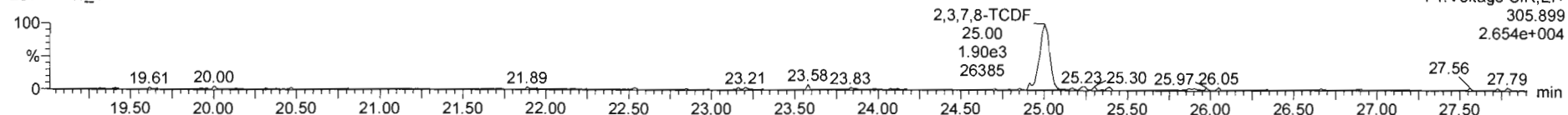
**2,3,7,8-TCDF**

200121R1\_1



F1: Voltage SIR, EI+  
303.9016  
1.741e+004

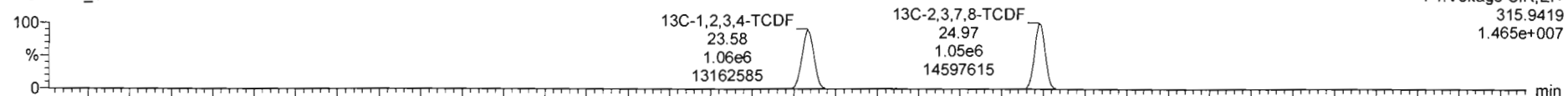
200121R1\_1



F1: Voltage SIR, EI+  
305.899  
2.654e+004

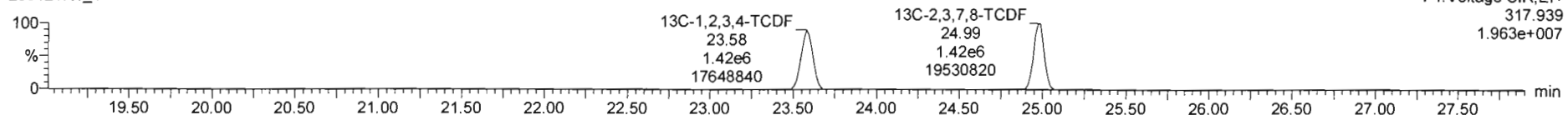
**13C-2,3,7,8-TCDF**

200121R1\_1



F1: Voltage SIR, EI+  
315.9419  
1.465e+007

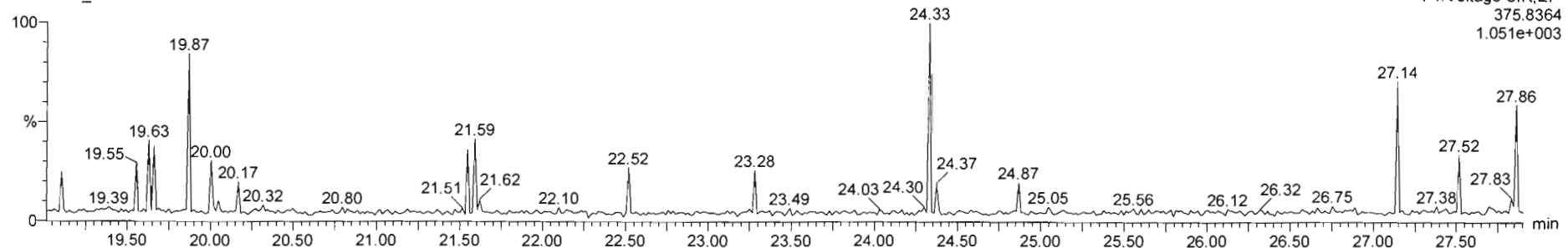
200121R1\_1



F1: Voltage SIR, EI+  
317.939  
1.963e+007

**DPE1**

200121R1\_1



F1: Voltage SIR, EI+  
375.8364  
1.051e+003

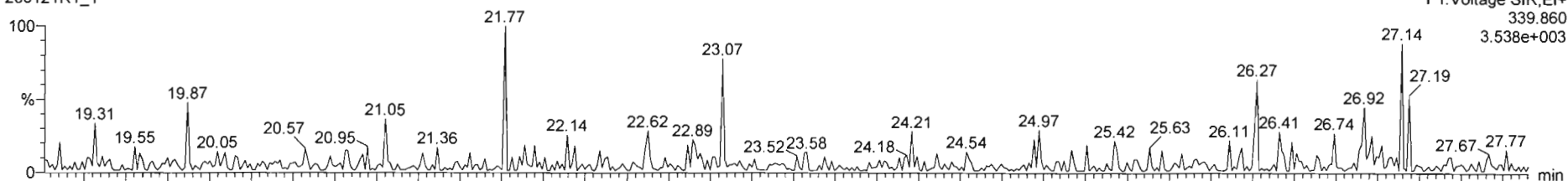
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

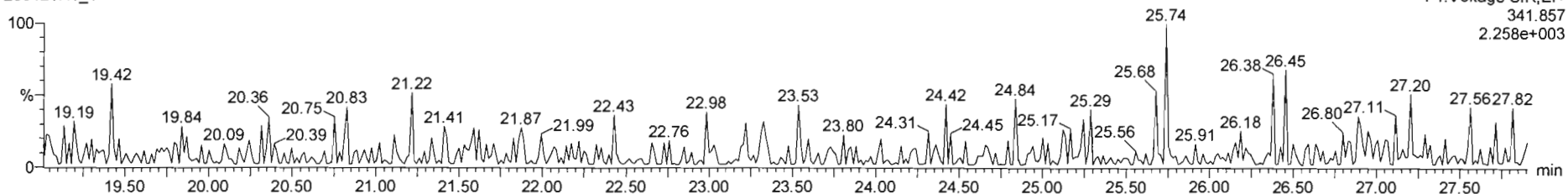
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200121R1\_1

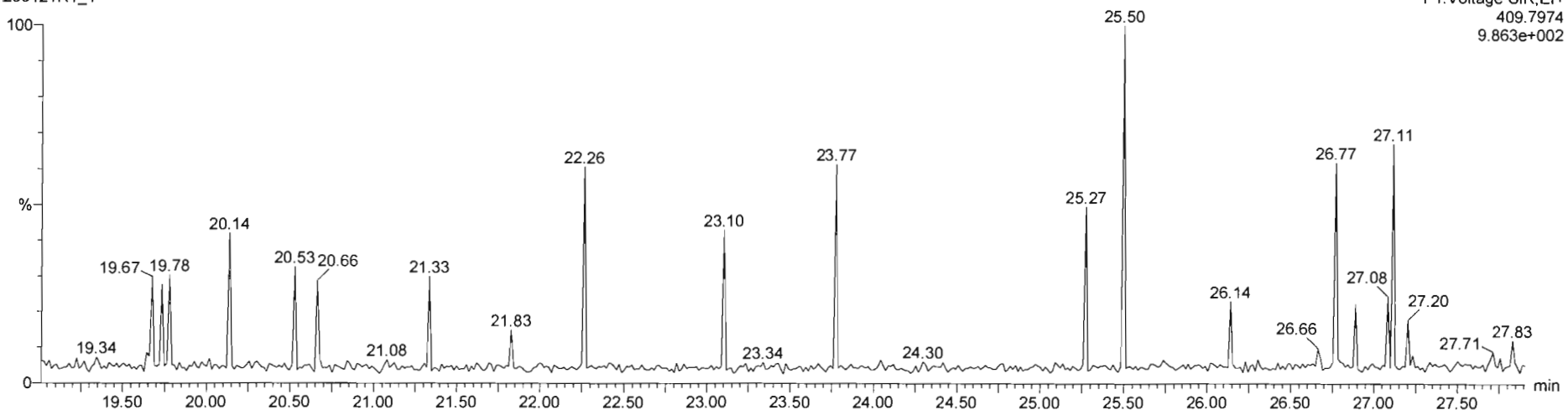


200121R1\_1



DPE6

200121R1\_1



Dataset: Untitled

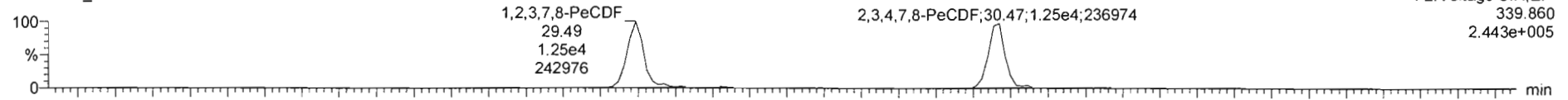
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

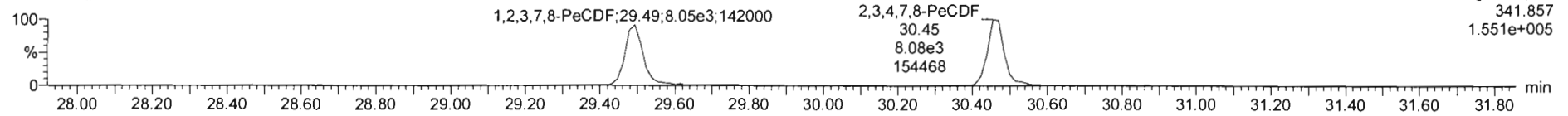
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**1,2,3,7,8-PeCDF**

200121R1\_1

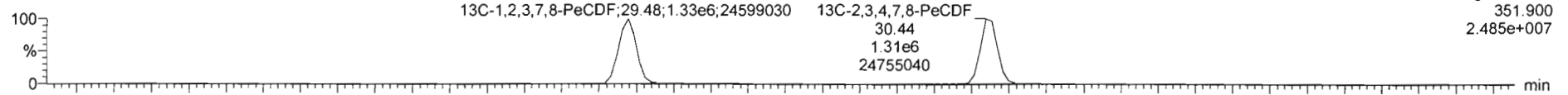


200121R1\_1

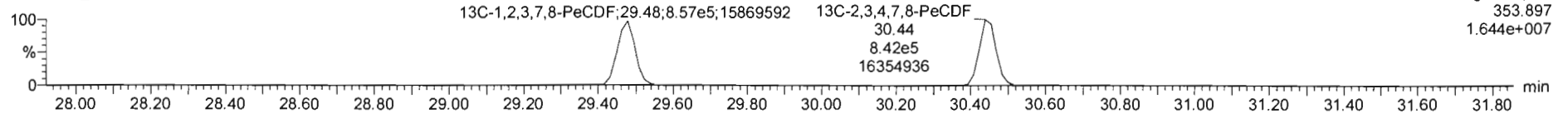


**13C-1,2,3,7,8-PeCDF**

200121R1\_1

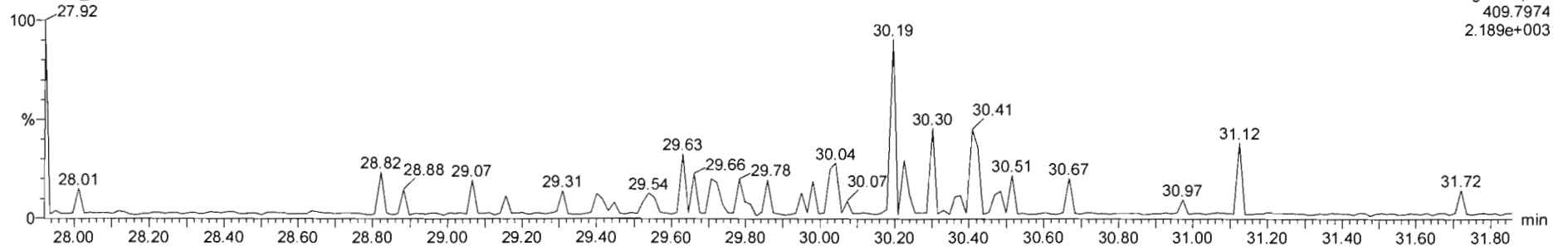


200121R1\_1



**DPE2**

200121R1\_1



Dataset: Untitled

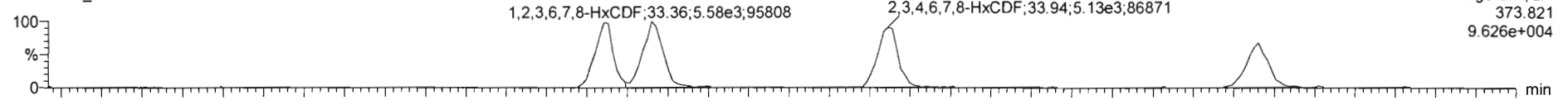
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_1, Date: 21-Jan-2020, Time: 14:11:21, ID: ST200121R1\_1 1613 CS0 19C2201, Description: 1613 CS0 19C2201

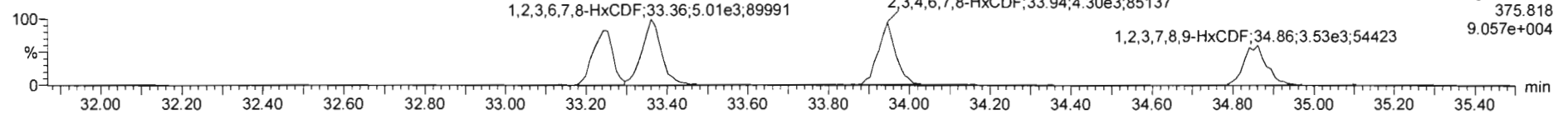
**1,2,3,4,7,8-HxCDF**

200121R1\_1



F3:Voltage SIR,EI+  
373.821  
9.626e+004

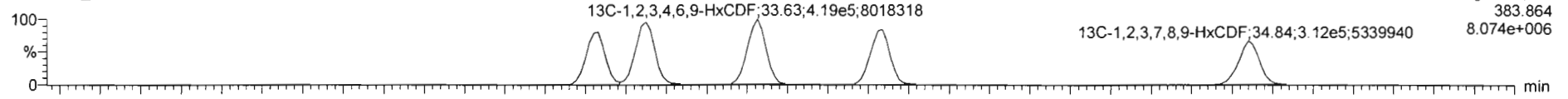
200121R1\_1



F3:Voltage SIR,EI+  
375.818  
9.057e+004

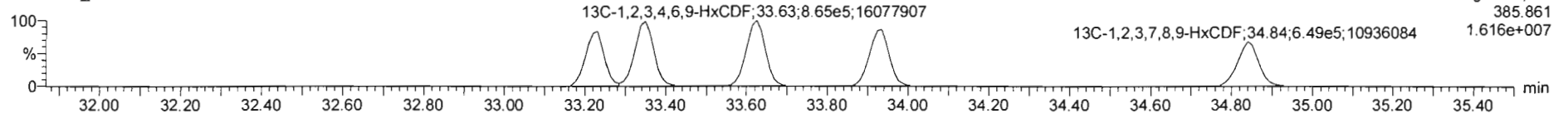
**13C-1,2,3,4,7,8-HxCDF**

200121R1\_1



F3:Voltage SIR,EI+  
383.864  
8.074e+006

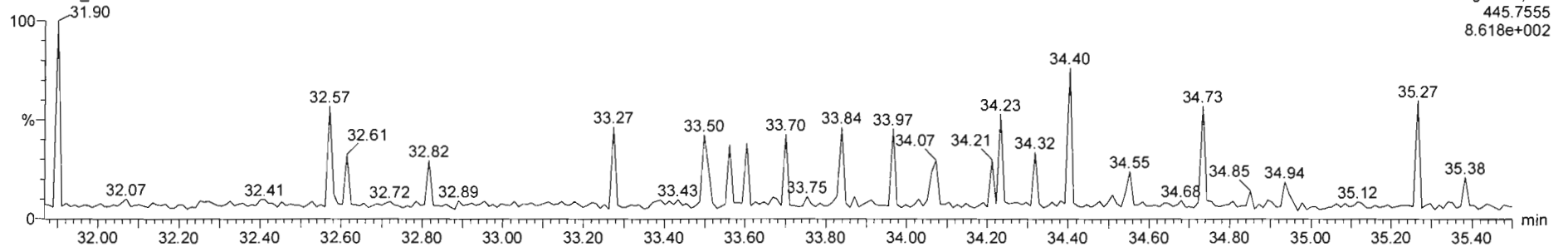
200121R1\_1



F3:Voltage SIR,EI+  
385.861  
1.616e+007

**DPE3**

200121R1\_1



F3:Voltage SIR,EI+  
445.7555  
8.618e+002

Dataset: Untitled

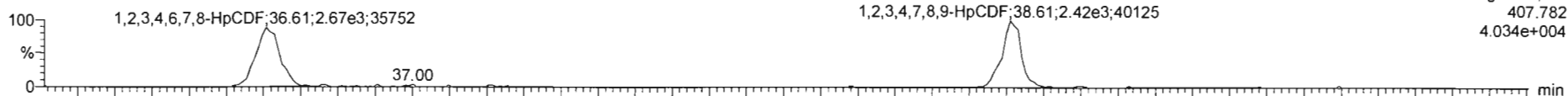
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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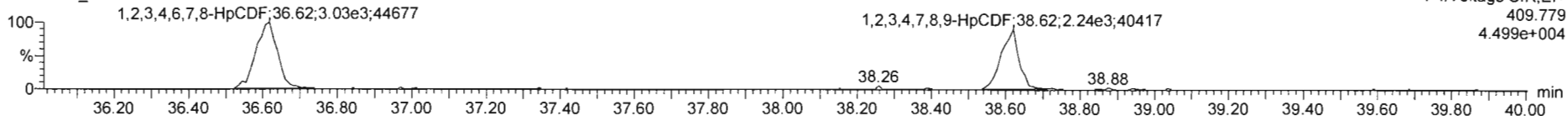
**1,2,3,4,6,7,8-HpCDF**

200121R1\_1



F4: Voltage SIR, EI+  
407.782  
4.034e+004

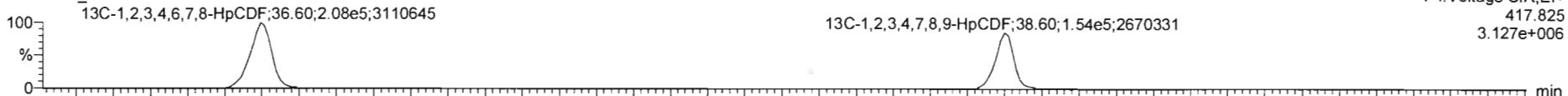
200121R1\_1



F4: Voltage SIR, EI+  
409.779  
4.499e+004

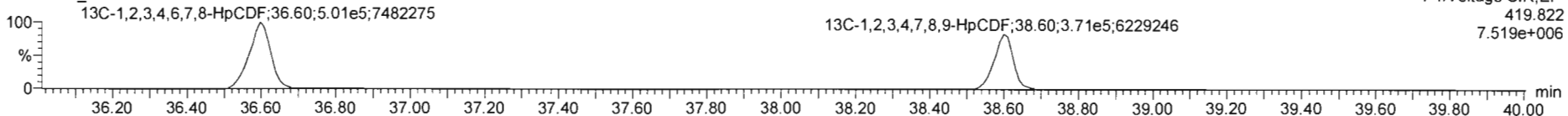
**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_1



F4: Voltage SIR, EI+  
417.825  
3.127e+006

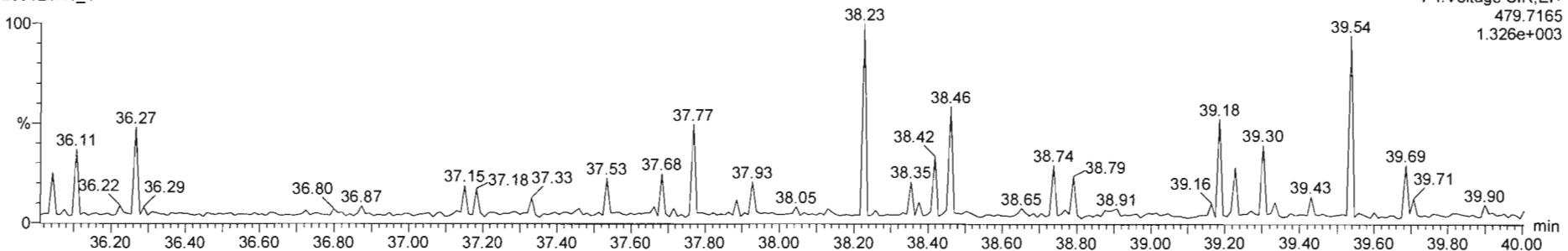
200121R1\_1



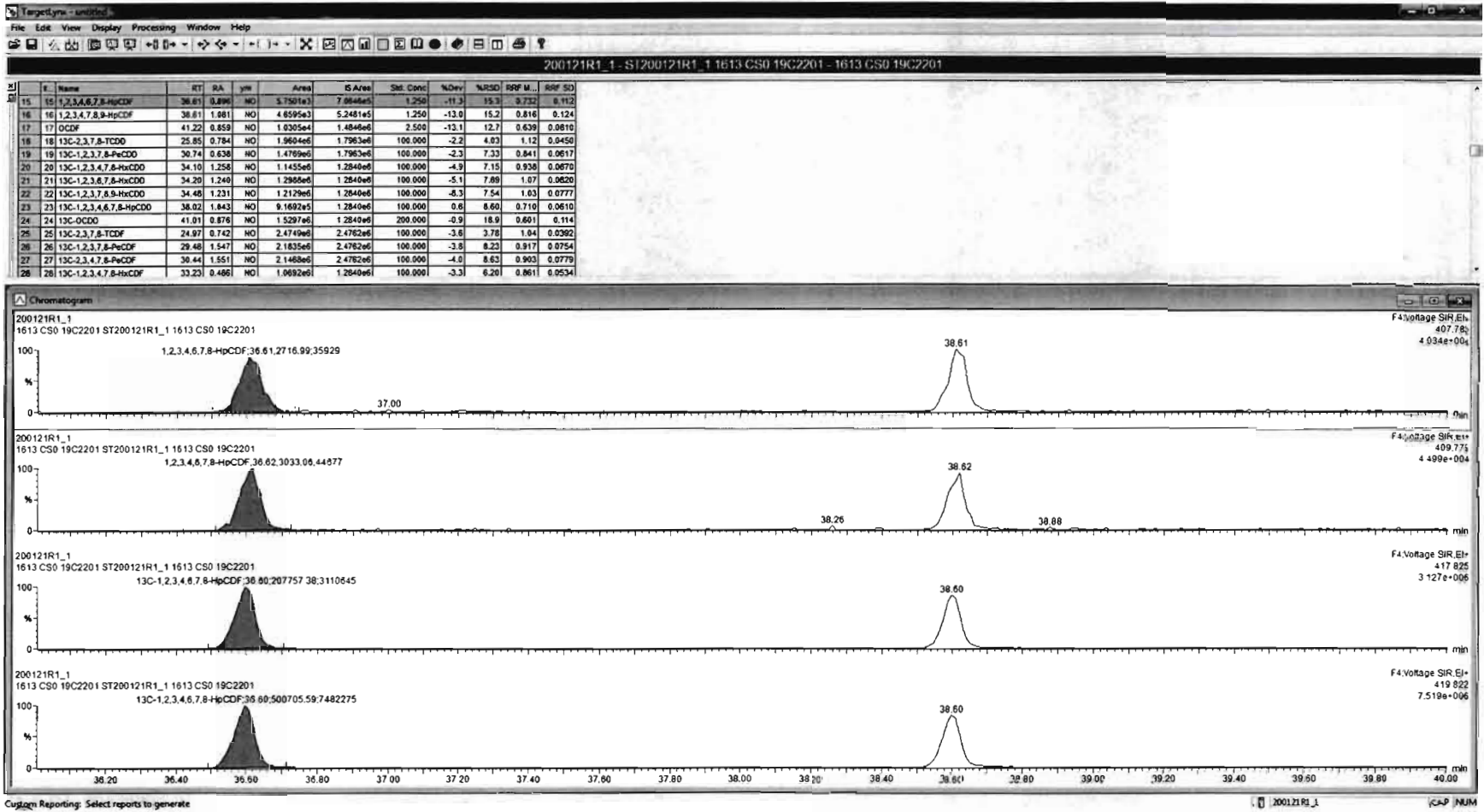
F4: Voltage SIR, EI+  
419.822  
7.519e+006

**DPE4**

200121R1\_1



F4: Voltage SIR, EI+  
479.7165  
1.326e+003

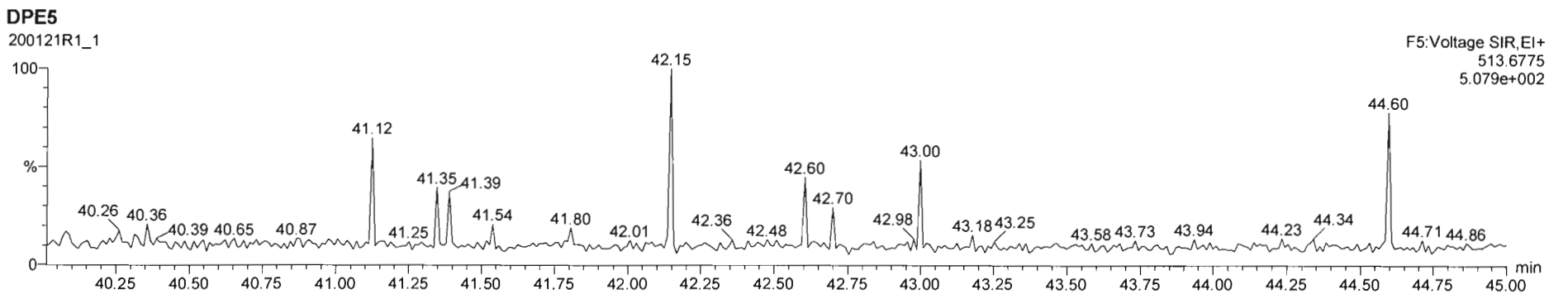
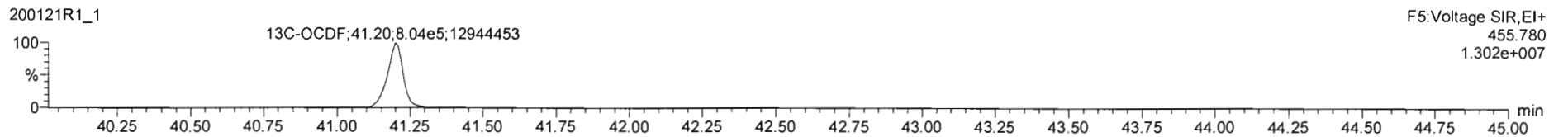
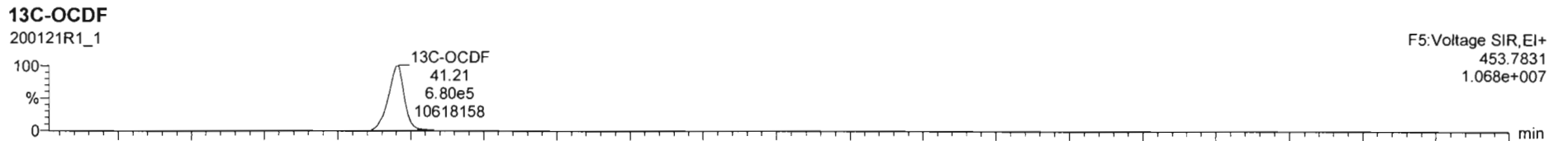
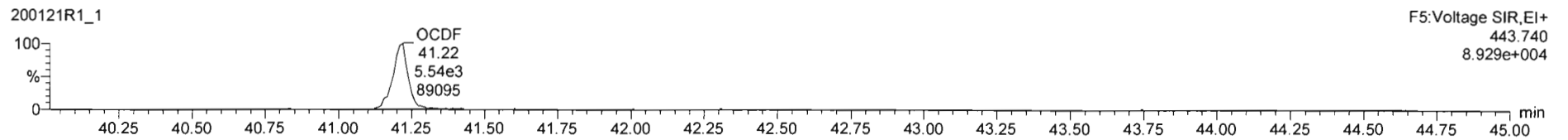
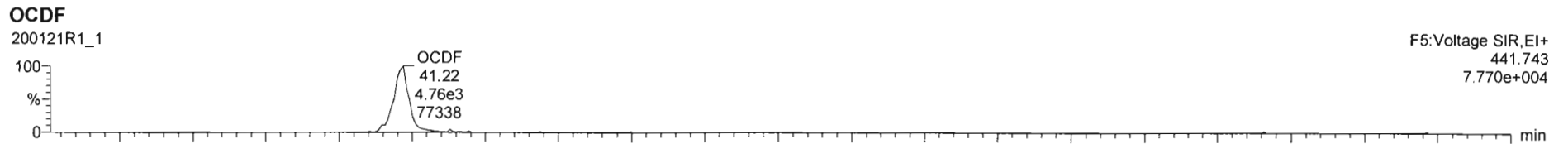




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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

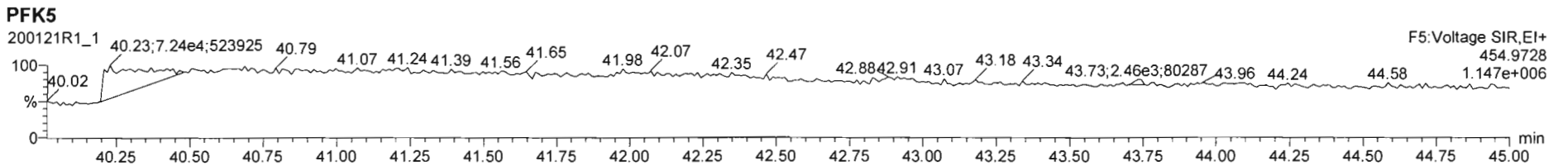
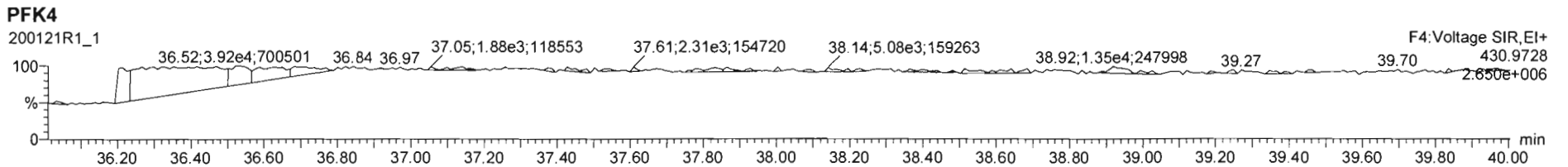
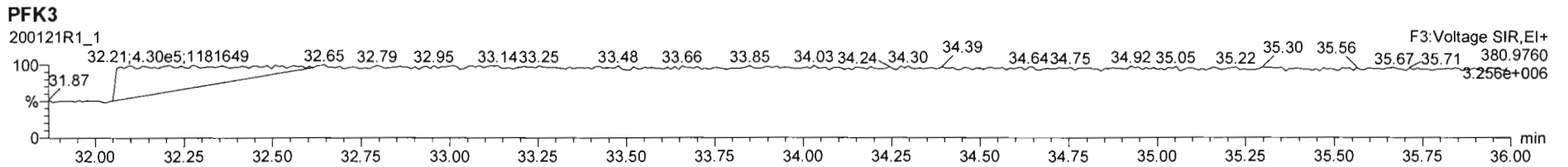
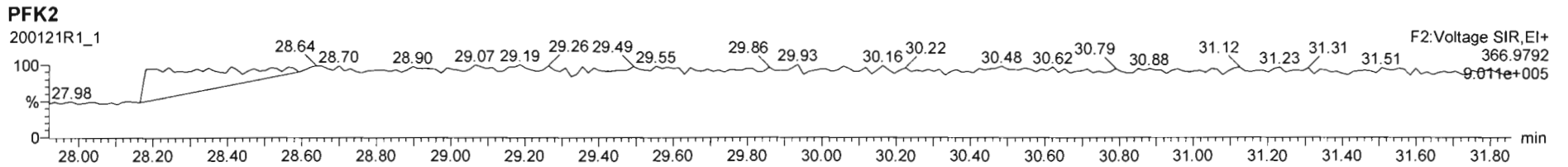
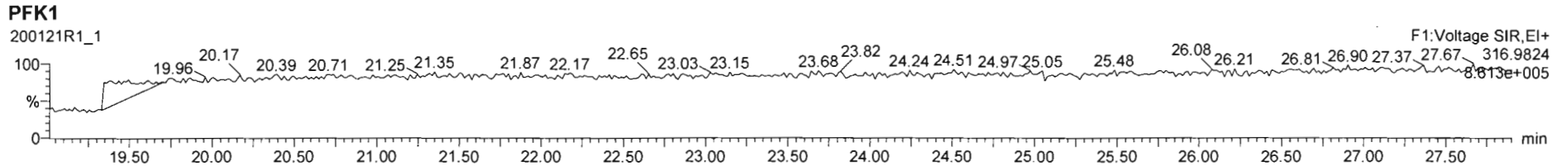
Name: 200121R1\_1, Date: 21-Jan-2020, Time: 14:11:21, ID: ST200121R1\_1 1613 CS0 19C2201, Description: 1613 CS0 19C2201



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_1, Date: 21-Jan-2020, Time: 14:11:21, ID: ST200121R1\_1 1613 CS0 19C2201, Description: 1613 CS0 19C2201



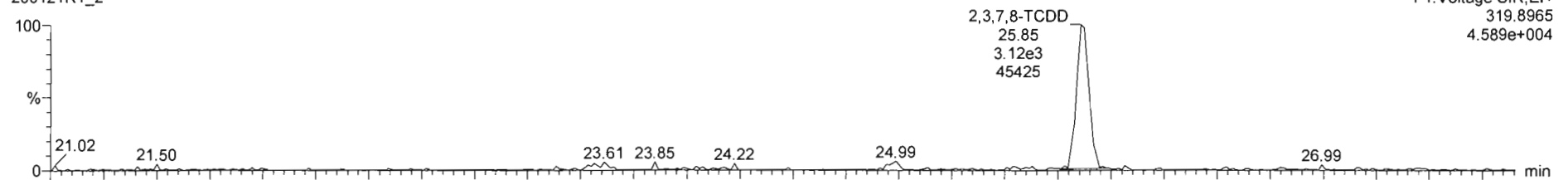
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

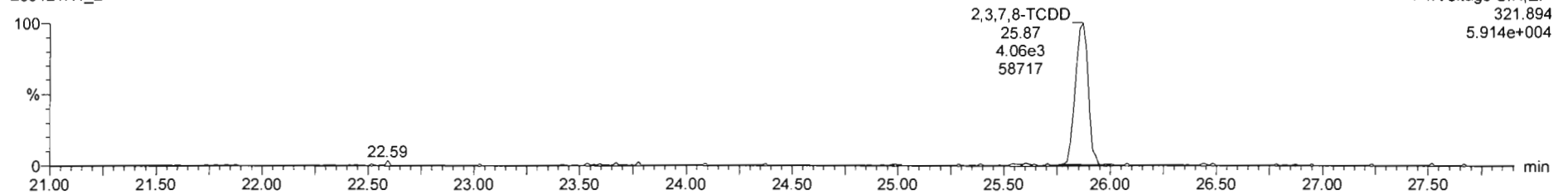
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**2,3,7,8-TCDD**

200121R1\_2

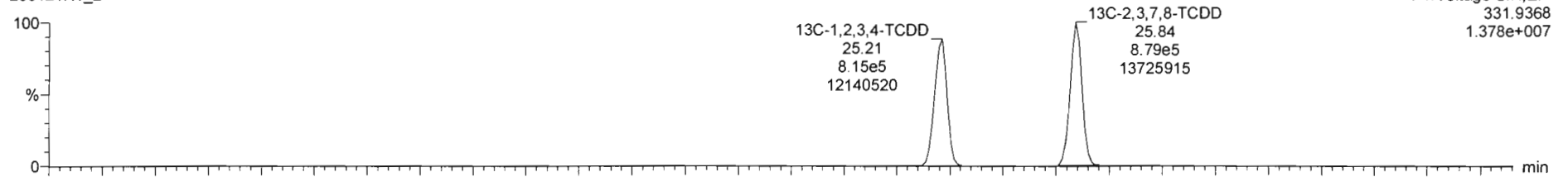


200121R1\_2

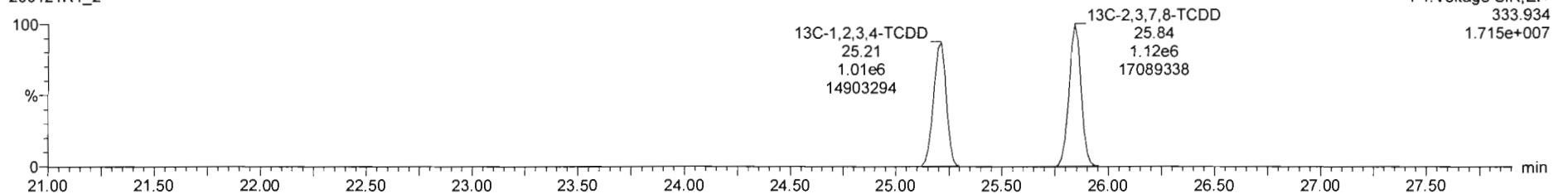


**13C-2,3,7,8-TCDD**

200121R1\_2



200121R1\_2



Dataset: Untitled

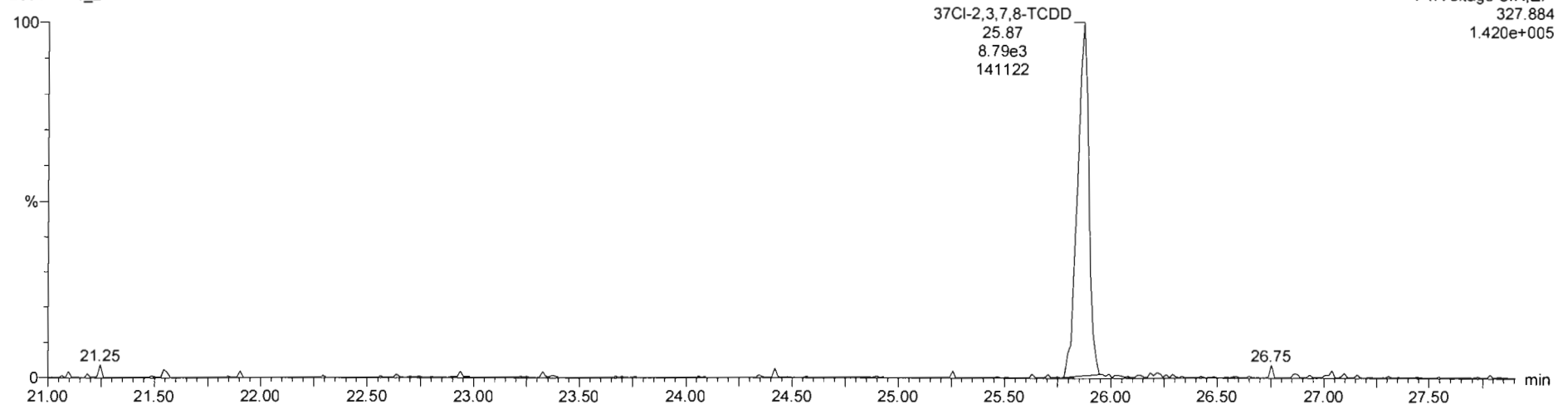
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

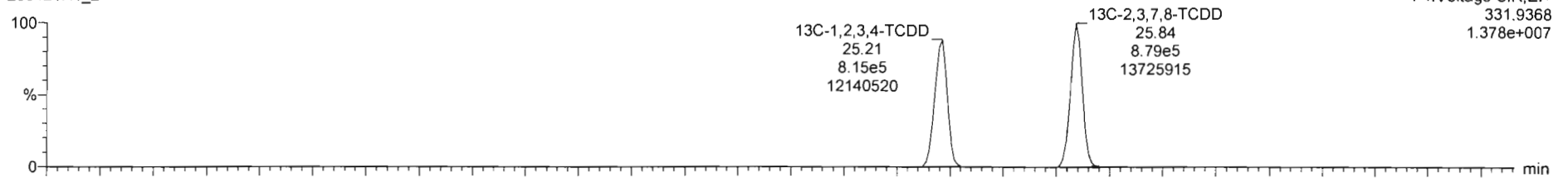
**37Cl-2,3,7,8-TCDD**

200121R1\_2

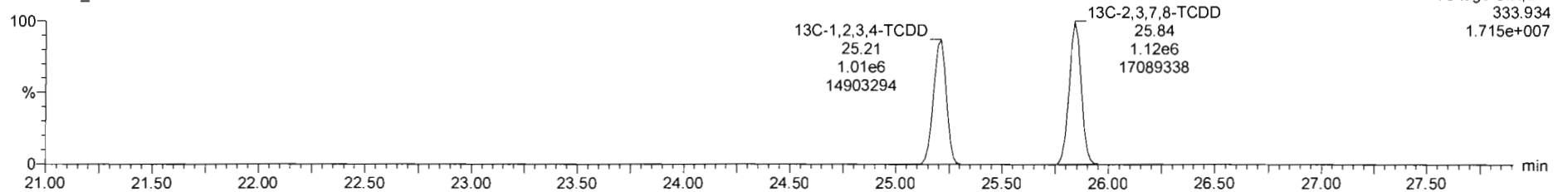


**13C-1,2,3,4-TCDD**

200121R1\_2



200121R1\_2



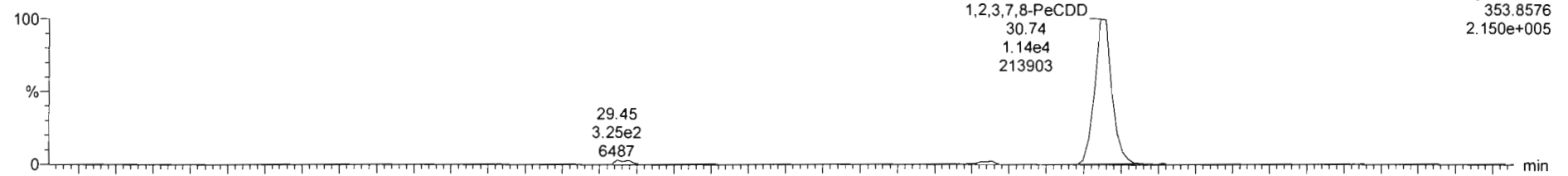
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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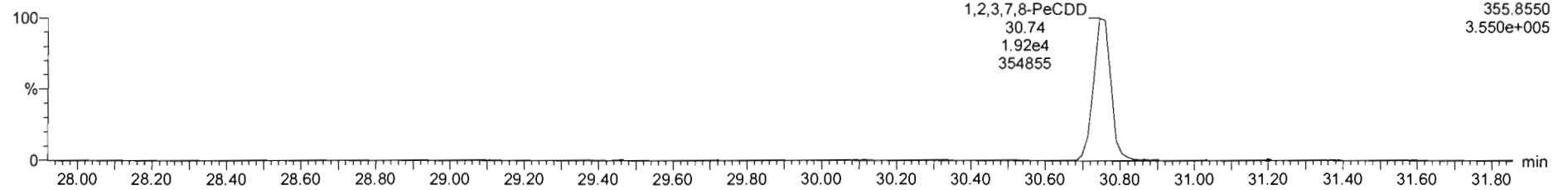
1,2,3,7,8-PeCDD

200121R1\_2



F2: Voltage SIR, EI+  
353.8576  
2.150e+005

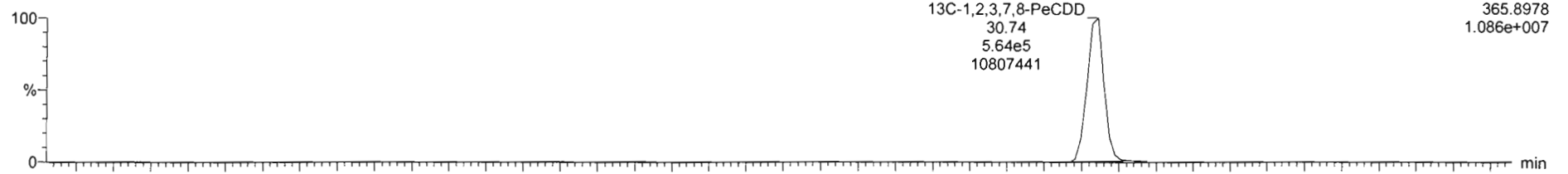
200121R1\_2



F2: Voltage SIR, EI+  
355.8550  
3.550e+005

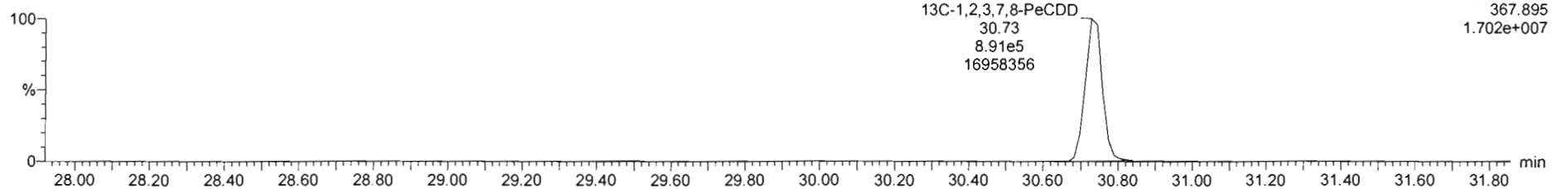
13C-1,2,3,7,8-PeCDD

200121R1\_2



F2: Voltage SIR, EI+  
365.8978  
1.086e+007

200121R1\_2



F2: Voltage SIR, EI+  
367.895  
1.702e+007

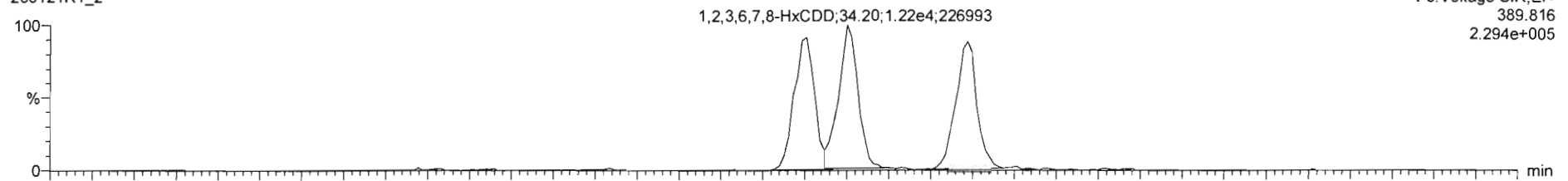
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

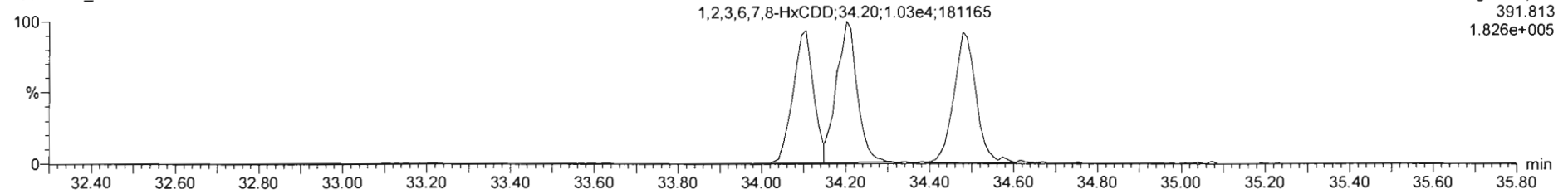
**1,2,3,4,7,8-HxCDD**

200121R1\_2



F3:Voltage SIR,EI+  
389.816  
2.294e+005

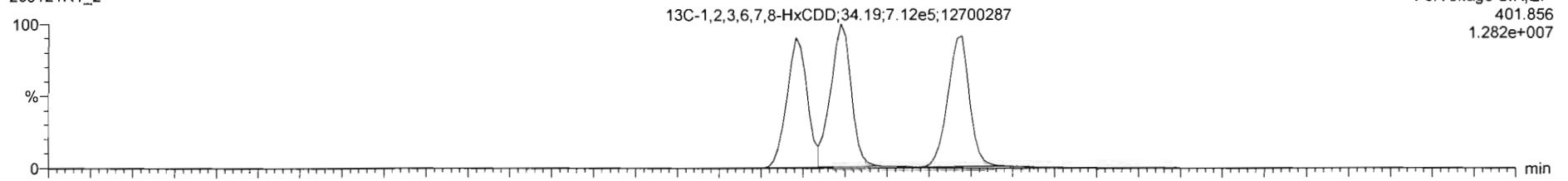
200121R1\_2



F3:Voltage SIR,EI+  
391.813  
1.826e+005

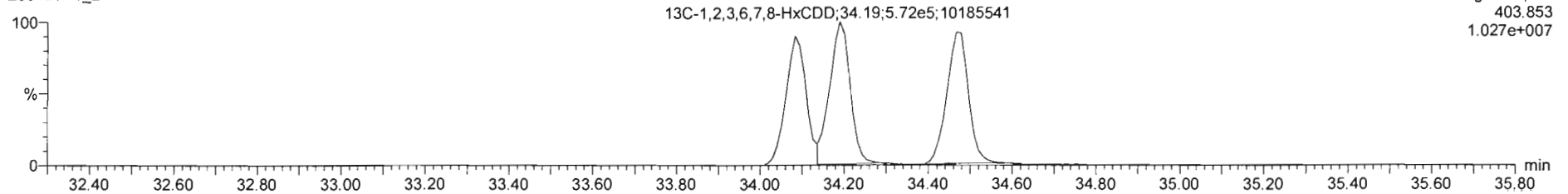
**13C-1,2,3,4,7,8-HxCDD**

200121R1\_2



F3:Voltage SIR,EI+  
401.856  
1.282e+007

200121R1\_2



F3:Voltage SIR,EI+  
403.853  
1.027e+007

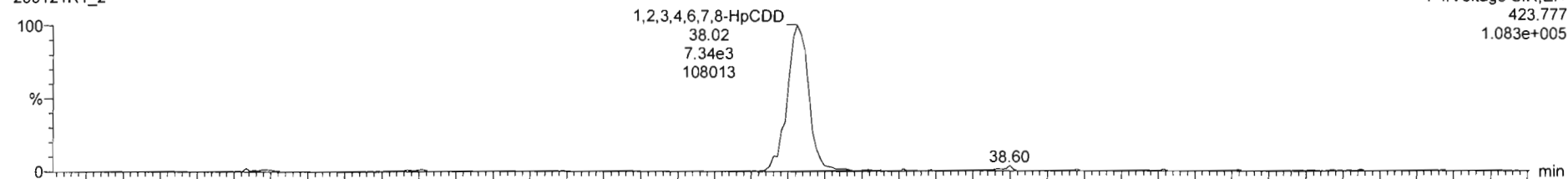
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

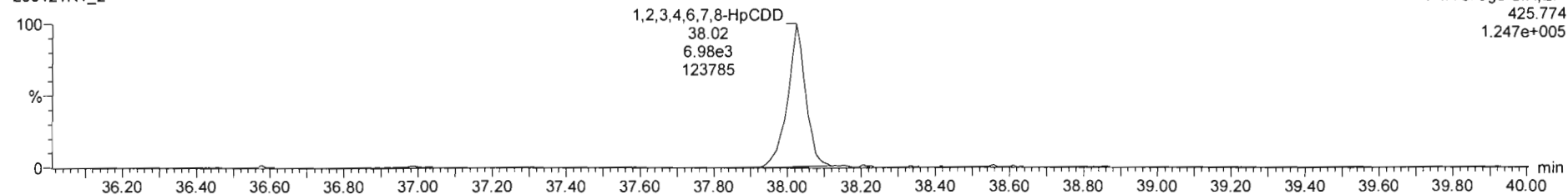
**1,2,3,4,6,7,8-HpCDD**

200121R1\_2



F4:Voltage SIR,EI+  
423.777  
1.083e+005

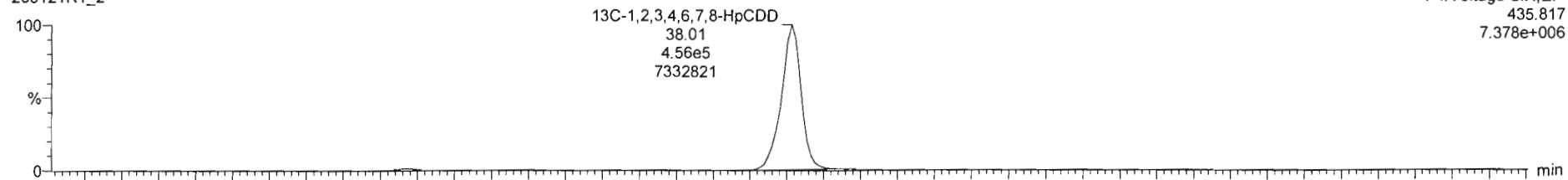
200121R1\_2



F4:Voltage SIR,EI+  
425.774  
1.247e+005

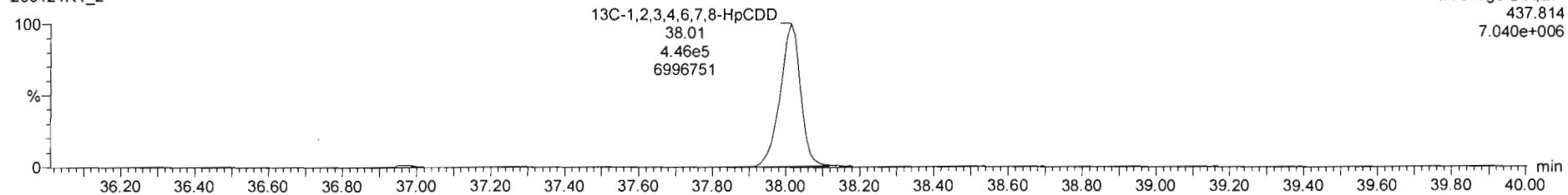
**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_2



F4:Voltage SIR,EI+  
435.817  
7.378e+006

200121R1\_2



F4:Voltage SIR,EI+  
437.814  
7.040e+006

Dataset: Untitled

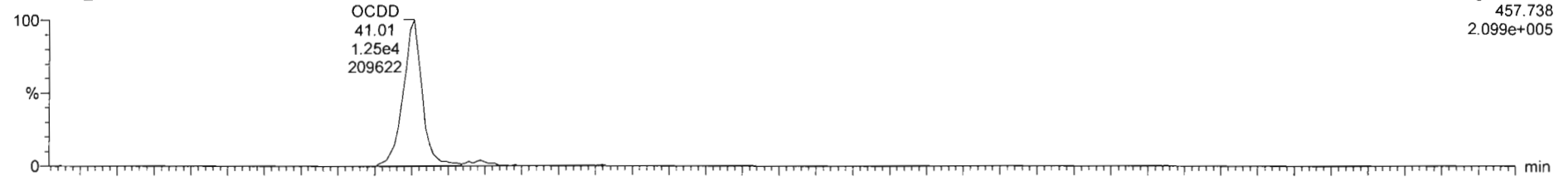
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

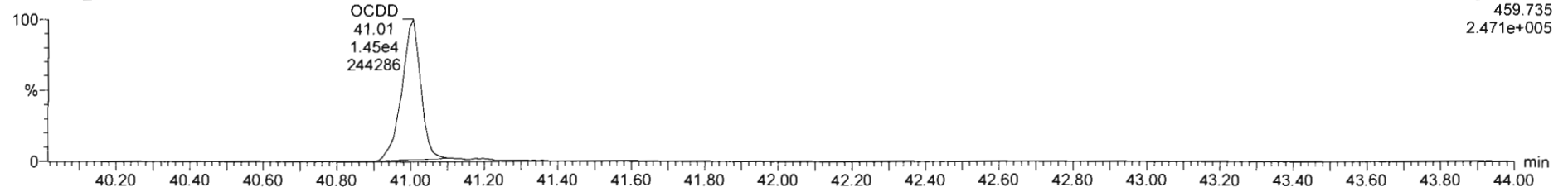
Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

**OCDD**

200121R1\_2

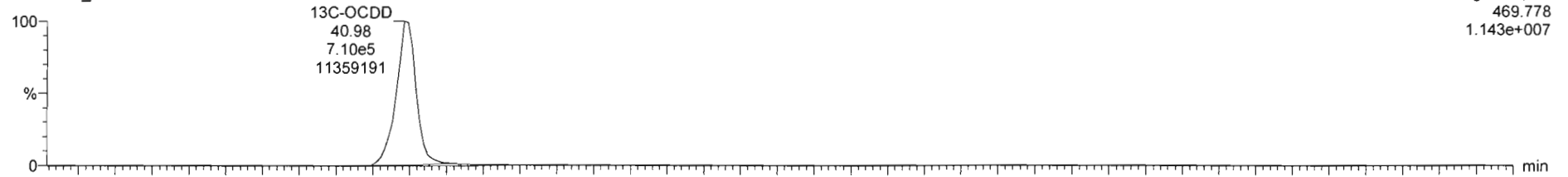


200121R1\_2

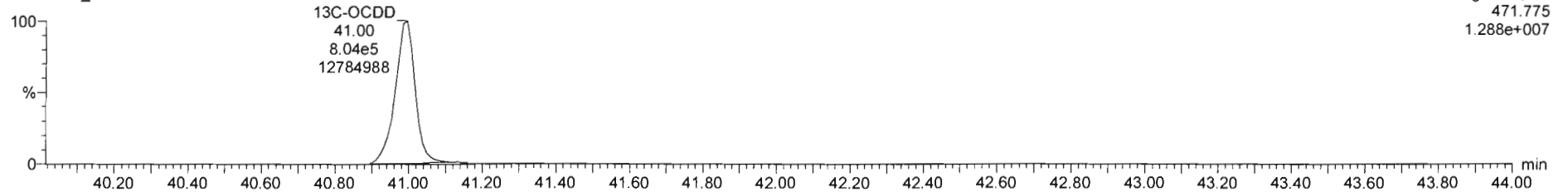


**13C-OCDD**

200121R1\_2



200121R1\_2





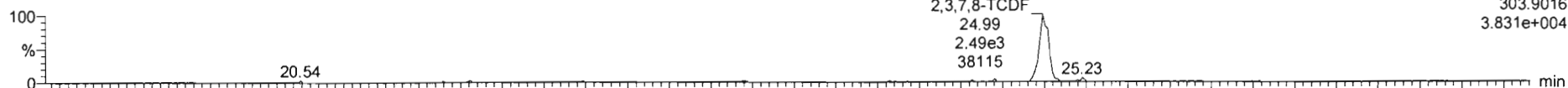
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

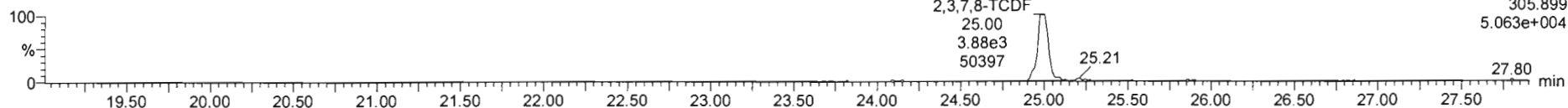
Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

**2,3,7,8-TCDF**

200121R1\_2

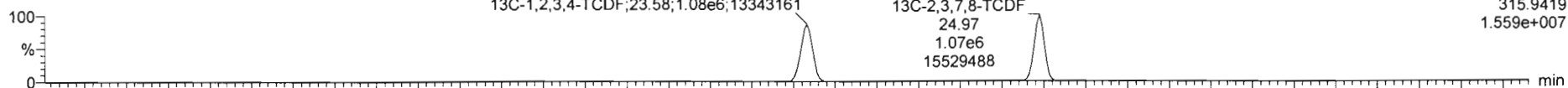


200121R1\_2

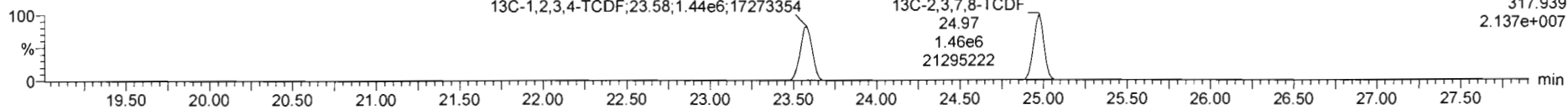


**13C-2,3,7,8-TCDF**

200121R1\_2

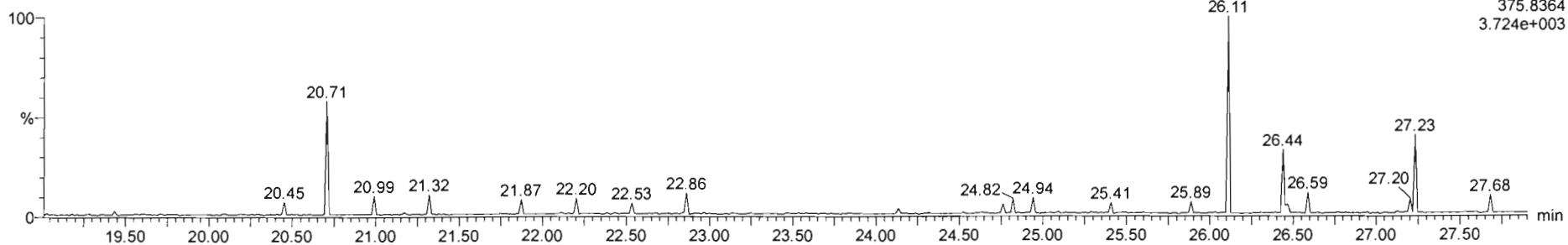


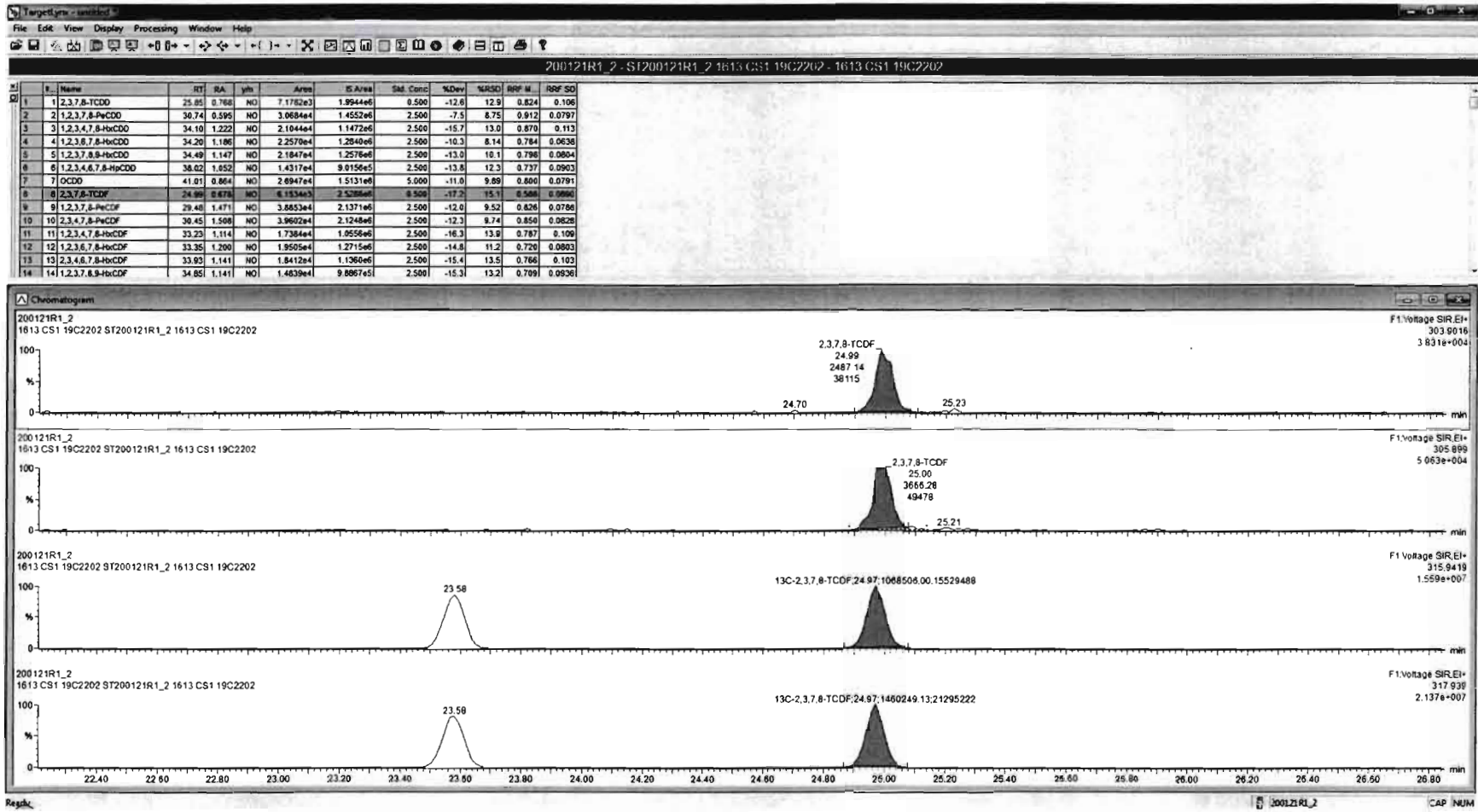
200121R1\_2



**DPE1**

200121R1\_2





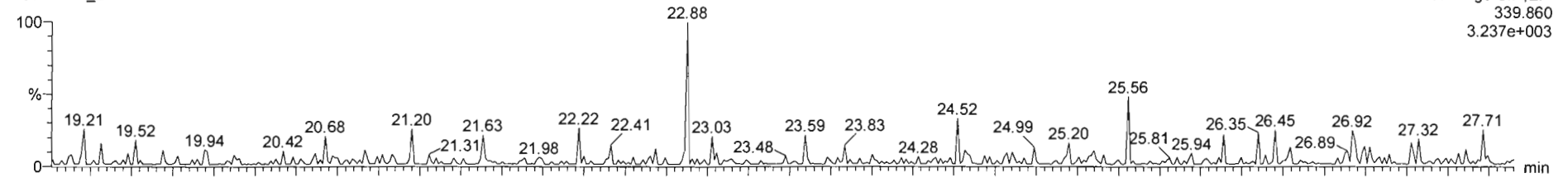
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

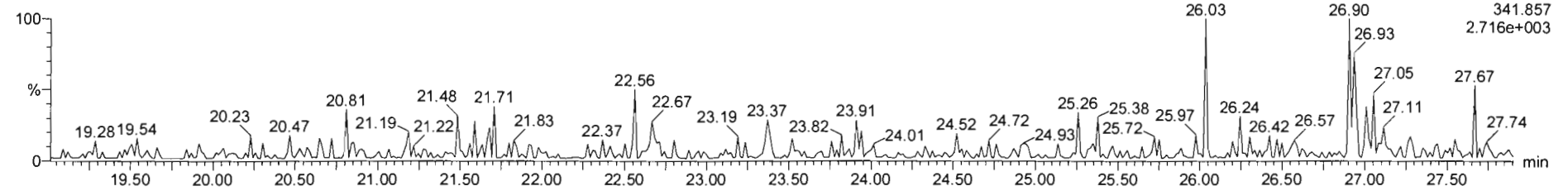
Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

1st Func. Penta-Furans

200121R1\_2

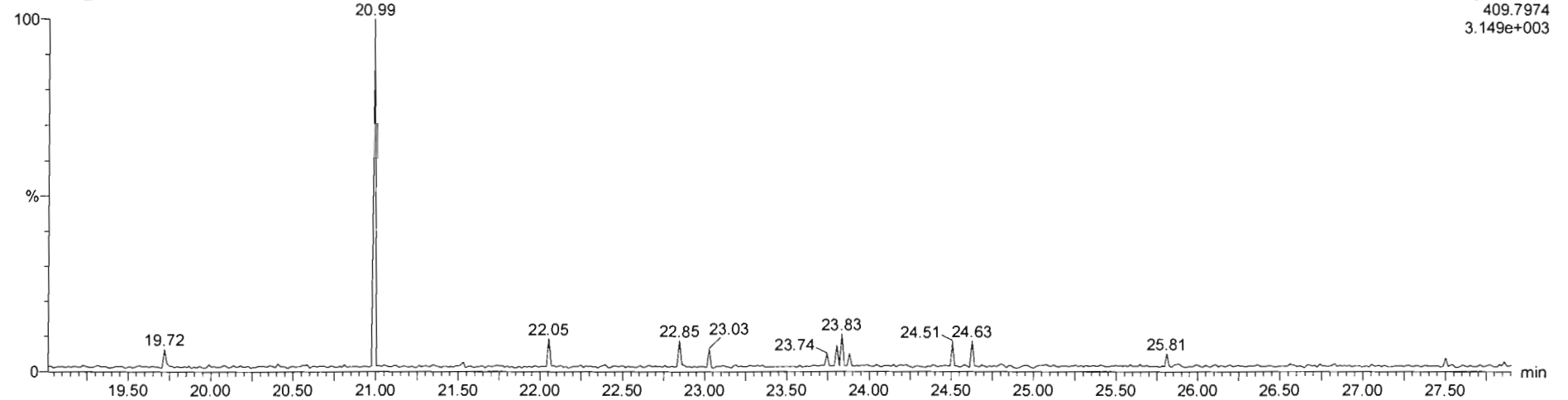


200121R1\_2



DPE6

200121R1\_2



Dataset: Untitled

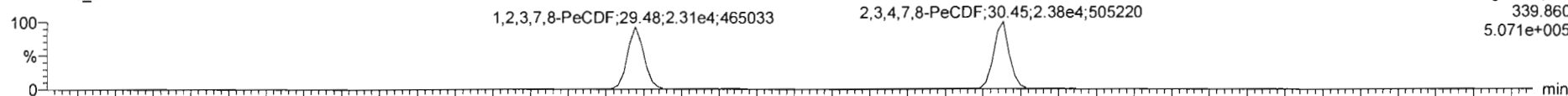
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

**1,2,3,7,8-PeCDF**

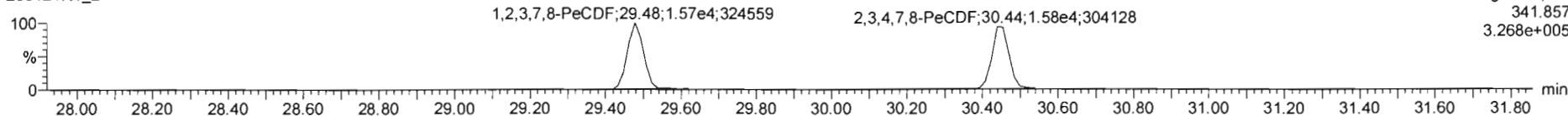
200121R1\_2

F2: Voltage SIR, EI+  
339.860  
5.071e+005



200121R1\_2

F2: Voltage SIR, EI+  
341.857  
3.268e+005



**13C-1,2,3,7,8-PeCDF**

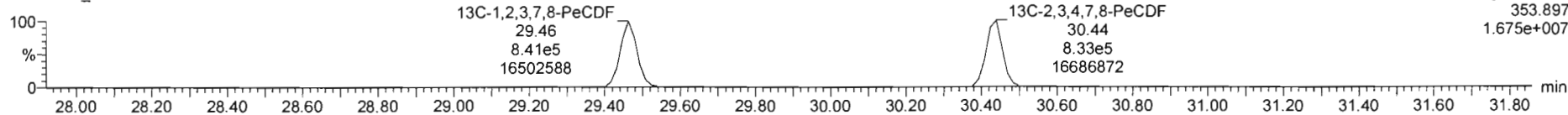
200121R1\_2

F2: Voltage SIR, EI+  
351.900  
2.647e+007



200121R1\_2

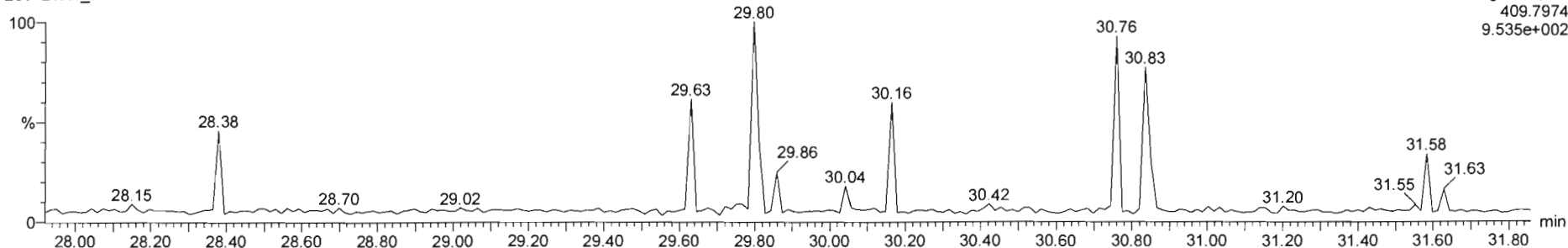
F2: Voltage SIR, EI+  
353.897  
1.675e+007



**DPE2**

200121R1\_2

F2: Voltage SIR, EI+  
409.7974  
9.535e+002



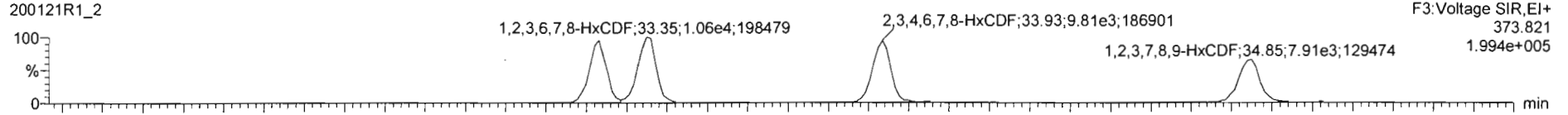
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

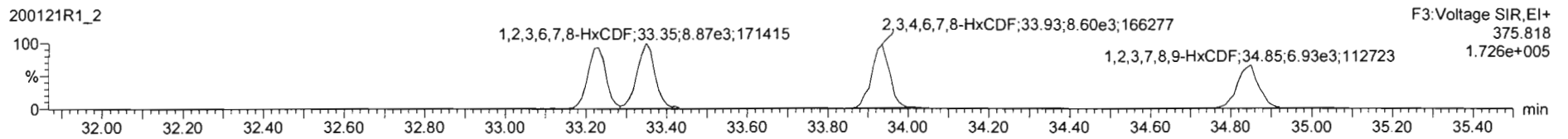
Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

**1,2,3,4,7,8-HxCDF**

200121R1\_2

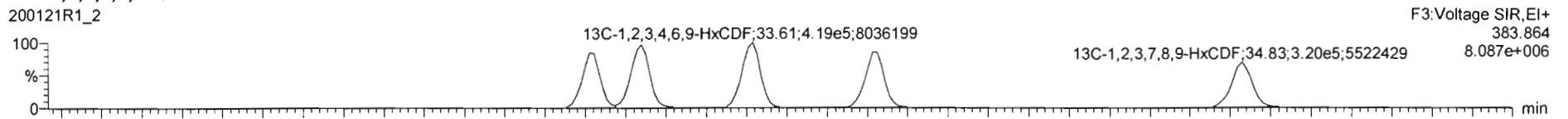


200121R1\_2

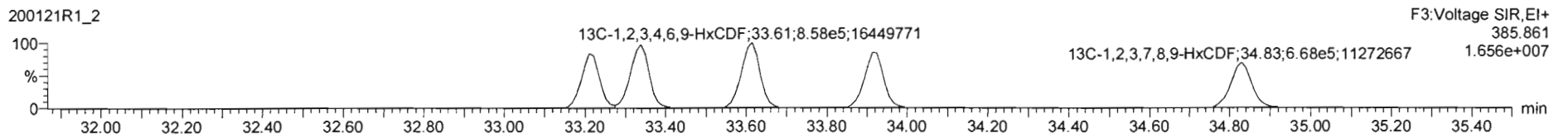


**13C-1,2,3,4,7,8-HxCDF**

200121R1\_2

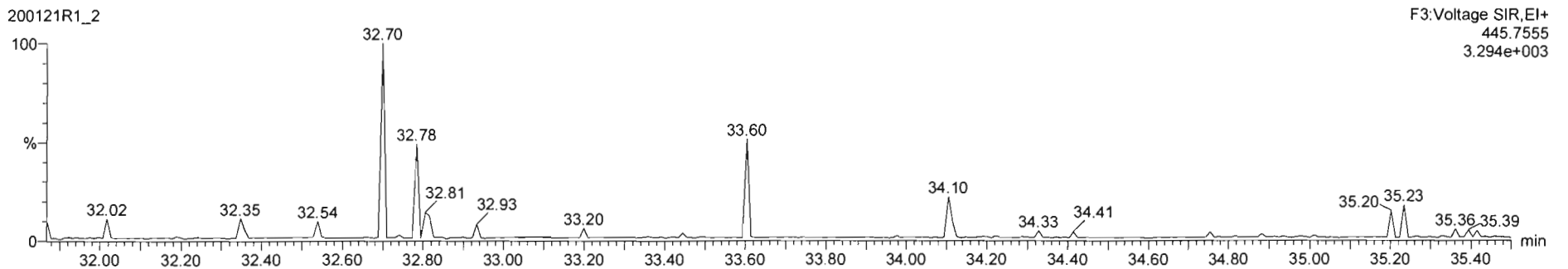


200121R1\_2



**DPE3**

200121R1\_2



Dataset: Untitled

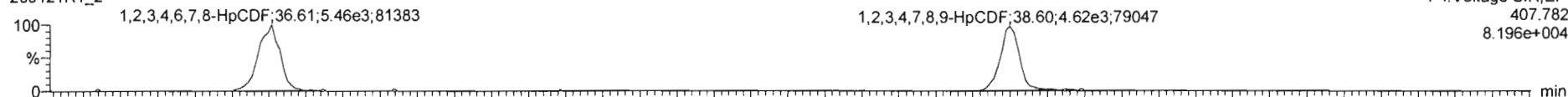
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

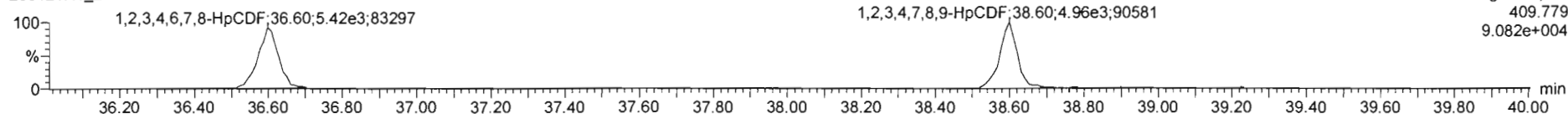
Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

**1,2,3,4,6,7,8-HpCDF**

200121R1\_2

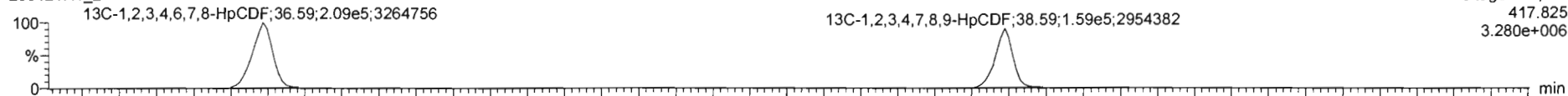


200121R1\_2

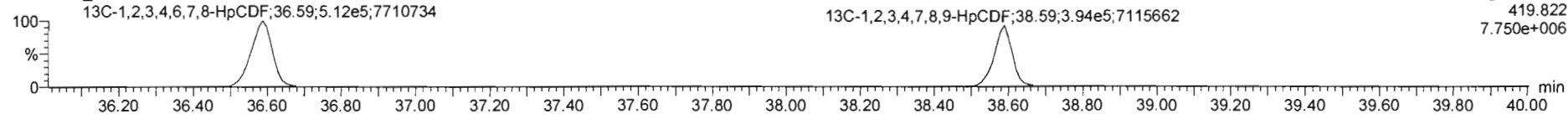


**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_2

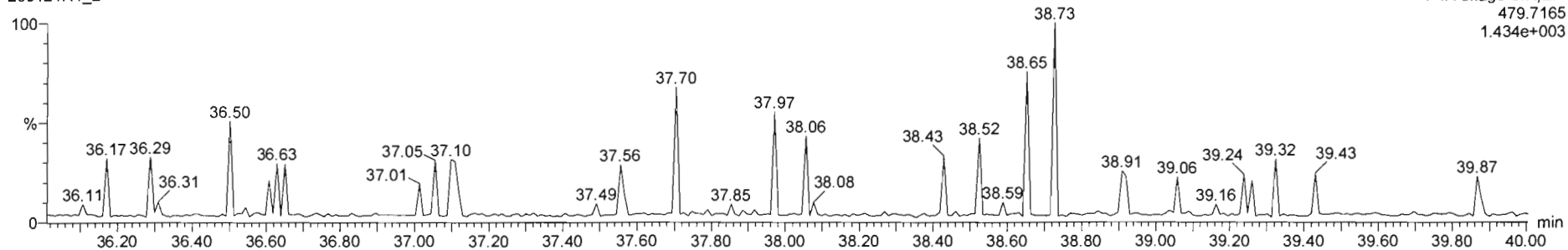


200121R1\_2



**DPE4**

200121R1\_2



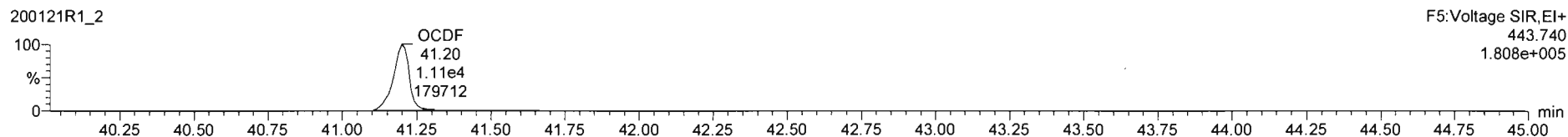
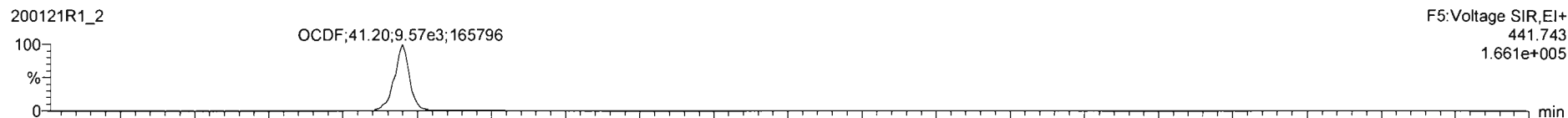
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

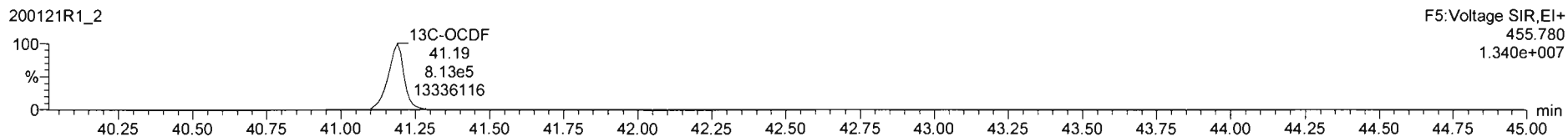
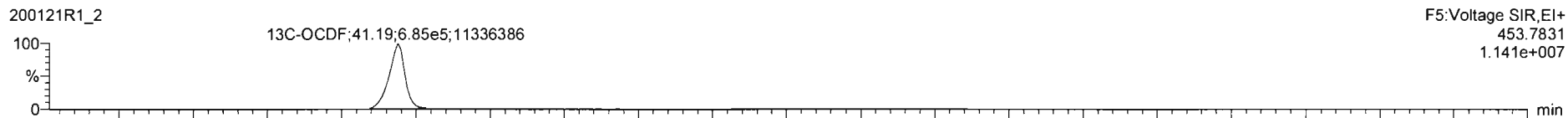
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

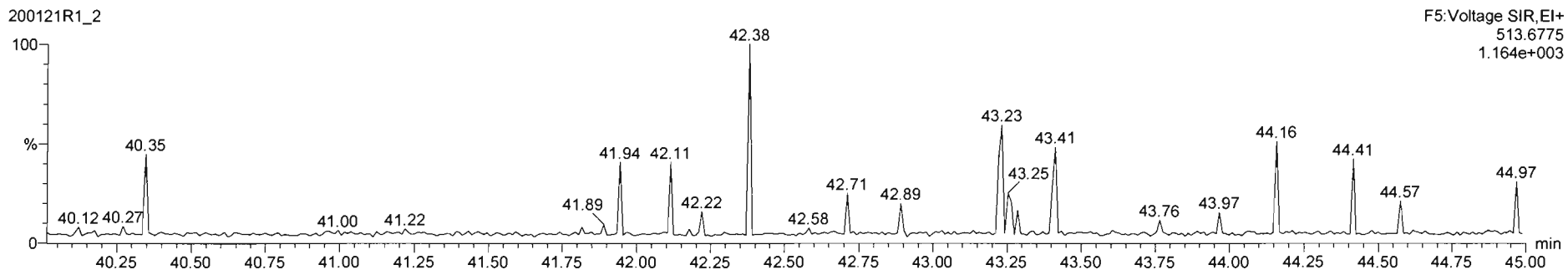
**OCDF**



**13C-OCDF**



**DPE5**

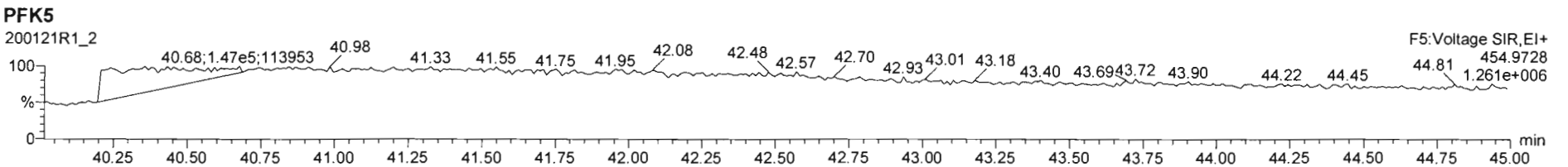
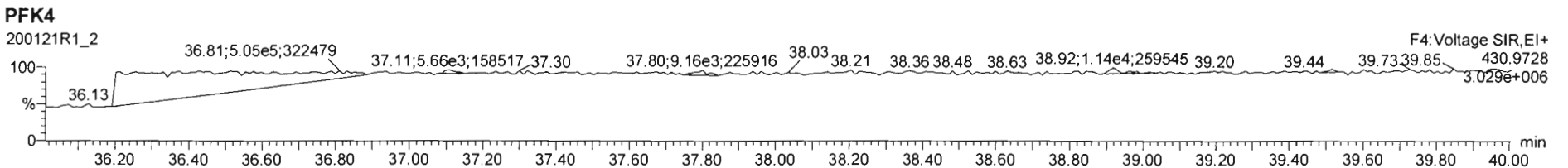
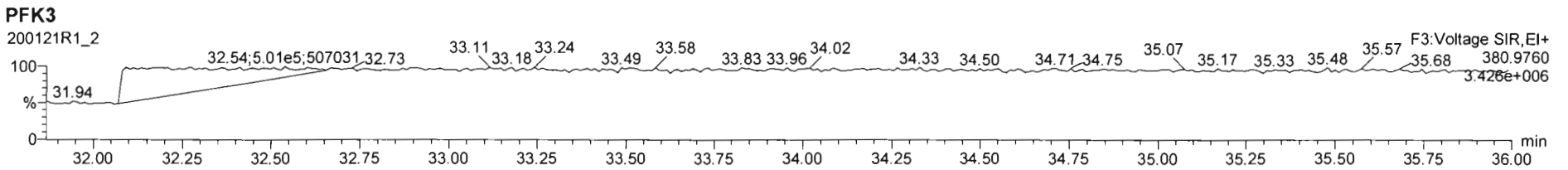
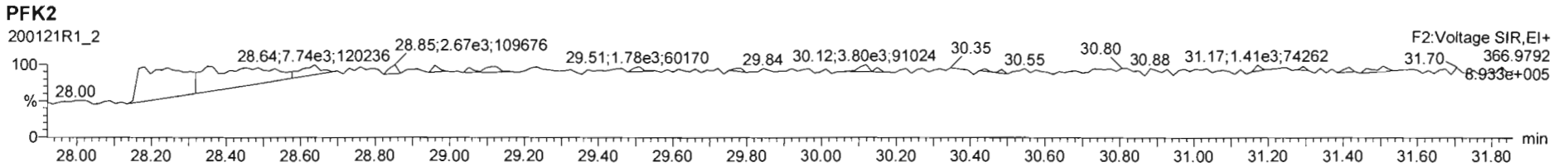
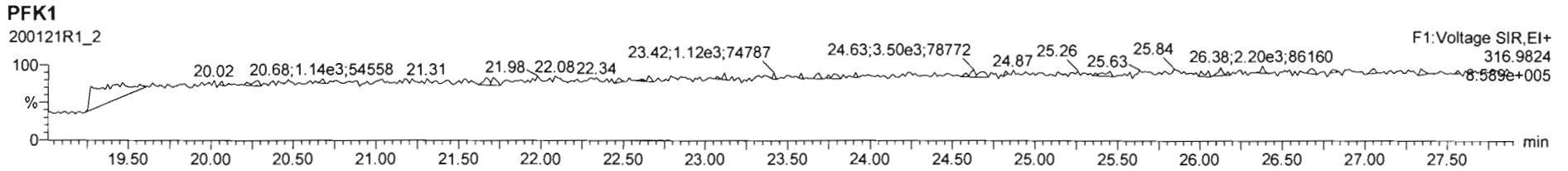


Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202





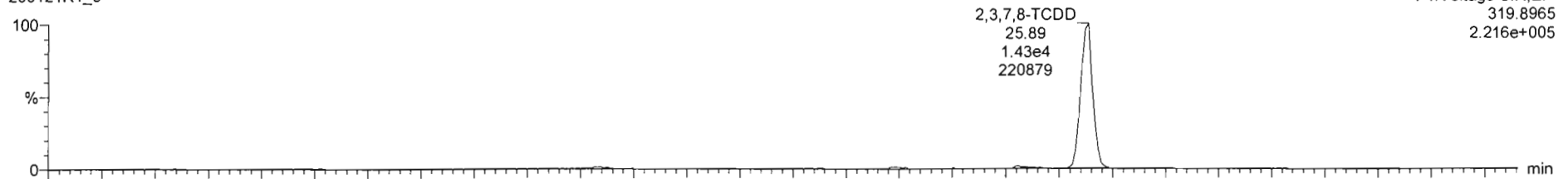
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

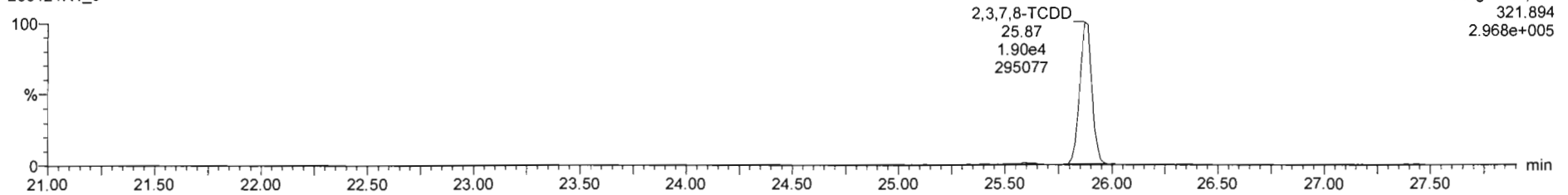
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**2,3,7,8-TCDD**

200121R1\_3

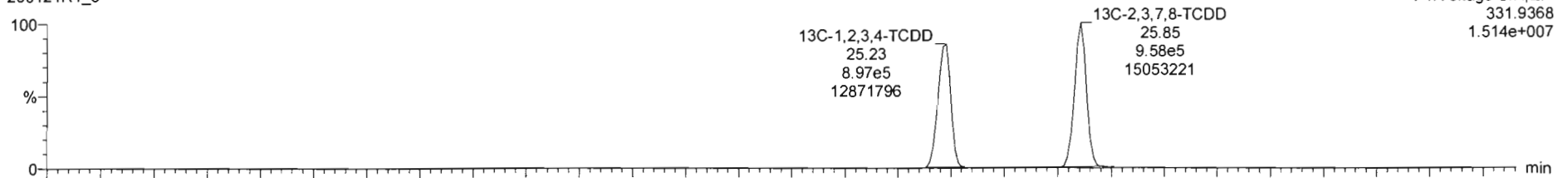


200121R1\_3

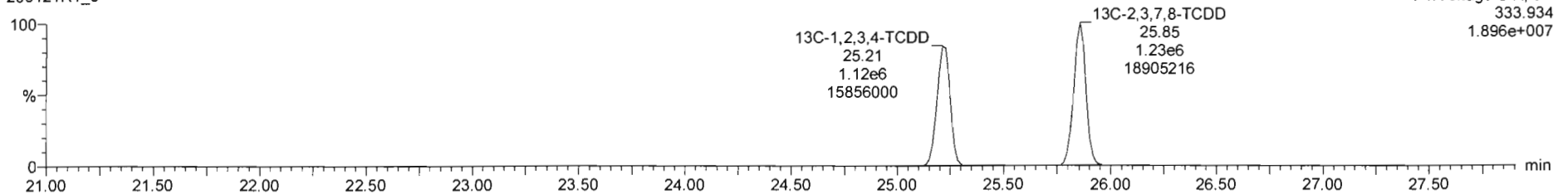


**13C-2,3,7,8-TCDD**

200121R1\_3



200121R1\_3



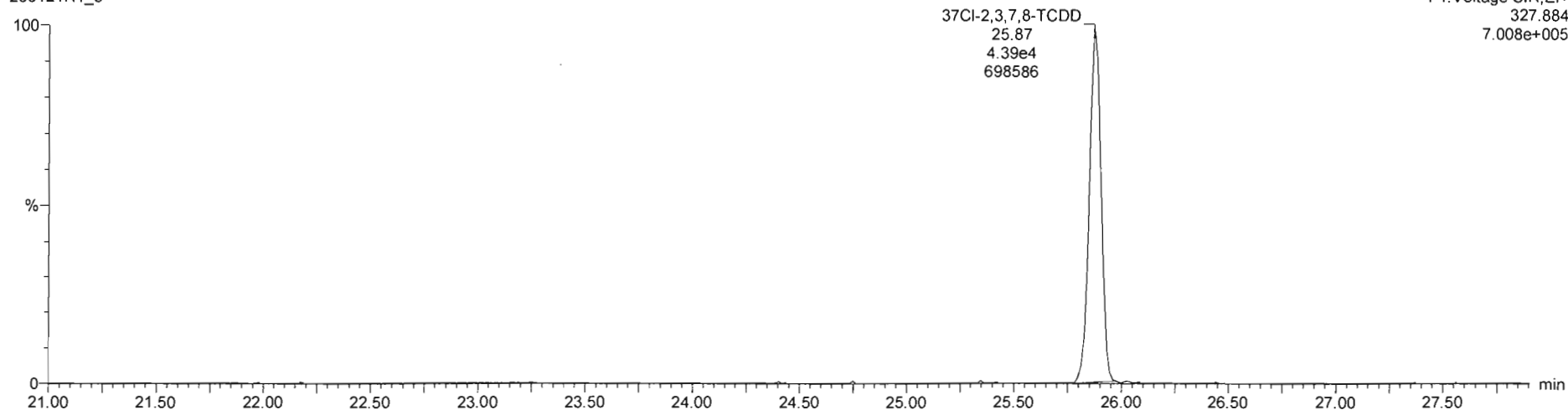
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

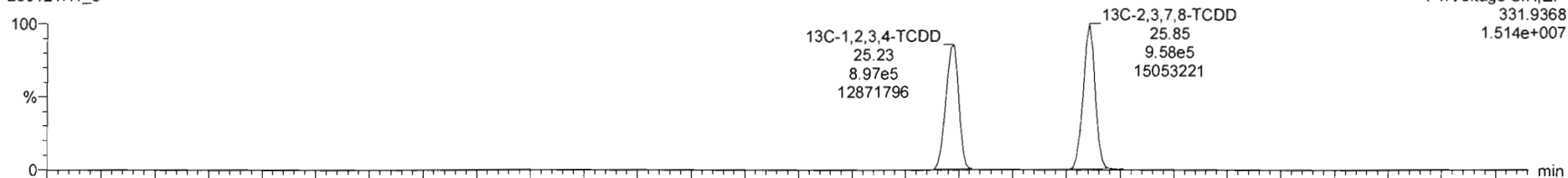
**37Cl-2,3,7,8-TCDD**

200121R1\_3

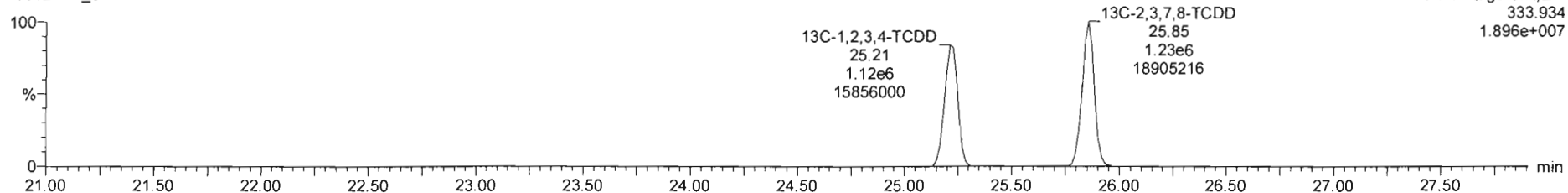


**13C-1,2,3,4-TCDD**

200121R1\_3



200121R1\_3



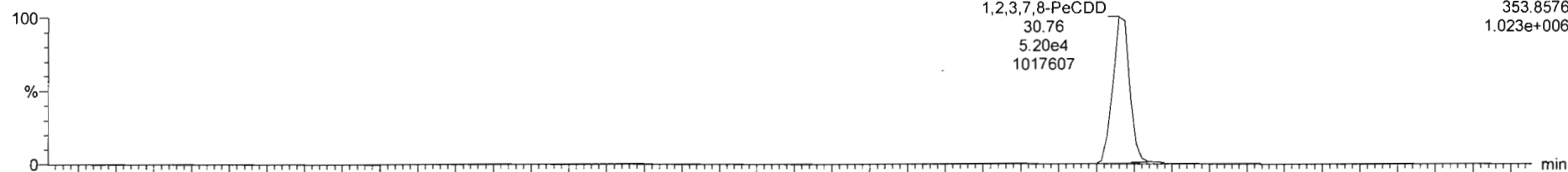
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

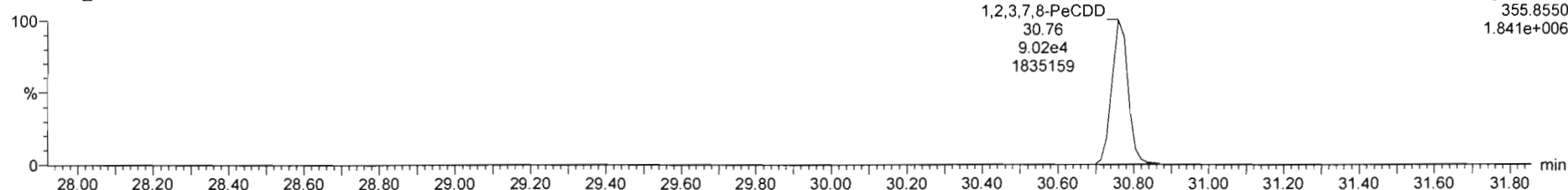
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**1,2,3,7,8-PeCDD**

200121R1\_3



200121R1\_3

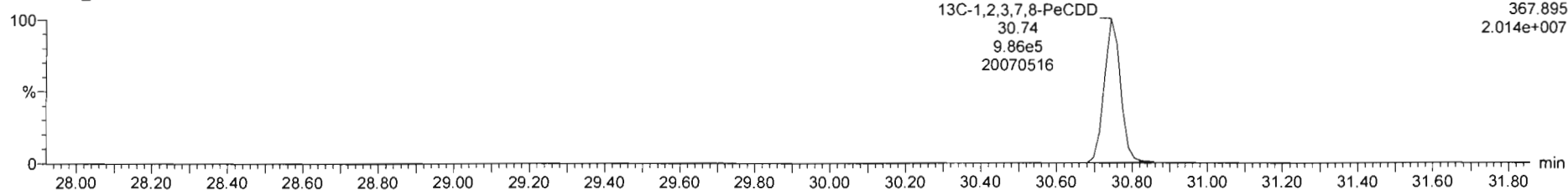


**13C-1,2,3,7,8-PeCDD**

200121R1\_3



200121R1\_3



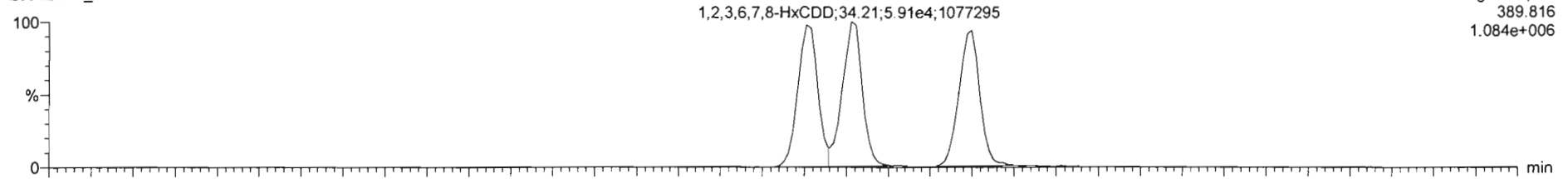
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

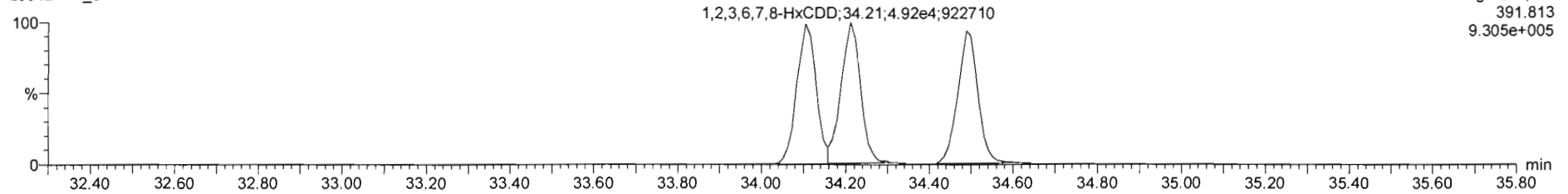
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**1,2,3,4,7,8-HxCDD**

200121R1\_3

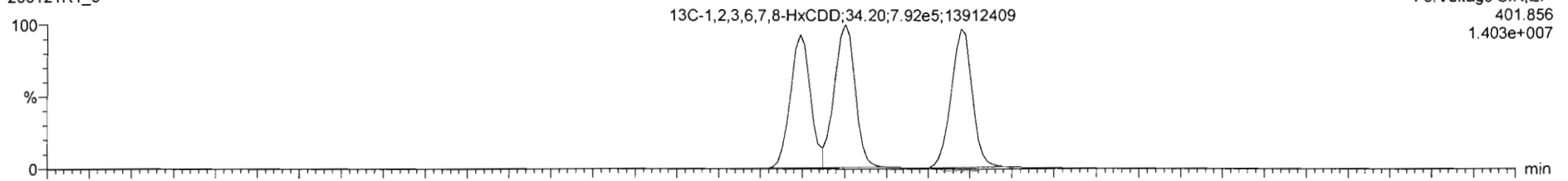


200121R1\_3

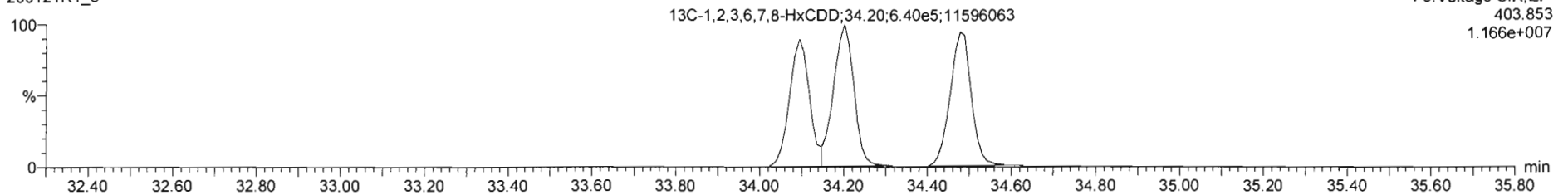


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_3



200121R1\_3



Dataset: Untitled

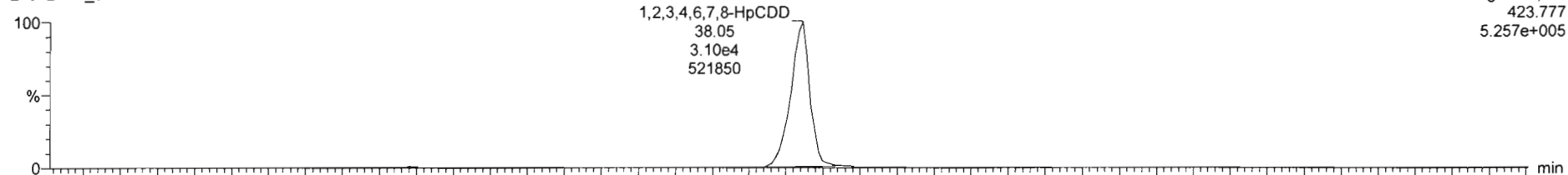
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

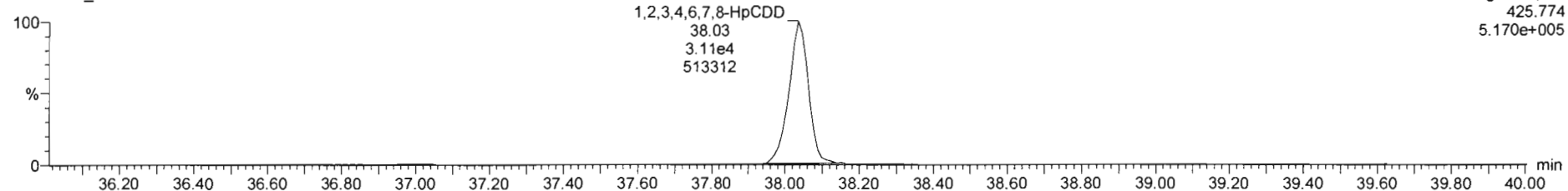
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**1,2,3,4,6,7,8-HpCDD**

200121R1\_3

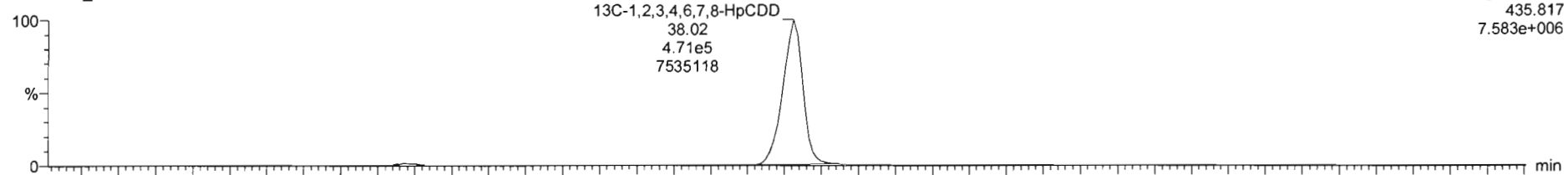


200121R1\_3

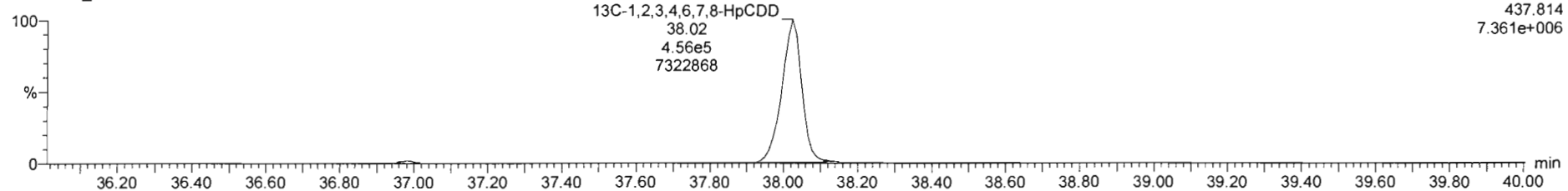


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_3



200121R1\_3



Dataset: Untitled

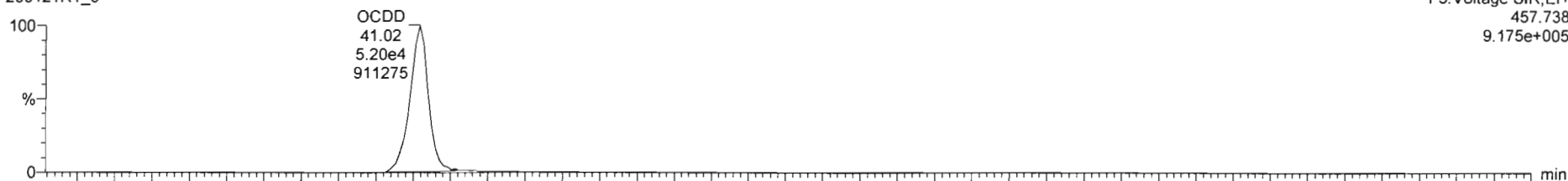
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**OCDD**

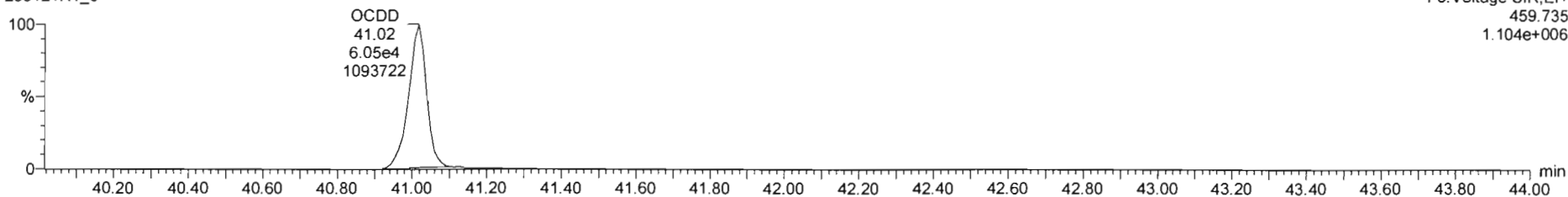
200121R1\_3

F5:Voltage SIR,EI+  
457.738  
9.175e+005



200121R1\_3

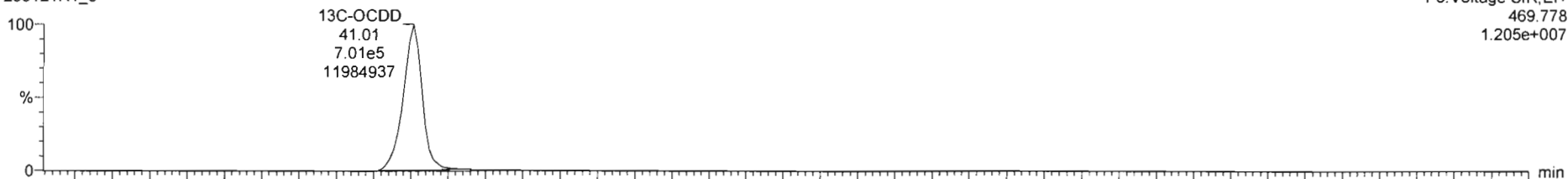
F5:Voltage SIR,EI+  
459.735  
1.104e+006



**13C-OCDD**

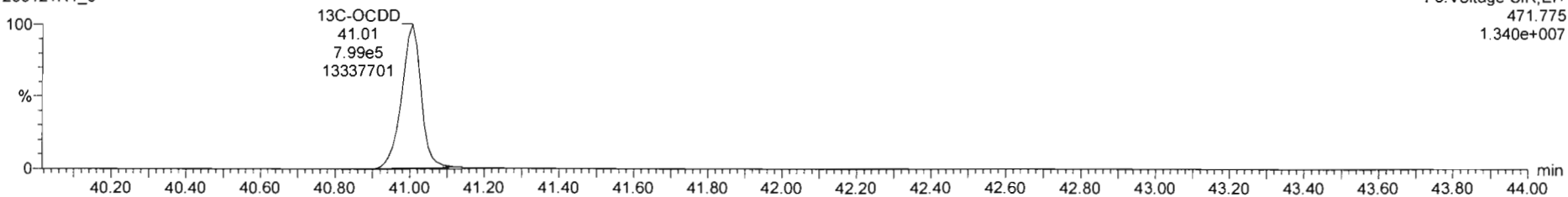
200121R1\_3

F5:Voltage SIR,EI+  
469.778  
1.205e+007



200121R1\_3

F5:Voltage SIR,EI+  
471.775  
1.340e+007



Dataset: Untitled

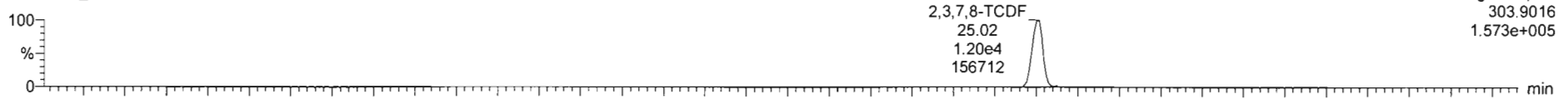
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

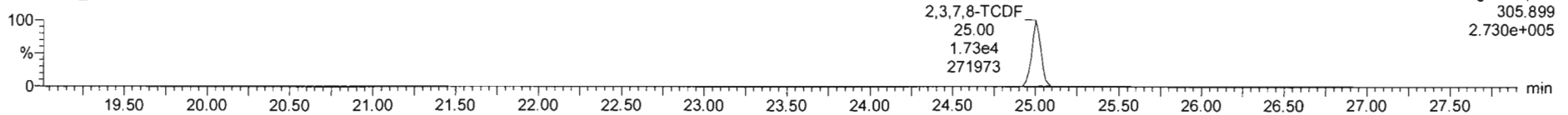
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**2,3,7,8-TCDF**

200121R1\_3

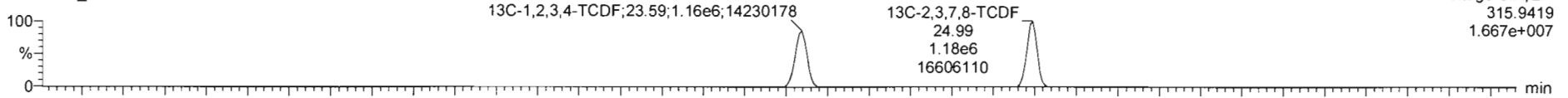


200121R1\_3

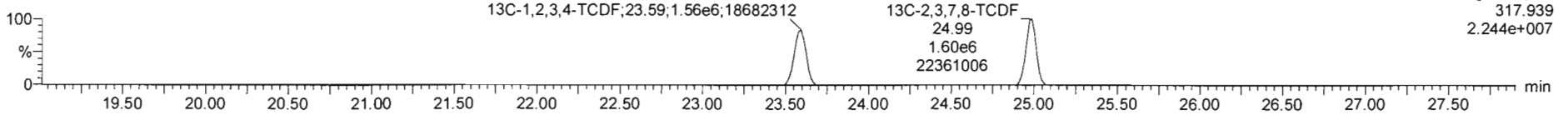


**13C-2,3,7,8-TCDF**

200121R1\_3

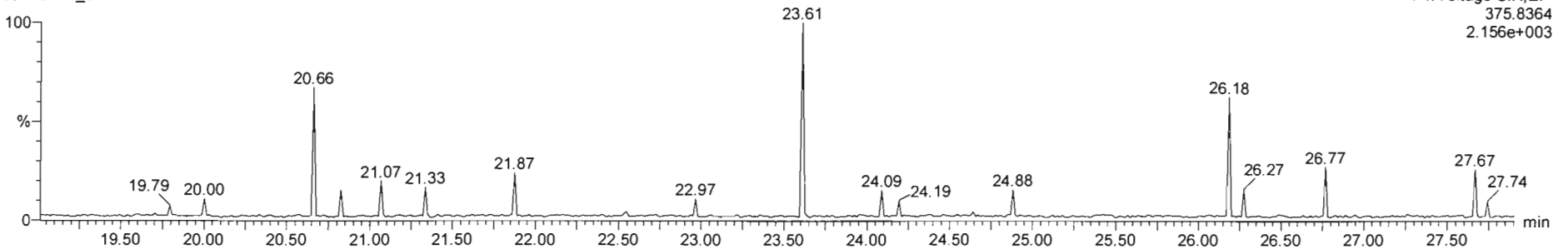


200121R1\_3



**DPE1**

200121R1\_3



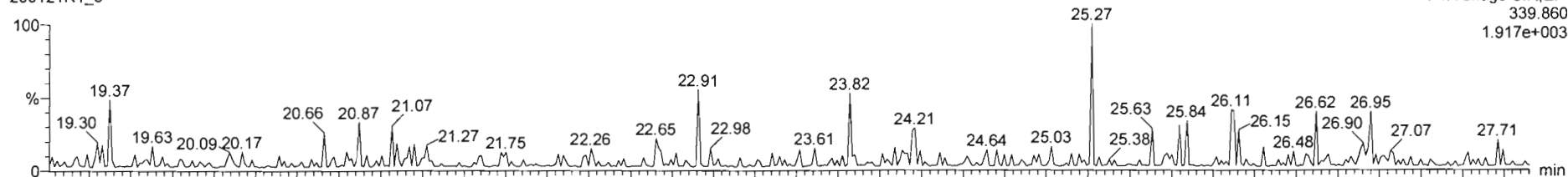
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

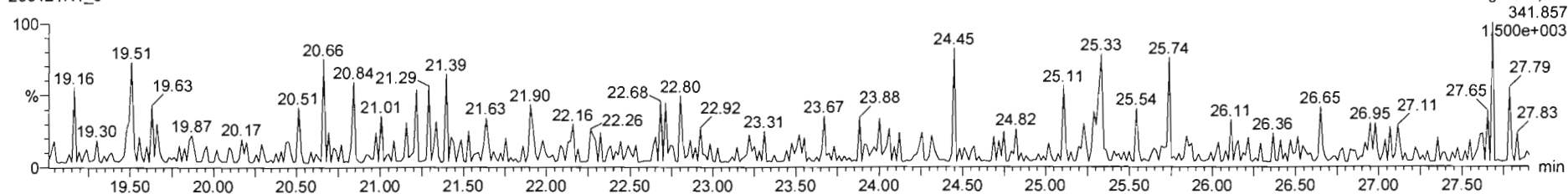
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

1st Func. Penta-Furans

200121R1\_3

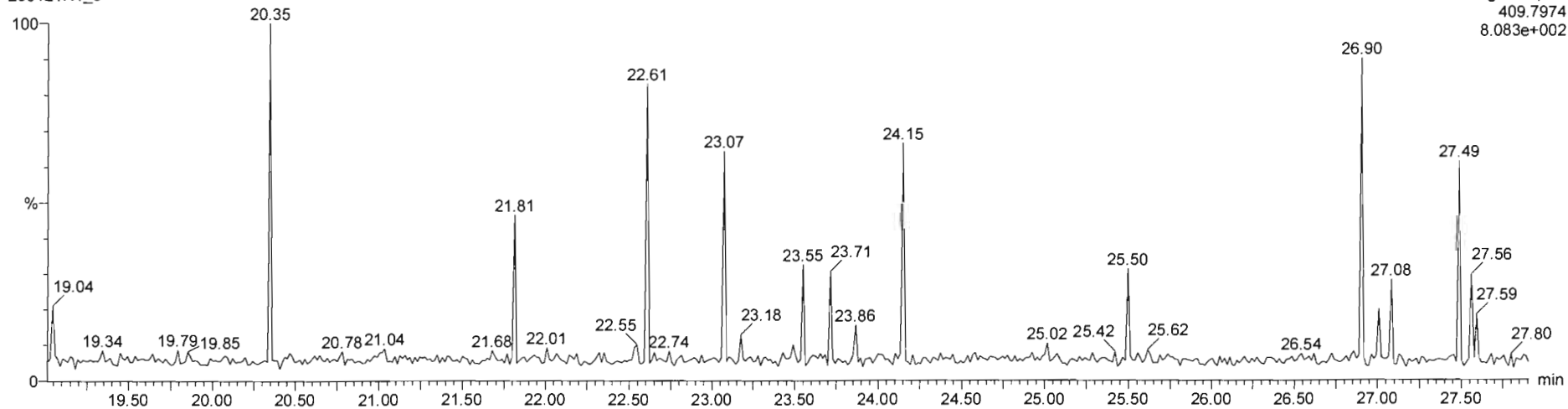


200121R1\_3



DPE6

200121R1\_3





Dataset: Untitled

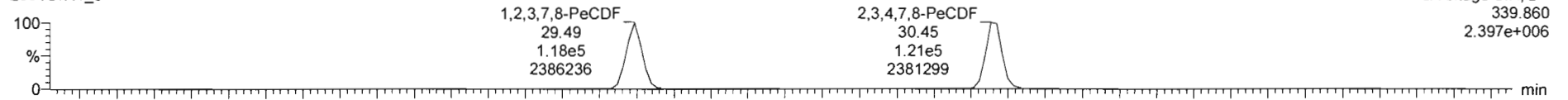
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

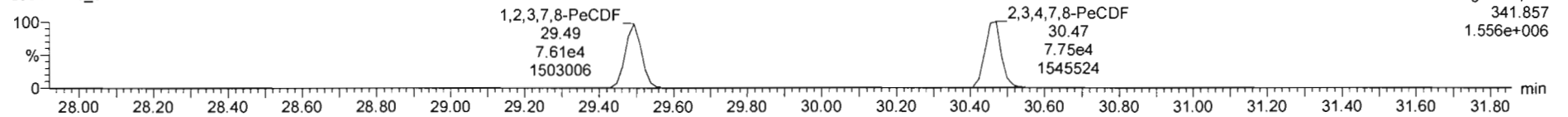
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**1,2,3,7,8-PeCDF**

200121R1\_3

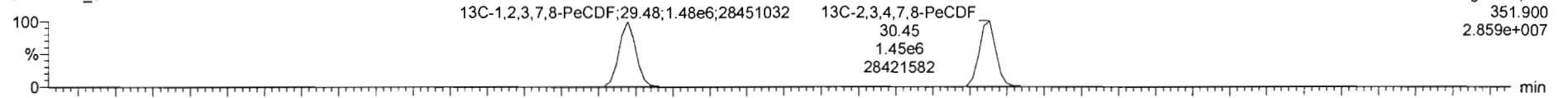


200121R1\_3

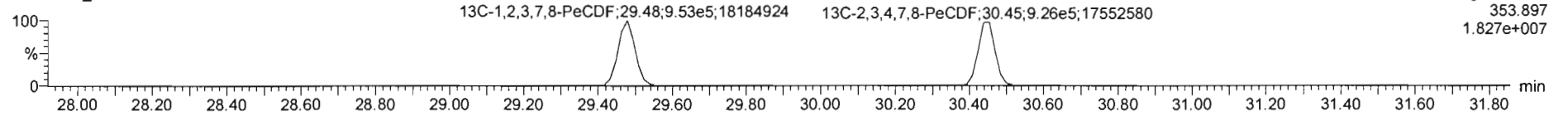


**13C-1,2,3,7,8-PeCDF**

200121R1\_3

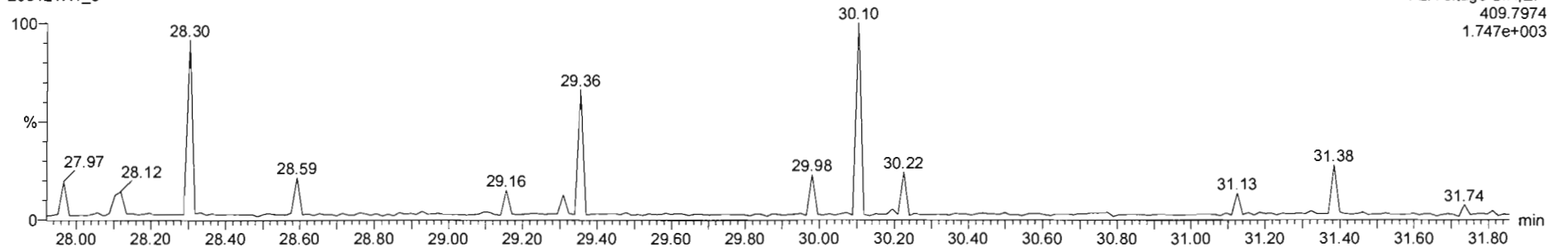


200121R1\_3



**DPE2**

200121R1\_3



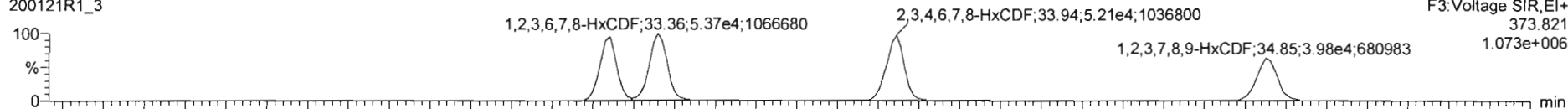
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

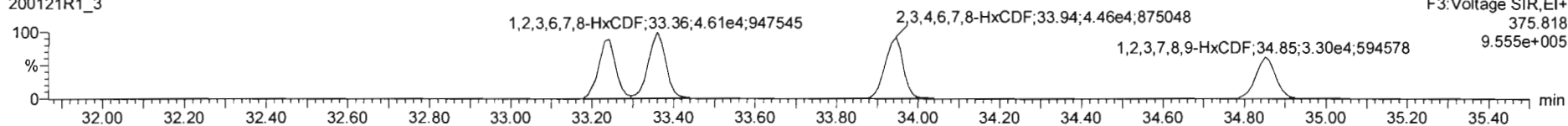
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**1,2,3,4,7,8-HxCDF**

200121R1\_3

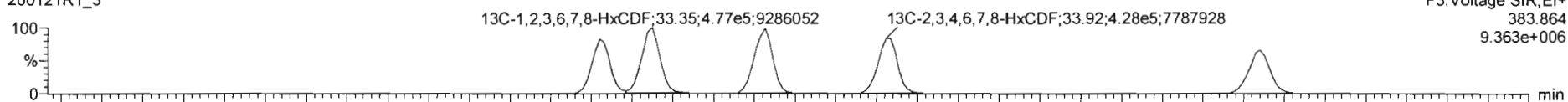


200121R1\_3

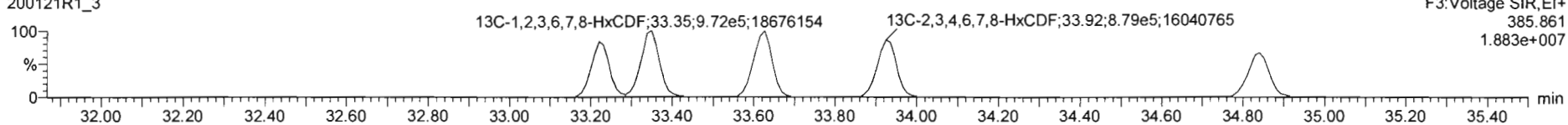


**13C-1,2,3,4,7,8-HxCDF**

200121R1\_3

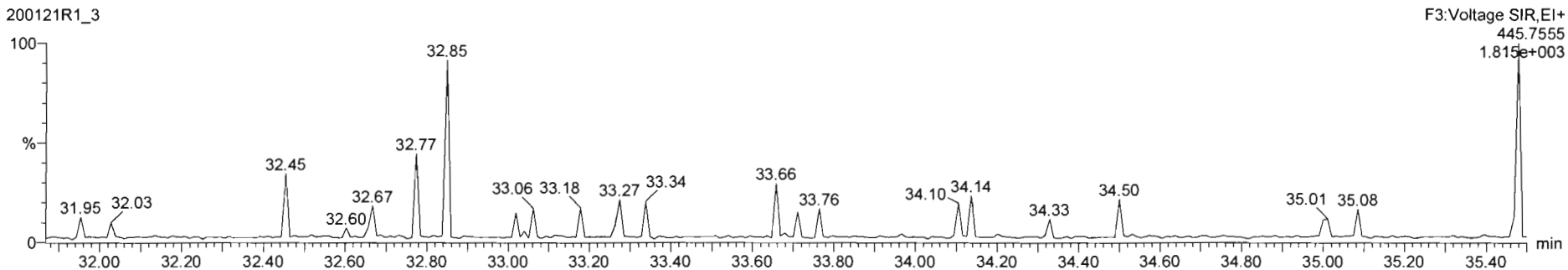


200121R1\_3



**DPE3**

200121R1\_3



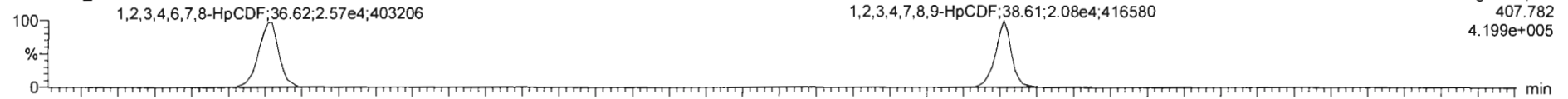
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

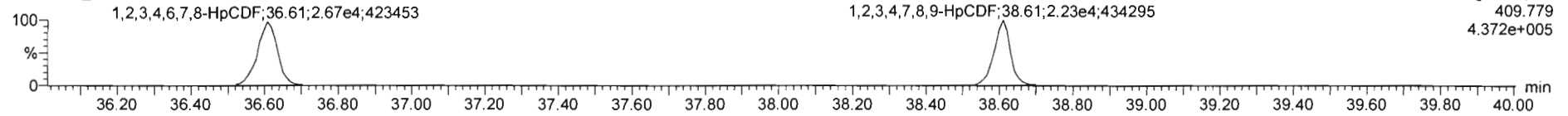
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**1,2,3,4,6,7,8-HpCDF**

200121R1\_3

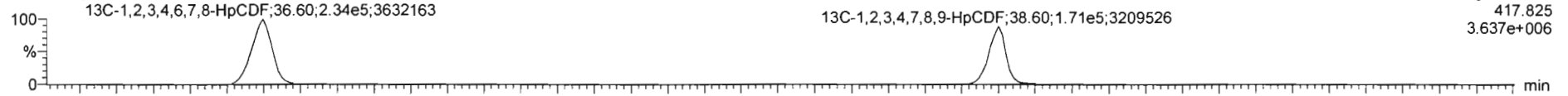


200121R1\_3

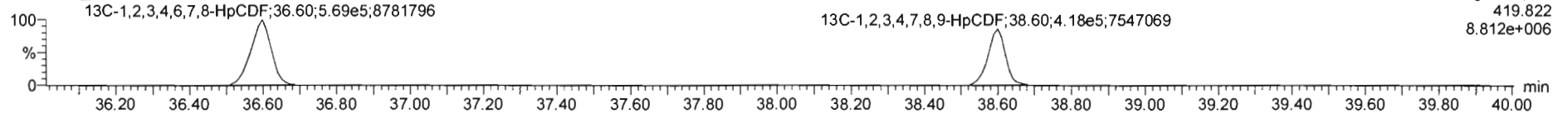


**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_3

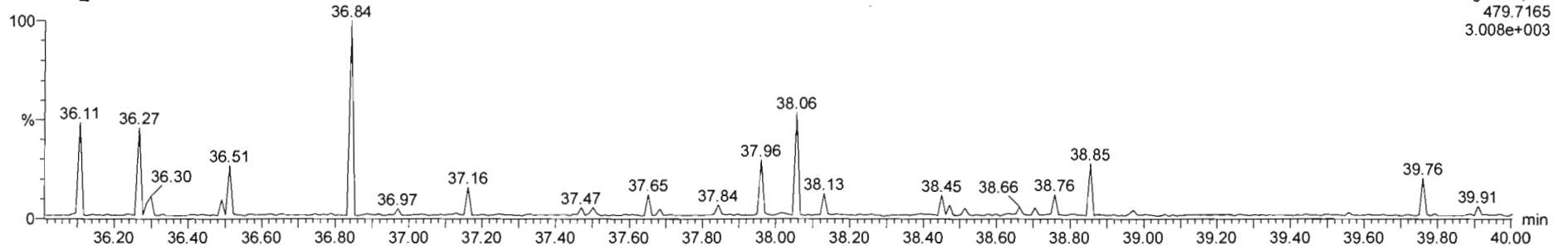


200121R1\_3



**DPE4**

200121R1\_3



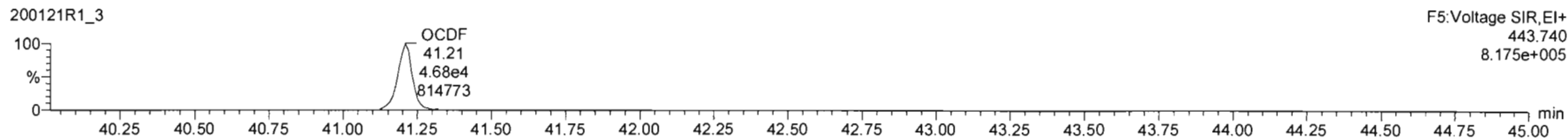
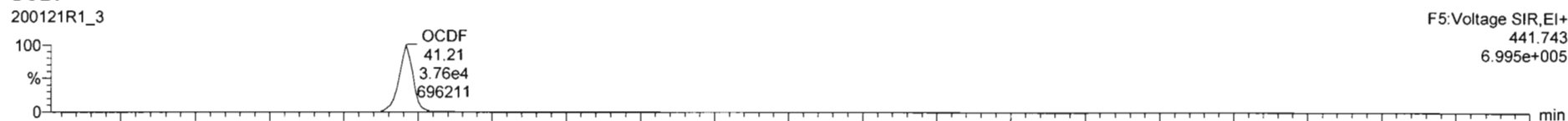
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

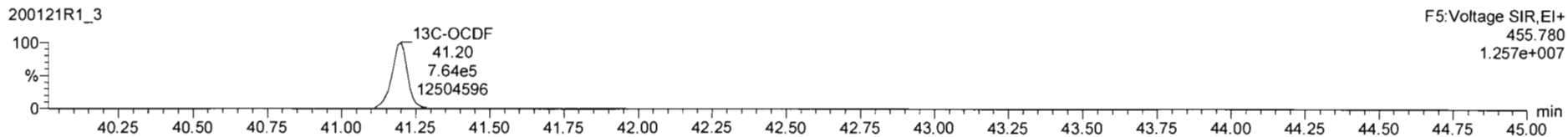
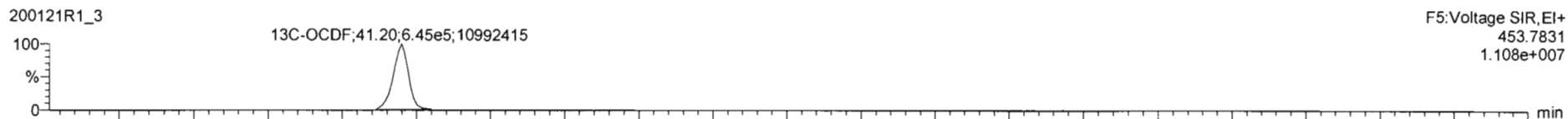
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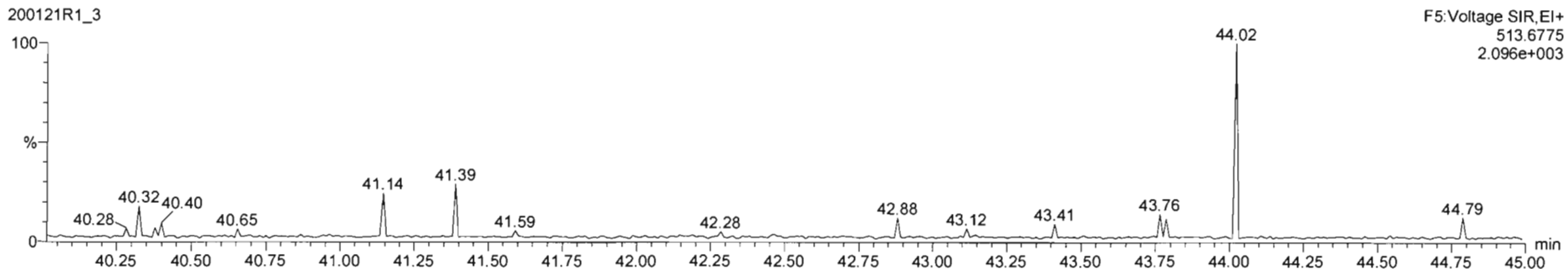
**OCDF**



**13C-OCDF**



**DPE5**

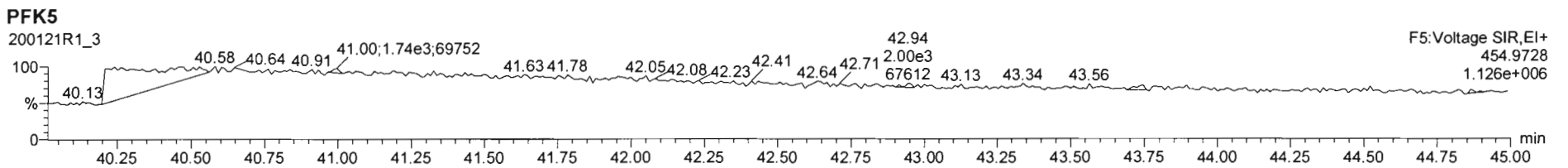
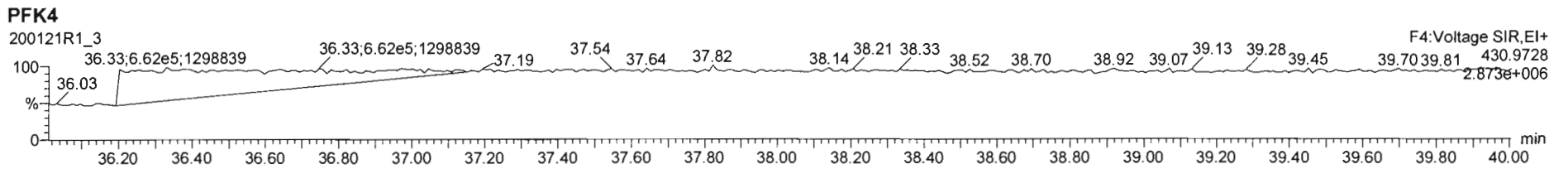
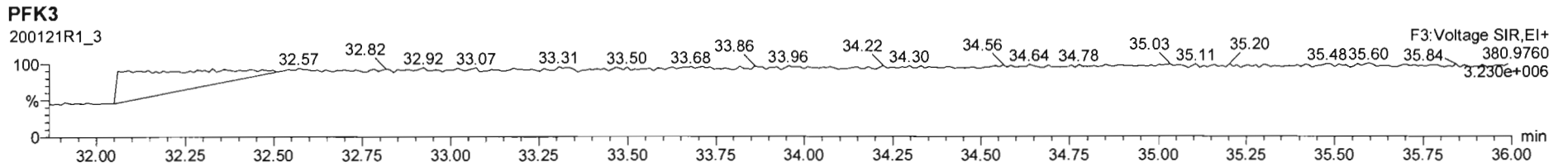
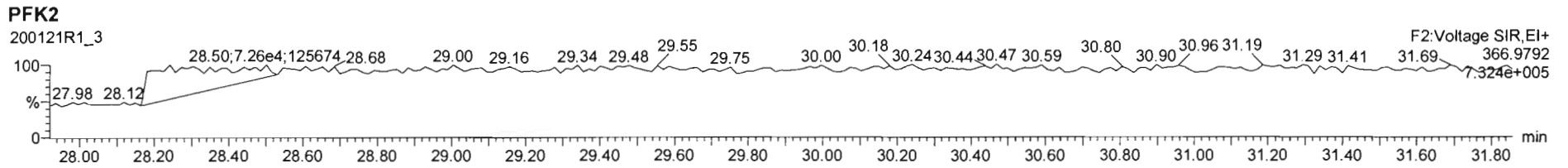
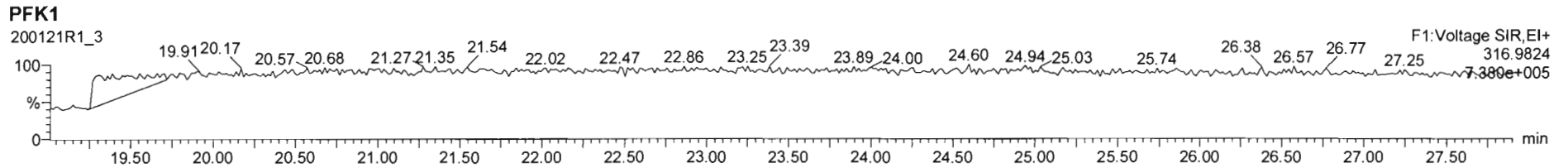


Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203



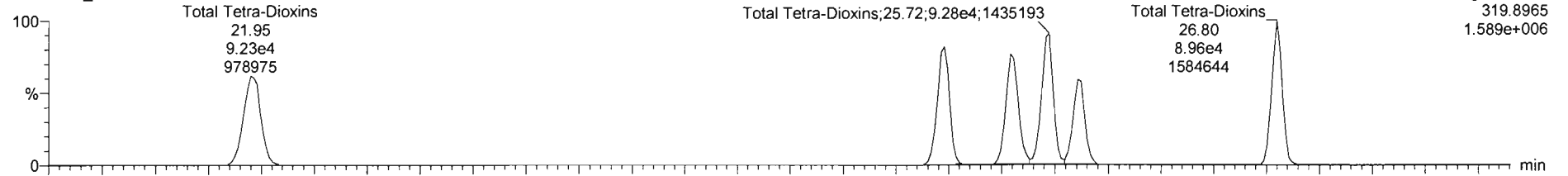
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

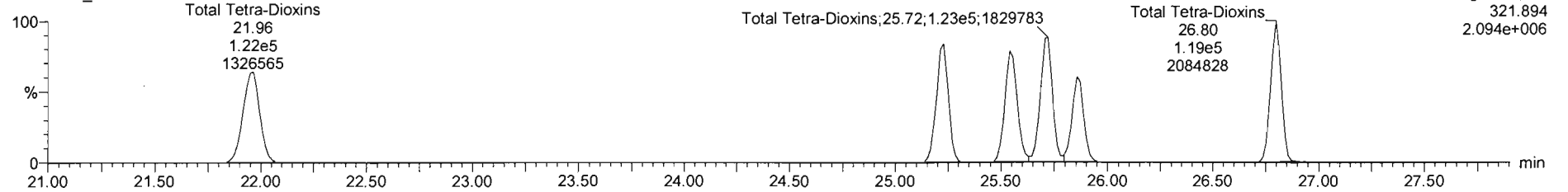
Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

**2,3,7,8-TCDD**

200121R1\_4

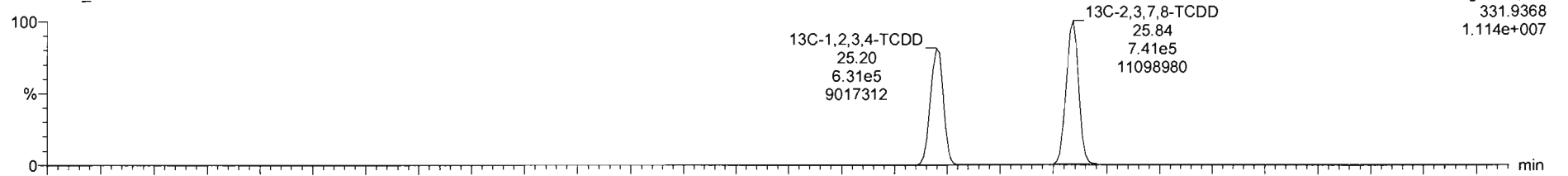


200121R1\_4

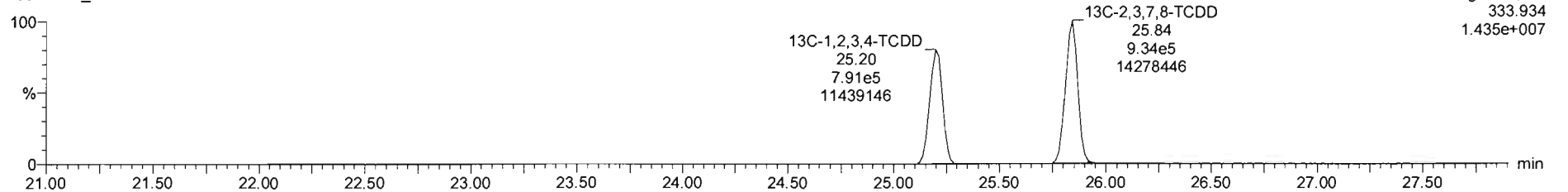


**13C-2,3,7,8-TCDD**

200121R1\_4



200121R1\_4



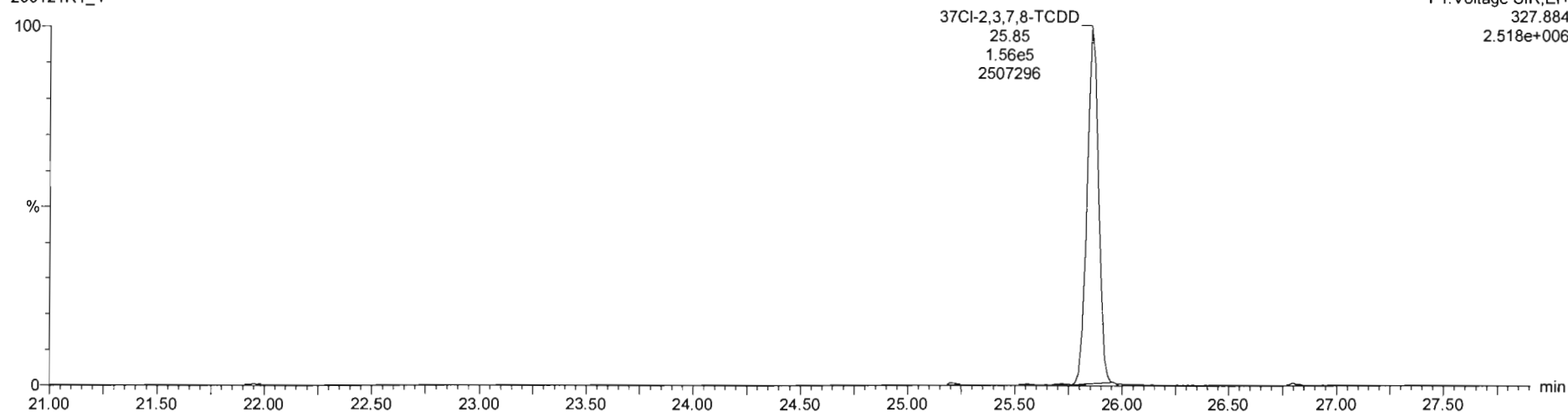
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

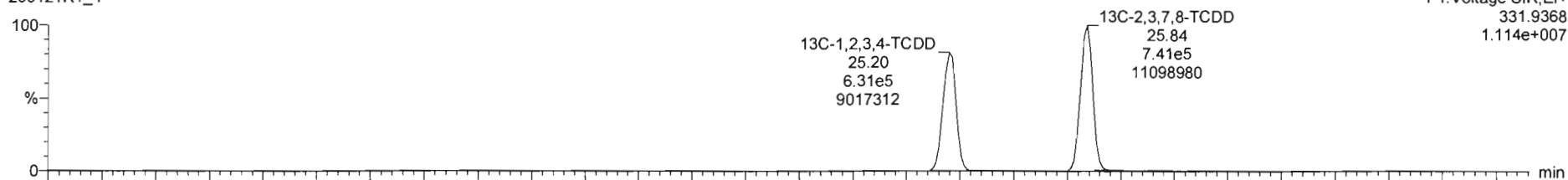
**37Cl-2,3,7,8-TCDD**

200121R1\_4

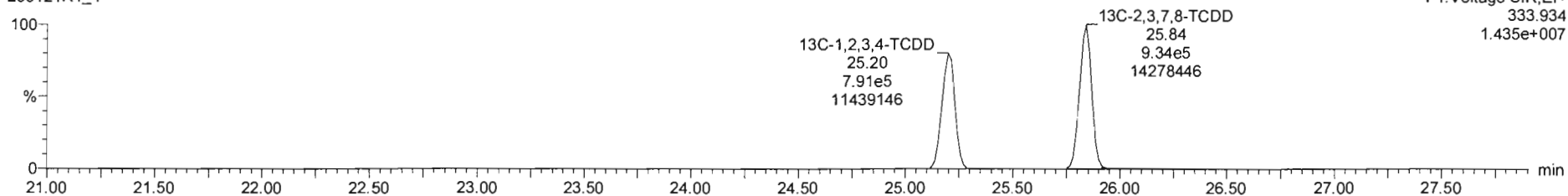


**13C-1,2,3,4-TCDD**

200121R1\_4



200121R1\_4



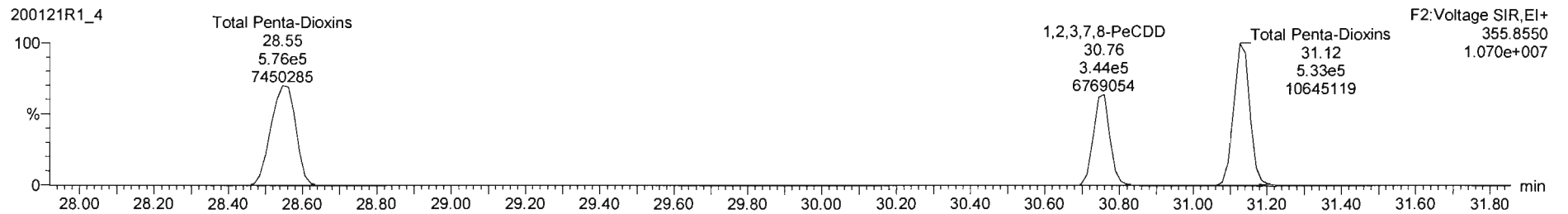
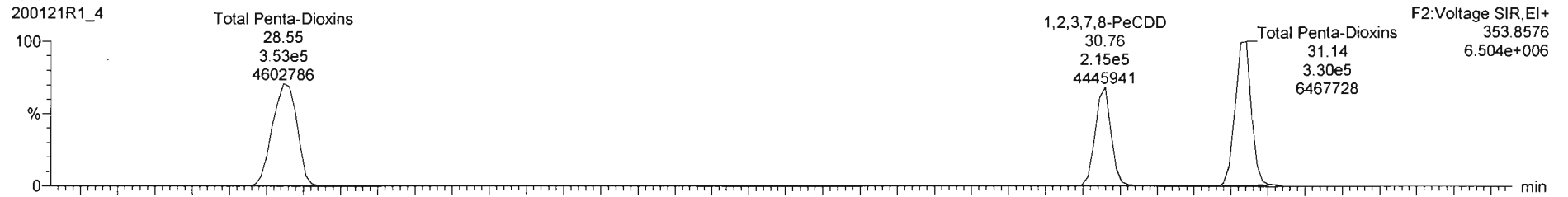
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

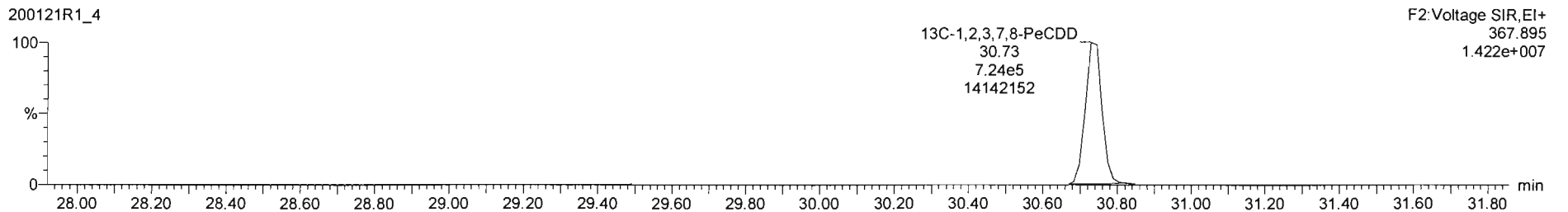
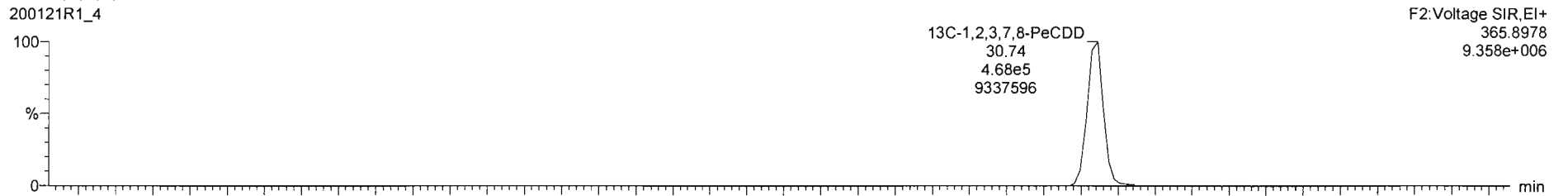
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

**1,2,3,7,8-PeCDD**



**13C-1,2,3,7,8-PeCDD**





Dataset: Untitled

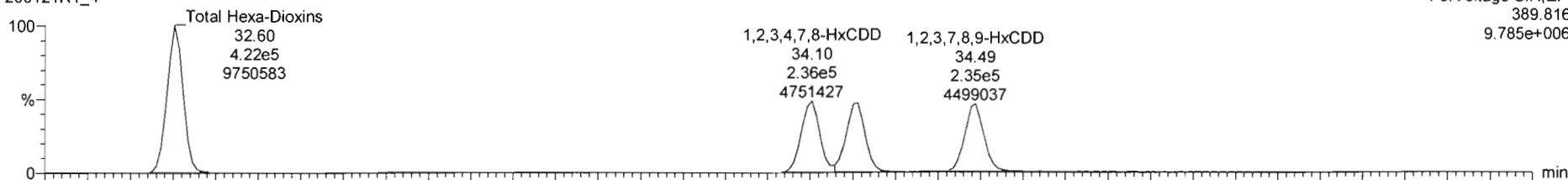
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 19I1604, Description: 1613 CS3 19I1604

### 1,2,3,4,7,8-HxCDD

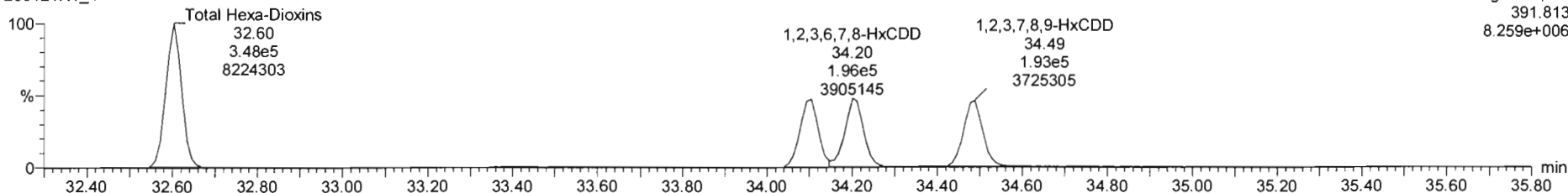
200121R1\_4

F3: Voltage SIR, EI+  
389.816  
9.785e+006



200121R1\_4

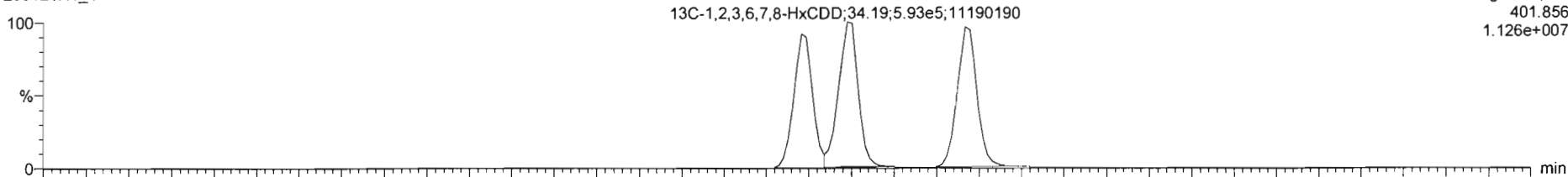
F3: Voltage SIR, EI+  
391.813  
8.259e+006



### 13C-1,2,3,4,7,8-HxCDD

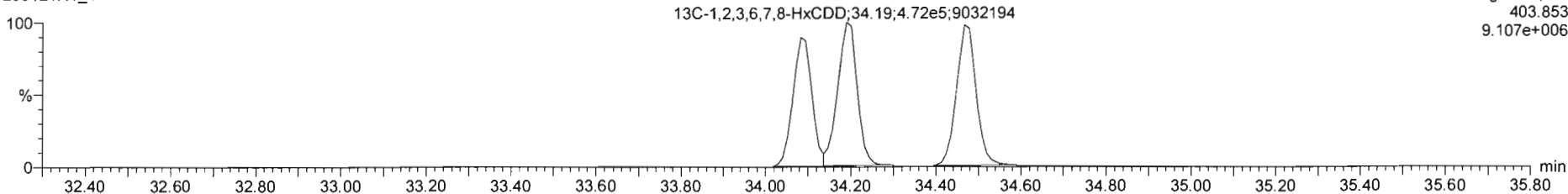
200121R1\_4

F3: Voltage SIR, EI+  
401.856  
1.126e+007



200121R1\_4

F3: Voltage SIR, EI+  
403.853  
9.107e+006



Dataset: Untitled

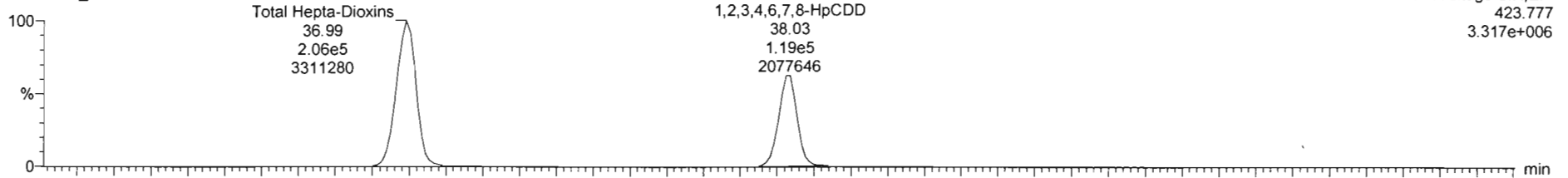
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

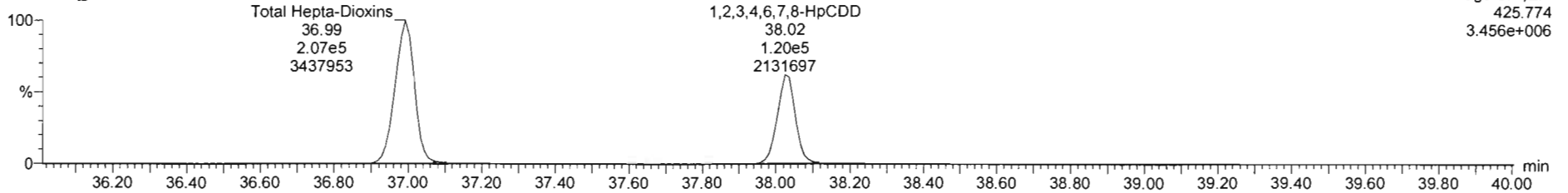
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**1,2,3,4,6,7,8-HpCDD**

200121R1\_4

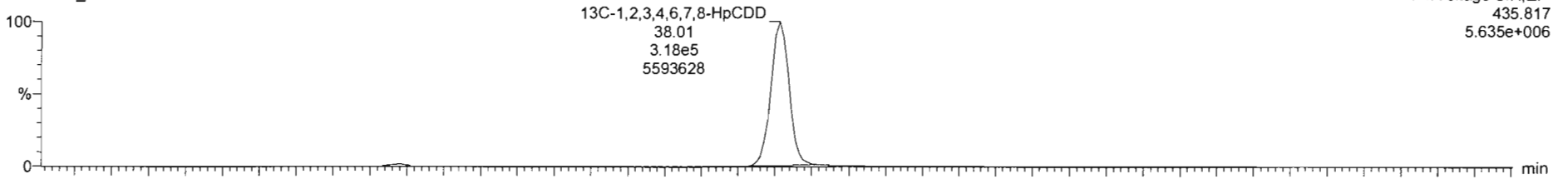


200121R1\_4

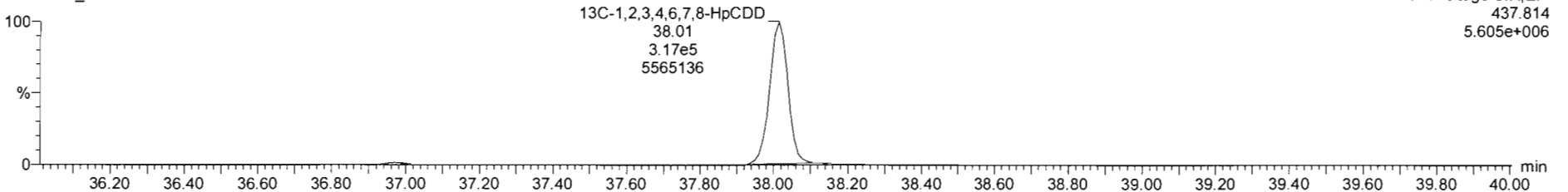


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_4



200121R1\_4



Dataset: Untitled

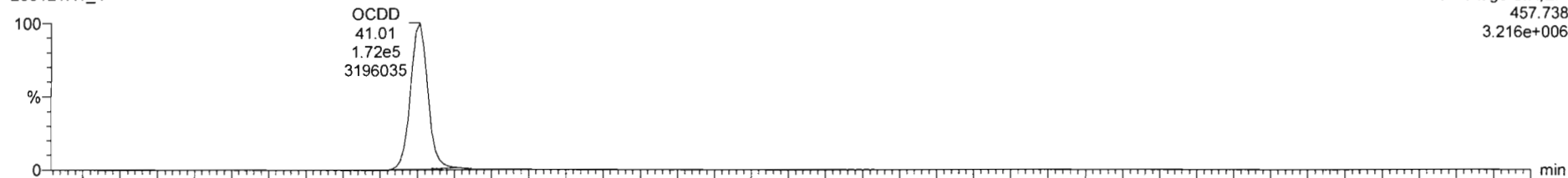
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

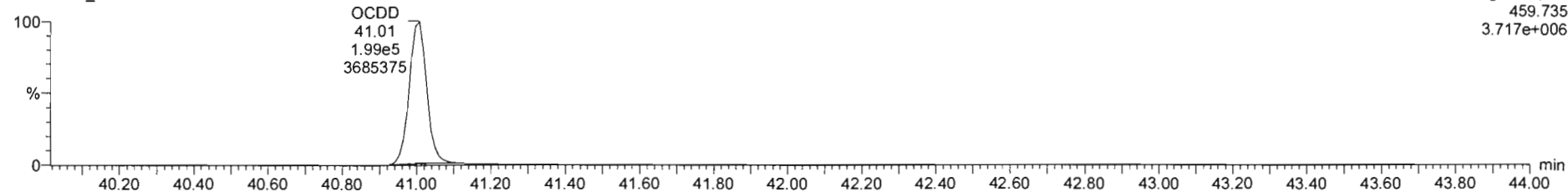
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**OCDD**

200121R1\_4

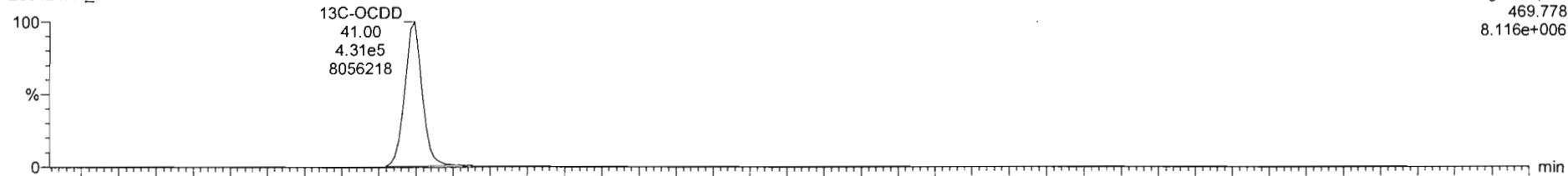


200121R1\_4

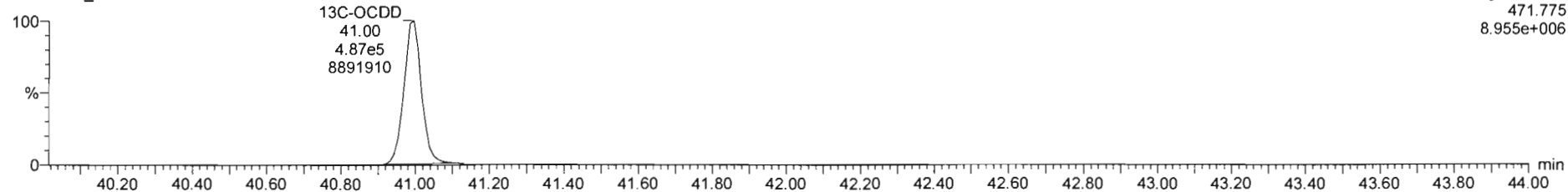


**13C-OCDD**

200121R1\_4



200121R1\_4



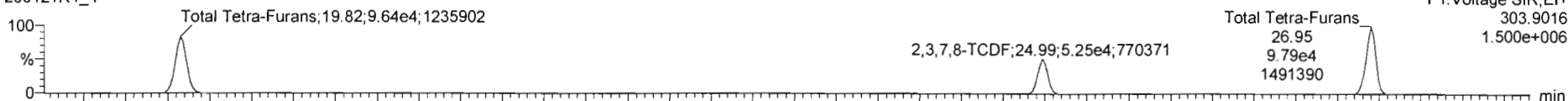
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

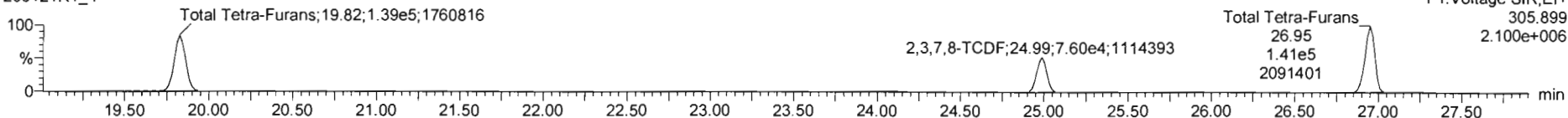
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**2,3,7,8-TCDF**

200121R1\_4

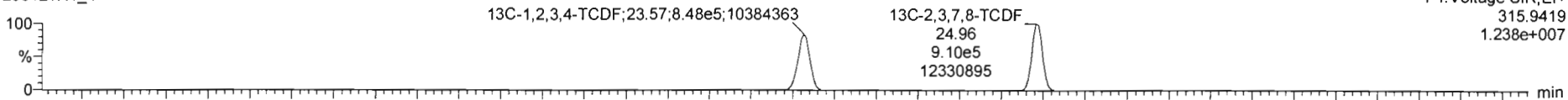


200121R1\_4

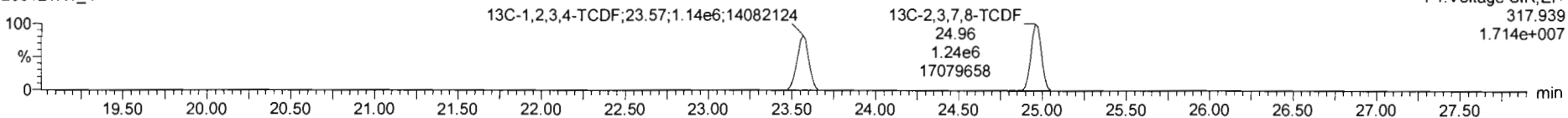


**13C-2,3,7,8-TCDF**

200121R1\_4

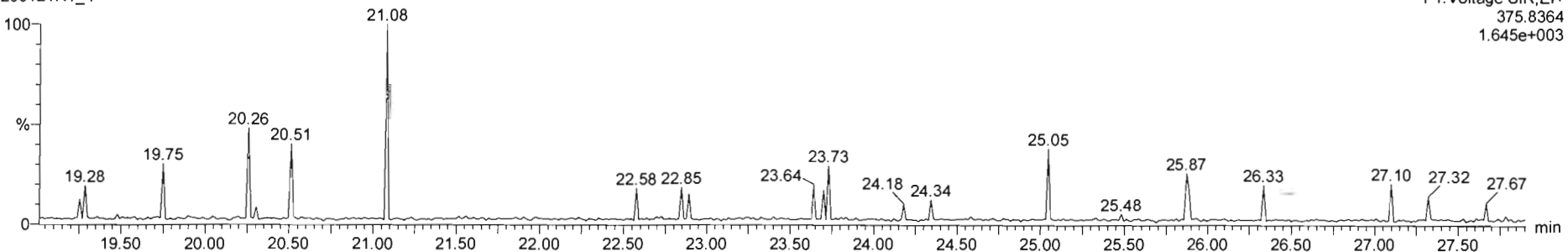


200121R1\_4



**DPE1**

200121R1\_4



Dataset: Untitled

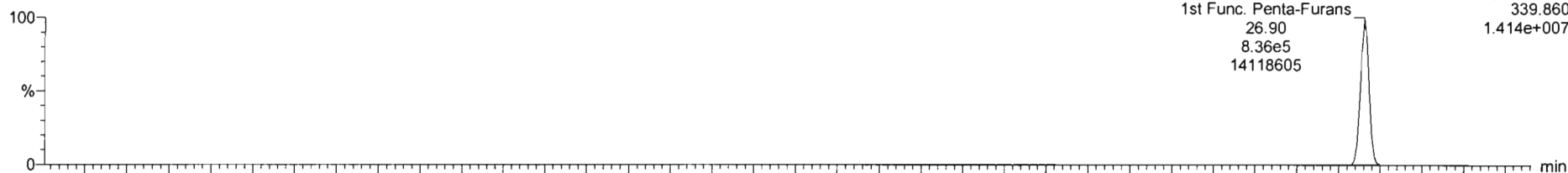
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

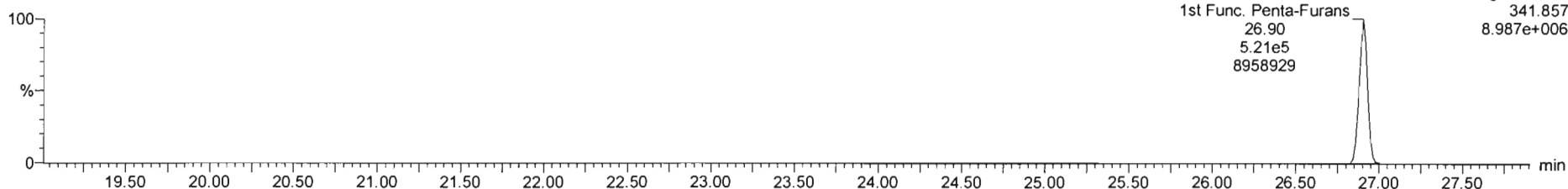
Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

1st Func. Penta-Furans

200121R1\_4

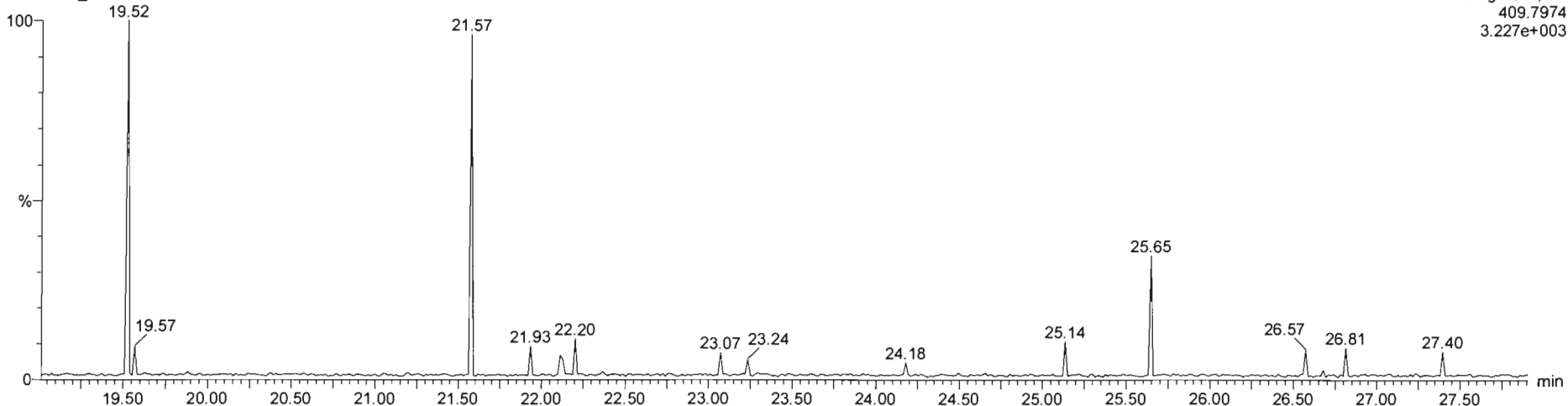


200121R1\_4



DPE6

200121R1\_4



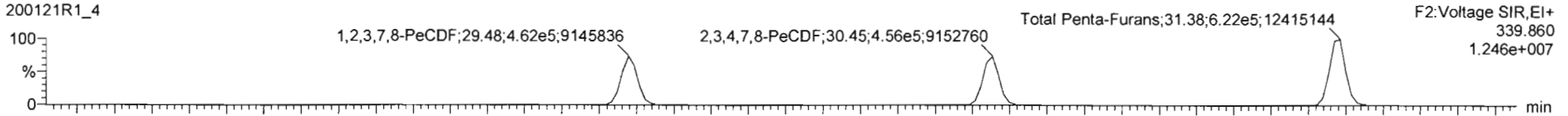
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

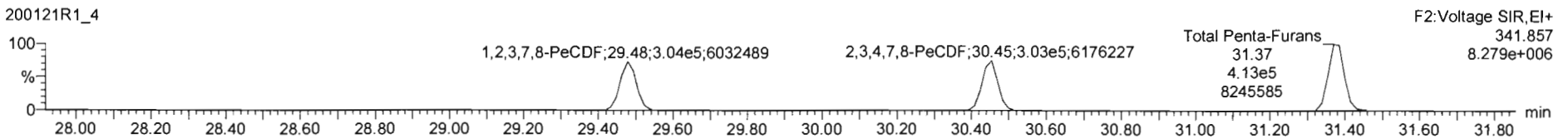
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**1,2,3,7,8-PeCDF**

200121R1\_4

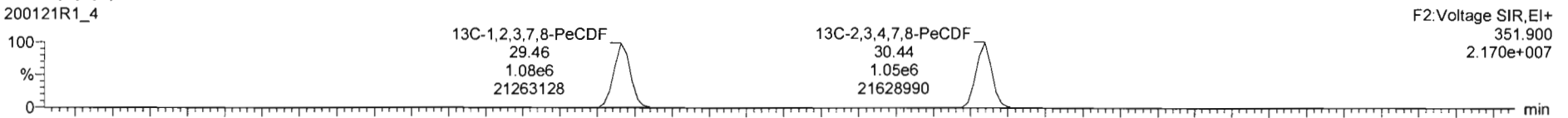


200121R1\_4

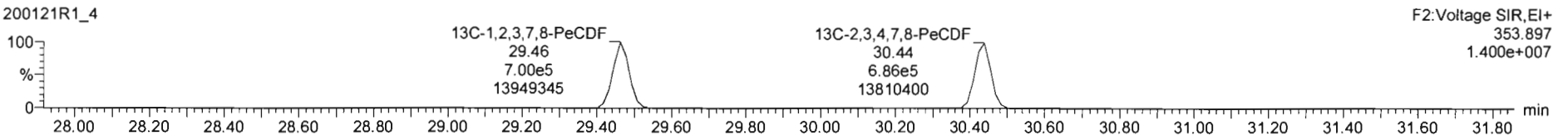


**13C-1,2,3,7,8-PeCDF**

200121R1\_4

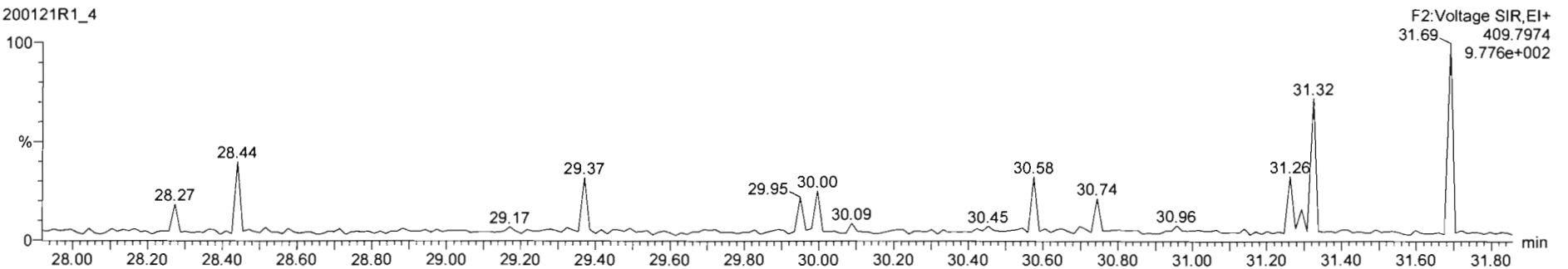


200121R1\_4



**DPE2**

200121R1\_4



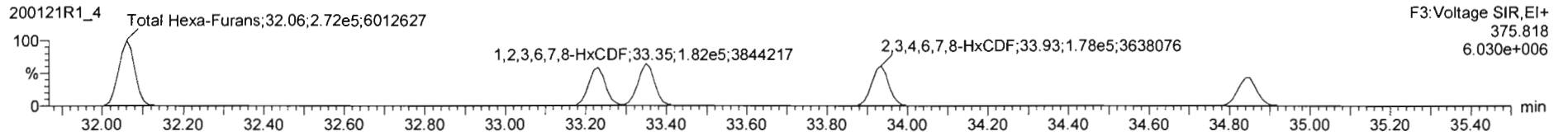
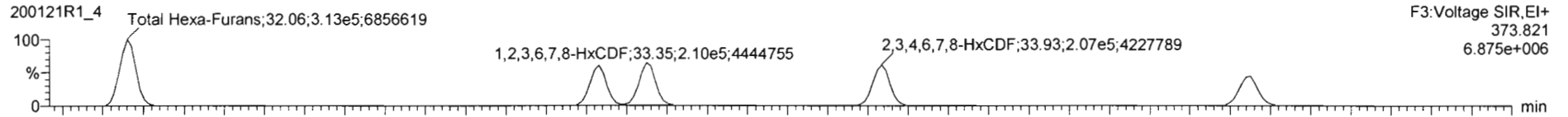
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

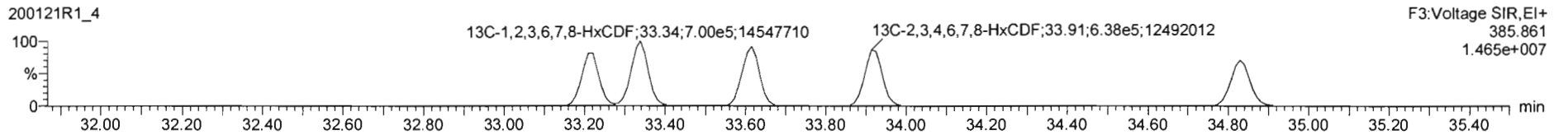
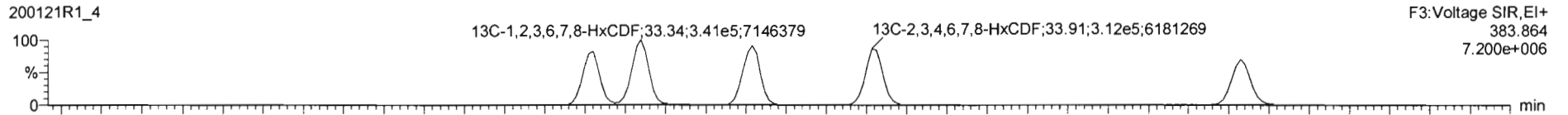
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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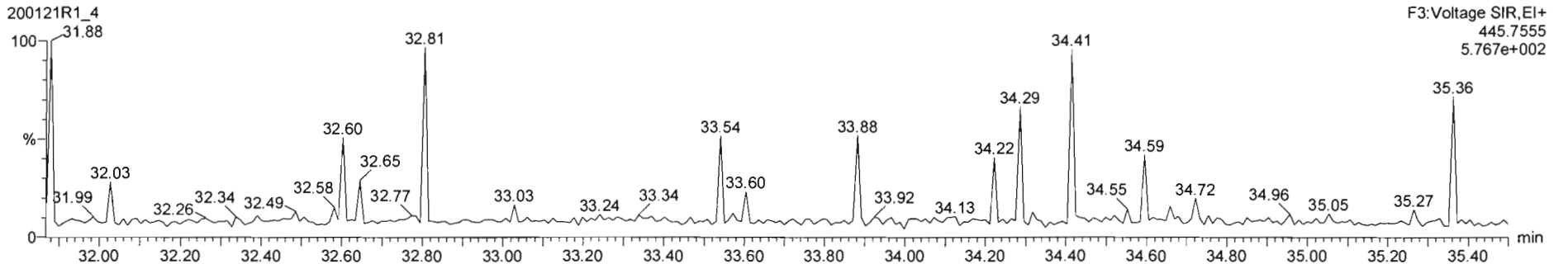
**1,2,3,4,7,8-HxCDF**



**13C-1,2,3,4,7,8-HxCDF**



**DPE3**



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

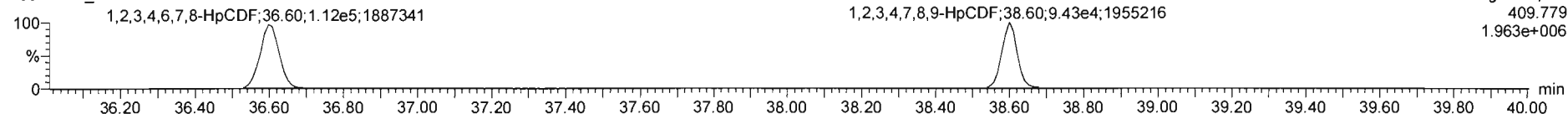
Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

### 1,2,3,4,6,7,8-HpCDF

200121R1\_4

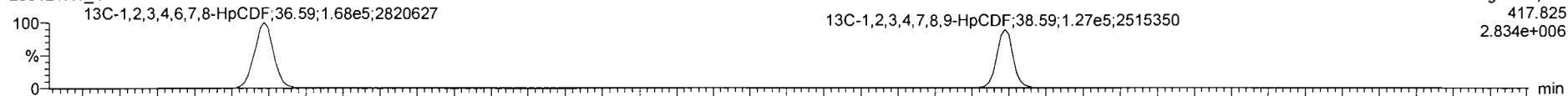


200121R1\_4

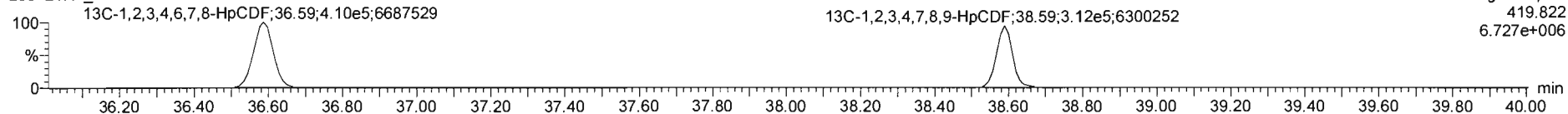


### 13C-1,2,3,4,6,7,8-HpCDF

200121R1\_4

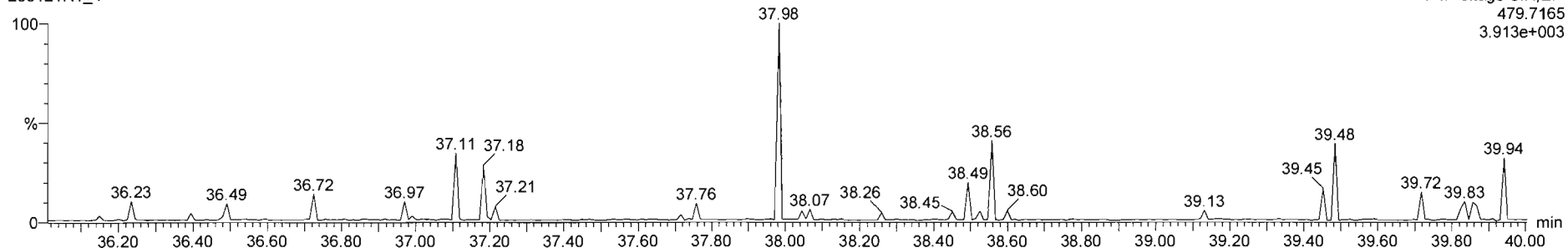


200121R1\_4



### DPE4

200121R1\_4





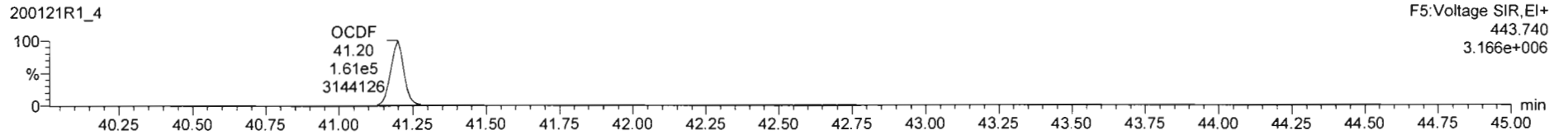
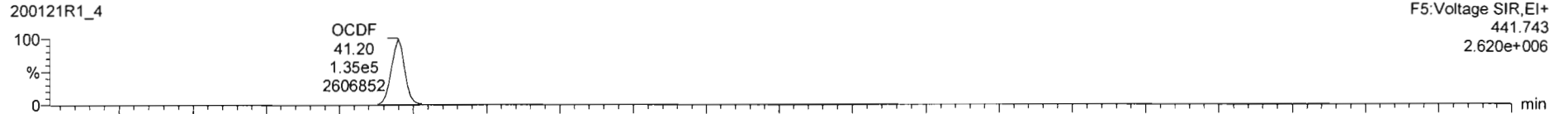
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

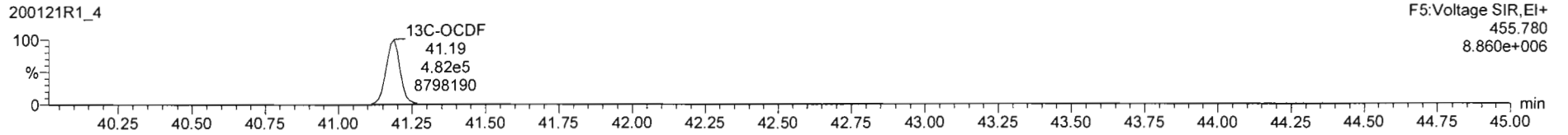
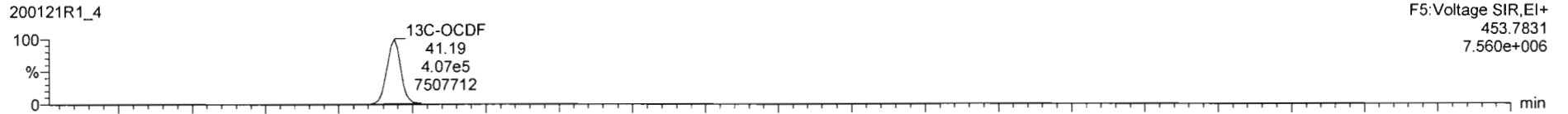
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

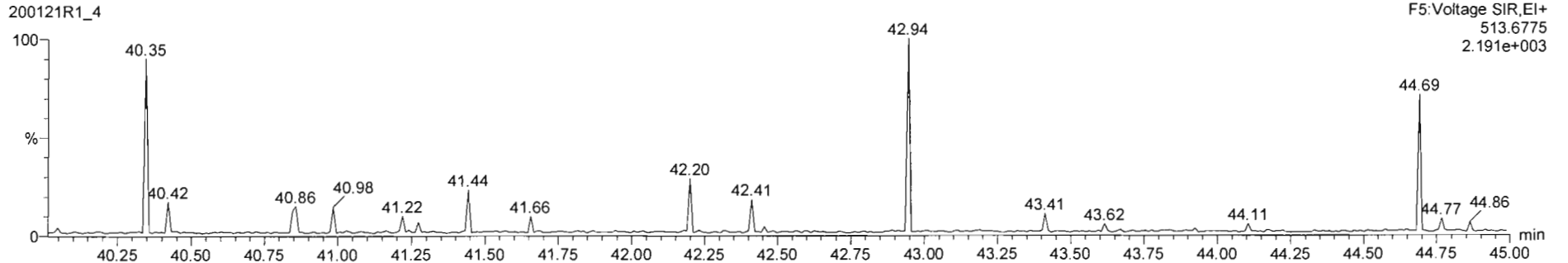
OCDF



13C-OCDF



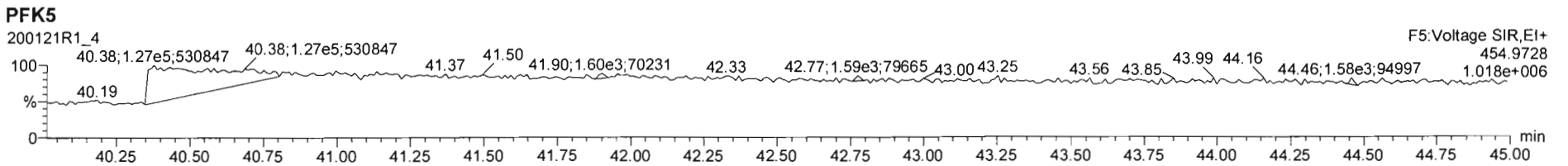
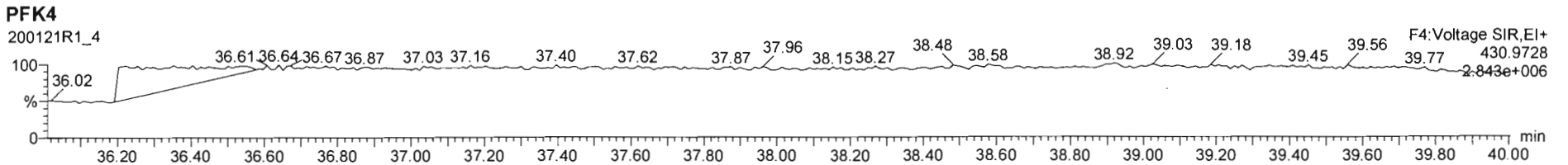
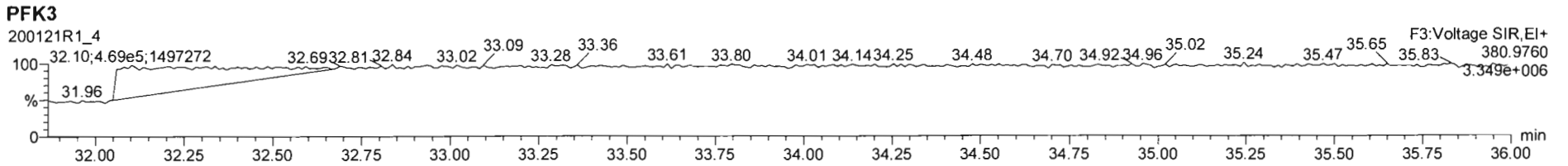
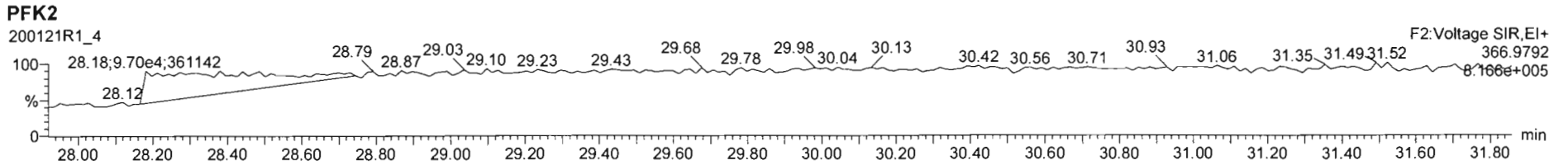
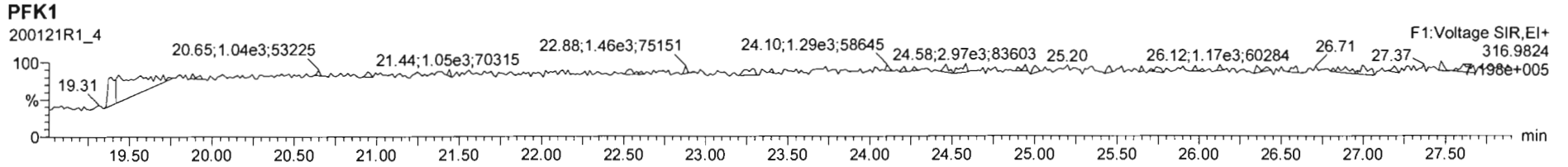
DPE5



Dataset: Untitled

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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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Dataset: Untitled

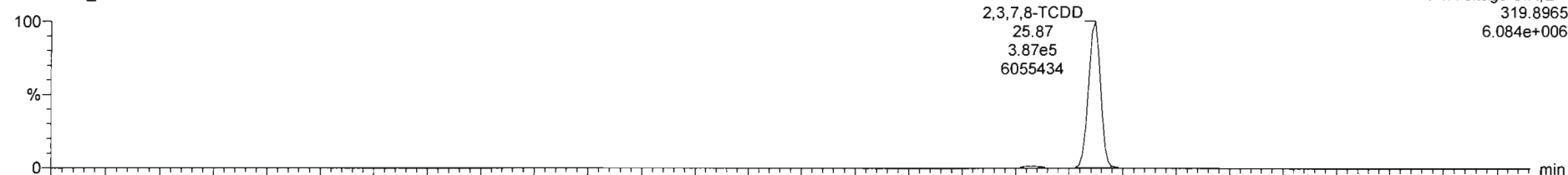
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

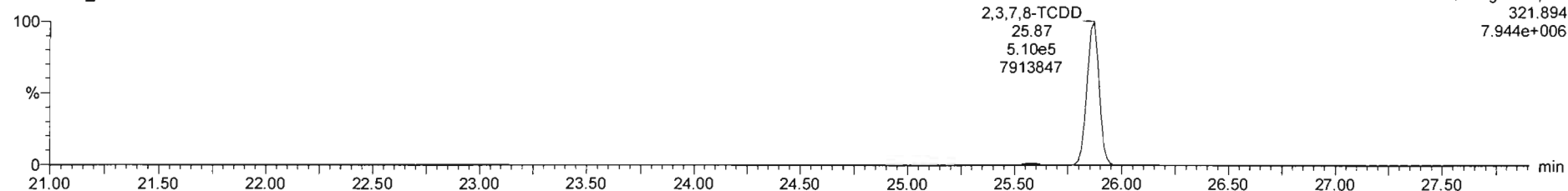
Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

**2,3,7,8-TCDD**

200121R1\_5

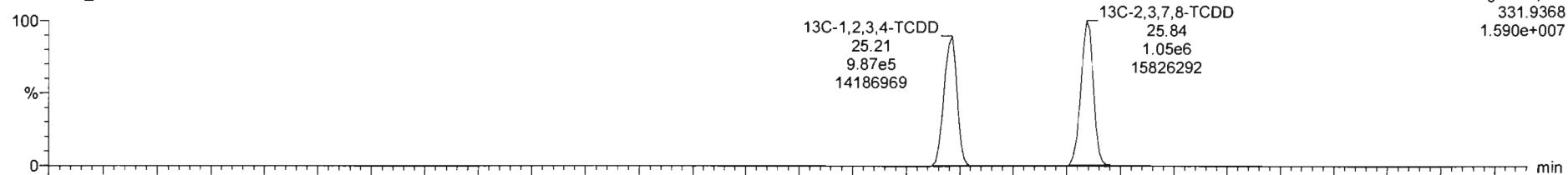


200121R1\_5

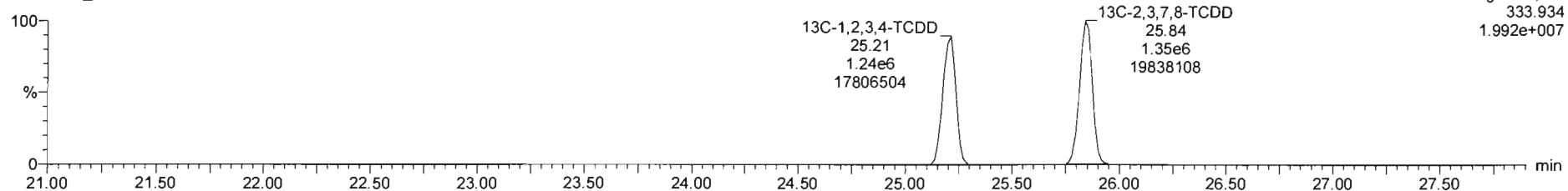


**13C-2,3,7,8-TCDD**

200121R1\_5



200121R1\_5



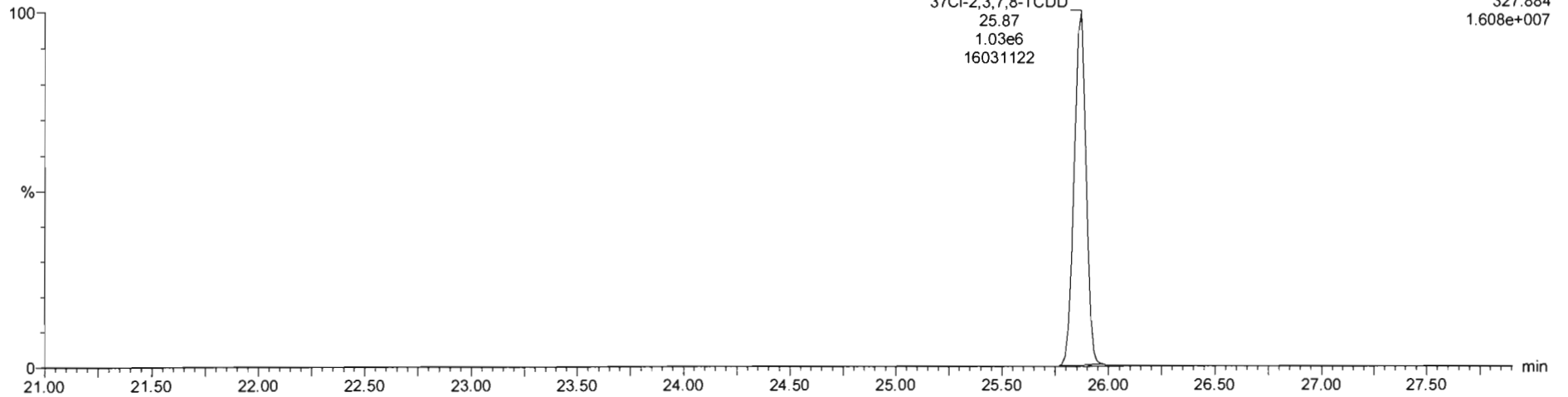
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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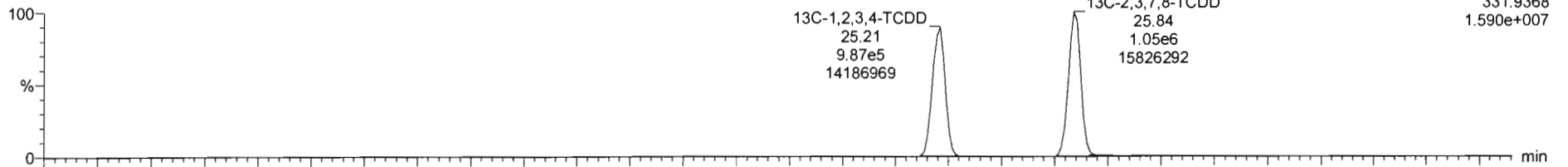
**37Cl-2,3,7,8-TCDD**

200121R1\_5

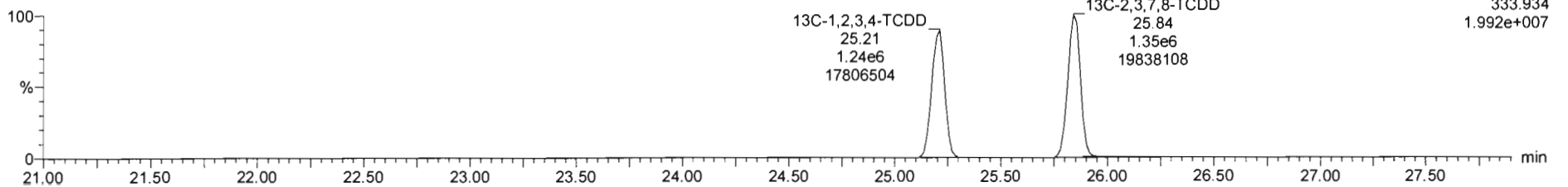


**13C-1,2,3,4-TCDD**

200121R1\_5



200121R1\_5



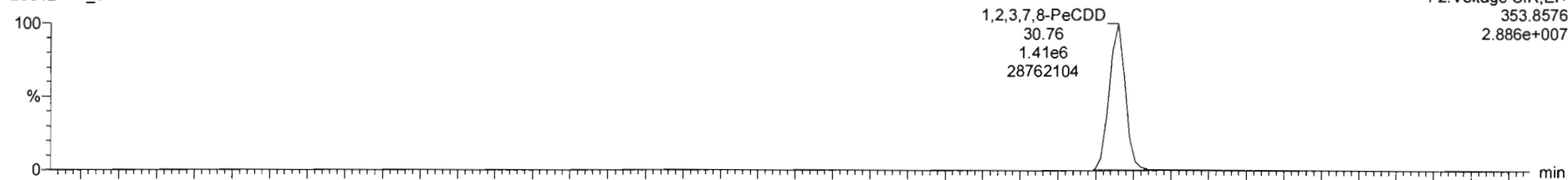
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

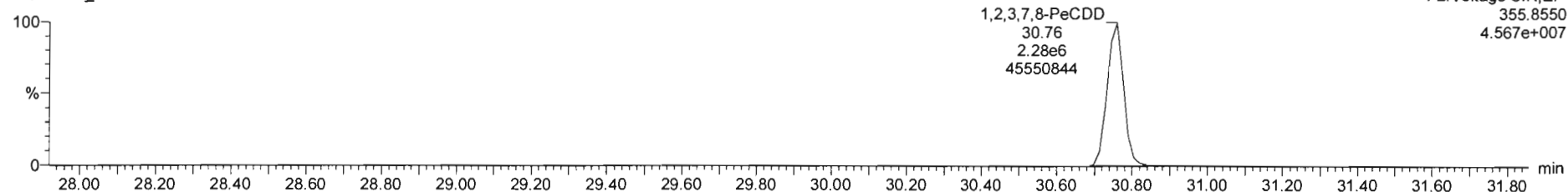
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**1,2,3,7,8-PeCDD**

200121R1\_5

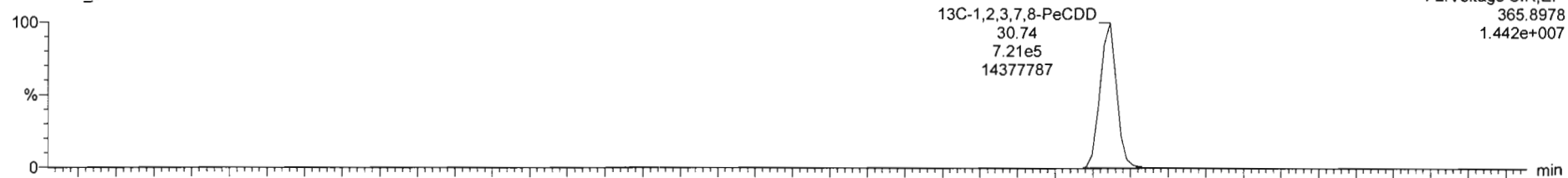


200121R1\_5

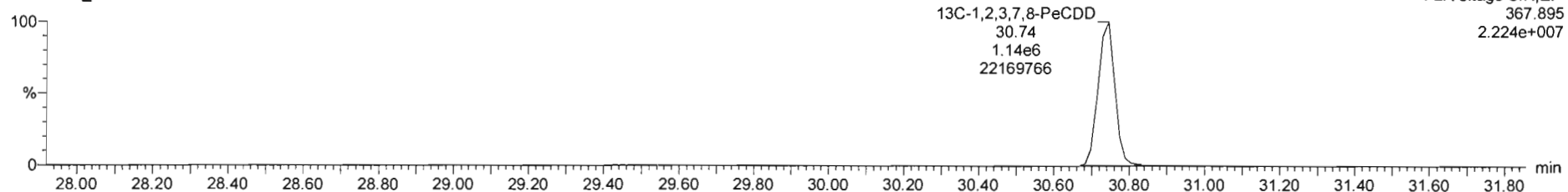


**13C-1,2,3,7,8-PeCDD**

200121R1\_5



200121R1\_5



Dataset: Untitled

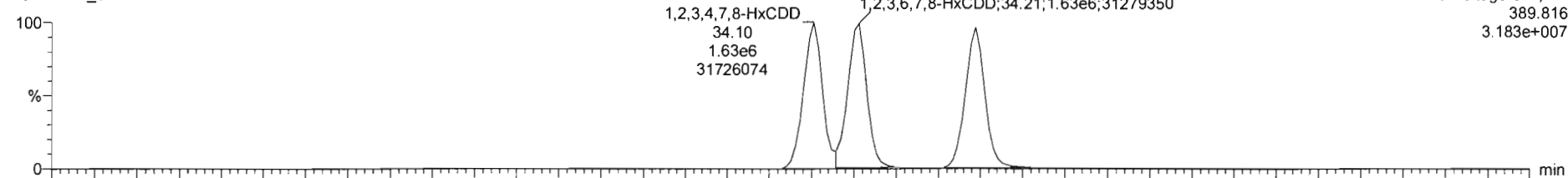
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

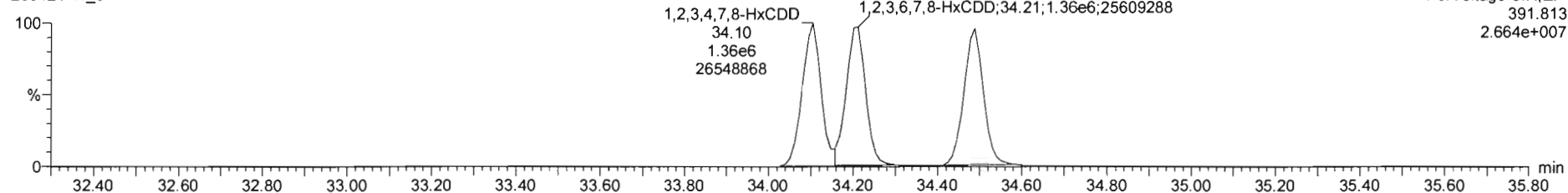
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**1,2,3,4,7,8-HxCDD**

200121R1\_5

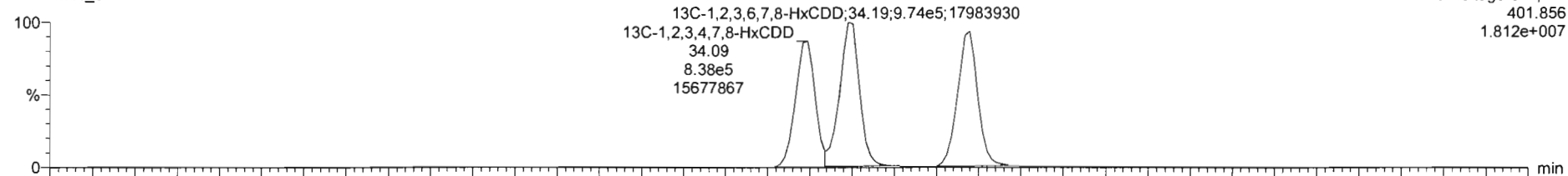


200121R1\_5

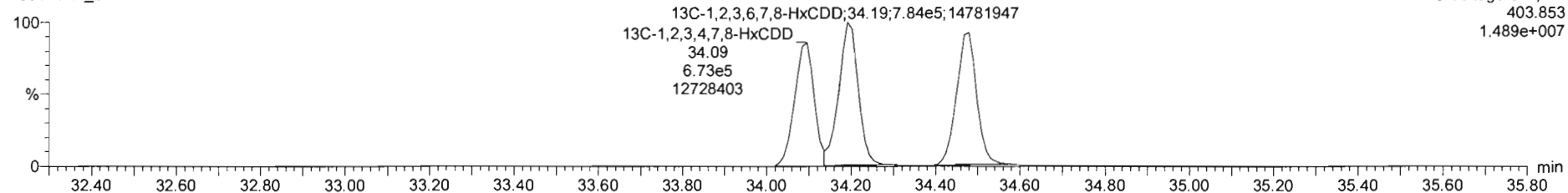


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_5



200121R1\_5



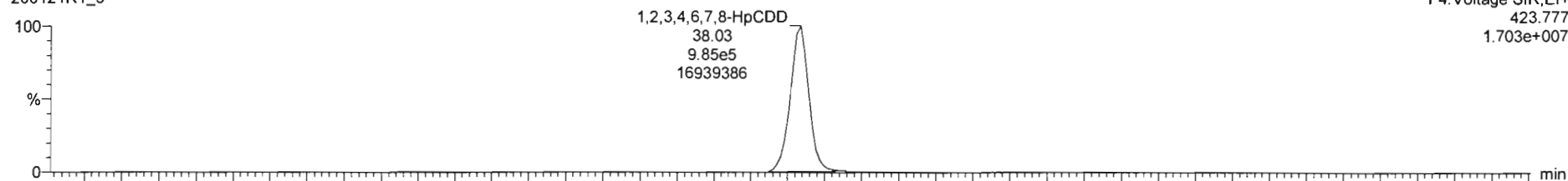
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

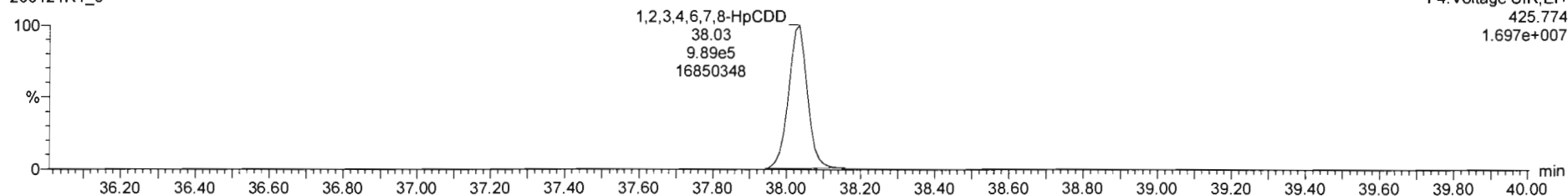
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**1,2,3,4,6,7,8-HpCDD**

200121R1\_5

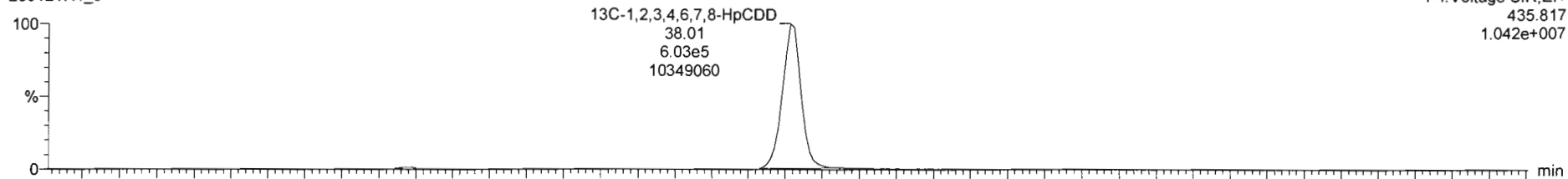


200121R1\_5

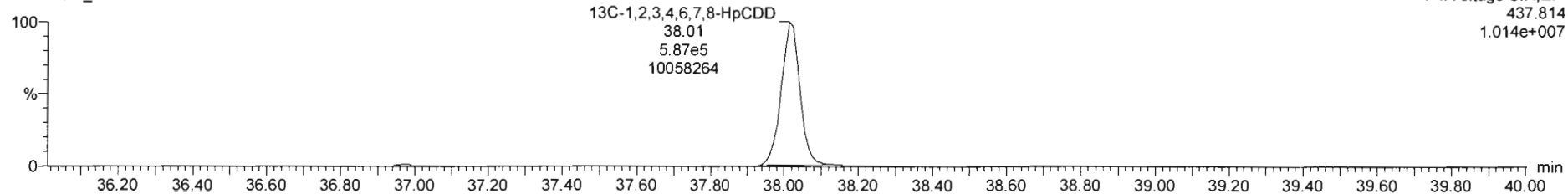


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_5



200121R1\_5



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

**OCDD**

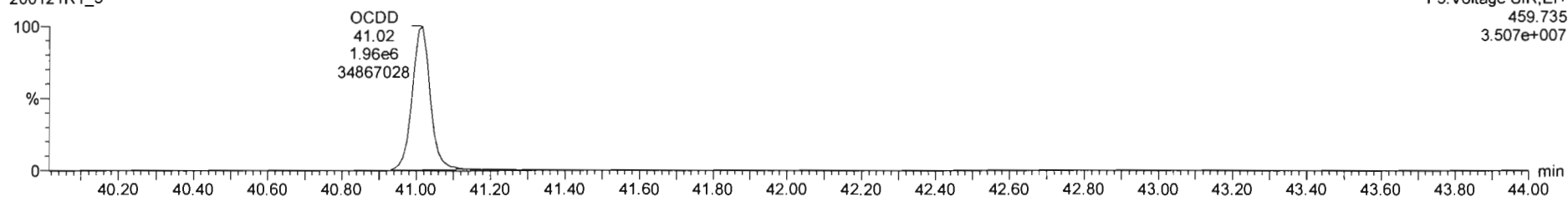
200121R1\_5

F5:Voltage SIR,EI+  
457.738  
3.047e+007



200121R1\_5

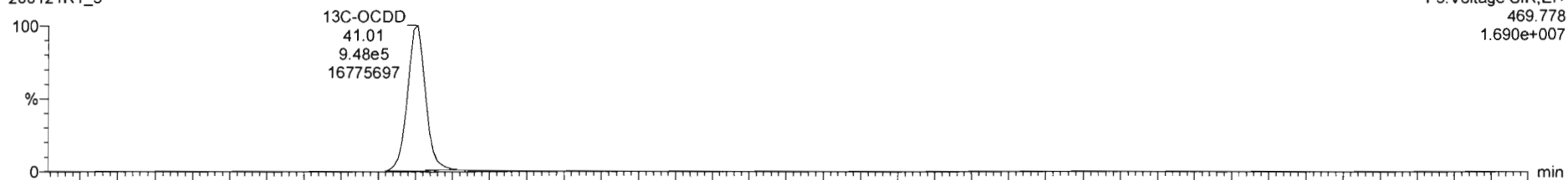
F5:Voltage SIR,EI+  
459.735  
3.507e+007



**13C-OCDD**

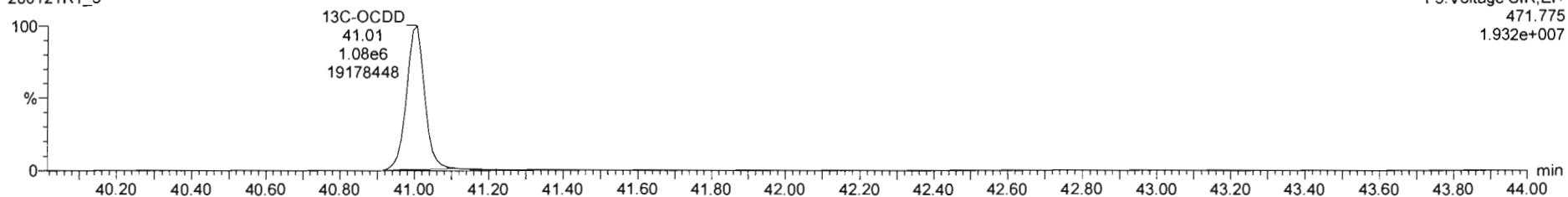
200121R1\_5

F5:Voltage SIR,EI+  
469.778  
1.690e+007



200121R1\_5

F5:Voltage SIR,EI+  
471.775  
1.932e+007





Dataset: Untitled

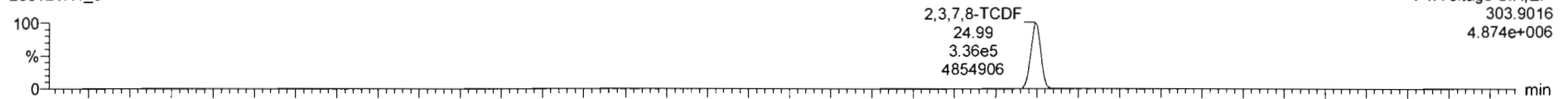
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

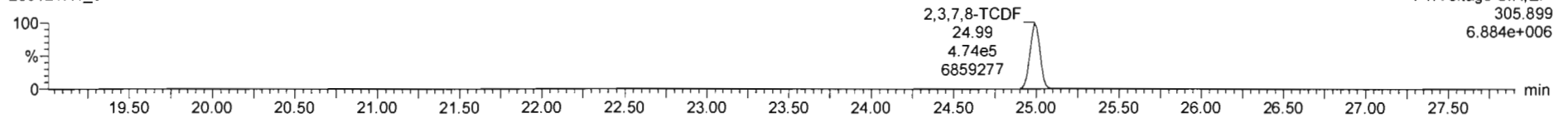
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**2,3,7,8-TCDF**

200121R1\_5

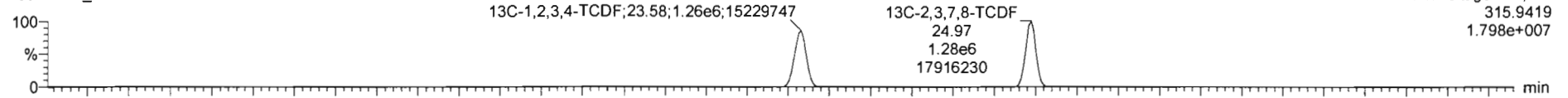


200121R1\_5

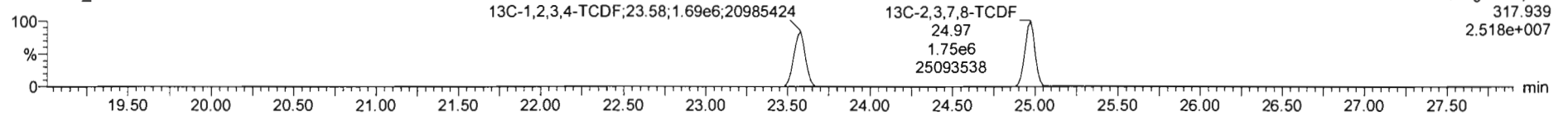


**13C-2,3,7,8-TCDF**

200121R1\_5

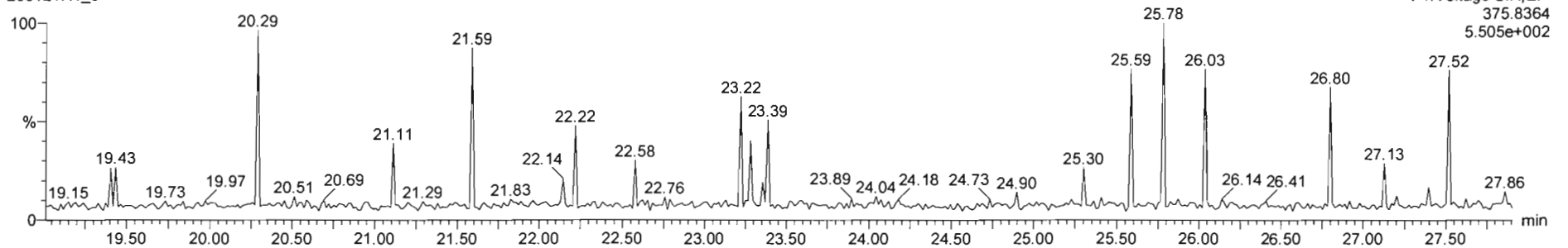


200121R1\_5



**DPE1**

200121R1\_5



Dataset: Untitled

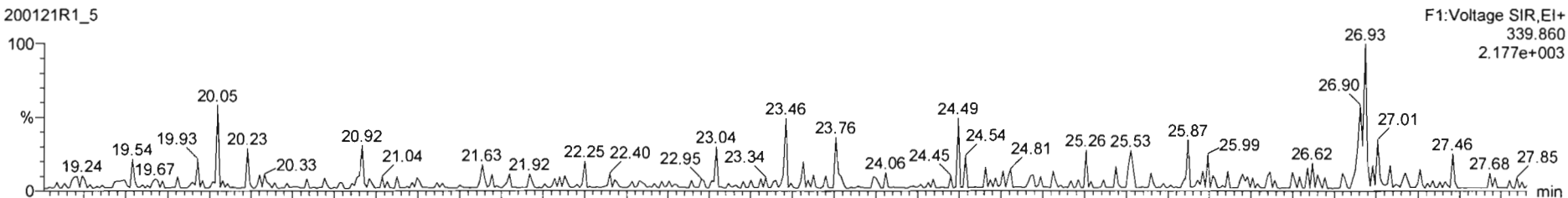
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

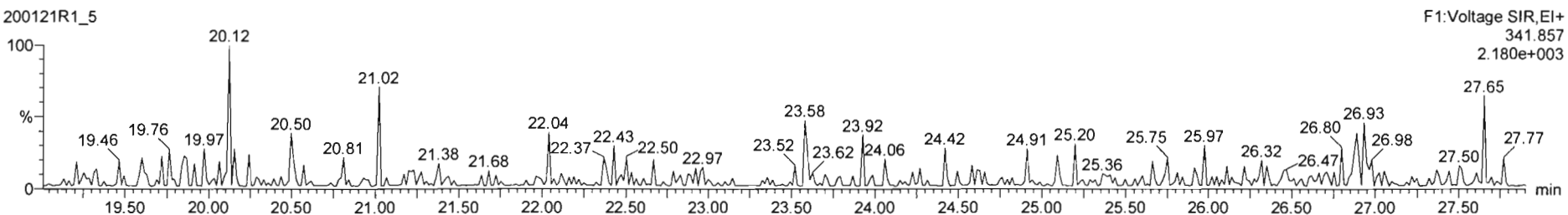
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1st Func. Penta-Furans

200121R1\_5

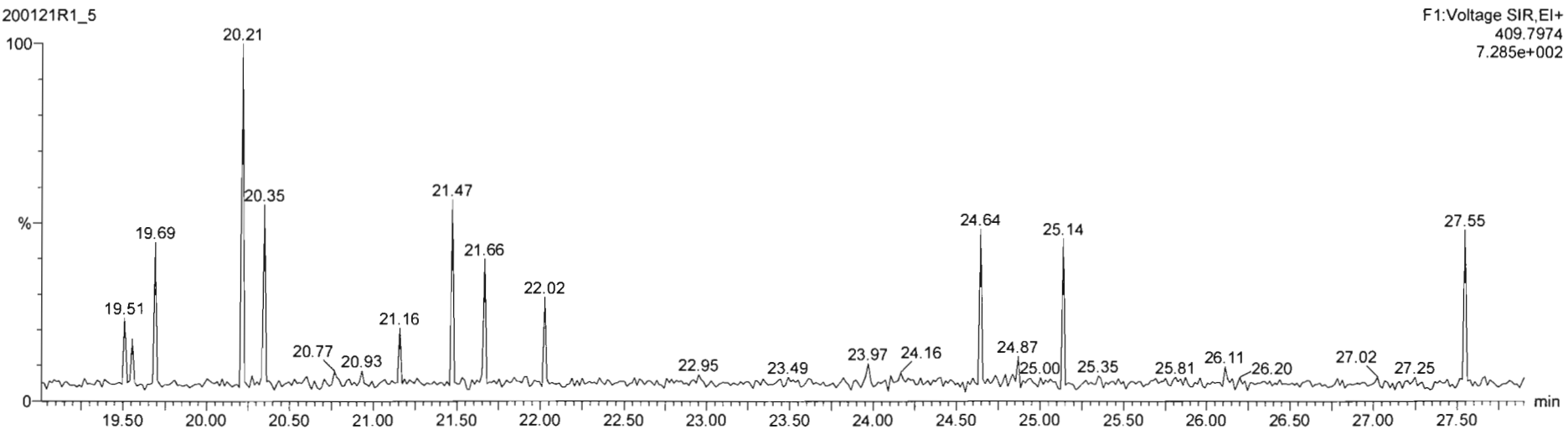


200121R1\_5



DPE6

200121R1\_5



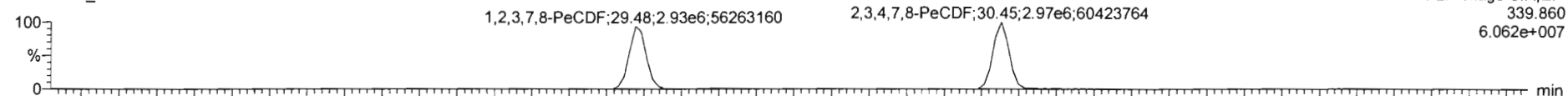
Dataset: Untitled

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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

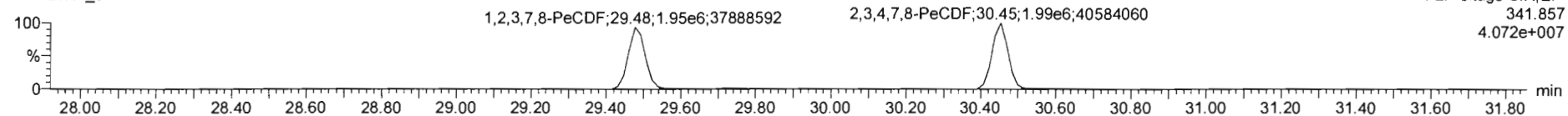
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**1,2,3,7,8-PeCDF**

200121R1\_5

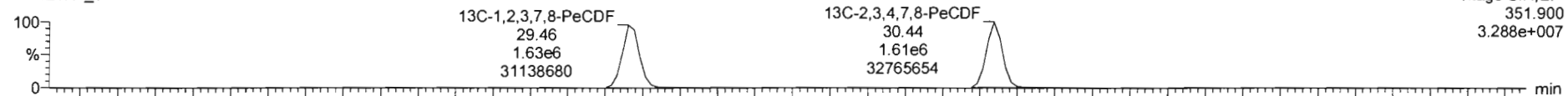


200121R1\_5

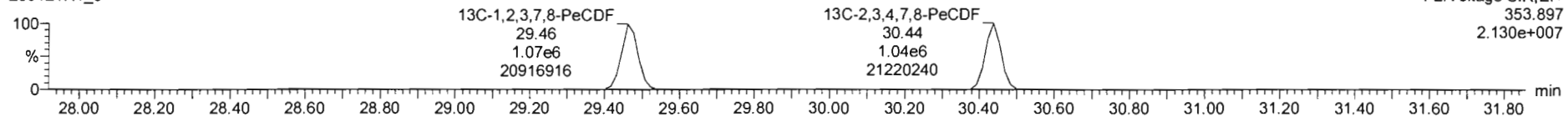


**13C-1,2,3,7,8-PeCDF**

200121R1\_5

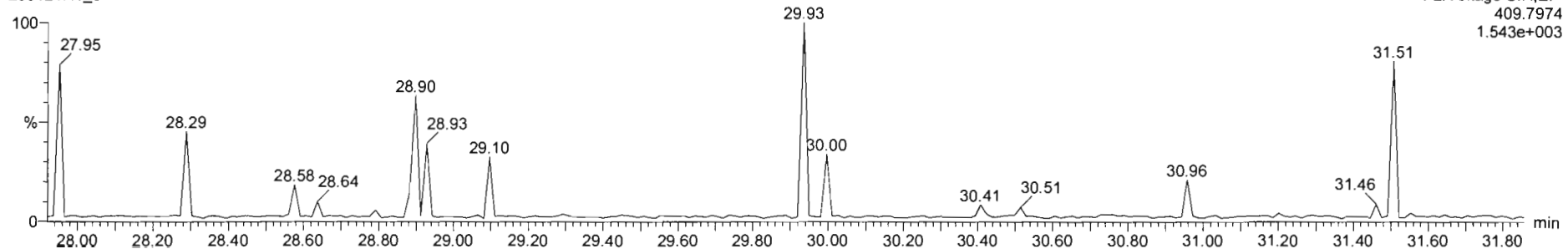


200121R1\_5



**DPE2**

200121R1\_5



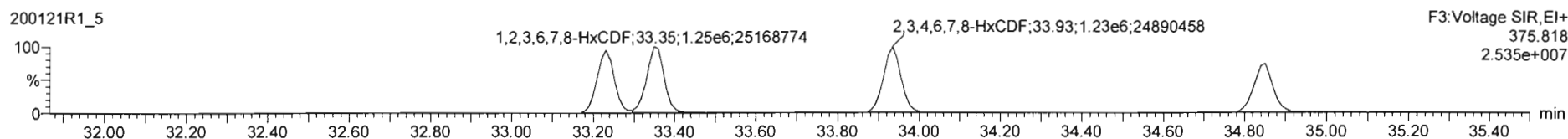
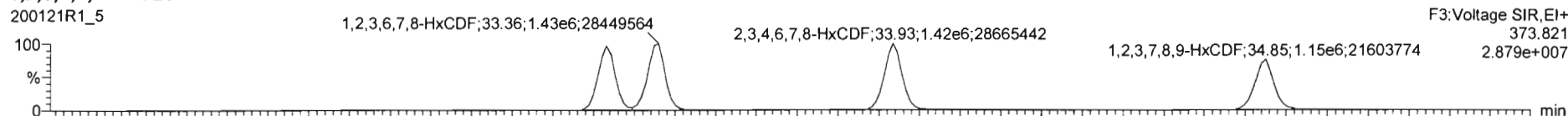
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

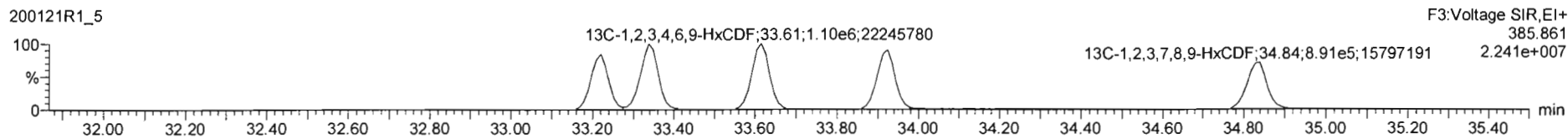
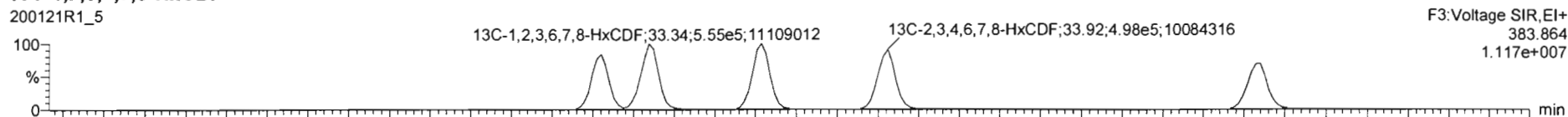
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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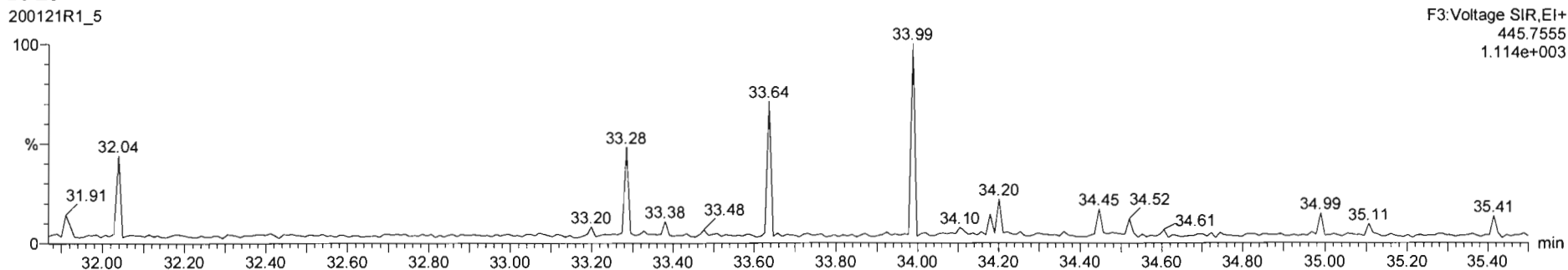
### 1,2,3,4,7,8-HxCDF



### 13C-1,2,3,4,7,8-HxCDF



### DPE3



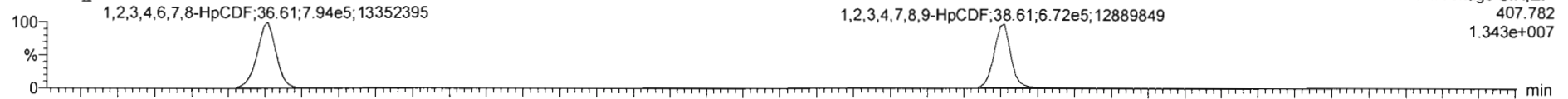
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

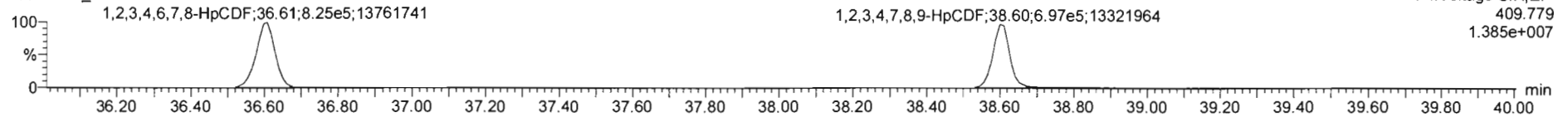
**1,2,3,4,6,7,8-HpCDF**

200121R1\_5



F4: Voltage SIR, EI+  
407.782  
1.343e+007

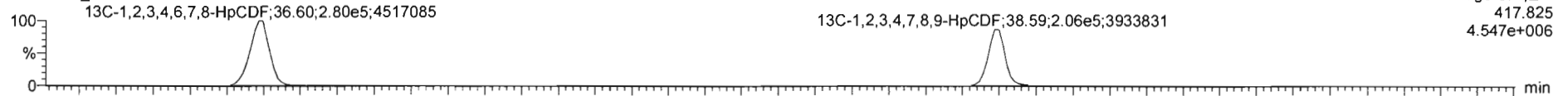
200121R1\_5



F4: Voltage SIR, EI+  
409.779  
1.385e+007

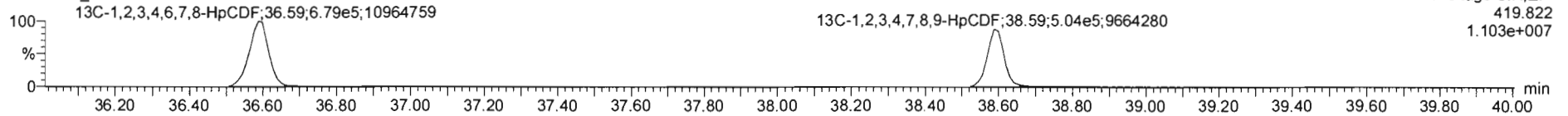
**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_5



F4: Voltage SIR, EI+  
417.825  
4.547e+006

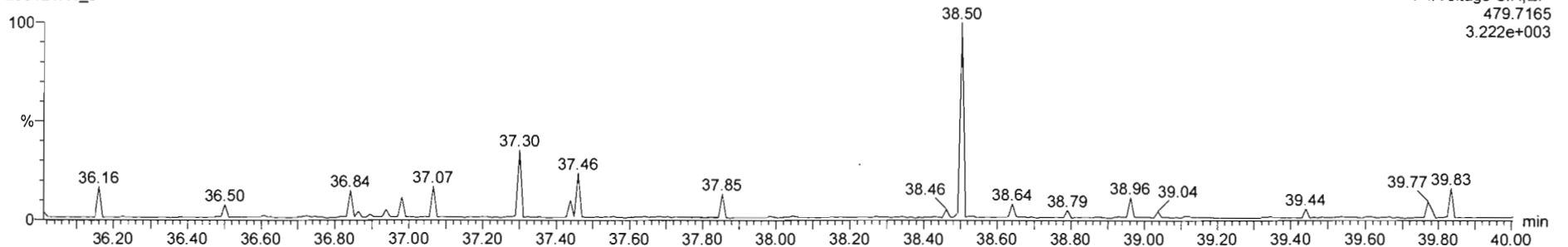
200121R1\_5



F4: Voltage SIR, EI+  
419.822  
1.103e+007

**DPE4**

200121R1\_5



F4: Voltage SIR, EI+  
479.7165  
3.222e+003

Dataset: Untitled

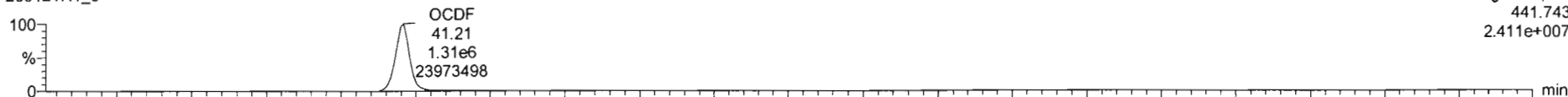
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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**OCDF**

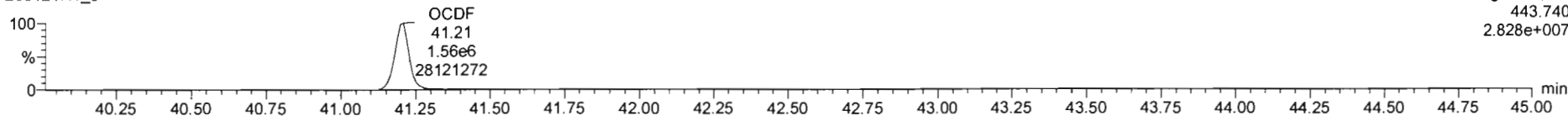
200121R1\_5

F5:Voltage SIR,EI+  
441.743  
2.411e+007



200121R1\_5

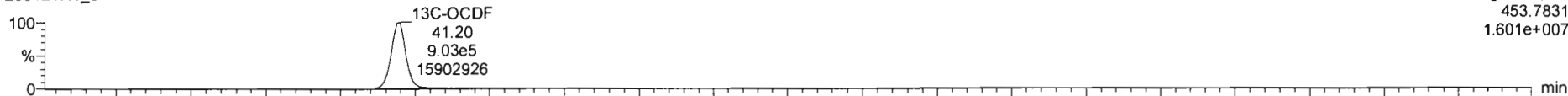
F5:Voltage SIR,EI+  
443.740  
2.828e+007



**13C-OCDF**

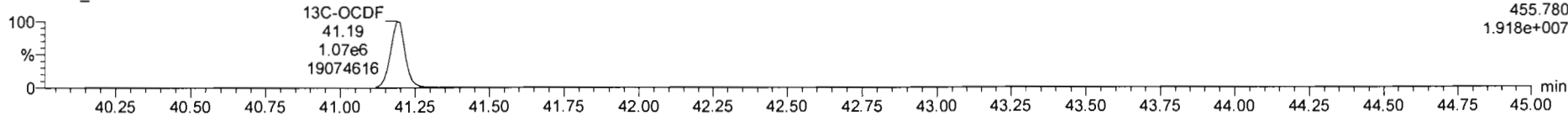
200121R1\_5

F5:Voltage SIR,EI+  
453.7831  
1.601e+007



200121R1\_5

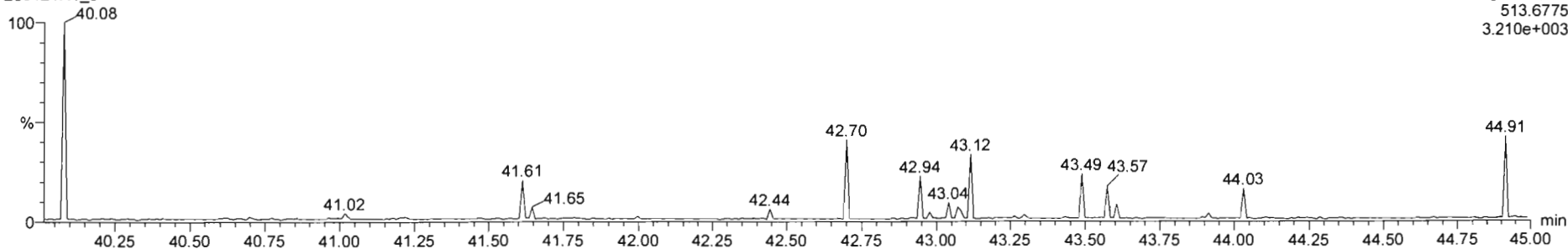
F5:Voltage SIR,EI+  
455.780  
1.918e+007



**DPE5**

200121R1\_5

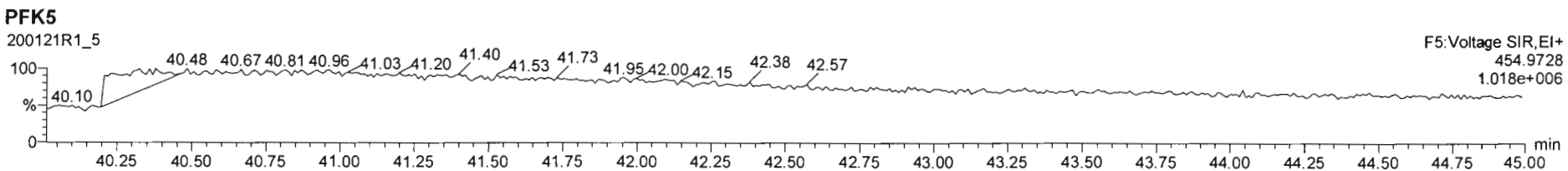
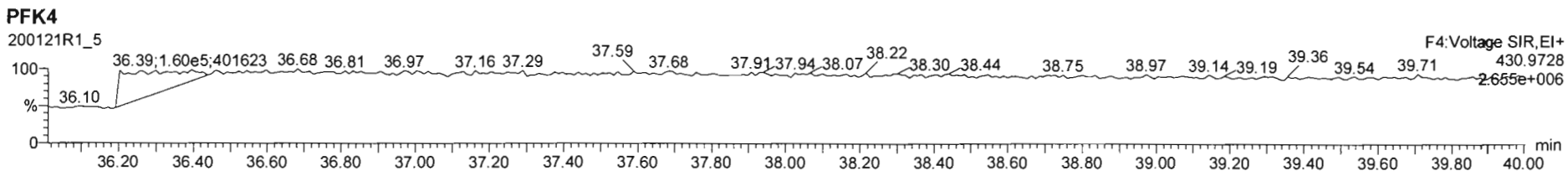
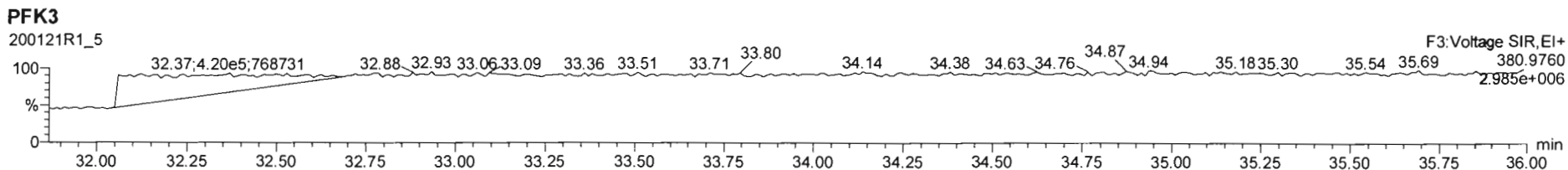
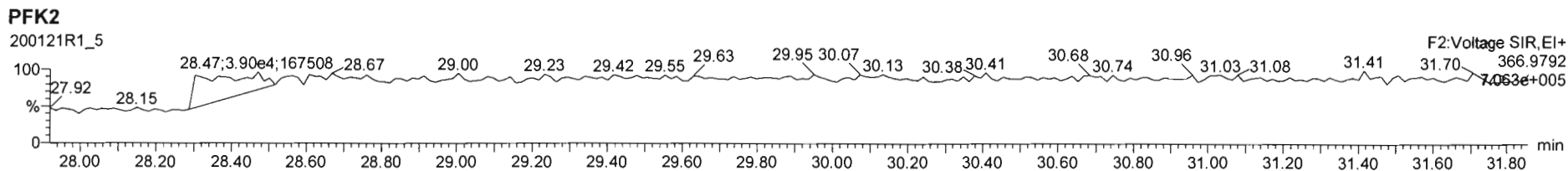
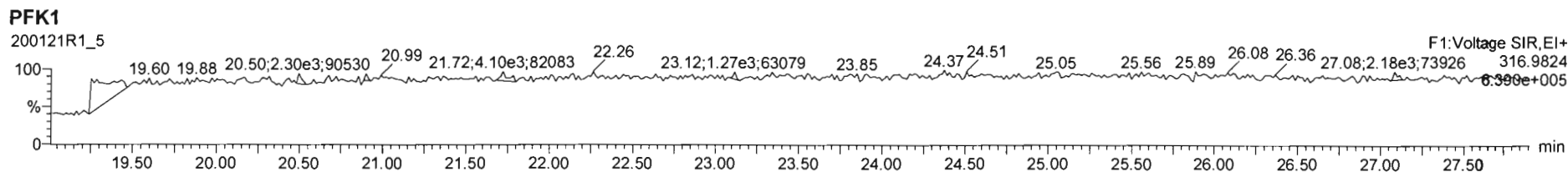
F5:Voltage SIR,EI+  
513.6775  
3.210e+003



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205



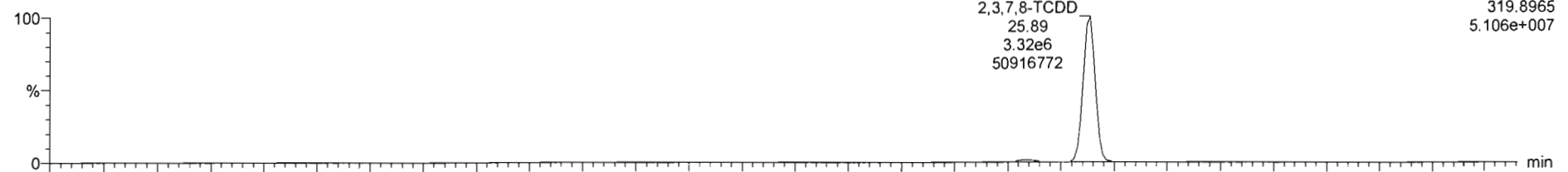
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

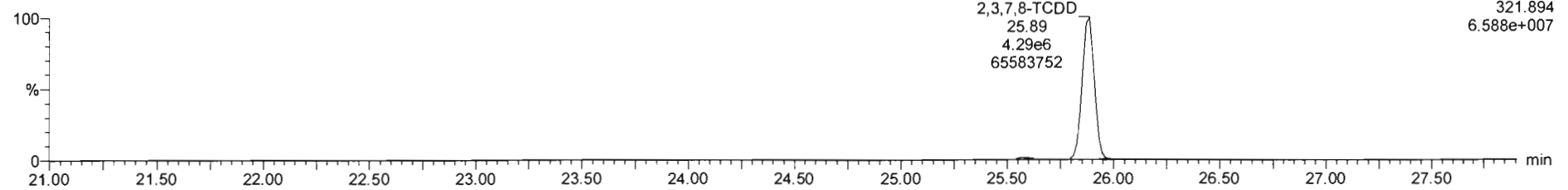
Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

**2,3,7,8-TCDD**

200121R1\_6

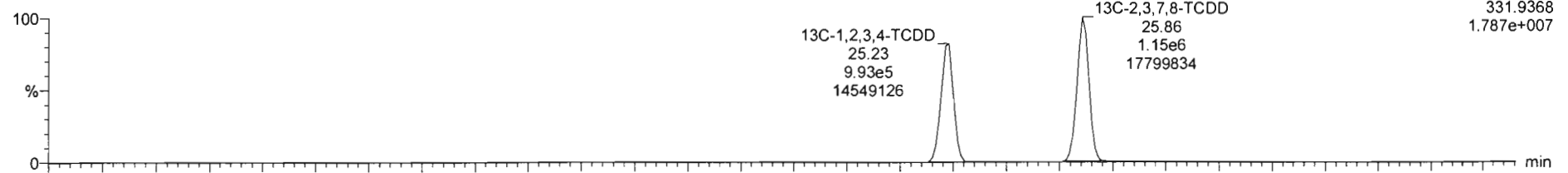


200121R1\_6

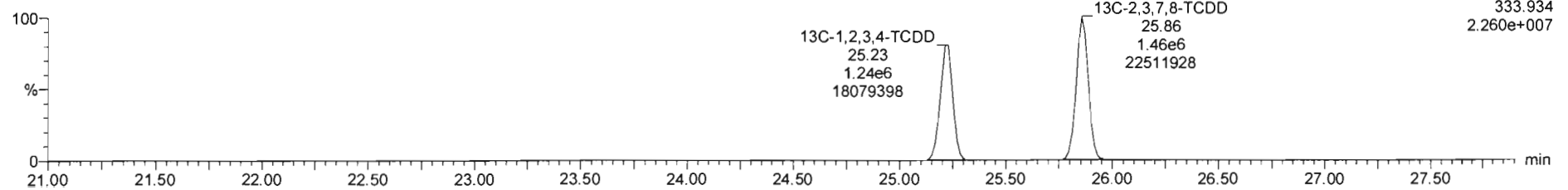


**13C-2,3,7,8-TCDD**

200121R1\_6



200121R1\_6





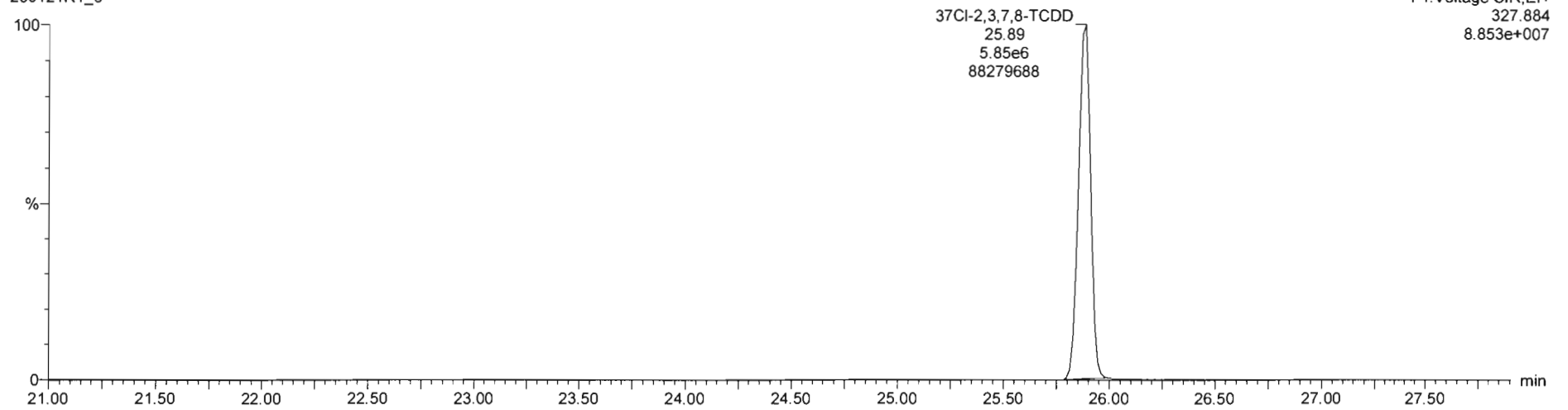
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

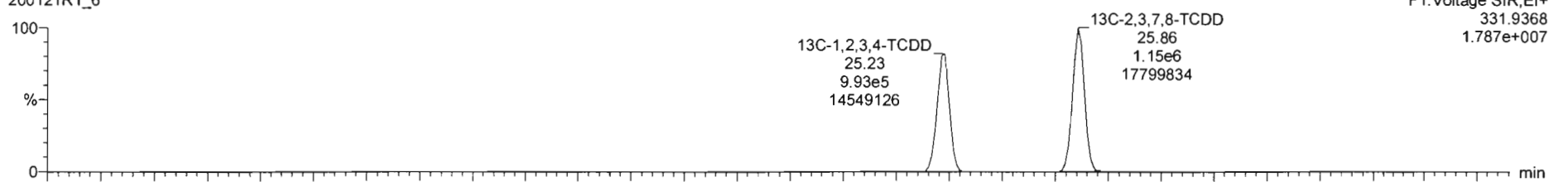
**37Cl-2,3,7,8-TCDD**

200121R1\_6

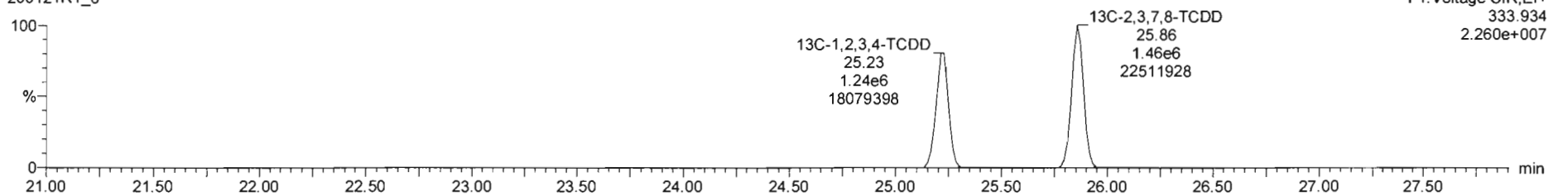


**13C-1,2,3,4-TCDD**

200121R1\_6



200121R1\_6



Dataset: Untitled

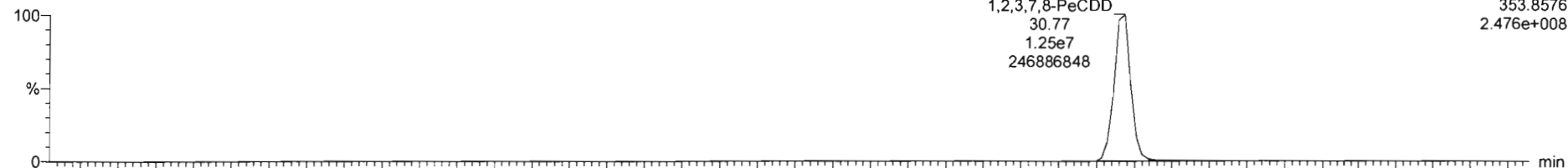
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

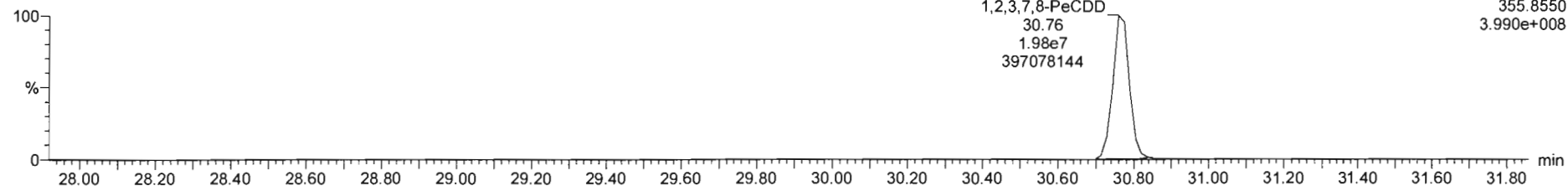
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**1,2,3,7,8-PeCDD**

200121R1\_6

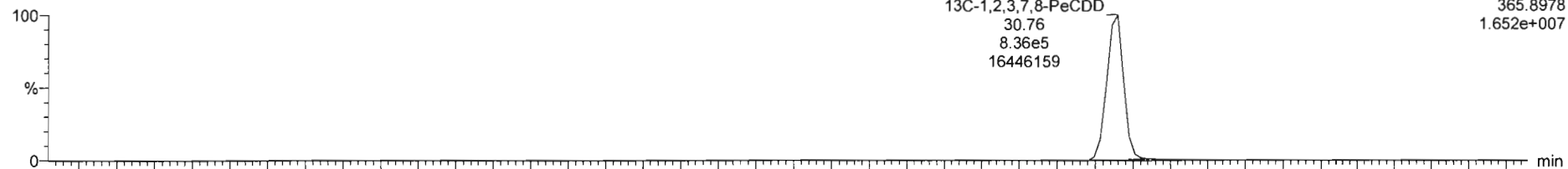


200121R1\_6

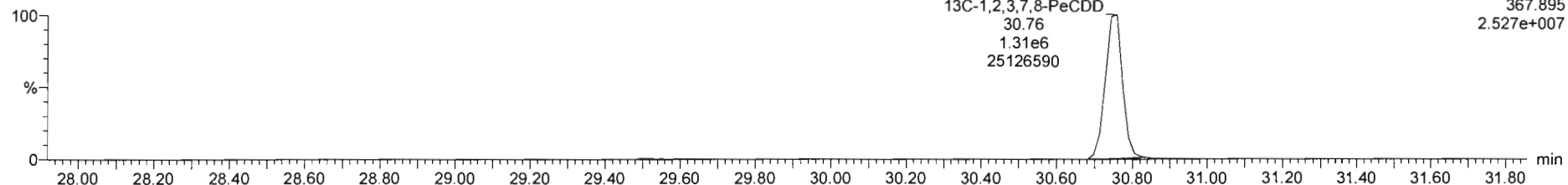


**13C-1,2,3,7,8-PeCDD**

200121R1\_6



200121R1\_6



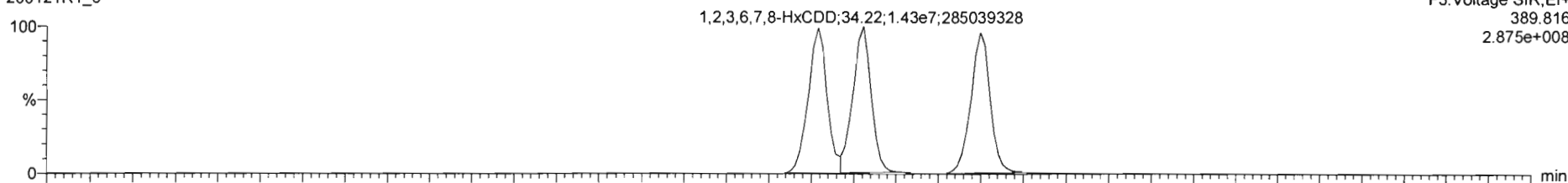
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

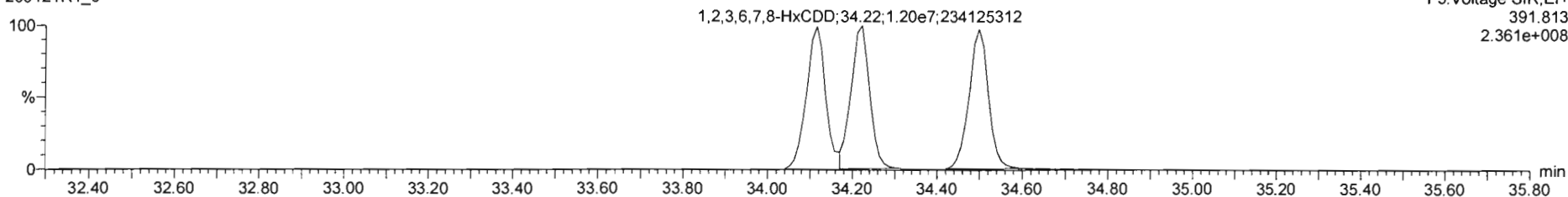
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**1,2,3,4,7,8-HxCDD**

200121R1\_6

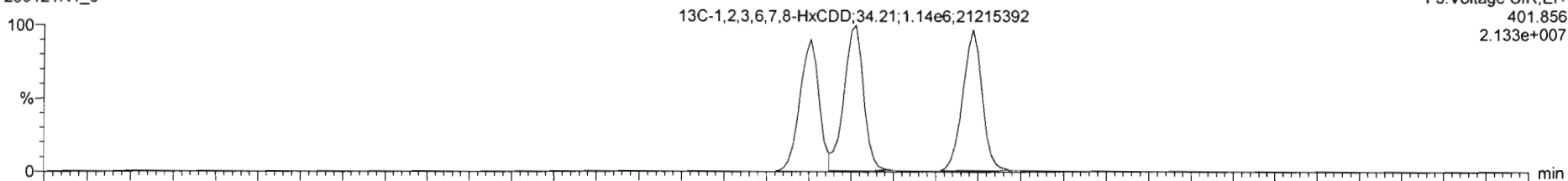


200121R1\_6

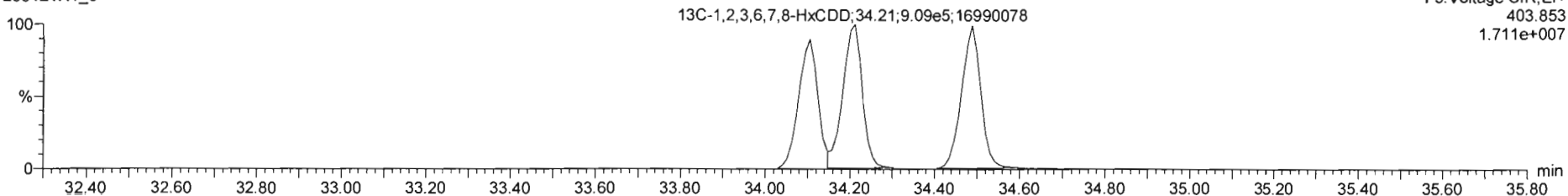


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_6



200121R1\_6



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

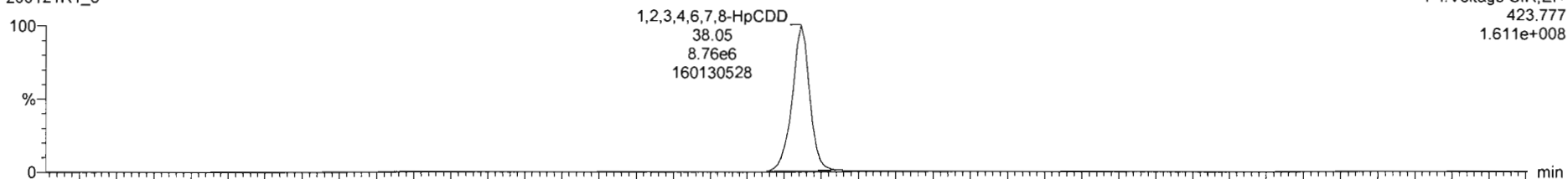
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

**1,2,3,4,6,7,8-HpCDD**

200121R1\_6

F4:Voltage SIR,EI+

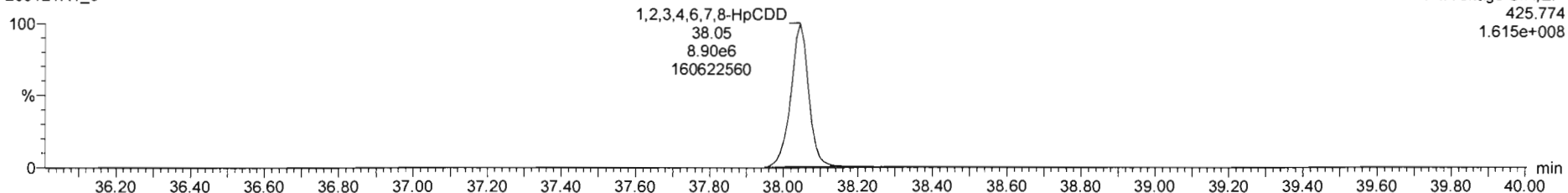


423.777

1.611e+008

200121R1\_6

F4:Voltage SIR,EI+



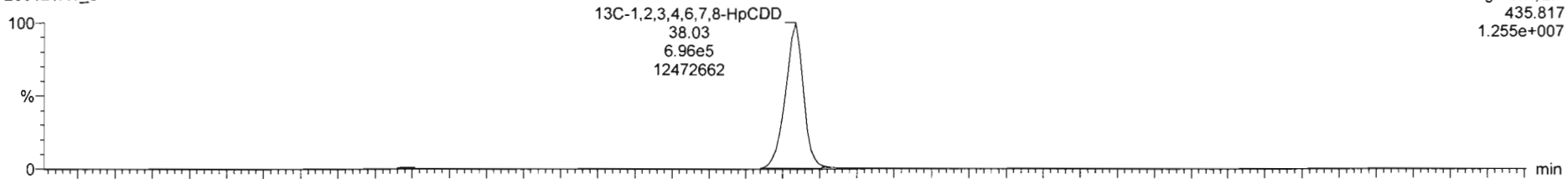
425.774

1.615e+008

**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_6

F4:Voltage SIR,EI+

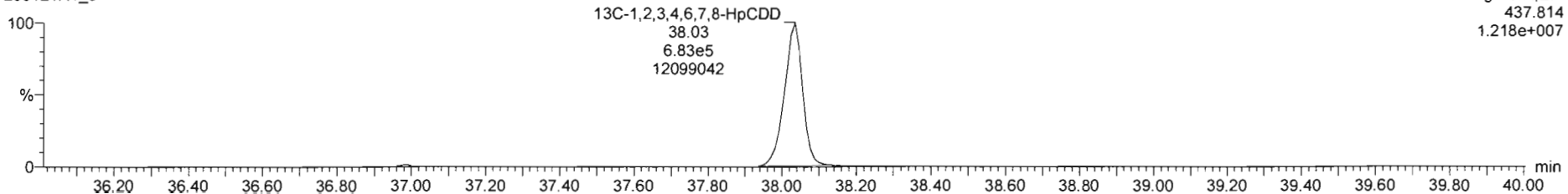


435.817

1.255e+007

200121R1\_6

F4:Voltage SIR,EI+



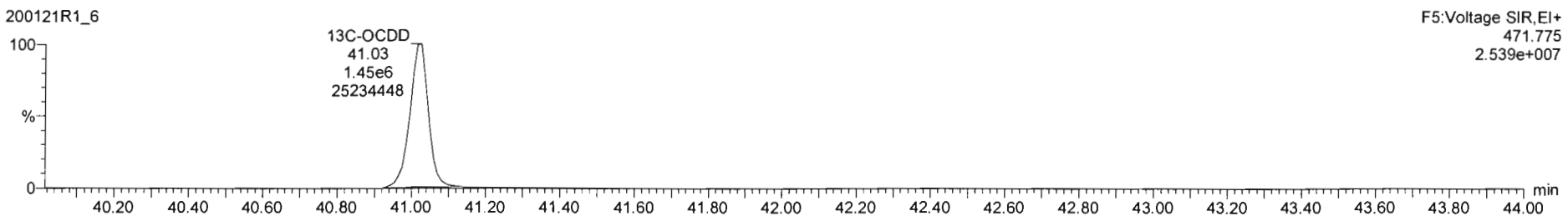
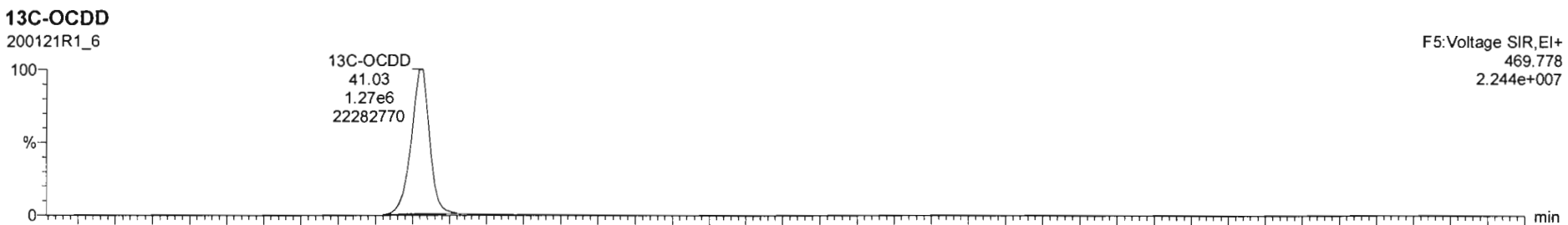
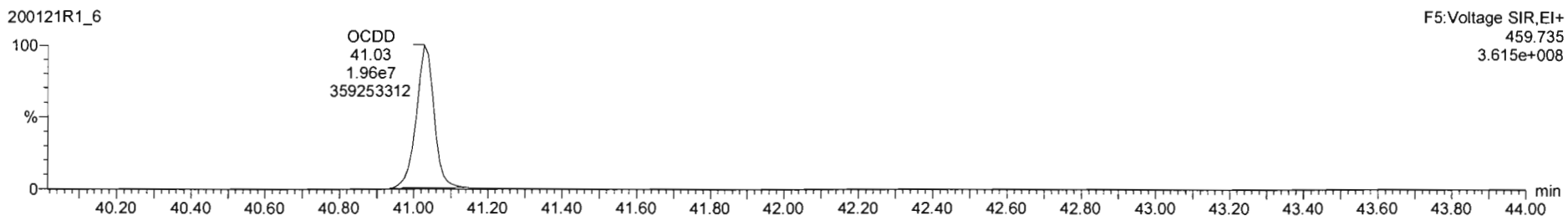
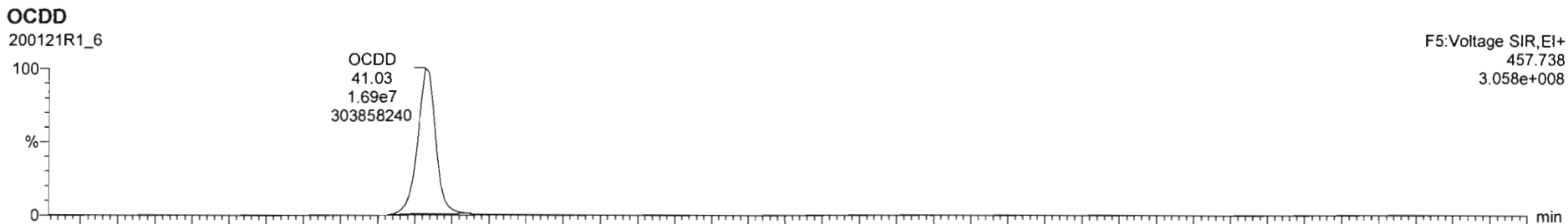
437.814

1.218e+007

Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206



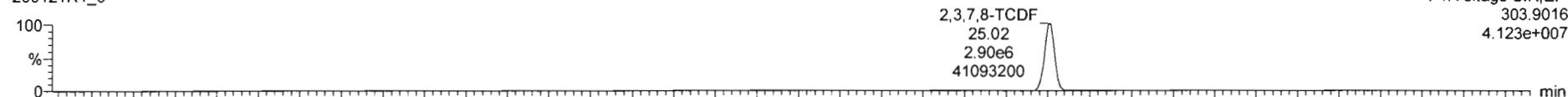
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

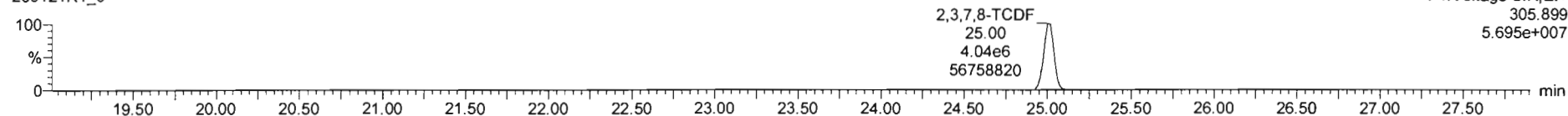
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### 2,3,7,8-TCDF

200121R1\_6

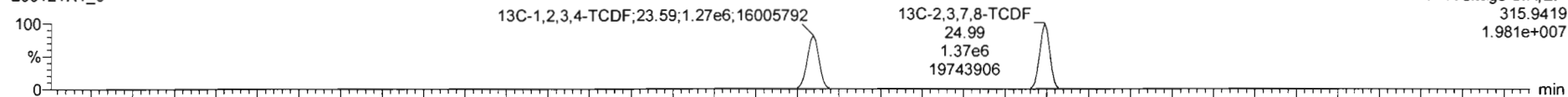


200121R1\_6

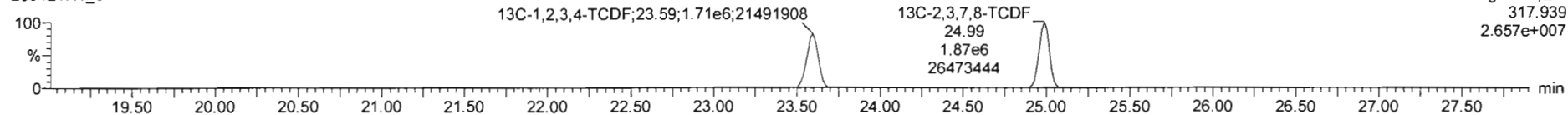


### 13C-2,3,7,8-TCDF

200121R1\_6

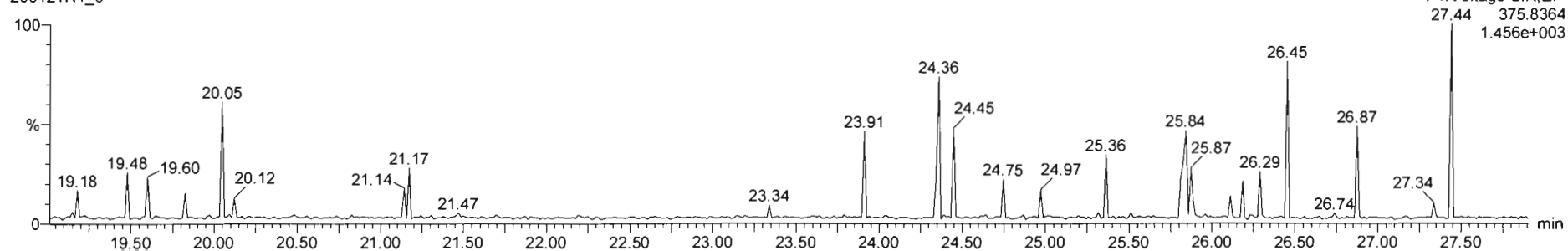


200121R1\_6



### DPE1

200121R1\_6



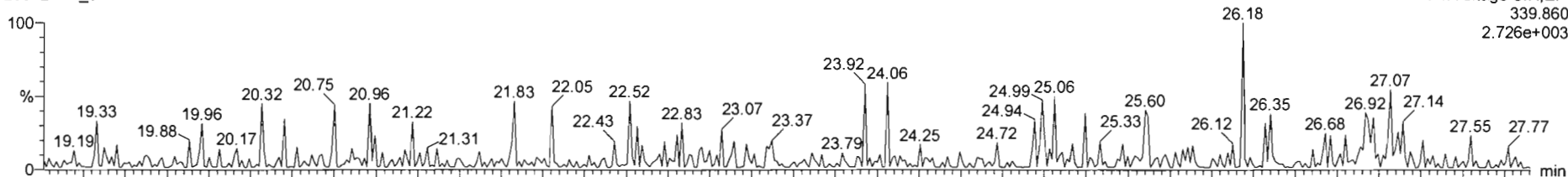
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

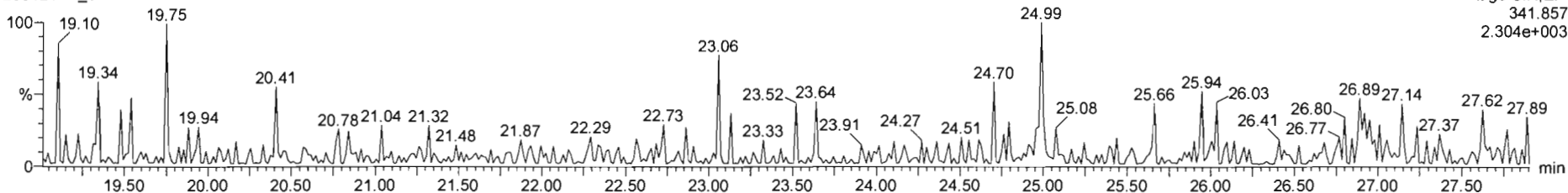
Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

1st Func. Penta-Furans

200121R1\_6

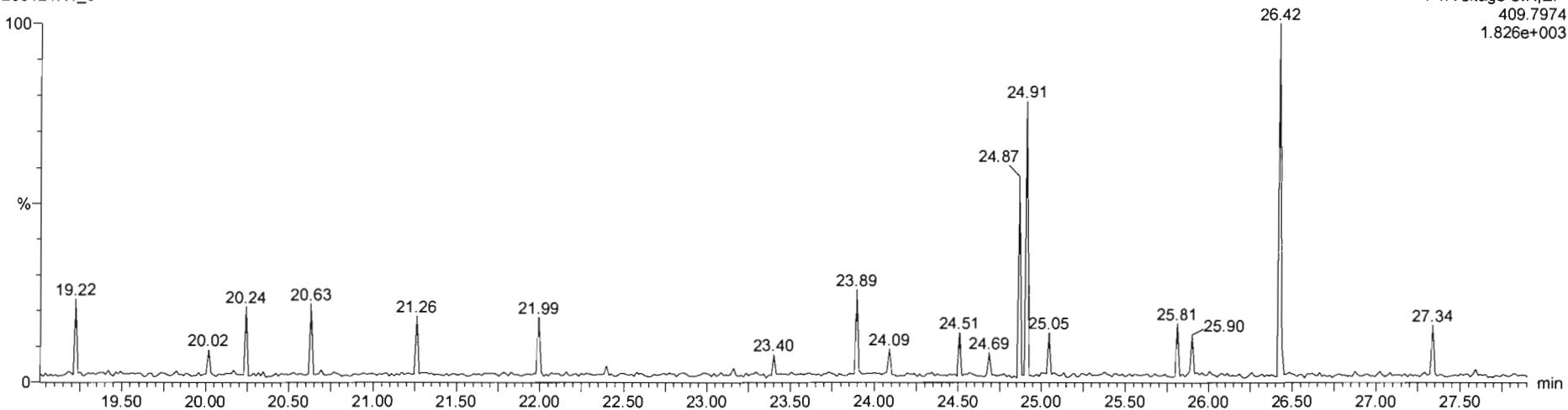


200121R1\_6



DPE6

200121R1\_6



Dataset: Untitled

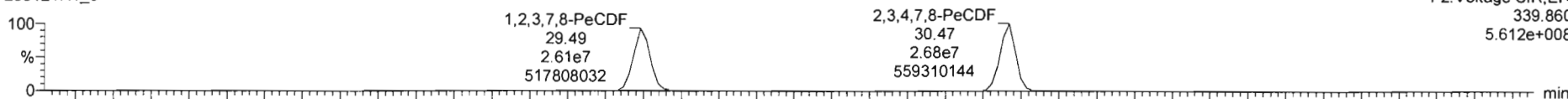
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

**1,2,3,7,8-PeCDF**

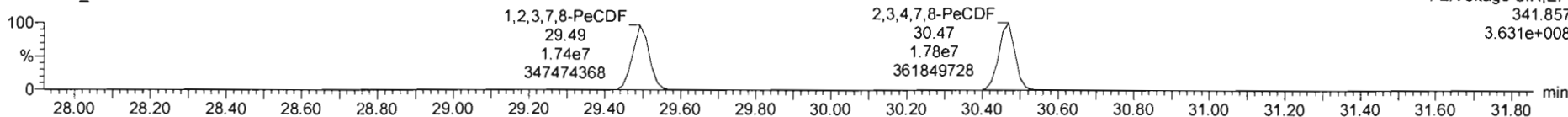
200121R1\_6

F2:Voltage SIR,EI+  
339.860  
5.612e+008



200121R1\_6

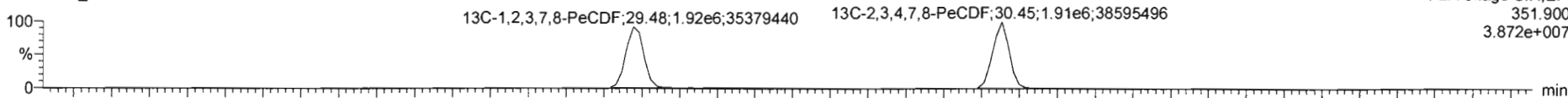
F2:Voltage SIR,EI+  
341.857  
3.631e+008



**13C-1,2,3,7,8-PeCDF**

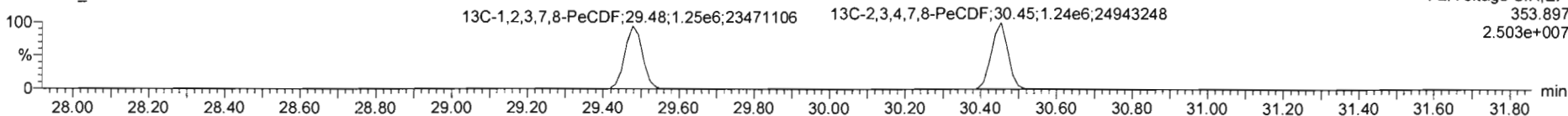
200121R1\_6

F2:Voltage SIR,EI+  
351.900  
3.872e+007



200121R1\_6

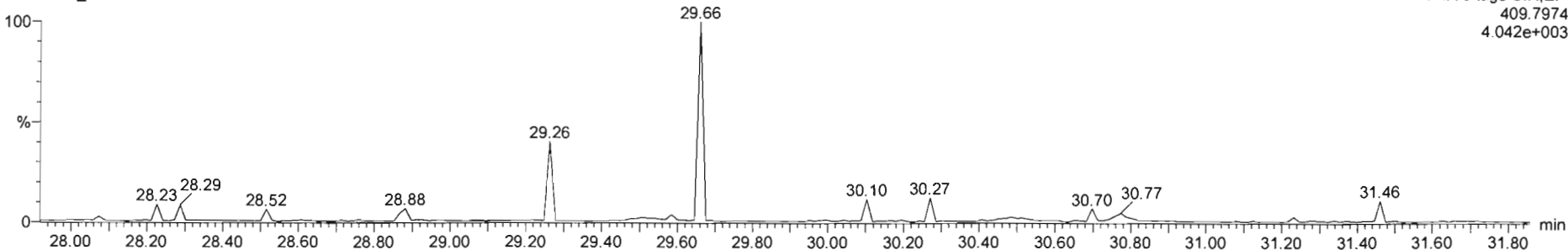
F2:Voltage SIR,EI+  
353.897  
2.503e+007



**DPE2**

200121R1\_6

F2:Voltage SIR,EI+  
409.7974  
4.042e+003





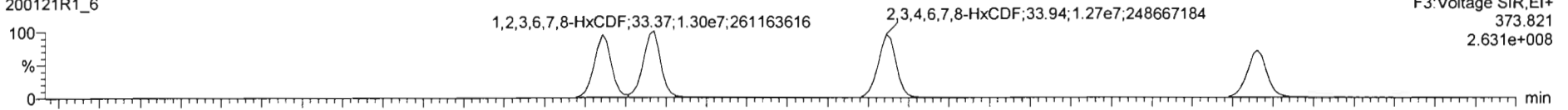
Dataset: Untitled

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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

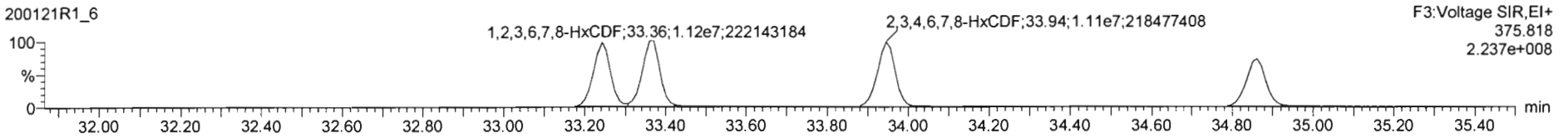
Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

**1,2,3,4,7,8-HxCDF**

200121R1\_6

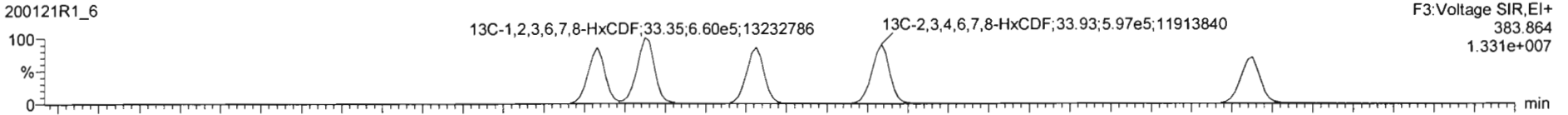


200121R1\_6

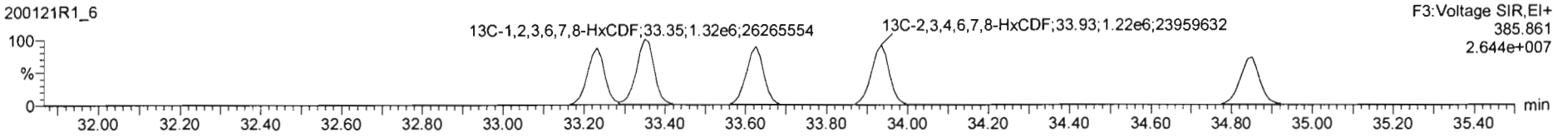


**13C-1,2,3,4,7,8-HxCDF**

200121R1\_6

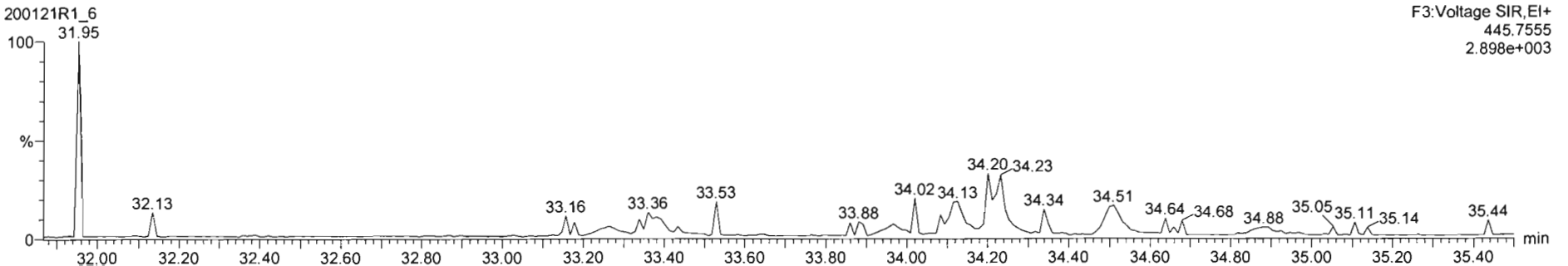


200121R1\_6



**DPE3**

200121R1\_6



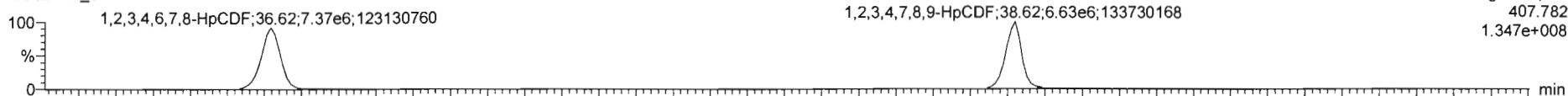
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

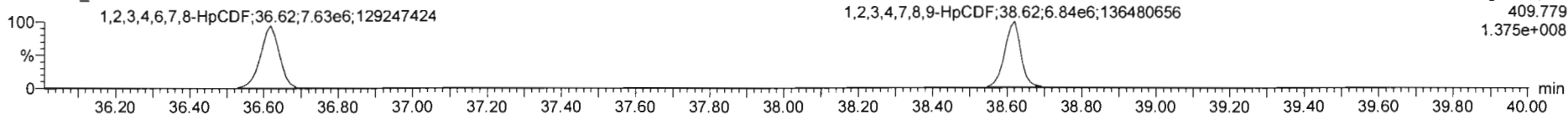
**1,2,3,4,6,7,8-HpCDF**

200121R1\_6



F4: Voltage SIR, EI+  
407.782  
1.347e+008

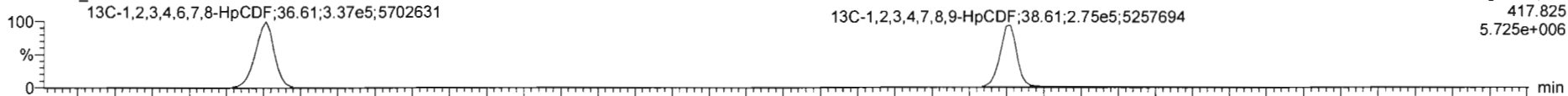
200121R1\_6



F4: Voltage SIR, EI+  
409.779  
1.375e+008

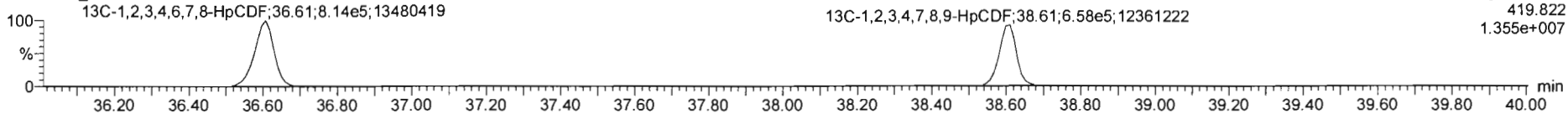
**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_6



F4: Voltage SIR, EI+  
417.825  
5.725e+006

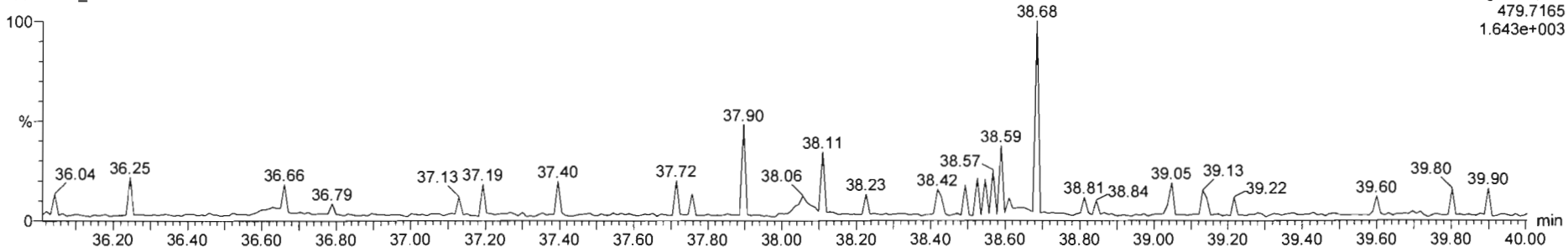
200121R1\_6



F4: Voltage SIR, EI+  
419.822  
1.355e+007

**DPE4**

200121R1\_6

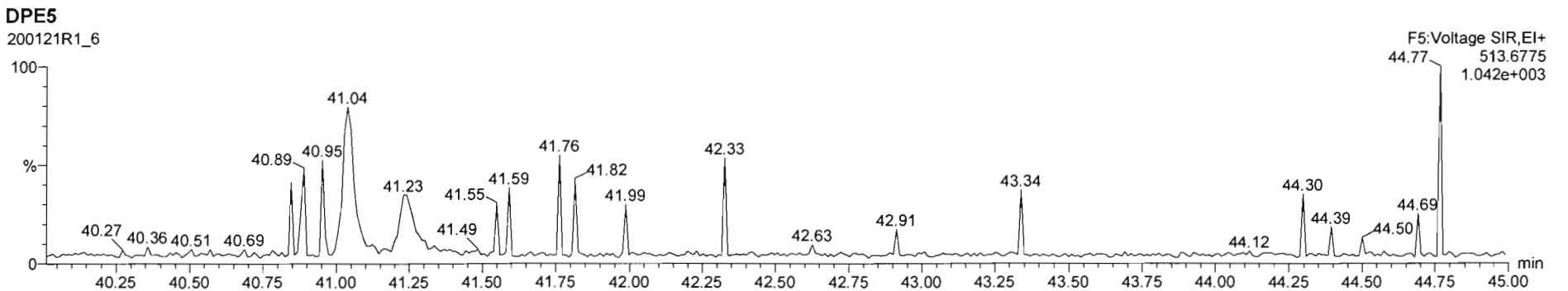
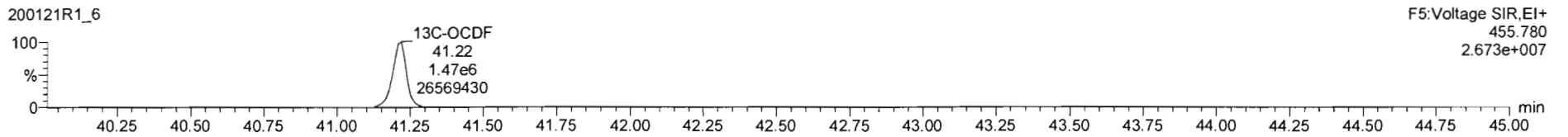
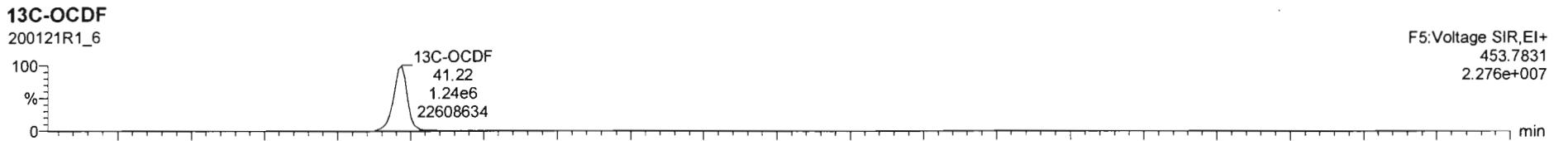
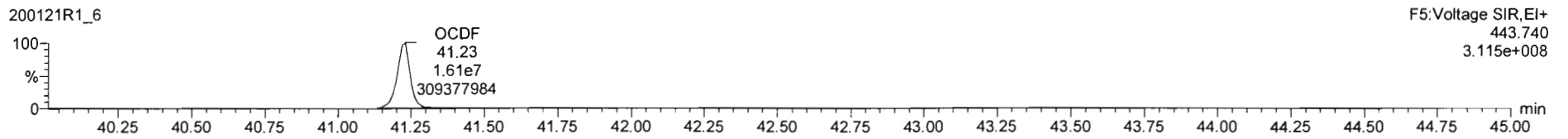
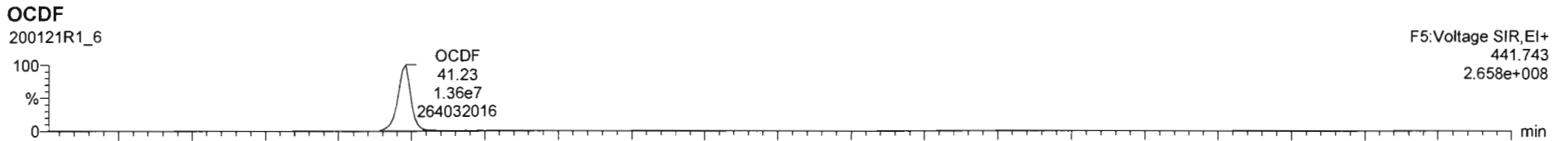


F4: Voltage SIR, EI+  
479.7165  
1.643e+003

Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

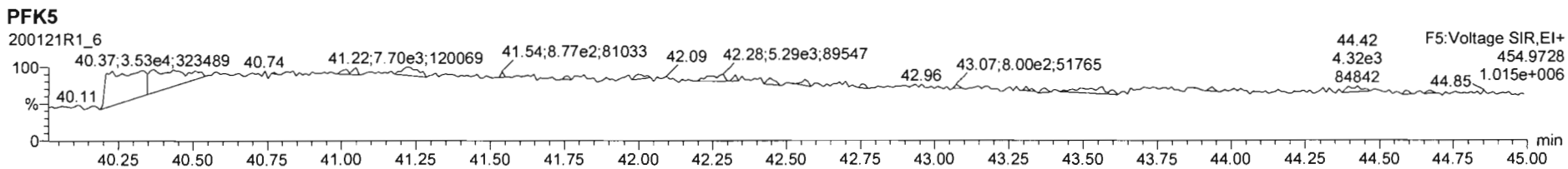
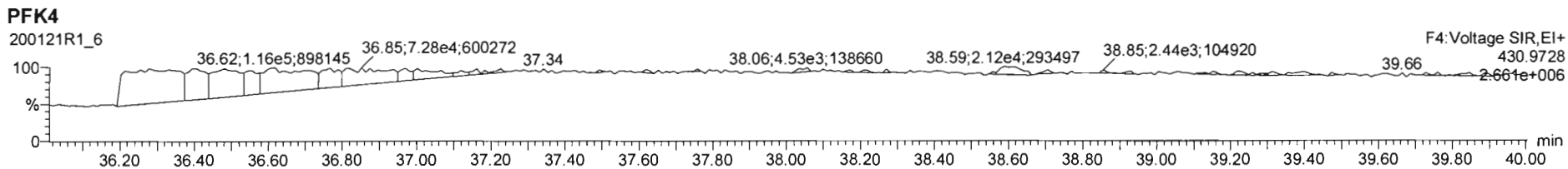
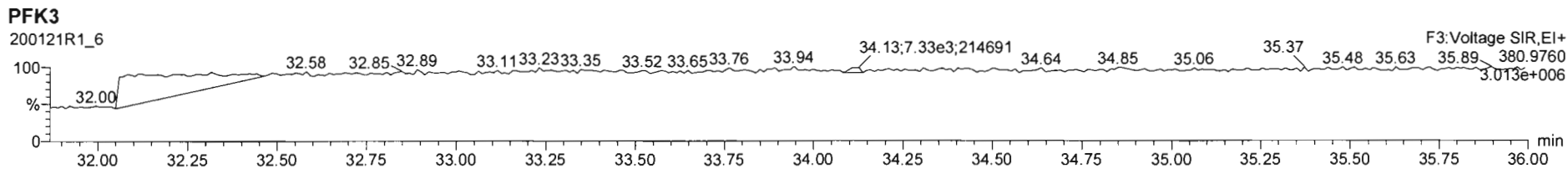
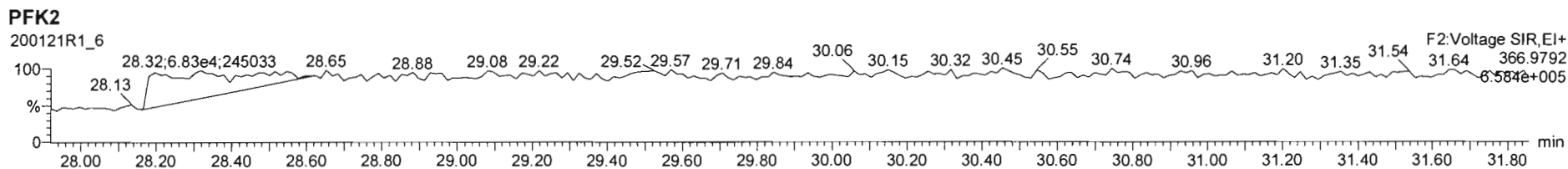
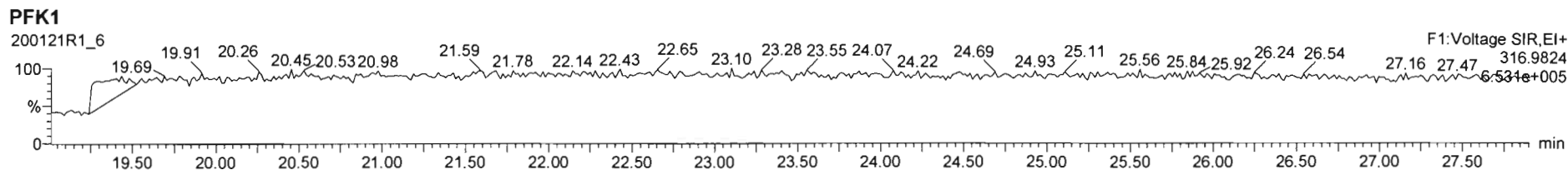


Dataset: Untitled

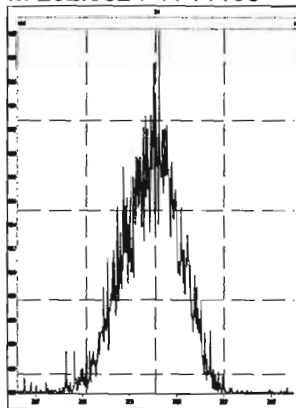
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

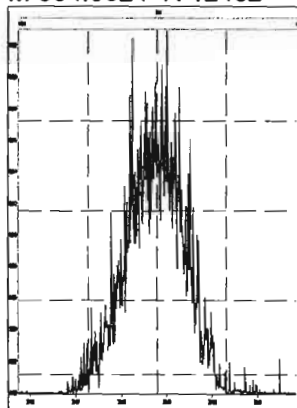
Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206



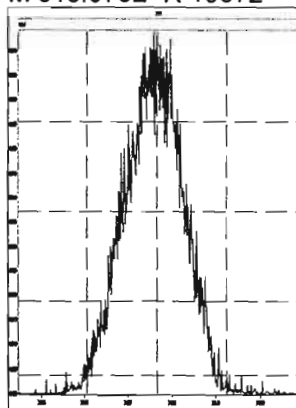
M 292.9824 R 11168



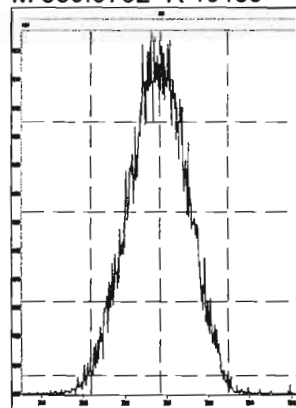
M 304.9824 R 12462



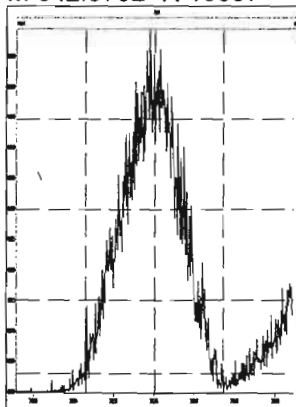
M 318.9792 R 10572



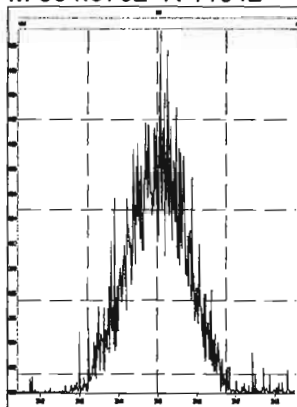
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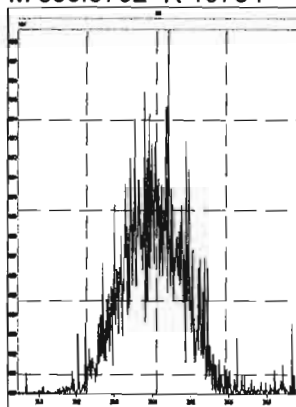
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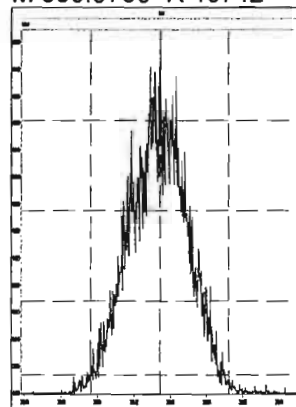
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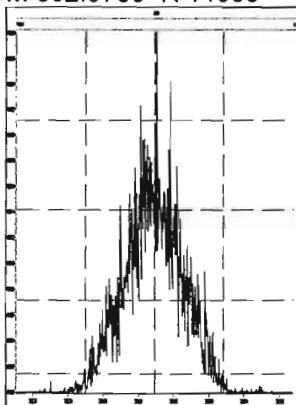
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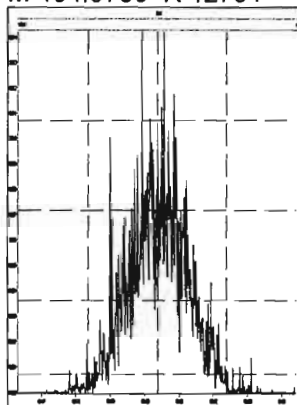
M 380.9760 R 10712



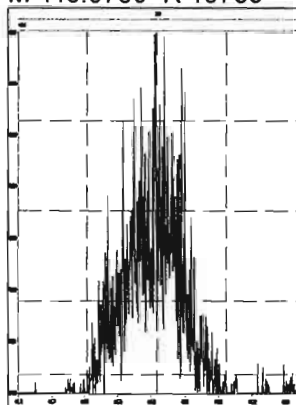
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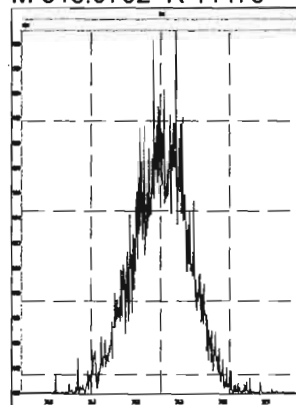
M 404.9760 R 12791



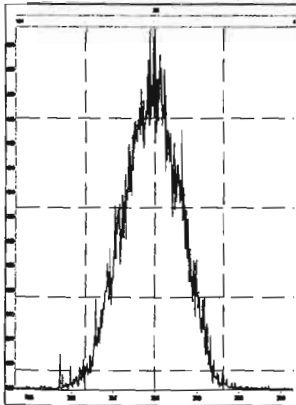
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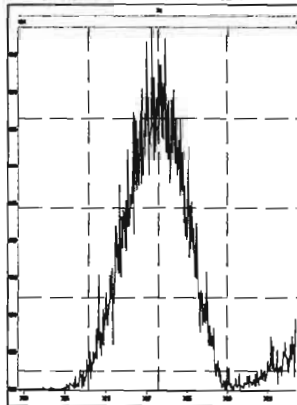
M 318.9792 R 11476



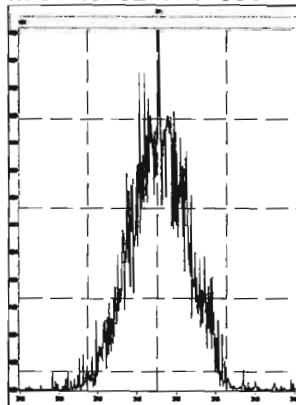
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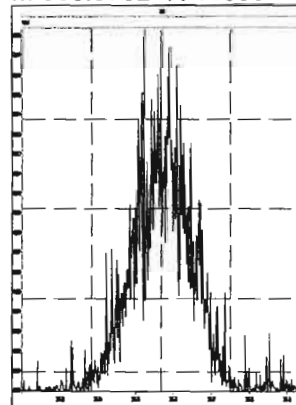
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M 354.9792 R 11393

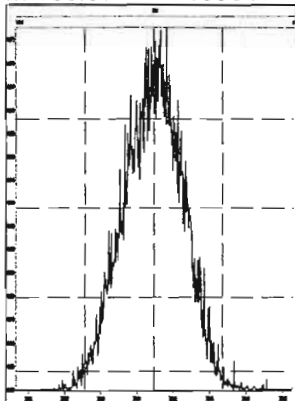


M 366.9792 R 11805

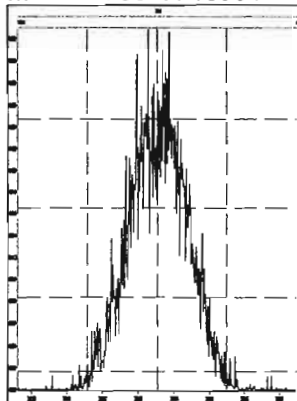


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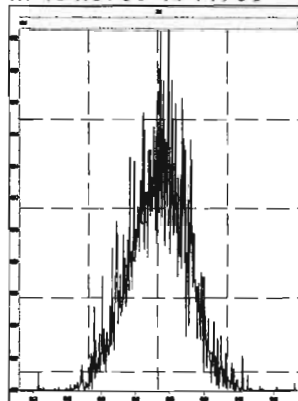
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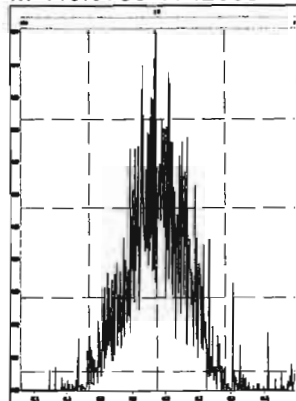
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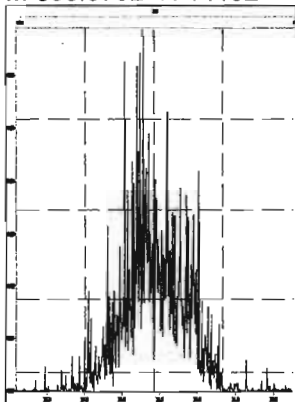
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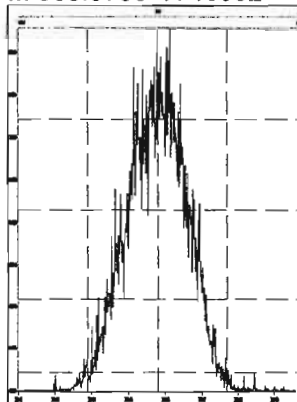
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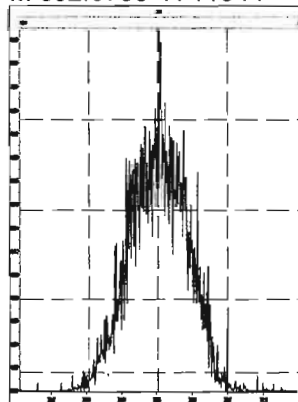
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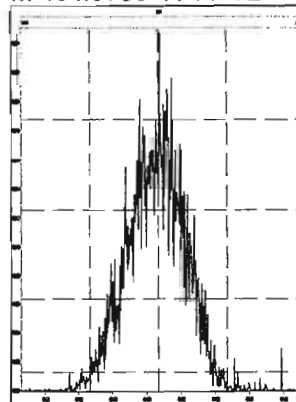
M 380.9760 R 10992



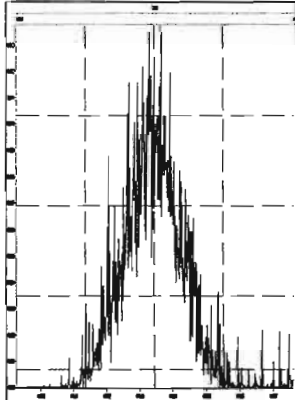
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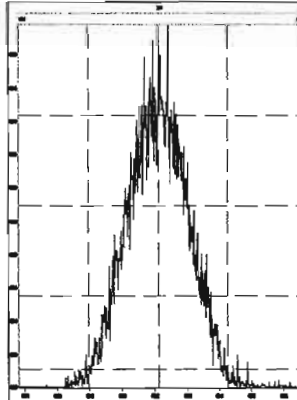
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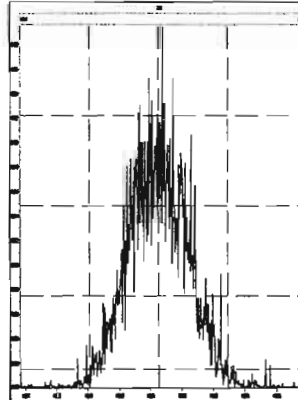
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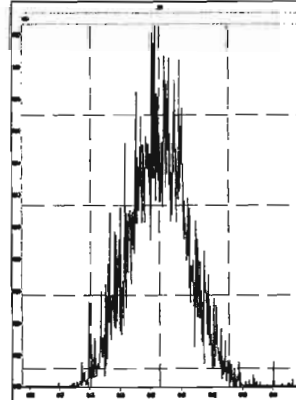
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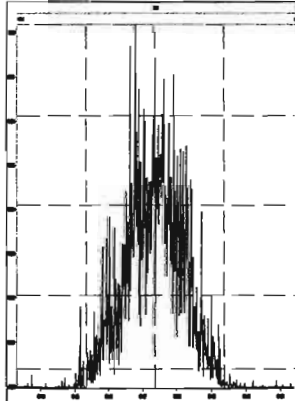
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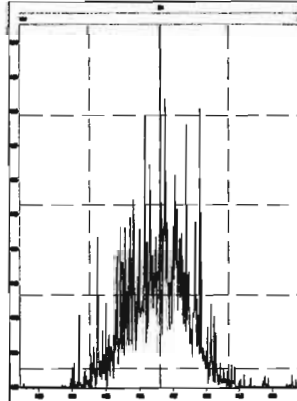
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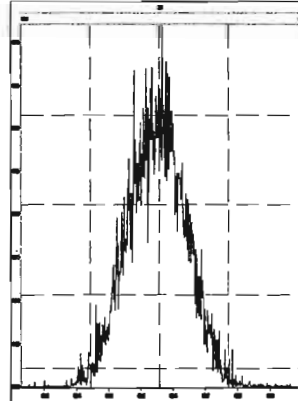
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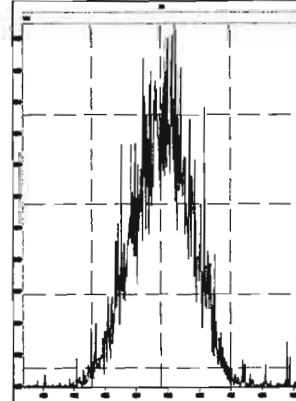
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M 430.9728 R 10869

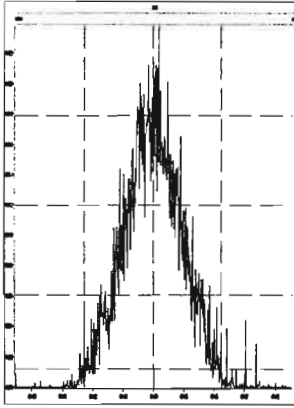


M 442.9728 R 11821

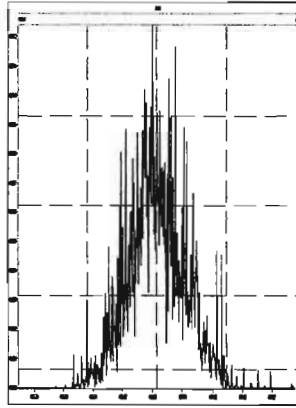


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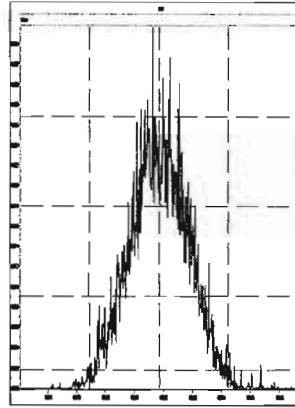
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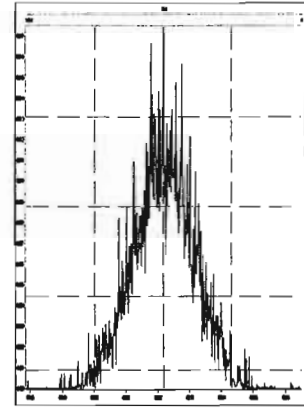
M 466.9728 R 12608



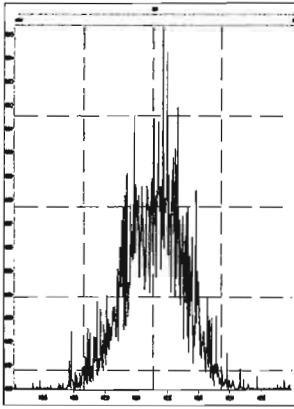
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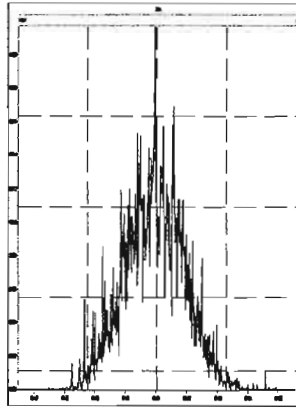
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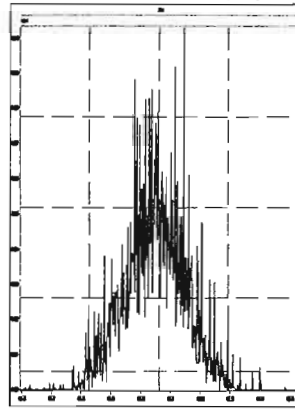
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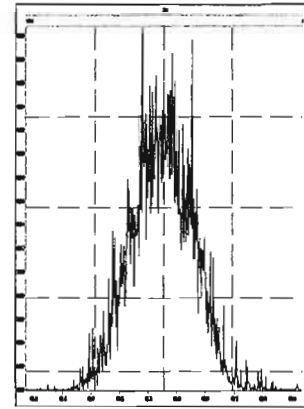
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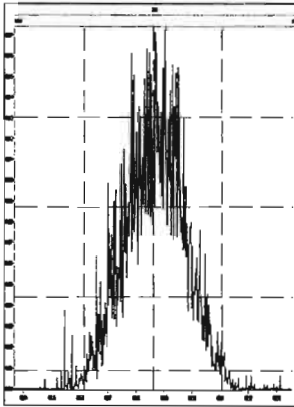
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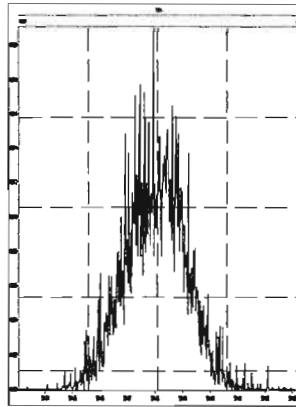
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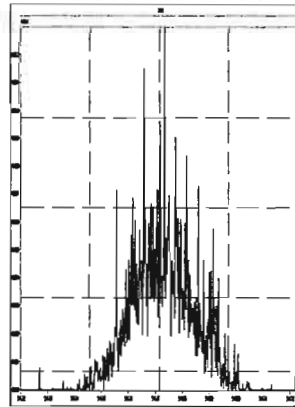
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Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_SSS.qld

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:02:30 Pacific Standard Time

*DB 1/22/20*

*CT 01/22/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.84e5	0.75	NO	0.824	1.000	25.871	25.85	1.001	1.001	10.441	104	0.0185	10.4
2	2 1,2,3,7,8-PeCDD	8.04e5	0.61	NO	0.912	1.000	30.765	30.76	1.001	1.000	53.036	106	0.0418	53.0
3	3 1,2,3,4,7,8-HxCDD	6.31e5	1.22	NO	0.870	1.000	34.093	34.10	1.000	1.001	54.796	110	0.0648	54.8
4	4 1,2,3,6,7,8-HxCDD	6.59e5	1.17	NO	0.784	1.000	34.190	34.21	1.000	1.001	55.282	111	0.0657	55.3
5	5 1,2,3,7,8,9-HxCDD	6.26e5	1.21	NO	0.798	1.000	34.512	34.49	1.001	1.000	54.538	109	0.0692	54.5
6	6 1,2,3,4,6,7,8-HpCDD	4.01e5	1.00	NO	0.737	1.000	38.025	38.03	1.000	1.001	54.358	109	0.0994	54.4
7	7 OCDD	7.82e5	0.85	NO	0.800	1.000	40.995	41.01	1.000	1.000	107.95	108	0.0650	108
8	8 2,3,7,8-TCDF	1.73e5	0.70	NO	0.588	1.000	24.997	24.99	1.001	1.001	10.947	109	0.0219	10.9
9	9 1,2,3,7,8-PeCDF	1.07e6	1.51	NO	0.826	1.000	29.482	29.48	1.001	1.001	52.282	105	0.0451	52.3
10	10 2,3,4,7,8-PeCDF	1.24e6	1.51	NO	0.850	1.000	30.469	30.45	1.001	1.001	59.189	118	0.0427	59.2
11	11 1,2,3,4,7,8-HxCDF	5.59e5	1.16	NO	0.787	1.000	33.221	33.23	1.000	1.000	57.856	116	0.0767	57.9
12	12 1,2,3,6,7,8-HxCDF	6.25e5	1.16	NO	0.720	1.000	33.348	33.35	1.000	1.000	57.011	114	0.0670	57.0
13	13 2,3,4,6,7,8-HxCDF	5.73e5	1.16	NO	0.766	1.000	33.957	33.93	1.001	1.000	54.935	110	0.0772	54.9
14	14 1,2,3,7,8,9-HxCDF	4.61e5	1.16	NO	0.709	1.000	34.829	34.85	1.000	1.001	55.318	111	0.105	55.3
15	15 1,2,3,4,6,7,8-HpCDF	3.69e5	0.96	NO	0.732	1.000	36.623	36.60	1.001	1.000	57.559	115	0.0892	57.6
16	16 1,2,3,4,7,8,9-HpCDF	2.89e5	0.99	NO	0.816	1.000	38.588	38.60	1.000	1.000	56.845	114	0.0888	56.8
17	17 OCDF	6.31e5	0.84	NO	0.639	1.000	41.187	41.20	1.000	1.000	110.02	110	0.0530	110
18	18 13C-2,3,7,8-TCDD	2.14e6	0.78	NO	1.12	1.000	25.844	25.84	1.026	1.026	99.587	99.6	0.0478	
19	19 13C-1,2,3,7,8-PeCDD	1.66e6	0.63	NO	0.841	1.000	30.614	30.74	1.215	1.220	102.80	103	0.0733	
20	20 13C-1,2,3,4,7,8-HxCDD	1.32e6	1.26	NO	0.938	1.000	34.085	34.08	1.014	1.014	94.308	94.3	0.0822	
21	21 13C-1,2,3,6,7,8-HxCDD	1.52e6	1.26	NO	1.07	1.000	34.186	34.19	1.017	1.017	95.435	95.4	0.0724	
22	22 13C-1,2,3,7,8,9-HxCDD	1.44e6	1.22	NO	1.03	1.000	34.488	34.48	1.026	1.026	93.258	93.3	0.0748	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.00e6	1.03	NO	0.710	1.000	38.052	38.01	1.132	1.131	94.380	94.4	0.121	
24	24 13C-OCDD	1.81e6	0.86	NO	0.601	1.000	40.942	41.00	1.218	1.220	201.46	101	0.123	
25	25 13C-2,3,7,8-TCDF	2.69e6	0.74	NO	1.04	1.000	25.020	24.97	0.993	0.991	99.034	99.0	0.0546	
26	26 13C-1,2,3,7,8-PeCDF	2.49e6	1.54	NO	0.917	1.000	29.379	29.46	1.166	1.169	103.45	103	0.0973	
27	27 13C-2,3,4,7,8-PeCDF	2.47e6	1.53	NO	0.903	1.000	30.336	30.44	1.204	1.208	104.43	104	0.0989	
28	28 13C-1,2,3,4,7,8-HxCDF	1.23e6	0.50	NO	0.861	1.000	33.211	33.22	0.988	0.988	95.295	95.3	0.128	
29	29 13C-1,2,3,6,7,8-HxCDF	1.52e6	0.50	NO	1.05	1.000	33.312	33.34	0.991	0.992	97.190	97.2	0.105	
30	30 13C-2,3,4,6,7,8-HxCDF	1.36e6	0.49	NO	0.946	1.000	33.920	33.92	1.009	1.009	96.243	96.2	0.116	
31	31 13C-1,2,3,7,8,9-HxCDF	1.18e6	0.50	NO	0.816	1.000	34.825	34.83	1.036	1.036	96.448	96.4	0.135	



Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_SSS.qld

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time

Printed: Wednesday, January 22, 2020 10:02:30 Pacific Standard Time

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	8.76e5	0.41	NO	0.589	1.000	36.573	36.59	1.088	1.088	99.376	99.4	0.141	
33	33 13C-1,2,3,4,7,8,9-HpCDF	6.24e5	0.41	NO	0.448	1.000	38.589	38.59	1.148	1.148	93.096	93.1	0.186	
34	34 13C-OCDF	1.80e6	0.85	NO	0.586	1.000	41.178	41.19	1.225	1.225	205.10	103	0.0864	
35	35 37Cl-2,3,7,8-TCDD	2.15e5			1.09	1.000	25.877	25.85	1.027	1.026	10.281	103	0.0115	
36	36 13C-1,2,3,4-TCDD	1.92e6	0.81	NO	1.00	1.000	25.260	25.20	1.000	1.000	100.00	100	0.0534	
37	37 13C-1,2,3,4-TCDF	2.62e6	0.74	NO	1.00	1.000	23.860	23.57	1.000	1.000	100.00	100	0.0566	
38	38 13C-1,2,3,4,6,9-HxCDF	1.50e6	0.49	NO	1.00	1.000	33.590	33.61	1.000	1.000	100.00	100	0.110	

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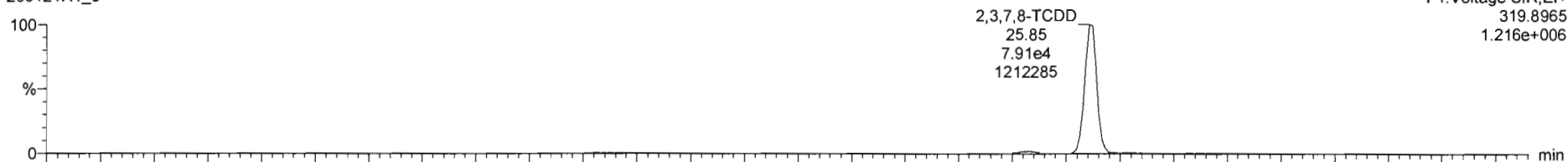
Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

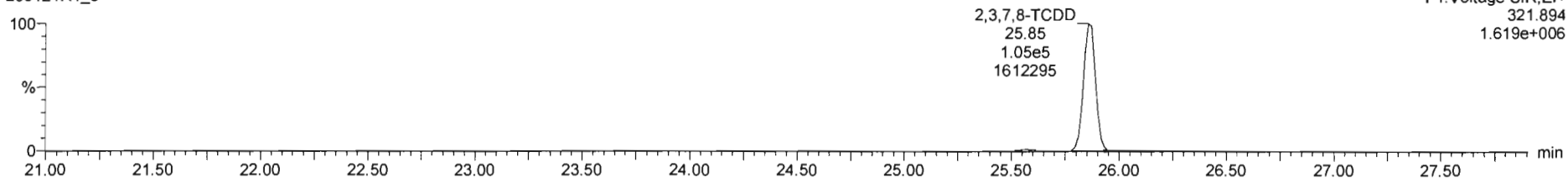
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**2,3,7,8-TCDD**

200121R1\_8

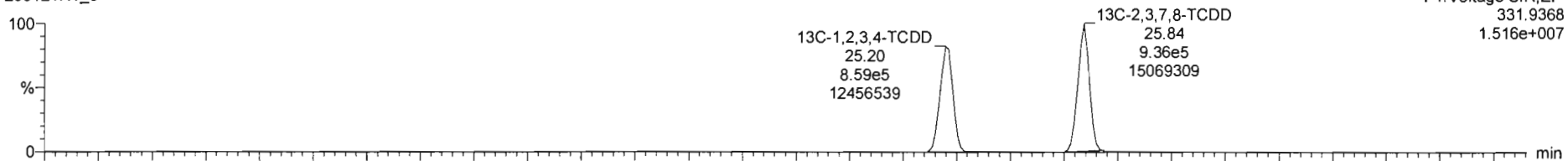


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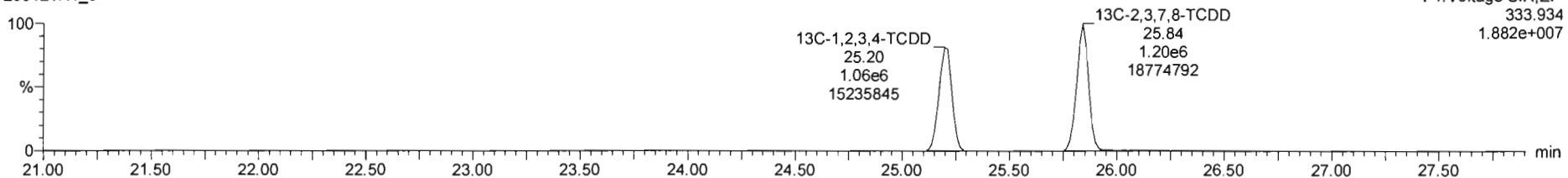


**13C-2,3,7,8-TCDD**

200121R1\_8



200121R1\_8



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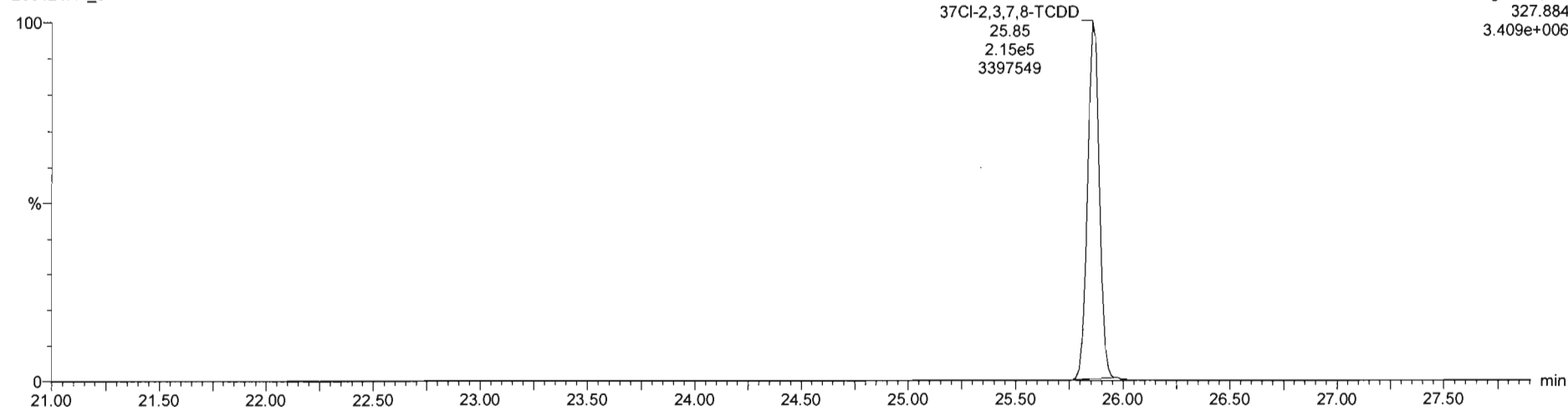
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Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

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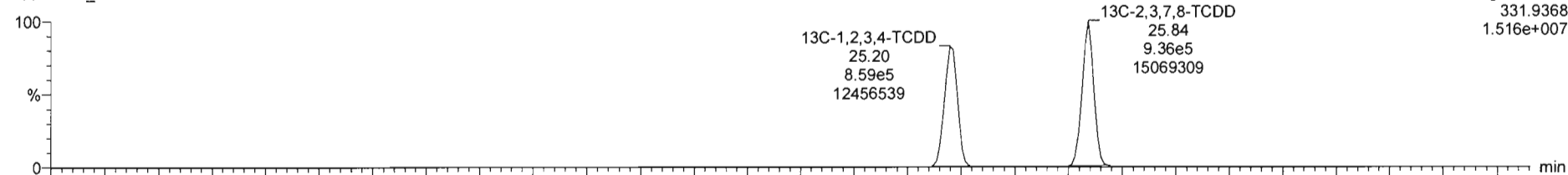
**37Cl-2,3,7,8-TCDD**

200121R1\_8

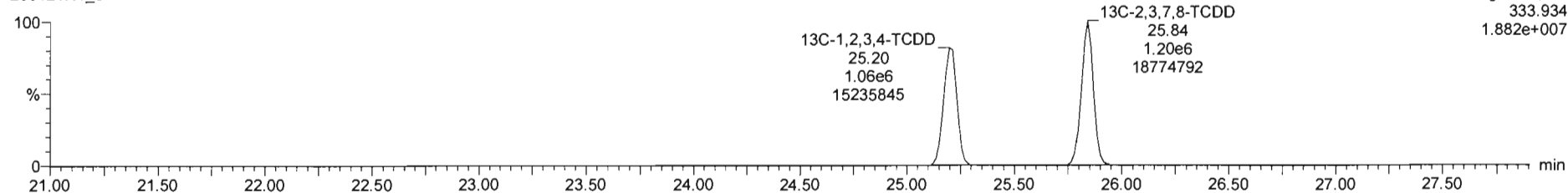


**13C-1,2,3,4-TCDD**

200121R1\_8



200121R1\_8



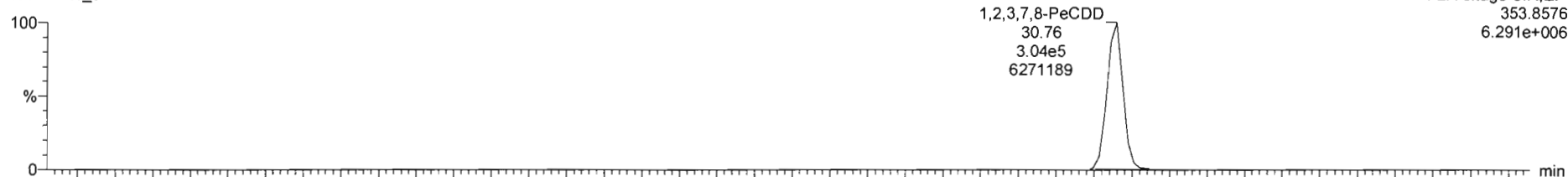
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

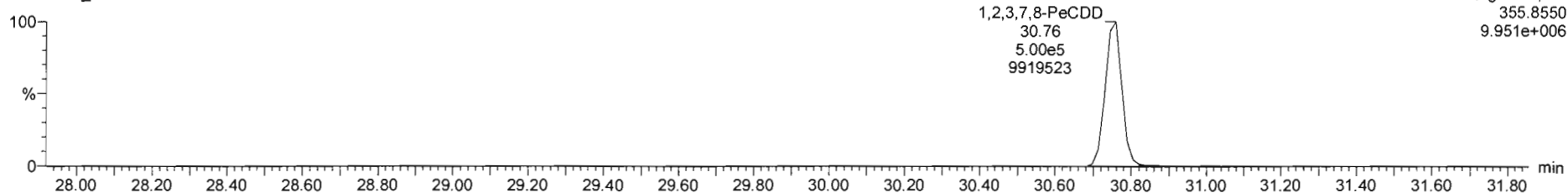
**1,2,3,7,8-PeCDD**

200121R1\_8



F2: Voltage SIR, EI+  
353.8576  
6.291e+006

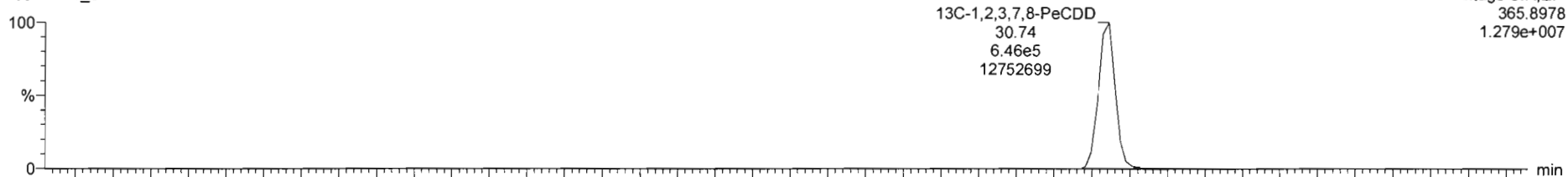
200121R1\_8



F2: Voltage SIR, EI+  
355.8550  
9.951e+006

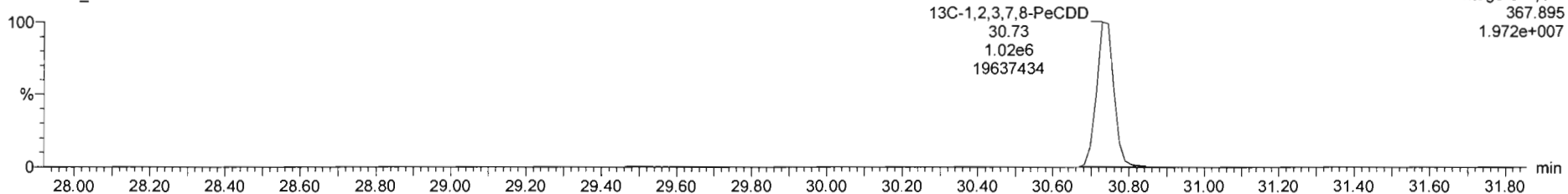
**13C-1,2,3,7,8-PeCDD**

200121R1\_8



F2: Voltage SIR, EI+  
365.8978  
1.279e+007

200121R1\_8



F2: Voltage SIR, EI+  
367.895  
1.972e+007

Dataset: Untitled

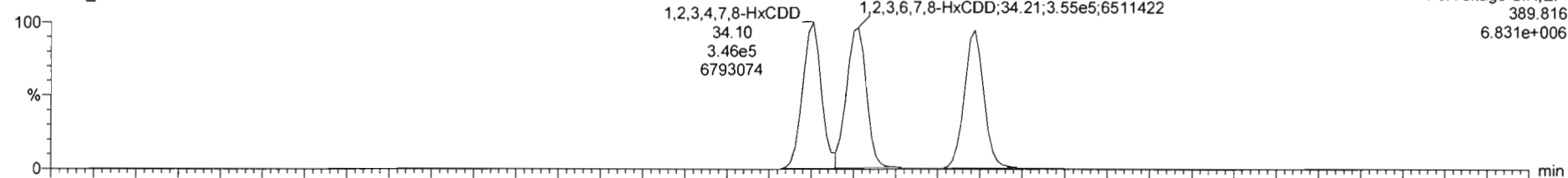
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Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

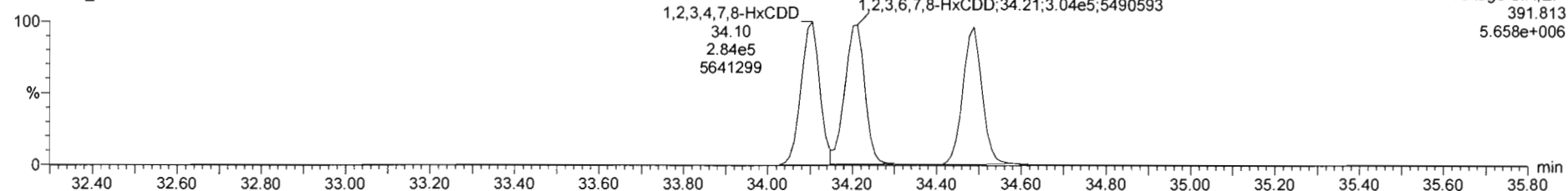
Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

**1,2,3,4,7,8-HxCDD**

200121R1\_8

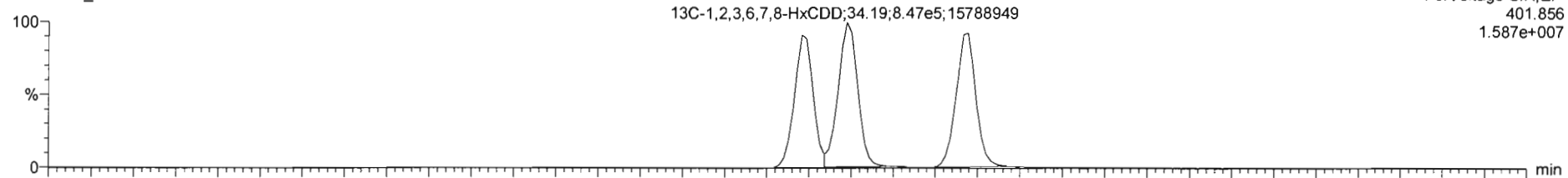


200121R1\_8

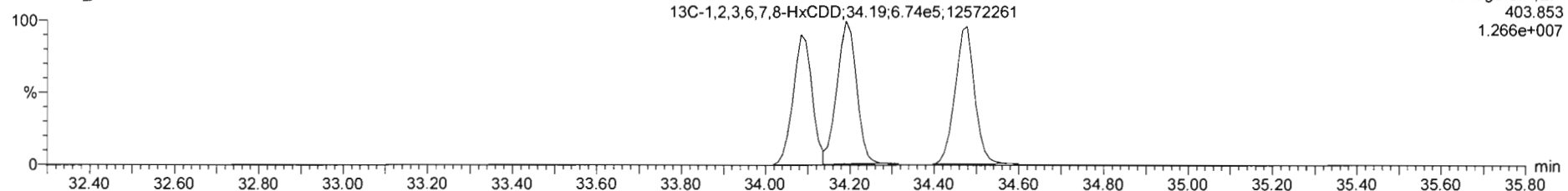


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_8



200121R1\_8



Dataset: Untitled

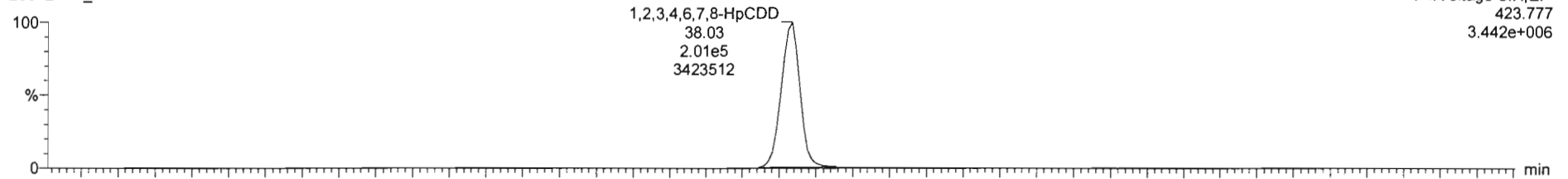
Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

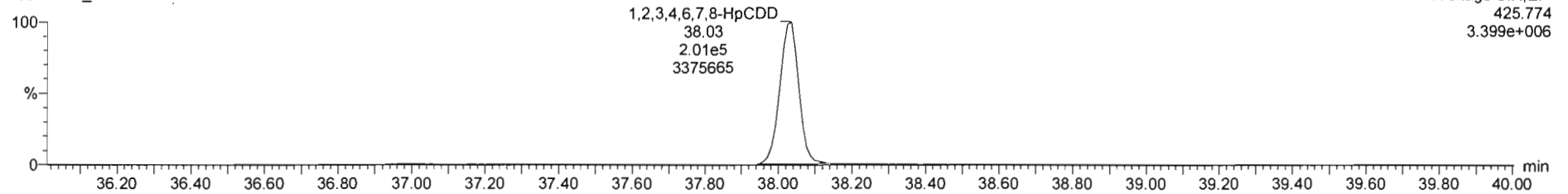
Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

**1,2,3,4,6,7,8-HpCDD**

200121R1\_8

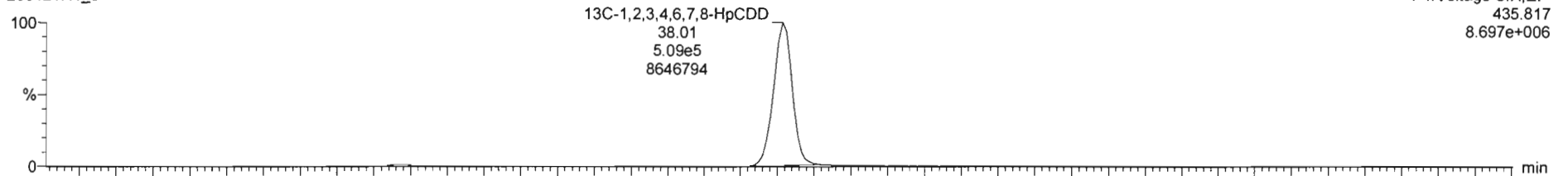


200121R1\_8

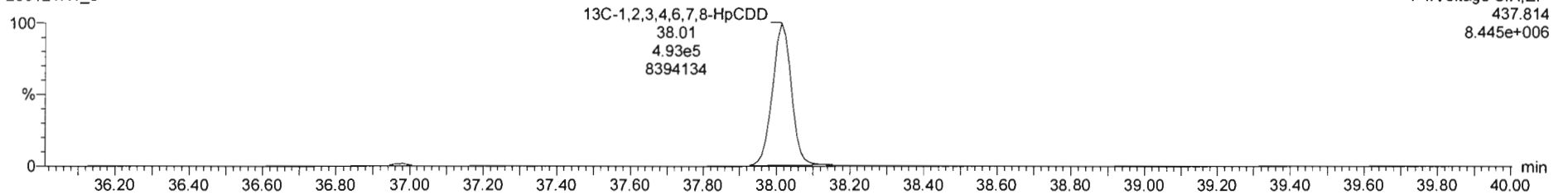


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_8



200121R1\_8

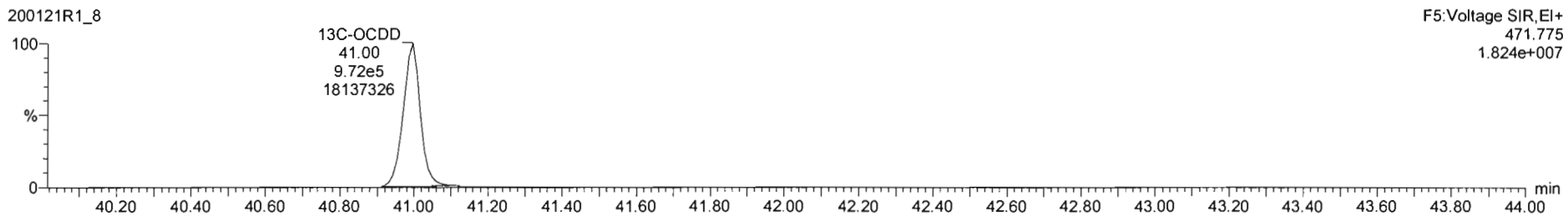
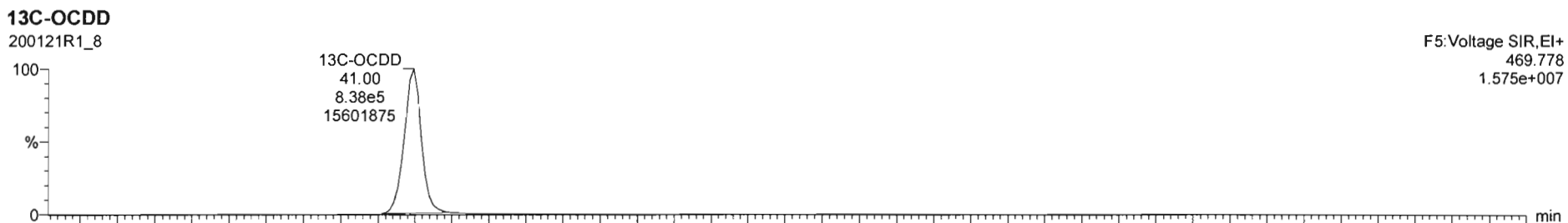
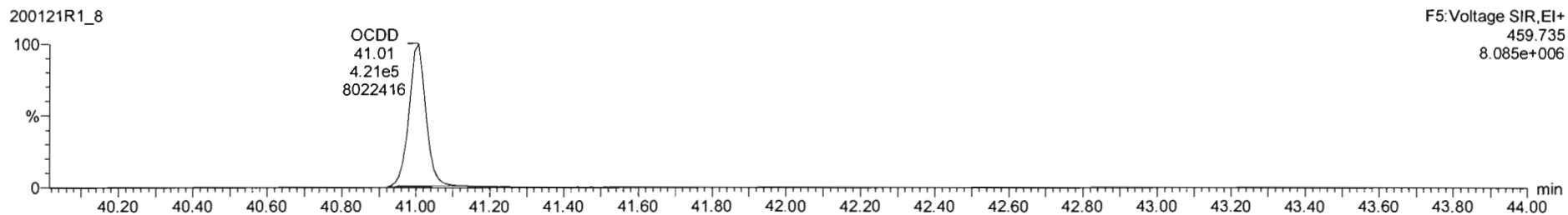
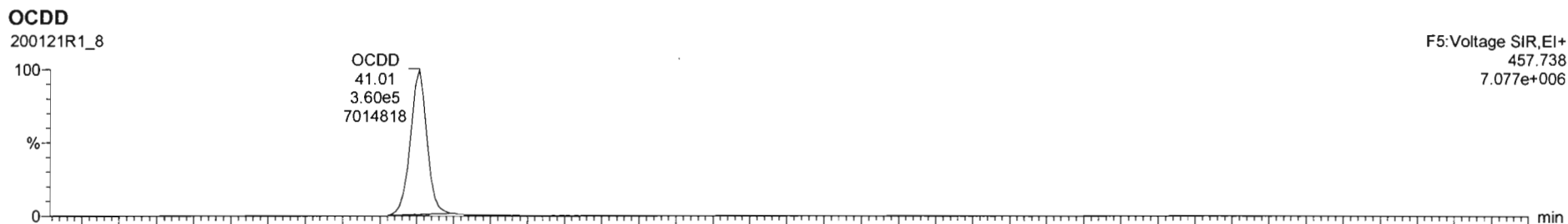


Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207



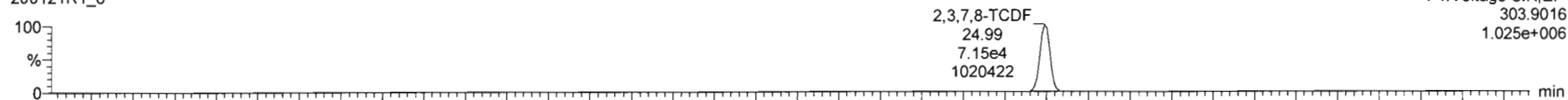
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

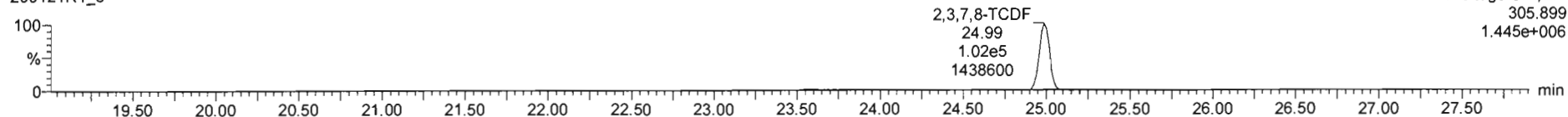
Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

**2,3,7,8-TCDF**

200121R1\_8

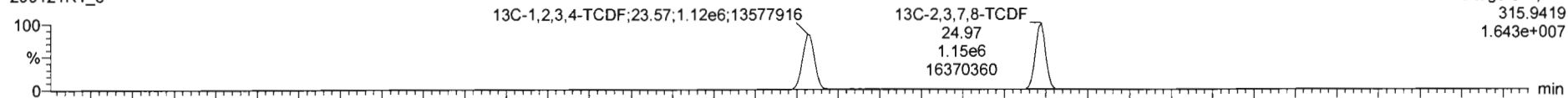


200121R1\_8

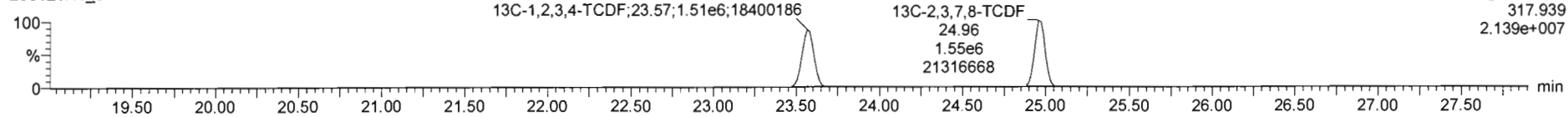


**13C-2,3,7,8-TCDF**

200121R1\_8

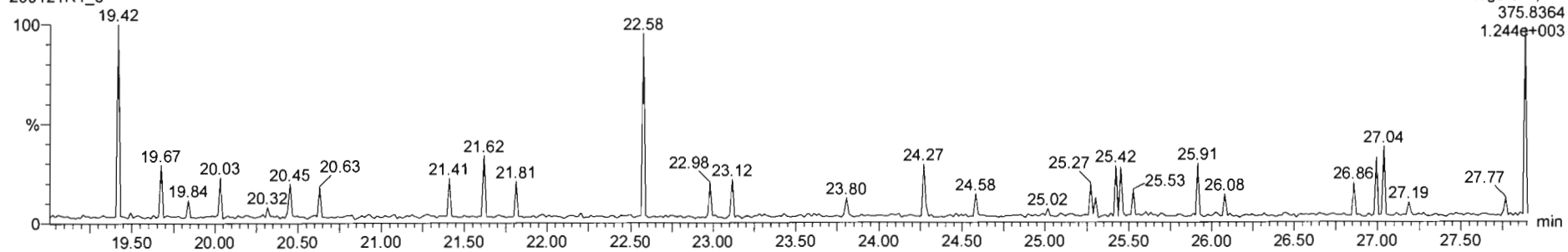


200121R1\_8



**DPE1**

200121R1\_8





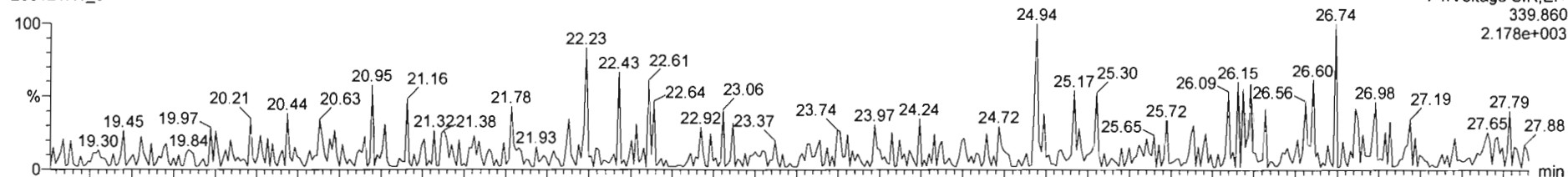
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

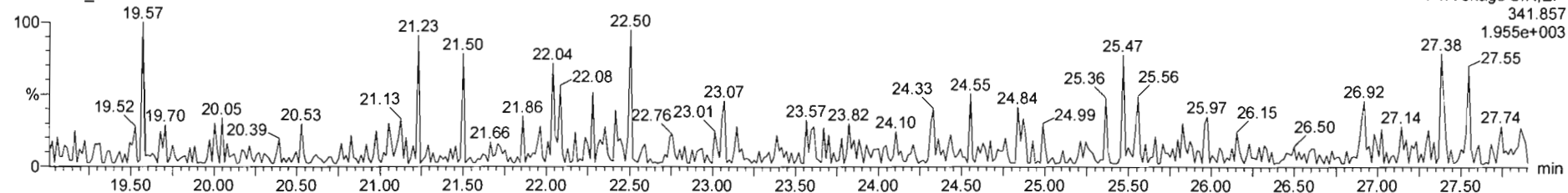
Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

1st Func. Penta-Furans

200121R1\_8

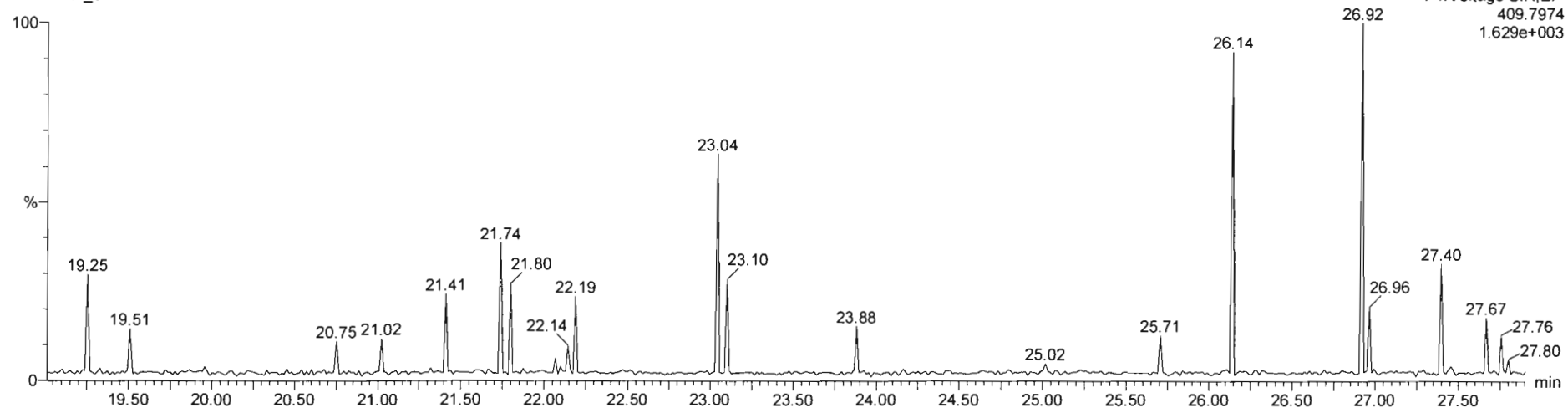


200121R1\_8



DPE6

200121R1\_8



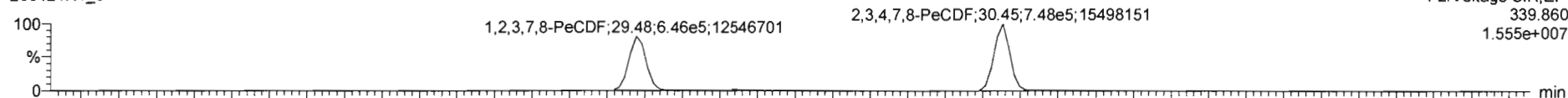
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

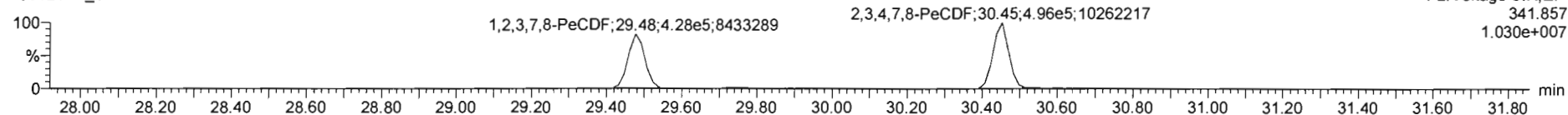
Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

**1,2,3,7,8-PeCDF**

200121R1\_8

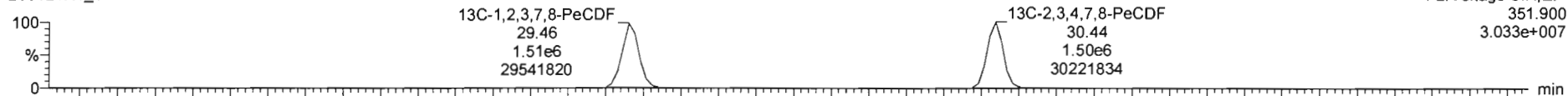


200121R1\_8

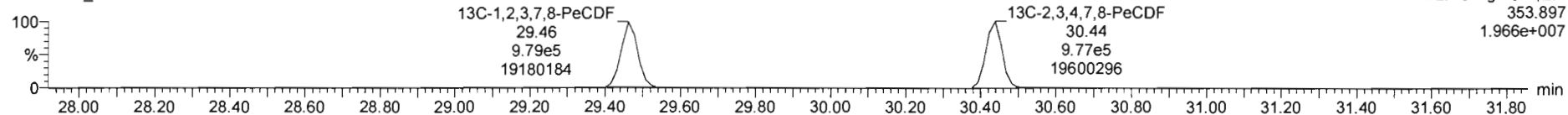


**13C-1,2,3,7,8-PeCDF**

200121R1\_8

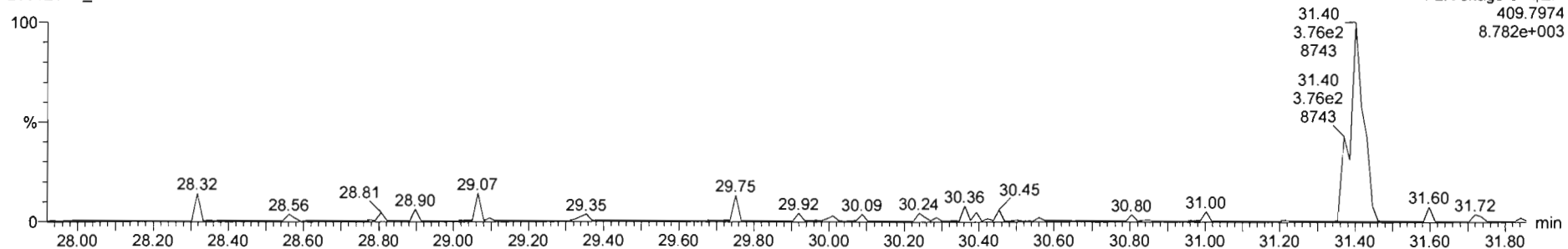


200121R1\_8



**DPE2**

200121R1\_8

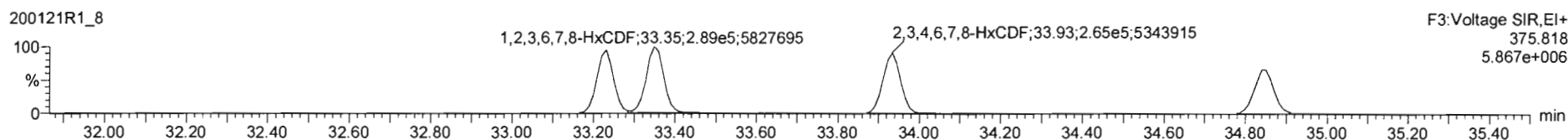
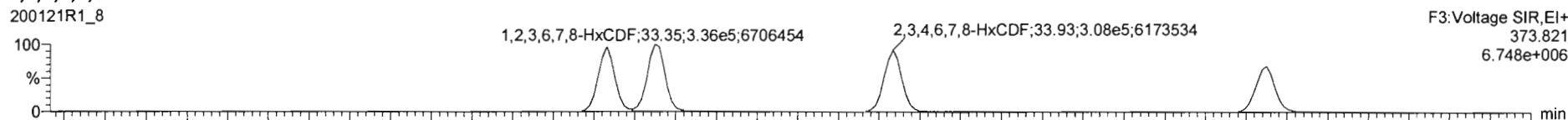


Dataset: Untitled

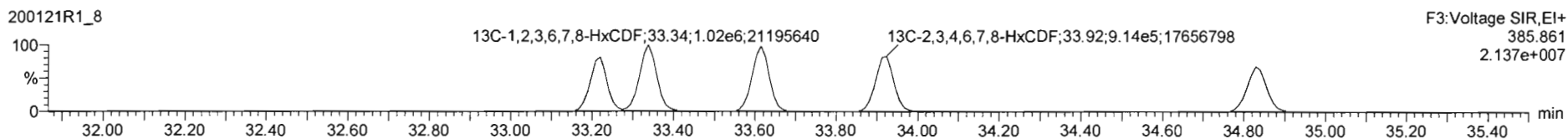
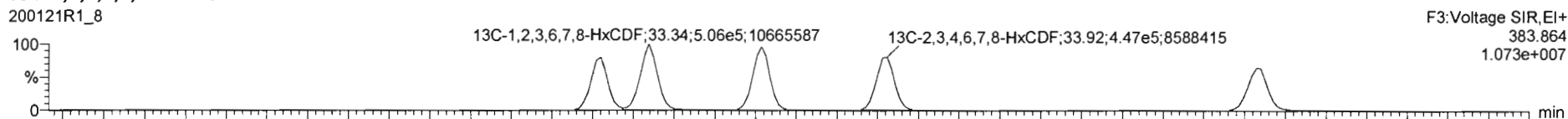
Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

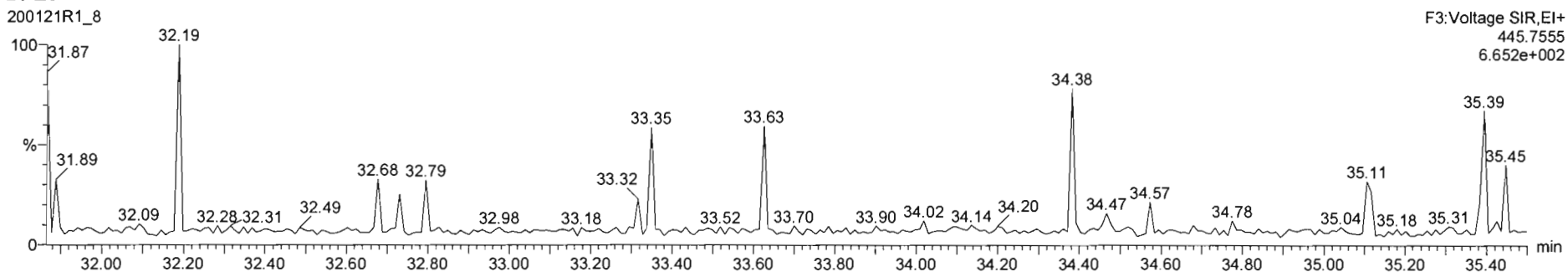
**1,2,3,4,7,8-HxCDF**



**13C-1,2,3,4,7,8-HxCDF**



**DPE3**

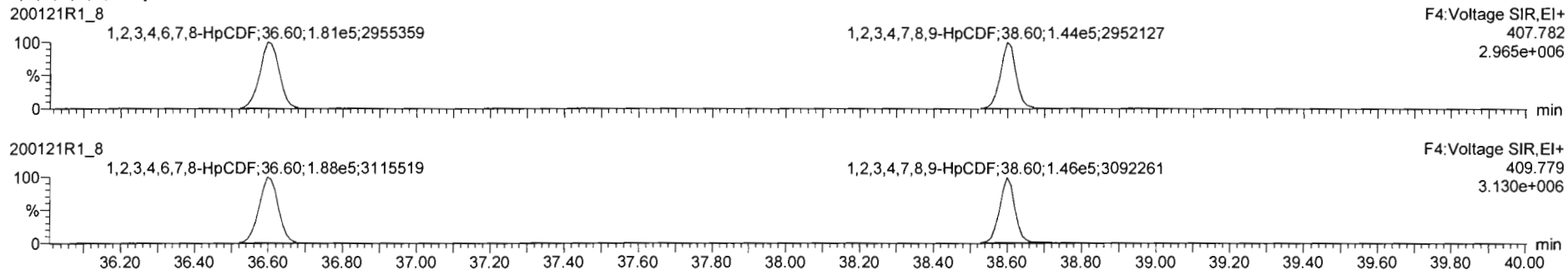


Dataset: Untitled

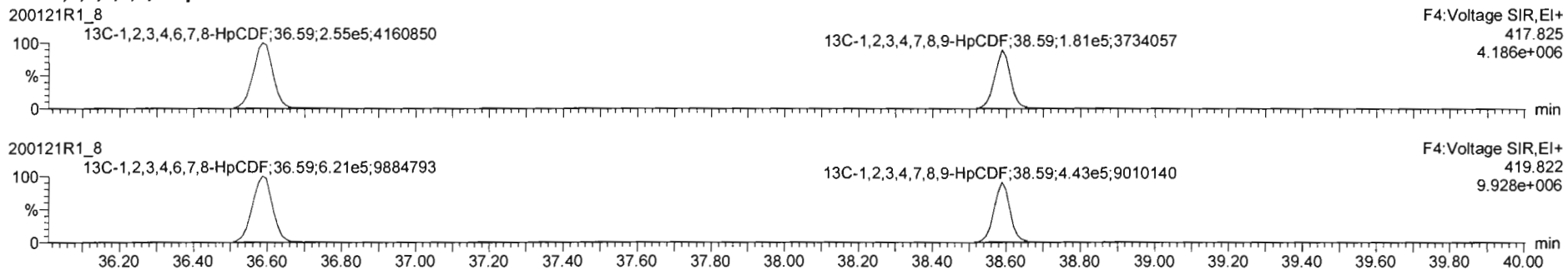
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Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

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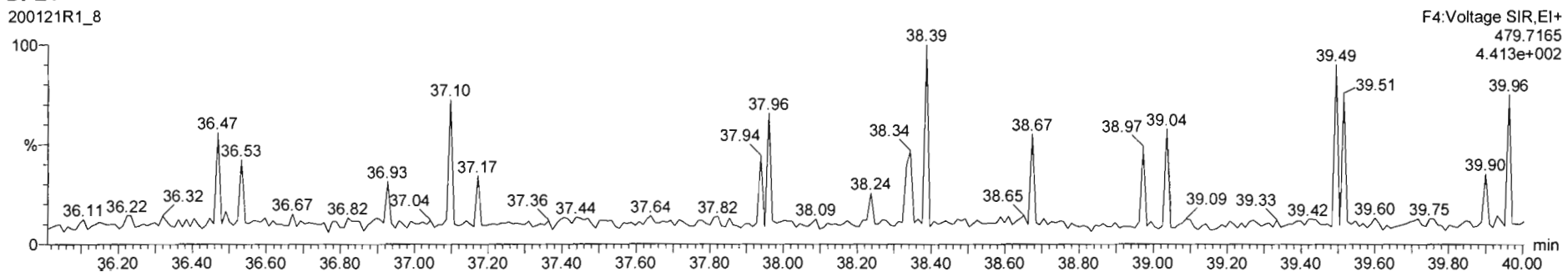
**1,2,3,4,6,7,8-HpCDF**



**13C-1,2,3,4,6,7,8-HpCDF**



**DPE4**

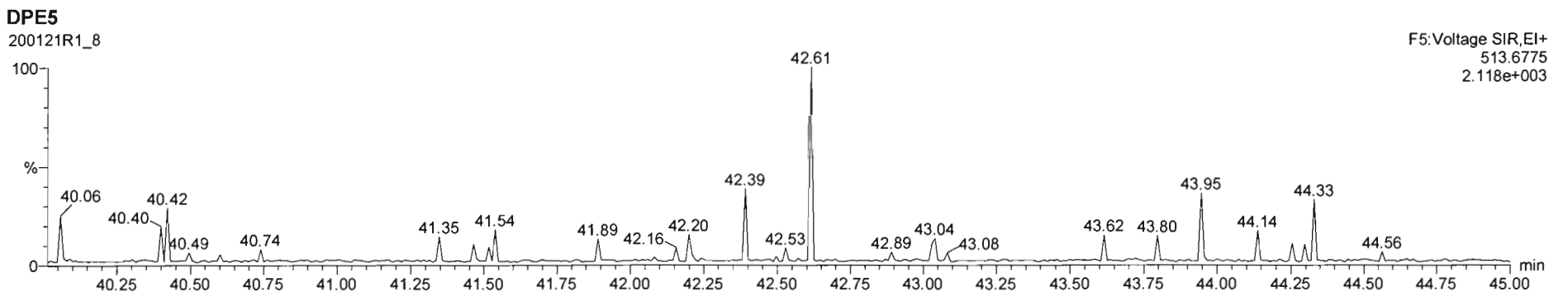
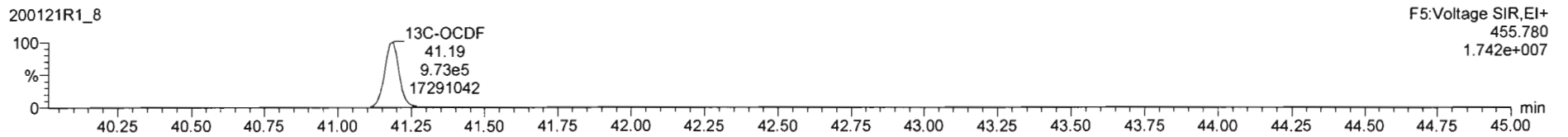
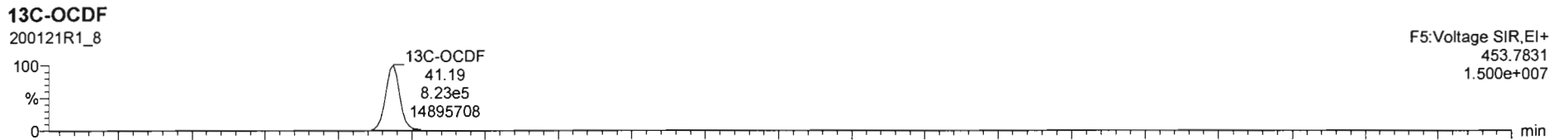
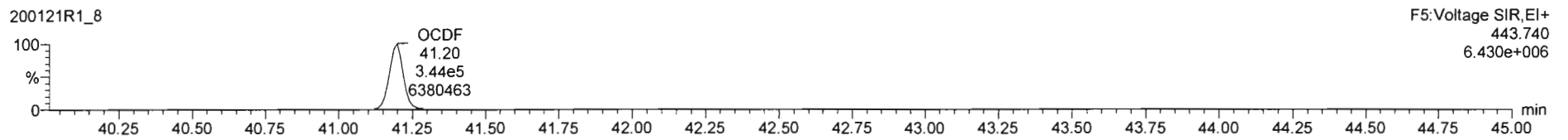
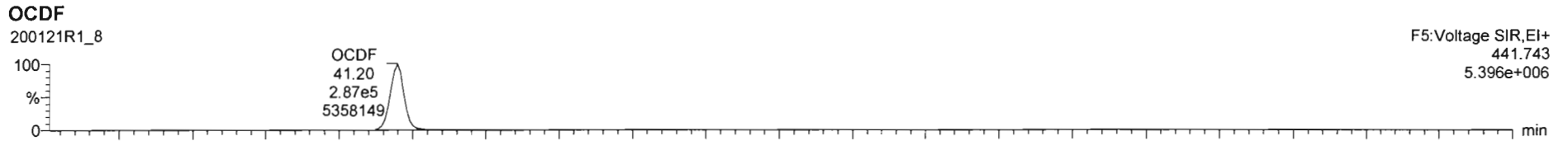


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Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

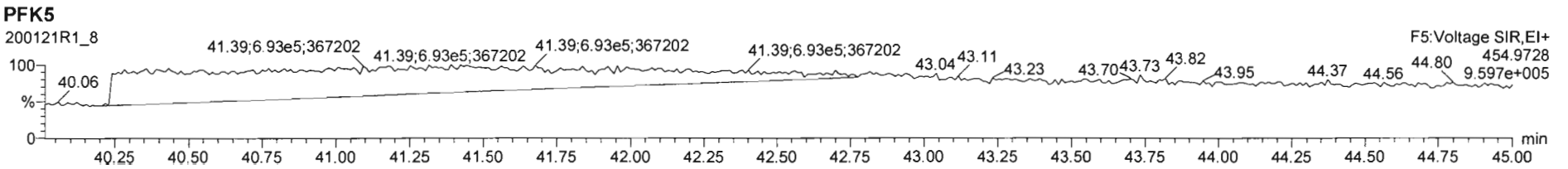
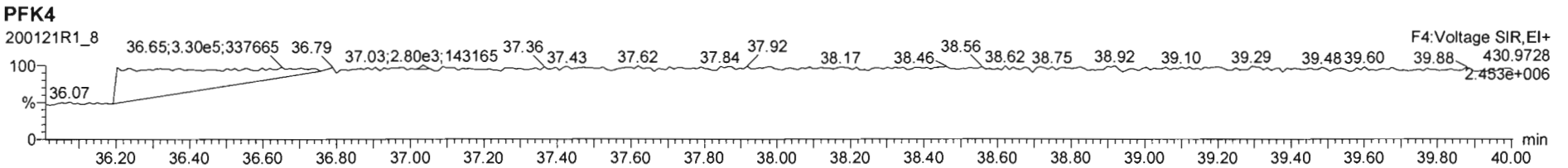
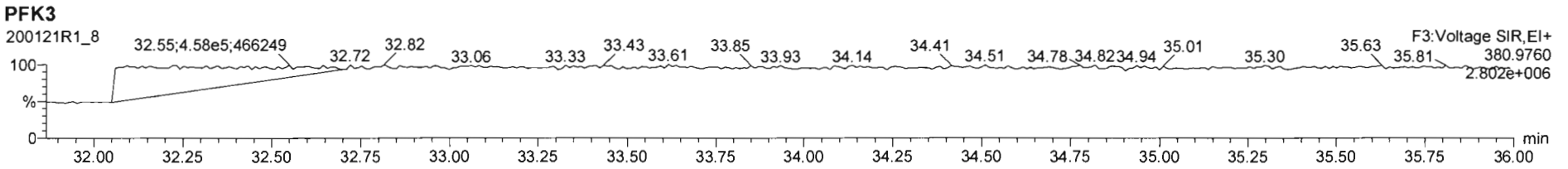
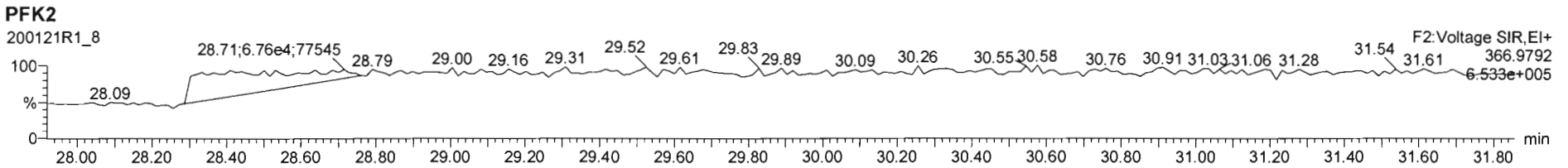
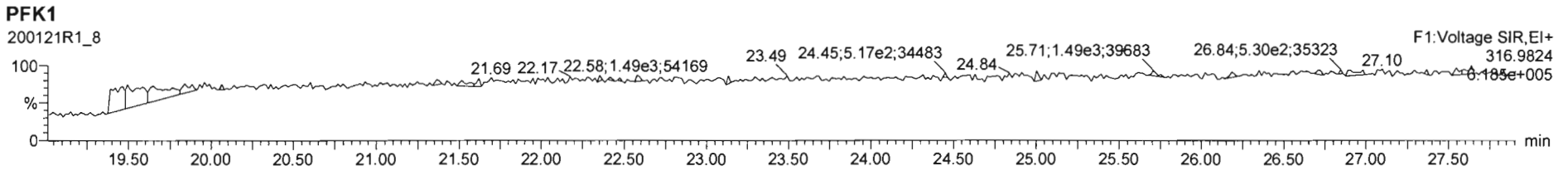
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Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207



Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

Last Altered: Sunday, February 02, 2020 11:05:29 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:14:39 AM Pacific Standard Time

*GRB 02/02/2020*

*C: 02/04/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\cb5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Compound name: 2,3,7,8-TCDD

Response Factor: 0.988069

RRF SD: 0.0483829, Relative SD: 4.89671

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	0.250	0.83	NO	25.74	1.001	2.87e3	1.21e6	0.239	-4.3	0.945	bb
2	200131R1_2	0.500	0.77	NO	25.69	1.001	7.22e3	1.37e6	0.532	6.5	1.05	bb
3	200131R1_3	2.00	0.80	NO	25.70	1.001	3.00e4	1.44e6	2.11	5.7	1.04	bb
4	200131R1_4	10.0	0.78	NO	25.70	1.001	1.39e5	1.42e6	9.92	-0.8	0.980	db
5	200131R1_5	40.0	0.77	NO	25.69	1.001	5.51e5	1.45e6	38.3	-4.2	0.946	bb
6	200131R1_6	300	0.78	NO	25.70	1.001	5.05e6	1.75e6	291	-2.9	0.960	bb

Compound name: 1,2,3,7,8-PeCDD

Response Factor: 0.972284

RRF SD: 0.054098, Relative SD: 5.56402

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	0.57	NO	30.67	1.000	1.12e4	9.52e5	1.21	-3.0	0.943	bb
2	200131R1_2	2.50	0.60	NO	30.64	1.001	2.75e4	1.05e6	2.70	7.9	1.05	bb
3	200131R1_3	10.0	0.63	NO	30.64	1.000	1.18e5	1.14e6	10.6	6.4	1.03	bb
4	200131R1_4	50.0	0.63	NO	30.64	1.000	5.09e5	1.09e6	48.2	-3.7	0.936	bb
5	200131R1_5	200	0.63	NO	30.62	1.000	2.30e6	1.23e6	192	-4.2	0.931	bb
6	200131R1_6	1500	0.63	NO	30.64	1.000	2.16e7	1.53e6	1450	-3.4	0.940	bb

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

Last Altered: Sunday, February 02, 2020 11:05:29 AM Pacific Standard Time  
 Printed: Sunday, February 02, 2020 11:14:39 AM Pacific Standard Time

**Compound name: 1,2,3,4,7,8-HxCDD**

Response Factor: 1.07079

RRF SD: 0.0439702, Relative SD: 4.10634

Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.18	NO	34.01	1.001	9.84e3	7.72e5	1.19	-4.8	1.02	MM
2	200131R1_2	2.50	1.28	NO	33.98	1.001	2.47e4	8.79e5	2.62	4.9	1.12	bd
3	200131R1_3	10.0	1.23	NO	33.98	1.000	1.09e5	9.69e5	10.5	5.2	1.13	bd
4	200131R1_4	50.0	1.22	NO	33.99	1.000	4.82e5	9.08e5	49.6	-0.8	1.06	bd
5	200131R1_5	200	1.27	NO	33.97	1.000	2.18e6	1.04e6	195	-2.7	1.04	bd
6	200131R1_6	1500	1.21	NO	33.99	1.000	2.05e7	1.30e6	1470	-1.8	1.05	bd

**Compound name: 1,2,3,6,7,8-HxCDD**

Response Factor: 0.921124

RRF SD: 0.0705821, Relative SD: 7.66261

Response type: Internal Std ( Ref 21 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.14	NO	34.10	1.000	1.01e4	9.31e5	1.18	-5.8	0.868	MM
2	200131R1_2	2.50	1.28	NO	34.08	1.001	2.68e4	1.05e6	2.78	11.2	1.02	db
3	200131R1_3	10.0	1.21	NO	34.08	1.000	1.13e5	1.13e6	10.8	8.3	0.998	db
4	200131R1_4	50.0	1.22	NO	34.09	1.001	4.87e5	1.11e6	47.7	-4.7	0.878	db
5	200131R1_5	200	1.17	NO	34.07	1.000	2.21e6	1.24e6	193	-3.4	0.890	db
6	200131R1_6	1500	1.22	NO	34.09	1.001	2.03e7	1.56e6	1410	-5.7	0.868	db

**Compound name: 1,2,3,7,8,9-HxCDD**

Response Factor: 0.9182

RRF SD: 0.0596016, Relative SD: 6.49114

Response type: Internal Std ( Ref 22 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.36	NO	34.38	1.000	9.78e3	9.08e5	1.17	-6.1	0.862	MM
2	200131R1_2	2.50	1.21	NO	34.35	1.000	2.43e4	9.77e5	2.71	8.3	0.995	bb



Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

Last Altered: Sunday, February 02, 2020 11:05:29 AM Pacific Standard Time  
 Printed: Sunday, February 02, 2020 11:14:39 AM Pacific Standard Time

**Compound name: 1,2,3,7,8,9-HxCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200131R1_3	10.0	1.18	NO	34.36	1.000	1.03e5	1.04e6	10.8	8.0	0.991	bb
4	200131R1_4	50.0	1.22	NO	34.37	1.001	4.43e5	1.02e6	47.4	-5.3	0.870	bb
5	200131R1_5	200	1.22	NO	34.35	1.001	2.05e6	1.15e6	195	-2.7	0.893	bb
6	200131R1_6	1500	1.22	NO	34.37	1.001	1.94e7	1.44e6	1470	-2.2	0.898	bb

**Compound name: 1,2,3,4,6,7,8-HpCDD**

Response Factor: 0.923064  
 RRF SD: 0.0512135, Relative SD: 5.54821  
 Response type: Internal Std ( Ref 23 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.04	NO	37.92	1.000	8.20e3	7.05e5	1.26	0.7	0.930	bb
2	200131R1_2	2.50	1.06	NO	37.88	1.000	1.88e4	7.60e5	2.69	7.4	0.991	bb
3	200131R1_3	10.0	1.02	NO	37.90	1.001	7.44e4	7.62e5	10.6	5.8	0.976	bb
4	200131R1_4	50.0	1.01	NO	37.90	1.000	3.45e5	7.83e5	47.7	-4.7	0.880	bb
5	200131R1_5	200	1.00	NO	37.88	1.000	1.57e6	8.87e5	192	-4.0	0.886	bb
6	200131R1_6	1500	1.01	NO	37.91	1.001	1.45e7	1.10e6	1420	-5.2	0.875	bb

**Compound name: OCDD**

Response Factor: 0.974578  
 RRF SD: 0.0610366, Relative SD: 6.26287  
 Response type: Internal Std ( Ref 24 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	2.50	0.90	NO	40.92	1.000	1.61e4	1.29e6	2.55	2.2	0.996	bd
2	200131R1_2	5.00	0.89	NO	40.90	1.000	3.84e4	1.46e6	5.41	8.2	1.05	bd
3	200131R1_3	20.0	0.88	NO	40.90	1.000	1.46e5	1.41e6	21.2	5.9	1.03	bd
4	200131R1_4	100	0.86	NO	40.90	1.000	6.76e5	1.48e6	93.7	-6.3	0.914	MM
5	200131R1_5	400	0.87	NO	40.90	1.000	3.13e6	1.69e6	379	-5.2	0.924	bb
6	200131R1_6	3000	0.83	NO	40.92	1.000	2.97e7	2.14e6	2850	-4.8	0.927	bb

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**Compound name: 2,3,7,8-TCDF**

Response Factor: 0.801975

RRF SD: 0.0524877, Relative SD: 6.54481

Response type: Internal Std ( Ref 25 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	0.250	0.73	NO	24.85	1.001	3.48e3	1.69e6	0.257	2.8	0.824	bb
2	200131R1_2	0.500	0.74	NO	24.82	1.001	8.24e3	1.87e6	0.549	9.9	0.881	bb
3	200131R1_3	2.00	0.71	NO	24.82	1.001	3.25e4	1.95e6	2.08	4.0	0.834	bb
4	200131R1_4	10.0	0.73	NO	24.82	1.001	1.47e5	1.92e6	9.50	-5.0	0.762	bb
5	200131R1_5	40.0	0.74	NO	24.81	1.001	5.87e5	1.96e6	37.3	-6.7	0.748	bb
6	200131R1_6	300	0.74	NO	24.82	1.001	5.37e6	2.35e6	285	-4.9	0.763	bb

**Compound name: 1,2,3,7,8-PeCDF**

Response Factor: 0.907368

RRF SD: 0.0556686, Relative SD: 6.13518

Response type: Internal Std ( Ref 26 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.54	NO	29.39	1.000	1.54e4	1.46e6	1.16	-7.1	0.843	MM
2	200131R1_2	2.50	1.49	NO	29.35	1.000	4.02e4	1.66e6	2.66	6.5	0.967	bb
3	200131R1_3	10.0	1.55	NO	29.35	1.000	1.82e5	1.85e6	10.8	8.5	0.984	bb
4	200131R1_4	50.0	1.54	NO	29.37	1.000	7.66e5	1.72e6	49.2	-1.7	0.892	bb
5	200131R1_5	200	1.53	NO	29.34	1.000	3.44e6	1.96e6	193	-3.5	0.875	bb
6	200131R1_6	1500	1.52	NO	29.37	1.000	3.24e7	2.45e6	1460	-2.7	0.883	bb

**Compound name: 2,3,4,7,8-PeCDF**

Response Factor: 0.951581

RRF SD: 0.0710528, Relative SD: 7.46682

Response type: Internal Std ( Ref 27 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.39	NO	30.36	1.000	1.52e4	1.40e6	1.14	-9.0	0.866	bb
2	200131R1_2	2.50	1.49	NO	30.33	1.000	4.18e4	1.60e6	2.74	9.7	1.04	bb

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**Compound name: 2,3,4,7,8-PeCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200131R1_3	10.0	1.52	NO	30.33	1.000	1.83e5	1.77e6	10.9	8.5	1.03	bb
4	200131R1_4	50.0	1.52	NO	30.33	1.000	7.42e5	1.63e6	48.0	-4.1	0.913	bb
5	200131R1_5	200	1.52	NO	30.32	1.000	3.55e6	1.92e6	195	-2.7	0.926	bb
6	200131R1_6	1500	1.53	NO	30.33	1.000	3.27e7	2.35e6	1460	-2.5	0.928	bb

**Compound name: 1,2,3,4,7,8-HxCDF**

Response Factor: 0.862294

RRF SD: 0.0432122, Relative SD: 5.0113

Response type: Internal Std ( Ref 28 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.16	NO	33.13	1.000	1.04e4	9.82e5	1.22	-2.1	0.844	MM
2	200131R1_2	2.50	1.16	NO	33.10	1.000	2.37e4	1.03e6	2.66	6.4	0.917	bd
3	200131R1_3	10.0	1.18	NO	33.11	1.000	1.05e5	1.14e6	10.6	6.5	0.918	bd
4	200131R1_4	50.0	1.16	NO	33.13	1.000	4.53e5	1.09e6	48.4	-3.3	0.834	dd
5	200131R1_5	200	1.16	NO	33.10	1.001	2.04e6	1.23e6	192	-4.1	0.827	bd
6	200131R1_6	1500	1.16	NO	33.12	1.000	1.94e7	1.55e6	1450	-3.4	0.833	bd

**Compound name: 1,2,3,6,7,8-HxCDF**

Response Factor: 0.841382

RRF SD: 0.0466581, Relative SD: 5.54541

Response type: Internal Std ( Ref 29 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.21	NO	33.26	1.001	1.06e4	1.07e6	1.17	-6.2	0.789	MM
2	200131R1_2	2.50	1.19	NO	33.23	1.001	2.67e4	1.18e6	2.69	7.5	0.904	MM
3	200131R1_3	10.0	1.15	NO	33.24	1.001	1.15e5	1.29e6	10.6	6.3	0.894	db
4	200131R1_4	50.0	1.16	NO	33.24	1.000	5.01e5	1.23e6	48.3	-3.3	0.813	db
5	200131R1_5	200	1.15	NO	33.22	1.000	2.41e6	1.46e6	196	-1.9	0.825	db
6	200131R1_6	1500	1.16	NO	33.24	1.000	2.16e7	1.75e6	1470	-2.3	0.822	db

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**Compound name: 2,3,4,6,7,8-HxCDF**

Response Factor: 0.898194

RRF SD: 0.0533025, Relative SD: 5.9344

Response type: Internal Std ( Ref 30 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.07	NO	33.84	1.000	1.01e4	9.62e5	1.17	-6.1	0.844	bb
2	200131R1_2	2.50	1.21	NO	33.81	1.000	2.55e4	1.06e6	2.67	6.7	0.958	bb
3	200131R1_3	10.0	1.14	NO	33.82	1.001	1.14e5	1.17e6	10.8	8.3	0.972	bb
4	200131R1_4	50.0	1.16	NO	33.82	1.000	4.82e5	1.11e6	48.4	-3.3	0.869	bb
5	200131R1_5	200	1.17	NO	33.80	1.000	2.21e6	1.27e6	194	-2.8	0.873	bb
6	200131R1_6	1500	1.17	NO	33.82	1.000	2.08e7	1.59e6	1460	-2.8	0.873	bb

**Compound name: 1,2,3,7,8,9-HxCDF**

Response Factor: 0.857779

RRF SD: 0.0530165, Relative SD: 6.18067

Response type: Internal Std ( Ref 31 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	1.12	NO	34.74	1.000	9.51e3	8.96e5	1.24	-1.0	0.849	bb
2	200131R1_2	2.50	1.18	NO	34.71	1.000	2.15e4	9.11e5	2.76	10.2	0.946	bb
3	200131R1_3	10.0	1.17	NO	34.72	1.001	8.71e4	9.71e5	10.5	4.6	0.897	MM
4	200131R1_4	50.0	1.15	NO	34.72	1.000	3.90e5	9.57e5	47.6	-4.9	0.816	bb
5	200131R1_5	200	1.16	NO	34.70	1.000	1.74e6	1.06e6	191	-4.6	0.818	bb
6	200131R1_6	1500	1.17	NO	34.72	1.000	1.68e7	1.37e6	1430	-4.4	0.820	bb

**Compound name: 1,2,3,4,6,7,8-HpCDF**

Response Factor: 0.851072

RRF SD: 0.0458765, Relative SD: 5.39044

Response type: Internal Std ( Ref 32 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	0.94	NO	36.48	1.000	7.60e3	7.37e5	1.21	-3.0	0.826	bb
2	200131R1_2	2.50	0.99	NO	36.47	1.001	1.79e4	7.82e5	2.70	7.9	0.918	bd

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**Compound name: 1,2,3,4,6,7,8-HpCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200131R1_3	10.0	0.96	NO	36.46	1.000	7.21e4	8.00e5	10.6	5.9	0.901	bd
4	200131R1_4	50.0	0.96	NO	36.47	1.001	3.29e5	8.01e5	48.2	-3.5	0.821	bb
5	200131R1_5	200	0.97	NO	36.45	1.000	1.46e6	8.88e5	193	-3.4	0.822	bb
6	200131R1_6	1500	0.96	NO	36.47	1.000	1.37e7	1.12e6	1440	-3.9	0.818	bb

**Compound name: 1,2,3,4,7,8,9-HpCDF**

Response Factor: 0.979894

RRF SD: 0.0488516, Relative SD: 4.9854

Response type: Internal Std ( Ref 33 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	1.25	0.96	NO	38.50	1.000	5.89e3	5.04e5	1.19	-4.7	0.934	MM
2	200131R1_2	2.50	0.97	NO	38.48	1.000	1.47e4	5.63e5	2.66	6.4	1.04	bb
3	200131R1_3	10.0	0.96	NO	38.49	1.000	5.91e4	5.68e5	10.6	6.2	1.04	bb
4	200131R1_4	50.0	0.97	NO	38.50	1.000	2.74e5	5.80e5	48.2	-3.6	0.945	bb
5	200131R1_5	200	0.96	NO	38.48	1.000	1.25e6	6.58e5	194	-2.9	0.952	bb
6	200131R1_6	1500	0.96	NO	38.50	1.000	1.20e7	8.31e5	1480	-1.5	0.966	bb

**Compound name: OCDF**

Response Factor: 0.805548

RRF SD: 0.0471476, Relative SD: 5.85286

Response type: Internal Std ( Ref 34 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	2.50	0.85	NO	41.10	1.000	1.39e4	1.44e6	2.40	-4.0	0.773	bb
2	200131R1_2	5.00	0.87	NO	41.08	1.000	3.50e4	1.59e6	5.46	9.2	0.880	bb
3	200131R1_3	20.0	0.87	NO	41.09	1.000	1.37e5	1.61e6	21.1	5.5	0.850	MM
4	200131R1_4	100	0.85	NO	41.10	1.000	6.45e5	1.67e6	95.6	-4.4	0.770	bb
5	200131R1_5	400	0.86	NO	41.09	1.000	2.92e6	1.87e6	388	-3.1	0.781	bb
6	200131R1_6	3000	0.86	NO	41.10	1.000	2.81e7	2.40e6	2900	-3.3	0.779	bb

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**Compound name: 13C-2,3,7,8-TCDD**

Response Factor: 1.19852

RRF SD: 0.0939444, Relative SD: 7.83835

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.79	NO	25.72	1.026	1.21e6	9.30e5	109	9.0	1.31	bb
2	200131R1_2	100	0.79	NO	25.67	1.026	1.37e6	1.27e6	90.2	-9.8	1.08	bb
3	200131R1_3	100	0.79	NO	25.67	1.026	1.44e6	1.31e6	91.3	-8.7	1.09	bb
4	200131R1_4	100	0.79	NO	25.67	1.026	1.42e6	1.19e6	99.9	-0.1	1.20	bb
5	200131R1_5	100	0.80	NO	25.66	1.026	1.45e6	1.18e6	103	2.7	1.23	bb
6	200131R1_6	100	0.78	NO	25.69	1.026	1.75e6	1.37e6	107	6.9	1.28	bb

**Compound name: 13C-1,2,3,7,8-PeCDD**

Response Factor: 0.966657

RRF SD: 0.113301, Relative SD: 11.7209

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.64	NO	30.65	1.222	9.52e5	9.30e5	106	5.9	1.02	bb
2	200131R1_2	100	0.63	NO	30.61	1.223	1.05e6	1.27e6	85.4	-14.6	0.826	bb
3	200131R1_3	100	0.64	NO	30.62	1.223	1.14e6	1.31e6	90.0	-10.0	0.870	bb
4	200131R1_4	100	0.65	NO	30.62	1.223	1.09e6	1.19e6	95.0	-5.0	0.918	bb
5	200131R1_5	100	0.64	NO	30.61	1.223	1.23e6	1.18e6	108	7.9	1.04	bb
6	200131R1_6	100	0.64	NO	30.62	1.223	1.53e6	1.37e6	116	15.8	1.12	bb

**Compound name: 13C-1,2,3,4,7,8-HxCDD**

Response Factor: 0.873915

RRF SD: 0.0797425, Relative SD: 9.12474

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	1.26	NO	33.99	1.014	7.72e5	8.41e5	105	5.1	0.918	bd
2	200131R1_2	100	1.27	NO	33.96	1.014	8.79e5	1.13e6	89.1	-10.9	0.778	bd

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**Compound name: 13C-1,2,3,4,7,8-HxCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200131R1_3	100	1.28	NO	33.97	1.014	9.69e5	1.23e6	90.5	-9.5	0.791	bd
4	200131R1_4	100	1.26	NO	33.98	1.014	9.08e5	1.05e6	98.8	-1.2	0.863	bd
5	200131R1_5	100	1.27	NO	33.96	1.014	1.04e6	1.15e6	104	3.8	0.907	bd
6	200131R1_6	100	1.28	NO	33.98	1.014	1.30e6	1.32e6	113	12.8	0.986	bd

**Compound name: 13C-1,2,3,6,7,8-HxCDD**

Response Factor: 1.04579  
 RRF SD: 0.10317, Relative SD: 9.86527  
 Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	1.24	NO	34.09	1.017	9.31e5	8.41e5	106	5.9	1.11	db
2	200131R1_2	100	1.25	NO	34.06	1.017	1.05e6	1.13e6	88.6	-11.4	0.927	db
3	200131R1_3	100	1.25	NO	34.07	1.017	1.13e6	1.23e6	88.2	-11.8	0.923	db
4	200131R1_4	100	1.25	NO	34.07	1.017	1.11e6	1.05e6	101	0.9	1.05	db
5	200131R1_5	100	1.26	NO	34.06	1.017	1.24e6	1.15e6	103	3.3	1.08	db
6	200131R1_6	100	1.27	NO	34.07	1.017	1.56e6	1.32e6	113	13.1	1.18	db

**Compound name: 13C-1,2,3,7,8,9-HxCDD**

Response Factor: 0.974375  
 RRF SD: 0.10254, Relative SD: 10.5236  
 Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	1.26	NO	34.37	1.025	9.08e5	8.41e5	111	10.8	1.08	bb
2	200131R1_2	100	1.24	NO	34.34	1.025	9.77e5	1.13e6	88.8	-11.2	0.865	bb
3	200131R1_3	100	1.23	NO	34.35	1.025	1.04e6	1.23e6	87.1	-12.9	0.848	bb
4	200131R1_4	100	1.26	NO	34.35	1.025	1.02e6	1.05e6	99.4	-0.6	0.968	bb
5	200131R1_5	100	1.22	NO	34.33	1.025	1.15e6	1.15e6	102	2.1	0.995	bb
6	200131R1_6	100	1.27	NO	34.35	1.025	1.44e6	1.32e6	112	11.8	1.09	bb

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

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**Compound name: 13C-1,2,3,4,6,7,8-HpCDD**

Response Factor: 0.747228

RRF SD: 0.0868418, Relative SD: 11.6219

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	1.04	NO	37.91	1.131	7.05e5	8.41e5	112	12.3	0.839	bb
2	200131R1_2	100	1.03	NO	37.88	1.131	7.60e5	1.13e6	90.0	-10.0	0.673	bb
3	200131R1_3	100	1.05	NO	37.88	1.131	7.62e5	1.23e6	83.2	-16.8	0.622	bb
4	200131R1_4	100	1.05	NO	37.88	1.131	7.83e5	1.05e6	99.7	-0.3	0.745	bb
5	200131R1_5	100	1.05	NO	37.88	1.131	8.87e5	1.15e6	103	3.2	0.771	bb
6	200131R1_6	100	1.03	NO	37.88	1.131	1.10e6	1.32e6	112	11.6	0.834	bb

**Compound name: 13C-OCDD**

Response Factor: 0.706533

RRF SD: 0.0850665, Relative SD: 12.04

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	200	0.89	NO	40.90	1.220	1.29e6	8.41e5	218	8.9	0.770	bb
2	200131R1_2	200	0.92	NO	40.88	1.221	1.46e6	1.13e6	183	-8.6	0.646	bd
3	200131R1_3	200	0.90	NO	40.89	1.221	1.41e6	1.23e6	163	-18.5	0.575	bb
4	200131R1_4	200	0.90	NO	40.90	1.221	1.48e6	1.05e6	199	-0.4	0.704	bb
5	200131R1_5	200	0.86	NO	40.89	1.221	1.69e6	1.15e6	208	4.0	0.735	bb
6	200131R1_6	200	0.84	NO	40.90	1.221	2.14e6	1.32e6	229	14.6	0.809	bb

**Compound name: 13C-2,3,7,8-TCDF**

Response Factor: 1.06529

RRF SD: 0.0915828, Relative SD: 8.59701

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.77	NO	24.84	0.990	1.69e6	1.42e6	112	11.8	1.19	bb
2	200131R1_2	100	0.78	NO	24.79	0.990	1.87e6	1.95e6	89.9	-10.1	0.958	bb



Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

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**Compound name: 13C-2,3,7,8-TCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200131R1_3	100	0.76	NO	24.79	0.990	1.95e6	2.03e6	90.3	-9.7	0.962	bb
4	200131R1_4	100	0.77	NO	24.79	0.990	1.92e6	1.80e6	100	0.3	1.07	bb
5	200131R1_5	100	0.77	NO	24.78	0.990	1.96e6	1.80e6	103	2.6	1.09	bb
6	200131R1_6	100	0.77	NO	24.81	0.990	2.35e6	2.10e6	105	5.1	1.12	bb

**Compound name: 13C-1,2,3,7,8-PeCDF**

Response Factor: 1.00172

RRF SD: 0.117905, Relative SD: 11.7703

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	1.57	NO	29.37	1.171	1.46e6	1.42e6	103	3.0	1.03	bb
2	200131R1_2	100	1.56	NO	29.34	1.172	1.66e6	1.95e6	84.9	-15.1	0.851	bb
3	200131R1_3	100	1.61	NO	29.34	1.172	1.85e6	2.03e6	91.2	-8.8	0.914	bb
4	200131R1_4	100	1.59	NO	29.35	1.173	1.72e6	1.80e6	95.2	-4.8	0.953	bb
5	200131R1_5	100	1.60	NO	29.32	1.172	1.96e6	1.80e6	109	9.1	1.09	bb
6	200131R1_6	100	1.59	NO	29.35	1.172	2.45e6	2.10e6	117	16.5	1.17	bb

**Compound name: 13C-2,3,4,7,8-PeCDF**

Response Factor: 0.961692

RRF SD: 0.117094, Relative SD: 12.1758

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	1.59	NO	30.35	1.210	1.40e6	1.42e6	103	2.7	0.988	db
2	200131R1_2	100	1.59	NO	30.32	1.211	1.60e6	1.95e6	85.2	-14.8	0.820	db
3	200131R1_3	100	1.56	NO	30.32	1.211	1.77e6	2.03e6	90.8	-9.2	0.873	bb
4	200131R1_4	100	1.61	NO	30.32	1.211	1.63e6	1.80e6	93.8	-6.2	0.902	db
5	200131R1_5	100	1.59	NO	30.30	1.211	1.92e6	1.80e6	111	10.9	1.07	db
6	200131R1_6	100	1.62	NO	30.33	1.211	2.35e6	2.10e6	117	16.5	1.12	db

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

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**Compound name: 13C-1,2,3,4,7,8-HxCDF**

Response Factor: 1.0492

RRF SD: 0.111678, Relative SD: 10.6441

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.51	NO	33.13	0.988	9.82e5	8.41e5	111	11.3	1.17	bd
2	200131R1_2	100	0.50	NO	33.09	0.988	1.03e6	1.13e6	87.3	-12.7	0.915	bd
3	200131R1_3	100	0.51	NO	33.10	0.988	1.14e6	1.23e6	88.8	-11.2	0.932	bd
4	200131R1_4	100	0.50	NO	33.11	0.988	1.09e6	1.05e6	98.5	-1.5	1.03	bd
5	200131R1_5	100	0.51	NO	33.08	0.988	1.23e6	1.15e6	102	2.0	1.07	bd
6	200131R1_6	100	0.50	NO	33.11	0.989	1.55e6	1.32e6	112	12.1	1.18	bd

**Compound name: 13C-1,2,3,6,7,8-HxCDF**

Response Factor: 1.18988

RRF SD: 0.120357, Relative SD: 10.1151

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.51	NO	33.24	0.992	1.07e6	8.41e5	107	7.4	1.28	db
2	200131R1_2	100	0.50	NO	33.21	0.992	1.18e6	1.13e6	88.0	-12.0	1.05	db
3	200131R1_3	100	0.51	NO	33.22	0.992	1.29e6	1.23e6	88.2	-11.8	1.05	db
4	200131R1_4	100	0.51	NO	33.23	0.992	1.23e6	1.05e6	98.5	-1.5	1.17	db
5	200131R1_5	100	0.51	NO	33.21	0.992	1.46e6	1.15e6	107	6.7	1.27	db
6	200131R1_6	100	0.51	NO	33.23	0.992	1.75e6	1.32e6	111	11.2	1.32	db

**Compound name: 13C-2,3,4,6,7,8-HxCDF**

Response Factor: 1.06623

RRF SD: 0.103589, Relative SD: 9.71549

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.51	NO	33.83	1.009	9.62e5	8.41e5	107	7.2	1.14	bb
2	200131R1_2	100	0.50	NO	33.80	1.009	1.06e6	1.13e6	88.4	-11.6	0.943	bb

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

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**Compound name: 13C-2,3,4,6,7,8-HxCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200131R1_3	100	0.51	NO	33.79	1.009	1.17e6	1.23e6	89.3	-10.7	0.953	bb
4	200131R1_4	100	0.51	NO	33.81	1.009	1.11e6	1.05e6	99.0	-1.0	1.06	bb
5	200131R1_5	100	0.51	NO	33.78	1.009	1.27e6	1.15e6	103	3.4	1.10	bb
6	200131R1_6	100	0.50	NO	33.81	1.009	1.59e6	1.32e6	113	12.6	1.20	bb

**Compound name: 13C-1,2,3,7,8,9-HxCDF**

Response Factor: 0.922357

RRF SD: 0.112781, Relative SD: 12.2275

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.52	NO	34.73	1.036	8.96e5	8.41e5	115	15.5	1.07	bd
2	200131R1_2	100	0.50	NO	34.70	1.036	9.11e5	1.13e6	87.5	-12.5	0.807	bb
3	200131R1_3	100	0.50	NO	34.70	1.036	9.71e5	1.23e6	85.9	-14.1	0.793	bb
4	200131R1_4	100	0.51	NO	34.71	1.036	9.57e5	1.05e6	98.7	-1.3	0.910	bb
5	200131R1_5	100	0.50	NO	34.69	1.036	1.06e6	1.15e6	100	0.1	0.923	bb
6	200131R1_6	100	0.52	NO	34.71	1.036	1.37e6	1.32e6	112	12.3	1.04	bb

**Compound name: 13C-1,2,3,4,6,7,8-HpCDF**

Response Factor: 0.767165

RRF SD: 0.0861255, Relative SD: 11.2265

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.44	NO	36.47	1.088	7.37e5	8.41e5	114	14.2	0.876	bb
2	200131R1_2	100	0.43	NO	36.44	1.088	7.82e5	1.13e6	90.2	-9.8	0.692	bb
3	200131R1_3	100	0.42	NO	36.45	1.088	8.00e5	1.23e6	85.1	-14.9	0.653	bb
4	200131R1_4	100	0.43	NO	36.45	1.088	8.01e5	1.05e6	99.3	-0.7	0.762	bb
5	200131R1_5	100	0.44	NO	36.44	1.088	8.88e5	1.15e6	101	0.6	0.772	bb
6	200131R1_6	100	0.44	NO	36.46	1.088	1.12e6	1.32e6	111	10.6	0.848	bb

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

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**Compound name: 13C-1,2,3,4,7,8,9-HpCDF**

Response Factor: 0.552323  
 RRF SD: 0.0621028, Relative SD: 11.2439  
 Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.44	NO	38.50	1.149	5.04e5	8.41e5	109	8.5	0.600	MM
2	200131R1_2	100	0.43	NO	38.47	1.149	5.63e5	1.13e6	90.3	-9.7	0.499	bb
3	200131R1_3	100	0.44	NO	38.48	1.149	5.68e5	1.23e6	83.9	-16.1	0.464	bb
4	200131R1_4	100	0.43	NO	38.48	1.148	5.80e5	1.05e6	99.8	-0.2	0.551	bb
5	200131R1_5	100	0.43	NO	38.47	1.149	6.58e5	1.15e6	104	3.6	0.572	bb
6	200131R1_6	100	0.43	NO	38.49	1.149	8.31e5	1.32e6	114	13.9	0.629	bb

**Compound name: 13C-OCDF**

Response Factor: 0.78941  
 RRF SD: 0.0937006, Relative SD: 11.8697  
 Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	200	0.88	NO	41.10	1.226	1.44e6	8.41e5	217	8.5	0.856	bb
2	200131R1_2	200	0.86	NO	41.07	1.226	1.59e6	1.13e6	178	-10.8	0.704	bb
3	200131R1_3	200	0.84	NO	41.08	1.226	1.61e6	1.23e6	167	-16.6	0.658	bb
4	200131R1_4	200	0.87	NO	41.08	1.226	1.67e6	1.05e6	202	0.8	0.796	bb
5	200131R1_5	200	0.86	NO	41.07	1.227	1.87e6	1.15e6	206	2.8	0.812	bb
6	200131R1_6	200	0.87	NO	41.09	1.227	2.40e6	1.32e6	230	15.2	0.910	bb

**Compound name: 37Cl-2,3,7,8-TCDD**

Response Factor: 1.17626  
 RRF SD: 0.0677436, Relative SD: 5.75926  
 Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	0.250			25.74	1.026	2.61e3	9.30e5	0.239	-4.6	1.12	bb
2	200131R1_2	0.500			25.70	1.027	7.49e3	1.27e6	0.502	0.3	1.18	bb

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

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**Compound name: 37Cl-2,3,7,8-TCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200131R1_3	2.00			25.70	1.027	2.85e4	1.31e6	1.85	-7.7	1.09	bb
4	200131R1_4	10.0			25.70	1.027	1.40e5	1.19e6	10.0	0.4	1.18	bb
5	200131R1_5	40.0			25.69	1.027	5.71e5	1.18e6	41.0	2.6	1.21	bb
6	200131R1_6	200			25.70	1.026	3.51e6	1.37e6	218	8.9	1.28	bb

**Compound name: 13C-1,2,3,4-TCDD**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.78	NO	25.08	1.000	9.30e5	9.30e5	100	0.0	1.00	bb
2	200131R1_2	100	0.80	NO	25.03	1.000	1.27e6	1.27e6	100	0.0	1.00	bb
3	200131R1_3	100	0.80	NO	25.03	1.000	1.31e6	1.31e6	100	0.0	1.00	bb
4	200131R1_4	100	0.80	NO	25.03	1.000	1.19e6	1.19e6	100	0.0	1.00	bb
5	200131R1_5	100	0.80	NO	25.02	1.000	1.18e6	1.18e6	100	0.0	1.00	bb
6	200131R1_6	100	0.80	NO	25.05	1.000	1.37e6	1.37e6	100	0.0	1.00	bb

**Compound name: 13C-1,2,3,4-TCDF**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.79	NO	23.42	1.000	1.42e6	1.42e6	100	0.0	1.00	bd
2	200131R1_2	100	0.79	NO	23.35	1.000	1.95e6	1.95e6	100	0.0	1.00	bb
3	200131R1_3	100	0.79	NO	23.37	1.000	2.03e6	2.03e6	100	0.0	1.00	bb
4	200131R1_4	100	0.79	NO	23.37	1.000	1.80e6	1.80e6	100	0.0	1.00	bb
5	200131R1_5	100	0.80	NO	23.35	1.000	1.80e6	1.80e6	100	0.0	1.00	bb
6	200131R1_6	100	0.79	NO	23.39	1.000	2.10e6	2.10e6	100	0.0	1.00	bb

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-CRV.qld

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**Compound name: 13C-1,2,3,4,6,9-HxCDF**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131R1_1	100	0.51	NO	33.52	1.000	8.41e5	8.41e5	100	0.0	1.00	bb
2	200131R1_2	100	0.51	NO	33.49	1.000	1.13e6	1.13e6	100	0.0	1.00	bb
3	200131R1_3	100	0.51	NO	33.50	1.000	1.23e6	1.23e6	100	0.0	1.00	bb
4	200131R1_4	100	0.51	NO	33.51	1.000	1.05e6	1.05e6	100	0.0	1.00	bb
5	200131R1_5	100	0.51	NO	33.49	1.000	1.15e6	1.15e6	100	0.0	1.00	bb
6	200131R1_6	100	0.51	NO	33.50	1.000	1.32e6	1.32e6	100	0.0	1.00	bb

Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:18:48 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:18:51 AM Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Compound name: 2,3,7,8-TCDD

	Name	ID	Acq.Date	Acq.Time
1	200131R1_1	ST200131R1_1 1613 CS0 19L2302	31-Jan-20	16:48:41
2	200131R1_2	ST200131R1_2 1613 CS1 19L2303	31-Jan-20	17:37:04
3	200131R1_3	ST200131R1_3 1613 CS2 19L2304	31-Jan-20	18:23:19
4	200131R1_4	ST200131R1_4 1613 CS3 19L2305	31-Jan-20	19:10:18
5	200131R1_5	ST200131R1_5 1613 CS4 19L2306	31-Jan-20	19:57:17
6	200131R1_6	ST200131R1_6 1613 CS5 19L2307	31-Jan-20	20:44:23
7	200131R1_7	SOLVENT BLANK	31-Jan-20	21:31:31
8	200131R1_8	SS200131R1_1 1613 SSS 19L2308	31-Jan-20	22:18:30
9	200131R1_9	ST200131R1_7 1613 CS3 19I1604	31-Jan-20	23:05:36
10	200131R1_10	B0A0133-BS1 OPR 1	31-Jan-20	23:52:35
11	200131R1_11	B0A0226-BS1 OPR 10	01-Feb-20	00:39:35
12	200131R1_12	SOLVENT BLANK	01-Feb-20	01:26:32
13	200131R1_13	B0A0133-BLK1 Method Blank 1	01-Feb-20	02:13:32
14	200131R1_14	B0A0226-BLK1 Method Blank 10	01-Feb-20	03:00:32
15	200131R1_15	1904161-10RE1 PDI-046SC-A-02-03-191001 ...	01-Feb-20	03:47:38
16	200131R1_16	1904161-16RE1 PDI-066SC-A-06-07-191011 ...	01-Feb-20	04:34:37
17	200131R1_17	1904207-04RE1 PDI-076SC-A-05-06-191013 ...	01-Feb-20	05:21:38
18	200131R1_18	1903647-05@2X PDI-067SC-B-06-08-191010 ...	01-Feb-20	06:08:35
19	200131R1_19	1903647-02@10X PDI-067SC-B-00-02-19101...	01-Feb-20	06:55:34

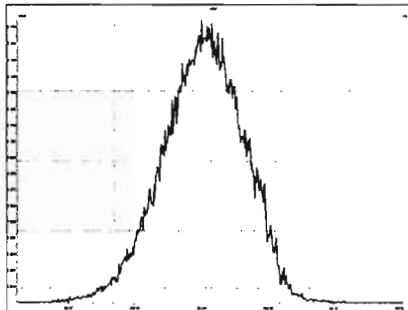
Experiment Calibration Report

MassLynx 4.1 SCN815

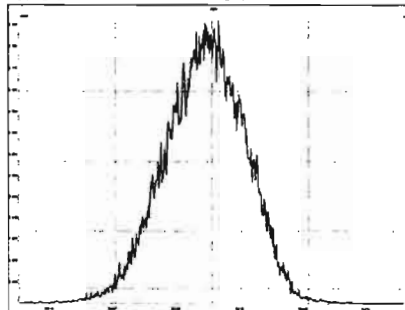
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:41:39 Pacific Standard Time

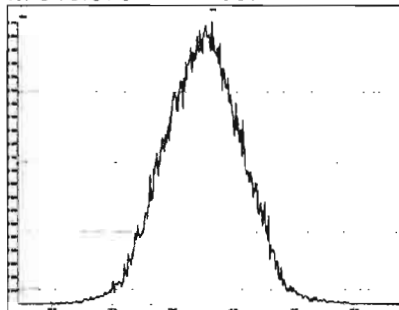
M 292.9824 R 10370



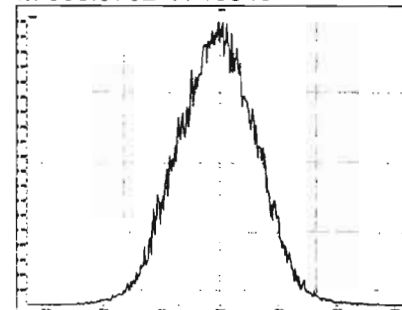
M 304.9824 R 10917



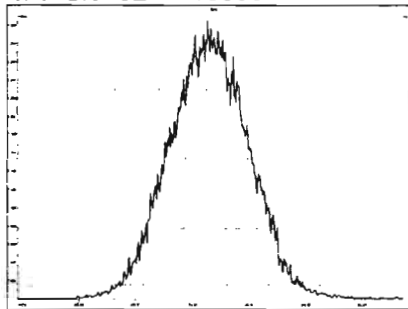
M 318.9792 R 10637



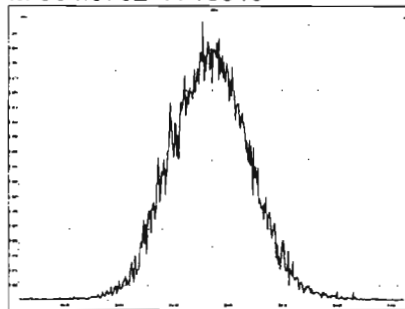
M 330.9792 R 10640



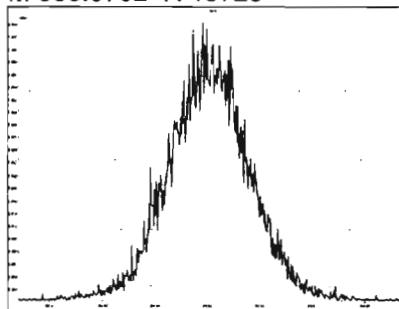
M 342.9792 R 10593



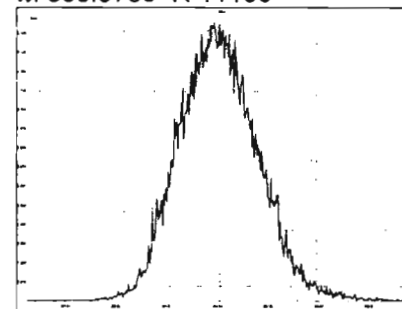
M 354.9792 R 10919



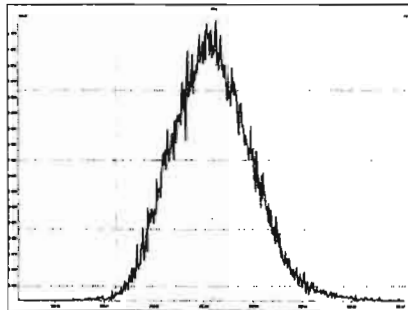
M 366.9792 R 10726



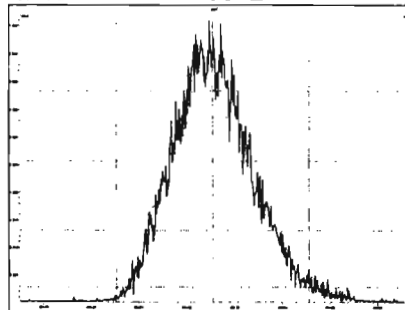
M 380.9760 R 11160



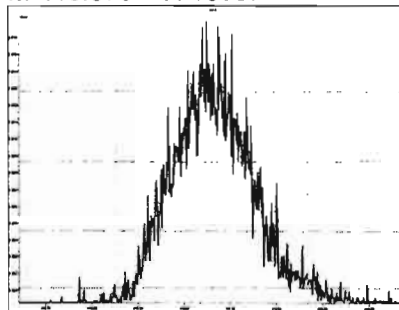
M 392.9760 R 11015



M 404.9760 R 10822



M 416.9760 R 10507





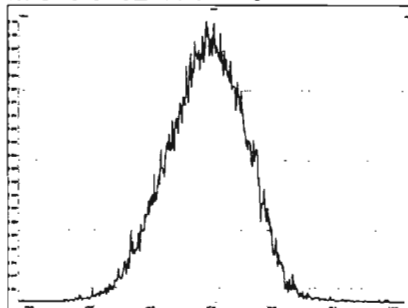
Experiment Calibration Report

MassLynx 4.1 SCN815

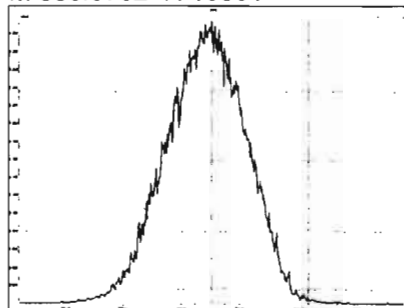
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:42:23 Pacific Standard Time

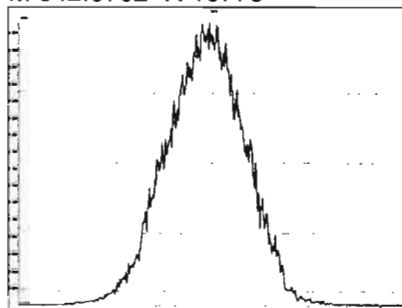
M 318.9792 R 11110



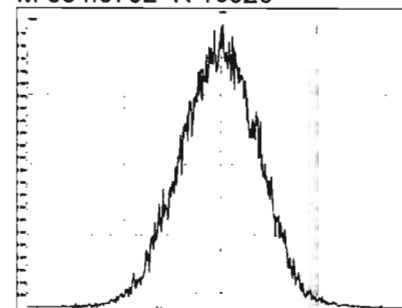
M 330.9792 R 10681



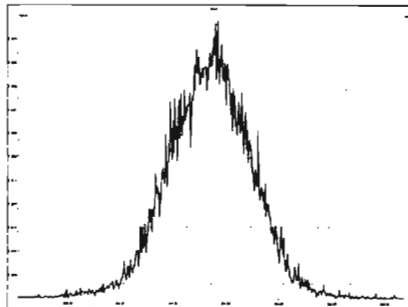
M 342.9792 R 10776



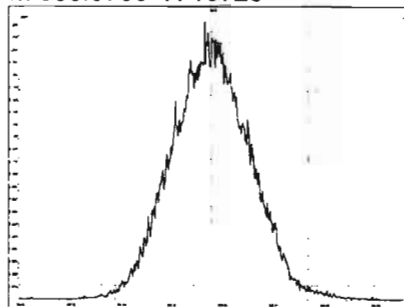
M 354.9792 R 10920



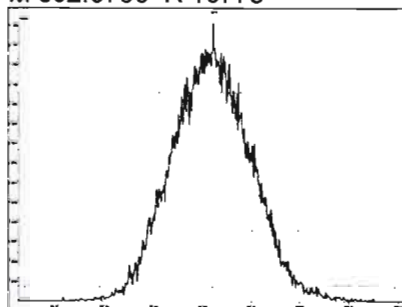
M 366.9792 R 10730



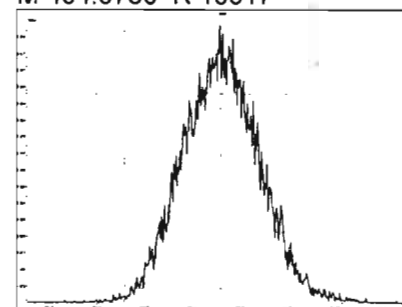
M 380.9760 R 10729



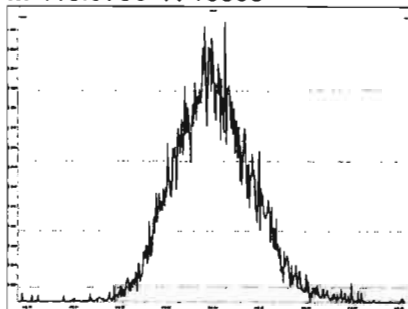
M 392.9760 R 10778



M 404.9760 R 10917



M 416.9760 R 10503



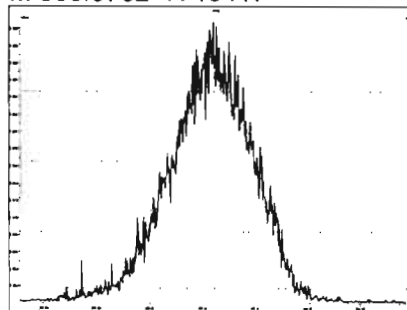
Experiment Calibration Report

MassLynx 4.1 SCN815

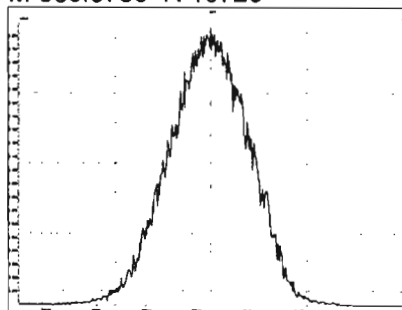
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:43:30 Pacific Standard Time

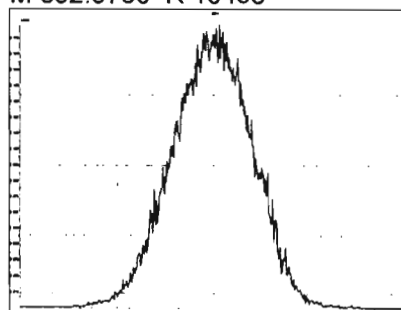
M 366.9792 R 10417



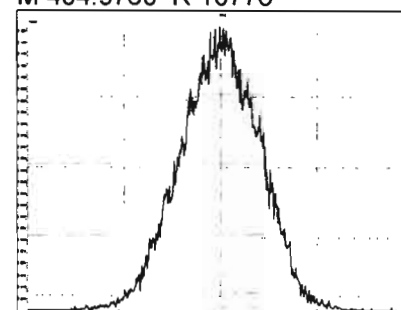
M 380.9760 R 10729



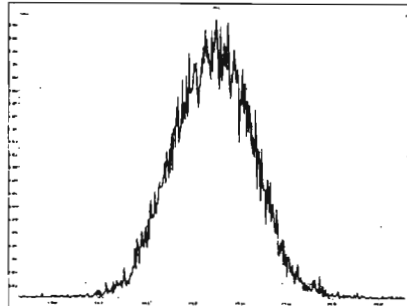
M 392.9760 R 10458



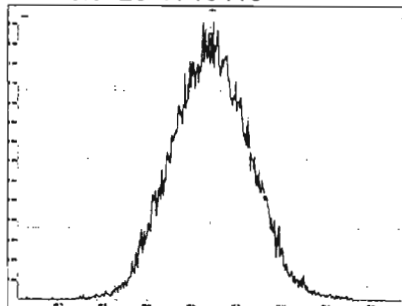
M 404.9760 R 10776



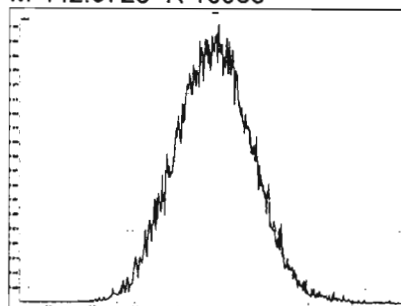
M 416.9760 R 10728



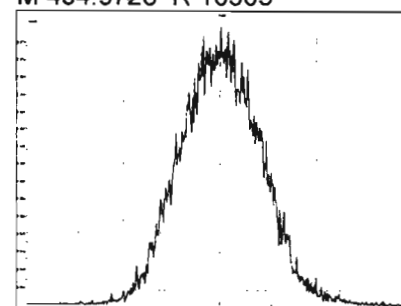
M 430.9728 R 10418



M 442.9728 R 10965



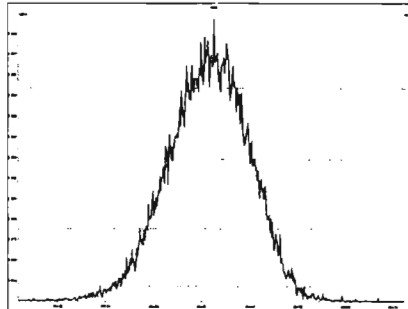
M 454.9728 R 10503



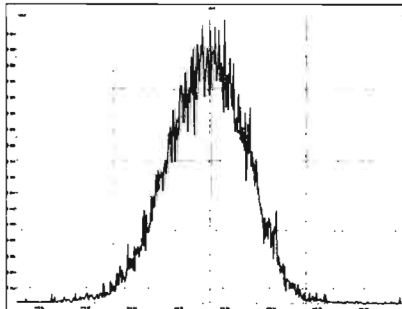
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:44:27 Pacific Standard Time

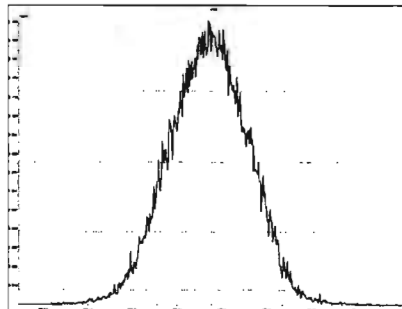
M 404.9760 R 10461



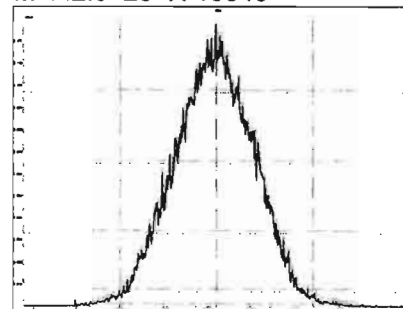
M 416.9760 R 10503



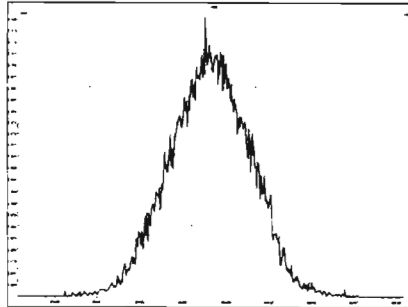
M 430.9728 R 10820



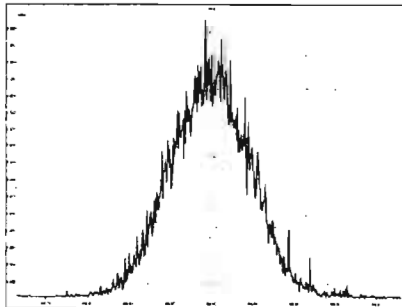
M 442.9728 R 10545



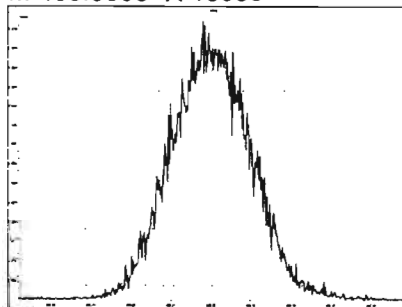
M 454.9728 R 10637



M 466.9728 R 11014



M 480.9696 R 10965



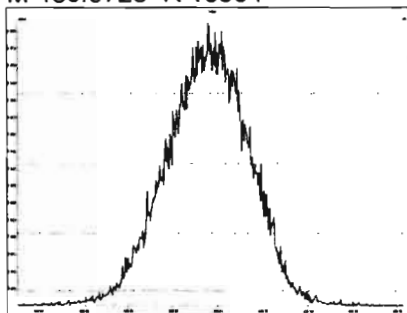
Experiment Calibration Report

MassLynx 4.1 SCN815

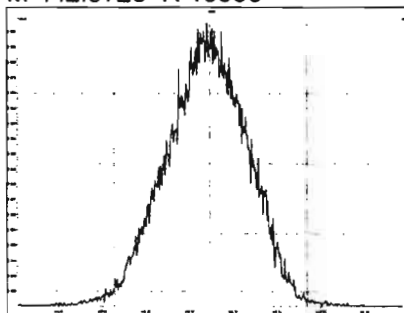
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:45:52 Pacific Standard Time

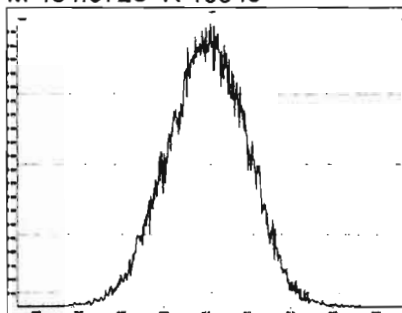
M 430.9728 R 10504



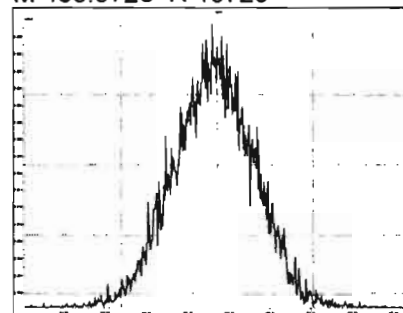
M 442.9728 R 10550



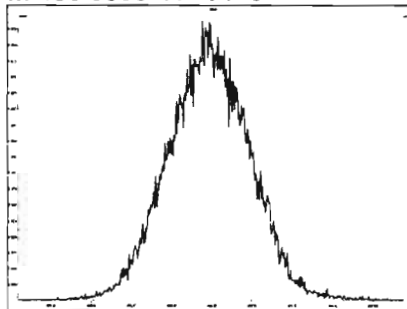
M 454.9728 R 10549



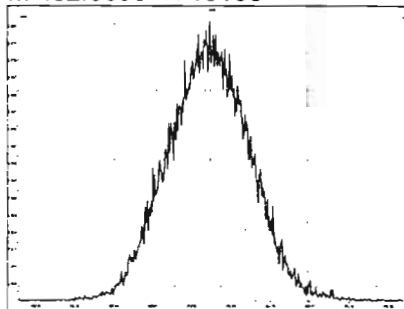
M 466.9728 R 10729



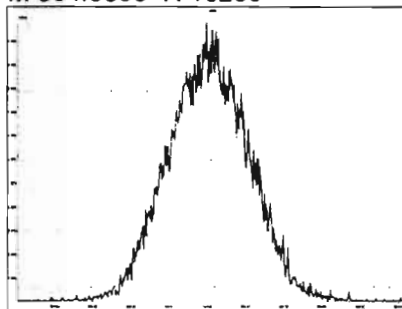
M 480.9696 R 10415



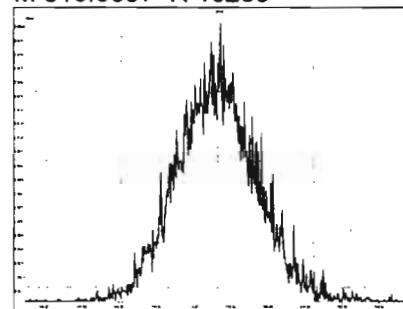
M 492.9696 R 10163



M 504.9696 R 10290



M 516.9697 R 10286



Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:18:10 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:18:19 AM Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26

Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200131R1\_4, Date: 31-Jan-2020, Time: 19:10:18, ID: ST200131R1\_4 1613 CS3 19L2305, Description: 1613 CS3 19L2305

#	Name	RT
1	1 1,3,6,8-TCDD (First)	21.72
2	2 1,2,8,9-TCDD (Last)	26.66
3	3 1,2,4,7,9-PeCDD (First)	28.44
4	4 1,2,3,8,9-PeCDD (Last)	31.02
5	5 1,2,4,6,7,9-HxCDD (First)	32.51
6	6 1,2,3,7,8,9-HxCDD (Last)	34.37
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.85
8	8 1,2,3,4,6,7,8-HpCDD (Last)	37.90
9	9 1,3,6,8-TCDF (First)	19.63
10	10 1,2,8,9-TCDF (Last)	26.81
11	11 1,3,4,6,8-PeCDF (First)	26.77
12	12 1,2,3,8,9-PeCDF (Last)	31.26
13	13 1,2,3,4,6,8-HxCDF (First)	31.95
14	14 1,2,3,7,8,9-HxCDF (Last)	34.72
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.47
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.50

Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:18:10 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:18:19 AM Pacific Standard Time

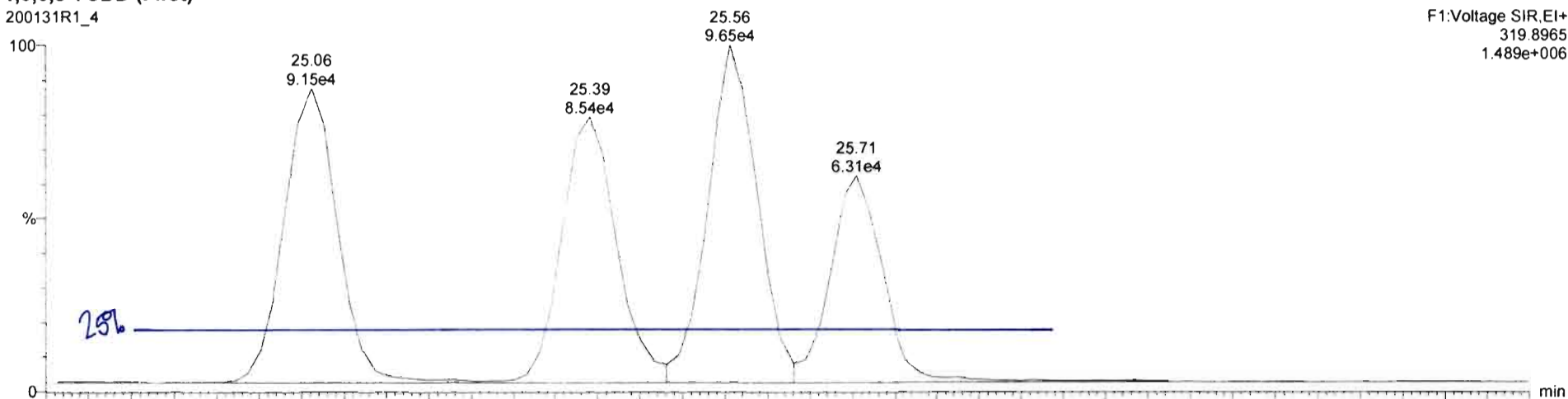
Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200131R1\_4, Date: 31-Jan-2020, Time: 19:10:18, ID: ST200131R1\_4 1613 CS3 19L2305, Description: 1613 CS3 19L2305

1,3,6,8-TCDD (First)

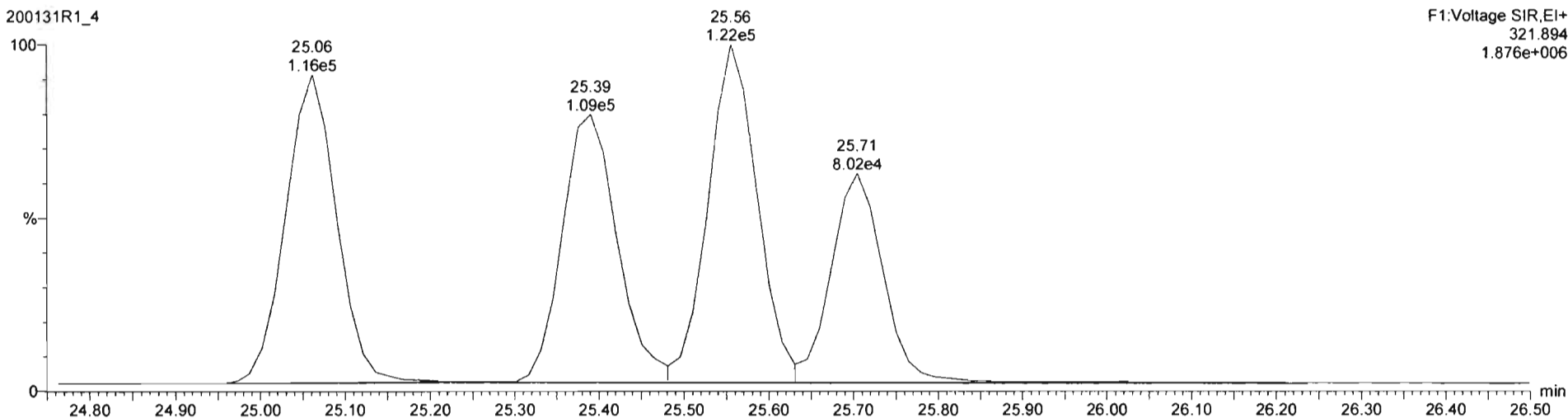
200131R1\_4

F1:Voltage SIR,EI+  
319.8965  
1.489e+006



200131R1\_4

F1:Voltage SIR,EI+  
321.894  
1.876e+006



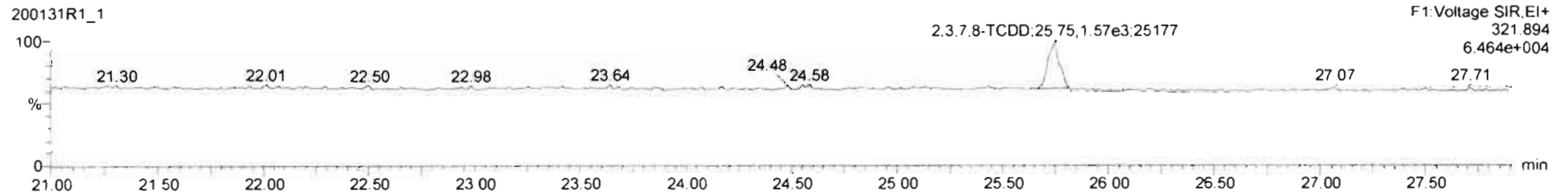
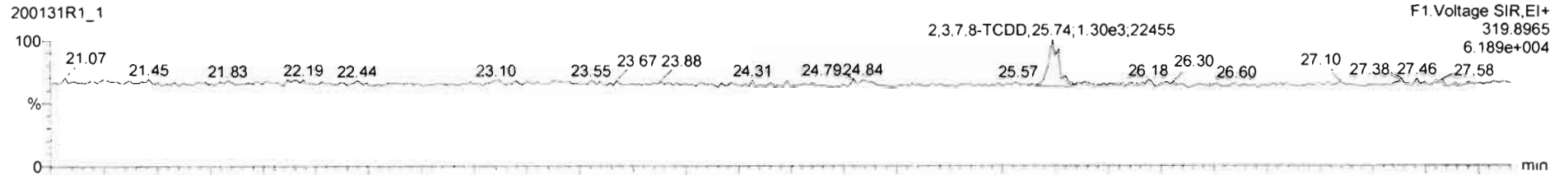
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

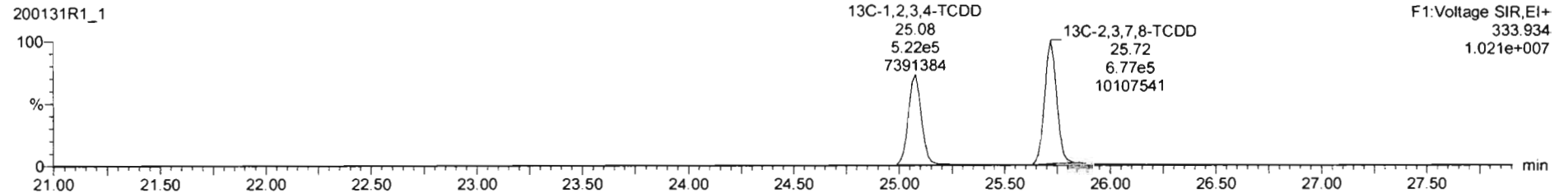
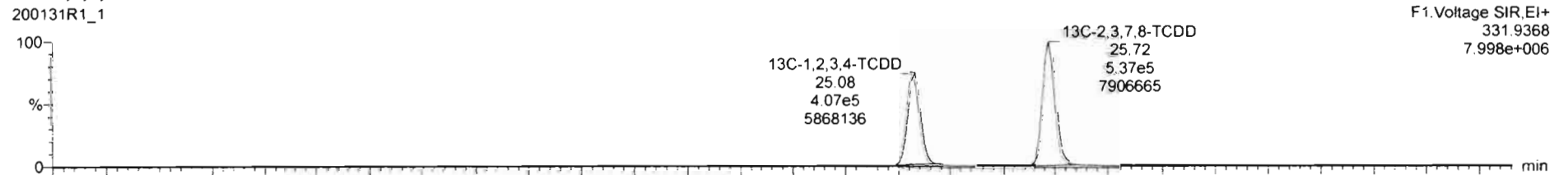
Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: 02 Feb 2020 11:06:20

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

2,3,7,8-TCDD



13C-2,3,7,8-TCDD



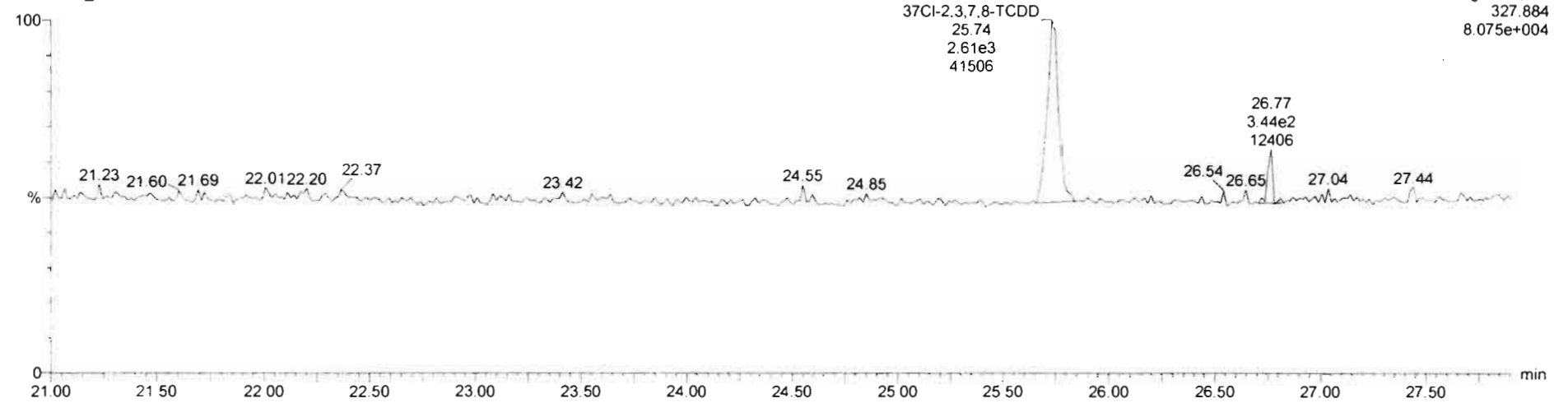
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

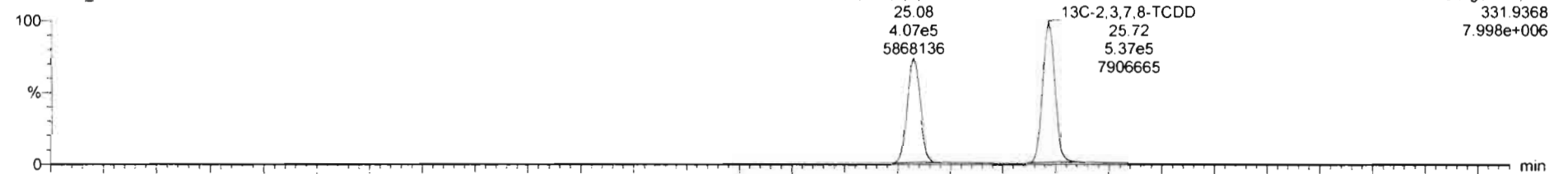
**37Cl-2,3,7,8-TCDD**

200131R1\_1

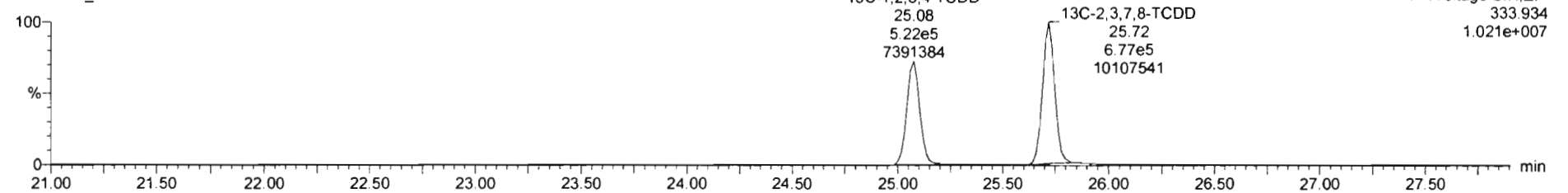


**13C-1,2,3,4-TCDD**

200131R1\_1



200131R1\_1





Dataset: Untitled

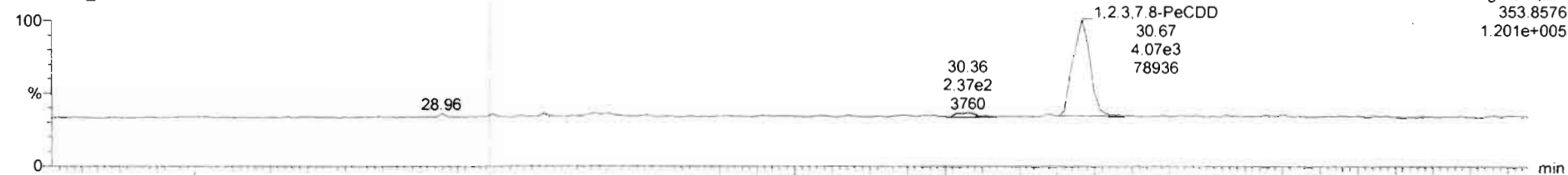
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

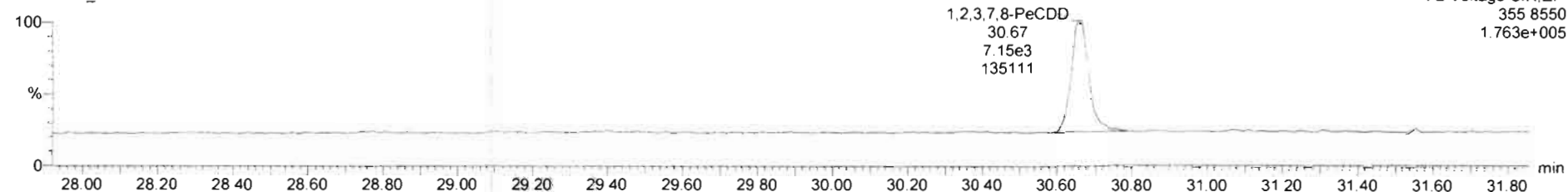
Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

**1,2,3,7,8-PeCDD**

200131R1\_1

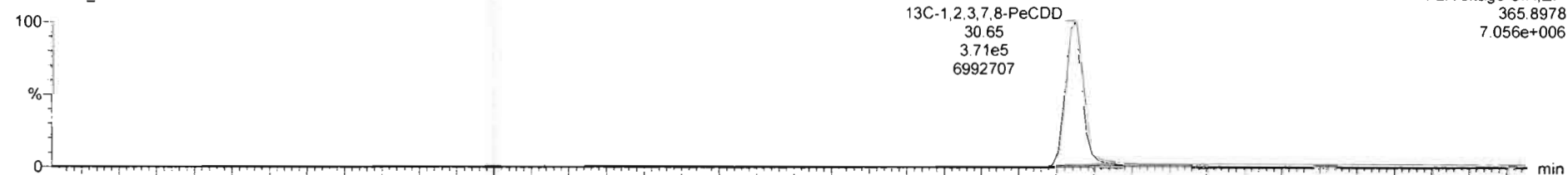


200131R1\_1

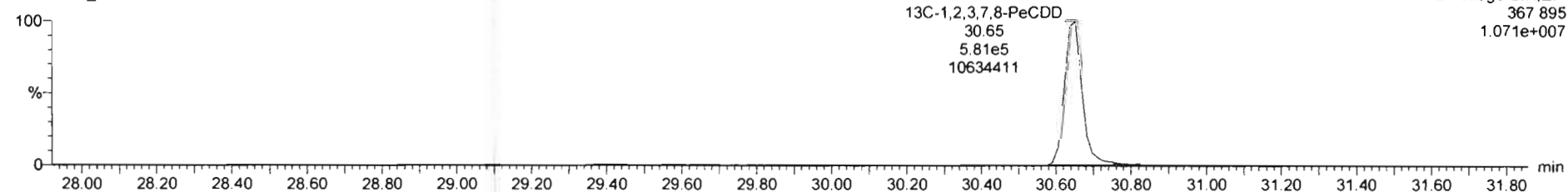


**13C-1,2,3,7,8-PeCDD**

200131R1\_1



200131R1\_1



Dataset: Untitled

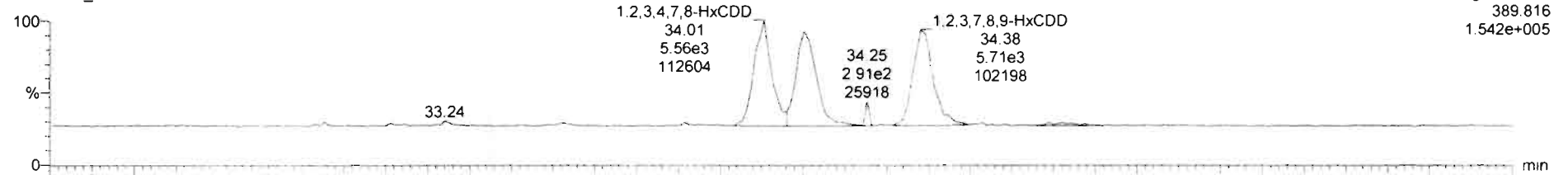
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

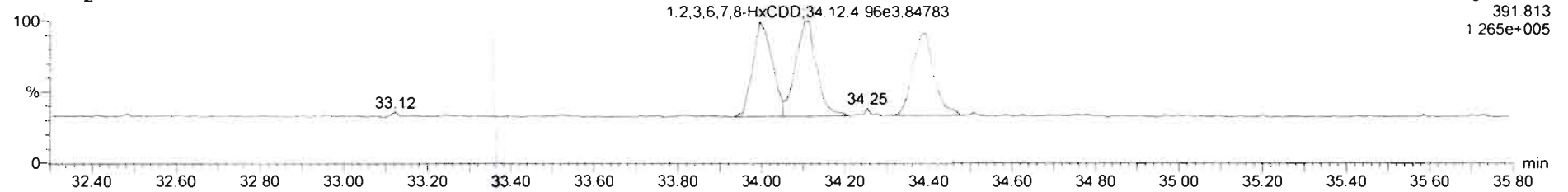
Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

**1,2,3,4,7,8-HxCDD**

200131R1\_1

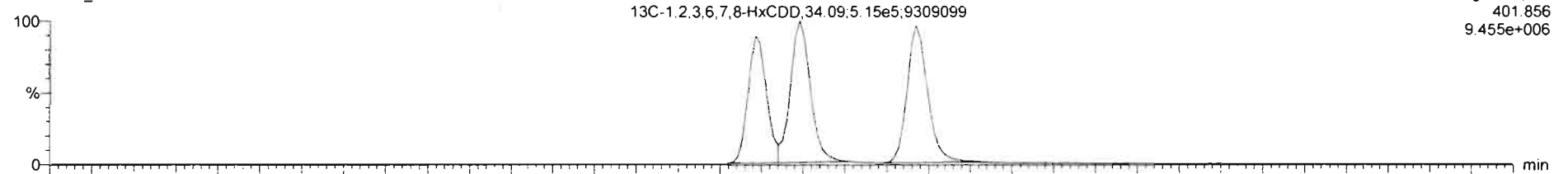


200131R1\_1

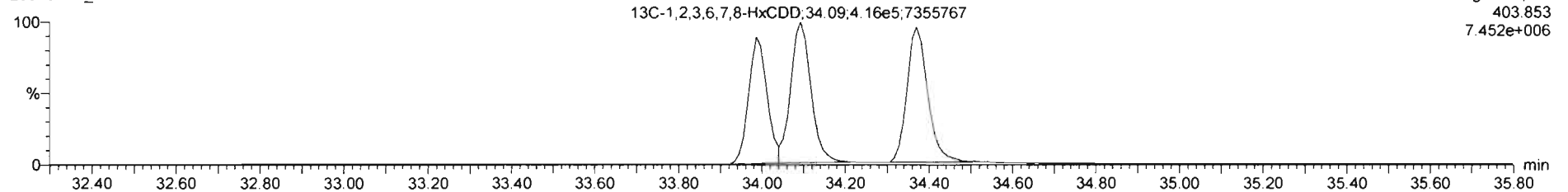


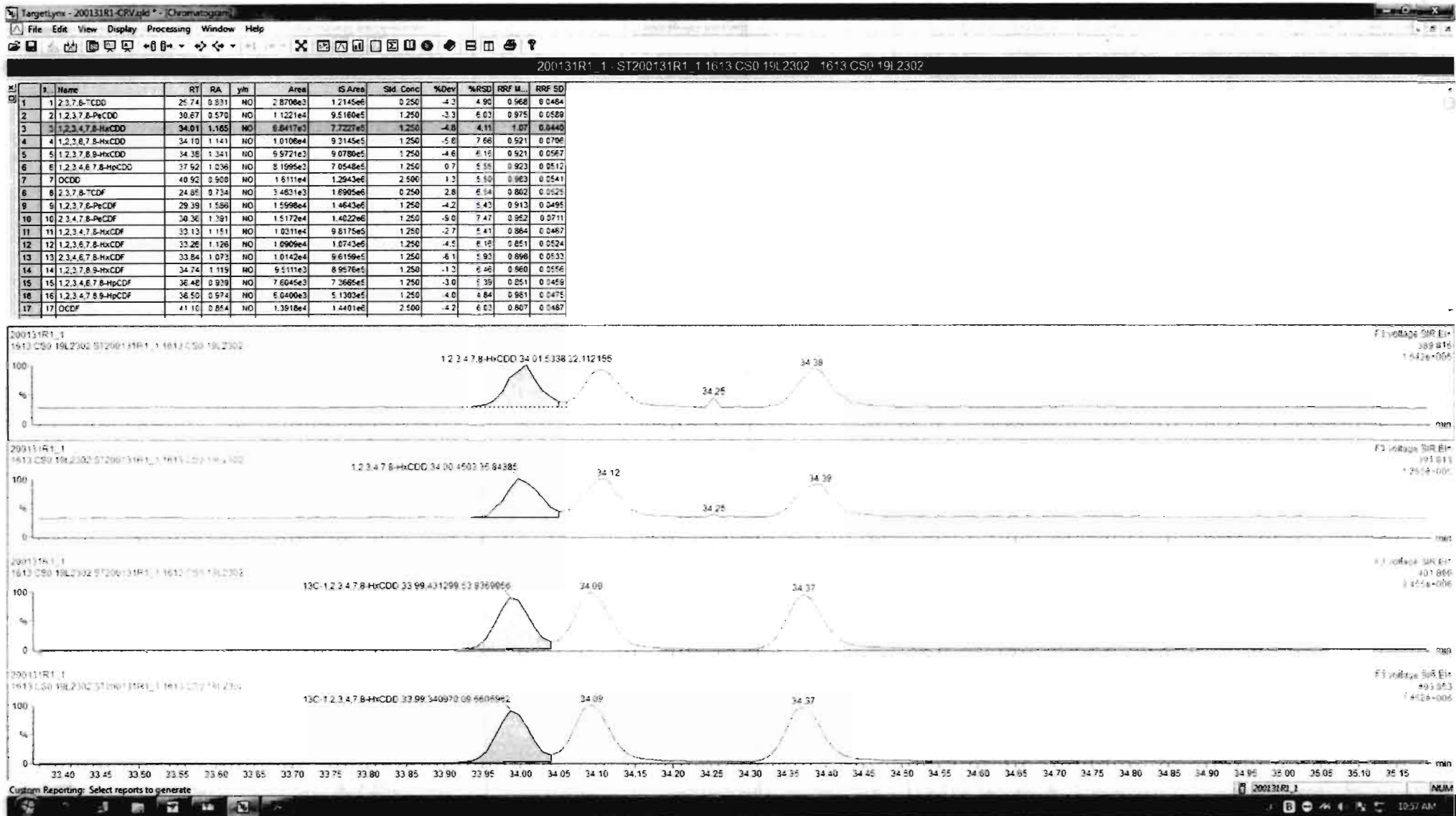
**13C-1,2,3,4,7,8-HxCDD**

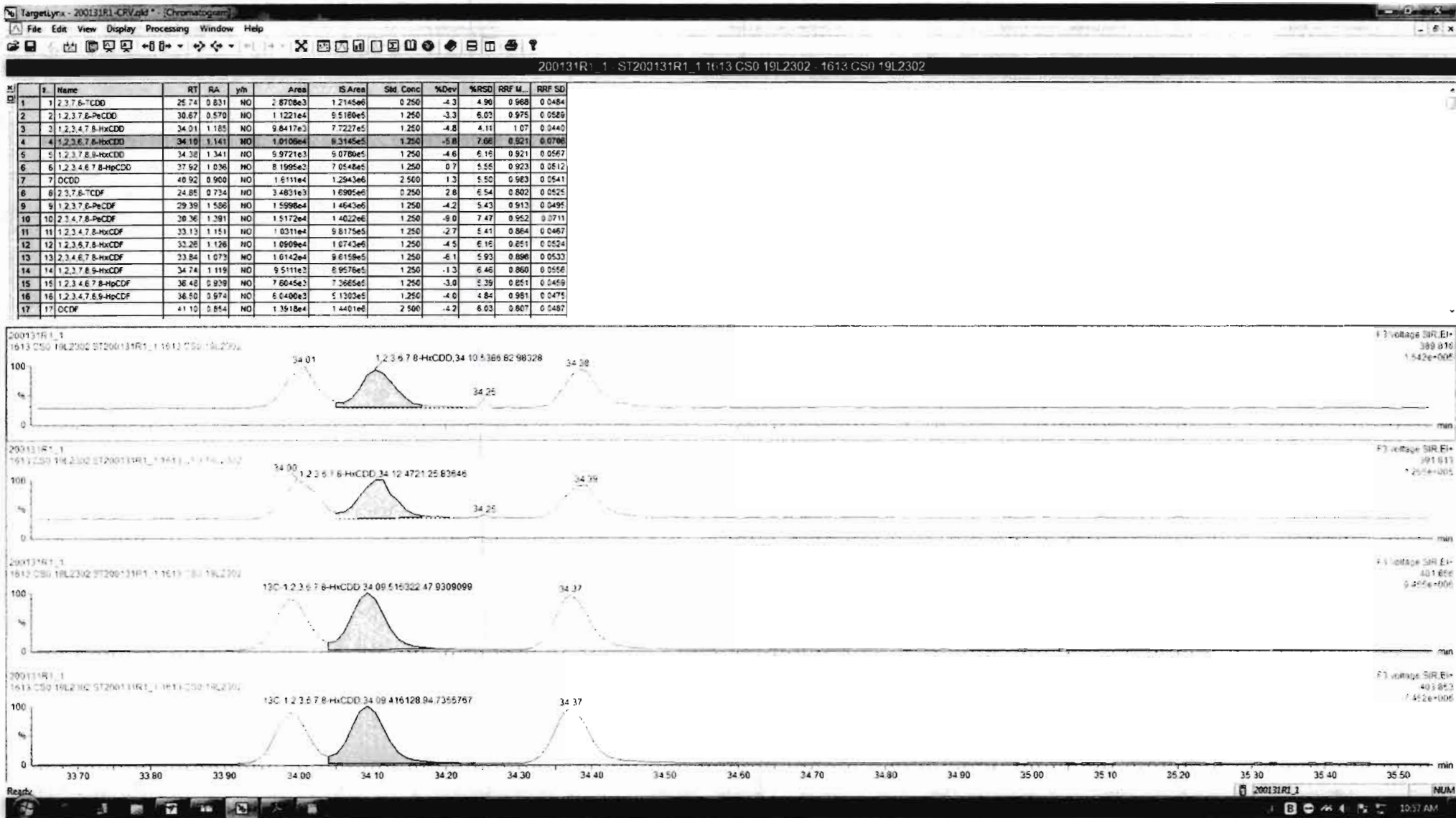
200131R1\_1

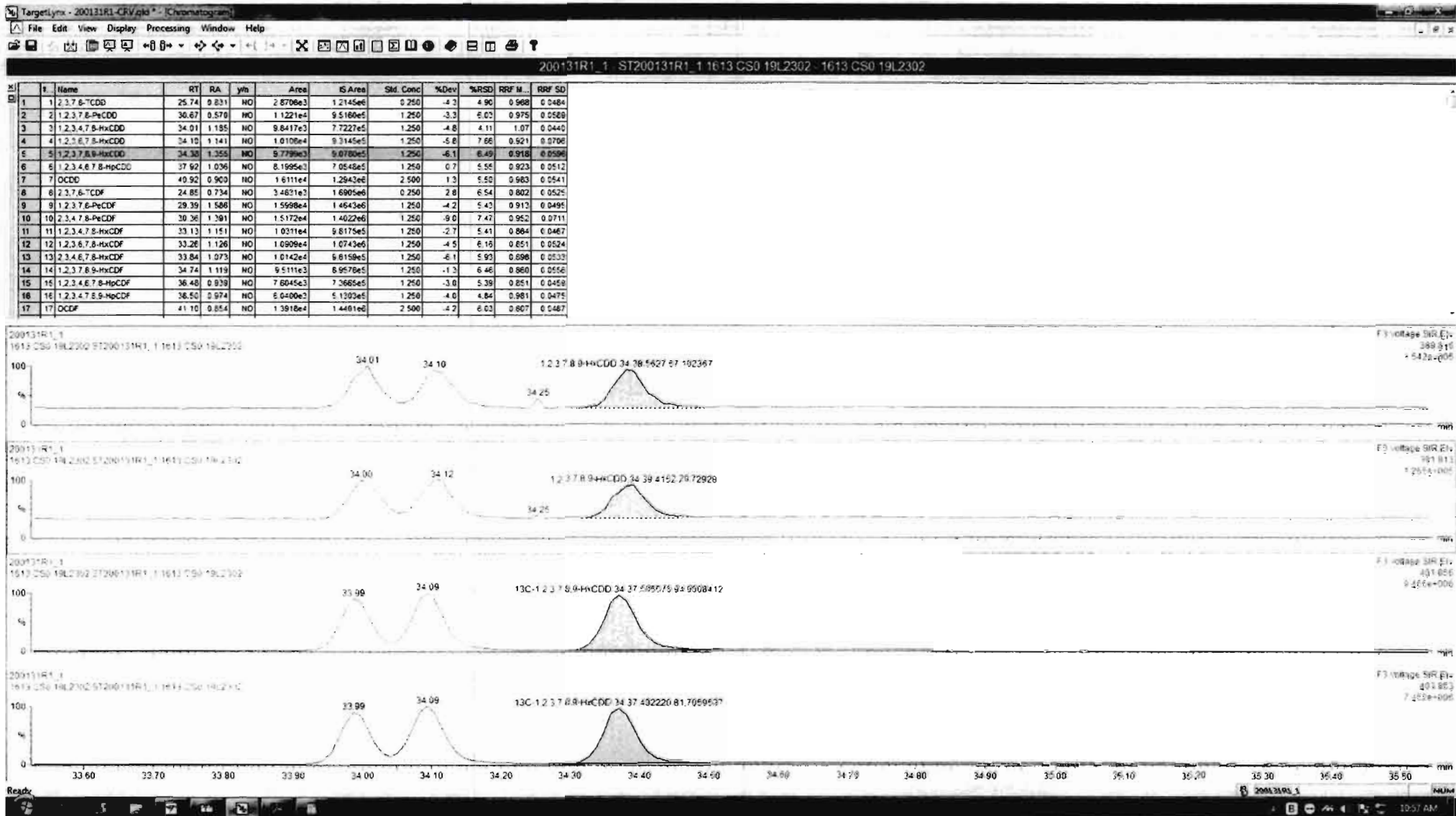


200131R1\_1









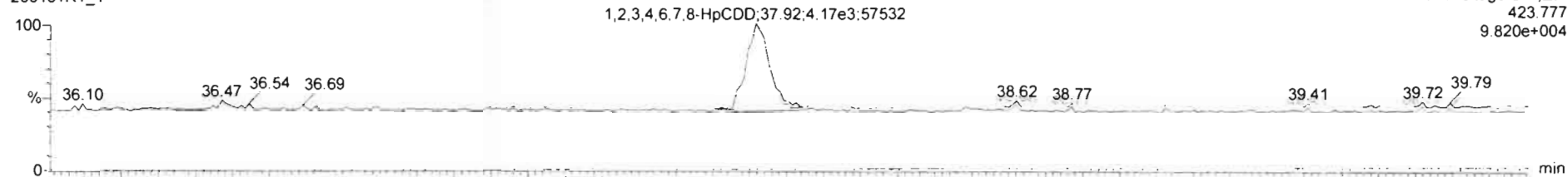
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

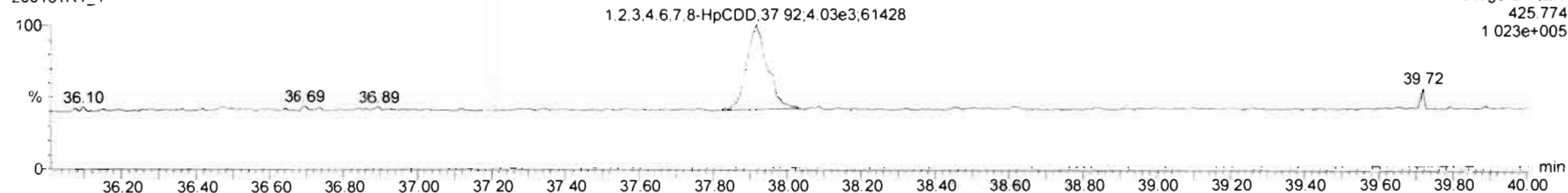
Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

1,2,3,4,6,7,8-HpCDD

200131R1\_1

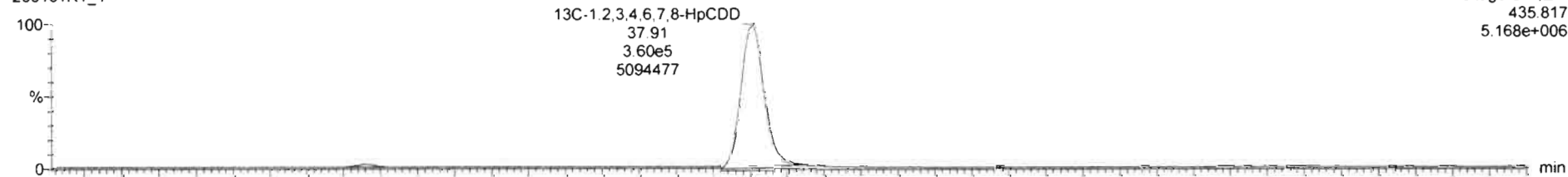


200131R1\_1

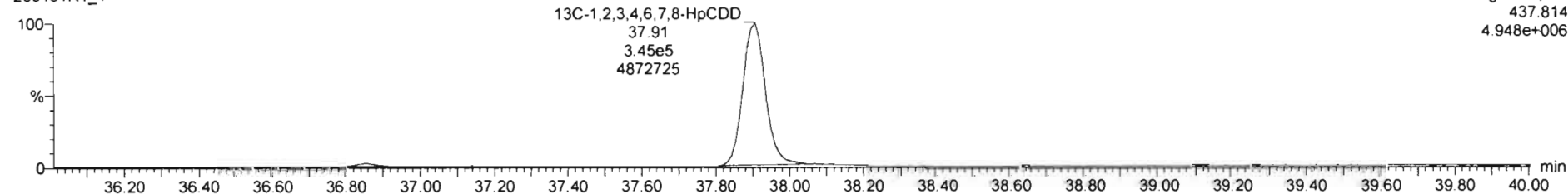


13C-1,2,3,4,6,7,8-HpCDD

200131R1\_1



200131R1\_1

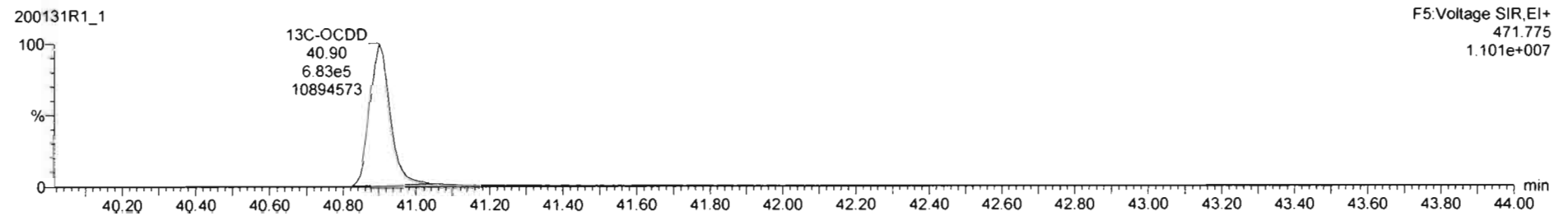
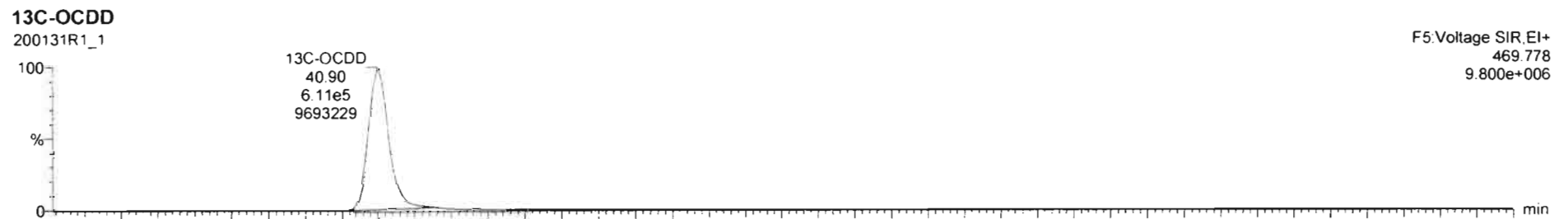
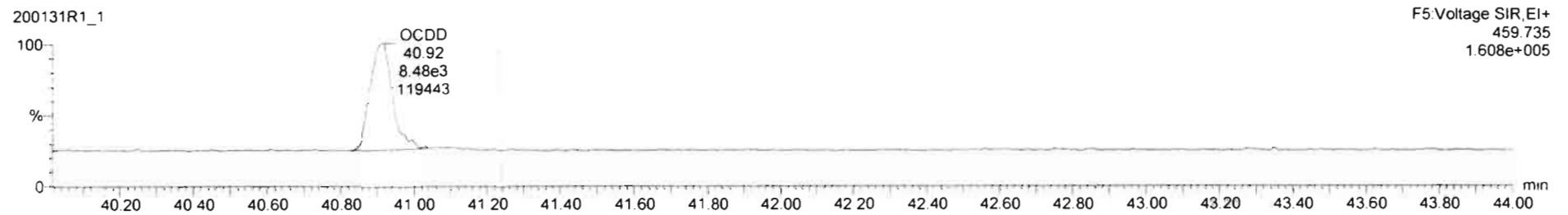
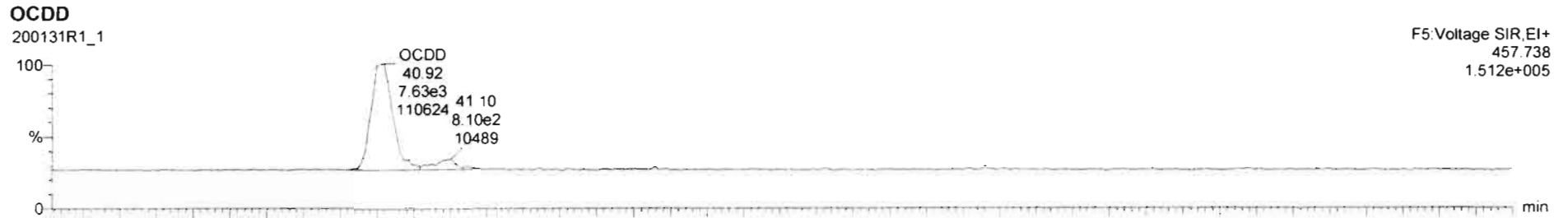


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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302



Dataset: Untitled

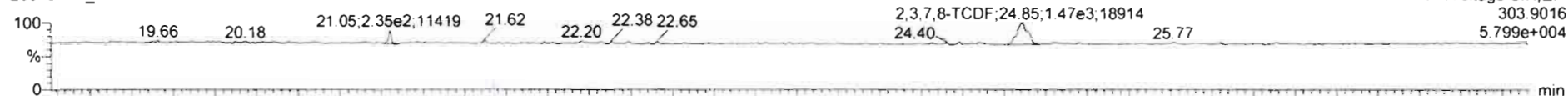
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

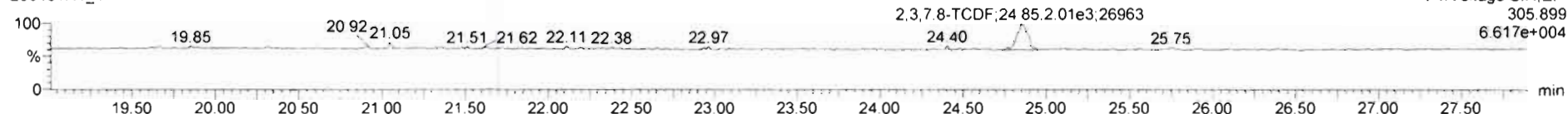
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**2,3,7,8-TCDF**

200131R1\_1

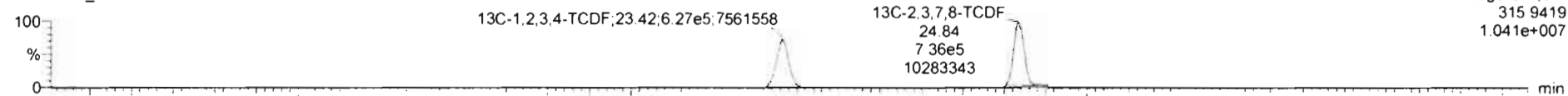


200131R1\_1

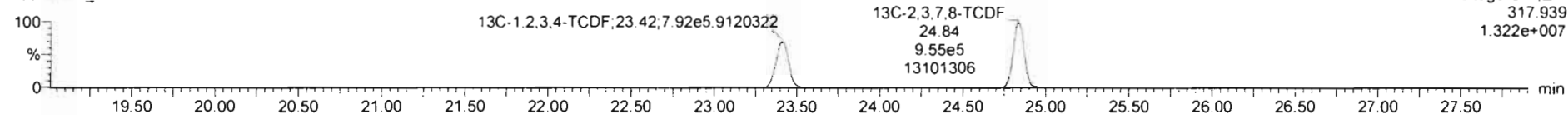


**13C-2,3,7,8-TCDF**

200131R1\_1

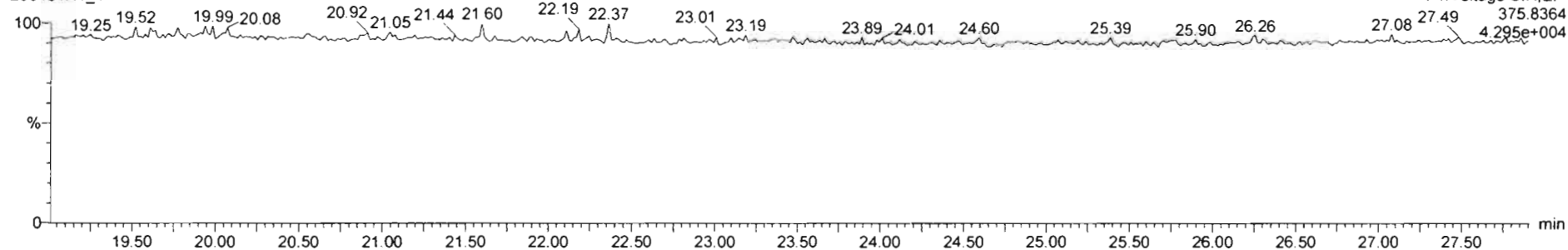


200131R1\_1



**DPE1**

200131R1\_1



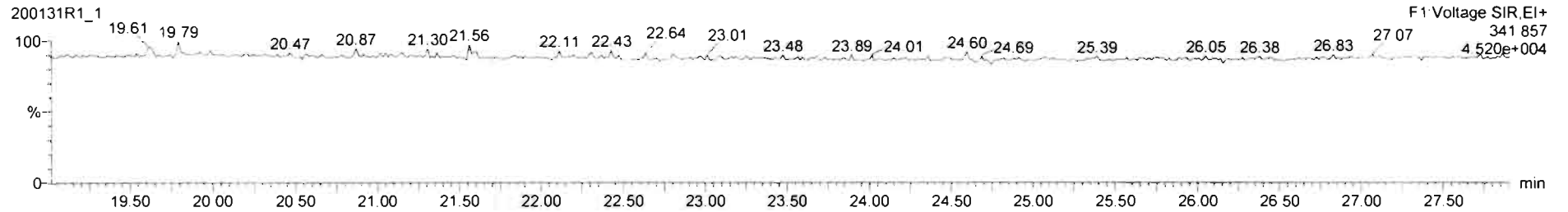
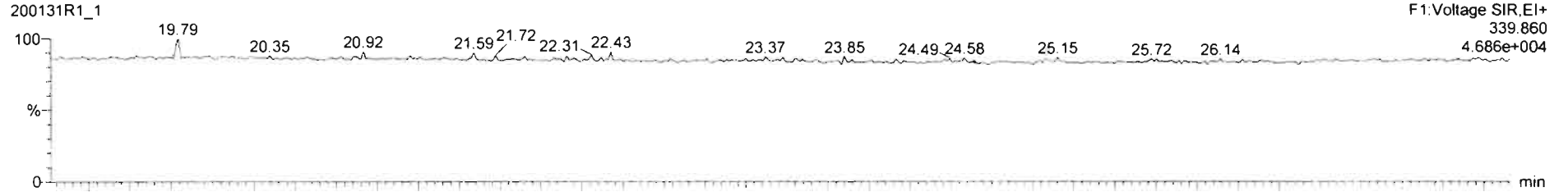


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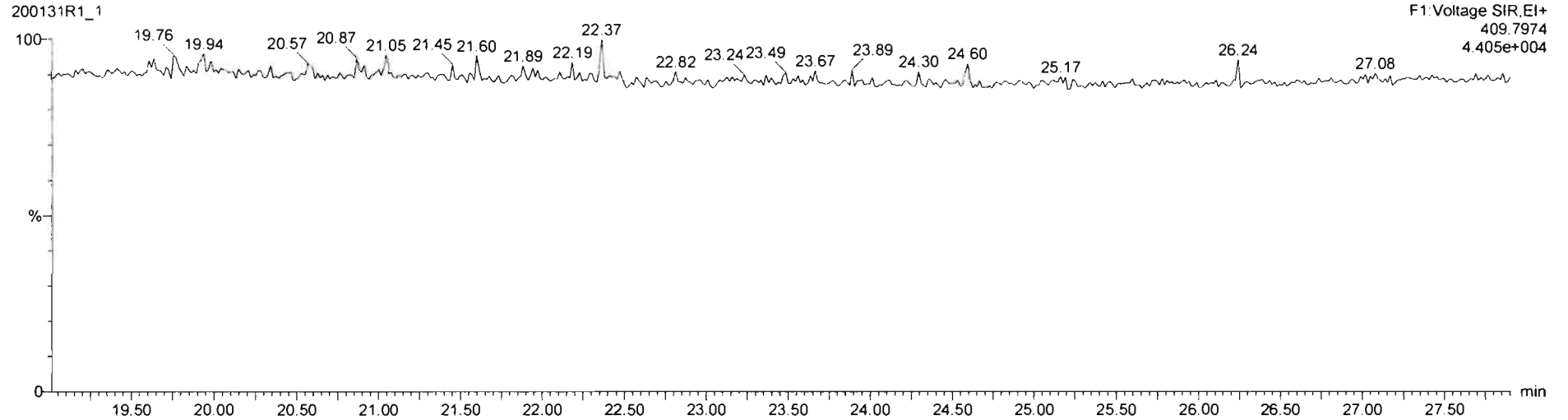
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

1st Func. Penta-Furans



DPE6



Dataset: Untitled

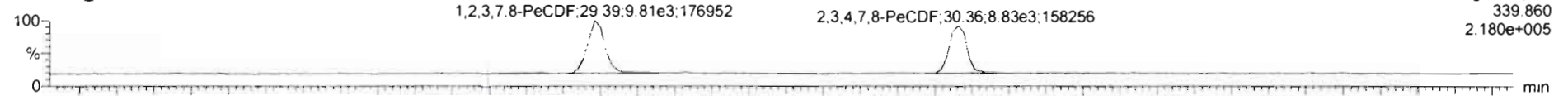
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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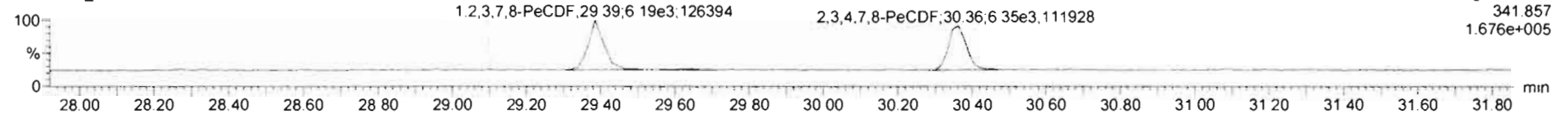
**1,2,3,7,8-PeCDF**

200131R1\_1



F2:Voltage SIR,EI+  
339.860  
2.180e+005

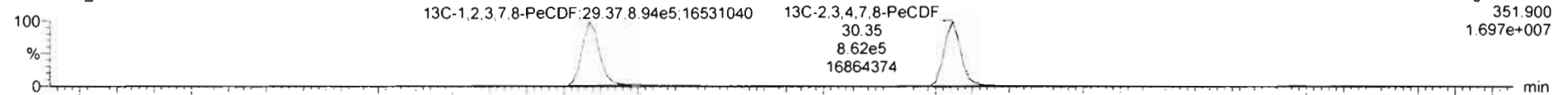
200131R1\_1



F2:Voltage SIR,EI+  
341.857  
1.676e+005

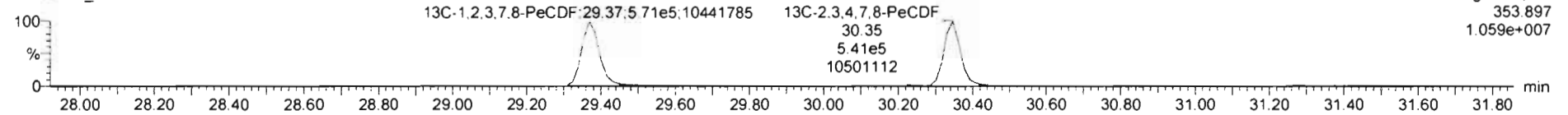
**13C-1,2,3,7,8-PeCDF**

200131R1\_1



F2:Voltage SIR,EI+  
351.900  
1.697e+007

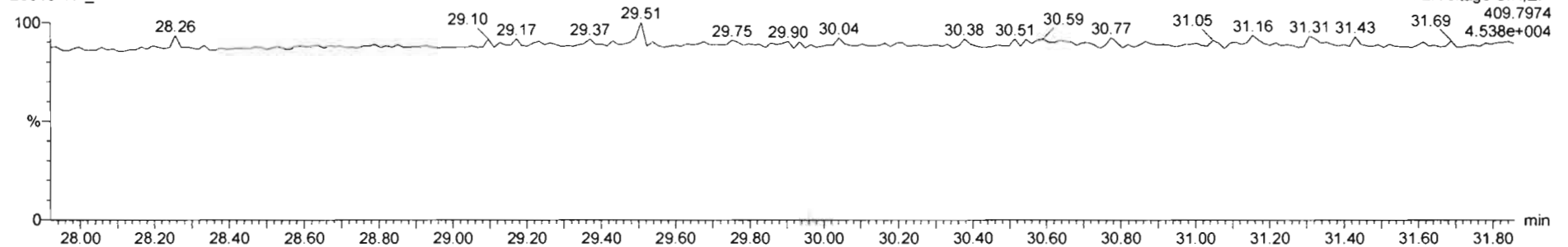
200131R1\_1



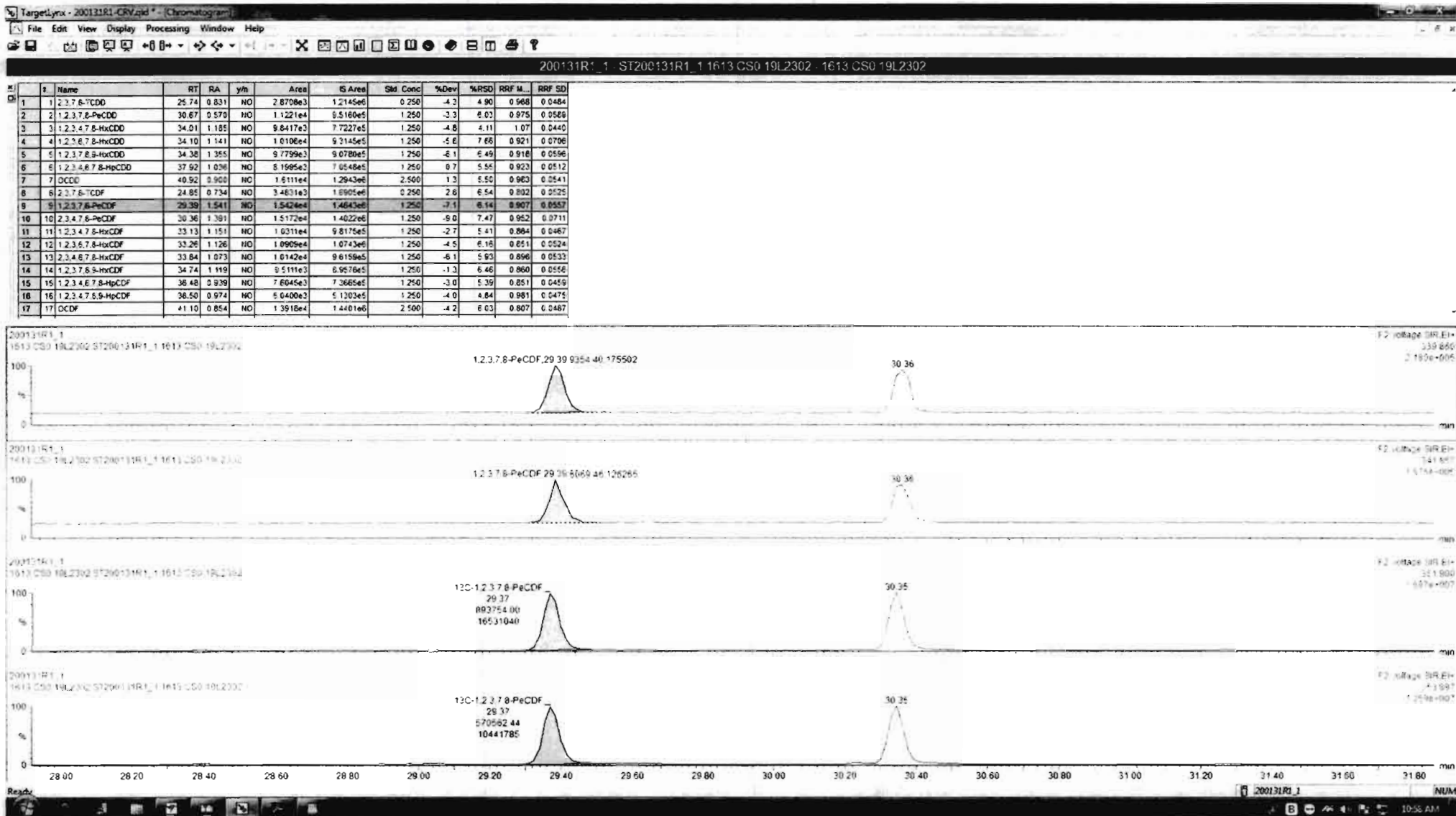
F2:Voltage SIR,EI+  
353.897  
1.059e+007

**DPE2**

200131R1\_1



F2:Voltage SIR,EI+  
409.7974  
4.538e+004



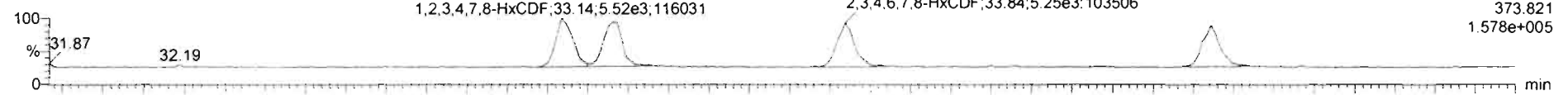
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

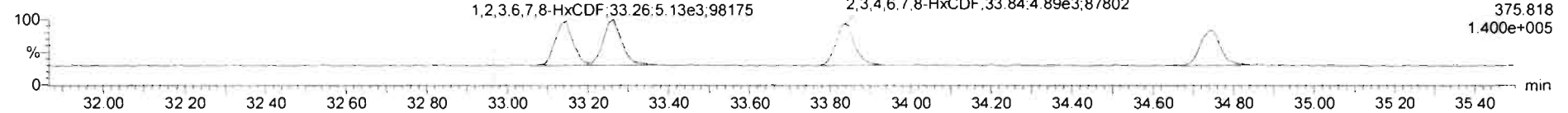
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**1,2,3,4,7,8-HxCDF**

200131R1\_1

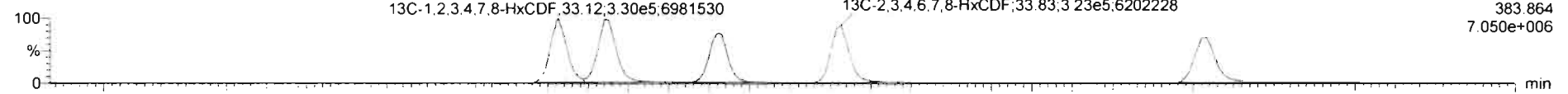


200131R1\_1

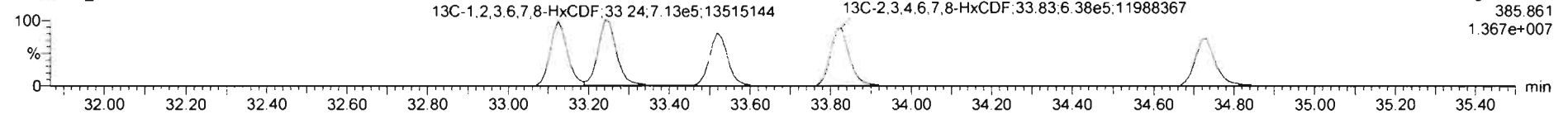


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_1

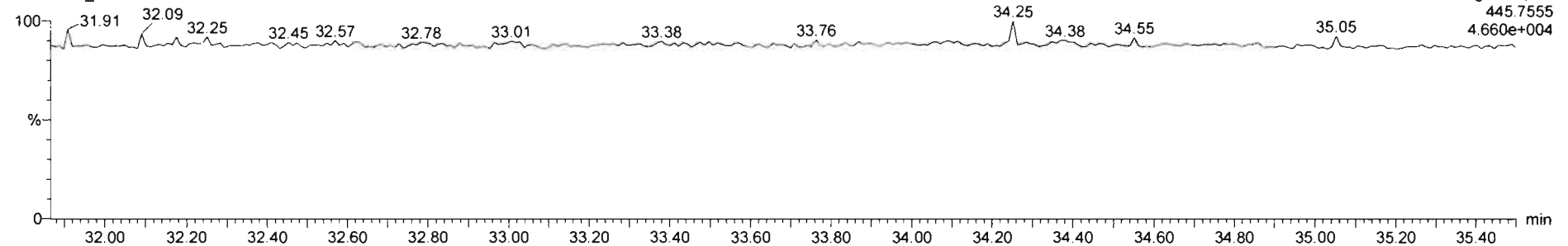


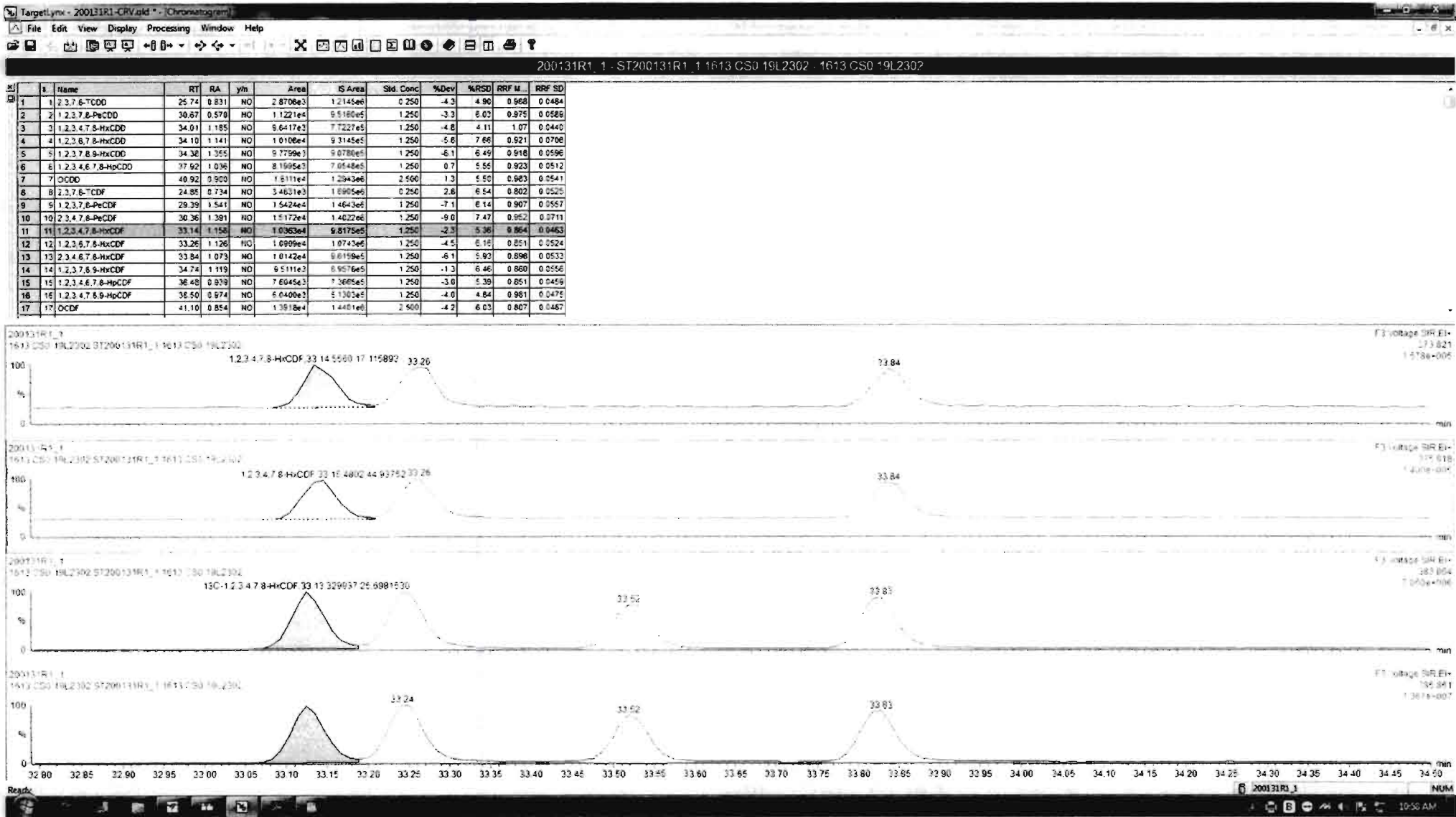
200131R1\_1

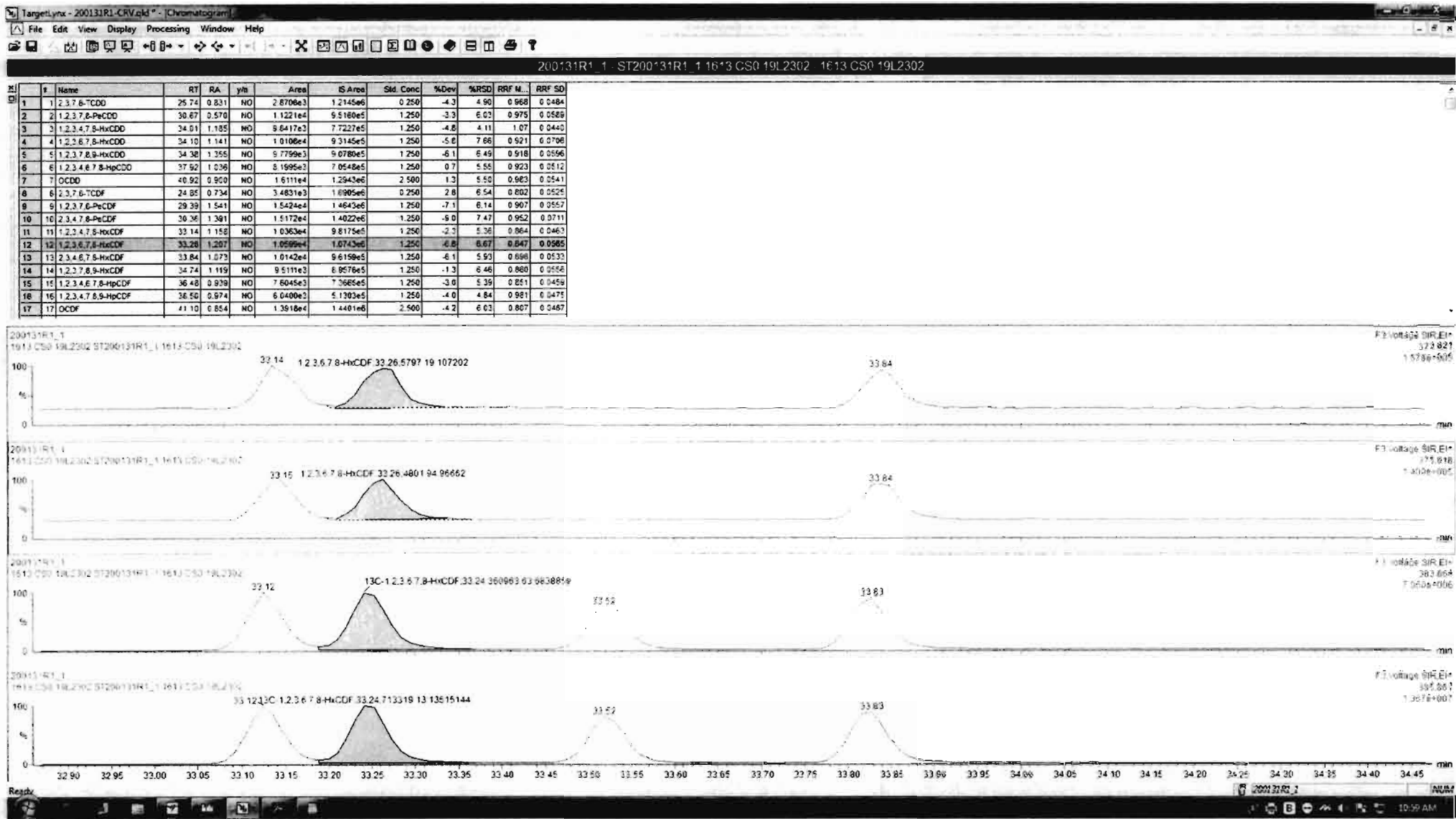


**DPE3**

200131R1\_1







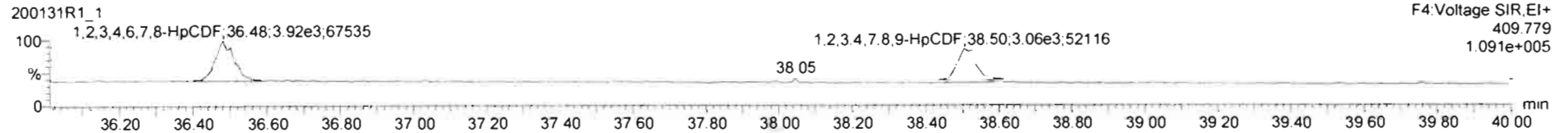
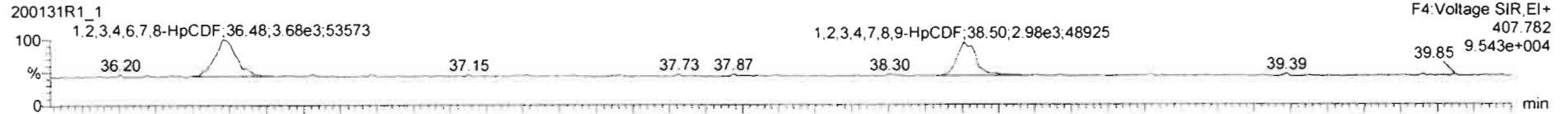
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

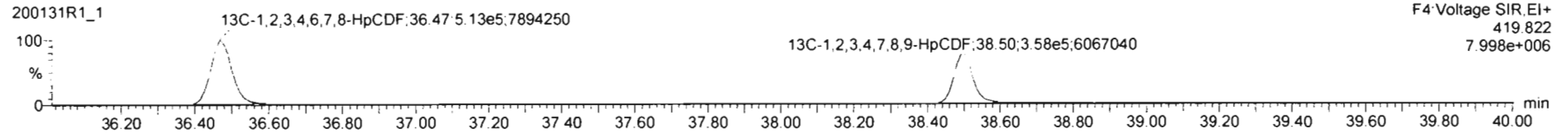
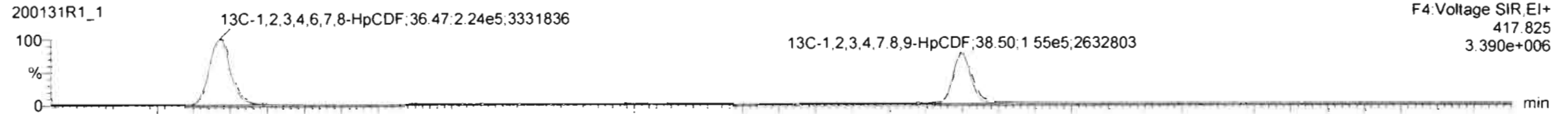
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

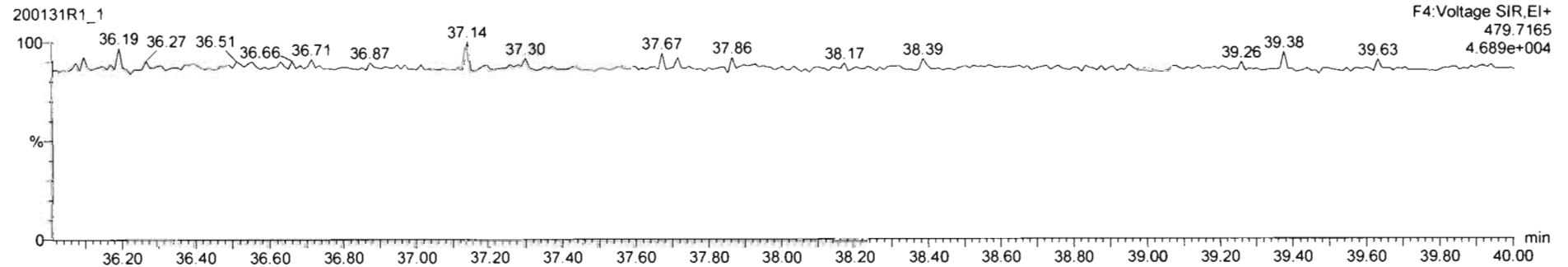
**1,2,3,4,6,7,8-HpCDF**

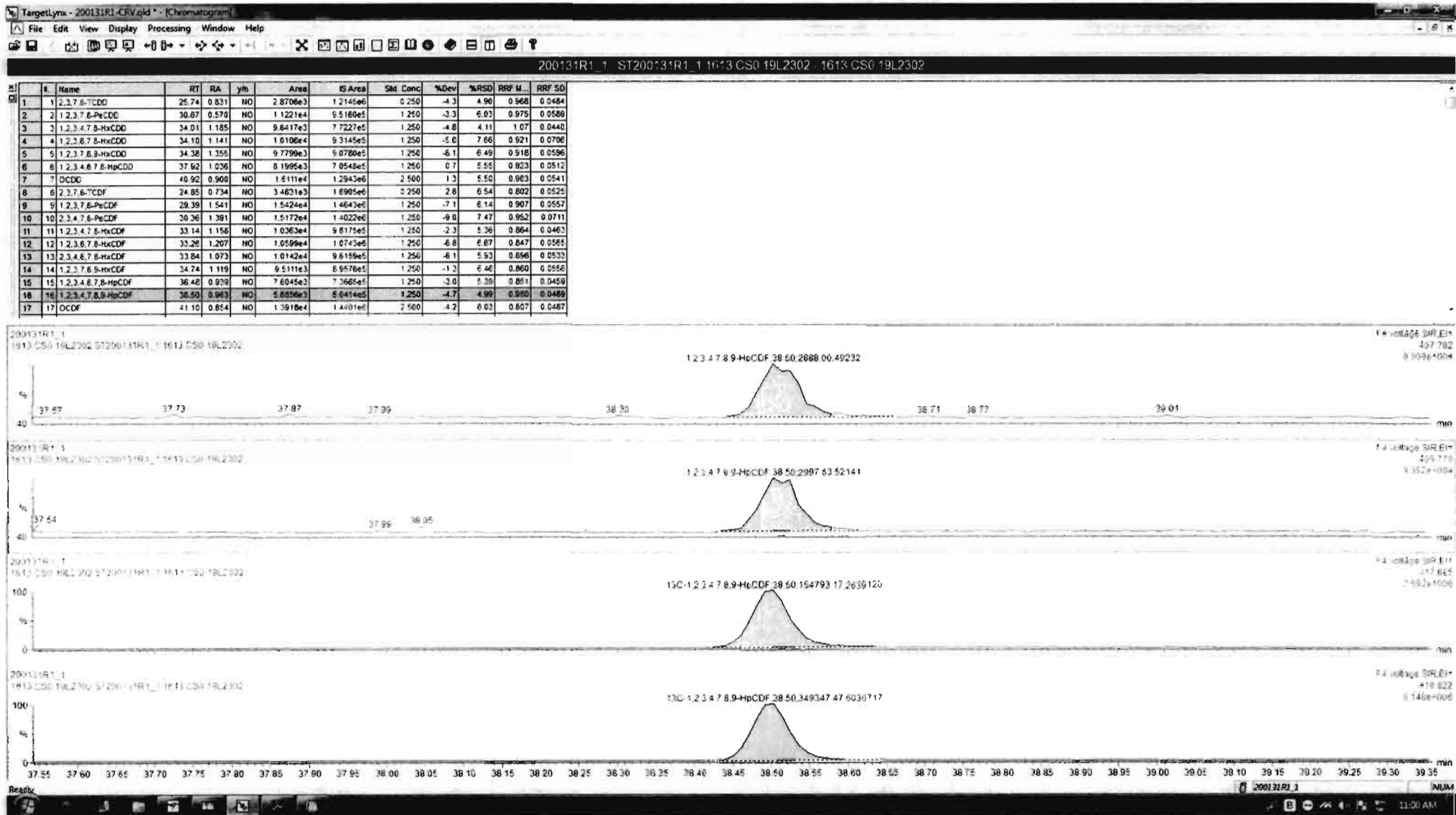


**13C-1,2,3,4,6,7,8-HpCDF**



**DPE4**





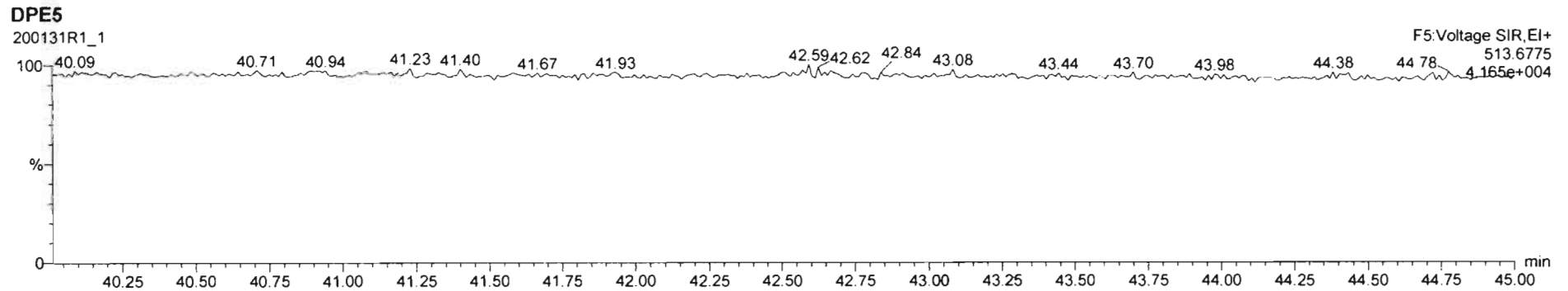
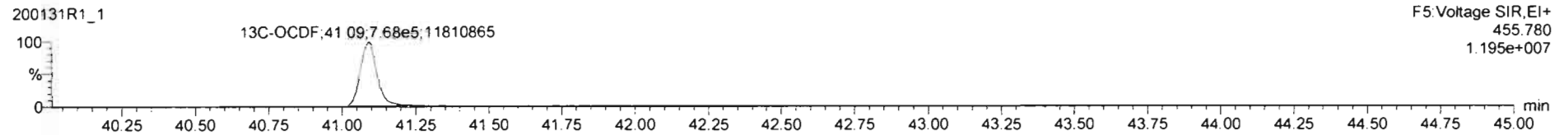
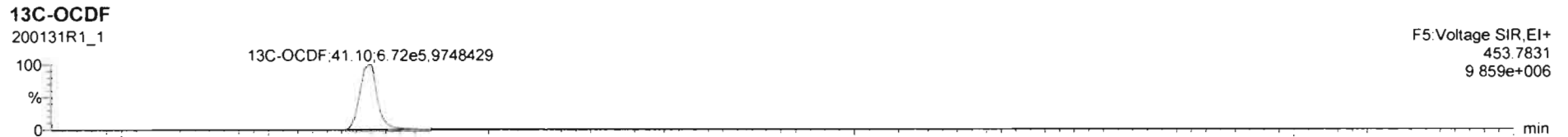
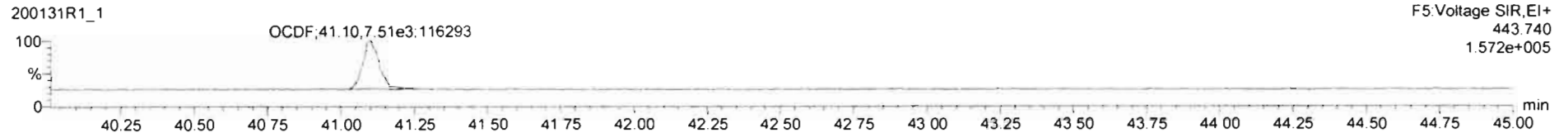
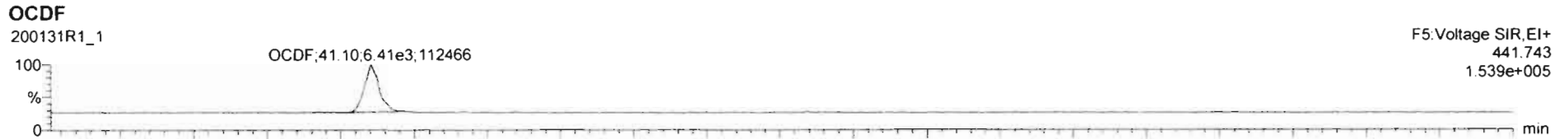


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

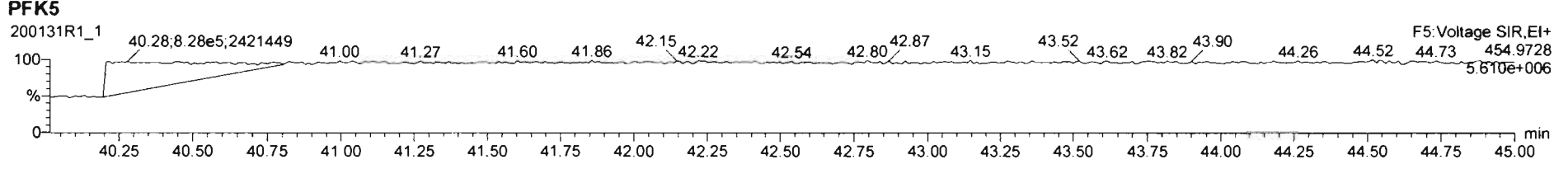
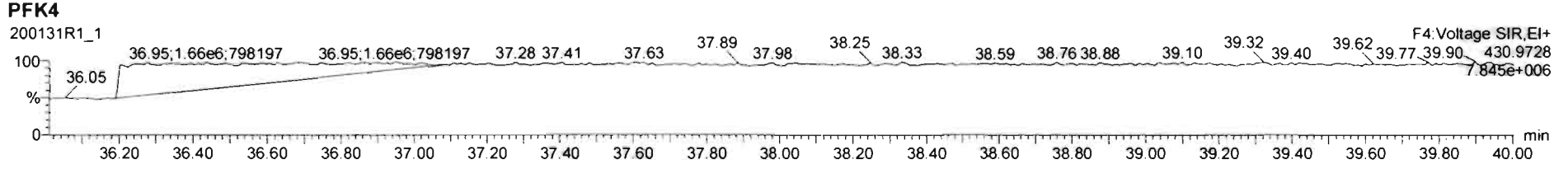
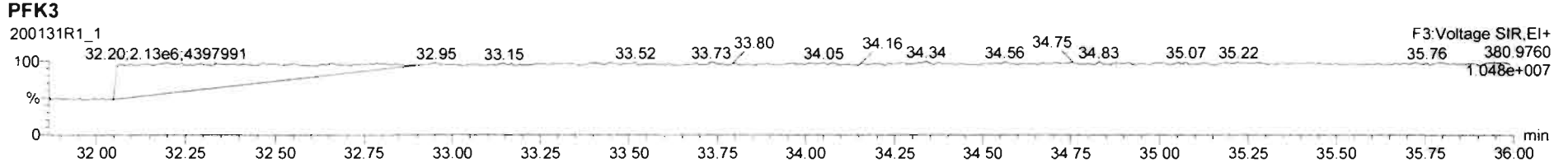
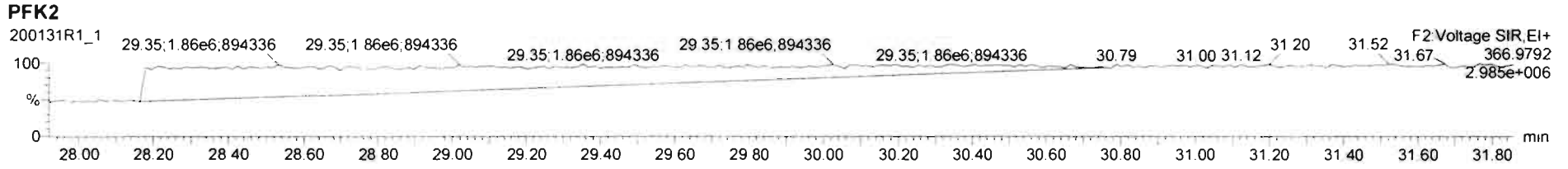
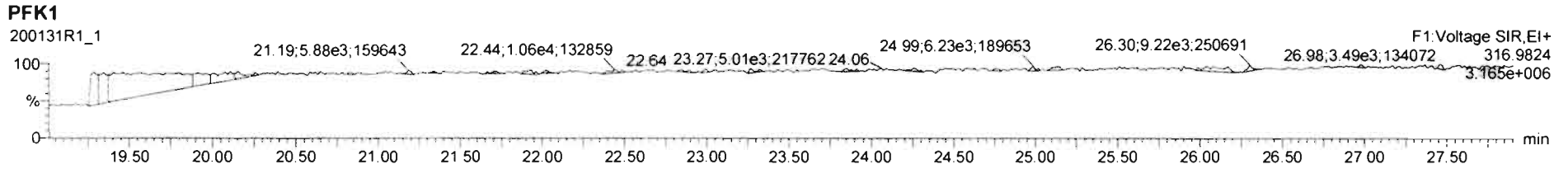


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302



Dataset: Untitled

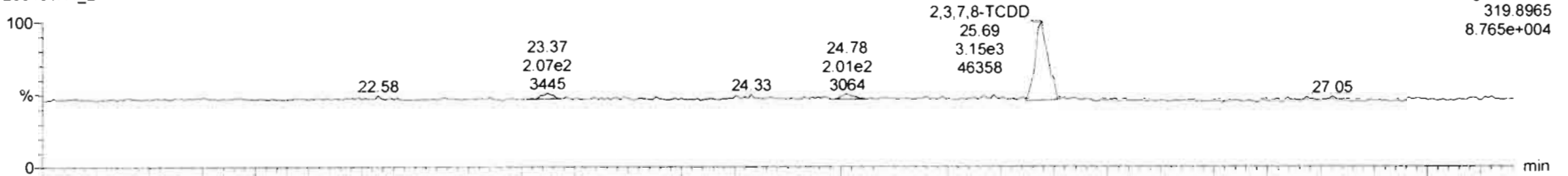
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

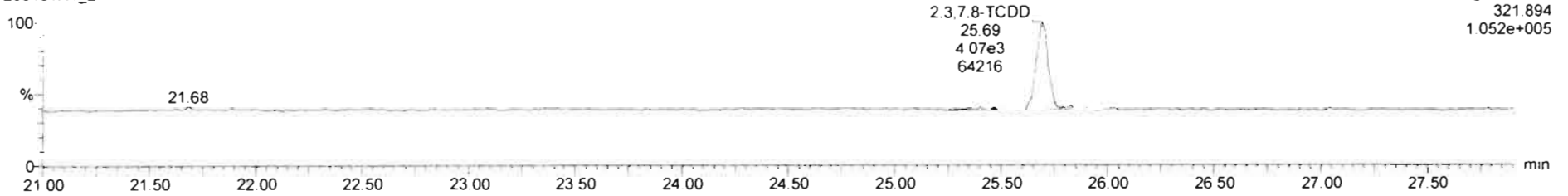
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**2,3,7,8-TCDD**

200131R1\_2

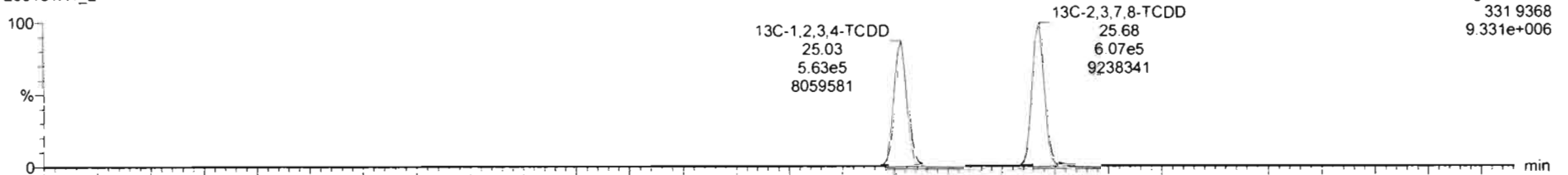


200131R1\_2

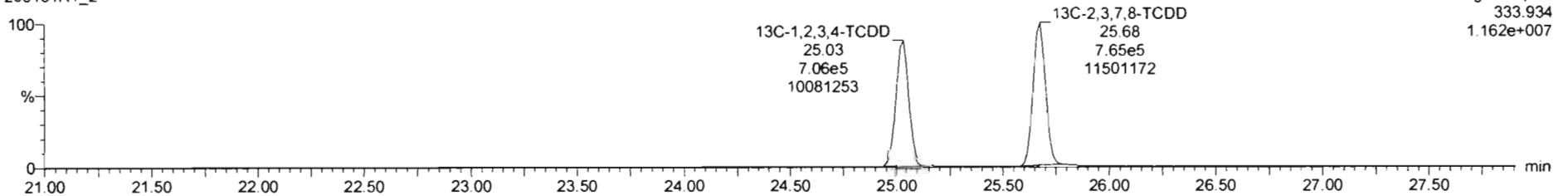


**13C-2,3,7,8-TCDD**

200131R1\_2



200131R1\_2



Dataset: Untitled

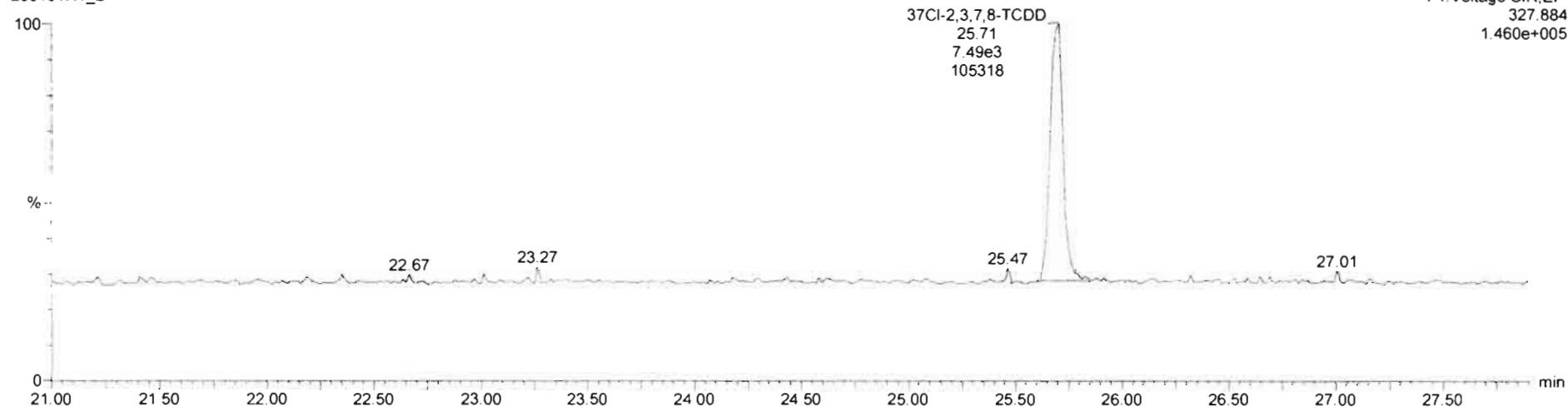
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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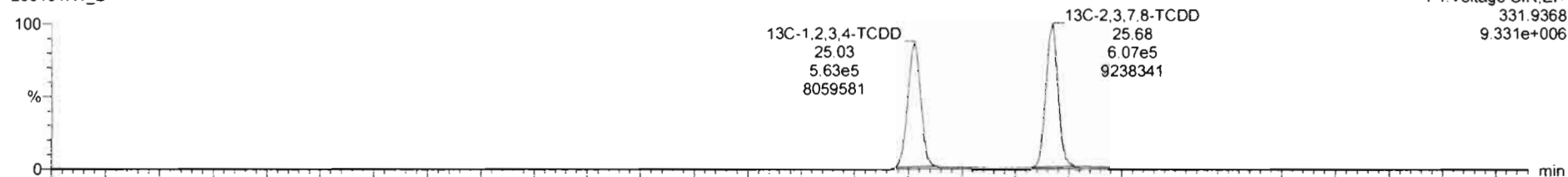
**37Cl-2,3,7,8-TCDD**

200131R1\_2

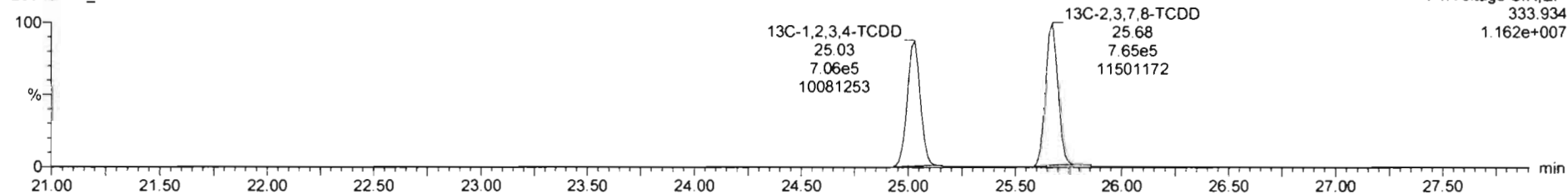


**13C-1,2,3,4-TCDD**

200131R1\_2



200131R1\_2



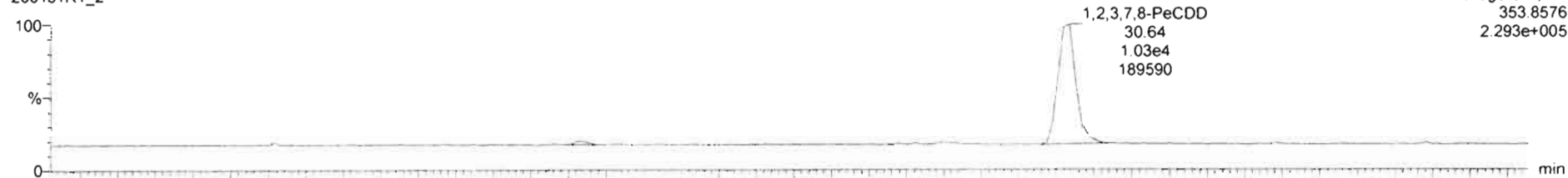
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

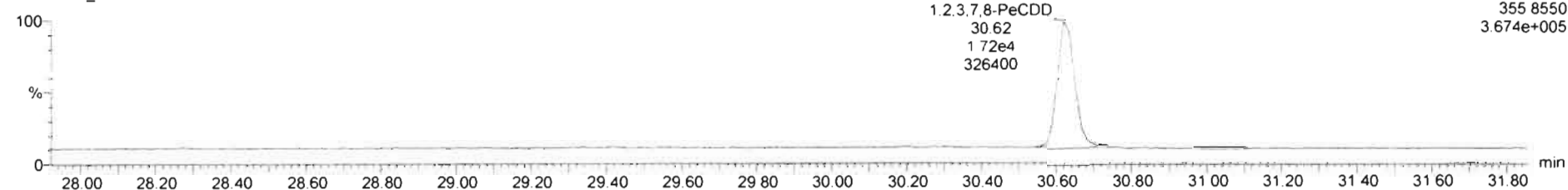
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**1,2,3,7,8-PeCDD**

200131R1\_2

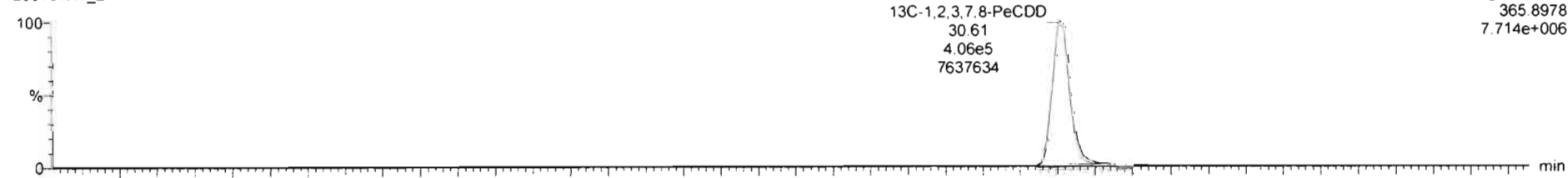


200131R1\_2

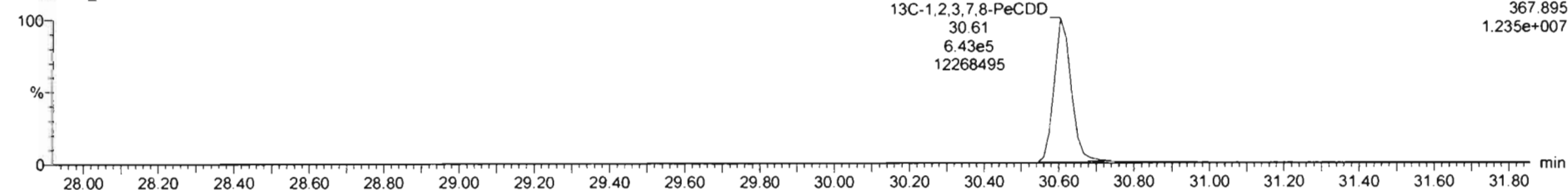


**13C-1,2,3,7,8-PeCDD**

200131R1\_2



200131R1\_2



Dataset: Untitled

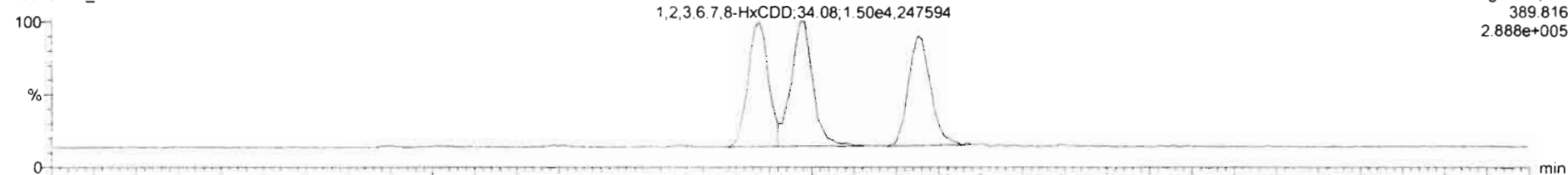
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

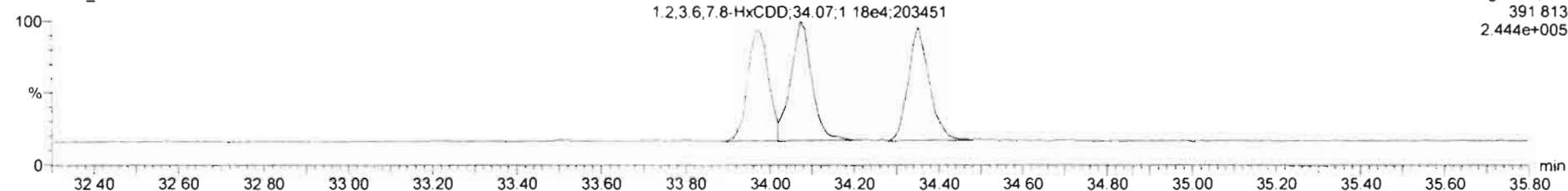
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**1,2,3,4,7,8-HxCDD**

200131R1\_2

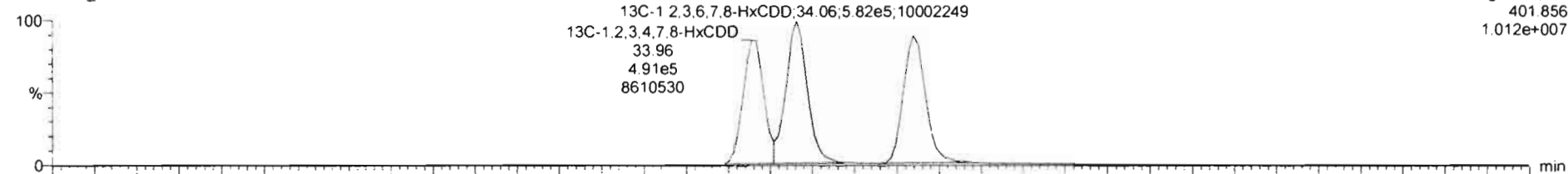


200131R1\_2

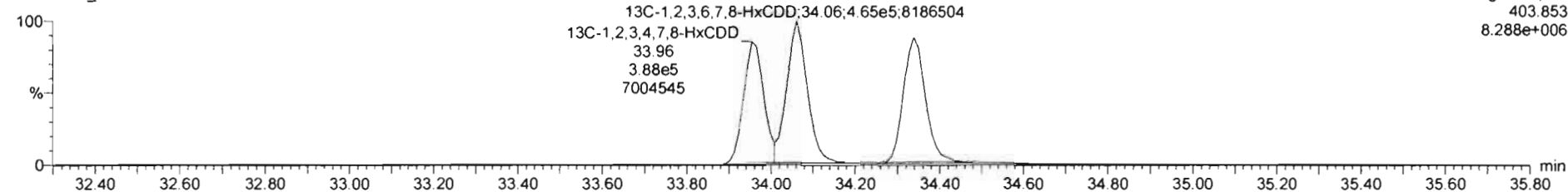


**13C-1,2,3,4,7,8-HxCDD**

200131R1\_2



200131R1\_2



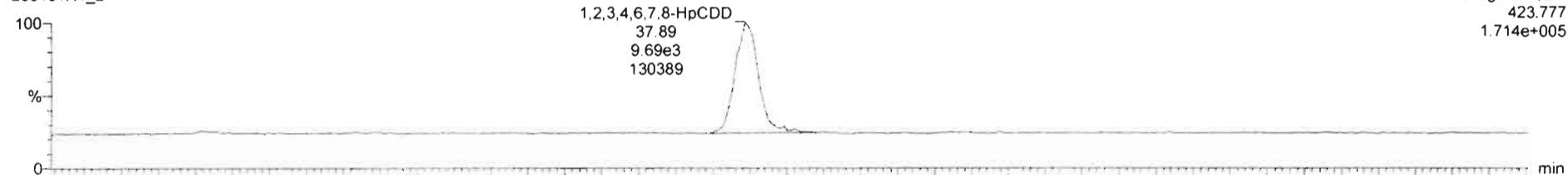
Dataset: Untitled

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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

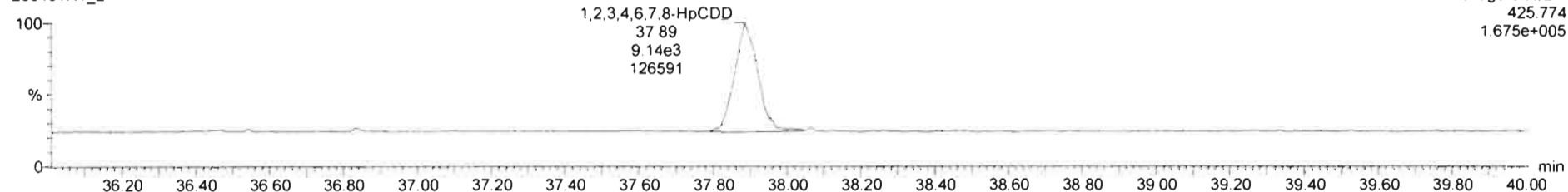
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**1,2,3,4,6,7,8-HpCDD**

200131R1\_2

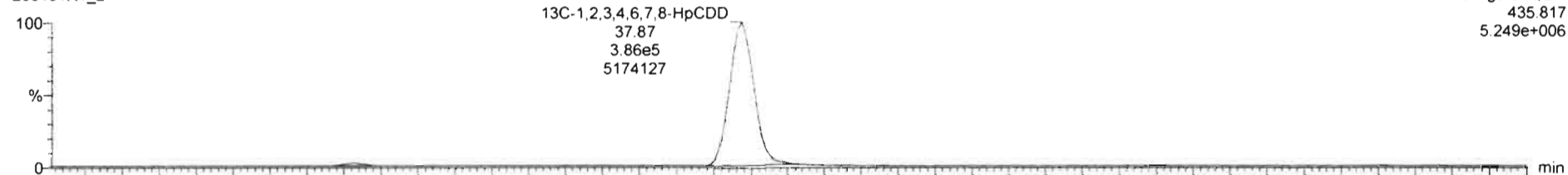


200131R1\_2

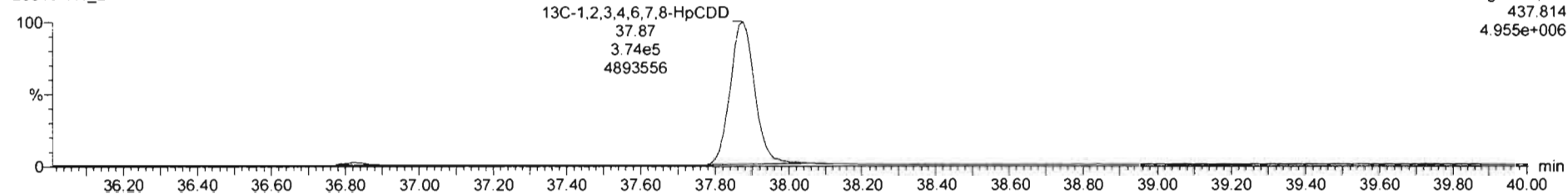


**<sup>13</sup>C-1,2,3,4,6,7,8-HpCDD**

200131R1\_2



200131R1\_2

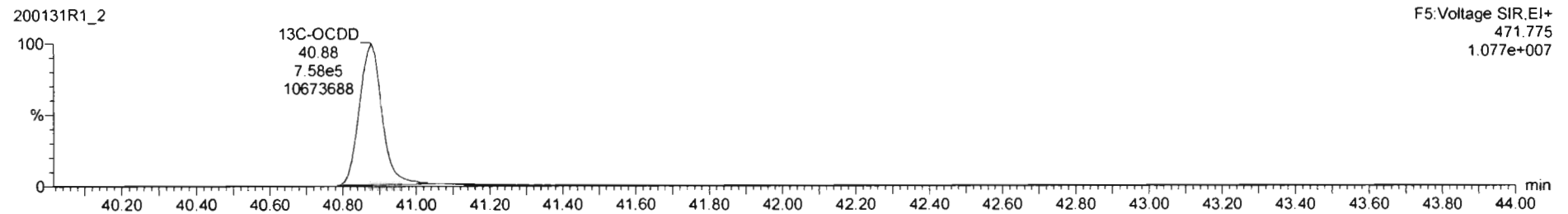
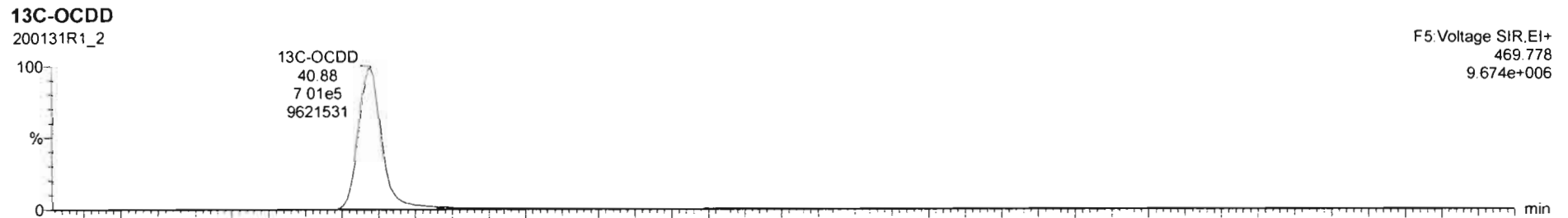
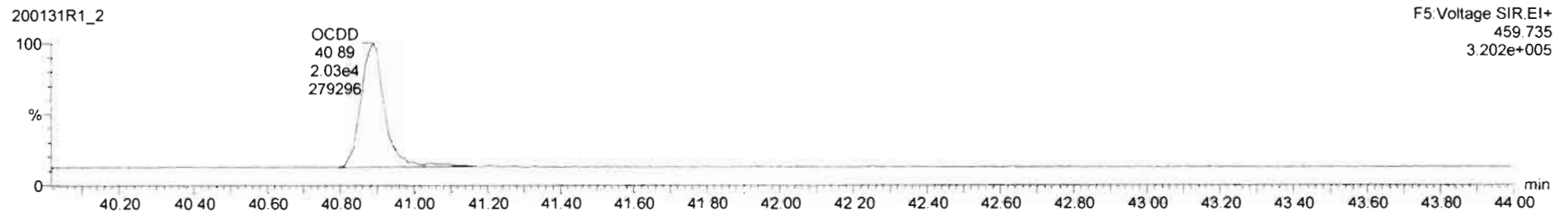
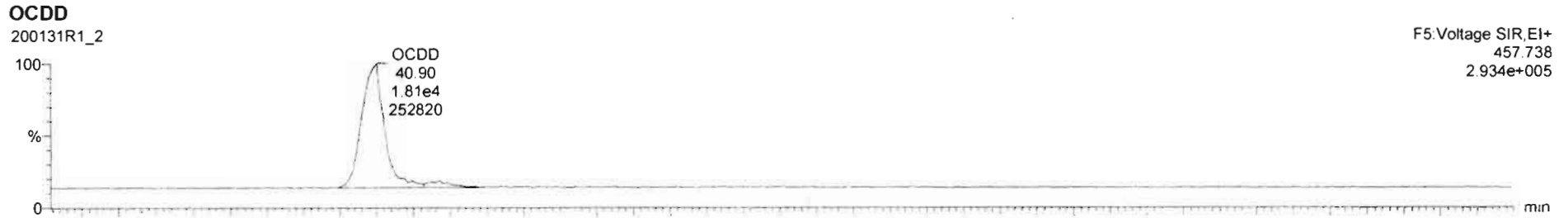


Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_2, Date: 31-Jan-2020, Time: 17:37:04, ID: ST200131R1\_2 1613 CS1 19L2303, Description: 1613 CS1 19L2303





Dataset: Untitled

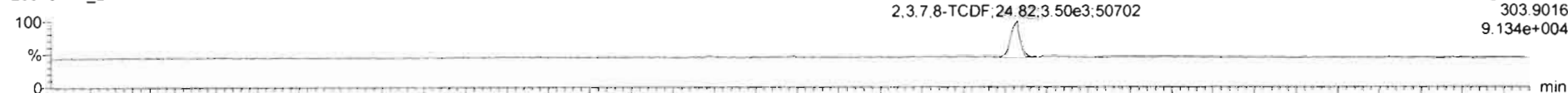
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

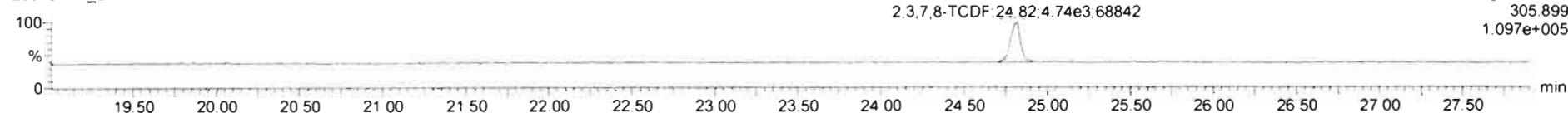
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**2,3,7,8-TCDF**

200131R1\_2

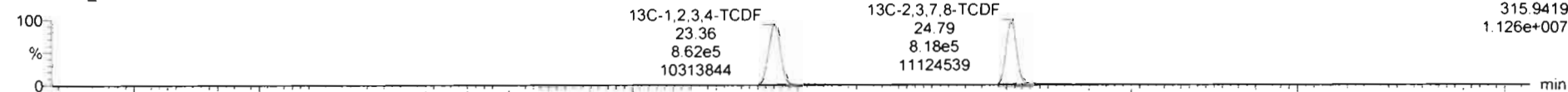


200131R1\_2

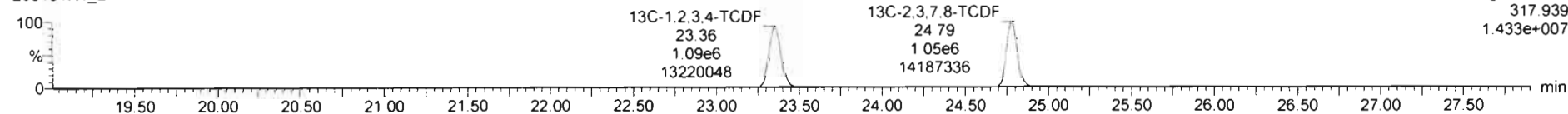


**13C-2,3,7,8-TCDF**

200131R1\_2

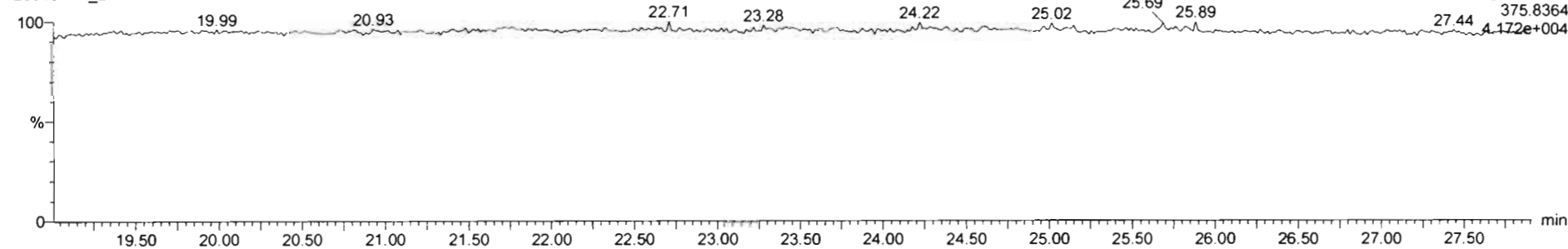


200131R1\_2



**DPE1**

200131R1\_2



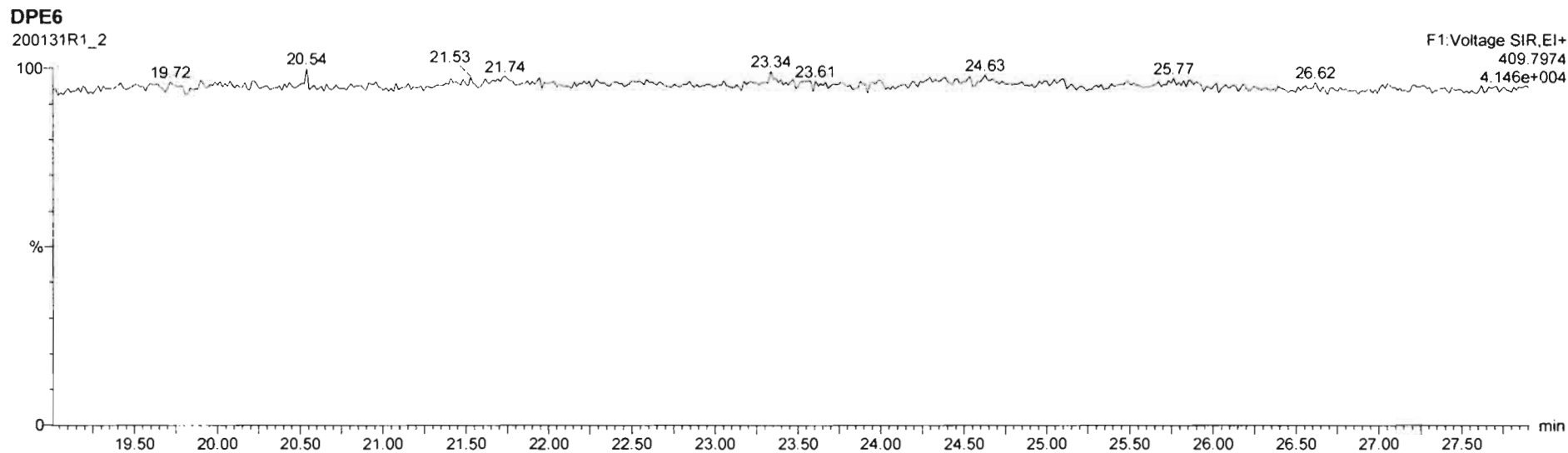
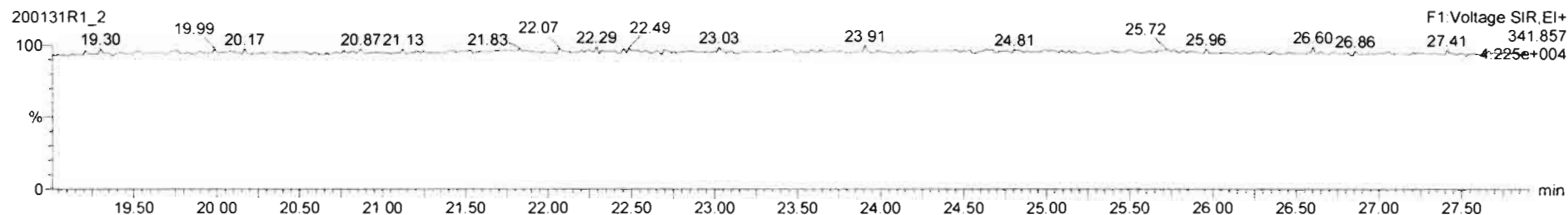
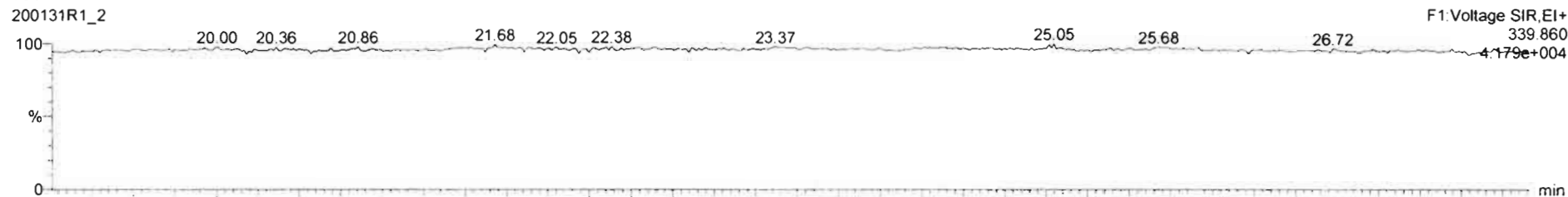
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_2, Date: 31-Jan-2020, Time: 17:37:04, ID: ST200131R1\_2 1613 CS1 19L2303, Description: 1613 CS1 19L2303

1st Func. Penta-Furans



Dataset: Untitled

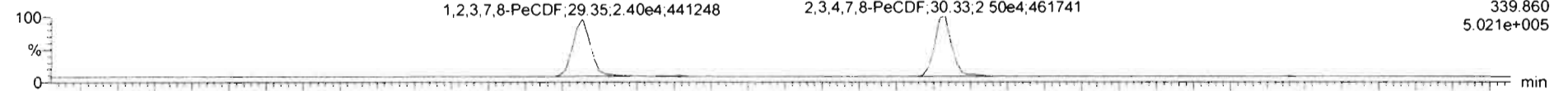
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

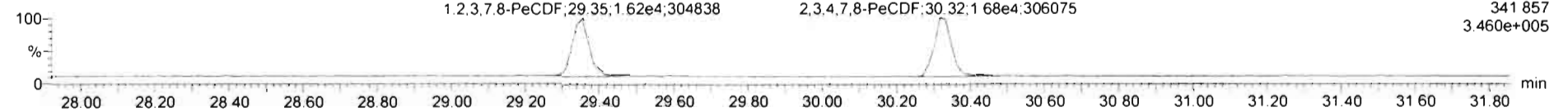
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**1,2,3,7,8-PeCDF**

200131R1\_2

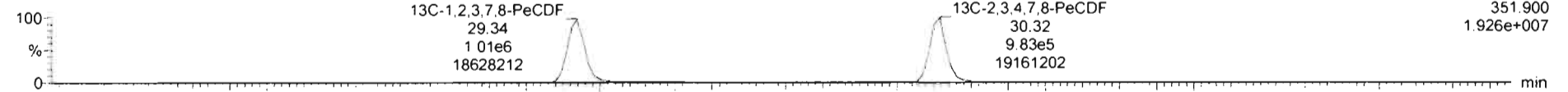


200131R1\_2

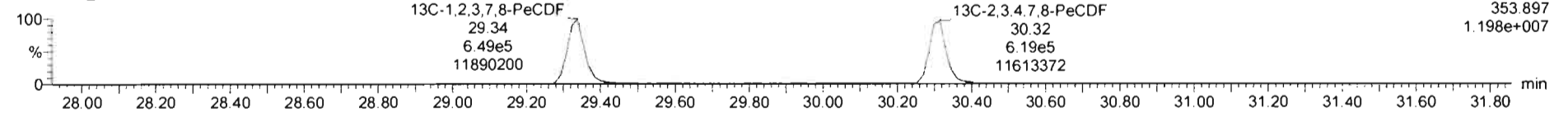


**13C-1,2,3,7,8-PeCDF**

200131R1\_2

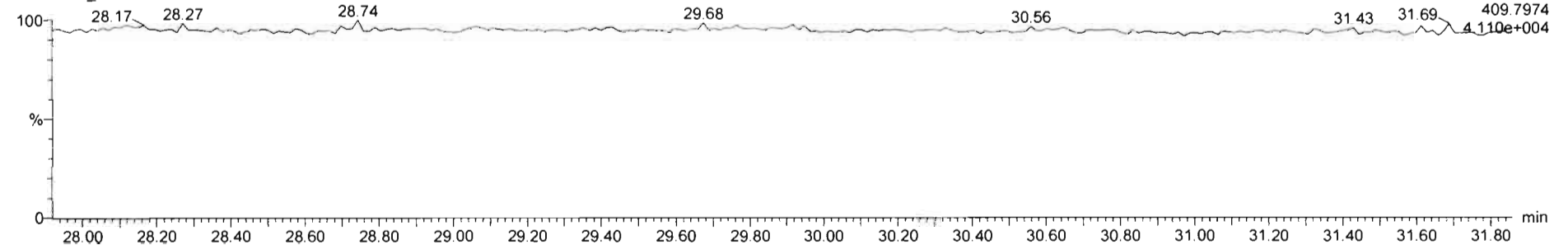


200131R1\_2



**DPE2**

200131R1\_2



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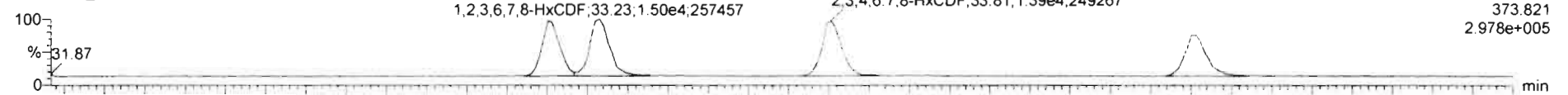
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

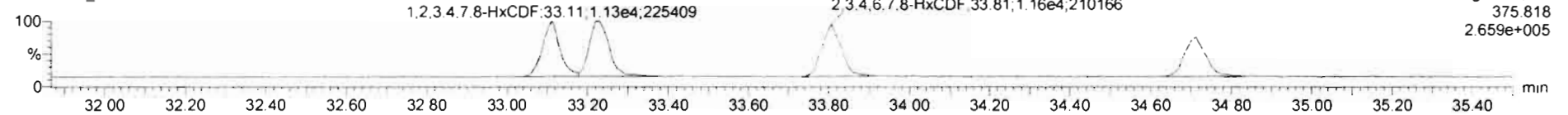
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**1,2,3,4,7,8-HxCDF**

200131R1\_2

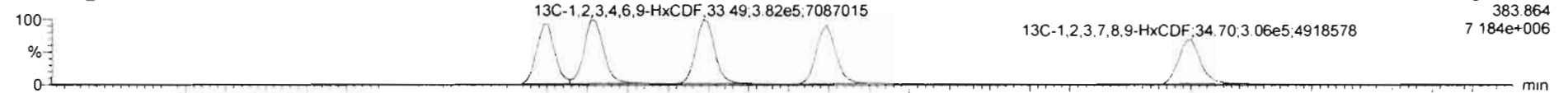


200131R1\_2

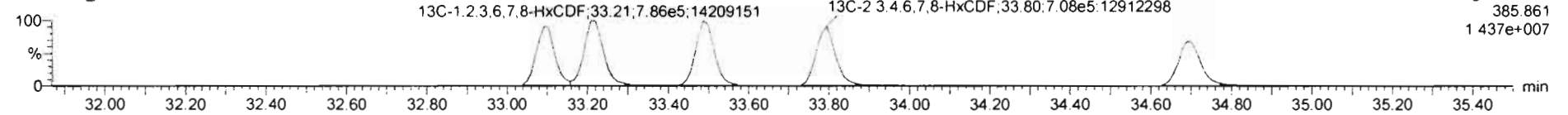


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_2

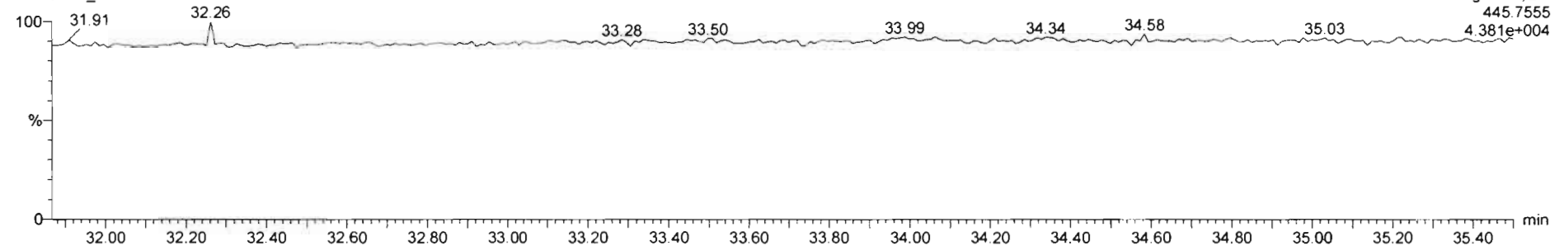


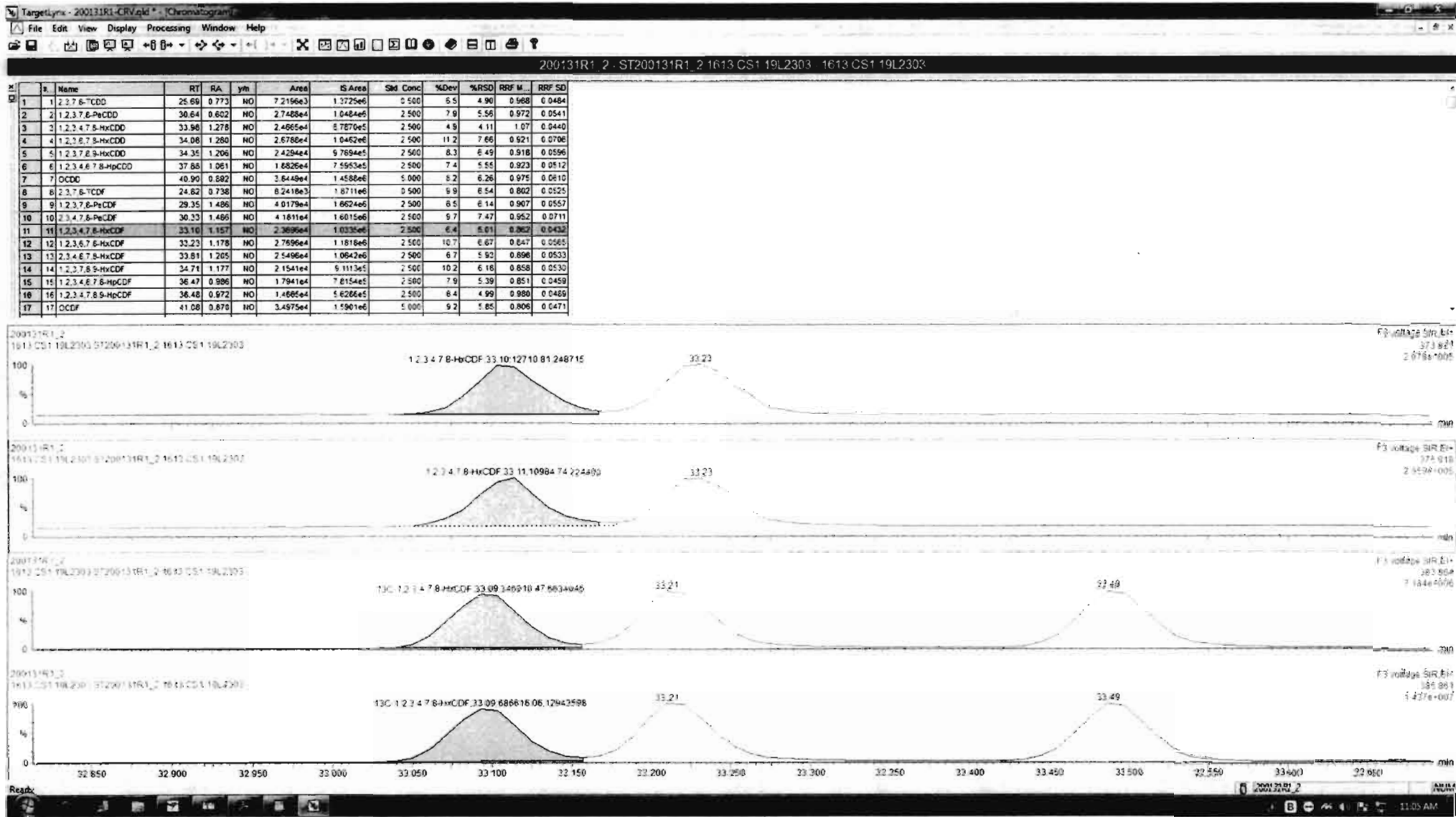
200131R1\_2



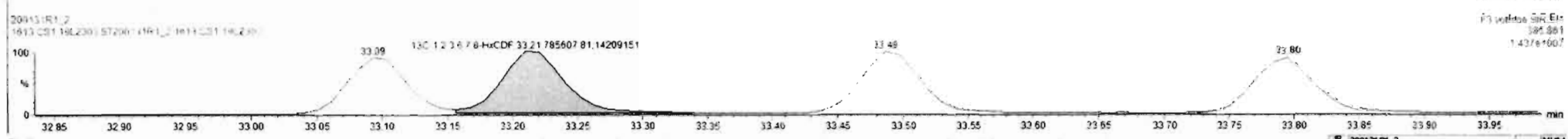
**DPE3**

200131R1\_2





#	Name	RT	RA	ym	Area	IS Area	Std Conc	%Dev	%RSD	RRF M	RRF SD
1	1 2 3 7 8-TCDD	25.69	0.773	NO	7.2196e3	1.3725e6	0.500	8.5	4.90	0.968	0.0484
2	2 1 2 3 7 8-PeCDD	30.64	0.802	NO	2.7488e4	1.0484e6	2.500	7.9	5.58	0.972	0.0541
3	3 1 2 3 4 7 8-HxCDD	33.96	1.278	NO	2.6685e4	8.7870e5	2.500	4.9	4.11	1.07	0.0440
4	4 1 2 3 6 7 8-HxCDD	34.08	1.280	NO	2.6786e4	1.0462e6	2.500	11.2	7.66	0.921	0.0706
5	5 1 2 3 7 8-HxCDD	34.35	1.206	NO	2.4294e4	9.7694e5	2.500	8.3	6.49	0.918	0.0596
6	6 1 2 3 4 6 7 8-HpCDD	37.86	1.061	NO	1.6826e4	7.5953e5	2.500	7.4	5.55	0.923	0.0512
7	7 OCDD	40.90	0.882	NO	3.8449e4	1.4586e6	5.000	8.2	6.28	0.975	0.0610
8	8 2 3 7 8-TCDF	24.62	0.738	NO	6.2418e3	1.8711e6	3.500	9.9	6.54	0.802	0.0525
9	9 1 2 3 7 8-PeCDF	29.35	1.486	NO	4.0179e4	1.8624e6	2.500	6.5	6.14	0.907	0.0557
10	10 2 3 4 7 8-PeCDF	30.33	1.486	NO	4.1811e4	1.6015e6	2.500	9.7	7.47	0.952	0.0711
11	11 1 2 3 4 7 8-HxCDF	33.10	1.157	NO	2.2696e4	1.0335e6	2.500	6.4	5.01	0.862	0.0432
12	12 1 2 3 6 7 8-HxCDF	33.23	1.192	NO	2.6729e4	1.1618e6	2.500	7.5	5.55	0.841	0.0467
13	13 2 3 4 6 7 8-HxCDF	33.81	1.205	NO	2.5496e4	1.0642e6	2.500	6.7	5.93	0.696	0.0533
14	14 1 2 3 7 8-HxCDF	34.71	1.177	NO	2.1541e4	9.1113e5	2.500	10.2	6.18	0.858	0.0530
15	15 1 2 3 4 6 7 8-HpCDF	36.47	0.866	NO	1.7941e4	7.8154e5	2.500	7.9	6.36	0.851	0.0459
16	16 1 2 3 4 7 8-HpCDF	38.48	0.972	NO	1.4685e4	5.6286e5	2.500	6.4	4.99	0.980	0.0489
17	17 OCDF	41.98	0.870	NO	3.4975e4	1.5901e6	5.000	9.2	5.85	0.806	0.0471



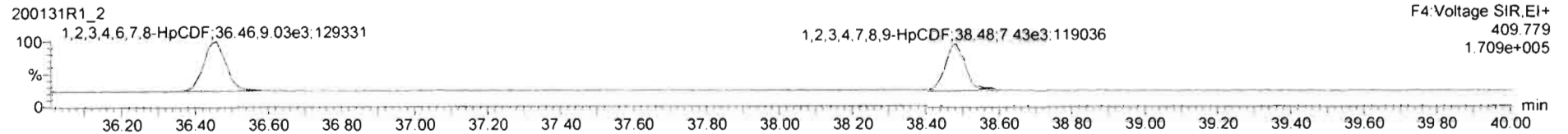
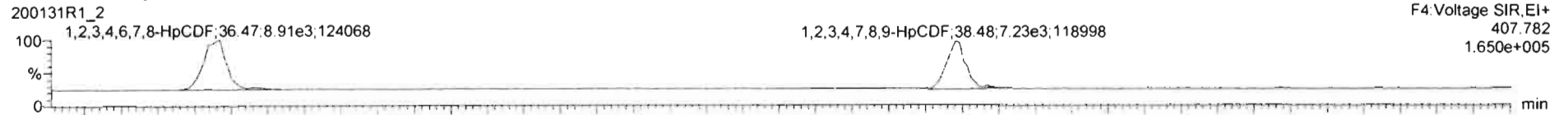
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

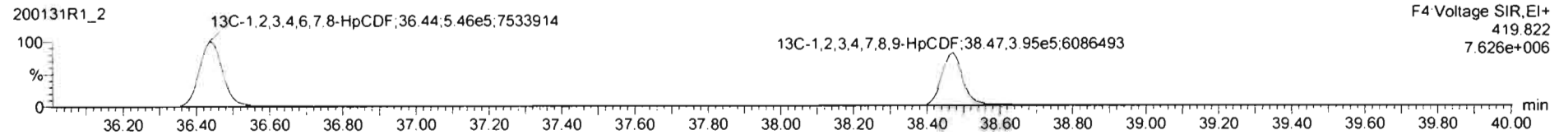
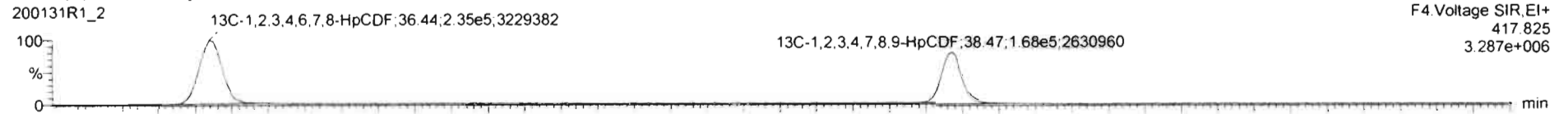
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_2, Date: 31-Jan-2020, Time: 17:37:04, ID: ST200131R1\_2 1613 CS1 19L2303, Description: 1613 CS1 19L2303

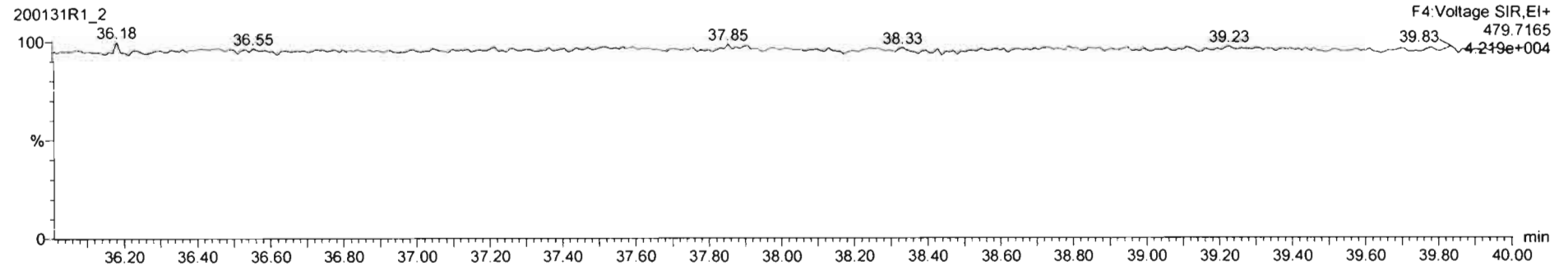
**1,2,3,4,6,7,8-HpCDF**



**13C-1,2,3,4,6,7,8-HpCDF**



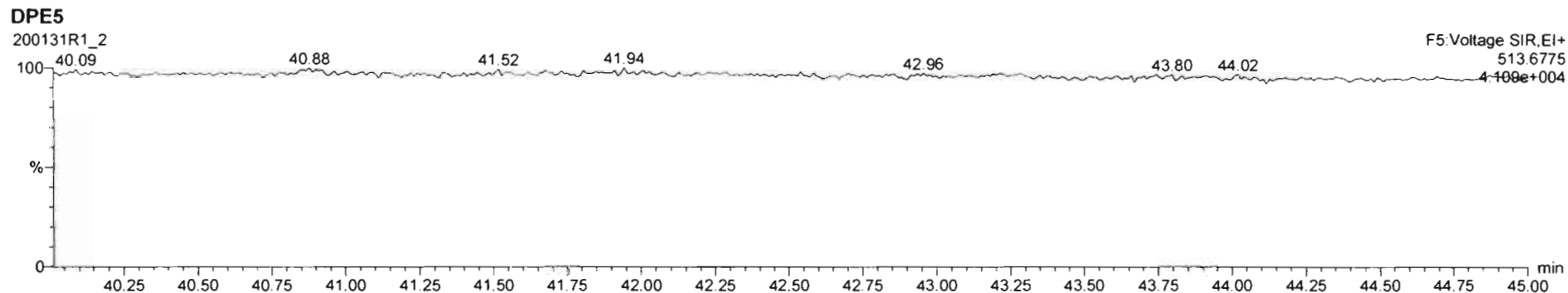
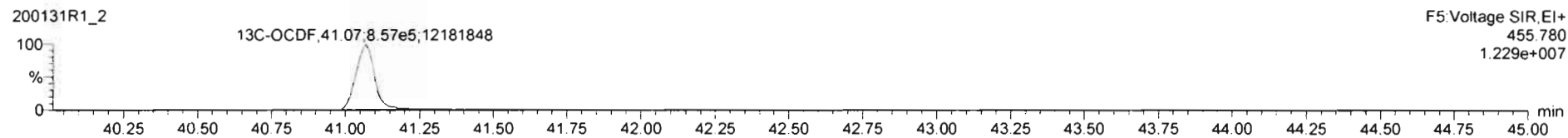
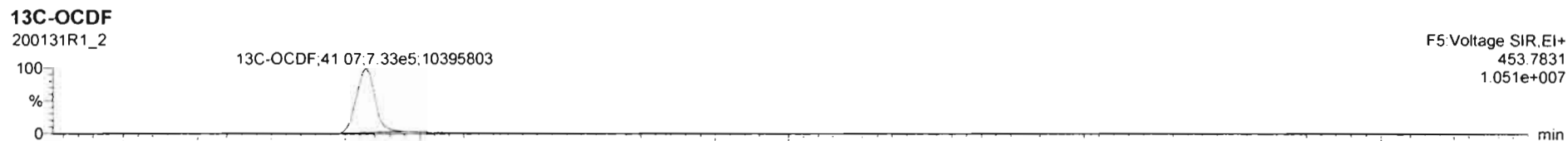
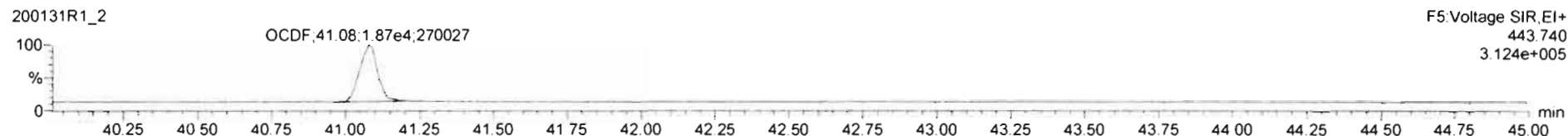
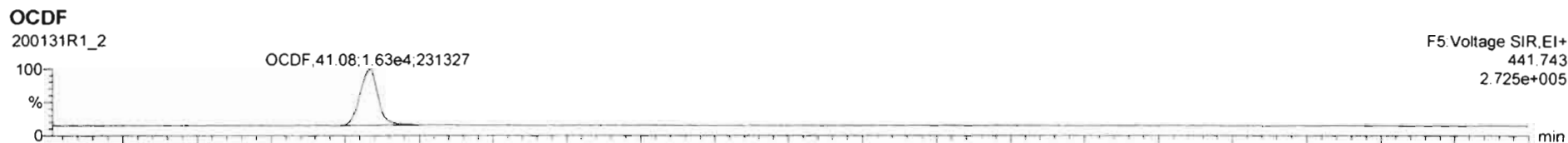
**DPE4**



Dataset: Untitled

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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_2, Date: 31-Jan-2020, Time: 17:37:04, ID: ST200131R1\_2 1613 CS1 19L2303, Description: 1613 CS1 19L2303



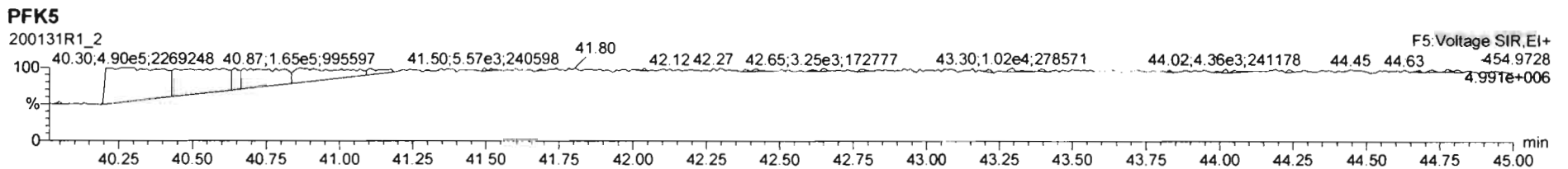
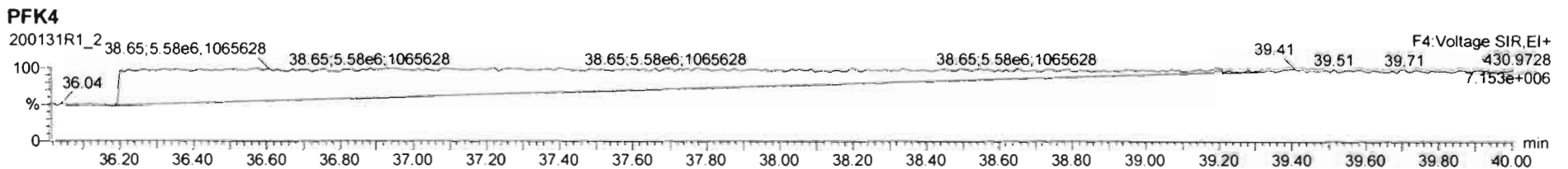
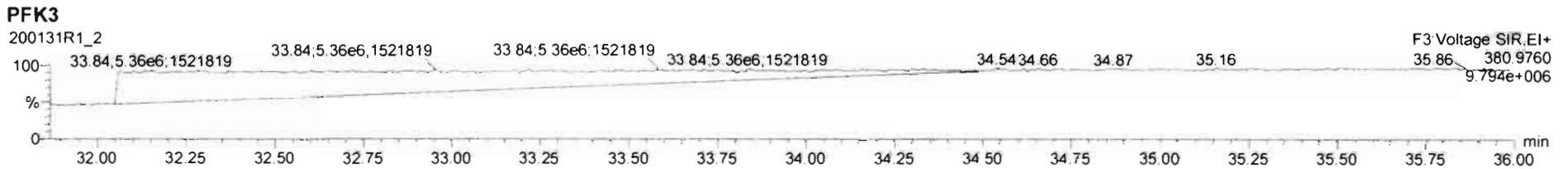
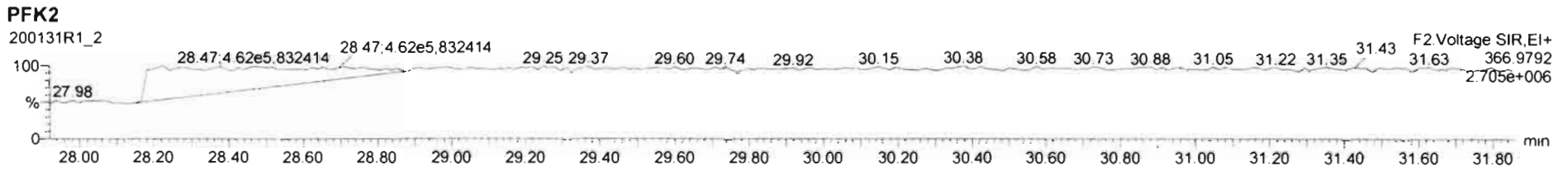
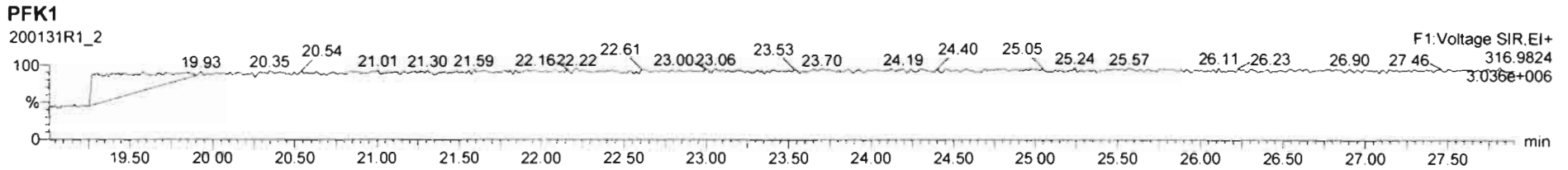


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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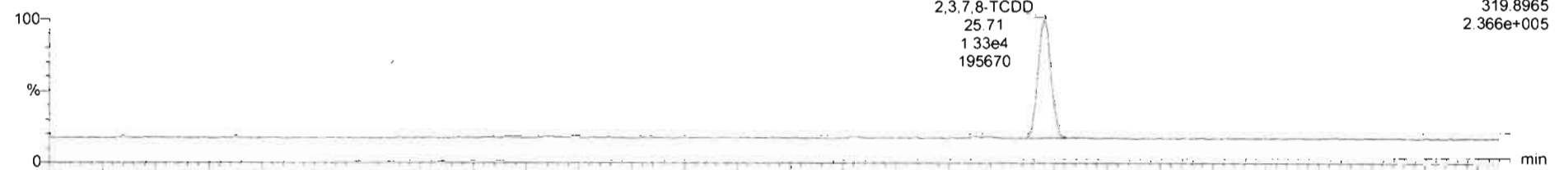
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

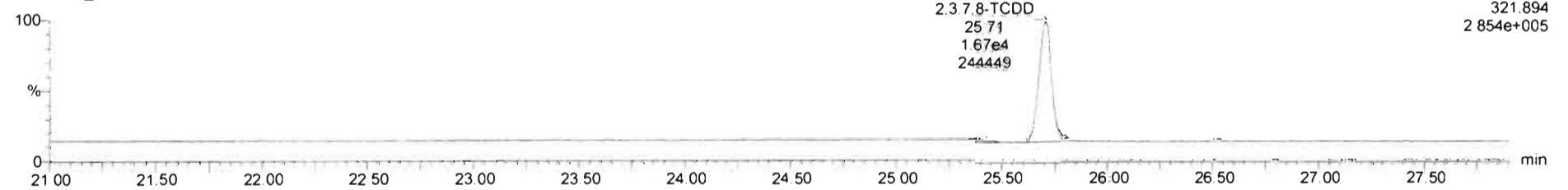
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**2,3,7,8-TCDD**

200131R1\_3

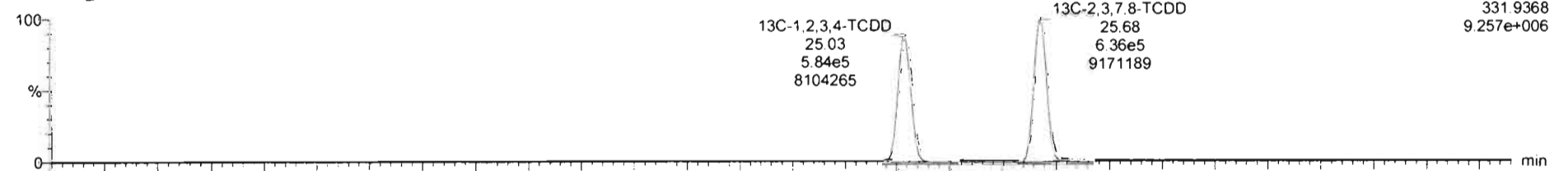


200131R1\_3

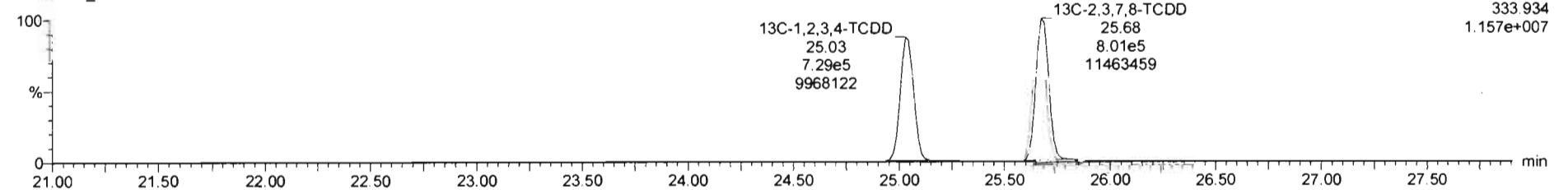


**13C-2,3,7,8-TCDD**

200131R1\_3



200131R1\_3



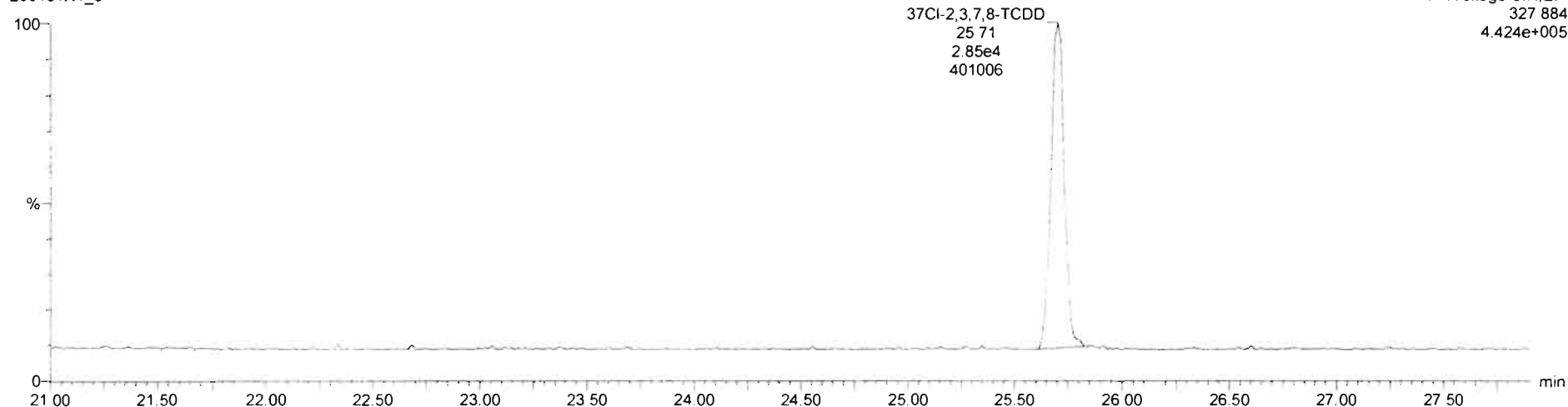
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

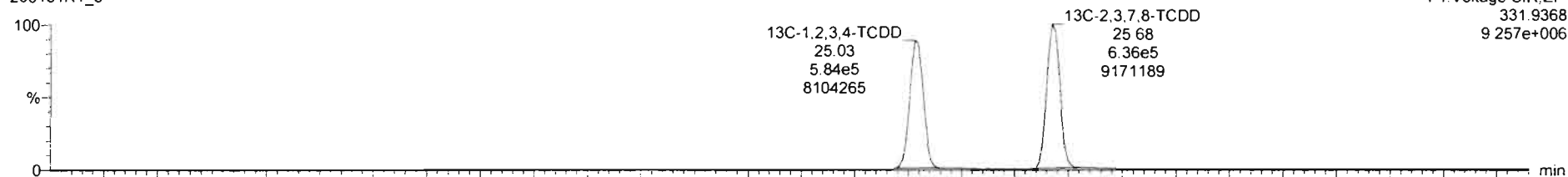
**37Cl-2,3,7,8-TCDD**

200131R1\_3

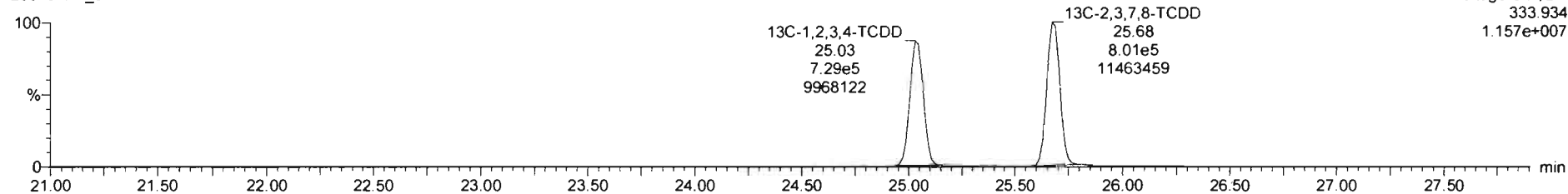


**13C-1,2,3,4-TCDD**

200131R1\_3



200131R1\_3



Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

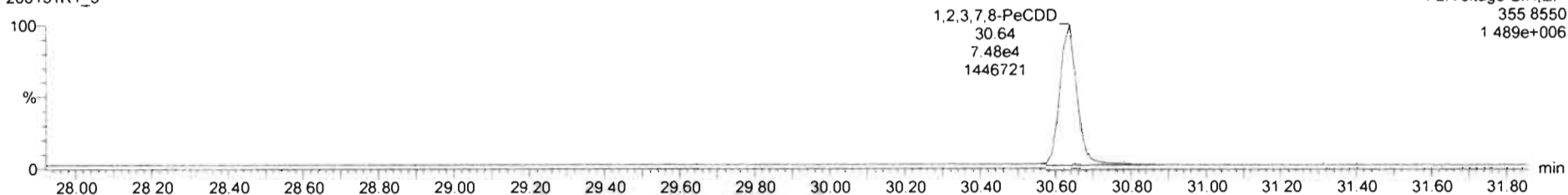
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**1,2,3,7,8-PeCDD**

200131R1\_3

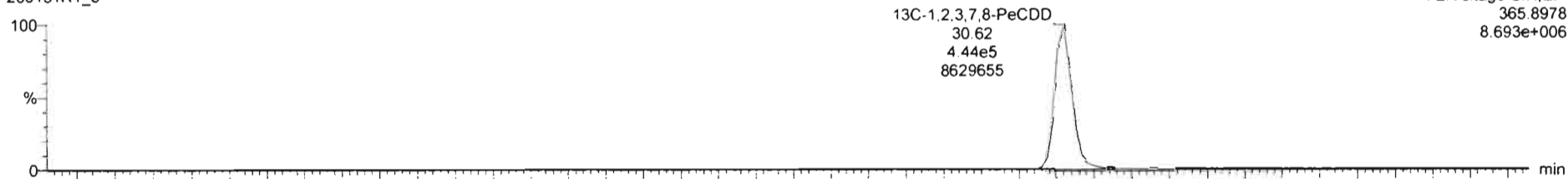


200131R1\_3

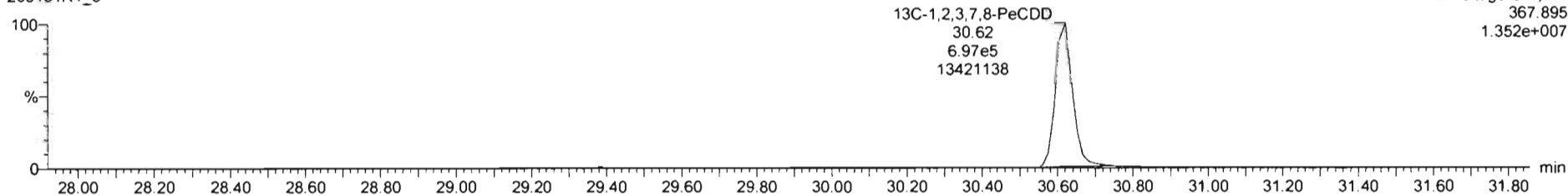


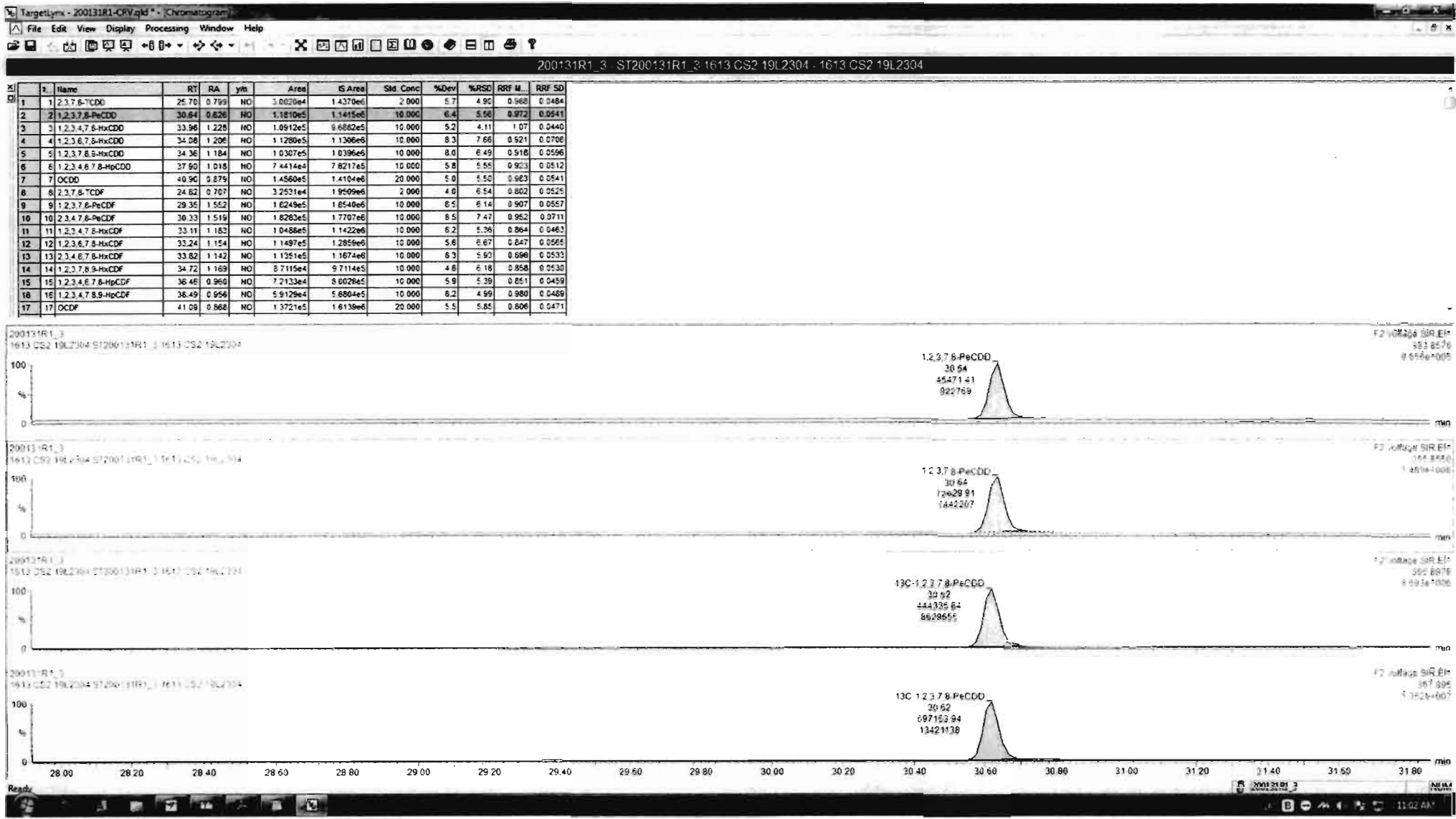
**13C-1,2,3,7,8-PeCDD**

200131R1\_3



200131R1\_3





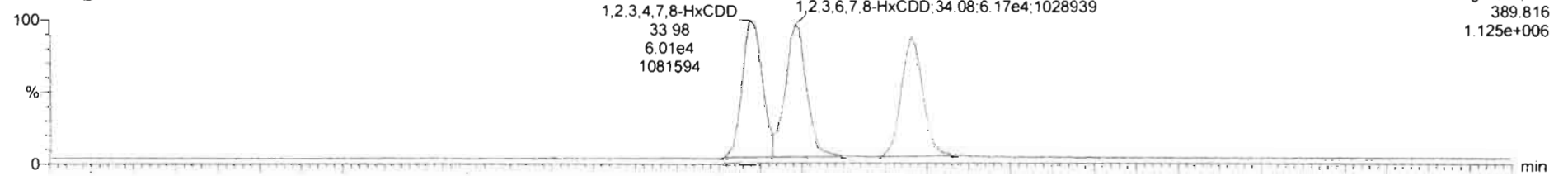
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

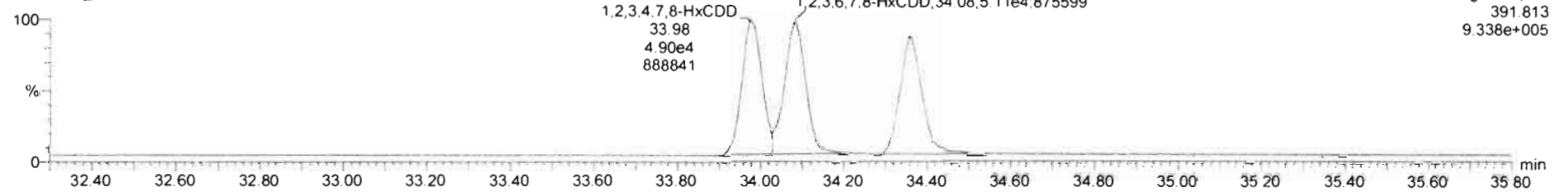
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**1,2,3,4,7,8-HxCDD**

200131R1\_3

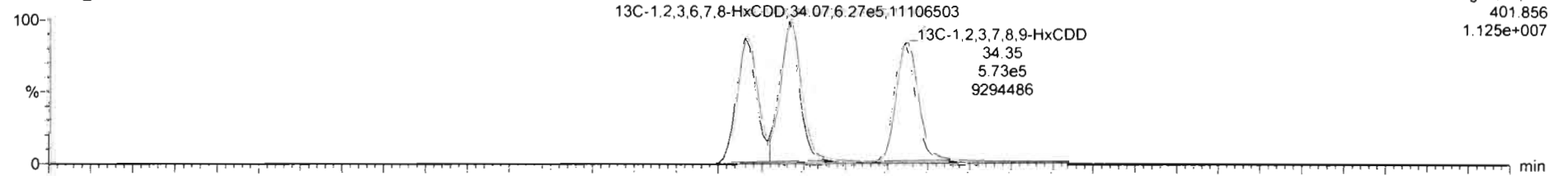


200131R1\_3

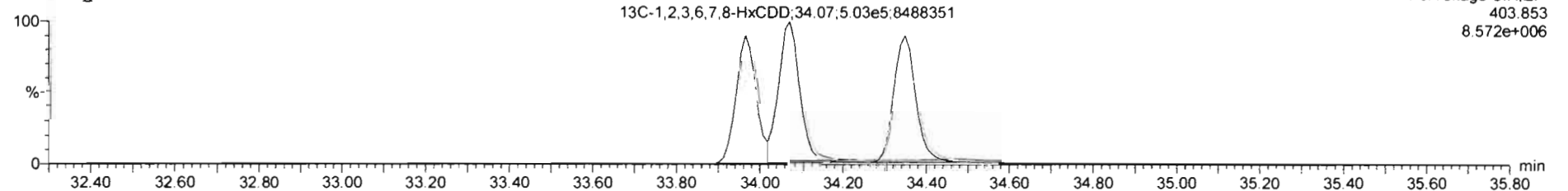


**13C-1,2,3,4,7,8-HxCDD**

200131R1\_3



200131R1\_3



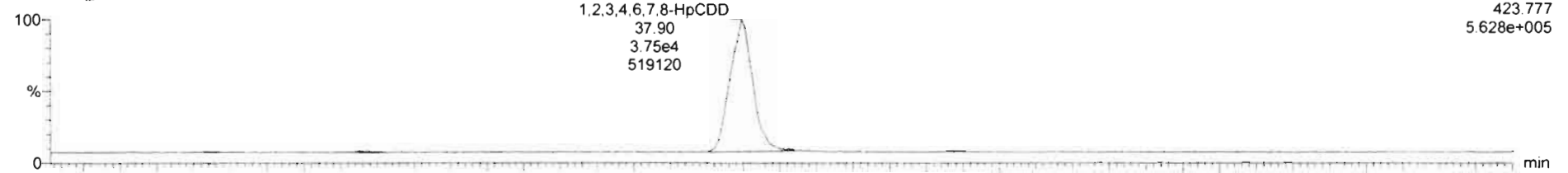
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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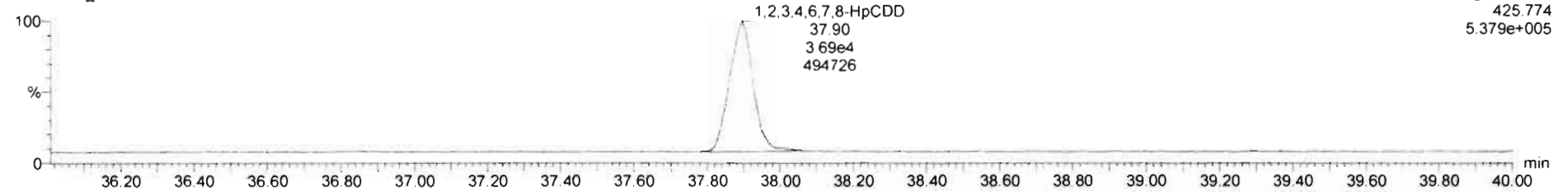
1,2,3,4,6,7,8-HpCDD

200131R1\_3



F4: Voltage SIR, EI+  
423.777  
5.628e+005

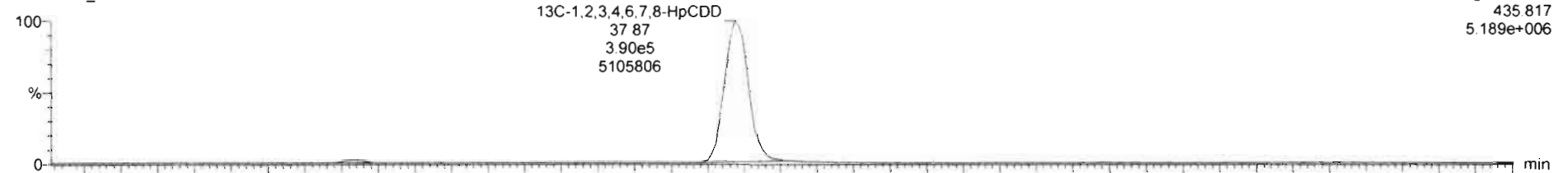
200131R1\_3



F4: Voltage SIR, EI+  
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5.379e+005

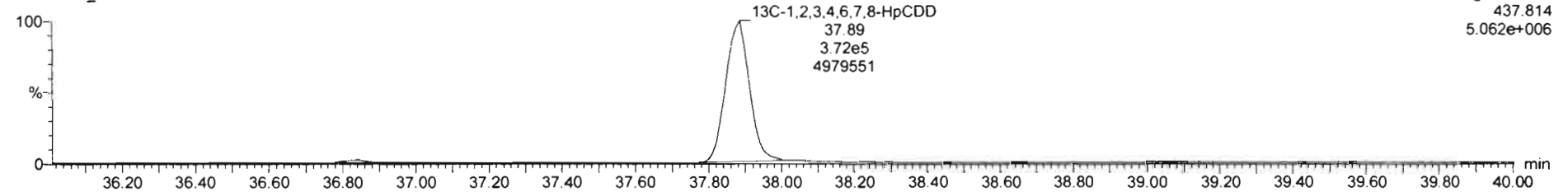
13C-1,2,3,4,6,7,8-HpCDD

200131R1\_3



F4: Voltage SIR, EI+  
435.817  
5.189e+006

200131R1\_3

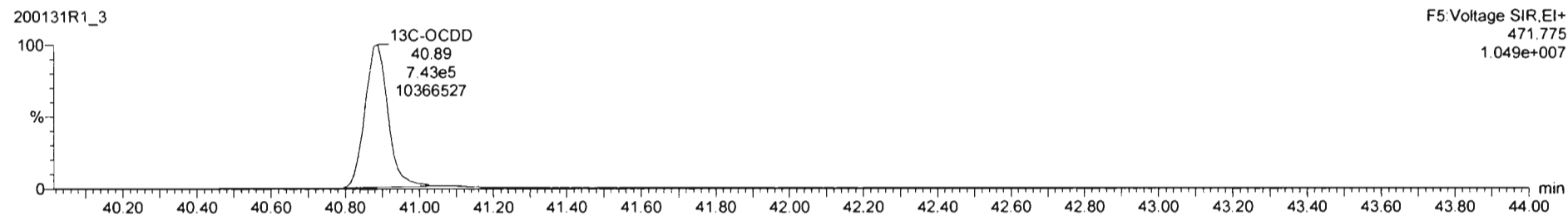
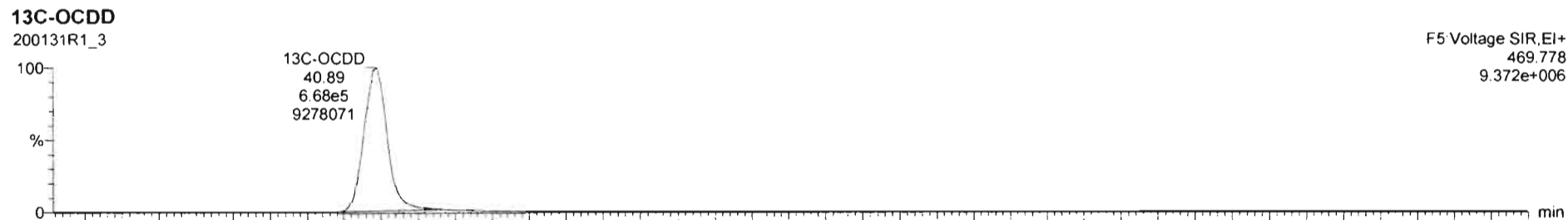
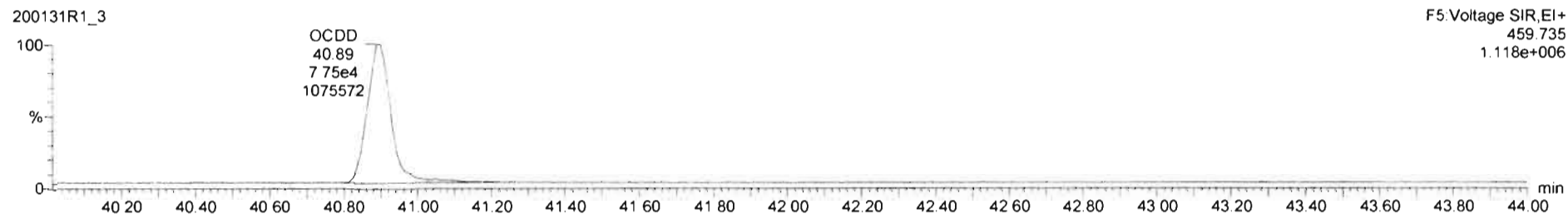
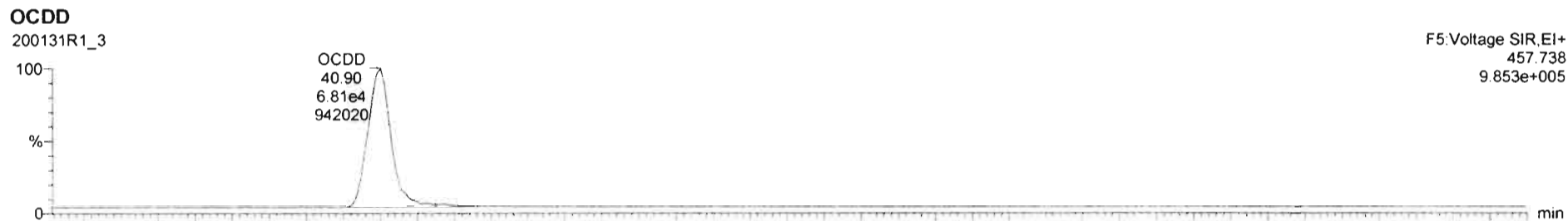


F4: Voltage SIR, EI+  
437.814  
5.062e+006

Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304





Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

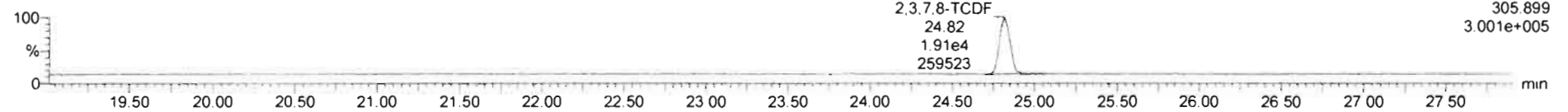
Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

**2,3,7,8-TCDF**

200131R1\_3

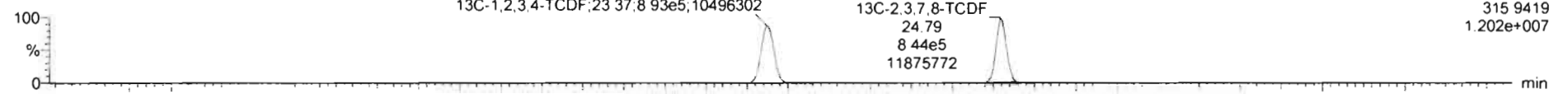


200131R1\_3

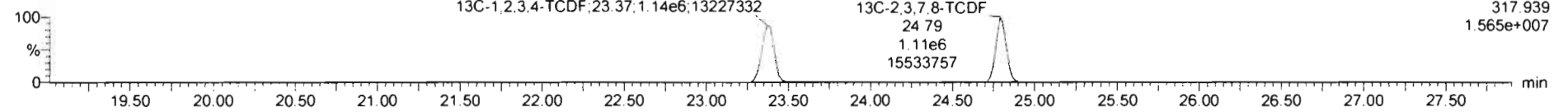


**13C-2,3,7,8-TCDF**

200131R1\_3

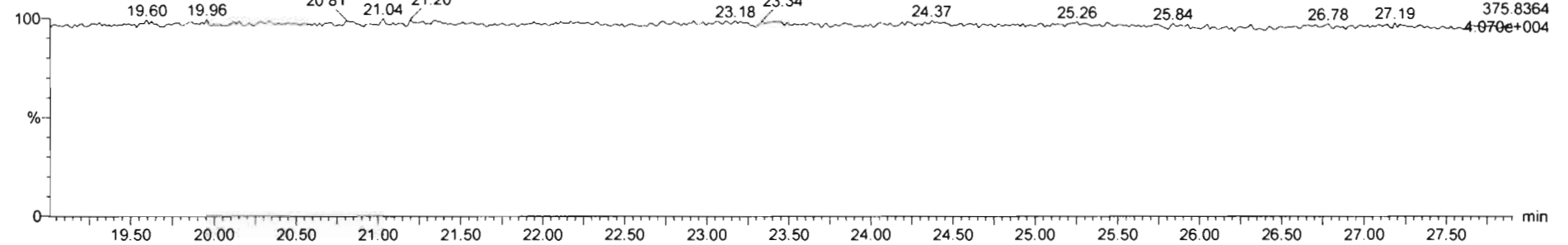


200131R1\_3



**DPE1**

200131R1\_3

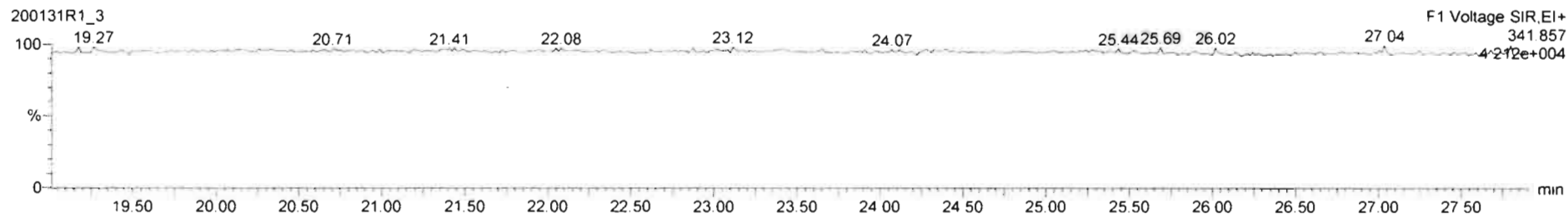
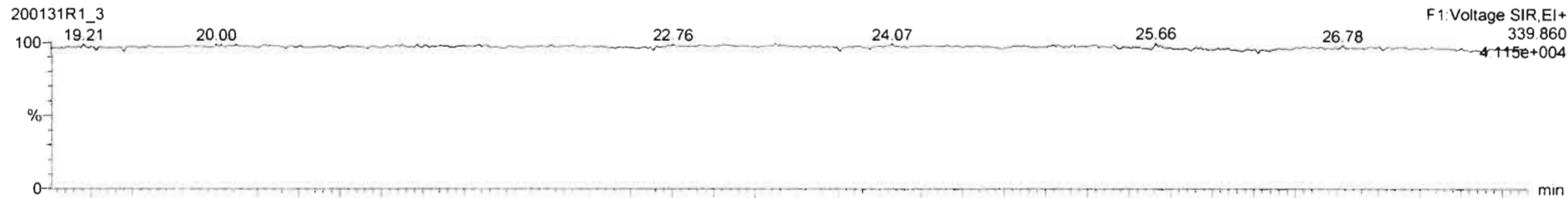


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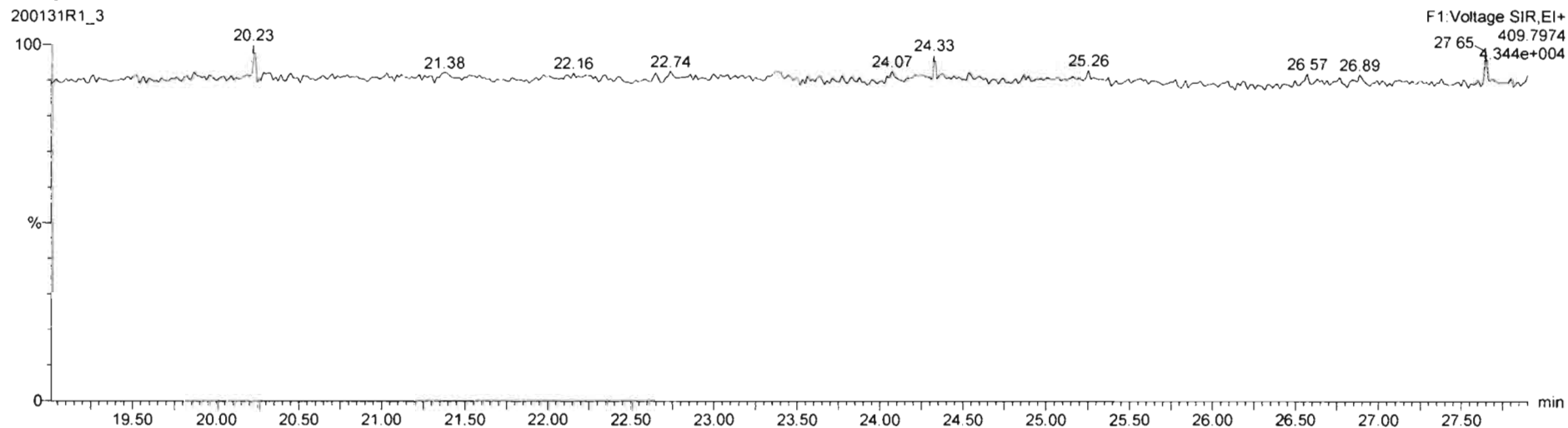
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Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

1st Func. Penta-Furans



DPE6



Dataset: Untitled

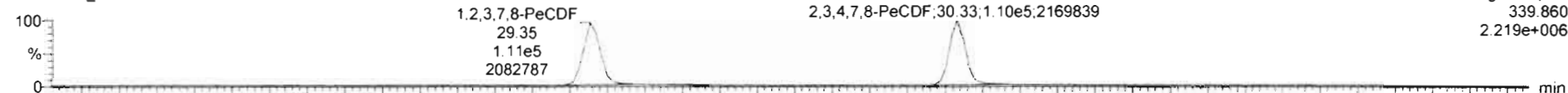
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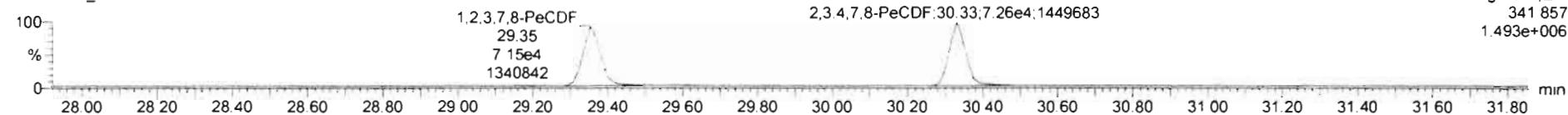
**1,2,3,7,8-PeCDF**

200131R1\_3



F2: Voltage SIR, EI+  
339.860  
2.219e+006

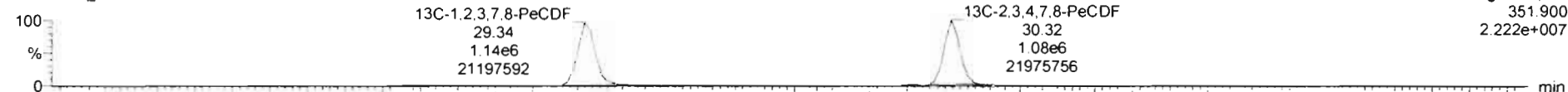
200131R1\_3



F2: Voltage SIR, EI+  
341.857  
1.493e+006

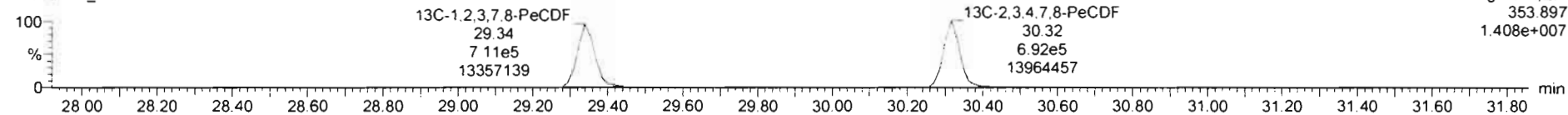
**13C-1,2,3,7,8-PeCDF**

200131R1\_3



F2: Voltage SIR, EI+  
351.900  
2.222e+007

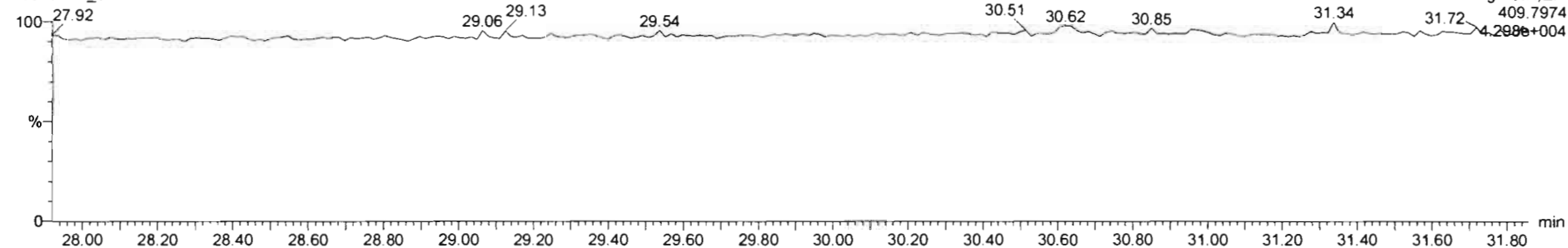
200131R1\_3



F2: Voltage SIR, EI+  
353.897  
1.408e+007

**DPE2**

200131R1\_3



F2: Voltage SIR, EI+  
409.7974  
4.298e+004

Dataset: Untitled

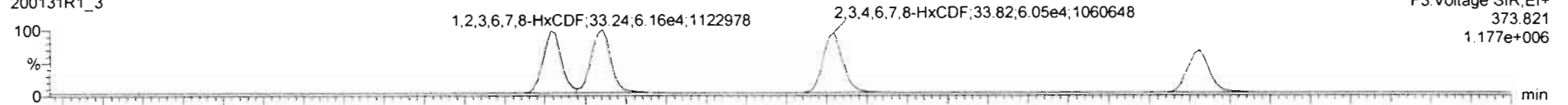
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

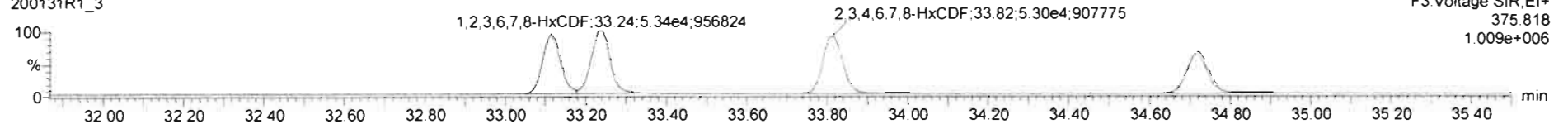
**1,2,3,4,7,8-HxCDF**

200131R1\_3



F3: Voltage SIR, EI+  
373.821  
1.177e+006

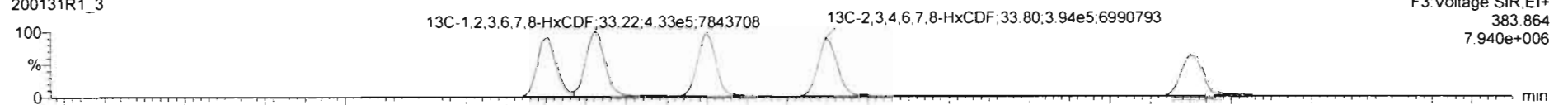
200131R1\_3



F3: Voltage SIR, EI+  
375.818  
1.009e+006

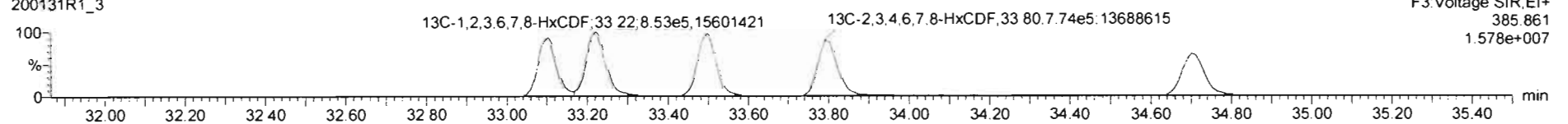
**13C-1,2,3,4,7,8-HxCDF**

200131R1\_3



F3: Voltage SIR, EI+  
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7.940e+006

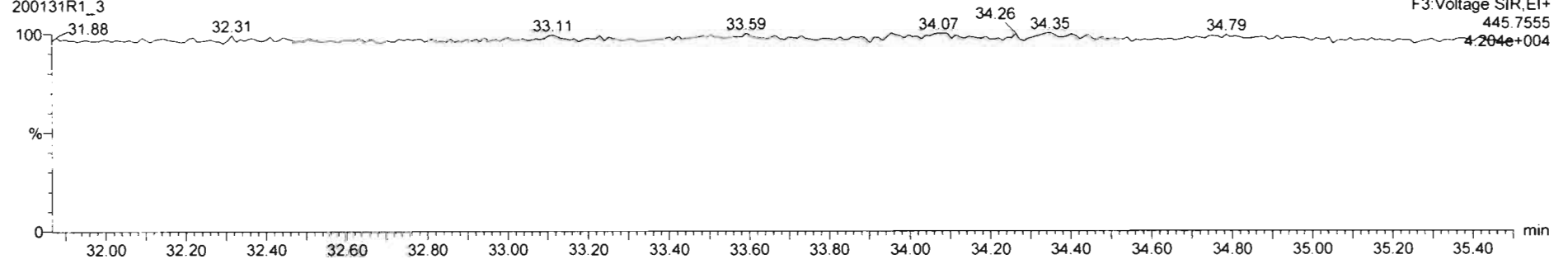
200131R1\_3



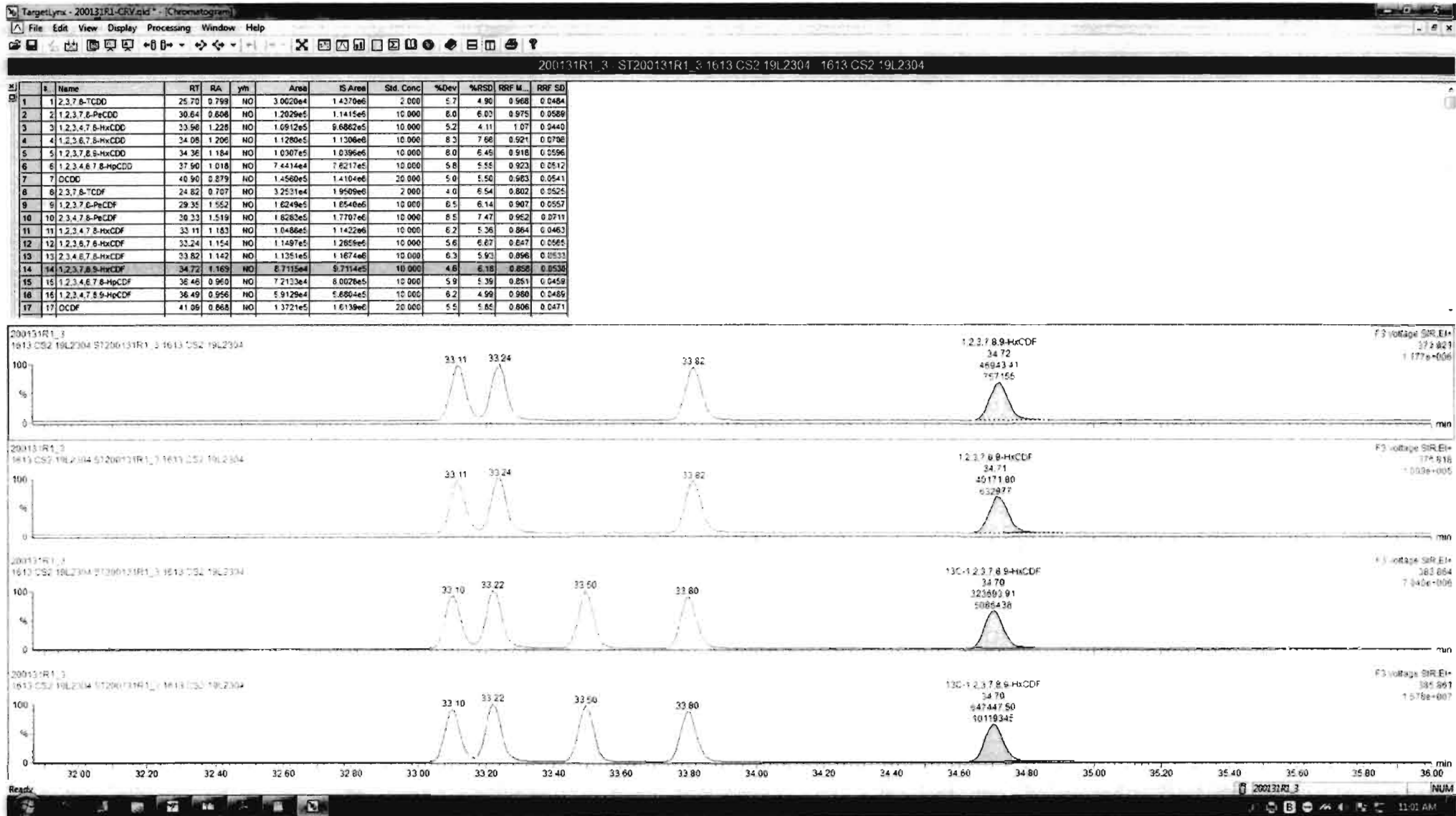
F3: Voltage SIR, EI+  
385.861  
1.578e+007

**DPE3**

200131R1\_3



F3: Voltage SIR, EI+  
445.7555  
4.204e+004

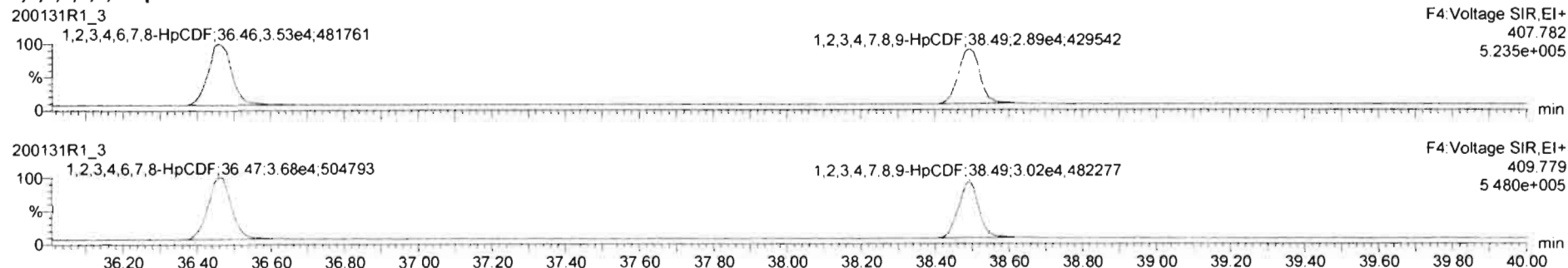


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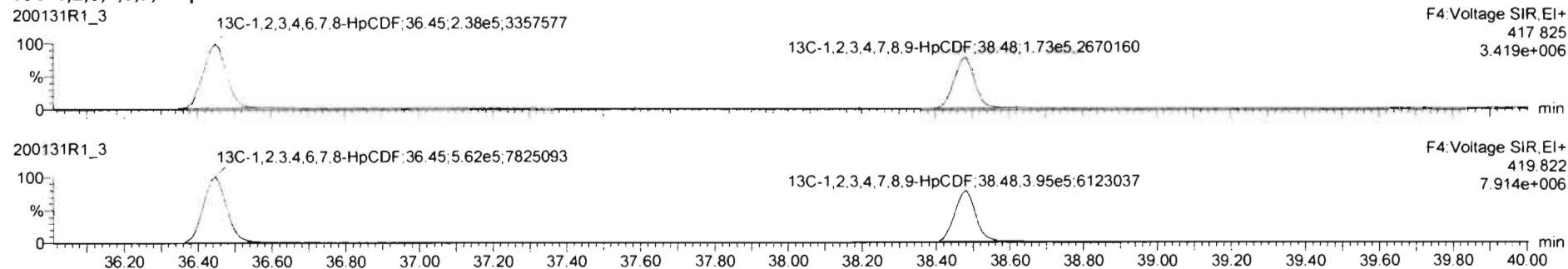
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Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

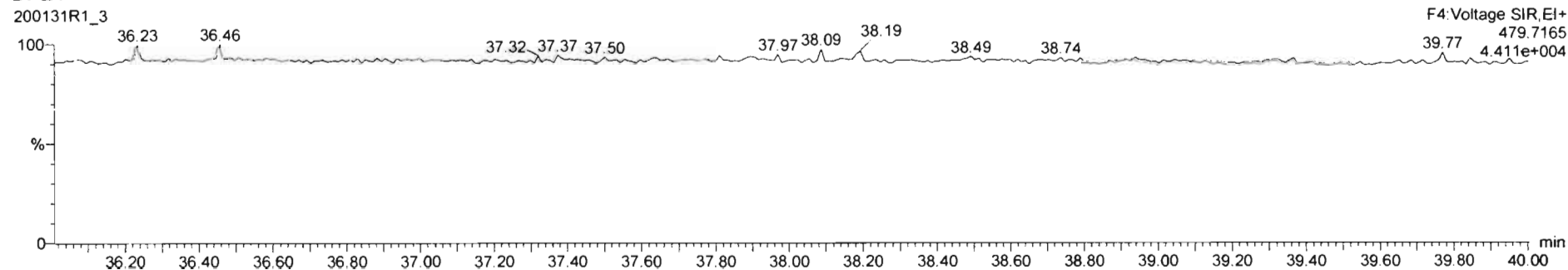
**1,2,3,4,6,7,8-HpCDF**



**13C-1,2,3,4,6,7,8-HpCDF**



**DPE4**



Dataset: Untitled

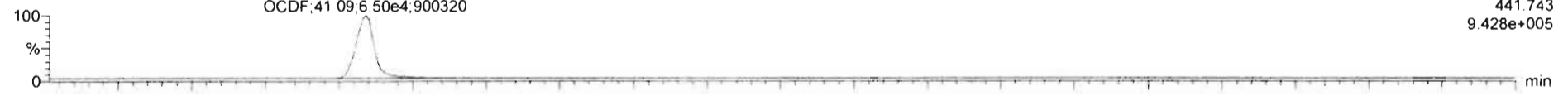
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

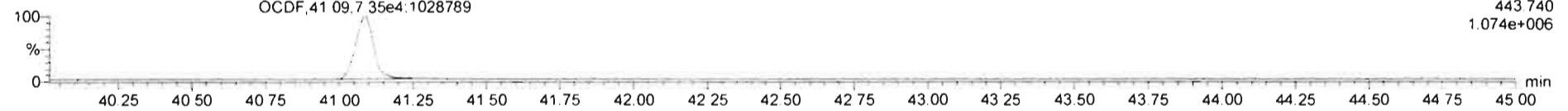
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**OCDF**

200131R1\_3

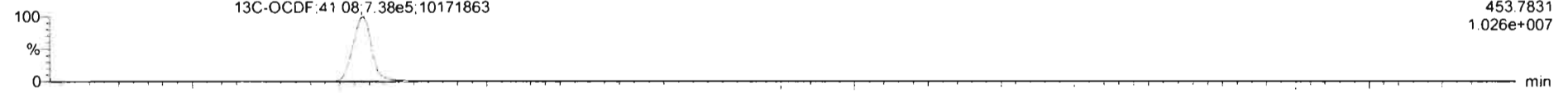


200131R1\_3

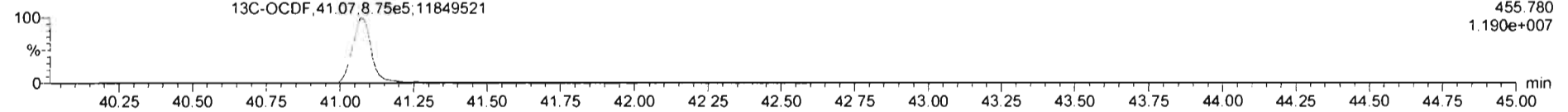


**13C-OCDF**

200131R1\_3

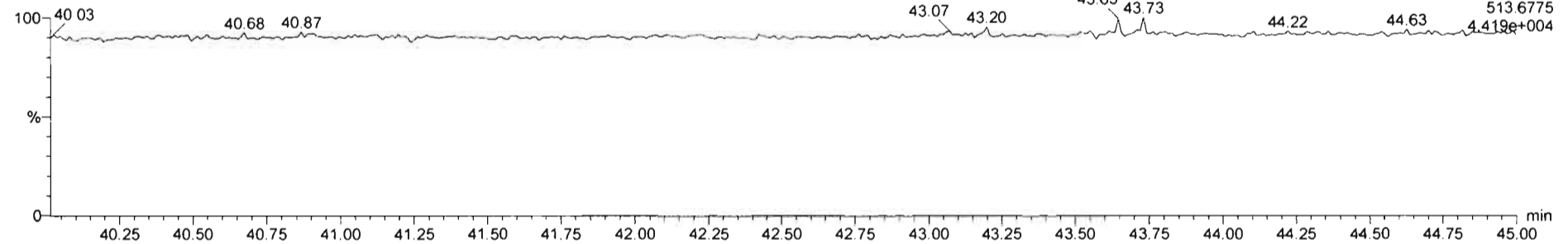


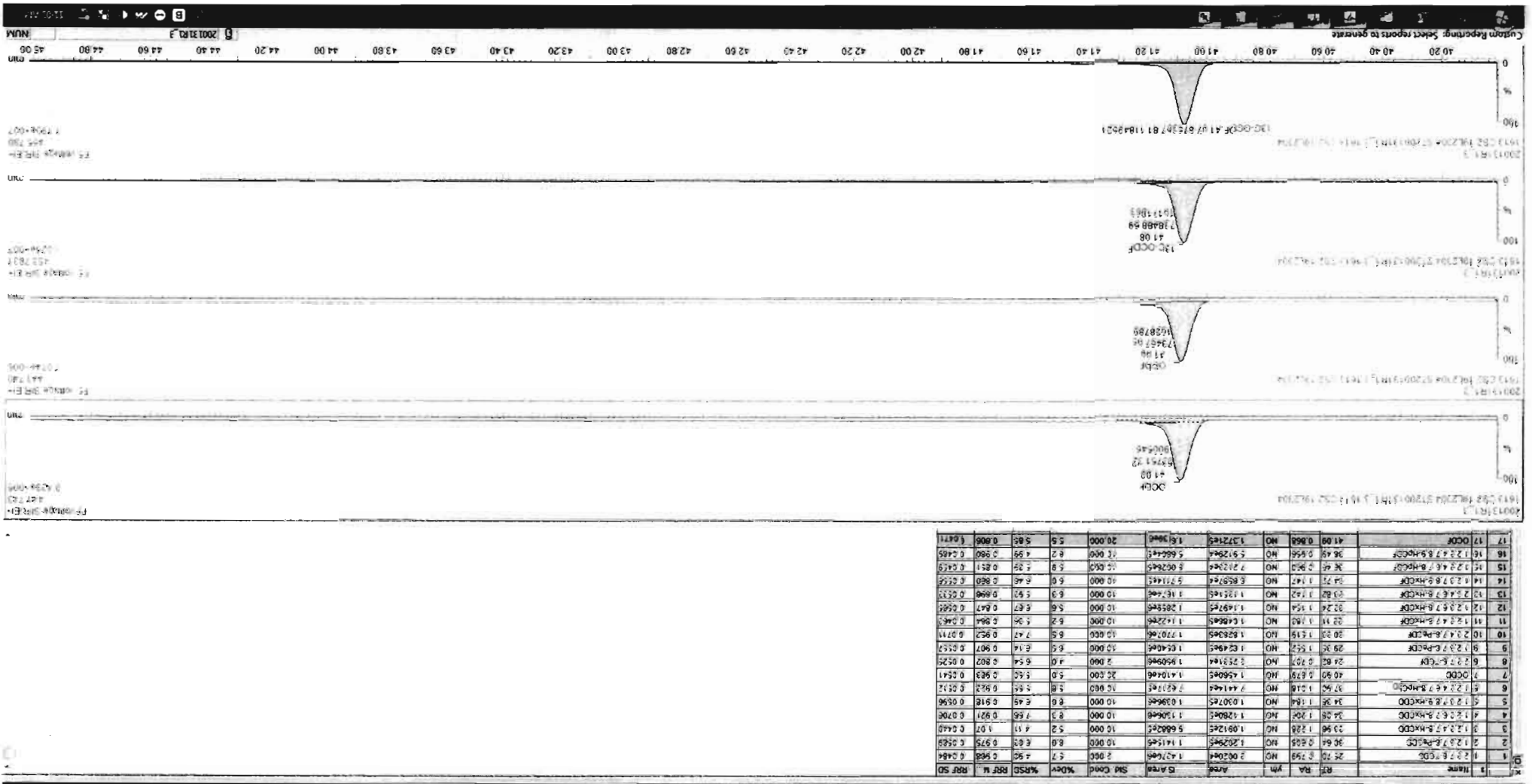
200131R1\_3



**DPE5**

200131R1\_3





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2	2 2 2 7 8 7 0 0	36.94	0.855	NO	1.20295	1.14155	10.00	6.80	0.975
3	3 2 2 7 8 7 0 0	33.94	1.228	NO	1.09124	5.68825	10.00	5.2	1.07
4	4 2 2 7 8 7 0 0	34.08	1.206	NO	1.12804	1.13068	10.00	8.3	0.921
5	5 2 2 7 8 7 0 0	34.36	1.164	NO	1.03075	1.03964	10.00	6.6	0.918
6	6 2 2 7 8 7 0 0	37.50	1.018	NO	7.44144	2.62174	10.00	5.8	0.932
7	7 2 2 7 8 7 0 0	40.90	0.879	NO	1.55045	1.41046	20.00	5.0	0.983
8	8 2 2 7 8 7 0 0	24.00	0.707	NO	1.25314	1.95094	2.000	4.0	0.807
9	9 2 2 7 8 7 0 0	29.30	1.552	NO	1.62485	10.000	10.00	6.5	0.907
10	10 2 2 7 8 7 0 0	20.20	1.119	NO	1.62505	1.77076	10.00	6.5	0.952
11	11 2 2 7 8 7 0 0	22.10	1.419	NO	1.64045	1.14226	10.00	6.2	0.964
12	12 2 2 7 8 7 0 0	32.24	1.154	NO	1.14974	1.28585	10.00	5.6	0.847
13	13 2 2 7 8 7 0 0	32.82	1.142	NO	1.13214	1.16746	10.00	6.3	0.898
14	14 2 2 7 8 7 0 0	34.70	1.147	NO	6.65974	5.71144	10.00	6.0	0.860
15	15 2 2 7 8 7 0 0	36.46	0.903	NO	7.21244	6.02845	10.00	5.9	0.851
16	16 2 2 7 8 7 0 0	38.48	0.956	NO	5.91294	5.66443	10.00	6.7	0.900
17	17 2 2 7 8 7 0 0	41.08	0.868	NO	1.37214	1.61364	20.00	5.5	0.808

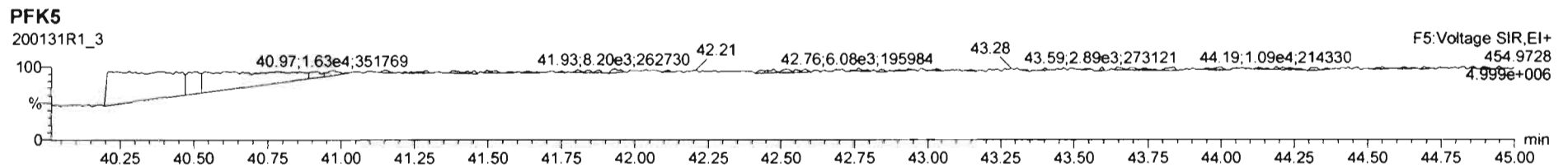
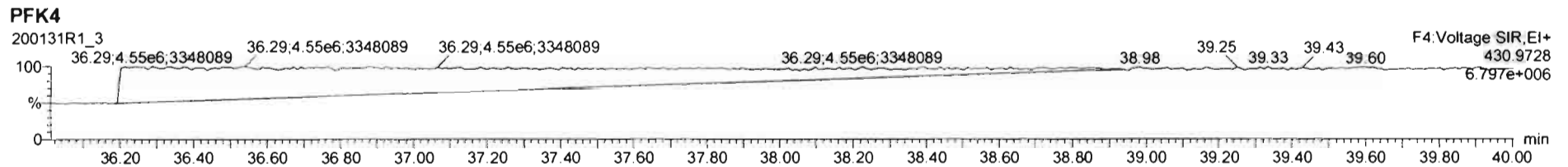
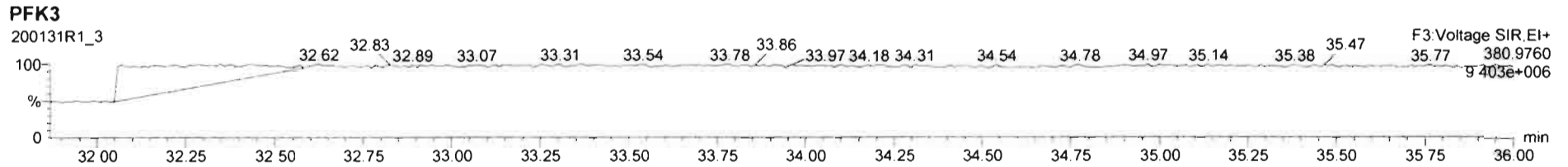
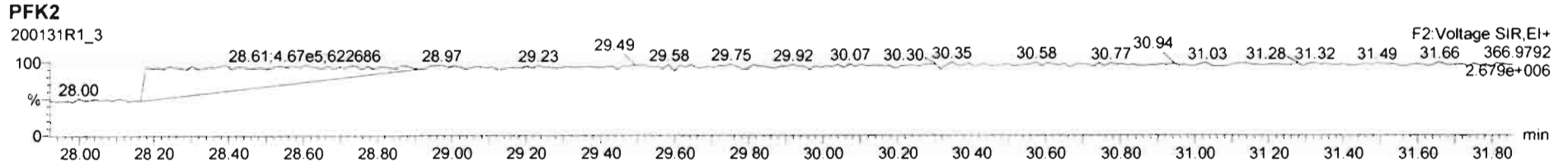
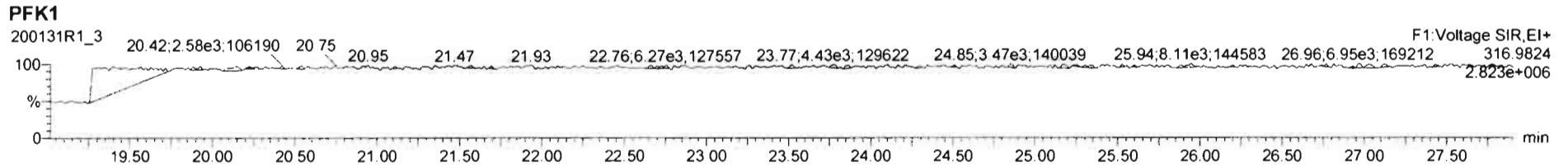


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

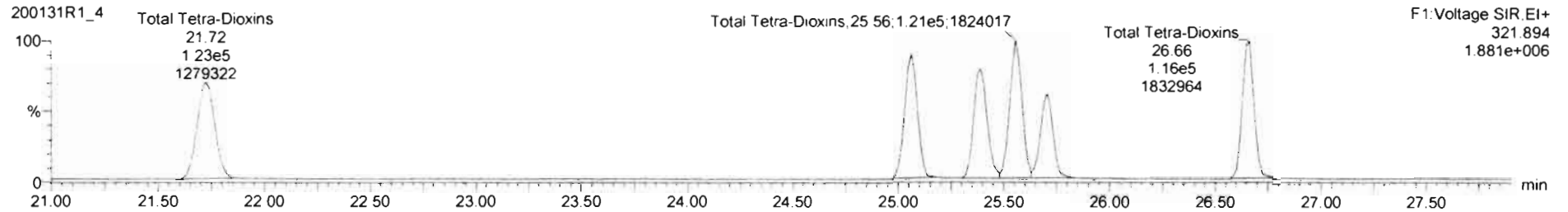
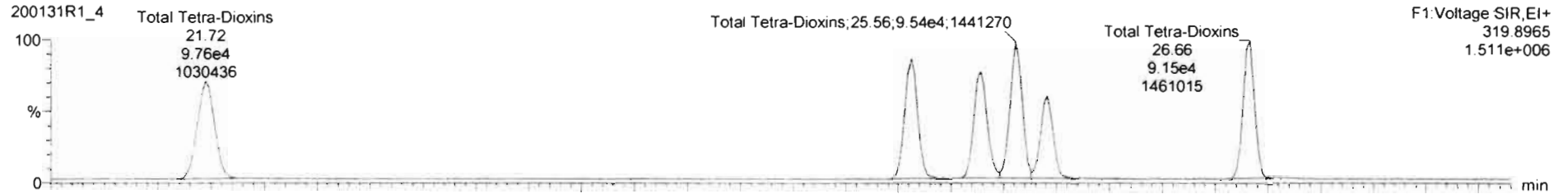


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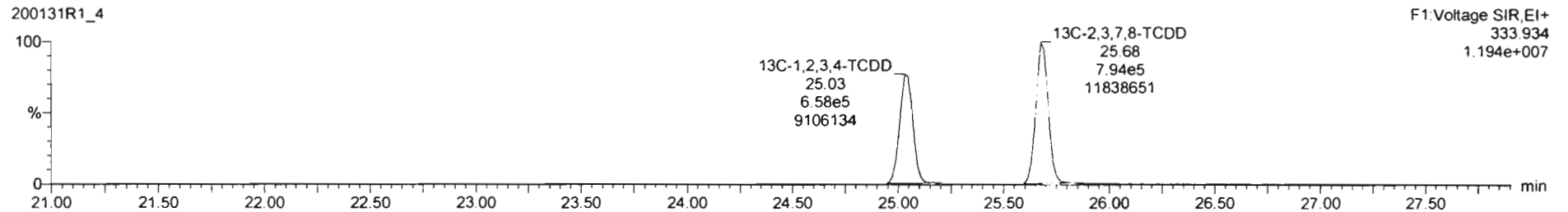
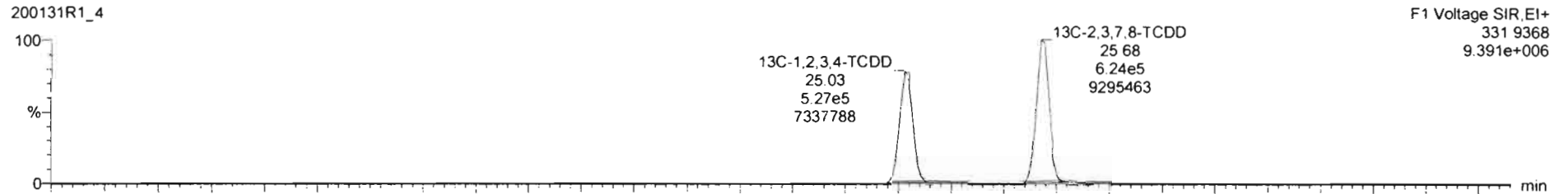
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**2,3,7,8-TCDD**



**13C-2,3,7,8-TCDD**



Dataset: Untitled

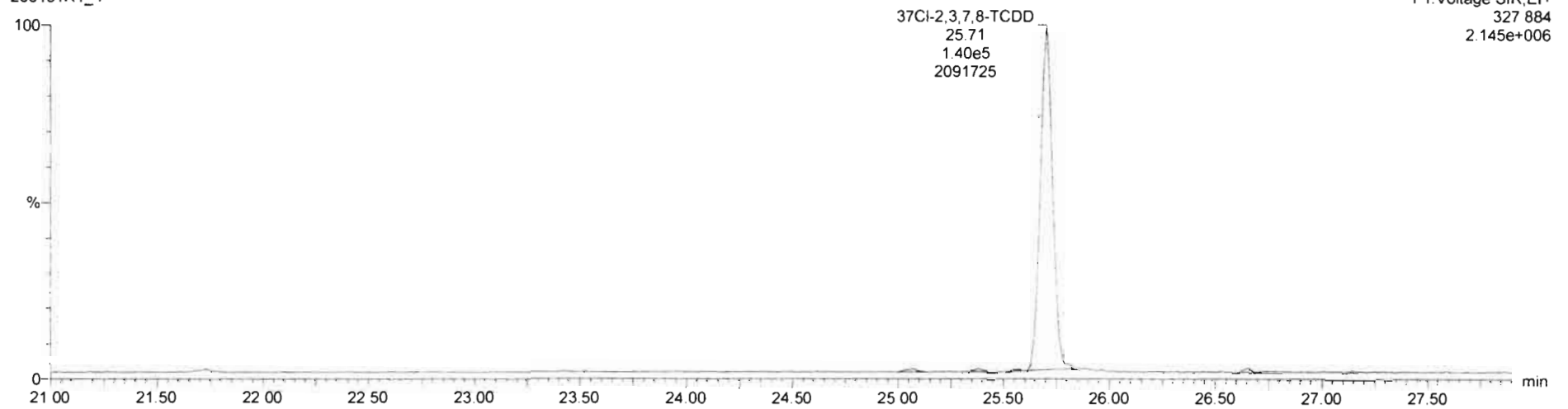
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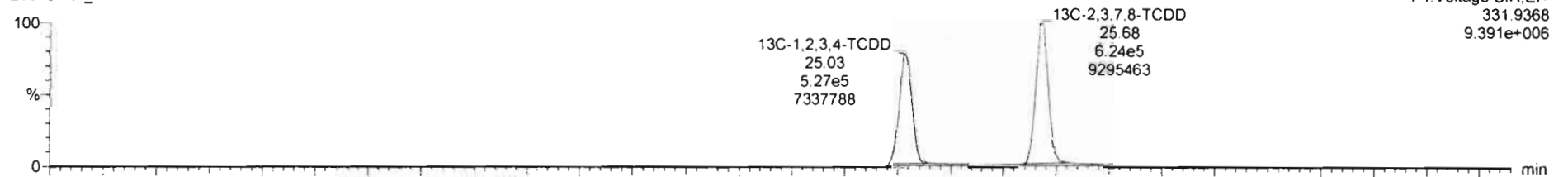
**37Cl-2,3,7,8-TCDD**

200131R1\_4

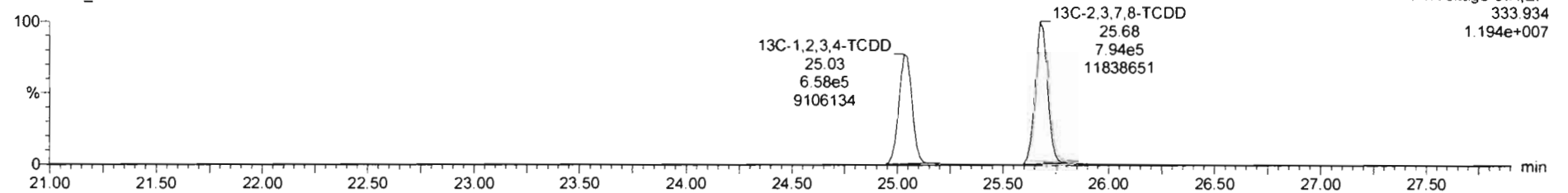


**13C-1,2,3,4-TCDD**

200131R1\_4



200131R1\_4

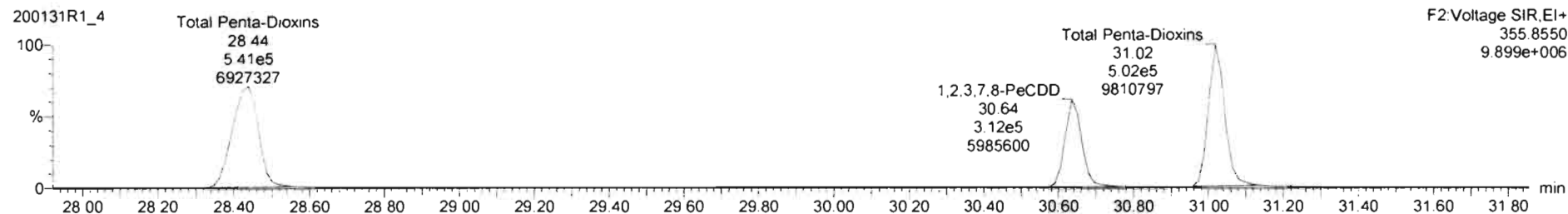
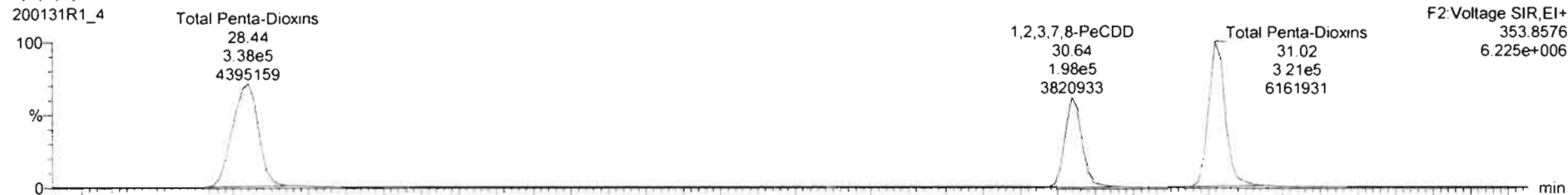


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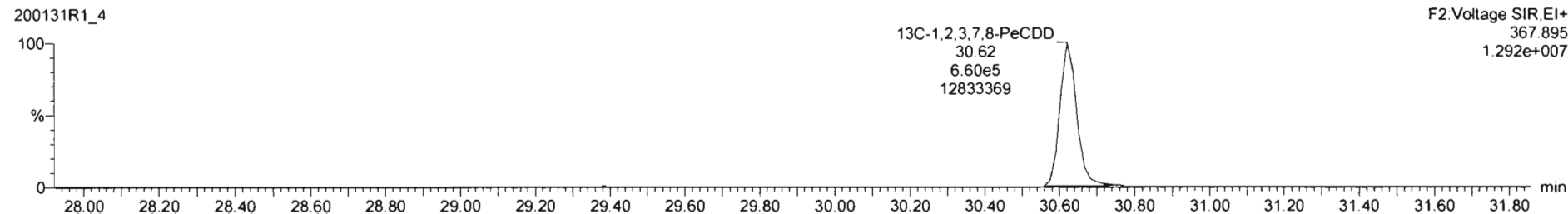
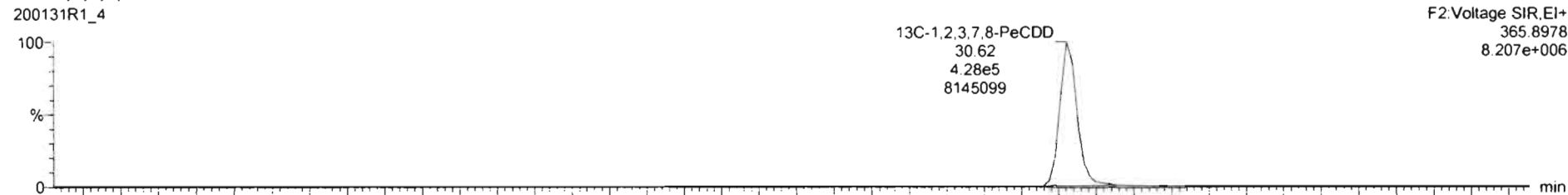
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**1,2,3,7,8-PeCDD**



**13C-1,2,3,7,8-PeCDD**



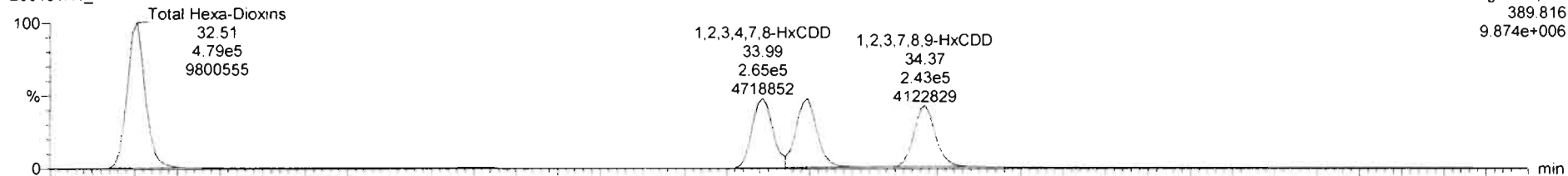
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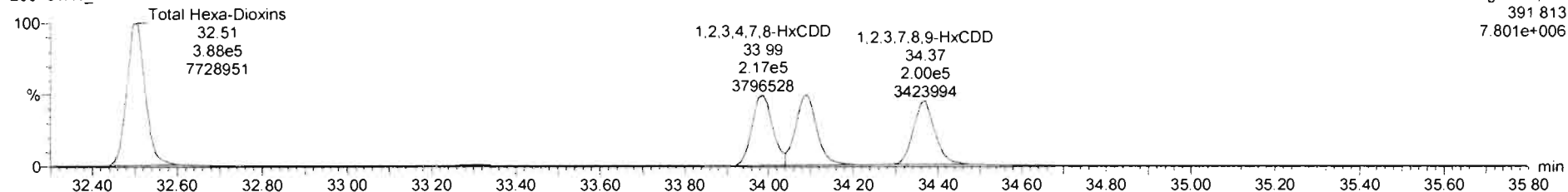
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1,2,3,4,7,8-HxCDD

200131R1\_4

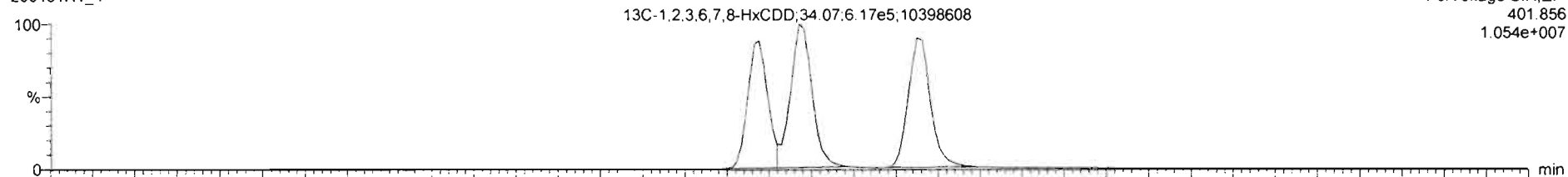


200131R1\_4

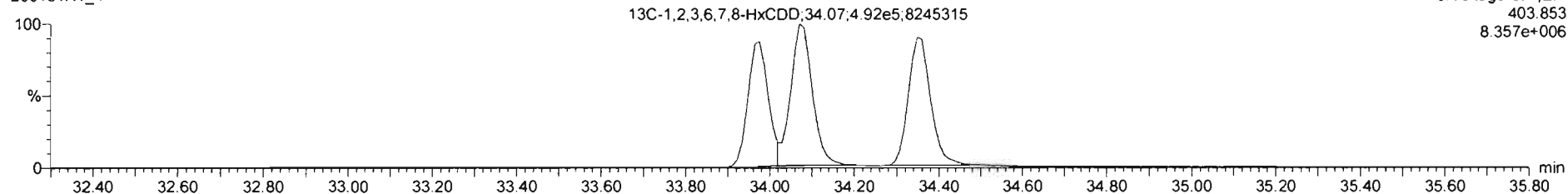


13C-1,2,3,4,7,8-HxCDD

200131R1\_4



200131R1\_4



Dataset: Untitled

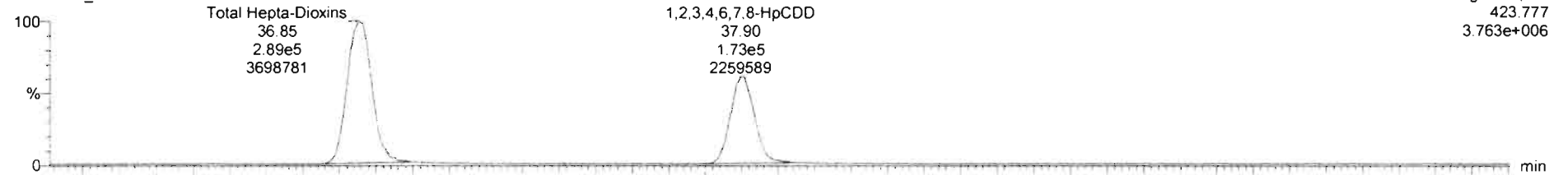
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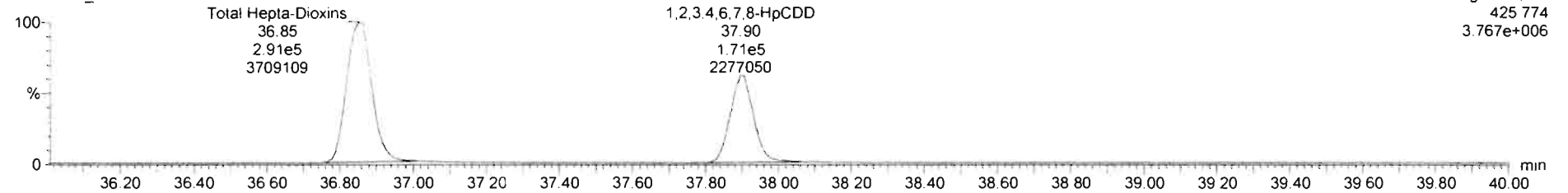
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1,2,3,4,6,7,8-HpCDD

200131R1\_4

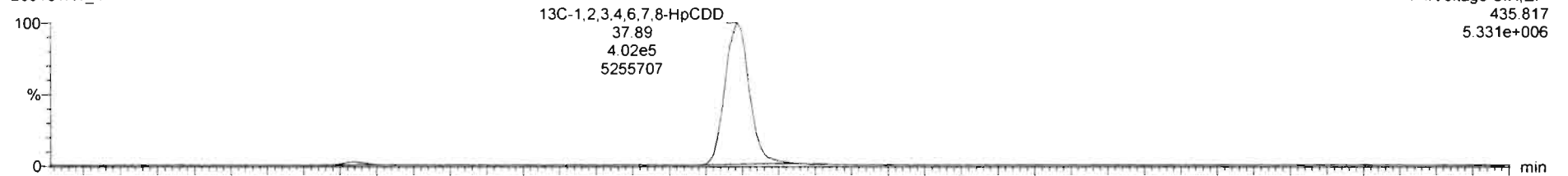


200131R1\_4

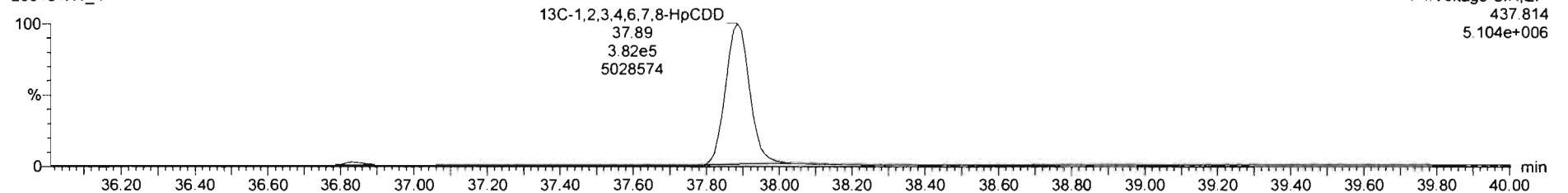


13C-1,2,3,4,6,7,8-HpCDD

200131R1\_4



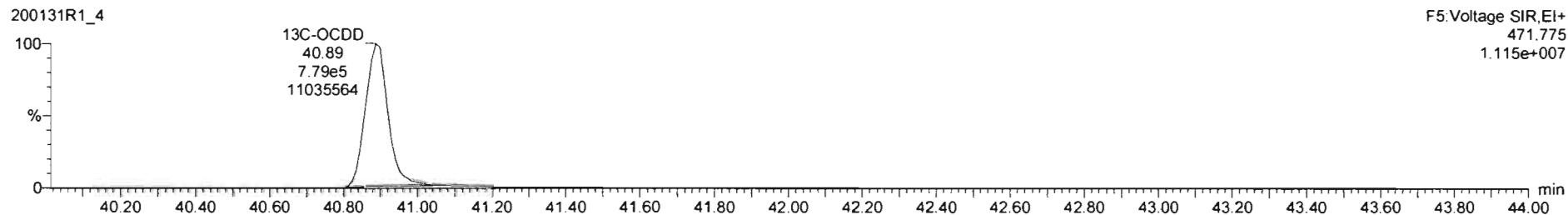
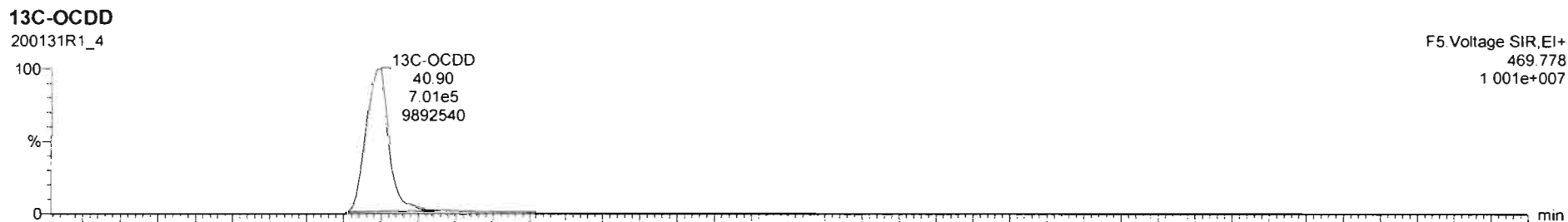
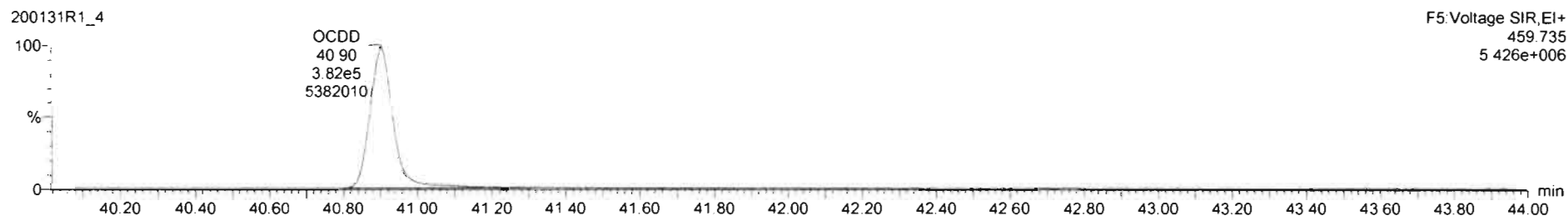
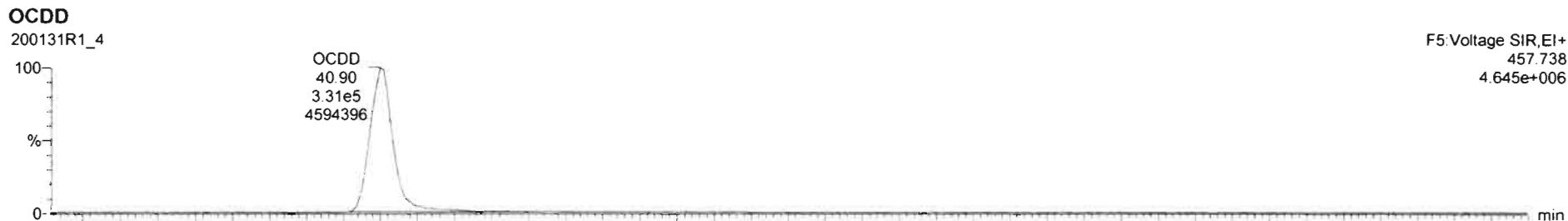
200131R1\_4

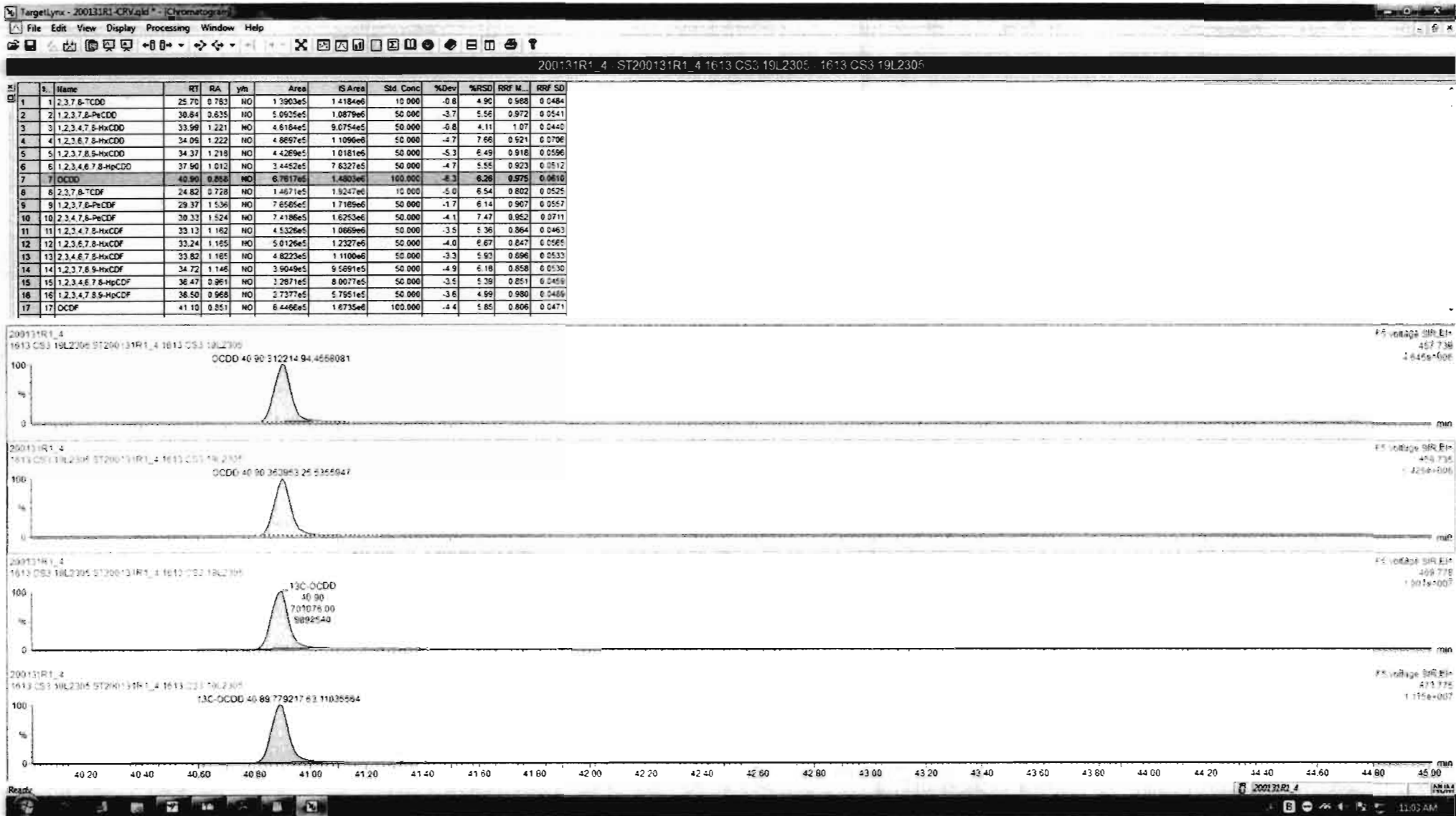


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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Dataset: Untitled

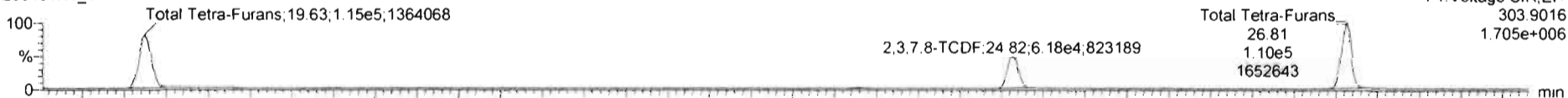
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

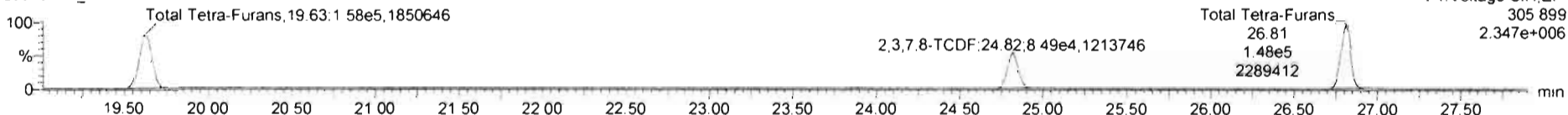
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**2,3,7,8-TCDF**

200131R1\_4

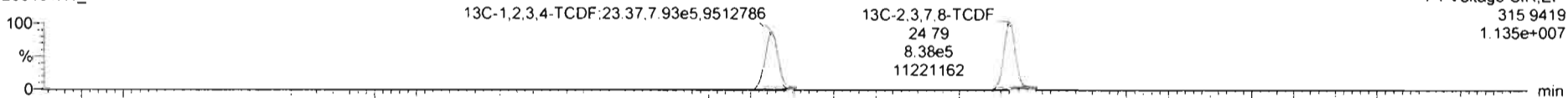


200131R1\_4

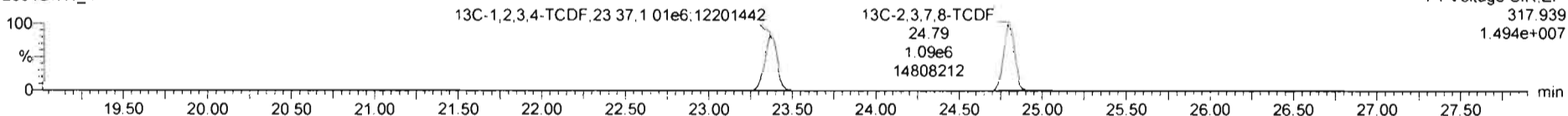


**13C-2,3,7,8-TCDF**

200131R1\_4

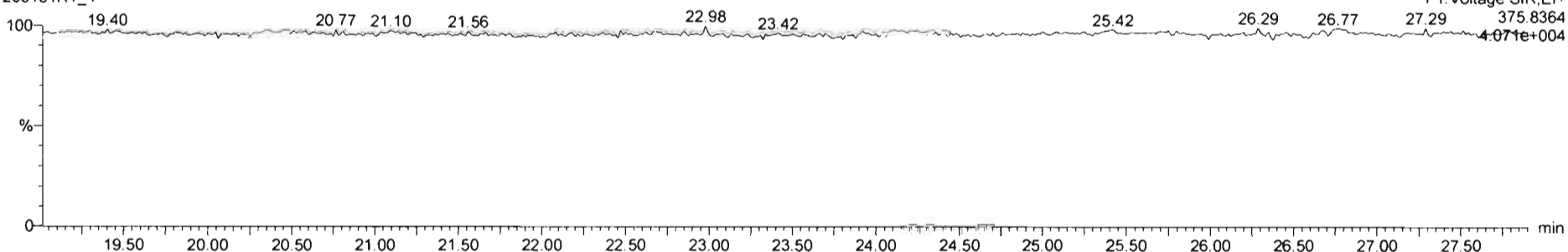


200131R1\_4



**DPE1**

200131R1\_4



Dataset: Untitled

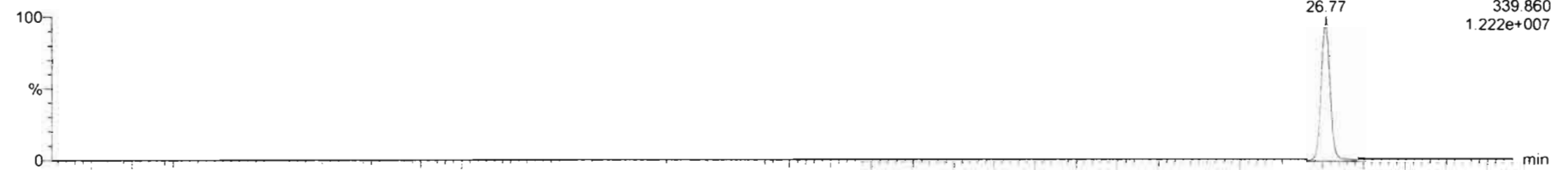
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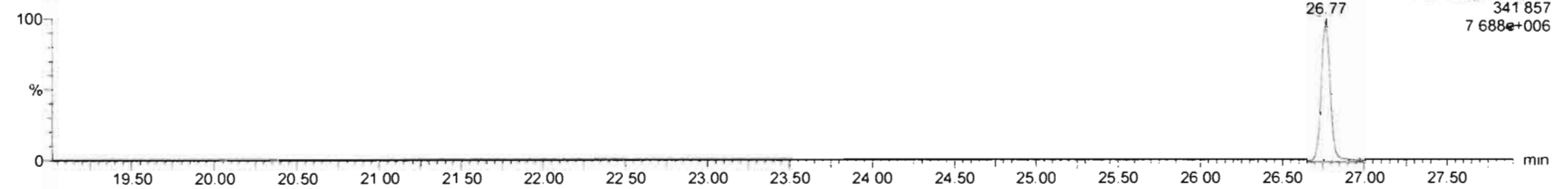
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1st Func. Penta-Furans

200131R1\_4

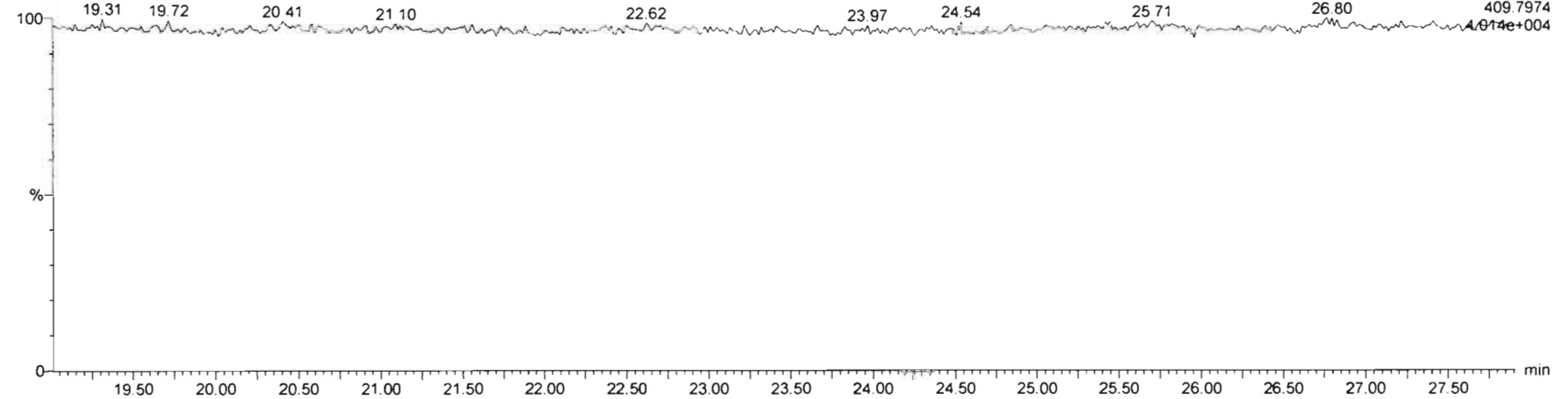


200131R1\_4



DPE6

200131R1\_4



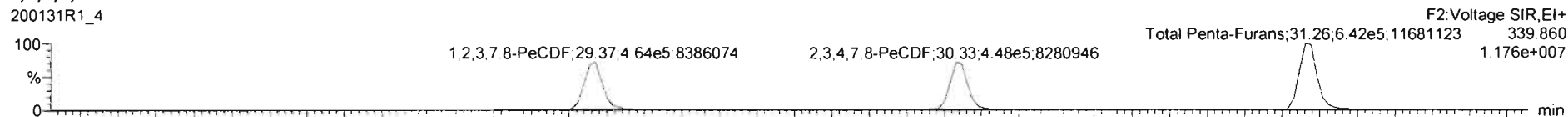
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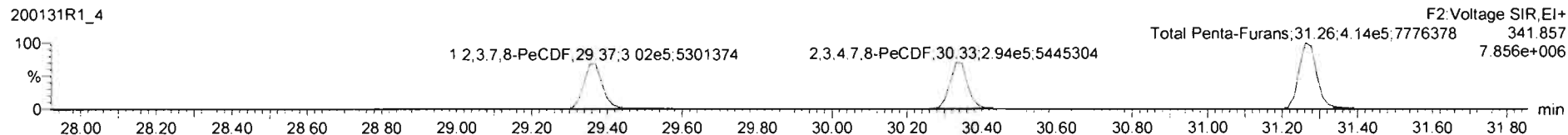
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**1,2,3,7,8-PeCDF**

200131R1\_4

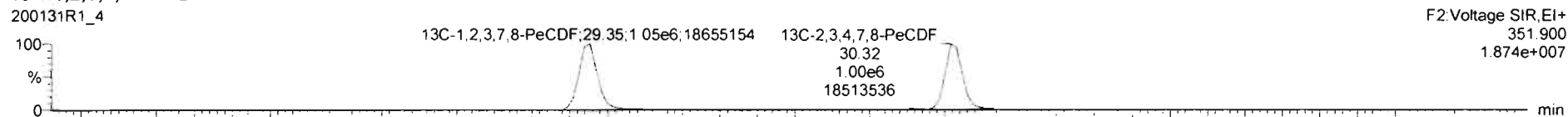


200131R1\_4

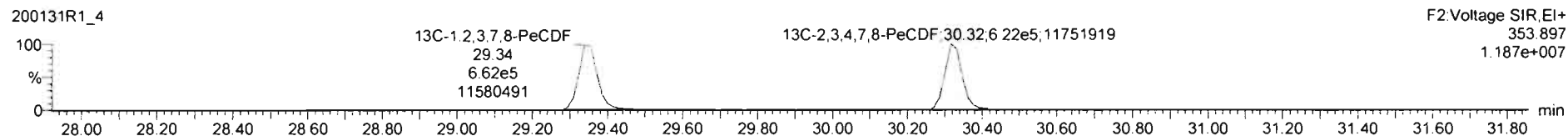


**13C-1,2,3,7,8-PeCDF**

200131R1\_4

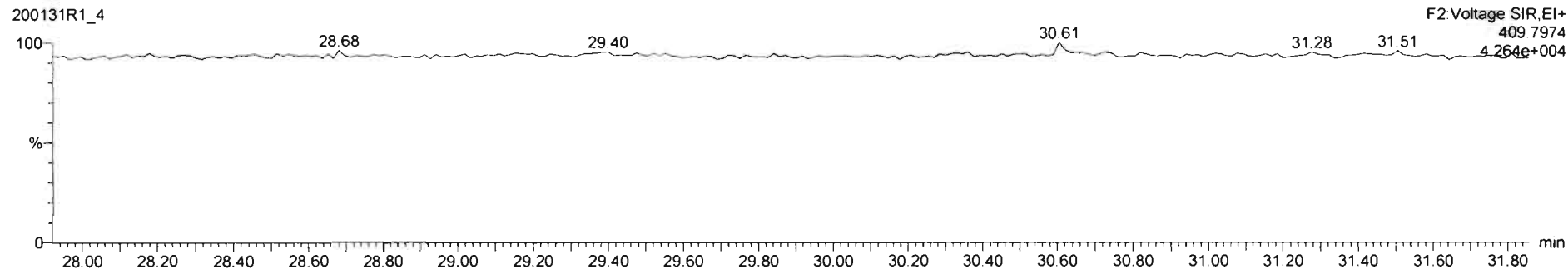


200131R1\_4



**DPE2**

200131R1\_4



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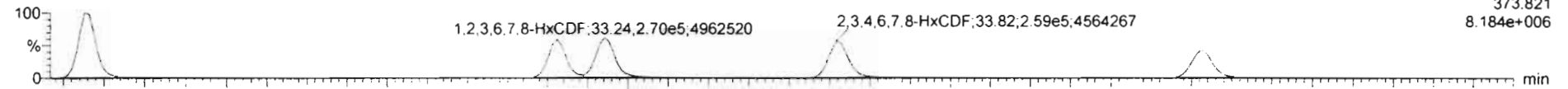
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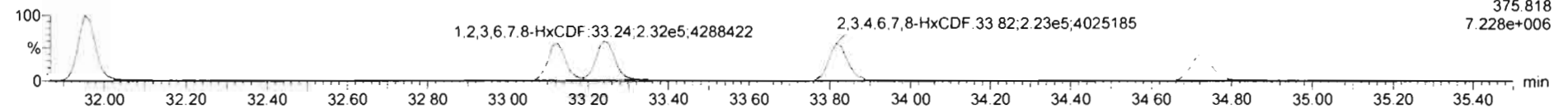
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**1,2,3,4,7,8-HxCDF**

200131R1\_4

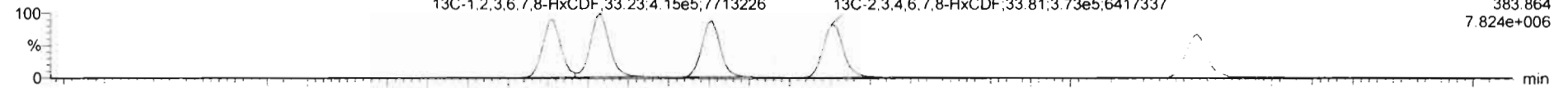


200131R1\_4

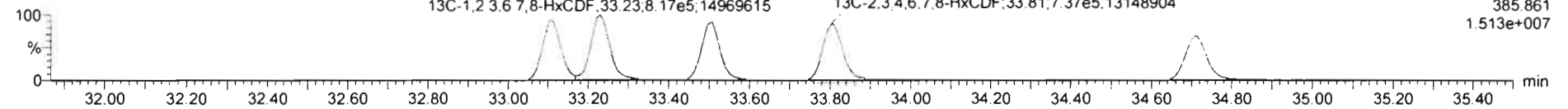


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_4

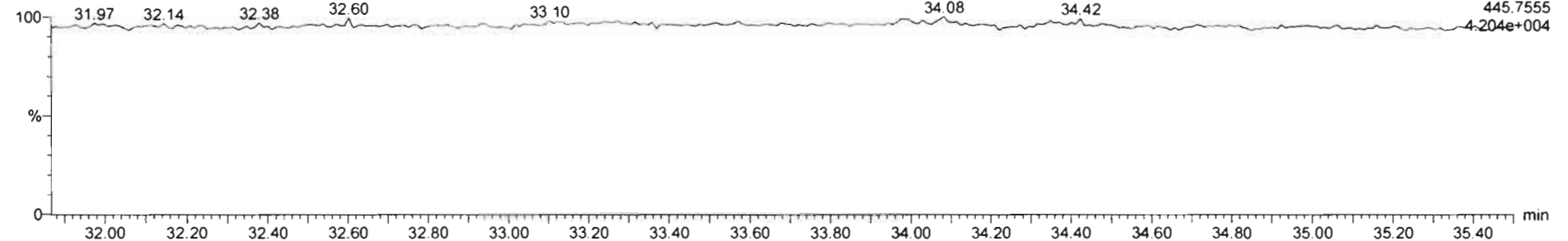


200131R1\_4



**DPE3**

200131R1\_4

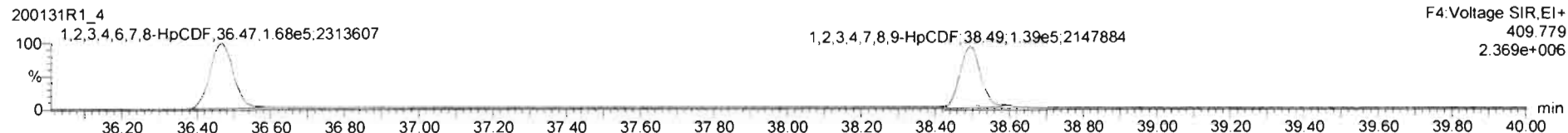
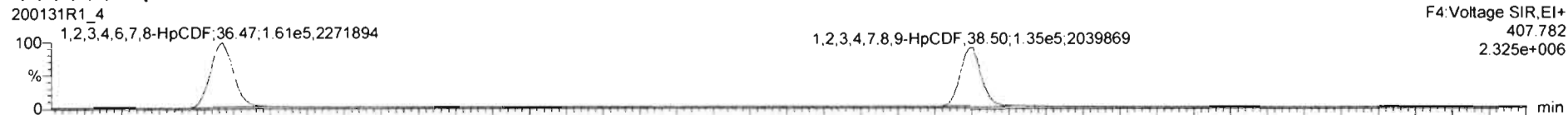


Dataset: Untitled

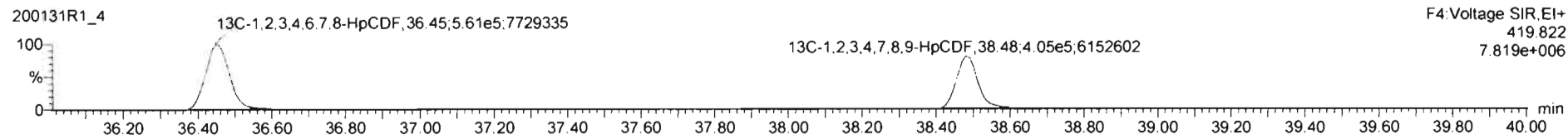
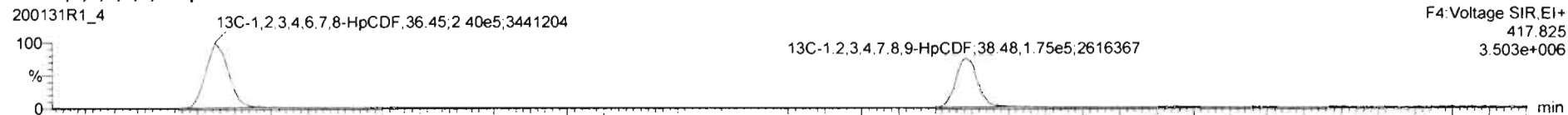
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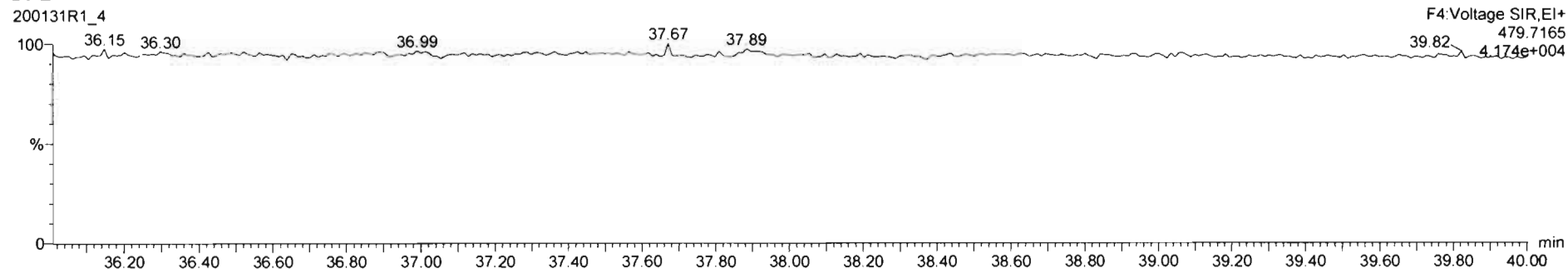
**1,2,3,4,6,7,8-HpCDF**



**13C-1,2,3,4,6,7,8-HpCDF**



**DPE4**

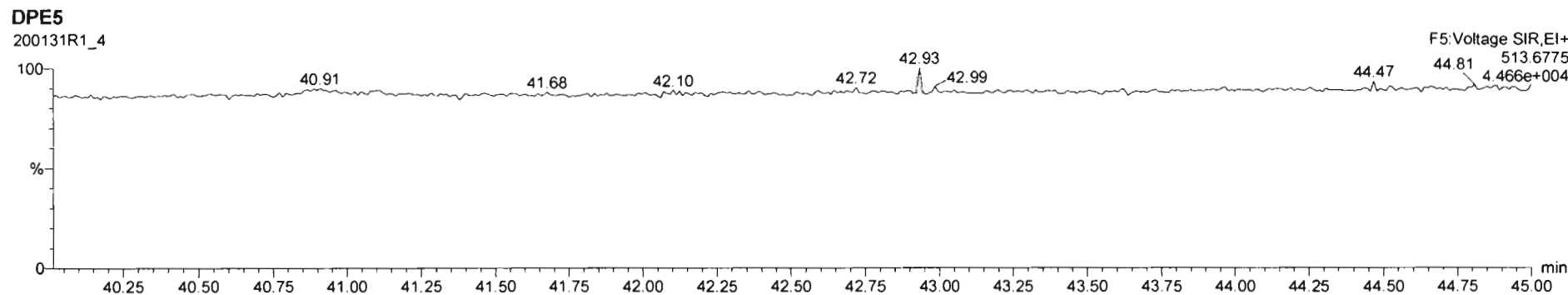
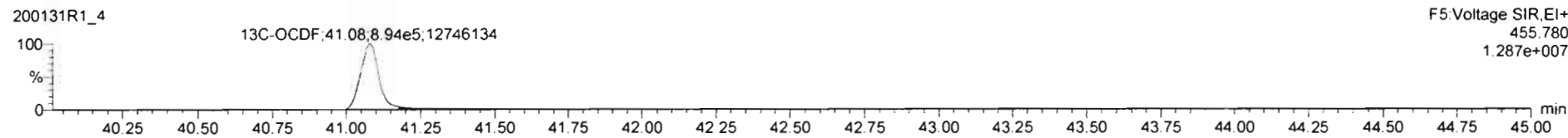
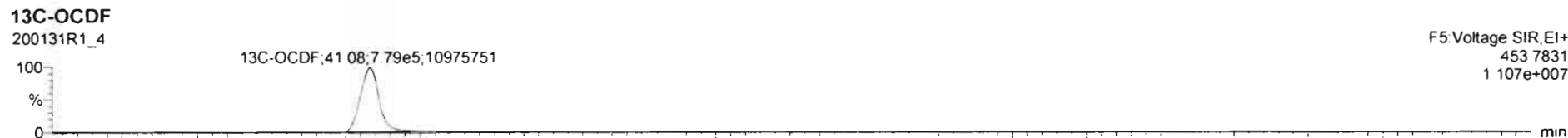
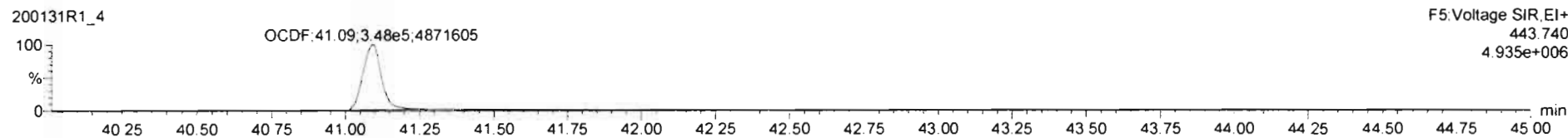
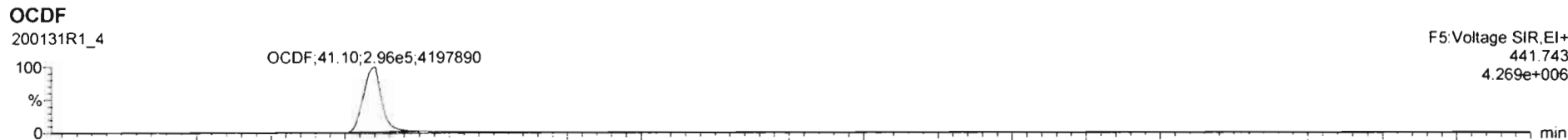


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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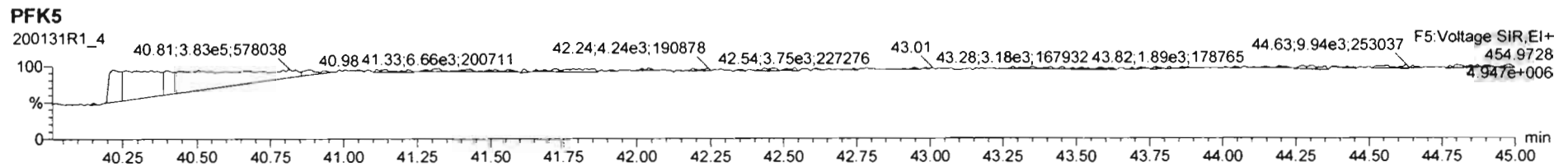
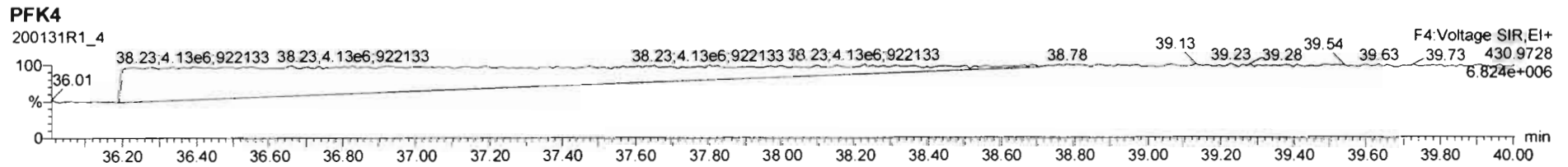
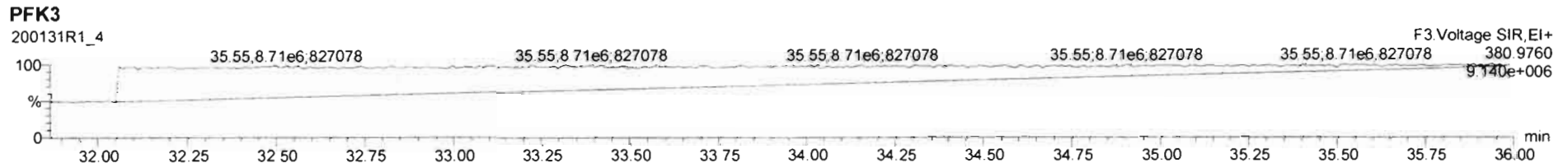
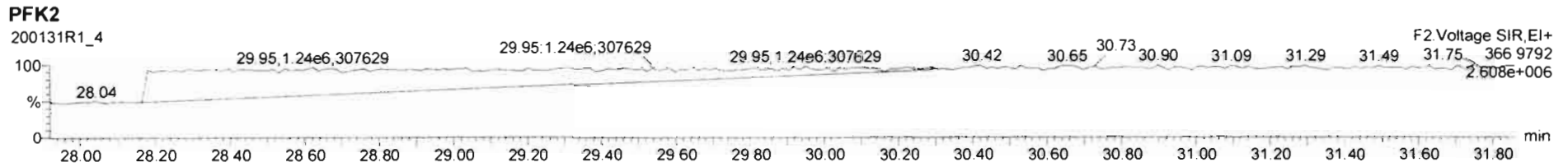
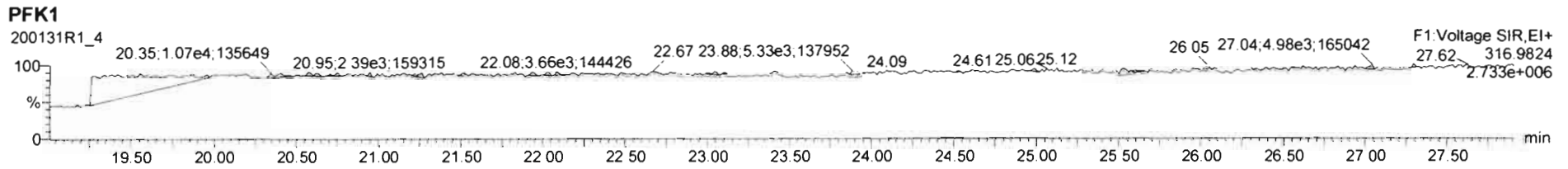


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

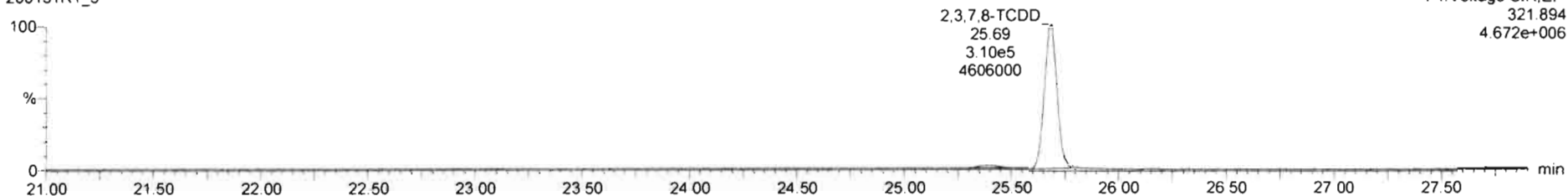
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**2,3,7,8-TCDD**

200131R1\_5

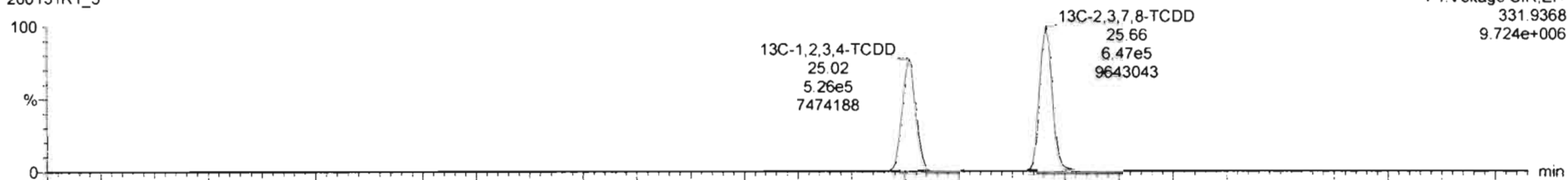


200131R1\_5

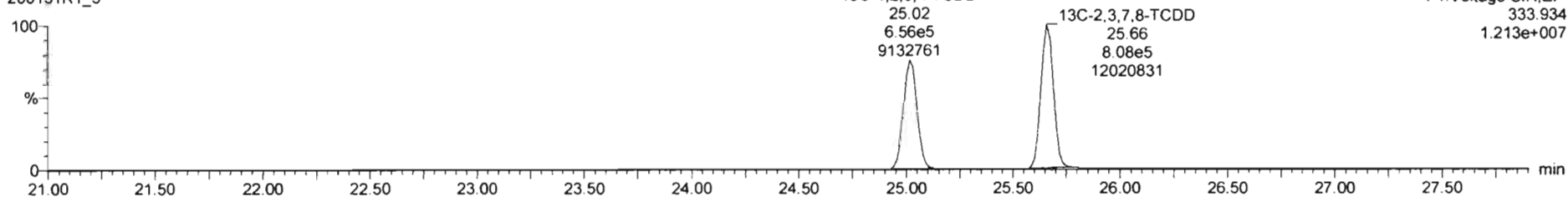


**13C-2,3,7,8-TCDD**

200131R1\_5



200131R1\_5





Dataset: Untitled

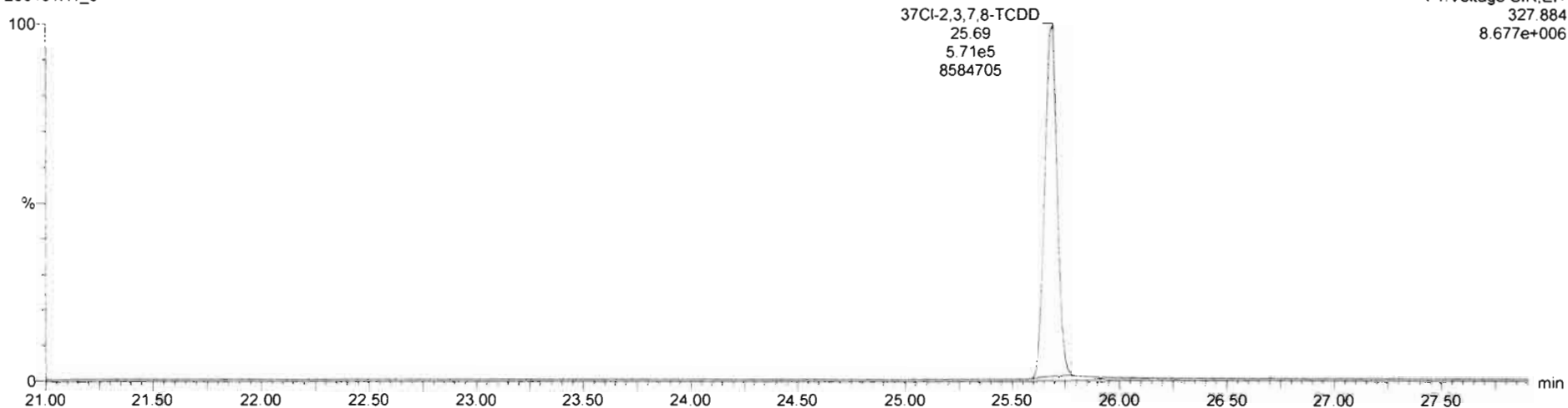
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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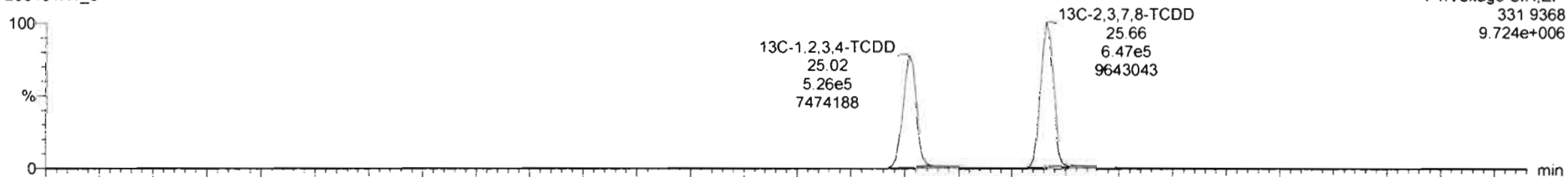
**37Cl-2,3,7,8-TCDD**

200131R1\_5

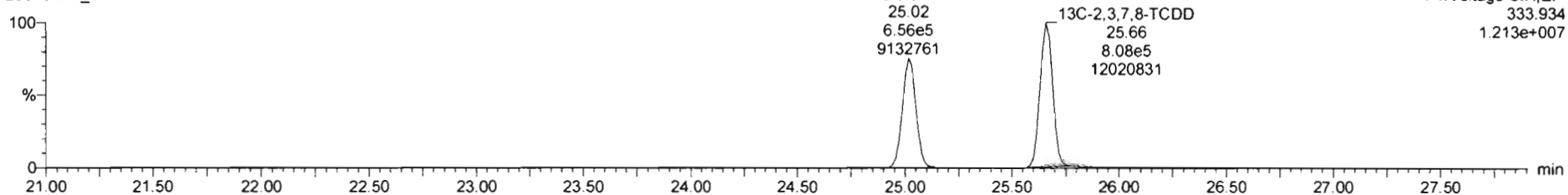


**13C-1,2,3,4-TCDD**

200131R1\_5



200131R1\_5



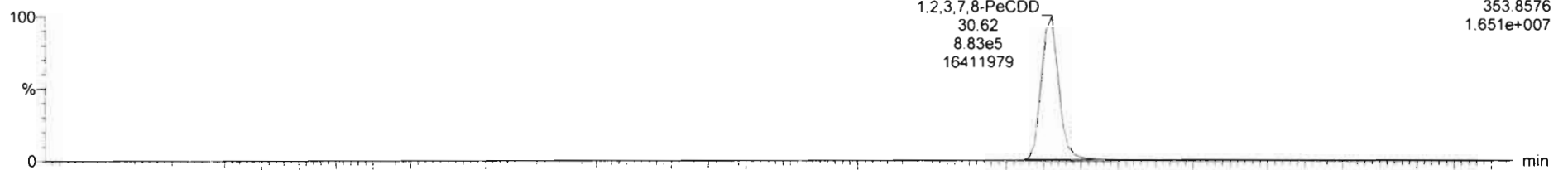
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

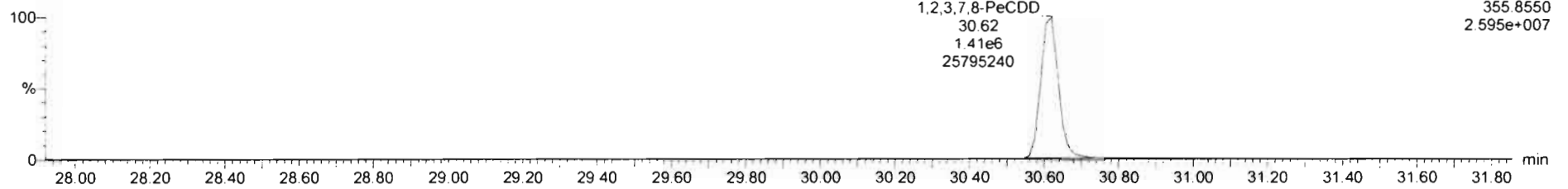
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**1,2,3,7,8-PeCDD**

200131R1\_5

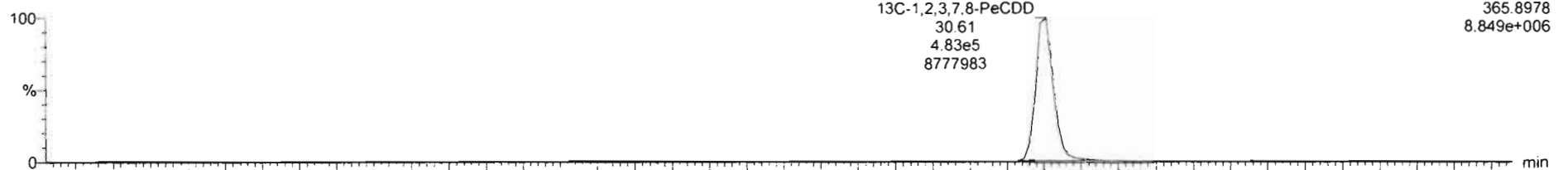


200131R1\_5

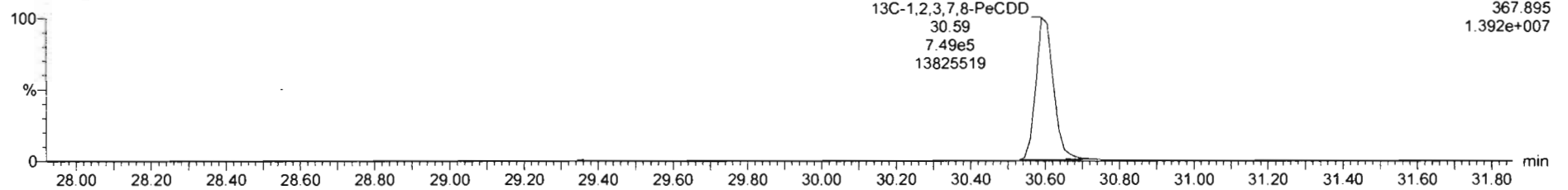


**13C-1,2,3,7,8-PeCDD**

200131R1\_5



200131R1\_5



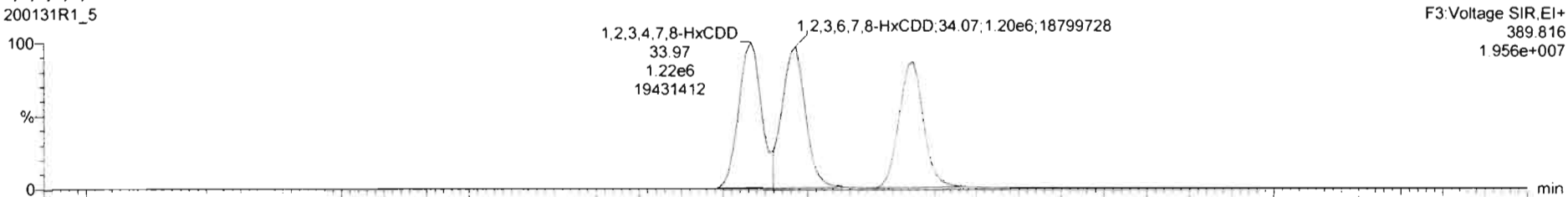
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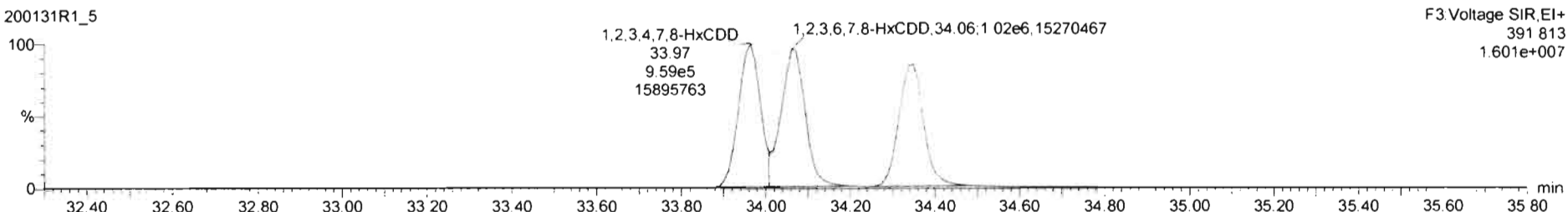
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1,2,3,4,7,8-HxCDD

200131R1\_5

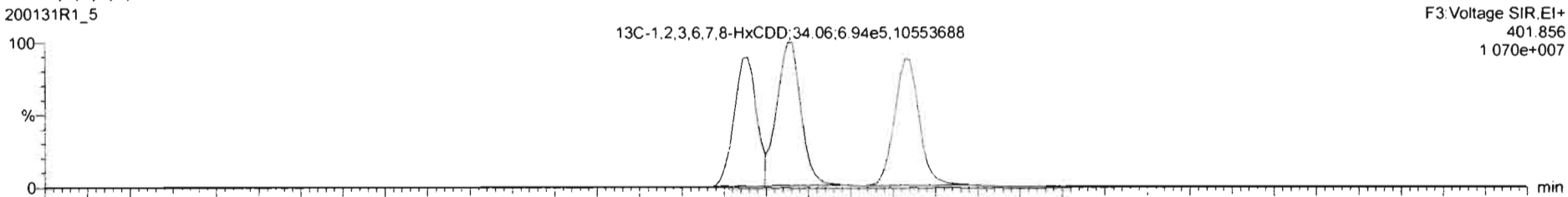


200131R1\_5

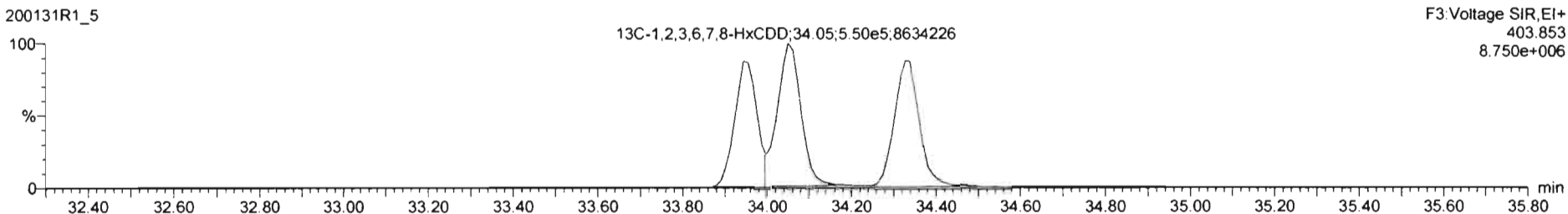


13C-1,2,3,4,7,8-HxCDD

200131R1\_5



200131R1\_5



Dataset: Untitled

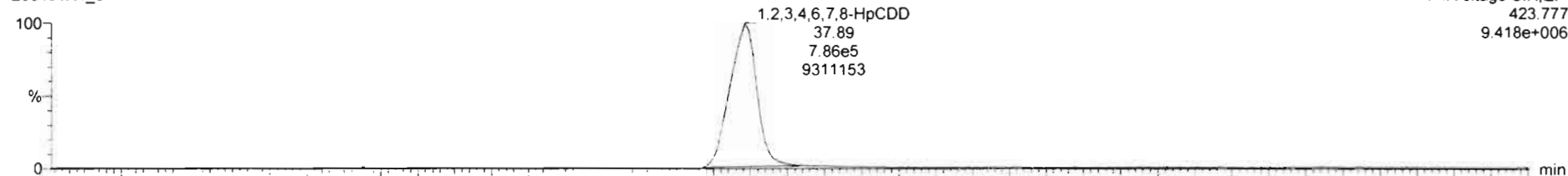
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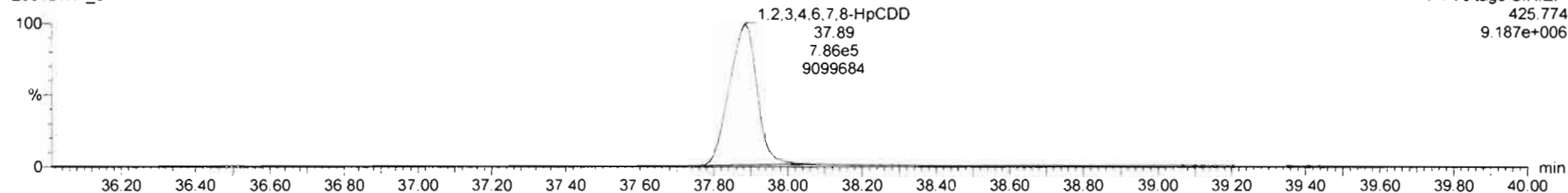
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**1,2,3,4,6,7,8-HpCDD**

200131R1\_5

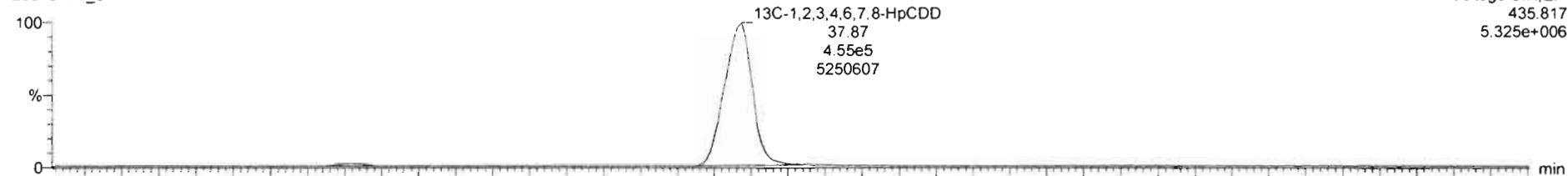


200131R1\_5

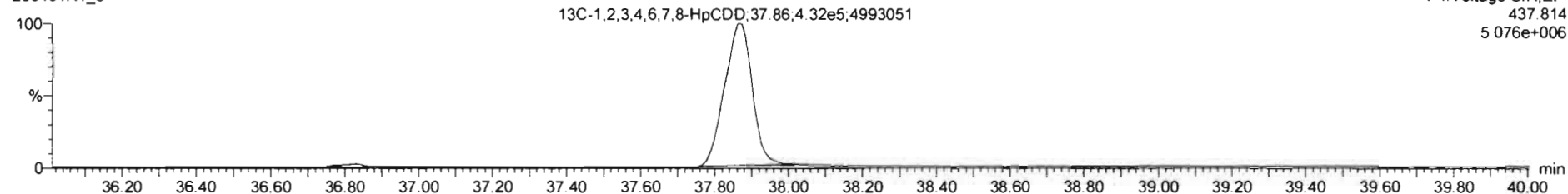


**13C-1,2,3,4,6,7,8-HpCDD**

200131R1\_5



200131R1\_5

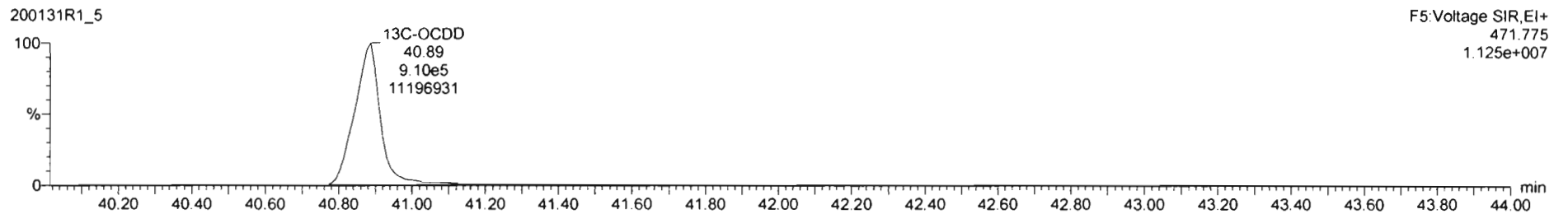
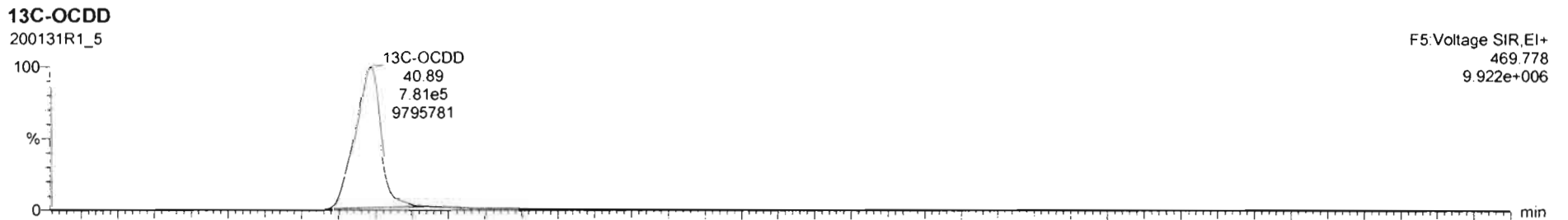
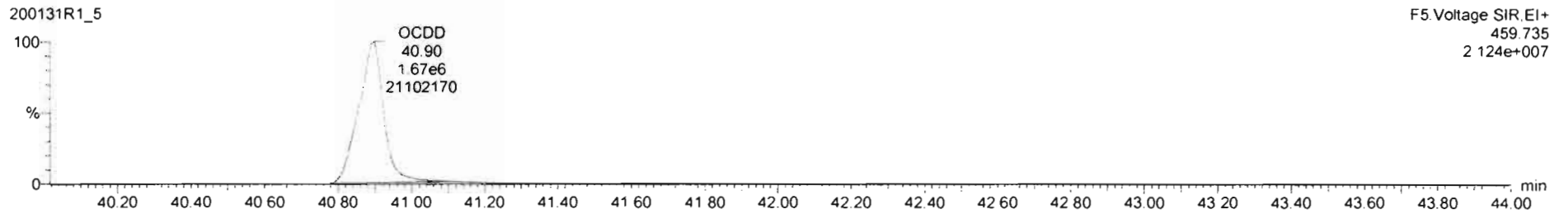
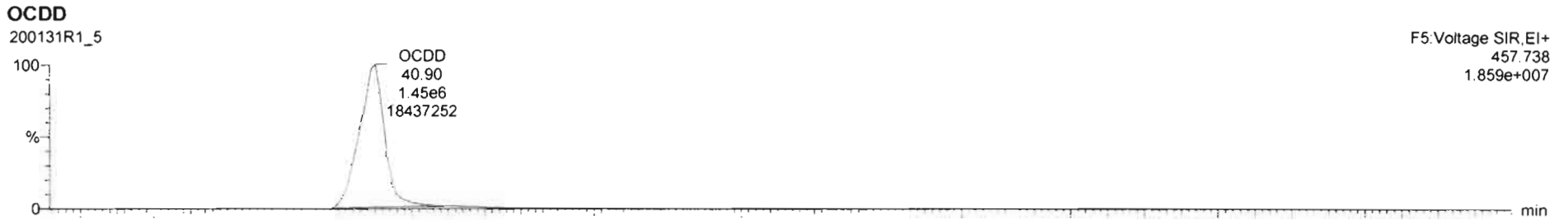


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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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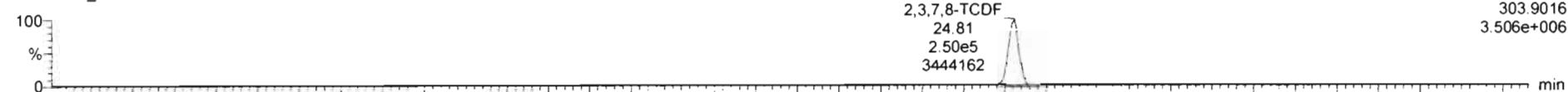
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

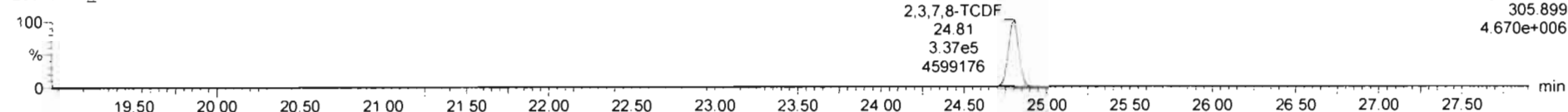
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**2,3,7,8-TCDF**

200131R1\_5

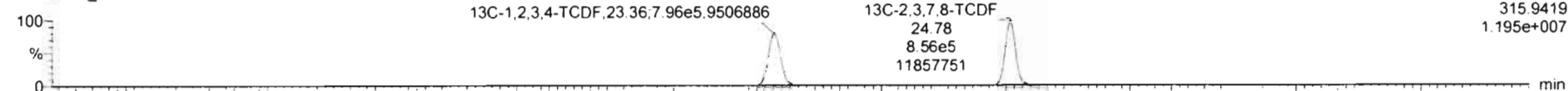


200131R1\_5

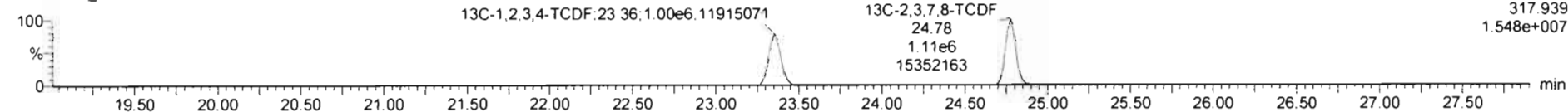


**13C-2,3,7,8-TCDF**

200131R1\_5

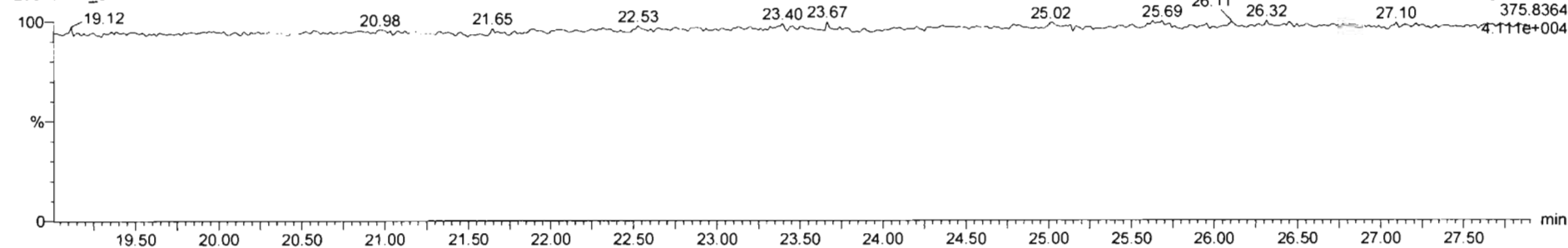


200131R1\_5



**DPE1**

200131R1\_5

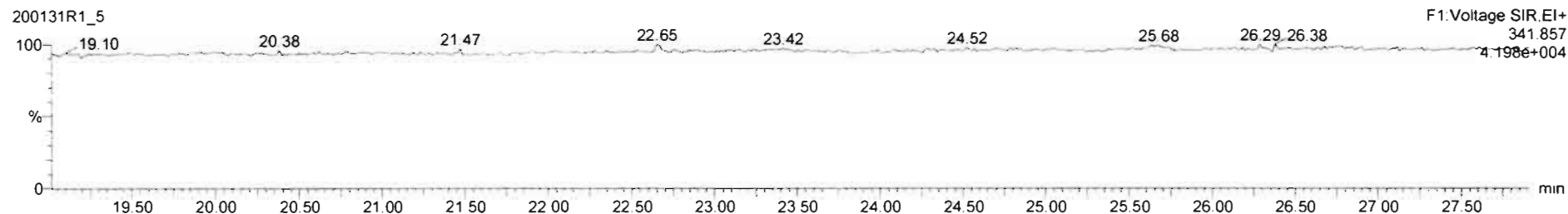
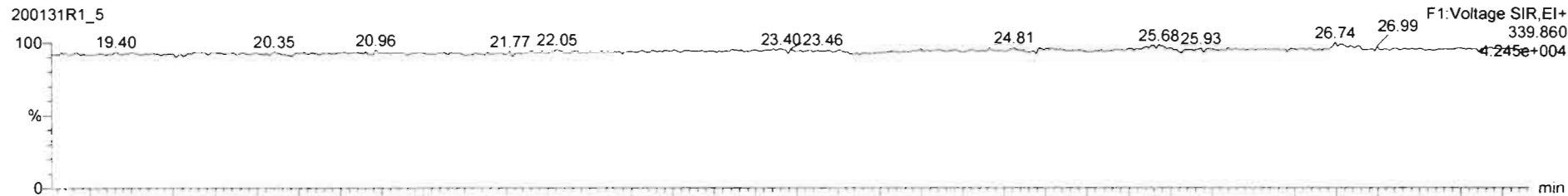


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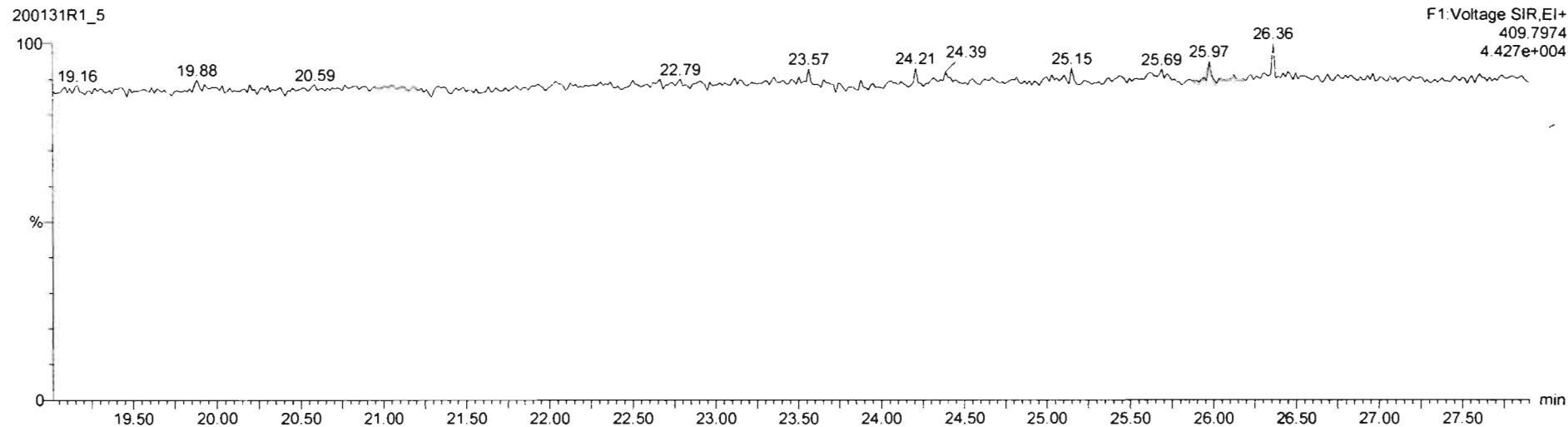
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Name: 200131R1\_5, Date: 31-Jan-2020, Time: 19:57:17, ID: ST200131R1\_5 1613 CS4 19L2306, Description: 1613 CS4 19L2306

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DPE6



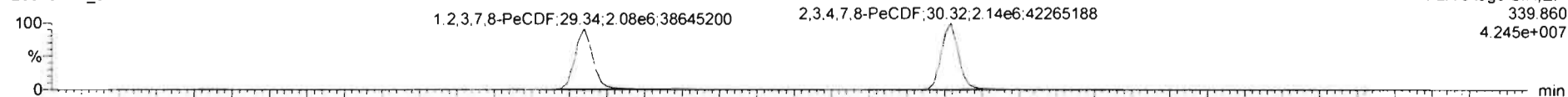
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_5, Date: 31-Jan-2020, Time: 19:57:17, ID: ST200131R1\_5 1613 CS4 19L2306, Description: 1613 CS4 19L2306

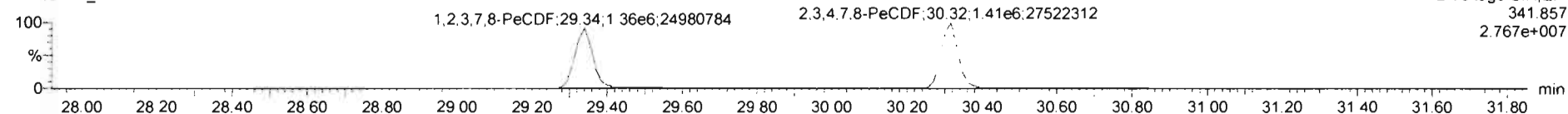
**1,2,3,7,8-PeCDF**

200131R1\_5



F2:Voltage SIR,EI+  
339.860  
4.245e+007

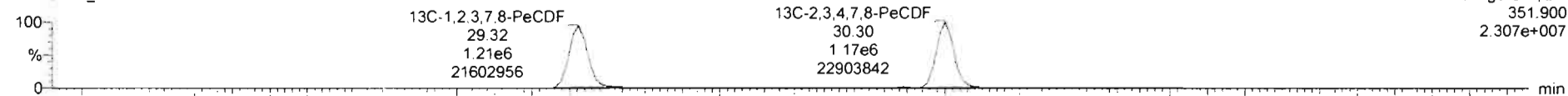
200131R1\_5



F2:Voltage SIR,EI+  
341.857  
2.767e+007

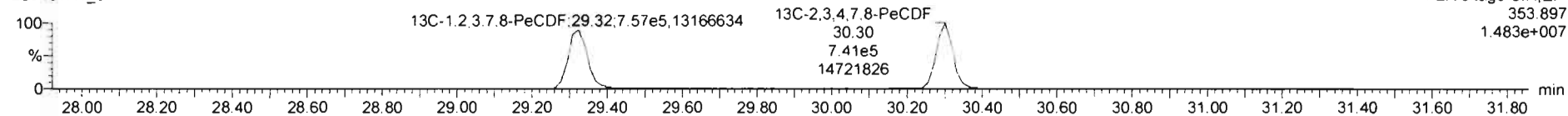
**13C-1,2,3,7,8-PeCDF**

200131R1\_5



F2:Voltage SIR,EI+  
351.900  
2.307e+007

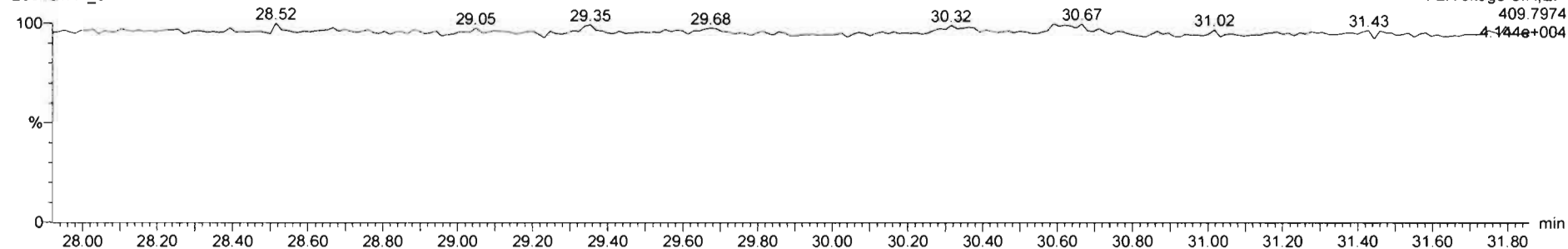
200131R1\_5



F2:Voltage SIR,EI+  
353.897  
1.483e+007

**DPE2**

200131R1\_5



F2:Voltage SIR,EI+  
409.7974  
4.144e+004



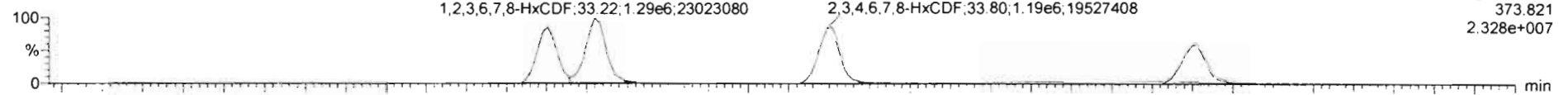
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

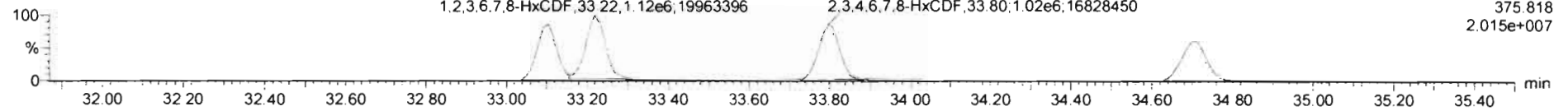
Name: 200131R1\_5, Date: 31-Jan-2020, Time: 19:57:17, ID: ST200131R1\_5 1613 CS4 19L2306, Description: 1613 CS4 19L2306

**1,2,3,4,7,8-HxCDF**

200131R1\_5

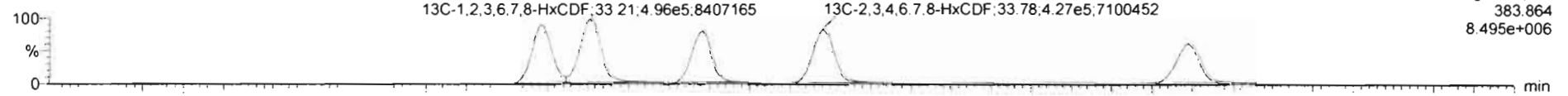


200131R1\_5

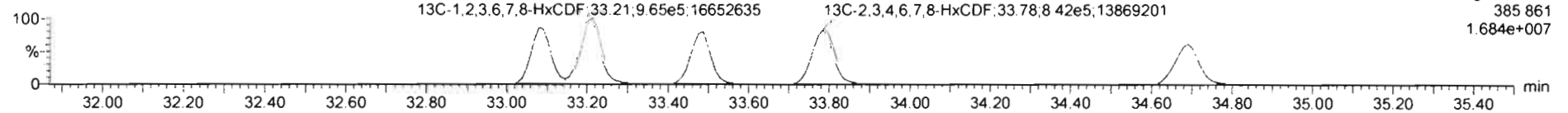


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_5

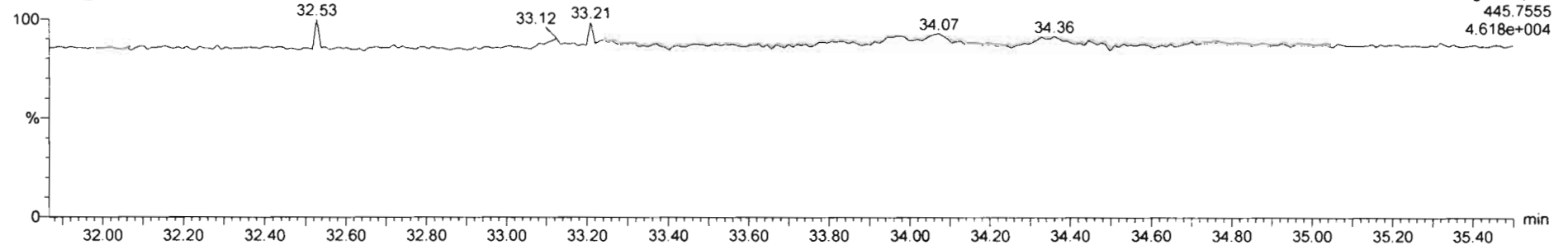


200131R1\_5



**DPE3**

200131R1\_5

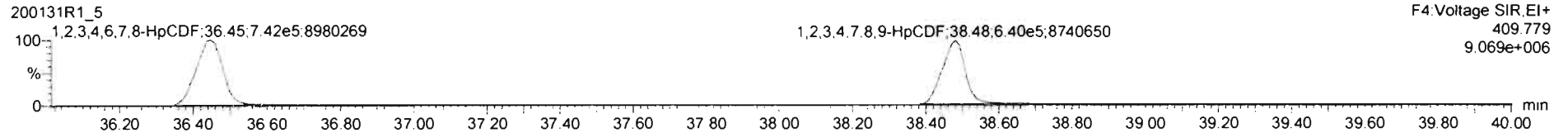
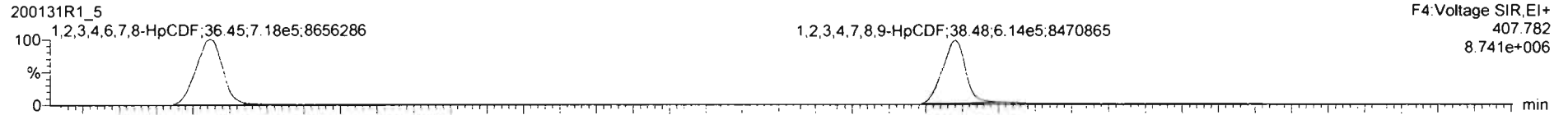


Dataset: Untitled

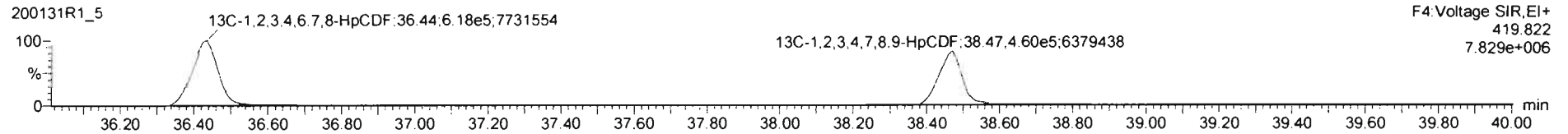
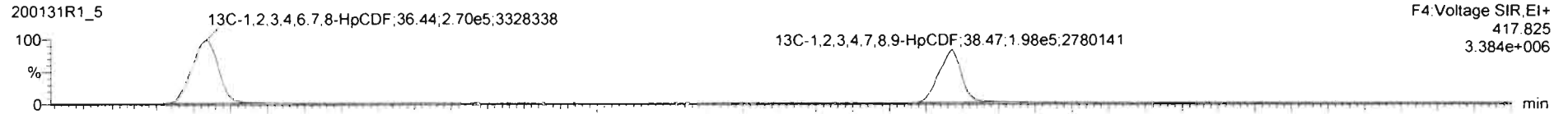
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_5, Date: 31-Jan-2020, Time: 19:57:17, ID: ST200131R1\_5 1613 CS4 19L2306, Description: 1613 CS4 19L2306

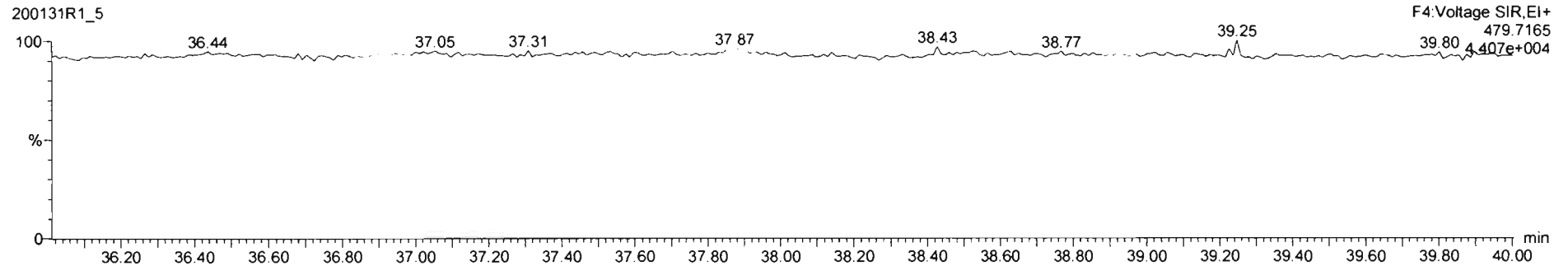
**1,2,3,4,6,7,8-HpCDF**



**13C-1,2,3,4,6,7,8-HpCDF**



**DPE4**

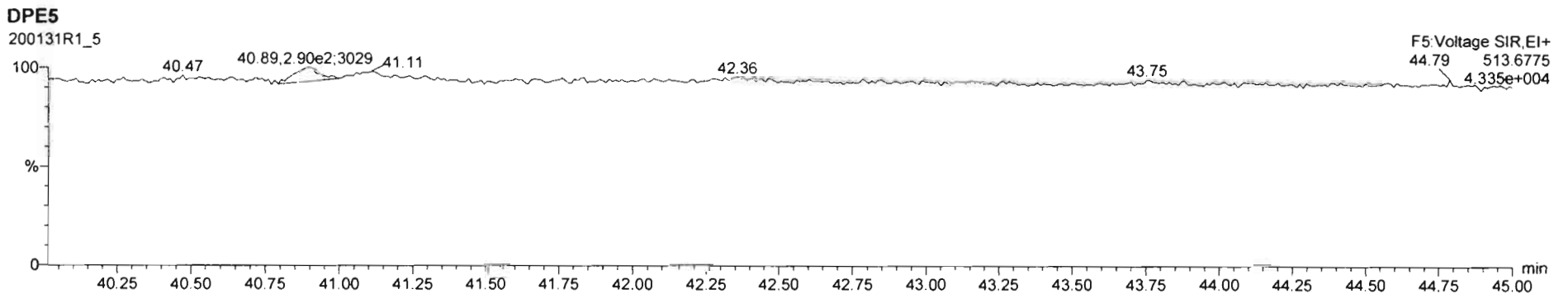
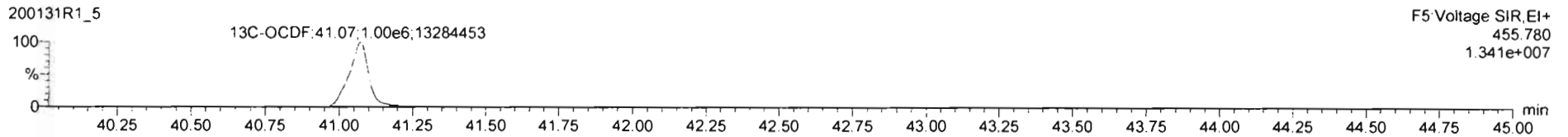
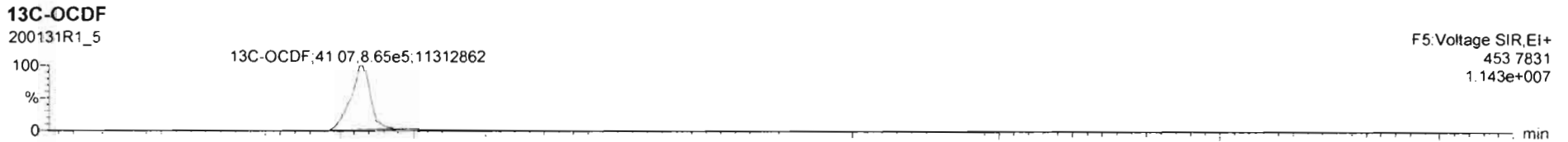
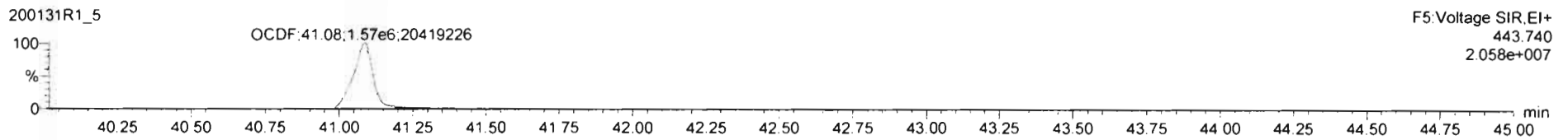
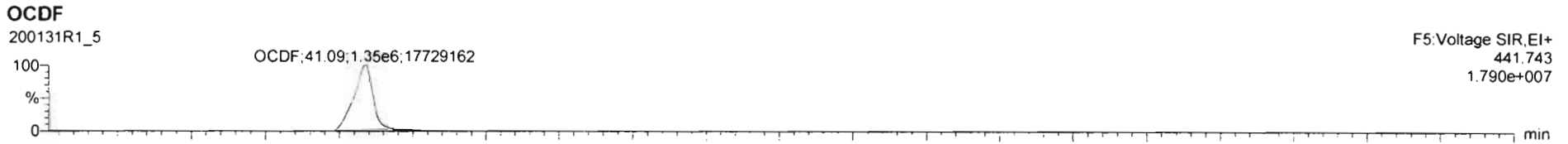


Dataset: Untitled

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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

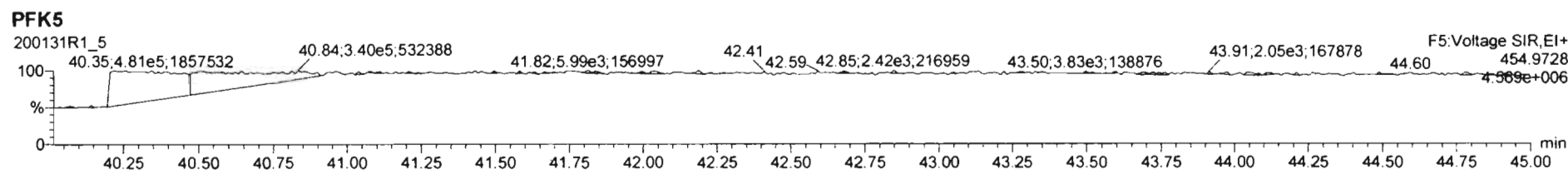
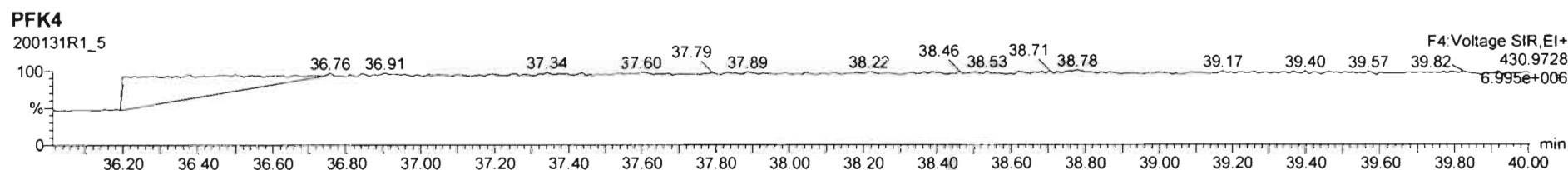
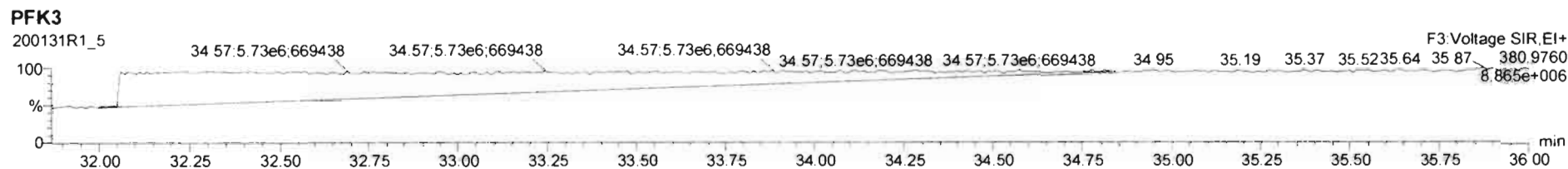
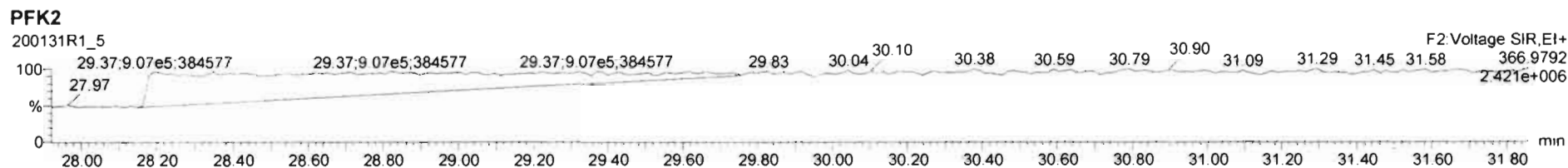
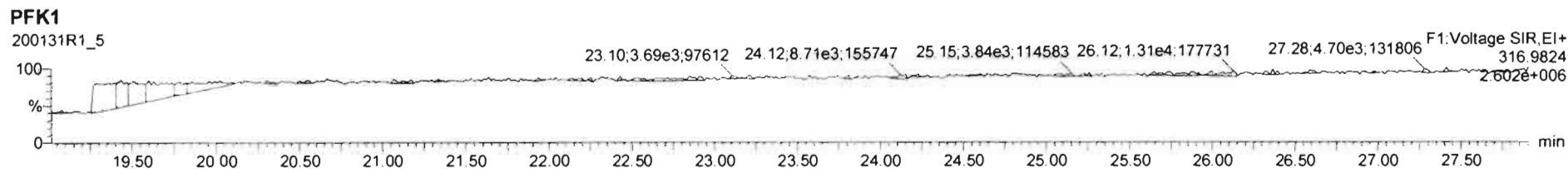
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Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_5, Date: 31-Jan-2020, Time: 19:57:17, ID: ST200131R1\_5 1613 CS4 19L2306, Description: 1613 CS4 19L2306



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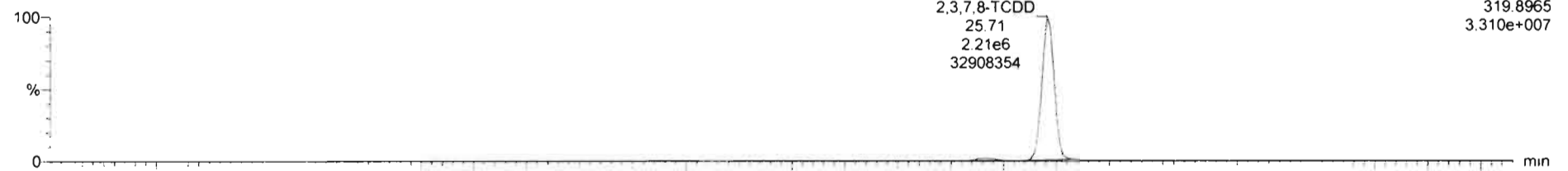
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

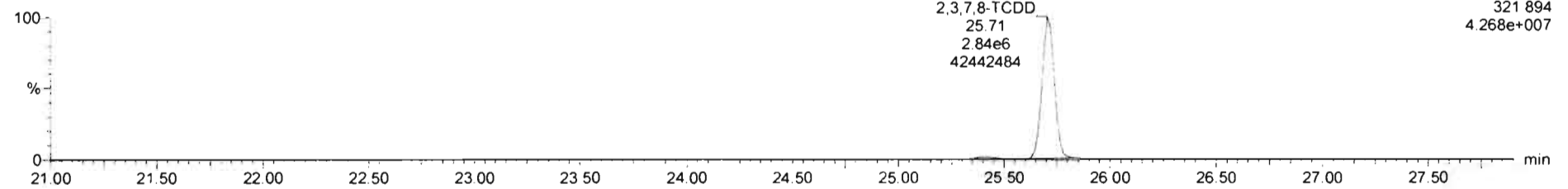
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**2,3,7,8-TCDD**

200131R1\_6

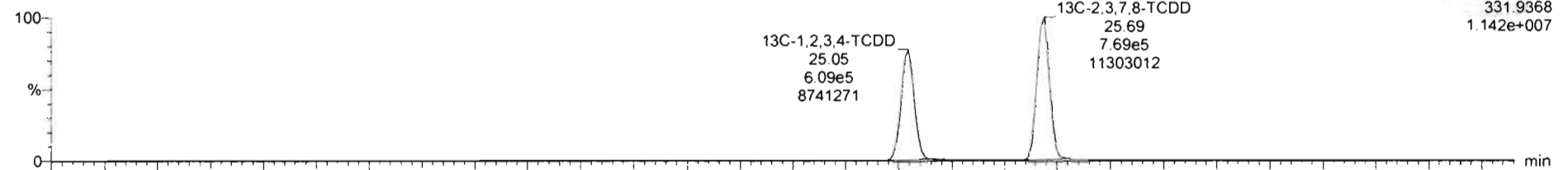


200131R1\_6

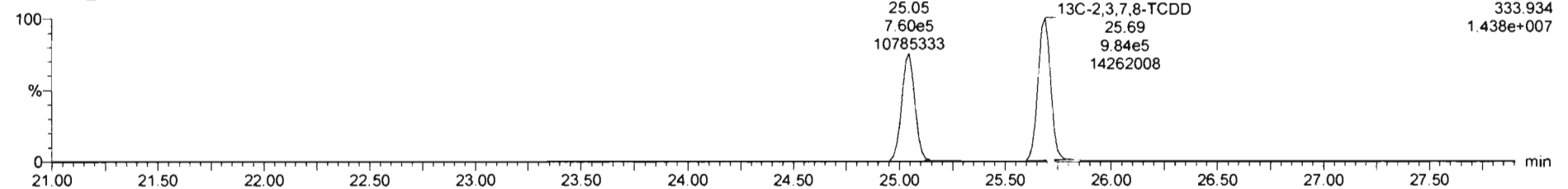


**13C-2,3,7,8-TCDD**

200131R1\_6



200131R1\_6



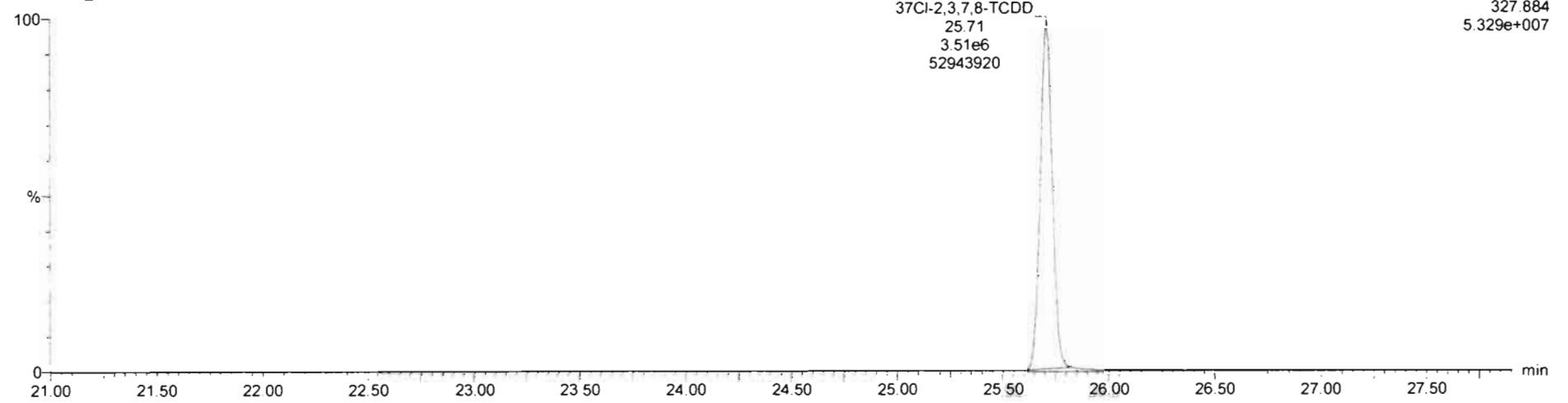
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

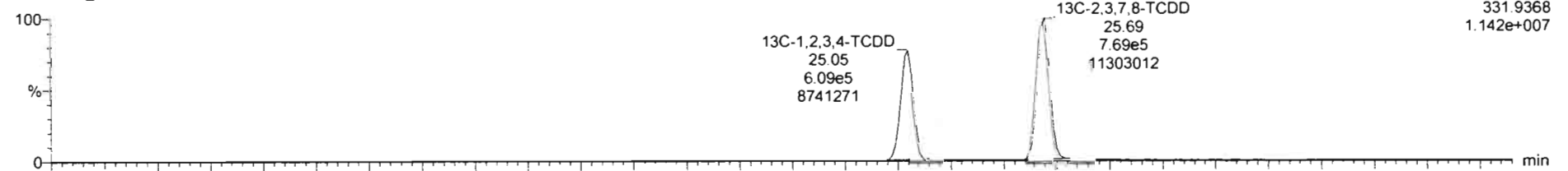
**37Cl-2,3,7,8-TCDD**

200131R1\_6

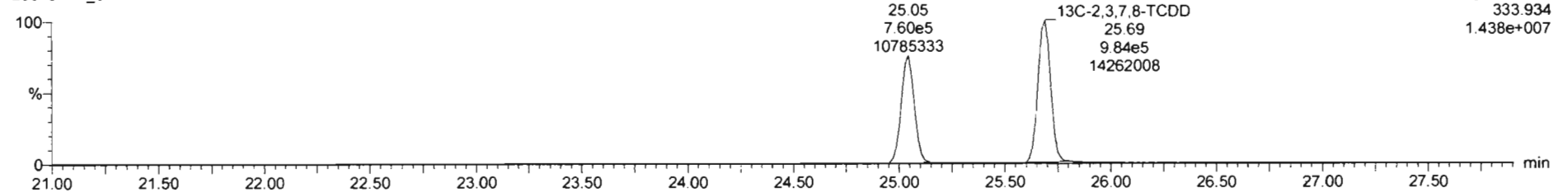


**13C-1,2,3,4-TCDD**

200131R1\_6



200131R1\_6



Dataset: Untitled

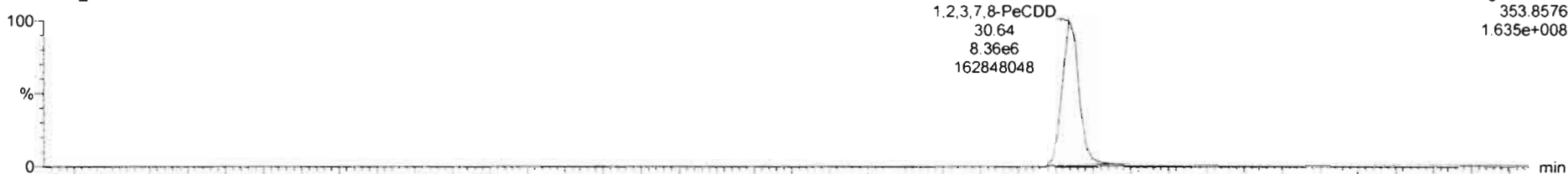
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

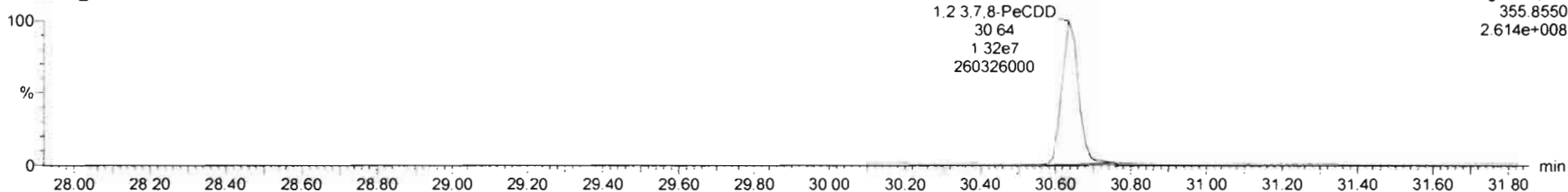
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**1,2,3,7,8-PeCDD**

200131R1\_6

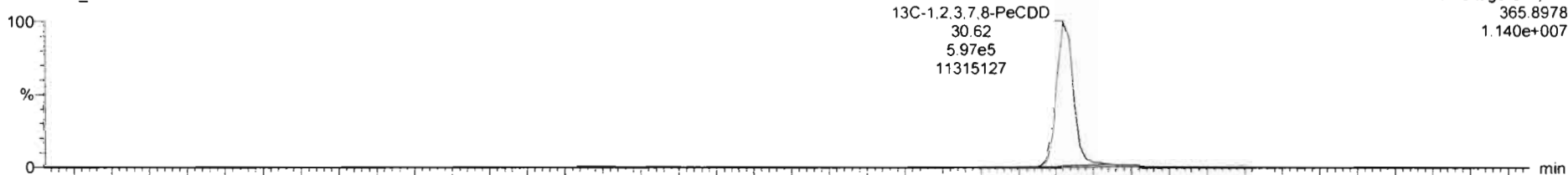


200131R1\_6

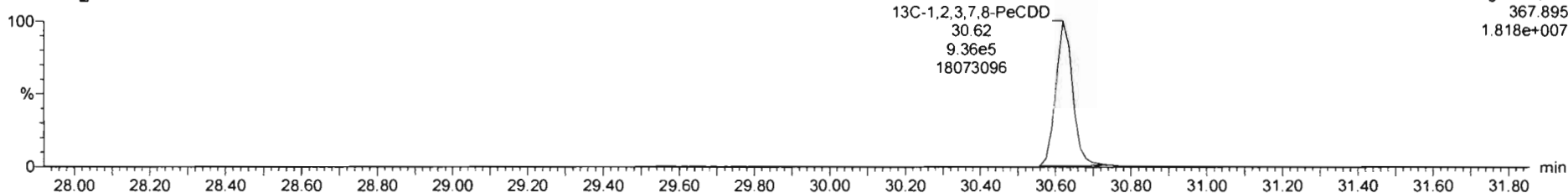


**13C-1,2,3,7,8-PeCDD**

200131R1\_6



200131R1\_6



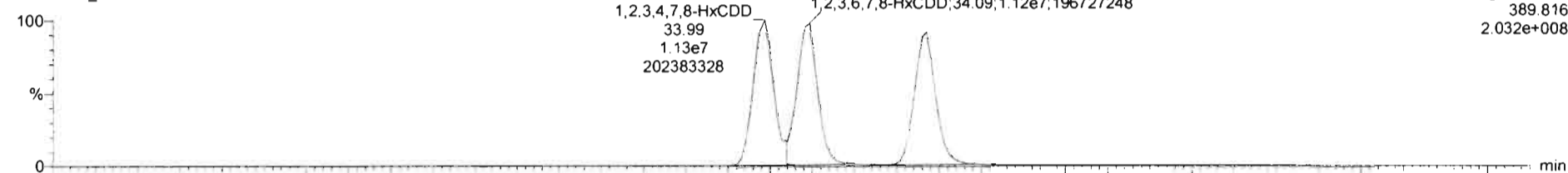
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

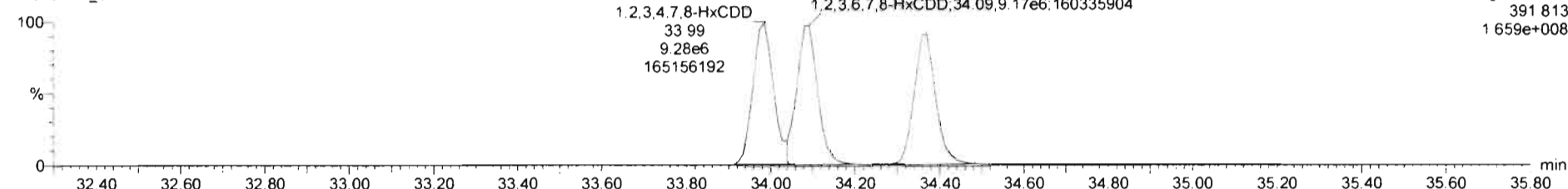
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1,2,3,4,7,8-HxCDD

200131R1\_6

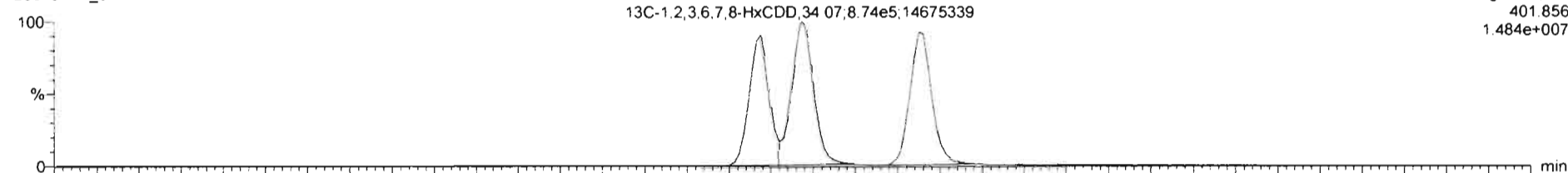


200131R1\_6

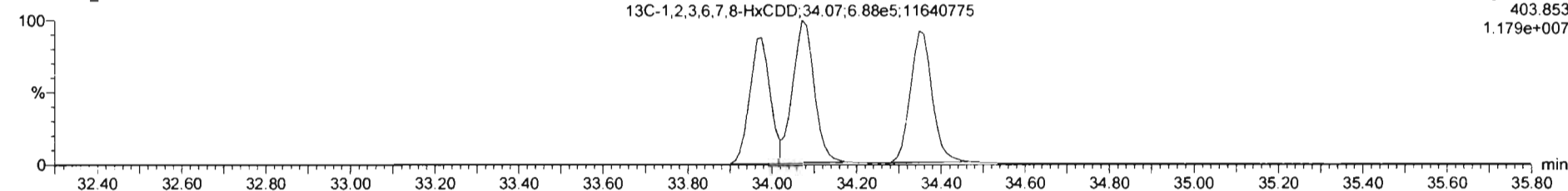


13C-1,2,3,4,7,8-HxCDD

200131R1\_6



200131R1\_6





Dataset: Untitled

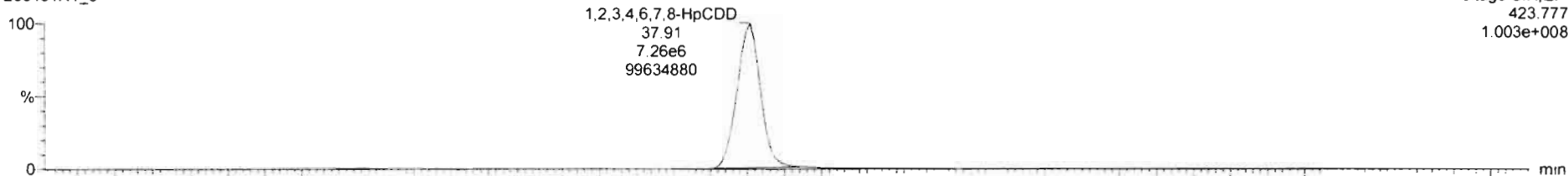
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

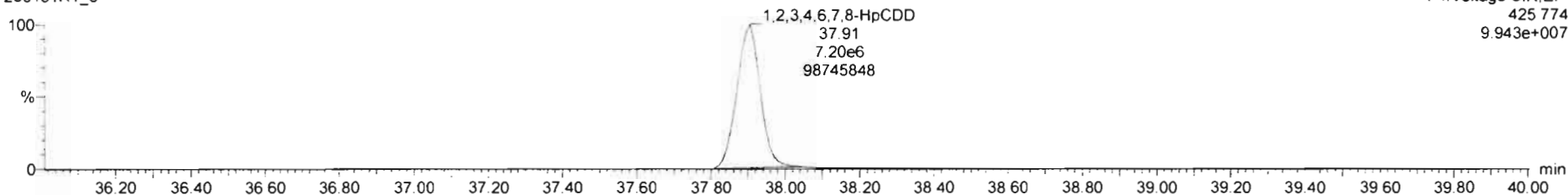
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**1,2,3,4,6,7,8-HpCDD**

200131R1\_6

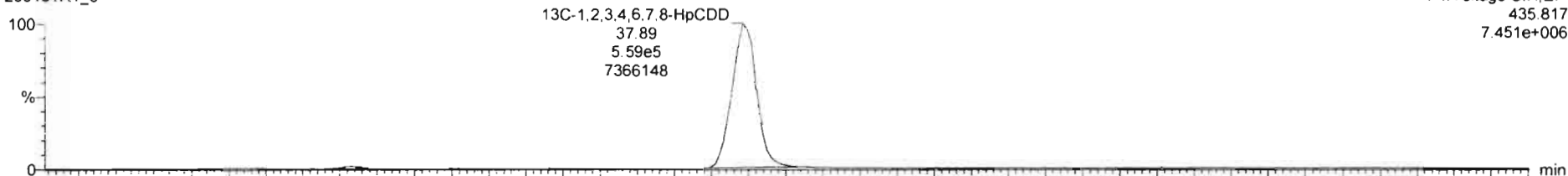


200131R1\_6

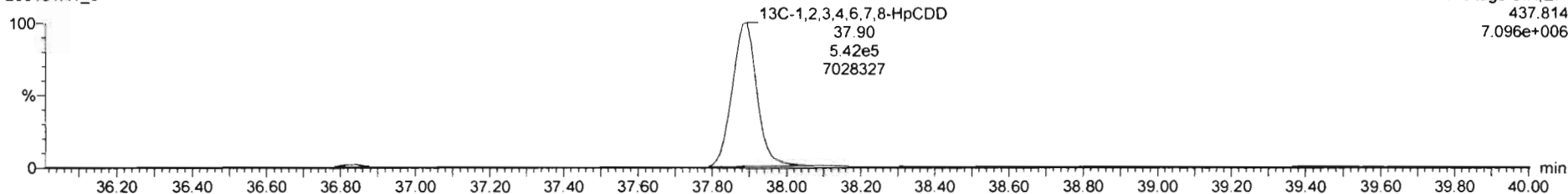


**13C-1,2,3,4,6,7,8-HpCDD**

200131R1\_6



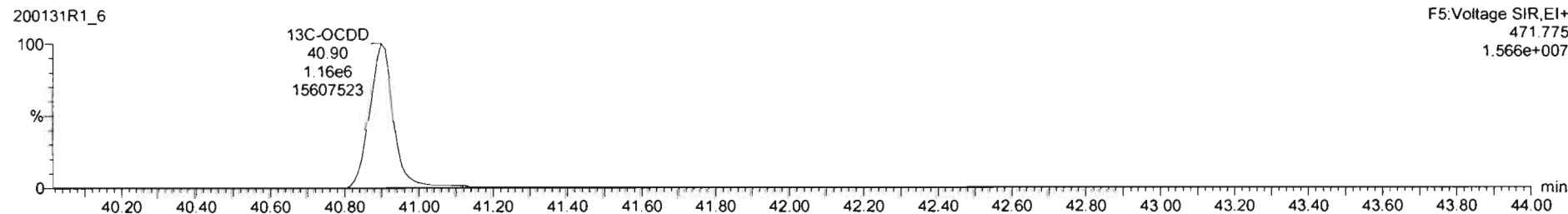
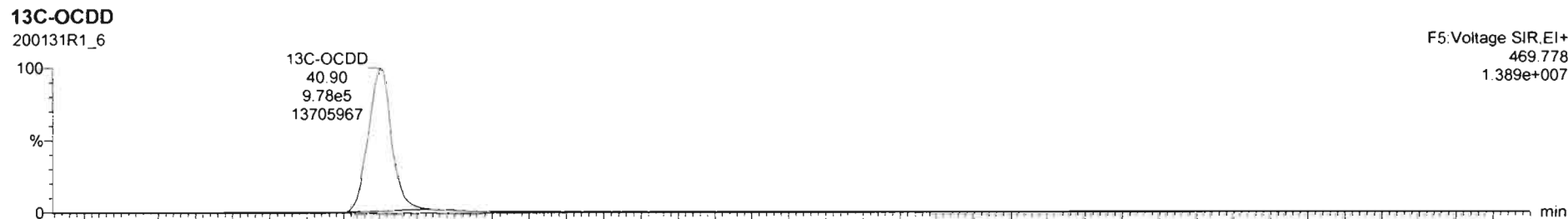
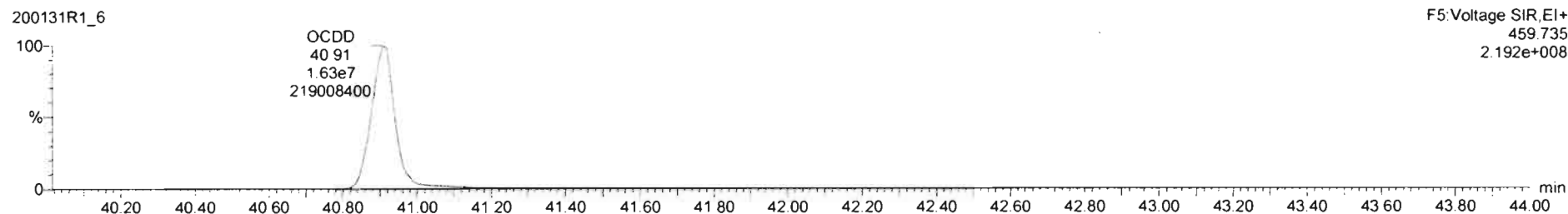
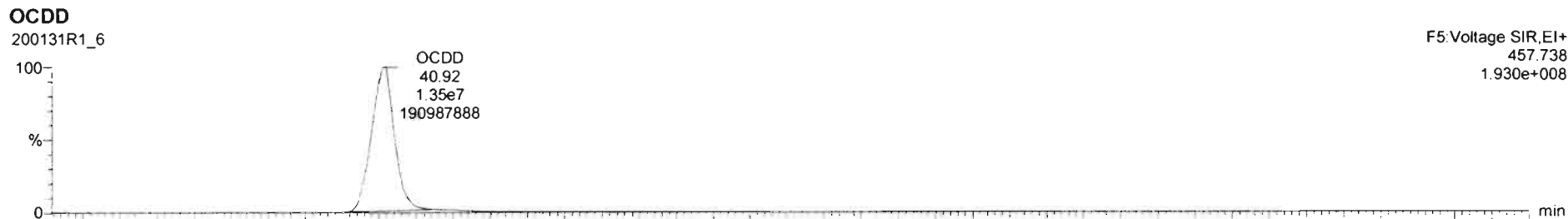
200131R1\_6



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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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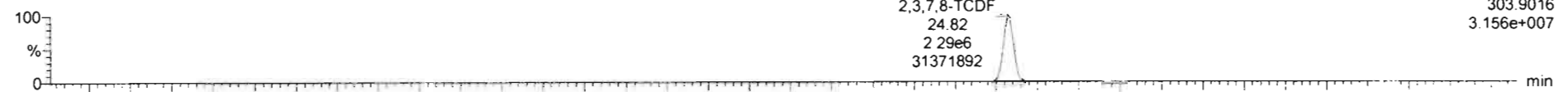
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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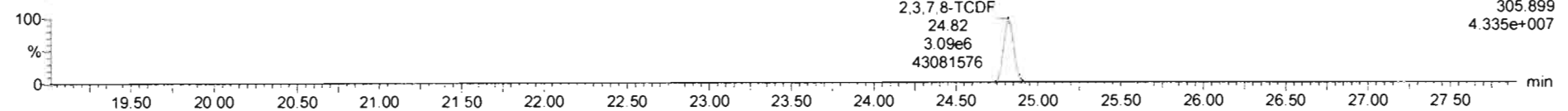
**2,3,7,8-TCDF**

200131R1\_6



F1: Voltage SIR, EI+  
303.9016  
3.156e+007

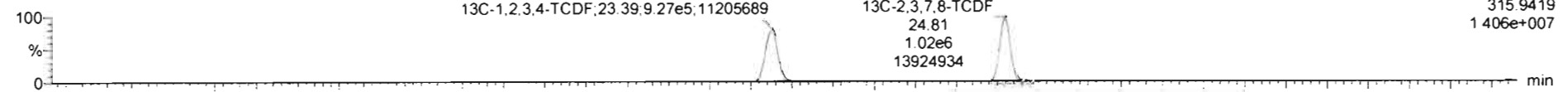
200131R1\_6



F1: Voltage SIR, EI+  
305.899  
4.335e+007

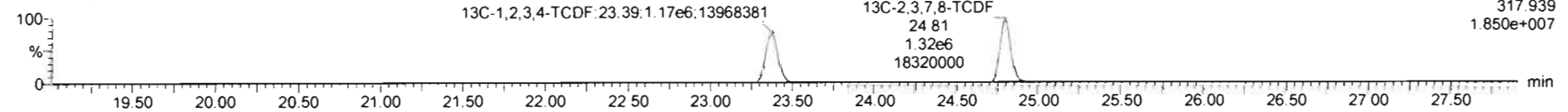
**13C-2,3,7,8-TCDF**

200131R1\_6



F1: Voltage SIR, EI+  
315.9419  
1.406e+007

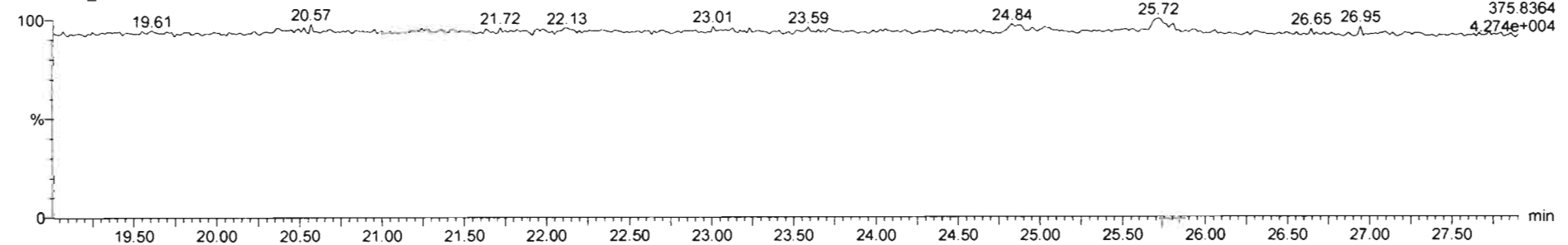
200131R1\_6



F1: Voltage SIR, EI+  
317.939  
1.850e+007

**DPE1**

200131R1\_6



F1: Voltage SIR, EI+  
375.8364  
4.274e+004

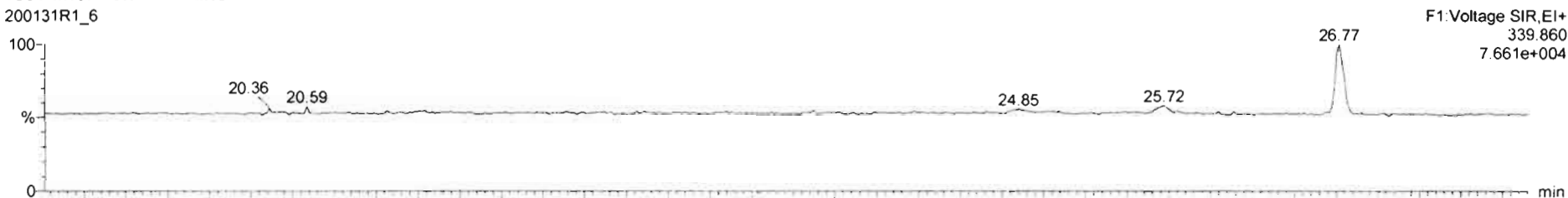
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

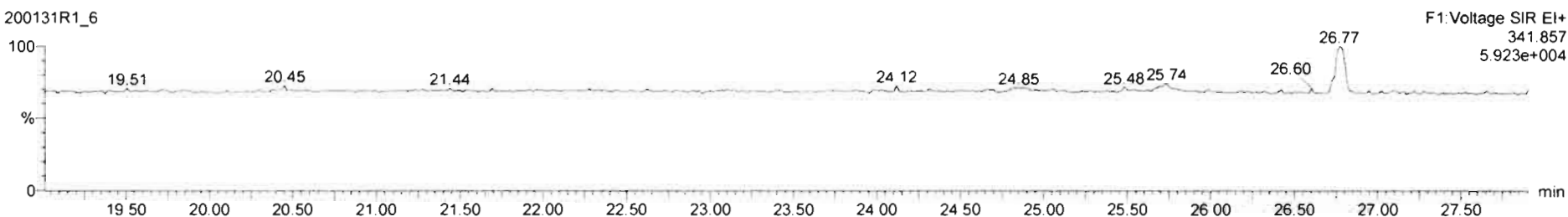
Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

1st Func. Penta-Furans

200131R1\_6

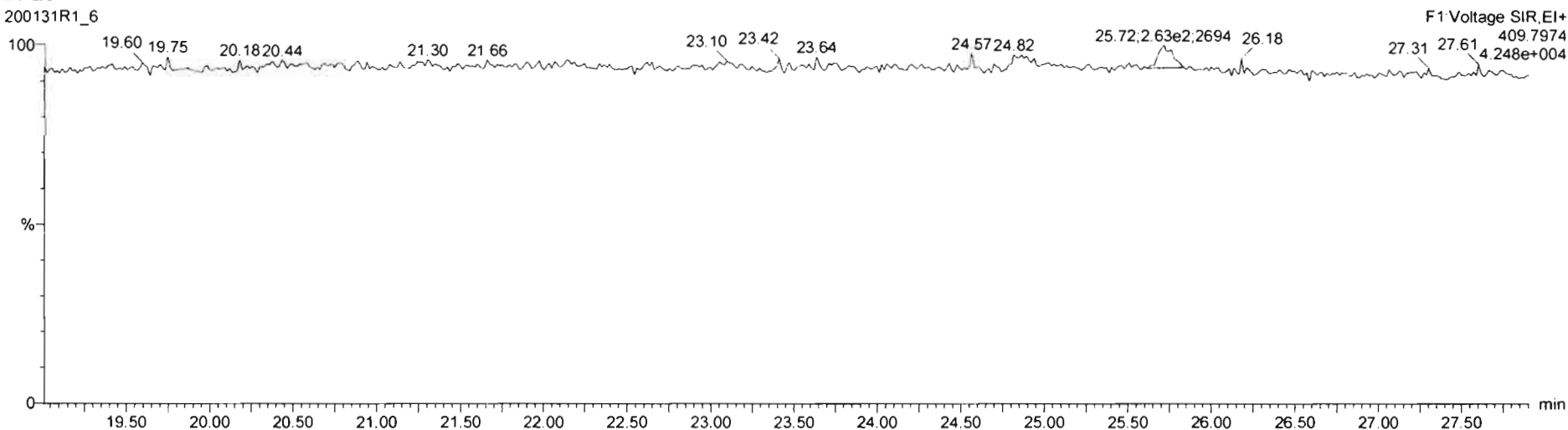


200131R1\_6



DPE6

200131R1\_6



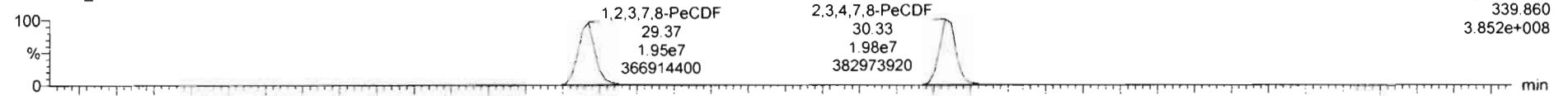
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

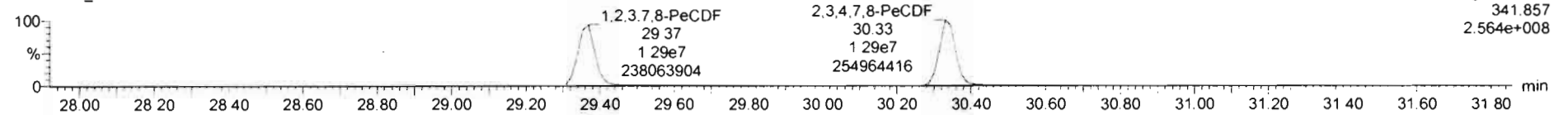
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**1,2,3,7,8-PeCDF**

200131R1\_6

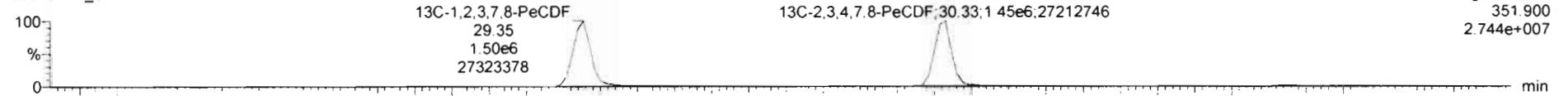


200131R1\_6

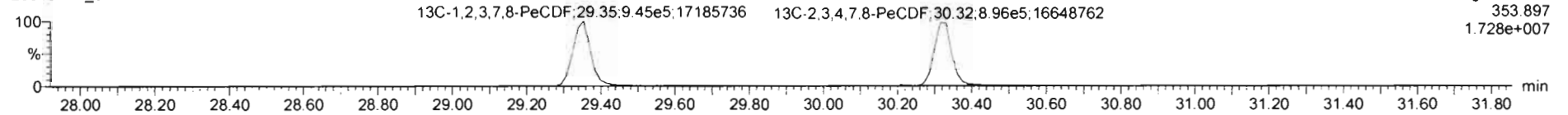


**13C-1,2,3,7,8-PeCDF**

200131R1\_6

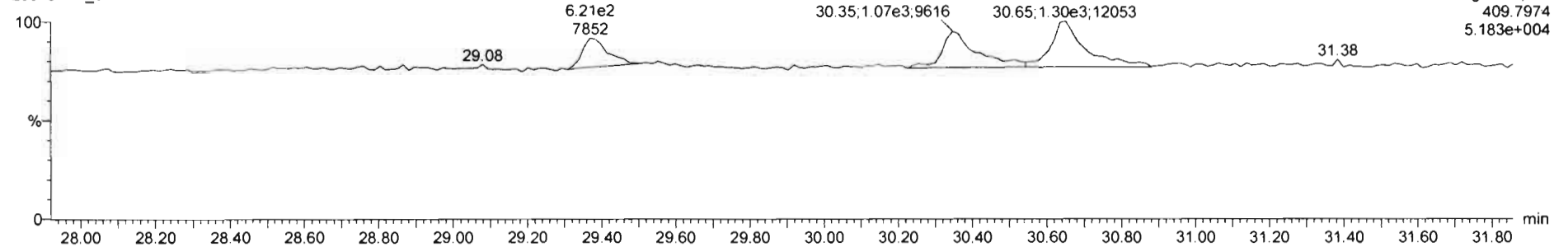


200131R1\_6



**DPE2**

200131R1\_6



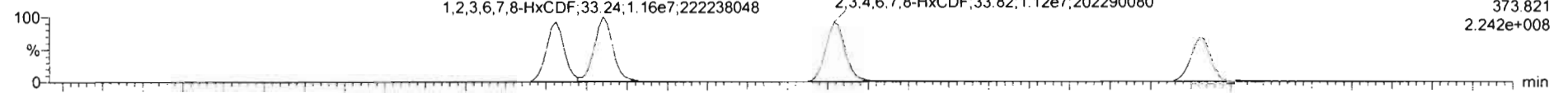
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

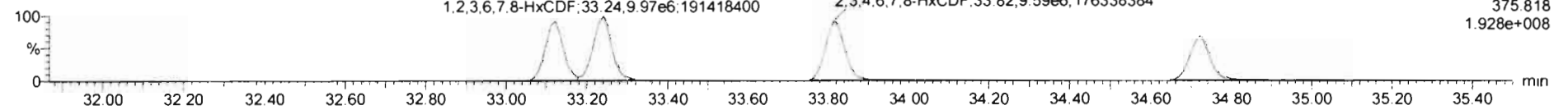
**1,2,3,4,7,8-HxCDF**

200131R1\_6



F3: Voltage SIR, EI+  
373 821  
2.242e+008

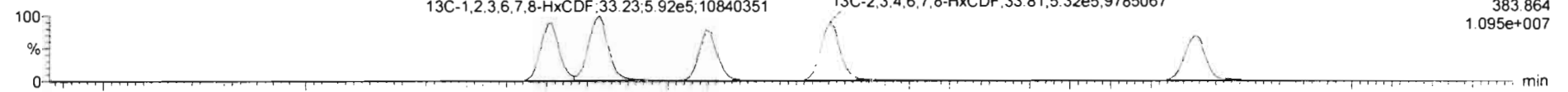
200131R1\_6



F3: Voltage SIR, EI+  
375 818  
1.928e+008

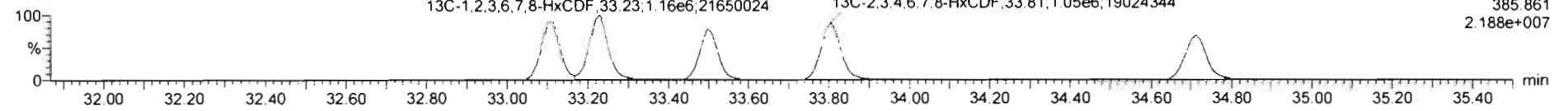
**13C-1,2,3,4,7,8-HxCDF**

200131R1\_6



F3: Voltage SIR, EI+  
383 864  
1.095e+007

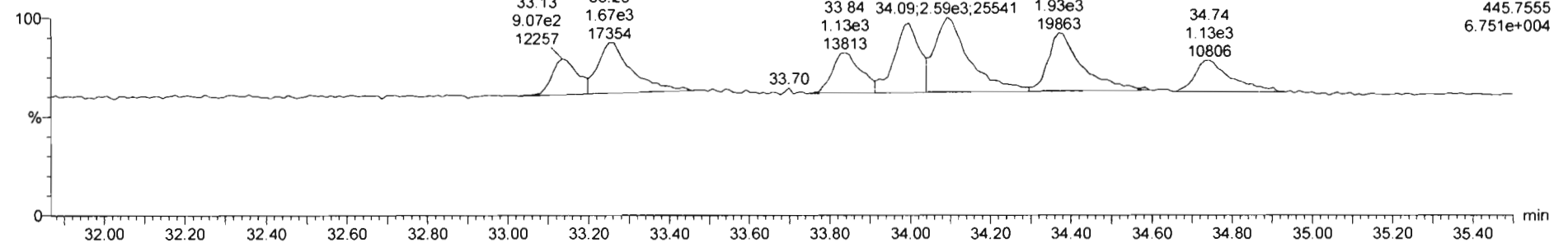
200131R1\_6



F3: Voltage SIR, EI+  
385 861  
2.188e+007

**DPE3**

200131R1\_6



F3: Voltage SIR, EI+  
445 7555  
6.751e+004

Dataset: Untitled

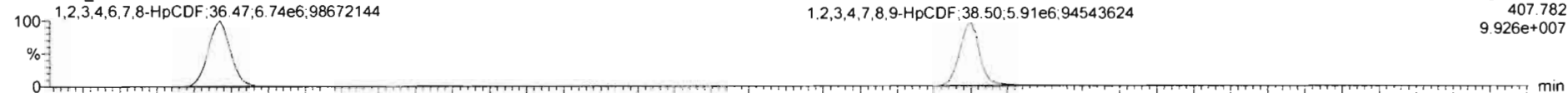
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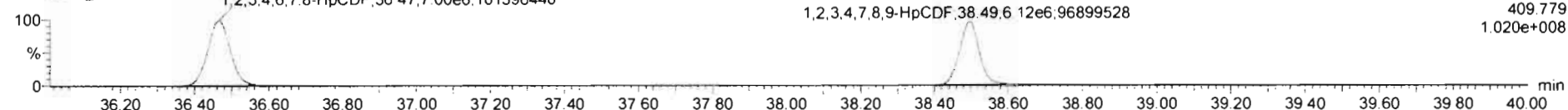
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**1,2,3,4,6,7,8-HpCDF**

200131R1\_6

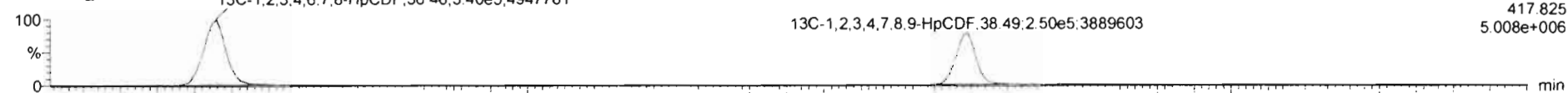


200131R1\_6

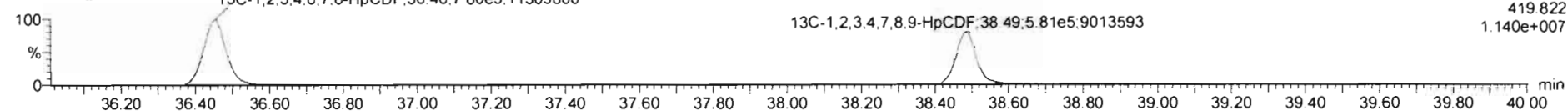


**13C-1,2,3,4,6,7,8-HpCDF**

200131R1\_6

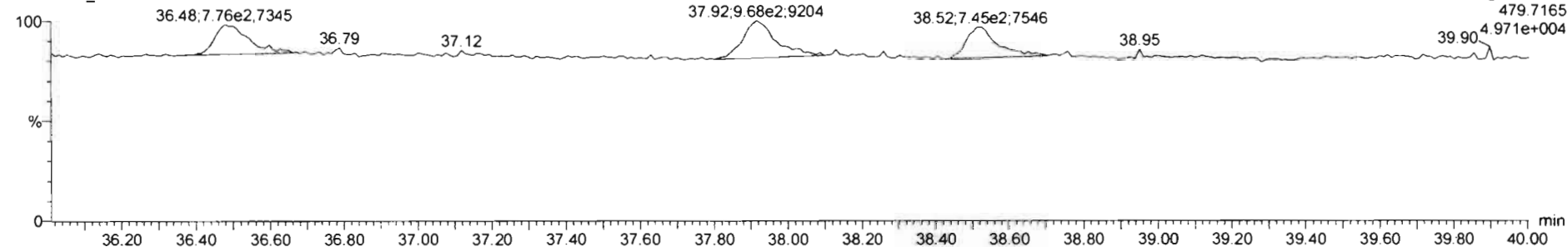


200131R1\_6



**DPE4**

200131R1\_6

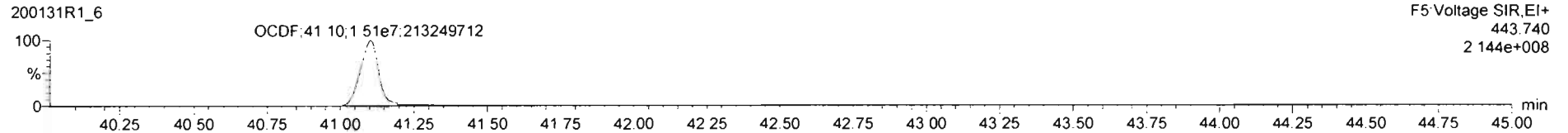
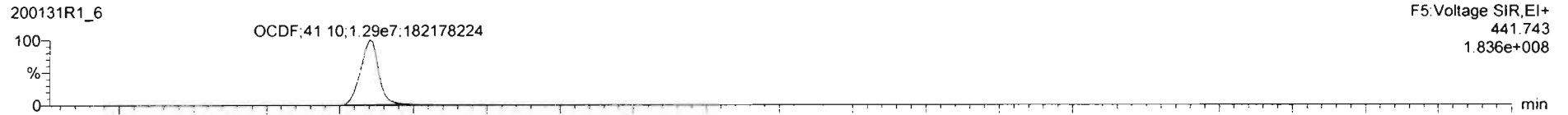


Dataset: Untitled

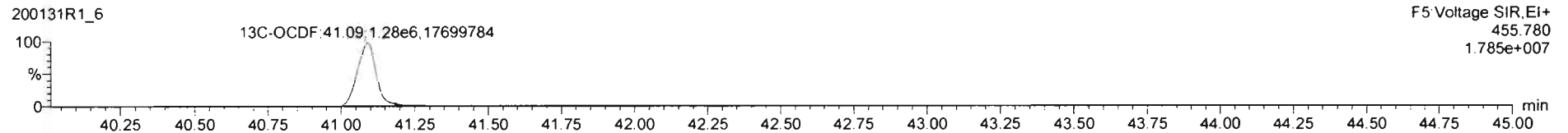
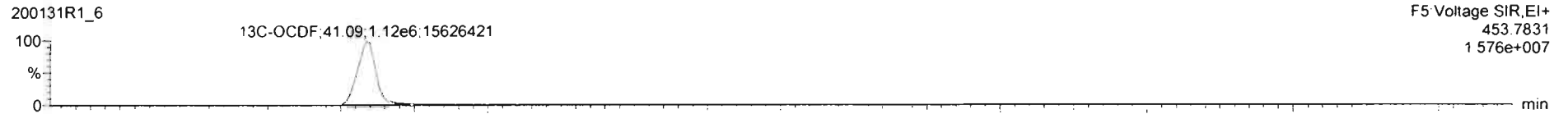
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Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

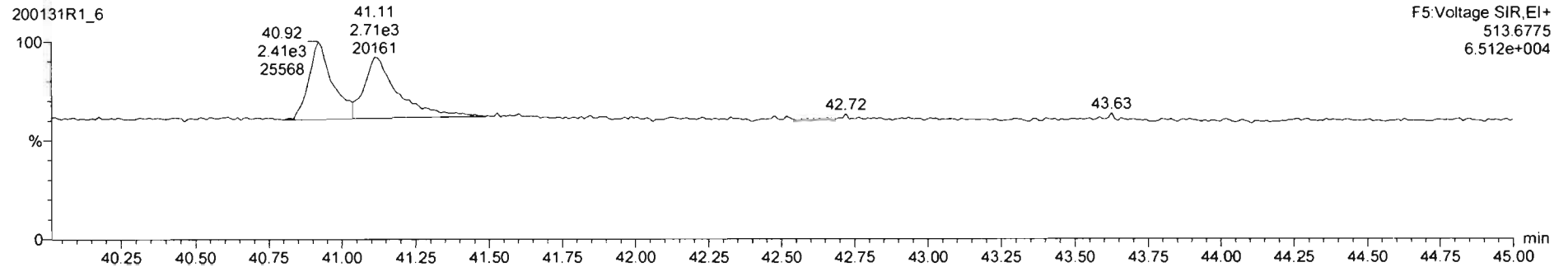
**OCDF**



**13C-OCDF**



**DPE5**



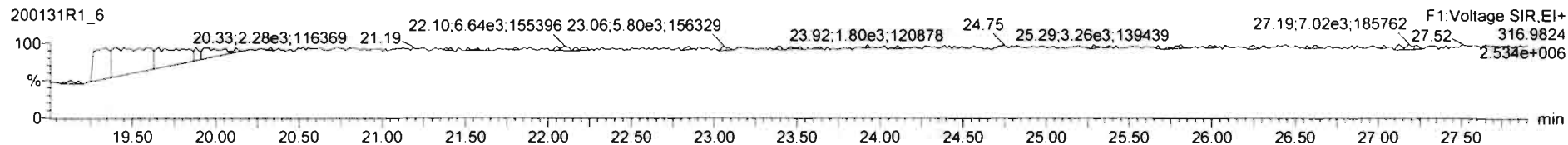


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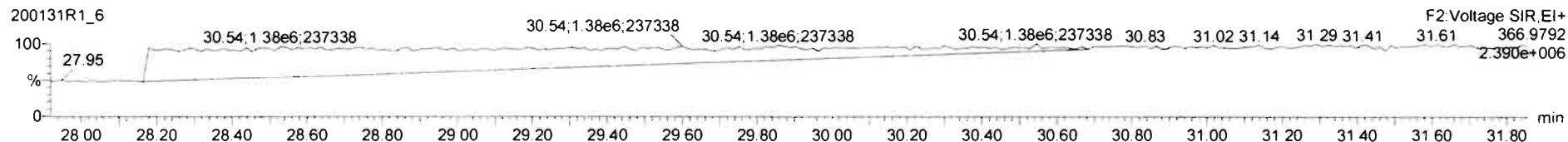
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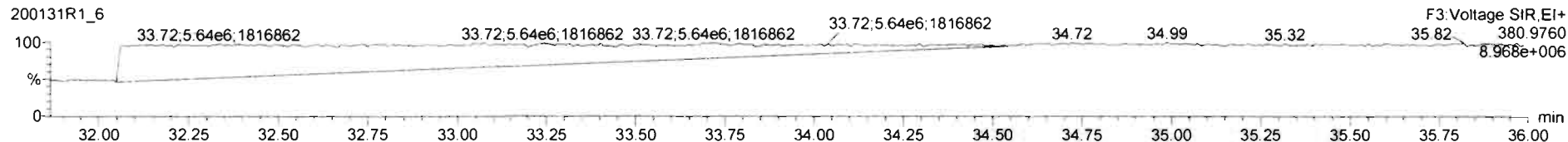
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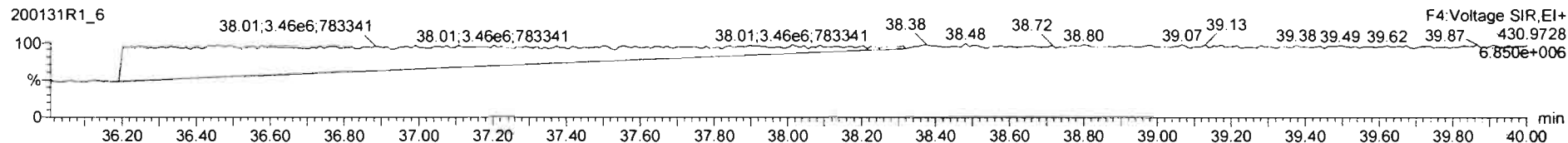
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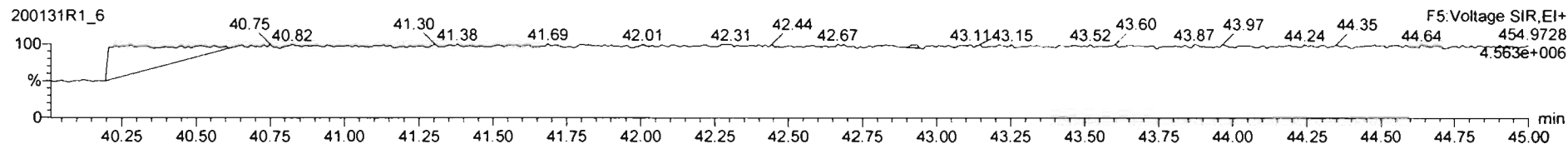
**PFK3**



**PFK4**

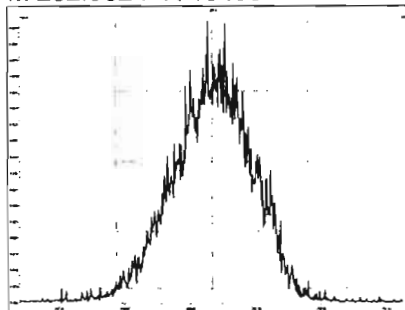


**PFK5**

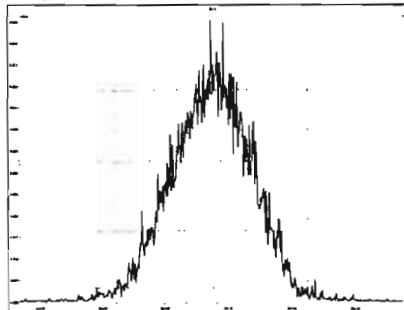


Printed: Saturday, February 01, 2020 07:51:26 Pacific Standard Time

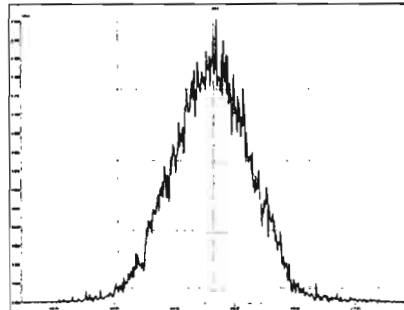
M 292.9824 R 10460



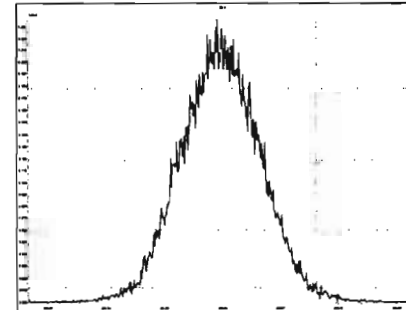
M 304.9824 R 11062



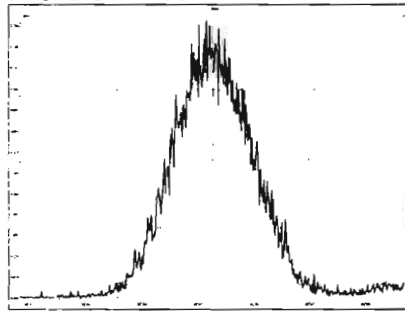
M 318.9792 R 11312



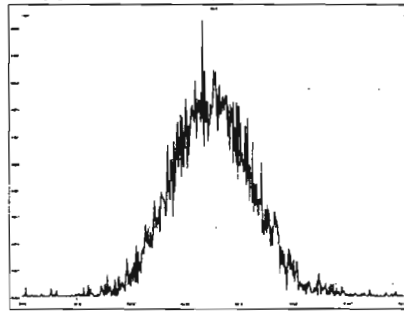
M 330.9792 R 10988



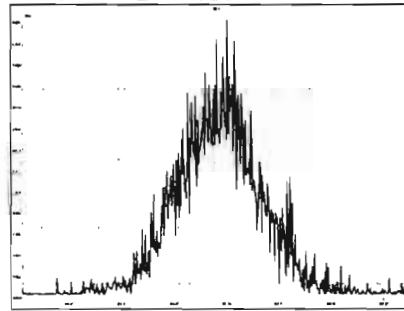
M 342.9792 R 10869



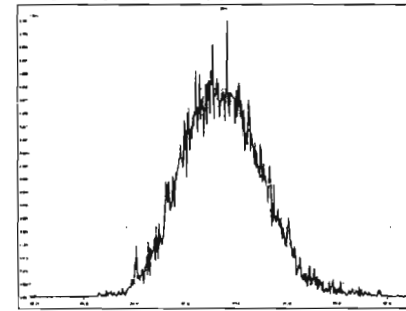
M 354.9792 R 11633



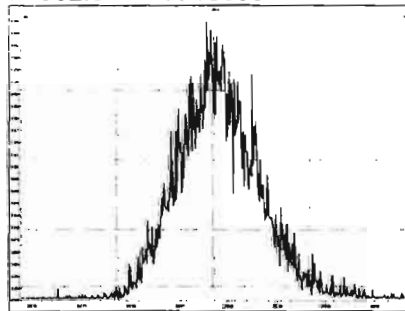
M 366.9792 R 10852



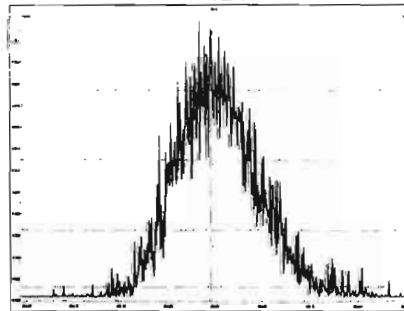
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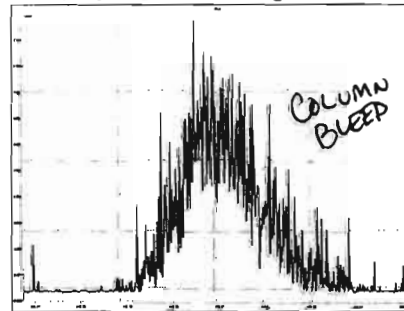
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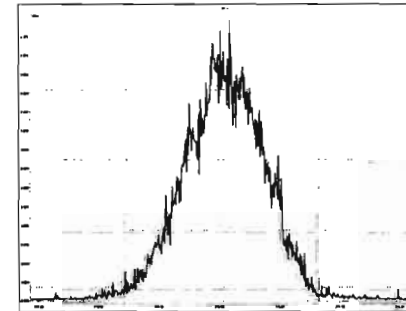
M 404.9760 R 11252



M 416.9760 R 6578 ok

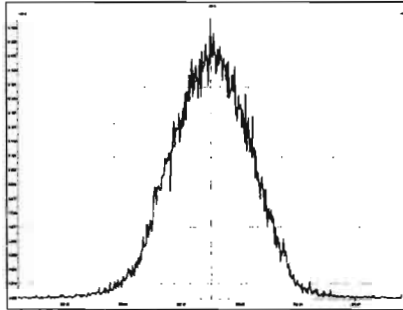


M 318.9792 R 10639

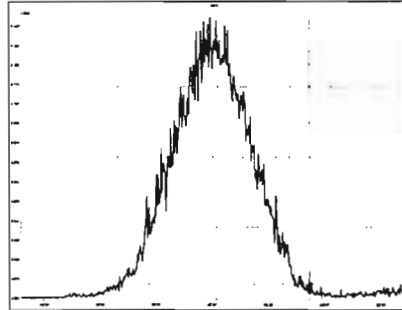


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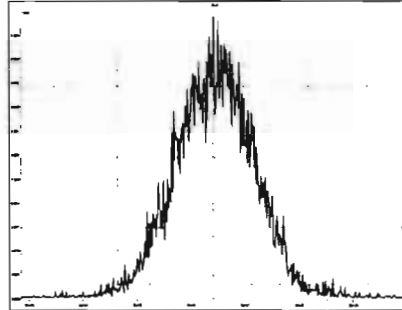
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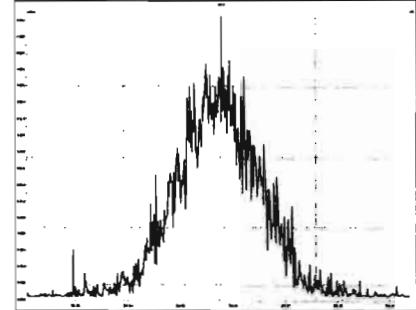
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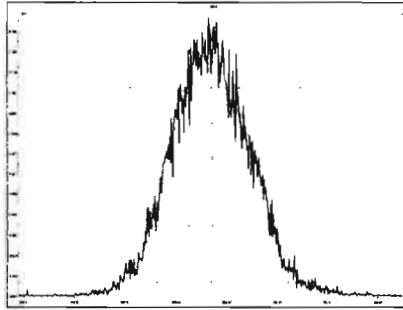
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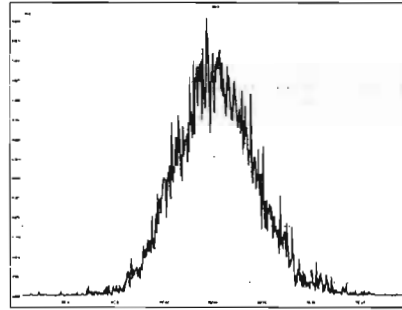
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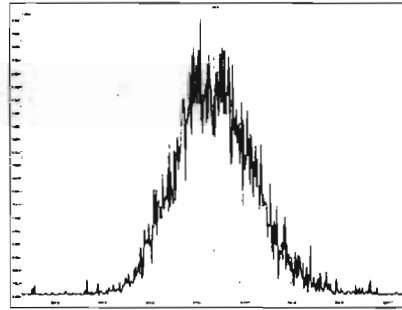
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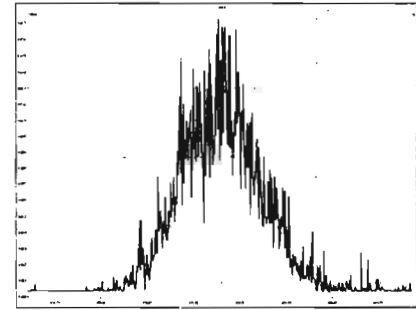
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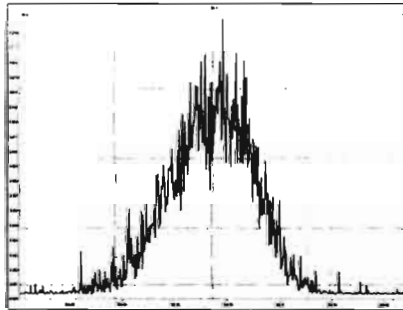
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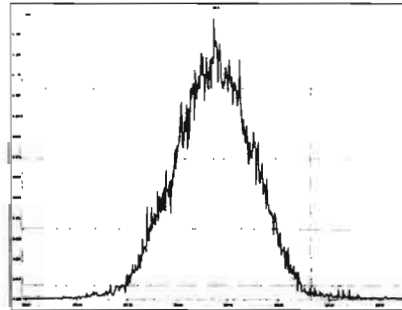
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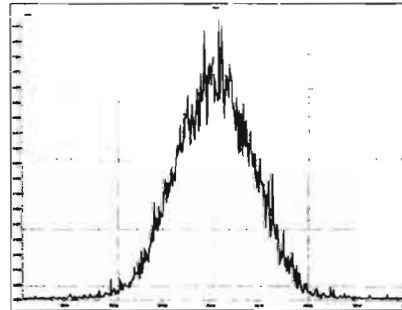
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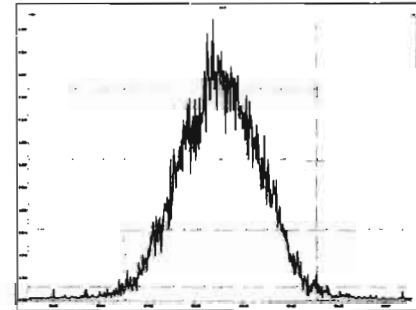
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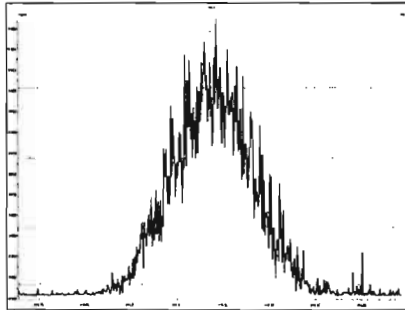


M 404.9760 R 11521

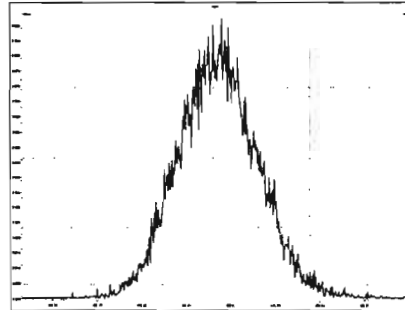


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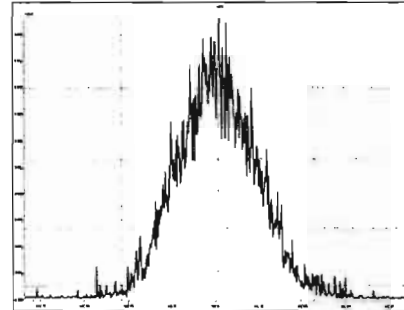
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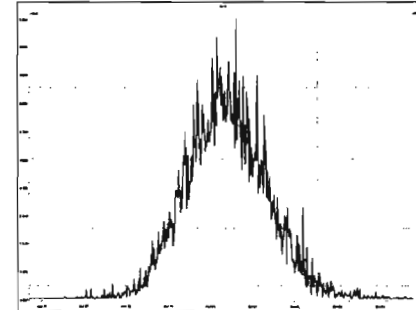
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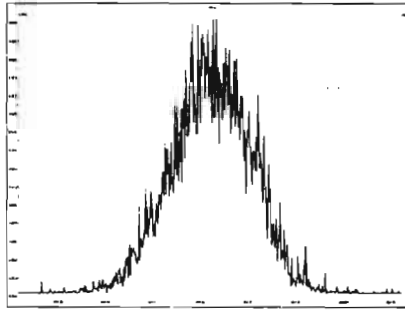
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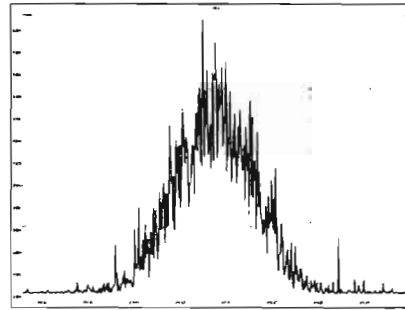
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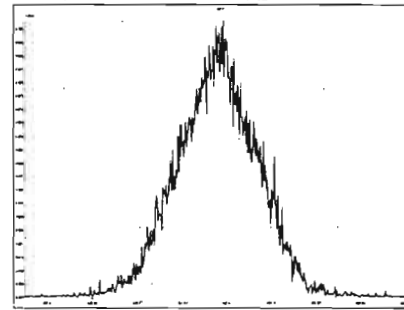
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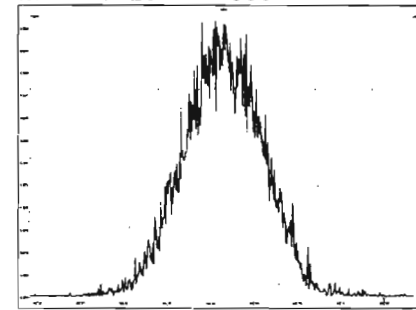
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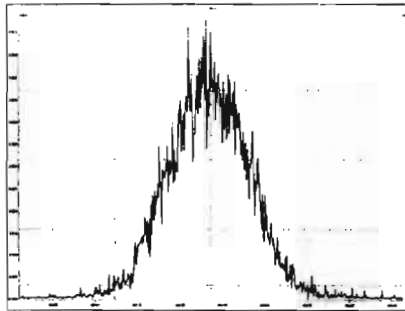
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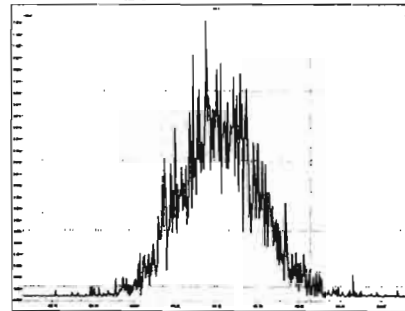
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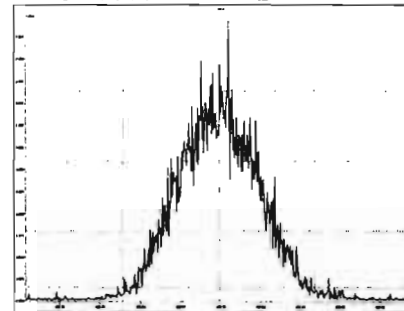
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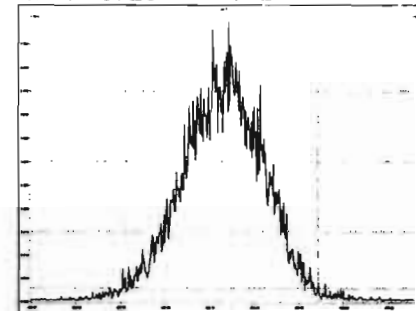
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M 480.9696 R 11062

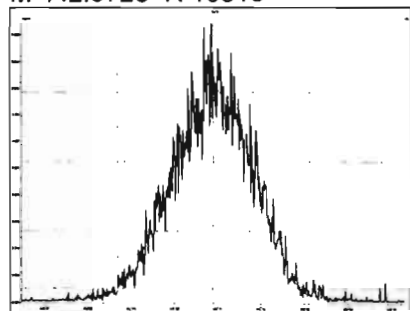


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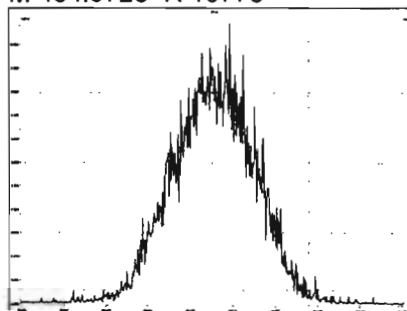


Printed: Saturday, February 01, 2020 07:51:26 Pacific Standard Time

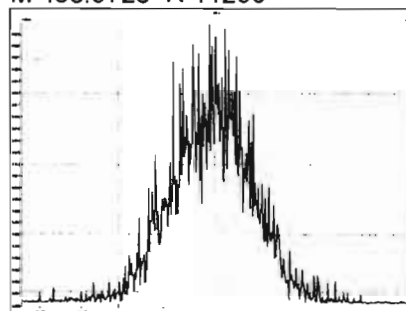
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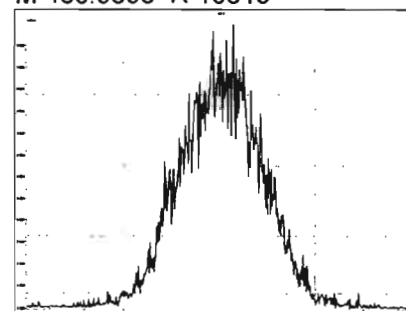
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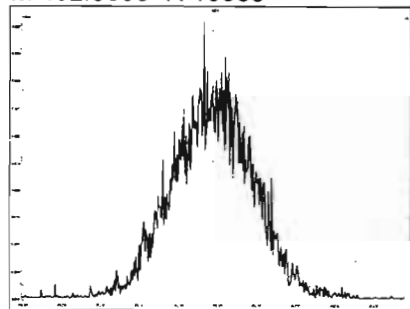
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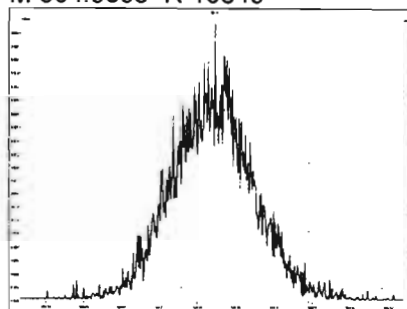
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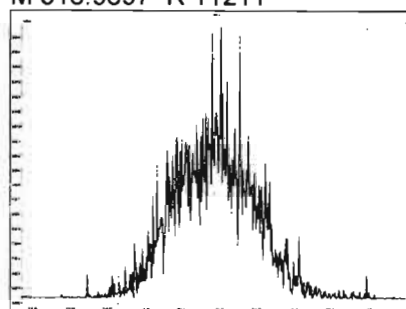
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M 504.9696 R 10849



M 516.9697 R 11211



Dataset: U:\VG12.PRO\Results\200131R1\200131R1-8.qld

Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:24:45 AM Pacific Standard Time

*GPB 02/02/2020*

*C7 02/04/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.56e5	0.77	NO	0.988	1.000	25.691	25.69	1.001	1.001	10.621	106	0.0312	10.6
2	2 1,2,3,7,8-PeCDD	6.38e5	0.61	NO	0.972	1.000	30.627	30.62	1.001	1.001	53.028	106	0.0615	53.0
3	3 1,2,3,4,7,8-HxCDD	5.69e5	1.22	NO	1.07	1.000	33.966	33.97	1.000	1.000	53.501	107	0.0848	53.5
4	4 1,2,3,6,7,8-HxCDD	6.05e5	1.23	NO	0.921	1.000	34.062	34.07	1.000	1.000	57.295	115	0.0864	57.3
5	5 1,2,3,7,8,9-HxCDD	5.57e5	1.21	NO	0.918	1.000	34.373	34.35	1.001	1.000	55.837	112	0.0961	55.8
6	6 1,2,3,4,6,7,8-HpCDD	4.04e5	1.06	NO	0.923	1.000	37.886	37.90	1.000	1.001	54.330	109	0.220	54.3
7	7 OCDD	7.74e5	0.92	NO	0.975	1.000	40.878	40.89	1.000	1.000	108.30	108	0.139	108
8	8 2,3,7,8-TCDF	1.73e5	0.74	NO	0.802	1.000	24.802	24.79	1.001	1.001	10.751	108	0.0280	10.8
9	9 1,2,3,7,8-PeCDF	9.70e5	1.53	NO	0.907	1.000	29.345	29.34	1.001	1.001	54.081	108	0.0886	54.1
10	10 2,3,4,7,8-PeCDF	1.11e6	1.53	NO	0.952	1.000	30.331	30.32	1.001	1.001	60.939	122	0.0845	60.9
11	11 1,2,3,4,7,8-HxCDF	5.97e5	1.15	NO	0.862	1.000	33.093	33.10	1.000	1.000	56.486	113	0.117	56.5
12	12 1,2,3,6,7,8-HxCDF	6.65e5	1.16	NO	0.841	1.000	33.220	33.22	1.000	1.000	55.919	112	0.104	55.9
13	13 2,3,4,6,7,8-HxCDF	5.96e5	1.17	NO	0.898	1.000	33.819	33.81	1.001	1.001	53.809	108	0.119	53.8
14	14 1,2,3,7,8,9-HxCDF	4.82e5	1.16	NO	0.858	1.000	34.690	34.71	1.000	1.001	54.259	109	0.175	54.3
15	15 1,2,3,4,6,7,8-HpCDF	4.07e5	0.95	NO	0.851	1.000	36.473	36.45	1.001	1.000	56.639	113	0.174	56.6
16	16 1,2,3,4,7,8,9-HpCDF	3.25e5	0.98	NO	0.980	1.000	38.471	38.48	1.000	1.000	55.517	111	0.189	55.5
17	17 OCDF	7.18e5	0.86	NO	0.806	1.000	41.070	41.08	1.000	1.000	105.51	106	0.148	106
18	18 13C-2,3,7,8-TCDD	1.49e6	0.78	NO	1.20	1.000	25.660	25.66	1.026	1.026	92.060	92.1	0.106	
19	19 13C-1,2,3,7,8-PeCDD	1.24e6	0.64	NO	0.967	1.000	30.395	30.61	1.215	1.223	95.149	95.1	0.134	
20	20 13C-1,2,3,4,7,8-HxCDD	9.93e5	1.27	NO	0.874	1.000	33.955	33.96	1.014	1.014	87.678	87.7	0.159	
21	21 13C-1,2,3,6,7,8-HxCDD	1.15e6	1.25	NO	1.05	1.000	34.056	34.06	1.017	1.017	84.618	84.6	0.133	
22	22 13C-1,2,3,7,8,9-HxCDD	1.09e6	1.25	NO	0.974	1.000	34.357	34.34	1.026	1.025	86.118	86.1	0.143	
23	23 13C-1,2,3,4,6,7,8-HpCDD	8.06e5	1.06	NO	0.747	1.000	37.907	37.87	1.132	1.131	83.254	83.3	0.245	
24	24 13C-OCDD	1.47e6	0.89	NO	0.707	1.000	40.787	40.88	1.218	1.221	160.15	80.1	0.173	
25	25 13C-2,3,7,8-TCDF	2.01e6	0.78	NO	1.07	1.000	24.842	24.78	0.993	0.990	91.210	91.2	0.143	
26	26 13C-1,2,3,7,8-PeCDF	1.98e6	1.58	NO	1.00	1.000	29.170	29.32	1.166	1.172	95.322	95.3	0.190	
27	27 13C-2,3,4,7,8-PeCDF	1.91e6	1.60	NO	0.962	1.000	30.120	30.30	1.204	1.211	96.164	96.2	0.198	
28	28 13C-1,2,3,4,7,8-HxCDF	1.23e6	0.52	NO	1.05	1.000	33.085	33.09	0.988	0.988	90.119	90.1	0.194	
29	29 13C-1,2,3,6,7,8-HxCDF	1.41e6	0.50	NO	1.19	1.000	33.185	33.21	0.991	0.992	91.687	91.7	0.171	
30	30 13C-2,3,4,6,7,8-HxCDF	1.23e6	0.51	NO	1.07	1.000	33.791	33.78	1.009	1.009	89.274	89.3	0.190	
31	31 13C-1,2,3,7,8,9-HxCDF	1.04e6	0.51	NO	0.922	1.000	34.692	34.69	1.036	1.036	86.700	86.7	0.220	

Dataset: U:\VG12.PRO\Results\200131R1\200131R1-8.qld

Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:24:45 AM Pacific Standard Time

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	8.43e5	0.43	NO	0.767	1.000	36.433	36.44	1.088	1.088	84.846	84.8	0.232	
33	13C-1,2,3,4,7,8,9-HpCDF	5.98e5	0.43	NO	0.552	1.000	38.443	38.47	1.148	1.149	83.515	83.5	0.322	
34	13C-OCDF	1.69e6	0.90	NO	0.789	1.000	41.021	41.07	1.225	1.226	165.15	82.6	0.137	
35	37Cl-2,3,7,8-TCDD	1.57e5			1.18	1.000	25.692	25.69	1.027	1.027	9.9110	99.1	0.0232	
36	13C-1,2,3,4-TCDD	1.35e6	0.81	NO	1.00	1.000	25.080	25.02	1.000	1.000	100.00	100	0.128	
37	13C-1,2,3,4-TCDF	2.07e6	0.79	NO	1.00	1.000	23.420	23.36	1.000	1.000	100.00	100	0.152	
38	13C-1,2,3,4,6,9-HxCDF	1.30e6	0.51	NO	1.00	1.000	33.520	33.49	1.000	1.000	100.00	100	0.203	

Dataset: Untitled

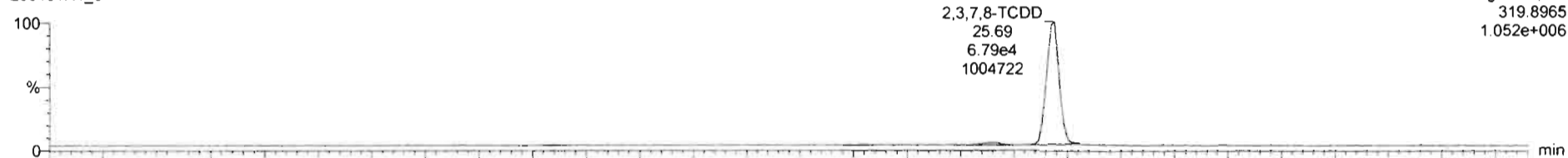
Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

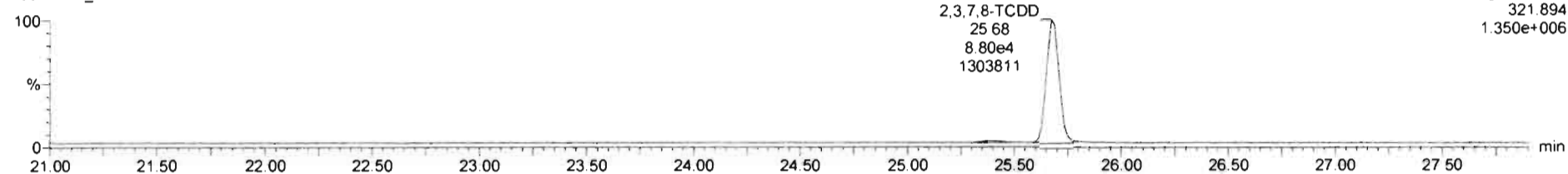
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**2,3,7,8-TCDD**

200131R1\_8

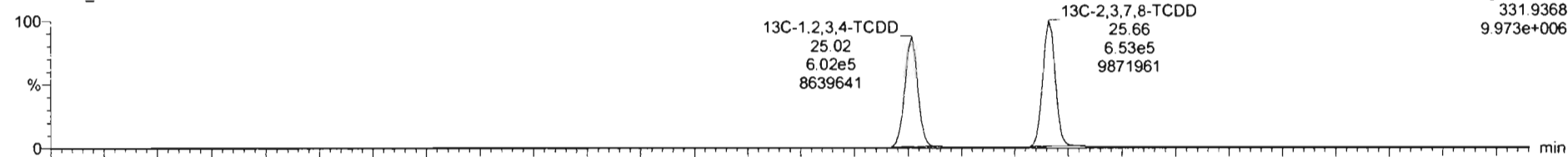


200131R1\_8

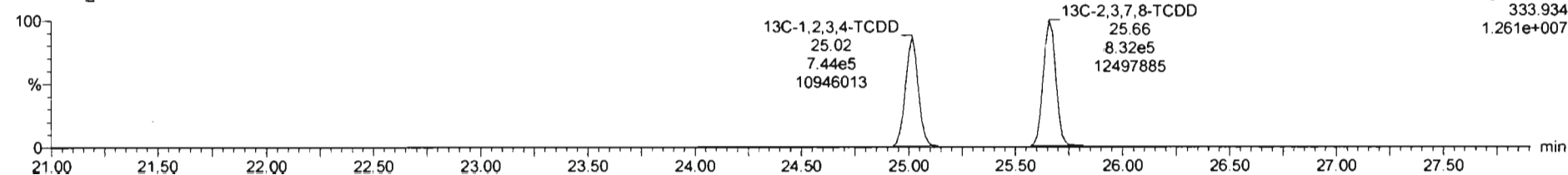


**13C-2,3,7,8-TCDD**

200131R1\_8



200131R1\_8





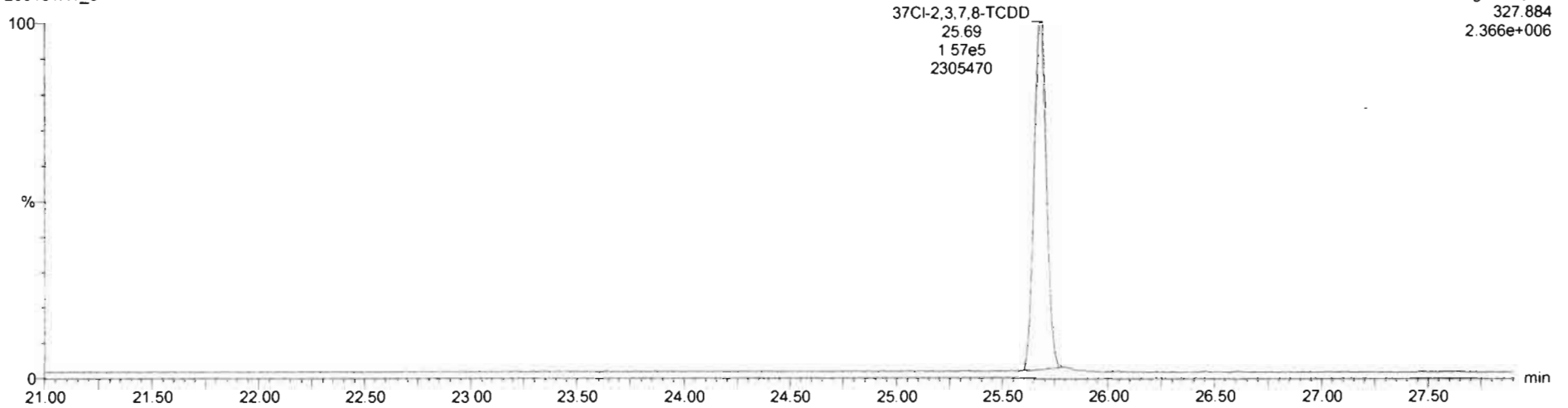
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Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

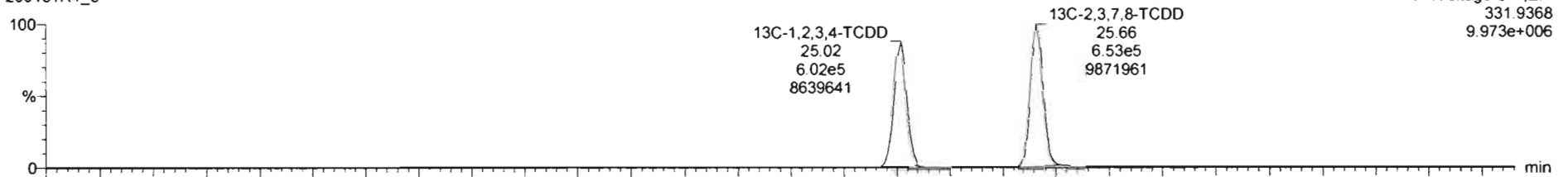
**37Cl-2,3,7,8-TCDD**

200131R1\_8

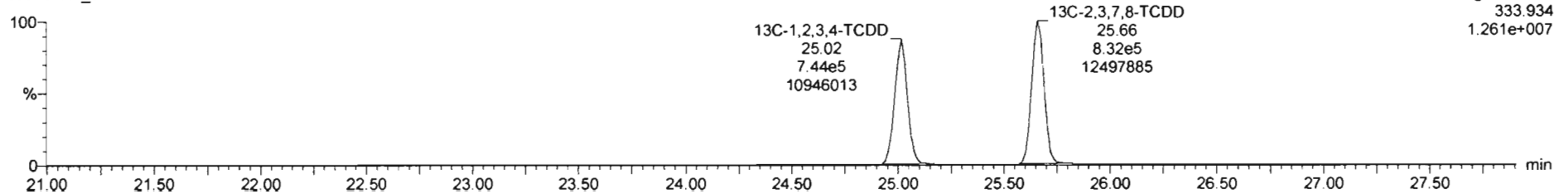


**13C-1,2,3,4-TCDD**

200131R1\_8



200131R1\_8



Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

**1,2,3,7,8-PeCDD**

200131R1\_8

1,2,3,7,8-PeCDD  
30.62  
2.43e5  
4890309

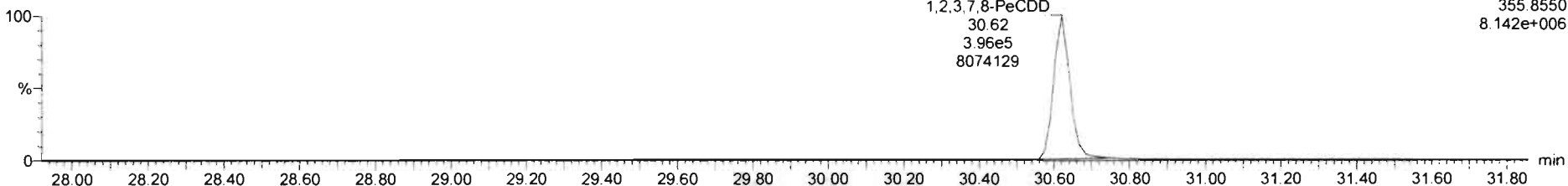
F2:Voltage SIR,EI+  
353.8576  
4.955e+006



200131R1\_8

1,2,3,7,8-PeCDD  
30.62  
3.96e5  
8074129

F2:Voltage SIR,EI+  
355.8550  
8.142e+006

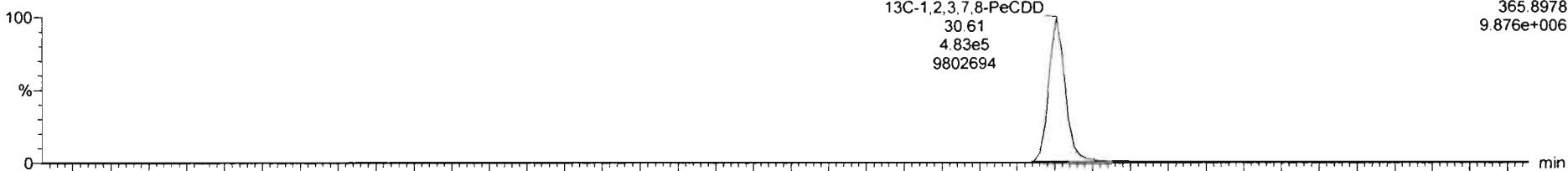


**13C-1,2,3,7,8-PeCDD**

200131R1\_8

13C-1,2,3,7,8-PeCDD  
30.61  
4.83e5  
9802694

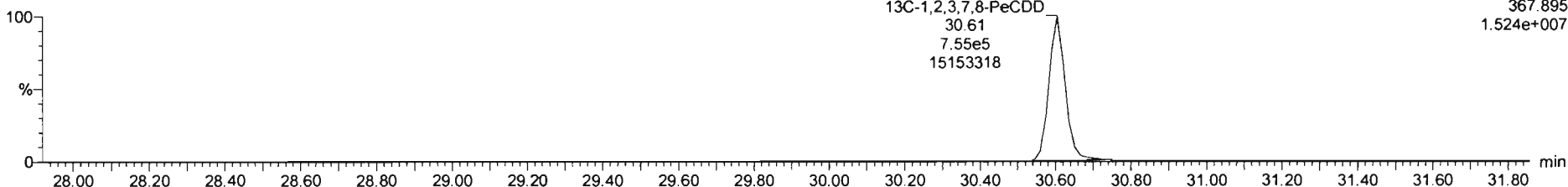
F2:Voltage SIR,EI+  
365.8978  
9.876e+006



200131R1\_8

13C-1,2,3,7,8-PeCDD  
30.61  
7.55e5  
15153318

F2:Voltage SIR,EI+  
367.895  
1.524e+007



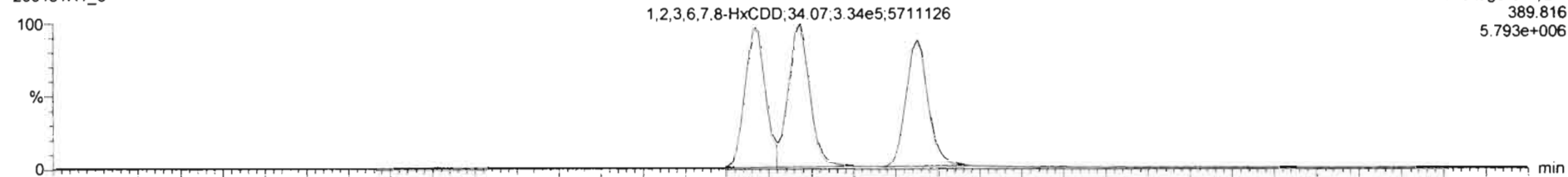
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Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

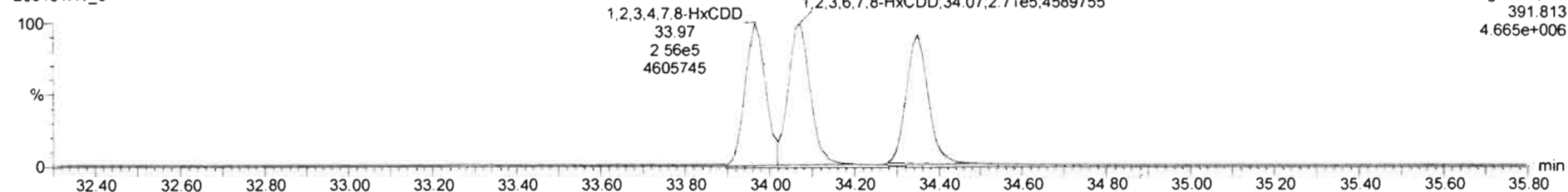
Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

**1,2,3,4,7,8-HxCDD**

200131R1\_8

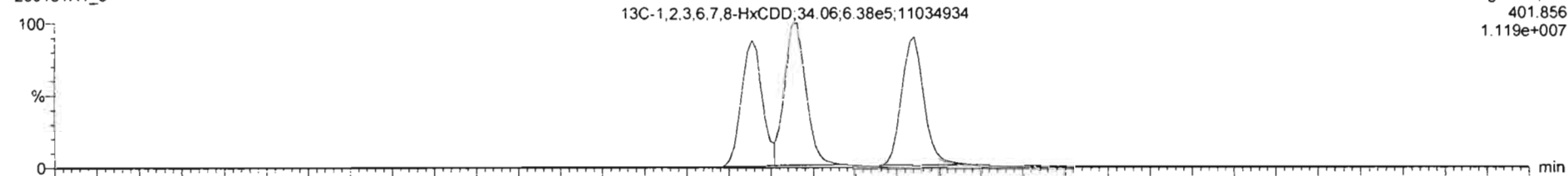


200131R1\_8

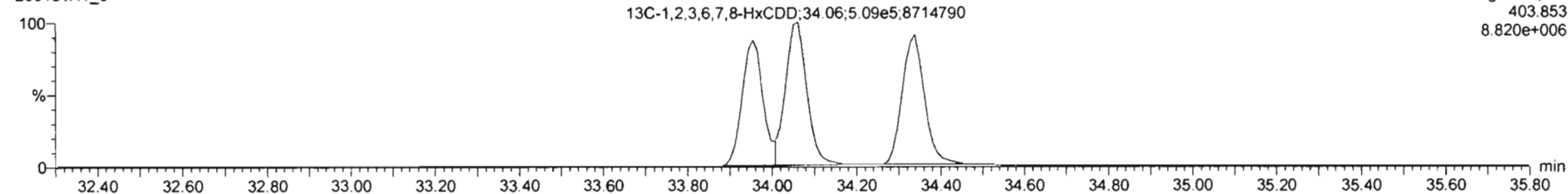


**13C-1,2,3,4,7,8-HxCDD**

200131R1\_8



200131R1\_8



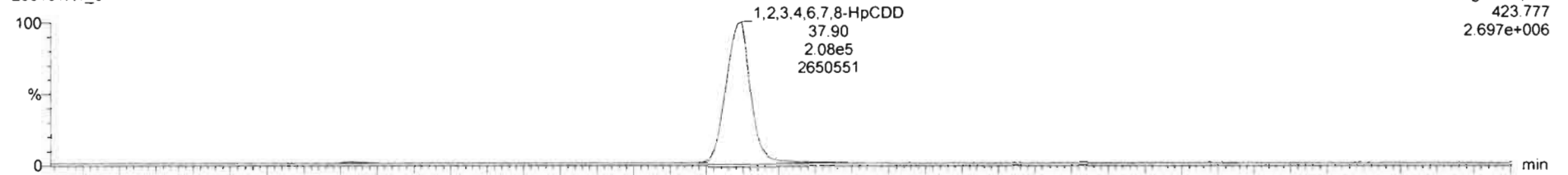
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Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

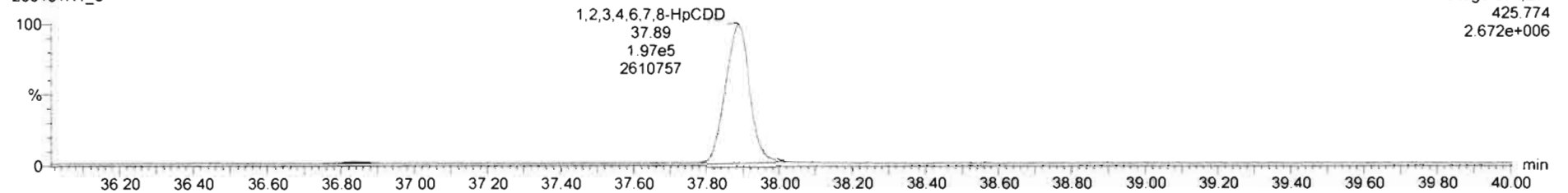
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**1,2,3,4,6,7,8-HpCDD**

200131R1\_8

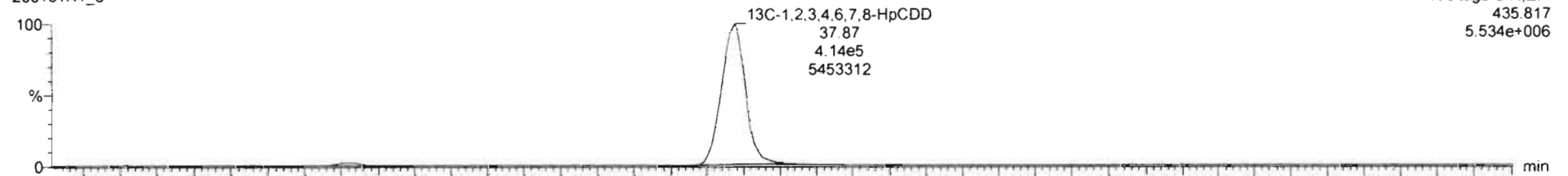


200131R1\_8

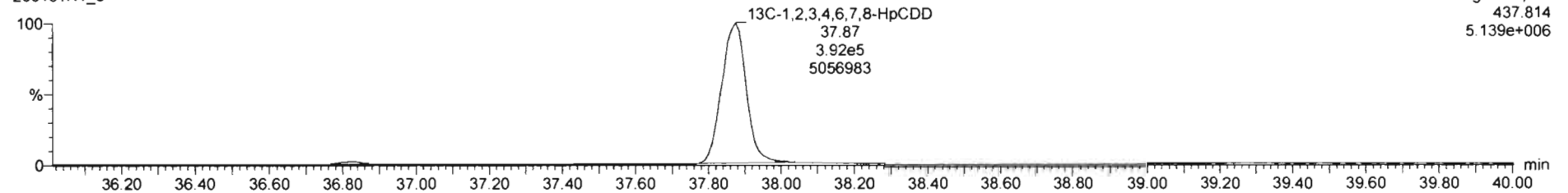


**<sup>13</sup>C-1,2,3,4,6,7,8-HpCDD**

200131R1\_8



200131R1\_8



Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

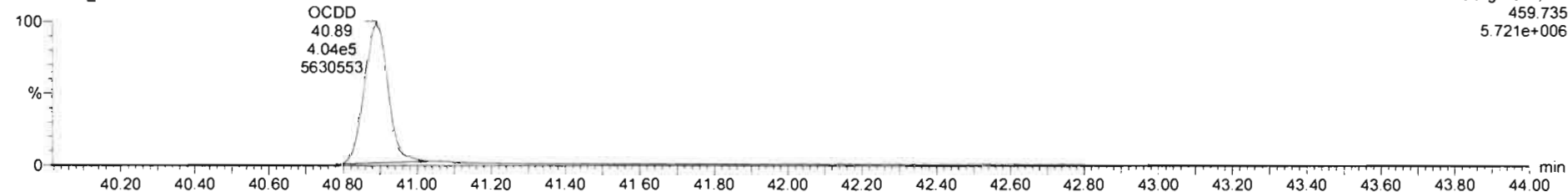
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**OCDD**

200131R1\_8

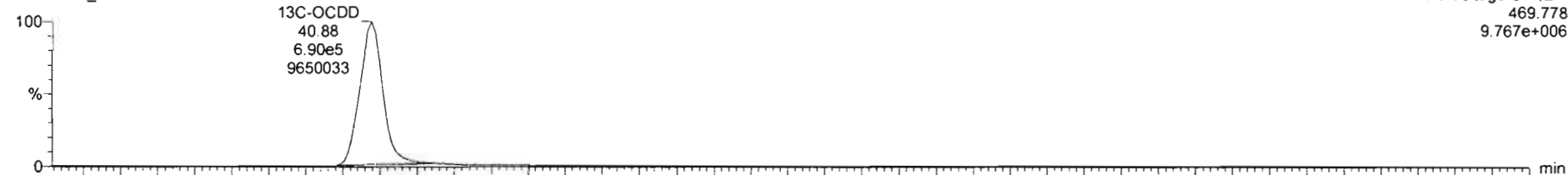


200131R1\_8

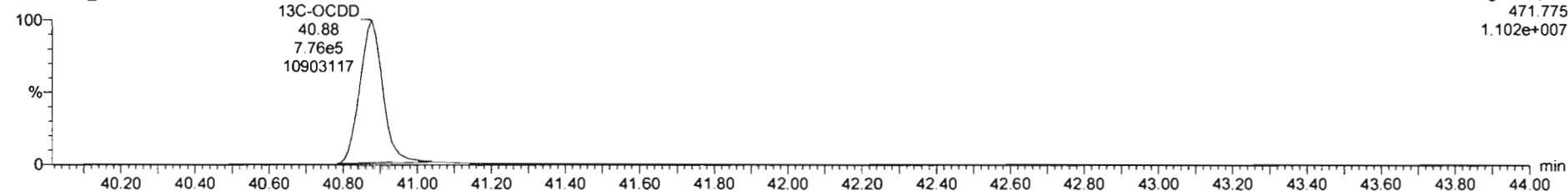


**13C-OCDD**

200131R1\_8



200131R1\_8



Dataset: Untitled

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Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

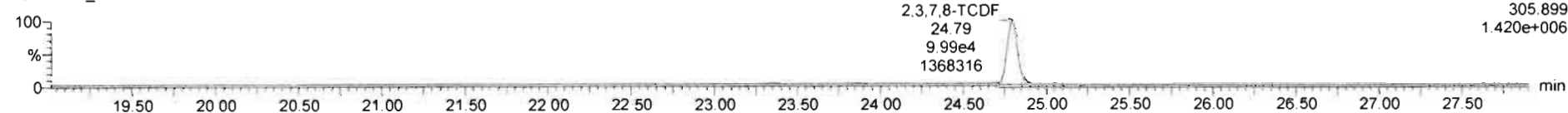
Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

**2,3,7,8-TCDF**

200131R1\_8

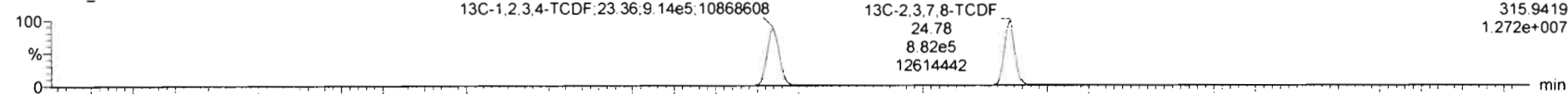


200131R1\_8

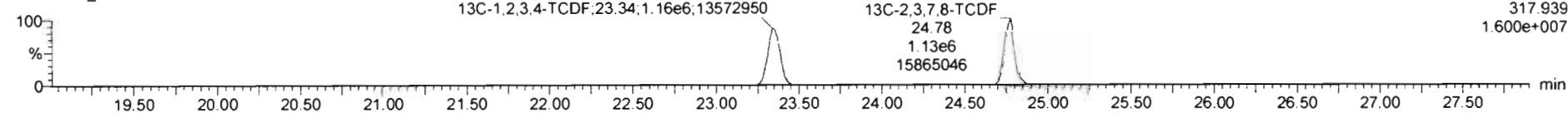


**13C-2,3,7,8-TCDF**

200131R1\_8

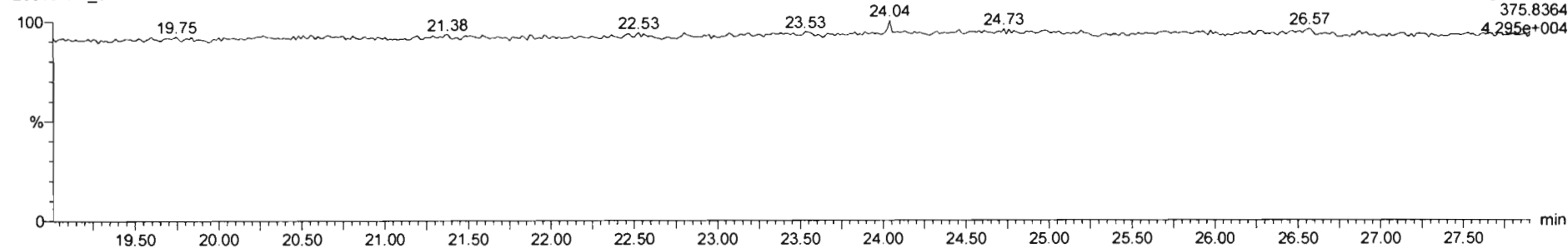


200131R1\_8



**DPE1**

200131R1\_8



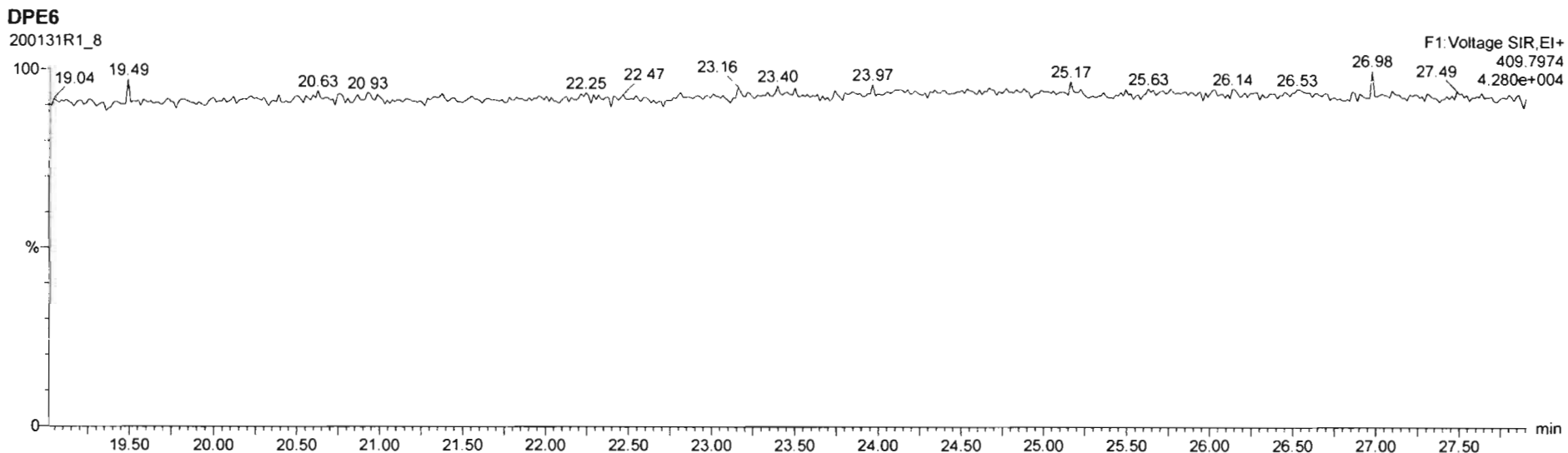
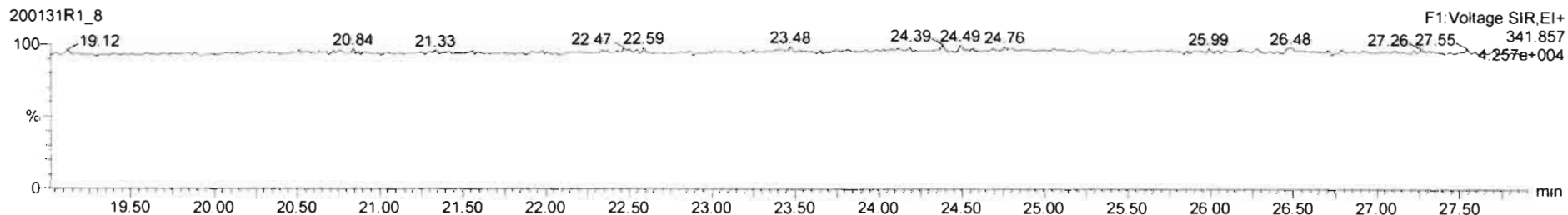
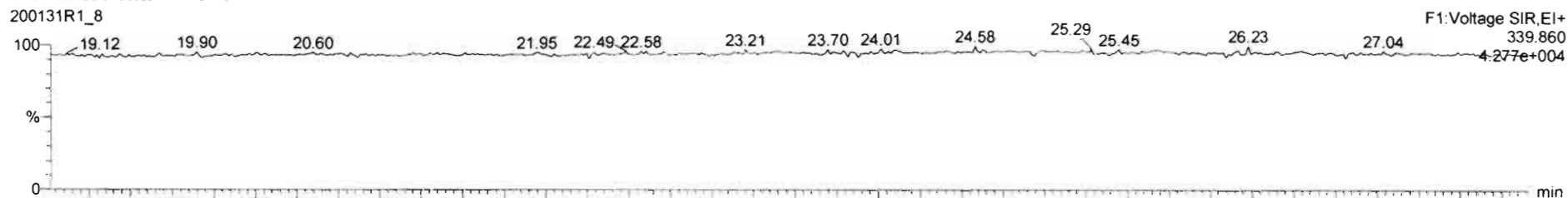
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Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

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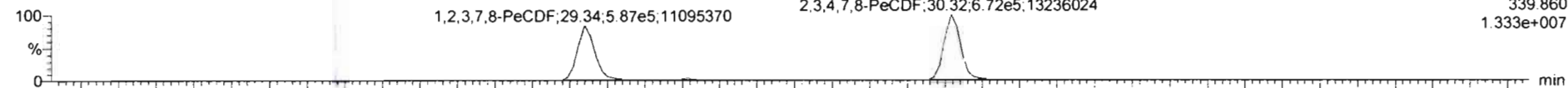
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Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time  
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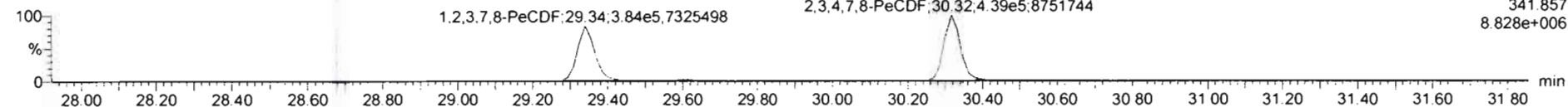
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**1,2,3,7,8-PeCDF**

200131R1\_8

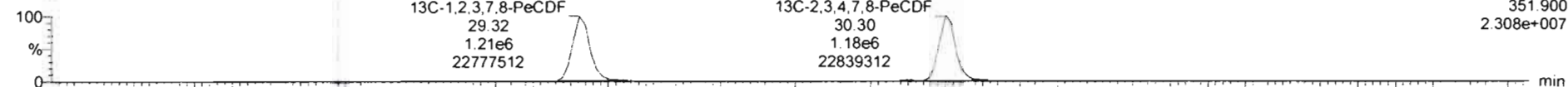


200131R1\_8

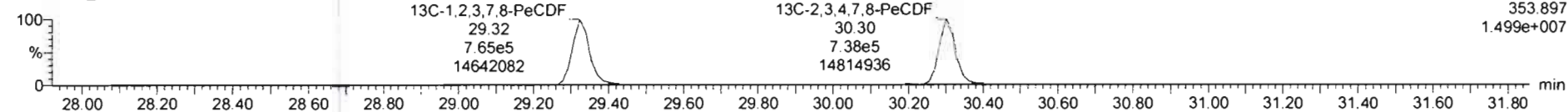


**13C-1,2,3,7,8-PeCDF**

200131R1\_8

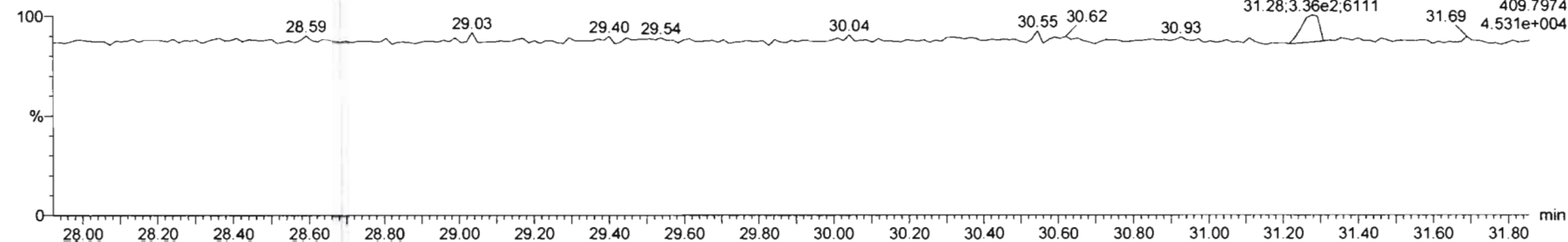


200131R1\_8



**DPE2**

200131R1\_8





Dataset: Untitled

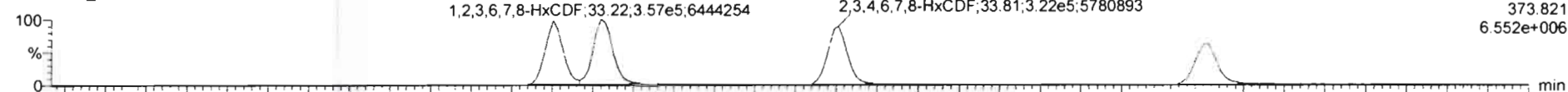
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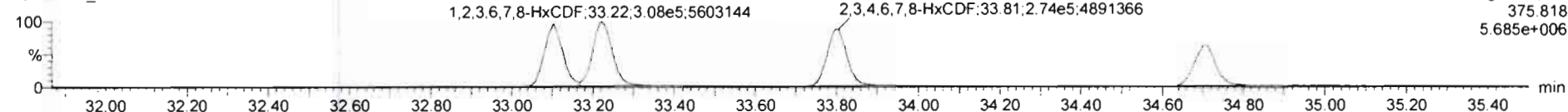
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**1,2,3,4,7,8-HxCDF**

200131R1\_8

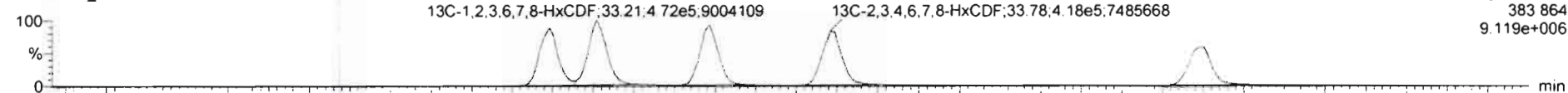


200131R1\_8

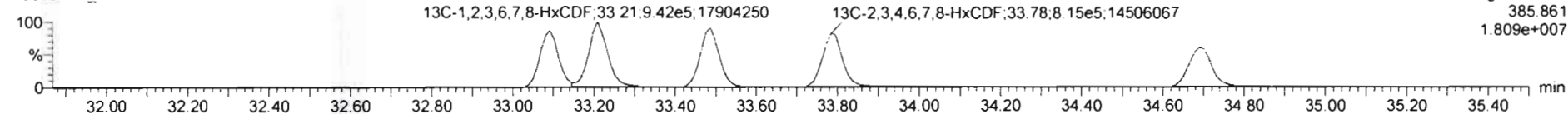


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_8

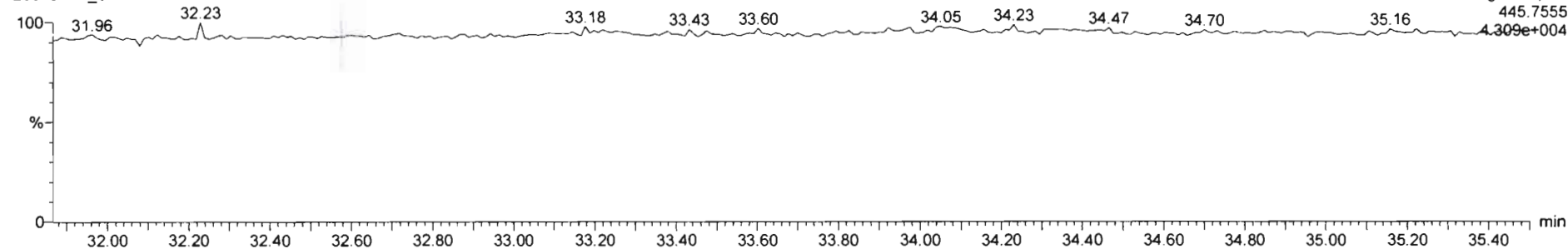


200131R1\_8



**DPE3**

200131R1\_8



Dataset: Untitled

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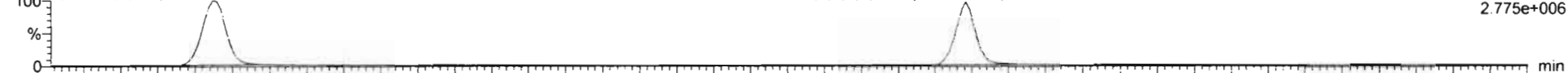
Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

**1,2,3,4,6,7,8-HpCDF**

200131R1\_8

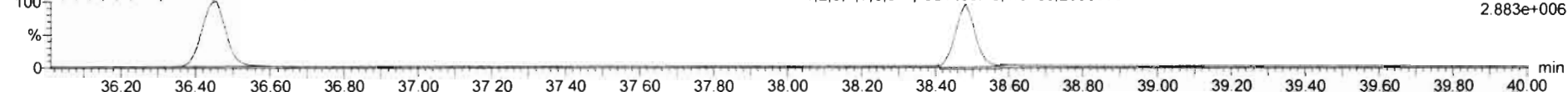
1,2,3,4,6,7,8-HpCDF;36.45;1.98e5;2717122



F4: Voltage SIR, EI+  
407.782  
2.775e+006

200131R1\_8

1,2,3,4,6,7,8-HpCDF;36.45;2.08e5;2828787

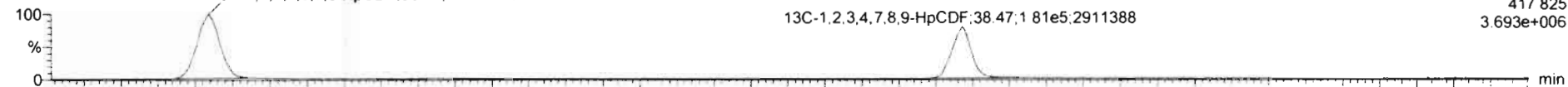


F4: Voltage SIR, EI+  
409.779  
2.883e+006

**13C-1,2,3,4,6,7,8-HpCDF**

200131R1\_8

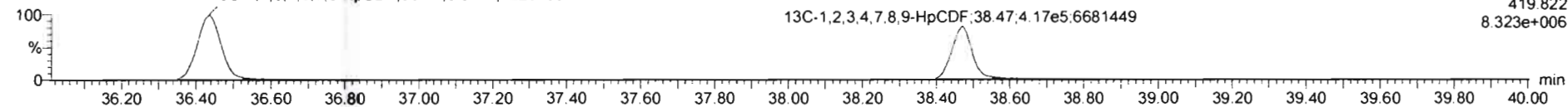
13C-1,2,3,4,6,7,8-HpCDF;36.44;2.54e5;3622240



F4: Voltage SIR, EI+  
417.825  
3.693e+006

200131R1\_8

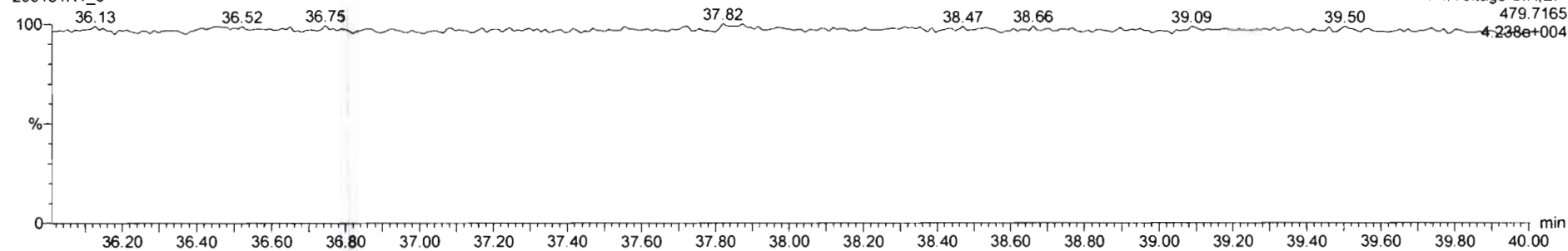
13C-1,2,3,4,6,7,8-HpCDF;36.44;5.89e5;8220130



F4: Voltage SIR, EI+  
419.822  
8.323e+006

**DPE4**

200131R1\_8

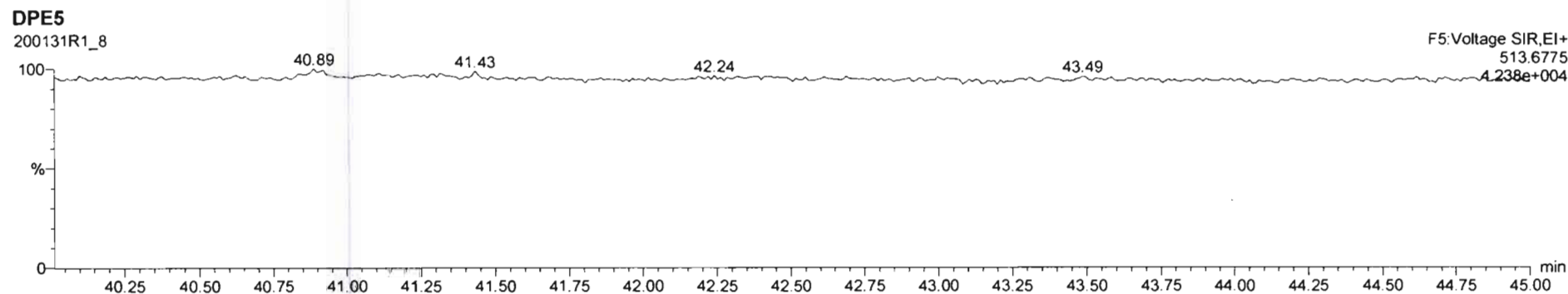
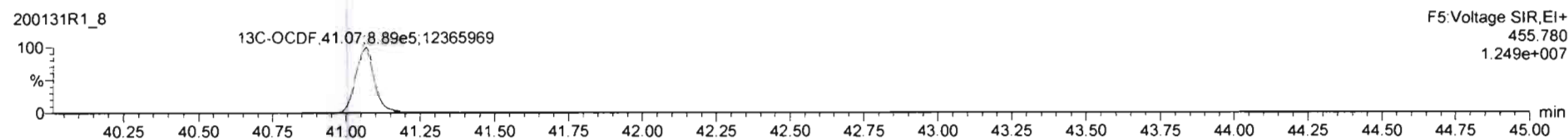
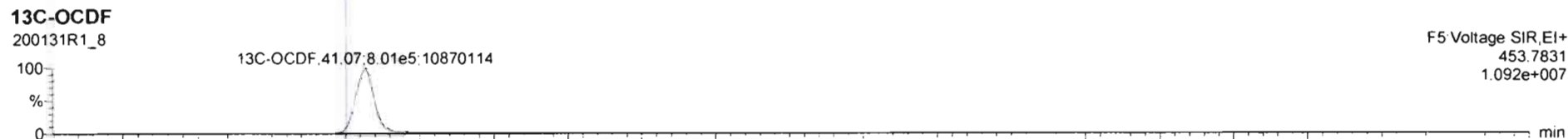
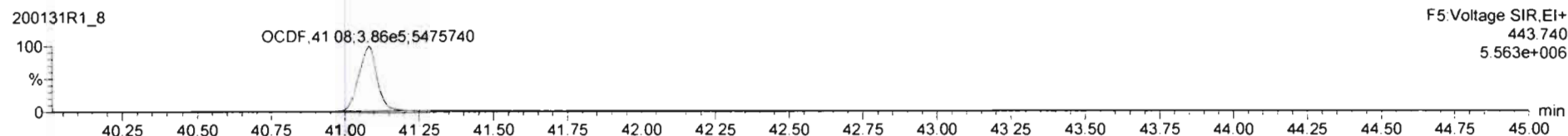
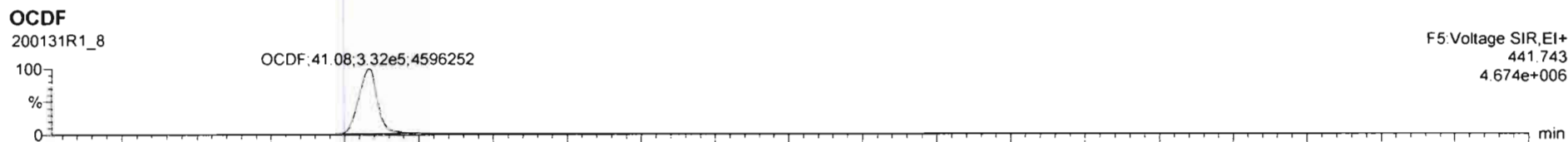


F4: Voltage SIR, EI+  
479.7165  
4.238e+004

Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

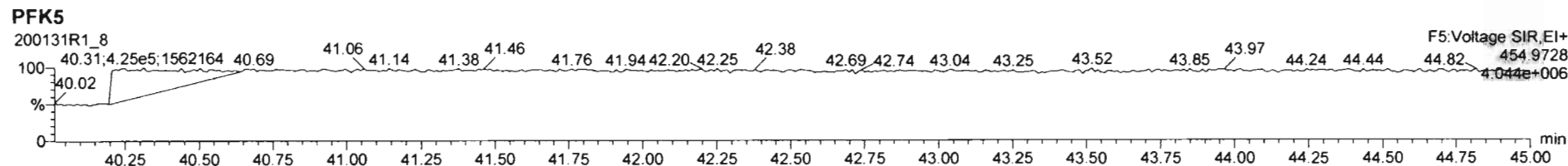
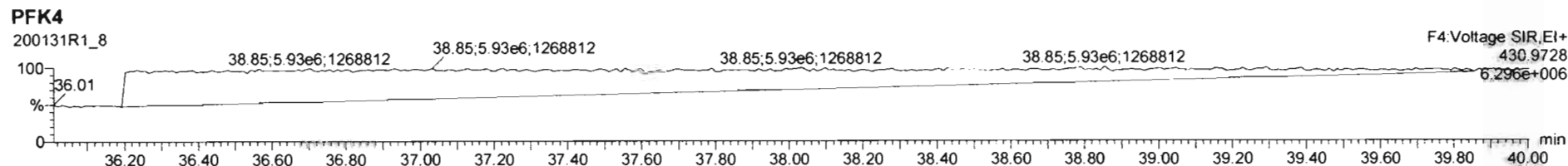
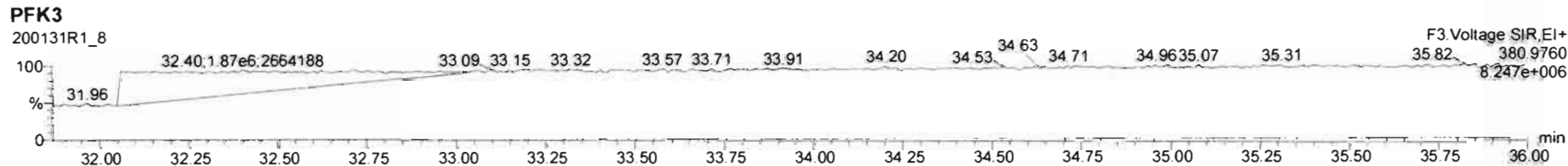
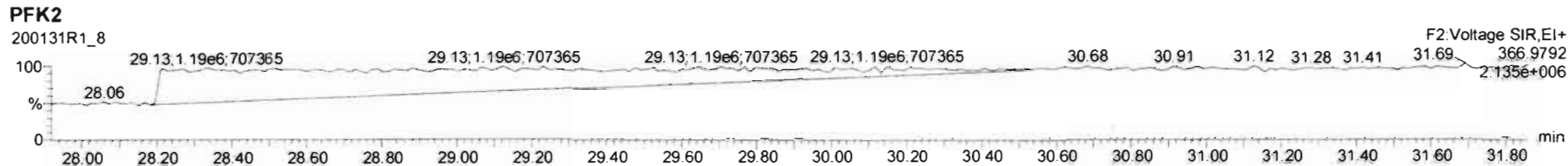
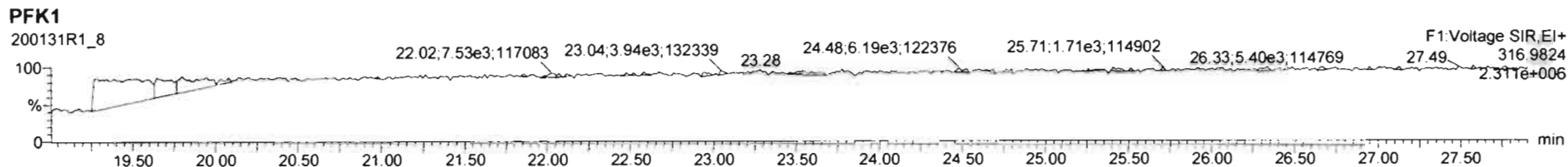


Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308



Dataset: U:\VG11.PRO\Results\200131K1\200131K1-CRV.qld

Last Altered: Friday, January 31, 2020 13:49:37 Pacific Standard Time  
 Printed: Saturday, February 01, 2020 08:27:10 Pacific Standard Time

*HC 2-1-2020 C1 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36  
 Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Compound name: 2,3,7,8-TCDF  
 Response Factor: 1.03616  
 RRF SD: 0.0951655, Relative SD: 9.1844  
 Response type: Internal Std ( Ref 2 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131K1_2	0.250	0.80	NO	16.38	1.001	9.45e3	3.12e6	0.292	16.8	1.21	MM
2	200131K1_3	0.500	0.76	NO	16.38	1.000	1.03e4	2.13e6	0.470	-6.1	0.973	MM
3	200131K1_4	2.00	0.77	NO	16.39	1.001	5.32e4	2.79e6	1.84	-7.9	0.954	bb
4	200131K1_5	10.0	0.78	NO	16.39	1.001	1.80e5	1.84e6	9.43	-5.7	0.977	bb
5	200131K1_6	40.0	0.79	NO	16.39	1.001	1.05e6	2.53e6	40.1	0.2	1.04	bb
6	200131K1_7	300	0.79	NO	16.40	1.001	7.90e6	2.47e6	308	2.7	1.06	bb

Compound name: 13C-2,3,7,8-TCDF  
 Response Factor: 1.02222  
 RRF SD: 0.0218203, Relative SD: 2.1346  
 Response type: Internal Std ( Ref 3 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131K1_2	100	0.79	NO	16.37	1.131	3.12e6	3.08e6	99.2	-0.8	1.01	bb
2	200131K1_3	100	0.79	NO	16.38	1.132	2.13e6	2.14e6	97.4	-2.6	0.996	bb
3	200131K1_4	100	0.77	NO	16.37	1.131	2.79e6	2.75e6	99.1	-0.9	1.01	bb
4	200131K1_5	100	0.79	NO	16.38	1.131	1.84e6	1.78e6	101	1.2	1.03	bd
5	200131K1_6	100	0.78	NO	16.38	1.132	2.53e6	2.48e6	99.5	-0.5	1.02	bb
6	200131K1_7	100	0.77	NO	16.39	1.131	2.47e6	2.34e6	104	3.6	1.06	bb

Dataset: U:\VG11.PRO\Results\200131K1\200131K1-CRV.qld

Last Altered: Friday, January 31, 2020 13:49:37 Pacific Standard Time  
 Printed: Saturday, February 01, 2020 08:27:10 Pacific Standard Time

**Compound name: 13C-1,2,3,4-TCDF**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 3 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131K1_2	100	0.78	NO	14.47	1.000	3.08e6	3.08e6	100	0.0	1.00	bb
2	200131K1_3	100	0.80	NO	14.47	1.000	2.14e6	2.14e6	100	0.0	1.00	bb
3	200131K1_4	100	0.79	NO	14.47	1.000	2.75e6	2.75e6	100	0.0	1.00	bb
4	200131K1_5	100	0.79	NO	14.48	1.000	1.78e6	1.78e6	100	0.0	1.00	bb
5	200131K1_6	100	0.79	NO	14.47	1.000	2.48e6	2.48e6	100	0.0	1.00	bb
6	200131K1_7	100	0.79	NO	14.49	1.000	2.34e6	2.34e6	100	0.0	1.00	bb

**Compound name: 13C-1,2,3,4-TCDD**

No Calibration

Response type: External Std, Area

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200131K1_2	0.000	0.79	NO	15.12	0.000	2.23e6				0.000	db
2	200131K1_3	0.000	0.77	NO	15.13	0.000	1.53e6				0.000	db
3	200131K1_4	0.000	0.80	NO	15.12	0.000	1.90e6				0.000	db
4	200131K1_5	0.000	0.79	NO	15.13	0.000	1.30e6				0.000	dd
5	200131K1_6	0.000	0.78	NO	15.13	0.000	1.74e6				0.000	db
6	200131K1_7	0.000	0.76	NO	15.06	0.000	1.62e6				0.000	bd

Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:56:50 Pacific Standard Time

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36  
Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

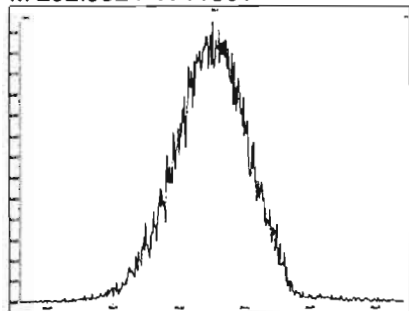
Compound name: 2,3,7,8-TCDF

	Name	ID	Acq.Date	Acq.Time
1	200131K1_1	CP200131K1-1 225 CPSM	31-Jan-20	10:07:42
2	200131K1_2	ST200131K1-1 1613 CS0 19C2201	31-Jan-20	10:37:56
3	200131K1_3	ST200131K1-2 1613 CS1 19C2202	31-Jan-20	11:09:19
4	200131K1_4	ST200131K1-3 1613 CS2 19C2203	31-Jan-20	11:40:42
5	200131K1_5	ST200131K1-4 1613 CS3 19C2204	31-Jan-20	12:13:33
6	200131K1_6	ST200131K1-5 1613 CS4 19C2205	31-Jan-20	12:43:47
7	200131K1_7	ST200131K1-6 1613 CS5 19C2206	31-Jan-20	13:16:14
8	200131K1_8	SOLVENT BLANK	31-Jan-20	13:46:37
9	200131K1_9	SS200131K1-1 1613 SSS 19C2207	31-Jan-20	14:19:06
10	200131K1_10	SOLVENT BLANK	31-Jan-20	14:49:31
11	200131K1_11	1903647-03RE1 PDI-067SC-B-02-04-191010 ...	31-Jan-20	15:20:42
12	200131K1_12	1904160-04RE1 PDI-032SC-A-01-02-191010 ...	31-Jan-20	15:52:01
13	200131K1_13	B0A0001-DUP1 Duplicate	31-Jan-20	16:23:24
14	200131K1_14	1904159-01RE1 PDI-013SC-A-02-03-190925 ...	31-Jan-20	16:54:44
15	200131K1_15	1904159-03RE1 PDI-015SC-A-07-08-191012 ...	31-Jan-20	17:26:05
16	200131K1_16	1904159-06RE1 PDI-016SC-A-01-02-191009 ...	31-Jan-20	17:57:25
17	200131K1_17	1904159-07RE1 PDI-018SC-A-06-07-190926 ...	31-Jan-20	18:30:13
18	200131K1_18	1904159-16RE1 PDI-024SC-A-03-04-190927 ...	31-Jan-20	19:00:33
19	200131K1_19	1904159-17RE1 PDI-025SC-A-02-03-190927 ...	31-Jan-20	19:32:58
20	200131K1_20	1904159-19RE1 PDI-026SC-A-04-05-191014 ...	31-Jan-20	20:03:17
21	200131K1_21	1904207-05RE1 PDI-077SC-A-00-01-191014 ...	31-Jan-20	20:34:41
22	200131K1_22	1904207-06RE1 PDI-077SC-A-01-02-191014 ...	31-Jan-20	21:06:06
23	200131K1_23	1904159-11RE1 PDI-020SC-A-02-03-191008 ...	31-Jan-20	21:37:30
24	200131K1_24	1904159-15RE1 PDI-024SC-A-02-03-190927 ...	31-Jan-20	22:10:18
25	200131K1_25	1904159-05RE1 PDI-016SC-A-00-01-191009 ...	31-Jan-20	22:41:56
26	200131K1_26	1904207-03RE1 PDI-076SC-A-04-05-191013 ...	31-Jan-20	23:13:28
27	200131K1_27	1903647-02RE1 PDI-067SC-B-00-02-191010 ...	31-Jan-20	23:44:04

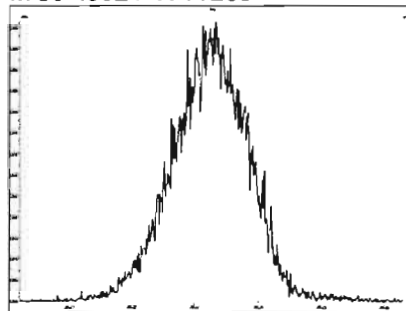
File: Experiment: tcdf\_db225.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed: Friday, January 31, 2020 10:05:02 Pacific Standard Time

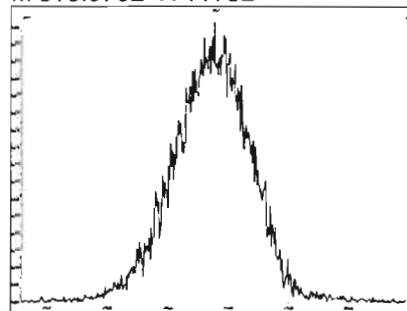
M 292.9824 R 11361



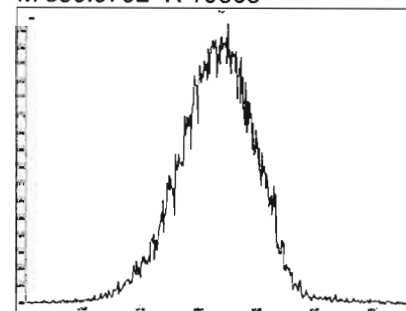
M 304.9824 R 11263



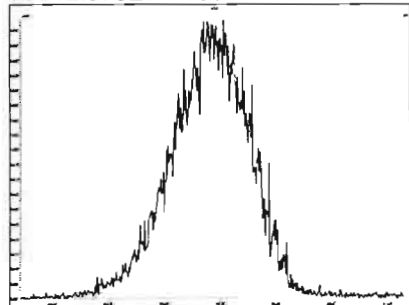
M 318.9792 R 11732



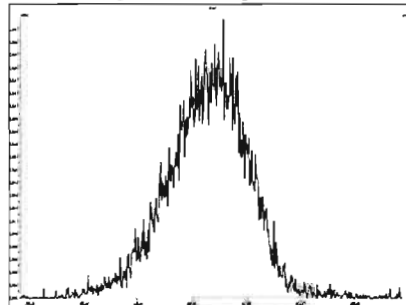
M 330.9792 R 10868



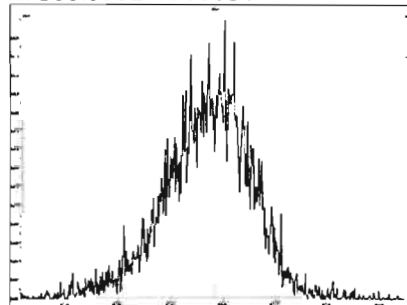
M 342.9792 R 10967



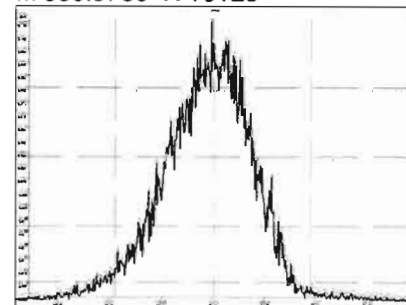
M 354.9792 R 12020



M 366.9792 R 11164



M 380.9760 R 10123

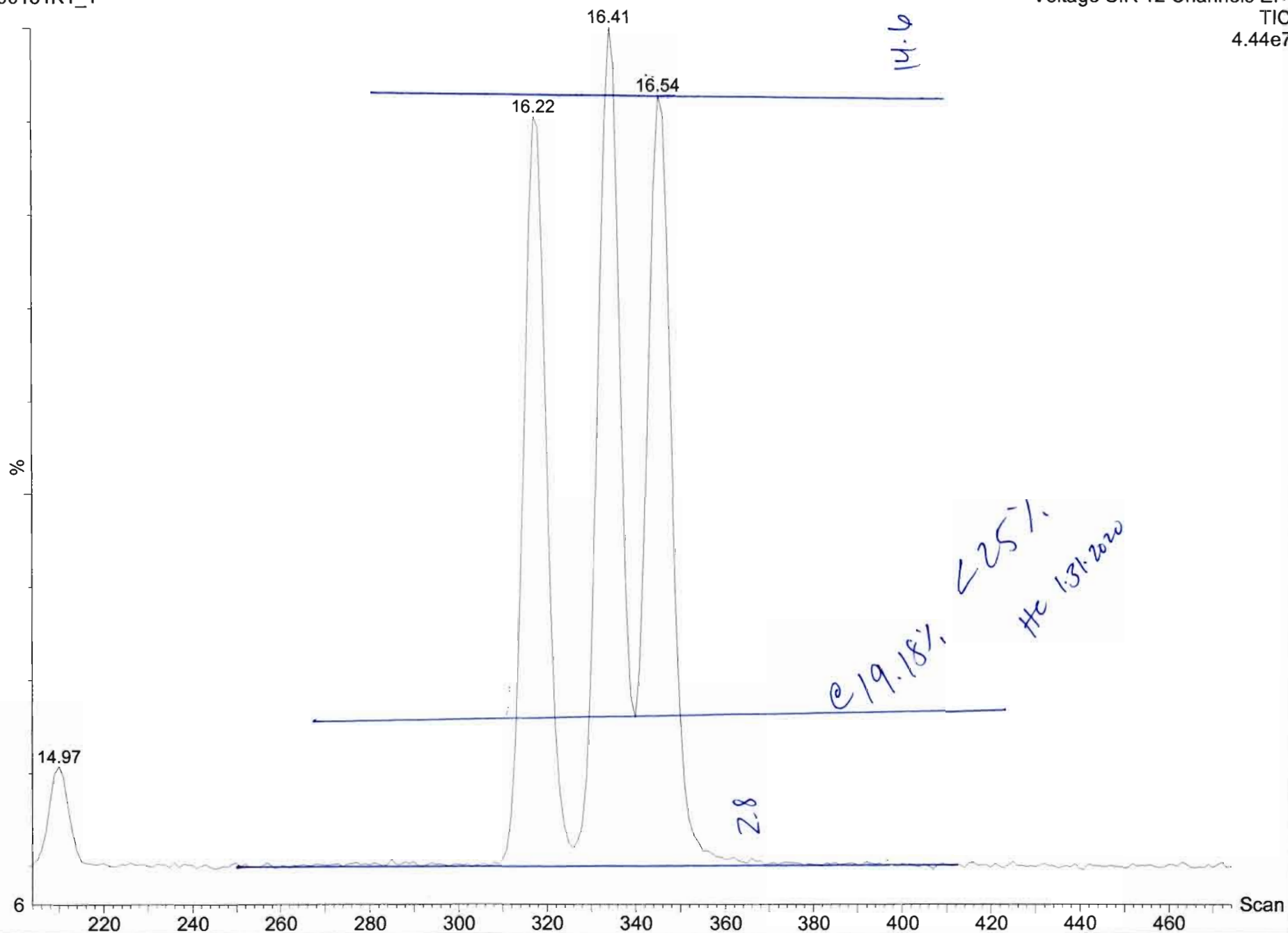




225 CPSM  
200131K1\_1

M658

31-Jan-2020 10:07:42  
Voltage SIR 12 Channels EI+  
TIC  
4.44e7



Dataset: Untitled

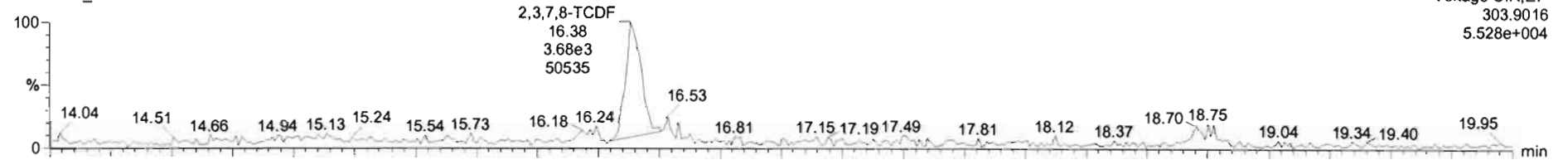
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36  
Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

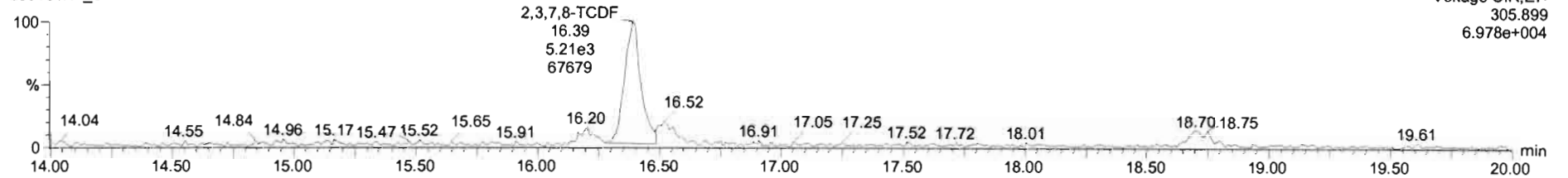
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2,3,7,8-TCDF

200131K1\_2

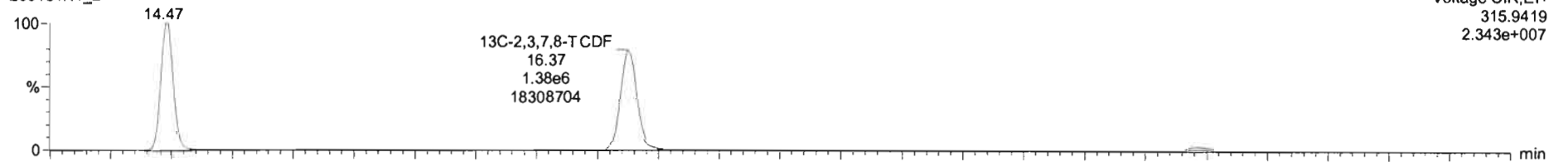


200131K1\_2

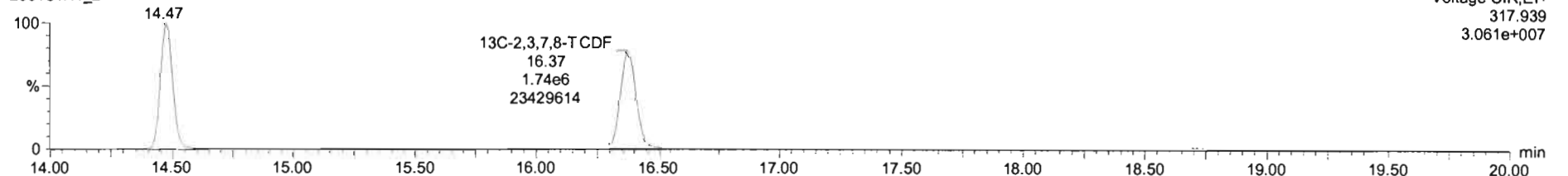


13C-2,3,7,8-TCDF

200131K1\_2



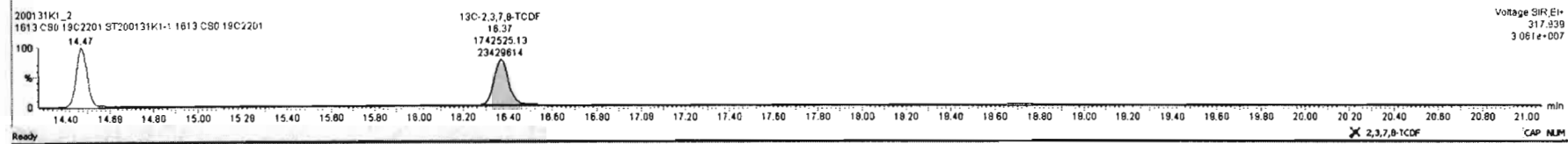
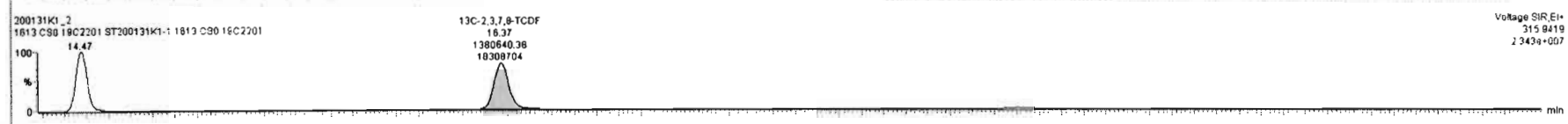
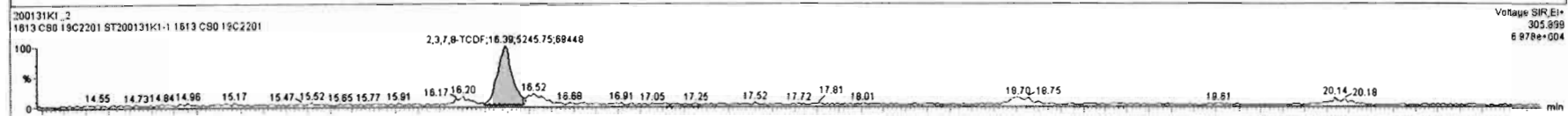
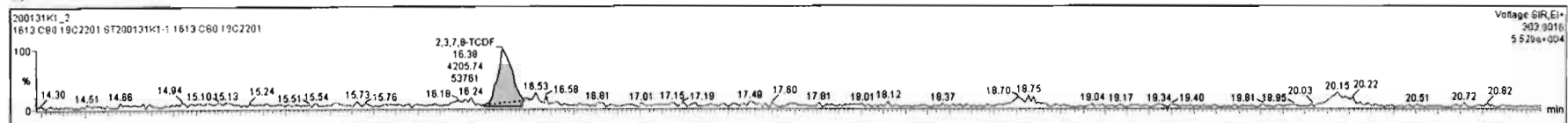
200131K1\_2



2,3,7,8-TCDF

#	Name	Std Conc	RT	Resp	Ratio	Ratio Flag	IS Resp	Response	Conc	%Dev	RRF Mean	RRF %RSD	RRF	Divisor1
1	200131K1_2	0.250	16.38	9.451e3	0.802	NO	3.123e6	0.303	0.3	16.8	1.036	9.184	1.211	1.0
2	200131K1_3	0.500	16.38	1.035e4	0.758	NO	2.126e6	0.487	0.5	-8.1	1.036	9.184	0.973	1.0
3	200131K1_4	2.000	16.38	5.325e4	0.770	NO	2.790e6	1.909	1.8	-7.9	1.036	9.184	0.954	1.0
4	200131K1_5	10.000	16.38	1.801e5	0.784	NO	1.844e6	9.770	9.4	-5.7	1.036	9.184	0.977	1.0
5	200131K1_6	40.000	16.38	1.049e6	0.792	NO	2.526e6	41.523	40.1	0.2	1.036	9.184	1.038	1.0
6	200131K1_7	300.000	16.40	7.895e6	0.793	NO	2.474e6	319.092	308.0	2.7	1.036	9.184	1.064	1.0

Name	RT	m1 Resp	m2 Resp	RA	rv	EMPC	Conc
1							



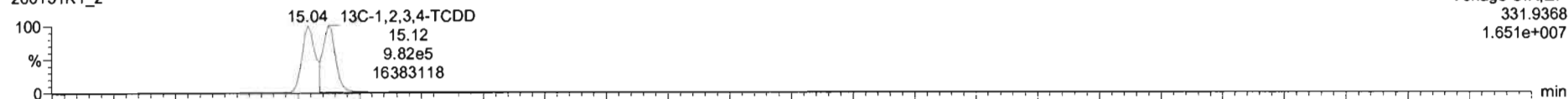
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Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_2, Date: 31-Jan-2020, Time: 10:37:56, ID: ST200131K1-1 1613 CS0 19C2201, Description: 1613 CS0 19C2201

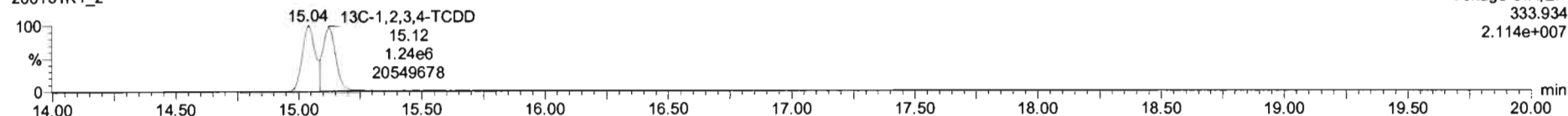
### 13C-1,2,3,4-TCDD

200131K1\_2



Voltage SIR,EI+  
331.9368  
1.651e+007

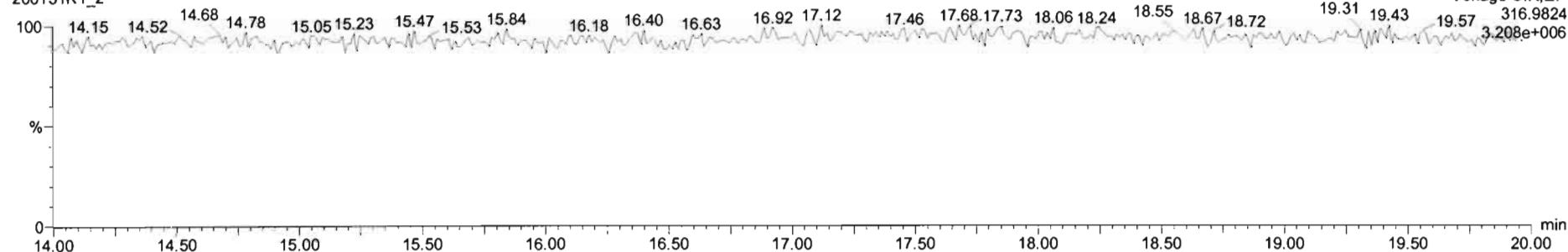
200131K1\_2



Voltage SIR,EI+  
333.934  
2.114e+007

### PFK1

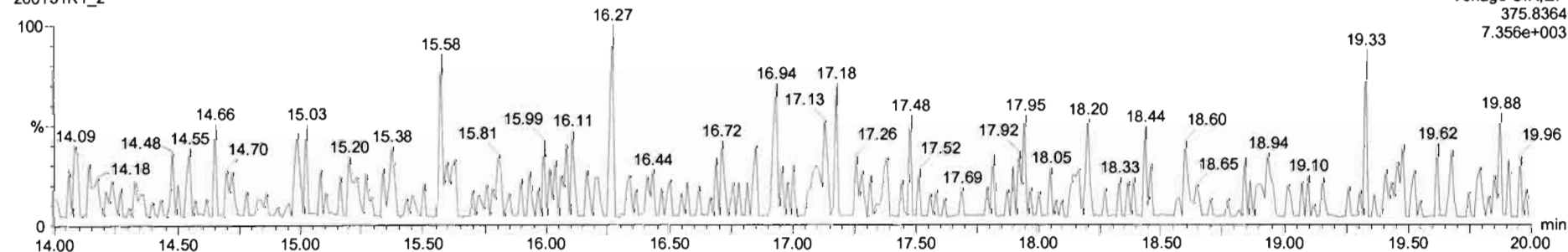
200131K1\_2



Voltage SIR,EI+  
316.9824  
3.208e+006

### DPE1

200131K1\_2



Voltage SIR,EI+  
375.8364  
7.356e+003

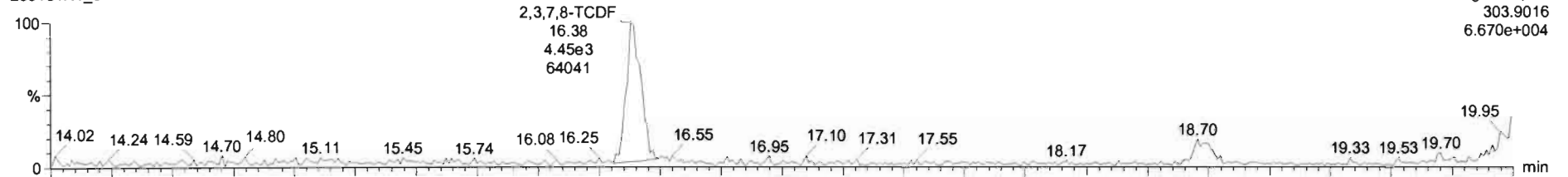
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Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

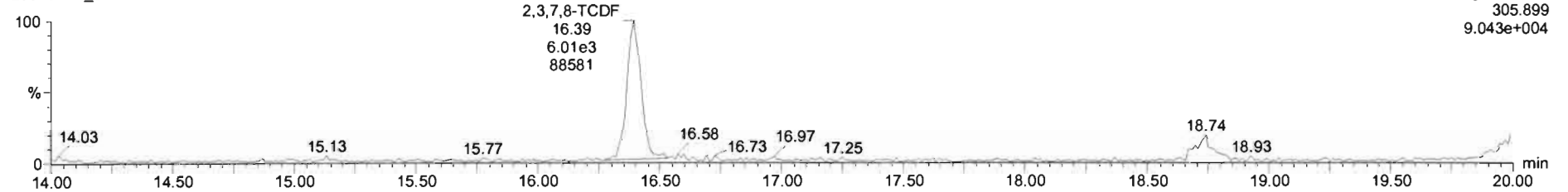
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2,3,7,8-TCDF

200131K1\_3

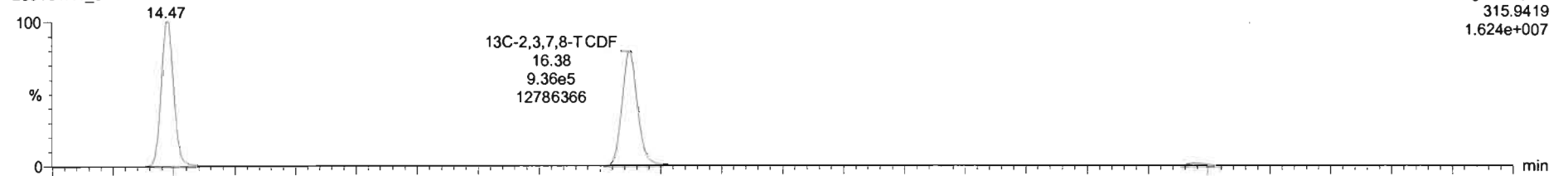


200131K1\_3

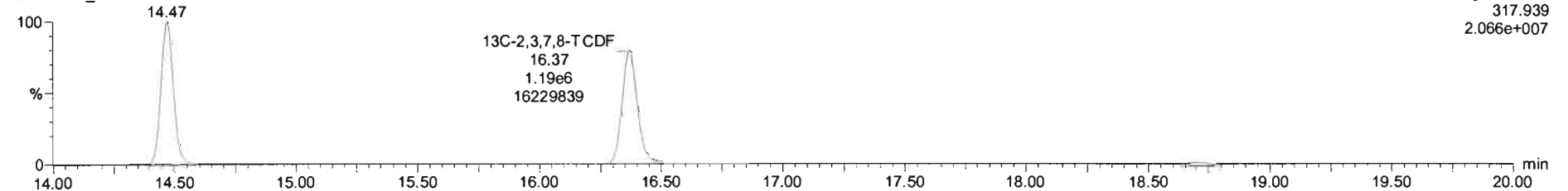


13C-2,3,7,8-TCDF

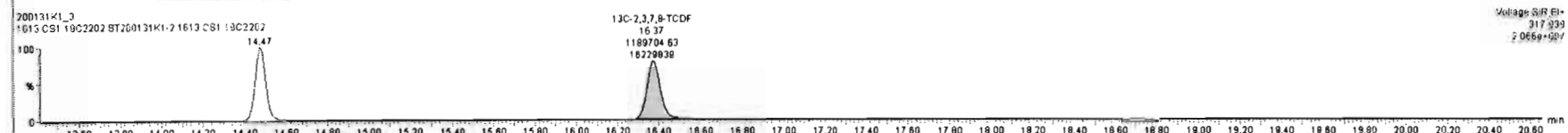
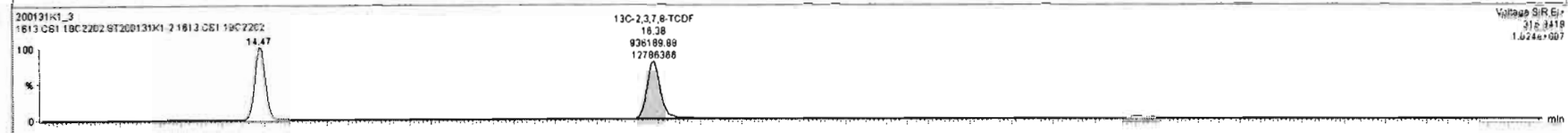
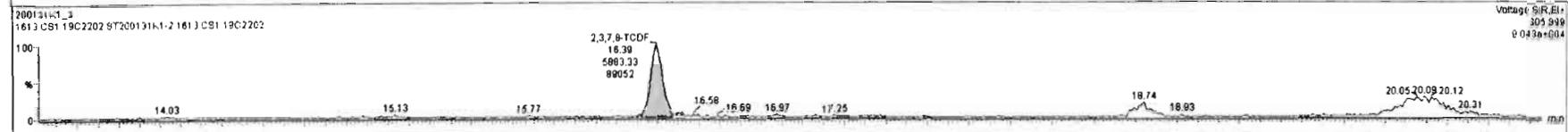
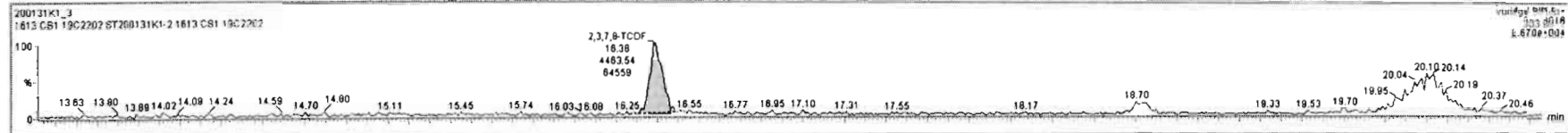
200131K1\_3



200131K1\_3



#	Name	Resp	RA	n/y	RRF	wtMol	RT	Conc.	%Rec	DL
1	2,3,7,8-TCDF	1.03e4	0.79	NO	1.04	1.000	16.38	0.470	83.9	0.0008
2	13C-2,3,7,8-TCDF	2.13e6	0.79	NO	1.02	1.000	16.38	97.4	97.4	0.125
3	13C-1,2,3,4-TCDF	2.14e6	0.80	NO	1.00	1.000	14.47	100	100	0.128
4	13C-1,2,3,4-TCDD	1.53e6	0.77	NO		1.000	15.13			
5	SPFK1					1.000				
6	DPE1					1.000				



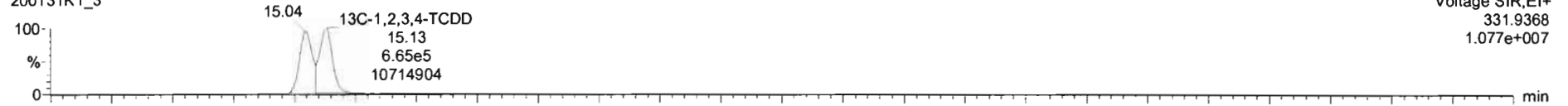
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Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

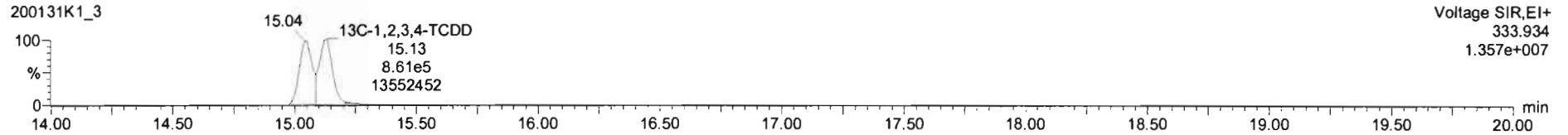
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13C-1,2,3,4-TCDD

200131K1\_3

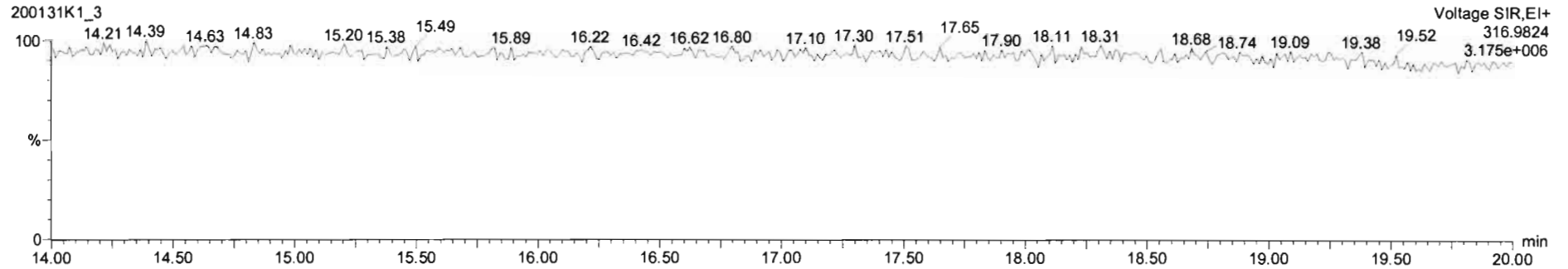


200131K1\_3



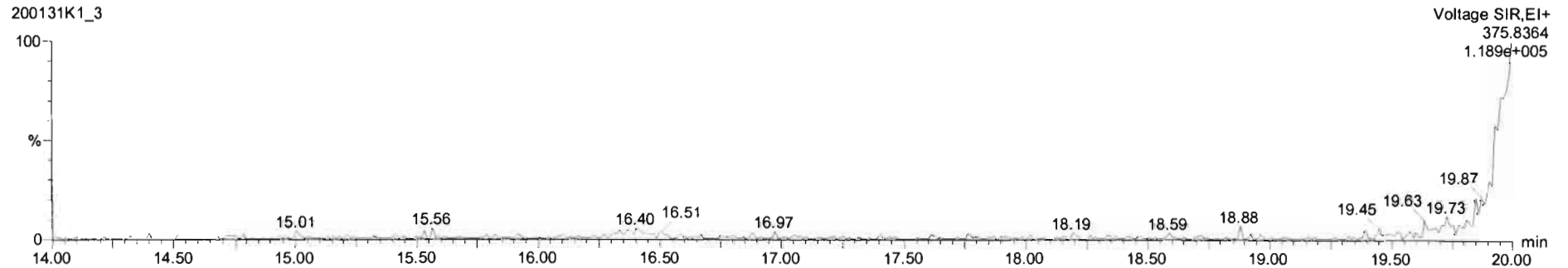
PFK1

200131K1\_3



DPE1

200131K1\_3



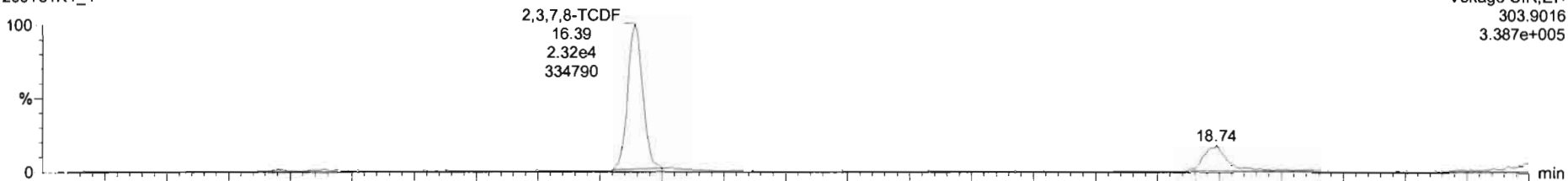
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

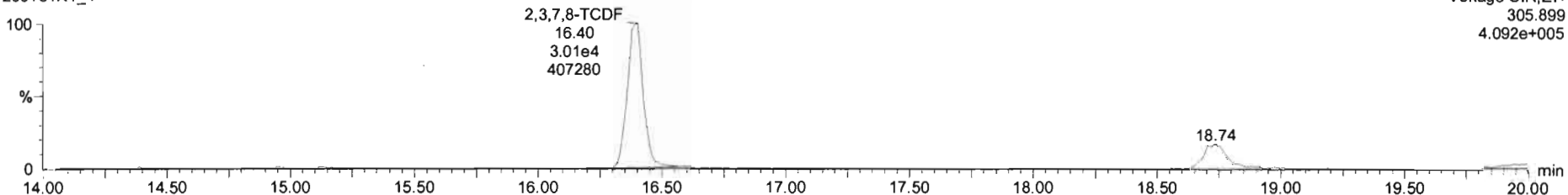
Name: 200131K1\_4, Date: 31-Jan-2020, Time: 11:40:42, ID: ST200131K1-3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**2,3,7,8-TCDF**

200131K1\_4

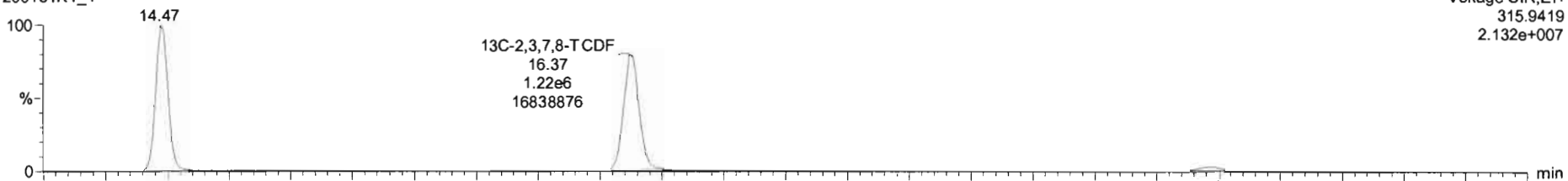


200131K1\_4

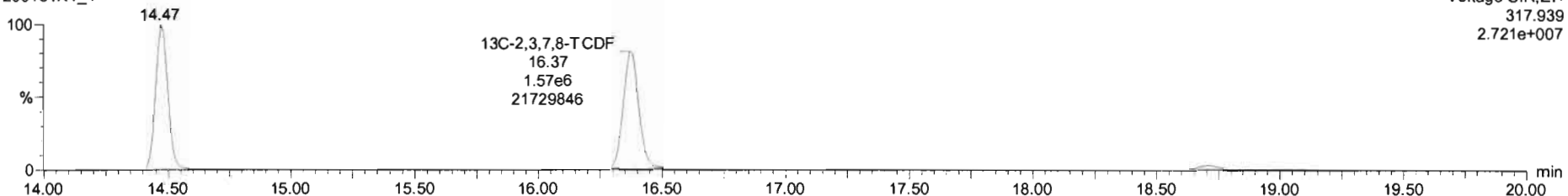


**13C-2,3,7,8-TCDF**

200131K1\_4



200131K1\_4





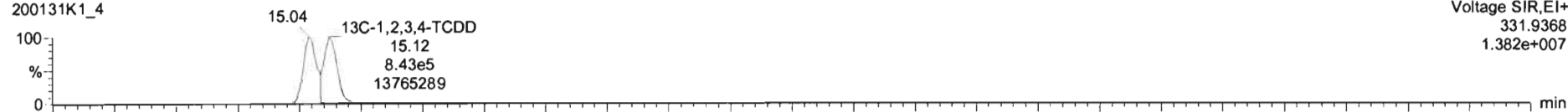
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

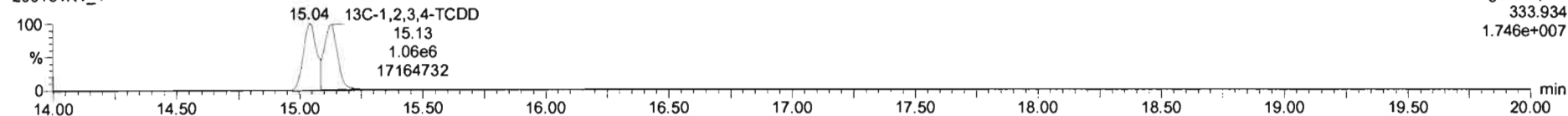
Name: 200131K1\_4, Date: 31-Jan-2020, Time: 11:40:42, ID: ST200131K1-3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

**13C-1,2,3,4-TCDD**

200131K1\_4

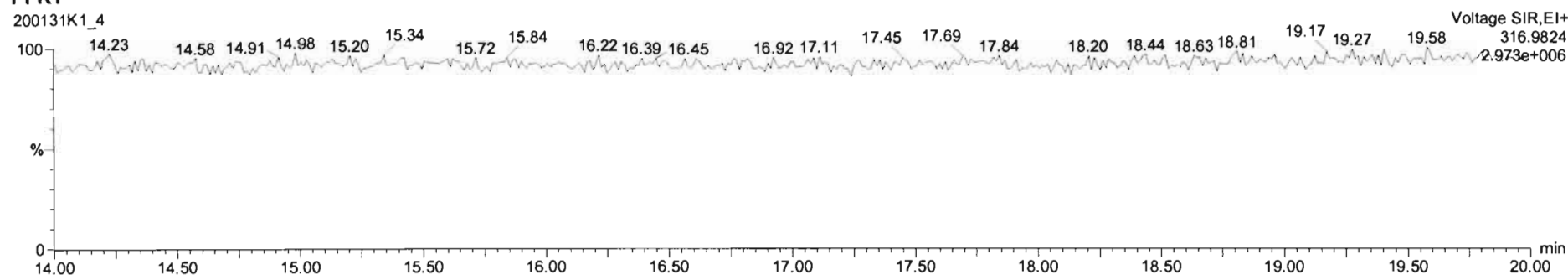


200131K1\_4



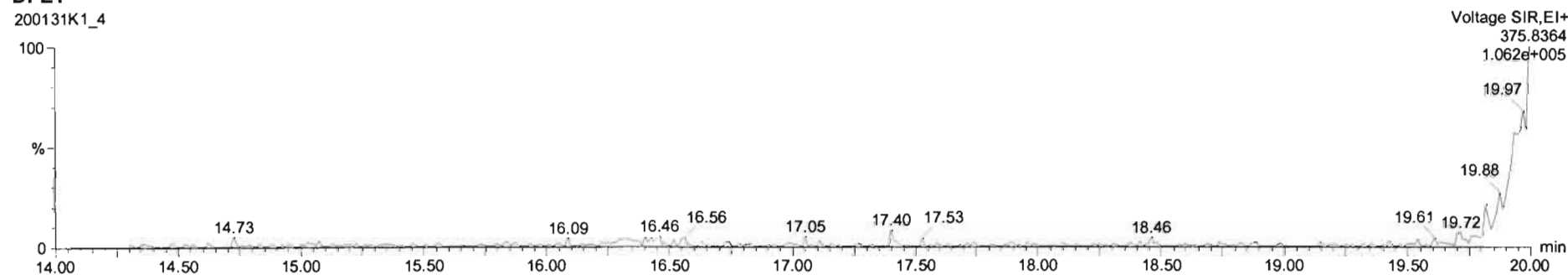
**PFK1**

200131K1\_4



**DPE1**

200131K1\_4



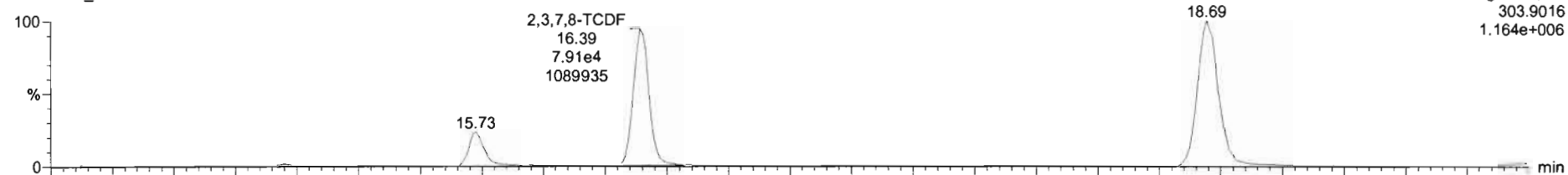
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

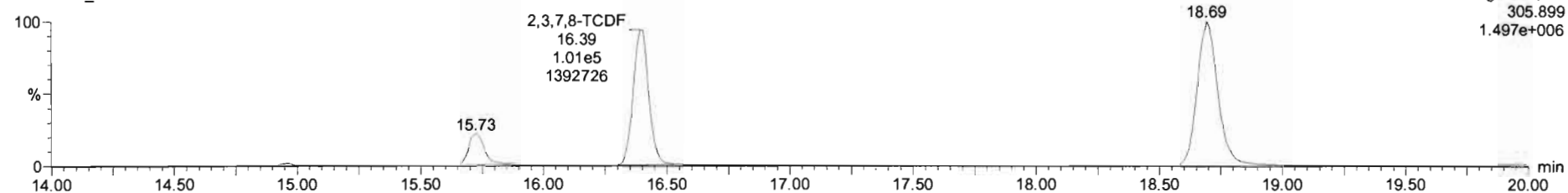
Name: 200131K1\_5, Date: 31-Jan-2020, Time: 12:13:33, ID: ST200131K1-4 1613 CS3 19C2204, Description: 1613 CS3 19C2204

**2,3,7,8-TCDF**

200131K1\_5

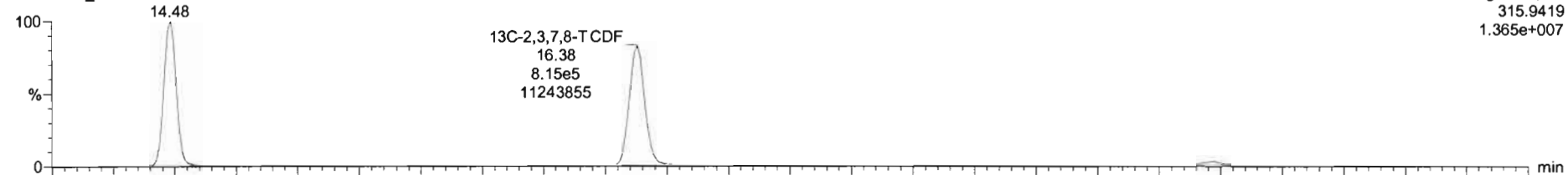


200131K1\_5

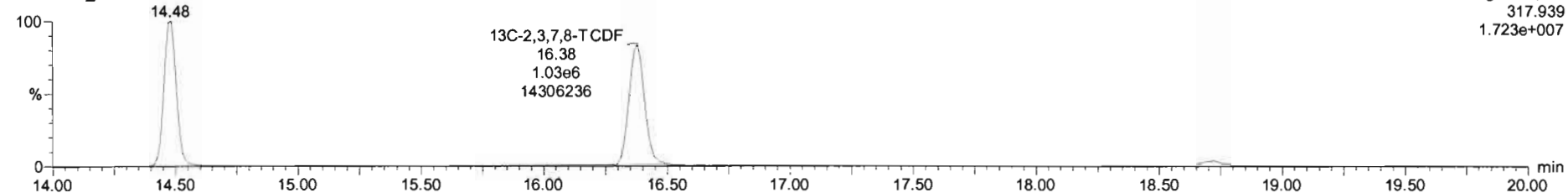


**13C-2,3,7,8-TCDF**

200131K1\_5



200131K1\_5



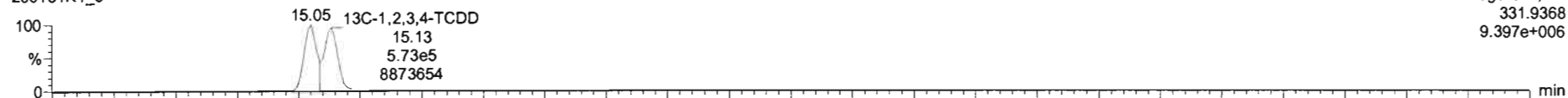
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

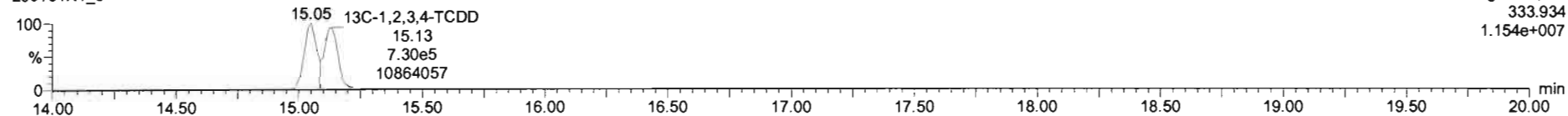
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**13C-1,2,3,4-TCDD**

200131K1\_5

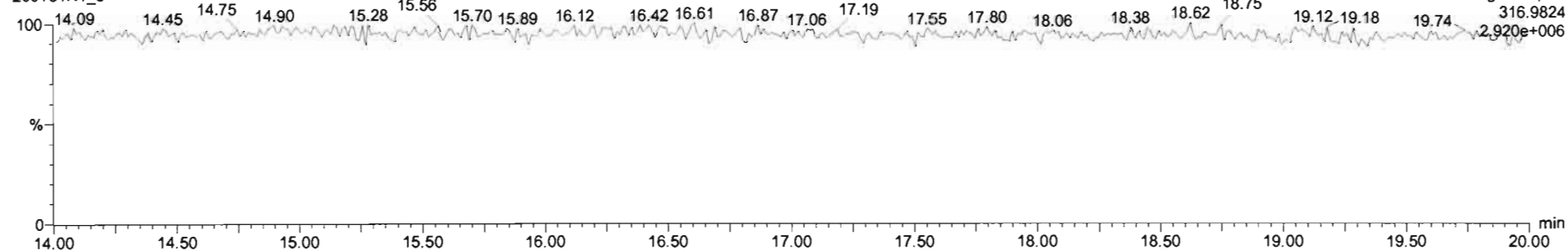


200131K1\_5



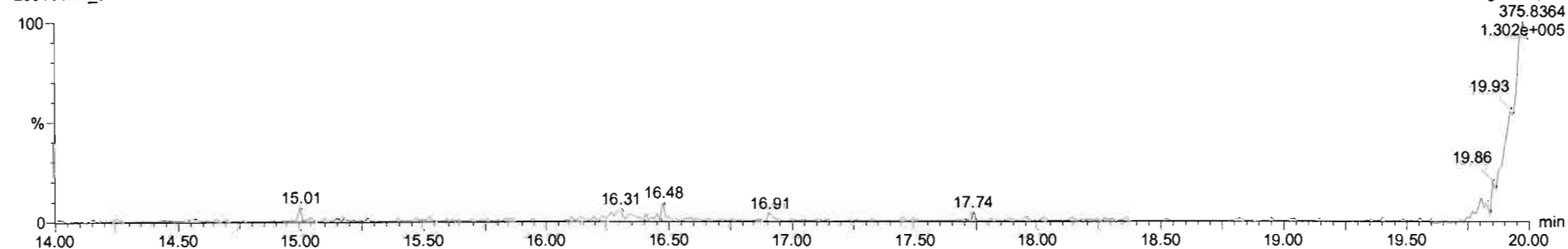
**PFK1**

200131K1\_5



**DPE1**

200131K1\_5



Dataset: Untitled

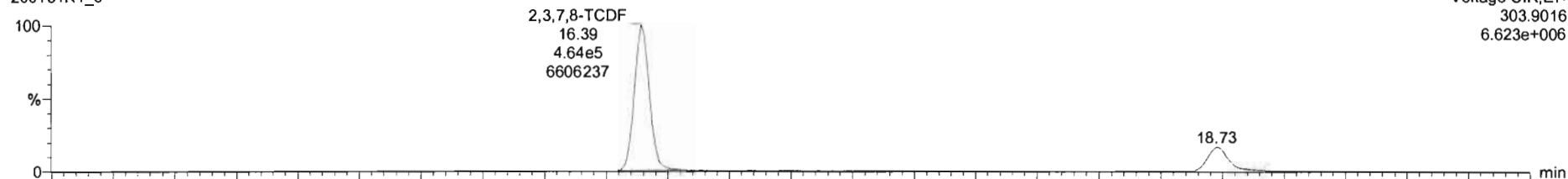
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time

Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_6, Date: 31-Jan-2020, Time: 12:43:47, ID: ST200131K1-5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

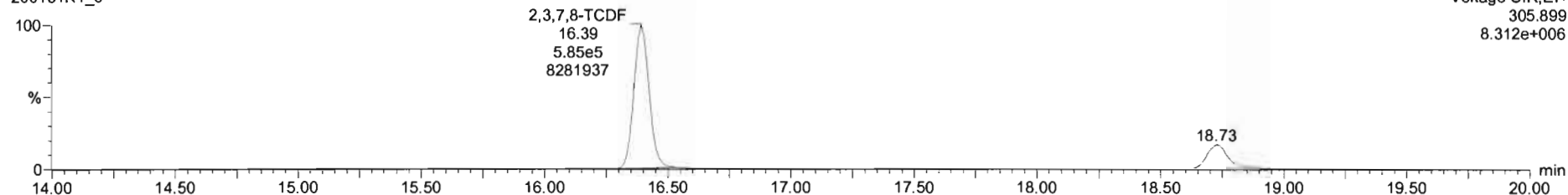
**2,3,7,8-TCDF**

200131K1\_6



Voltage SIR,EI+  
303.9016  
6.623e+006

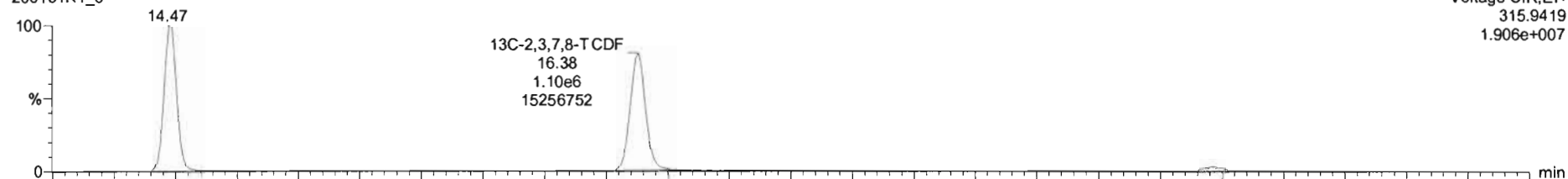
200131K1\_6



Voltage SIR,EI+  
305.899  
8.312e+006

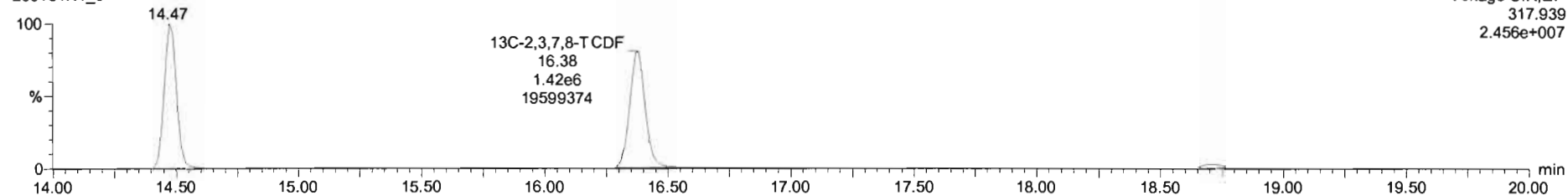
**13C-2,3,7,8-TCDF**

200131K1\_6



Voltage SIR,EI+  
315.9419  
1.906e+007

200131K1\_6



Voltage SIR,EI+  
317.939  
2.456e+007

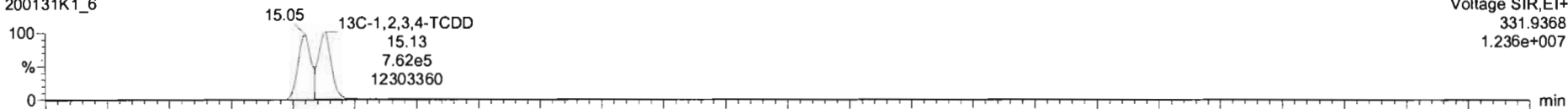
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

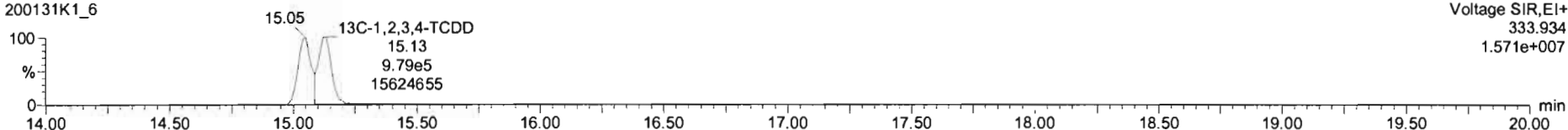
Name: 200131K1\_6, Date: 31-Jan-2020, Time: 12:43:47, ID: ST200131K1-5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

13C-1,2,3,4-TCDD

200131K1\_6

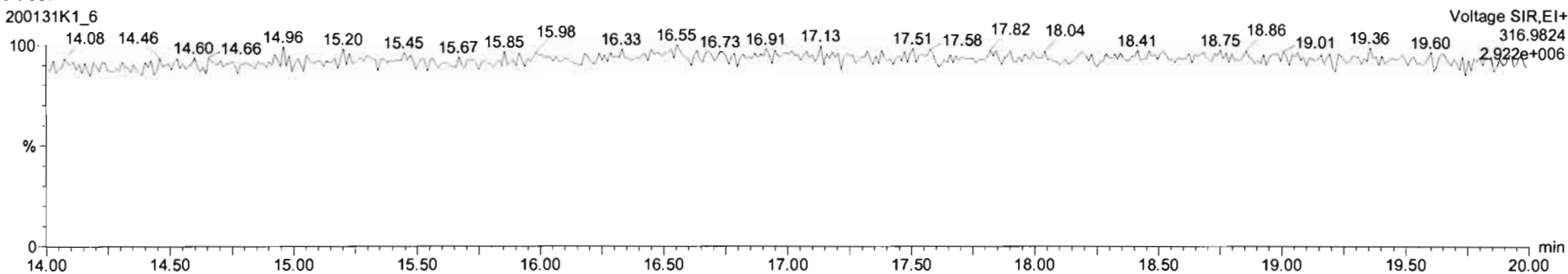


200131K1\_6



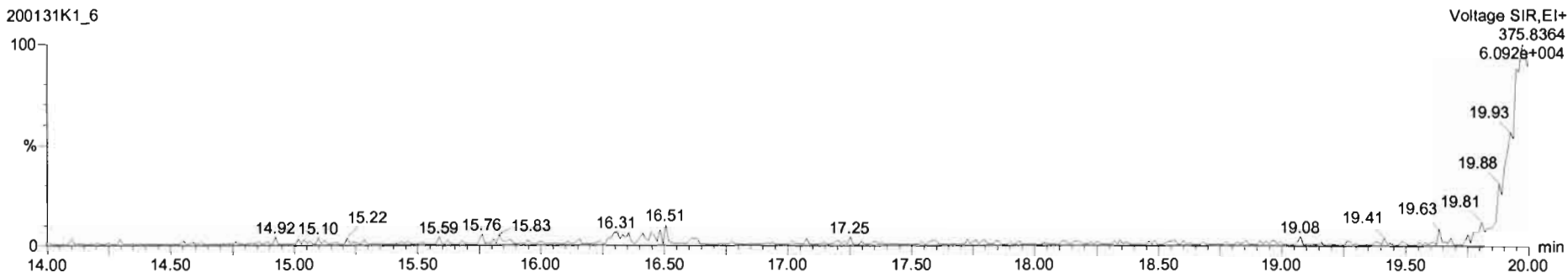
PFK1

200131K1\_6



DPE1

200131K1\_6



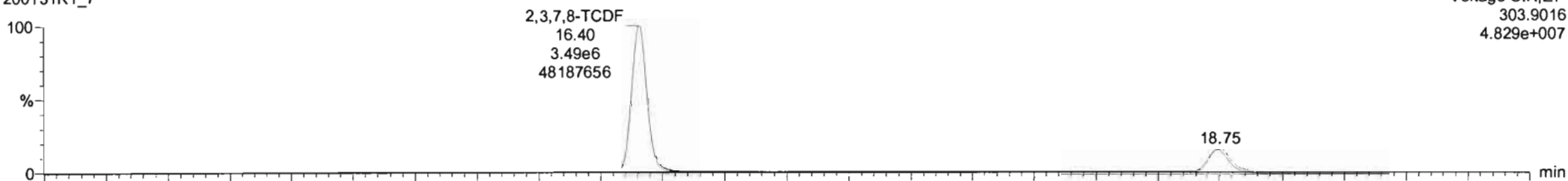
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_7, Date: 31-Jan-2020, Time: 13:16:14, ID: ST200131K1-6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

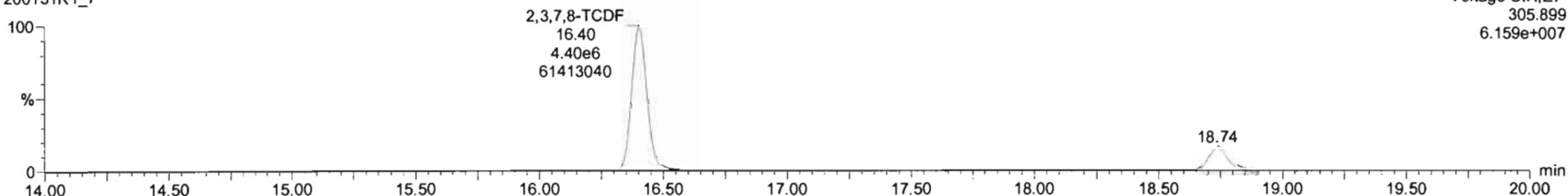
**2,3,7,8-TCDF**

200131K1\_7



Voltage SIR,EI+  
303.9016  
4.829e+007

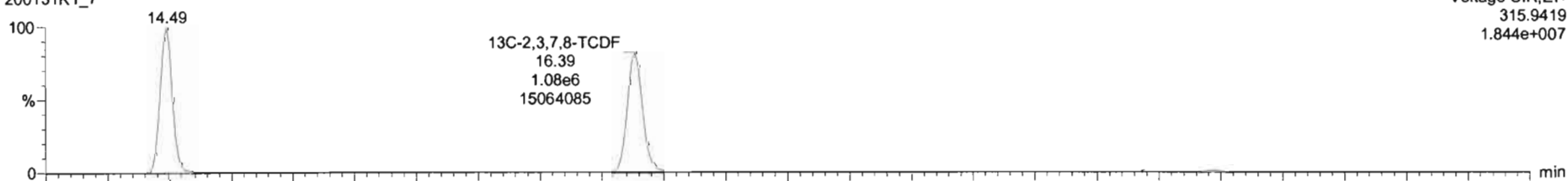
200131K1\_7



Voltage SIR,EI+  
305.899  
6.159e+007

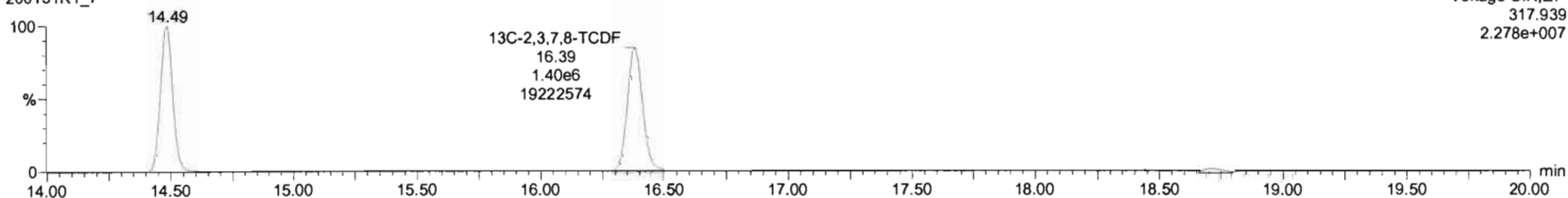
**13C-2,3,7,8-TCDF**

200131K1\_7



Voltage SIR,EI+  
315.9419  
1.844e+007

200131K1\_7



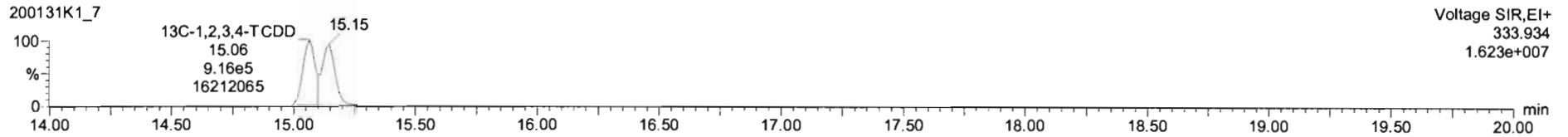
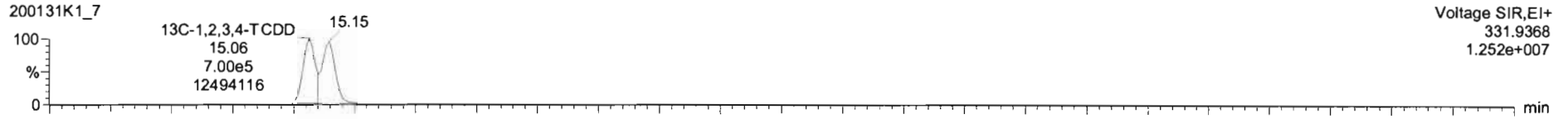
Voltage SIR,EI+  
317.939  
2.278e+007

Dataset: Untitled

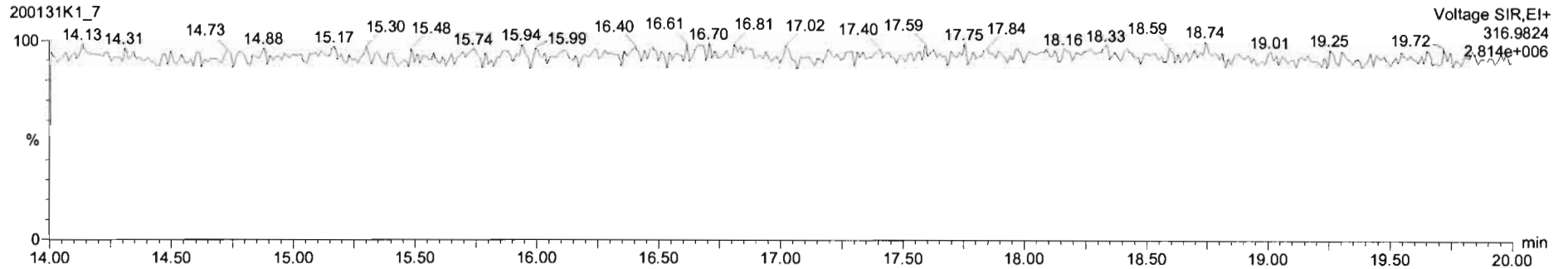
Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_7, Date: 31-Jan-2020, Time: 13:16:14, ID: ST200131K1-6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

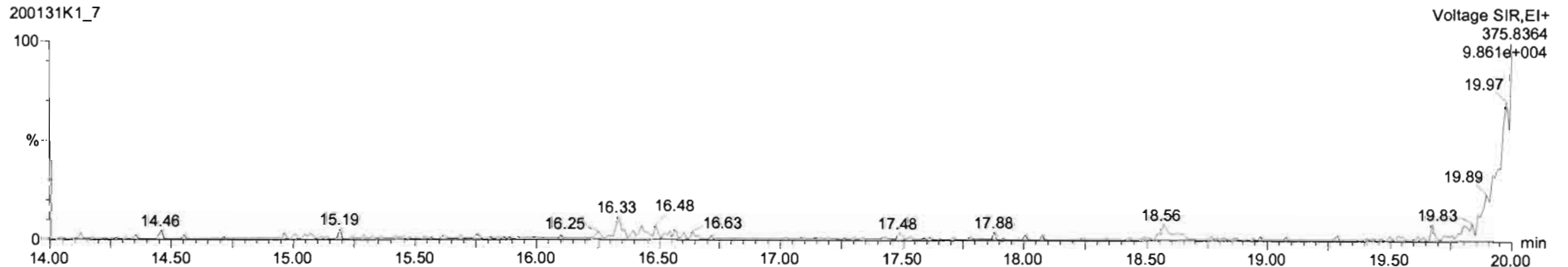
**13C-1,2,3,4-TCDD**

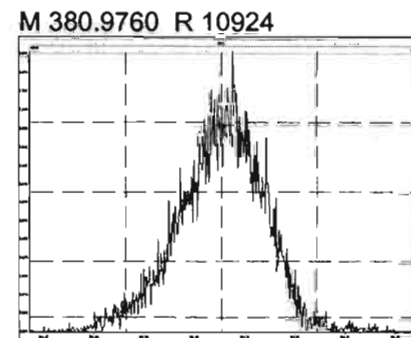
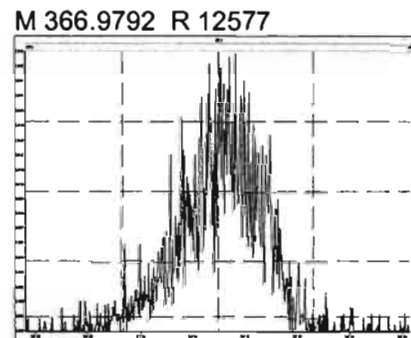
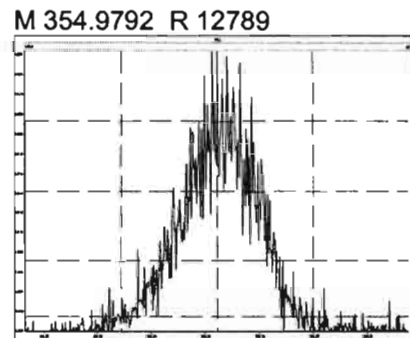
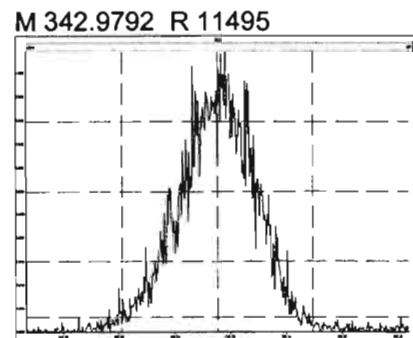
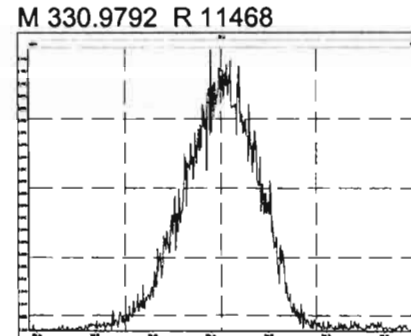
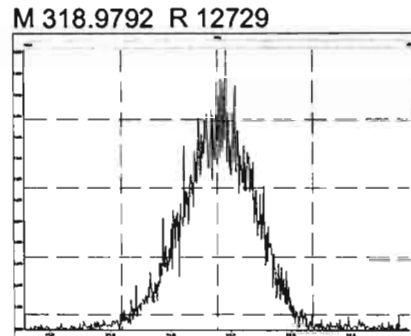
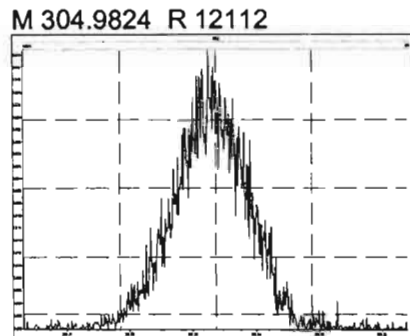
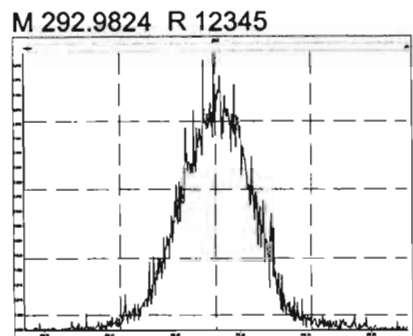


**PFK1**



**DPE1**







Dataset: U:\VG11.PRO\Results\200131K1\200131K1-9.qld

Last Altered: Saturday, February 01, 2020 08:31:58 Pacific Standard Time

Printed: Saturday, February 01, 2020 08:32:13 Pacific Standard Time

*H2.1.20W*

*CT 02/03/2020*

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225\_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1\_9, Date: 31-Jan-2020, Time: 14:19:06, ID: SS200131K1-1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

#	Name	Resp	RA	n/y	RRF M...	wt/vol	RT	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	2.08e5	0.78	NO	1.04	1.000	16.40	10.088	101	0.0618
2	2 13C-2,3,7,8-TCDF	1.99e6	0.76	NO	1.02	1.000	16.39	94.052	94.1	0.102
3	3 13C-1,2,3,4-TCDF	2.07e6	0.80	NO	1.00	1.000	14.48	100.00	100	0.104
4	4 13C-1,2,3,4-TCDD	1.39e6	0.79	NO		1.000	15.13			

*5-14.781*

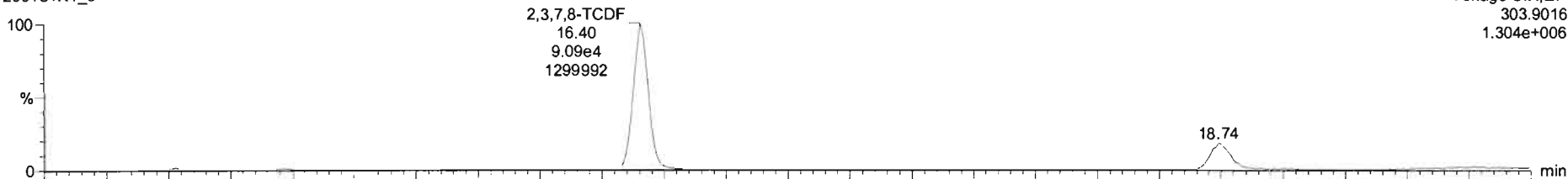
Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1\_9, Date: 31-Jan-2020, Time: 14:19:06, ID: SS200131K1-1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

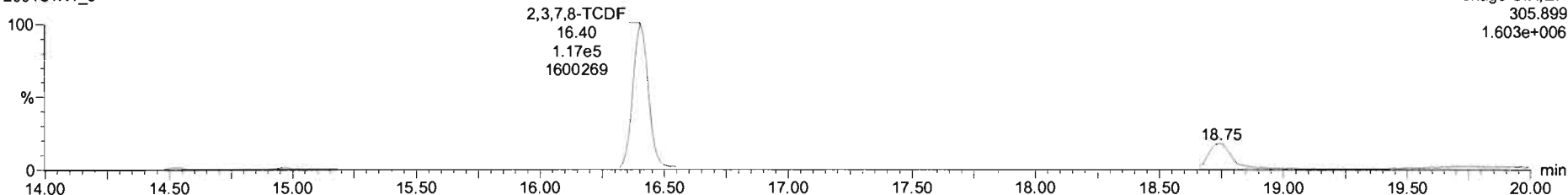
**2,3,7,8-TCDF**

200131K1\_9



Voltage SIR,EI+  
303.9016  
1.304e+006

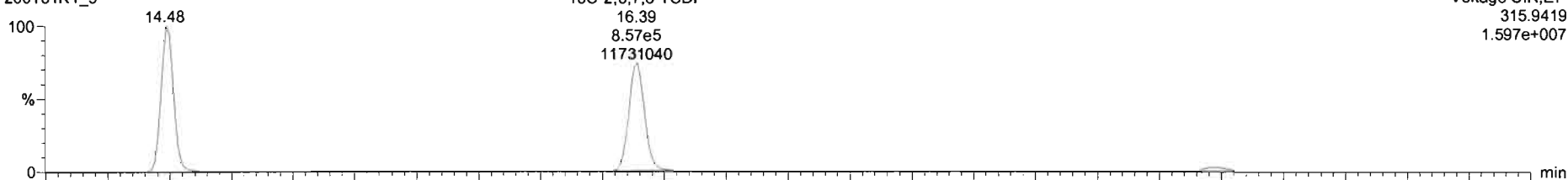
200131K1\_9



Voltage SIR,EI+  
305.899  
1.603e+006

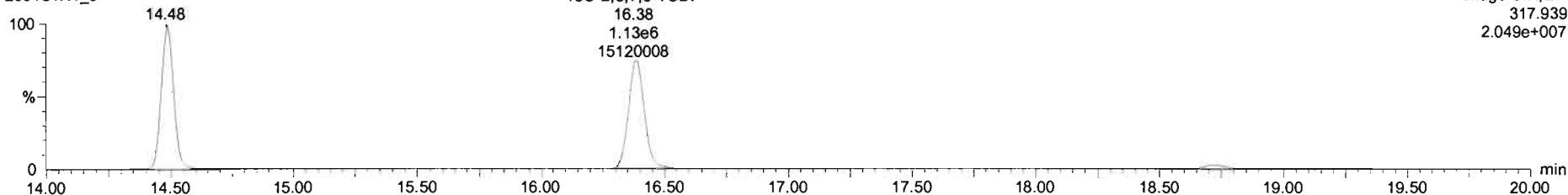
**13C-2,3,7,8-TCDF**

200131K1\_9



Voltage SIR,EI+  
315.9419  
1.597e+007

200131K1\_9



Voltage SIR,EI+  
317.939  
2.049e+007

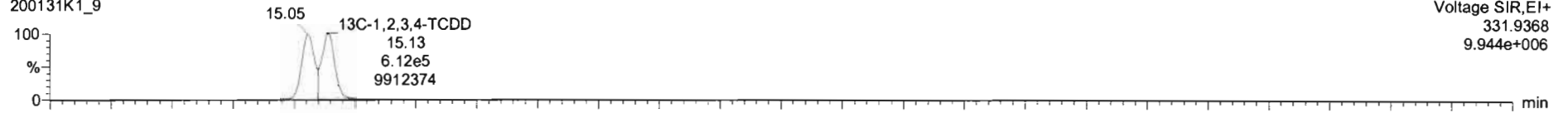
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Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time  
Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

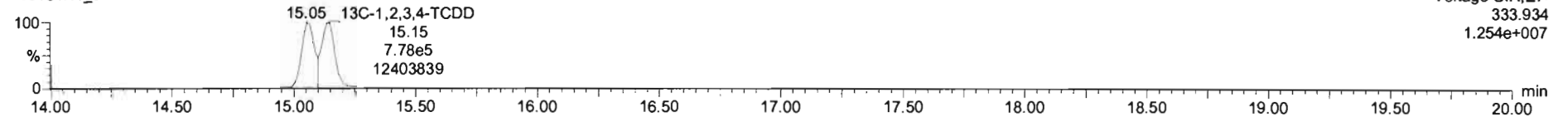
Name: 200131K1\_9, Date: 31-Jan-2020, Time: 14:19:06, ID: SS200131K1-1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

13C-1,2,3,4-TCDD

200131K1\_9

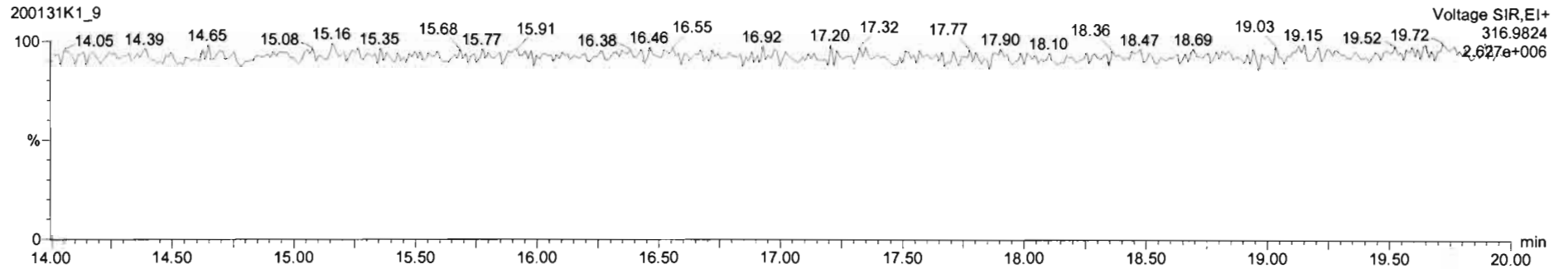


200131K1\_9



PFK1

200131K1\_9



DPE1

200131K1\_9

