

February 28, 2020

**Vista Work Order No. 2000329**

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 February 17, 2020 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. 2000329**

### **Case Narrative**

#### **Sample Condition on Receipt:**

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

#### **Analytical Notes:**

##### **EPA Method 1613B**

These samples were extracted and analyzed for tetra-through-octa chlorinated dioxins and furans by EPA Method 1613B using a ZB-5MS GC column.

##### **Holding Times**

These samples were extracted and analyzed within the method hold times.

##### **Quality Control**

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. The concentrations of OCDD, 1,2,3,4,6,7,8-HpCDF and OCDF were 0.667 pg/g, 0.453 pg/g and 0.312 pg/g, respectively, in the Method Blank. No other analytes were detected in the Method Blank. The OPR recoveries were within the method acceptance criteria.

A duplicate was performed on sample "PDI-100SC-J-09-10-190926". The RPDs were out of the acceptance criteria for 1,2,3,4,6,7,8-HpCDD and OCDD.

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

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# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
2000329-01	PDI-100SC-J-06-07-190926	26-Sep-19 11:11	17-Feb-20 13:36	Amber Glass, 120 mL
2000329-02	PDI-100SC-J-07-08-190926	26-Sep-19 11:11	17-Feb-20 13:36	Amber Glass, 120 mL
2000329-03	PDI-100SC-J-08-09-190926	26-Sep-19 11:11	17-Feb-20 13:36	Amber Glass, 120 mL
2000329-04	PDI-100SC-J-09-10-190926	DUP26-Sep-19 11:11	17-Feb-20 13:36	Amber Glass, 120 mL
2000329-05	PDI-100SC-J-10-11-190926	26-Sep-19 11:11	17-Feb-20 13:36	Amber Glass, 120 mL

## **ANALYTICAL RESULTS**

Sample ID: Method Blank					EPA Method 1613B			
Matrix: Solid	QC Batch: B0B0195	Lab Sample: B0B0195-BLK1			Date Analyzed: 25-Feb-20 16:16 Column: ZB-5MS			
Sample Size: 10.0 g	Date Extracted: 21-Feb-2020 12:54							
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0301			IS 13C-2,3,7,8-TCDD	95.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0453			13C-1,2,3,7,8-PeCDD	93.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0664			13C-1,2,3,4,7,8-HxCDD	82.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0682			13C-1,2,3,6,7,8-HxCDD	88.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0797			13C-1,2,3,7,8,9-HxCDD	83.2	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.122			13C-1,2,3,4,6,7,8-HpCDD	85.9	23 - 140	
OCDD	0.667			J	13C-OCDD	84.3	17 - 157	
2,3,7,8-TCDF	ND	0.0535			13C-2,3,7,8-TCDF	96.9	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0497			13C-1,2,3,7,8-PeCDF	87.5	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0456			13C-2,3,4,7,8-PeCDF	88.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0617			13C-1,2,3,4,7,8-HxCDF	89.4	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0585			13C-1,2,3,6,7,8-HxCDF	89.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0622			13C-2,3,4,6,7,8-HxCDF	92.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0940			13C-1,2,3,7,8,9-HxCDF	88.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	0.453			J	13C-1,2,3,4,6,7,8-HpCDF	93.8	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.123			13C-1,2,3,4,7,8,9-HpCDF	92.6	26 - 138	
OCDF	0.312			J	13C-OCDF	84.7	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	90.5	35 - 197	
					<b>Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)</b>			
					TEQMinWHO2005Dioxin	0.00482		
<b>TOTALS</b>								
Total TCDD	ND	0.0301						
Total PeCDD	ND		0.0950					
Total HxCDD	ND	0.0797						
Total HpCDD	ND		0.192					
Total TCDF	ND	0.0535						
Total PeCDF	0.329							
Total HxCDF	ND	0.0940						
Total HpCDF	0.453							

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: B0B0195	Lab Sample: B0B0195-BS1					
Sample Size: 10.0 g	Date Extracted: 21-Feb-2020 12:54	Date Analyzed: 25-Feb-20 13:54	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	98.9	20 - 175
1,2,3,7,8-PeCDD	90.8	100	90.8	70 - 142	13C-1,2,3,7,8-PeCDD	101	21 - 227
1,2,3,4,7,8-HxCDD	97.3	100	97.3	70 - 164	13C-1,2,3,4,7,8-HxCDD	92.1	21 - 193
1,2,3,6,7,8-HxCDD	105	100	105	76 - 134	13C-1,2,3,6,7,8-HxCDD	92.9	25 - 163
1,2,3,7,8,9-HxCDD	106	100	106	64 - 162	13C-1,2,3,7,8,9-HxCDD	89.5	21 - 193
1,2,3,4,6,7,8-HpCDD	98.1	100	98.1	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	93.1	26 - 166
OCDD	198	200	99.1	78 - 144	13C-OCDD	89.5	13 - 199
2,3,7,8-TCDF	21.3	20.0	107	75 - 158	13C-2,3,7,8-TCDF	99.1	22 - 152
1,2,3,7,8-PeCDF	99.2	100	99.2	80 - 134	13C-1,2,3,7,8-PeCDF	92.5	21 - 192
2,3,4,7,8-PeCDF	99.4	100	99.4	68 - 160	13C-2,3,4,7,8-PeCDF	94.0	13 - 328
1,2,3,4,7,8-HxCDF	111	100	111	72 - 134	13C-1,2,3,4,7,8-HxCDF	96.3	19 - 202
1,2,3,6,7,8-HxCDF	118	100	118	84 - 130	13C-1,2,3,6,7,8-HxCDF	98.0	21 - 159
2,3,4,6,7,8-HxCDF	115	100	115	70 - 156	13C-2,3,4,6,7,8-HxCDF	98.4	22 - 176
1,2,3,7,8,9-HxCDF	110	100	110	78 - 130	13C-1,2,3,7,8,9-HxCDF	99.1	17 - 205
1,2,3,4,6,7,8-HpCDF	112	100	112	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	102	21 - 158
1,2,3,4,7,8,9-HpCDF	114	100	114	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	101	20 - 186
OCDF	224	200	112	63 - 170	13C-OCDF	92.5	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	93.9	31 - 191

LCL-UCL - Lower control limit - upper control limit

**Sample ID: PDI-100SC-J-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: 2000329-01      Date Received: 17-Feb-2020 13:36
Project: Gasco PDI 000029-02.59	Sample Size: 14.4 g	QC Batch: B0B0195      Date Extracted: 21-Feb-2020 12:54
Date Collected: 26-Sep-2019 11:11	% Solids: 69.7	Date Analyzed : 25-Feb-20 17:50      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0504			IS 13C-2,3,7,8-TCDD	97.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0548			13C-1,2,3,7,8-PeCDD	97.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0759			13C-1,2,3,4,7,8-HxCDD	85.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0756			13C-1,2,3,6,7,8-HxCDD	89.2	28 - 130	
1,2,3,7,8,9-HxCDD	0.115			J	13C-1,2,3,7,8,9-HxCDD	88.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.832			J	13C-1,2,3,4,6,7,8-HpCDD	96.8	23 - 140	
OCDD	7.94			B	13C-OCDD	99.3	17 - 157	
2,3,7,8-TCDF	ND	0.0392			13C-2,3,7,8-TCDF	95.9	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0341			13C-1,2,3,7,8-PeCDF	86.5	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0327			13C-2,3,4,7,8-PeCDF	86.7	21 - 178	
1,2,3,4,7,8-HxCDF	ND		0.0584		13C-1,2,3,4,7,8-HxCDF	90.5	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0409			13C-1,2,3,6,7,8-HxCDF	90.6	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0442			13C-2,3,4,6,7,8-HxCDF	93.5	28 - 136	
1,2,3,7,8,9-HxCDF	0.0539			J	13C-1,2,3,7,8,9-HxCDF	92.1	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.144		13C-1,2,3,4,6,7,8-HpCDF	97.1	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.104			13C-1,2,3,4,7,8,9-HpCDF	106	26 - 138	
OCDF	0.145			J, B	13C-OCDF	99.6	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	90.9	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      0.0276

<b>TOTALS</b>								
Total TCDD	0.126							
Total PeCDD	0.103		0.138					
Total HxCDD	1.15							
Total HpCDD	2.25							
Total TCDF	ND	0.0392						
Total PeCDF	ND	0.0341						
Total HxCDF	0.0778		0.136					
Total HpCDF	ND		0.144					

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-100SC-J-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: 2000329-02      Date Received: 17-Feb-2020 13:36
Project: Gasco PDI 000029-02.59	Sample Size: 14.3 g	QC Batch: B0B0195      Date Extracted: 21-Feb-2020 12:54
Date Collected: 26-Sep-2019 11:11	% Solids: 70.6	Date Analyzed : 25-Feb-20 18:38      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0440			IS 13C-2,3,7,8-TCDD	94.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0463			13C-1,2,3,7,8-PeCDD	94.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0606			13C-1,2,3,4,7,8-HxCDD	85.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0627			13C-1,2,3,6,7,8-HxCDD	90.0	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0710			13C-1,2,3,7,8,9-HxCDD	88.0	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.570			J	13C-1,2,3,4,6,7,8-HpCDD	100	23 - 140	
OCDD	3.96			J, B	13C-OCDD	93.8	17 - 157	
2,3,7,8-TCDF	ND	0.0326			13C-2,3,7,8-TCDF	94.3	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0289			13C-1,2,3,7,8-PeCDF	85.5	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0277			13C-2,3,4,7,8-PeCDF	86.1	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0456			13C-1,2,3,4,7,8-HxCDF	88.9	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0444			13C-1,2,3,6,7,8-HxCDF	88.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0487			13C-2,3,4,6,7,8-HxCDF	91.3	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0665			13C-1,2,3,7,8,9-HxCDF	92.9	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0817			13C-1,2,3,4,6,7,8-HpCDF	98.7	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0957			13C-1,2,3,4,7,8,9-HpCDF	105	26 - 138	
OCDF	0.135			J, B	13C-OCDF	95.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	88.7	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      0.00693

<b>TOTALS</b>			
Total TCDD	0.120		
Total PeCDD	0.0768		0.128
Total HxCDD	0.642		
Total HpCDD	1.45		
Total TCDF	ND	0.0326	
Total PeCDF	ND	0.0289	
Total HxCDF	ND	0.0665	
Total HpCDF	ND	0.0957	

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-100SC-J-08-09-190926** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 2000329-03      Date Received: 17-Feb-2020 13:36
Project: Gasco PDI 000029-02.59	Sample Size: 12.9 g	QC Batch: B0B0195      Date Extracted: 21-Feb-2020 12:54
Date Collected: 26-Sep-2019 11:11	% Solids: 77.7	Date Analyzed : 25-Feb-20 19:25      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND		0.0880		IS 13C-2,3,7,8-TCDD	92.4	25 - 164	
1,2,3,7,8-PeCDD	0.0664			J	13C-1,2,3,7,8-PeCDD	92.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND		0.0539		13C-1,2,3,4,7,8-HxCDD	83.2	32 - 141	
1,2,3,6,7,8-HxCDD	0.0776			J	13C-1,2,3,6,7,8-HxCDD	83.6	28 - 130	
1,2,3,7,8,9-HxCDD	0.151			J	13C-1,2,3,7,8,9-HxCDD	82.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	1.26			J	13C-1,2,3,4,6,7,8-HpCDD	94.1	23 - 140	
OCDD	17.4			B	13C-OCDD	89.3	17 - 157	
2,3,7,8-TCDF	ND	0.0310			13C-2,3,7,8-TCDF	90.8	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0272			13C-1,2,3,7,8-PeCDF	84.0	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0254			13C-2,3,4,7,8-PeCDF	84.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0423			13C-1,2,3,4,7,8-HxCDF	84.8	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0407			13C-1,2,3,6,7,8-HxCDF	84.6	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0419			13C-2,3,4,6,7,8-HxCDF	89.1	28 - 136	
1,2,3,7,8,9-HxCDF	0.0647			J	13C-1,2,3,7,8,9-HxCDF	88.5	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0529			13C-1,2,3,4,6,7,8-HpCDF	92.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0627			13C-1,2,3,4,7,8,9-HpCDF	100	26 - 138	
OCDF	ND	0.0602			13C-OCDF	92.8	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	89.6	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      0.114

<b>TOTALS</b>								
Total TCDD	0.177		0.314					
Total PeCDD	0.251		0.409					
Total HxCDD	1.53		1.59					
Total HpCDD	3.43							
Total TCDF	ND	0.0310						
Total PeCDF	ND	0.0272						
Total HxCDF	0.103							
Total HpCDF	ND	0.0627						

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-100SC-J-09-10-190926** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 2000329-04      Date Received: 17-Feb-2020 13:36
Project: Gasco PDI 000029-02.59	Sample Size: 14.6 g	QC Batch: B0B0195      Date Extracted: 21-Feb-2020 12:54
Date Collected: 26-Sep-2019 11:11	% Solids: 69.6	Date Analyzed : 25-Feb-20 20:13      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0393			IS 13C-2,3,7,8-TCDD	94.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0483			13C-1,2,3,7,8-PeCDD	92.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0465			13C-1,2,3,4,7,8-HxCDD	82.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0490			13C-1,2,3,6,7,8-HxCDD	85.4	28 - 130	
1,2,3,7,8,9-HxCDD	0.0787			J	13C-1,2,3,7,8,9-HxCDD	85.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.845			J	13C-1,2,3,4,6,7,8-HpCDD	94.9	23 - 140	
OCDD	7.38			B	13C-OCDD	87.3	17 - 157	
2,3,7,8-TCDF	ND	0.0307			13C-2,3,7,8-TCDF	93.4	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0268			13C-1,2,3,7,8-PeCDF	84.7	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0255			13C-2,3,4,7,8-PeCDF	86.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0379			13C-1,2,3,4,7,8-HxCDF	87.1	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0381			13C-1,2,3,6,7,8-HxCDF	85.4	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0389			13C-2,3,4,6,7,8-HxCDF	90.5	28 - 136	
1,2,3,7,8,9-HxCDF	ND		0.0375		13C-1,2,3,7,8,9-HxCDF	90.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0563			13C-1,2,3,4,6,7,8-HpCDF	94.7	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0647			13C-1,2,3,4,7,8,9-HpCDF	104	26 - 138	
OCDF	ND		0.109		13C-OCDF	91.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	91.7	35 - 197	

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

TEQMinWHO2005Dioxin      0.0185

<b>TOTALS</b>			
Total TCDD	0.124		
Total PeCDD	ND	0.0483	
Total HxCDD	0.812		1.05
Total HpCDD	2.36		
Total TCDF	ND	0.0307	
Total PeCDF	ND	0.0268	
Total HxCDF	ND		0.0666
Total HpCDF	ND	0.0647	

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-100SC-J-09-10-190926		QC Batch: B0B0195		Lab Sample: B0B0195-DUP1				
Source LabNumber: 2000329-04		Date Extracted: 21-Feb-2020 12:54		Date Analyzed: 25-Feb-20 21:00 Column: ZB-5MS				
Matrix: Solid								
Sample Size: 14.5 g								
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0415			IS 13C-2,3,7,8-TCDD	96.4	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0533			13C-1,2,3,7,8-PeCDD	93.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0484			13C-1,2,3,4,7,8-HxCDD	84.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0495			13C-1,2,3,6,7,8-HxCDD	85.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0561			13C-1,2,3,7,8,9-HxCDD	85.3	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.515			J	13C-1,2,3,4,6,7,8-HpCDD	93.4	23 - 140	
OCDD	5.52			B	13C-OCDD	83.8	17 - 157	
2,3,7,8-TCDF	ND	0.0345			13C-2,3,7,8-TCDF	92.4	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0297			13C-1,2,3,7,8-PeCDF	83.3	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0288			13C-2,3,4,7,8-PeCDF	85.9	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0325			13C-1,2,3,4,7,8-HxCDF	87.2	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0317			13C-1,2,3,6,7,8-HxCDF	87.8	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0333			13C-2,3,4,6,7,8-HxCDF	89.0	28 - 136	
1,2,3,7,8,9-HxCDF	0.0609			J	13C-1,2,3,7,8,9-HxCDF	94.8	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0576			13C-1,2,3,4,6,7,8-HpCDF	92.8	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0691			13C-1,2,3,4,7,8,9-HpCDF	97.7	26 - 138	
OCDF	ND		0.0704		13C-OCDF	86.0	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	94.5	35 - 197	
					<b>Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)</b>			
					TEQMinWHO2005Dioxin 0.0129			
<b>TOTALS</b>								
Total TCDD	0.106							
Total PeCDD	ND		0.0968					
Total HxCDD	0.787							
Total HpCDD	1.47							
Total TCDF	ND	0.0345						
Total PeCDF	ND	0.0297						
Total HxCDF	0.0918							
Total HpCDF	ND	0.0691						

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.

weight.

The sample size is reported in wet

Sample ID: Duplicate					EPA Method 1613B				
Source Client ID: PDI-100SC-J-09-10-190926					Duplicate Lab Sample: B0B0195-DUP1				
Source LabNumber: 2000329-04									
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	96.4	94.5	25 - 164	
1,2,3,7,8-PeCDD	ND	ND	NA	25	13C-1,2,3,7,8-PeCDD	93.3	92.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	ND	NA	25	13C-1,2,3,4,7,8-HxCDD	84.5	82.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	ND	NA	25	13C-1,2,3,6,7,8-HxCDD	85.3	85.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0787	#	25	13C-1,2,3,7,8,9-HxCDD	85.3	85.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.515	0.845	48.5	25	13C-1,2,3,4,6,7,8-HpCDD	93.4	94.9	23 - 140	
OCDD	5.52	7.38	28.8	25	13C-OCDD	83.8	87.3	17 - 157	
2,3,7,8-TCDF	ND	ND	NA	25	13C-2,3,7,8-TCDF	92.4	93.4	24 - 169	
1,2,3,7,8-PeCDF	ND	ND	NA	25	13C-1,2,3,7,8-PeCDF	83.3	84.7	24 - 185	
2,3,4,7,8-PeCDF	ND	ND	NA	25	13C-2,3,4,7,8-PeCDF	85.9	86.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	ND	NA	25	13C-1,2,3,4,7,8-HxCDF	87.2	87.1	26 - 152	
1,2,3,6,7,8-HxCDF	ND	ND	NA	25	13C-1,2,3,6,7,8-HxCDF	87.8	85.4	26 - 123	
2,3,4,6,7,8-HxCDF	ND	ND	NA	25	13C-2,3,4,6,7,8-HxCDF	89.0	90.5	28 - 136	
1,2,3,7,8,9-HxCDF	0.0609	ND	#	25	13C-1,2,3,7,8,9-HxCDF	94.8	90.4	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	ND	NA	25	13C-1,2,3,4,6,7,8-HpCDF	92.8	94.7	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	ND	NA	25	13C-1,2,3,4,7,8,9-HpCDF	97.7	104	26 - 138	
OCDF	ND	ND	NA	25	13C-OCDF	86.0	91.2	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	94.5	91.7	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-100SC-J-10-11-190926** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 2000329-05      Date Received: 17-Feb-2020 13:36
Project: Gasco PDI 000029-02.59	Sample Size: 12.0 g	QC Batch: B0B0195      Date Extracted: 21-Feb-2020 12:54
Date Collected: 26-Sep-2019 11:11	% Solids: 84.7	Date Analyzed : 25-Feb-20 21:48      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0471			IS 13C-2,3,7,8-TCDD	92.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0378			13C-1,2,3,7,8-PeCDD	93.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0488			13C-1,2,3,4,7,8-HxCDD	85.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0518			13C-1,2,3,6,7,8-HxCDD	84.5	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0579			13C-1,2,3,7,8,9-HxCDD	83.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.299			J	13C-1,2,3,4,6,7,8-HpCDD	93.0	23 - 140	
OCDD	2.48			J, B	13C-OCDD	91.7	17 - 157	
2,3,7,8-TCDF	ND	0.0343			13C-2,3,7,8-TCDF	94.8	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0305			13C-1,2,3,7,8-PeCDF	86.8	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0275			13C-2,3,4,7,8-PeCDF	88.9	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0342			13C-1,2,3,4,7,8-HxCDF	86.6	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0338			13C-1,2,3,6,7,8-HxCDF	86.6	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0338			13C-2,3,4,6,7,8-HxCDF	90.3	28 - 136	
1,2,3,7,8,9-HxCDF	ND		0.0471		13C-1,2,3,7,8,9-HxCDF	88.1	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0562			13C-1,2,3,4,6,7,8-HpCDF	94.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0626			13C-1,2,3,4,7,8,9-HpCDF	103	26 - 138	
OCDF	ND	0.0709			13C-OCDF	94.8	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	92.3	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      0.00373

<b>TOTALS</b>								
Total TCDD	0.124							
Total PeCDD	ND		0.0417					
Total HxCDD	0.267		0.337					
Total HpCDD	0.807							
Total TCDF	ND	0.0343						
Total PeCDF	ND	0.0305						
Total HxCDF	ND		0.0758					
Total HpCDF	ND	0.0626						

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

2000329 3.1°C

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

Laboratory Number:				<b>Test Parameters</b>													
Date: 02.14.2020				No. of Containers													
Project Name: Gasco PDI																	
Project Number: 000029-02.59																	
Project Manager: Delaney Peterson																	
Phone Number: 360.715.2707																	
Shipment Method: FedEx				Dioxin/furans (1613B)	Total solids (SM 2540G)												
Samplers: dep																	



Line	Field Sample ID	Collection Date/Time	Matrix	No. of Containers	Dioxin/furans (1613B)	Total solids (SM 2540G)	Test Parameters												Comments/Preservation
1	PDI-100SC-J-06-07-190926	9/26/2019 11:11	SE	1	X	X													
2	PDI-100SC-J-07-08-190926	9/26/2019 11:11	SE	1	X	X													
3	PDI-100SC-J-08-09-190926	9/26/2019 11:11	SE	1	X	X													
4	PDI-100SC-J-09-10-190926	9/26/2019 11:11	SE	1	X	X													Please analyze lab duplicate
5	PDI-100SC-J-10-11-190926	9/26/2019 11:11	SE	1	X	X													
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

5-day TAT

Relinquished By: <u>Modi Raduma-DNR</u>	Company: Anchor QEA, LLC
Signature/Printed Name	Date/Time: 02-14-2020 12:00 PM

Received By: <u>Hayden Canas</u>	Company: VAL
Signature/Printed Name	Date/Time: 02/17/2020 13:36

HDR 02/17/2020  
02/17/2020  
HDR 02/17/2020

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

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

# Sample Log-In Checklist

 Page # 1 of 1

 Vista Work Order #: 2000329

 TAT 7

<b>Samples Arrival:</b>	<b>Date/Time</b> 02/17/2020 13:36	<b>Initials:</b> HOG	<b>Location:</b> WR-2
			<b>Shelf/Rack:</b> NA
<b>Delivered By:</b>	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> GLS	<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> 3.1 (uncorrected)	<b>Probe used:</b> Y / <input checked="" type="checkbox"/> N		<b>Thermometer ID:</b> IR-4
<b>Temp °C:</b> 3.1 (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>1</u> Trk # <u>7777 7565 8282</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Documentation Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Container	<input type="checkbox"/> Vista	<input checked="" type="checkbox"/> Client	<input type="checkbox"/> Retain
			<input checked="" type="checkbox"/> Return
			<input type="checkbox"/> Dispose
Chain of Custody / Sample Documentation Present?	<input 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> 02/18/20 0706	<b>Initials:</b> KS	<b>Location:</b> WR-2
			<b>Shelf/Rack:</b> D-7
COC Anomaly/Sample Acceptance Form completed?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

# CoC/Label Reconciliation Report WO# 2000329

LabNumber	CoC Sample ID	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2000329-01	A PDI-100SC-J-06-07-190926	<input checked="" type="checkbox"/>	26-Sep-19 11:11	<input checked="" type="checkbox"/>	Amber Glass, 120 mL	Solid
2000329-02	A PDI-100SC-J-07-08-190926	<input checked="" type="checkbox"/>	26-Sep-19 11:11	<input checked="" type="checkbox"/>	Amber Glass, 120 mL	Solid
2000329-03	A PDI-100SC-J-08-09-190926	<input checked="" type="checkbox"/>	26-Sep-19 11:11	<input checked="" type="checkbox"/>	Amber Glass, 120 mL	Solid
2000329-04	A PDI-100SC-J-09-10-190926	<input checked="" type="checkbox"/>	26-Sep-19 11:11	<input checked="" type="checkbox"/>	Amber Glass, 120 mL	Solid DUP
2000329-05	A PDI-100SC-J-10-11-190926	<input checked="" type="checkbox"/>	26-Sep-19 11:11	<input checked="" type="checkbox"/>	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	Comments:
Sample Container Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sample Custody Seals Intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Adequate Sample Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Container Type Appropriate for Analysis(es)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Preservation Documented: Na2S2O3 Trizma <u>None</u> Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Verified by/Date: KS 02/18/20

## **EXTRACTION INFORMATION**

**RUSH**

**RUSH**

Process Sheet

Workorder: **2000329**

RX ASAP

2002/21/20

Prep Expiration: 2020-09-25  
Client: Anchor QEA, LLC

Workorder Due: **24-Feb-20 00:00**

TAT: 7

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

Prep Batch: 8080195

Prep Data Entered: AZ 02/25/20  
Date and Initials

Initial Sequence: 5080060

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
2000329-01	<input checked="" type="checkbox"/>	PDI-100SC-J-06-07-190926	17-Feb-20 13:36	WR-2 D-7	
2000329-02	<input checked="" type="checkbox"/>	PDI-100SC-J-07-08-190926	17-Feb-20 13:36	WR-2 D-7	
2000329-03	<input checked="" type="checkbox"/>	PDI-100SC-J-08-09-190926	17-Feb-20 13:36	WR-2 D-7	
2000329-04	<input checked="" type="checkbox"/>	PDI-100SC-J-09-10-190926	17-Feb-20 13:36	WR-2 D-7	<b>DUP</b>
2000329-05	<input checked="" type="checkbox"/>	PDI-100SC-J-10-11-190926	17-Feb-20 13:36	WR-2 D-7	

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

Pre-Prep Check Out: NA  
Pre-Prep Check In: NA


Prep Check Out: RR 02-21-20  
Prep Check In: RR 02-21-20

Prep Reconciled Initials/Date: RR 02-21-20  
Spike Reconciled Initials/Date: BU 02/21/20  
VialBoxID: Mayhem

PREPARATION BENCH SHEET

Matrix: Solid

B0B0195

Chemist: 

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 21-Feb-20 12:54

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/DATE	ABSG CHEM/DATE	AA CHEM/DATE	Florisol CHEM/DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	B0B0195-BLK1	NA	(10.00)	RR 02/21/20	AZ 02/24/20	NA	AZ 02/24/20	AZ 02/24/20	AZ 02/24/20	CRS RR 02/25/20
<input type="checkbox"/>	B0B0195-BS1	NA	(10.00)	T	T	T	T	T	T	T
<input type="checkbox"/>	B0B0195-DUP1 2000329-04RE1	14.36	14.48	T	T	T	T	T	T	T
<input type="checkbox"/>	2000301-01RE1	17.36	17.60	T	T	T	yellow	T	T	T
<input type="checkbox"/>	2000329-01RE1	14.36	14.43	T	T	T	T	T	T	T
<input type="checkbox"/>	2000329-02RE1	14.17	14.26	T	T	T	T	T	T	T
<input type="checkbox"/>	2000329-03RE1	12.86	12.94	T	T	T	T	T	T	T
<input type="checkbox"/>	2000329-04RE1	14.36	14.55	T	T	T	T	T	T	T
<input type="checkbox"/>	2000329-05RE1	11.81	11.99	T	T	T	T	T	T	T

A Built ABSG/AA columns RR 02/24/20

IS Name <u>V6</u>	NS Name <u>V3</u>	CRS Name <u>V3</u>	RS Name <u>V5</u>	Cycle Time	APP: SEFUN SOX <u>SDS</u>	Check Out: Chemist/Date: <u>RR 02-21-20</u>
PCDD/F <u>19L2301, 10uL</u>	PCDD/F <u>18F1913, 10uL</u>	PCDD/F <u>19I1602, 10uL</u>	PCDD/F <u>19I1603, 10uL</u>	Start Date/Time <u>02-21-20 1427</u>	SOLV: <u>Toluene</u>	Check In: Chemist/Date: <u>RR 02-21-20</u>
PCB _____	PCB _____	PCB _____	PCB _____	Stop Date/Time <u>02-22-20 0811</u>	Other <u>NA</u>	Balance ID: <u>HRMS-9</u>
PAH _____	PAH _____	PAH _____	PAH _____	Final Volume(s) <u>C14</u>	<u>20uL</u>	

Comments:

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



Batch: B0B0195

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
2000301-01RE1	17.6 ✓	57.60112	10.1378	20 ✓	21-Feb-20 12:54	MSD ✓			Sediment	1613 Full List
2000329-01RE1	14.43 ✓	69.65889	10.0518	20	21-Feb-20 12:54	MSD			Sediment	1613 Full List
2000329-02RE1	14.26 ✓	70.57654	10.0642	20	21-Feb-20 12:54	MSD			Sediment	1613 Full List
2000329-03RE1	12.94 ✓	77.7328	10.0586	20	21-Feb-20 12:54	MSD			Sediment	1613 Full List
2000329-04RE1	14.55 ✓	69.62963	10.1311	20	21-Feb-20 12:54	MSD			Sediment	1613 Full List
2000329-05RE1	11.99 ✓	84.70875	10.1566	20	21-Feb-20 12:54	MSD			Sediment	1613 Full List
B0B0195-BLK1	10 ✓			20	21-Feb-20 12:54	MSD				QC
B0B0195-BS1	10 ✓			20	21-Feb-20 12:54	MSD	18F1913 ✓	10 ✓		QC
B0B0195-DUP1	14.48 ✓	69.62963	10.1824	20 ✓	21-Feb-20 12:54	MSD ✓				QC

All bolded data on report verified against written benchsheet by (initial/date) AZ 02/25/20

SAMPLE DATA – EPA METHOD 1613

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-5.qld

Last Altered: Friday, February 28, 2020 09:00:38 Pacific Standard Time

Printed: Friday, February 28, 2020 09:01:04 Pacific Standard Time

*dy 02-28-2020*

*0702/28/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

Calibration: U:\VG12.PRO\CurveDB\ldb5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD													0.0701	
2	2 1,2,3,7,8-PeCDD				0.972	10.000	30.83		1.00		NO			0.0453	
3	3 1,2,3,4,7,8-HxCDD				1.07	10.000	34.20		1.00		NO			0.0664	
4	4 1,2,3,6,7,8-HxCDD				0.921	10.000	34.28		1.00		NO			0.0682	
5	5 1,2,3,7,8,9-HxCDD				0.918	10.000	34.60		1.00		NO			0.0797	
6	6 1,2,3,4,6,7,8-HpCDD				0.923	10.000	38.07		1.00		NO			0.122	
7	7 OCDD	3297.321	0.904	NO	0.975	10.000	41.18	41.20	1.00	1.00	NO	0.6670		0.140	0.6670
8	8 2,3,7,8-TCDF				0.802	10.000	24.80		1.00		NO			0.0535	
9	9 1,2,3,7,8-PeCDF				0.907	10.000	29.53		1.00		NO			0.0497	
10	10 2,3,4,7,8-PeCDF				0.952	10.000	30.53		1.00		NO			0.0456	
11	11 1,2,3,4,7,8-HxCDF				0.862	10.000	33.33		1.00		NO			0.0617	
12	12 1,2,3,6,7,8-HxCDF				0.841	10.000	33.45		1.00		NO			0.0585	
13	13 2,3,4,6,7,8-HxCDF				0.898	10.000	34.05		1.00		NO			0.0622	
14	14 1,2,3,7,8,9-HxCDF				0.858	10.000	34.90		1.00		NO			0.0940	
15	15 1,2,3,4,6,7,8-HpCDF	2362.611	0.991	NO	0.851	10.000	36.68	36.67	1.00	1.00	NO	0.4529		0.0998	0.4529
16	16 1,2,3,4,7,8,9-HpCDF				0.980	10.000	38.72		1.00		NO			0.123	
17	17 OCDF	1428.920	0.889	NO	0.806	10.000	41.36	41.36	1.00	1.00	NO	0.3117		0.119	0.3117
18	18 13C-2,3,7,8-TCDD	2204483.5...	0.779	NO	1.20	10.000	25.69	25.72	1.03	1.03	NO	191.0	95.5	0.151	
19	19 13C-1,2,3,7,8-PeCDD	1736773.0...	0.639	NO	0.967	10.000	30.43	30.80	1.22	1.23	NO	186.6	93.3	0.155	
20	20 13C-1,2,3,4,7,8-HxCDD	1227880.8...	1.263	NO	0.874	10.000	34.19	34.19	1.01	1.01	NO	165.0	82.5	0.390	
21	21 13C-1,2,3,6,7,8-HxCDD	1570317.7...	1.263	NO	1.05	10.000	34.29	34.28	1.02	1.02	NO	176.3	88.2	0.326	
22	22 13C-1,2,3,7,8,9-HxCDD	1381589.0...	1.254	NO	0.974	10.000	34.60	34.56	1.03	1.02	NO	166.5	83.2	0.350	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1092955.1...	1.042	NO	0.747	10.000	38.17	38.06	1.13	1.13	NO	171.7	85.9	0.430	
24	24 13C-OCDD	2028887.8...	0.885	NO	0.707	10.000	41.07	41.18	1.22	1.22	NO	337.2	84.3	0.402	
25	25 13C-2,3,7,8-TCDF	2804485.6...	0.768	NO	1.07	10.000	24.87	24.78	0.99	0.99	NO	193.8	96.9	0.214	
26	26 13C-1,2,3,7,8-PeCDF	2380766.8...	1.572	NO	1.00	10.000	29.46	29.51	1.18	1.18	NO	175.0	87.5	0.351	
27	27 13C-2,3,4,7,8-PeCDF	2305741.1...	1.581	NO	0.962	10.000	30.42	30.50	1.21	1.22	NO	176.5	88.3	0.365	
28	28 13C-1,2,3,4,7,8-HxCDF	1597668.5...	0.508	NO	1.05	10.000	33.32	33.33	0.99	0.99	NO	178.8	89.4	0.416	
29	29 13C-1,2,3,6,7,8-HxCDF	1803740.7...	0.514	NO	1.19	10.000	33.42	33.44	0.99	0.99	NO	178.0	89.0	0.367	
30	30 13C-2,3,4,6,7,8-HxCDF	1674449.4...	0.528	NO	1.07	10.000	34.03	34.02	1.01	1.01	NO	184.4	92.2	0.409	
31	31 13C-1,2,3,7,8,9-HxCDF	1389492.0...	0.514	NO	0.922	10.000	34.93	34.90	1.04	1.04	NO	176.9	88.4	0.473	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-5.qld

Last Altered: Friday, February 28, 2020 09:00:38 Pacific Standard Time  
Printed: Friday, February 28, 2020 09:01:04 Pacific Standard Time

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank

	# Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1225971.2...	0.436	NO	0.767	10.000	36.69	36.64	1.09	1.09	NO	187.6	93.8	0.533	
33	33 13C-1,2,3,4,7,8,9-HpCDF	871178.876	0.433	NO	0.552	10.000	38.71	38.72	1.15	1.15	NO	185.2	92.6	0.740	
34	34 13C-OCDF	2276604.3...	0.875	NO	0.789	10.000	41.31	41.36	1.23	1.23	NO	338.6	84.7	0.320	
35	35 37Cl-2,3,7,8-TCDD	820379.438			1.18	10.000	25.72	25.74	1.03	1.03	NO	72.43	90.5	0.0426	
36	36 13C-1,2,3,4-TCDD	1925758.0...	0.800	NO	1.00	10.000	25.11	25.05	1.00	1.00	NO	200.0	100	0.182	
37	37 13C-1,2,3,4-TCDF	2716734.8...	0.788	NO	1.00	10.000	23.37	23.28	1.00	1.00	NO	200.0	100	0.228	
38	38 13C-1,2,3,4,6,9-HxCDF	1703281.1...	0.520	NO	1.00	10.000	33.71	33.72	1.00	1.00	NO	200.0	100	0.436	
39	39 Total Tetra-Dioxins				0.988	10.000	24.62		0.00		NO			0.0301	
40	40 Total Penta-Dioxins				0.972	10.000	29.96		0.00		NO	0.0000		0.0187	0.09477
41	41 Total Hexa-Dioxins				0.921	10.000	33.63		0.00		NO			0.0333	
42	42 Total Hepta-Dioxins				0.923	10.000	37.64		0.00		NO	0.0000		0.0658	0.1917
43	43 Total Tetra-Furans				0.802	10.000	23.61		0.00		NO			0.0268	
44	44 1st Func. Penta-Furans				0.907	10.000	27.09		0.00		NO	0.1206		0.0236	0.1206
45	45 Total Penta-Furans				0.907	10.000	29.27		0.00		NO	0.2079		0.0488	0.2079
46	46 Total Hexa-Furans				0.898	10.000	33.56		0.00		NO			0.0290	
47	47 Total Hepta-Furans				0.851	10.000	37.83		0.00		NO	0.4529		0.117	0.4529

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-5.qld

Last Altered: Friday, February 28, 2020 09:00:38 Pacific Standard Time

Printed: Friday, February 28, 2020 09:01:28 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank

**Tetra-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	0.00e0	1.74e6	0.474	YES	29.96	28.55	0.0000	0.09477

**Hexa-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hepta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	42 Total Hepta-Dioxins	0.00e0	1.09e6	1.437	YES	37.64	37.04	0.0000	0.1917

**Tetra-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	44 1st Func. Penta-Fura...	1.28e3	0.00e0	1.354	NO	27.09	26.87	0.1206	0.1206

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-5.qld

Last Altered: Friday, February 28, 2020 09:00:38 Pacific Standard Time

Printed: Friday, February 28, 2020 09:01:28 Pacific Standard Time

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank

**Penta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	45 Total Penta-Furans	2.21e3	0.00e0	1.380	NO	29.27	28.50	0.2079	0.2079

**Hexa-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

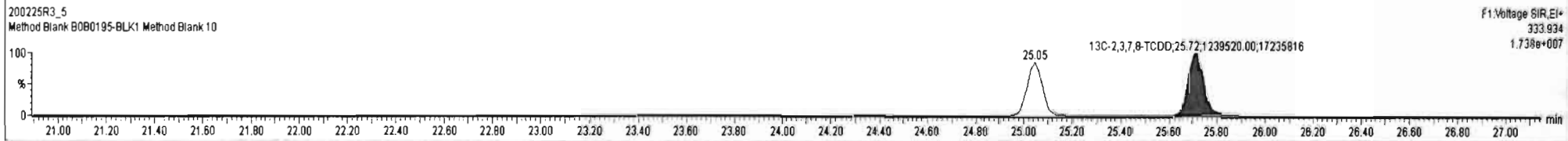
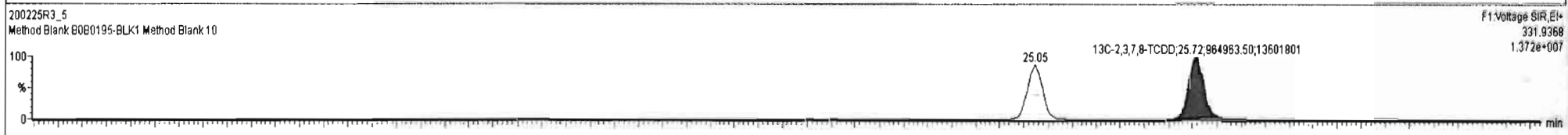
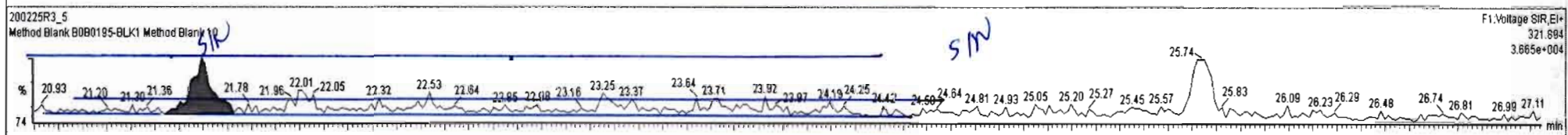
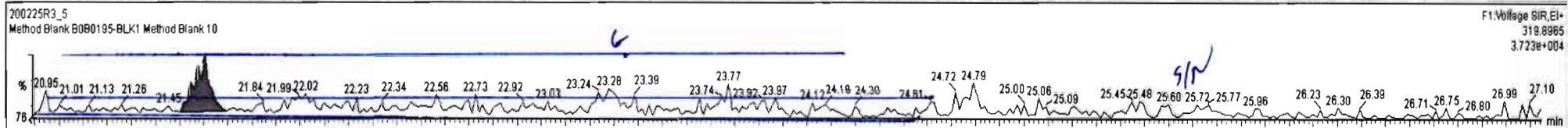
**Hepta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	15 1,2,3,4,6,7,8-HpCDF	2.36e3	1.23e6	0.991	NO	36.68	36.67	0.4529	0.4529

200225R3\_5 - B0B0195-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	n/y	RRF	w/Aval	Pred_RT	RT	Pred_R...	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9861	10.000	24.62		0.000		NO	0.1334		0.0434	0.1334
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	0.0000		0.0187	0.1204
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	0.0000		0.0333	0.1179
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	0.0000		0.0658	0.4247
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	0.4843		0.0535	0.8193
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206
45	Total Benzo-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206

#	Name	Pred_RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1	39 Total Tetra-Dioxins	24.62	21.60	6.025e2	8.504e2	0.770	0.71	NO	0.13340	0.13340



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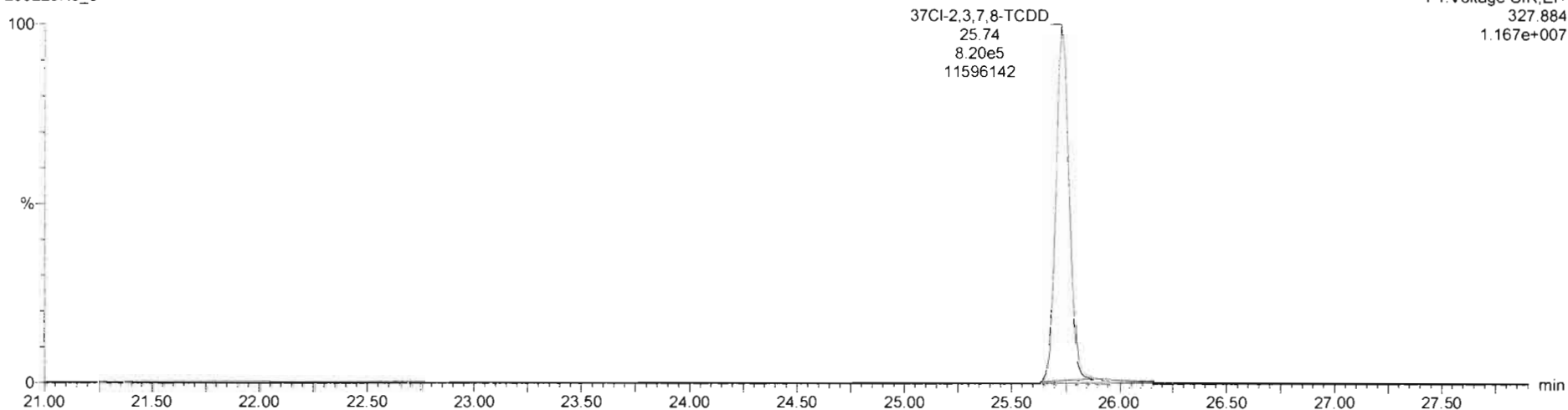
Last Altered: Wednesday, February 26, 2020 08:39:34 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:39:36 Pacific Standard Time

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank

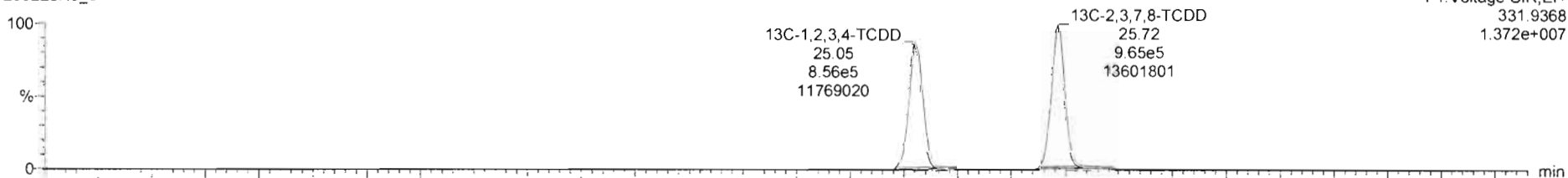
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200225R3\_5

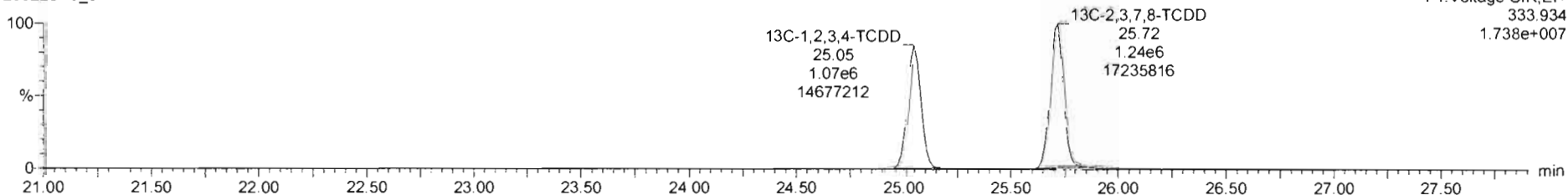


13C-1,2,3,4-TCDD

200225R3\_5



200225R3\_5





Dataset: Untitled

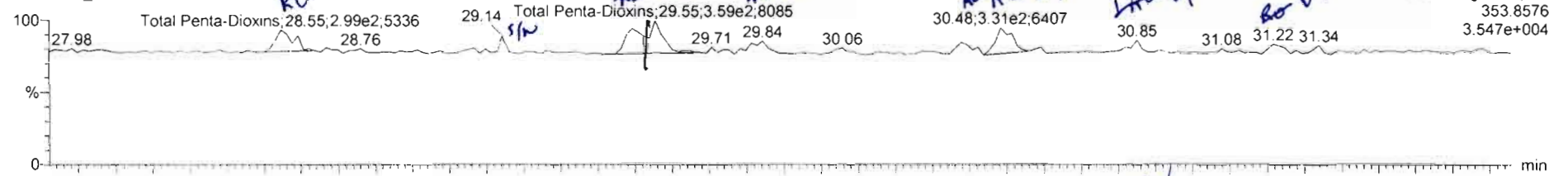
Last Altered: Wednesday, February 26, 2020 08:39:34 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:39:36 Pacific Standard Time

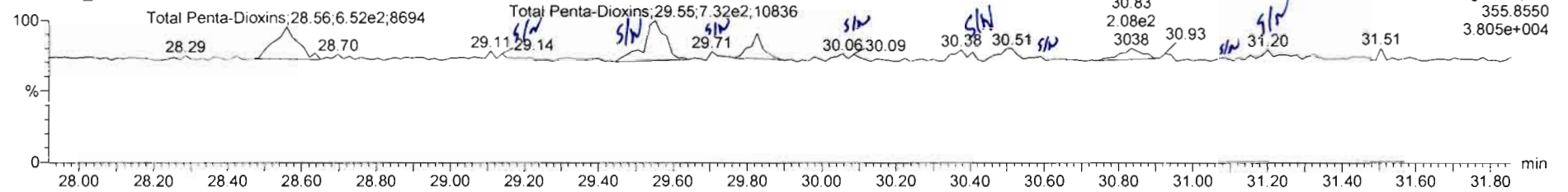
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1,2,3,7,8-PeCDD

200225R3\_5

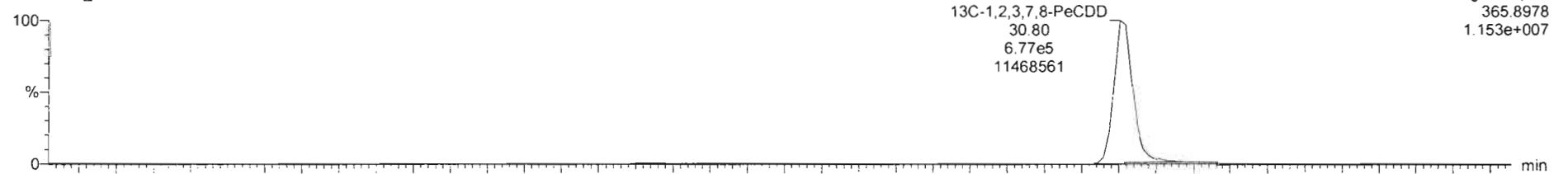


200225R3\_5

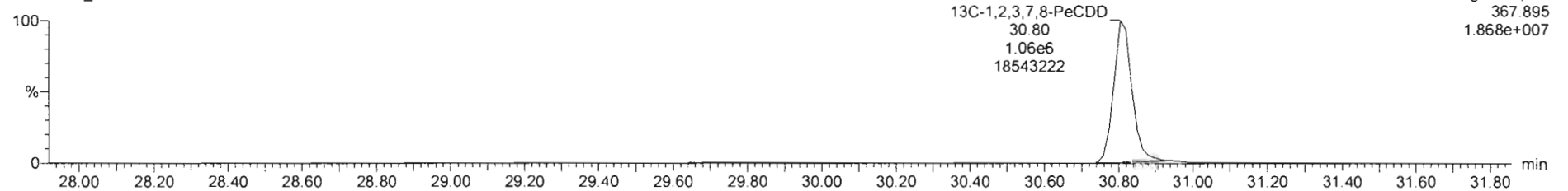


13C-1,2,3,7,8-PeCDD

200225R3\_5



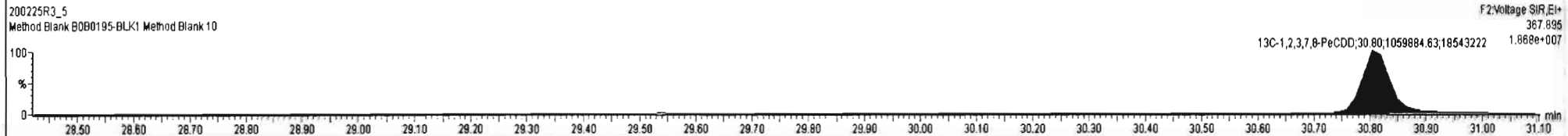
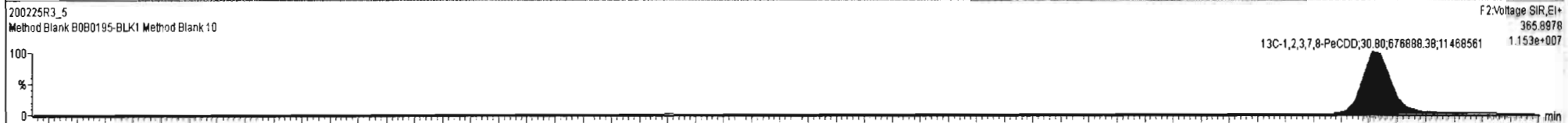
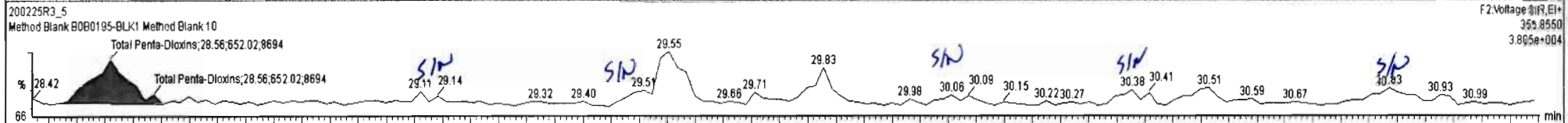
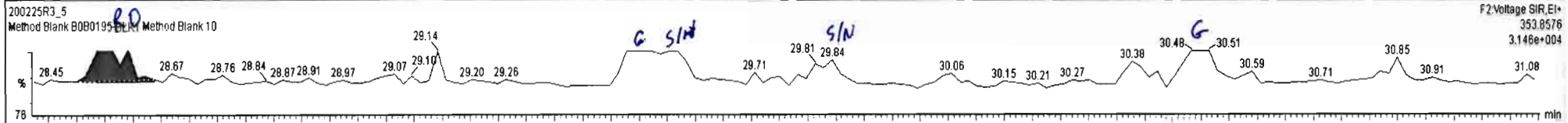
200225R3\_5

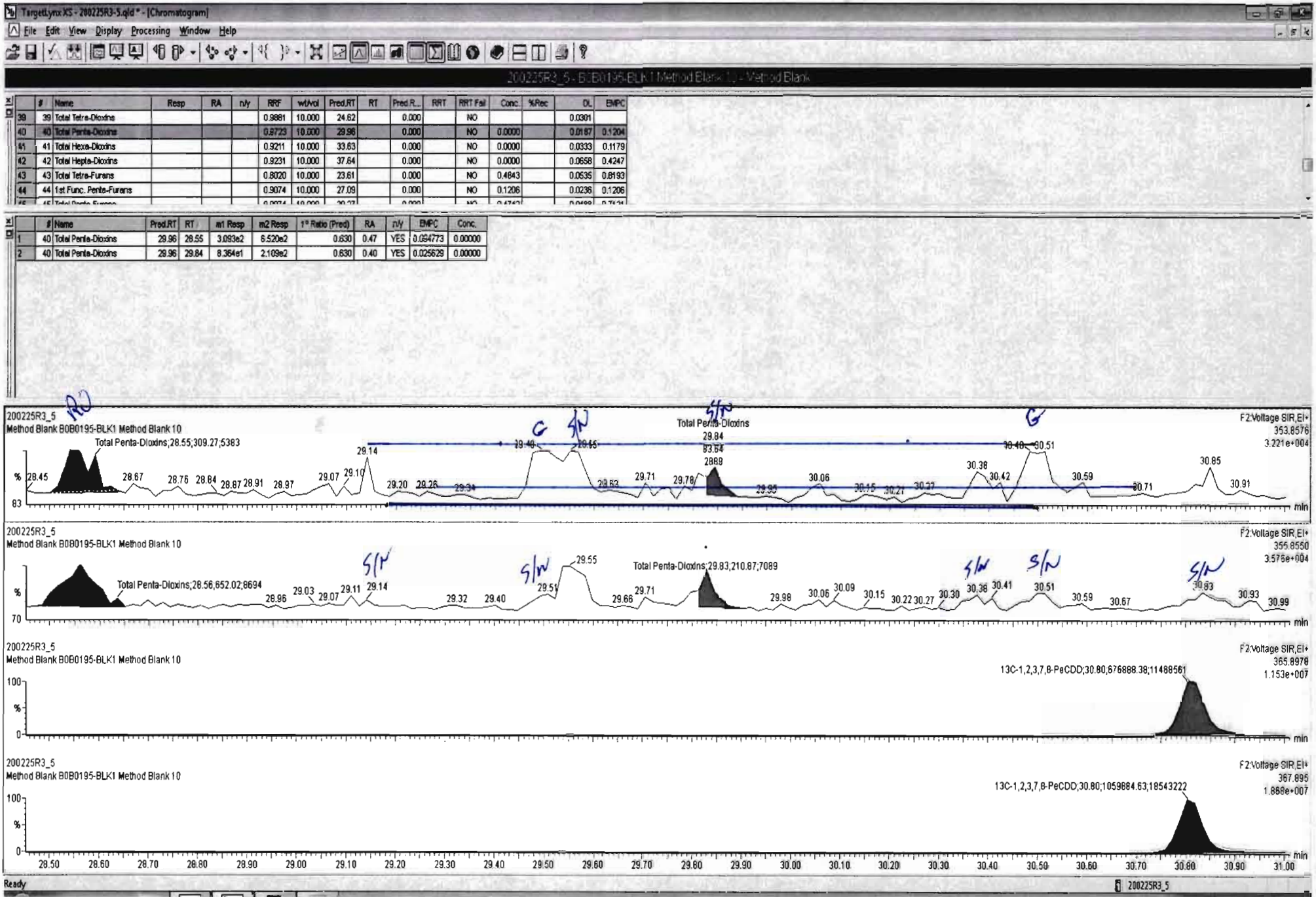


200225R3\_5 - B0B0195-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	n/y	RRF	wtVol	Pred_RT	RT	Pred_R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9861	10.000	24.52		0.000		NO			0.0361	
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	0.0000		0.0187	0.09477
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	0.0000		0.0333	0.1178
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	0.0000		0.0658	0.4247
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	0.4643		0.0535	0.8193
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206
45	Total Dioxin Equiv.				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206

#	Name	Pred_RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1	40 Total Penta-Dioxins	29.96	29.55	3.083e2	6.520e2	0.630	0.47	YES	0.064773	0.00000





Dataset: Untitled

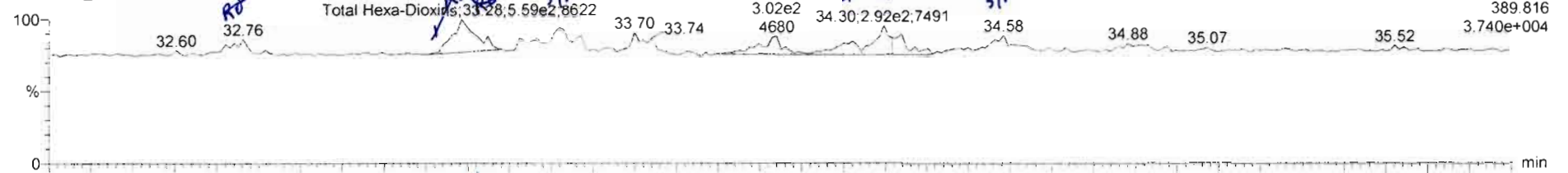
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Printed: Wednesday, February 26, 2020 08:39:36 Pacific Standard Time

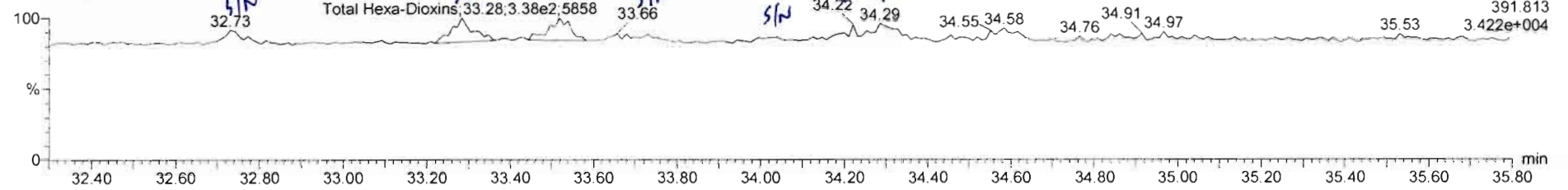
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1,2,3,4,7,8-HxCDD

200225R3\_5

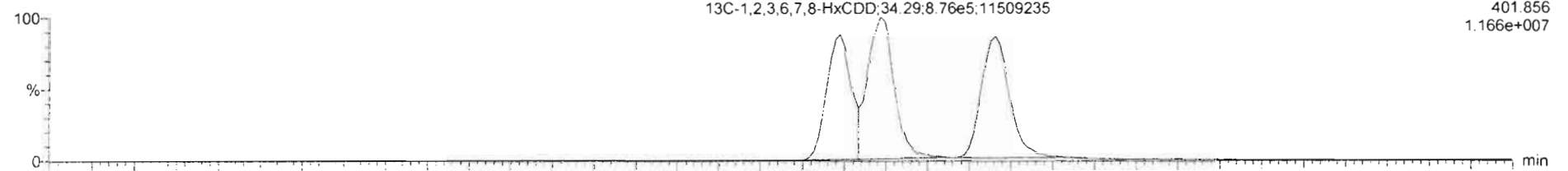


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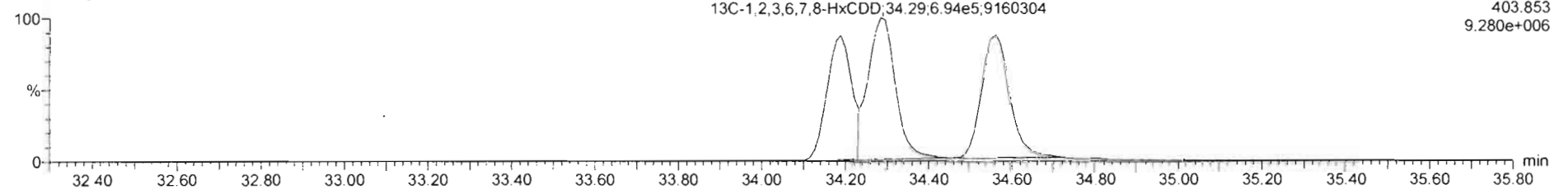


13C-1,2,3,4,7,8-HxCDD

200225R3\_5



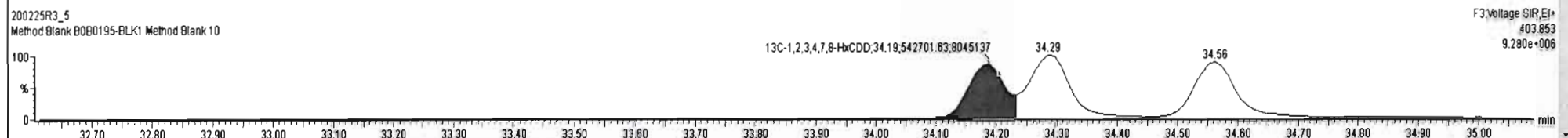
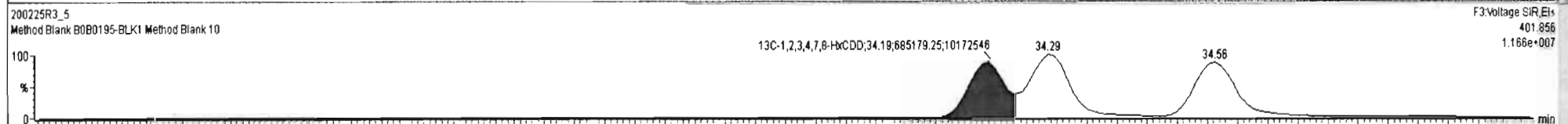
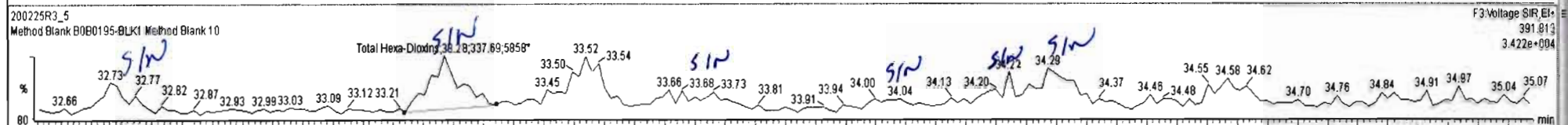
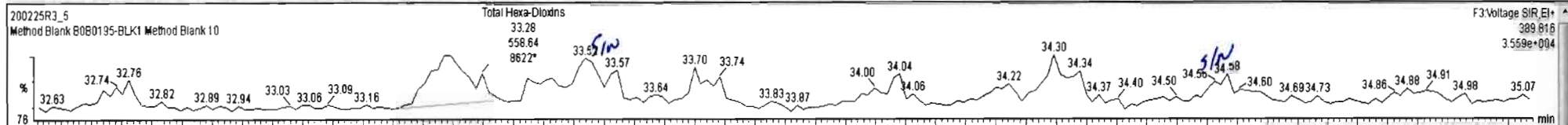
200225R3\_5



200225R3\_5 - B0B0195-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	n/y	RF	wVol	Pred.RT	RT	Pred.R...	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	0.0000		0.0333	0.1179
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	0.0000		0.0658	0.4247
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	0.4843		0.0535	0.8193
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	0.4742		0.0489	0.7121
46	Total Hexa-Furans				0.8982	10.000	33.58		0.000		NO			0.0290	
47	Total Octa-Furans				0.9544	10.000	37.69		0.000		NO	0.4590		0.1417	0.4590

#	Name	Pred RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1	41 Total Hexa-Dioxins	33.63	33.28	5.586e2	3.377e2	1.240	1.65	YES	0.11798	6.90006



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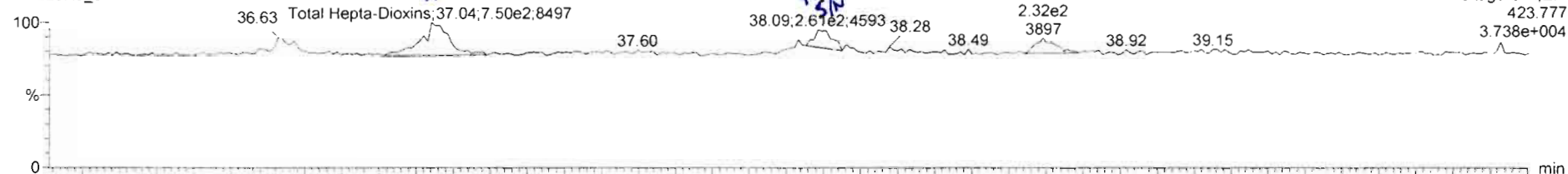
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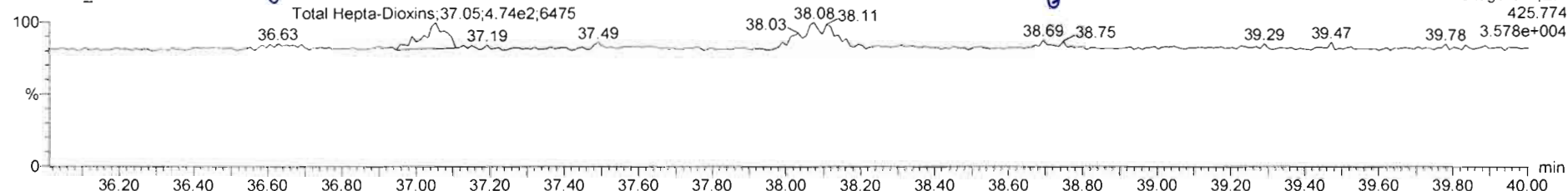
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1,2,3,4,6,7,8-HpCDD

200225R3\_5

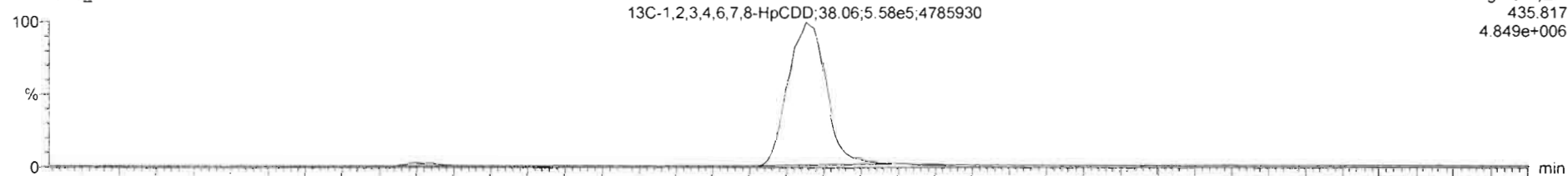


200225R3\_5

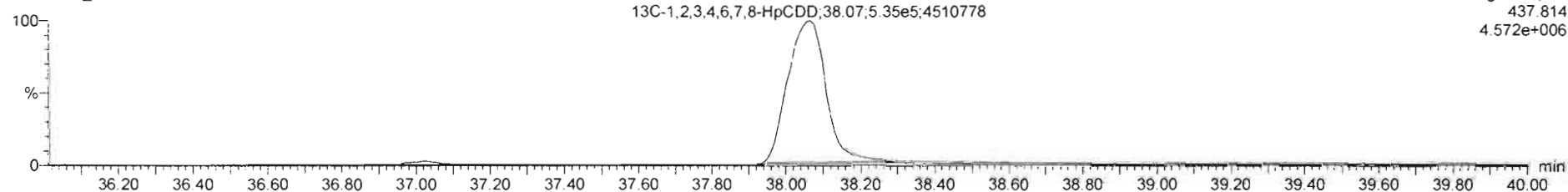


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200225R3\_5



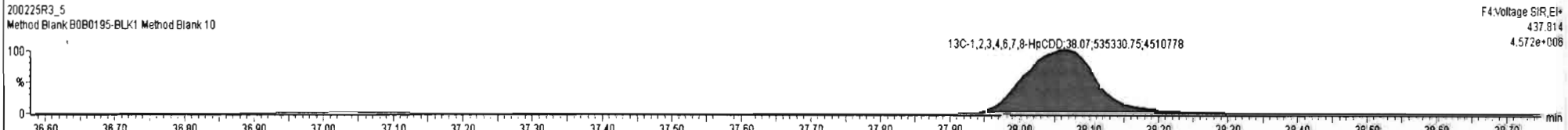
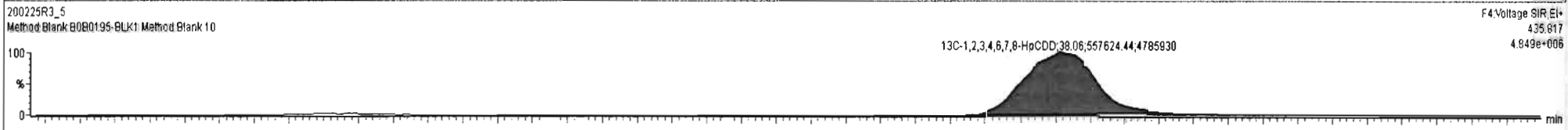
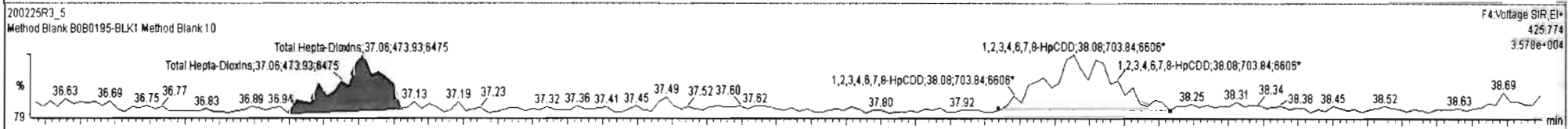
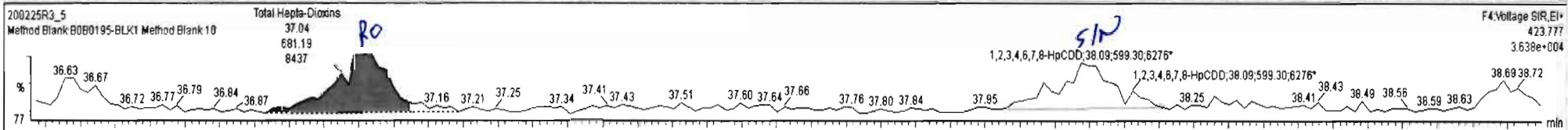
200225R3\_5



200225R3\_5 - B0B0195-BLK1 Method Blank 10 Method Blank

#	Name	Resp	RA	n/y	RF	wt/Vol	Pred.RT	RT	Pred.R...	RRT	RRT.Fai	Conc.	%Rec	DL	EMPC
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO			0.0333	
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	0.0000		0.0658	0.4247
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	0.4843		0.0535	0.6193
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	0.4742		0.0488	0.7121
46	Total Hexa-Furans				0.8962	10.000	33.56		0.000		NO			0.0290	
47	Total Hepta-Furans				0.9544	10.000	37.93		0.000		NO	0.4490		0.1417	0.4490

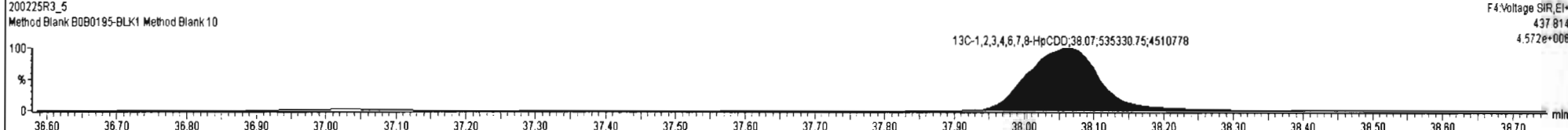
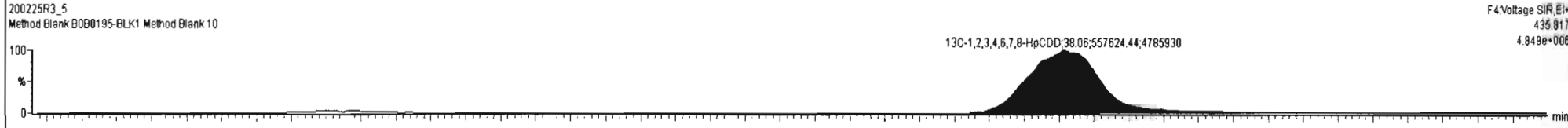
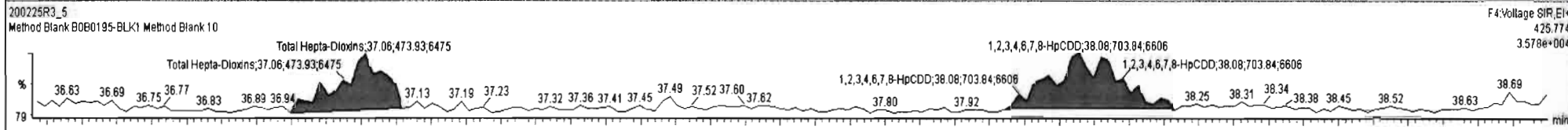
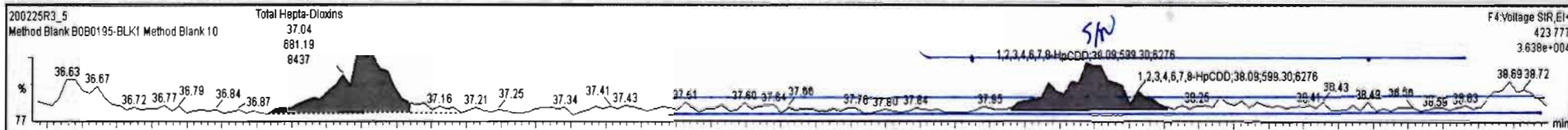
#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1	42 Total Hepta-Dioxins	37.64	37.04	6.812e2	4.739e2	1.040	1.44	YES	0.19166	0.00000
2	6 1,2,3,4,6,7,8-HpCDD	38.07	38.09	5.993e2	7.038e2	1.040	0.85	YES	0.23304	0.00000



200225R3\_5\_EI\_B0195-BLK1 Method Blank 10 Method Blank

#	Name	Resp	RA	n/y	RRF	wt/rd	Pred RT	RT	Pred R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	0.0000		0.0333	
42	Total Hepta-Dioxins				0.9221	10.000	37.64		0.000		NO	0.0000		0.0659	0.4247
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	0.4843		0.0535	0.8193
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	0.4742		0.0488	0.7121
46	Total Hexa-Furans				0.8962	10.000	33.56		0.000		NO			0.0290	
47	Total Mixed Furans				0.9044	10.000	27.93		0.000		NO	0.4636		0.0447	0.4636

#	Name	Pred RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1	42 Total Hepta-Dioxins	37.64	37.04	6.812e2	4.739e2	1.040	1.44	YES	0.19196	0.00000
2	6 1,2,3,4,6,7,8-HpCDD	38.07	38.09	5.993e2	7.038e2	1.040	0.85	YES	0.23304	0.00000



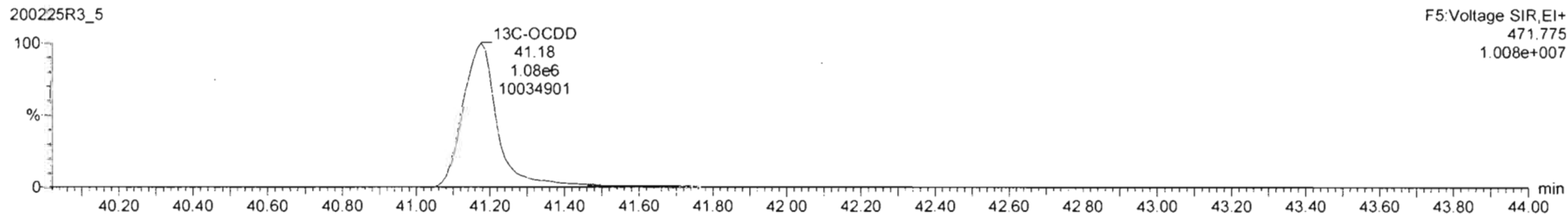
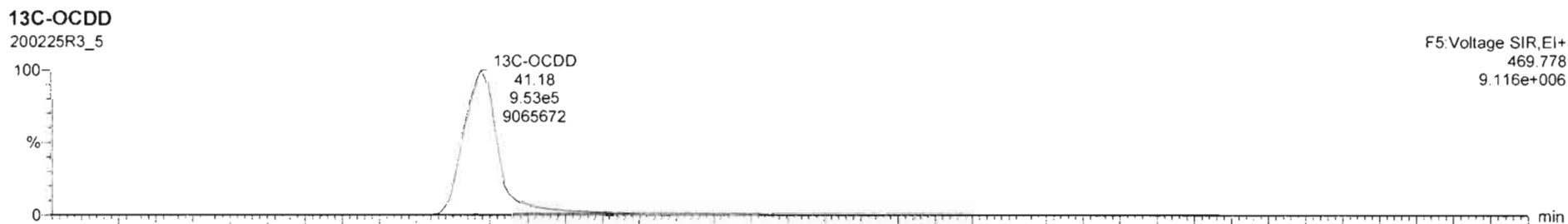
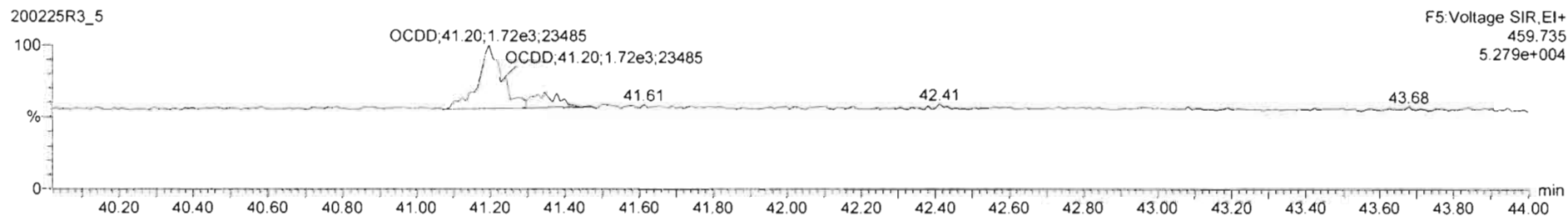
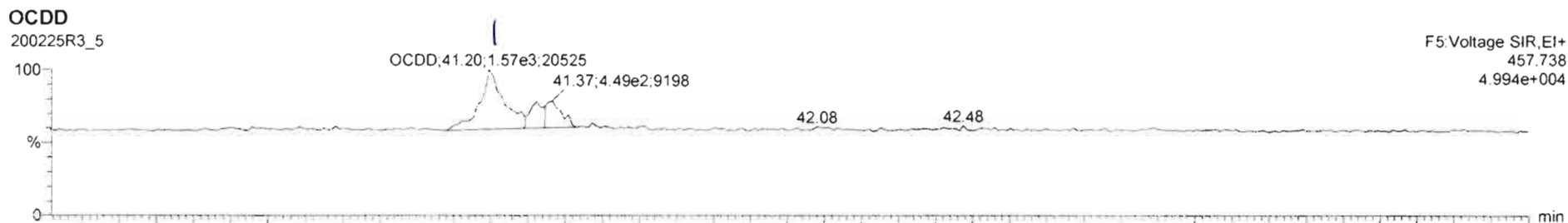


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Printed: Wednesday, February 26, 2020 08:39:36 Pacific Standard Time

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank



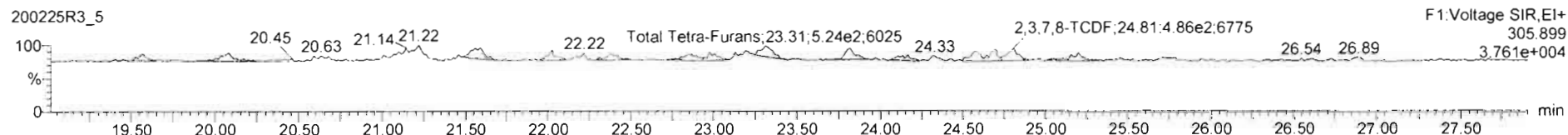
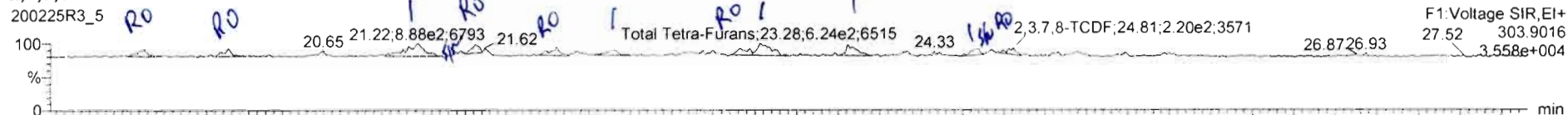
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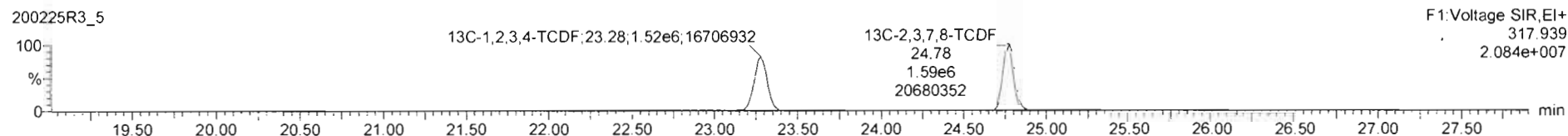
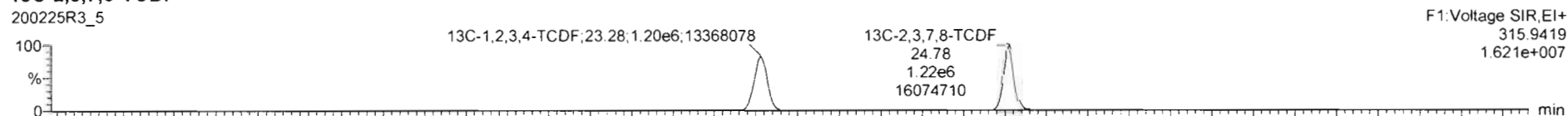
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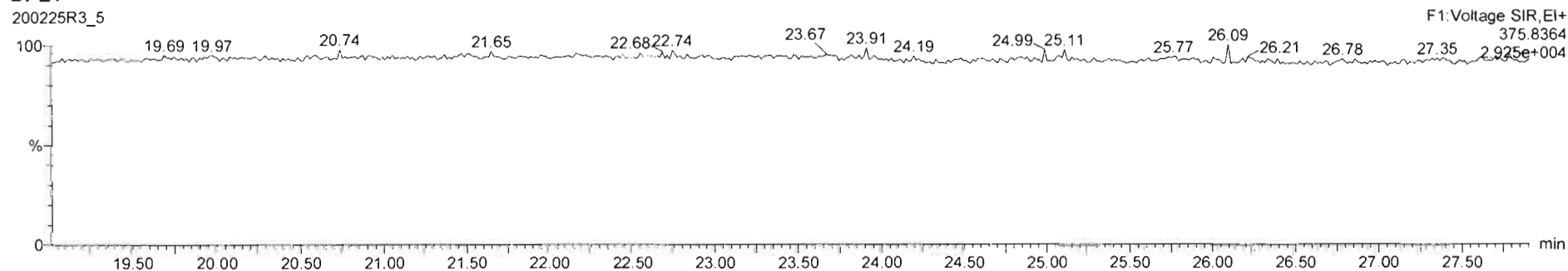
2,3,7,8-TCDF



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



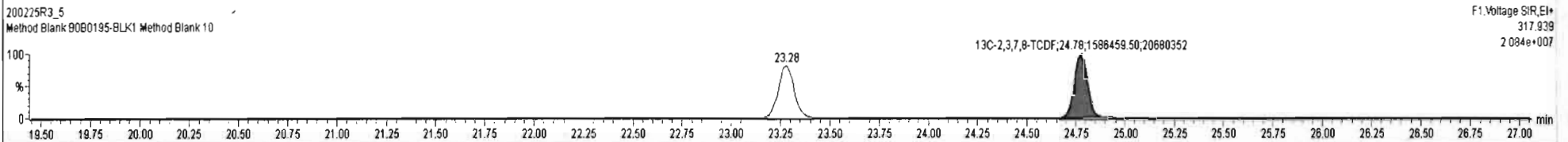
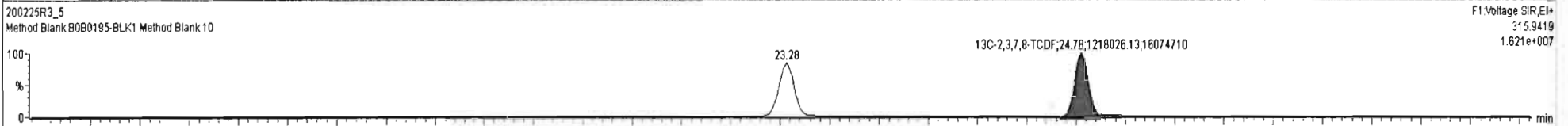
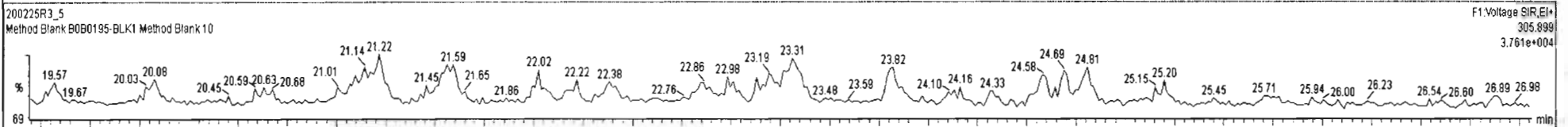
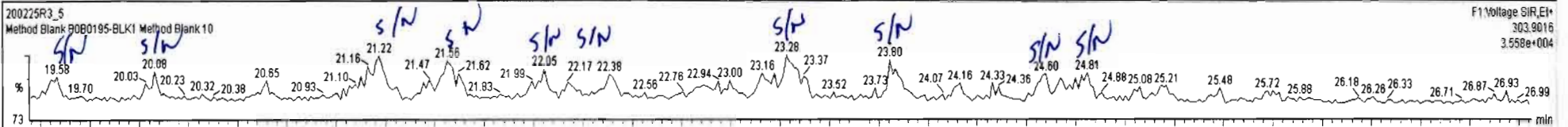
DPE1



200225R3\_5 - B0B0195-BLK1 Method Blank 10 - Method Blank

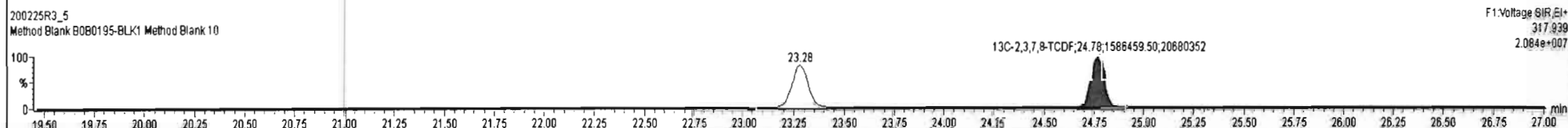
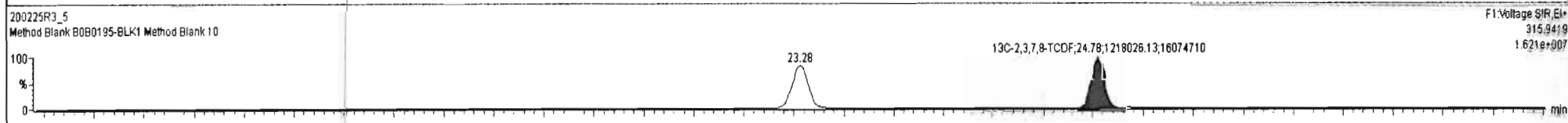
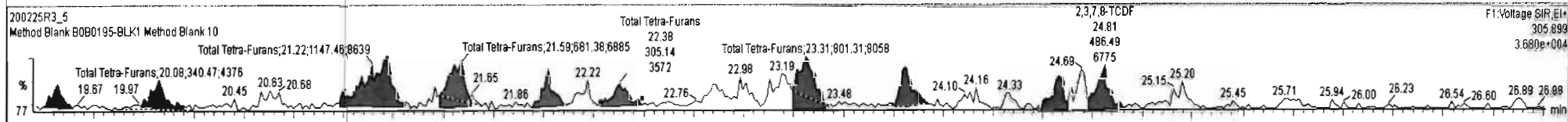
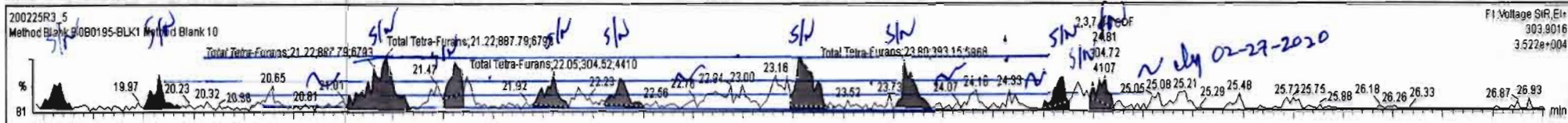
#	Name	Resp	RA	nly	RRF	wt/Acd	Pred RT	RT	Pred.R.	RRT	RRT Fail	Conc	%Rec	DL	EMPC
43	Total Tetra-Furans				0.8020	10.000	23.81		0.000		NO			0.0288	
44	1st Func. Penta-Furans				0.9074	10.000	27.08		0.000		NO	0.1206		0.0236	0.1206
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	0.5879		0.0488	0.7283
46	Total Hexa-Furans				0.8982	10.000	33.56		0.000		NO	0.8635		0.0653	0.8393
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	0.4646		0.117	0.5781
48	PFK1														

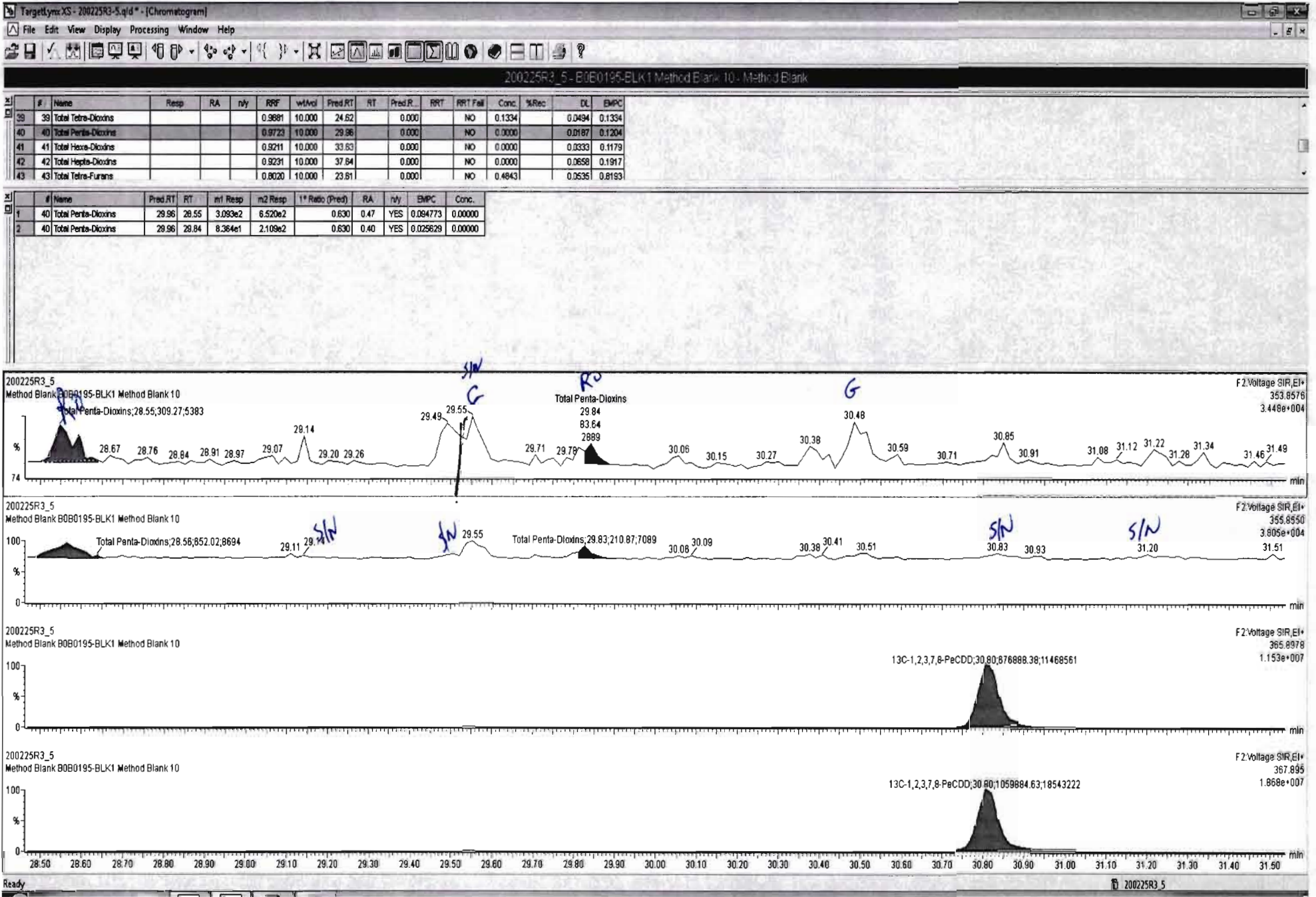
#	Name	Pred RT	RT	m1 Resp	m2 Resp	* Ratio (Pred)	RA	nly	EMPC	Conc.
1										



#	Name	Resp	RA	nly	RF	wt/Avl	Pred.RT	RT	Pred.R...	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.9020	10.000	23.81		0.000		NO	0.4465		0.0535	0.7783
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	0.2414		0.0488	0.5753
46	Total Hexa-Furans				0.8982	10.000	33.56		0.000		NO	0.8010		0.0653	0.8567
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	0.0000		0.0583	0.3840

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	nly	EMPC	Conc.
1	43 Total Tetra-Furans	23.81	19.58	2.385e2	2.282e2	0.770	1.04	YES	0.035921	0.00000
2	43 Total Tetra-Furans	23.81	20.08	2.331e2	3.405e2	0.770	0.68	NO	0.051001	0.00000
3	43 Total Tetra-Furans	23.81	21.22	8.878e2	1.147e3	0.770	0.77	NO	0.18096	0.18098
4	43 Total Tetra-Furans	23.81	21.56	4.089e2	6.814e2	0.770	0.60	YES	0.063574	0.00000
5	43 Total Tetra-Furans	23.81	22.05	3.045e2	3.240e2	0.770	0.94	YES	0.051000	0.00000
6	43 Total Tetra-Furans	23.81	22.38	2.704e2	3.051e2	0.770	0.89	YES	0.048026	0.00000
7	43 Total Tetra-Furans	23.81	23.28	6.463e2	8.013e2	0.770	0.81	NO	0.12872	0.12872
8	43 Total Tetra-Furans	23.81	23.80	3.932e2	4.576e2	0.770	0.86	NO	0.075649	0.075649
9	43 Total Tetra-Furans	23.81	24.80	2.810e2	4.067e2	0.770	0.69	NO	0.061154	0.061154
10	8 2,3,7,8-TCDF	24.80	24.81	3.047e2	4.865e2	0.770	0.63	YES	0.062286	0.00000





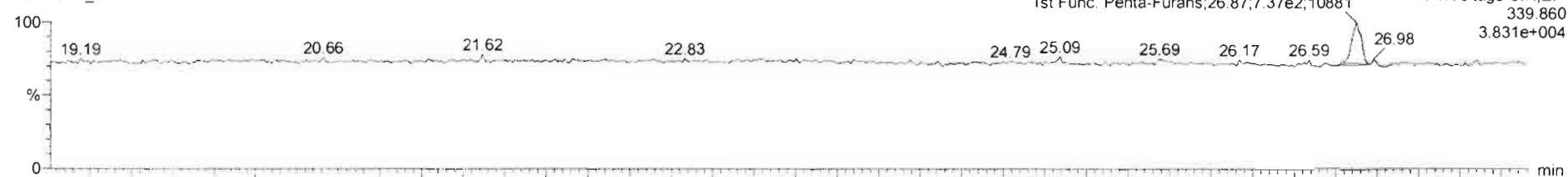
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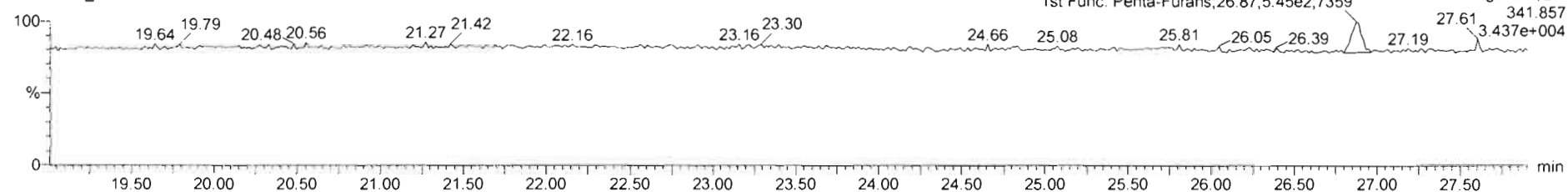
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1st Func. Penta-Furans

200225R3\_5

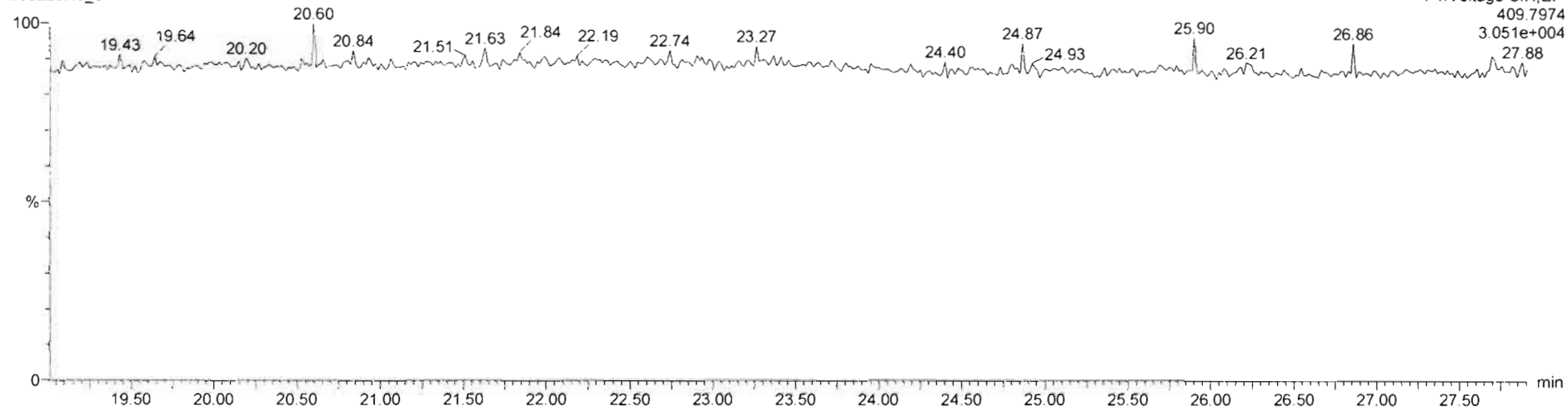


200225R3\_5



DPE6

200225R3\_5



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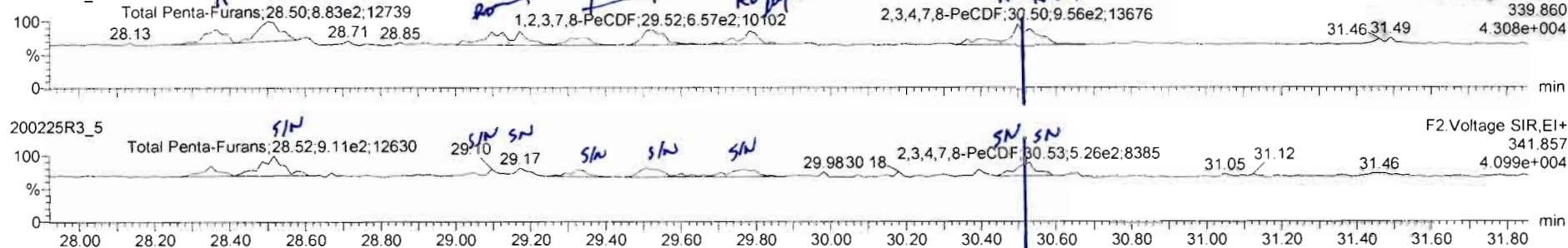
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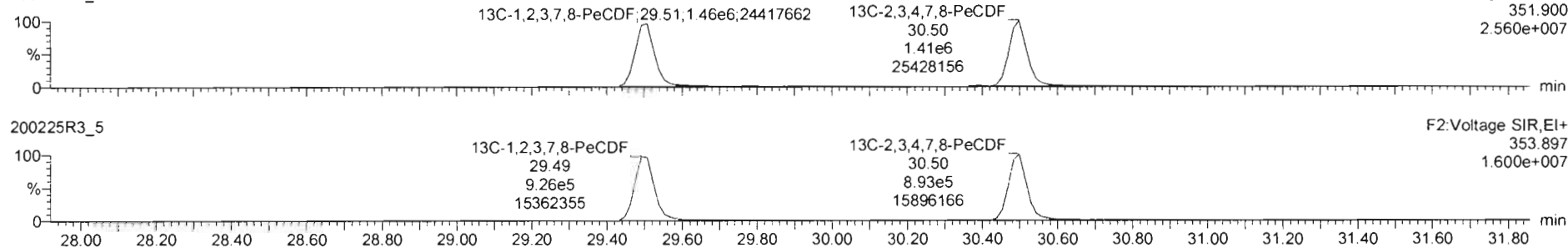
**1,2,3,7,8-PeCDF**

200225R3\_5



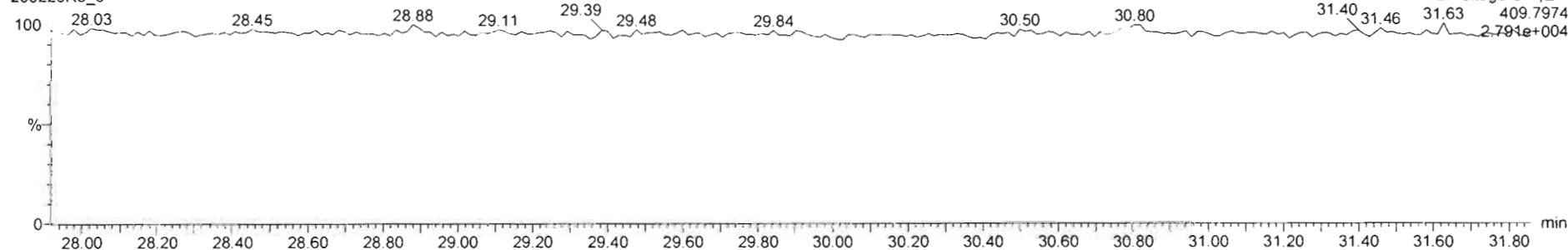
**13C-1,2,3,7,8-PeCDF**

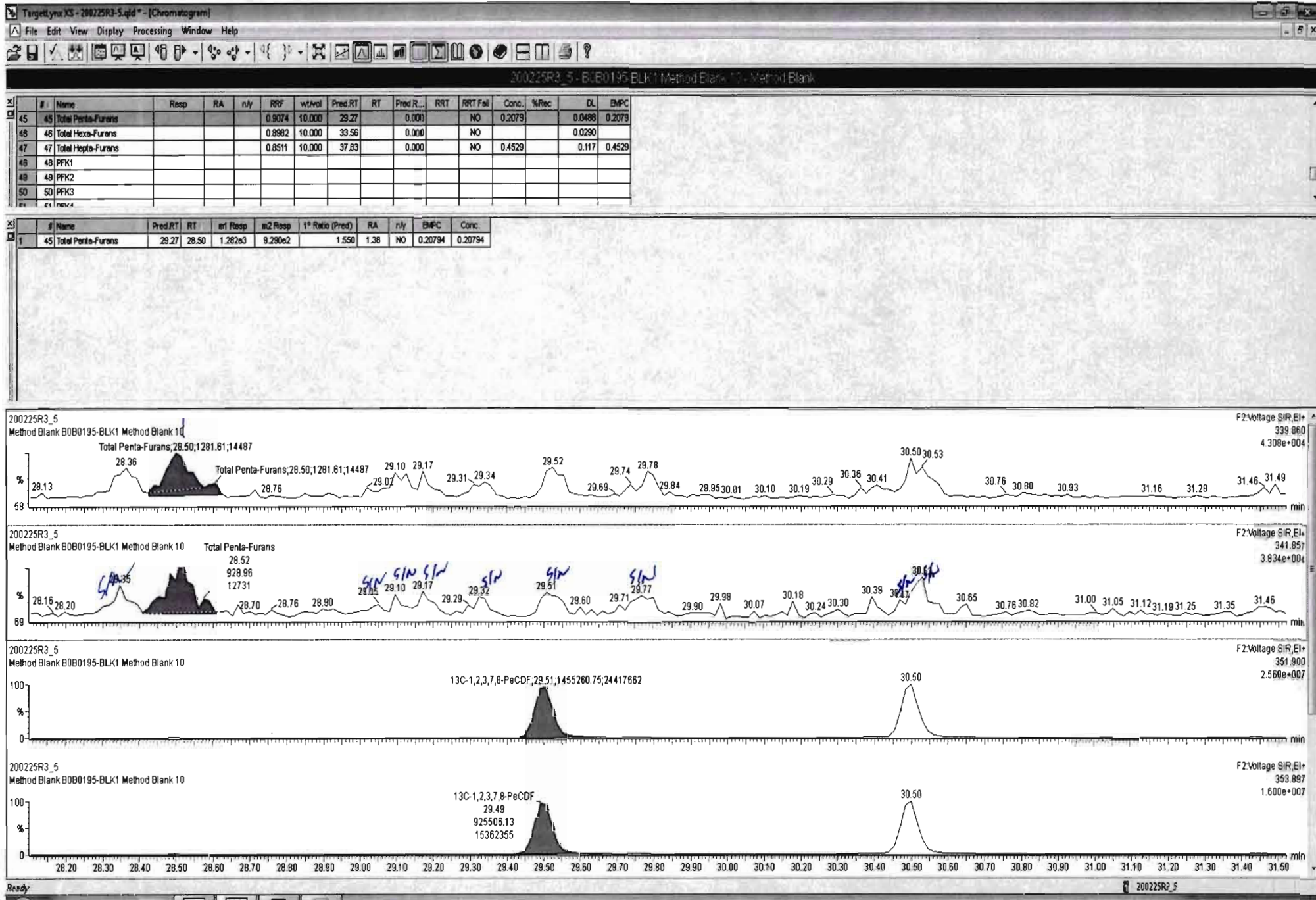
200225R3\_5



**DPE2**

200225R3\_5



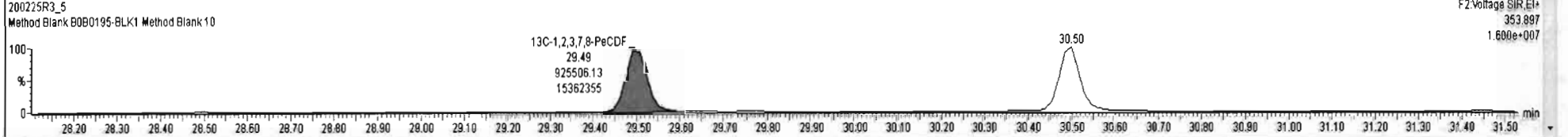
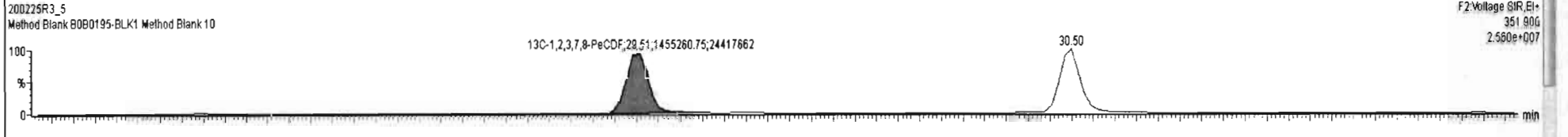
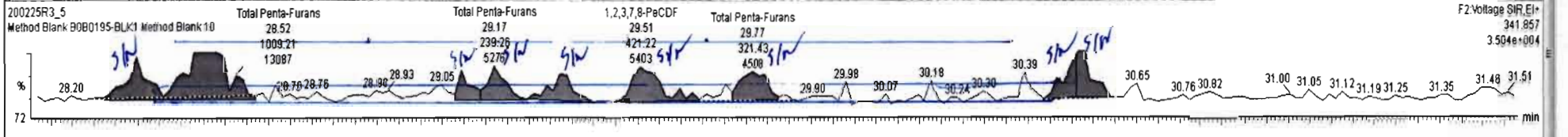
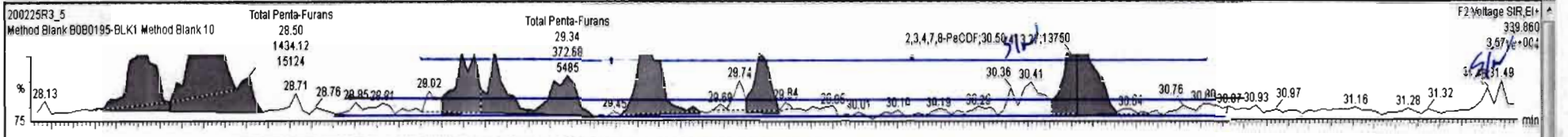




200225R3\_5 - B0E0195-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	n/y	RRF	wtVol	Pred RT	RT	Pred.R.	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.8020	10.000	23.81		0.000		NO			0.0268	
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.1206		0.0236	0.1206
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	0.5220		0.0498	0.7575
46	Total Hexa-Furans				0.8982	10.000	33.56		0.000		NO	0.8835		0.0653	0.9393
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	0.4646		0.117	0.5781
48	PFK1														

#	Name	Pred RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1	Total Penta-Furans	29.27	28.36	6.837e2	3.785e2	1.550	1.81	YES	0.080795	0.00000
2	Total Penta-Furans	29.27	28.50	1.434e3	1.009e3	1.550	1.42	NO	0.22983	0.22983
3	Total Penta-Furans	29.27	29.10	4.784e2	1.527e2	1.550	3.13	YES	0.038634	0.00000
4	Total Penta-Furans	29.27	29.17	3.567e2	2.393e2	1.550	1.49	NO	0.056059	0.056059
5	Total Penta-Furans	29.27	29.34	3.727e2	2.449e2	1.550	1.52	NO	0.058097	0.058097
6	1,2,3,7,8-PeCDF	29.53	29.52	6.796e2	4.212e2	1.550	1.81	NO	0.10191	0.10191
7	Total Penta-Furans	29.27	29.78	3.685e2	3.214e2	1.550	1.14	YES	0.058720	0.00000
8	2,3,4,7,8-PeCDF	30.50	30.50	4.133e2	2.209e2	1.550	1.87	YES	0.061345	0.00000
9	Total Penta-Furans	29.27	30.53	5.132e2	2.958e2	1.550	1.74	NO	0.078074	0.078074

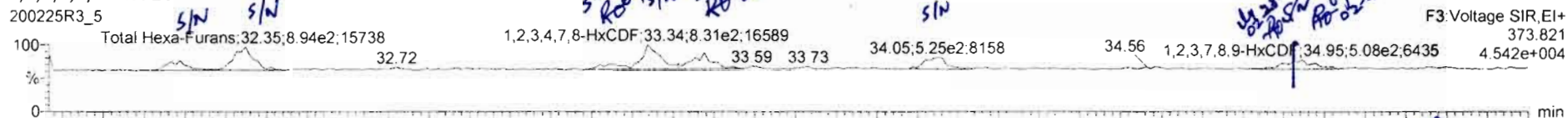


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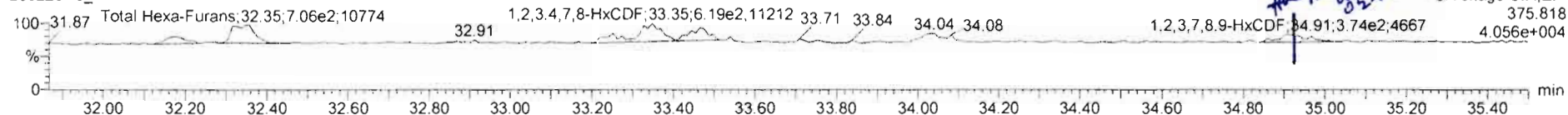
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Printed: Wednesday, February 26, 2020 08:39:36 Pacific Standard Time

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank

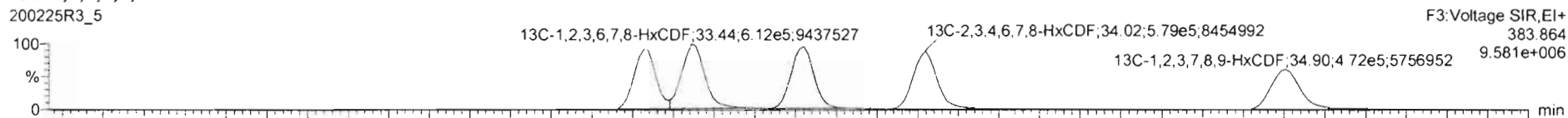
1,2,3,4,7,8-HxCDF



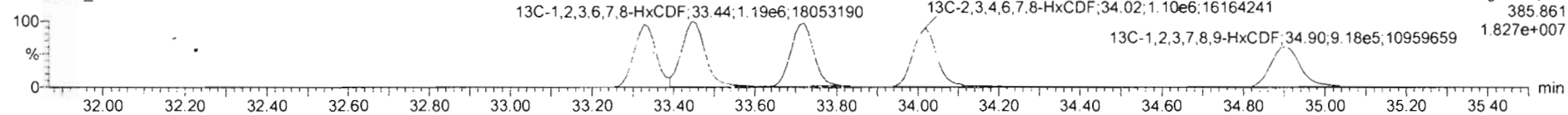
200225R3\_5



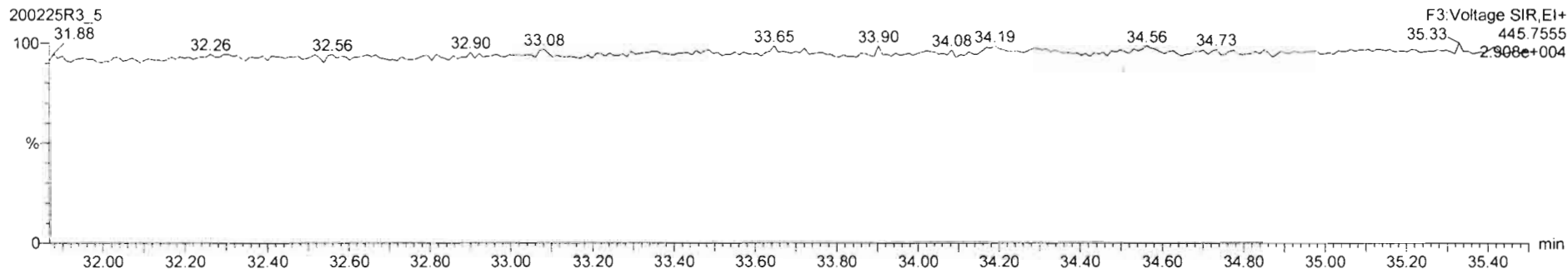
13C-1,2,3,4,7,8-HxCDF

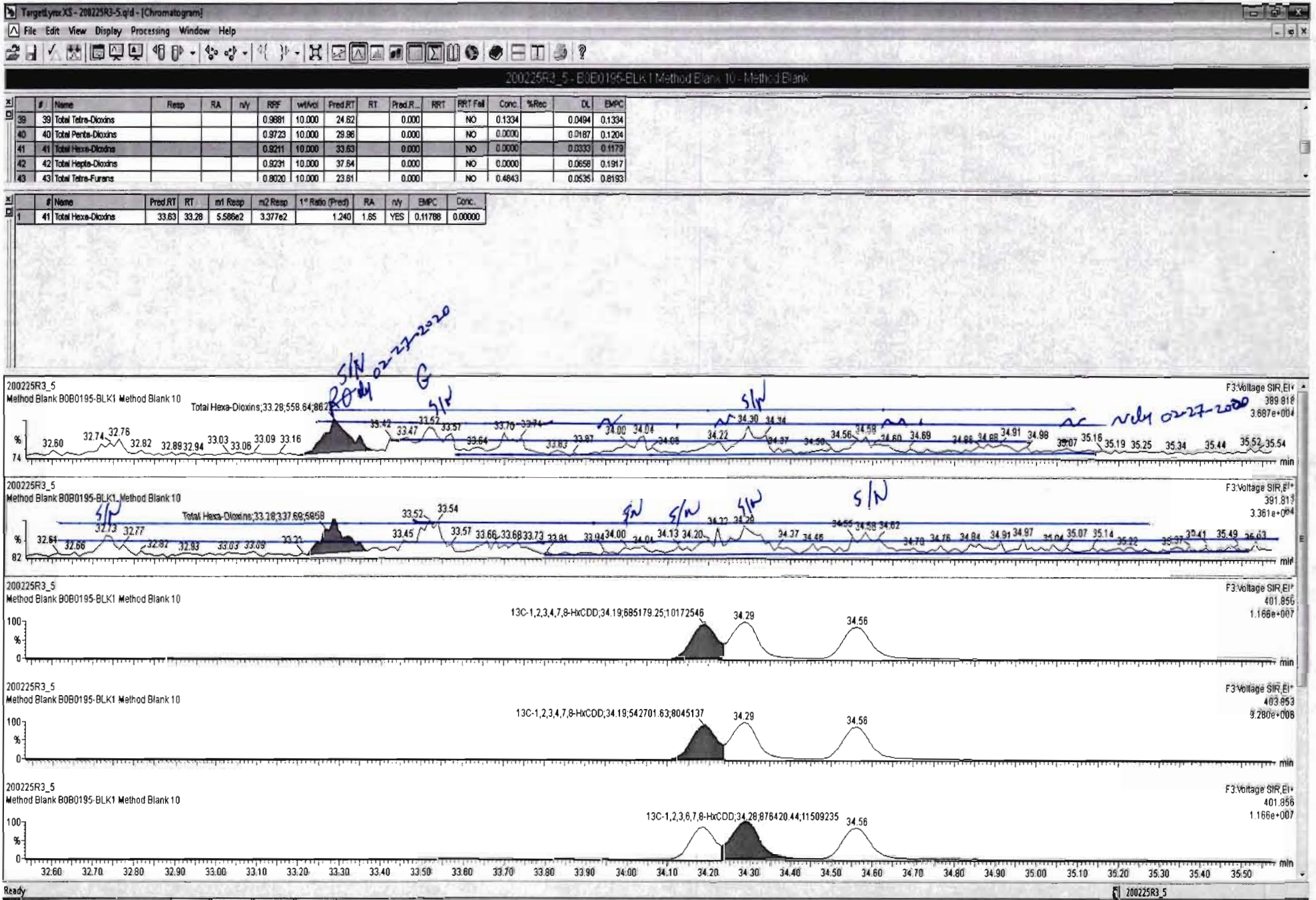


200225R3\_5



DPE3



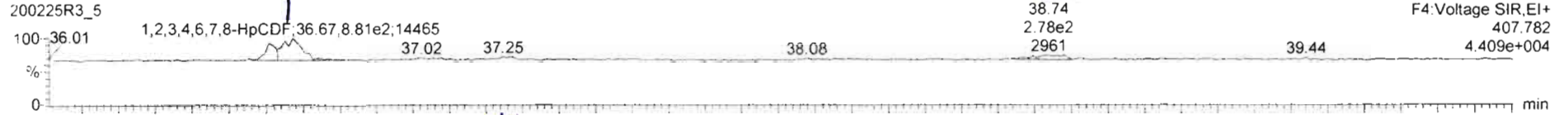


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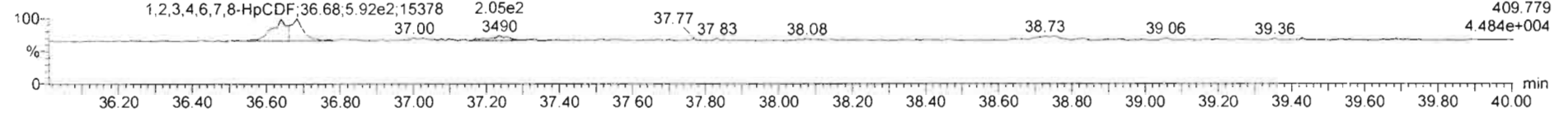
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Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank

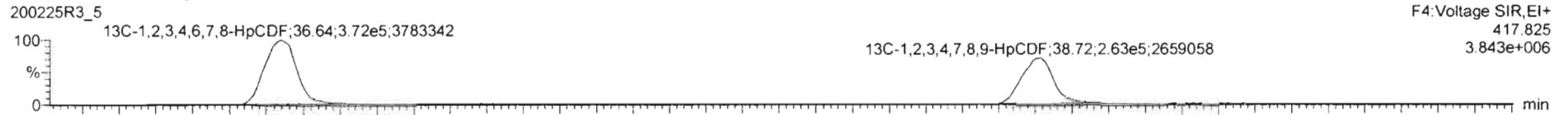
1,2,3,4,6,7,8-HpCDF



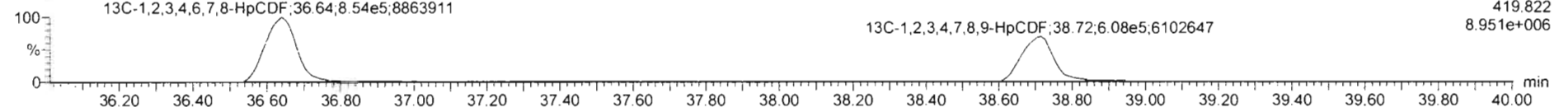
200225R3\_5



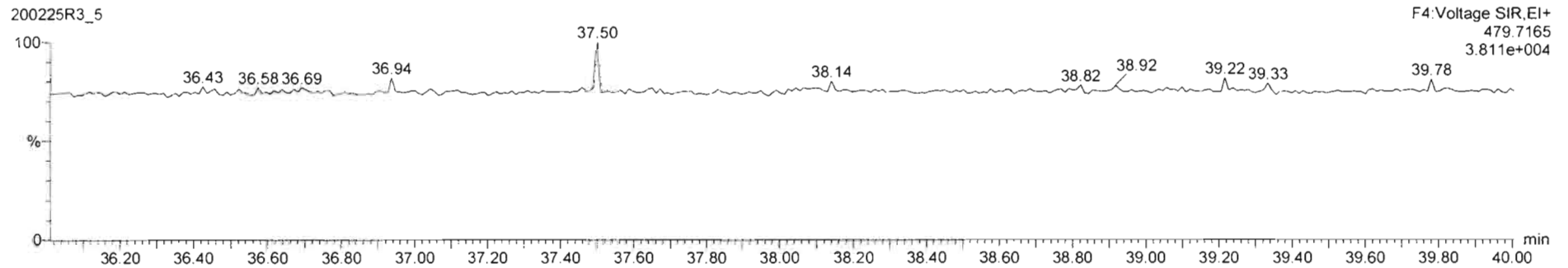
13C-1,2,3,4,6,7,8-HpCDF



200225R3\_5



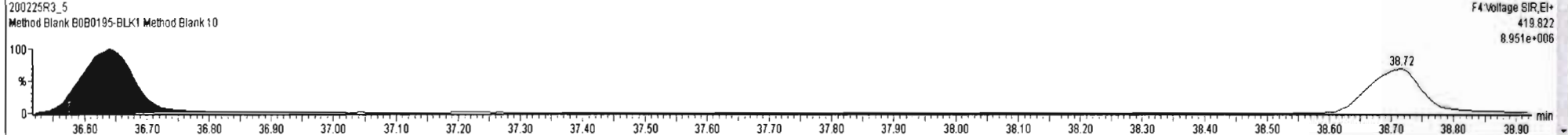
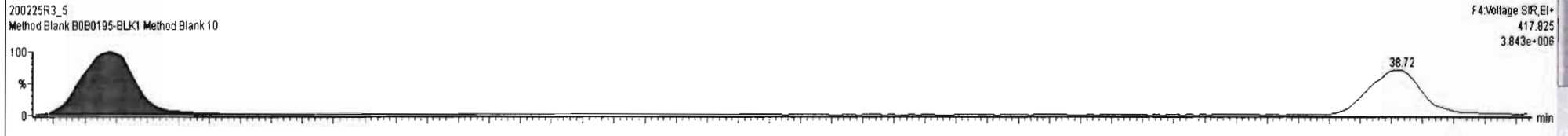
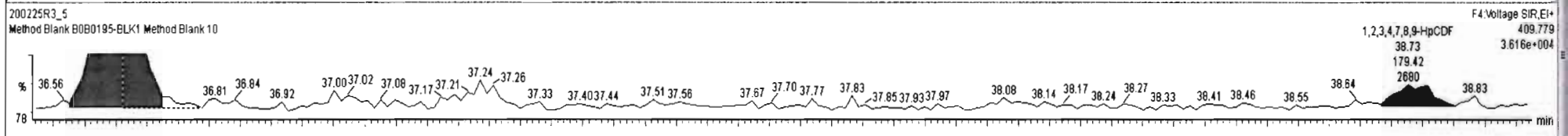
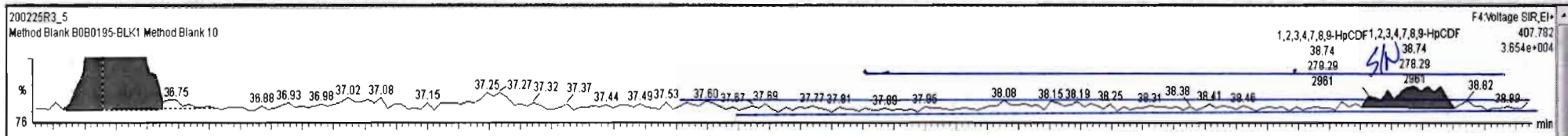
DPE4



200225R3\_5 - B0B0195-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	n/y	RPF	wtVol	Pred.RT	RT	Pred.R	RRT	RRT Fal	Conc.	%Rec	DL	EMPC
46	Total Hexa-Furans				0.8982	10.000	33.58		0.000		NO			0.0290	
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	0.4529		0.117	0.5388
48	PFK1														
49	PFK2														
50	PFK3														
51	PFK4														

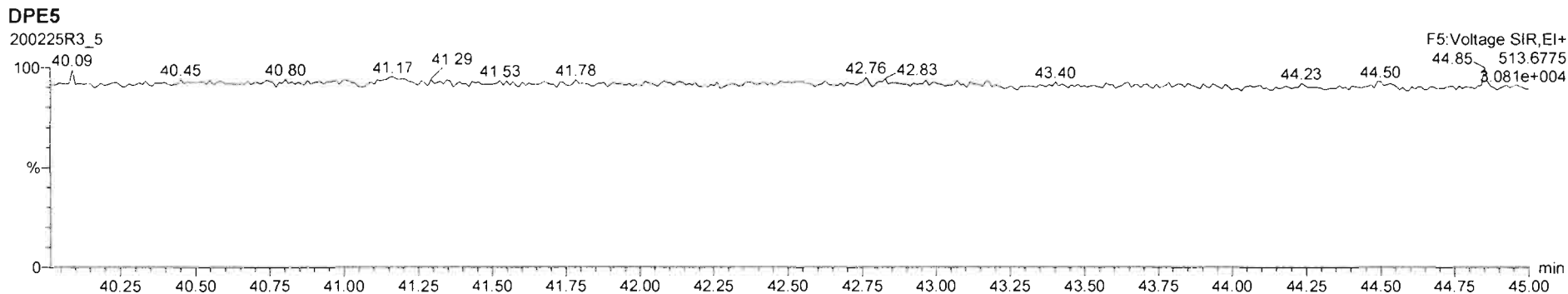
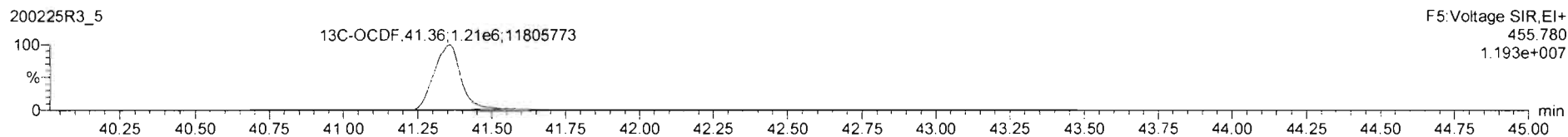
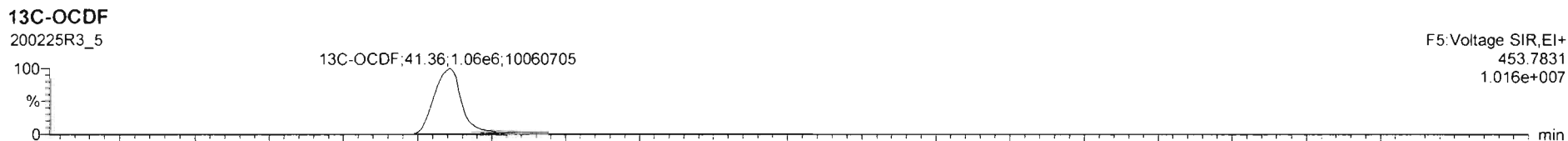
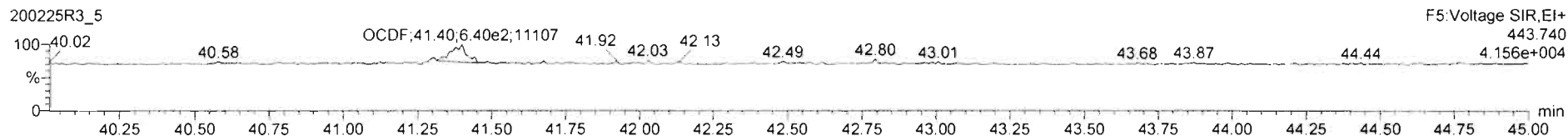
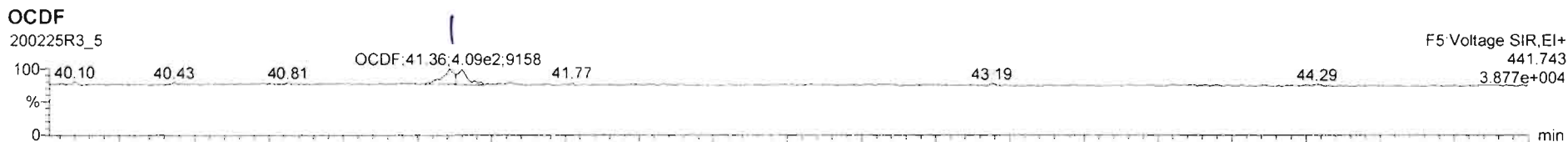
#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1	1,2,3,4,6,7,8-HpCDF	36.68	36.67	1.178e3	1.186e3	1.040	0.98	NO	0.45267	0.45267
2	1,2,3,4,7,8,9-HpCDF	38.72	38.74	2.783e2	1.794e2	1.040	1.55	YES	0.085752	0.00000



Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:39:34 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:39:36 Pacific Standard Time

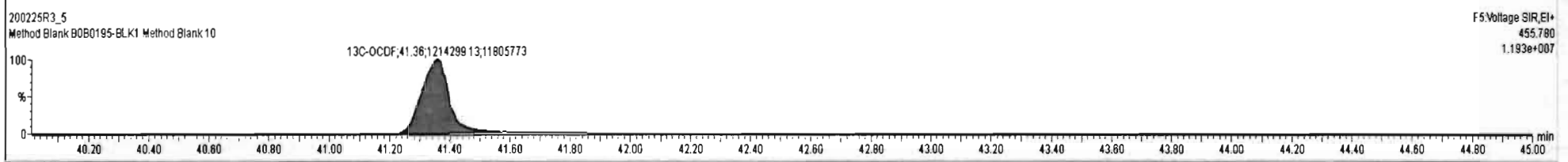
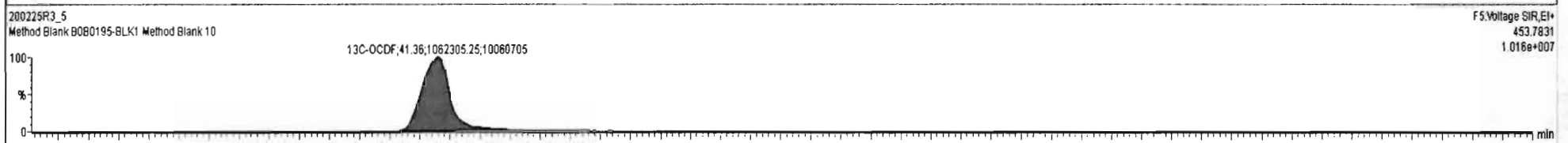
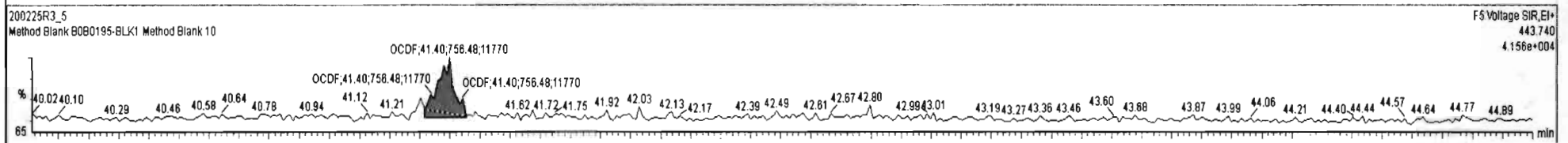
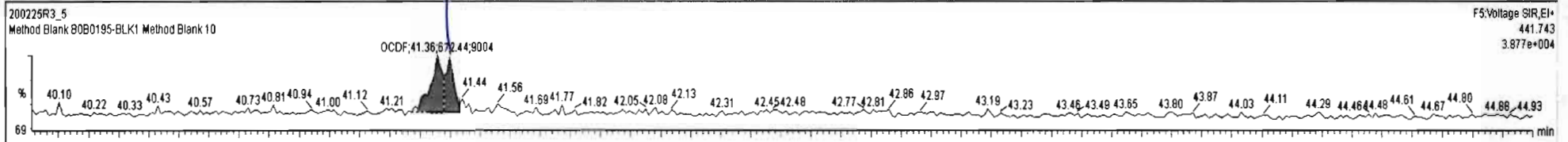
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200225R3\_5 - B0B0195-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	n/y	RF	wt/Avl	Pred_RT	RT	Pred_R...	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
17	OCDF	1.43e3	0.89	NO	0.8055	10.000	41.36	41.36	1.000	1.000	NO	0.3117		0.119	0.3117
18	13C-2,3,7,8-TCDD	2.20e6	0.78	NO	1.1985	10.000	25.69	25.72	1.026	1.027	NO	191.0	95.5		0.151
19	13C-1,2,3,7,8-PeCDD	1.74e6	0.64	NO	0.9667	10.000	30.43	30.80	1.215	1.230	NO	186.6	93.3		0.155
20	13C-1,2,3,4,7,8-HxCDD	1.23e6	1.26	NO	0.8738	10.000	34.19	34.19	1.014	1.014	NO	185.0	82.5		0.390
21	13C-1,2,3,8,7,8-HxCDD	1.57e6	1.28	NO	1.0458	10.000	34.28	34.28	1.017	1.017	NO	178.3	88.2		0.326

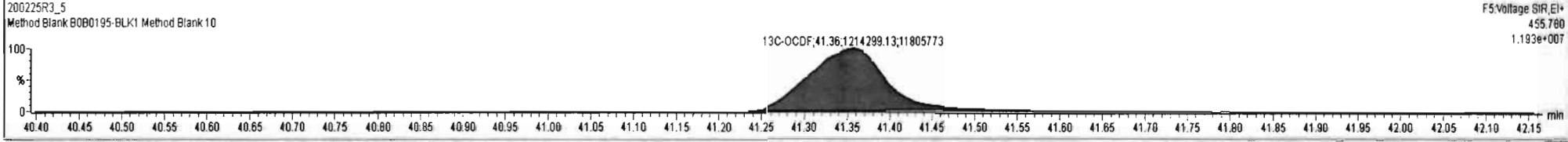
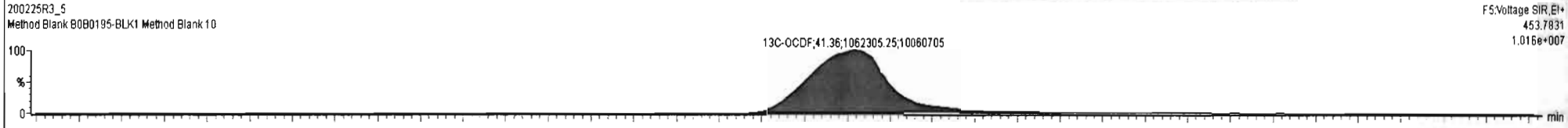
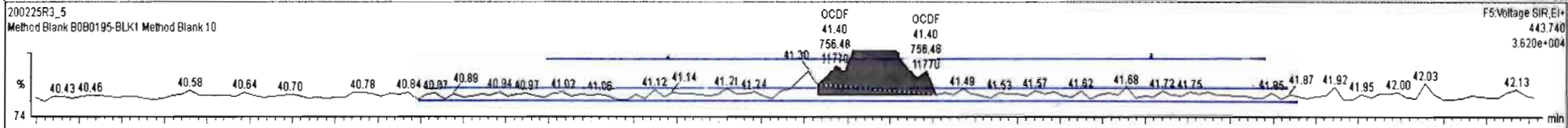
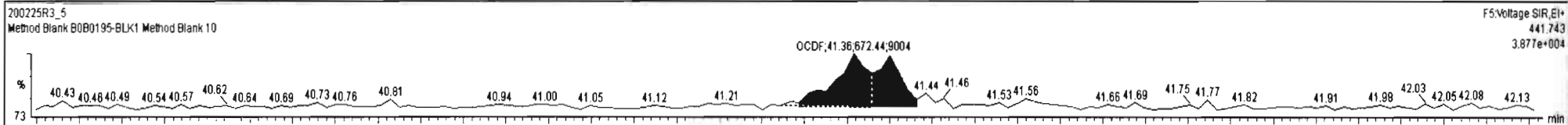
#	Name	Prod_RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1										



200225R3\_5 - B0B0195-BLK1 Method Blank 10 - Method Blank

#	Name	Resp	RA	n/y	RRF	wtVcl	Pred.RT	RT	Pred.R...	RRT	RRT Fail	Cons.	%Rec	DL	EMPC
17	OCDF	1.43e3	0.88	NO	0.8055	10.000	41.36	41.36	1.000	1.000	NO	0.3117		0.119	0.3117
18	13C-2,3,7,8-TCDD	2.20e6	0.78	NO	1.1985	10.000	25.69	25.72	1.026	1.027	NO	191.0	95.5	0.151	
19	13C-1,2,3,7,8-PeCDD	1.74e6	0.64	NO	0.9667	10.000	30.43	30.80	1.215	1.230	NO	186.6	93.3	0.155	
20	13C-1,2,3,4,7,8-HxCDD	1.23e6	1.26	NO	0.8739	10.000	34.19	34.19	1.014	1.014	NO	165.0	82.5	0.390	
21	13C-1,2,3,6,7,8-HxCDD	1.57e6	1.26	NO	1.0458	10.000	34.29	34.28	1.017	1.017	NO	176.3	88.2	0.326	
22	13C-1,2,3,7,8,9-HxCDD	1.38e6	1.25	NO	0.9744	10.000	34.60	34.56	1.026	1.025	NO	166.5	83.2	0.350	

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Cons.
1										



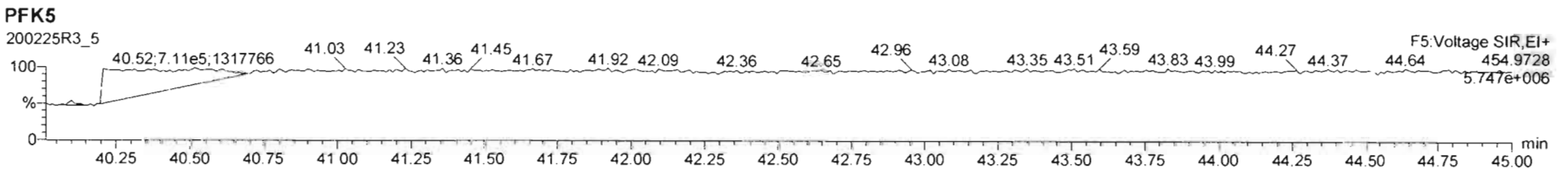
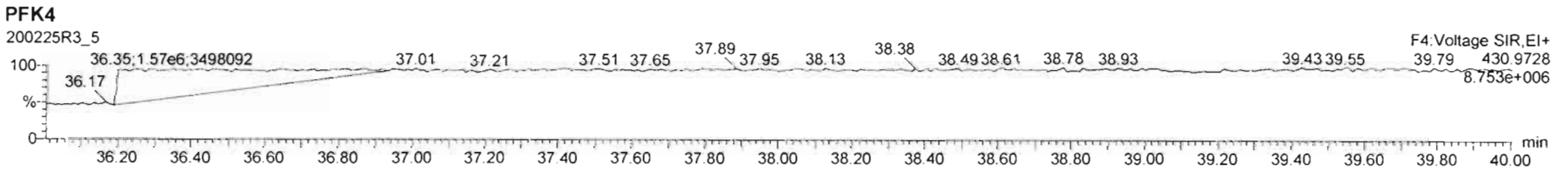
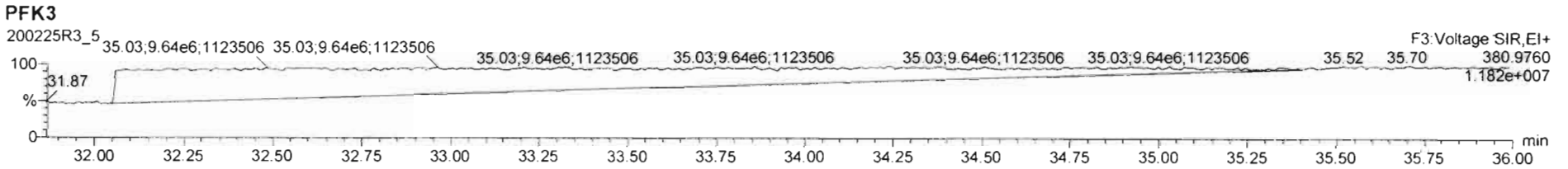
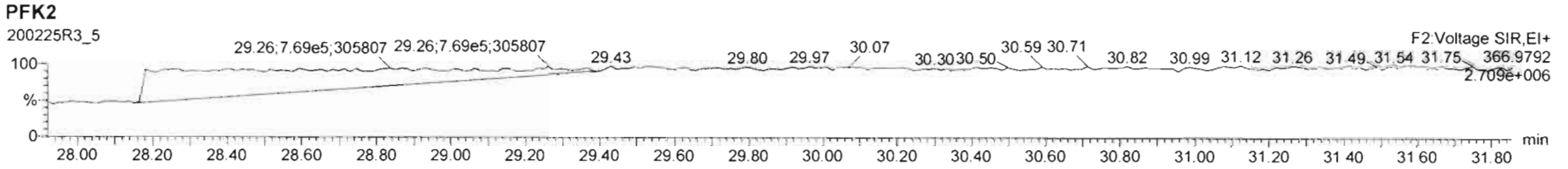
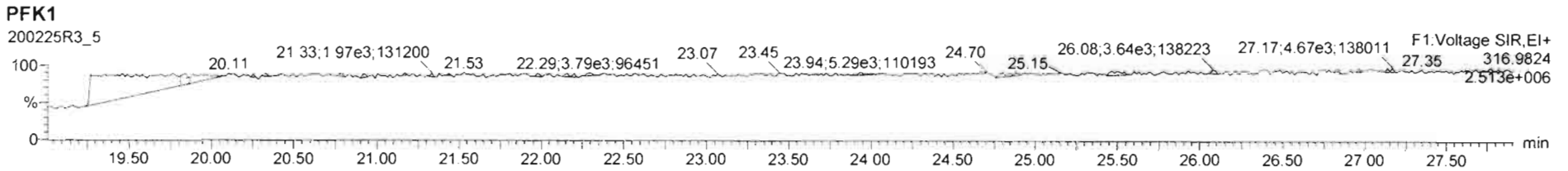


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Last Altered: Wednesday, February 26, 2020 08:39:34 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:39:36 Pacific Standard Time

Name: 200225R3\_5, Date: 25-Feb-2020, Time: 16:16:03, ID: B0B0195-BLK1 Method Blank 10, Description: Method Blank



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-2.qld

Last Altered: Wednesday, February 26, 2020 13:34:07 Pacific Standard Time  
 Printed: Wednesday, February 26, 2020 13:46:42 Pacific Standard Time

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C102/27/2020

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00  
 Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_2, Date: 25-Feb-2020, Time: 13:54:46, ID: B0B0195-BS1 OPR 10, Description: OPR

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	165021.368	0.755	NO	0.988	10.000	25.75	25.74	1.00	1.00	NO	18.47		0.0765	18.47
2	2 1,2,3,7,8-PeCDD	655429.375	0.621	NO	0.972	10.000	30.84	30.83	1.00	1.00	NO	90.79		0.0982	90.79
3	3 1,2,3,4,7,8-HxCDD	568827.735	1.228	NO	1.07	10.000	34.21	34.21	1.00	1.00	NO	97.31		0.221	97.31
4	4 1,2,3,6,7,8-HxCDD	634592.469	1.247	NO	0.921	10.000	34.30	34.32	1.00	1.00	NO	104.6		0.230	104.6
5	5 1,2,3,7,8,9-HxCDD	575167.016	1.223	NO	0.918	10.000	34.61	34.58	1.00	1.00	NO	105.9		0.261	105.9
6	6 1,2,3,4,6,7,8-HpCDD	426990.188	1.028	NO	0.923	10.000	38.09	38.09	1.00	1.00	NO	98.05		0.396	98.05
7	7 OCDD	828450.594	0.889	NO	0.975	10.000	41.18	41.20	1.00	1.00	NO	198.3		0.343	198.3
8	8 2,3,7,8-TCDF	198486.211	0.746	NO	0.802	10.000	24.80	24.79	1.00	1.00	NO	21.33		0.0919	21.33
9	9 1,2,3,7,8-PeCDF	915581.969	1.557	NO	0.907	10.000	29.53	29.52	1.00	1.00	NO	99.16		0.148	99.16
10	10 2,3,4,7,8-PeCDF	939753.281	1.552	NO	0.952	10.000	30.53	30.51	1.00	1.00	NO	99.44		0.135	99.44
11	11 1,2,3,4,7,8-HxCDF	652977.625	1.212	NO	0.862	10.000	33.34	33.36	1.00	1.00	NO	110.6		0.247	110.6
12	12 1,2,3,6,7,8-HxCDF	785791.344	1.218	NO	0.841	10.000	33.48	33.48	1.00	1.00	NO	118.2		0.252	118.2
13	13 2,3,4,6,7,8-HxCDF	733493.344	1.219	NO	0.898	10.000	34.06	34.04	1.00	1.00	NO	114.8		0.255	114.8
14	14 1,2,3,7,8,9-HxCDF	583689.313	1.207	NO	0.858	10.000	34.91	34.94	1.00	1.00	NO	109.8		0.355	109.8
15	15 1,2,3,4,6,7,8-HpCDF	506030.828	1.012	NO	0.851	10.000	36.69	36.67	1.00	1.00	NO	111.7		0.367	111.7
16	16 1,2,3,4,7,8,9-HpCDF	422107.234	1.003	NO	0.980	10.000	38.72	38.74	1.00	1.00	NO	114.4		0.460	114.4
17	17 OCDF	891881.344	0.861	NO	0.806	10.000	41.36	41.38	1.00	1.00	NO	223.6		0.294	223.6
18	18 13C-2,3,7,8-TCDD	1808615.0...	0.782	NO	1.20	10.000	25.69	25.72	1.03	1.03	NO	197.7	98.9	0.186	
19	19 13C-1,2,3,7,8-PeCDD	1485033.6...	0.626	NO	0.967	10.000	30.43	30.82	1.22	1.23	NO	201.3	101	0.221	
20	20 13C-1,2,3,4,7,8-HxCDD	1091853.6...	1.257	NO	0.874	10.000	34.20	34.20	1.01	1.01	NO	184.3	92.1	0.366	
21	21 13C-1,2,3,6,7,8-HxCDD	1317723.4...	1.254	NO	1.05	10.000	34.30	34.30	1.02	1.02	NO	185.8	92.9	0.306	
22	22 13C-1,2,3,7,8,9-HxCDD	1182662.3...	1.229	NO	0.974	10.000	34.61	34.57	1.03	1.02	NO	179.0	89.5	0.328	
23	23 13C-1,2,3,4,6,7,8-HpCDD	943526.656	1.009	NO	0.747	10.000	38.18	38.08	1.13	1.13	NO	186.2	93.1	0.494	
24	24 13C-OCDD	1714999.4...	0.920	NO	0.707	10.000	41.08	41.18	1.22	1.22	NO	358.0	89.5	0.430	
25	25 13C-2,3,7,8-TCDF	2320277.1...	0.776	NO	1.07	10.000	24.87	24.78	0.99	0.99	NO	198.2	99.1	0.327	
26	26 13C-1,2,3,7,8-PeCDF	2035112.7...	1.615	NO	1.00	10.000	29.46	29.51	1.18	1.18	NO	184.9	92.5	0.354	
27	27 13C-2,3,4,7,8-PeCDF	1986351.6...	1.603	NO	0.962	10.000	30.42	30.50	1.21	1.22	NO	188.0	94.0	0.369	
28	28 13C-1,2,3,4,7,8-HxCDF	1369797.8...	0.516	NO	1.05	10.000	33.33	33.34	0.99	0.99	NO	192.6	96.3	0.473	
29	29 13C-1,2,3,6,7,8-HxCDF	1580649.6...	0.522	NO	1.19	10.000	33.43	33.47	0.99	0.99	NO	195.9	98.0	0.417	
30	30 13C-2,3,4,6,7,8-HxCDF	1422932.1...	0.521	NO	1.07	10.000	34.04	34.03	1.01	1.01	NO	196.8	98.4	0.466	
31	31 13C-1,2,3,7,8,9-HxCDF	1239383.8...	0.495	NO	0.922	10.000	34.95	34.91	1.04	1.04	NO	198.2	99.1	0.539	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-2.qld

Last Altered: Wednesday, February 26, 2020 13:34:07 Pacific Standard Time

Printed: Wednesday, February 26, 2020 13:46:42 Pacific Standard Time

Name: 200225R3\_2, Date: 25-Feb-2020, Time: 13:54:46, ID: B0B0195-BS1 OPR 10, Description: OPR

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1064178.3...	0.461	NO	0.767	10.000	36.70	36.65	1.09	1.09	NO	204.6	102	0.518	
33	33 13C-1,2,3,4,7,8,9-HpCDF	753243.485	0.454	NO	0.552	10.000	38.72	38.72	1.15	1.15	NO	201.1	101	0.720	
34	34 13C-OCDF	1980360.3...	0.872	NO	0.789	10.000	41.32	41.36	1.23	1.23	NO	370.0	92.5	0.425	
35	35 37Cl-2,3,7,8-TCDD	674242.000			1.18	10.000	25.72	25.74	1.03	1.03	NO	75.11	93.9	0.0481	
36	36 13C-1,2,3,4-TCDD	1526372.1...	0.785	NO	1.00	10.000	25.11	25.05	1.00	1.00	NO	200.0	100	0.223	
37	37 13C-1,2,3,4-TCDF	2197450.6...	0.788	NO	1.00	10.000	23.37	23.26	1.00	1.00	NO	200.0	100	0.348	
38	38 13C-1,2,3,4,6,9-HxCDF	1356047.9...	0.513	NO	1.00	10.000	33.71	33.73	1.00	1.00	NO	200.0	100	0.497	
39	39 Total Tetra-Dioxins				0.988	10.000	24.62		0.00		NO	19.20		0.0765	19.20
40	40 Total Penta-Dioxins				0.972	10.000	29.96		0.00		NO	91.25		0.0982	91.96
41	41 Total Hexa-Dioxins				0.921	10.000	33.63		0.00		NO	308.8		0.248	308.8
42	42 Total Hepta-Dioxins				0.923	10.000	37.64		0.00		NO	99.41		0.396	99.41
43	43 Total Tetra-Furans				0.802	10.000	23.61		0.00		NO	22.47		0.0919	23.45
44	44 1st Func. Penta-Furans				0.907	10.000	27.09		0.00		NO	0.3176		0.0375	0.3176
45	45 Total Penta-Furans				0.907	10.000	29.27		0.00		NO	200.5		0.145	201.8
46	46 Total Hexa-Furans				0.898	10.000	33.56		0.00		NO	454.4		0.264	454.4
47	47 Total Hepta-Furans				0.851	10.000	37.83		0.00		NO	226.9		0.434	226.9

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-2.qld

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Name: 200225R3\_2, Date: 25-Feb-2020, Time: 13:54:46, ID: B0B0195-BS1 OPR 10, Description: OPR

**Tetra-Dioxins**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	1 2,3,7,8-TCDD	1.65e5	1.81e6	0.755	NO	25.75	25.74	18.47	18.47
2	39 Total Tetra-Dioxins	4.28e3	1.81e6	0.781	NO	24.62	25.42	0.4793	0.4793
3	39 Total Tetra-Dioxins	2.21e3	1.81e6	0.749	NO	24.62	21.59	0.2474	0.2474

**Penta-Dioxins**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	0.00e0	1.49e6	1.288	YES	29.96	29.54	0.0000	0.07347
2	40 Total Penta-Dioxins	2.46e3	1.49e6	0.625	NO	29.96	28.58	0.3411	0.3411
3	40 Total Penta-Dioxins	0.00e0	1.49e6	0.956	YES	29.96	31.23	0.0000	0.1983
4	2 1,2,3,7,8-PeCDD	6.55e5	1.49e6	0.621	NO	30.84	30.83	90.79	90.79
5	40 Total Penta-Dioxins	0.00e0	1.49e6	1.857	YES	29.96	30.53	0.0000	0.05786
6	40 Total Penta-Dioxins	0.00e0	1.49e6	0.399	YES	29.96	30.39	0.0000	0.1568
7	40 Total Penta-Dioxins	8.61e2	1.49e6	0.689	NO	29.96	29.83	0.1193	0.1193
8	40 Total Penta-Dioxins	0.00e0	1.49e6	0.881	YES	29.96	29.74	0.0000	0.05934
9	40 Total Penta-Dioxins	0.00e0	1.49e6	0.617	NO	29.96	29.58	0.0000	0.1700

**Hexa-Dioxins**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	5 1,2,3,7,8,9-HxCDD	5.75e5	1.18e6	1.223	NO	34.61	34.58	105.9	105.9
2	4 1,2,3,6,7,8-HxCDD	6.35e5	1.32e6	1.247	NO	34.30	34.32	104.6	104.6
3	3 1,2,3,4,7,8-HxCDD	5.69e5	1.09e6	1.228	NO	34.21	34.21	97.31	97.31
4	41 Total Hexa-Dioxins	1.77e3	0.00e0	1.331	NO	33.63	33.53	0.3204	0.3204
5	41 Total Hexa-Dioxins	1.58e3	0.00e0	1.066	NO	33.63	33.29	0.2858	0.2858
6	41 Total Hexa-Dioxins	2.30e3	0.00e0	1.375	NO	33.63	32.76	0.4168	0.4168

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-2.qld

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Hepta-Dioxins

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	4.27e5	9.44e5	1.028	NO	38.09	38.09	98.05	98.05
2	42 Total Hepta-Dioxins	5.92e3	9.44e5	1.094	NO	37.64	37.08	1.358	1.358

Tetra-Furans

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	43 Total Tetra-Furans	6.11e2	2.32e6	0.870	NO	23.61	24.36	0.06571	0.06571
2	43 Total Tetra-Furans	5.16e2	2.32e6	0.689	NO	23.61	24.12	0.05542	0.05542
3	43 Total Tetra-Furans	2.43e3	2.32e6	0.858	NO	23.61	23.82	0.2617	0.2617
4	43 Total Tetra-Furans	2.78e3	2.32e6	0.745	NO	23.61	23.30	0.2987	0.2987
5	43 Total Tetra-Furans	0.00e0	2.32e6	0.900	YES	23.61	23.15	0.0000	0.1344
6	43 Total Tetra-Furans	0.00e0	2.32e6	1.469	YES	23.61	23.00	0.0000	0.05047
7	43 Total Tetra-Furans	0.00e0	2.32e6	0.956	YES	23.61	22.83	0.0000	0.07742
8	43 Total Tetra-Furans	0.00e0	2.32e6	1.220	YES	23.61	22.38	0.0000	0.06879
9	43 Total Tetra-Furans	0.00e0	2.32e6	0.917	YES	23.61	22.01	0.0000	0.09768
10	43 Total Tetra-Furans	0.00e0	2.32e6	0.809	NO	23.61	21.56	0.0000	0.2314
11	43 Total Tetra-Furans	0.00e0	2.32e6	1.028	YES	23.61	21.17	0.0000	0.2688
12	43 Total Tetra-Furans	0.00e0	2.32e6	0.601	YES	23.61	20.63	0.0000	0.05856
13	43 Total Tetra-Furans	7.08e2	2.32e6	0.796	NO	23.61	20.03	0.07614	0.07614
14	43 Total Tetra-Furans	1.04e3	2.32e6	0.790	NO	23.61	19.51	0.1116	0.1116
15	43 Total Tetra-Furans	5.34e2	2.32e6	0.827	NO	23.61	26.90	0.05741	0.05741
16	43 Total Tetra-Furans	1.16e3	2.32e6	0.762	NO	23.61	25.21	0.1251	0.1251
17	8 2,3,7,8-TCDF	1.98e5	2.32e6	0.746	NO	24.80	24.79	21.33	21.33
18	43 Total Tetra-Furans	7.56e2	2.32e6	0.809	NO	23.61	24.57	0.08127	0.08127

Penta-Furans function 1

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	44 1st Func. Penta-Fura...	2.90e3	0.00e0	1.480	NO	27.09	26.89	0.3176	0.3176

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-2.qld

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**Penta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	45 Total Penta-Furans	0.00e0	0.00e0	1.233	YES	29.27	29.80	0.0000	1.091
2	9 1,2,3,7,8-PeCDF	9.16e5	2.04e6	1.557	NO	29.53	29.52	99.16	99.16
3	45 Total Penta-Furans	2.50e3	0.00e0	1.579	NO	29.27	29.34	0.2739	0.2739
4	45 Total Penta-Furans	1.40e3	0.00e0	1.328	NO	29.27	29.20	0.1530	0.1530
5	45 Total Penta-Furans	1.48e3	0.00e0	1.698	NO	29.27	29.11	0.1626	0.1626
6	45 Total Penta-Furans	5.91e3	0.00e0	1.740	NO	29.27	28.52	0.6483	0.6483
7	45 Total Penta-Furans	0.00e0	0.00e0	2.131	YES	29.27	28.36	0.0000	0.1491
8	45 Total Penta-Furans	5.82e3	0.00e0	1.395	NO	29.27	31.48	0.6380	0.6380
9	45 Total Penta-Furans	0.00e0	0.00e0	0.940	YES	29.27	30.85	0.0000	0.05082
10	10 2,3,4,7,8-PeCDF	9.40e5	1.99e6	1.552	NO	30.53	30.51	99.44	99.44

**Hexa-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	5.84e5	1.24e6	1.207	NO	34.91	34.94	109.8	109.8
2	13 2,3,4,6,7,8-HxCDF	7.33e5	1.42e6	1.219	NO	34.06	34.04	114.8	114.8
3	12 1,2,3,6,7,8-HxCDF	7.86e5	1.58e6	1.218	NO	33.48	33.48	118.2	118.2
4	11 1,2,3,4,7,8-HxCDF	6.53e5	1.37e6	1.212	NO	33.34	33.36	110.6	110.6
5	46 Total Hexa-Furans	3.61e3	0.00e0	1.128	NO	33.56	32.35	0.5732	0.5732
6	46 Total Hexa-Furans	2.96e3	0.00e0	1.139	NO	33.56	32.19	0.4693	0.4693

**Hepta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	16 1,2,3,4,7,8,9-HpCDF	4.22e5	7.53e5	1.003	NO	38.72	38.74	114.4	114.4
2	47 Total Hepta-Furans	2.82e3	0.00e0	0.898	NO	37.83	37.25	0.7300	0.7300
3	15 1,2,3,4,6,7,8-HpCDF	5.06e5	1.06e6	1.012	NO	36.69	36.67	111.7	111.7

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Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time

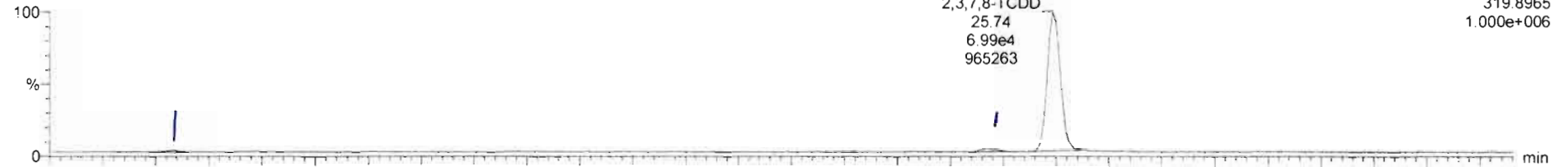
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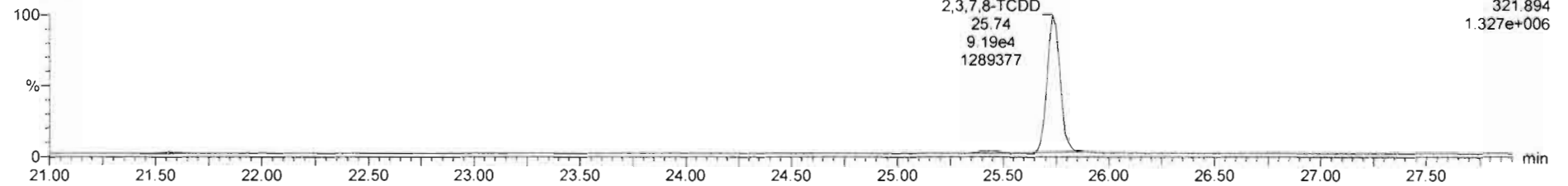
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**2,3,7,8-TCDD**

200225R3\_2

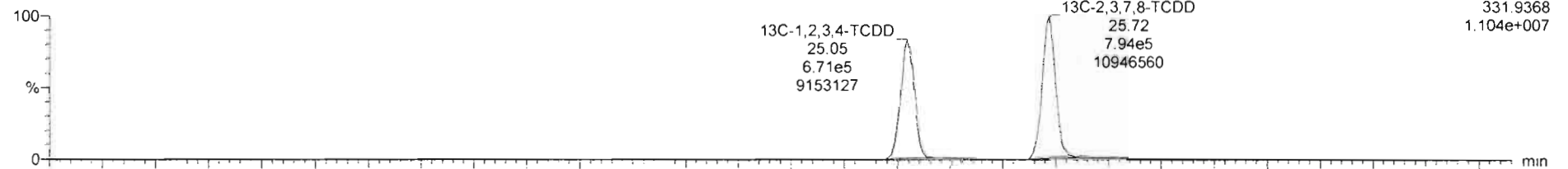


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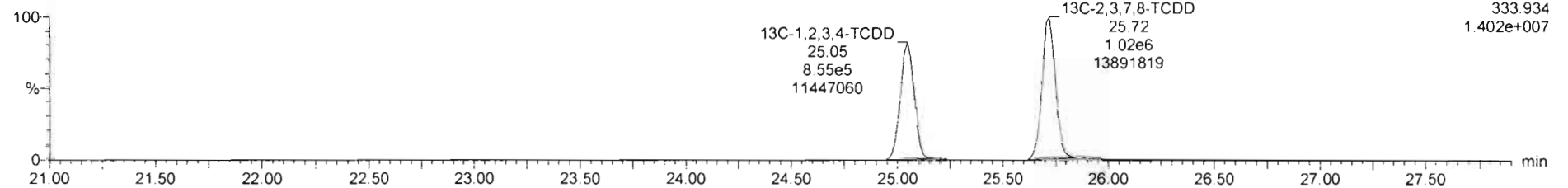


**13C-2,3,7,8-TCDD**

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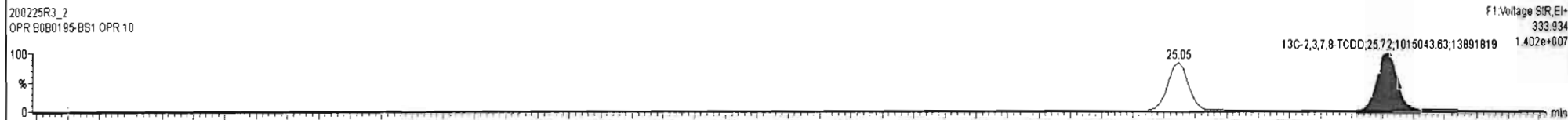
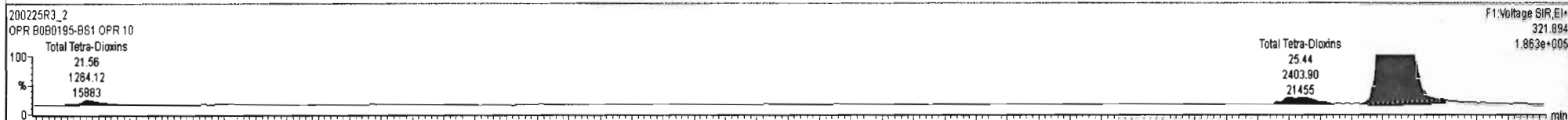
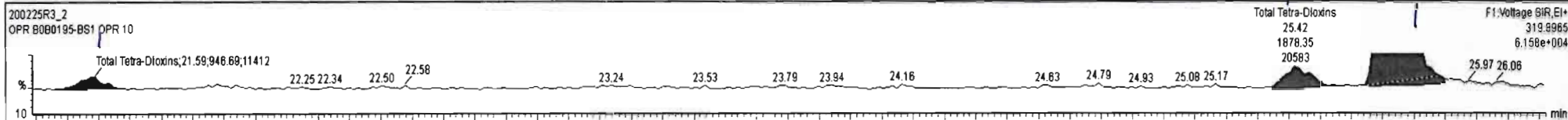
200225R3\_2



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#	Name	Resp	RA	n/y	RF	wt/ct	Pred RT	RT	Pred R...	RRT	RRT Fal	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9881	10.000	24.52		0.000		NO	18.20	0.0785	18.20	
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	87.89	0.0982	86.63	
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	298.0	0.248	298.7	
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	39.41	0.396	39.41	
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	21.45	0.0919	22.44	
44	1st Func. Penta-Furans				0.9074	10.000	27.89		0.000		NO	0.3176	0.0375	0.3176	
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	195.0	0.145	195.9	
46	Total Hexa-Furans				0.8962	10.000	33.56		0.000		NO	444.6	0.264	444.6	
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9	0.434	226.9	
48	PFK1														
49	PFK2														

#	Name	Pred RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1	2,3,7,8-TCDD	25.75	25.74	7.098e4	9.404e4	0.770	0.75	NO	18.469	18.469
2	Total Tetra-Dioxins	24.52	21.59	9.467e2	1.264e3	0.770	0.75	NO	0.24743	0.24743
3	Total Tetra-Dioxins	24.52	25.42	1.878e3	2.404e3	0.770	0.78	NO	0.47926	0.47926



Ready

200225R3\_2

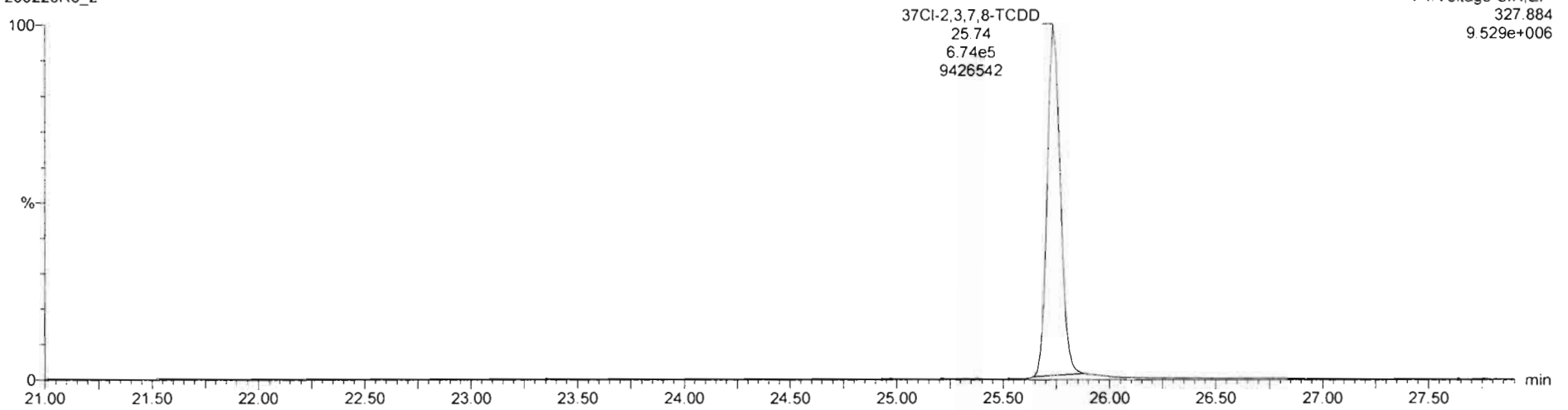


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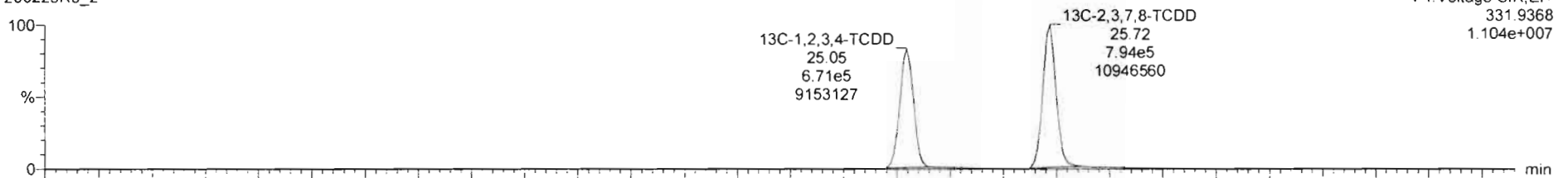
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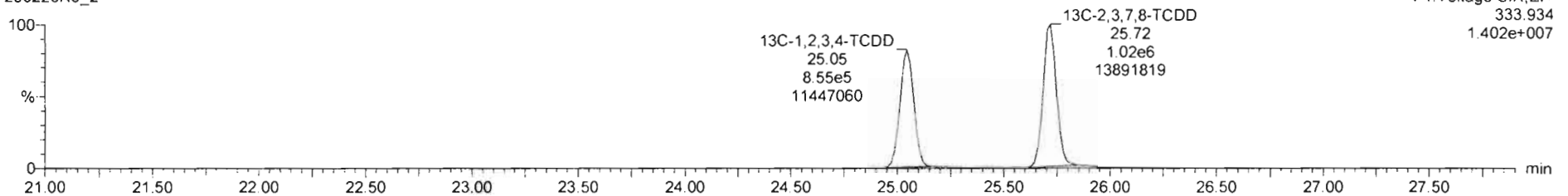
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200225R3\_2



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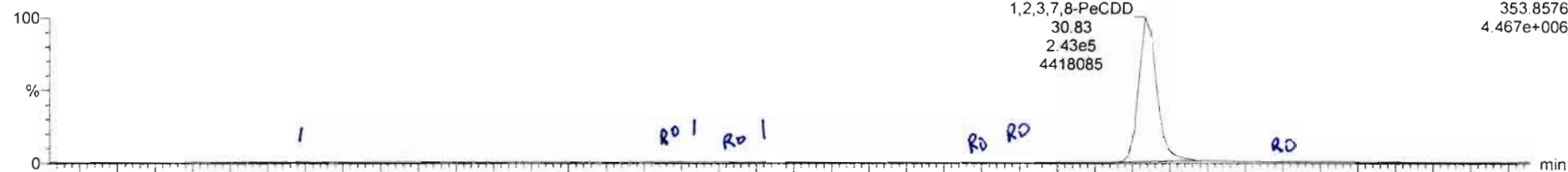
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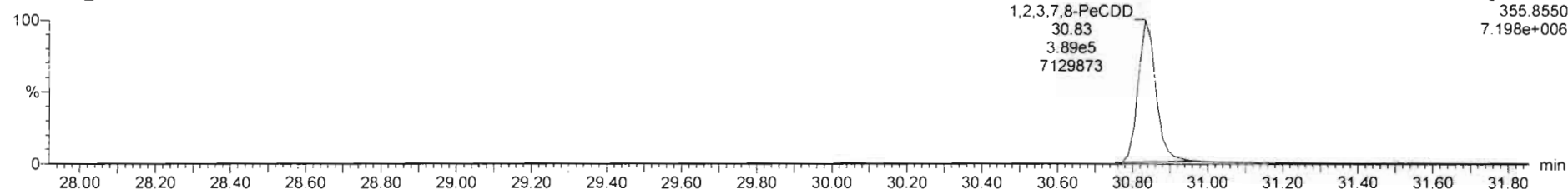
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**1,2,3,7,8-PeCDD**

200225R3\_2

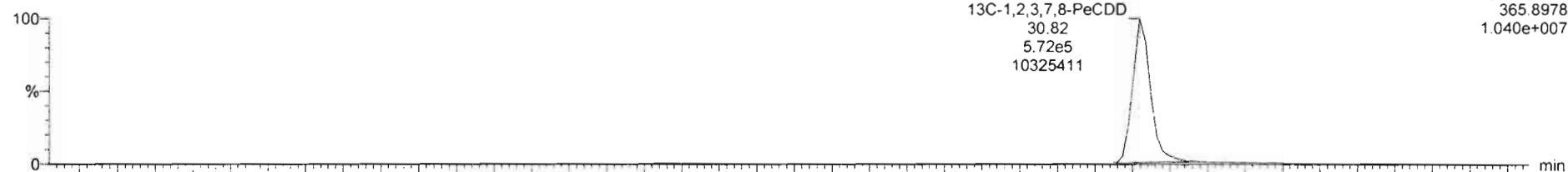


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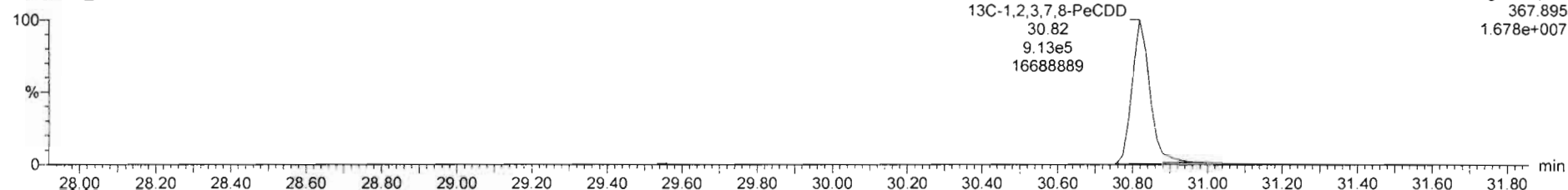


**13C-1,2,3,7,8-PeCDD**

200225R3\_2



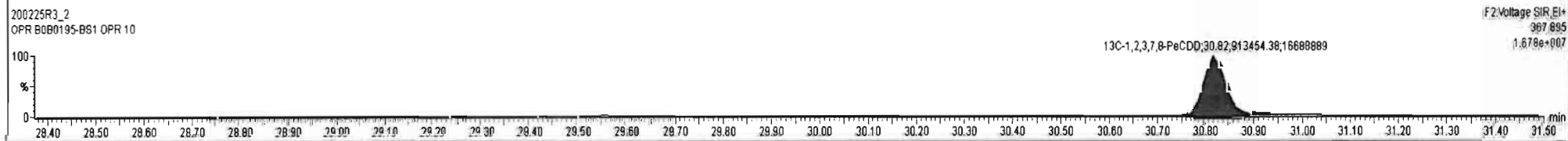
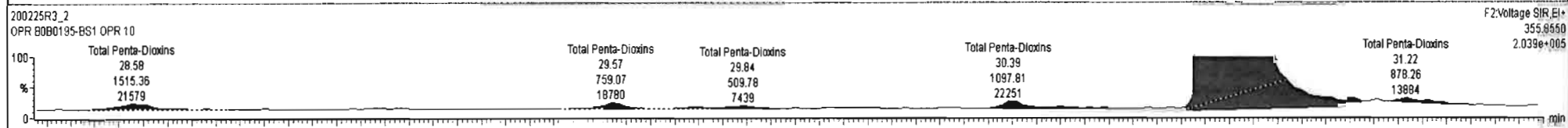
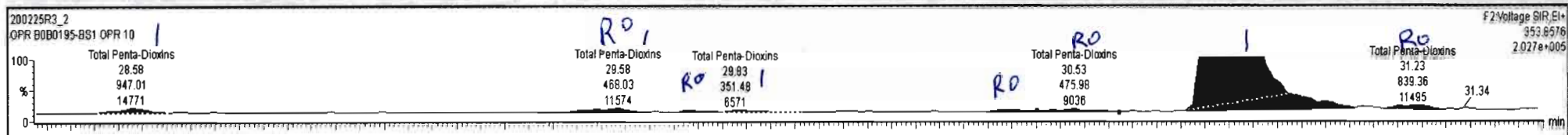
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200225R3\_2 - BOB0195-BS1 OPR 10 - QPR

#	Name	Resp	RA	n/y	RRF	wt/wt	Pred.RT	RT	Pred.R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9981	10.000	24.62		0.000		NO	19.20		0.0765	19.20
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	91.25		0.0962	91.98
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	298.0		0.248	296.7
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	99.41		0.396	99.41
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	21.45		0.0919	22.44
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.3178		0.0375	0.3178
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	195.0		0.145	195.9
46	Total Hexa-Furans				0.8962	10.000	33.56		0.000		NO	444.6		0.264	444.6
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9		0.434	226.9

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc
1	40 Total Penta-Dioxins	29.96	28.58	9.470e2	1.515e3	0.630	0.62	NO	0.34106	0.34108
2	40 Total Penta-Dioxins	29.96	29.54	4.191e2	3.254e2	0.630	1.29	YES	0.073469	0.00000
3	40 Total Penta-Dioxins	29.96	29.58	4.680e2	7.591e2	0.630	0.62	NO	0.16997	0.00000
4	40 Total Penta-Dioxins	29.96	29.74	2.315e2	2.628e2	0.630	0.88	YES	0.059336	0.00000
5	40 Total Penta-Dioxins	29.96	29.83	3.515e2	5.098e2	0.630	0.69	NO	0.11930	0.11930
6	40 Total Penta-Dioxins	29.96	30.39	4.376e2	1.098e3	0.630	0.40	YES	0.15683	0.00000
7	40 Total Penta-Dioxins	29.96	30.53	4.760e2	2.563e2	0.630	1.86	YES	0.057956	0.00000
8	2,3,7,8-PeCDD	30.84	30.83	2.511e5	4.043e5	0.630	0.62	NO	90.788	90.788
9	40 Total Penta-Dioxins	29.96	31.23	8.394e2	8.783e2	0.630	0.96	YES	0.19829	0.00000



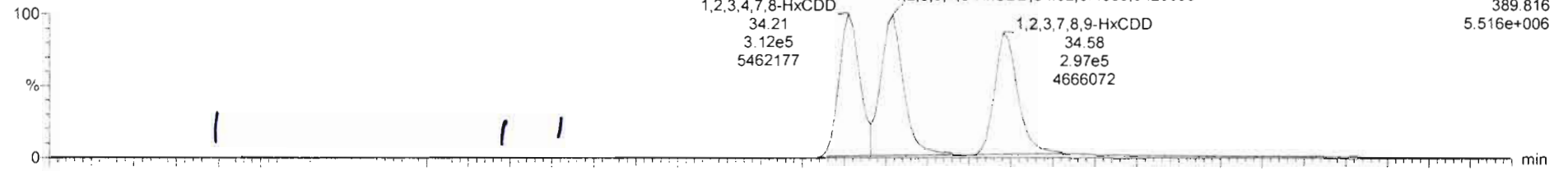
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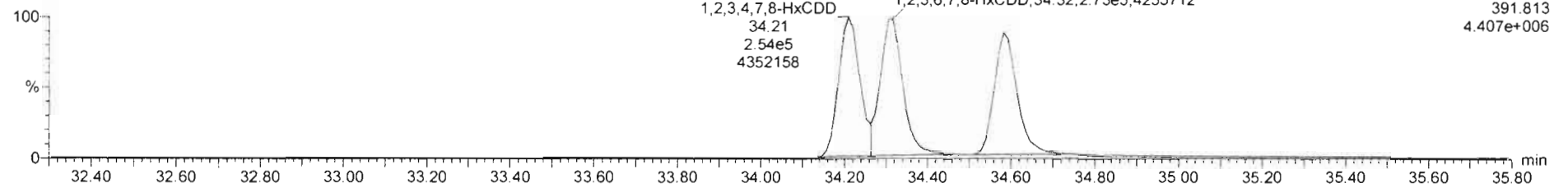
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1,2,3,4,7,8-HxCDD

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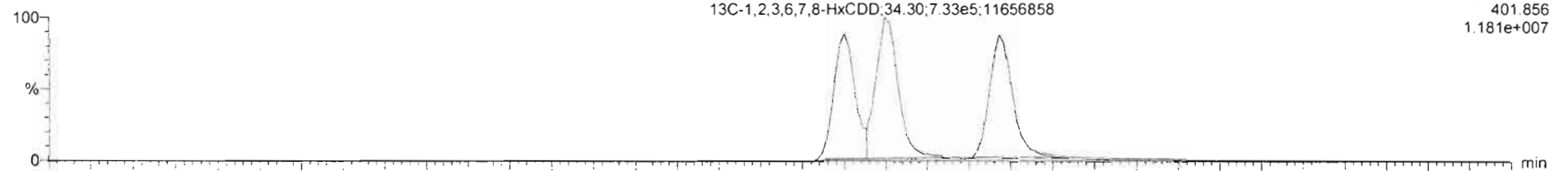


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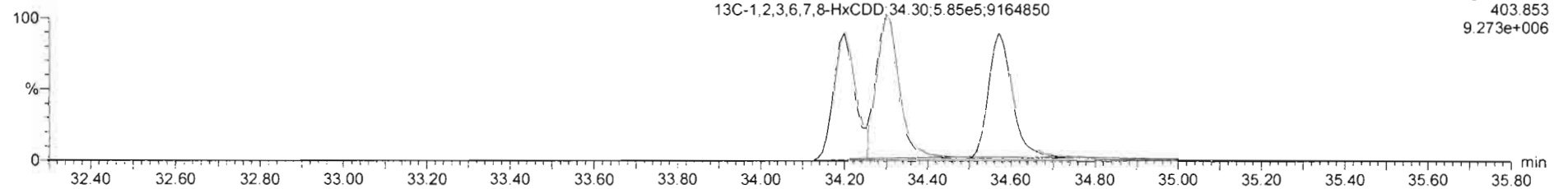


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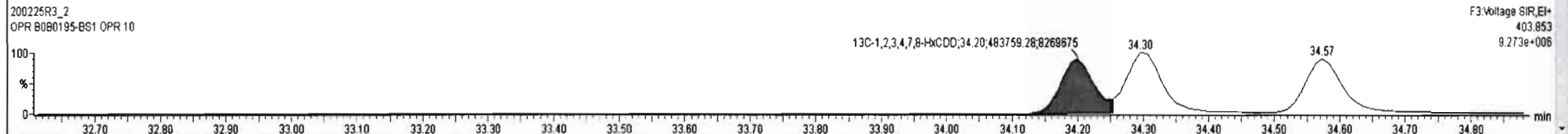
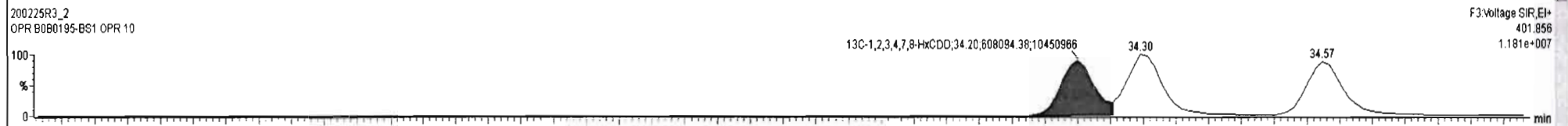
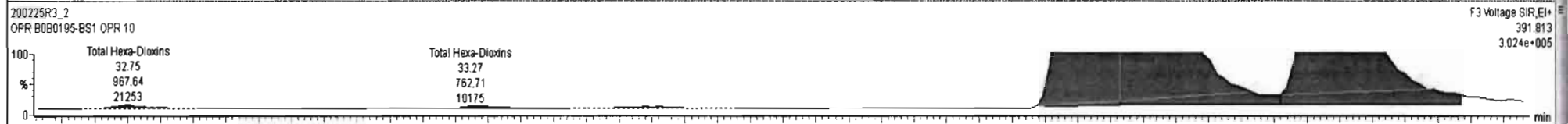
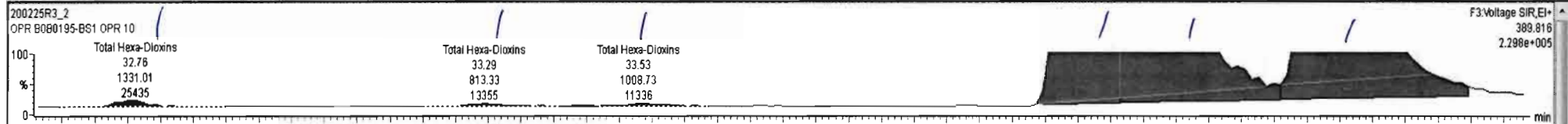


200225R3\_2



#	Name	Resp	RA	n/y	RRF	wVol	Pred.RT	RT	Pred.R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9861	10.000	24.62		0.000		NO	19.20		0.0765	19.20
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	91.25		0.0982	91.96
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	298.8		0.248	298.8
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	99.41		0.396	99.41
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	21.45		0.0819	22.44
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.3176		0.0375	0.3176
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	195.0		0.145	195.9
46	Total Hexa-Furans				0.8962	10.000	33.56		0.000		NO	444.6		0.264	444.6
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9		0.434	226.9

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1	41 Total Hexa-Dioxins	33.63	32.76	1.331e3	9.678e2	1.240	1.36	NO	0.41681	0.41681
2	41 Total Hexa-Dioxins	33.63	33.29	8.133e2	7.627e2	1.240	1.07	NO	0.26578	0.26578
3	41 Total Hexa-Dioxins	33.63	33.53	1.009e3	7.581e2	1.240	1.33	NO	0.32038	0.32038
4	3 1,2,3,4,7,8-HxCDD	34.21	34.21	3.121e5	2.541e5	1.240	1.23	NO	96.848	96.848
5	4 1,2,3,6,7,8-HxCDD	34.30	34.32	3.434e5	2.728e5	1.240	1.26	NO	101.54	101.54
6	5 1,2,3,7,8,9-HxCDD	34.61	34.58	2.974e5	2.422e5	1.240	1.23	NO	99.368	99.368



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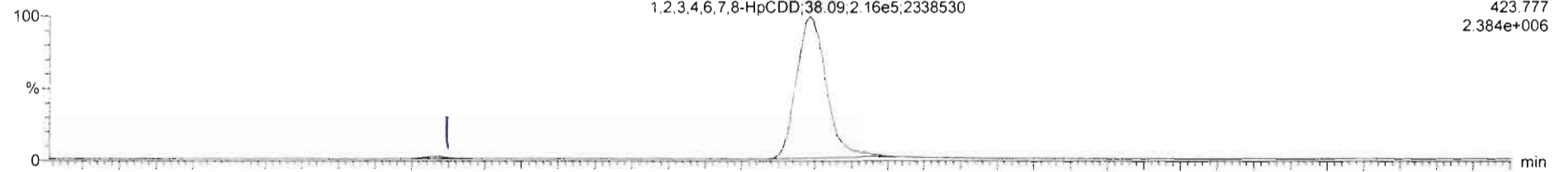
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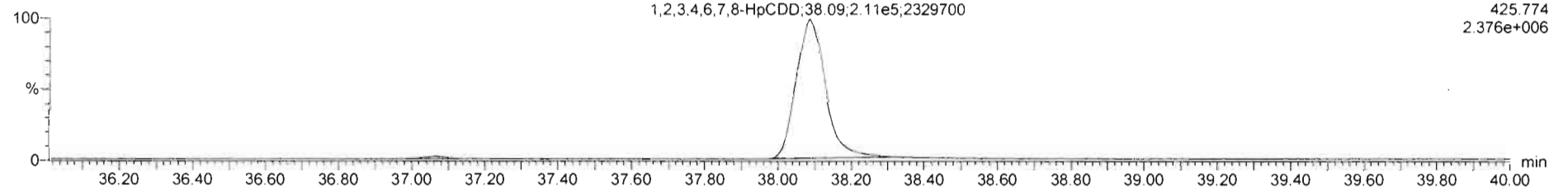
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200225R3\_2



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2.384e+006

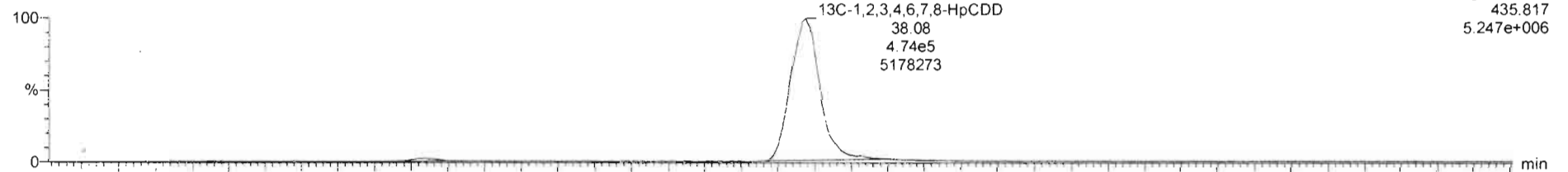
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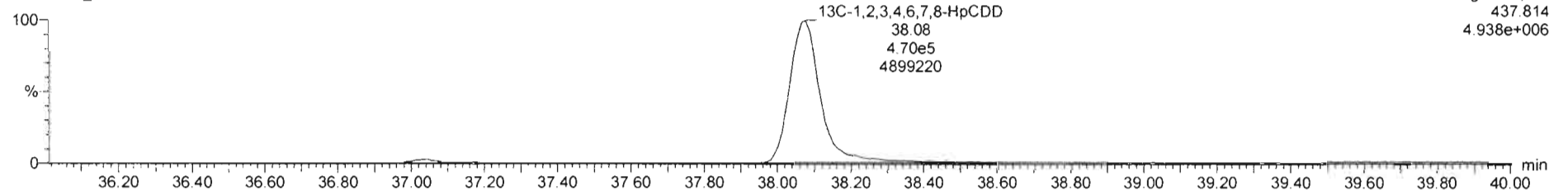
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200225R3\_2



F4: Voltage SIR, EI+  
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200225R3\_2

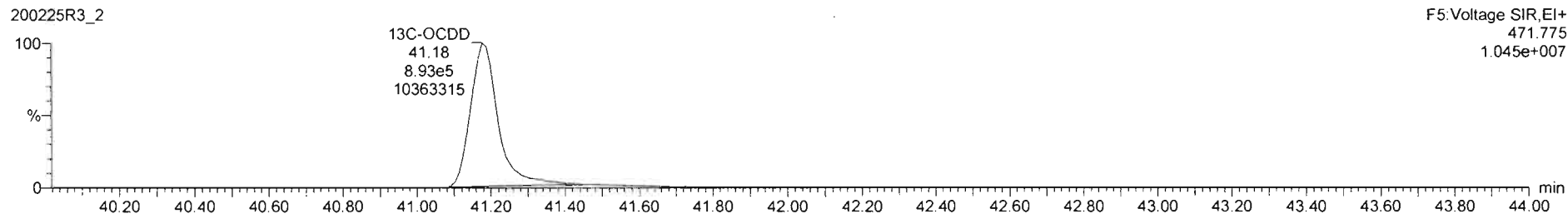
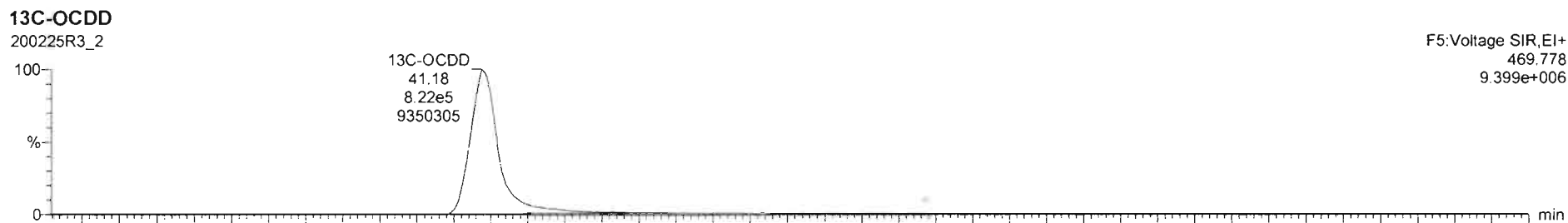
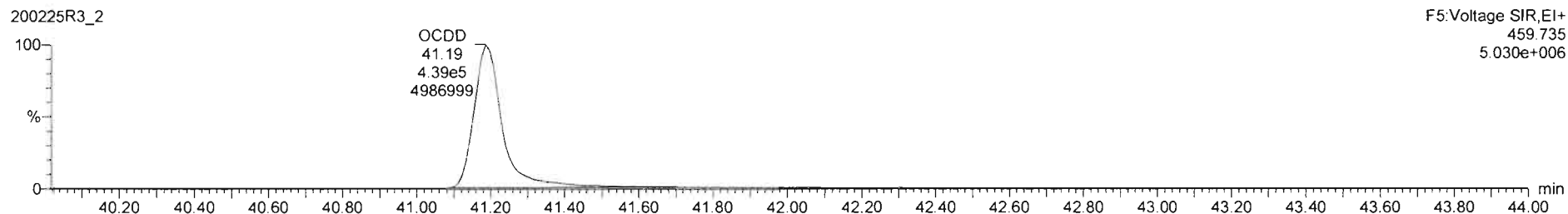
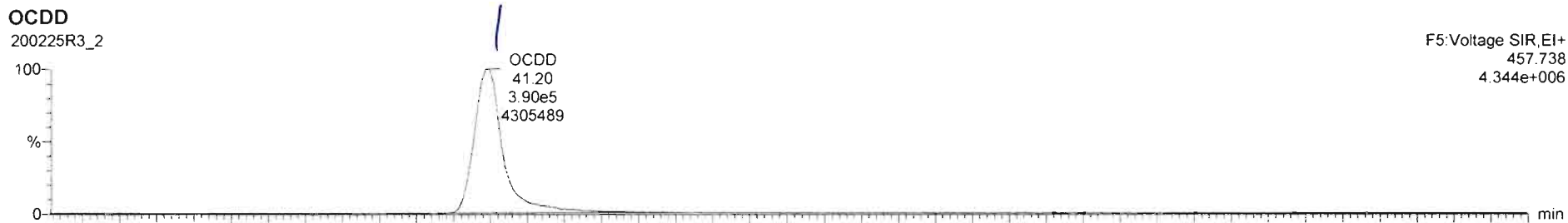


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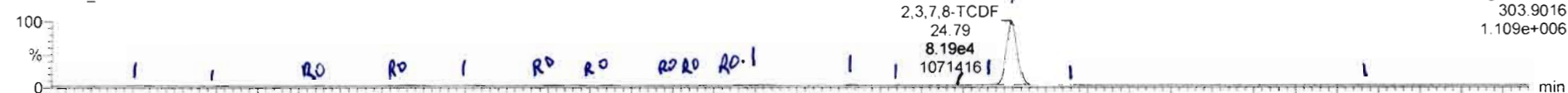
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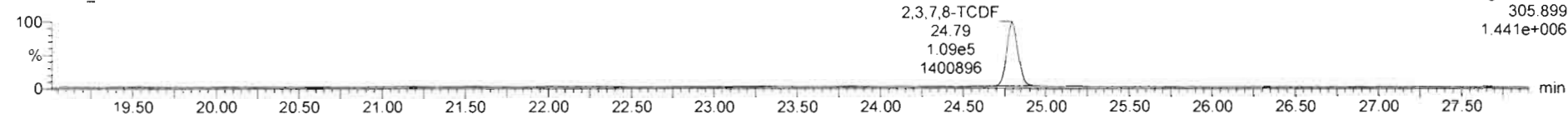
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### 2,3,7,8-TCDF

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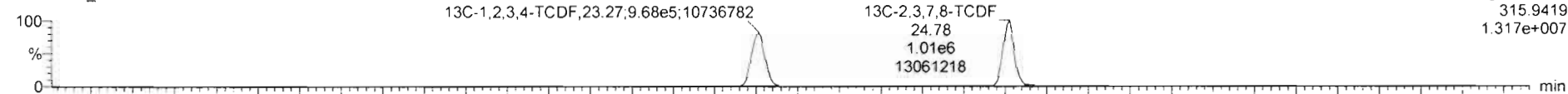


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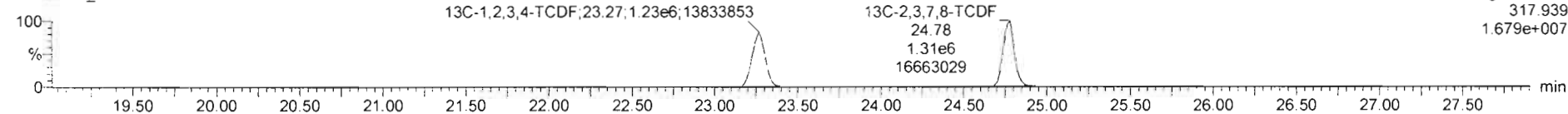


### 13C-2,3,7,8-TCDF

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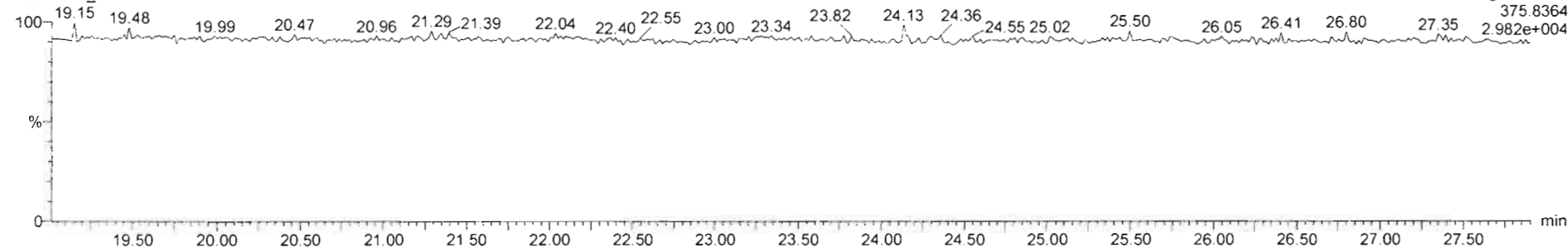


200225R3\_2



### DPE1

200225R3\_2

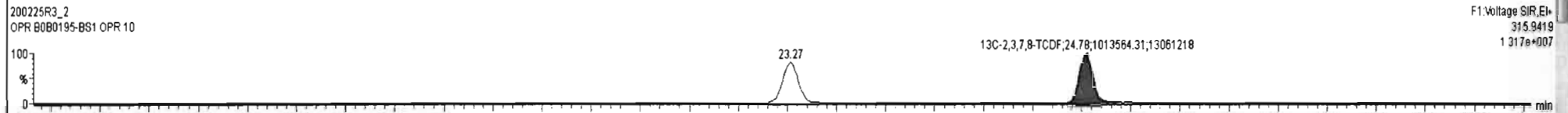
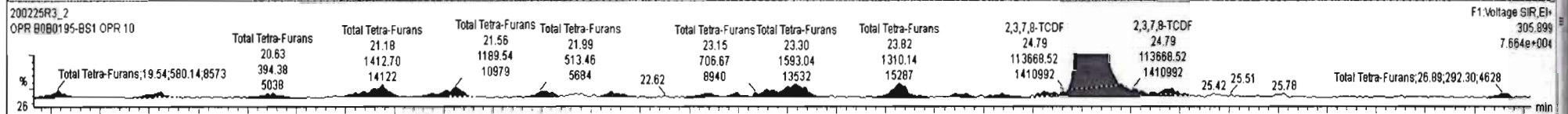
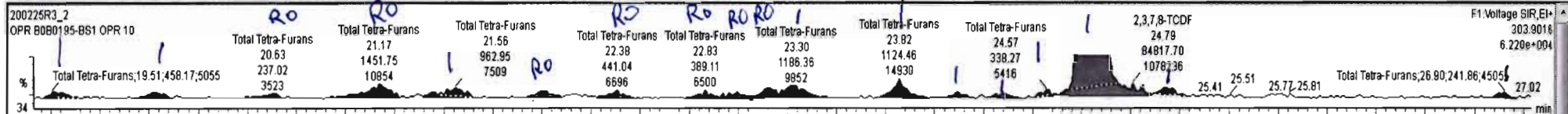




200225R3\_2 - BOB0195-BS1 OPR 11 OPR

#	Name	Resp	RA	nly	RFF	wtVol	Pred.RT	RT	Pred.R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9881	10.000	24.62		0.000		NO	19.20		0.0785	19.20
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	91.25		0.0982	91.96
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	308.8		0.248	308.8
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	99.41		0.396	99.41
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	22.47		0.0919	23.45
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.3176		0.0375	0.3176
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	185.0		0.145	195.9
46	Total Hexa-Furans				0.8982	10.000	33.56		0.000		NO	444.6		0.284	444.6
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9		0.434	226.9

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	nly	EMPC	Conc.
1	43 Total Tetra-Furans	23.61	19.51	4.582e2	5.801e2	0.770	0.79	NO	0.11160	0.11160
2	43 Total Tetra-Furans	23.61	20.03	3.140e2	3.944e2	0.770	0.80	NO	0.076138	0.076138
3	43 Total Tetra-Furans	23.61	20.63	2.370e2	3.944e2	0.770	0.60	YES	0.058559	0.00000
4	43 Total Tetra-Furans	23.61	21.17	1.452e3	1.413e3	0.770	1.03	YES	0.26875	0.00000
5	43 Total Tetra-Furans	23.61	21.56	9.630e2	1.190e3	0.770	0.81	NO	0.23135	0.00000
6	43 Total Tetra-Furans	23.61	22.01	4.708e2	5.135e2	0.770	0.92	YES	0.097681	0.00000
7	43 Total Tetra-Furans	23.61	22.38	4.410e2	3.816e2	0.770	1.22	YES	0.068785	0.00000
8	43 Total Tetra-Furans	23.61	22.83	3.891e2	4.070e2	0.770	0.96	YES	0.077422	0.00000
9	43 Total Tetra-Furans	23.61	23.00	3.897e2	2.653e2	0.770	1.47	YES	0.050469	0.00000
10	43 Total Tetra-Furans	23.61	23.15	6.363e2	7.067e2	0.770	0.90	YES	0.13444	0.00000
11	43 Total Tetra-Furans	23.61	23.30	1.188e3	1.593e3	0.770	0.74	NO	0.29873	0.29873
12	43 Total Tetra-Furans	23.61	23.82	1.124e3	1.310e3	0.770	0.86	NO	0.26167	0.26167
13	43 Total Tetra-Furans	23.61	24.12	2.104e2	3.052e2	0.770	0.69	NO	0.055422	0.055422
14	43 Total Tetra-Furans	23.61	24.36	2.844e2	3.269e2	0.770	0.87	NO	0.065711	0.065711
15	43 Total Tetra-Furans	23.61	24.57	3.383e2	4.179e2	0.770	0.81	NO	0.081275	0.081275
16	8 2,3,7,8-TCDF	24.80	24.79	8.482e4	1.137e5	0.770	0.75	NO	21.333	21.333
17	43 Total Tetra-Furans	23.61	25.21	5.034e2	6.605e2	0.770	0.76	NO	0.12509	0.12509
18	43 Total Tetra-Furans	23.61	26.90	2.419e2	2.923e2	0.770	0.83	NO	0.057412	0.057412



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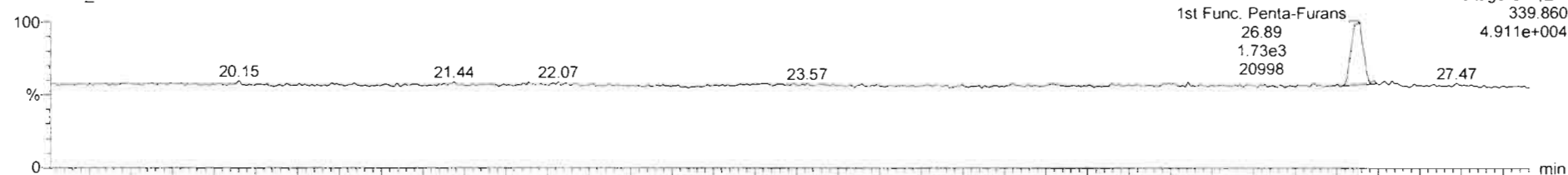
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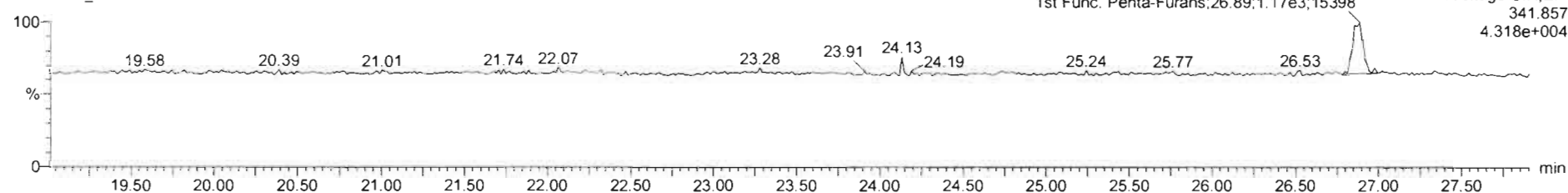
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1st Func. Penta-Furans

200225R3\_2

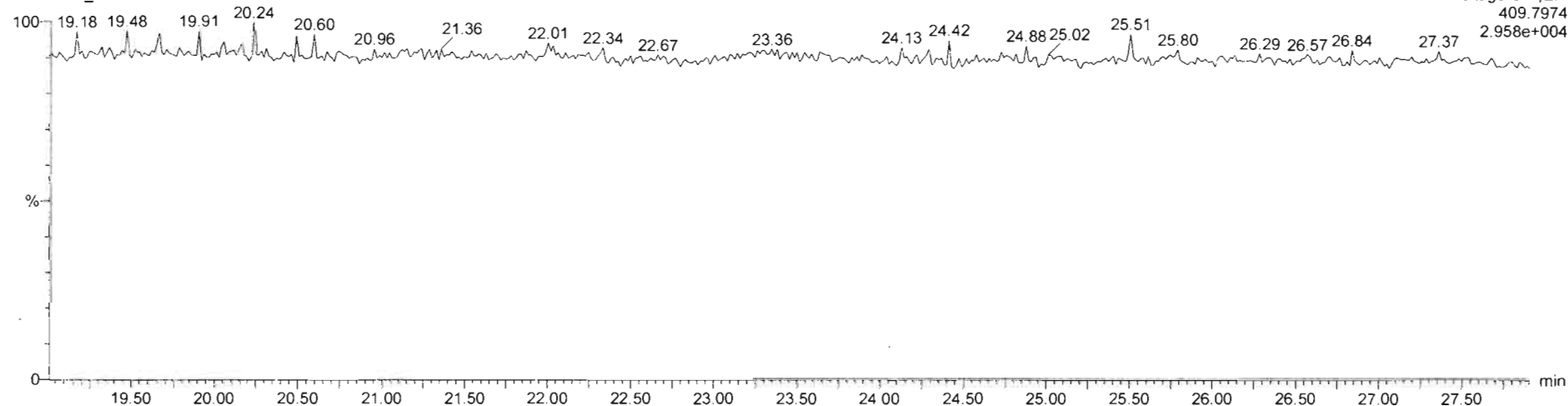


200225R3\_2



DPE6

200225R3\_2



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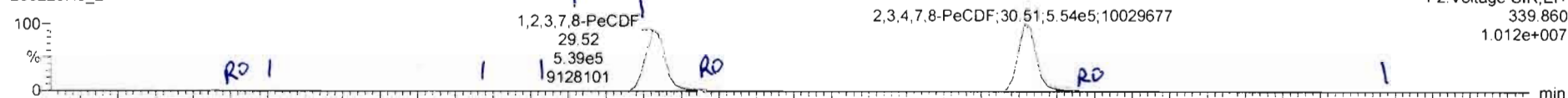
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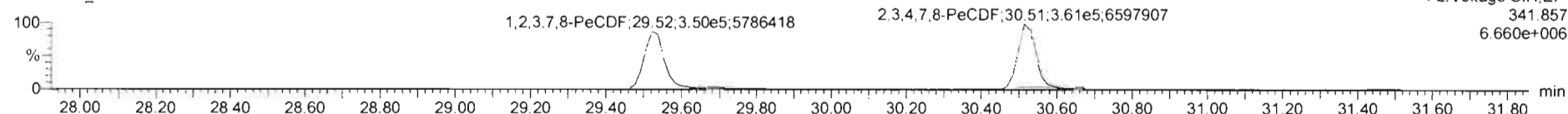
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1,2,3,7,8-PeCDF

200225R3\_2

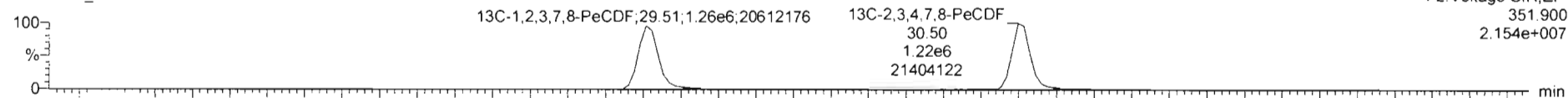


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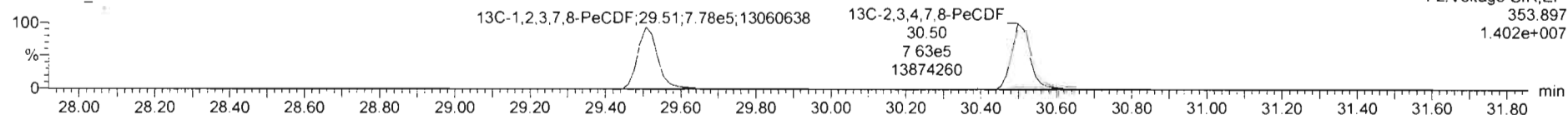


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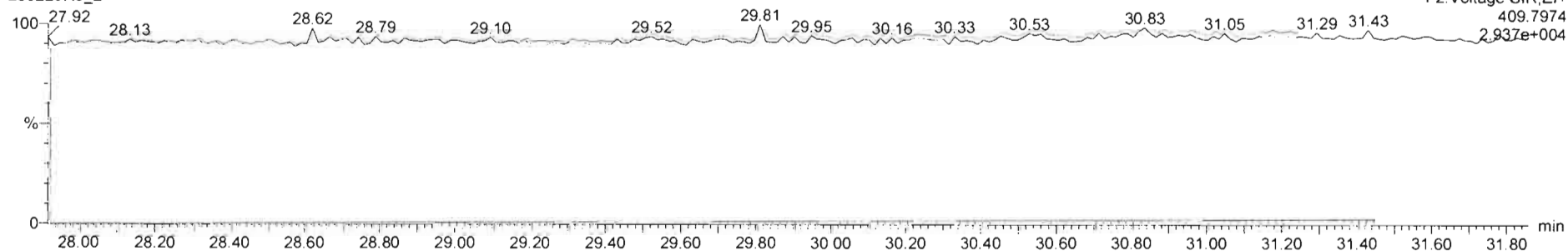


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DPE2

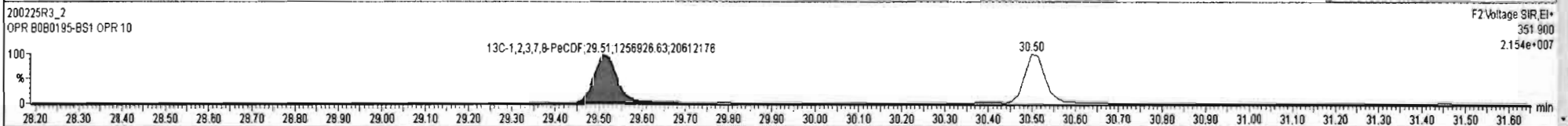
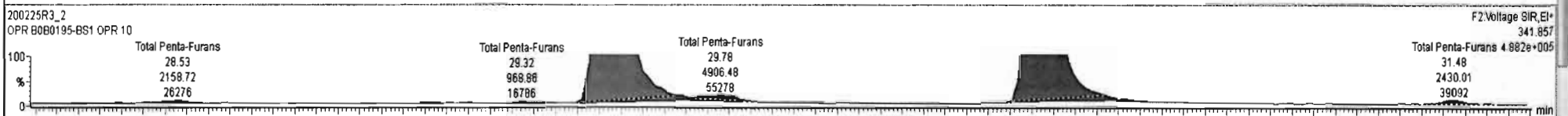
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200225R3\_2 - B0B0195-BS1 OPR 10 - OPR

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39	Total Tetra-Dioxins				0.9881	10.000	24.52		0.000		NO	19.20		0.0765	19.20
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	91.25		0.0982	91.96
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	308.8		0.248	308.8
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	99.41		0.396	99.41
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	22.47		0.0919	23.45
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.3176		0.0375	0.3176
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	200.5		0.145	201.8
46	Total Hexa-Furans				0.8982	10.000	33.58		0.000		NO	444.5		0.264	444.5
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9		0.434	226.9

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1	Total Penta-Furans	29.27	28.36	1.137e3	5.334e2	1.550	2.13	YES	0.14908	0.00000
2	Total Penta-Furans	29.27	28.52	3.758e3	2.159e3	1.550	1.74	NO	0.64833	0.64833
3	Total Penta-Furans	29.27	29.11	9.338e2	5.499e2	1.550	1.70	NO	0.16262	0.16262
4	Total Penta-Furans	29.27	29.20	7.964e2	5.995e2	1.550	1.33	NO	0.15302	0.15302
5	Total Penta-Furans	29.27	29.34	1.529e3	9.689e2	1.550	1.58	NO	0.27386	0.27386
6	1,2,3,7,8-PeCDF	29.53	29.52	5.576e5	3.580e5	1.550	1.56	NO	99.164	99.164
7	Total Penta-Furans	29.27	29.80	6.049e3	4.906e3	1.550	1.23	YES	1.0909	0.00000
8	1,2,3,4,7,8-PeCDF	30.53	30.51	5.715e5	3.683e5	1.550	1.55	NO	99.436	99.436
9	Total Penta-Furans	29.27	30.85	2.818e2	2.998e2	1.550	0.94	YES	0.050823	0.00000
10	Total Penta-Furans	29.27	31.48	3.390e3	2.430e3	1.550	1.40	NO	0.63804	0.63804



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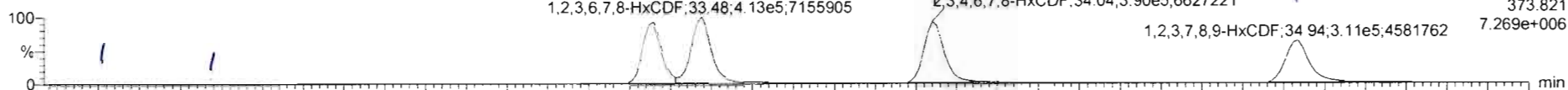
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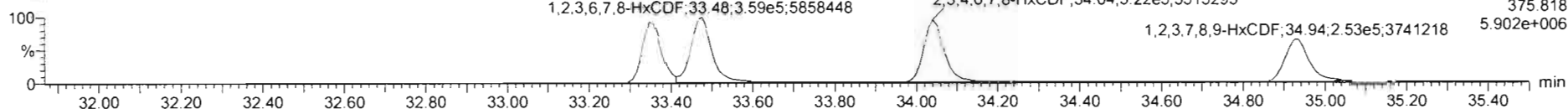
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200225R3\_2

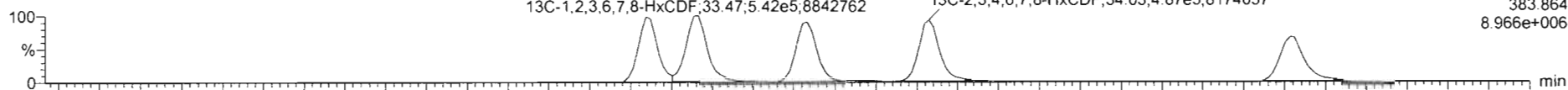


200225R3\_2

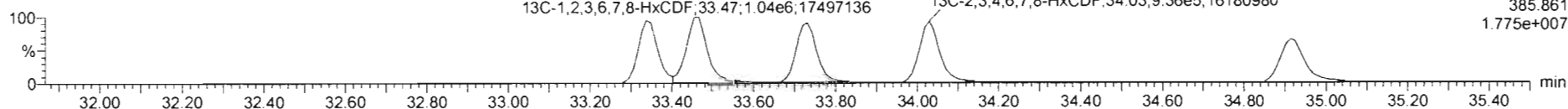


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200225R3\_2

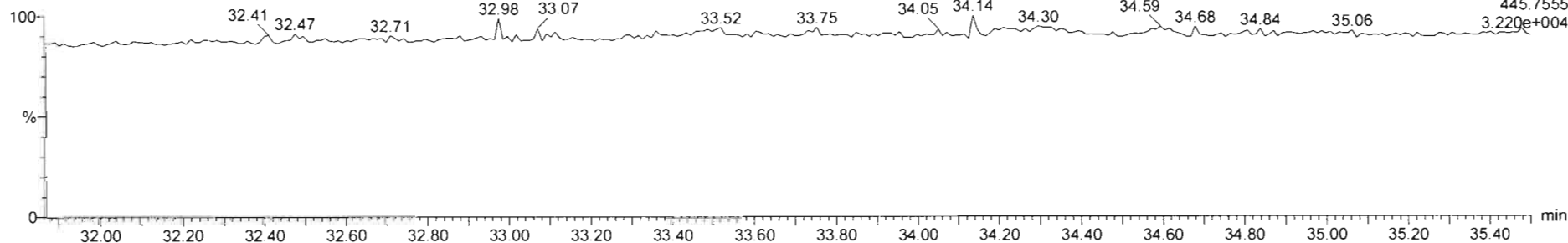


200225R3\_2



DPE3

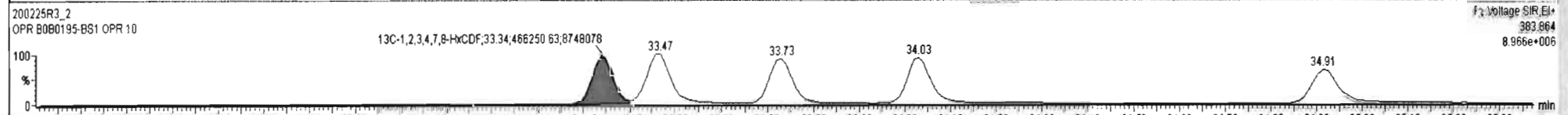
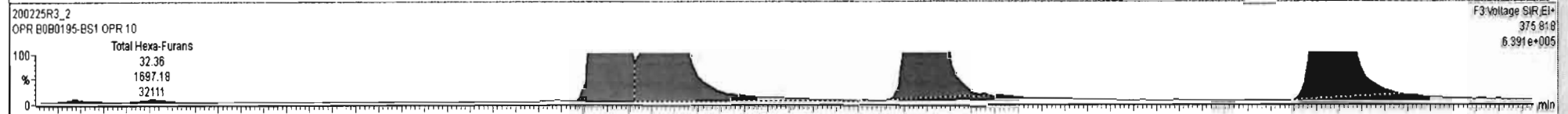
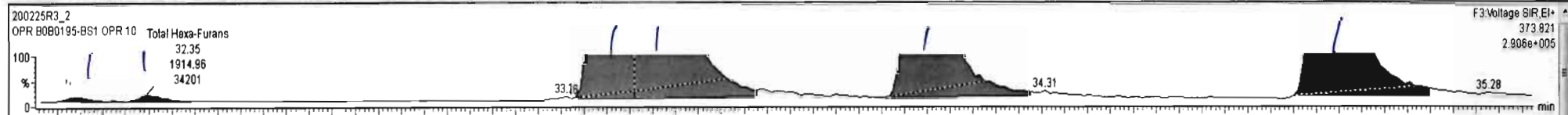
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200225R3\_2 - B0B0195-BS1 OPR 10 - OPR

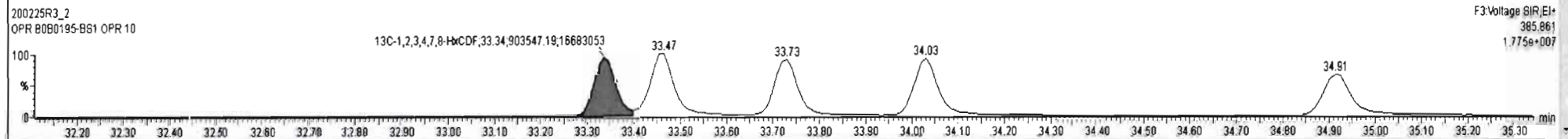
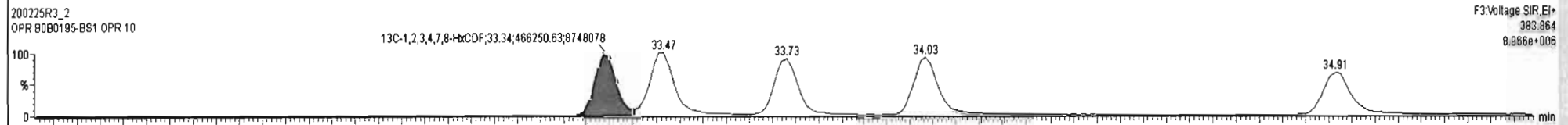
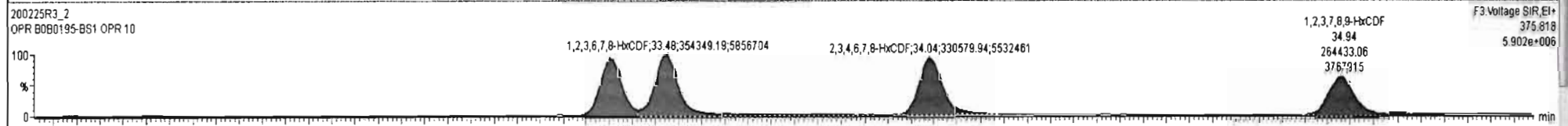
#	Name	Resp	RA	n/y	RF	wtAvd	Pred.RT	RT	Pred.R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9881	10.000	24.62		0.000		NO	19.20		0.0765	19.20
40	Total Penta-Dioxins				0.9723	10.000	29.96		0.000		NO	91.25		0.0982	91.96
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	308.8		0.248	308.8
42	Total Hepta-Dioxins				0.9231	10.000	37.84		0.000		NO	99.41		0.396	99.41
43	Total Tetra-Furans				0.9020	10.000	23.61		0.000		NO	22.47		0.0919	23.45
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.3175		0.0375	0.3175
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	200.5		0.145	201.8
46	Total Hexa-Furans				0.8982	10.000	33.56		0.000		NO	454.4		0.284	454.4
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9		0.434	226.9

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1	46 Total Hexa-Furans	33.56	32.19	1.575e3	1.382e3	1.240	1.14	NO	0.46931	0.46931
2	46 Total Hexa-Furans	33.56	32.35	1.915e3	1.697e3	1.240	1.13	NO	0.57320	0.57320
3	11 1,2,3,4,7,8-HxCDF	33.34	33.36	3.579e5	2.951e5	1.240	1.21	NO	110.56	110.56
4	12 1,2,3,6,7,8-HxCDF	33.48	33.48	4.314e5	3.543e5	1.240	1.22	NO	118.17	118.17
5	13 2,3,4,6,7,8-HxCDF	34.06	34.04	4.029e5	3.306e5	1.240	1.22	NO	114.78	114.78
6	14 1,2,3,7,8-HxCDF	34.81	34.94	3.193e5	2.644e5	1.240	1.21	NO	109.81	109.81



#	Name	Resp	RA	n/y	R/F	wt/Vol	Pred RT	RT	Pred R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
41	Total Hexa-Dioxins				0.9211	10.000	33.53		0.000		NO	308.8		0.248	308.8
42	Total Hepta-Dioxins				0.9231	10.000	37.54		0.000		NO	99.41		0.396	99.41
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	22.47		0.0919	23.45
44	1st Func. Penta-Furans				0.9074	10.000	27.09		0.000		NO	0.3176		0.0375	0.3176
45	Total Penta-Furans				0.9074	10.000	29.27		0.000		NO	200.5		0.145	201.8
46	Total Hexa-Furans				0.8962	10.000	33.56		0.000		NO	454.4		0.264	454.4
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9		0.434	226.9
48	PFK1														
49	PFK2														

#	Name	Pred RT	RT	wt Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1	46 Total Hexa-Furans	33.56	32.19	1.575e3	1.382e3	1.240	1.14	NO	0.46931	0.46931
2	46 Total Hexa-Furans	33.56	32.35	1.915e3	1.687e3	1.240	1.13	NO	0.57320	0.57320
3	11 1,2,3,4,7,8-HxCDF	33.34	33.36	3.579e5	2.951e5	1.240	1.21	NO	110.56	110.56
4	12 1,2,3,6,7,8-HxCDF	33.48	33.48	4.314e5	3.543e5	1.240	1.22	NO	118.17	118.17
5	13 3,4,6,7,8-HxCDF	34.06	34.04	4.029e5	3.306e5	1.240	1.22	NO	114.78	114.78
6	14 1,2,3,7,8,9-HxCDF	34.91	34.94	3.193e5	2.544e5	1.240	1.21	NO	109.81	109.81



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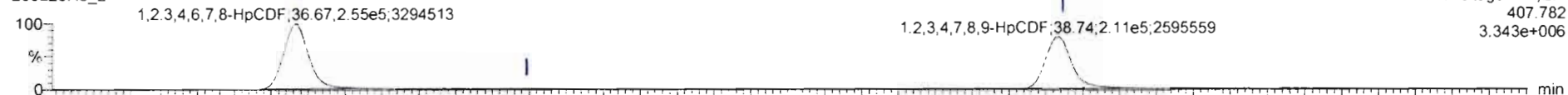
Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:39:24 Pacific Standard Time

Name: 200225R3\_2, Date: 25-Feb-2020, Time: 13:54:46, ID: B0B0195-BS1 OPR 10, Description: OPR

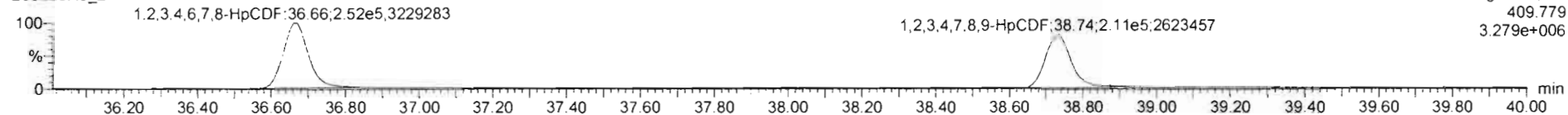
1,2,3,4,6,7,8-HpCDF

200225R3\_2



F4: Voltage SIR, EI+  
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3.343e+006

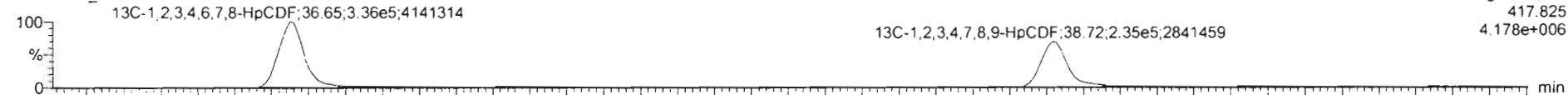
200225R3\_2



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3.279e+006

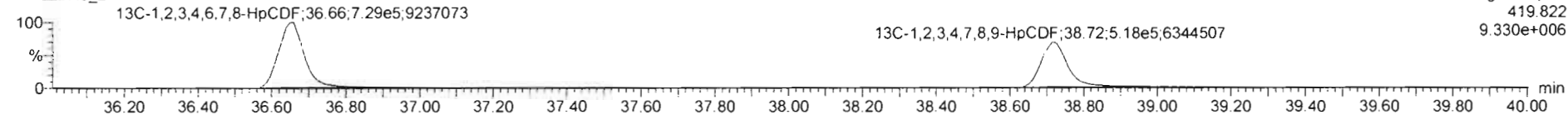
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200225R3\_2



F4: Voltage SIR, EI+  
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4.178e+006

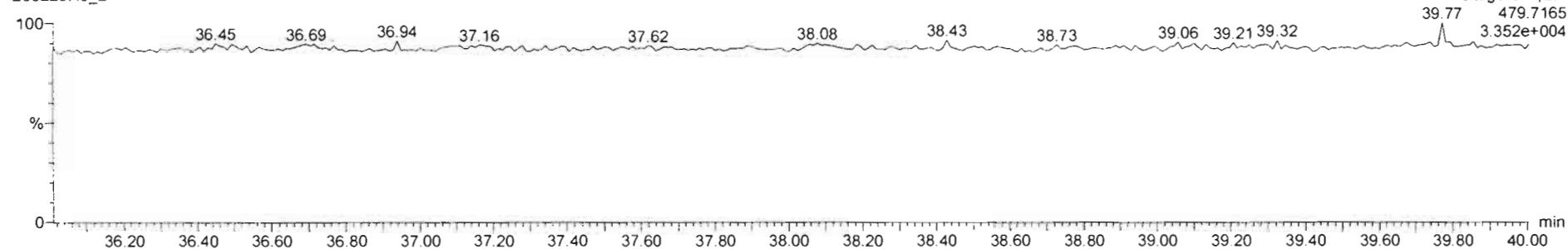
200225R3\_2



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9.330e+006

DPE4

200225R3\_2

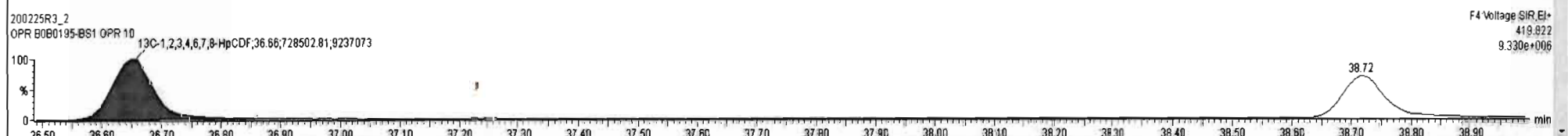
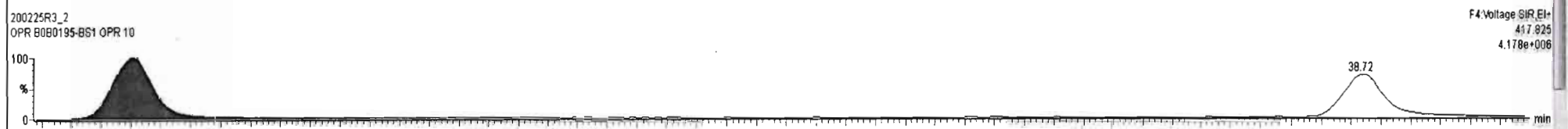
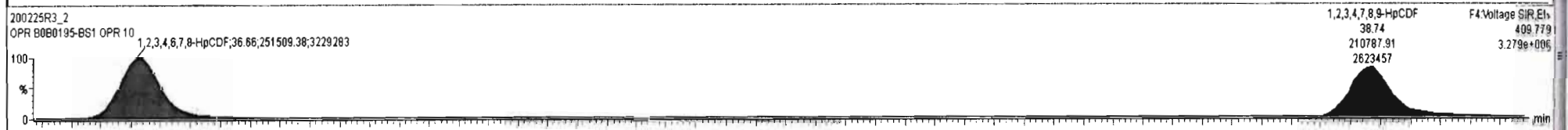
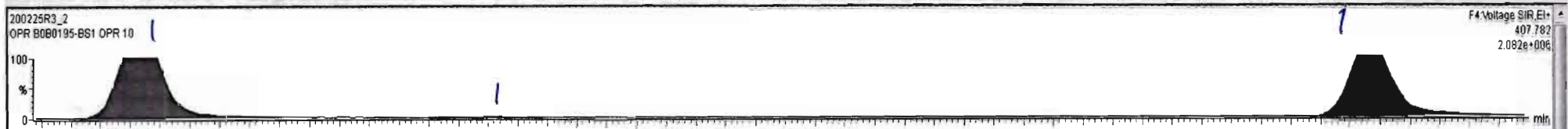


F4: Voltage SIR, EI+  
39.77 479.7165  
3.352e+004



#	Name	Resp	RA	n/y	RPF	w/wcl	Pred.RT	RT	Pred.R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
41	Total Hexa-Dioxins				0.9211	10.000	33.63		0.000		NO	308.8		0.248	308.8
42	Total Hepta-Dioxins				0.9231	10.000	37.64		0.000		NO	98.41		0.396	98.41
43	Total Tetra-Furans				0.8020	10.000	23.61		0.000		NO	22.47		0.0919	23.45
44	1st Func. Penta-Furans				0.8074	10.000	27.09		0.000		NO	0.3176		0.0375	0.3176
45	Total Penta-Furans				0.8074	10.000	29.27		0.000		NO	200.5		0.145	201.8
46	Total Hexa-Furans				0.8962	10.000	33.56		0.000		NO	454.4		0.264	454.4
47	Total Hepta-Furans				0.8511	10.000	37.83		0.000		NO	226.9		0.434	226.9
48	PFK1														
49	PFK2														

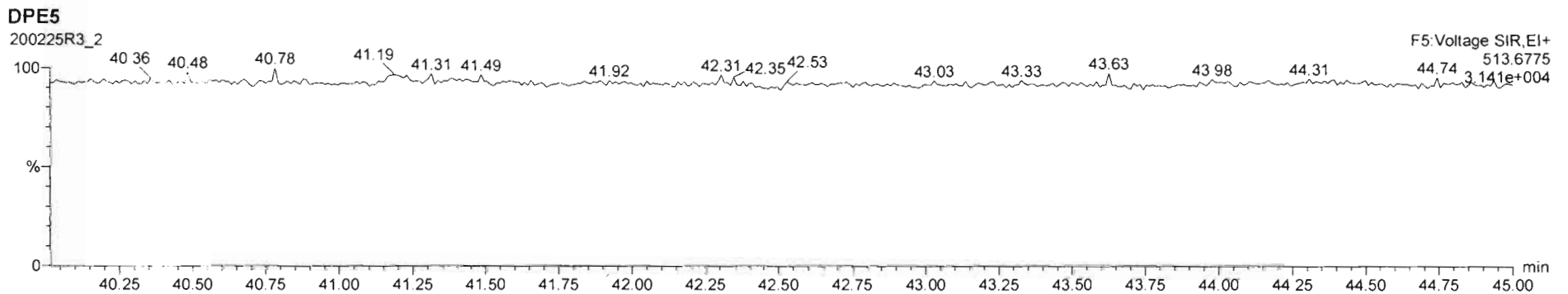
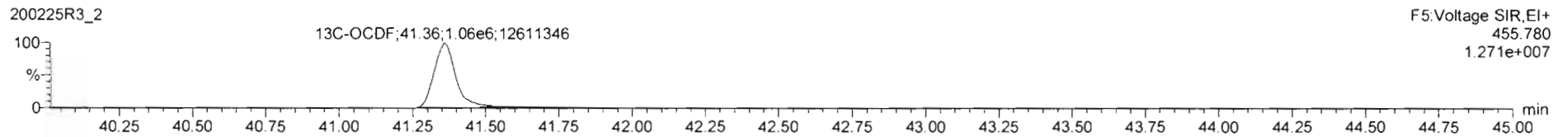
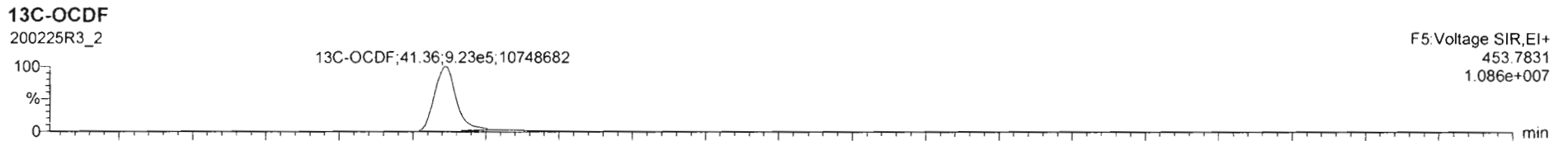
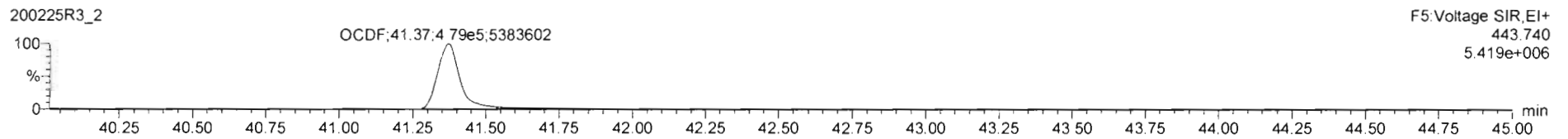
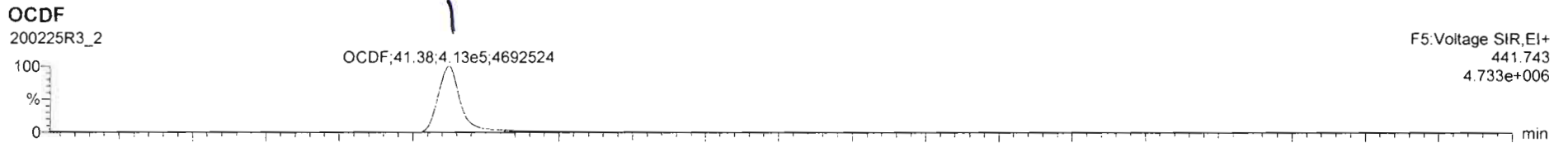
#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1	1,2,3,4,6,7,8-HpCDF	36.69	36.67	2.545e5	2.515e5	1.040	1.01	NO	111.74	111.74
2	Total Hepta-Furans	37.83	37.25	1.335e3	1.487e3	1.040	0.90	NO	0.72996	0.72996
3	1,2,3,4,7,8,9-HpCDF	38.72	38.74	2.113e5	2.106e5	1.040	1.00	NO	114.38	114.38



Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:39:24 Pacific Standard Time

Name: 200225R3\_2, Date: 25-Feb-2020, Time: 13:54:46, ID: B0B0195-BS1 OPR 10, Description: OPR

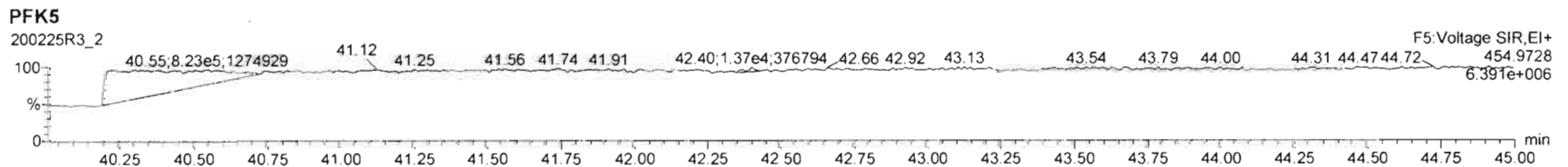
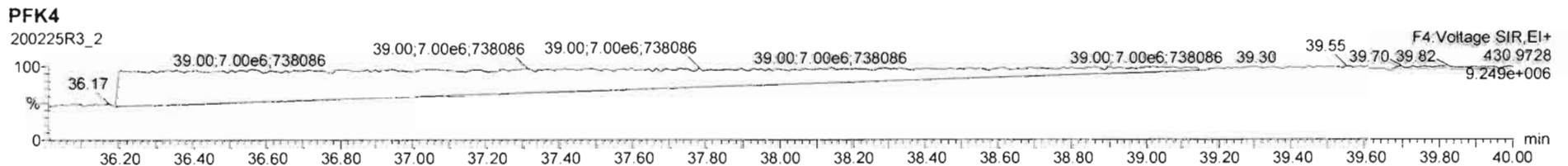
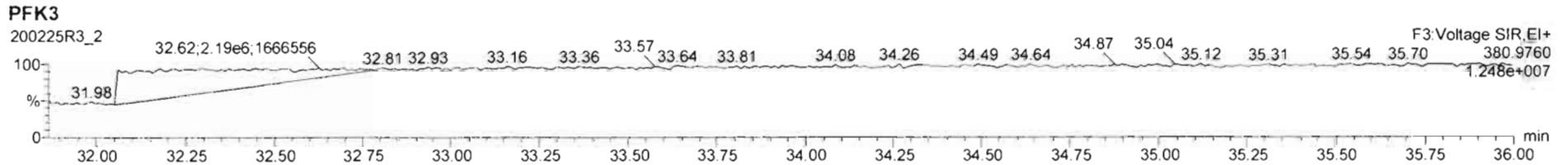
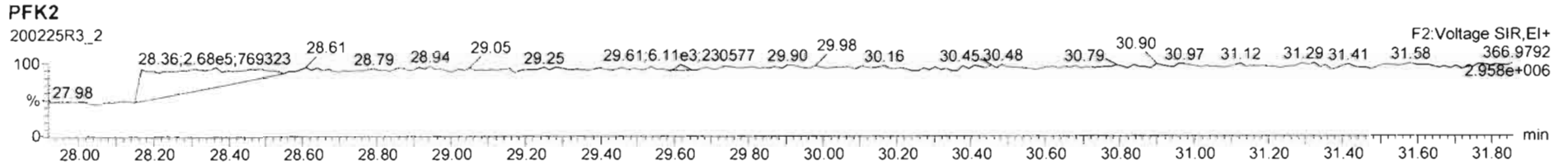
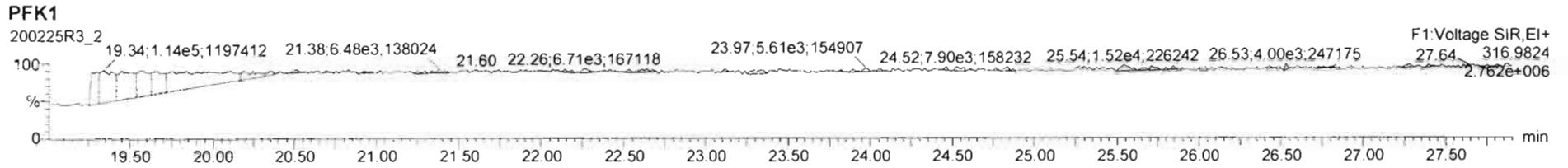


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Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:39:24 Pacific Standard Time

Name: 200225R3\_2, Date: 25-Feb-2020, Time: 13:54:46, ID: B0B0195-BS1 OPR 10, Description: OPR



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-7.qld

Last Altered: Wednesday, February 26, 2020 10:32:24 Pacific Standard Time

Printed: Wednesday, February 26, 2020 10:33:05 Pacific Standard Time

GEB 02/26/2020

C7 02/27/2020

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

#	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	10.052	25.751		1.001				0.0504	
2	2 1,2,3,7,8-PeCDD			NO	0.972	10.052	30.842		1.001				0.0548	
3	3 1,2,3,4,7,8-HxCDD			NO	1.07	10.052	34.210		1.000				0.0759	
4	4 1,2,3,6,7,8-HxCDD			NO	0.921	10.052	34.296		1.000				0.0756	
5	5 1,2,3,7,8,9-HxCDD	8.07e2	1.34	NO	0.918	10.052	34.608	34.57	1.001	1.000	0.11478		0.0855	0.115
6	6 1,2,3,4,6,7,8-HpCDD	4.94e3	1.12	NO	0.923	10.052	38.088	38.10	1.000	1.001	0.83229		0.127	0.832
7	7 OCDD	4.83e4	0.89	NO	0.975	10.052	41.176	41.20	1.000	1.001	7.9402		0.111	7.94
8	8 2,3,7,8-TCDF			NO	0.802	10.052	24.802		1.001				0.0392	
9	9 1,2,3,7,8-PeCDF			NO	0.907	10.052	29.528		1.001				0.0341	
10	10 2,3,4,7,8-PeCDF			NO	0.952	10.052	30.530		1.001				0.0327	
11	11 1,2,3,4,7,8-HxCDF	4.66e2	1.02	YES	0.862	10.052	33.338	33.36	1.000	1.001	0.063899		0.0235	0.0584
12	12 1,2,3,6,7,8-HxCDF			NO	0.841	10.052	33.465		1.000				0.0409	
13	13 2,3,4,6,7,8-HxCDF			NO	0.898	10.052	34.064		1.001				0.0442	
14	14 1,2,3,7,8,9-HxCDF	3.49e2	1.06	NO	0.858	10.052	34.914	34.91	1.000	1.000	0.053903		0.0335	0.0539
15	15 1,2,3,4,6,7,8-HpCDF	8.78e2	1.21	YES	0.851	10.052	36.687	36.69	1.001	1.001	0.15579		0.0475	0.144
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.980	10.052	38.716		1.000				0.104	
17	17 OCDF	8.18e2	0.91	NO	0.806	10.052	41.357	41.39	1.000	1.001	0.14511		0.0773	0.145
18	18 13C-2,3,7,8-TCDD	2.23e6	0.78	NO	1.20	10.052	25.691	25.72	1.026	1.027	193.30	97.2	0.122	
19	19 13C-1,2,3,7,8-PeCDD	1.81e6	0.62	NO	0.967	10.052	30.432	30.82	1.215	1.230	193.75	97.4	0.197	
20	20 13C-1,2,3,4,7,8-HxCDD	1.32e6	1.27	NO	0.874	10.052	34.193	34.20	1.014	1.014	170.40	85.6	0.233	
21	21 13C-1,2,3,6,7,8-HxCDD	1.65e6	1.24	NO	1.05	10.052	34.294	34.30	1.017	1.017	177.38	89.2	0.194	
22	22 13C-1,2,3,7,8,9-HxCDD	1.52e6	1.20	NO	0.974	10.052	34.598	34.57	1.026	1.025	175.81	88.4	0.209	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.28e6	1.04	NO	0.747	10.052	38.172	38.08	1.132	1.129	192.68	96.8	0.384	
24	24 13C-OCDD	2.48e6	0.85	NO	0.707	10.052	41.072	41.18	1.218	1.221	394.96	99.3	0.300	
25	25 13C-2,3,7,8-TCDF	2.81e6	0.77	NO	1.07	10.052	24.872	24.78	0.993	0.989	190.73	95.9	0.225	
26	26 13C-1,2,3,7,8-PeCDF	2.38e6	1.58	NO	1.00	10.052	29.455	29.51	1.176	1.178	172.14	86.5	0.327	
27	27 13C-2,3,4,7,8-PeCDF	2.29e6	1.59	NO	0.962	10.052	30.425	30.50	1.215	1.218	172.56	86.7	0.341	
28	28 13C-1,2,3,4,7,8-HxCDF	1.68e6	0.52	NO	1.05	10.052	33.316	33.34	0.988	0.989	180.02	90.5	0.350	
29	29 13C-1,2,3,6,7,8-HxCDF	1.91e6	0.51	NO	1.19	10.052	33.418	33.46	0.991	0.992	180.27	90.6	0.309	
30	30 13C-2,3,4,6,7,8-HxCDF	1.76e6	0.52	NO	1.07	10.052	34.028	34.03	1.009	1.009	186.06	93.5	0.345	
31	31 13C-1,2,3,7,8,9-HxCDF	1.50e6	0.51	NO	0.922	10.052	34.935	34.91	1.036	1.035	183.18	92.1	0.398	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-7.qld

Last Altered: Wednesday, February 26, 2020 10:32:24 Pacific Standard Time

Printed: Wednesday, February 26, 2020 10:33:05 Pacific Standard Time

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

#	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	1.32e6	0.44	NO	0.767	10.052	36.688	36.65	1.088	1.087	193.12	97.1	0.440	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.03e6	0.44	NO	0.552	10.052	38.712	38.72	1.148	1.148	210.24	106	0.611	
34	34 13C-OCDF	2.78e6	0.88	NO	0.789	10.052	41.308	41.36	1.225	1.226	396.42	99.6	0.345	
35	35 37Cl-2,3,7,8-TCDD	8.20e5			1.18	10.052	25.723	25.74	1.027	1.027	72.346	90.9	0.0235	
36	36 13C-1,2,3,4-TCDD	1.92e6	0.79	NO	1.00	10.052	25.110	25.05	1.000	1.000	198.97	100	0.146	
37	37 13C-1,2,3,4-TCDF	2.75e6	0.79	NO	1.00	10.052	23.370	23.28	1.000	1.000	198.97	100	0.240	
38	38 13C-1,2,3,4,6,9-HxCDF	1.77e6	0.51	NO	1.00	10.052	33.710	33.72	1.000	1.000	198.97	100	0.367	
39	39 Total Tetra-Dioxins				0.988	10.052	24.620		0.000		0.12639		0.0504	0.126
40	40 Total Penta-Dioxins				0.972	10.052	29.960		0.000		0.10332		0.0548	0.138
41	41 Total Hexa-Dioxins				0.921	10.052	33.635		0.000		1.1476		0.0826	1.15
42	42 Total Hepta-Dioxins				0.923	10.052	37.640		0.000		2.2451		0.127	2.25
43	43 Total Tetra-Furans				0.802	10.052	23.610		0.000				0.0172	
44	44 1st Func. Penta-Furans				0.907	10.052	27.090		0.000				0.0111	
45	45 Total Penta-Furans				0.907	10.052	29.275		0.000				0.0181	
46	46 Total Hexa-Furans				0.898	10.052	33.555		0.000		0.077763		0.0242	0.136
47	47 Total Hepta-Furans				0.851	10.052	37.835		0.000		0.00000		0.0539	0.144

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-7.qld

Last Altered: Wednesday, February 26, 2020 10:32:24 Pacific Standard Time

Printed: Wednesday, February 26, 2020 10:33:05 Pacific Standard Time

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

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	23.46	7.081e3	1.004e4	5.983e2	8.034e2	0.74	NO	1.402e3	0.12639	0.12639	0.0504

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.56	2.272e3	4.374e3	1.191e2	3.024e2	0.39	YES	0.000e0	0.00000	0.034938	0.0548
2	Total Penta-Dioxins	29.07	5.872e3	1.131e4	3.299e2	5.816e2	0.57	NO	9.115e2	0.10332	0.10332	0.0548

**Hexa-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.74	5.295e4	4.380e4	2.763e3	2.149e3	1.29	NO	4.912e3	0.70773	0.70773	0.0826
2	Total Hexa-Dioxins	33.55	1.906e4	1.588e4	1.271e3	9.850e2	1.29	NO	2.256e3	0.32509	0.32509	0.0826
3	1,2,3,7,8,9-HxCDD	34.57	1.051e4	5.908e3	4.615e2	3.455e2	1.34	NO	8.070e2	0.11478	0.11478	0.0855

**Hepta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	37.07	4.631e4	4.798e4	4.248e3	4.144e3	1.03	NO	8.393e3	1.4128	1.4128	0.127
2	1,2,3,4,6,7,8-HpCDD	38.10	2.966e4	2.362e4	2.613e3	2.331e3	1.12	NO	4.944e3	0.83229	0.83229	0.127

**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												

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-7.qld

Last Altered: Wednesday, February 26, 2020 10:32:24 Pacific Standard Time

Printed: Wednesday, February 26, 2020 10:33:05 Pacific Standard Time

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

**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	1,2,3,4,7,8-HxCDF	33.36	5.756e3	4.964e3	2.354e2	2.306e2	1.02	YES	4.659e2	0.00000	0.058401	0.0235
2	1,2,3,7,8,9-HxCDF	34.91	5.107e3	3.644e3	1.801e2	1.691e2	1.06	NO	3.492e2	0.053903	0.053903	0.0335
3	Total Hexa-Furans	34.95	7.033e3	3.229e3	1.031e2	8.149e1	1.27	NO	1.846e2	0.023860	0.023860	0.0242

**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	36.69	7.231e3	6.514e3	4.800e2	3.981e2	1.21	YES	8.781e2	0.00000	0.14410	0.0475

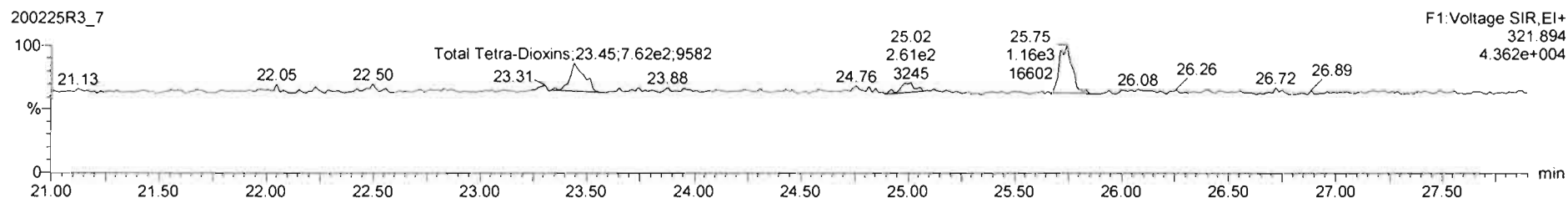
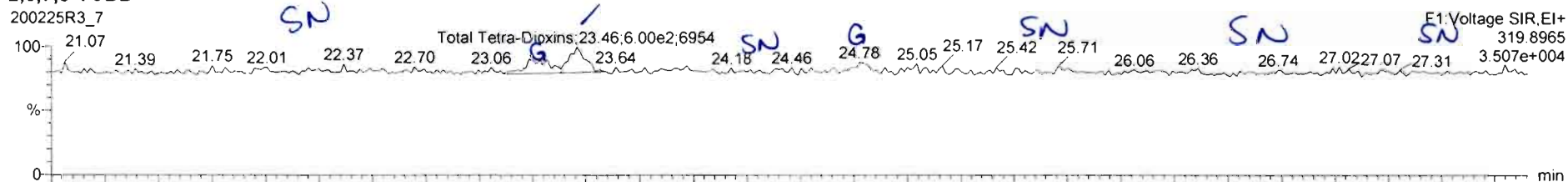
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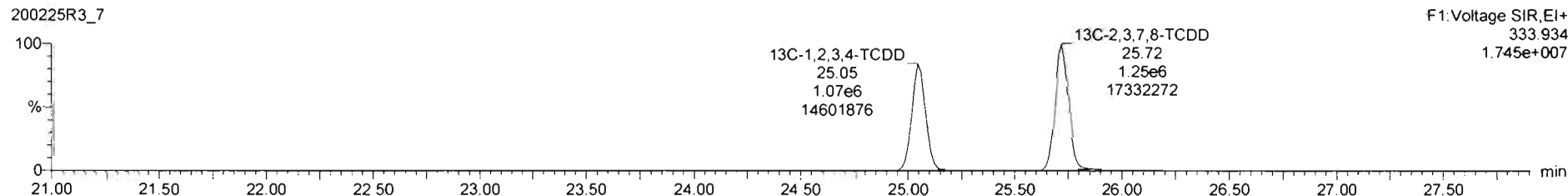
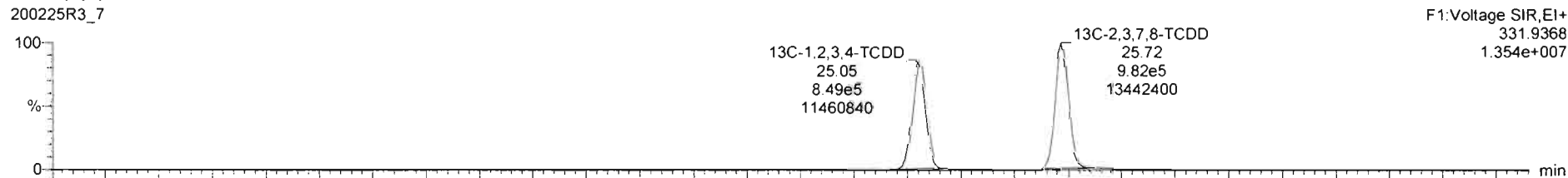
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Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

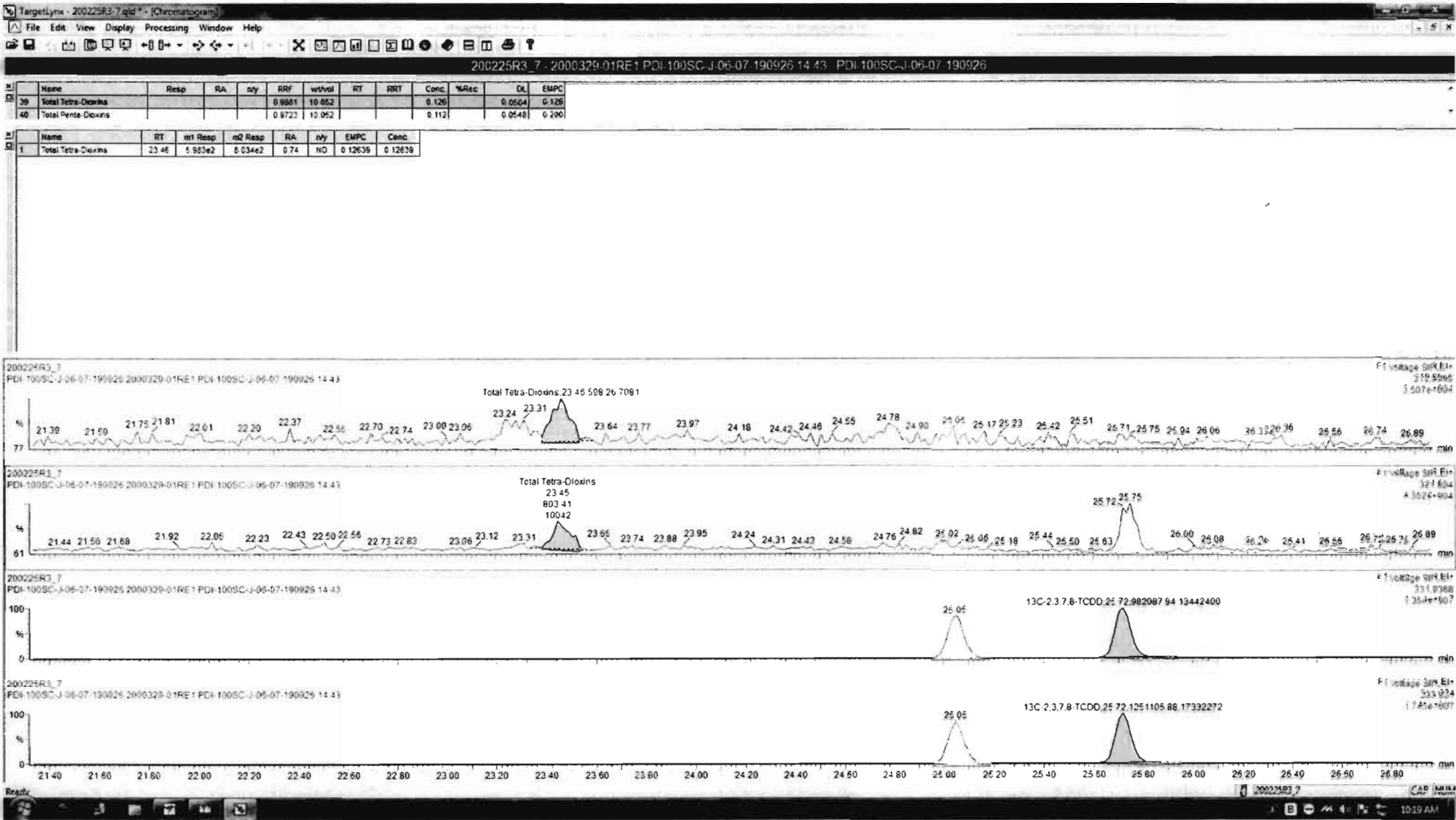
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13C-2,3,7,8-TCDD







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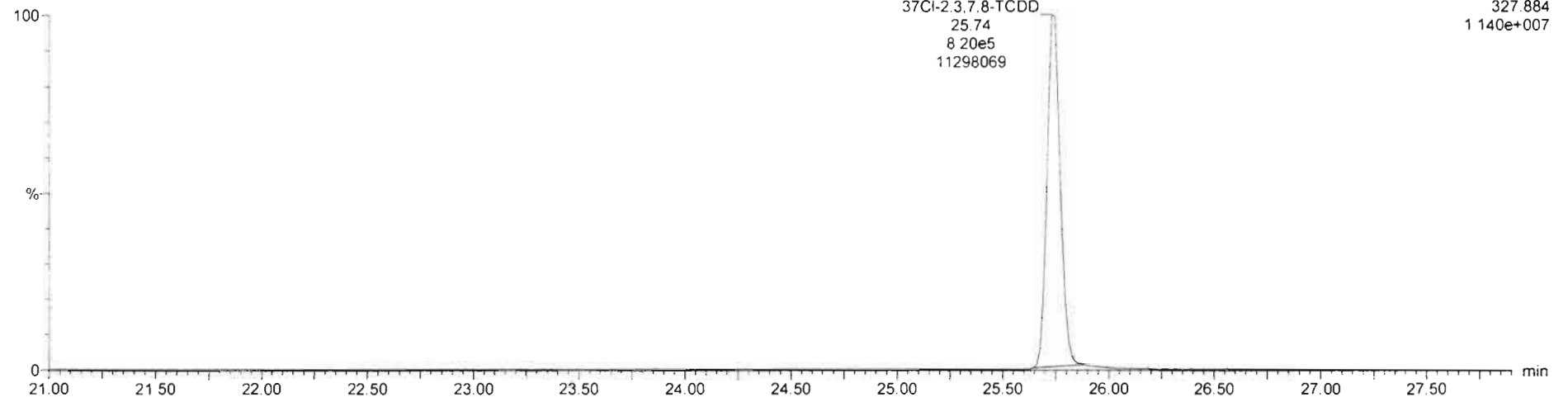
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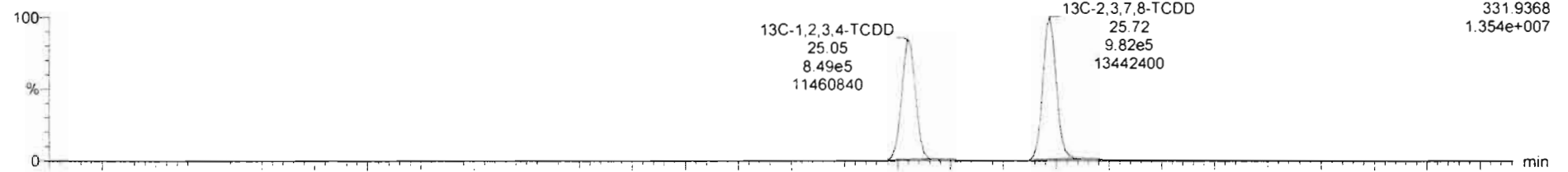
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200225R3\_7

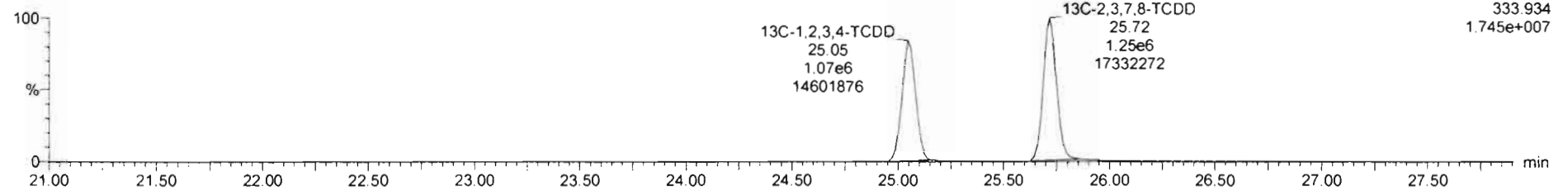


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200225R3\_7



200225R3\_7



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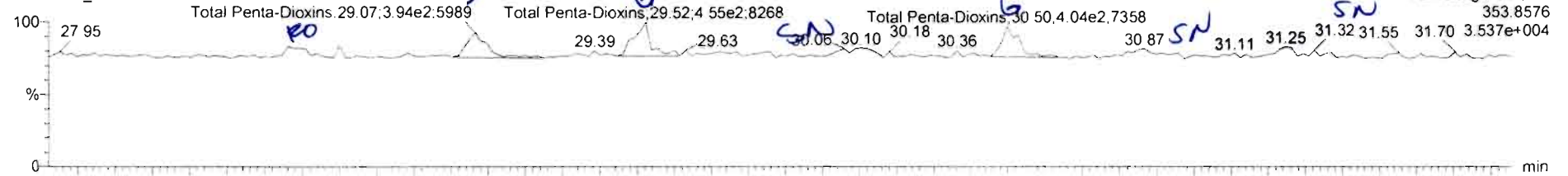
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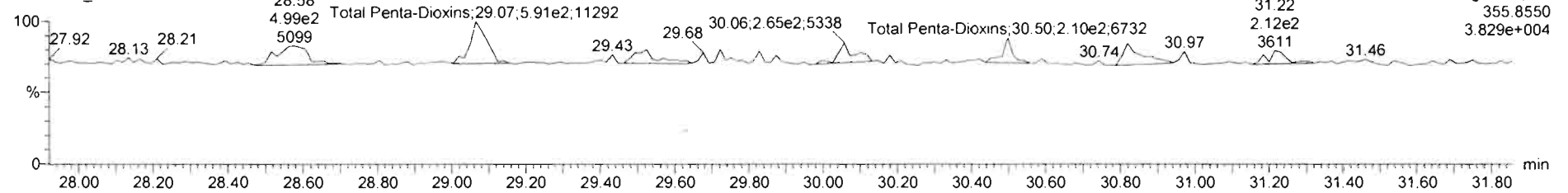
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1,2,3,7,8-PeCDD

200225R3\_7

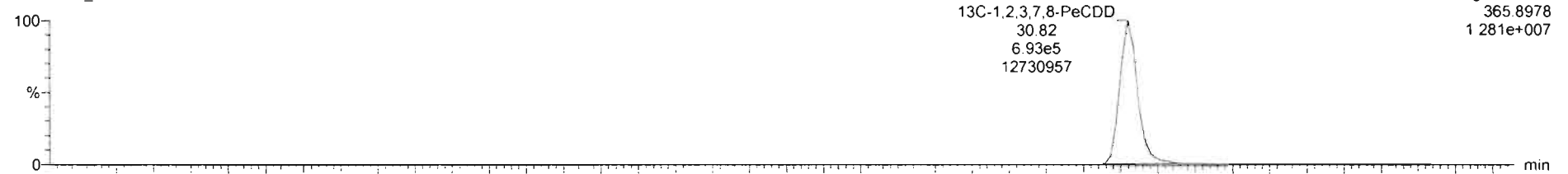


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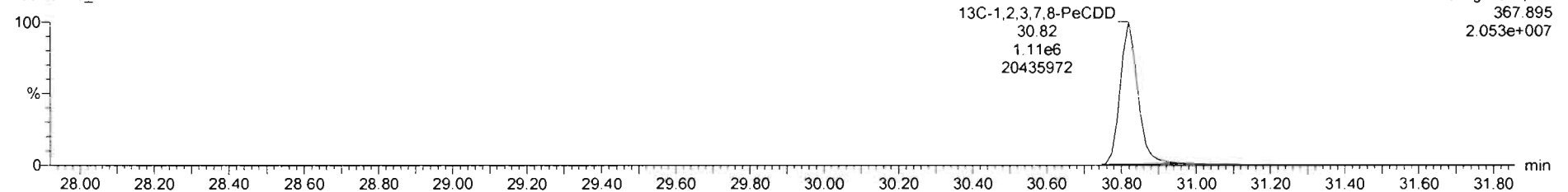


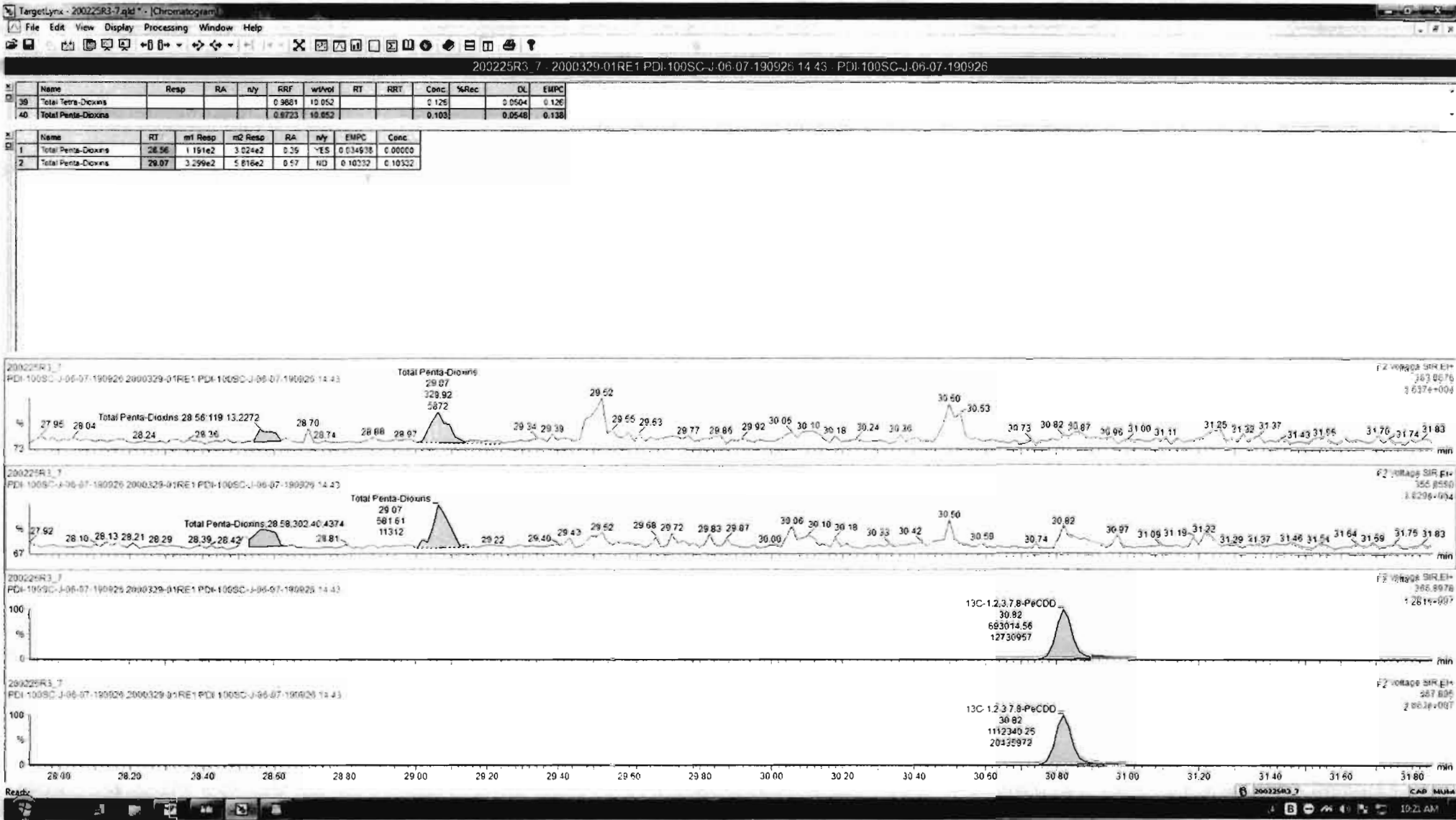
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200225R3\_7



200225R3\_7





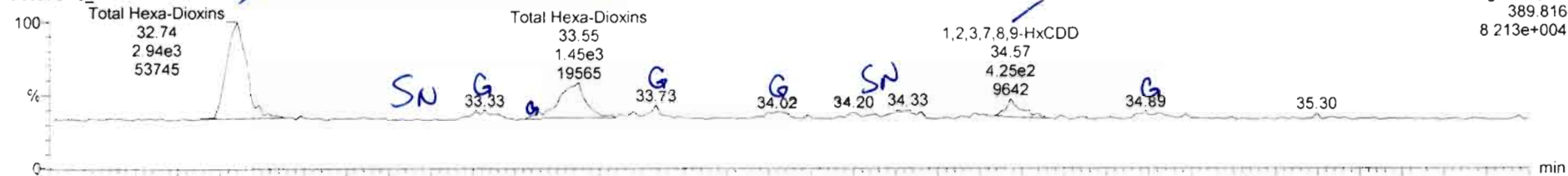
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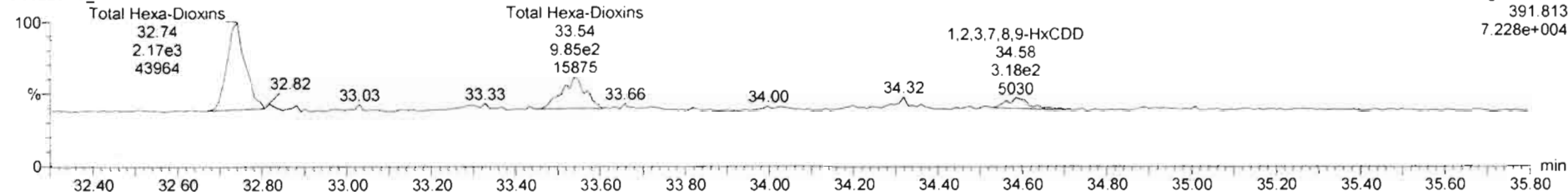
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1,2,3,4,7,8-HxCDD

200225R3\_7

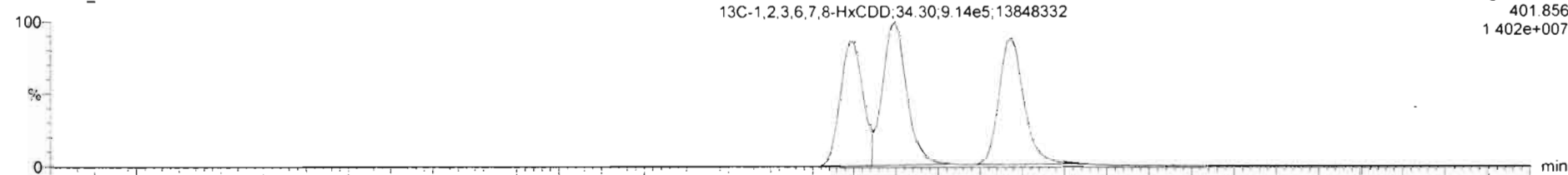


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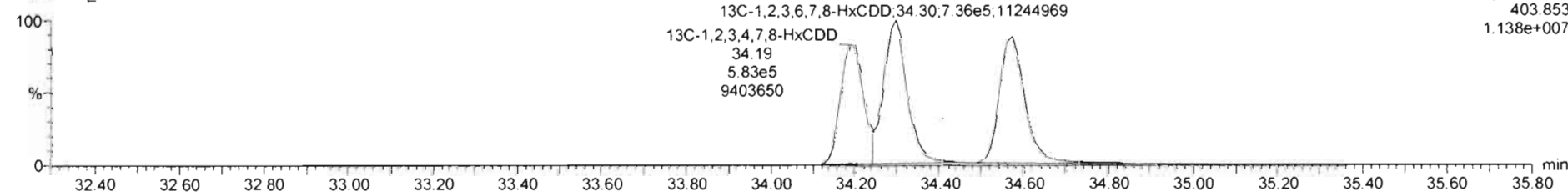


13C-1,2,3,4,7,8-HxCDD

200225R3\_7



200225R3\_7



TargetLynx - 200225R3-7.qld - [Chromatogram]

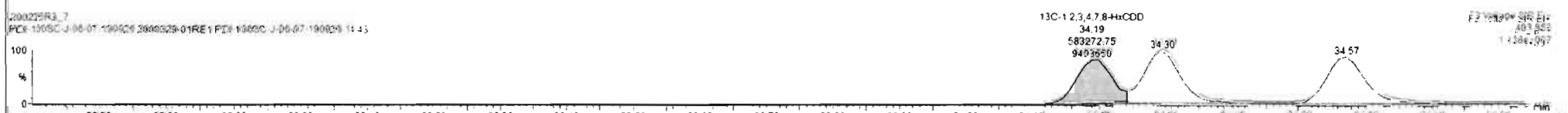
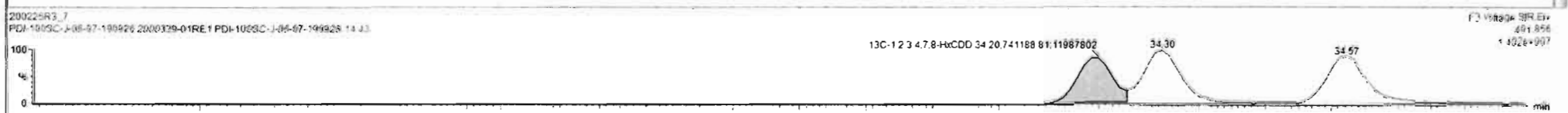
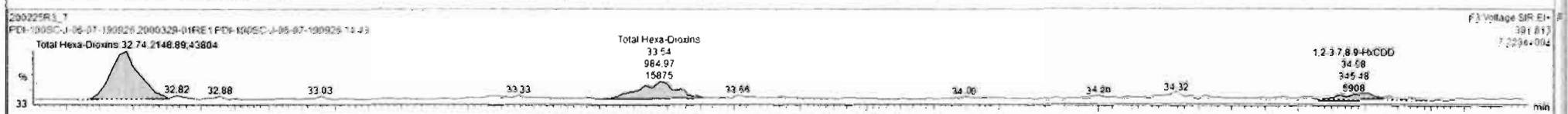
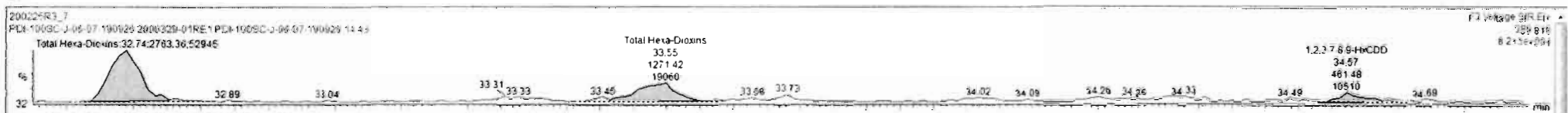
File Edit View Display Processing Window Help

200225R3\_7 - 2000329-01RE1 PDI-100SC-J-06-07-190926 14 43 - PDI-100SC-J-06-07-190926

Name	Resp	RA	n/y	RRF	wt/vol	RT	RRT	Conc.	%Rec	DL	EMPC
41 Total Hexa-Dioxins				0.9211	10.952			1.15	0.063E	1.15	
42 Total Hepta-Dioxins				0.9231	10.952			2.26	0.127	2.26	

Name	RT	m1 Resp	m2 Resp	RA	n/y	EMPC	Conc.
1 Total Hexa-Dioxins	32.74	2.763e3	2.149e3	1.29	NO	0.70773	0.70773
2 Total Hexa-Dioxins	33.55	1.271e3	9.850e2	1.29	NO	0.32509	0.32509
3 1,2,3,7,8,9-HxCDD	34.57	4.615e2	3.455e2	1.34	NO	0.11476	0.11476



TargetLynx - 200225R3-7.qid - [Chromatogram]

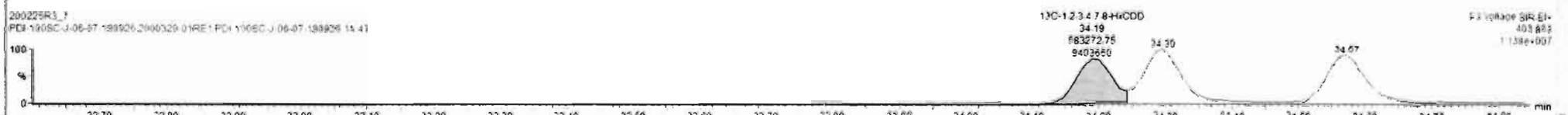
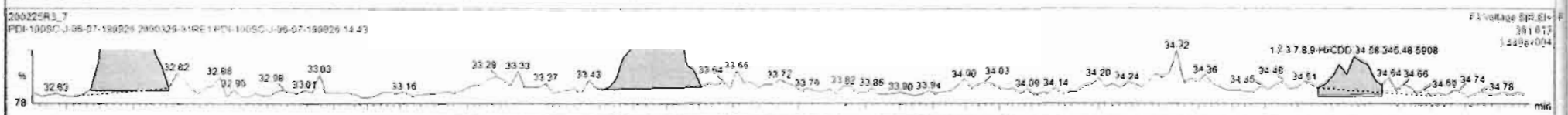
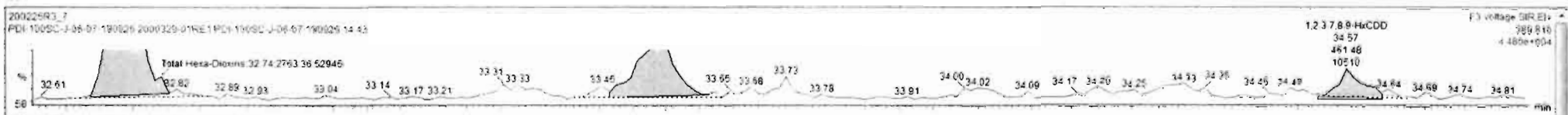
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200225R3\_7 - 2000329-01RE1 PDI-100SC-J-06-07-190926 14 43 - PDI-100SC-J-06-07-190926

SI	Memo	Resp	RA	nly	RRF	wtVol	RT	RRT	Conc	%Rec	DL	EMPC
A1	Total Hexa-Dioxins				0.9211	10.052			1.15		0.0626	1.15
A2	Total Hepta-Dioxins				0.9231	10.052			2.28		0.127	2.28

SI	Name	RT	m1 Resp	m2 Resp	RA	nly	EMPC	Conc
1	Total Hexa-Dioxins	32.74	2.765e3	2.149e3	1.29	NO	0.70773	0.70773
2	Total Hexa-Dioxins	33.55	1.271e3	9.850e2	1.29	NO	0.32509	0.32509
3	1,2,3,7,8,9-HxCDD	34.57	4.915e2	3.455e2	1.34	NO	0.11478	0.11478



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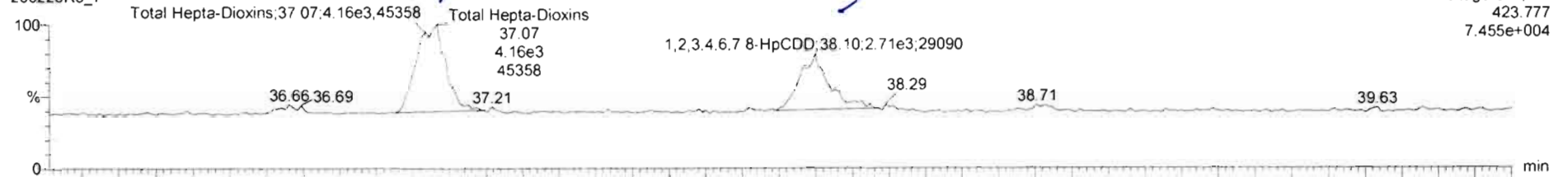
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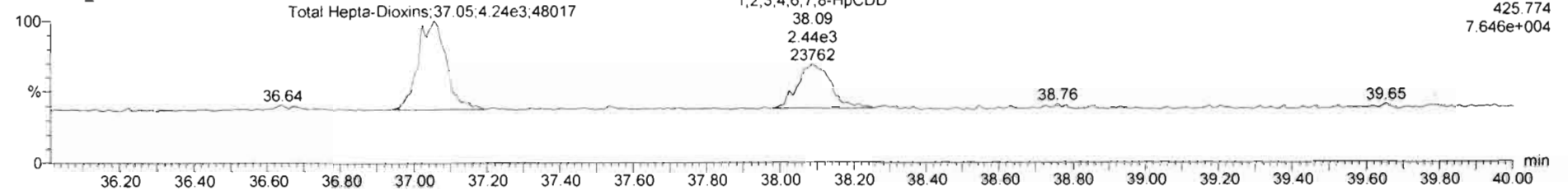
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1,2,3,4,6,7,8-HpCDD

200225R3\_7

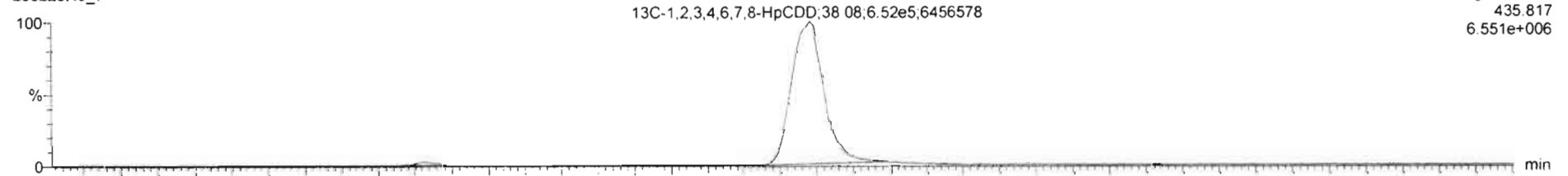


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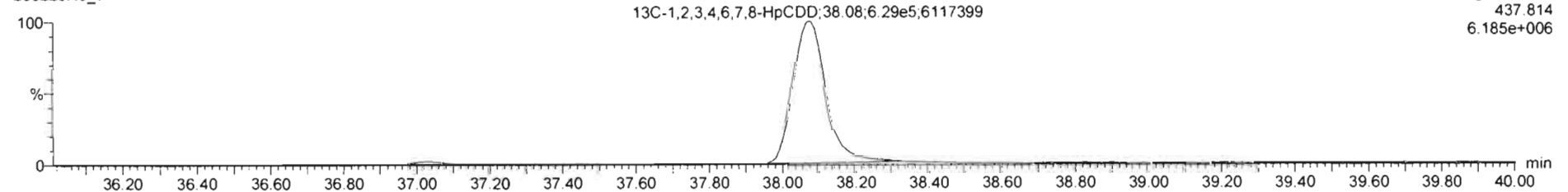


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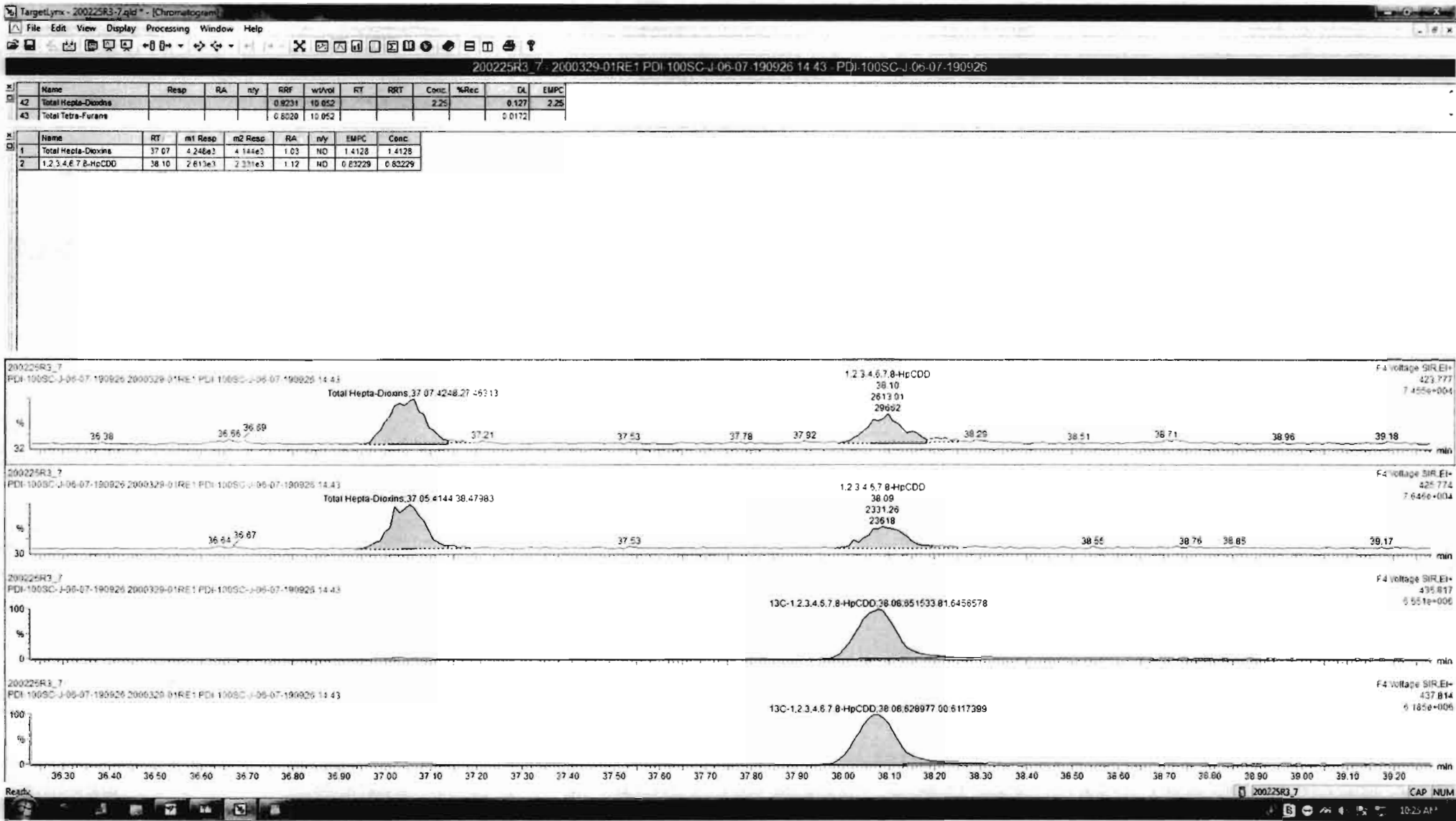
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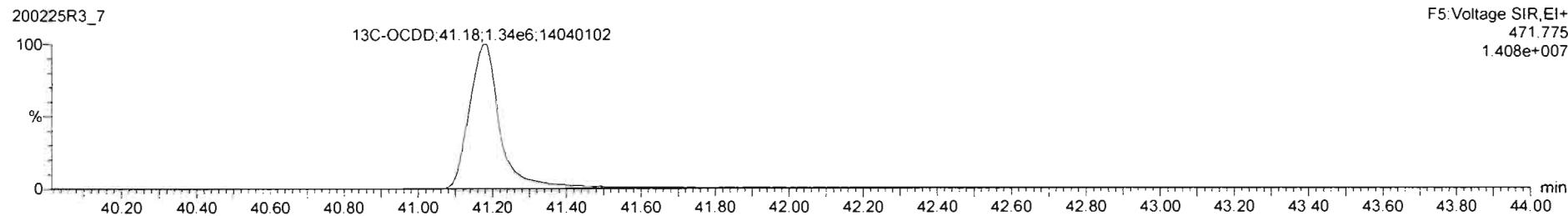
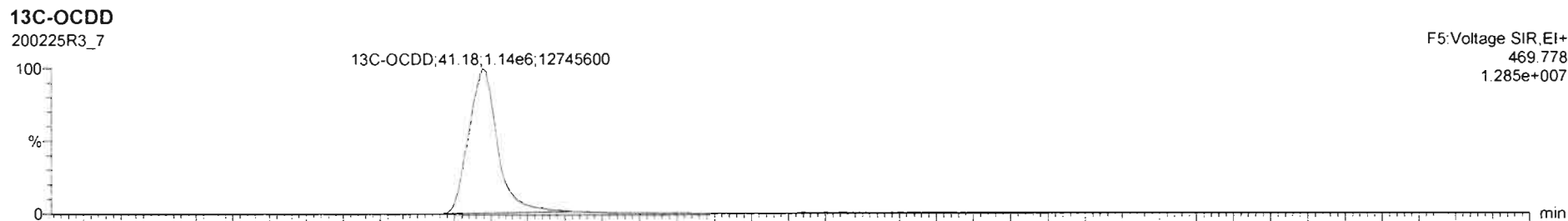
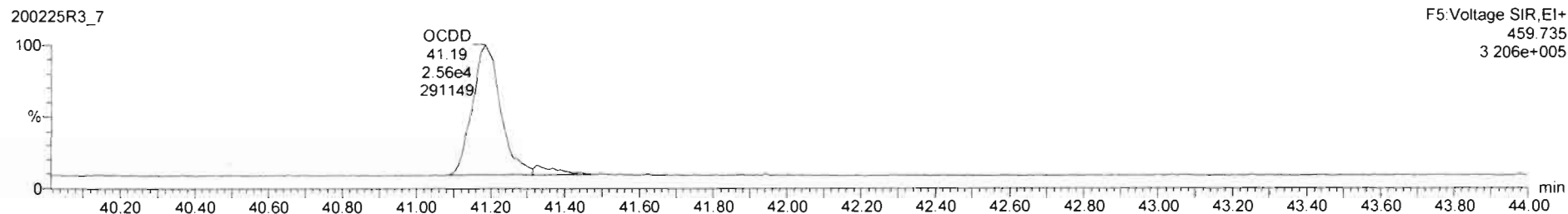
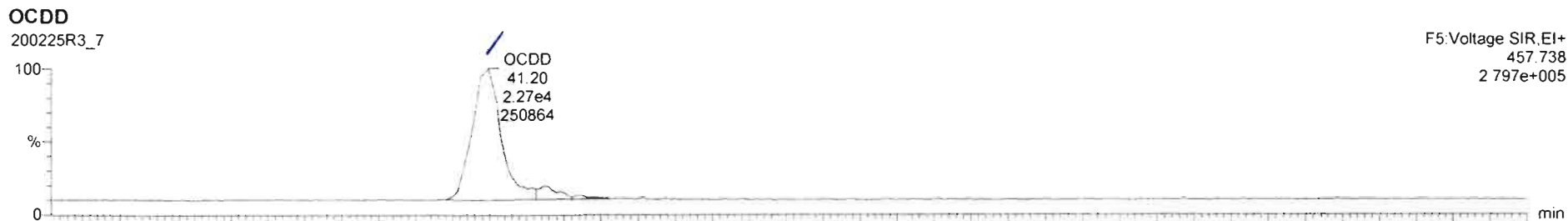


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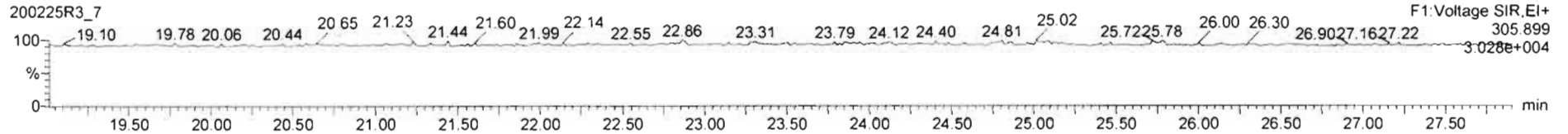
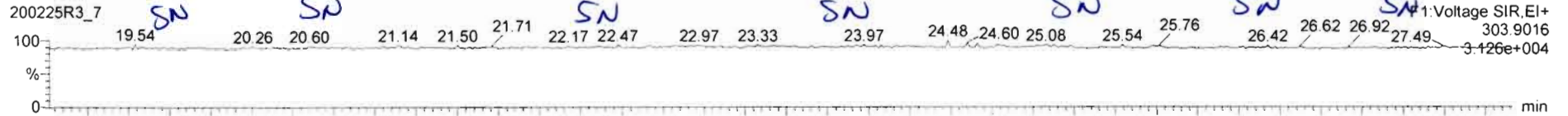
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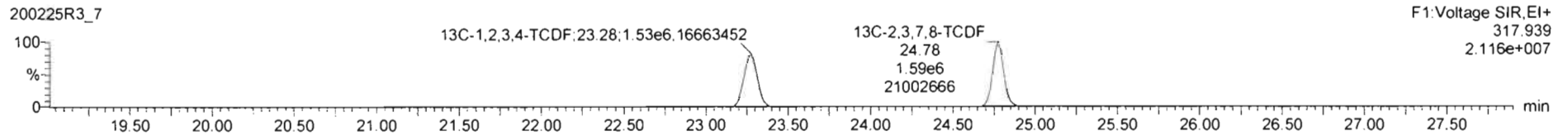
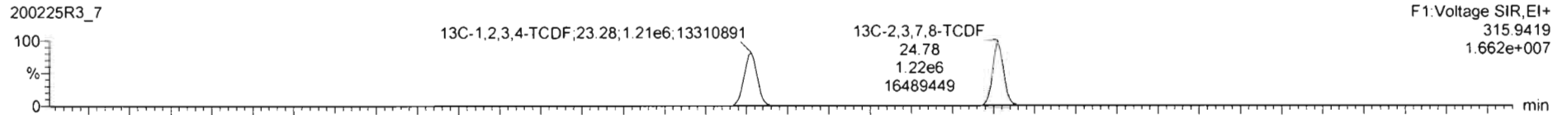
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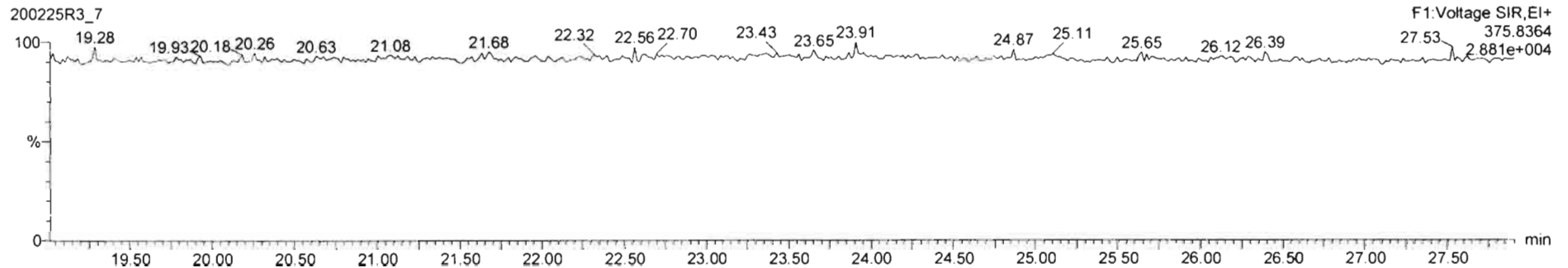
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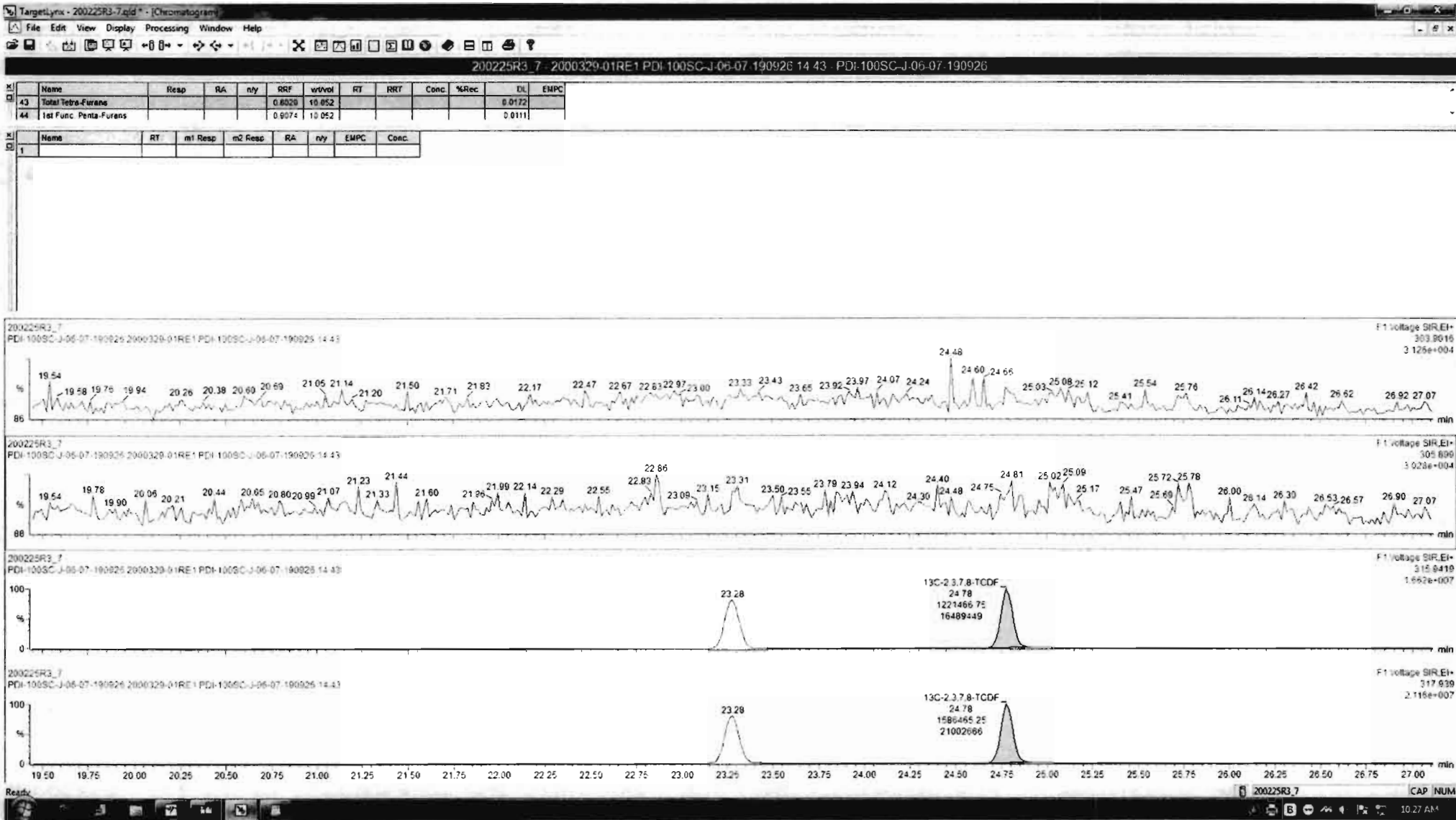


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DPE1





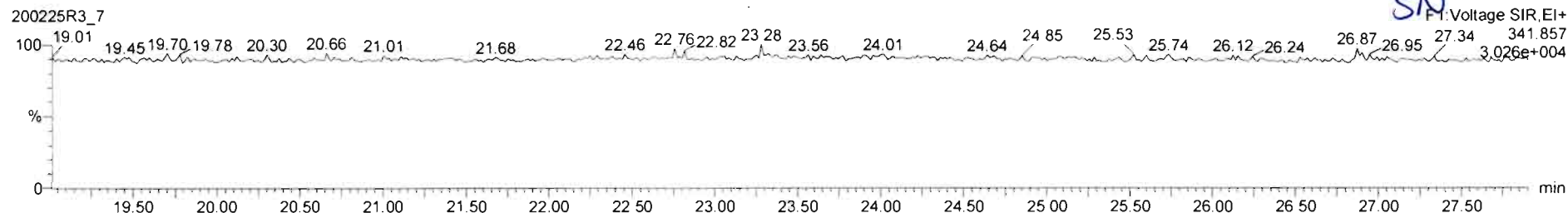
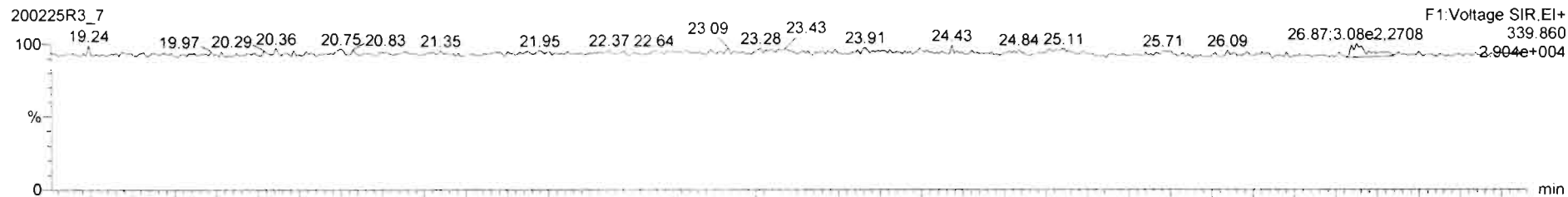
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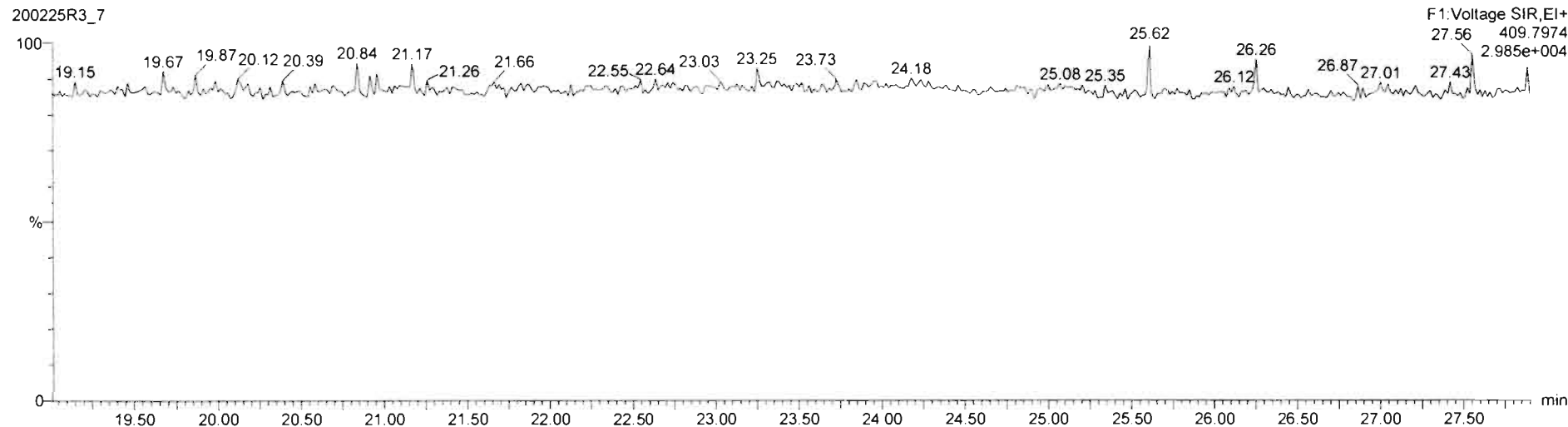
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1st Func. Penta-Furans



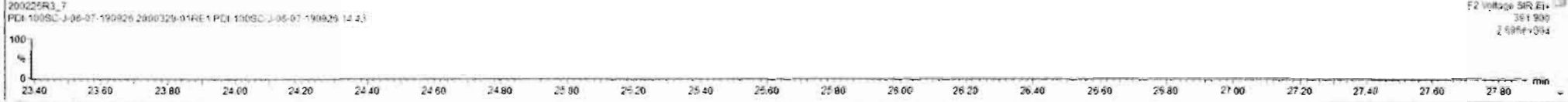
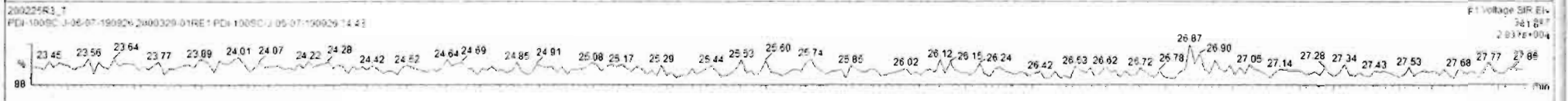
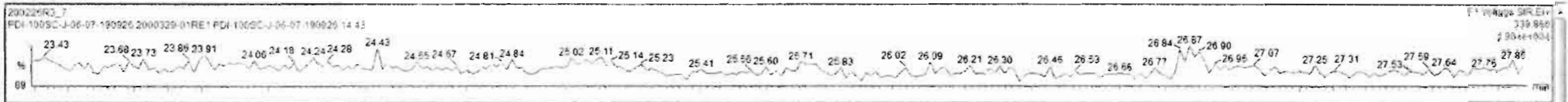
DPE6



200225R3\_7 - 2000329-01RE1 PDI-100SC-J-06-07-190926 14 43 - PDI-100SC-J-06-07-190926

KL	Name	Resp	RA	nty	RRF	wtVol	RT	RRT	Conc	%Rec	DL	EMPC
43	Total Tetra-Furans				0.0020	10.052				0.0172		
44	1st Func. Penia-Furans				0.0074	10.052				0.0111		

KL	Name	RT	m1 Resp	m2 Resp	RA	nty	EMPC	Conc
1								

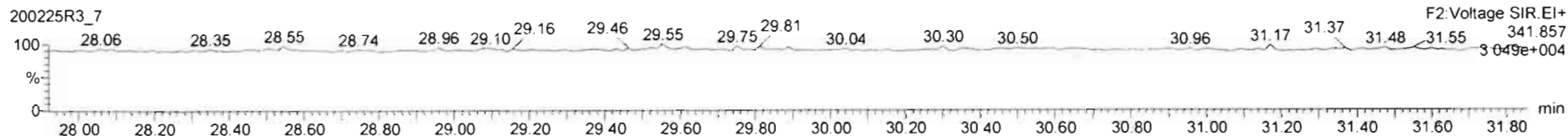
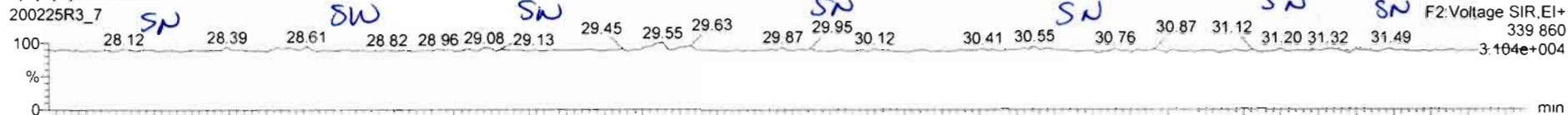


Dataset: Untitled

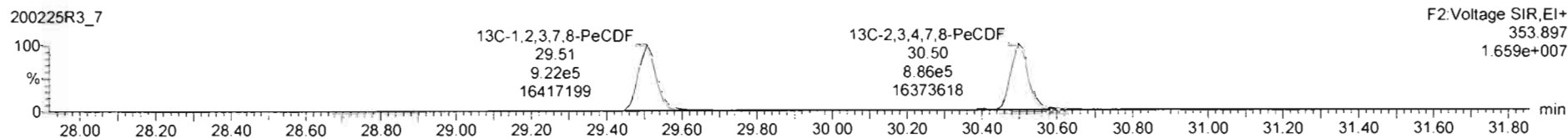
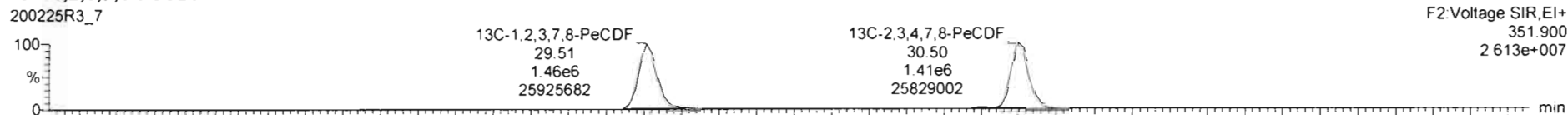
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Printed: Wednesday, February 26, 2020 08:41:34 Pacific Standard Time

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

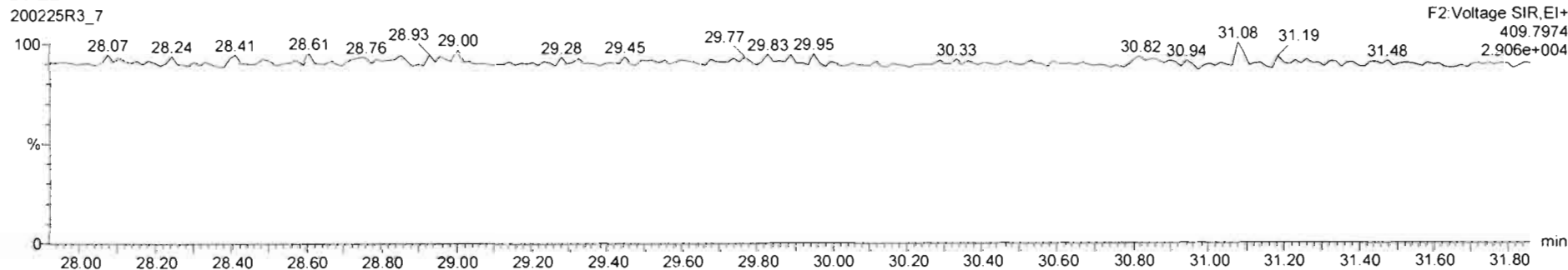
1,2,3,7,8-PeCDF

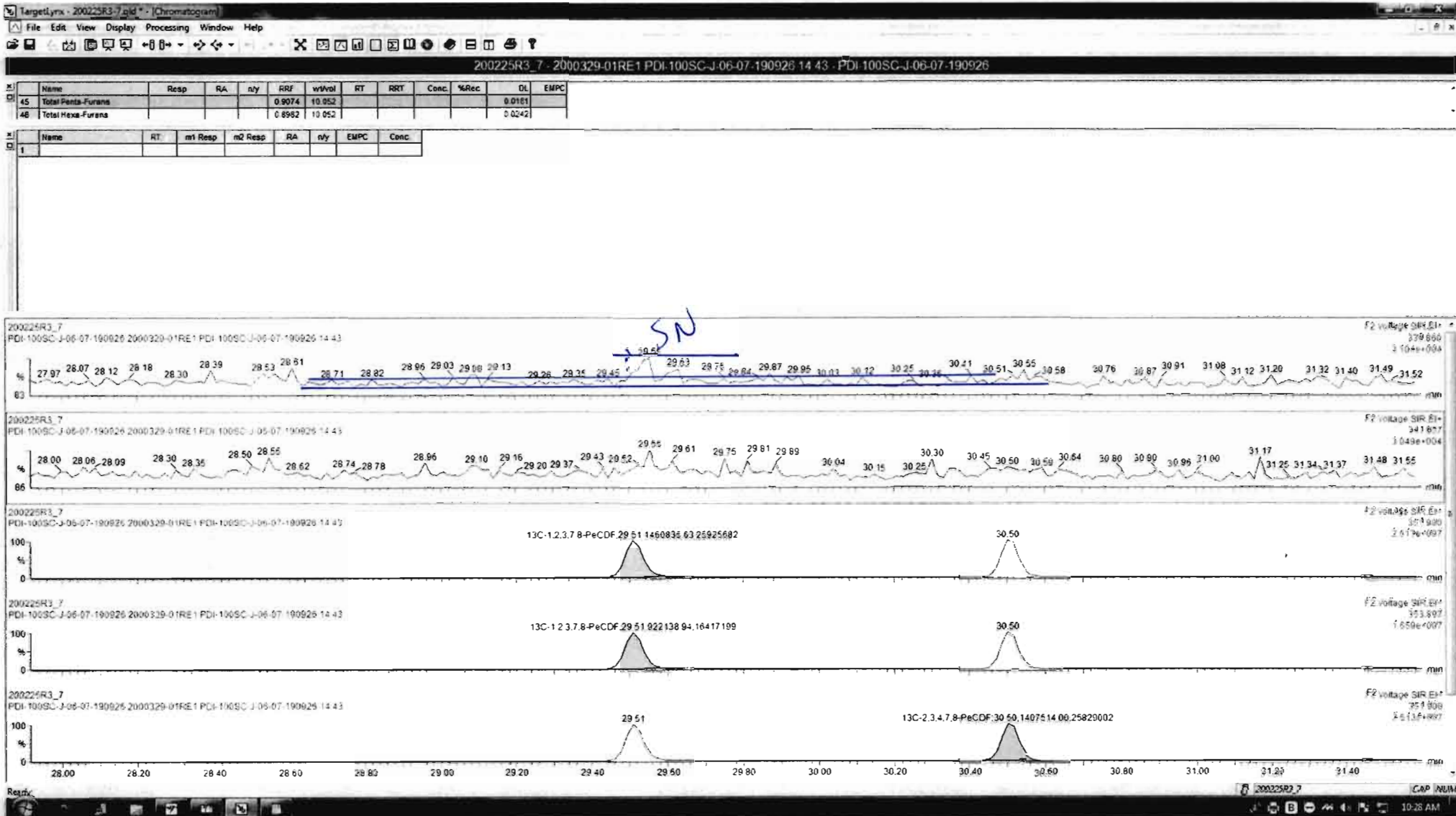


13C-1,2,3,7,8-PeCDF



DPE2







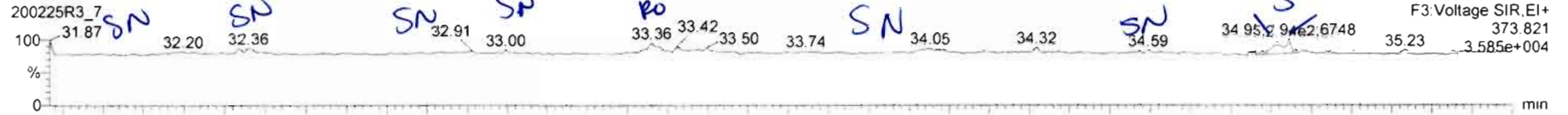
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Last Altered: Wednesday, February 26, 2020 08:41:31 Pacific Standard Time

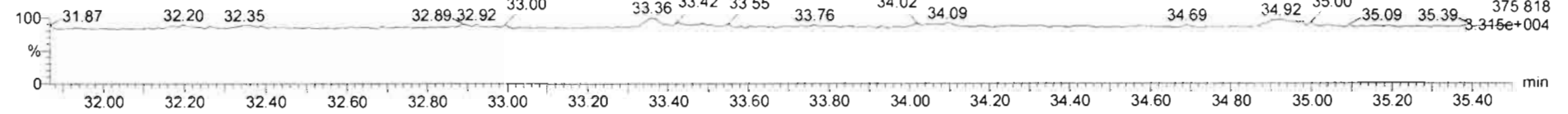
Printed: Wednesday, February 26, 2020 08:41:34 Pacific Standard Time

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

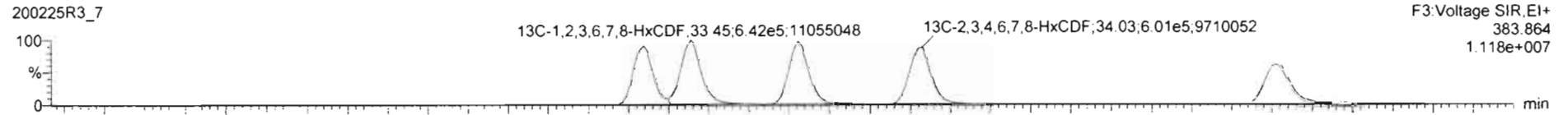
1,2,3,4,7,8-HxCDF



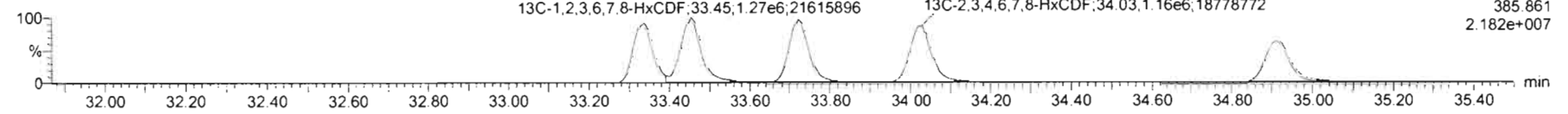
200225R3\_7



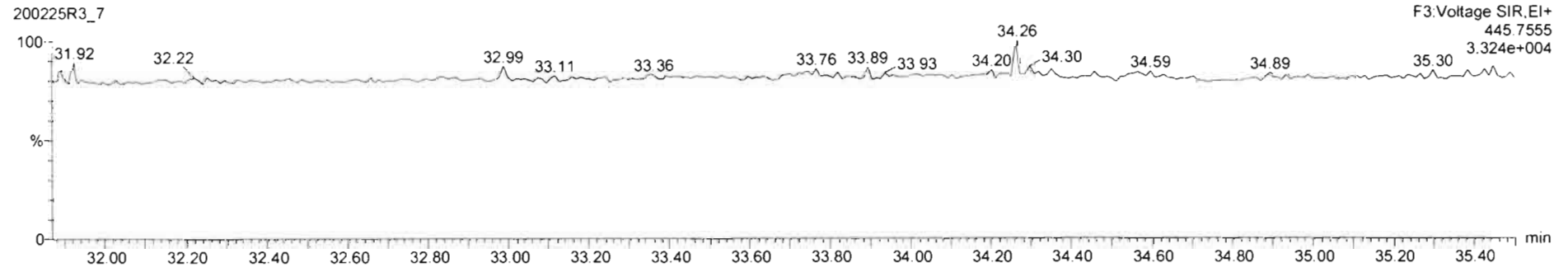
13C-1,2,3,4,7,8-HxCDF

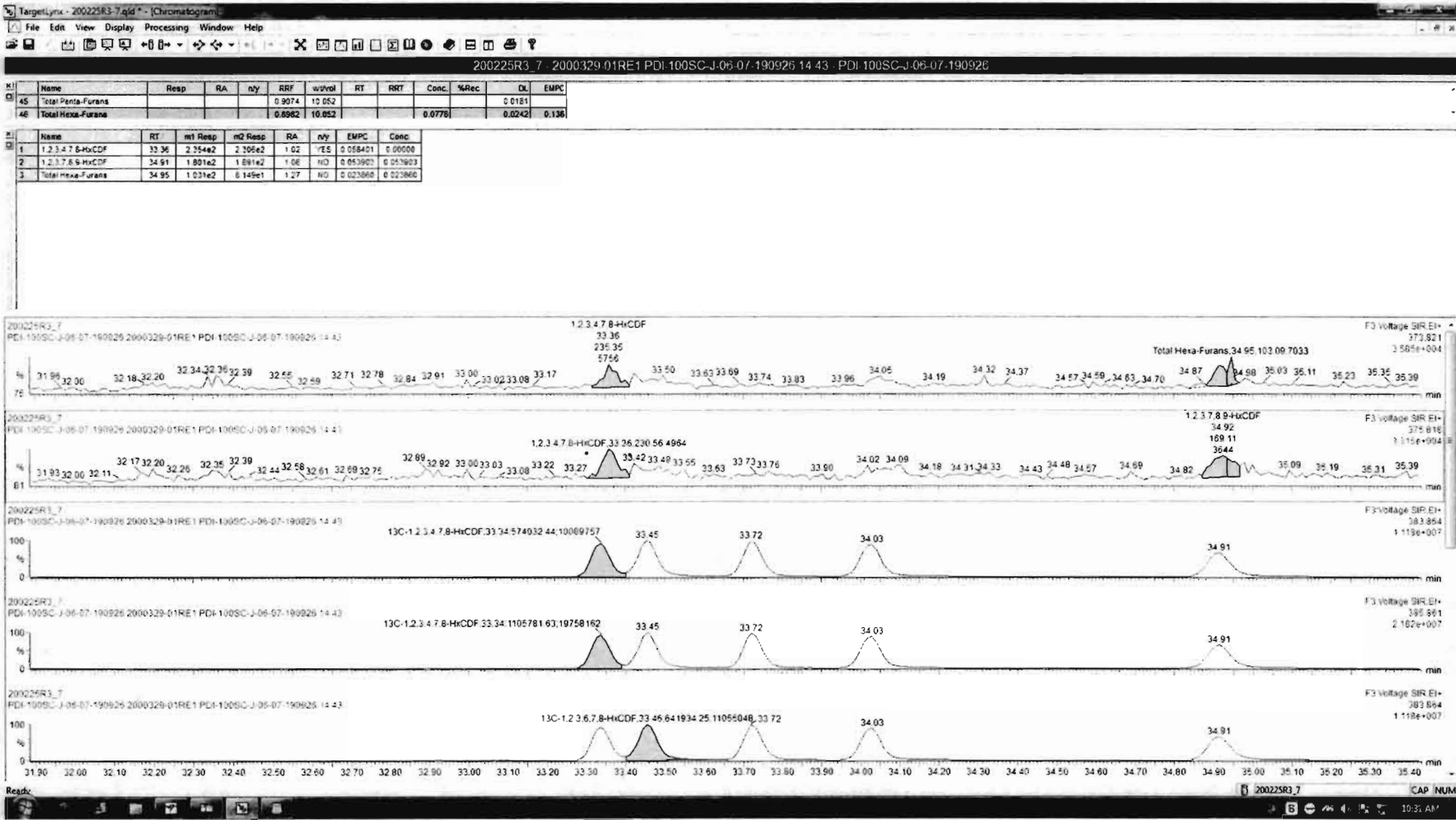


200225R3\_7



DPE3





Dataset: Untitled

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Printed: Wednesday, February 26, 2020 08:41:34 Pacific Standard Time

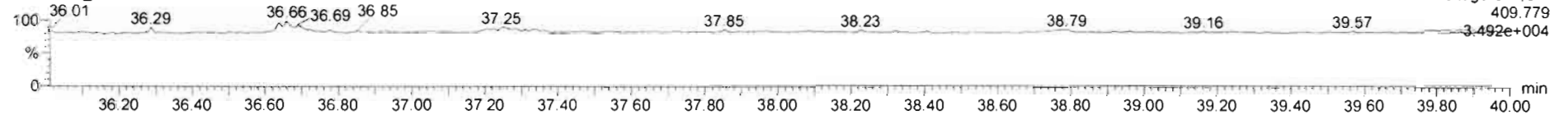
Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

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

200225R3\_7

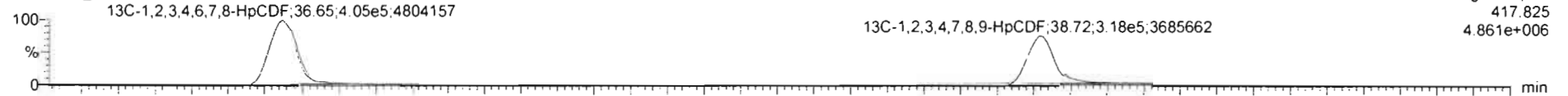


200225R3\_7

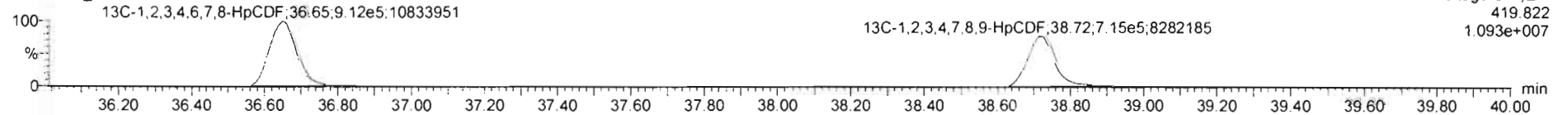


13C-1,2,3,4,6,7,8-HpCDF

200225R3\_7

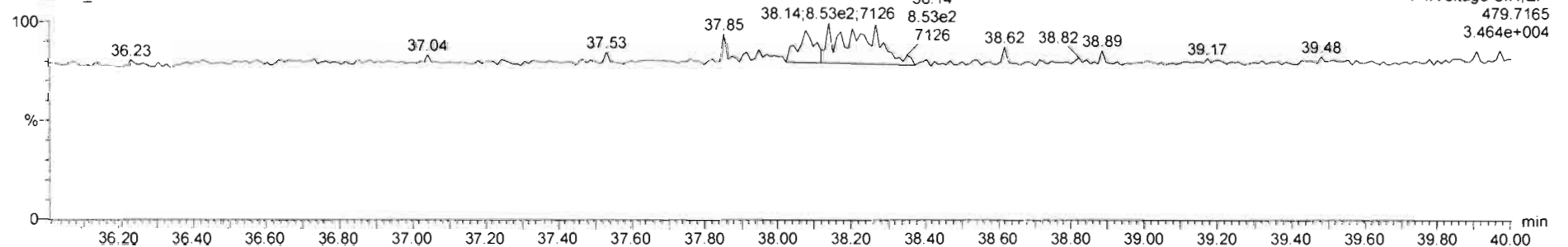


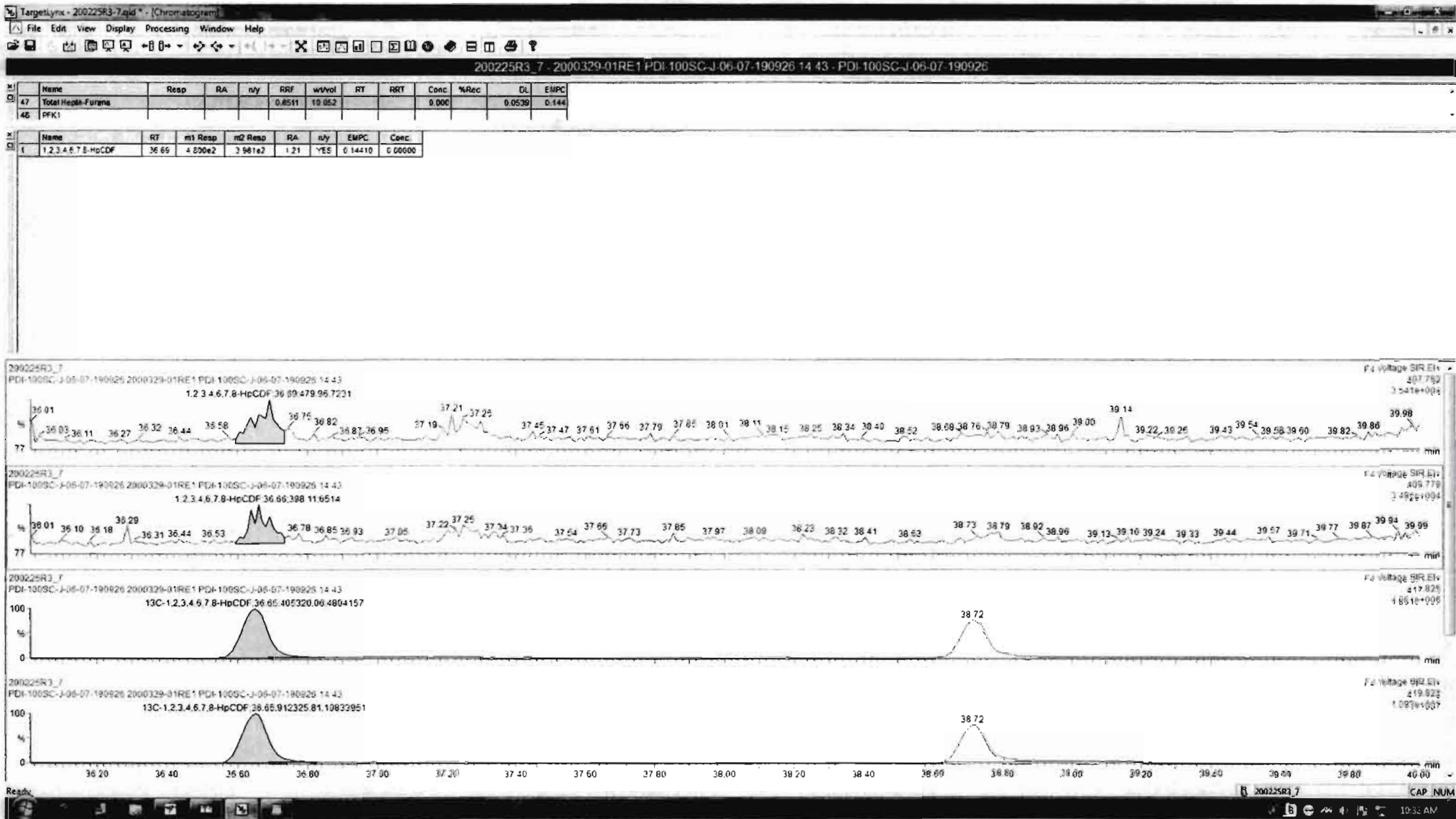
200225R3\_7



DPE4

200225R3\_7

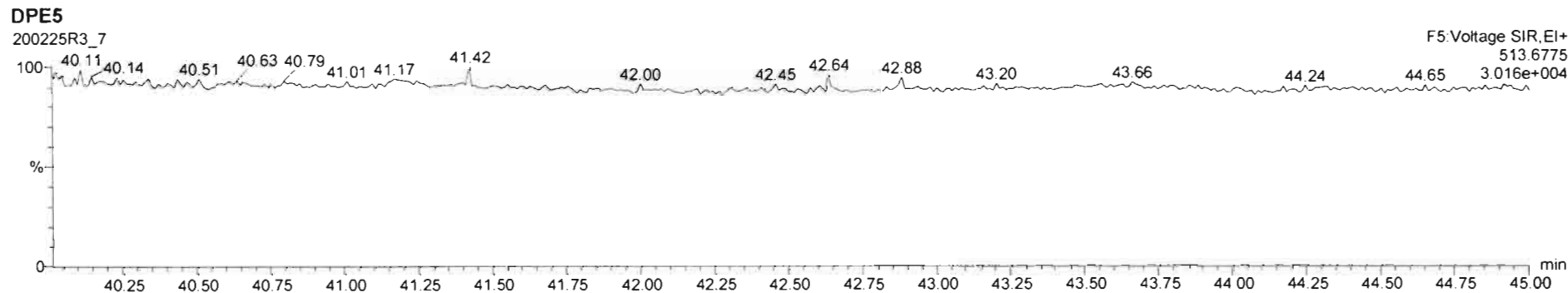
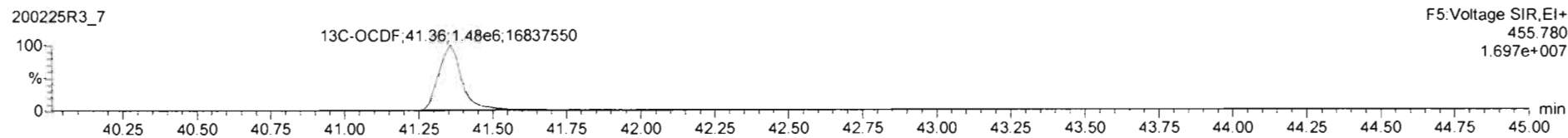
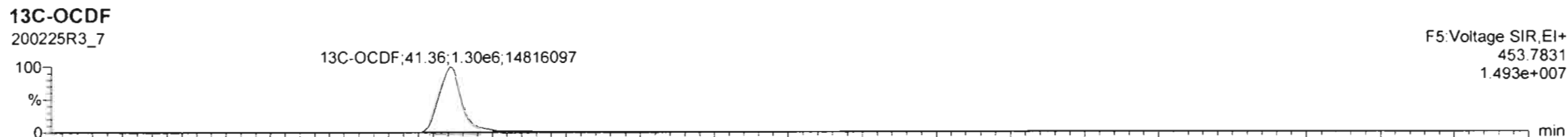
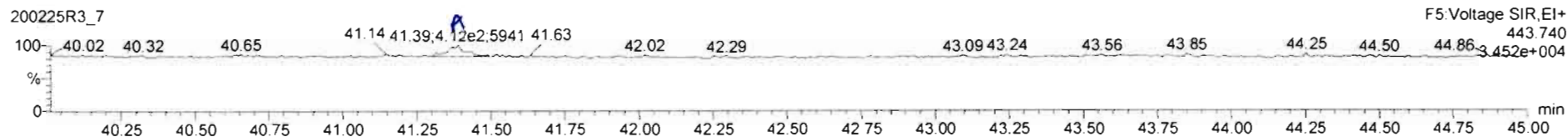
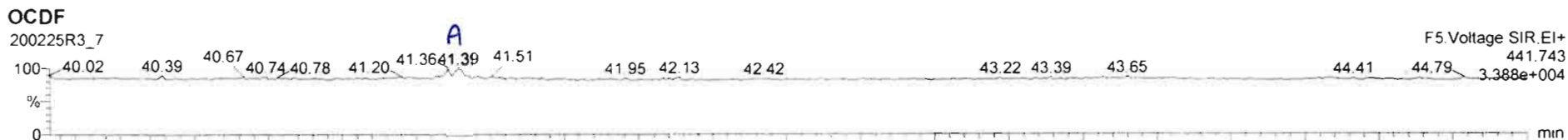




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Last Altered: Wednesday, February 26, 2020 08:41:31 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:41:34 Pacific Standard Time

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926



TargetLynx - 200225R3-7.qtd - [Chromatogram]

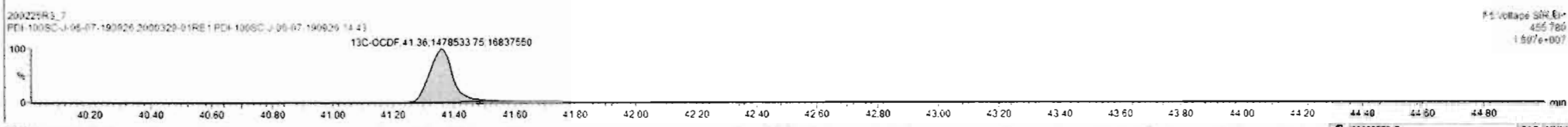
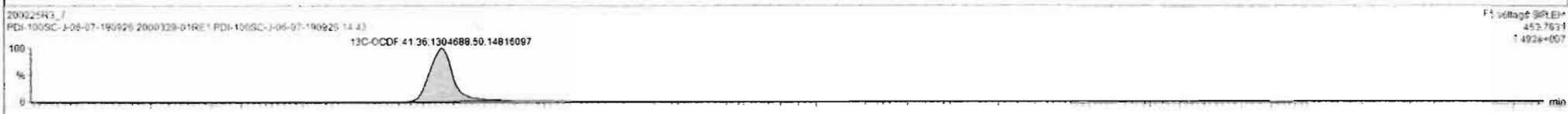
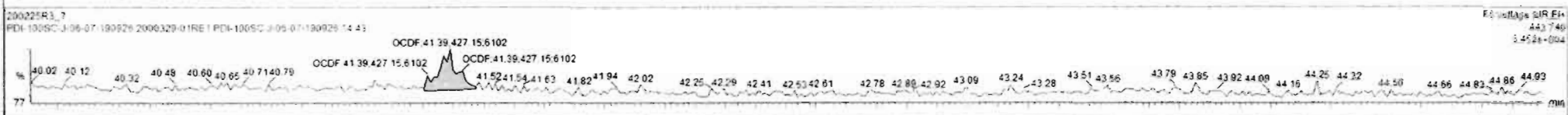
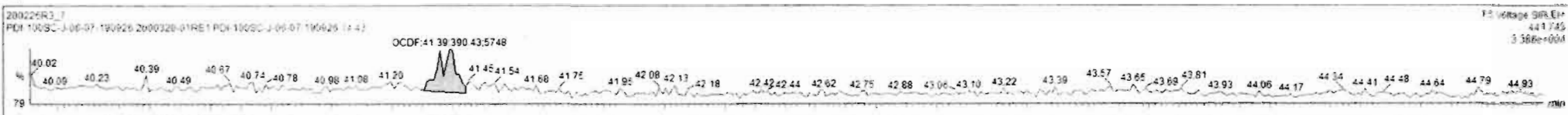
File Edit View Display Processing Window Help

200225R3\_7 - 2000329-01RE1 PDI-100SC-J-06-07-190926 14 43 - PDI-100SC-J-06-07-190926

#	Name	Resp	RA	n/y	RF	wt/vol	RT	RRT	Conc	%Rec	DL	EMPC
17	OCDF	8.16e2	0.91	NO	0.6055	10.052	41.39	1.001	0.145	0.0773	0.145	
18	13C-2,3,7,8-TCDD	2.23e2	0.78	NO	1.1965	10.052	26.72	1.027	193	97.2	0.122	

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



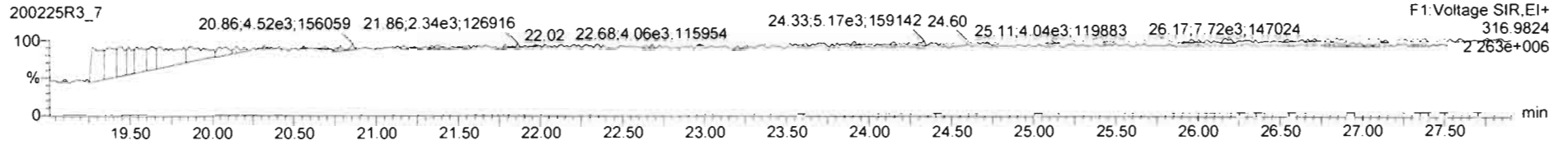
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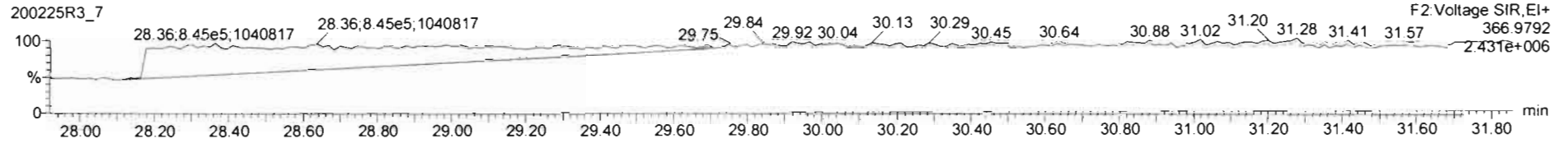
Printed: Wednesday, February 26, 2020 08:41:34 Pacific Standard Time

Name: 200225R3\_7, Date: 25-Feb-2020, Time: 17:50:55, ID: 2000329-01RE1 PDI-100SC-J-06-07-190926 14.43, Description: PDI-100SC-J-06-07-190926

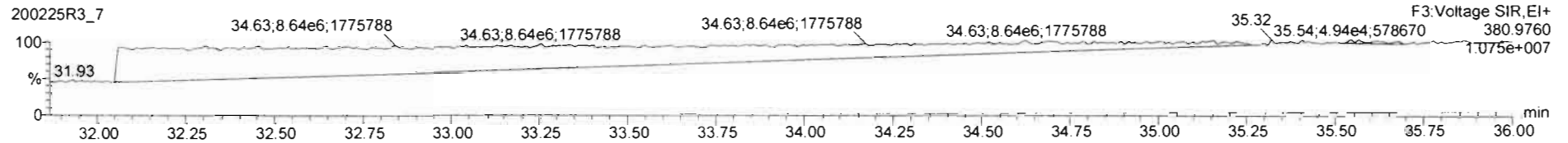
PFK1



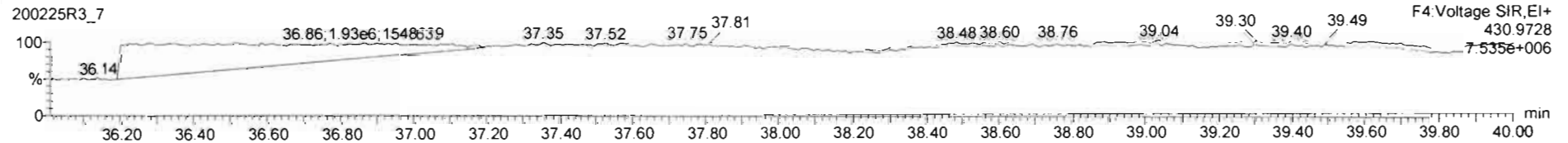
PFK2



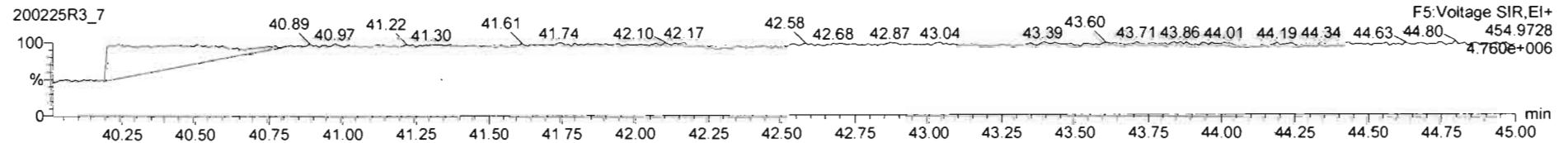
PFK3



PFK4



PFK5



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-8.qld

Last Altered: Wednesday, February 26, 2020 11:20:24 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 11:23:58 Pacific Standard Time

*EL 02/26/2020*

*CA 02/27/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_8, Date: 25-Feb-2020, Time: 18:38:19, ID: 2000329-02RE1 PDI-100SC-J-07-08-190926 14.26, Description: PDI-100SC-J-07-08-190926

#	Name	Abs.Resp	RA	n/y	RRF	wt.vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD				0.988	10.064	25.75		1.00		NO			0.0440	
2	2 1,2,3,7,8-PeCDD				0.972	10.064	30.84		1.00		NO			0.0463	
3	3 1,2,3,4,7,8-HxCDD				1.07	10.064	34.21		1.00		NO			0.0606	
4	4 1,2,3,6,7,8-HxCDD				0.921	10.064	34.30		1.00		NO			0.0627	
5	5 1,2,3,7,8,9-HxCDD				0.918	10.064	34.61		1.00		NO			0.0710	
6	6 1,2,3,4,6,7,8-HpCDD	3442.443	1.092	NO	0.923	10.064	38.08	38.08	1.00	1.00	NO	0.5702		0.138	0.5702
7	7 OCDD	22401.586	0.910	NO	0.975	10.064	41.17	41.19	1.00	1.00	NO	3.964		0.111	3.964
8	8 2,3,7,8-TCDF				0.802	10.064	24.82		1.00		NO			0.0326	
9	9 1,2,3,7,8-PeCDF				0.907	10.064	29.53		1.00		NO			0.0289	
10	10 2,3,4,7,8-PeCDF				0.952	10.064	30.53		1.00		NO			0.0277	
11	11 1,2,3,4,7,8-HxCDF				0.862	10.064	33.34		1.00		NO			0.0456	
12	12 1,2,3,6,7,8-HxCDF				0.841	10.064	33.47		1.00		NO			0.0444	
13	13 2,3,4,6,7,8-HxCDF				0.898	10.064	34.06		1.00		NO			0.0487	
14	14 1,2,3,7,8,9-HxCDF				0.858	10.064	34.91		1.00		NO			0.0665	
15	15 1,2,3,4,6,7,8-HpCDF				0.851	10.064	36.69		1.00		NO			0.0817	
16	16 1,2,3,4,7,8,9-HpCDF				0.980	10.064	38.72		1.00		NO			0.0957	
17	17 OCDF	713.982	0.850	NO	0.806	10.064	41.36	41.38	1.00	1.00	NO	0.1349		0.0882	0.1349
18	18 13C-2,3,7,8-TCDD	2162441.5...	0.776	NO	1.20	10.064	25.71	25.72	1.03	1.03	NO	187.9	94.5	0.116	
19	19 13C-1,2,3,7,8-PeCDD	1744470.6...	0.633	NO	0.967	10.064	30.45	30.82	1.22	1.23	NO	187.9	94.6	0.183	
20	20 13C-1,2,3,4,7,8-HxCDD	1300120.4...	1.262	NO	0.874	10.064	34.19	34.20	1.01	1.01	NO	170.1	85.6	0.302	
21	21 13C-1,2,3,6,7,8-HxCDD	1635927.1...	1.261	NO	1.05	10.064	34.29	34.30	1.02	1.02	NO	178.8	90.0	0.253	
22	22 13C-1,2,3,7,8,9-HxCDD	1490417.3...	1.253	NO	0.974	10.064	34.60	34.57	1.03	1.03	NO	174.9	88.0	0.271	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1299708.3...	1.007	NO	0.747	10.064	38.17	38.07	1.13	1.13	NO	198.9	100	0.428	
24	24 13C-OCDD	2304551.6...	0.905	NO	0.707	10.064	41.07	41.17	1.22	1.22	NO	372.9	93.8	0.416	
25	25 13C-2,3,7,8-TCDF	2747795.6...	0.775	NO	1.07	10.064	24.89	24.79	0.99	0.99	NO	187.3	94.3	0.230	
26	26 13C-1,2,3,7,8-PeCDF	2342449.7...	1.571	NO	1.00	10.064	29.47	29.51	1.18	1.18	NO	169.8	85.5	0.380	
27	27 13C-2,3,4,7,8-PeCDF	2264858.1...	1.569	NO	0.962	10.064	30.44	30.50	1.21	1.22	NO	171.0	86.1	0.396	
28	28 13C-1,2,3,4,7,8-HxCDF	1621702.3...	0.527	NO	1.05	10.064	33.32	33.34	0.99	0.99	NO	176.7	88.9	0.380	
29	29 13C-1,2,3,6,7,8-HxCDF	1838696.1...	0.506	NO	1.19	10.064	33.42	33.46	0.99	0.99	NO	176.7	88.9	0.335	
30	30 13C-2,3,4,6,7,8-HxCDF	1692613.5...	0.513	NO	1.07	10.064	34.03	34.03	1.01	1.01	NO	181.5	91.3	0.374	



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-8.qld

Last Altered: Wednesday, February 26, 2020 11:20:24 Pacific Standard Time

Printed: Wednesday, February 26, 2020 11:23:58 Pacific Standard Time

Name: 200225R3\_8, Date: 25-Feb-2020, Time: 18:38:19, ID: 2000329-02RE1 PDI-100SC-J-07-08-190926 14.26, Description: PDI-100SC-J-07-08-190926

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	1489710.4...	0.515	NO	0.922	10.064	34.93	34.91	1.04	1.04	NO	184.7	92.9	0.432	
32	32 13C-1,2,3,4,6,7,8-HpCDF	1315481.0...	0.443	NO	0.767	10.064	36.69	36.65	1.09	1.09	NO	196.0	98.7	0.469	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1008759.1...	0.430	NO	0.552	10.064	38.71	38.72	1.15	1.15	NO	208.8	105	0.652	
34	34 13C-OCDF	2612255.3...	0.883	NO	0.789	10.064	41.31	41.36	1.23	1.23	NO	378.3	95.2	0.281	
35	35 37Cl-2,3,7,8-TCDD	796134.625			1.18	10.064	25.74	25.75	1.03	1.03	NO	70.47	88.7	0.0337	
36	36 13C-1,2,3,4-TCDD	1908603.3...	0.789	NO	1.00	10.064	25.11	25.06	1.00	1.00	NO	198.7	100	0.139	
37	37 13C-1,2,3,4-TCDF	2736410.2...	0.789	NO	1.00	10.064	23.37	23.30	1.00	1.00	NO	198.7	100	0.245	
38	38 13C-1,2,3,4,6,9-HxCDF	1738147.6...	0.517	NO	1.00	10.064	33.71	33.72	1.00	1.00	NO	198.7	100	0.399	
39	39 Total Tetra-Dioxins				0.988	10.064	24.62		0.00		NO	0.1196		0.0440	0.1196
40	40 Total Penta-Dioxins				0.972	10.064	29.96		0.00		NO	0.07679		0.0463	0.1276
41	41 Total Hexa-Dioxins				0.921	10.064	33.63		0.00		NO	0.6422		0.0677	0.6422
42	42 Total Hepta-Dioxins				0.923	10.064	37.64		0.00		NO	1.447		0.138	1.447
43	43 Total Tetra-Furans				0.802	10.064	23.61		0.00		NO			0.0159	
44	44 1st Func. Penta-Furans				0.907	10.064	27.09		0.00		NO			0.0103	
45	45 Total Penta-Furans				0.907	10.064	29.27		0.00		NO			0.0149	
46	46 Total Hexa-Furans				0.898	10.064	33.56		0.00		NO			0.0254	
47	47 Total Hepta-Furans				0.851	10.064	37.83		0.00		NO			0.0450	

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Dataset: U:\VG12.PRO\Results\200225R3\200225R3-8.qld

Last Altered: Wednesday, February 26, 2020 11:20:24 Pacific Standard Time

Printed: Wednesday, February 26, 2020 11:22:53 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Name: 200225R3\_8, Date: 25-Feb-2020, Time: 18:38:19, ID: 2000329-02RE1 PDI-100SC-J-07-08-190926 14.26, Description: PDI-100SC-J-07-08-190926

**Tetra-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	39 Total Tetra-Dioxins	1.29e3	2.16e6	0.703	NO	24.62	23.49	0.1196	0.1196

**Penta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	6.55e2	1.74e6	0.601	NO	29.96	29.07	0.07679	0.07679
2	40 Total Penta-Dioxins	0.00e0	1.74e6	0.818	YES	29.96	28.58	0.0000	0.05085

**Hexa-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	41 Total Hexa-Dioxins	1.37e3	0.00e0	1.417	NO	33.63	33.54	0.1996	0.1996
2	41 Total Hexa-Dioxins	3.03e3	0.00e0	1.235	NO	33.63	32.75	0.4426	0.4426

**Hepta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	3.44e3	1.30e6	1.092	NO	38.08	38.08	0.5702	0.5702
2	42 Total Hepta-Dioxins	5.29e3	1.30e6	1.091	NO	37.64	37.02	0.8764	0.8764

**Tetra-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-8.qld

Last Altered: Wednesday, February 26, 2020 11:20:24 Pacific Standard Time

Printed: Wednesday, February 26, 2020 11:22:53 Pacific Standard Time

Name: 200225R3\_8, Date: 25-Feb-2020, Time: 18:38:19, ID: 2000329-02RE1 PDI-100SC-J-07-08-190926 14.26, Description: PDI-100SC-J-07-08-190926

**Penta-Furans**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hexa-Furans**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hepta-Furans**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:41:51 Pacific Standard Time

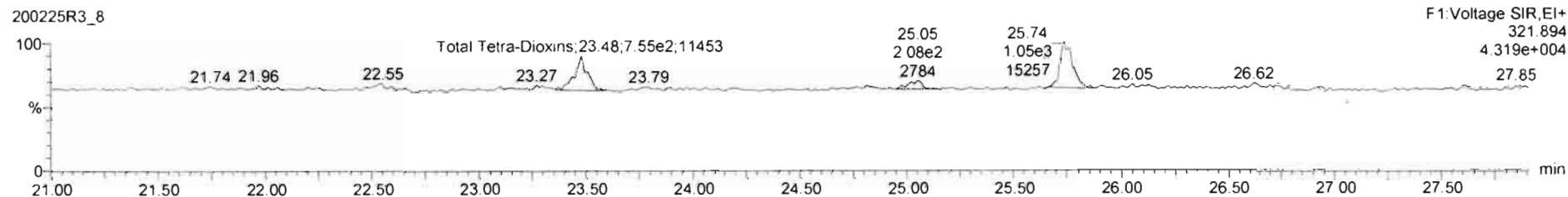
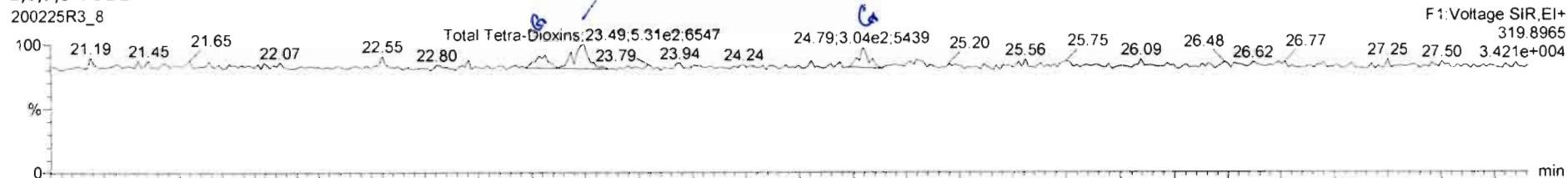
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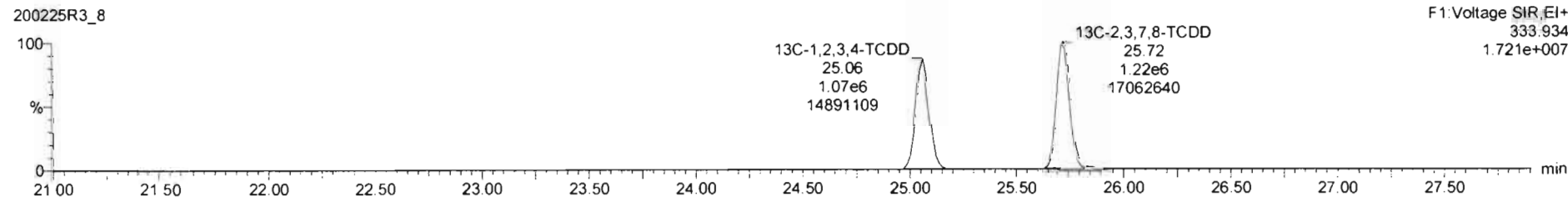
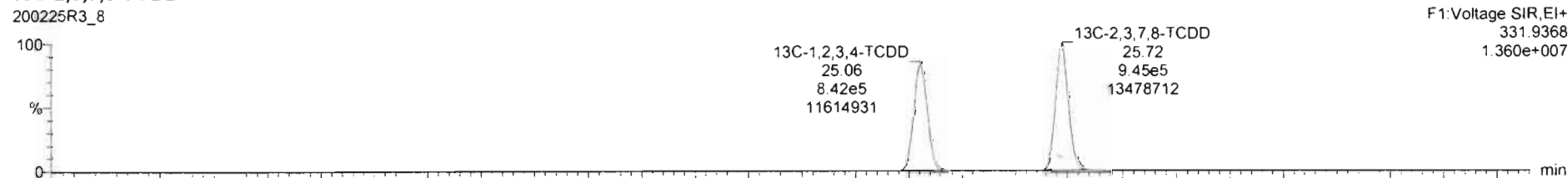
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Name: 200225R3\_8, Date: 25-Feb-2020, Time: 18:38:19, ID: 2000329-02RE1 PDI-100SC-J-07-08-190926 14.26, Description: PDI-100SC-J-07-08-190926

2,3,7,8-TCDD



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



Dataset: Untitled

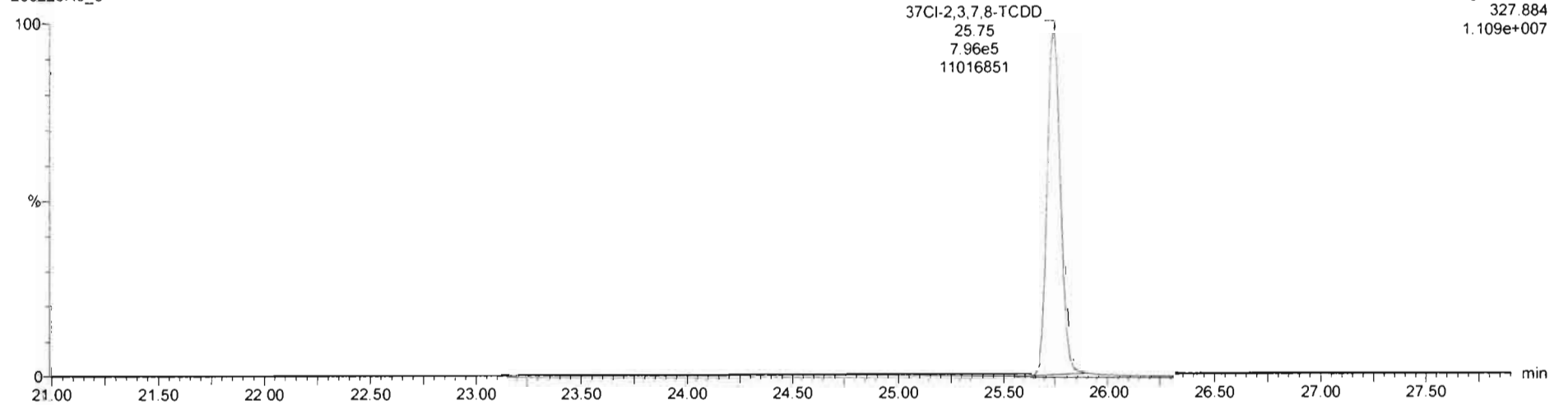
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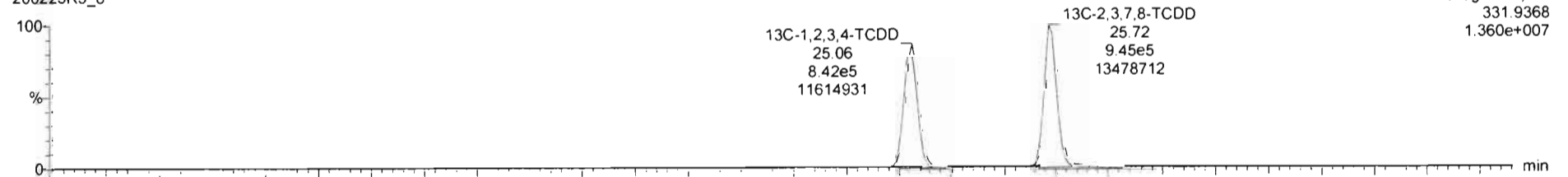
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200225R3\_8

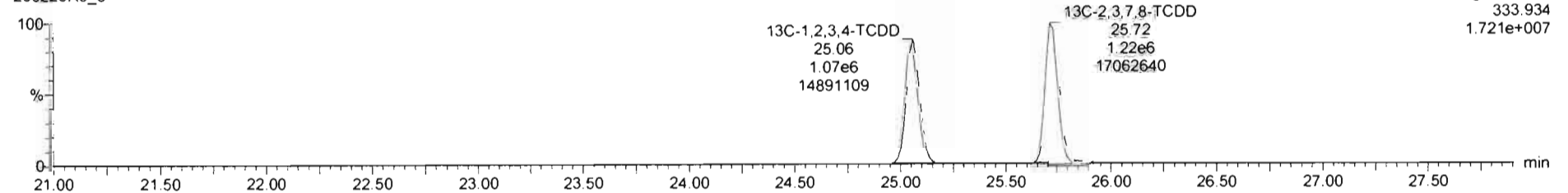


13C-1,2,3,4-TCDD

200225R3\_8



200225R3\_8



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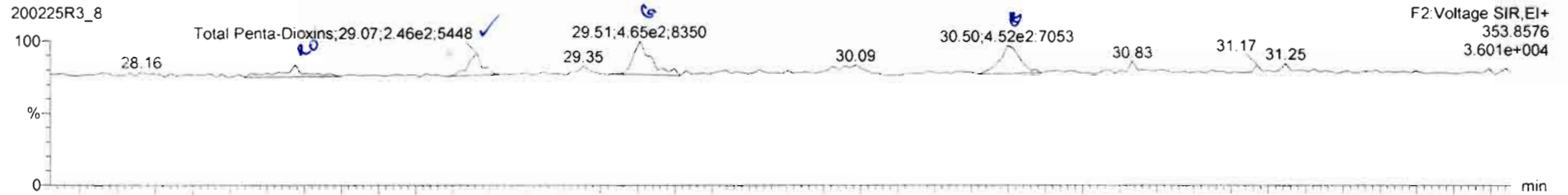
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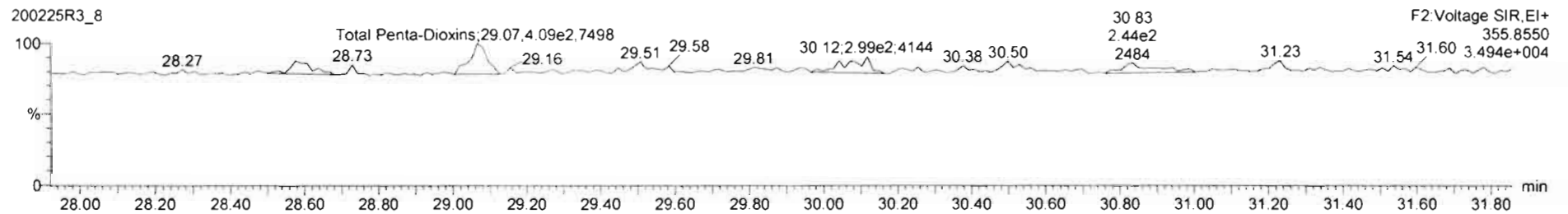
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1,2,3,7,8-PeCDD

200225R3\_8

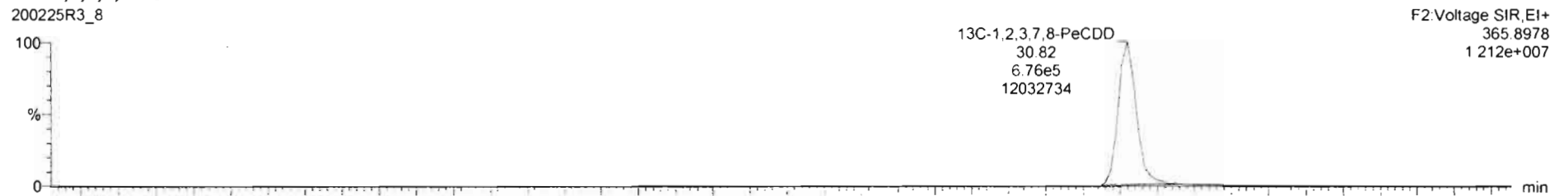


200225R3\_8

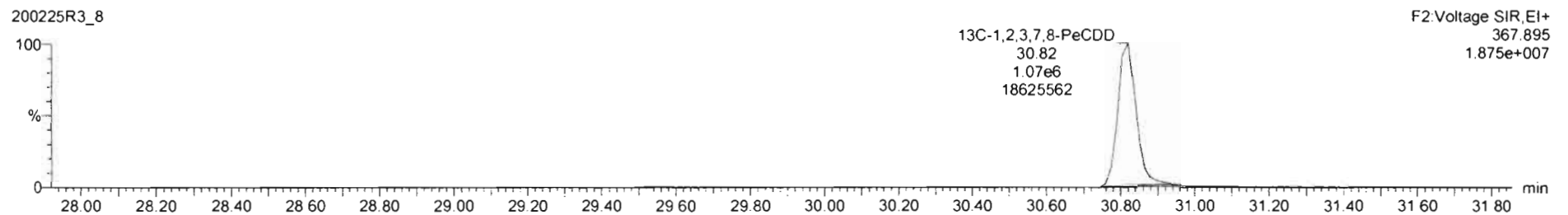


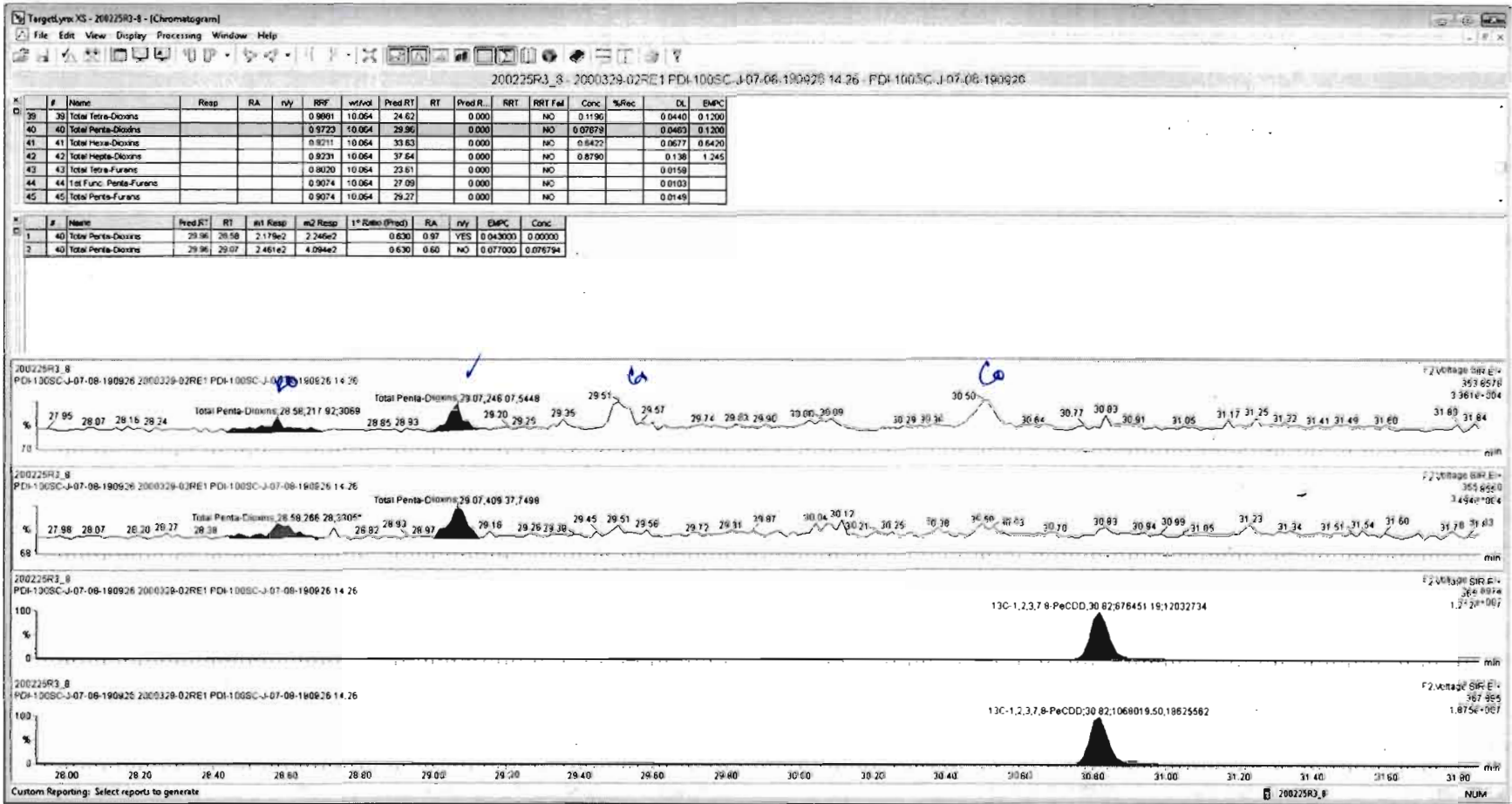
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200225R3\_8



200225R3\_8





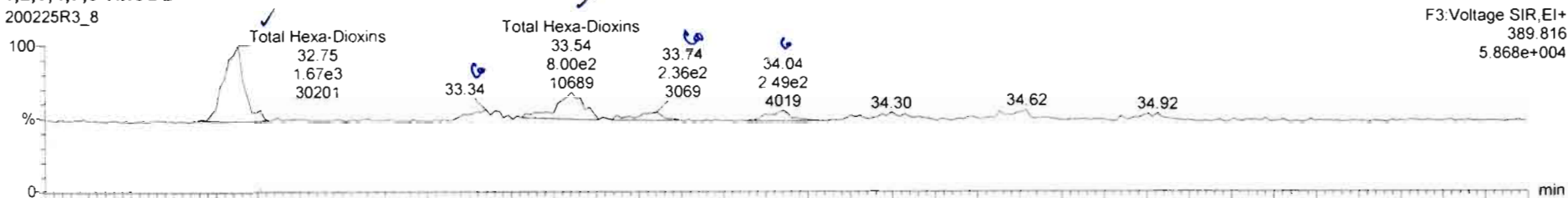
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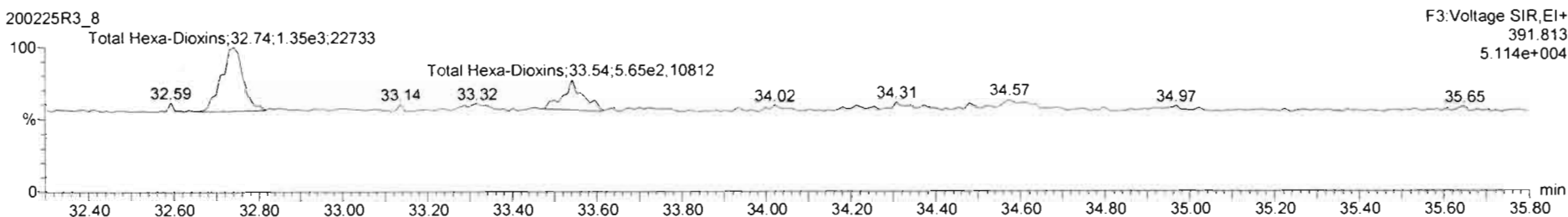
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1,2,3,4,7,8-HxCDD

200225R3\_8

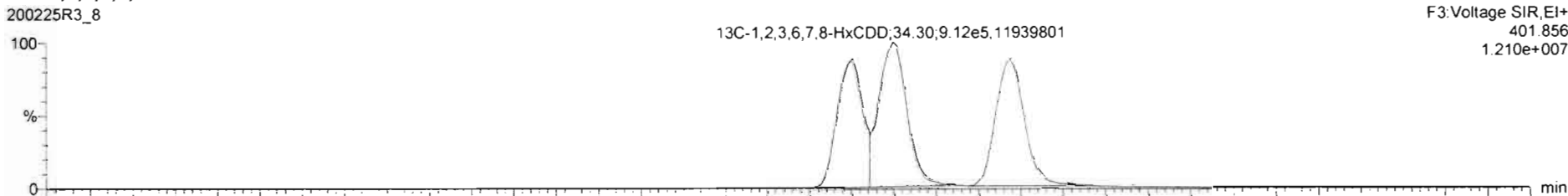


200225R3\_8

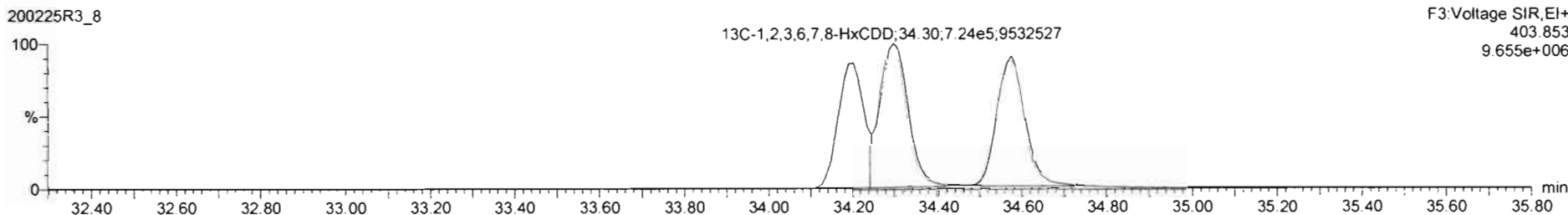


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200225R3\_8



200225R3\_8





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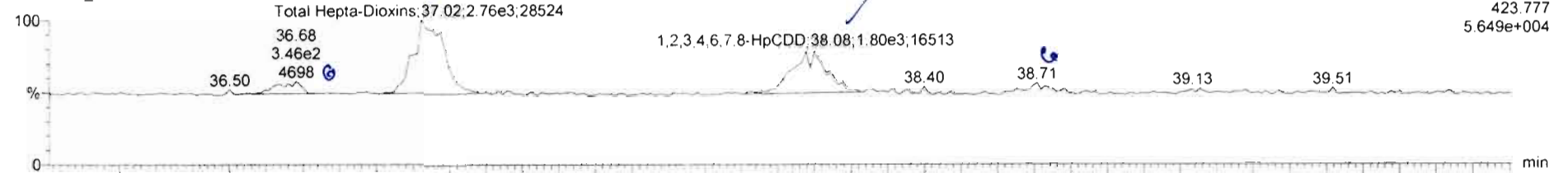
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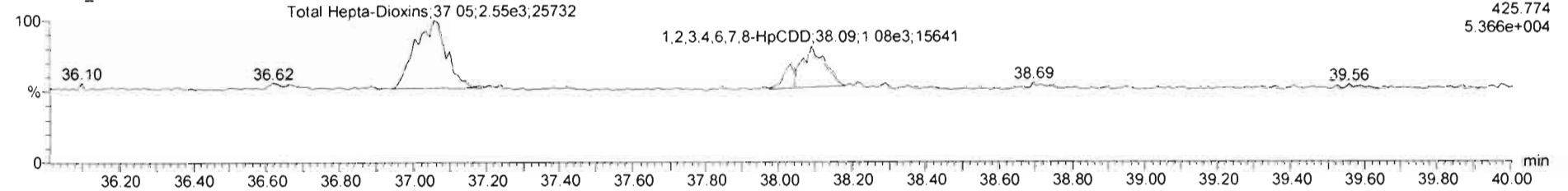
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1,2,3,4,6,7,8-HpCDD

200225R3\_8

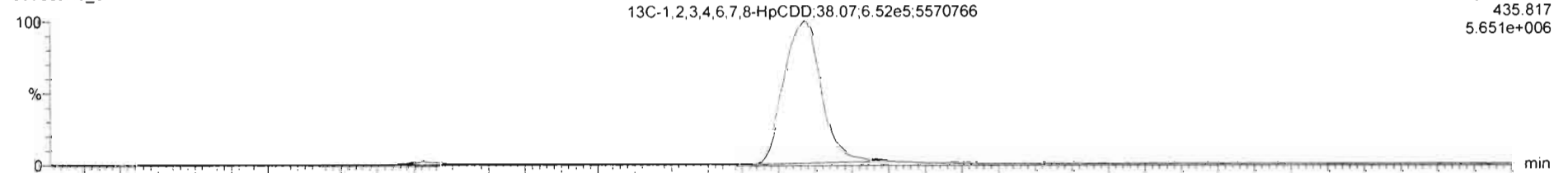


200225R3\_8

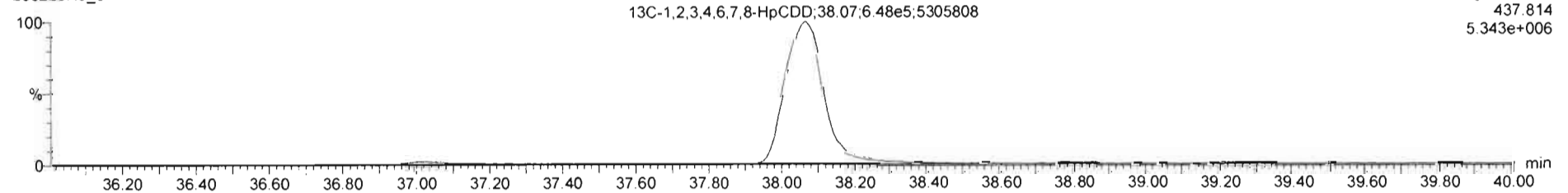


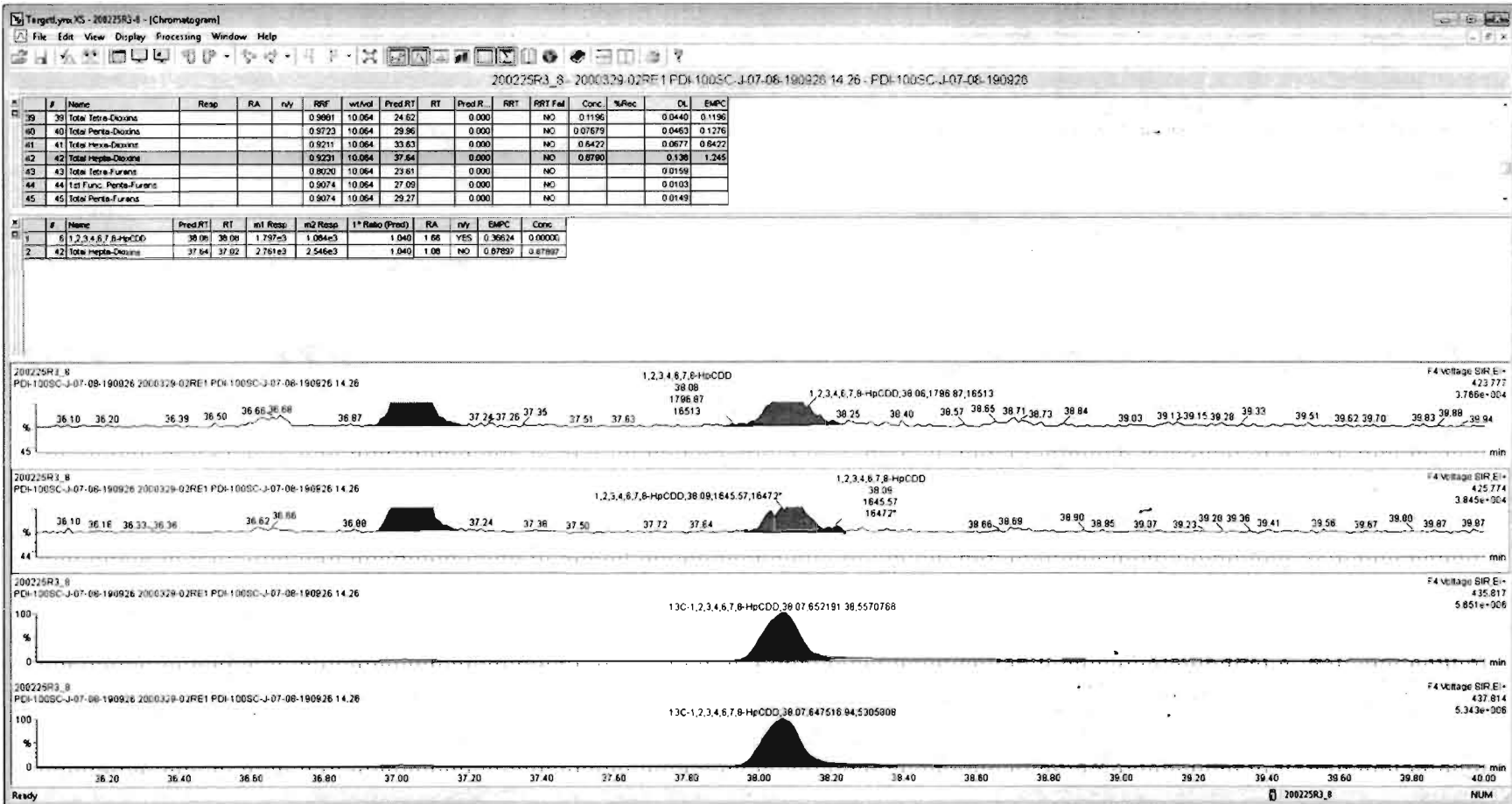
13C-1,2,3,4,6,7,8-HpCDD

200225R3\_8



200225R3\_8



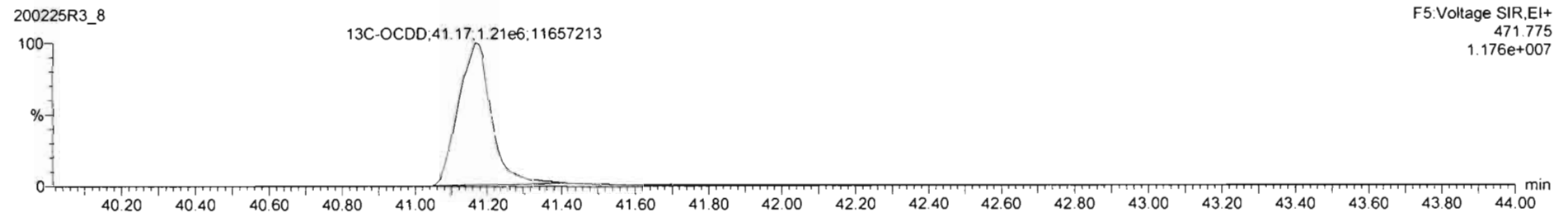
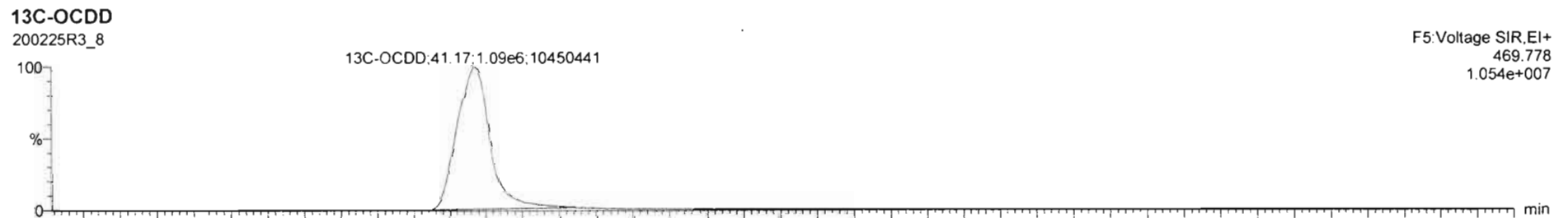
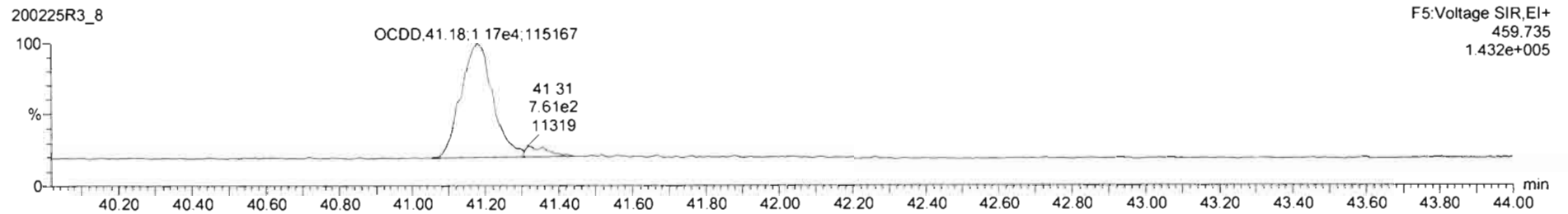
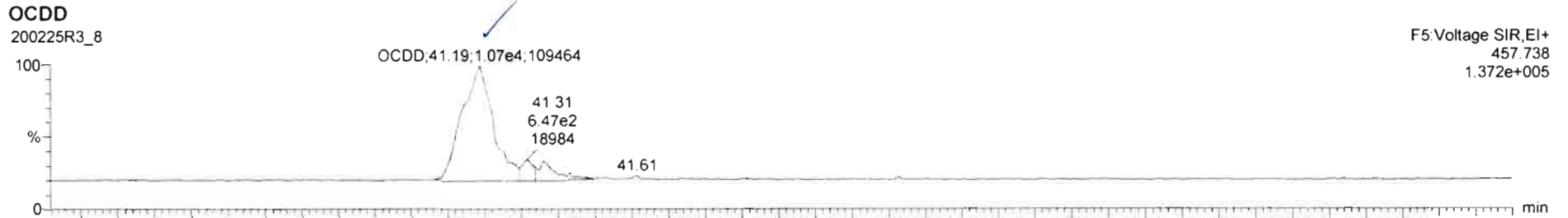


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Printed: Wednesday, February 26, 2020 08:41:57 Pacific Standard Time

Name: 200225R3\_8, Date: 25-Feb-2020, Time: 18:38:19, ID: 2000329-02RE1 PDI-100SC-J-07-08-190926 14.26, Description: PDI-100SC-J-07-08-190926



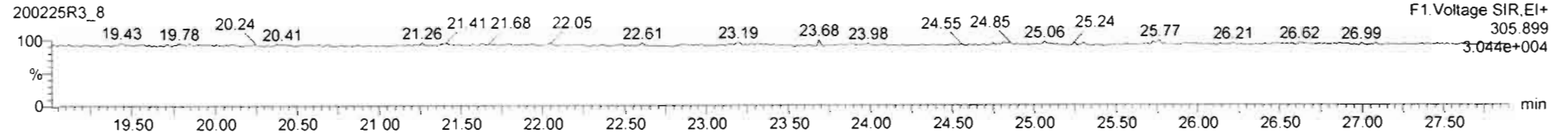
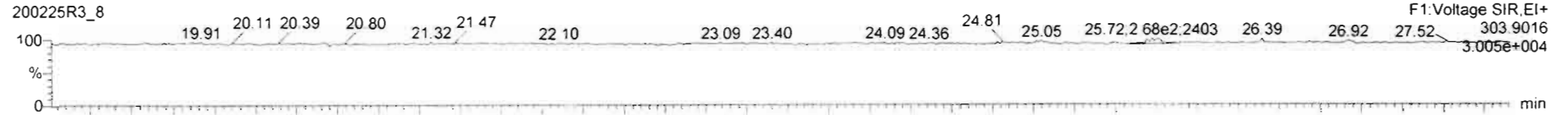
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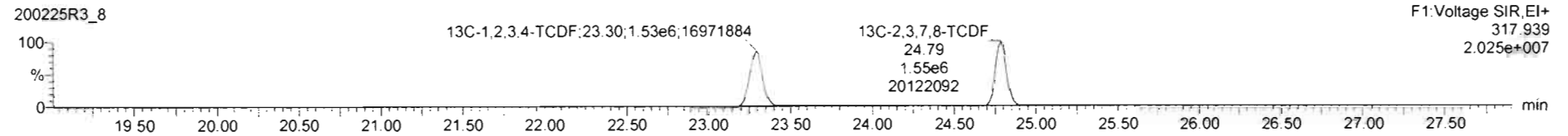
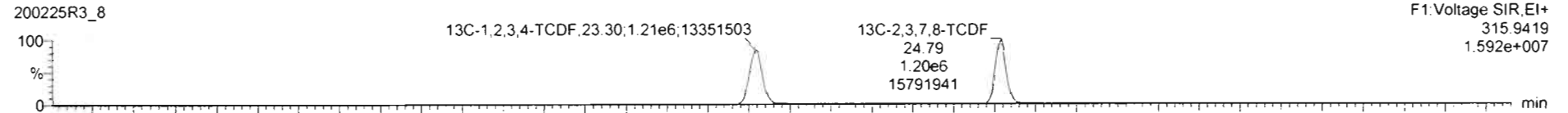
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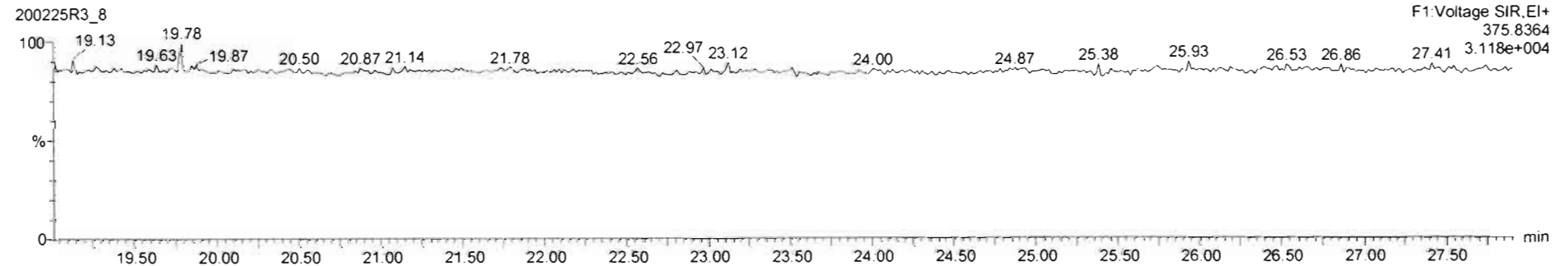
2,3,7,8-TCDF



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



DPE1



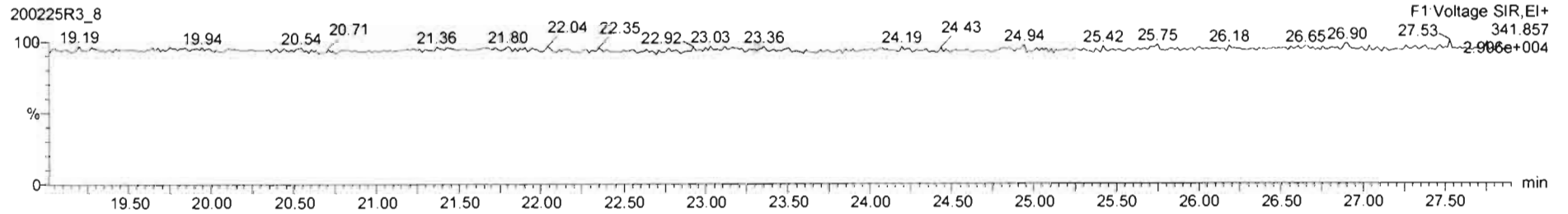
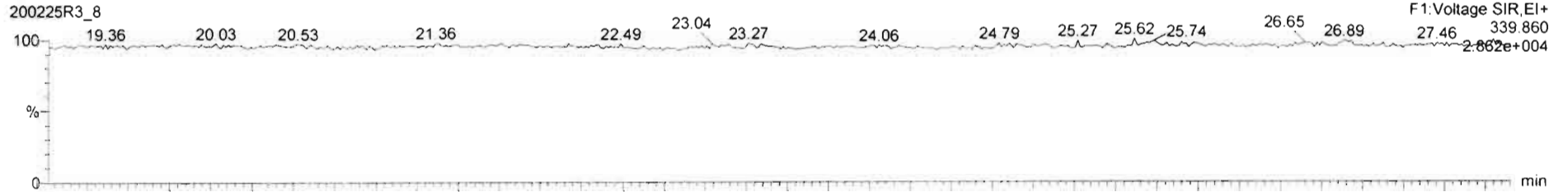
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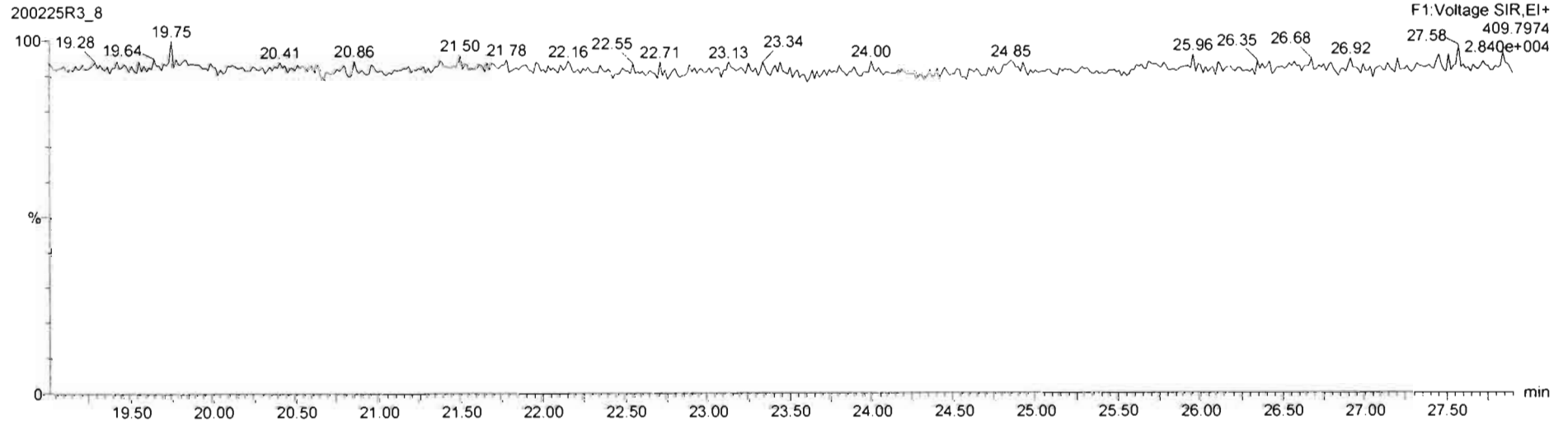
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1st Func. Penta-Furans



DPE6



Dataset: Untitled

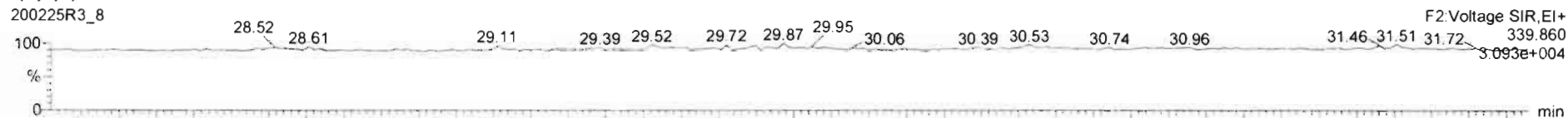
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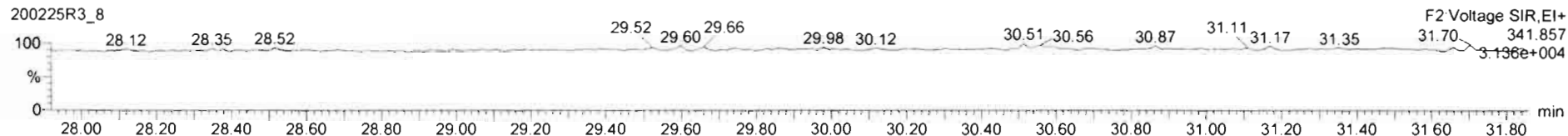
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1,2,3,7,8-PeCDF

200225R3\_8

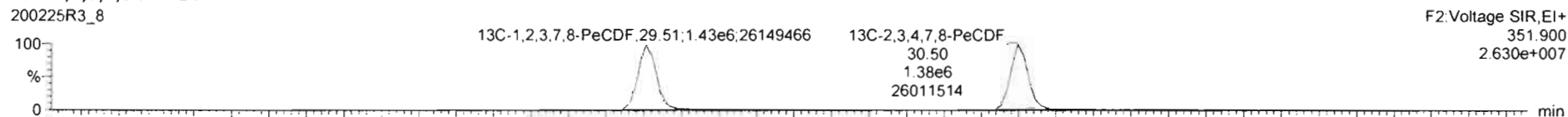


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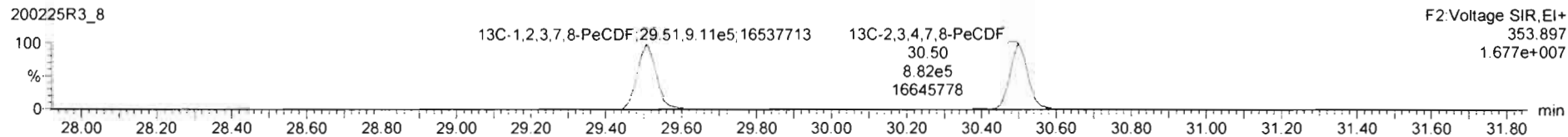


13C-1,2,3,7,8-PeCDF

200225R3\_8

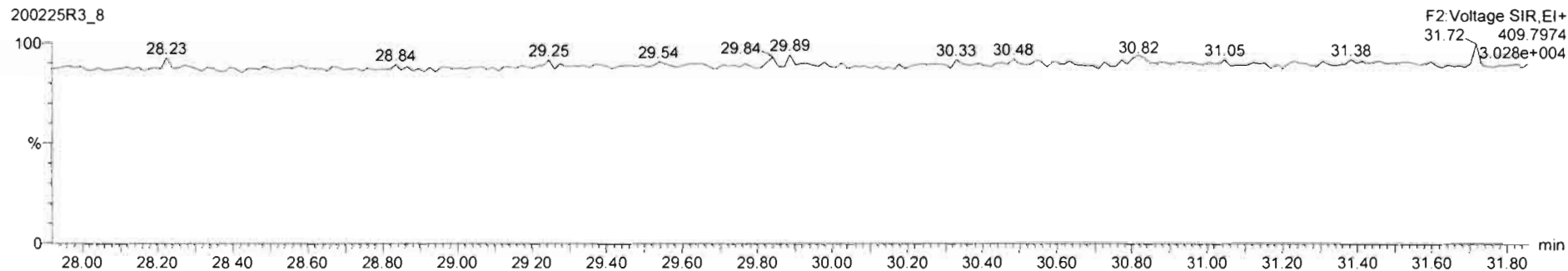


200225R3\_8



DPE2

200225R3\_8



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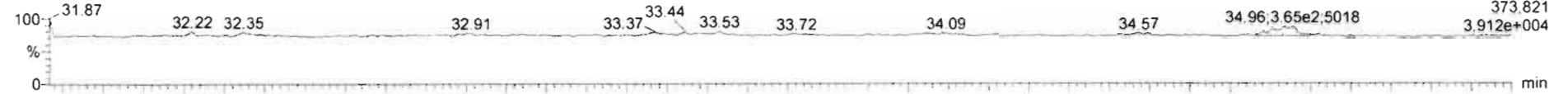
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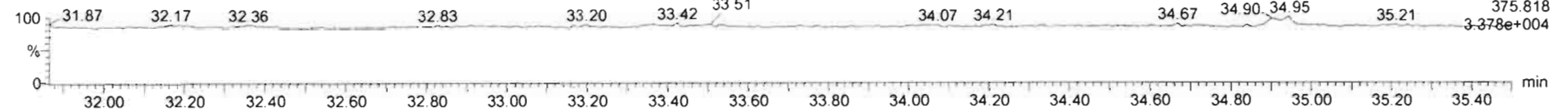
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**1,2,3,4,7,8-HxCDF**

200225R3\_8

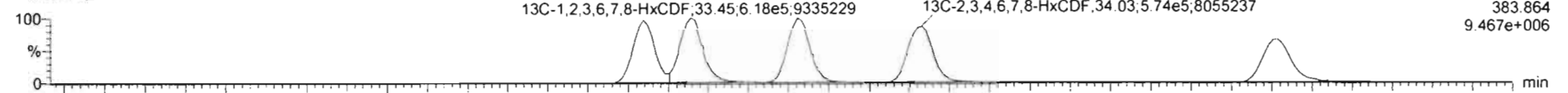


200225R3\_8

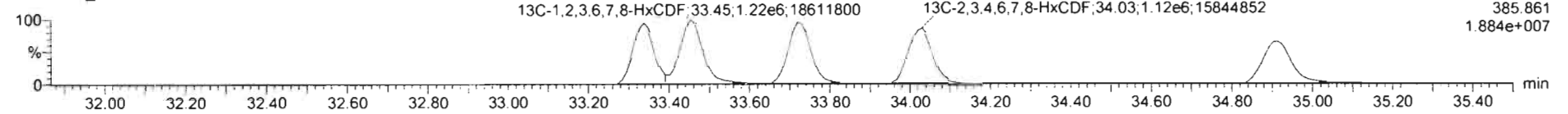


**13C-1,2,3,4,7,8-HxCDF**

200225R3\_8

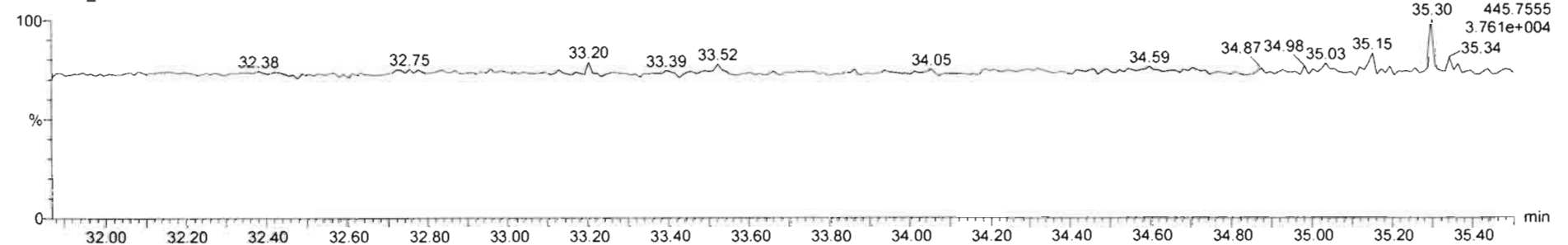


200225R3\_8



**DPE3**

200225R3\_8

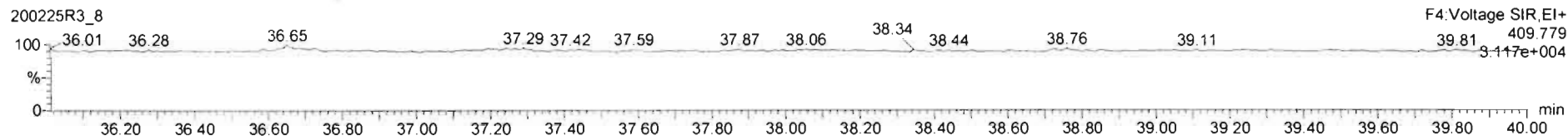
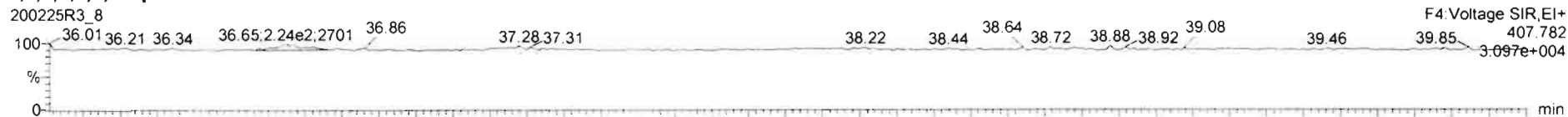


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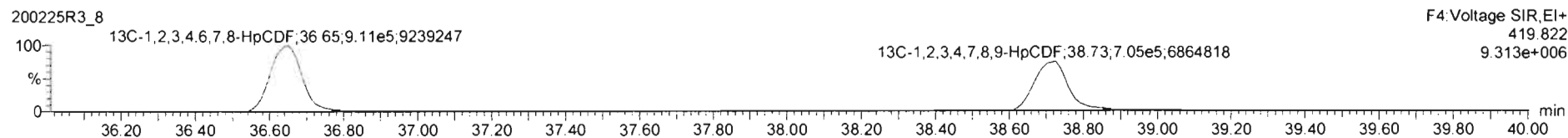
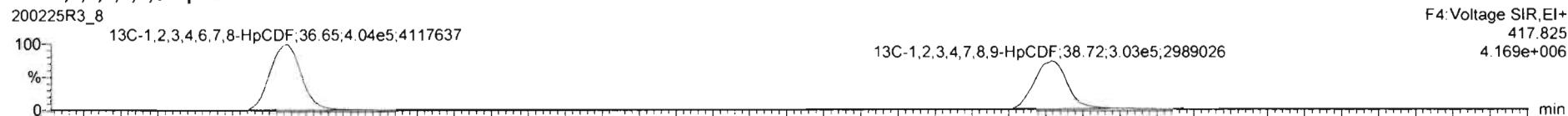
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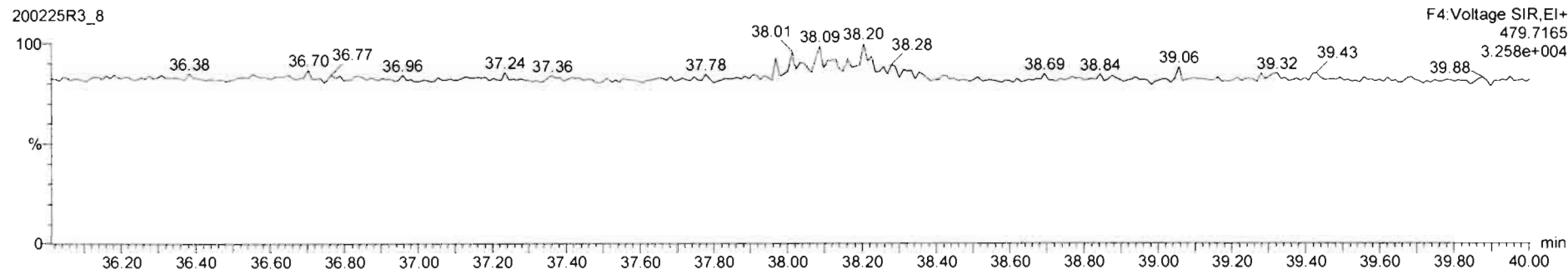
1,2,3,4,6,7,8-HpCDF



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



DPE4

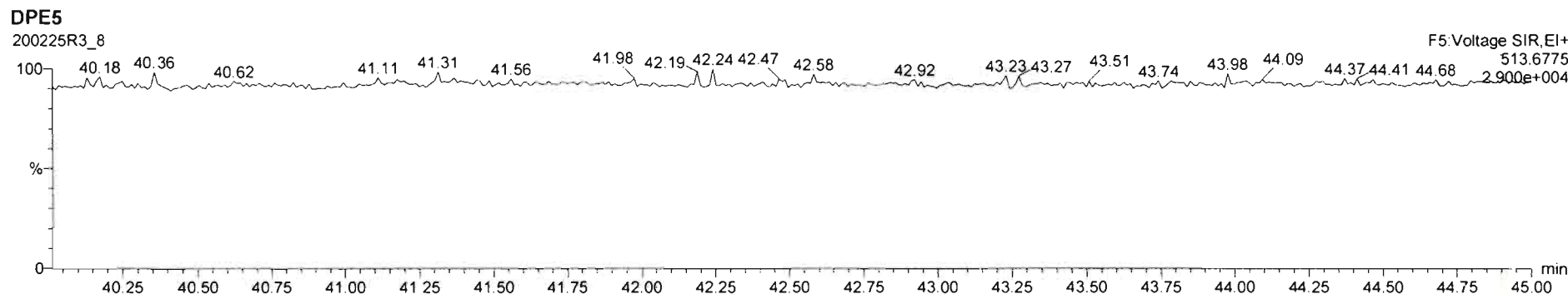
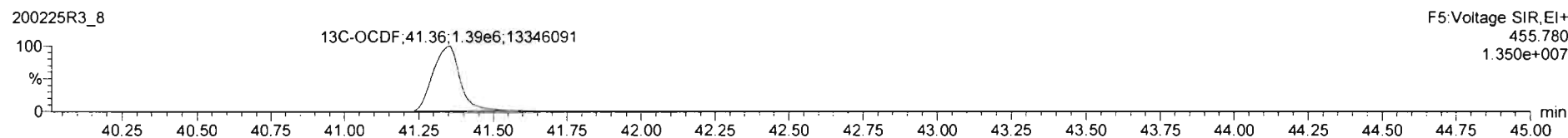
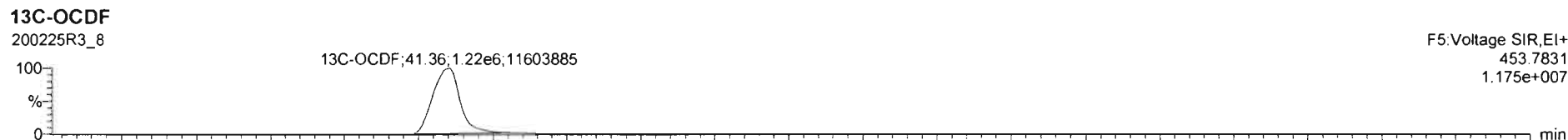
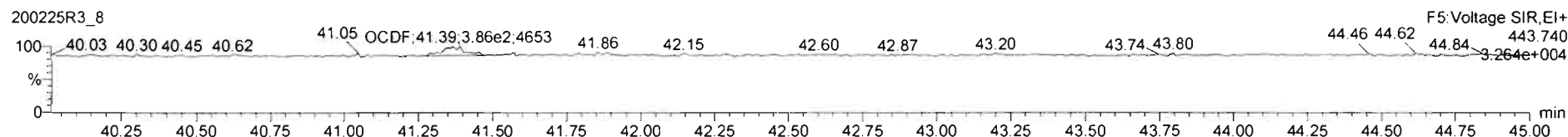
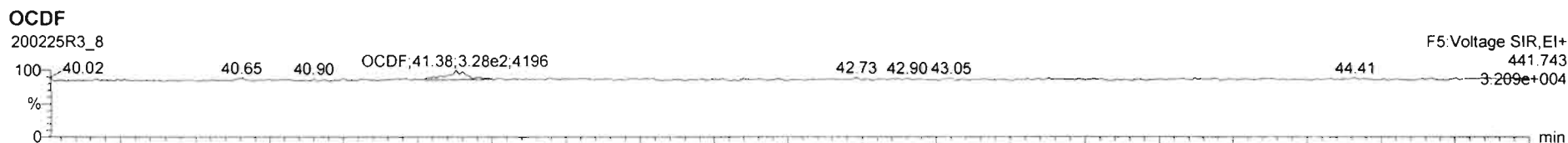




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Last Altered: Wednesday, February 26, 2020 08:41:51 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:41:57 Pacific Standard Time

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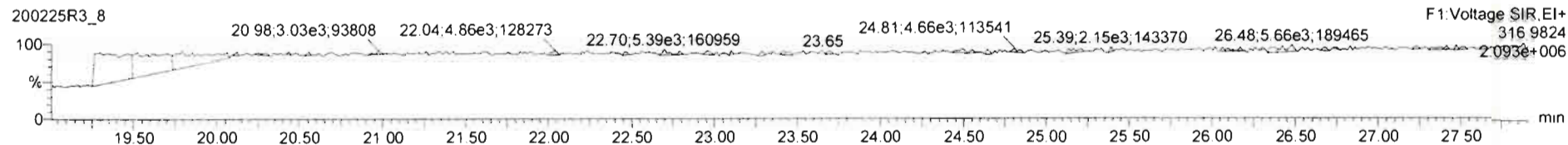


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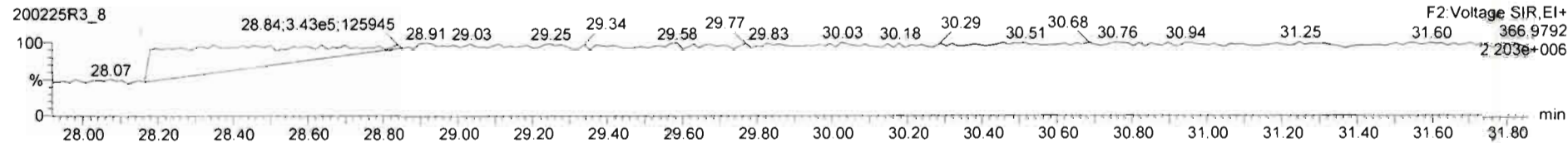
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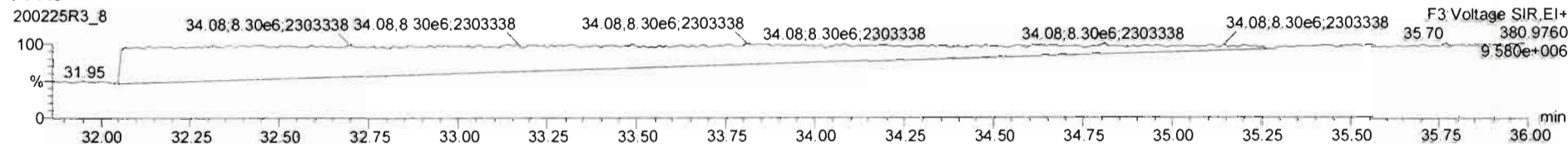
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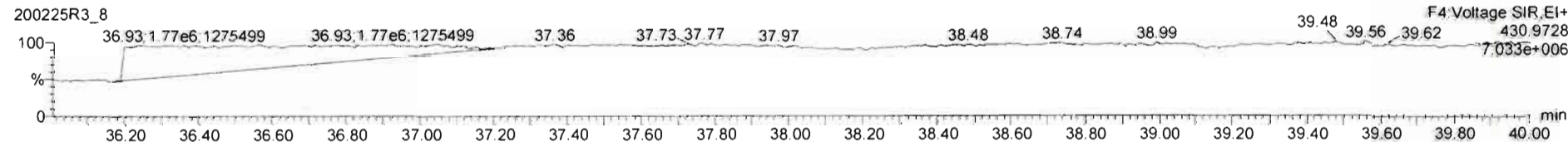
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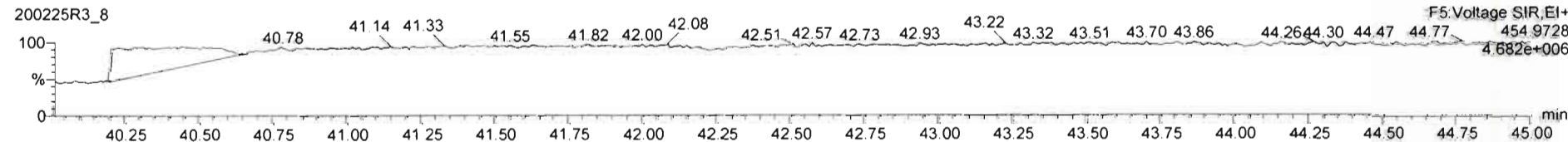
PFK3



PFK4



PFK5



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-9.qld

Last Altered: Wednesday, February 26, 2020 12:02:43 Pacific Standard Time

Printed: Wednesday, February 26, 2020 13:59:49 Pacific Standard Time

*BL 02/26/20*  
*02/27/20*

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	2024.203	0.277	YES	0.988	10.059	✓ 25.75	25.74	1.00	1.00	NO	0.1766		0.0447	0.08800
2	2 1,2,3,7,8-PeCDD	602.774	0.536	NO	0.972	10.059	30.84	30.83	1.00	1.00	NO	0.06636		0.0363	0.06600
3	3 1,2,3,4,7,8-HxCDD	447.421	1.036	YES	1.07	10.059	34.20	34.20	1.00	1.00	NO	0.05858		0.0457	0.05400
4	4 1,2,3,6,7,8-HxCDD	613.742	1.070	NO	0.921	10.059	34.30	34.31	1.00	1.00	NO	0.07760		0.0475	0.07800
5	5 1,2,3,7,8,9-HxCDD	1096.909	1.167	NO	0.918	10.059	34.60	34.57	1.00	1.00	NO	0.1507		0.0543	0.1510
6	6 1,2,3,4,6,7,8-HpCDD	8028.894	1.095	NO	0.923	10.059	38.07	38.08	1.00	1.00	NO	1.260		0.139	1.260
7	7 OCDD	105047.469	0.929	NO	0.975	10.059	41.18	41.19	1.00	1.00	NO	17.41		0.116	17.41
8	8 2,3,7,8-TCDF				0.802	10.059	24.80		1.00		NO			0.0310	
9	9 1,2,3,7,8-PeCDF				0.907	10.059	29.53		1.00		NO			0.0272	
10	10 2,3,4,7,8-PeCDF				0.952	10.059	30.53		1.00		NO			0.0254	
11	11 1,2,3,4,7,8-HxCDF				0.862	10.059	33.34		1.00		NO			0.0423	
12	12 1,2,3,6,7,8-HxCDF				0.841	10.059	33.47		1.00		NO			0.0407	
13	13 2,3,4,6,7,8-HxCDF				0.898	10.059	34.05		1.00		NO			0.0419	
14	14 1,2,3,7,8,9-HxCDF	444.482	1.414	NO	0.858	10.059	34.90	34.92	1.00	1.00	NO	0.06466		0.0589	0.06500
15	15 1,2,3,4,6,7,8-HpCDF				0.851	10.059	36.68		1.00		NO			0.0529	
16	16 1,2,3,4,7,8,9-HpCDF				0.980	10.059	38.71		1.00		NO			0.0627	
17	17 OCDF				0.806	10.059	41.36		1.00		NO			0.0602	
18	18 13C-2,3,7,8-TCDD	2306504.0...	0.774	NO	1.20	10.059	25.69	25.72	1.03	1.03	NO	183.8	92.4	0.132	
19	19 13C-1,2,3,7,8-PeCDD	1857542.6...	0.626	NO	0.967	10.059	30.43	30.82	1.22	1.23	NO	183.5	92.3	0.212	
20	20 13C-1,2,3,4,7,8-HxCDD	1418276.5...	1.269	NO	0.874	10.059	34.19	34.19	1.01	1.01	NO	165.3	83.2	0.225	
21	21 13C-1,2,3,6,7,8-HxCDD	1707200.7...	1.265	NO	1.05	10.059	34.29	34.30	1.02	1.02	NO	166.3	83.6	0.188	
22	22 13C-1,2,3,7,8,9-HxCDD	1575838.5...	1.241	NO	0.974	10.059	34.60	34.56	1.03	1.02	NO	164.8	82.9	0.202	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1372147.3...	1.047	NO	0.747	10.059	38.17	38.06	1.13	1.13	NO	187.1	94.1	0.379	
24	24 13C-OCDD	2461752.8...	0.885	NO	0.707	10.059	41.07	41.18	1.22	1.22	NO	355.0	89.3	0.256	
25	25 13C-2,3,7,8-TCDF	2876380.5...	0.783	NO	1.07	10.059	24.87	24.78	0.99	0.99	NO	180.6	90.8	0.215	
26	26 13C-1,2,3,7,8-PeCDF	2501171.8...	1.591	NO	1.00	10.059	29.46	29.51	1.18	1.18	NO	187.0	84.0	0.232	
27	27 13C-2,3,4,7,8-PeCDF	2410147.0...	1.584	NO	0.962	10.059	30.42	30.50	1.21	1.22	NO	167.6	84.3	0.242	
28	28 13C-1,2,3,4,7,8-HxCDF	1736321.6...	0.514	NO	1.05	10.059	33.32	33.34	0.99	0.99	NO	168.6	84.8	0.287	
29	29 13C-1,2,3,6,7,8-HxCDF	1965485.3...	0.518	NO	1.19	10.059	33.42	33.46	0.99	0.99	NO	168.3	84.6	0.253	
30	30 13C-2,3,4,6,7,8-HxCDF	1853305.3...	0.513	NO	1.07	10.059	34.03	34.02	1.01	1.01	NO	177.1	89.1	0.283	
31	31 13C-1,2,3,7,8,9-HxCDF	1593381.8...	0.518	NO	0.922	10.059	34.94	34.90	1.04	1.04	NO	176.0	88.5	0.327	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-9.qld

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Printed: Wednesday, February 26, 2020 13:59:49 Pacific Standard Time

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1384626.9...	0.444	NO	0.767	10.059	36.69	36.64	1.09	1.09	NO	183.9	92.5	0.407	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1081604.3...	0.441	NO	0.552	10.059	38.71	38.71	1.15	1.15	NO	199.5	100	0.565	
34	34 13C-OCDF	2858991.5...	0.877	NO	0.789	10.059	41.31	41.36	1.23	1.23	NO	369.0	92.8	0.289	
35	35 37Cl-2,3,7,8-TCDD	877444.625			1.18	10.059	25.72	25.74	1.03	1.03	NO	71.23	89.6	0.0299	
36	36 13C-1,2,3,4-TCDD	2082426.6...	0.793	NO	1.00	10.059	25.11	25.05	1.00	1.00	NO	198.8	100	0.158	
37	37 13C-1,2,3,4-TCDF	2972696.5...	0.787	NO	1.00	10.059	23.37	23.28	1.00	1.00	NO	198.8	100	0.229	
38	38 13C-1,2,3,4,6,9-HxCDF	1951564.6...	0.517	NO	1.00	10.059	33.71	33.72	1.00	1.00	NO	198.8	100	0.301	
39	39 Total Tetra-Dioxins				0.988	10.059	24.62		0.00		NO	0.1774		0.0447	0.3140
40	40 Total Penta-Dioxins				0.972	10.059	29.96		0.00		NO	0.2506		0.0363	0.4090
41	41 Total Hexa-Dioxins				0.921	10.059	33.63		0.00		NO	1.532		0.0514	1.586
42	42 Total Hepta-Dioxins				0.923	10.059	37.64		0.00		NO	3.434		0.139	3.434
43	43 Total Tetra-Furans				0.802	10.059	23.61		0.00		NO			0.0132	
44	44 1st Func. Penta-Furans				0.907	10.059	27.09		0.00		NO			0.00959	
45	45 Total Penta-Furans				0.907	10.059	29.27		0.00		NO			0.0121	
46	46 Total Hexa-Furans				0.898	10.059	33.56		0.00		NO	0.1034		0.0437	0.1030
47	47 Total Hepta-Furans				0.851	10.059	37.83		0.00		NO			0.0285	

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Last Altered: Wednesday, February 26, 2020 12:02:43 Pacific Standard Time

Printed: Wednesday, February 26, 2020 14:00:03 Pacific Standard Time

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

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

**Tetra-Dioxins**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	39 Total Tetra-Dioxins	6.03e2	2.31e6	0.784	NO	24.62	26.08	0.05264	0.05300
2	1 2,3,7,8-TCDD	2.02e3	2.31e6	0.277	YES	25.75	25.74	0.0000	0.08800
3	39 Total Tetra-Dioxins	0.00e0	2.31e6	1.372	YES	24.62	25.00	0.0000	0.04900
4	39 Total Tetra-Dioxins	1.43e3	2.31e6	0.781	NO	24.62	23.44	0.1247	0.1250

**Penta-Dioxins**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	5.90e2	1.86e6	0.638	NO	29.96	28.61	0.06492	0.06500
2	40 Total Penta-Dioxins	0.00e0	1.86e6	0.777	YES	29.96	31.22	0.0000	0.04600
3	2 1,2,3,7,8-PeCDD	6.03e2	1.86e6	0.536	NO	30.84	30.83	0.06636	0.06600
4	40 Total Penta-Dioxins	8.63e2	1.86e6	0.594	NO	29.96	30.06	0.09499	0.09500
5	40 Total Penta-Dioxins	0.00e0	1.86e6	0.787	YES	29.96	29.07	0.0000	0.1120
6	40 Total Penta-Dioxins	2.21e2	1.86e6	0.622	NO	29.96	30.90	0.02434	0.02400

**Hexa-Dioxins**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	41 Total Hexa-Dioxins	6.07e3	0.00e0	1.110	NO	33.63	32.73	0.8357	0.8360
2	5 1,2,3,7,8,9-HxCDD	1.10e3	1.58e6	1.167	NO	34.60	34.57	0.1507	0.1510
3	4 1,2,3,6,7,8-HxCDD	6.14e2	1.71e6	1.070	NO	34.30	34.31	0.07760	0.07800
4	3 1,2,3,4,7,8-HxCDD	4.47e2	1.42e6	1.036	YES	34.20	34.20	0.0000	0.05400
5	41 Total Hexa-Dioxins	3.40e3	0.00e0	1.253	NO	33.63	33.54	0.4679	0.4680

**Hepta-Dioxins**

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	8.03e3	1.37e6	1.095	NO	38.07	38.08	1.260	1.260
2	42 Total Hepta-Dioxins	1.38e4	1.37e6	1.000	NO	37.64	37.04	2.174	2.174

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-9.qld

Last Altered: Wednesday, February 26, 2020 12:02:43 Pacific Standard Time  
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Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

**Tetra-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hexa-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	4.44e2	1.59e6	1.414	NO	34.90	34.92	0.06466	0.06500
2	46 Total Hexa-Furans	3.12e2	0.00e0	1.318	NO	33.56	34.96	0.03871	0.03900

**Hepta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

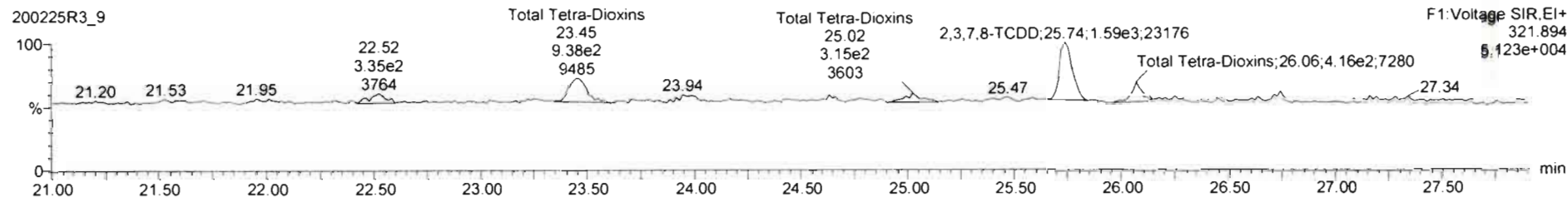
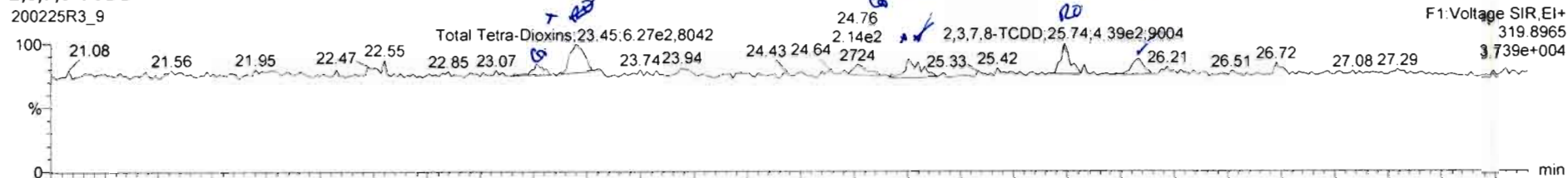
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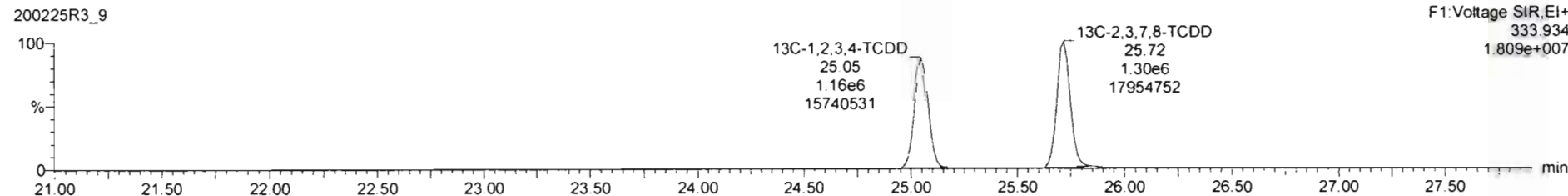
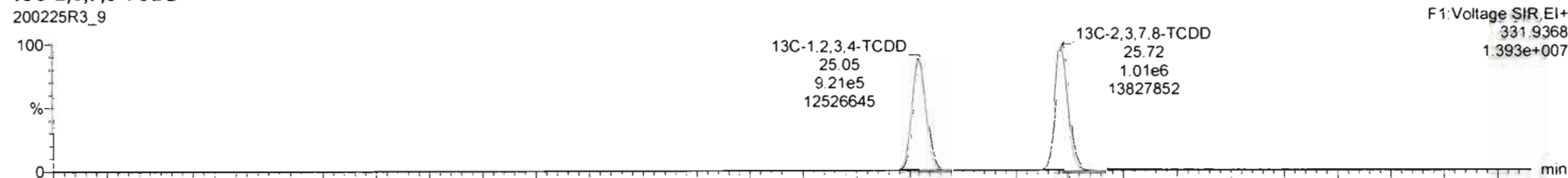
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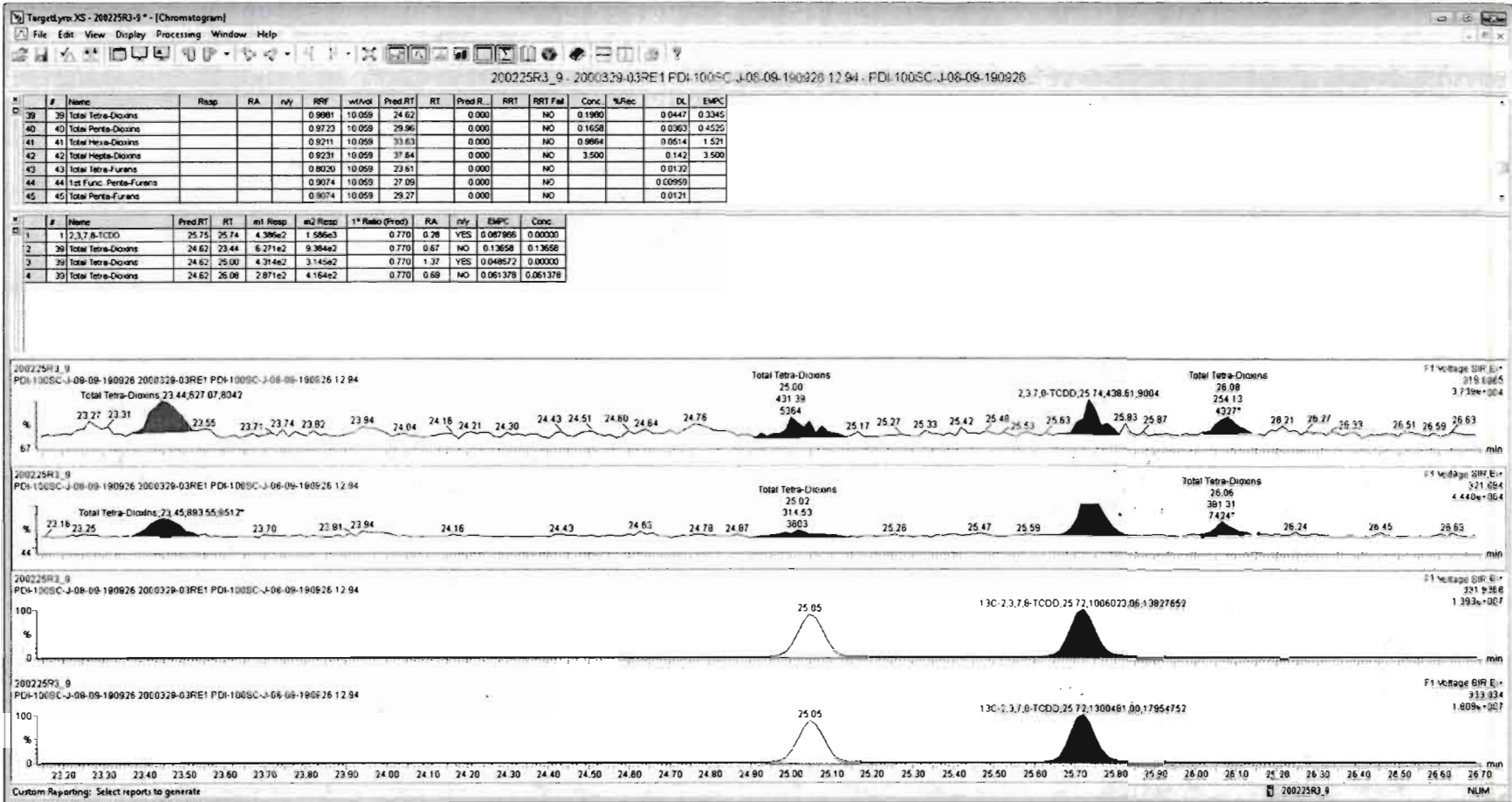
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2,3,7,8-TCDD



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







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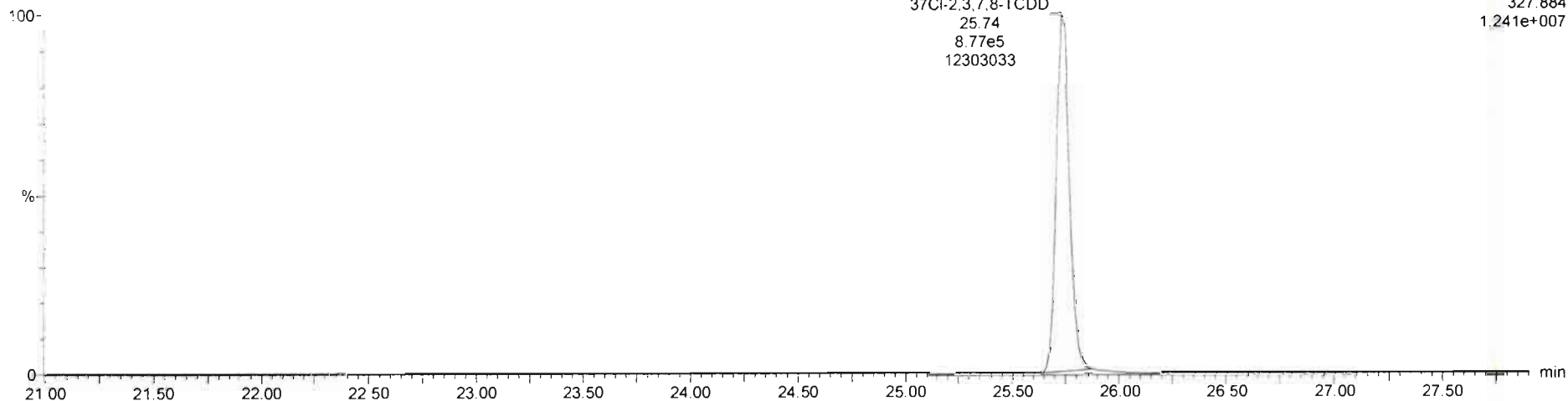
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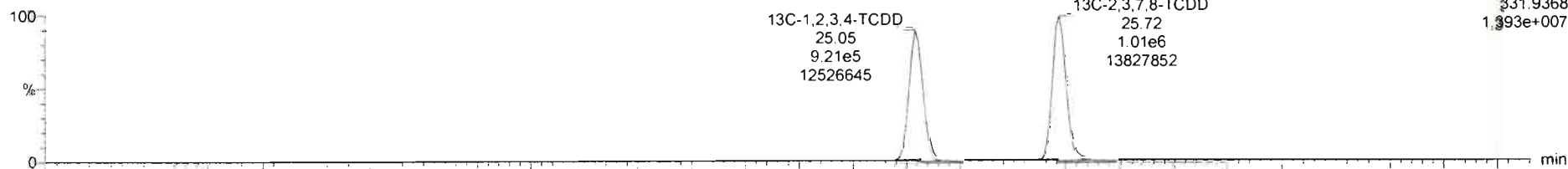
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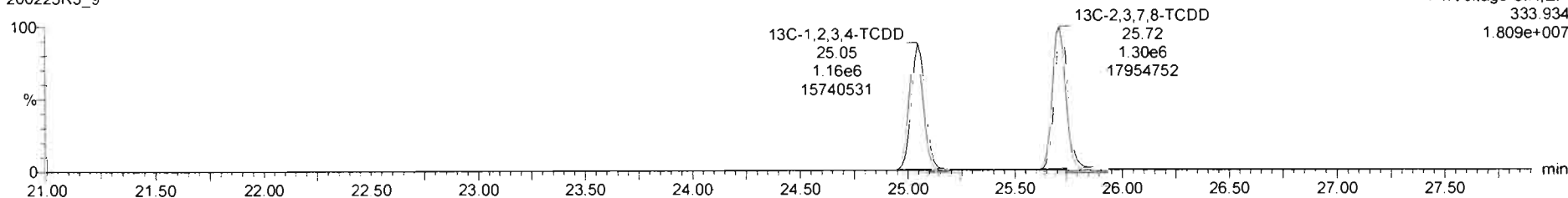


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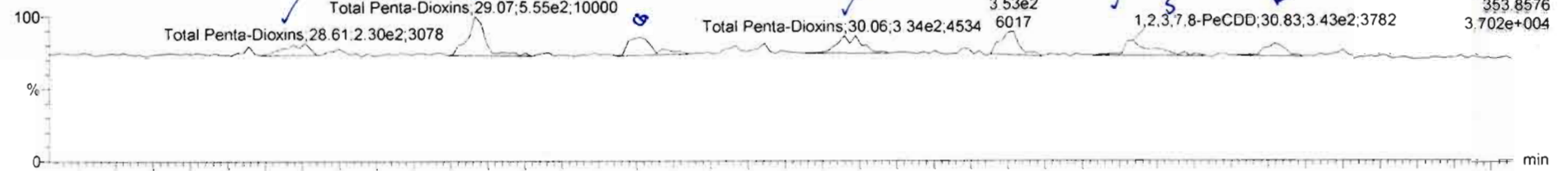
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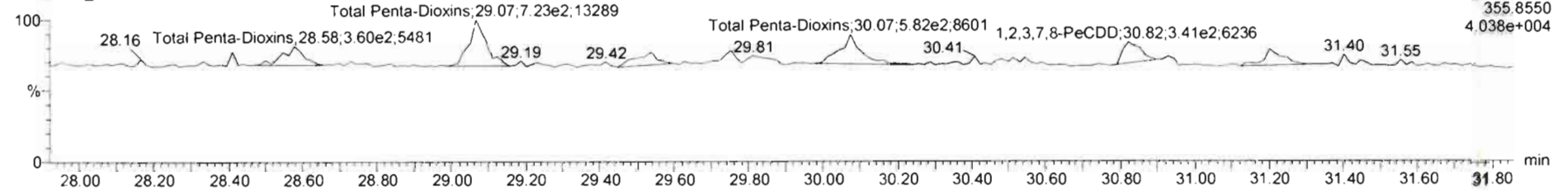
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1,2,3,7,8-PeCDD

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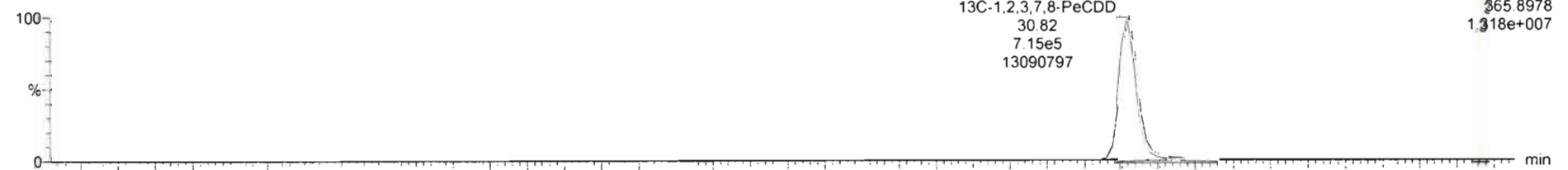


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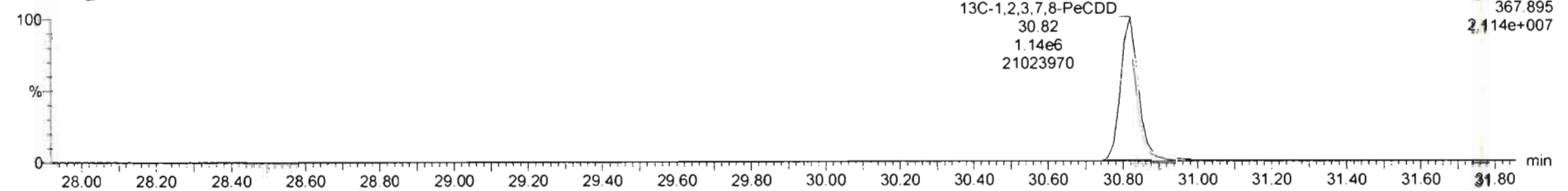


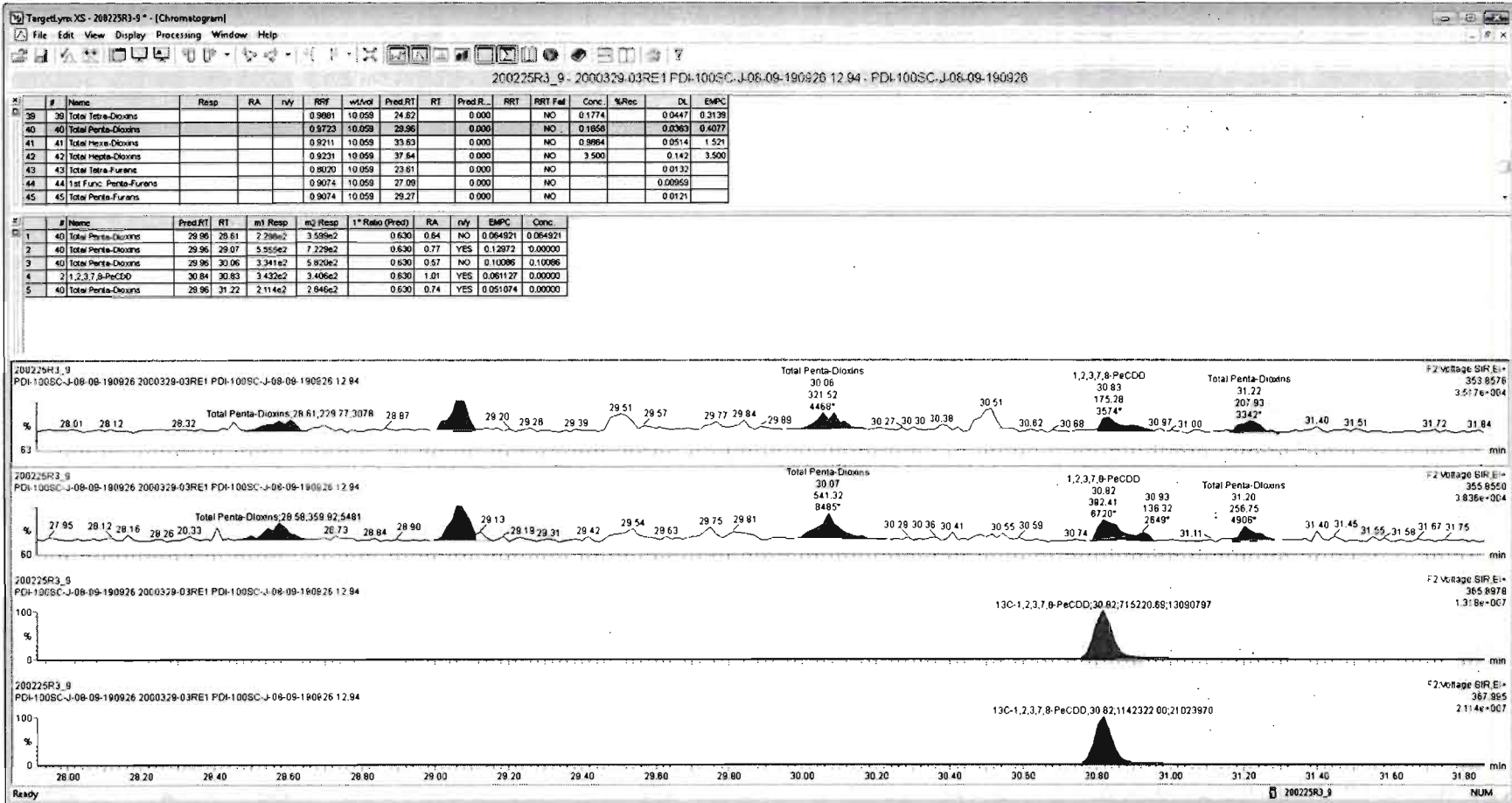
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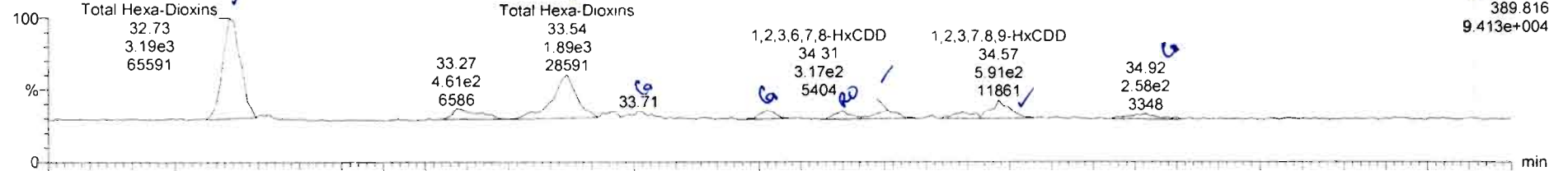
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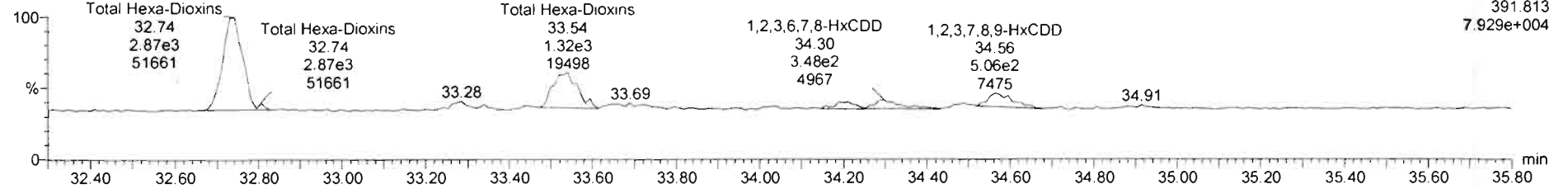
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1,2,3,4,7,8-HxCDD

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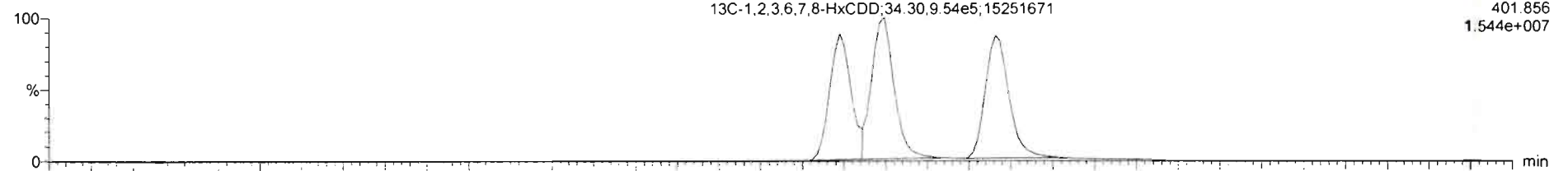


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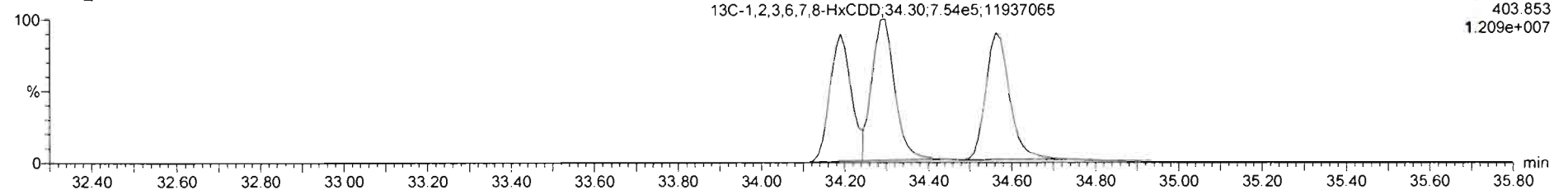


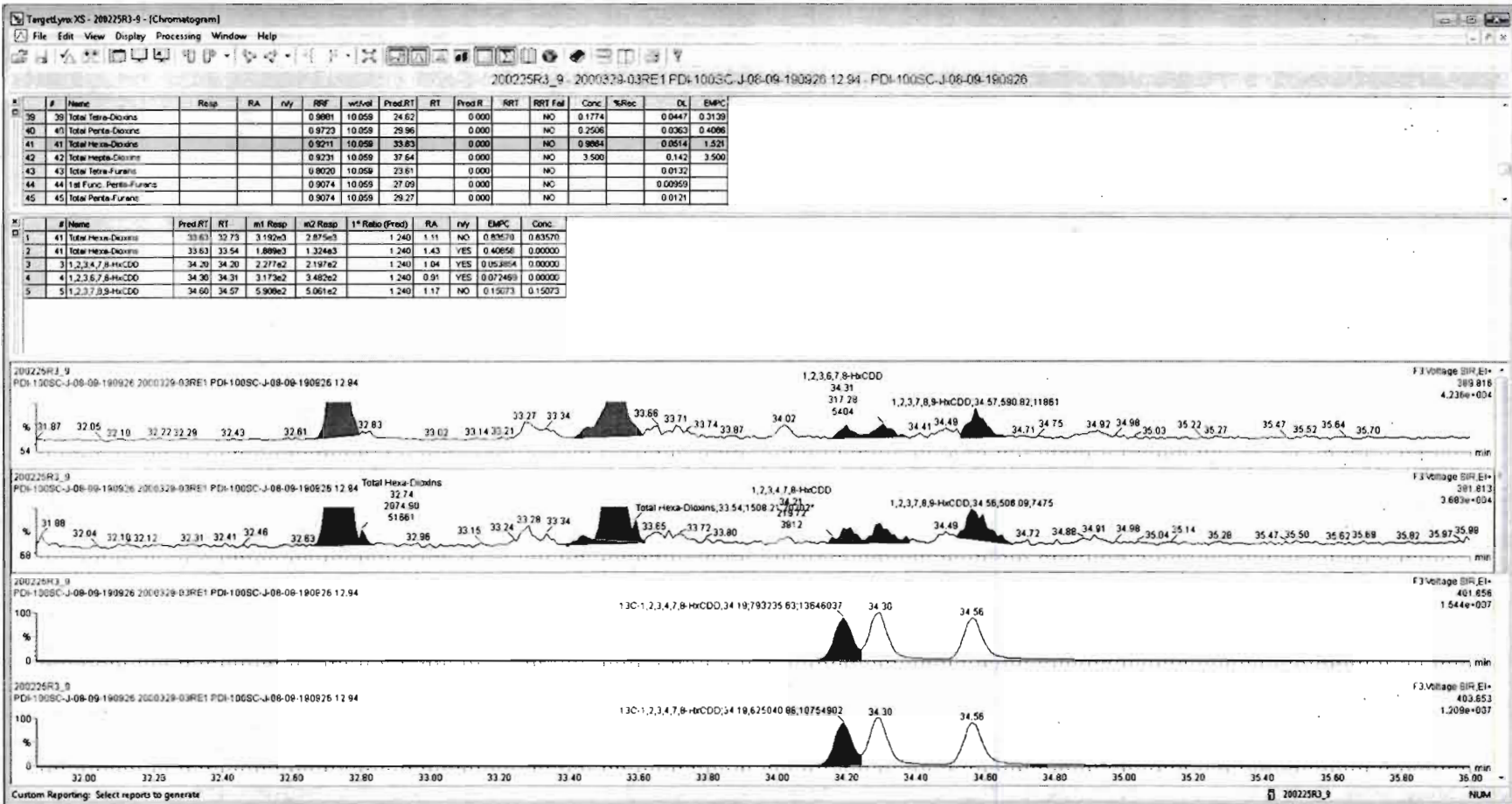
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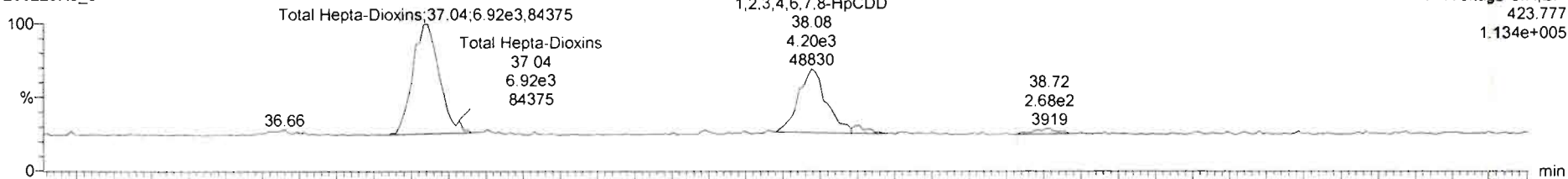
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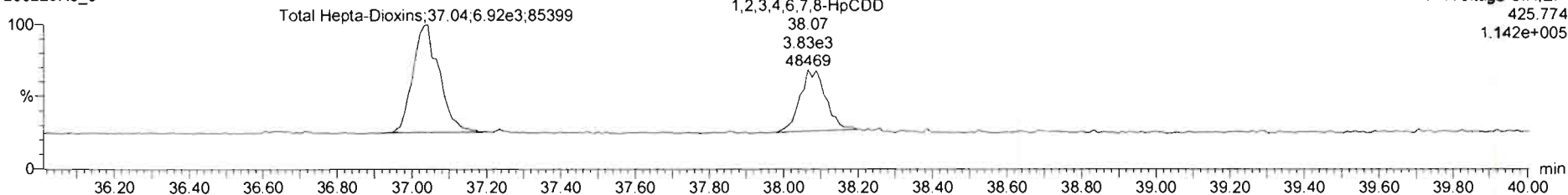
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1,2,3,4,6,7,8-HpCDD

200225R3\_9

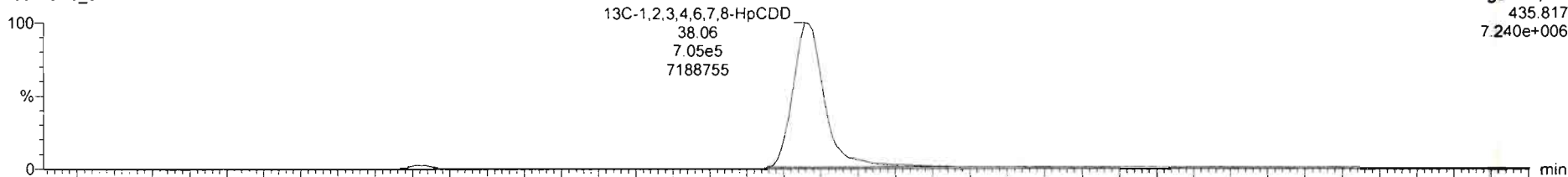


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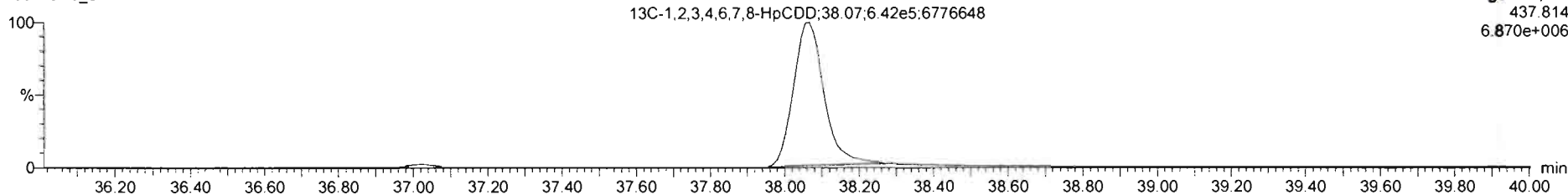


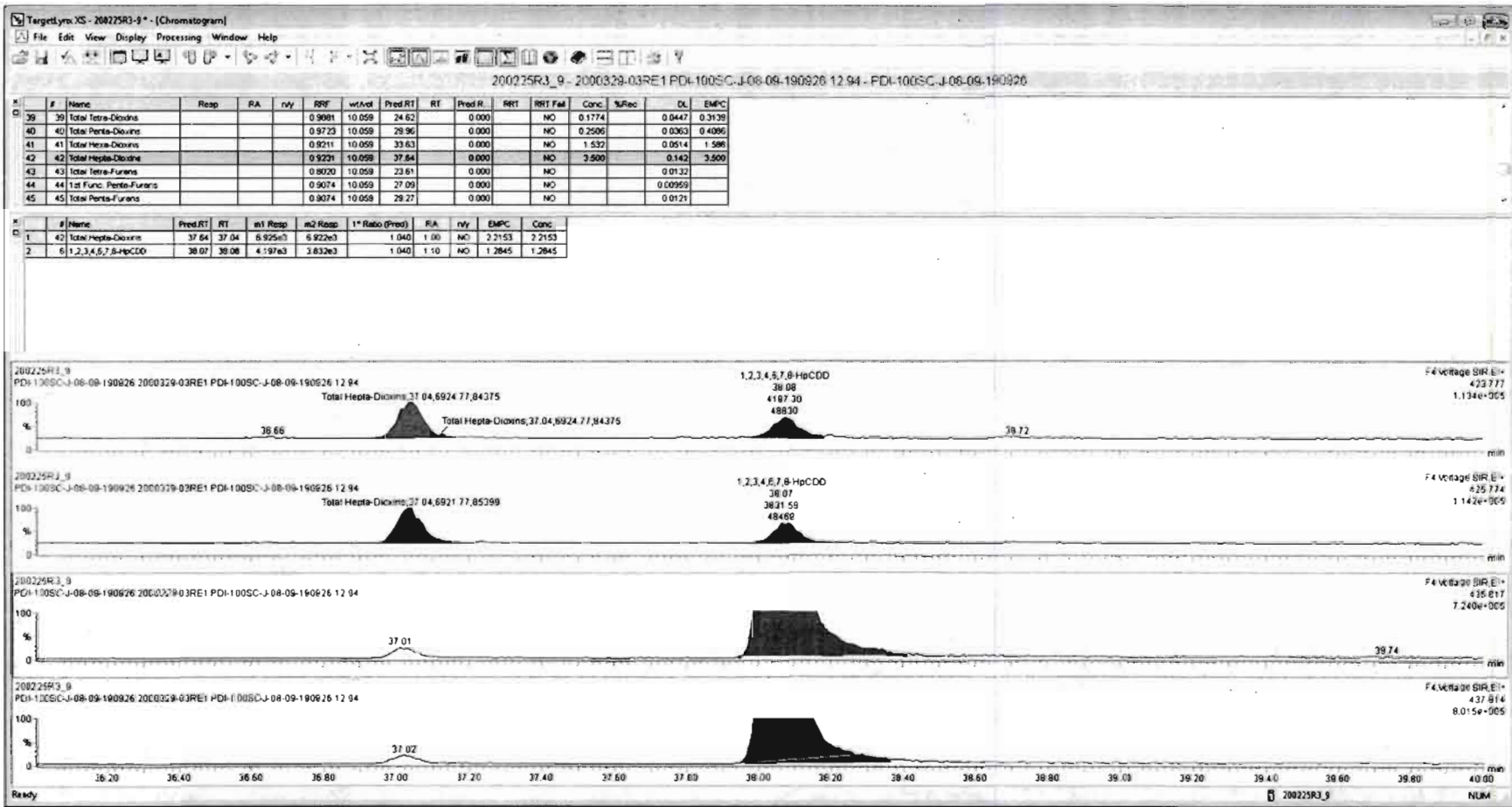
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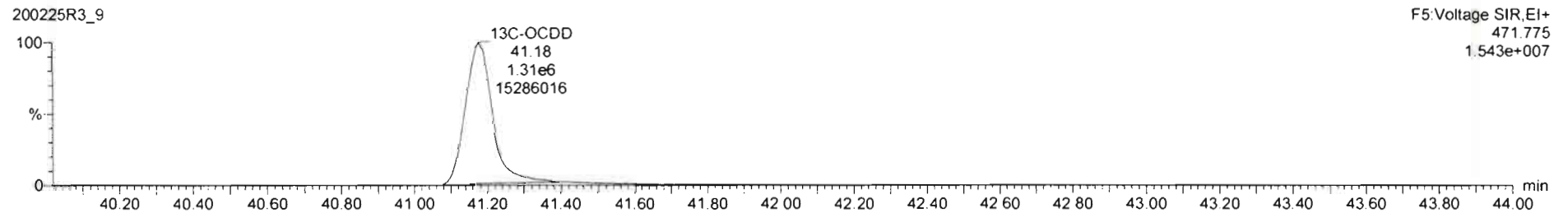
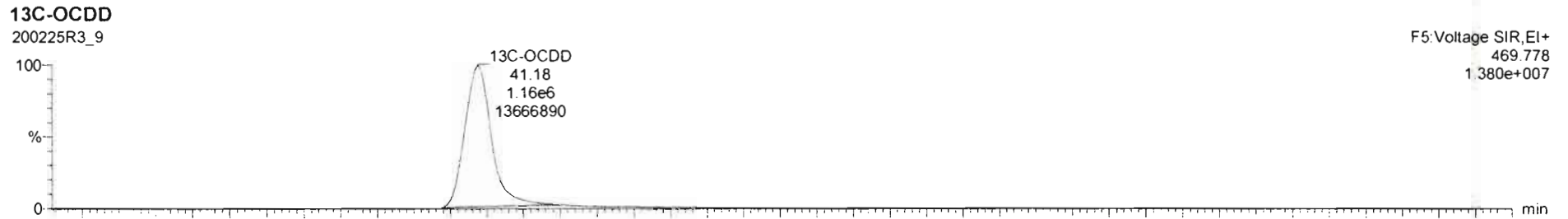
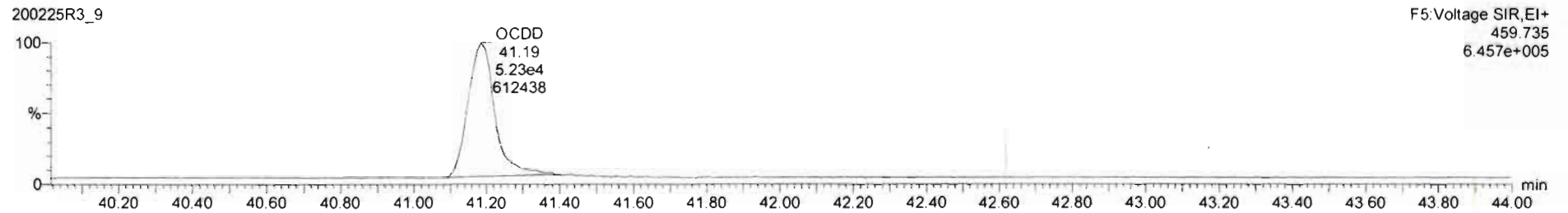
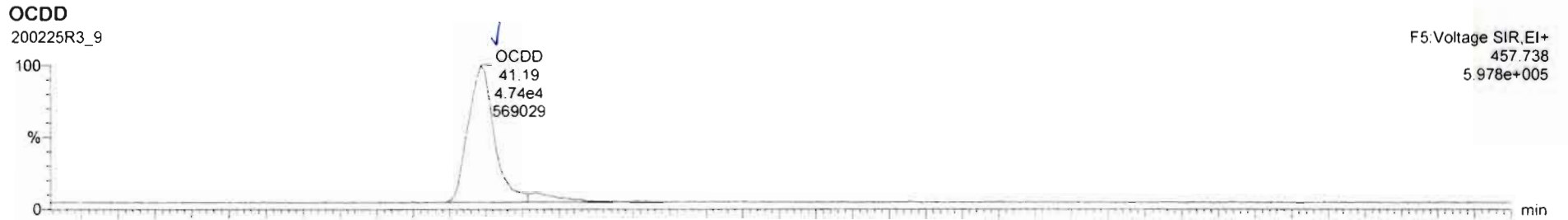


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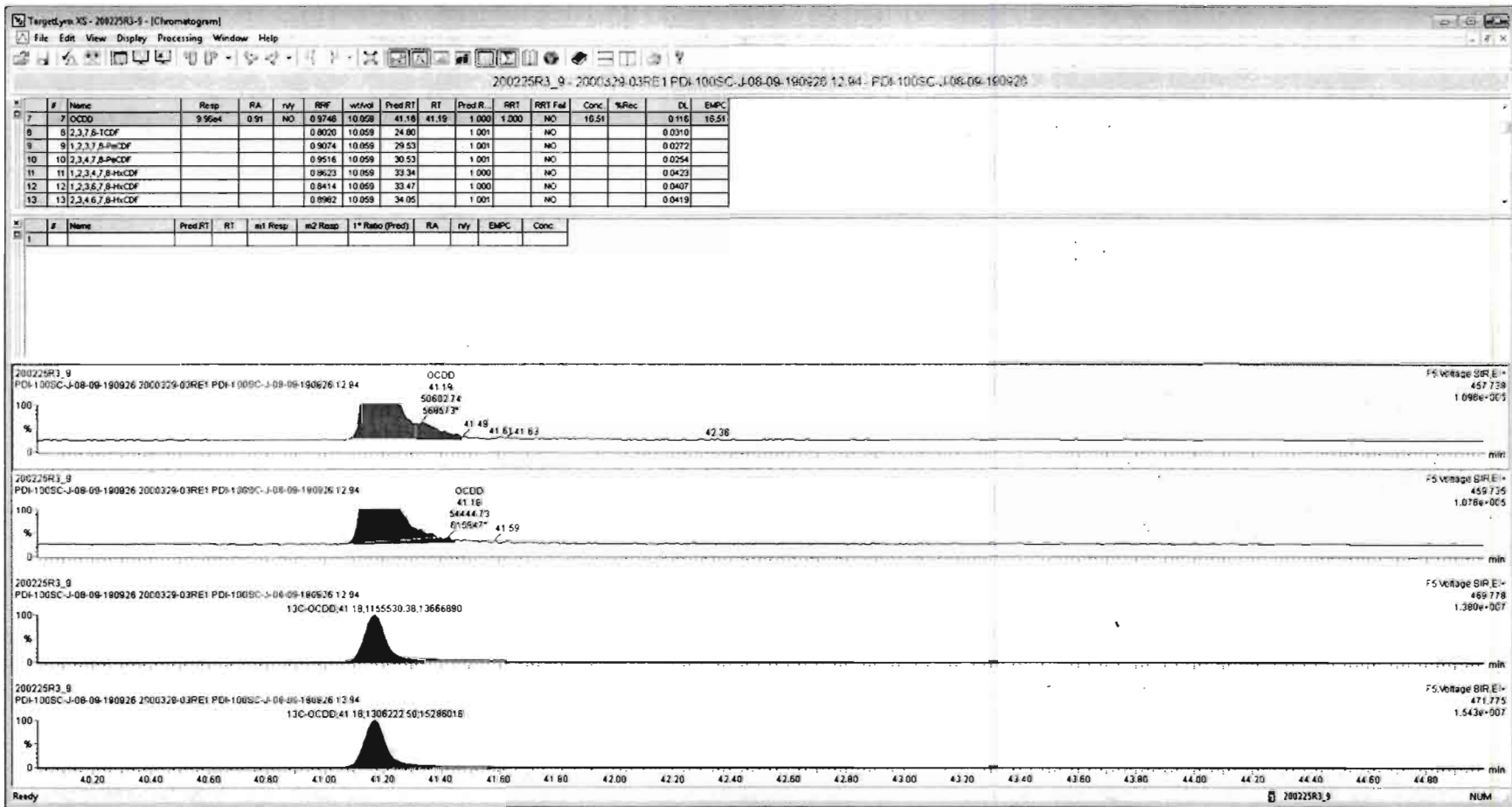
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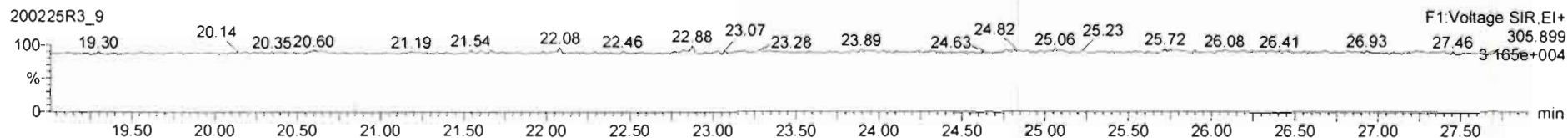
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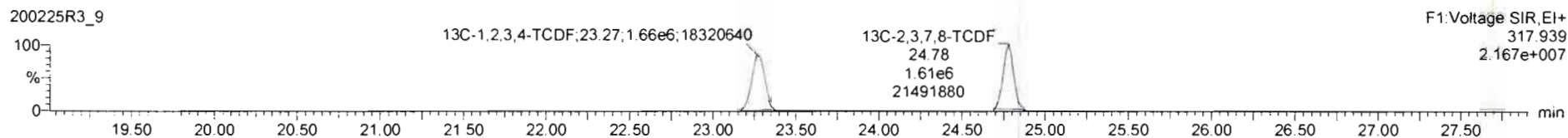
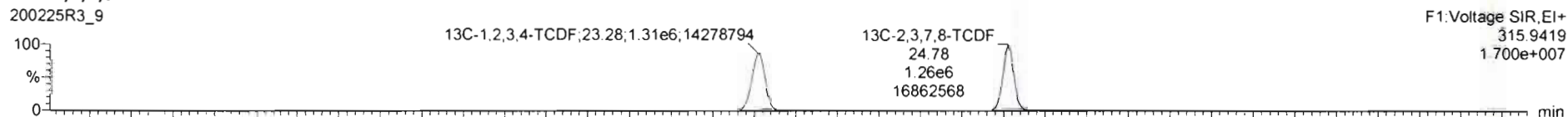
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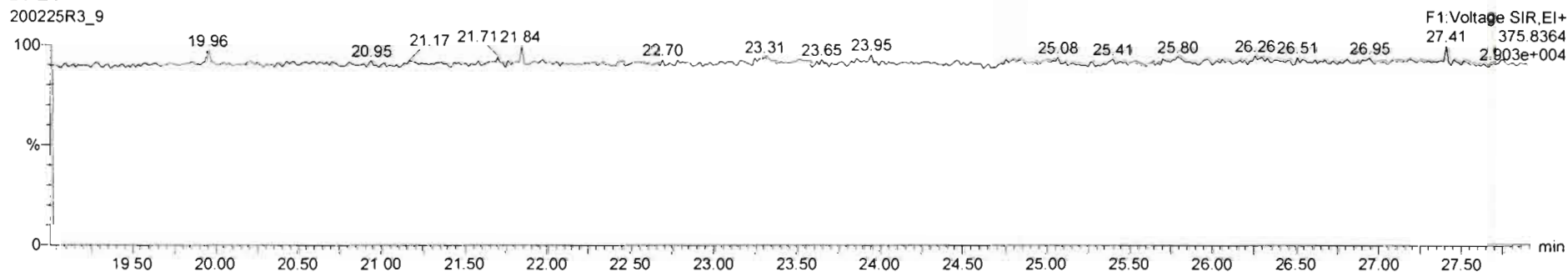
### 2,3,7,8-TCDF



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



### DPE1

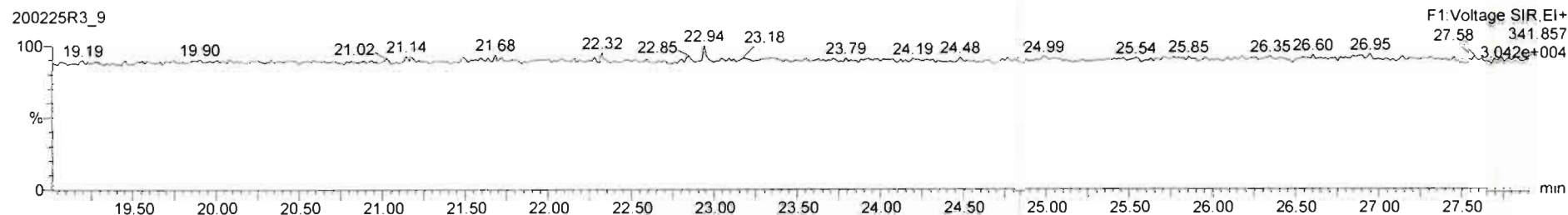
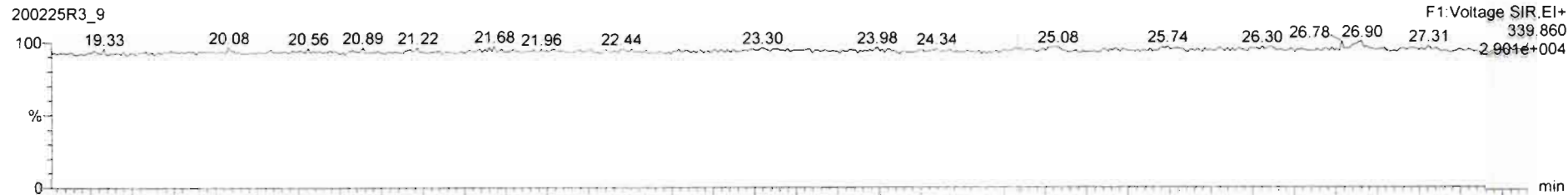


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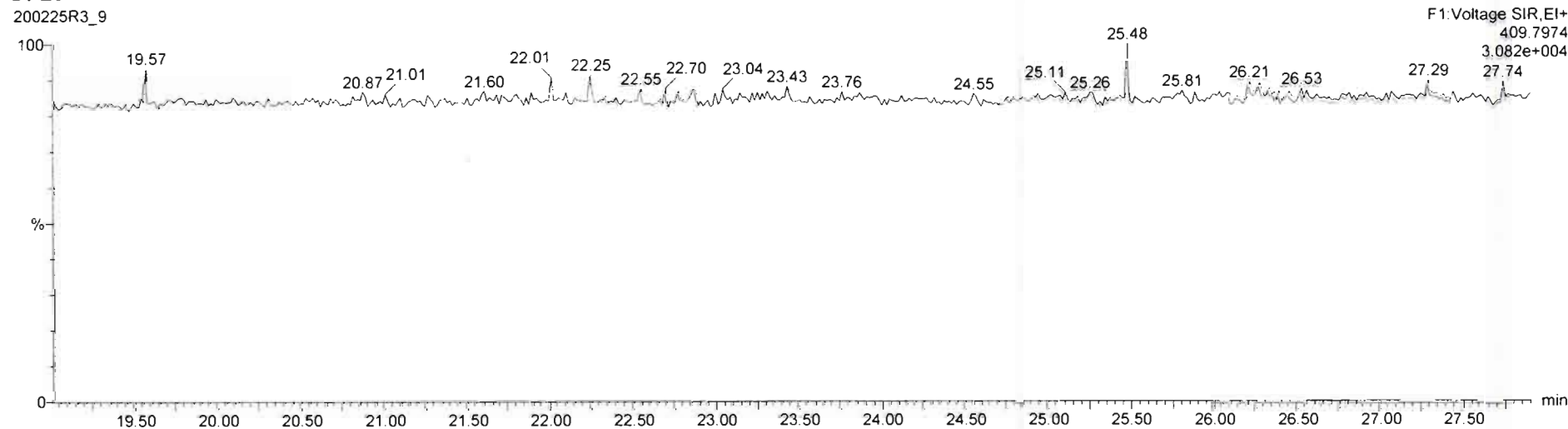
Last Altered: Wednesday, February 26, 2020 08:42:14 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:42:24 Pacific Standard Time

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

1st Func. Penta-Furans



DPE6

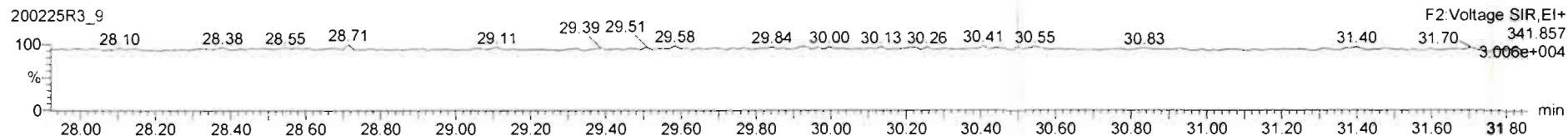
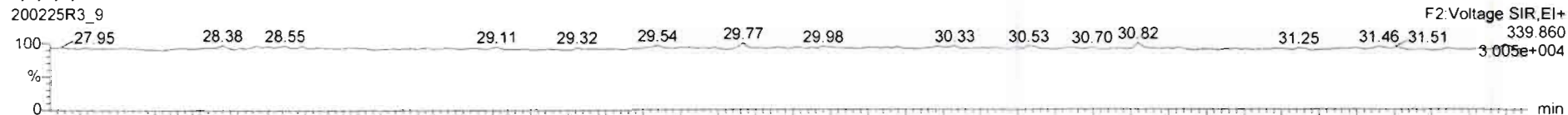


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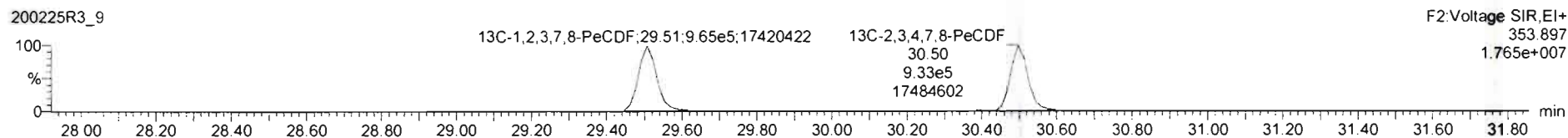
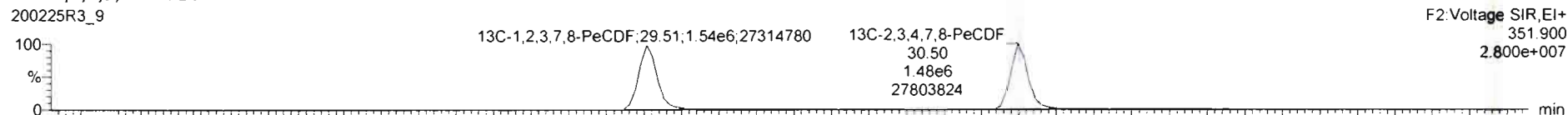
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Printed: Wednesday, February 26, 2020 08:42:24 Pacific Standard Time

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

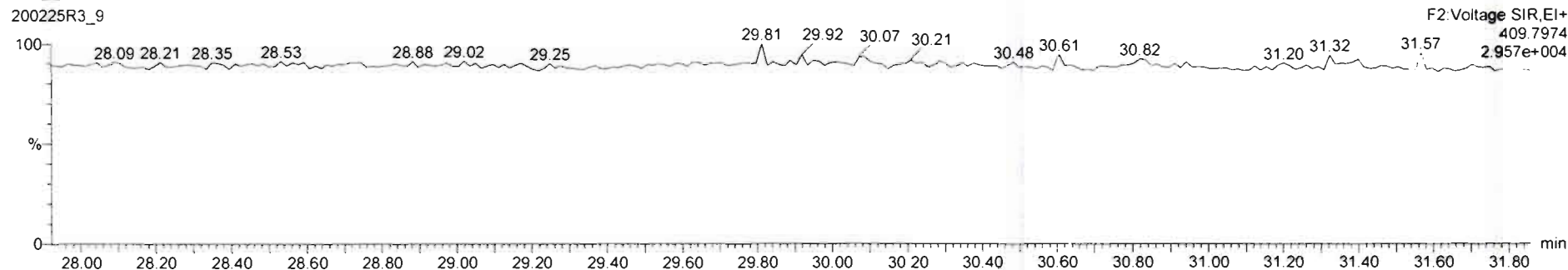
1,2,3,7,8-PeCDF



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



DPE2



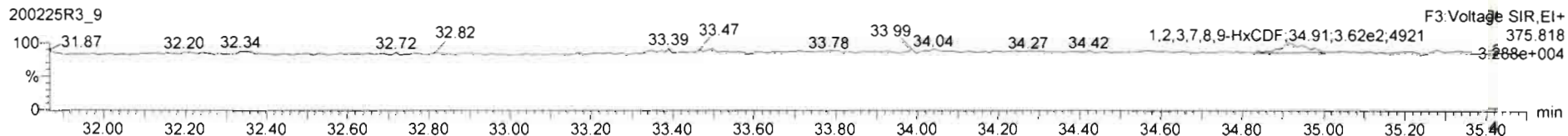
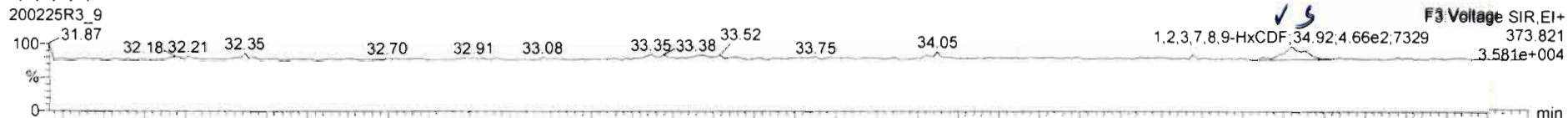
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Last Altered: Wednesday, February 26, 2020 08:42:14 Pacific Standard Time

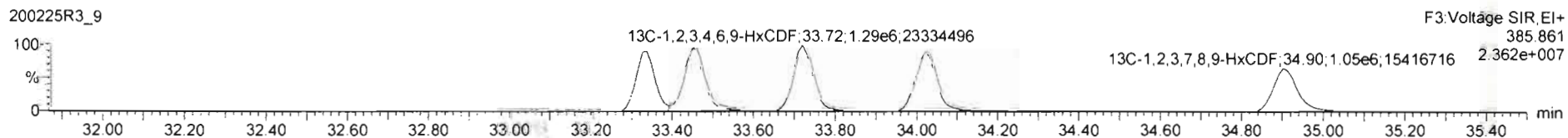
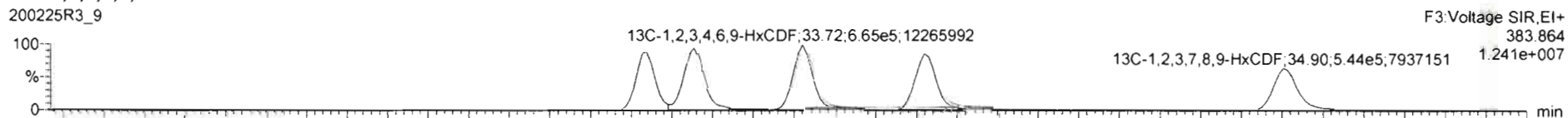
Printed: Wednesday, February 26, 2020 08:42:24 Pacific Standard Time

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

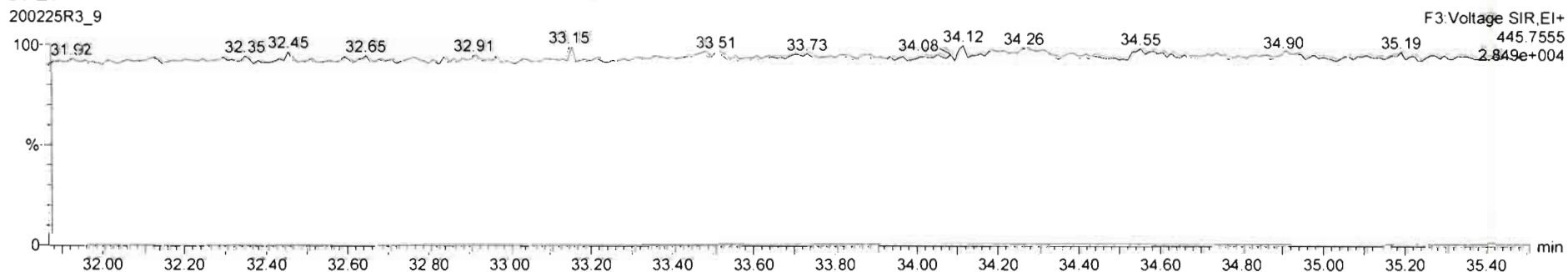
1,2,3,4,7,8-HxCDF

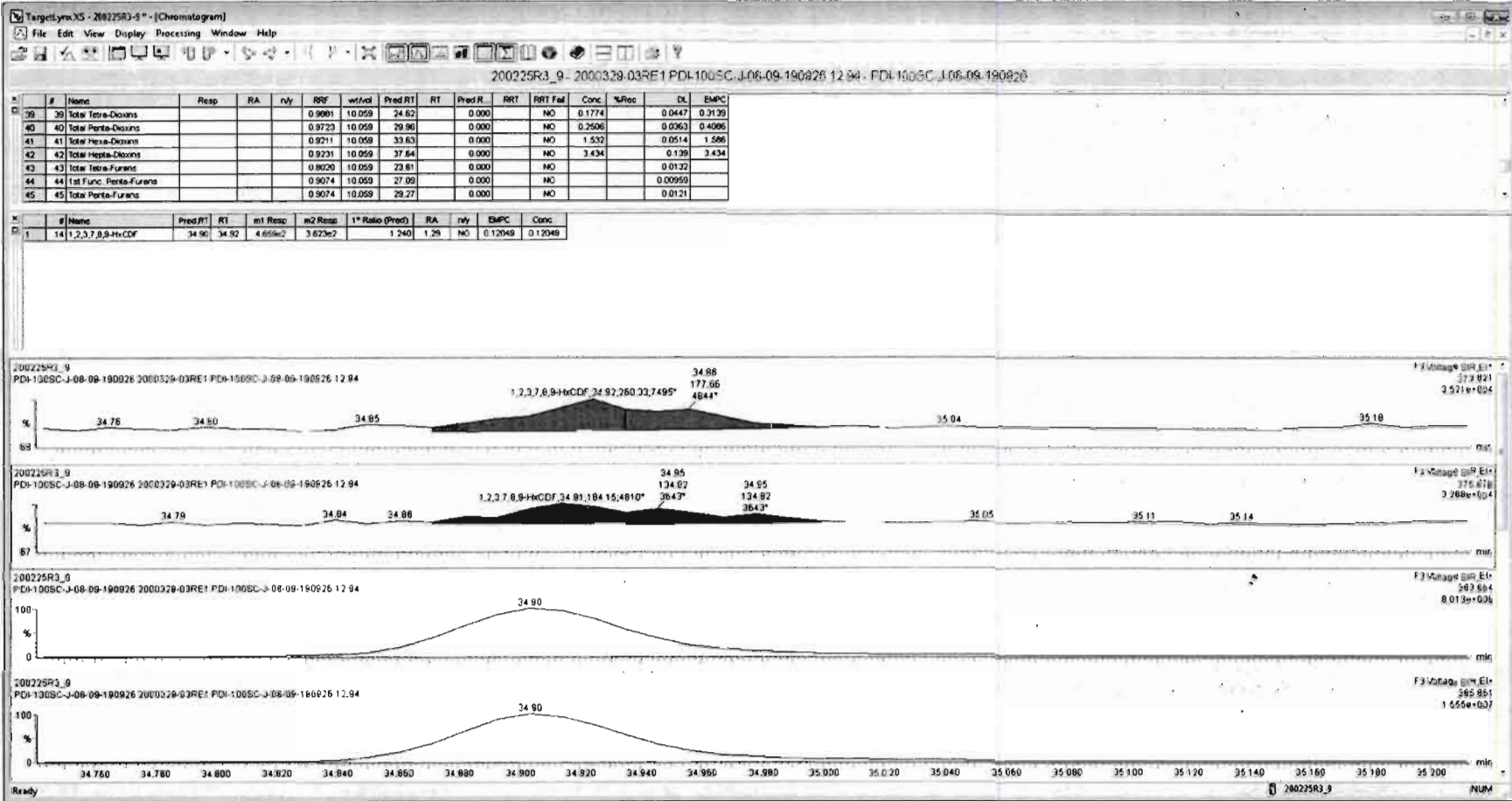


13C-1,2,3,4,7,8-HxCDF



DPE3



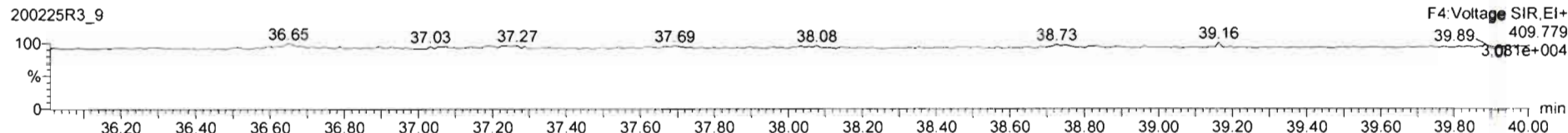
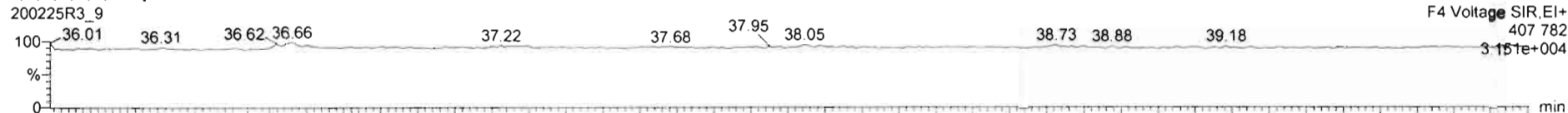


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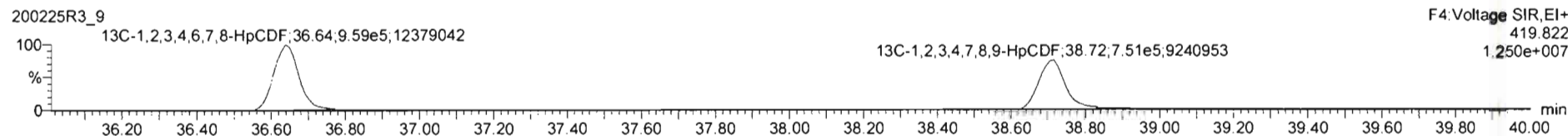
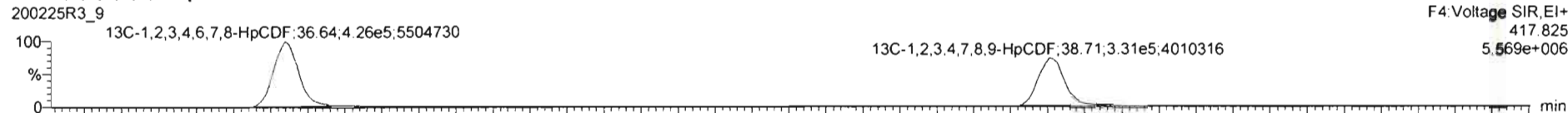
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Printed: Wednesday, February 26, 2020 08:42:24 Pacific Standard Time

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

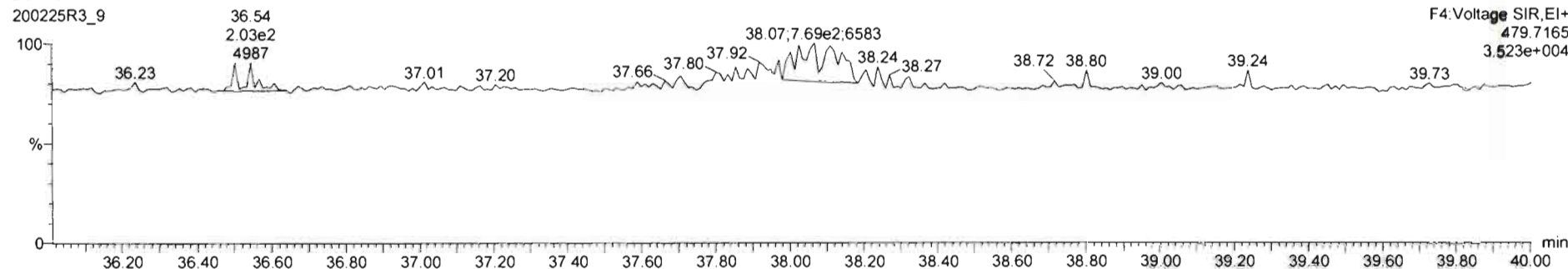
1,2,3,4,6,7,8-HpCDF



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



DPE4

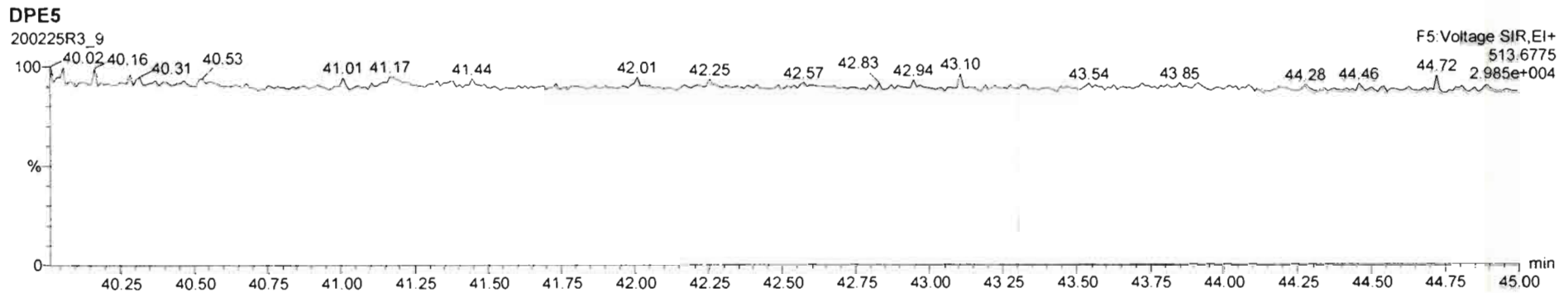
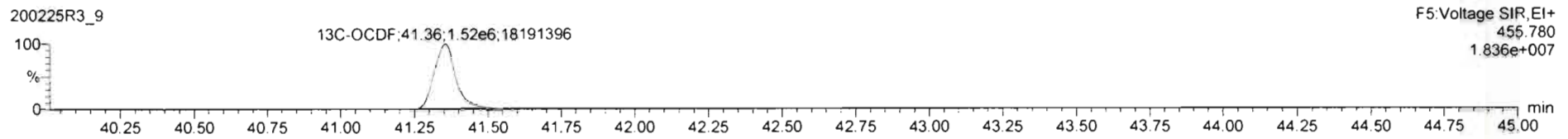
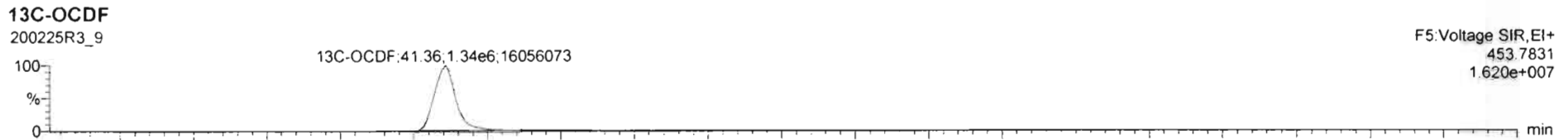
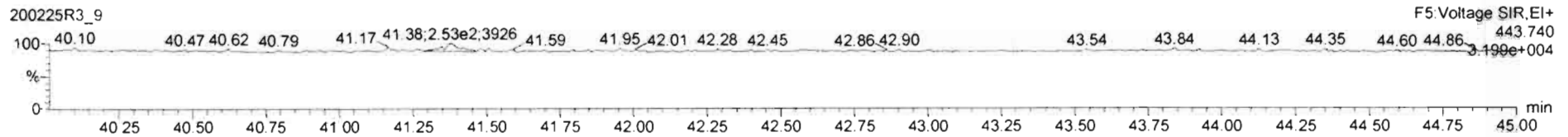
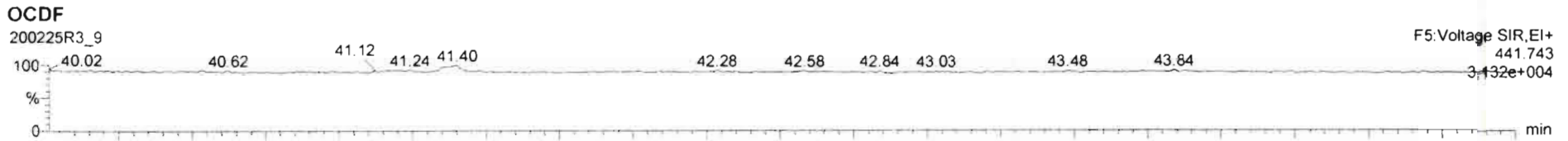


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Last Altered: Wednesday, February 26, 2020 08:42:14 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:42:24 Pacific Standard Time

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926





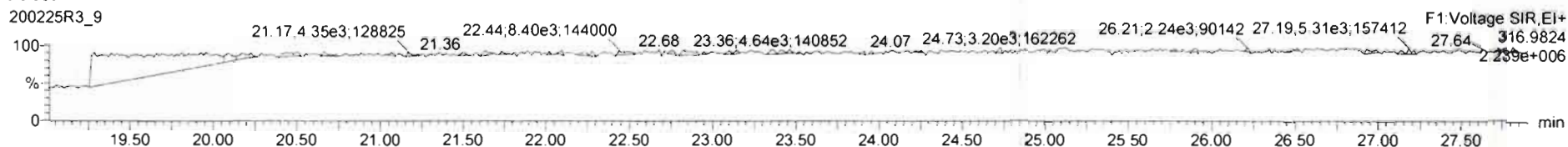
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Last Altered: Wednesday, February 26, 2020 08:42:14 Pacific Standard Time

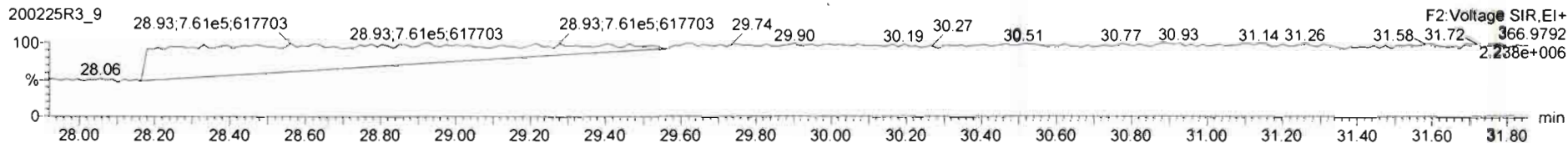
Printed: Wednesday, February 26, 2020 08:42:24 Pacific Standard Time

Name: 200225R3\_9, Date: 25-Feb-2020, Time: 19:25:44, ID: 2000329-03RE1 PDI-100SC-J-08-09-190926 12.94, Description: PDI-100SC-J-08-09-190926

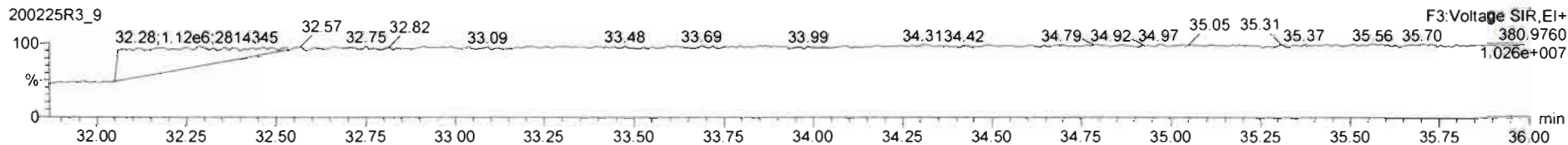
PFK1



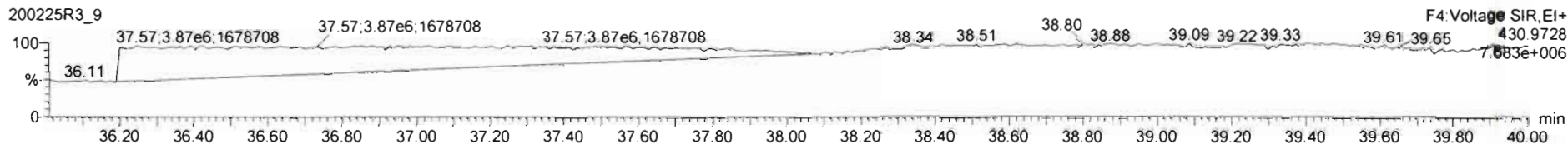
PFK2



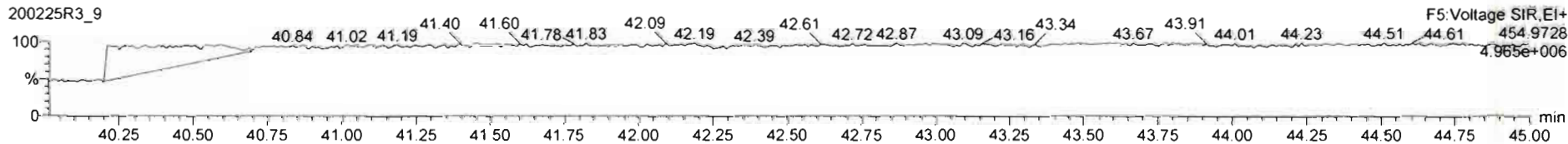
PFK3



PFK4



PFK5



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-10.qld

Last Altered: Wednesday, February 26, 2020 13:29:13 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 14:00:39 Pacific Standard Time

*BL 02/26/2020*  
*C1 02/27/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00  
Calibration: U:\VG12.PRO\CurveDB\ldb5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_10, Date: 25-Feb-2020, Time: 20:13:11, ID: 2000329-04RE1 PDI-100SC-J-09-10-190926 14.55, Description: PDI-100SC-J-09-10-190926

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD				0.988	10.131	25.75		1.00		NO			0.0393	
2	2 1,2,3,7,8-PeCDD				0.972	10.131	30.84		1.00		NO			0.0483	
3	3 1,2,3,4,7,8-HxCDD				1.07	10.131	34.21		1.00		NO			0.0465	
4	4 1,2,3,6,7,8-HxCDD				0.921	10.131	34.30		1.00		NO			0.0490	
5	5 1,2,3,7,8,9-HxCDD	556.519	1.136	NO	0.918	10.131	34.61	34.59	1.00	1.00	NO	0.07873		0.0531	0.07900
6	6 1,2,3,4,6,7,8-HpCDD	5092.767	1.066	NO	0.923	10.131	38.09	38.11	1.00	1.00	NO	0.8451		0.145	0.8450
7	7 OCDD	40850.853	0.866	NO	0.975	10.131	41.18	41.19	1.00	1.00	NO	7.379		0.102	7.379
8	8 2,3,7,8-TCDF				0.802	10.131	24.80		1.00		NO			0.0307	
9	9 1,2,3,7,8-PeCDF				0.907	10.131	29.53		1.00		NO			0.0268	
10	10 2,3,4,7,8-PeCDF				0.952	10.131	30.53		1.00		NO			0.0255	
11	11 1,2,3,4,7,8-HxCDF				0.862	10.131	33.34		1.00		NO			0.0379	
12	12 1,2,3,6,7,8-HxCDF				0.841	10.131	33.47		1.00		NO			0.0381	
13	13 2,3,4,6,7,8-HxCDF				0.898	10.131	34.06		1.00		NO			0.0389	
14	14 1,2,3,7,8,9-HxCDF	270.080	1.027	YES	0.858	10.131	34.91	34.92	1.00	1.00	NO	0.04102		0.0533	0.03800
15	15 1,2,3,4,6,7,8-HpCDF				0.851	10.131	36.69		1.00		NO			0.0563	
16	16 1,2,3,4,7,8,9-HpCDF				0.980	10.131	38.72		1.00		NO			0.0647	
17	17 OCDF	627.581	1.042	YES	0.806	10.131	41.36	41.38	1.00	1.00	NO	0.1176		0.0711	0.1090
18	18 13C-2,3,7,8-TCDD	2261411.6...	0.781	NO	1.20	10.131	25.69	25.72	1.03	1.03	NO	186.6	94.5	0.112	
19	19 13C-1,2,3,7,8-PeCDD	1783740.5...	0.629	NO	0.967	10.131	30.43	30.82	1.22	1.23	NO	182.5	92.4	0.179	
20	20 13C-1,2,3,4,7,8-HxCDD	1303208.6...	1.263	NO	0.874	10.131	34.20	34.20	1.01	1.01	NO	162.0	82.1	0.290	
21	21 13C-1,2,3,6,7,8-HxCDD	1622716.8...	1.261	NO	1.05	10.131	34.31	34.30	1.02	1.02	NO	168.5	85.4	0.242	
22	22 13C-1,2,3,7,8,9-HxCDD	1519682.2...	1.250	NO	0.974	10.131	34.61	34.57	1.03	1.02	NO	169.4	85.8	0.260	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1288771.6...	1.056	NO	0.747	10.131	38.18	38.08	1.13	1.13	NO	187.3	94.9	0.357	
24	24 13C-OCDD	2242932.1...	0.900	NO	0.707	10.131	41.09	41.18	1.22	1.22	NO	344.8	87.3	0.302	
25	25 13C-2,3,7,8-TCDF	2784497.0...	0.784	NO	1.07	10.131	24.87	24.78	0.99	0.99	NO	184.3	93.4	0.235	
26	26 13C-1,2,3,7,8-PeCDF	2376039.0...	1.579	NO	1.00	10.131	29.46	29.51	1.18	1.18	NO	167.3	84.7	0.240	
27	27 13C-2,3,4,7,8-PeCDF	2324509.9...	1.599	NO	0.962	10.131	30.42	30.50	1.21	1.22	NO	170.4	86.3	0.250	
28	28 13C-1,2,3,4,7,8-HxCDF	1659933.6...	0.513	NO	1.05	10.131	33.33	33.34	0.99	0.99	NO	171.9	87.1	0.357	
29	29 13C-1,2,3,6,7,8-HxCDF	1845815.7...	0.520	NO	1.19	10.131	33.43	33.46	0.99	0.99	NO	168.5	85.4	0.315	
30	30 13C-2,3,4,6,7,8-HxCDF	1753704.0...	0.528	NO	1.07	10.131	34.04	34.03	1.01	1.01	NO	178.7	90.5	0.351	
31	31 13C-1,2,3,7,8,9-HxCDF	1515371.6...	0.516	NO	0.922	10.131	34.95	34.91	1.04	1.03	NO	178.5	90.4	0.406	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-10.qld

Last Altered: Wednesday, February 26, 2020 13:29:13 Pacific Standard Time

Printed: Wednesday, February 26, 2020 14:00:39 Pacific Standard Time

Name: 200225R3\_10, Date: 25-Feb-2020, Time: 20:13:11, ID: 2000329-04RE1 PDI-100SC-J-09-10-190926 14.55, Description: PDI-100SC-J-09-10-190926

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1320013.7...	0.444	NO	0.767	10.131	36.70	36.65	1.09	1.09	NO	186.9	94.7	0.360	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1043657.8...	0.437	NO	0.552	10.131	38.72	38.72	1.15	1.15	NO	205.3	104	0.501	
34	34 13C-OCDF	2615752.0...	0.887	NO	0.789	10.131	41.32	41.36	1.23	1.23	NO	359.9	91.2	0.309	
35	35 37Cl-2,3,7,8-TCDD	861318.188			1.18	10.131	25.72	25.74	1.03	1.03	NO	72.41	91.7	0.0362	
36	36 13C-1,2,3,4-TCDD	1996314.5...	0.793	NO	1.00	10.131	25.11	25.05	1.00	1.00	NO	197.4	100	0.134	
37	37 13C-1,2,3,4-TCDF	2799482.2...	0.785	NO	1.00	10.131	23.37	23.28	1.00	1.00	NO	197.4	100	0.250	
38	38 13C-1,2,3,4,6,9-HxCDF	1817372.1...	0.515	NO	1.00	10.131	33.71	33.73	1.00	1.00	NO	197.4	100	0.375	
39	39 Total Tetra-Dioxins				0.988	10.131	24.62		0.00		NO	0.1243		0.0393	0.1240
40	40 Total Penta-Dioxins				0.972	10.131	29.96		0.00		NO			0.0223	
41	41 Total Hexa-Dioxins				0.921	10.131	33.63		0.00		NO	0.8123		0.0518	1.054
42	42 Total Hepta-Dioxins				0.923	10.131	37.64		0.00		NO	2.364		0.145	2.364
43	43 Total Tetra-Furans				0.802	10.131	23.61		0.00		NO			0.0140	
44	44 1st Func. Penta-Furans				0.907	10.131	27.09		0.00		NO			0.0106	
45	45 Total Penta-Furans				0.907	10.131	29.27		0.00		NO			0.0120	
46	46 Total Hexa-Furans				0.898	10.131	33.56		0.00		NO	0.0000		0.0192	0.06700
47	47 Total Hepta-Furans				0.851	10.131	37.83		0.00		NO			0.0308	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-10.qld

Last Altered: Wednesday, February 26, 2020 13:29:13 Pacific Standard Time  
 Printed: Wednesday, February 26, 2020 14:00:22 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00  
 Calibration: U:\VG12.PRO\CurveDB\1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_10, Date: 25-Feb-2020, Time: 20:13:11, ID: 2000329-04RE1 PDI-100SC-J-09-10-190926 14.55, Description: PDI-100SC-J-09-10-190926

**Tetra-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	39 Total Tetra-Dioxins	1.41e3	2.26e6	0.837	NO	24.62	23.46	0.1243	0.1240

**Penta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hexa-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	5 1,2,3,7,8,9-HxCDD	5.57e2	1.52e6	1.136	NO	34.61	34.59	0.07873	0.07900
2	41 Total Hexa-Dioxins	0.00e0	0.00e0	1.429	YES	33.63	33.54	0.0000	0.2410
3	41 Total Hexa-Dioxins	5.07e3	0.00e0	1.263	NO	33.63	32.74	0.7336	0.7340

**Hepta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	5.09e3	1.29e6	1.066	NO	38.09	38.11	0.8451	0.8450
2	42 Total Hepta-Dioxins	9.16e3	1.29e6	1.036	NO	37.64	37.06	1.519	1.519

**Tetra-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-10.qld

Last Altered: Wednesday, February 26, 2020 13:29:13 Pacific Standard Time

Printed: Wednesday, February 26, 2020 14:00:22 Pacific Standard Time

Name: 200225R3\_10, Date: 25-Feb-2020, Time: 20:13:11, ID: 2000329-04RE1 PDI-100SC-J-09-10-190926 14.55, Description: PDI-100SC-J-09-10-190926

**Penta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hexa-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	2.70e2	1.52e6	1.027	YES	34.91	34.92	0.0000	0.03800
2	46 Total Hexa-Furans	0.00e0	0.00e0	1.698	YES	33.56	34.95	0.0000	0.02900

**Hepta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:42:42 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:42:47 Pacific Standard Time

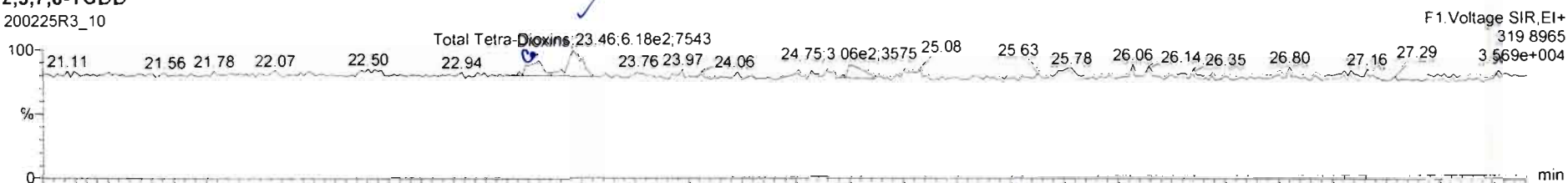
Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

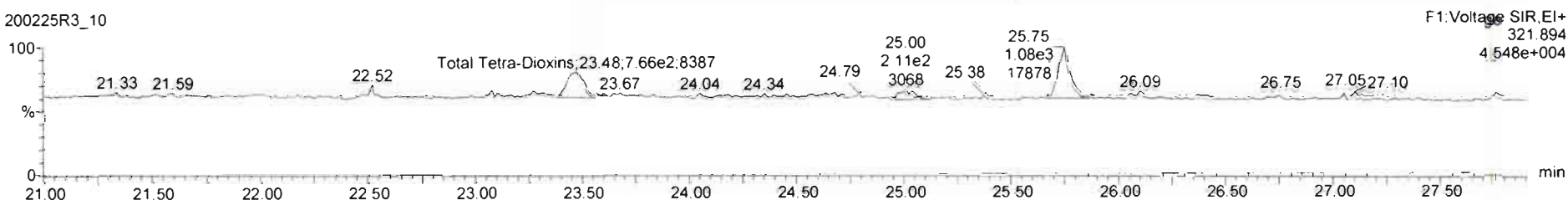
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2,3,7,8-TCDD

200225R3\_10

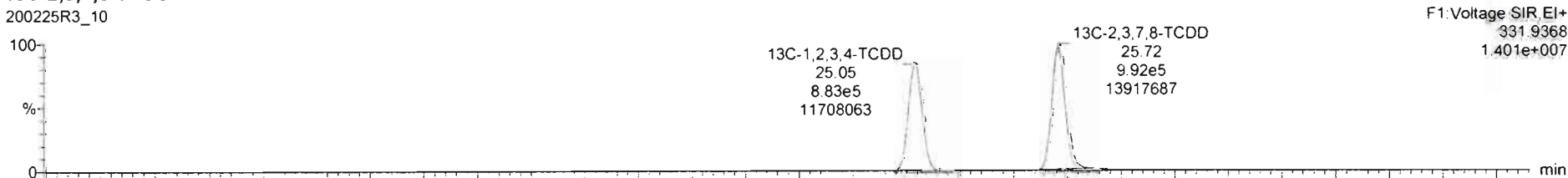


200225R3\_10

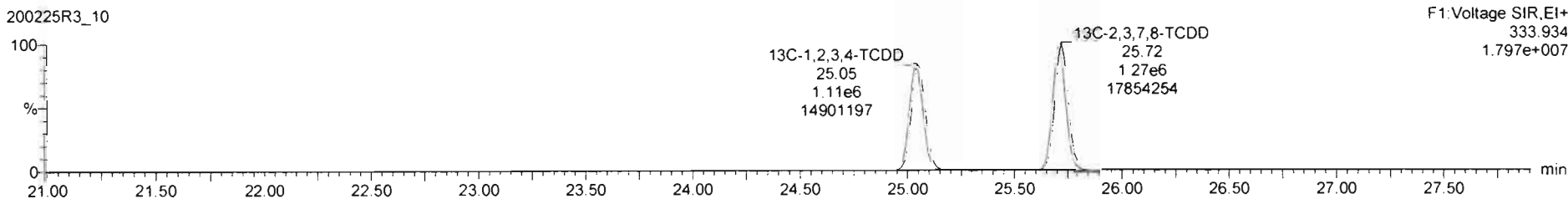


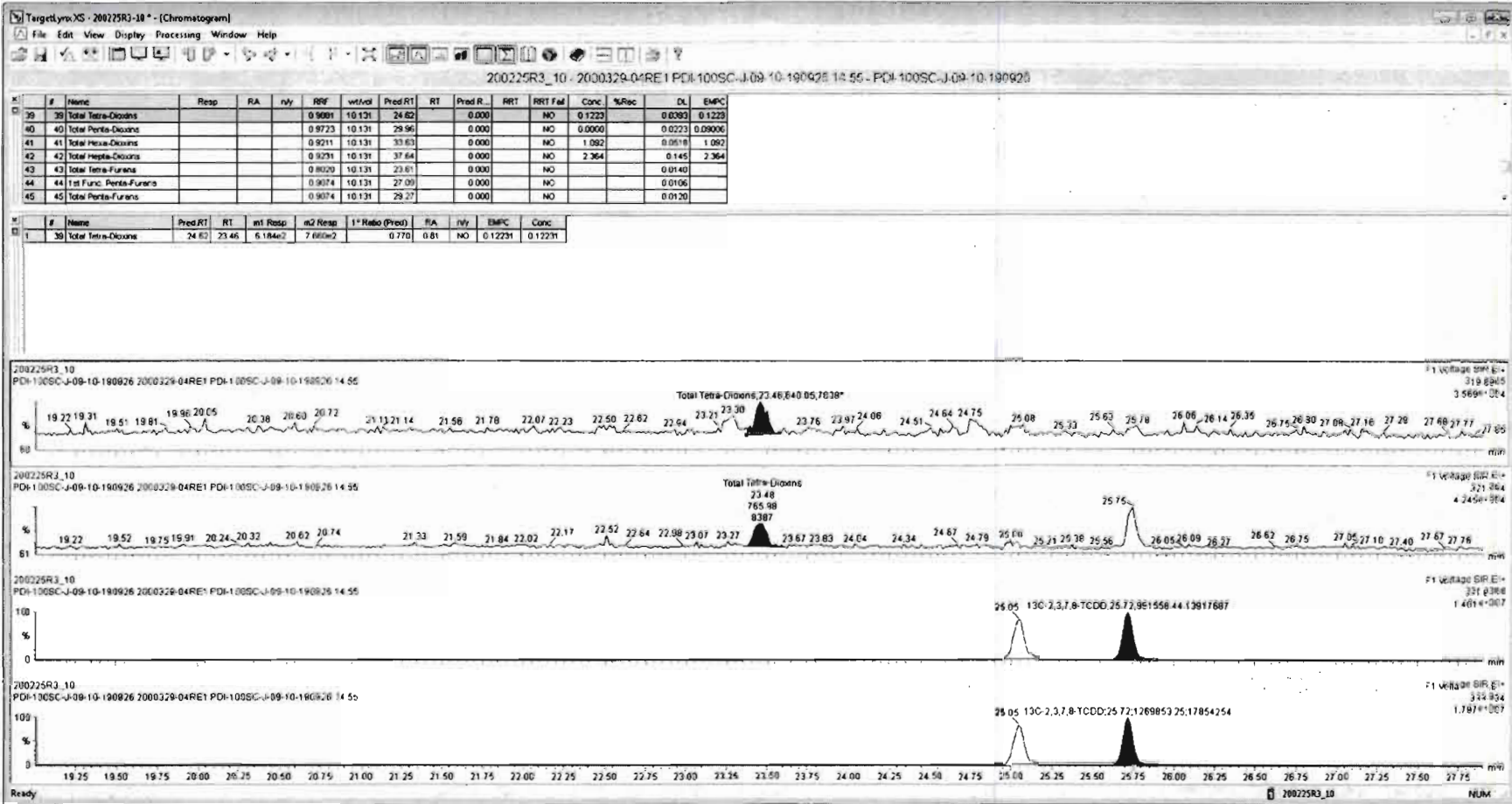
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200225R3\_10



200225R3\_10





Dataset: Untitled

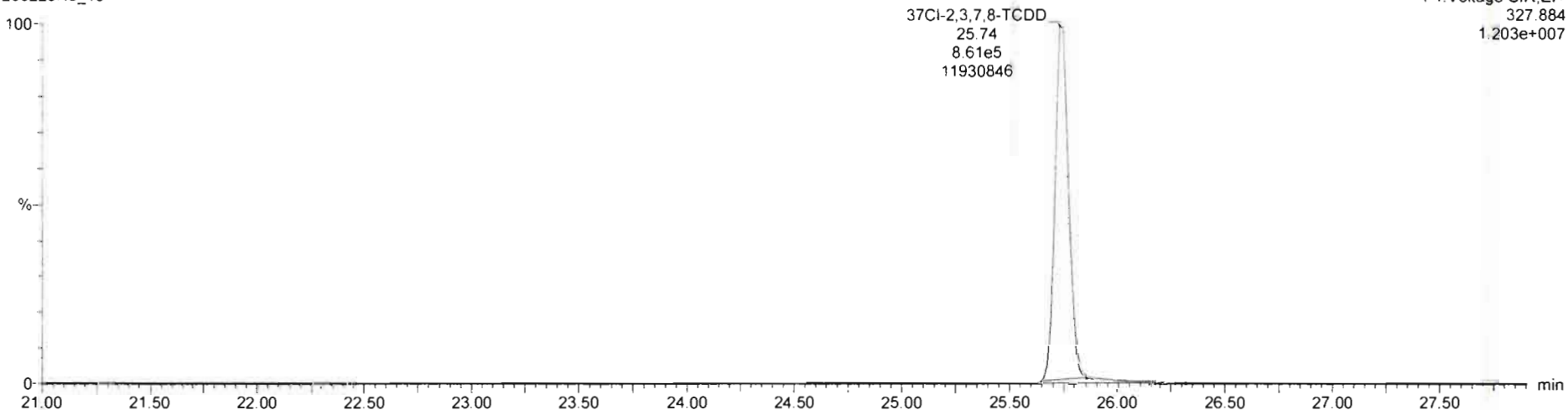
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Printed: Wednesday, February 26, 2020 08:42:47 Pacific Standard Time

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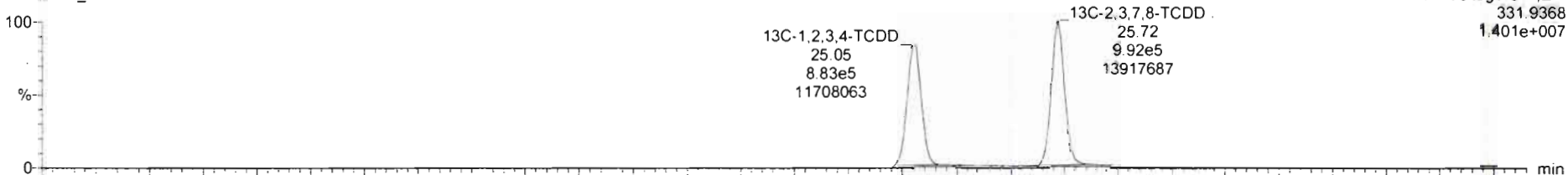
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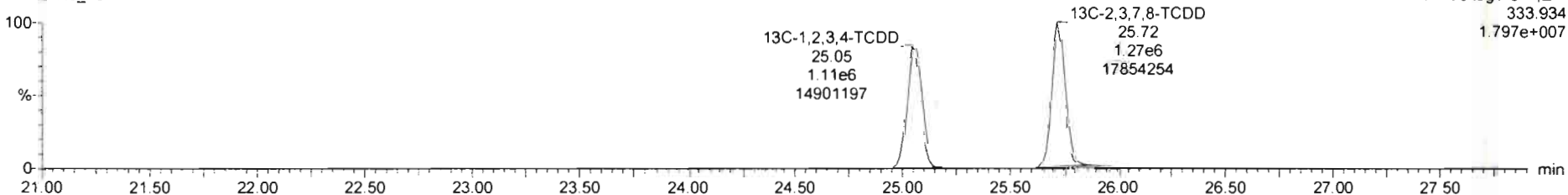


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200225R3\_10



200225R3\_10





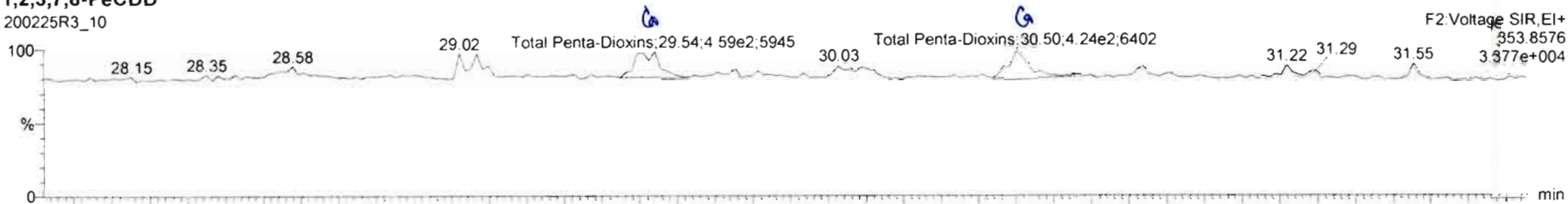
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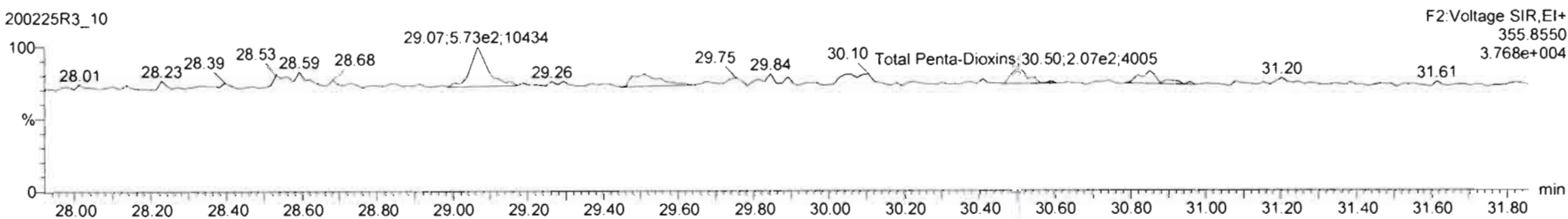
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1,2,3,7,8-PeCDD

200225R3\_10

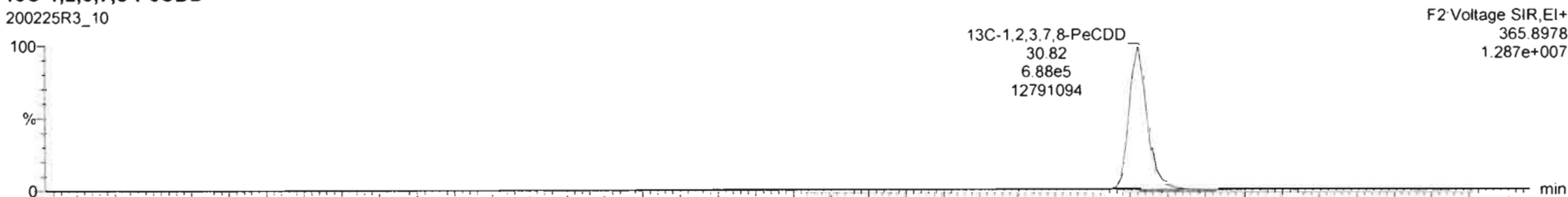


200225R3\_10

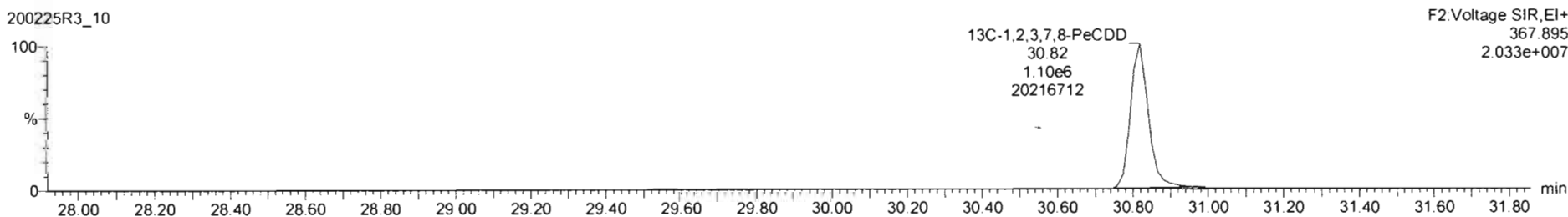


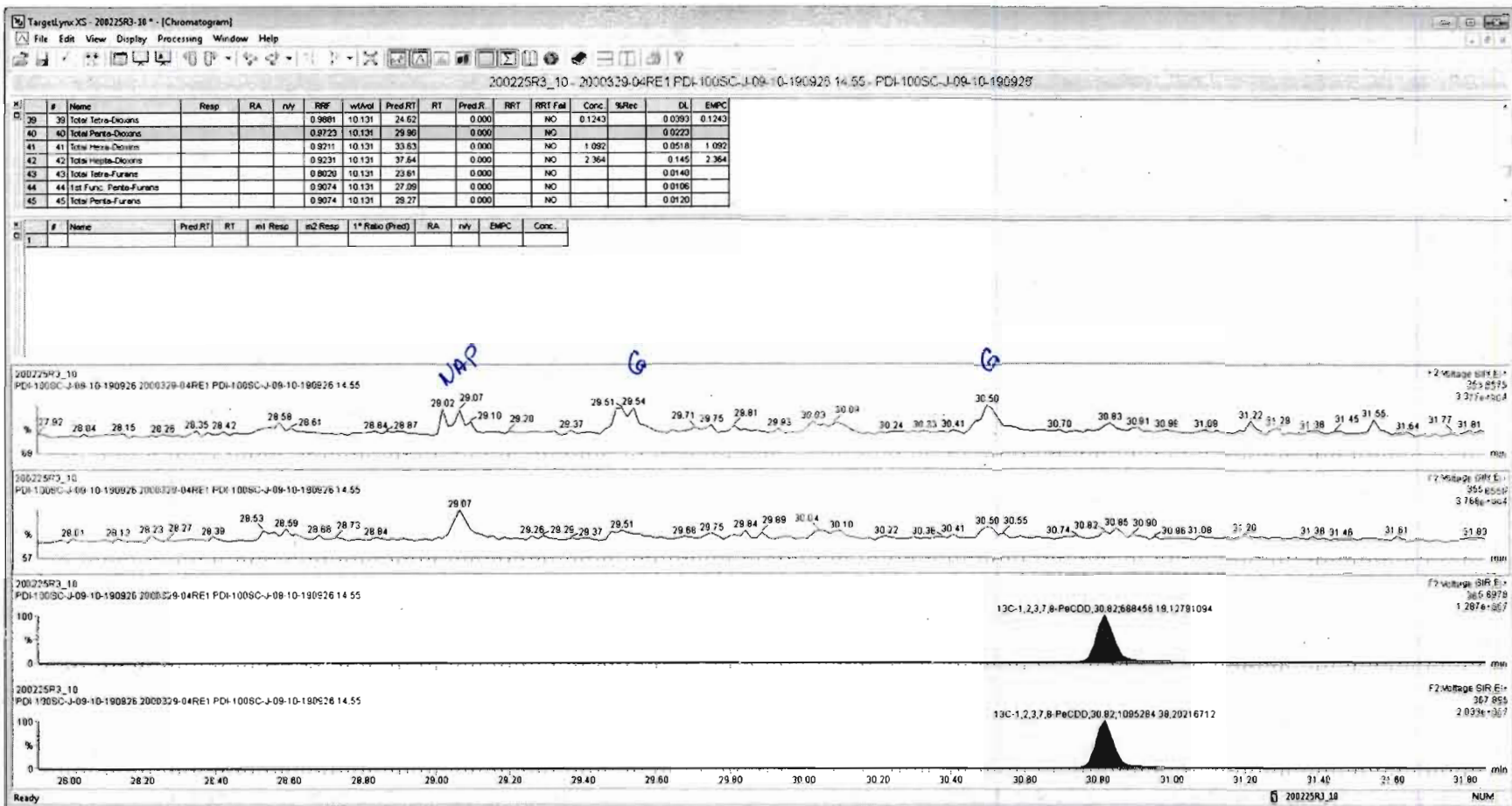
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200225R3\_10



200225R3\_10





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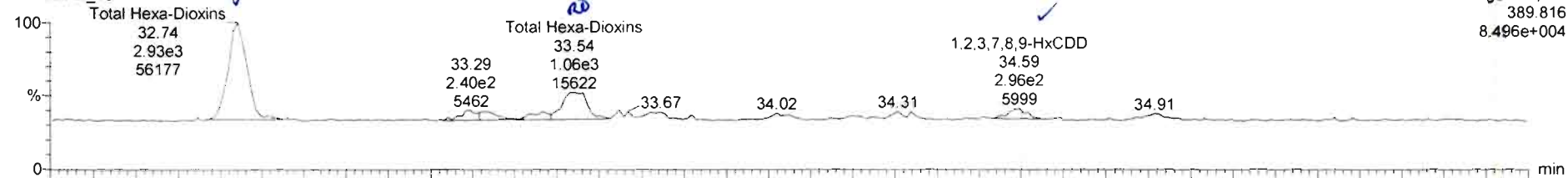
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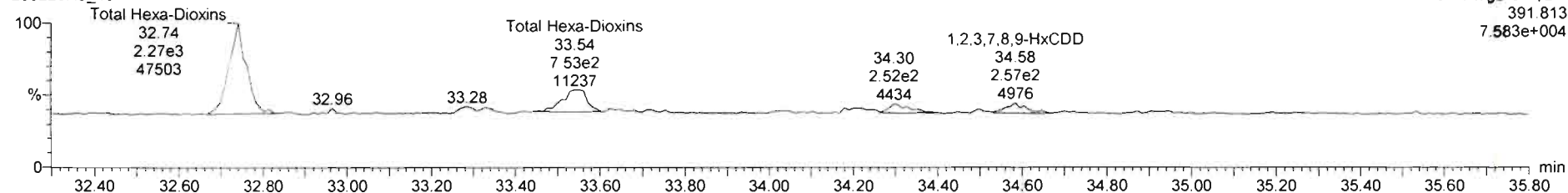
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1,2,3,4,7,8-HxCDD

200225R3\_10

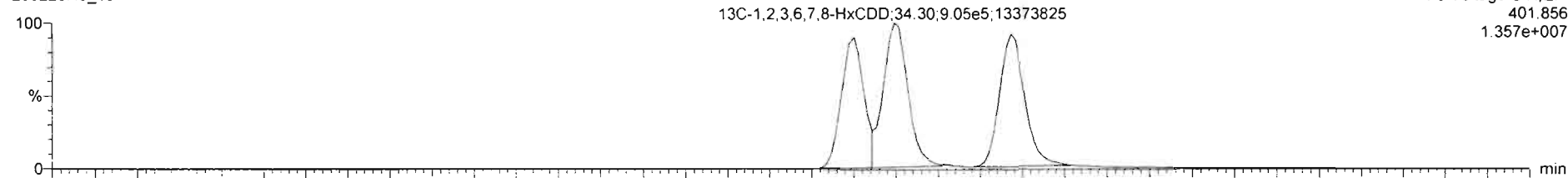


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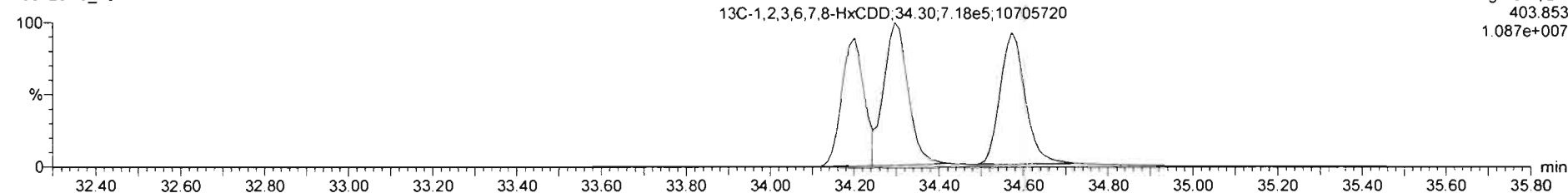


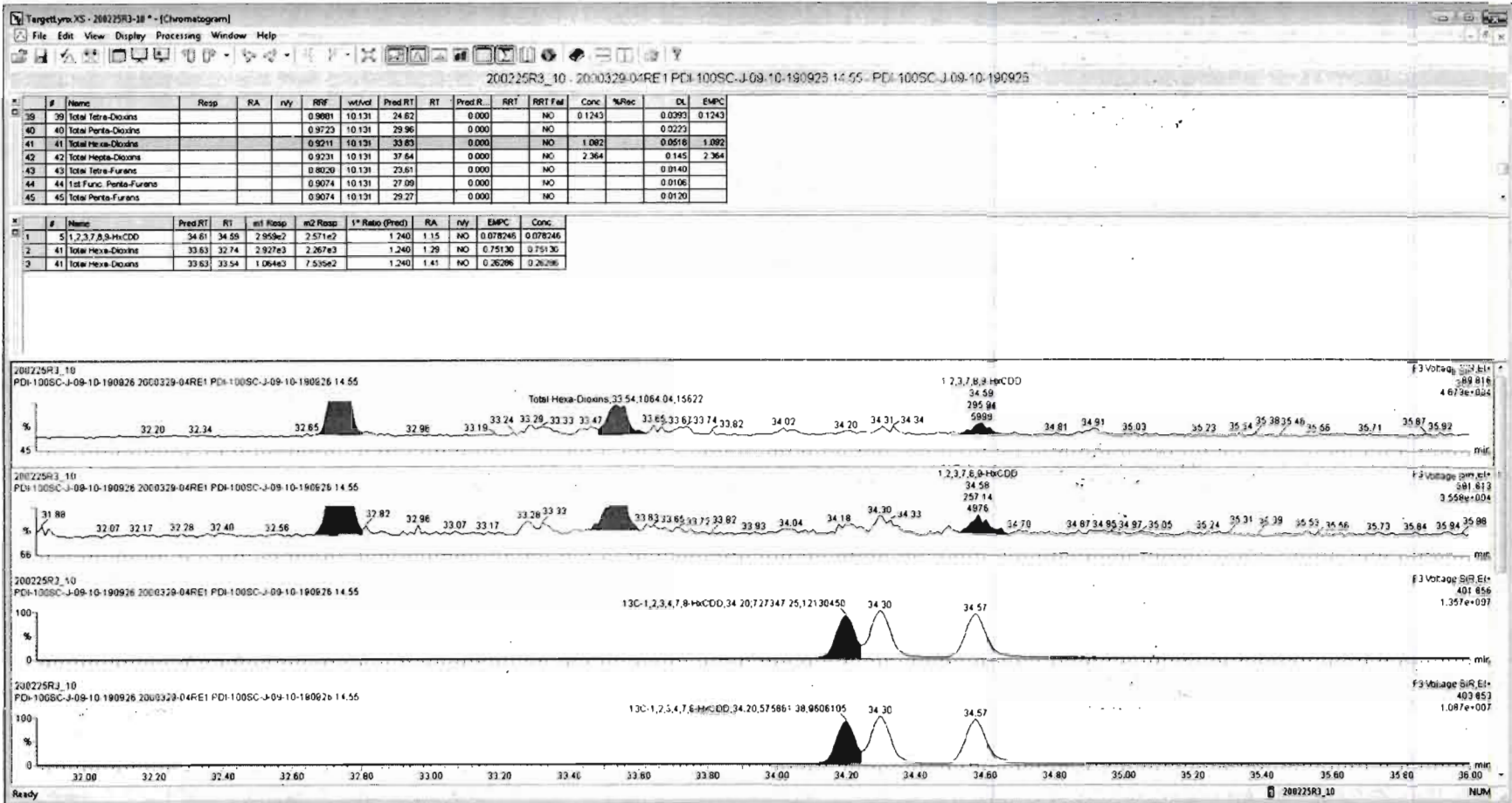
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200225R3\_10



200225R3\_10





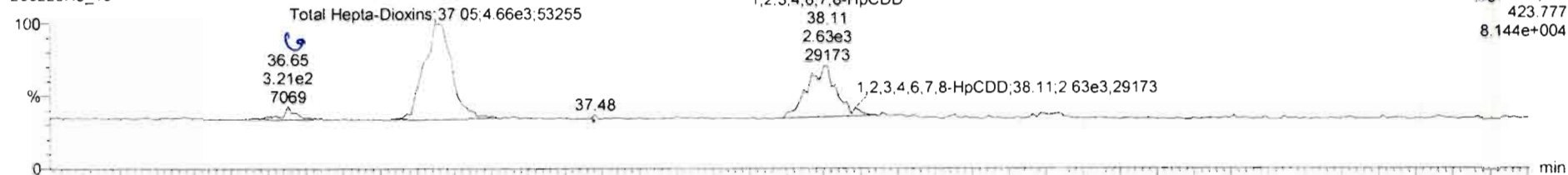
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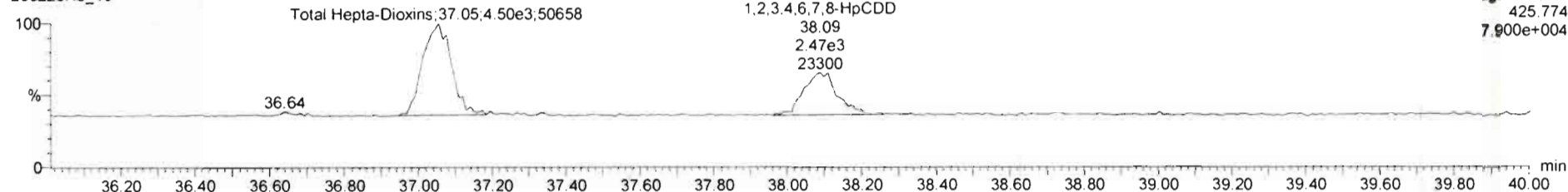
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1,2,3,4,6,7,8-HpCDD

200225R3\_10

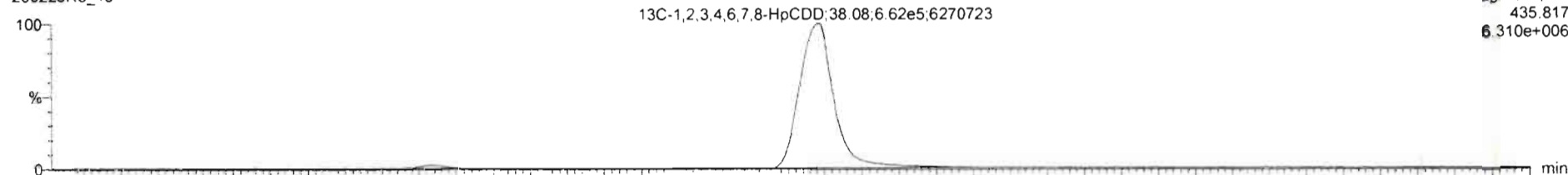


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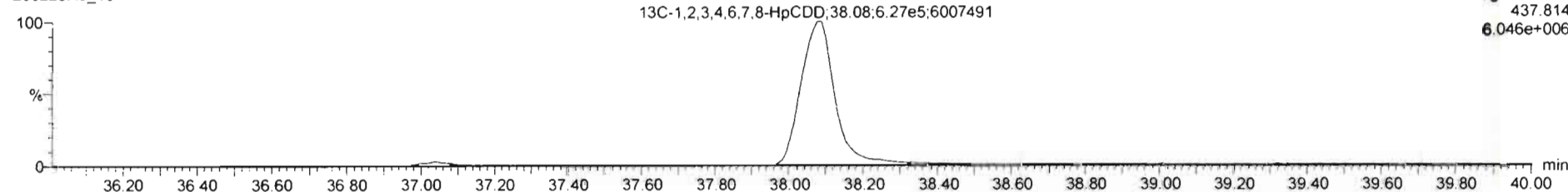


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200225R3\_10



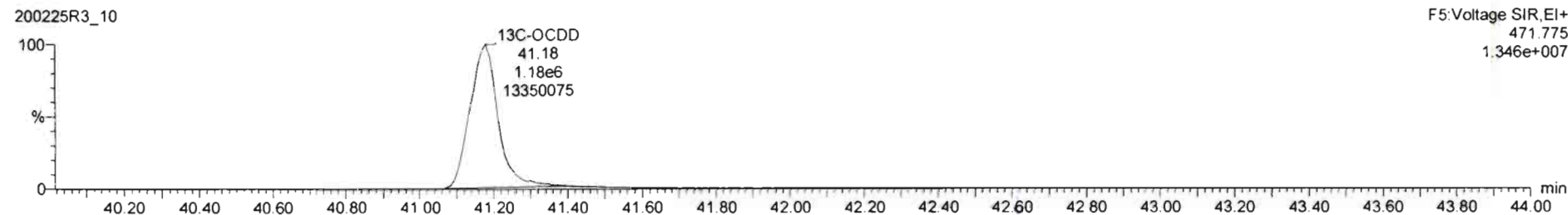
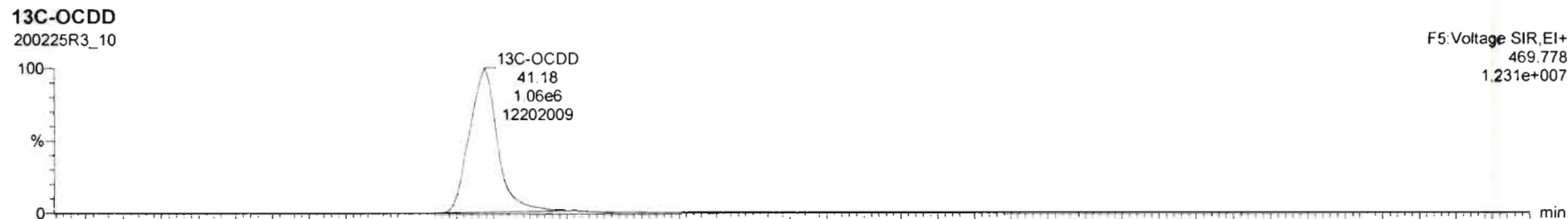
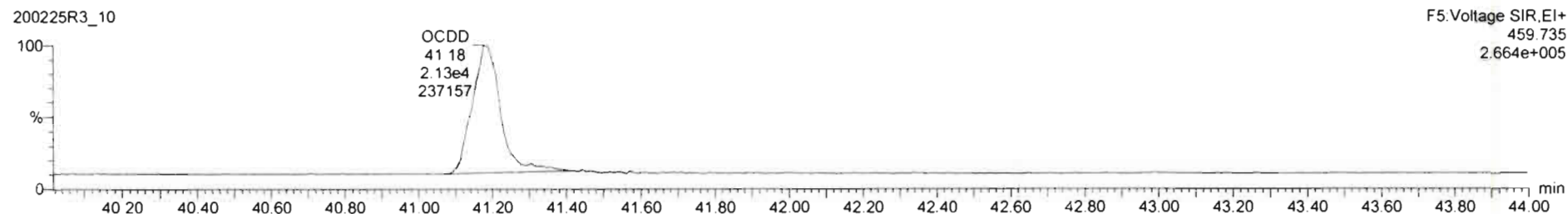
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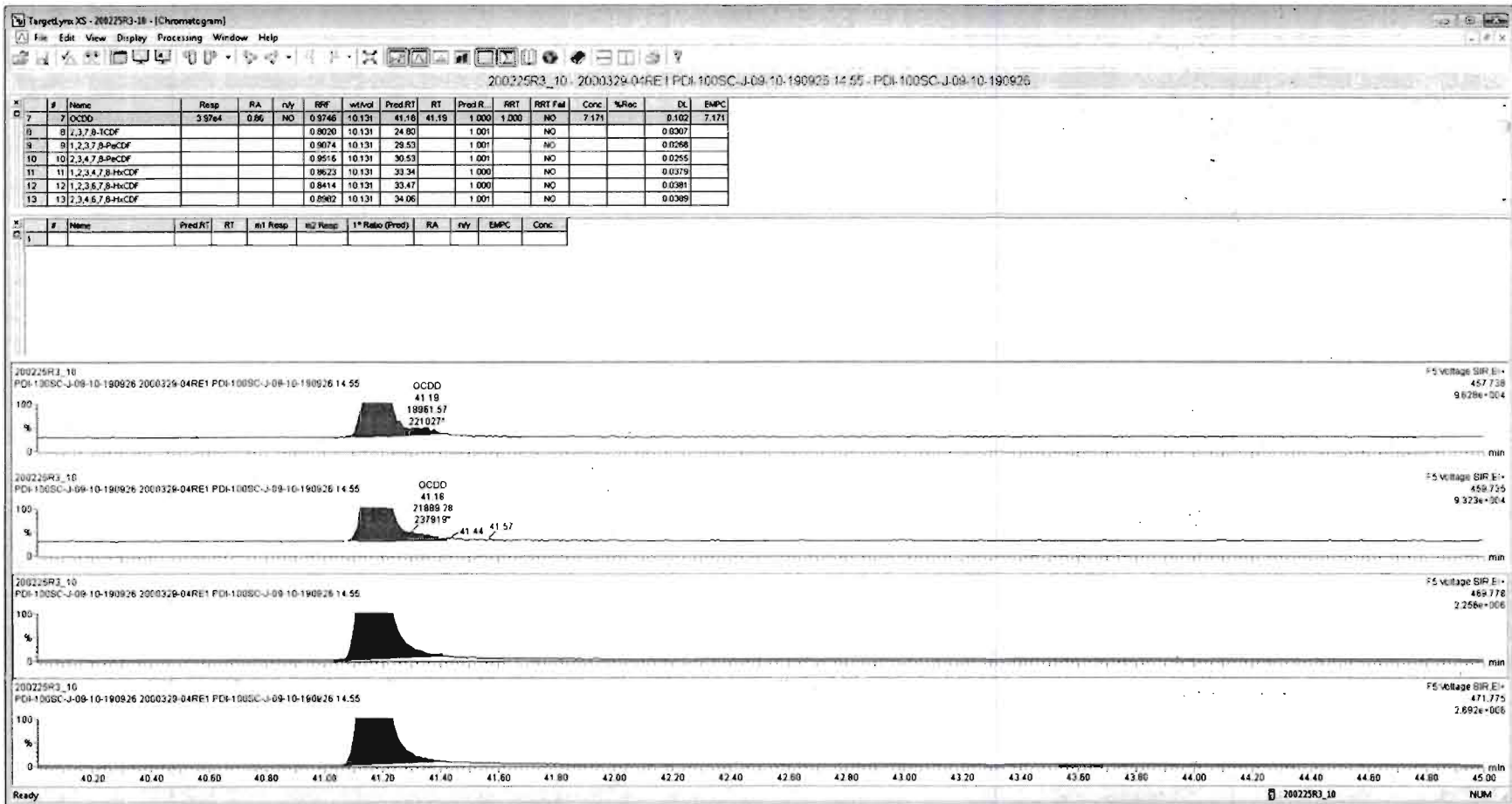


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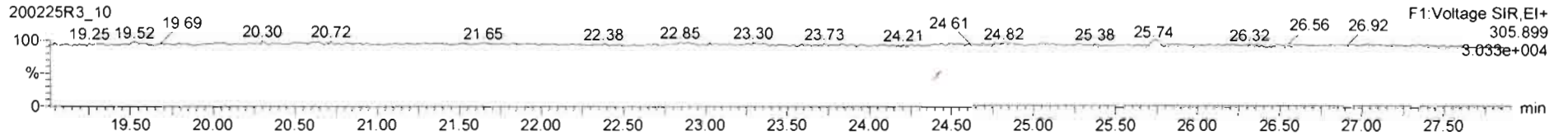
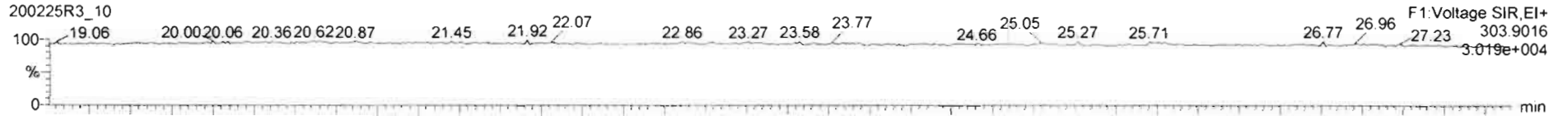
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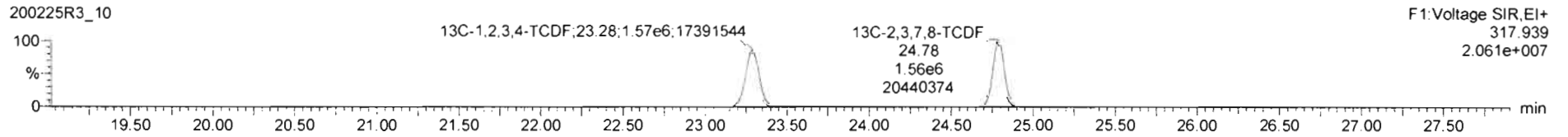
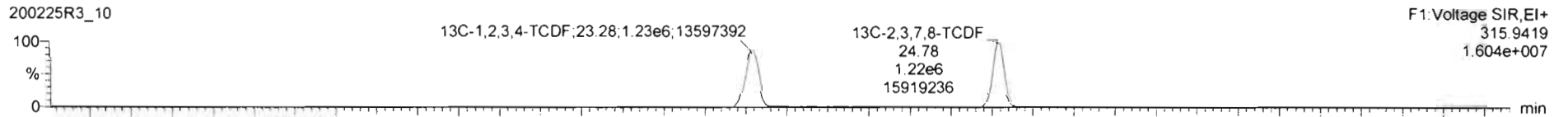
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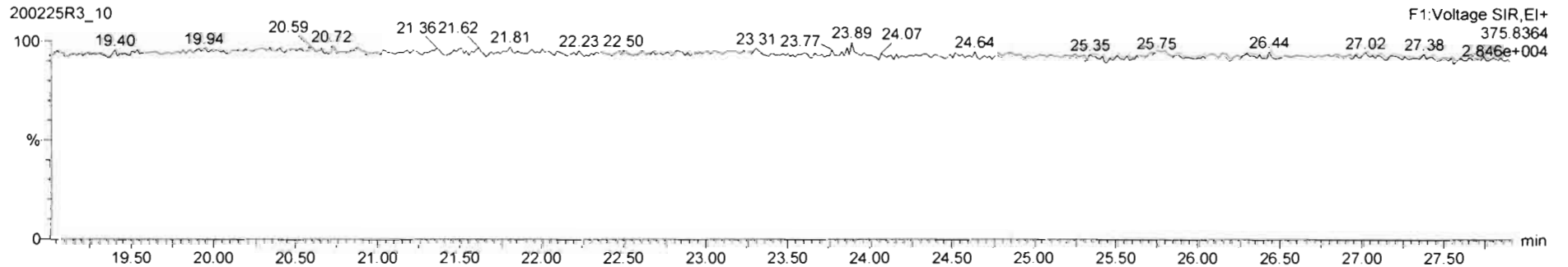
2,3,7,8-TCDF



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



DPE1





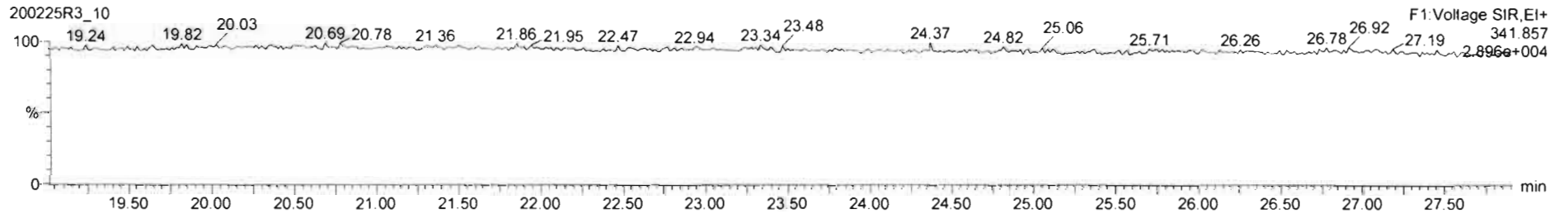
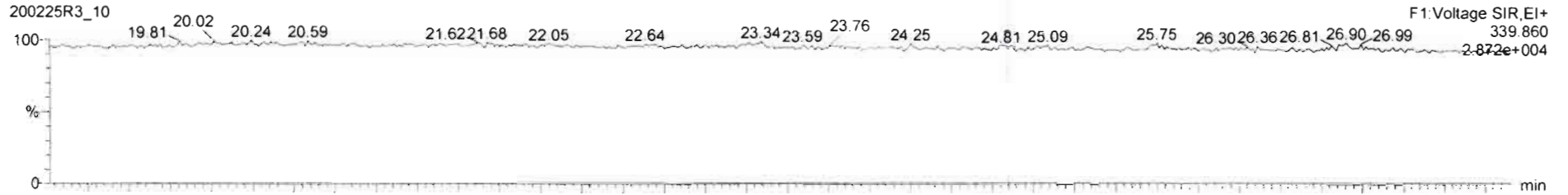
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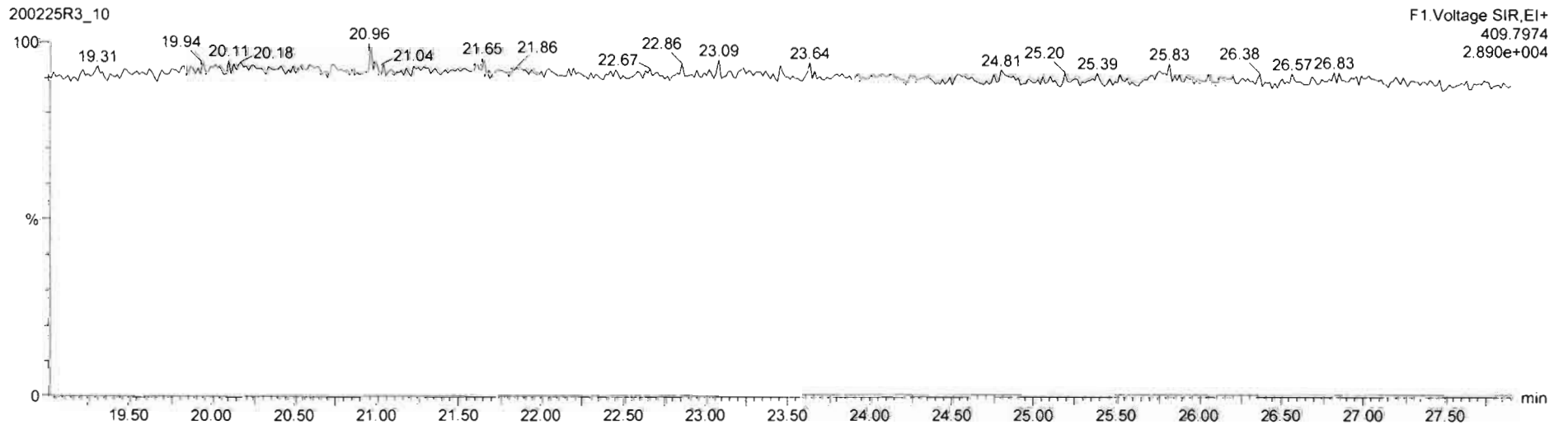
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1st Func. Penta-Furans



DPE6



Dataset: Untitled

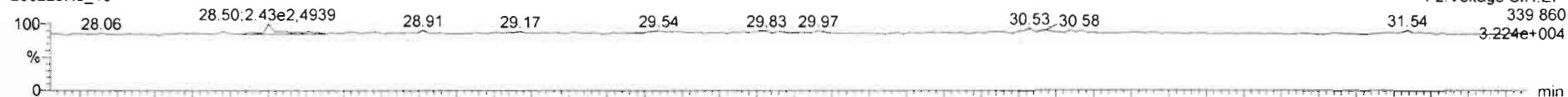
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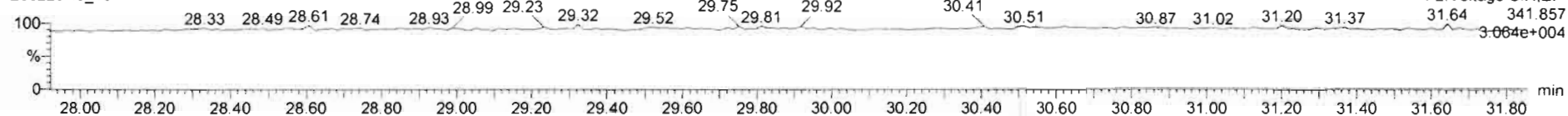
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1,2,3,7,8-PeCDF

200225R3\_10

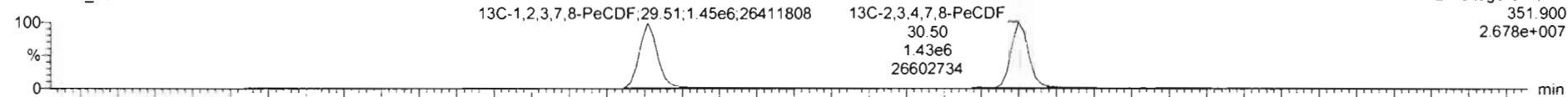


200225R3\_10

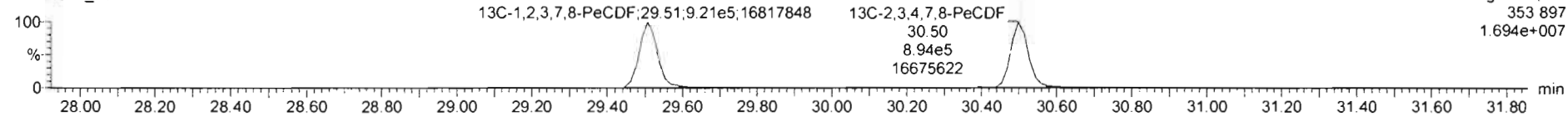


13C-1,2,3,7,8-PeCDF

200225R3\_10

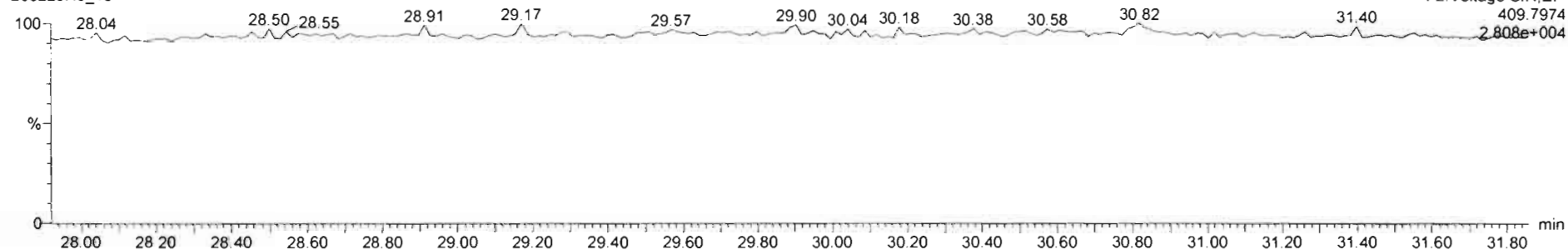


200225R3\_10



DPE2

200225R3\_10



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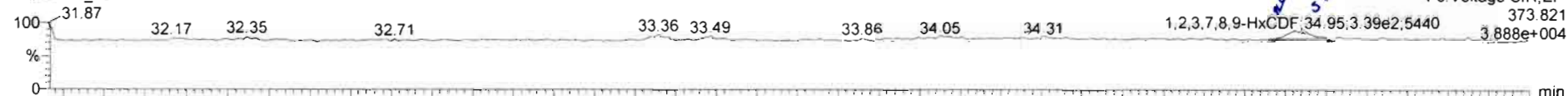
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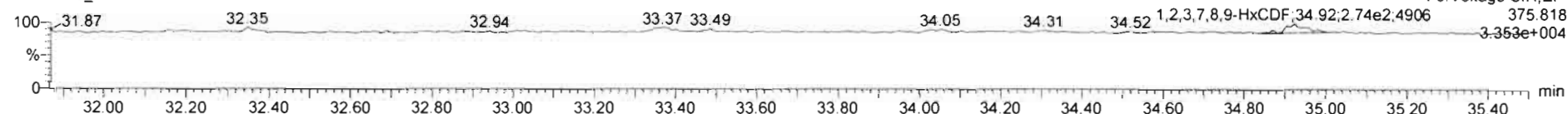
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1,2,3,4,7,8-HxCDF

200225R3\_10

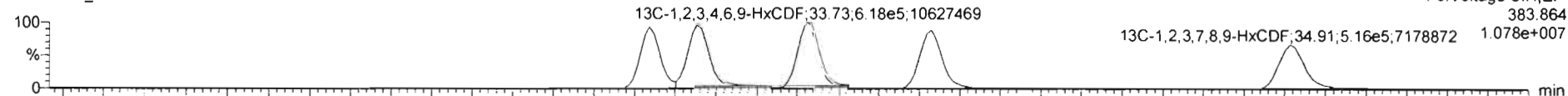


200225R3\_10

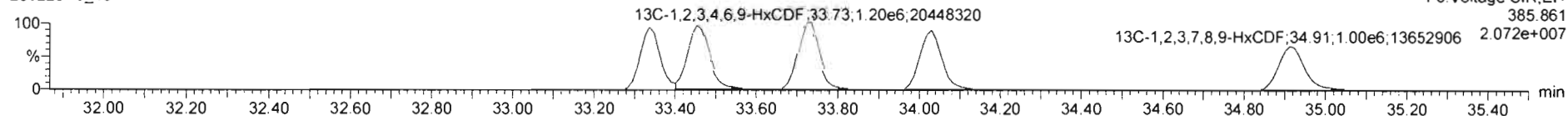


13C-1,2,3,4,7,8-HxCDF

200225R3\_10

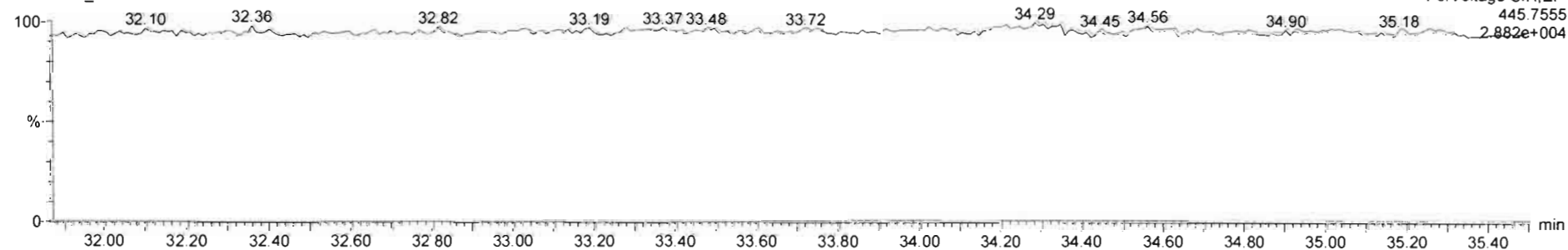


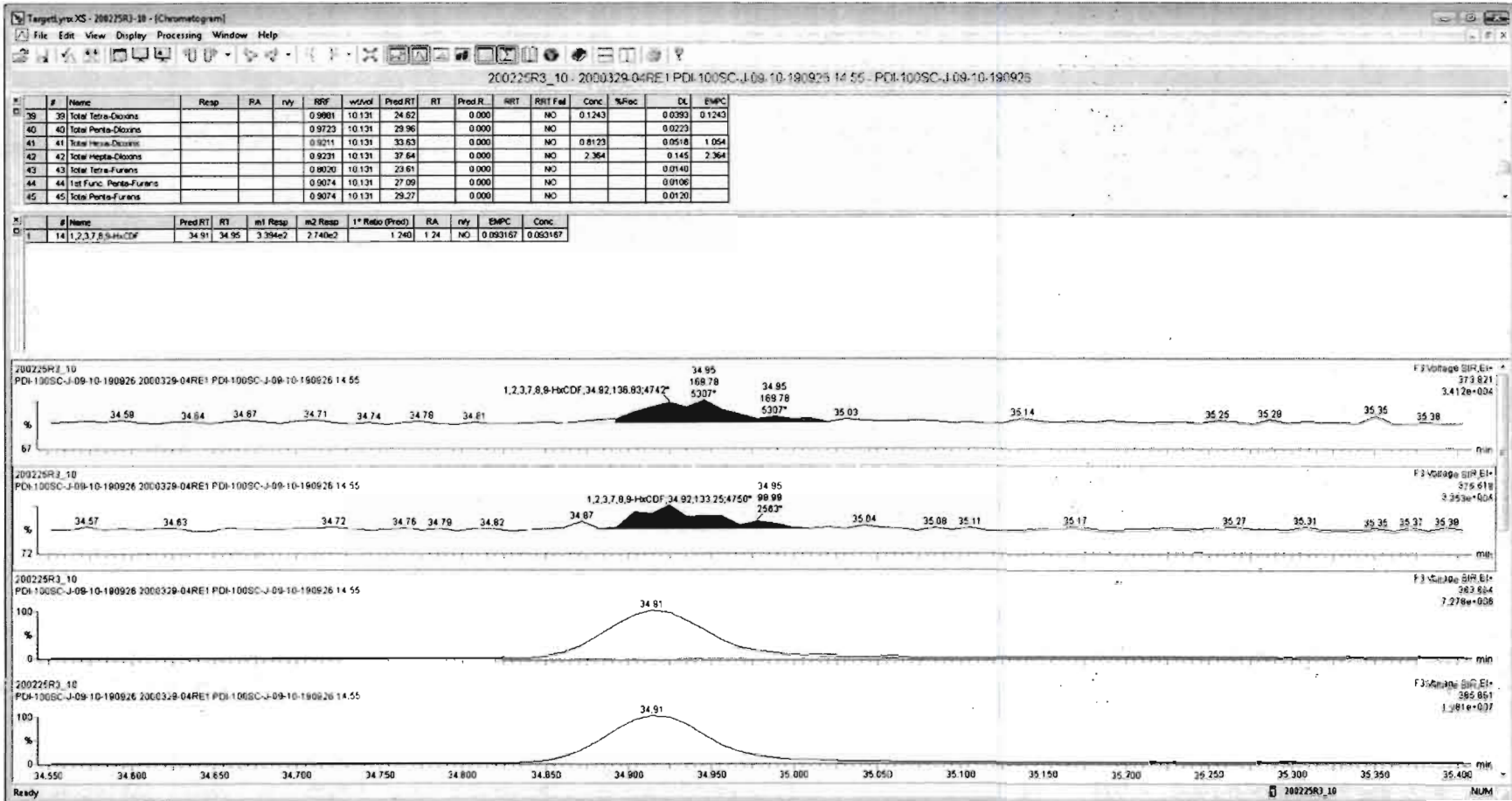
200225R3\_10



DPE3

200225R3\_10



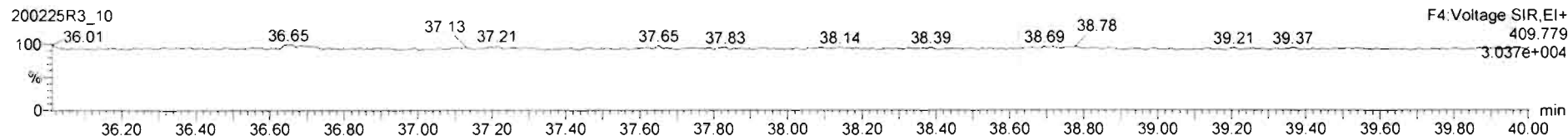
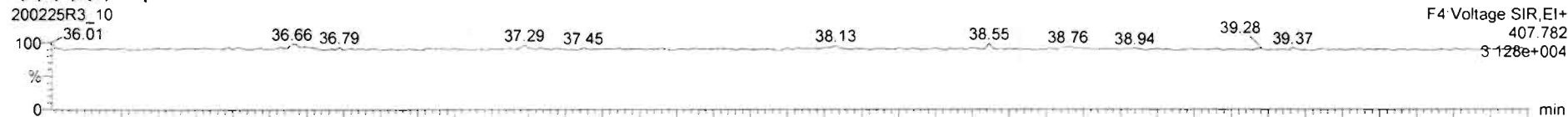


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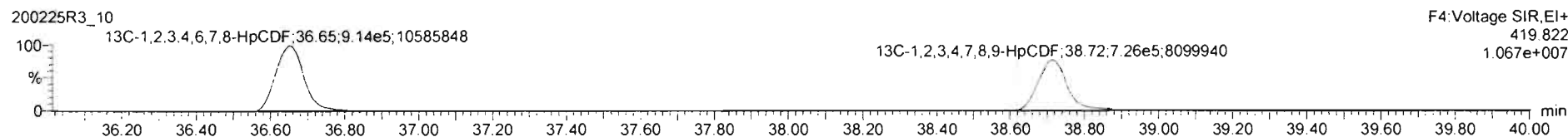
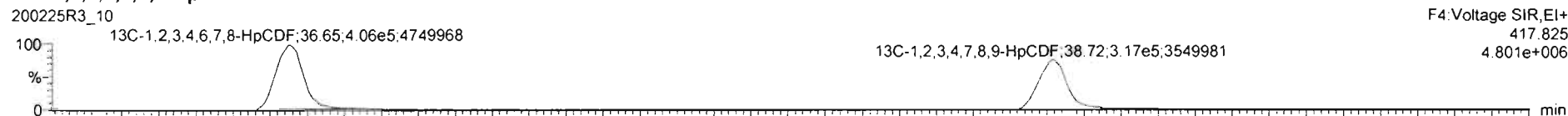
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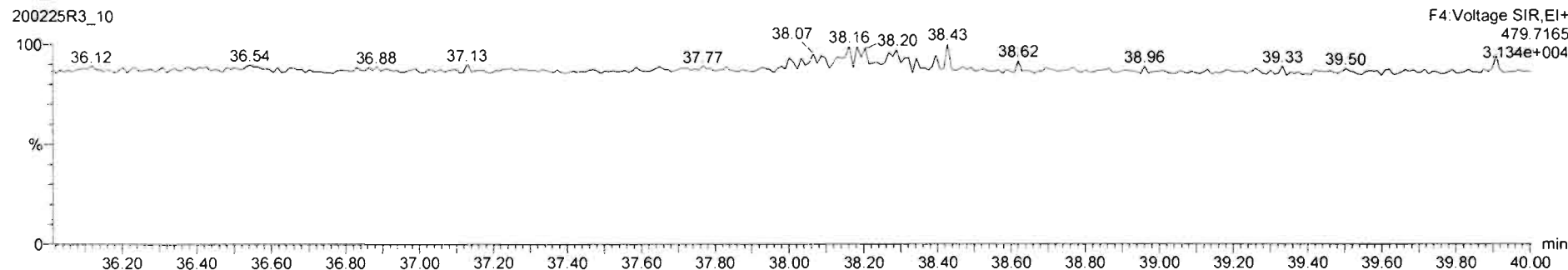
1,2,3,4,6,7,8-HpCDF



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



DPE4

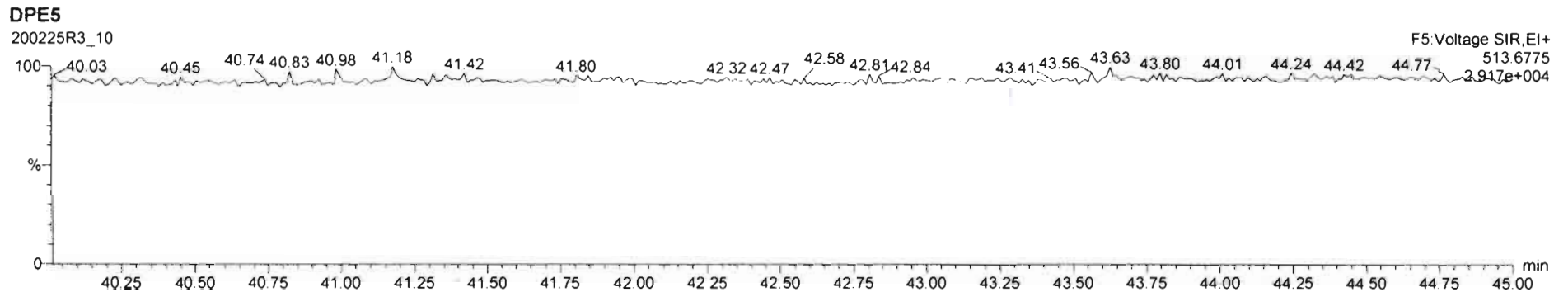
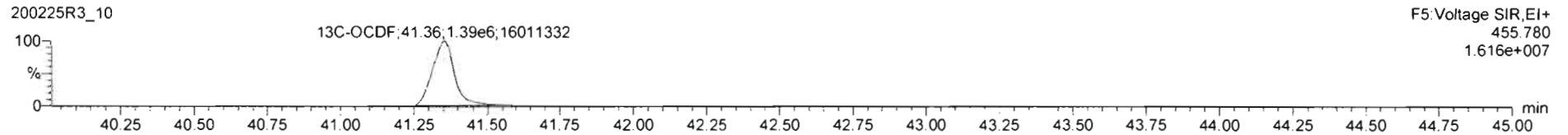
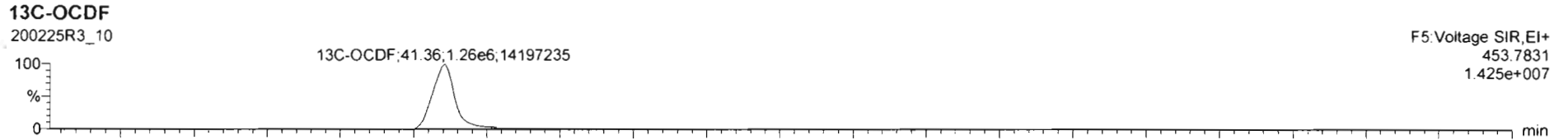
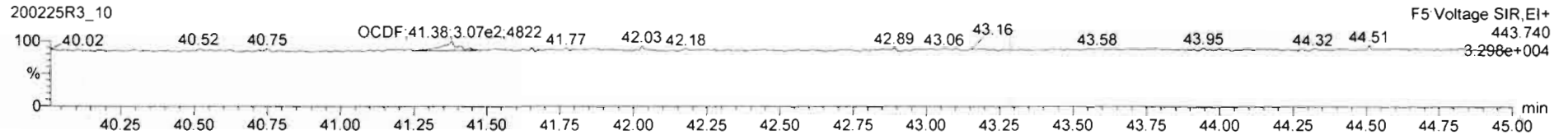
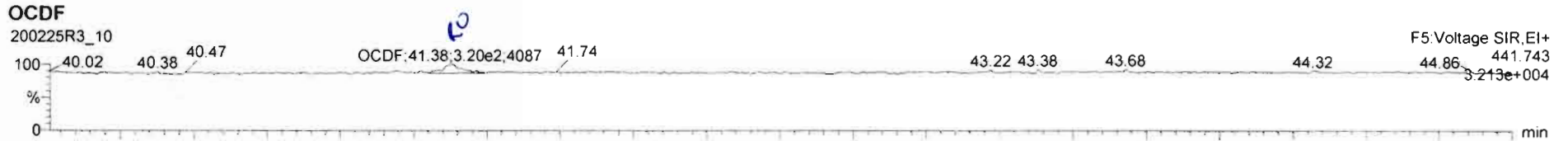


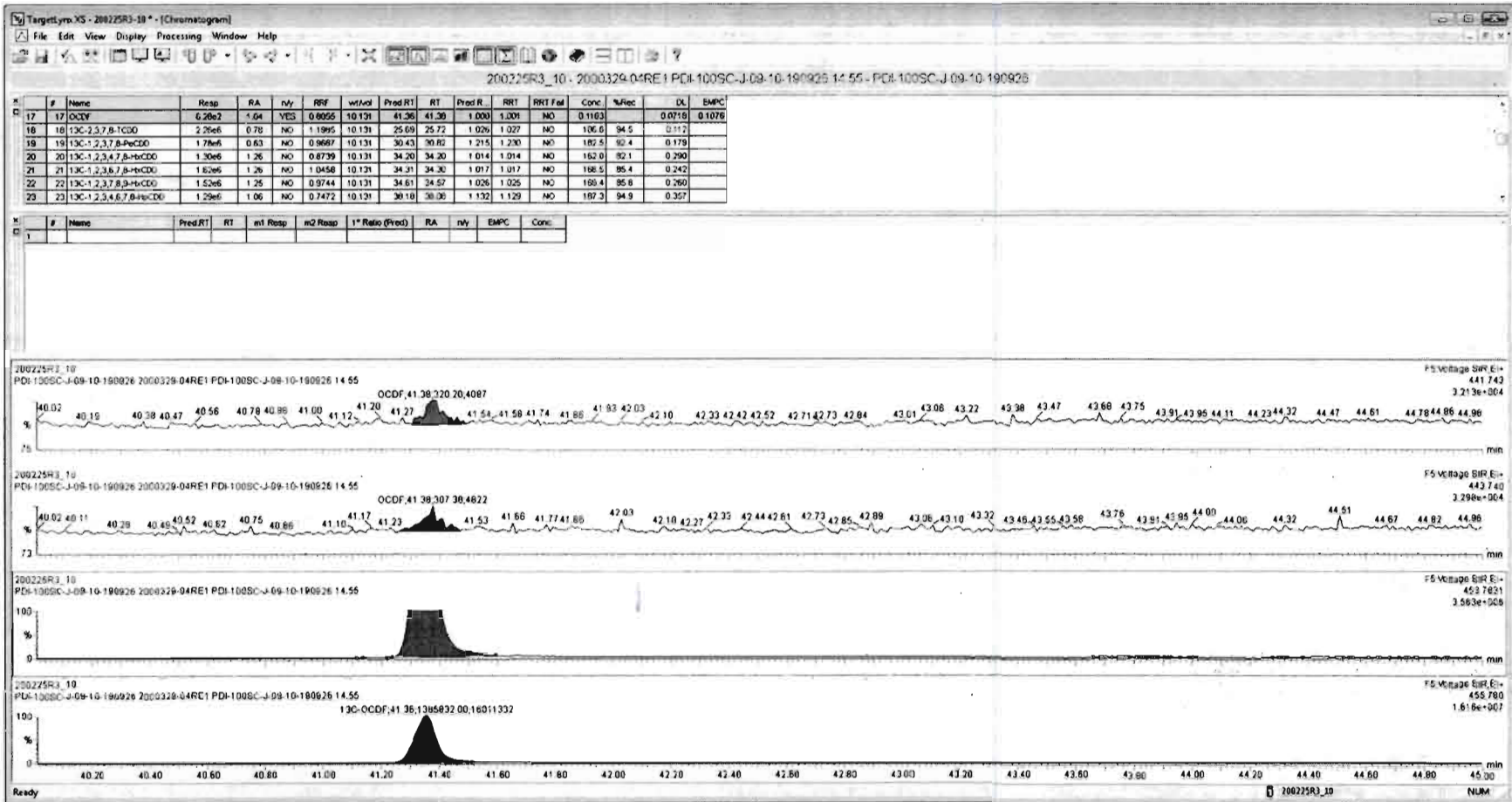
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Printed: Wednesday, February 26, 2020 08:42:47 Pacific Standard Time

Name: 200225R3\_10, Date: 25-Feb-2020, Time: 20:13:11, ID: 2000329-04RE1 PDI-100SC-J-09-10-190926 14.55, Description: PDI-100SC-J-09-10-190926





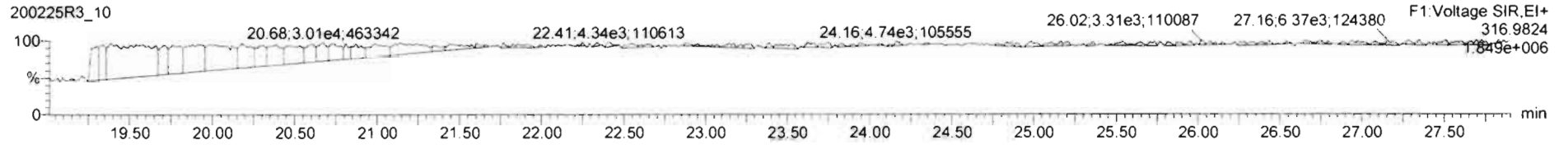
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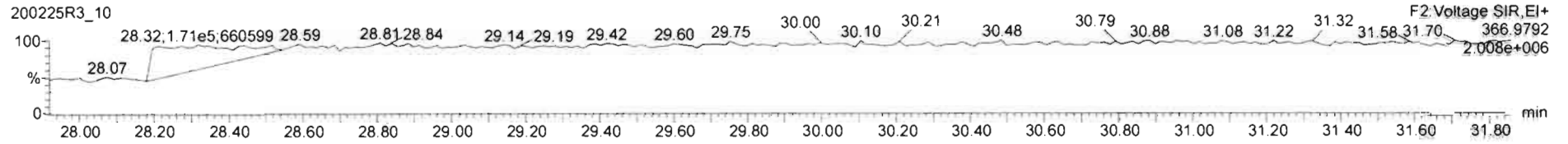
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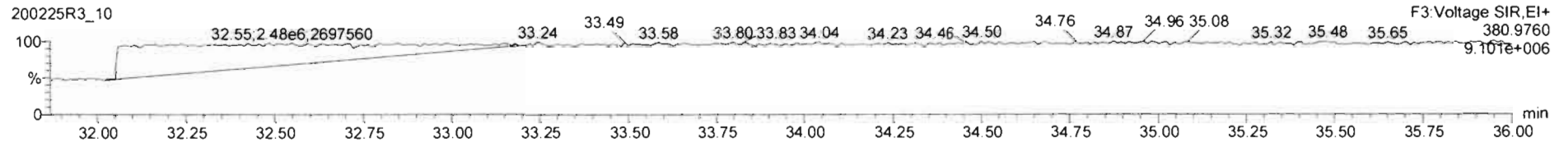
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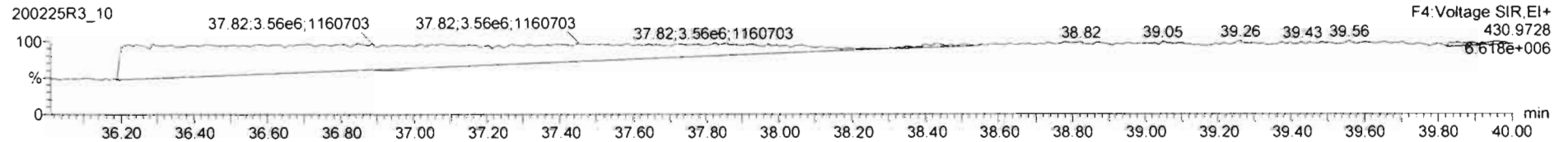
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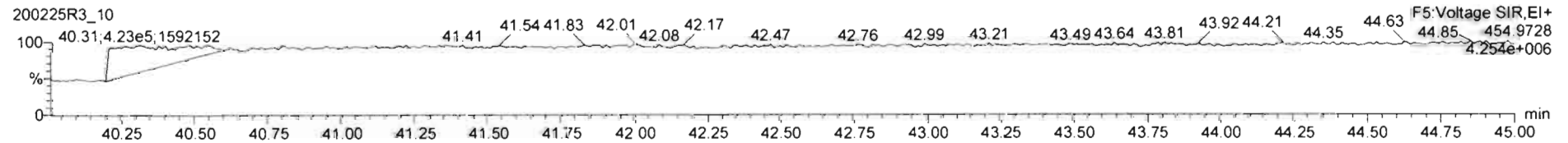
PFK3



PFK4



PFK5





Dataset: U:\VG12.PRO\Results\200225R3\200225R3-11.qld

Last Altered: Friday, February 28, 2020 10:32:32 Pacific Standard Time  
Printed: Friday, February 28, 2020 10:35:10 Pacific Standard Time

*dy 02-28-2020*

*07/02/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_11, Date: 25-Feb-2020, Time: 21:00:35, ID: B0B0195-DUP1 Duplicate 14.48, Description: Duplicate

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD				0.988	10.082	25.75		1.00		NO			0.0415	
2	2 1,2,3,7,8-PeCDD				0.972	10.082	30.84		1.00		NO			0.0533	
3	3 1,2,3,4,7,8-HxCDD				1.07	10.082	34.21		1.00		NO			0.0484	
4	4 1,2,3,6,7,8-HxCDD				0.921	10.082	34.31		1.00		NO			0.0495	
5	5 1,2,3,7,8,9-HxCDD				0.918	10.082	34.61		1.00		NO			0.0561	
6	6 1,2,3,4,6,7,8-HpCDD	2938.962	0.938	NO	0.923	10.082	38.08	38.08	1.00	1.00	NO	0.5153		0.0923	0.5153
7	7 OCDD	28205.508	0.855	NO	0.975	10.082	41.18	41.20	1.00	1.00	NO	5.523		0.0985	5.523
8	8 2,3,7,8-TCDF				0.802	10.082	24.80		1.00		NO			0.0345	
9	9 1,2,3,7,8-PeCDF				0.907	10.082	29.53		1.00		NO			0.0297	
10	10 2,3,4,7,8-PeCDF				0.952	10.082	30.54		1.00		NO			0.0288	
11	11 1,2,3,4,7,8-HxCDF				0.862	10.082	33.35		1.00		NO			0.0325	
12	12 1,2,3,6,7,8-HxCDF				0.841	10.082	33.48		1.00		NO			0.0317	
13	13 2,3,4,6,7,8-HxCDF				0.898	10.082	34.06		1.00		NO			0.0333	
14	14 1,2,3,7,8,9-HxCDF	404.497	1.331	NO	0.858	10.082	34.91	34.92	1.00	1.00	NO	0.06091		0.0469	0.06091
15	15 1,2,3,4,6,7,8-HpCDF				0.851	10.082	36.69		1.00		NO			0.0576	
16	16 1,2,3,4,7,8,9-HpCDF				0.980	10.082	38.72		1.00		NO			0.0691	
17	17 OCDF	370.532	1.053	YES	0.806	10.082	41.36	41.37	1.00	1.00	NO	0.07650		0.0844	0.07042
18	18 13C-2,3,7,8-TCDD	2183176.5...	0.779	NO	1.20	10.082	25.69	25.72	1.03	1.03	NO	191.3	96.4	0.152	
19	19 13C-1,2,3,7,8-PeCDD	1703635.8...	0.621	NO	0.967	10.082	30.43	30.82	1.22	1.23	NO	185.0	93.3	0.236	
20	20 13C-1,2,3,4,7,8-HxCDD	1297460.1...	1.278	NO	0.874	10.082	34.20	34.20	1.01	1.01	NO	167.7	84.5	0.364	
21	21 13C-1,2,3,6,7,8-HxCDD	1567147.1...	1.267	NO	1.05	10.082	34.31	34.31	1.02	1.02	NO	169.3	85.3	0.304	
22	22 13C-1,2,3,7,8,9-HxCDD	1459497.1...	1.230	NO	0.974	10.082	34.61	34.57	1.03	1.02	NO	169.2	85.3	0.326	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1225710.8...	1.023	NO	0.747	10.082	38.18	38.07	1.13	1.13	NO	185.3	93.4	0.445	
24	24 13C-OCDD	2079078.8...	0.869	NO	0.707	10.082	41.09	41.18	1.22	1.22	NO	332.4	83.8	0.416	
25	25 13C-2,3,7,8-TCDF	2712051.0...	0.770	NO	1.07	10.082	24.87	24.78	0.99	0.99	NO	183.3	92.4	0.213	
26	26 13C-1,2,3,7,8-PeCDF	2299739.3...	1.552	NO	1.00	10.082	29.46	29.51	1.18	1.18	NO	165.3	83.3	0.328	
27	27 13C-2,3,4,7,8-PeCDF	2275104.5...	1.578	NO	0.962	10.082	30.42	30.51	1.21	1.22	NO	170.3	85.9	0.342	
28	28 13C-1,2,3,4,7,8-HxCDF	1606692.0...	0.511	NO	1.05	10.082	33.33	33.35	0.99	0.99	NO	173.0	87.2	0.412	
29	29 13C-1,2,3,6,7,8-HxCDF	1835218.9...	0.525	NO	1.19	10.082	33.43	33.47	0.99	0.99	NO	174.2	87.8	0.363	
30	30 13C-2,3,4,6,7,8-HxCDF	1666945.4...	0.513	NO	1.07	10.082	34.04	34.03	1.01	1.01	NO	176.6	89.0	0.406	
31	31 13C-1,2,3,7,8,9-HxCDF	1535672.5...	0.526	NO	0.922	10.082	34.95	34.91	1.04	1.04	NO	188.1	94.8	0.469	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-11.qld

Last Altered: Friday, February 28, 2020 10:32:32 Pacific Standard Time  
Printed: Friday, February 28, 2020 10:35:10 Pacific Standard Time

Name: 200225R3\_11, Date: 25-Feb-2020, Time: 21:00:35, ID: B0B0195-DUP1 Duplicate 14.48, Description: Duplicate

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1249715.3...	0.443	NO	0.767	10.082	36.70	36.65	1.09	1.09	NO	184.0	92.8	0.411	
33	33 13C-1,2,3,4,7,8,9-HpCDF	947991.563	0.450	NO	0.552	10.082	38.72	38.72	1.15	1.15	NO	193.9	97.7	0.570	
34	34 13C-OCDF	2385379.1...	0.922	NO	0.789	10.082	41.32	41.36	1.23	1.23	NO	341.3	86.0	0.234	
35	35 37Cl-2,3,7,8-TCDD	840061.563			1.18	10.082	25.72	25.74	1.03	1.03	NO	74.99	94.5	0.0666	
36	36 13C-1,2,3,4-TCDD	1889216.5...	0.795	NO	1.00	10.082	25.11	25.05	1.00	1.00	NO	198.4	100	0.182	
37	37 13C-1,2,3,4-TCDF	2755298.2...	0.794	NO	1.00	10.082	23.37	23.27	1.00	1.00	NO	198.4	100	0.227	
38	38 13C-1,2,3,4,6,9-HxCDF	1756151.1...	0.517	NO	1.00	10.082	33.71	33.73	1.00	1.00	NO	198.4	100	0.432	
39	39 Total Tetra-Dioxins				0.988	10.082	24.62		0.00		NO	0.1058		0.0415	0.1058
40	40 Total Penta-Dioxins				0.972	10.082	29.96		0.00		NO	0.0000		0.0243	0.09678
41	41 Total Hexa-Dioxins				0.921	10.082	33.63		0.00		NO	0.7868		0.0537	0.7868
42	42 Total Hepta-Dioxins				0.923	10.082	37.64		0.00		NO	1.471		0.0923	1.471
43	43 Total Tetra-Furans				0.802	10.082	23.61		0.00		NO			0.0164	
44	44 1st Func. Penta-Furans				0.907	10.082	27.09		0.00		NO			0.0122	
45	45 Total Penta-Furans				0.907	10.082	29.27		0.00		NO			0.0153	
46	46 Total Hexa-Furans				0.898	10.082	33.56		0.00		NO	0.09176		0.0344	0.09176
47	47 Total Hepta-Furans				0.851	10.082	37.83		0.00		NO			0.0340	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-11.qld

Last Altered: Friday, February 28, 2020 10:32:32 Pacific Standard Time

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Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Name: 200225R3\_11, Date: 25-Feb-2020, Time: 21:00:35, ID: B0B0195-DUP1 Duplicate 14.48, Description: Duplicate

**Tetra-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	39 Total Tetra-Dioxins	1.15e3	2.18e6	0.857	NO	24.62	23.45	0.1058	0.1058

**Penta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	0.00e0	1.70e6	2.638	YES	29.96	29.49	0.0000	0.02497
2	40 Total Penta-Dioxins	0.00e0	1.70e6	0.373	YES	29.96	29.07	0.0000	0.07182

**Hexa-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	41 Total Hexa-Dioxins	3.91e3	0.00e0	1.160	NO	33.63	32.74	0.5837	0.5837
2	41 Total Hexa-Dioxins	1.36e3	0.00e0	1.260	NO	33.63	33.55	0.2031	0.2031

**Hepta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	2.94e3	1.23e6	0.938	NO	38.08	38.08	0.5153	0.5153
2	42 Total Hepta-Dioxins	5.45e3	1.23e6	1.084	NO	37.64	37.04	0.9557	0.9557

**Tetra-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-11.qld

Last Altered: Friday, February 28, 2020 10:32:32 Pacific Standard Time

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Name: 200225R3\_11, Date: 25-Feb-2020, Time: 21:00:35, ID: B0B0195-DUP1 Duplicate 14.48, Description: Duplicate

**Penta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hexa-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	4.04e2	1.54e6	1.331	NO	34.91	34.92	0.06091	0.06091
2	46 Total Hexa-Furans	2.32e2	0.00e0	1.143	NO	33.56	34.95	0.03084	0.03084

**Hepta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

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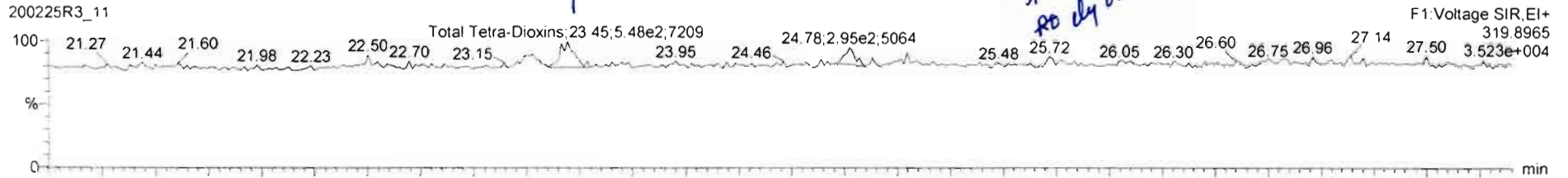
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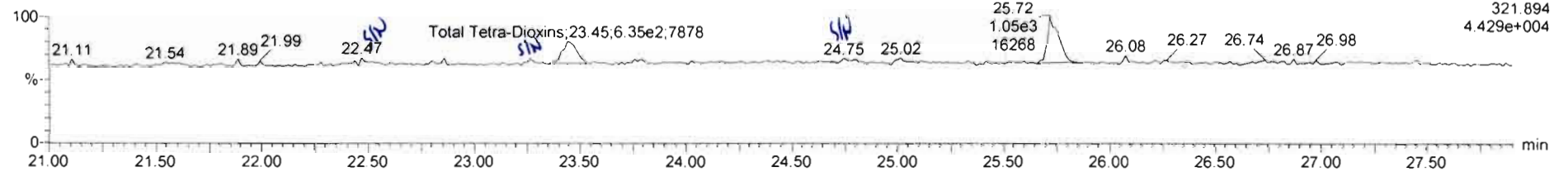
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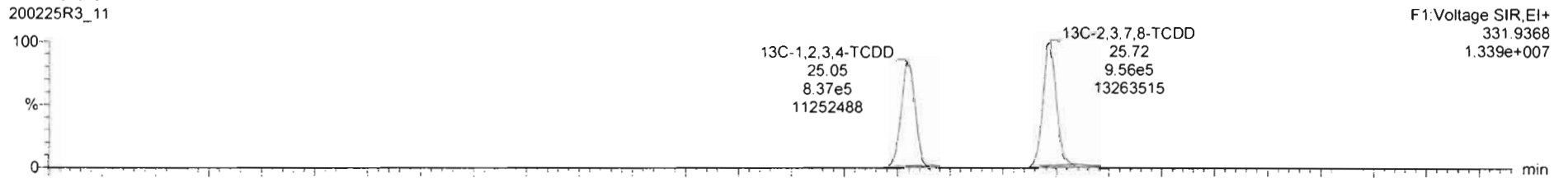
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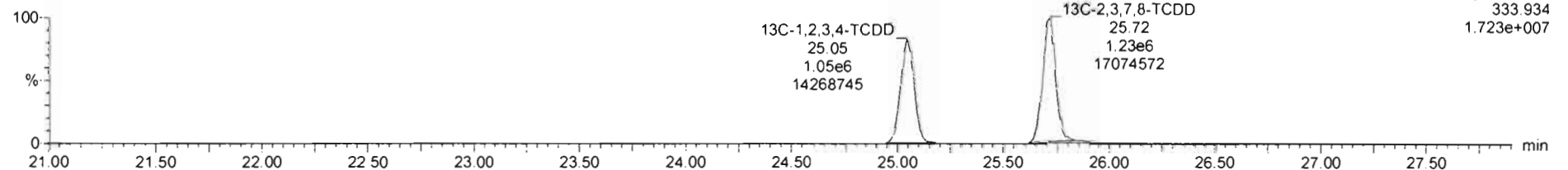
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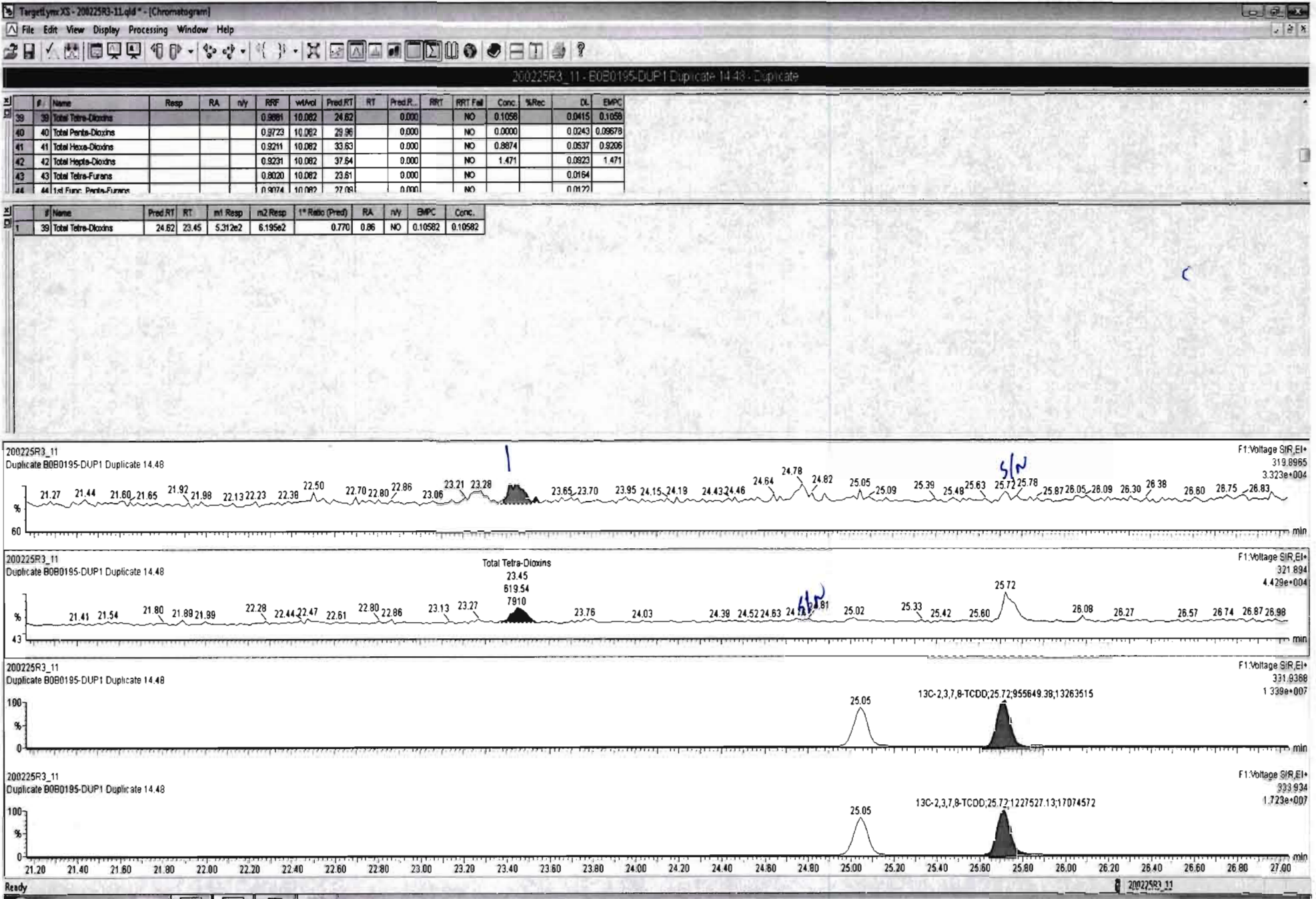


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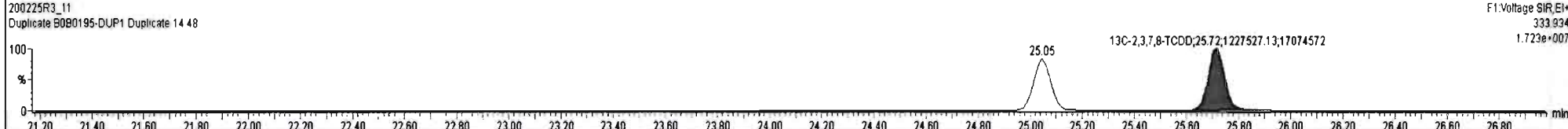
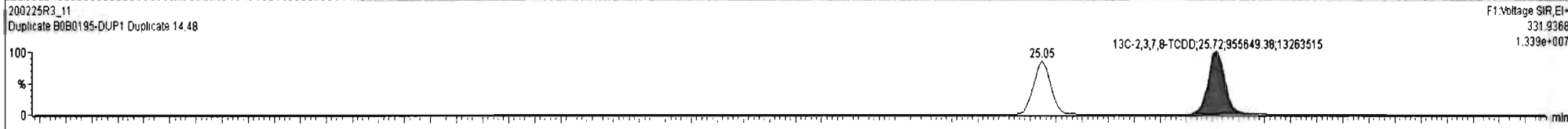
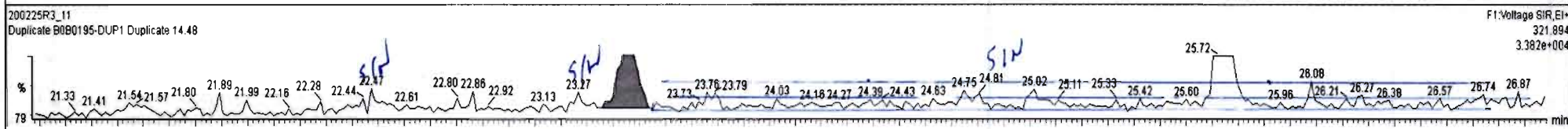
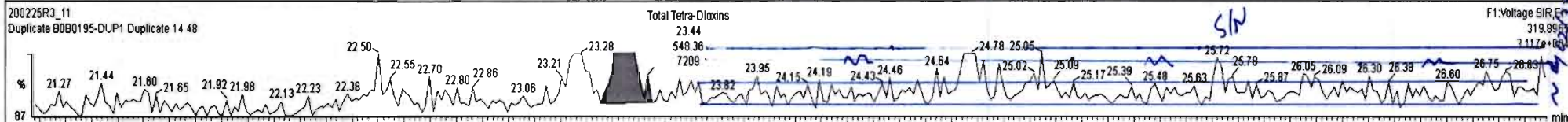
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#	Name	Resp	RA	n/y	RPF	wtMol	Pred_RT	RT	Pred_R...	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9861	10.082	24.62		0.000		NO	0.1089		0.0415	0.1090
40	Total Penta-Dioxins				0.9723	10.082	29.96		0.000		NO	0.0000		0.0243	0.06200
41	Total Hexa-Dioxins				0.9211	10.082	33.83		0.000		NO	0.7937		0.0537	0.7940
42	Total Hepta-Dioxins				0.9231	10.082	37.64		0.000		NO	1.441		0.0923	1.441
43	Total Tetra-Furans				0.8020	10.082	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.082	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.082	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8982	10.082	33.56		0.000		NO	0.09921		0.0344	0.09900
47	Total Hepta-Furans				0.8511	10.082	37.83		0.000		NO			0.0340	

#	Name	Pred_RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1	39 Total Tetra-Dioxins	24.62	23.44	5.484e2	6.355e2	0.770	0.66	NO	0.10900	0.10886



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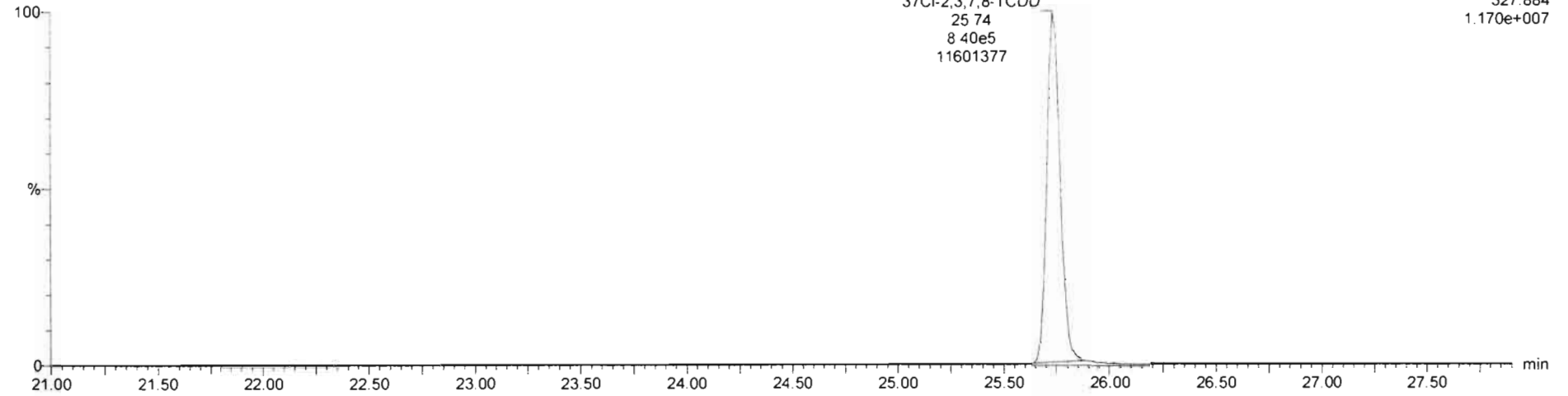
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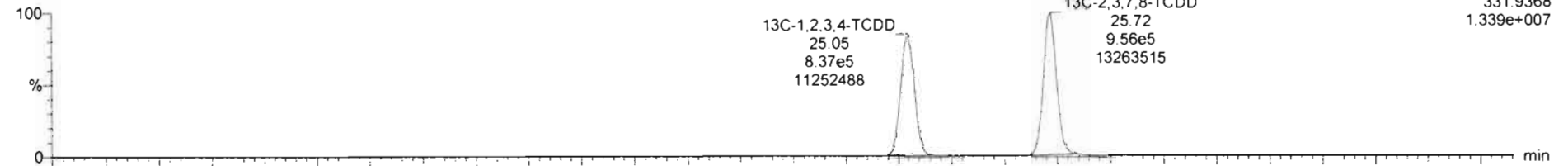
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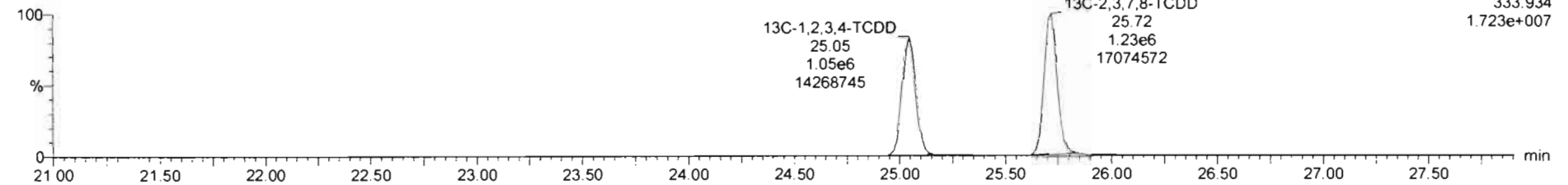


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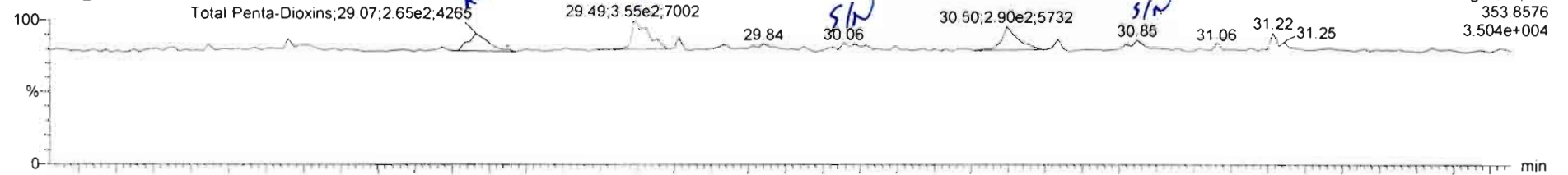
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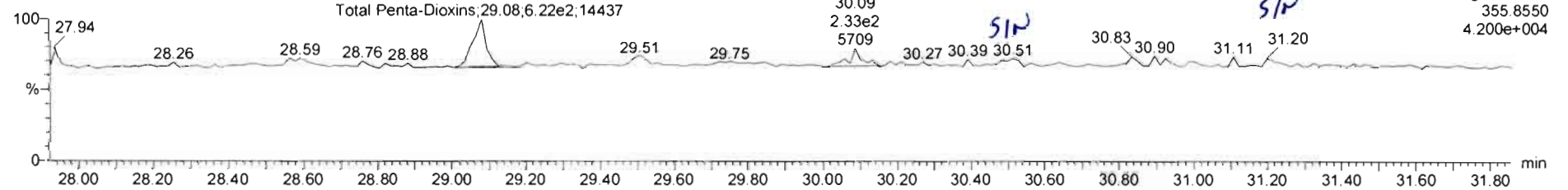
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1,2,3,7,8-PeCDD

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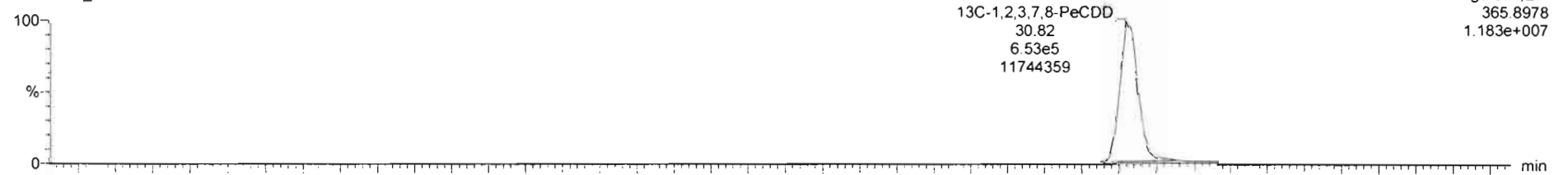


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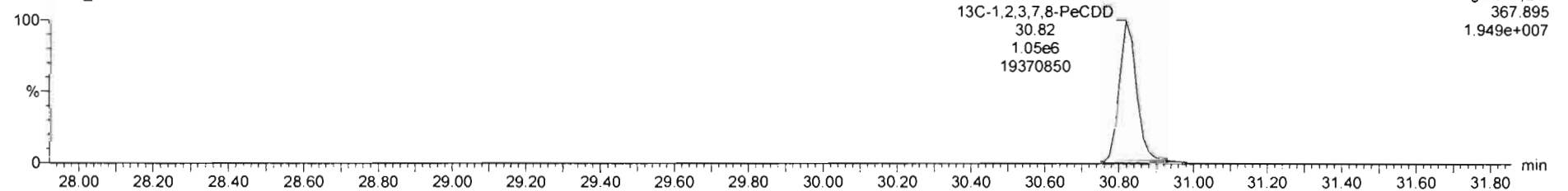


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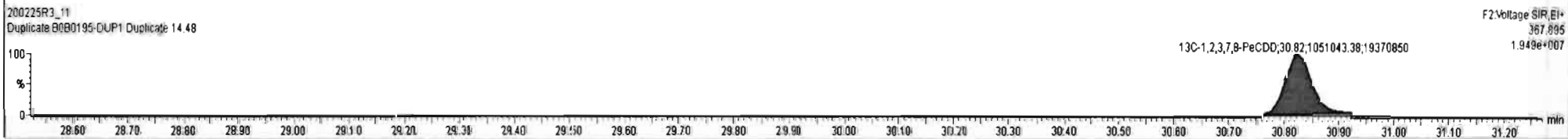
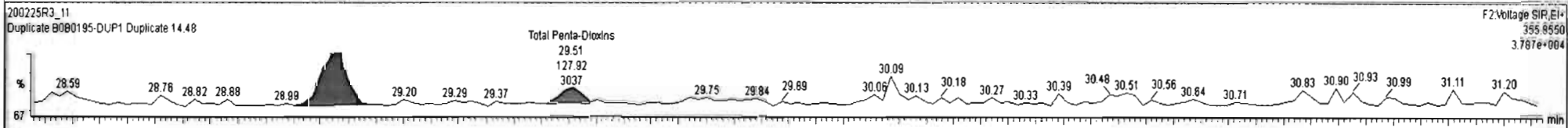
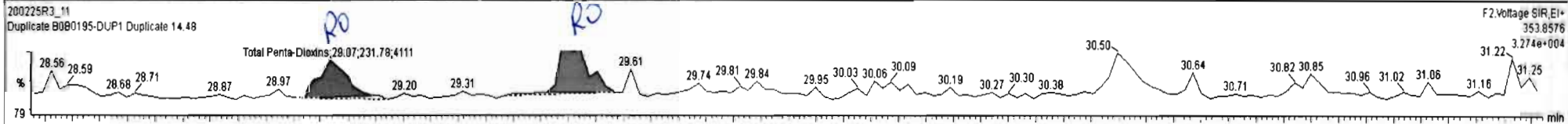
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200225R3\_11 - BUB0195-DUP1 Duplicate 14.48 - Duplicate

#	Name	Resp	RA	n/y	RRF	wtAcl	Pred.RT	RT	Pred.R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9661	10.082	24.62		0.000		NO	0.1058		0.0415	0.1259
40	Total Penta-Dioxins				0.9723	10.082	29.96		0.000		NO	0.0000		0.0243	0.09678
41	Total Hexa-Dioxins				0.9211	10.082	33.63		0.000		NO	0.7937		0.0537	0.7937
42	Total Hepta-Dioxins				0.9231	10.082	37.64		0.000		NO	1.441		0.0923	1.441
43	Total Tetra-Furans				0.9020	10.082	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.082	27.09		0.000		NO			0.0122	
45	Total Furans				0.9074	10.082	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8962	10.082	33.56		0.000		NO	0.09921		0.0344	0.09921
47	Total Hepta-Furans				0.8511	10.082	37.83		0.000		NO			0.0340	

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1	40 Total Penta-Dioxins	29.96	29.07	2.318e2	6.218e2	0.630	0.37	YES	0.071815	0.00000
2	40 Total Penta-Dioxins	29.96	29.49	3.374e2	1.279e2	0.630	2.64	YES	0.024970	0.00000

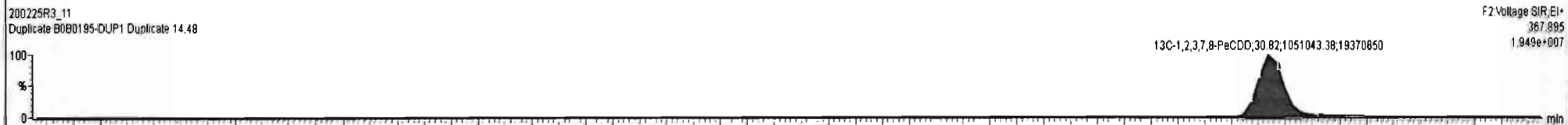
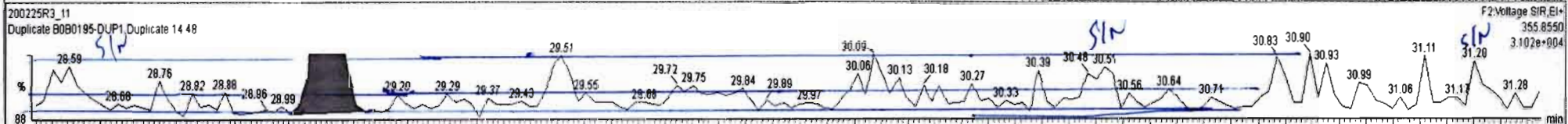
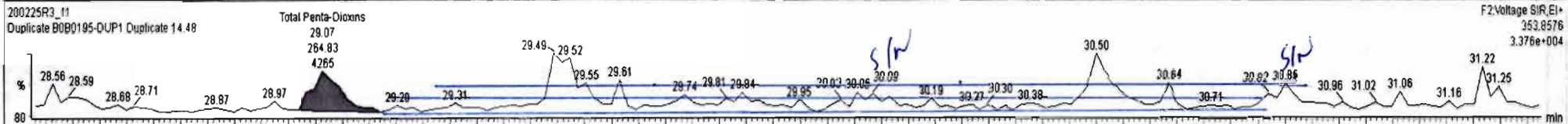




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#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.R.	RRT	RRT Fal	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9881	10.062	24.82		0.000		NO	0.1058		0.0415	0.1259
40	Total Penta-Dioxins				0.9723	10.062	29.96		0.000		NO	0.0000		0.0243	0.06208
41	Total Hexa-Dioxins				0.9211	10.062	33.63		0.000		NO	0.7937		0.0537	0.7937
42	Total Hepta-Dioxins				0.9231	10.062	37.54		0.000		NO	1.441		0.0923	1.441
43	Total Tetra-Furans				0.8020	10.062	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.062	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.062	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8982	10.062	33.56		0.000		NO	0.09921		0.0844	0.09921
47	Total Hepta-Furans				0.8511	10.062	37.83		0.000		NO			0.0340	

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1	40 Total Penta-Dioxins	29.96	29.07	2.648e2	6.218e2	0.630	0.43	YES	0.082055	0.00000



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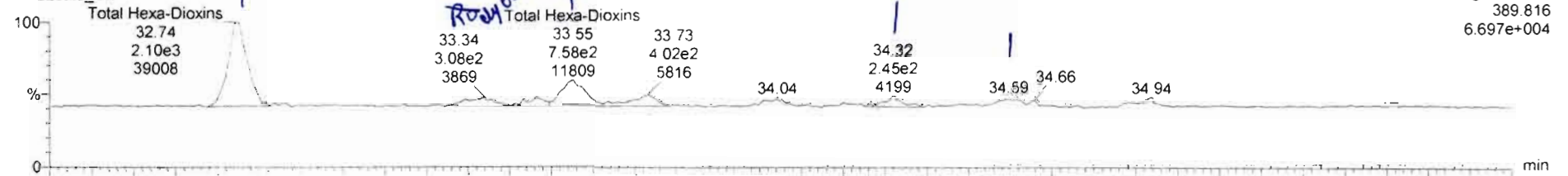
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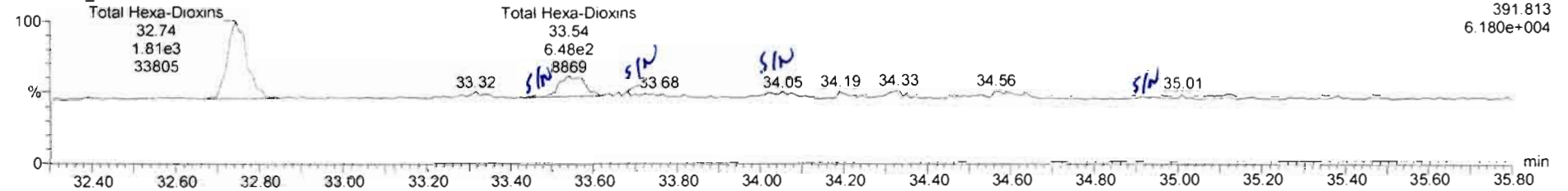
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1,2,3,4,7,8-HxCDD

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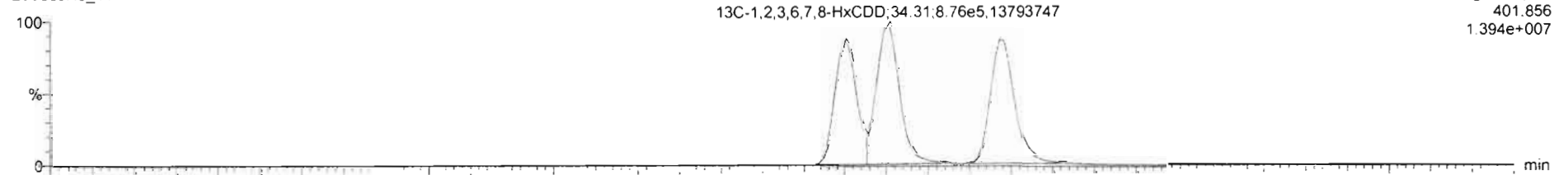


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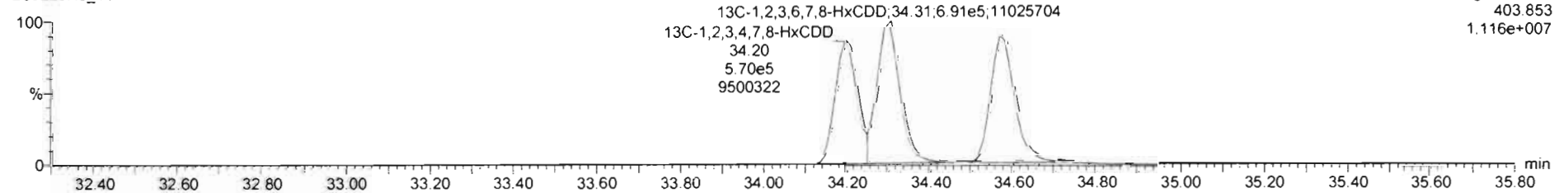


13C-1,2,3,4,7,8-HxCDD

200225R3\_11

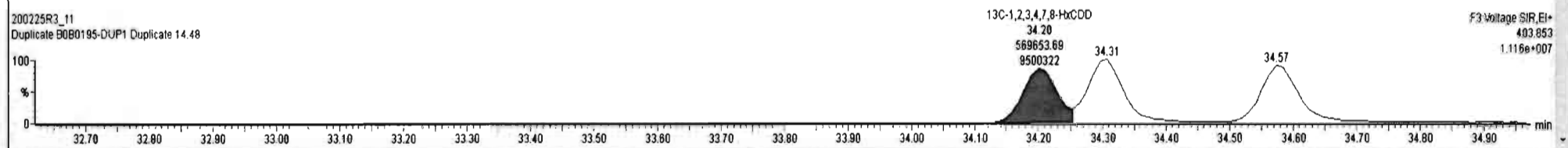
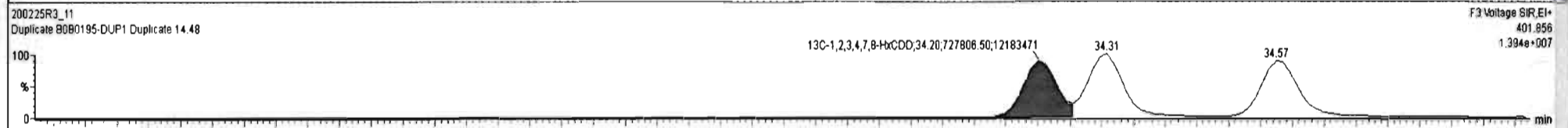
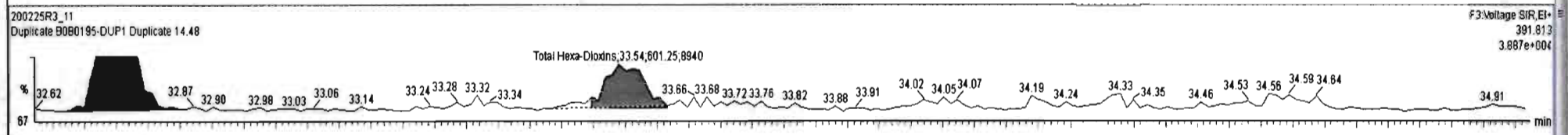
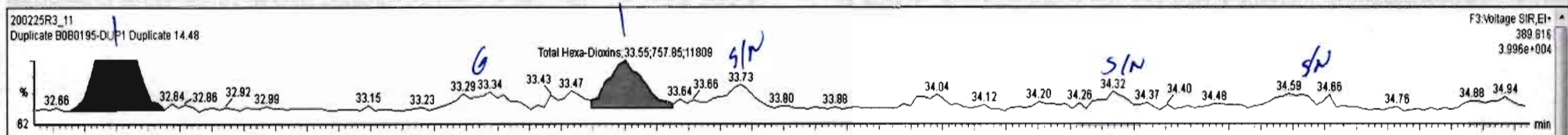


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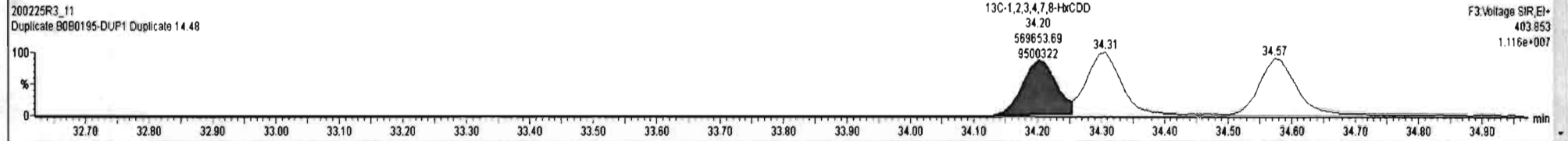
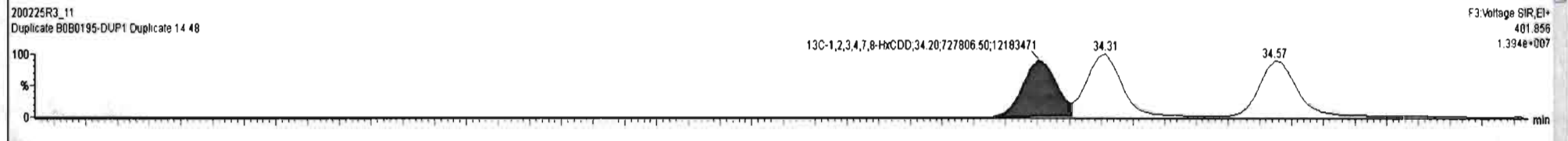
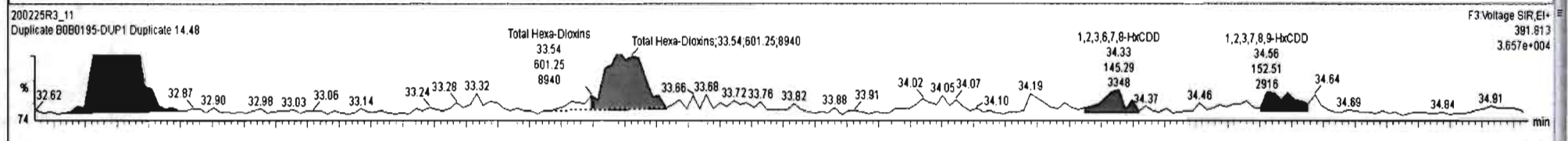
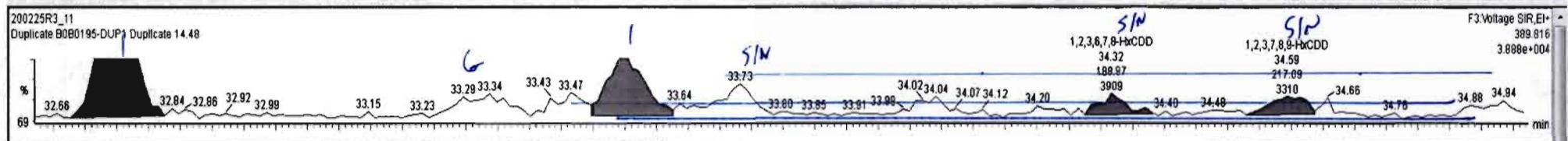
#	Name	Resp	RA	n/y	RRF	retArd	Pred.RT	RT	Pred.R.	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
41	Total Hexa-Dioxins				0.9211	10.062	33.63		0.000		NO	0.7868		0.0537	0.7868
42	Total Hepta-Dioxins				0.9231	10.062	37.64		0.000		NO	1.471		0.0923	1.471
43	Total Tetra-Furans				0.6020	10.062	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.062	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.062	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8962	10.062	33.56		0.000		NO	0.09176		0.0344	0.09176
47	Total Hepta-Furans				0.0244	10.062	37.03		0.000		NO			0.0244	

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>o</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1	41 Total Hexa-Dioxins	33.63	32.74	2.098e3	1.809e3	1.240	1.16	NO	0.58370	0.58370
2	41 Total Hexa-Dioxins	33.63	33.55	7.578e2	6.012e2	1.240	1.26	NO	0.20306	0.20306



#	Name	Resp	RA	n/y	RRF	wt/wt	Pred.RT	RT	Pred.R.	RRT	RRT Fail	Conc.	%Rec	DL	B MPC
41	Total Hexa-Dioxins				0.9211	10.082	33.63		0.000		NO	0.8874		0.0537	0.8870
42	Total Hepta-Dioxins				0.9231	10.082	37.64		0.000		NO	1.471		0.0923	1.471
43	Total Tetra-Furans				0.8020	10.082	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.082	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.082	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8982	10.082	33.56		0.000		NO	0.09176		0.0344	0.09200
47	Total Hepta-Furans				0.9244	10.082	37.09		0.000		NO			0.0940	

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	B MPC	Conc.
1	1,2,3,6,7,8-HxCDD	34.31	34.32	1.890e2	1.453e2	1.240	1.30	NO	0.046000	0.045832
2	1,2,3,7,8,9-HxCDD	34.61	34.59	2.171e2	1.525e2	1.240	1.42	NO	0.055000	0.054710
3	Total Hexa-Dioxins	33.63	32.74	2.098e3	1.809e3	1.240	1.16	NO	0.58400	0.58370
4	Total Hexa-Dioxins	33.63	33.55	7.578e2	6.012e2	1.240	1.26	NO	0.20300	0.20306



Dataset: Untitled

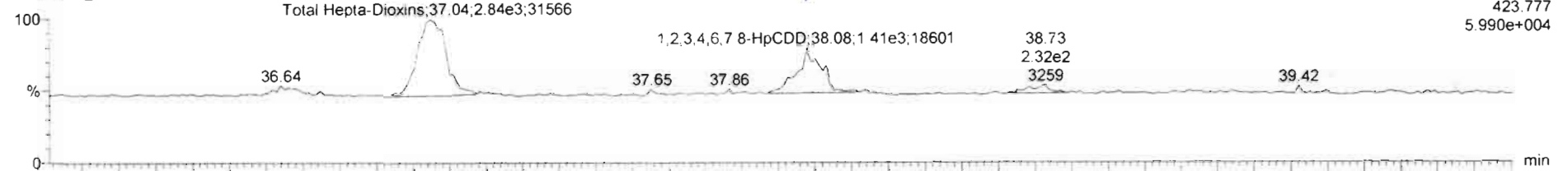
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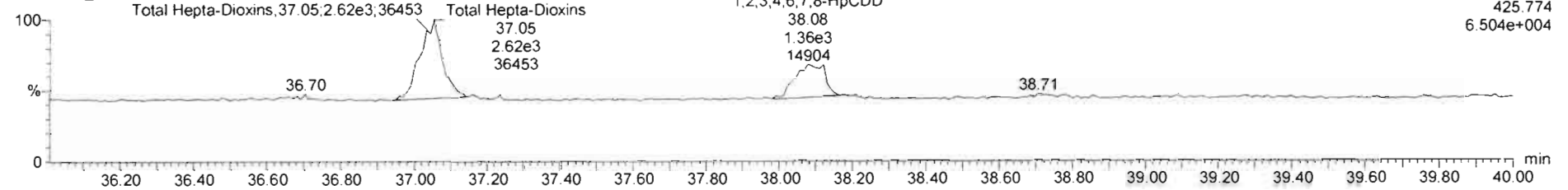
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1,2,3,4,6,7,8-HpCDD

200225R3\_11

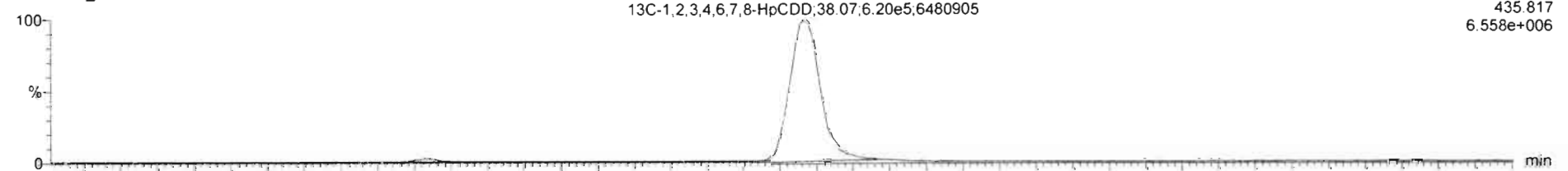


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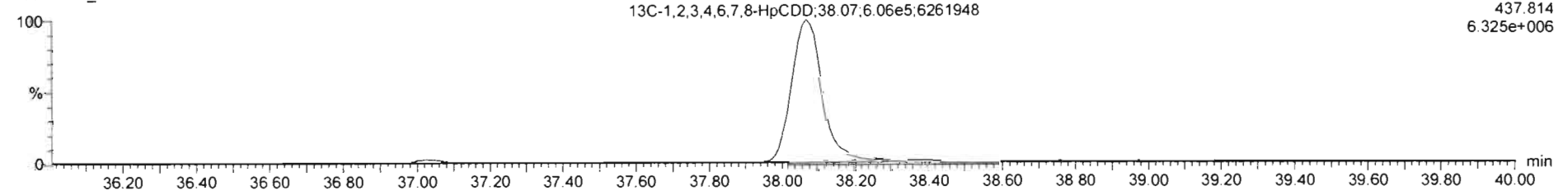


13C-1,2,3,4,6,7,8-HpCDD

200225R3\_11



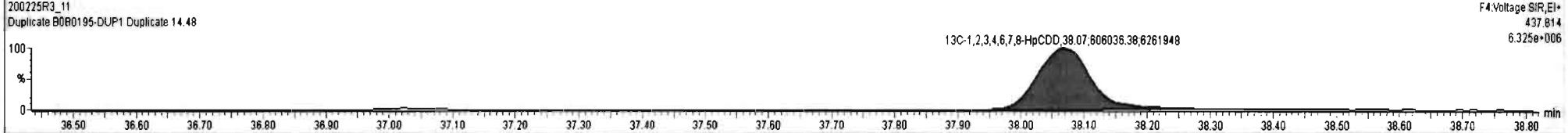
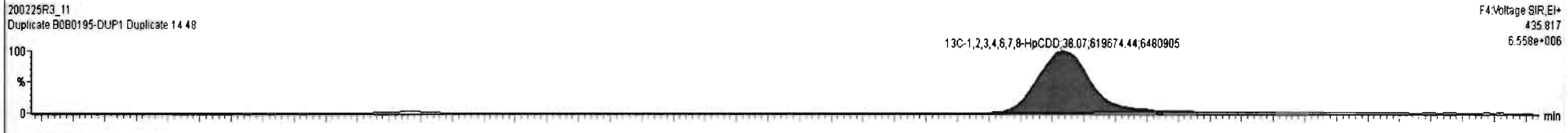
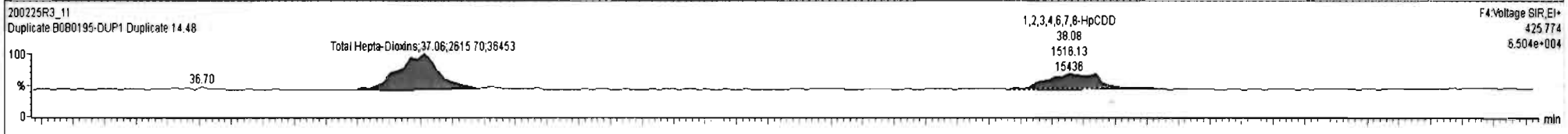
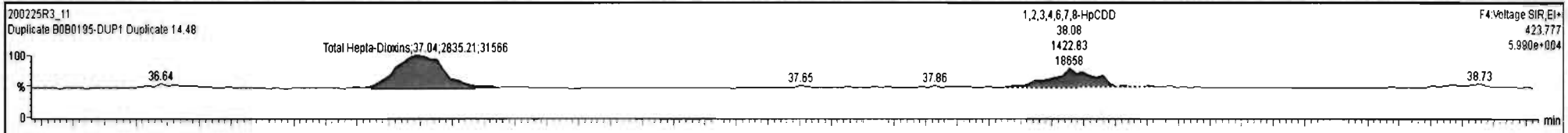
200225R3\_11



20025R3\_11 - B0B0195-DUP1 Duplicate 14.48 - Duplicate

#	Name	Resp	RA	n/y	RRF	wt/mol	Pred.RT	RT	Pred.R.	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
39	Total Tetra-Dioxins				0.9881	10.082	24.62		0.000		NO	0.1058		0.0415	0.1259
40	Total Penta-Dioxins				0.9723	10.082	28.96		0.000		NO	0.0000		0.0243	0.09678
41	Total Hexa-Dioxins				0.9211	10.082	33.63		0.000		NO	0.8874		0.0537	0.9206
42	Total Hepta-Dioxins				0.9231	10.082	37.64		0.000		NO	1.471		0.0923	1.471
43	Total Tetra-Furans				0.9020	10.082	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.082	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.082	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8982	10.082	33.56		0.000		NO	0.09921		0.0344	0.09921
47	Total Hepta-Furans				0.9511	10.082	37.83		0.000		NO			0.0340	

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1	42 Total Hepta-Dioxins	37.64	37.04	2.835e3	2.616e3	1.040	1.06	NO	0.95569	0.95569
2	6 1,2,3,4,6,7,8-HpCDD	38.08	38.08	1.423e3	1.516e3	1.040	0.94	NO	0.51528	0.51528





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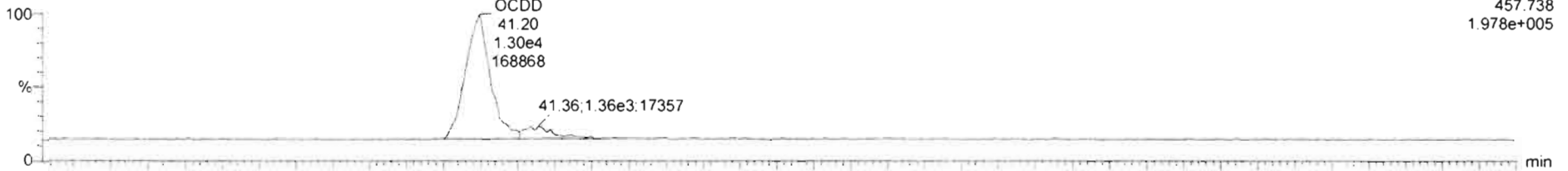
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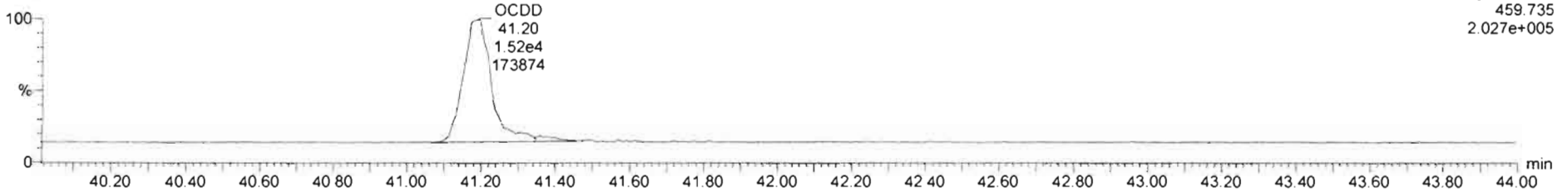
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**OCDD**

200225R3\_11

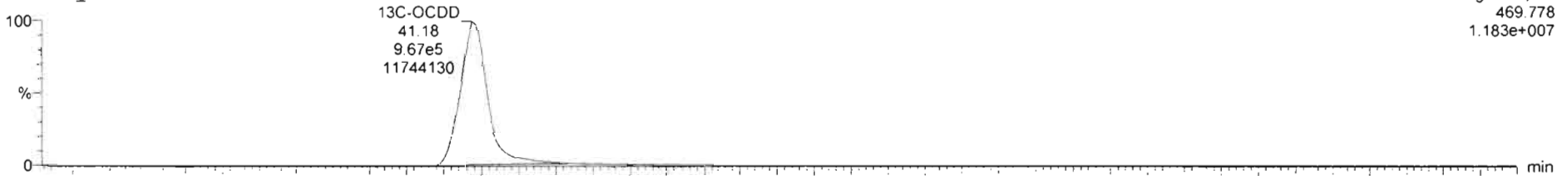


200225R3\_11

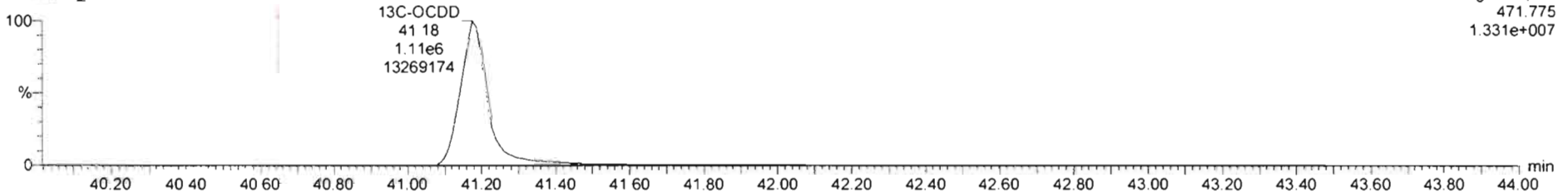


**13C-OCDD**

200225R3\_11



200225R3\_11



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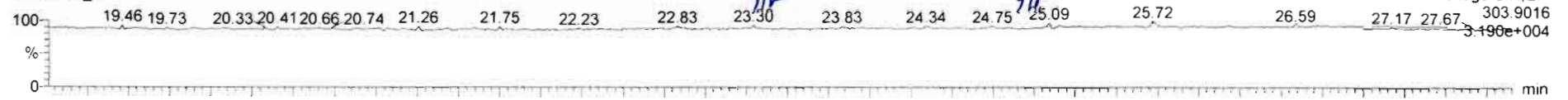
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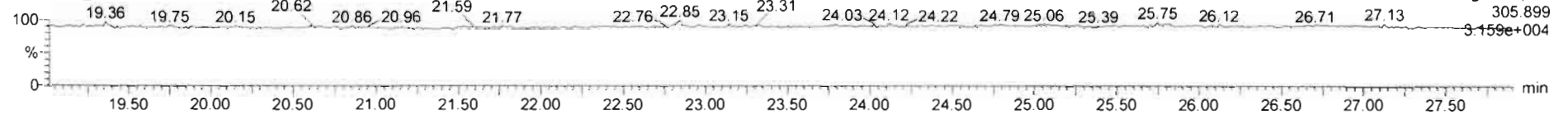
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2,3,7,8-TCDF

200225R3\_11

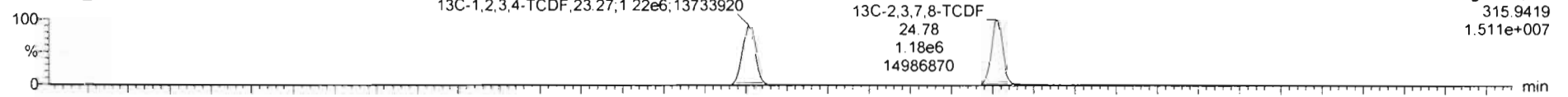


200225R3\_11

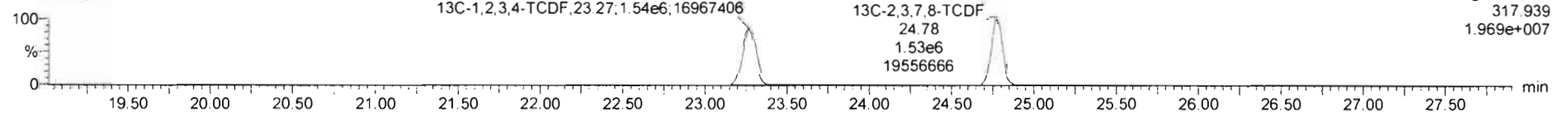


13C-2,3,7,8-TCDF

200225R3\_11

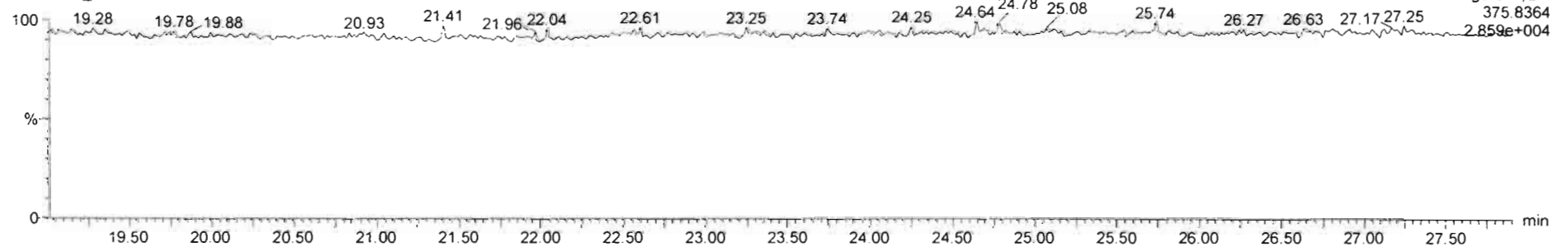


200225R3\_11



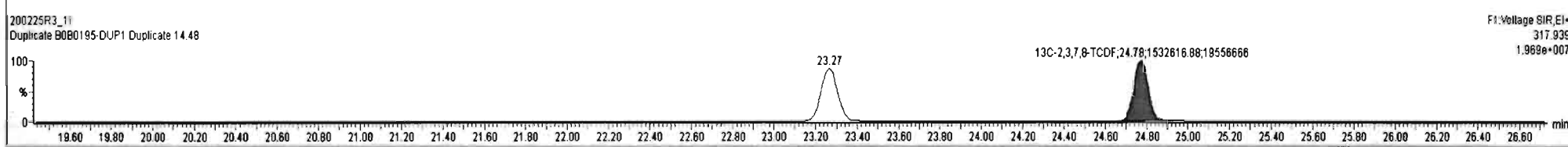
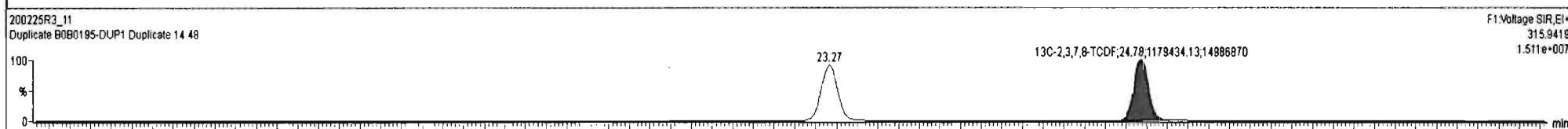
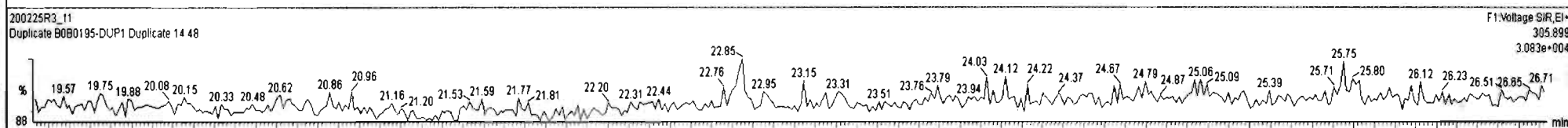
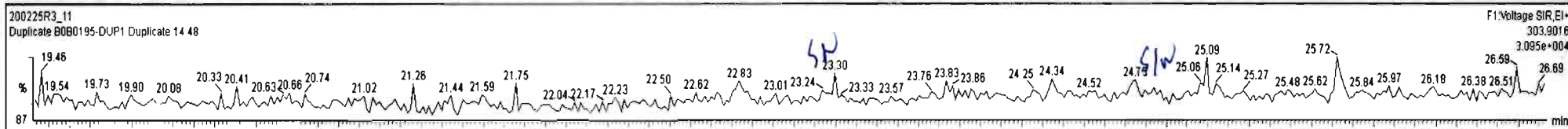
DPE1

200225R3\_11



#	Name	Resp	RA	n/y	RRF	wtAvol	Pred.RT	RT	Pred.R...	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.8020	10.082	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.8074	10.082	27.08		0.000		NO			0.0122	
45	Total Penta-Furans				0.8074	10.082	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8982	10.082	33.56		0.000		NO	0.09921		0.0344	0.09921
47	Total Hepta-Furans				0.8511	10.082	37.83		0.000		NO			0.0340	
48	PFK1														
49	PFK2														
50	PFK3														
51	PFK4														

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1										

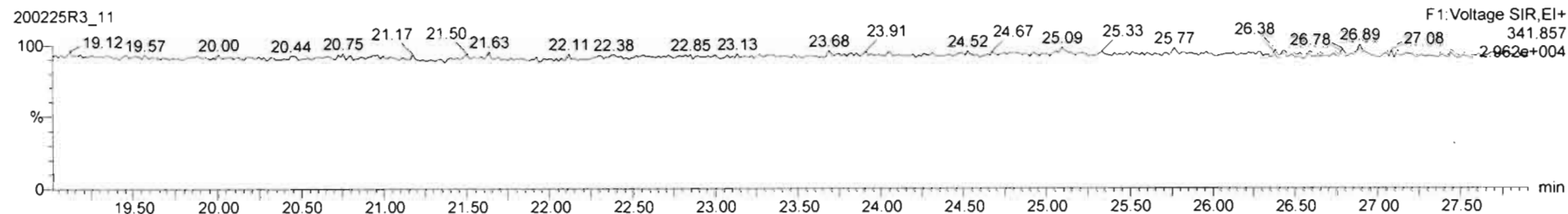
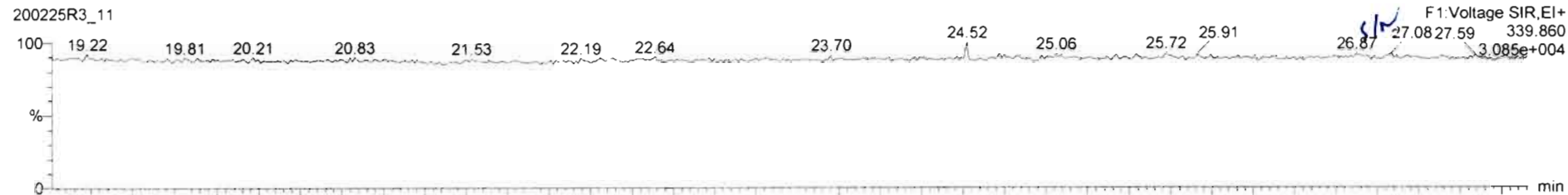


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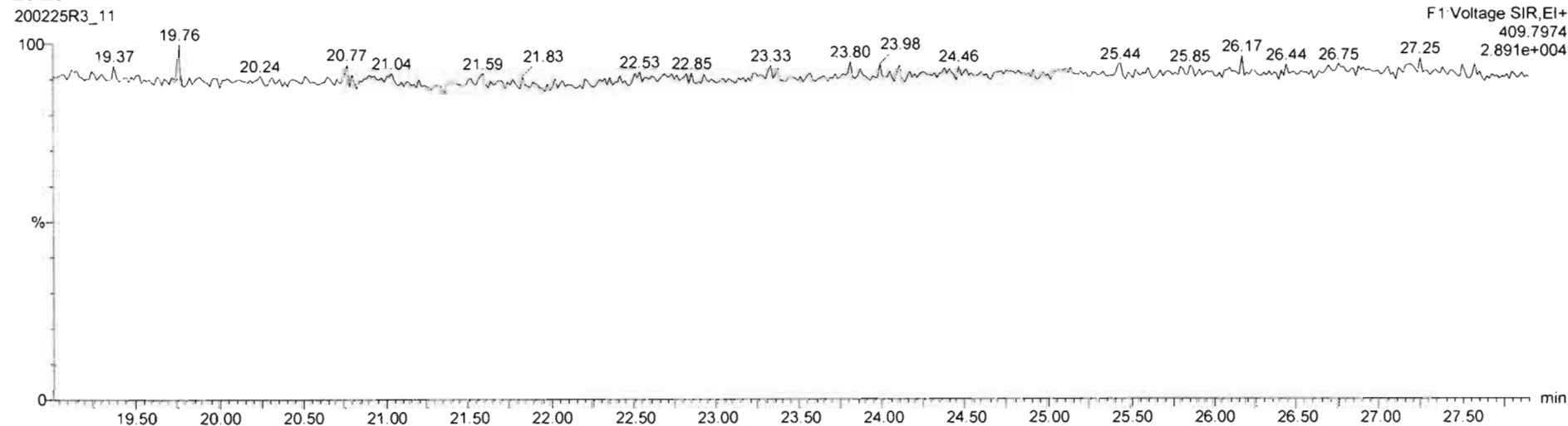
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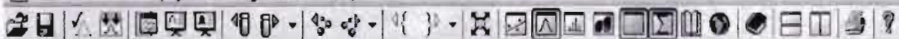
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1st Func. Penta-Furans



DPE6

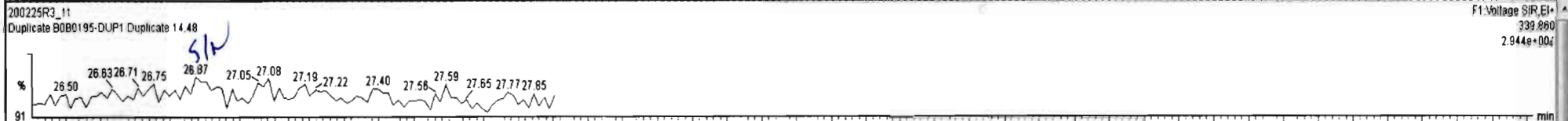




200225R3\_11 - B0B0195-DUP1 Duplicate 14.48 - Duplicate

#	Name	Resp	RA	n/y	RPF	wt/Vol	Pred.RT	RT	Pred.R	RRT	RRT Fal	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.8020	10.062	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.062	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.062	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8962	10.062	33.56		0.000		NO	0.09921		0.0344	0.09921
47	Total Hepta-Furans				0.8511	10.062	37.83		0.000		NO			0.0340	
48	PFK1														
49	PFK2														
50	PFK3														
51	PFK4														

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1										



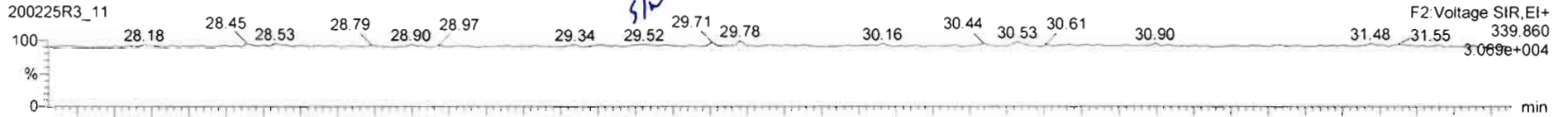
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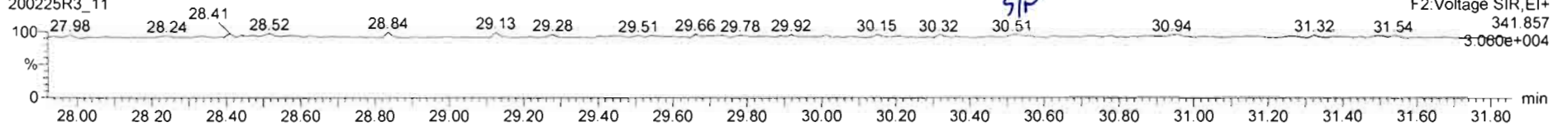
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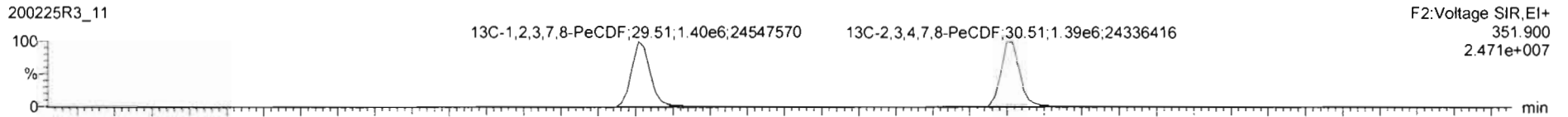
**1,2,3,7,8-PeCDF**



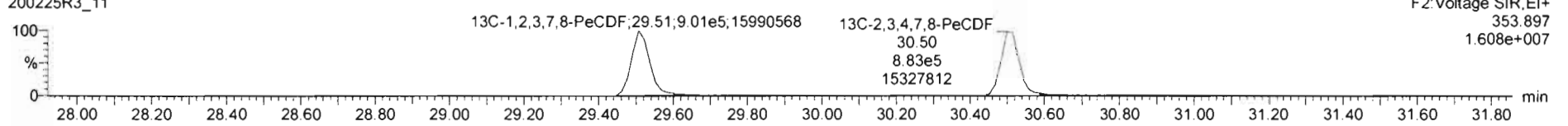
200225R3\_11



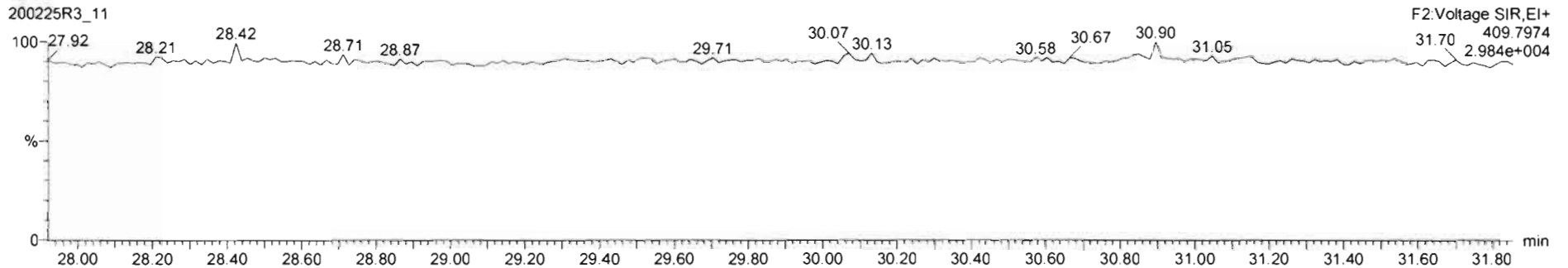
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200225R3\_11



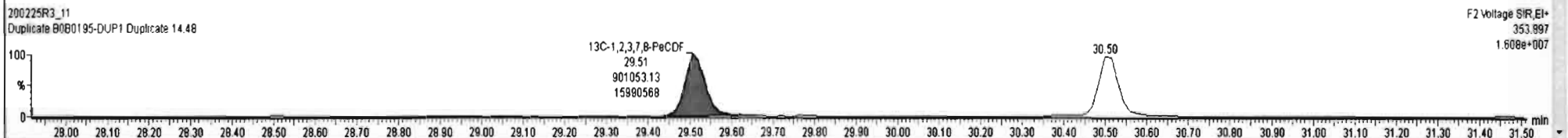
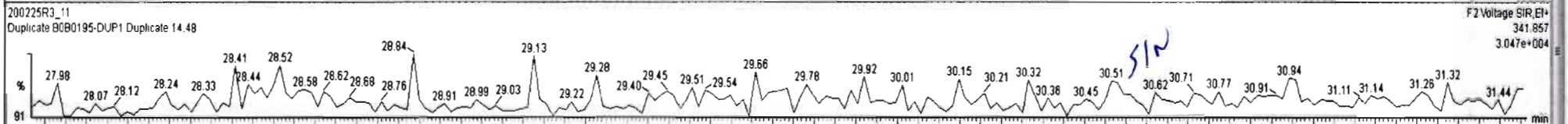
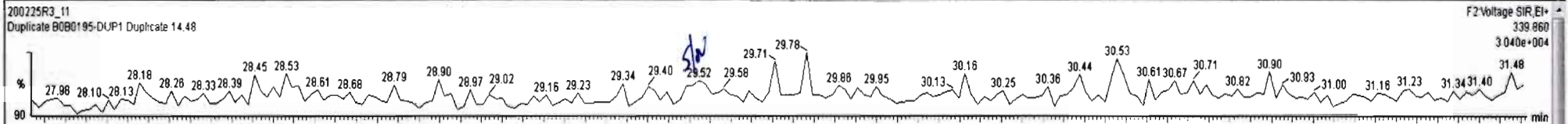
**DPE2**



200225R3\_11 - B0B0195-DUP1 Duplicate 14.48 - Duplicate

#	Name	Resp	RA	n/y	RF	wt/vol	Pred.RT	RT	Pred.R...	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.8020	10.082	23.81		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.082	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.082	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8982	10.082	33.56		0.000		NO	0.09921		0.0344	0.09921
47	Total Hepta-Furans				0.8511	10.082	37.83		0.000		NO			0.0340	
48	PFK1														
49	PFK2														
50	PFK3														
51	PFK4														

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1° Ratio (Pred)	RA	n/y	EMPC	Conc.
1										



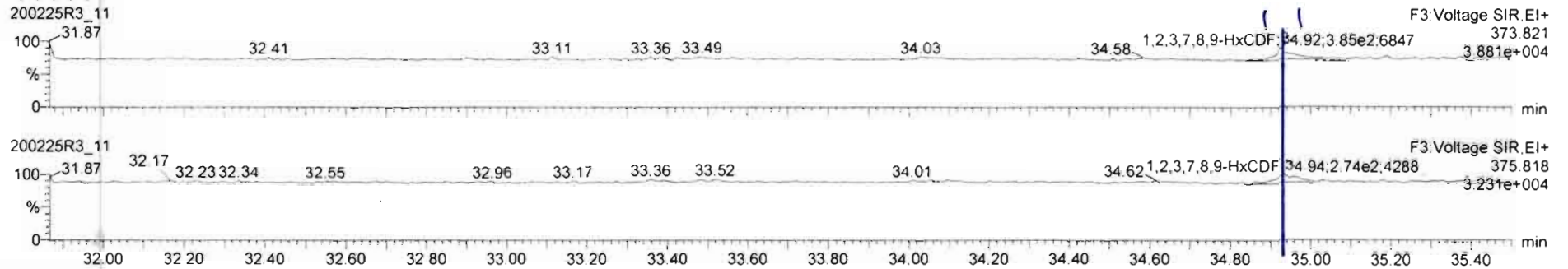
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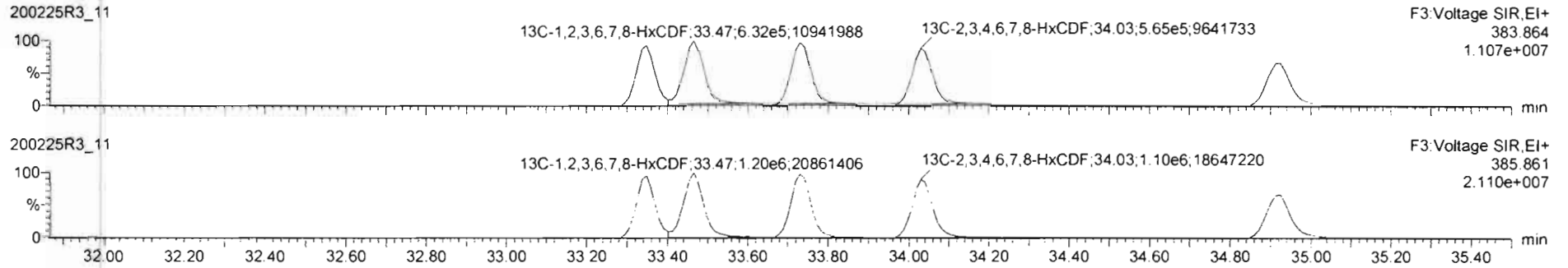
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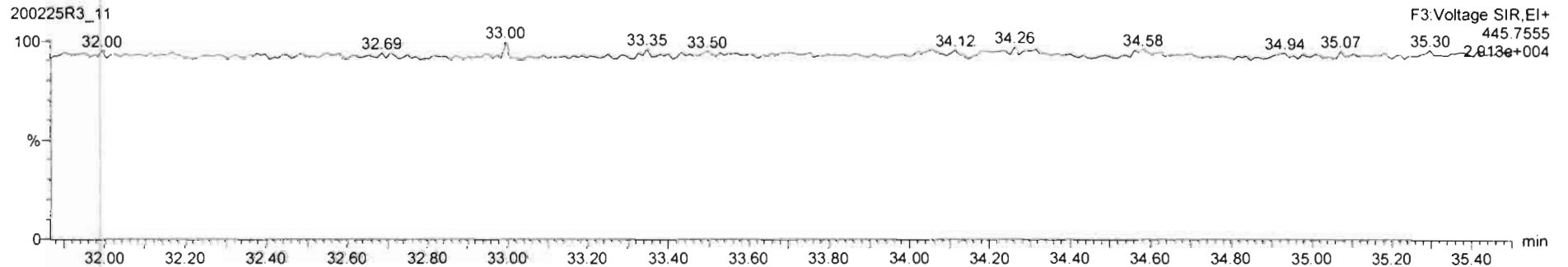
**1,2,3,4,7,8-HxCDF**



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



**DPE3**

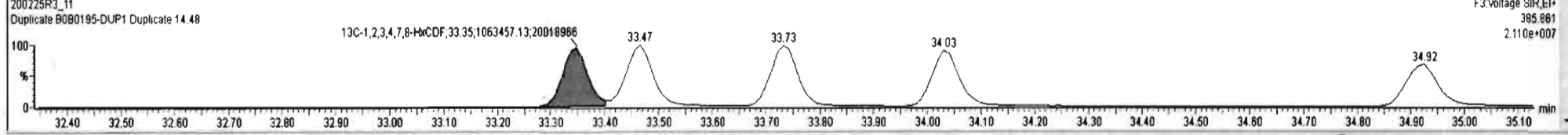
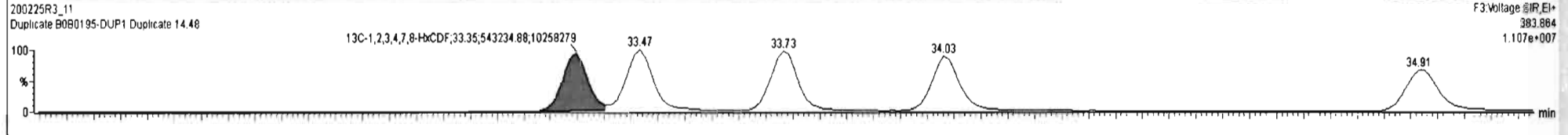
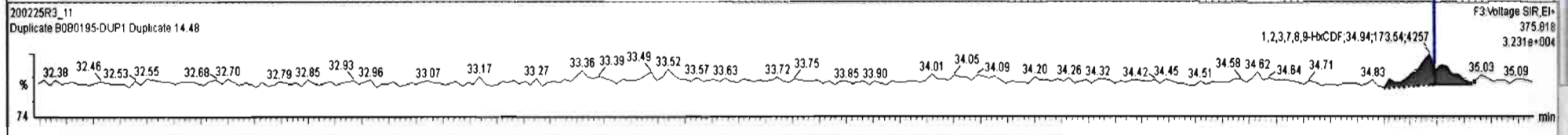
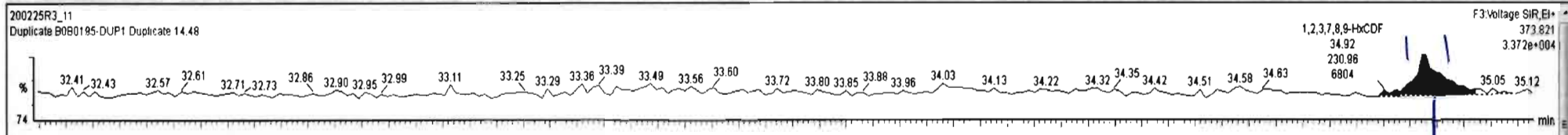




200225R3\_11 - BUB0195-DUP1 Duplicate 14.45 - Duplicate

#	Name	Resp	RA	n/y	RFF	wtVol	Pred RT	RT	Pred R	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
43	Total Tetra-Furans				0.8020	10.062	23.61		0.000		NO			0.0164	
44	1st Func. Penta-Furans				0.9074	10.062	27.09		0.000		NO			0.0122	
45	Total Penta-Furans				0.9074	10.062	29.27		0.000		NO			0.0153	
46	Total Hexa-Furans				0.8982	10.062	33.56		0.000		NO	0.09175		0.0344	0.09178
47	Total Hepta-Furans				0.8511	10.062	37.83		0.000		NO			0.0340	
48	PFK1														
49	PFK2														
50	PFK3														
51	PFK4														

#	Name	Pred RT	RT	m1 Resp	m2 Resp	1 <sup>st</sup> Ratio (Pred)	RA	n/y	EMPC	Conc.
1	1,2,3,7,8,9-HxCDF	34.91	34.92	2.310e2	1.735e2	1.240	1.33	NO	0.060913	0.060913
2	Total Hexa-Furans	33.56	34.85	1.238e2	1.082e2	1.240	1.14	NO	0.030942	0.030942



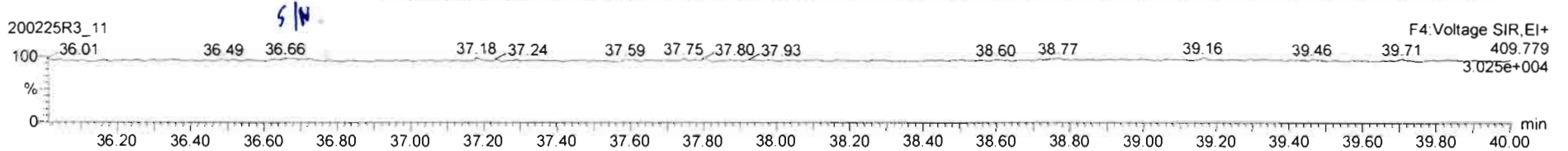
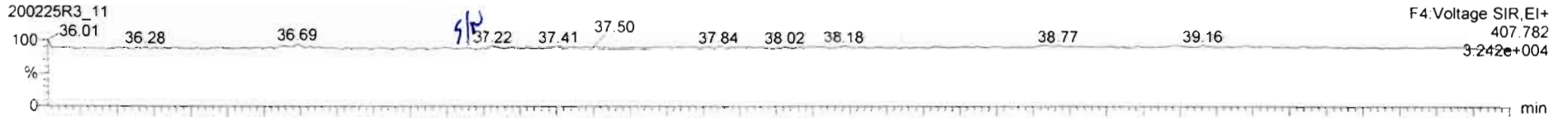
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Last Altered: Wednesday, February 26, 2020 08:43:04 Pacific Standard Time

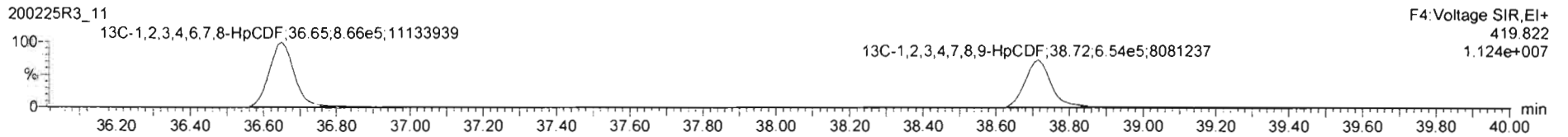
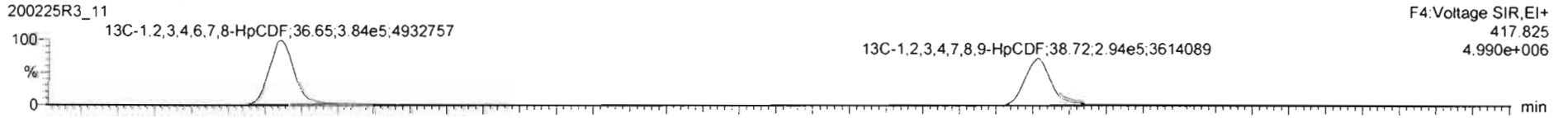
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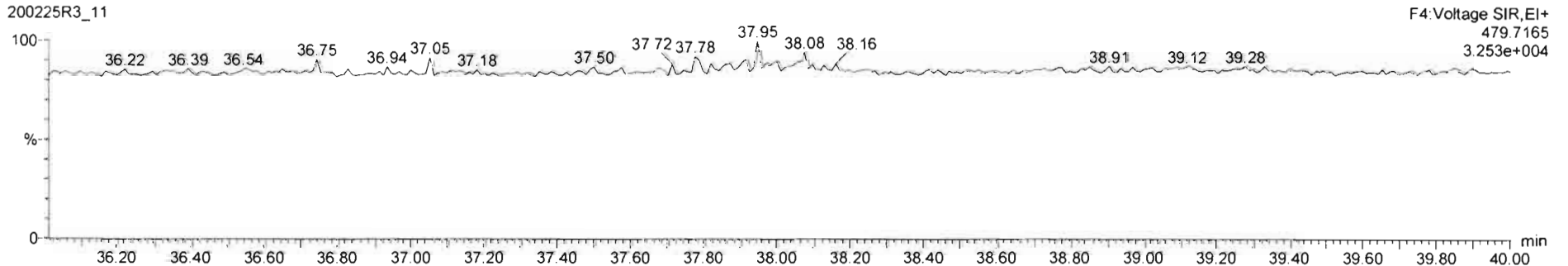
1,2,3,4,6,7,8-HpCDF

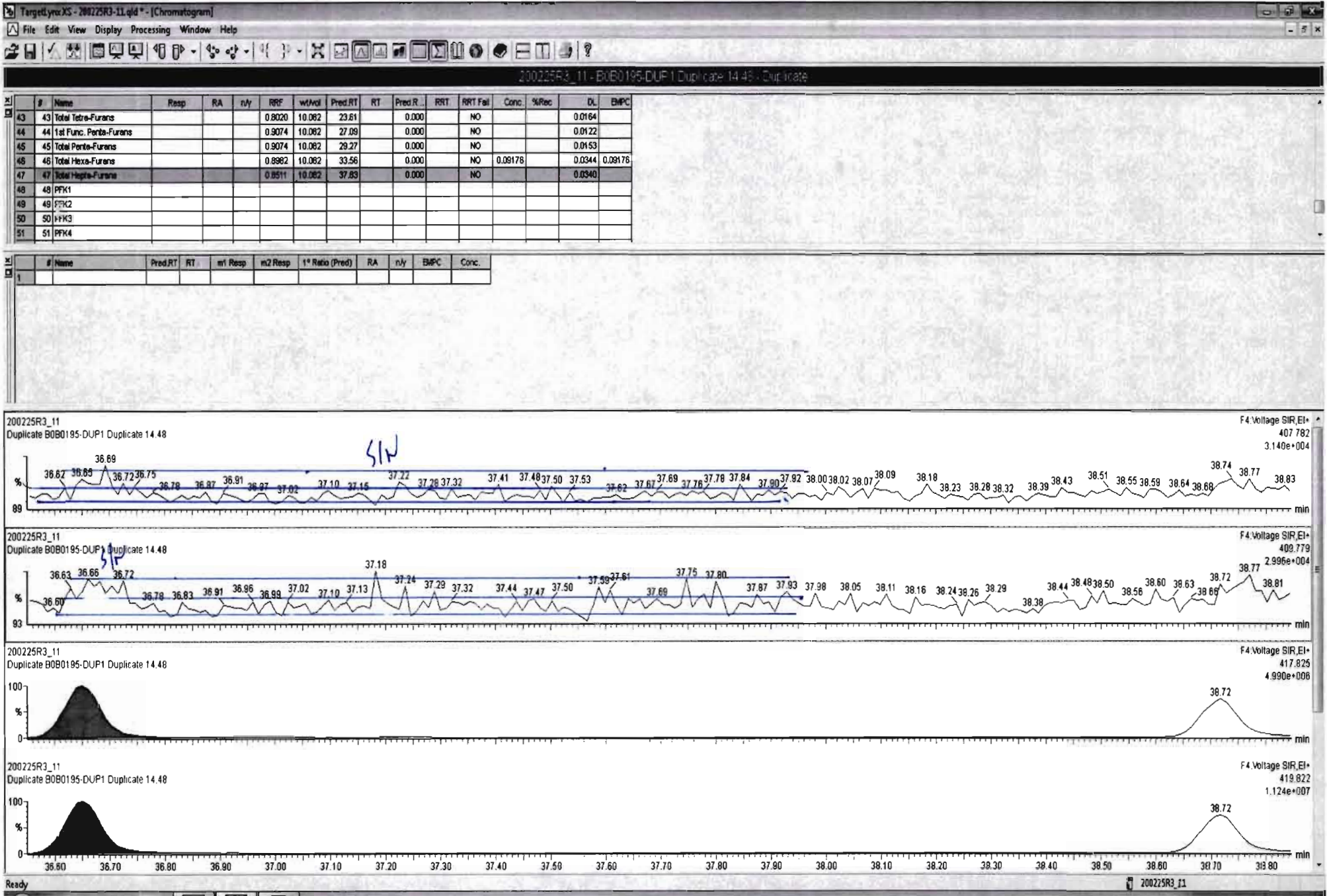


13C-1,2,3,4,6,7,8-HpCDF



DPE4

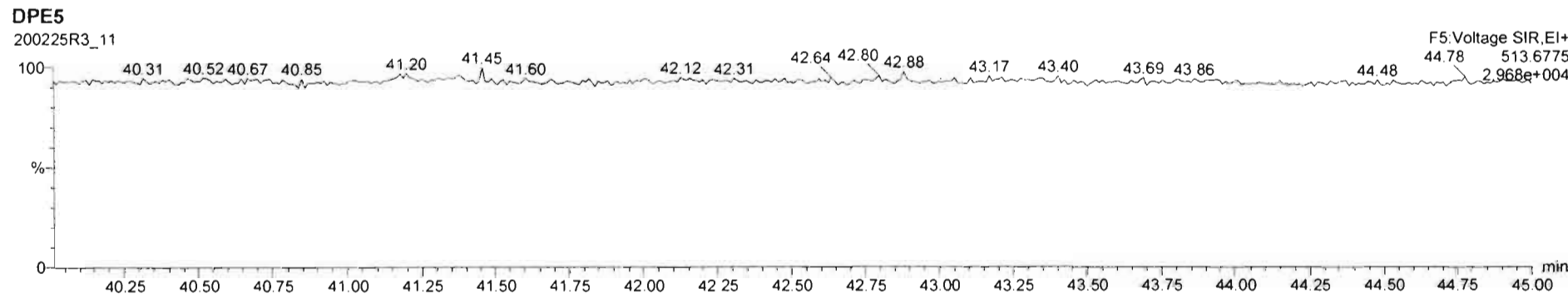
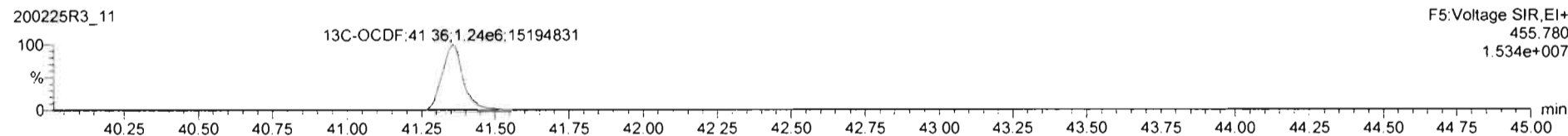
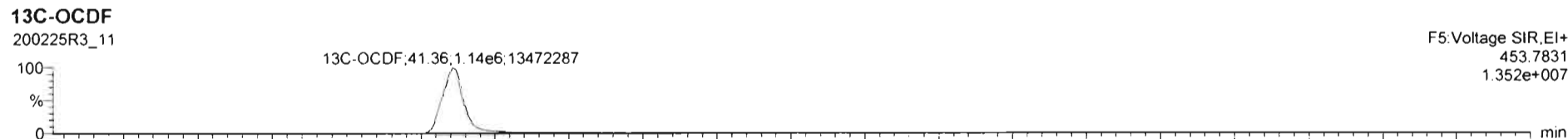
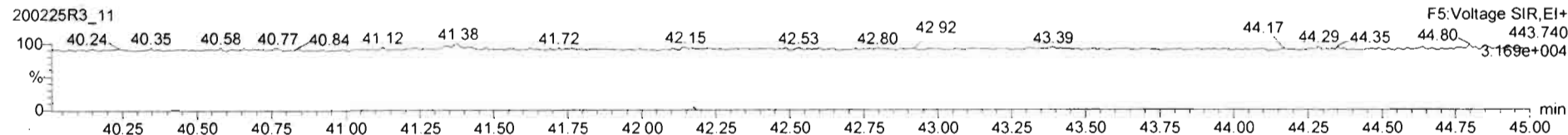
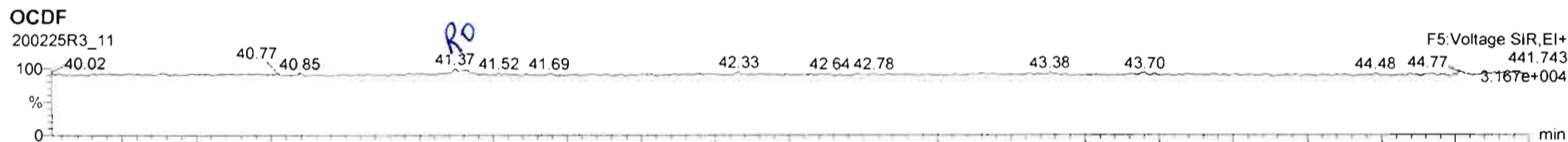




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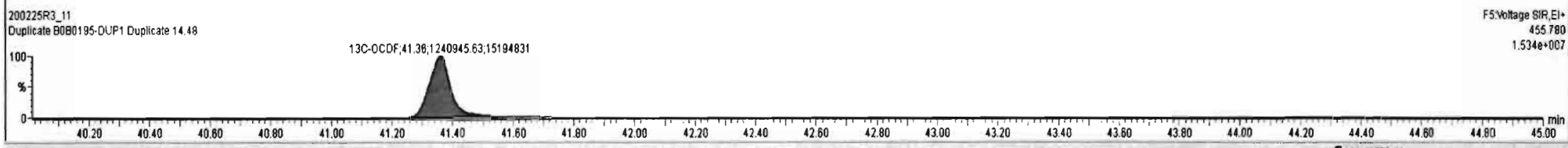
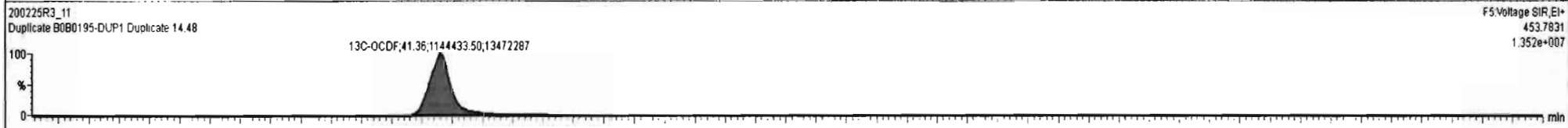
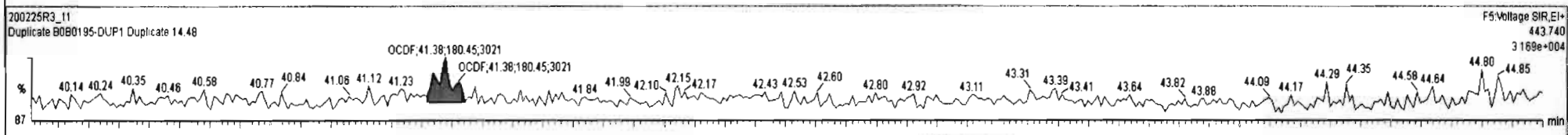
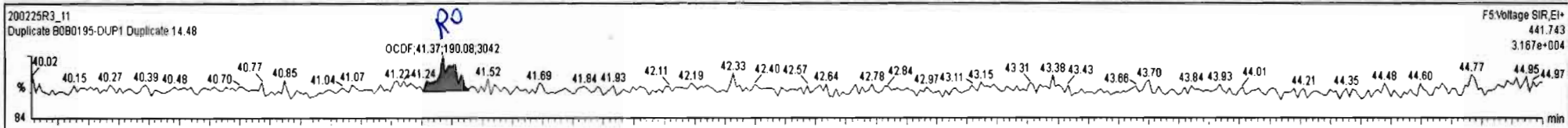
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Printed: Wednesday, February 26, 2020 08:43:07 Pacific Standard Time

Name: 200225R3\_11, Date: 25-Feb-2020, Time: 21:00:35, ID: B0B0195-DUP1 Duplicate 14.48, Description: Duplicate



#	Name	Resp	RA	n/y	R/F	wAve	Pred.RT	RT	Pred.R.	RRT	RRT Fail	Conc.	%Rec	DL	EMPC
17	OCDF	3.71e2	1.05	YES	0.8055	10.082	41.38	41.37	1.000	1.000	NO	0.07650		0.0844	0.07042
18	13C-2,3,7,8-TCDD	2.18e6	0.78	NO	1.1985	10.082	25.69	25.72	1.026	1.027	NO	191.3	96.4	0.152	
19	13C-1,2,3,7,8-PeCDD	1.70e6	0.62	NO	0.9667	10.082	30.43	30.62	1.215	1.230	NO	185.0	93.3	0.236	
20	13C-1,2,3,4,7,8-HxCDD	1.30e6	1.28	NO	0.8738	10.082	34.20	34.20	1.014	1.014	NO	167.7	84.5	0.364	
21	13C-1,2,3,6,7,8-HxCDD	1.57e6	1.27	NO	1.0458	10.082	34.31	34.31	1.017	1.017	NO	169.3	85.3	0.304	
22	13C-1,2,3,7,8,9-HxCDD	1.46e6	1.23	NO	0.9744	10.082	34.61	34.57	1.026	1.025	NO	169.2	85.3	0.326	
23	13C-1,2,3,4,6,7,8-HpCDD	1.23e6	1.02	NO	0.7472	10.082	38.18	38.07	1.132	1.129	NO	185.3	93.4	0.445	
24	13C-OCDD	2.08e6	0.87	NO	0.7065	10.082	41.09	41.18	1.218	1.221	NO	332.4	83.9	0.416	
25	13C-2,3,7,8-TCDF	2.71e6	0.77	NO	1.0653	10.082	24.87	24.78	0.983	0.989	NO	183.3	92.4	0.213	

#	Name	Pred.RT	RT	m1 Resp	m2 Resp	1* Ratio (Pred)	RA	n/y	EMPC	Conc.
1										

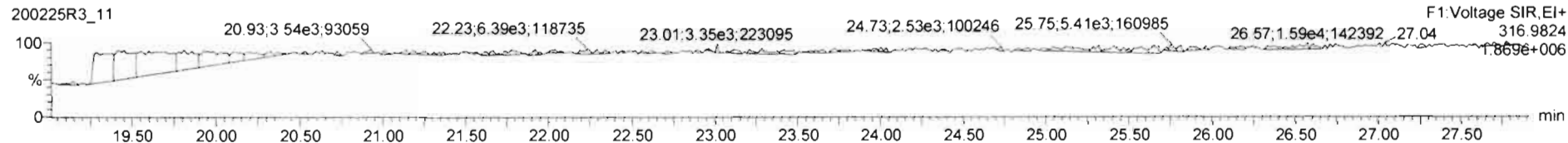


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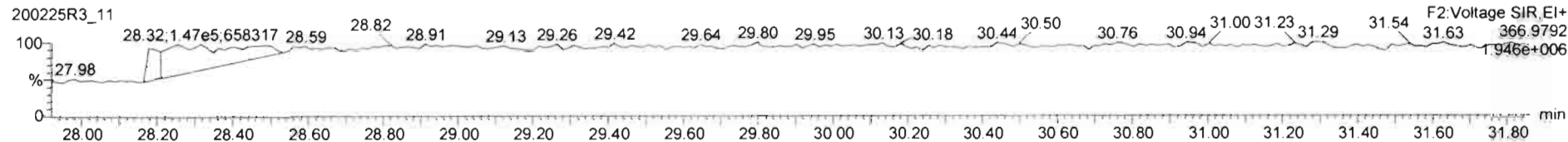
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Printed: Wednesday, February 26, 2020 08:43:07 Pacific Standard Time

Name: 200225R3\_11, Date: 25-Feb-2020, Time: 21:00:35, ID: B0B0195-DUP1 Duplicate 14.48, Description: Duplicate

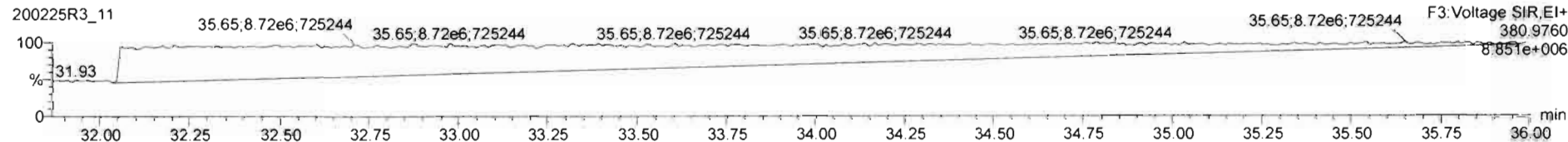
**PFK1**



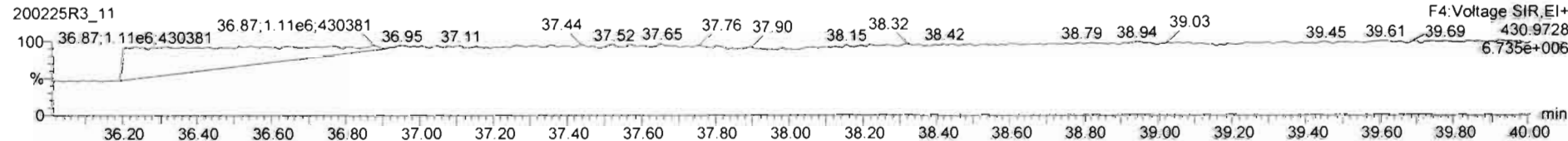
**PFK2**



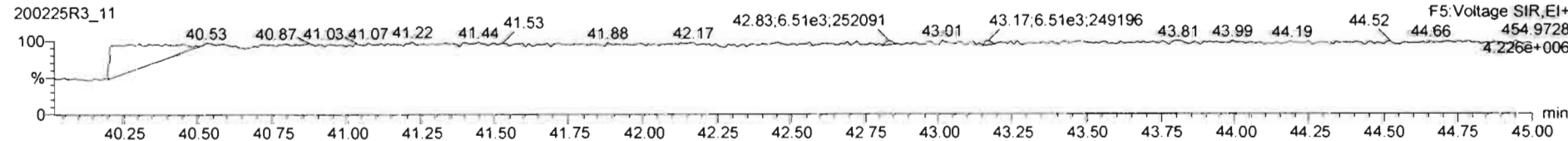
**PFK3**



**PFK4**



**PFK5**



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-12.qld

Last Altered: Wednesday, February 26, 2020 14:29:15 Pacific Standard Time  
 Printed: Wednesday, February 26, 2020 14:32:31 Pacific Standard Time

*BL 02/26/2020*

*C1 02/27/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00  
 Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

#	Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD				0.988	10.157	25.74		1.00		NO			0.0471	
2	2 1,2,3,7,8-PeCDD				0.972	10.157	30.84		1.00		NO			0.0378	
3	3 1,2,3,4,7,8-HxCDD				1.07	10.157	34.20		1.00		NO			0.0488	
4	4 1,2,3,6,7,8-HxCDD				0.921	10.157	34.30		1.00		NO			0.0518	
5	5 1,2,3,7,8,9-HxCDD				0.918	10.157	34.60		1.00		NO			0.0579	
6	6 1,2,3,4,6,7,8-HpCDD	1750.053	0.921	NO	0.923	10.157	38.08	38.09	1.00	1.00	NO	0.2991		0.102	0.2991
7	7 OCDD	14290.578	0.854	NO	0.975	10.157	41.18	41.19	1.00	1.00	NO	2.481		0.0940	2.481
8	8 2,3,7,8-TCDF				0.802	10.157	24.79		1.00		NO			0.0343	
9	9 1,2,3,7,8-PeCDF				0.907	10.157	29.53		1.00		NO			0.0305	
10	10 2,3,4,7,8-PeCDF				0.952	10.157	30.53		1.00		NO			0.0275	
11	11 1,2,3,4,7,8-HxCDF				0.862	10.157	33.33		1.00		NO			0.0342	
12	12 1,2,3,6,7,8-HxCDF				0.841	10.157	33.45		1.00		NO			0.0338	
13	13 2,3,4,6,7,8-HxCDF				0.898	10.157	34.05		1.00		NO			0.0338	
14	14 1,2,3,7,8,9-HxCDF	344.461	1.575	YES	0.858	10.157	34.91	34.91	1.00	1.00	NO	0.05418		0.0506	0.04713
15	15 1,2,3,4,6,7,8-HpCDF				0.851	10.157	36.68		1.00		NO			0.0562	
16	16 1,2,3,4,7,8,9-HpCDF				0.980	10.157	38.72		1.00		NO			0.0626	
17	17 OCDF				0.806	10.157	41.36		1.00		NO			0.0709	
18	18 13C-2,3,7,8-TCDD	2121857.1...	0.775	NO	1.20	10.157	25.69	25.70	1.03	1.03	NO	182.1	92.5	0.113	
19	19 13C-1,2,3,7,8-PeCDD	1732439.8...	0.632	NO	0.967	10.157	30.43	30.82	1.22	1.23	NO	184.4	93.6	0.174	
20	20 13C-1,2,3,4,7,8-HxCDD	1338803.7...	1.270	NO	0.874	10.157	34.19	34.19	1.01	1.01	NO	168.0	85.3	0.283	
21	21 13C-1,2,3,6,7,8-HxCDD	1587857.1...	1.261	NO	1.05	10.157	34.29	34.30	1.02	1.02	NO	166.5	84.5	0.237	
22	22 13C-1,2,3,7,8,9-HxCDD	1459132.5...	1.228	NO	0.974	10.157	34.60	34.56	1.03	1.02	NO	164.2	83.4	0.254	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1248396.1...	1.063	NO	0.747	10.157	38.17	38.07	1.13	1.13	NO	183.2	93.0	0.428	
24	24 13C-OCDD	2327978.7...	0.890	NO	0.707	10.157	41.07	41.18	1.22	1.22	NO	361.3	91.7	0.382	
25	25 13C-2,3,7,8-TCDF	2697859.0...	0.768	NO	1.07	10.157	24.87	24.76	0.99	0.99	NO	186.8	94.8	0.223	
26	26 13C-1,2,3,7,8-PeCDF	2321701.1...	1.568	NO	1.00	10.157	29.46	29.51	1.18	1.18	NO	170.9	86.8	0.462	
27	27 13C-2,3,4,7,8-PeCDF	2284065.3...	1.572	NO	0.962	10.157	30.42	30.50	1.21	1.22	NO	175.1	88.9	0.481	
28	28 13C-1,2,3,4,7,8-HxCDF	1632641.8...	0.516	NO	1.05	10.157	33.32	33.33	0.99	0.99	NO	170.6	86.6	0.372	
29	29 13C-1,2,3,6,7,8-HxCDF	1851668.1...	0.520	NO	1.19	10.157	33.42	33.44	0.99	0.99	NO	170.6	86.6	0.328	
30	30 13C-2,3,4,6,7,8-HxCDF	1728900.8...	0.527	NO	1.07	10.157	34.03	34.02	1.01	1.01	NO	177.8	90.3	0.366	
31	31 13C-1,2,3,7,8,9-HxCDF	1459518.1...	0.521	NO	0.922	10.157	34.93	34.91	1.04	1.04	NO	173.5	88.1	0.423	

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-12.qld

Last Altered: Wednesday, February 26, 2020 14:29:15 Pacific Standard Time  
 Printed: Wednesday, February 26, 2020 14:32:31 Pacific Standard Time

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

#	Name	Abs.Resp	RA	n/y	RRF	wL/vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	1302153.3...	0.443	NO	0.767	10.157	36.69	36.64	1.09	1.09	NO	186.1	94.5	0.385	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1018297.1...	0.440	NO	0.552	10.157	38.71	38.72	1.15	1.15	NO	202.1	103	0.535	
34	34 13C-OCDF	2687956.0...	0.887	NO	0.789	10.157	41.31	41.36	1.23	1.23	NO	373.3	94.8	0.321	
35	35 37Cl-2,3,7,8-TCDD	831043.625			1.18	10.157	25.72	25.74	1.03	1.03	NO	72.69	92.3	0.0367	
36	36 13C-1,2,3,4-TCDD	1913942.0...	0.785	NO	1.00	10.157	25.11	25.05	1.00	1.00	NO	196.9	100	0.136	
37	37 13C-1,2,3,4-TCDF	2670265.2...	0.792	NO	1.00	10.157	23.37	23.26	1.00	1.00	NO	196.9	100	0.237	
38	38 13C-1,2,3,4,6,9-HxCDF	1796056.1...	0.518	NO	1.00	10.157	33.71	33.72	1.00	1.00	NO	196.9	100	0.390	
39	39 Total Tetra-Dioxins				0.988	10.157	24.62		0.00		NO	0.1241		0.0471	0.1241
40	40 Total Penta-Dioxins				0.972	10.157	29.96		0.00		NO	0.0000		0.0177	0.04168
41	41 Total Hexa-Dioxins				0.921	10.157	33.63		0.00		NO	0.2671		0.0553	0.3367
42	42 Total Hepta-Dioxins				0.923	10.157	37.64		0.00		NO	0.8069		0.102	0.8069
43	43 Total Tetra-Furans				0.802	10.157	23.61		0.00		NO			0.0170	
44	44 1st Func. Penta-Furans				0.907	10.157	27.09		0.00		NO			0.0108	
45	45 Total Penta-Furans				0.907	10.157	29.27		0.00		NO			0.0153	
46	46 Total Hexa-Furans				0.898	10.157	33.56		0.00		NO	0.0000		0.0192	0.07579
47	47 Total Hepta-Furans				0.851	10.157	37.83		0.00		NO			0.0319	



Dataset: U:\VG12.PRO\Results\200225R3\200225R3-12.qld

Last Altered: Wednesday, February 26, 2020 14:29:15 Pacific Standard Time

Printed: Wednesday, February 26, 2020 14:32:11 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

**Tetra-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	39 Total Tetra-Dioxins	1.32e3	2.12e6	0.688	NO	24.62	23.43	0.1241	0.1241

**Penta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	0.00e0	1.73e6	0.920	YES	29.96	29.07	0.0000	0.04168

**Hexa-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	41 Total Hexa-Dioxins	1.83e3	0.00e0	1.396	NO	33.63	32.74	0.2671	0.2671
2	41 Total Hexa-Dioxins	0.00e0	0.00e0	0.992	YES	33.63	33.52	0.0000	0.06962

**Hepta-Dioxins**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	6 1,2,3,4,6,7,8-HpCDD	1.75e3	1.25e6	0.921	NO	38.08	38.09	0.2991	0.2991
2	42 Total Hepta-Dioxins	2.97e3	1.25e6	1.109	NO	37.64	37.04	0.5079	0.5079

**Tetra-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Penta-Furans function 1**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-12.qld

Last Altered: Wednesday, February 26, 2020 14:29:15 Pacific Standard Time

Printed: Wednesday, February 26, 2020 14:32:11 Pacific Standard Time

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

**Penta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

**Hexa-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	3.44e2	1.46e6	1.575	YES	34.91	34.91	0.0000	0.04713
2	46 Total Hexa-Furans	0.00e0	0.00e0	1.661	YES	33.56	34.95	0.0000	0.02330
3	46 Total Hexa-Furans	0.00e0	0.00e0	0.755	YES	33.56	34.87	0.0000	0.0053...

**Hepta-Furans**

#	Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1									

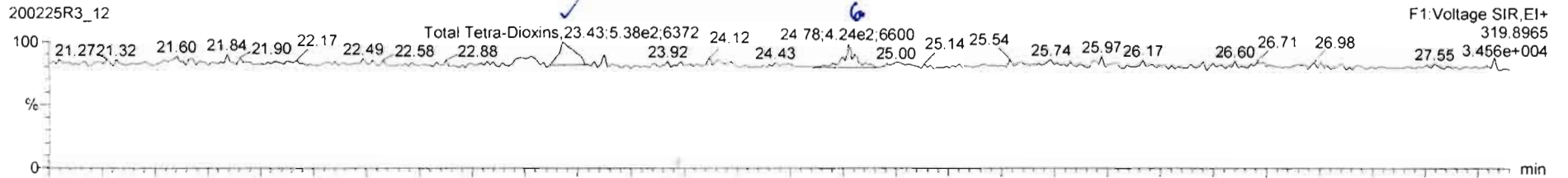
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Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

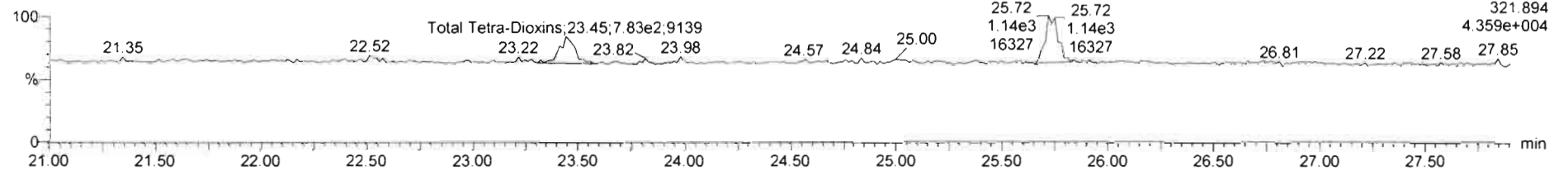
Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

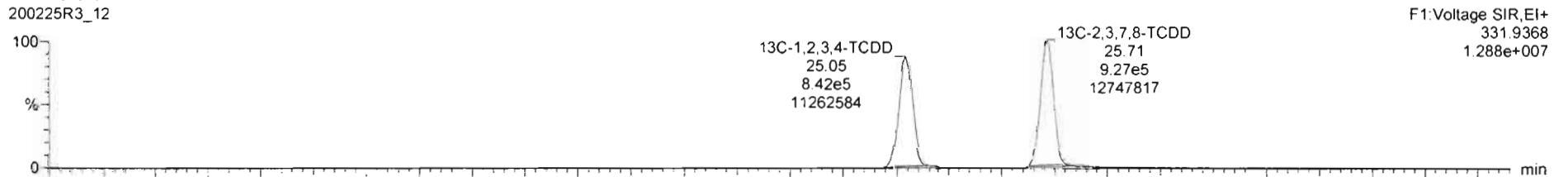
2,3,7,8-TCDD



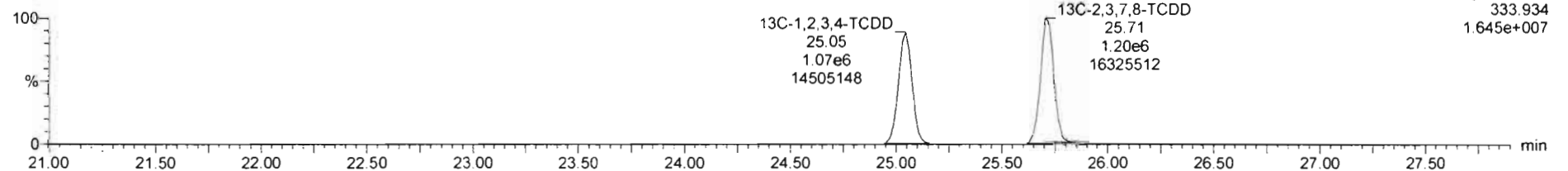
200225R3\_12



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



200225R3\_12



Dataset: Untitled

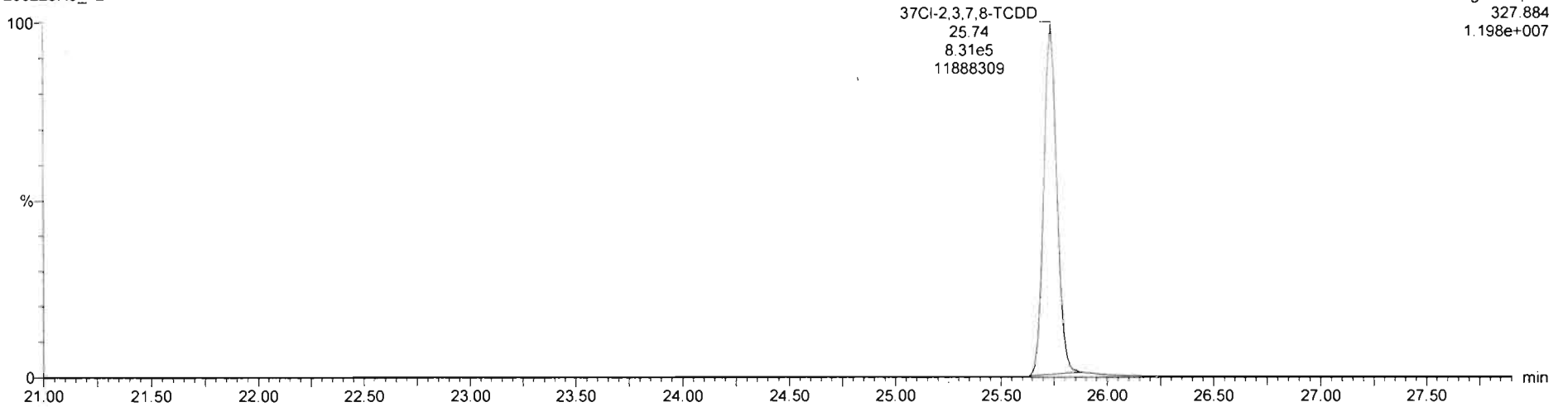
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Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

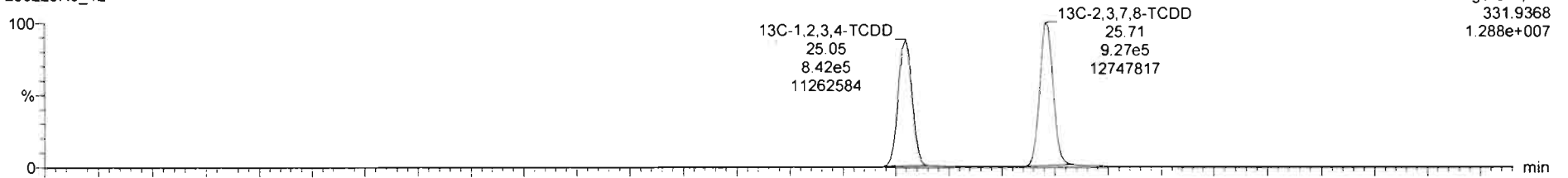
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200225R3\_12

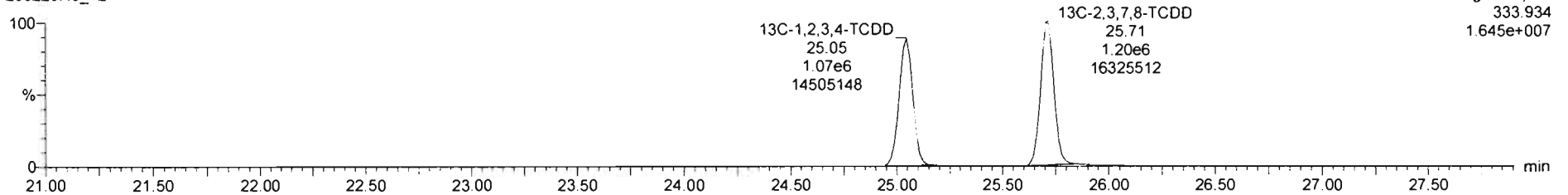


**13C-1,2,3,4-TCDD**

200225R3\_12



200225R3\_12



Dataset: Untitled

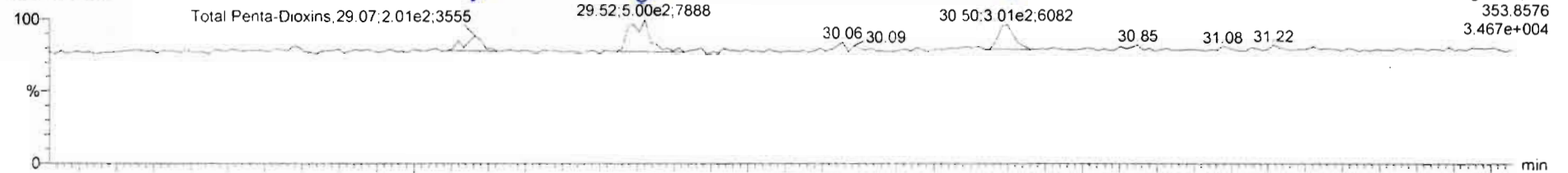
Last Altered: Wednesday, February 26, 2020 08:43:26 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

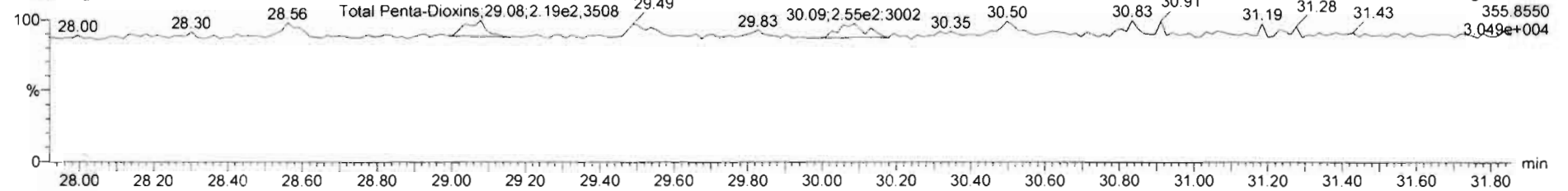
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1,2,3,7,8-PeCDD

200225R3\_12

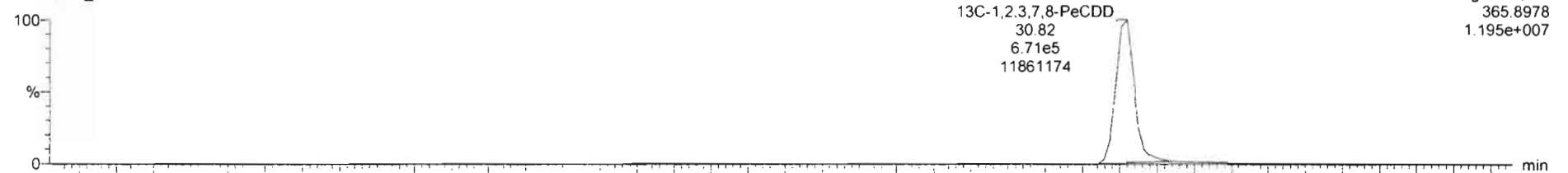


200225R3\_12

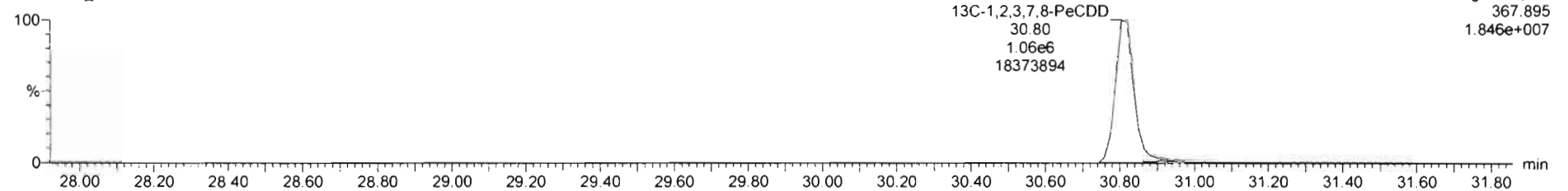


13C-1,2,3,7,8-PeCDD

200225R3\_12



200225R3\_12



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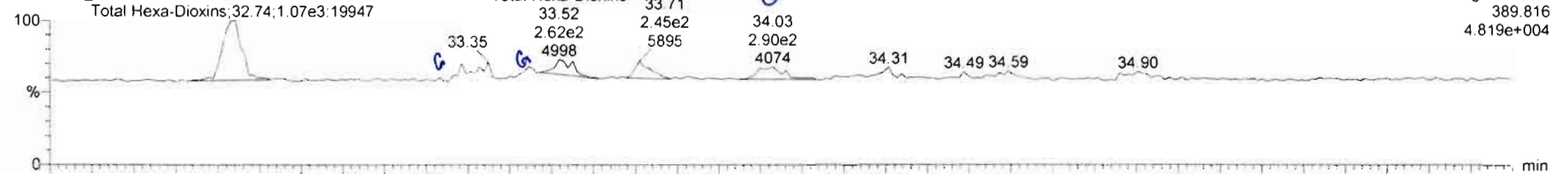
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Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

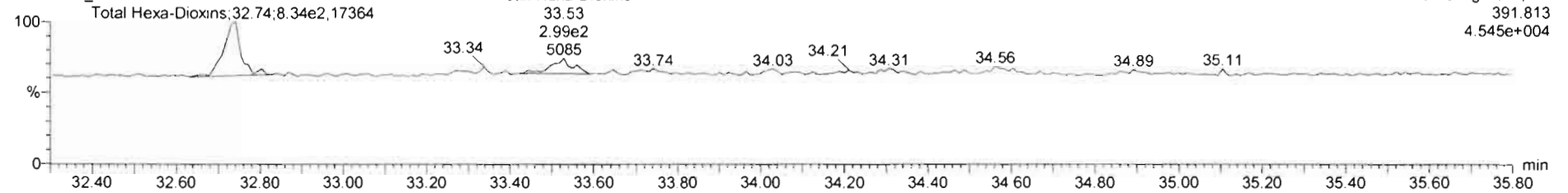
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1,2,3,4,7,8-HxCDD

200225R3\_12

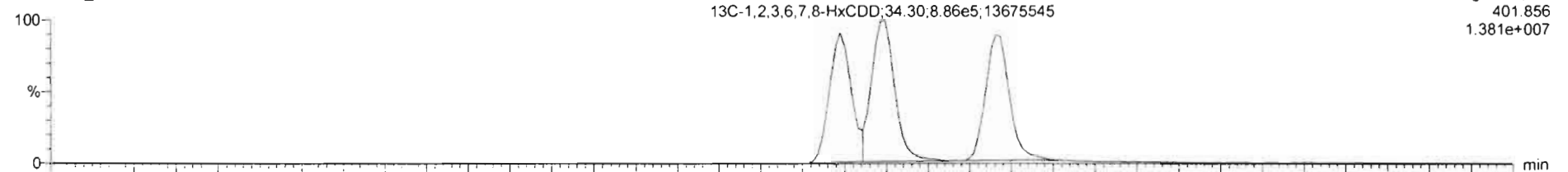


200225R3\_12

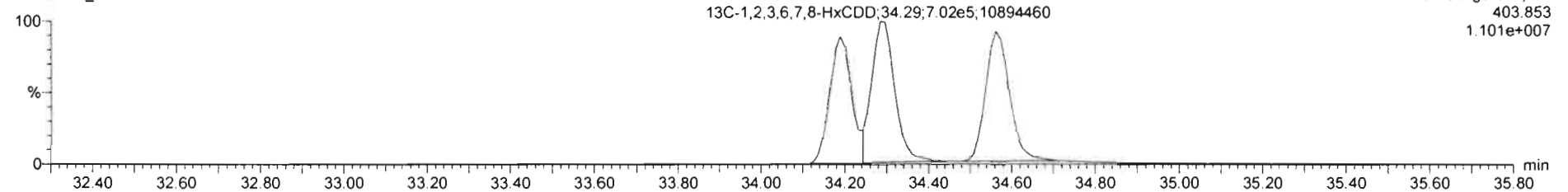


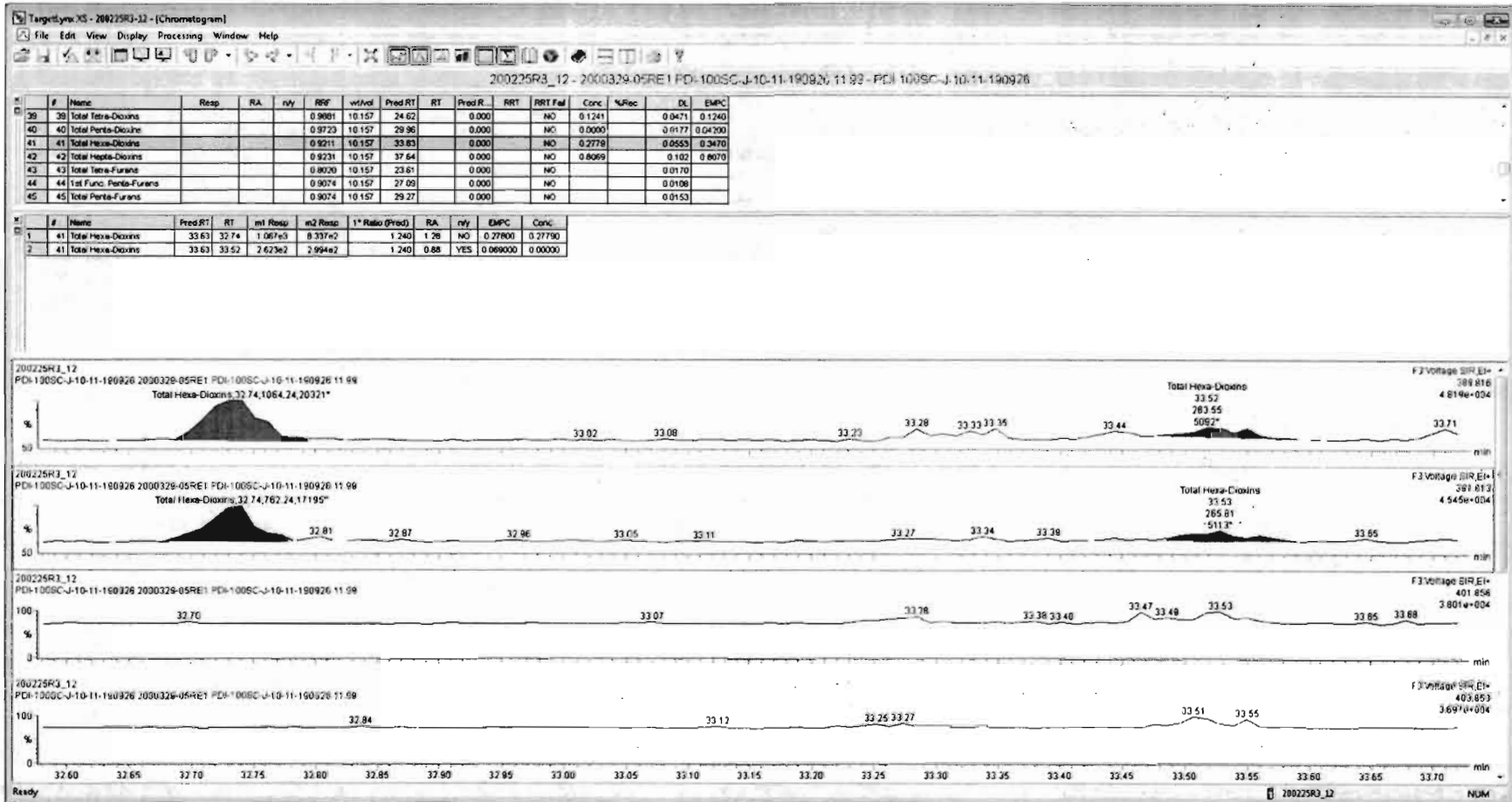
13C-1,2,3,4,7,8-HxCDD

200225R3\_12



200225R3\_12





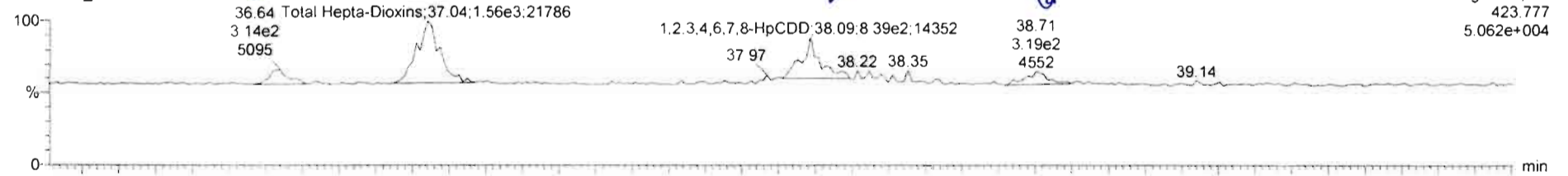
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Last Altered: Wednesday, February 26, 2020 08:43:26 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

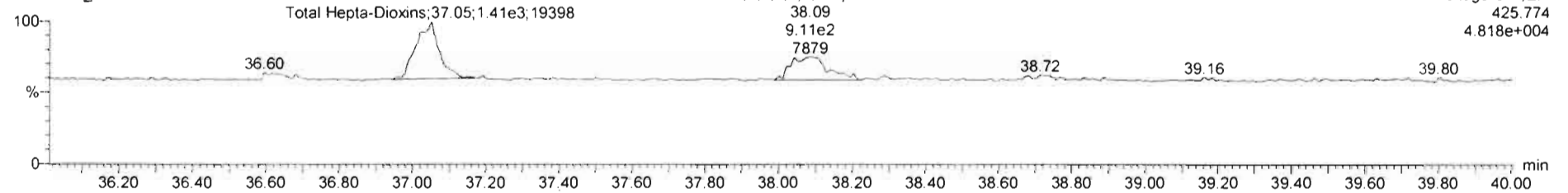
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1,2,3,4,6,7,8-HpCDD

200225R3\_12

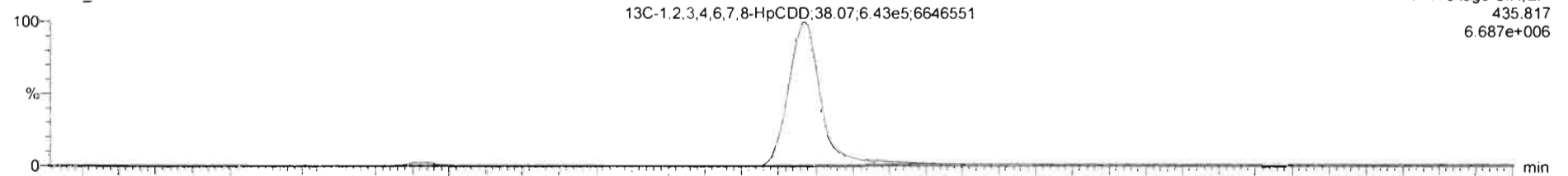


200225R3\_12

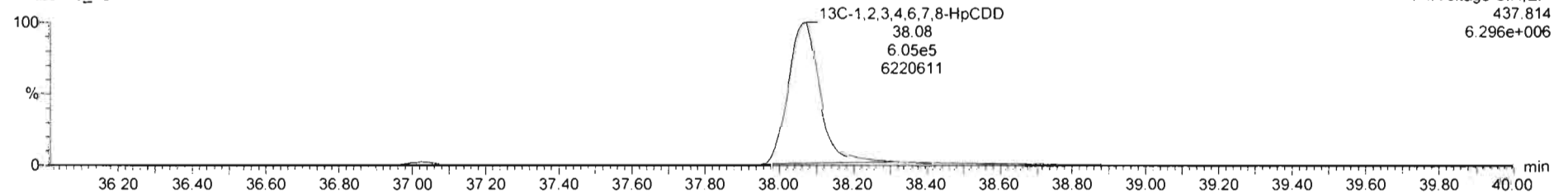


13C-1,2,3,4,6,7,8-HpCDD

200225R3\_12



200225R3\_12



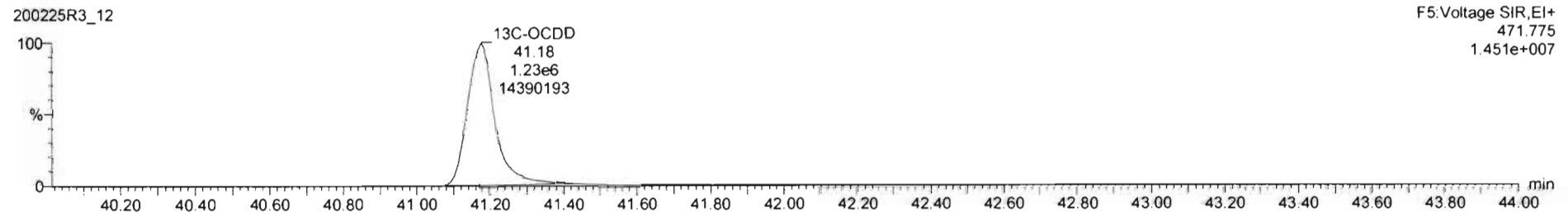
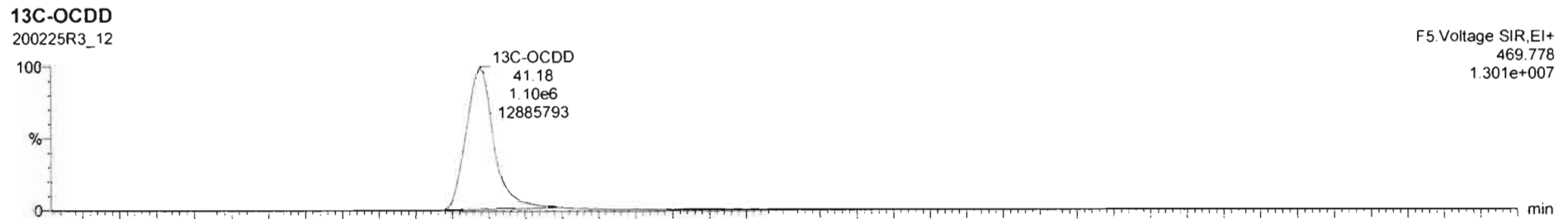
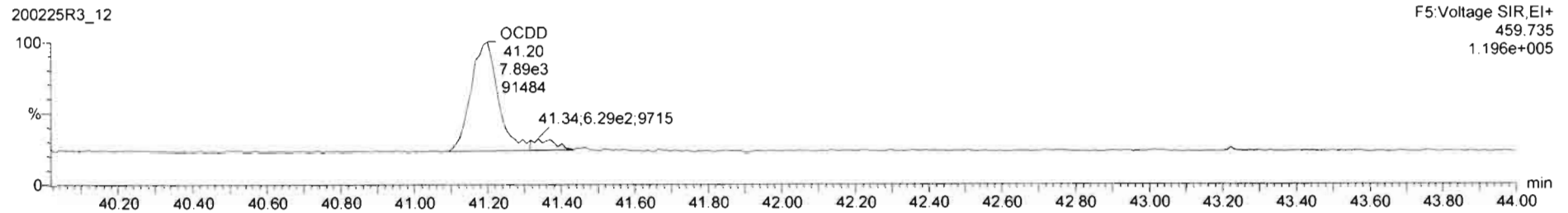
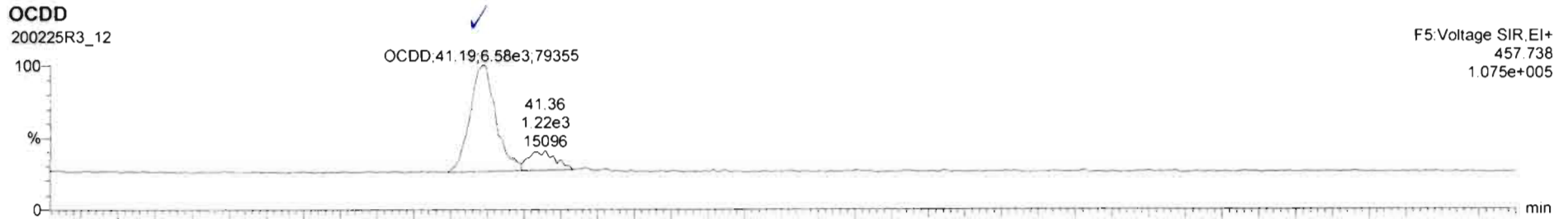


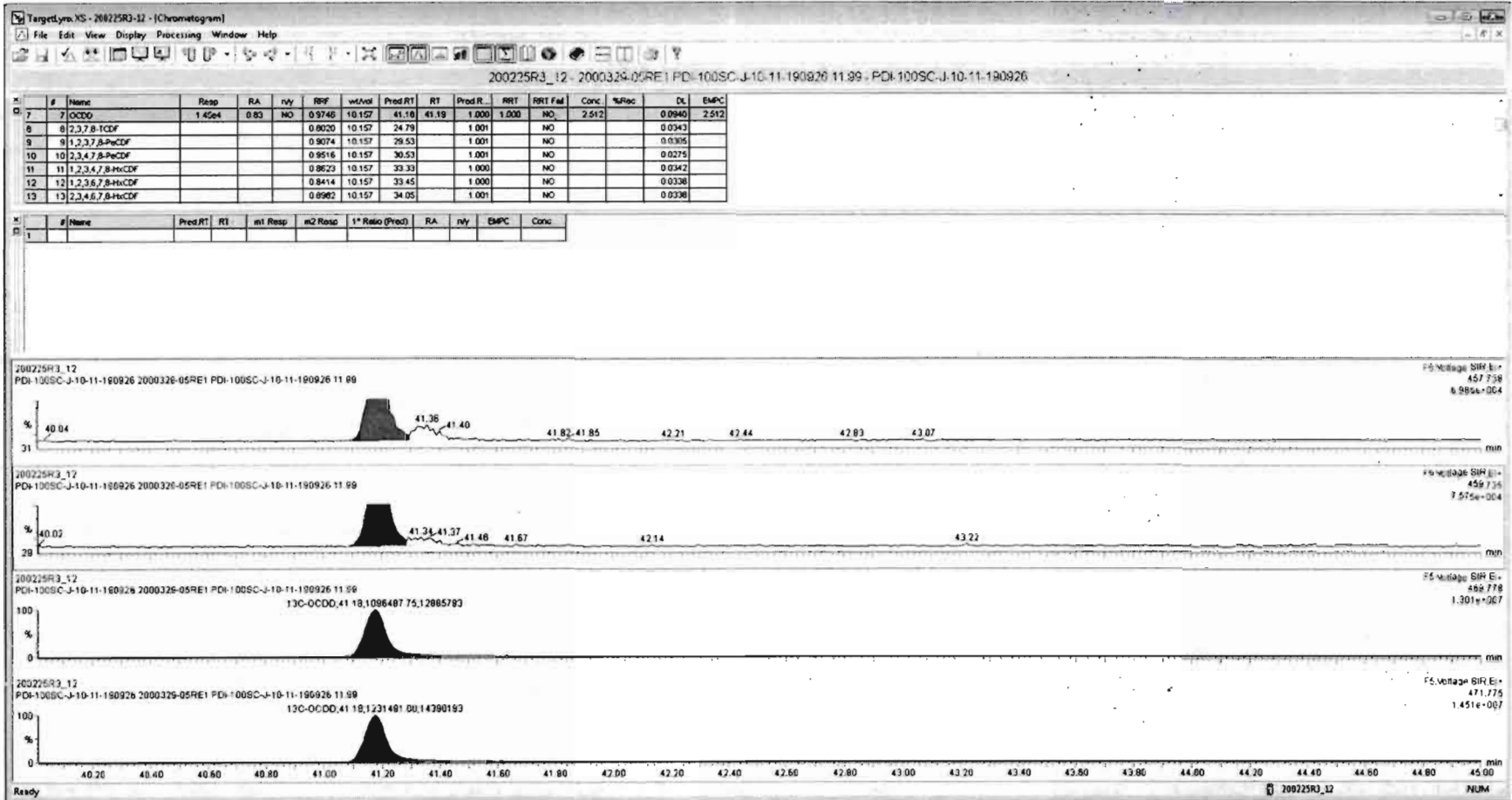
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Last Altered: Wednesday, February 26, 2020 08:43:26 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926





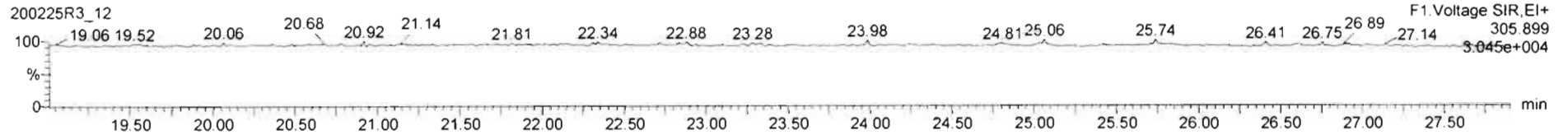
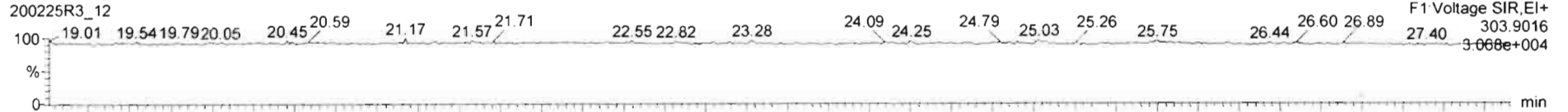
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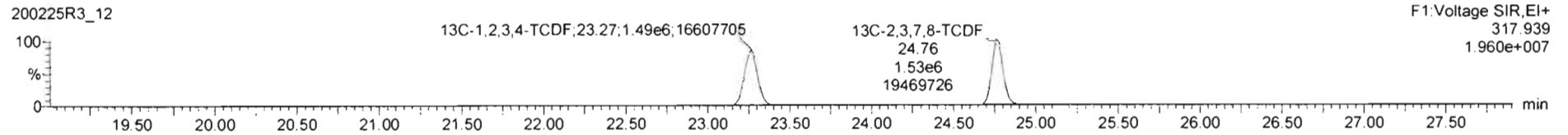
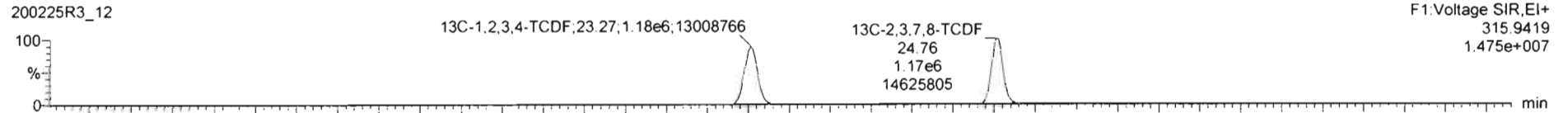
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Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

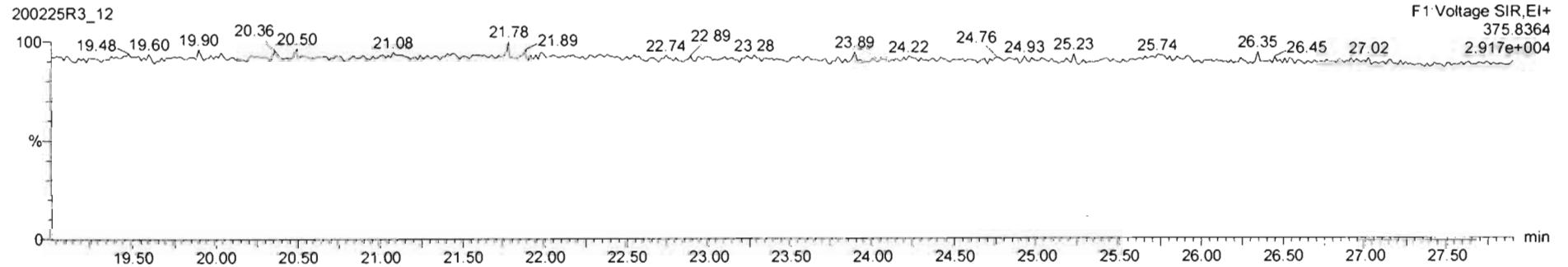
**2,3,7,8-TCDF**



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



**DPE1**



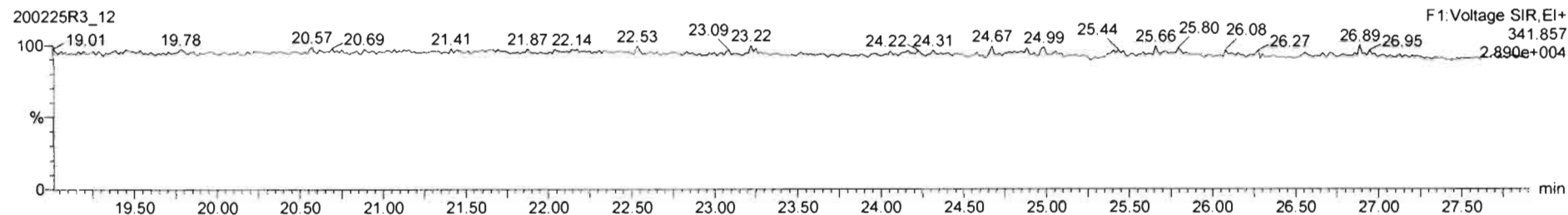
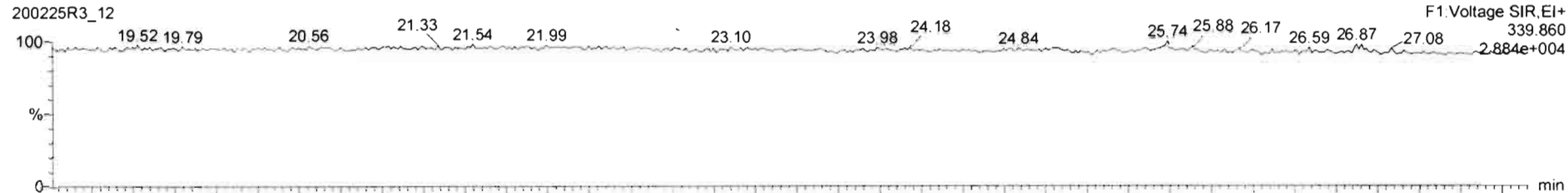
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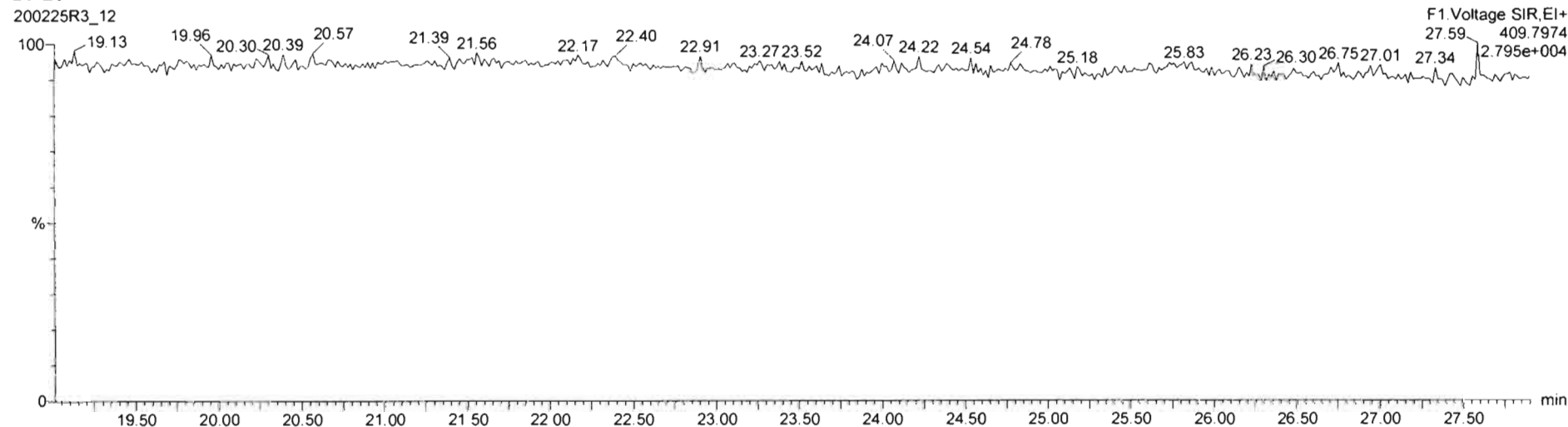
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Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

1st Func. Penta-Furans



DPE6



Dataset: Untitled

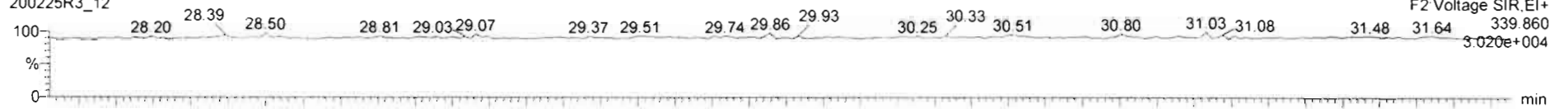
Last Altered: Wednesday, February 26, 2020 08:43:26 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

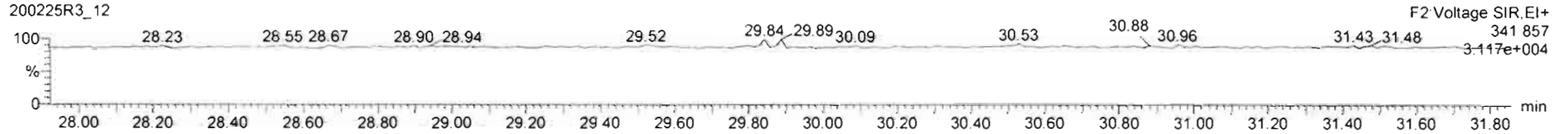
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**1,2,3,7,8-PeCDF**

200225R3\_12

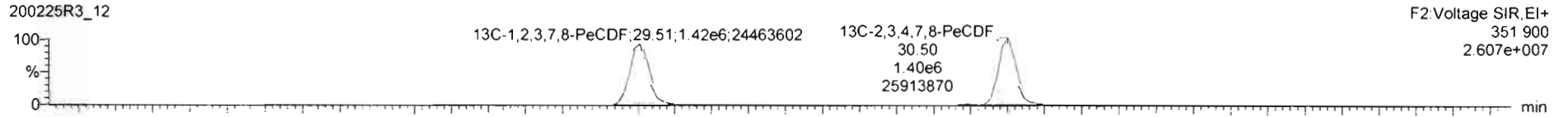


200225R3\_12

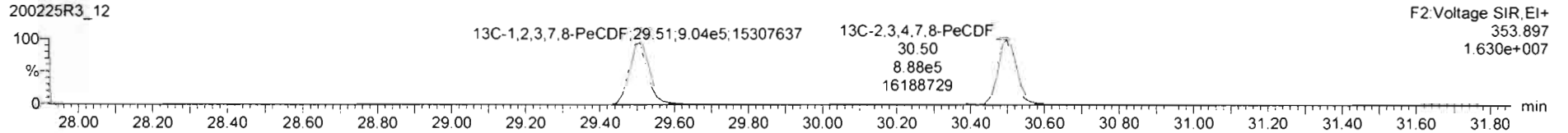


**13C-1,2,3,7,8-PeCDF**

200225R3\_12

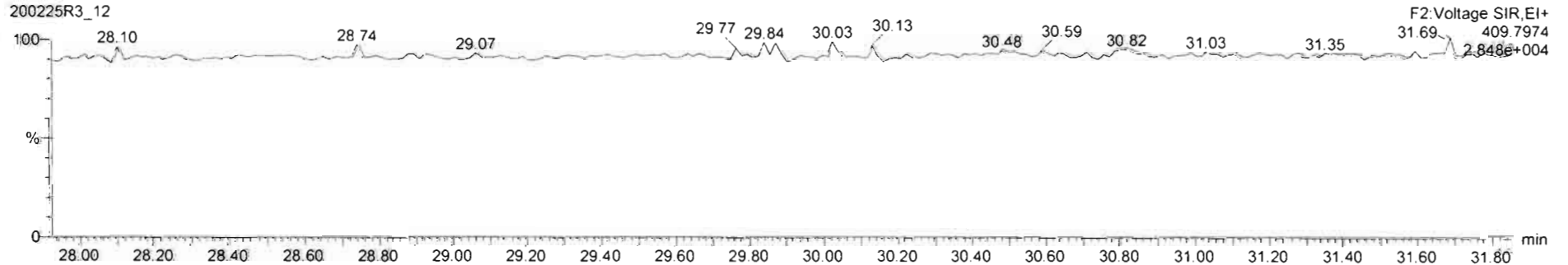


200225R3\_12



**DPE2**

200225R3\_12



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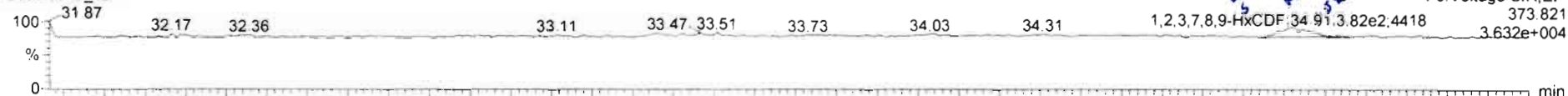
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Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

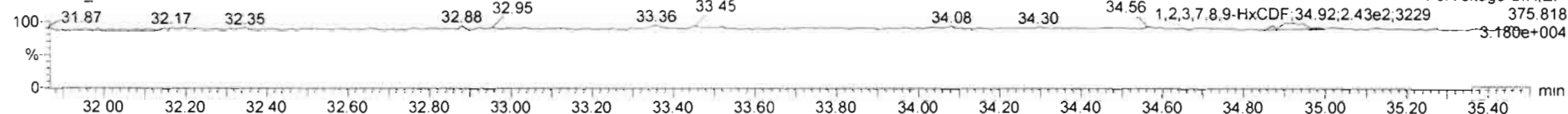
Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

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

200225R3\_12

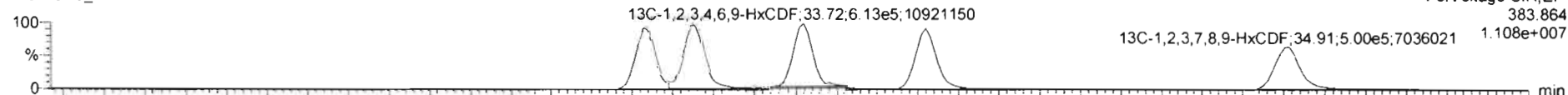


200225R3\_12

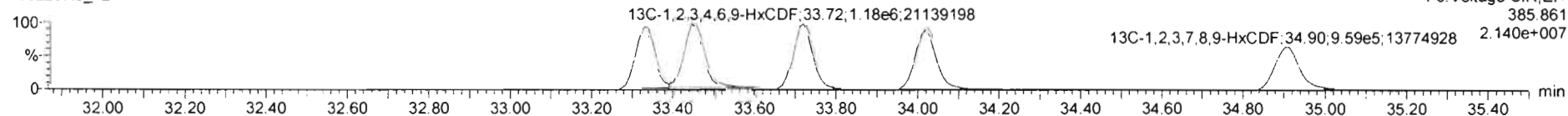


13C-1,2,3,4,7,8-HxCDF

200225R3\_12

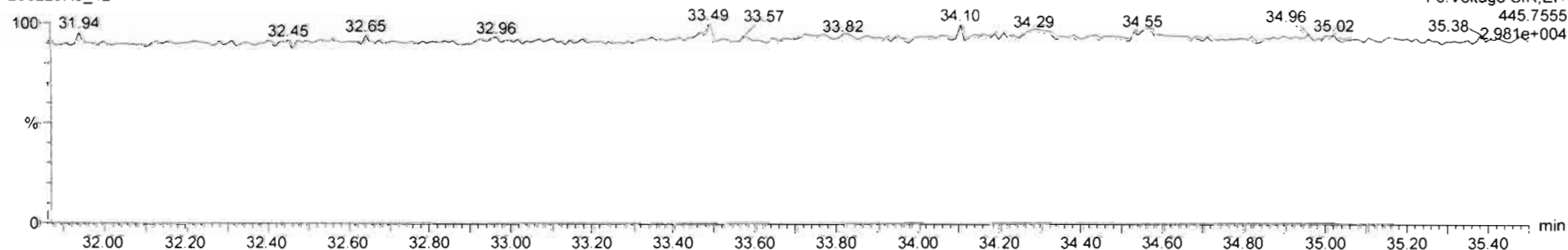


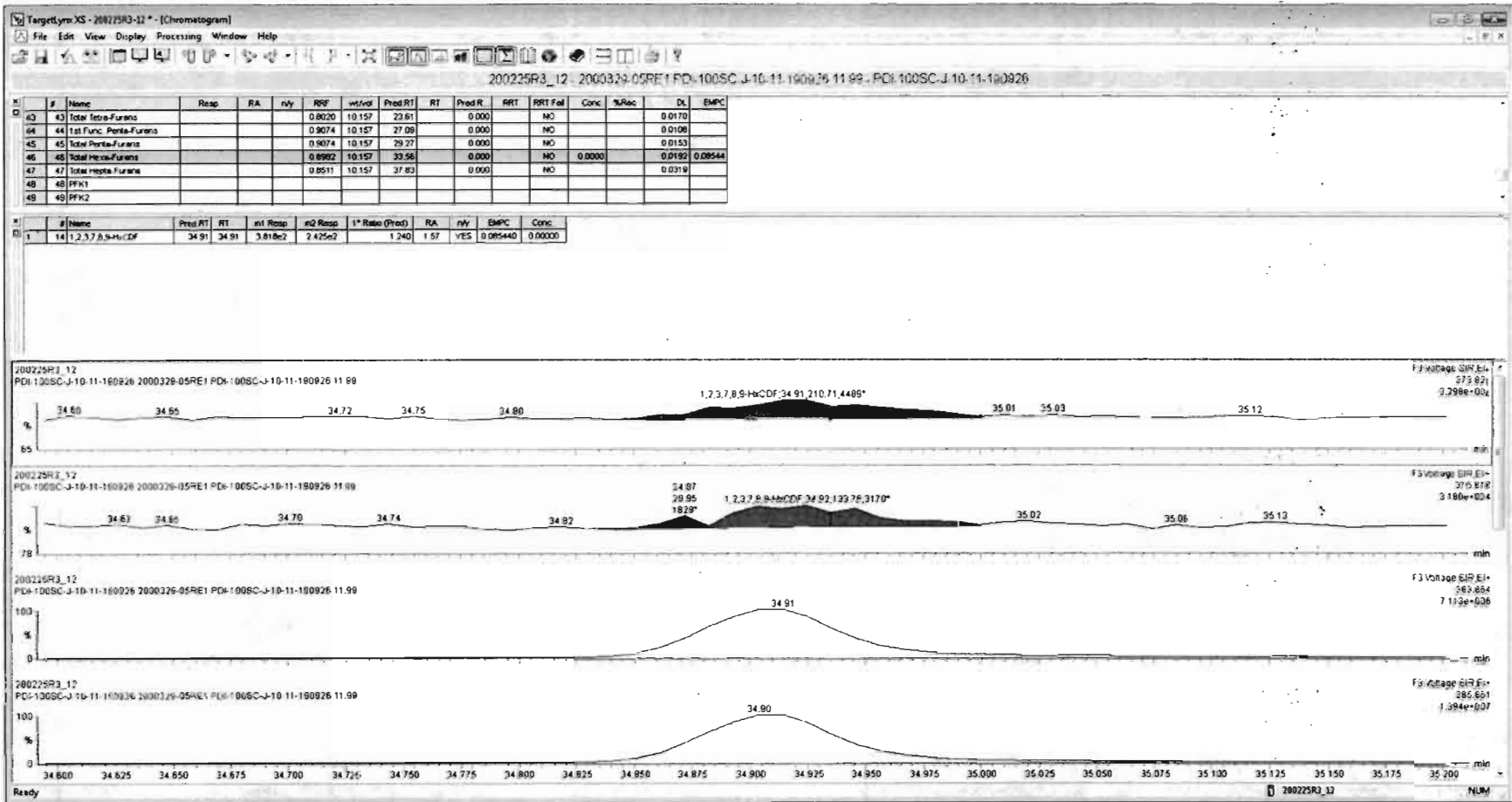
200225R3\_12



DPE3

200225R3\_12



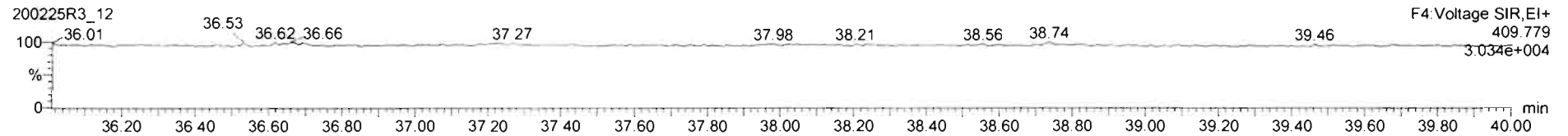
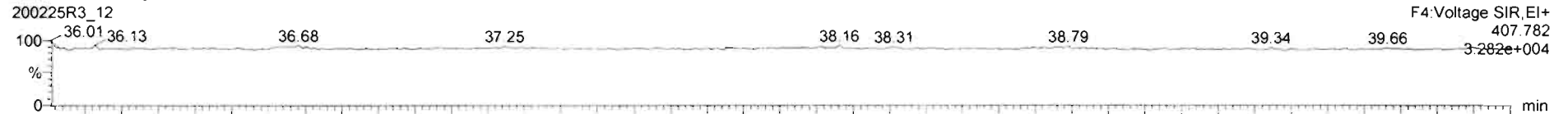


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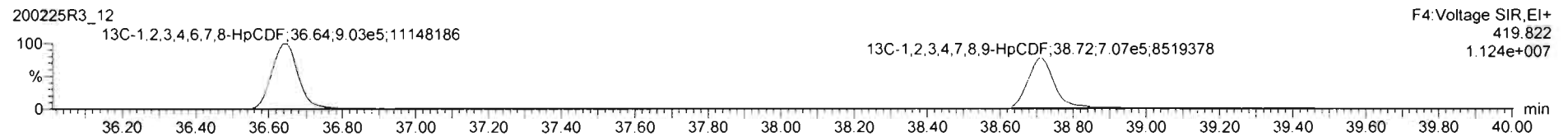
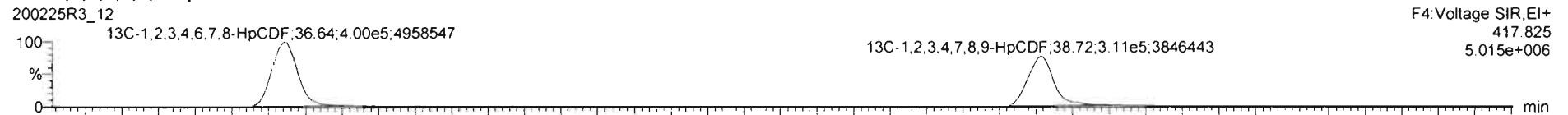
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Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

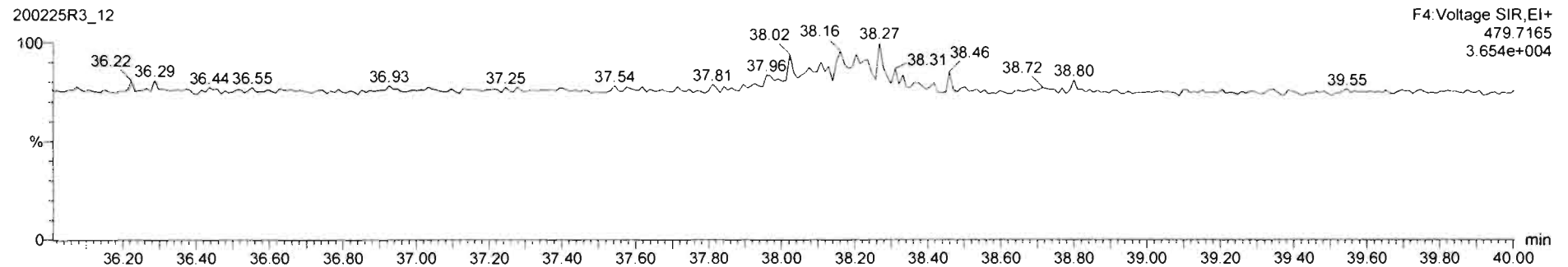
**1,2,3,4,6,7,8-HpCDF**



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



**DPE4**



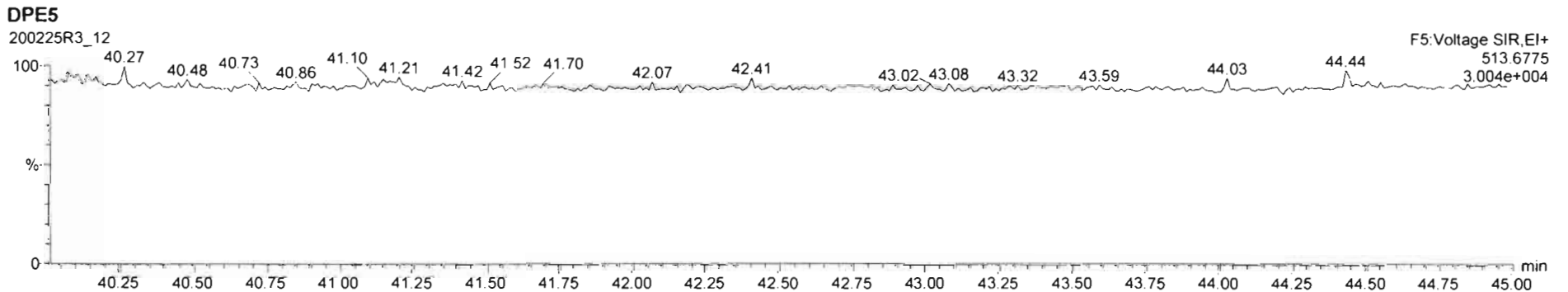
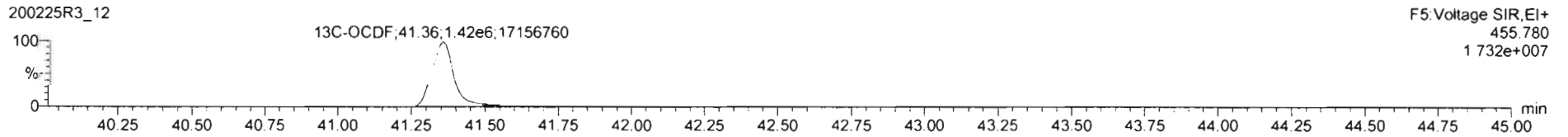
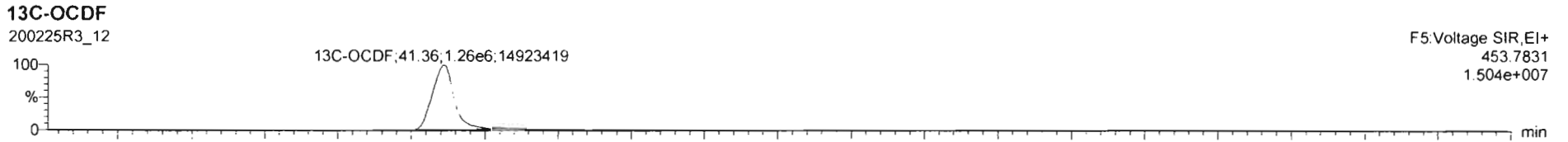
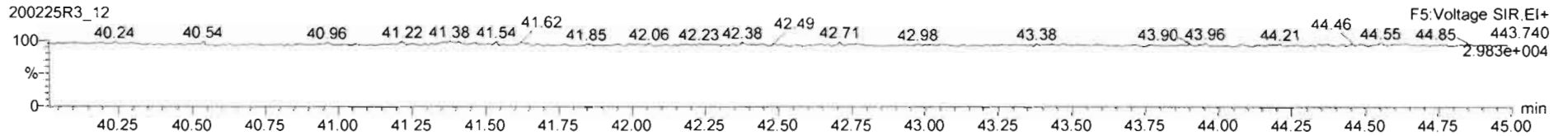
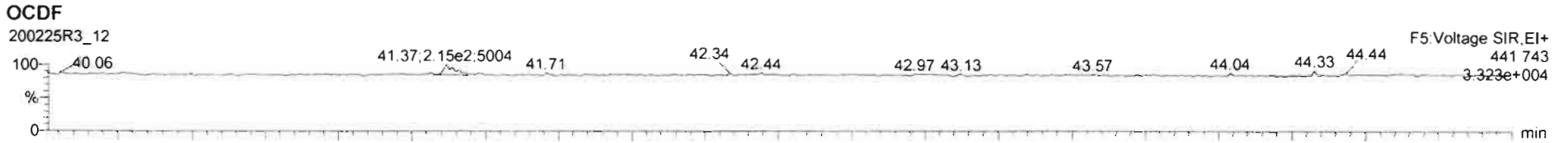


Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:43:26 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926



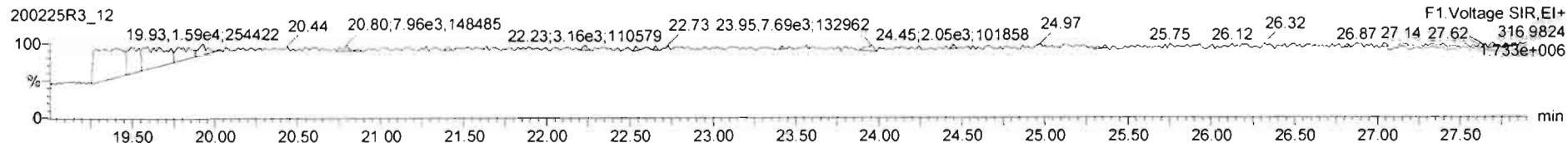
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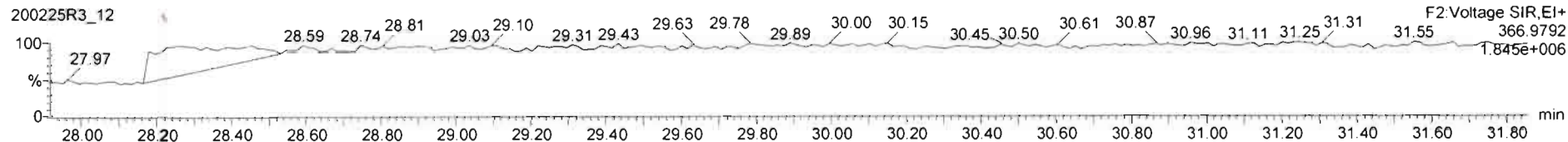
Printed: Wednesday, February 26, 2020 08:43:29 Pacific Standard Time

Name: 200225R3\_12, Date: 25-Feb-2020, Time: 21:48:00, ID: 2000329-05RE1 PDI-100SC-J-10-11-190926 11.99, Description: PDI-100SC-J-10-11-190926

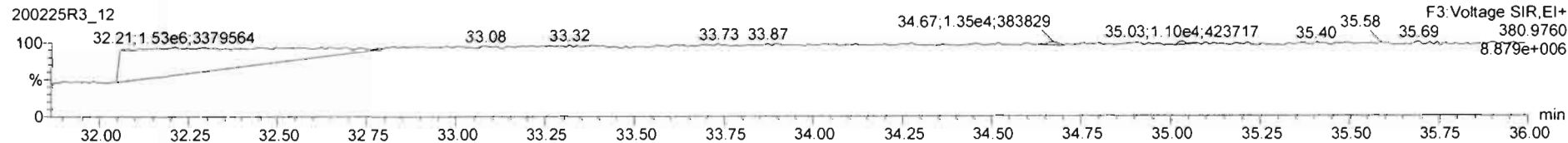
PFK1



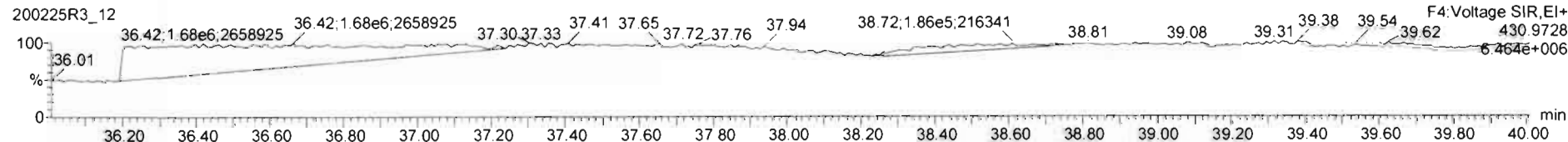
PFK2



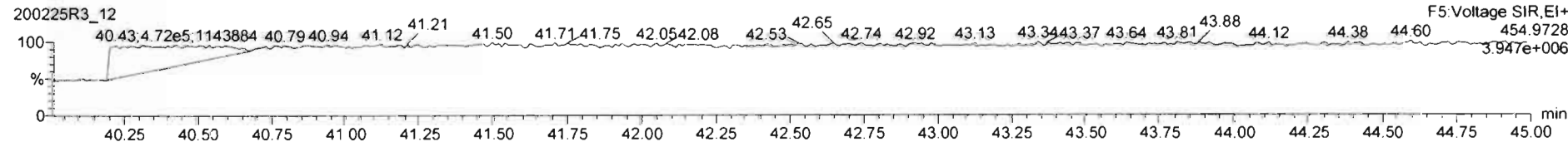
PFK3



PFK4



PFK5



**CONTINUING CALIBRATION**

## HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calibration ID: ST200225R3-1

Reviewed By: CT 02/26/2020  
*Initials & Date*

End Calibration ID: NA

	<u>Beg.</u>	<u>End</u>
Ion abundance within QC limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/> <u>NA</u>
Concentrations within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TCDD/TCDF Valleys <25%	<input checked="" type="checkbox"/>	<input type="checkbox"/>
First and last eluters present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Retention Times within criteria?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Verification Std. named correctly? (ST-Year-Month-Day-VG ID)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Forms signed and dated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Correct ICAL referenced?	<u>GRB</u>	<input type="checkbox"/>
<b>Run Log:</b>		
- Correct instrument listed?	<input checked="" type="checkbox"/>	<input type="checkbox"/> <u>N</u>
- Samples within 12 hour clock?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- Bottle position verified?	<u>GRB</u>	<input type="checkbox"/>

Mass resolution  $\geq$

5k    6-8K    8K    10K  
 1614   1699   429   1613/1668/8280

Intergrated peaks display correctly?

GC Break <20%

**8280 CS1 End Standard:**

- Ratios within limits, S/N <2.5:1, CS1  
 within 12 hours

Comments:

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-1.qld

Last Altered: Wednesday, February 26, 2020 08:52:31 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:53:48 Pacific Standard Time

*GRB 02/26/2020*

*C7 02/26/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Name: 200225R3\_1, Date: 25-Feb-2020, Time: 13:07:03, ID: ST200225R3\_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	1.68e5	1.84e6	0.76	NO	0.988	25.77	25.75	NO	1.001	1.001	9.2493	92.5	NO
2	2 1,2,3,7,8-PeCDD	6.09e5	1.42e6	0.62	NO	0.972	30.86	30.85	NO	1.001	1.000	44.277	88.6	NO
3	3 1,2,3,4,7,8-HxCDD	5.15e5	9.89e5	1.24	NO	1.07	34.21	34.22	NO	1.000	1.001	48.634	97.3	NO
4	4 1,2,3,6,7,8-HxCDD	5.86e5	1.28e6	1.24	NO	0.921	34.31	34.32	NO	1.000	1.000	49.782	99.6	NO
5	5 1,2,3,7,8,9-HxCDD	4.94e5	1.12e6	1.25	NO	0.918	34.61	34.59	NO	1.001	1.001	47.937	95.9	NO
6	6 1,2,3,4,6,7,8-HpCDD	4.00e5	8.86e5	0.99	NO	0.923	38.09	38.09	NO	1.000	1.000	48.853	97.7	NO
7	7 OCDD	8.03e5	1.69e6	0.88	NO	0.975	41.19	41.20	NO	1.000	1.000	97.637	97.6	NO
8	8 2,3,7,8-TCDF	1.98e5	2.36e6	0.74	NO	0.802	24.82	24.82	NO	1.001	1.001	10.449	104	NO
9	9 1,2,3,7,8-PeCDF	8.82e5	1.93e6	1.54	NO	0.907	29.54	29.54	NO	1.001	1.001	50.335	101	NO
10	10 2,3,4,7,8-PeCDF	8.90e5	1.90e6	1.54	NO	0.952	30.55	30.53	NO	1.001	1.000	49.128	98.3	NO
11	11 1,2,3,4,7,8-HxCDF	6.27e5	1.31e6	1.20	NO	0.862	33.35	33.36	NO	1.000	1.000	55.518	111	NO
12	12 1,2,3,6,7,8-HxCDF	7.31e5	1.55e6	1.20	NO	0.841	33.48	33.48	NO	1.000	1.000	56.116	112	NO
13	13 2,3,4,6,7,8-HxCDF	6.89e5	1.37e6	1.20	NO	0.898	34.06	34.05	NO	1.001	1.001	55.868	112	NO
14	14 1,2,3,7,8,9-HxCDF	5.36e5	1.15e6	1.23	NO	0.858	34.92	34.94	NO	1.000	1.000	54.159	108	NO
15	15 1,2,3,4,6,7,8-HpCDF	4.86e5	1.06e6	1.01	NO	0.851	36.70	36.67	NO	1.001	1.000	53.906	108	NO
16	16 1,2,3,4,7,8,9-HpCDF	3.82e5	6.80e5	1.02	NO	0.980	38.73	38.74	NO	1.000	1.000	57.277	115	NO
17	17 OCDF	8.49e5	1.97e6	0.89	NO	0.806	41.37	41.38	NO	1.000	1.000	107.04	107	NO
18	18 13C-2,3,7,8-TCDD	1.84e6	1.58e6	0.78	NO	1.20	25.71	25.74	NO	1.026	1.027	97.017	97.0	NO
19	19 13C-1,2,3,7,8-PeCDD	1.42e6	1.58e6	0.63	NO	0.967	30.45	30.83	NO	1.215	1.230	92.397	92.4	NO
20	20 13C-1,2,3,4,7,8-HxCDD	9.89e5	1.32e6	1.26	NO	0.874	34.20	34.20	NO	1.014	1.014	85.396	85.4	NO
21	21 13C-1,2,3,6,7,8-HxCDD	1.28e6	1.32e6	1.25	NO	1.05	34.31	34.31	NO	1.017	1.017	92.175	92.2	NO
22	22 13C-1,2,3,7,8,9-HxCDD	1.12e6	1.32e6	1.25	NO	0.974	34.61	34.57	NO	1.026	1.025	86.966	87.0	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	8.86e5	1.32e6	1.04	NO	0.747	38.18	38.08	NO	1.132	1.129	89.522	89.5	NO
24	24 13C-OCDD	1.69e6	1.32e6	0.89	NO	0.707	41.09	41.19	NO	1.218	1.221	180.26	90.1	NO
25	25 13C-2,3,7,8-TCDF	2.36e6	2.22e6	0.77	NO	1.07	24.89	24.79	NO	0.993	0.989	99.599	99.6	NO
26	26 13C-1,2,3,7,8-PeCDF	1.93e6	2.22e6	1.58	NO	1.00	29.47	29.52	NO	1.176	1.178	86.791	86.8	NO
27	27 13C-2,3,4,7,8-PeCDF	1.90e6	2.22e6	1.53	NO	0.962	30.44	30.51	NO	1.215	1.218	89.125	89.1	NO
28	28 13C-1,2,3,4,7,8-HxCDF	1.31e6	1.32e6	0.51	NO	1.05	33.33	33.35	NO	0.988	0.989	94.224	94.2	NO
29	29 13C-1,2,3,6,7,8-HxCDF	1.55e6	1.32e6	0.51	NO	1.19	33.43	33.47	NO	0.991	0.992	98.159	98.2	NO
30	30 13C-2,3,4,6,7,8-HxCDF	1.37e6	1.32e6	0.52	NO	1.07	34.04	34.03	NO	1.009	1.009	97.150	97.1	NO
31	31 13C-1,2,3,7,8,9-HxCDF	1.15e6	1.32e6	0.53	NO	0.922	34.95	34.92	NO	1.036	1.035	94.345	94.3	NO

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-1.qld

Last Altered: Wednesday, February 26, 2020 08:52:31 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:53:48 Pacific Standard Time

Name: 200225R3\_1, Date: 25-Feb-2020, Time: 13:07:03, ID: ST200225R3\_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	1.06e6	1.32e6	0.44	NO	0.767	36.70	36.66	NO	1.088	1.087	104.16	104	NO
33	13C-1,2,3,4,7,8,9-HpCDF	6.80e5	1.32e6	0.43	NO	0.552	38.72	38.73	NO	1.148	1.148	92.930	92.9	NO
34	13C-OCDF	1.97e6	1.32e6	0.88	NO	0.789	41.32	41.37	NO	1.225	1.226	188.28	94.1	NO
35	37Cl-2,3,7,8-TCDD	1.73e5	1.58e6			1.18	25.74	25.75	NO	1.027	1.027	9.2935	92.9	NO
36	13C-1,2,3,4-TCDD	1.58e6	1.58e6	0.79	NO	1.00	25.11	25.06	NO	1.000	1.000	100.00	100	NO
37	13C-1,2,3,4-TCDF	2.22e6	2.22e6	0.79	NO	1.00	23.37	23.30	NO	1.000	1.000	100.00	100	NO
38	13C-1,2,3,4,6,9-HxCDF	1.32e6	1.32e6	0.51	NO	1.00	33.71	33.73	NO	1.000	1.000	100.00	100	YES <i>ok</i>
39	Total Tetra-Dioxins		1.84e6			0.988	24.62		NO	0.000		80.962		NO
40	Total Penta-Dioxins		1.42e6			0.972	29.96		NO	0.000		196.18		NO
41	Total Hexa-Dioxins		0.00e0			0.921	33.63		NO	0.000		246.80		NO
42	Total Hepta-Dioxins		8.86e5			0.923	37.64		NO	0.000		134.48		NO
43	Total Tetra-Furans		2.36e6			0.802	23.61		NO	0.000		50.277		NO
44	1st Func. Penta-Furans		0.00e0			0.907	27.09		NO	0.000		95.380		NO
45	Total Penta-Furans		0.00e0			0.907	29.27		NO	0.000		175.25		NO
46	Total Hexa-Furans		0.00e0			0.898	33.56		NO	0.000		314.34		NO
47	Total Hepta-Furans		0.00e0			0.851	37.83		NO	0.000		111.39		NO

Dataset: U:\VG12.PRO\Results\200225R3\200225R3-CPSM.qld

Last Altered: Tuesday, February 25, 2020 13:58:44 Pacific Standard Time  
Printed: Tuesday, February 25, 2020 13:59:10 Pacific Standard Time

Method: Untitled 23 Jan 2020 15:01:26

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

Name: 200225R3\_1, Date: 25-Feb-2020, Time: 13:07:03, ID: ST200225R3\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

	# Name	RT
1	1 1,3,6,8-TCDD (First)	21.59
2	2 1,2,8,9-TCDD (Last)	26.75
3	3 1,2,4,7,9-PeCDD (First)	28.59
4	4 1,2,3,8,9-PeCDD (Last)	31.23
5	5 1,2,4,6,7,9-HxCDD (First)	32.75
6	6 1,2,3,7,8,9-HxCDD (Last)	34.59
7	7 1,2,3,4,6,7,9-HpCDD (First)	37.06
8	8 1,2,3,4,6,7,8-HpCDD (Last)	38.09
9	9 1,3,6,8-TCDF (First)	19.55
10	10 1,2,8,9-TCDF (Last)	26.90
11	11 1,3,4,6,8-PeCDF (First)	26.87
12	12 1,2,3,8,9-PeCDF (Last)	31.48
13	13 1,2,3,4,6,8-HxCDF (First)	32.19
14	14 1,2,3,7,8,9-HxCDF (Last)	34.94
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.67
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.74

Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:56:40 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:56:43 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-02-14-20.mdb 14 Feb 2020 10:26:00

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

Compound name: 2,3,7,8-TCDD

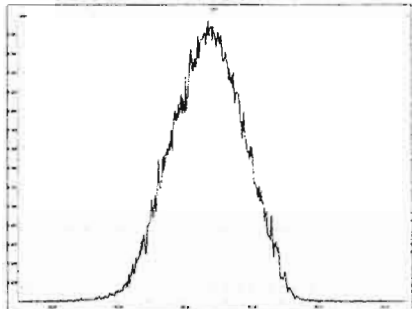
	Name	ID	Acq.Date	Acq.Time
1	200225R3_1	ST200225R3_1 1613 CS3 19L2305	25-Feb-20	13:07:03
2	200225R3_2	B0B0195-BS1 OPR 10	25-Feb-20	13:54:46
3	200225R3_3	SOLVENT BLANK	25-Feb-20	14:41:14
4	200225R3_4	SOLVENT BLANK	25-Feb-20	15:28:42
5	200225R3_5	B0B0195-BLK1 Method Blank 10	25-Feb-20	16:16:03
6	200225R3_6	2000301-01RE1 PDI-077SC-A-02-03-191014 ...	25-Feb-20	17:03:29
7	200225R3_7	2000329-01RE1 PDI-100SC-J-06-07-190926 ...	25-Feb-20	17:50:55
8	200225R3_8	2000329-02RE1 PDI-100SC-J-07-08-190926 ...	25-Feb-20	18:38:19
9	200225R3_9	2000329-03RE1 PDI-100SC-J-08-09-190926 ...	25-Feb-20	19:25:44
10	200225R3_10	2000329-04RE1 PDI-100SC-J-09-10-190926 ...	25-Feb-20	20:13:11
11	200225R3_11	B0B0195-DUP1 Duplicate 14.48	25-Feb-20	21:00:35
12	200225R3_12	2000329-05RE1 PDI-100SC-J-10-11-190926 1...	25-Feb-20	21:48:00
13	200225R3_13	SOLVENT BLANK	25-Feb-20	22:44:20



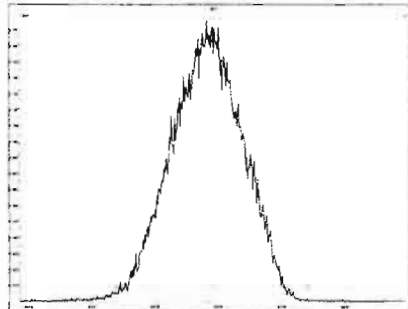
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Tuesday, February 25, 2020 13:02:47 Pacific Standard Time

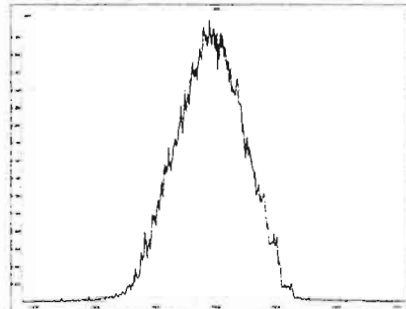
M 292.9824 R 11964



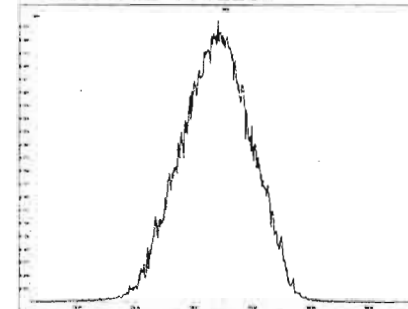
M 304.9824 R 12255



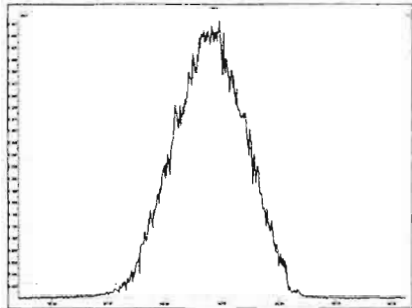
M 318.9792 R 12375



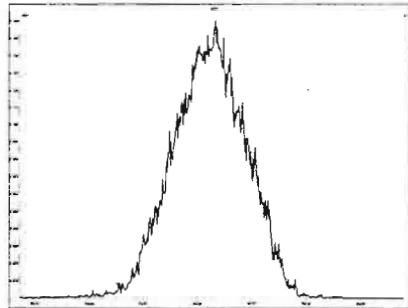
M 330.9792 R 12257



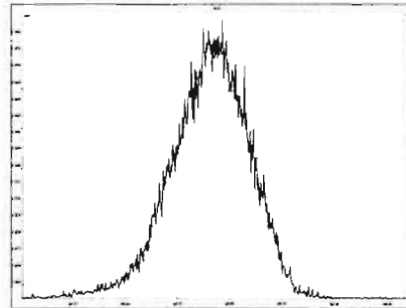
M 342.9792 R 12136



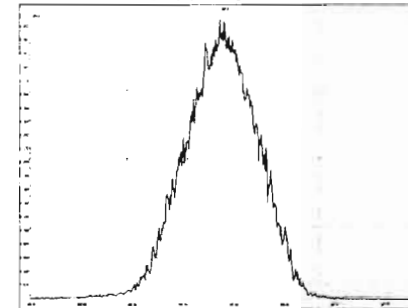
M 354.9792 R 12080



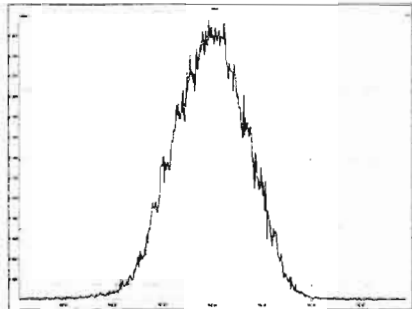
M 366.9792 R 10961



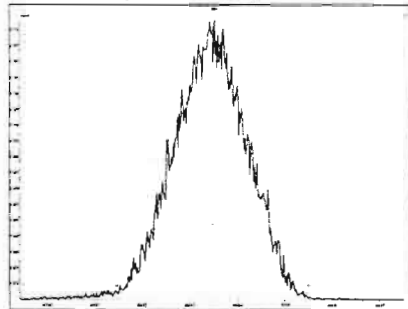
M 380.9760 R 11904



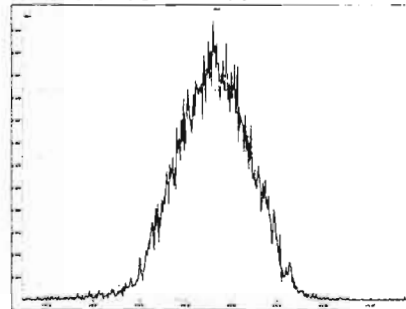
M 392.9760 R 11571



M 404.9760 R 11848



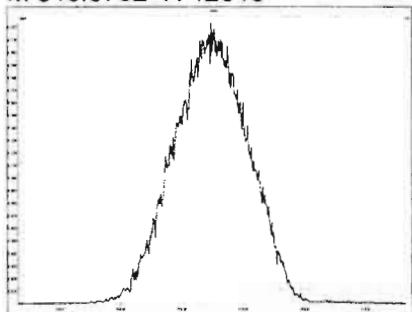
M 416.9760 R 11362



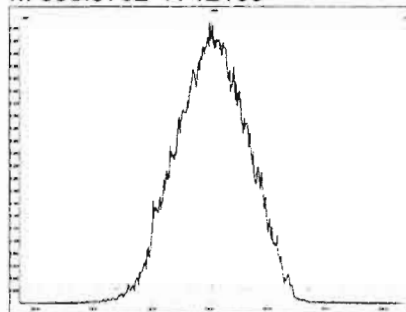
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Tuesday, February 25, 2020 13:03:26 Pacific Standard Time

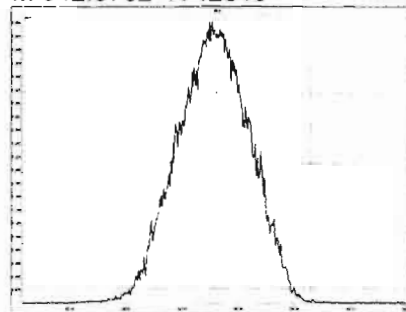
M 318.9792 R 12018



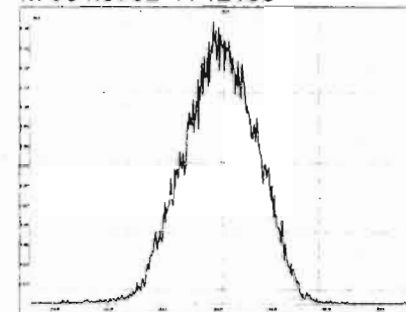
M 330.9792 R 12133



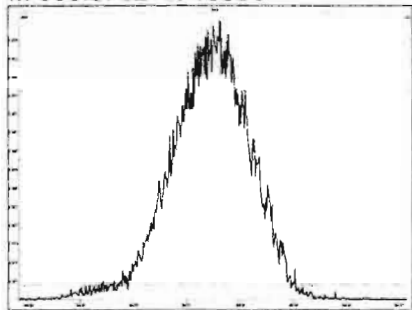
M 342.9792 R 12019



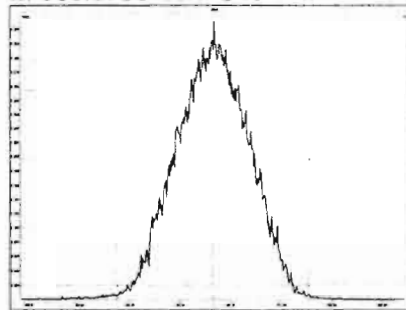
M 354.9792 R 12193



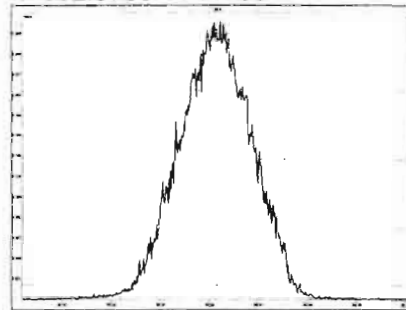
M 366.9792 R 10966



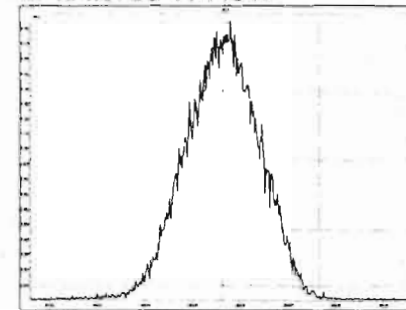
M 380.9760 R 11848



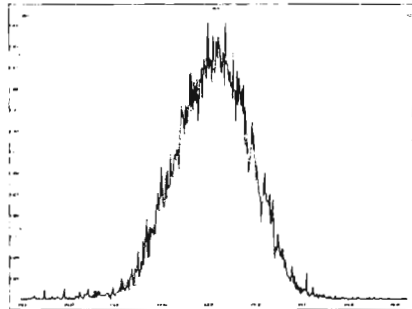
M 392.9760 R 11735



M 404.9760 R 11517



M 416.9760 R 11736



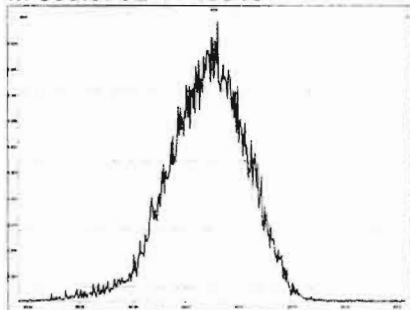
Experiment Calibration Report

MassLynx 4.1 SCN815

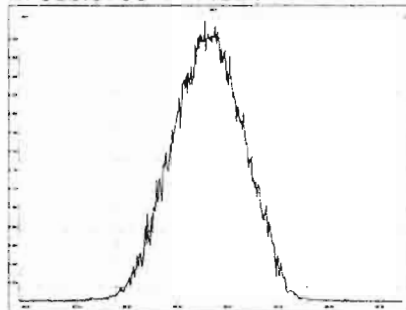
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Printed: Tuesday, February 25, 2020 13:04:04 Pacific Standard Time

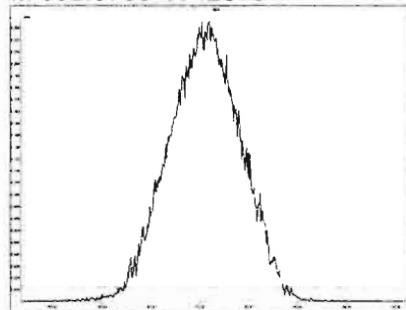
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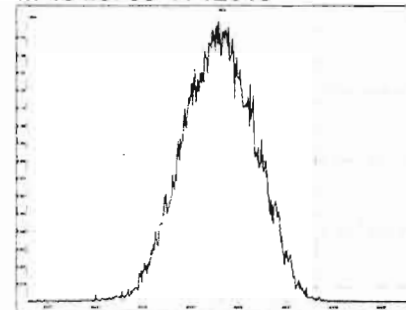
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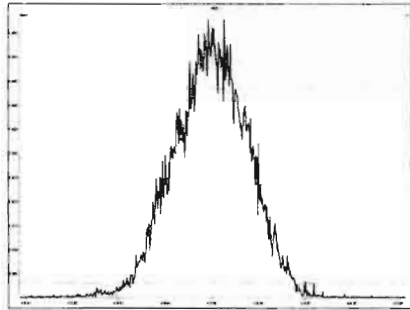
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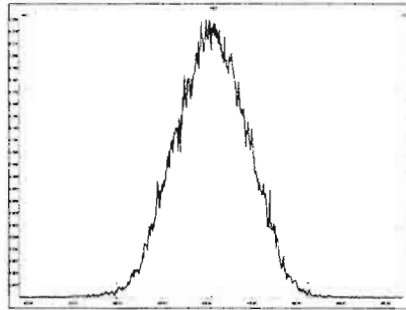
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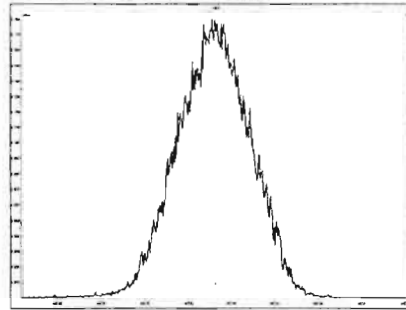
M 416.9760 R 11736



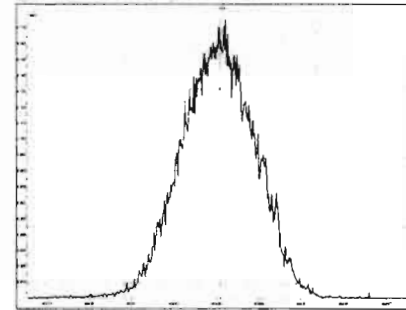
M 430.9728 R 11470



M 442.9728 R 11678



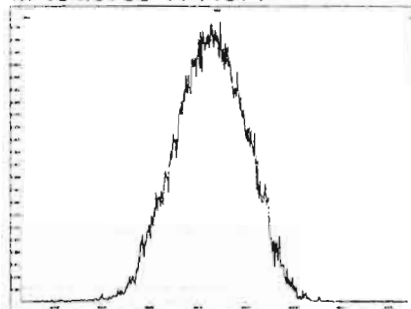
M 454.9728 R 11791



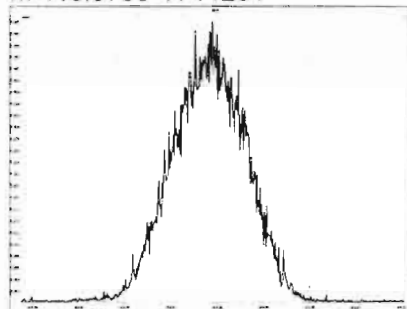
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Printed: Tuesday, February 25, 2020 13:04:45 Pacific Standard Time

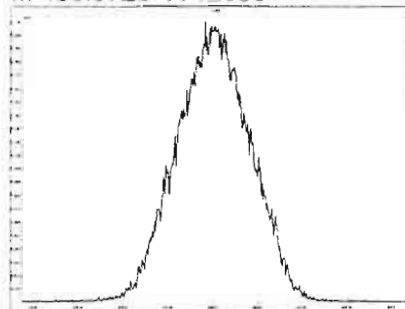
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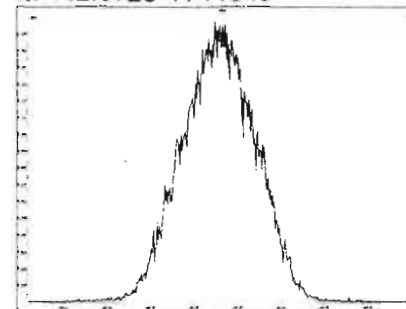
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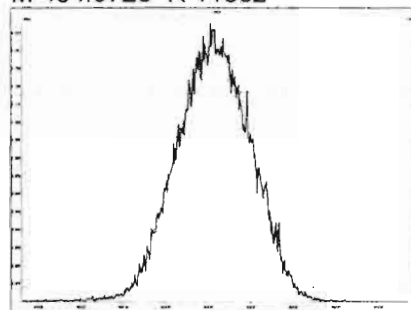
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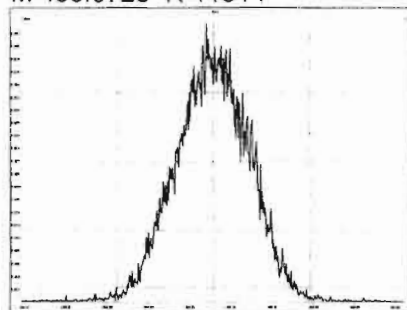
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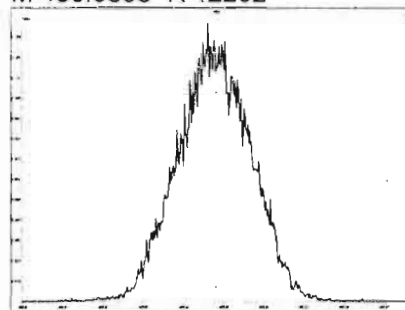
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M 466.9728 R 11314



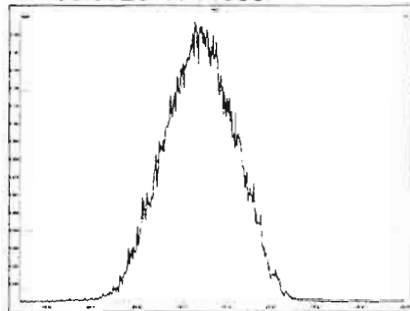
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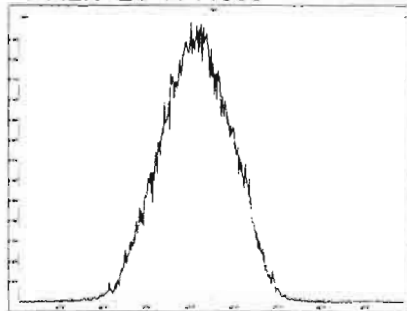
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Printed: Tuesday, February 25, 2020 13:05:10 Pacific Standard Time

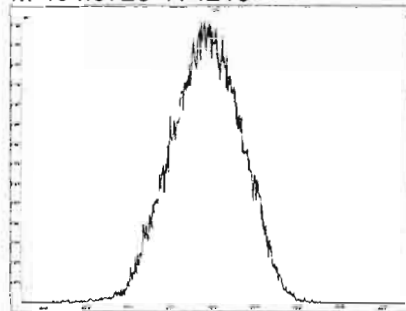
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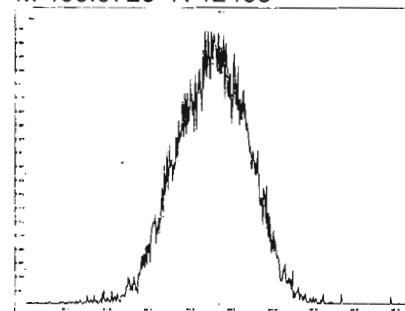
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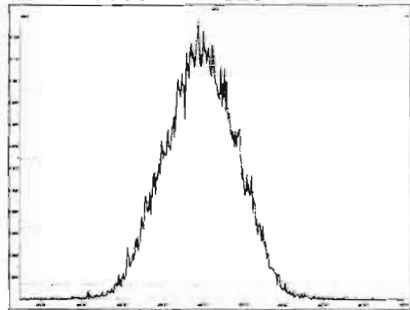
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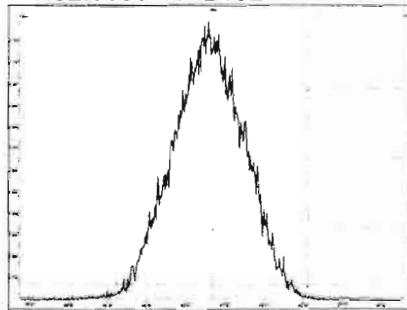
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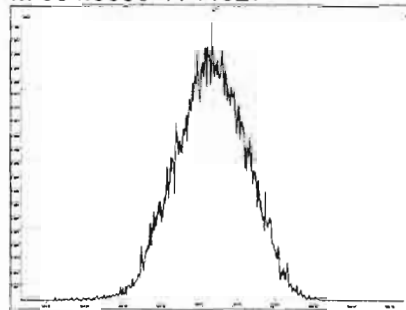
M 480.9696 R 11523



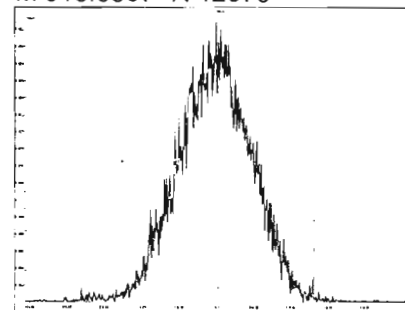
M 492.9696 R 12192



M 504.9696 R 11627



M 516.9697 R 12075



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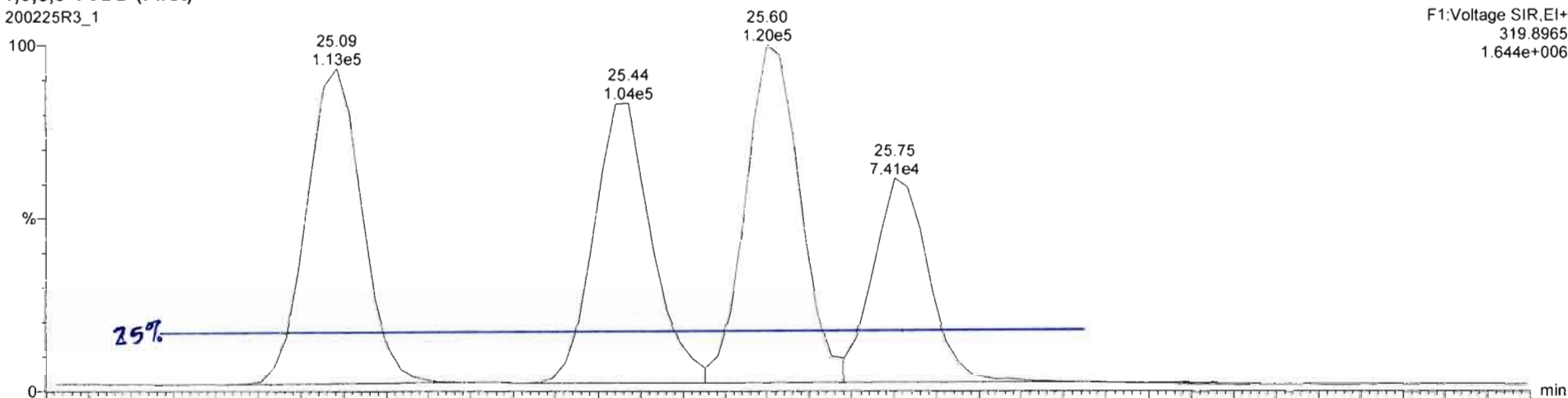
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*GRB 02/26/2020*

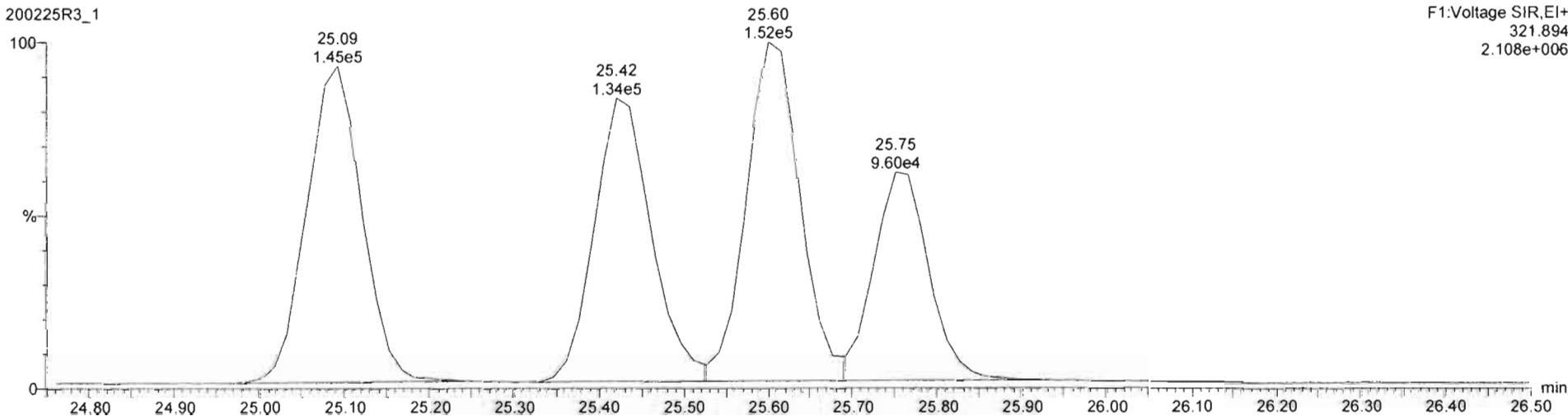
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Name: 200225R3\_1, Date: 25-Feb-2020, Time: 13:07:03, ID: ST200225R3\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

1,3,6,8-TCDD (First)  
200225R3\_1



200225R3\_1



Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:39:24 Pacific Standard Time

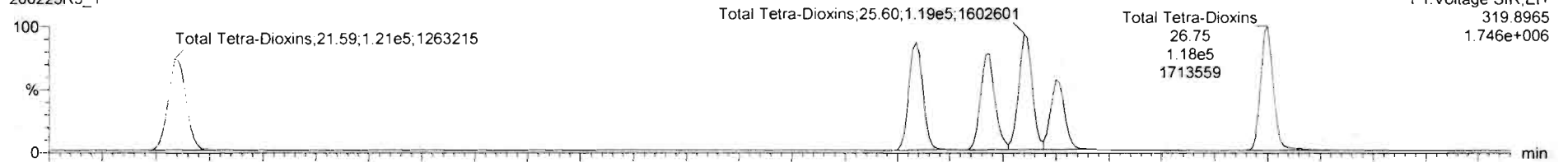
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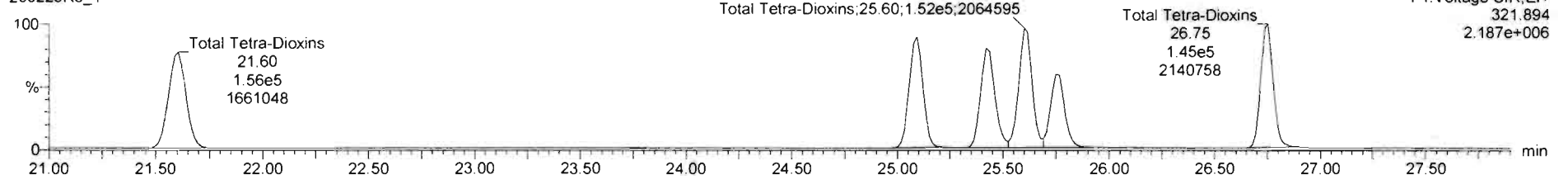
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2,3,7,8-TCDD

200225R3\_1

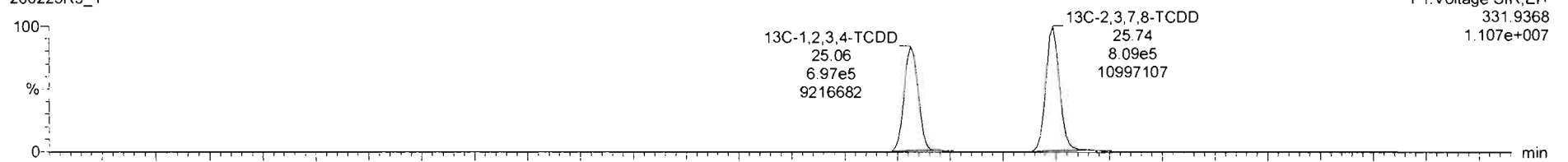


200225R3\_1

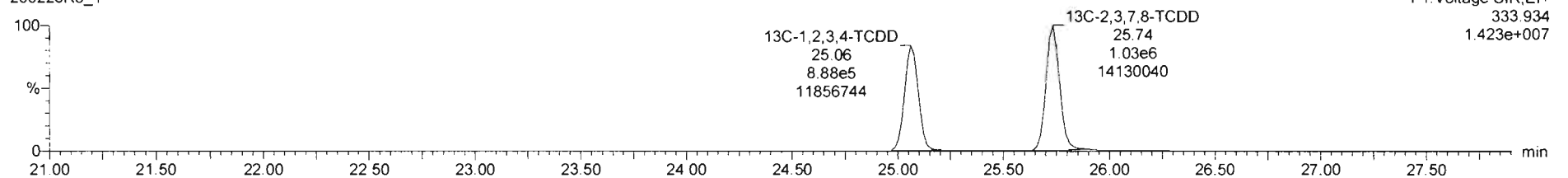


13C-2,3,7,8-TCDD

200225R3\_1



200225R3\_1



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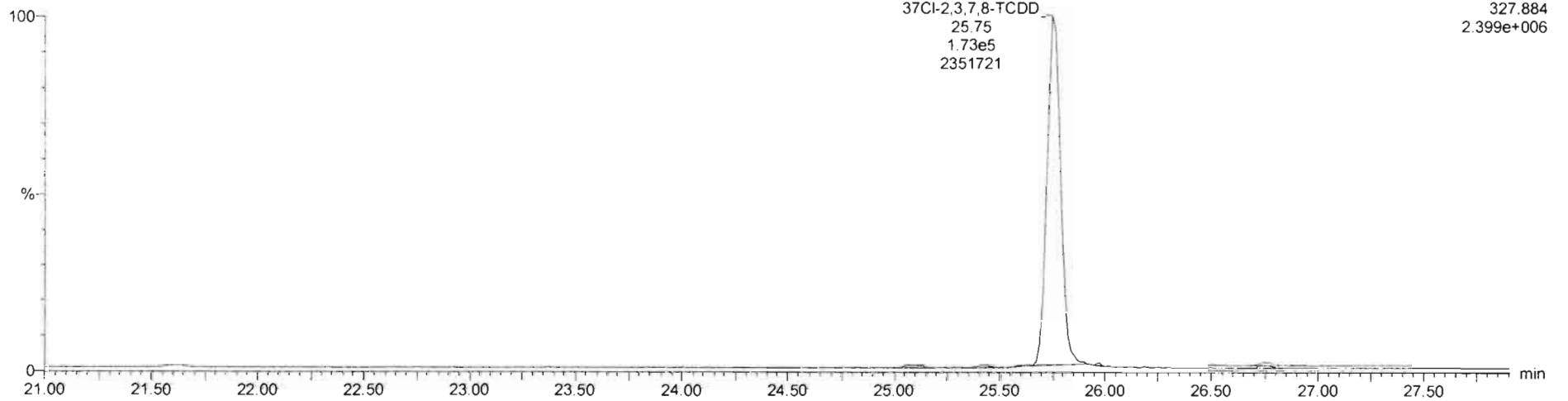
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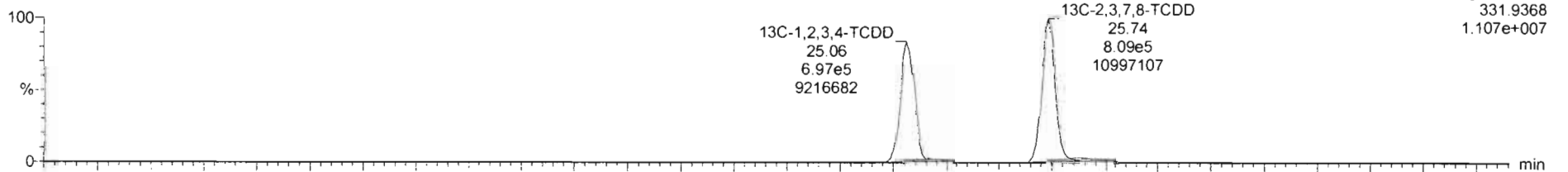
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200225R3\_1

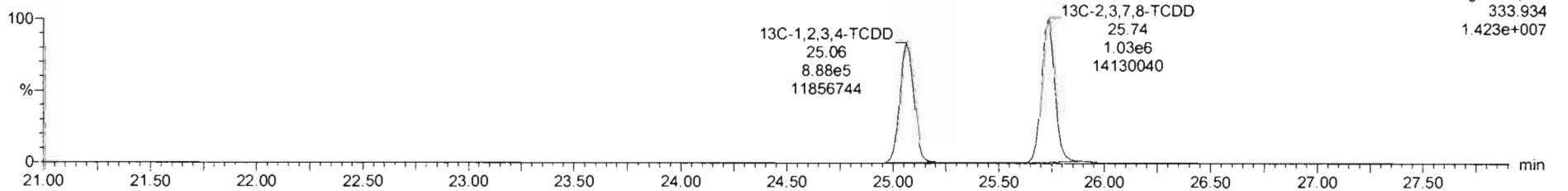


**13C-1,2,3,4-TCDD**

200225R3\_1



200225R3\_1





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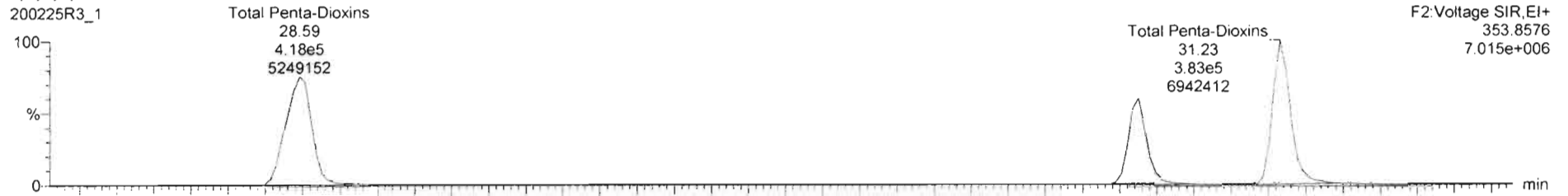
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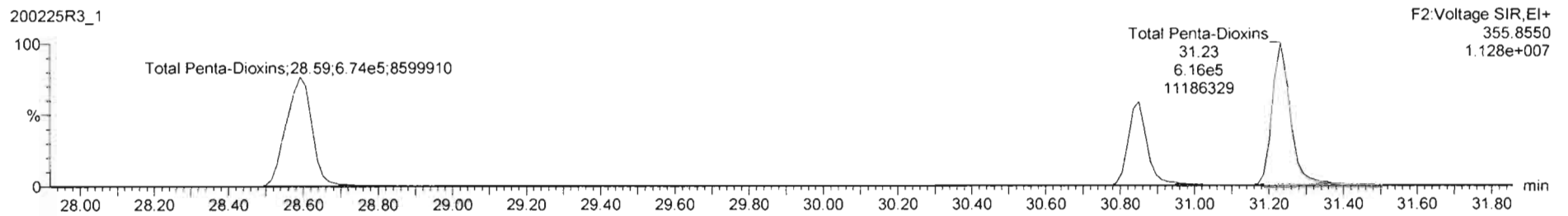
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1,2,3,7,8-PeCDD

200225R3\_1

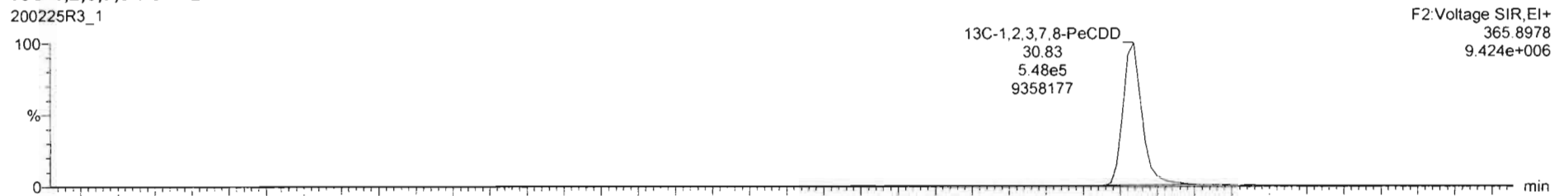


200225R3\_1

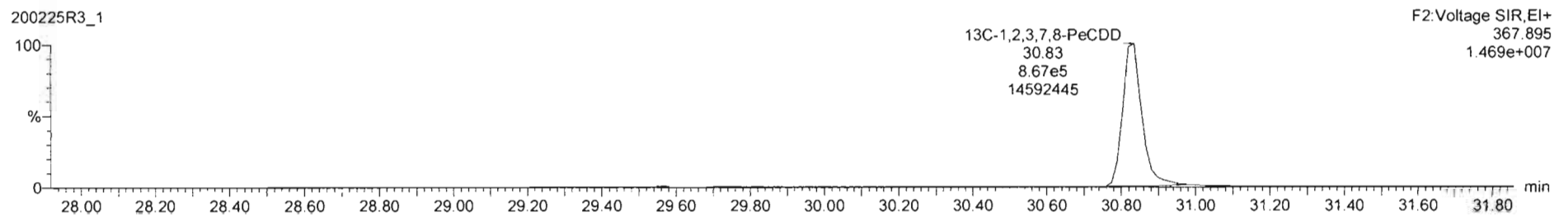


13C-1,2,3,7,8-PeCDD

200225R3\_1



200225R3\_1



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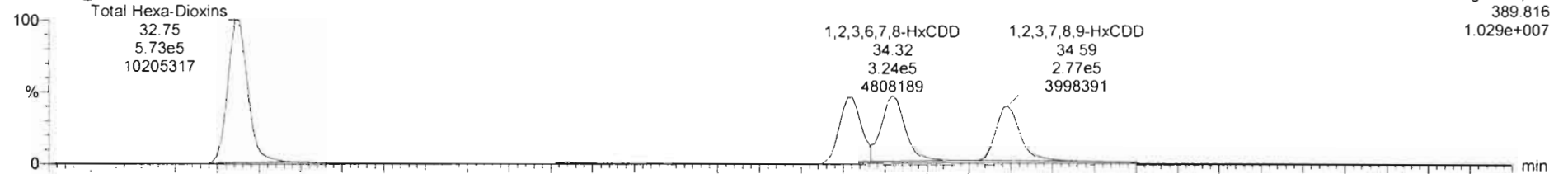
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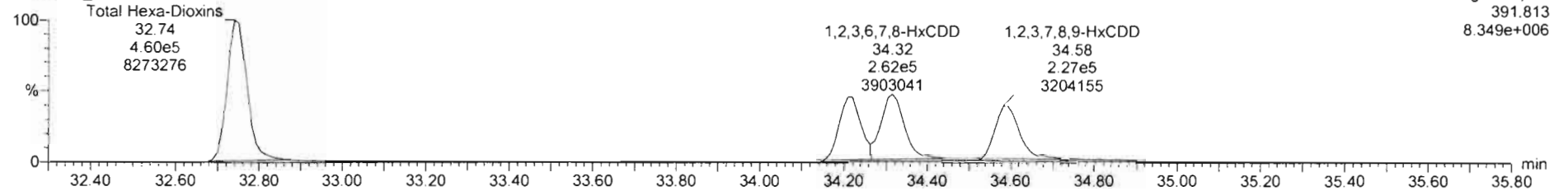
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1,2,3,4,7,8-HxCDD

200225R3\_1

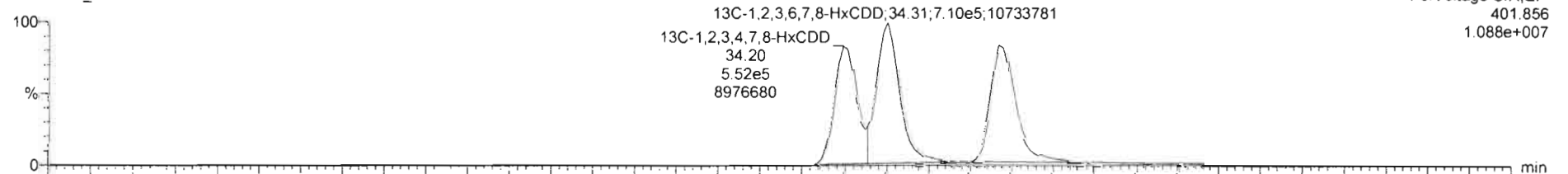


200225R3\_1

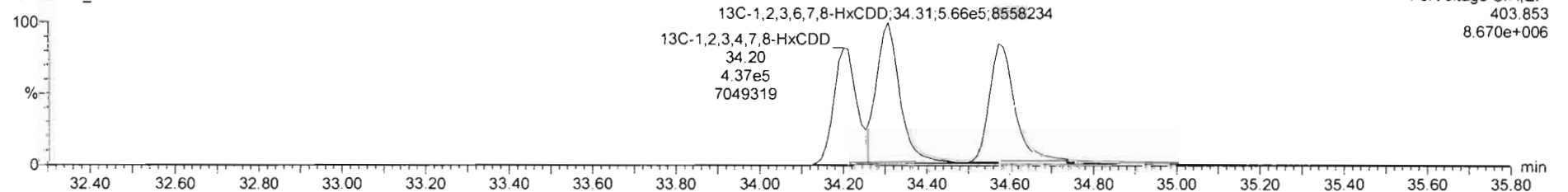


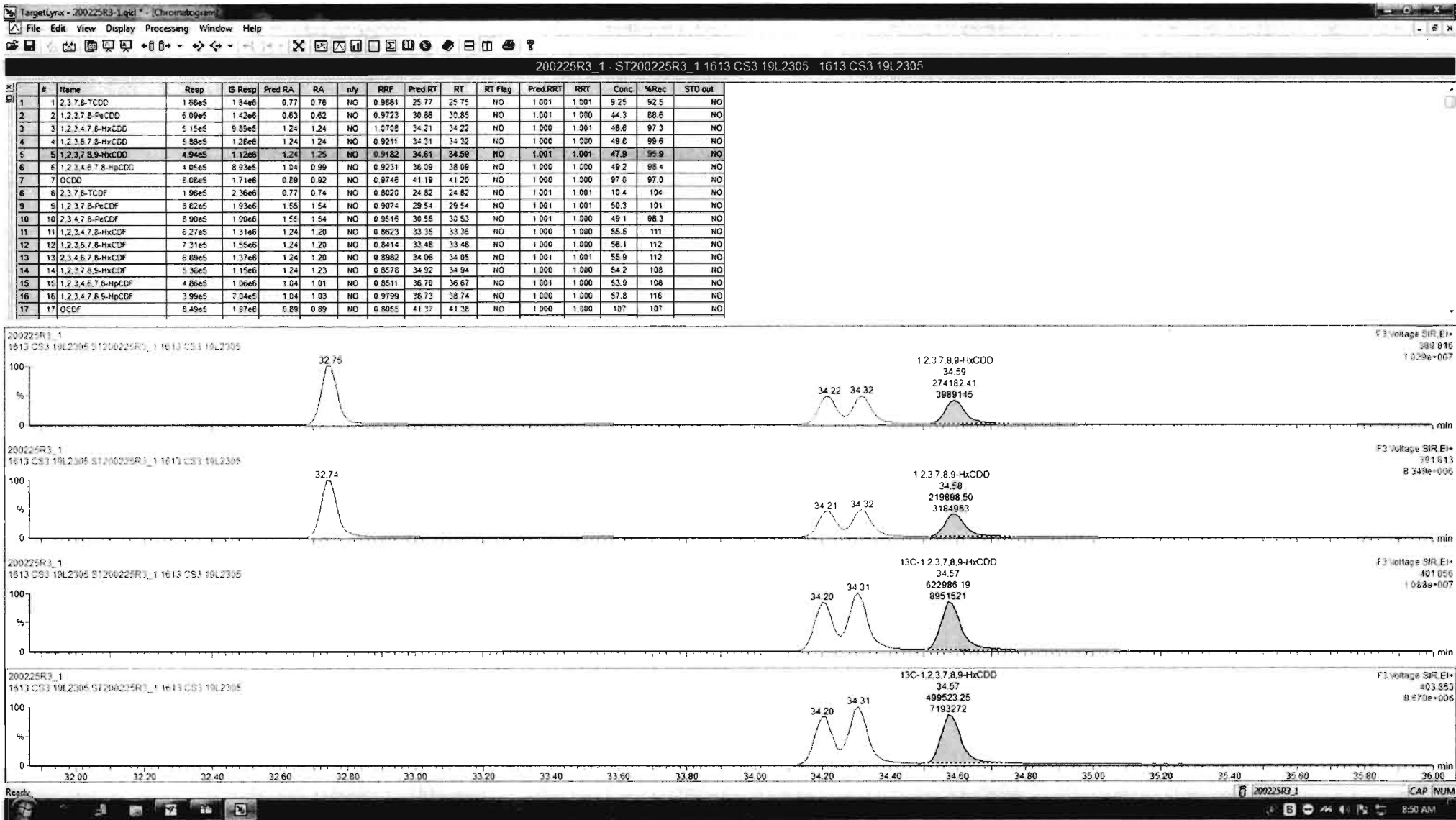
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200225R3\_1



200225R3\_1





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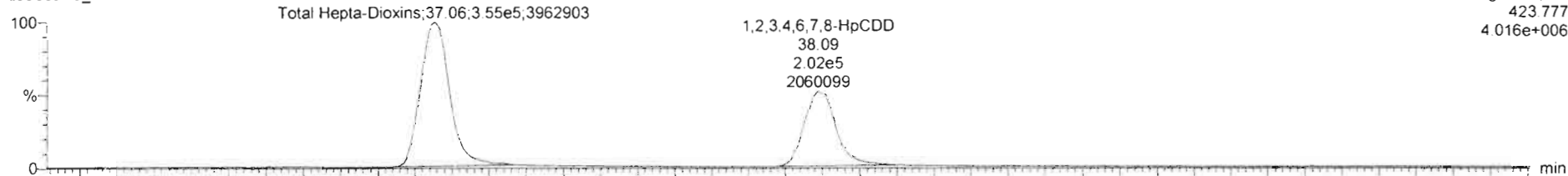
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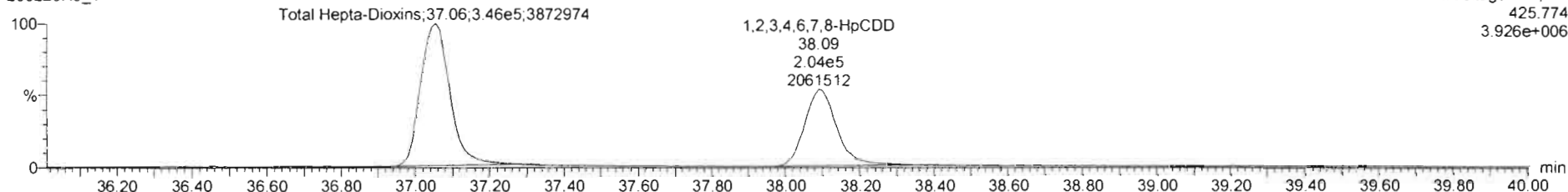
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**1,2,3,4,6,7,8-HpCDD**

200225R3\_1

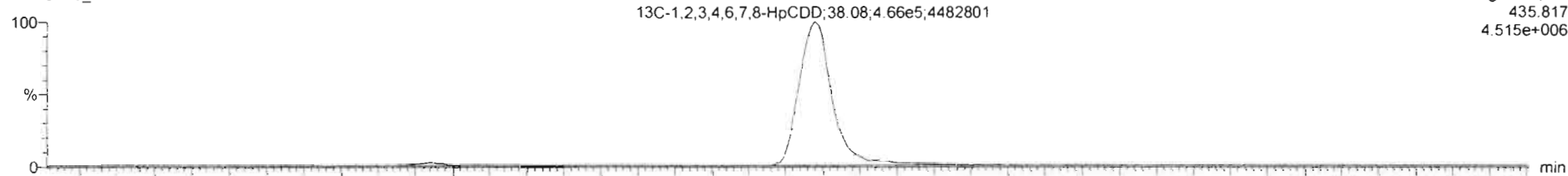


200225R3\_1

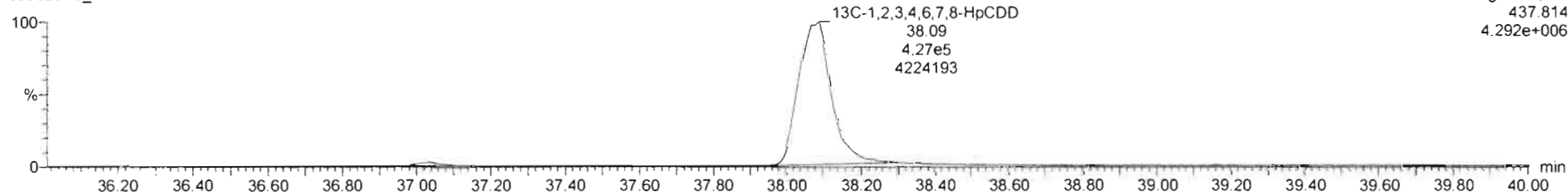


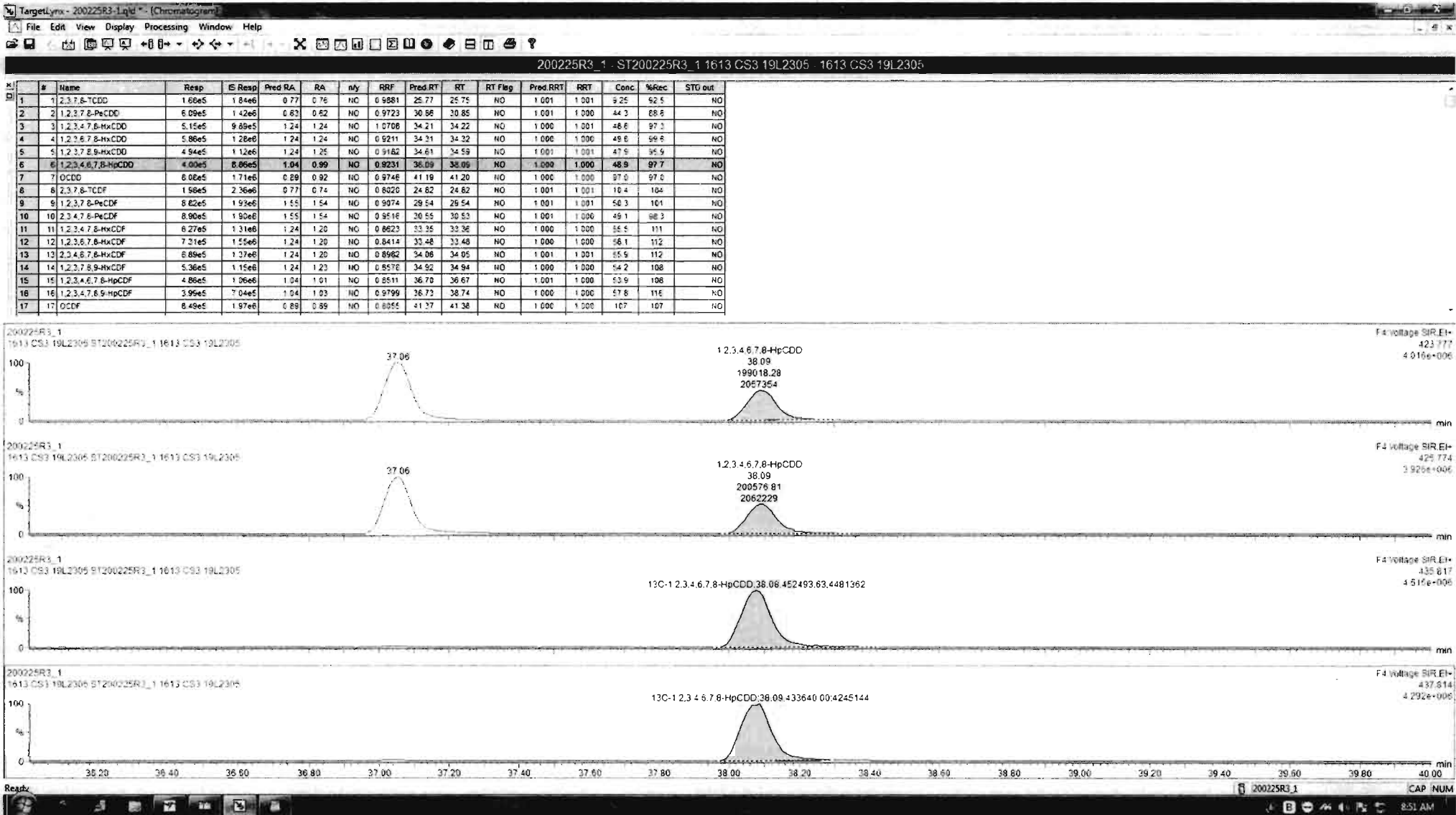
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200225R3\_1



200225R3\_1





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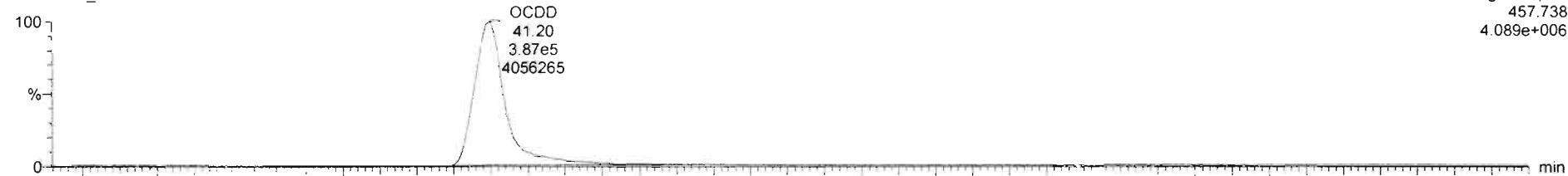
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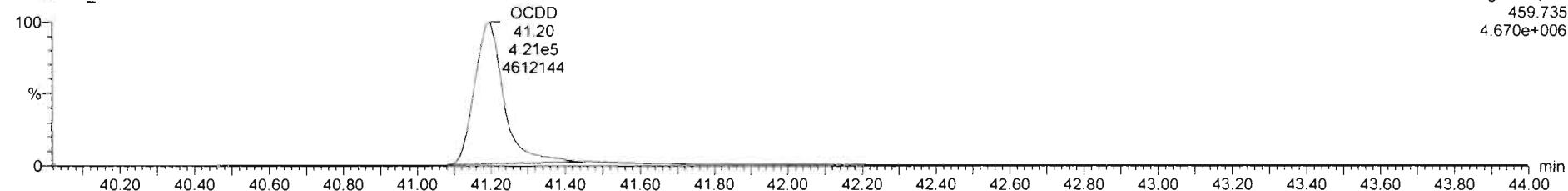
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**OCDD**

200225R3\_1

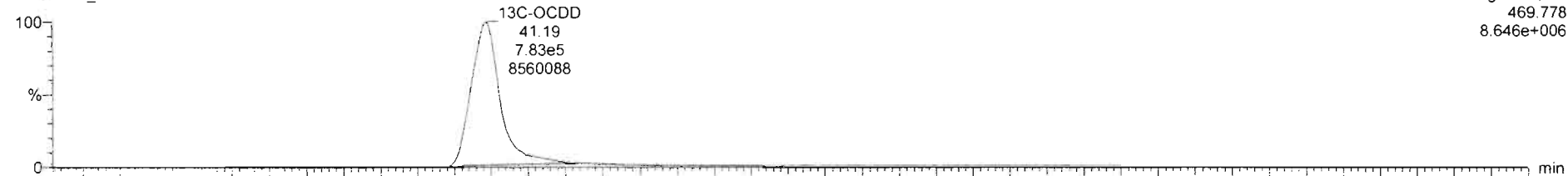


200225R3\_1

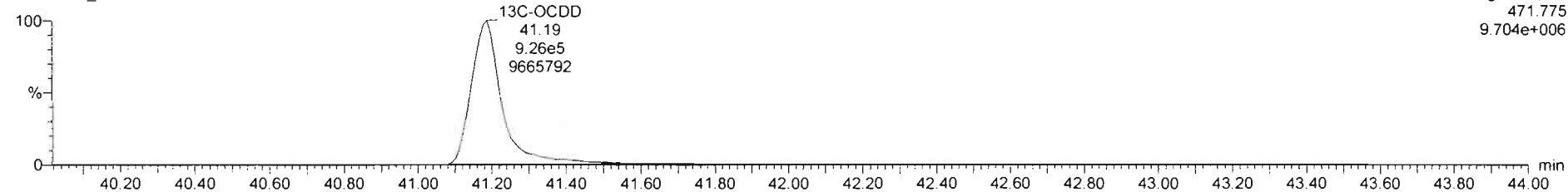


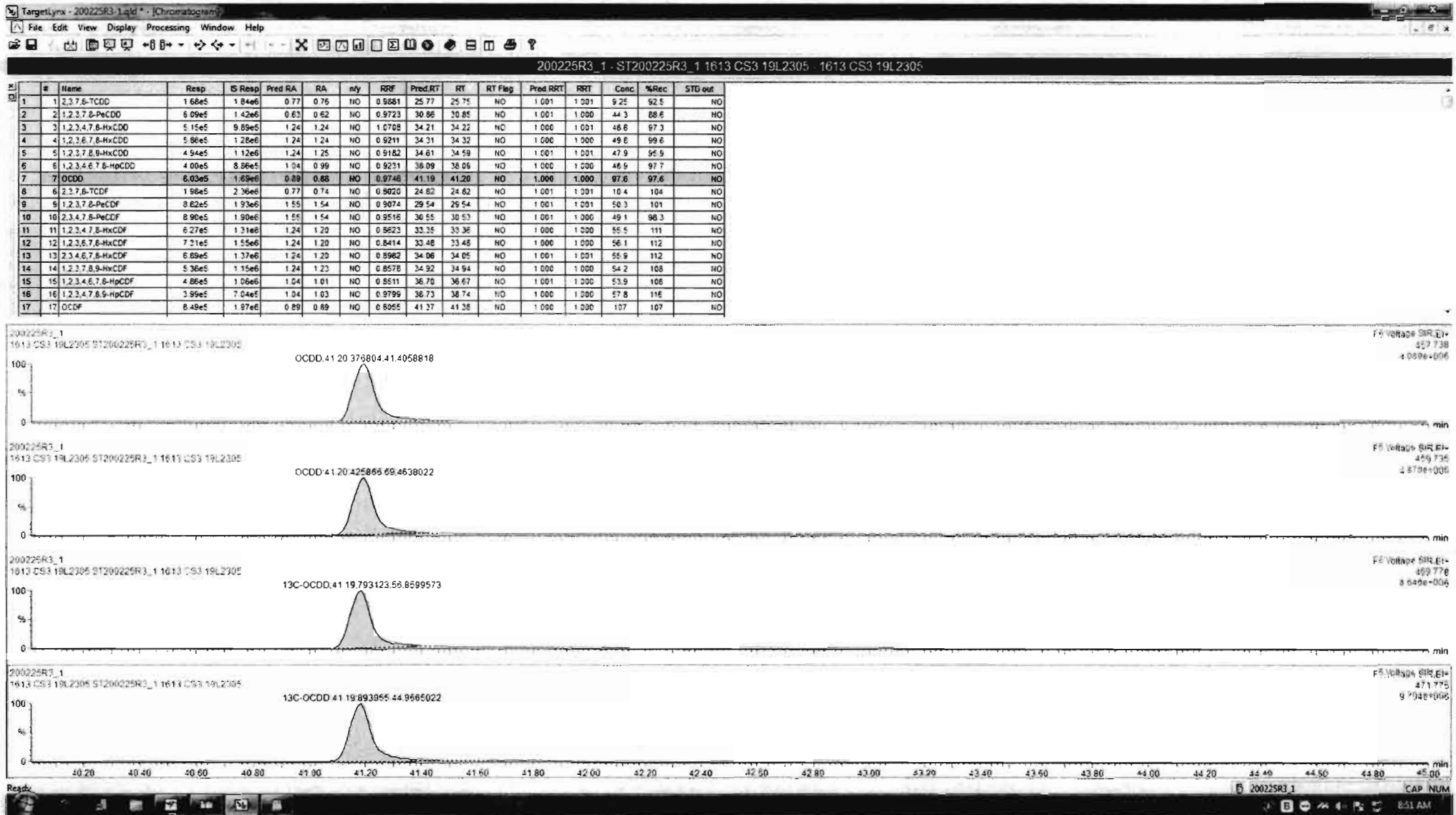
**13C-OCDD**

200225R3\_1



200225R3\_1





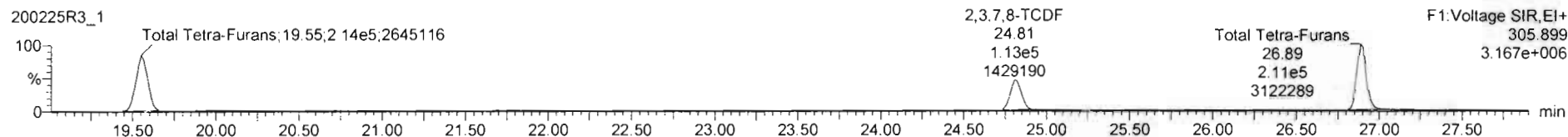
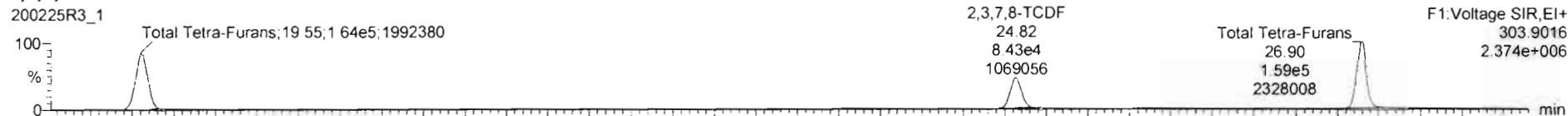
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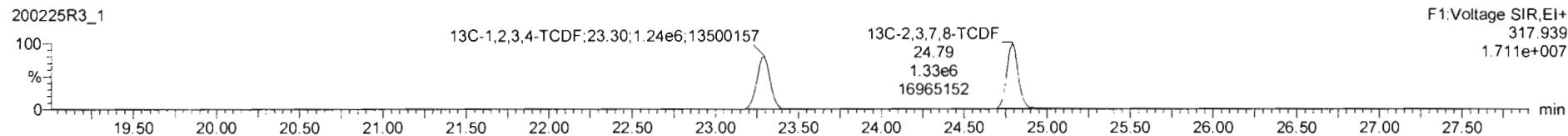
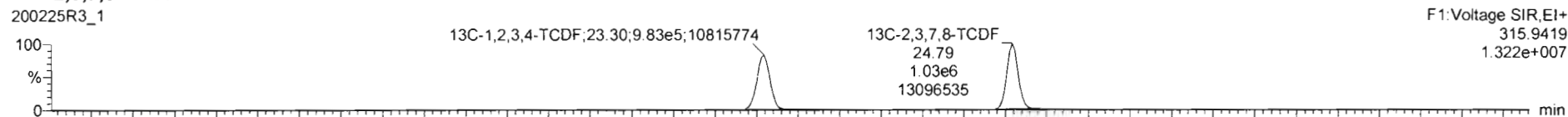
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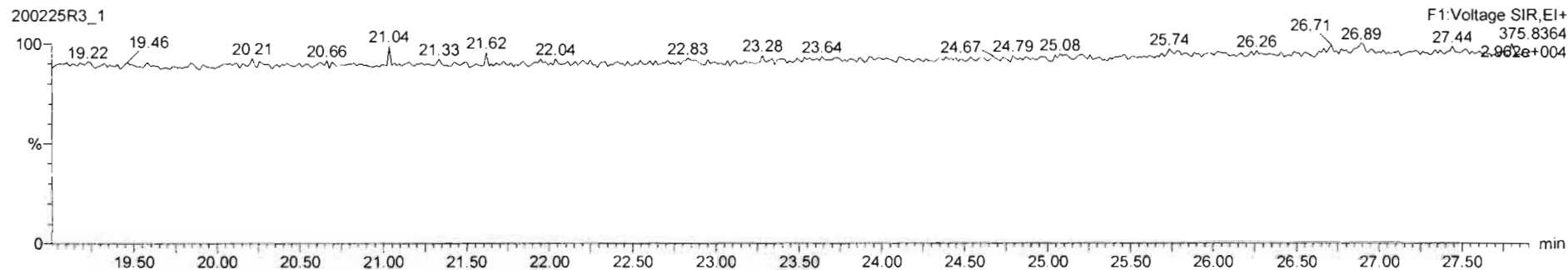
### 2,3,7,8-TCDF



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



### DPE1





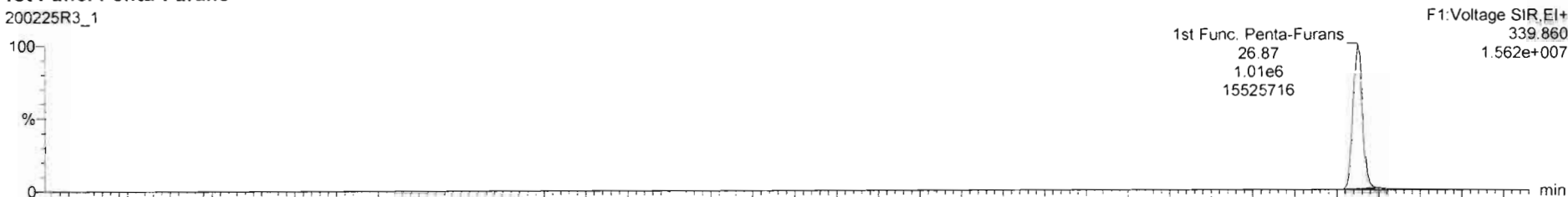
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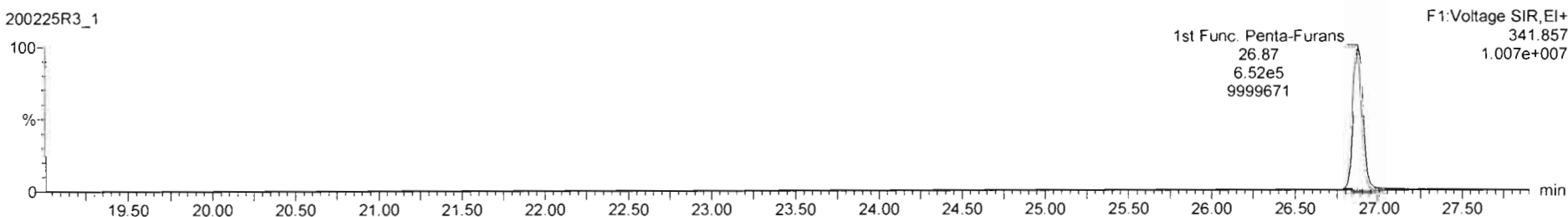
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1st Func. Penta-Furans

200225R3\_1

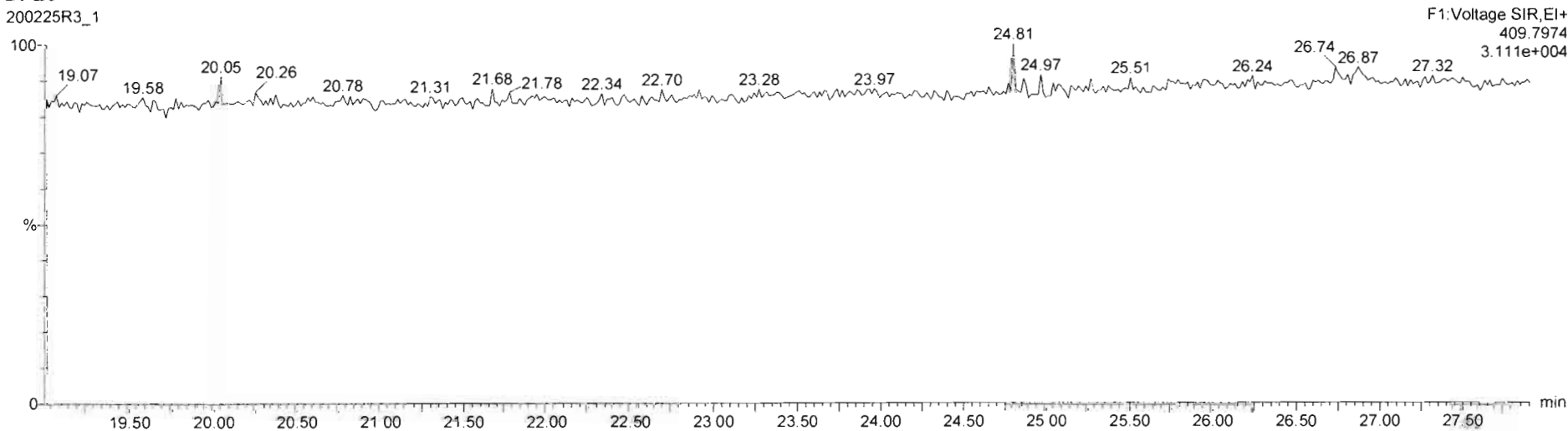


200225R3\_1



DPE6

200225R3\_1



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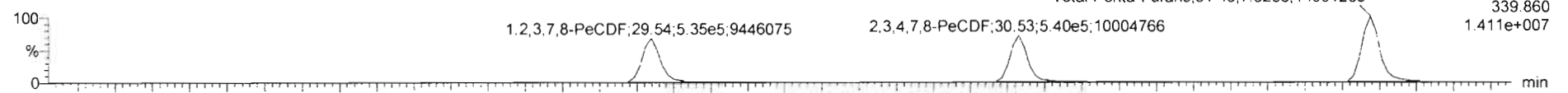
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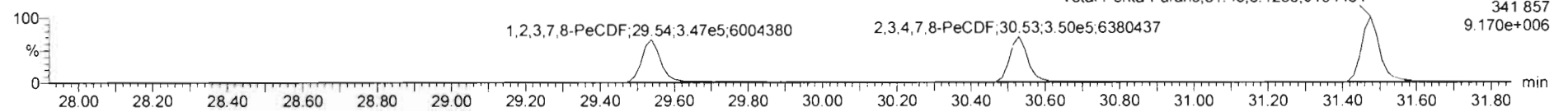
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**1,2,3,7,8-PeCDF**

200225R3\_1

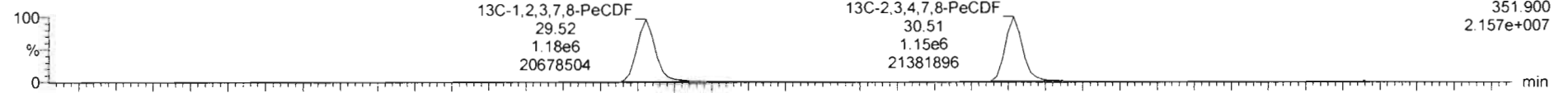


200225R3\_1

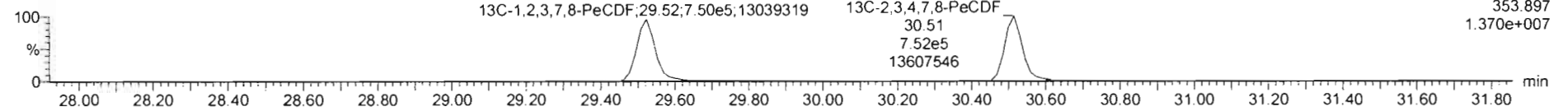


**13C-1,2,3,7,8-PeCDF**

200225R3\_1

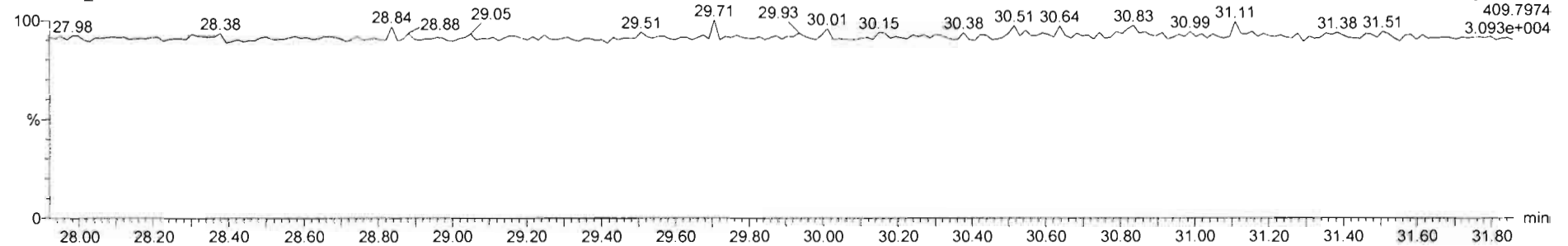


200225R3\_1



**DPE2**

200225R3\_1

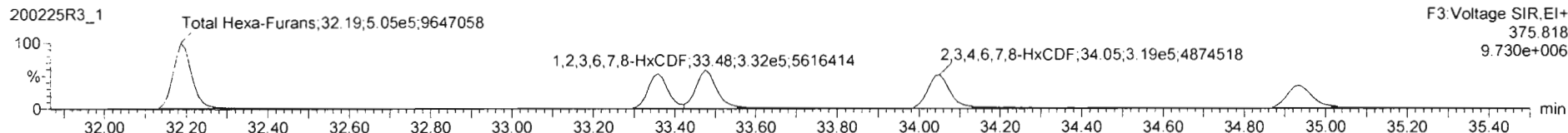
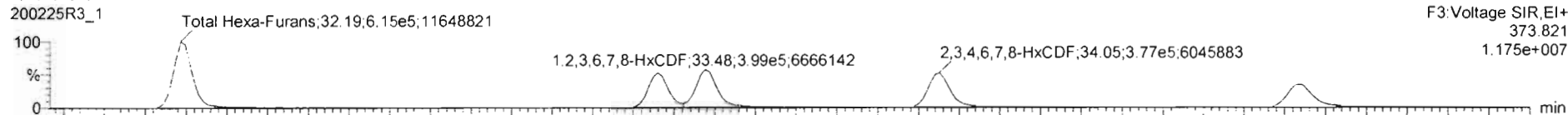


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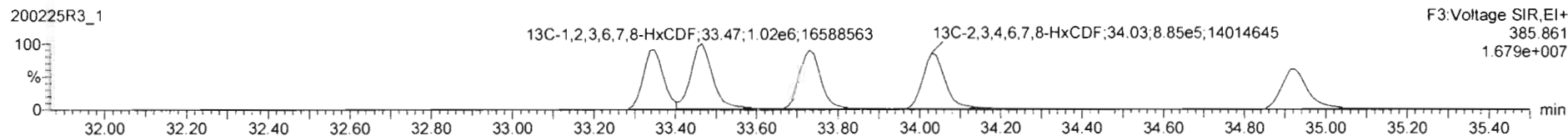
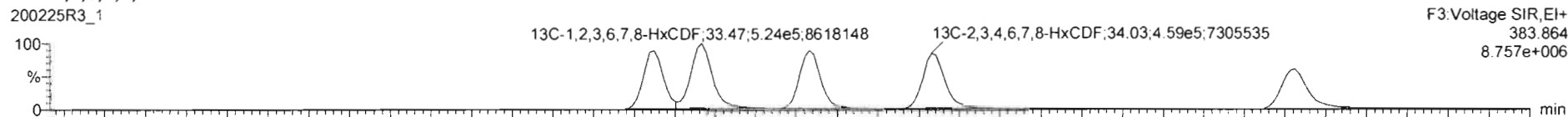
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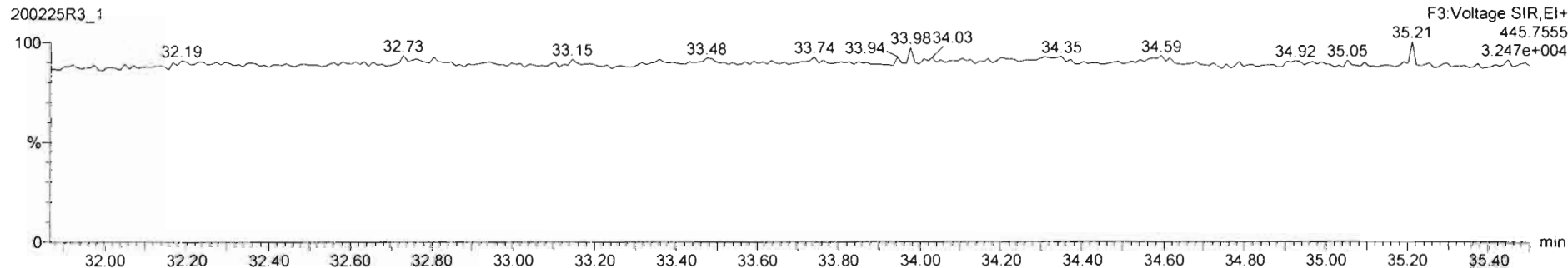
**1,2,3,4,7,8-HxCDF**

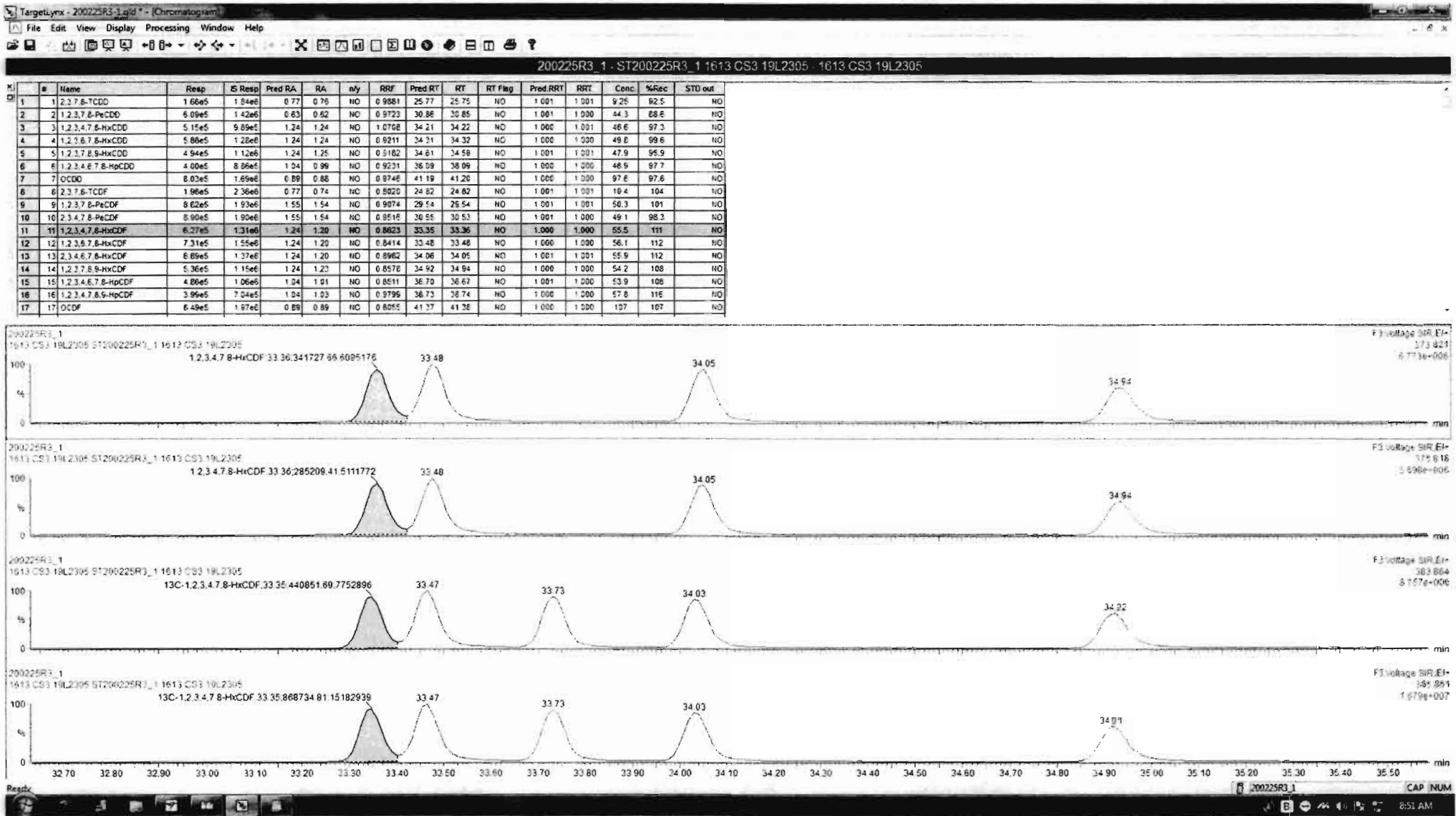


**13C-1,2,3,4,7,8-HxCDF**

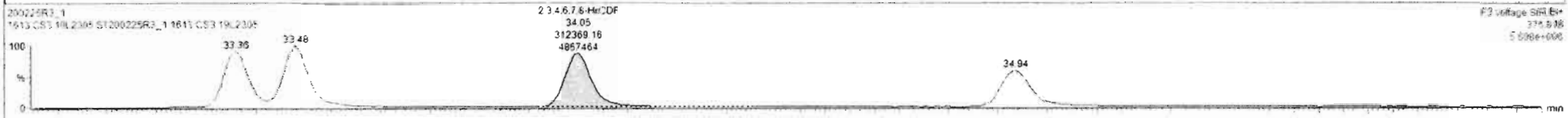
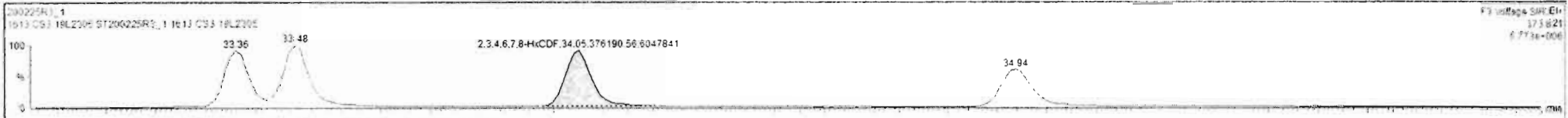


**DPE3**





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1	1,2,3,7,8-TCDD	1.68e5	1.84e6	0.77	0.76	NO	0.8881	25.77	25.75	NO	1.001	1.001	9.25	52.5	NO
2	1,2,3,7,8-PeCDD	6.09e5	1.42e6	0.83	0.82	NO	0.9723	30.88	30.85	NO	1.001	1.000	44.3	88.6	NO
3	1,2,3,4,7,8-HxCDD	5.15e5	9.85e5	1.24	1.24	NO	1.0768	34.21	34.22	NO	1.000	1.001	46.6	97.3	NO
4	1,2,3,6,7,8-HxCDD	5.88e5	1.28e6	1.24	1.24	NO	0.9211	34.21	34.32	NO	1.000	1.000	49.2	99.6	NO
5	1,2,3,7,8,9-HxCDD	4.94e5	1.12e6	1.24	1.25	NO	0.9182	34.61	34.59	NO	1.001	1.001	47.9	95.9	NO
6	1,2,3,4,6,7,8-HpCDD	4.00e5	8.86e5	1.04	0.99	NO	0.9231	38.09	38.09	NO	1.000	1.000	48.9	97.7	NO
7	OCDD	8.03e5	1.69e6	0.89	0.88	NO	0.9748	41.19	41.20	NO	1.000	1.000	97.6	97.6	NO
8	2,3,7,8-TCDF	1.96e5	2.36e6	0.77	0.74	NO	0.8020	24.82	24.82	NO	1.001	1.001	10.4	104	NO
9	1,2,3,7,8-PeCDF	8.82e5	1.93e6	1.55	1.54	NO	0.9074	29.54	29.54	NO	1.001	1.001	50.3	101	NO
10	1,2,3,4,7,8-PeCDF	6.90e5	1.80e6	1.55	1.54	NO	0.9516	30.55	30.53	NO	1.001	1.000	49.1	96.3	NO
11	1,2,3,4,7,8-HxCDF	6.27e5	1.31e6	1.24	1.20	NO	0.8623	33.35	33.36	NO	1.000	1.000	55.5	111	NO
12	1,2,3,6,7,8-HxCDF	7.71e5	1.55e6	1.24	1.20	NO	0.8414	33.48	33.48	NO	1.000	1.000	56.1	112	NO
13	2,3,4,6,7,8-HxCDF	6.89e5	1.37e6	1.24	1.20	NO	0.8962	34.06	34.05	NO	1.001	1.001	55.0	112	NO
14	1,2,3,7,8,9-HxCDF	5.38e5	1.15e6	1.24	1.23	NO	0.8578	34.92	34.94	NO	1.000	1.000	54.2	105	NO
15	1,2,3,4,6,7,8-HpCDF	4.86e5	1.06e6	1.04	1.01	NO	0.8511	36.70	36.67	NO	1.001	1.000	53.9	108	NO
16	1,2,3,4,7,8,9-HpCDF	3.99e5	7.04e5	1.04	1.03	NO	0.9799	36.72	36.74	NO	1.000	1.000	57.8	116	NO
17	OCDF	8.48e5	1.87e6	0.89	0.89	NO	0.8055	41.27	41.38	NO	1.000	1.000	107	107	NO



Custom Reporting: Select reports to generate

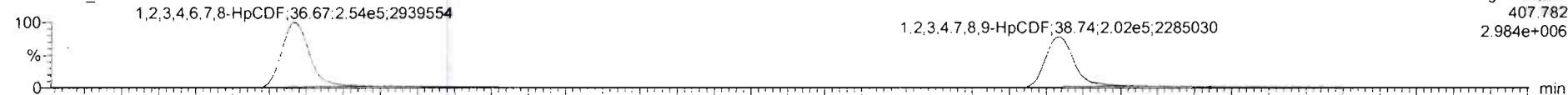
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Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time  
Printed: Wednesday, February 26, 2020 08:39:24 Pacific Standard Time

Name: 200225R3\_1, Date: 25-Feb-2020, Time: 13:07:03, ID: ST200225R3\_1 1613 CS3 19L2305, Description: 1613 CS3 19L2305

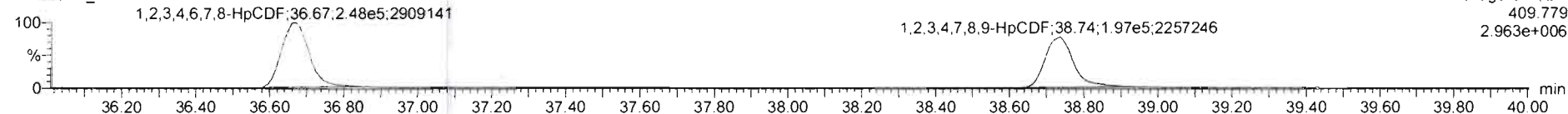
**1,2,3,4,6,7,8-HpCDF**

200225R3\_1



F4: Voltage SIR, EI+  
407.782  
2.984e+006

200225R3\_1



F4: Voltage SIR, EI+  
409.779  
2.963e+006

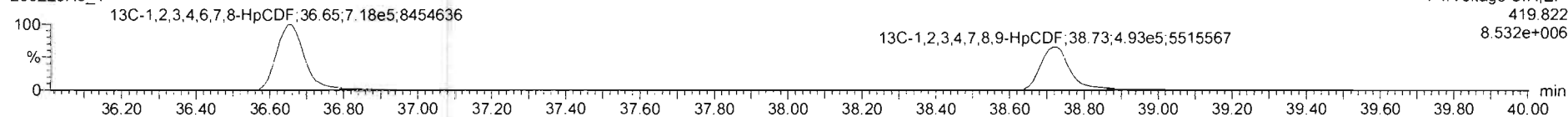
**13C-1,2,3,4,6,7,8-HpCDF**

200225R3\_1



F4: Voltage SIR, EI+  
417.825  
3.794e+006

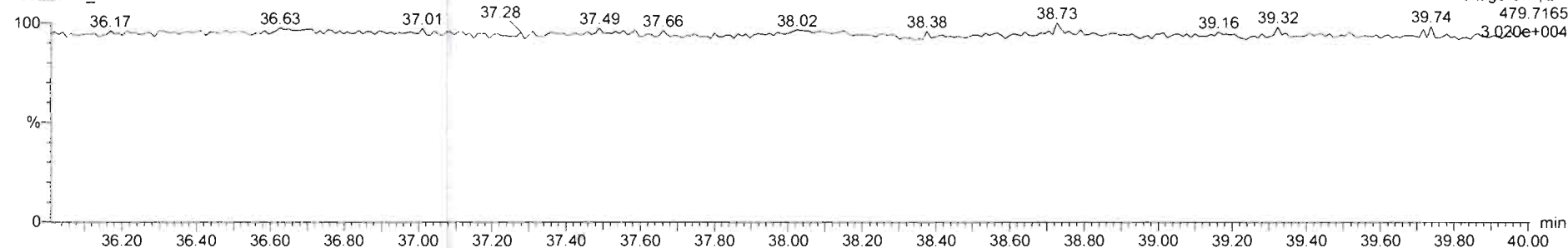
200225R3\_1



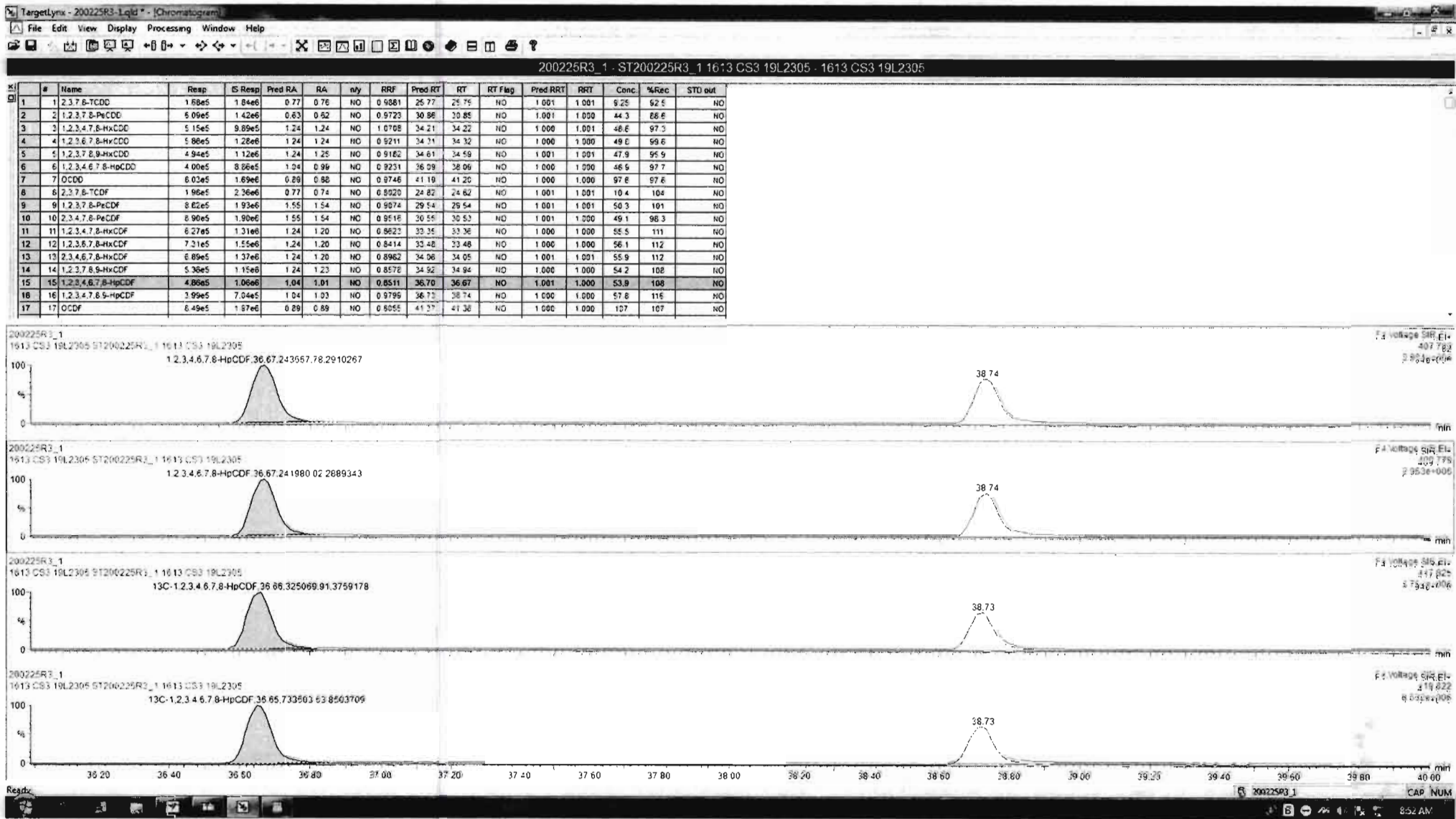
F4: Voltage SIR, EI+  
419.822  
8.532e+006

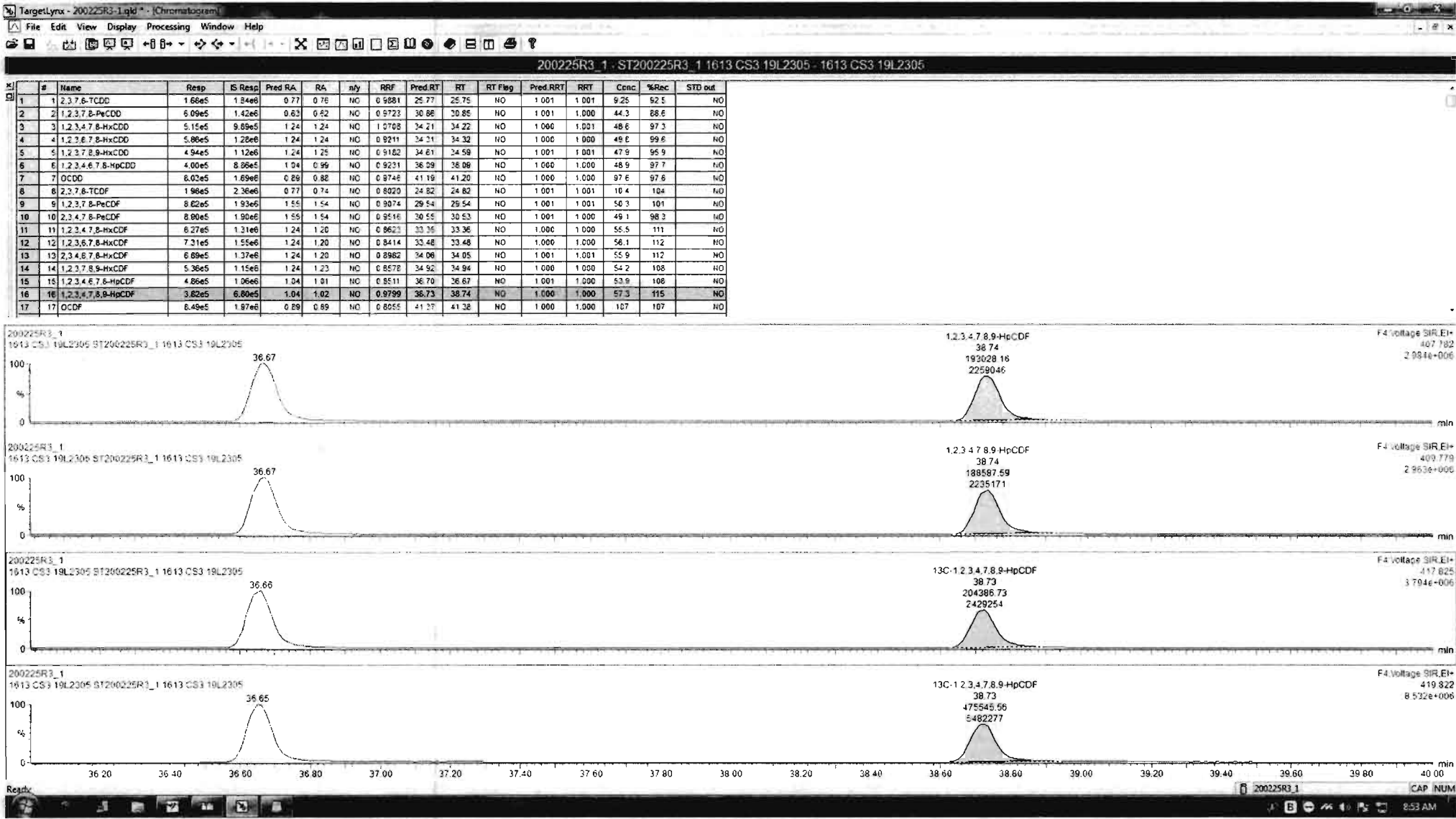
**DPE4**

200225R3\_1



F4: Voltage SIR, EI+  
479.7165  
3.020e+004





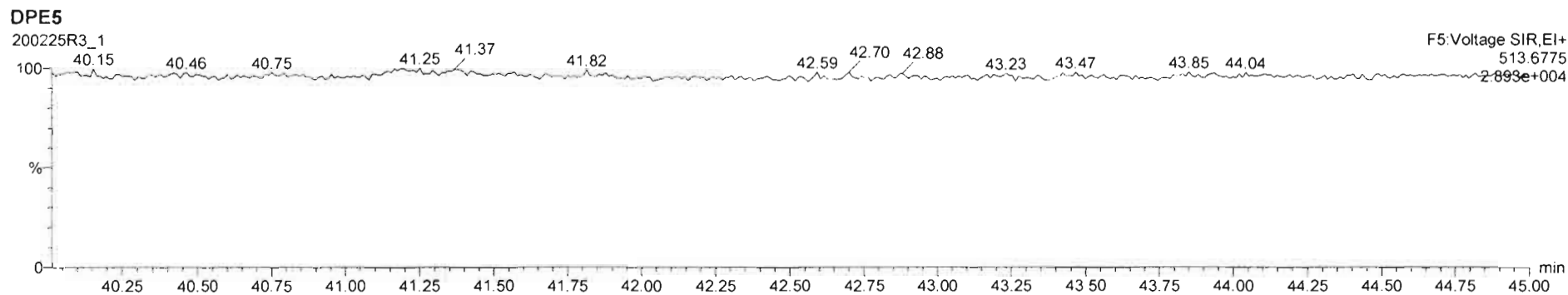
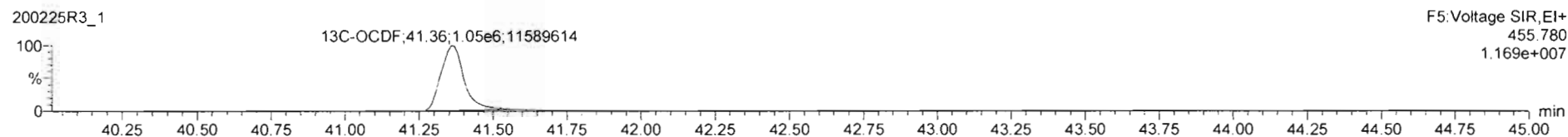
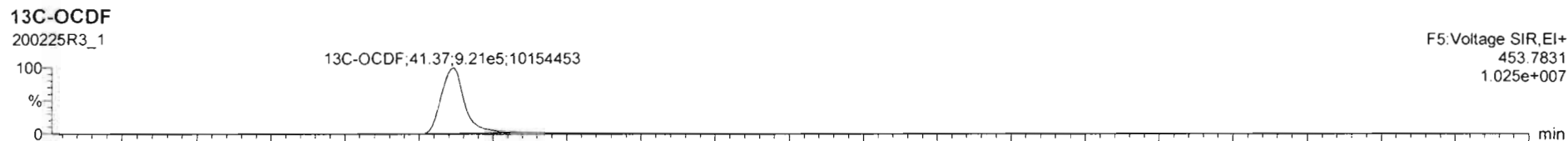
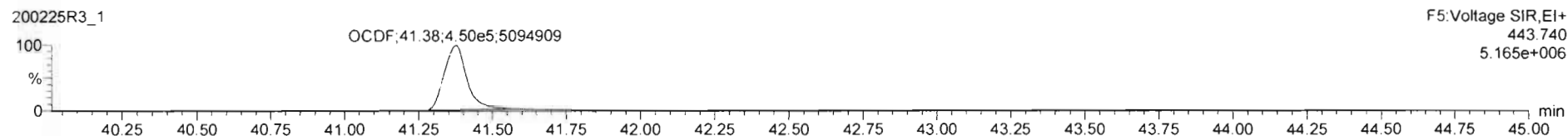
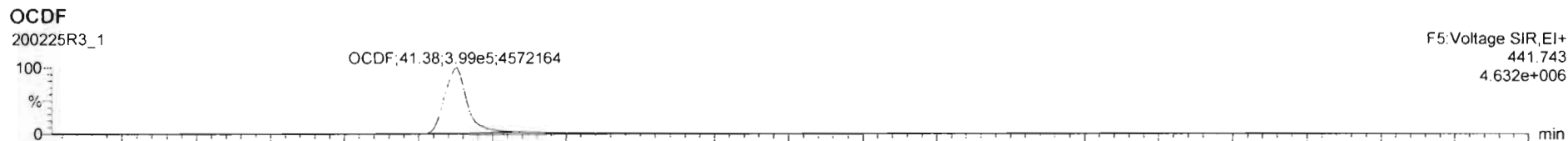


Dataset: Untitled

Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time

Printed: Wednesday, February 26, 2020 08:39:24 Pacific Standard Time

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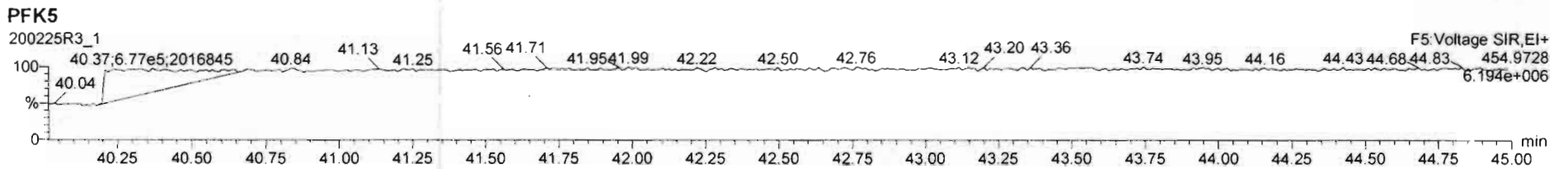
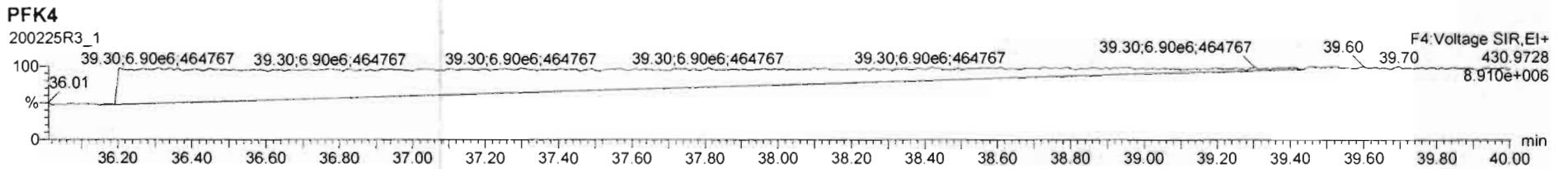
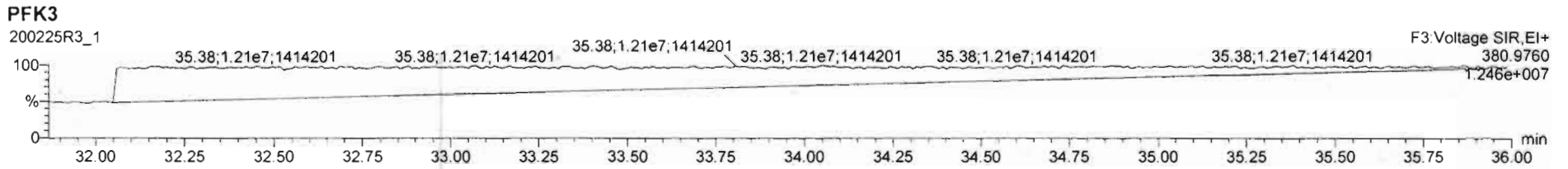
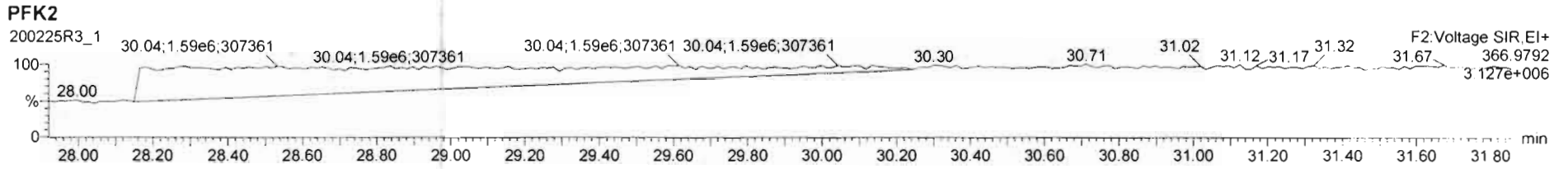
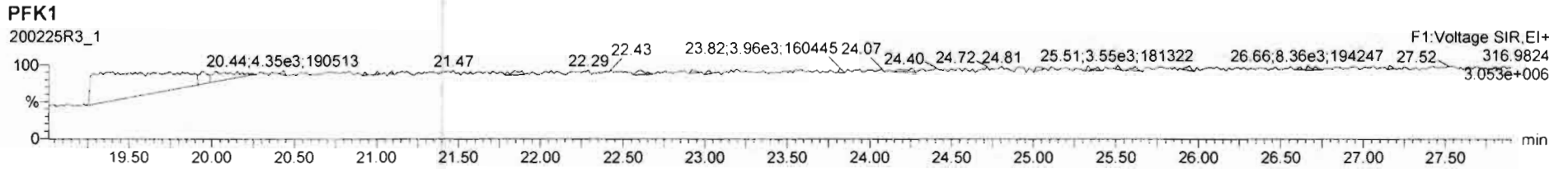


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Last Altered: Wednesday, February 26, 2020 08:39:13 Pacific Standard Time

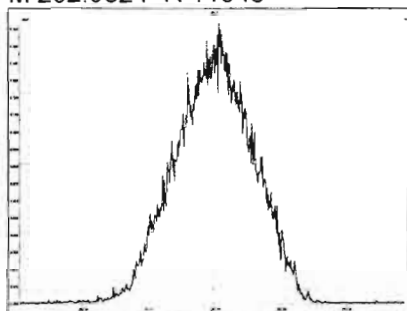
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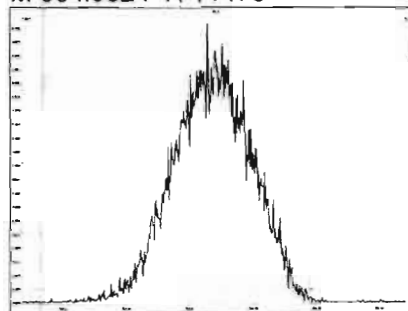


Printed: Tuesday, February 25, 2020 22:44:18 Pacific Standard Time

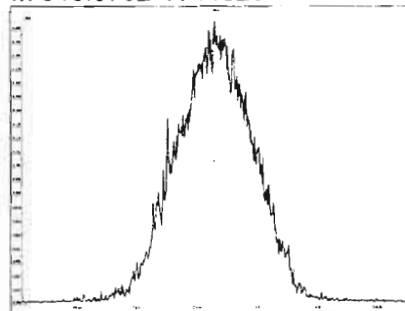
M 292.9824 R 11046



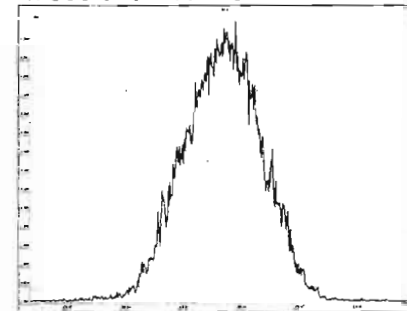
M 304.9824 R 11476



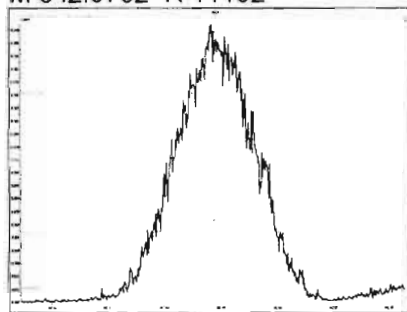
M 318.9792 R 11520



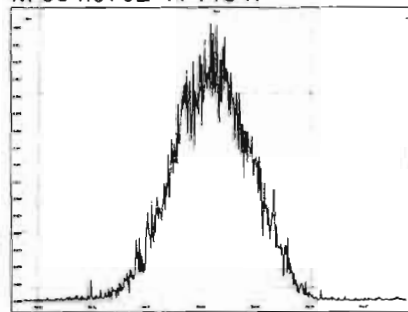
M 330.9792 R 11340



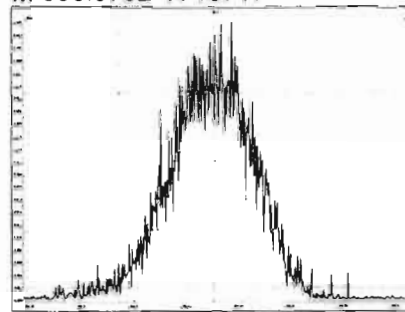
M 342.9792 R 11192



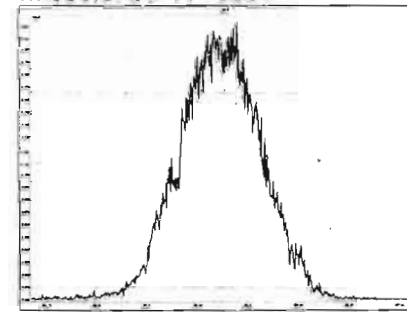
M 354.9792 R 11547



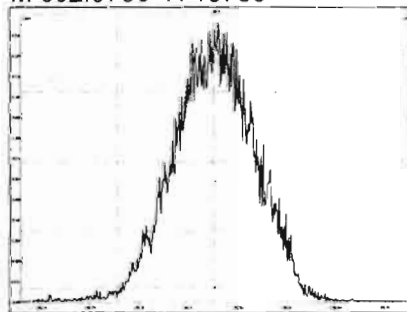
M 366.9792 R 10717



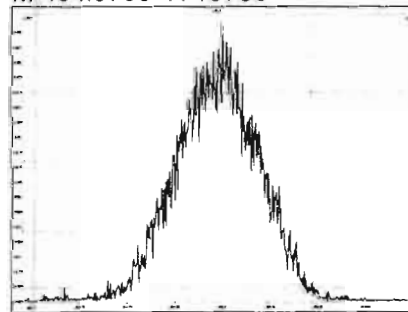
M 380.9760 R 10504



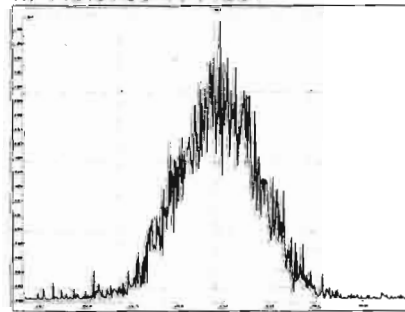
M 392.9760 R 10753



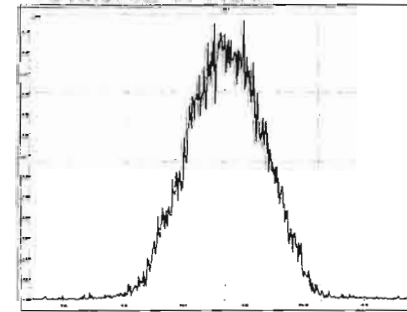
M 404.9760 R 10780



M 416.9760 R 11891

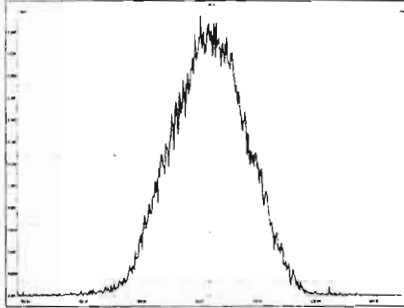


M 318.9792 R 11212

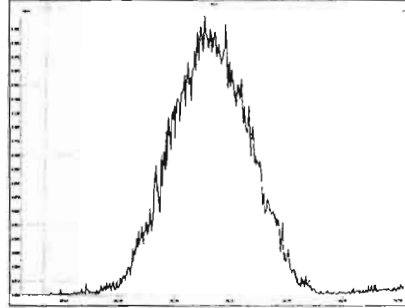


Printed: Tuesday, February 25, 2020 22:44:18 Pacific Standard Time

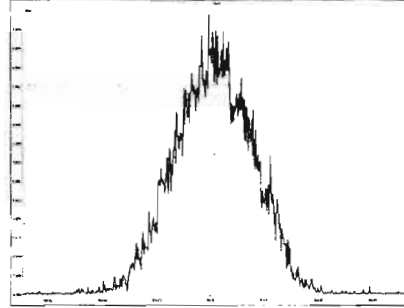
M 330.9792 R 11344



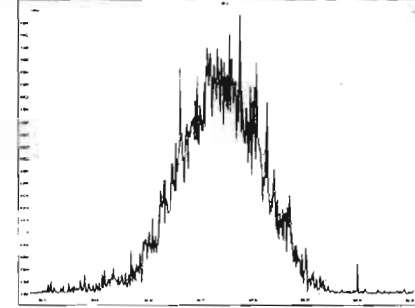
M 342.9792 R 11189



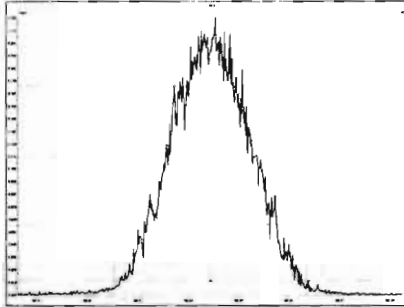
M 354.9792 R 11313



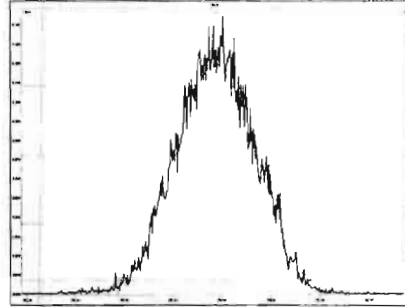
M 366.9792 R 11039



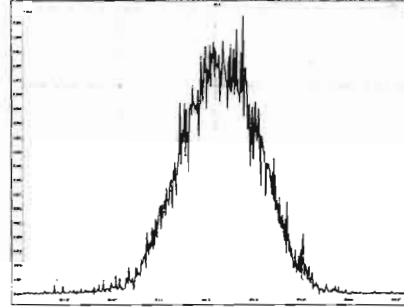
M 380.9760 R 10823



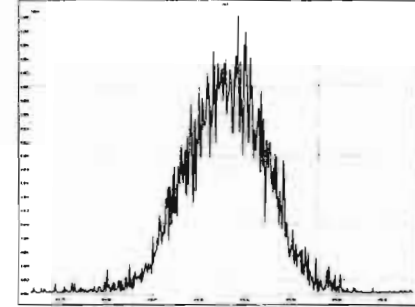
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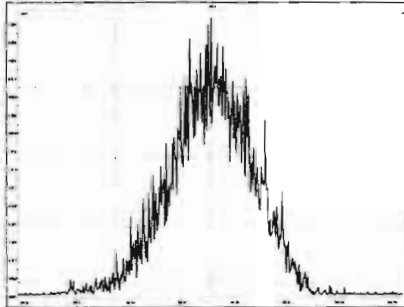
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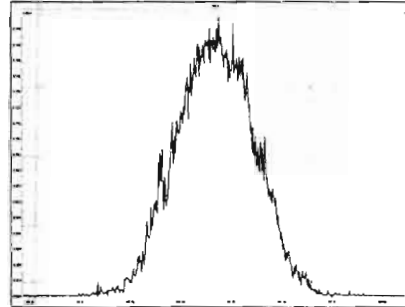
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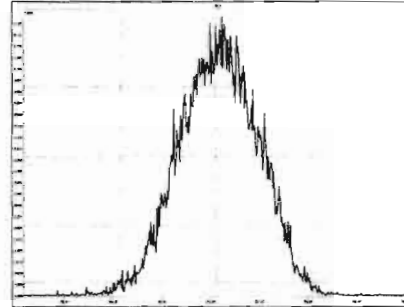
M 366.9792 R 10848



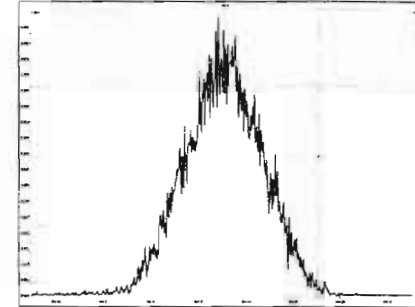
M 380.9760 R 10940



M 392.9760 R 11211

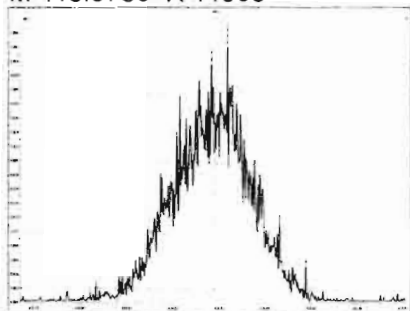


M 404.9760 R 11063

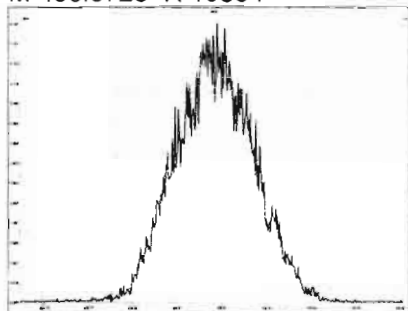


Printed: Tuesday, February 25, 2020 22:44:18 Pacific Standard Time

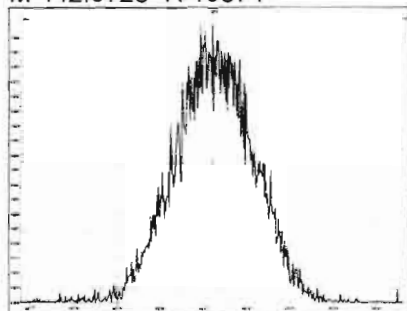
M 416.9760 R 11938



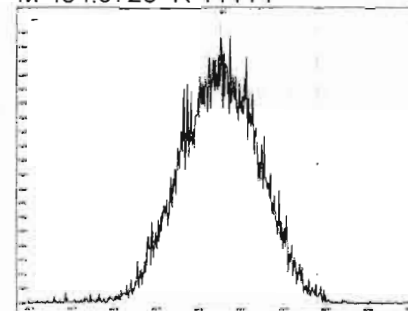
M 430.9728 R 10854



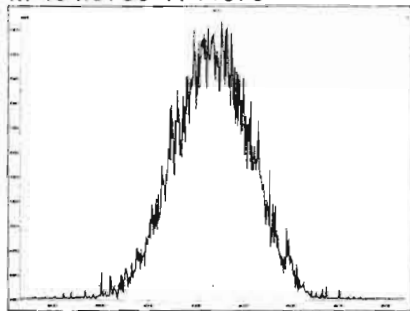
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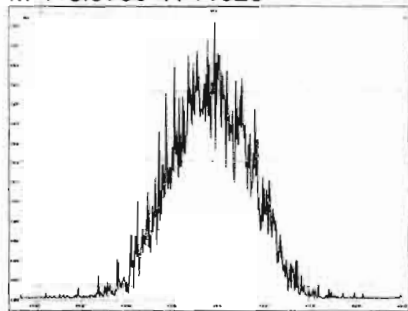
M 454.9728 R 11114



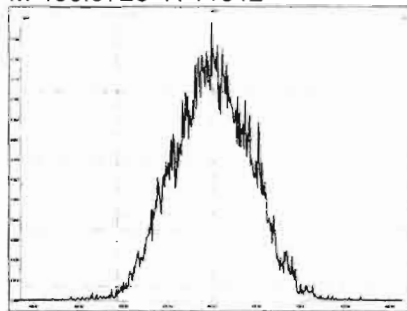
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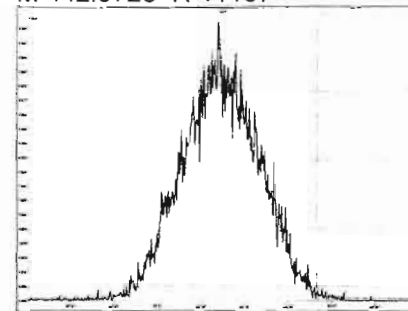
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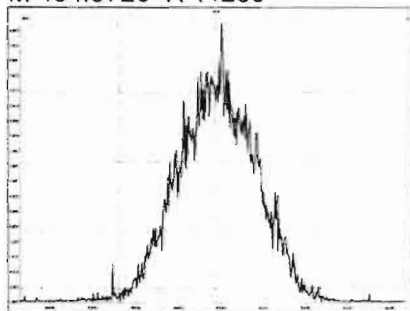
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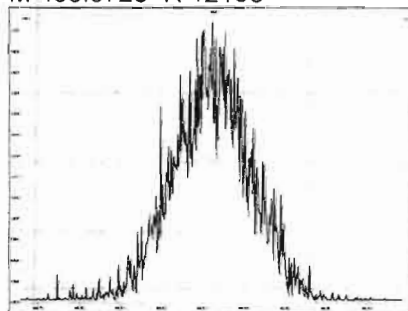
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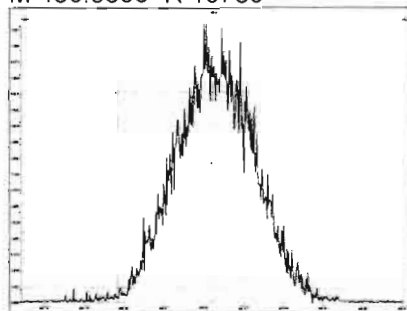
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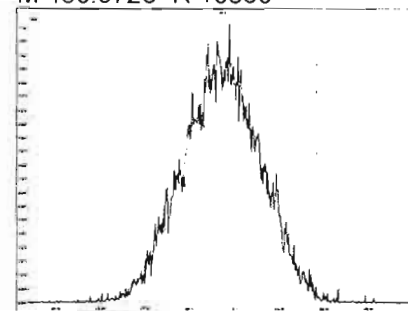
M 466.9728 R 12158



M 480.9696 R 10780

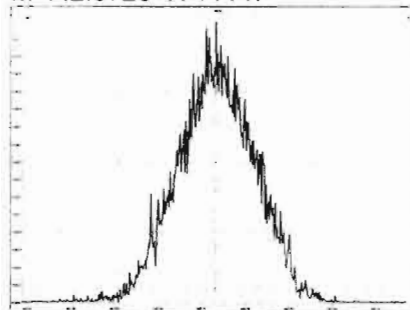


M 430.9728 R 10860

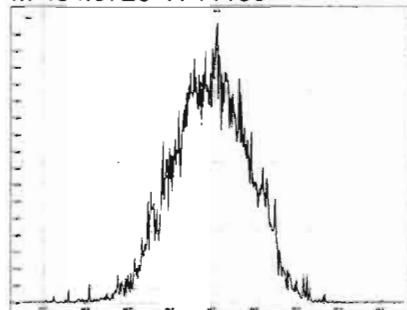


Printed: Tuesday, February 25, 2020 22:44:18 Pacific Standard Time

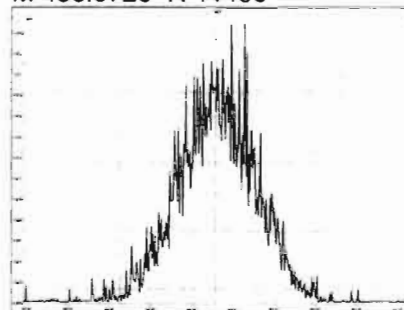
M 442.9728 R 11147



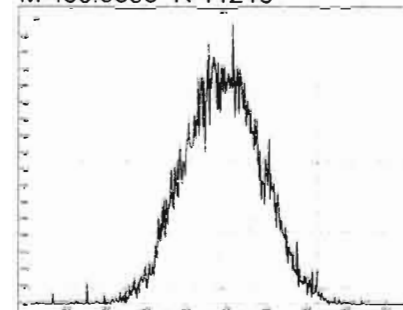
M 454.9728 R 11160



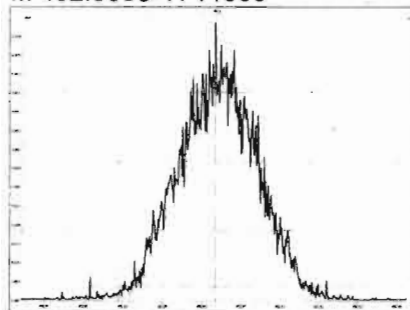
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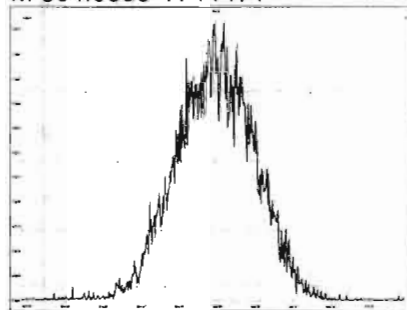
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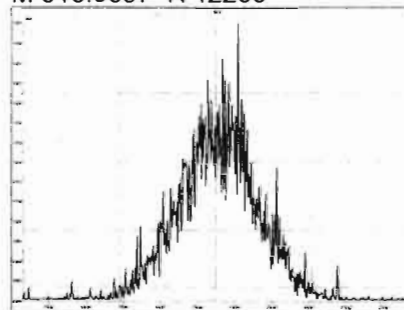
M 492.9696 R 11065



M 504.9696 R 11471



M 516.9697 R 12265



## **INITIAL CALIBRATION**

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

Last Altered: Sunday, February 02, 2020 11:05:29 AM 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	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



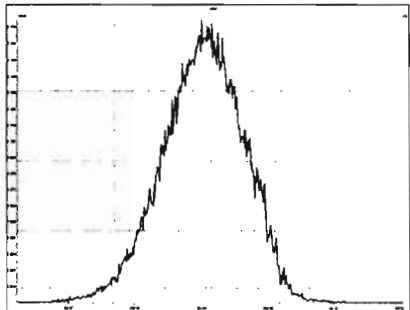
Experiment Calibration Report

MassLynx 4.1 SCN815

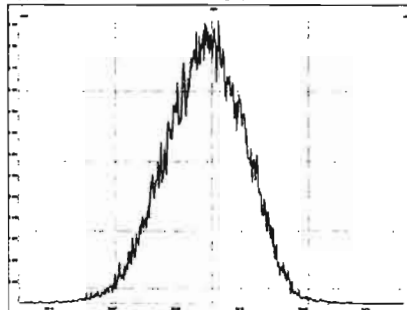
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:41:39 Pacific Standard Time

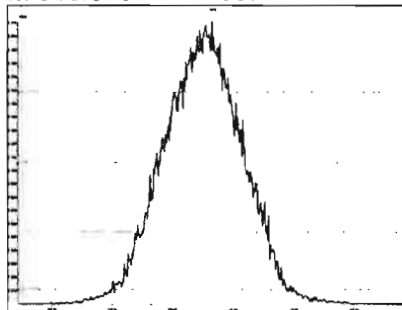
M 292.9824 R 10370



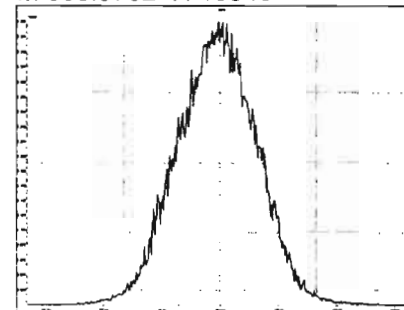
M 304.9824 R 10917



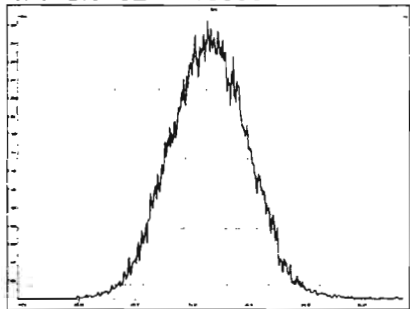
M 318.9792 R 10637



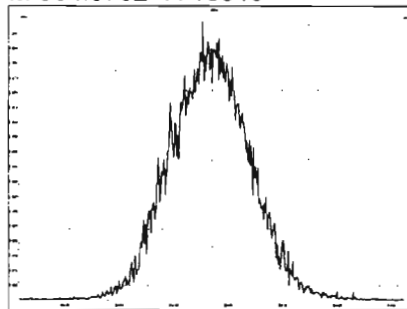
M 330.9792 R 10640



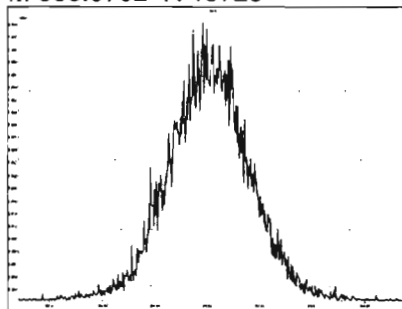
M 342.9792 R 10593



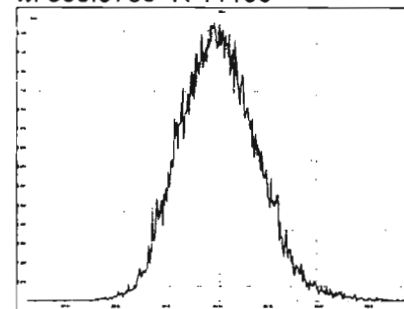
M 354.9792 R 10919



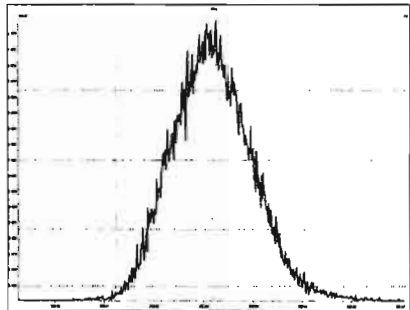
M 366.9792 R 10726



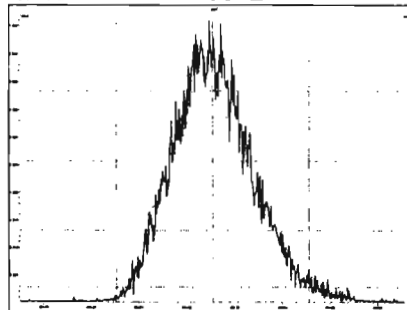
M 380.9760 R 11160



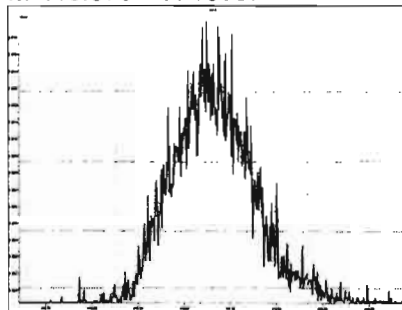
M 392.9760 R 11015



M 404.9760 R 10822



M 416.9760 R 10507



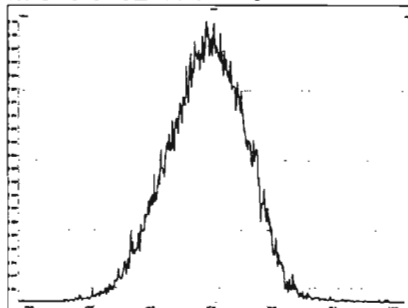
Experiment Calibration Report

MassLynx 4.1 SCN815

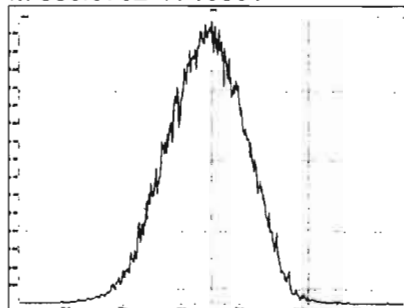
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:42:23 Pacific Standard Time

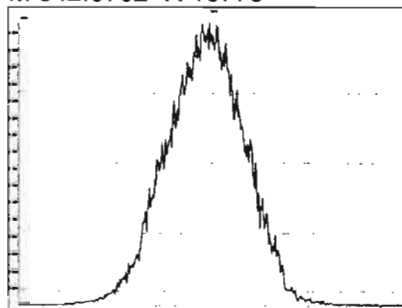
M 318.9792 R 11110



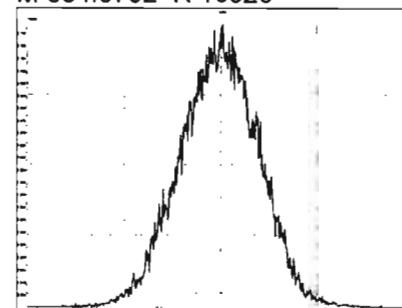
M 330.9792 R 10681



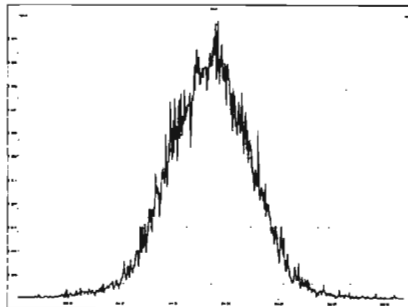
M 342.9792 R 10776



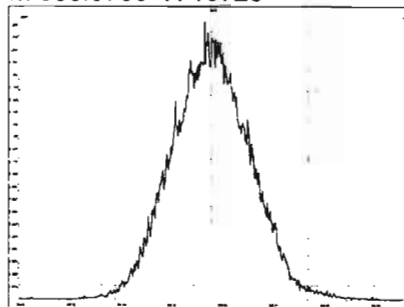
M 354.9792 R 10920



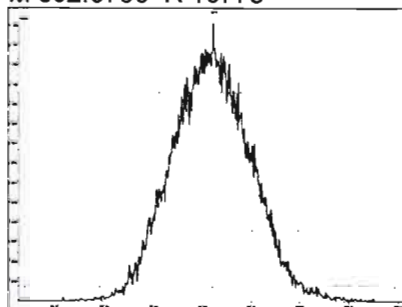
M 366.9792 R 10730



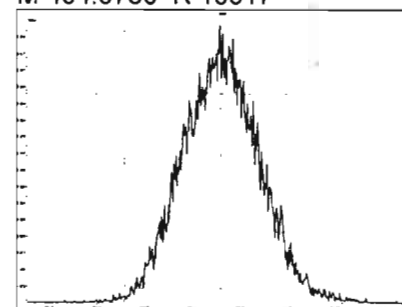
M 380.9760 R 10729



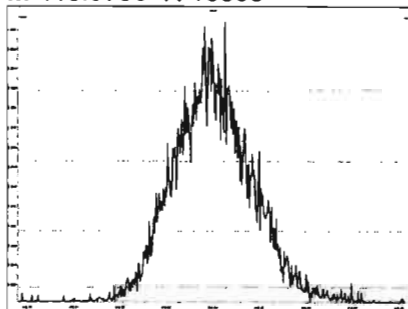
M 392.9760 R 10778



M 404.9760 R 10917



M 416.9760 R 10503



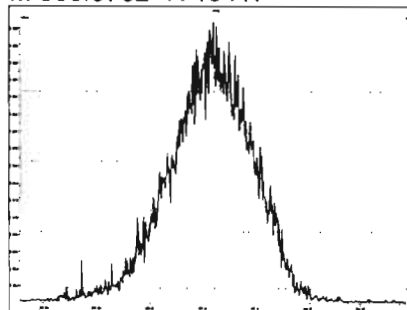
Experiment Calibration Report

MassLynx 4.1 SCN815

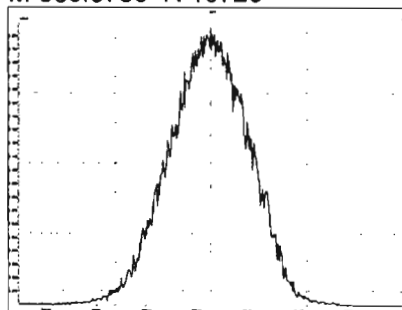
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:43:30 Pacific Standard Time

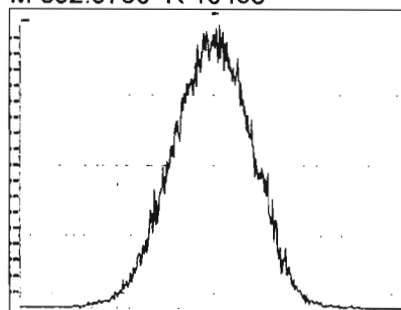
M 366.9792 R 10417



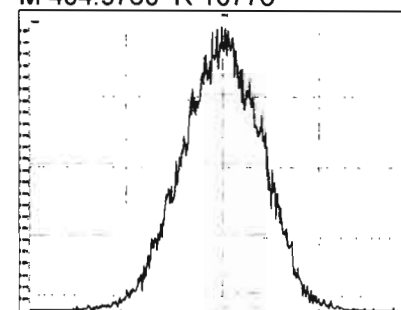
M 380.9760 R 10729



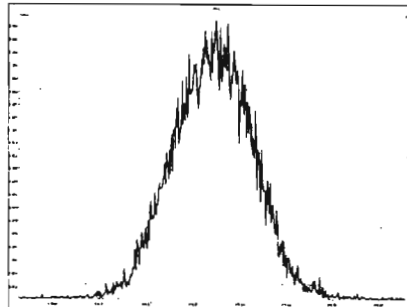
M 392.9760 R 10458



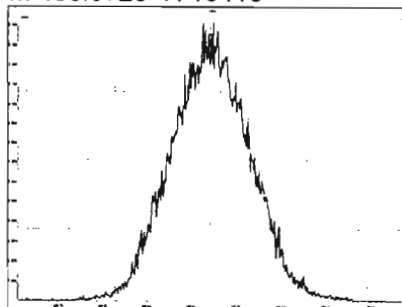
M 404.9760 R 10776



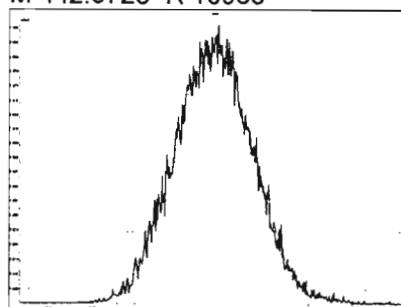
M 416.9760 R 10728



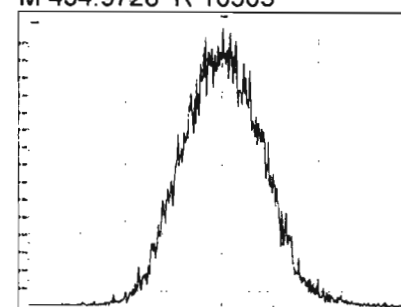
M 430.9728 R 10418



M 442.9728 R 10965



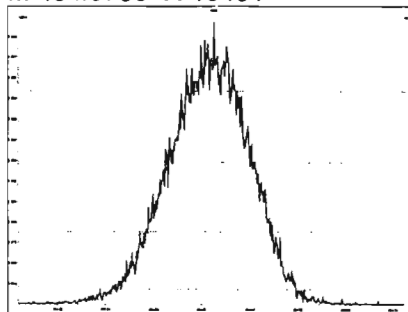
M 454.9728 R 10503



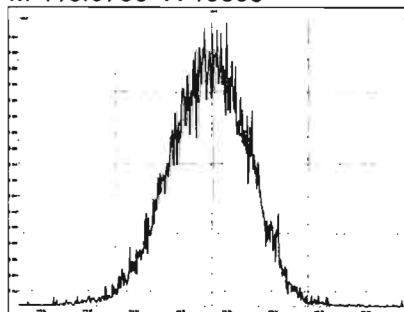
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:44:27 Pacific Standard Time

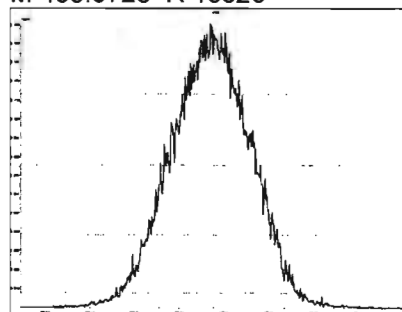
M 404.9760 R 10461



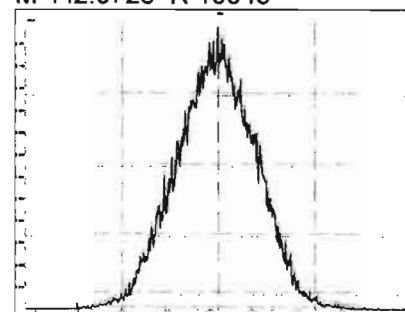
M 416.9760 R 10503



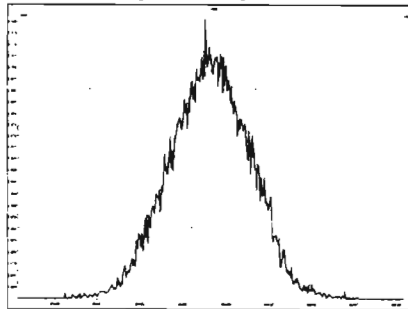
M 430.9728 R 10820



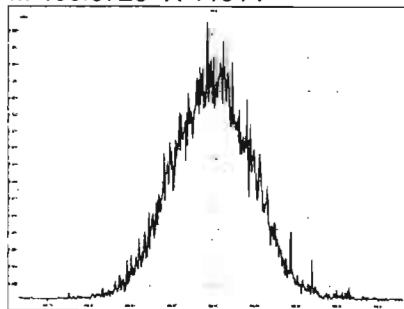
M 442.9728 R 10545



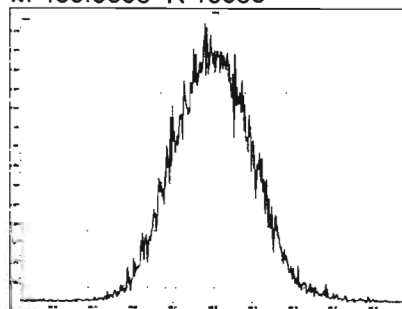
M 454.9728 R 10637



M 466.9728 R 11014



M 480.9696 R 10965



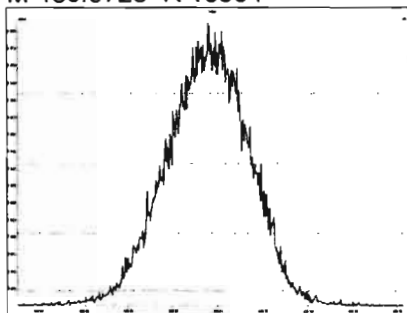
Experiment Calibration Report

MassLynx 4.1 SCN815

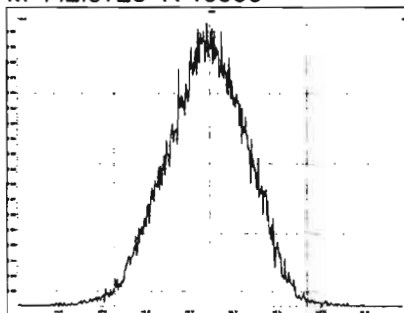
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Friday, January 31, 2020 16:45:52 Pacific Standard Time

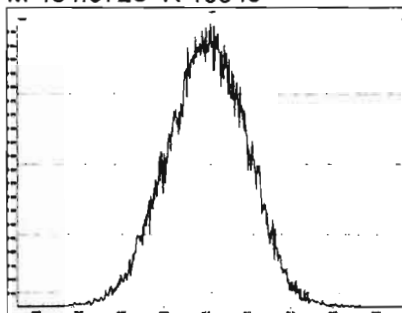
M 430.9728 R 10504



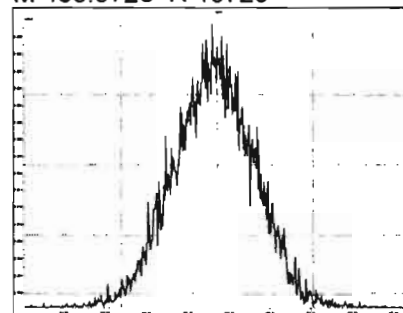
M 442.9728 R 10550



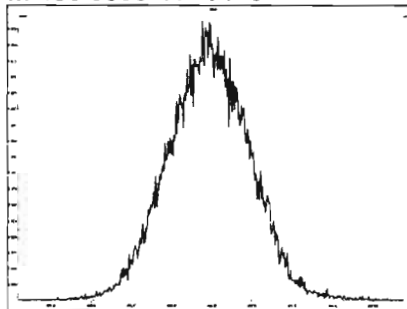
M 454.9728 R 10549



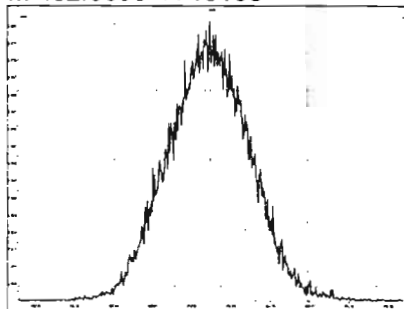
M 466.9728 R 10729



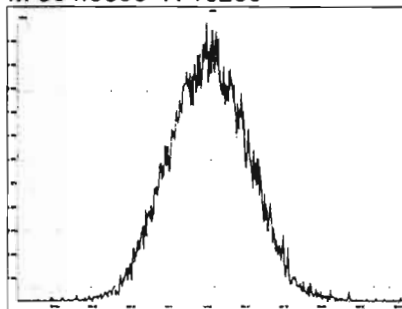
M 480.9696 R 10415



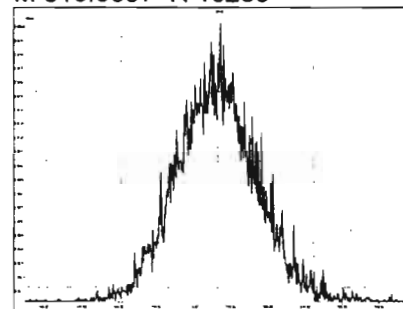
M 492.9696 R 10163



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

Vista Analytical Laboratory VG-11

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

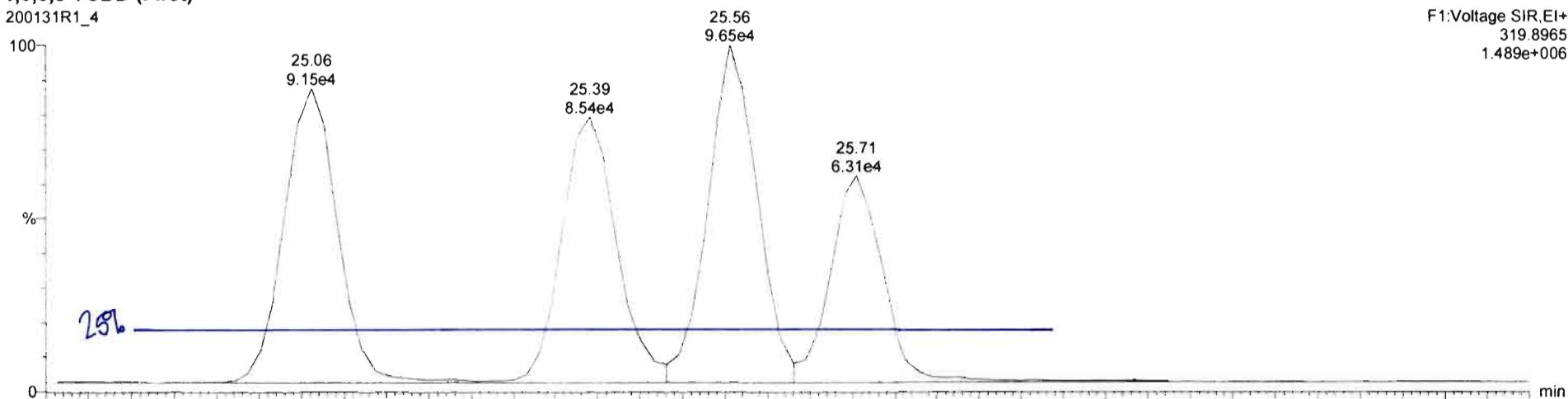
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-31-20.cdb 02 Feb 2020 11:05:29

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)

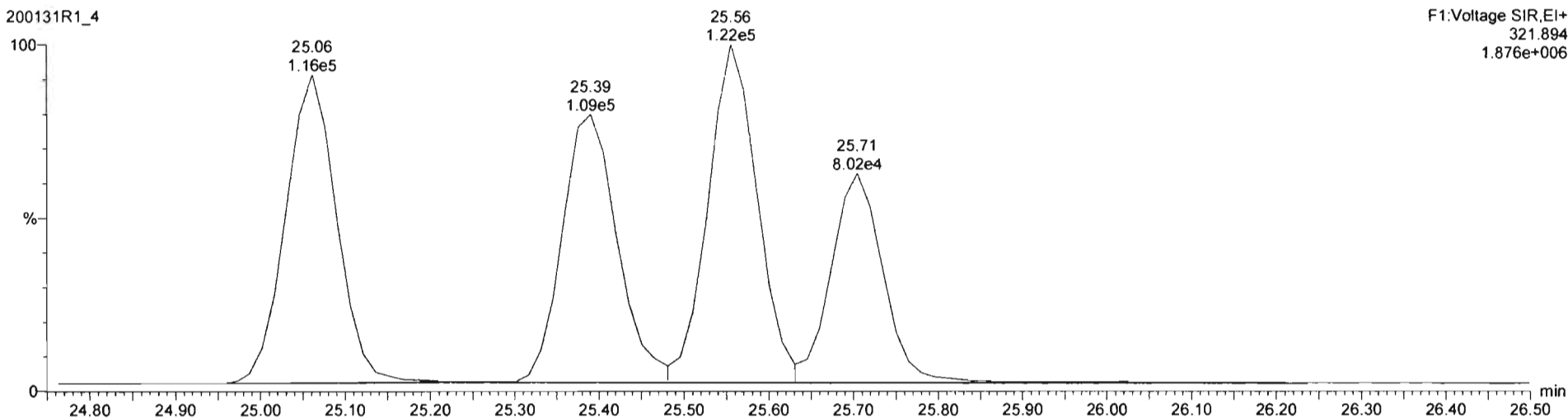
200131R1\_4

F1:Voltage SIR,EI+  
319.8965  
1.489e+006



200131R1\_4

F1:Voltage SIR,EI+  
321.894  
1.876e+006



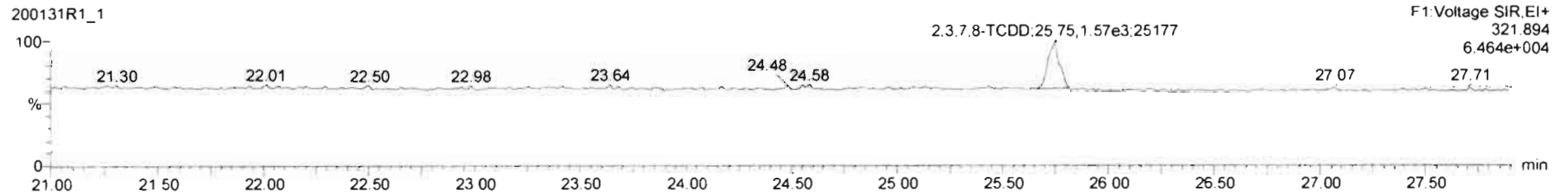
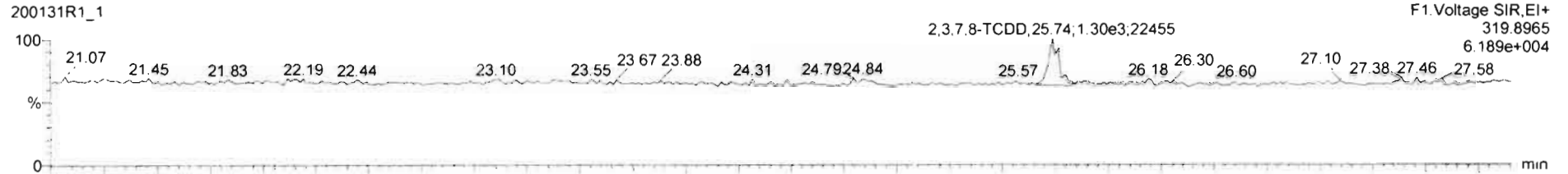
Dataset: Untitled

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

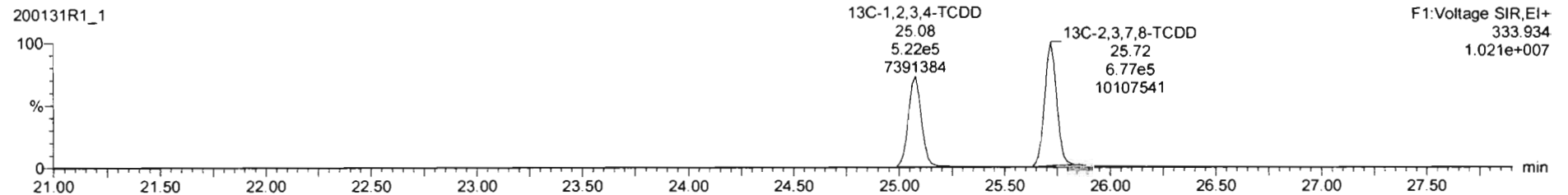
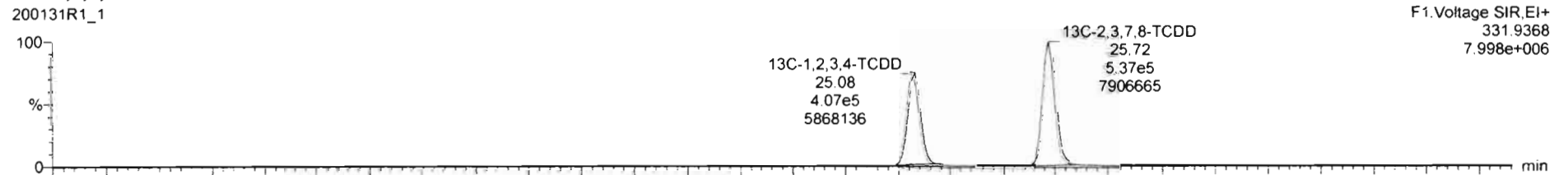
Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: 02 Feb 2020 11:06:20

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





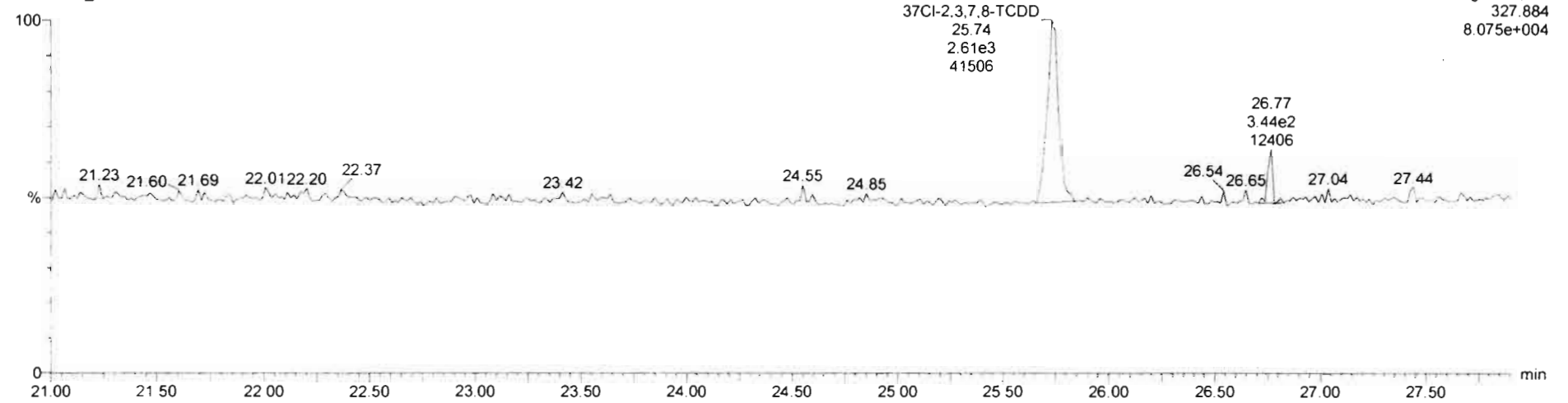
Dataset: Untitled

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

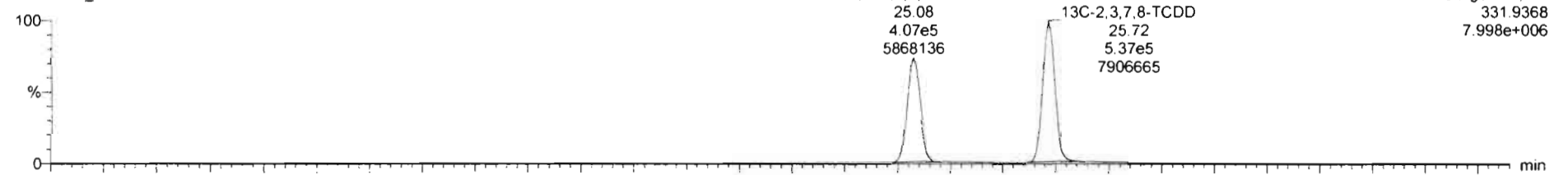
37Cl-2,3,7,8-TCDD

200131R1\_1

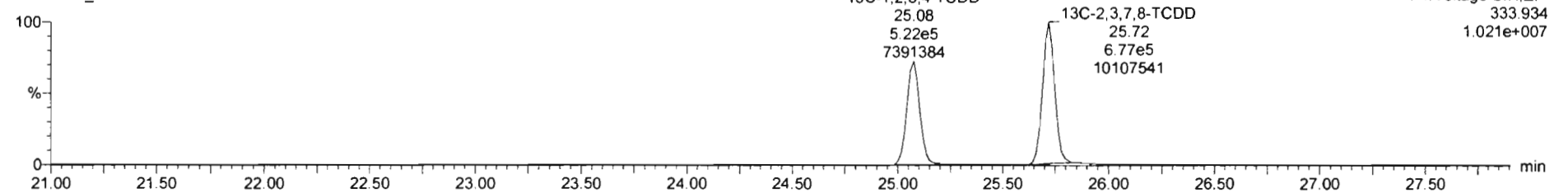


13C-1,2,3,4-TCDD

200131R1\_1



200131R1\_1



Dataset: Untitled

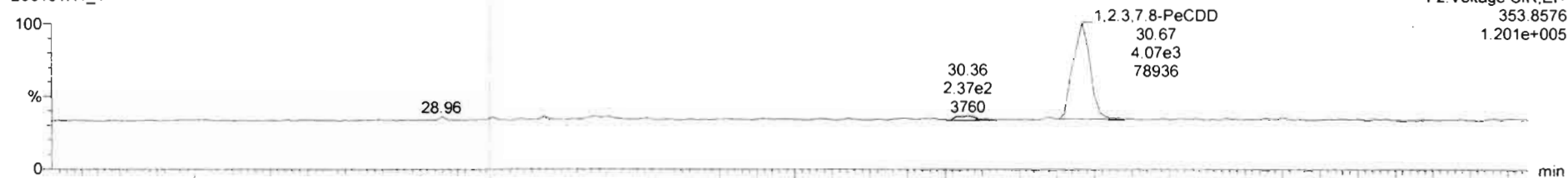
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

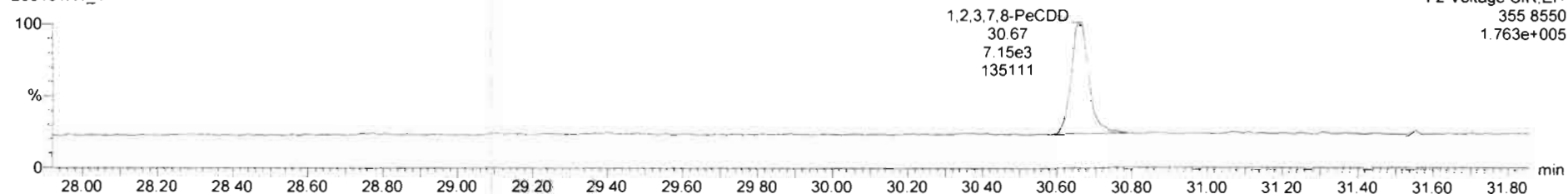
Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

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

200131R1\_1

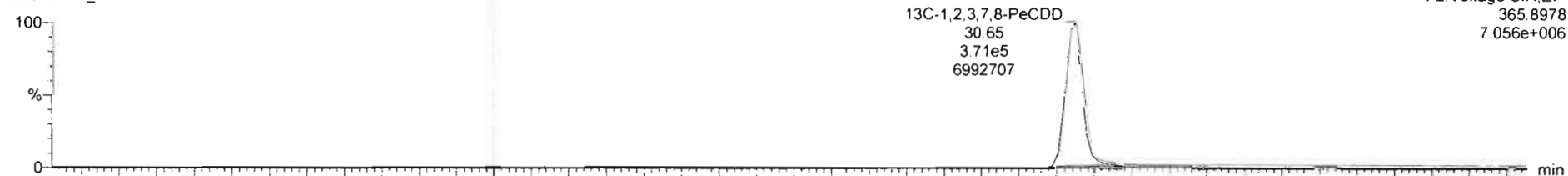


200131R1\_1

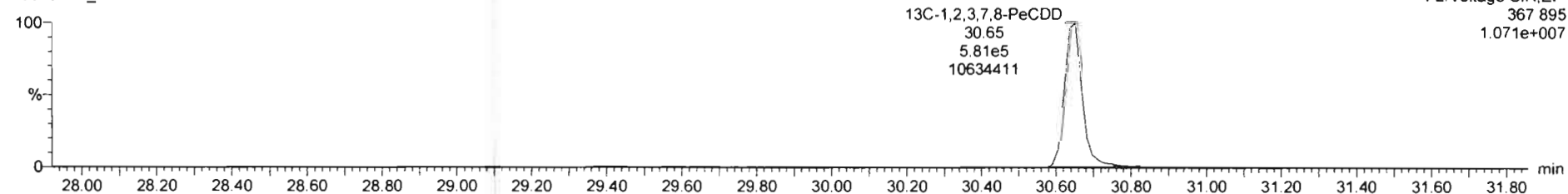


**13C-1,2,3,7,8-PeCDD**

200131R1\_1



200131R1\_1



Dataset: Untitled

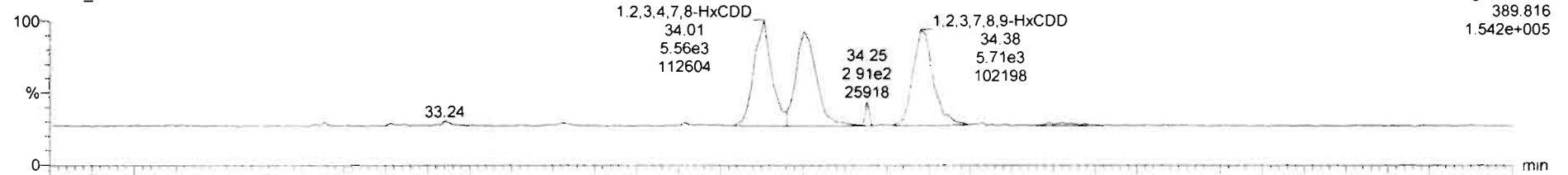
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

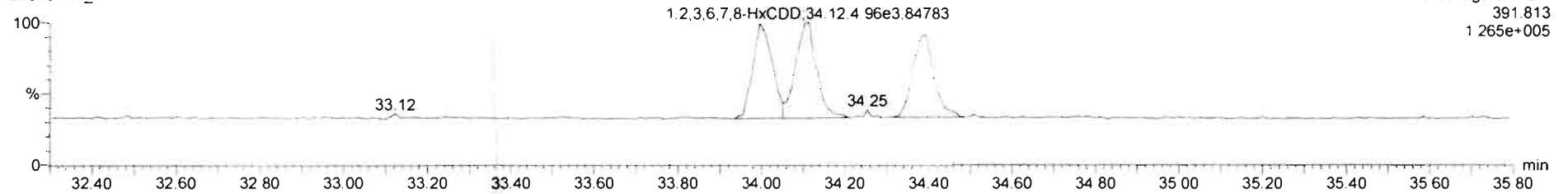
Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

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

200131R1\_1

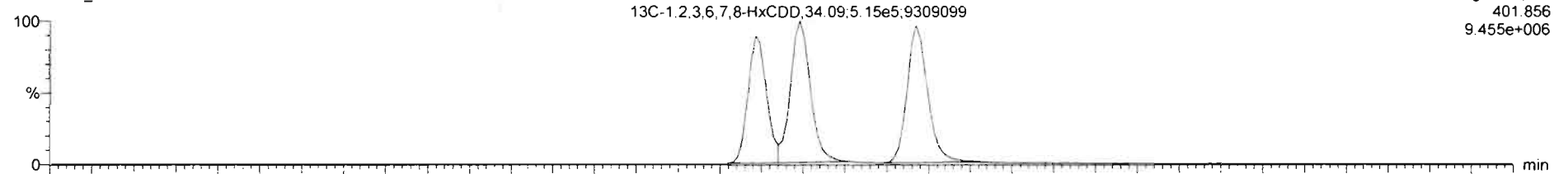


200131R1\_1

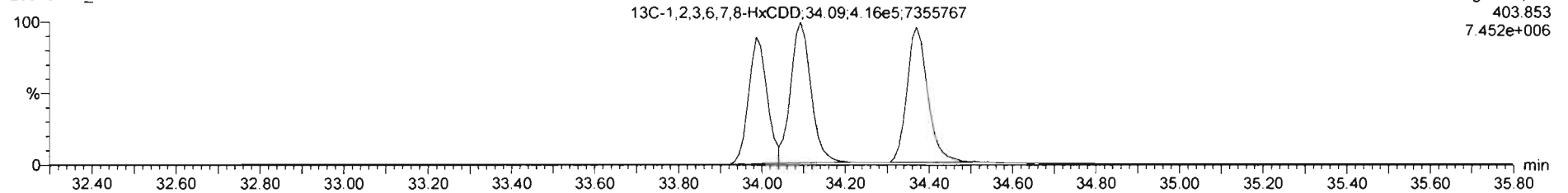


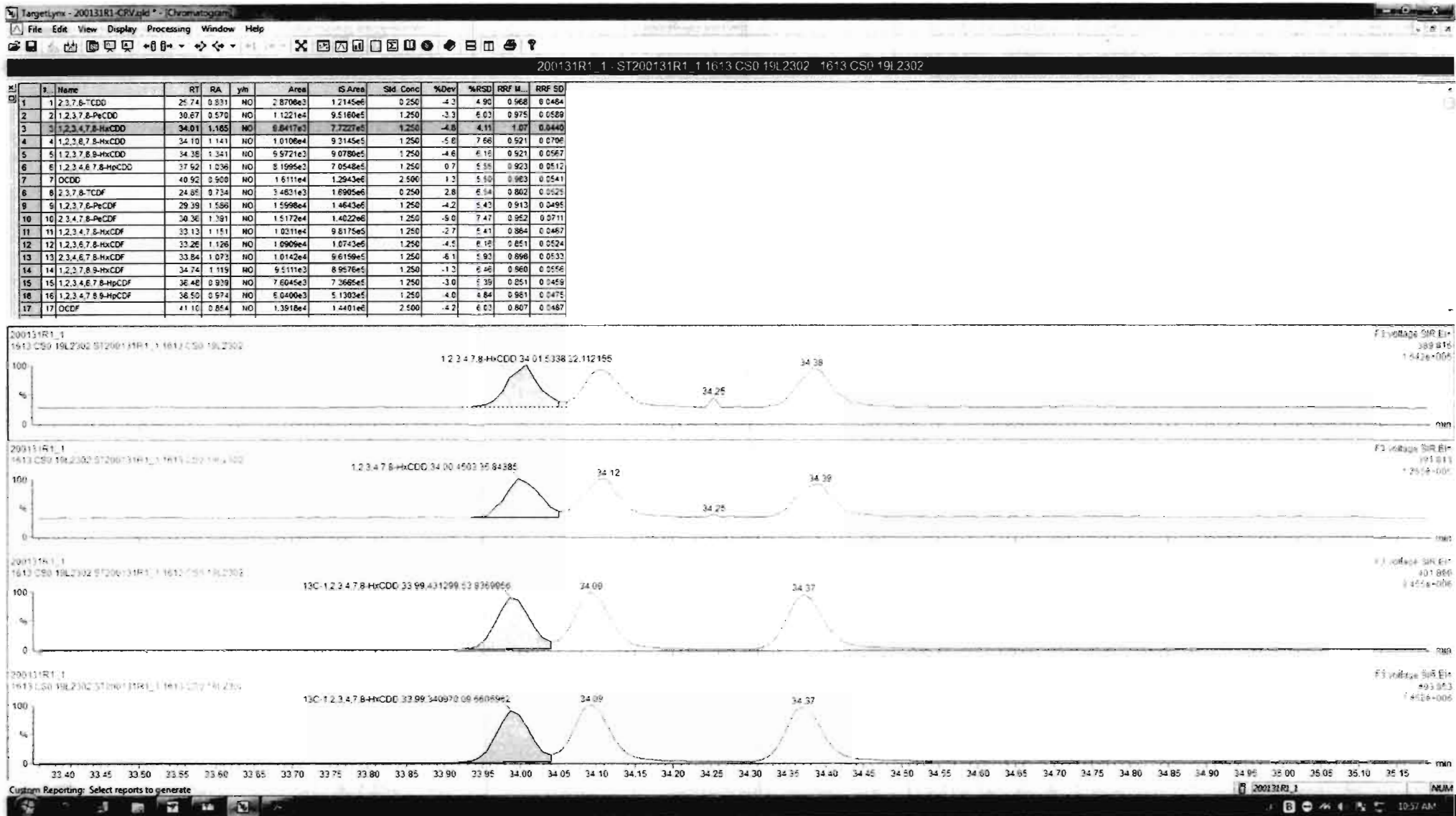
**13C-1,2,3,4,7,8-HxCDD**

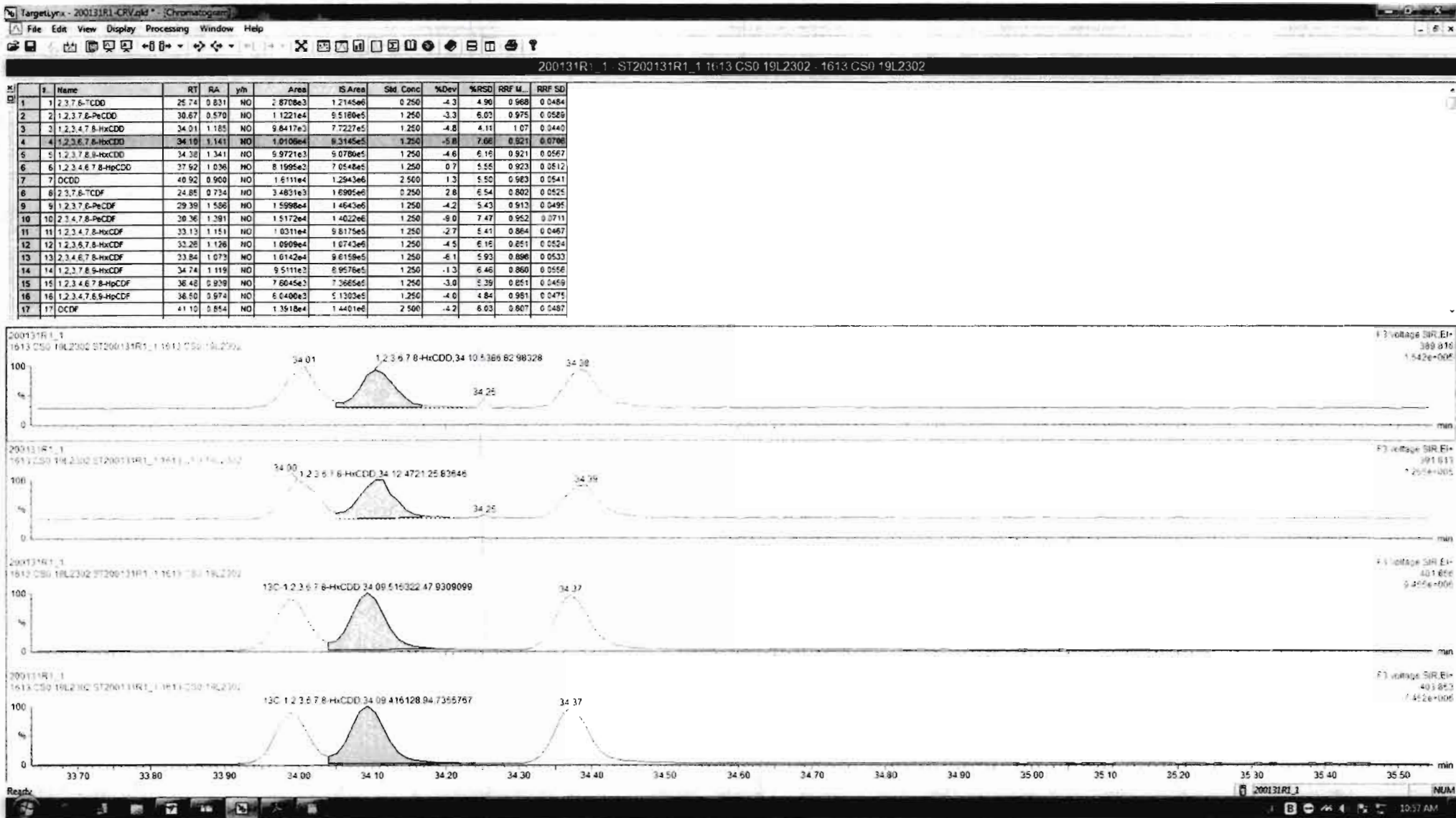
200131R1\_1

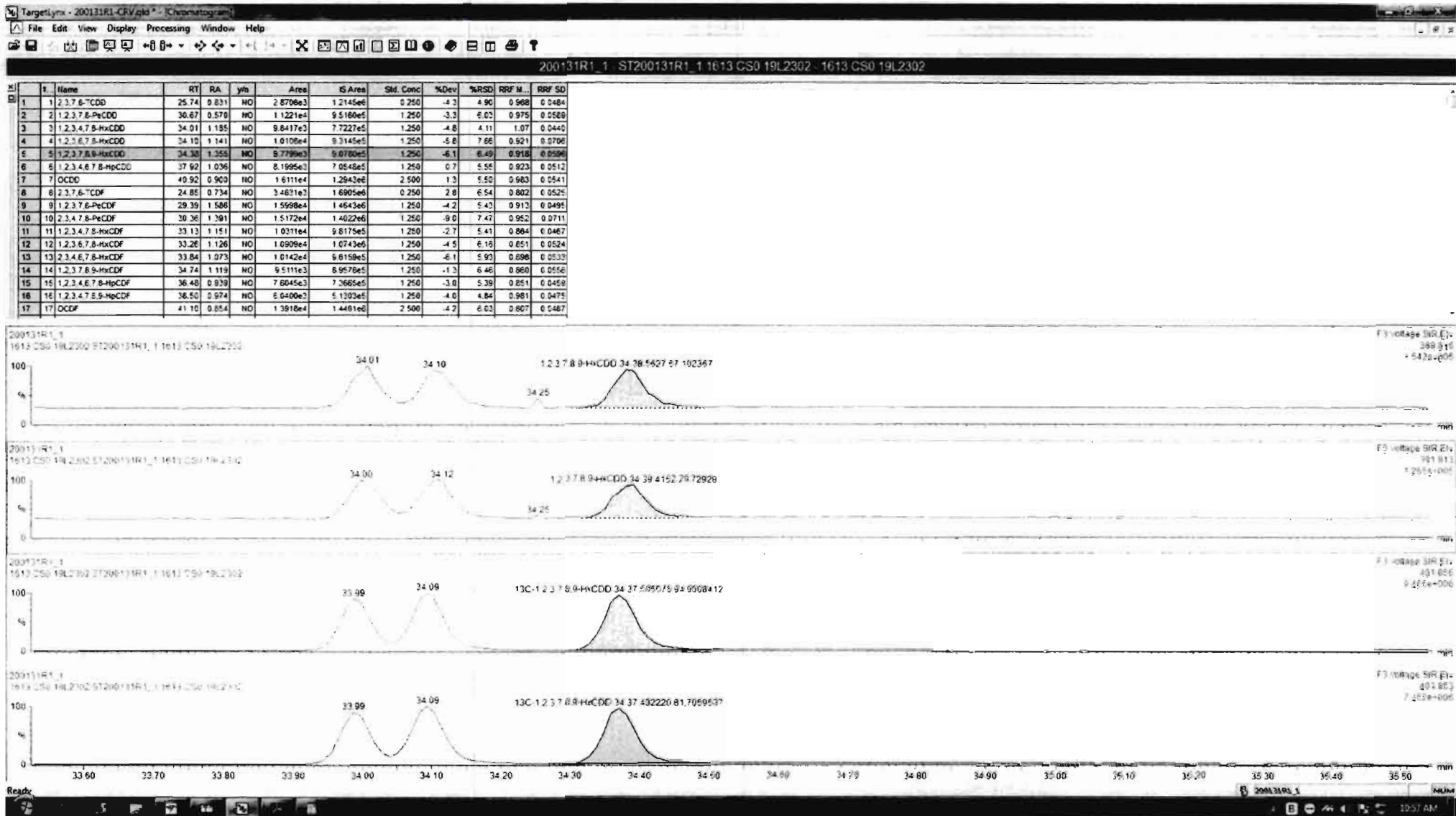


200131R1\_1









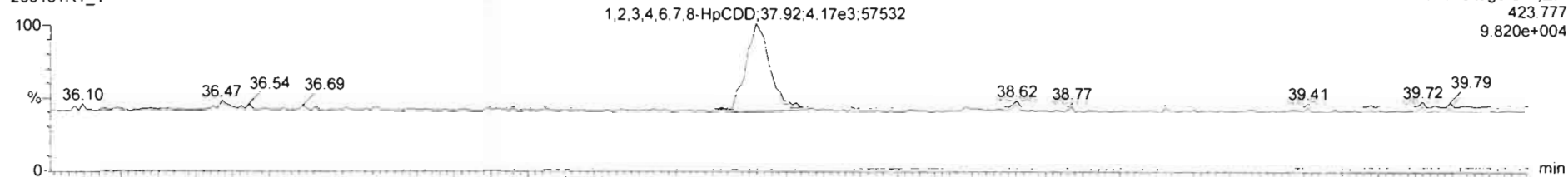
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

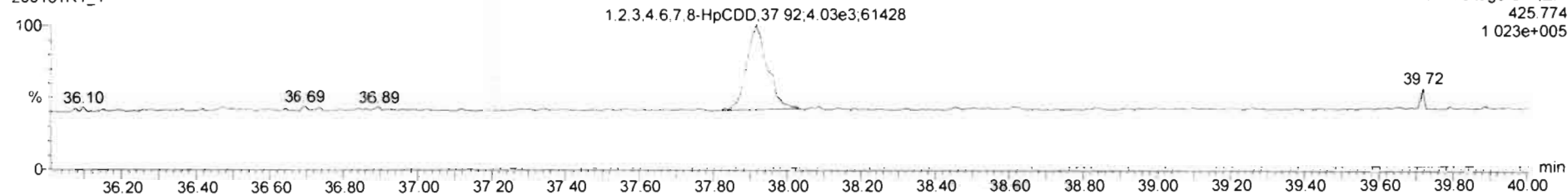
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1,2,3,4,6,7,8-HpCDD

200131R1\_1

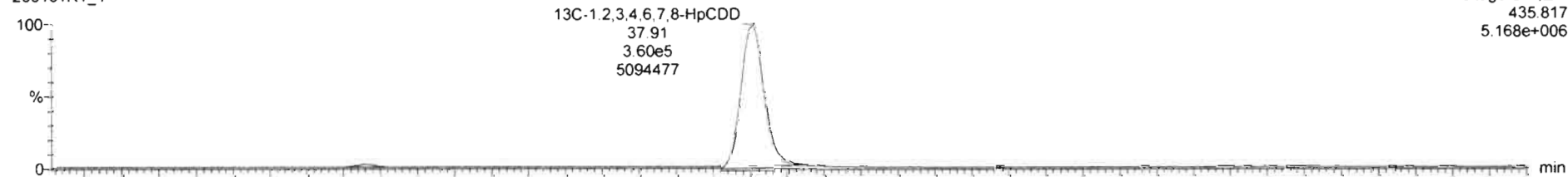


200131R1\_1

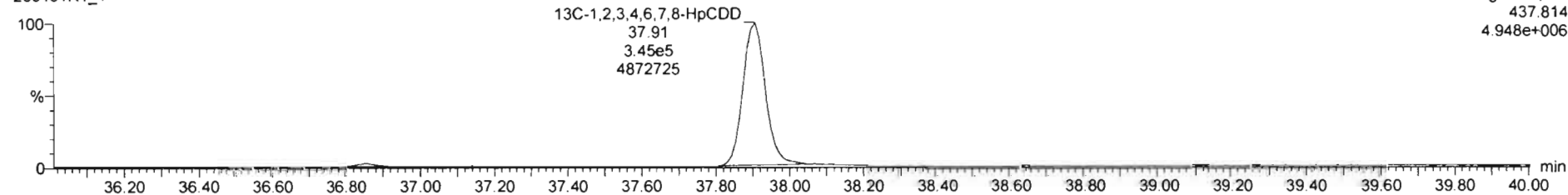


13C-1,2,3,4,6,7,8-HpCDD

200131R1\_1



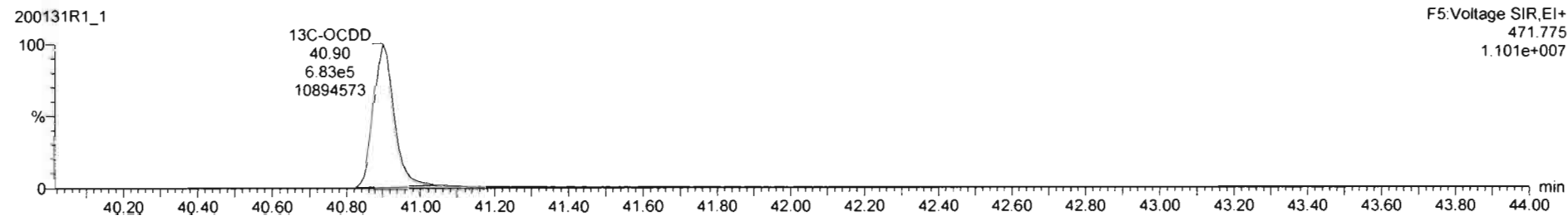
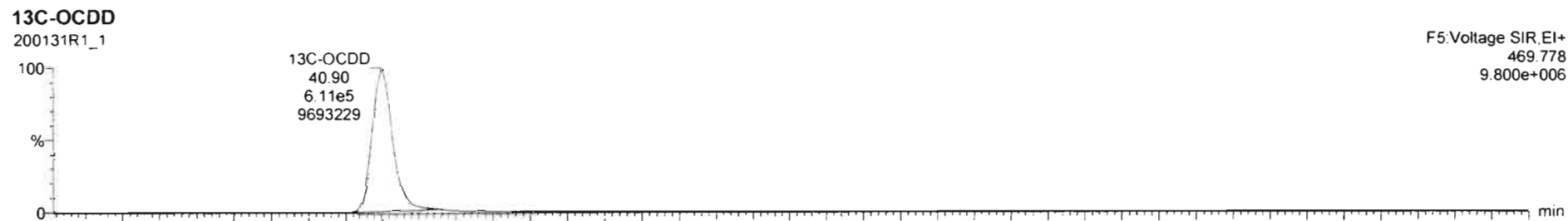
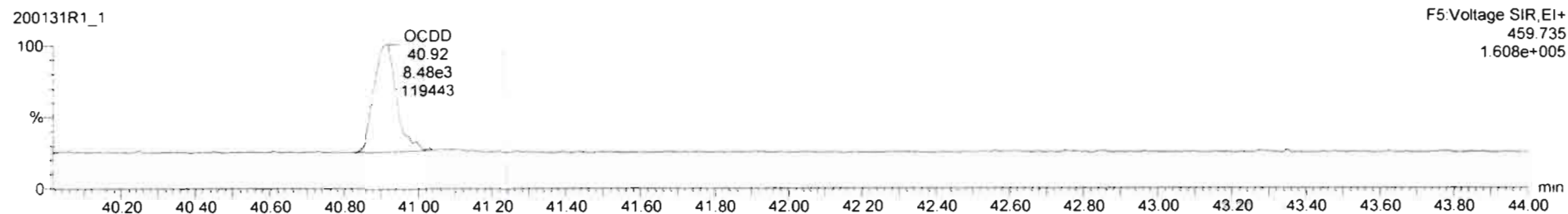
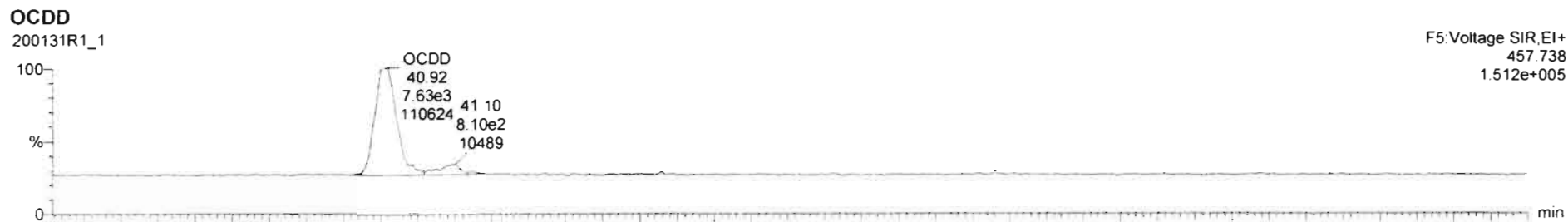
200131R1\_1



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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





Dataset: Untitled

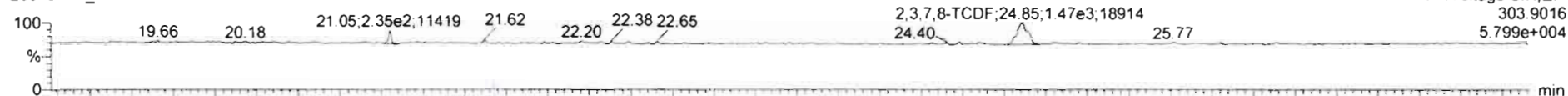
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

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

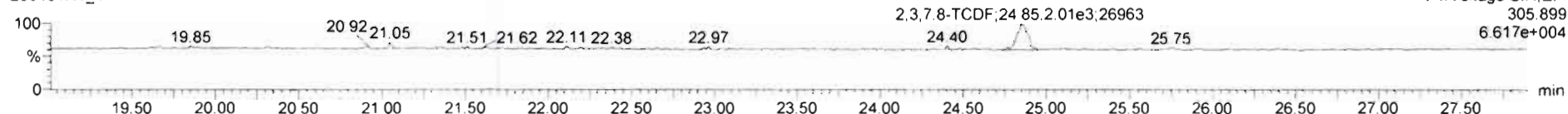
### 2,3,7,8-TCDF

200131R1\_1



F1: Voltage SIR, EI+  
303.9016  
5.799e+004

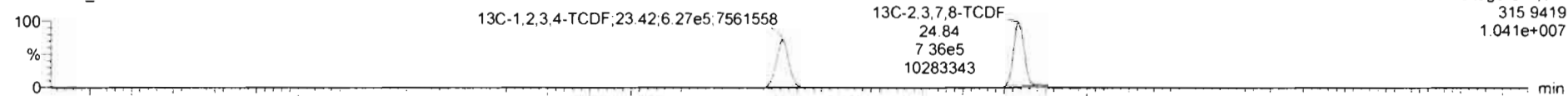
200131R1\_1



F1: Voltage SIR, EI+  
305.899  
6.617e+004

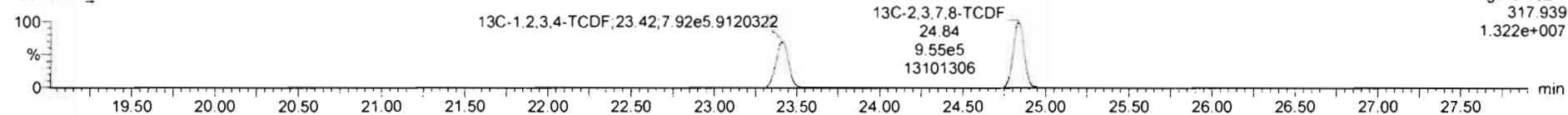
### 13C-2,3,7,8-TCDF

200131R1\_1



F1: Voltage SIR, EI+  
315.9419  
1.041e+007

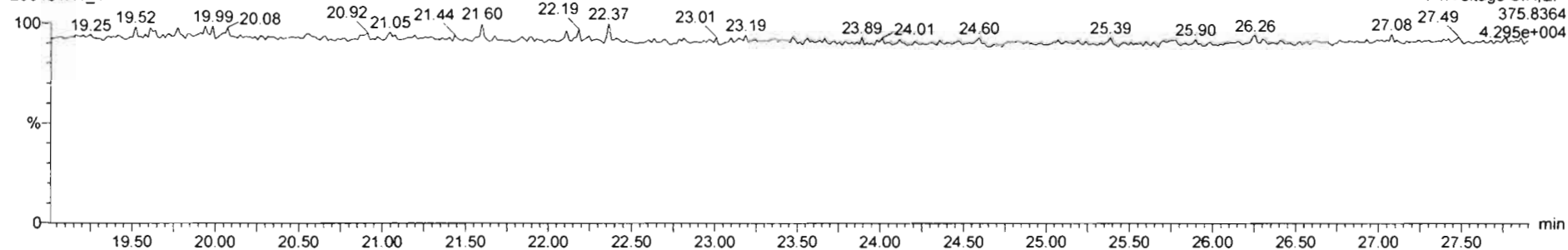
200131R1\_1



F1: Voltage SIR, EI+  
317.939  
1.322e+007

### DPE1

200131R1\_1



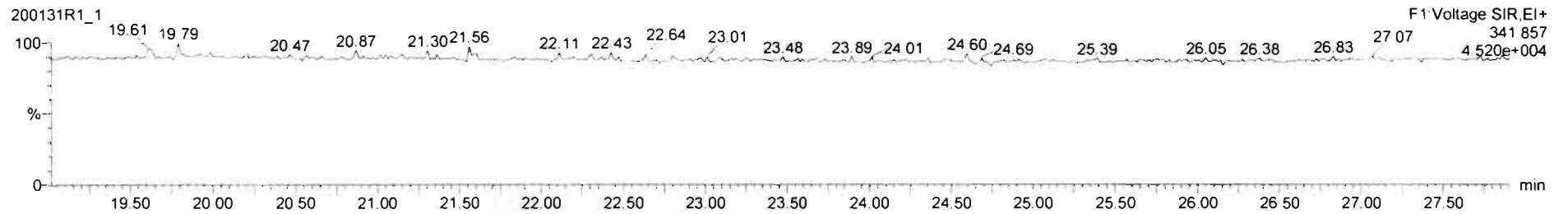
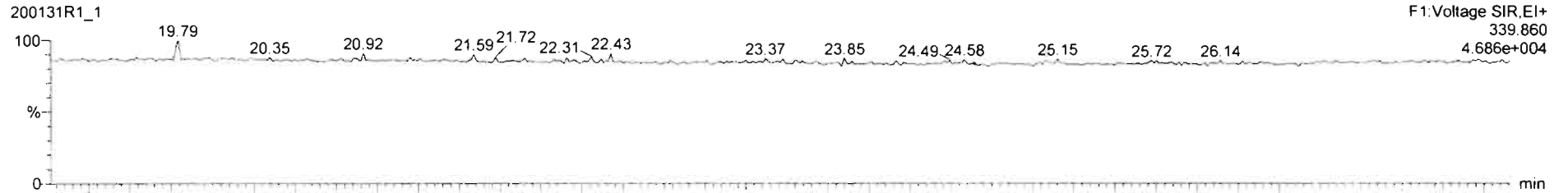
F1: Voltage SIR, EI+  
375.8364  
4.295e+004

Dataset: Untitled

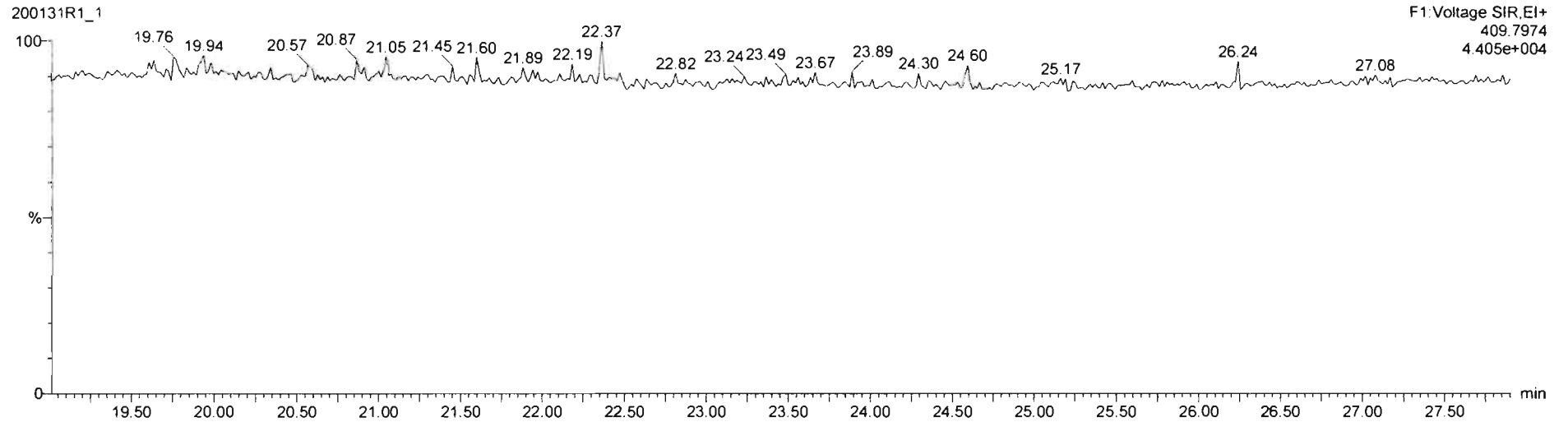
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_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

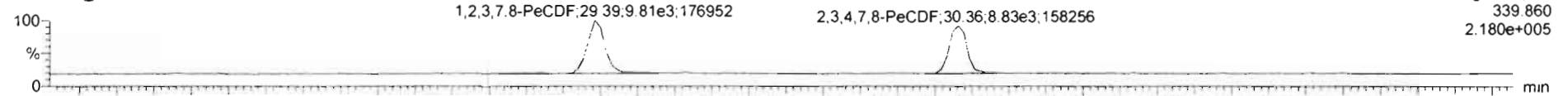
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

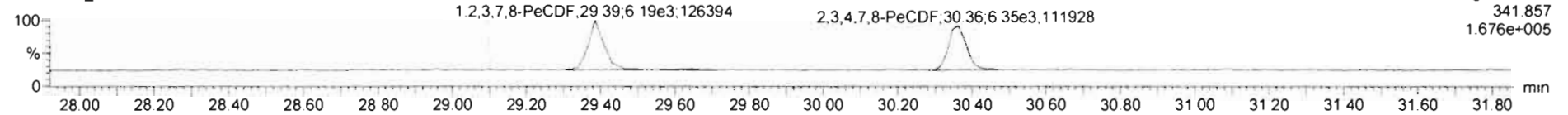
Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

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

200131R1\_1

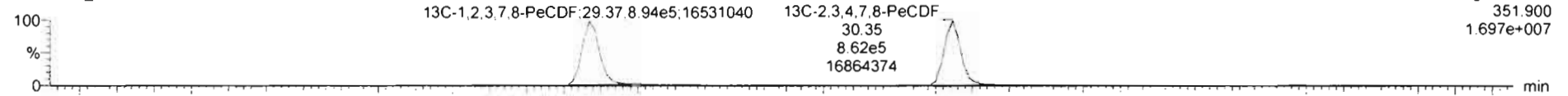


200131R1\_1

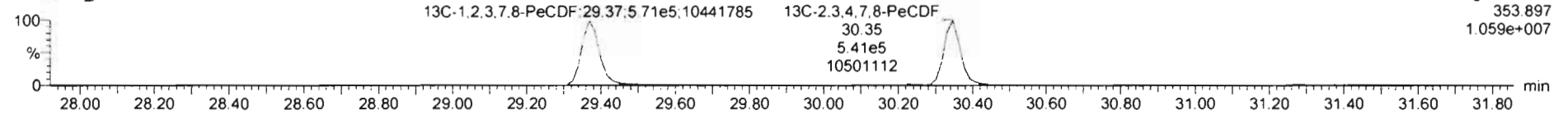


**13C-1,2,3,7,8-PeCDF**

200131R1\_1

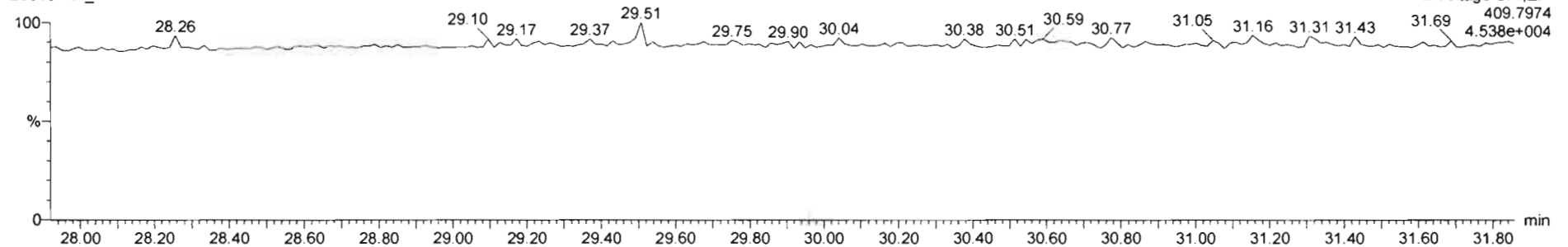


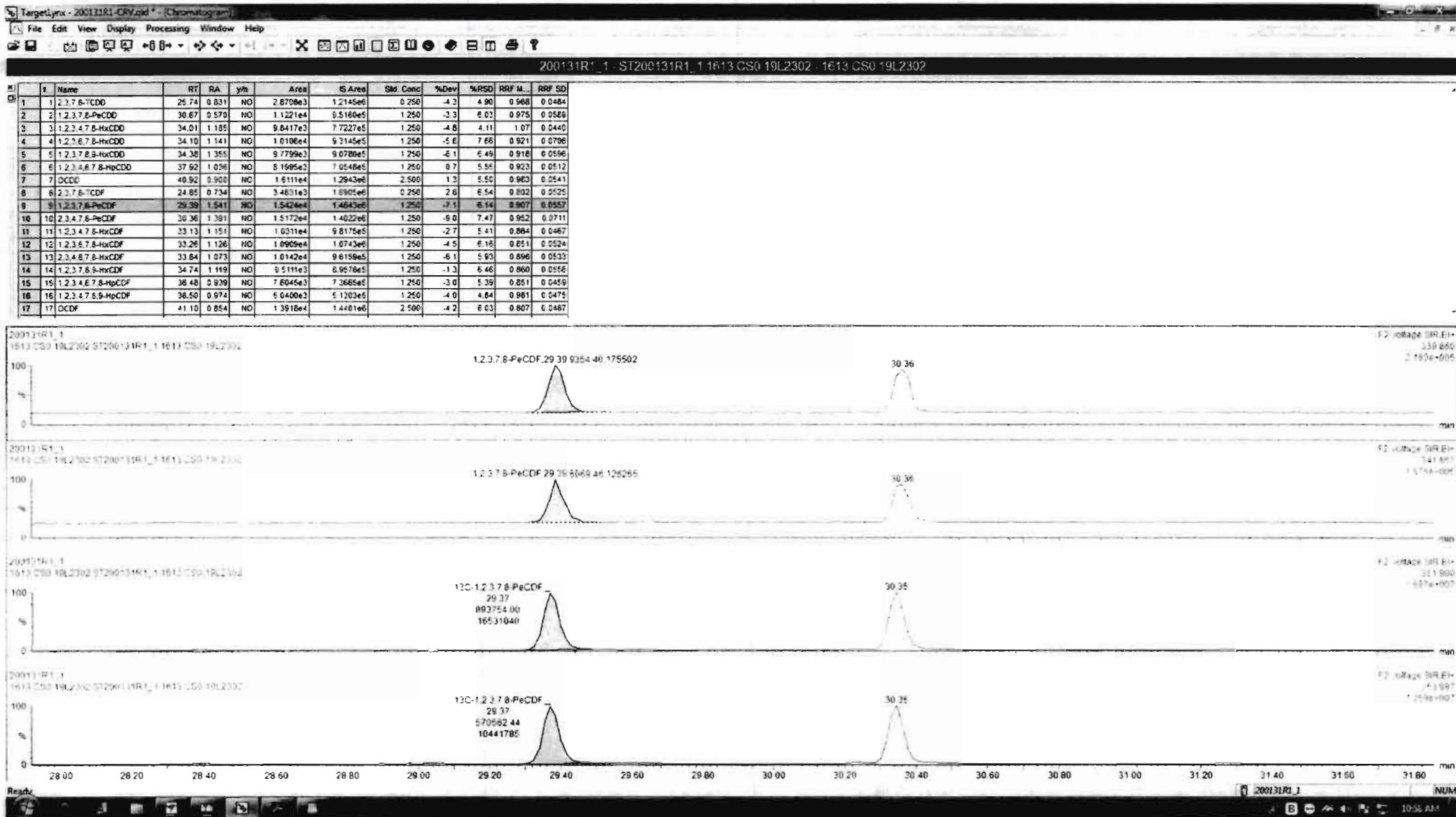
200131R1\_1



**DPE2**

200131R1\_1





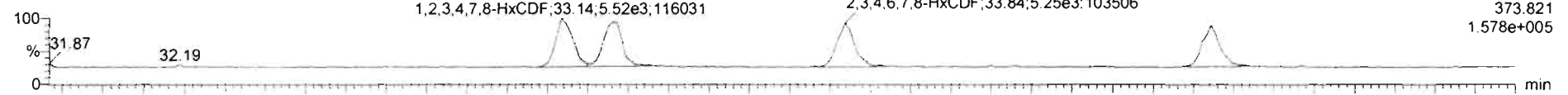
Dataset: Untitled

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

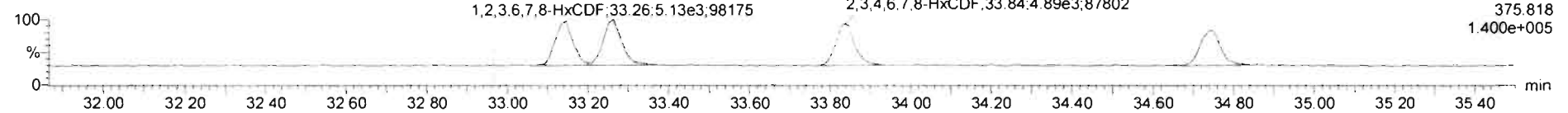
Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

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

200131R1\_1

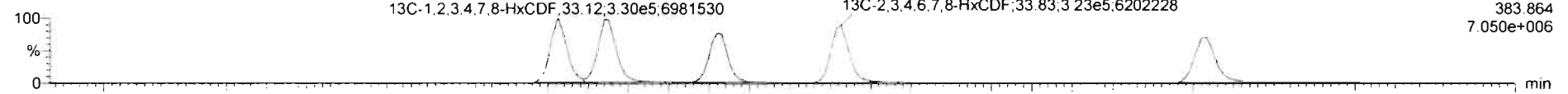


200131R1\_1

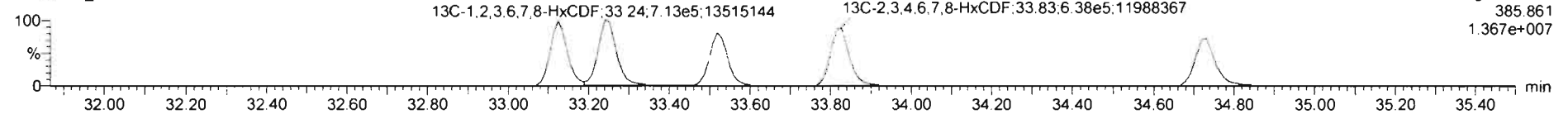


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_1

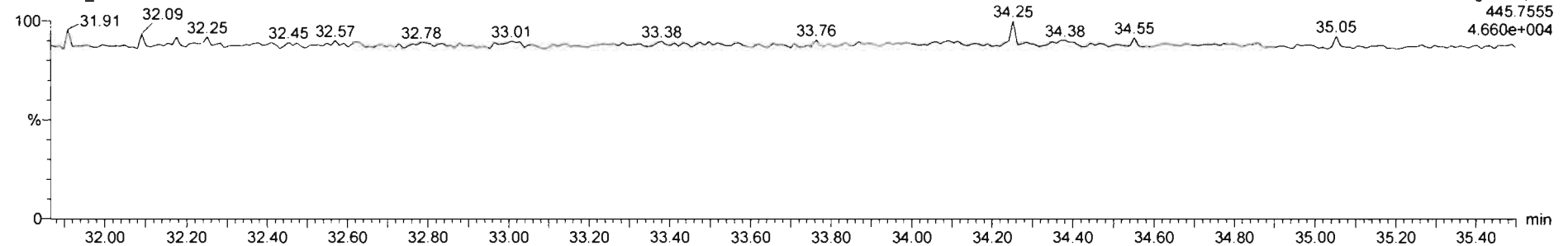


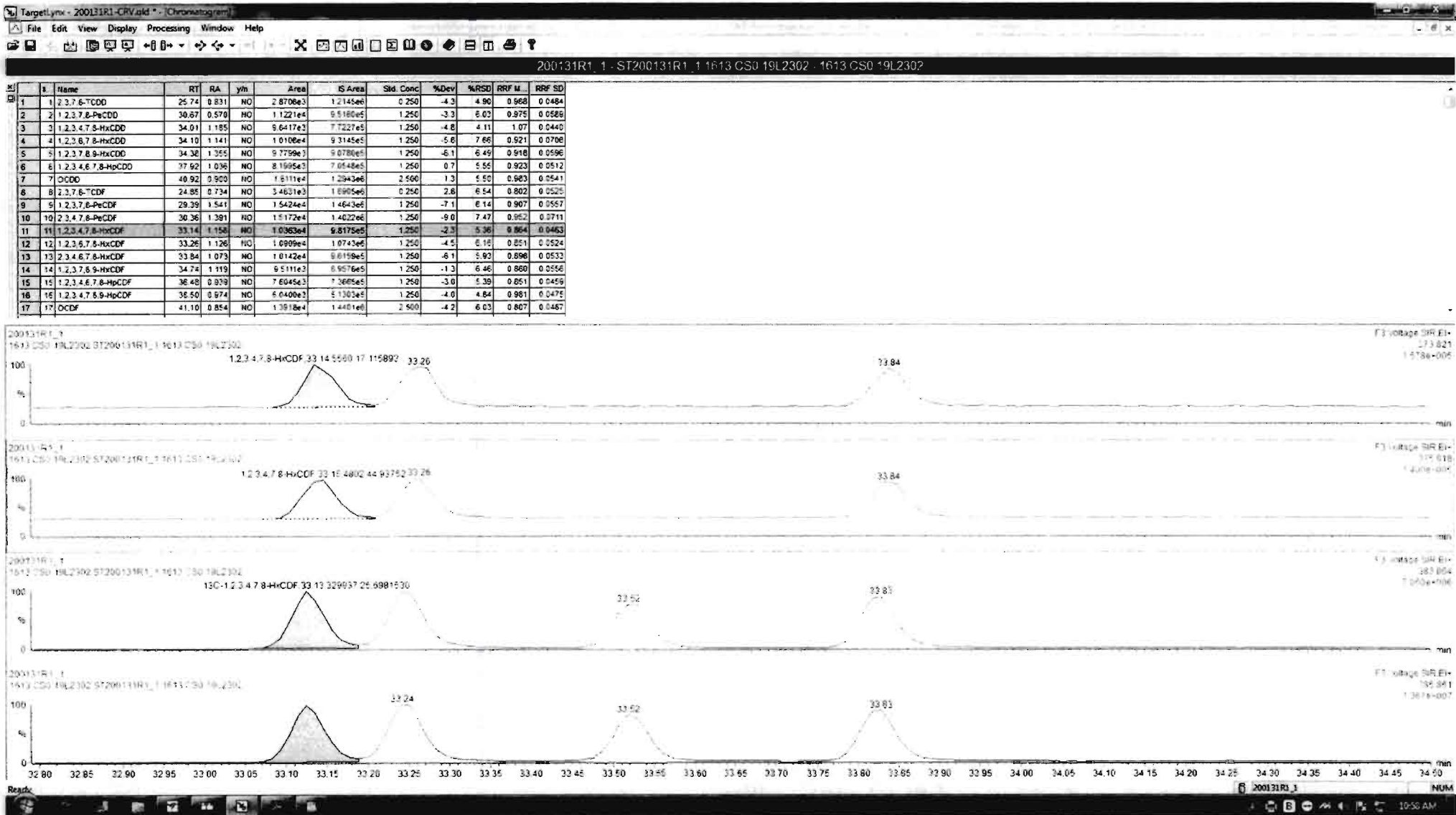
200131R1\_1

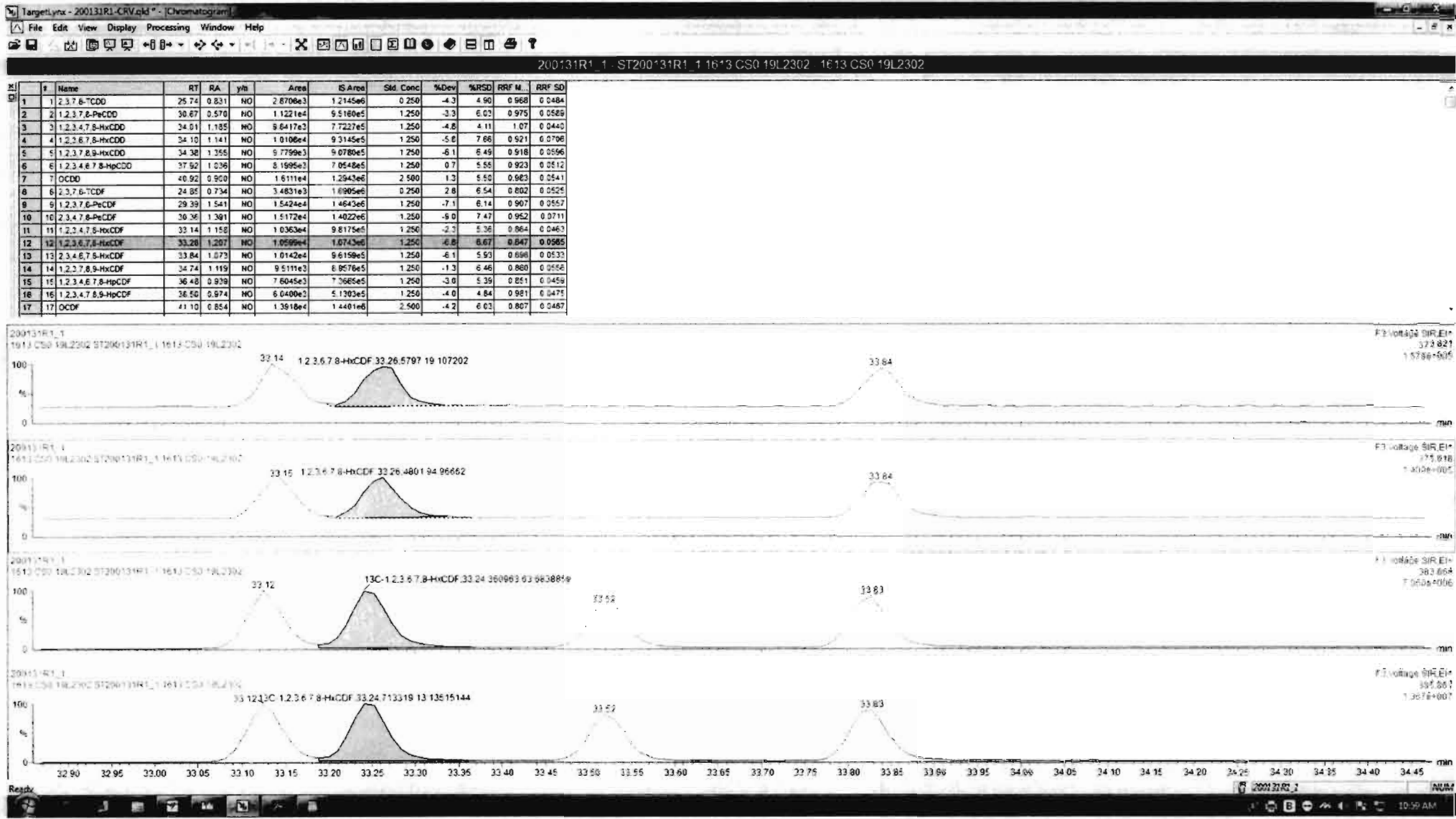


**DPE3**

200131R1\_1







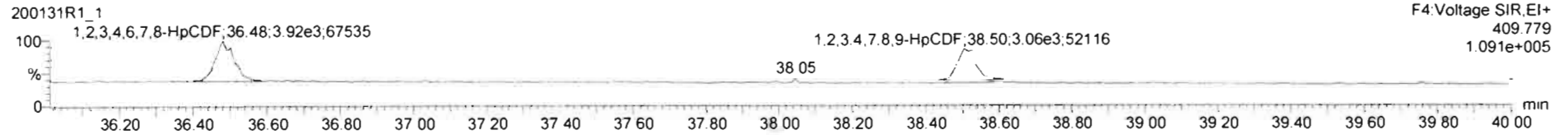
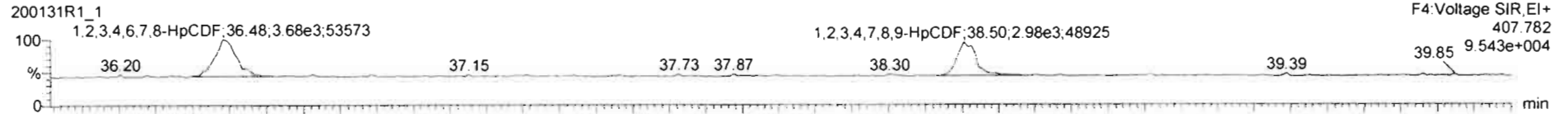
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

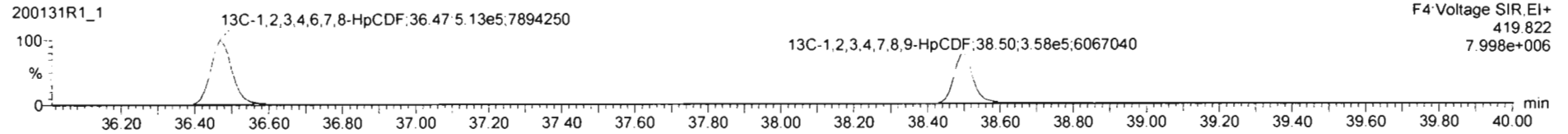
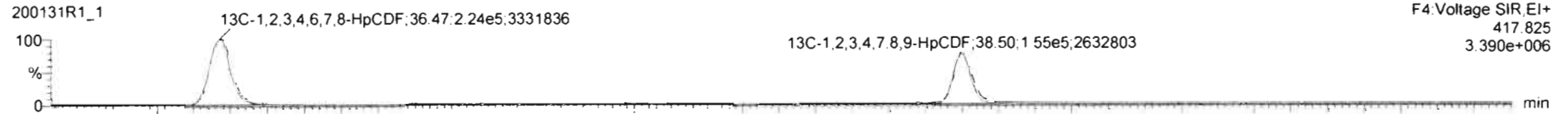
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

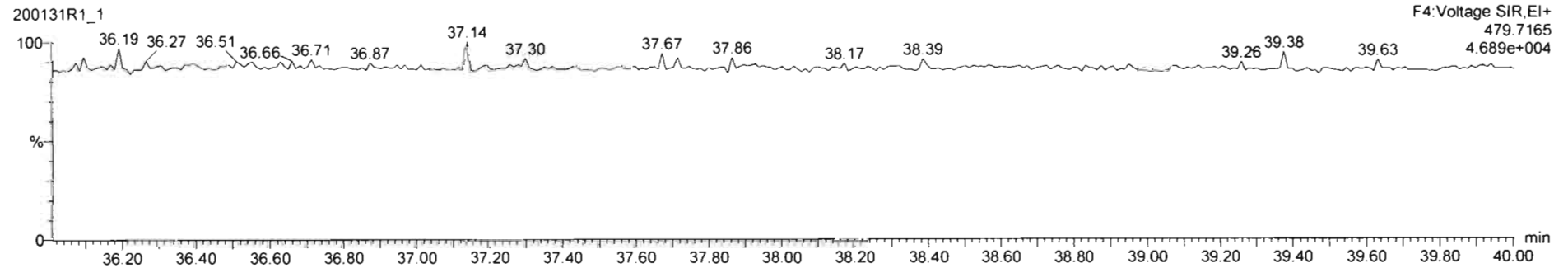
**1,2,3,4,6,7,8-HpCDF**



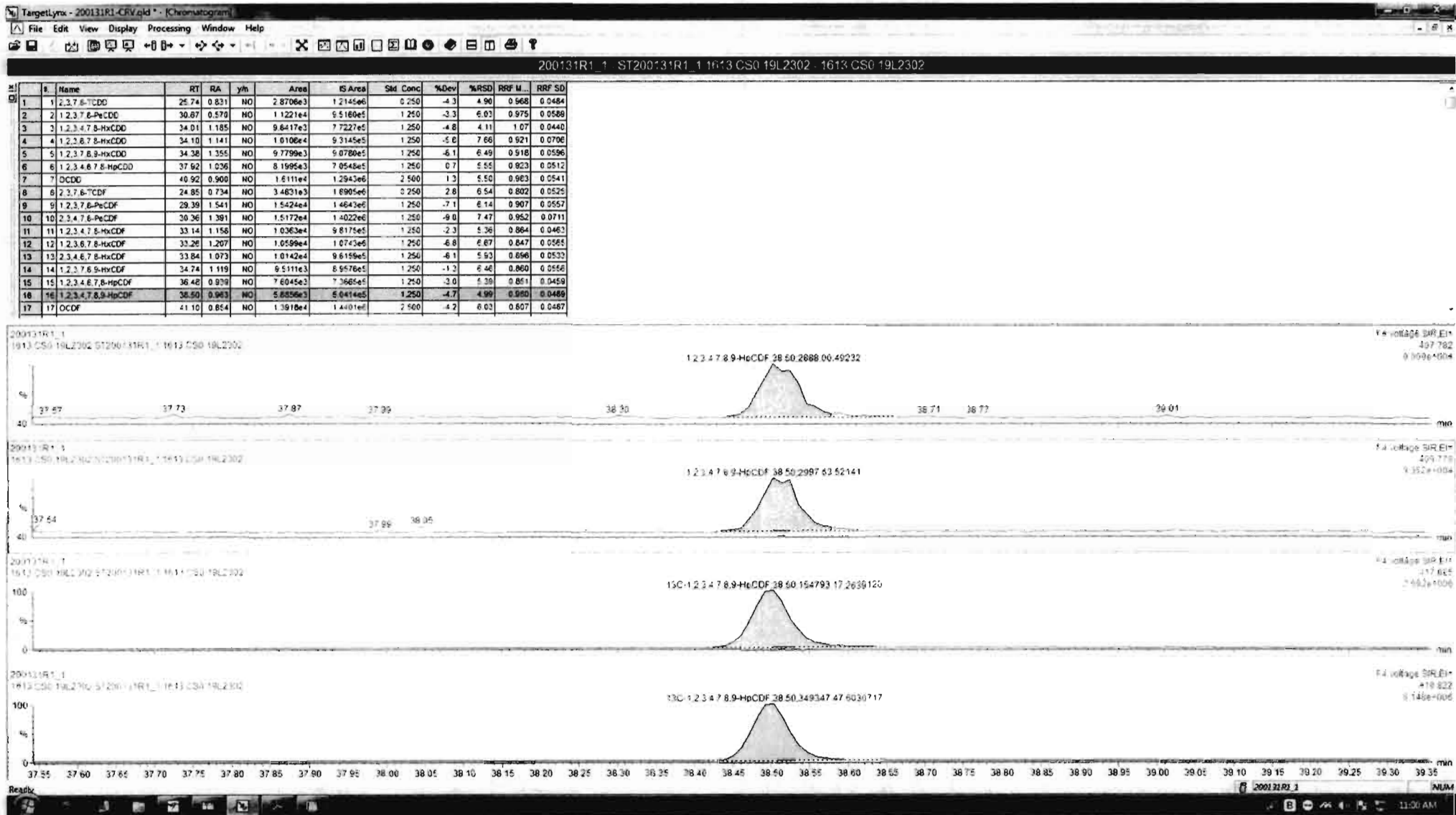
**13C-1,2,3,4,6,7,8-HpCDF**



**DPE4**







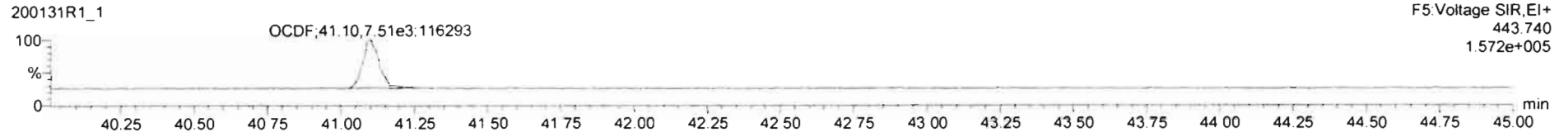
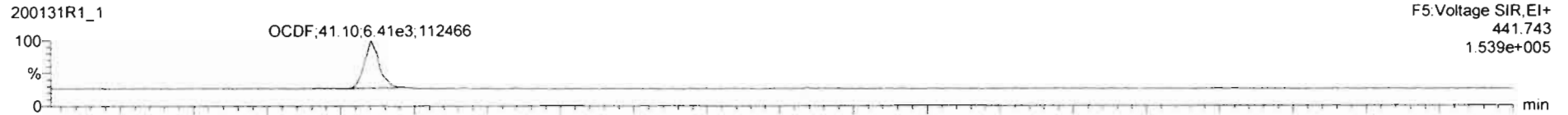
Dataset: Untitled

Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

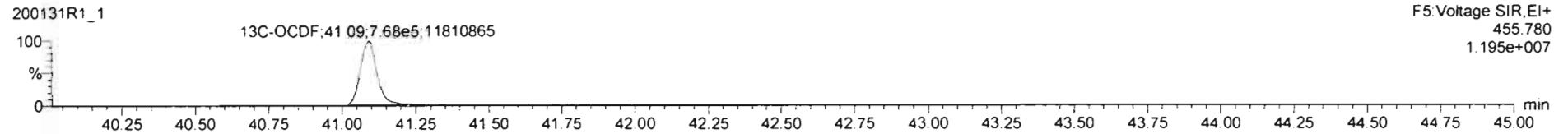
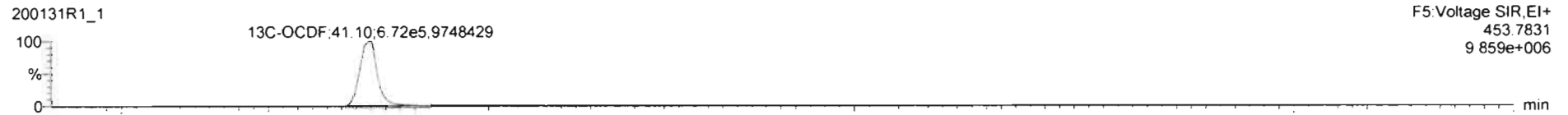
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_1, Date: 31-Jan-2020, Time: 16:48:41, ID: ST200131R1\_1 1613 CS0 19L2302, Description: 1613 CS0 19L2302

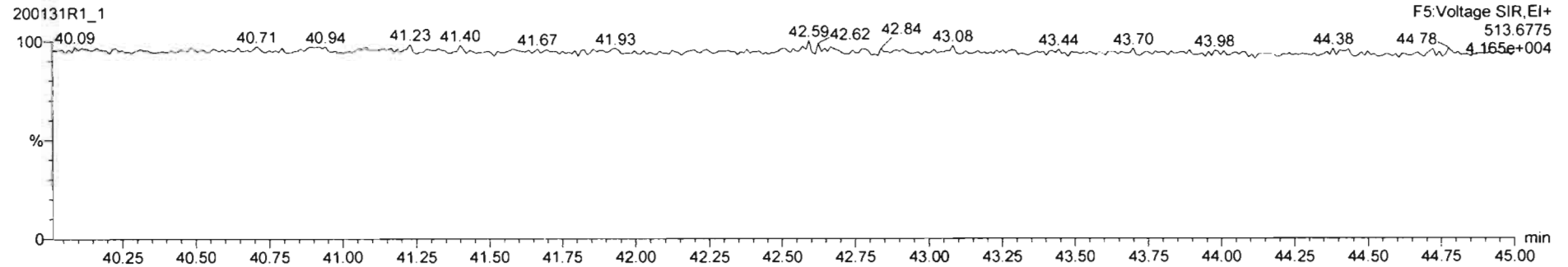
**OCDF**



**13C-OCDF**



**DPE5**

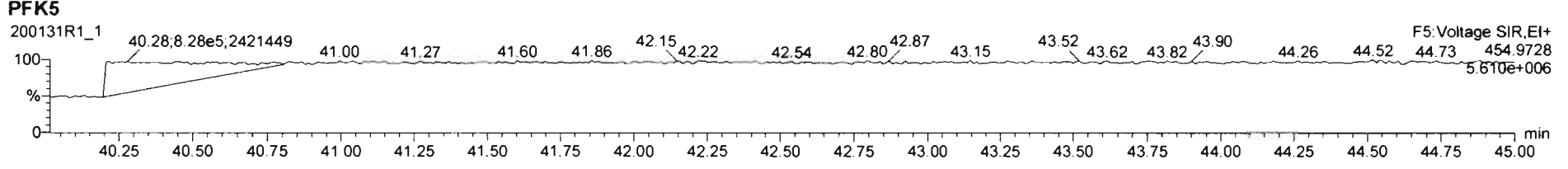
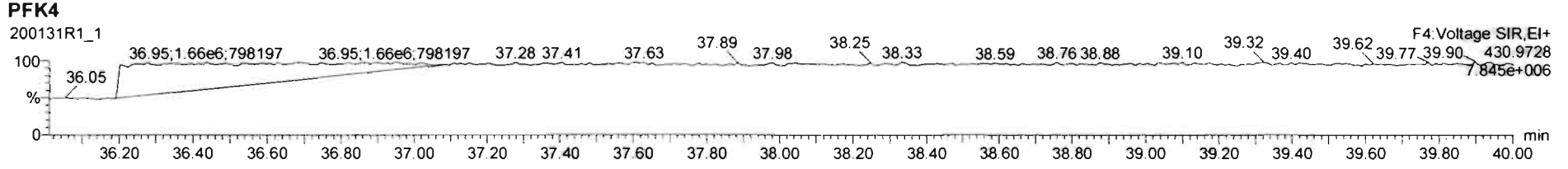
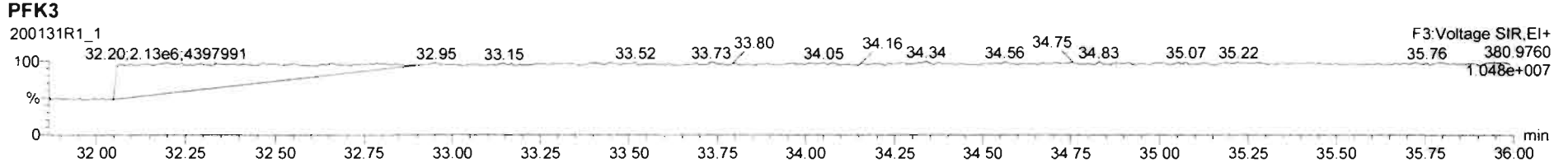
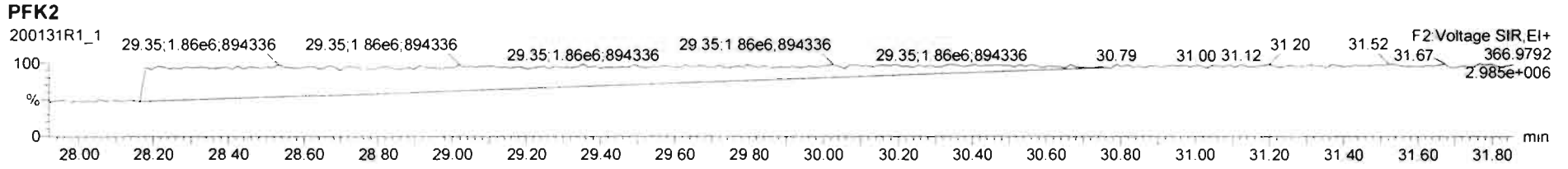
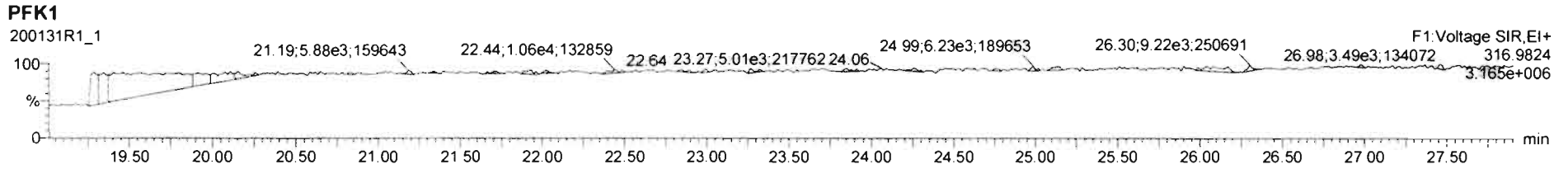


Dataset: Untitled

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



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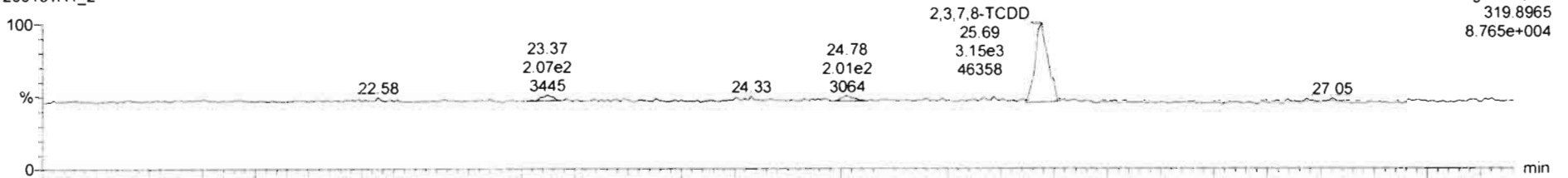
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

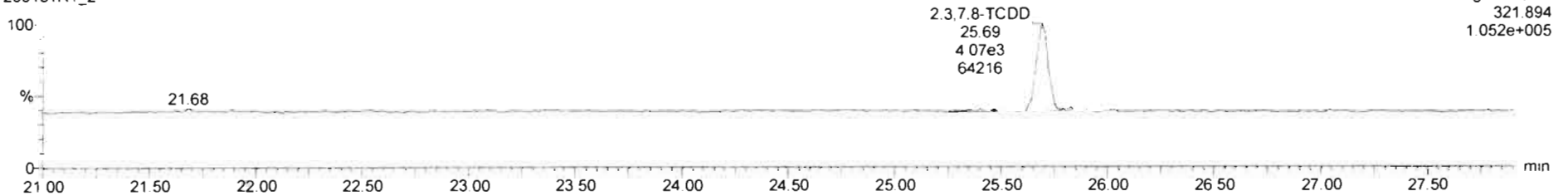
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**2,3,7,8-TCDD**

200131R1\_2

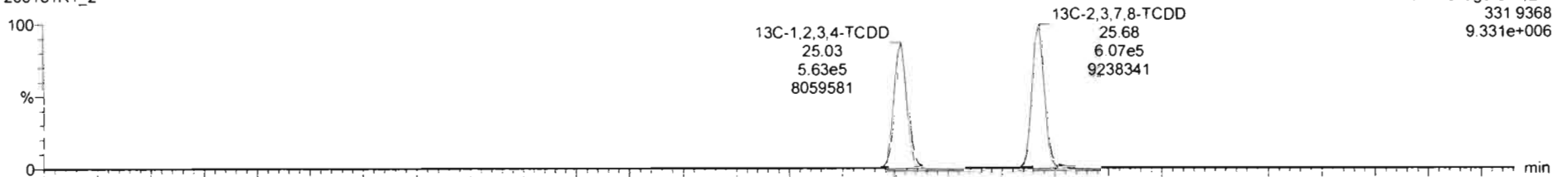


200131R1\_2

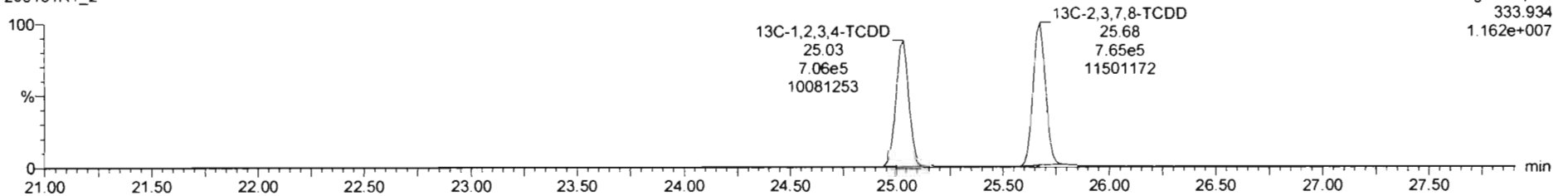


**13C-2,3,7,8-TCDD**

200131R1\_2



200131R1\_2



Dataset: Untitled

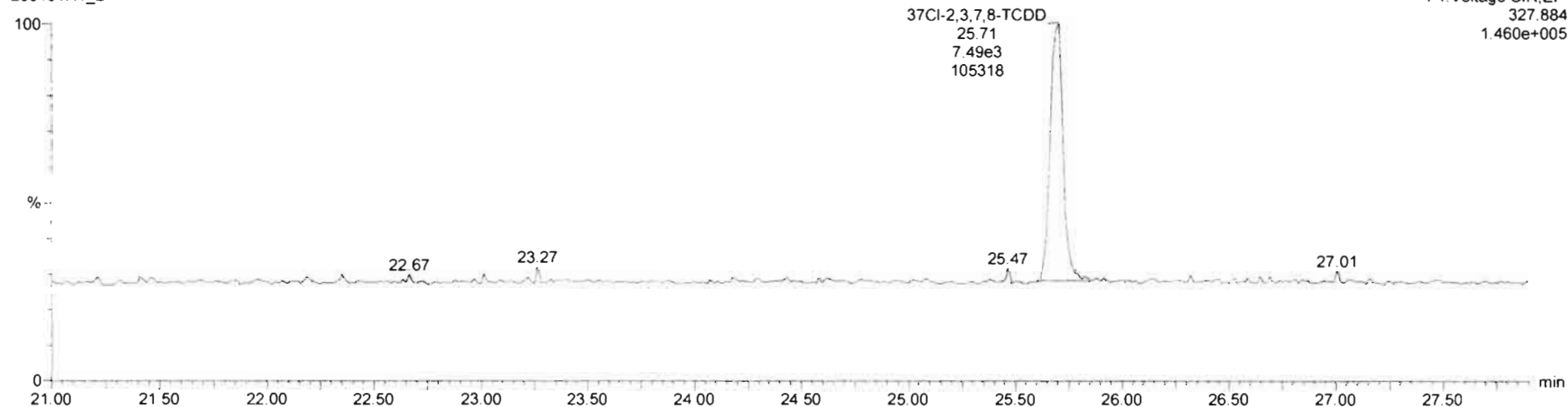
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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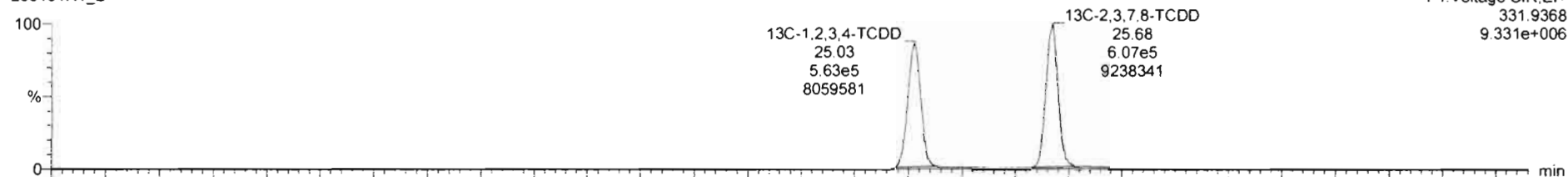
**37Cl-2,3,7,8-TCDD**

200131R1\_2

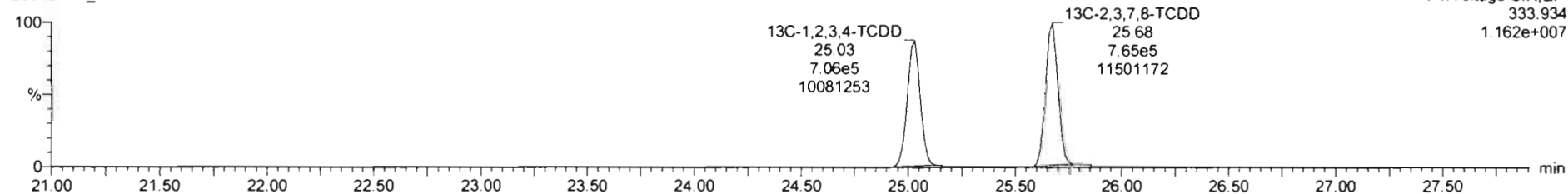


**13C-1,2,3,4-TCDD**

200131R1\_2



200131R1\_2



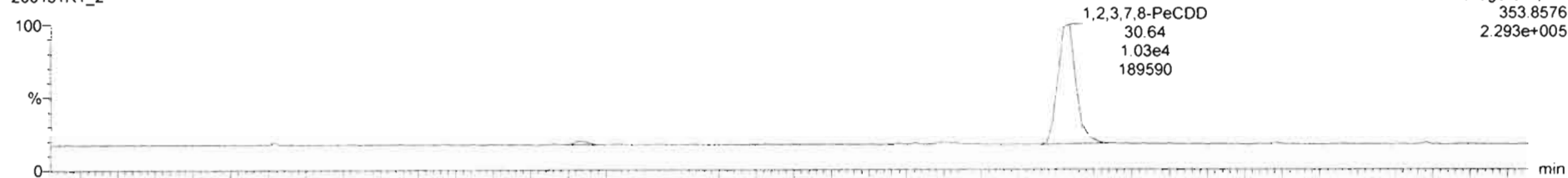
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

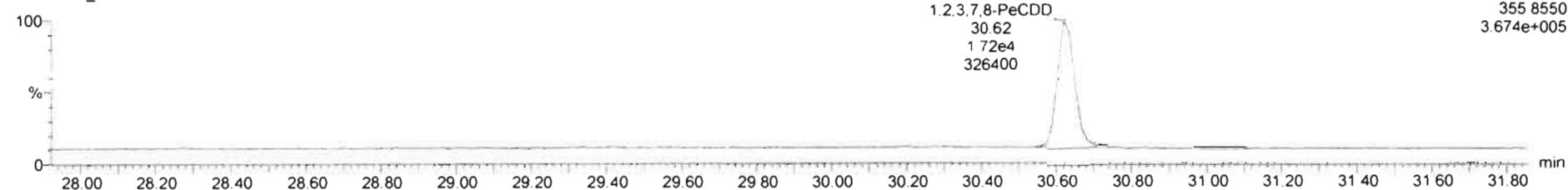
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**1,2,3,7,8-PeCDD**

200131R1\_2

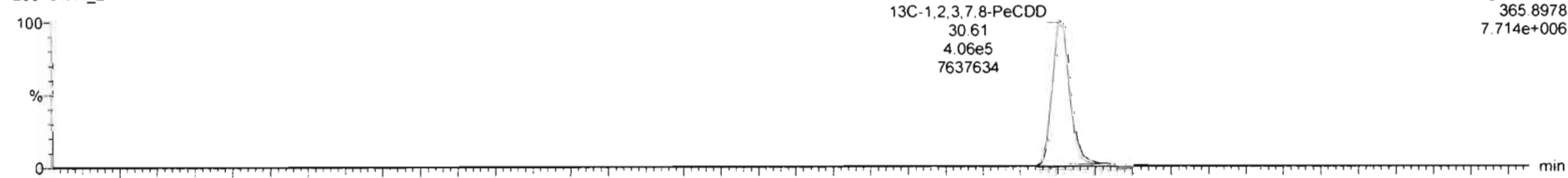


200131R1\_2

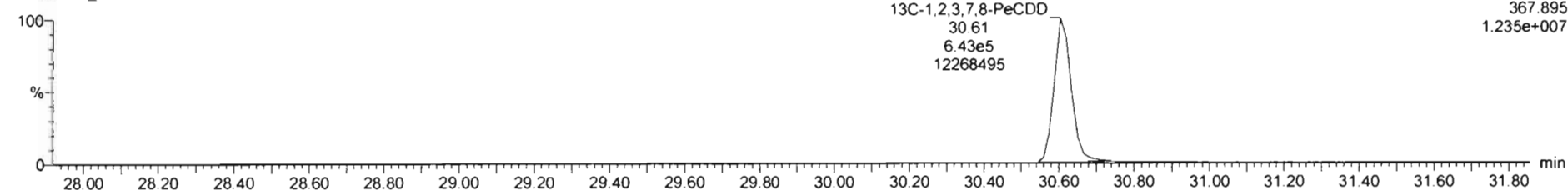


**13C-1,2,3,7,8-PeCDD**

200131R1\_2



200131R1\_2



Dataset: Untitled

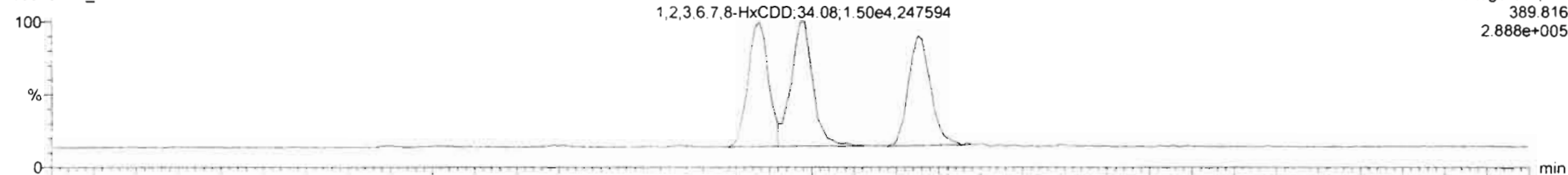
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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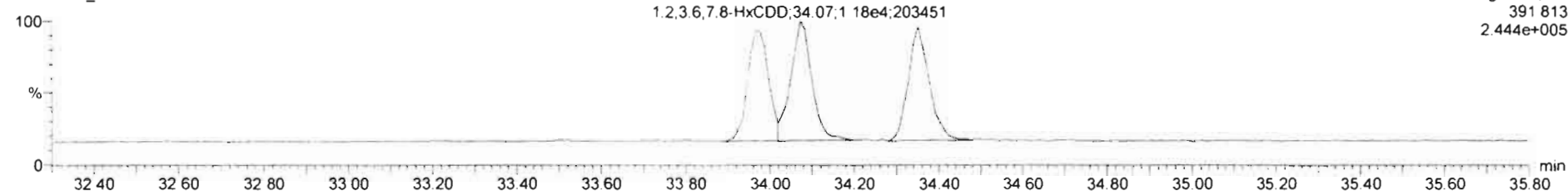
**1,2,3,4,7,8-HxCDD**

200131R1\_2



F3:Voltage SIR,EI+  
389.816  
2.888e+005

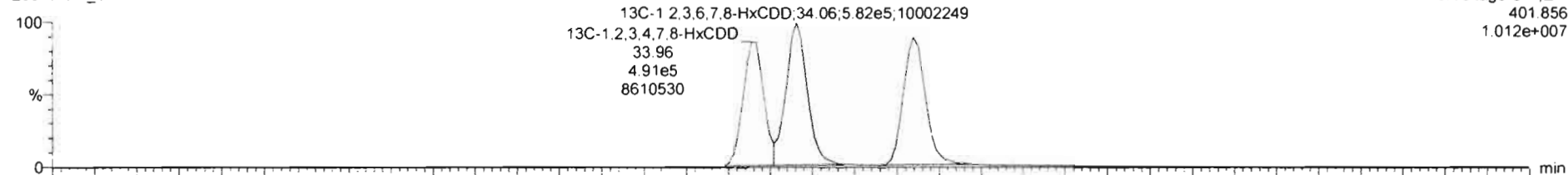
200131R1\_2



F3:Voltage SIR,EI+  
391.813  
2.444e+005

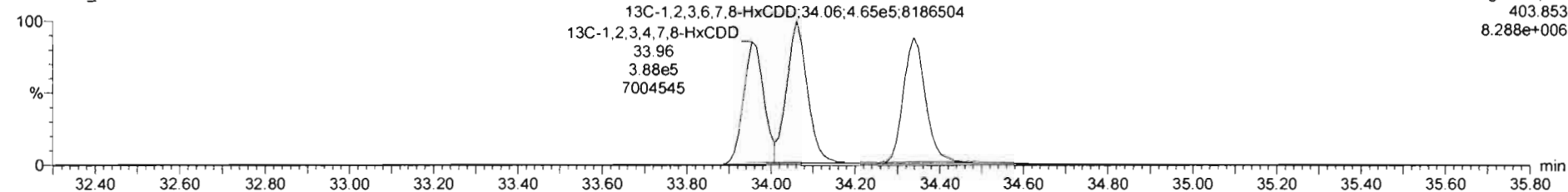
**13C-1,2,3,4,7,8-HxCDD**

200131R1\_2



F3:Voltage SIR,EI+  
401.856  
1.012e+007

200131R1\_2



F3:Voltage SIR,EI+  
403.853  
8.288e+006

Dataset: Untitled

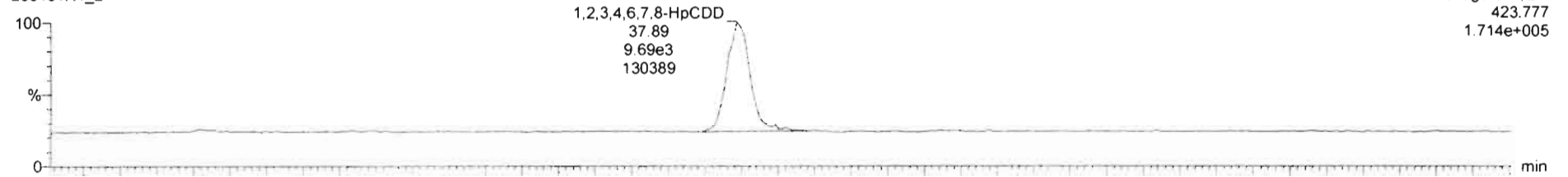
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

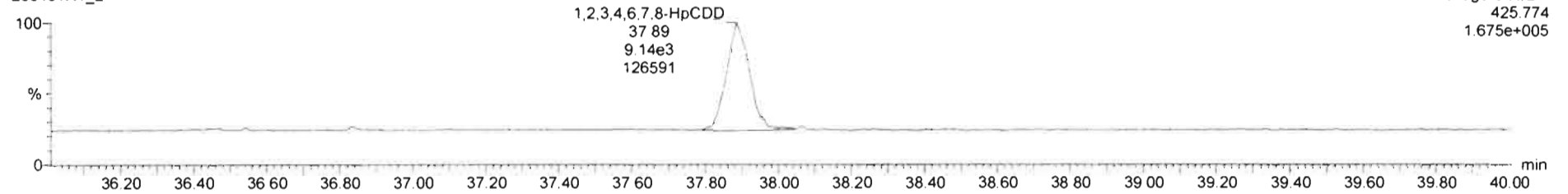
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**1,2,3,4,6,7,8-HpCDD**

200131R1\_2

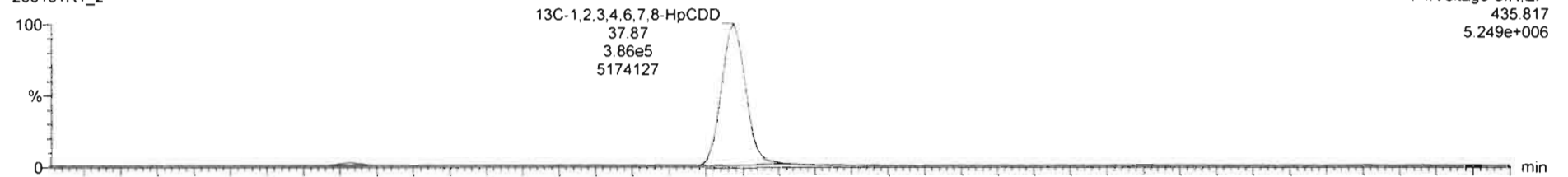


200131R1\_2

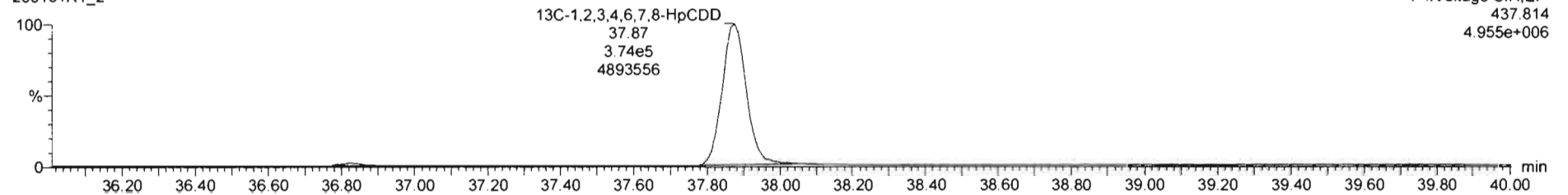


**<sup>13</sup>C-1,2,3,4,6,7,8-HpCDD**

200131R1\_2



200131R1\_2



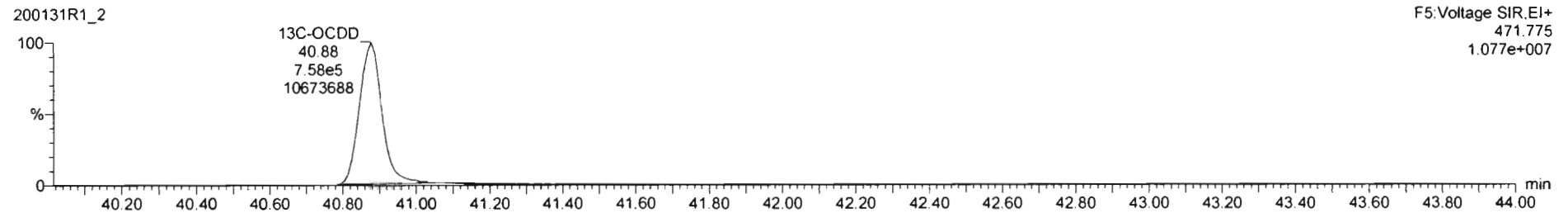
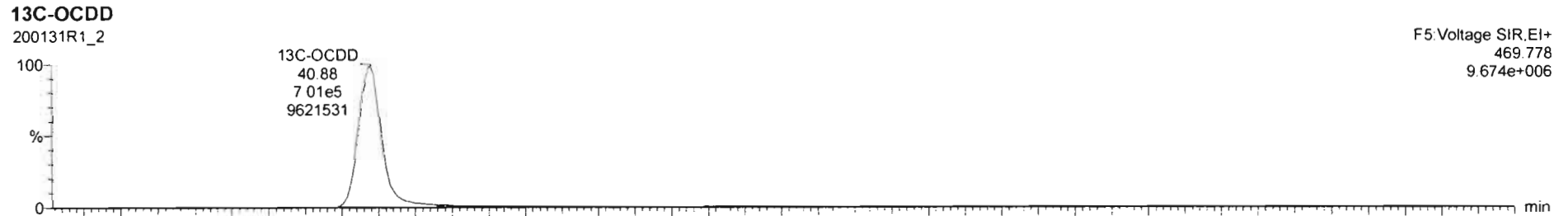
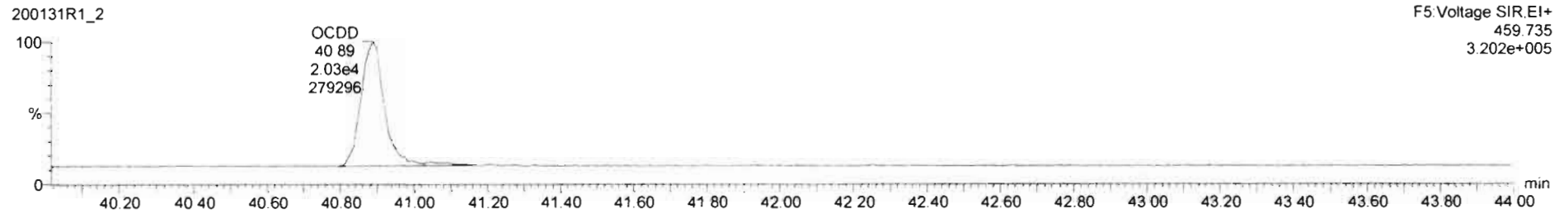
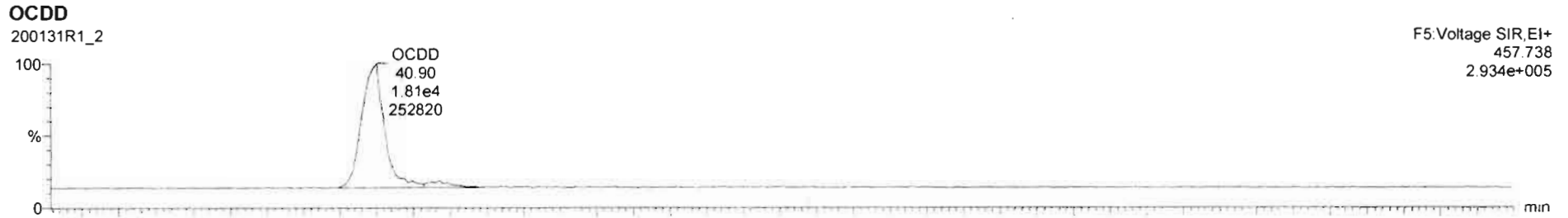


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

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



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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

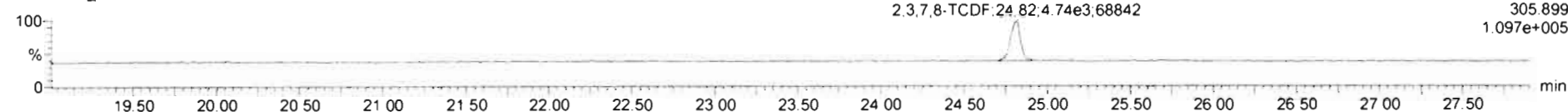
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**2,3,7,8-TCDF**

200131R1\_2

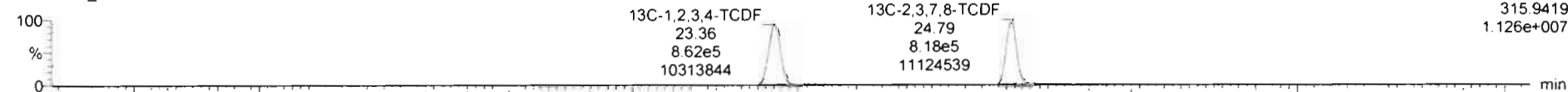


200131R1\_2

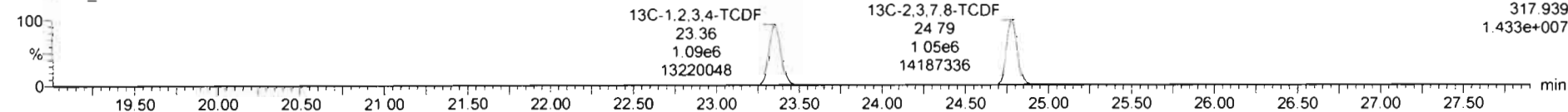


**13C-2,3,7,8-TCDF**

200131R1\_2

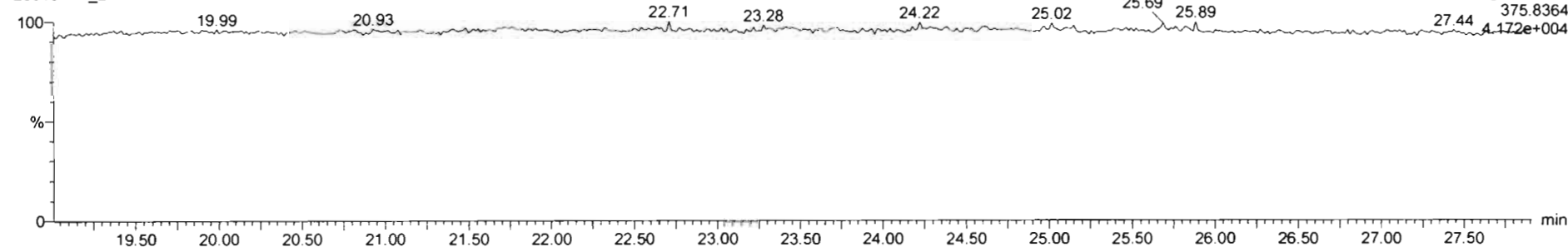


200131R1\_2



**DPE1**

200131R1\_2



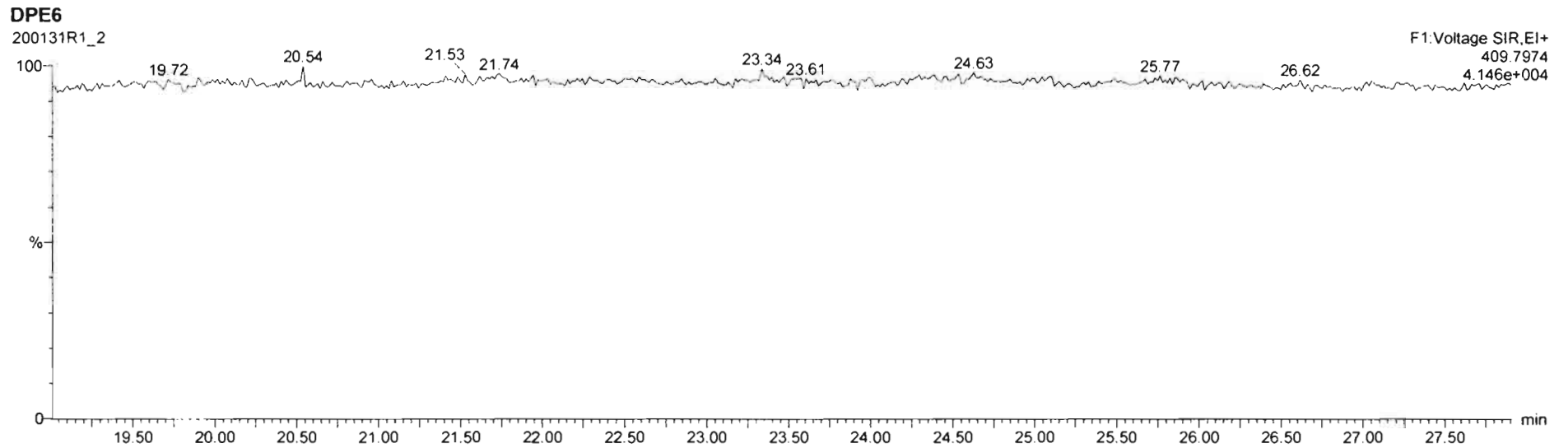
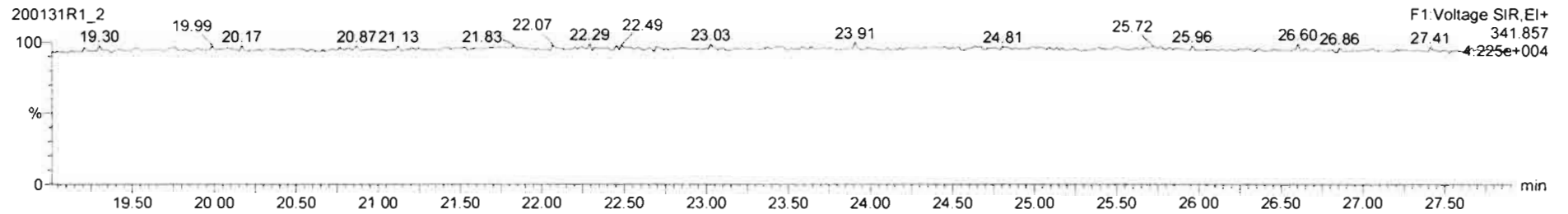
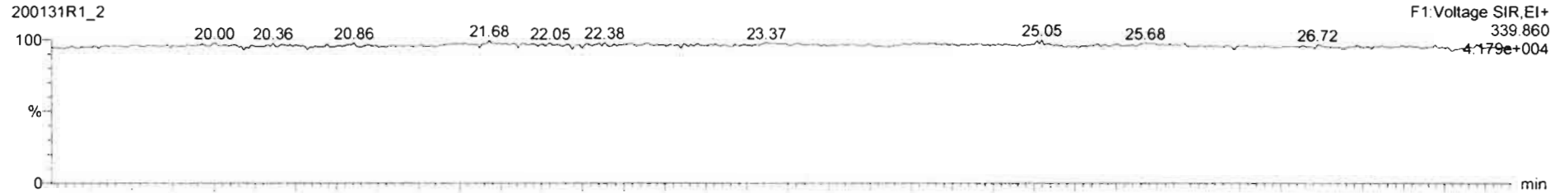
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

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

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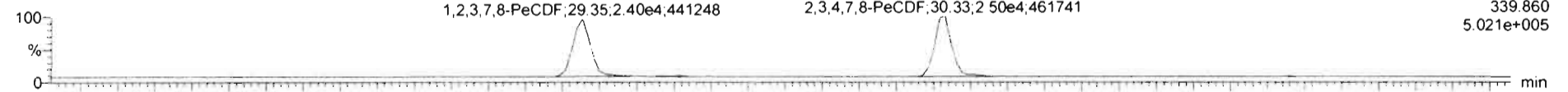
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

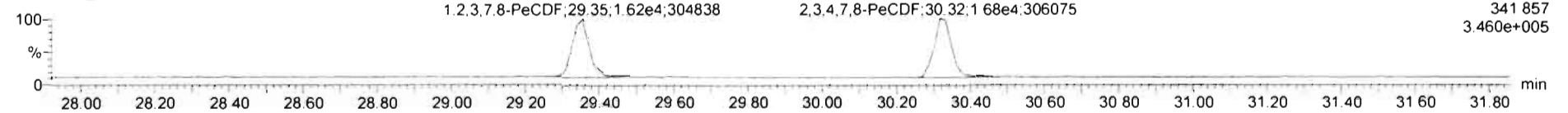
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**1,2,3,7,8-PeCDF**

200131R1\_2

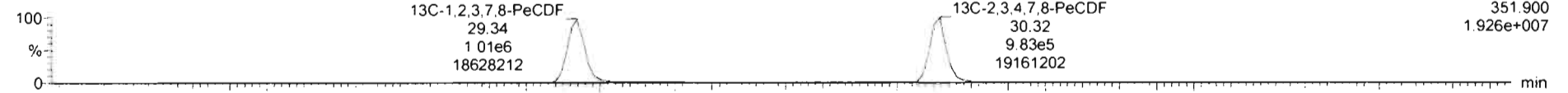


200131R1\_2

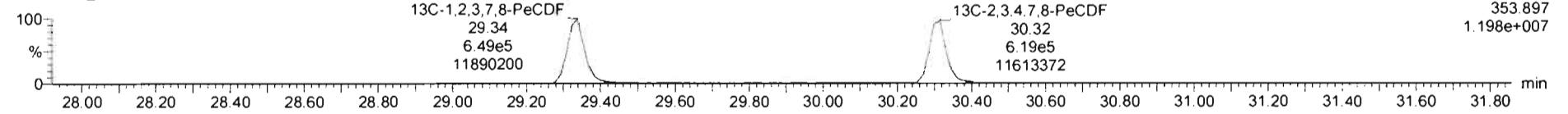


**13C-1,2,3,7,8-PeCDF**

200131R1\_2

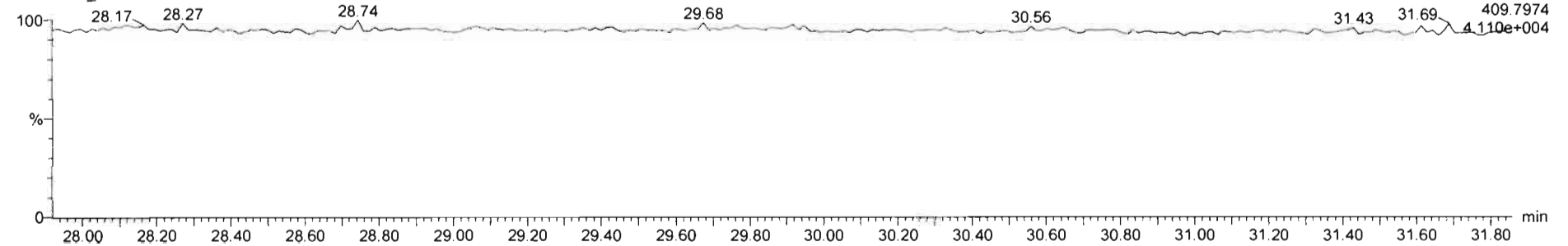


200131R1\_2



**DPE2**

200131R1\_2



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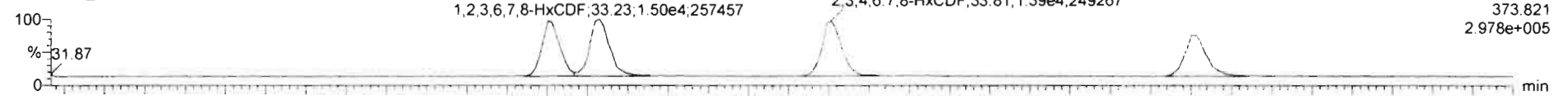
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

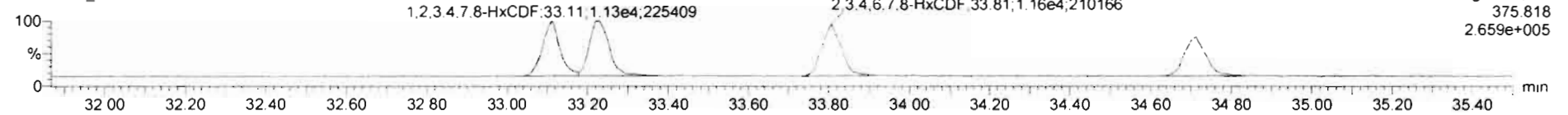
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**1,2,3,4,7,8-HxCDF**

200131R1\_2

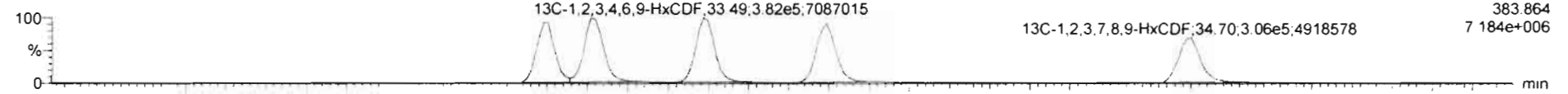


200131R1\_2

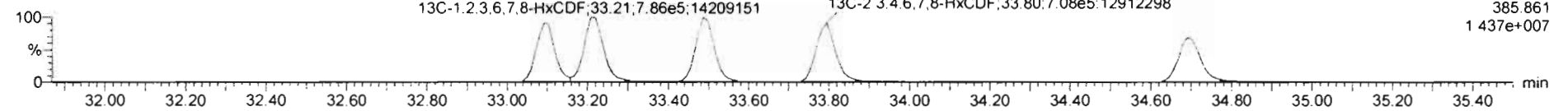


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_2

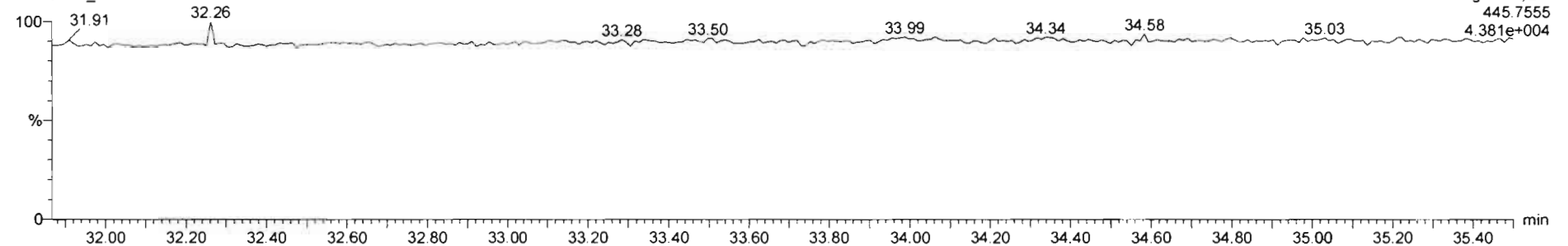


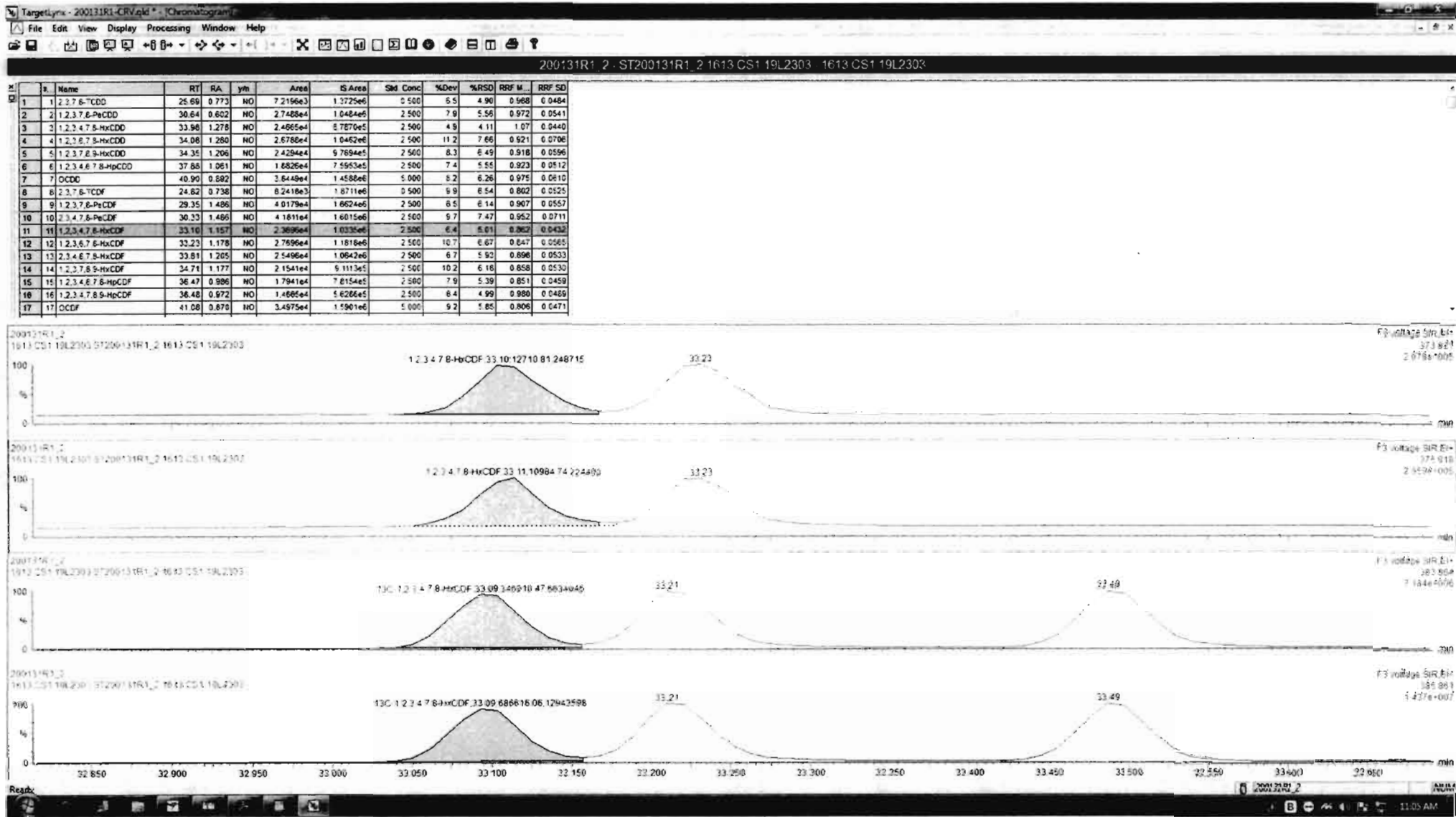
200131R1\_2

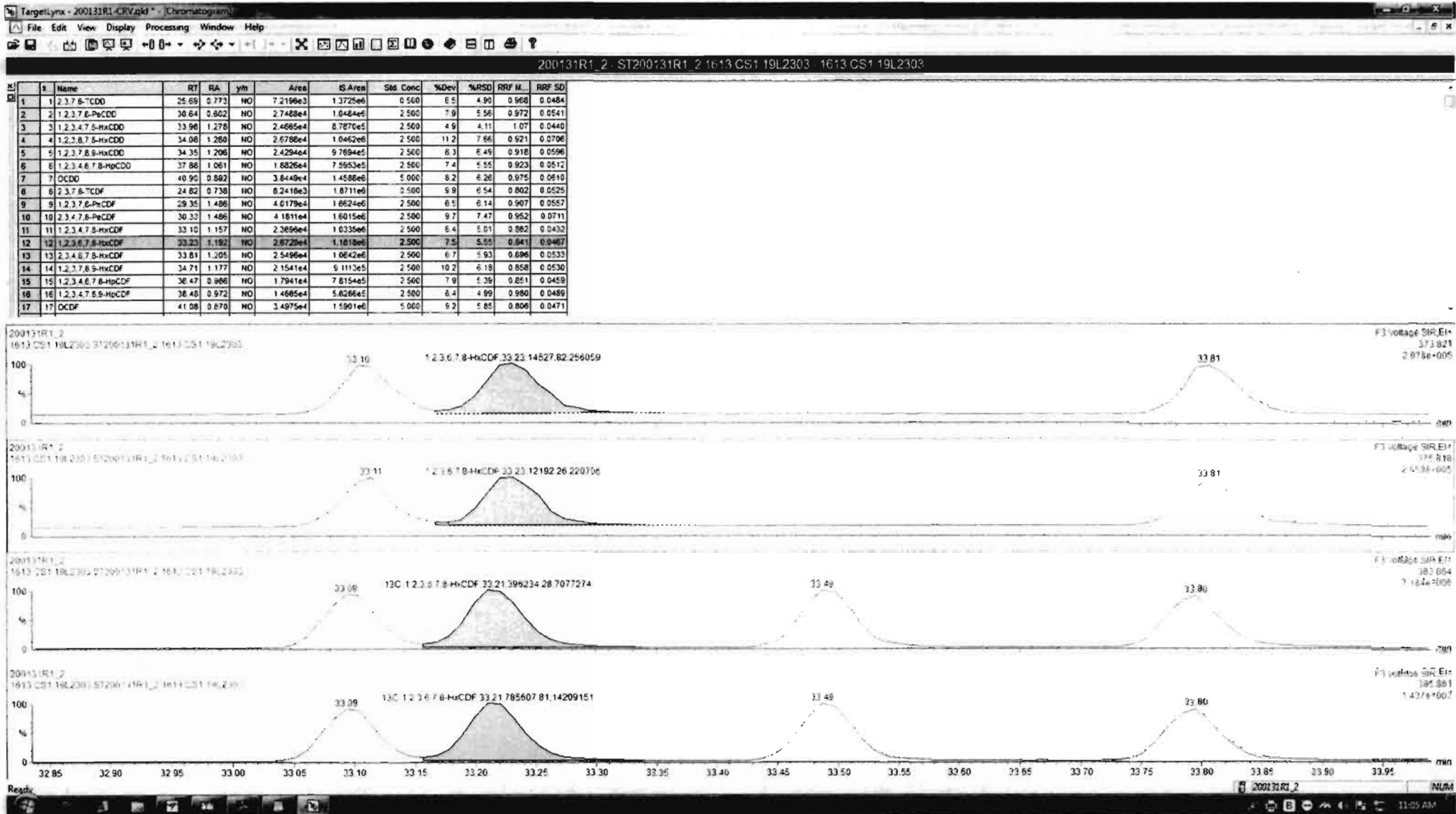


**DPE3**

200131R1\_2







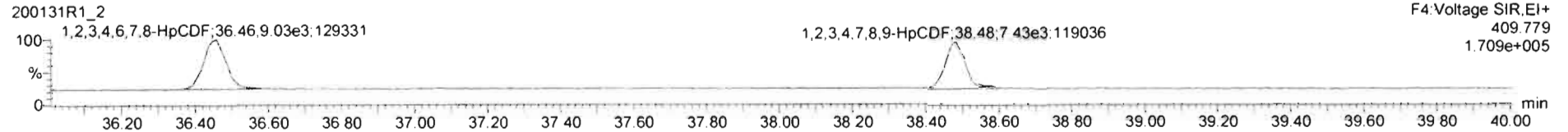
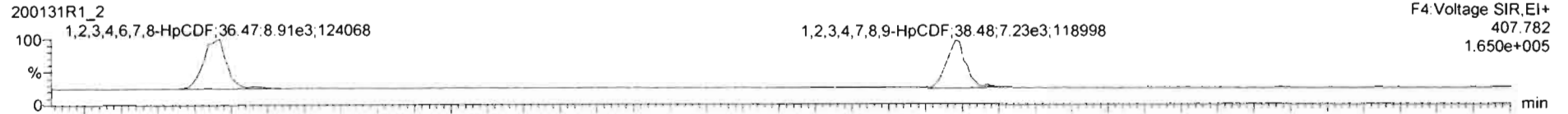
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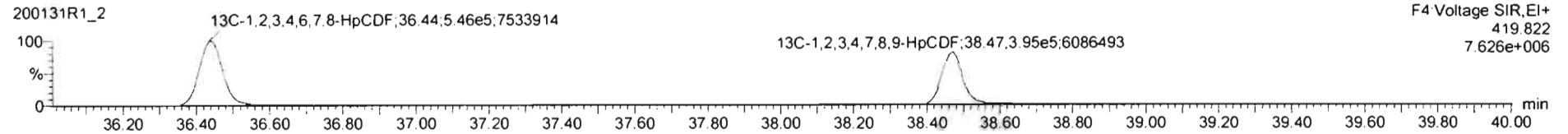
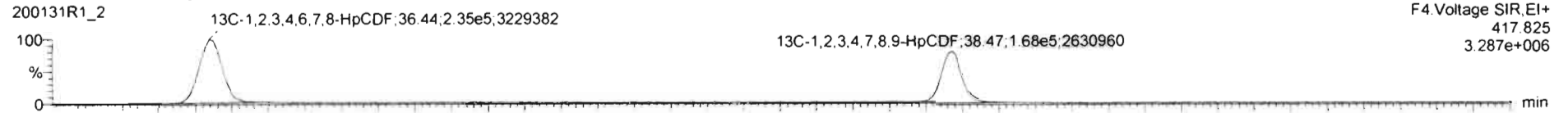
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_2, Date: 31-Jan-2020, Time: 17:37:04, ID: ST200131R1\_2 1613 CS1 19L2303, Description: 1613 CS1 19L2303

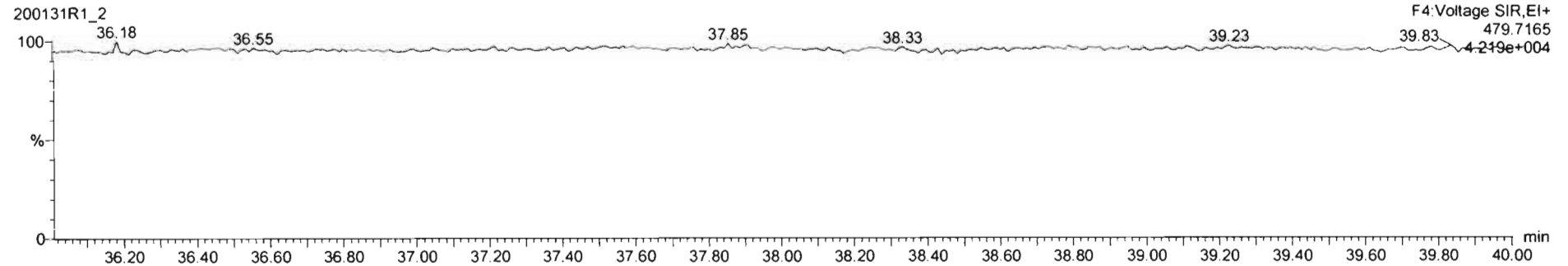
**1,2,3,4,6,7,8-HpCDF**



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



**DPE4**

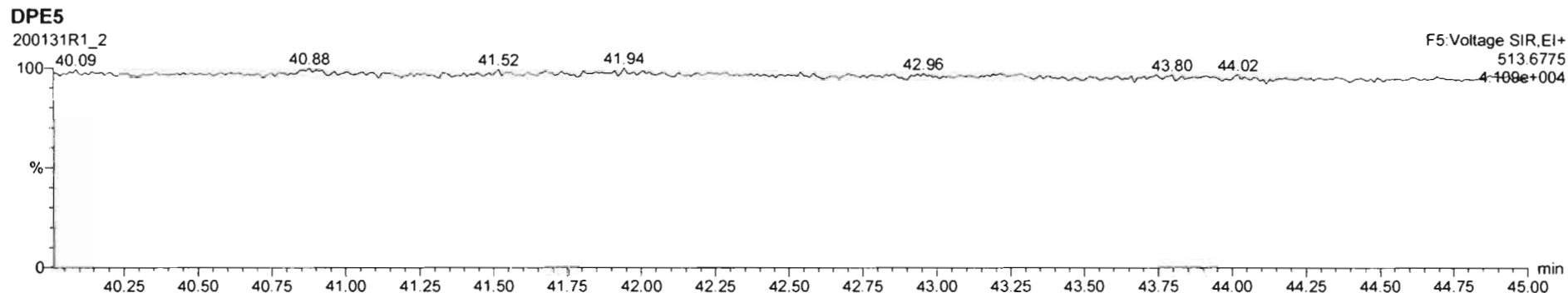
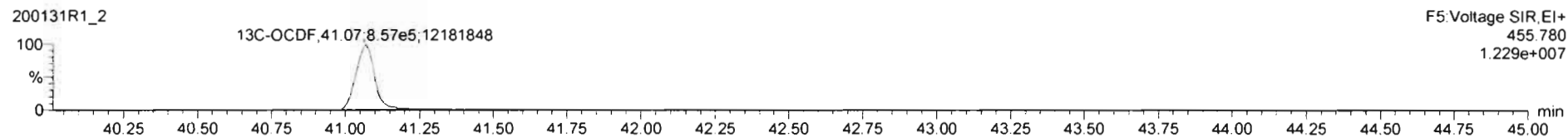
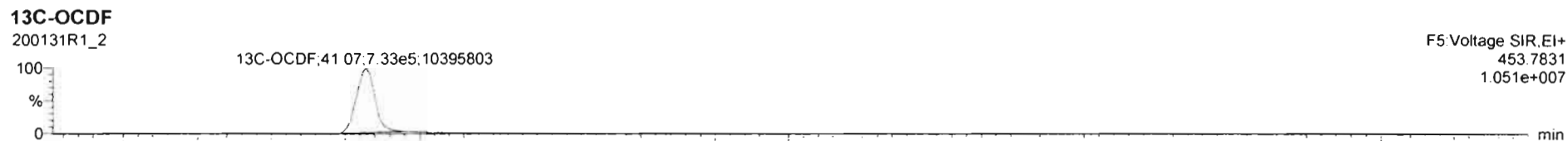
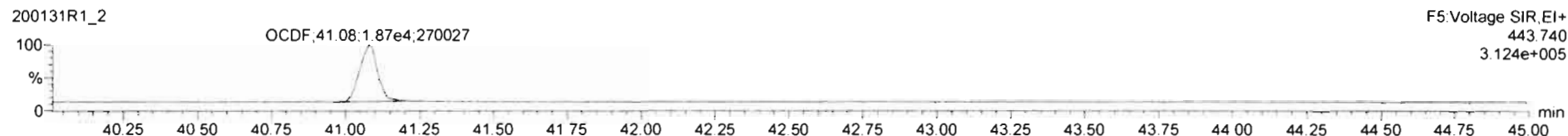
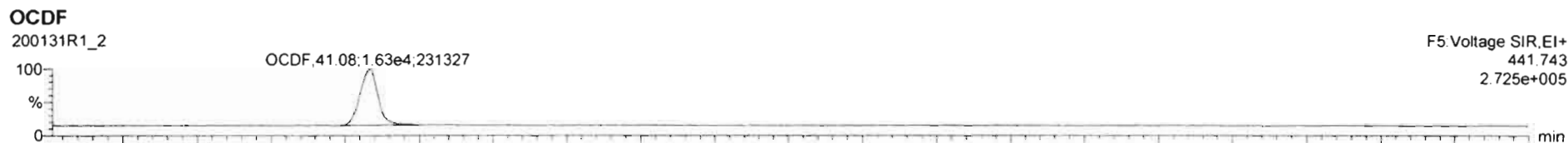




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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_2, Date: 31-Jan-2020, Time: 17:37:04, ID: ST200131R1\_2 1613 CS1 19L2303, Description: 1613 CS1 19L2303

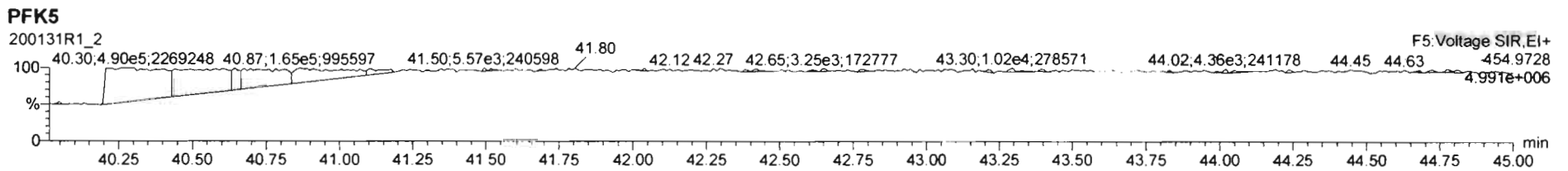
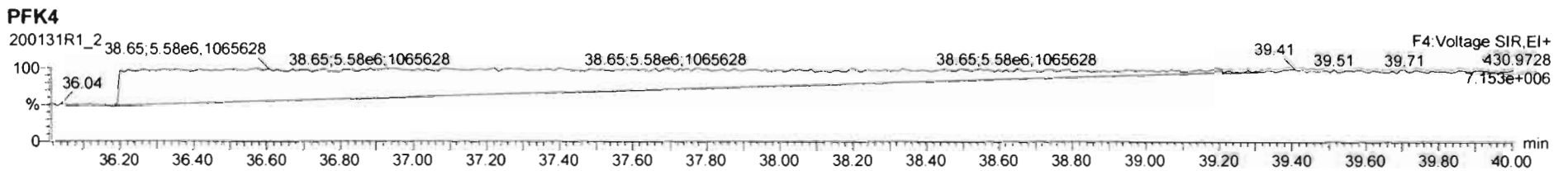
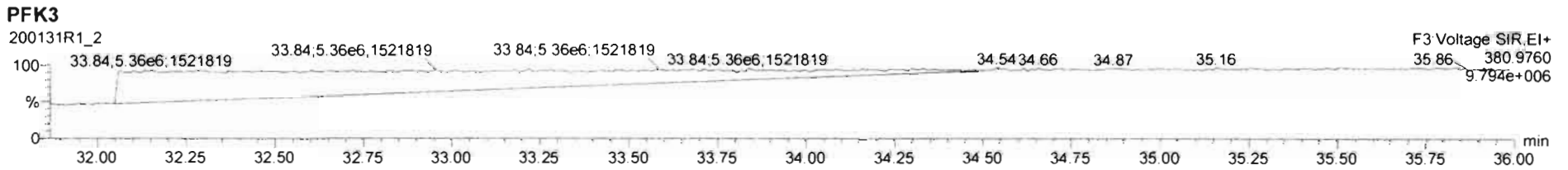
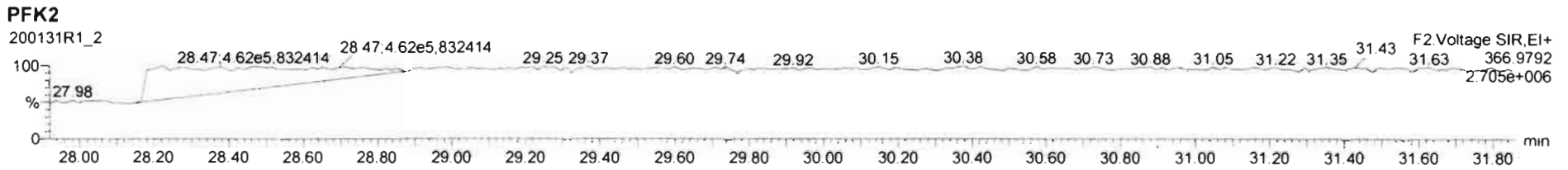
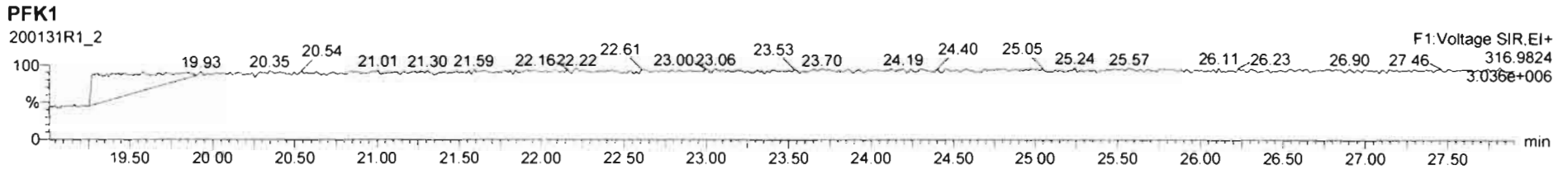


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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_2, Date: 31-Jan-2020, Time: 17:37:04, ID: ST200131R1\_2 1613 CS1 19L2303, Description: 1613 CS1 19L2303



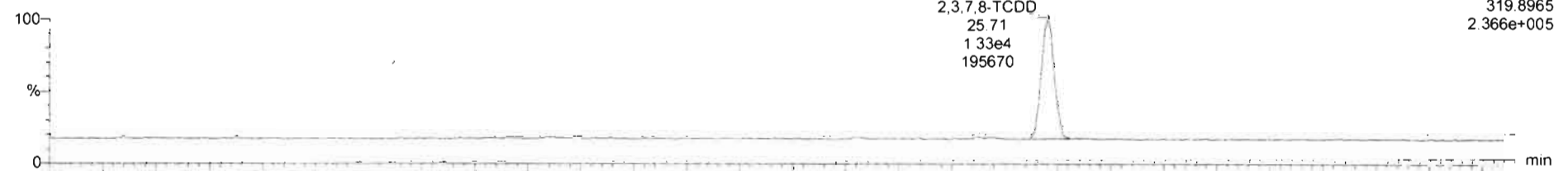
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

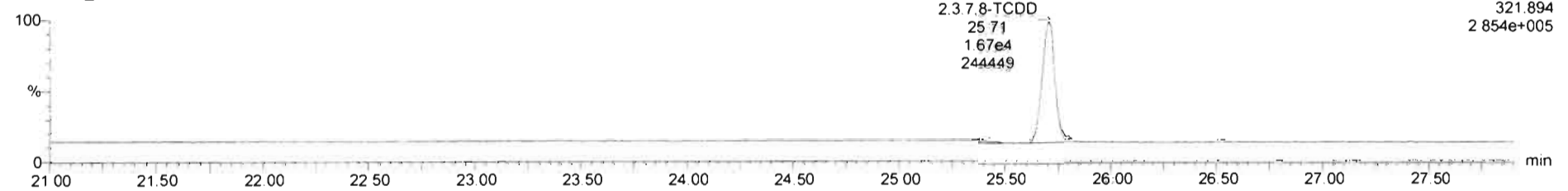
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**2,3,7,8-TCDD**

200131R1\_3

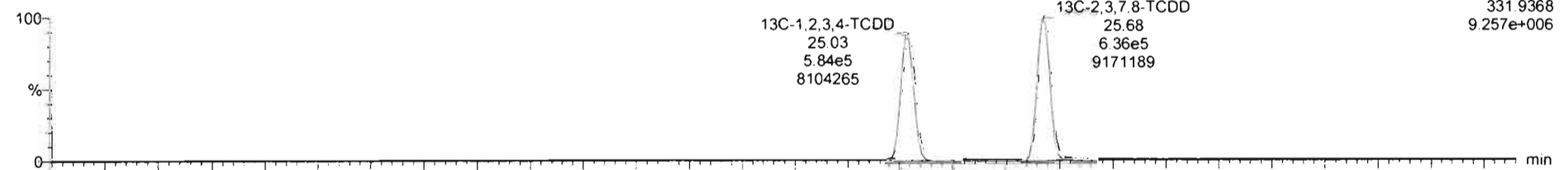


200131R1\_3

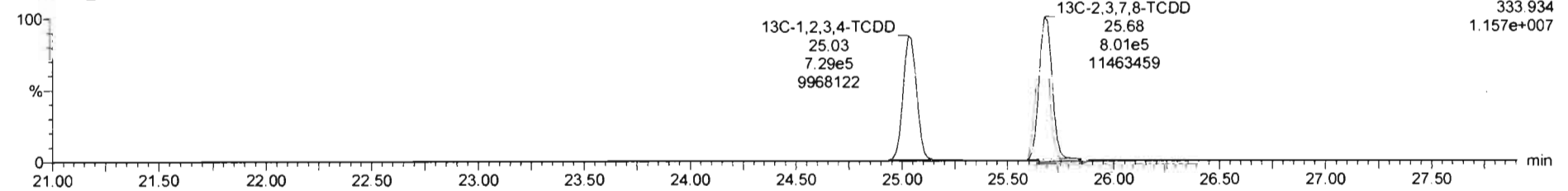


**13C-2,3,7,8-TCDD**

200131R1\_3



200131R1\_3



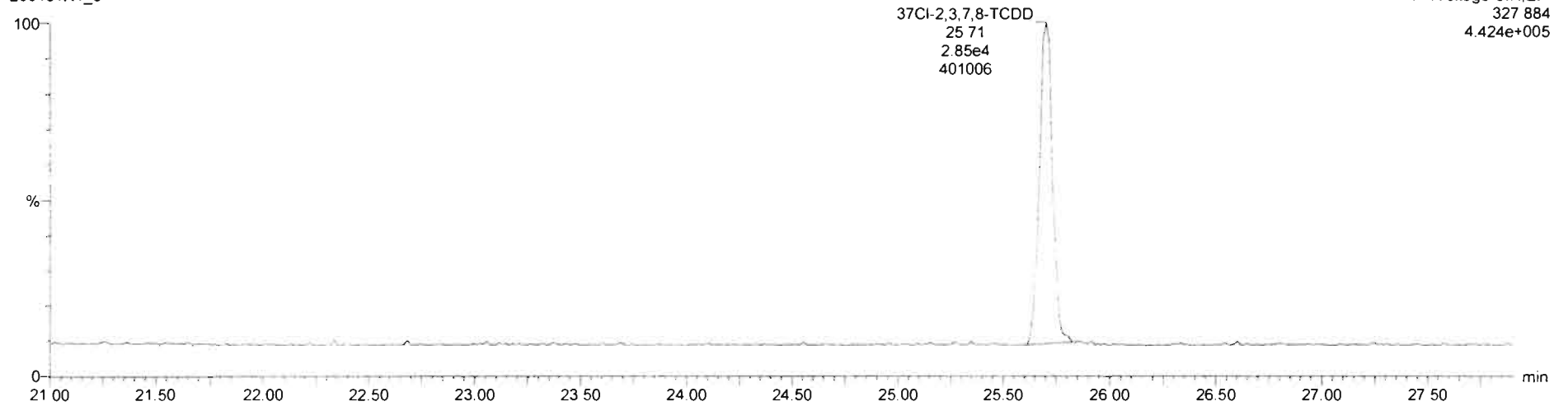
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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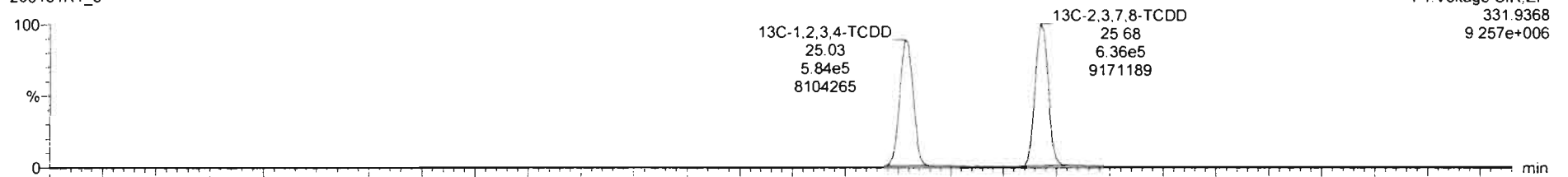
**37Cl-2,3,7,8-TCDD**

200131R1\_3

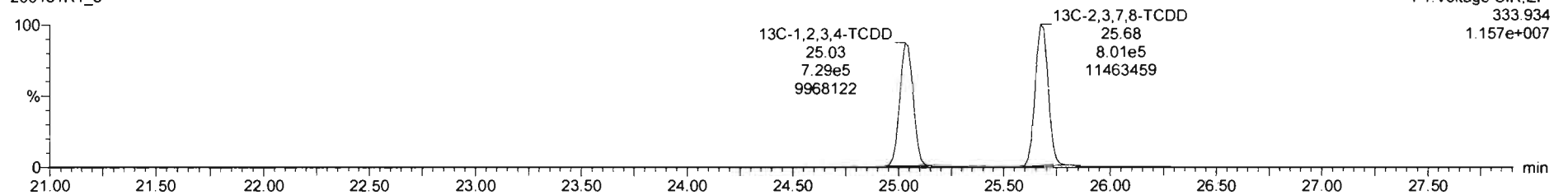


**13C-1,2,3,4-TCDD**

200131R1\_3



200131R1\_3



Dataset: Untitled

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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

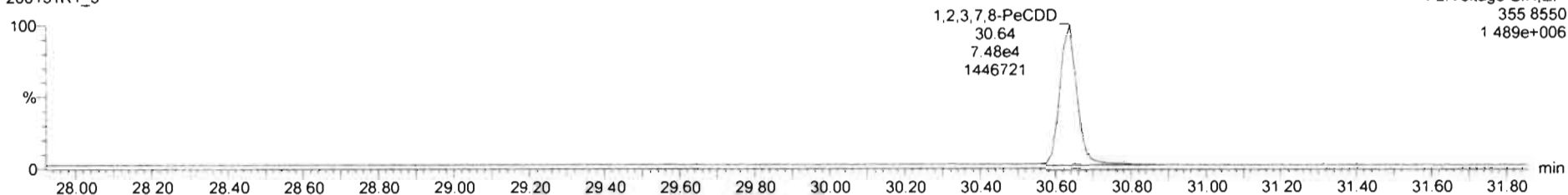
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**1,2,3,7,8-PeCDD**

200131R1\_3

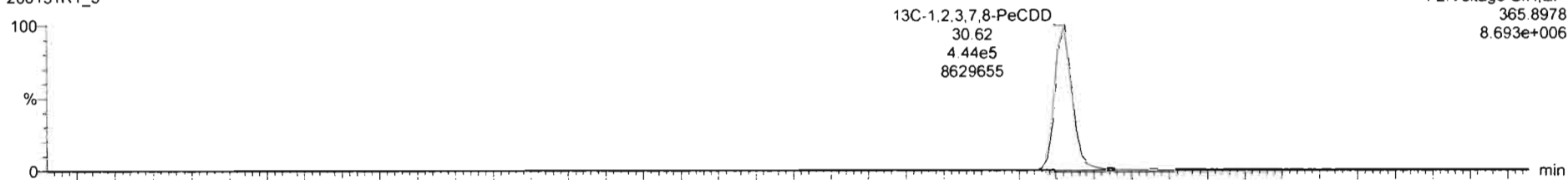


200131R1\_3

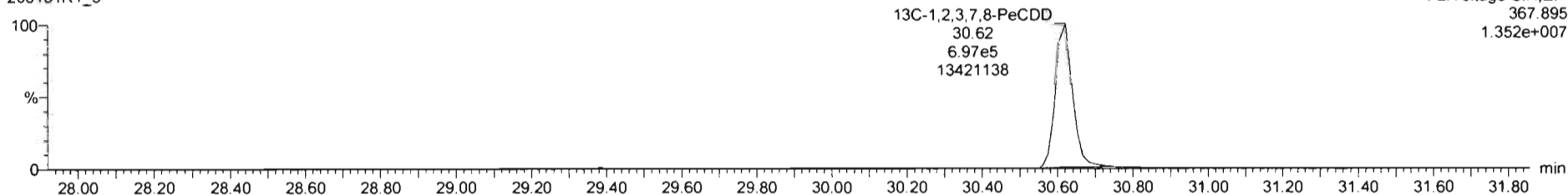


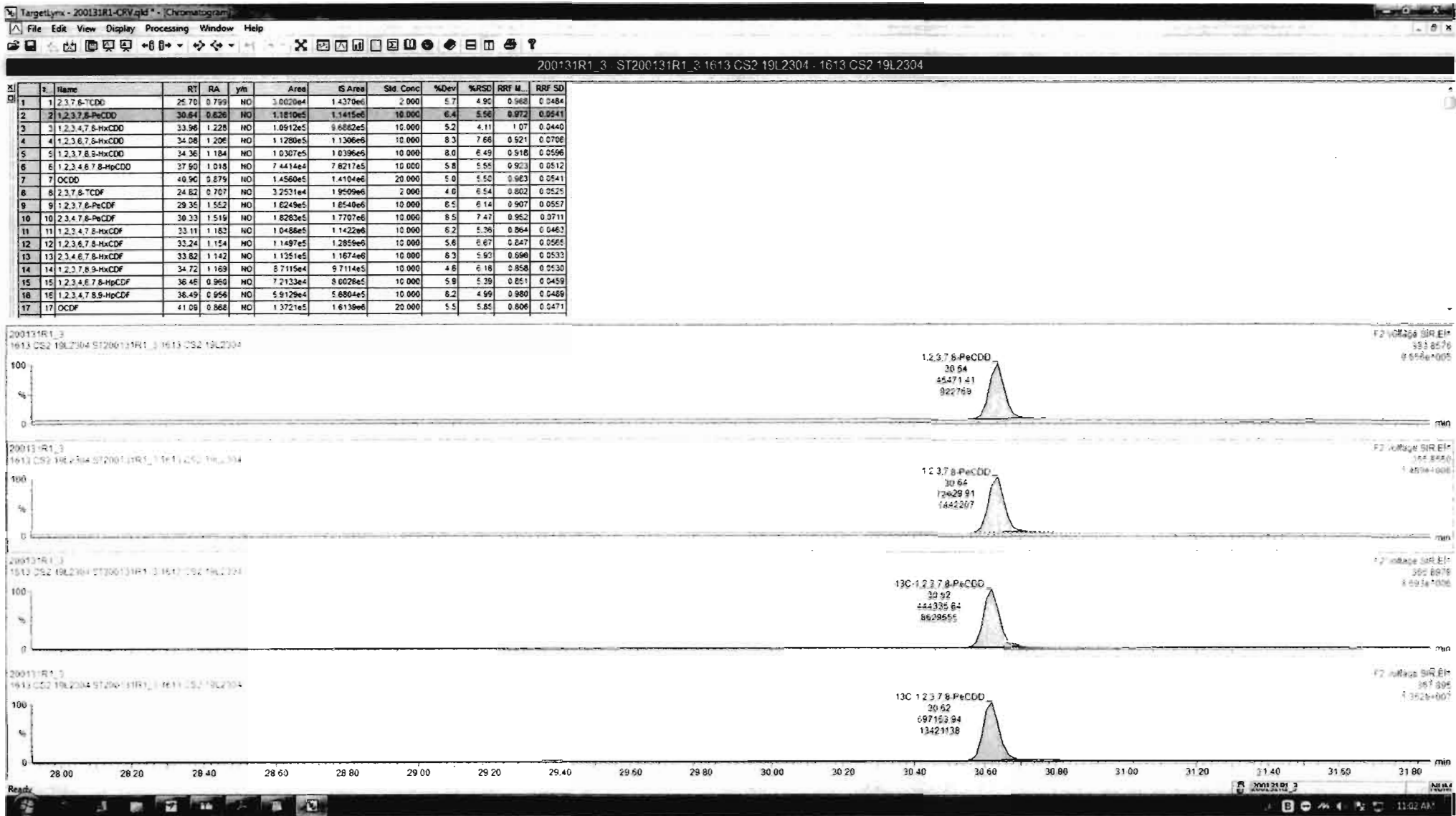
**13C-1,2,3,7,8-PeCDD**

200131R1\_3



200131R1\_3





Dataset: Untitled

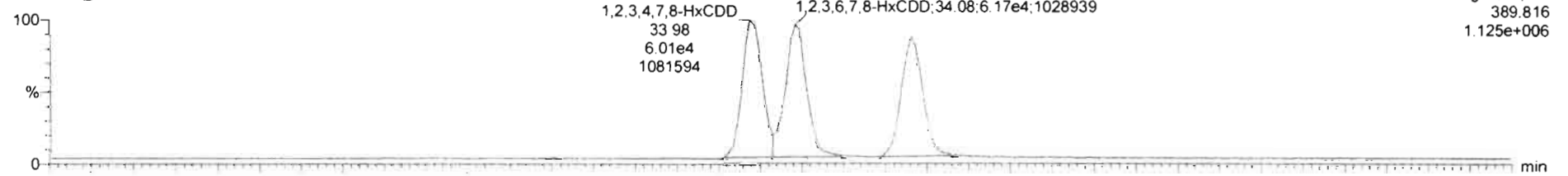
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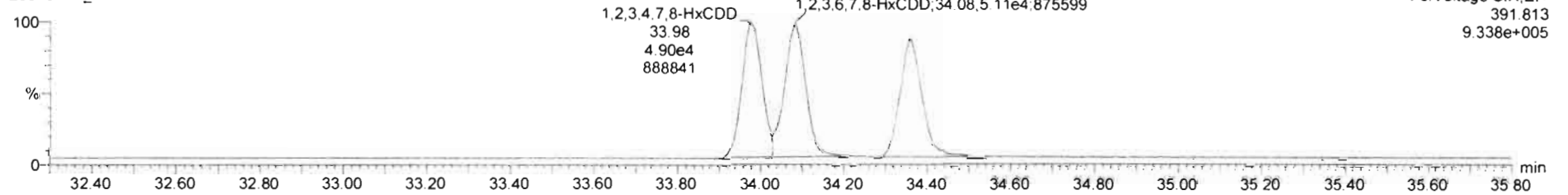
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**1,2,3,4,7,8-HxCDD**

200131R1\_3

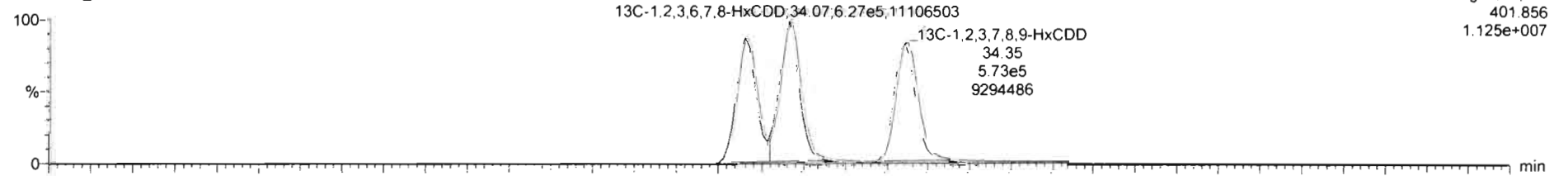


200131R1\_3

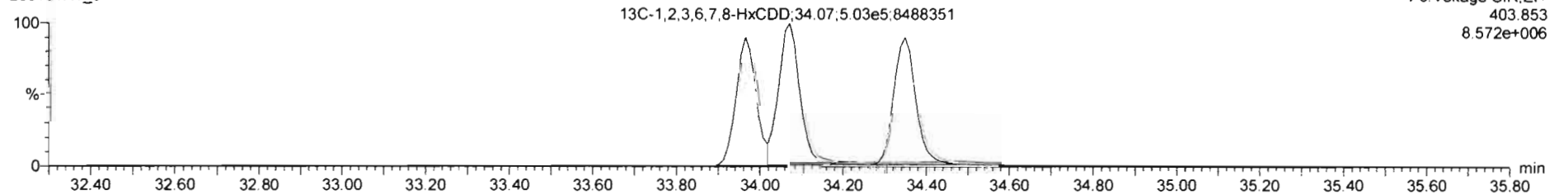


**13C-1,2,3,4,7,8-HxCDD**

200131R1\_3



200131R1\_3



Dataset: Untitled

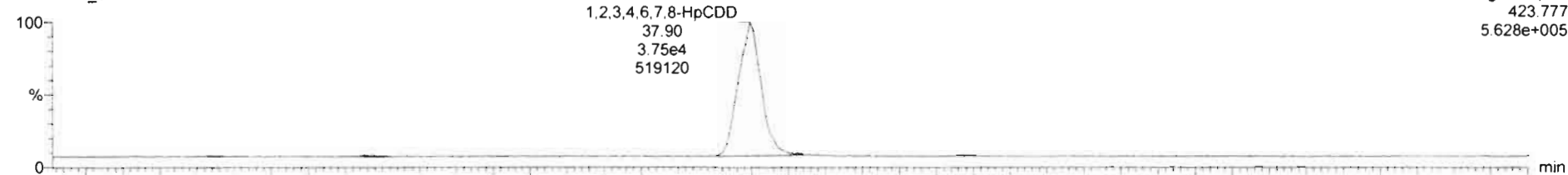
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

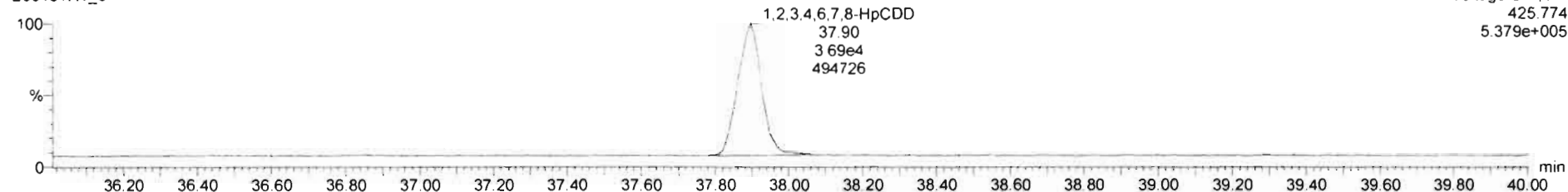
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1,2,3,4,6,7,8-HpCDD

200131R1\_3

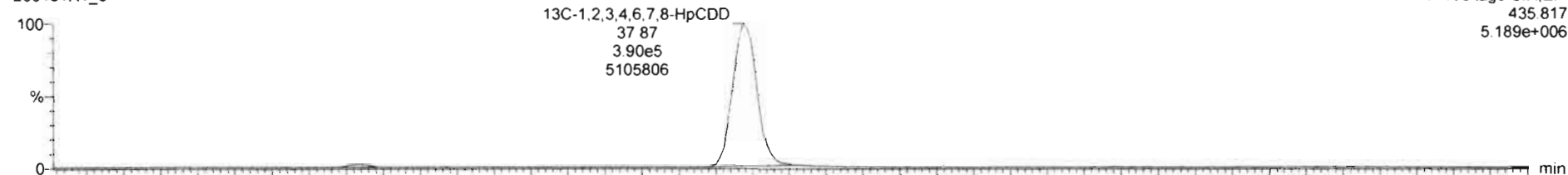


200131R1\_3

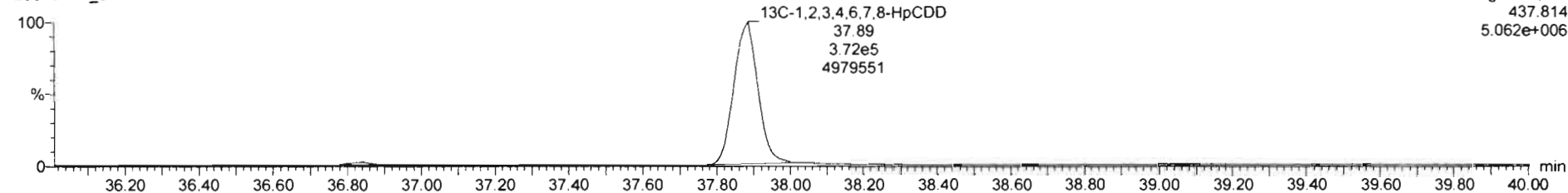


13C-1,2,3,4,6,7,8-HpCDD

200131R1\_3



200131R1\_3

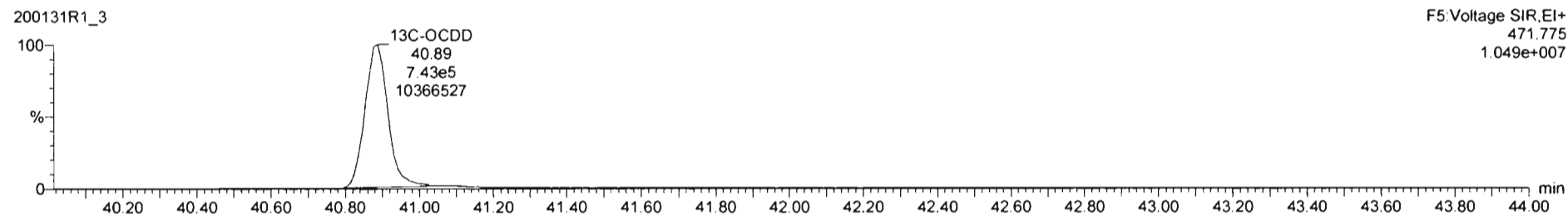
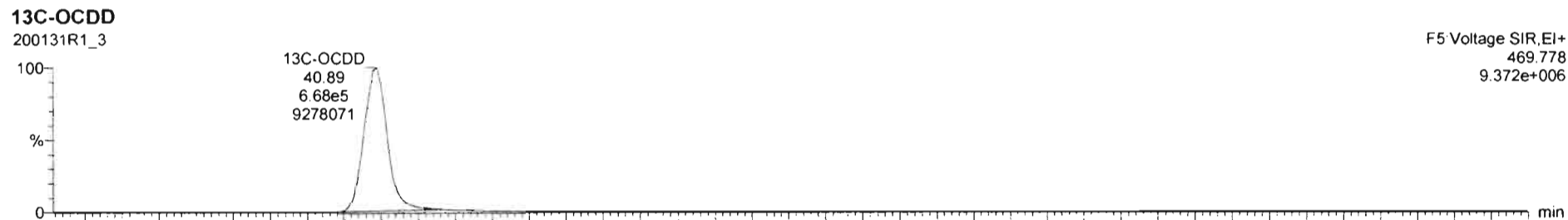
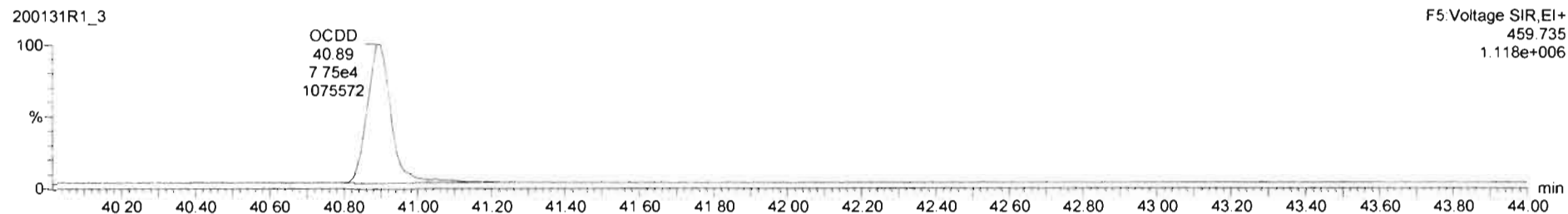
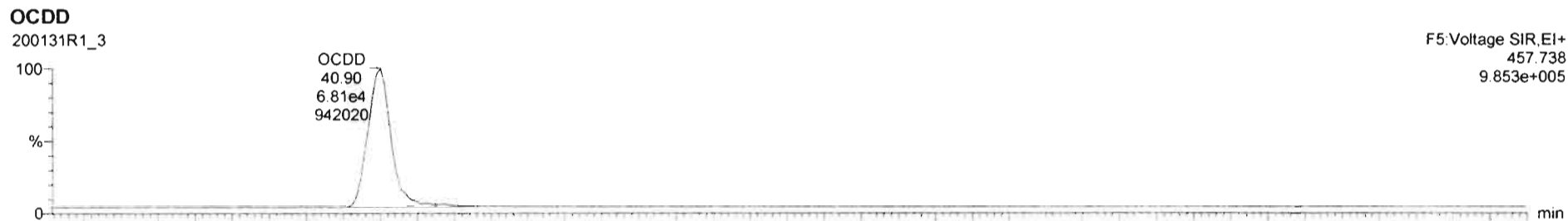




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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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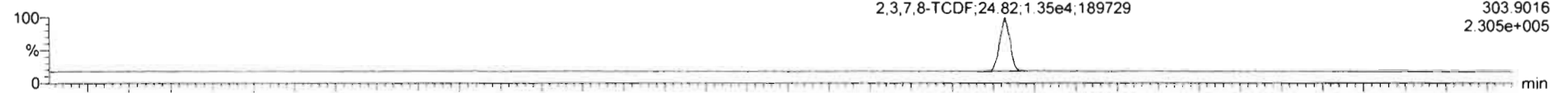
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

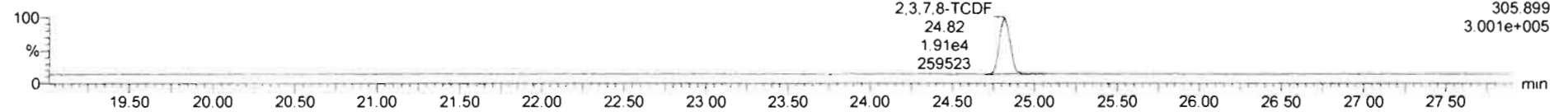
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**2,3,7,8-TCDF**

200131R1\_3

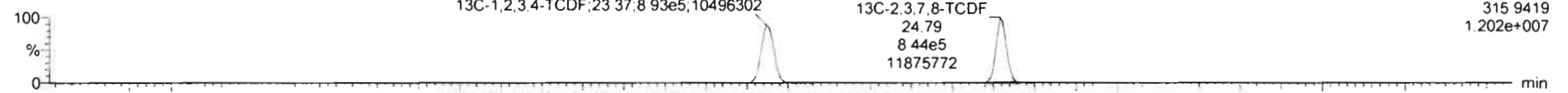


200131R1\_3

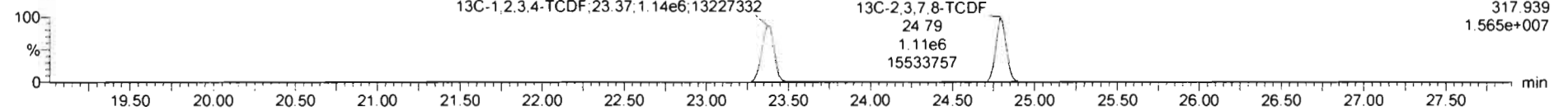


**13C-2,3,7,8-TCDF**

200131R1\_3

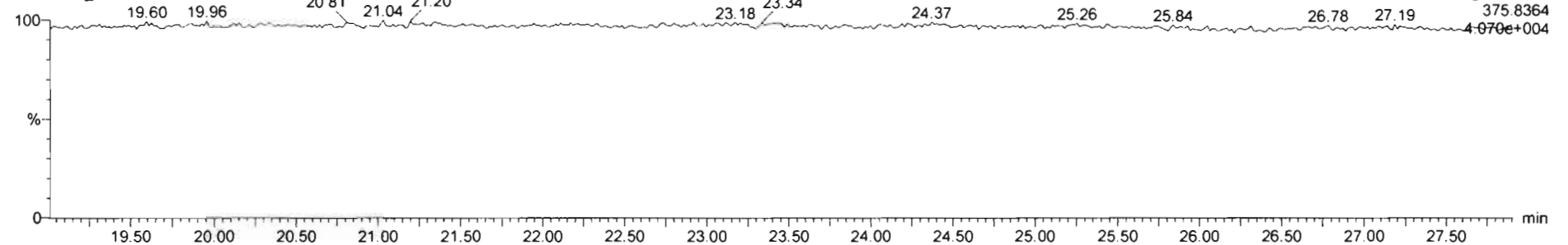


200131R1\_3



**DPE1**

200131R1\_3

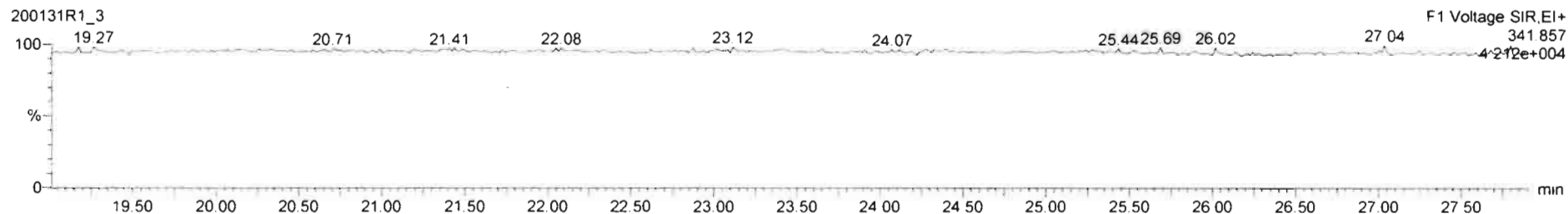
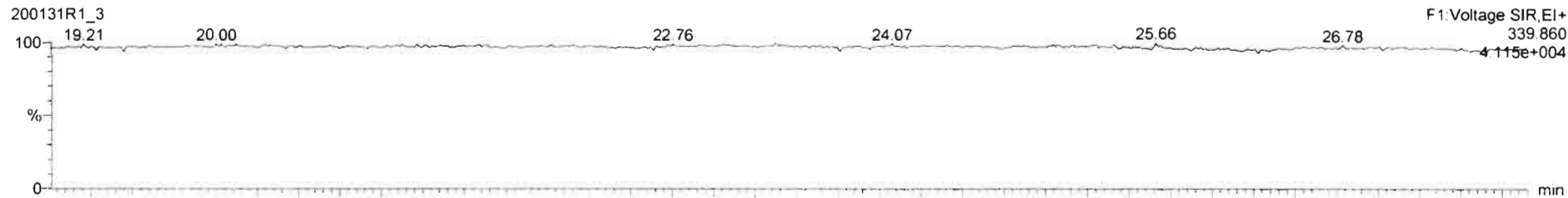


Dataset: Untitled

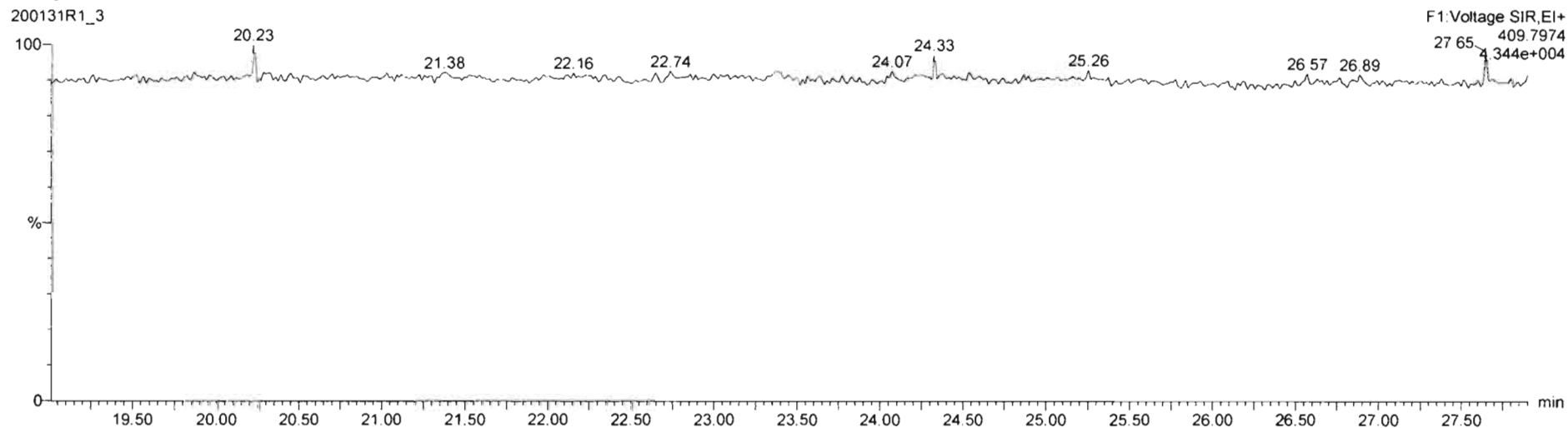
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

1st Func. Penta-Furans



DPE6



Dataset: Untitled

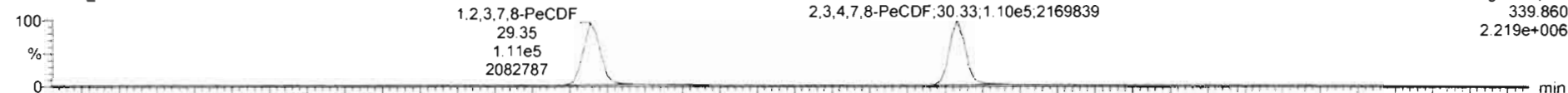
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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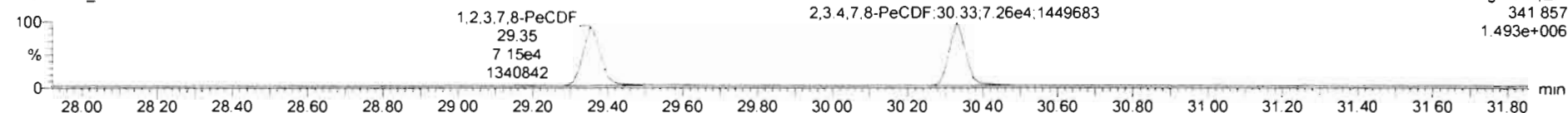
**1,2,3,7,8-PeCDF**

200131R1\_3



F2: Voltage SIR, EI+  
339.860  
2.219e+006

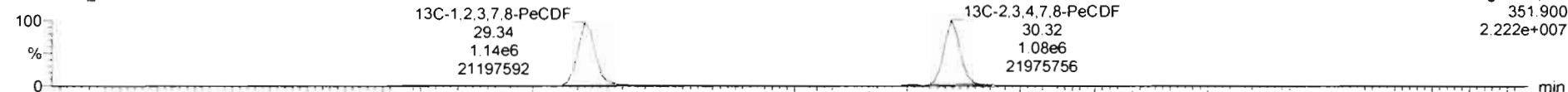
200131R1\_3



F2: Voltage SIR, EI+  
341.857  
1.493e+006

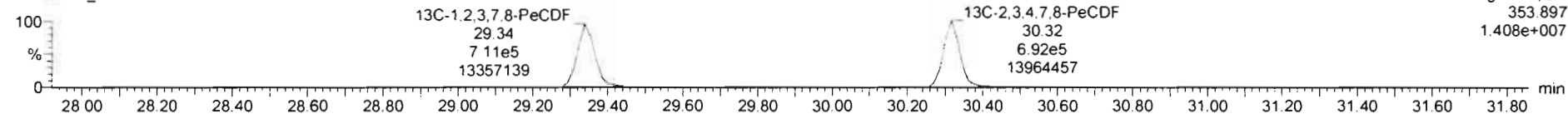
**13C-1,2,3,7,8-PeCDF**

200131R1\_3



F2: Voltage SIR, EI+  
351.900  
2.222e+007

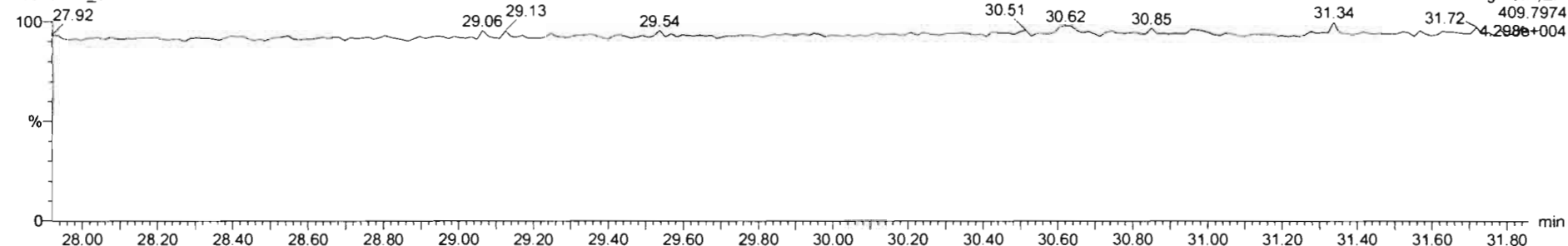
200131R1\_3



F2: Voltage SIR, EI+  
353.897  
1.408e+007

**DPE2**

200131R1\_3



F2: Voltage SIR, EI+  
409.7974  
4.298e+004

Dataset: Untitled

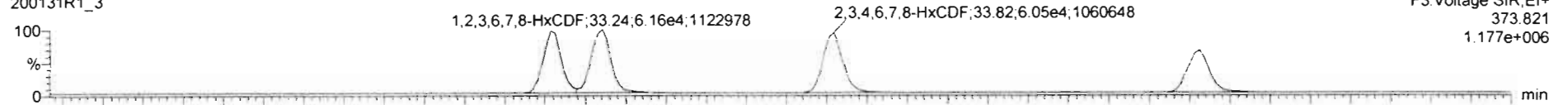
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Name: 200131R1\_3, Date: 31-Jan-2020, Time: 18:23:19, ID: ST200131R1\_3 1613 CS2 19L2304, Description: 1613 CS2 19L2304

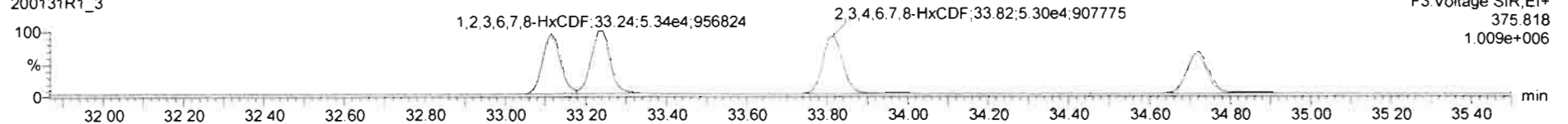
**1,2,3,4,7,8-HxCDF**

200131R1\_3



F3: Voltage SIR, EI+  
373.821  
1.177e+006

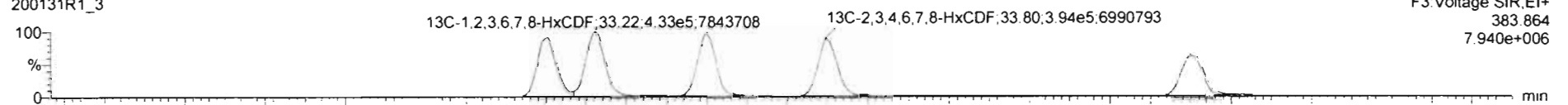
200131R1\_3



F3: Voltage SIR, EI+  
375.818  
1.009e+006

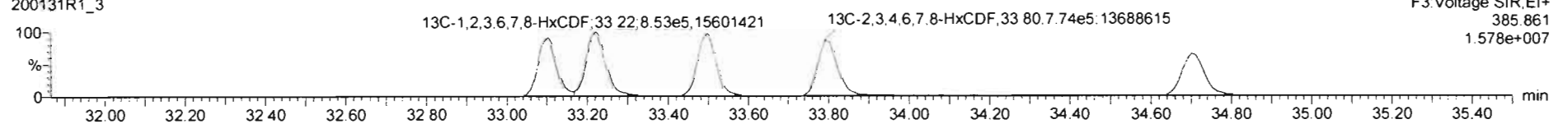
**13C-1,2,3,4,7,8-HxCDF**

200131R1\_3



F3: Voltage SIR, EI+  
383.864  
7.940e+006

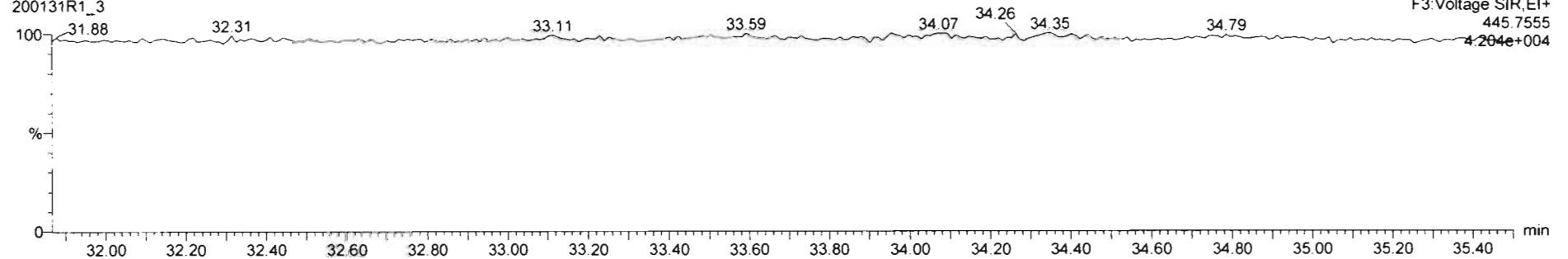
200131R1\_3



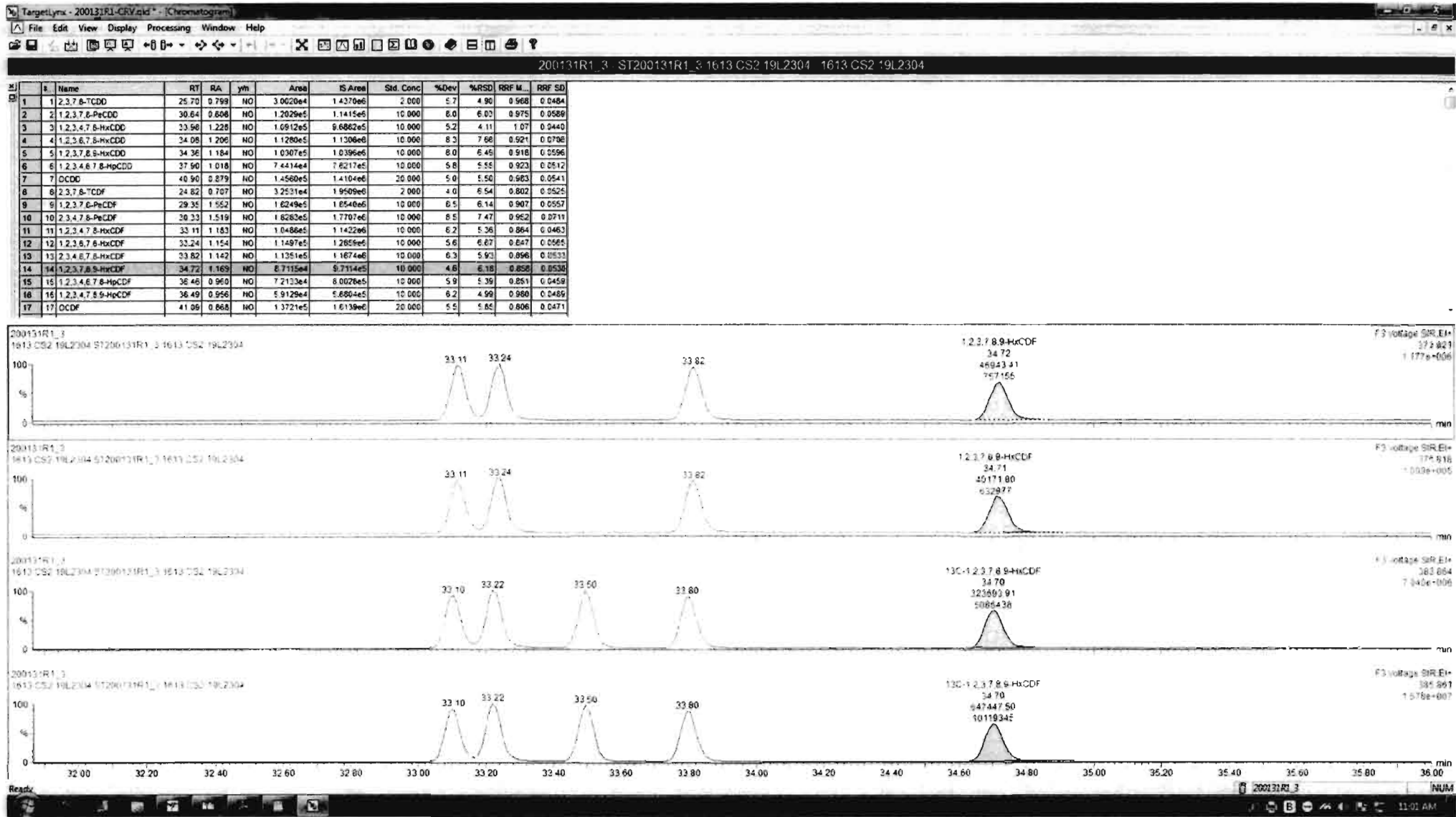
F3: Voltage SIR, EI+  
385.861  
1.578e+007

**DPE3**

200131R1\_3



F3: Voltage SIR, EI+  
445.7555  
4.204e+004

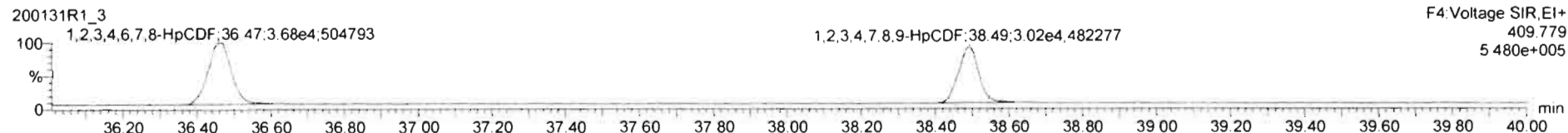
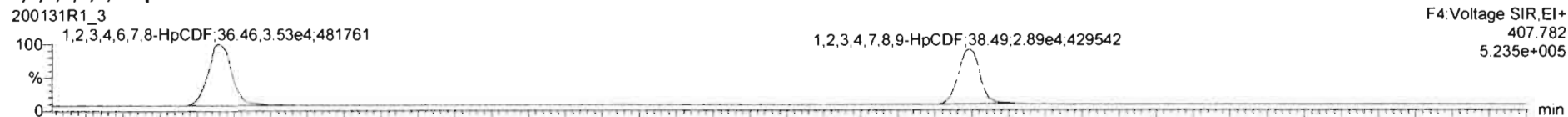


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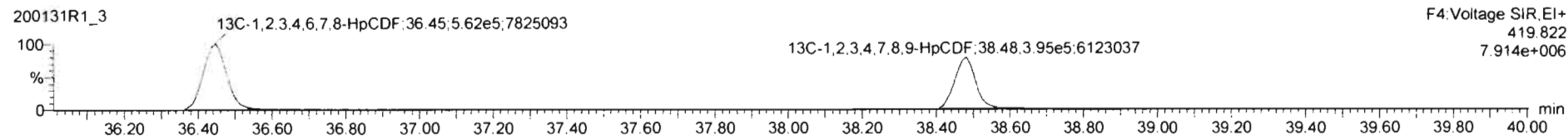
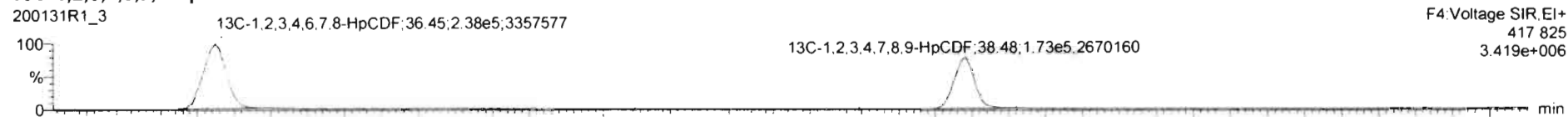
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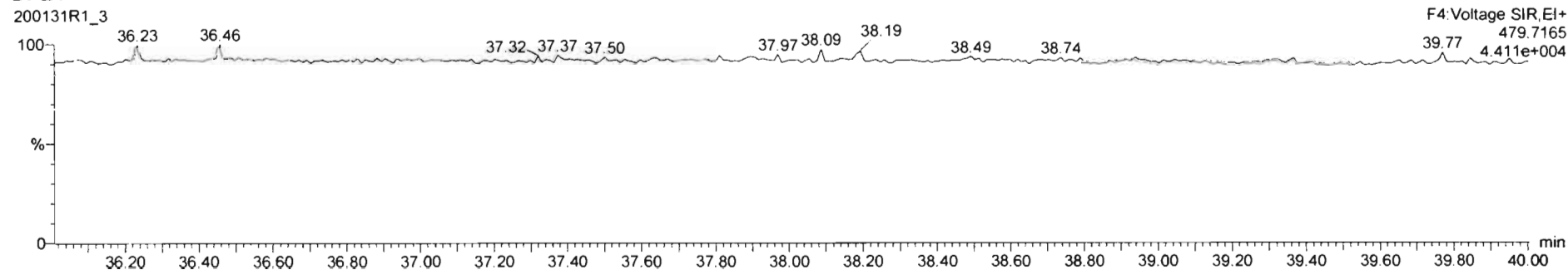
**1,2,3,4,6,7,8-HpCDF**



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



**DPE4**



Dataset: Untitled

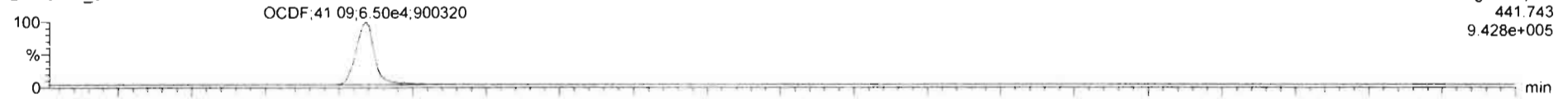
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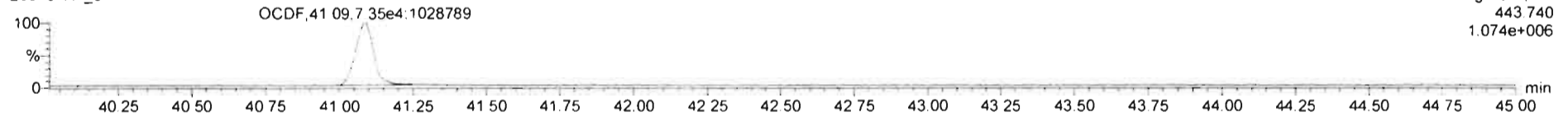
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**OCDF**

200131R1\_3

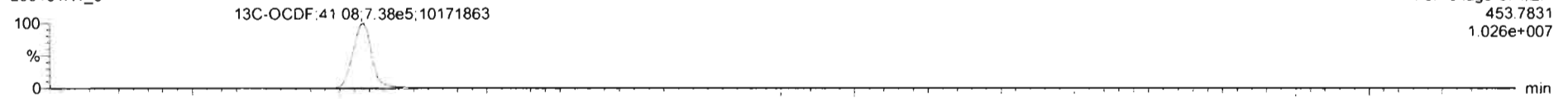


200131R1\_3

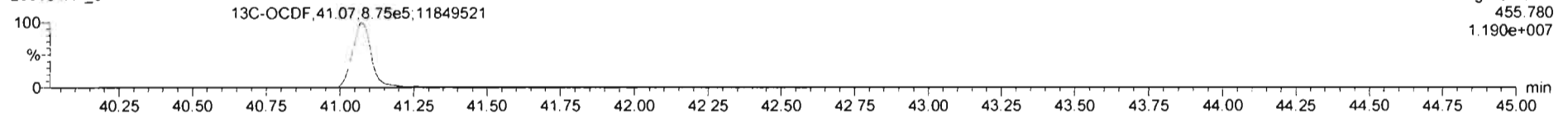


**13C-OCDF**

200131R1\_3

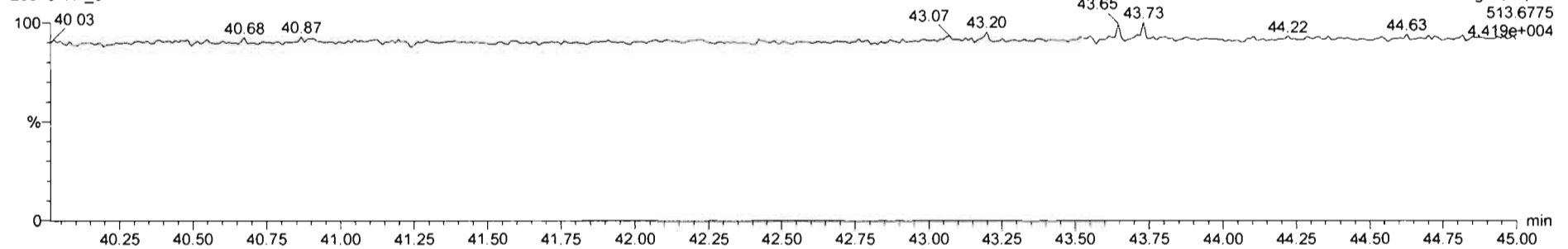


200131R1\_3

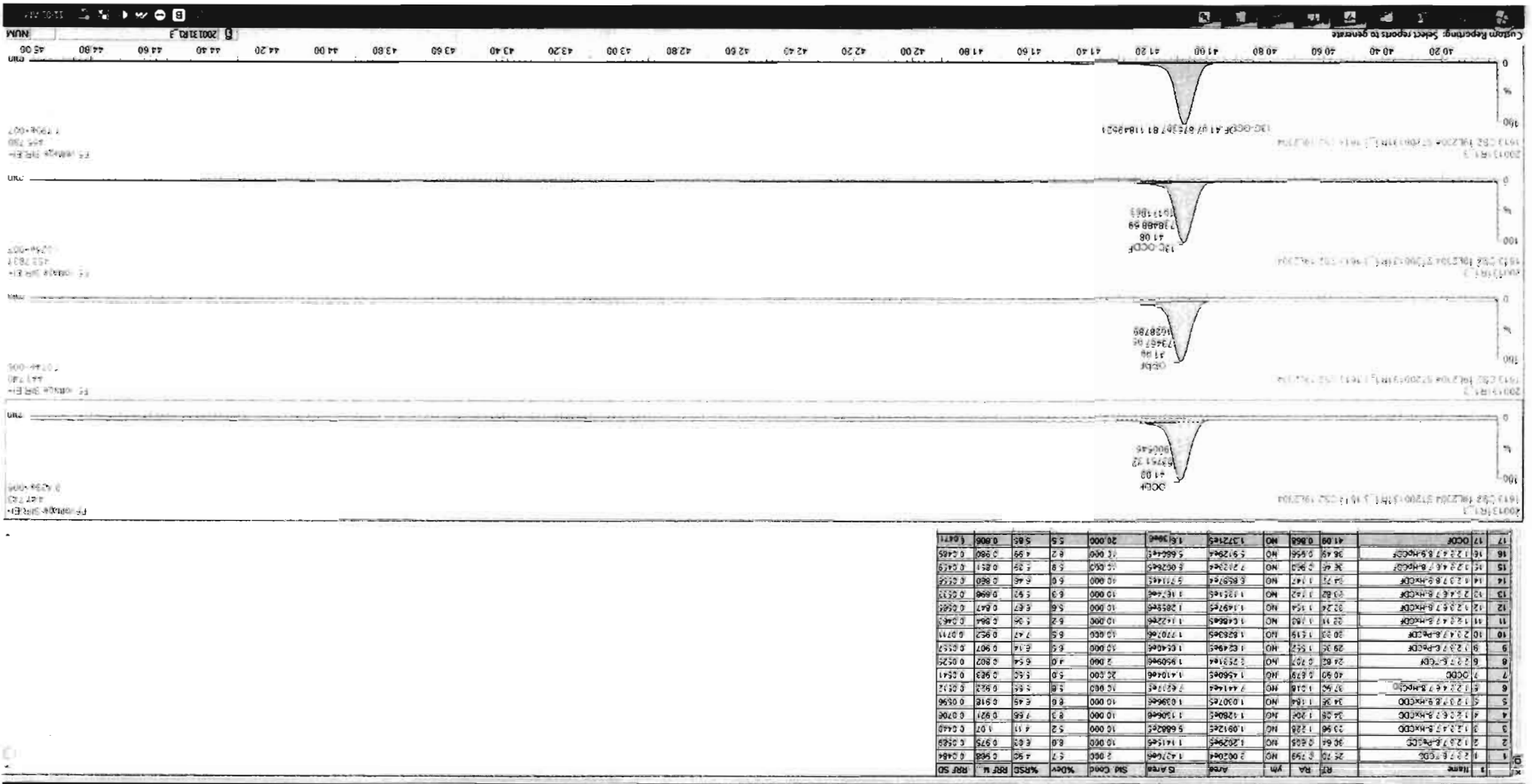


**DPE5**

200131R1\_3







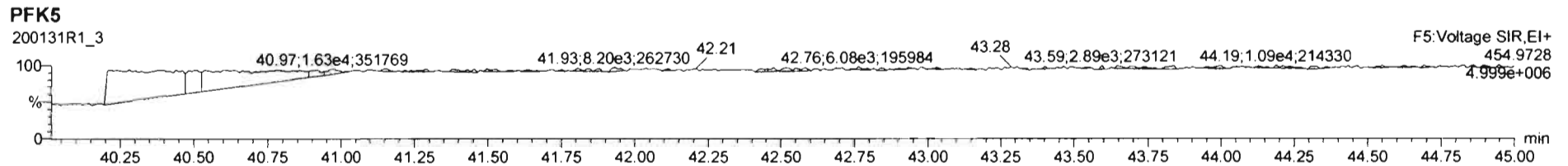
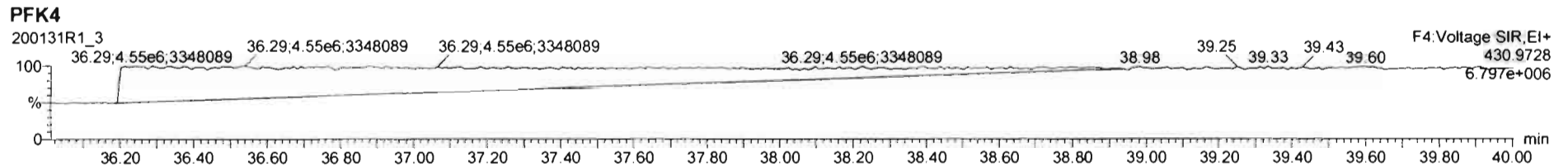
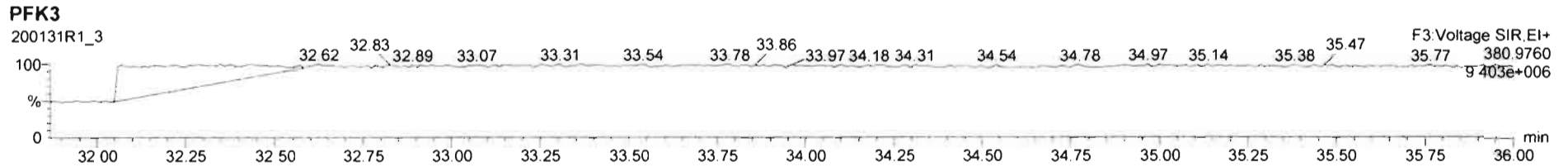
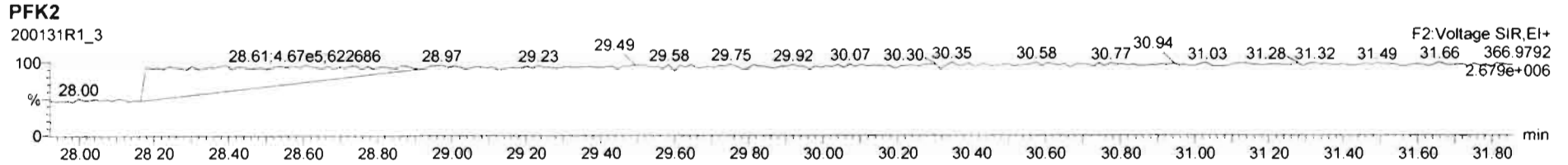
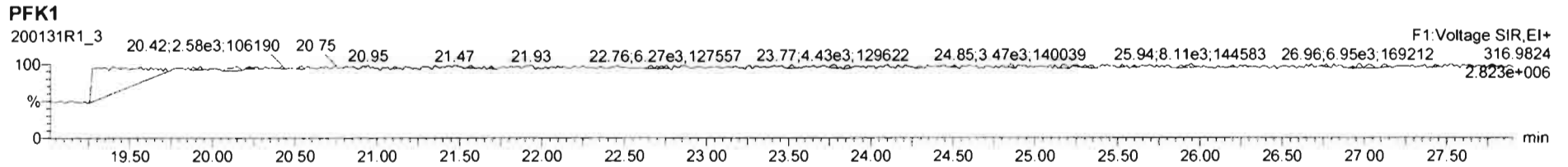
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1	1.227 E-GC	25.70	0.799	NO	2.00204	1.42168	2.96	1.90	0.968
2	2.223 E-SM-CDD	36.64	0.855	NO	1.20295	1.14155	10.00	1.63	0.975
3	3.223 E-SM-CDD	33.94	1.228	NO	1.09124	5.68825	10.00	5.2	1.07
4	4.223 E-SM-CDD	34.08	1.205	NO	1.12804	1.13068	10.00	7.68	0.921
5	5.223 E-SM-CDD	34.36	1.184	NO	1.03075	1.03964	10.00	6.0	0.918
6	6.227 E-GC	34.90	0.879	NO	1.55695	1.41046	20.00	5.0	0.983
7	7.223 E-SM-CDD	37.90	1.018	NO	7.44144	2.62174	10.00	5.65	0.932
8	8.227 E-GC	34.00	0.797	NO	1.25314	1.95094	2.000	4.0	0.807
9	9.223 E-SM-CDD	29.26	1.552	NO	1.62485	10.000	10.00	6.5	0.907
10	10.223 E-SM-CDD	20.20	1.119	NO	1.62505	1.77076	10.00	6.5	0.952
11	11.223 E-SM-CDD	22.10	1.110	NO	1.62645	1.14226	10.00	6.2	0.964
12	12.223 E-SM-CDD	32.24	1.154	NO	1.14974	1.28585	10.00	5.6	0.847
13	13.223 E-SM-CDD	32.82	1.142	NO	1.12514	1.16746	10.00	6.3	0.898
14	14.223 E-SM-CDD	34.22	1.147	NO	6.65974	5.71144	10.00	6.0	0.860
15	15.223 E-SM-CDD	36.46	0.900	NO	7.21244	6.02845	10.00	5.9	0.851
16	16.223 E-SM-CDD	36.48	0.956	NO	5.91294	5.66445	10.00	6.7	0.900
17	17.223 E-SM-CDD	41.08	0.868	NO	1.37214	1.61364	20.00	5.5	0.806

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

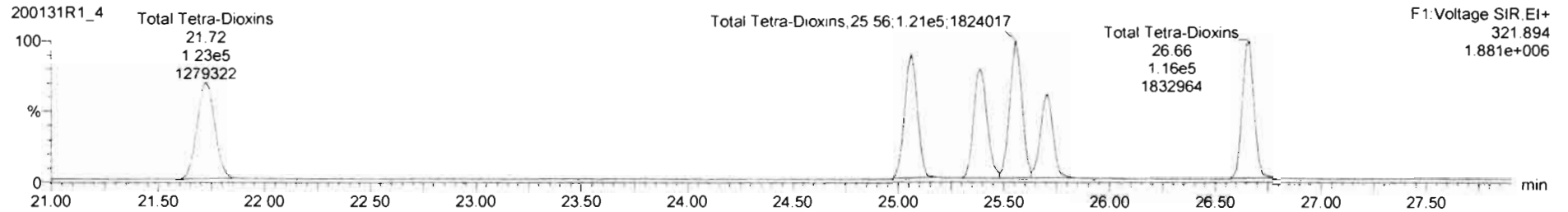
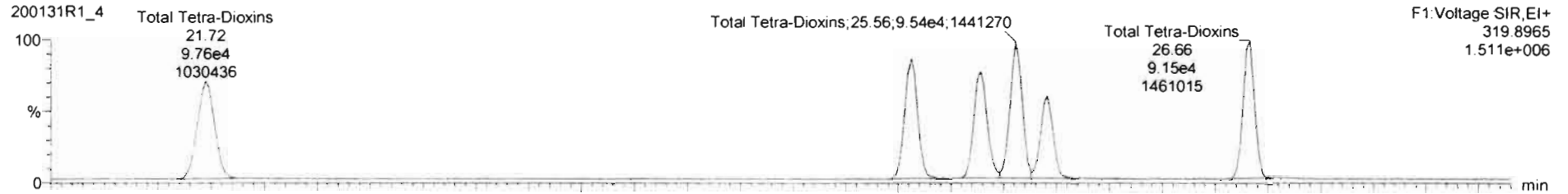


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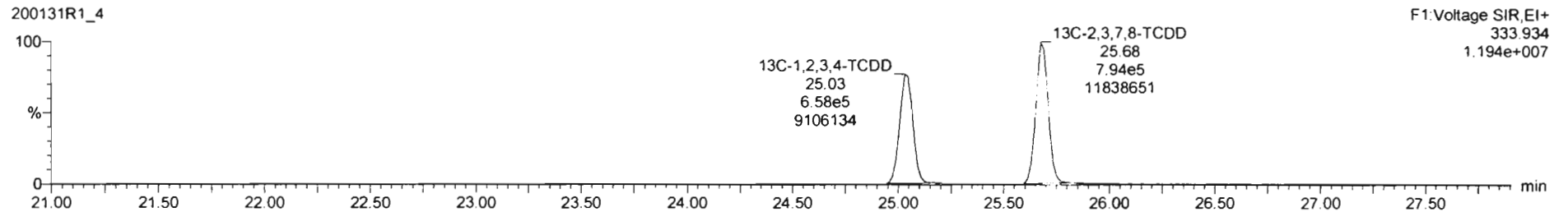
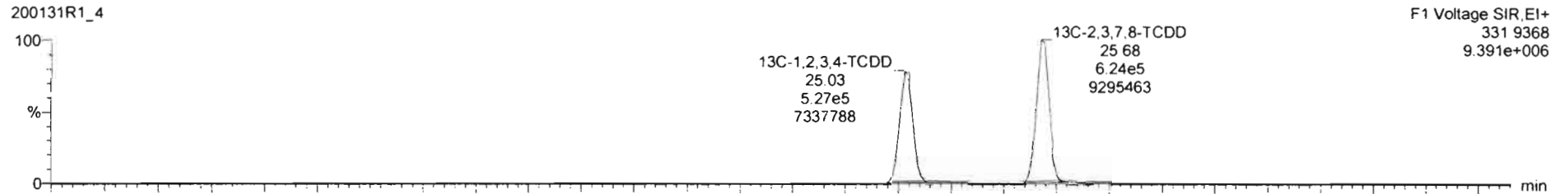
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**2,3,7,8-TCDD**



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



Dataset: Untitled

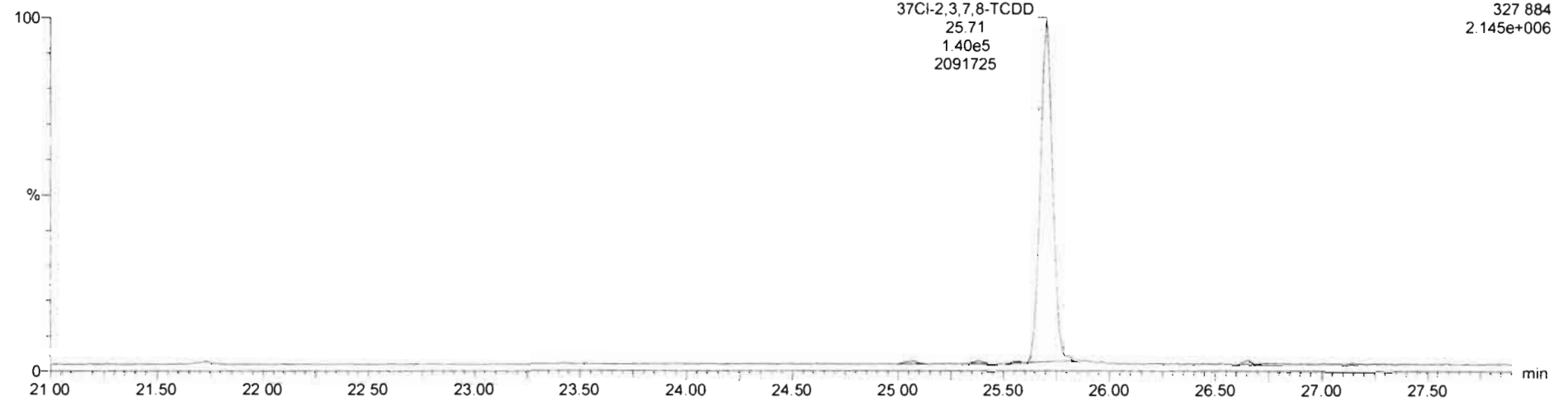
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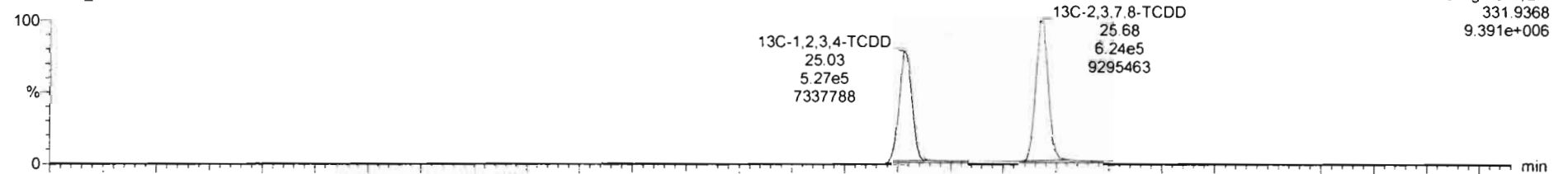
37Cl-2,3,7,8-TCDD

200131R1\_4

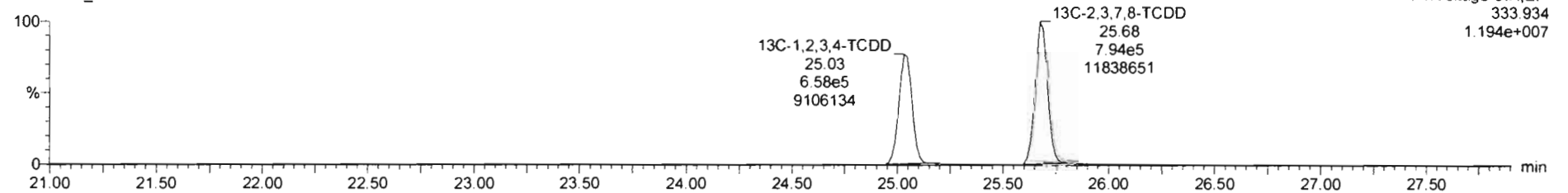


13C-1,2,3,4-TCDD

200131R1\_4



200131R1\_4

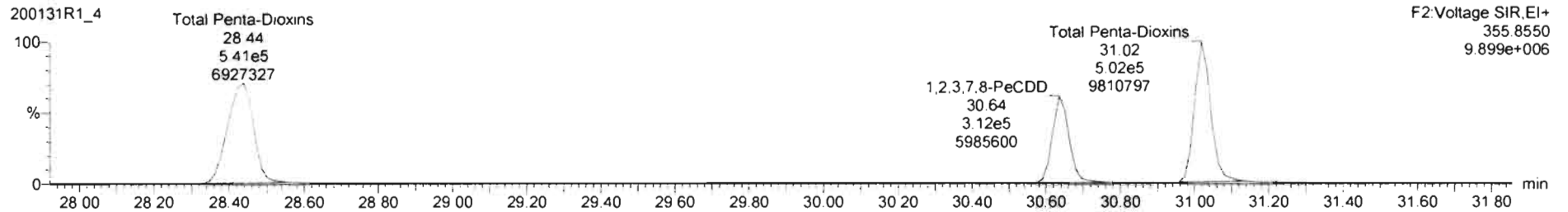
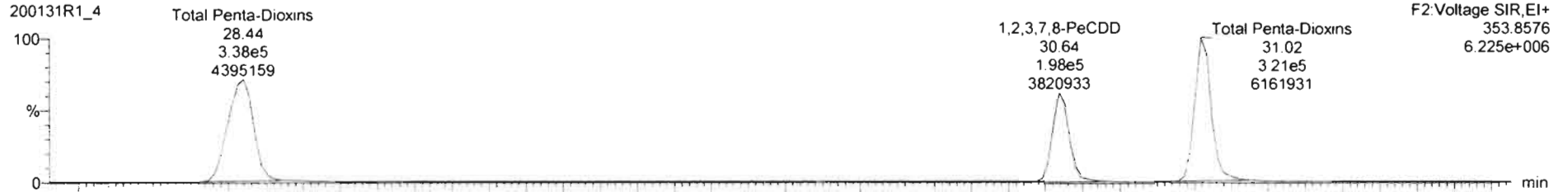


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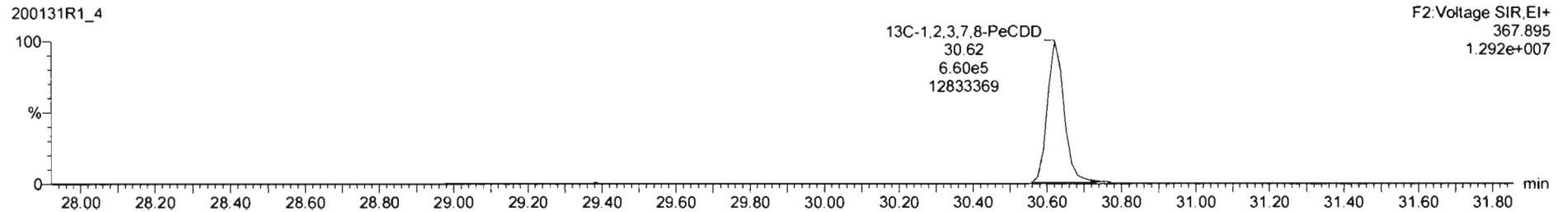
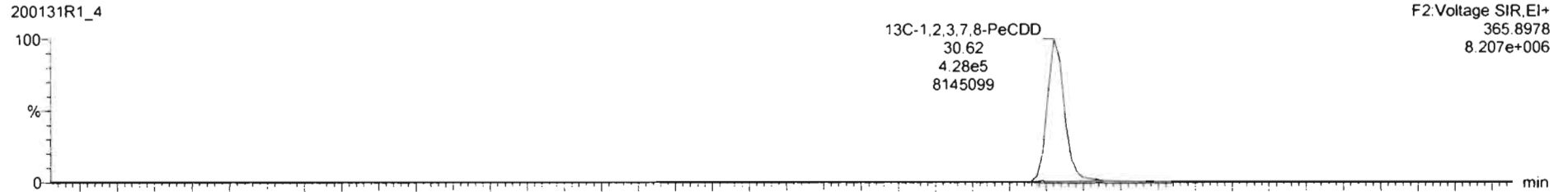
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Name: 200131R1\_4, Date: 31-Jan-2020, Time: 19:10:18, ID: ST200131R1\_4 1613 CS3 19L2305, Description: 1613 CS3 19L2305

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



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



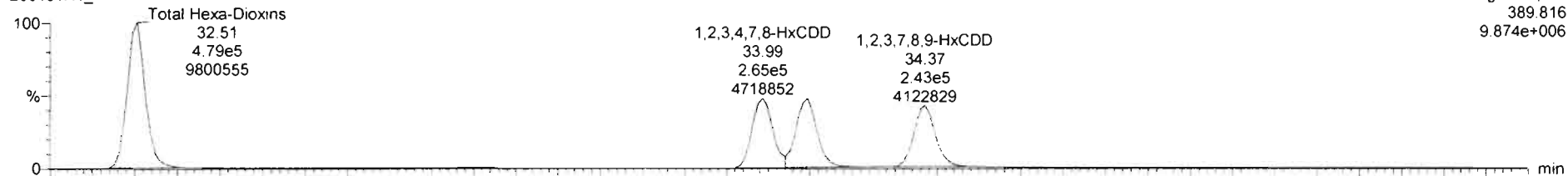
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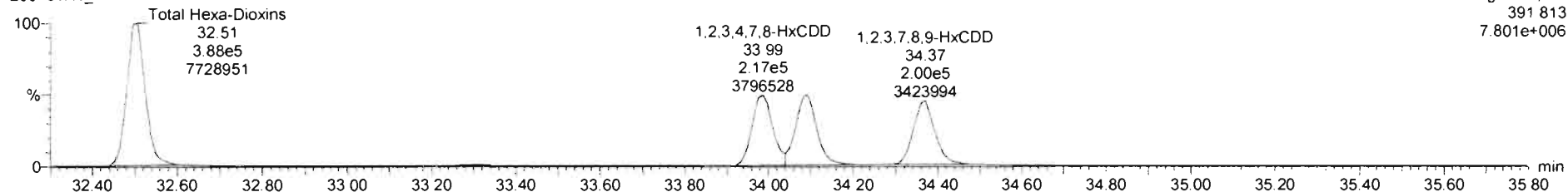
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1,2,3,4,7,8-HxCDD

200131R1\_4

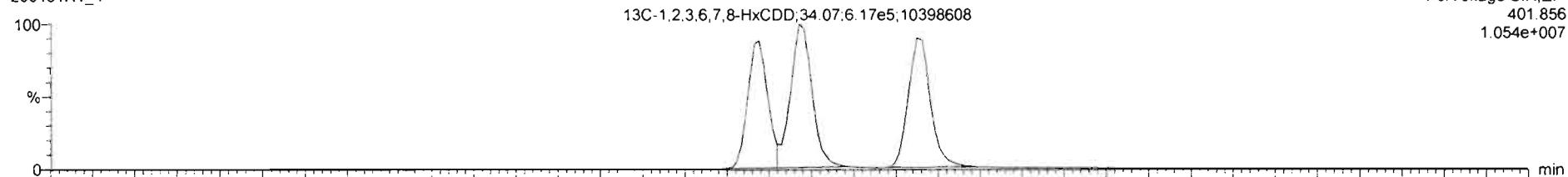


200131R1\_4

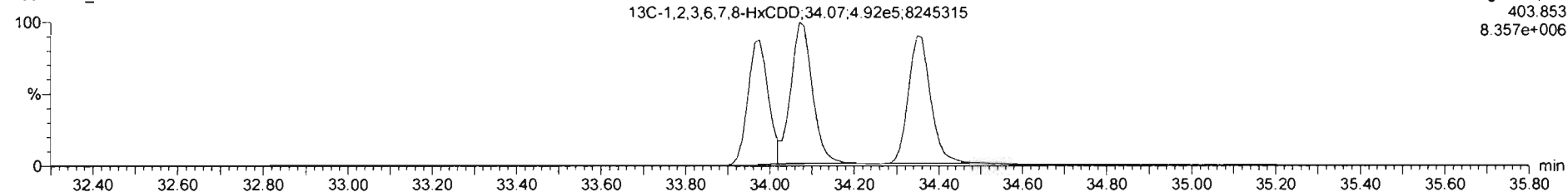


13C-1,2,3,4,7,8-HxCDD

200131R1\_4



200131R1\_4



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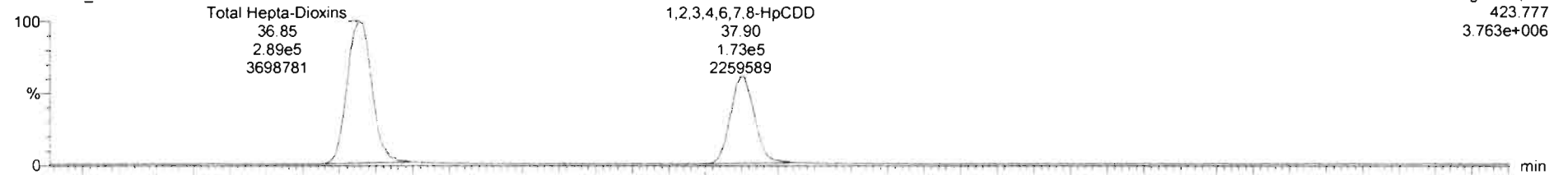
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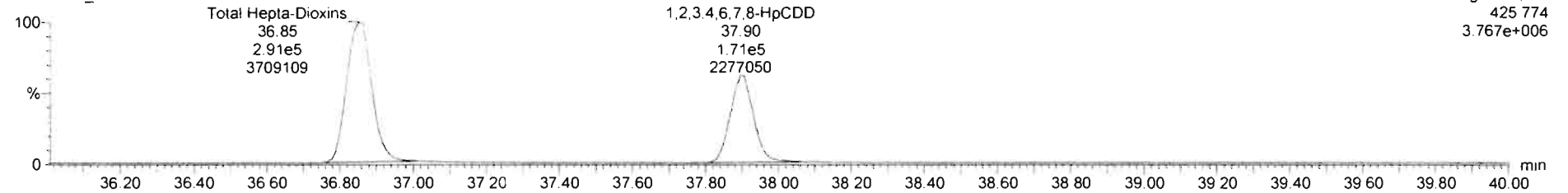
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1,2,3,4,6,7,8-HpCDD

200131R1\_4

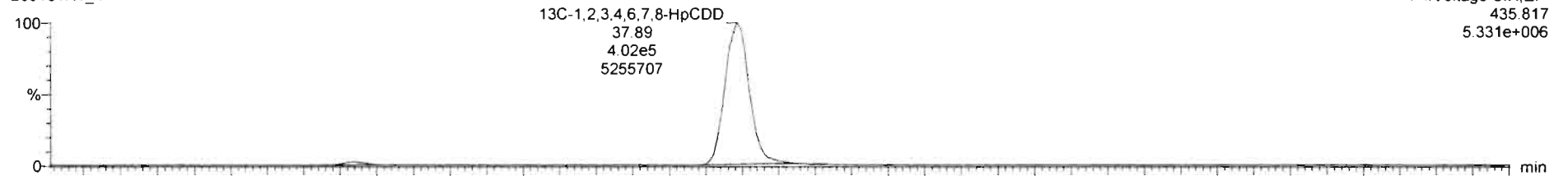


200131R1\_4

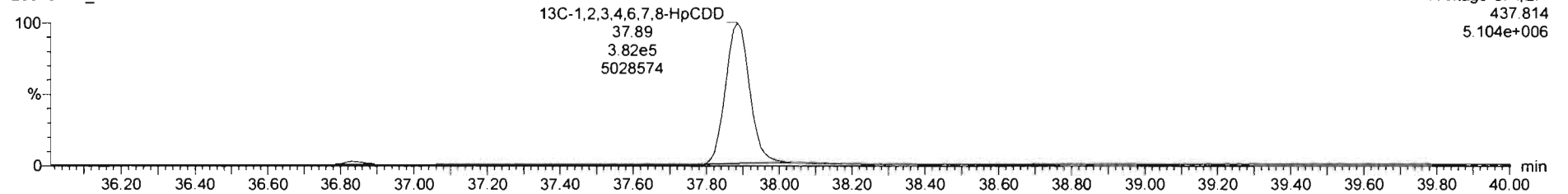


13C-1,2,3,4,6,7,8-HpCDD

200131R1\_4



200131R1\_4

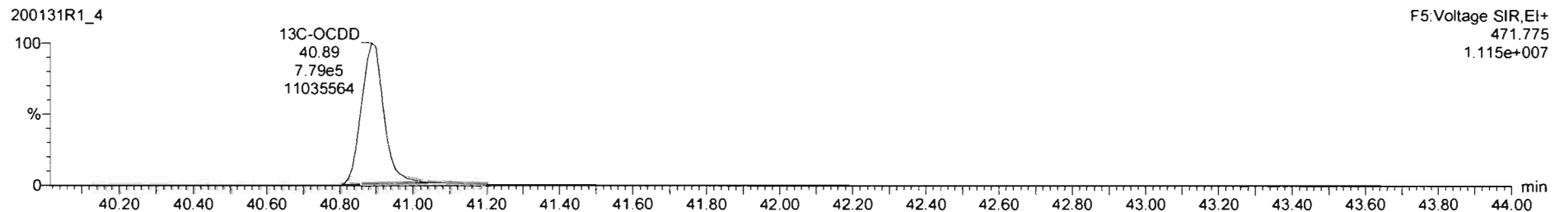
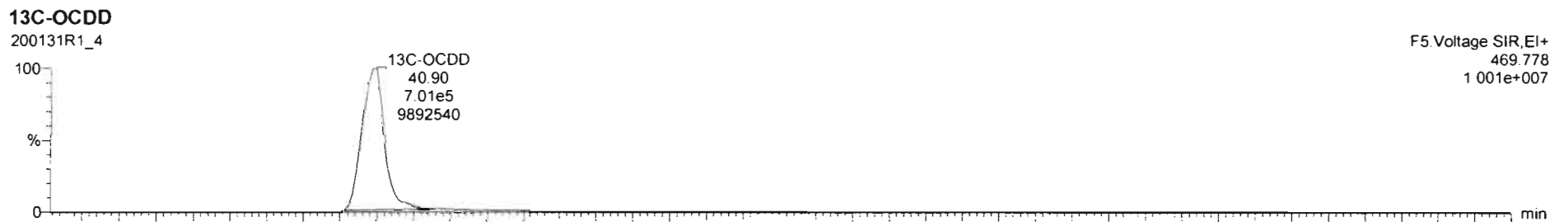
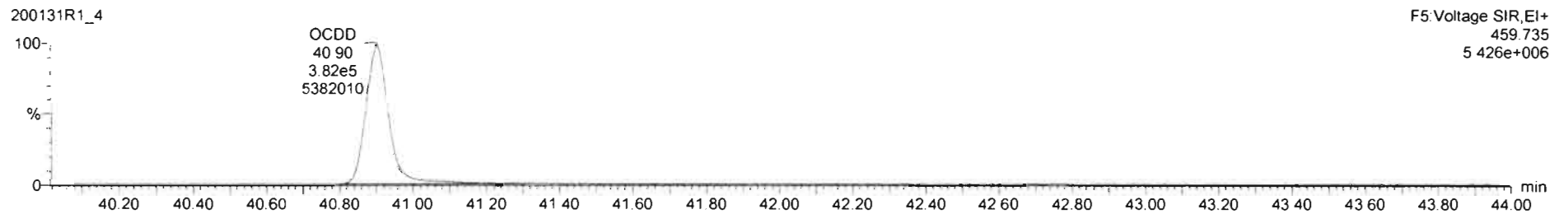
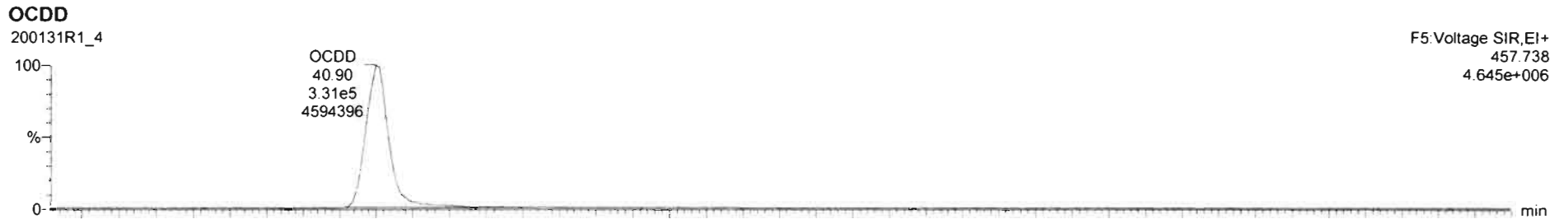


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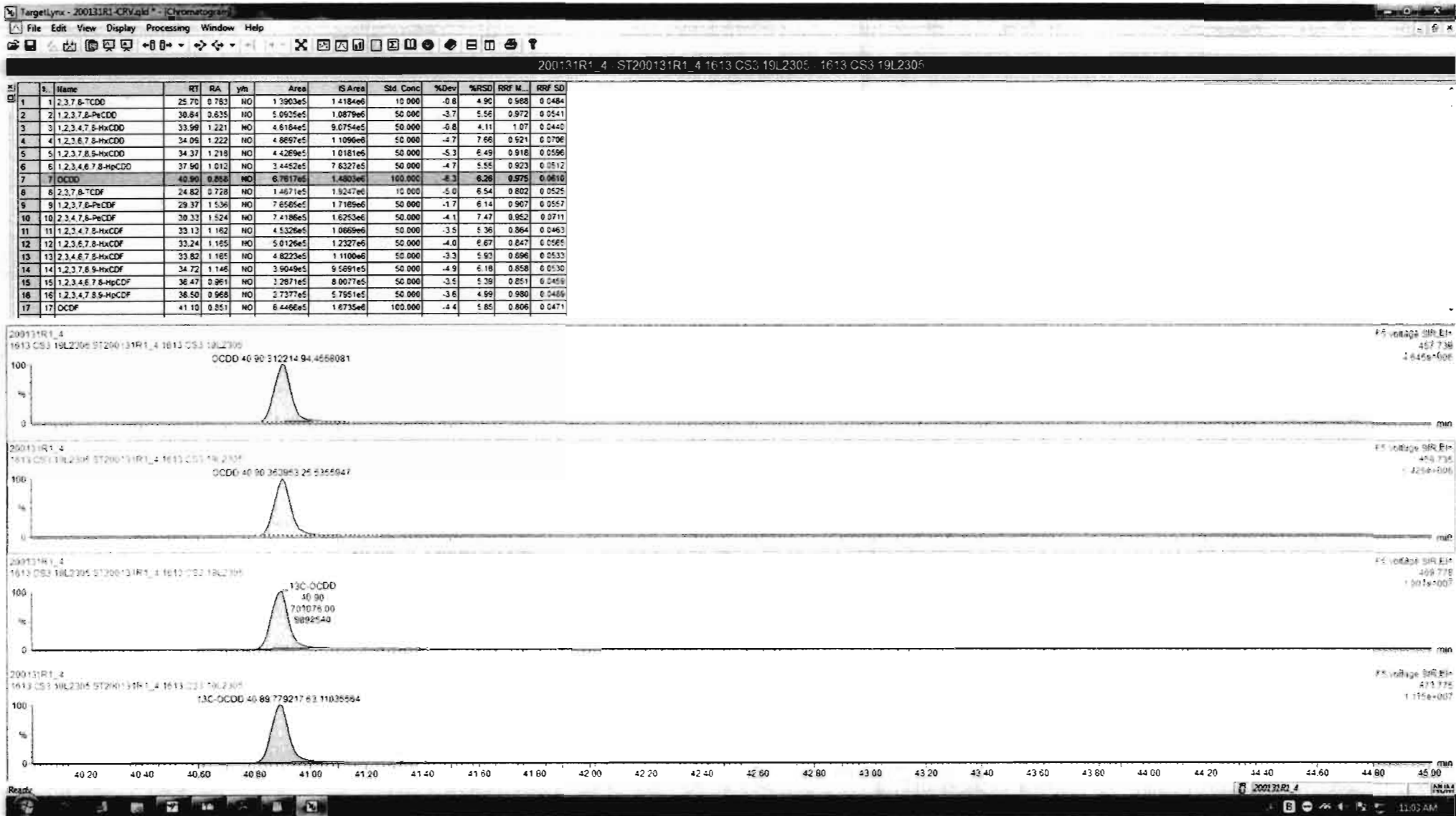
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Dataset: Untitled

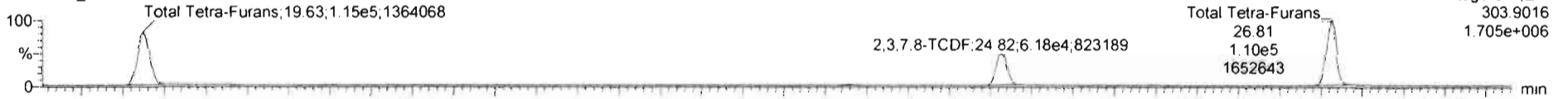
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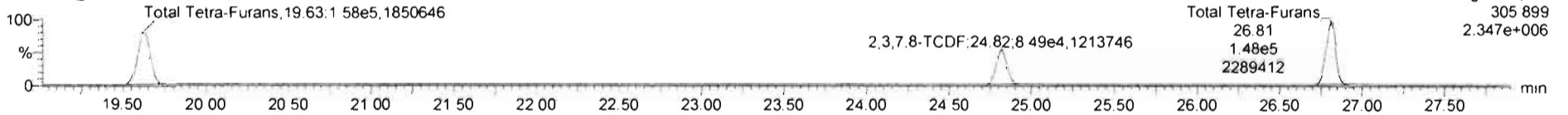
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**2,3,7,8-TCDF**

200131R1\_4

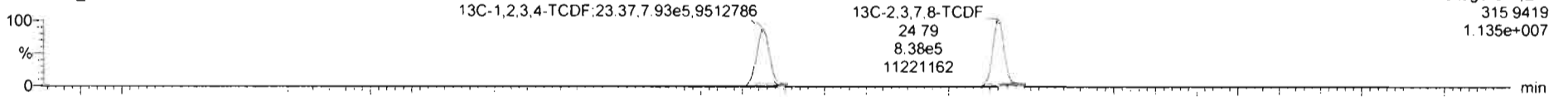


200131R1\_4

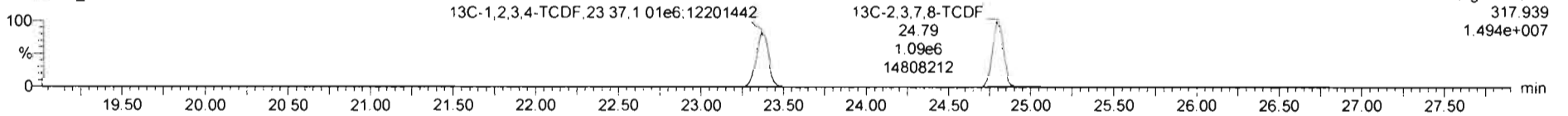


**13C-2,3,7,8-TCDF**

200131R1\_4

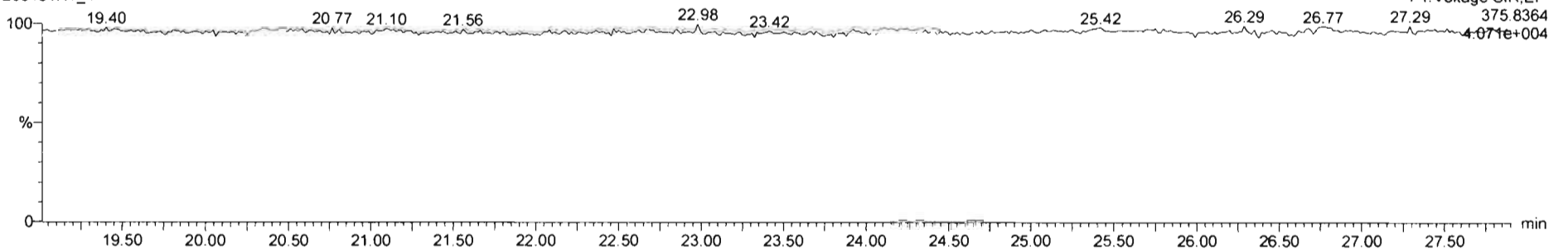


200131R1\_4



**DPE1**

200131R1\_4



Dataset: Untitled

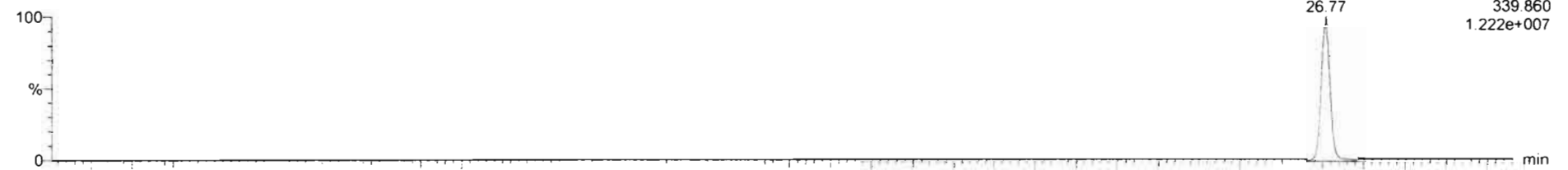
Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time

Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

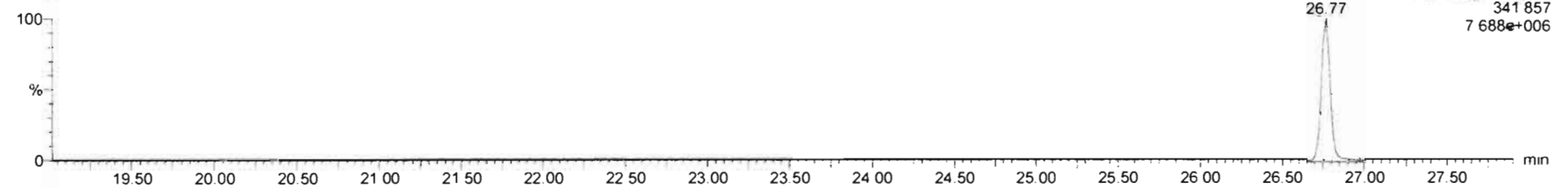
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1st Func. Penta-Furans

200131R1\_4

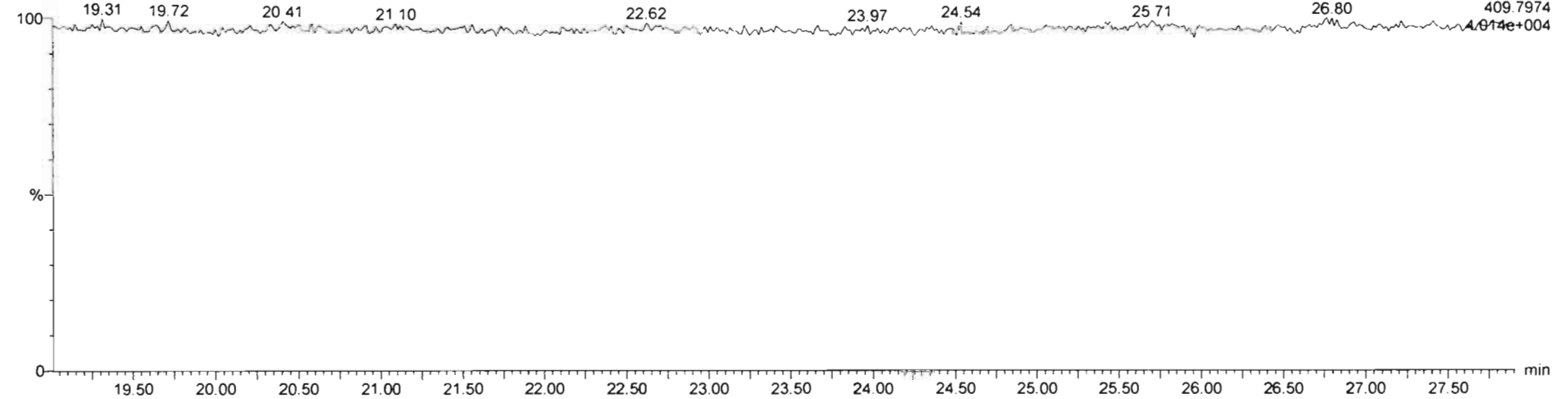


200131R1\_4



DPE6

200131R1\_4



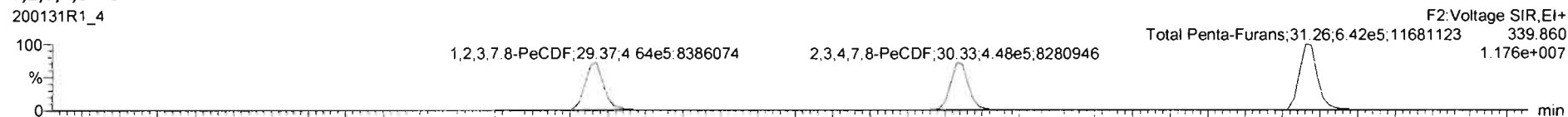
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

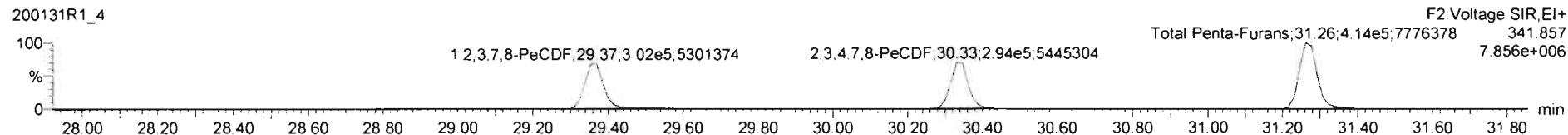
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**1,2,3,7,8-PeCDF**

200131R1\_4

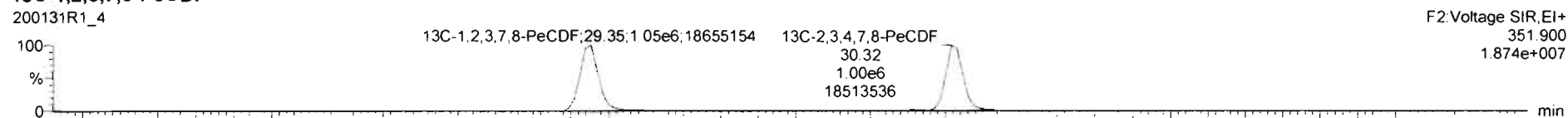


200131R1\_4

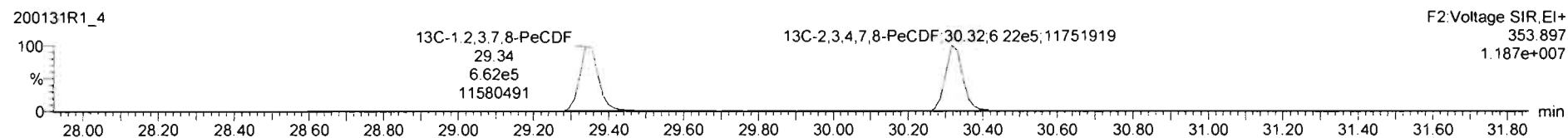


**13C-1,2,3,7,8-PeCDF**

200131R1\_4

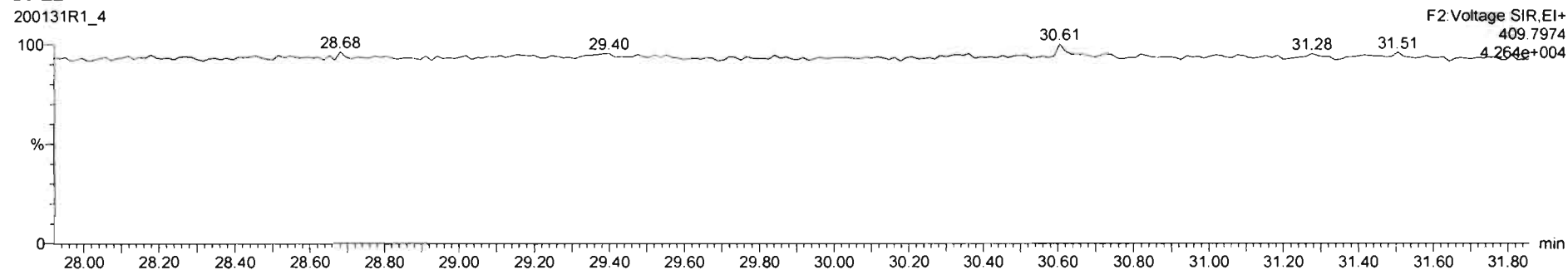


200131R1\_4



**DPE2**

200131R1\_4



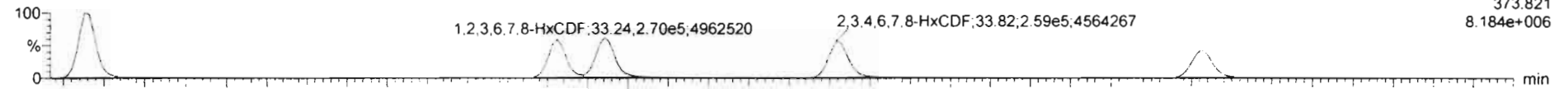
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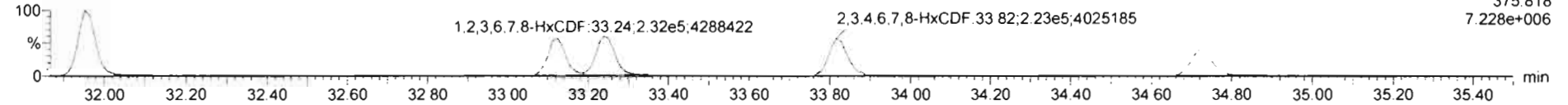
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**1,2,3,4,7,8-HxCDF**

200131R1\_4

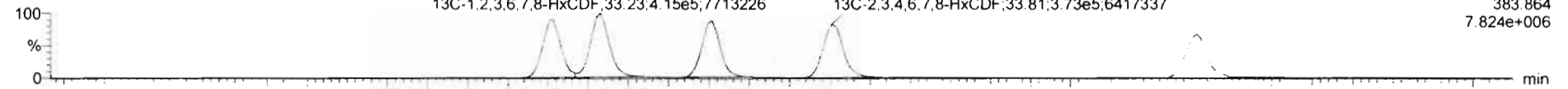


200131R1\_4

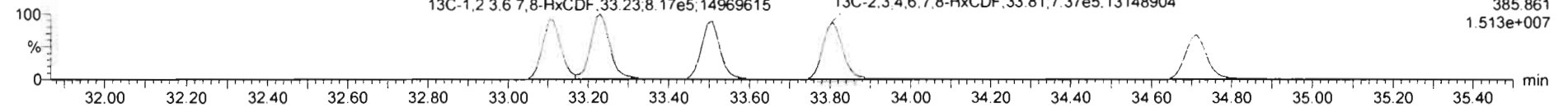


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_4

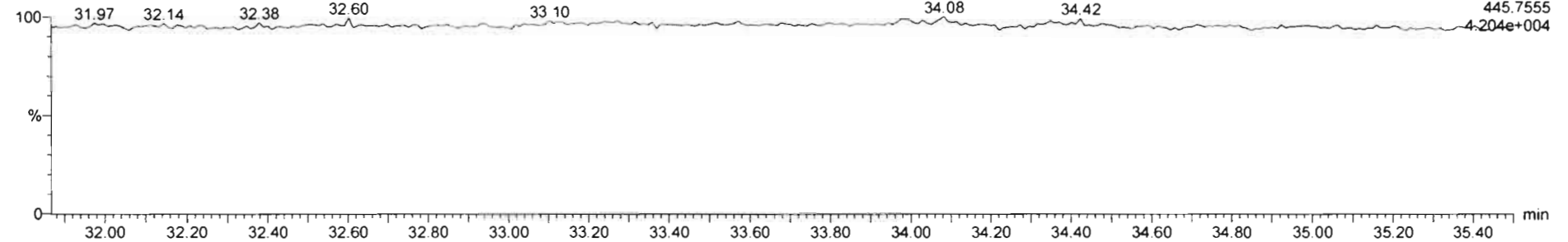


200131R1\_4



**DPE3**

200131R1\_4

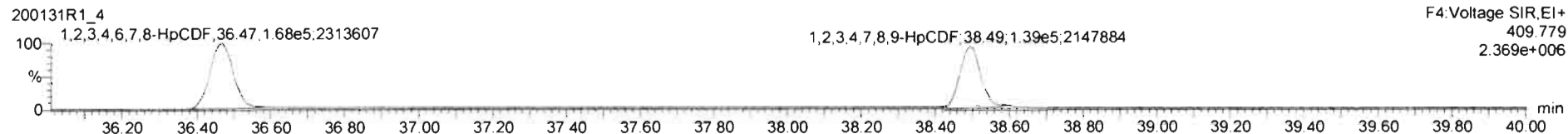
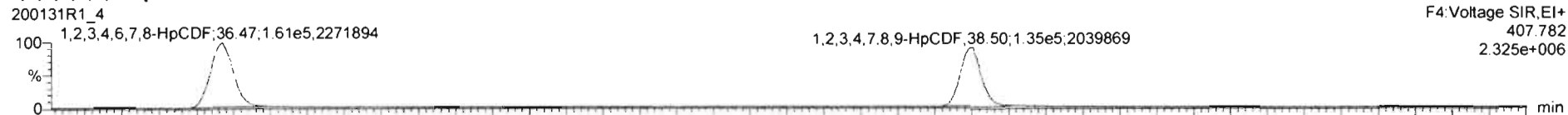


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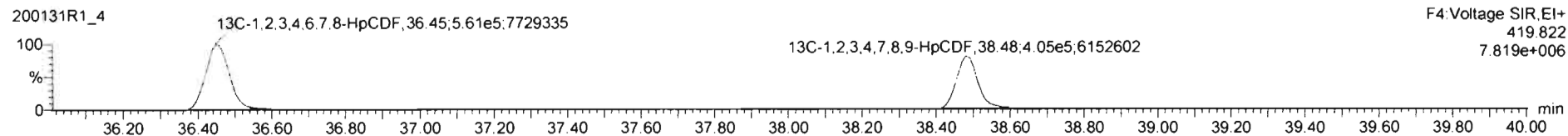
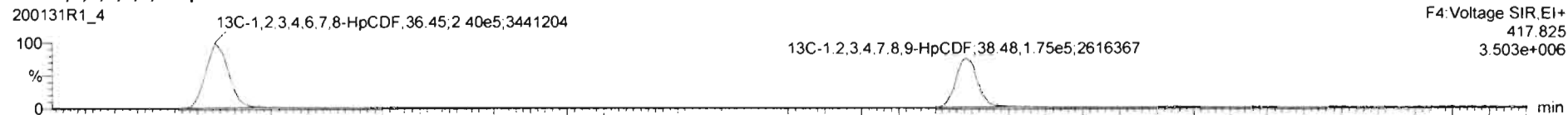
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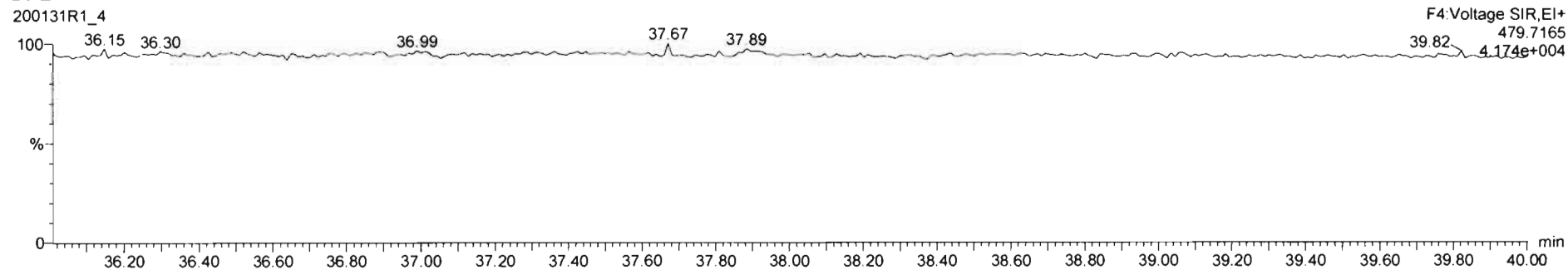
**1,2,3,4,6,7,8-HpCDF**



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



**DPE4**

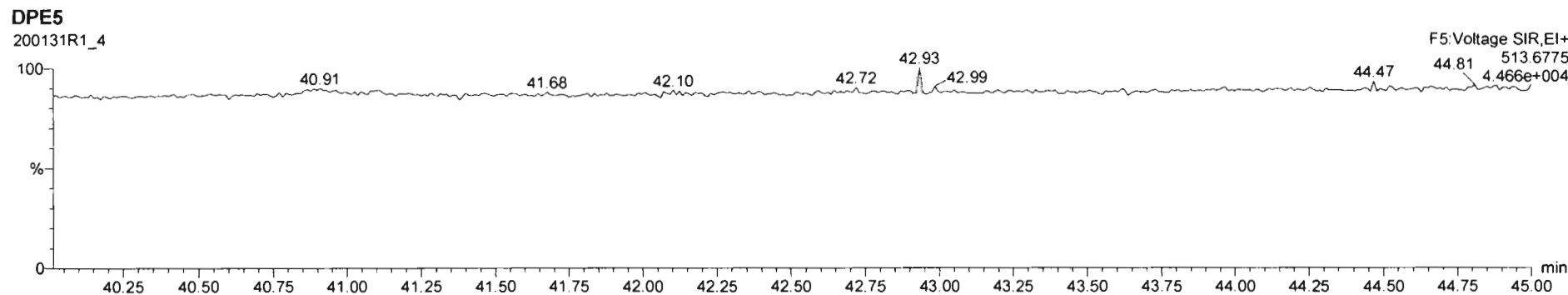
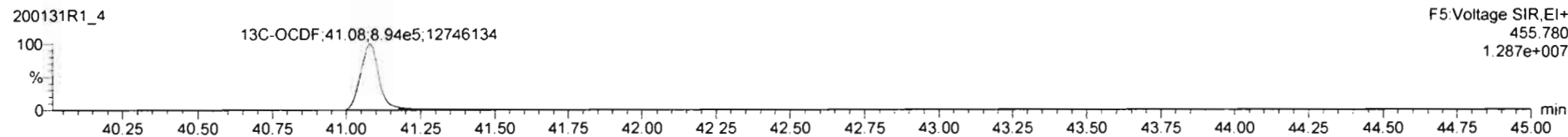
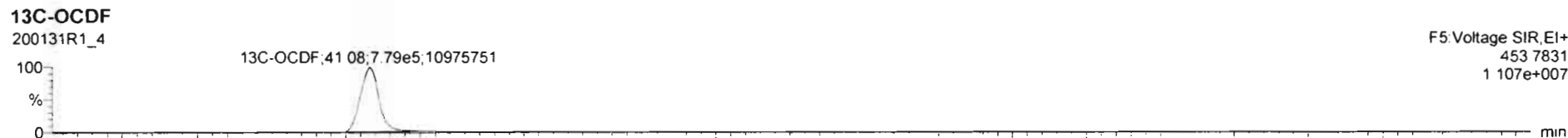
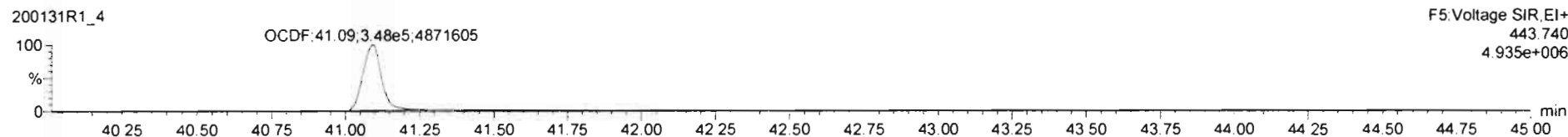
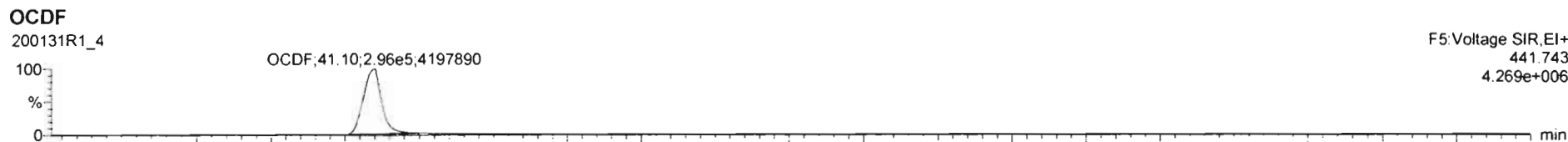


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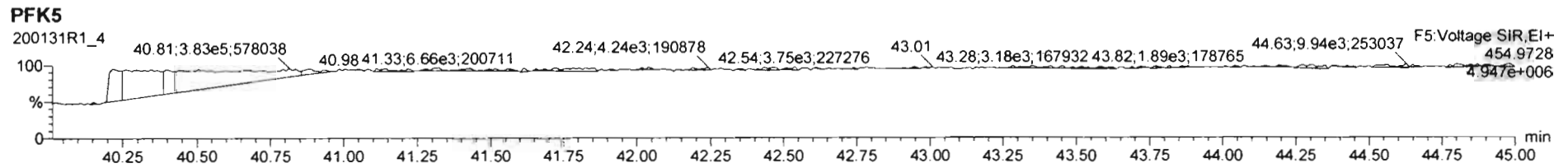
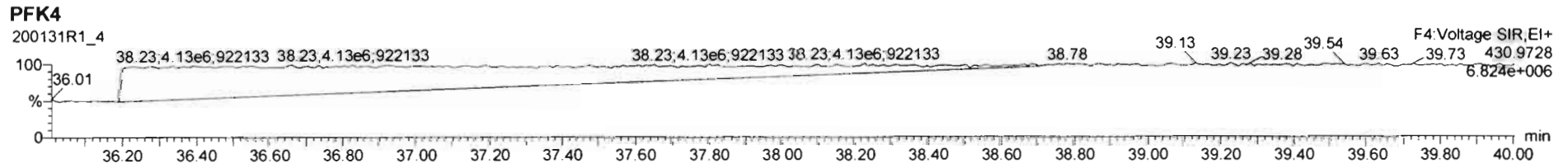
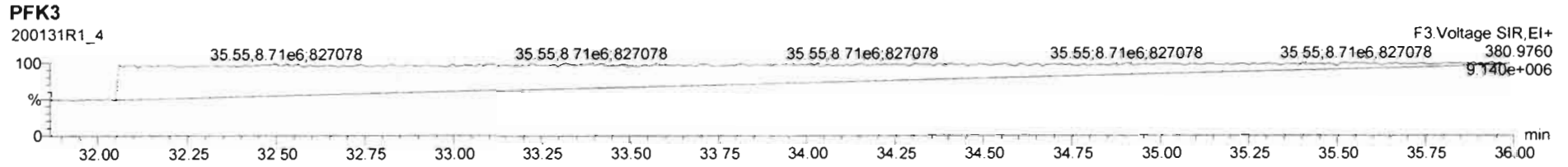
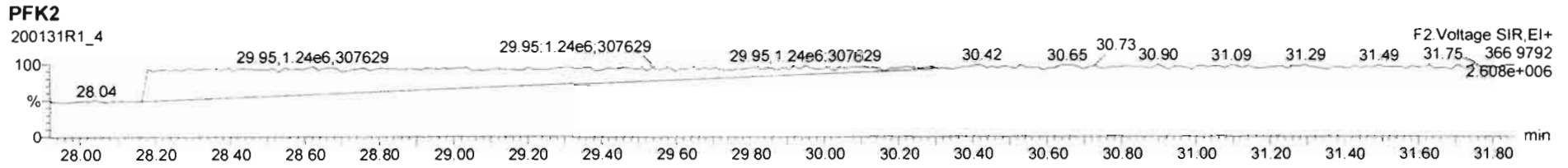
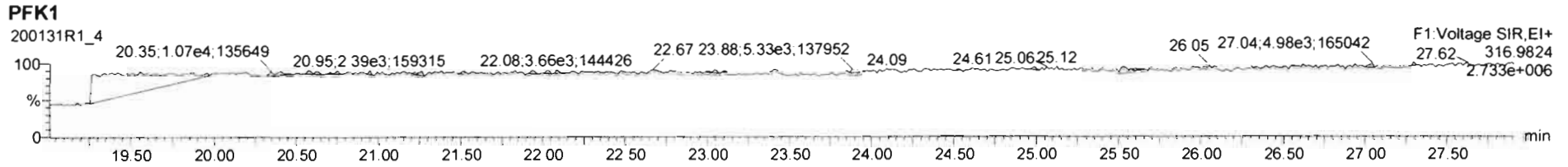


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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

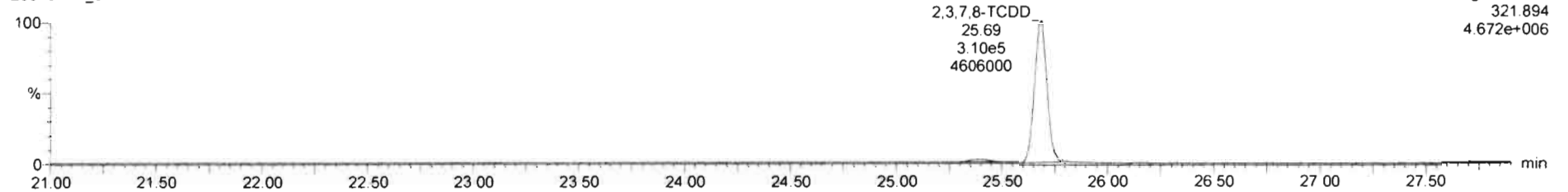
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**2,3,7,8-TCDD**

200131R1\_5

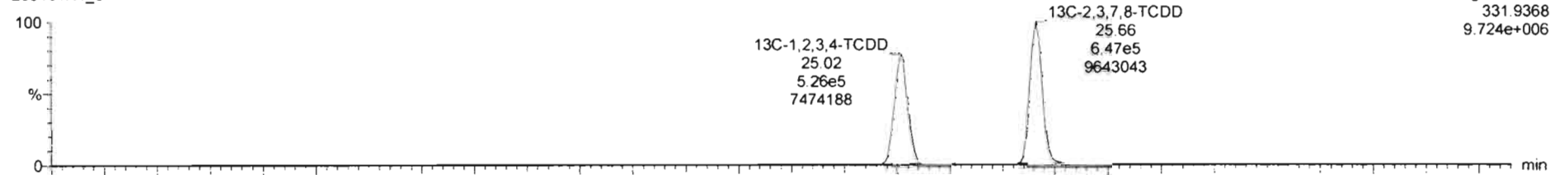


200131R1\_5

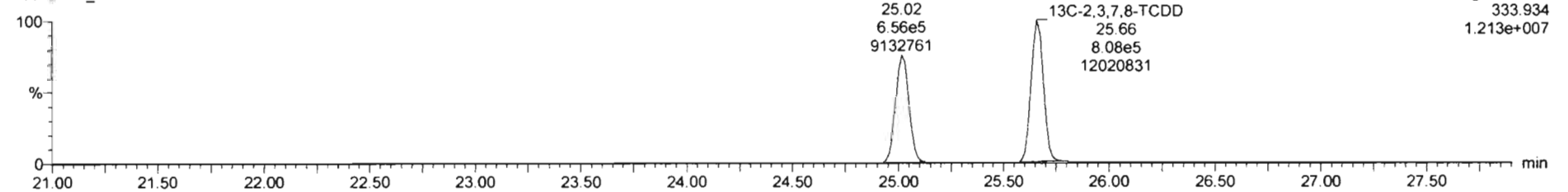


**13C-2,3,7,8-TCDD**

200131R1\_5



200131R1\_5



Dataset: Untitled

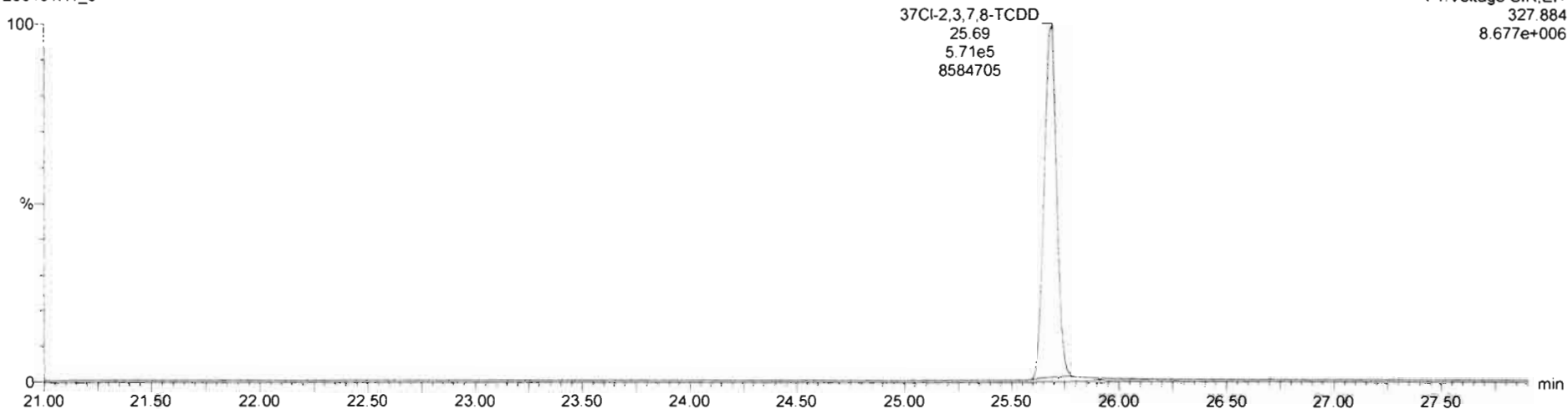
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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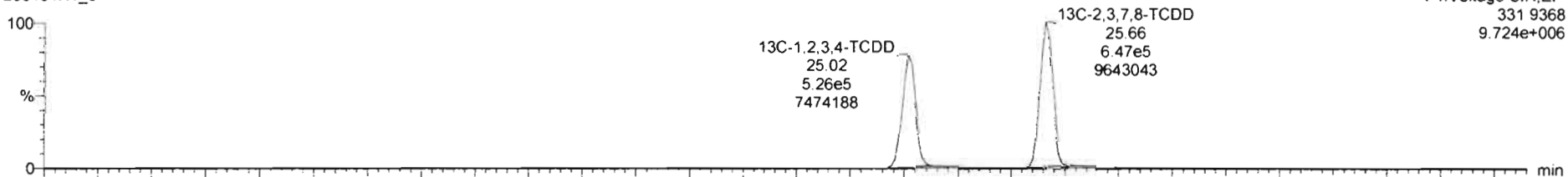
**37Cl-2,3,7,8-TCDD**

200131R1\_5

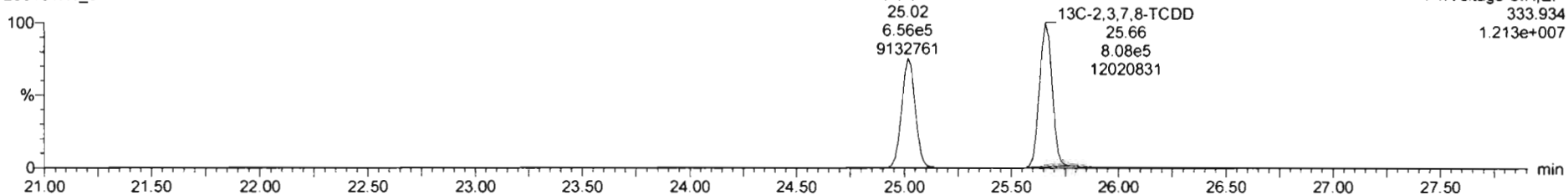


**13C-1,2,3,4-TCDD**

200131R1\_5



200131R1\_5



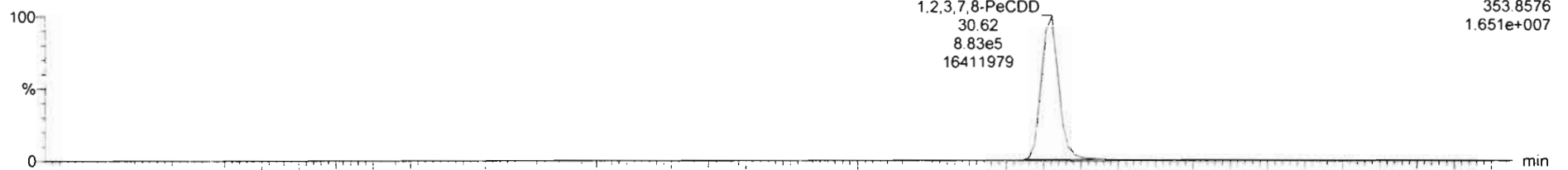
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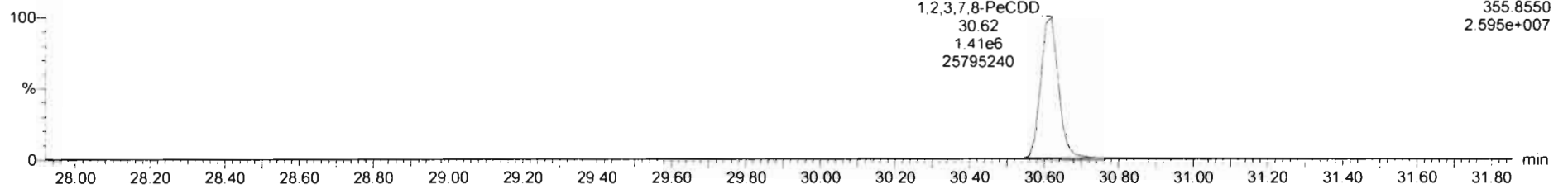
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**1,2,3,7,8-PeCDD**

200131R1\_5

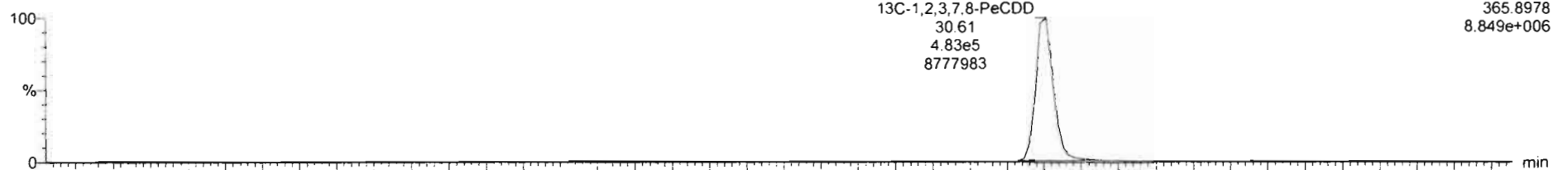


200131R1\_5

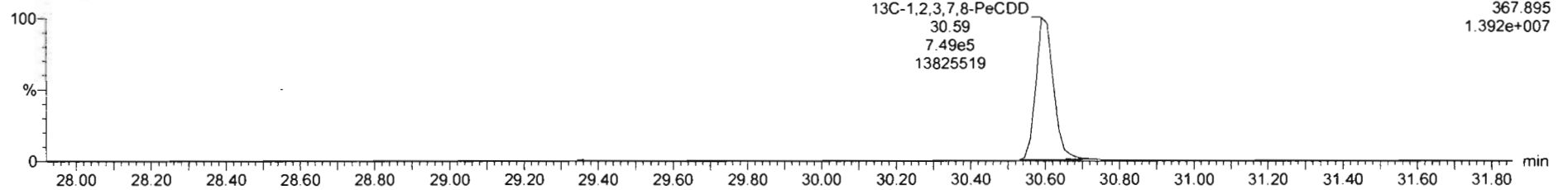


**13C-1,2,3,7,8-PeCDD**

200131R1\_5



200131R1\_5



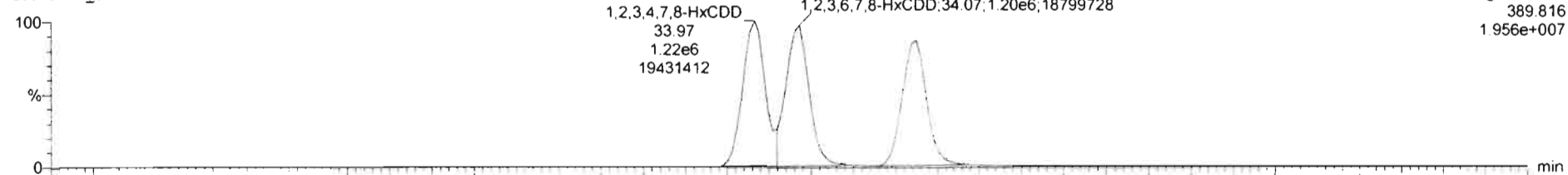
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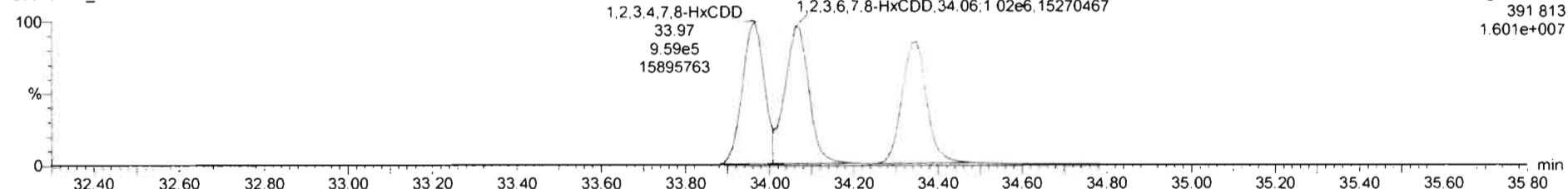
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1,2,3,4,7,8-HxCDD

200131R1\_5

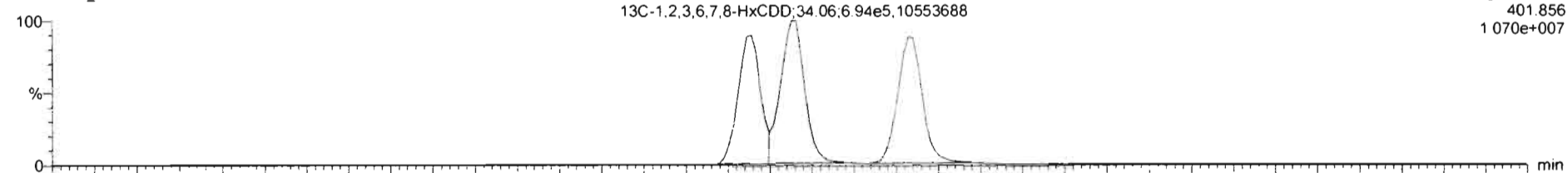


200131R1\_5

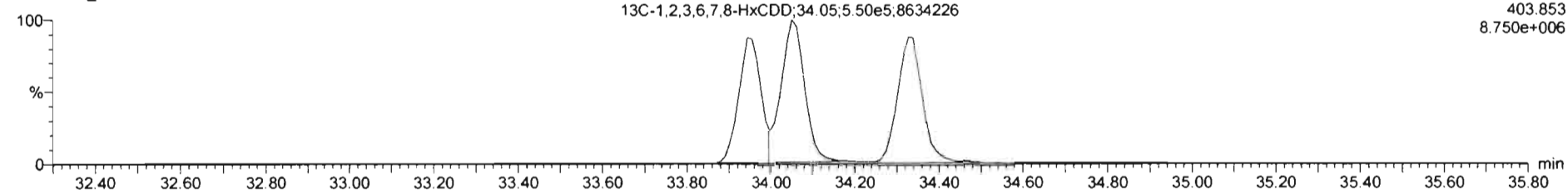


13C-1,2,3,4,7,8-HxCDD

200131R1\_5



200131R1\_5



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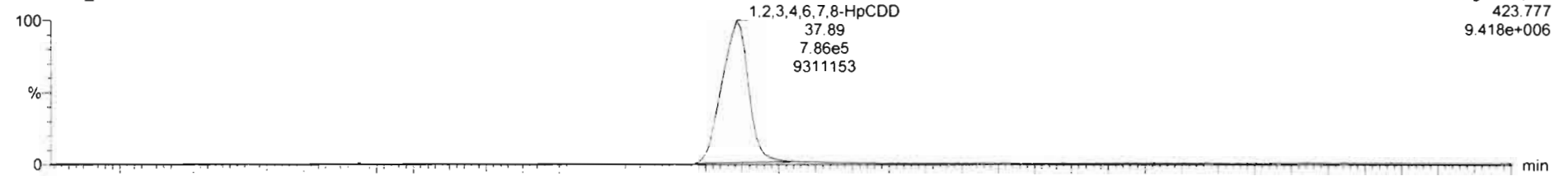
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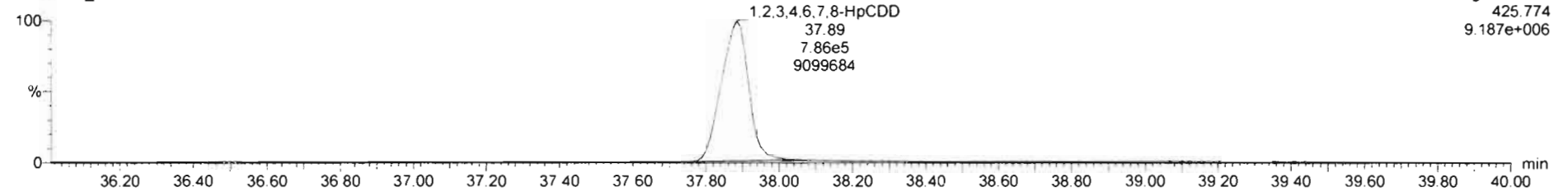
**1,2,3,4,6,7,8-HpCDD**

200131R1\_5



F4: Voltage SIR, EI+  
423.777  
9.418e+006

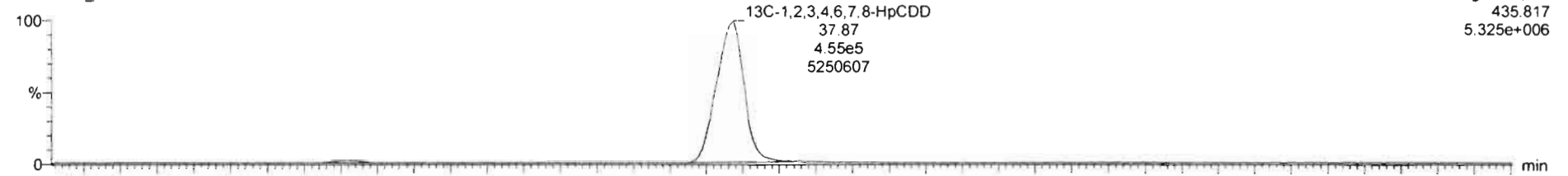
200131R1\_5



F4 Voltage SIR, EI+  
425.774  
9.187e+006

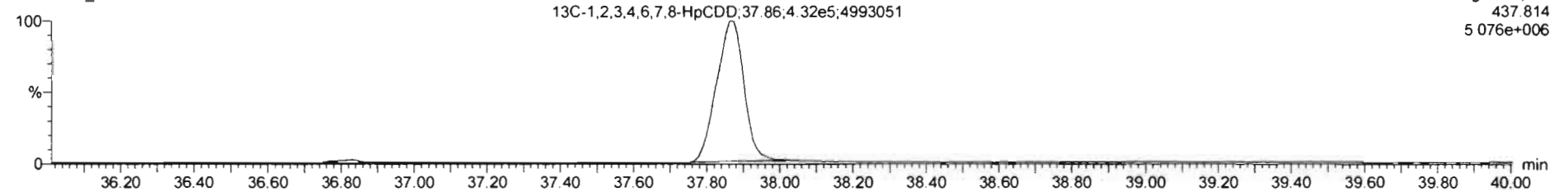
**13C-1,2,3,4,6,7,8-HpCDD**

200131R1\_5



F4: Voltage SIR, EI+  
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5.325e+006

200131R1\_5



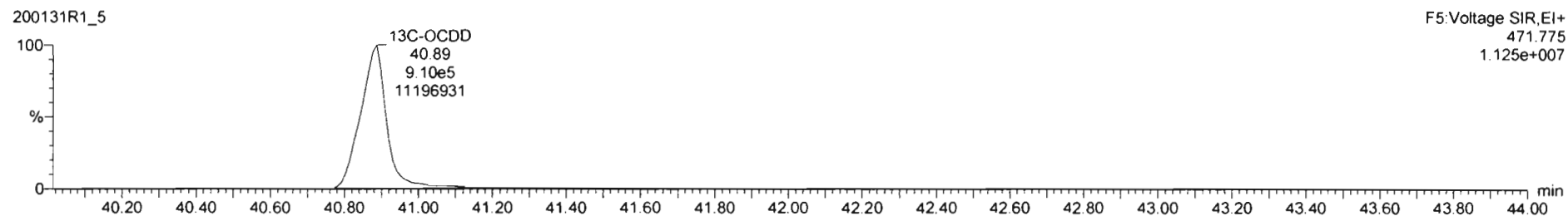
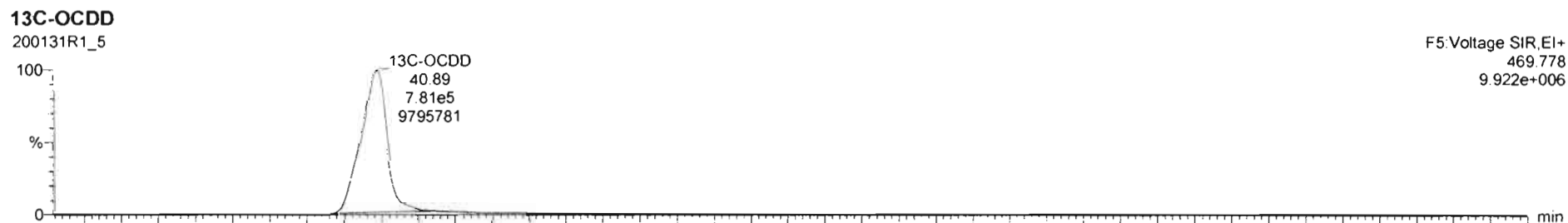
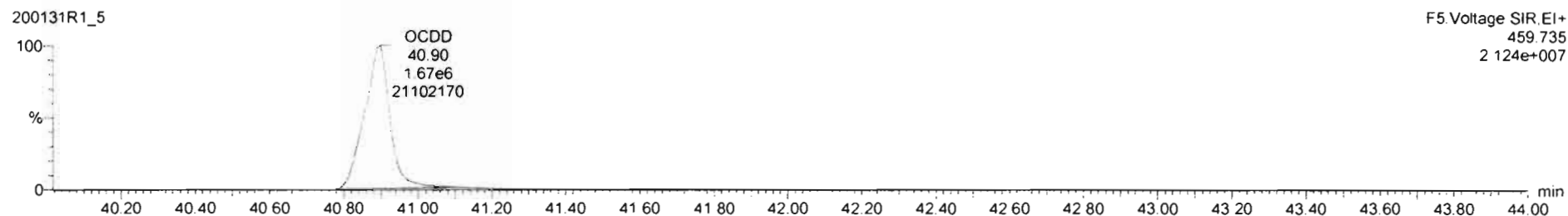
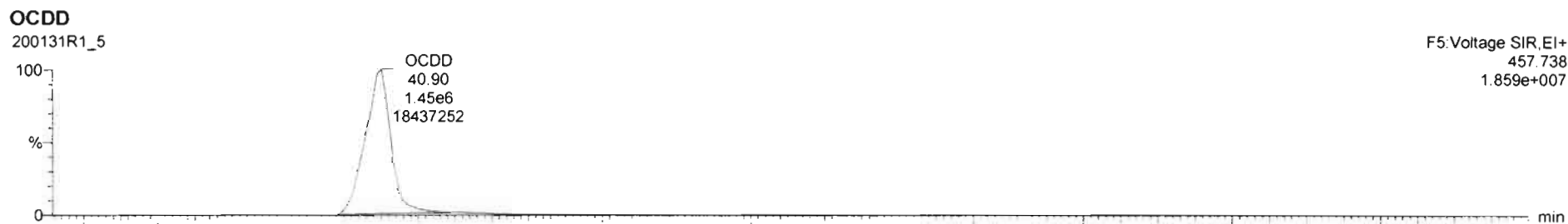
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Dataset: Untitled

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

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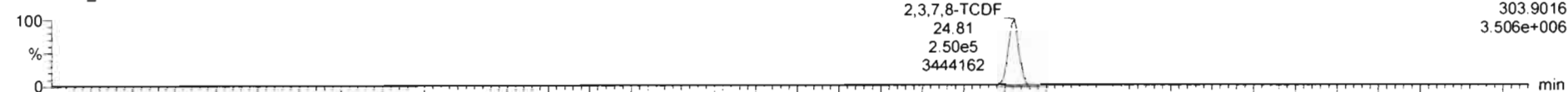
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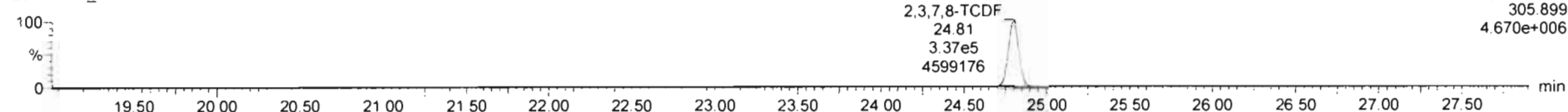
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### 2,3,7,8-TCDF

200131R1\_5

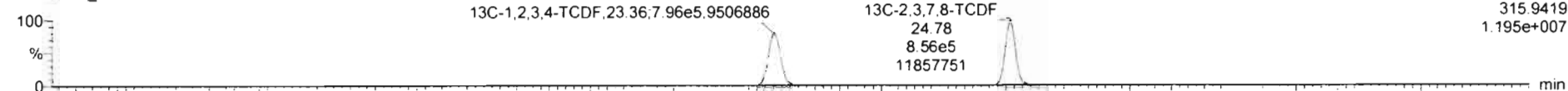


200131R1\_5

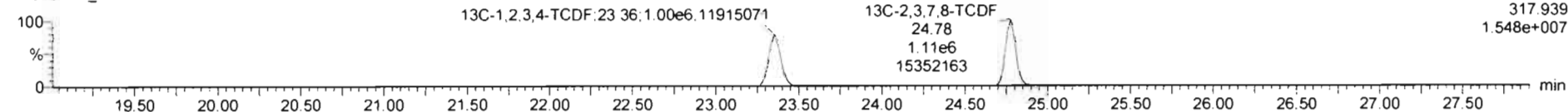


### 13C-2,3,7,8-TCDF

200131R1\_5

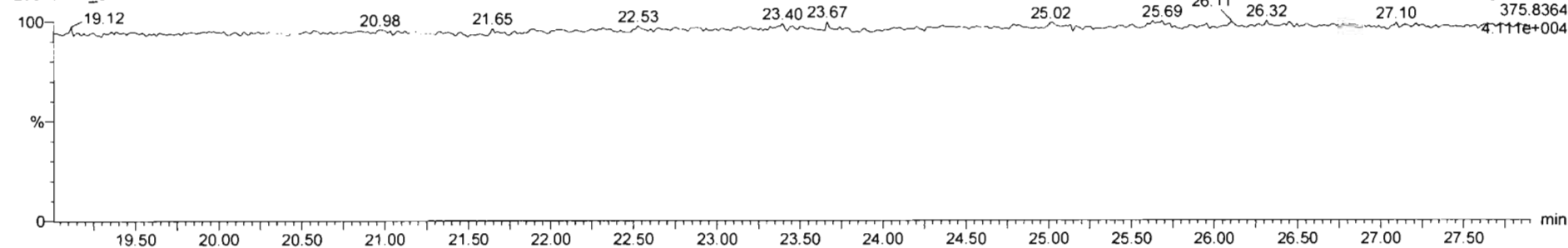


200131R1\_5



### DPE1

200131R1\_5

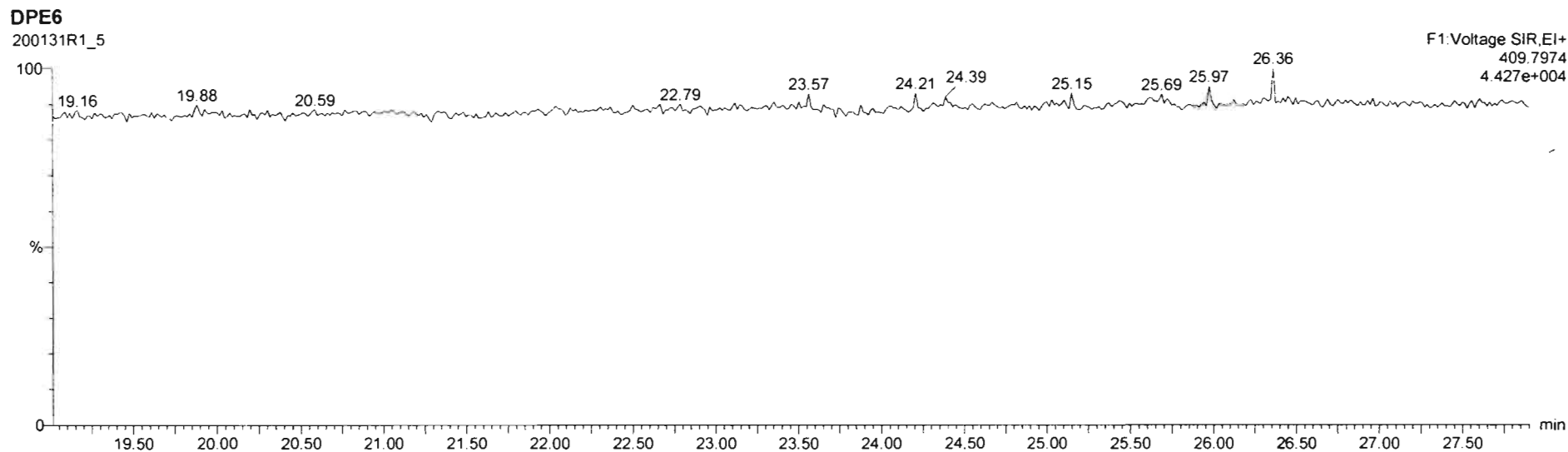
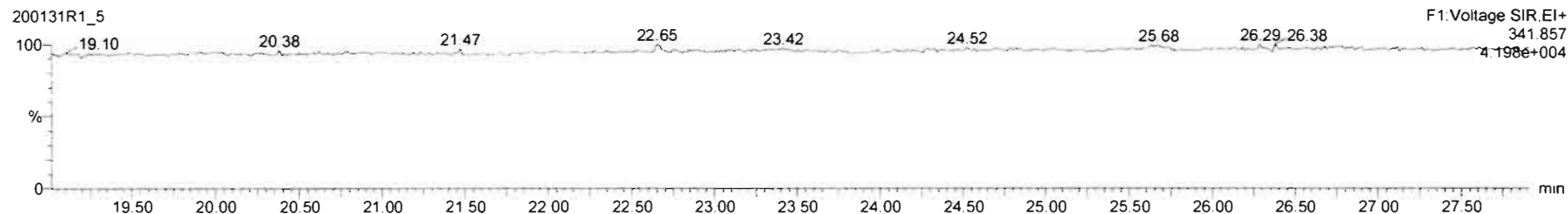
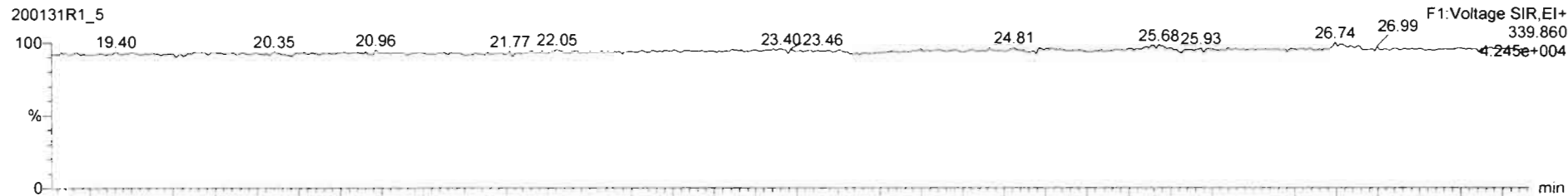


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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_5, Date: 31-Jan-2020, Time: 19:57:17, ID: ST200131R1\_5 1613 CS4 19L2306, Description: 1613 CS4 19L2306

1st Func. Penta-Furans





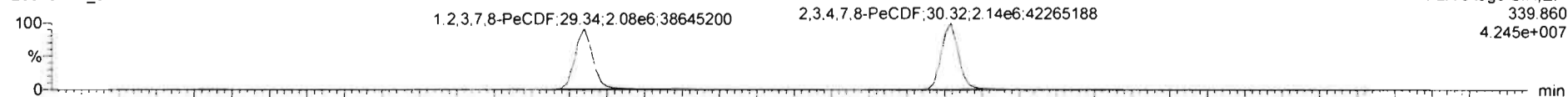
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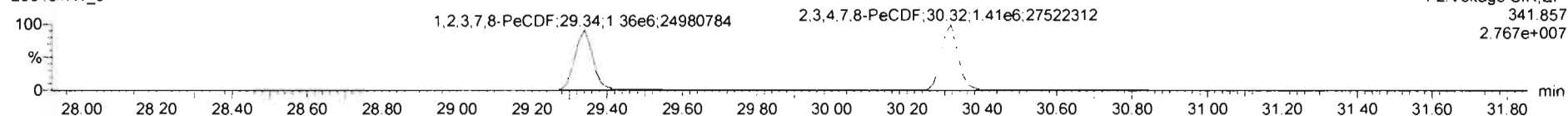
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**1,2,3,7,8-PeCDF**

200131R1\_5

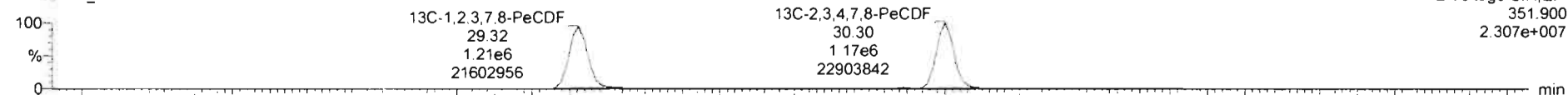


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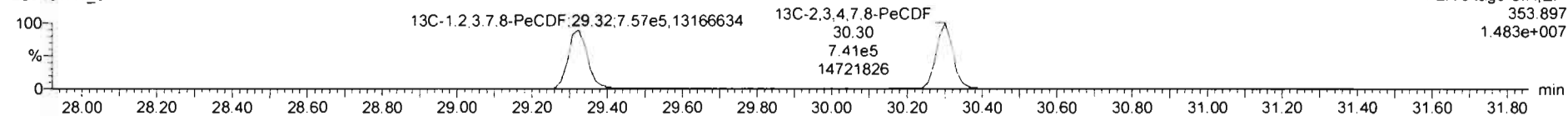


**13C-1,2,3,7,8-PeCDF**

200131R1\_5

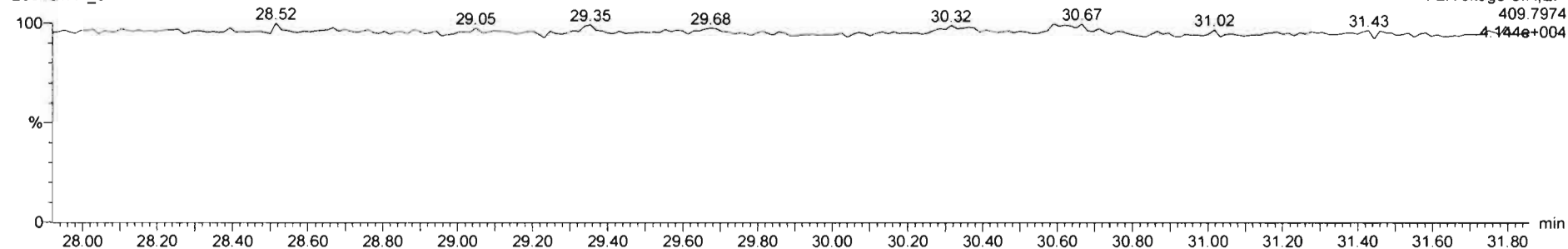


200131R1\_5



**DPE2**

200131R1\_5



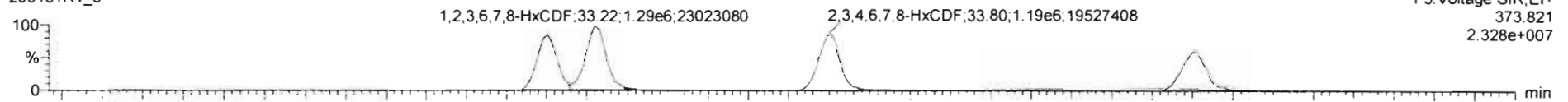
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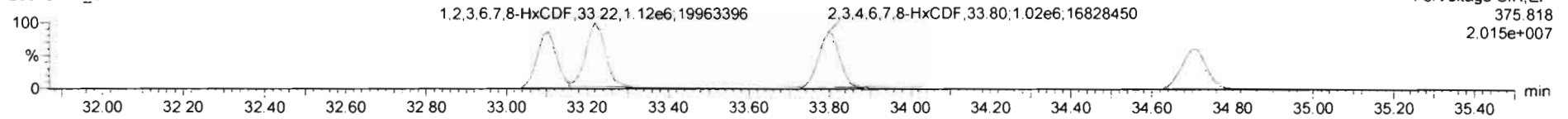
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**1,2,3,4,7,8-HxCDF**

200131R1\_5

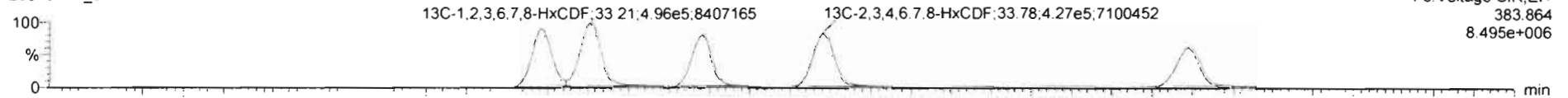


200131R1\_5

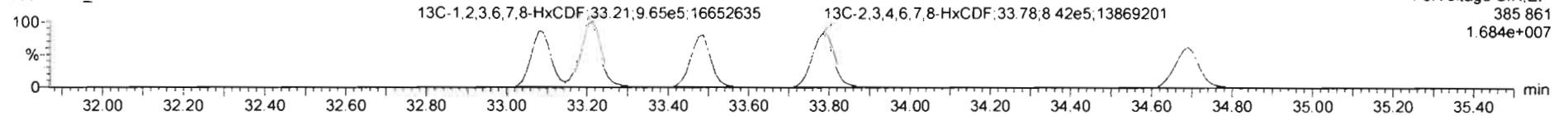


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_5

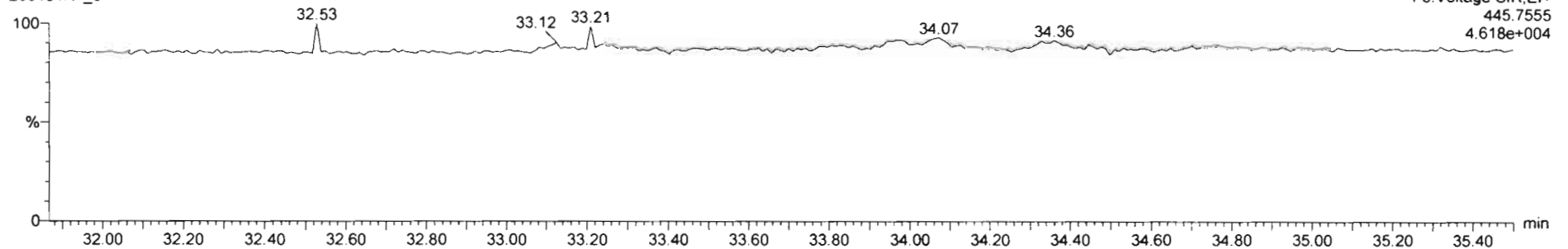


200131R1\_5



**DPE3**

200131R1\_5

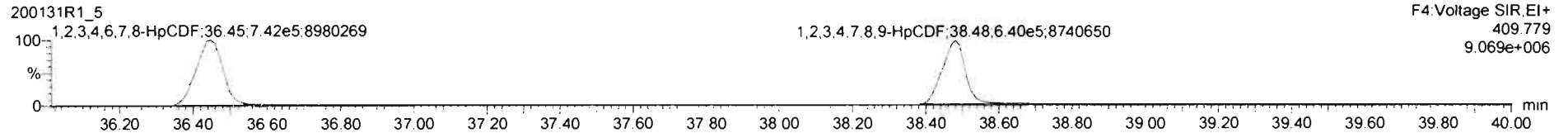
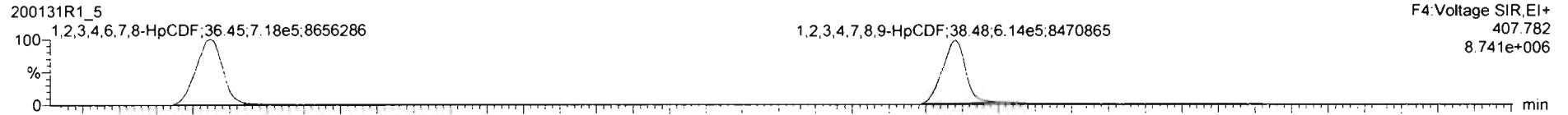


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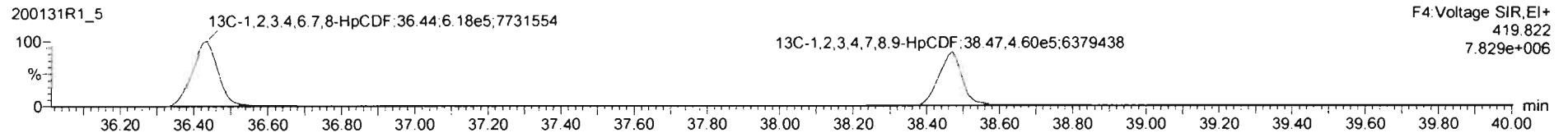
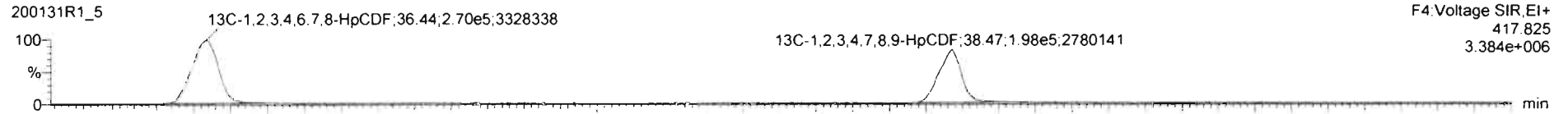
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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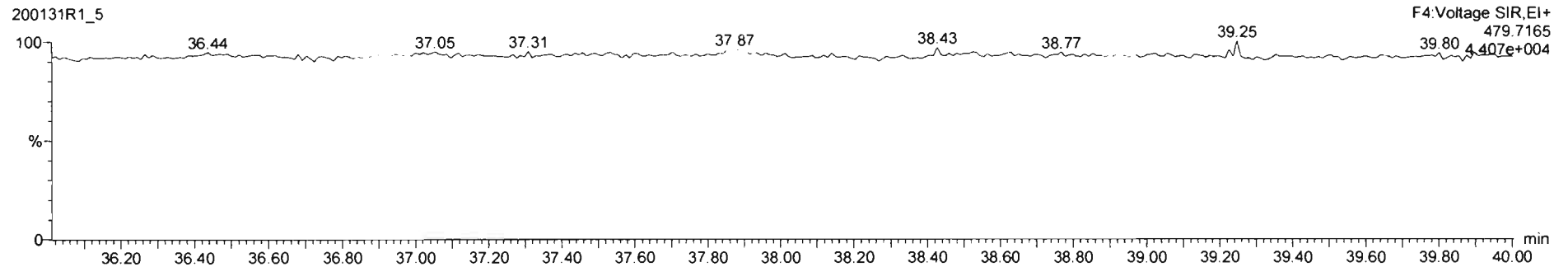
**1,2,3,4,6,7,8-HpCDF**



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



**DPE4**

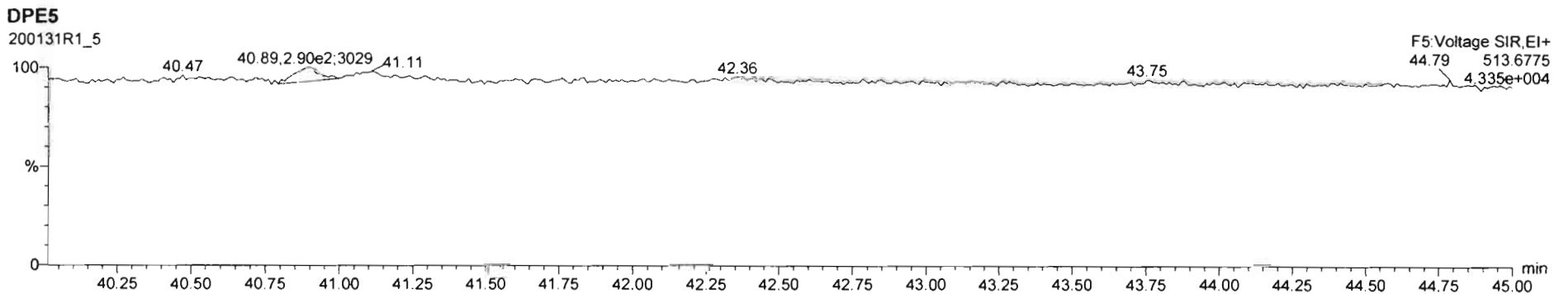
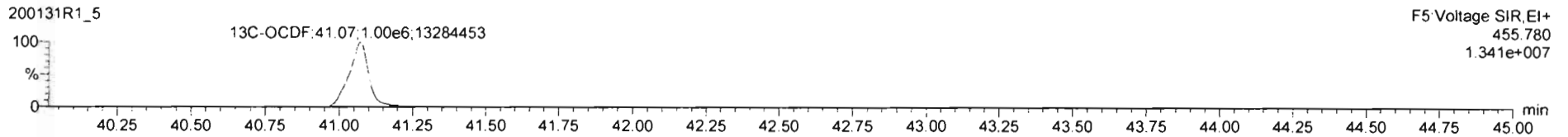
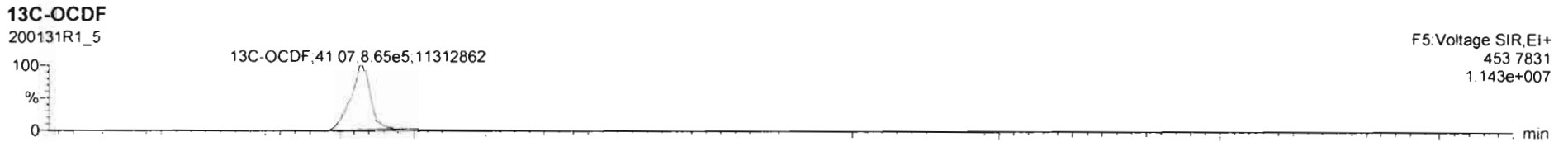
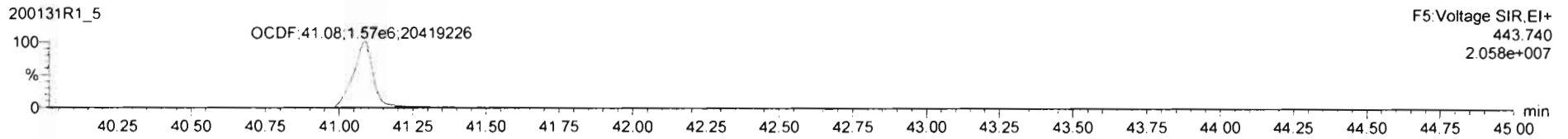
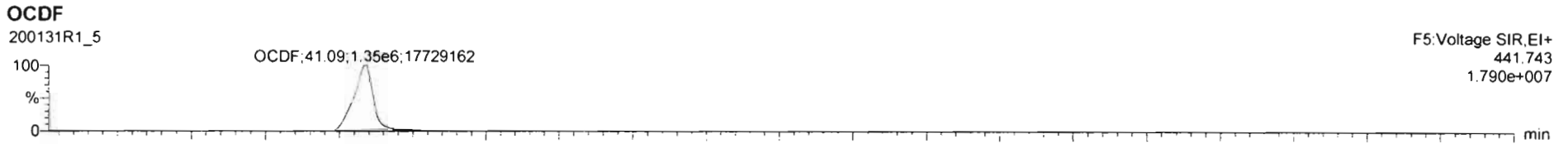


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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

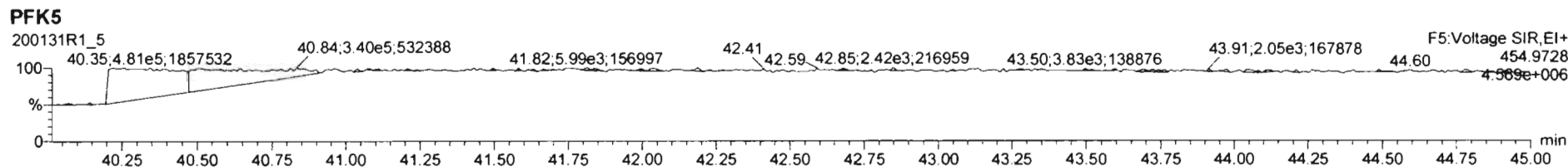
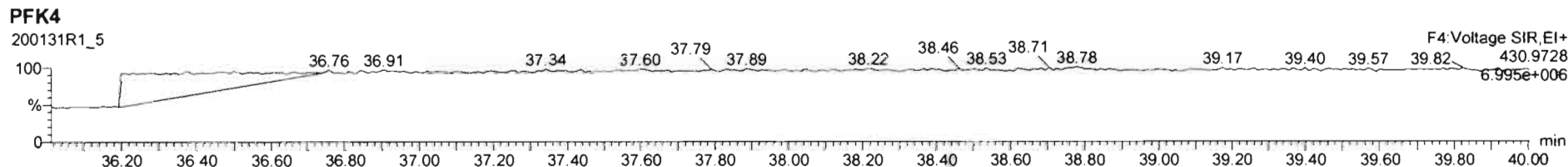
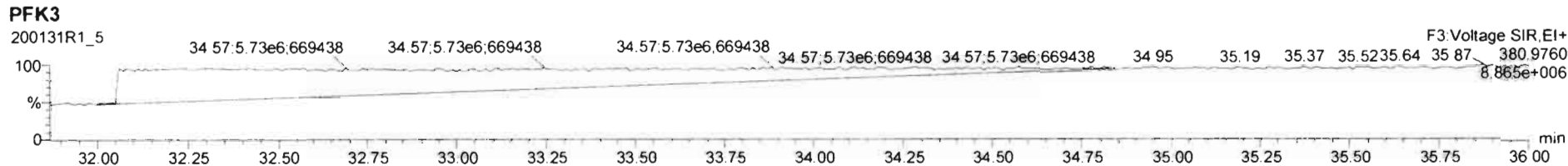
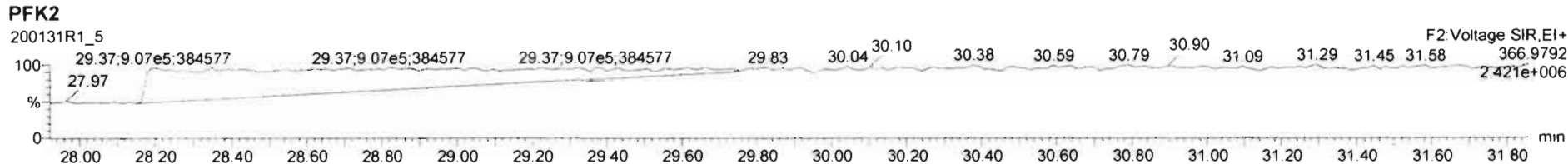
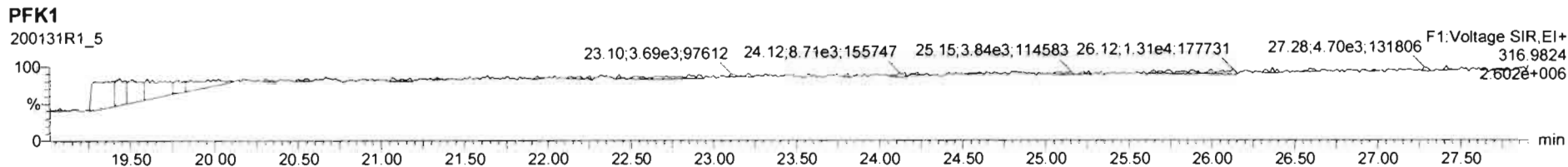
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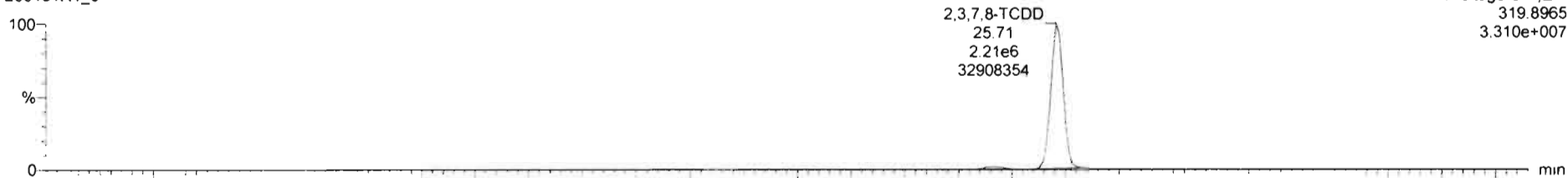
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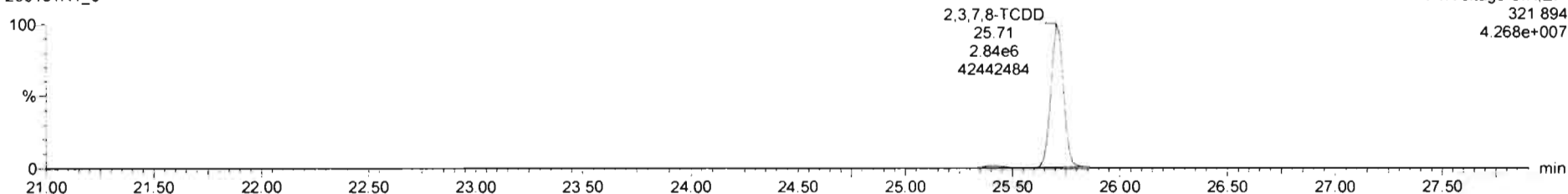
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**2,3,7,8-TCDD**

200131R1\_6

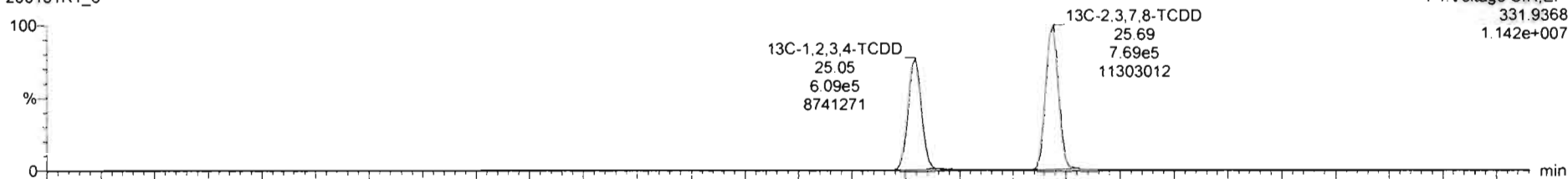


200131R1\_6

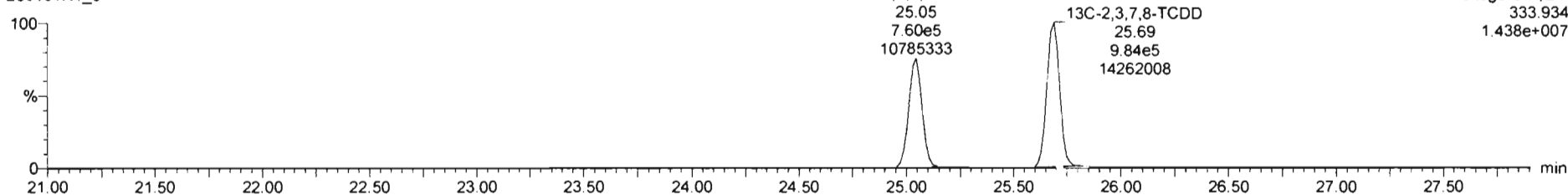


**13C-2,3,7,8-TCDD**

200131R1\_6



200131R1\_6



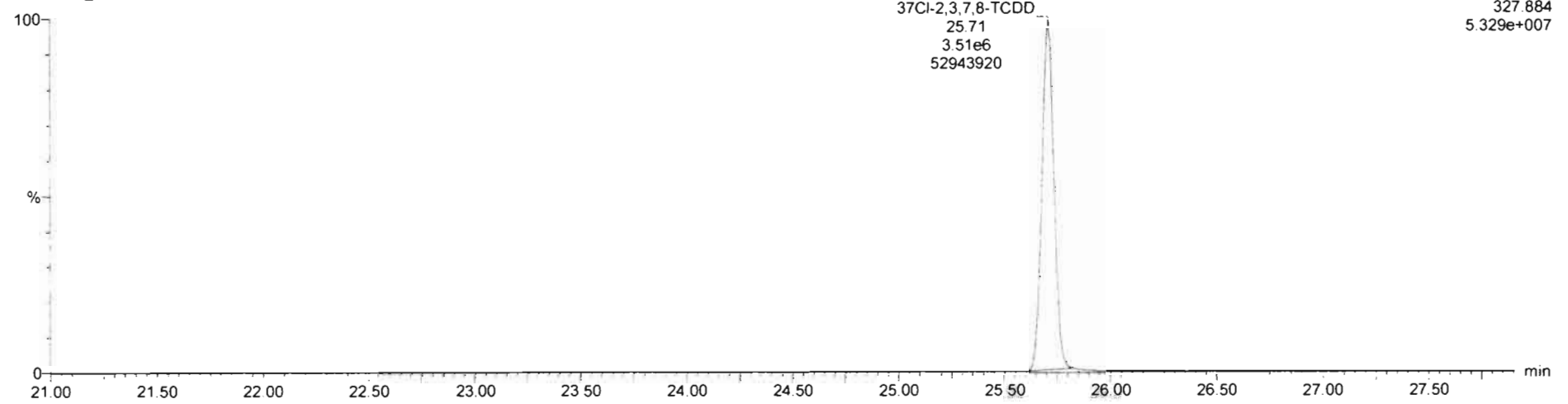
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

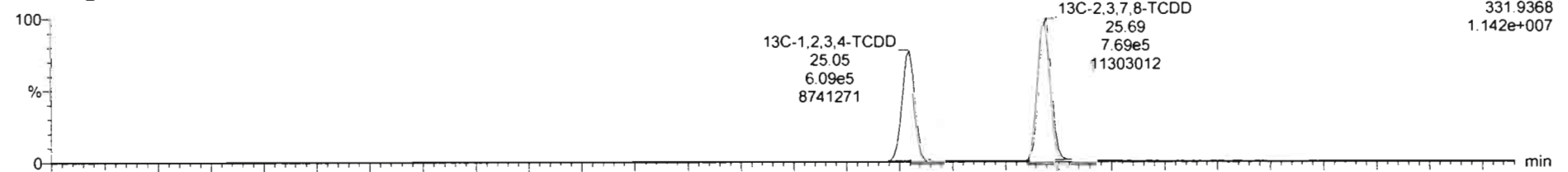
**37Cl-2,3,7,8-TCDD**

200131R1\_6

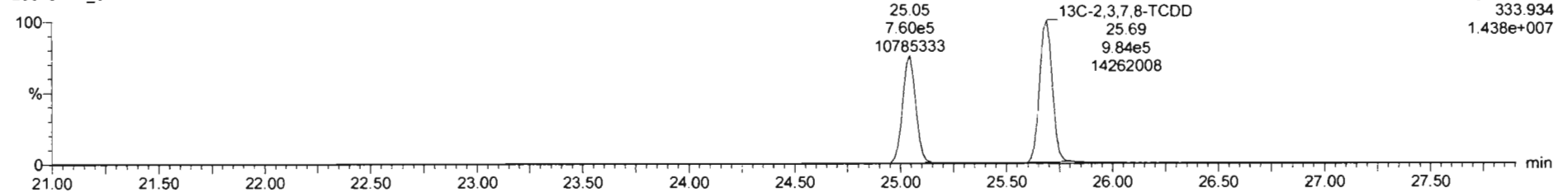


**13C-1,2,3,4-TCDD**

200131R1\_6



200131R1\_6



Dataset: Untitled

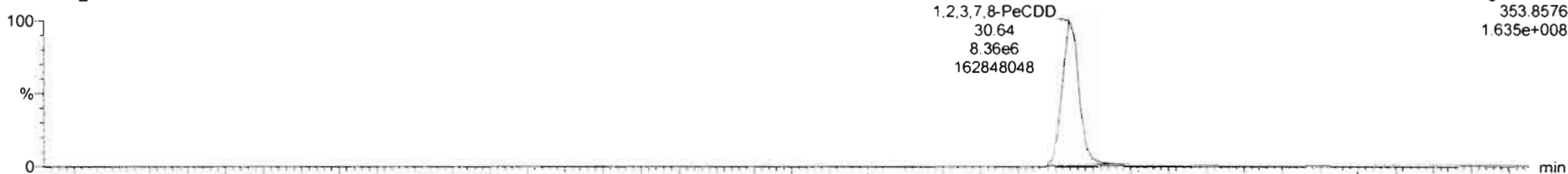
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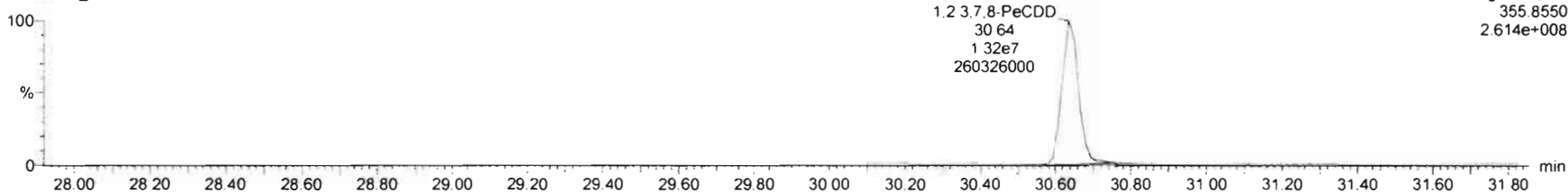
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**1,2,3,7,8-PeCDD**

200131R1\_6

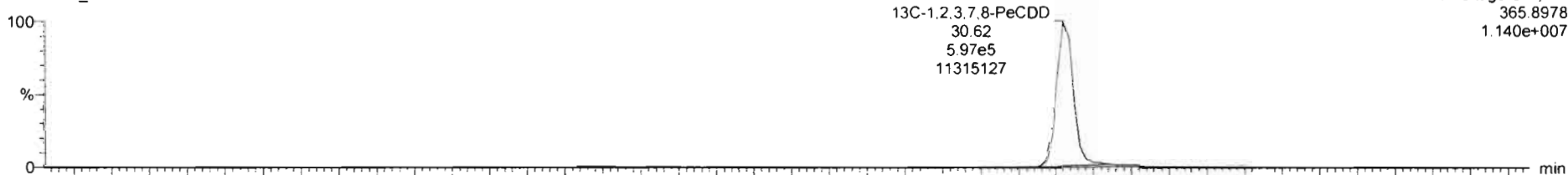


200131R1\_6

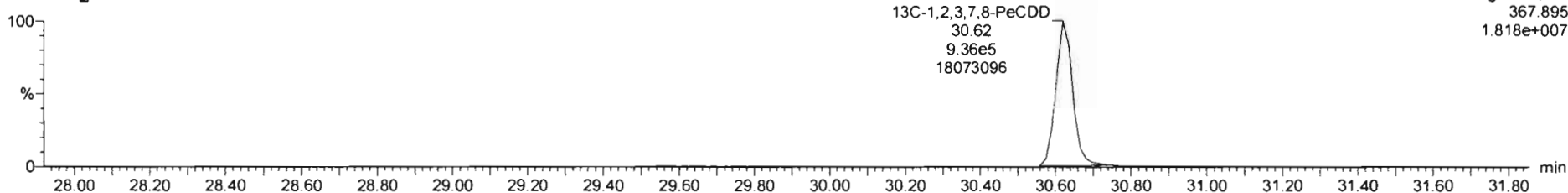


**13C-1,2,3,7,8-PeCDD**

200131R1\_6



200131R1\_6





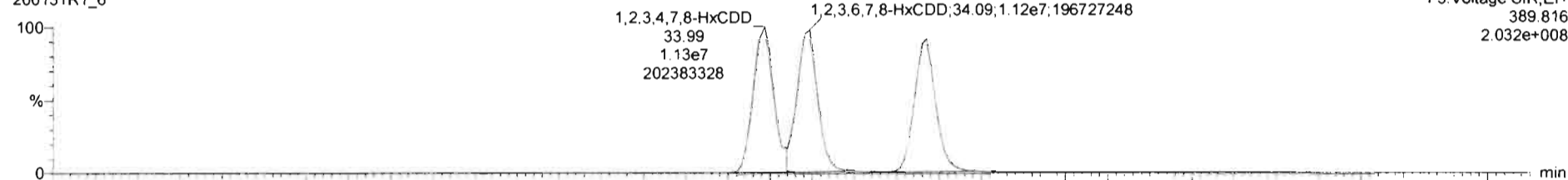
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

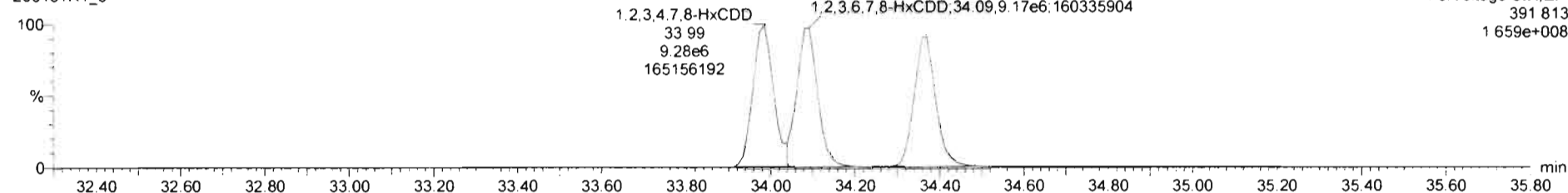
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**1,2,3,4,7,8-HxCDD**

200131R1\_6

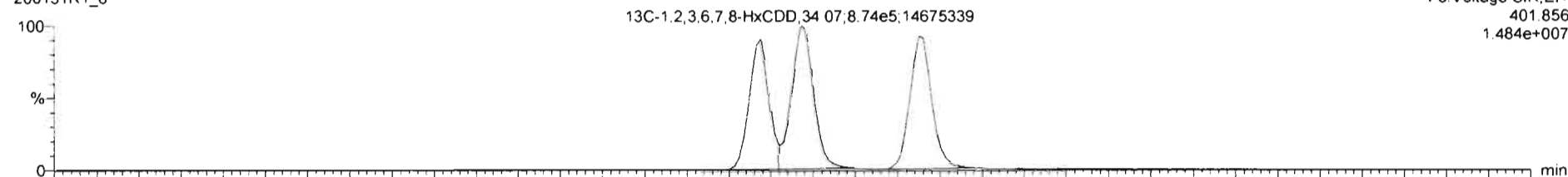


200131R1\_6

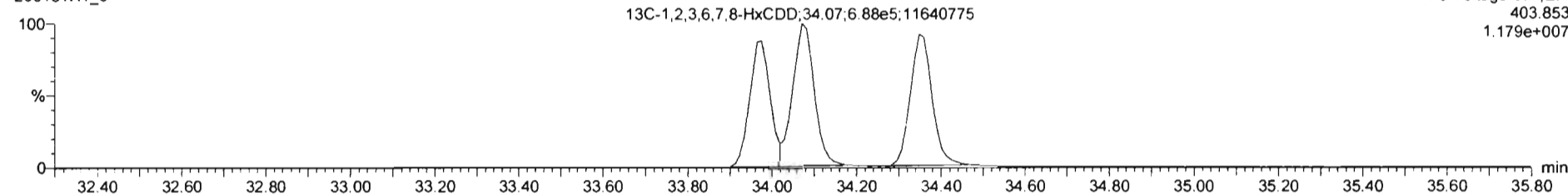


**13C-1,2,3,4,7,8-HxCDD**

200131R1\_6



200131R1\_6



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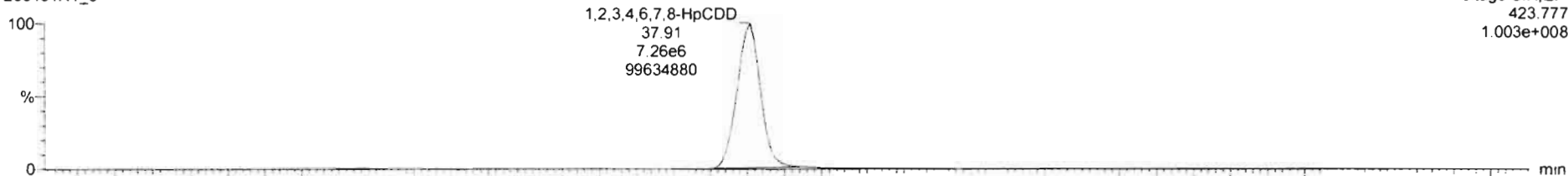
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

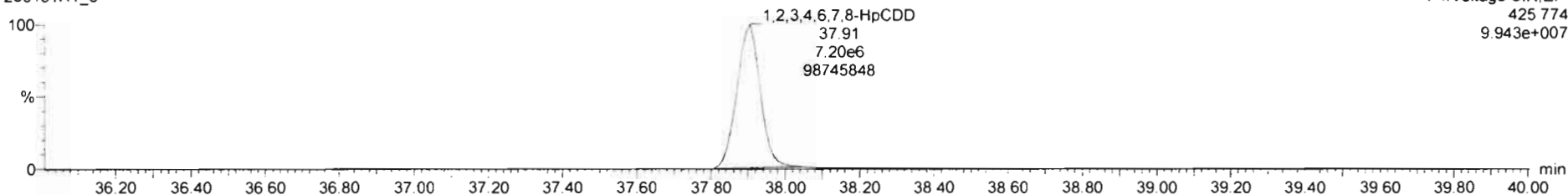
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**1,2,3,4,6,7,8-HpCDD**

200131R1\_6

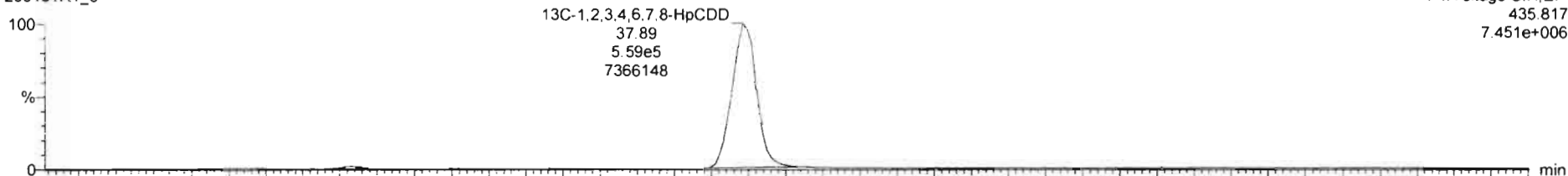


200131R1\_6

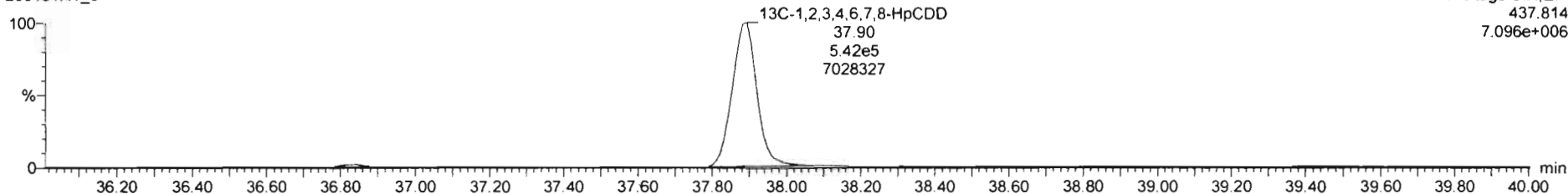


**13C-1,2,3,4,6,7,8-HpCDD**

200131R1\_6



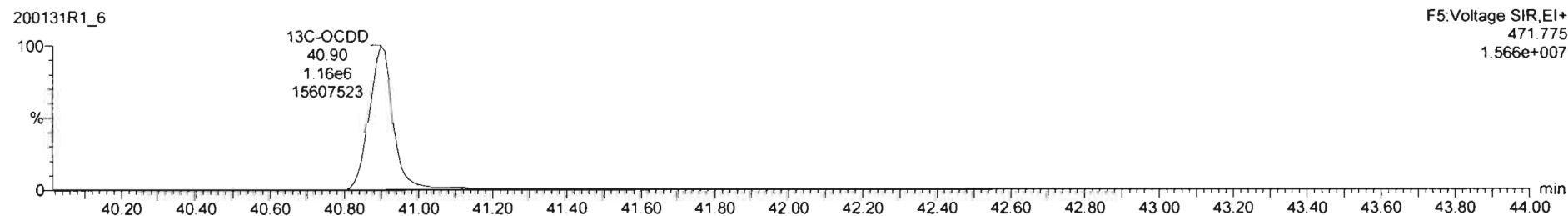
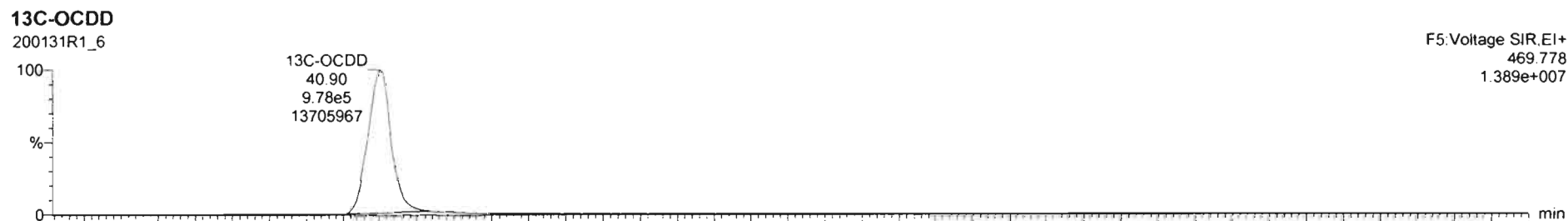
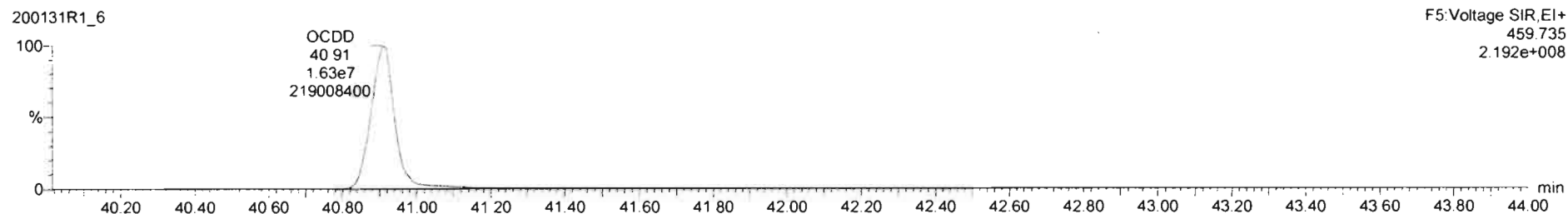
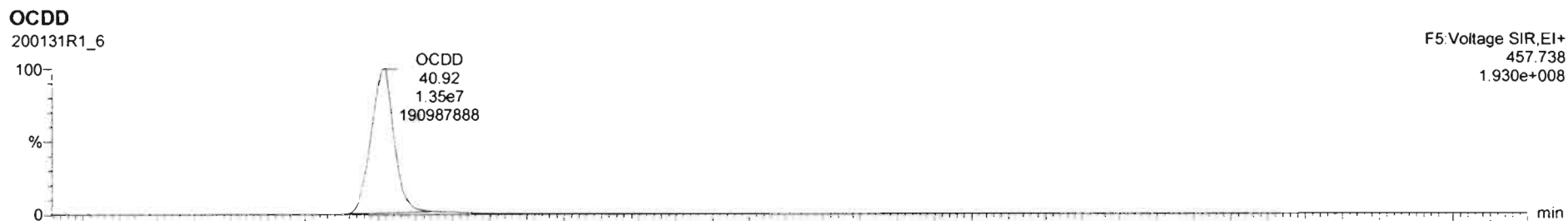
200131R1\_6



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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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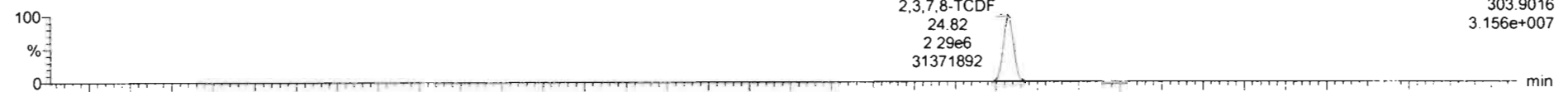
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

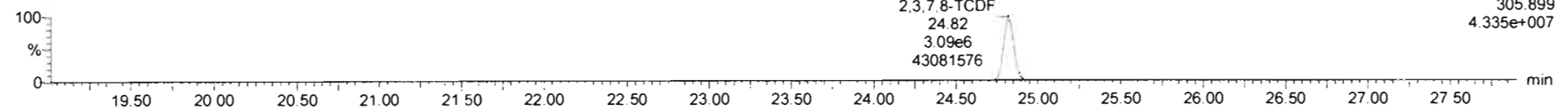
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**2,3,7,8-TCDF**

200131R1\_6

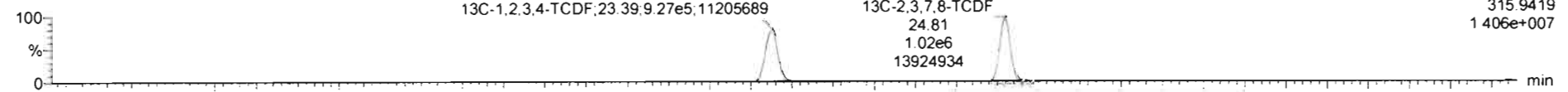


200131R1\_6

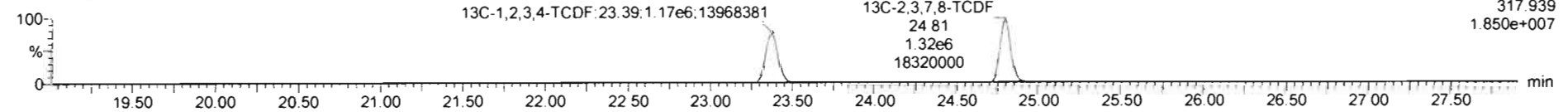


**13C-2,3,7,8-TCDF**

200131R1\_6

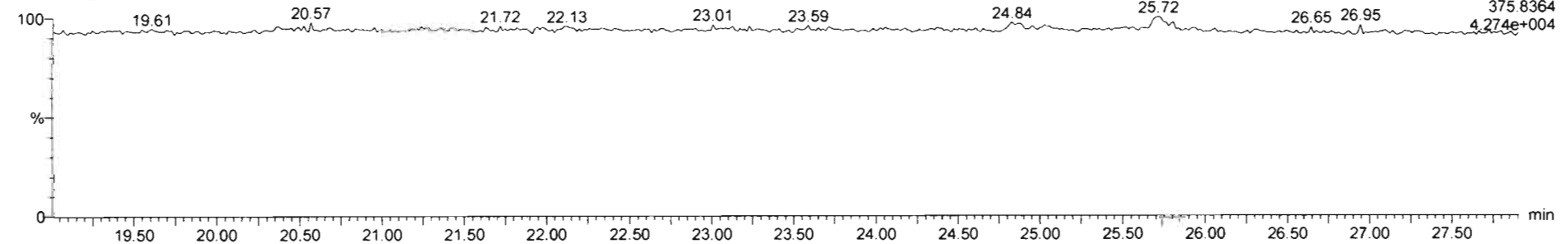


200131R1\_6



**DPE1**

200131R1\_6



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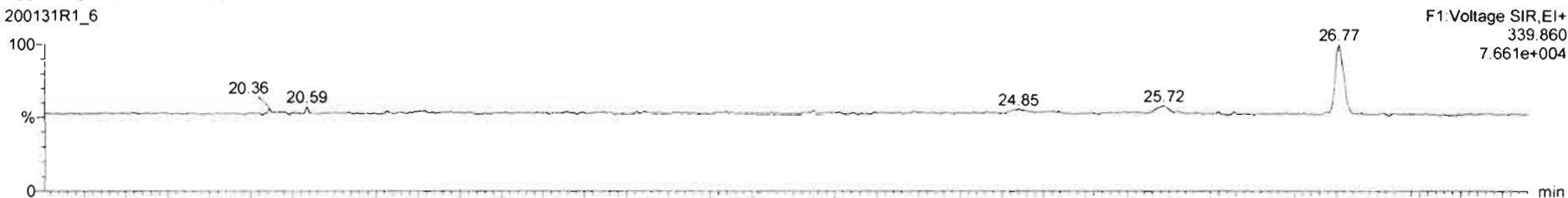
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

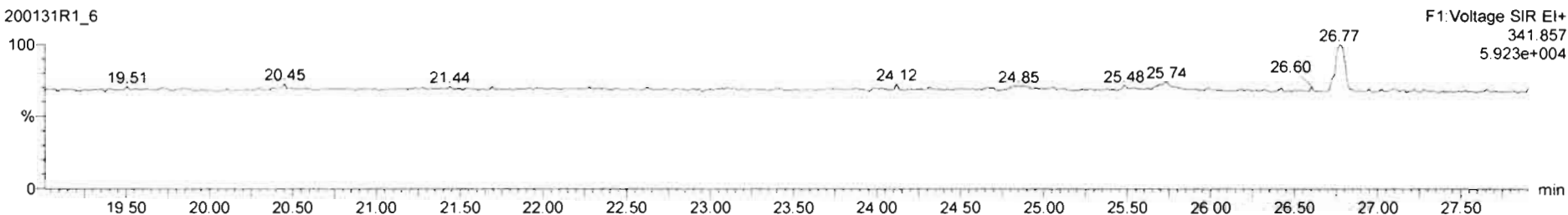
Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

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200131R1\_6

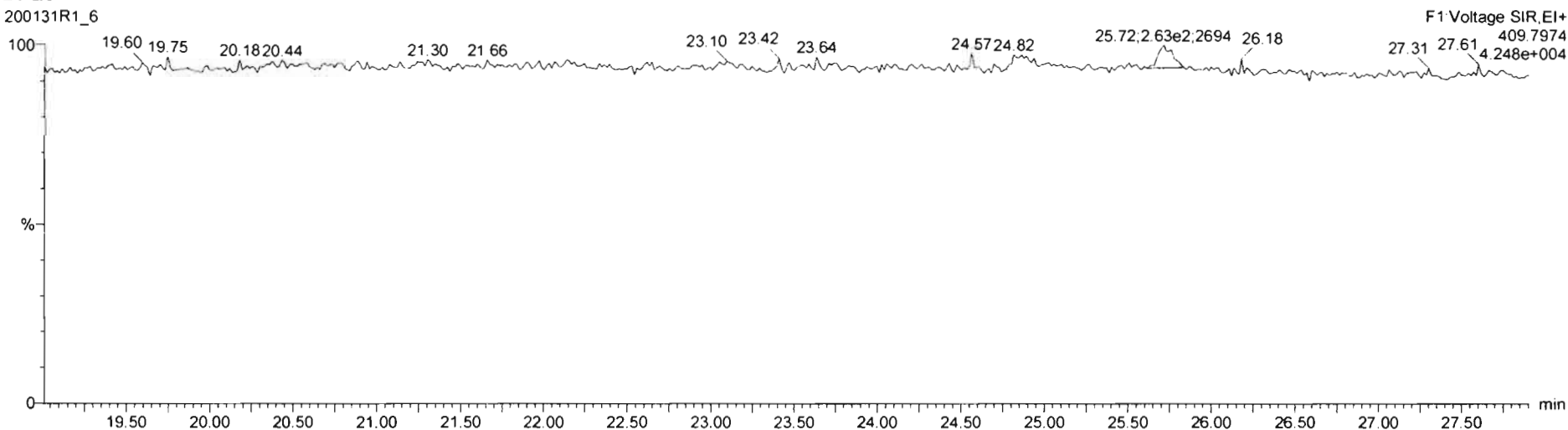


200131R1\_6



DPE6

200131R1\_6



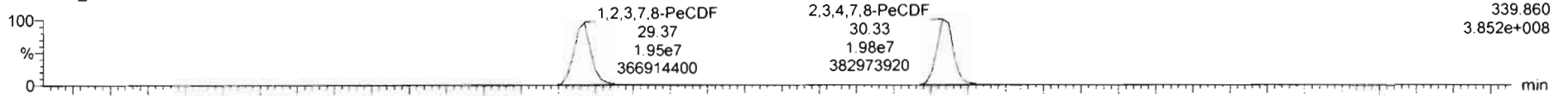
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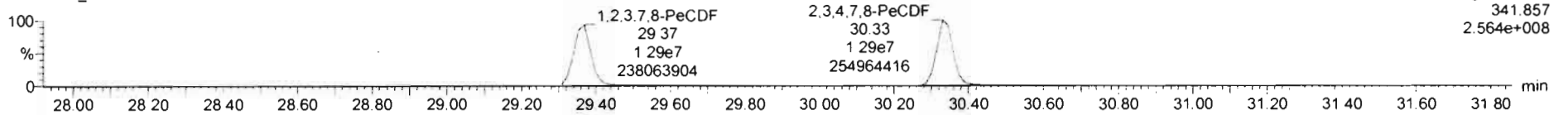
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**1,2,3,7,8-PeCDF**

200131R1\_6

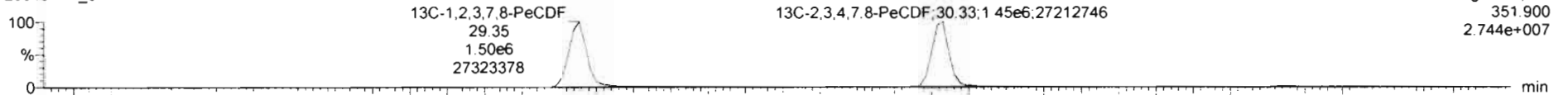


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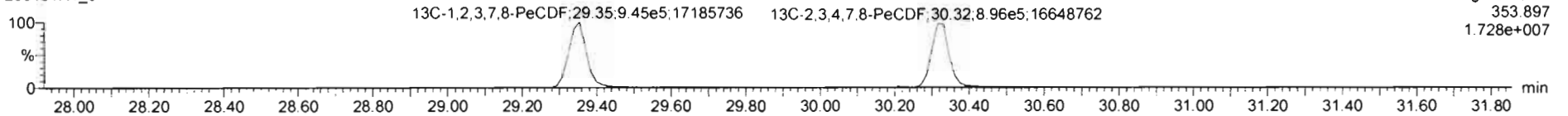


**13C-1,2,3,7,8-PeCDF**

200131R1\_6

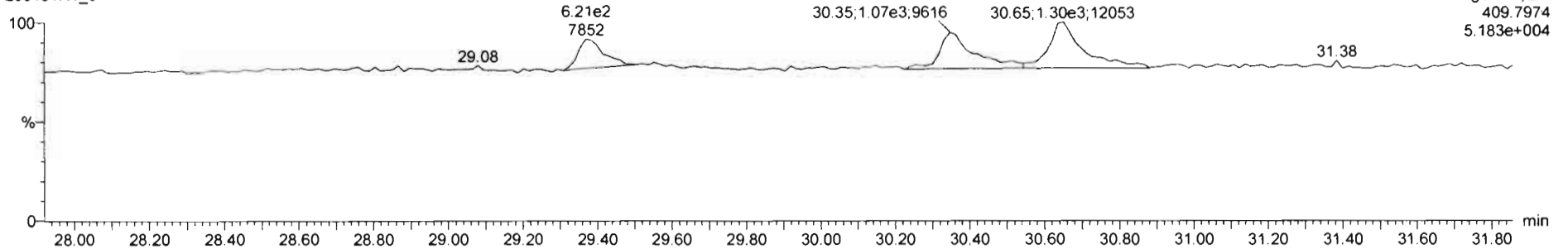


200131R1\_6



**DPE2**

200131R1\_6



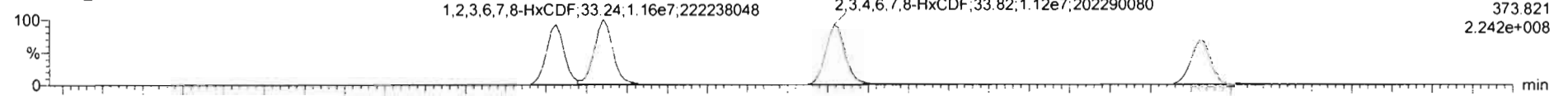
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Last Altered: Sunday, February 02, 2020 11:06:20 AM Pacific Standard Time  
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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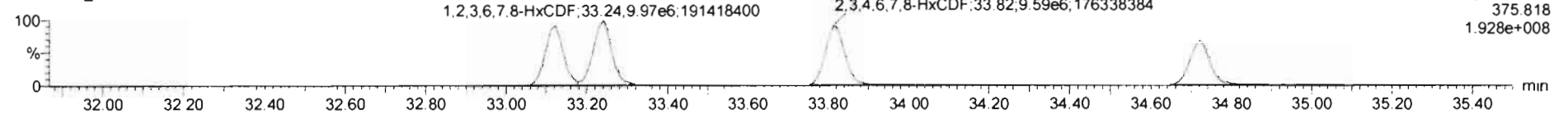
**1,2,3,4,7,8-HxCDF**

200131R1\_6



F3: Voltage SIR, EI+  
373 821  
2.242e+008

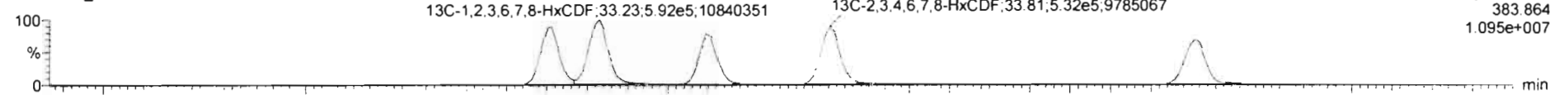
200131R1\_6



F3: Voltage SIR, EI+  
375 818  
1.928e+008

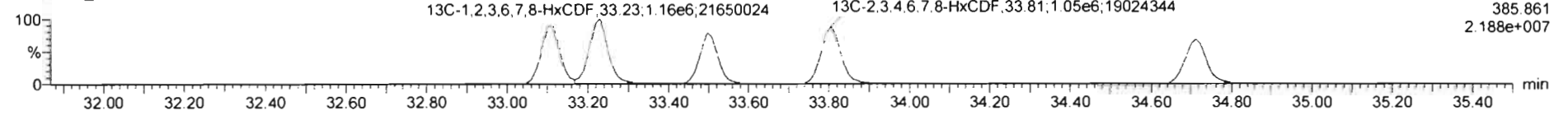
**13C-1,2,3,4,7,8-HxCDF**

200131R1\_6



F3: Voltage SIR, EI+  
383 864  
1.095e+007

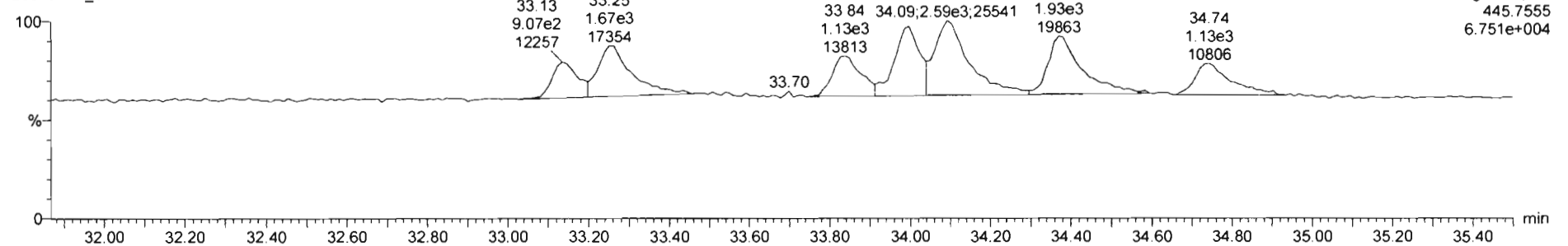
200131R1\_6



F3: Voltage SIR, EI+  
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**DPE3**

200131R1\_6



F3: Voltage SIR, EI+  
445 7555  
6.751e+004

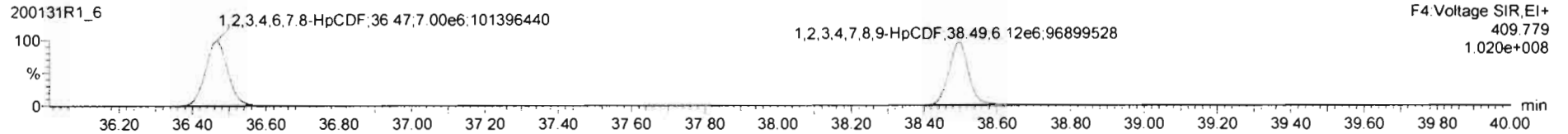
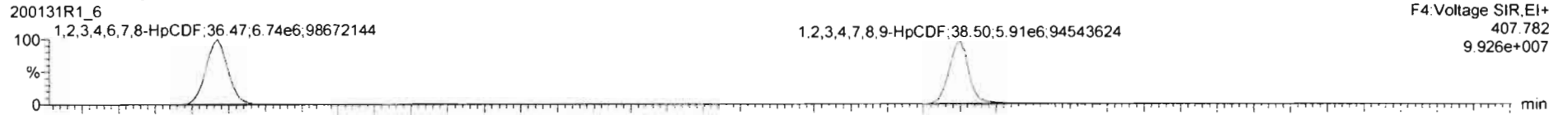
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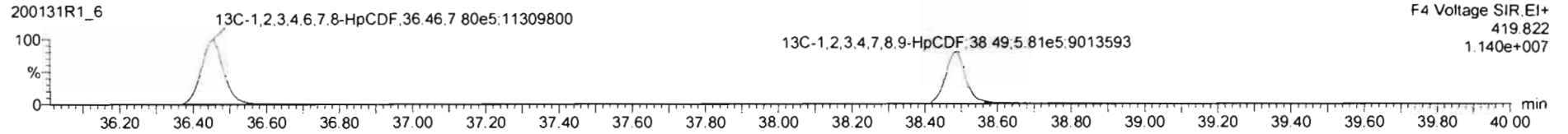
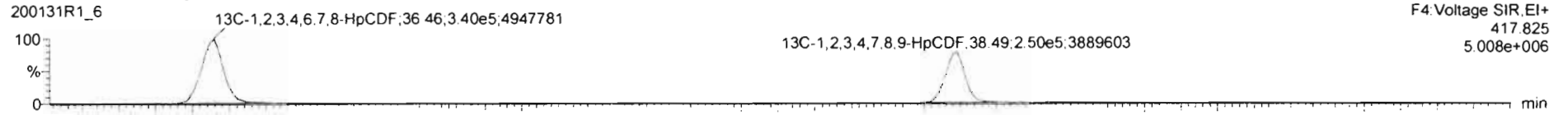
Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

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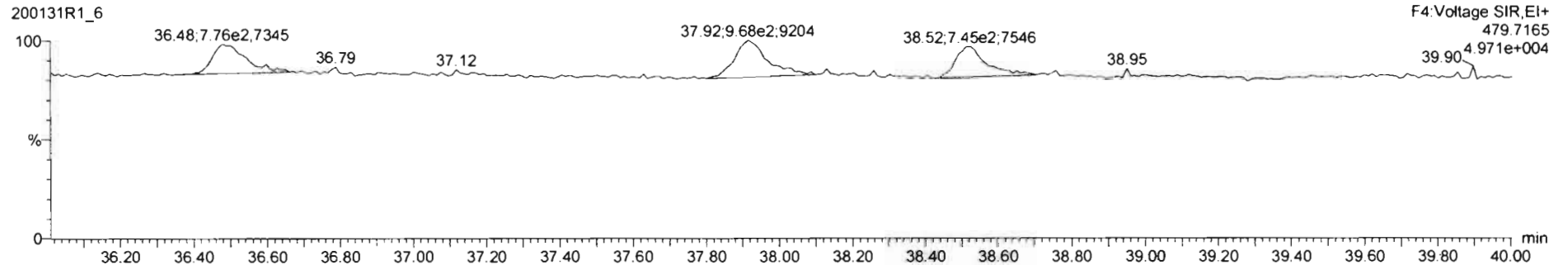
**1,2,3,4,6,7,8-HpCDF**



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



**DPE4**



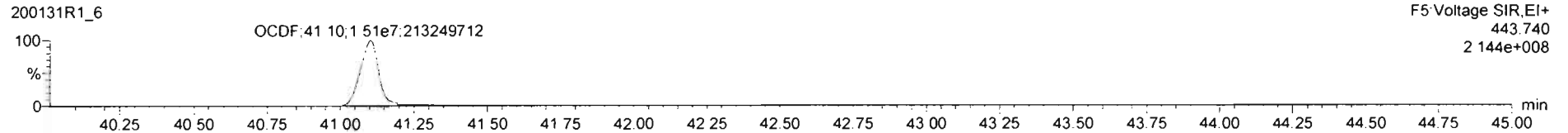
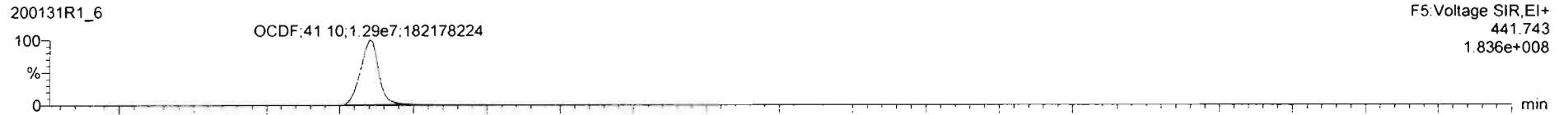


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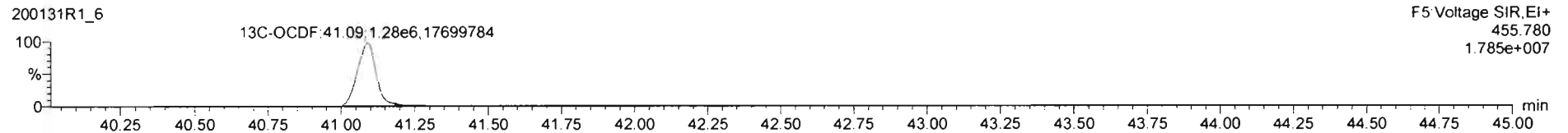
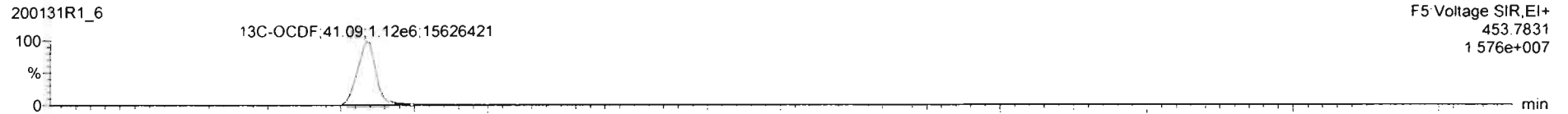
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Printed: Sunday, February 02, 2020 11:06:35 AM Pacific Standard Time

Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

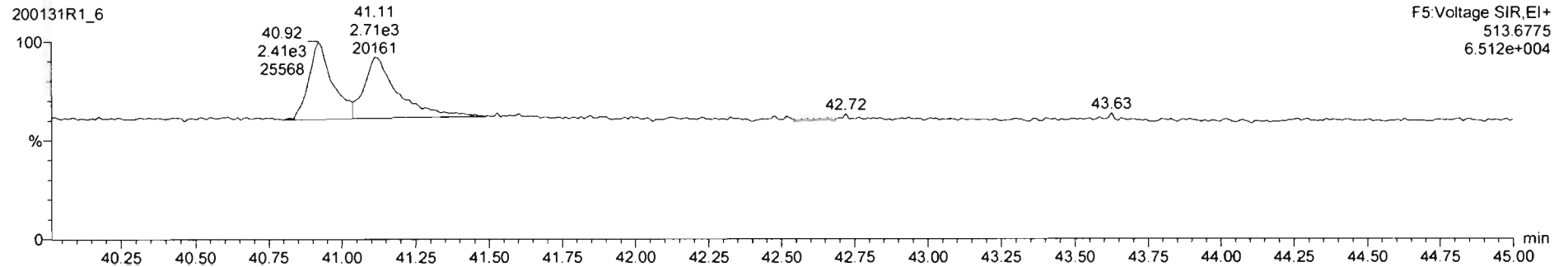
**OCDF**



**13C-OCDF**



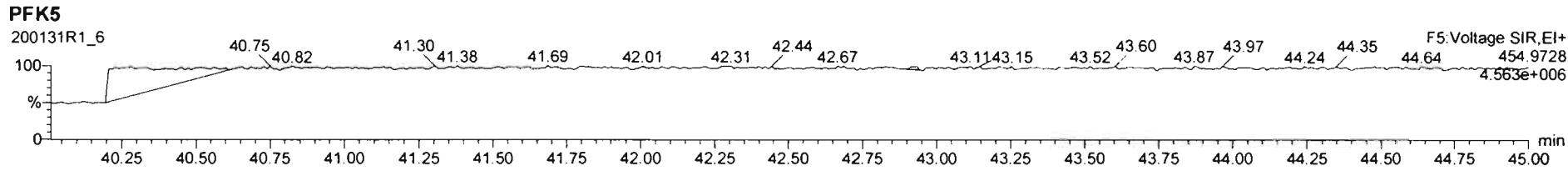
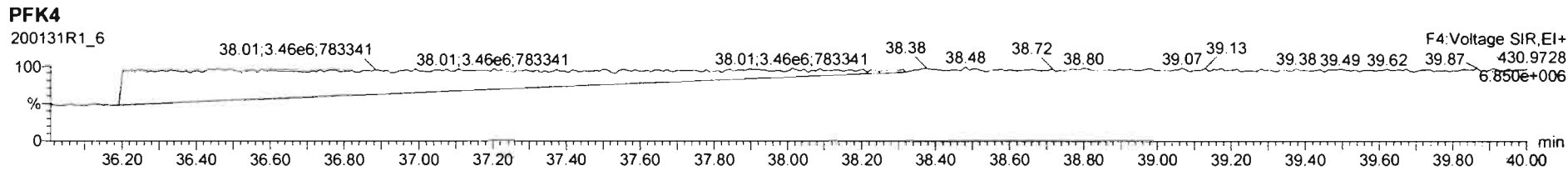
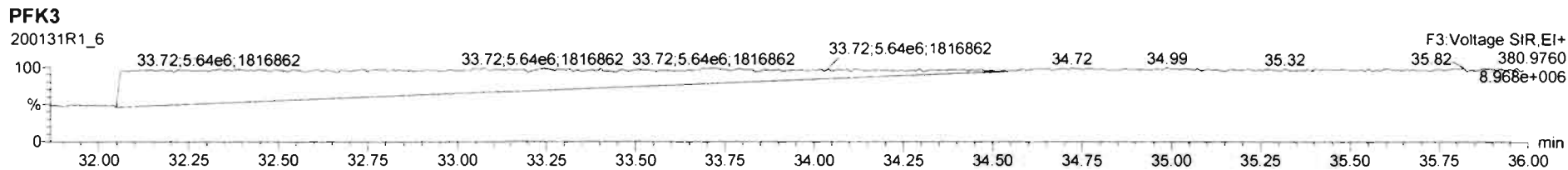
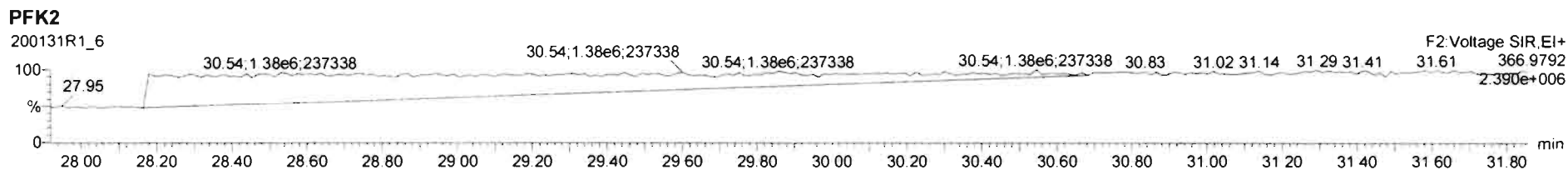
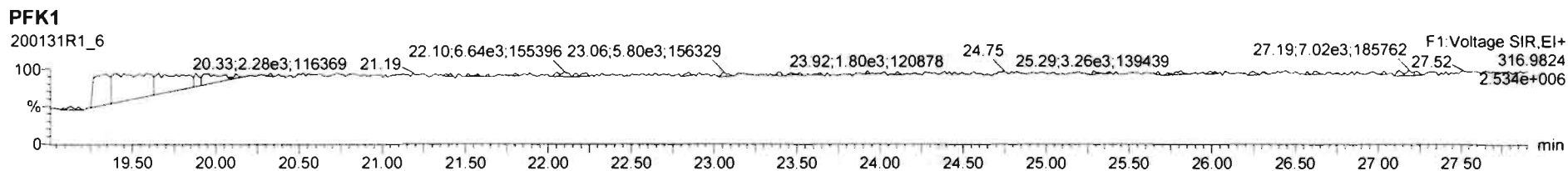
**DPE5**



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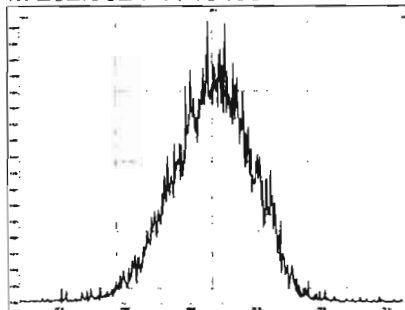
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Name: 200131R1\_6, Date: 31-Jan-2020, Time: 20:44:23, ID: ST200131R1\_6 1613 CS5 19L2307, Description: 1613 CS5 19L2307

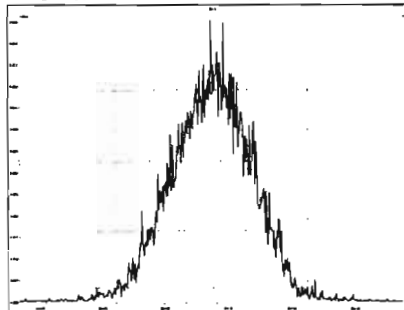


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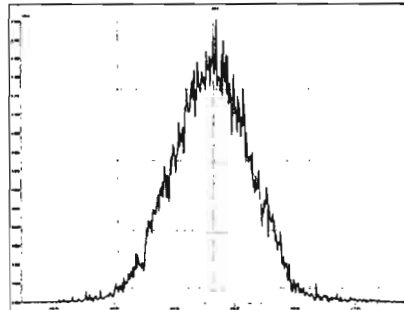
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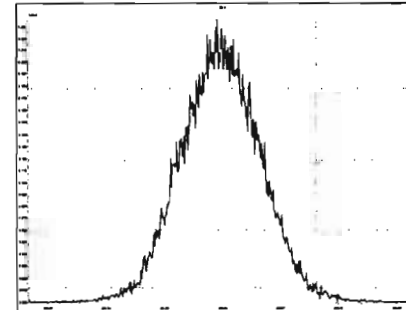
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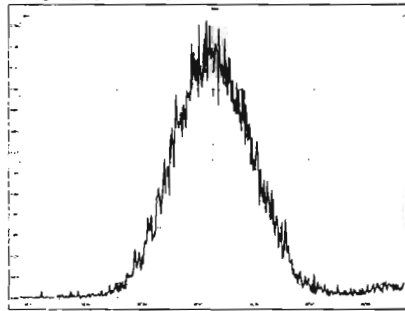
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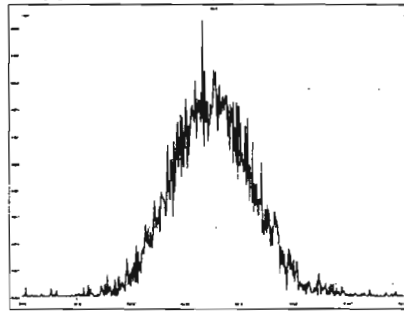
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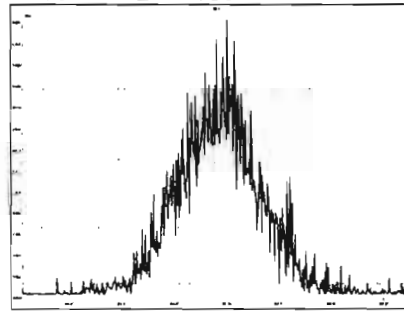
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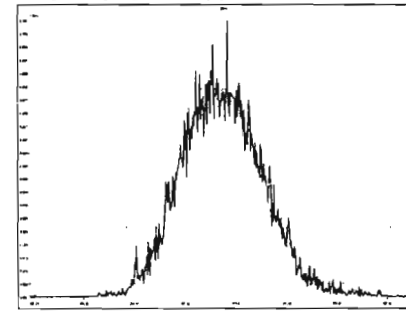
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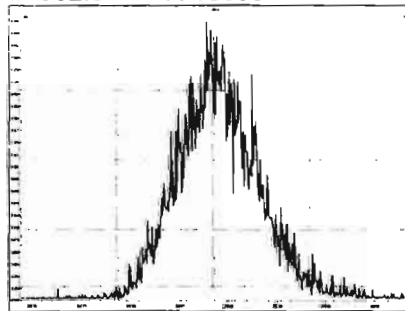
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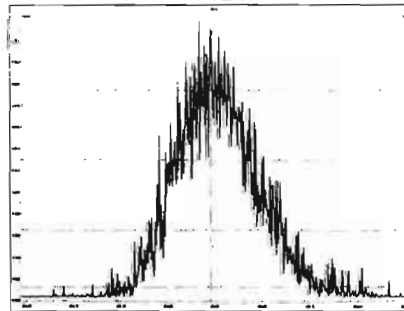
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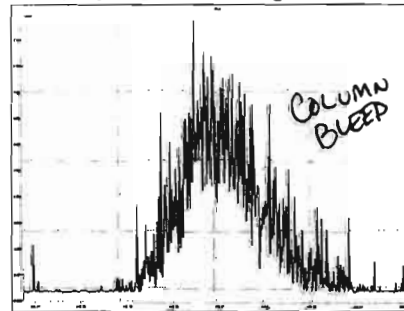
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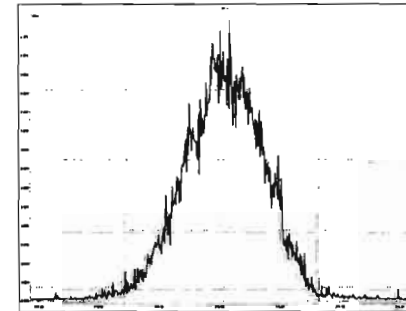
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M 416.9760 R 6578 ok

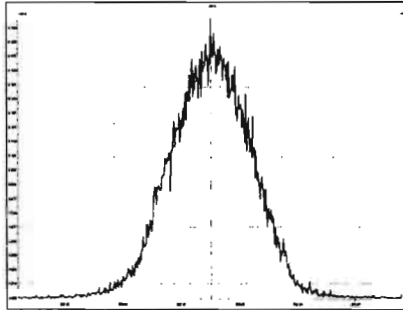


M 318.9792 R 10639

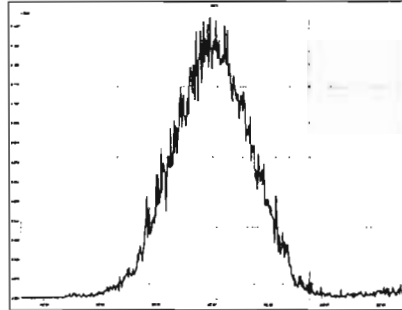


Printed: Saturday, February 01, 2020 07:51:26 Pacific Standard Time

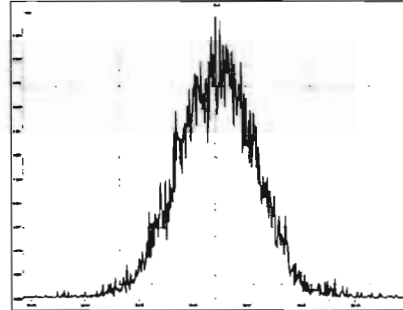
M 330.9792 R 11210



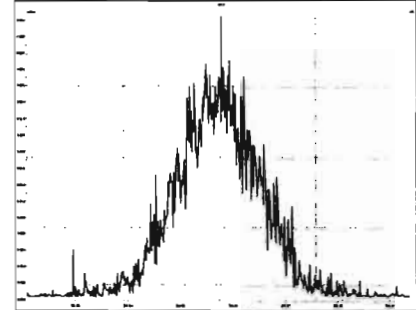
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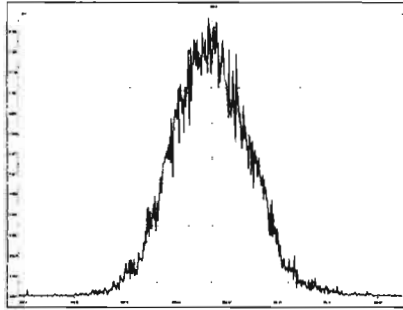
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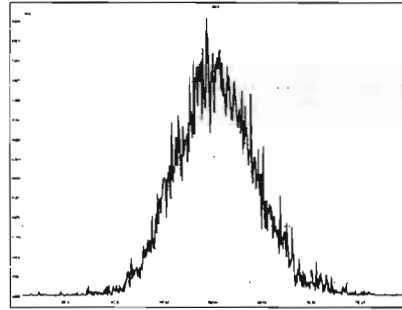
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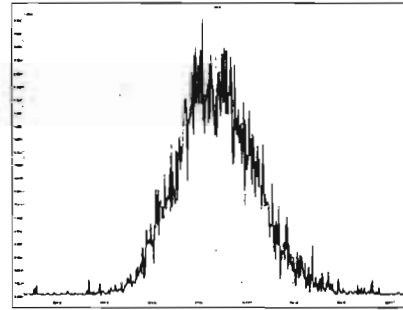
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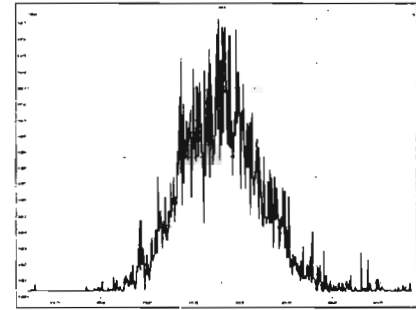
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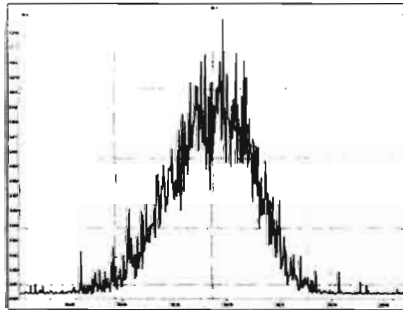
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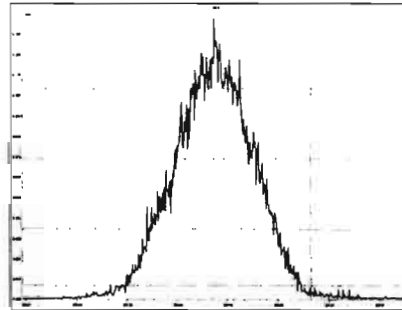
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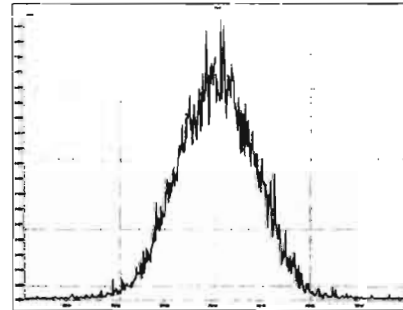
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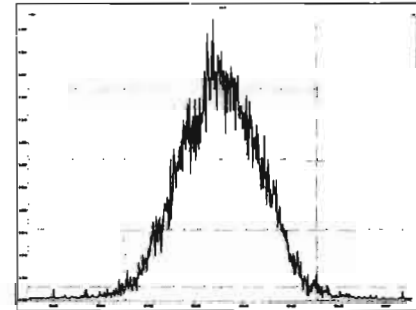
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M 392.9760 R 10930

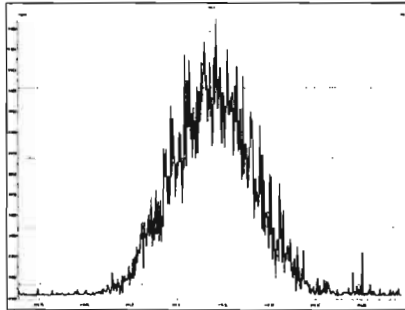


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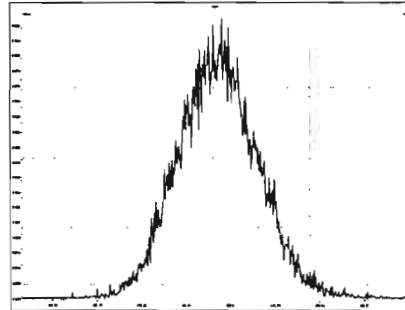


Printed: Saturday, February 01, 2020 07:51:26 Pacific Standard Time

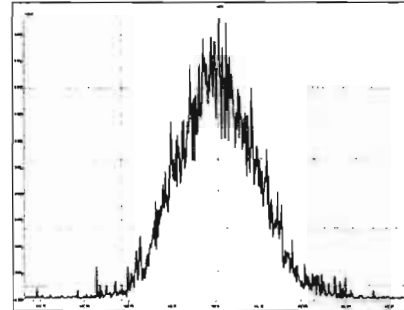
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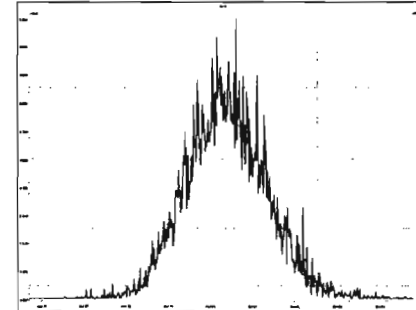
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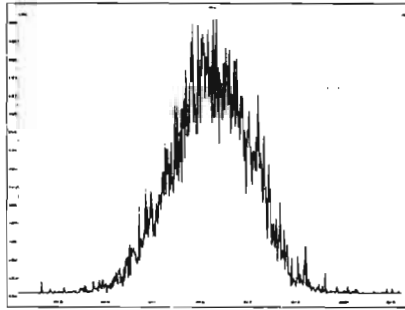
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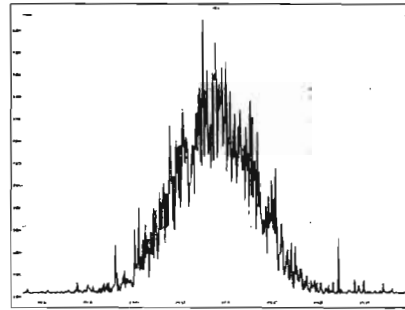
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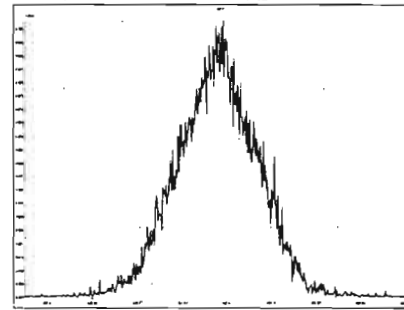
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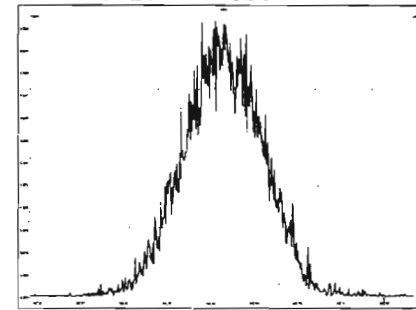
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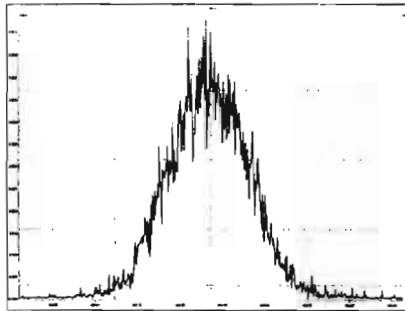
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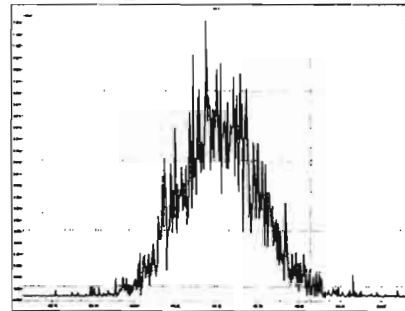
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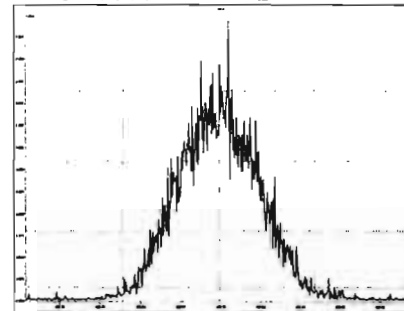
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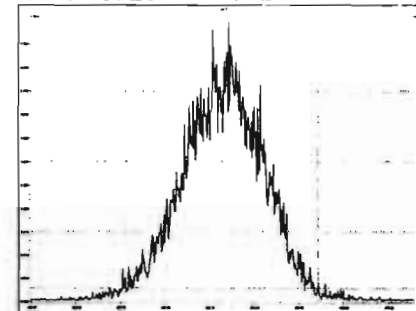
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M 480.9696 R 11062

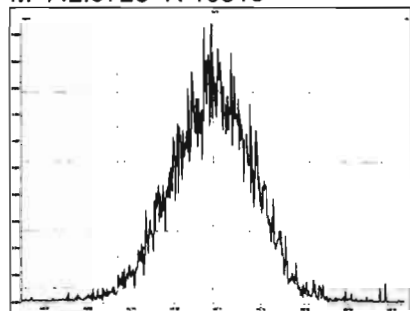


M 430.9728 R 10642

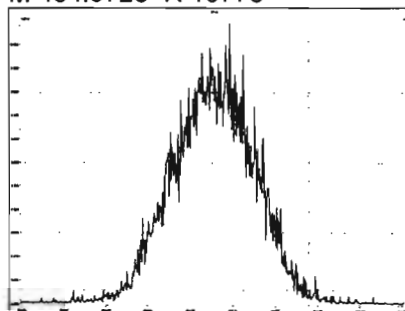


Printed: Saturday, February 01, 2020 07:51:26 Pacific Standard Time

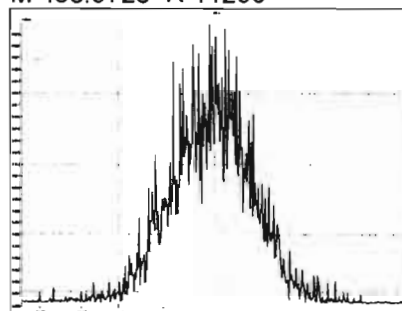
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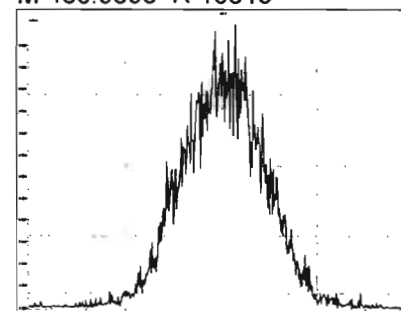
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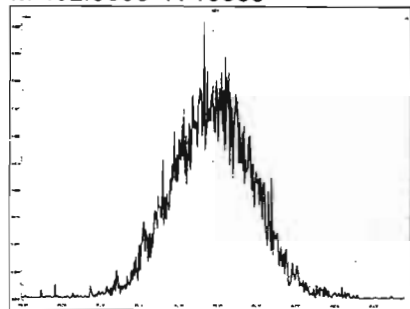
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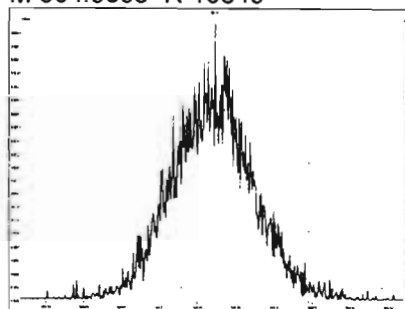
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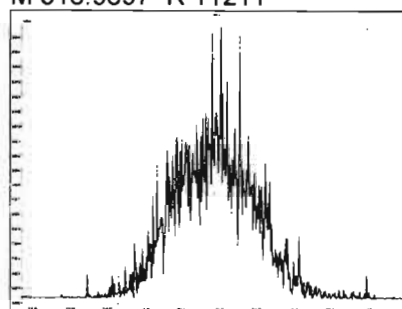
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M 504.9696 R 10849



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

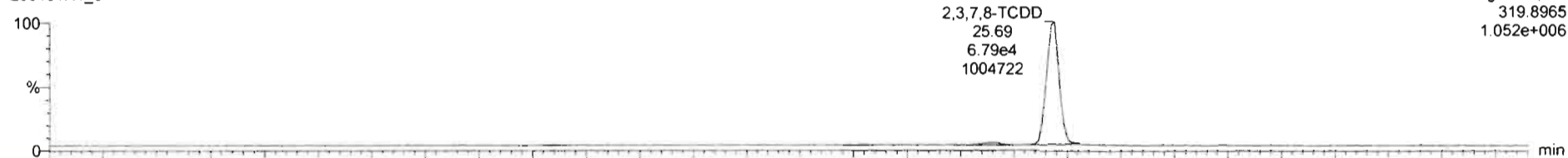
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Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

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

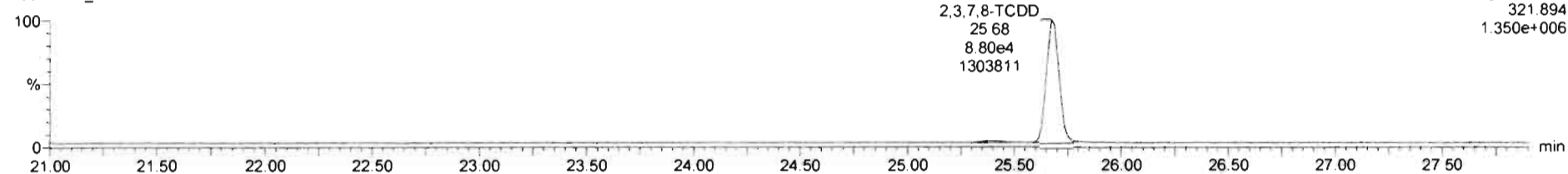
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**2,3,7,8-TCDD**

200131R1\_8

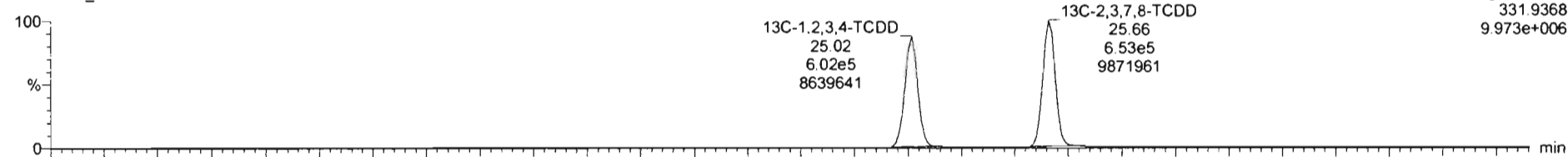


200131R1\_8

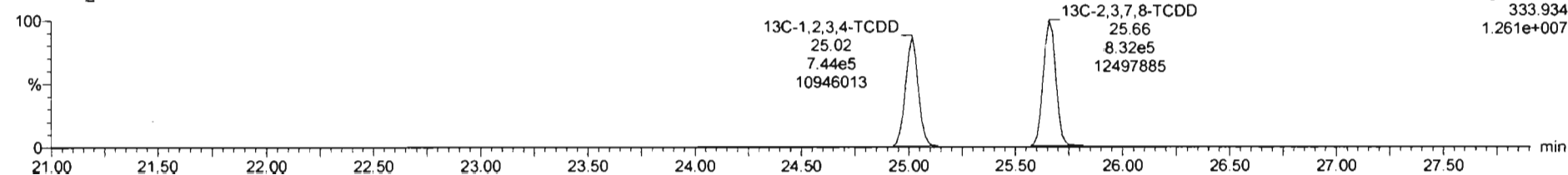


**13C-2,3,7,8-TCDD**

200131R1\_8



200131R1\_8



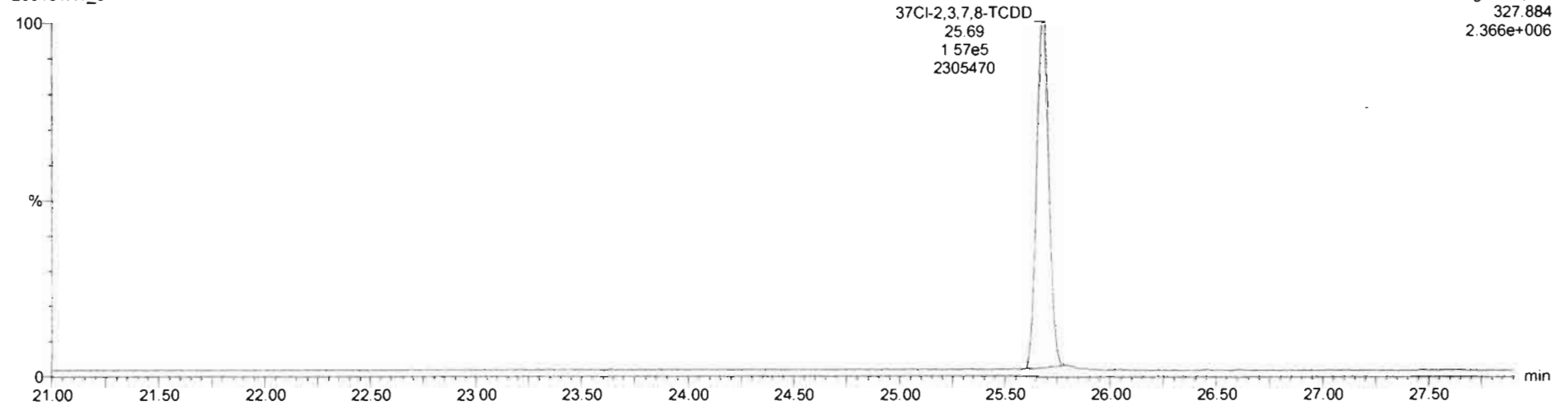
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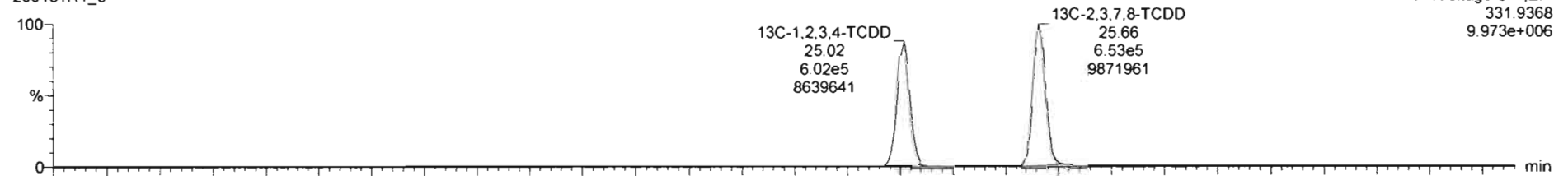
**37Cl-2,3,7,8-TCDD**

200131R1\_8

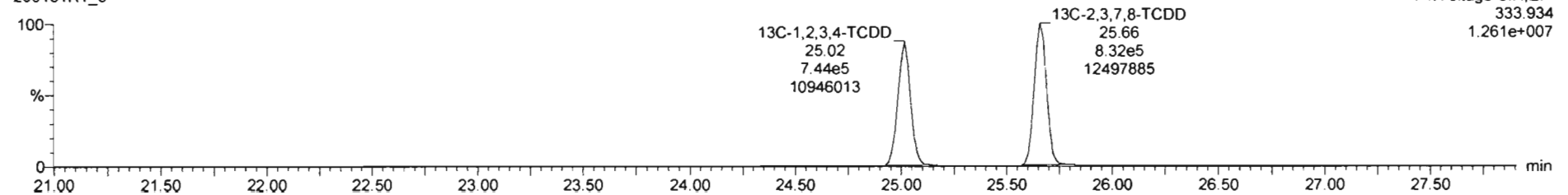


**13C-1,2,3,4-TCDD**

200131R1\_8



200131R1\_8



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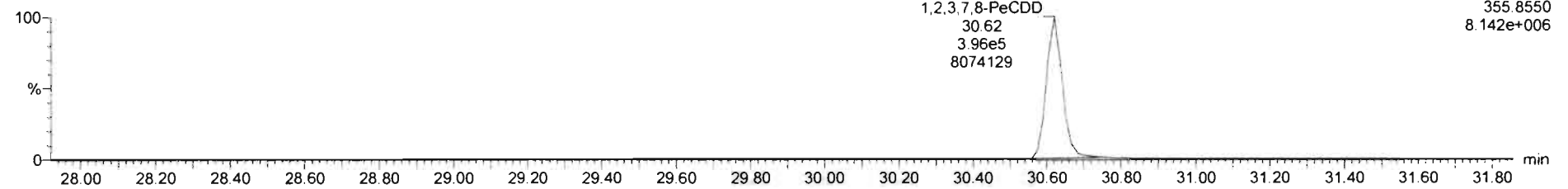
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**1,2,3,7,8-PeCDD**

200131R1\_8

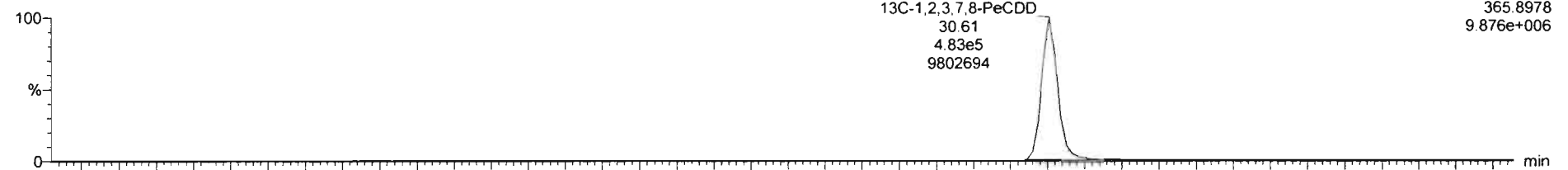


200131R1\_8

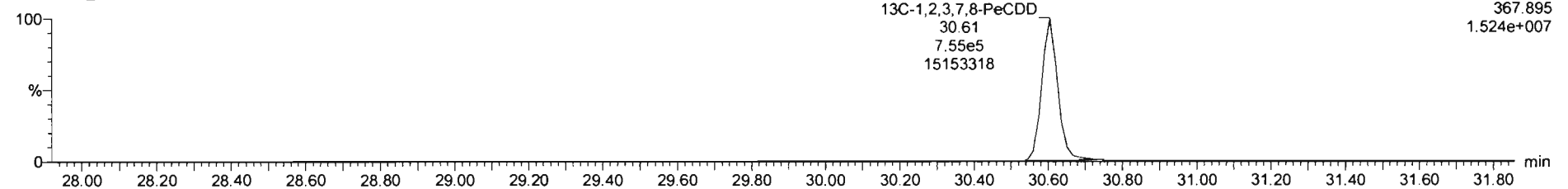


**13C-1,2,3,7,8-PeCDD**

200131R1\_8



200131R1\_8



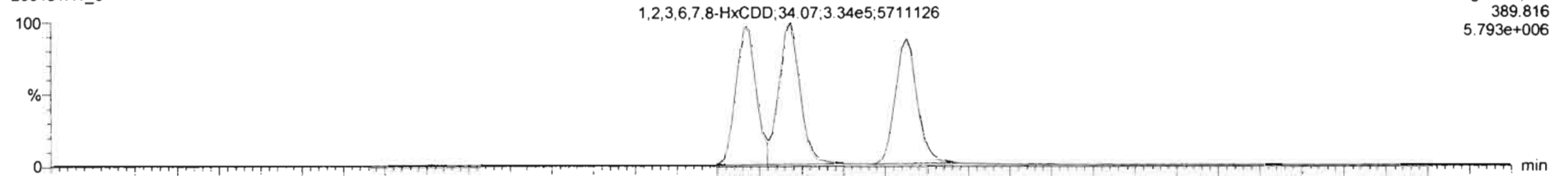
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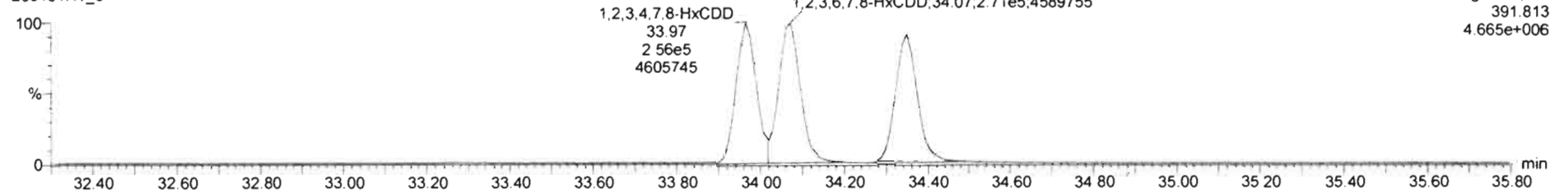
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**1,2,3,4,7,8-HxCDD**

200131R1\_8

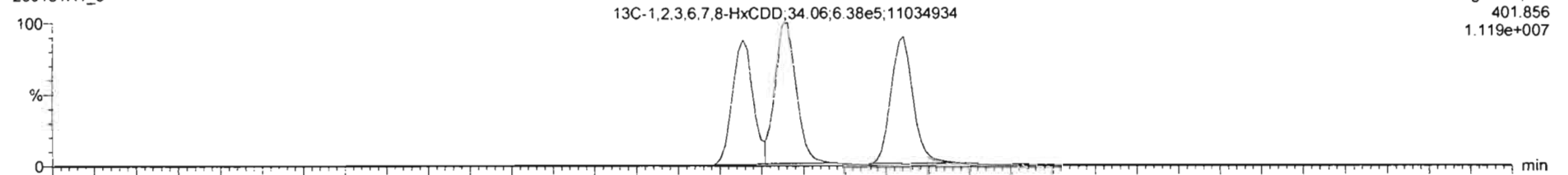


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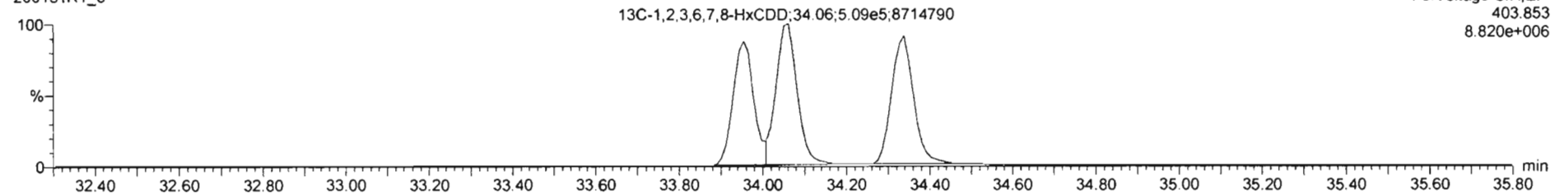


**13C-1,2,3,4,7,8-HxCDD**

200131R1\_8



200131R1\_8



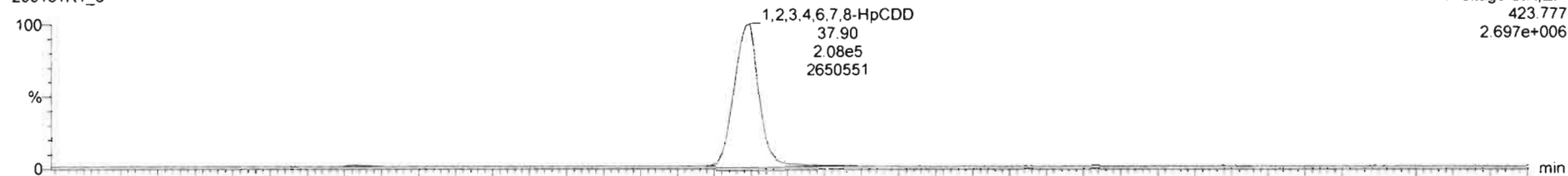
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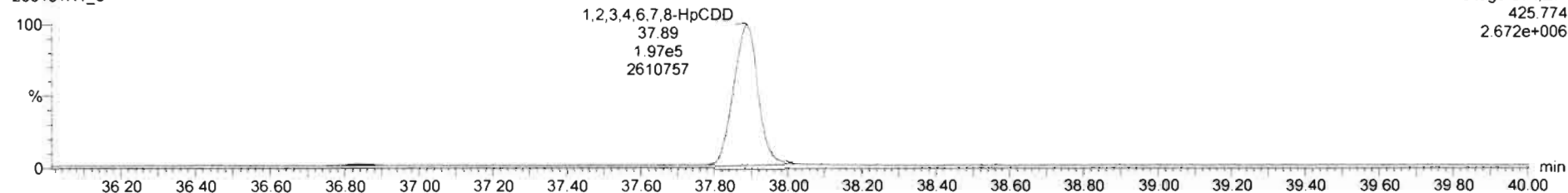
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**1,2,3,4,6,7,8-HpCDD**

200131R1\_8

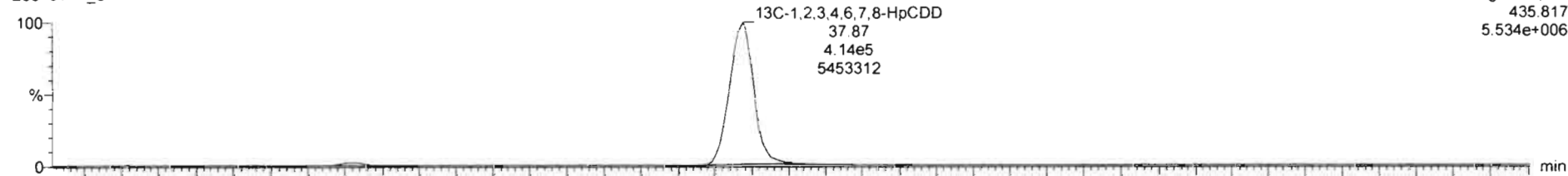


200131R1\_8

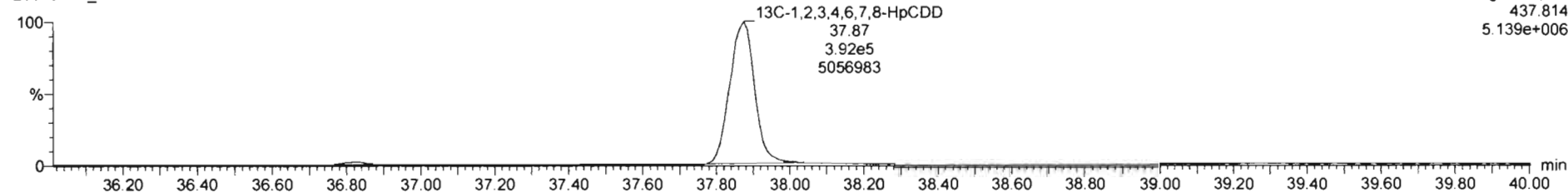


**<sup>13</sup>C-1,2,3,4,6,7,8-HpCDD**

200131R1\_8



200131R1\_8

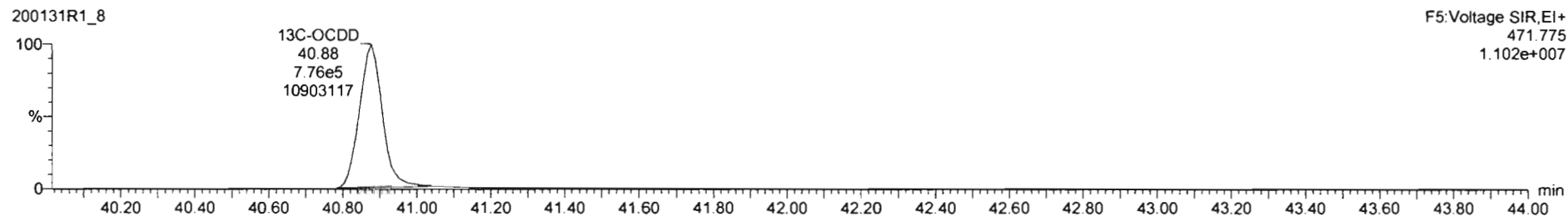
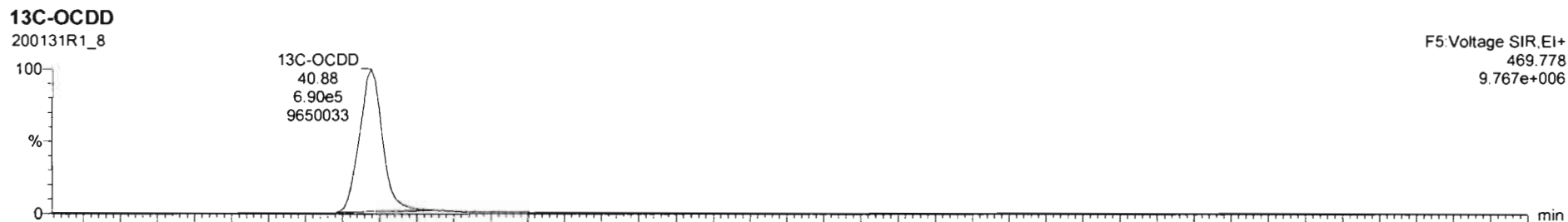
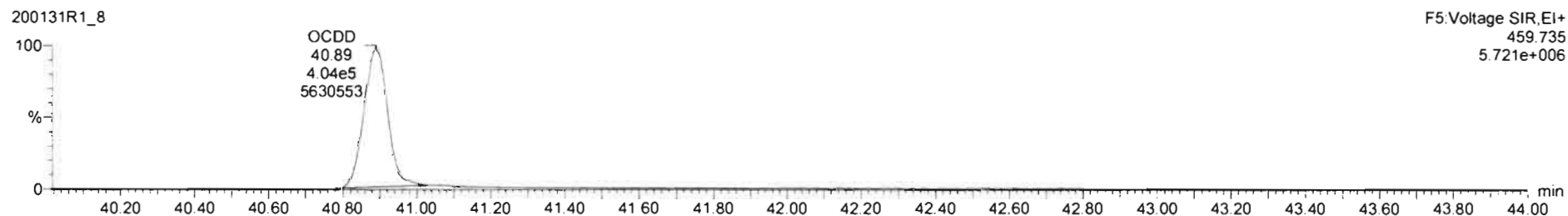
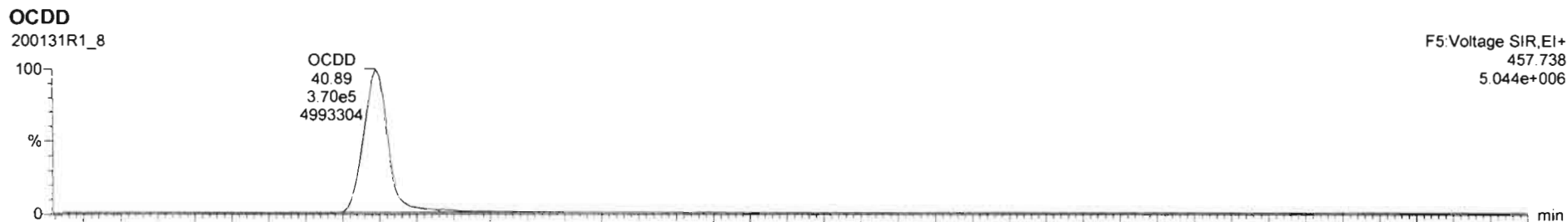


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Printed: Sunday, February 02, 2020 11:23:53 AM Pacific Standard Time

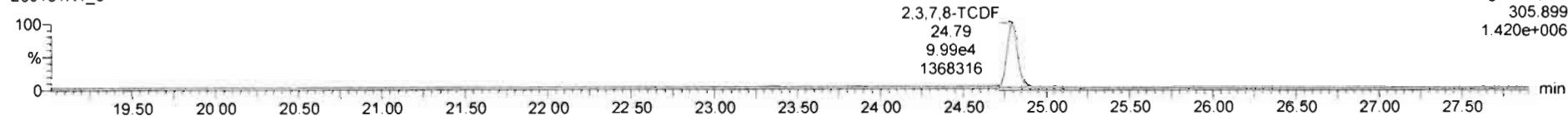
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**2,3,7,8-TCDF**

200131R1\_8

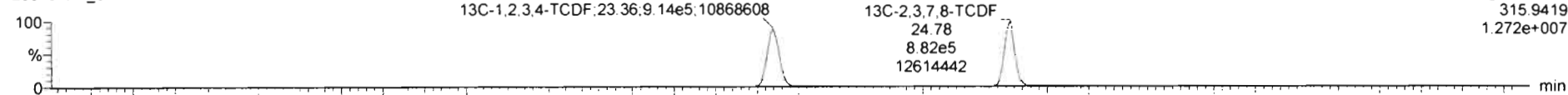


200131R1\_8

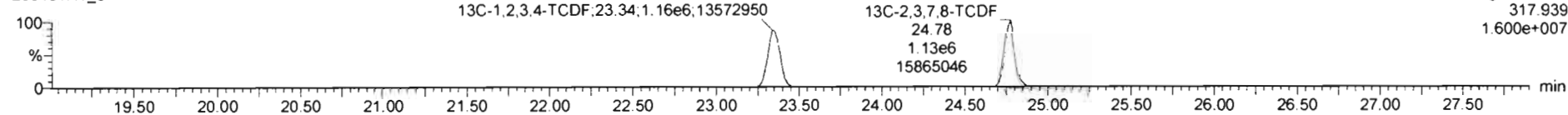


**13C-2,3,7,8-TCDF**

200131R1\_8

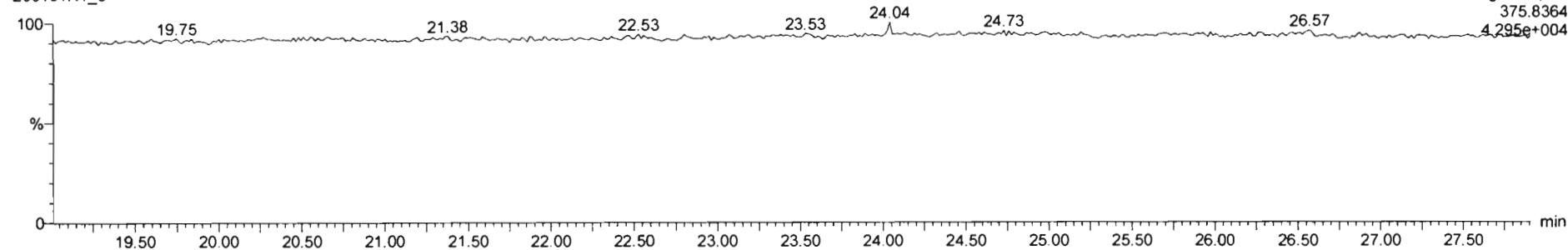


200131R1\_8



**DPE1**

200131R1\_8



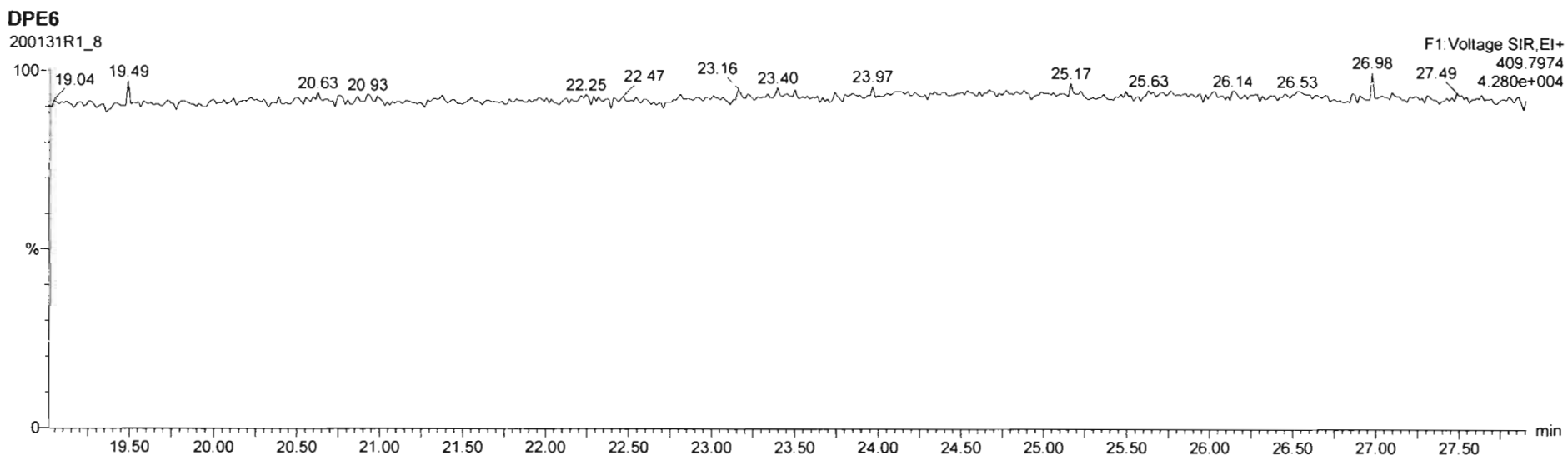
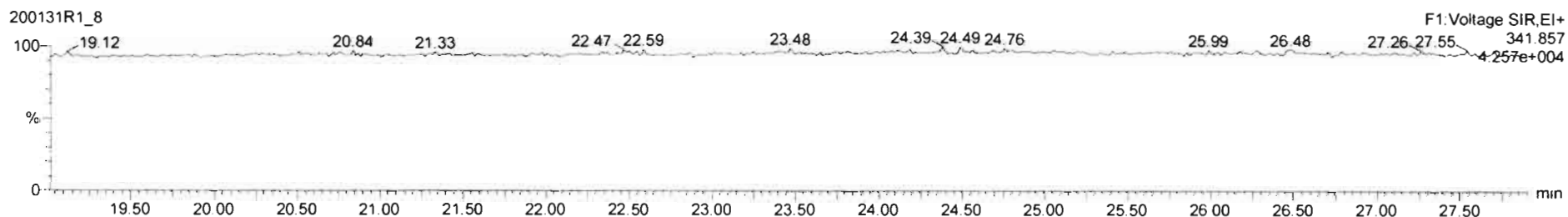
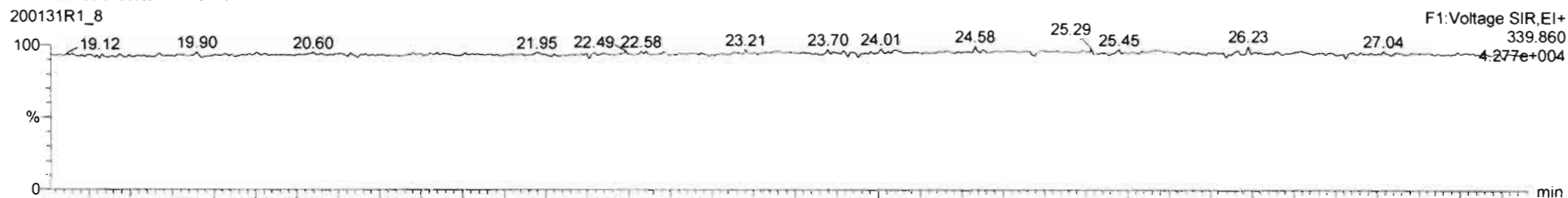
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Last Altered: Sunday, February 02, 2020 11:21:34 AM Pacific Standard Time

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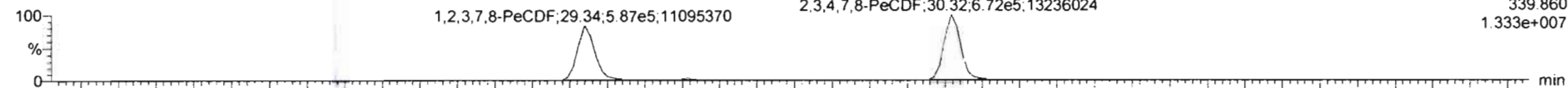
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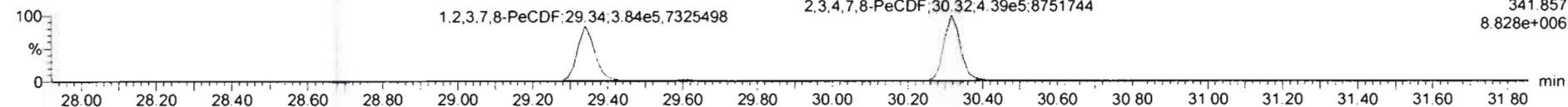
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**1,2,3,7,8-PeCDF**

200131R1\_8

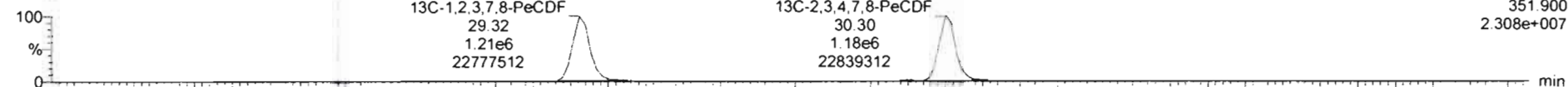


200131R1\_8

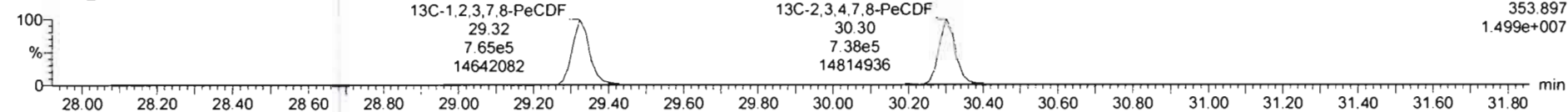


**13C-1,2,3,7,8-PeCDF**

200131R1\_8

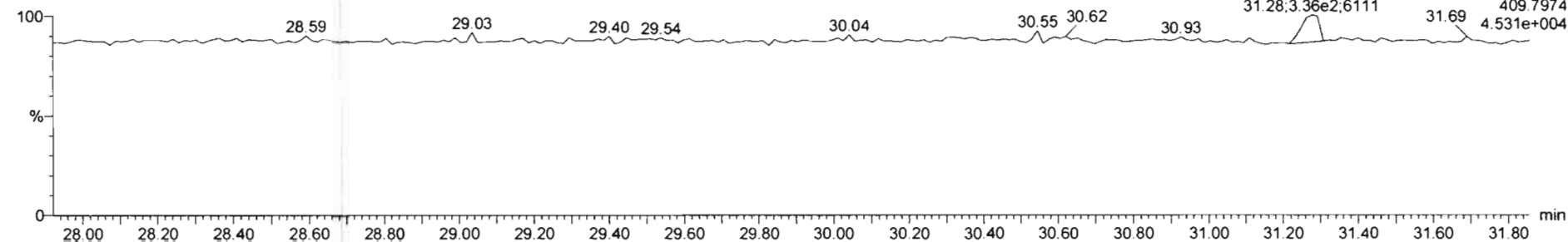


200131R1\_8



**DPE2**

200131R1\_8



Dataset: Untitled

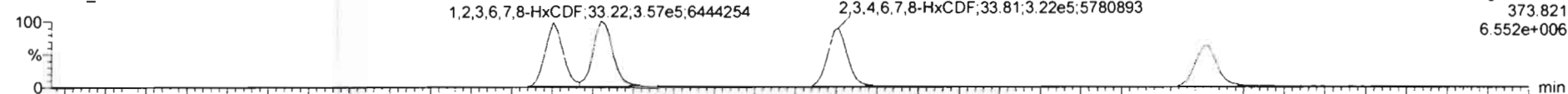
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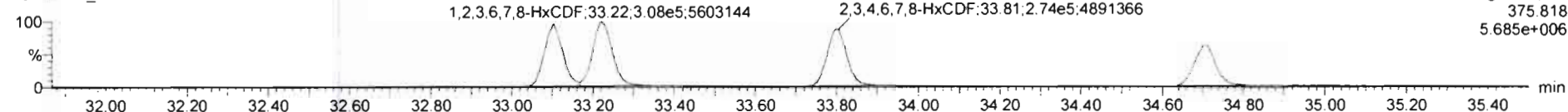
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**1,2,3,4,7,8-HxCDF**

200131R1\_8

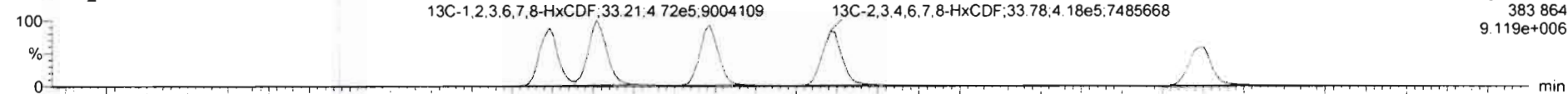


200131R1\_8

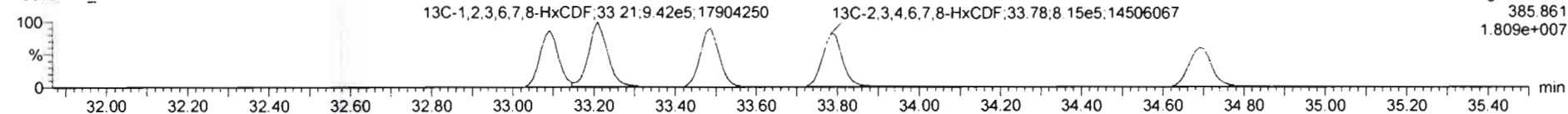


**13C-1,2,3,4,7,8-HxCDF**

200131R1\_8

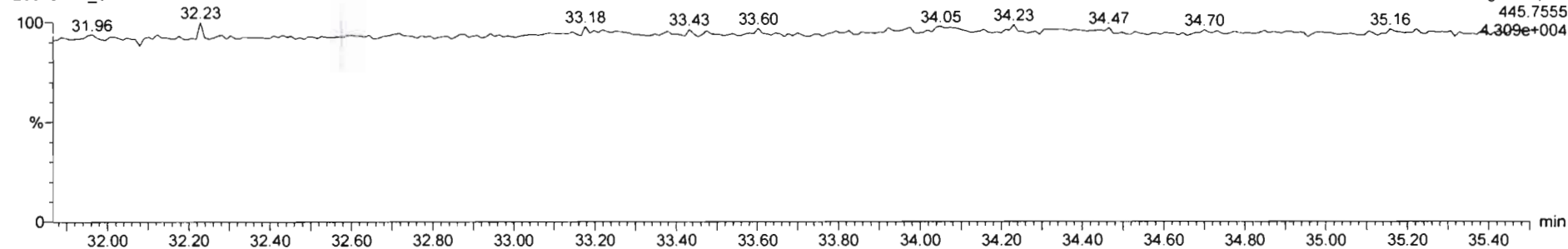


200131R1\_8



**DPE3**

200131R1\_8



Dataset: Untitled

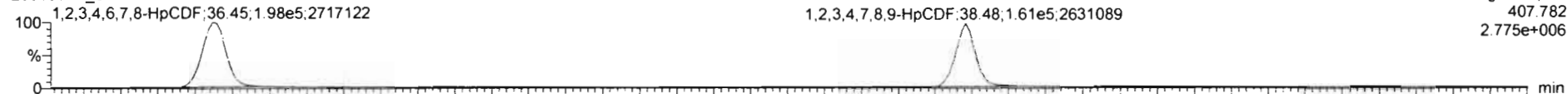
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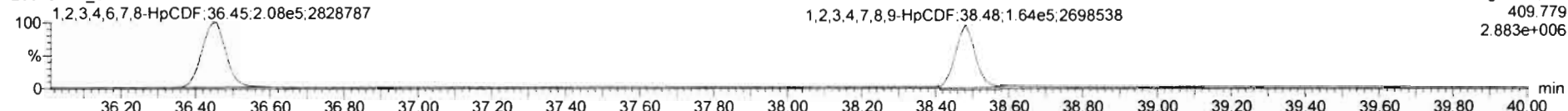
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**1,2,3,4,6,7,8-HpCDF**

200131R1\_8

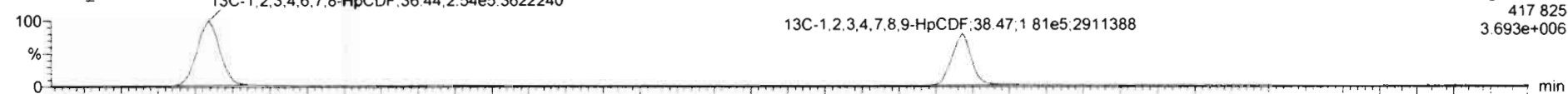


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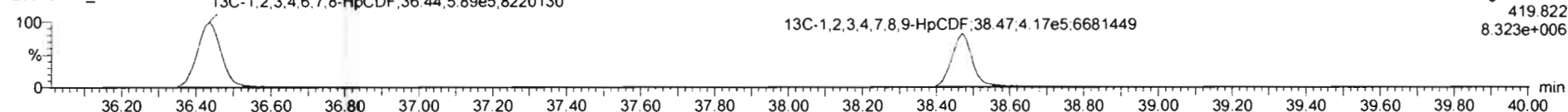


**13C-1,2,3,4,6,7,8-HpCDF**

200131R1\_8

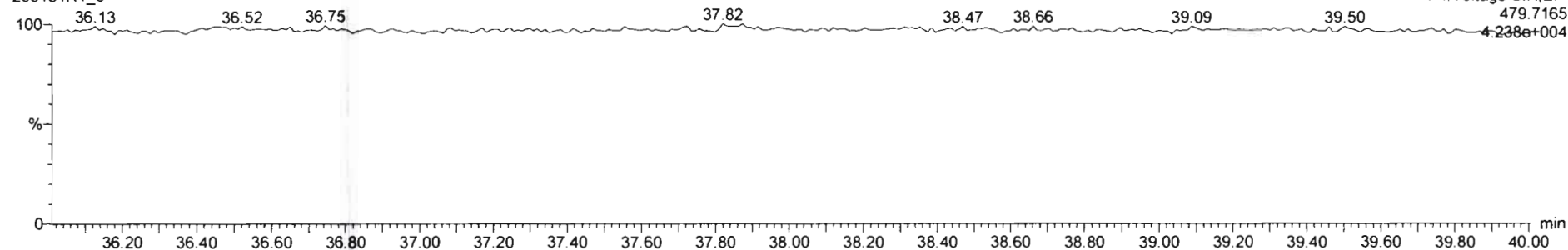


200131R1\_8



**DPE4**

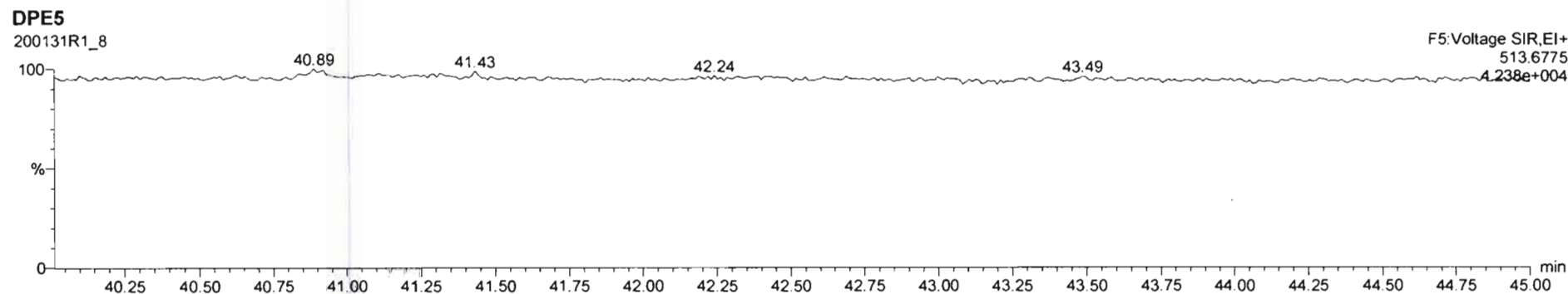
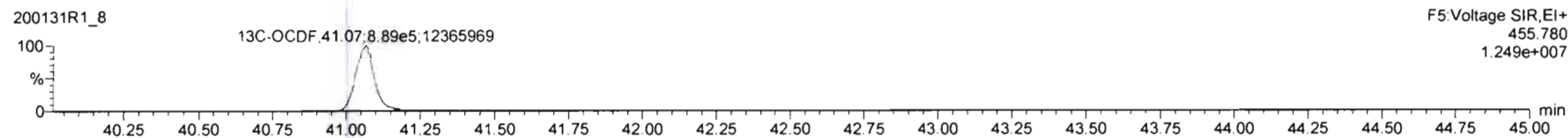
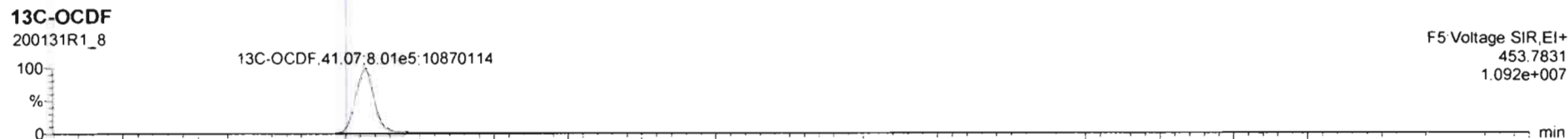
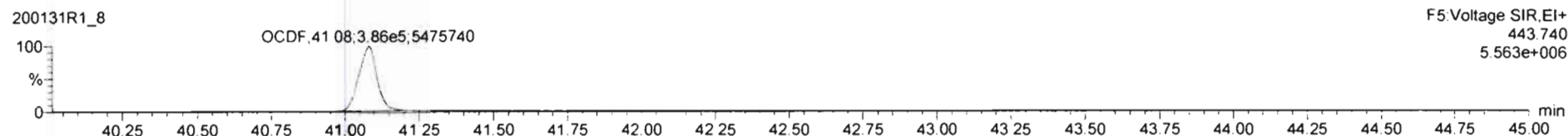
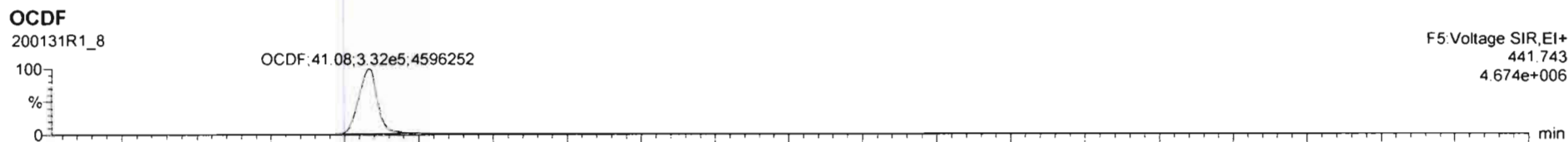
200131R1\_8



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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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Name: 200131R1\_8, Date: 31-Jan-2020, Time: 22:18:30, ID: SS200131R1\_1 1613 SSS 19L2308, Description: 1613 SSS 19L2308

