



February 04, 2020

**Vista Work Order No. 1903649**

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

Dear Ms. Peterson,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on October 15, 2019 under your Project Name 'Gasco PDI'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](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 Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 [www.vista-analytical.com](http://www.vista-analytical.com)

**Vista Work Order No. 1903649**

**Case Narrative**

**Sample Condition on Receipt:**

One sediment sample was received in good condition and within the method temperature requirements. The sample was received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

**Analytical Notes:**

**EPA Method 1613B**

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

**Holding Times**

The sample was extracted and analyzed within the method hold times.

**Quality Control**

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

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank. The OPR recoveries were within the method acceptance criteria.

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

## TABLE OF CONTENTS

Case Narrative.....	1
Table of Contents.....	3
Sample Inventory.....	4
Analytical Results.....	5
Qualifiers.....	9
Certifications.....	10
Sample Receipt.....	13
Extraction Information.....	16
Sample Data - EPA Method 1613.....	23
Continuing Calibration.....	93
Initial Calibration.....	178

# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1903649-01	PDI-016SC-B-06-08-191009	09-Oct-19 09:41	15-Oct-19 08:51	Amber Glass, 120 mL

## **ANALYTICAL RESULTS**

Sample ID: Method Blank					EPA Method 1613B				
Matrix: Solid Sample Size: 10.0 g		QC Batch: B0A0016 Date Extracted: 05-Jan-2020 10:28		Lab Sample: B0A0016-BLK1 Date Analyzed: 30-Jan-20 18:21 Column: ZB-5MS					
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
2,3,7,8-TCDD	ND	0.241			IS 13C-2,3,7,8-TCDD	89.9	25 - 164		
1,2,3,7,8-PeCDD	ND	0.109			13C-1,2,3,7,8-PeCDD	102	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.124			13C-1,2,3,4,7,8-HxCDD	80.4	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.128			13C-1,2,3,6,7,8-HxCDD	80.0	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.133			13C-1,2,3,7,8,9-HxCDD	79.8	32 - 141		
1,2,3,4,6,7,8-HpCDD	ND	0.171			13C-1,2,3,4,6,7,8-HpCDD	102	23 - 140		
OCDD	ND		0.276		13C-OCDD	96.3	17 - 157		
2,3,7,8-TCDF	ND		0.116		13C-2,3,7,8-TCDF	82.2	24 - 169		
1,2,3,7,8-PeCDF	ND	0.0770			13C-1,2,3,7,8-PeCDF	91.8	24 - 185		
2,3,4,7,8-PeCDF	ND	0.0750			13C-2,3,4,7,8-PeCDF	87.8	21 - 178		
1,2,3,4,7,8-HxCDF	ND	0.129			13C-1,2,3,4,7,8-HxCDF	94.5	26 - 152		
1,2,3,6,7,8-HxCDF	ND	0.127			13C-1,2,3,6,7,8-HxCDF	90.0	26 - 123		
2,3,4,6,7,8-HxCDF	ND	0.141			13C-2,3,4,6,7,8-HxCDF	85.0	28 - 136		
1,2,3,7,8,9-HxCDF	ND		0.0290		13C-1,2,3,7,8,9-HxCDF	90.7	29 - 147		
1,2,3,4,6,7,8-HpCDF	ND	0.151			13C-1,2,3,4,6,7,8-HpCDF	105	28 - 143		
1,2,3,4,7,8,9-HpCDF	ND	0.141			13C-1,2,3,4,7,8,9-HpCDF	112	26 - 138		
OCDF	ND	0.236			13C-OCDF	109	17 - 157		
					CRS 37Cl-2,3,7,8-TCDD	94.9	35 - 197		
					<b>Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)</b>				
					TEQMinWHO2005Dioxin		0.00		
<b>TOTALS</b>									
Total TCDD	0.110		0.289						
Total PeCDD	ND	0.109							
Total HxCDD	ND	0.133							
Total HpCDD	ND	0.171							
Total TCDF	ND		0.269						
Total PeCDF	ND		0.0440						
Total HxCDF	ND		0.0290						
Total HpCDF	ND	0.151							

DL - Sample specific estimated detection limit

EMPC - Estimated maximum possible concentration

LCL-UCL- Lower control limit - upper control limit

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

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

Sample ID: OPR					EPA Method 1613B		
Matrix: Solid Sample Size: 10.0 g		QC Batch: B0A0016 Date Extracted: 05-Jan-2020 10:28		Lab Sample: B0A0016-BS1 Date Analyzed: 30-Jan-20 16:00 Column: ZB-5MS			
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	23.0	20.0	115	67 - 158	IS 13C-2,3,7,8-TCDD	101	20 - 175
1,2,3,7,8-PeCDD	104	100	104	70 - 142	13C-1,2,3,7,8-PeCDD	115	21 - 227
1,2,3,4,7,8-HxCDD	114	100	114	70 - 164	13C-1,2,3,4,7,8-HxCDD	84.6	21 - 193
1,2,3,6,7,8-HxCDD	117	100	117	76 - 134	13C-1,2,3,6,7,8-HxCDD	83.5	25 - 163
1,2,3,7,8,9-HxCDD	114	100	114	64 - 162	13C-1,2,3,7,8,9-HxCDD	87.7	21 - 193
1,2,3,4,6,7,8-HpCDD	118	100	118	70 - 140	13C-1,2,3,4,6,7,8-HpCDD	107	26 - 166
OCDD	228	200	114	78 - 144	13C-OCDD	94.5	13 - 199
2,3,7,8-TCDF	26.5	20.0	133	75 - 158	13C-2,3,7,8-TCDF	86.7	22 - 152
1,2,3,7,8-PeCDF	109	100	109	80 - 134	13C-1,2,3,7,8-PeCDF	96.2	21 - 192
2,3,4,7,8-PeCDF	111	100	111	68 - 160	13C-2,3,4,7,8-PeCDF	92.8	13 - 328
1,2,3,4,7,8-HxCDF	121	100	121	72 - 134	13C-1,2,3,4,7,8-HxCDF	109	19 - 202
1,2,3,6,7,8-HxCDF	117	100	117	84 - 130	13C-1,2,3,6,7,8-HxCDF	104	21 - 159
2,3,4,6,7,8-HxCDF	120	100	120	70 - 156	13C-2,3,4,6,7,8-HxCDF	95.0	22 - 176
1,2,3,7,8,9-HxCDF	119	100	119	78 - 130	13C-1,2,3,7,8,9-HxCDF	104	17 - 205
1,2,3,4,6,7,8-HpCDF	114	100	114	82 - 122	13C-1,2,3,4,6,7,8-HpCDF	115	21 - 158
1,2,3,4,7,8,9-HpCDF	116	100	116	78 - 138	13C-1,2,3,4,7,8,9-HpCDF	119	20 - 186
OCDF	247	200	124	63 - 170	13C-OCDF	110	13 - 199
					CRS 37Cl-2,3,7,8-TCDD	101	31 - 191

LCL-UCL - Lower control limit - upper control limit

**Sample ID: PDI-016SC-B-06-08-191009** **EPA Method 1613B**

<b>Client Data</b>	<b>Sample Data</b>	<b>Laboratory Data</b>
Name: Anchor QEA, LLC	Matrix: Sediment	Lab Sample: 1903649-01      Date Received: 15-Oct-2019 8:51
Project: Gasco PDI	Sample Size: 14.4 g	QC Batch: B0A0016      Date Extracted: 05-Jan-2020 10:28
Date Collected: 09-Oct-2019 9:41	% Solids: 69.9	Date Analyzed : 31-Jan-20 07:01      Column: ZB-5MS

Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0876			IS 13C-2,3,7,8-TCDD	96.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0863			13C-1,2,3,7,8-PeCDD	111	25 - 181	
1,2,3,4,7,8-HxCDD	0.0751			J	13C-1,2,3,4,7,8-HxCDD	87.5	32 - 141	
1,2,3,6,7,8-HxCDD	0.142			J	13C-1,2,3,6,7,8-HxCDD	83.9	28 - 130	
1,2,3,7,8,9-HxCDD	0.260			J	13C-1,2,3,7,8,9-HxCDD	87.8	32 - 141	
1,2,3,4,6,7,8-HpCDD	2.64				13C-1,2,3,4,6,7,8-HpCDD	116	23 - 140	
OCDD	38.6				13C-OCDD	118	17 - 157	
2,3,7,8-TCDF	ND	0.0661			13C-2,3,7,8-TCDF	87.3	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0478			13C-1,2,3,7,8-PeCDF	95.8	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0458			13C-2,3,4,7,8-PeCDF	93.4	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0530			13C-1,2,3,4,7,8-HxCDF	104	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0535			13C-1,2,3,6,7,8-HxCDF	96.2	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0588			13C-2,3,4,6,7,8-HxCDF	92.7	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0751			13C-1,2,3,7,8,9-HxCDF	101	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0864			13C-1,2,3,4,6,7,8-HpCDF	116	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0807			13C-1,2,3,4,7,8,9-HpCDF	127	26 - 138	
OCDF	ND	0.0824			13C-OCDF	130	17 - 157	
					CRS 37Cl-2,3,7,8-TCDD	101	35 - 197	

**Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)**  
 TEQMinWHO2005Dioxin      0.0857

<b>TOTALS</b>								
Total TCDD	1.83			B				
Total PeCDD	0.287		0.623					
Total HxCDD	3.03		3.10					
Total HpCDD	6.62							
Total TCDF	0.148							
Total PeCDF	ND	0.0478						
Total HxCDF	ND	0.0751						
Total HpCDF	ND	0.0864						

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

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



## DATA QUALIFIERS & ABBREVIATIONS

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

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

### Vista Analytical Laboratory Certifications

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

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

## NELAP Accredited Test Methods

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

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

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

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

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

**ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY**

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

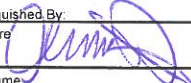
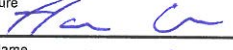
**Project:** Gasco PDI  
**Client:** NW Natural

**COC ID:** VIST1-20191009-171243  
**Sample Custodian:** CO, SN, BJ, DL  
**Lab:** VISTA - Archive

1903649 3.8°C

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
001	PDI-016SC-B-06-08-191009	N	SE	10/09/2019	9:41	1	<input type="checkbox"/>	Archive (VISTA) - (Field Facility)	ARCHIVE	-1	-10°C

SN0906+19  
VISTA  
00-10/12/19

Comment:					
Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: 	Signature: 	Signature:	Signature:	Signature:	Signature:
Print Name: C. OREIKO	Print Name: Hayden Cana	Print Name:	Print Name:	Print Name:	Print Name:
Company: AQ	Company: VAL	Company:	Company:	Company:	Company:
Date/Time: 10/14/19 07:55	Date/Time: 10/15/19 08:51	Date/Time:	Date/Time:	Date/Time:	Date/Time:

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

# Sample Log-In Checklist

 Page # 1 of 1

 Vista Work Order #: 1903649 TAT std

<b>Samples Arrival:</b>	<b>Date/Time:</b> 10/15/19 0851	<b>Initials:</b> WWS	<b>Location:</b> WR-2
			<b>Shelf/Rack:</b> N/A
<b>Delivered By:</b>	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
		<input type="checkbox"/> GSO	<input type="checkbox"/> DHL
		<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
<b>Preservation:</b>	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
<b>Temp °C:</b> 3.6 (uncorrected)	<b>Probe used:</b> Y / <input checked="" type="checkbox"/> N		<b>Thermometer ID:</b> IR-3
<b>Temp °C:</b> 3.6 (corrected)			

	YES	NO	NA
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Airbill <u>4 of 4</u> Trk # <u>7767 1463 8021</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? <u>COC present in other codes</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Complete?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Holding Time Acceptable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Logged In:</b>	<b>Date/Time:</b> 10/16/19 1009	<b>Initials:</b> WWS	<b>Location:</b> WF-2
			<b>Shelf/Rack:</b> D-1
COC Anomaly/Sample Acceptance Form completed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

# CoC/Label Reconciliation Report WO# 1903649

LabNumber	CoC Sample ID	Label ID matches COCID	Label ID doesn't match	COCID	SampleAlias	Sampled	Label Sampled matches	Sampled doesn't match	Container	Container Correct	BaseMatrix	Sample Comments
1903649-01	A PDI-016SC-B-06-08-191009	<input checked="" type="checkbox"/>		001		09-Oct-19 09:41	<input checked="" type="checkbox"/>		Amber Glass, 120 mL	<input checked="" type="checkbox"/>	Solid	

	Yes	No	NA
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"/>
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"/>

Comments:

"4" = cooler 4

Verified by/Date: HOG 10/17/19

## **EXTRACTION INFORMATION**



Process Sheet

Workorder: 1903649

Prep Expiration: 2020-10-08  
Client: Anchor QEA, LLC

Workorder Due: 03-Jan-20 00:00

TAT: 80

Method: 1613 Full List  
Matrix: Solid

Prep Batch: BOA0016

Client Matrix: Sediment  
Also run: Percent Solids

Prep Data Entered: RP 01-09-20  
Date and Initials

Initial Sequence: SOA6068

LabSampleID	Recon ClientSampleID	Date Received	Location	Comments
1903649-01	<input checked="" type="checkbox"/> PDI-016SC-B-06-08-191009	15-Oct-19 08:51	WF-2 D-1	

WO Comments: ~~\_\_\_\_\_ (dry weight)~~  
**Dioxin - 10g (dry weight)**  
~~\_\_\_\_\_ (dry weight)~~

Pre-Prep Check Out: RP 12/23/17  
Pre-Prep Check In: RP 12/23/17

Prep Check Out: RP 01/05/20  
Prep Check In: RP 01/05/20

Prep Reconciled Initials/Date: RP 12/23/17  
Spike Reconciled Initials/Date: RP 01/05/20  
VialBoxID: IKEA

PREPARATION BENCH SHEET

Matrix: Solid

B0A0016

Chemist: DF

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 05-Jan-20 10:28

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"/>	B0A0016-BLK1	<u>NA</u>	<u>(10.00)</u>	<u>DF</u> <u>1/10/19</u>	<u>AO</u> <u>DF</u> <u>01/06/20</u>	<u>NA</u> <u>01/07/20</u>	<u>AO</u> <u>01/07/20</u>	<u>AO</u> <u>01/07/20</u>	<u>AO</u> <u>01/07/20</u>	<u>AO</u> <u>01/07/20</u>
<input type="checkbox"/>	B0A0016-BS1	<u>↓</u>	<u>(10.00)</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	B0A0016-DUP1 1903647-04	<u>15.36</u>	<u>15.46</u>	<u>↓</u>	<u>↓</u>	<u>N/A</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	B0A0016-DUP2 1904210-09	<u>10.89</u>	<u>11.00</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1903647-01	<u>10.93</u>	<u>10.99</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1903647-02	<u>18.09</u>	<u>18.90</u>	<u>↓</u>	<u>↓</u>	<u>NA</u> <u>01/07/20</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1903647-03	<u>17.31</u>	<u>17.58</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1903647-04	<u>15.36</u>	<u>15.56</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1903647-05	<u>12.04</u>	<u>12.18</u>	<u>↓</u>	<u>↓</u>	<u>N/A</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1903649-01	<u>14.31</u>	<u>14.36</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>NA</u> <u>01/07/20</u>	<u>↓</u>
<input type="checkbox"/>	1904210-03	<u>11.74</u>	<u>11.96</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1904210-04	<u>11.85</u>	<u>11.95</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1904210-05	<u>12.77</u>	<u>12.97</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1904210-06	<u>12.62</u>	<u>12.75</u>	<u>↓</u>	<u>↓</u>	<u>NA</u> <u>01/07/20</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<input type="checkbox"/>	1904210-07	<u>15.10</u>	<u>15.50</u>	<u>↓</u>	<u>↓</u>	<u>N/A</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>

IS Name <u>V1</u>	NS Name <u>V5</u>	CRS Name <u>FS</u>	RS Name <u>FS</u>	Cycle Time	APP: SEFUN <u>SOX</u> SDS	Check Out: <u>DF 01/05/20</u>
PCDD/F <u>1 ac 1902, 10 mL</u>	PCDD/F <u>10 E 1913, 10 mL</u>	PCDD/F <u>19 E 1902, 10 mL</u>	PCDD/F <u>19 E 1903, 10 mL</u>	Start Date/Time	SOLV: <u>Toluene</u>	Check In: <u>DF 01/05/20</u>
PCB _____	PCB _____	PCB _____	PCB _____	<u>01/05/19</u>	Other <u>NA</u>	Chemist/Date: <u>DF 01/05/20</u>
PAH _____	PAH _____	PAH _____	PAH _____	<u>13:58</u>	Final Volume(s) <u>20 mL</u>	Balance ID: <u>HRMS-8</u>
				<u>01/06/19</u>	<u>0.14</u>	

Comments:

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

PREPARATION BENCH SHEET

Matrix: Solid

B0A0016

Chemist: DF

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 05-Jan-20 10:28

C	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
<input type="checkbox"/>	1904210-08	13.51	13.69	DF <sup>MM</sup> 01/05/19	AO DE 01/06/20	N/A	AO 01/07/20	AO 01/07/20	01/07/20	01/07/20
<input type="checkbox"/>	1904210-09	10.89	10.92	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904210-10	10.84	10.88	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1904210-11	10.86	10.91	↓	↓	↓	↓	↓	↓	↓

\* 01/07/20

IS Name <u>V0</u>	NS Name <u>V5</u>	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX SDS	Check Out: <u>DF 01/05/20</u>
PCDD/F <u>19C1902, 10mL</u>	PCDD/F <u>19F1913, 10mL</u>	PCDD/F <u>19I1902, 10mL</u>	PCDD/F <u>19I1903, 10mL</u>	Start Date/Time	SOLV: <u>Toluene</u>	Chemist/Date: <u>DF 01/05/20</u>
PCB	PCB	PCB	PCB	01/05/19	Other <u>NA</u>	Check In: <u>DF 01/05/20</u>
PAH	PAH	PAH	PAH	1358	Final Volume(s) <u>10mL</u>	Chemist/Date: <u>DF 01/05/20</u>
				01/06/19	<u>C14</u>	Balance ID: <u>HRMS-8</u>

Comments:

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

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1903647-01	10.99 ✓	91.46538	10.0520	20 ✓	05-Jan-20 10:28 ✓	DFO			Sediment	1613 Full List
1903647-02	18.9 ✓	52.92818	10.0034	20	05-Jan-20 10:28	DFO			Sediment	1613 Full List
1903647-03	17.58 ✓	57.77414	10.1567	20	05-Jan-20 10:28	DFO			Sediment	1613 Full List
1903647-04	15.56 ✓	65.10791	10.1308	20	05-Jan-20 10:28	DFO			Sediment	1613 Full List
1903647-05	12.18 ✓	83.07155	10.1181	20	05-Jan-20 10:28	DFO			Sediment	1613 Full List
1903649-01	14.36 ✓	69.88267	10.0352	20	05-Jan-20 10:28	DFO			Sediment	1613 Full List
1904210-03	11.96 ✓	85.14285	10.1831	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-04	11.95 ✓	84.40749	10.0867	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-05	12.97 ✓	78.32167	10.1583	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-06	12.75 ✓	79.22913	10.1017	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-07	13.5 ✓	76.3116	10.3021	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-08	13.69 ✓	74.01478	10.1326	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-09	10.92 ✓	91.79105	10.0236	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-10	10.88 ✓	92.2619	10.0381	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
1904210-11	10.91 ✓	92.06963	10.0448	20	05-Jan-20 10:28	DFO			Soil	1613 Full List
<b>B0A0016-BLK1</b>	10			20	05-Jan-20 10:28	DFO				QC
<b>B0A0016-BS1</b>	10			20	05-Jan-20 10:28	DFO	18F1913 ✓	10 ✓		QC
<b>B0A0016-DUP1</b>	15.46 ✓			20	05-Jan-20 10:28	DFO				QC
<b>B0A0016-DUP2</b>	11 ✓			20 ✓	05-Jan-20 10:28 ✓	DFO				QC

All bolded data on report verified against written benchsheet by (initial/date) RR / 01-09-20

D2216-90

BATCH ID B9L0066

Analyst: JC	Test Code: %Moist/%Solids	Data Entry Verified by: (Initial and Date) <i>JL 12/31/19</i>
Analyte: Dried at 110°C+/-5°C	Units: %	
Oven ID: 01 02		

Inst: HRMS-9

Date/Time IN: 12/23/19 1500    Date/Time OUT: 12/26/19 1415

S		C	D	E		G		H		I	K	L	M	N	O	P
Particle Size	SampID	SampType	Initial and Date:		Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids Raw/Val	Visual Inspection	Cl-	pH Before	pH After	Acid Added	NA		Sample Homogenized*
			Pan Tare Wt. (gms)	JC 12/23/19										RR 12/26/19	JC 12/23/19	
	1903649-01	A	Sample	1.2700	8.9400	6.6300	5.3600	69.88	sand	NA	NA	NA	NA	NA	NA	Y

\*Sample homogenized in sample container unless otherwise noted.

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

Inst HPMS-9

Date/Time IN: 12/23/19 Date/Time OUT: 12/26/19  
15:00 14:15

Particle Size	SampID	SampType	Initial and Date:	K	RR	Dry Sample Weight (g)	%Solids RawVal	K			Sample Homogenized*	
				12/23/19	12/26/19			12/23/19	NA	12/23/19		
			Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)		Visual Inspection	Cl-	pH Before	pH After	Acid Added	
	1903649-01   A	Sample	1.27	8.94	6.63	NA	NA	gnd	<del>NA</del>	NA		Y

\*Sample homogenized in sample container unless otherwise noted.

SAMPLE DATA – EPA METHOD 1613

Dataset: U:\VG12.PRO\Results\200130R2\200130R2-6.qld

Last Altered: Monday, February 03, 2020 15:25:22 Pacific Standard Time  
Printed: Monday, February 03, 2020 15:26:39 Pacific Standard Time

GPB 02/03/2020

BT 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\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD			NO	0.924	10.000	25.721		1.001				0.241	
2	2 1,2,3,7,8-PeCDD			NO	0.912	10.000	30.642		1.001				0.109	
3	3 1,2,3,4,7,8-HxCDD			NO	0.870	10.000	33.976		1.000				0.124	
4	4 1,2,3,6,7,8-HxCDD			NO	0.784	10.000	34.072		1.000				0.128	
5	5 1,2,3,7,8,9-HxCDD			NO	0.798	10.000	34.383		1.001				0.133	
6	6 1,2,3,4,6,7,8-HpCDD			NO	0.737	10.000	37.896		1.000				0.171	
7	7 OCDD	6.11e2	0.68	YES	0.800	10.000	40.889	40.89	1.000	1.000	0.32141		0.208	0.276
8	8 2,3,7,8-TCDF	5.36e2	1.70	YES	0.588	10.000	24.832	24.76	1.001	0.998	0.17027		0.122	0.116
9	9 1,2,3,7,8-PeCDF			NO	0.826	10.000	29.376		1.001				0.0770	
10	10 2,3,4,7,8-PeCDF			NO	0.850	10.000	30.346		1.001				0.0750	
11	11 1,2,3,4,7,8-HxCDF			NO	0.787	10.000	33.103		1.000				0.129	
12	12 1,2,3,6,7,8-HxCDF			NO	0.720	10.000	33.241		1.000				0.127	
13	13 2,3,4,6,7,8-HxCDF			NO	0.766	10.000	33.840		1.001				0.141	
14	14 1,2,3,7,8,9-HxCDF	9.13e1	0.62	YES	0.709	10.000	34.711	34.80	1.000	1.002	0.04218		0.0978	0.0293
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.732	10.000	36.494		1.001				0.151	
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.816	10.000	38.482		1.000				0.141	
17	17 OCDF			NO	0.639	10.000	41.081		1.000				0.236	
18	18 13C-2,3,7,8-TCDD	8.01e5	0.79	NO	1.12	10.000	25.691	25.69	1.026	1.026	179.81	89.9	0.305	
19	19 13C-1,2,3,7,8-PeCDD	6.83e5	0.63	NO	0.841	10.000	30.432	30.62	1.215	1.223	203.47	102	0.339	
20	20 13C-1,2,3,4,7,8-HxCDD	6.19e5	1.26	NO	0.938	10.000	33.966	33.97	1.014	1.014	160.75	80.4	0.325	
21	21 13C-1,2,3,6,7,8-HxCDD	7.00e5	1.25	NO	1.07	10.000	34.066	34.07	1.017	1.017	160.04	80.0	0.286	
22	22 13C-1,2,3,7,8,9-HxCDD	6.76e5	1.25	NO	1.03	10.000	34.368	34.35	1.026	1.025	159.69	79.8	0.296	
23	23 13C-1,2,3,4,6,7,8-HpCDD	5.94e5	1.05	NO	0.710	10.000	37.919	37.88	1.132	1.131	203.59	102	0.649	
24	24 13C-OCDD	9.51e5	0.88	NO	0.601	10.000	40.799	40.89	1.218	1.221	385.19	96.3	0.407	
25	25 13C-2,3,7,8-TCDF	1.03e6	0.78	NO	1.04	10.000	24.872	24.81	0.993	0.990	164.32	82.2	0.417	
26	26 13C-1,2,3,7,8-PeCDF	1.02e6	1.61	NO	0.917	10.000	29.205	29.35	1.166	1.172	183.59	91.8	0.504	
27	27 13C-2,3,4,7,8-PeCDF	9.63e5	1.55	NO	0.903	10.000	30.157	30.32	1.204	1.210	175.62	87.8	0.512	
28	28 13C-1,2,3,4,7,8-HxCDF	6.69e5	0.51	NO	0.861	10.000	33.095	33.10	0.988	0.988	189.02	94.5	0.653	
29	29 13C-1,2,3,6,7,8-HxCDF	7.74e5	0.52	NO	1.05	10.000	33.196	33.23	0.991	0.992	180.03	90.0	0.537	
30	30 13C-2,3,4,6,7,8-HxCDF	6.60e5	0.50	NO	0.946	10.000	33.802	33.81	1.009	1.009	169.91	85.0	0.595	
31	31 13C-1,2,3,7,8,9-HxCDF	6.07e5	0.53	NO	0.816	10.000	34.703	34.71	1.036	1.036	181.31	90.7	0.690	



Dataset: U:\VG12.PRO\Results\200130R2\200130R2-6.qld

Last Altered: Monday, February 03, 2020 15:25:22 Pacific Standard Time

Printed: Monday, February 03, 2020 15:26:39 Pacific Standard Time

Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	EL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	5.07e5	0.44	NO	0.589	10.000	36.445	36.46	1.088	1.088	209.37	105	0.765	
33	13C-1,2,3,4,7,8,9-HpCDF	4.12e5	0.43	NO	0.448	10.000	38.455	38.48	1.148	1.149	223.65	112	1.01	
34	13C-OCDF	1.05e6	0.86	NO	0.586	10.000	41.034	41.08	1.225	1.226	435.48	109	0.436	
35	37Cl-2,3,7,8-TCDD	3.29e5			1.09	10.000	25.723	25.70	1.027	1.026	75.911	94.9	0.146	
36	13C-1,2,3,4-TCDD	7.98e5	0.80	NO	1.00	10.000	25.080	25.05	1.000	1.000	200.00	100	0.341	
37	13C-1,2,3,4-TCDF	1.22e6	0.78	NO	1.00	10.000	23.420	23.39	1.000	1.000	200.00	100	0.432	
38	13C-1,2,3,4,6,9-HxCDF	8.22e5	0.52	NO	1.00	10.000	33.520	33.50	1.000	1.000	200.00	100	0.563	
39	Total Tetra-Dioxins				0.824	10.000	24.620		0.000		0.10954		0.241	0.289
40	Total Penta-Dioxins				0.912	10.000	29.960		0.000				0.0613	
41	Total Hexa-Dioxins				0.784	10.000	33.635		0.000				0.0695	
42	Total Hepta-Dioxins				0.737	10.000	37.640		0.000				0.0873	
43	Total Tetra-Furans				0.588	10.000	23.610		0.000		0.00000		0.122	0.269
44	1st Func. Penta-Furans				0.826	10.000	27.090		0.000				0.0576	
45	Total Penta-Furans				0.826	10.000	29.275		0.000		0.00000		0.0348	0.0436
46	Total Hexa-Furans				0.766	10.000	33.555		0.000		0.00000		0.0726	0.0293
47	Total Hepta-Furans				0.732	10.000	37.835		0.000				0.0768	

Dataset: U:\VG12.PRO\Results\200130R2\200130R2-6.qld

Last Altered: Monday, February 03, 2020 15:25:22 Pacific Standard Time  
 Printed: Monday, February 03, 2020 15:26:39 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\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	21.90	1.553e4	1.107e4	2.317e2	1.651e2	1.40	YES	0.000e0	0.00000	0.088559	0.241
2	Total Tetra-Dioxins	24.49	8.615e3	1.297e4	1.298e2	2.420e2	0.54	YES	0.000e0	0.00000	0.090448	0.241
3	Total Tetra-Dioxins	25.27	8.192e3	1.270e4	1.468e2	2.146e2	0.68	NO	3.614e2	0.10954	0.10954	0.241

**Penta-Dioxins**

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

**Hexa-Dioxins**

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

**Hepta-Dioxins**

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

**Tetra-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	24.27	1.748e4	5.115e3	2.608e2	8.866e1	2.94	YES	0.000e0	0.00000	0.051600	0.122
2	2,3,7,8-TCDF	24.76	1.680e4	9.609e3	3.376e2	1.985e2	1.70	YES	5.361e2	0.00000	0.11553	0.122
3	Total Tetra-Furans	25.60	4.772e3	1.398e4	1.351e2	2.750e2	0.49	YES	0.000e0	0.00000	0.10212	0.273

**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\200130R2\200130R2-6.qld

Last Altered: Monday, February 03, 2020 15:25:22 Pacific Standard Time  
 Printed: Monday, February 03, 2020 15:26:39 Pacific Standard Time

Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank

**Penta-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.03	2.157e3	3.136e3	5.410e1	7.091e1	0.76	YES	0.000e0	0.00000	0.021704	0.0348
2	Total Penta-Furans	30.03	3.360e3	4.796e3	5.458e1	8.622e1	0.63	YES	0.000e0	0.00000	0.021896	0.0348

**Hexa-Furans**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,7,8,9-HxCDF	34.80	2.705e3	5.156e3	3.489e1	5.640e1	0.62	YES	9.129e1	0.00000	0.029289	0.0978

**Hepta-Furans**

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

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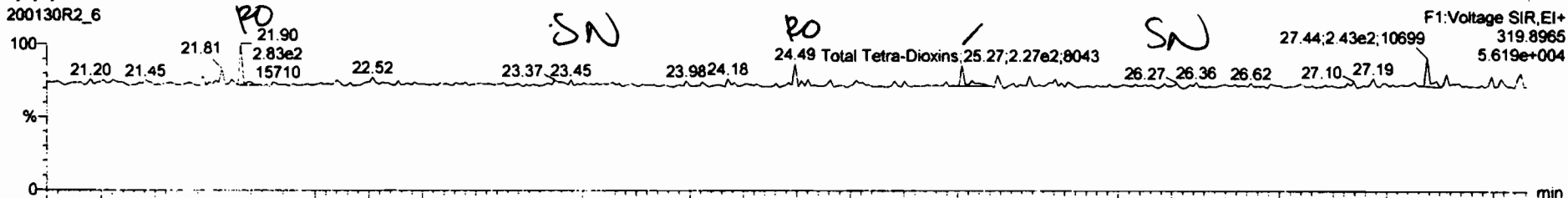
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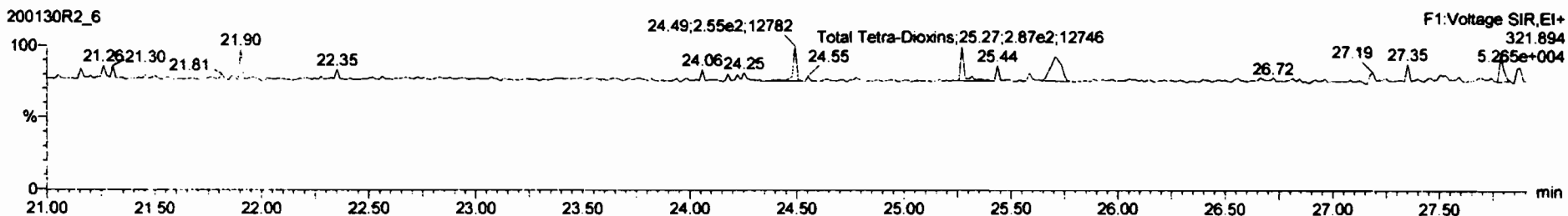
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2,3,7,8-TCDD

200130R2\_6

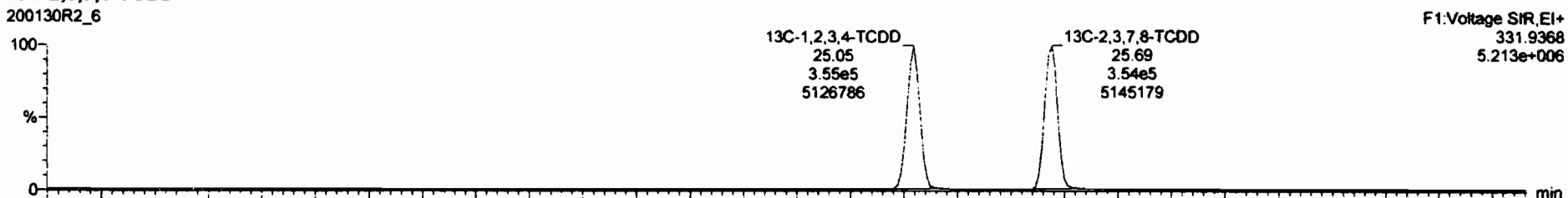


200130R2\_6

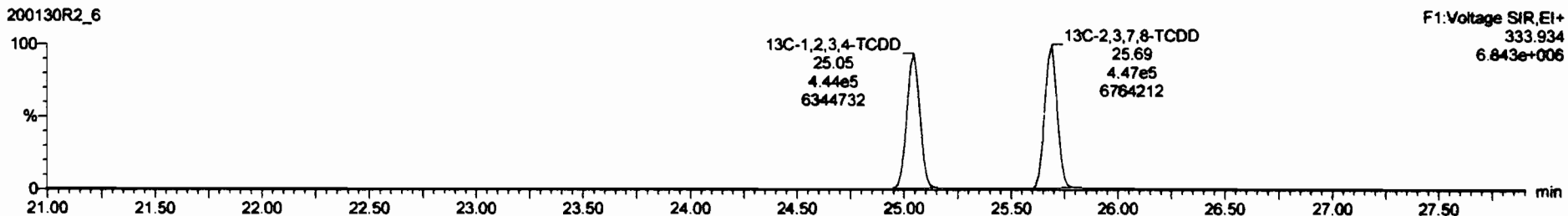


13C-2,3,7,8-TCDD

200130R2\_6

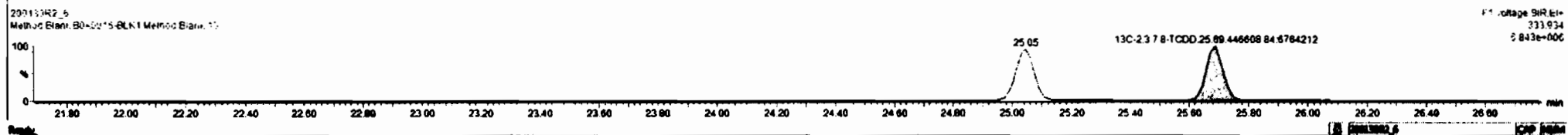
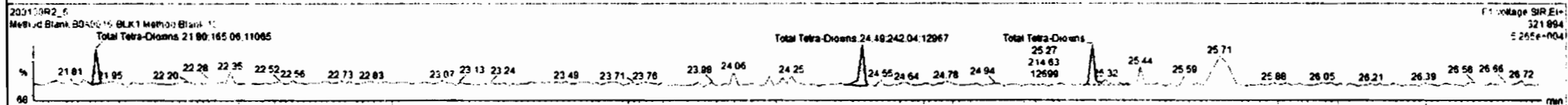
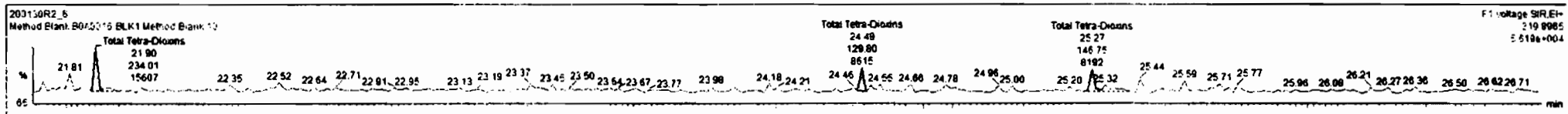


200130R2\_6



Step	Step	Run	Time	Conc	Unit	Conc	Unit	Conc	Unit	Conc	Unit
1	Total Tetra-Chlorins			0.8114	10.000					0.0613	

Step	Run	Time	Conc	Unit	Conc	Unit	Conc	Unit
1	Total Tetra-Chlorins	21.90	2.340e2	1.051e2	1.42	YES	0.000000	0.000000
2	Total Tetra-Chlorins	24.48	1.299e2	2.420e2	0.54	YES	0.090448	0.000000
3	Total Tetra-Chlorins	25.27	1.466e2	2.146e2	0.88	NO	0.10954	0.10954



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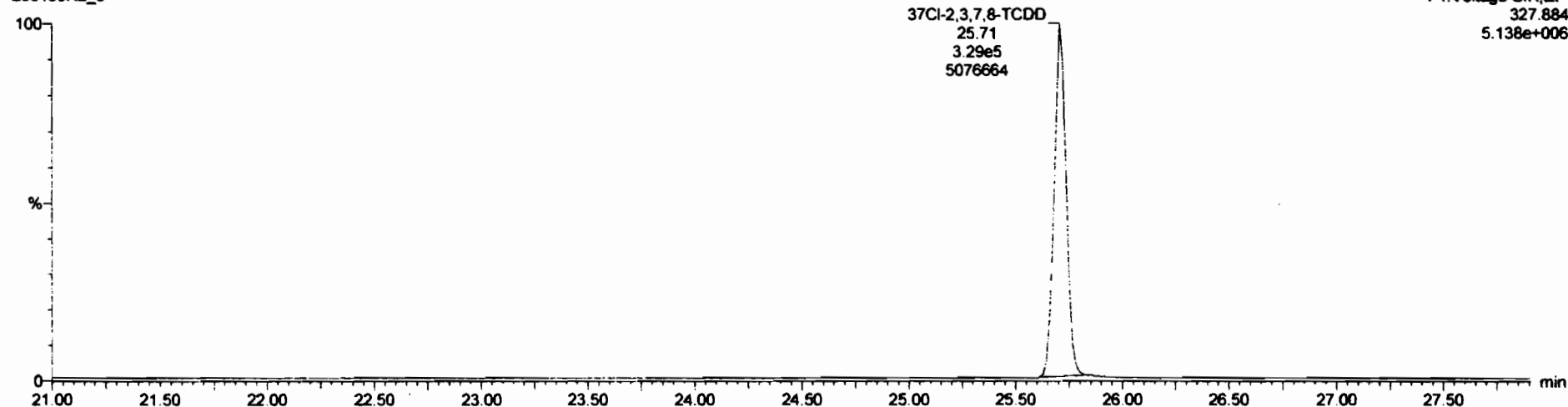
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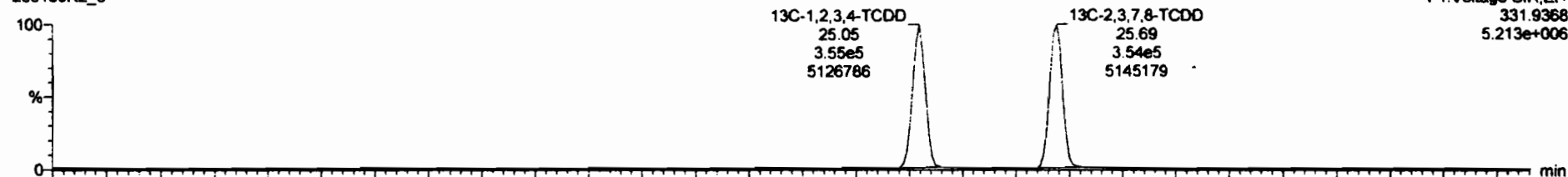
37Cl-2,3,7,8-TCDD

200130R2\_6

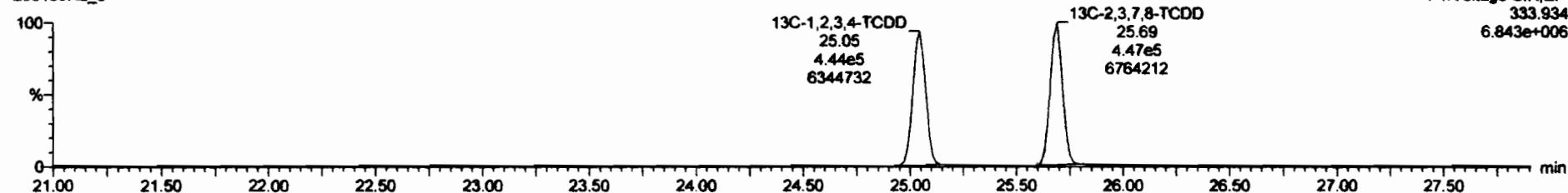


13C-1,2,3,4-TCDD

200130R2\_6



200130R2\_6



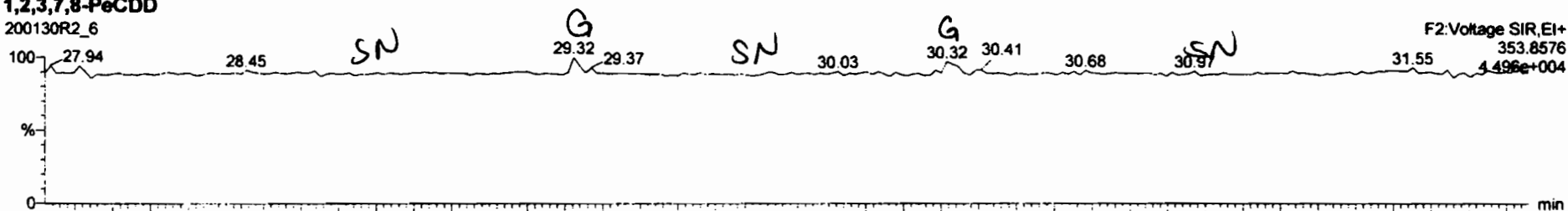
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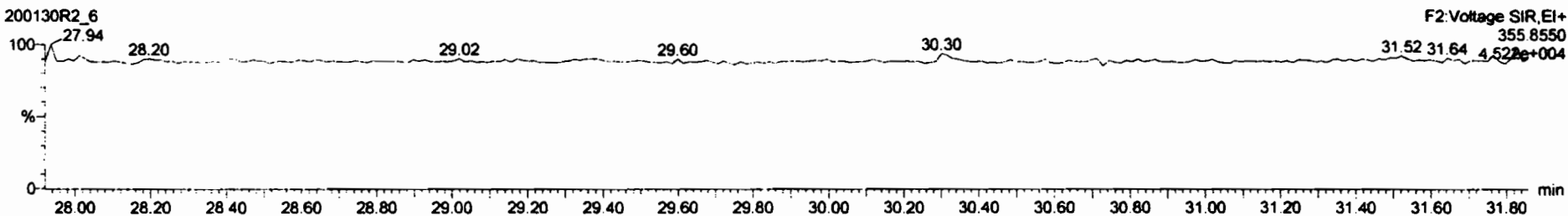
1,2,3,7,8-PeCDD

200130R2\_6



F2: Voltage SIR, EI+  
353.8576  
4.496e+004

200130R2\_6



F2: Voltage SIR, EI+  
355.8550  
4.522e+004

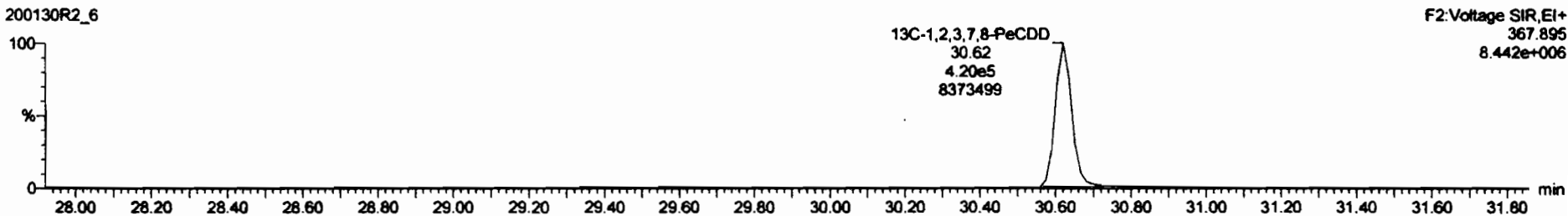
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200130R2\_6

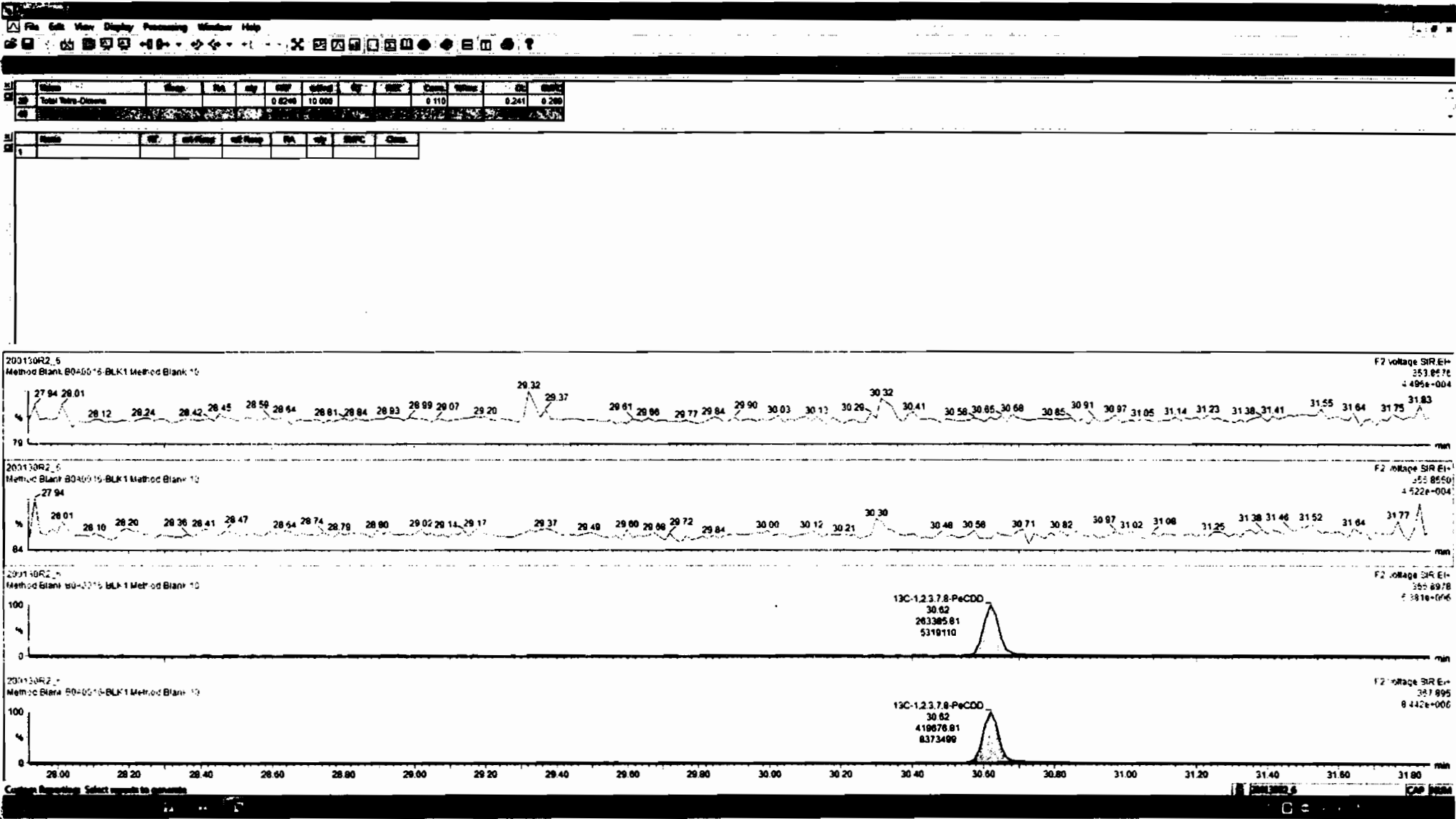


F2: Voltage SIR, EI+  
365.8978  
5.381e+006

200130R2\_6



F2: Voltage SIR, EI+  
367.895  
8.442e+006





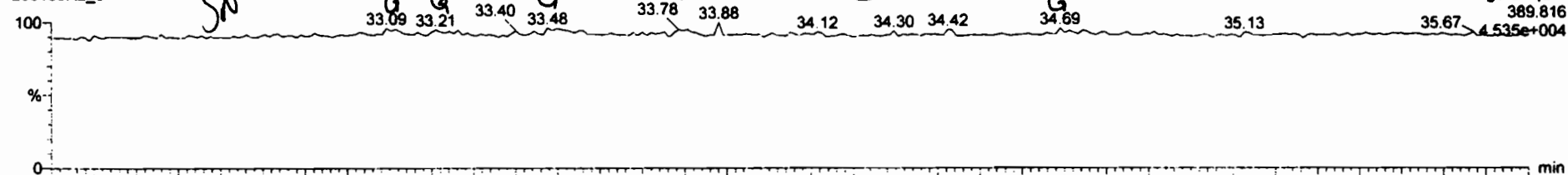
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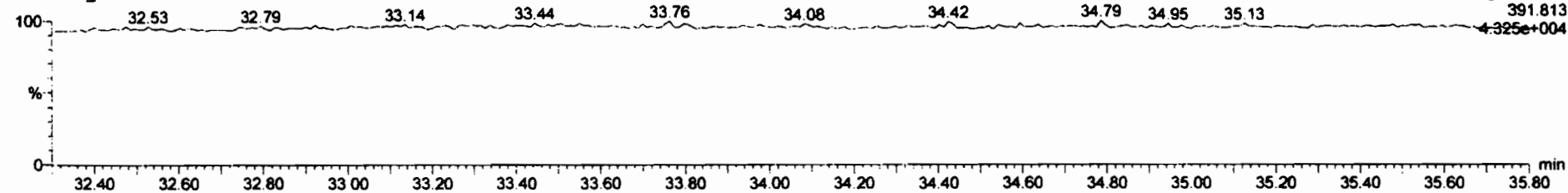
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1,2,3,4,7,8-HxCDD

200130R2\_6

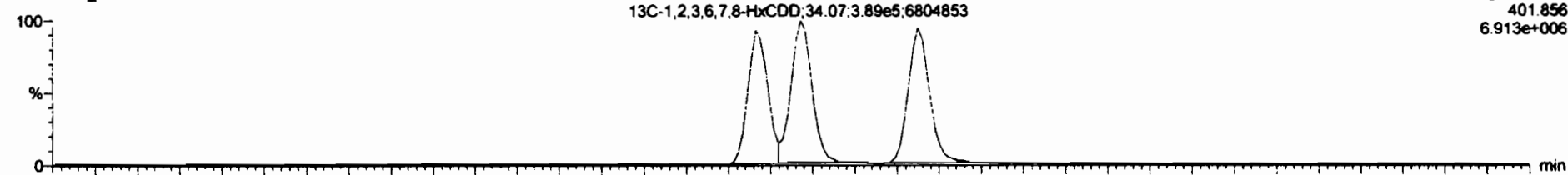


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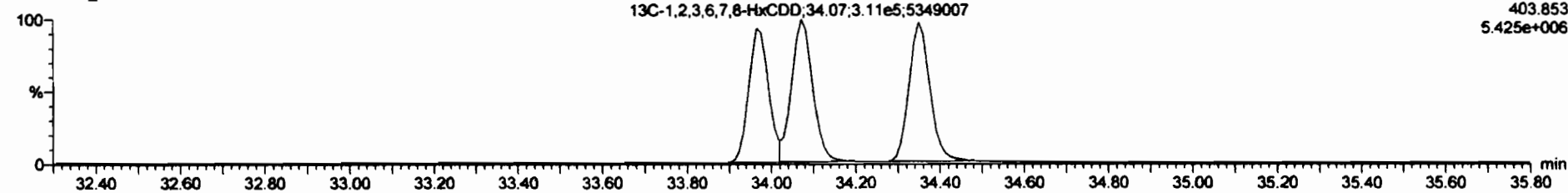


13C-1,2,3,4,7,8-HxCDD

200130R2\_6

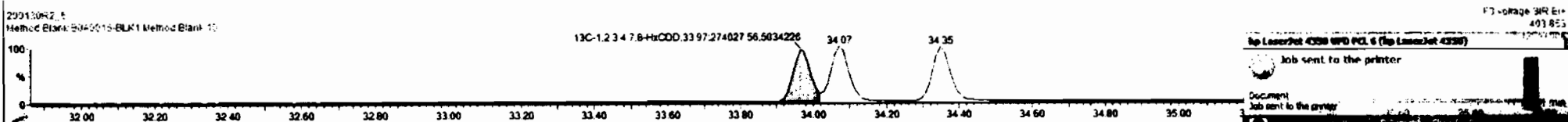
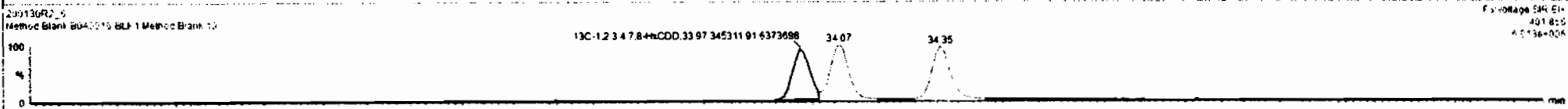
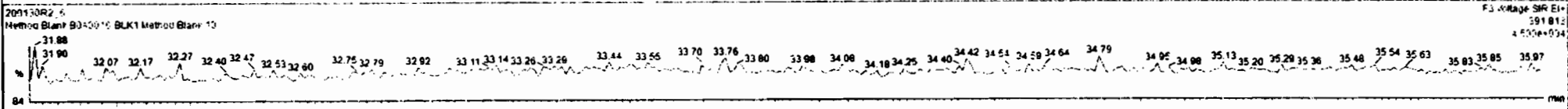
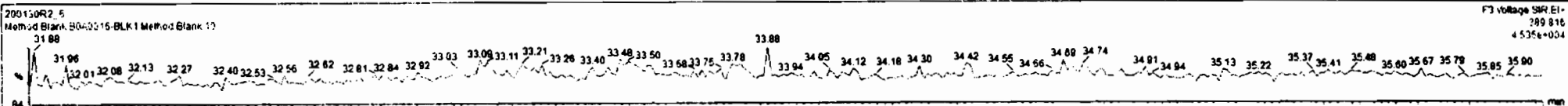


200130R2\_6



Area	Height	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area
Total Tetra-Oxime	0.8248	10.000						0.110			0.241	0.280
Total Penta-Oxime	0.9116	10.000									0.0613	

Peak	Area	Height	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area
1												



hp LaserJet 4330 MFP PCL 6 (hp LaserJet 4330)

Job sent to the printer

Document  
Job sent to the printer

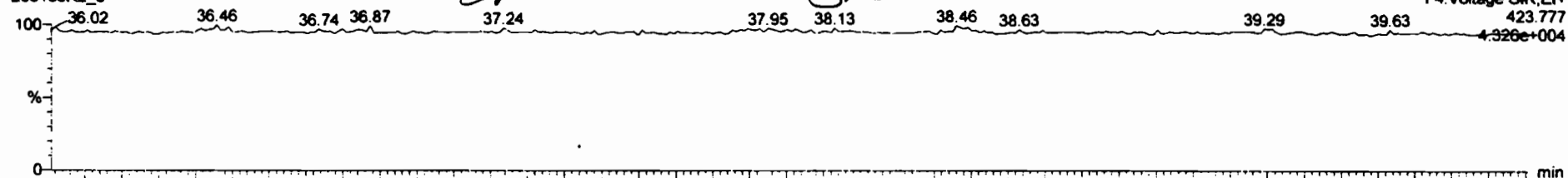
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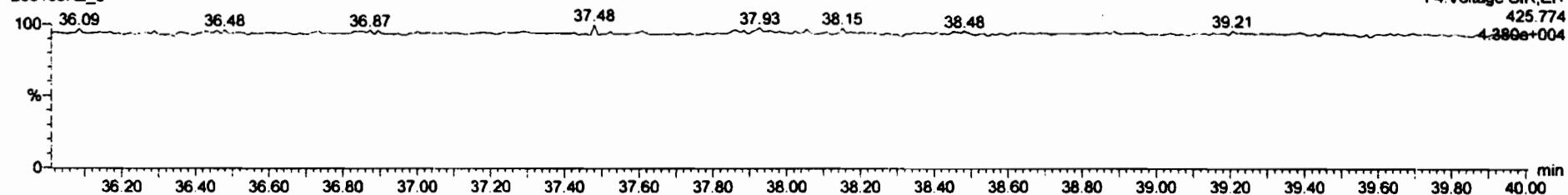
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1,2,3,4,6,7,8-HpCDD

200130R2\_6

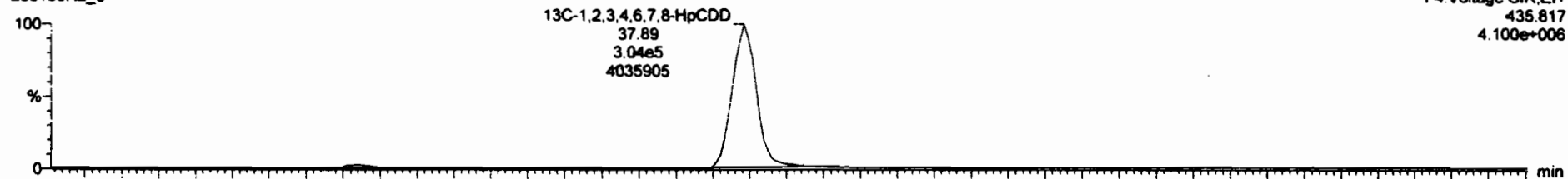


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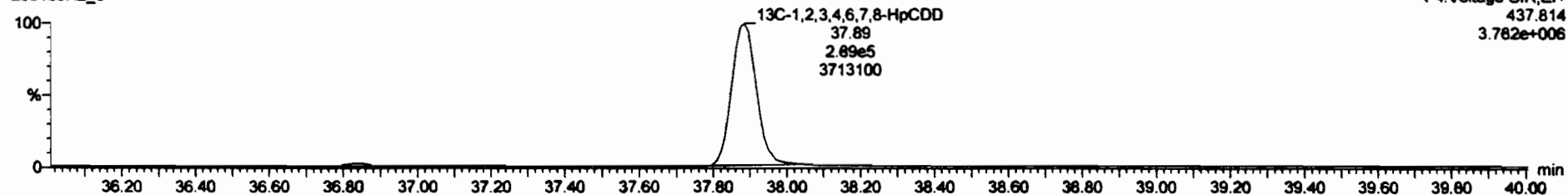


13C-1,2,3,4,6,7,8-HpCDD

200130R2\_6

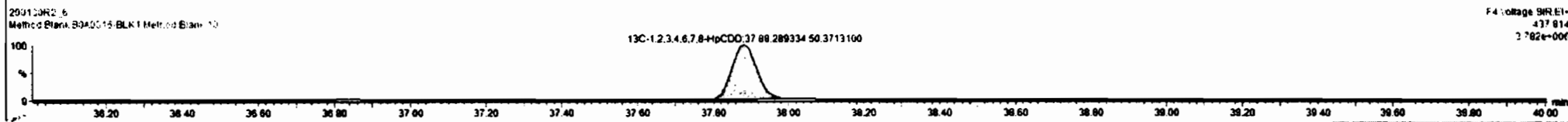
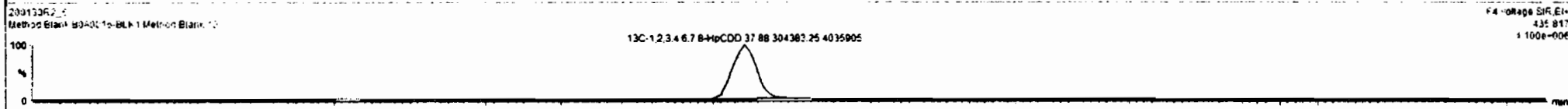
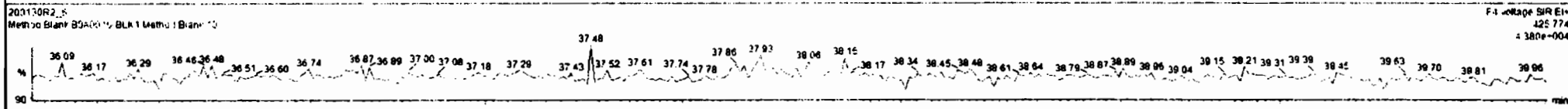
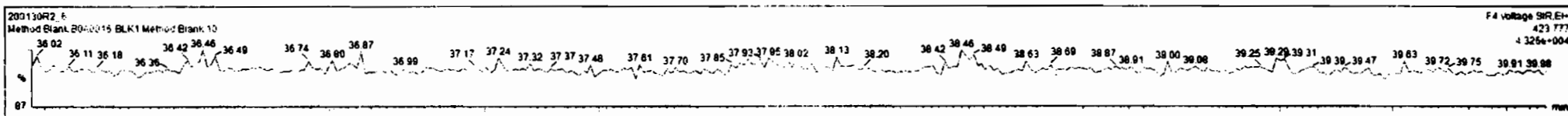


200130R2\_6



Sample	Qty	Unit	Weight	Conc.	Volume
23	Total Tetra-Furans		0.5878	10.000	0.122

Time	RT	Int. Peak	Int. Name	Area	Qty	Wt%	Conc.

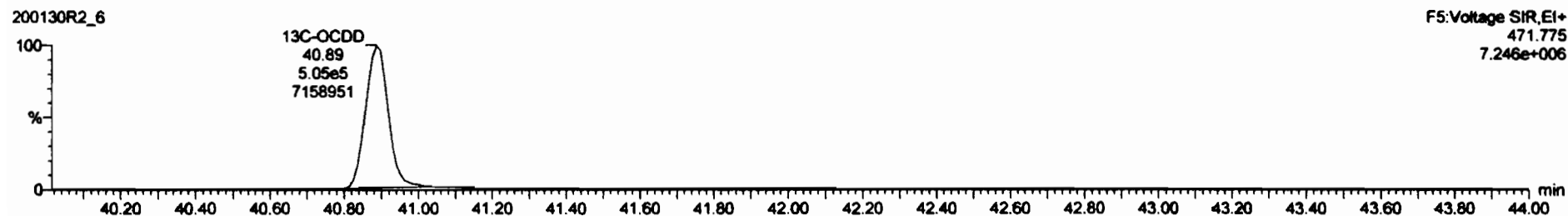
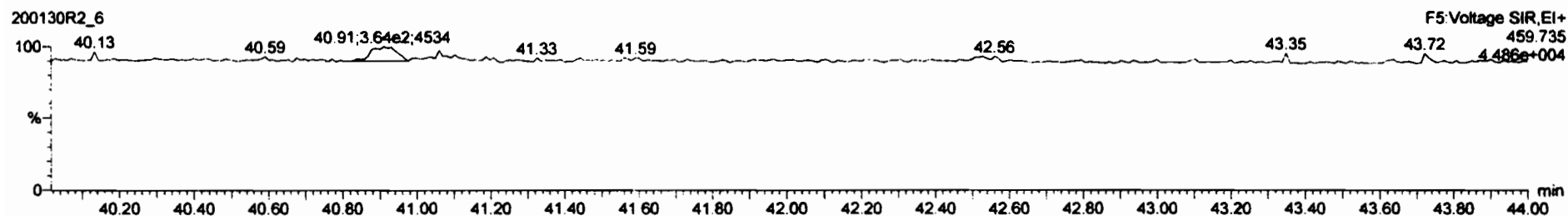
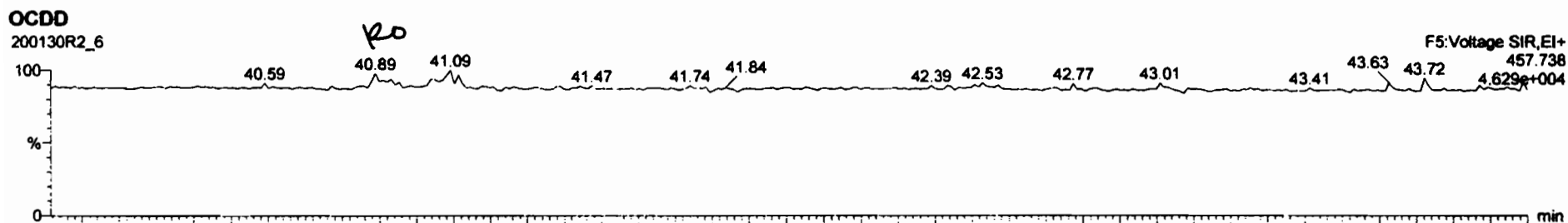


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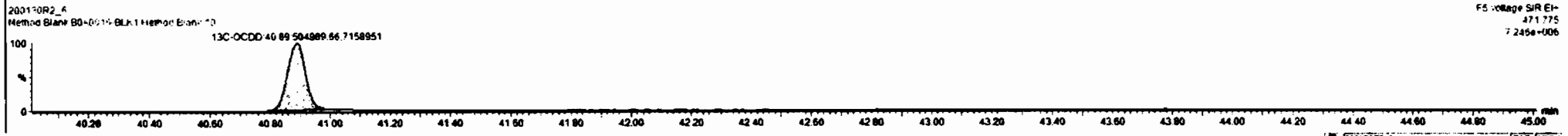
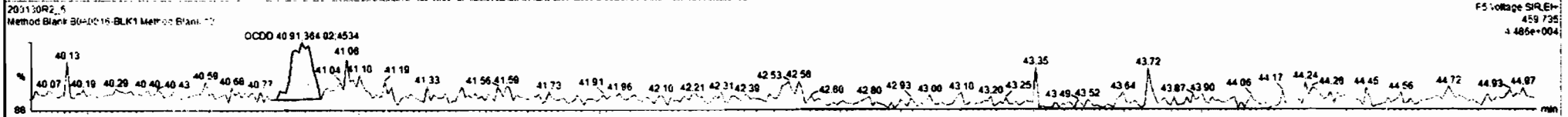
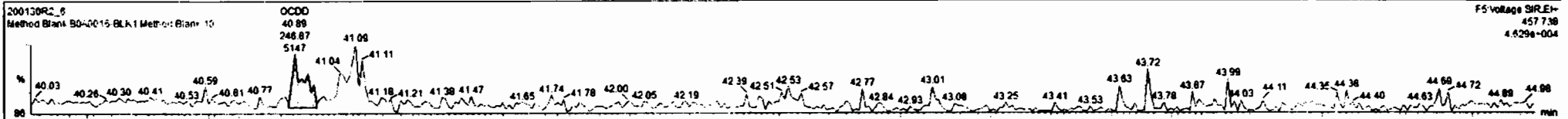
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Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank





Peak	Step	URL	Qty	Conc	Conc	Conc	Conc	Conc	Conc	Conc
1	2,3,7,8-TCDD		NO	0.0240	10.000					0.241
2	1,2,3,7,8-PeCDD		NO	0.0116	10.000					0.109
3	1,2,3,4,7,8-HxCDD		NO	0.0704	10.000					0.124
4	1,2,3,6,7,8-HxCDD		NO	0.7041	10.000					0.120
5	1,2,3,7,8,9-HxCDD		NO	0.7905	10.000					0.133
6	1,2,3,4,6,7,8-HpCDD		NO	0.7309	10.000					0.171
7										
8	2,3,7,8-TCDF		NO	0.5078	10.000					0.273
9	1,2,3,7,8-PeCDF		NO	0.0261	10.000					0.0778
10	2,3,4,7,8-PeCDF		NO	0.0408	10.000					0.0750
11	1,2,3,4,7,8-HxCDF		NO	0.7006	10.000					0.129
12	1,2,3,6,7,8-HxCDF		NO	0.7201	10.000					0.127
13	2,3,4,6,7,8-HxCDF		NO	0.7005	10.000					0.141
14	1,2,3,7,8,9-HxCDF		NO	0.7006	10.000					0.100
15	1,2,3,4,6,7,8-HpCDF		NO	0.7316	10.000					0.151



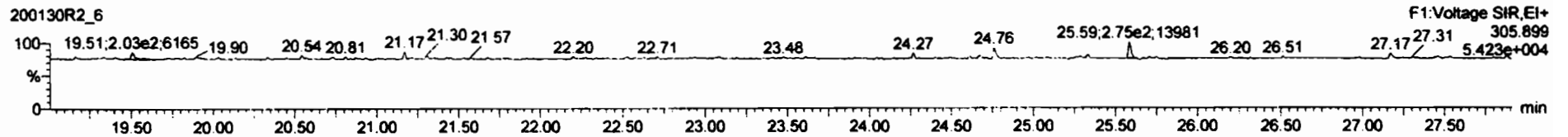
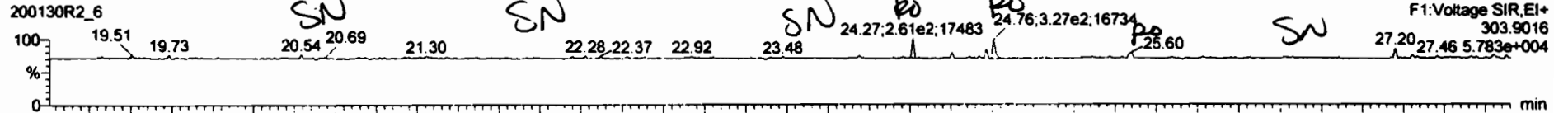
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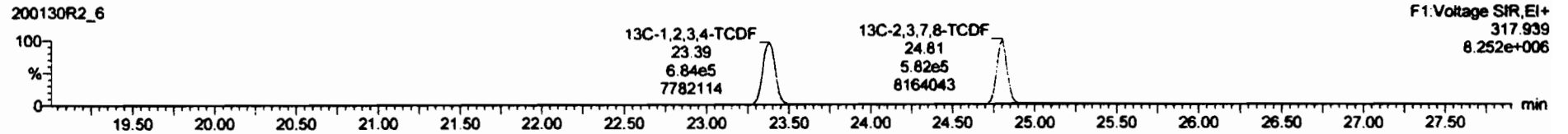
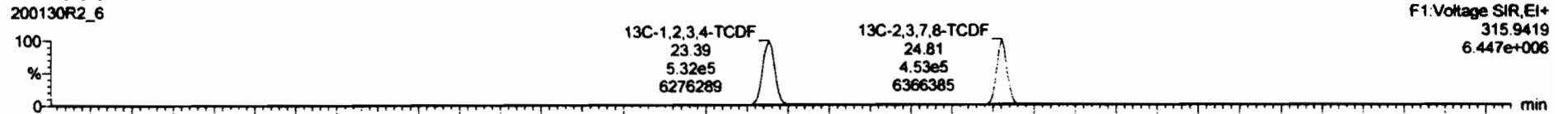
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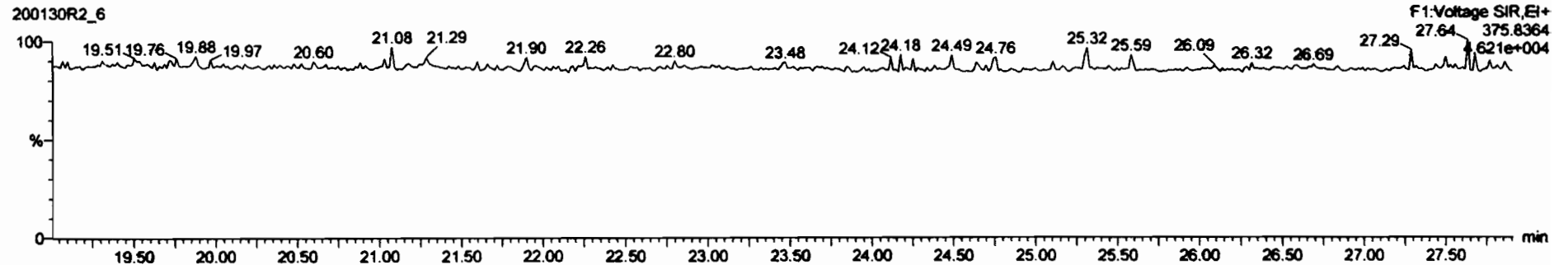
**2,3,7,8-TCDF**



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

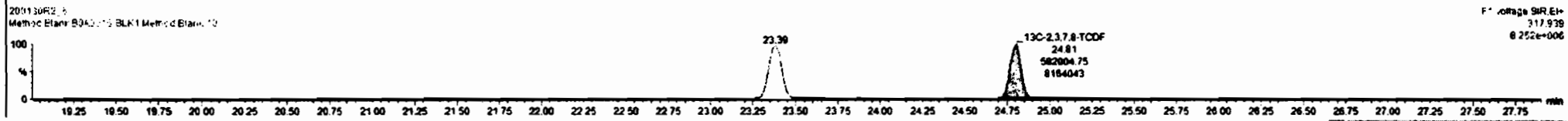
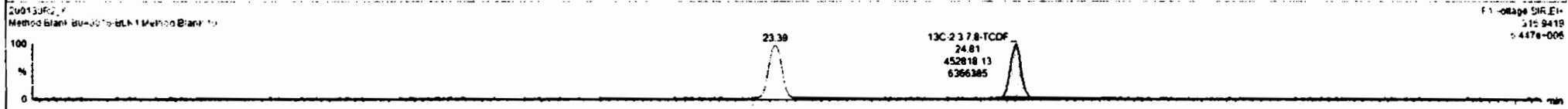
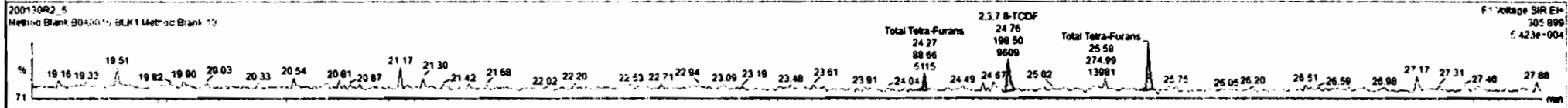
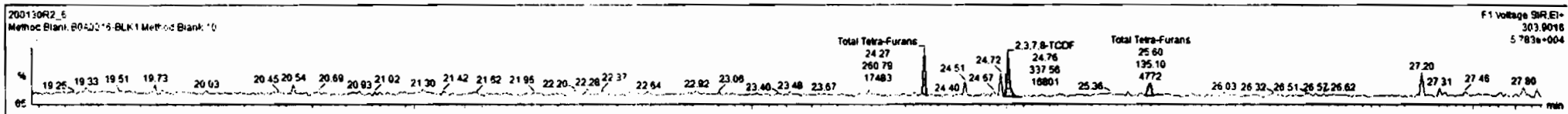


**DPE1**



Sample	Comp	SA	SP	OFF	QUANT	IS	UNIT	Comp	Total	BL	EMPC
Total Hepta-Dioxin				0.7300	10.000					0.0073	

Name	RT	RT Comp	Int Area	SA	SP	IS	UNIT	Comp	Total
Total Tetra-Furans	24.27	2.686e2	8.888e1	2.94	YES	0.561800	0.00000		
2,3,7,8-TCDF	24.76	3.378e2	1.985e2	1.70	YES	0.11553	0.00000		
Total Tetra-Furans	25.60	1.951e2	2.750e2	0.49	YES	0.18212	0.00000		





Dataset: Untitled

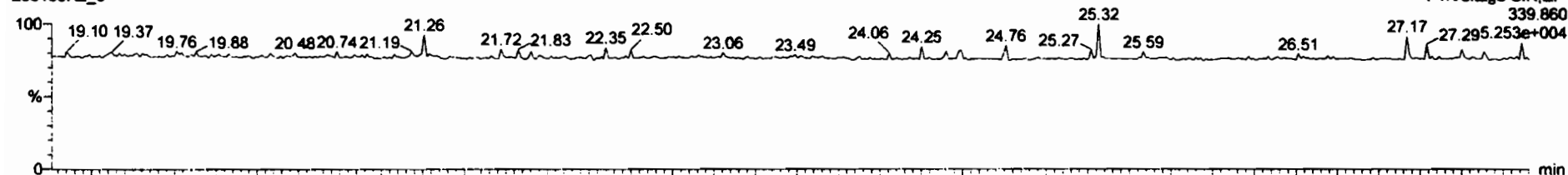
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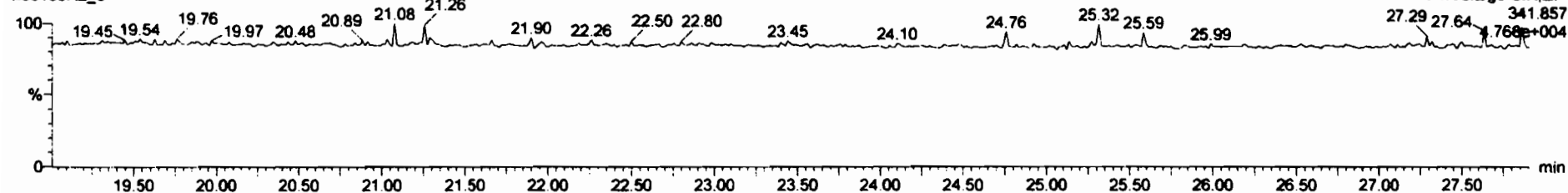
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1st Func. Penta-Furans

200130R2\_6

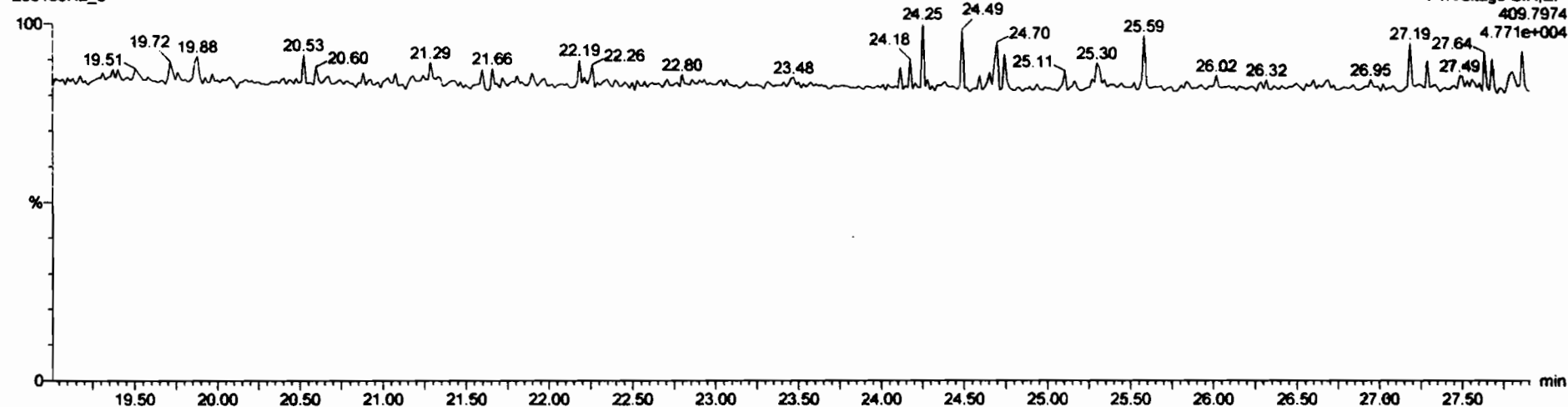


200130R2\_6



DPE6

200130R2\_6



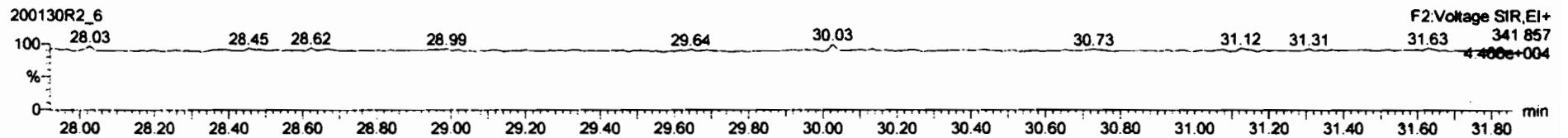
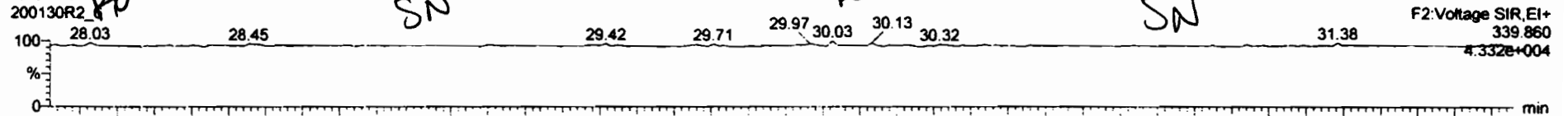
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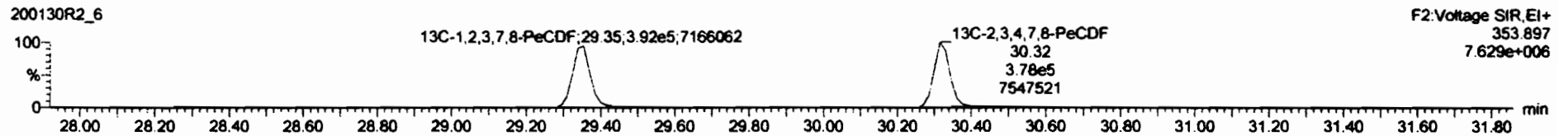
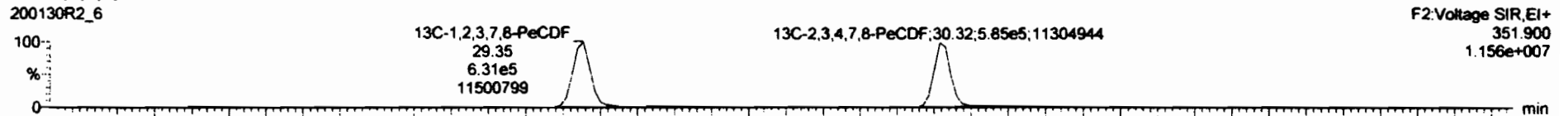
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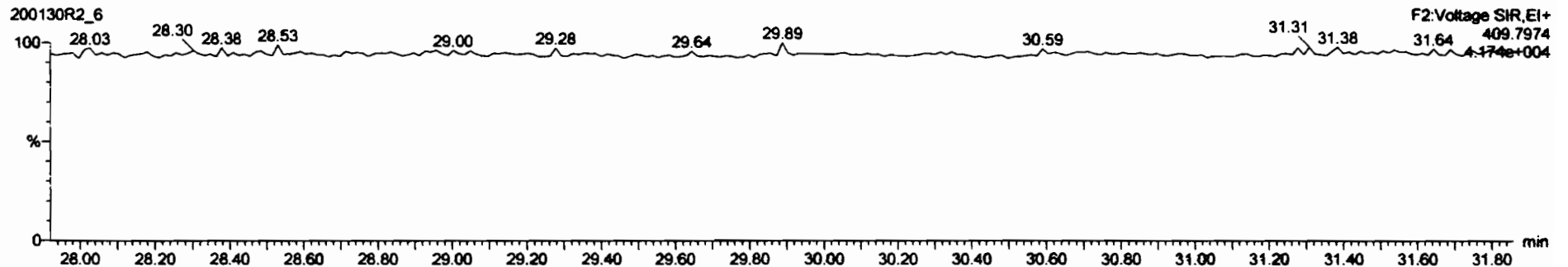
**1,2,3,7,8-PeCDF**



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

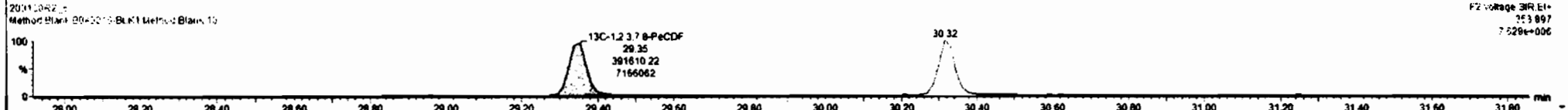
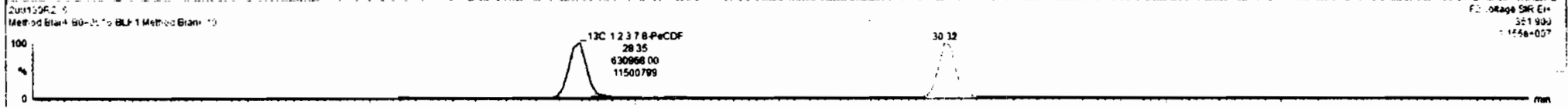
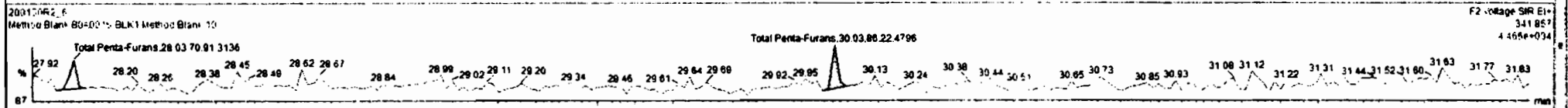
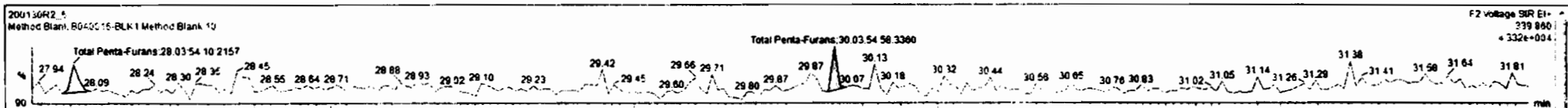


**DPE2**



Class	Group	SN	Qty	WWT	WWT2	WWT3	WWT4	WWT5	WWT6	WWT7	WWT8	WWT9	WWT10	WWT11	WWT12	WWT13	WWT14	WWT15	WWT16	WWT17	WWT18	WWT19	WWT20
Total Hexa-Furans				0.7685	10.000																		0.0726

Class	WWT	net Weight	net Weight	SN	Qty	WWT	WWT2	WWT3	WWT4	WWT5	WWT6	WWT7	WWT8	WWT9	WWT10	WWT11	WWT12	WWT13	WWT14	WWT15	WWT16	WWT17	WWT18	WWT19	WWT20	
1 Total Penta-Furans	28.03	5.410e1	7.881e1	0.78	YES	0.021704	0.000000																			
2 Total Penta-Furans	30.03	5.458e1	8.622e1	0.63	YES	0.021886	0.000000																			



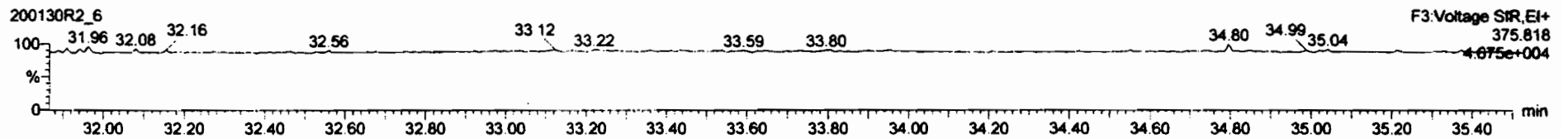
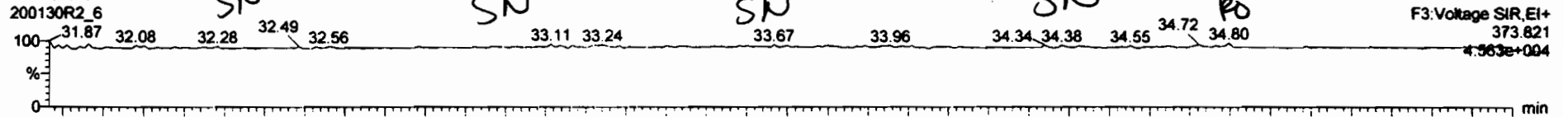
Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

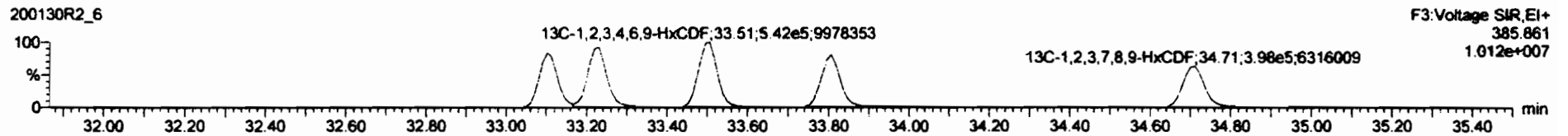
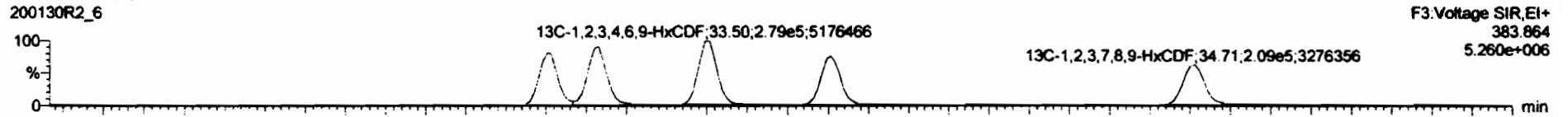
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank

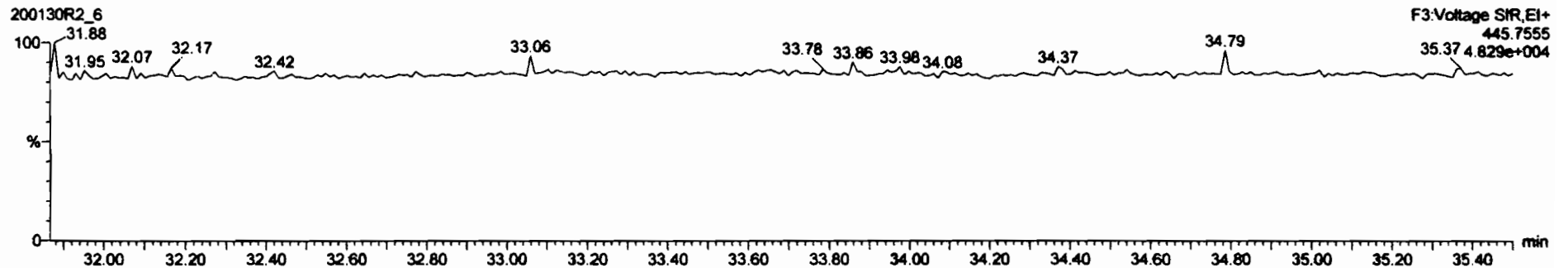
**1,2,3,4,7,8-HxCDF**

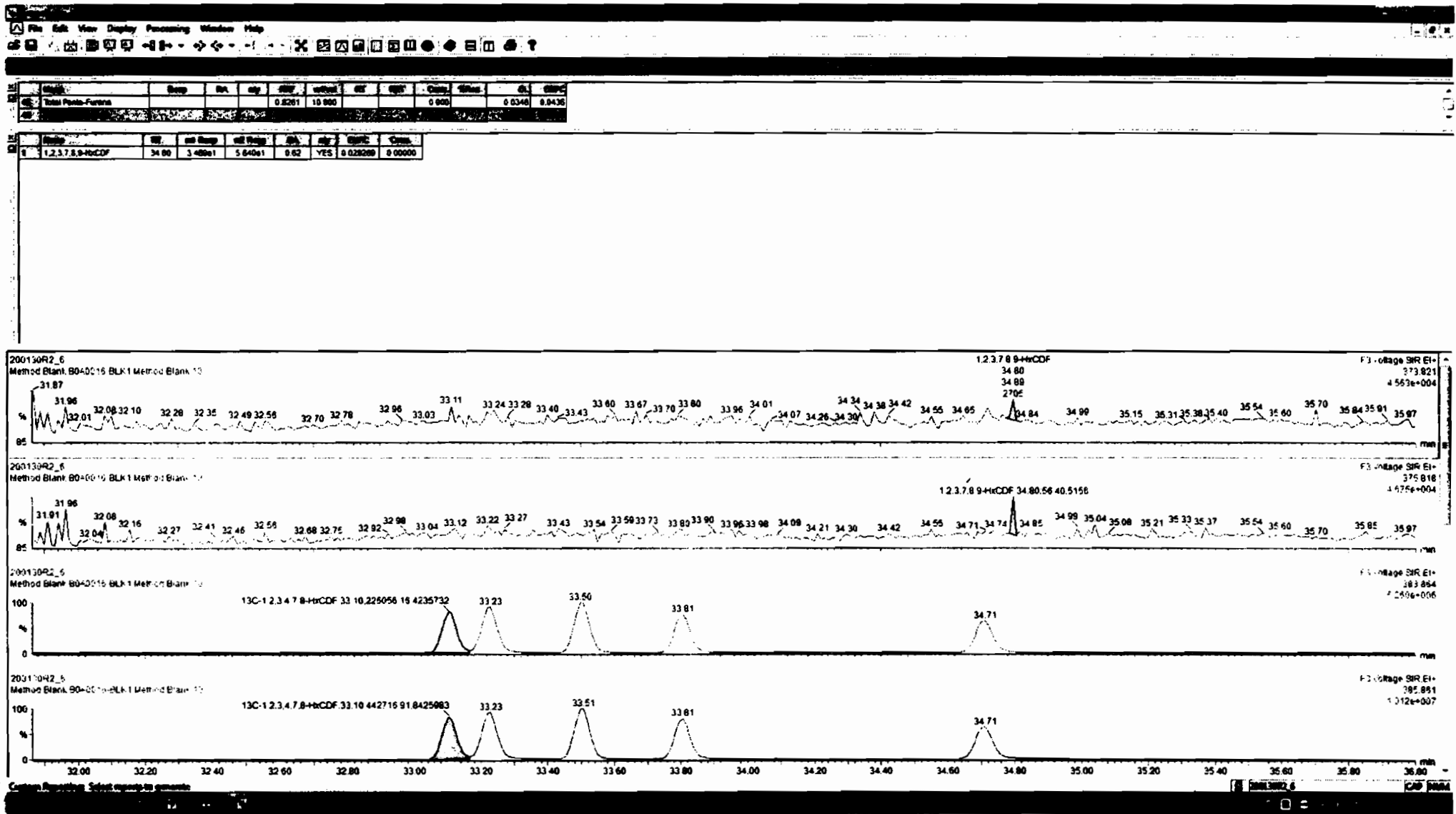


**13C-1,2,3,4,7,8-HxCDF**



**DPE3**





Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

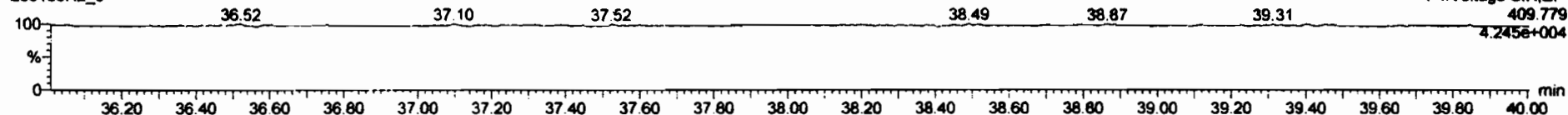
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1,2,3,4,6,7,8-HpCDF

200130R2\_6

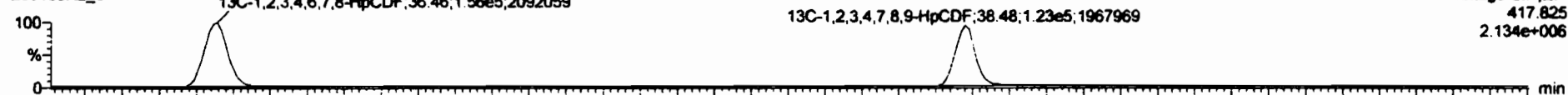


200130R2\_6

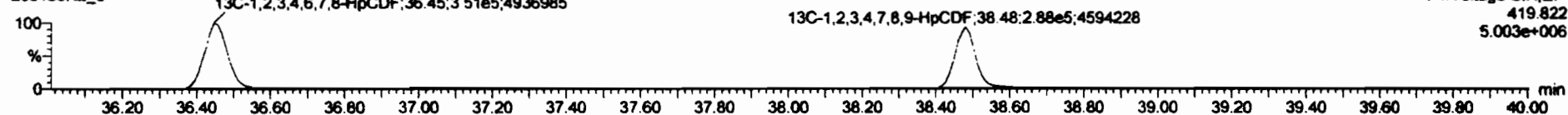


13C-1,2,3,4,6,7,8-HpCDF

200130R2\_6

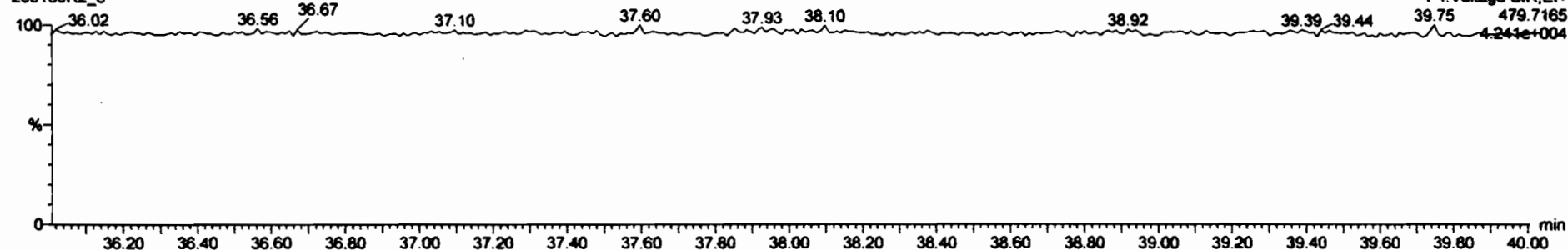


200130R2\_6



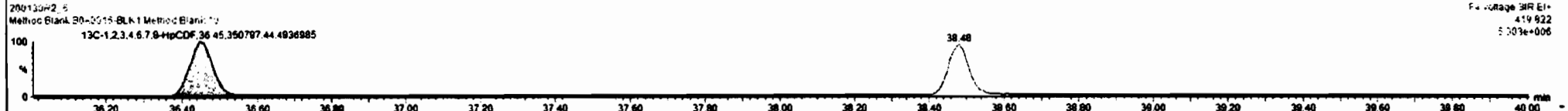
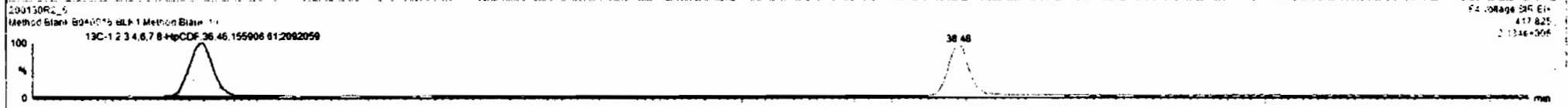
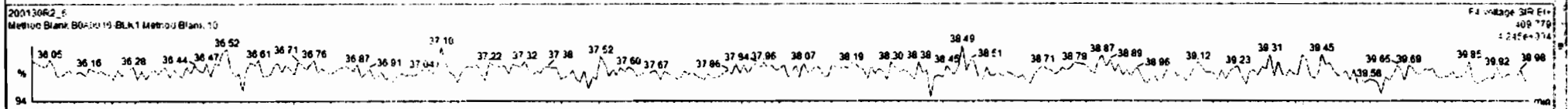
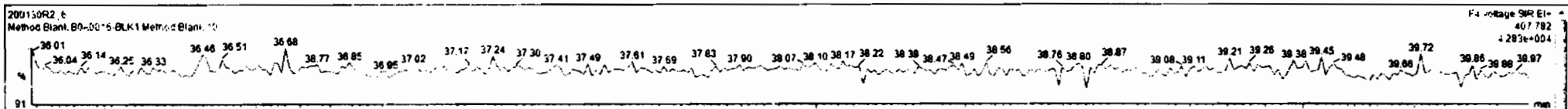
DPE4

200130R2\_6



Sample	Comp	Run	inj	Area	Conc	Area	Conc
Total Penta-Furans				0.6281	10.000	0.0348	0.0438
Total Hexa-Furans				0.7685	10.000	0.0600	0.0726

Mass	RT	Int Resp	MS/MS	SN	SP	SWPC	Choc.
1							

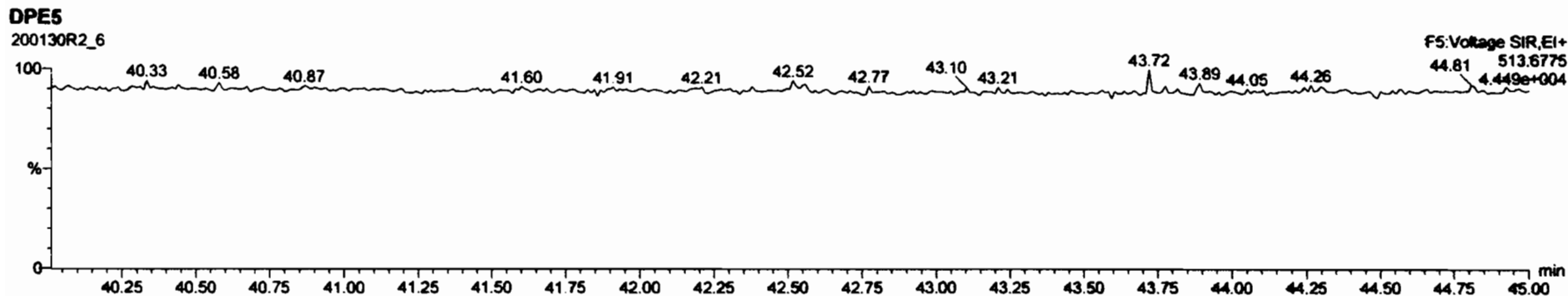
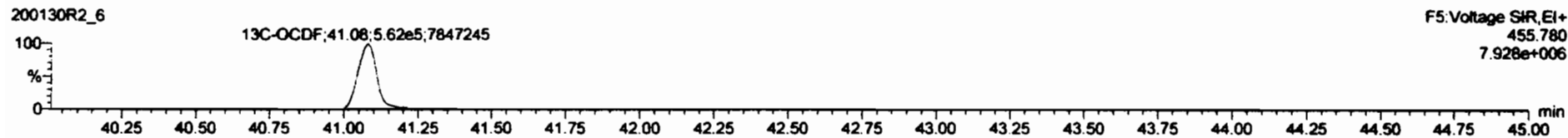
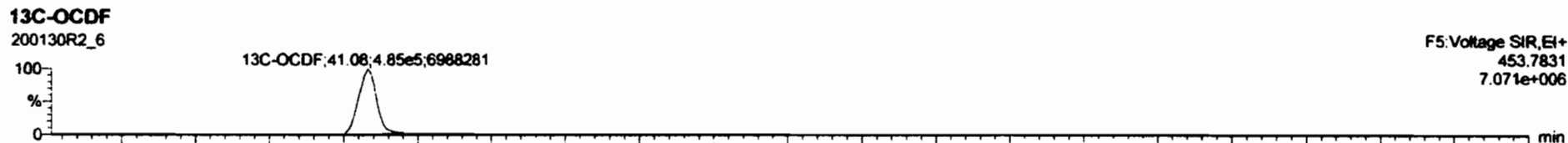
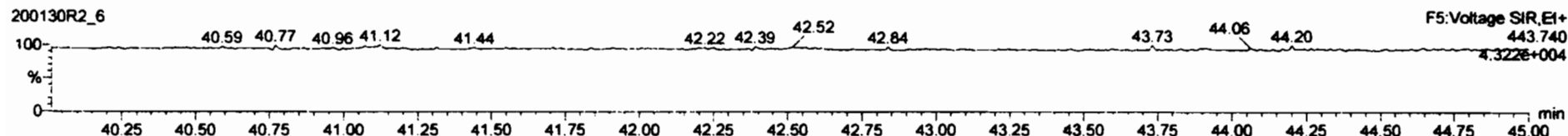
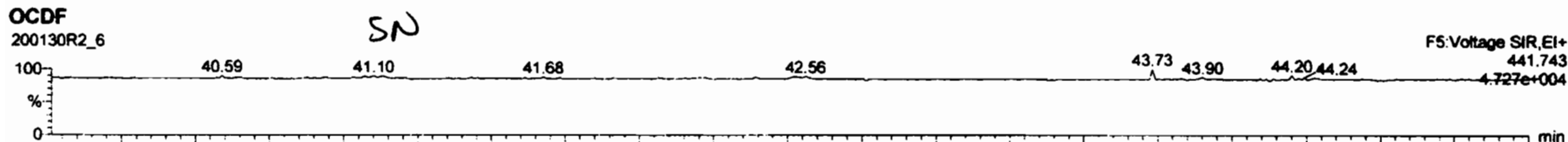


Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

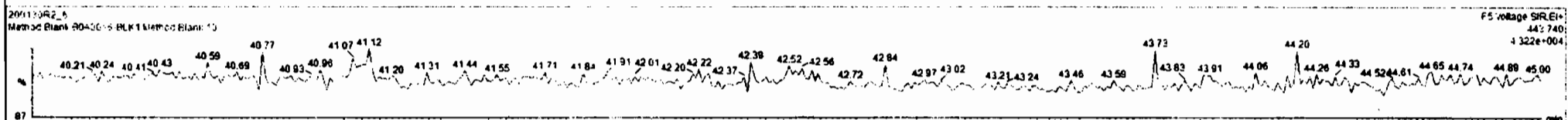
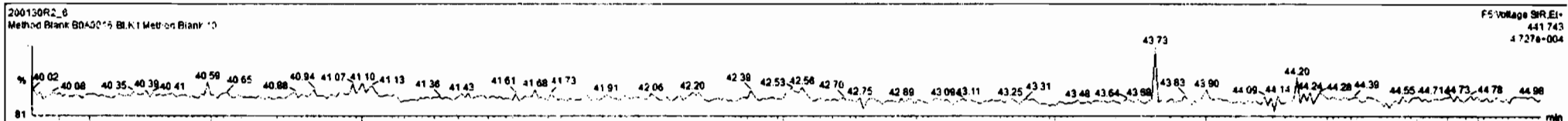
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank





Peak	Ret. Time	Area	Height	Width	Height	Area	Height	Width	Height	Area	Height	Width	Height	
1	12.378-PeCDD					NO	0.9116	10.000					0.109	
2	12.347,8-HxCDD					NO	0.8794	10.000					0.124	
3	12.387,8-HxCDD					NO	0.7841	10.000					0.128	
4	12.378,8-HxCDD					NO	0.7585	10.000					0.133	
5	12.346,7,8-HpCDD					NO	0.7369	10.000					0.171	
6	OCDD	0.11e2	0.66	YES	0.8000	10.000	48.80	1.000	0.321				0.208	0.278
7	2,3,7,8-TCDF					NO	0.5878	10.000					0.273	
8	12.378-PeCDF					NO	0.8281	10.000					0.0770	
9	2,3,4,7,8-PeCDF					NO	0.8486	10.000					0.0750	
10	12,3,4,7,8-HxCDF					NO	0.7896	10.000					0.129	
11	12,3,6,7,8-HxCDF					NO	0.7201	10.000					0.127	
12	2,3,4,6,7,8-HxCDF					NO	0.7685	10.000					0.141	
13	12,3,7,8-HxCDF					NO	0.7086	10.000					0.188	
14	12,3,4,6,7,8-HpCDF					NO	0.7316	10.000					0.151	
15	12,3,4,7,8-HpCDF					NO	0.8164	10.000					0.141	



hp LaserJet 4330 MFP PCL 6 (hp LaserJet 4330)

Job sent to the printer

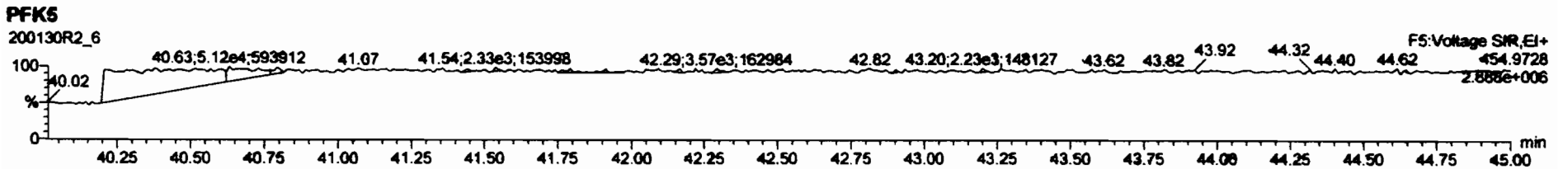
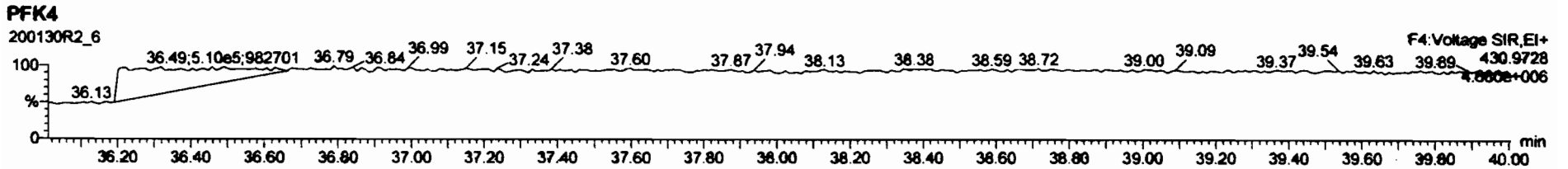
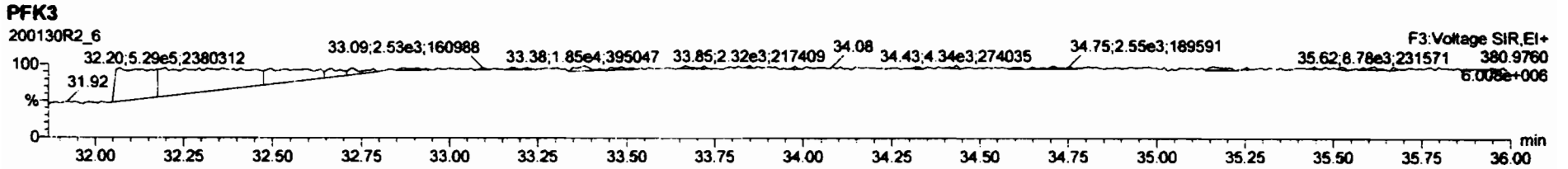
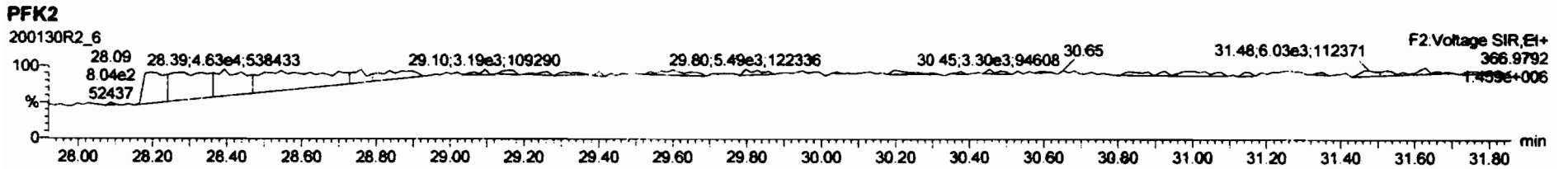
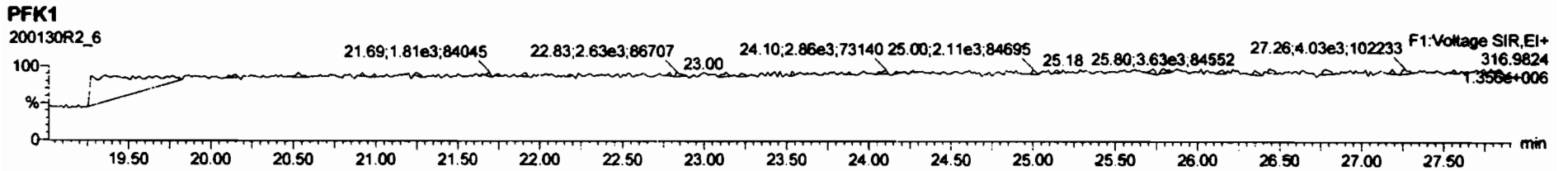
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Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2\_6, Date: 30-Jan-2020, Time: 18:21:31, ID: B0A0016-BLK1 Method Blank 10, Description: Method Blank



Dataset: U:\VG12.PRO\Results\200130R2\200130R2-3.qld

Last Altered: Friday, January 31, 2020 08:46:22 Pacific Standard Time  
Printed: Monday, February 03, 2020 15:28:27 Pacific Standard Time

*GRB 02/03/2020*

*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\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.52e5	0.77	NO	0.824	10.000	25.736	25.74	1.001	1.001	22.954		0.145	23.0
2	2 1,2,3,7,8-PeCDD	6.56e5	0.63	NO	0.912	10.000	30.658	30.65	1.001	1.000	103.57		0.126	104
3	3 1,2,3,4,7,8-HxCDD	5.99e5	1.23	NO	0.870	10.000	33.998	34.00	1.000	1.000	114.08		0.164	114
4	4 1,2,3,6,7,8-HxCDD	6.22e5	1.23	NO	0.784	10.000	34.094	34.10	1.000	1.000	117.24		0.174	117
5	5 1,2,3,7,8,9-HxCDD	6.26e5	1.21	NO	0.798	10.000	34.405	34.38	1.001	1.000	114.12		0.174	114
6	6 1,2,3,4,6,7,8-HpCDD	5.02e5	1.02	NO	0.737	10.000	37.907	37.92	1.000	1.001	118.05		0.417	118
7	7 OCDD	7.87e5	0.88	NO	0.800	10.000	40.900	40.91	1.000	1.000	227.84		0.247	228
8	8 2,3,7,8-TCDF	1.71e5	0.74	NO	0.588	10.000	24.862	24.85	1.001	1.001	26.529		0.156	26.5
9	9 1,2,3,7,8-PeCDF	9.71e5	1.54	NO	0.826	10.000	29.376	29.37	1.001	1.000	109.46		0.166	109
10	10 2,3,4,7,8-PeCDF	9.60e5	1.53	NO	0.850	10.000	30.362	30.35	1.001	1.000	110.78		0.156	111
11	11 1,2,3,4,7,8-HxCDF	6.74e5	1.16	NO	0.787	10.000	33.125	33.13	1.000	1.000	120.55		0.243	121
12	12 1,2,3,6,7,8-HxCDF	6.96e5	1.18	NO	0.720	10.000	33.252	33.25	1.000	1.000	116.56		0.238	117
13	13 2,3,4,6,7,8-HxCDF	6.31e5	1.17	NO	0.766	10.000	33.851	33.84	1.001	1.001	120.41		0.275	120
14	14 1,2,3,7,8,9-HxCDF	5.41e5	1.16	NO	0.709	10.000	34.722	34.74	1.000	1.001	118.79		0.334	119
15	15 1,2,3,4,6,7,8-HpCDF	4.30e5	0.95	NO	0.732	10.000	36.505	36.49	1.001	1.001	114.24		0.419	114
16	16 1,2,3,4,7,8,9-HpCDF	3.83e5	0.96	NO	0.816	10.000	38.493	38.50	1.000	1.000	115.90		0.412	116
17	17 OCDF	7.72e5	0.85	NO	0.639	10.000	41.091	41.10	1.000	1.000	247.03		0.275	247
18	18 13C-2,3,7,8-TCDD	1.61e6	0.79	NO	1.12	10.000	25.706	25.70	1.026	1.026	201.10	101	0.215	
19	19 13C-1,2,3,7,8-PeCDD	1.39e6	0.64	NO	0.841	10.000	30.450	30.64	1.215	1.222	230.00	115	0.326	
20	20 13C-1,2,3,4,7,8-HxCDD	1.21e6	1.27	NO	0.938	10.000	33.988	33.99	1.014	1.014	169.24	84.6	0.286	
21	21 13C-1,2,3,6,7,8-HxCDD	1.35e6	1.26	NO	1.07	10.000	34.088	34.09	1.017	1.017	167.03	83.5	0.251	
22	22 13C-1,2,3,7,8,9-HxCDD	1.37e6	1.26	NO	1.03	10.000	34.390	34.37	1.026	1.025	175.35	87.7	0.260	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.15e6	1.03	NO	0.710	10.000	37.943	37.90	1.132	1.131	213.70	107	0.535	
24	24 13C-OCDD	1.73e6	0.89	NO	0.601	10.000	40.826	40.90	1.218	1.220	378.01	94.5	0.268	
25	25 13C-2,3,7,8-TCDF	2.19e6	0.78	NO	1.04	10.000	24.886	24.84	0.993	0.991	173.48	86.7	0.269	
26	26 13C-1,2,3,7,8-PeCDF	2.15e6	1.57	NO	0.917	10.000	29.222	29.35	1.166	1.171	192.37	96.2	0.417	
27	27 13C-2,3,4,7,8-PeCDF	2.04e6	1.60	NO	0.903	10.000	30.174	30.33	1.204	1.210	185.50	92.8	0.423	
28	28 13C-1,2,3,4,7,8-HxCDF	1.42e6	0.51	NO	0.861	10.000	33.116	33.13	0.988	0.988	216.91	108	0.417	
29	29 13C-1,2,3,6,7,8-HxCDF	1.66e6	0.51	NO	1.05	10.000	33.217	33.24	0.991	0.992	208.21	104	0.343	
30	30 13C-2,3,4,6,7,8-HxCDF	1.37e6	0.51	NO	0.946	10.000	33.824	33.82	1.009	1.009	190.00	95.0	0.380	
31	31 13C-1,2,3,7,8,9-HxCDF	1.29e6	0.51	NO	0.818	10.000	34.725	34.72	1.036	1.036	207.20	104	0.440	

Dataset: U:\VG12.PRO\Results\200130R2\200130R2-3.qld

Last Altered: Friday, January 31, 2020 08:46:22 Pacific Standard Time  
Printed: Monday, February 03, 2020 15:28:27 Pacific Standard Time

Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

#	Name	Resp	RA	nty	RRF	wt/dil	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	13C-1,2,3,4,6,7,8-HpCDF	1.03e6	0.43	NO	0.589	10.000	36.468	36.47	1.088	1.088	229.79	115	0.612	
33	13C-1,2,3,4,7,8,9-HpCDF	8.10e5	0.43	NO	0.448	10.000	38.479	38.49	1.148	1.148	237.62	119	0.804	
34	13C-OCDF	1.96e6	0.88	NO	0.586	10.000	41.060	41.09	1.225	1.226	439.14	110	0.307	
35	37Cl-2,3,7,8-TCDD	6.32e5			1.09	10.000	25.738	25.74	1.027	1.027	81.067	101	0.0885	
36	13C-1,2,3,4-TCDD	1.44e6	0.80	NO	1.00	10.000	25.080	25.06	1.000	1.000	200.00	100	0.240	
37	13C-1,2,3,4-TCDF	2.44e6	0.78	NO	1.00	10.000	23.420	23.42	1.000	1.000	200.00	100	0.279	
38	13C-1,2,3,4,6,9-HxCDF	1.52e6	0.51	NO	1.00	10.000	33.520	33.52	1.000	1.000	200.00	100	0.359	

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Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

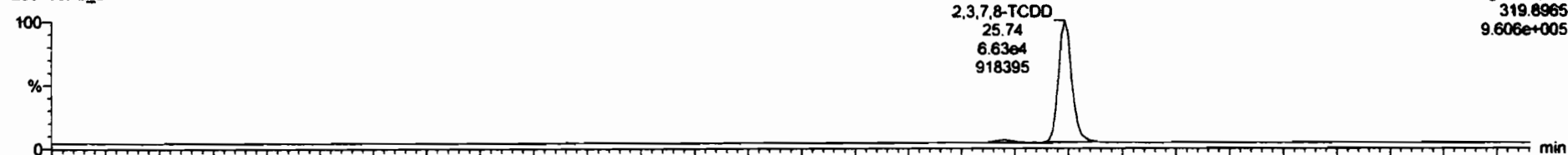
Method: U:\VG12.PROMethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\cb5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

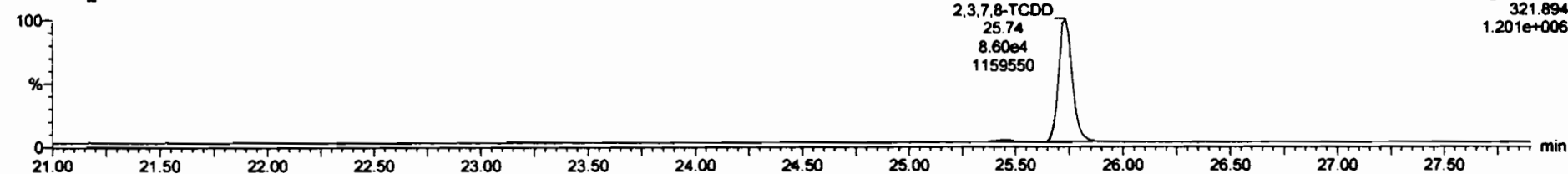
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**2,3,7,8-TCDD**

200130R2\_3

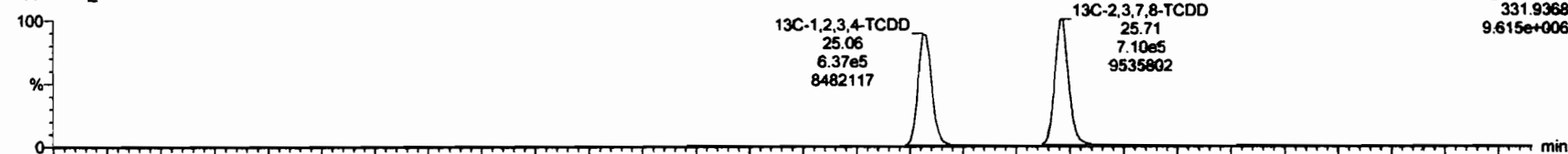


200130R2\_3

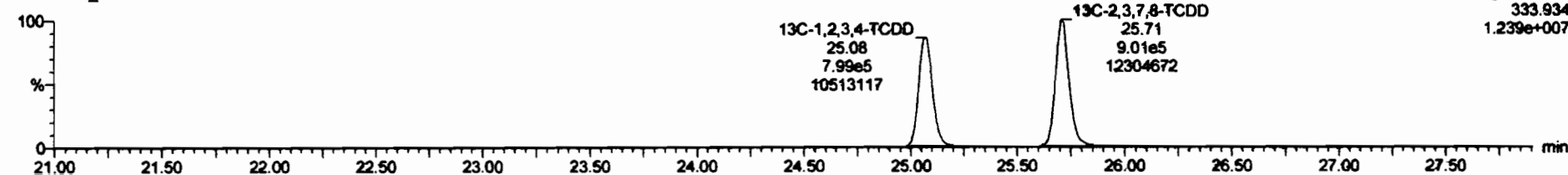


**13C-2,3,7,8-TCDD**

200130R2\_3



200130R2\_3



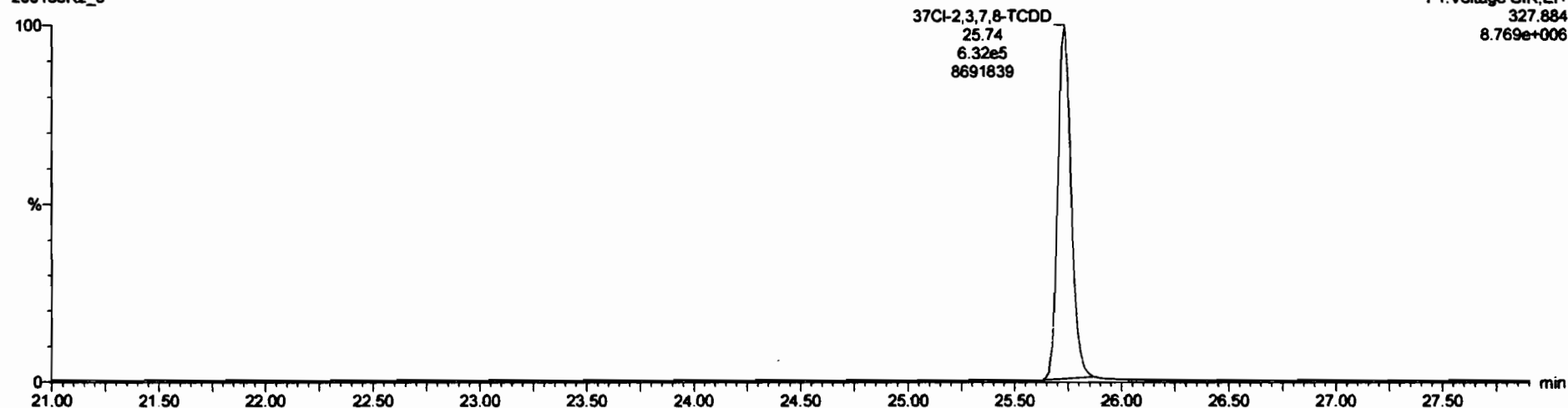
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Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time  
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

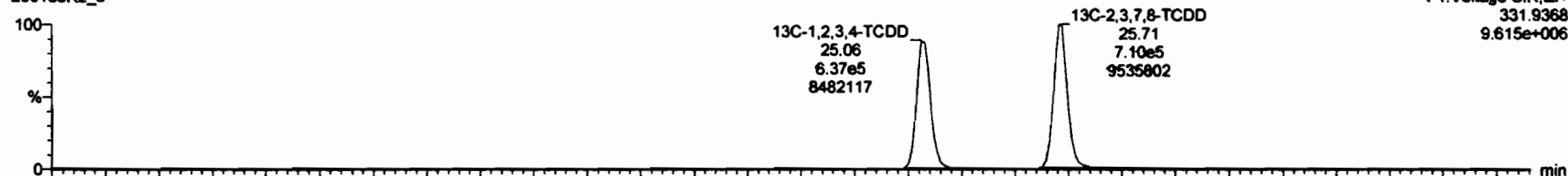
**37Cl-2,3,7,8-TCDD**

200130R2\_3

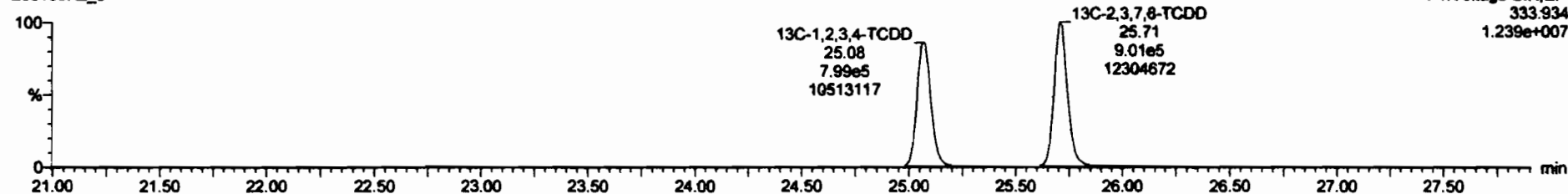


**13C-1,2,3,4-TCDD**

200130R2\_3



200130R2\_3



Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

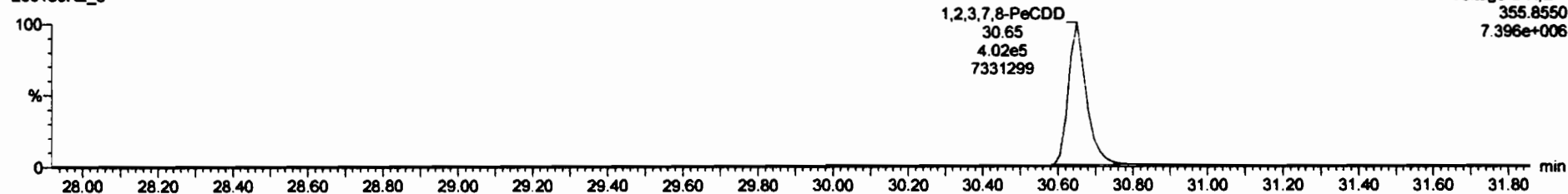
**1,2,3,7,8-PeCDD**

200130R2\_3



F2:Voltage SIR,EI+  
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4.758e+006

200130R2\_3



F2:Voltage SIR,EI+  
355.8550  
7.396e+006

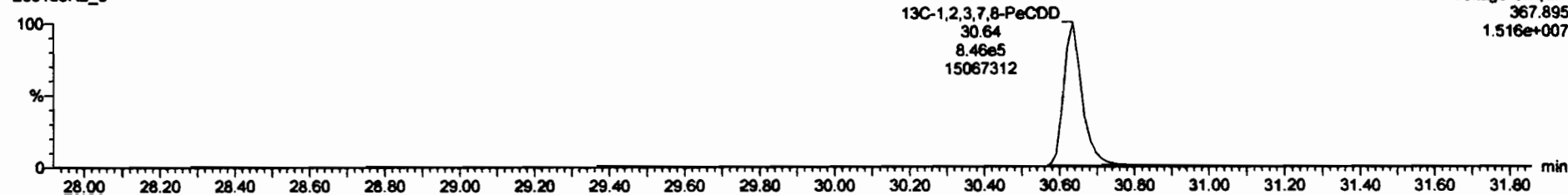
**13C-1,2,3,7,8-PeCDD**

200130R2\_3



F2:Voltage SIR,EI+  
365.8978  
9.741e+006

200130R2\_3



F2:Voltage SIR,EI+  
367.895  
1.516e+007

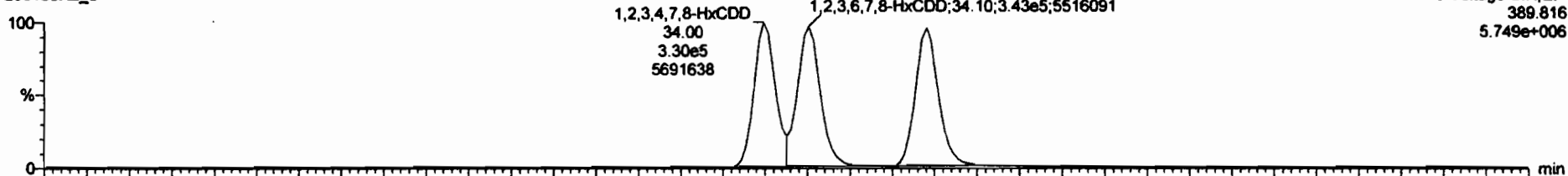
Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time  
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

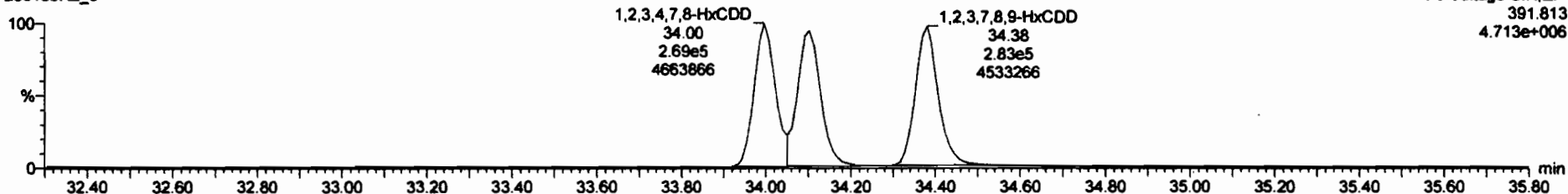
Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

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

200130R2\_3

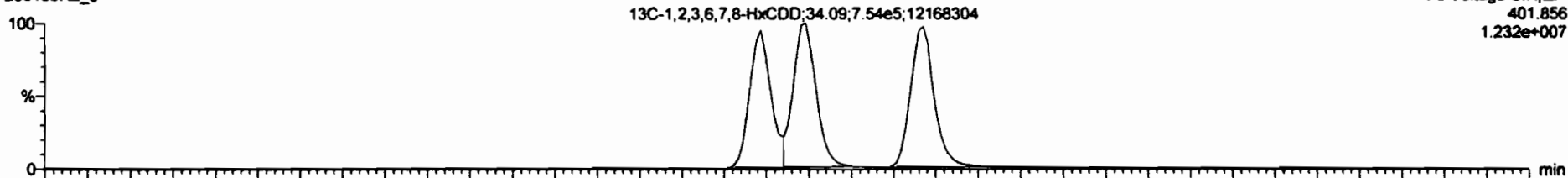


200130R2\_3

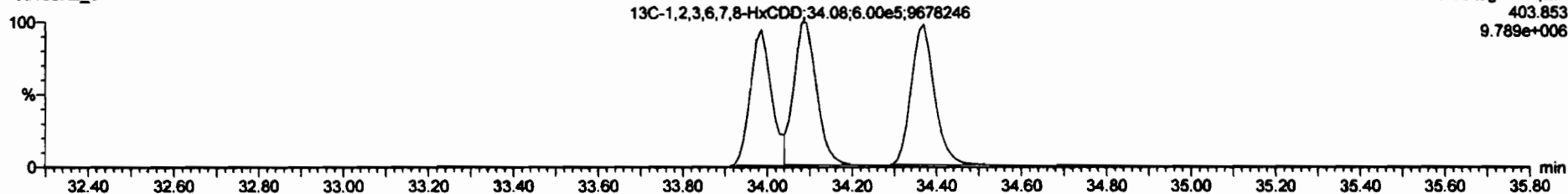


13C-1,2,3,4,7,8-HxCDD

200130R2\_3



200130R2\_3





Dataset: Untitled

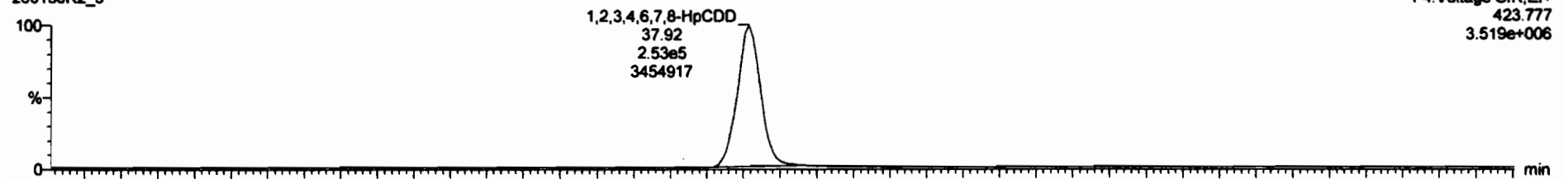
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Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

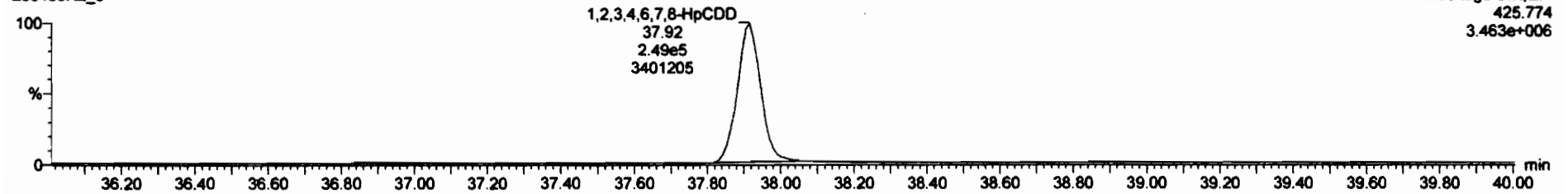
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1,2,3,4,6,7,8-HpCDD

200130R2\_3

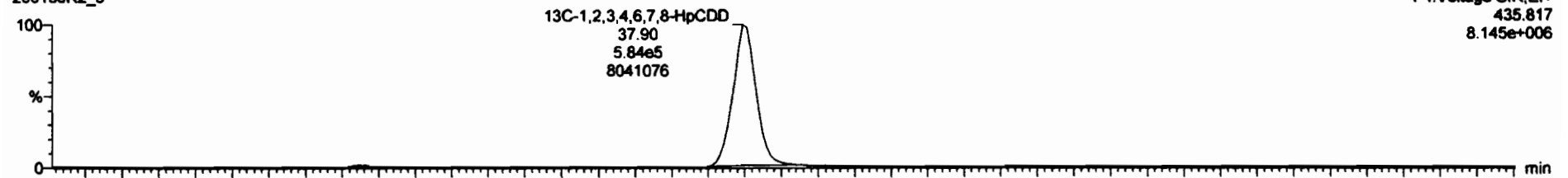


200130R2\_3

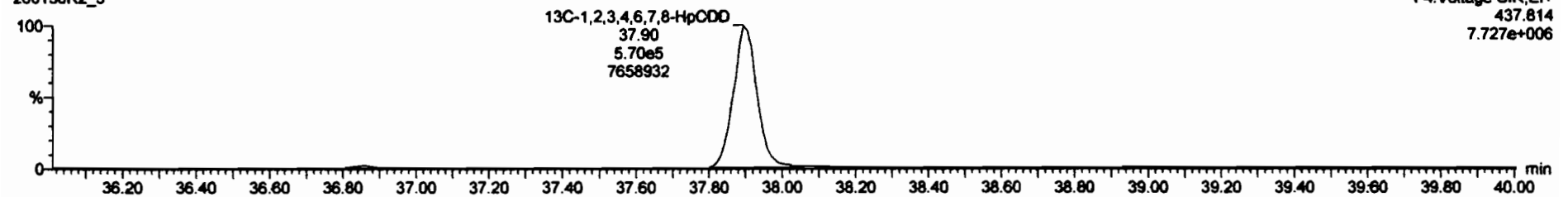


13C-1,2,3,4,6,7,8-HpCDD

200130R2\_3



200130R2\_3



Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

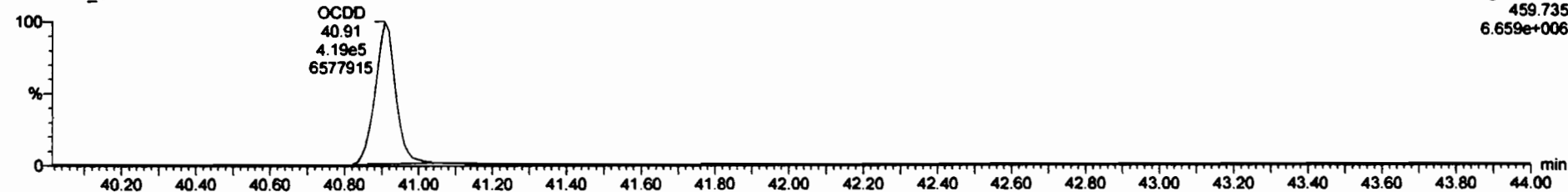
Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

**OCDD**

200130R2\_3



200130R2\_3

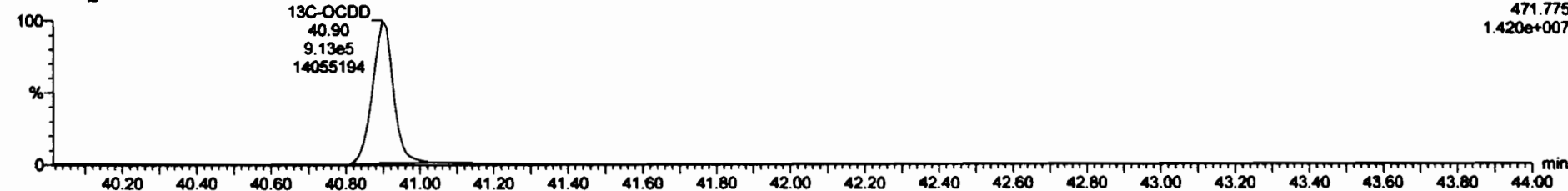


**13C-OCDD**

200130R2\_3



200130R2\_3



Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time  
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

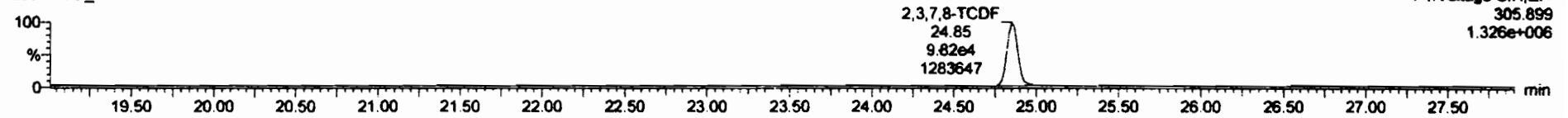
Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

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

200130R2\_3

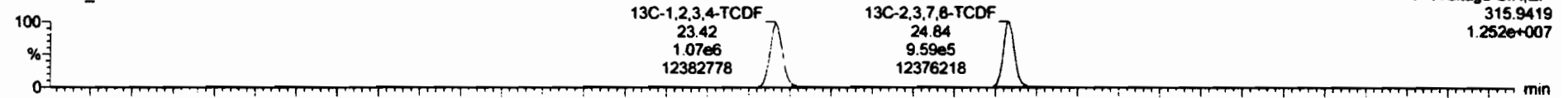


200130R2\_3

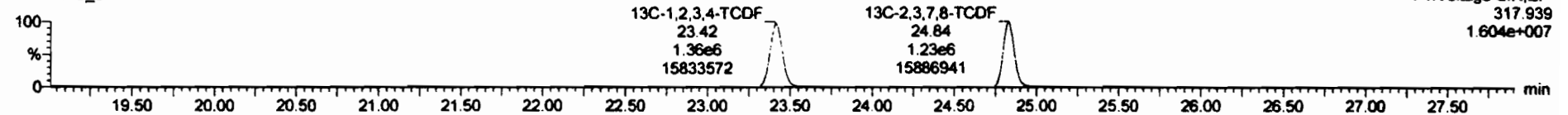


**13C-2,3,7,8-TCDF**

200130R2\_3

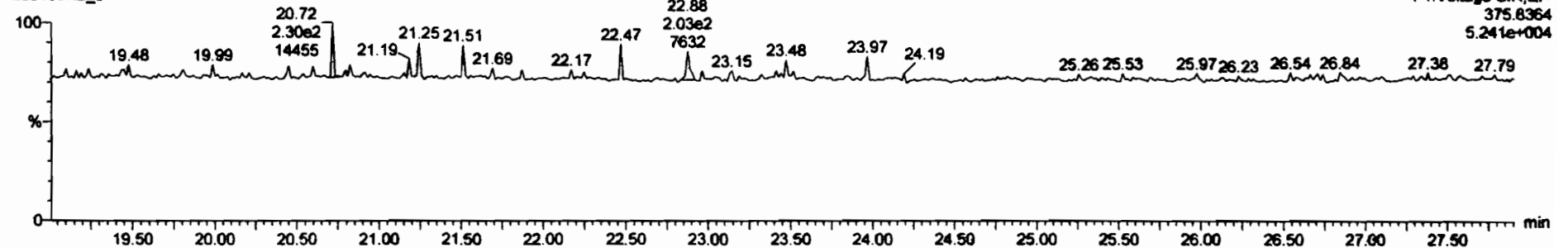


200130R2\_3



**DPE1**

200130R2\_3



Dataset: Untitled

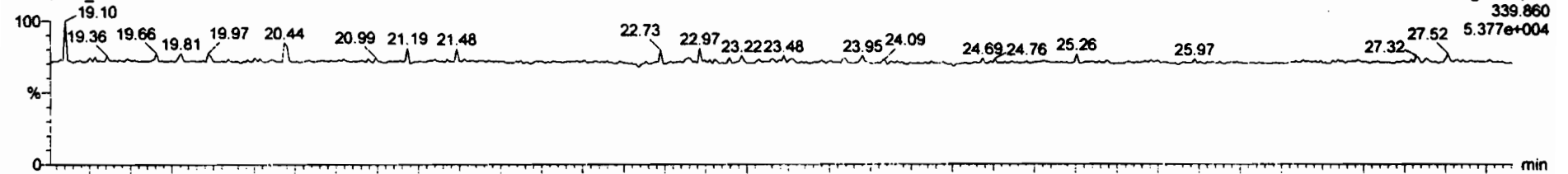
Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

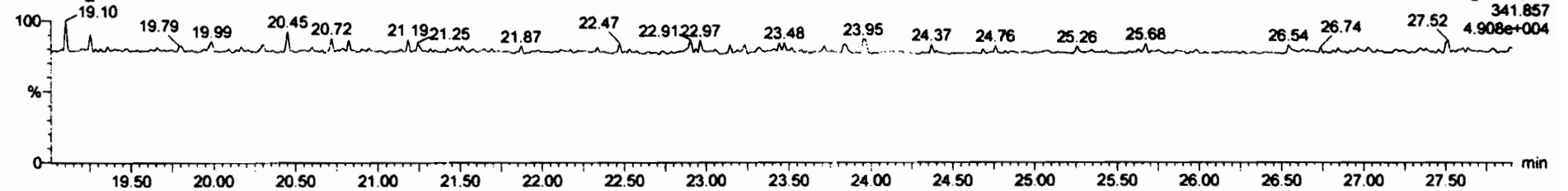
Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

1st Func. Penta-Furans

200130R2\_3

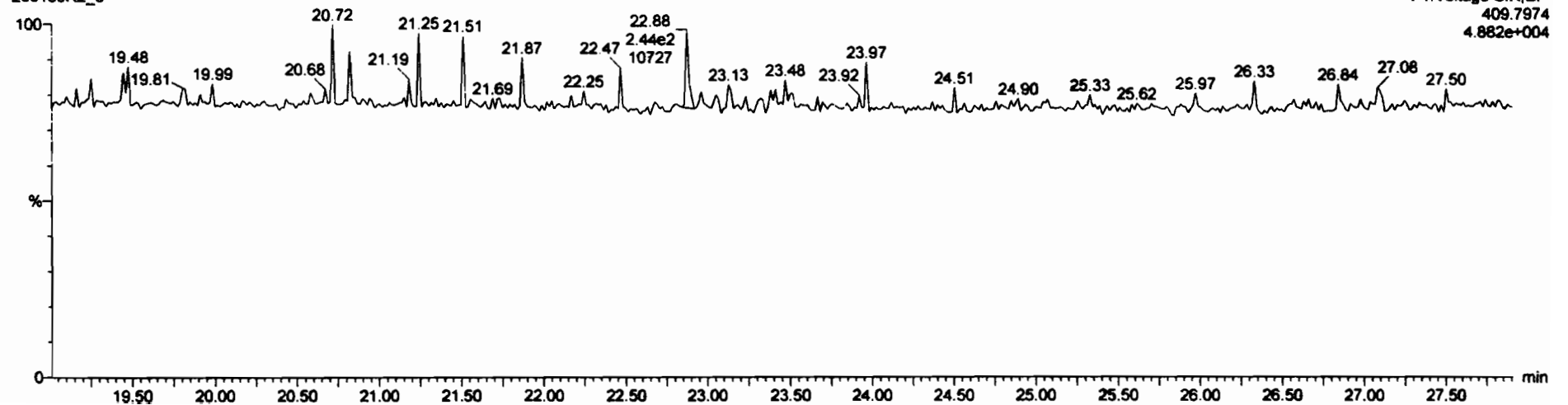


200130R2\_3



DPE6

200130R2\_3



Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time

Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

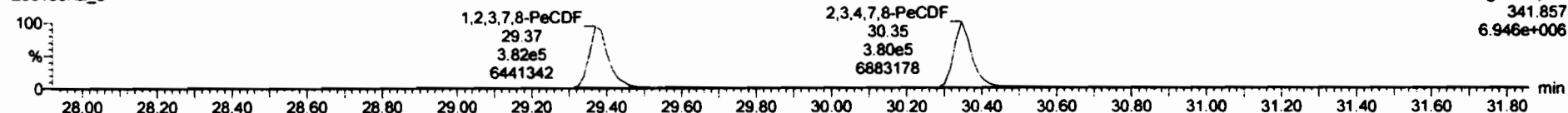
**1,2,3,7,8-PeCDF**

200130R2\_3



F2: Voltage SIR, EI+  
339.860  
1.036e+007

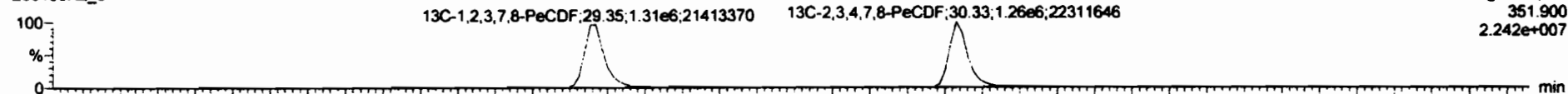
200130R2\_3



F2: Voltage SIR, EI+  
341.857  
6.946e+006

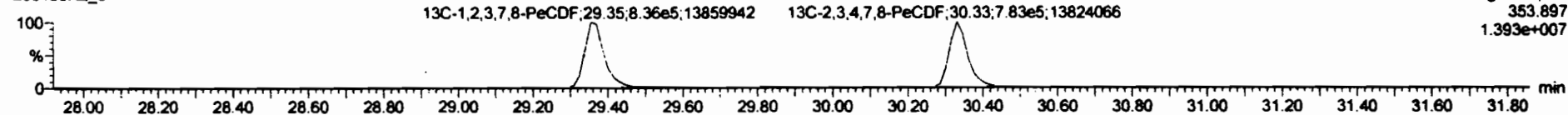
**13C-1,2,3,7,8-PeCDF**

200130R2\_3



F2: Voltage SIR, EI+  
351.900  
2.242e+007

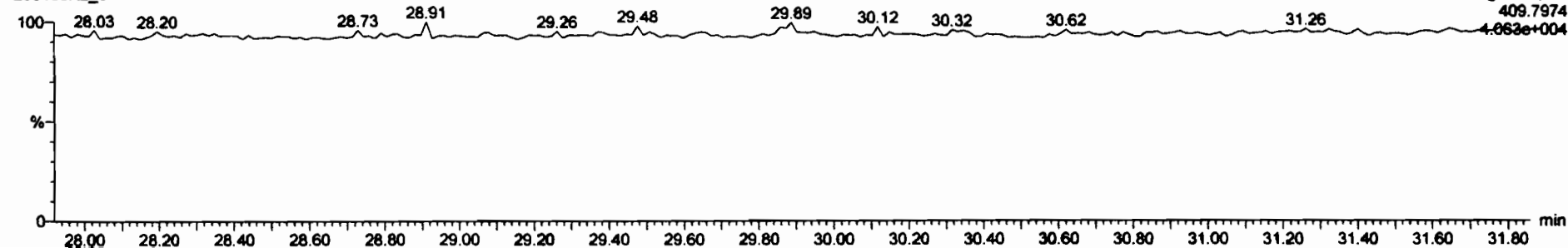
200130R2\_3



F2: Voltage SIR, EI+  
353.897  
1.393e+007

**DPE2**

200130R2\_3



F2: Voltage SIR, EI+  
409.7974  
4.063e+004

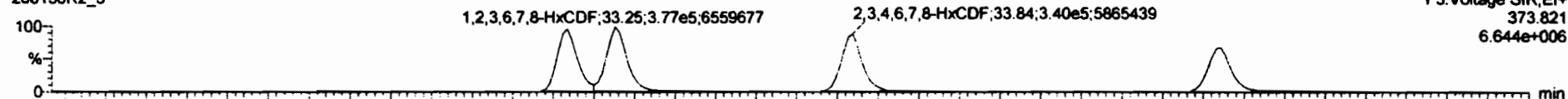
Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time  
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

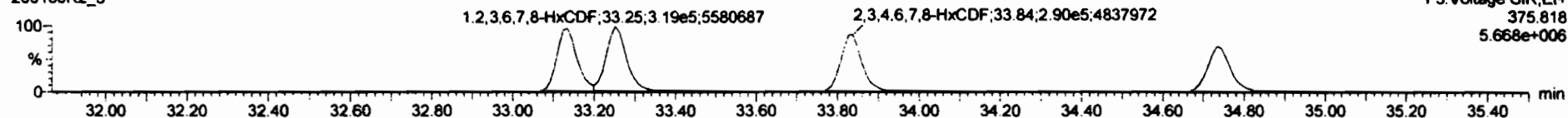
Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

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

200130R2\_3

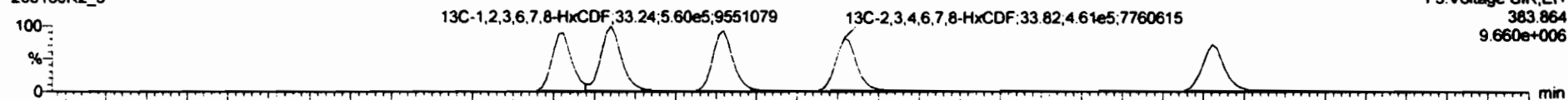


200130R2\_3

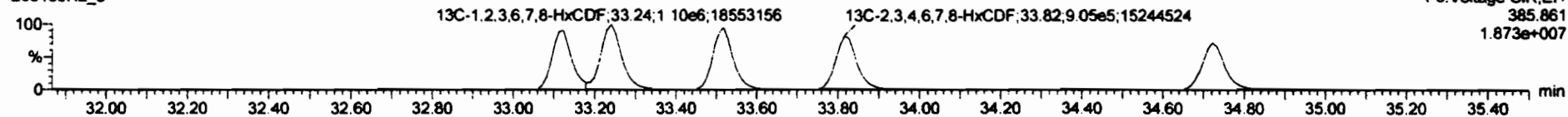


**13C-1,2,3,4,7,8-HxCDF**

200130R2\_3

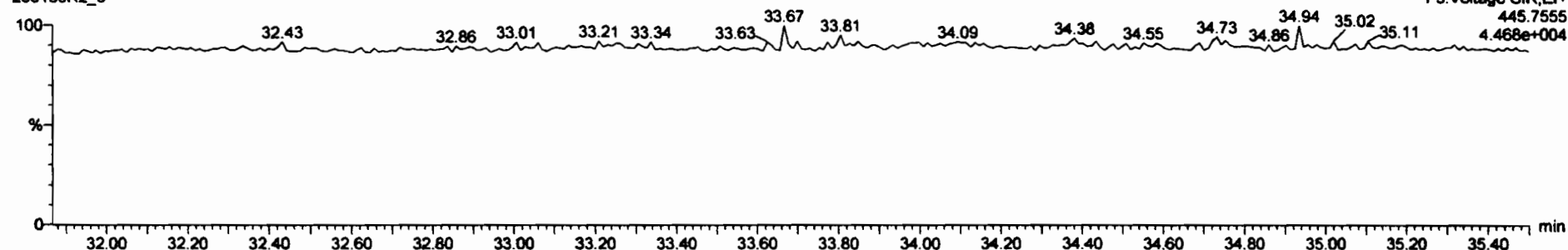


200130R2\_3



**DPE3**

200130R2\_3



Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time  
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

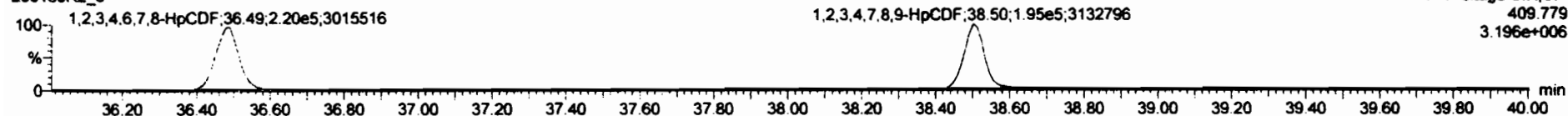
Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR

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

200130R2\_3

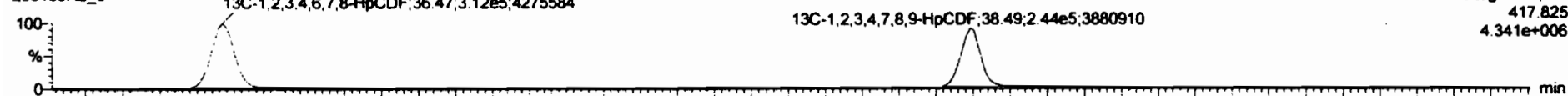


200130R2\_3

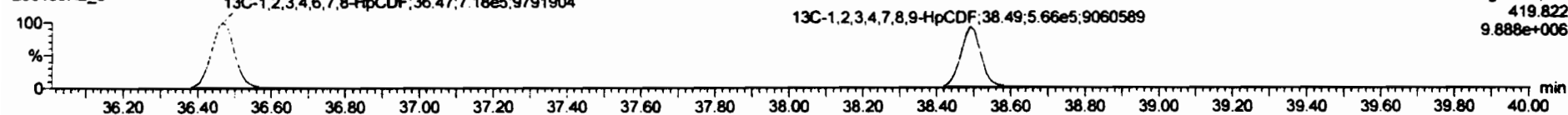


**13C-1,2,3,4,6,7,8-HpCDF**

200130R2\_3

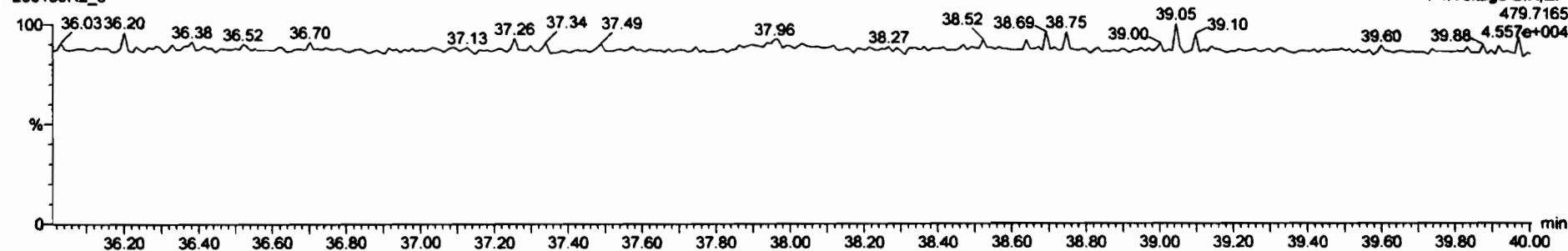


200130R2\_3



**DPE4**

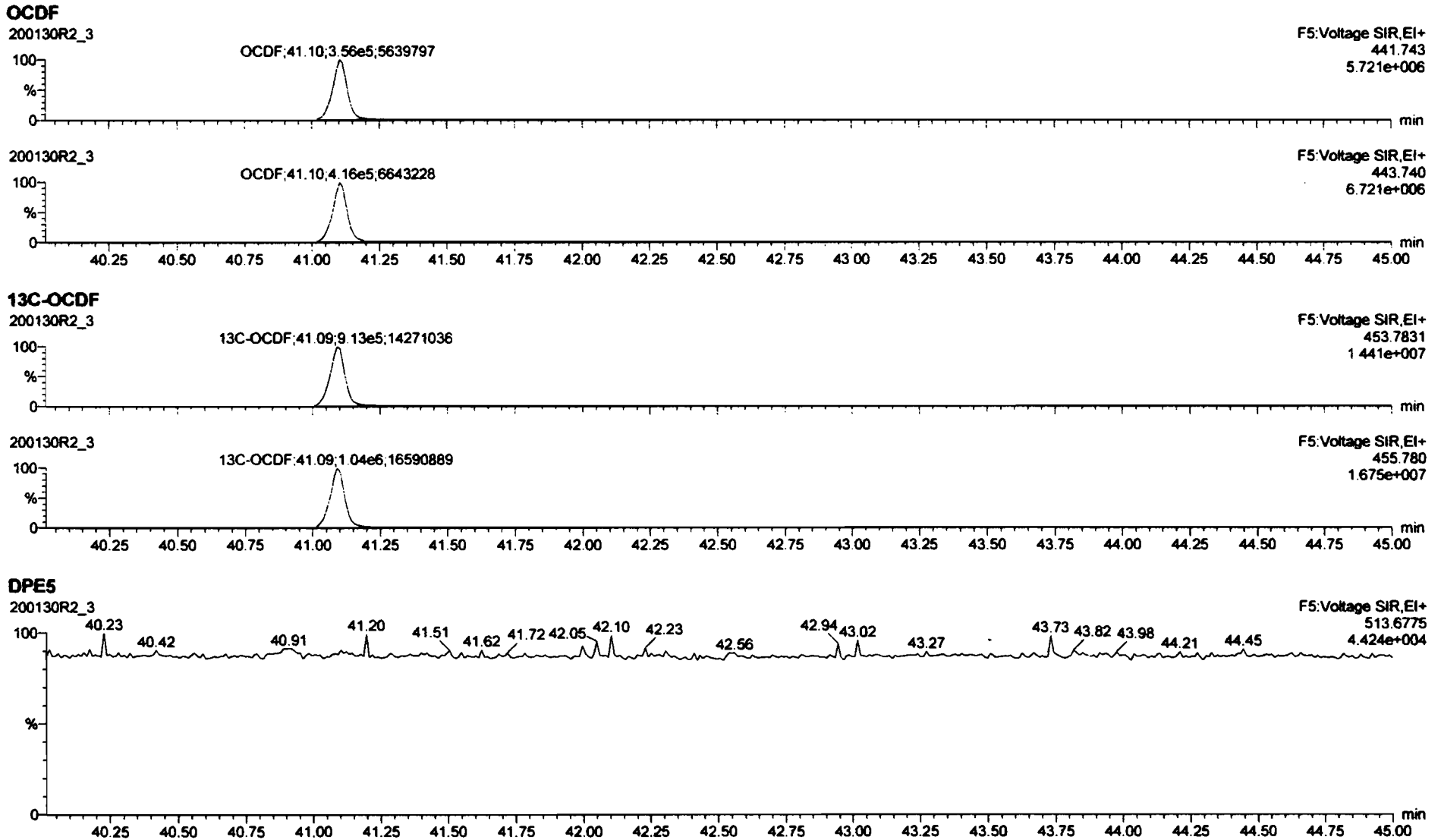
200130R2\_3



Dataset: Untitled

Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time  
Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2\_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR





Dataset: U:\VG12.PRO\Results\200130R3\200130R3-6.qld

Last Altered: Tuesday, February 04, 2020 11:46:28 Pacific Standard Time

Printed: Tuesday, February 04, 2020 11:54:41 Pacific Standard Time

*GRB 02/04/2020*

*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\lb5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

#	Name	Resp	RA	n/y	R/R	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD			NO	0.824	10.035	25.721		1.001				0.0876	
2	2 1,2,3,7,8-PeCDD			NO	0.912	10.035	30.642		1.001				0.0863	
3	3 1,2,3,4,7,8-HxCDD	3.02e2	1.37	NO	0.870	10.035	33.997	34.00	1.000	1.000	0.075116		0.0786	0.0751
4	4 1,2,3,6,7,8-HxCDD	5.60e2	1.29	NO	0.784	10.035	34.094	34.09	1.000	1.000	0.14201		0.0814	0.142
5	5 1,2,3,7,8,9-HxCDD	1.05e3	1.21	NO	0.798	10.035	34.394	34.38	1.001	1.001	0.25957		0.0868	0.260
6	6 1,2,3,4,6,7,8-HpCDD	9.04e3	1.02	NO	0.737	10.035	37.907	37.92	1.000	1.001	2.6423		0.154	2.64
7	7 OCDD	1.23e5	0.87	NO	0.800	10.035	40.900	40.91	1.000	1.000	38.573		0.101	38.6
8	8 2,3,7,8-TCDF			NO	0.588	10.035	24.832		1.001				0.0661	
9	9 1,2,3,7,8-PeCDF			NO	0.826	10.035	29.376		1.001				0.0478	
10	10 2,3,4,7,8-PeCDF			NO	0.850	10.035	30.361		1.001				0.0458	
11	11 1,2,3,4,7,8-HxCDF			NO	0.787	10.035	33.114		1.000				0.0530	
12	12 1,2,3,6,7,8-HxCDF			NO	0.720	10.035	33.252		1.000				0.0535	
13	13 2,3,4,6,7,8-HxCDF			NO	0.766	10.035	33.851		1.001				0.0588	
14	14 1,2,3,7,8,9-HxCDF			NO	0.709	10.035	34.722		1.000				0.0751	
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.732	10.035	36.505		1.001				0.0864	
16	16 1,2,3,4,7,8,9-HpCDF			NO	0.816	10.035	38.493		1.000				0.0807	
17	17 OCDF			NO	0.639	10.035	41.091		1.000				0.0824	
18	18 13C-2,3,7,8-TCDD	1.14e6	0.79	NO	1.12	10.035	25.691	25.69	1.026	1.026	191.32	96.0	0.151	
19	19 13C-1,2,3,7,8-PeCDD	9.94e5	0.65	NO	0.841	10.035	30.432	30.62	1.215	1.223	220.30	111	0.315	
20	20 13C-1,2,3,4,7,8-HxCDD	9.20e5	1.26	NO	0.938	10.035	33.988	33.99	1.014	1.014	174.32	87.5	0.310	
21	21 13C-1,2,3,6,7,8-HxCDD	1.00e6	1.25	NO	1.07	10.035	34.089	34.09	1.017	1.017	167.31	83.9	0.273	
22	22 13C-1,2,3,7,8,9-HxCDD	1.01e6	1.23	NO	1.03	10.035	34.390	34.36	1.026	1.025	174.92	87.8	0.282	
23	23 13C-1,2,3,4,6,7,8-HpCDD	9.25e5	1.04	NO	0.710	10.035	37.944	37.90	1.132	1.131	231.57	116	0.560	
24	24 13C-OCDD	1.59e6	0.89	NO	0.601	10.035	40.826	40.90	1.218	1.220	469.98	118	0.411	
25	25 13C-2,3,7,8-TCDF	1.50e6	0.77	NO	1.04	10.035	24.872	24.81	0.993	0.990	174.02	87.3	0.225	
26	26 13C-1,2,3,7,8-PeCDF	1.45e6	1.59	NO	0.917	10.035	29.205	29.35	1.166	1.172	190.87	95.8	0.441	
27	27 13C-2,3,4,7,8-PeCDF	1.39e6	1.57	NO	0.903	10.035	30.157	30.33	1.204	1.211	186.11	93.4	0.448	
28	28 13C-1,2,3,4,7,8-HxCDF	1.00e6	0.51	NO	0.861	10.035	33.117	33.11	0.988	0.988	206.84	104	0.568	
29	29 13C-1,2,3,6,7,8-HxCDF	1.13e6	0.51	NO	1.05	10.035	33.217	33.24	0.991	0.992	191.78	96.2	0.467	
30	30 13C-2,3,4,6,7,8-HxCDF	9.83e5	0.51	NO	0.946	10.035	33.824	33.82	1.009	1.009	184.85	92.7	0.517	
31	31 13C-1,2,3,7,8,9-HxCDF	9.24e5	0.51	NO	0.816	10.035	34.726	34.72	1.036	1.036	201.34	101	0.600	

Dataset: U:\VG12.PRO\Results\200130R3\200130R3-6.qld

Last Altered: Tuesday, February 04, 2020 11:46:28 Pacific Standard Time  
Printed: Tuesday, February 04, 2020 11:54:41 Pacific Standard Time

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

Peak	Name	Resp	RA	nt	RRF	whol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	IMP
32	13C-1,2,3,4,6,7,8-HpCDF	7.67e5	0.44	NO	0.589	10.035	36.469	36.47	1.088	1.088	231.31	116	0.650	
33	13C-1,2,3,4,7,8,9-HpCDF	6.40e5	0.45	NO	0.448	10.035	38.480	38.49	1.148	1.148	253.78	127	0.855	
34	13C-OCDF	1.71e6	0.87	NO	0.586	10.035	41.061	41.09	1.225	1.226	517.58	130	0.422	
35	37Cl-2,3,7,8-TCDD	4.69e5			1.09	10.035	25.723	25.72	1.027	1.027	80.530	101	0.0611	
36	13C-1,2,3,4-TCDD	1.07e6	0.79	NO	1.00	10.035	25.080	25.05	1.000	1.000	199.30	100	0.168	
37	13C-1,2,3,4-TCDF	1.65e6	0.79	NO	1.00	10.035	23.420	23.39	1.000	1.000	199.30	100	0.233	
38	13C-1,2,3,4,6,9-HxCDF	1.12e6	0.51	NO	1.00	10.035	33.520	33.52	1.000	1.000	199.30	100	0.489	
39	Total Tetra-Dioxins				0.824	10.035	24.620		0.000		1.8325		0.0876	1.83
40	Total Penta-Dioxins				0.912	10.035	29.960		0.000		0.28737		0.0863	0.623
41	Total Hexa-Dioxins				0.784	10.035	33.635		0.000		3.0267		0.0849	3.10
42	Total Hepta-Dioxins				0.737	10.035	37.640		0.000		6.6208		0.154	6.62
43	Total Tetra-Furans				0.588	10.035	23.610		0.000		0.14800		0.0661	0.148
44	1st Func. Penta-Furans				0.826	10.035	27.090		0.000				0.0160	
45	Total Penta-Furans				0.826	10.035	29.275		0.000				0.0217	
46	Total Hexa-Furans				0.766	10.035	33.555		0.000				0.0257	
47	Total Hepta-Furans				0.732	10.035	37.835		0.000				0.0426	

Dataset: U:\VG12.PRO\Results\200130R3\200130R3-6.qld

Last Altered: Tuesday, February 04, 2020 11:46:28 Pacific Standard Time

Printed: Tuesday, February 04, 2020 11:54:41 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\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

**Tetra-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	23.53	3.969e4	5.070e4	3.455e3	4.251e3	0.81	NO	7.707e3	1.6287	1.6287	0.0876
2	Total Tetra-Dioxins	25.03	6.337e3	8.732e3	3.847e2	5.798e2	0.66	NO	9.644e2	0.20382	0.20382	0.0876

**Penta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.49	3.671e3	8.637e3	2.839e2	6.234e2	0.46	YES	0.000e0	0.00000	0.16163	0.0863
2	Total Penta-Dioxins	28.93	8.368e3	1.331e4	4.034e2	7.183e2	0.56	NO	1.122e3	0.24682	0.24682	0.0863
3	Total Penta-Dioxins	29.66	4.705e3	5.461e3	7.175e1	1.125e2	0.64	NO	1.843e2	0.040550	0.040550	0.0863
4	Total Penta-Dioxins	29.92	5.102e3	6.377e3	4.214e2	4.840e2	0.87	YES	0.000e0	0.00000	0.17360	0.0863

**Hexa-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.51	8.771e4	6.536e4	3.685e3	2.890e3	1.27	NO	6.576e3	1.7075	1.7075	0.0849
2	Total Hexa-Dioxins	33.33	2.648e4	2.475e4	1.794e3	1.450e3	1.24	NO	3.244e3	0.84247	0.84247	0.0849
3	1,2,3,4,7,8-HxCDD	34.00	4.551e3	2.805e3	1.743e2	1.274e2	1.37	NO	3.018e2	0.075116	0.075116	0.0766
4	1,2,3,6,7,8-HxCDD	34.09	5.755e3	5.143e3	3.160e2	2.443e2	1.29	NO	5.603e2	0.14201	0.14201	0.0814
5	Total Hexa-Dioxins	34.30	5.060e3	3.355e3	1.879e2	1.256e2	1.50	YES	0.000e0	0.00000	0.073048	0.0849
6	1,2,3,7,8,9-HxCDD	34.38	1.175e4	8.304e3	5.769e2	4.776e2	1.21	NO	1.054e3	0.25957	0.25957	0.0868

**Hepta-Dioxins**

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.86	1.095e5	1.109e5	6.923e3	6.683e3	1.04	NO	1.361e4	3.9785	3.9785	0.154
2	1,2,3,4,6,7,8-HpCDD	37.92	7.008e4	7.682e4	4.574e3	4.462e3	1.02	NO	9.036e3	2.6423	2.6423	0.154

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Printed: Tuesday, February 04, 2020 11:54:41 Pacific Standard Time

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

Tetra-Furans

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 Total Tetra-Furans	20.78	4.087e3	4.946e3	2.605e2	3.929e2	0.66	NO	6.534e2	0.14800	0.14800	0.0661

Penta-Furans function 1

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

Penta-Furans

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

Hexa-Furans

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

Hepta-Furans

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

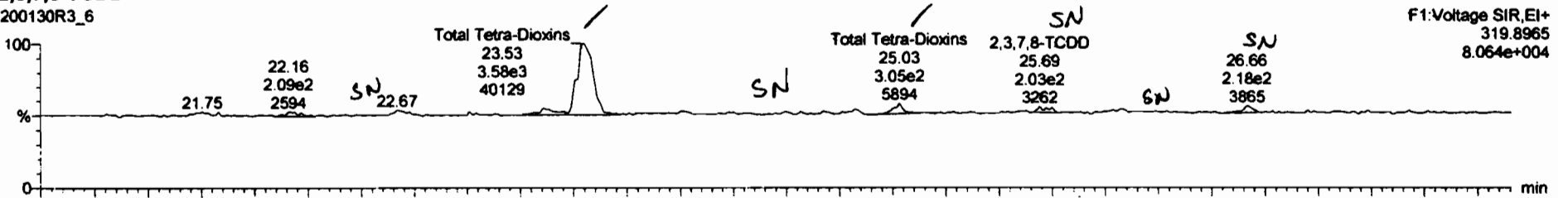
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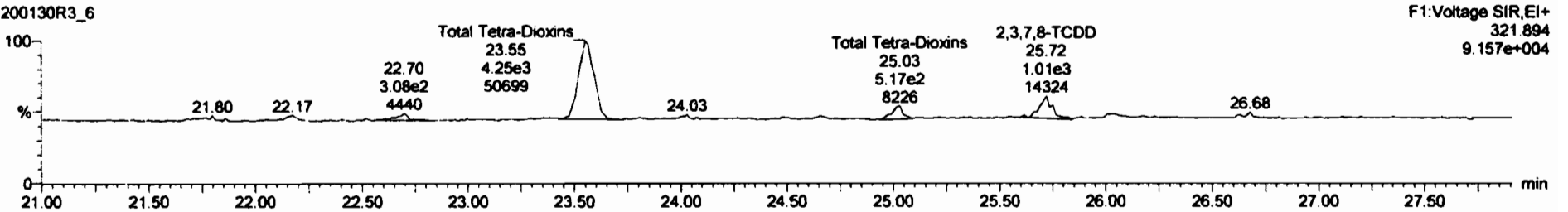
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2,3,7,8-TCDD

200130R3\_6

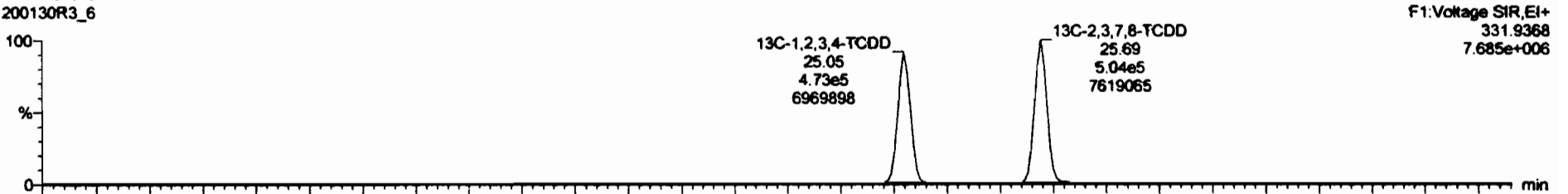


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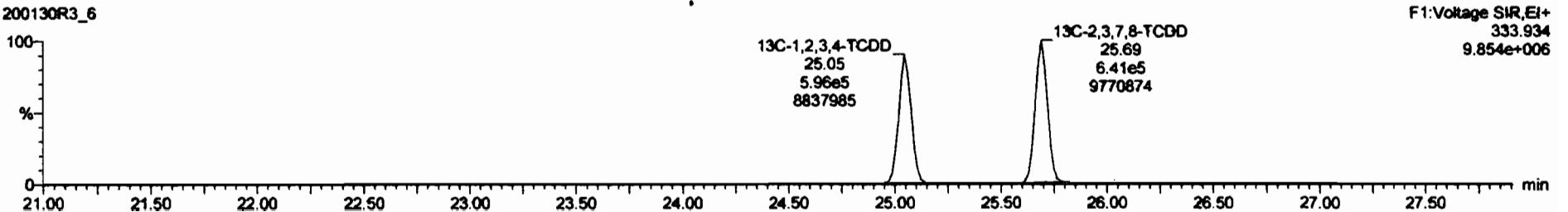


13C-2,3,7,8-TCDD

200130R3\_6

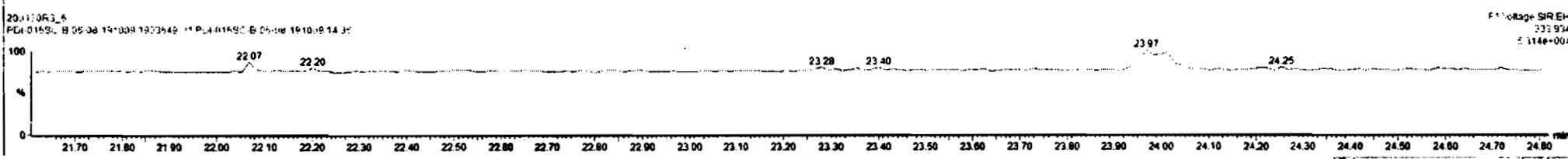
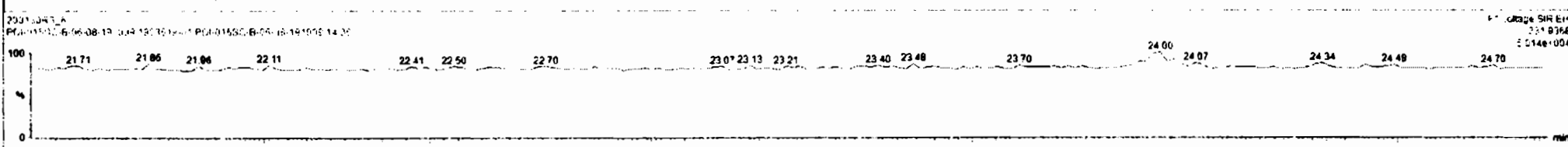
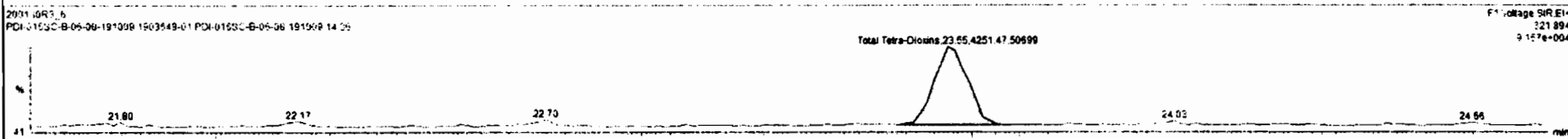
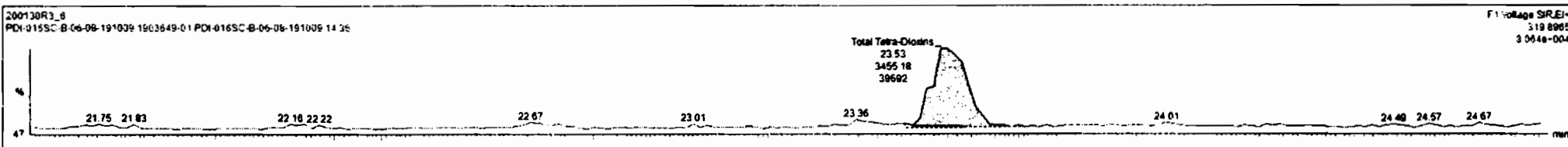


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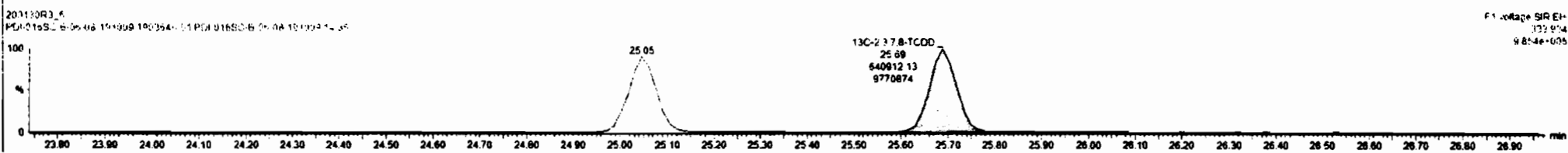
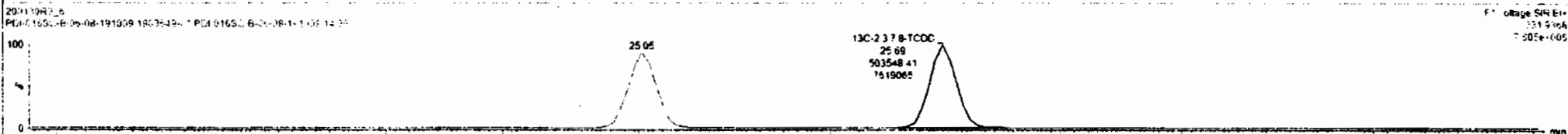
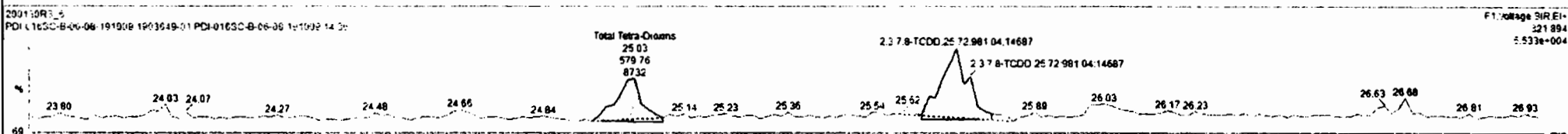
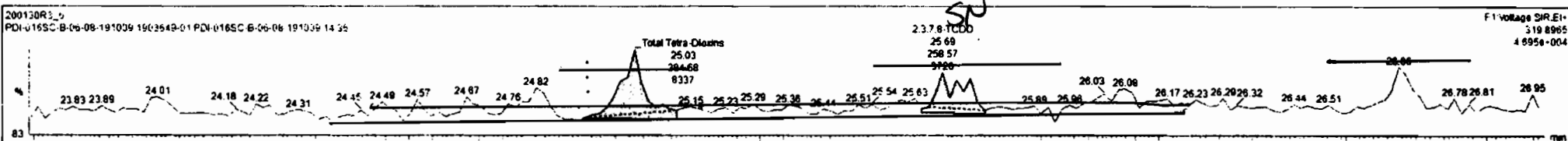
Sample	Flow	SA	dy	SP	width	RT	HW	Area	Height	DL	SP%
20											
40	Total Penta-Chloro			0.9116	10.035			0.890		0.0477	0.212
41	Total Hexa-Chloro			0.7841	10.035			3.84		0.0649	3.04

Sample	RT	int Resp	std Resp	SA	dy	SP%	Conc.
1	Total Tetra-Chloro	3.455e3	4.251e3	0.81	NO	1.6287	1.6287
2	Total Tetra-Chloro	3.045e2	5.188e2	0.58	YES	0.14794	0.00000
3	2,3,7,8-TCDD	2.030e2	1.000e3	0.20	YES	0.898633	0.00000



Sample	Conc	Unit	Conc	Unit	Conc	Unit	Conc	Unit
48	Total Penta-Chlorins		0.9118	10.035		0.890		0.0477 0.212
49	Total Hexa-Chlorins		0.7841	10.035		3.04		0.0849 3.04

Sample	Conc	Unit	Conc	Unit	Conc	Unit	Conc	Unit
1	Total Tetra-Chlorins	25.53	3.495e3	4.251e3	0.61	NO	1.6287	1.6287
2	Total Tetra-Chlorins	25.03	3.847e2	5.798e2	0.86	NO	0.20382	0.20382
3	2,3,7,8-TCDD	25.69	2.586e2	9.810e2	0.26	YES	0.12561	0.00000



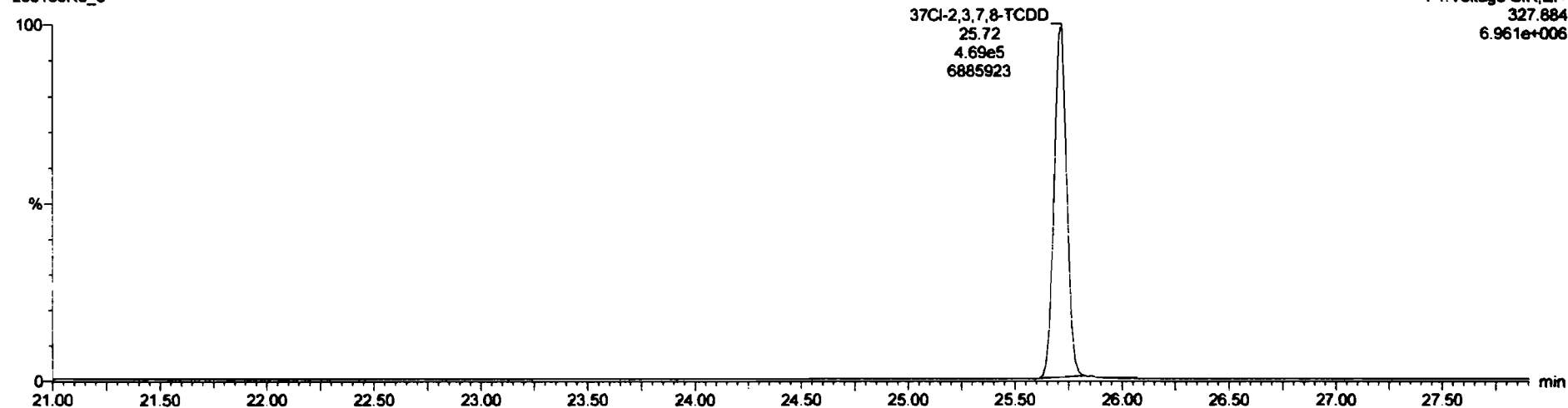
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Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

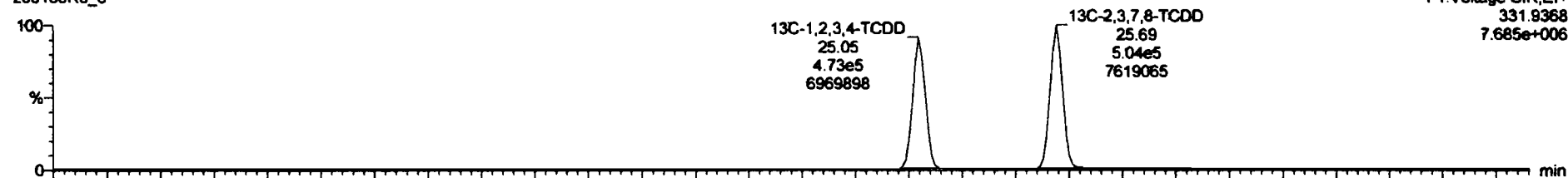
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200130R3\_6

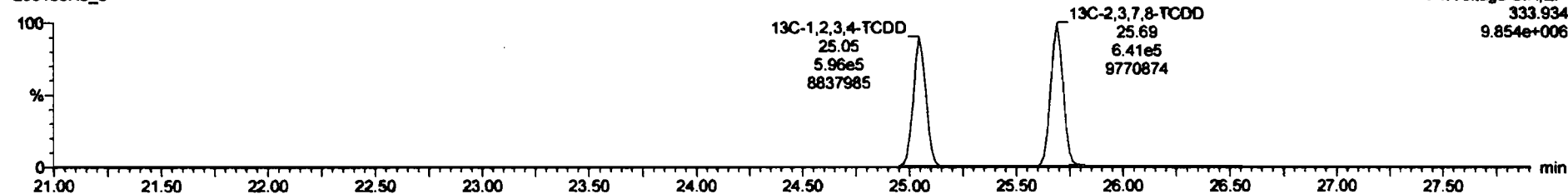


**13C-1,2,3,4-TCDD**

200130R3\_6



200130R3\_6





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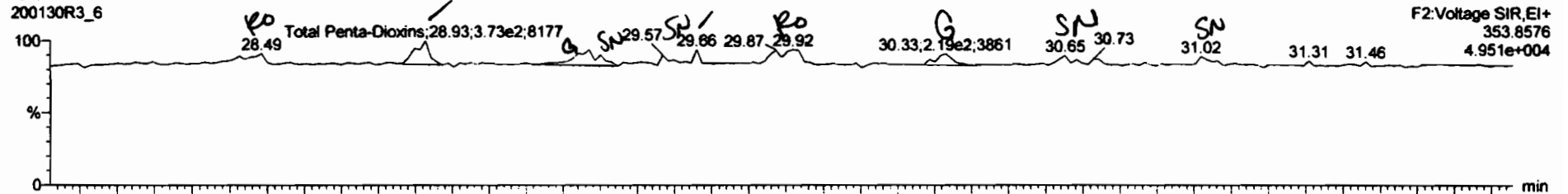
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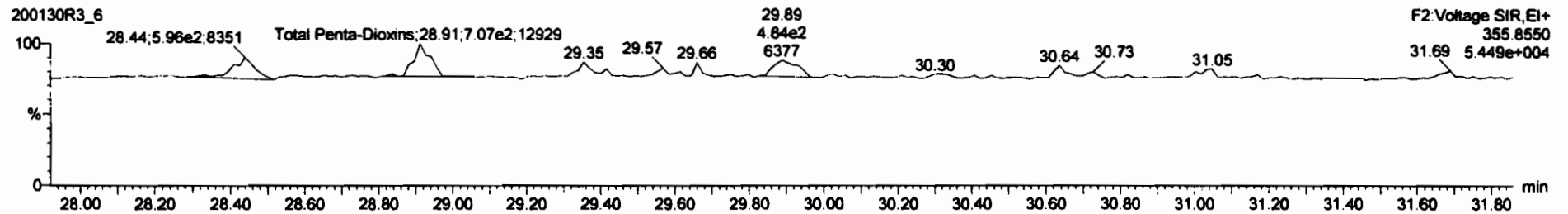
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1,2,3,7,8-PeCDD

200130R3\_6



200130R3\_6

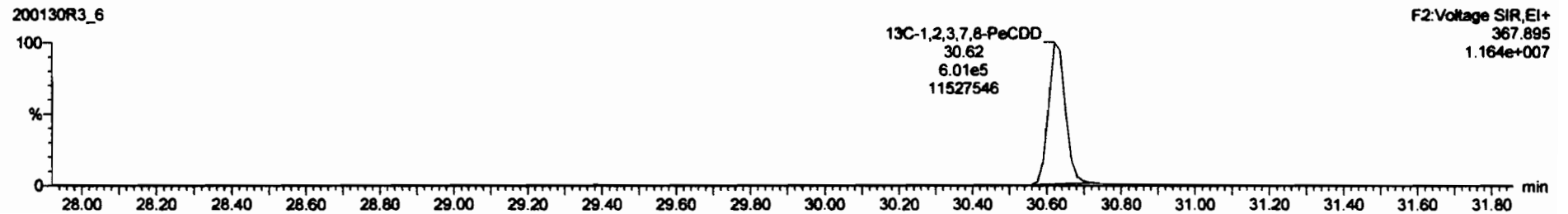


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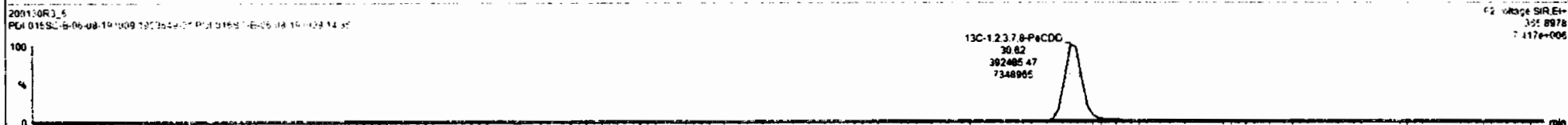
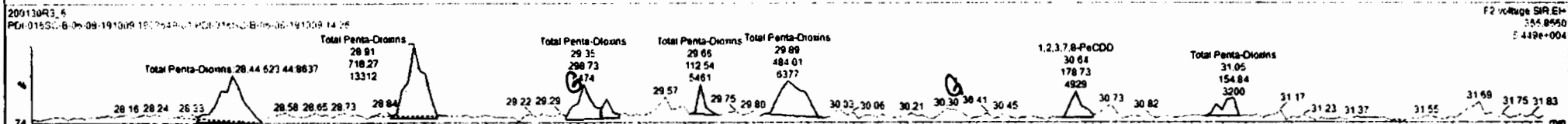
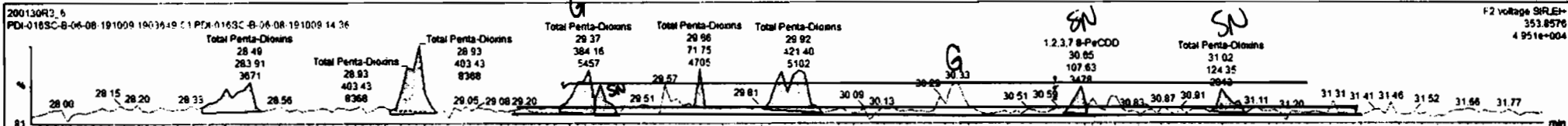


200130R3\_6



Sample	Comp	PK	Qty	Area	Area%	Conc	Conc%
Total Hexa-Chlorins			0.0248	10.635		1.63	0.0676
Total Hepta-Chlorins			0.7841	10.635		3.04	0.0849

Sample	PK	net Resp	net Resp	SN	Qty	Area%	Conc
Total Penta-Chlorins	28 49	7.838e2	0.234e2	0.46	YES	0.18163	0.00000
Total Penta-Chlorins	28 93	4.034e2	7.183e2	0.56	NO	0.24882	0.24682
Total Penta-Chlorins	28 37	3.842e2	2.867e2	1.29	YES	0.10715	0.00000
Total Penta-Chlorins	28 40	1.200e2	8.875e1	1.35	YES	0.031851	0.00000
Total Penta-Chlorins	28 66	7.175e1	1.125e2	0.84	NO	0.049550	0.049550
Total Penta-Chlorins	28 92	4.214e2	4.840e2	0.87	YES	0.17368	0.00000
1,2,3,7,8-PeCDD	30 85	1.078e2	1.787e2	0.88	NO	0.063011	0.063011
Total Penta-Chlorins	31 82	1.244e2	1.548e2	0.80	YES	0.055638	0.00000

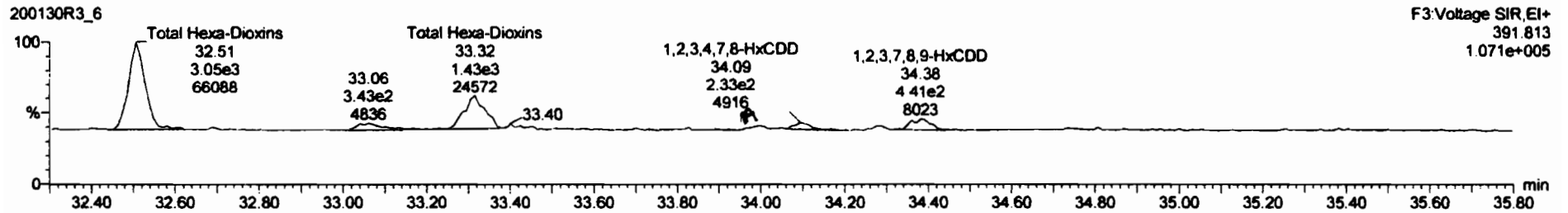
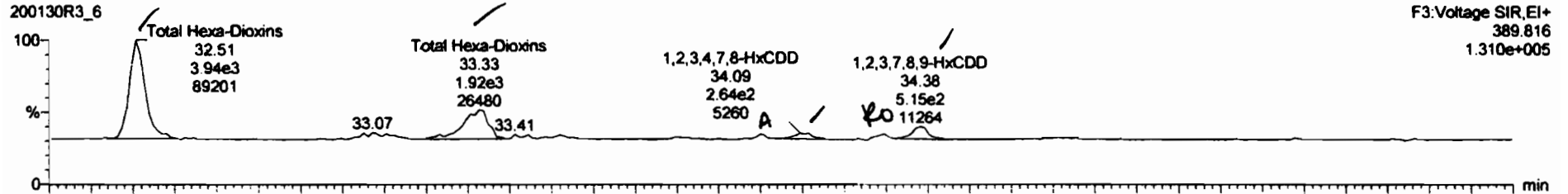


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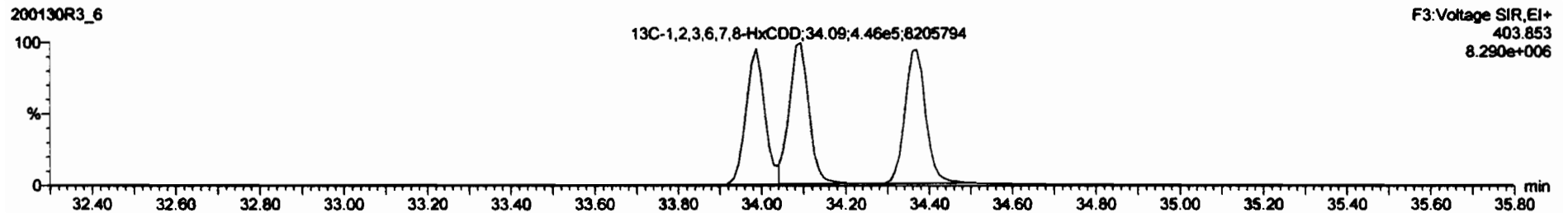
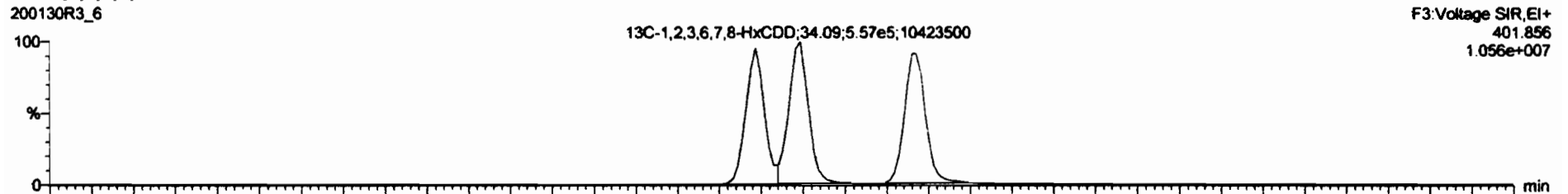
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Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

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

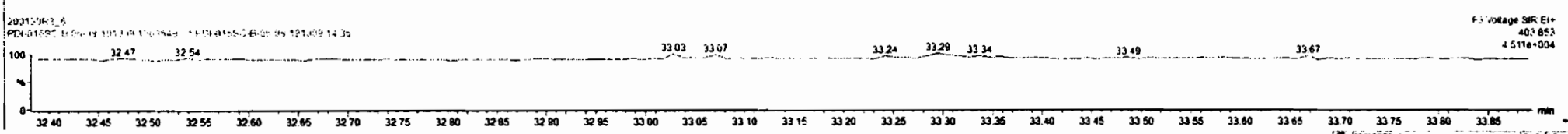
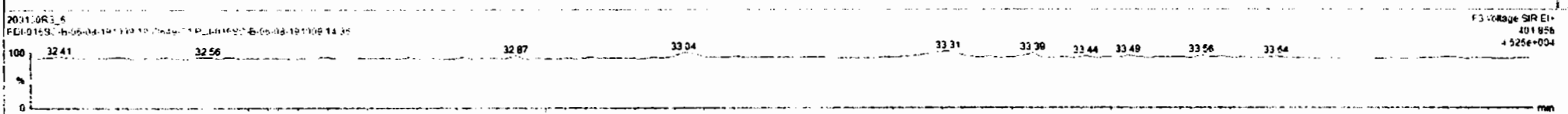
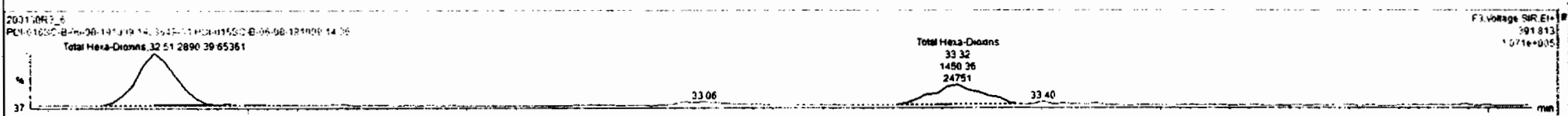
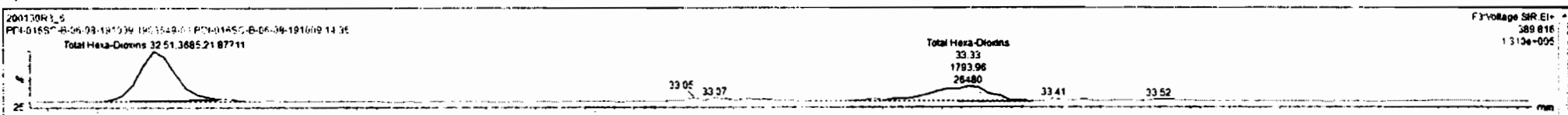


13C-1,2,3,4,7,8-HxCDD



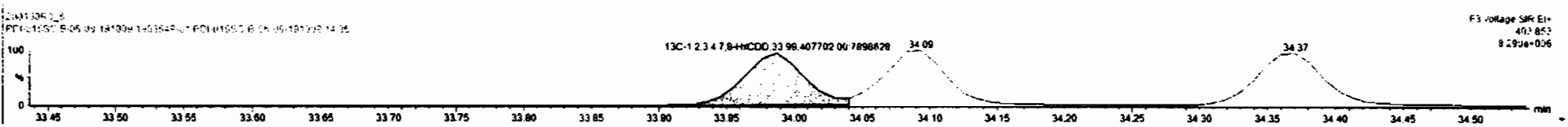
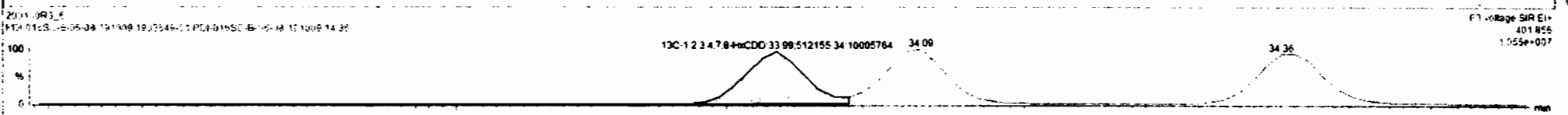
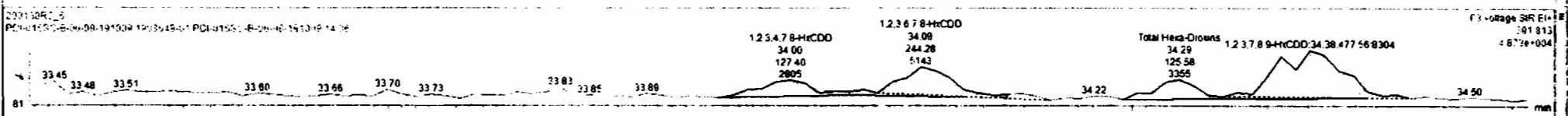
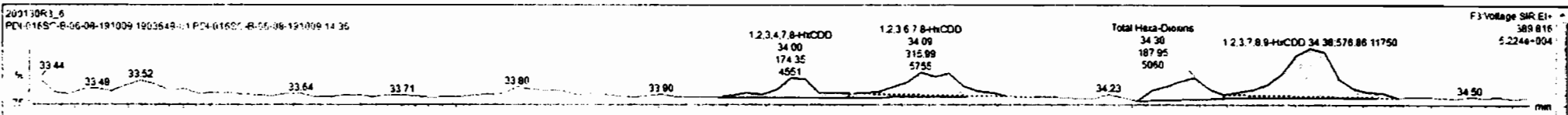
Name	Range	RT	Std	Area	Height	RT	Area	Comp	Width	RT	Area	
Total Tetra-Dioxins				0.8240	10.635			1.63			0.0876	1.83
Total Penta-Dioxins				0.9116	10.855			0.287			0.0885	0.823

Name	RT	Std	Area	Height	RT	Area	Comp
Total Hexa-Dioxins	32.51	3.685e3	2.880e3	1.27	NO	1.7875	1.7875
Total Hexa-Dioxins	33.33	1.794e3	1.450e3	1.24	NO	0.84247	0.84247
1,2,3,4,7,8-HxCDD	34.08	2.644e2	2.335e2	1.13	NO	0.12383	0.12383
1,2,3,7,8,9-HxCDD	34.38	5.148e2	4.410e2	1.17	NO	0.23531	0.23531



Sample	Comp	RA	mg	PPM	ppb	ppm	ppb	ppm	ppb	DL	MPIC
Total Hexa-Oxans				0.6240	10.035					0.0876	1.83
Total Penta-Oxans				0.0116	10.035					0.0063	0.623

Sample	RET	int Comp	ext Comp	RA	mg	ppm	ppb	Status
1 Total Hexa-Oxans	32.51	3.085e3	2.880e3	1.27	NO	1.7075	1.7075	
2 Total Hexa-Oxans	33.33	1.794e3	1.450e3	1.24	NO	0.84247	0.84247	
3 1,2,3,4,7,8-HxCDD	34.00	1.743e2	1.274e2	1.37	NO	0.075116	0.075116	
4 1,2,3,4,7,8-HxCDD	34.09	3.180e2	2.443e2	1.29	NO	0.14201	0.14201	
5 Total Hexa-Oxans	34.30	1.870e2	1.256e2	1.50	YES	0.073048	0.00000	
6 1,2,3,7,8,9-HxCDD	34.36	5.786e2	4.778e2	1.21	NO	0.25957	0.25957	

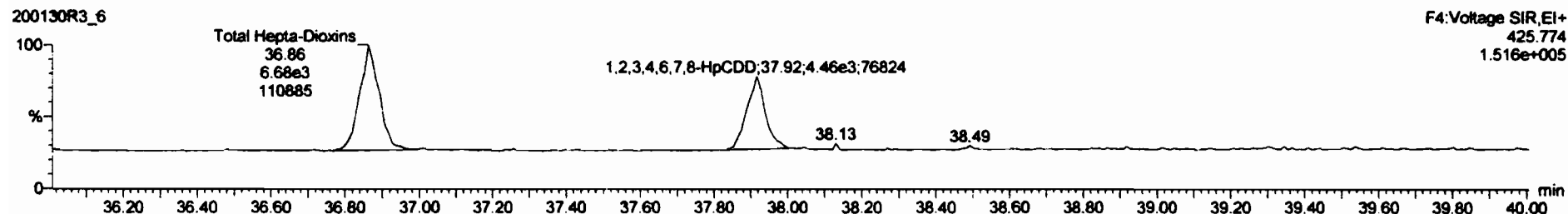
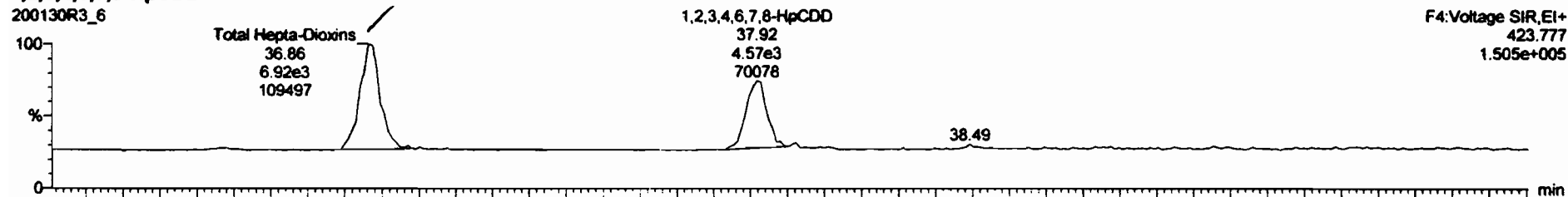


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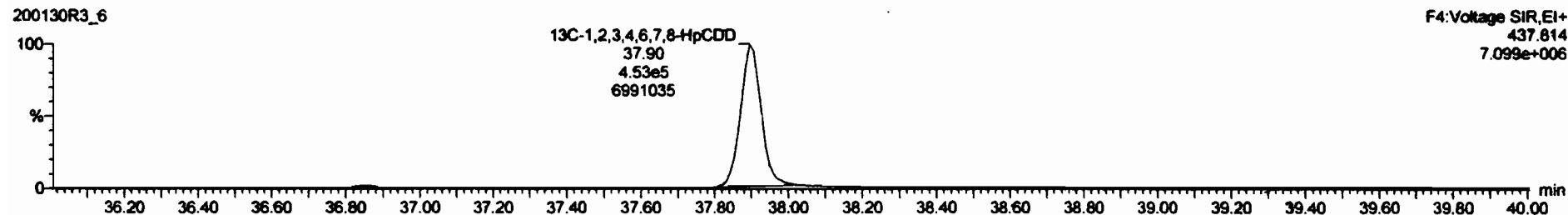
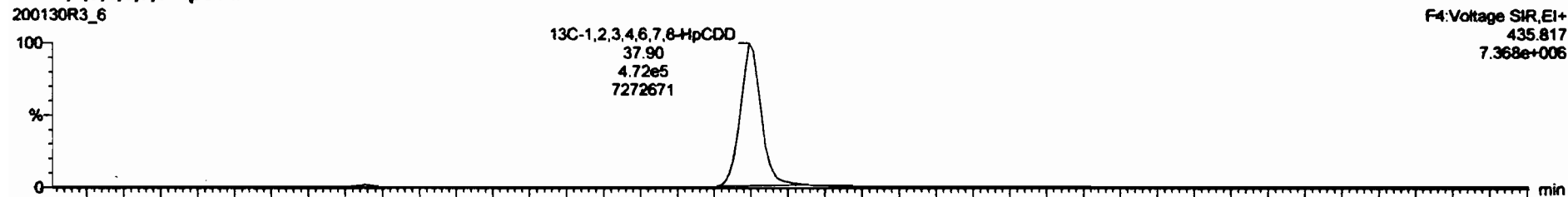
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1,2,3,4,6,7,8-HpCDD



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

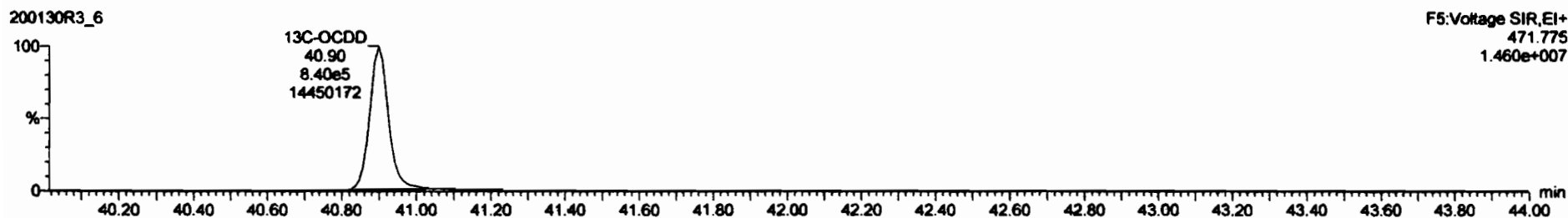
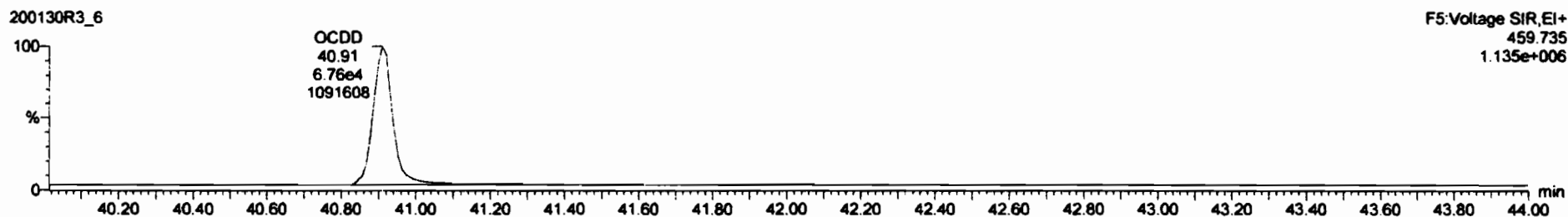


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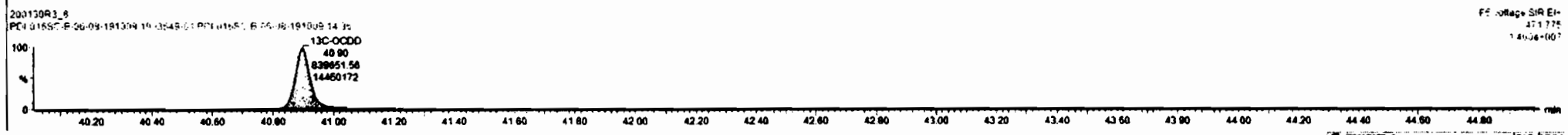
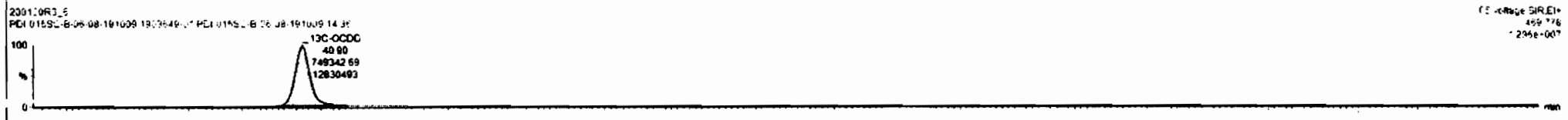
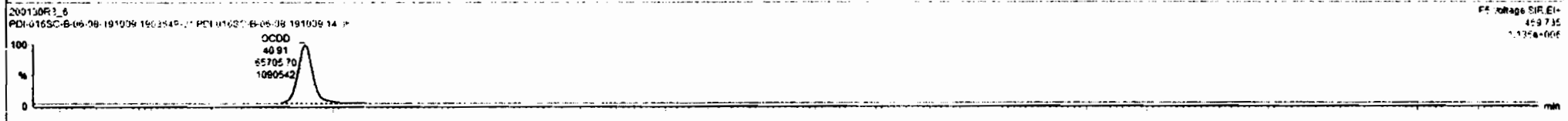
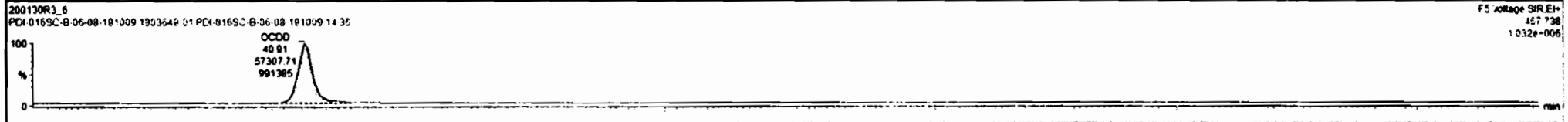
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Comp	PA	My	SP	Conc	SP	Conc	SP	Conc	SP	Conc	SP	Conc
2,3,7,8-TCDD	1.21e3	0.20	YES	0.8240	10.035	25.69	1.000	0.256		0.0876	0.0946	
1,2,3,7,8-PeCDD			NO	0.8116	10.035					0.0803		
1,2,3,4,7,8-HxCDD	4.88e2	1.13	NO	0.8794	10.035	34.09	1.003	0.124		0.0788	0.124	
1,2,3,6,7,8-HxCDD			NO	0.7841	10.035					0.0814		
1,2,3,7,8,9-HxCDD	9.56e2	1.17	NO	0.7985	10.035	34.38	1.001	0.235		0.0888	0.235	
1,2,3,4,6,7,8-HpCDD	9.04e3	1.02	NO	0.7389	10.035	37.82	1.001	2.64		0.154	2.64	
2,3,7,8-TCDF			NO	0.5878	10.035					0.0881		
1,2,3,7,8-PeCDF			NO	0.6281	10.035					0.0478		
2,3,4,7,8-PeCDF			NO	0.8498	10.035					0.0468		
1,2,3,4,7,8-HxCDF			NO	0.7888	10.035					0.0530		
1,2,3,6,7,8-HxCDF			NO	0.7281	10.035					0.0535		
2,3,4,6,7,8-HxCDF			NO	0.7885	10.035					0.0588		
1,2,3,7,8,9-HxCDF			NO	0.7085	10.035					0.0751		
1,2,3,4,6,7,8-HpCDF			NO	0.7318	10.035					0.0864		
1,2,3,4,7,8,9-HpCDF			NO	0.8184	10.035					0.0807		
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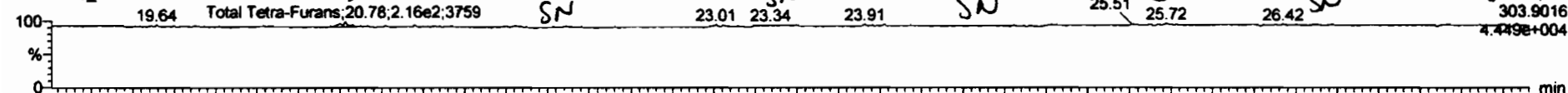
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Printed: Friday, January 31, 2020 16:16:17 Pacific Standard Time

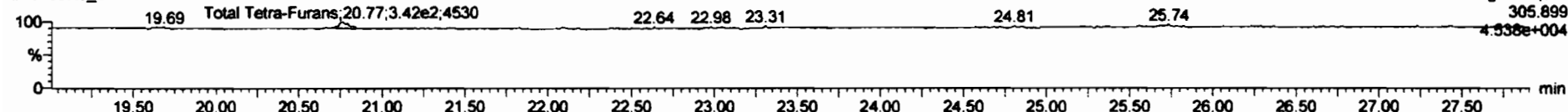
Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

2,3,7,8-TCDF

200130R3\_6

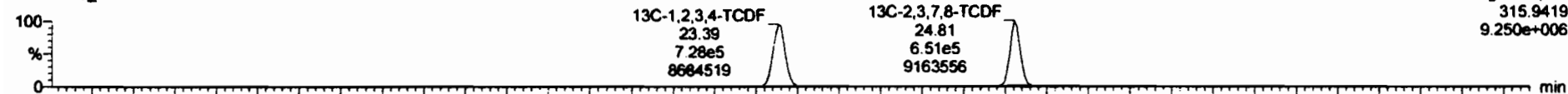


200130R3\_6

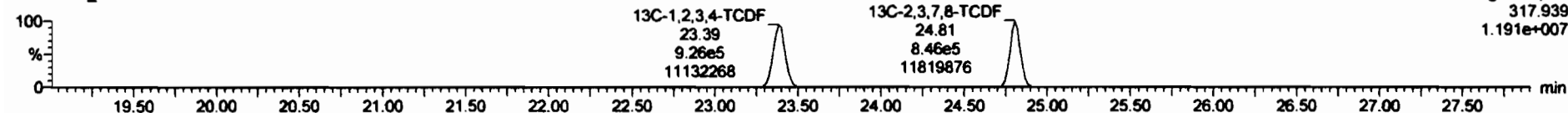


13C-2,3,7,8-TCDF

200130R3\_6

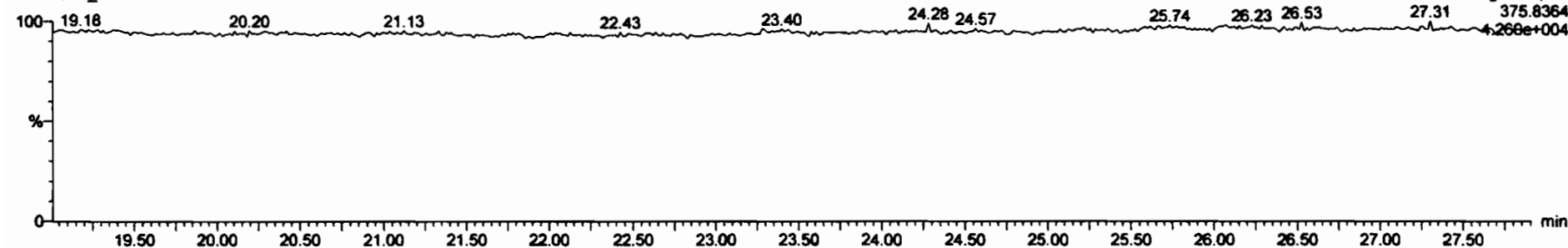


200130R3\_6



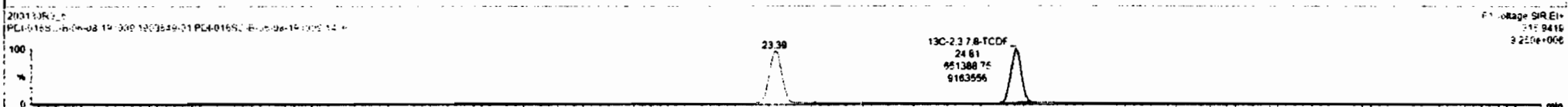
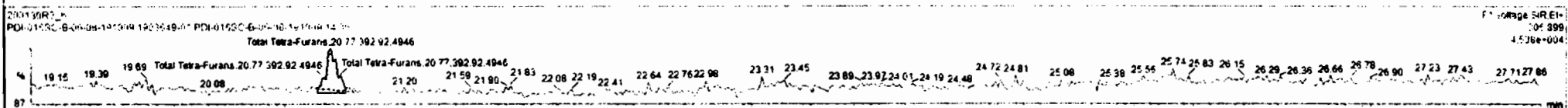
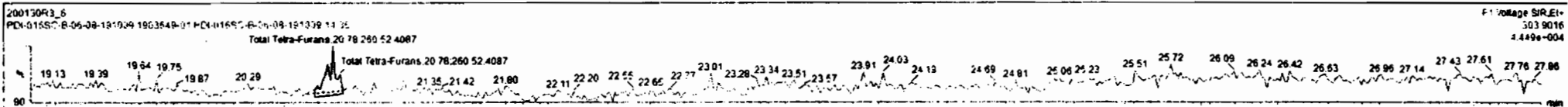
DPE1

200130R3\_6



Peak	Area	Height	W	Ret	Label	Int	Area	Height	W	Ret	Label
24	1st Func. Penta-Furans			0.8261	10.035					0.0160	
	Total Penta-Furans			0.8261	10.035					0.0217	

Peak	Area	Height	W	Ret	Label	Int	Area	Height	W	Ret	Label
1	Total Tetra-Furans	20.78	2.085e2	3.929e2	0.86	HO	0.14808	0.14808			



Dataset: Untitled

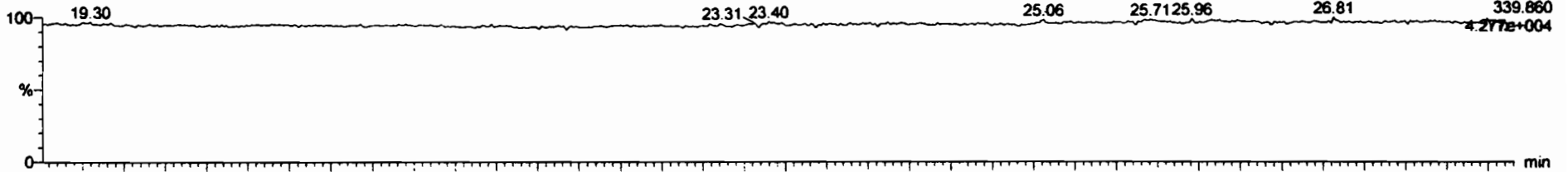
Last Altered: Friday, January 31, 2020 16:15:53 Pacific Standard Time

Printed: Friday, January 31, 2020 16:16:17 Pacific Standard Time

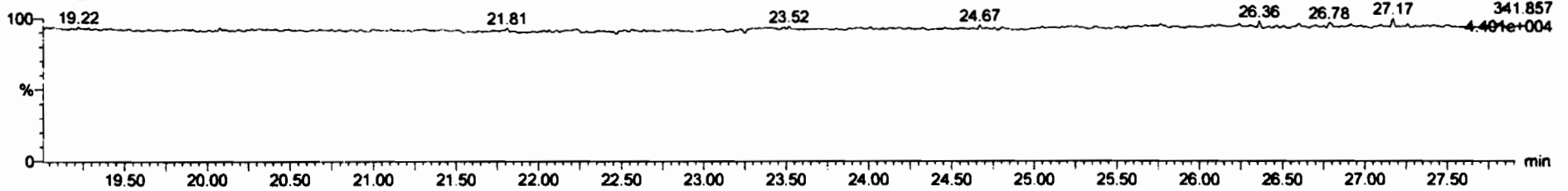
Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

1st Func. Penta-Furans

200130R3\_6

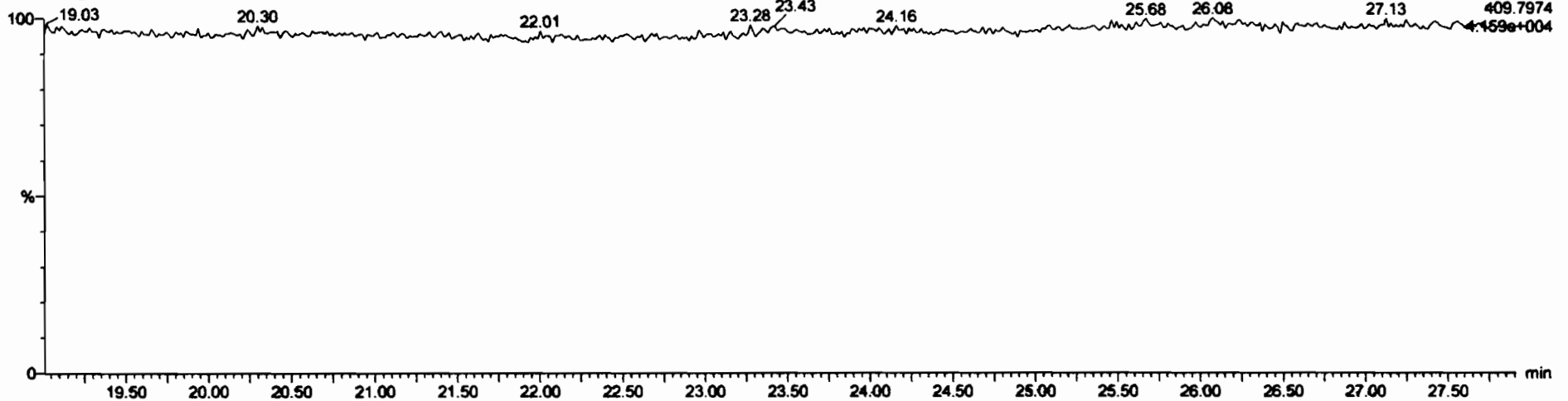


200130R3\_6



DPE6

200130R3\_6



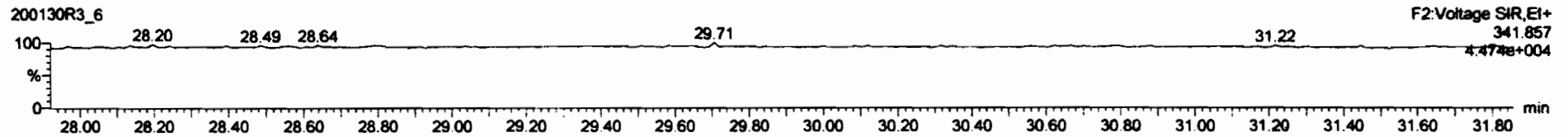
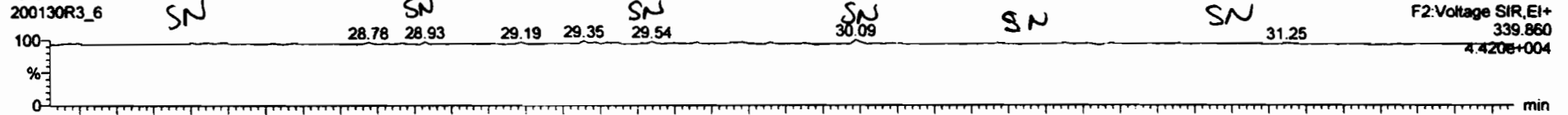
Dataset: Untitled

Last Altered: Friday, January 31, 2020 16:15:53 Pacific Standard Time

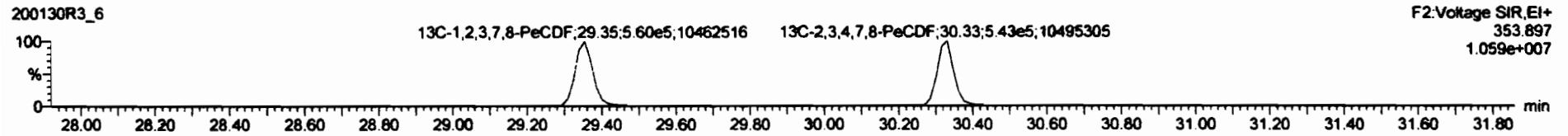
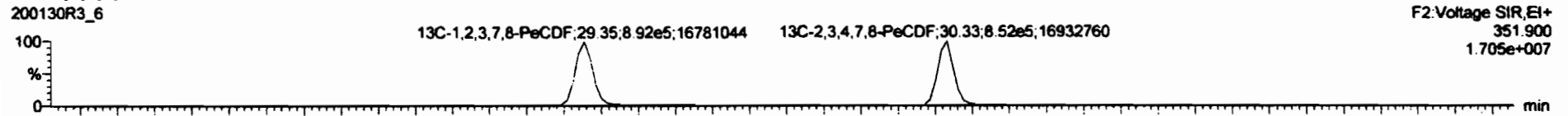
Printed: Friday, January 31, 2020 16:16:17 Pacific Standard Time

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

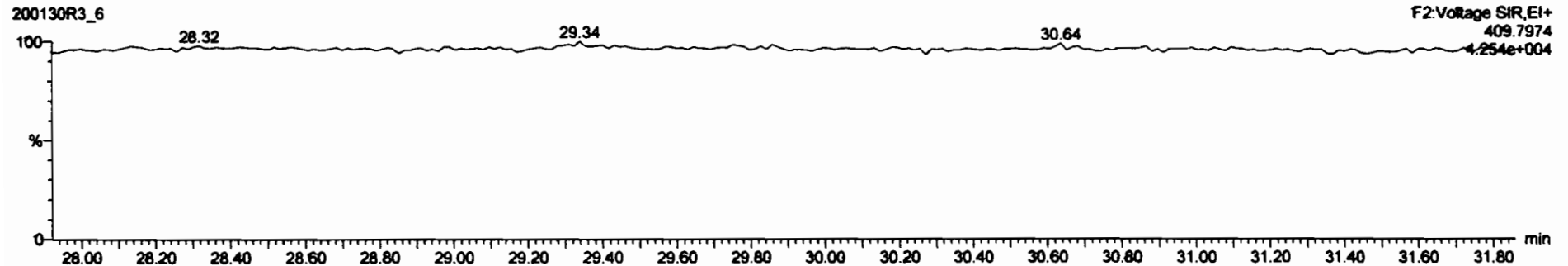
1,2,3,7,8-PeCDF



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

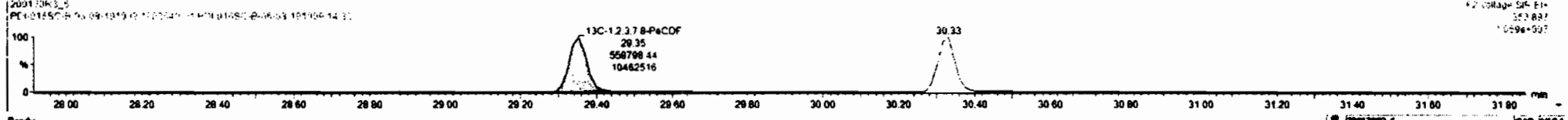
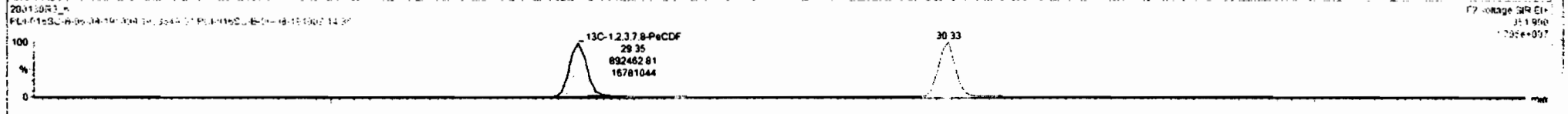
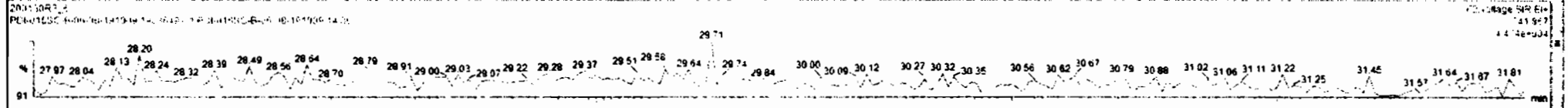
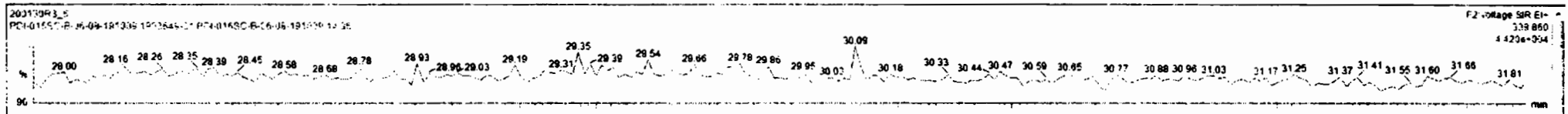


DPE2



SI	Name	Range	RA	Qty	RFI	RetTime	RT	RFI	Conc.	Wt%	St.	RFI
00	Total Tetra-Furans				0.5878	10.035			0.148		0.0651	0.148
01	1st Func. Penta-Furans				0.8281	10.035					0.0180	

SI	Range	RT	ret Range	wt Range	RA	Qty	RFI	Conc.
1								

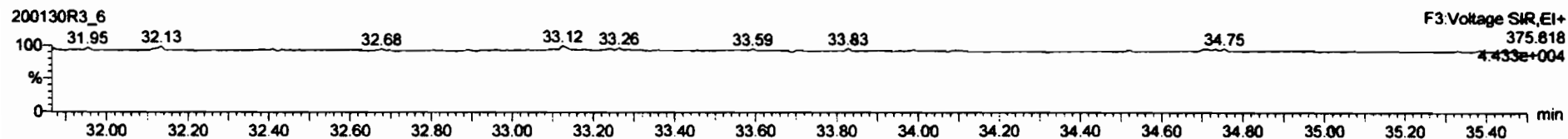
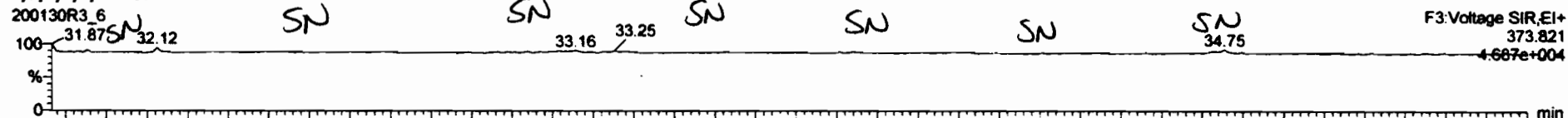


Dataset: Untitled

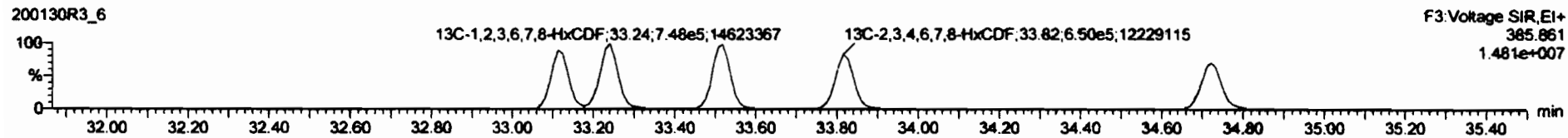
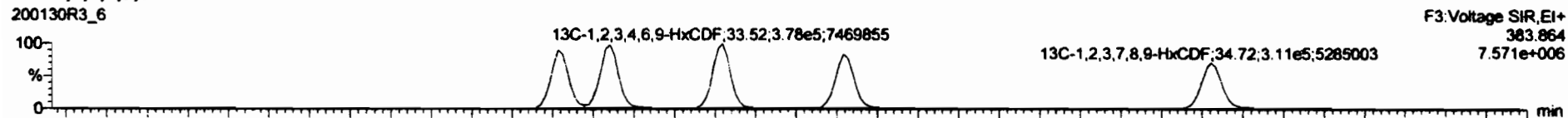
Last Altered: Friday, January 31, 2020 16:15:53 Pacific Standard Time  
Printed: Friday, January 31, 2020 16:16:17 Pacific Standard Time

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

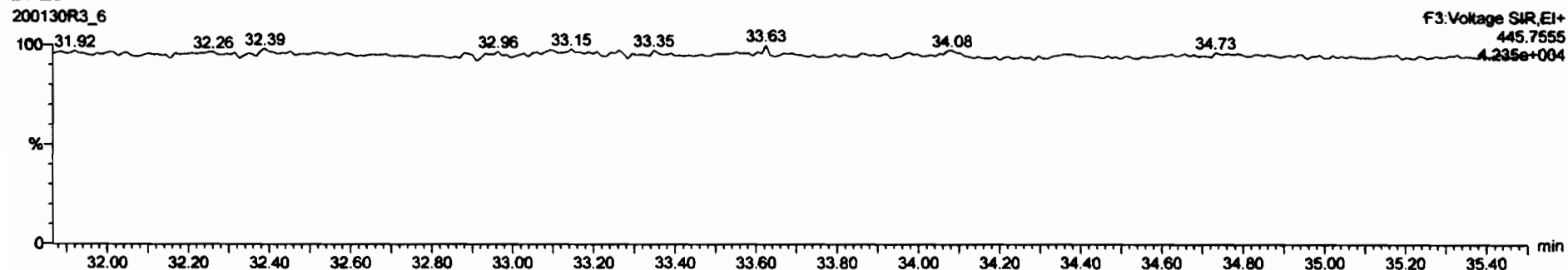
1,2,3,4,7,8-HxCDF



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

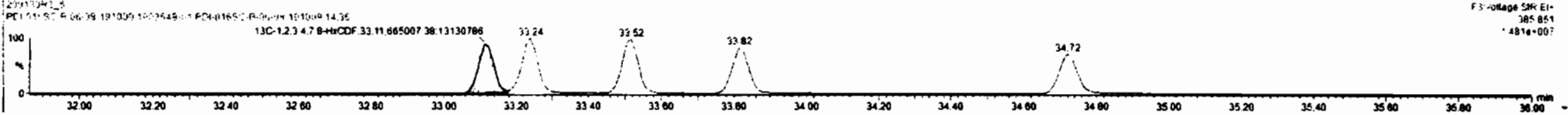
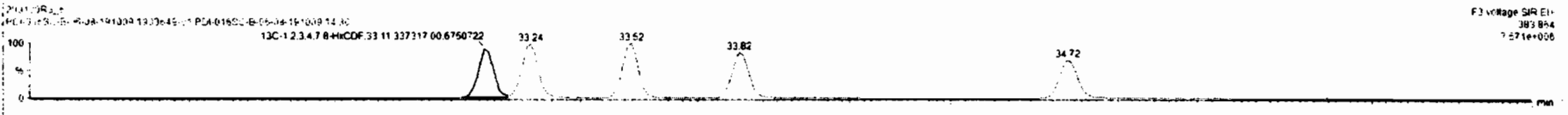
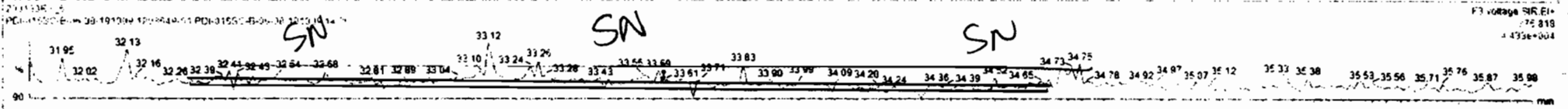
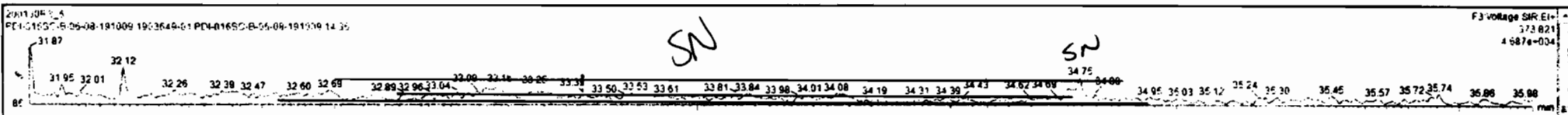


DPE3



Area	Comp	SN	Qty	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%
43	Total Toluene-Furans				0.5878	10.035				0.148		0.0861	0.148
44	Lat Func. Penta-Furans				0.8281	10.035						0.0180	
45	Total Penta-Furans				0.8281	10.035						0.0217	

Area	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%	Wt%
1								



Dataset: Untitled

Last Altered: Friday, January 31, 2020 16:15:53 Pacific Standard Time

Printed: Friday, January 31, 2020 16:16:17 Pacific Standard Time

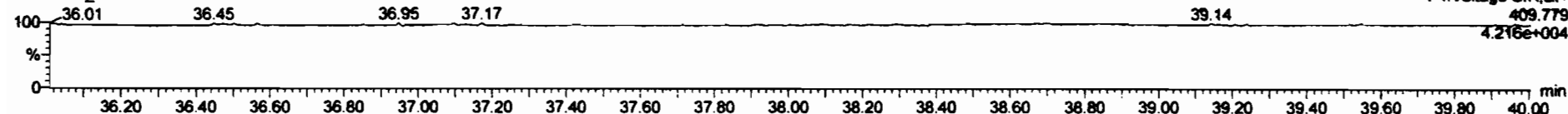
Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009

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

200130R3\_6

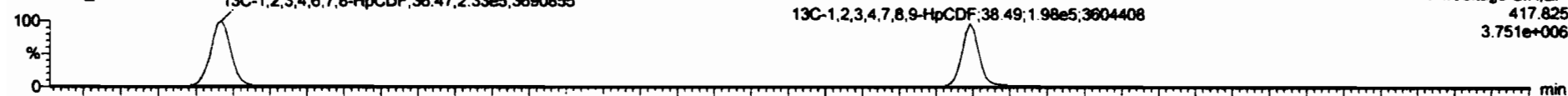


200130R3\_6

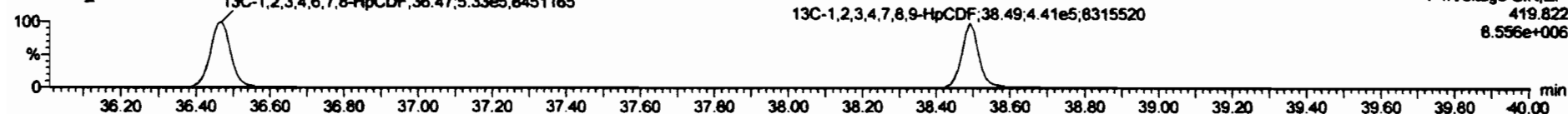


13C-1,2,3,4,6,7,8-HpCDF

200130R3\_6

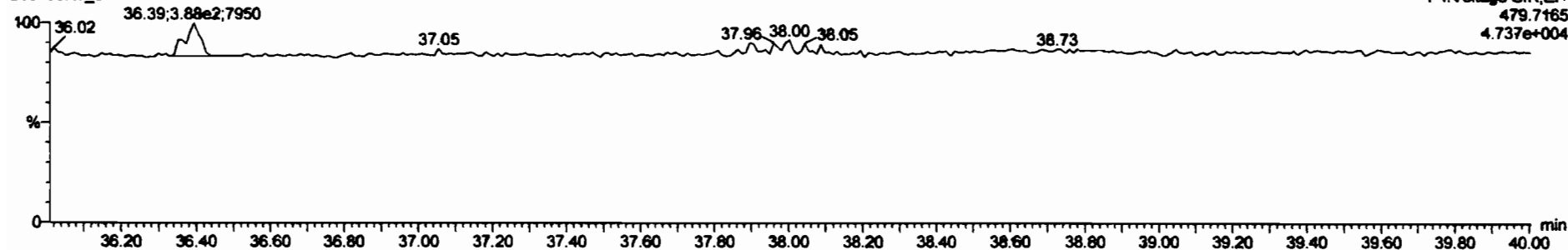


200130R3\_6

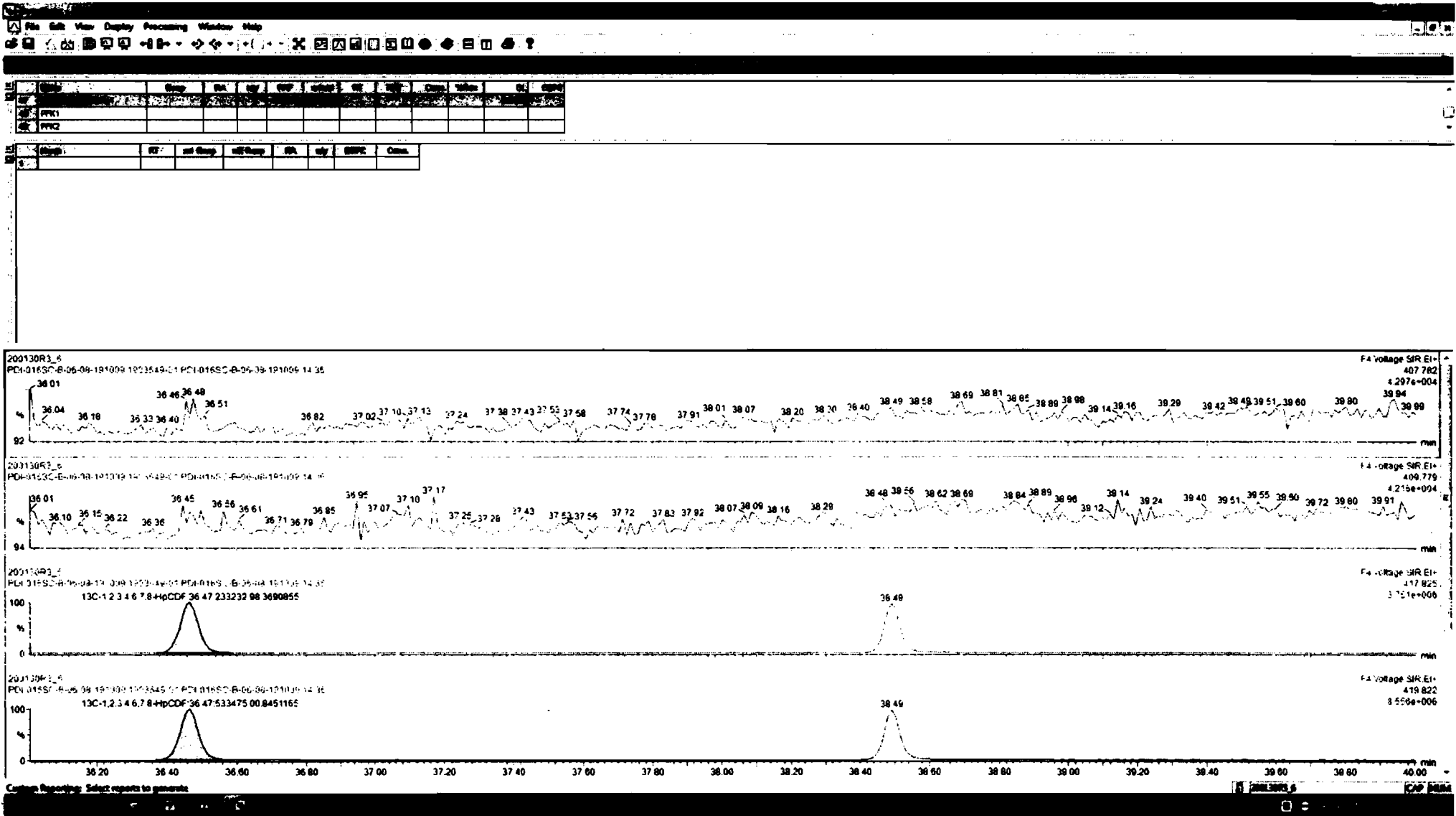


DPE4

200130R3\_6





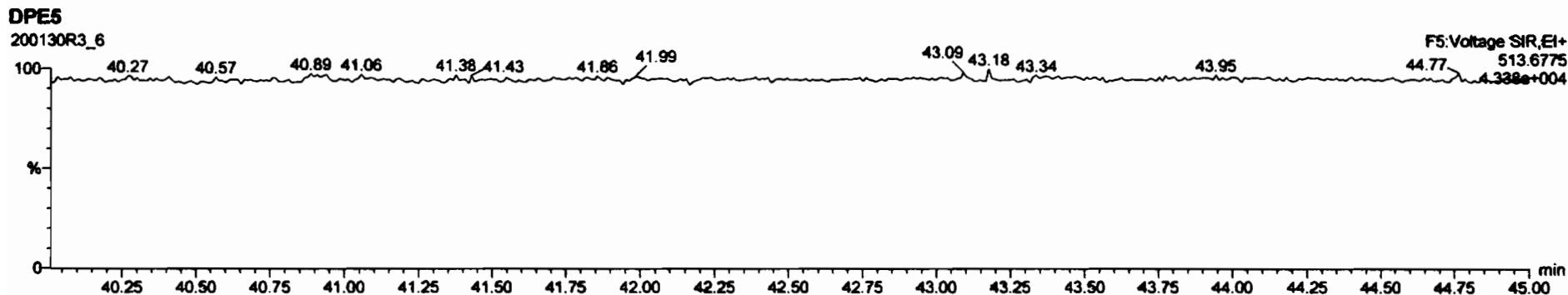
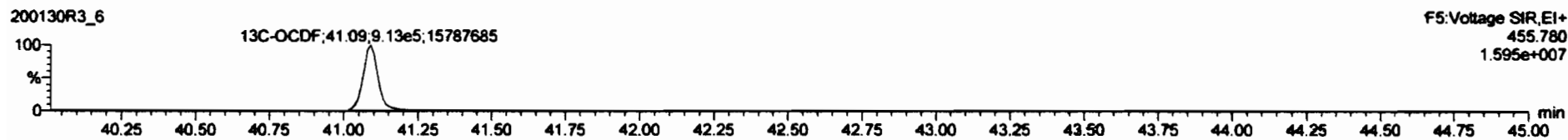
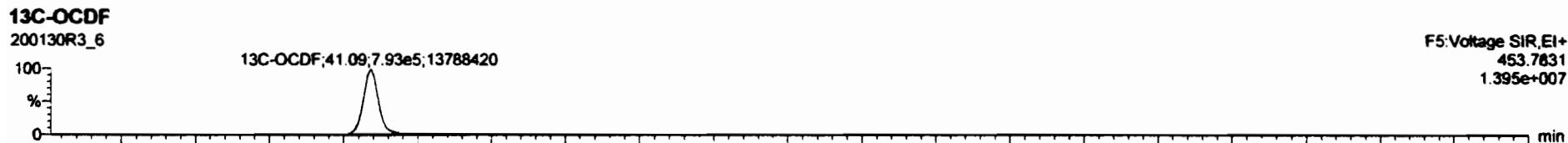
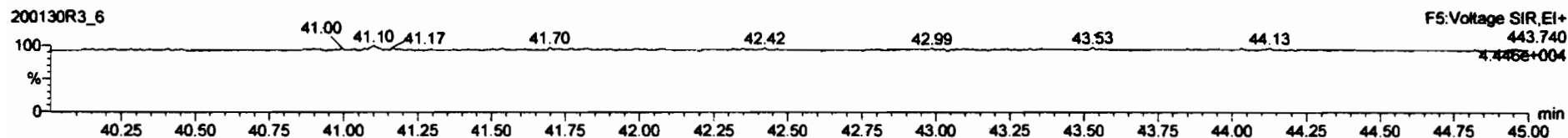
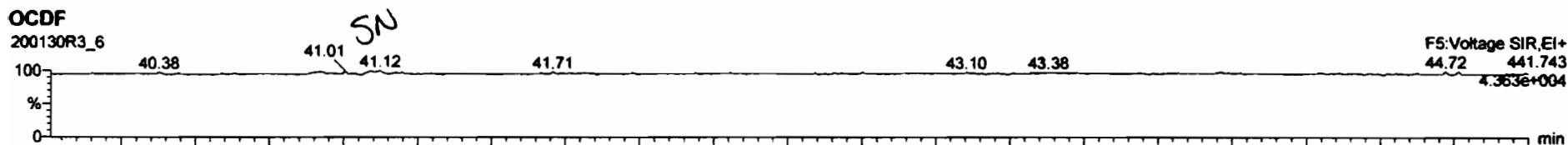


Dataset: Untitled

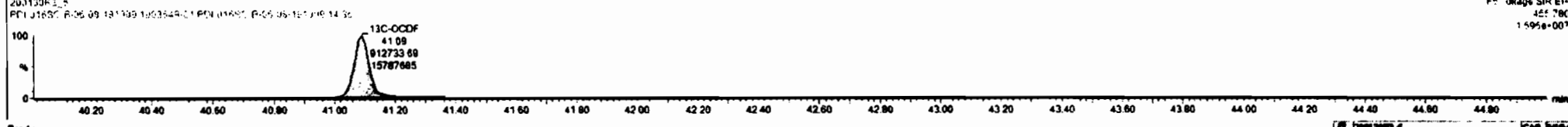
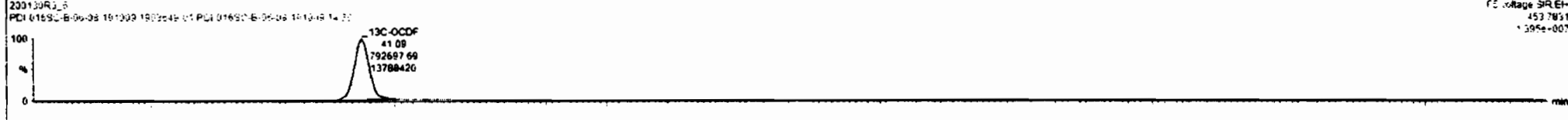
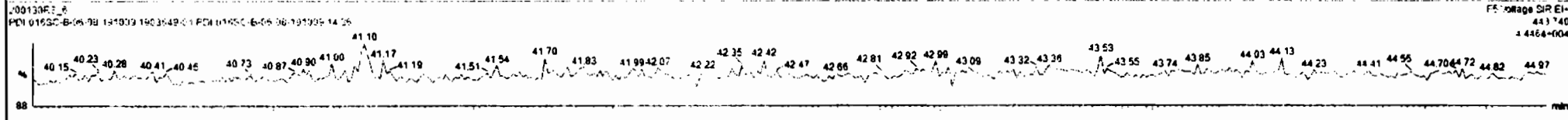
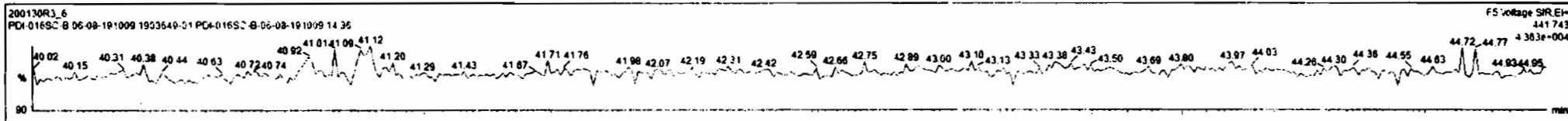
Last Altered: Friday, January 31, 2020 16:15:53 Pacific Standard Time

Printed: Friday, January 31, 2020 16:16:17 Pacific Standard Time

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009



Sample	Comp	SN	mg	ppm	method	DF	DF	DF	DF	DF	DF
2.3.7.8-TCDD	1.2143	0.20	YES	0.8240	10.835	25.00	1.000	0.256		0.0676	0.0086
1.2.3.7.8-PeCDD			NO	0.8116	10.835					0.0663	
1.2.3.4.7.8-HxCDD	4.8842	1.13	NO	0.8704	10.835	34.00	1.003	0.124		0.0706	0.124
1.2.3.8.7.8-HxCDD			NO	0.7841	10.835					0.0814	
1.2.3.7.8.9-HxCDD	9.5642	1.17	NO	0.7965	10.835	34.38	1.001	0.235		0.0880	0.235
1.2.3.4.8.7.8-HpCDD	9.0443	1.02	NO	0.7388	10.835	37.82	1.001	2.64		0.154	2.64
OCDD	1.2545	0.87	NO	0.8000	10.835	40.91	1.000	38.6		0.101	38.6
2.3.7.8-TCDF			NO	0.5878	10.835					0.0681	
1.2.3.7.8-PeCDF			NO	0.8281	10.835					0.0478	
2.3.4.7.8-HxCDF			NO	0.8488	10.835					0.0458	
1.2.3.4.7.8-HxCDF			NO	0.7880	10.835					0.0530	
1.2.3.8.7.8-HxCDF			NO	0.7201	10.835					0.0535	
2.3.4.8.7.8-HxCDF			NO	0.7685	10.835					0.0568	
1.2.3.7.8.9-HxCDF			NO	0.7686	10.835					0.0751	
1.2.3.4.8.7.8-HpCDF			NO	0.7316	10.835					0.0884	
1.2.3.4.7.8.9-HpCDF			NO	0.8164	10.835					0.0807	

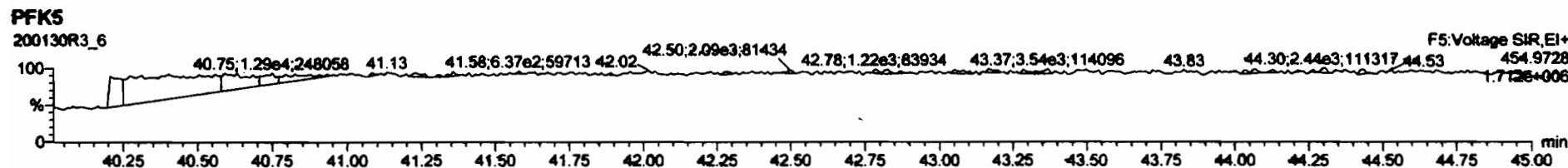
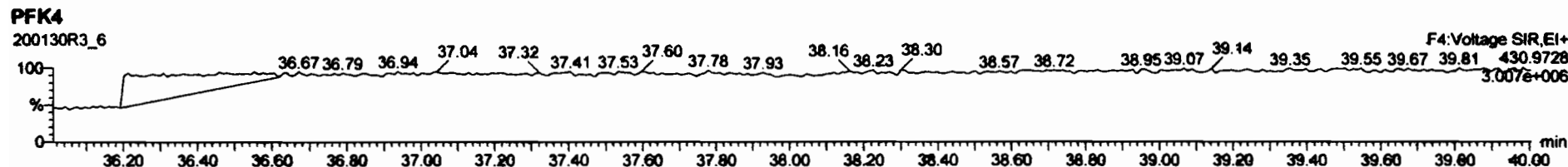
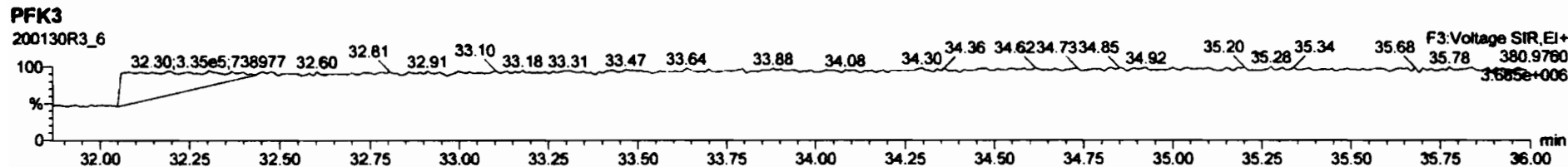
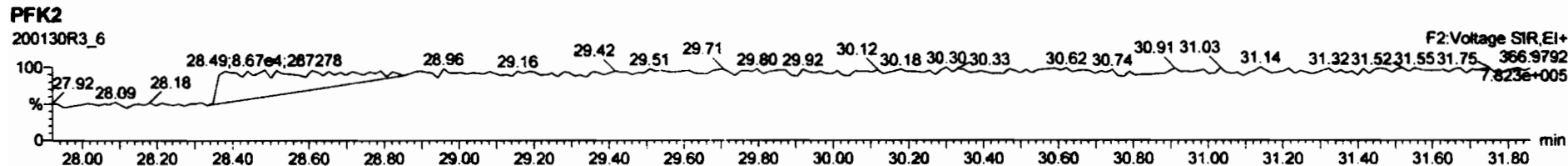
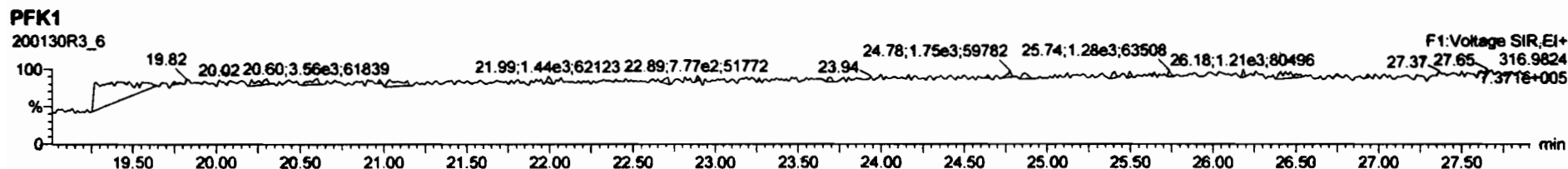


Dataset: Untitled

Last Altered: Friday, January 31, 2020 16:15:53 Pacific Standard Time

Printed: Friday, January 31, 2020 16:16:17 Pacific Standard Time

Name: 200130R3\_6, Date: 31-Jan-2020, Time: 07:01:52, ID: 1903649-01 PDI-016SC-B-06-08-191009 14.36, Description: PDI-016SC-B-06-08-191009



**CONTINUING CALIBRATION**

# HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

**Beg. Calibration ID:** ST200130R2-1

**Reviewed By:** CT 02/03/2020  
*Initials & Date*

**End Calibration ID:** NA

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

**Mass resolution ≥**

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

**Intergrated peaks display correctly?**   NA

**GC Break <20%**  NA

**8280 CS1 End Standard:**

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

**Comments:**  
 (A) END RES CHECK HAD ONE MASS <10K

Dataset: U:\VG12.PRO\Results\200130R2\200130R2-1.qld

Last Altered: Thursday, January 30, 2020 15:24:44 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:25:55 Pacific Standard Time

*BBB 01/30/2020*

*C7 02/03/2020*

Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: U:\VG12.PRO\CurveDB\db5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

#	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	8.34e4	7.87e5	0.79	NO	0.824	25.75	25.75	NO	1.001	1.001	12.856	129	NO
2	2 1,2,3,7,8-PeCDD	2.78e5	5.68e5	0.65	NO	0.912	30.67	30.67	NO	1.001	1.001	53.631	107	NO
3	3 1,2,3,4,7,8-HxCDD	2.86e5	5.80e5	1.24	NO	0.870	34.01	34.01	NO	1.000	1.000	56.512	113	NO
4	4 1,2,3,6,7,8-HxCDD	3.03e5	6.75e5	1.21	NO	0.784	34.09	34.12	NO	1.000	1.001	57.258	115	NO
5	5 1,2,3,7,8,9-HxCDD	2.82e5	6.61e5	1.23	NO	0.798	34.40	34.39	NO	1.001	1.001	53.475	107	NO
6	6 1,2,3,4,6,7,8-HpCDD	2.25e5	5.35e5	1.02	NO	0.737	37.93	37.93	NO	1.000	1.000	57.133	114	NO
7	7 OCDD	4.44e5	9.51e5	0.88	NO	0.800	40.91	40.92	NO	1.000	1.000	116.76	117	NO
8	8 2,3,7,8-TCDF	7.97e4	1.13e6	0.71	NO	0.588	24.88	24.87	NO	1.001	1.001	11.974	120	NO
9	9 1,2,3,7,8-PeCDF	4.15e5	8.96e5	1.50	NO	0.826	29.39	29.39	NO	1.001	1.001	56.008	112	NO
10	10 2,3,4,7,8-PeCDF	4.16e5	8.57e5	1.55	NO	0.850	30.38	30.36	NO	1.001	1.001	57.067	114	NO
11	11 1,2,3,4,7,8-HxCDF	2.84e5	6.48e5	1.17	NO	0.787	33.12	33.15	NO	1.000	1.001	55.786	112	NO
12	12 1,2,3,6,7,8-HxCDF	3.16e5	7.74e5	1.18	NO	0.720	33.25	33.26	NO	1.000	1.001	56.783	114	NO
13	13 2,3,4,6,7,8-HxCDF	3.05e5	7.04e5	1.20	NO	0.766	33.86	33.84	NO	1.001	1.000	56.424	113	NO
14	14 1,2,3,7,8,9-HxCDF	2.46e5	6.28e5	1.17	NO	0.709	34.73	34.74	NO	1.000	1.000	55.355	111	NO
15	15 1,2,3,4,6,7,8-HpCDF	2.17e5	5.43e5	0.96	NO	0.732	36.52	36.49	NO	1.001	1.000	54.696	109	NO
16	16 1,2,3,4,7,8,9-HpCDF	1.88e5	4.08e5	0.98	NO	0.816	38.50	38.51	NO	1.000	1.000	56.617	113	NO
17	17 OCDF	4.35e5	1.08e6	0.86	NO	0.639	41.10	41.12	NO	1.000	1.001	126.49	126	NO
18	18 13C-2,3,7,8-TCDD	7.87e5	6.33e5	0.79	NO	1.12	25.74	25.72	NO	1.026	1.025	111.49	111	NO
19	19 13C-1,2,3,7,8-PeCDD	5.68e5	6.33e5	0.65	NO	0.841	30.49	30.65	NO	1.215	1.222	106.60	107	NO
20	20 13C-1,2,3,4,7,8-HxCDD	5.80e5	7.16e5	1.25	NO	0.938	34.00	34.00	NO	1.014	1.014	86.399	86.4	NO
21	21 13C-1,2,3,6,7,8-HxCDD	6.75e5	7.16e5	1.26	NO	1.07	34.10	34.09	NO	1.017	1.017	88.410	88.4	NO
22	22 13C-1,2,3,7,8,9-HxCDD	6.61e5	7.16e5	1.22	NO	1.03	34.40	34.37	NO	1.026	1.025	89.582	89.6	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	5.35e5	7.16e5	1.02	NO	0.710	37.96	37.92	NO	1.132	1.131	105.27	105	NO
24	24 13C-OCDD	9.51e5	7.16e5	0.90	NO	0.601	40.84	40.91	NO	1.218	1.220	220.96	110	NO
25	25 13C-2,3,7,8-TCDF	1.13e6	1.04e6	0.77	NO	1.04	24.92	24.85	NO	0.993	0.990	104.97	105	NO
26	26 13C-1,2,3,7,8-PeCDF	8.96e5	1.04e6	1.55	NO	0.917	29.26	29.37	NO	1.166	1.171	93.904	93.9	NO
27	27 13C-2,3,4,7,8-PeCDF	8.57e5	1.04e6	1.56	NO	0.903	30.21	30.35	NO	1.204	1.209	91.214	91.2	NO
28	28 13C-1,2,3,4,7,8-HxCDF	6.48e5	7.16e5	0.52	NO	0.861	33.13	33.12	NO	0.988	0.988	105.02	105	NO
29	29 13C-1,2,3,6,7,8-HxCDF	7.74e5	7.16e5	0.52	NO	1.05	33.23	33.24	NO	0.991	0.991	103.19	103	NO
30	30 13C-2,3,4,6,7,8-HxCDF	7.04e5	7.16e5	0.52	NO	0.946	33.83	33.83	NO	1.009	1.009	103.98	104	NO
31	31 13C-1,2,3,7,8,9-HxCDF	6.28e5	7.16e5	0.52	NO	0.816	34.74	34.73	NO	1.036	1.036	107.50	107	NO

Dataset: U:\VG12.PRO\Results\200130R2\200130R2-1.qld

Last Altered: Thursday, January 30, 2020 15:24:44 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:25:55 Pacific Standard Time

Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

#	Name	Resp	IS Resp	RA	n/y	RRF	Pred.RT	RT	RT Flag	Pred.RRT	RRT	Conc.	%Rec	STD out
32	32 13C-1,2,3,4,6,7,8-HpCDF	5.43e5	7.16e5	0.43	NO	0.589	36.48	36.48	NO	1.088	1.088	128.78	129	NO
33	33 13C-1,2,3,4,7,8,9-HpCDF	4.08e5	7.16e5	0.43	NO	0.448	38.49	38.50	NO	1.148	1.148	127.01	127	NO
34	34 13C-OCDF	1.08e6	7.16e5	0.87	NO	0.586	41.07	41.10	NO	1.225	1.226	256.37	128	NO
35	35 37Cl-2,3,7,8-TCDD	7.58e4	6.33e5			1.09	25.77	25.75	NO	1.027	1.026	11.035	110	NO
36	36 13C-1,2,3,4-TCDD	6.33e5	6.33e5	0.78	NO	1.00	25.08	25.09	NO	1.000	1.000	100.00	100	NO
37	37 13C-1,2,3,4-TCDF	1.04e6	1.04e6	0.79	NO	1.00	23.42	23.43	NO	1.000	1.000	100.00	100	NO
38	38 13C-1,2,3,4,6,9-HxCDF	7.16e5	7.16e5	0.51	NO	1.00	33.52	33.53	NO	1.000	1.000	100.00	100	YES <i>ok</i>
39	39 Total Tetra-Dioxins		7.87e5			0.824	24.62		NO	0.000		105.07		NO
40	40 Total Penta-Dioxins		5.68e5			0.912	29.96		NO	0.000		248.36		NO
41	41 Total Hexa-Dioxins		0.00e0			0.784	33.63		NO	0.000		271.52		NO
42	42 Total Hepta-Dioxins		5.35e5			0.737	37.64		NO	0.000		151.84		NO
43	43 Total Tetra-Furans		1.13e6			0.588	23.61		NO	0.000		64.681		NO
44	44 1st Func. Penta-Furans		0.00e0			0.826	27.09		NO	0.000		97.497		NO
45	45 Total Penta-Furans		0.00e0			0.826	29.27		NO	0.000		200.91		NO
46	46 Total Hexa-Furans		0.00e0			0.766	33.56		NO	0.000		315.01		NO
47	47 Total Hepta-Furans		0.00e0			0.732	37.83		NO	0.000		111.31		NO



Dataset: Untitled

Last Altered: Thursday, January 30, 2020 15:27:11 Pacific Standard Time

Printed: Thursday, January 30, 2020 15:27:21 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26

Calibration: U:\VG12.PRO\CurveDB\cb5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

	# Name	RT
1	1 1,3,6,8-TCDD (First)	21.80
2	2 1,2,8,9-TCDD (Last)	26.69
3	3 1,2,4,7,9-PeCDD (First)	28.47
4	4 1,2,3,8,9-PeCDD (Last)	31.05
5	5 1,2,4,6,7,9-HxCDD (First)	32.52
6	6 1,2,3,7,8,9-HxCDD (Last)	34.39
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.87
8	8 1,2,3,4,6,7,8-HpCDD (Last)	37.93
9	9 1,3,6,8-TCDF (First)	19.69
10	10 1,2,8,9-TCDF (Last)	26.84
11	11 1,3,4,6,8-PeCDF (First)	26.81
12	12 1,2,3,8,9-PeCDF (Last)	31.29
13	13 1,2,3,4,6,8-HxCDF (First)	31.97
14	14 1,2,3,7,8,9-HxCDF (Last)	34.74
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.49
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.51

Dataset: Untitled

Last Altered: Friday, January 31, 2020 09:48:55 Pacific Standard Time

Printed: Friday, January 31, 2020 09:49:01 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\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

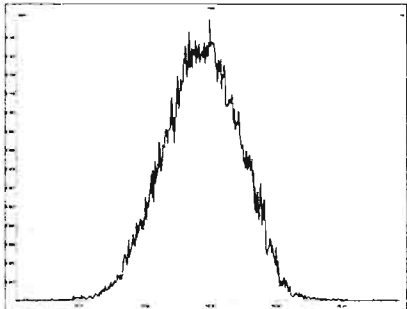
Compound name: 2,3,7,8-TCDD

	Name	ID	Acq.Date	Acq.Time
1	200130R2_1	ST200130R2_1 1613 CS3 19I1604	30-Jan-20	14:14:22
2	200130R2_2	B0A0133-BS1 OPR 1	30-Jan-20	15:14:19
3	200130R2_3	B0A0016-BS1 OPR 10	30-Jan-20	16:00:38
4	200130R2_4	SOLVENT BLANK	30-Jan-20	16:47:35
5	200130R2_5	B0A0133-BLK1 Method Blank 1	30-Jan-20	17:34:32
6	200130R2_6	B0A0016-BLK1 Method Blank 10	30-Jan-20	18:21:31
7	200130R2_7	1904210-01 PDI-FB-1911191346 0.99738	30-Jan-20	19:08:32
8	200130R2_8	1904210-02 PDI-RB-1911191254 1.01128	30-Jan-20	19:55:30
9	200130R2_9	1904161-20 PDI-071SC-A-09-10-191001 16.47	30-Jan-20	20:42:27
10	200130R2_10	1904161-13@5X PDI-064SC-A-00-01-190929 ...	30-Jan-20	21:29:27
11	200130R2_11	1903647-01 PDI-045SC-B-04-06-191010 10.99	30-Jan-20	22:16:27
12	200130R2_12	1903647-02 PDI-067SC-B-00-02-191010 18.9	30-Jan-20	23:03:32
13	200130R2_13	1903647-03 PDI-067SC-B-02-04-191010 17.58	30-Jan-20	23:50:32
14	200130R2_14	1903647-04 PDI-067SC-B-04-06-191010 15.56	31-Jan-20	00:37:32
15	200130R2_15	1904207-04RE1 PDI-076SC-A-05-06-191013 ...	31-Jan-20	01:24:32

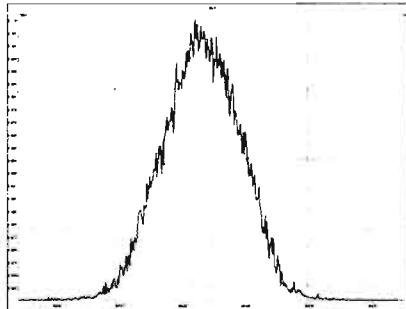
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed: Thursday, January 30, 2020 14:07:36 Pacific Standard Time

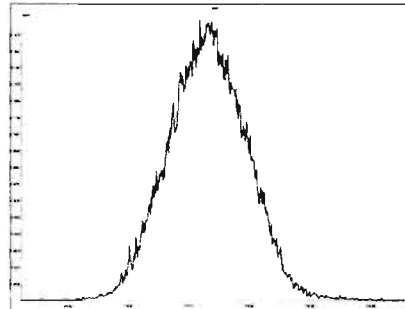
M 292.9824 R 10680



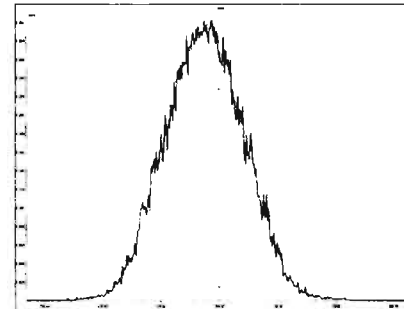
M 304.9824 R 11312



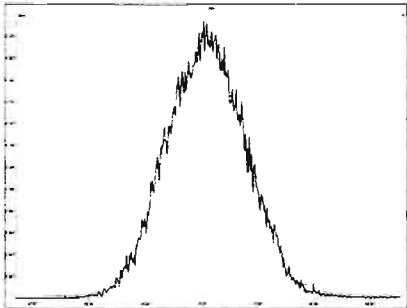
M 318.9792 R 10915



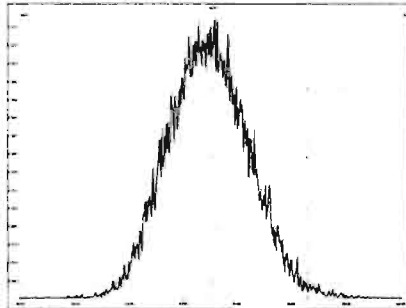
M 330.9792 R 10545



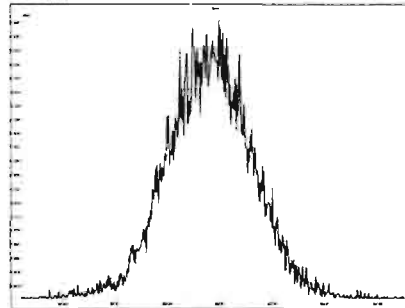
M 342.9792 R 10460



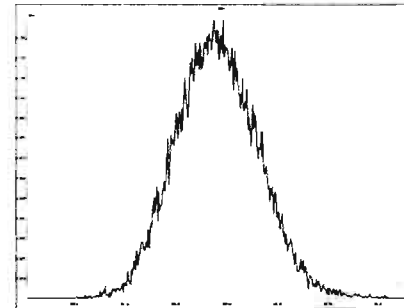
M 354.9792 R 10867



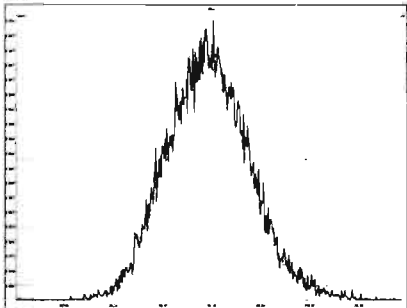
M 366.9792 R 10036



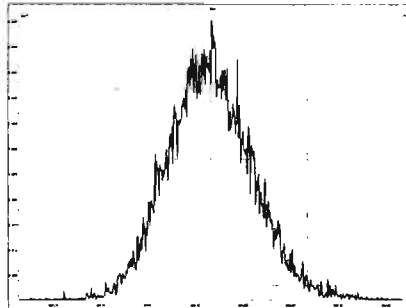
M 380.9760 R 10637



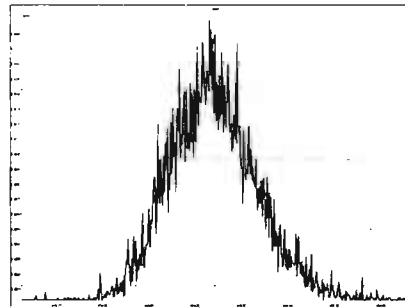
M 392.9760 R 10375



M 404.9760 R 10000



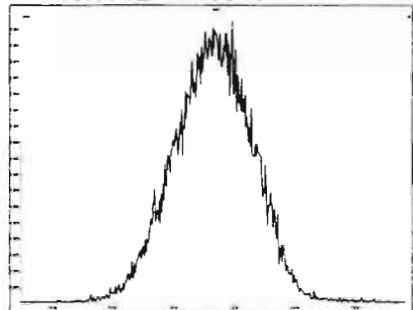
M 416.9760 R 10329



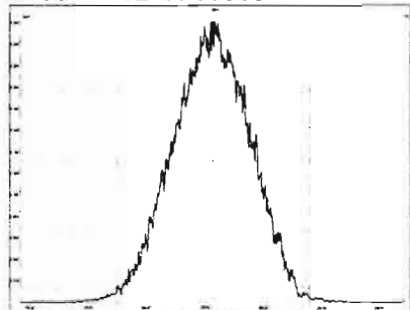
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed: Thursday, January 30, 2020 14:08:31 Pacific Standard Time

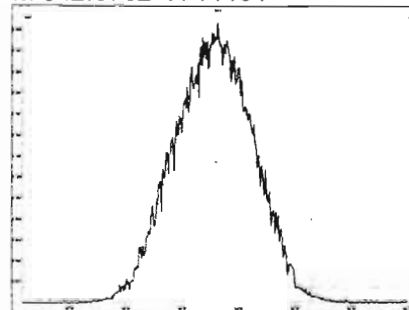
M 318.9792 R 10916



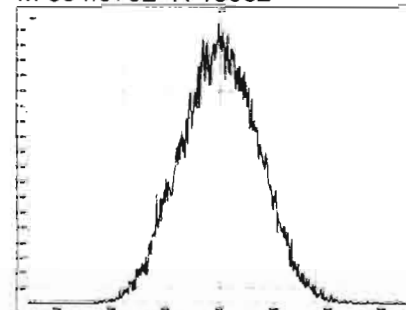
M 330.9792 R 11015



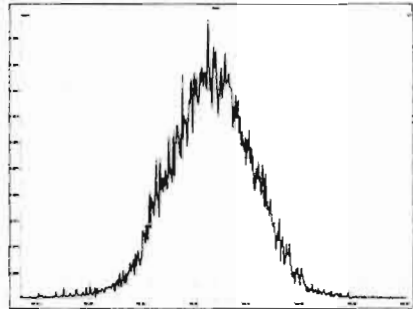
M 342.9792 R 11161



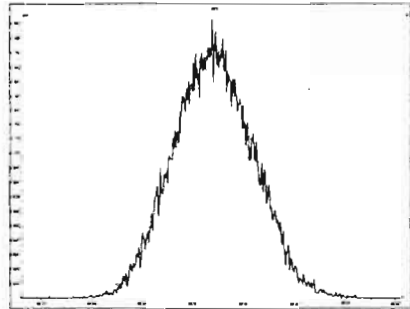
M 354.9792 R 10682



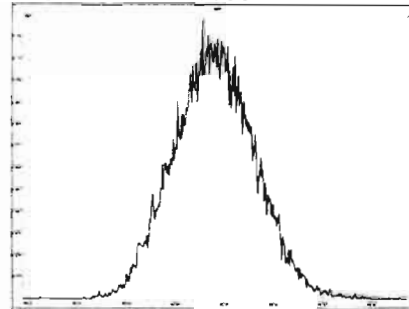
M 366.9792 R 10118



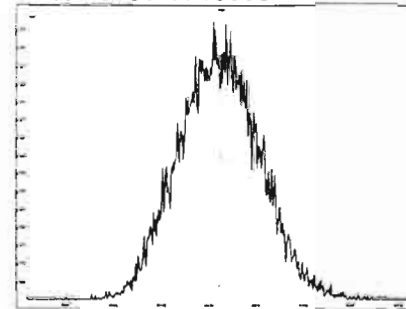
M 380.9760 R 10504



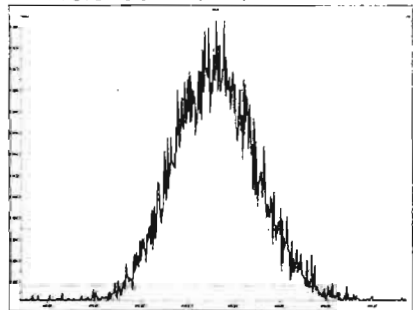
M 392.9760 R 10332



M 404.9760 R 10639



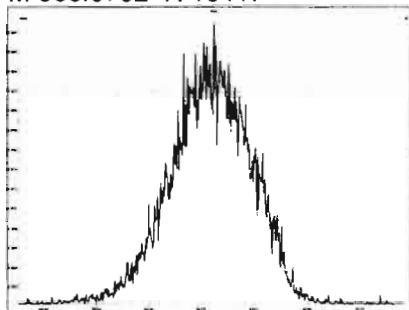
M 416.9760 R 10203



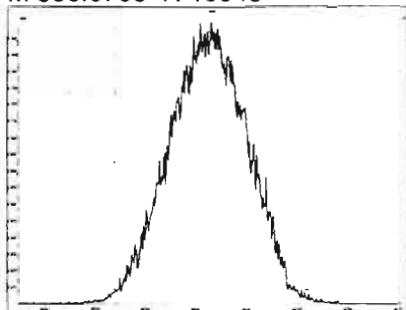
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed: Thursday, January 30, 2020 14:09:31 Pacific Standard Time

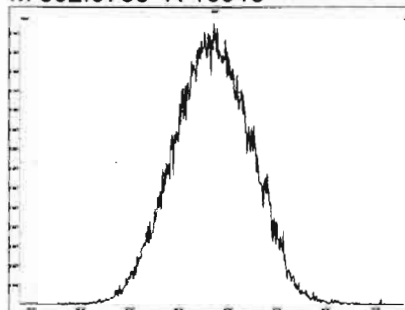
M 366.9792 R 10417



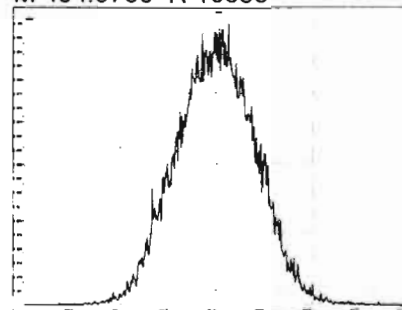
M 380.9760 R 10548



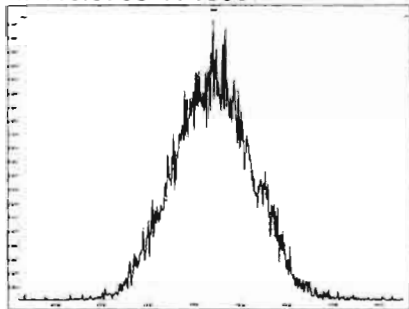
M 392.9760 R 10915



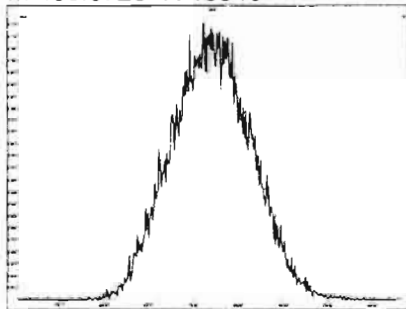
M 404.9760 R 10638



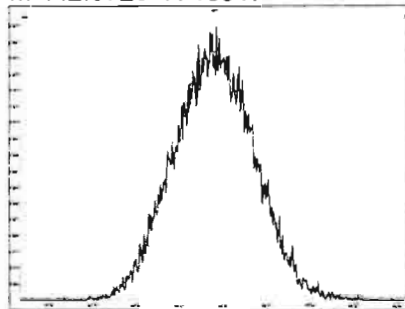
M 416.9760 R 10637



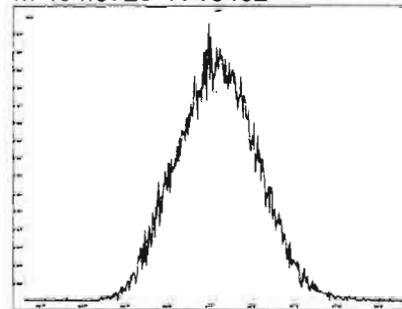
M 430.9728 R 10546



M 442.9728 R 10917



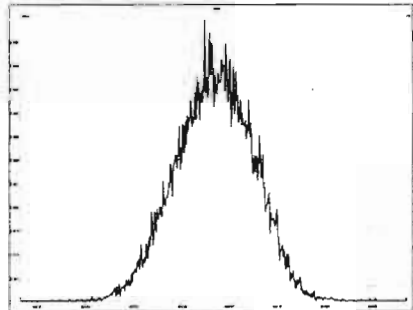
M 454.9728 R 10462



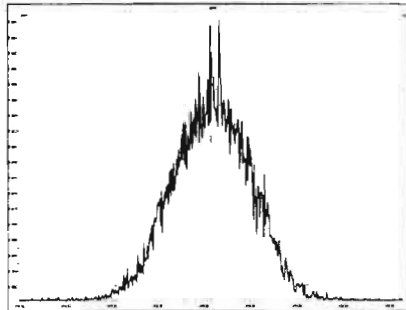
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Thursday, January 30, 2020 14:10:21 Pacific Standard Time

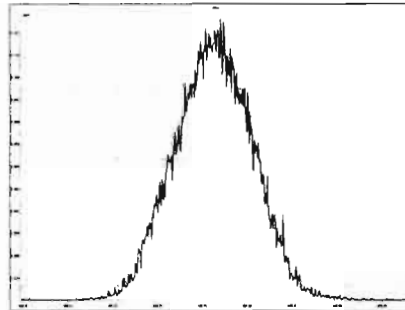
M 404.9760 R 10590



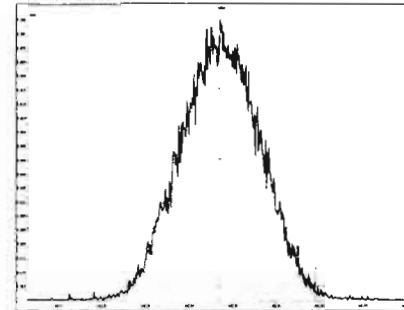
M 416.9760 R 11415



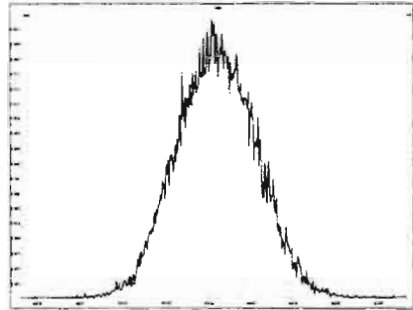
M 430.9728 R 10778



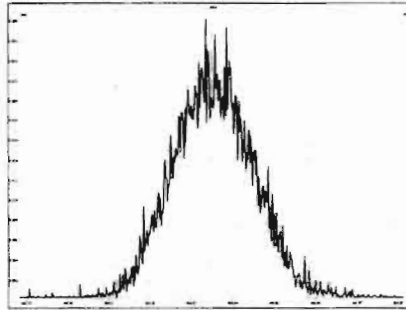
M 442.9728 R 10962



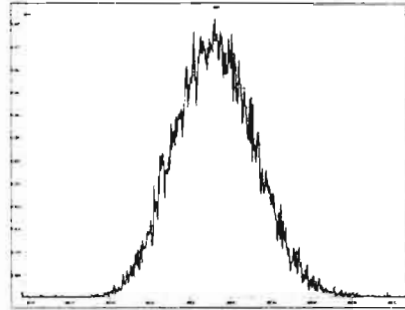
M 454.9728 R 10775



M 466.9728 R 10685



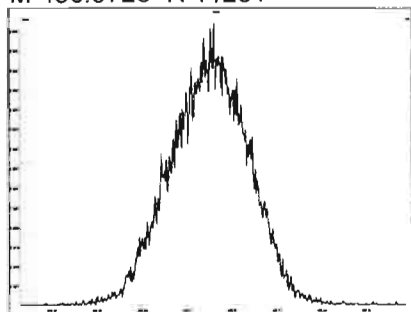
M 480.9696 R 10373



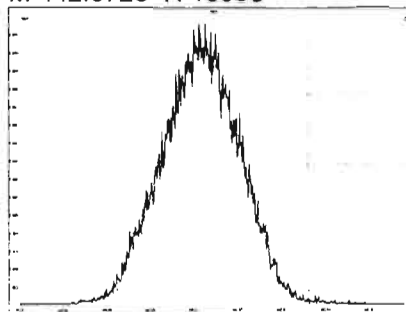
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Thursday, January 30, 2020 14:10:50 Pacific Standard Time

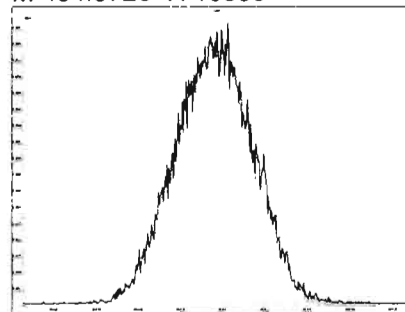
M 430.9728 R 11261



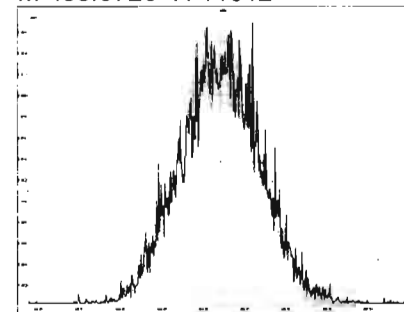
M 442.9728 R 10963



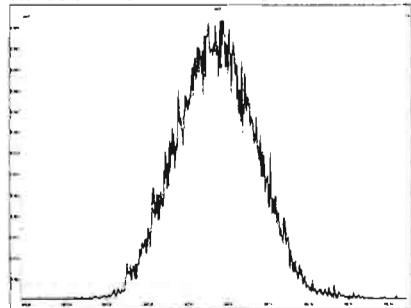
M 454.9728 R 10639



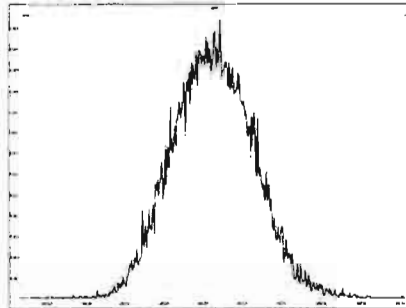
M 466.9728 R 11012



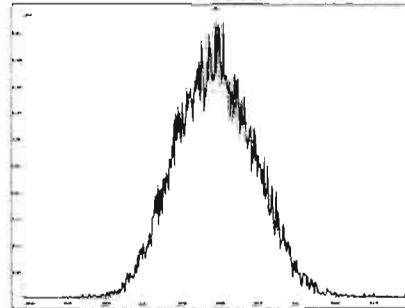
M 480.9696 R 10682



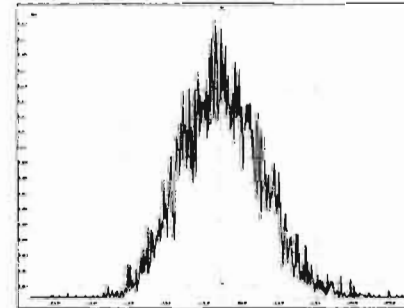
M 492.9696 R 10160



M 504.9696 R 10503



M 516.9697 R 10915



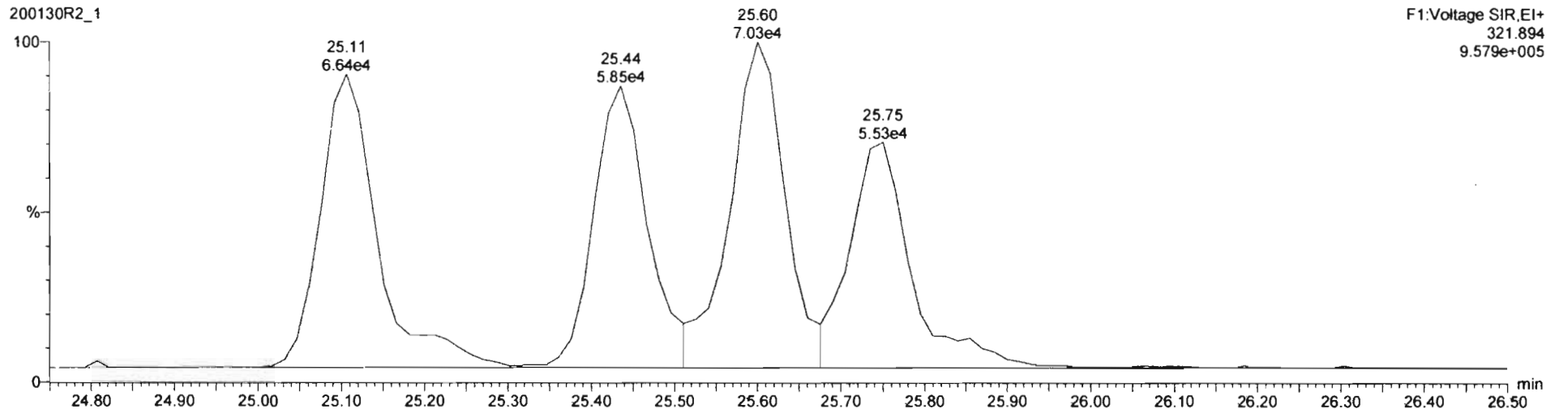
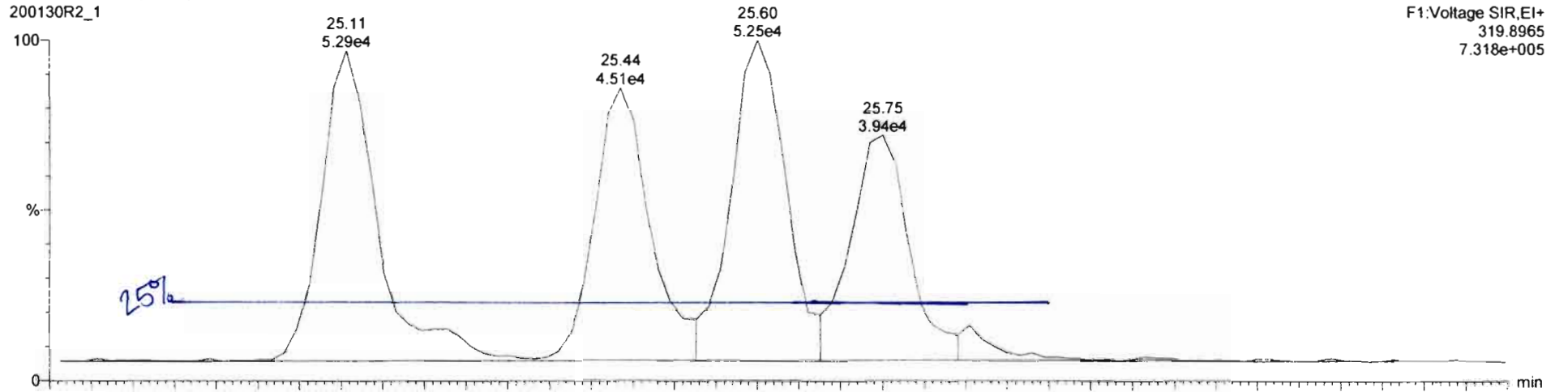
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Last Altered: Thursday, January 30, 2020 15:27:11 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:27:21 Pacific Standard Time

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

Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

1,3,6,8-TCDD (First)





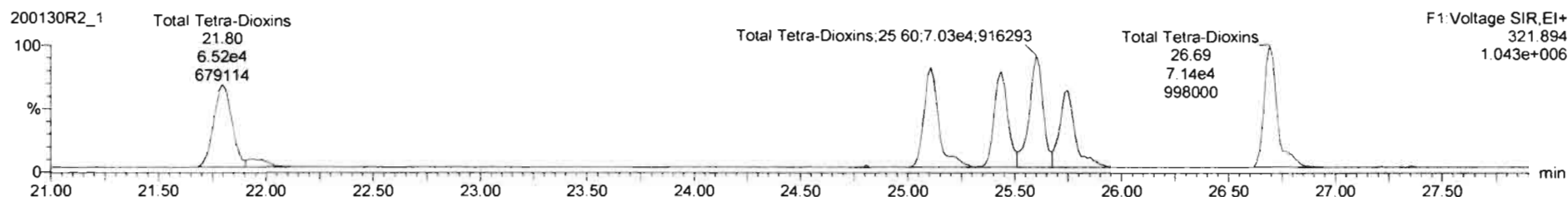
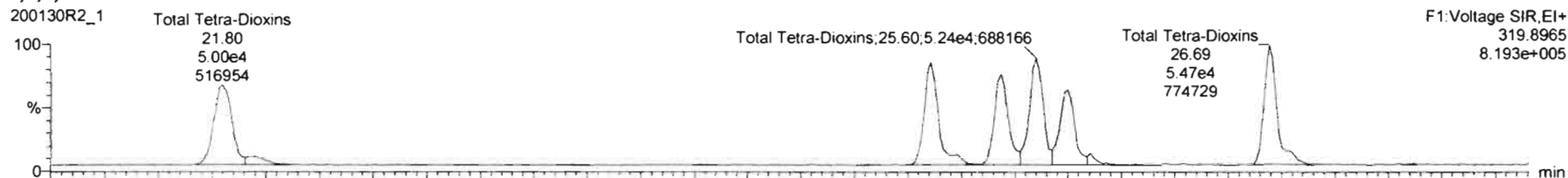
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Last Altered: Thursday, January 30, 2020 15:26:25 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

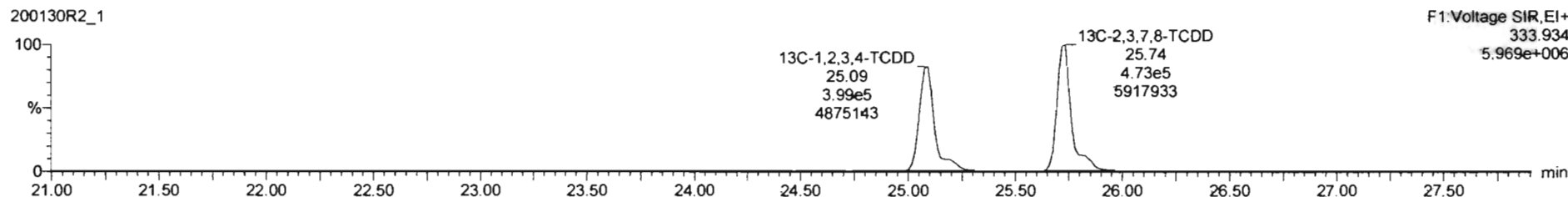
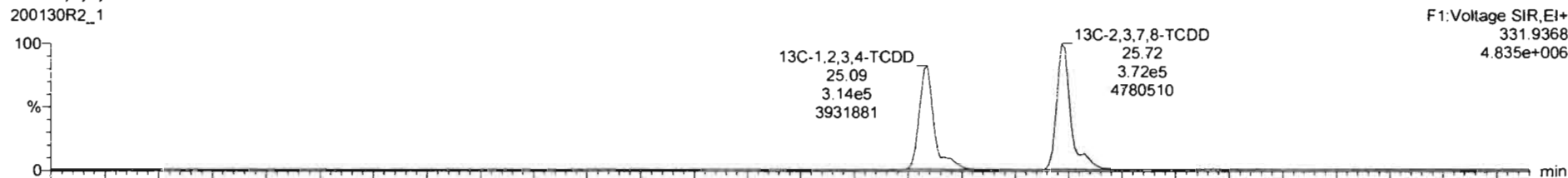
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Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

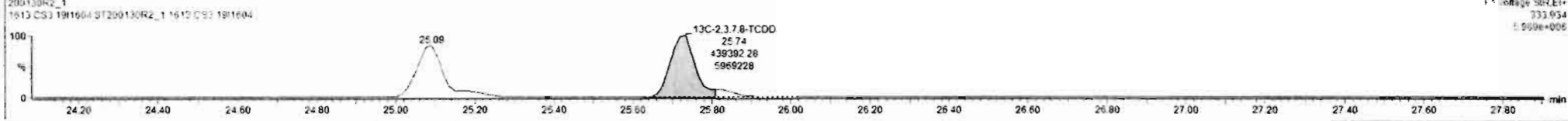
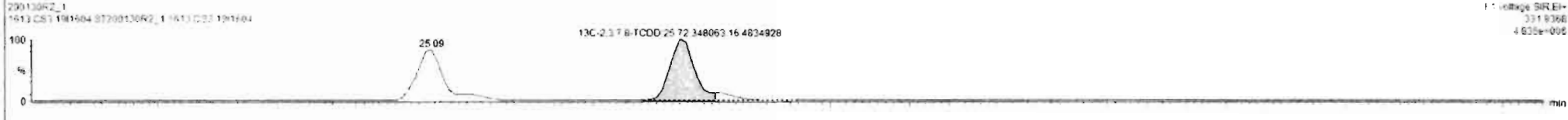
**2,3,7,8-TCDD**



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



#	Name	Resp	IS Resp	Pred RA	RA	wly	RRF	Pred RT	RT	RT Flag	Pred RRT	RRT	Conc	%Rec	STD out
1	2,3,7,8-TCDD	8.34e4	7.87e5	0.77	0.78	NO	0.8240	25.75	25.75	NO	1.001	1.001	12.9	129	NO
2	1,2,3,7,8-PeCDD	2.78e5	5.26e5	6.63	0.65	NO	0.9116	30.67	30.67	NO	1.001	1.001	53.6	107	NO
3	1,2,3,4,7,8-HxCDD	2.06e5	5.59e5	1.24	1.24	NO	0.8704	34.01	34.01	NO	1.000	1.000	56.5	113	NO
4	1,2,3,6,7,8-HxCDD	3.03e5	8.75e5	1.24	1.21	NO	0.7841	34.09	34.12	NO	1.000	1.001	57.2	115	NO
5	1,2,3,7,8,9-HxCDD	2.82e5	6.61e5	1.24	1.23	NO	0.7985	34.40	34.39	NO	1.001	1.001	53.5	107	NO
6	1,2,3,4,6,7,8-HpCDD	2.22e5	5.26e5	1.04	1.04	NO	0.7369	37.53	37.93	NO	1.000	1.000	57.2	114	NO
7	OCDD	4.36e5	9.36e5	0.89	0.87	NO	0.8000	40.91	40.82	NO	1.000	1.000	117	117	NO
8	2,3,7,8-TCDF	7.96e4	1.13e6	0.77	0.71	NO	0.5878	24.88	24.87	NO	1.001	1.001	12.0	120	NO
9	1,2,3,7,8-PeCDF	4.15e5	8.96e5	1.55	1.50	NO	0.8261	29.39	29.36	NO	1.001	1.001	56.0	112	NO
10	2,3,4,7,8-PeCDF	4.16e5	8.57e5	1.55	1.55	NO	0.8498	30.38	30.36	NO	1.001	1.001	57.1	114	NO
11	1,2,3,4,7,8-HxCDF	2.84e5	6.48e5	1.24	1.17	NO	0.7866	33.12	33.15	NO	1.000	1.001	55.6	112	NO
12	1,2,3,6,7,8-HxCDF	3.16e5	7.74e5	1.24	1.16	NO	0.7201	33.25	33.26	NO	1.000	1.001	56.6	114	NO
13	2,3,4,6,7,8-HxCDF	3.05e5	7.04e5	1.24	1.20	NO	0.7665	33.86	33.84	NO	1.001	1.000	56.4	113	NO
14	1,2,3,7,8,9-HxCDF	2.46e5	6.28e5	1.24	1.17	NO	0.7085	34.73	34.74	NO	1.000	1.000	55.4	111	NO
15	1,2,3,4,6,7,8-HpCDF	2.16e5	5.39e5	1.04	0.96	NO	0.7316	36.52	36.49	NO	1.001	1.000	54.7	109	NO
16	1,2,3,4,7,8,9-HpCDF	1.90e5	4.09e5	1.04	0.99	NO	0.8164	36.50	38.51	NO	1.000	1.000	56.8	114	NO
17	OCDF	4.26e5	1.05e6	0.89	0.85	NO	0.6368	41.10	41.12	NO	1.000	1.001	126	126	NO



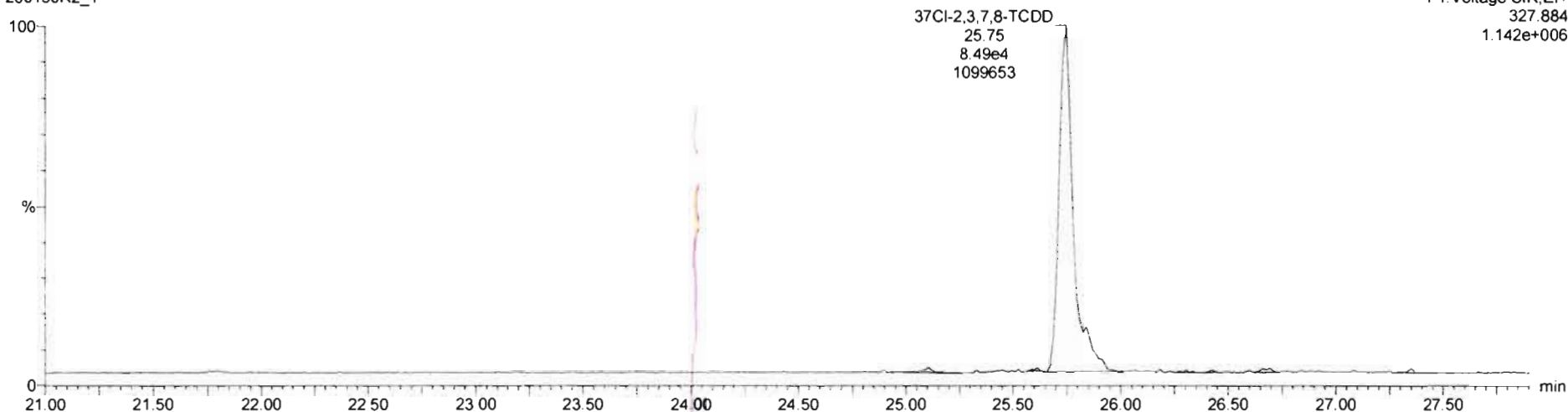
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Last Altered: Thursday, January 30, 2020 15:26:25 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

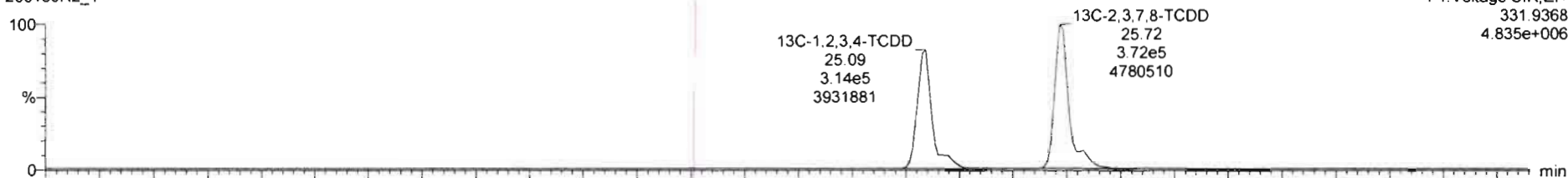
**37Cl-2,3,7,8-TCDD**

200130R2\_1

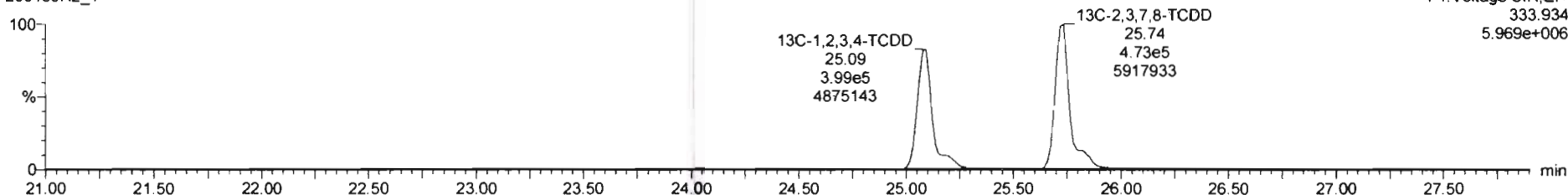


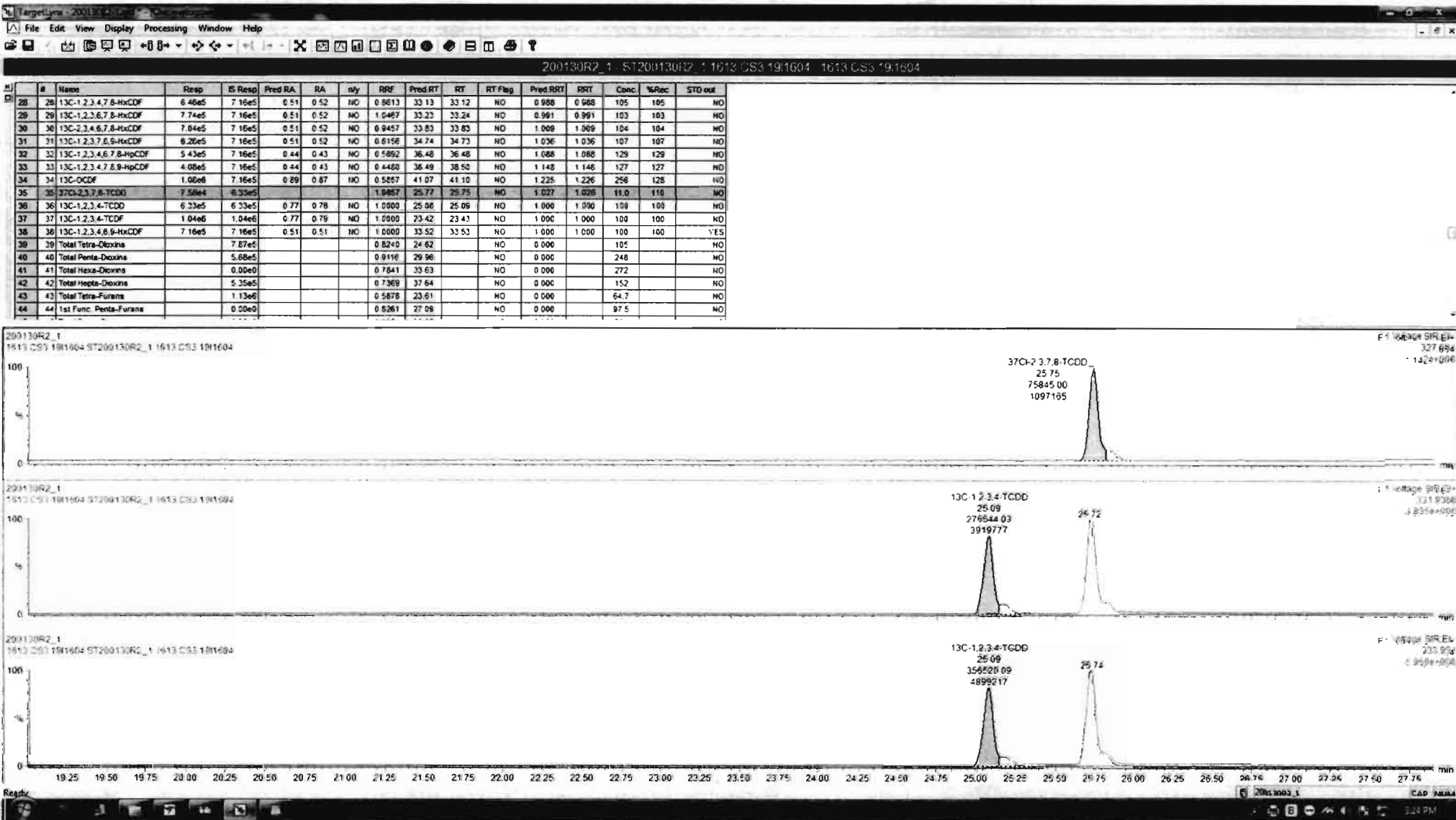
**13C-1,2,3,4-TCDD**

200130R2\_1



200130R2\_1



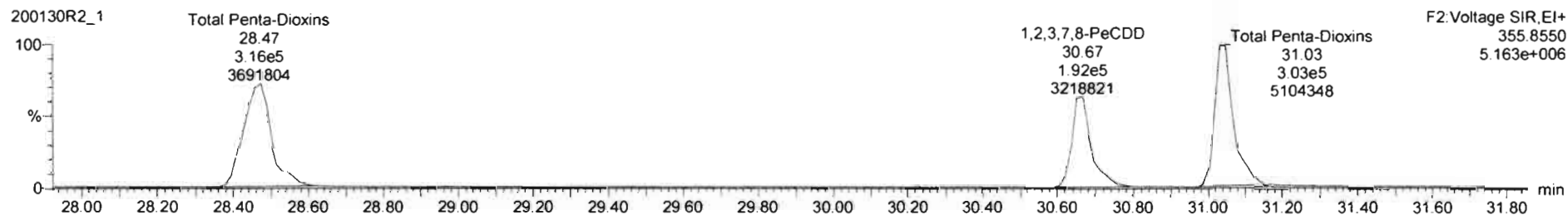
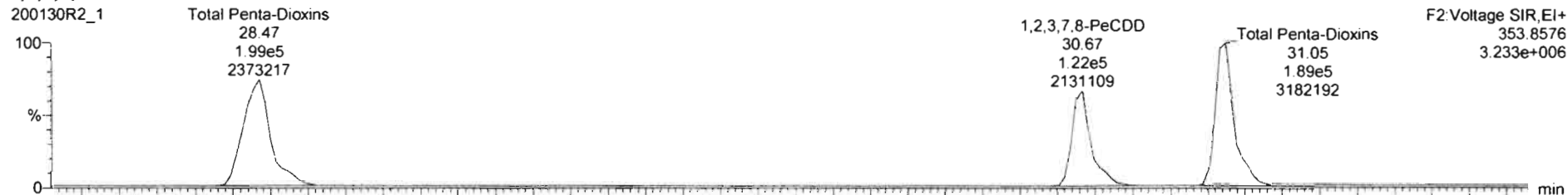


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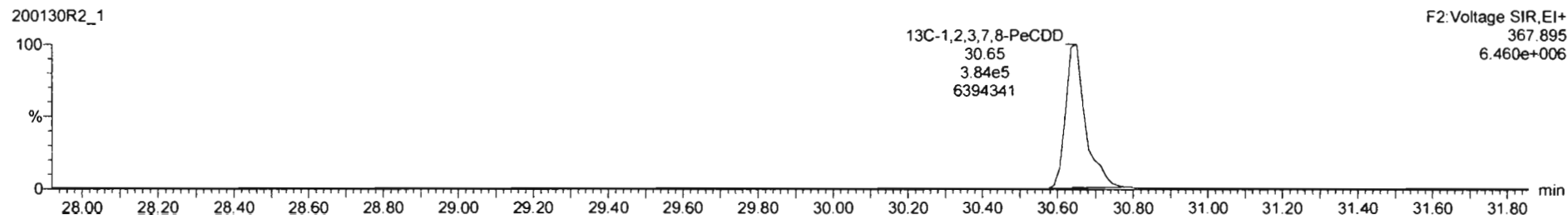
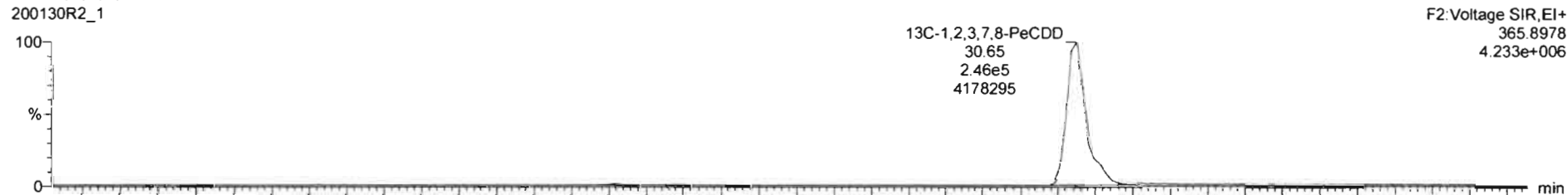
Last Altered: Thursday, January 30, 2020 15:26:25 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

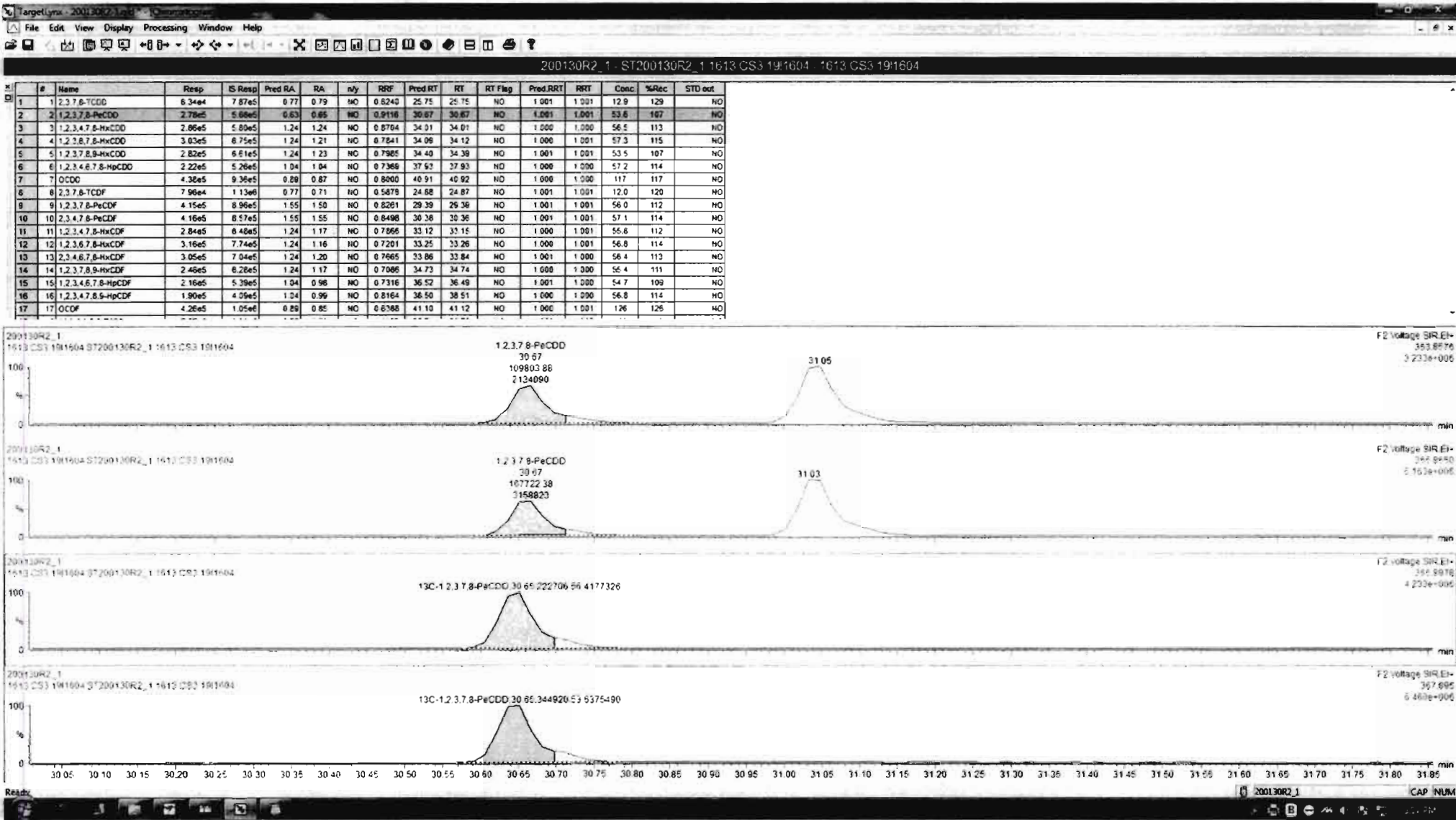
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**1,2,3,7,8-PeCDD**



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





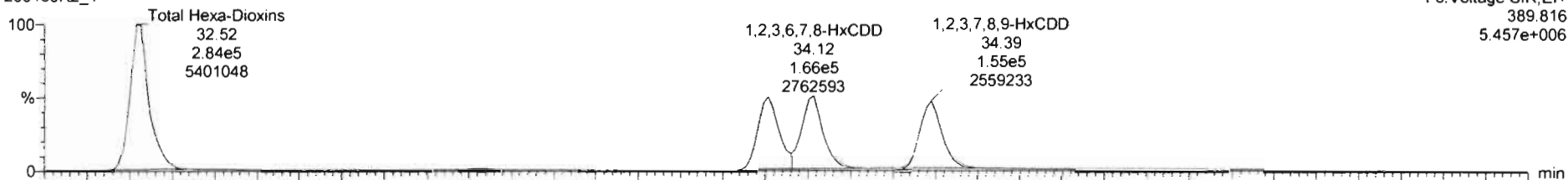
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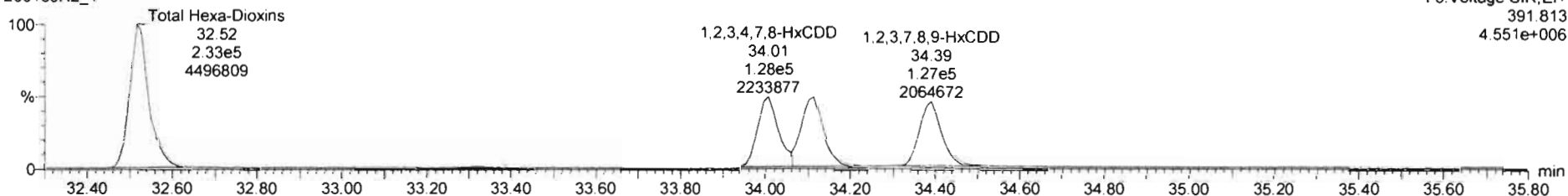
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1,2,3,4,7,8-HxCDD

200130R2\_1

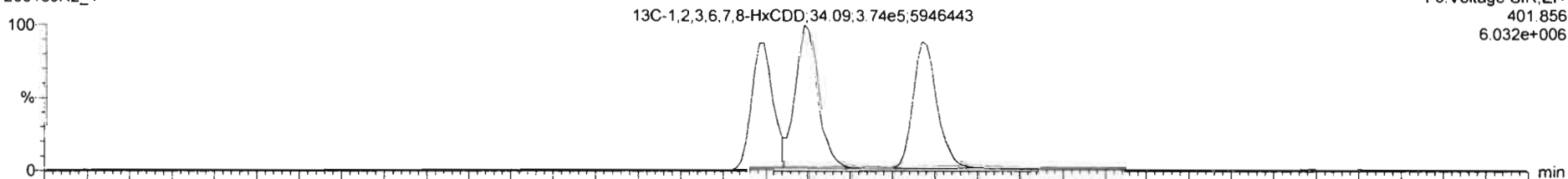


200130R2\_1

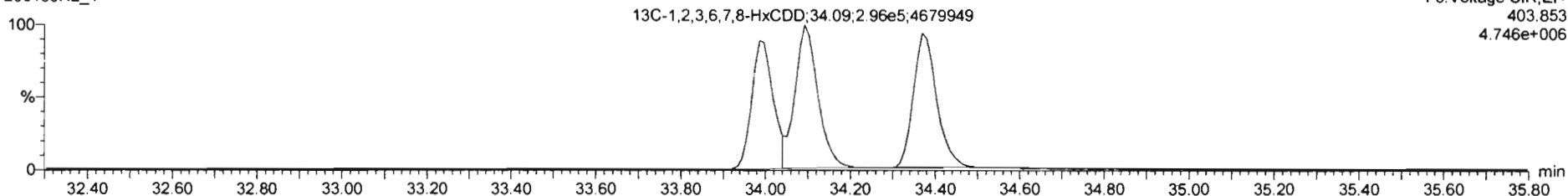


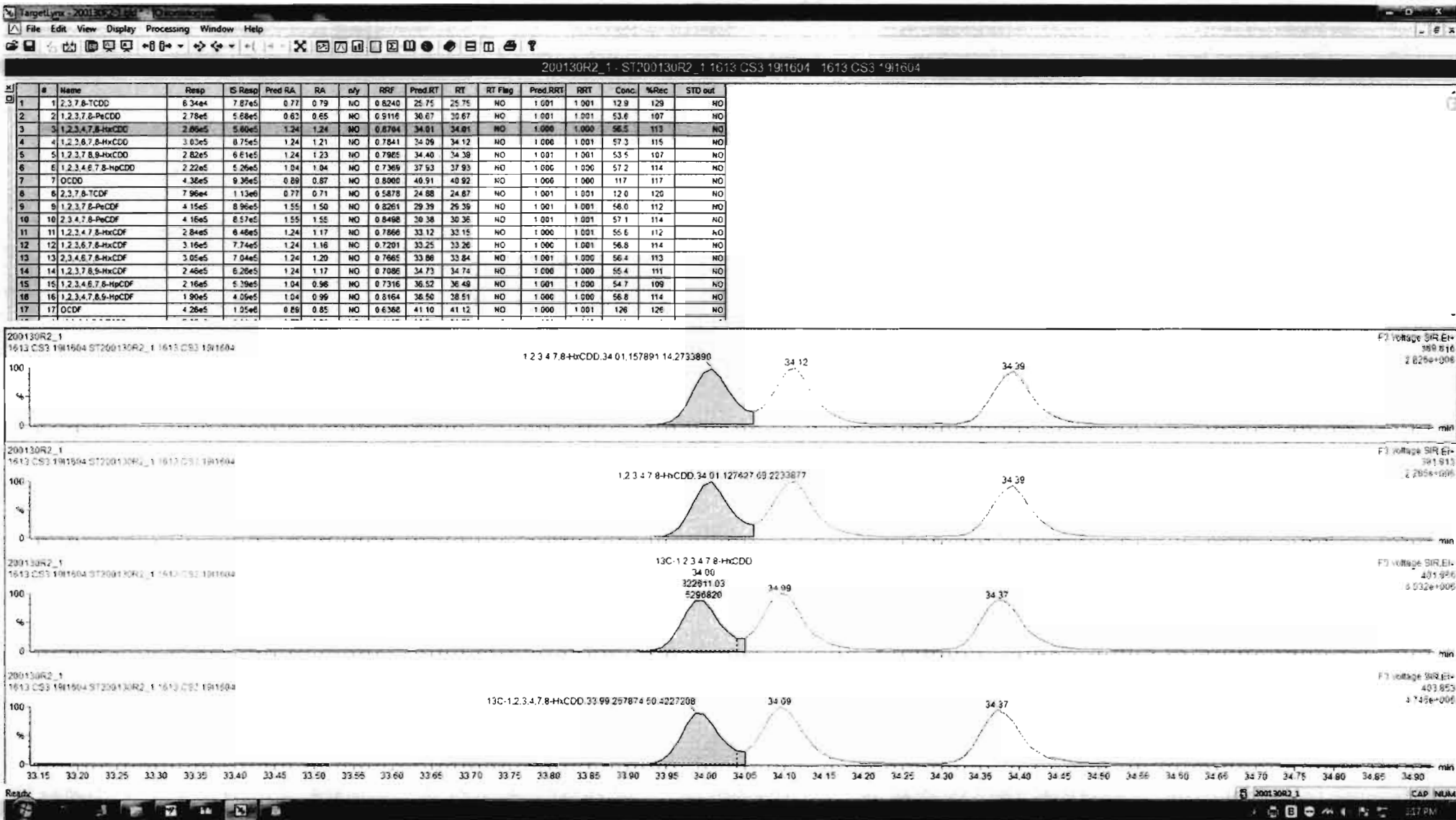
13C-1,2,3,4,7,8-HxCDD

200130R2\_1

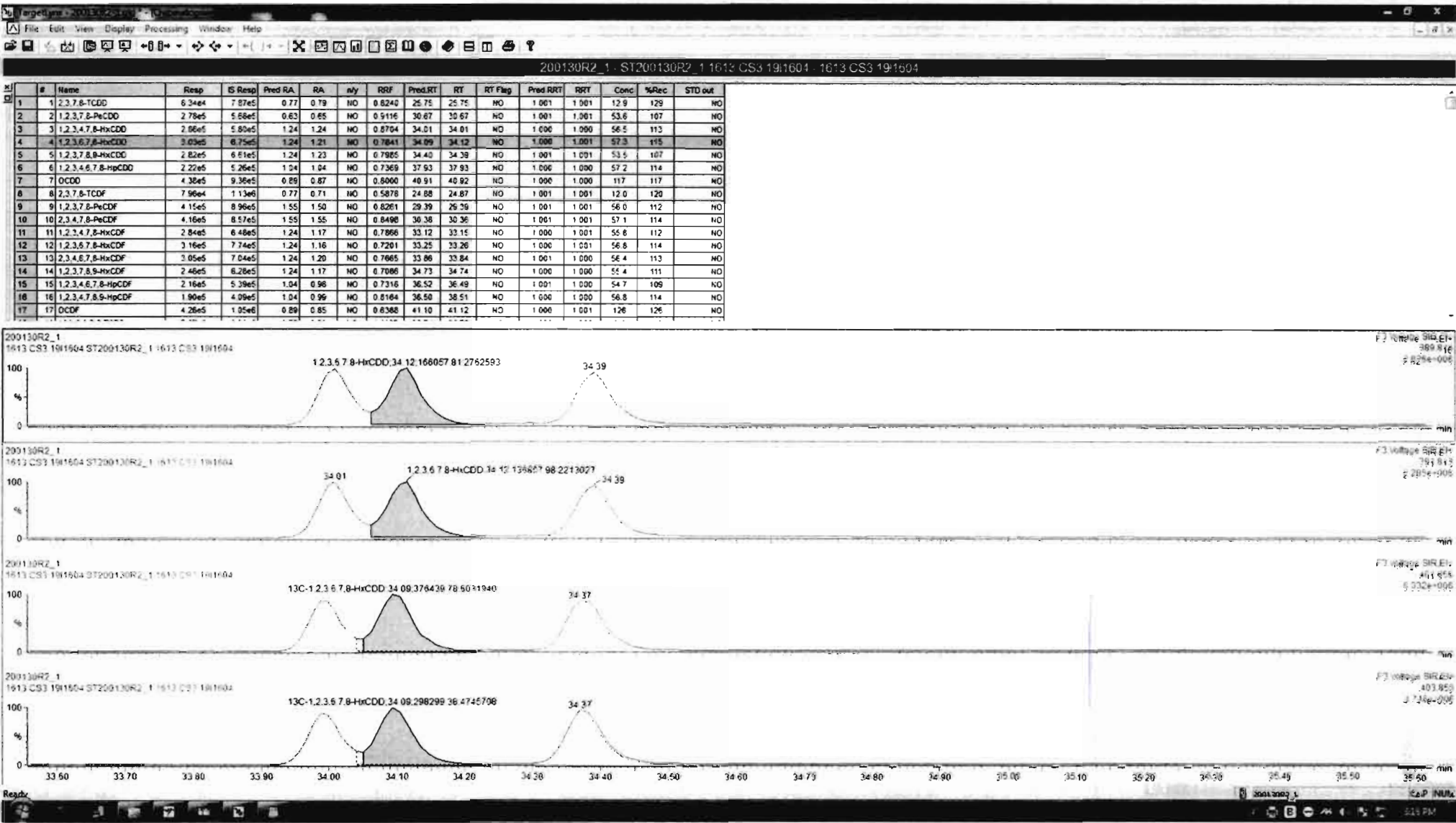


200130R2\_1

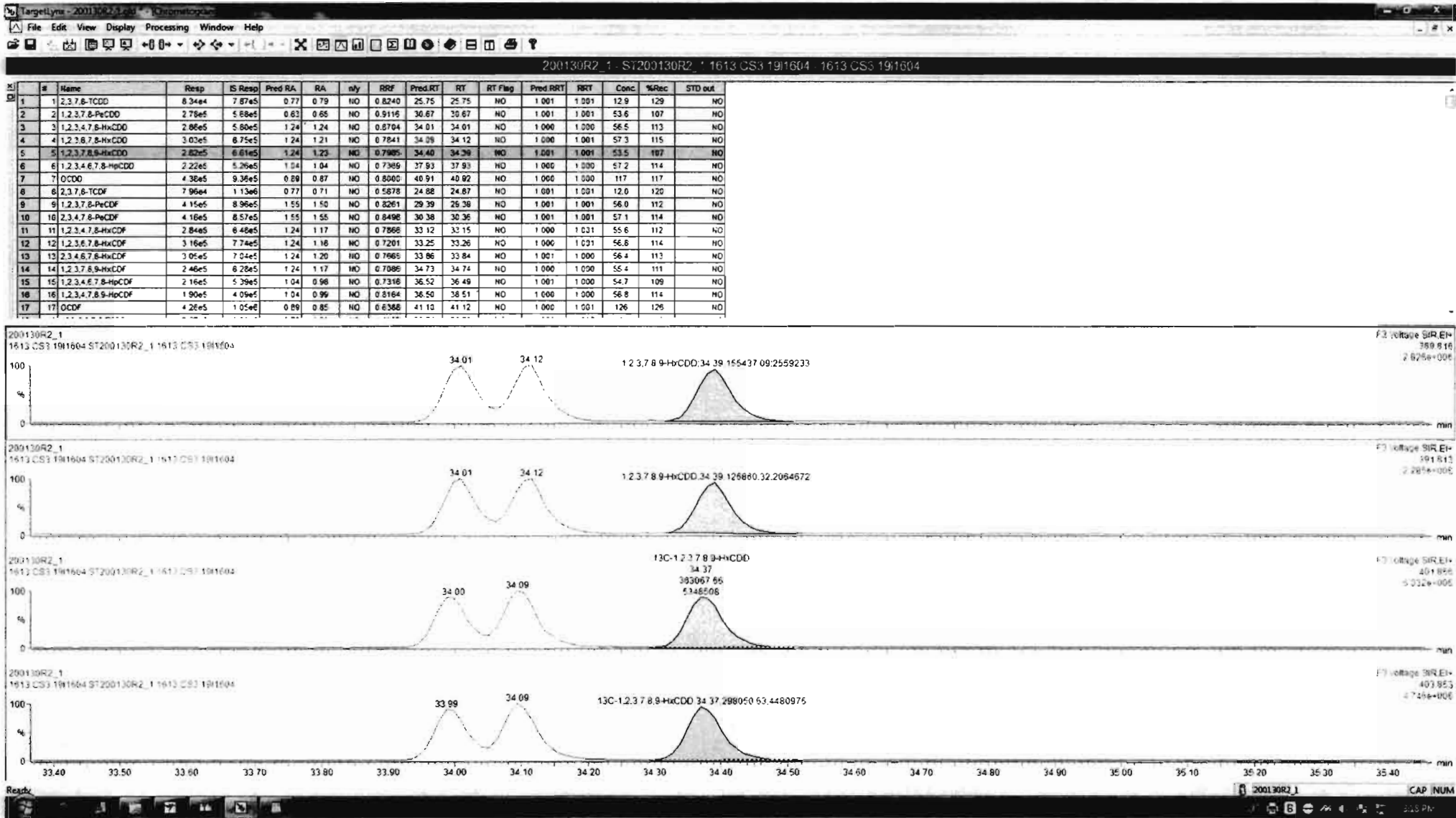








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Dataset: Untitled

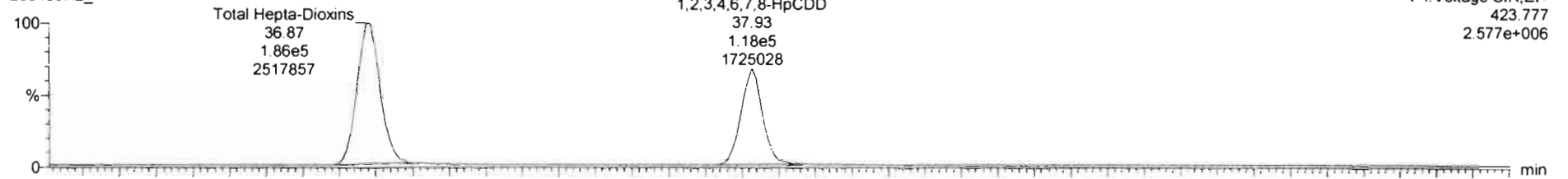
Last Altered: Thursday, January 30, 2020 15:26:25 Pacific Standard Time

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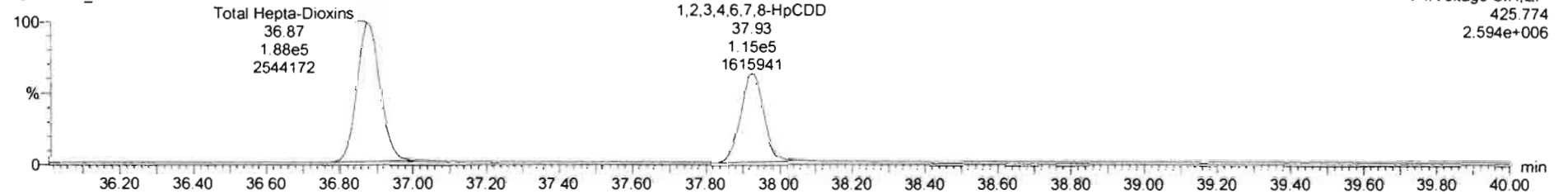
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**1,2,3,4,6,7,8-HpCDD**

200130R2\_1

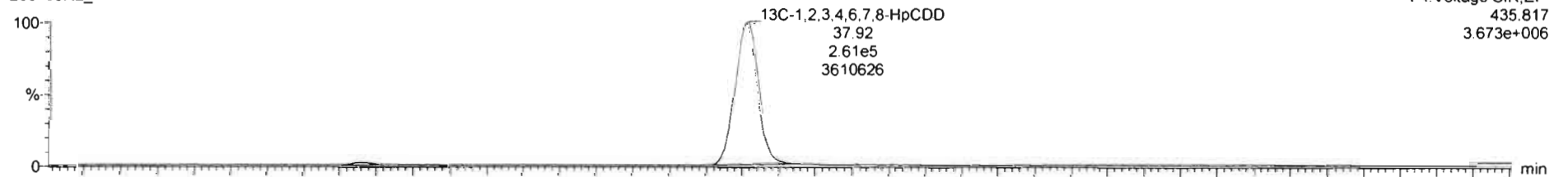


200130R2\_1

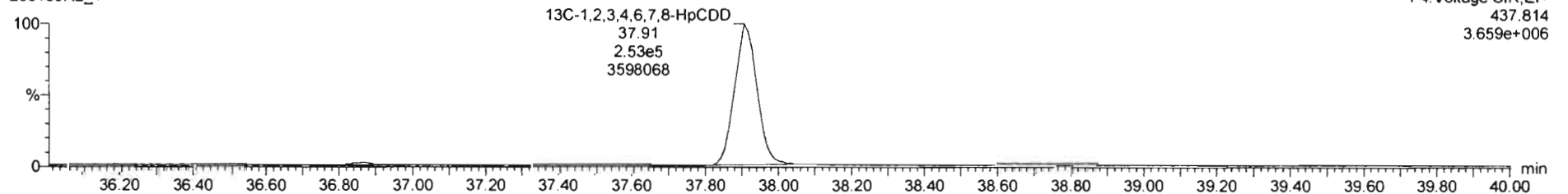


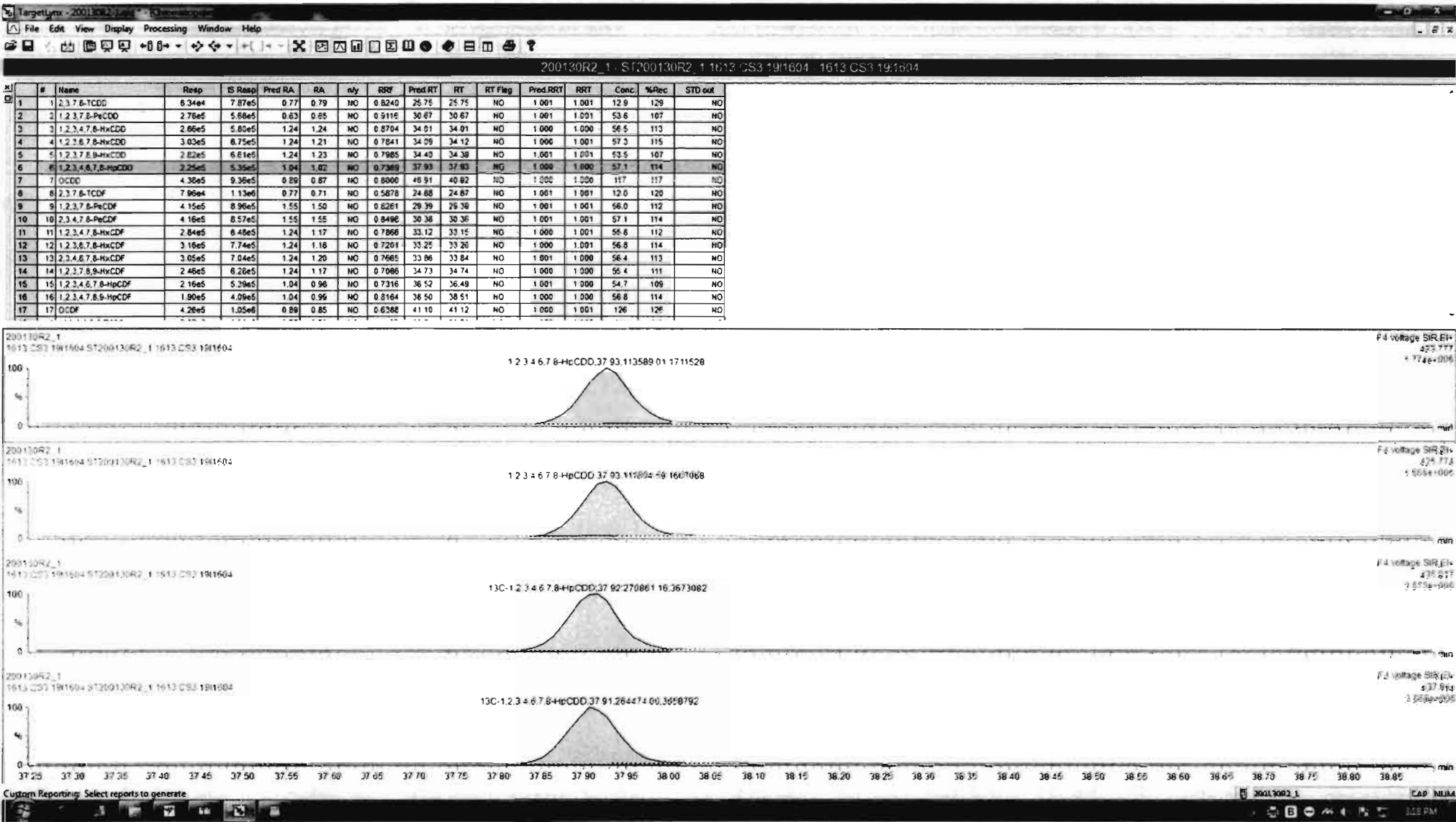
**13C-1,2,3,4,6,7,8-HpCDD**

200130R2\_1



200130R2\_1

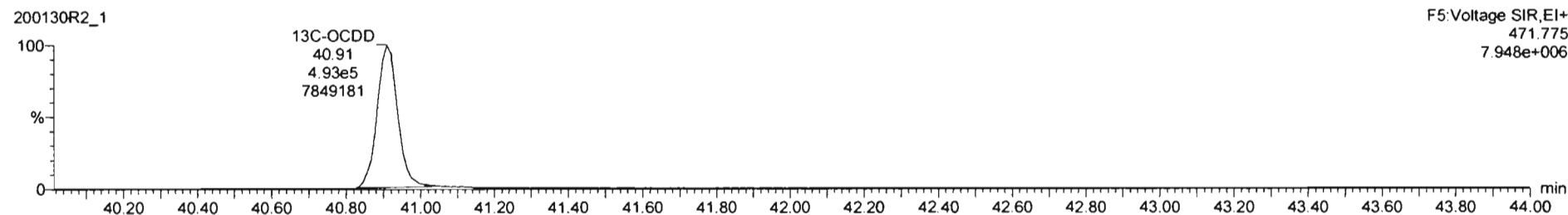
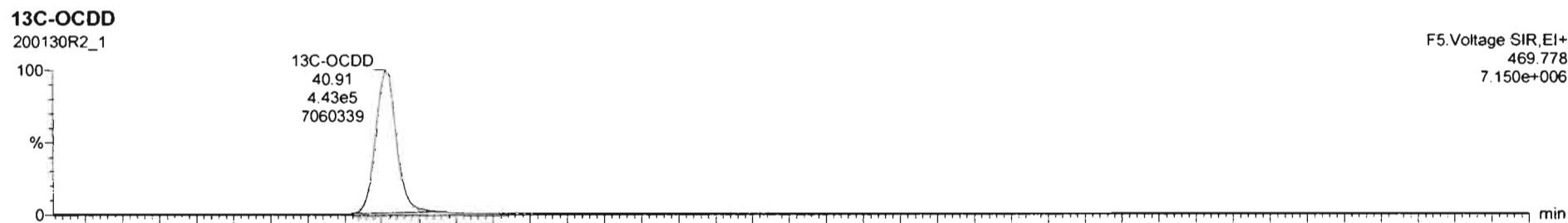
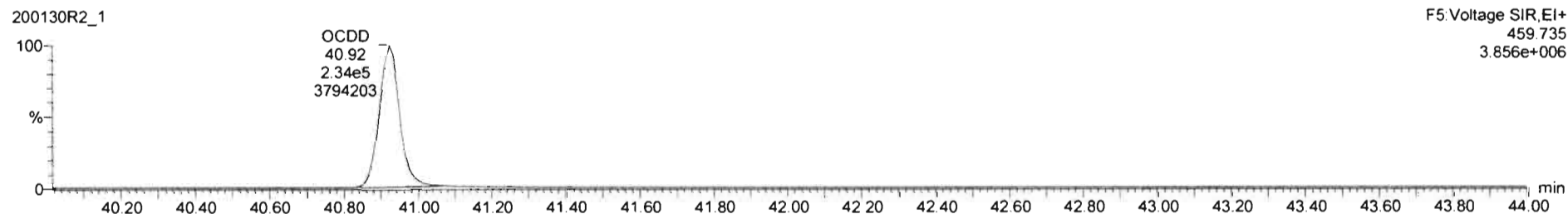
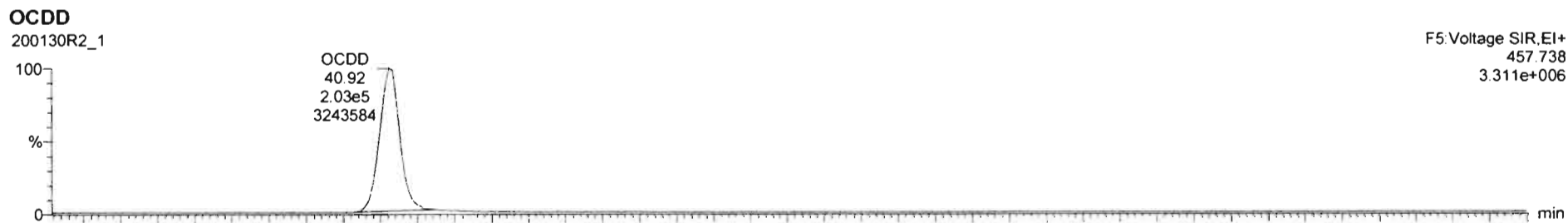




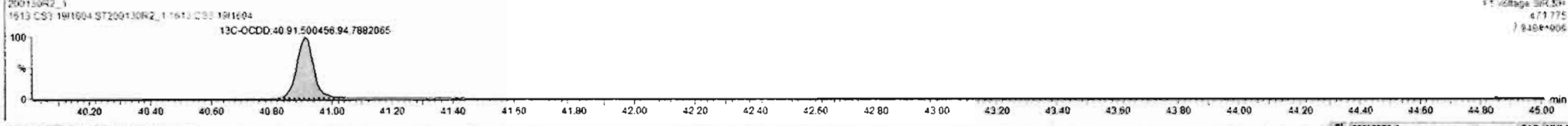
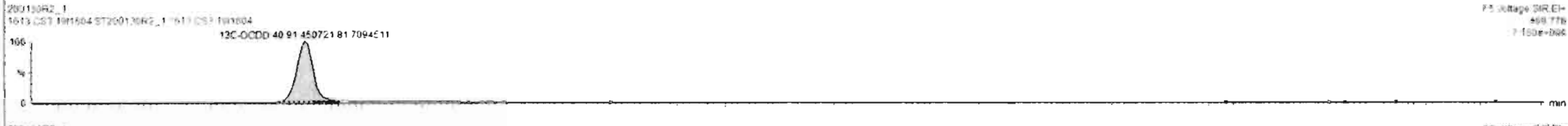
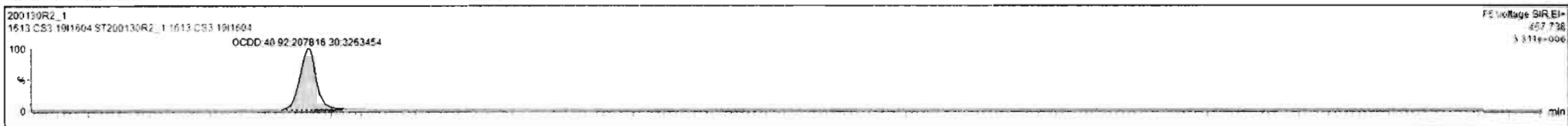
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Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604



#	Name	Resp	IS Resp	Pred RA	RA	n/y	RRF	Pred RT	RT	RT Flag	Pred RRT	RRT	Conc	%Rec	STD out
1	2,3,7,8-TCDD	6.34e4	7.87e5	0.77	0.79	NO	0.8240	25.75	25.75	NO	1.001	1.001	12.9	129	NO
2	1,2,3,7,8-PeCDD	2.78e5	5.69e5	0.63	0.65	NO	0.5118	36.67	36.67	NO	1.001	1.001	53.6	107	NO
3	1,2,3,4,7,8-HxCDD	2.86e5	5.80e5	1.24	1.24	NO	0.8704	34.01	34.01	NO	1.000	1.000	56.5	113	NO
4	1,2,3,6,7,8-HxCDD	3.05e5	6.75e5	1.24	1.21	NO	0.7841	34.09	34.12	NO	1.000	1.001	57.3	115	NO
5	1,2,3,7,8,9-HxCDD	2.82e5	6.61e5	1.24	1.23	NO	0.7985	34.40	34.39	NO	1.001	1.001	53.5	107	NO
6	1,2,3,4,6,7,8-HpCDD	2.25e5	5.35e5	1.04	1.02	NO	0.7365	37.93	37.93	NO	1.000	1.000	57.1	114	NO
7	OCDD	4.44e5	9.51e5	0.89	0.88	NO	0.6900	40.91	40.92	NO	1.000	1.000	117	117	NO
8	2,3,7,8-TCDF	7.96e4	1.13e6	0.77	0.71	NO	0.5878	24.88	24.87	NO	1.001	1.001	12.0	120	NO
9	1,2,3,7,8-PeCDF	4.15e5	8.96e5	1.55	1.50	NO	0.8261	29.39	29.36	NO	1.001	1.001	56.0	112	NO
10	2,3,4,7,8-PeCDF	4.16e5	8.57e5	1.55	1.55	NO	0.8498	30.38	30.35	NO	1.001	1.001	57.1	114	NO
11	1,2,3,4,7,8-HxCDF	2.84e5	8.46e5	1.24	1.17	NO	0.7868	33.12	33.15	NO	1.000	1.001	55.6	112	NO
12	1,2,3,6,7,8-HxCDF	3.16e5	7.74e5	1.24	1.16	NO	0.7201	32.25	32.26	NO	1.000	1.001	56.8	114	NO
13	2,3,4,6,7,8-HxCDF	3.05e5	7.04e5	1.24	1.20	NO	0.7665	33.86	33.84	NO	1.001	1.000	56.4	113	NO
14	1,2,3,7,8,9-HxCDF	2.46e5	6.28e5	1.24	1.17	NO	0.7086	34.73	34.74	NO	1.000	1.000	55.4	111	NO
15	1,2,3,4,6,7,8-HpCDF	2.18e5	5.39e5	1.04	0.96	NO	0.7316	36.52	36.49	NO	1.001	1.000	54.7	109	NO
16	1,2,3,4,7,8,9-HpCDF	1.90e5	4.09e5	1.04	0.99	NO	0.8164	38.50	38.51	NO	1.000	1.000	56.8	114	NO
17	OCDF	4.28e5	1.05e6	0.89	0.85	NO	0.6388	41.10	41.12	NO	1.000	1.001	126	126	NO



Dataset: Untitled

Last Altered: Thursday, January 30, 2020 15:26:25 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

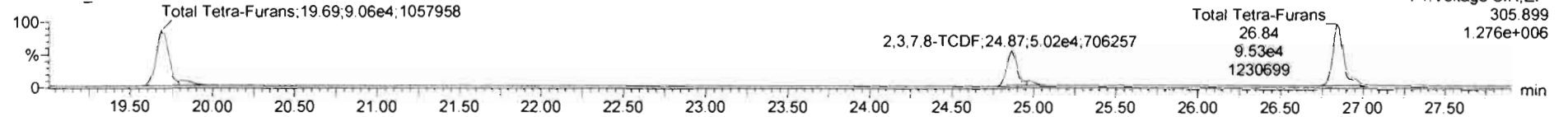
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**2,3,7,8-TCDF**

200130R2\_1

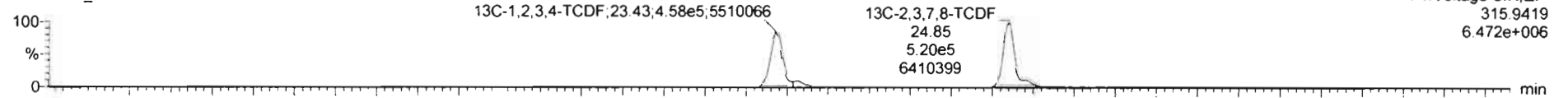


200130R2\_1

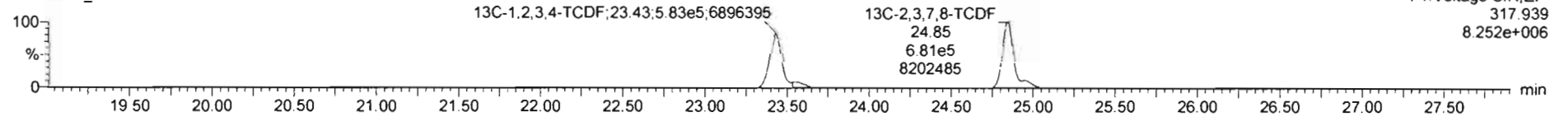


**13C-2,3,7,8-TCDF**

200130R2\_1

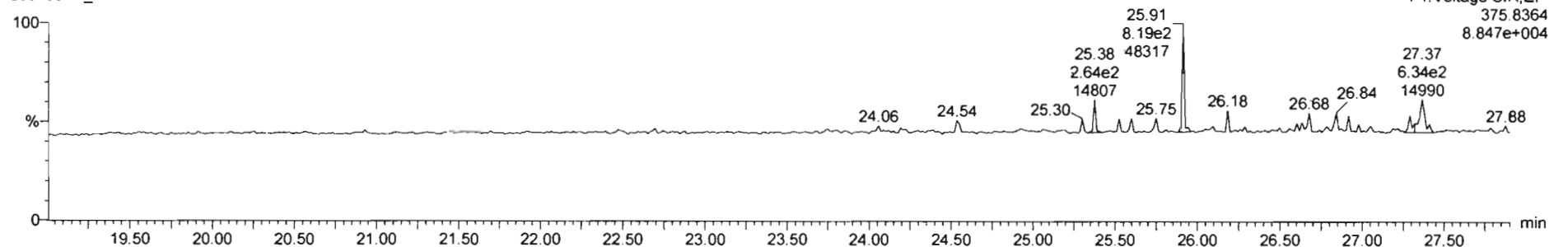


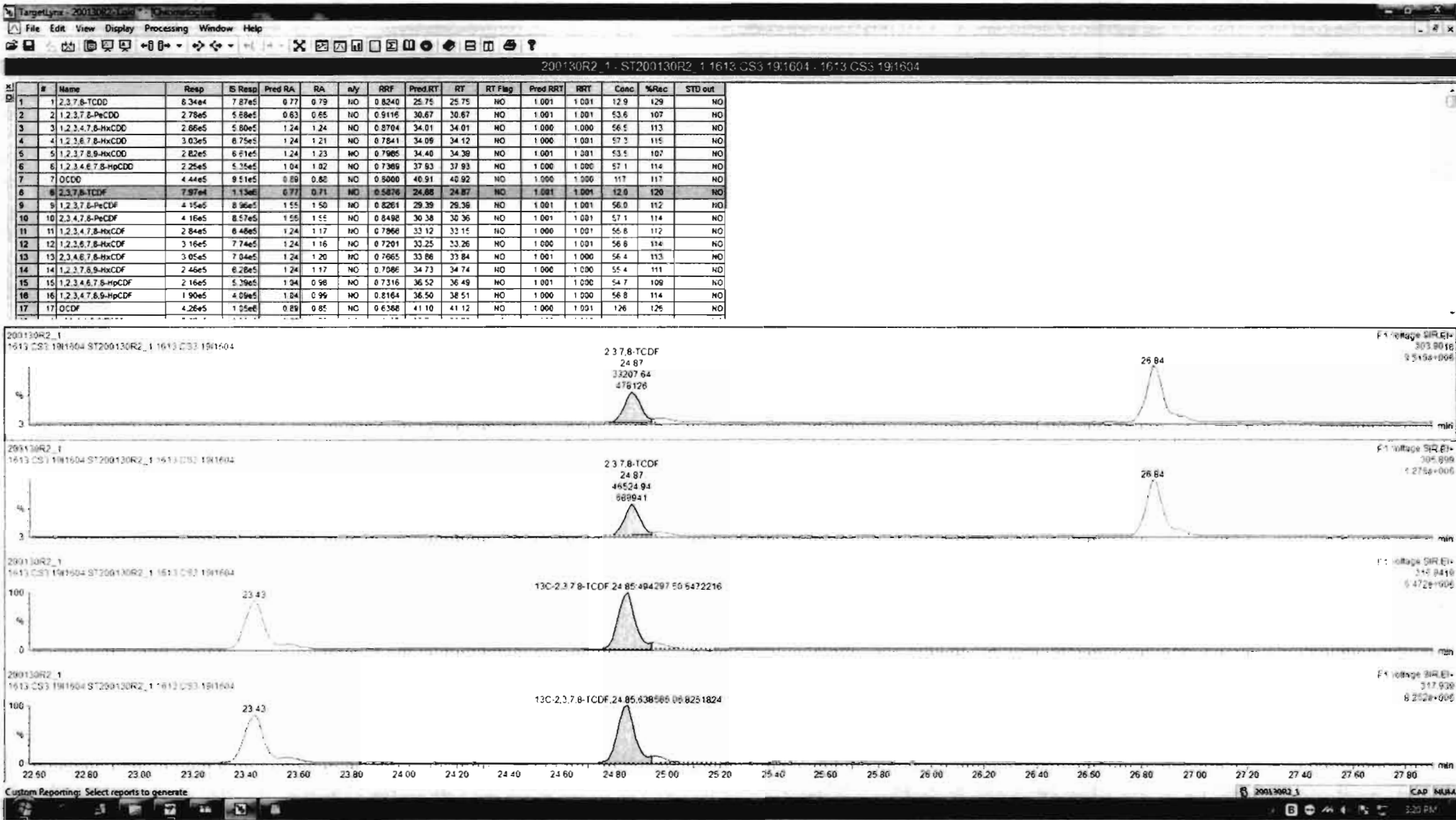
200130R2\_1



**DPE1**

200130R2\_1







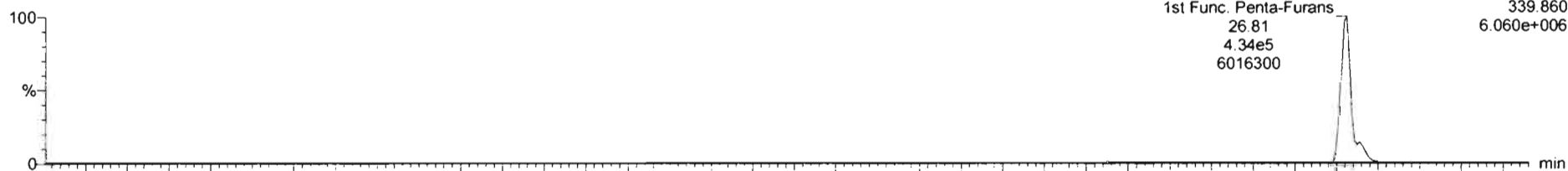
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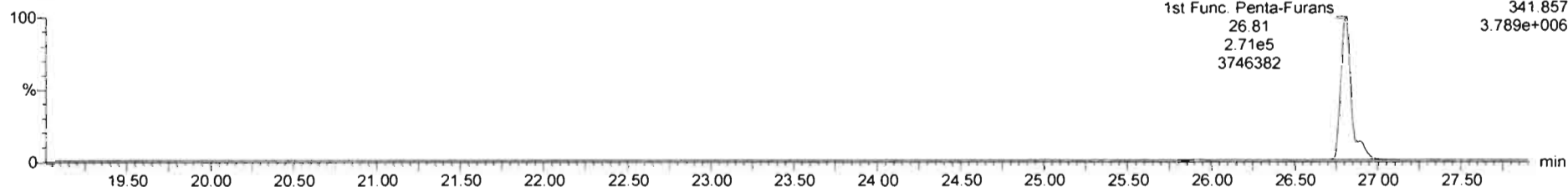
Name: 200130R2\_1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

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200130R2\_1

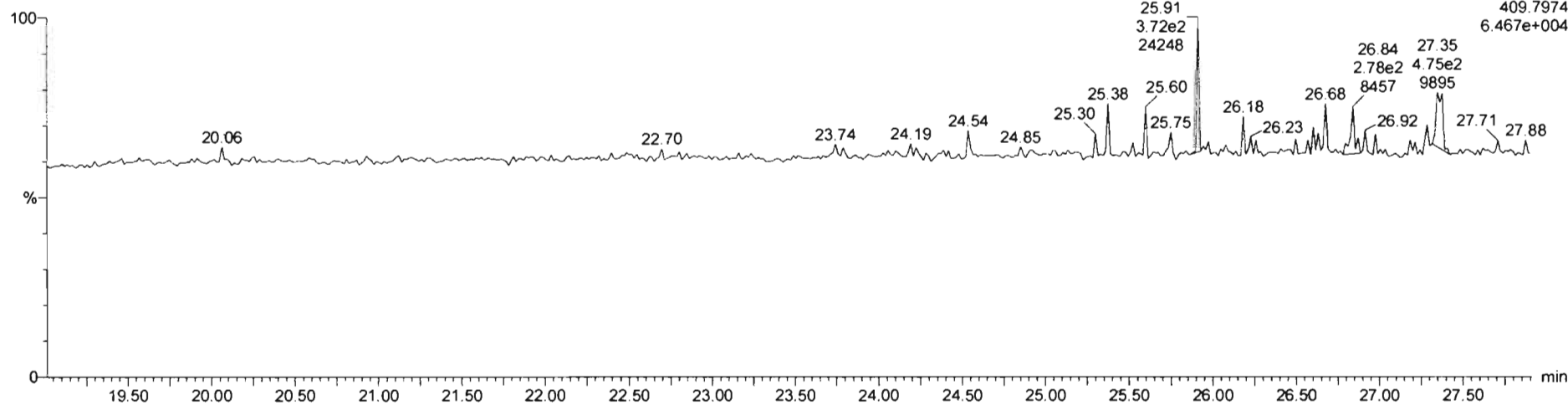


200130R2\_1



DPE6

200130R2\_1



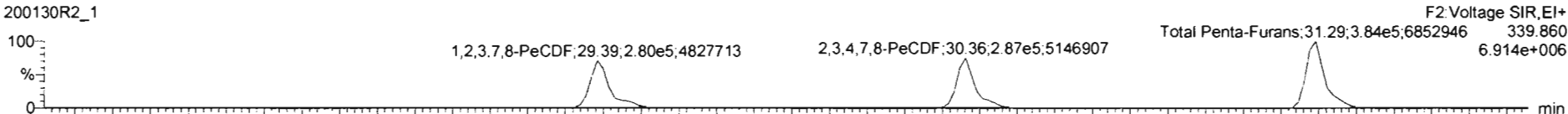
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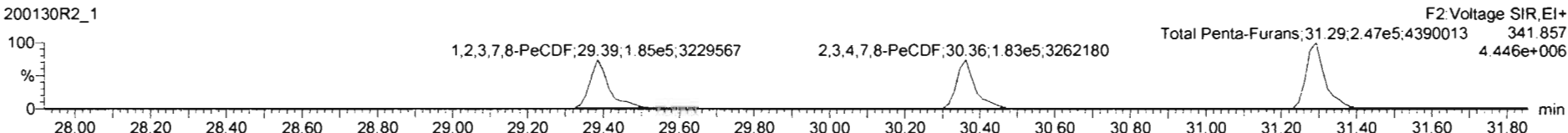
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**1,2,3,7,8-PeCDF**

200130R2\_1

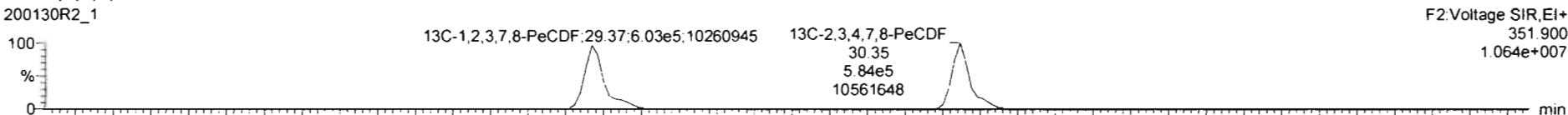


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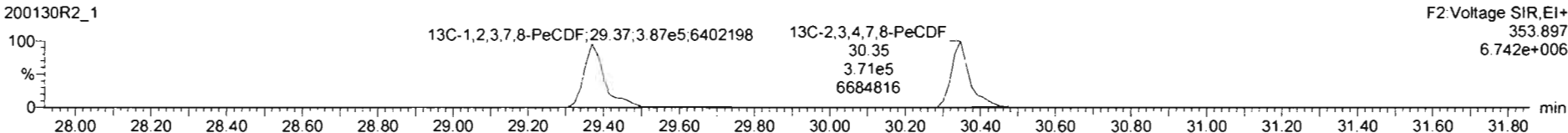


**13C-1,2,3,7,8-PeCDF**

200130R2\_1

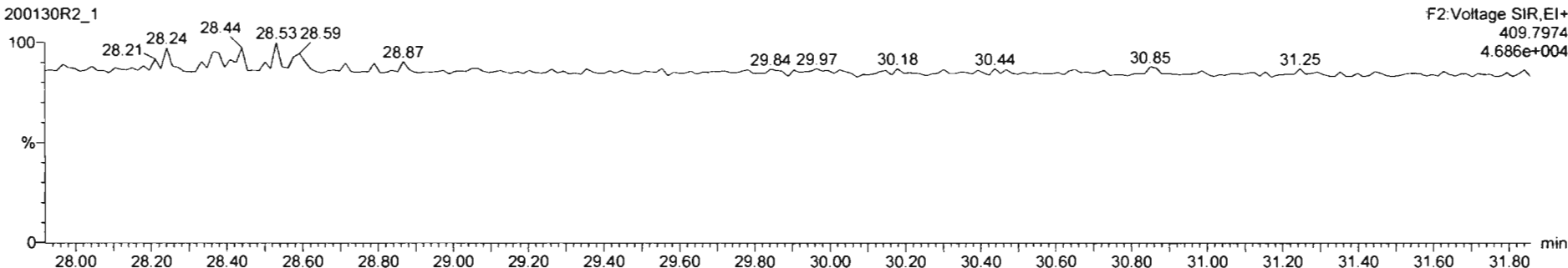


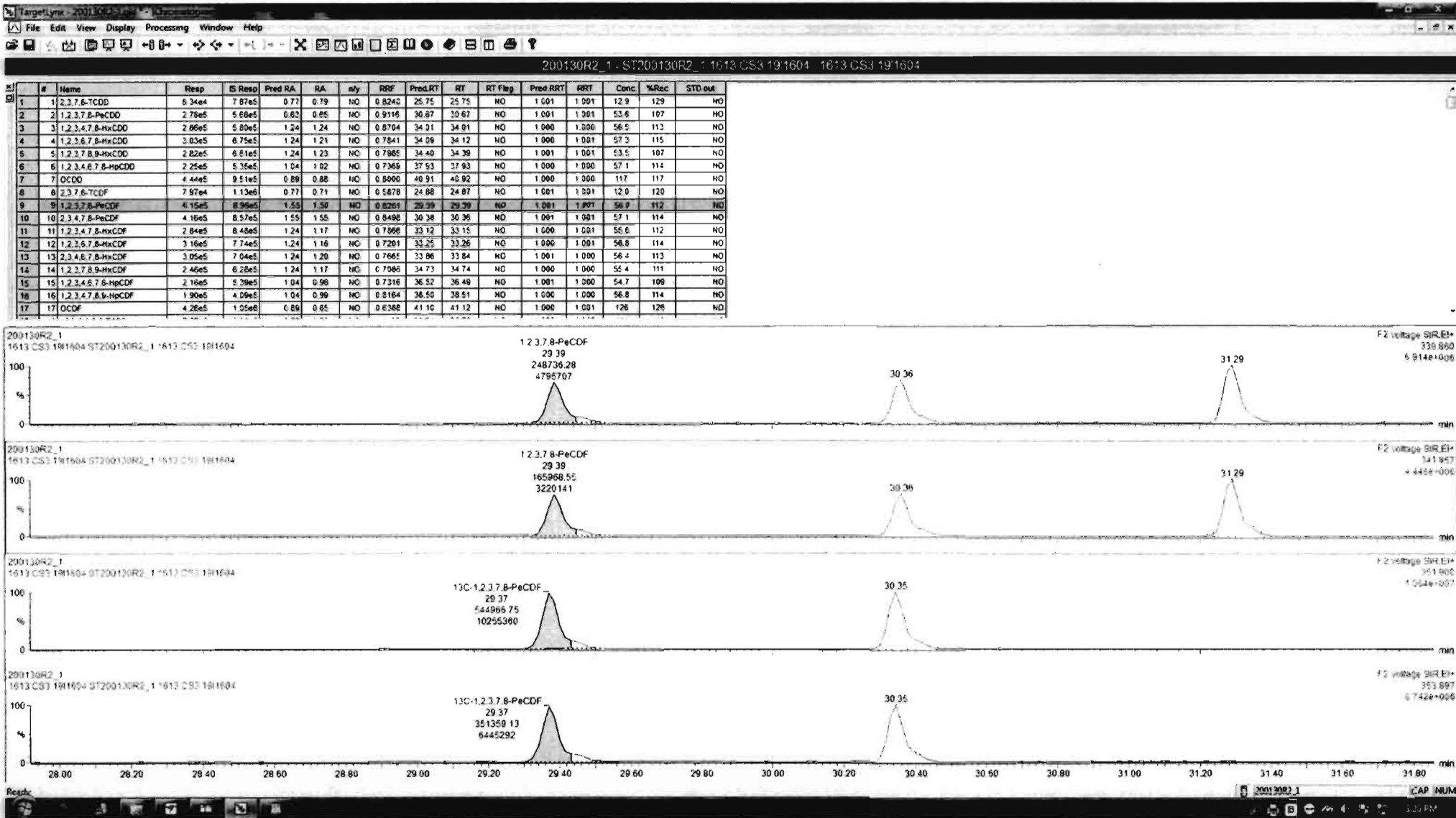
200130R2\_1

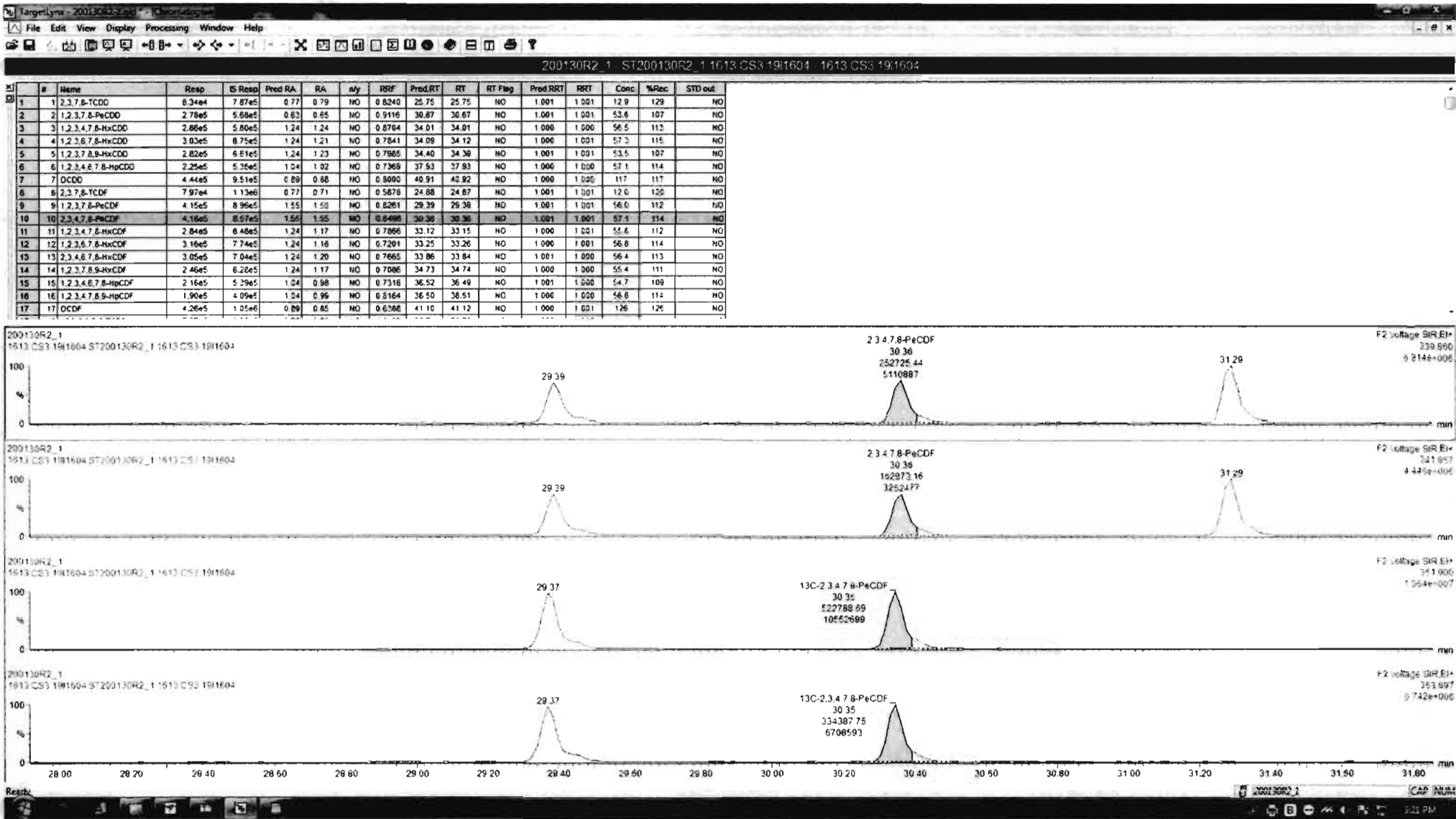


**DPE2**

200130R2\_1







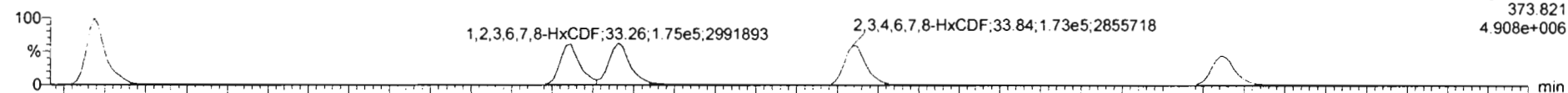
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Last Altered: Thursday, January 30, 2020 15:26:25 Pacific Standard Time  
Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

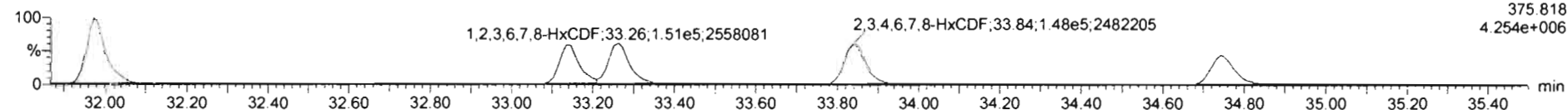
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**1,2,3,4,7,8-HxCDF**

200130R2\_1

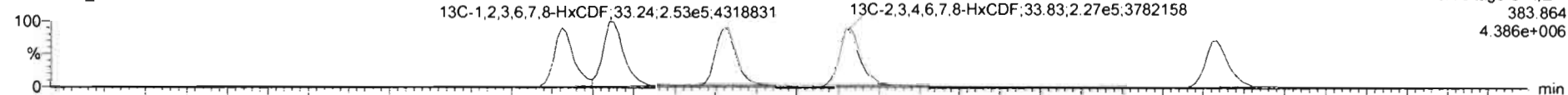


200130R2\_1

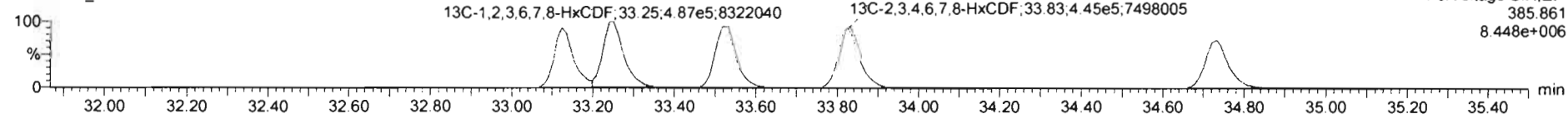


**13C-1,2,3,4,7,8-HxCDF**

200130R2\_1

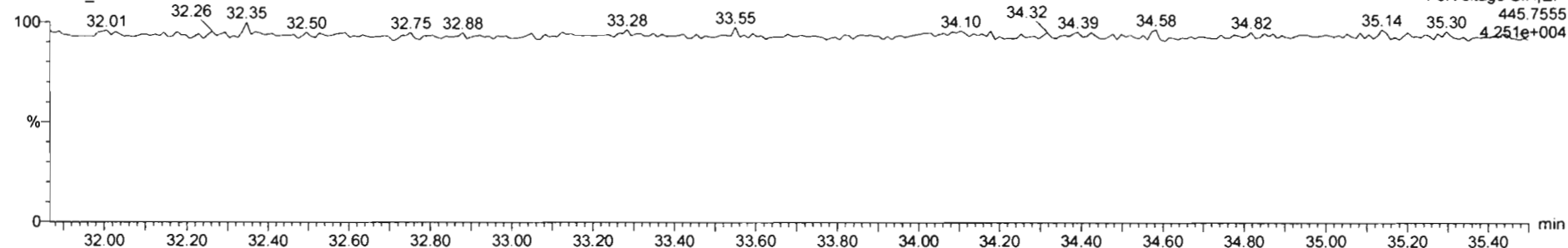


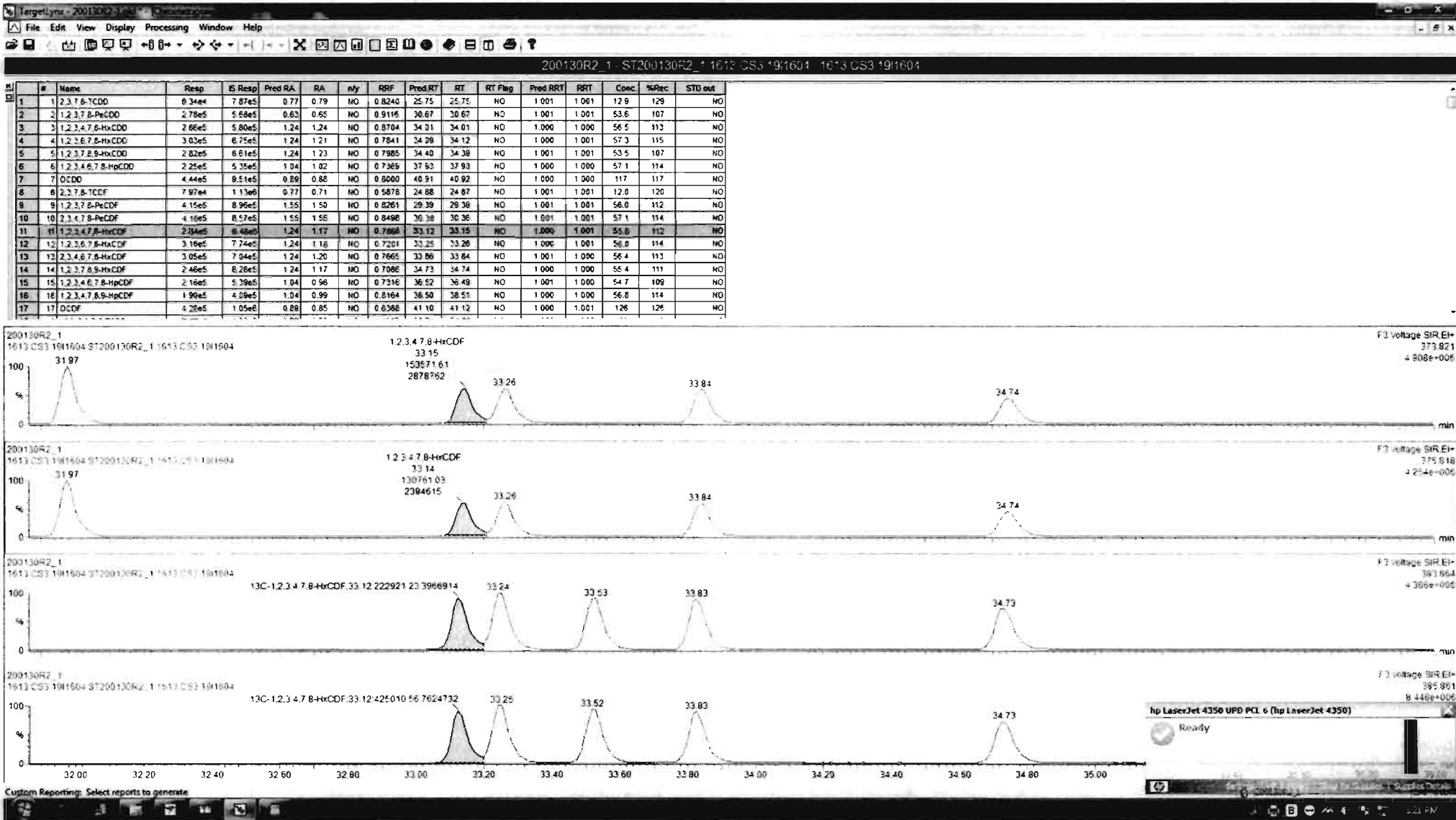
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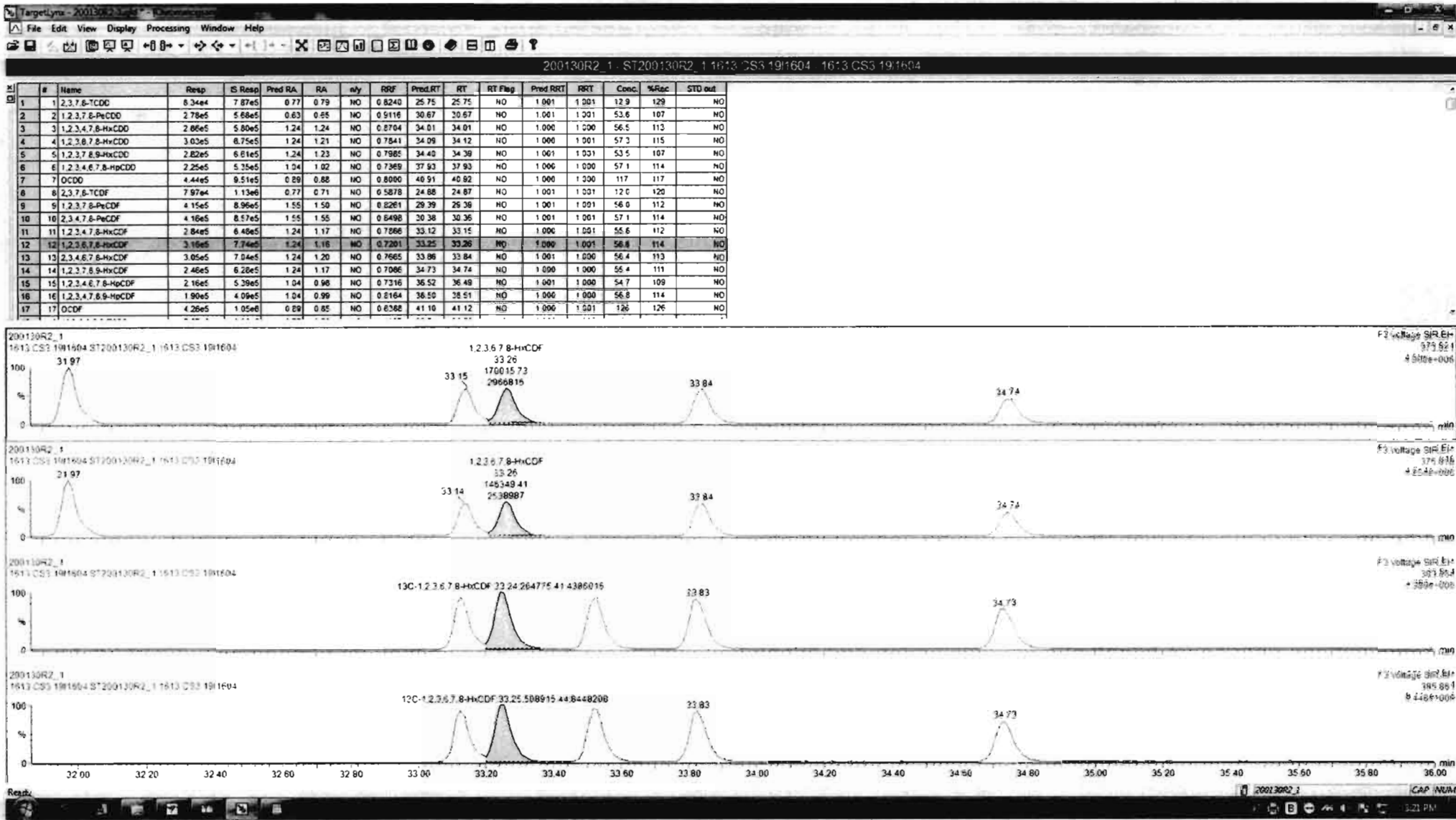


**DPE3**

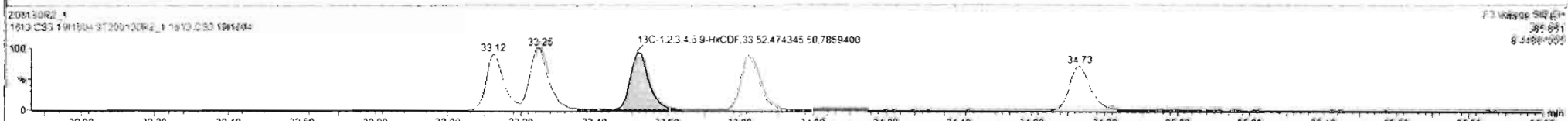
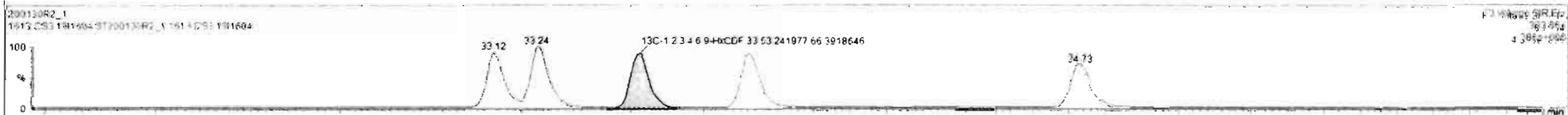
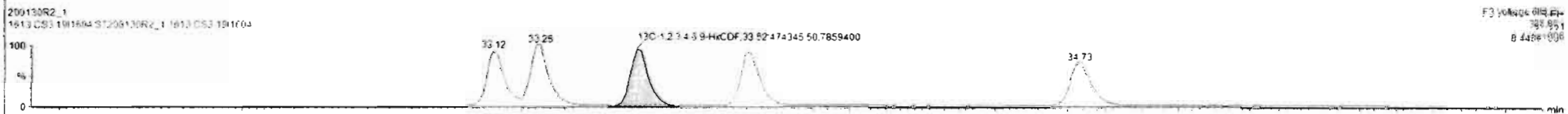
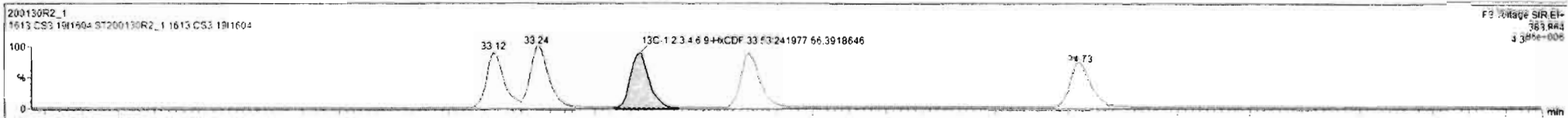
200130R2\_1





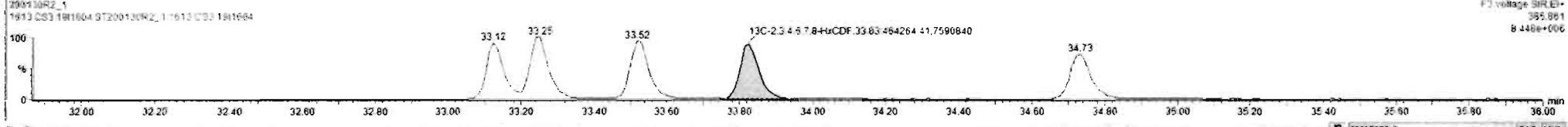
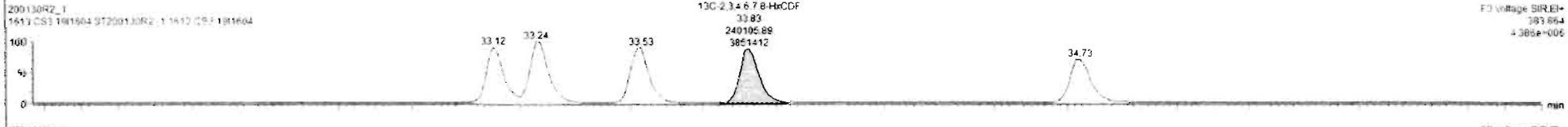
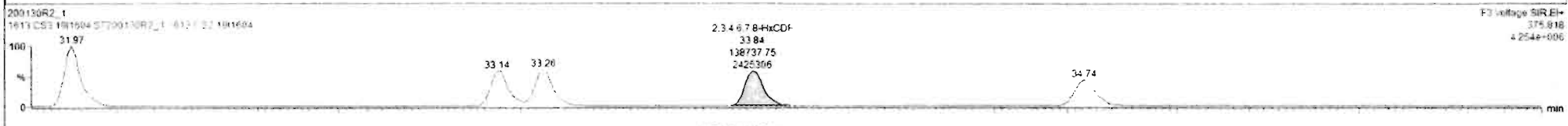
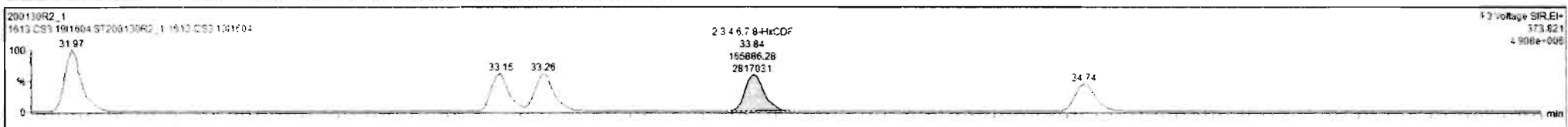


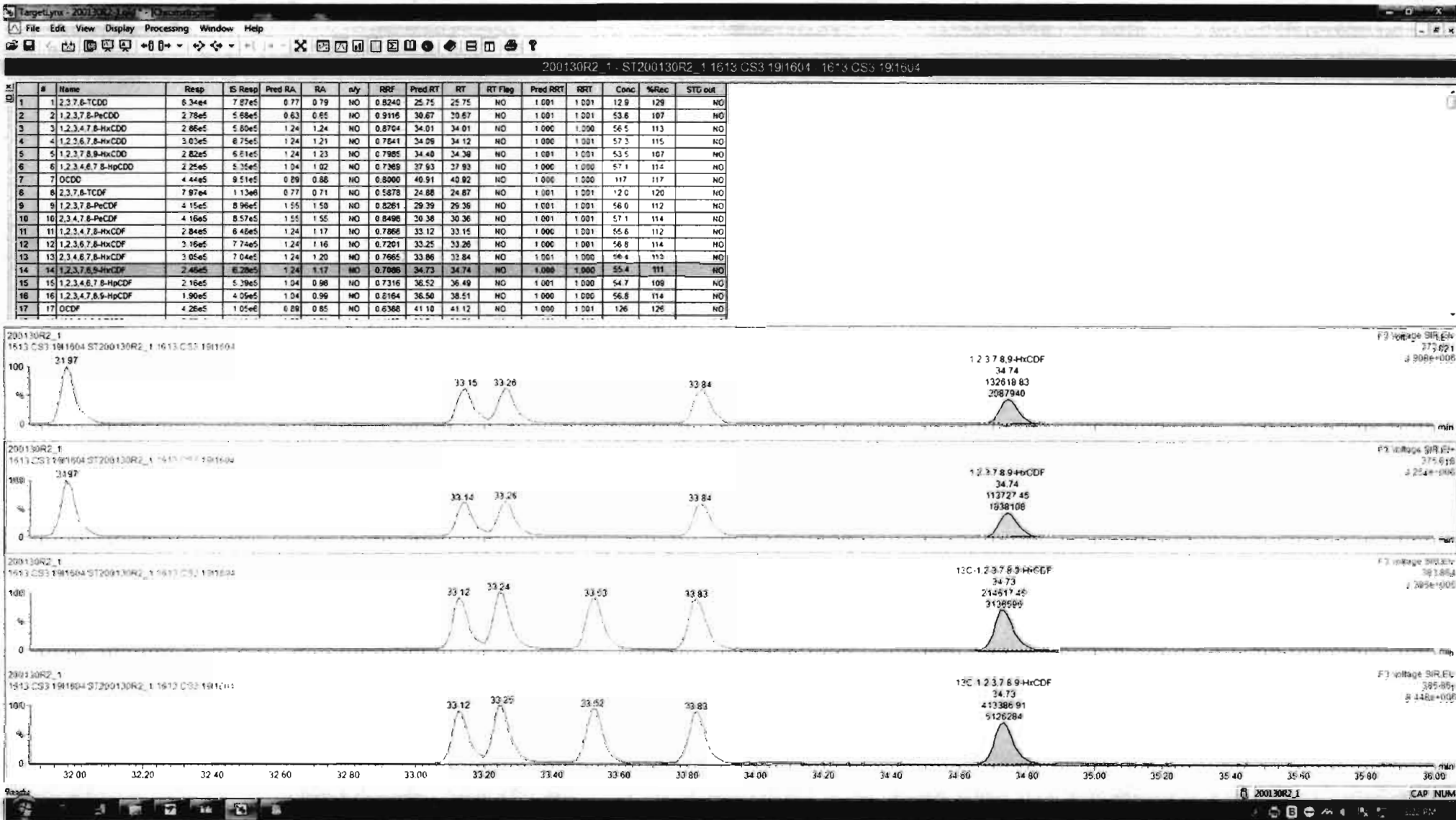
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28	13C-1,2,3,4,7,8-HxCDF	6.48e5	7.16e5	0.51	0.52	NO	0.8613	33.13	33.12	NO	0.988	0.988	105	105	NO
29	13C-1,2,3,6,7,8-HxCDF	7.74e5	7.16e5	0.51	0.52	NO	1.0467	33.23	33.24	NO	0.991	0.991	103	103	NO
30	13C-2,3,4,6,7,8-HxCDF	7.04e5	7.16e5	0.51	0.52	NO	0.9457	33.83	33.83	NO	1.009	1.009	104	104	NO
31	13C-1,2,3,7,8,9-HxCDF	6.28e5	7.16e5	0.51	0.52	NO	0.8156	34.74	34.73	NO	1.036	1.036	107	107	NO
32	13C-1,2,3,4,6,7,8-HpCDF	5.43e5	7.16e5	0.44	0.43	NO	0.5852	36.48	36.48	NO	1.088	1.088	129	129	NO
33	13C-1,2,3,4,7,8,9-HpCDF	4.08e5	7.16e5	0.44	0.43	NO	0.4480	38.49	38.50	NO	1.148	1.148	127	127	NO
34	13C-OCDF	1.08e6	7.16e5	0.89	0.87	NO	0.5857	41.07	41.10	NO	1.225	1.226	256	128	NO
35	37Cl-2,3,7,8-TCDD	7.58e4	6.33e5				1.0857	25.77	25.75	NO	1.027	1.026	110	110	NO
36	13C-1,2,3,4-TCDD	6.33e5	6.33e5	0.77	0.78	NO	1.0000	25.06	25.09	NO	1.000	1.000	100	100	NO
37	13C-1,2,3,4-TCDF	1.04e6	1.04e6	0.77	0.79	NO	1.0000	23.42	23.43	NO	1.000	1.000	100	100	NO
38	13C-1,2,3,4,6,9-HxCDF	7.16e5	7.16e5	0.51	0.51	NO	1.0000	33.52	33.53	NO	1.000	1.000	100	100	YES
39	Total Tetra-Dioxins		7.87e5				0.8240	24.62		NO	0.000		105		NO
40	Total Penta-Dioxins		5.68e5				0.9116	29.96		NO	0.000		248		NO
41	Total Hexa-Dioxins		0.00e0				0.7841	33.63		NO	0.000		272		NO
42	Total Hepta-Dioxins		5.35e5				0.7369	37.64		NO	0.000		152		NO
43	Total Tetra-Furans		1.13e6				0.5878	23.61		NO	0.000		64.7		NO
44	1st Func. Penta-Furans		0.00e0				0.8261	27.09		NO	0.000		97.5		NO





#	Name	Resp	IS Resp	Pred RA	RA	nly	RRF	Pred RT	RT	RT Flag	Pred RRT	RRT	Conc	%Rec	STD out
1	2,3,7,8-TCDD	6.34e4	7.87e5	0.77	0.79	NO	0.8240	26.75	25.75	NO	1.001	1.001	12.9	129	NO
2	1,2,3,7,8-PeCDD	2.78e5	5.68e5	0.63	0.65	NO	0.9116	30.67	30.67	NO	1.001	1.001	53.6	107	NO
3	1,2,3,4,7,8-HxCDD	2.86e5	5.80e5	1.24	1.24	NO	0.8764	34.01	34.01	NO	1.000	1.000	56.5	113	NO
4	1,2,3,6,7,8-HxCDD	3.03e5	6.75e5	1.24	1.21	NO	0.7841	34.09	34.12	NO	1.000	1.001	57.3	115	NO
5	1,2,3,7,8,9-HxCDD	2.82e5	6.61e5	1.24	1.23	NO	0.7965	34.40	34.39	NO	1.001	1.001	53.5	107	NO
6	1,2,3,4,6,7,8-HpCDD	2.25e5	5.25e5	1.04	1.02	NO	0.7369	37.53	37.93	NO	1.000	1.000	57.1	114	NO
7	OCDD	4.44e5	9.51e5	0.89	0.88	NO	0.8000	40.91	40.82	NO	1.000	1.000	117	117	NO
8	2,3,7,8-TCDF	7.97e4	1.13e6	0.77	0.71	NO	0.5878	24.88	24.87	NO	1.001	1.001	12.0	120	NO
9	1,2,3,7,8-PeCDF	4.15e5	8.96e5	1.55	1.55	NO	0.8261	29.39	29.38	NO	1.001	1.001	58.0	112	NO
10	2,3,4,7,8-PeCDF	4.16e5	8.57e5	1.55	1.55	NO	0.8498	30.38	30.36	NO	1.001	1.001	57.1	114	NO
11	1,2,3,4,7,8-HxCDF	2.84e5	6.48e5	1.24	1.17	NO	0.7866	33.12	33.15	NO	1.000	1.001	55.6	112	NO
12	1,2,3,6,7,8-HxCDF	3.16e5	7.74e5	1.24	1.16	NO	0.7201	33.25	33.28	NO	1.000	1.001	58.8	114	NO
13	2,3,4,6,7,8-HxCDF	3.05e5	7.04e5	1.24	1.20	NO	0.7665	33.86	33.84	NO	1.001	1.000	56.4	113	NO
14	1,2,3,7,8,9-HxCDF	2.48e5	6.28e5	1.24	1.17	NO	0.7086	34.73	34.74	NO	1.000	1.000	55.4	111	NO
15	1,2,3,4,6,7,8-HpCDF	2.16e5	5.29e5	1.04	0.98	NO	0.7316	36.52	36.49	NO	1.001	1.000	54.7	109	NO
16	1,2,3,4,7,8,9-HpCDF	1.90e5	4.09e5	1.04	0.99	NO	0.8164	38.50	38.51	NO	1.000	1.000	56.8	114	NO
17	OCDF	4.26e5	1.05e6	0.88	0.85	NO	0.8380	41.10	41.12	NO	1.000	1.001	126	126	NO



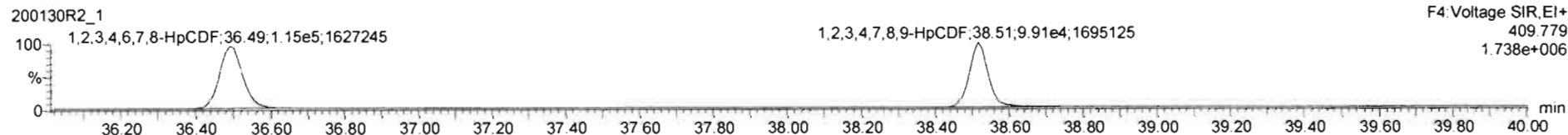


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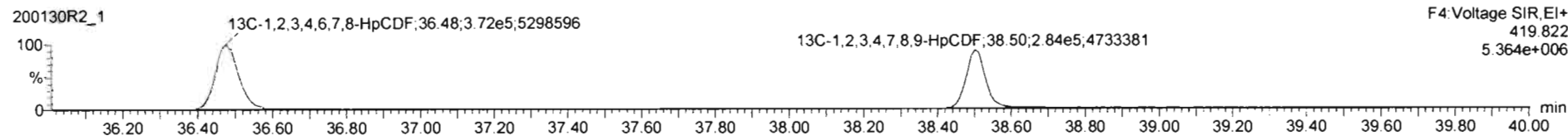
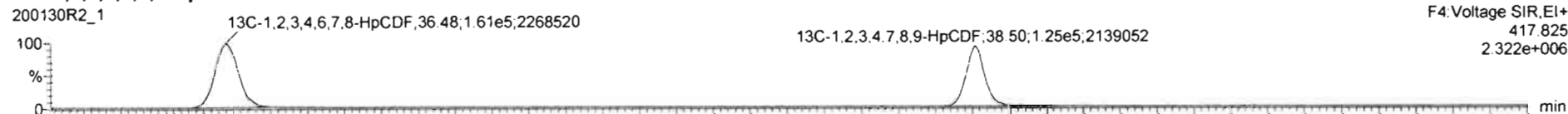
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Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

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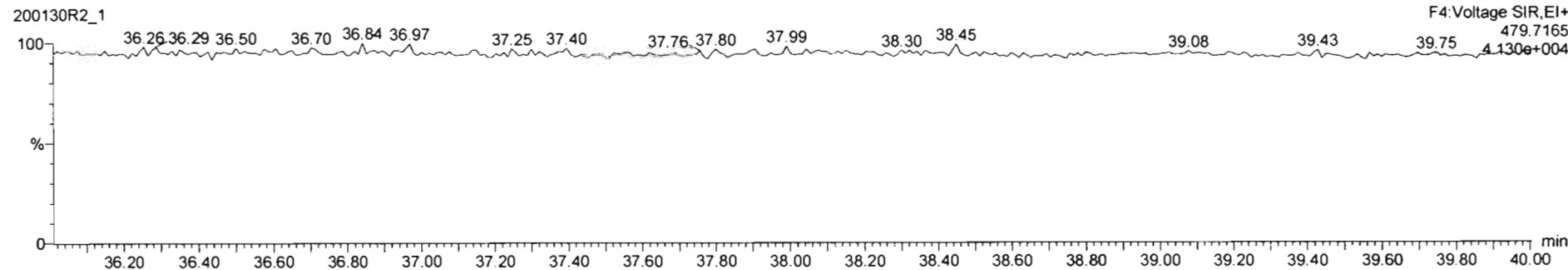
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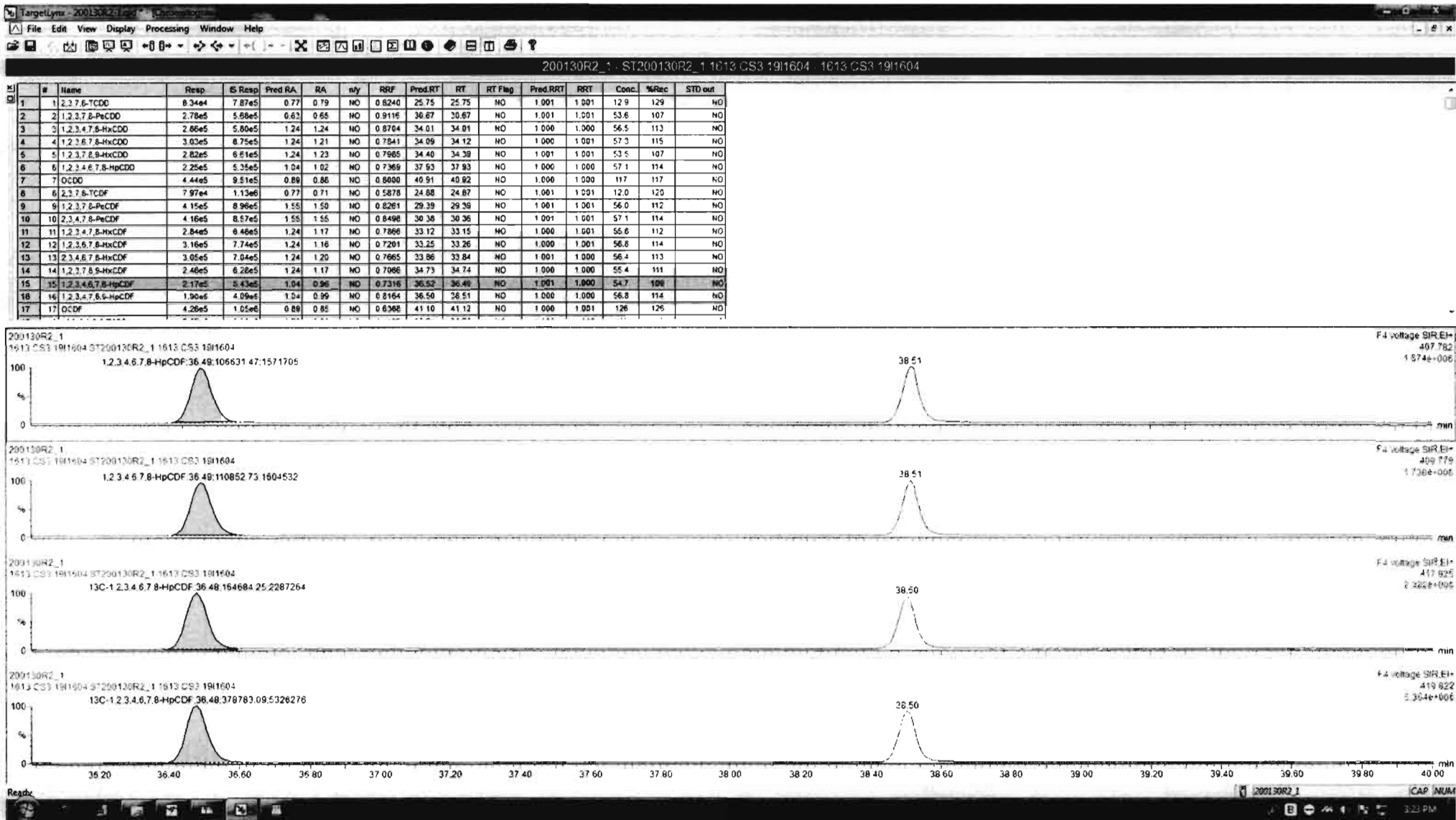


**13C-1,2,3,4,6,7,8-HpCDF**

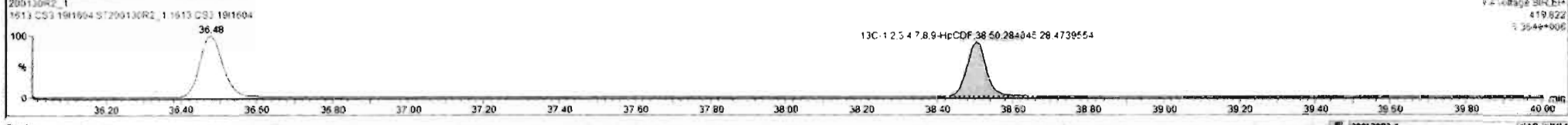
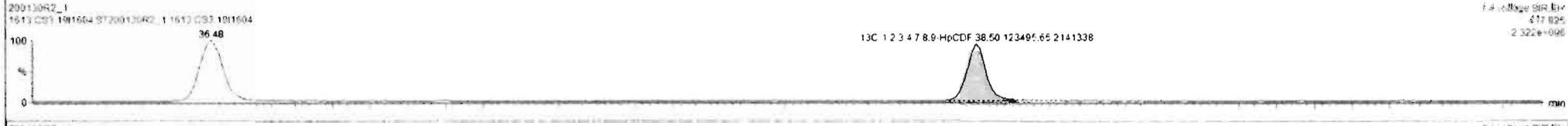
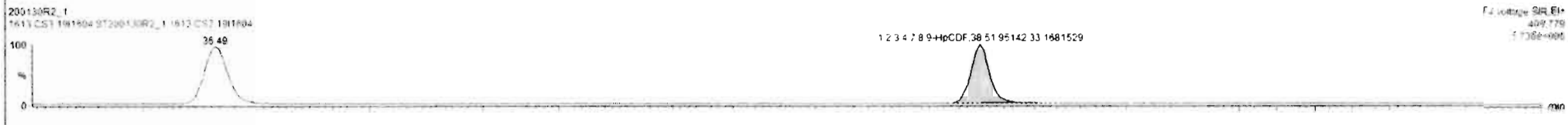


**DPE4**





#	Name	Resp	IS Resp	Pred RA	RA	nly	RRF	Pred RT	RT	RT Flag	Pred RRT	RRT	Conc	%Rec	STD out
1	1,2,3,7,8-TCDD	8.34e4	7.87e5	0.77	0.79	NO	0.8240	25.75	25.75	NO	1.001	1.001	12.9	129	NO
2	1,2,3,7,8-PeCDD	2.78e5	5.58e5	0.63	0.55	NO	0.9115	30.67	30.67	NO	1.001	1.001	53.6	107	NO
3	1,2,3,4,7,8-HxCDD	2.86e5	5.80e5	1.24	1.24	NO	0.8704	34.01	34.01	NO	1.000	1.000	56.5	113	NO
4	1,2,3,6,7,8-HxCDD	3.03e5	6.75e5	1.24	1.21	NO	0.7841	34.09	34.12	NO	1.000	1.001	57.3	115	NO
5	1,2,3,7,8-HxCDD	2.82e5	6.61e5	1.24	1.23	NO	0.7985	34.40	34.39	NO	1.001	1.001	53.5	107	NO
6	1,2,3,4,6,7,8-HpCDD	2.25e5	5.25e5	1.04	1.02	NO	0.7369	37.93	37.93	NO	1.000	1.000	57.1	114	NO
7	OCDD	4.44e5	9.51e5	0.89	0.88	NO	0.8900	40.91	40.92	NO	1.000	1.000	117	117	NO
8	2,3,7,8-TCDF	7.97e4	1.13e6	0.77	0.71	NO	0.5878	24.88	24.87	NO	1.001	1.001	12.0	120	NO
9	1,2,3,7,8-PeCDF	4.15e5	8.96e5	1.55	1.50	NO	0.8261	29.39	29.39	NO	1.001	1.001	56.0	112	NO
10	1,2,3,4,7,8-PeCDF	4.16e5	8.57e5	1.55	1.55	NO	0.8498	30.38	30.36	NO	1.001	1.001	57.1	114	NO
11	1,2,3,4,7,8-HxCDF	2.84e5	6.48e5	1.24	1.17	NO	0.7866	33.12	33.15	NO	1.000	1.001	55.6	112	NO
12	1,2,3,6,7,8-HxCDF	3.16e5	7.74e5	1.24	1.16	NO	0.7201	33.25	33.26	NO	1.000	1.001	56.8	114	NO
13	1,2,3,4,6,7,8-HxCDF	3.05e5	7.04e5	1.24	1.20	NO	0.7665	33.86	33.84	NO	1.001	1.000	56.4	113	NO
14	1,2,3,7,8,9-HxCDF	2.46e5	6.28e5	1.24	1.17	NO	0.7086	34.73	34.74	NO	1.000	1.000	55.4	111	NO
15	1,2,3,4,6,7,8-HpCDF	2.17e5	5.43e5	1.04	0.96	NO	0.7316	36.52	36.49	NO	1.001	1.000	54.7	109	NO
16	1,2,3,4,7,8,9-HpCDF	1.88e5	4.08e5	1.04	0.98	NO	0.8184	38.50	38.51	NO	1.000	1.000	58.6	113	NO
17	OCDF	4.28e5	1.05e6	0.89	0.85	NO	0.6388	41.10	41.12	NO	1.000	1.001	126	126	NO



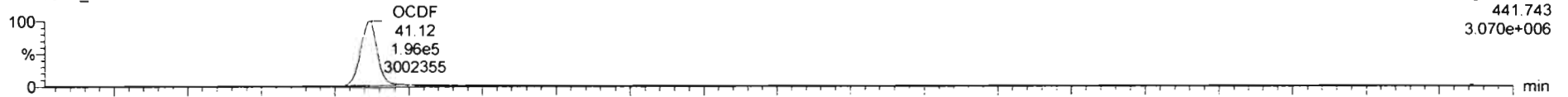
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Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

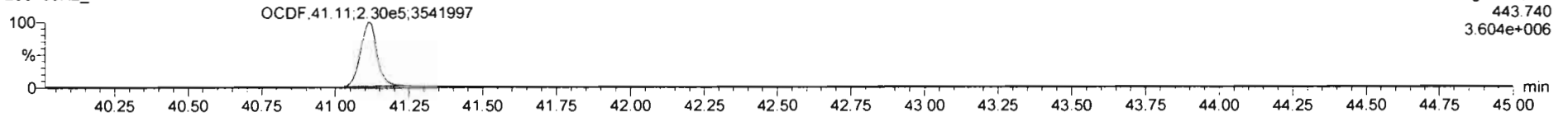
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**OCDF**

200130R2\_1

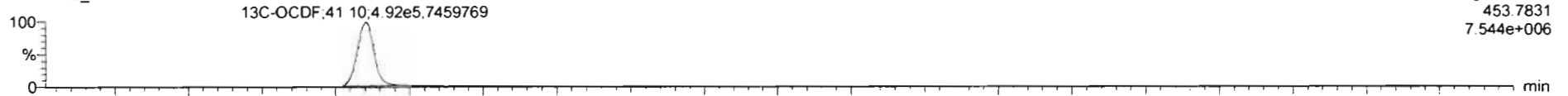


200130R2\_1

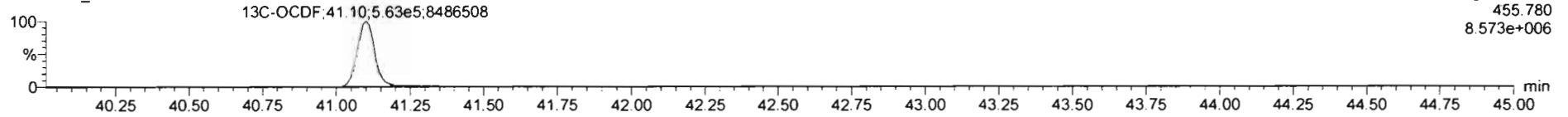


**13C-OCDF**

200130R2\_1

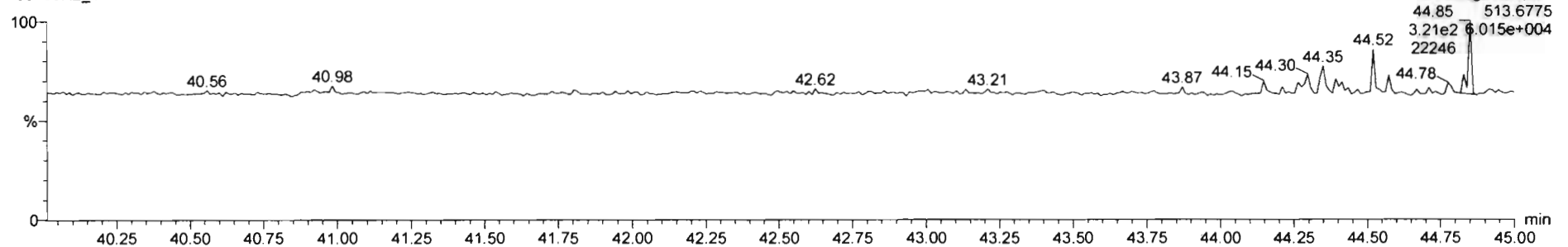


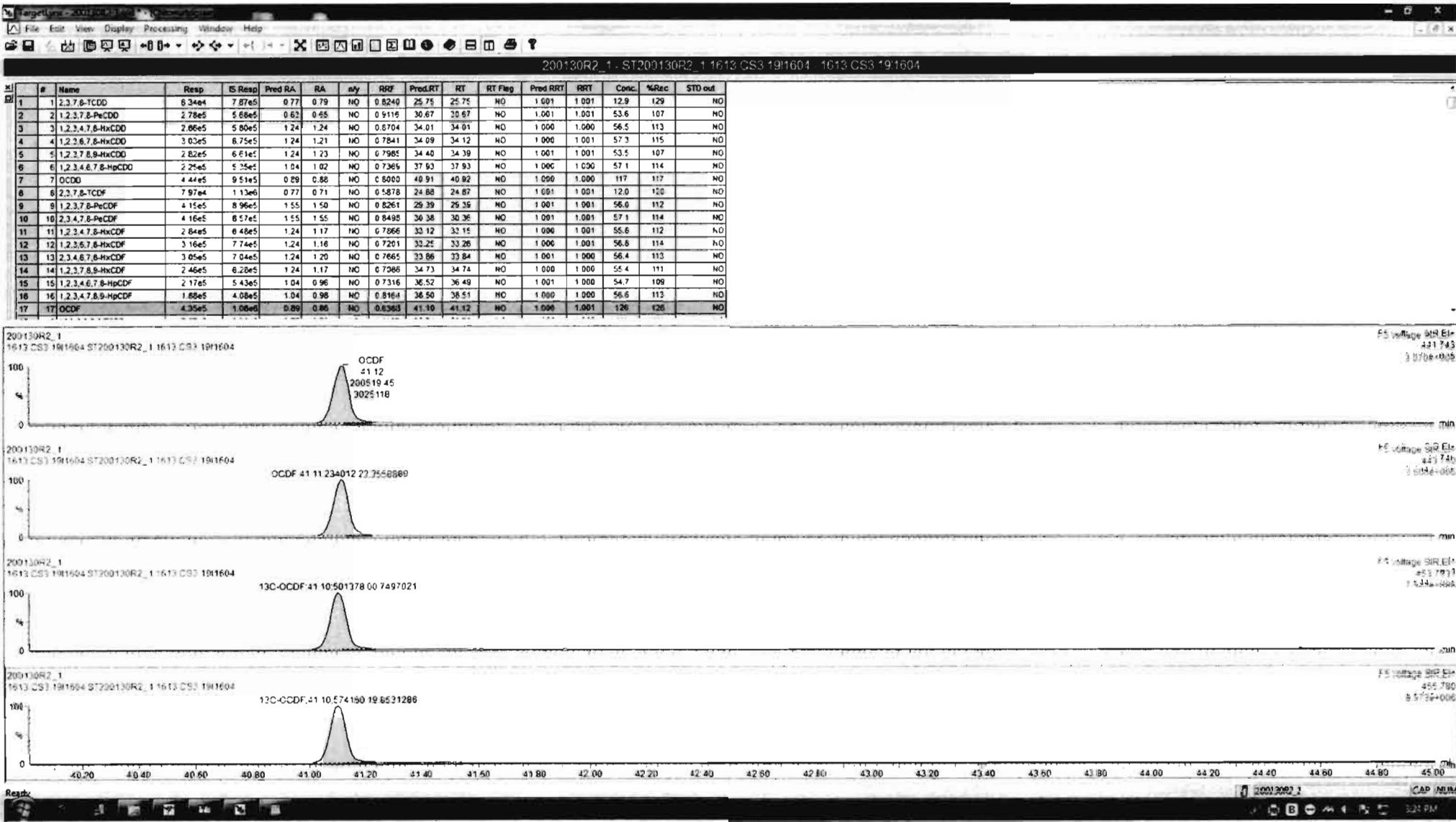
200130R2\_1



**DPE5**

200130R2\_1





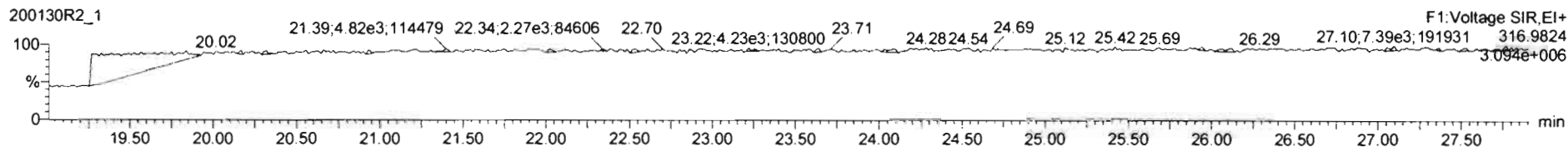
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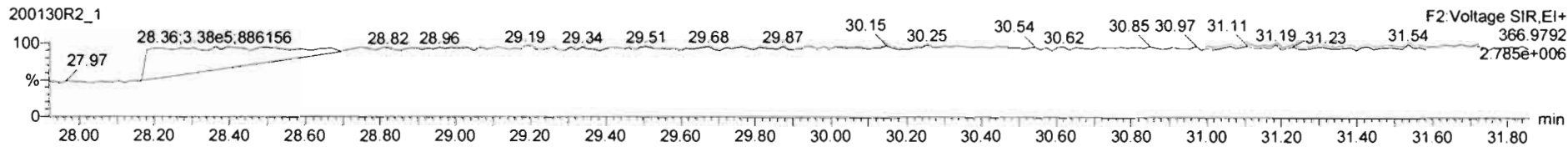
Printed: Thursday, January 30, 2020 15:26:36 Pacific Standard Time

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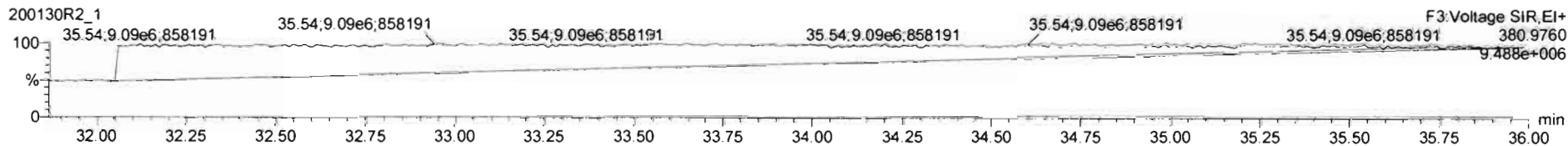
PFK1



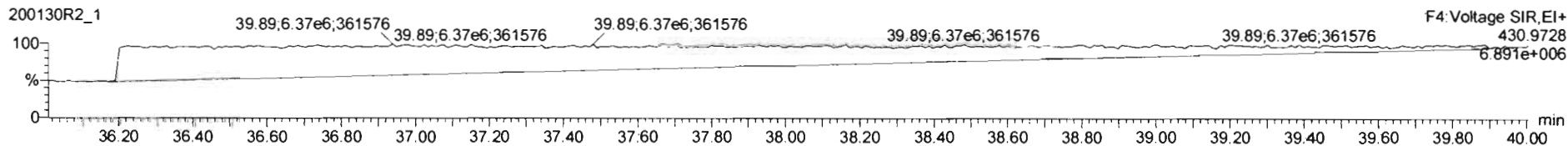
PFK2



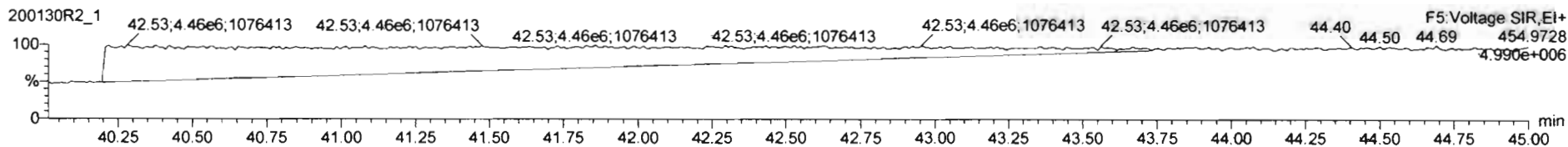
PFK3



PFK4

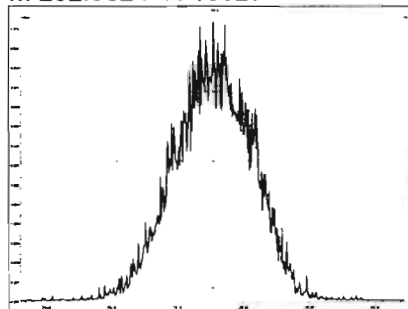


PFK5

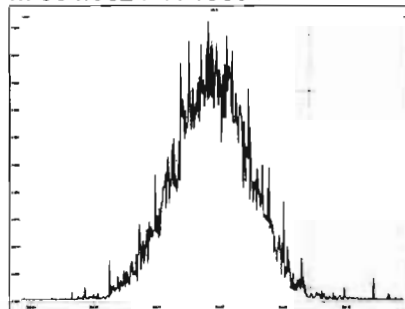




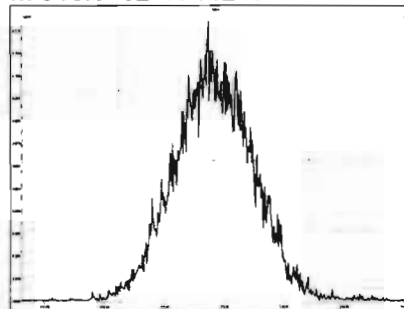
M 292.9824 R 10927



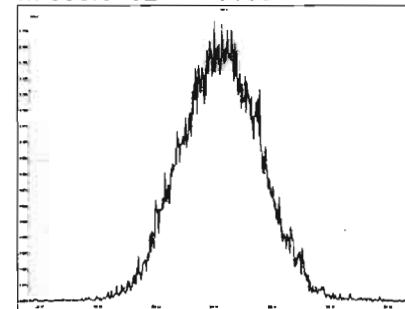
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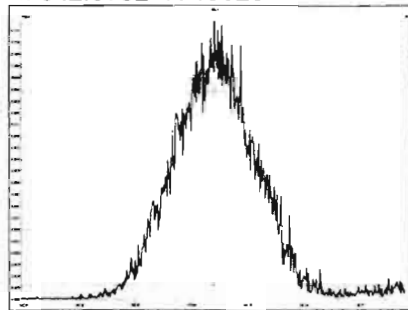
M 318.9792 R 11210



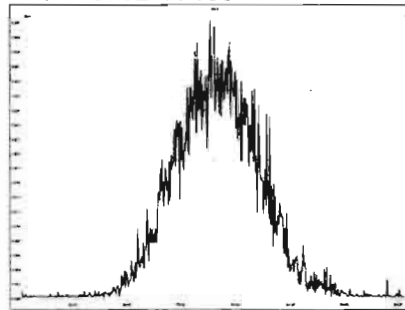
M 330.9792 R 10639



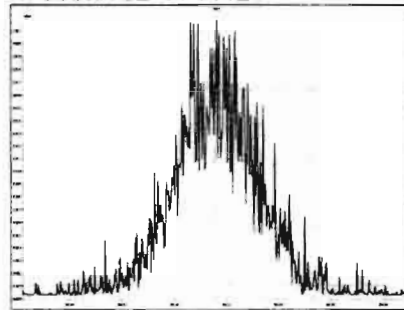
M 342.9792 R 10920



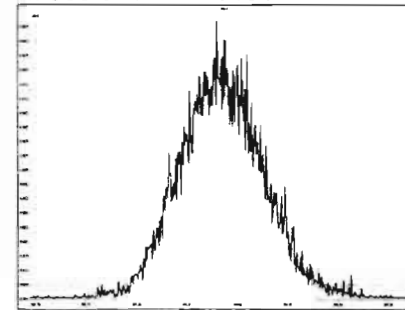
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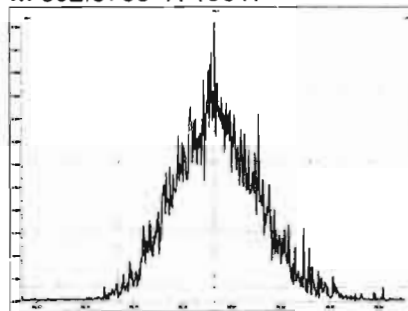
M 366.9792 R 11120



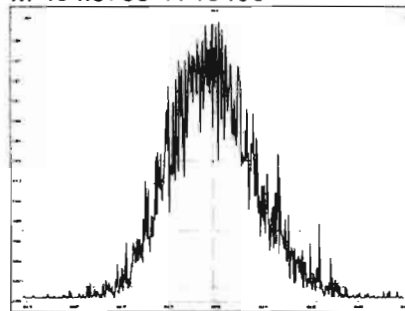
M 380.9760 R 10151



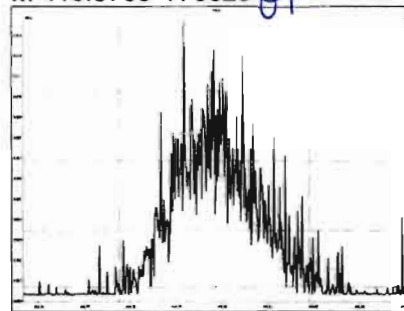
M 392.9760 R 10617



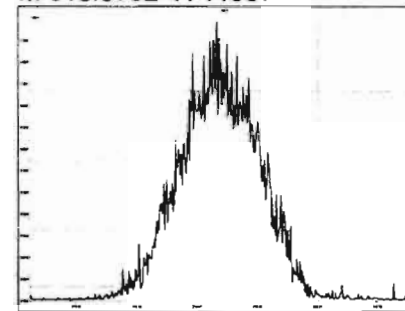
M 404.9760 R 10458



M 416.9760 R 9925 *OK*

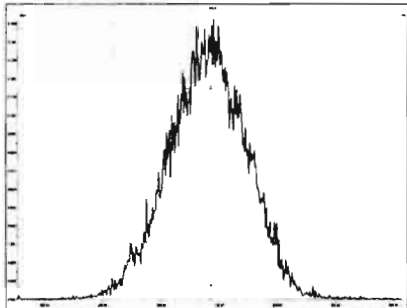


M 318.9792 R 11087

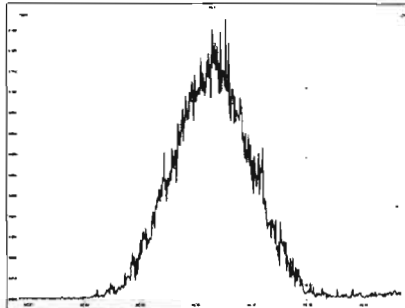


Printed: Friday, January 31, 2020 02:20:30 Pacific Standard Time

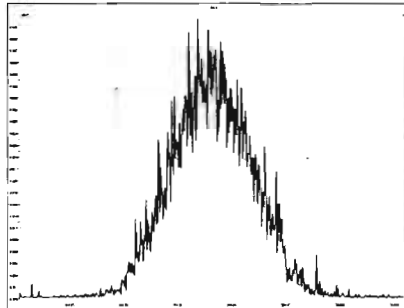
M 330.9792 R 10742



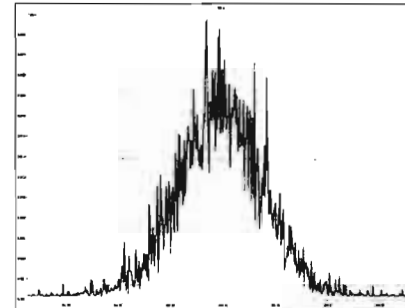
M 342.9792 R 10969



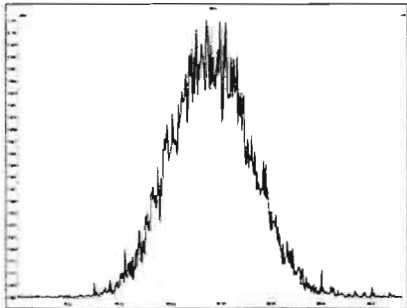
M 354.9792 R 10714



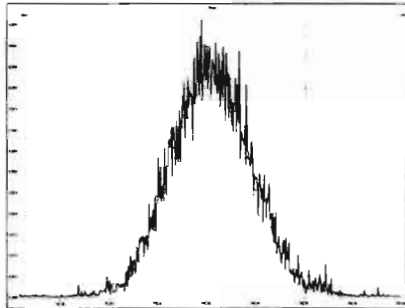
M 366.9792 R 10882



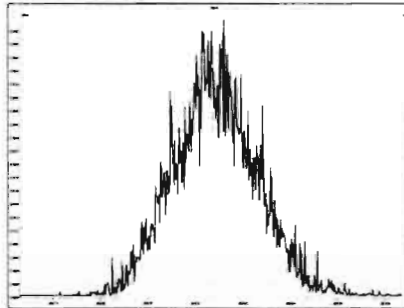
M 380.9760 R 10460



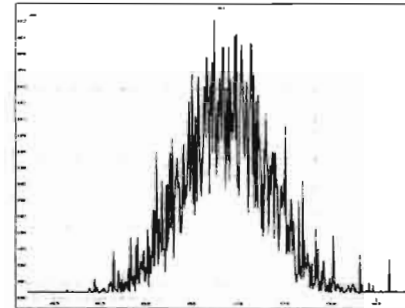
M 392.9760 R 10822



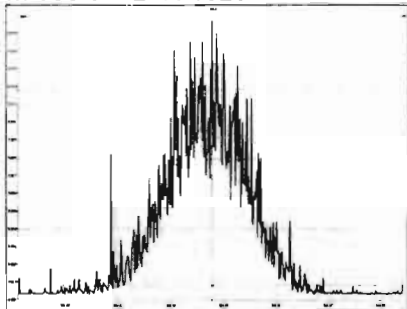
M 404.9760 R 10869



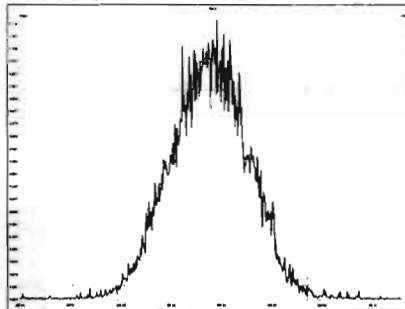
M 416.9760 R 10495



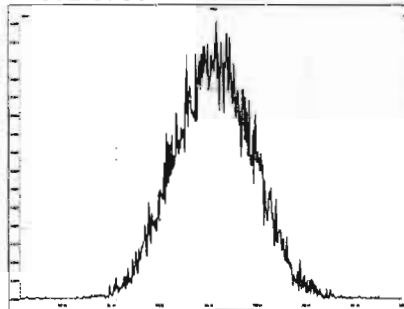
M 366.9792 R 10296



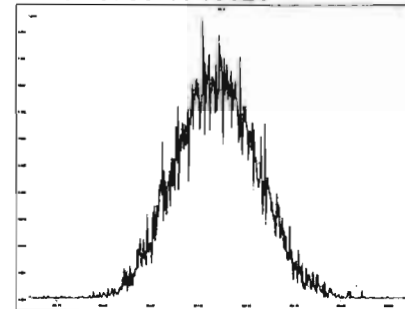
M 380.9760 R 10969



M 392.9760 R 11263

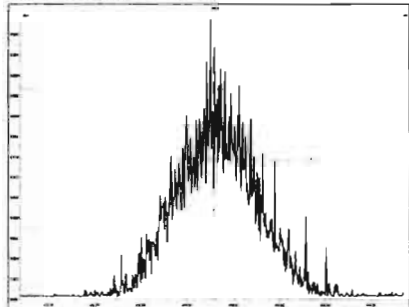


M 404.9760 R 10823

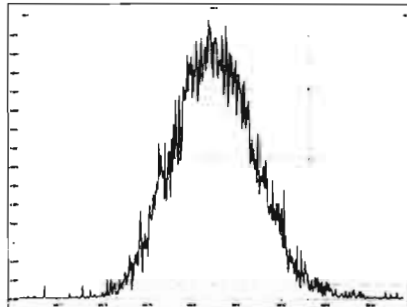


Printed: Friday, January 31, 2020 02:20:30 Pacific Standard Time

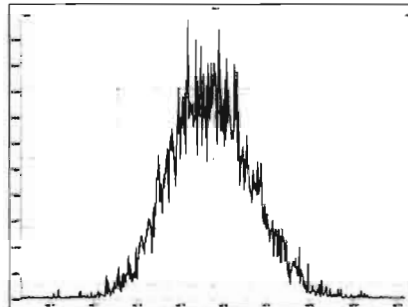
M 416.9760 R 11063



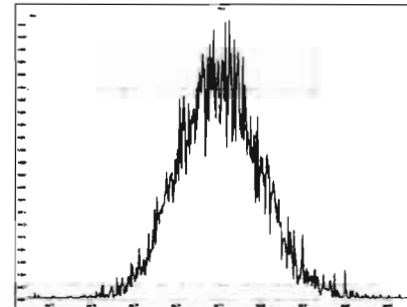
M 430.9728 R 10963



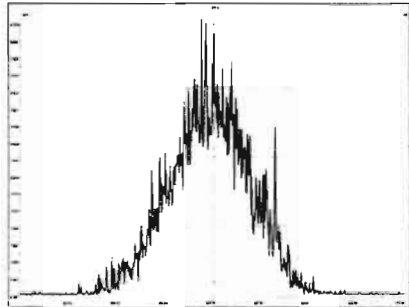
M 442.9728 R 10817



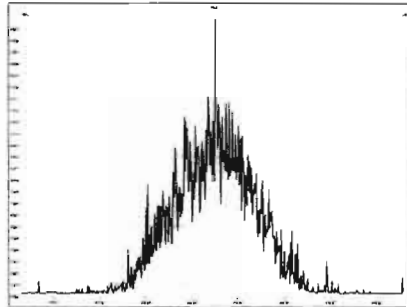
M 454.9728 R 10904



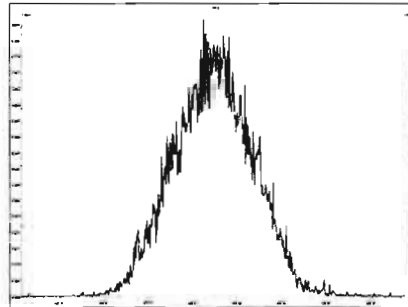
M 404.9760 R 10995



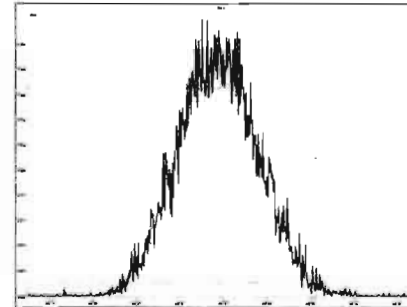
M 416.9760 R 11653



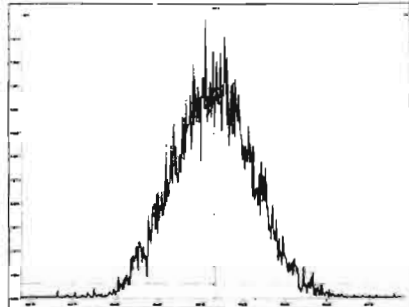
M 430.9728 R 10666



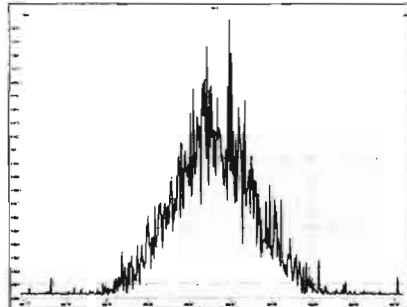
M 442.9728 R 10823



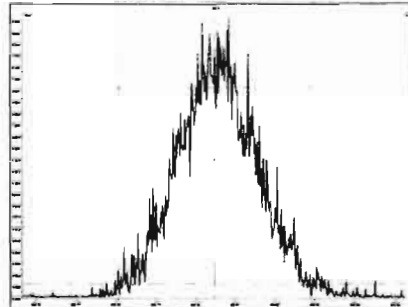
M 454.9728 R 10849



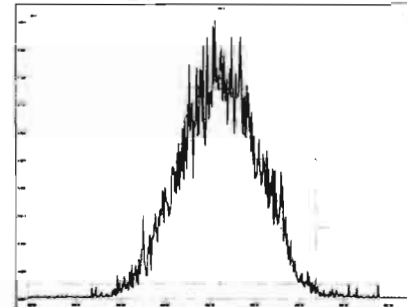
M 466.9728 R 10727



M 480.9696 R 10570

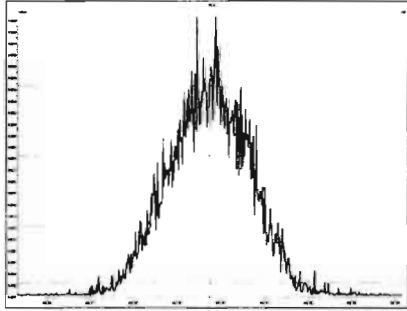


M 430.9728 R 10776

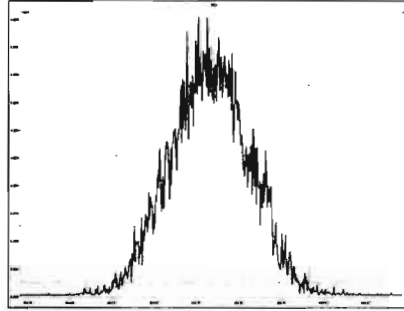


Printed: Friday, January 31, 2020 02:20:30 Pacific Standard Time

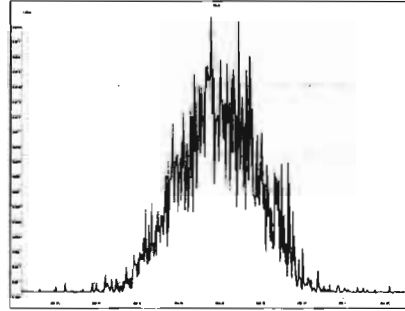
M 442.9728 R 10893



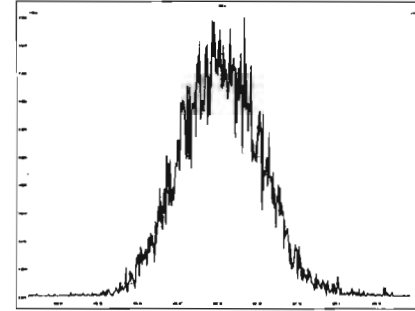
M 454.9728 R 11118



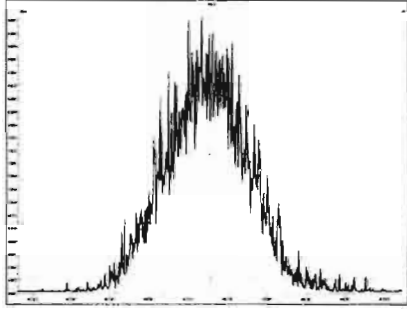
M 466.9728 R 10311



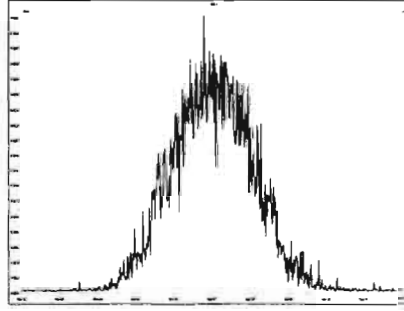
M 480.9696 R 10552



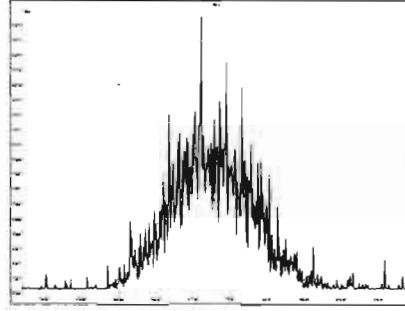
M 492.9696 R 11063



M 504.9696 R 11072



M 516.9697 R 10752



# HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

**Beg. Calibration ID:** ST200130R3-1

**Reviewed By:** Q1 02/04/2020  
*Initials & Date*

**End Calibration ID:** NA

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

**Mass resolution ≥**

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

**Intergrated peaks display correctly?**

**GC Break <20%**

NA

**8280 CS1 End Standard:**

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

<u>Beg.</u>	<u>End</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
<input type="checkbox"/>	<input type="checkbox"/> NA

**Comments:**

(A) BOTH BEG. & END RES CHECK HAD 1-2 MASSES BELOW 10K.

Dataset: U:\VG12.PRO\Results\200130R3\200130R3-2.qld

Last Altered: Friday, January 31, 2020 15:57:02 Pacific Standard Time  
Printed: Friday, January 31, 2020 16:01:44 Pacific Standard Time

GRS 01/31/2020

CT 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\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

#	Name	Resp	IS Flag	IS	ay	RF	Pre-RT	RT	RT Flag	Pre-Int	Int	Comp	Mass	STD
1	1,2,3,7,8-TCDD	6.09e4	6.36e5	0.78	NO	0.824	25.72	25.72	NO	1.001	1.001	11.624	116	NO
2	1,2,3,7,8-PeCDD	2.42e5	5.03e5	0.63	NO	0.912	30.66	30.65	NO	1.001	1.001	52.730	105	NO
3	1,2,3,4,7,8-HxCDD	2.25e5	4.48e5	1.20	NO	0.870	33.99	34.00	NO	1.000	1.001	57.830	116	NO
4	1,2,3,6,7,8-HxCDD	2.32e5	5.09e5	1.19	NO	0.784	34.08	34.09	NO	1.000	1.000	58.049	116	NO
5	1,2,3,7,8,9-HxCDD	2.20e5	4.85e5	1.23	NO	0.798	34.39	34.37	NO	1.001	1.000	56.897	114	NO
6	1,2,3,4,6,7,8-HpCDD	1.75e5	4.27e5	0.97	NO	0.737	37.91	37.92	NO	1.000	1.001	55.516	111	NO
7	OCDD	3.60e5	7.79e5	0.86	NO	0.800	40.90	40.91	NO	1.000	1.000	115.38	115	NO
8	2,3,7,8-TCDF	6.40e4	9.08e5	0.74	NO	0.588	24.83	24.84	NO	1.001	1.001	11.984	120	NO
9	1,2,3,7,8-PeCDF	3.45e5	7.46e5	1.52	NO	0.826	29.38	29.37	NO	1.001	1.001	55.906	112	NO
10	2,3,4,7,8-PeCDF	3.53e5	7.32e5	1.55	NO	0.850	30.36	30.35	NO	1.001	1.001	56.695	113	NO
11	1,2,3,4,7,8-HxCDF	2.18e5	4.95e5	1.18	NO	0.787	33.11	33.13	NO	1.000	1.000	55.913	112	NO
12	1,2,3,6,7,8-HxCDF	2.40e5	5.88e5	1.15	NO	0.720	33.24	33.25	NO	1.000	1.001	56.740	113	NO
13	2,3,4,6,7,8-HxCDF	2.31e5	5.30e5	1.16	NO	0.766	33.85	33.83	NO	1.001	1.000	56.760	114	NO
14	1,2,3,7,8,9-HxCDF	1.89e5	4.78e5	1.19	NO	0.709	34.72	34.73	NO	1.000	1.000	55.960	112	NO
15	1,2,3,4,6,7,8-HpCDF	1.63e5	4.09e5	0.98	NO	0.732	36.51	36.48	NO	1.001	1.000	54.380	109	NO
16	1,2,3,4,7,8,9-HpCDF	1.36e5	2.91e5	0.96	NO	0.816	38.49	38.50	NO	1.000	1.000	57.132	114	NO
17	OCDF	3.31e5	8.32e5	0.84	NO	0.639	41.09	41.10	NO	1.000	1.000	124.52	125	NO
18	13C-2,3,7,8-TCDD	6.36e5	5.51e5	0.79	NO	1.12	25.69	25.69	NO	1.026	1.026	103.38	103	NO
19	13C-1,2,3,7,8-PeCDD	5.03e5	5.51e5	0.63	NO	0.841	30.43	30.64	NO	1.215	1.223	108.53	109	NO
20	13C-1,2,3,4,7,8-HxCDD	4.48e5	5.45e5	1.28	NO	0.938	33.98	33.98	NO	1.014	1.014	87.668	87.7	NO
21	13C-1,2,3,6,7,8-HxCDD	5.09e5	5.45e5	1.28	NO	1.07	34.08	34.08	NO	1.017	1.017	87.749	87.7	NO
22	13C-1,2,3,7,8,9-HxCDD	4.85e5	5.45e5	1.24	NO	1.03	34.38	34.36	NO	1.026	1.025	86.448	86.4	NO
23	13C-1,2,3,4,6,7,8-HpCDD	4.27e5	5.45e5	1.06	NO	0.710	37.93	37.90	NO	1.132	1.131	110.44	110	NO
24	13C-OCDD	7.79e5	5.45e5	0.90	NO	0.801	40.81	40.90	NO	1.218	1.221	238.04	119	NO
25	13C-2,3,7,8-TCDF	9.08e5	7.97e5	0.78	NO	1.04	24.87	24.81	NO	0.993	0.990	109.88	110	NO
26	13C-1,2,3,7,8-PeCDF	7.46e5	7.97e5	1.58	NO	0.917	29.20	29.35	NO	1.166	1.172	102.08	102	NO
27	13C-2,3,4,7,8-PeCDF	7.32e5	7.97e5	1.58	NO	0.903	30.16	30.33	NO	1.204	1.211	101.77	102	NO
28	13C-1,2,3,4,7,8-HxCDF	4.95e5	5.45e5	0.52	NO	0.861	33.11	33.11	NO	0.988	0.988	105.55	106	NO
29	13C-1,2,3,6,7,8-HxCDF	5.88e5	5.45e5	0.52	NO	1.05	33.21	33.23	NO	0.991	0.992	103.16	103	NO
30	13C-2,3,4,6,7,8-HxCDF	5.30e5	5.45e5	0.52	NO	0.946	33.81	33.82	NO	1.009	1.009	103.00	103	NO
31	13C-1,2,3,7,8,9-HxCDF	4.78e5	5.45e5	0.52	NO	0.816	34.71	34.72	NO	1.036	1.036	107.59	108	NO

Dataset: U:\VG12.PRO\Results\200130R3\200130R3-2.qld

Last Altered: Friday, January 31, 2020 15:57:02 Pacific Standard Time

Printed: Friday, January 31, 2020 16:01:44 Pacific Standard Time

Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

32	13C-1,2,3,4,6,7,8-HpCDF	4.09e5	5.45e5	0.45	NO	0.589	36.46	36.47	NO	1.088	1.088	127.60	128	NO
33	13C-1,2,3,4,7,8,9-HpCDF	2.91e5	5.45e5	0.44	NO	0.448	38.47	38.49	NO	1.148	1.149	119.44	119	NO
34	13C-OCDF	8.32e5	5.45e5	0.87	NO	0.586	41.05	41.09	NO	1.225	1.226	260.87	130	NO
35	37Cl-2,3,7,8-TCDD	6.30e4	5.51e5			1.09	25.72	25.70	NO	1.027	1.026	10.531	105	NO
36	13C-1,2,3,4-TCDD	5.51e5	5.51e5	0.80	NO	1.00	25.08	25.05	NO	1.000	1.000	100.00	100	NO
37	13C-1,2,3,4-TCDF	7.97e5	7.97e5	0.79	NO	1.00	23.42	23.39	NO	1.000	1.000	100.00	100	NO
38	13C-1,2,3,4,6,9-HxCDF	5.45e5	5.45e5	0.51	NO	1.00	33.52	33.51	NO	1.000	1.000	100.00	100	YES <i>OK</i>
39	Total Tetra-Dioxins		6.36e5			0.824	24.82		NO	0.000		98.200		NO
40	Total Penta-Dioxins		5.03e5			0.912	29.96		NO	0.000		219.99		NO
41	Total Hexa-Dioxins		0.00e0			0.784	33.63		NO	0.000		280.21		NO
42	Total Hepta-Dioxins		4.27e5			0.737	37.64		NO	0.000		145.71		NO
43	Total Tetra-Furans		9.08e5			0.588	23.61		NO	0.000		55.699		NO
44	1st Func. Penta-Furans		0.00e0			0.826	27.09		NO	0.000				NO
45	Total Penta-Furans		0.00e0			0.826	29.27		NO	0.000		191.46		NO
46	Total Hexa-Furans		0.00e0			0.766	33.56		NO	0.000		313.85		NO
47	Total Hepta-Furans		0.00e0			0.732	37.83		NO	0.000		111.49		NO

Dataset: Untitled

Last Altered: Friday, January 31, 2020 15:50:36 Pacific Standard Time  
Printed: Friday, January 31, 2020 15:50:41 Pacific Standard Time

Method: U:\VG12.PROMethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23  
Calibration: U:\VG12.PRO\CurveDB\vb5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

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

Sample	Description	Acq Date	Acq Time
200130R3_1	SOLVENT BLANK	31-Jan-20	03:06:50
200130R3_2	ST200130R3_1 1613 CS3 1911604	31-Jan-20	03:53:47
200130R3_3	SOLVENT BLANK	31-Jan-20	04:40:47
200130R3_4	B0A0016-DUP1 Duplicate 15.46	31-Jan-20	05:27:46
200130R3_5	1903647-05 PDI-067SC-B-06-08-191010 12.18	31-Jan-20	06:14:54
200130R3_6	1903649-01 PDI-016SC-B-06-08-191009 14.36	31-Jan-20	07:01:52
200130R3_7	1904210-03 PDI-1138RAB-00-10-191118 11.96	31-Jan-20	07:48:52
200130R3_8	1904210-04 PDI-138RAB-00-10-191118 11.95	31-Jan-20	08:35:50
200130R3_9	1904210-05 PDI-138RAB-10-19.1-191118 12.97	31-Jan-20	09:22:49
200130R3_10	1904210-06 PDI-139RAB-00-10-191115 12.75	31-Jan-20	10:09:50
200130R3_11	1904210-07 PDI-139RAB-10-20-191115 13.5	31-Jan-20	10:56:50
200130R3_12	1904210-08 PDI-139RAB-20-25.5-191118 13.69	31-Jan-20	11:43:50
200130R3_13	1904210-09 PDI-145RAB-00-10-191114 10.92	31-Jan-20	12:30:49
200130R3_14	B0A0016-DUP2 Duplicate 11	31-Jan-20	13:17:52
200130R3_15	1904210-10 PDI-145RAB-10-20-191114 10.88	31-Jan-20	14:04:50
200130R3_16	1904210-11 PDI-145RAB-20-24.7-191114 10.91	31-Jan-20	14:51:50



Dataset: Untitled

Last Altered: Friday, January 31, 2020 15:49:38 Pacific Standard Time

Printed: Friday, January 31, 2020 15:49:43 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26

Calibration: U:\VG12.PRO\CurveDB\cb5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

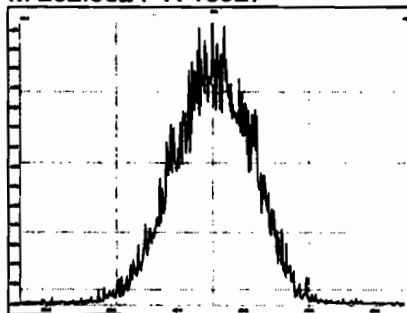
#	Name	RT
1	1 1,3,6,8-TCDD (First)	21.74
2	2 1,2,8,9-TCDD (Last)	26.66
3	3 1,2,4,7,9-PeCDD (First)	28.44
4	4 1,2,3,8,9-PeCDD (Last)	31.03
5	5 1,2,4,6,7,9-HxCDD (First)	32.51
6	6 1,2,3,7,8,9-HxCDD (Last)	34.37
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.86
8	8 1,2,3,4,6,7,8-HpCDD (Last)	37.92
9	9 1,3,6,8-TCDF (First)	19.64
10	10 1,2,8,9-TCDF (Last)	26.81
11	11 1,3,4,6,8-PeCDF (First)	26.78
12	12 1,2,3,8,9-PeCDF (Last)	31.28
13	13 1,2,3,4,6,8-HxCDF (First)	31.96
14	14 1,2,3,7,8,9-HxCDF (Last)	34.73
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.48
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.50

Resolution Check Report

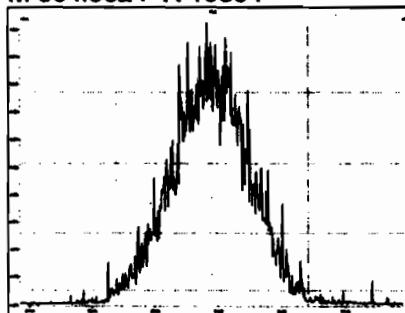
MassLynx 4.1 SCN815

Printed: Friday, January 31, 2020 02:20:30 Pacific Standard Time

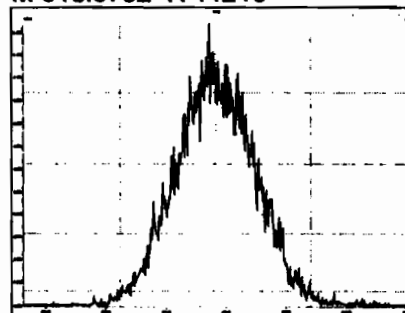
M 292.9824 R 10927



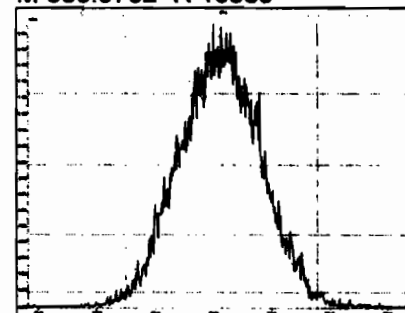
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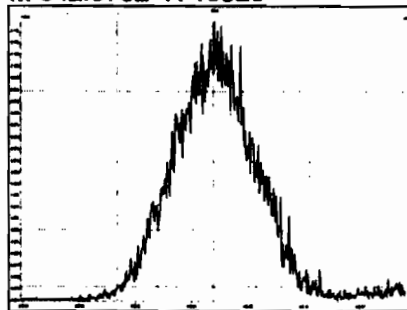
M 318.9792 R 11210



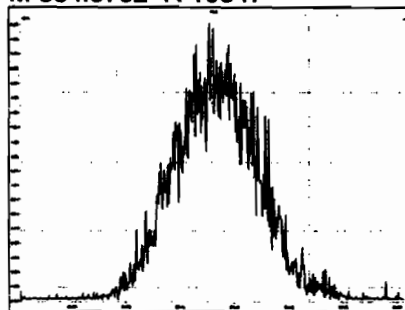
M 330.9792 R 10639



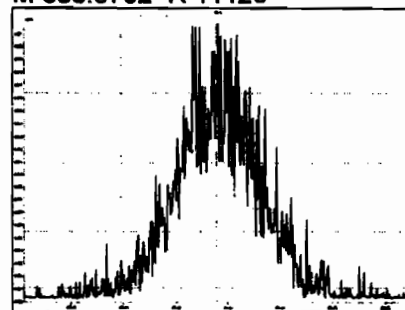
M 342.9792 R 10920



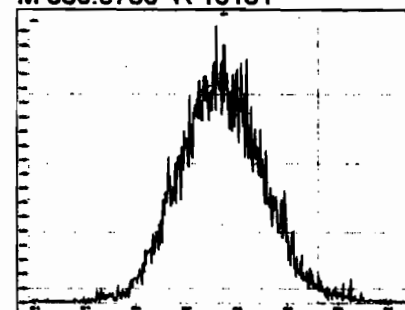
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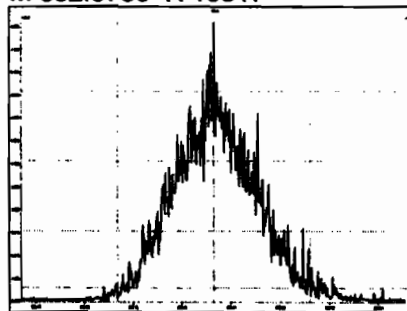
M 366.9792 R 11120



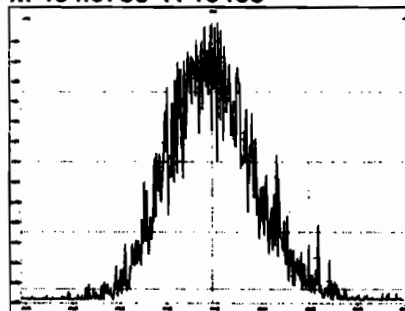
M 380.9760 R 10151



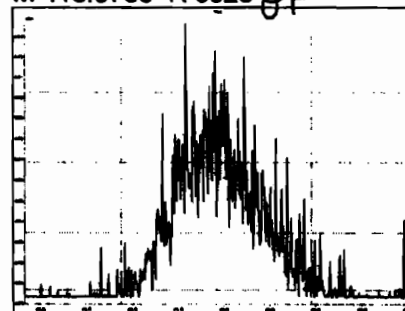
M 392.9760 R 10617



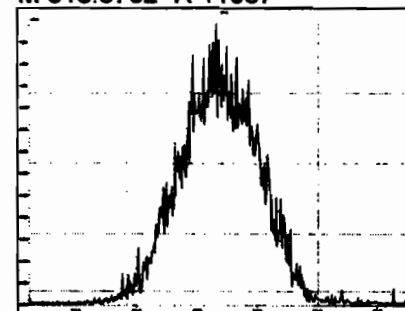
M 404.9760 R 10458



M 416.9760 R 9925 *OK*

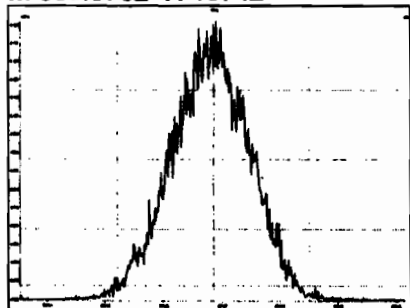


M 318.9792 R 11087

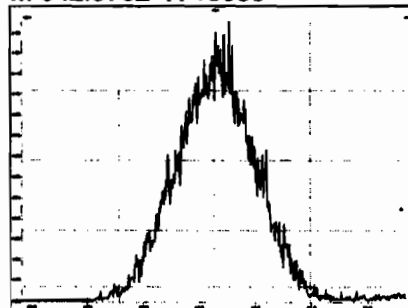


Printed: Friday, January 31, 2020 02:20:30 Pacific Standard Time

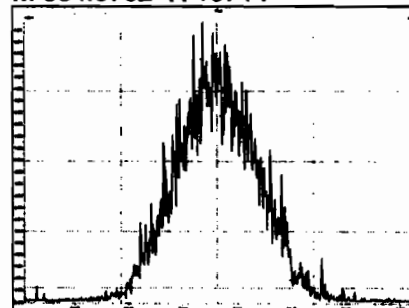
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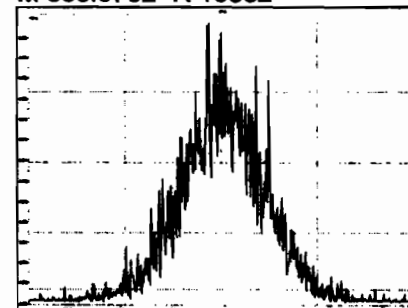
M 342.9792 R 10969



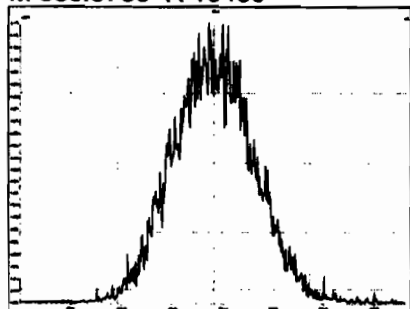
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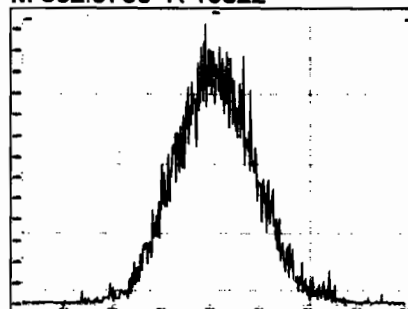
M 366.9792 R 10882



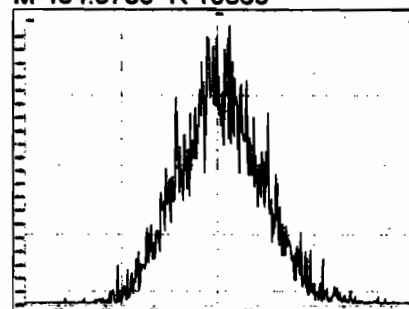
M 380.9760 R 10460



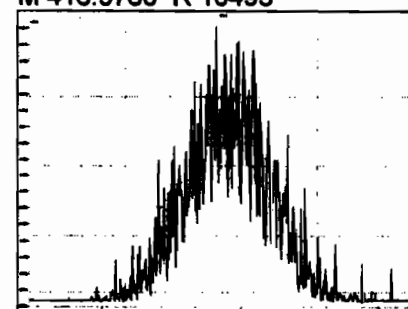
M 392.9760 R 10822



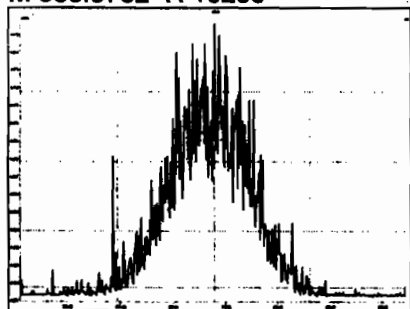
M 404.9760 R 10869



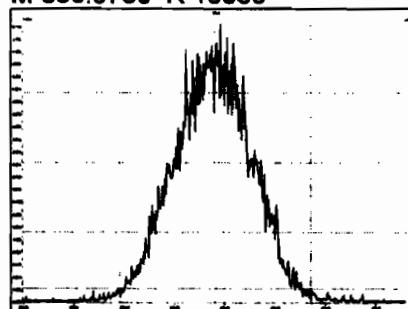
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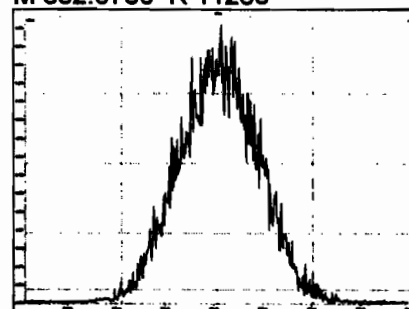
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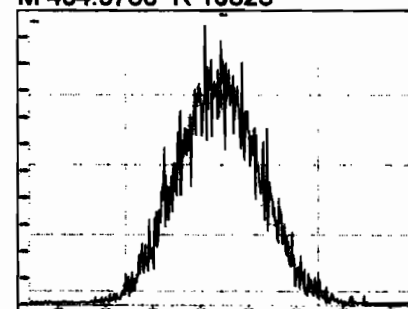
M 380.9760 R 10969



M 392.9760 R 11263

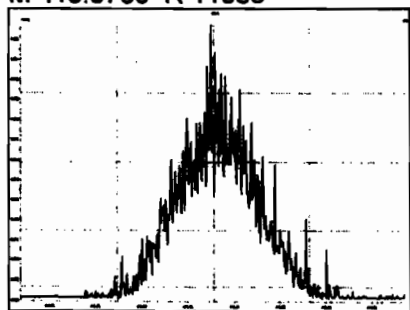


M 404.9760 R 10823

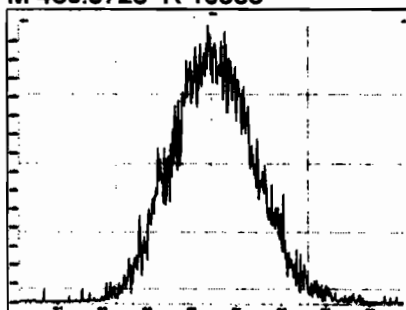


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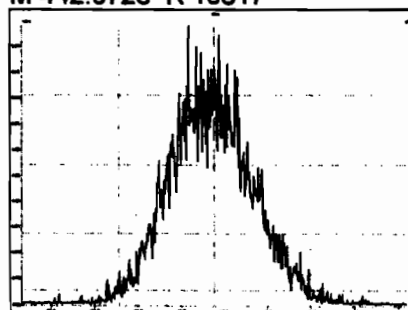
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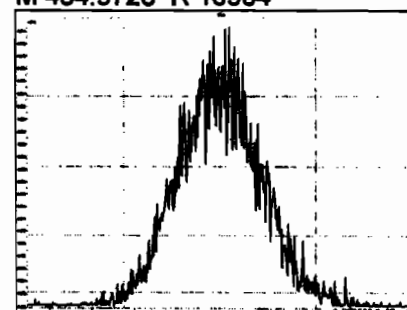
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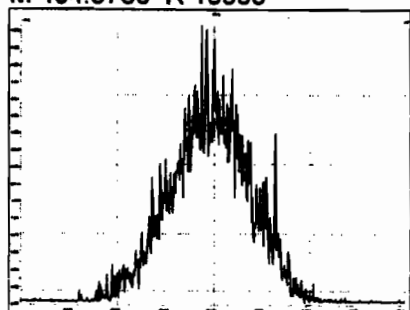
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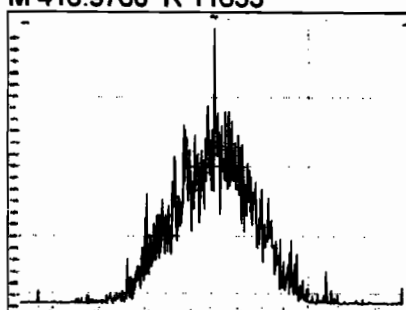
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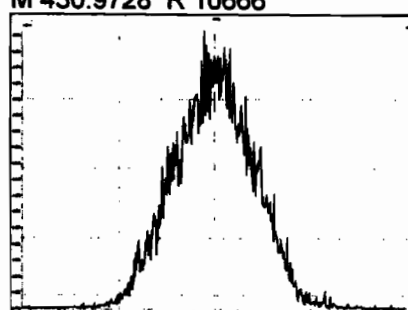
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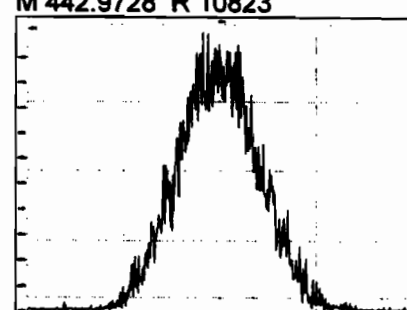
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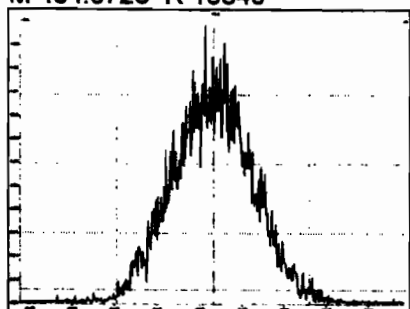
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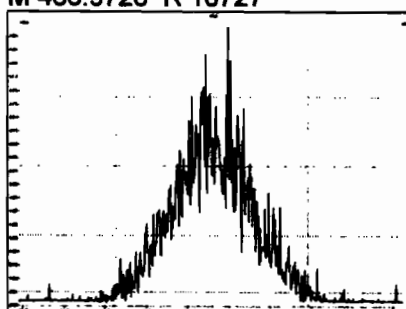
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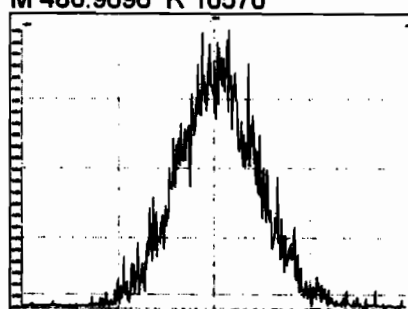
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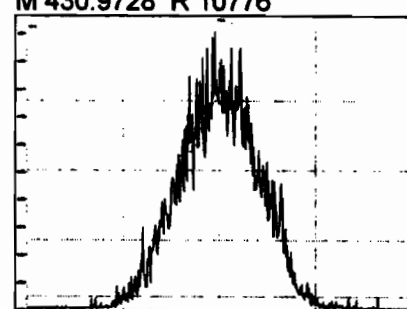
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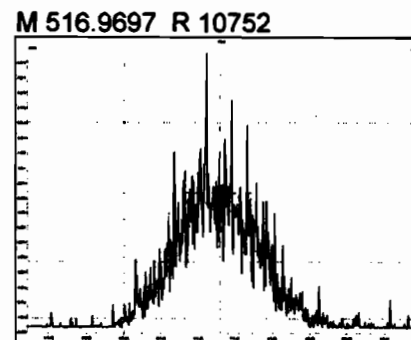
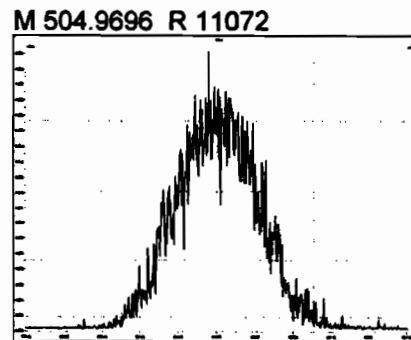
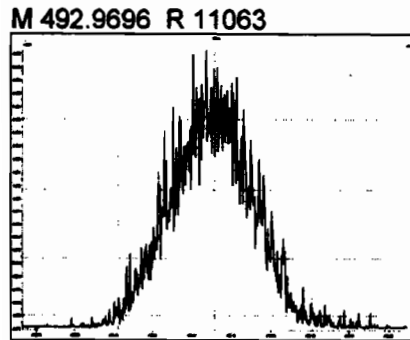
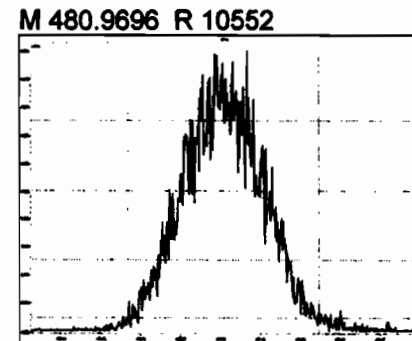
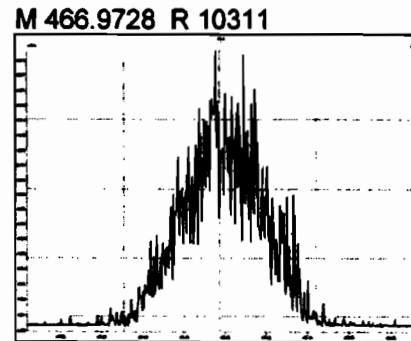
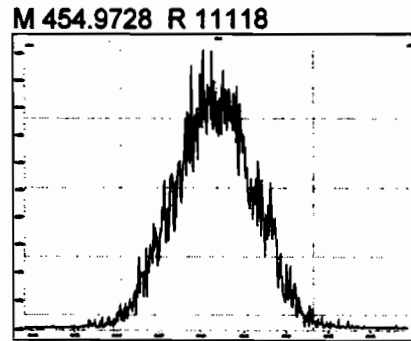
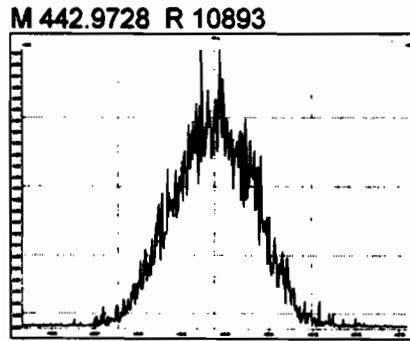


M 480.9696 R 10570



M 430.9728 R 10776





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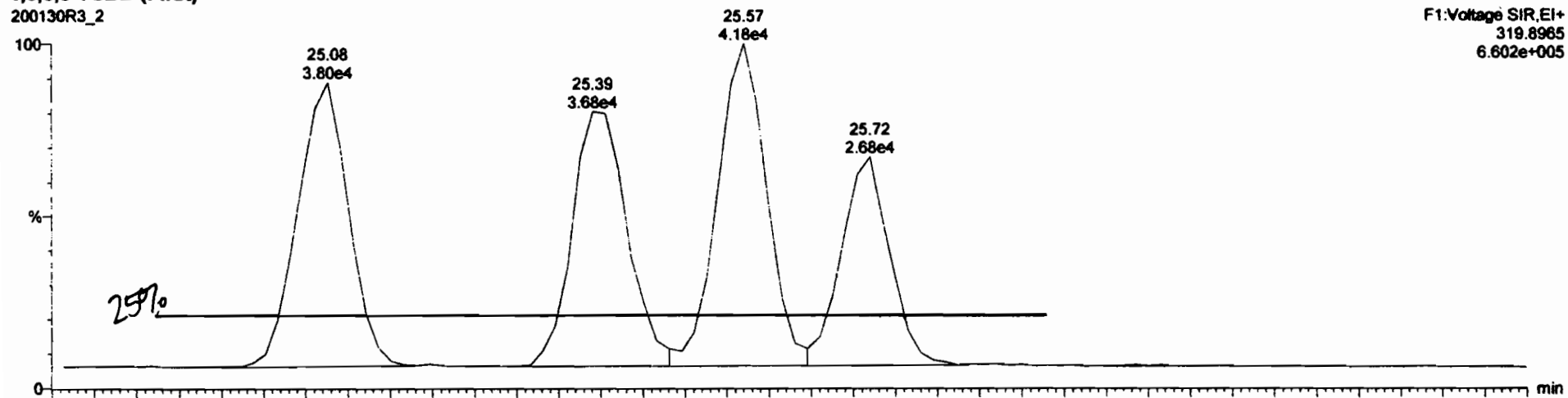
Last Altered: Friday, January 31, 2020 15:49:38 Pacific Standard Time  
Printed: Friday, January 31, 2020 15:49:43 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 23 Jan 2020 15:01:26  
Calibration: U:\VG12.PRO\CurveDB\cb5\_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

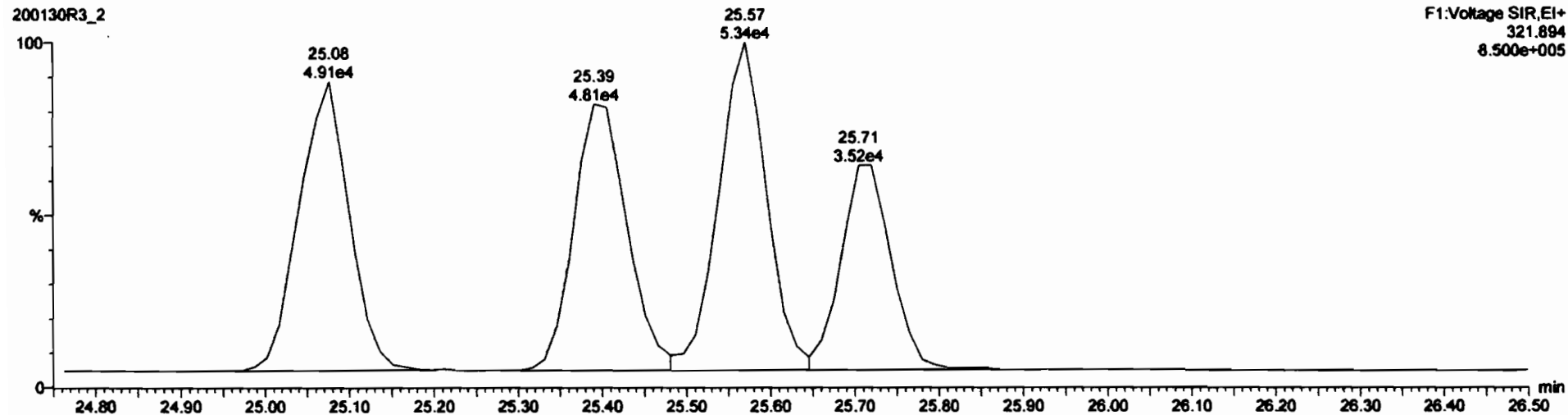
Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613-CS3 1911604

1,3,6,8-TCDD (First)

200130R3\_2



200130R3\_2



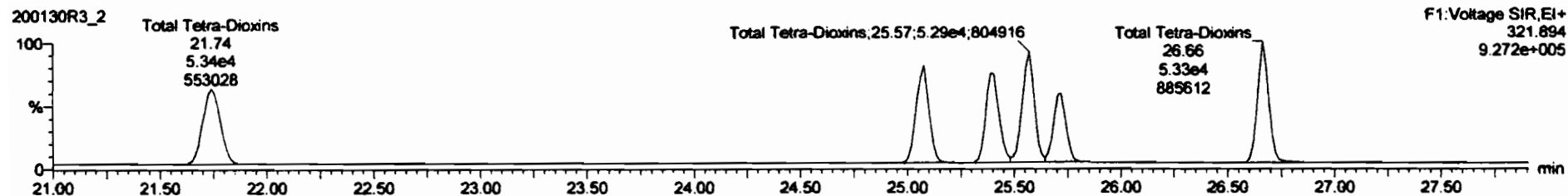
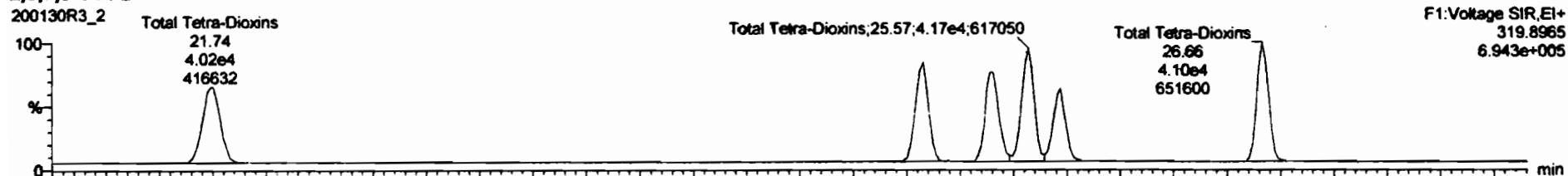
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Printed: Friday, January 31, 2020 15:49:21 Pacific Standard Time

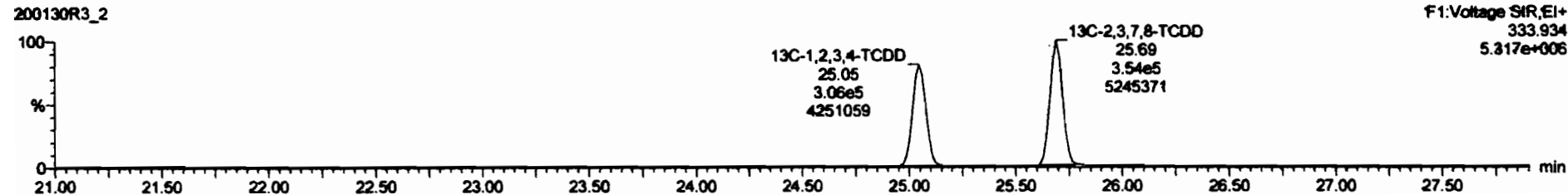
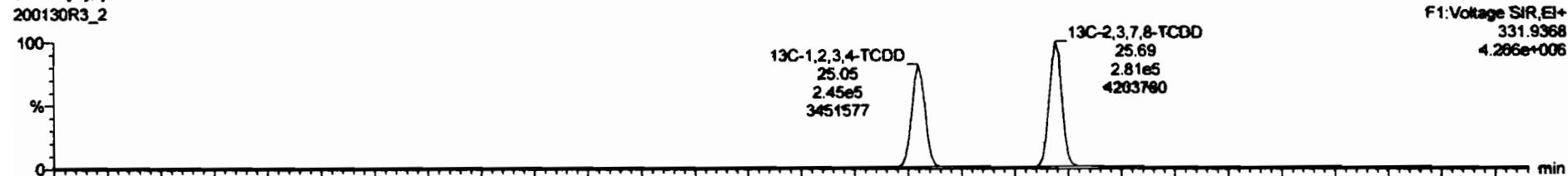
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Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

2,3,7,8-TCDD



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



Dataset: Untitled

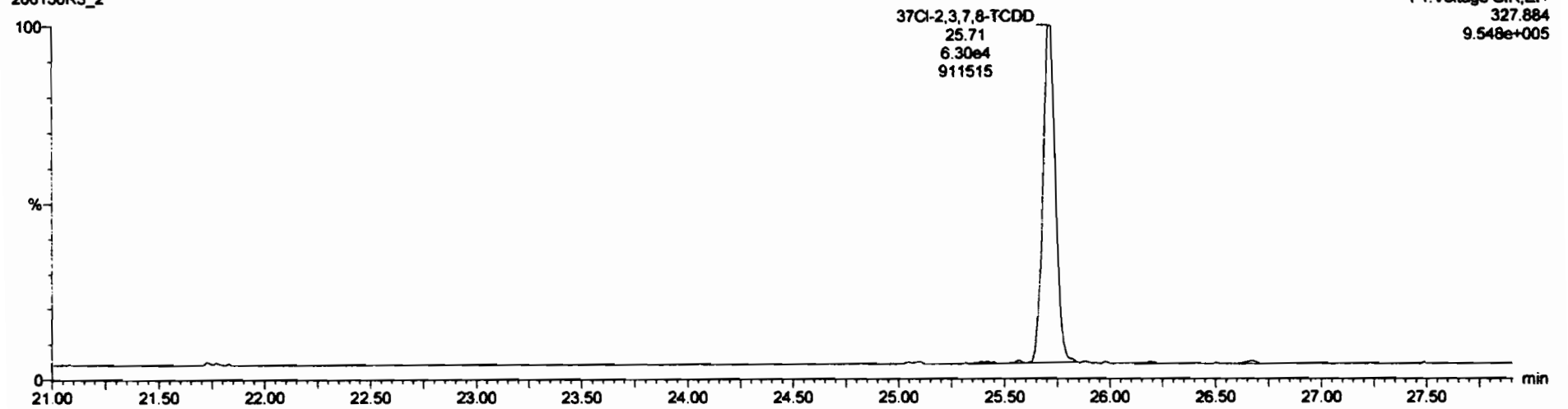
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Printed: Friday, January 31, 2020 15:49:21 Pacific Standard Time

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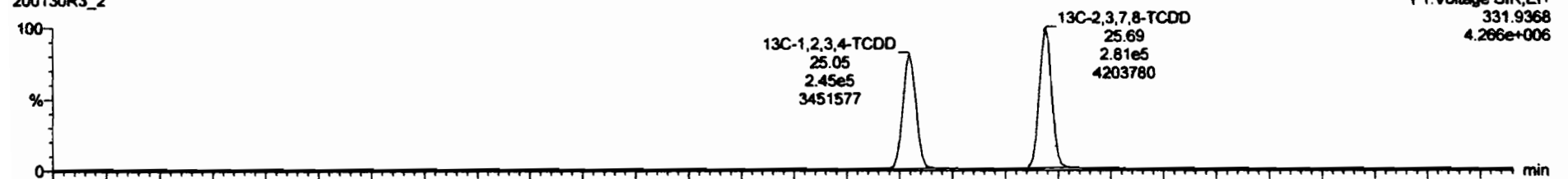
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200130R3\_2

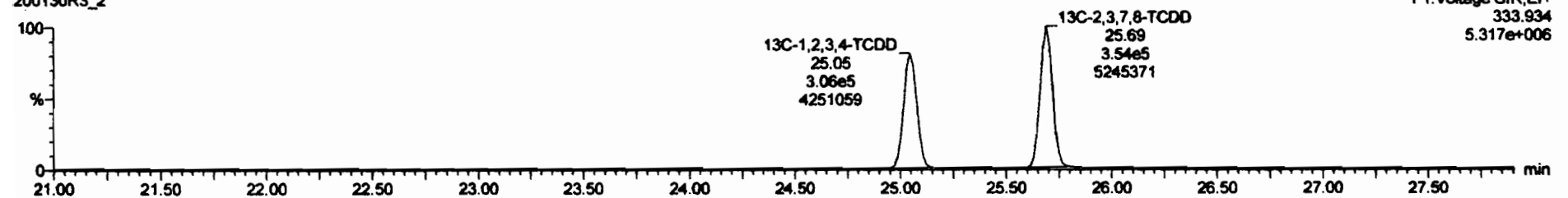


13C-1,2,3,4-TCDD

200130R3\_2



200130R3\_2



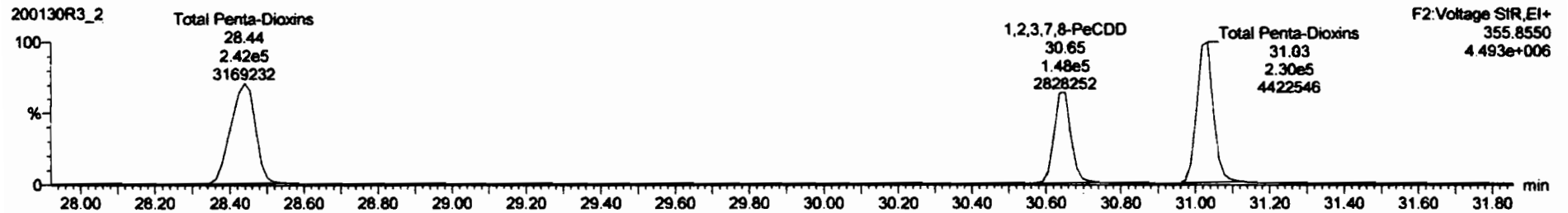


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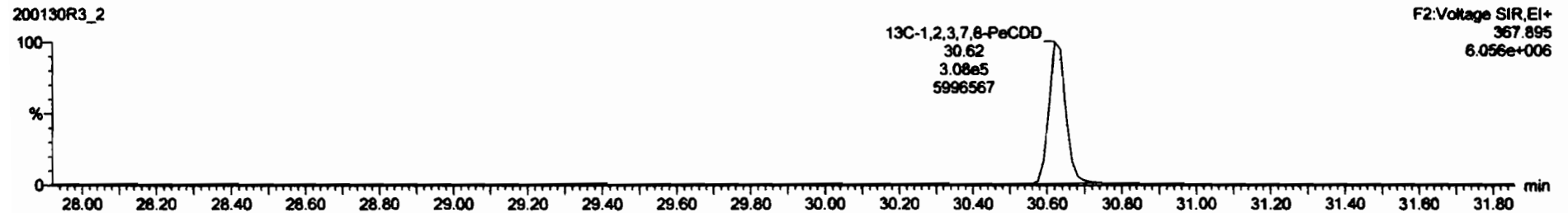
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1,2,3,7,8-PeCDD



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

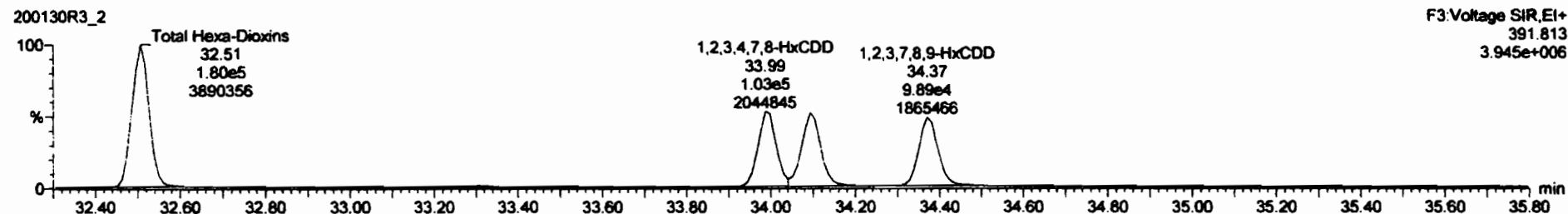
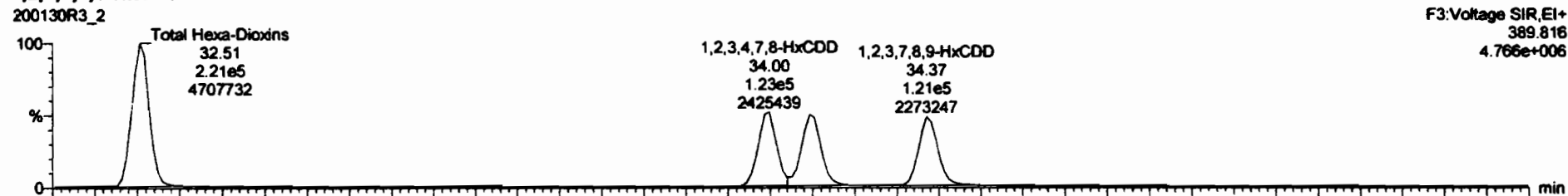


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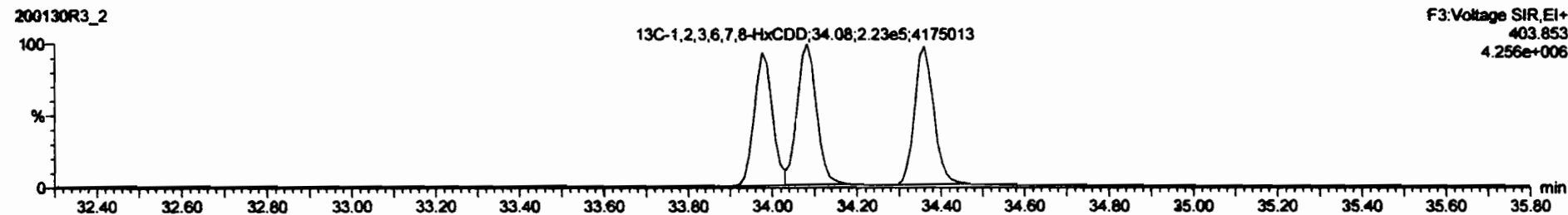
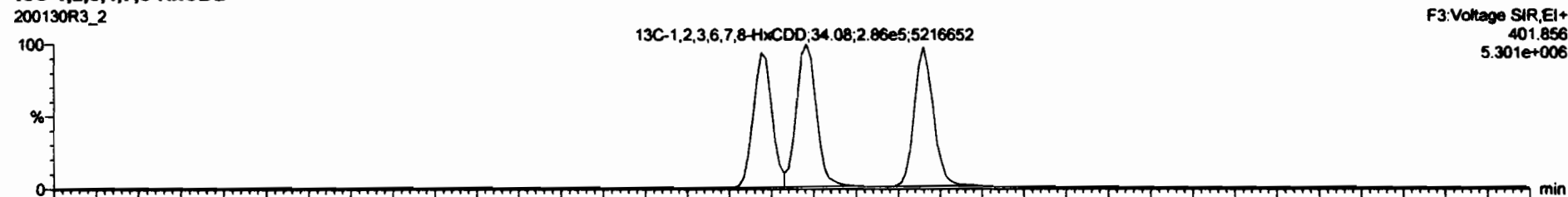
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1,2,3,4,7,8-HxCDD



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



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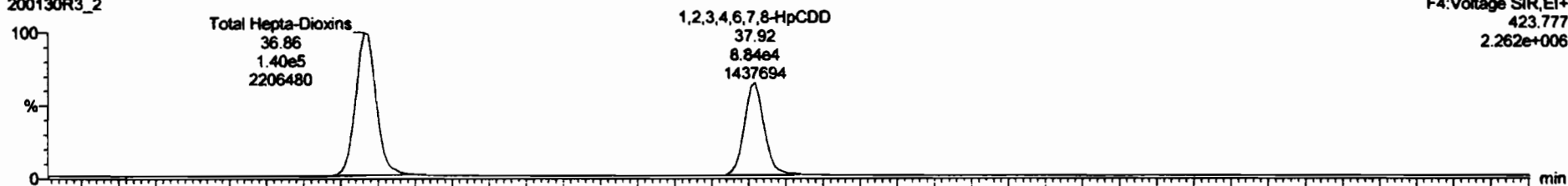
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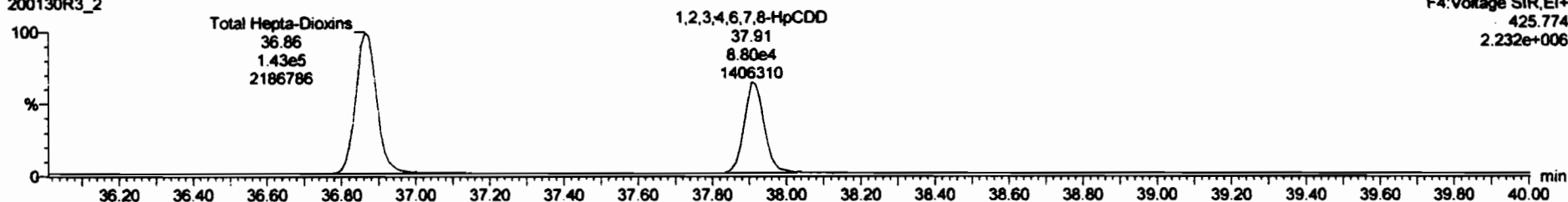
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1,2,3,4,6,7,8-HpCDD

200130R3\_2

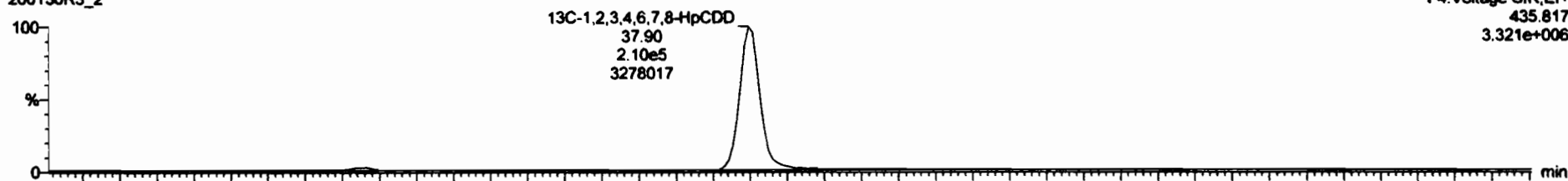


200130R3\_2

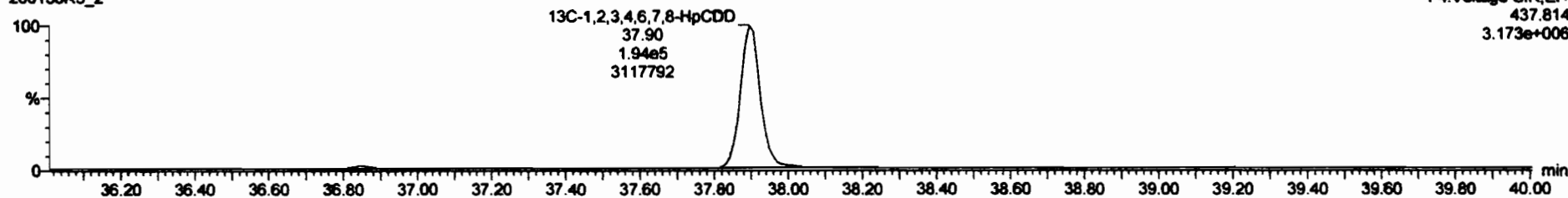


13C-1,2,3,4,6,7,8-HpCDD

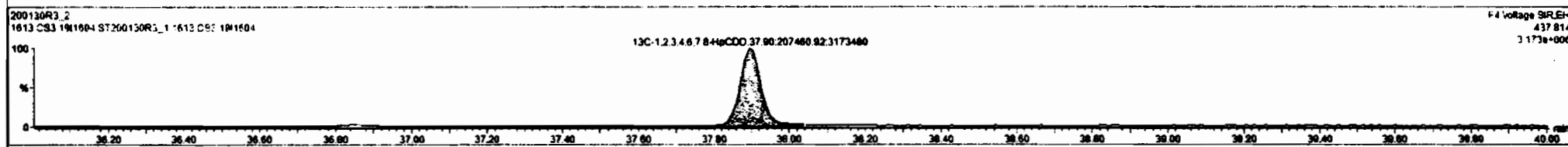
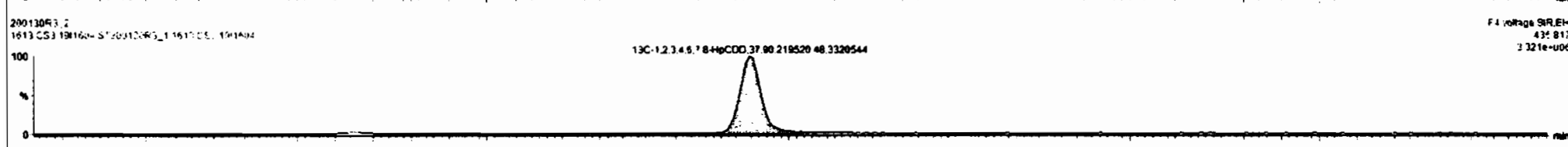
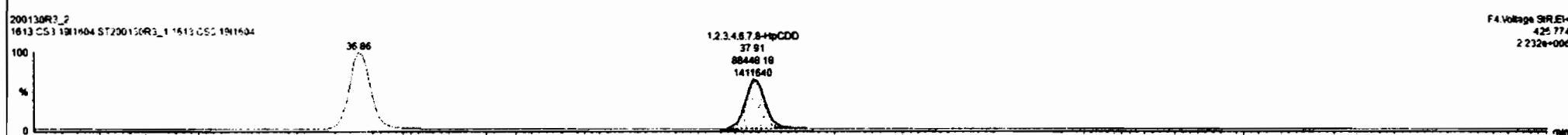
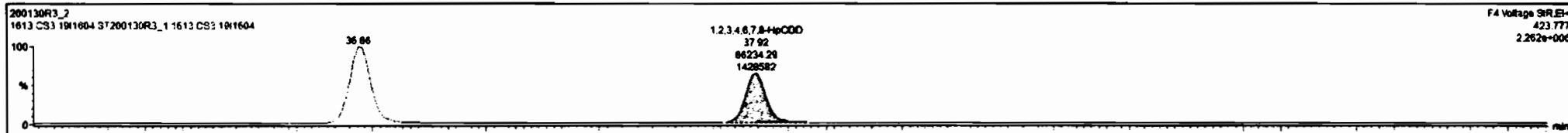
200130R3\_2



200130R3\_2



Peak	Retention Time	Area	Height	Width	Height	Area	Height	Width	Height	Area	Height	Width	Height	Area	Height	Width	Height
1	23.78	TCDD	6.88e4	6.38e5	0.77	0.78	NO	0.8246	25.72	25.72	NO	1.001	1.001	11.6	116	NO	
2	12.34	7,8-HpCDD	2.42e5	5.03e5	0.63	0.63	NO	0.9116	36.88	36.85	NO	1.001	1.000	52.7	105	NO	
3	12.34	7,8-HpCDD	2.25e5	4.48e5	1.24	1.20	NO	0.8784	33.88	34.80	NO	1.000	1.001	57.8	116	NO	
4	12.34	7,8-HpCDD	2.52e5	5.08e5	1.24	1.19	NO	0.7841	34.08	34.09	NO	1.000	1.000	58.0	116	NO	
5	12.34	7,8-HpCDD	2.28e5	4.85e5	1.24	1.23	NO	0.7885	34.38	34.37	NO	1.001	1.000	58.9	114	NO	
7	OCDD	3.62e5	7.71e5	0.66	0.67	NO	0.8800	46.96	46.81	NO	1.000	1.000	117	117	NO		
8	2,3,7,8-TCDF	6.38e4	9.07e5	0.77	0.74	NO	0.5878	24.83	24.84	NO	1.001	1.001	12.0	120	NO		
9	1,2,3,7,8-PeCDF	3.45e5	7.48e5	1.59	1.52	NO	0.8281	28.38	28.37	NO	1.001	1.000	55.9	112	NO		
10	2,3,4,7,8-PeCDF	3.53e5	7.32e5	1.55	1.55	NO	0.8480	30.38	30.35	NO	1.001	1.000	56.7	113	NO		
11	1,2,3,4,7,8-HxCDF	2.18e5	4.85e5	1.24	1.18	NO	0.7885	33.17	33.13	NO	1.000	1.000	56.9	112	NO		
12	1,2,3,6,7,8-HxCDF	2.48e5	5.88e5	1.24	1.15	NO	0.7201	33.24	33.25	NO	1.000	1.001	58.7	113	NO		
13	1,2,3,6,7,8-HxCDF	2.78e5	6.18e5	1.24	1.14	NO	0.7605	33.85	33.85	NO	1.001	1.000	64.4	113	NO		



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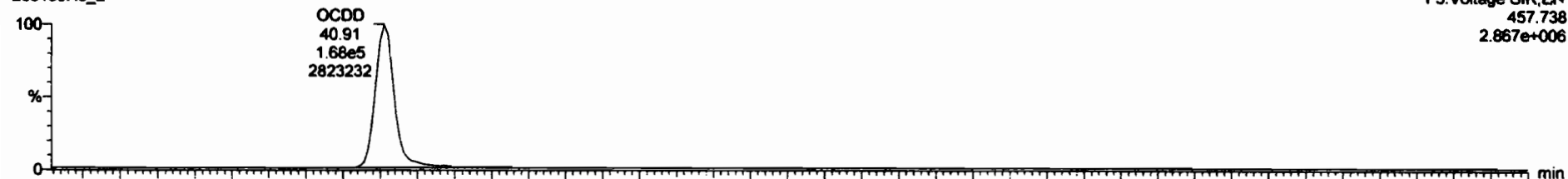
Last Altered: Friday, January 31, 2020 15:49:11 Pacific Standard Time

Printed: Friday, January 31, 2020 15:49:21 Pacific Standard Time

Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

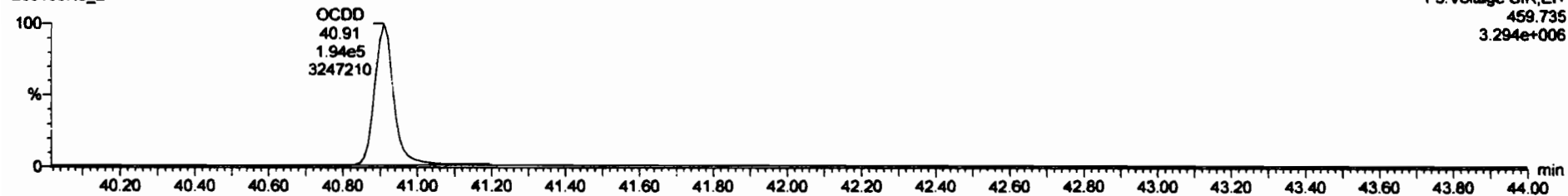
**OCDD**

200130R3\_2



F5:Voltage SIR,EI+  
457.738  
2.867e+006

200130R3\_2



F5:Voltage SIR,EI+  
459.735  
3.294e+006

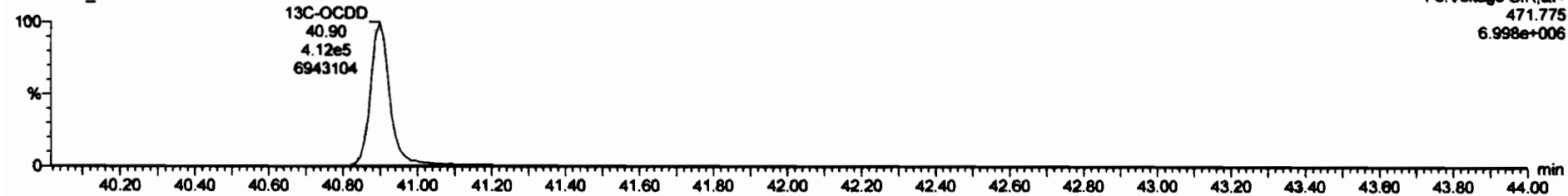
**13C-OCDD**

200130R3\_2



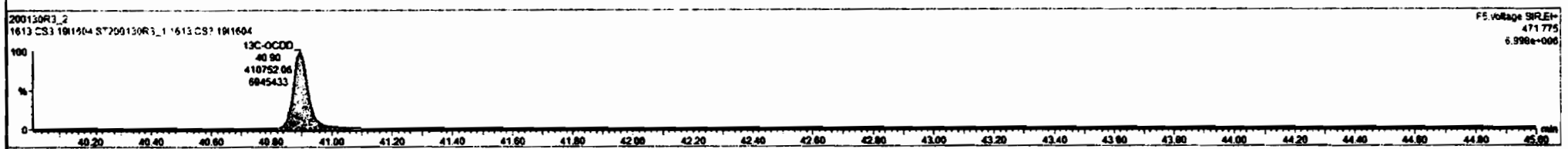
F5:Voltage SIR,EI+  
469.778  
6.206e+006

200130R3\_2



F5:Voltage SIR,EI+  
471.775  
6.998e+006

Peak	Retention	Area	Height	Width	Height	Area	Height	Width	Height	Area	Height	Width	Height	Area	Height	Width	Height	Area	Height	Width	Height	Area	Height	Width	Height		
1	12.378-TCCD	0.00e4	0.30e5	0.77	0.78	NO	0.8240	25.72	25.72	NO	1.001	1.001	11.8	118	NO												
2	12.378-PeCCD	2.42e5	5.73e5	0.63	0.63	NO	0.9116	30.88	30.85	NO	1.001	1.001	52.7	105	NO												
3	12.378-HuCCD	2.25e5	4.48e5	1.24	1.29	NO	0.8704	33.88	34.00	NO	1.000	1.001	57.8	116	NO												
4	12.378-HuCCD	2.35e5	5.09e5	1.24	1.19	NO	0.7841	34.08	34.08	NO	1.000	1.000	56.0	116	NO												
5	12.378-HuCCD	2.20e5	4.89e5	1.29	1.23	NO	0.7885	34.38	34.37	NO	1.001	1.000	56.9	114	NO												
6	12.378-HuCCD	1.75e5	4.27e5	1.04	0.97	NO	0.7388	37.81	37.92	NO	1.000	1.001	55.5	111	NO												
8	23.78-TCCD	0.30e4	0.07e5	0.77	0.73	NO	0.9578	24.83	24.84	NO	1.001	1.001	12.0	120	NO												
9	12.378-PeCCD	3.45e5	7.48e5	1.55	1.52	NO	0.8281	28.38	28.37	NO	1.001	1.001	55.9	112	NO												
10	23.78-PeCCD	3.53e5	7.23e5	1.55	1.55	NO	0.8488	30.36	30.36	NO	1.001	1.001	56.7	113	NO												
11	12.378-HuCCD	2.10e5	4.85e5	1.24	1.18	NO	0.7888	33.11	33.13	NO	1.000	1.000	55.9	112	NO												
12	12.378-HuCCD	2.40e5	5.08e5	1.24	1.15	NO	0.7201	33.24	33.25	NO	1.000	1.001	56.7	113	NO												
13	23.78-TCCD	2.70e4	6.10e4	1.24	1.14	NO	0.7888	33.11	33.13	NO	1.001	1.000	55.9	112	NO												



Dataset: Untitled

Last Altered: Friday, January 31, 2020 15:49:11 Pacific Standard Time

Printed: Friday, January 31, 2020 15:49:21 Pacific Standard Time

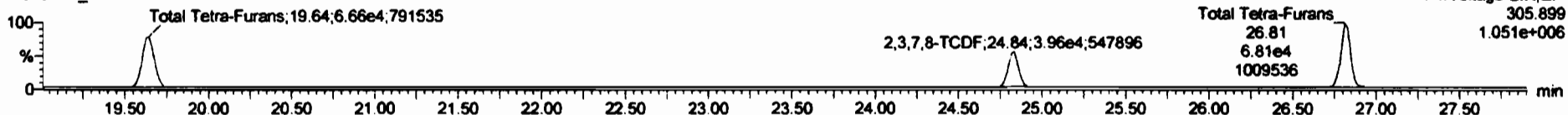
Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

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

200130R3\_2

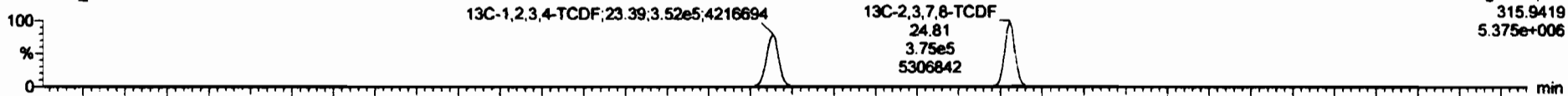


200130R3\_2

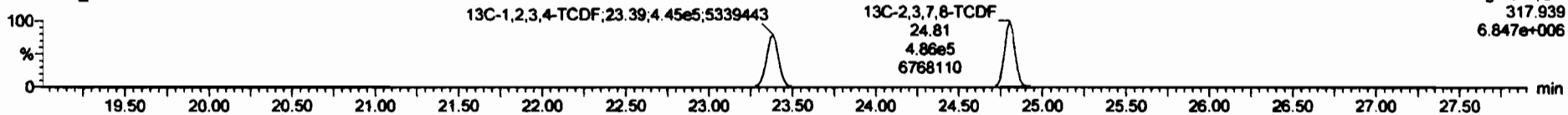


**13C-2,3,7,8-TCDF**

200130R3\_2

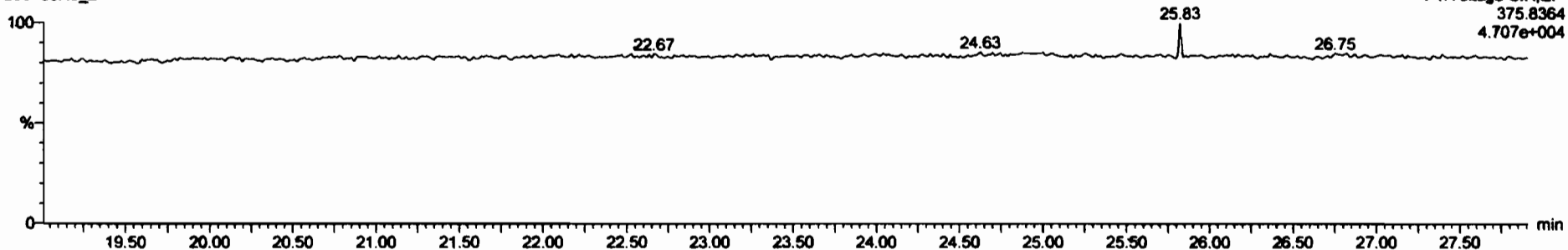


200130R3\_2

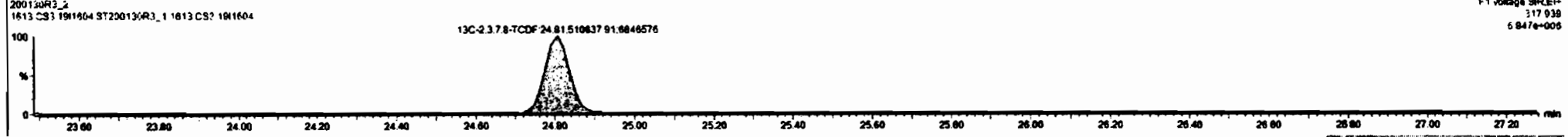
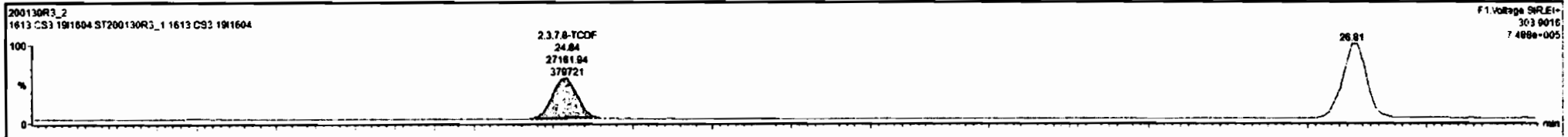


**DPE1**

200130R3\_2



Peak	Retention Time	Area	Height	Width	Resolution	Signal	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration
1	2.378-TCDD	6.88e4	6.36e5	0.77	0.78	NO	0.8240	25.72	25.72	NO	1.001	1.001	11.8	118	NO					
2	1,2,3,7,8-PeCDD	2.42e4	5.02e4	0.63	0.63	NO	0.9116	30.88	30.85	NO	1.001	1.001	52.7	195	NO					
3	1,2,3,4,7,8-HxCDD	2.35e4	4.48e4	1.24	1.20	NO	0.8784	33.88	34.80	NO	1.000	1.001	57.8	118	NO					
4	1,2,3,6,7,8-HxCDD	2.32e4	5.09e4	1.24	1.19	NO	0.7941	34.08	34.08	NO	1.000	1.000	58.0	118	NO					
5	1,2,3,7,8-HxCDD	2.20e4	4.85e4	1.24	1.23	NO	0.7985	34.39	34.37	NO	1.001	1.000	58.9	114	NO					
6	1,2,3,4,6,7,8-HeCDD	1.75e4	4.27e4	1.84	0.97	NO	0.7380	37.81	37.82	NO	1.000	1.001	55.5	111	NO					
7	OCDD	3.08e4	7.75e4	0.88	0.88	NO	0.8000	46.98	48.81	NO	1.000	1.000	115	115	NO					
8	1,2,3,7,8-PeCDF	3.45e4	7.48e4	1.55	1.52	NO	0.8291	28.38	28.37	NO	1.001	1.001	55.9	112	NO					
9	2,3,4,7,8-PeCDF	3.53e4	7.22e4	1.56	1.56	NO	0.8408	30.36	30.35	NO	1.001	1.001	56.7	113	NO					
10	1,2,3,4,7,8-HxCDF	2.10e4	4.86e4	1.24	1.18	NO	0.7880	33.11	33.13	NO	1.000	1.000	55.9	112	NO					
11	1,2,3,6,7,8-HxCDF	2.40e4	5.80e4	1.24	1.15	NO	0.7291	33.24	33.25	NO	1.000	1.001	58.7	113	NO					
12	1,2,3,6,7,8-HxCDF	2.79e4	5.70e4	1.24	1.14	NO	0.7887	33.84	33.85	NO	1.001	1.000	58.4	113	NO					





Dataset: Untitled

Last Altered: Friday, January 31, 2020 15:49:11 Pacific Standard Time  
Printed: Friday, January 31, 2020 15:49:21 Pacific Standard Time

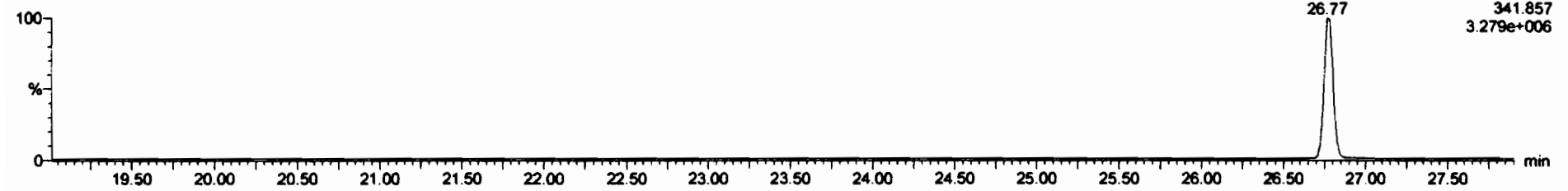
Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

1st Func. Penta-Furans

200130R3\_2

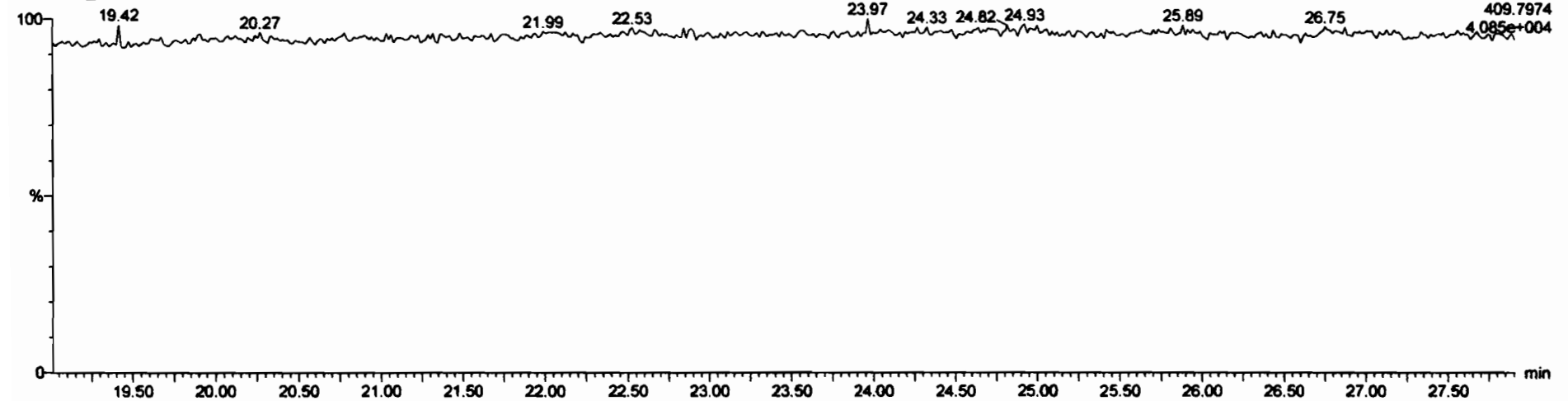


200130R3\_2



DPE6

200130R3\_2



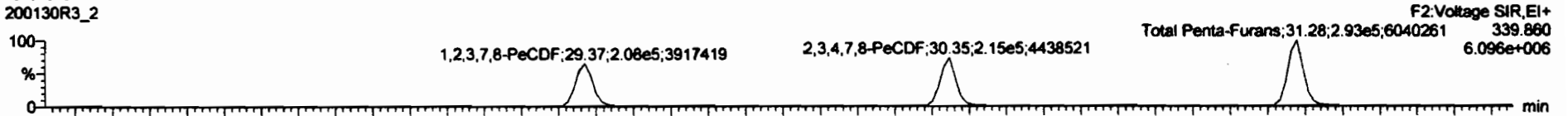
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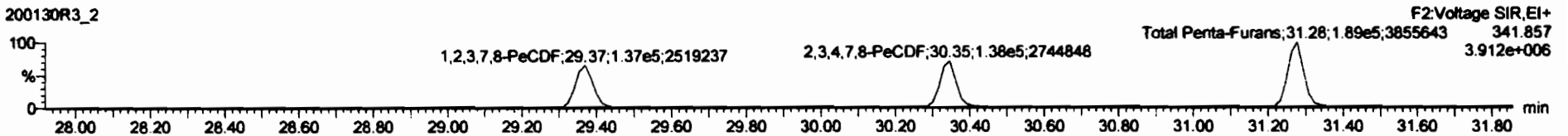
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**1,2,3,7,8-PeCDF**

200130R3\_2

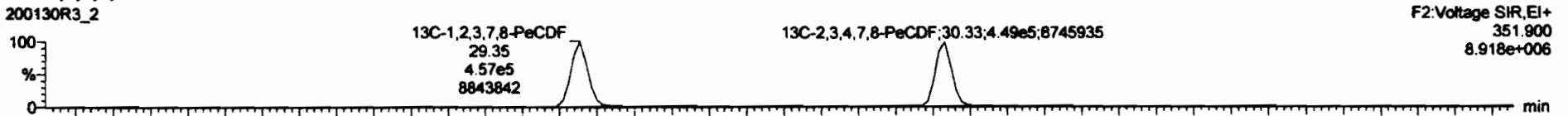


200130R3\_2

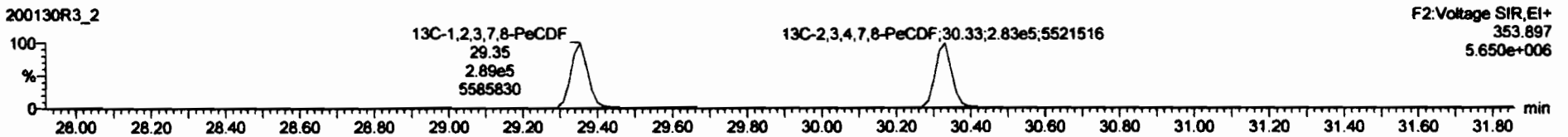


**13C-1,2,3,7,8-PeCDF**

200130R3\_2

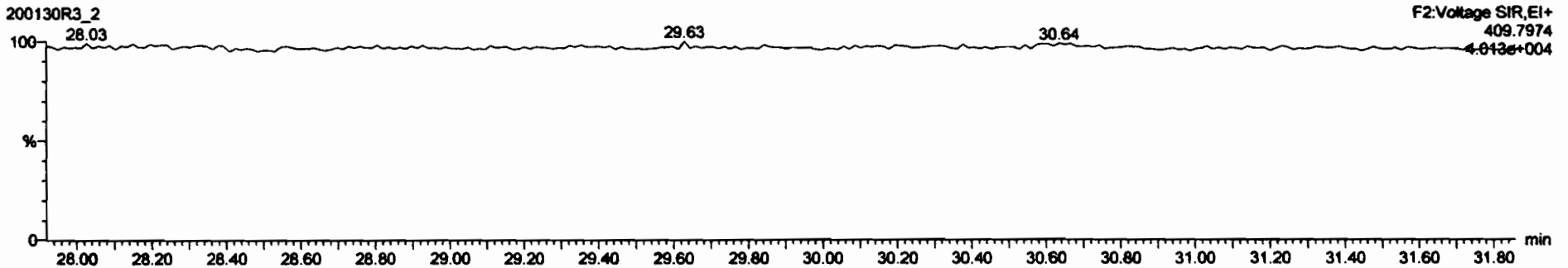


200130R3\_2



**DPE2**

200130R3\_2



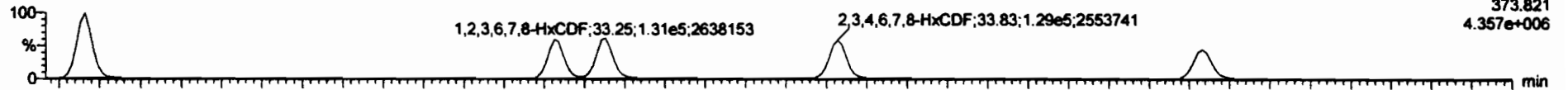
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Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

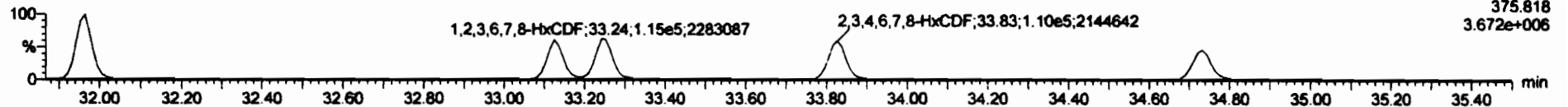
1,2,3,4,7,8-HxCDF

200130R3\_2



F3: Voltage SiR, EI+  
373.821  
4.357e+006

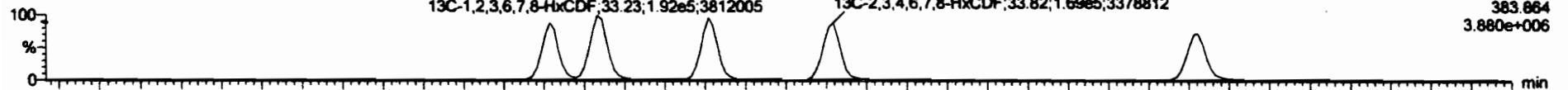
200130R3\_2



F3: Voltage SiR, EI+  
375.818  
3.672e+006

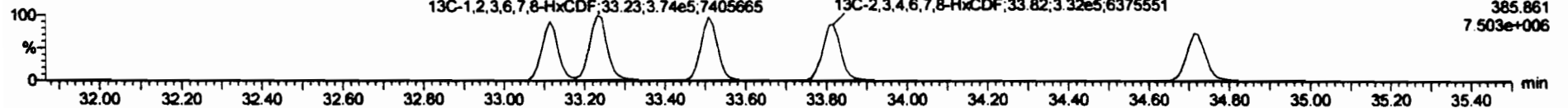
13C-1,2,3,4,7,8-HxCDF

200130R3\_2



F3: Voltage SiR, EI+  
383.864  
3.880e+006

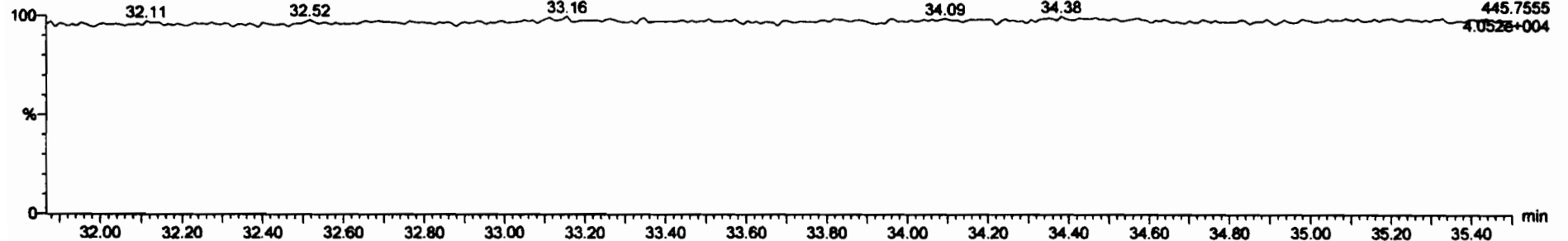
200130R3\_2



F3: Voltage SiR, EI+  
385.861  
7.503e+006

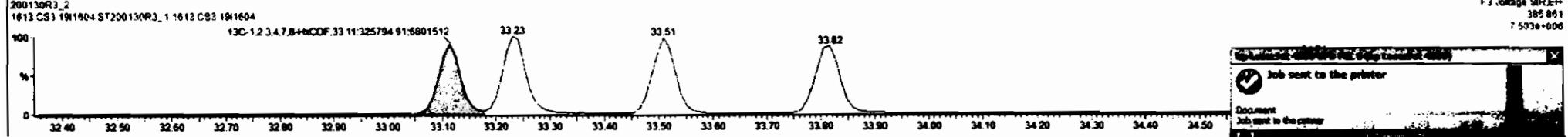
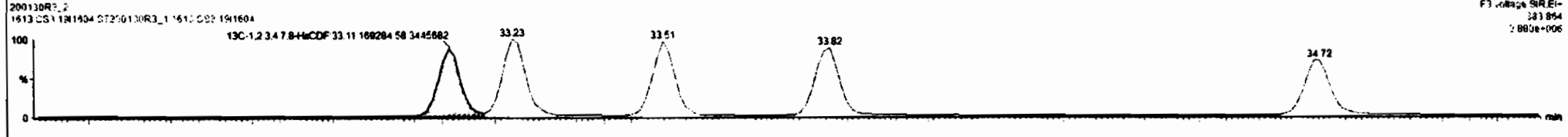
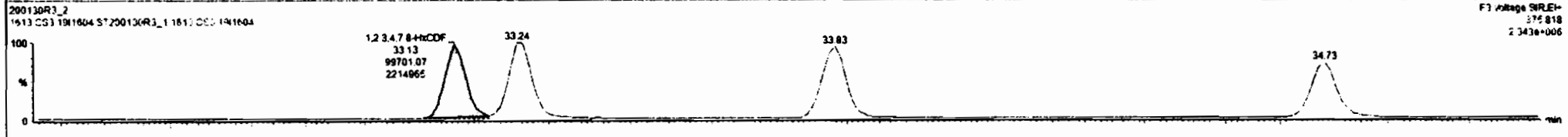
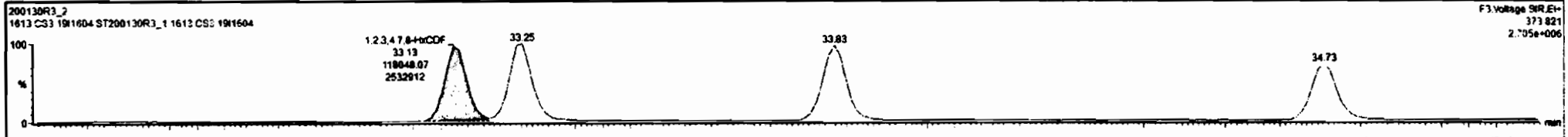
DPE3

200130R3\_2



F3: Voltage SiR, EI+  
445.7555  
4.052e+004

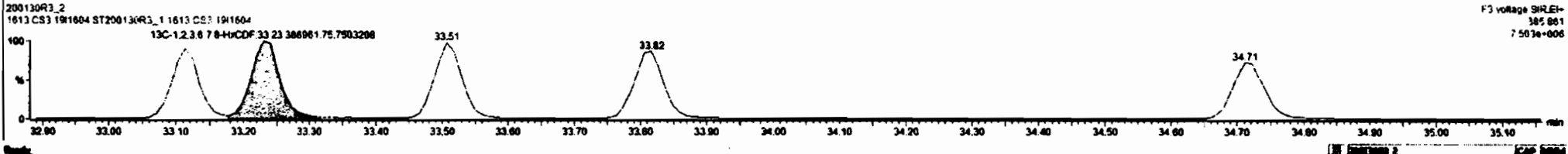
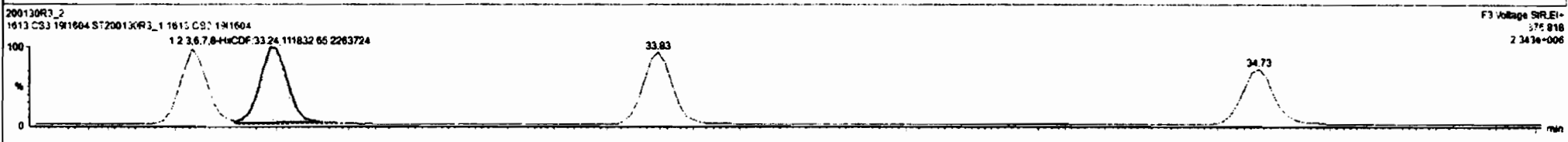
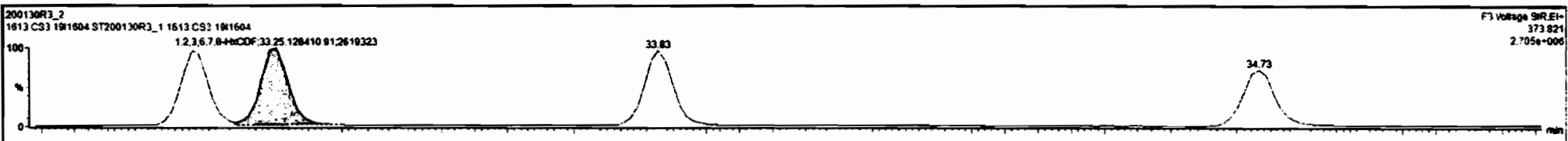
Peak	Retention Time	Area	Height	Width	Skew	Resolution	Integration	Label	Response	Concentration	Integration	Integration	Integration	Integration	Integration
1	23.78	6.88e4	6.38e5	0.77	0.78	NO	0.8240	25.72	25.72	NO	1.001	1.001	11.8	116	NO
2	12.3478	2.42e5	5.03e5	0.63	0.63	NO	0.9116	36.68	36.65	NO	1.001	1.001	52.7	105	NO
3	12.3478	2.25e5	4.48e5	1.24	1.20	NO	0.8794	33.88	34.00	NO	1.000	1.001	57.8	116	NO
4	12.3478	2.52e5	5.08e5	1.24	1.19	NO	0.7841	34.08	34.00	NO	1.000	1.000	58.0	116	NO
5	12.3478	2.20e5	4.85e5	1.24	1.23	NO	0.7885	34.38	34.37	NO	1.001	1.000	58.9	114	NO
6	12.3478	1.75e5	4.27e5	1.04	0.97	NO	0.7389	37.91	37.92	NO	1.000	1.001	55.5	111	NO
7	OCDD	3.08e5	7.79e5	0.86	0.85	NO	0.8988	46.98	46.91	NO	1.000	1.000	115	115	NO
8	23.78	6.40e4	9.08e5	0.77	0.74	NO	0.5878	24.83	24.84	NO	1.001	1.001	12.0	120	NO
9	12.3478	3.45e5	7.48e5	1.52	1.52	NO	0.8281	28.38	28.37	NO	1.001	1.001	55.9	112	NO
10	23.478	3.63e5	7.33e5	1.56	1.55	NO	0.8488	30.38	30.35	NO	1.001	1.001	56.7	113	NO
11	12.3478	2.49e5	5.08e5	1.24	1.15	NO	0.7201	33.24	33.25	NO	1.000	1.001	58.7	113	NO
12	12.3478	2.79e5	5.10e5	1.24	1.14	NO	0.7885	33.84	33.83	NO	1.001	1.000	58.4	113	NO



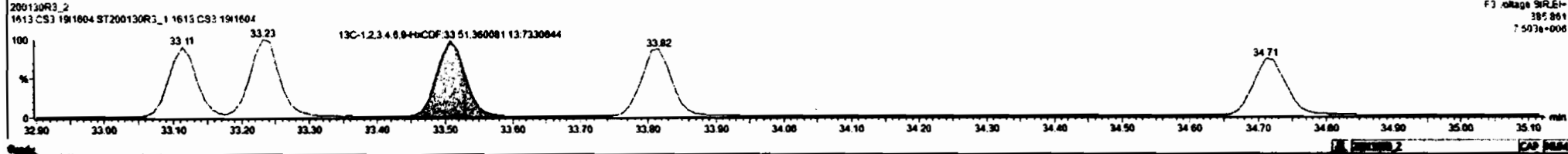
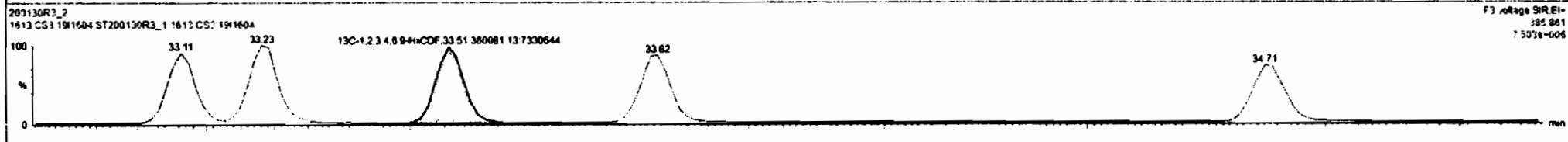
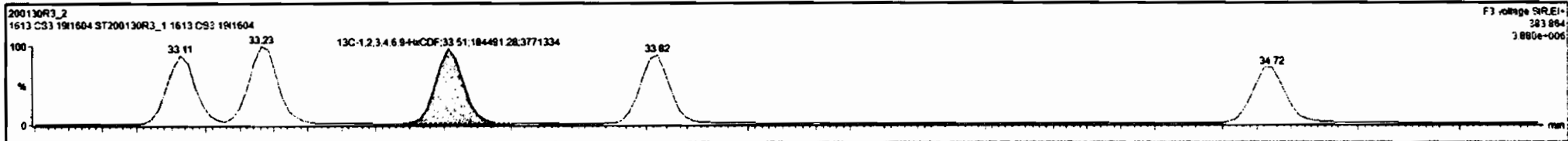
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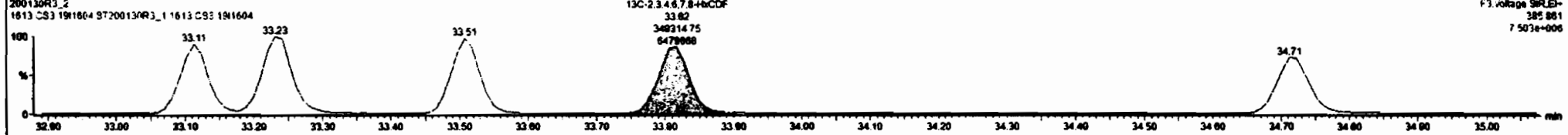
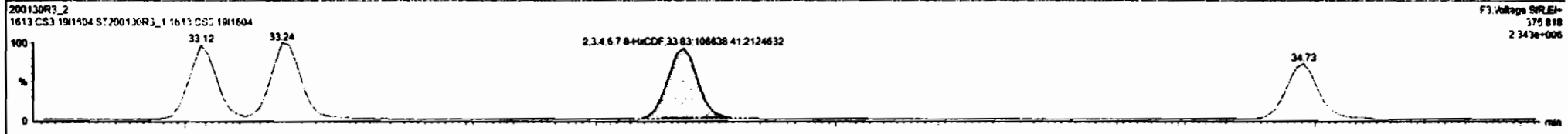
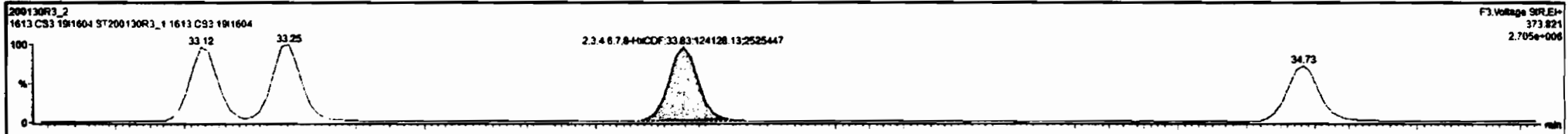
1	1,2,3,7,8-TCDF	6.88e4	6.38e5	0.77	0.78	NO	0.8248	25.72	25.72	NO	1.001	1.001	11.8	118	NO
2	1,2,3,7,8-PeCDF	2.42e5	5.83e5	0.83	0.83	NO	0.9116	30.88	30.85	NO	1.001	1.001	52.7	195	NO
3	1,2,3,4,7,8-HxCDF	2.25e5	4.48e5	1.24	1.20	NO	0.8704	33.99	34.00	NO	1.000	1.001	57.8	118	NO
4	1,2,3,6,7,8-HxCDF	2.32e5	5.09e5	1.24	1.19	NO	0.7941	34.08	34.09	NO	1.000	1.000	58.0	118	NO
5	1,2,3,7,8-HxCDF	2.20e5	4.85e5	1.24	1.23	NO	0.7985	34.99	34.37	NO	1.001	1.000	58.9	114	NO
6	1,2,3,4,6,7,8-HpCDF	1.75e5	4.27e5	1.84	0.97	NO	0.7309	37.81	37.92	NO	1.000	1.001	55.5	111	NO
7	OCDF	3.68e5	7.79e5	0.89	0.88	NO	0.8960	49.98	49.91	NO	1.000	1.000	115	115	NO
8	2,3,7,8-TCDF	6.48e4	6.88e5	0.77	0.74	NO	0.5878	24.83	24.84	NO	1.001	1.001	12.0	120	NO
9	1,2,3,7,8-PeCDF	3.45e5	7.46e5	1.52	1.52	NO	0.8281	29.38	29.37	NO	1.001	1.001	55.9	112	NO
10	2,3,4,7,8-PeCDF	3.53e5	7.32e5	1.55	1.55	NO	0.8489	30.38	30.35	NO	1.001	1.001	58.7	113	NO
11	1,2,3,4,7,8-HxCDF	2.16e5	4.95e5	1.24	1.18	NO	0.7890	33.11	33.13	NO	1.000	1.000	85.9	112	NO



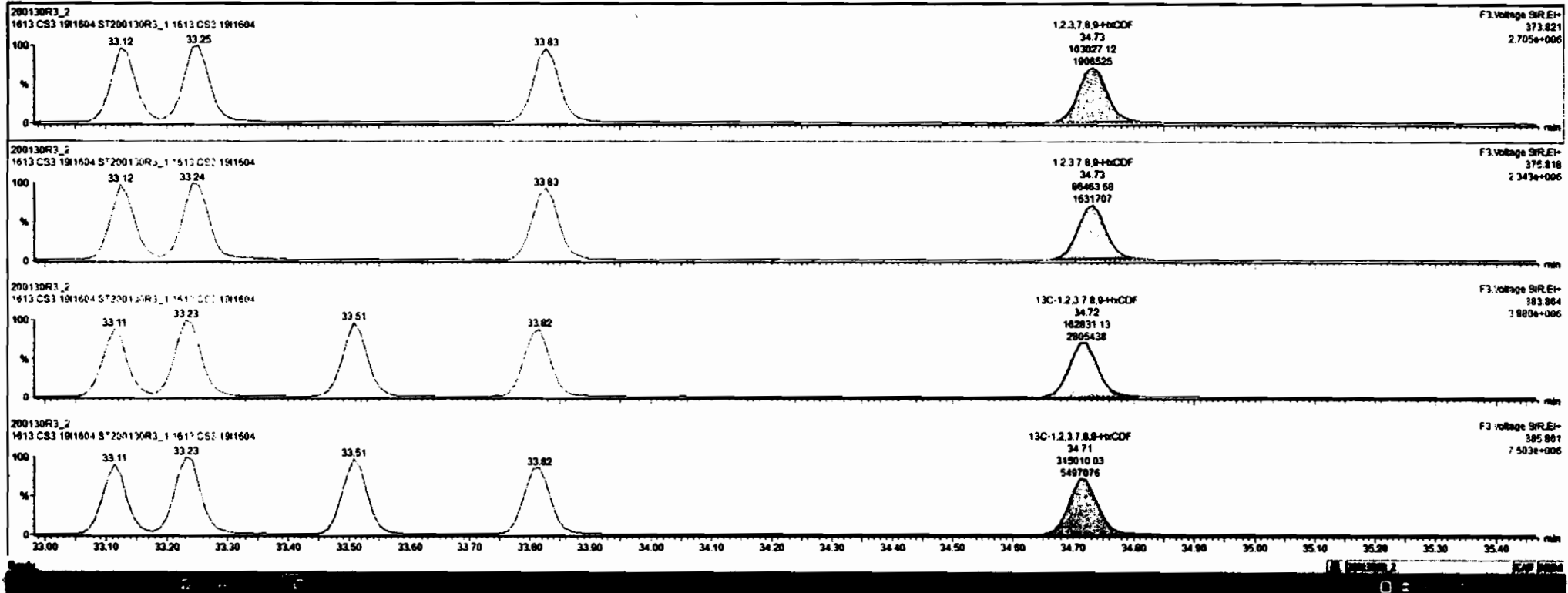
Peak #	Retention Time (min)	Height	Area	Width	Height	Area	Width	Height	Area	Width	Height	Area	Width	Height	Area	Width	Height	Area	Width
27	13C-2,3,4,7,8-HxCDF	7.32e5	7.97e5	1.56	1.58	NO	0.0027	39.96	38.33	NO	1.204	1.211	102	102	NO				
28	13C-1,2,3,4,7,8-HxCDF	4.95e5	5.45e5	0.51	0.52	NO	0.0013	33.11	33.11	NO	0.000	0.000	100	100	NO				
29	13C-1,2,3,4,7,8-HxCDF	5.88e5	5.45e5	0.51	0.52	NO	1.0407	33.21	33.23	NO	0.001	0.002	103	103	NO				
30	13C-2,3,4,6,7,8-HxCDF	5.30e5	5.45e5	0.51	0.52	NO	0.0457	33.81	33.82	NO	1.000	1.000	103	103	NO				
31	13C-1,2,3,4,6,7,8-HxCDF	4.78e5	5.45e5	0.51	0.52	NO	0.0158	34.71	34.72	NO	1.036	1.036	100	100	NO				
32	13C-1,2,3,4,6,7,8-HxCDF	4.80e5	5.45e5	0.44	0.45	NO	0.5002	38.48	38.47	NO	1.000	1.000	120	120	NO				
33	13C-1,2,3,4,7,8-HxCDF	2.91e5	5.45e5	0.44	0.44	NO	0.4400	38.47	38.49	NO	1.140	1.140	119	119	NO				
34	13C-OCDF	0.33e5	5.45e5	0.00	0.07	NO	0.5057	41.05	41.00	NO	1.225	1.228	201	130	NO				
35	13C-2,3,7,8-TCDF	0.30e5	5.51e5				1.0057	25.72	25.70	NO	1.027	1.028	10.5	105	NO				
36	13C-1,2,3,4-TCDF	5.51e5	5.51e5	0.77	0.80	NO	1.0000	25.00	25.05	NO	1.000	1.000	100	100	NO				
37	13C-1,2,3,4-TCDF	7.87e5	7.87e5	0.77	0.79	NO	1.0000	23.42	23.38	NO	1.000	1.000	100	100	NO				



1	2,3,7,8-TCDD	6.88e4	6.38e5	0.77	0.78	NO	0.8240	25.72	25.72	NO	1.001	1.001	11.8	116	NO
2	1,2,3,7,8-PeCDD	2.42e5	5.83e6	0.63	0.63	NO	0.9116	30.88	30.85	NO	1.001	1.001	52.7	105	NO
3	1,2,3,4,7,8-HxCDD	2.25e5	4.48e5	1.24	1.20	NO	0.8794	33.98	34.80	NO	1.000	1.001	57.8	116	NO
4	1,2,3,6,7,8-HxCDD	2.33e5	5.98e5	1.24	1.19	NO	0.7841	34.08	34.89	NO	1.000	1.000	58.0	116	NO
5	1,2,3,7,8,9-HxCDD	2.20e5	4.85e5	1.24	1.23	NO	0.7885	34.39	34.37	NO	1.001	1.000	58.9	114	NO
6	1,2,3,4,6,7,8-HpCDD	1.75e5	4.27e5	1.04	0.97	NO	0.7388	37.81	37.82	NO	1.000	1.001	55.5	111	NO
7	OCDD	3.60e5	7.79e5	0.80	0.88	NO	0.6080	46.90	48.81	NO	1.000	1.000	115	115	NO
8	2,3,7,8-TCDF	6.40e4	6.90e5	0.77	0.74	NO	0.9276	24.83	24.94	NO	1.001	1.001	12.0	120	NO
9	1,2,3,7,8-PeCDF	3.45e5	7.46e5	1.95	1.52	NO	0.8281	28.38	28.37	NO	1.001	1.001	55.9	112	NO
10	2,3,4,7,8-PeCDF	3.53e5	7.32e5	1.95	1.95	NO	0.8488	30.35	30.35	NO	1.001	1.001	58.7	113	NO
11	1,2,3,4,7,8-HxCDF	2.38e5	4.90e5	1.24	1.18	NO	0.7880	33.11	33.13	NO	1.000	1.000	55.9	112	NO
12	1,2,3,6,7,8-HxCDF	2.48e5	5.88e5	1.24	1.15	NO	0.7291	33.24	33.35	NO	1.000	1.001	58.7	113	NO



15	1,2,3,4,6,7,8-HxCDF	1.83e5	4.09e5	1.04	0.98	NO	0.7318	38.51	38.48	NO	1.001	1.000	54.4	100	NO
16	1,2,3,4,7,8,9-HxCDF	1.37e5	2.91e5	1.04	0.97	NO	0.8164	38.48	38.50	NO	1.000	1.000	57.8	115	NO
17	OCDF	3.31e5	8.32e5	0.98	0.84	NO	0.8388	41.09	41.18	NO	1.000	1.000	125	125	NO
18	13C-2,3,7,8-TCDF	6.36e5	5.51e5	0.77	0.79	NO	1.1157	25.89	25.88	NO	1.026	1.028	103	103	NO
19	13C-1,2,3,7,8-PeCDD	5.83e5	5.51e5	0.83	0.83	NO	0.8411	30.43	30.64	NO	1.215	1.223	109	109	NO
20	13C-1,2,3,4,7,8-HxCDD	4.49e5	5.45e5	1.24	1.28	NO	0.8379	33.98	33.88	NO	1.014	1.014	87.7	87.7	NO
21	13C-1,2,3,6,7,8-HxCDD	5.09e5	5.45e5	1.24	1.28	NO	1.0054	34.08	34.08	NO	1.017	1.017	87.7	87.7	NO
22	13C-1,2,3,7,8,9-HxCDD	4.85e5	5.45e5	1.24	1.24	NO	1.0303	34.38	34.38	NO	1.028	1.025	88.4	88.4	NO
23	13C-1,2,3,4,6,7,8-HpCDD	4.27e5	5.45e5	1.04	1.08	NO	0.7989	37.93	37.98	NO	1.132	1.131	110	110	NO
24	13C-OCDD	7.79e5	5.45e5	0.88	0.88	NO	0.6910	40.81	40.80	NO	1.218	1.221	238	119	NO
25	13C-2,3,7,8-TCDF	9.88e5	7.87e5	0.77	0.78	NO	1.0387	24.87	24.81	NO	0.993	0.990	110	110	NO
26	13C-1,2,3,7,8-HxCDF	7.48e4	7.43e4	1.54	1.48	NO	0.8489	28.28	28.25	NO	1.188	1.175	107	107	NO



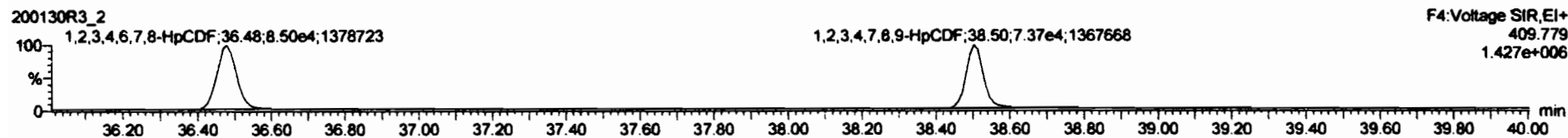
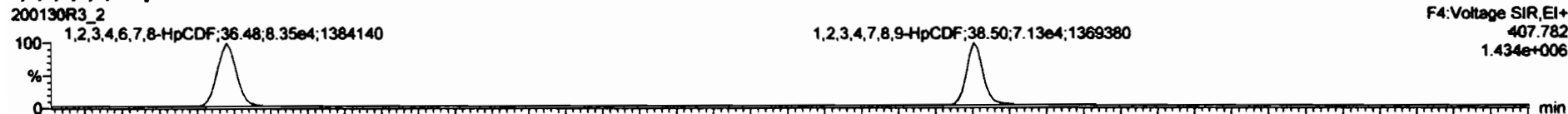


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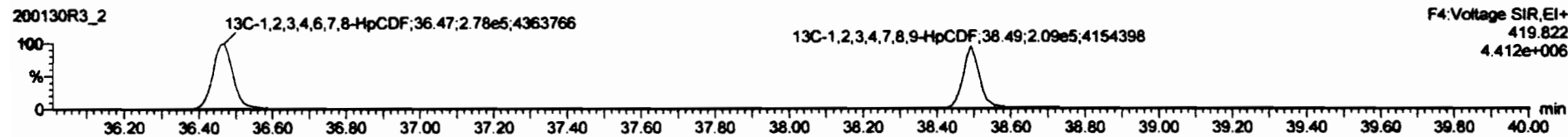
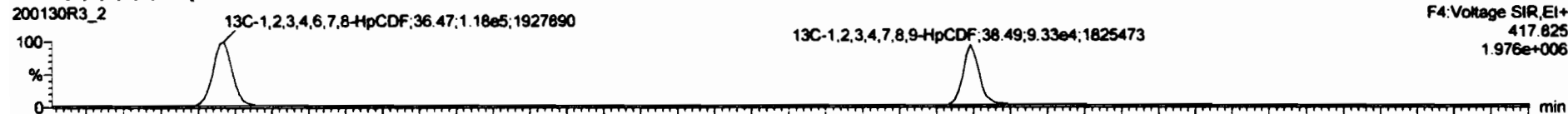
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Name: 200130R3\_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3\_1 1613 CS3 1911604, Description: 1613 CS3 1911604

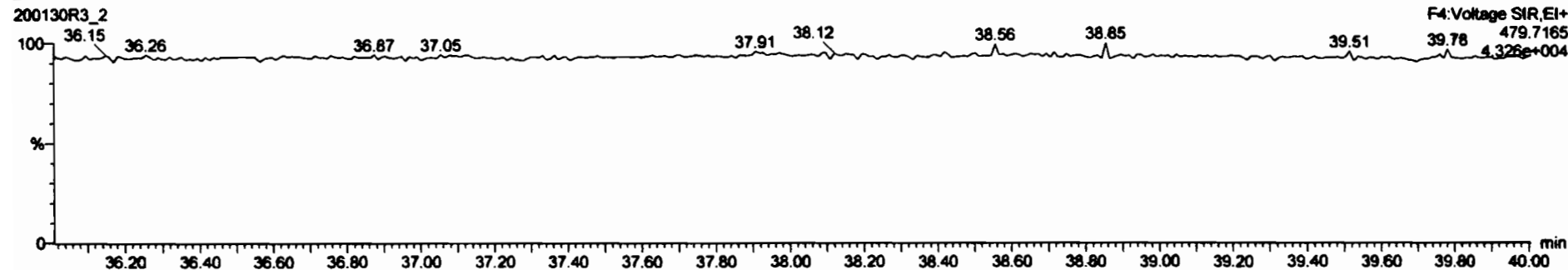
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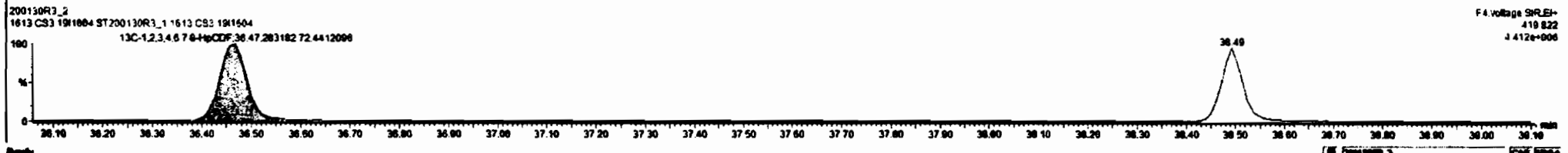
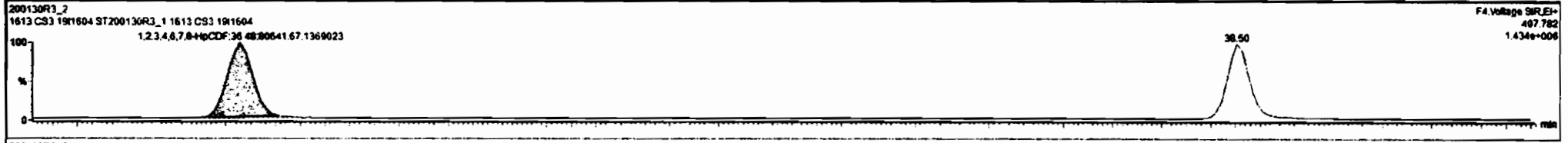
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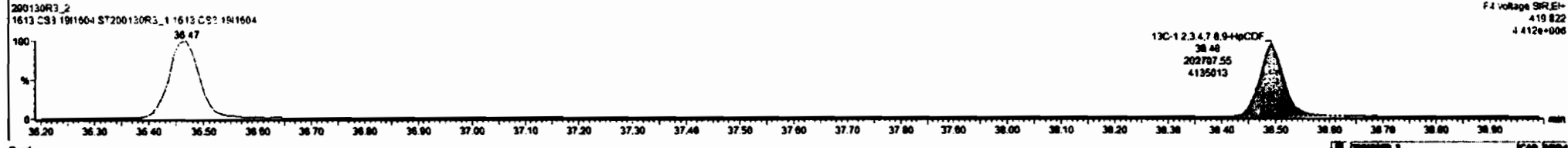
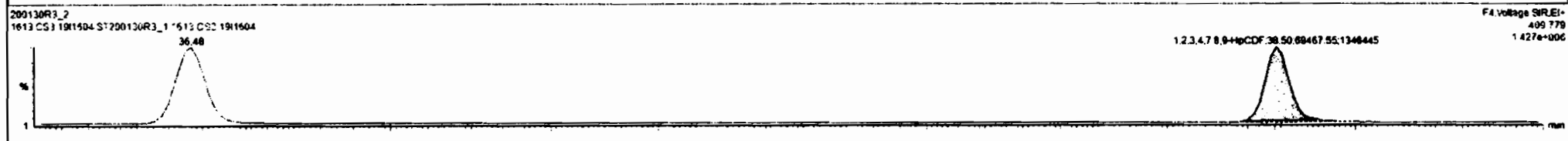
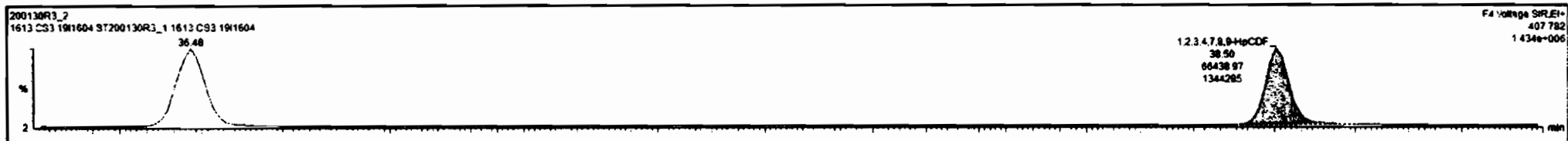
DPE4



ID	Compound	Area	Height	Width	Retention	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration	Integration
16	1,2,3,4,7,8-HpCDF	1.89e5	4.78e5	1.24	1.19	NO	0.7988	34.72	34.73	NO	1.000	1.000	56.0	112	NO
16	1,2,3,4,7,8-HpCDF	1.37e5	2.81e5	1.04	0.97	NO	0.8184	38.48	38.50	NO	1.000	1.000	57.8	115	NO
17	OCDF	3.31e5	6.32e5	0.89	0.84	NO	0.8388	41.88	41.10	NO	1.000	1.000	125	125	NO
18	13C-2,3,7,8-TCDF	6.36e5	5.51e5	0.77	0.79	NO	1.1157	25.88	25.88	NO	1.026	1.026	103	103	NO
18	13C-1,2,3,7,8-PeCDD	5.63e5	5.51e5	0.63	0.63	NO	0.8411	38.43	38.64	NO	1.215	1.223	109	109	NO
20	13C-1,2,3,4,7,8-HpCDD	4.48e5	5.45e5	1.24	1.28	NO	0.8379	33.98	33.86	NO	1.014	1.014	87.7	87.7	NO
21	13C-1,2,3,4,7,8-HpCDD	5.88e5	5.45e5	1.24	1.28	NO	1.0854	34.88	34.88	NO	1.017	1.017	87.7	87.7	NO
22	13C-1,2,3,7,8,9-HpCDD	4.85e5	5.45e5	1.24	1.24	NO	1.0393	34.38	34.38	NO	1.026	1.025	88.4	88.4	NO
23	13C-1,2,3,4,8,7,8-HpCDD	4.27e5	5.45e5	1.04	1.08	NO	0.7988	37.83	37.88	NO	1.132	1.131	118	118	NO
24	13C-OCDD	7.78e5	5.45e5	0.89	0.88	NO	0.8810	40.81	40.80	NO	1.216	1.221	238	118	NO
25	13C-2,3,7,8-TCDF	9.88e5	7.97e5	0.77	0.78	NO	1.0387	24.87	24.81	NO	0.983	0.980	118	110	NO
26	13C-1,2,3,7,8-PeCDF	7.89e5	7.03e5	1.54	1.58	NO	0.8988	28.28	28.36	NO	1.168	1.175	187	187	NO



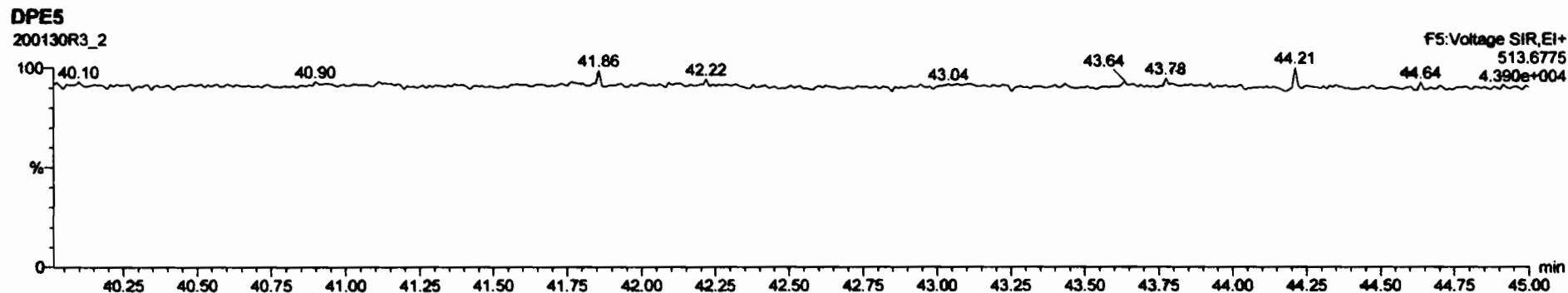
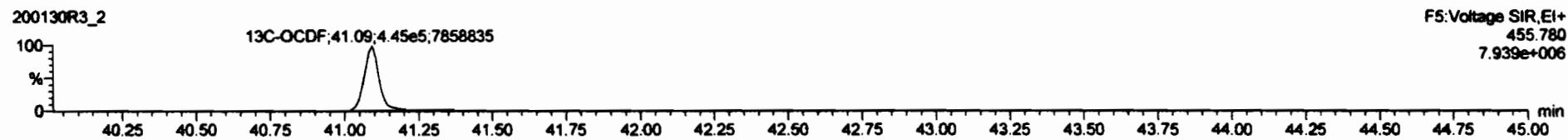
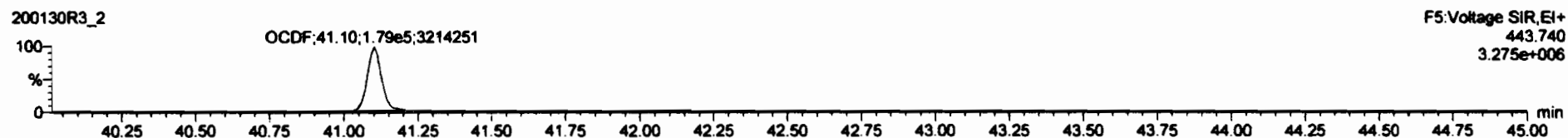
14	1,2,3,7,8-HpCDF	1.88e5	4.78e5	1.24	1.19	NO	0.7088	34.72	34.73	NO	1.000	1.000	85.0	112	NO
15	1,2,3,4,6,7,8-HpCDF	1.83e5	4.08e5	1.04	0.98	NO	0.7216	38.51	38.48	NO	1.001	1.000	54.4	109	NO
17	OCDF	3.31e5	8.32e5	0.89	0.84	NO	0.8388	41.08	41.10	NO	1.000	1.000	125	125	NO
18	13C-2,3,7,8-TCDF	6.36e5	5.51e5	0.77	0.79	NO	1.1157	25.89	25.88	NO	1.028	1.026	103	103	NO
19	13C-1,2,3,7,8-PeCDD	5.82e5	5.51e5	0.83	0.83	NO	0.8411	36.43	36.84	NO	1.215	1.223	109	109	NO
20	13C-1,2,3,4,7,8-HpCDD	4.48e5	5.45e5	1.24	1.28	NO	0.8379	33.96	33.86	NO	1.014	1.014	87.7	87.7	NO
21	13C-1,2,3,6,7,8-HpCDD	5.08e5	5.45e5	1.24	1.28	NO	1.0854	34.08	34.08	NO	1.017	1.017	87.7	87.7	NO
22	13C-1,2,3,7,8-HpCDD	4.85e5	5.45e5	1.24	1.24	NO	1.0393	34.36	34.36	NO	1.026	1.025	86.4	86.4	NO
23	13C-1,2,3,4,6,7,8-HpCDD	4.27e5	5.45e5	1.04	1.08	NO	0.7889	37.83	37.80	NO	1.132	1.131	119	119	NO
24	13C-OCDD	7.78e5	8.45e5	0.88	0.90	NO	0.8910	48.81	48.80	NO	1.218	1.221	238	119	NO
26	13C-2,3,7,8-TCDF	9.88e5	7.97e5	0.77	0.78	NO	1.0387	24.87	24.81	NO	0.983	0.988	110	110	NO
28	13C-1,2,3,7,8-HpCDF	7.28e5	7.82e5	1.42	1.48	NO	0.8988	29.34	29.34	NO	1.448	1.172	163	160	NO



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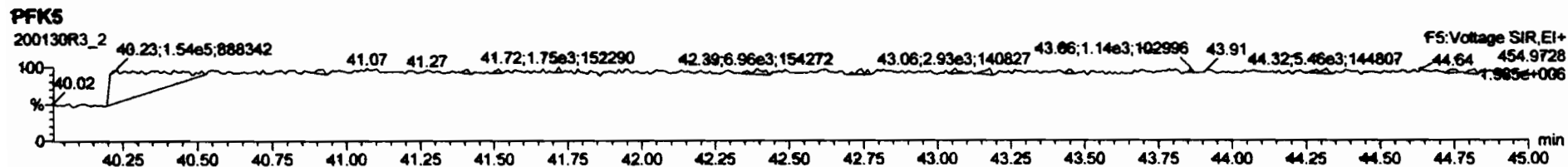
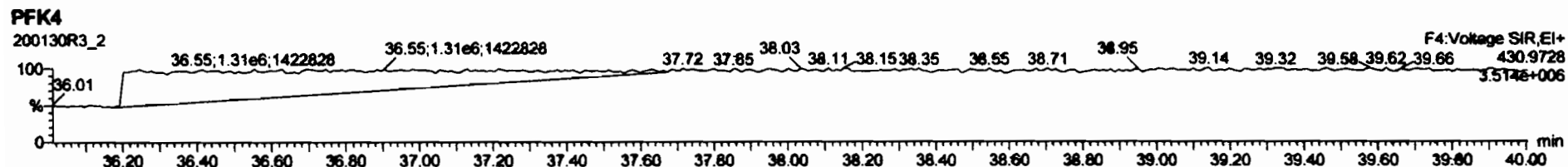
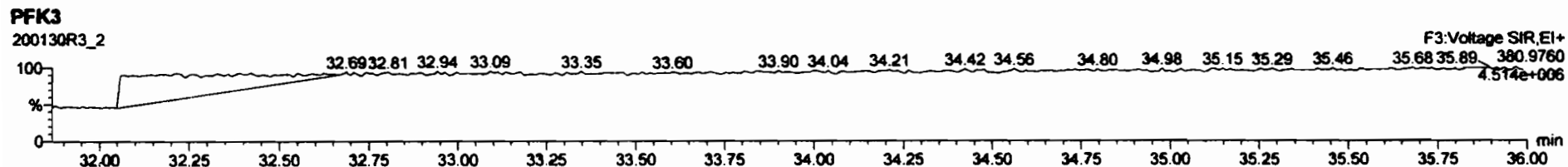
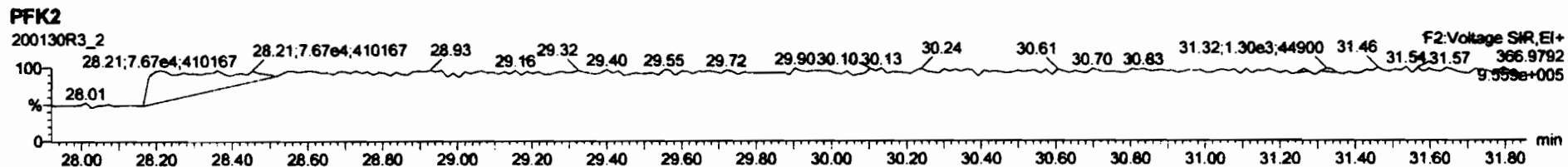
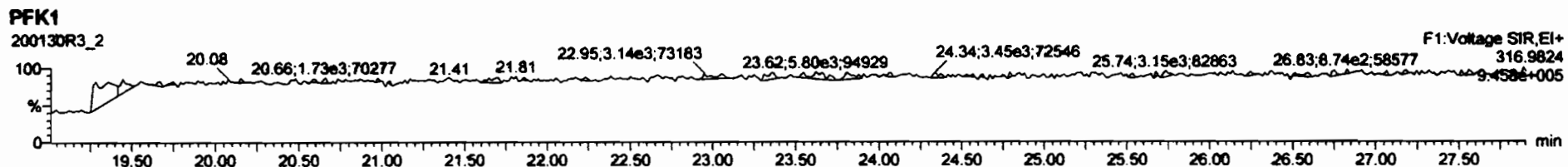
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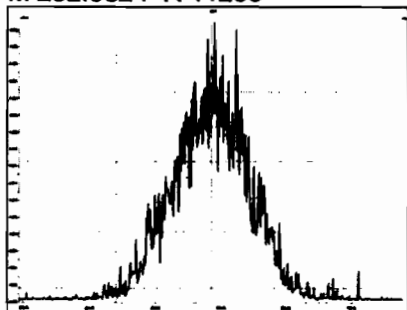
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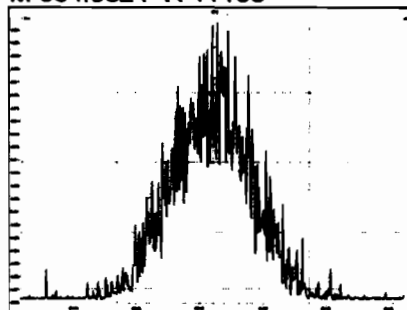


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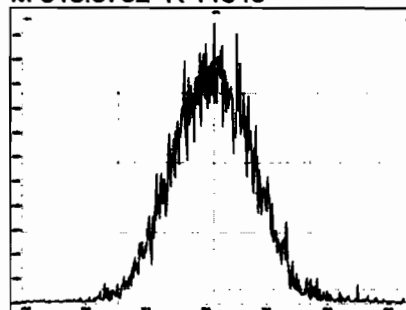
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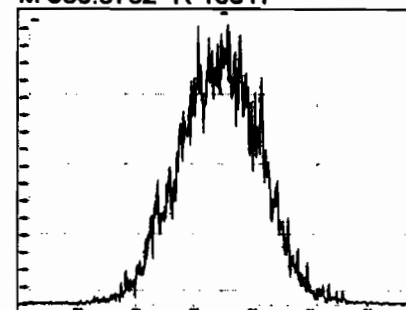
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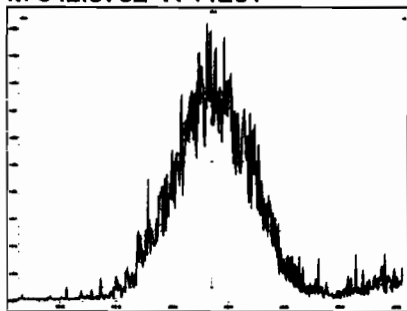
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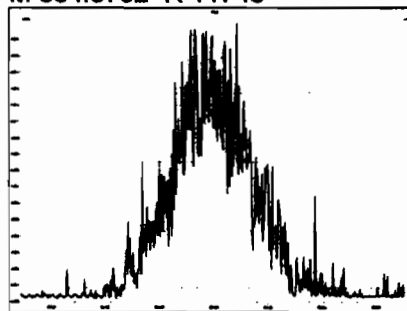
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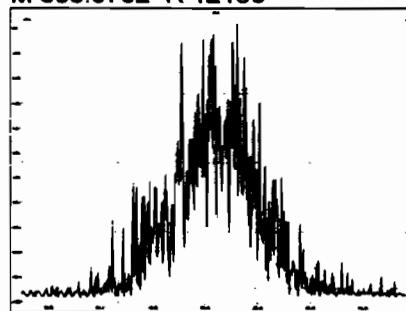
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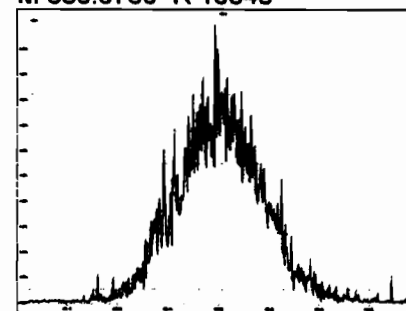
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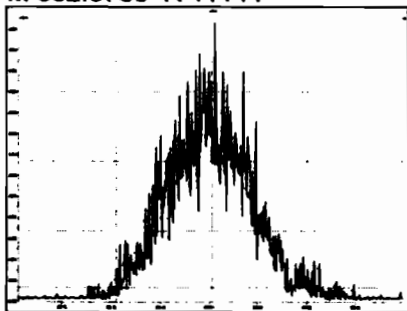
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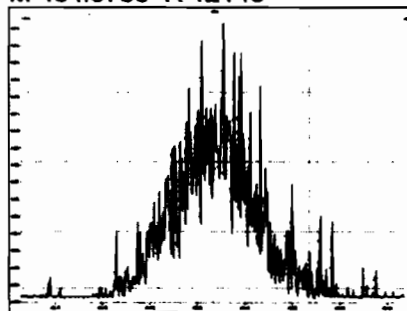
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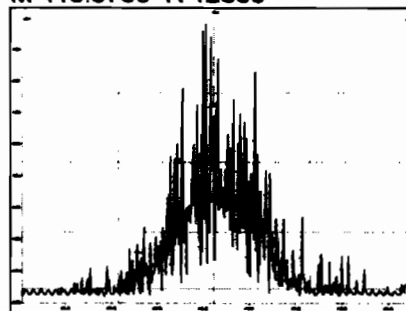
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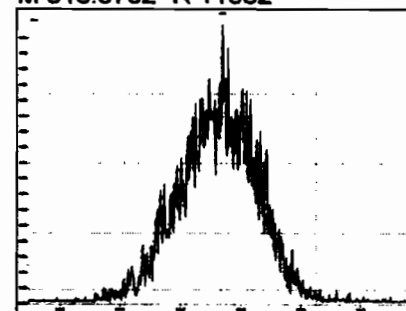
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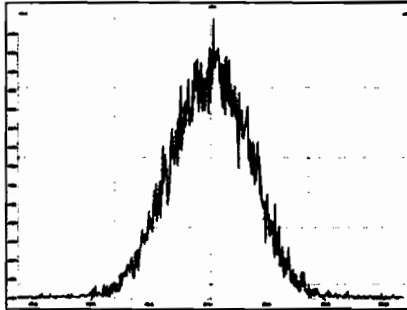


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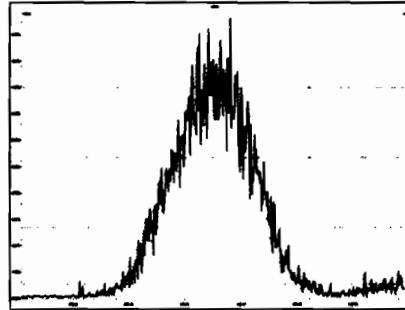


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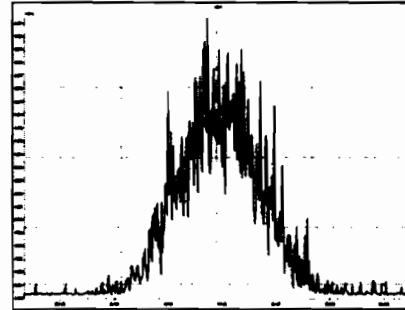
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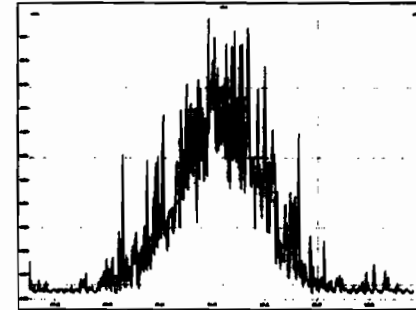
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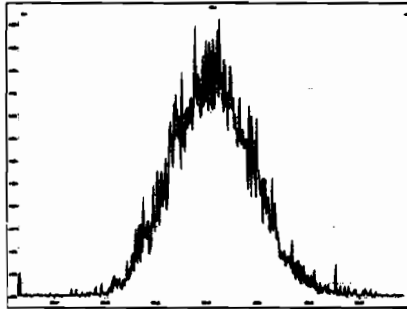
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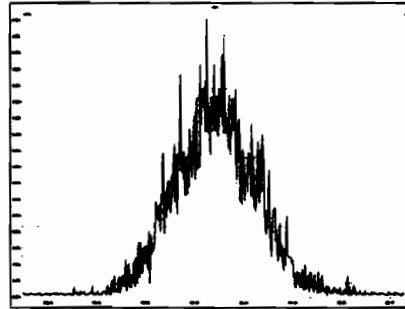
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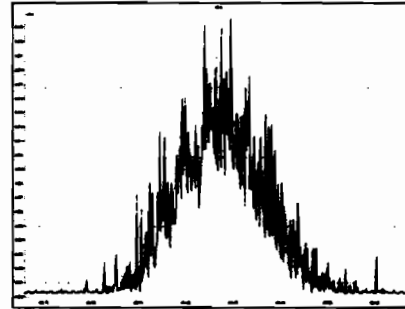
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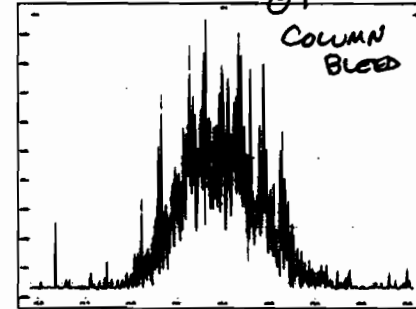
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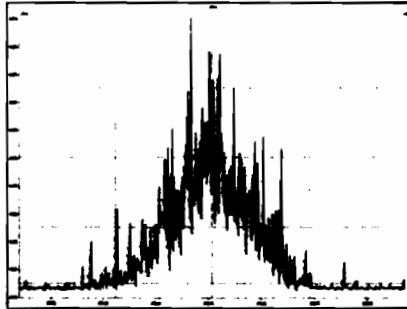
M 404.9760 R 11424



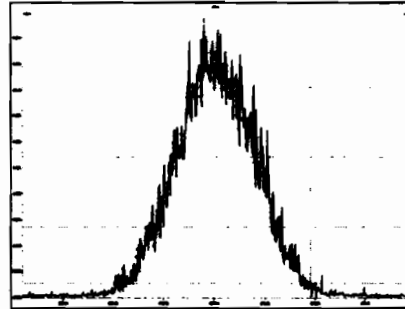
M 416.9760 R 5681



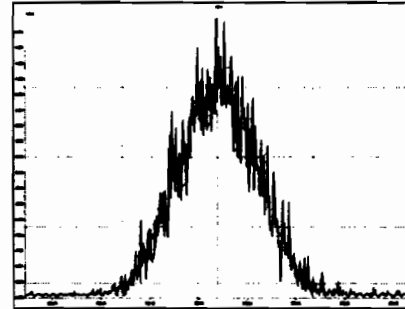
M 366.9792 R 12755



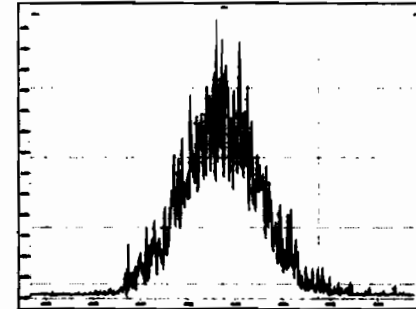
M 380.9760 R 10825



M 392.9760 R 11062

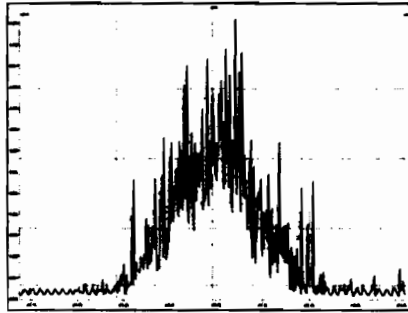


M 404.9760 R 11576

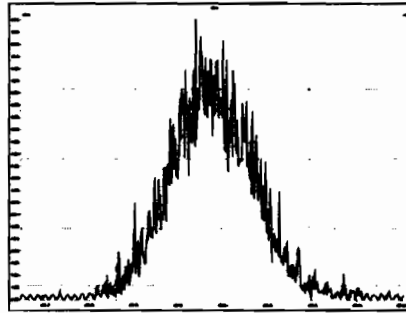


Printed: Friday, January 31, 2020 15:47:45 Pacific Standard Time

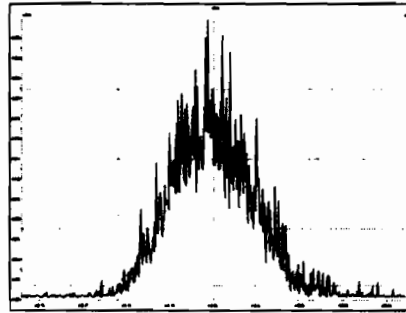
M 416.9760 R 10852



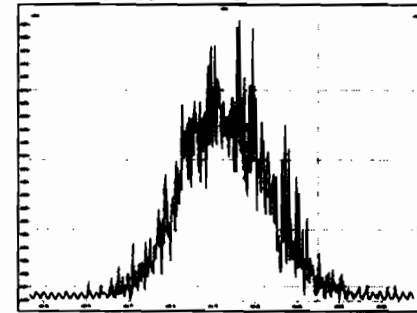
M 430.9728 R 10734



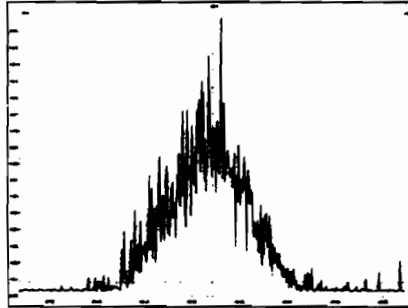
M 442.9728 R 11288



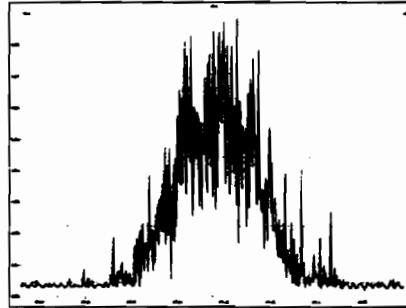
M 454.9728 R 11829



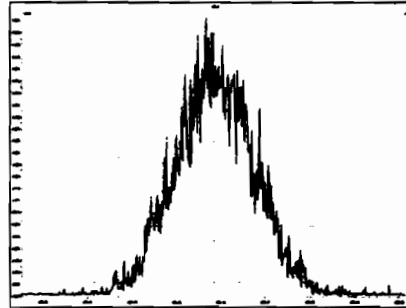
M 404.9760 R 10090



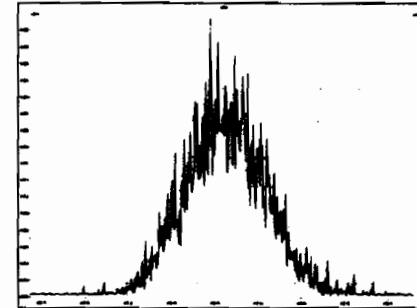
M 416.9760 R 12194



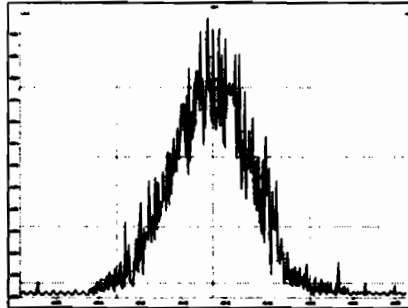
M 430.9728 R 11497



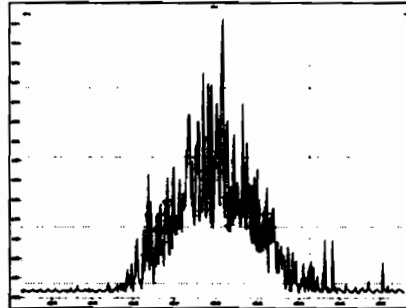
M 442.9728 R 11796



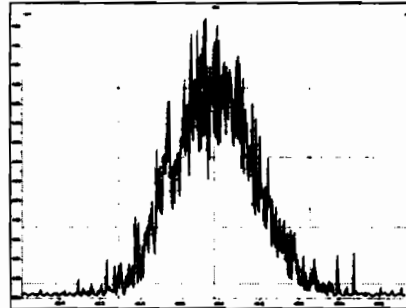
M 454.9728 R 10823



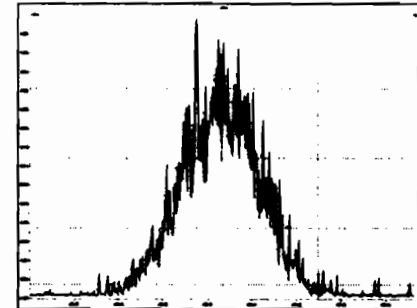
M 466.9728 R 12732



M 480.9696 R 11446



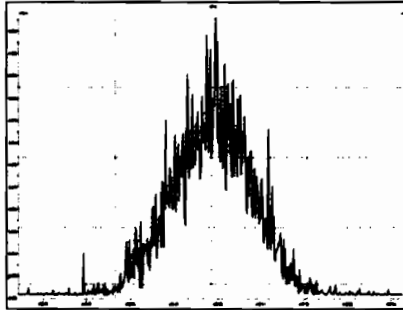
M 430.9728 R 10707



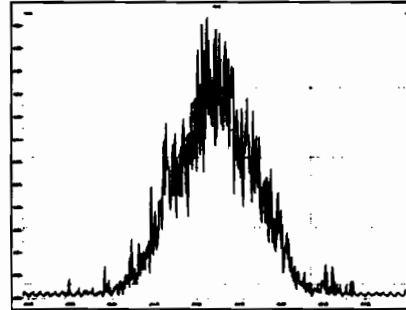


Printed: Friday, January 31, 2020 15:47:45 Pacific Standard Time

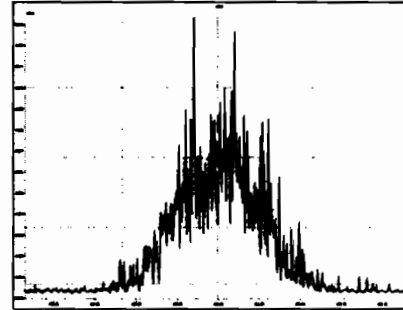
M 442.9728 R 11354



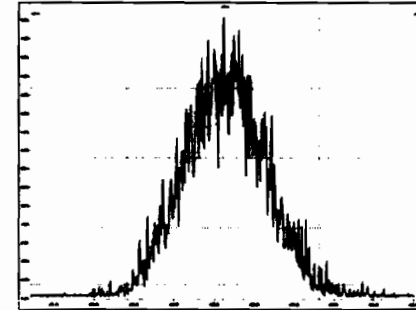
M 454.9728 R 10804



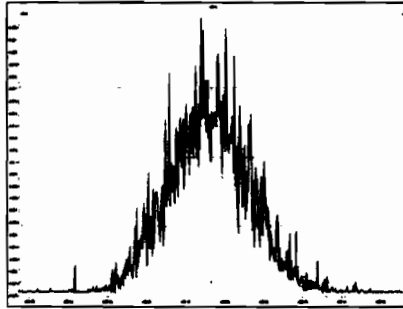
M 466.9728 R 10453



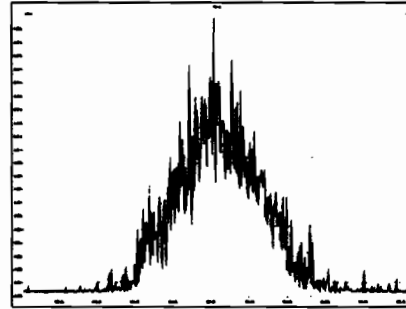
M 480.9696 R 11628



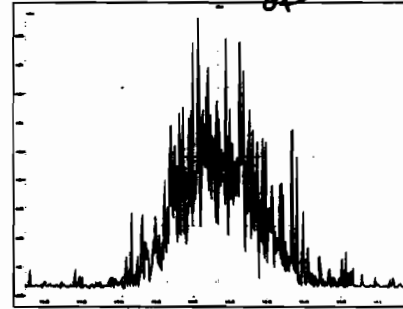
M 492.9696 R 10908



M 504.9696 R 10597



M 516.9697 R 9434 *OK*



## **INITIAL CALIBRATION**

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

DB 1/22/20

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

C1 01/22/2020

Compound name: 2,3,7,8-TCDD  
 Response Factor: 0.824003  
 RRF SD: 0.106482, Relative SD: 12.9225  
 Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	0.250	0.68	NO	25.85	1.000	3.58e3	1.96e6	0.222	-11.3	0.731	MM
2	200121R1_2	0.500	0.77	NO	25.85	1.001	7.18e3	1.99e6	0.437	-12.6	0.720	bb
3	200121R1_3	2.00	0.75	NO	25.89	1.001	3.33e4	2.18e6	1.85	-7.4	0.763	bb
4	200121R1_4	10.0	0.75	NO	25.85	1.001	1.39e5	1.68e6	10.0	0.3	0.827	db
5	200121R1_5	40.0	0.76	NO	25.87	1.001	8.97e5	2.41e6	45.3	13.1	0.932	bb
6	200121R1_6	300	0.77	NO	25.89	1.001	7.61e6	2.61e6	354	17.9	0.971	bb

Compound name: 1,2,3,7,8-PeCDD  
 Response Factor: 0.911647  
 RRF SD: 0.0797461, Relative SD: 8.74747  
 Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	0.64	NO	30.76	1.000	1.49e4	1.48e6	1.10	-11.6	0.806	bb
2	200121R1_2	2.50	0.59	NO	30.74	1.000	3.07e4	1.46e6	2.31	-7.5	0.843	bb
3	200121R1_3	10.0	0.58	NO	30.76	1.000	1.42e5	1.60e6	9.73	-2.7	0.887	bb
4	200121R1_4	50.0	0.63	NO	30.76	1.000	5.59e5	1.19e6	51.5	3.0	0.939	bb
5	200121R1_5	200	0.62	NO	30.76	1.000	3.69e6	1.86e6	218	9.0	0.993	bb
6	200121R1_6	1500	0.63	NO	30.77	1.000	3.22e7	2.15e6	1650	9.8	1.00	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 1,2,3,4,7,8-HxCDD**

Response Factor: 0.870361  
 RRF SD: 0.1132, Relative SD: 13.0061  
 Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.23	NO	34.12	1.000	1.09e4	1.15e6	1.09	-12.5	0.762	bd
2	200121R1_2	2.50	1.22	NO	34.10	1.001	2.10e4	1.15e6	2.11	-15.7	0.734	bd
3	200121R1_3	10.0	1.20	NO	34.10	1.000	1.06e5	1.28e6	9.54	-4.6	0.830	bd
4	200121R1_4	50.0	1.24	NO	34.10	1.001	4.27e5	9.39e5	52.2	4.4	0.908	bd
5	200121R1_5	200	1.19	NO	34.10	1.000	2.99e6	1.51e6	228	13.8	0.990	bd
6	200121R1_6	1500	1.20	NO	34.12	1.000	2.69e7	1.80e6	1720	14.6	0.998	bd

**Compound name: 1,2,3,6,7,8-HxCDD**

Response Factor: 0.784064  
 RRF SD: 0.0638384, Relative SD: 8.14199  
 Response type: Internal Std ( Ref 21 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.14	NO	34.21	1.000	1.19e4	1.30e6	1.17	-6.8	0.731	db
2	200121R1_2	2.50	1.19	NO	34.20	1.000	2.26e4	1.28e6	2.24	-10.3	0.703	db
3	200121R1_3	10.0	1.20	NO	34.21	1.000	1.08e5	1.43e6	9.65	-3.5	0.756	db
4	200121R1_4	50.0	1.19	NO	34.21	1.001	4.29e5	1.07e6	51.4	2.8	0.806	db
5	200121R1_5	200	1.20	NO	34.21	1.001	3.00e6	1.76e6	217	8.7	0.852	db
6	200121R1_6	1500	1.20	NO	34.22	1.000	2.63e7	2.05e6	1640	9.1	0.856	db

**Compound name: 1,2,3,7,8,9-HxCDD**

Response Factor: 0.798497  
 RRF SD: 0.0803566, Relative SD: 10.0635  
 Response type: Internal Std ( Ref 22 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.17	NO	34.51	1.001	1.14e4	1.21e6	1.18	-5.6	0.754	bb
2	200121R1_2	2.50	1.15	NO	34.49	1.000	2.18e4	1.26e6	2.18	-13.0	0.695	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 1,2,3,7,8,9-HxCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	10.0	1.22	NO	34.50	1.001	1.06e5	1.43e6	9.33	-6.7	0.745	bb
4	200121R1_4	50.0	1.22	NO	34.49	1.001	4.28e5	1.04e6	51.3	2.6	0.820	db
5	200121R1_5	200	1.21	NO	34.49	1.000	2.97e6	1.68e6	222	10.8	0.885	bb
6	200121R1_6	1500	1.19	NO	34.50	1.000	2.63e7	1.96e6	1680	11.8	0.893	bb

**Compound name: 1,2,3,4,6,7,8-HpCDD**

Response Factor: 0.736928  
 RRF SD: 0.0903282, Relative SD: 12.2574  
 Response type: Internal Std ( Ref 23 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	0.96	NO	38.05	1.001	7.79e3	9.17e5	1.15	-7.8	0.679	bb
2	200121R1_2	2.50	1.05	NO	38.02	1.000	1.43e4	9.02e5	2.15	-13.8	0.635	bb
3	200121R1_3	10.0	1.00	NO	38.05	1.001	6.21e4	9.27e5	9.09	-9.1	0.670	bb
4	200121R1_4	50.0	0.99	NO	38.03	1.001	2.40e5	6.36e5	51.1	2.3	0.754	bb
5	200121R1_5	200	1.00	NO	38.03	1.001	1.97e6	1.19e6	225	12.6	0.830	bb
6	200121R1_6	1500	0.99	NO	38.05	1.000	1.77e7	1.38e6	1740	15.9	0.854	bb

**Compound name: OCDD**

Response Factor: 0.799993  
 RRF SD: 0.0791297, Relative SD: 9.8913  
 Response type: Internal Std ( Ref 24 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	2.50	0.86	NO	41.03	1.001	1.42e4	1.53e6	2.32	-7.3	0.742	bb
2	200121R1_2	5.00	0.86	NO	41.01	1.001	2.69e4	1.51e6	4.45	-11.0	0.712	bd
3	200121R1_3	20.0	0.86	NO	41.02	1.000	1.12e5	1.50e6	18.7	-6.3	0.750	bb
4	200121R1_4	100	0.86	NO	41.01	1.000	3.71e5	9.18e5	101	1.0	0.808	bb
5	200121R1_5	400	0.85	NO	41.02	1.000	3.62e6	2.03e6	446	11.6	0.893	bb
6	200121R1_6	3000	0.86	NO	41.03	1.000	3.66e7	2.72e6	3360	11.9	0.895	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 2,3,7,8-TCDF**

Response Factor: 0.587758  
 RRF SD: 0.0889725, Relative SD: 15.1376  
 Response type: Internal Std ( Ref 25 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	0.250	0.73	NO	25.00	1.001	3.29e3	2.47e6	0.226	-9.5	0.532	bb
2	200121R1_2	0.500	0.68	NO	24.99	1.001	6.15e3	2.53e6	0.414	-17.2	0.487	bb
3	200121R1_3	2.00	0.69	NO	25.02	1.001	2.93e4	2.77e6	1.80	-10.2	0.528	bb
4	200121R1_4	10.0	0.69	NO	24.99	1.001	1.29e5	2.15e6	10.2	1.5	0.597	bb
5	200121R1_5	40.0	0.71	NO	24.99	1.001	8.09e5	3.02e6	45.6	14.0	0.670	bb
6	200121R1_6	300	0.72	NO	25.02	1.001	6.94e6	3.24e6	364	21.4	0.714	bb

**Compound name: 1,2,3,7,8-PeCDF**

Response Factor: 0.826078  
 RRF SD: 0.0786342, Relative SD: 9.51897  
 Response type: Internal Std ( Ref 26 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.56	NO	29.49	1.001	2.06e4	2.18e6	1.14	-8.7	0.754	bb
2	200121R1_2	2.50	1.47	NO	29.48	1.001	3.89e4	2.14e6	2.20	-12.0	0.727	bb
3	200121R1_3	10.0	1.55	NO	29.49	1.001	1.94e5	2.43e6	9.65	-3.5	0.797	bb
4	200121R1_4	50.0	1.52	NO	29.48	1.001	7.65e5	1.78e6	51.9	3.8	0.857	bb
5	200121R1_5	200	1.50	NO	29.48	1.001	4.89e6	2.70e6	219	9.6	0.906	bb
6	200121R1_6	1500	1.50	NO	29.49	1.001	4.35e7	3.17e6	1660	10.7	0.915	bb

**Compound name: 2,3,4,7,8-PeCDF**

Response Factor: 0.84982  
 RRF SD: 0.0827911, Relative SD: 9.74219  
 Response type: Internal Std ( Ref 27 ), Area \* ( IS Conc. / IS Area )  
 Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.55	NO	30.47	1.001	2.06e4	2.15e6	1.13	-9.7	0.768	bb
2	200121R1_2	2.50	1.51	NO	30.45	1.000	3.96e4	2.12e6	2.19	-12.3	0.746	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 2,3,4,7,8-PeCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	10.0	1.56	NO	30.45	1.000	1.98e5	2.38e6	9.81	-1.9	0.834	bb
4	200121R1_4	50.0	1.51	NO	30.45	1.001	7.59e5	1.74e6	51.5	2.9	0.875	bb
5	200121R1_5	200	1.49	NO	30.45	1.001	4.95e6	2.65e6	220	10.0	0.934	bb
6	200121R1_6	1500	1.50	NO	30.47	1.001	4.46e7	3.15e6	1660	10.9	0.943	bb

**Compound name: 1,2,3,4,7,8-HxCDF**

Response Factor: 0.786631

RRF SD: 0.109057, Relative SD: 13.8638

Response type: Internal Std ( Ref 28 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.15	NO	33.24	1.000	9.08e3	1.07e6	1.08	-13.6	0.680	bd
2	200121R1_2	2.50	1.11	NO	33.23	1.001	1.74e4	1.06e6	2.09	-16.3	0.659	bd
3	200121R1_3	10.0	1.18	NO	33.24	1.001	8.87e4	1.19e6	9.50	-5.0	0.747	bd
4	200121R1_4	50.0	1.17	NO	33.23	1.000	3.55e5	8.64e5	52.2	4.4	0.821	bd
5	200121R1_5	200	1.16	NO	33.23	1.000	2.46e6	1.37e6	229	14.4	0.900	bd
6	200121R1_6	1500	1.14	NO	33.24	1.000	2.22e7	1.62e6	1740	16.1	0.914	bd

**Compound name: 1,2,3,6,7,8-HxCDF**

Response Factor: 0.720113

RRF SD: 0.0803142, Relative SD: 11.153

Response type: Internal Std ( Ref 29 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.11	NO	33.36	1.000	1.06e4	1.29e6	1.14	-9.1	0.655	db
2	200121R1_2	2.50	1.20	NO	33.35	1.000	1.95e4	1.27e6	2.13	-14.8	0.614	db
3	200121R1_3	10.0	1.17	NO	33.36	1.000	9.98e4	1.45e6	9.57	-4.3	0.689	db
4	200121R1_4	50.0	1.15	NO	33.35	1.000	3.92e5	1.04e6	52.3	4.6	0.753	db
5	200121R1_5	200	1.15	NO	33.36	1.001	2.68e6	1.68e6	221	10.7	0.797	db
6	200121R1_6	1500	1.15	NO	33.37	1.001	2.42e7	1.98e6	1690	12.9	0.813	db

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 2,3,4,6,7,8-HxCDF**

Response Factor: 0.766474

RRF SD: 0.103369, Relative SD: 13.4863

Response type: Internal Std ( Ref 30 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.19	NO	33.94	1.000	9.43e3	1.16e6	1.06	-15.1	0.651	bb
2	200121R1_2	2.50	1.14	NO	33.93	1.001	1.84e4	1.14e6	2.11	-15.4	0.648	bb
3	200121R1_3	10.0	1.17	NO	33.94	1.001	9.67e4	1.31e6	9.66	-3.4	0.740	bb
4	200121R1_4	50.0	1.16	NO	33.93	1.001	3.84e5	9.50e5	52.8	5.6	0.809	bb
5	200121R1_5	200	1.15	NO	33.93	1.000	2.65e6	1.51e6	228	14.2	0.875	bb
6	200121R1_6	1500	1.14	NO	33.94	1.000	2.38e7	1.82e6	1710	14.2	0.875	bb

**Compound name: 1,2,3,7,8,9-HxCDF**

Response Factor: 0.708637

RRF SD: 0.0936, Relative SD: 13.2084

Response type: Internal Std ( Ref 31 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.15	NO	34.86	1.001	7.60e3	9.61e5	1.12	-10.8	0.632	bb
2	200121R1_2	2.50	1.14	NO	34.85	1.001	1.48e4	9.89e5	2.12	-15.3	0.600	bb
3	200121R1_3	10.0	1.21	NO	34.85	1.000	7.28e4	1.12e6	9.19	-8.1	0.651	bb
4	200121R1_4	50.0	1.17	NO	34.85	1.001	3.08e5	8.31e5	52.3	4.6	0.741	bb
5	200121R1_5	200	1.15	NO	34.85	1.000	2.14e6	1.33e6	228	14.0	0.808	bb
6	200121R1_6	1500	1.16	NO	34.86	1.000	1.93e7	1.57e6	1730	15.5	0.819	bb

**Compound name: 1,2,3,4,6,7,8-HpCDF**

Response Factor: 0.731638

RRF SD: 0.111983, Relative SD: 15.3058

Response type: Internal Std ( Ref 32 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	0.90	NO	36.61	1.000	5.75e3	7.08e5	1.11	-11.3	0.649	MM
2	200121R1_2	2.50	1.01	NO	36.61	1.001	1.09e4	7.21e5	2.06	-17.5	0.604	bb



Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 1,2,3,4,6,7,8-HpCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	10.0	0.96	NO	36.62	1.001	5.24e4	8.04e5	8.91	-10.9	0.652	bb
4	200121R1_4	50.0	0.98	NO	36.60	1.000	2.23e5	5.77e5	52.7	5.4	0.771	bb
5	200121R1_5	200	0.96	NO	36.61	1.000	1.62e6	9.59e5	231	15.4	0.844	bb
6	200121R1_6	1500	0.97	NO	36.62	1.000	1.50e7	1.15e6	1780	18.8	0.869	bb

**Compound name: 1,2,3,4,7,8,9-HpCDF**

Response Factor: 0.816406

RRF SD: 0.124425, Relative SD: 15.2406

Response type: Internal Std ( Ref 33 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	1.25	1.08	NO	38.61	1.000	4.66e3	5.25e5	1.09	-13.0	0.710	bb
2	200121R1_2	2.50	0.93	NO	38.60	1.000	9.58e3	5.53e5	2.12	-15.1	0.693	bb
3	200121R1_3	10.0	0.93	NO	38.61	1.000	4.30e4	5.88e5	8.96	-10.4	0.731	bb
4	200121R1_4	50.0	0.95	NO	38.60	1.000	1.84e5	4.40e5	51.2	2.5	0.837	bb
5	200121R1_5	200	0.96	NO	38.61	1.001	1.37e6	7.10e5	236	18.1	0.964	bb
6	200121R1_6	1500	0.97	NO	38.62	1.000	1.35e7	9.33e5	1770	17.9	0.963	bb

**Compound name: OCDF**

Response Factor: 0.638789

RRF SD: 0.0810198, Relative SD: 12.6833

Response type: Internal Std ( Ref 34 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	2.50	0.86	NO	41.22	1.000	1.03e4	1.48e6	2.17	-13.1	0.555	bb
2	200121R1_2	5.00	0.86	NO	41.20	1.000	2.07e4	1.50e6	4.33	-13.4	0.553	bb
3	200121R1_3	20.0	0.80	NO	41.21	1.000	8.44e4	1.41e6	18.8	-6.2	0.599	bb
4	200121R1_4	100	0.84	NO	41.20	1.000	2.96e5	8.88e5	104	4.5	0.667	bb
5	200121R1_5	400	0.84	NO	41.21	1.000	2.87e6	1.98e6	455	13.6	0.726	bb
6	200121R1_6	3000	0.84	NO	41.23	1.000	2.97e7	2.70e6	3430	14.5	0.731	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 13C-2,3,7,8-TCDD**

Response Factor: 1.11572

RRF SD: 0.045003, Relative SD: 4.03353

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.78	NO	25.85	1.026	1.96e6	1.80e6	97.8	-2.2	1.09	bb
2	200121R1_2	100	0.79	NO	25.84	1.025	1.99e6	1.83e6	97.7	-2.3	1.09	bb
3	200121R1_3	100	0.78	NO	25.85	1.025	2.18e6	2.01e6	97.2	-2.8	1.08	bb
4	200121R1_4	100	0.79	NO	25.84	1.026	1.68e6	1.42e6	106	5.6	1.18	bb
5	200121R1_5	100	0.78	NO	25.84	1.025	2.41e6	2.23e6	96.9	-3.1	1.08	bb
6	200121R1_6	100	0.79	NO	25.86	1.025	2.61e6	2.23e6	105	4.7	1.17	bb

**Compound name: 13C-1,2,3,7,8-PeCDD**

Response Factor: 0.841144

RRF SD: 0.0616639, Relative SD: 7.33095

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.64	NO	30.74	1.219	1.48e6	1.80e6	97.7	-2.3	0.822	bb
2	200121R1_2	100	0.63	NO	30.74	1.219	1.46e6	1.83e6	94.6	-5.4	0.795	bb
3	200121R1_3	100	0.63	NO	30.74	1.219	1.60e6	2.01e6	94.6	-5.4	0.796	bb
4	200121R1_4	100	0.65	NO	30.74	1.220	1.19e6	1.42e6	99.6	-0.4	0.838	bb
5	200121R1_5	100	0.63	NO	30.74	1.219	1.86e6	2.23e6	99.2	-0.8	0.834	bb
6	200121R1_6	100	0.64	NO	30.76	1.219	2.15e6	2.23e6	114	14.3	0.961	bb

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

Response Factor: 0.937941

RRF SD: 0.0670362, Relative SD: 7.14717

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.26	NO	34.10	1.014	1.15e6	1.28e6	95.1	-4.9	0.892	bd
2	200121R1_2	100	1.26	NO	34.08	1.014	1.15e6	1.28e6	95.8	-4.2	0.898	bd

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

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

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	100	1.26	NO	34.09	1.014	1.28e6	1.44e6	94.6	-5.4	0.888	bd
4	200121R1_4	100	1.26	NO	34.08	1.014	9.39e5	9.71e5	103	3.1	0.967	bd
5	200121R1_5	100	1.24	NO	34.09	1.014	1.51e6	1.64e6	98.2	-1.8	0.921	bd
6	200121R1_6	100	1.25	NO	34.10	1.014	1.80e6	1.69e6	113	13.1	1.06	bd

**Compound name: 13C-1,2,3,6,7,8-HxCDD**

Response Factor: 1.06543

RRF SD: 0.0819846, Relative SD: 7.69496

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.24	NO	34.20	1.017	1.30e6	1.28e6	94.9	-5.1	1.01	db
2	200121R1_2	100	1.24	NO	34.19	1.017	1.28e6	1.28e6	94.4	-5.6	1.01	db
3	200121R1_3	100	1.24	NO	34.20	1.017	1.43e6	1.44e6	93.4	-6.6	0.995	db
4	200121R1_4	100	1.25	NO	34.19	1.017	1.07e6	9.71e5	103	3.0	1.10	db
5	200121R1_5	100	1.24	NO	34.19	1.017	1.76e6	1.64e6	101	0.7	1.07	db
6	200121R1_6	100	1.25	NO	34.21	1.017	2.05e6	1.69e6	114	13.7	1.21	db

**Compound name: 13C-1,2,3,7,8,9-HxCDD**

Response Factor: 1.03027

RRF SD: 0.0777089, Relative SD: 7.54257

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.23	NO	34.48	1.025	1.21e6	1.28e6	91.7	-8.3	0.945	bb
2	200121R1_2	100	1.24	NO	34.48	1.026	1.26e6	1.28e6	95.6	-4.4	0.985	bb
3	200121R1_3	100	1.22	NO	34.48	1.025	1.43e6	1.44e6	96.2	-3.8	0.991	bb
4	200121R1_4	100	1.22	NO	34.47	1.025	1.04e6	9.71e5	104	4.4	1.08	bb
5	200121R1_5	100	1.23	NO	34.48	1.026	1.68e6	1.64e6	99.4	-0.6	1.02	bb
6	200121R1_6	100	1.23	NO	34.49	1.026	1.96e6	1.69e6	113	12.7	1.16	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

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

Response Factor: 0.709925

RRF SD: 0.0610429, Relative SD: 8.5985

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.04	NO	38.02	1.131	9.17e5	1.28e6	101	0.6	0.714	bb
2	200121R1_2	100	1.02	NO	38.01	1.131	9.02e5	1.28e6	99.4	-0.6	0.706	bb
3	200121R1_3	100	1.03	NO	38.02	1.131	9.27e5	1.44e6	90.8	-9.2	0.645	bb
4	200121R1_4	100	1.00	NO	38.01	1.131	6.36e5	9.71e5	92.2	-7.8	0.654	bb
5	200121R1_5	100	1.03	NO	38.01	1.131	1.19e6	1.64e6	102	2.2	0.726	bb
6	200121R1_6	100	1.02	NO	38.03	1.131	1.38e6	1.69e6	115	14.8	0.815	bb

**Compound name: 13C-OCDD**

Response Factor: 0.600957

RRF SD: 0.113803, Relative SD: 18.9369

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	200	0.88	NO	41.01	1.220	1.53e6	1.28e6	198	-0.9	0.596	bb
2	200121R1_2	200	0.88	NO	40.98	1.219	1.51e6	1.28e6	197	-1.4	0.592	bb
3	200121R1_3	200	0.88	NO	41.01	1.220	1.50e6	1.44e6	174	-13.2	0.521	bb
4	200121R1_4	200	0.89	NO	41.00	1.220	9.18e5	9.71e5	157	-21.3	0.473	bb
5	200121R1_5	200	0.88	NO	41.01	1.220	2.03e6	1.64e6	206	3.0	0.619	bb
6	200121R1_6	200	0.88	NO	41.03	1.220	2.72e6	1.69e6	268	33.9	0.805	bb

**Compound name: 13C-2,3,7,8-TCDF**

Response Factor: 1.03665

RRF SD: 0.0391627, Relative SD: 3.7778

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.74	NO	24.97	0.991	2.47e6	2.48e6	96.4	-3.6	0.999	bb
2	200121R1_2	100	0.73	NO	24.97	0.991	2.53e6	2.52e6	96.8	-3.2	1.00	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 13C-2,3,7,8-TCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	100	0.74	NO	24.99	0.991	2.77e6	2.71e6	98.6	-1.4	1.02	bb
4	200121R1_4	100	0.73	NO	24.96	0.990	2.15e6	1.99e6	105	4.6	1.08	bb
5	200121R1_5	100	0.73	NO	24.97	0.991	3.02e6	2.95e6	98.8	-1.2	1.02	bb
6	200121R1_6	100	0.73	NO	24.99	0.991	3.24e6	2.98e6	105	4.9	1.09	bb

**Compound name: 13C-1,2,3,7,8-PeCDF**

Response Factor: 0.916847

RRF SD: 0.0754197, Relative SD: 8.22599

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.55	NO	29.48	1.169	2.18e6	2.48e6	96.2	-3.8	0.882	bb
2	200121R1_2	100	1.54	NO	29.46	1.169	2.14e6	2.52e6	92.5	-7.5	0.848	bb
3	200121R1_3	100	1.55	NO	29.48	1.169	2.43e6	2.71e6	97.6	-2.4	0.895	bb
4	200121R1_4	100	1.55	NO	29.46	1.169	1.78e6	1.99e6	97.9	-2.1	0.898	bb
5	200121R1_5	100	1.53	NO	29.46	1.169	2.70e6	2.95e6	99.7	-0.3	0.914	bb
6	200121R1_6	100	1.54	NO	29.48	1.169	3.17e6	2.98e6	116	16.0	1.06	bb

**Compound name: 13C-2,3,4,7,8-PeCDF**

Response Factor: 0.902658

RRF SD: 0.0778583, Relative SD: 8.62544

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	1.55	NO	30.44	1.207	2.15e6	2.48e6	96.0	-4.0	0.867	bb
2	200121R1_2	100	1.55	NO	30.44	1.207	2.12e6	2.52e6	93.4	-6.6	0.843	bb
3	200121R1_3	100	1.57	NO	30.45	1.207	2.38e6	2.71e6	97.1	-2.9	0.877	bb
4	200121R1_4	100	1.53	NO	30.44	1.208	1.74e6	1.99e6	96.8	-3.2	0.874	bb
5	200121R1_5	100	1.55	NO	30.44	1.207	2.65e6	2.95e6	99.5	-0.5	0.898	bb
6	200121R1_6	100	1.54	NO	30.45	1.207	3.15e6	2.98e6	117	17.1	1.06	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

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

Response Factor: 0.861328

RRF SD: 0.0533731, Relative SD: 6.1966

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.49	NO	33.23	0.988	1.07e6	1.28e6	96.7	-3.3	0.833	bd
2	200121R1_2	100	0.49	NO	33.21	0.988	1.06e6	1.28e6	96.0	-4.0	0.826	bd
3	200121R1_3	100	0.49	NO	33.22	0.988	1.19e6	1.44e6	95.8	-4.2	0.825	bd
4	200121R1_4	100	0.48	NO	33.22	0.988	8.64e5	9.71e5	103	3.3	0.890	bd
5	200121R1_5	100	0.49	NO	33.22	0.988	1.37e6	1.64e6	97.0	-3.0	0.835	bd
6	200121R1_6	100	0.49	NO	33.23	0.988	1.62e6	1.69e6	111	11.3	0.958	bd

**Compound name: 13C-1,2,3,6,7,8-HxCDF**

Response Factor: 1.04669

RRF SD: 0.067318, Relative SD: 6.43153

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.49	NO	33.35	0.992	1.29e6	1.28e6	96.3	-3.7	1.01	db
2	200121R1_2	100	0.49	NO	33.34	0.992	1.27e6	1.28e6	95.1	-4.9	0.996	db
3	200121R1_3	100	0.49	NO	33.35	0.992	1.45e6	1.44e6	96.2	-3.8	1.01	db
4	200121R1_4	100	0.49	NO	33.34	0.992	1.04e6	9.71e5	102	2.4	1.07	db
5	200121R1_5	100	0.49	NO	33.34	0.992	1.68e6	1.64e6	97.9	-2.1	1.02	db
6	200121R1_6	100	0.50	NO	33.35	0.992	1.98e6	1.69e6	112	12.0	1.17	db

**Compound name: 13C-2,3,4,6,7,8-HxCDF**

Response Factor: 0.945665

RRF SD: 0.0695985, Relative SD: 7.35974

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.49	NO	33.93	1.009	1.16e6	1.28e6	95.4	-4.6	0.902	bb
2	200121R1_2	100	0.49	NO	33.91	1.009	1.14e6	1.28e6	94.1	-5.9	0.889	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 13C-2,3,4,6,7,8-HxCDF**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	100	0.49	NO	33.92	1.009	1.31e6	1.44e6	96.0	-4.0	0.908	bb
4	200121R1_4	100	0.49	NO	33.91	1.009	9.50e5	9.71e5	103	3.5	0.978	bb
5	200121R1_5	100	0.49	NO	33.92	1.009	1.51e6	1.64e6	97.6	-2.4	0.923	bb
6	200121R1_6	100	0.49	NO	33.93	1.009	1.82e6	1.69e6	113	13.4	1.07	bb

**Compound name: 13C-1,2,3,7,8,9-HxCDF**

Response Factor: 0.815567

RRF SD: 0.0668162, Relative SD: 8.19261

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.48	NO	34.84	1.036	9.61e5	1.28e6	91.8	-8.2	0.748	bb
2	200121R1_2	100	0.48	NO	34.83	1.036	9.89e5	1.28e6	94.9	-5.1	0.774	bb
3	200121R1_3	100	0.48	NO	34.84	1.036	1.12e6	1.44e6	95.3	-4.7	0.777	bb
4	200121R1_4	100	0.48	NO	34.83	1.036	8.31e5	9.71e5	105	4.9	0.856	bb
5	200121R1_5	100	0.49	NO	34.84	1.036	1.33e6	1.64e6	99.2	-0.8	0.809	bb
6	200121R1_6	100	0.49	NO	34.85	1.036	1.57e6	1.69e6	114	13.9	0.929	bb

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

Response Factor: 0.589153

RRF SD: 0.047443, Relative SD: 8.05274

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.41	NO	36.60	1.088	7.08e5	1.28e6	93.7	-6.3	0.552	bb
2	200121R1_2	100	0.41	NO	36.59	1.088	7.21e5	1.28e6	95.8	-4.2	0.565	bb
3	200121R1_3	100	0.41	NO	36.60	1.088	8.04e5	1.44e6	94.9	-5.1	0.559	bd
4	200121R1_4	100	0.41	NO	36.59	1.088	5.77e5	9.71e5	101	0.9	0.594	bb
5	200121R1_5	100	0.41	NO	36.60	1.089	9.59e5	1.64e6	99.3	-0.7	0.585	bb
6	200121R1_6	100	0.41	NO	36.61	1.089	1.15e6	1.69e6	115	15.5	0.680	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 13C-1,2,3,4,7,8,9-HpCDF**

Response Factor: 0.447956

RRF SD: 0.0532865, Relative SD: 11.8955

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.41	NO	38.60	1.148	5.25e5	1.28e6	91.2	-8.8	0.409	bd
2	200121R1_2	100	0.40	NO	38.59	1.148	5.53e5	1.28e6	96.7	-3.3	0.433	bb
3	200121R1_3	100	0.41	NO	38.60	1.148	5.88e5	1.44e6	91.3	-8.7	0.409	bb
4	200121R1_4	100	0.41	NO	38.59	1.148	4.40e5	9.71e5	101	1.1	0.453	bb
5	200121R1_5	100	0.41	NO	38.59	1.148	7.10e5	1.64e6	96.7	-3.3	0.433	bb
6	200121R1_6	100	0.42	NO	38.61	1.148	9.33e5	1.69e6	123	23.1	0.551	bb

**Compound name: 13C-OCDF**

Response Factor: 0.585674

RRF SD: 0.119724, Relative SD: 20.4422

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	200	0.85	NO	41.21	1.226	1.48e6	1.28e6	197	-1.3	0.578	bb
2	200121R1_2	200	0.84	NO	41.19	1.225	1.50e6	1.28e6	200	0.1	0.586	bb
3	200121R1_3	200	0.84	NO	41.20	1.225	1.41e6	1.44e6	167	-16.4	0.490	bb
4	200121R1_4	200	0.84	NO	41.19	1.225	8.88e5	9.71e5	156	-21.9	0.457	bb
5	200121R1_5	200	0.84	NO	41.20	1.226	1.98e6	1.64e6	206	3.0	0.603	bb
6	200121R1_6	200	0.84	NO	41.22	1.226	2.70e6	1.69e6	273	36.5	0.799	bb

**Compound name: 37Cl-2,3,7,8-TCDD**

Response Factor: 1.08568

RRF SD: 0.146073, Relative SD: 13.4545

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	0.250			25.87	1.026	4.03e3	1.80e6	0.207	-17.3	0.898	bb
2	200121R1_2	0.500			25.87	1.026	8.79e3	1.83e6	0.442	-11.5	0.961	bb



Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time  
 Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 37Cl-2,3,7,8-TCDD**

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	200121R1_3	2.00			25.87	1.026	4.39e4	2.01e6	2.01	0.4	1.09	bb
4	200121R1_4	10.0			25.85	1.026	1.56e5	1.42e6	10.1	1.0	1.10	bb
5	200121R1_5	40.0			25.87	1.026	1.03e6	2.23e6	42.7	6.7	1.16	bb
6	200121R1_6	200			25.89	1.026	5.85e6	2.23e6	241	20.6	1.31	bb

**Compound name: 13C-1,2,3,4-TCDD**

Response Factor: 1

RRF SD: 9.93014e-017, Relative SD: 9.93014e-015

Response type: Internal Std ( Ref 36 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.80	NO	25.21	1.000	1.80e6	1.80e6	100	0.0	1.00	bb
2	200121R1_2	100	0.80	NO	25.21	1.000	1.83e6	1.83e6	100	0.0	1.00	bb
3	200121R1_3	100	0.80	NO	25.23	1.000	2.01e6	2.01e6	100	0.0	1.00	bb
4	200121R1_4	100	0.80	NO	25.20	1.000	1.42e6	1.42e6	100	0.0	1.00	bb
5	200121R1_5	100	0.80	NO	25.21	1.000	2.23e6	2.23e6	100	0.0	1.00	bb
6	200121R1_6	100	0.80	NO	25.23	1.000	2.23e6	2.23e6	100	0.0	1.00	bb

**Compound name: 13C-1,2,3,4-TCDF**

Response Factor: 1

RRF SD: 9.93014e-017, Relative SD: 9.93014e-015

Response type: Internal Std ( Ref 37 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.74	NO	23.58	1.000	2.48e6	2.48e6	100	0.0	1.00	bb
2	200121R1_2	100	0.75	NO	23.58	1.000	2.52e6	2.52e6	100	0.0	1.00	bb
3	200121R1_3	100	0.74	NO	23.59	1.000	2.71e6	2.71e6	100	0.0	1.00	bb
4	200121R1_4	100	0.74	NO	23.57	1.000	1.99e6	1.99e6	100	0.0	1.00	bb
5	200121R1_5	100	0.75	NO	23.58	1.000	2.95e6	2.95e6	100	0.0	1.00	bb
6	200121R1_6	100	0.75	NO	23.59	1.000	2.98e6	2.98e6	100	0.0	1.00	bb

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_CRV.qld

Last Altered: Wednesday, January 22, 2020 09:29:50 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:53:59 Pacific Standard Time

**Compound name: 13C-1,2,3,4,6,9-HxCDF**

Response Factor: 1

RRF SD: 9.93014e-017, Relative SD: 9.93014e-015

Response type: Internal Std ( Ref 38 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	100	0.48	NO	33.63	1.000	1.28e6	1.28e6	100	0.0	1.00	bb
2	200121R1_2	100	0.49	NO	33.61	1.000	1.28e6	1.28e6	100	0.0	1.00	bb
3	200121R1_3	100	0.48	NO	33.63	1.000	1.44e6	1.44e6	100	0.0	1.00	bb
4	200121R1_4	100	0.49	NO	33.61	1.000	9.71e5	9.71e5	100	0.0	1.00	bb
5	200121R1_5	100	0.50	NO	33.61	1.000	1.64e6	1.64e6	100	0.0	1.00	bb
6	200121R1_6	100	0.49	NO	33.63	1.000	1.69e6	1.69e6	100	0.0	1.00	bb

Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 11:16:46 Pacific Standard Time

Printed: Wednesday, January 22, 2020 11:17:01 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 22 Jan 2020 11:16:40

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

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 19I1604, Description: 1613 CS3 19I1604

#	Name	RT
1	1,3,6,8-TCDD (First)	21.95
2	1,2,8,9-TCDD (Last)	26.80
3	1,2,4,7,9-PeCDD (First)	28.55
4	1,2,3,8,9-PeCDD (Last)	31.14
5	1,2,4,6,7,9-HxCDD (First)	32.60
6	1,2,3,7,8,9-HxCDD (Last)	34.49
7	1,2,3,4,6,7,9-HpCDD (First)	36.99
8	1,2,3,4,6,7,8-HpCDD (Last)	38.03
9	1,3,6,8-TCDF (First)	19.82
10	1,2,8,9-TCDF (Last)	26.95
11	1,3,4,6,8-PeCDF (First)	26.90
12	1,2,3,8,9-PeCDF (Last)	31.38
13	1,2,3,4,6,8-HxCDF (First)	32.06
14	1,2,3,7,8,9-HxCDF (Last)	34.85
15	1,2,3,4,6,7,8-HpCDF (First)	36.60
16	1,2,3,4,7,8,9-HpCDF (Last)	38.60

Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:56:31 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:56:54 Pacific Standard Time

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

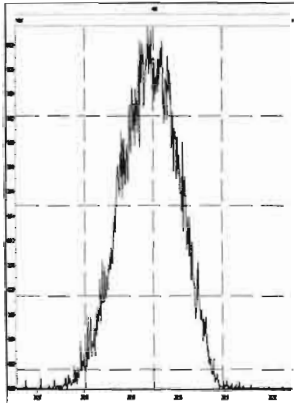
Compound name: 2,3,7,8-TCDD

	Name	ID	Acq.Date	Acq.Time
1	200121R1_1	ST200121R1_1 1613 CS0 19C2201	21-Jan-20	14:11:21
2	200121R1_2	ST200121R1_2 1613 CS1 19C2202	21-Jan-20	14:58:26
3	200121R1_3	ST200121R1_3 1613 CS2 19C2203	21-Jan-20	15:45:27
4	200121R1_4	ST200121R1_4 1613 CS3 19I1604	21-Jan-20	16:32:26
5	200121R1_5	ST200121R1_5 1613 CS4 19C2205	21-Jan-20	17:19:23
6	200121R1_6	ST200121R1_6 1613 CS5 19C2206	21-Jan-20	18:06:23
7	200121R1_7	SOLVENT BLANK	21-Jan-20	18:53:23
8	200121R1_8	SS200121R1_1 1613 SSS 19C2207	21-Jan-20	19:40:22
9	200121R1_9	SOLVENT BLANK	21-Jan-20	20:27:20
10	200121R1_10	QC200121D1_1 HRMS-191231-1 1613 BLK-1	21-Jan-20	21:14:18
11	200121R1_11	QC200121D1_2 HRMS-191231-2 1613 BS-1	21-Jan-20	22:01:20

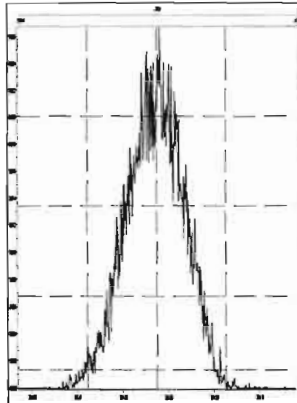
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Printed: Tuesday, January 21, 2020 14:06:23 Pacific Standard Time

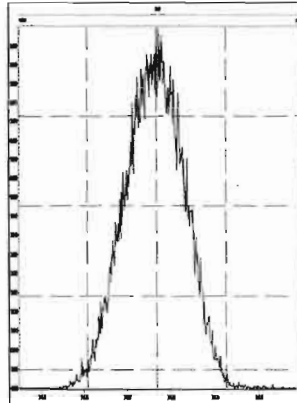
M 292.9824 R 10962



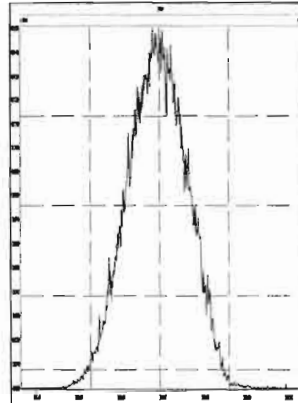
M 304.9824 R 10373



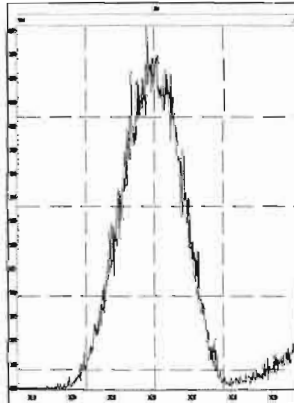
M 318.9792 R 10334



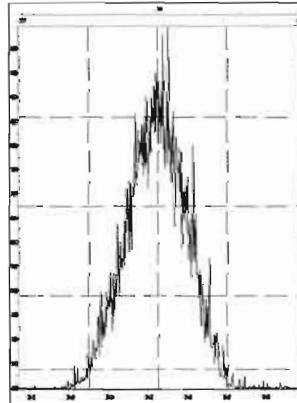
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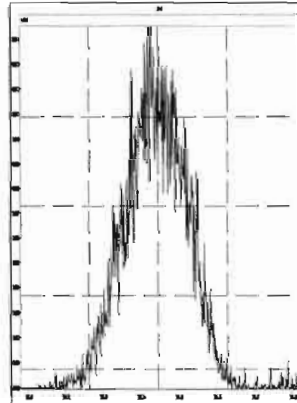
M 342.9792 R 10040



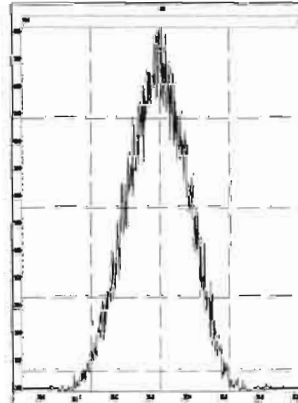
M 354.9792 R 10458



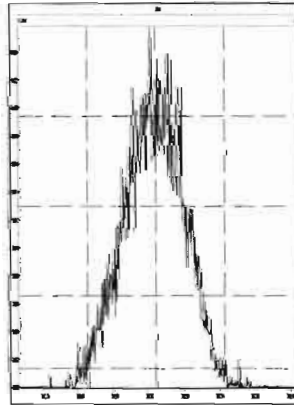
M 366.9792 R 11062



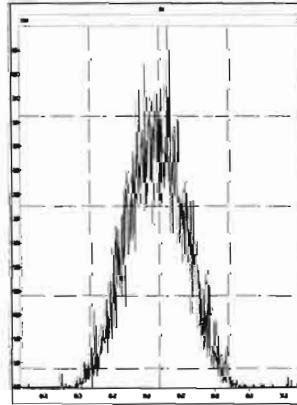
M 380.9760 R 10463



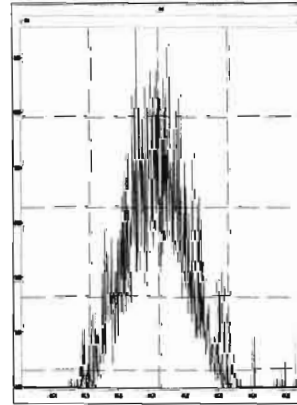
M 392.9760 R 10546



M 404.9760 R 11363



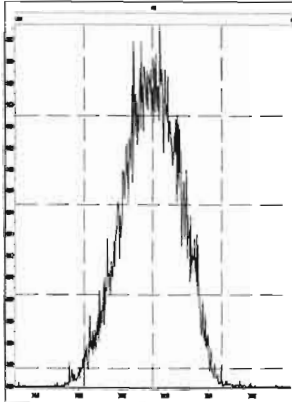
M 416.9760 R 11064



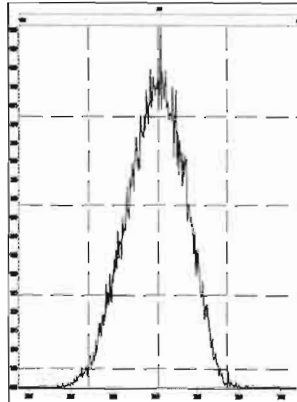
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Printed: Tuesday, January 21, 2020 14:06:59 Pacific Standard Time

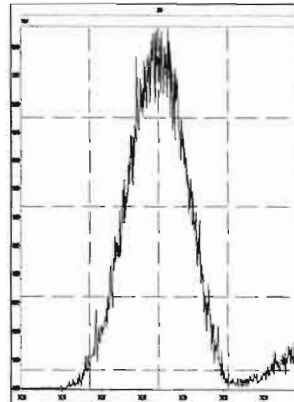
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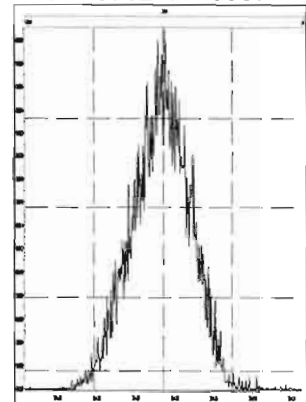
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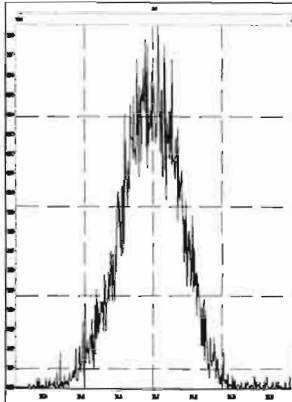
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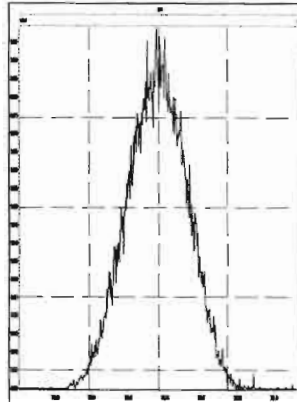
M 354.9792 R 10507



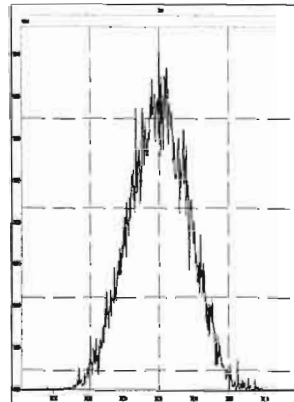
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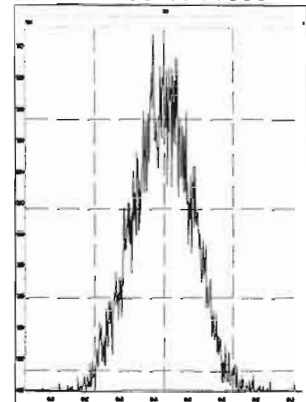
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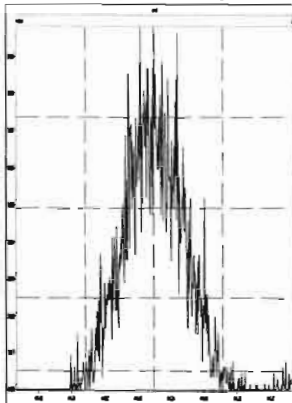
M 392.9760 R 10160



M 404.9760 R 11009



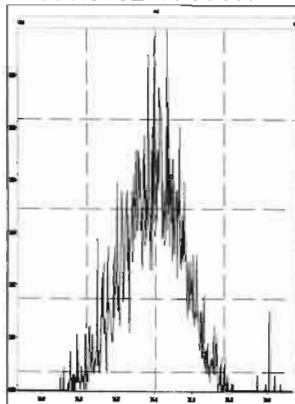
M 416.9760 R 11311



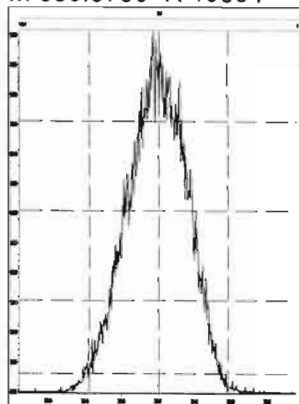
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Printed: Tuesday, January 21, 2020 14:08:02 Pacific Standard Time

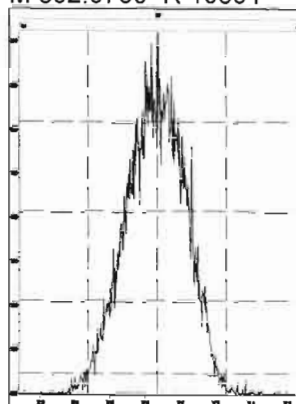
M 366.9792 R 11417



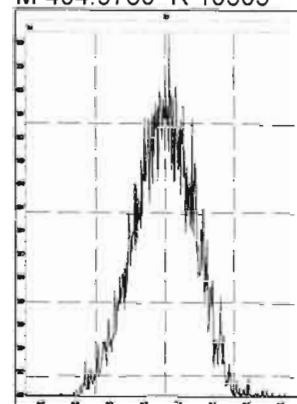
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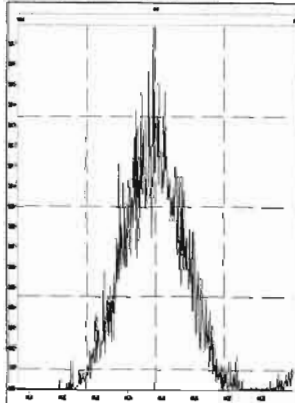
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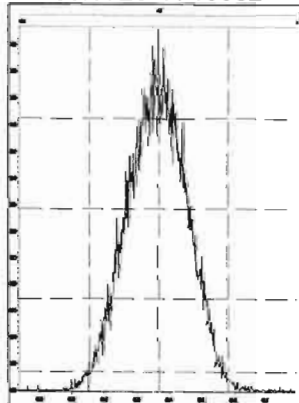
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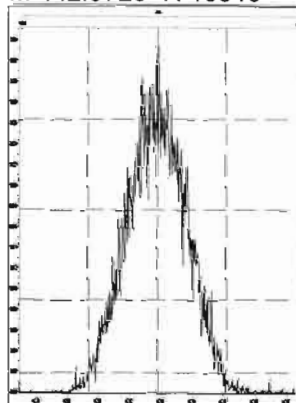
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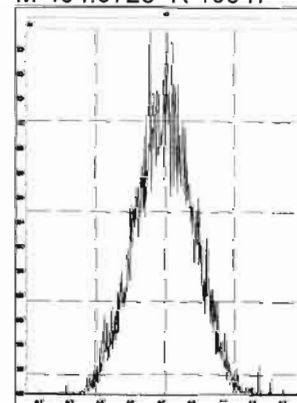
M 430.9728 R 10082



M 442.9728 R 10819



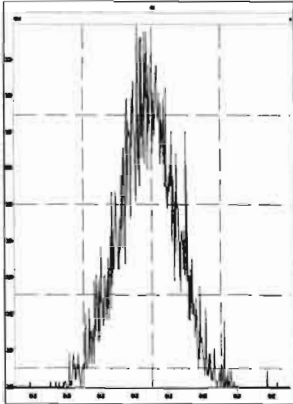
M 454.9728 R 10547



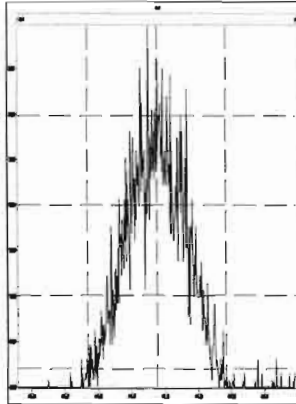
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed: Tuesday, January 21, 2020 14:09:20 Pacific Standard Time

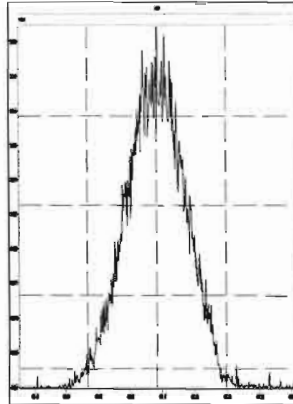
M 404.9760 R 11212



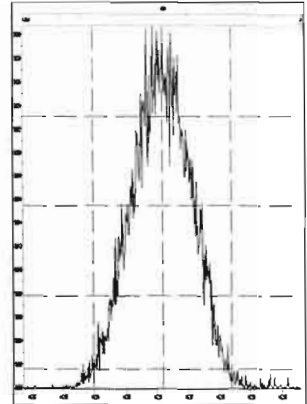
M 416.9760 R 12195



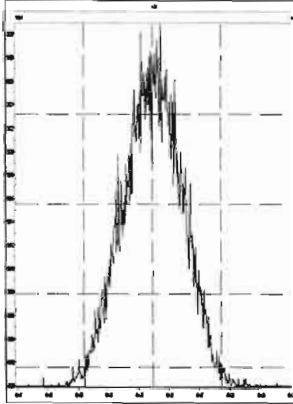
M 430.9728 R 10637



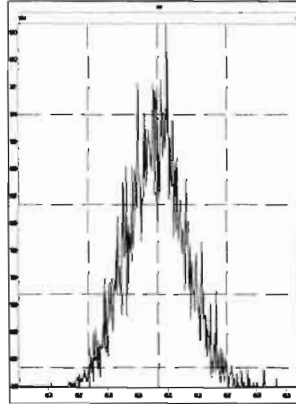
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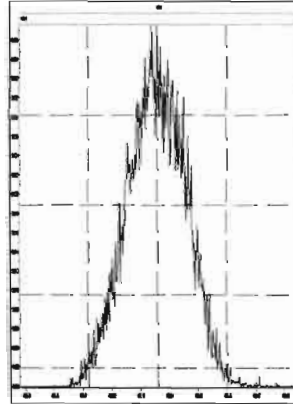
M 454.9728 R 10592



M 466.9728 R 12498



M 480.9696 R 10635

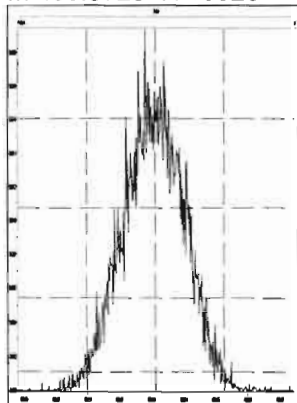




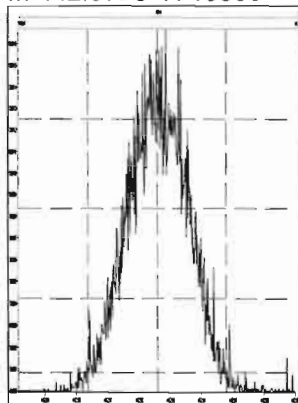
File: Experiment: OCDD\_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed: Tuesday, January 21, 2020 14:10:41 Pacific Standard Time

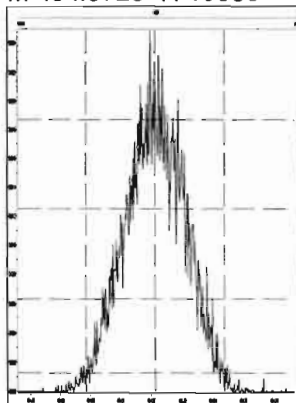
M 430.9728 R 10823



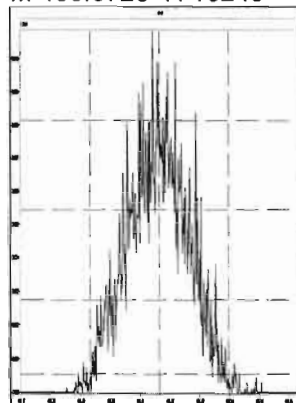
M 442.9728 R 10868



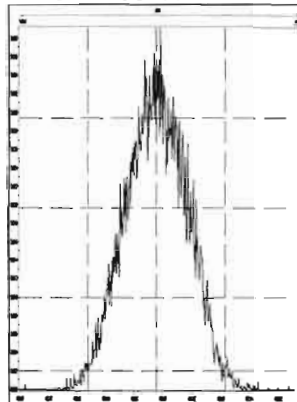
M 454.9728 R 10685



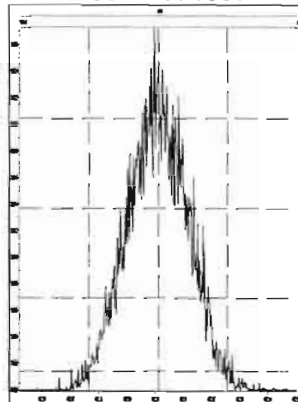
M 466.9728 R 10245



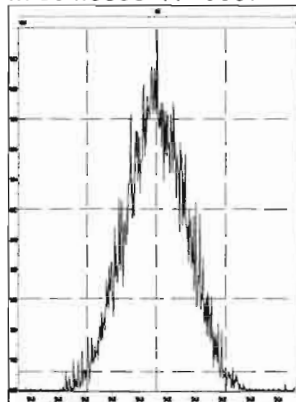
M 480.9696 R 10002



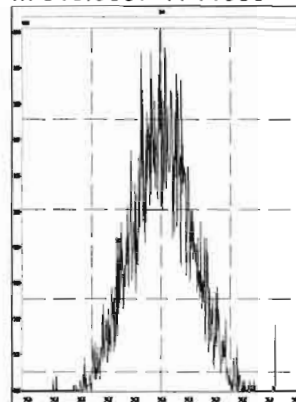
M 492.9696 R 10371



M 504.9696 R 10637



M 516.9697 R 11066



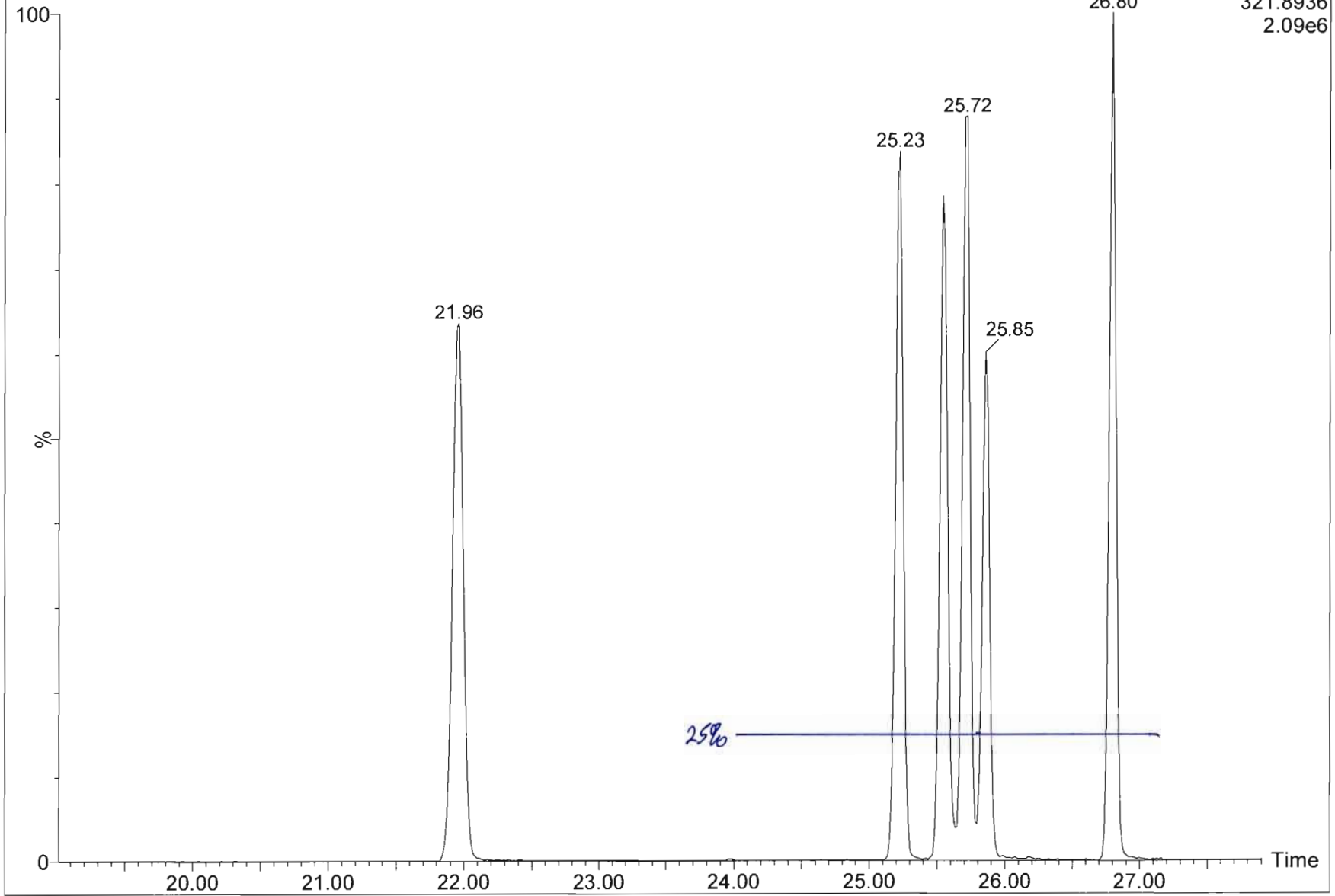
1613 CS3 19I1604

200121R1\_4

1: Voltage SIR 14 Channels EI+

321.8936

2.09e6



Dataset: Untitled

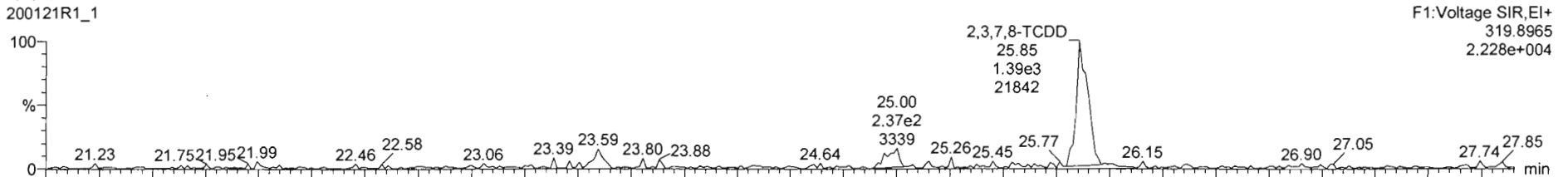
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-1-15-20.mdb 21 Jan 2020 11:10:24  
Calibration: 22 Jan 2020 09:03:58

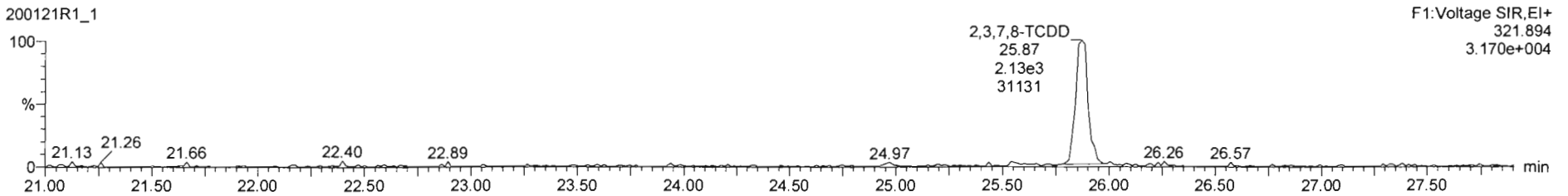
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**2,3,7,8-TCDD**

200121R1\_1

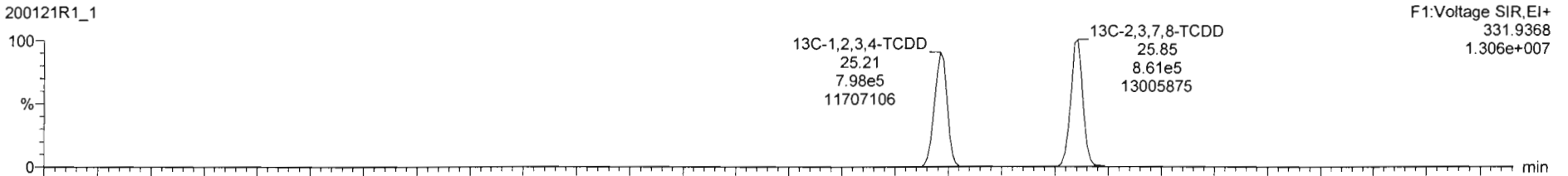


200121R1\_1

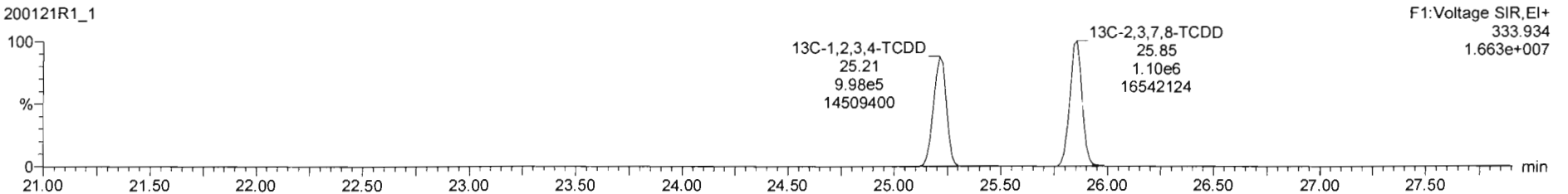


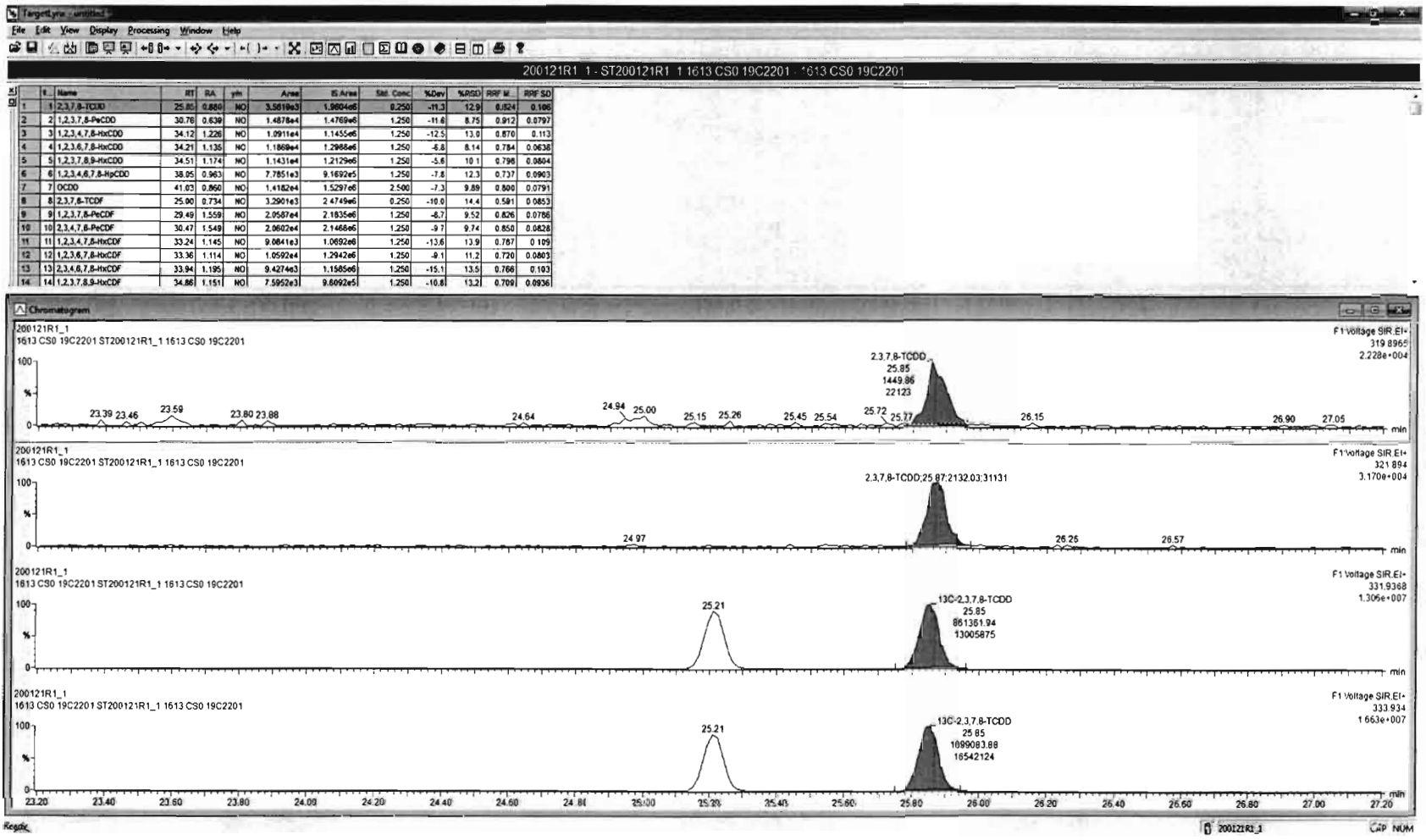
**13C-2,3,7,8-TCDD**

200121R1\_1



200121R1\_1





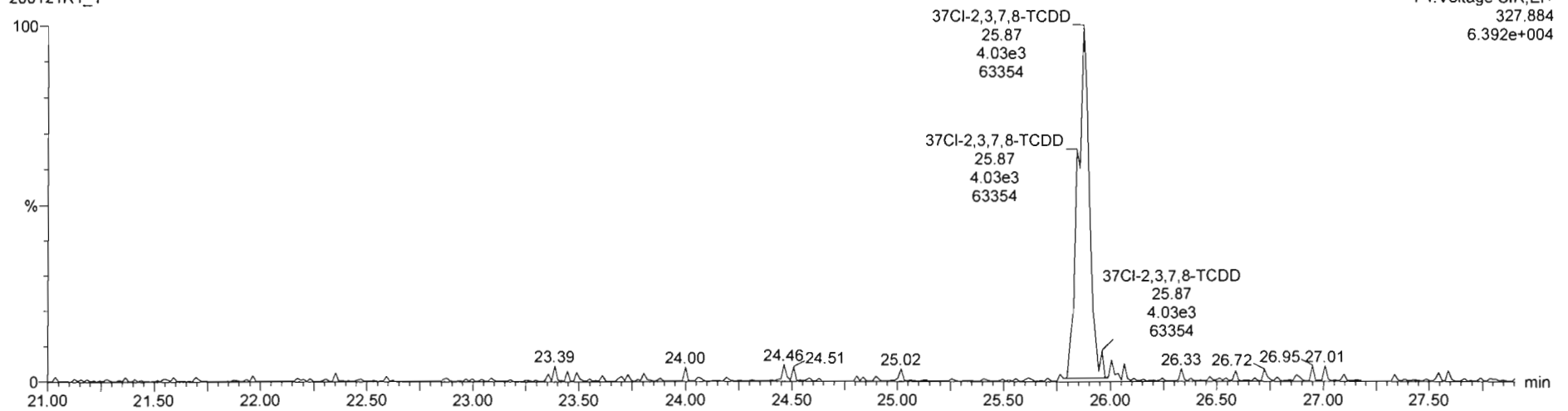
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_1, Date: 21-Jan-2020, Time: 14:11:21, ID: ST200121R1\_1 1613 CS0 19C2201, Description: 1613 CS0 19C2201

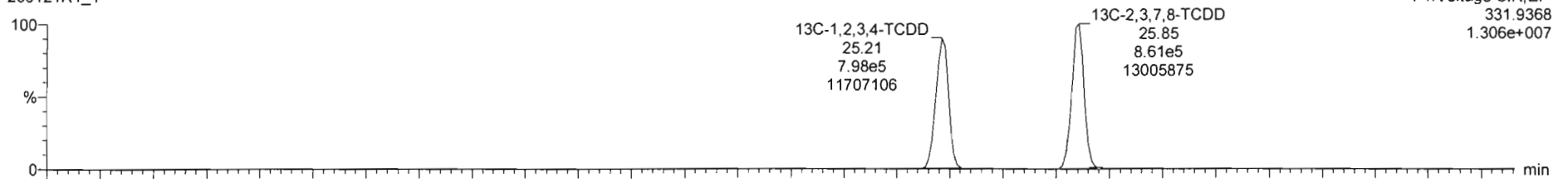
**37Cl-2,3,7,8-TCDD**

200121R1\_1

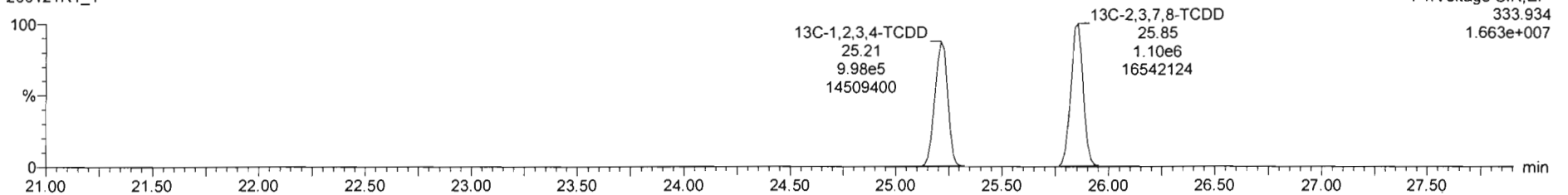


**13C-1,2,3,4-TCDD**

200121R1\_1



200121R1\_1



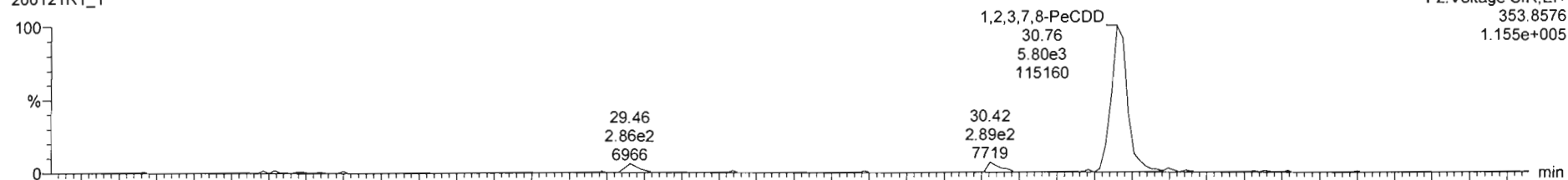
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

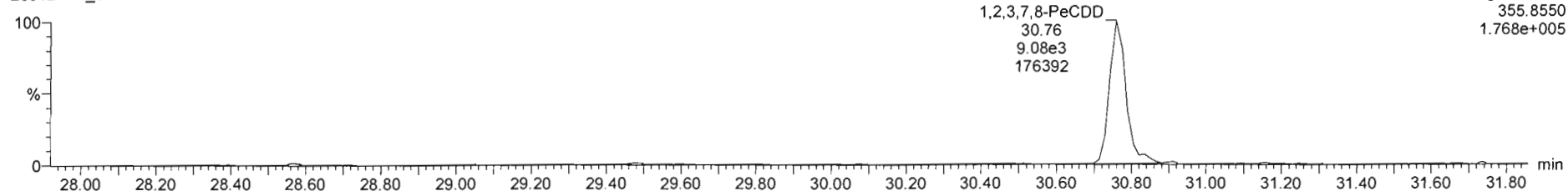
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**1,2,3,7,8-PeCDD**

200121R1\_1



200121R1\_1

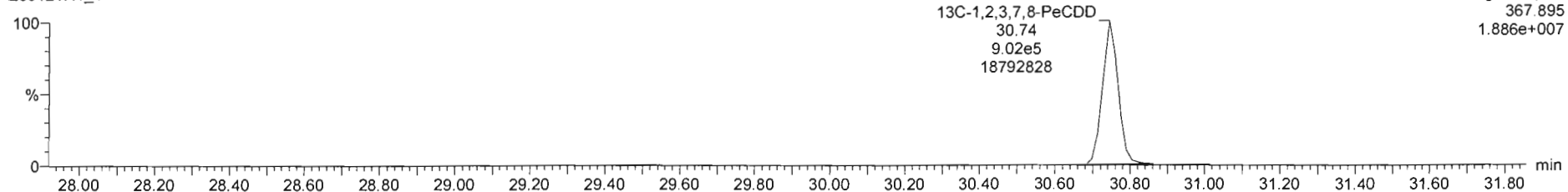


**13C-1,2,3,7,8-PeCDD**

200121R1\_1



200121R1\_1



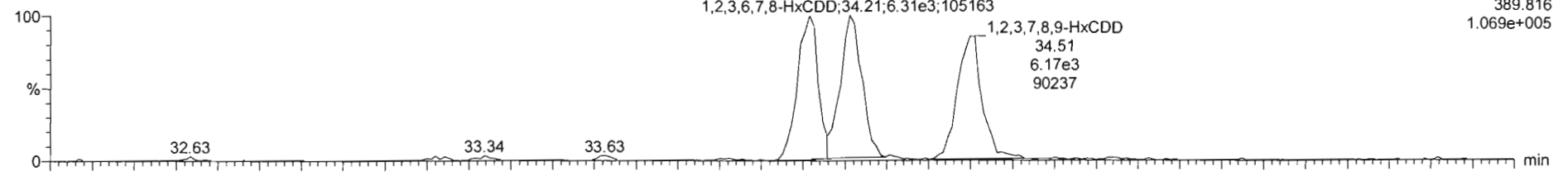
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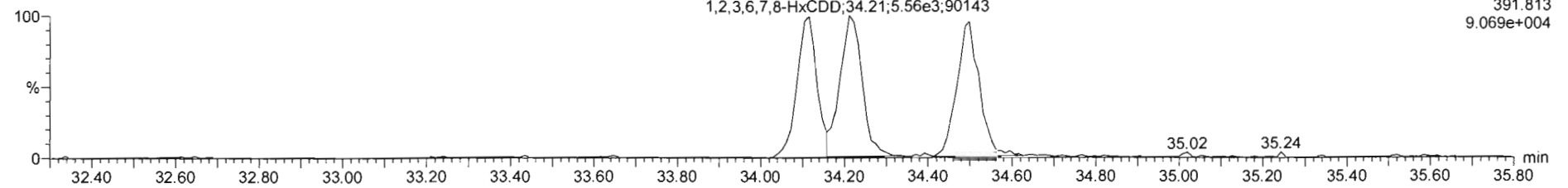
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1,2,3,4,7,8-HxCDD

200121R1\_1

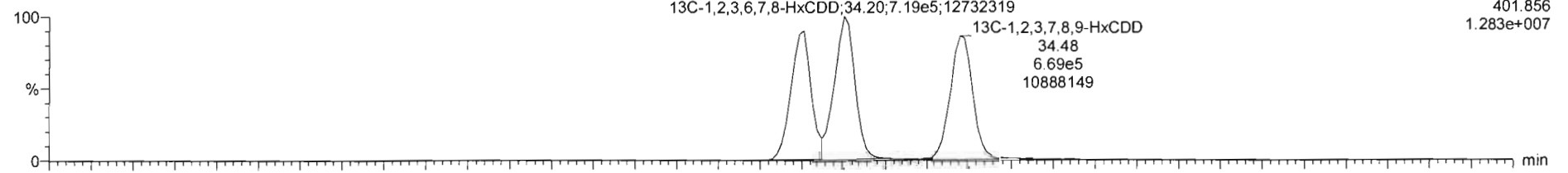


200121R1\_1

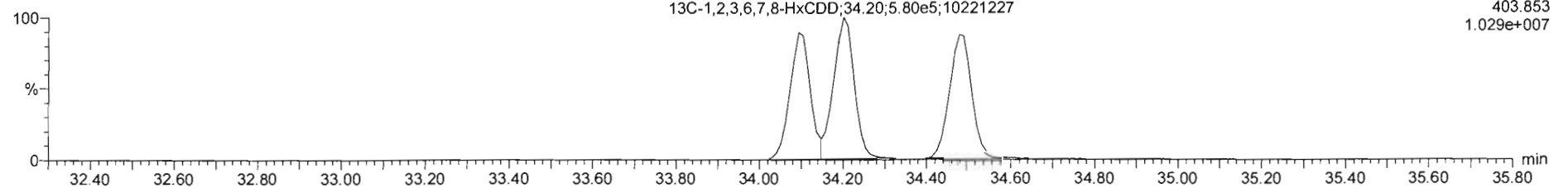


13C-1,2,3,4,7,8-HxCDD

200121R1\_1



200121R1\_1



Dataset: Untitled

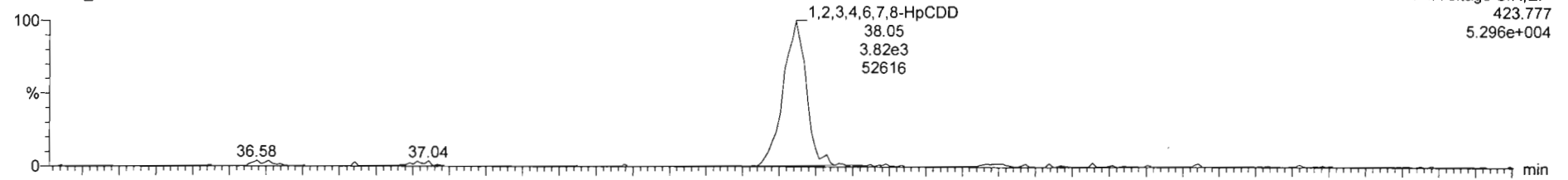
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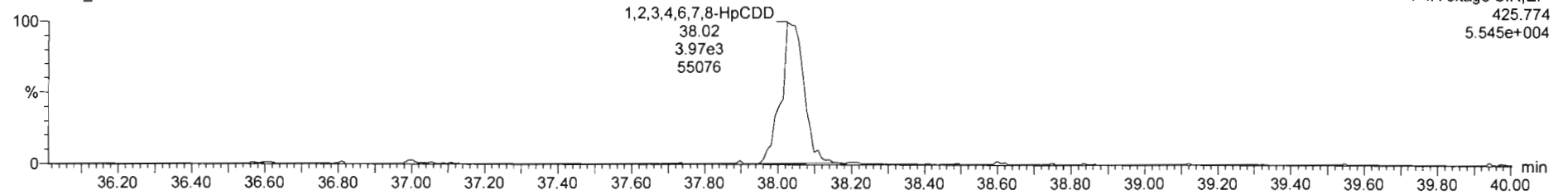
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1,2,3,4,6,7,8-HpCDD

200121R1\_1

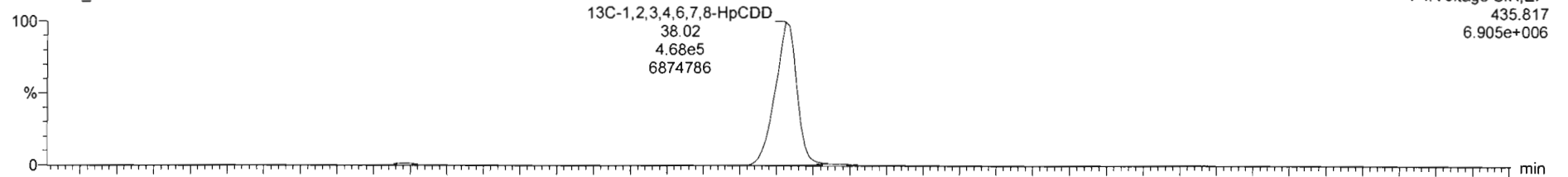


200121R1\_1

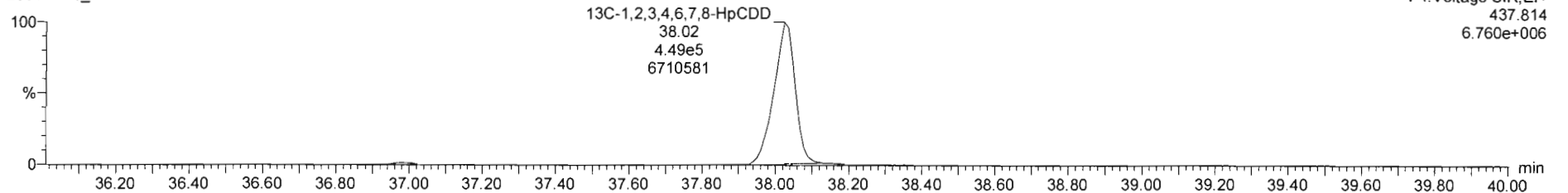


13C-1,2,3,4,6,7,8-HpCDD

200121R1\_1



200121R1\_1





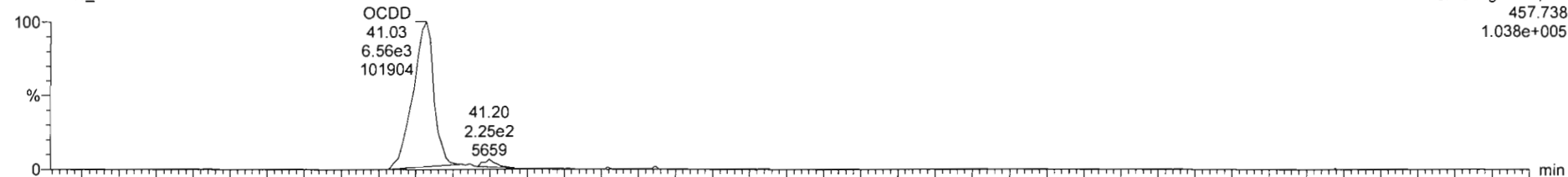
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

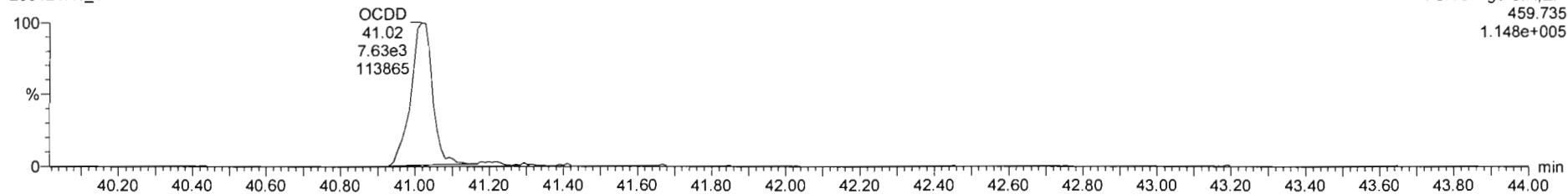
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OCDD

200121R1\_1

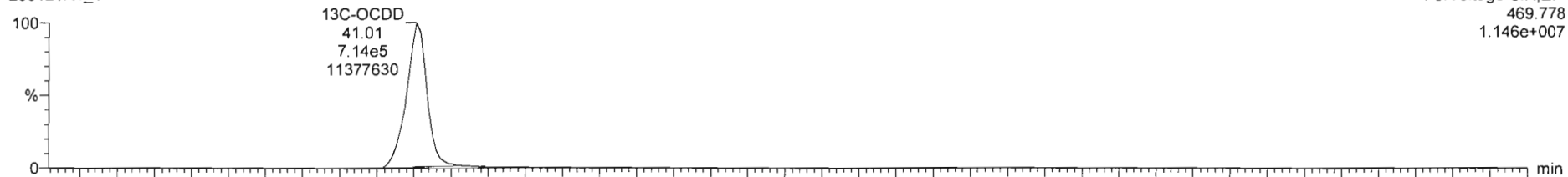


200121R1\_1

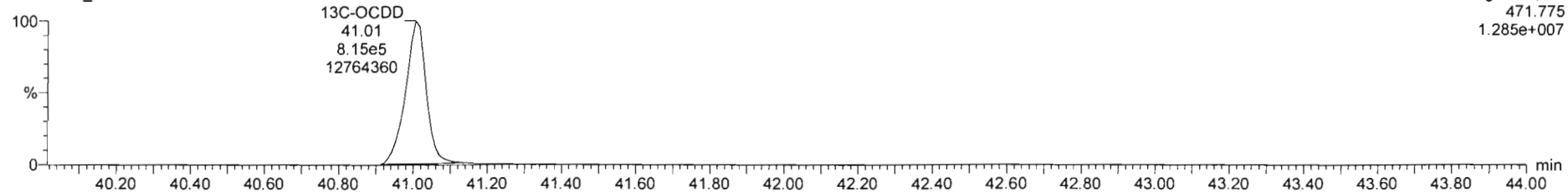


13C-OCDD

200121R1\_1



200121R1\_1



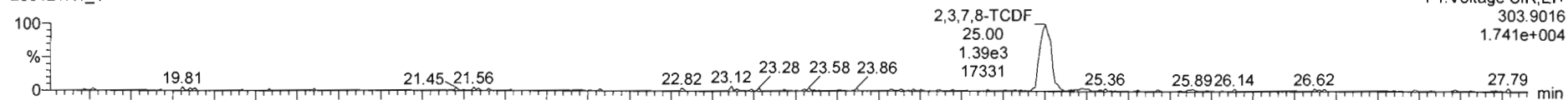
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

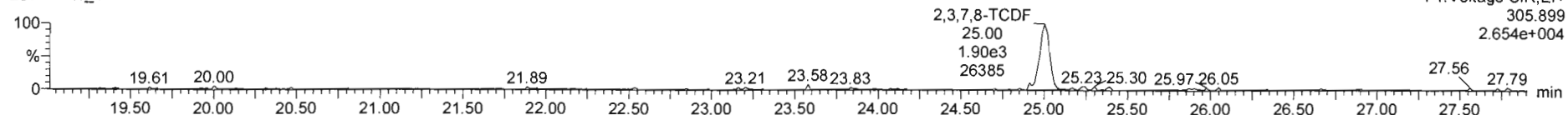
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**2,3,7,8-TCDF**

200121R1\_1

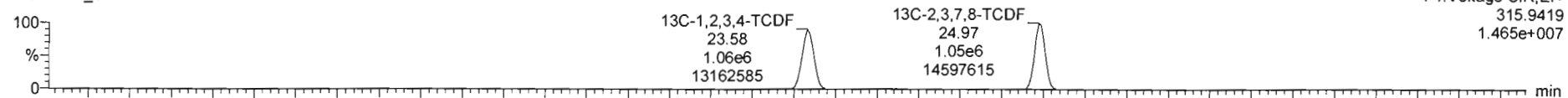


200121R1\_1

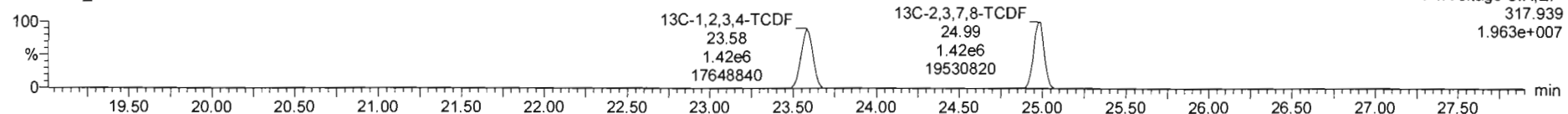


**13C-2,3,7,8-TCDF**

200121R1\_1

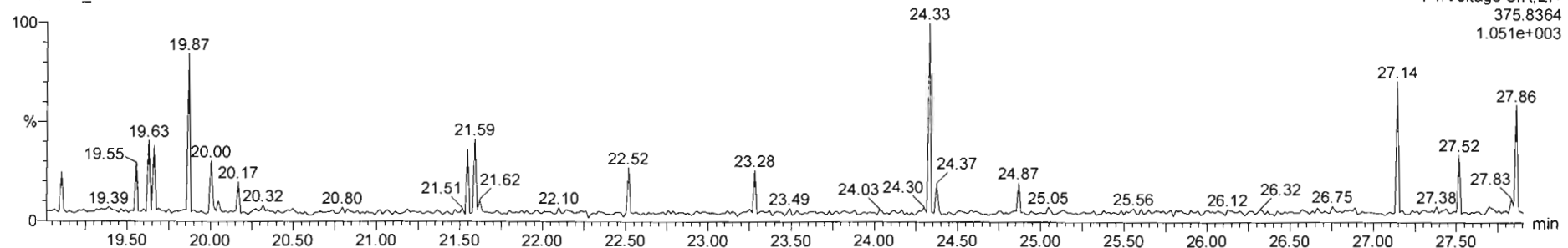


200121R1\_1



**DPE1**

200121R1\_1



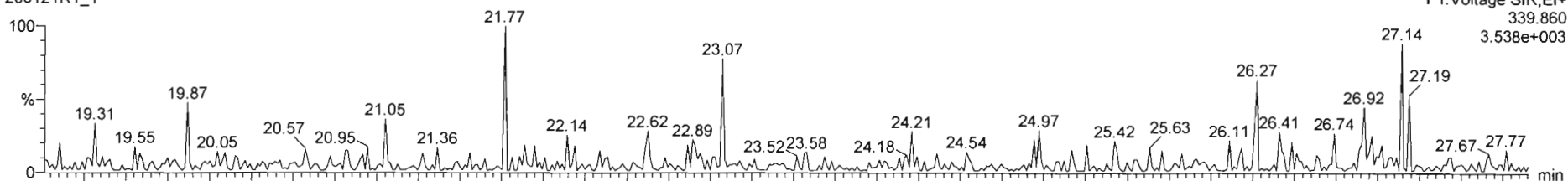
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

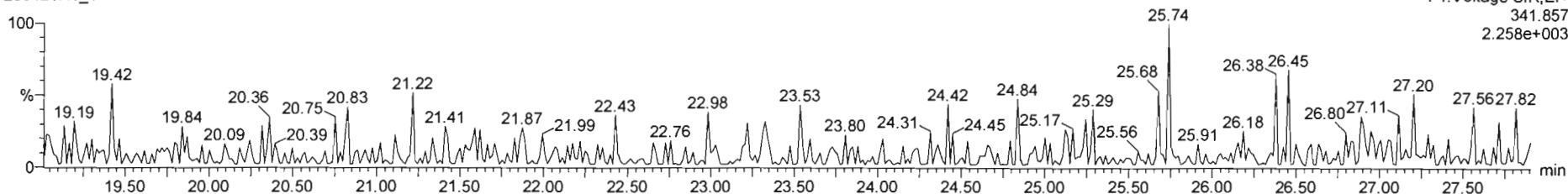
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1st Func. Penta-Furans

200121R1\_1

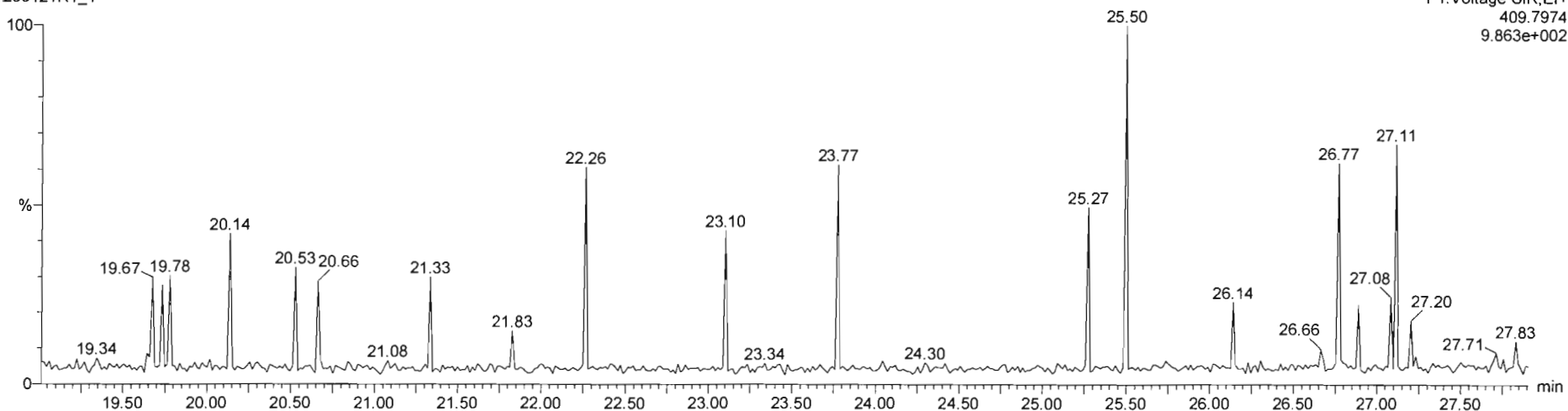


200121R1\_1



DPE6

200121R1\_1



Dataset: Untitled

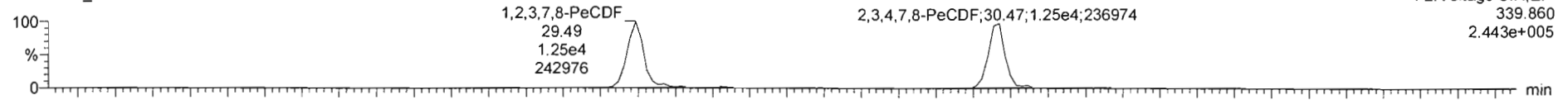
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

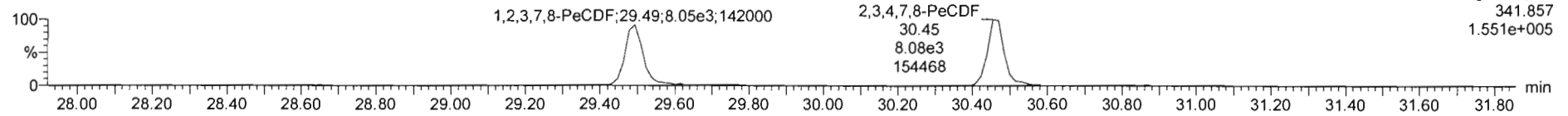
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**1,2,3,7,8-PeCDF**

200121R1\_1

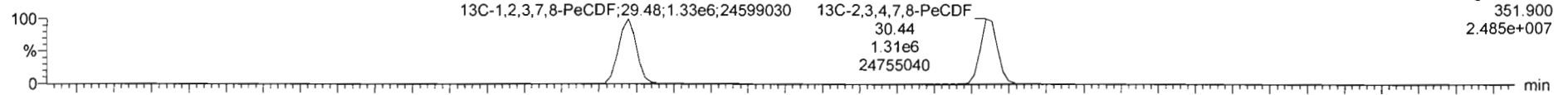


200121R1\_1

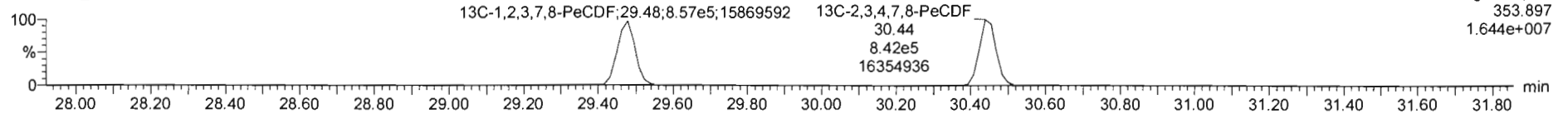


**13C-1,2,3,7,8-PeCDF**

200121R1\_1

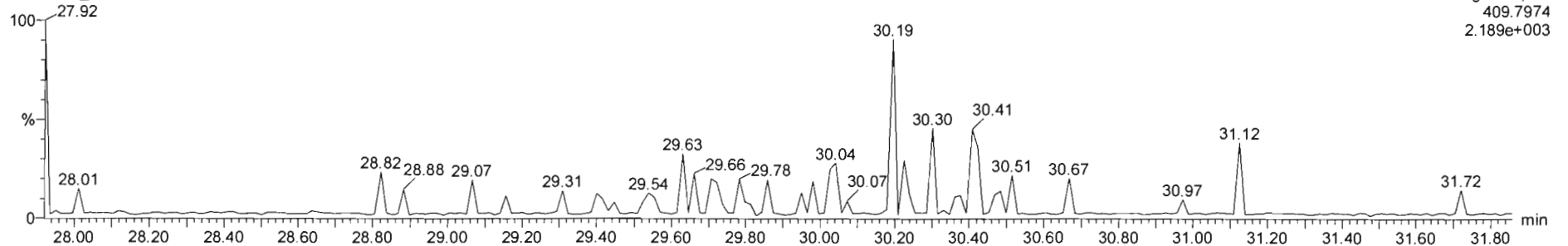


200121R1\_1



**DPE2**

200121R1\_1



Dataset: Untitled

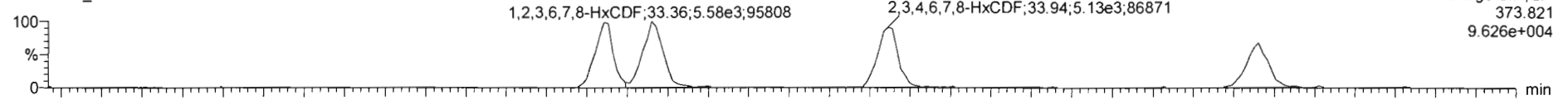
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

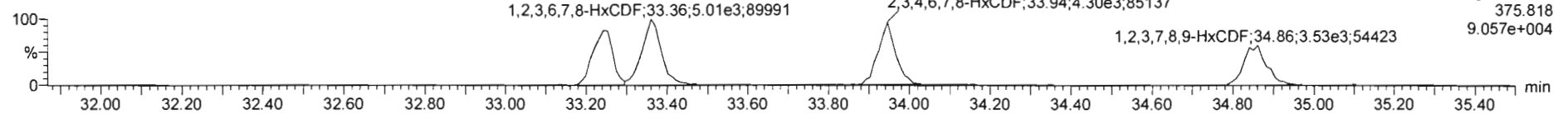
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**1,2,3,4,7,8-HxCDF**

200121R1\_1

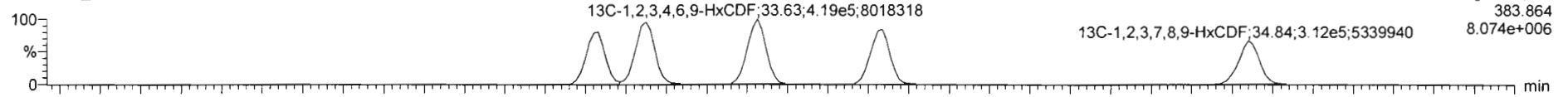


200121R1\_1

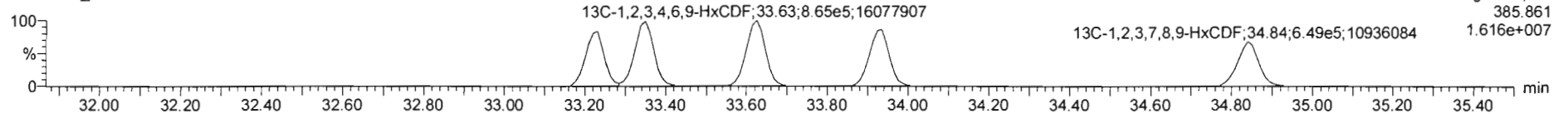


**13C-1,2,3,4,7,8-HxCDF**

200121R1\_1

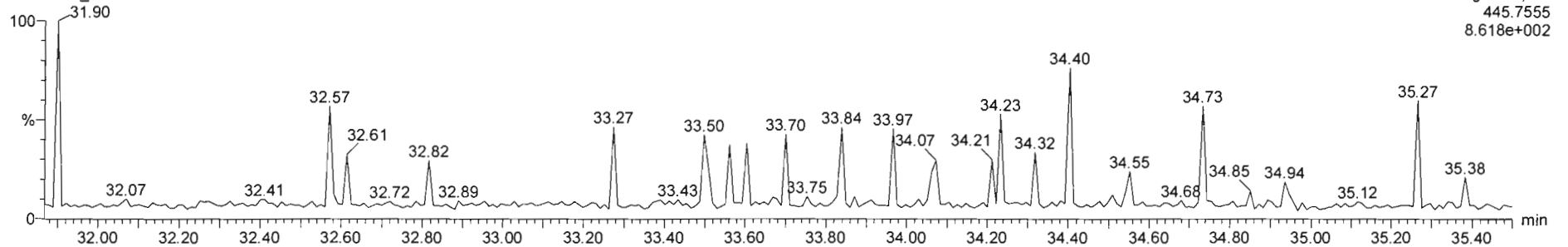


200121R1\_1



**DPE3**

200121R1\_1



Dataset: Untitled

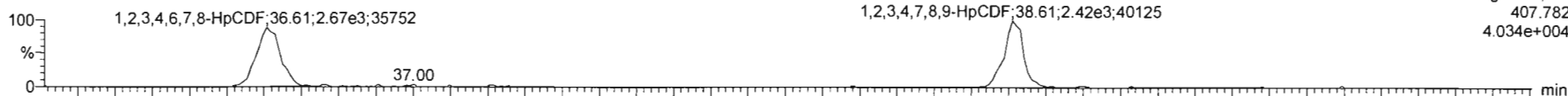
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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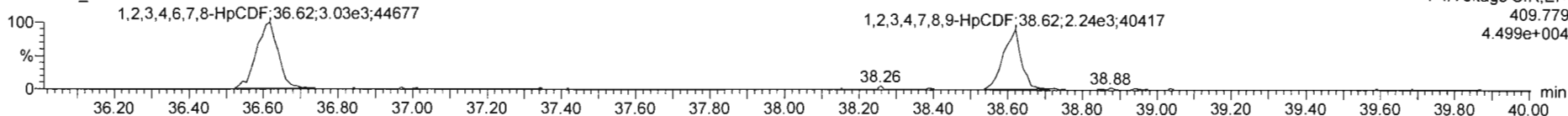
**1,2,3,4,6,7,8-HpCDF**

200121R1\_1



F4: Voltage SIR, EI+  
407.782  
4.034e+004

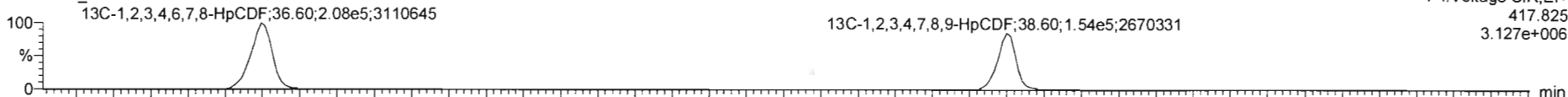
200121R1\_1



F4: Voltage SIR, EI+  
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4.499e+004

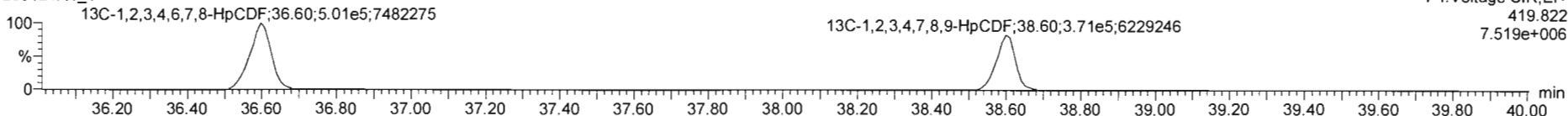
**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_1



F4: Voltage SIR, EI+  
417.825  
3.127e+006

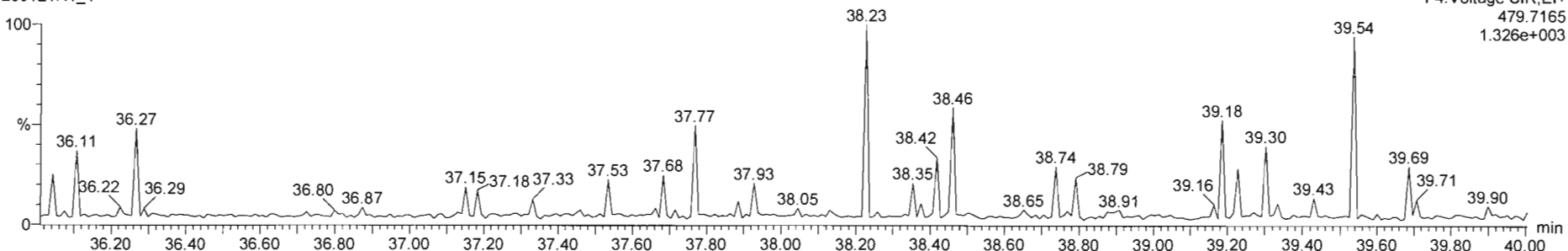
200121R1\_1



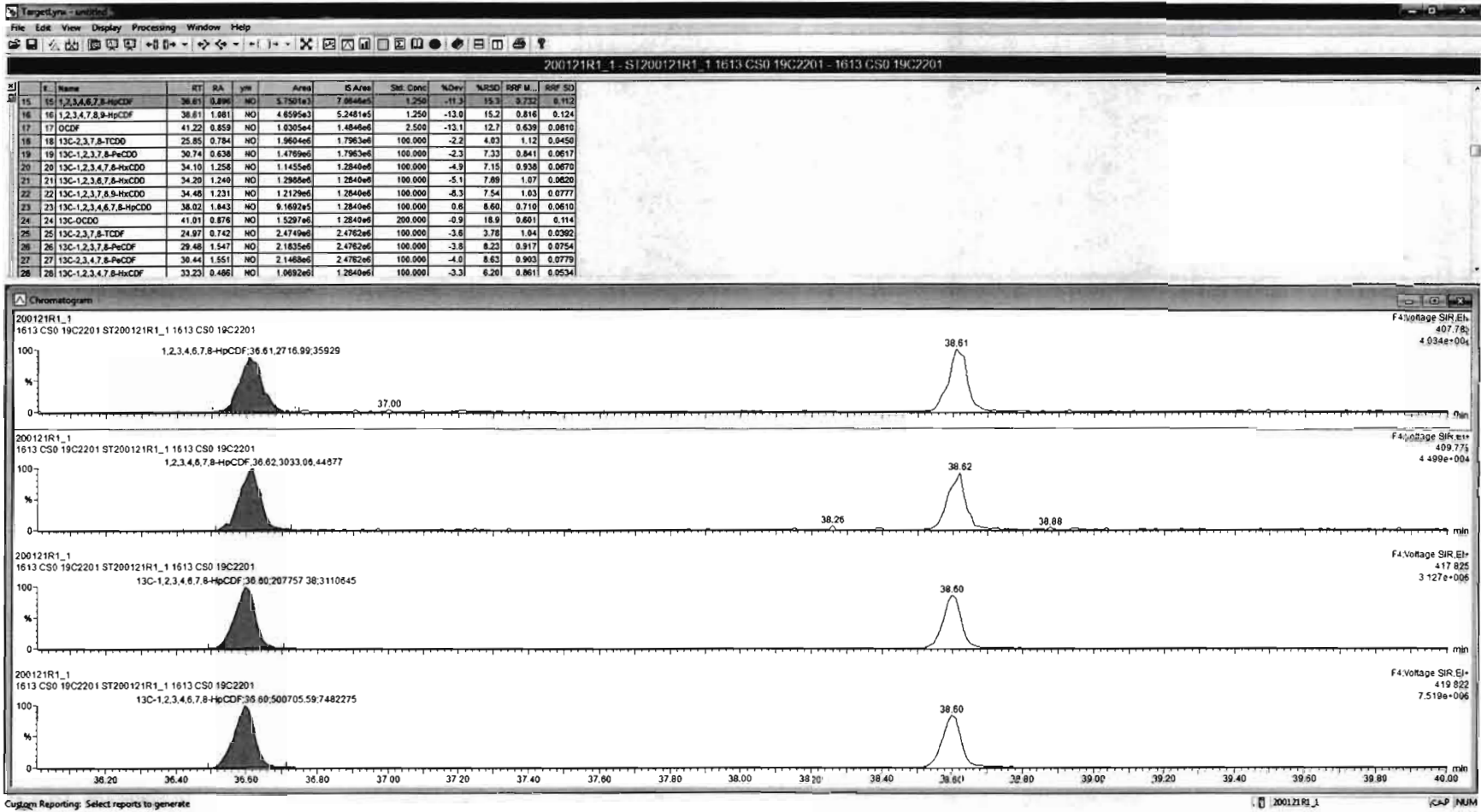
F4: Voltage SIR, EI+  
419.822  
7.519e+006

**DPE4**

200121R1\_1



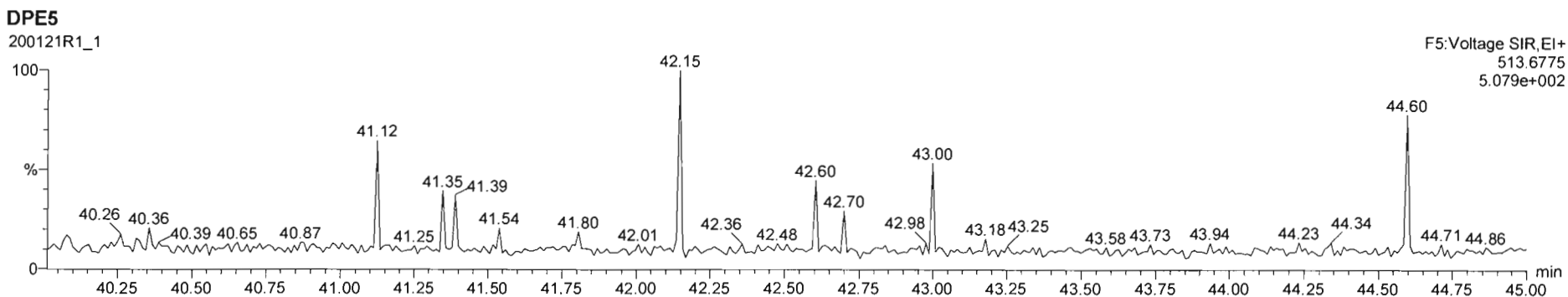
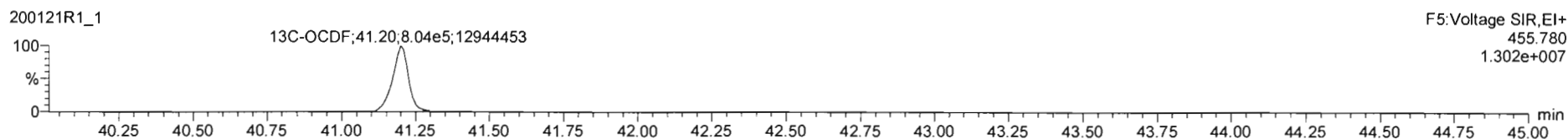
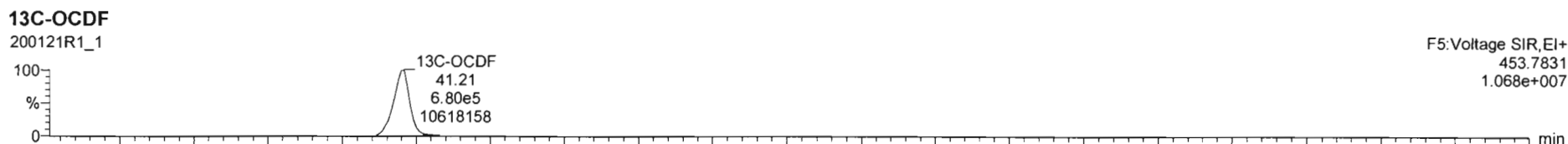
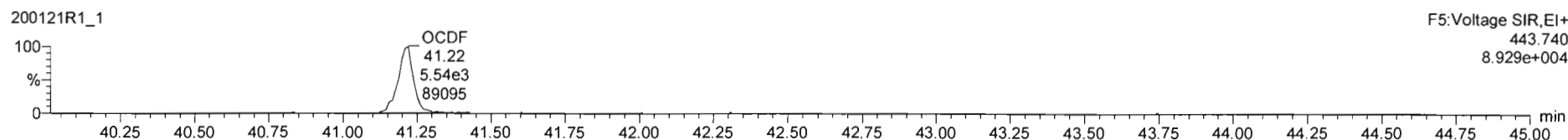
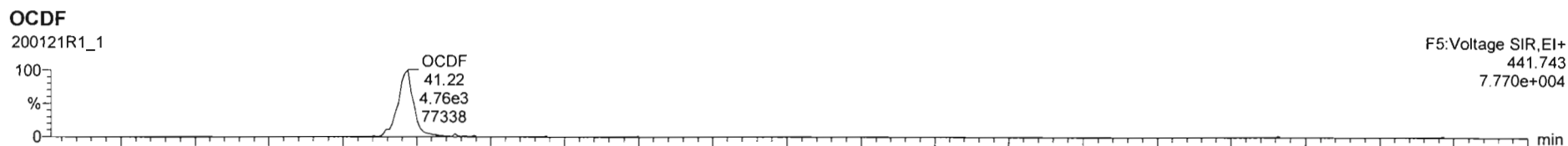
F4: Voltage SIR, EI+  
479.7165  
1.326e+003



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_1, Date: 21-Jan-2020, Time: 14:11:21, ID: ST200121R1\_1 1613 CS0 19C2201, Description: 1613 CS0 19C2201

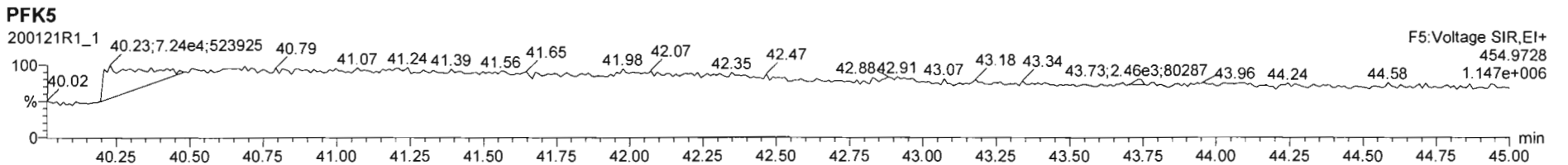
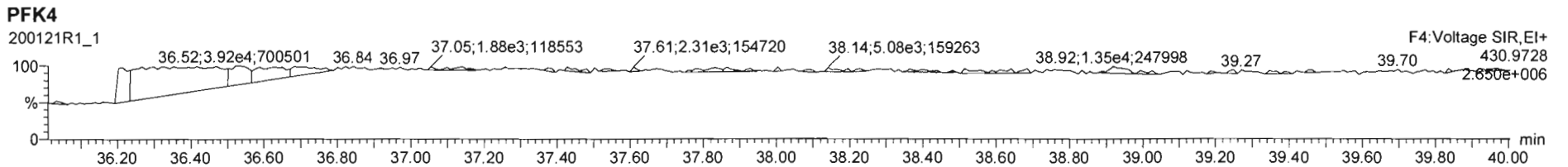
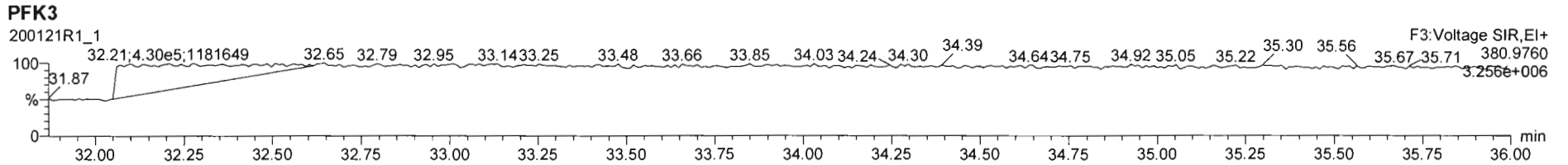
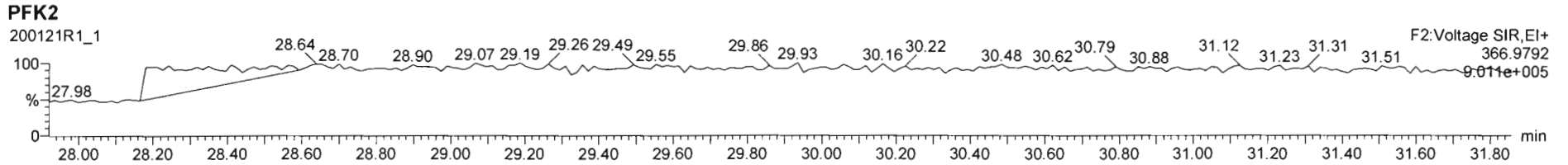
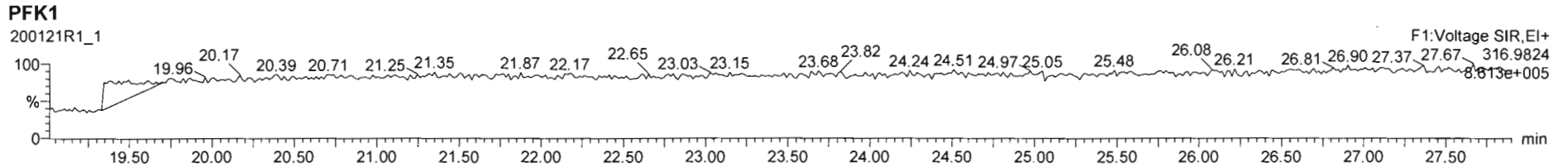




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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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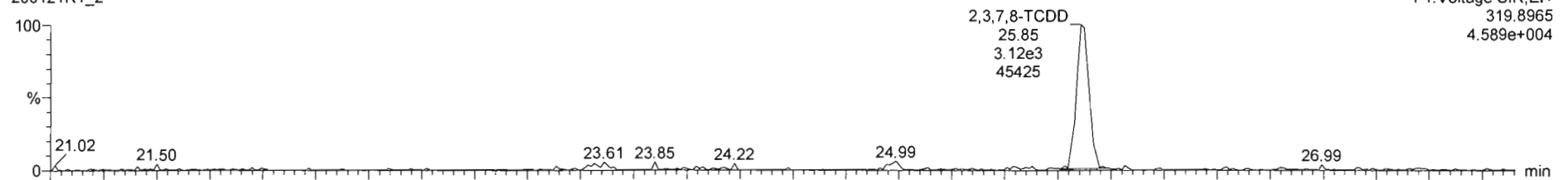
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

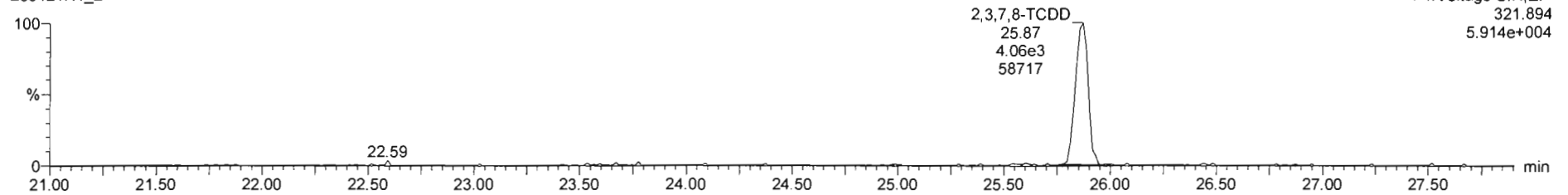
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**2,3,7,8-TCDD**

200121R1\_2

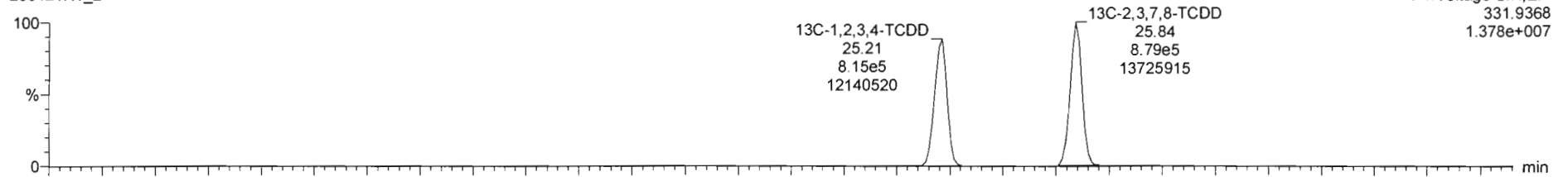


200121R1\_2

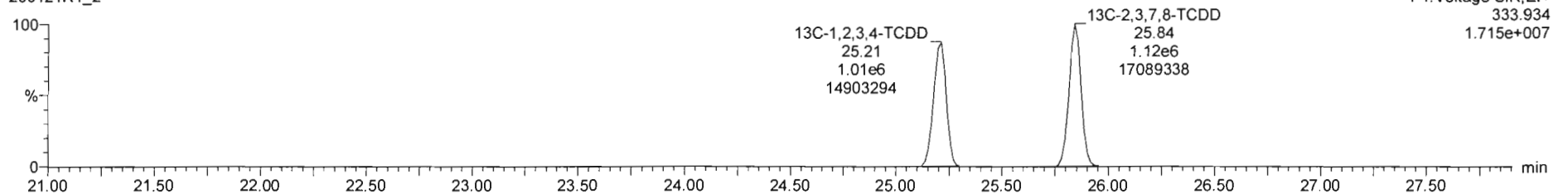


**13C-2,3,7,8-TCDD**

200121R1\_2



200121R1\_2



Dataset: Untitled

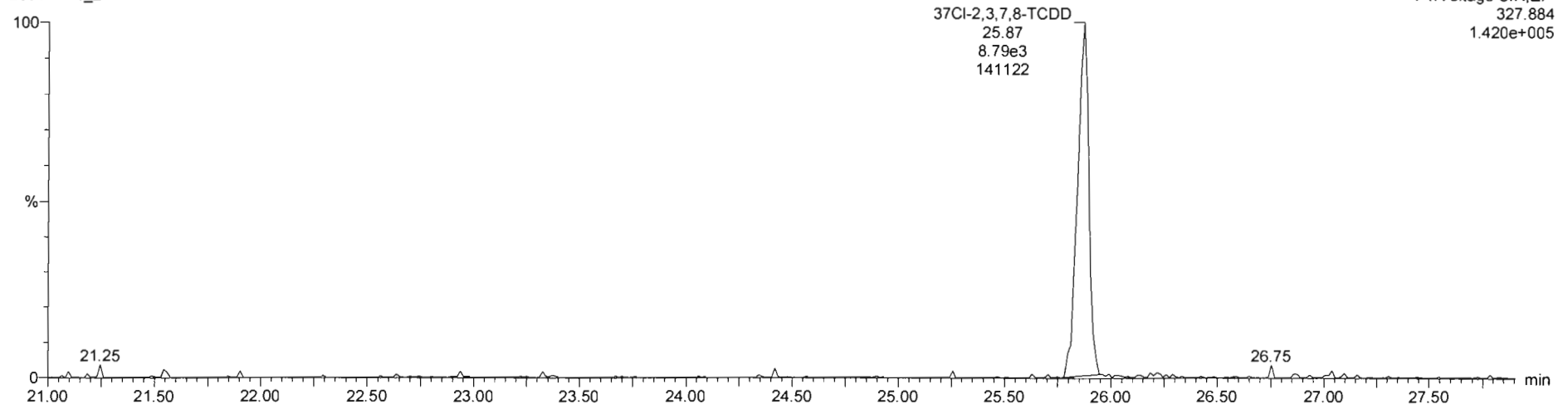
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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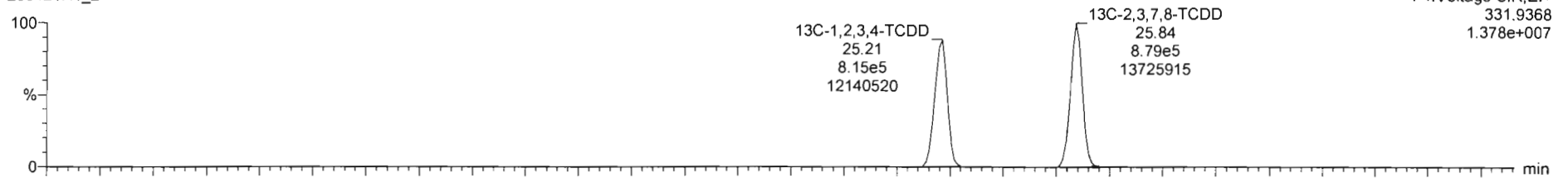
**37Cl-2,3,7,8-TCDD**

200121R1\_2

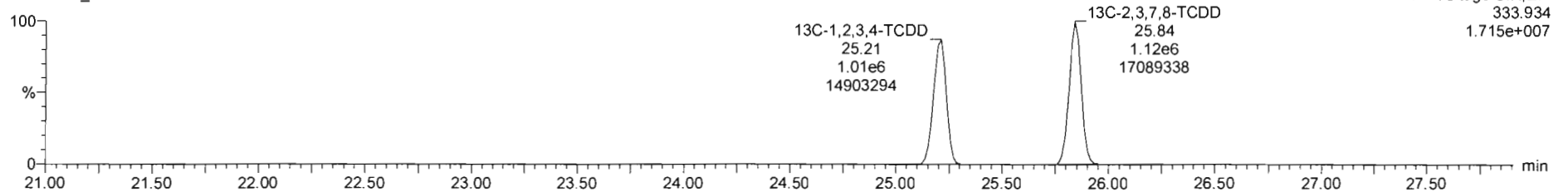


**13C-1,2,3,4-TCDD**

200121R1\_2



200121R1\_2



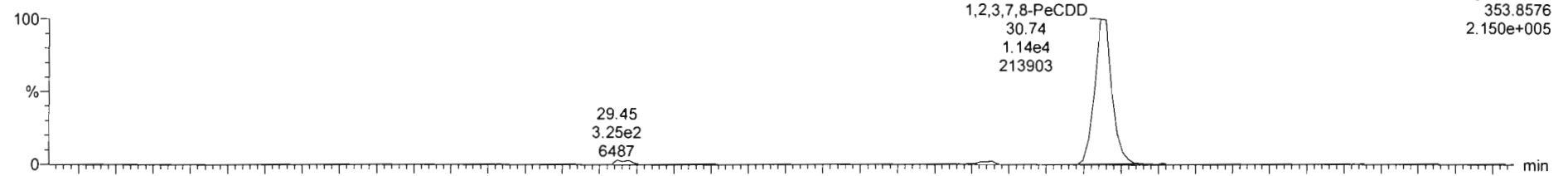
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

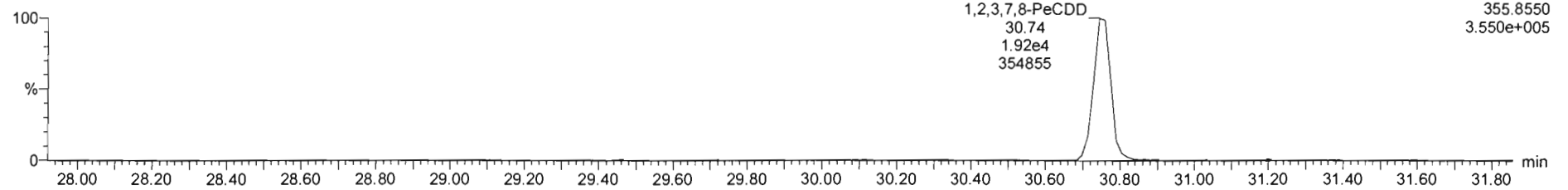
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1,2,3,7,8-PeCDD

200121R1\_2

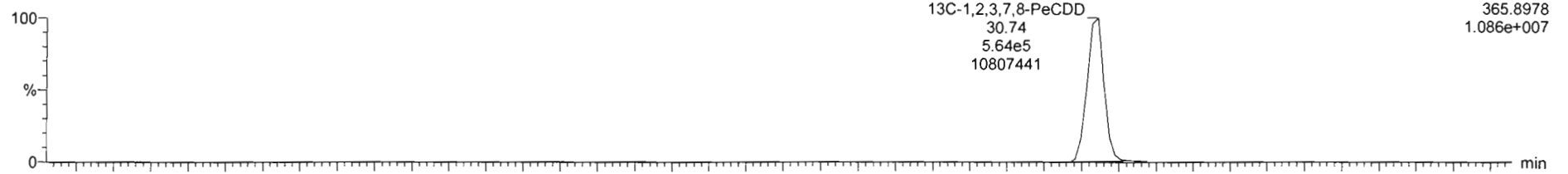


200121R1\_2

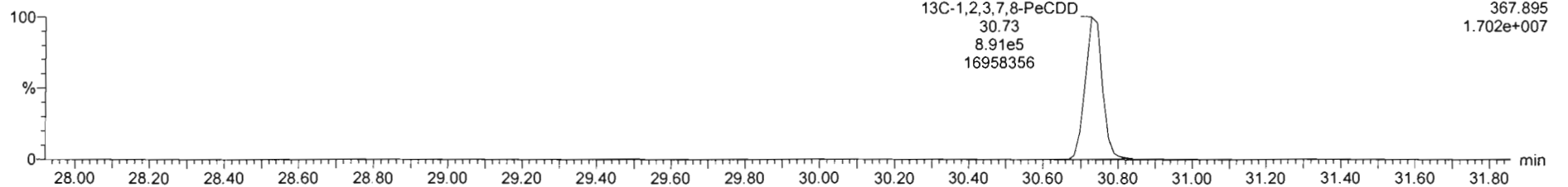


13C-1,2,3,7,8-PeCDD

200121R1\_2



200121R1\_2



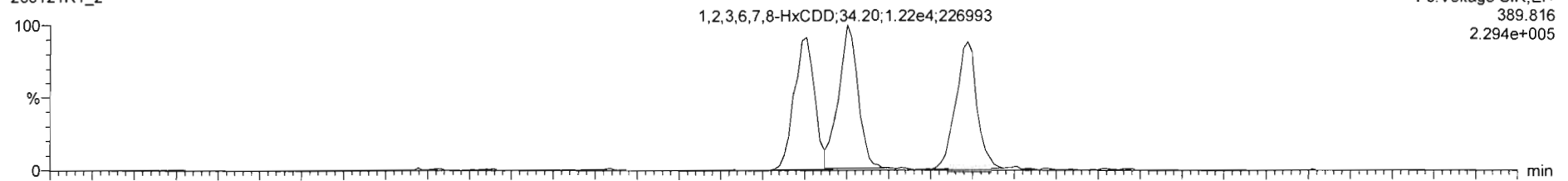
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

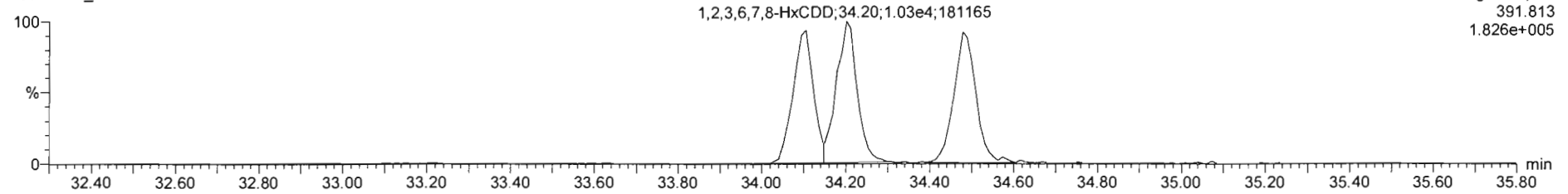
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**1,2,3,4,7,8-HxCDD**

200121R1\_2

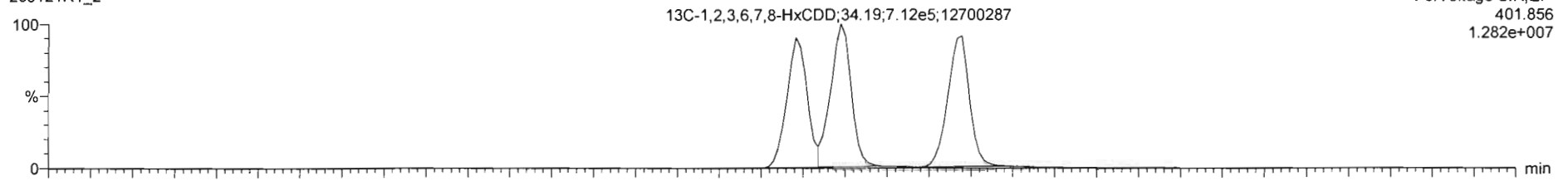


200121R1\_2

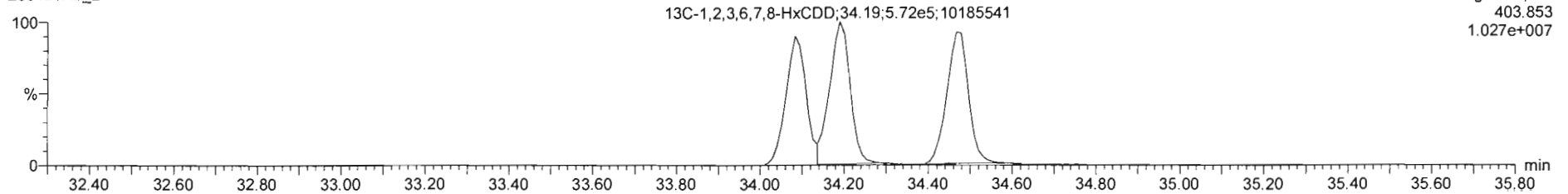


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_2



200121R1\_2



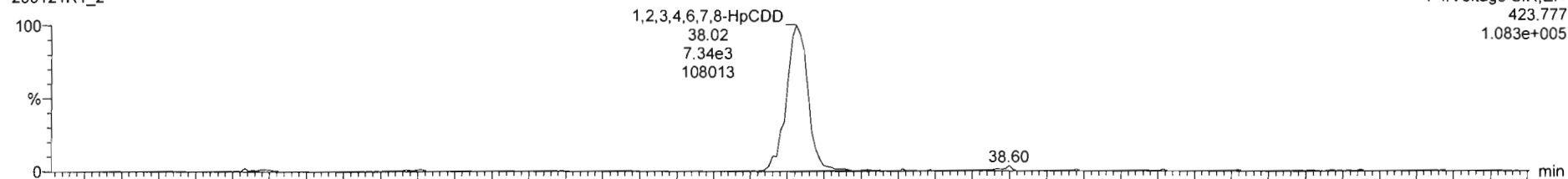
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

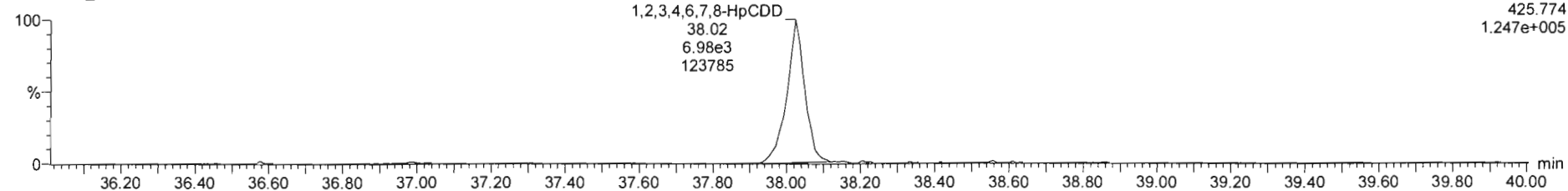
1,2,3,4,6,7,8-HpCDD

200121R1\_2



F4:Voltage SIR,EI+  
423.777  
1.083e+005

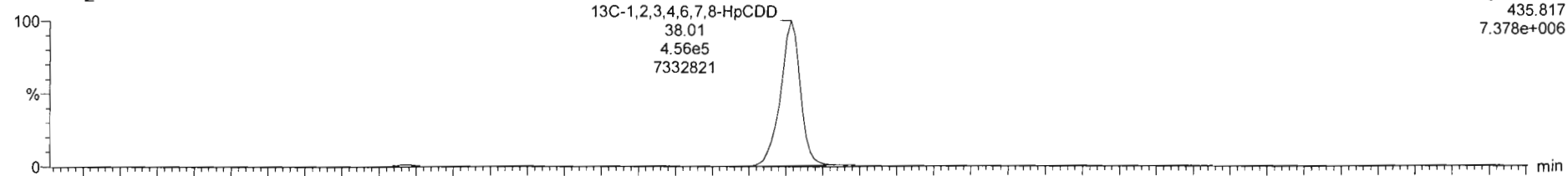
200121R1\_2



F4:Voltage SIR,EI+  
425.774  
1.247e+005

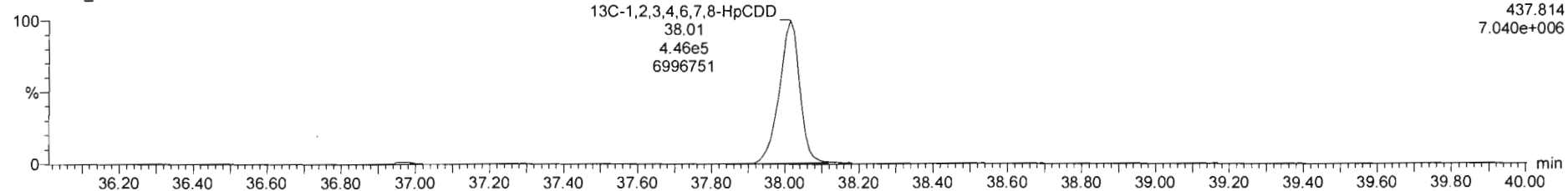
13C-1,2,3,4,6,7,8-HpCDD

200121R1\_2



F4:Voltage SIR,EI+  
435.817  
7.378e+006

200121R1\_2



F4:Voltage SIR,EI+  
437.814  
7.040e+006

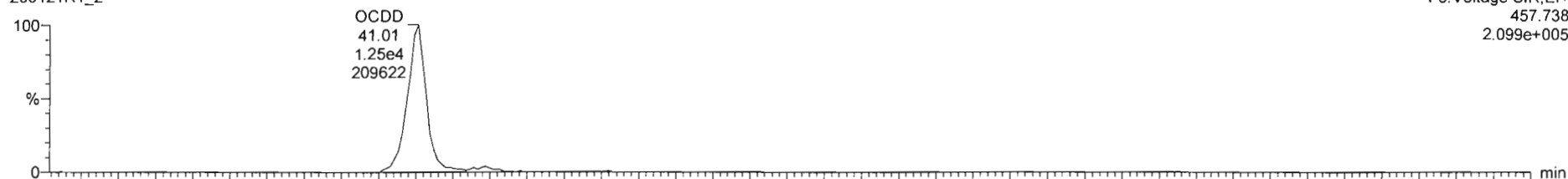
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

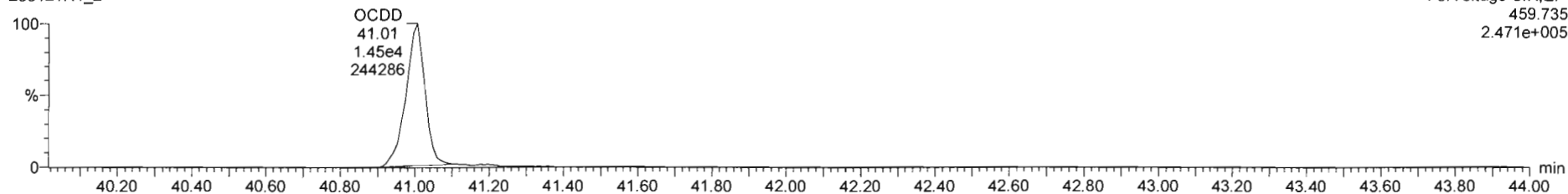
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**OCDD**

200121R1\_2

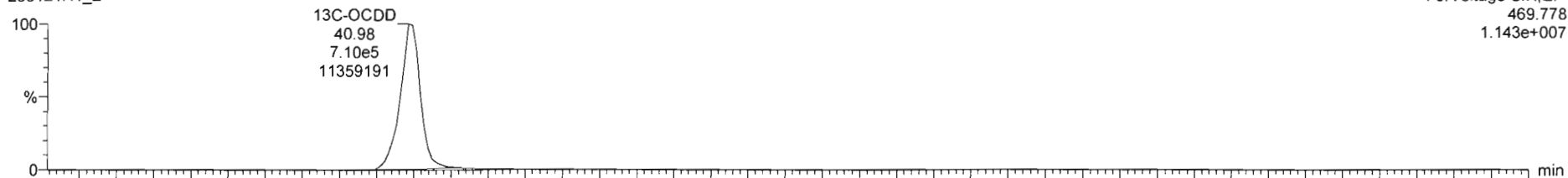


200121R1\_2

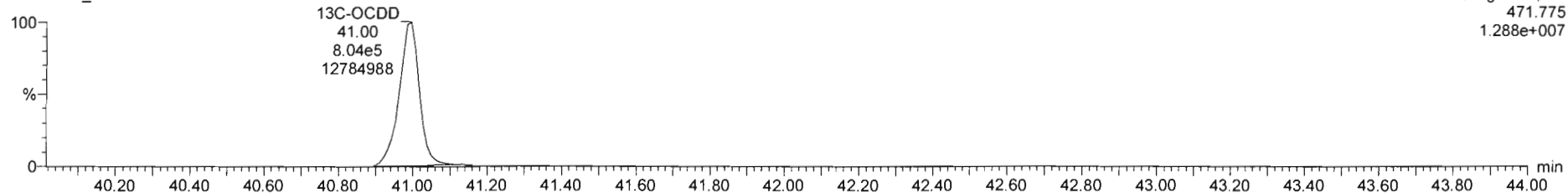


**13C-OCDD**

200121R1\_2



200121R1\_2



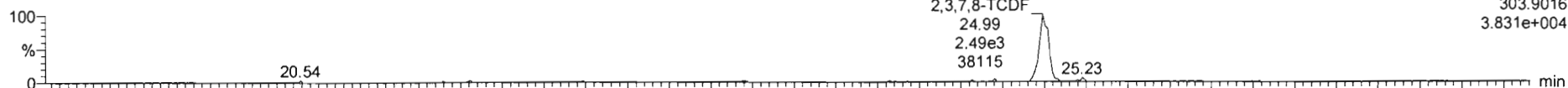
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

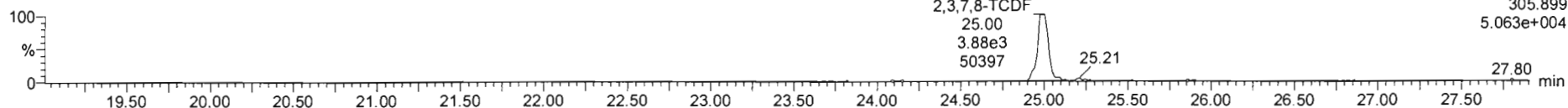
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**2,3,7,8-TCDF**

200121R1\_2

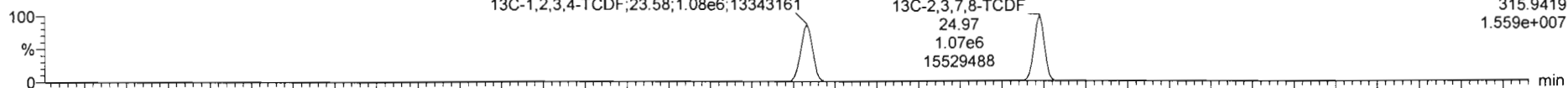


200121R1\_2

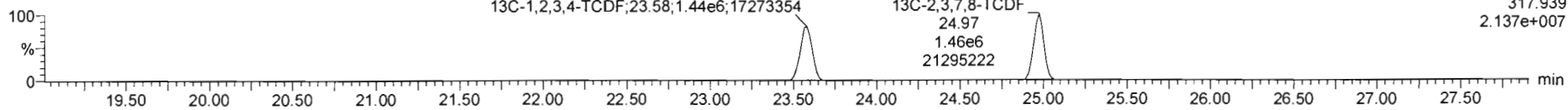


**13C-2,3,7,8-TCDF**

200121R1\_2

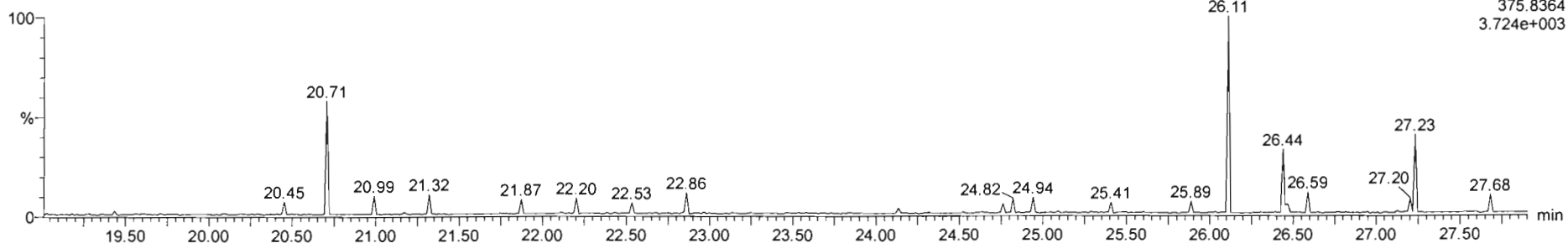


200121R1\_2

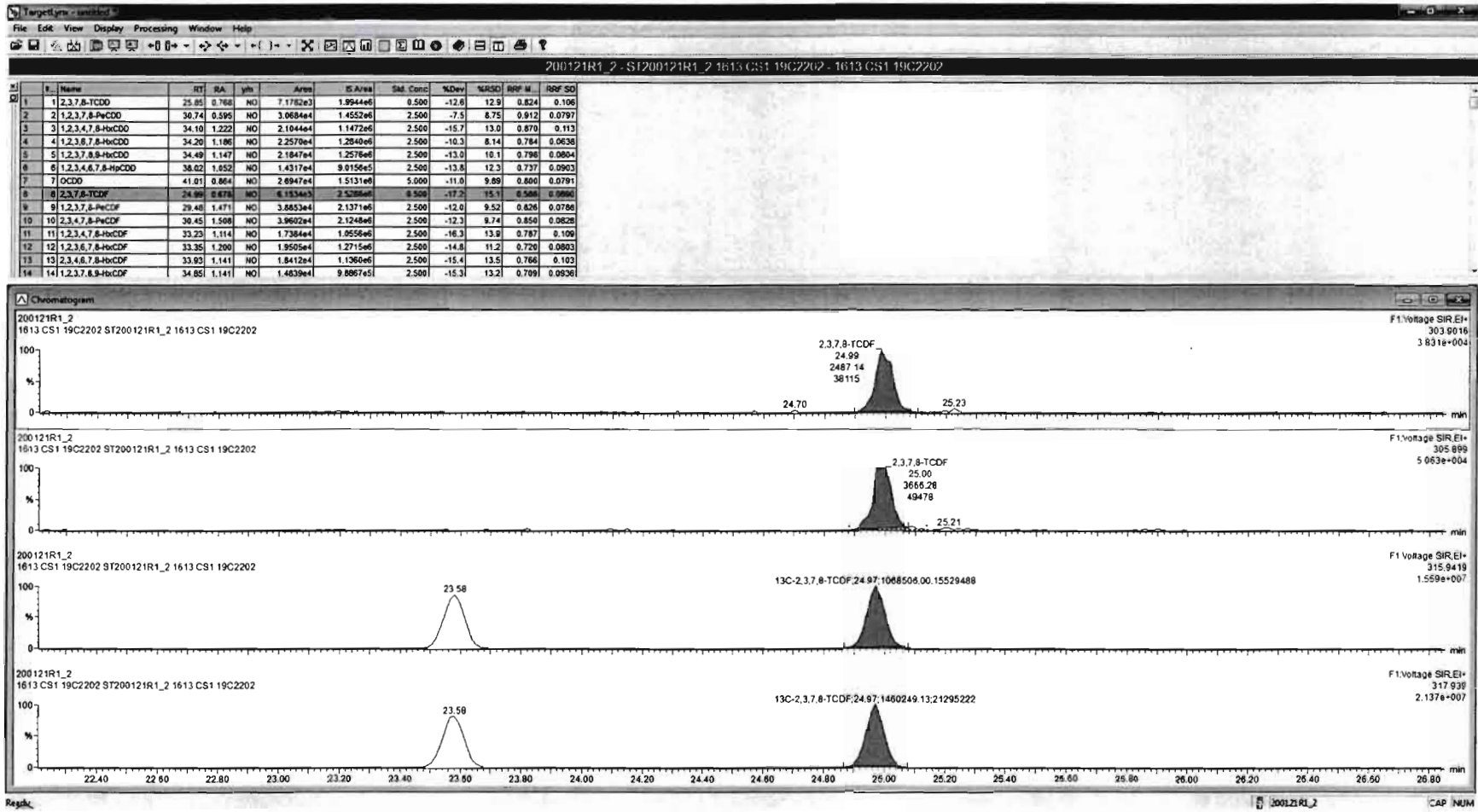


**DPE1**

200121R1\_2







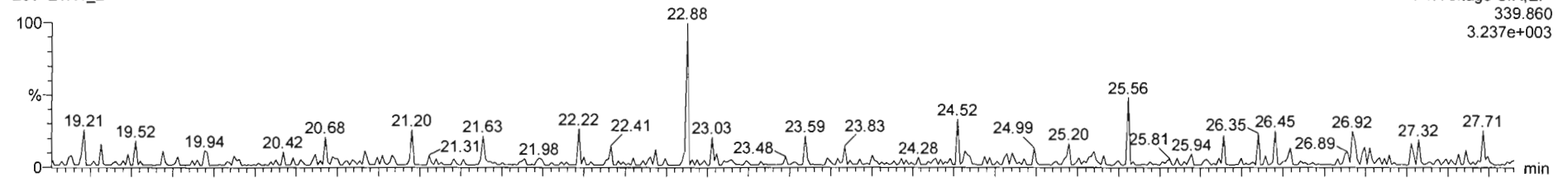
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

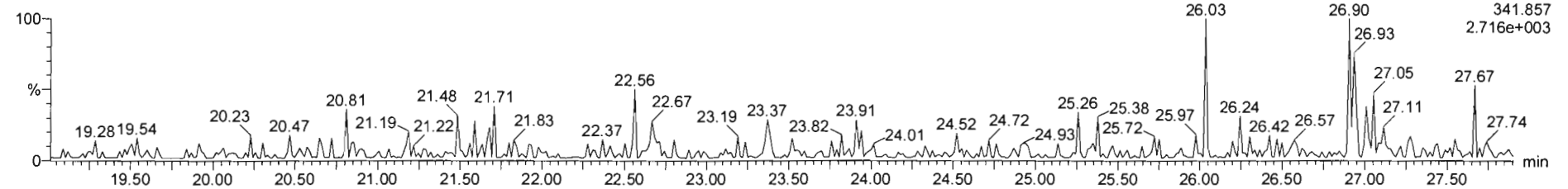
Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

1st Func. Penta-Furans

200121R1\_2

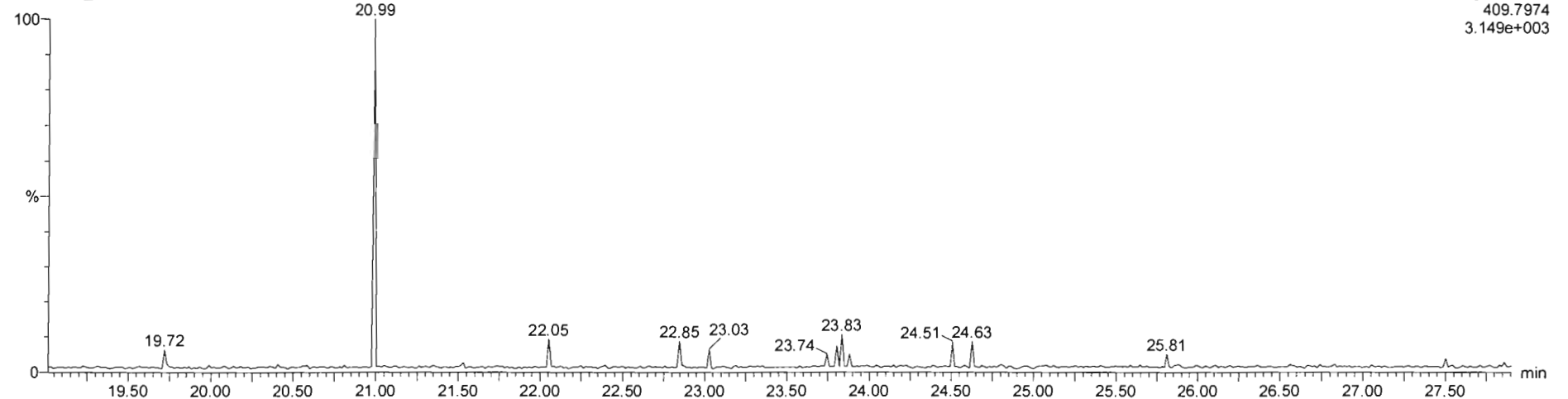


200121R1\_2



DPE6

200121R1\_2



Dataset: Untitled

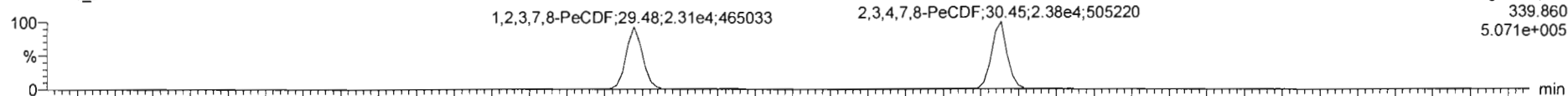
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202

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

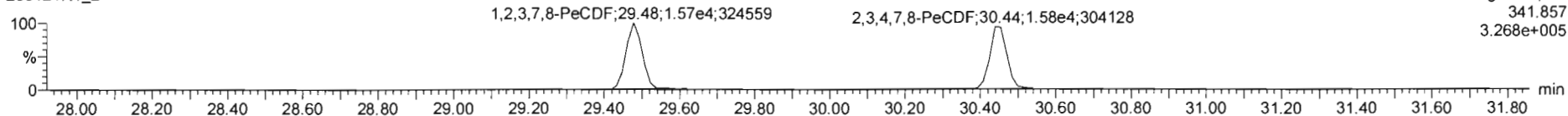
200121R1\_2

F2: Voltage SIR, EI+  
339.860  
5.071e+005



200121R1\_2

F2: Voltage SIR, EI+  
341.857  
3.268e+005



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

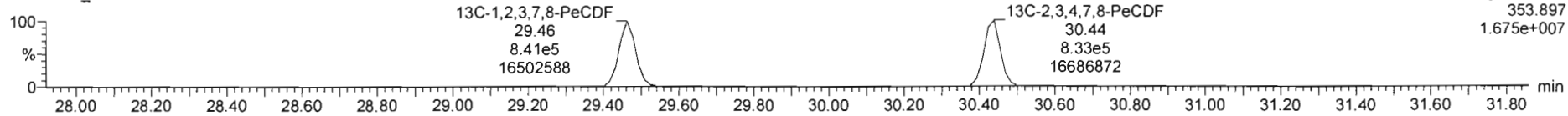
200121R1\_2

F2: Voltage SIR, EI+  
351.900  
2.647e+007



200121R1\_2

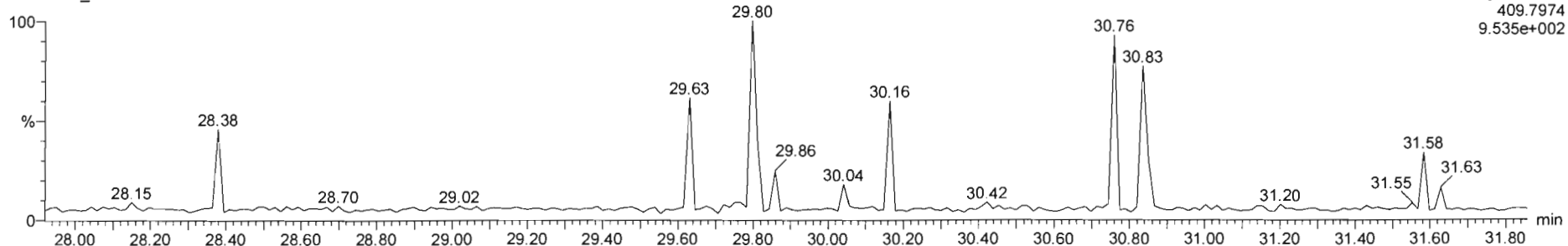
F2: Voltage SIR, EI+  
353.897  
1.675e+007



**DPE2**

200121R1\_2

F2: Voltage SIR, EI+  
409.7974  
9.535e+002



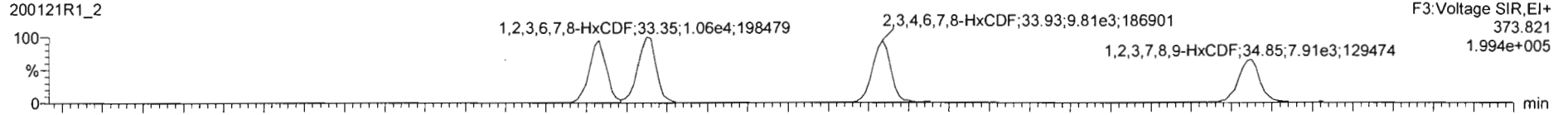
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

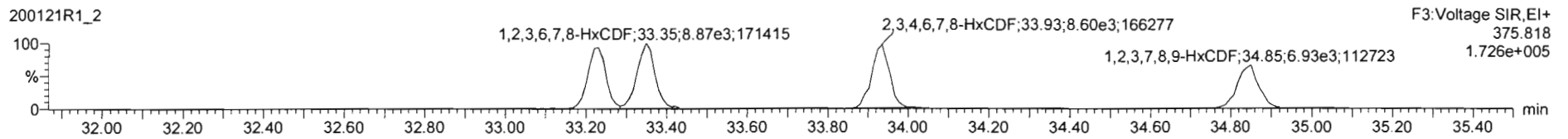
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**1,2,3,4,7,8-HxCDF**

200121R1\_2

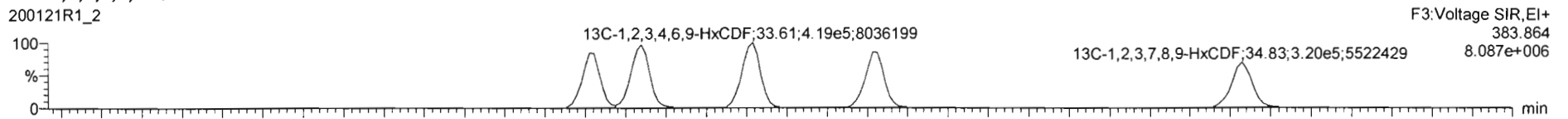


200121R1\_2

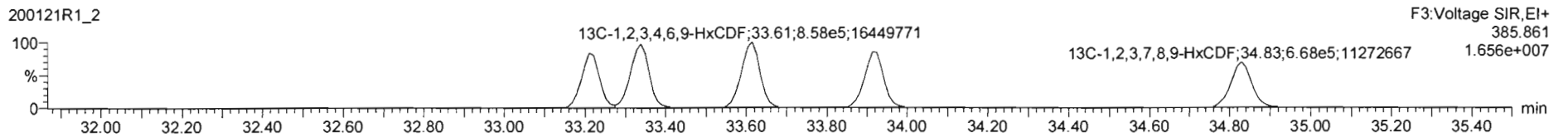


**13C-1,2,3,4,7,8-HxCDF**

200121R1\_2

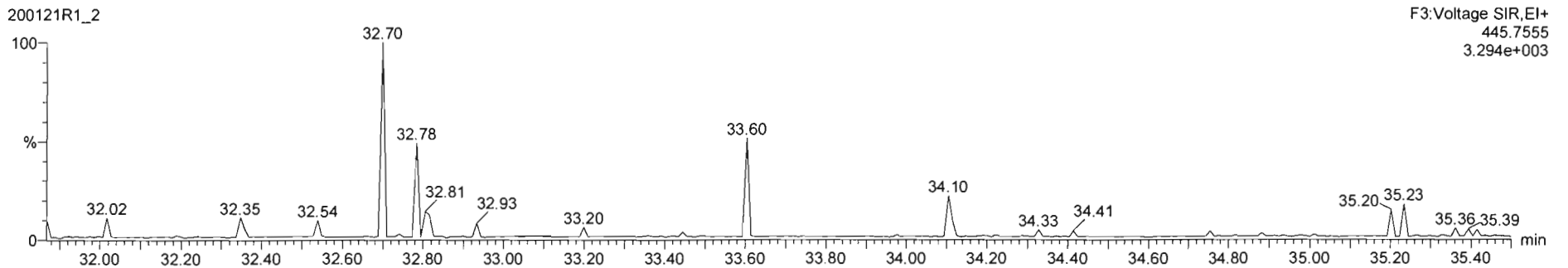


200121R1\_2



**DPE3**

200121R1\_2



Dataset: Untitled

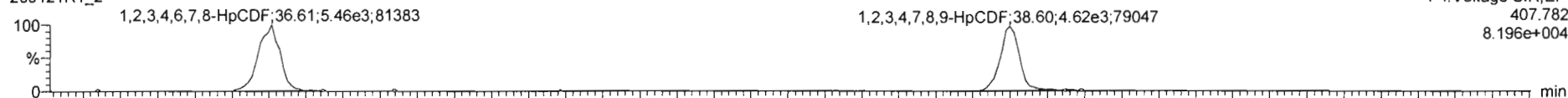
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

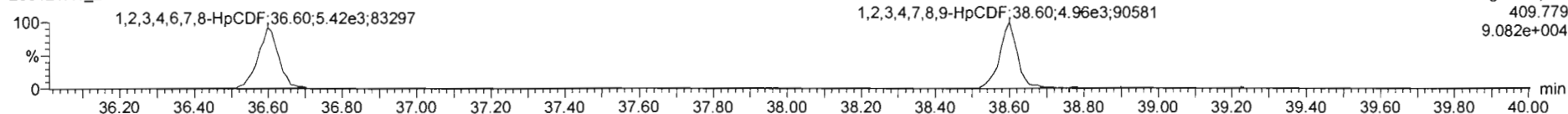
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### 1,2,3,4,6,7,8-HpCDF

200121R1\_2

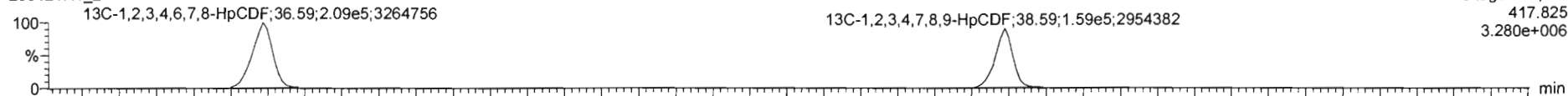


200121R1\_2

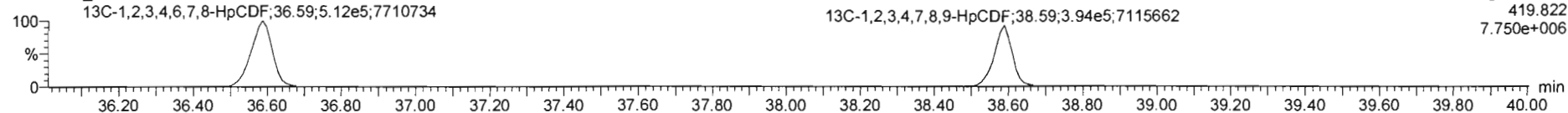


### 13C-1,2,3,4,6,7,8-HpCDF

200121R1\_2

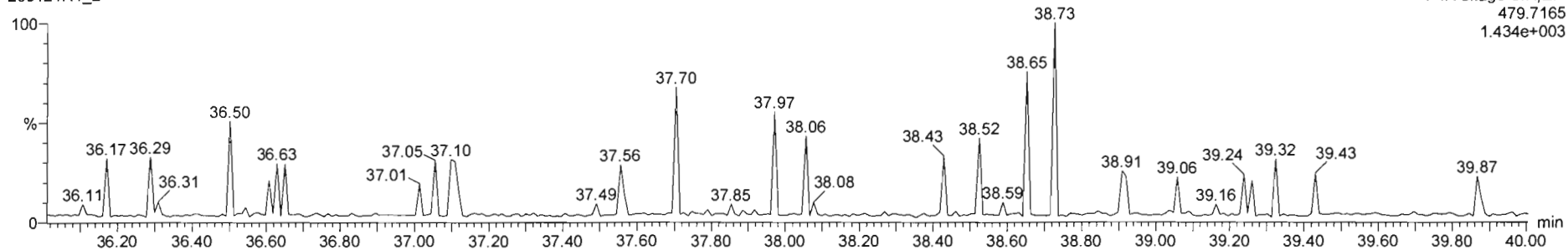


200121R1\_2



### DPE4

200121R1\_2



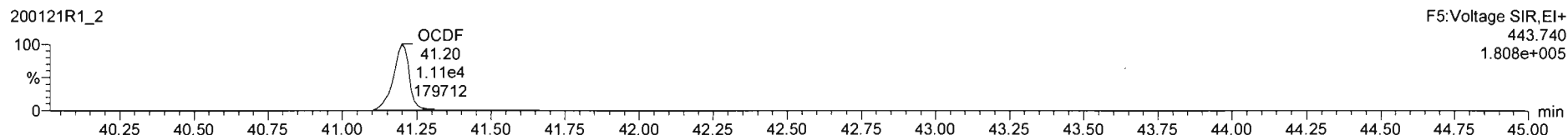
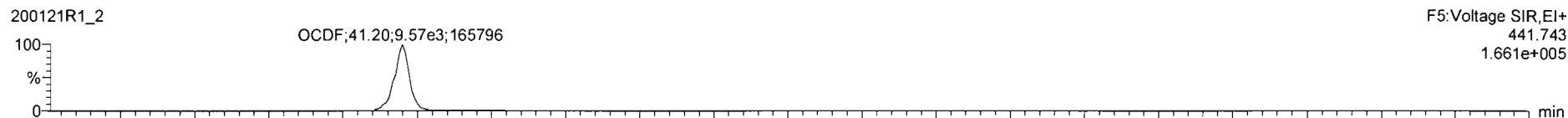
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

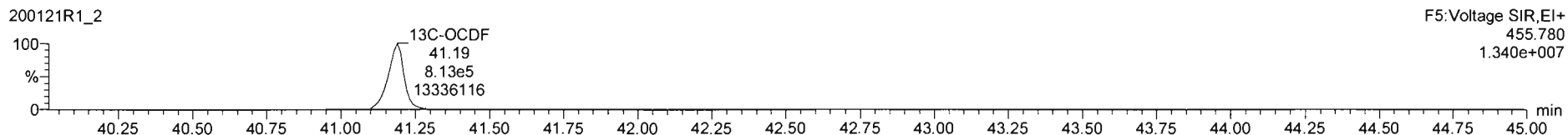
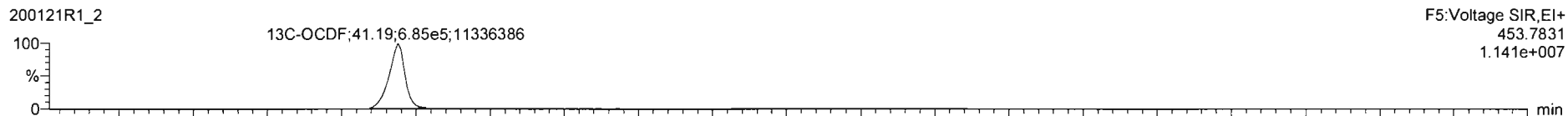
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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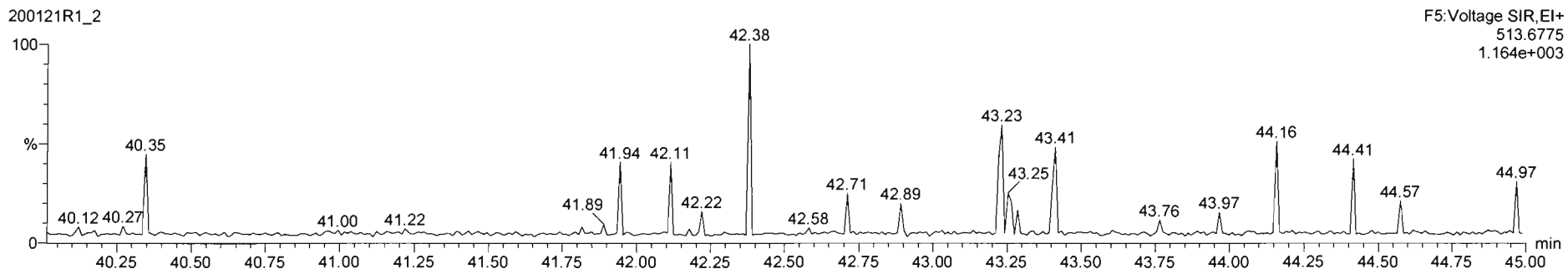
**OCDF**



**13C-OCDF**



**DPE5**

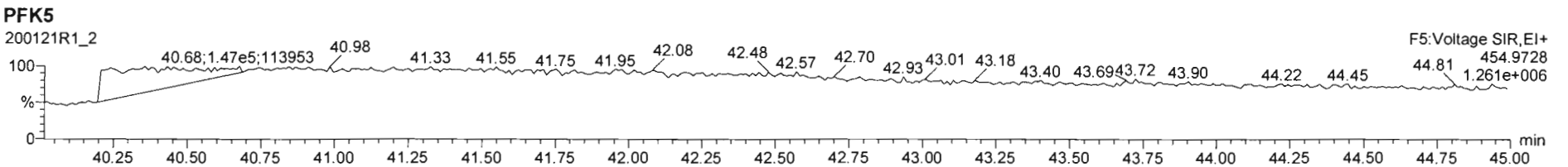
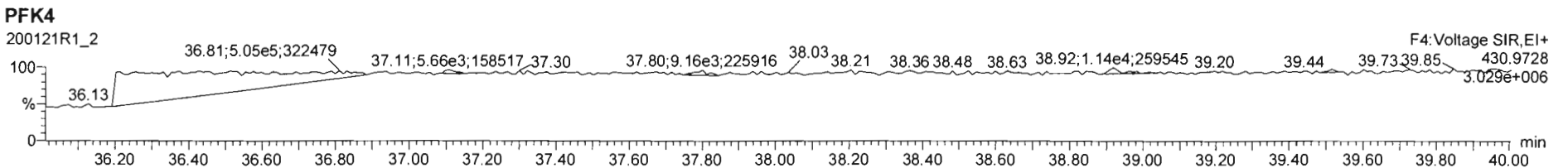
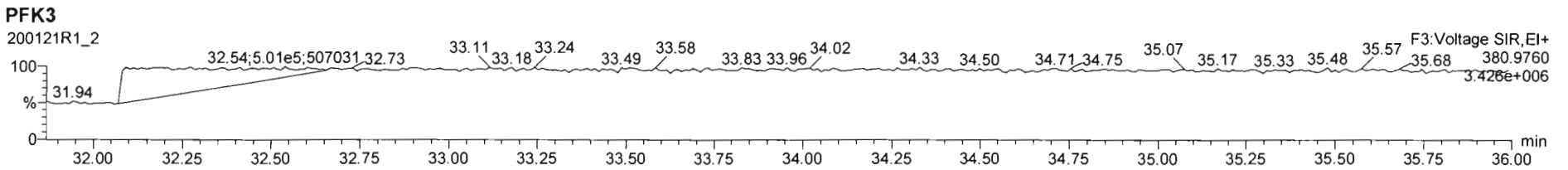
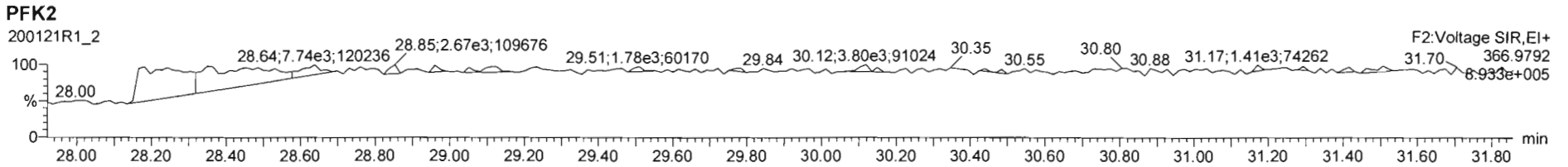
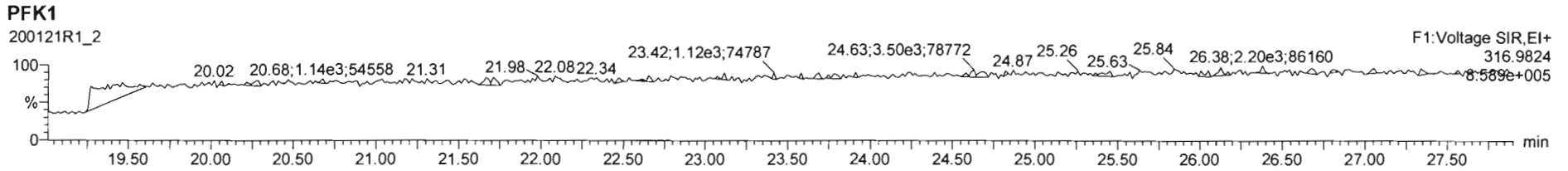


Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_2, Date: 21-Jan-2020, Time: 14:58:26, ID: ST200121R1\_2 1613 CS1 19C2202, Description: 1613 CS1 19C2202



Dataset: Untitled

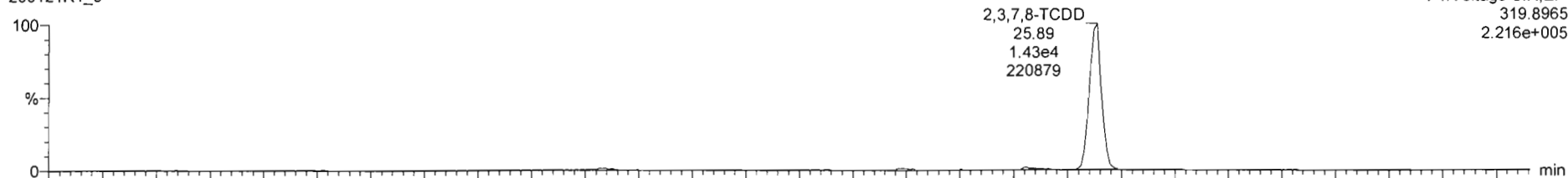
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

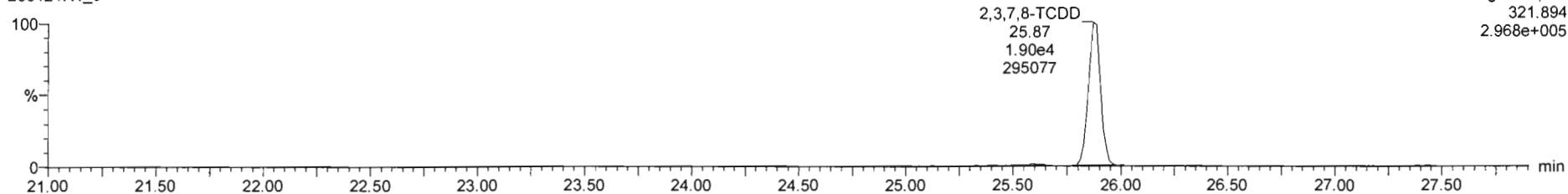
**2,3,7,8-TCDD**

200121R1\_3



F1: Voltage SIR, EI+  
319.8965  
2.216e+005

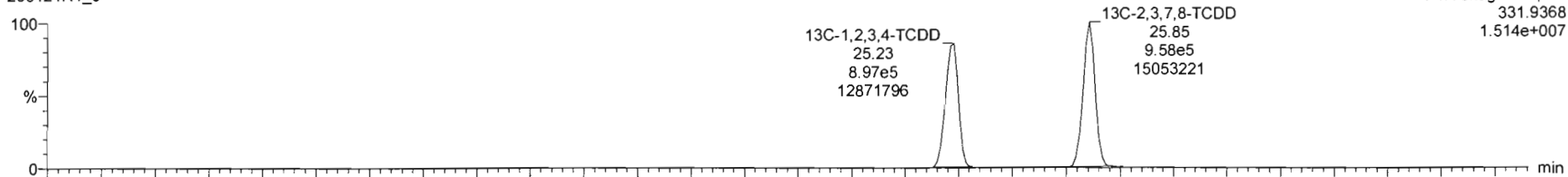
200121R1\_3



F1: Voltage SIR, EI+  
321.894  
2.968e+005

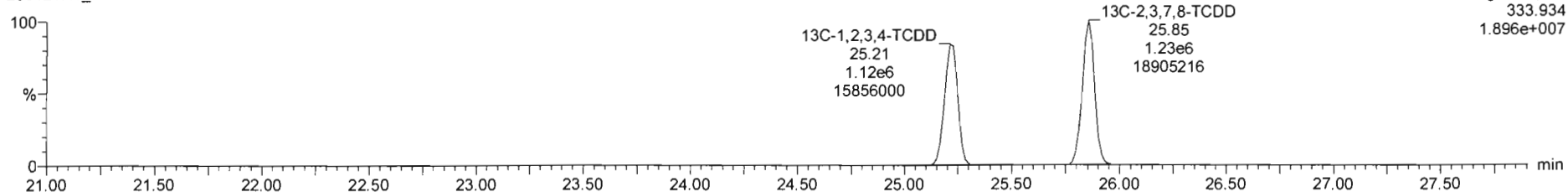
**13C-2,3,7,8-TCDD**

200121R1\_3



F1: Voltage SIR, EI+  
331.9368  
1.514e+007

200121R1\_3



F1: Voltage SIR, EI+  
333.934  
1.896e+007



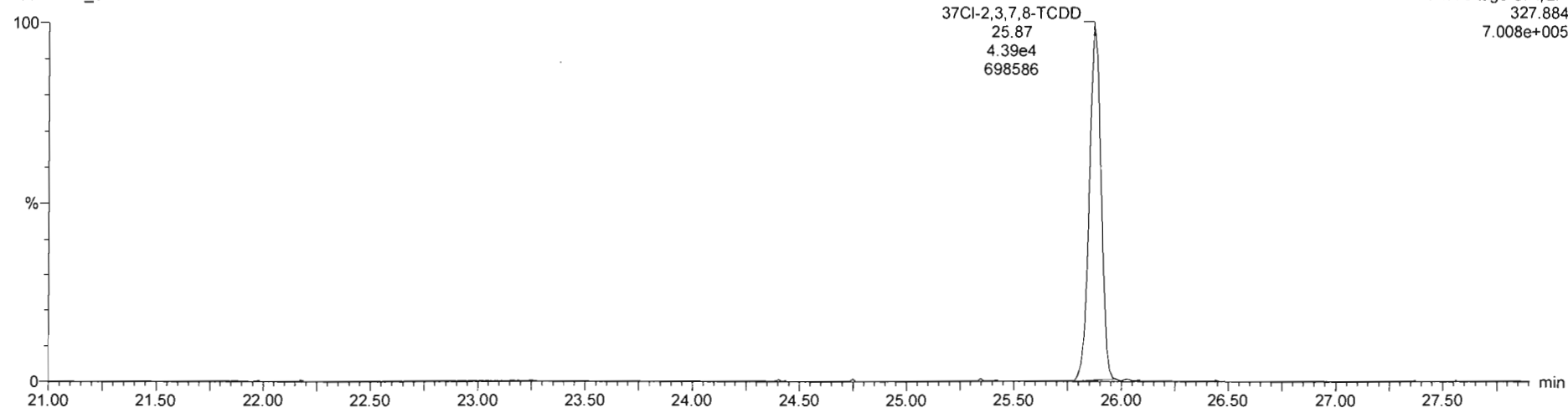
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

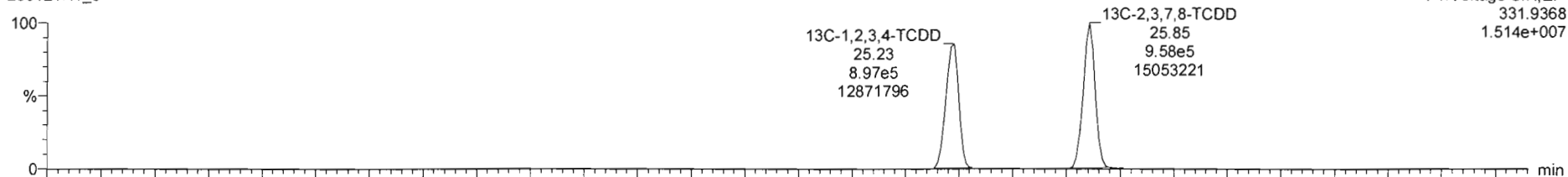
**37Cl-2,3,7,8-TCDD**

200121R1\_3

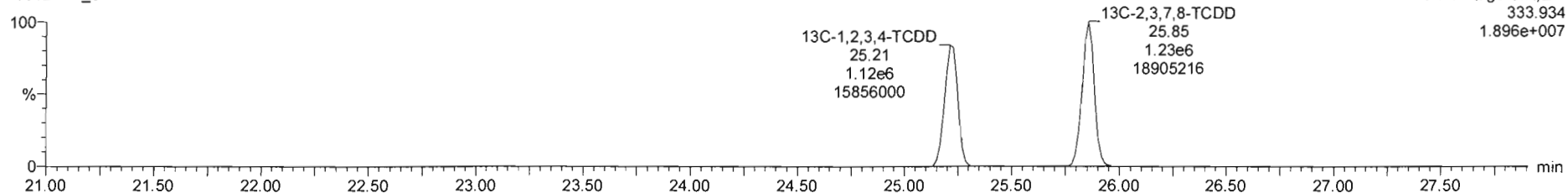


**13C-1,2,3,4-TCDD**

200121R1\_3



200121R1\_3



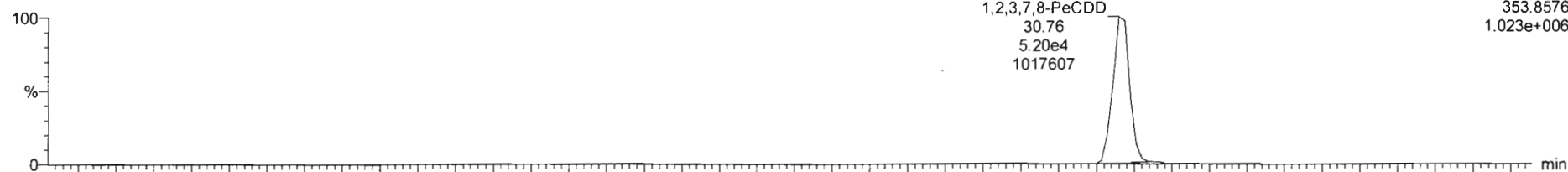
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

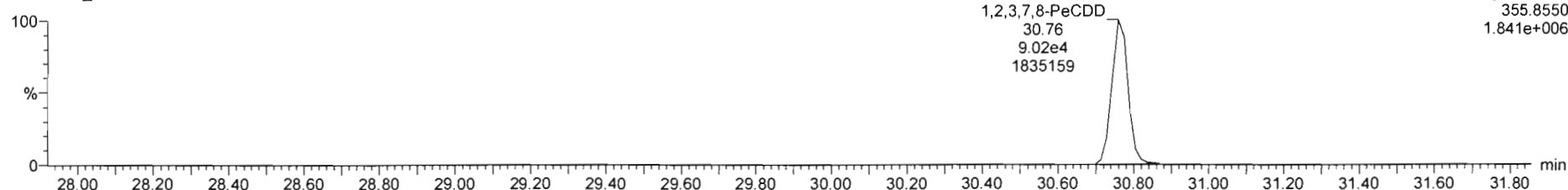
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

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

200121R1\_3



200121R1\_3

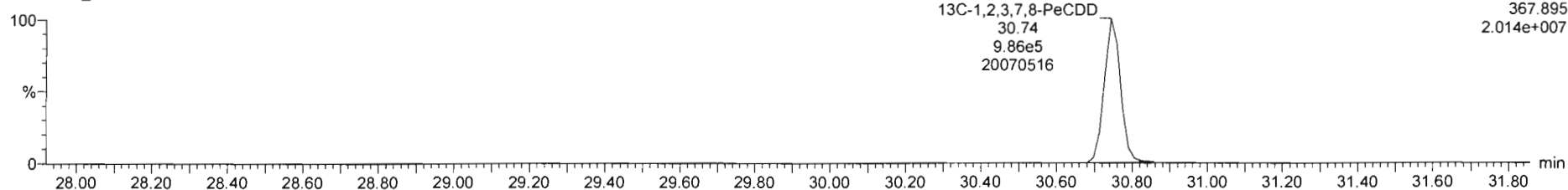


**13C-1,2,3,7,8-PeCDD**

200121R1\_3



200121R1\_3



Dataset: Untitled

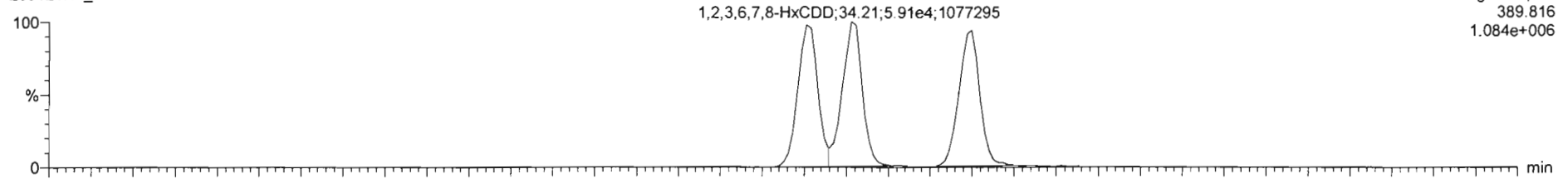
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

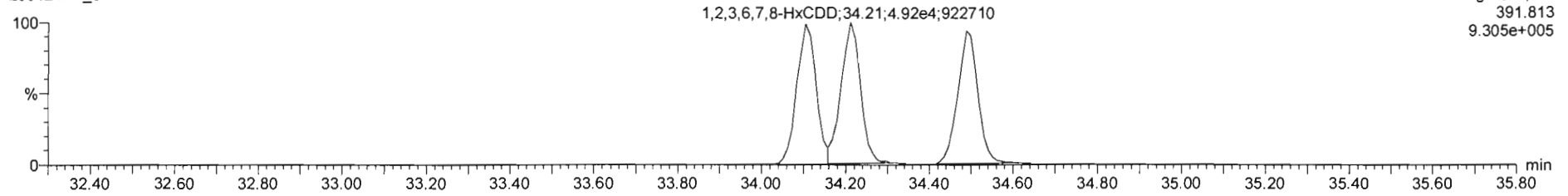
**1,2,3,4,7,8-HxCDD**

200121R1\_3



F3: Voltage SIR, EI+  
389.816  
1.084e+006

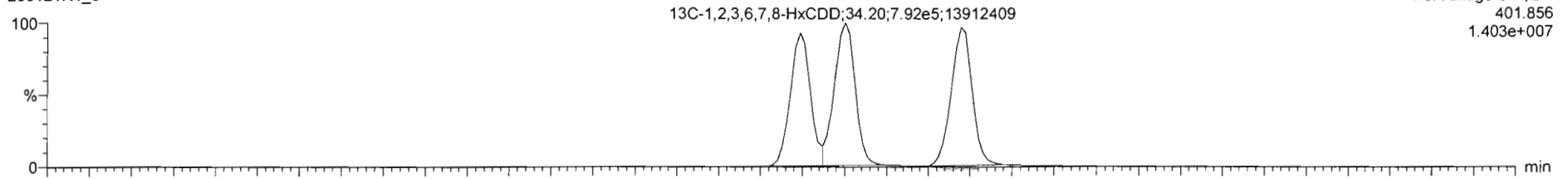
200121R1\_3



F3: Voltage SIR, EI+  
391.813  
9.305e+005

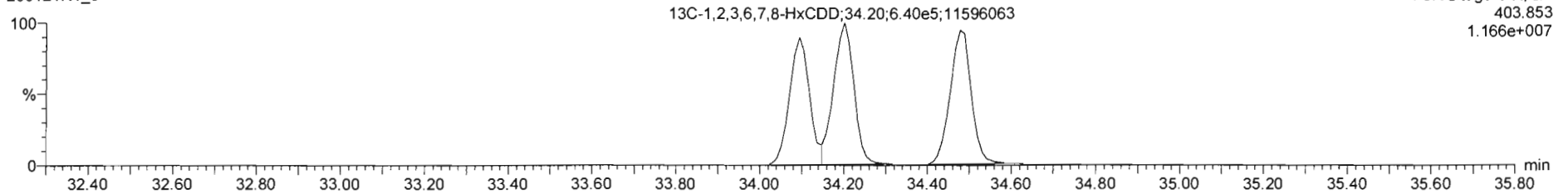
**13C-1,2,3,4,7,8-HxCDD**

200121R1\_3



F3: Voltage SIR, EI+  
401.856  
1.403e+007

200121R1\_3



F3: Voltage SIR, EI+  
403.853  
1.166e+007

Dataset: Untitled

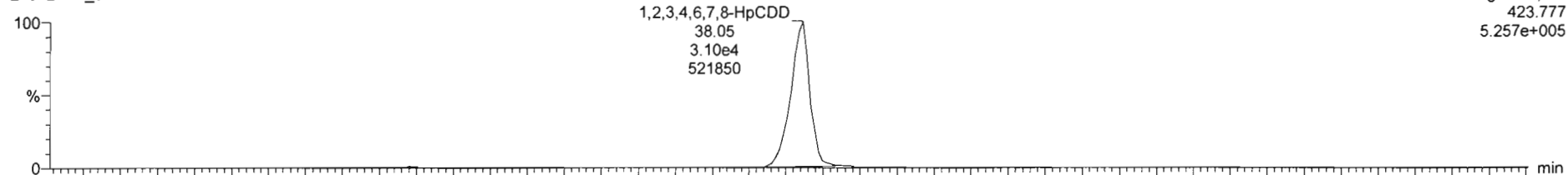
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

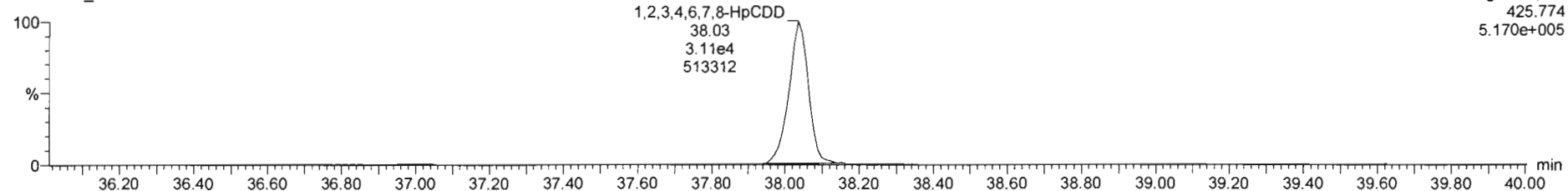
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

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

200121R1\_3

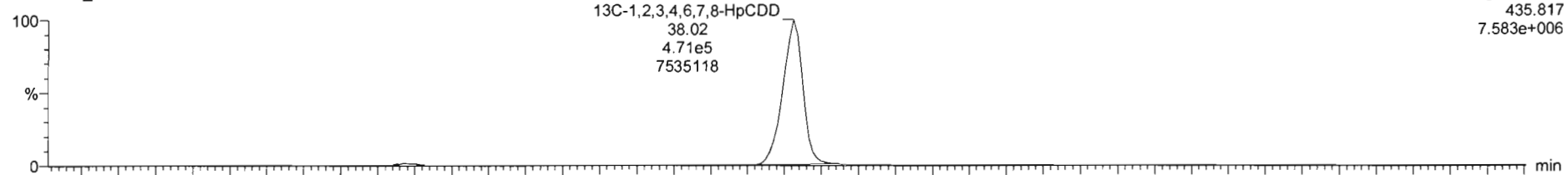


200121R1\_3

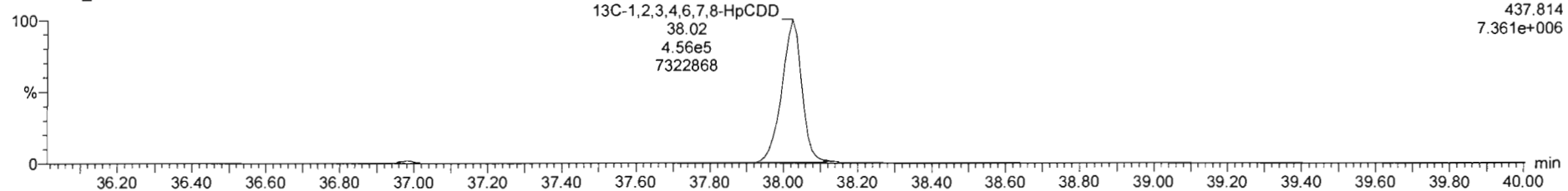


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_3



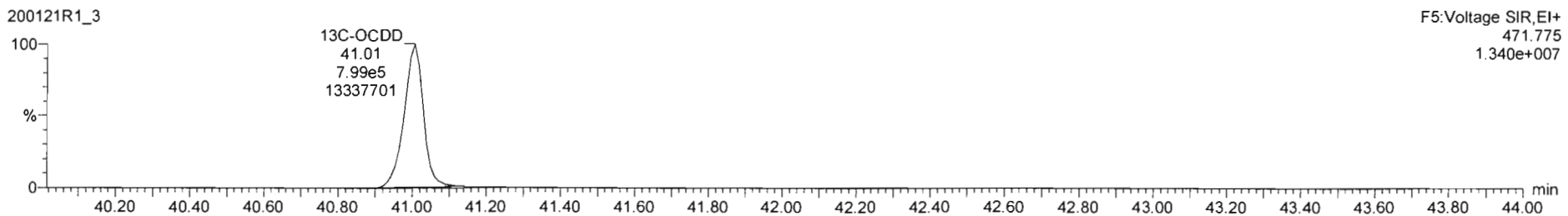
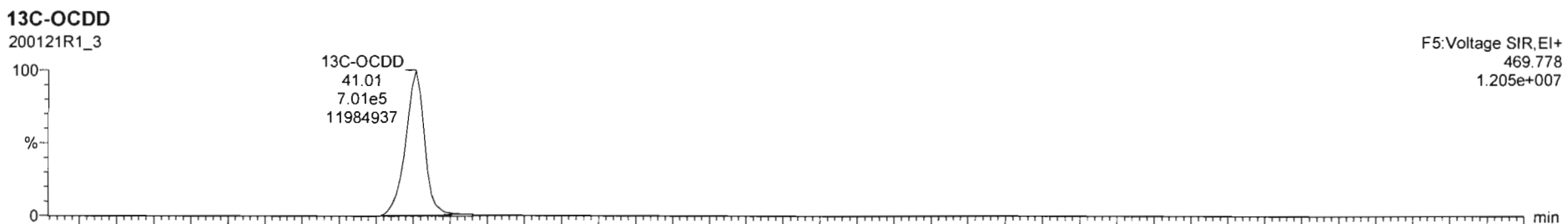
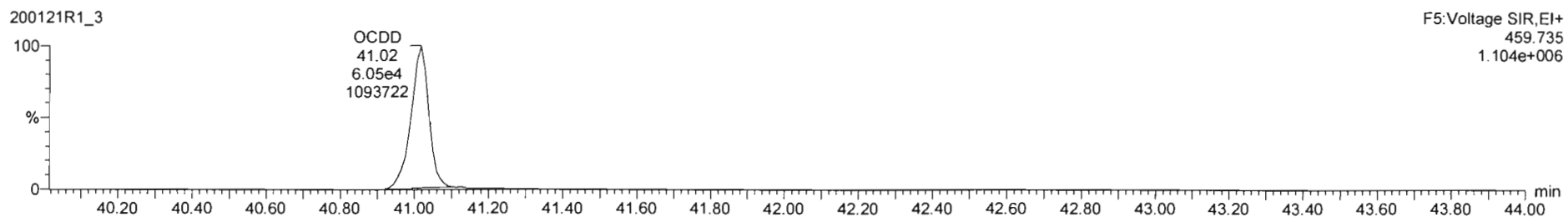
200121R1\_3



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203



Dataset: Untitled

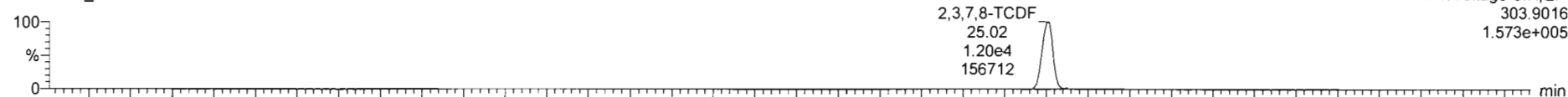
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

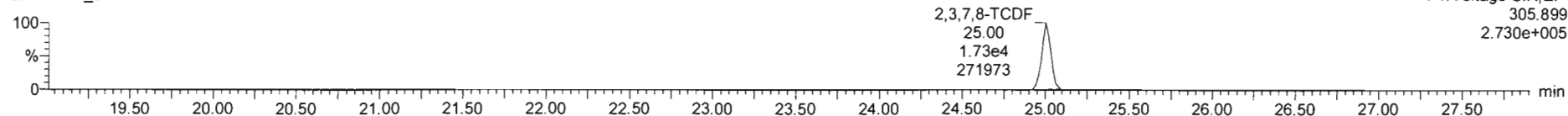
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

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

200121R1\_3

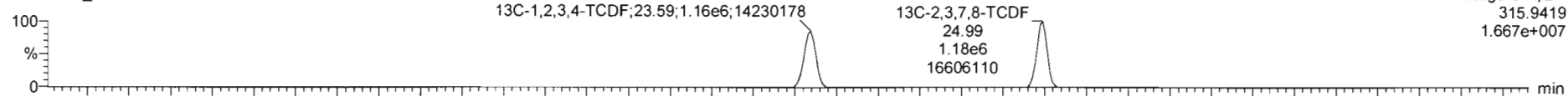


200121R1\_3

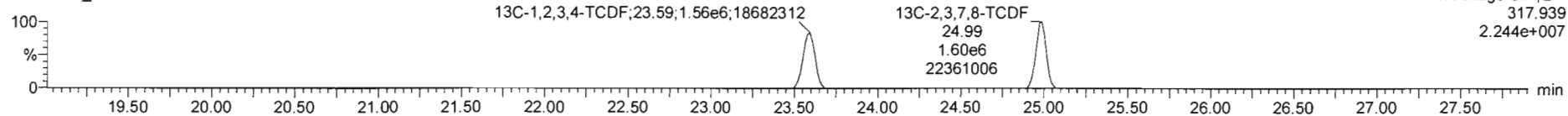


**13C-2,3,7,8-TCDF**

200121R1\_3

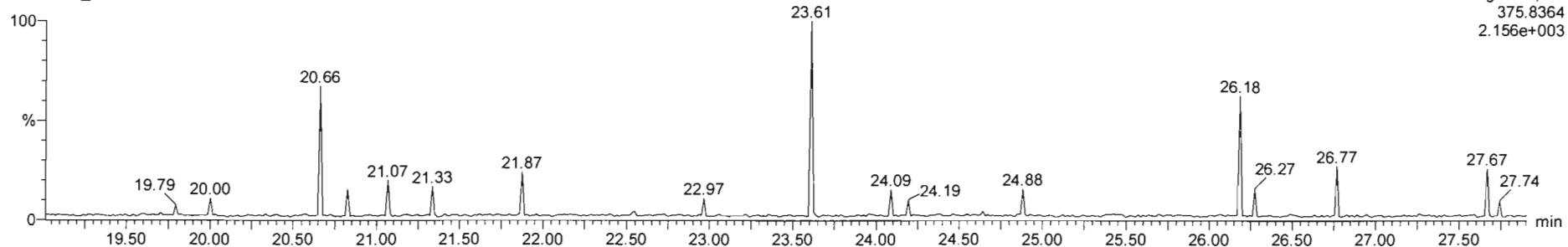


200121R1\_3



**DPE1**

200121R1\_3



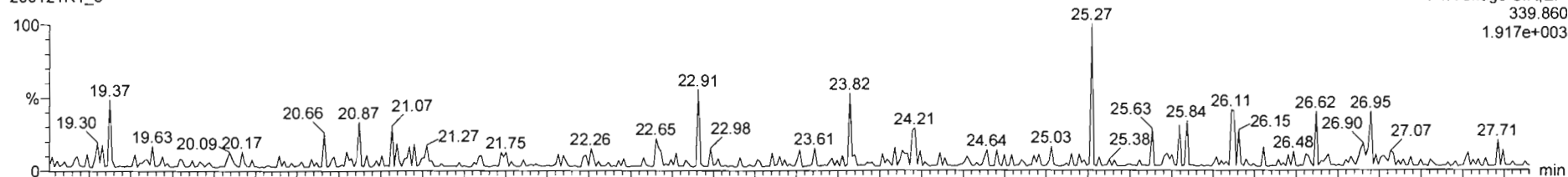
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

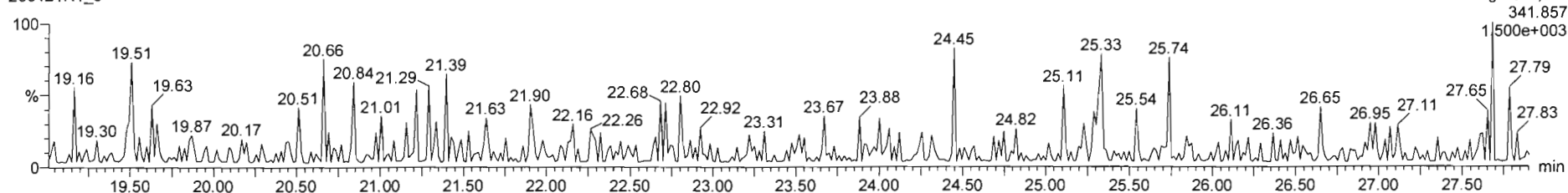
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

1st Func. Penta-Furans

200121R1\_3

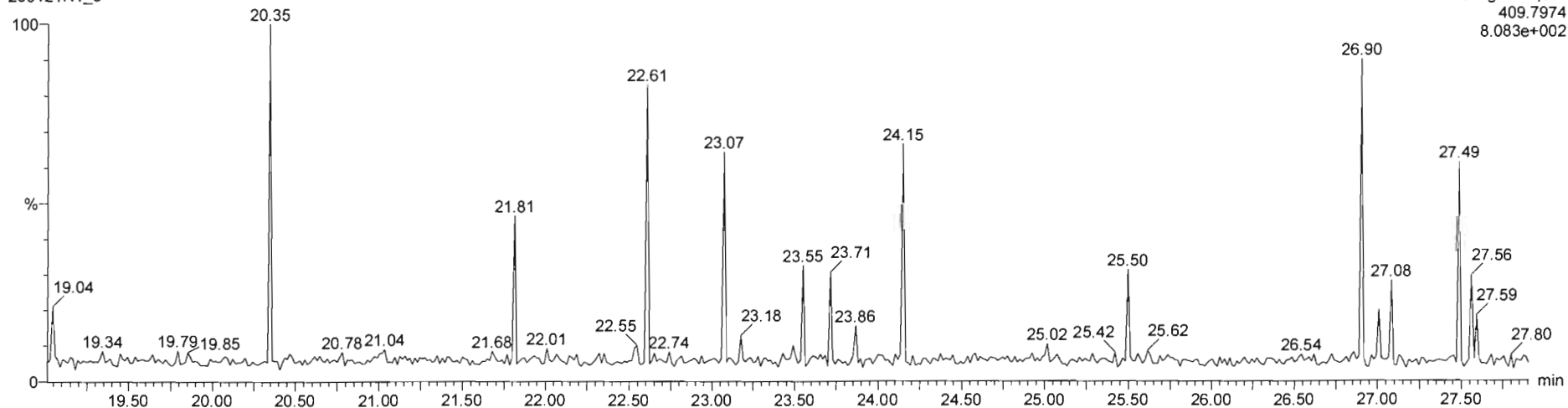


200121R1\_3



DPE6

200121R1\_3



Dataset: Untitled

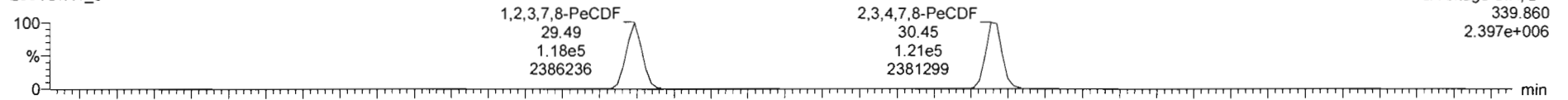
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

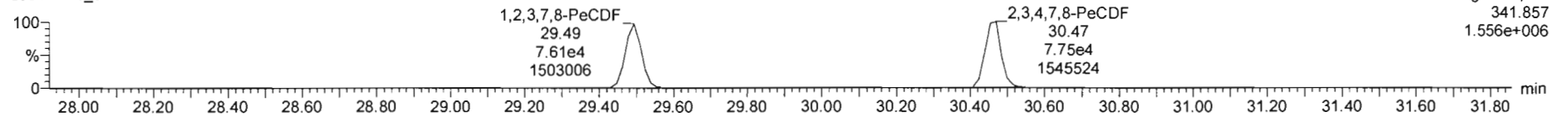
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

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

200121R1\_3

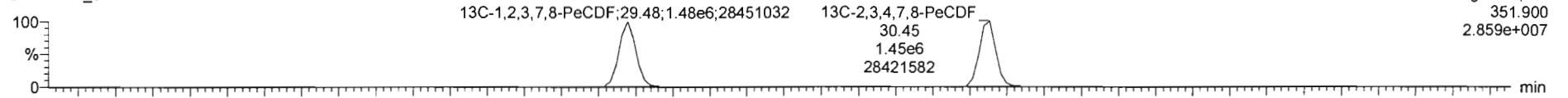


200121R1\_3

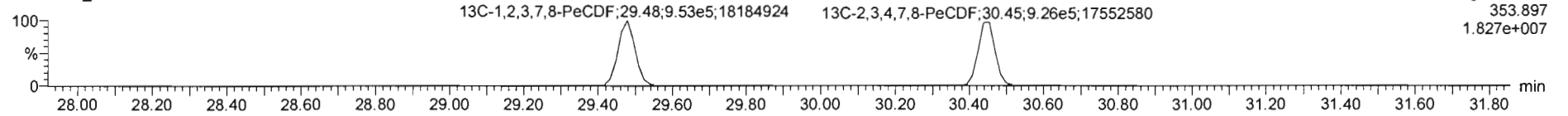


**13C-1,2,3,7,8-PeCDF**

200121R1\_3

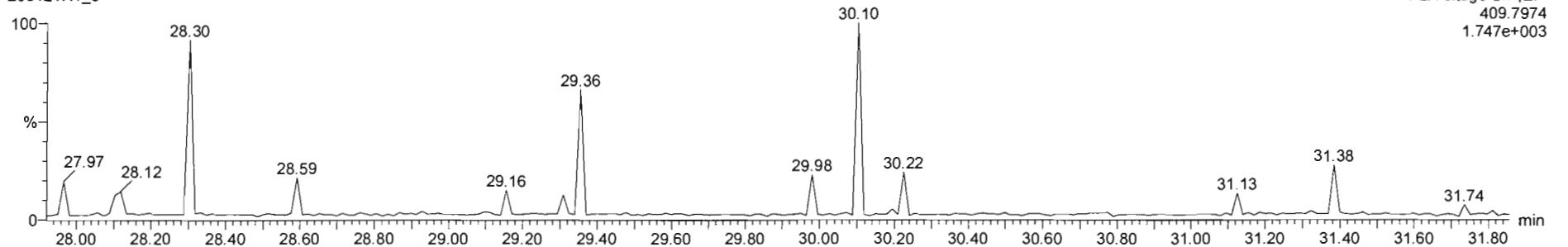


200121R1\_3



**DPE2**

200121R1\_3





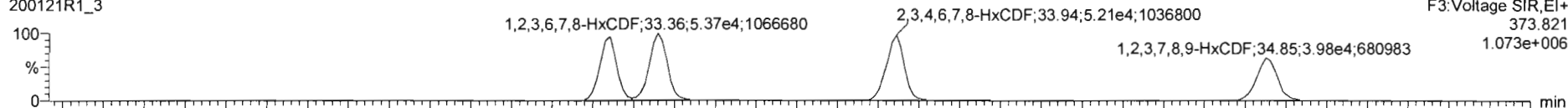
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

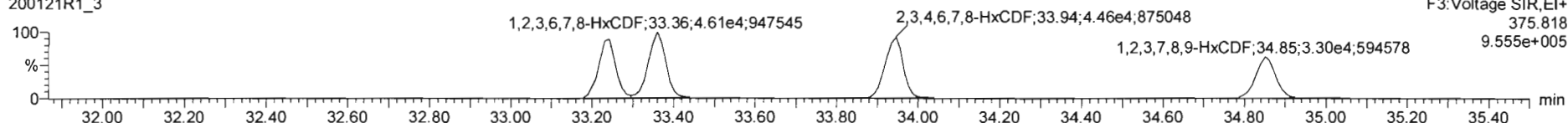
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

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

200121R1\_3

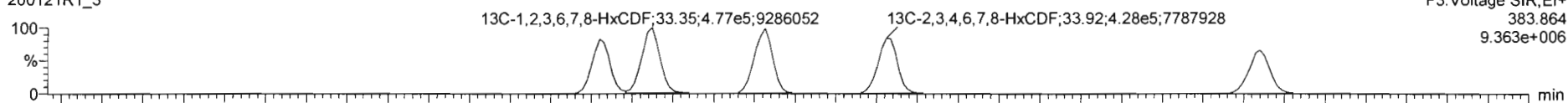


200121R1\_3

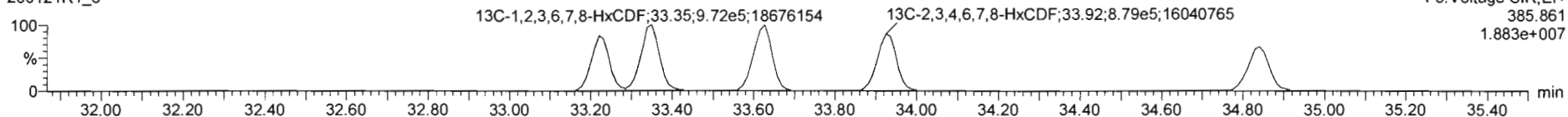


**13C-1,2,3,4,7,8-HxCDF**

200121R1\_3

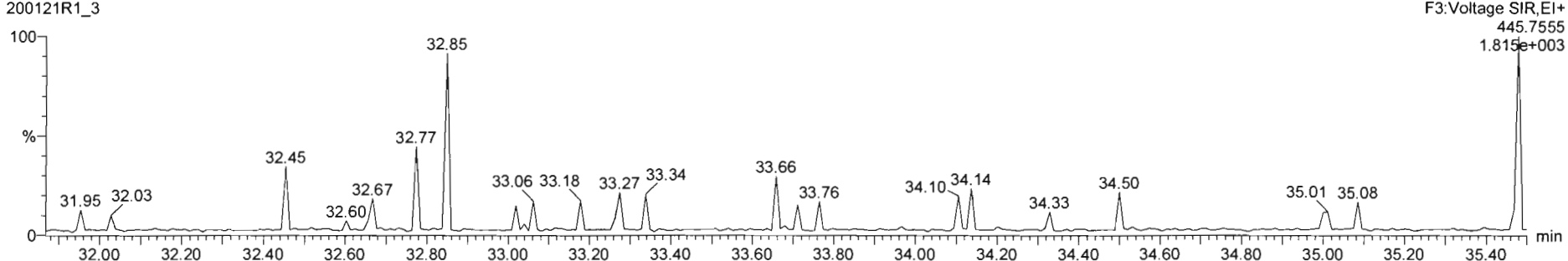


200121R1\_3



**DPE3**

200121R1\_3



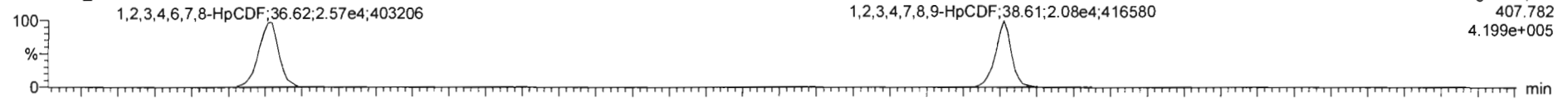
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

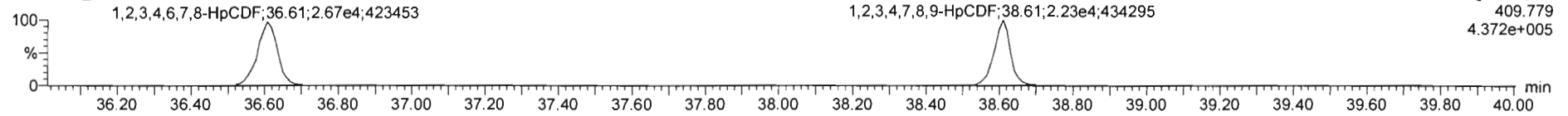
Name: 200121R1\_3, Date: 21-Jan-2020, Time: 15:45:27, ID: ST200121R1\_3 1613 CS2 19C2203, Description: 1613 CS2 19C2203

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

200121R1\_3

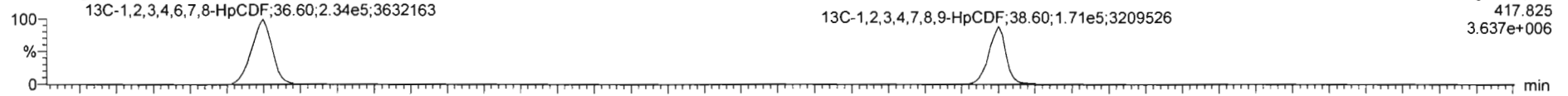


200121R1\_3

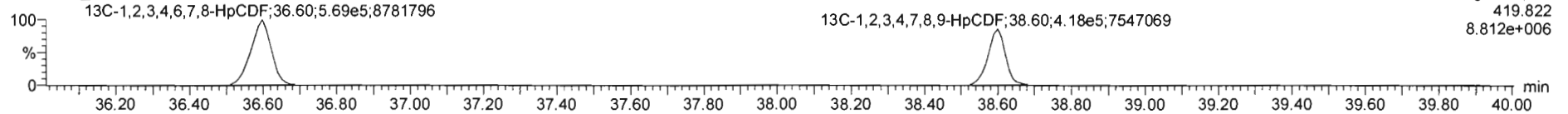


**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_3

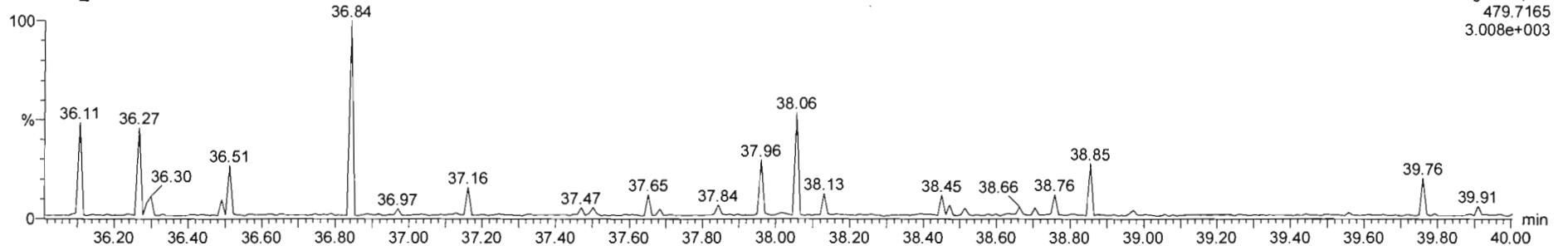


200121R1\_3



**DPE4**

200121R1\_3



Dataset: Untitled

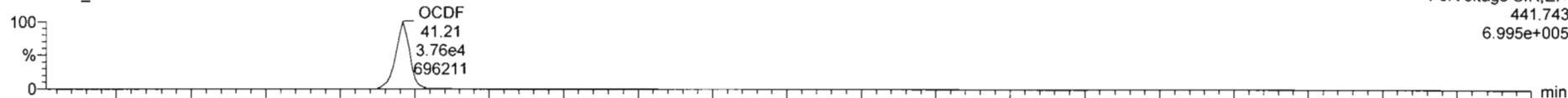
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

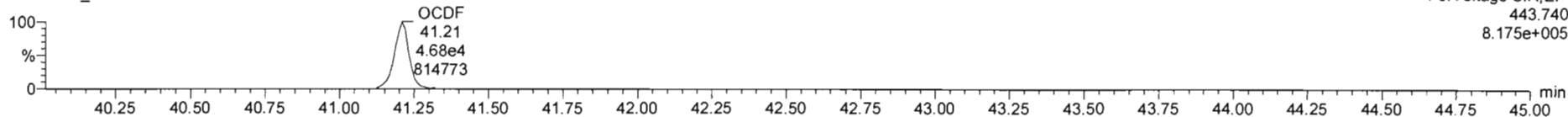
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**OCDF**

200121R1\_3

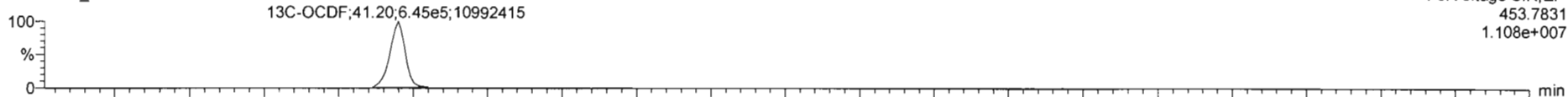


200121R1\_3

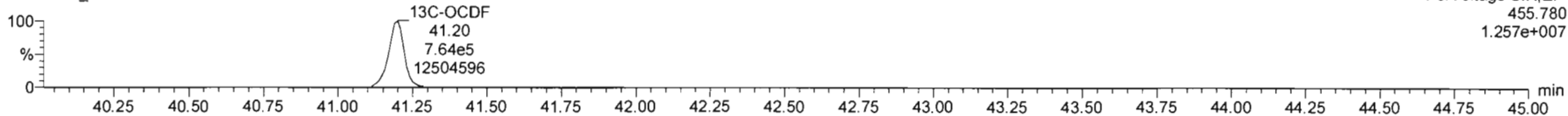


**13C-OCDF**

200121R1\_3

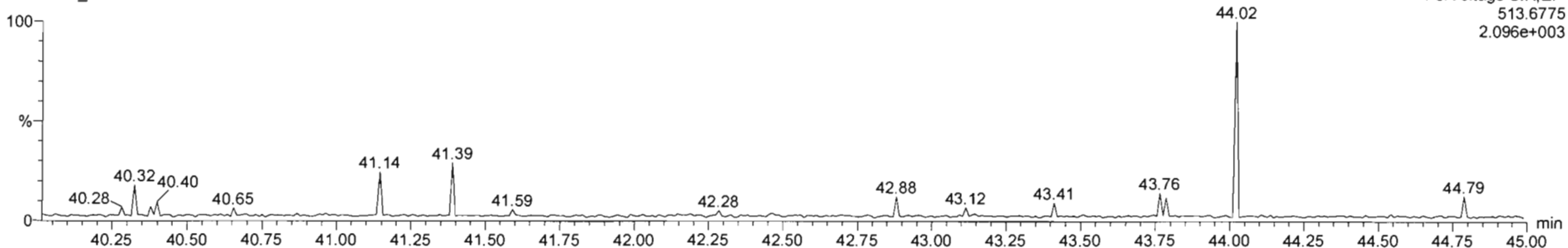


200121R1\_3



**DPE5**

200121R1\_3





Dataset: Untitled

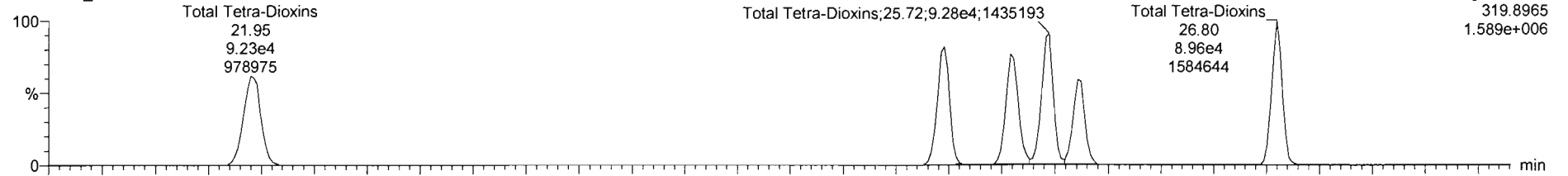
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

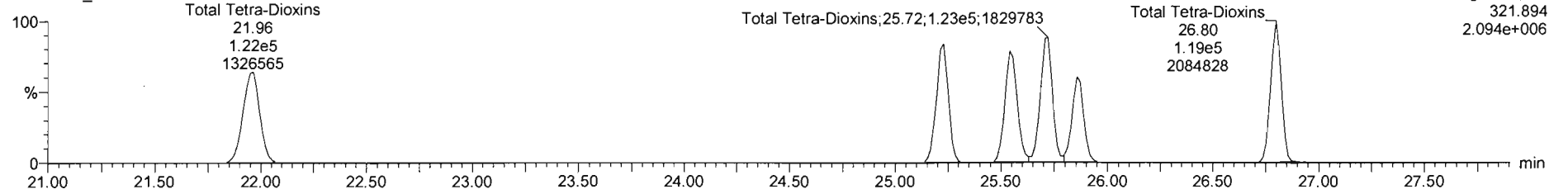
Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

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

200121R1\_4

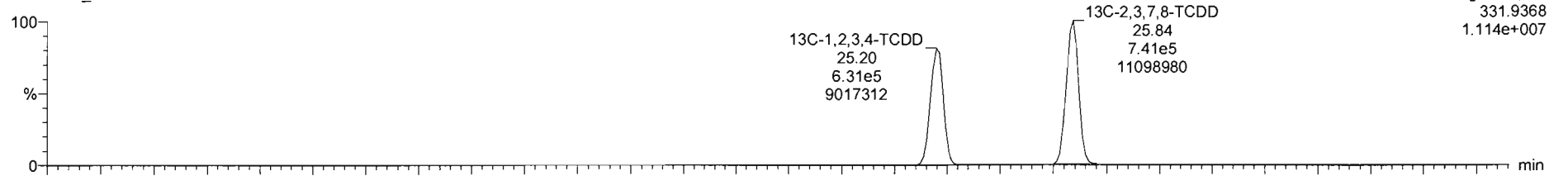


200121R1\_4

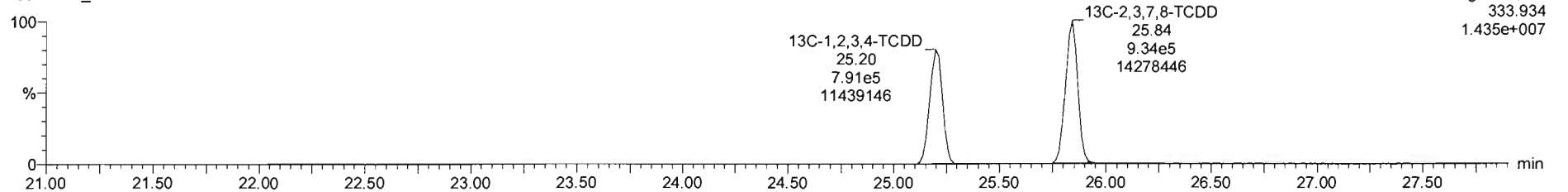


**13C-2,3,7,8-TCDD**

200121R1\_4



200121R1\_4



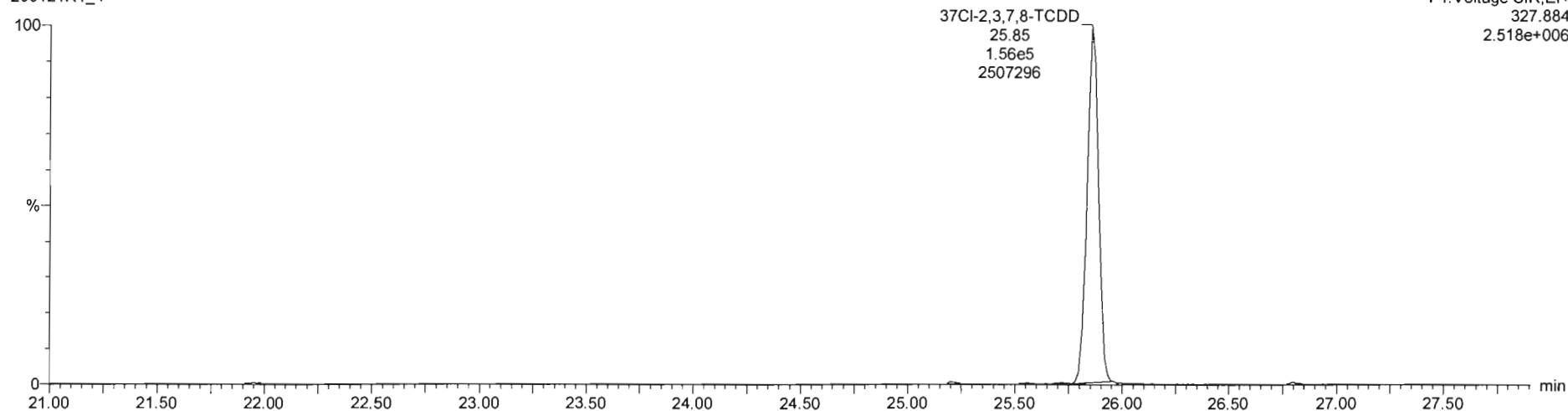
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

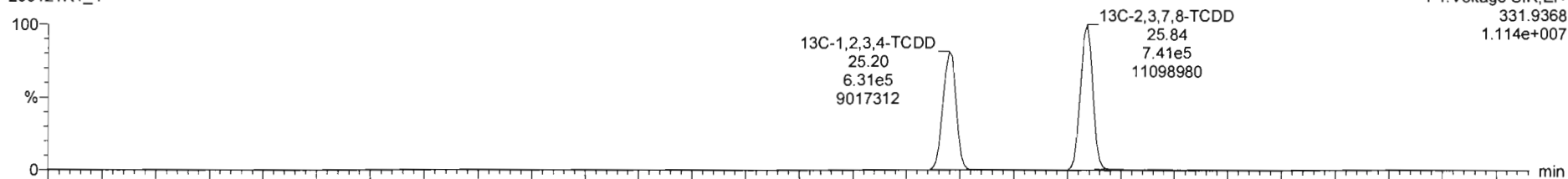
**37Cl-2,3,7,8-TCDD**

200121R1\_4

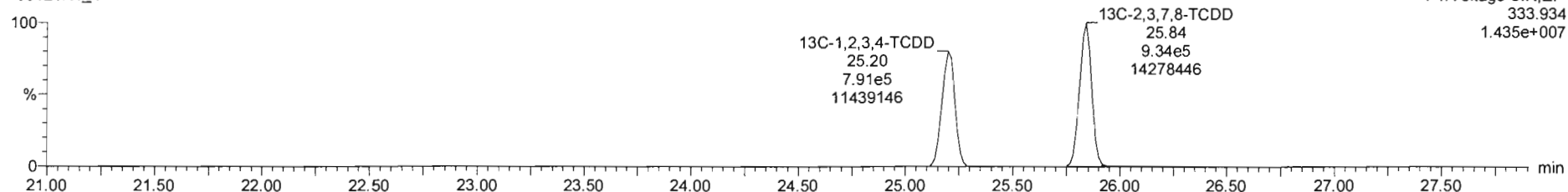


**13C-1,2,3,4-TCDD**

200121R1\_4



200121R1\_4



Dataset: Untitled

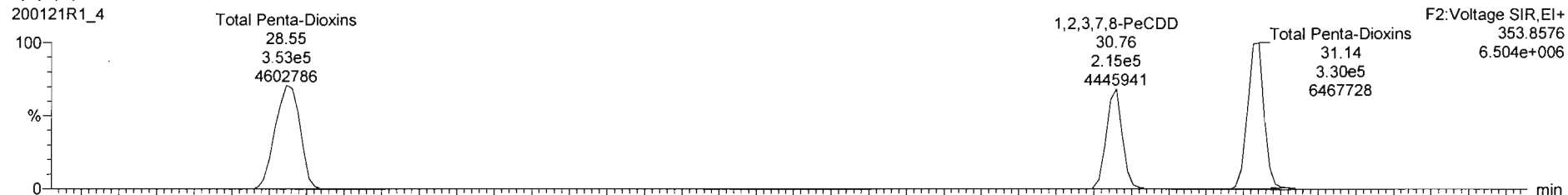
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

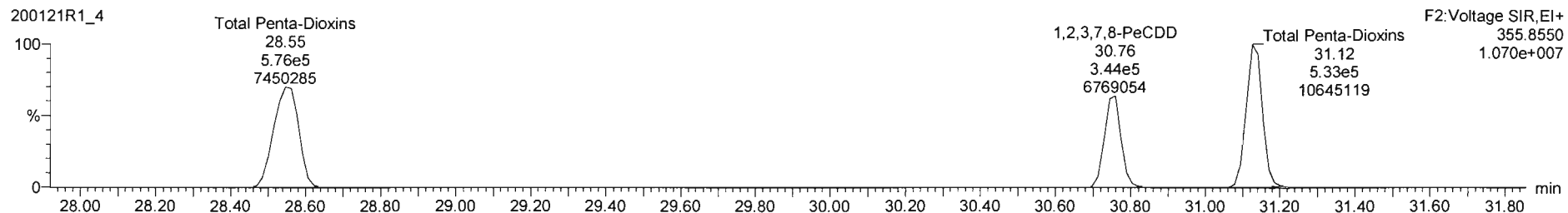
Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 1911604, Description: 1613 CS3 1911604

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

200121R1\_4



200121R1\_4

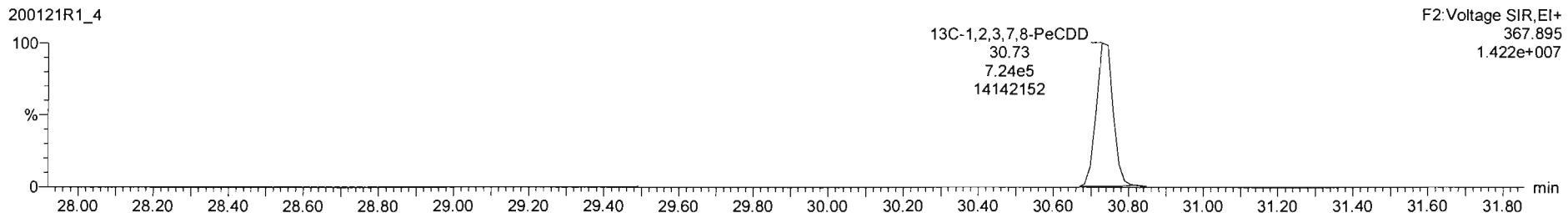


**13C-1,2,3,7,8-PeCDD**

200121R1\_4



200121R1\_4



Dataset: Untitled

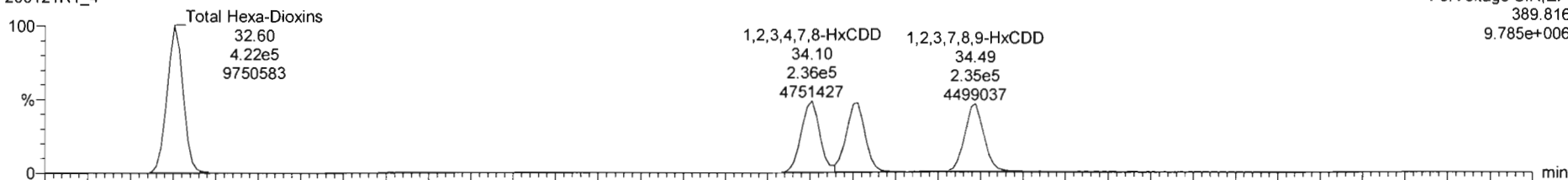
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_4, Date: 21-Jan-2020, Time: 16:32:26, ID: ST200121R1\_4 1613 CS3 19I1604, Description: 1613 CS3 19I1604

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

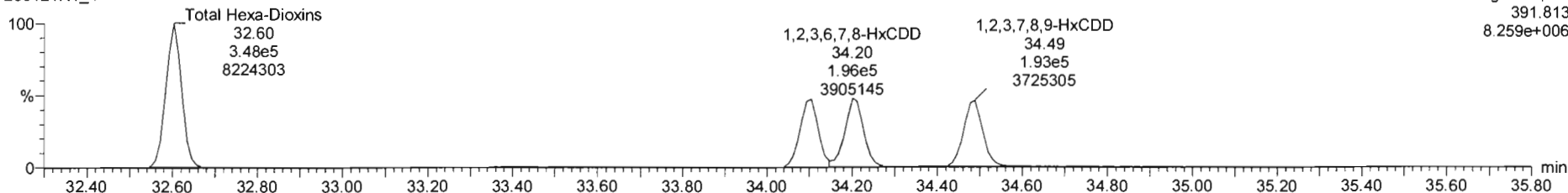
200121R1\_4

F3: Voltage SIR, EI+  
389.816  
9.785e+006



200121R1\_4

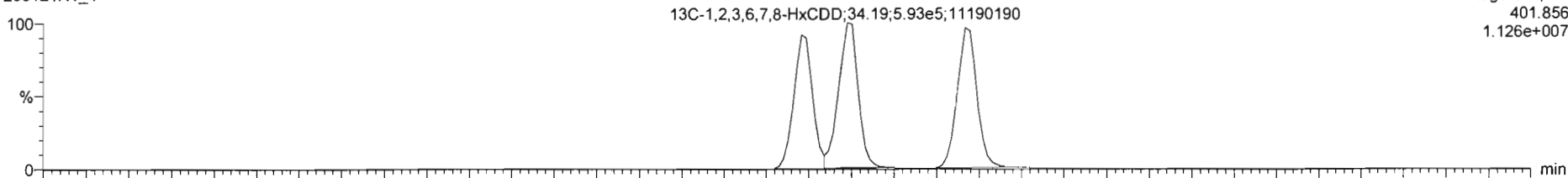
F3: Voltage SIR, EI+  
391.813  
8.259e+006



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

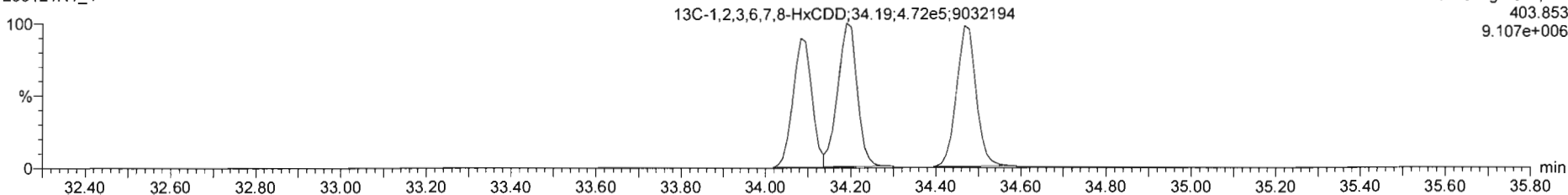
200121R1\_4

F3: Voltage SIR, EI+  
401.856  
1.126e+007



200121R1\_4

F3: Voltage SIR, EI+  
403.853  
9.107e+006





Dataset: Untitled

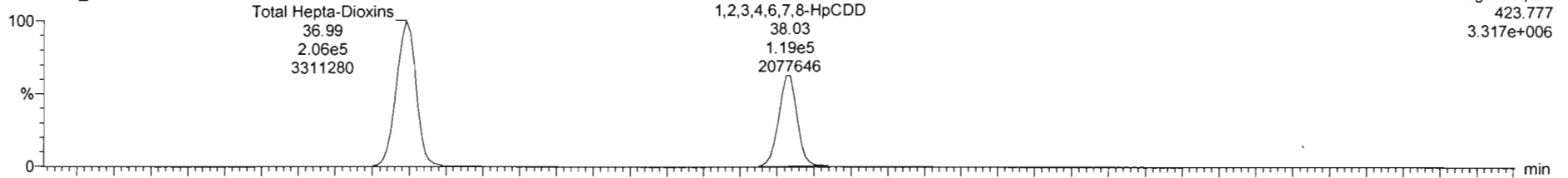
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

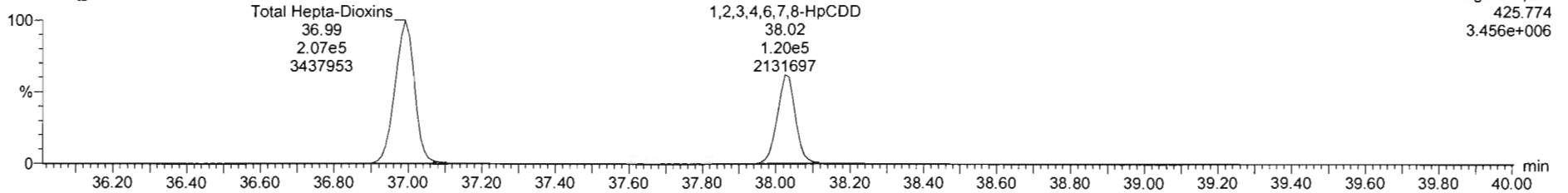
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**1,2,3,4,6,7,8-HpCDD**

200121R1\_4

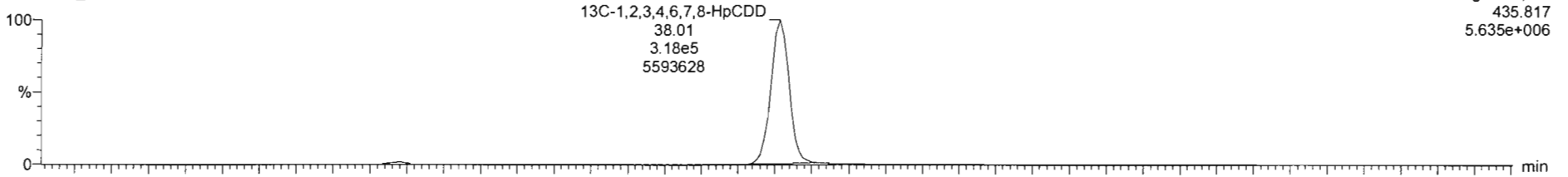


200121R1\_4

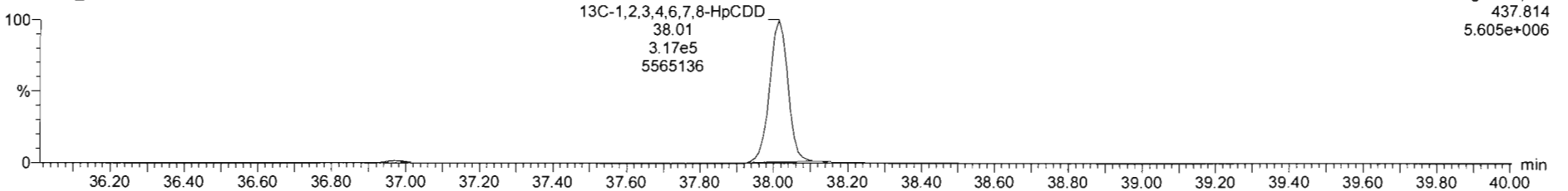


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_4



200121R1\_4



Dataset: Untitled

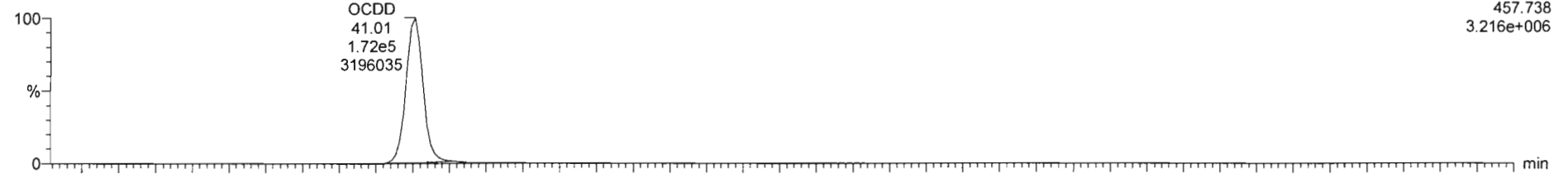
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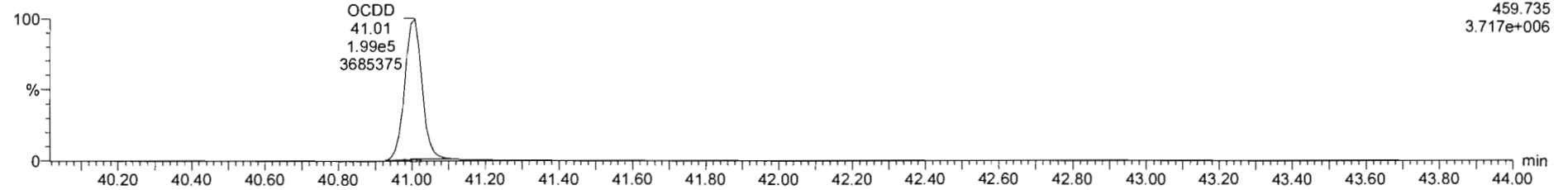
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**OCDD**

200121R1\_4

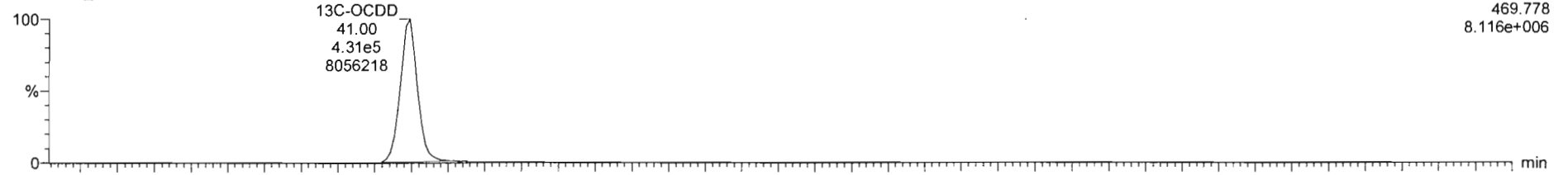


200121R1\_4

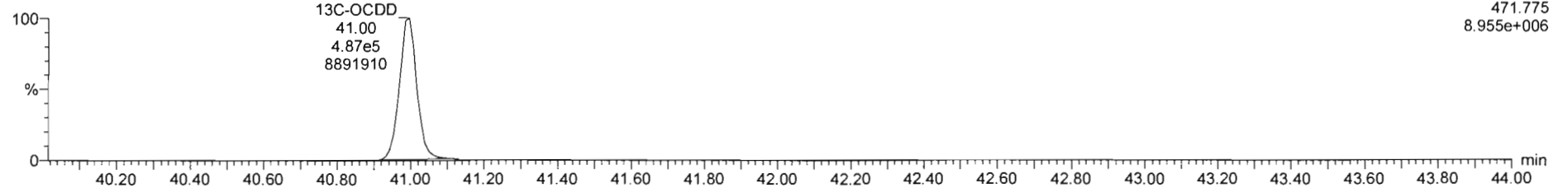


**13C-OCDD**

200121R1\_4



200121R1\_4



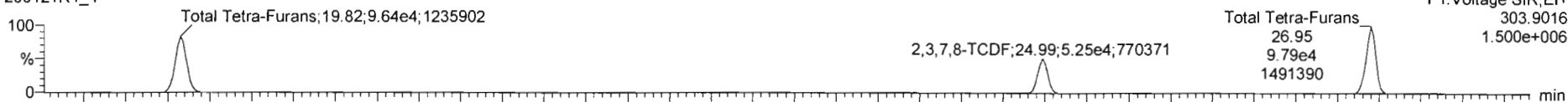
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

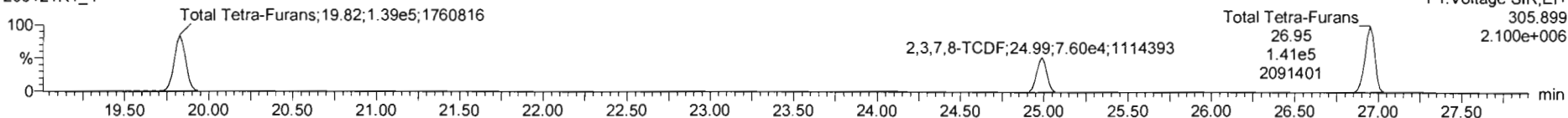
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**2,3,7,8-TCDF**

200121R1\_4

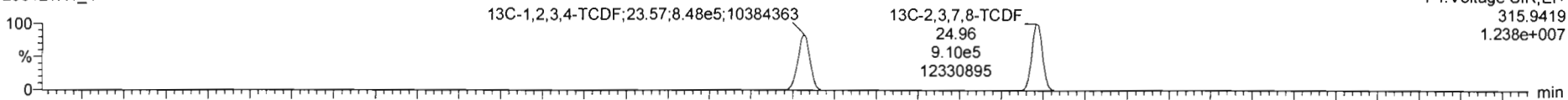


200121R1\_4

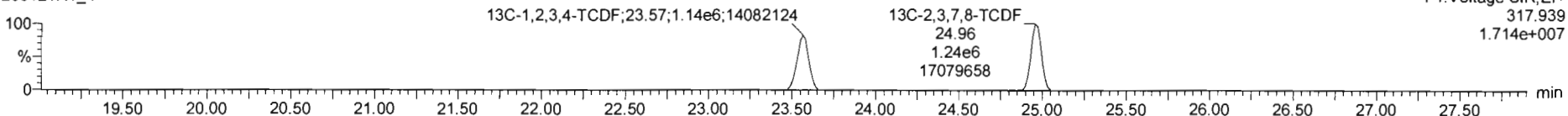


**13C-2,3,7,8-TCDF**

200121R1\_4

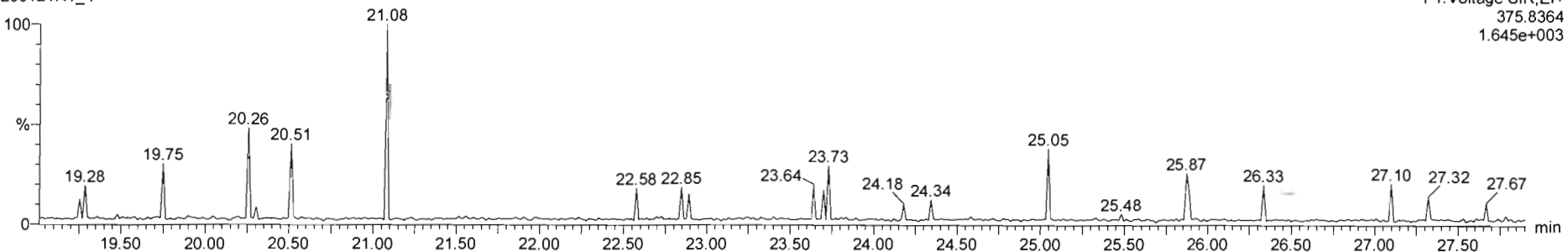


200121R1\_4



**DPE1**

200121R1\_4



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

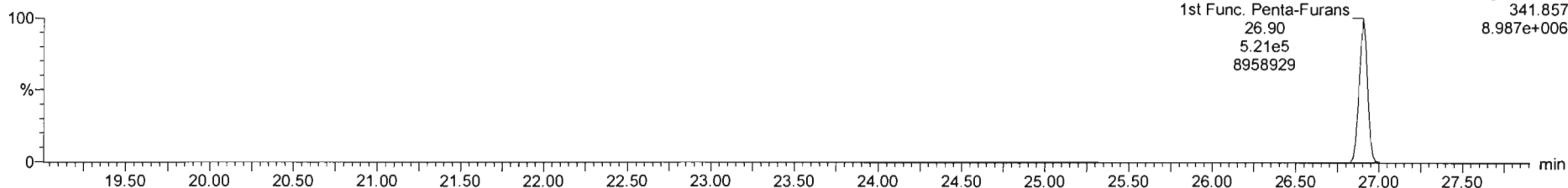
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200121R1\_4

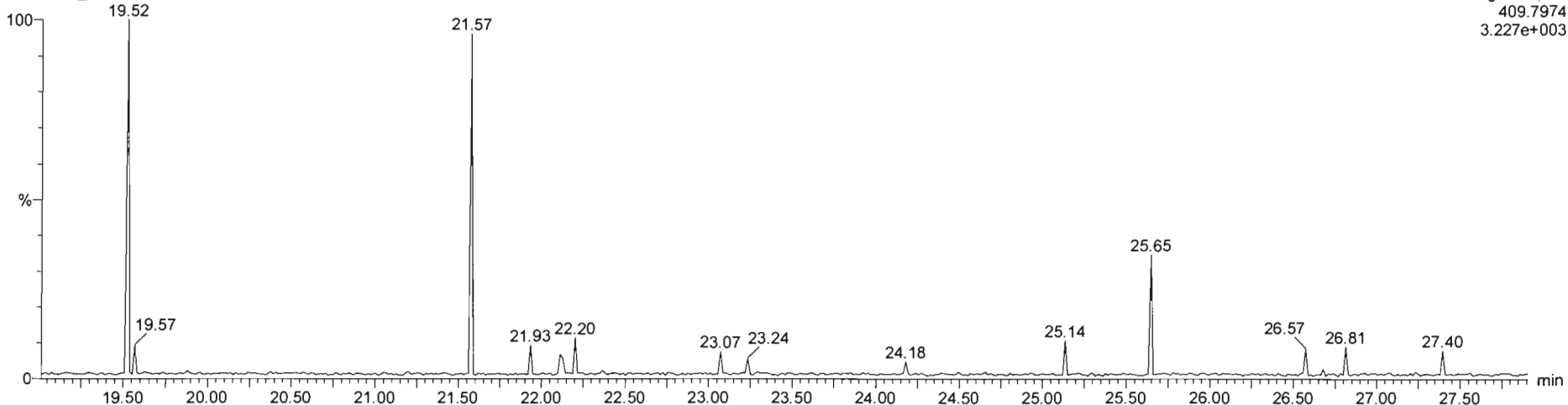


200121R1\_4



DPE6

200121R1\_4



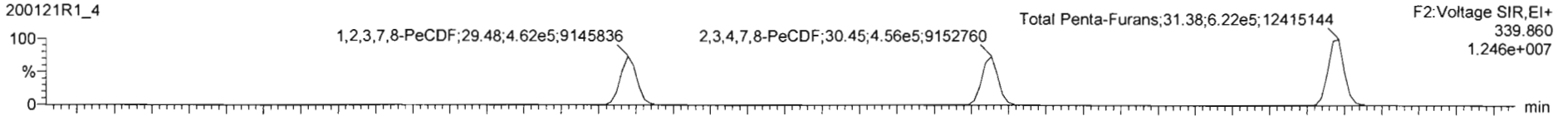
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

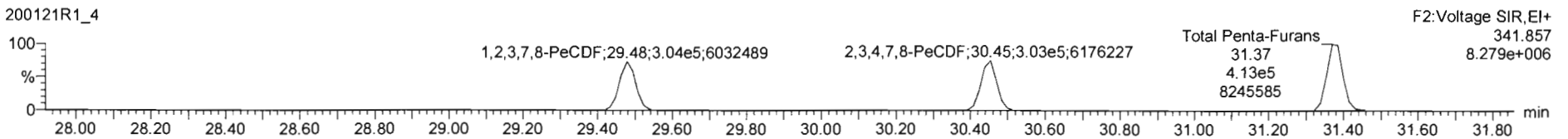
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**1,2,3,7,8-PeCDF**

200121R1\_4

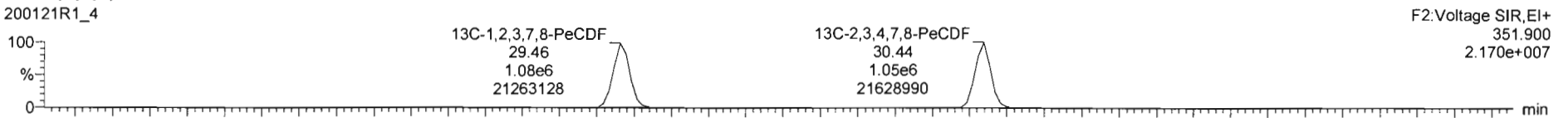


200121R1\_4

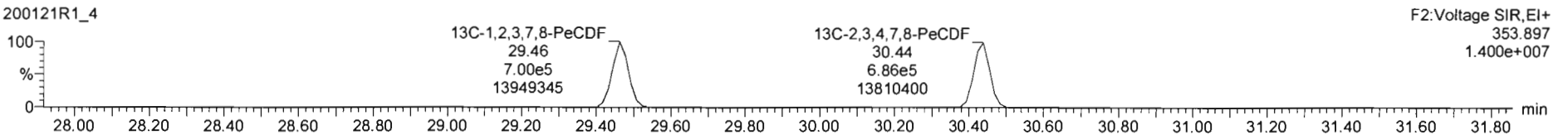


**13C-1,2,3,7,8-PeCDF**

200121R1\_4

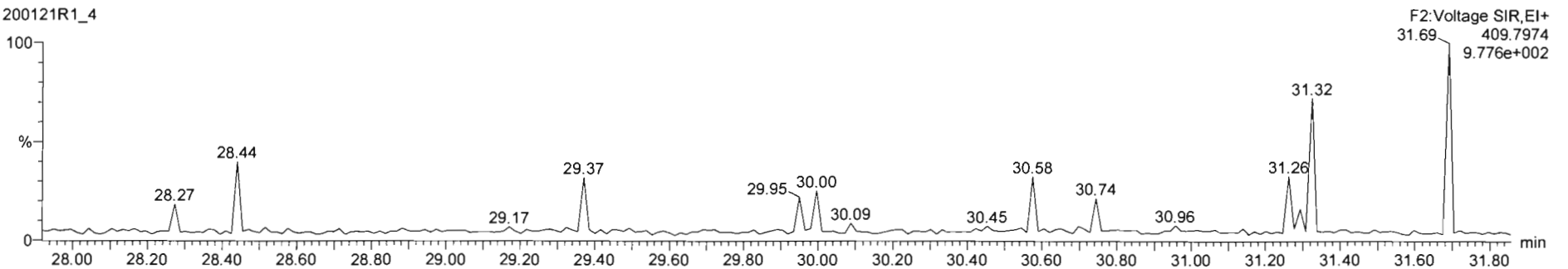


200121R1\_4



**DPE2**

200121R1\_4



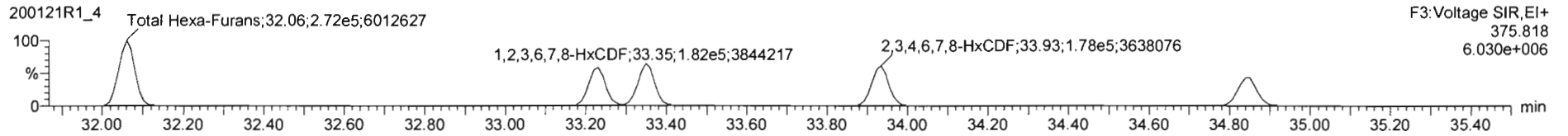
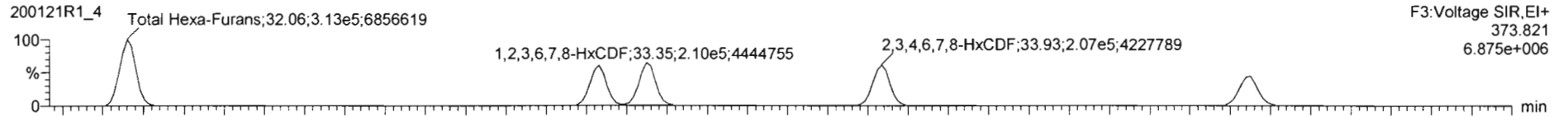
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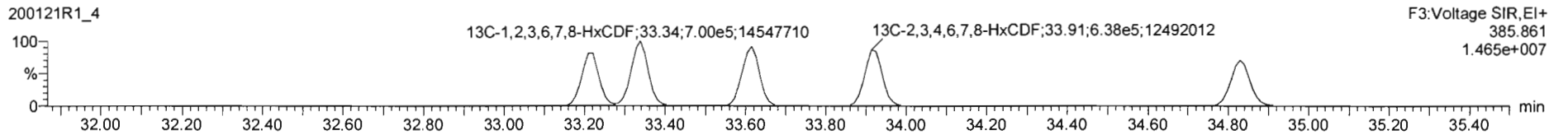
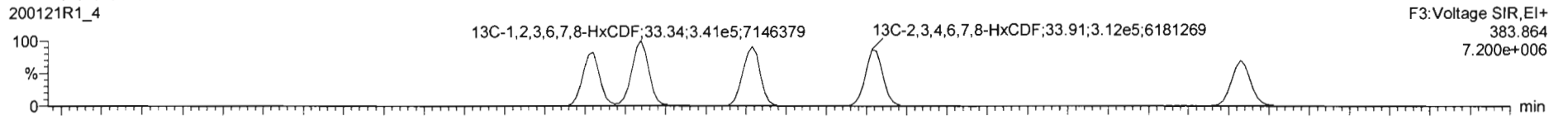
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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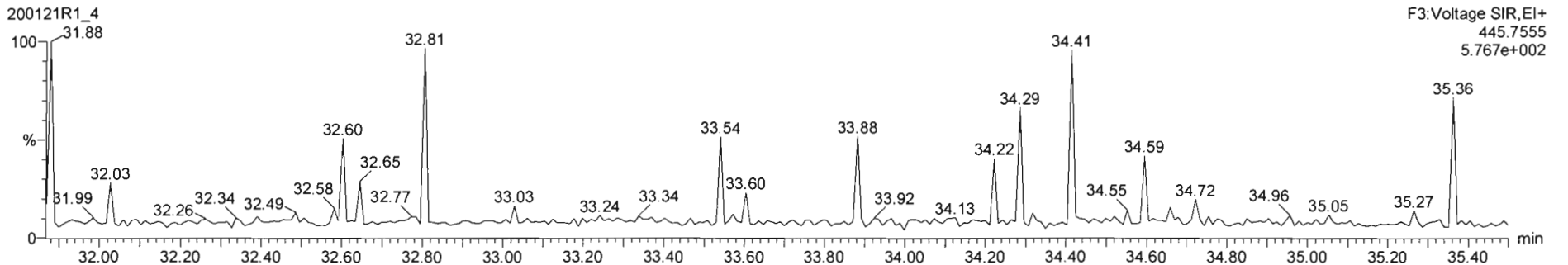
**1,2,3,4,7,8-HxCDF**



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



**DPE3**



Dataset: Untitled

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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

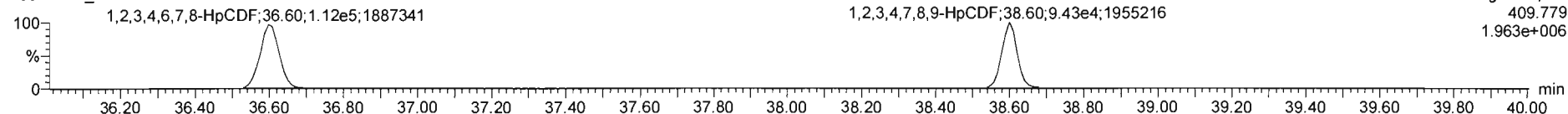
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### 1,2,3,4,6,7,8-HpCDF

200121R1\_4

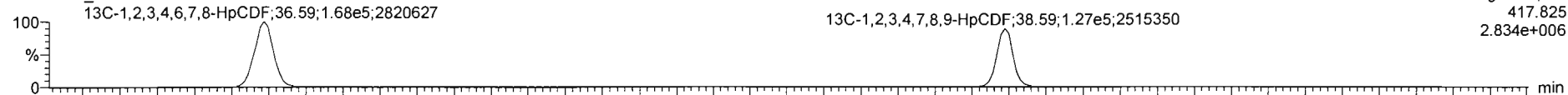


200121R1\_4

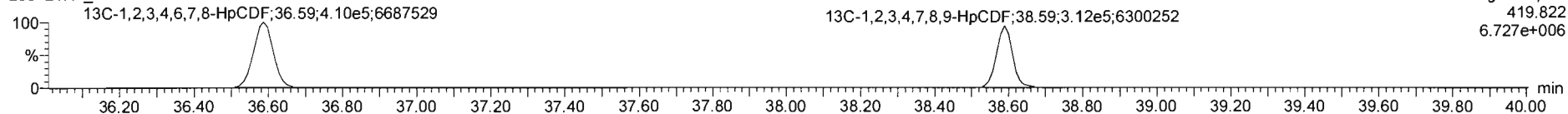


### 13C-1,2,3,4,6,7,8-HpCDF

200121R1\_4

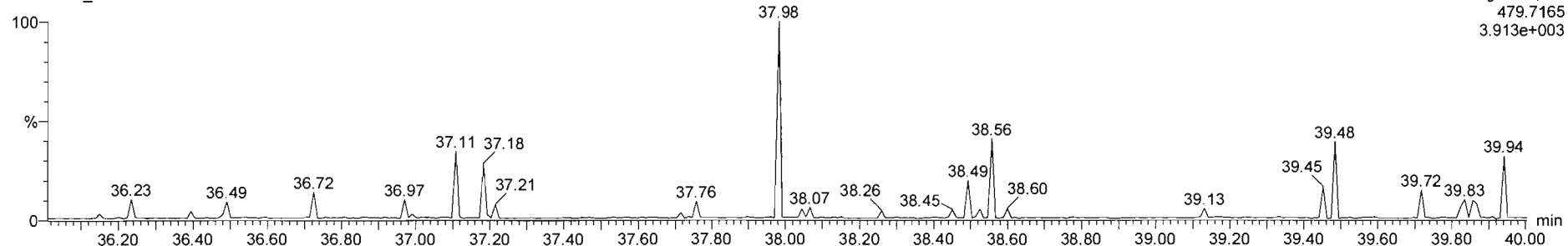


200121R1\_4



### DPE4

200121R1\_4



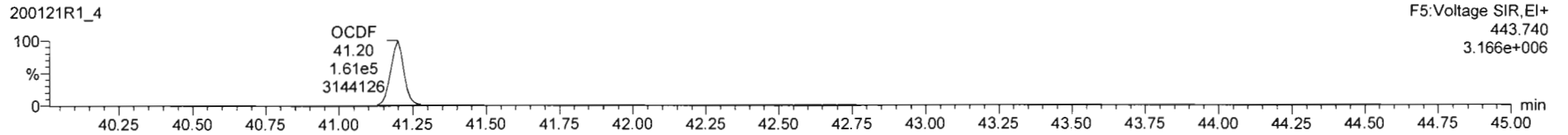
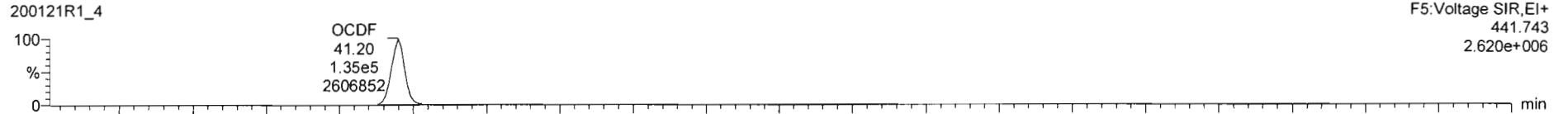
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

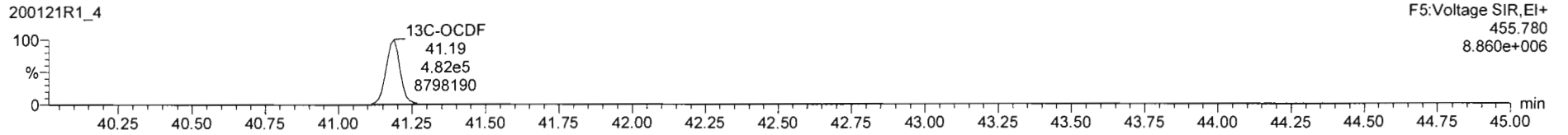
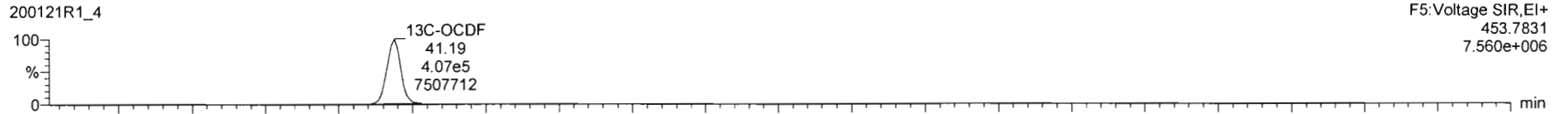
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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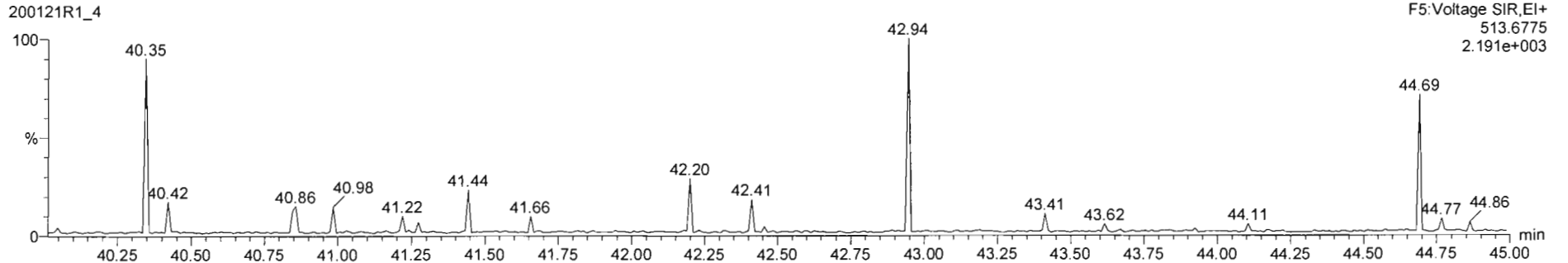
OCDF



13C-OCDF



DPE5

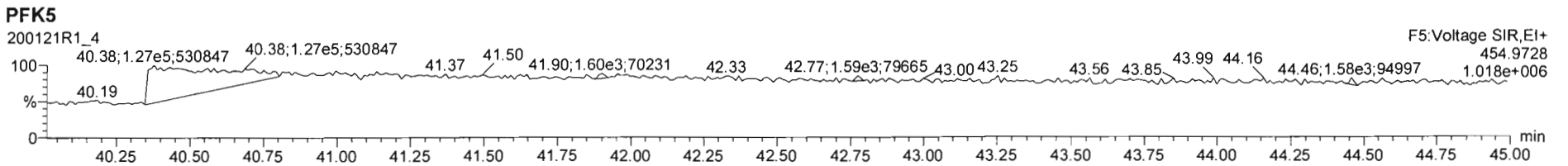
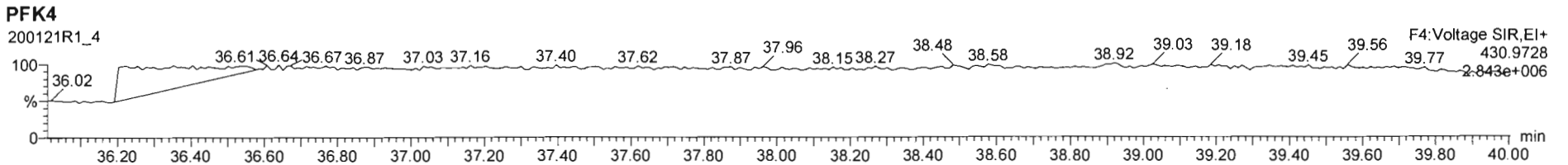
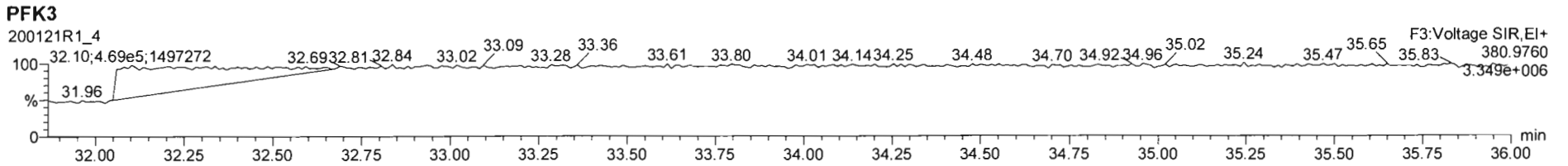
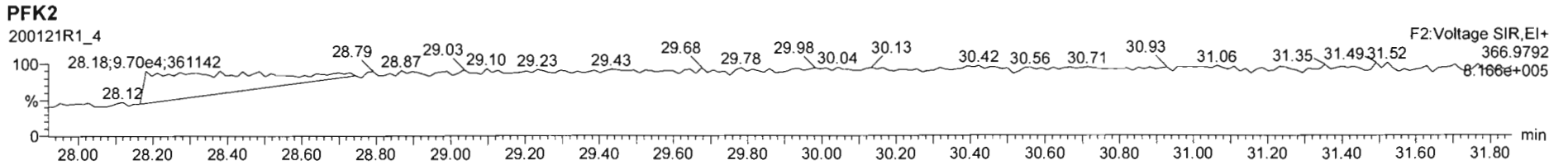
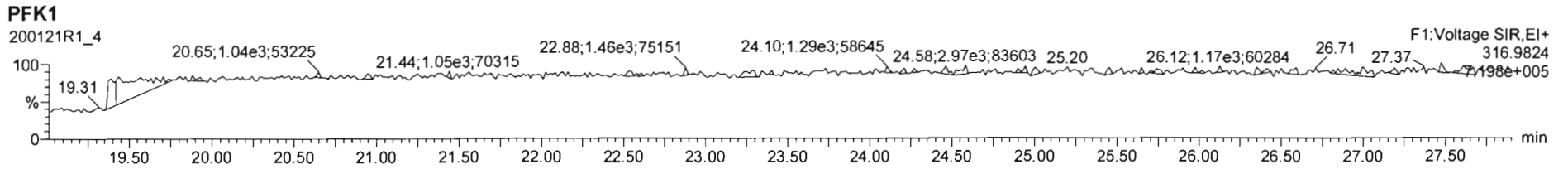




Dataset: Untitled

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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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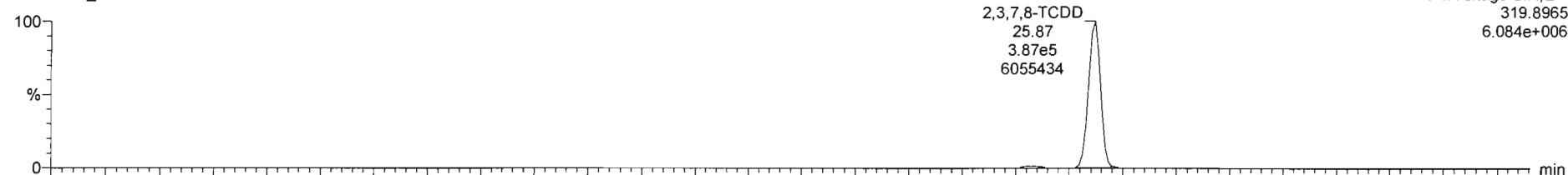
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

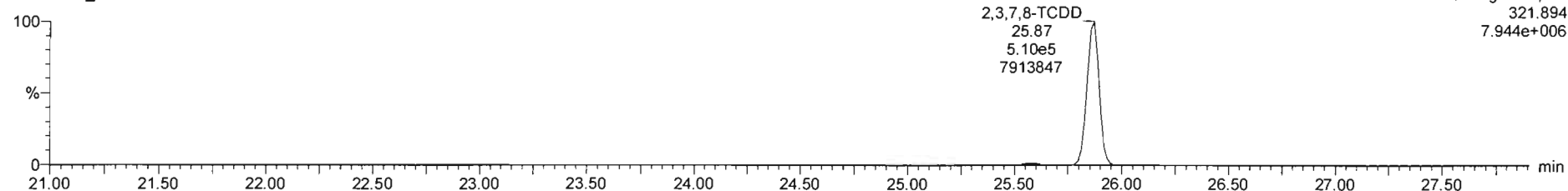
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**2,3,7,8-TCDD**

200121R1\_5

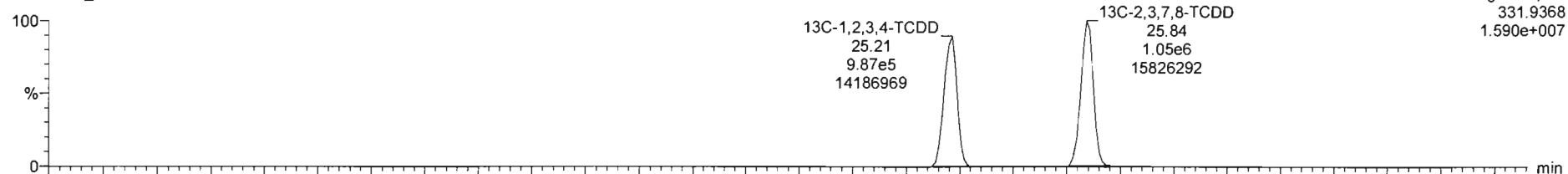


200121R1\_5

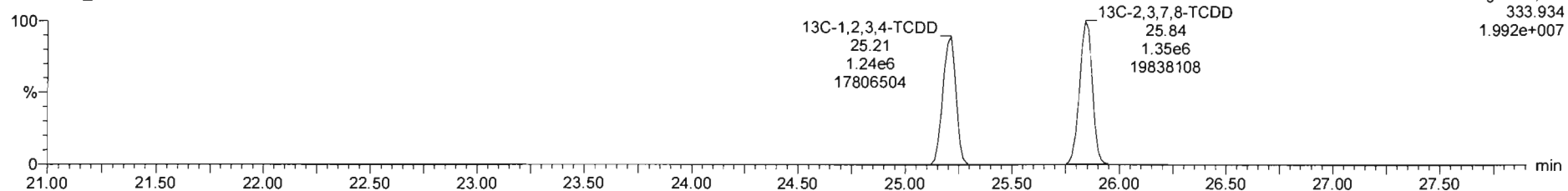


**13C-2,3,7,8-TCDD**

200121R1\_5



200121R1\_5



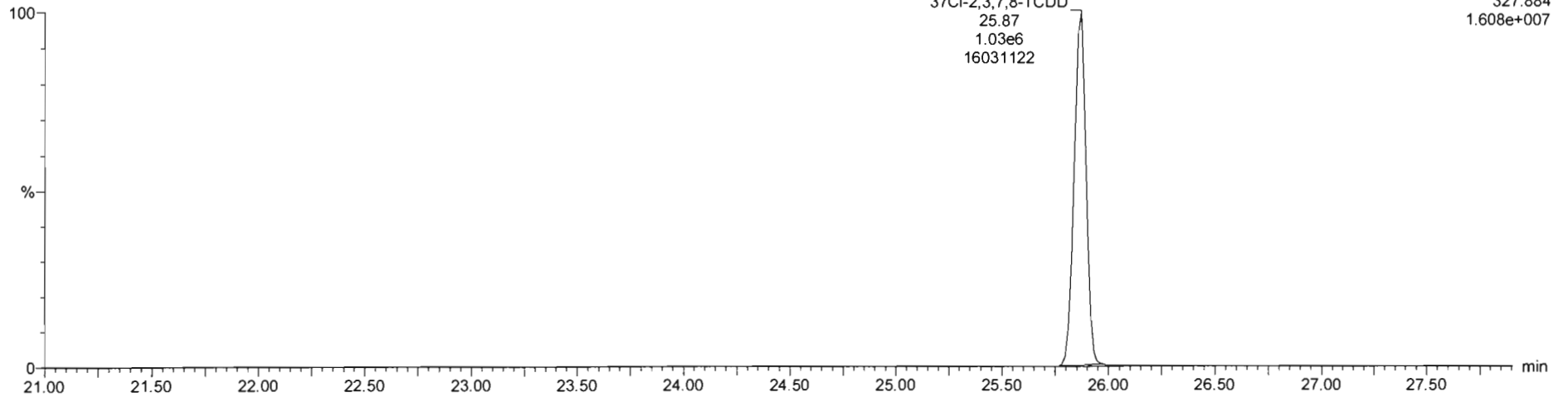
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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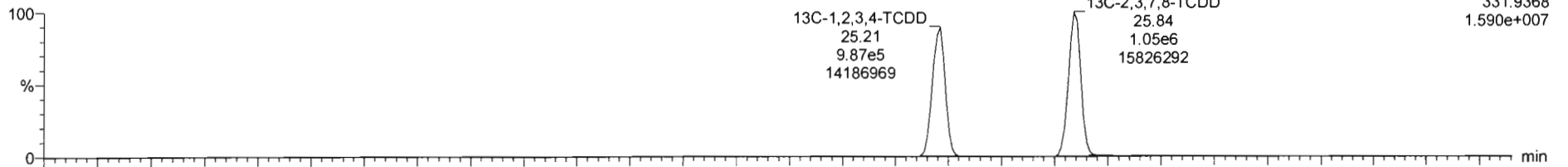
**37Cl-2,3,7,8-TCDD**

200121R1\_5

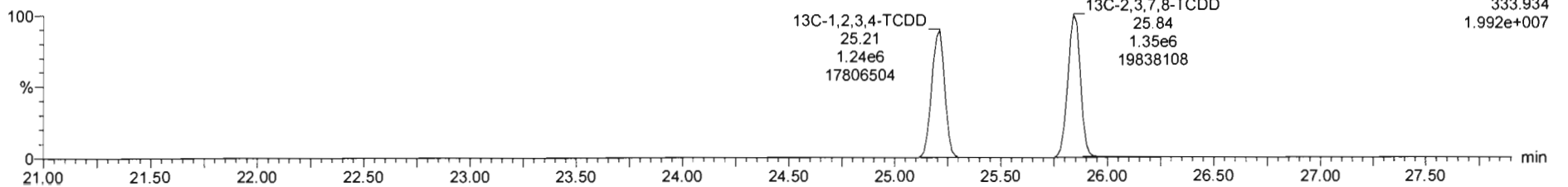


**13C-1,2,3,4-TCDD**

200121R1\_5



200121R1\_5



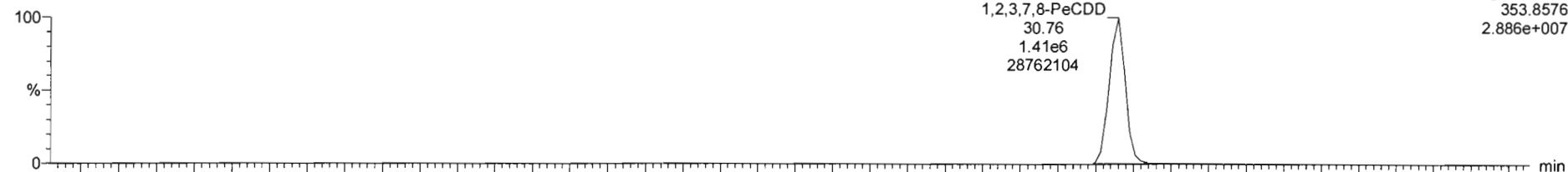
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

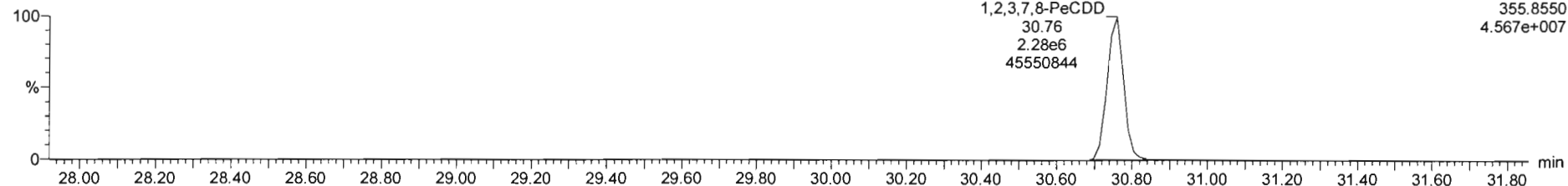
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**1,2,3,7,8-PeCDD**

200121R1\_5

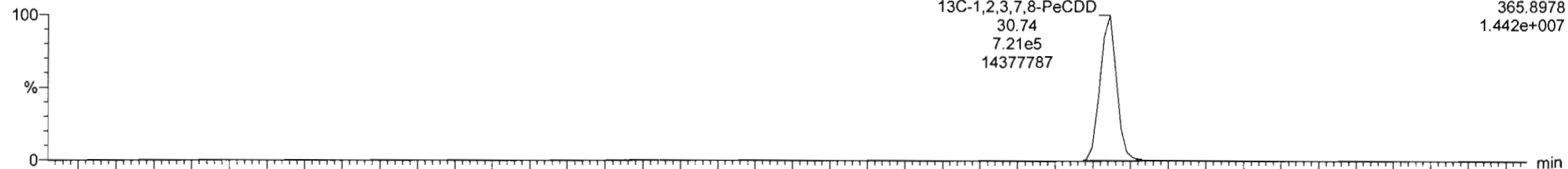


200121R1\_5

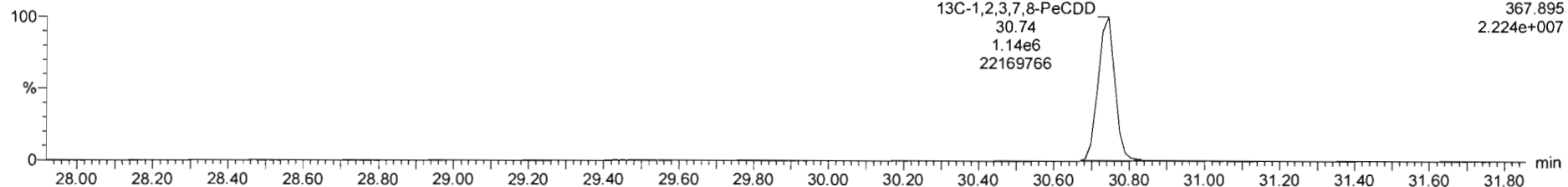


**13C-1,2,3,7,8-PeCDD**

200121R1\_5



200121R1\_5



Dataset: Untitled

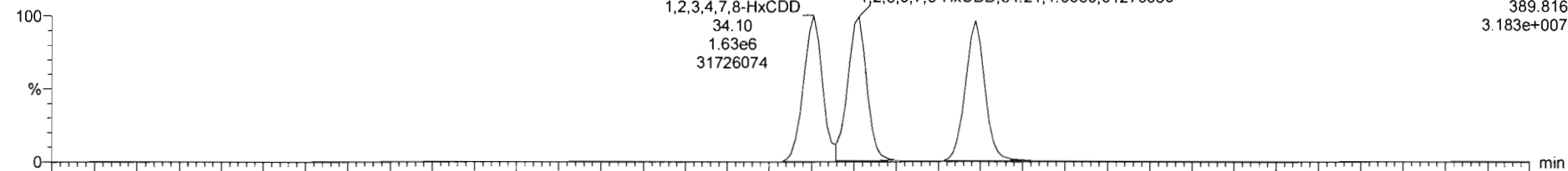
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

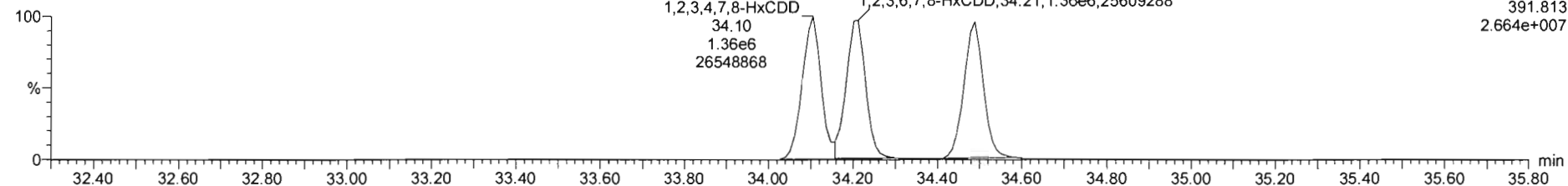
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**1,2,3,4,7,8-HxCDD**

200121R1\_5

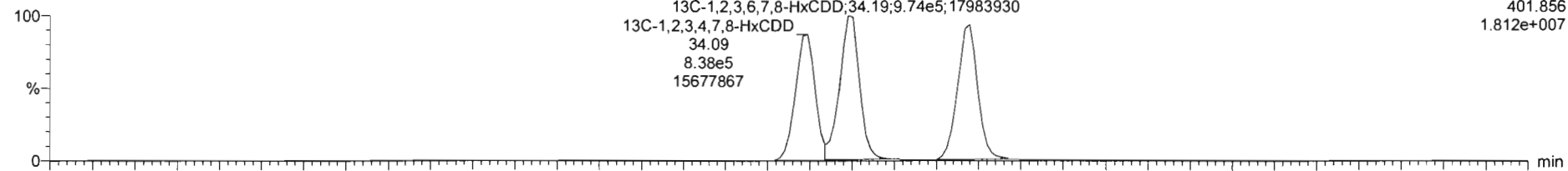


200121R1\_5

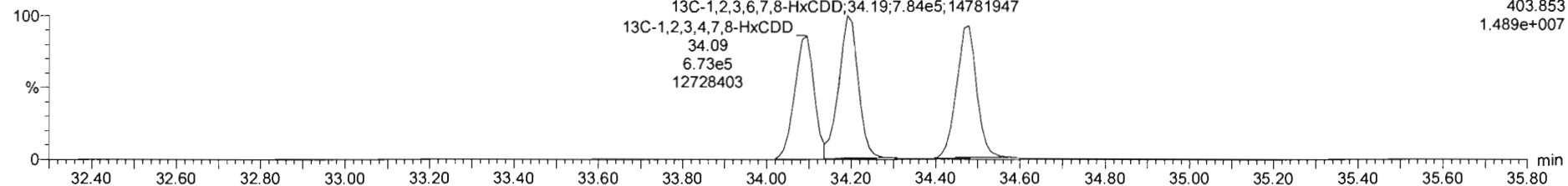


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_5



200121R1\_5



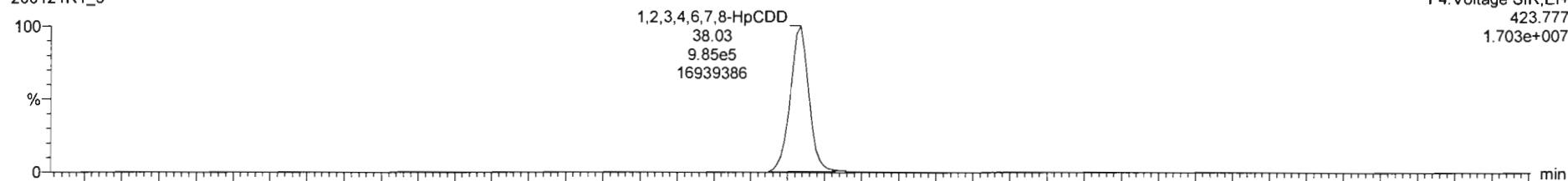
Dataset: Untitled

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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

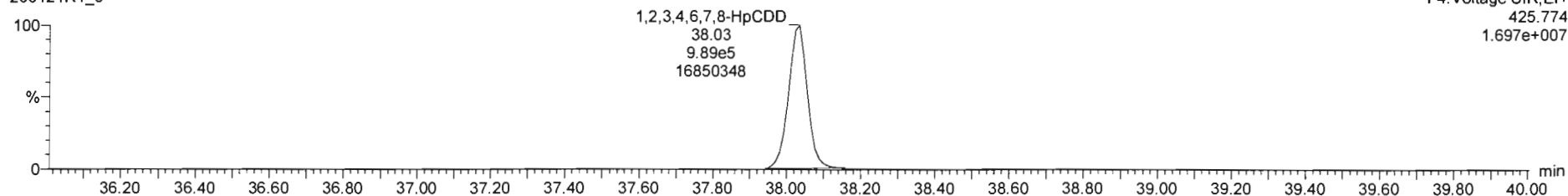
Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

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

200121R1\_5

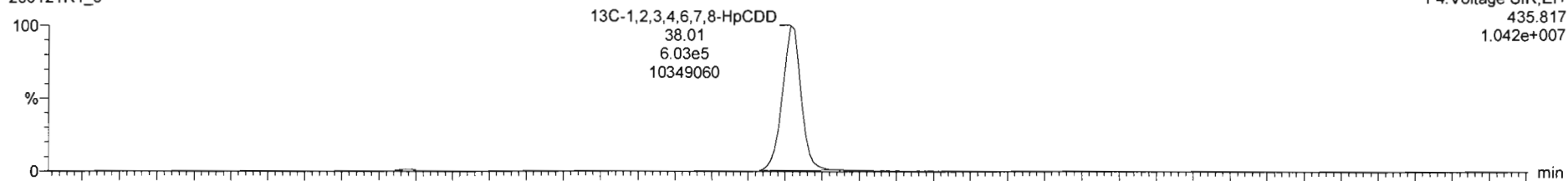


200121R1\_5

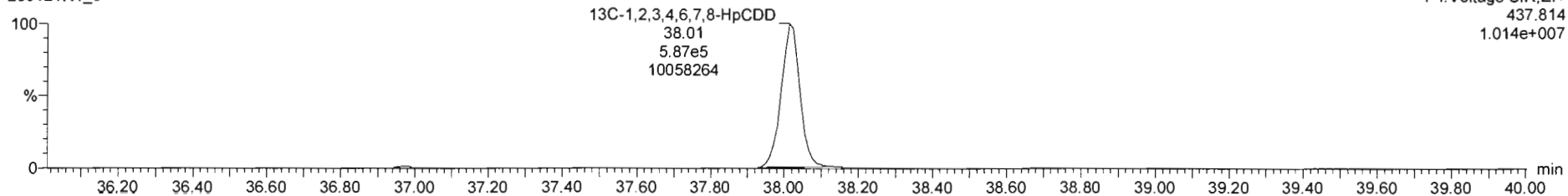


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_5



200121R1\_5



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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**OCDD**

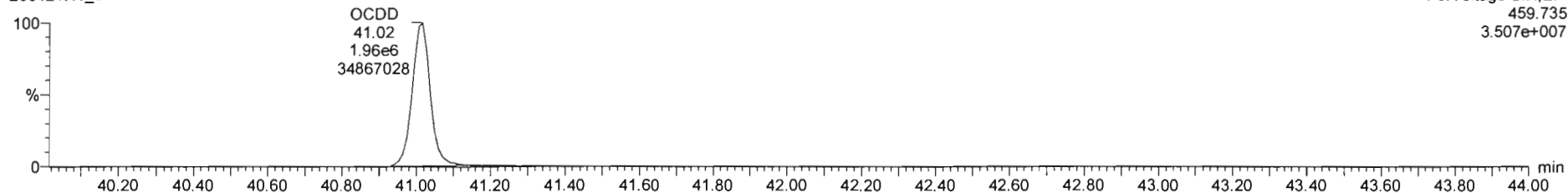
200121R1\_5

F5:Voltage SIR,EI+  
457.738  
3.047e+007



200121R1\_5

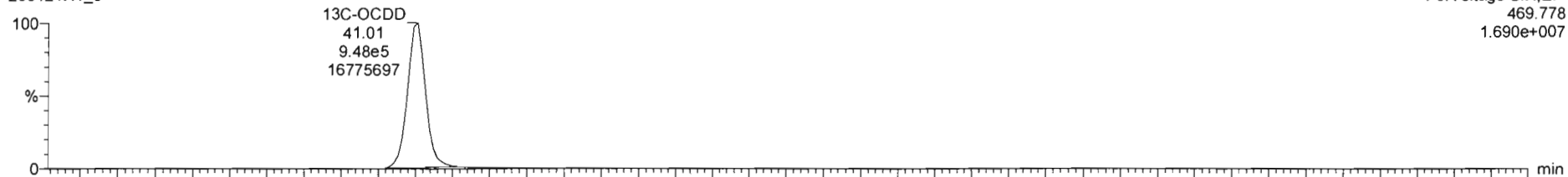
F5:Voltage SIR,EI+  
459.735  
3.507e+007



**13C-OCDD**

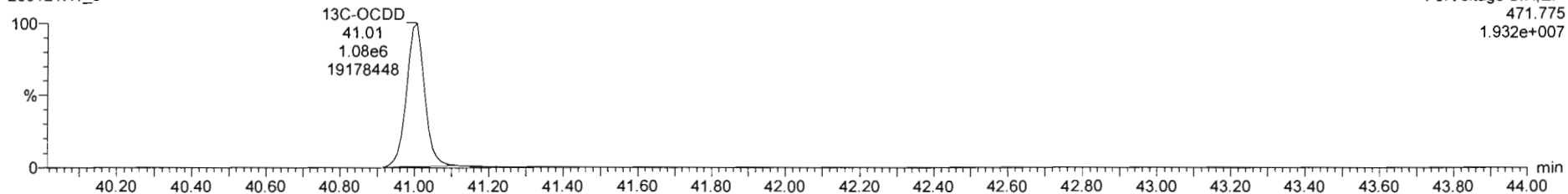
200121R1\_5

F5:Voltage SIR,EI+  
469.778  
1.690e+007



200121R1\_5

F5:Voltage SIR,EI+  
471.775  
1.932e+007



Dataset: Untitled

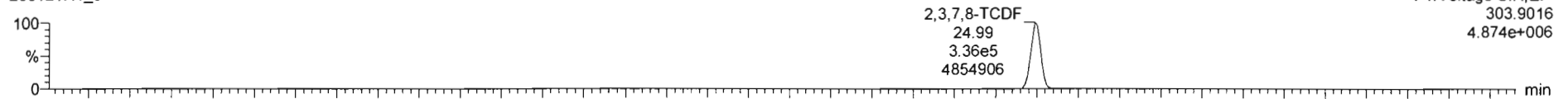
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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

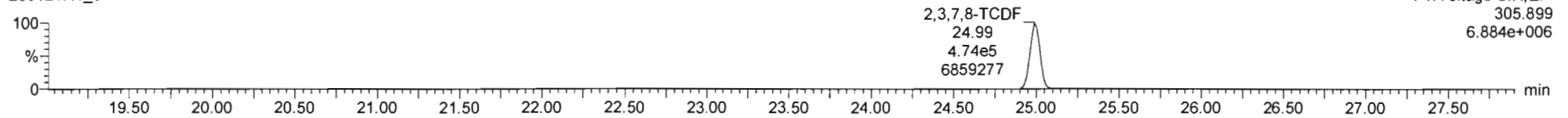
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**2,3,7,8-TCDF**

200121R1\_5

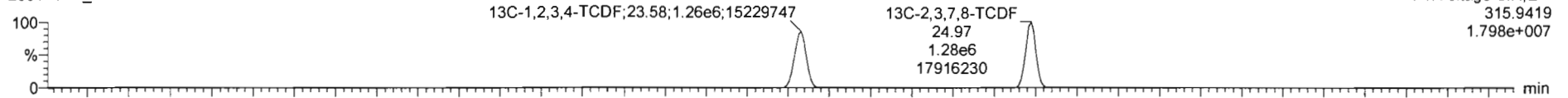


200121R1\_5

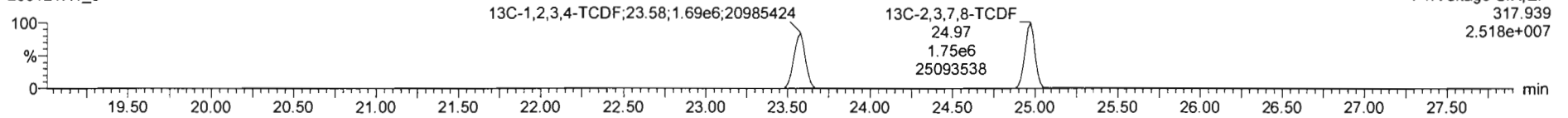


**13C-2,3,7,8-TCDF**

200121R1\_5

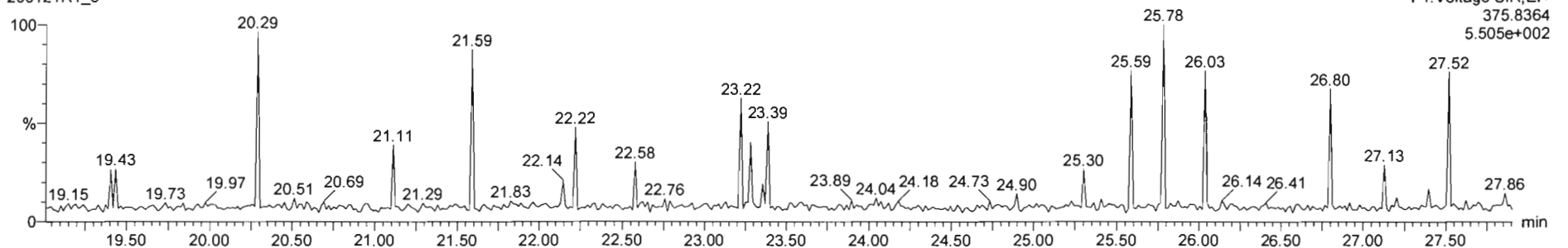


200121R1\_5



**DPE1**

200121R1\_5





Dataset: Untitled

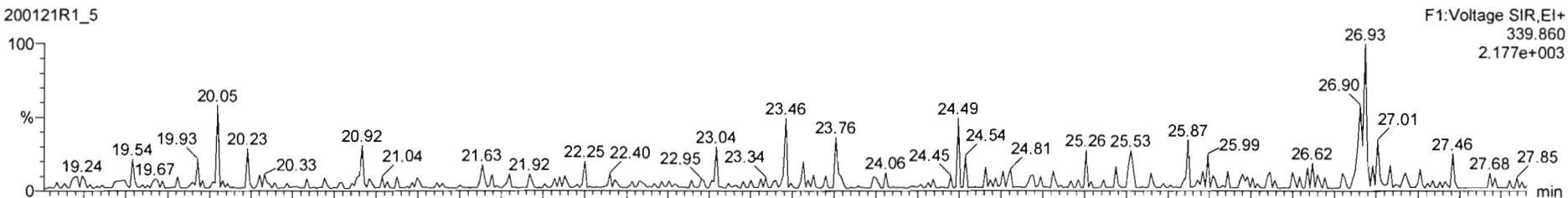
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

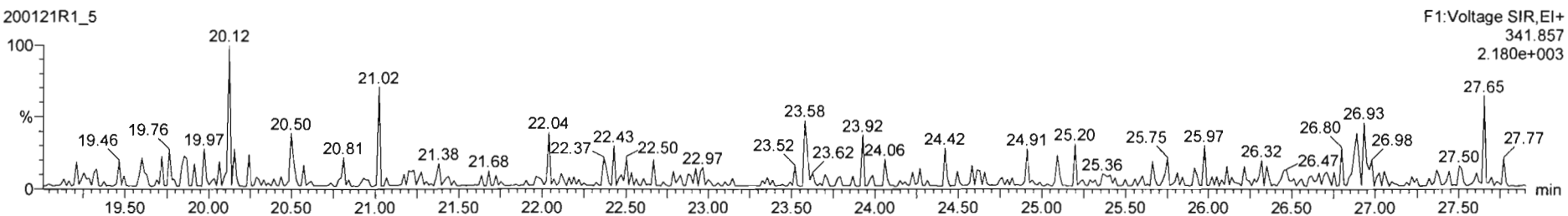
Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

1st Func. Penta-Furans

200121R1\_5

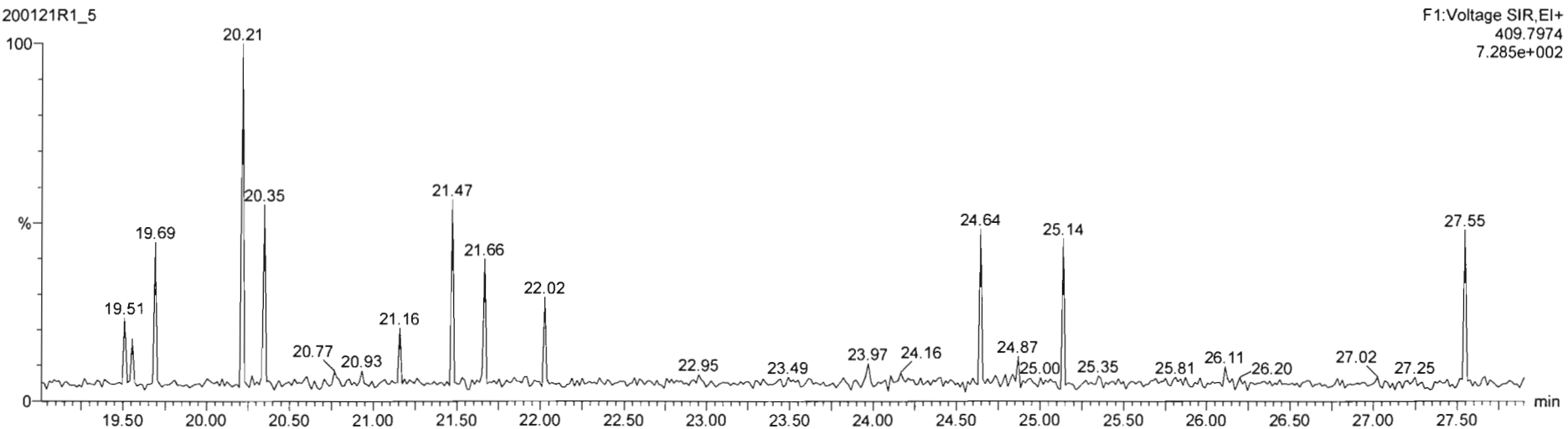


200121R1\_5



DPE6

200121R1\_5



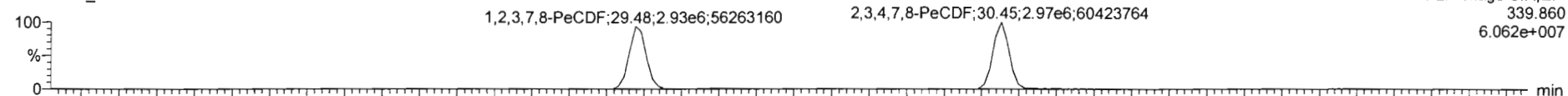
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

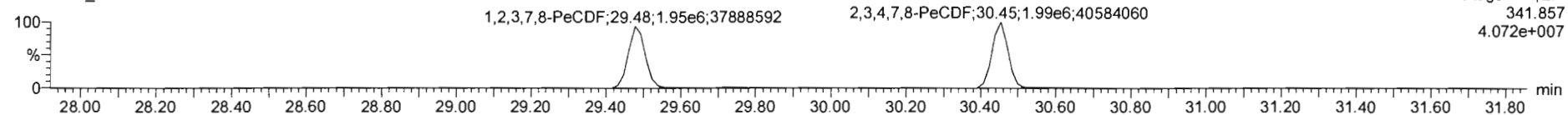
**1,2,3,7,8-PeCDF**

200121R1\_5



F2:Voltage SIR,EI+  
339.860  
6.062e+007

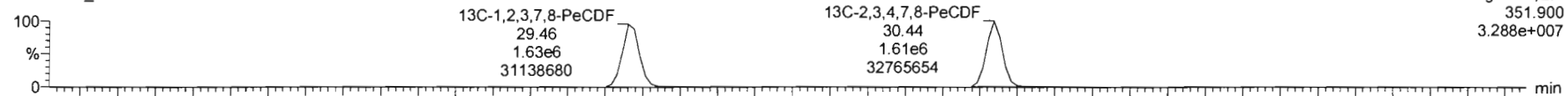
200121R1\_5



F2:Voltage SIR,EI+  
341.857  
4.072e+007

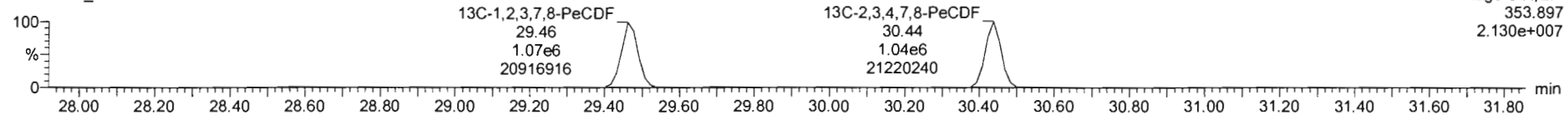
**13C-1,2,3,7,8-PeCDF**

200121R1\_5



F2:Voltage SIR,EI+  
351.900  
3.288e+007

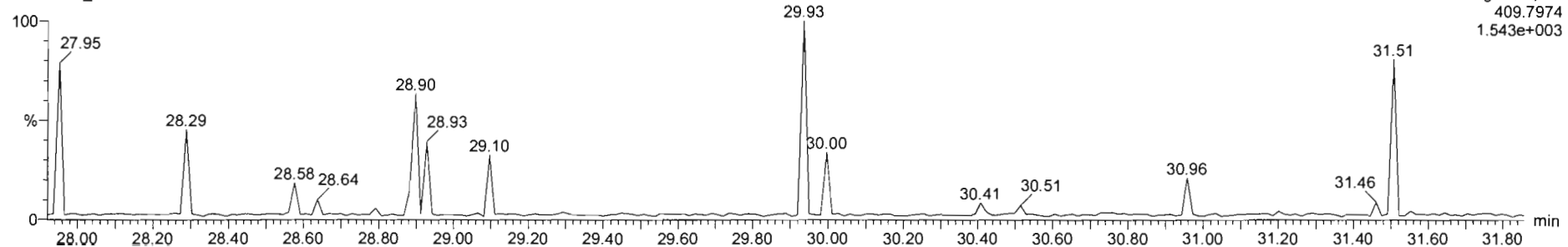
200121R1\_5



F2:Voltage SIR,EI+  
353.897  
2.130e+007

**DPE2**

200121R1\_5



F2:Voltage SIR,EI+  
409.7974  
1.543e+003

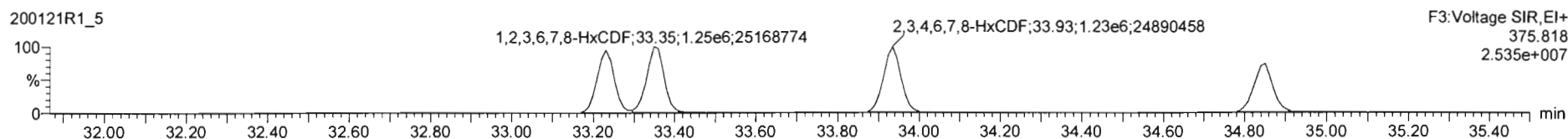
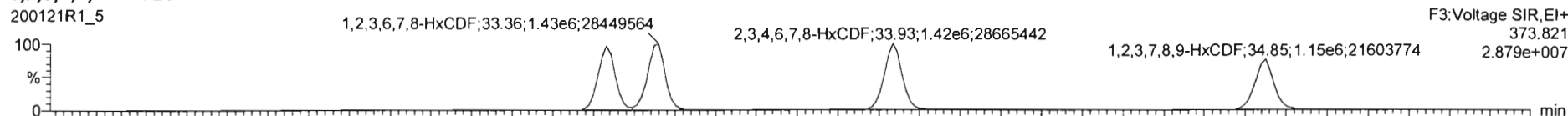
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Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

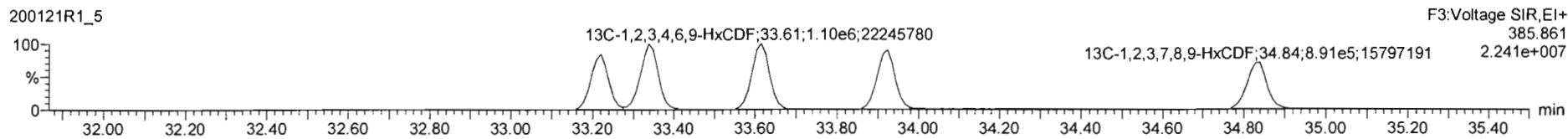
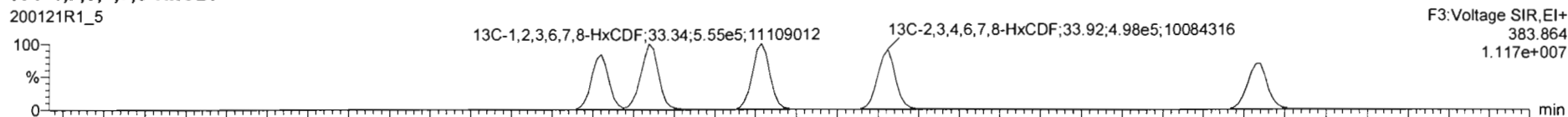
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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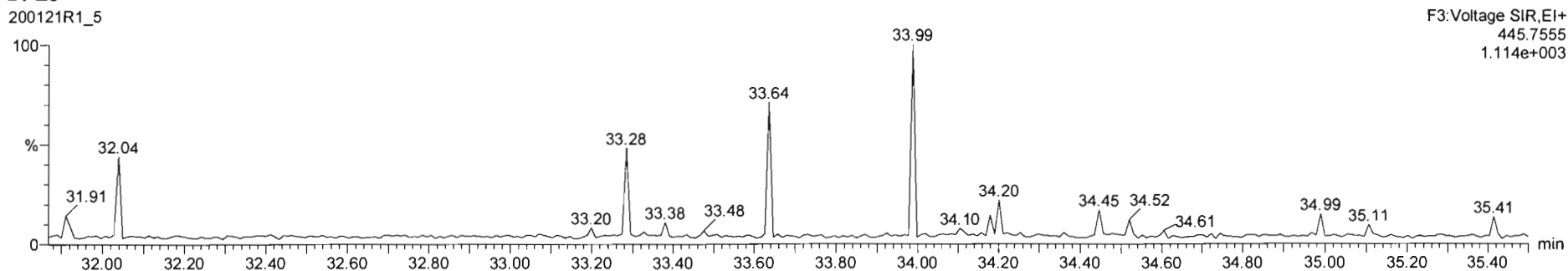
**1,2,3,4,7,8-HxCDF**



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



**DPE3**



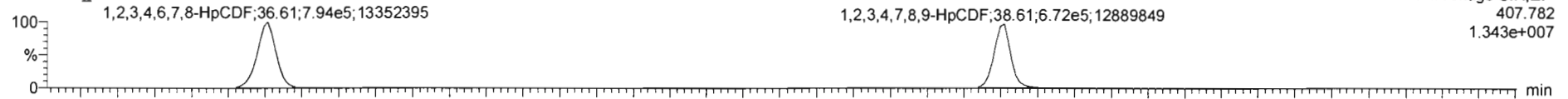
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

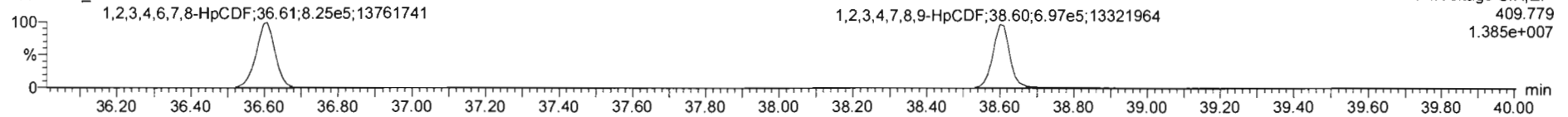
**1,2,3,4,6,7,8-HpCDF**

200121R1\_5



F4: Voltage SIR, EI+  
407.782  
1.343e+007

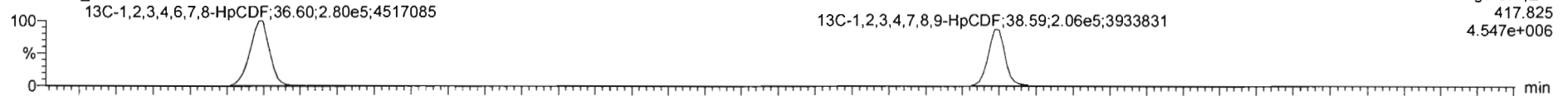
200121R1\_5



F4: Voltage SIR, EI+  
409.779  
1.385e+007

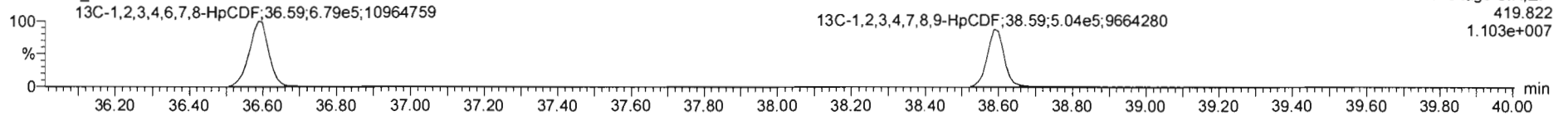
**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_5



F4: Voltage SIR, EI+  
417.825  
4.547e+006

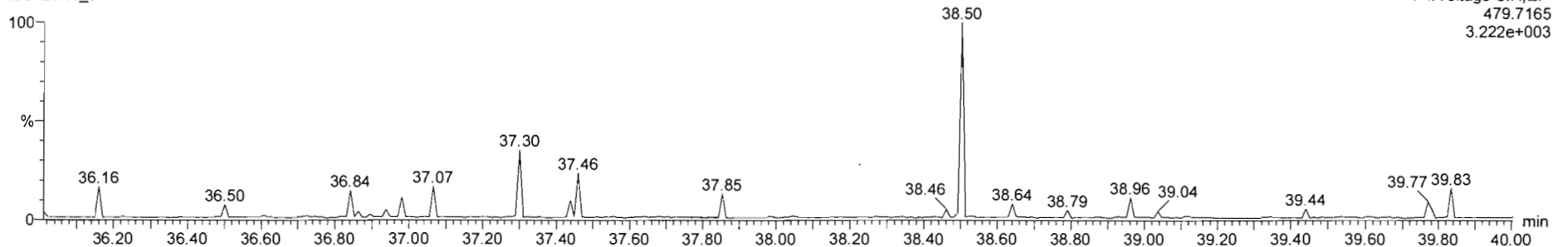
200121R1\_5



F4: Voltage SIR, EI+  
419.822  
1.103e+007

**DPE4**

200121R1\_5



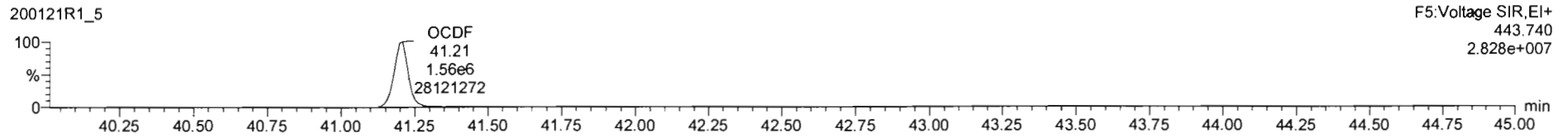
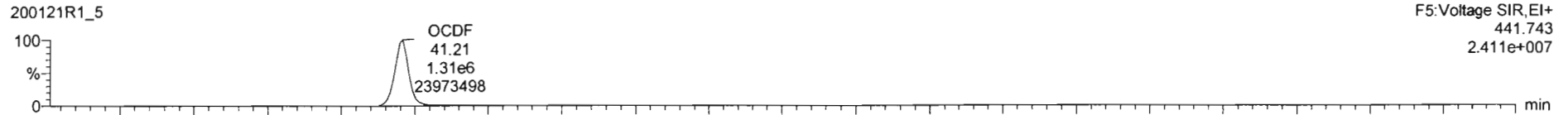
F4: Voltage SIR, EI+  
479.7165  
3.222e+003

Dataset: Untitled

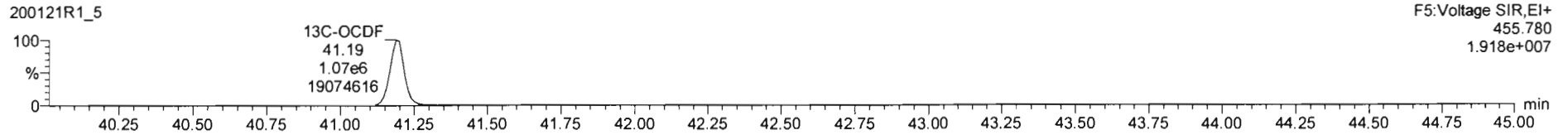
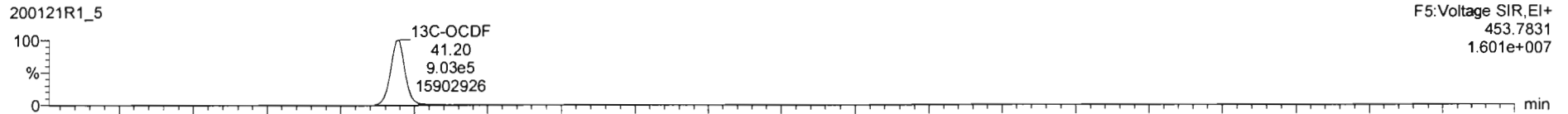
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205

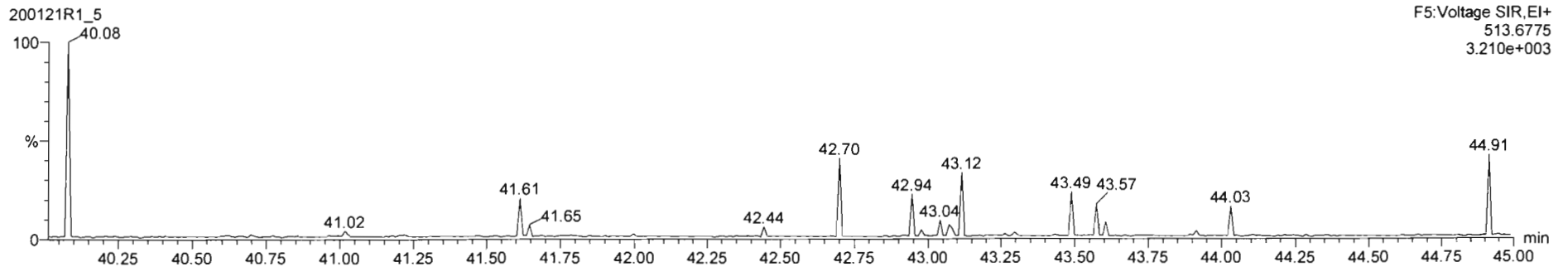
**OCDF**



**13C-OCDF**



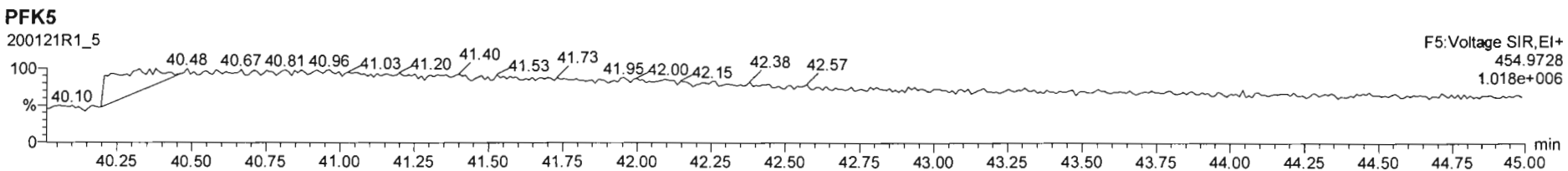
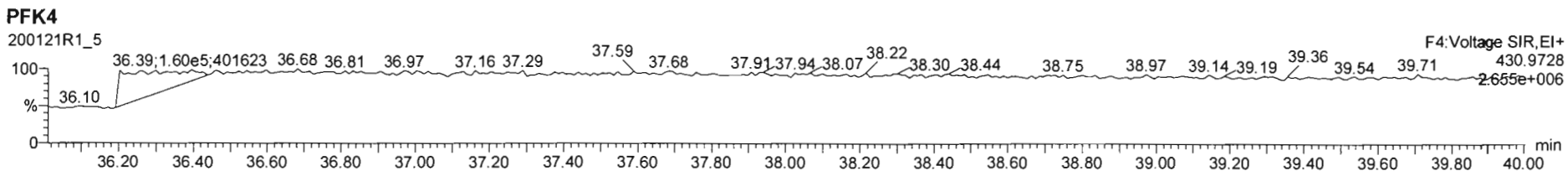
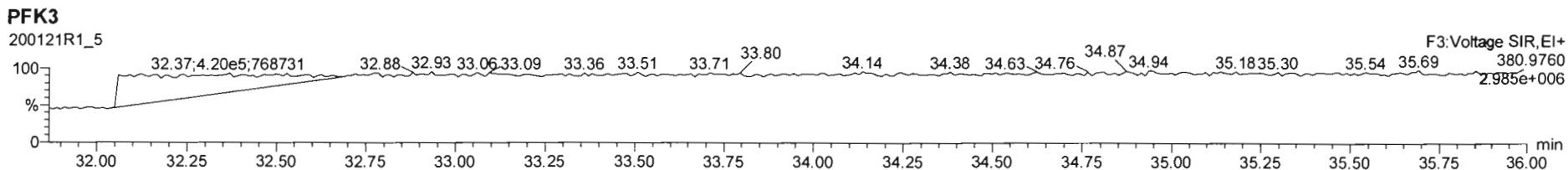
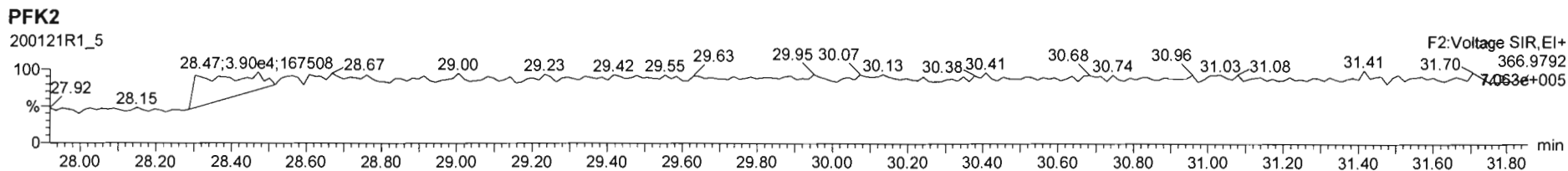
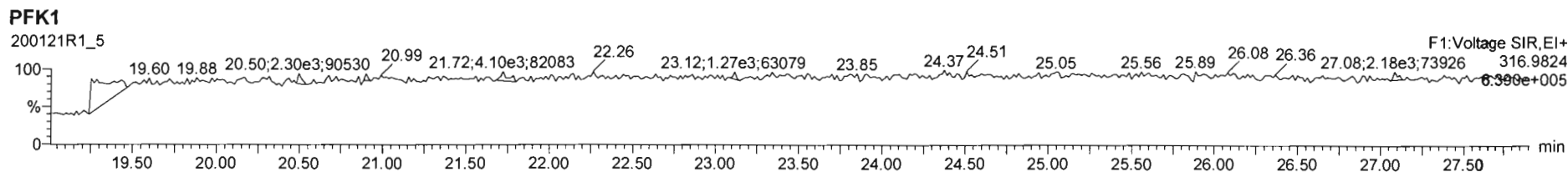
**DPE5**



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_5, Date: 21-Jan-2020, Time: 17:19:23, ID: ST200121R1\_5 1613 CS4 19C2205, Description: 1613 CS4 19C2205



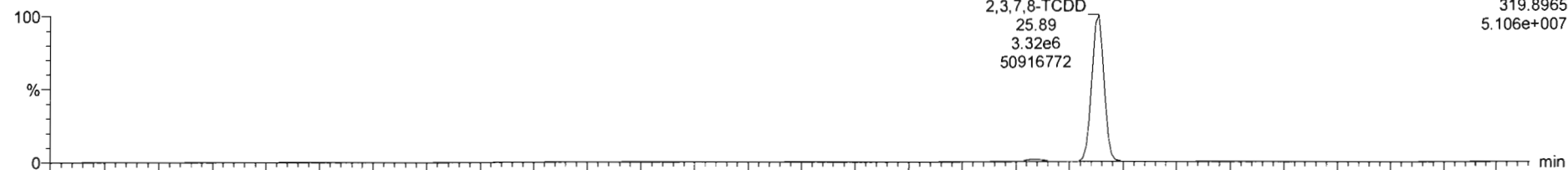
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

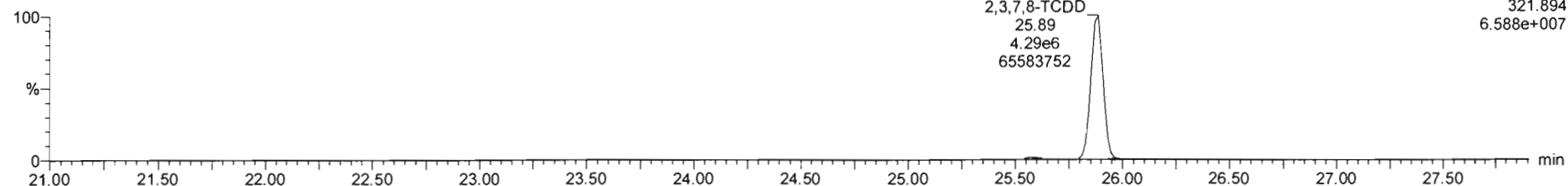
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### 2,3,7,8-TCDD

200121R1\_6

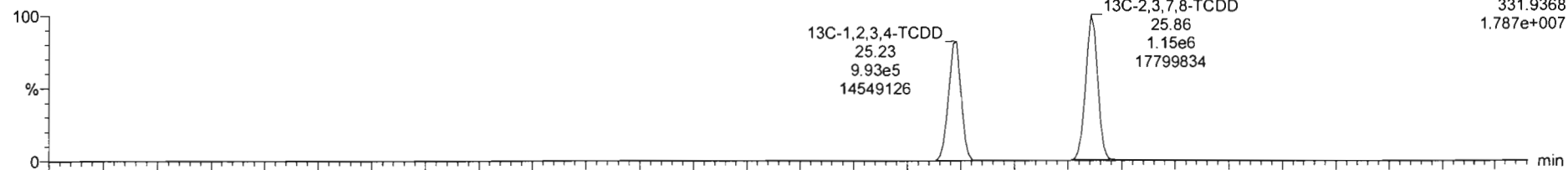


200121R1\_6

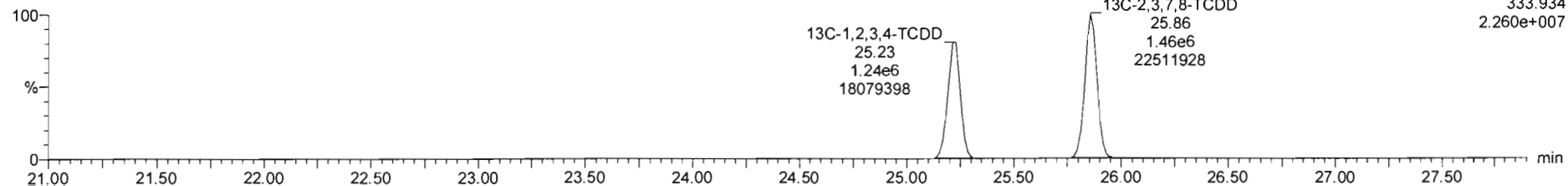


### 13C-2,3,7,8-TCDD

200121R1\_6



200121R1\_6



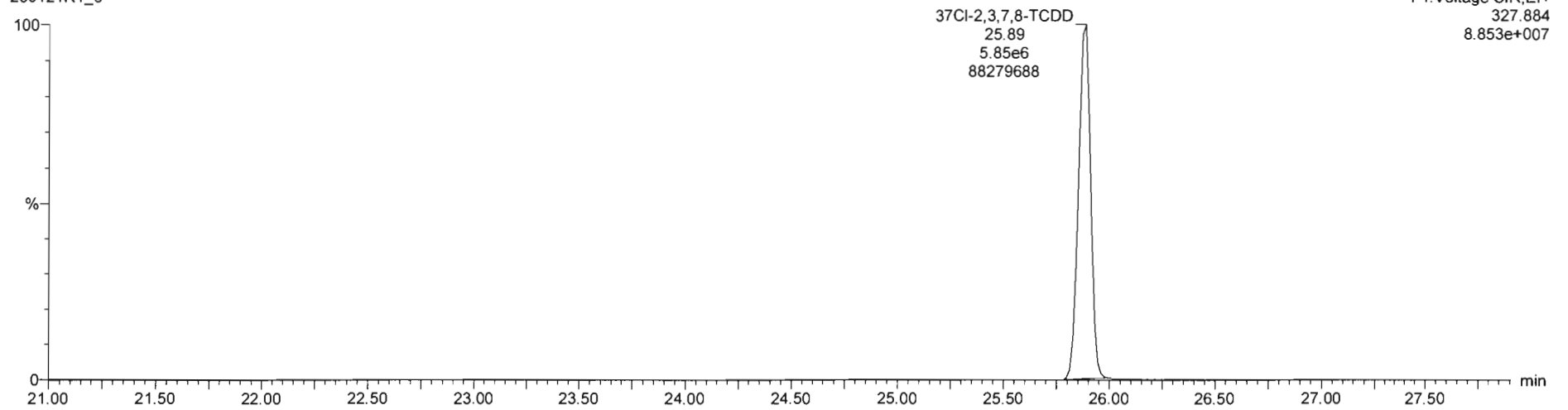
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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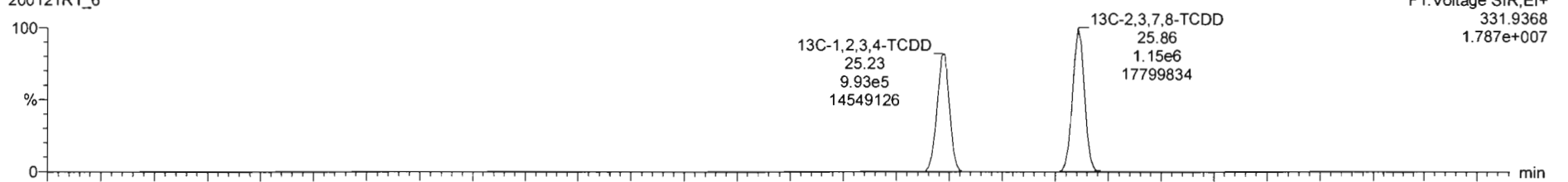
**37Cl-2,3,7,8-TCDD**

200121R1\_6

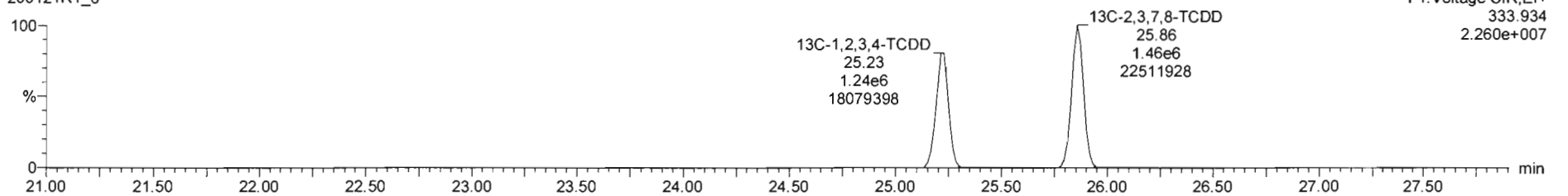


**13C-1,2,3,4-TCDD**

200121R1\_6



200121R1\_6





Dataset: Untitled

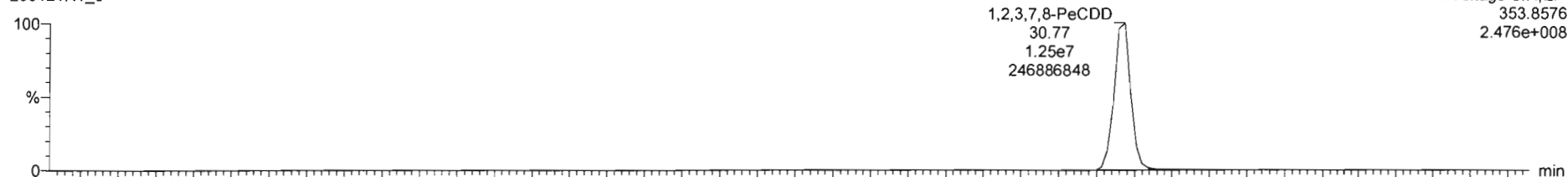
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

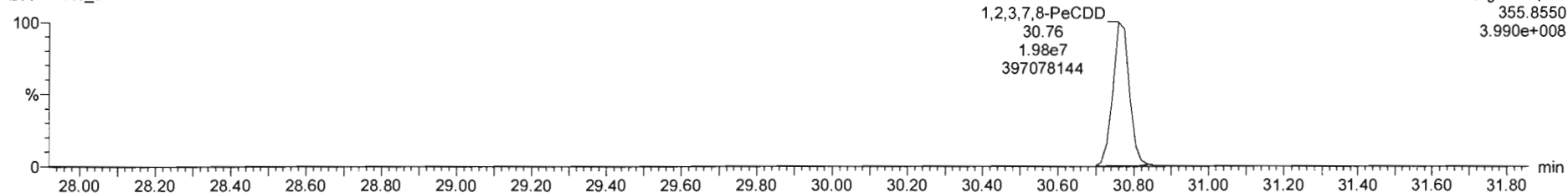
Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

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

200121R1\_6

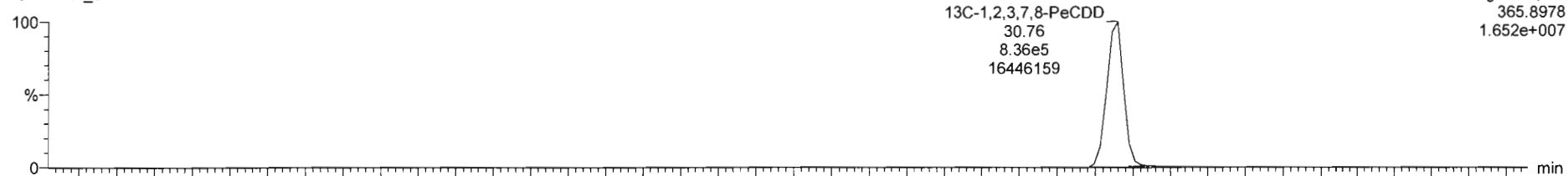


200121R1\_6

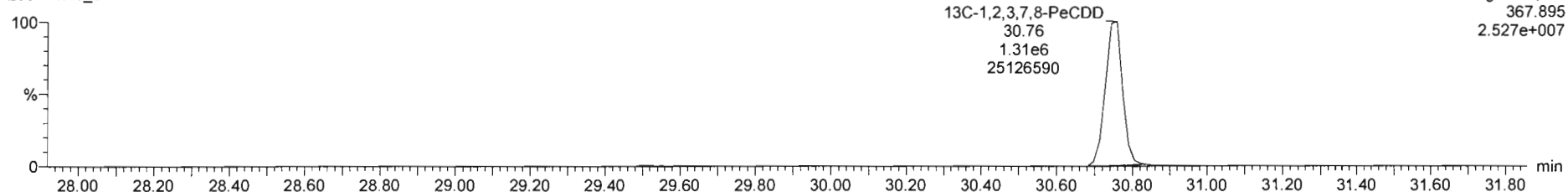


**13C-1,2,3,7,8-PeCDD**

200121R1\_6



200121R1\_6



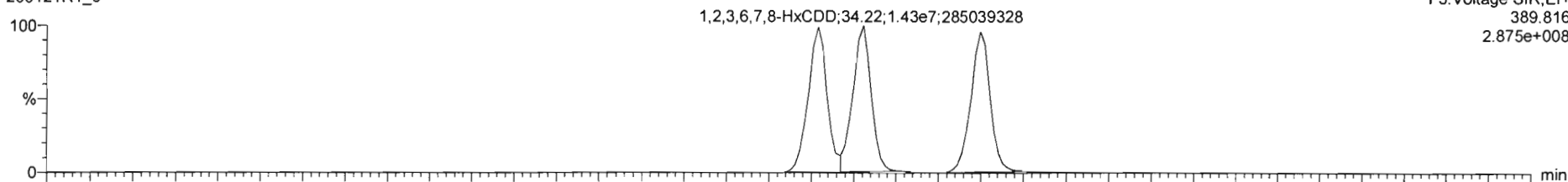
Dataset: Untitled

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Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

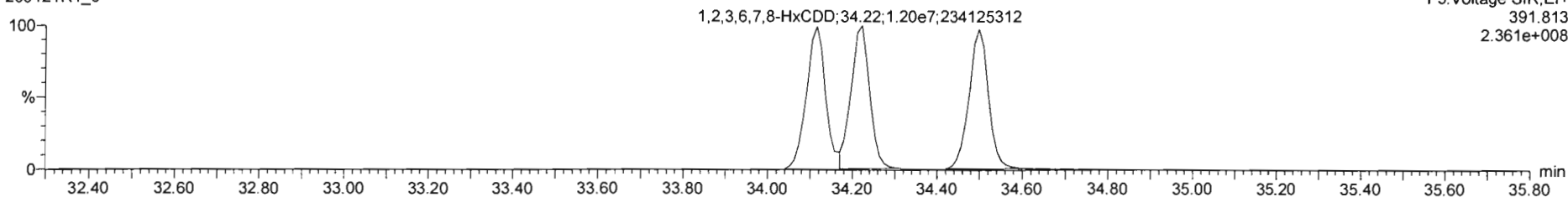
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**1,2,3,4,7,8-HxCDD**

200121R1\_6

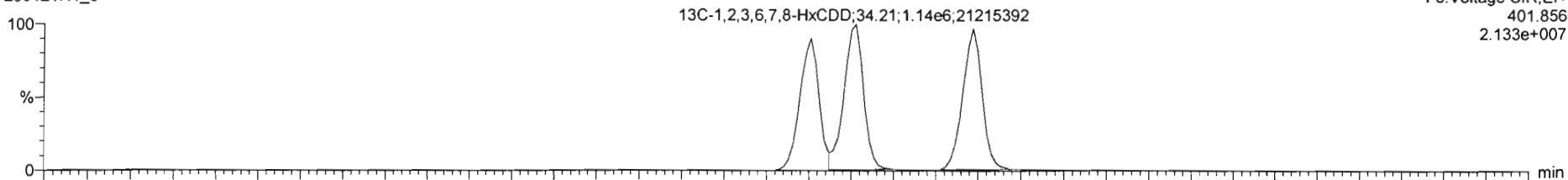


200121R1\_6

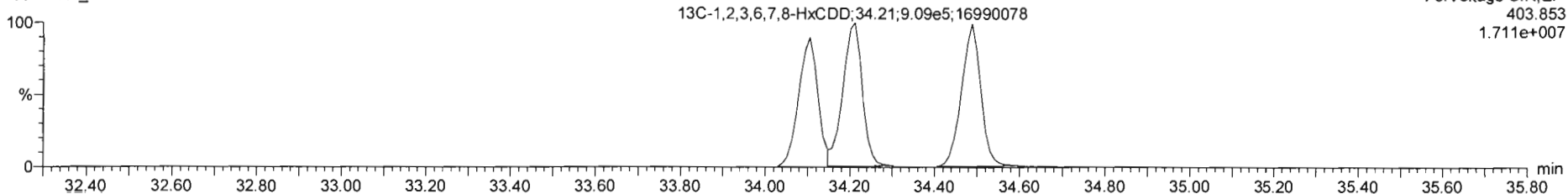


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_6



200121R1\_6



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time

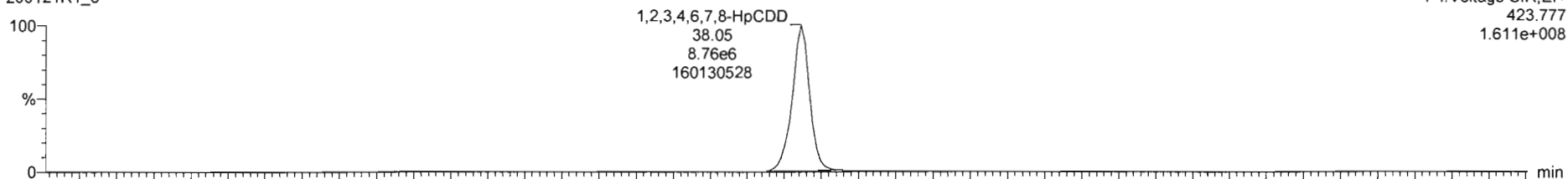
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

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

200121R1\_6

F4:Voltage SIR,EI+

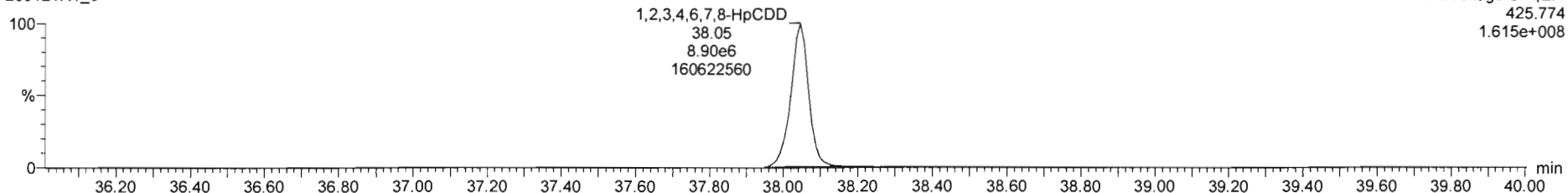


423.777

1.611e+008

200121R1\_6

F4:Voltage SIR,EI+



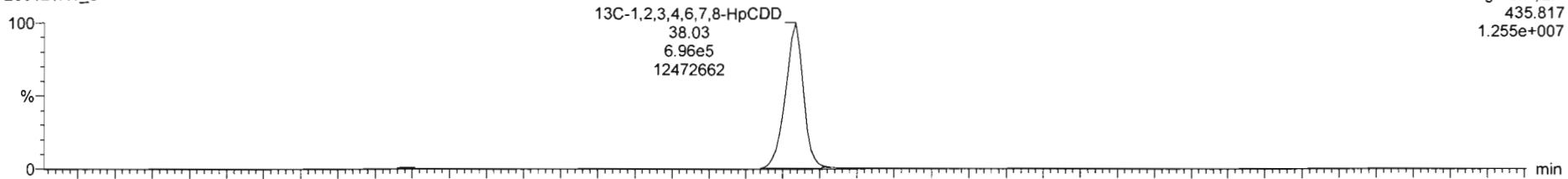
425.774

1.615e+008

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

200121R1\_6

F4:Voltage SIR,EI+

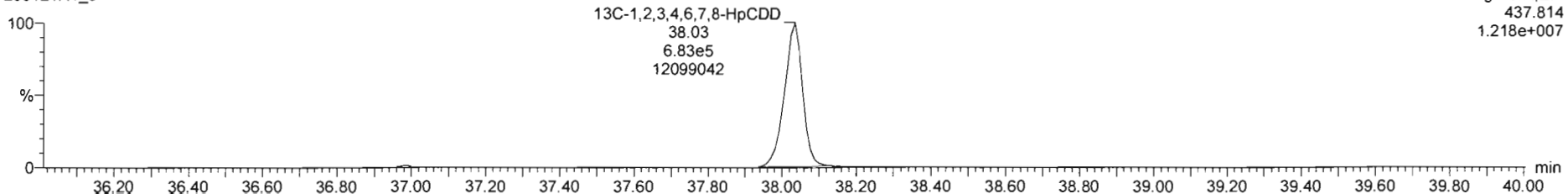


435.817

1.255e+007

200121R1\_6

F4:Voltage SIR,EI+



437.814

1.218e+007

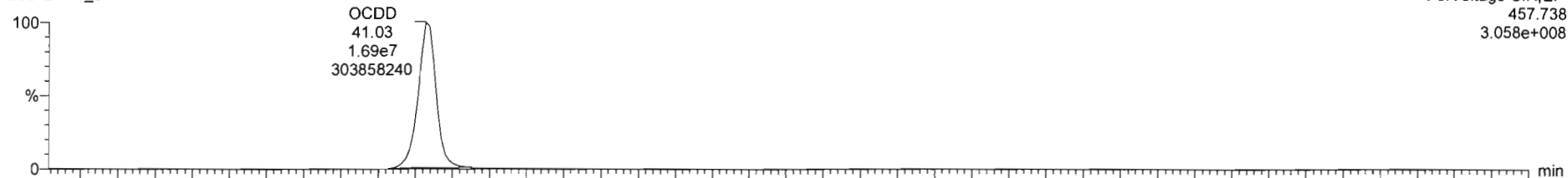
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

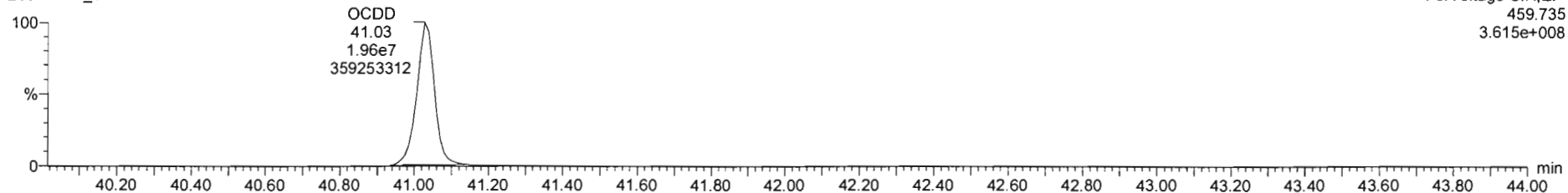
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**OCDD**

200121R1\_6

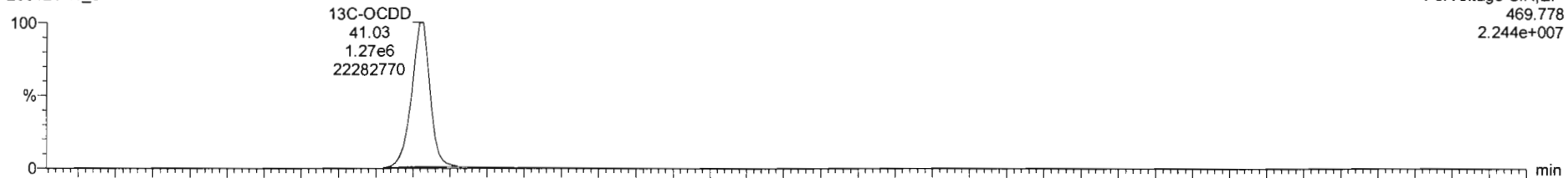


200121R1\_6

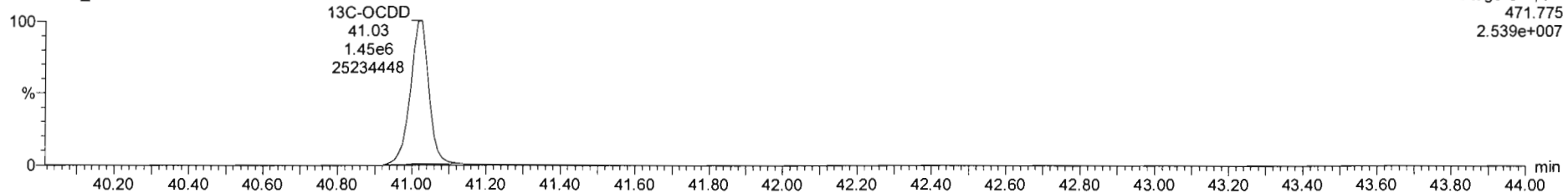


**13C-OCDD**

200121R1\_6



200121R1\_6



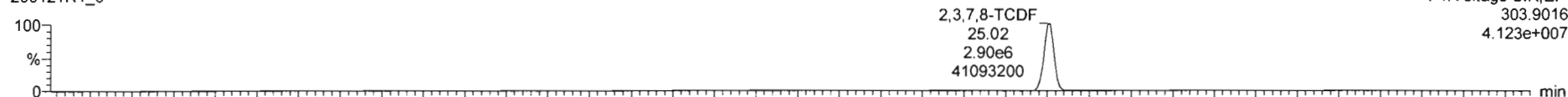
Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

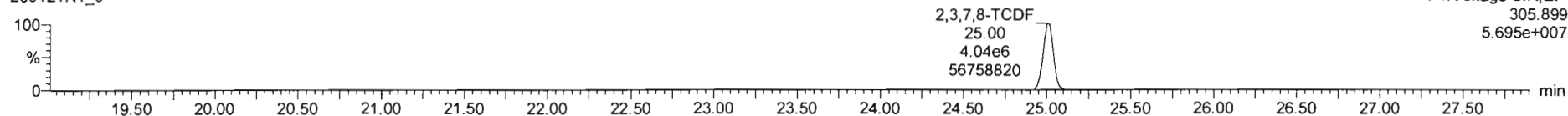
Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

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

200121R1\_6

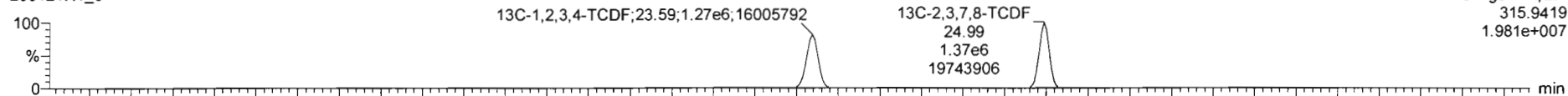


200121R1\_6

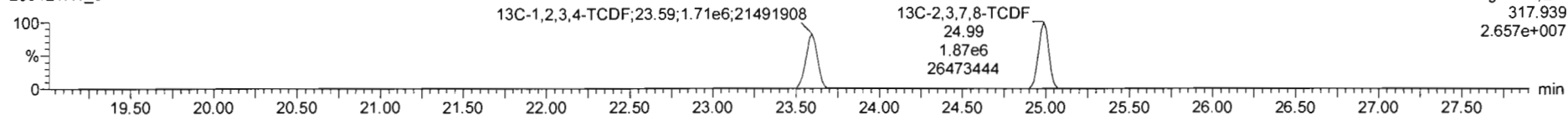


### 13C-2,3,7,8-TCDF

200121R1\_6

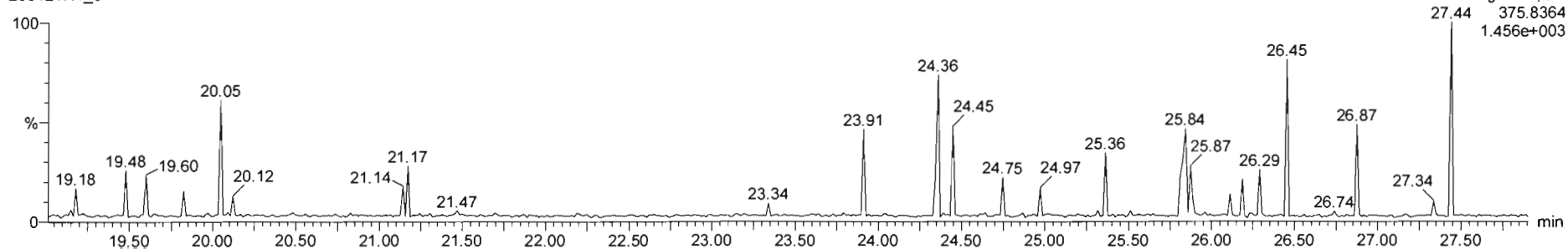


200121R1\_6



### DPE1

200121R1\_6



Dataset: Untitled

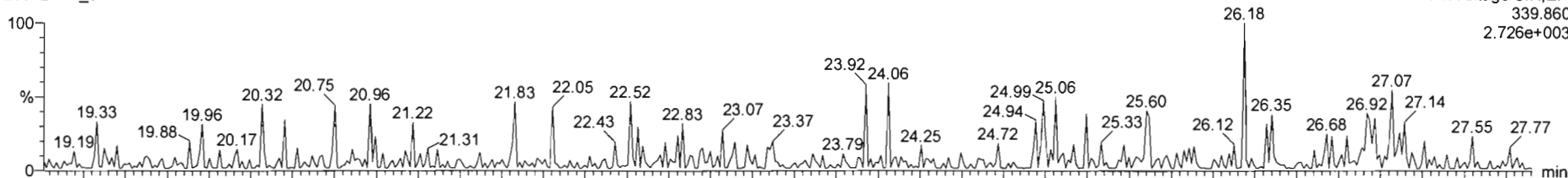
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

1st Func. Penta-Furans

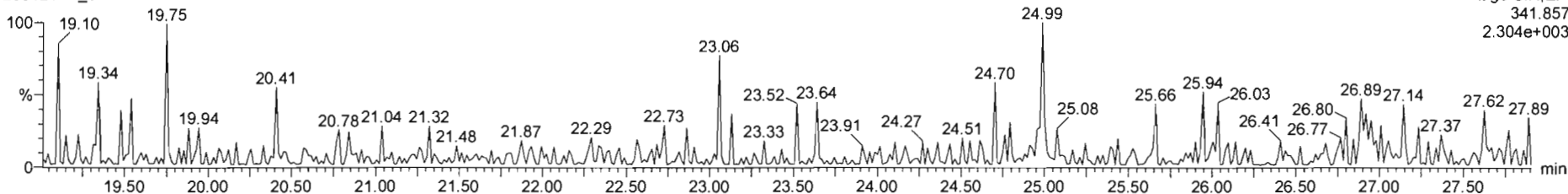
200121R1\_6

F1: Voltage SIR, EI+  
339.860  
2.726e+003



200121R1\_6

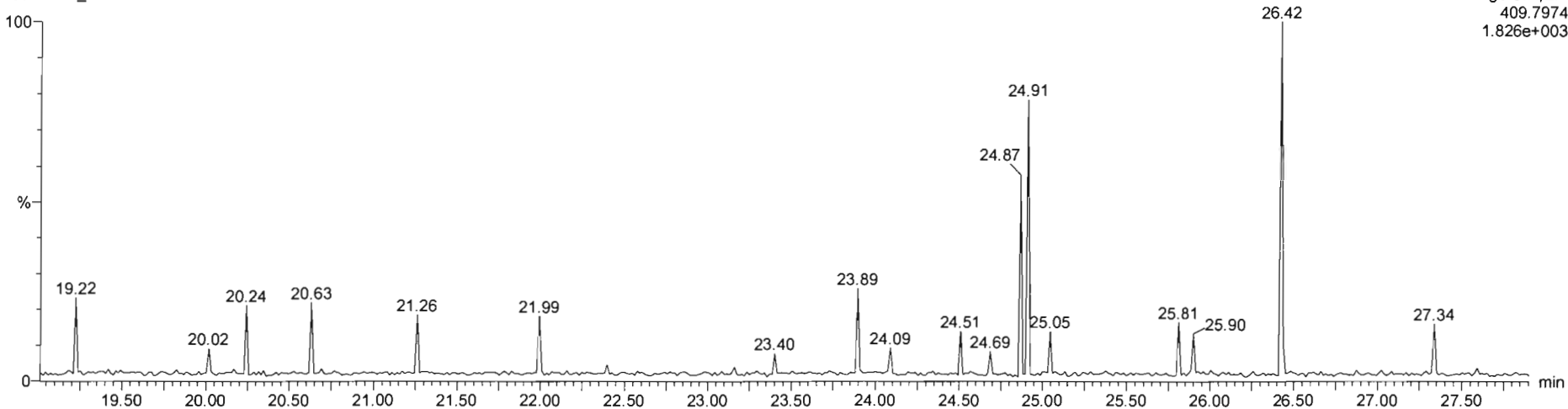
F1: Voltage SIR, EI+  
341.857  
2.304e+003



DPE6

200121R1\_6

F1: Voltage SIR, EI+  
409.794  
1.826e+003



Dataset: Untitled

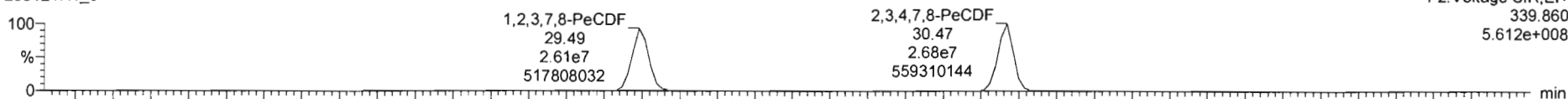
Last Altered: Wednesday, January 22, 2020 09:03:58 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

Name: 200121R1\_6, Date: 21-Jan-2020, Time: 18:06:23, ID: ST200121R1\_6 1613 CS5 19C2206, Description: 1613 CS5 19C2206

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

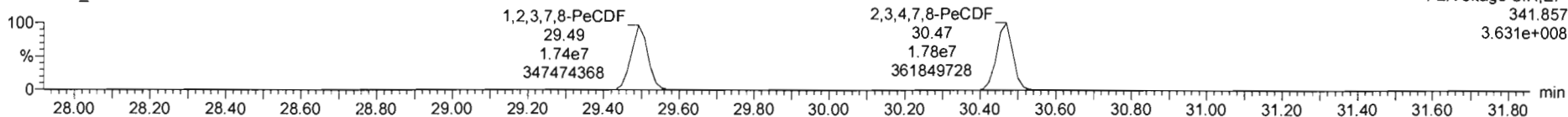
200121R1\_6

F2:Voltage SIR,EI+  
339.860  
5.612e+008



200121R1\_6

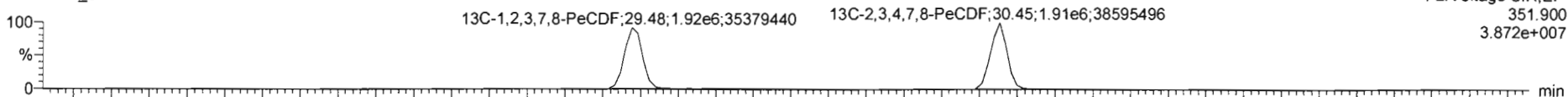
F2:Voltage SIR,EI+  
341.857  
3.631e+008



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

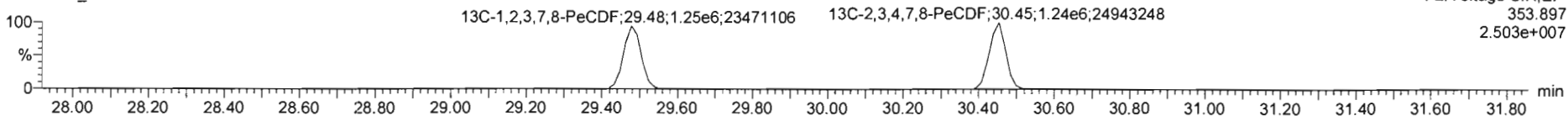
200121R1\_6

F2:Voltage SIR,EI+  
351.900  
3.872e+007



200121R1\_6

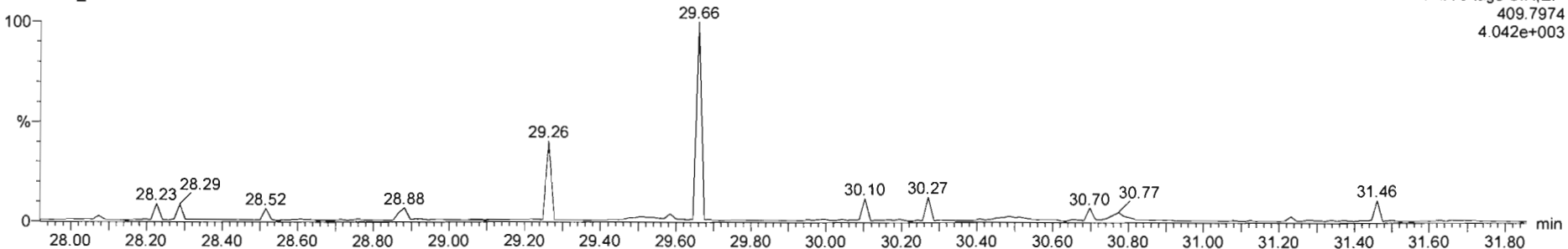
F2:Voltage SIR,EI+  
353.897  
2.503e+007



**DPE2**

200121R1\_6

F2:Voltage SIR,EI+  
409.7974  
4.042e+003



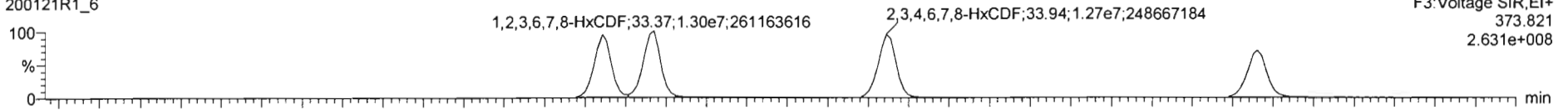
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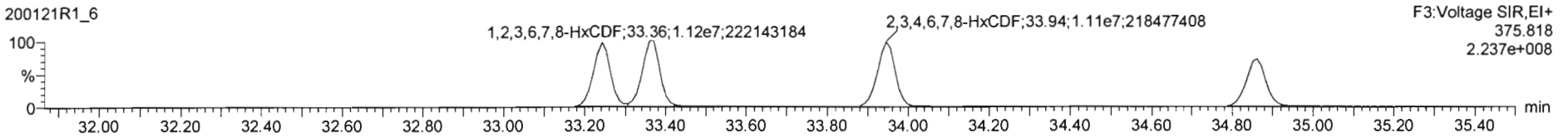
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**1,2,3,4,7,8-HxCDF**

200121R1\_6

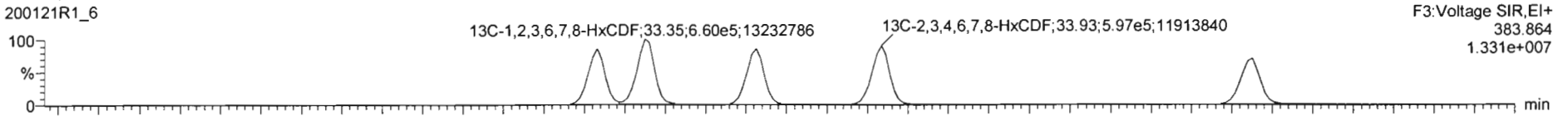


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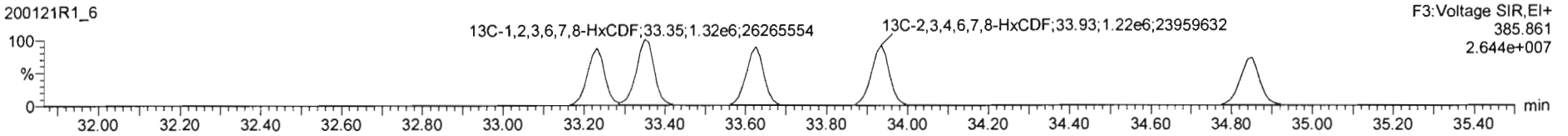


**13C-1,2,3,4,7,8-HxCDF**

200121R1\_6

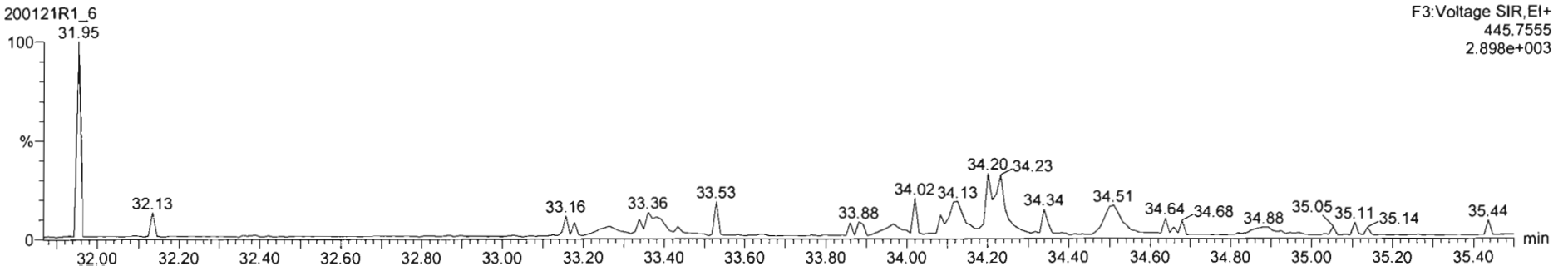


200121R1\_6



**DPE3**

200121R1\_6





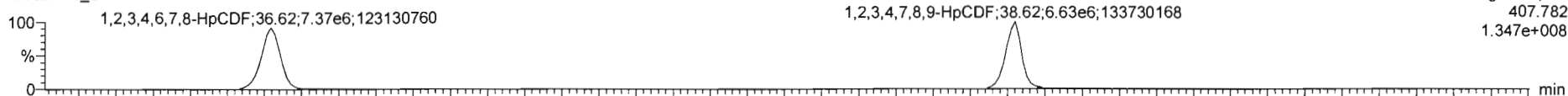
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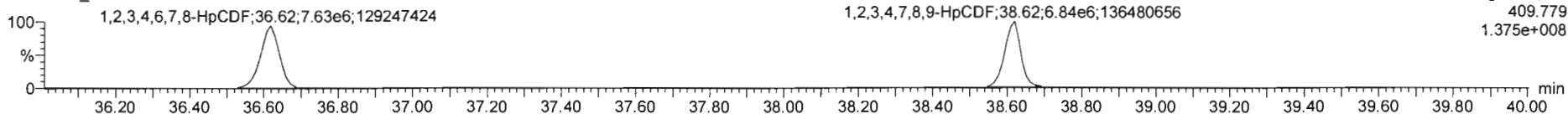
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**1,2,3,4,6,7,8-HpCDF**

200121R1\_6

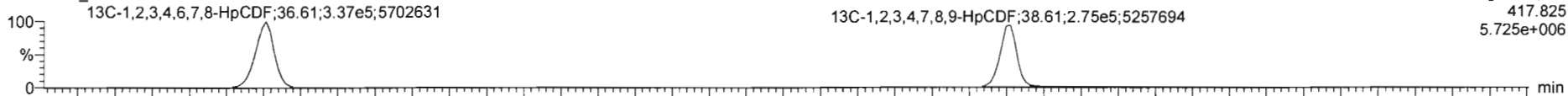


200121R1\_6

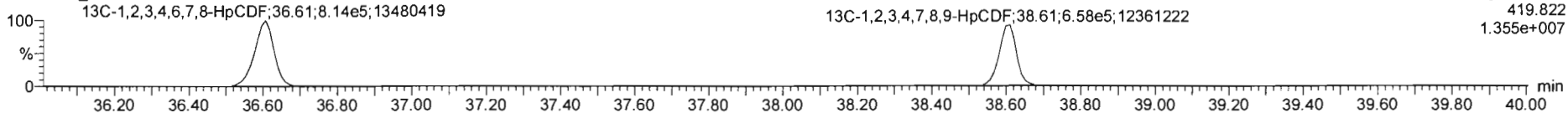


**13C-1,2,3,4,6,7,8-HpCDF**

200121R1\_6

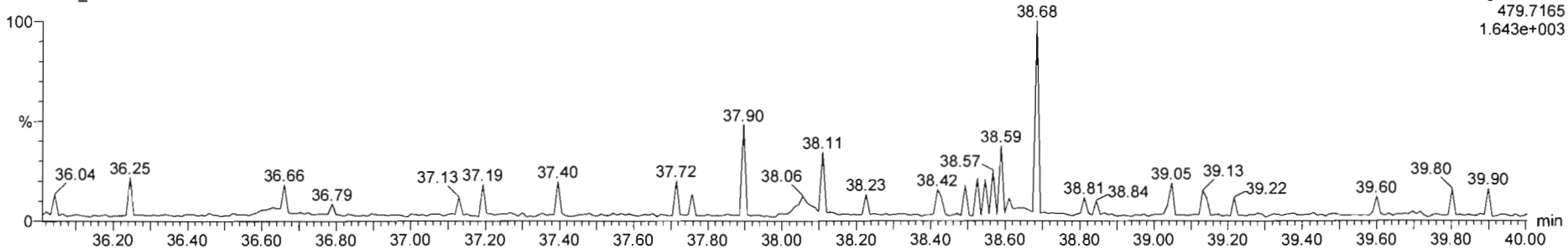


200121R1\_6



**DPE4**

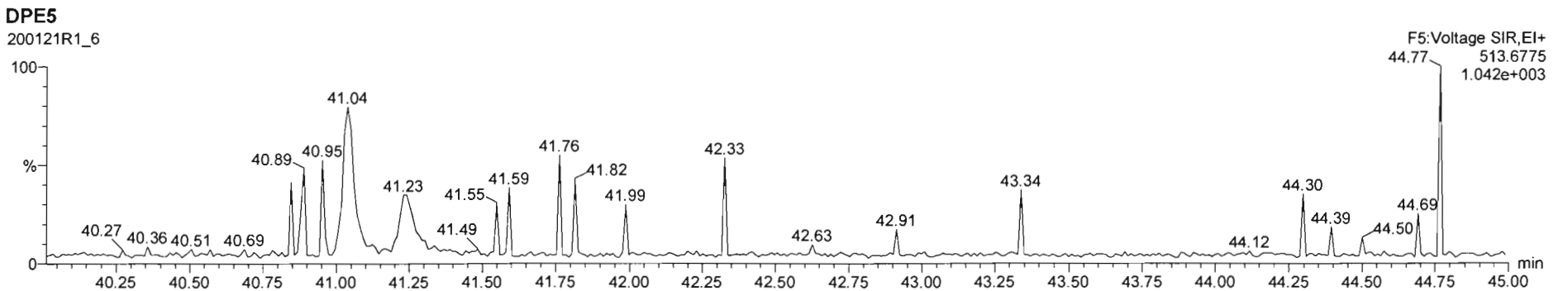
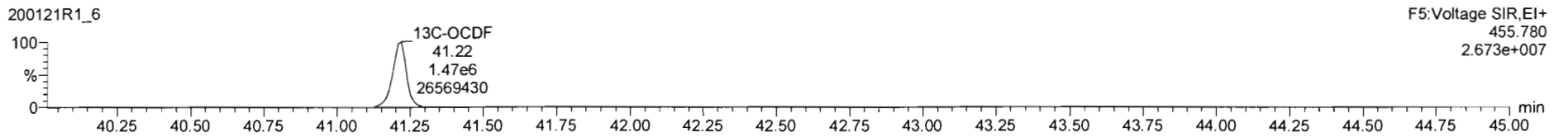
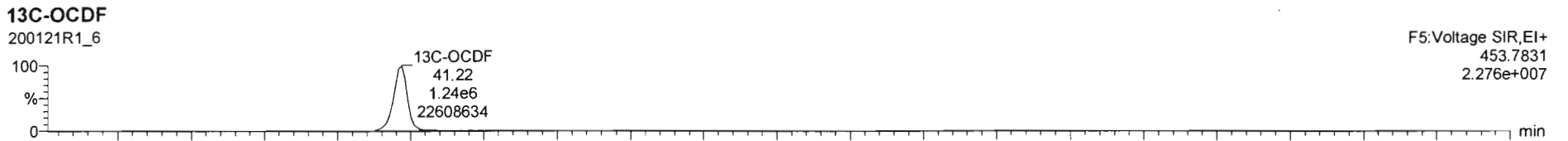
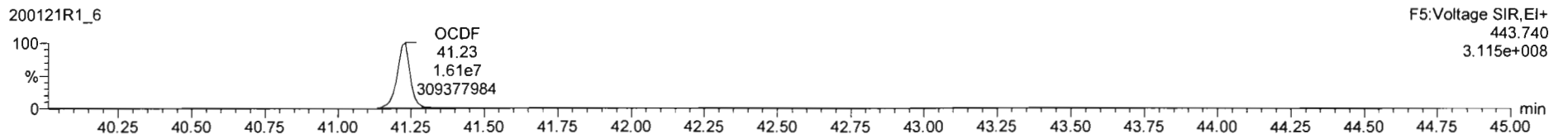
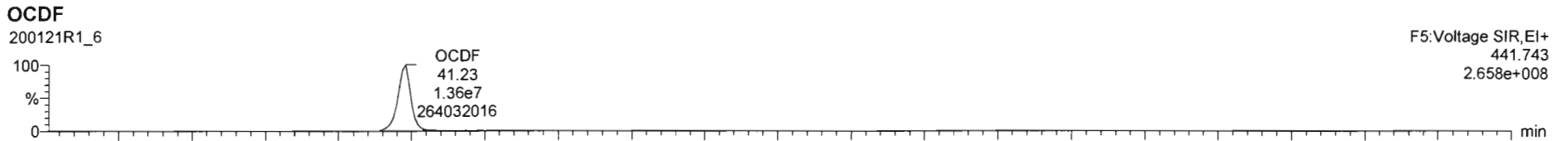
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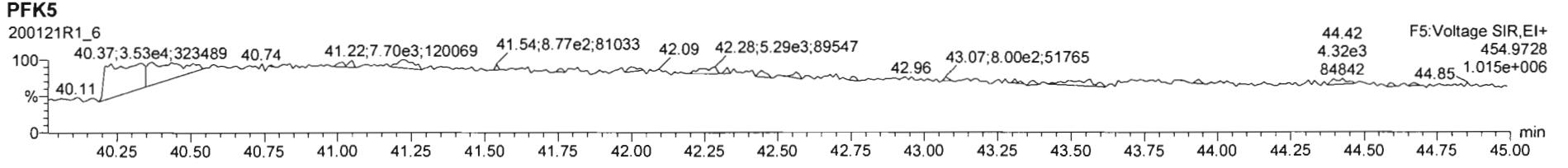
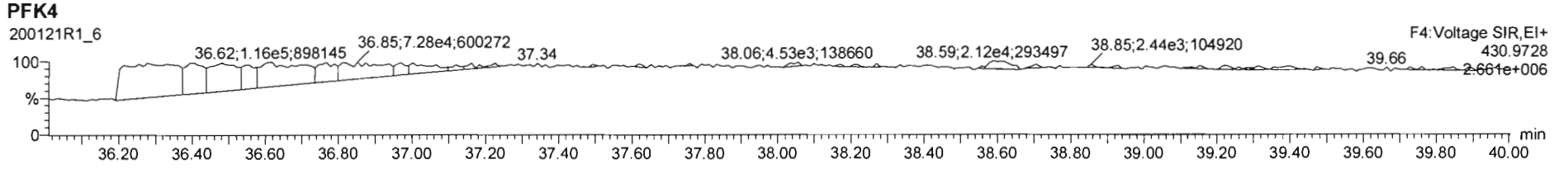
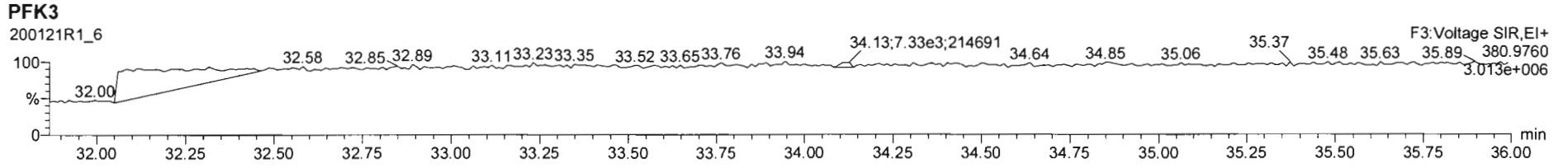
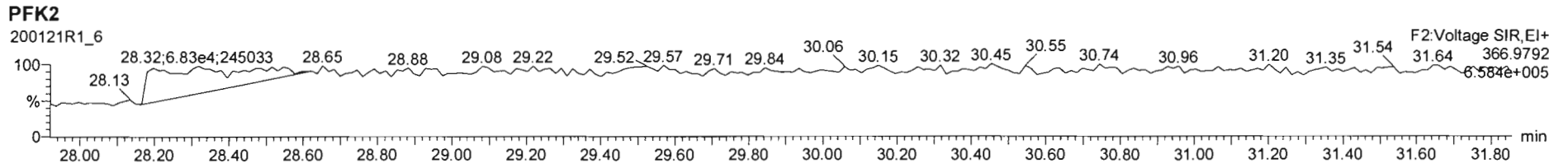
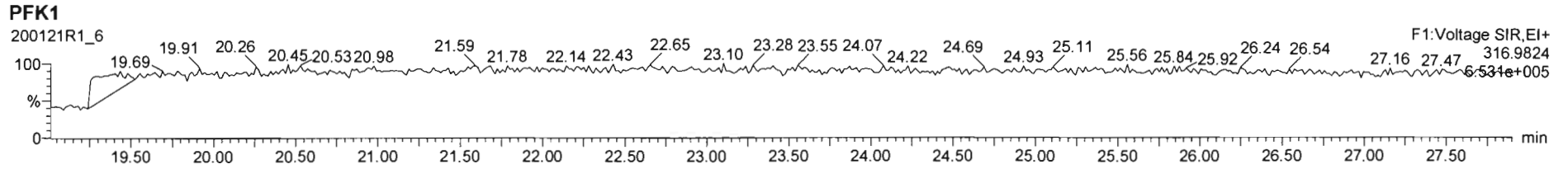


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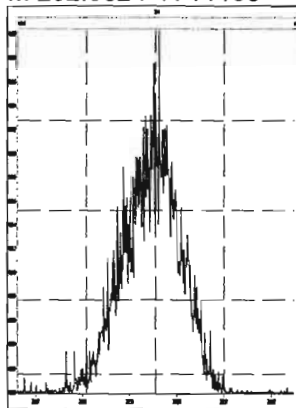
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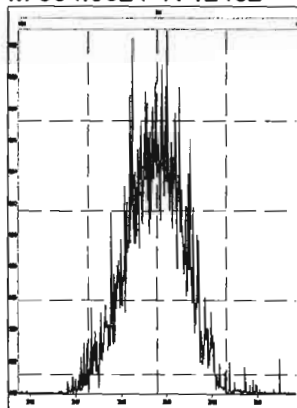
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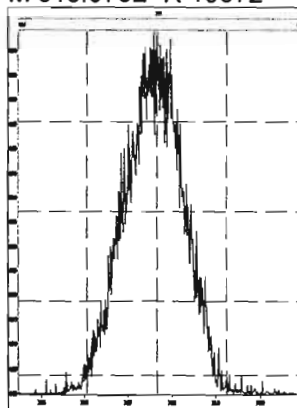
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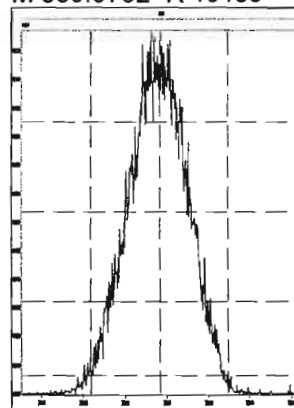
M 304.9824 R 12462



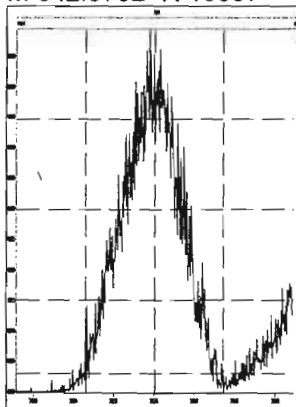
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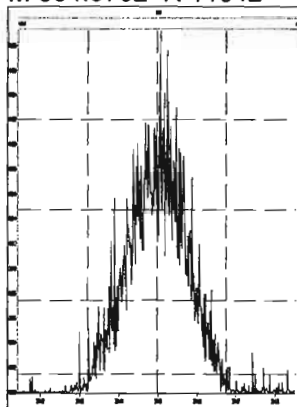
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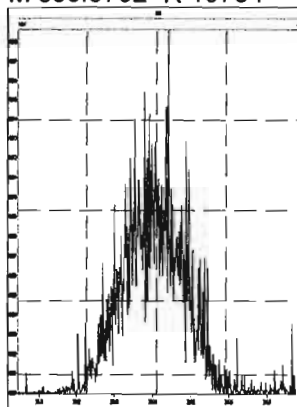
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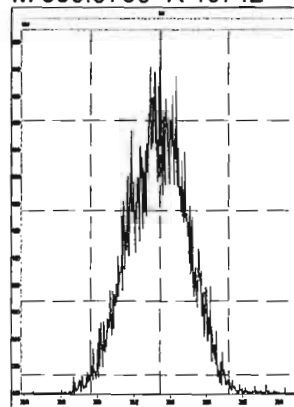
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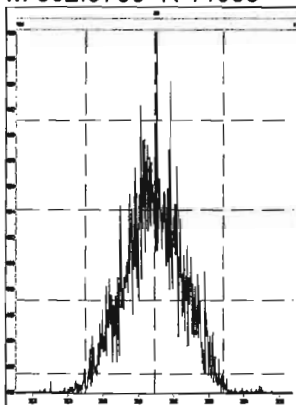
M 366.9792 R 10734



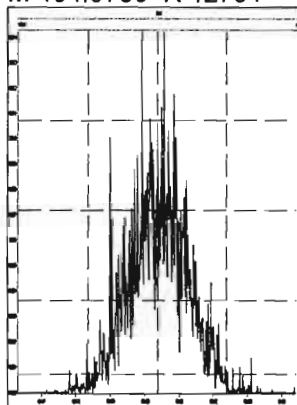
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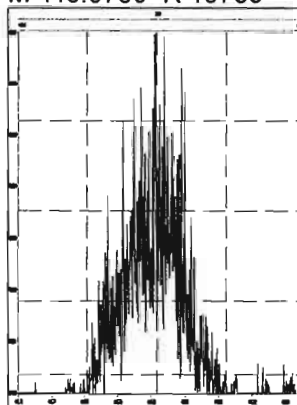
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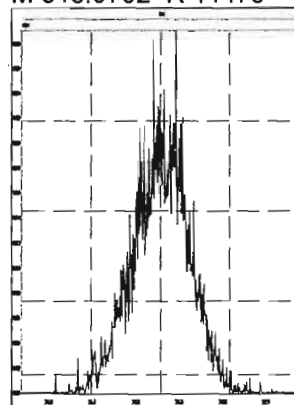
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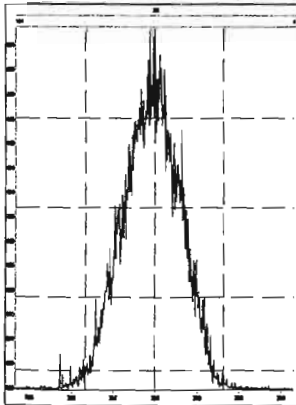
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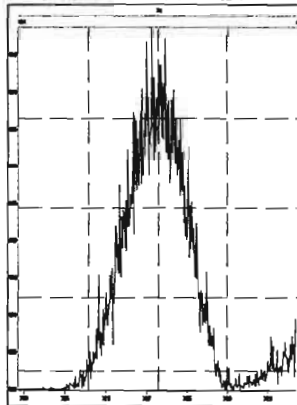
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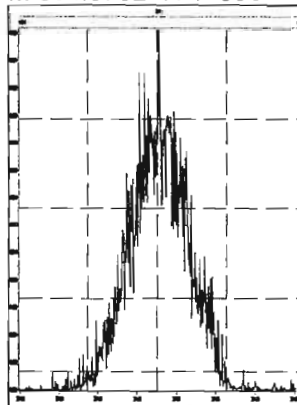
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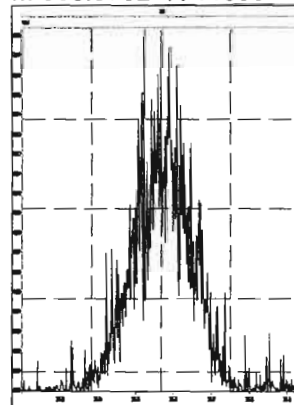
M 342.9792 R 11211



M 354.9792 R 11393

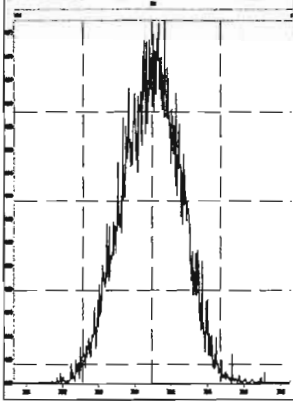


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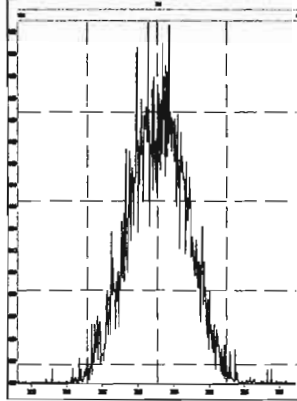


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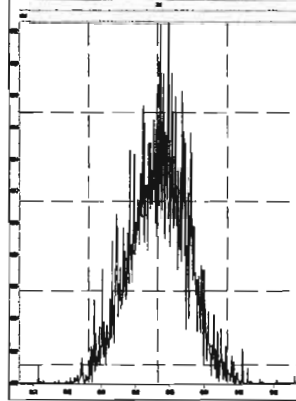
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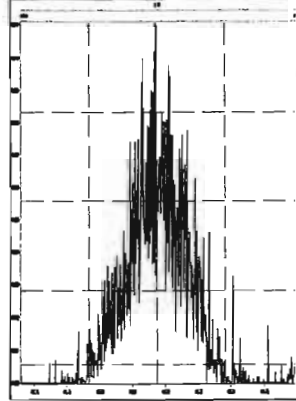
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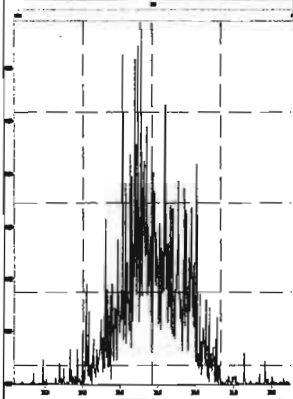
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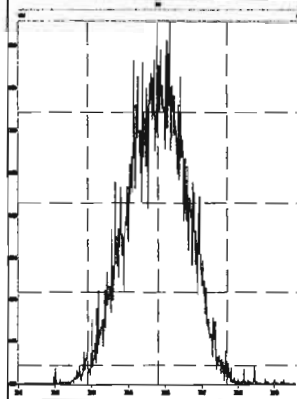
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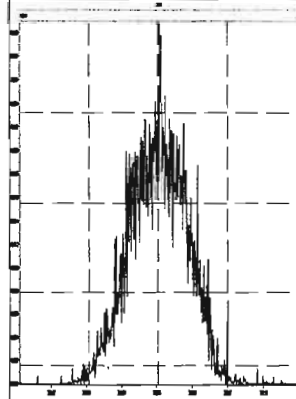
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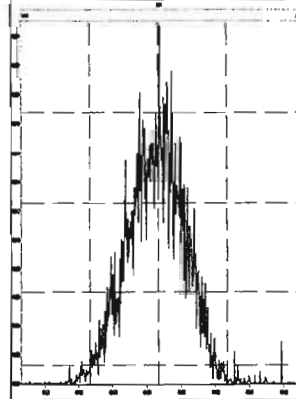
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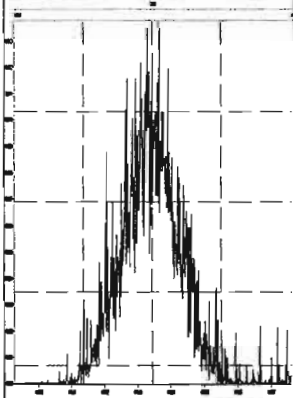
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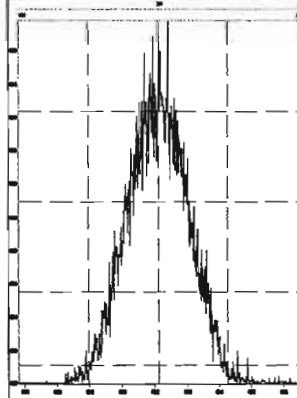
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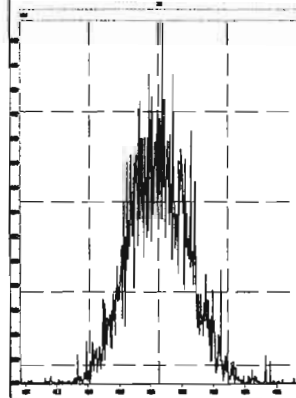
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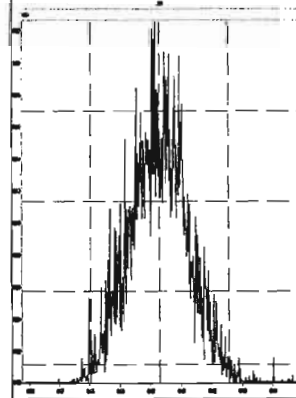
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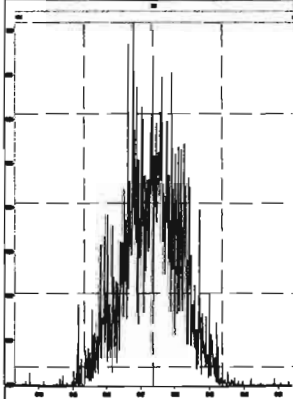
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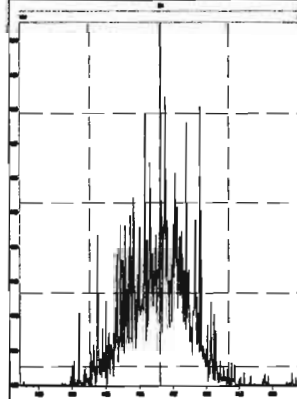
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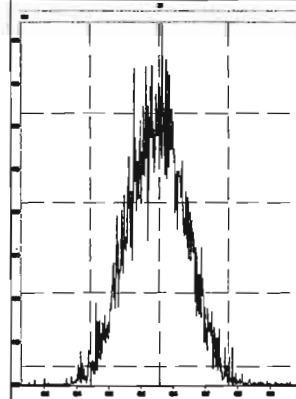
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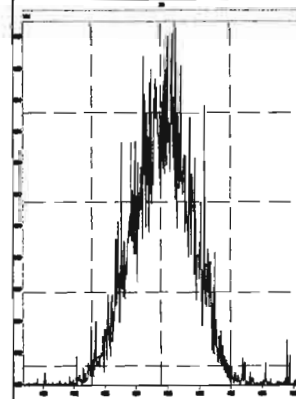
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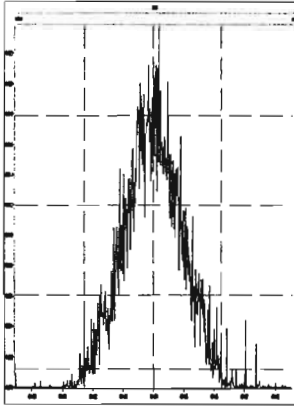


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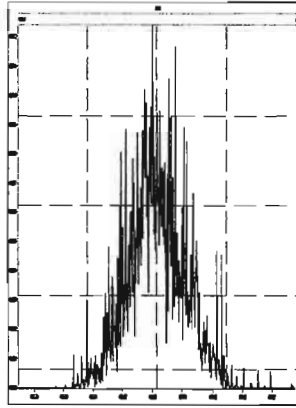


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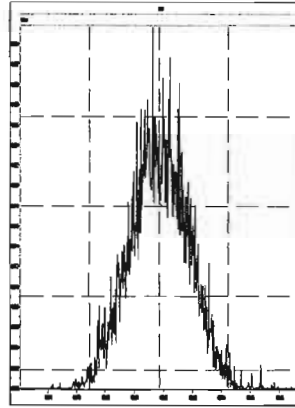
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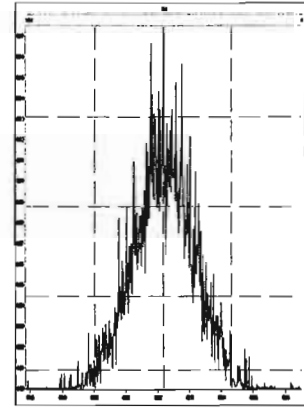
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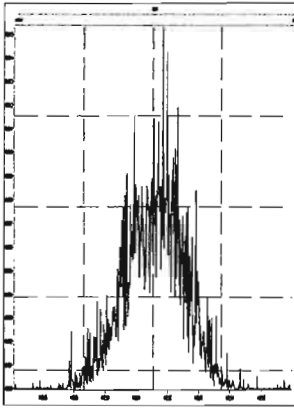
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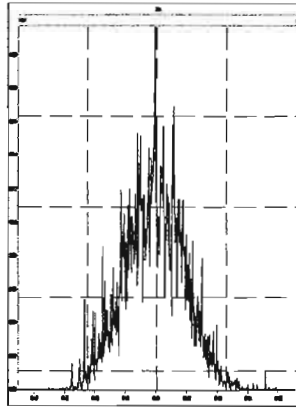
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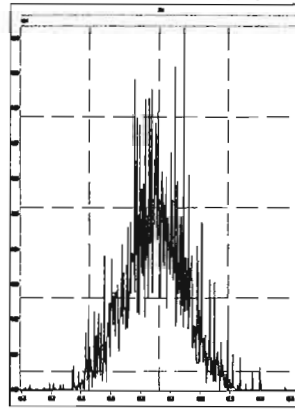
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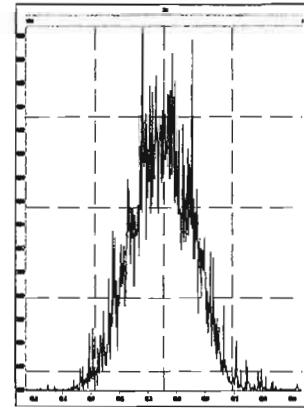
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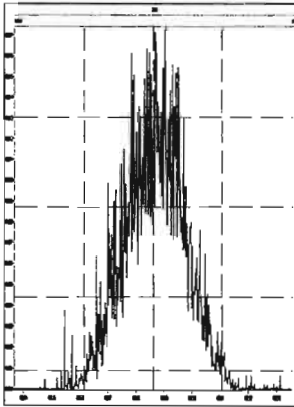
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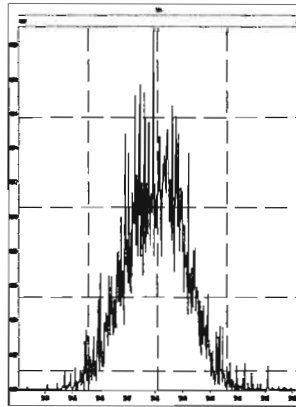
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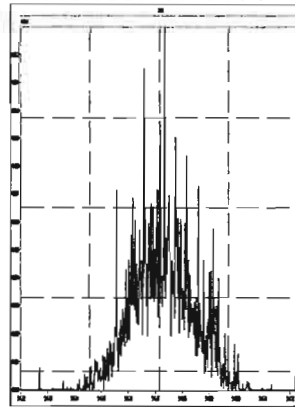
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M 504.9696 R 11062



M 516.9697 R 12334



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Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
Printed: Wednesday, January 22, 2020 10:02:30 Pacific Standard Time

*DB 1/22/20*

*CT 01/22/2020*

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

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#	Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	1.84e5	0.75	NO	0.824	1.000	25.871	25.85	1.001	1.001	10.441	104	0.0185	10.4
2	2 1,2,3,7,8-PeCDD	8.04e5	0.61	NO	0.912	1.000	30.765	30.76	1.001	1.000	53.036	106	0.0418	53.0
3	3 1,2,3,4,7,8-HxCDD	6.31e5	1.22	NO	0.870	1.000	34.093	34.10	1.000	1.001	54.796	110	0.0648	54.8
4	4 1,2,3,6,7,8-HxCDD	6.59e5	1.17	NO	0.784	1.000	34.190	34.21	1.000	1.001	55.282	111	0.0657	55.3
5	5 1,2,3,7,8,9-HxCDD	6.26e5	1.21	NO	0.798	1.000	34.512	34.49	1.001	1.000	54.538	109	0.0692	54.5
6	6 1,2,3,4,6,7,8-HpCDD	4.01e5	1.00	NO	0.737	1.000	38.025	38.03	1.000	1.001	54.358	109	0.0994	54.4
7	7 OCDD	7.82e5	0.85	NO	0.800	1.000	40.995	41.01	1.000	1.000	107.95	108	0.0650	108
8	8 2,3,7,8-TCDF	1.73e5	0.70	NO	0.588	1.000	24.997	24.99	1.001	1.001	10.947	109	0.0219	10.9
9	9 1,2,3,7,8-PeCDF	1.07e6	1.51	NO	0.826	1.000	29.482	29.48	1.001	1.001	52.282	105	0.0451	52.3
10	10 2,3,4,7,8-PeCDF	1.24e6	1.51	NO	0.850	1.000	30.469	30.45	1.001	1.001	59.189	118	0.0427	59.2
11	11 1,2,3,4,7,8-HxCDF	5.59e5	1.16	NO	0.787	1.000	33.221	33.23	1.000	1.000	57.856	116	0.0767	57.9
12	12 1,2,3,6,7,8-HxCDF	6.25e5	1.16	NO	0.720	1.000	33.348	33.35	1.000	1.000	57.011	114	0.0670	57.0
13	13 2,3,4,6,7,8-HxCDF	5.73e5	1.16	NO	0.766	1.000	33.957	33.93	1.001	1.000	54.935	110	0.0772	54.9
14	14 1,2,3,7,8,9-HxCDF	4.61e5	1.16	NO	0.709	1.000	34.829	34.85	1.000	1.001	55.318	111	0.105	55.3
15	15 1,2,3,4,6,7,8-HpCDF	3.69e5	0.96	NO	0.732	1.000	36.623	36.60	1.001	1.000	57.559	115	0.0892	57.6
16	16 1,2,3,4,7,8,9-HpCDF	2.89e5	0.99	NO	0.816	1.000	38.588	38.60	1.000	1.000	56.845	114	0.0888	56.8
17	17 OCDF	6.31e5	0.84	NO	0.639	1.000	41.187	41.20	1.000	1.000	110.02	110	0.0530	110
18	18 13C-2,3,7,8-TCDD	2.14e6	0.78	NO	1.12	1.000	25.844	25.84	1.026	1.026	99.587	99.6	0.0478	
19	19 13C-1,2,3,7,8-PeCDD	1.66e6	0.63	NO	0.841	1.000	30.614	30.74	1.215	1.220	102.80	103	0.0733	
20	20 13C-1,2,3,4,7,8-HxCDD	1.32e6	1.26	NO	0.938	1.000	34.085	34.08	1.014	1.014	94.308	94.3	0.0822	
21	21 13C-1,2,3,6,7,8-HxCDD	1.52e6	1.26	NO	1.07	1.000	34.186	34.19	1.017	1.017	95.435	95.4	0.0724	
22	22 13C-1,2,3,7,8,9-HxCDD	1.44e6	1.22	NO	1.03	1.000	34.488	34.48	1.026	1.026	93.258	93.3	0.0748	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.00e6	1.03	NO	0.710	1.000	38.052	38.01	1.132	1.131	94.380	94.4	0.121	
24	24 13C-OCDD	1.81e6	0.86	NO	0.601	1.000	40.942	41.00	1.218	1.220	201.46	101	0.123	
25	25 13C-2,3,7,8-TCDF	2.69e6	0.74	NO	1.04	1.000	25.020	24.97	0.993	0.991	99.034	99.0	0.0546	
26	26 13C-1,2,3,7,8-PeCDF	2.49e6	1.54	NO	0.917	1.000	29.379	29.46	1.166	1.169	103.45	103	0.0973	
27	27 13C-2,3,4,7,8-PeCDF	2.47e6	1.53	NO	0.903	1.000	30.336	30.44	1.204	1.208	104.43	104	0.0989	
28	28 13C-1,2,3,4,7,8-HxCDF	1.23e6	0.50	NO	0.861	1.000	33.211	33.22	0.988	0.988	95.295	95.3	0.128	
29	29 13C-1,2,3,6,7,8-HxCDF	1.52e6	0.50	NO	1.05	1.000	33.312	33.34	0.991	0.992	97.190	97.2	0.105	
30	30 13C-2,3,4,6,7,8-HxCDF	1.36e6	0.49	NO	0.946	1.000	33.920	33.92	1.009	1.009	96.243	96.2	0.116	
31	31 13C-1,2,3,7,8,9-HxCDF	1.18e6	0.50	NO	0.816	1.000	34.825	34.83	1.036	1.036	96.448	96.4	0.135	

Dataset: U:\VG12.PRO\Results\200121R1\200121R1\_SSS.qld

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Printed: Wednesday, January 22, 2020 10:02:30 Pacific Standard Time

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	8.76e5	0.41	NO	0.589	1.000	36.573	36.59	1.088	1.088	99.376	99.4	0.141	
33	33 13C-1,2,3,4,7,8,9-HpCDF	6.24e5	0.41	NO	0.448	1.000	38.589	38.59	1.148	1.148	93.096	93.1	0.186	
34	34 13C-OCDF	1.80e6	0.85	NO	0.586	1.000	41.178	41.19	1.225	1.225	205.10	103	0.0864	
35	35 37Cl-2,3,7,8-TCDD	2.15e5			1.09	1.000	25.877	25.85	1.027	1.026	10.281	103	0.0115	
36	36 13C-1,2,3,4-TCDD	1.92e6	0.81	NO	1.00	1.000	25.260	25.20	1.000	1.000	100.00	100	0.0534	
37	37 13C-1,2,3,4-TCDF	2.62e6	0.74	NO	1.00	1.000	23.860	23.57	1.000	1.000	100.00	100	0.0566	
38	38 13C-1,2,3,4,6,9-HxCDF	1.50e6	0.49	NO	1.00	1.000	33.590	33.61	1.000	1.000	100.00	100	0.110	



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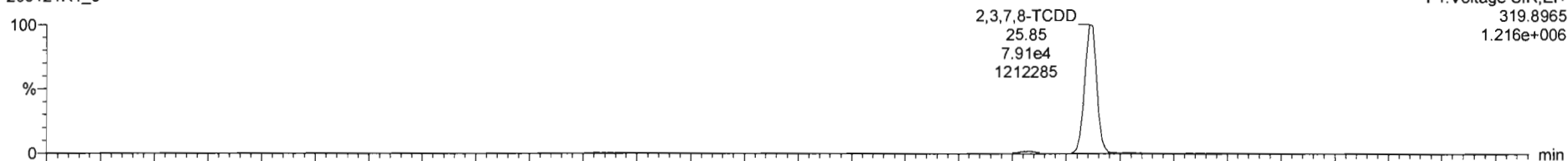
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Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

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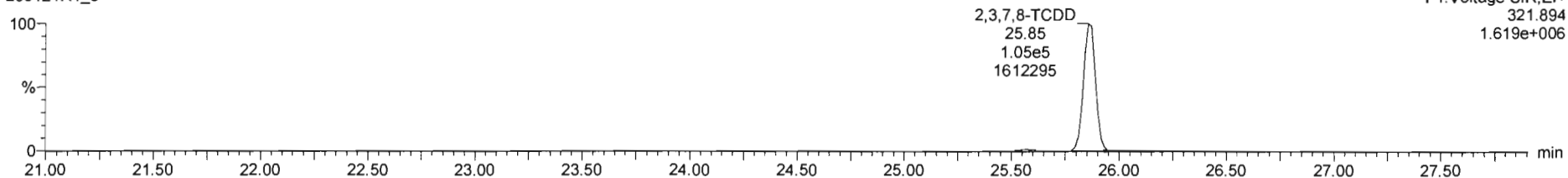
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**2,3,7,8-TCDD**

200121R1\_8

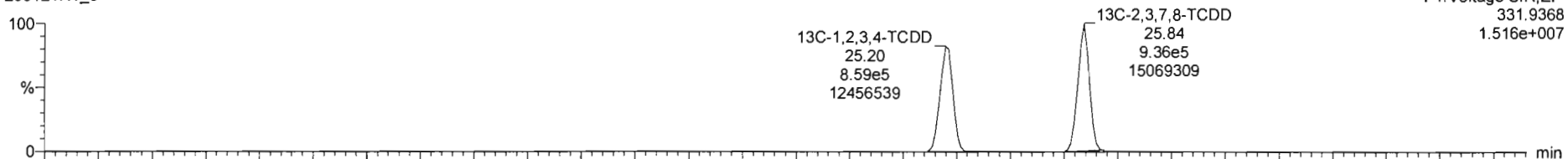


200121R1\_8

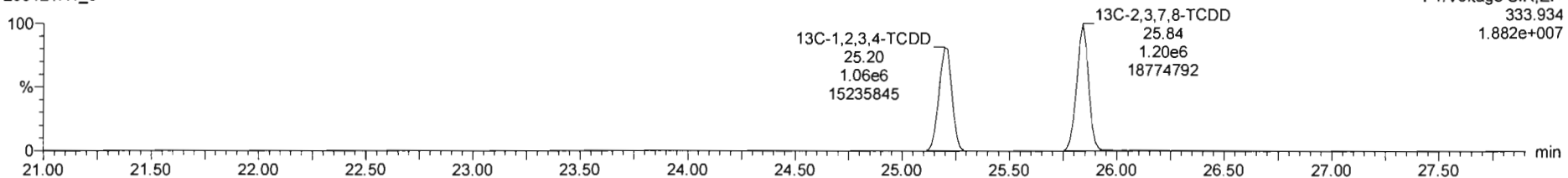


**13C-2,3,7,8-TCDD**

200121R1\_8



200121R1\_8



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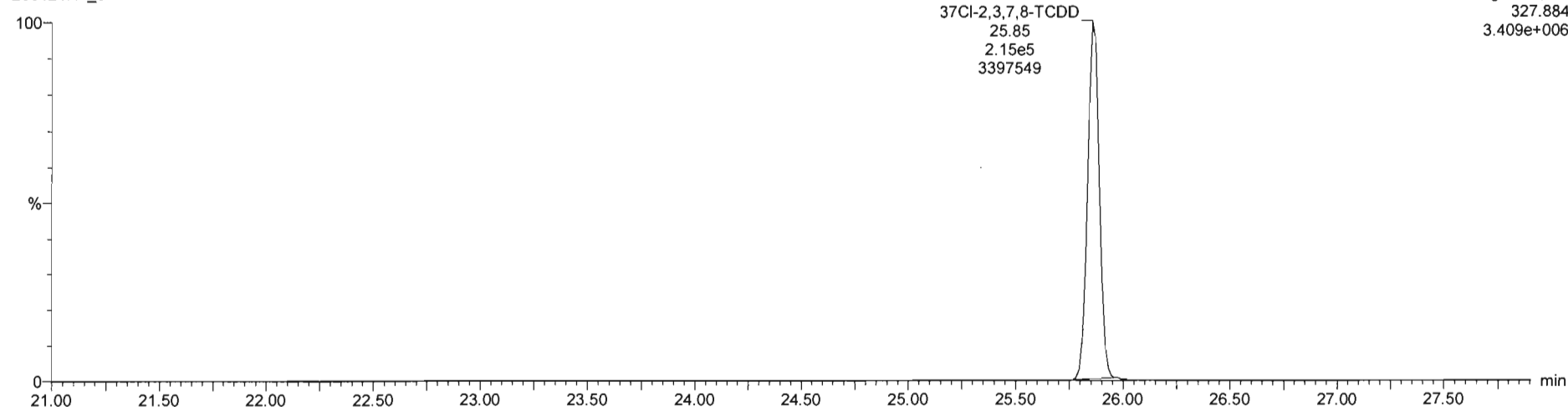
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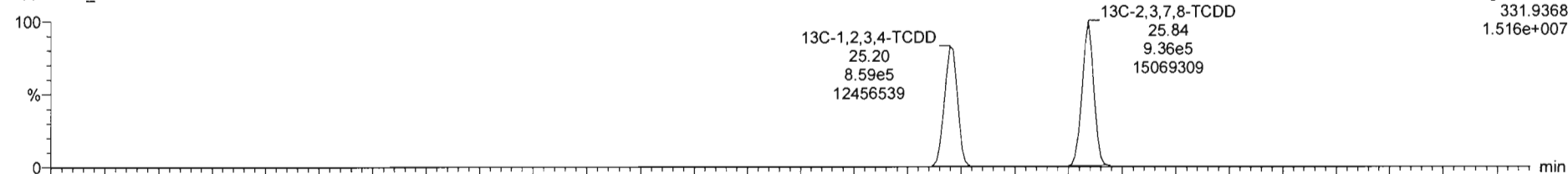
**37Cl-2,3,7,8-TCDD**

200121R1\_8

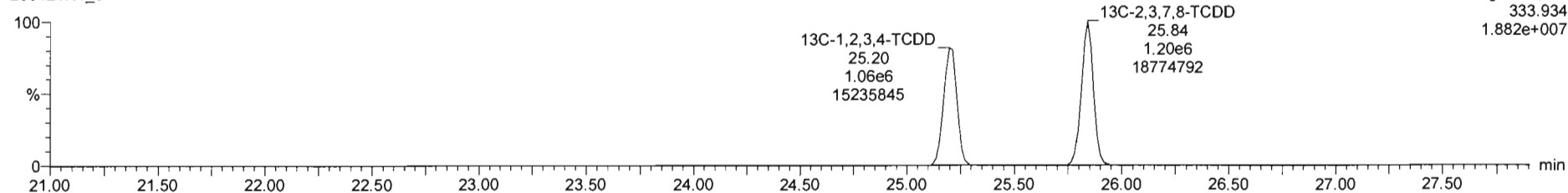


**13C-1,2,3,4-TCDD**

200121R1\_8



200121R1\_8



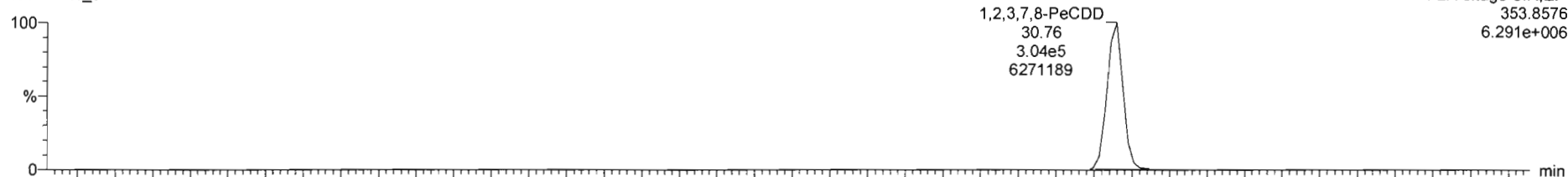
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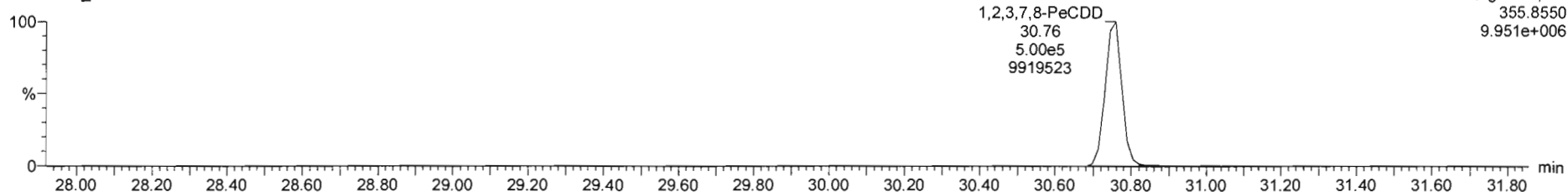
**1,2,3,7,8-PeCDD**

200121R1\_8



F2: Voltage SIR, EI+  
353.8576  
6.291e+006

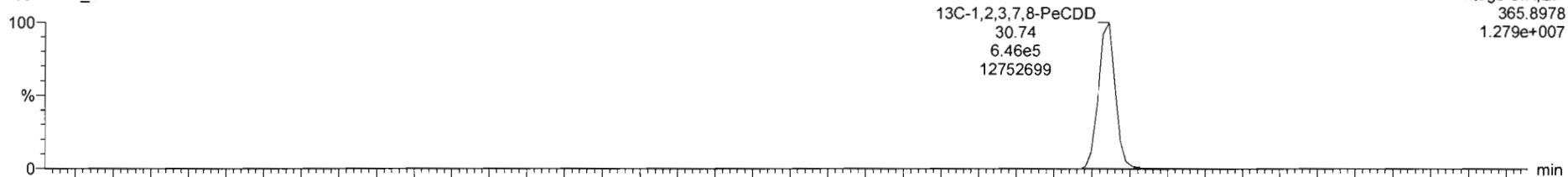
200121R1\_8



F2: Voltage SIR, EI+  
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9.951e+006

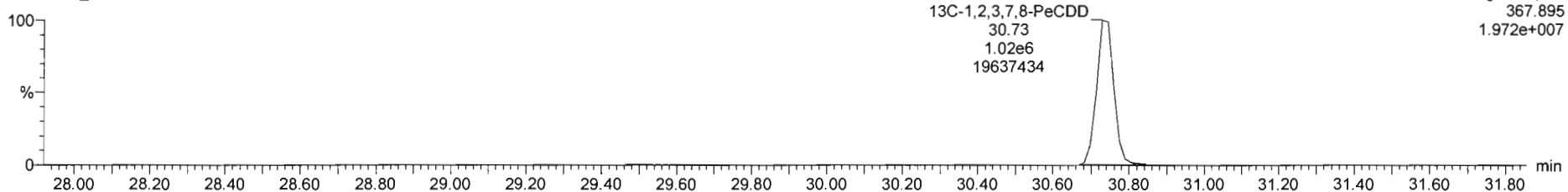
**13C-1,2,3,7,8-PeCDD**

200121R1\_8



F2: Voltage SIR, EI+  
365.8978  
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200121R1\_8



F2: Voltage SIR, EI+  
367.895  
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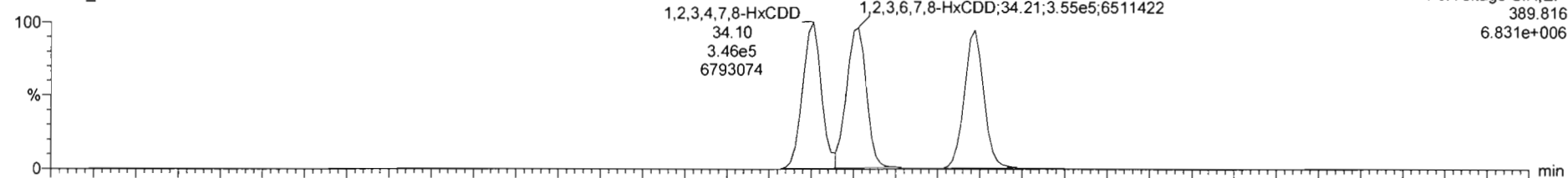
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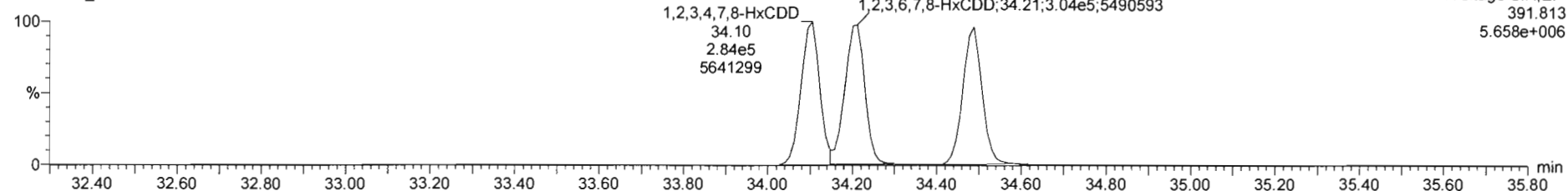
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**1,2,3,4,7,8-HxCDD**

200121R1\_8

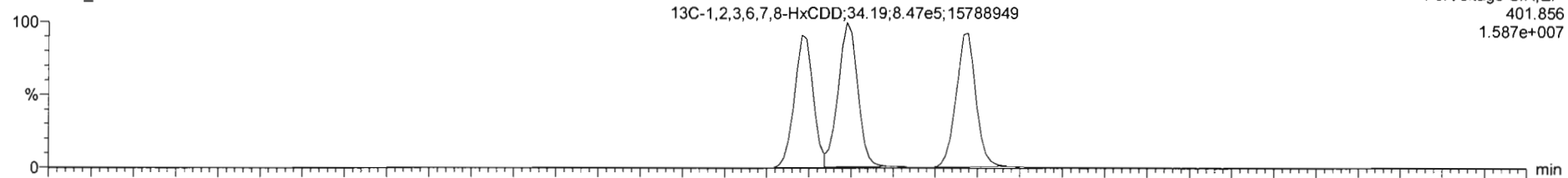


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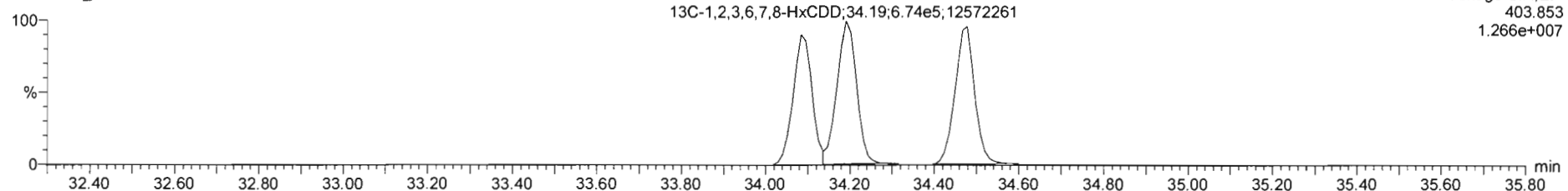


**13C-1,2,3,4,7,8-HxCDD**

200121R1\_8



200121R1\_8



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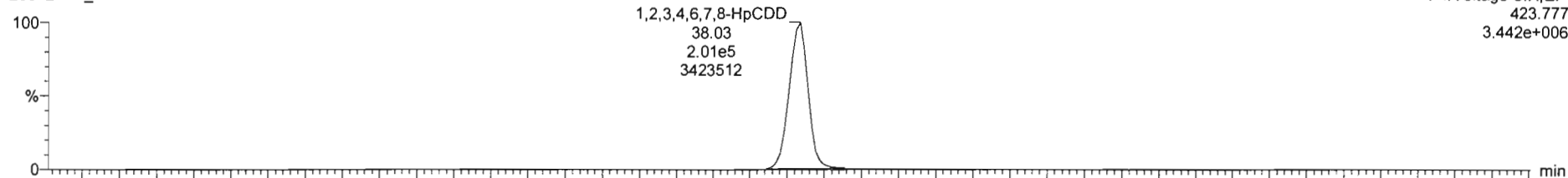
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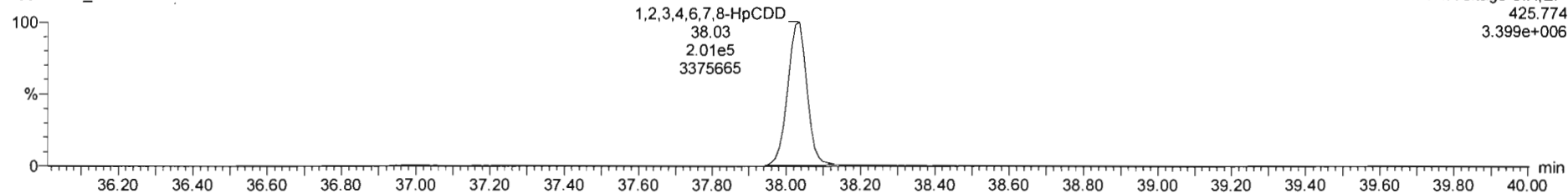
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**1,2,3,4,6,7,8-HpCDD**

200121R1\_8

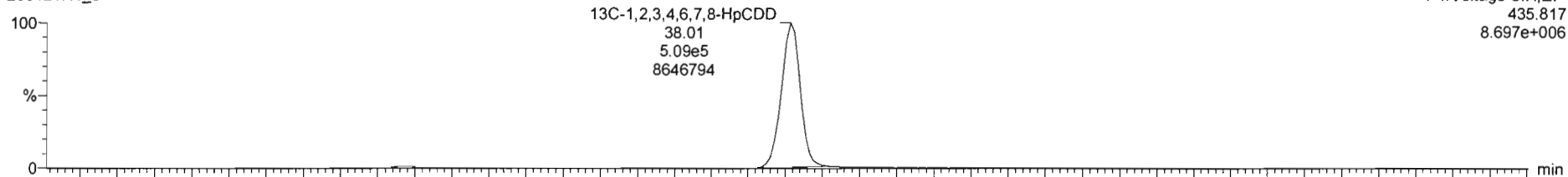


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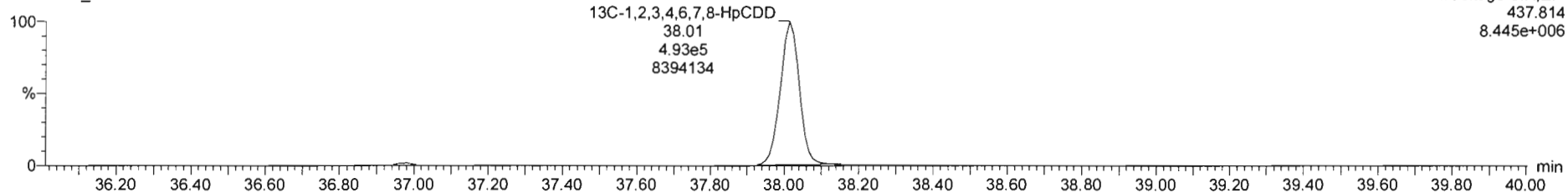


**13C-1,2,3,4,6,7,8-HpCDD**

200121R1\_8



200121R1\_8

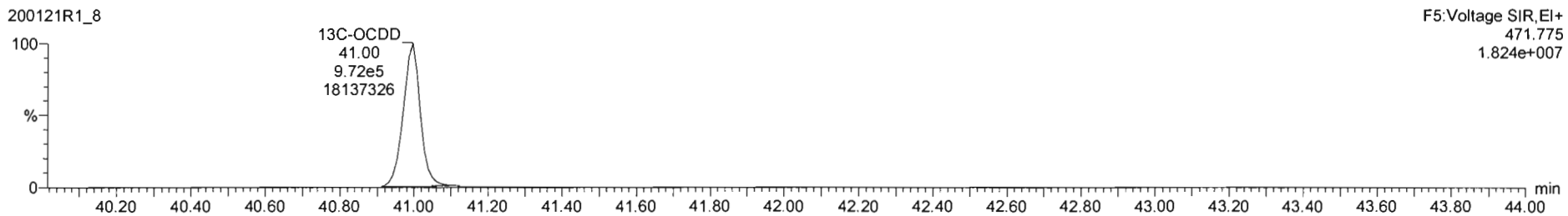
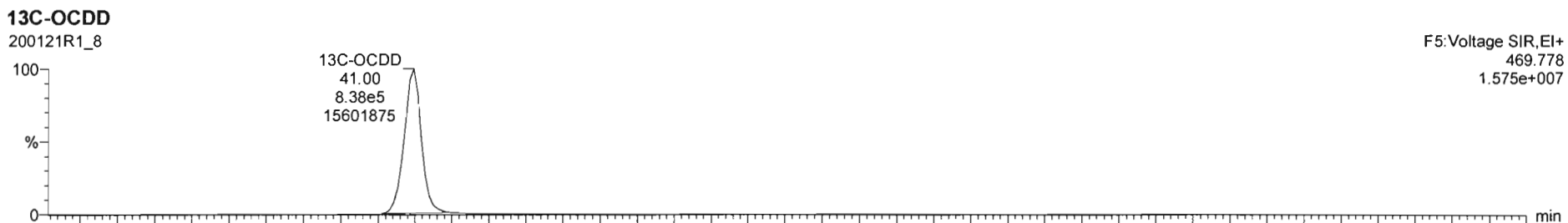
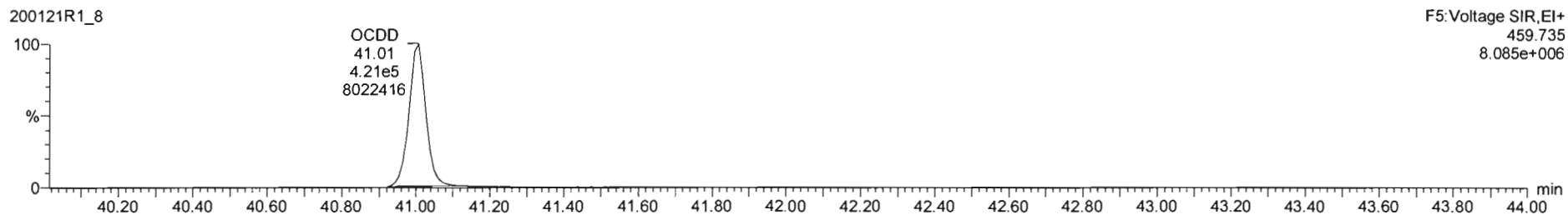
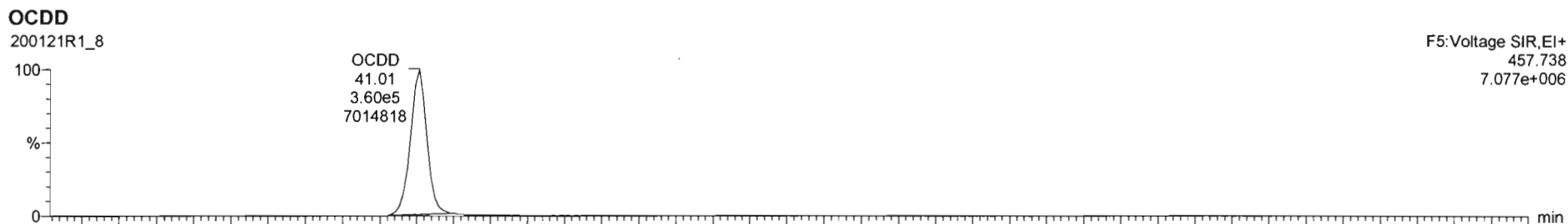


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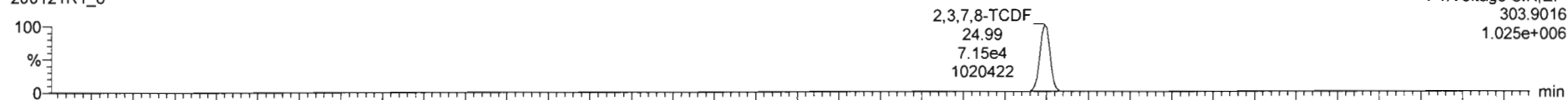
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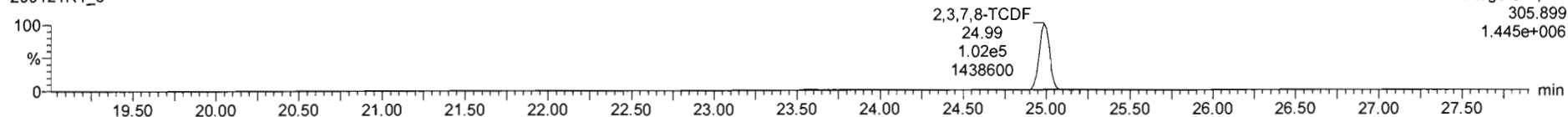
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**2,3,7,8-TCDF**

200121R1\_8

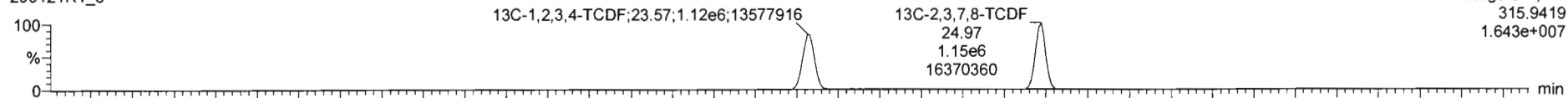


200121R1\_8

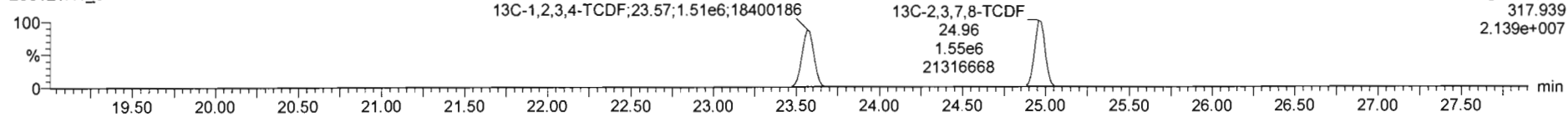


**13C-2,3,7,8-TCDF**

200121R1\_8

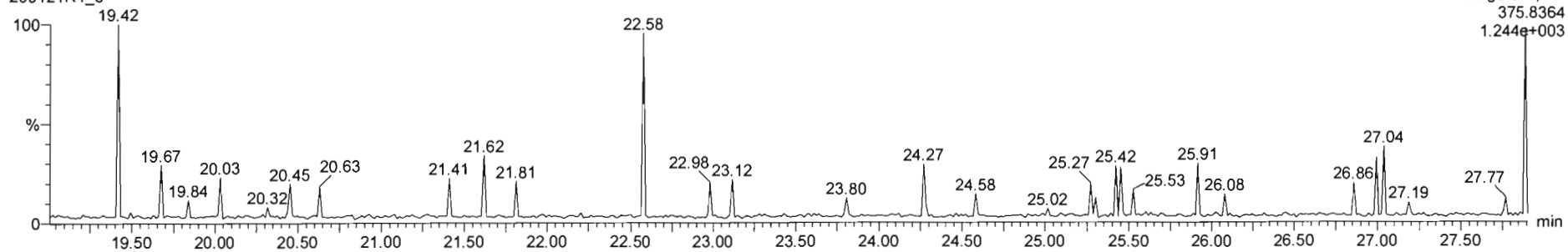


200121R1\_8



**DPE1**

200121R1\_8



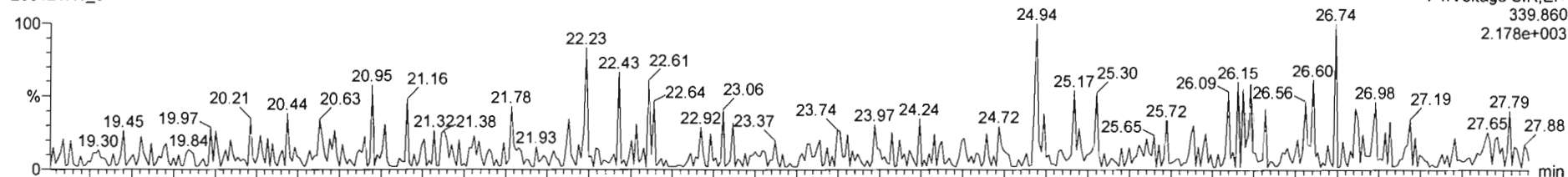
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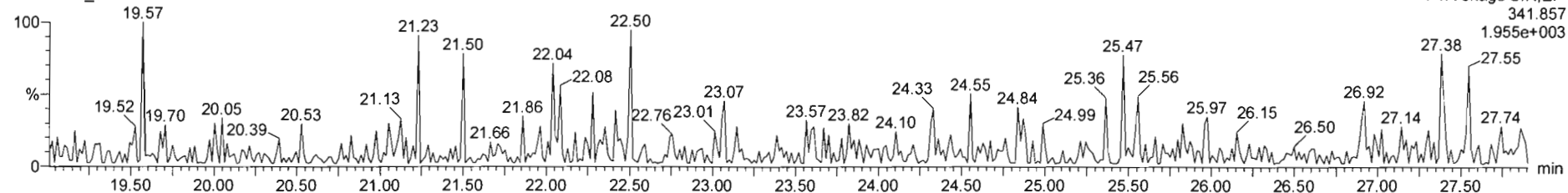
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200121R1\_8

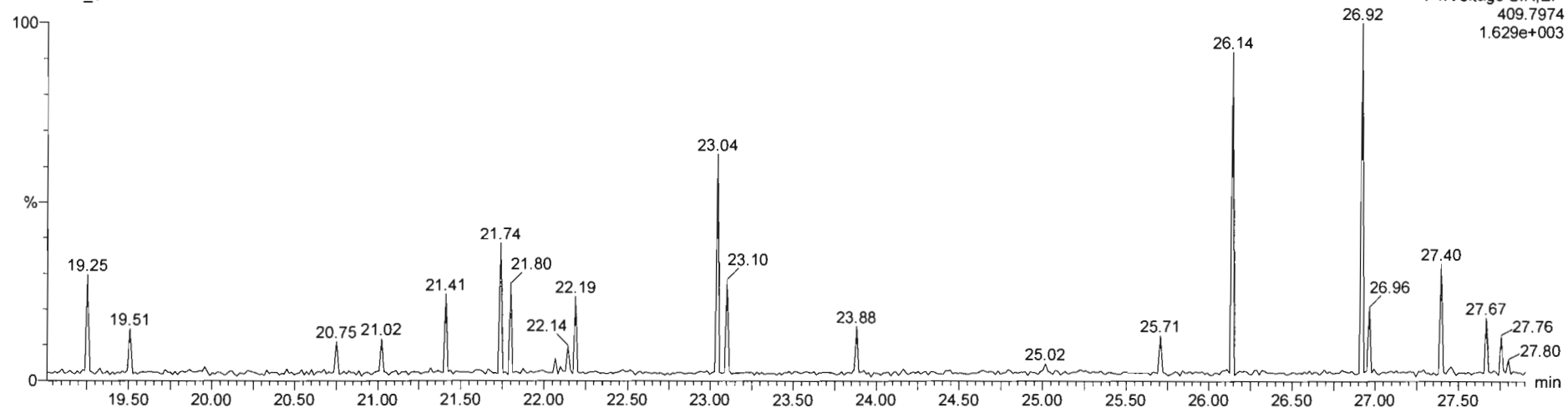


200121R1\_8



DPE6

200121R1\_8





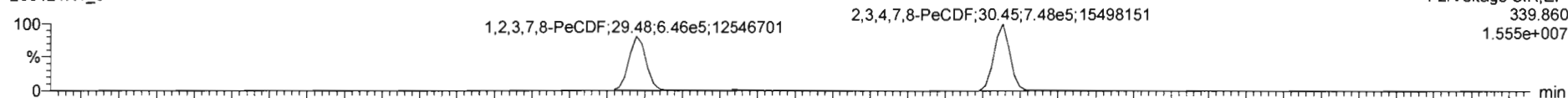
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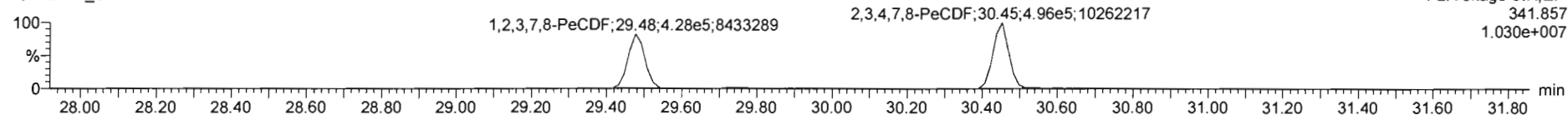
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**1,2,3,7,8-PeCDF**

200121R1\_8

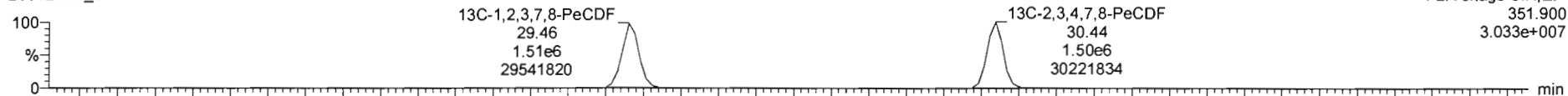


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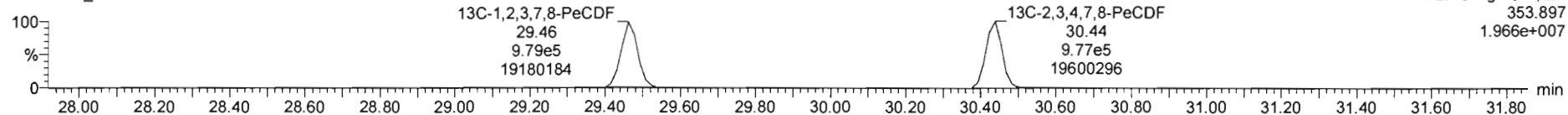


**13C-1,2,3,7,8-PeCDF**

200121R1\_8

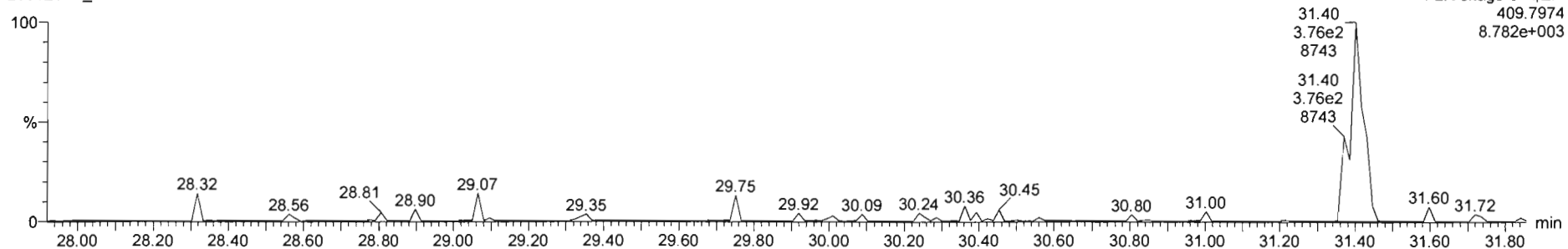


200121R1\_8



**DPE2**

200121R1\_8

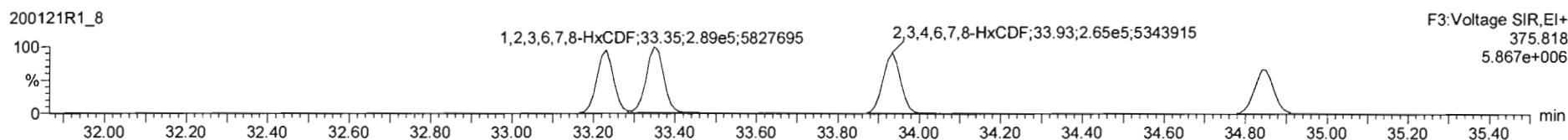
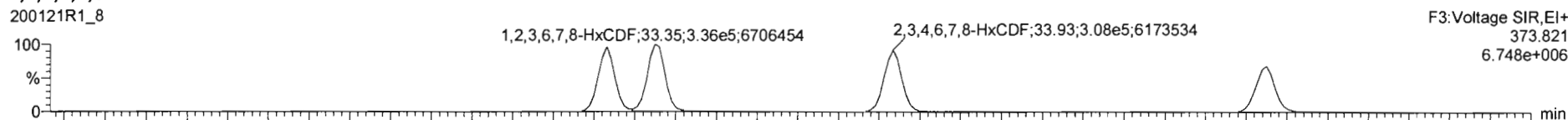


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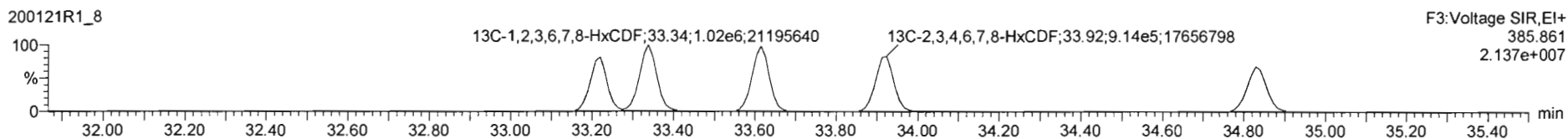
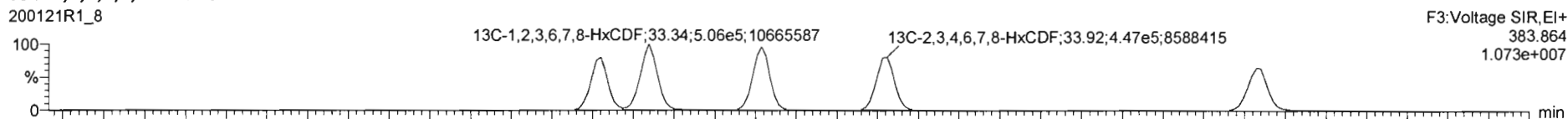
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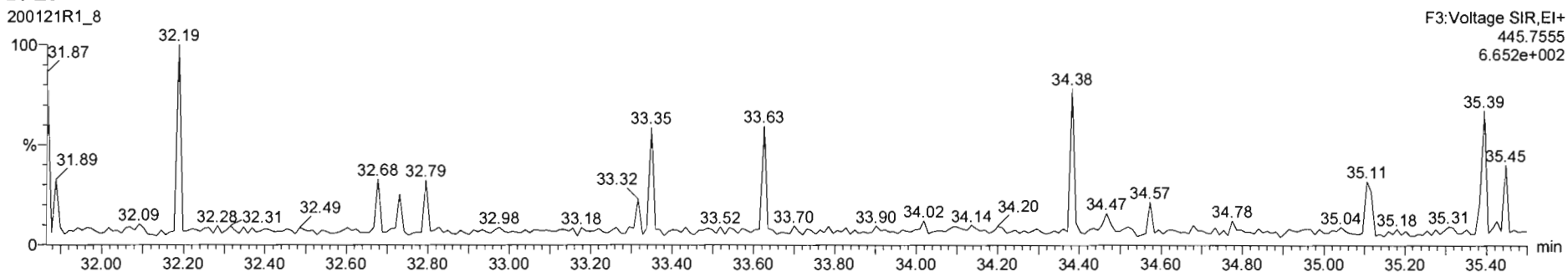
**1,2,3,4,7,8-HxCDF**



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



**DPE3**

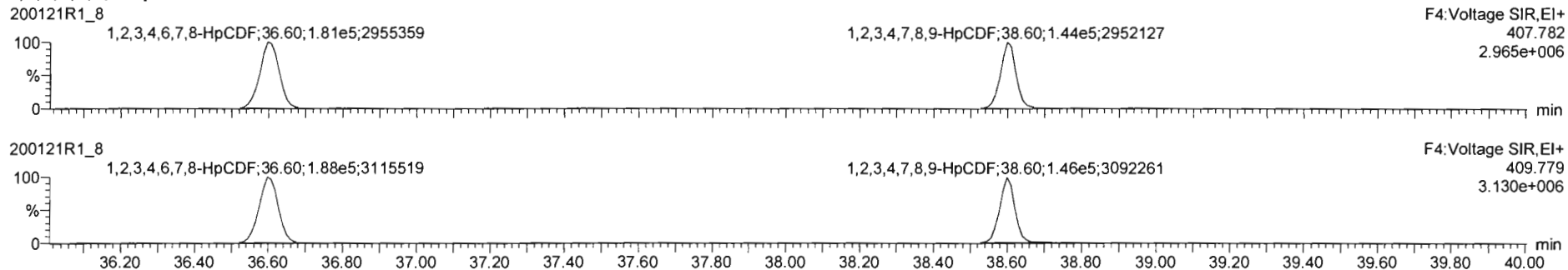


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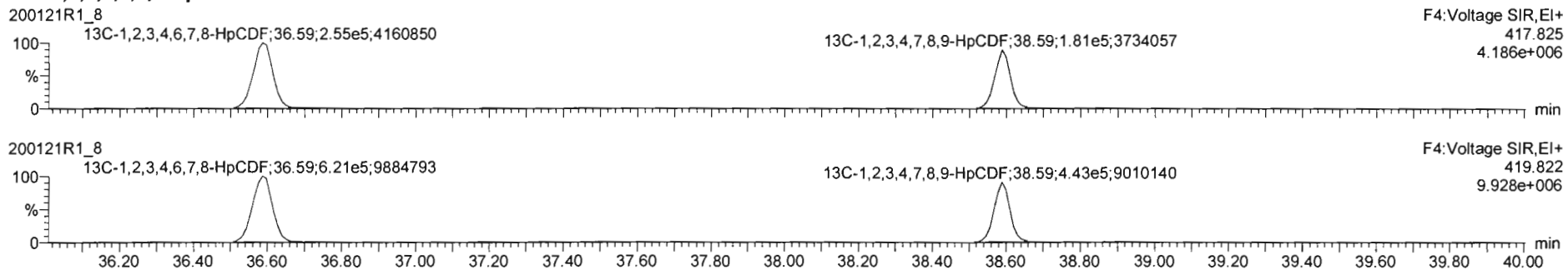
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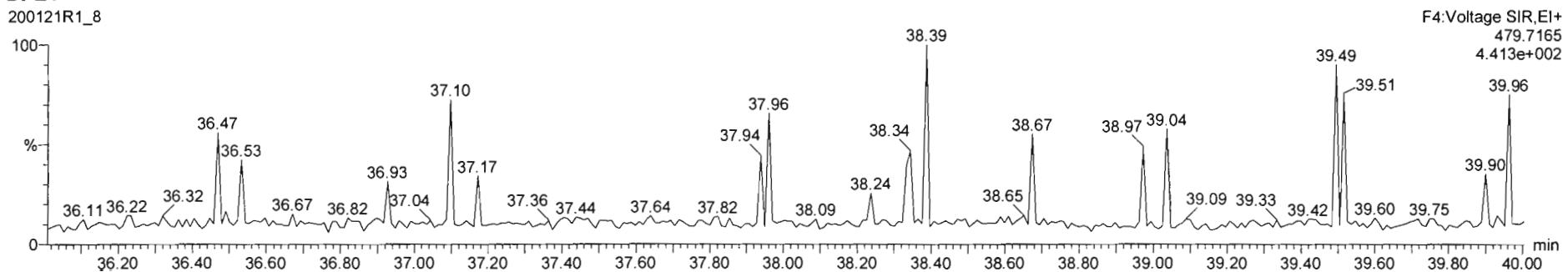
**1,2,3,4,6,7,8-HpCDF**



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



**DPE4**

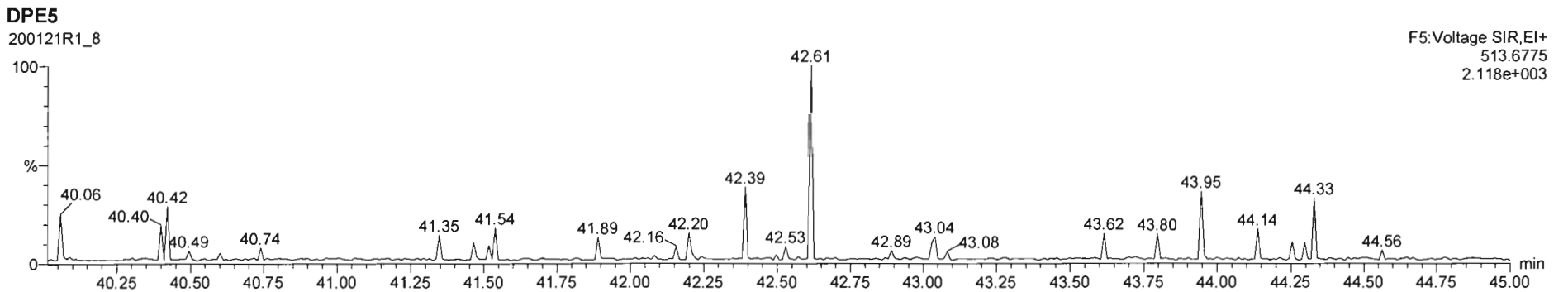
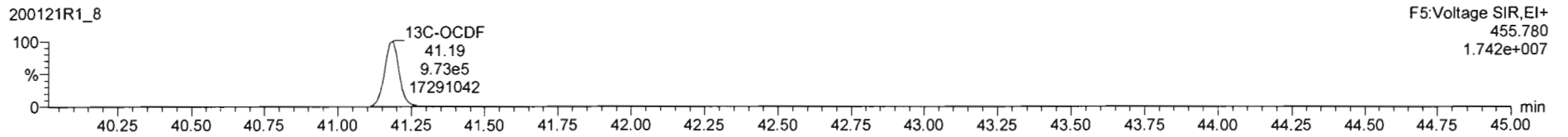
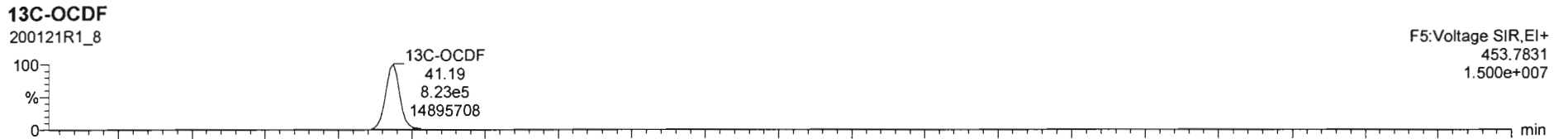
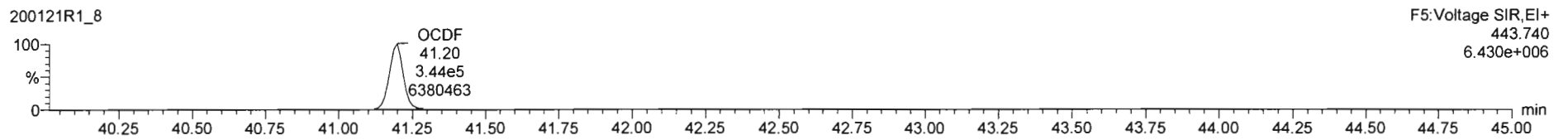
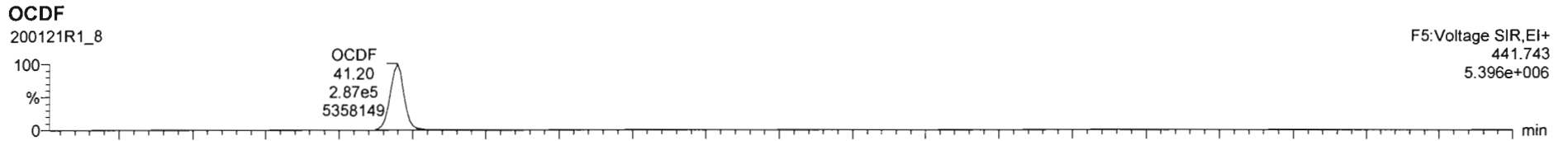


Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time

Printed: Wednesday, January 22, 2020 09:59:05 Pacific Standard Time

Name: 200121R1\_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1\_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207



Dataset: Untitled

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time  
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