

February 06, 2020

Vista Work Order No. 1903647

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.

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

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Vista Work Order No. 1903647 Case Narrative

Sample Condition on Receipt:

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

Analytical Notes:

EPA Method 1613B

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

Holding Times

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

Quality Control

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

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

As requested, a Duplicate was performed on sample "PDI-067SC-B-04-06-191010". The Duplicate RPDs were out of the acceptance criteria for 1,2,3,4,6,7,8-HpCDD and OCDD.

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

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1903647-01	PDI-045SC-B-04-06-191010	10-Oct-19 17:01	15-Oct-19 08:51	Amber Glass, 120 mL
1903647-02	PDI-067SC-B-00-02-191010	10-Oct-19 15:48	15-Oct-19 08:51	Amber Glass, 120 mL
1903647-03	PDI-067SC-B-02-04-191010	10-Oct-19 15:48	15-Oct-19 08:51	Amber Glass, 120 mL
1903647-04	PDI-067SC-B-04-06-191010	Dup10-Oct-19 15:48	15-Oct-19 08:51	Amber Glass, 120 mL
1903647-05	PDI-067SC-B-06-08-191010	10-Oct-19 15:48	15-Oct-19 08:51	Amber Glass, 120 mL

Vista Project: 1903647 Client Project: Gasco PDI

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ANALYTICAL RESULTS

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Sample ID: Method	l Blank							EPA Me	thod 1613B
Matrix: Solid Sample Size: 10.0 g		QC Batch: Date Extracted:	B0A0016 05-Jan-2020 10:28			ab Sample: B0A0016-BLK1 ate Analyzed : 30-Jan-20 18:21	Column: ZB-5N	⁄/S	
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	
						Toxic Equivalent Quotient (T	EQ) Data (pg/g d	ry wt)	
						TEQMinWHO2005Dioxin	0.00		
TOTALS									
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	0.151	0.0290						
Total HpCDF	ND	0.151			LOLIN	^I - I ower control limit - unner control lir	•		

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.

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Sample ID: OPR								EPA Method 1613B
Matrix: Solid Sample Size: 10.0 g	1 '		B0A0016 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	37C1-2,3,7,8-TCDD	101	31 - 191

LCL-UCL - Lower control limit - upper control limit

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Sample ID: PDI-0459	SC-B-04-06-191010							EPA Me	thod 1613B
Project: Gasco I	PDI -2019 17:01	Sample Da Matrix: Sample S % Solids:	Sediment ize: 11.0 g		Lab QC	Pooratory Data 1903647-01 Sample: 1903647-01 Batch: B0A0016 e Analyzed: 30-Jan-20 22:16	Date Received: Date Extracted: Column: ZB-5MS	15-Oct-2019 05-Jan-2020	
Analyte Conc. ()	pg/g)	DL 1	EMPC	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0799			IS	13C-2,3,7,8-TCDD	99.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0753				13C-1,2,3,7,8-PeCDD	117	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0853				13C-1,2,3,4,7,8-HxCDD	87.8	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0891				13C-1,2,3,6,7,8-HxCDD	84.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0869				13C-1,2,3,7,8,9-HxCDD	89.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.797			J		13C-1,2,3,4,6,7,8-HpCDD	114	23 - 140	
OCDD	8.79					13C-OCDD	104	17 - 157	
2,3,7,8-TCDF	ND		0.140			13C-2,3,7,8-TCDF	88.2	24 - 169	
1,2,3,7,8-PeCDF	0.140			J		13C-1,2,3,7,8-PeCDF	97.3	24 - 185	
2,3,4,7,8-PeCDF	0.0912			J		13C-2,3,4,7,8-PeCDF	96.3	21 - 178	
1,2,3,4,7,8-HxCDF	0.268			J		13C-1,2,3,4,7,8-HxCDF	108	26 - 152	
1,2,3,6,7,8-HxCDF	0.109			J		13C-1,2,3,6,7,8-HxCDF	100	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0712				13C-2,3,4,6,7,8-HxCDF	95.0	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0986				13C-1,2,3,7,8,9-HxCDF	98.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.221			13C-1,2,3,4,6,7,8-HpCDF	116	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.120				13C-1,2,3,4,7,8,9-HpCDF	120	26 - 138	
OCDF	0.480			J		13C-OCDF	117	17 - 157	
					CRS	37Cl-2,3,7,8-TCDD	104	35 - 197	
						Toxic Equivalent Quotient (TEQ) Data (pg/g dry w	rt)	
						TEQMinWHO2005Dioxin	0.0800		
TOTALS									
Total TCDD	ND	0.0799							
Total PeCDD		0.0753							
Total HxCDD	ND		0.176						
Total HpCDD	1.69								
Total TCDF	ND		0.140						
Total PeCDF	0.345		0.361						
Total HxCDF	0.507								
Total HpCDF DL - Sample specifc estim	ND		0.525			L- Lower control limit - upper control limit			

EMPC - Estimated maximum possible concentration

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.

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Sample ID: PDI-06'	7SC-B-00-02-191010						EPA Me	thod 1613B
Project: Gasco	or QEA, LLC o PDI ot-2019 15:48	Sample Size:	Sediment 18.9 g 52.9	Lab QC	-	Date Received: Date Extracted: Column: ZB-5MS Column: DB-225		
Analyte Conc.	(pg/g)	DL EMPC	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	2.41			IS	13C-2,3,7,8-TCDD	84.0	25 - 164	
1,2,3,7,8-PeCDD	4.12				13C-1,2,3,7,8-PeCDD	86.6	25 - 181	
1,2,3,4,7,8-HxCDD	8.95				13C-1,2,3,4,7,8-HxCDD	65.3	32 - 141	
1,2,3,6,7,8-HxCDD	81.1				13C-1,2,3,6,7,8-HxCDD	64.9	28 - 130	
1,2,3,7,8,9-HxCDD	22.8				13C-1,2,3,7,8,9-HxCDD	63.5	32 - 141	
1,2,3,4,6,7,8-HpCDD	6210		D		13C-1,2,3,4,6,7,8-HpCDD	75.5	23 - 140	
OCDD	39800		D		13C-OCDD	48.2	17 - 157	D
2,3,7,8-TCDF	183				13C-2,3,7,8-TCDF	79.6	24 - 169	
1,2,3,7,8-PeCDF	302				13C-1,2,3,7,8-PeCDF	81.8	24 - 185	
2,3,4,7,8-PeCDF	148				13C-2,3,4,7,8-PeCDF	77.4	21 - 178	
1,2,3,4,7,8-HxCDF	468				13C-1,2,3,4,7,8-HxCDF	81.1	26 - 152	
1,2,3,6,7,8-HxCDF	120				13C-1,2,3,6,7,8-HxCDF	74.2	26 - 123	
2,3,4,6,7,8-HxCDF	37.8				13C-2,3,4,6,7,8-HxCDF	65.0	28 - 136	
1,2,3,7,8,9-HxCDF	29.8				13C-1,2,3,7,8,9-HxCDF	75.7	29 - 147	
1,2,3,4,6,7,8-HpCDF	359				13C-1,2,3,4,6,7,8-HpCDF	82.8	28 - 143	
1,2,3,4,7,8,9-HpCDF	91.5				13C-1,2,3,4,7,8,9-HpCDF	85.0	26 - 138	
OCDF	1810				13C-OCDF	66.6	17 - 157	
				CRS	37C1-2,3,7,8-TCDD	85.1	35 - 197	
					Toxic Equivalent Quotient (TE	Q) Data (pg/g dry w	rt)	
					TEQMinWHO2005Dioxin	234		
TOTALS								
Total TCDD	41.1	46.0	В					
Total PeCDD	57.9	72.1						
Total HxCDD	1260							
Total HpCDD	15100							
Total TCDF	810	811						
Total PeCDF	931	932						
Total HxCDF	1070							
Total HpCDF	1850							
DL - Sample specifc esti	imated detection limit			LCL-UC	CL- Lower control limit - upper control limit	t		

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.

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Sample ID: PDI-06	7SC-B-02-04-191010						EPA Met	thod 1613B
Project: Gasco	or QEA, LLC o PDI ct-2019 15:48	Sample Data Matrix: Sediment Sample Size: 17.6 g % Solids: 57.8		Lab QC	Sample: 1903647-03 Batch: B0A0016 e Analyzed: 30-Jan-20 23:50 31-Jan-20 15:20	Date Received: Date Extracted: Column: ZB-5MS Column: DB-225		
Analyte Conc.	(1887	DL EMPC	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD		0.105		IS	13C-2,3,7,8-TCDD	104	25 - 164	
1,2,3,7,8-PeCDD	ND	0.130			13C-1,2,3,7,8-PeCDD	123	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0668			13C-1,2,3,4,7,8-HxCDD	89.7	32 - 141	
1,2,3,6,7,8-HxCDD	0.267		J		13C-1,2,3,6,7,8-HxCDD	89.8	28 - 130	
1,2,3,7,8,9-HxCDD	0.172		J		13C-1,2,3,7,8,9-HxCDD	93.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	9.78				13C-1,2,3,4,6,7,8-HpCDD	119	23 - 140	
OCDD	108				13C-OCDD	122	17 - 157	
2,3,7,8-TCDF	0.326		J		13C-2,3,7,8-TCDF	92.6	24 - 169	
1,2,3,7,8-PeCDF	ND	0.381			13C-1,2,3,7,8-PeCDF	104	24 - 185	
2,3,4,7,8-PeCDF	ND	0.297			13C-2,3,4,7,8-PeCDF	101	21 - 178	
1,2,3,4,7,8-HxCDF	0.808		J		13C-1,2,3,4,7,8-HxCDF	110	26 - 152	
1,2,3,6,7,8-HxCDF	0.357		J		13C-1,2,3,6,7,8-HxCDF	99.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.381			13C-2,3,4,6,7,8-HxCDF	96.9	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0468			13C-1,2,3,7,8,9-HxCDF	106	29 - 147	
1,2,3,4,6,7,8-HpCDF	1.12		J		13C-1,2,3,4,6,7,8-HpCDF	124	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.161			13C-1,2,3,4,7,8,9-HpCDF	133	26 - 138	
OCDF	2.61		J		13C-OCDF	135	17 - 157	
				CRS	37C1-2,3,7,8-TCDD	104	35 - 197	
					Toxic Equivalent Quotient (TEQ) Data (pg/g dry w	vt)	
					TEQMinWHO2005Dioxin	0.335		
TOTALS								
Total TCDD	0.348	0.480	В					
Total PeCDD	0.506	1.15						
Total HxCDD	2.94	3.18						
Total HpCDD	20.9							
Total TCDF	5.76	5.96						
Total PeCDF	6.51	8.02						
Total HxCDF	4.55	5.37						
Total HpCDF	2.94	3.10						
DL - Sample specifc esti	imated detection limit			LCL-UC	L- Lower control limit - upper control 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.

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Sample ID: PDI-067	SC-B-04-06-191010							EPA Met	hod 1613B
Project: Gasco	r QEA, LLC PDI -2019 15:48	Sample Da Matrix: Sample S % Solids	Sediment Size: 15.6 g		Lab QC	Sample: 1903647-04 Batch: B0A0016 e Analyzed: 31-Jan-20 00:37	Date Received: Date Extracted: Column: ZB-5MS		
Analyte Conc. ((pg/g)	DL	EMPC	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0723			IS	13C-2,3,7,8-TCDD	100	25 - 164	
1,2,3,7,8-PeCDD		0.0737				13C-1,2,3,7,8-PeCDD	117	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0822				13C-1,2,3,4,7,8-HxCDD	91.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0847				13C-1,2,3,6,7,8-HxCDD	87.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0874				13C-1,2,3,7,8,9-HxCDD	88.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.433			J		13C-1,2,3,4,6,7,8-HpCDD	115	23 - 140	
OCDD	2.32			J		13C-OCDD	117	17 - 157	
2,3,7,8-TCDF	ND	0.0798				13C-2,3,7,8-TCDF	91.6	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0519				13C-1,2,3,7,8-PeCDF	101	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0489				13C-2,3,4,7,8-PeCDF	101	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0602				13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0582				13C-1,2,3,6,7,8-HxCDF	99.4	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0644				13C-2,3,4,6,7,8-HxCDF	97.8	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0864				13C-1,2,3,7,8,9-HxCDF	101	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0942				13C-1,2,3,4,6,7,8-HpCDF	120	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0877				13C-1,2,3,4,7,8,9-HpCDF	128	26 - 138	
OCDF	ND		0.143			13C-OCDF	130	17 - 157	
					CRS	37Cl-2,3,7,8-TCDD	102	35 - 197	
						Toxic Equivalent Quotient (TEQ) Data (pg/g dry v	vt)	
						TEQMinWHO2005Dioxin	0.00503		
TOTALS									
Total TCDD		0.0723							
Total PeCDD		0.0737							
Total HxCDD	ND		0.125						
Total HpCDD	0.926								
Total TCDF	ND		0.150						
Total PeCDF		0.0519							
Total HxCDF		0.0864							
Total HpCDF DL - Sample specifc estin		0.0942							

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.

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Sample ID: Du	plicate							EPA Met	nod 1613B
Source Client ID: Source LabNumber: Matrix: Sample Size:	PDI-067SC-B-04-06-191010 1903647-04 Solid 15.5 g		QC Batch: Date Extracted:	B0A0016 05-Jan-2020 10:28	Lab San Date An	•	nn: ZB-5MS		
Analyte	Conc. (pg/g)	DL	EMPC	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0911			IS	13C-2,3,7,8-TCDD	97.0	25 - 164	
1,2,3,7,8-PeCDD	0.0923			J		13C-1,2,3,7,8-PeCDD	112	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.133				13C-1,2,3,4,7,8-HxCDD	82.9	32 - 141	
1,2,3,6,7,8-HxCDD	0.201			J		13C-1,2,3,6,7,8-HxCDD	82.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND		0.226			13C-1,2,3,7,8,9-HxCDD	83.6	32 - 141	
1,2,3,4,6,7,8-HpCDD	3.28					13C-1,2,3,4,6,7,8-HpCDD	111	23 - 140	
OCDD	23.9					13C-OCDD	101	17 - 157	
2,3,7,8-TCDF	ND		0.233			13C-2,3,7,8-TCDF	90.0	24 - 169	
1,2,3,7,8-PeCDF	ND		0.117			13C-1,2,3,7,8-PeCDF	96.7	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0714				13C-2,3,4,7,8-PeCDF	95.6	21 - 178	
1,2,3,4,7,8-HxCDF	0.234			J		13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
1,2,3,6,7,8-HxCDF	ND		0.115			13C-1,2,3,6,7,8-HxCDF	99.3	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0895				13C-2,3,4,6,7,8-HxCDF	92.8	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.116				13C-1,2,3,7,8,9-HxCDF	96.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	0.462			J		13C-1,2,3,4,6,7,8-HpCDF	115	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.109				13C-1,2,3,4,7,8,9-HpCDF	119	26 - 138	
OCDF	0.582			J		13C-OCDF	112	17 - 157	
					CRS	37Cl-2,3,7,8-TCDD	98.6	35 - 197	
						Toxic Equivalent Quotient (TE	Q) Data (pg/g dr	y wt)	
						TEQMinWHO2005Dioxin	0.181		
TOTALS	0.000		1.25	D					
Total TCDD	0.968		1.35	В					
Total PeCDD	0.305		1.45						
Total HxCDD	3.69		3.92						
Total HpCDD	7.40 1.80		2.39						
Total TCDF	0.328		0.939						
Total PeCDF	0.328		0.939						
Total HxCDF	0.462		0.704						
Total HpCDF	0.402		0.000		IC	CL-UCL - Lower control limit - unper control	1.1114		

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.

Work Order 1903647 Page 12 of 523 Sample ID: EPA Method 1613B Duplicate

PDI-067SC-B-04-06-191010 Source Client ID:

Source LabNumber: 1903647-04 Matrix: Solid

Duplicate Lab Sample: B0A0016-DUP1

Analyte	Dup Conc. (pg/g)	Source Conc.	RPD	RPD Limits		Labeled Standard	Dup %R	Source %R	LCL-UCL
2,3,7,8-TCDD	ND	ND	NA	25	IS	13C-2,3,7,8-TCDD	97.0	100	25 - 164
1,2,3,7,8-PeCDD	0.0923	ND	#	25		13C-1,2,3,7,8-PeCDD	112	117	25 - 181
1,2,3,4,7,8-HxCDD	ND	ND	NA	25		13C-1,2,3,4,7,8-HxCDD	82.9	91.4	32 - 141
1,2,3,6,7,8-HxCDD	0.201	ND	#	25		13C-1,2,3,6,7,8-HxCDD	82.2	87.8	28 - 130
1,2,3,7,8,9-HxCDD	ND	ND	NA	25		13C-1,2,3,7,8,9-HxCDD	83.6	88.7	32 - 141
1,2,3,4,6,7,8-HpCDD	3.28	0.433	153	25		13C-1,2,3,4,6,7,8-HpCDD	111	115	23 - 140
OCDD	23.9	2.32	165	25		13C-OCDD	101	117	17 - 157
2,3,7,8-TCDF	ND	ND	NA	25		13C-2,3,7,8-TCDF	90.0	91.6	24 - 169
1,2,3,7,8-PeCDF	ND	ND	NA	25		13C-1,2,3,7,8-PeCDF	96.7	101	24 - 185
2,3,4,7,8-PeCDF	ND	ND	NA	25		13C-2,3,4,7,8-PeCDF	95.6	101	21 - 178
1,2,3,4,7,8-HxCDF	0.234	ND	#	25		13C-1,2,3,4,7,8-HxCDF	106	106	26 - 152
1,2,3,6,7,8-HxCDF	ND	ND	NA	25		13C-1,2,3,6,7,8-HxCDF	99.3	99.4	26 - 123
2,3,4,6,7,8-HxCDF	ND	ND	NA	25		13C-2,3,4,6,7,8-HxCDF	92.8	97.8	28 - 136
1,2,3,7,8,9-HxCDF	ND	ND	NA	25		13C-1,2,3,7,8,9-HxCDF	96.3	101	29 - 147
1,2,3,4,6,7,8-HpCDF	0.462	ND	#	25		13C-1,2,3,4,6,7,8-HpCDF	115	120	28 - 143
1,2,3,4,7,8,9-HpCDF	ND	ND	NA	25		13C-1,2,3,4,7,8,9-HpCDF	119	128	26 - 138
OCDF	0.582	ND	#	25		13C-OCDF	112	130	17 - 157
					CRS	37C1-2,3,7,8-TCDD	98.6	102	35 - 197

LCL-UCL - Lower control limit - upper control limit

The results are reported in dry weight.

reported to the MDL

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The sample size is reported in wet weight.Results

Sample ID: PDI-067	SC-B-06-08-191010			EPA Method 1613F
Project: Gasco	r QEA, LLC PDI t-2019 15:48	Sample Data Matrix: Sediment Sample Size: 12.2 g % Solids: 83.1		Laboratory Data Lab Sample: 1903647-05 Date Received: 15-Oct-2019 8:51 QC Batch: B0A0016 Date Extracted: 05-Jan-2020 10:28 Date Analyzed: 31-Jan-20 06:14 Column: ZB-5MS
Analyte Conc.	(pg/g)	DL EMPC	Qualifiers	Labeled Standard %R LCL-UCL Qualifiers
2,3,7,8-TCDD	ND	0.116		IS 13C-2,3,7,8-TCDD 104 25 - 164
1,2,3,7,8-PeCDD	ND	0.0999		13C-1,2,3,7,8-PeCDD 121 25 - 181
1,2,3,4,7,8-HxCDD	ND	0.0799		13C-1,2,3,4,7,8-HxCDD 87.2 32 - 141
1,2,3,6,7,8-HxCDD	ND	0.0820		13C-1,2,3,6,7,8-HxCDD 86.0 28 - 130
1,2,3,7,8,9-HxCDD	ND	0.0846		13C-1,2,3,7,8,9-HxCDD 90.0 32 - 141
1,2,3,4,6,7,8-HpCDD	2.53			13C-1,2,3,4,6,7,8-HpCDD 120 23 - 140
OCDD	18.6			13C-OCDD 120 17 - 157
2,3,7,8-TCDF	ND	0.0981		13C-2,3,7,8-TCDF 90.6 24 - 169
1,2,3,7,8-PeCDF	0.151		J	13C-1,2,3,7,8-PeCDF 100 24 - 185
2,3,4,7,8-PeCDF	ND	0.0749		13C-2,3,4,7,8-PeCDF 98.6 21 - 178
1,2,3,4,7,8-HxCDF	0.351		J	13C-1,2,3,4,7,8-HxCDF 109 26 - 152
1,2,3,6,7,8-HxCDF	ND	0.0956		13C-1,2,3,6,7,8-HxCDF 100 26 - 123
2,3,4,6,7,8-HxCDF	ND	0.0710		13C-2,3,4,6,7,8-HxCDF 96.1 28 - 136
1,2,3,7,8,9-HxCDF	ND	0.0914		13C-1,2,3,7,8,9-HxCDF 105 29 - 147
1,2,3,4,6,7,8-HpCDF	0.594		J	13C-1,2,3,4,6,7,8-HpCDF 119 28 - 143
1,2,3,4,7,8,9-HpCDF	0.225		J	13C-1,2,3,4,7,8,9-HpCDF 131 26 - 138
OCDF	2.85		J	13C-OCDF 132 17 - 157
				CRS 37Cl-2,3,7,8-TCDD 109 35 - 197
				Toxic Equivalent Quotient (TEQ) Data (pg/g dry wt)
				TEQMinWHO2005Dioxin 0.0796
TOTALS				
Total TCDD	ND	0.116		
Total PeCDD	0.0785	0.133		
Total HxCDD	0.664			
Total HpCDD	5.46			
Total TCDF	0.123			
Total PeCDF	0.151	0.371		
Total HxCDF	0.457	0.553		
Total HpCDF DL - Sample specife estir	1.45			LCL-UCL- Lower control limit - upper control limit

EMPC - Estimated maximum possible concentration

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.

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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.

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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-В
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.

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NELAP Accredited Test Methods

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

MATRIX: Biological Tissue						
Description of Test	Method					
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B					
Dilution GC/HRMS						
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A					
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue	EPA 1668A/C					
by GC/HRMS						
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by	EPA 1699					
HRGC/HRMS						
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537					
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by	EPA 8280A/B					
GC/HRMS						
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated	EPA					
Dibenzofurans (PCDFs) by GC/HRMS	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	EPA 1613B
Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue	EPA 1668A/C
by GC/HRMS	
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	EPA 8280A/B
Dibenzofurans by GC/HRMS	
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated	EPA
Dibenzofurans (PCDFs) by GC/HRMS	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	EPA 1613B
Dilution GC/HRMS	TD 1 4 51 1 1
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue	EPA 1668A/C
by GC/HRMS	
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	EPA 8280A/B
Dibenzofurans by GC/HRMS	
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated	EPA
Dibenzofurans (PCDFs) by GC/HRMS	8290/8290A

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A X ANCHOR	
V OFA	
1201 3rd Avenue, Suite 2600, Seattle, WA 9810)1

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

									- 0.00	COCI):	VISI	1-201910	10-175158
POC: #	Delaney Peterson (360-715-2707)			Project:	Gasco	PDI		10000.17	3.6°C	Sampl	e Custodian:	CO,	SN, BJ, DI	
	1605 Cornwall Avenue, Bellingham	i, WA	98225	Client:	NW N	atural		1403647	3.8°C	Lab: 18 10/17	19	VIST	A - Archive)
COC Sample Number	Field Sample ID	Sample Type	Matrix	Collecte Date	ed Time	# Containers	Lab QC*	Test Request			Method		TAT**	Preservative
001	PDI-045SC-B-04-06-191010	N	SE	10/10/2019	17:01	1								
					300 - 2000			Archive (VISTA)			ARCHIVE		-1	-10°C
002	PDI-067SC-B-00-02-191010	N	SE	10/10/2019	15:48	1								
								Archive (VISTA)	2		ARCHIVE		-1	-10°C
003	PDI-067SC-B-02-04-191010	N	SE	10/10/2019	15:48	1								
								Archive (VISTA)			ARCHIVE		-1	-10°C
004	PDI-067SC-B-04-06-191010	N	SE	10/10/2019	15:48	1	Х							
								Archive (VISTA)			ARCHIVE		-1	-10°C
005	PDI-067SC-B-06-08-191010	N	SE	10/10/2019	15:48	1								
								Archive (VISTA)			ARCHIVE		-1	-10°C

Comment:					
Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature / MM	Signature	Signature	Signature		Signature
Print Name	Print Name Has lon Canal	Print Name	Print Name	Print Name	Print Name
Company	Company VAL	Company	Company	Company	Company
Date/Time (0/14/19 0755)	Date/Time 10(15/19 08:51	Date/Time	Date/Time	Date/Time	Date/Time



Sample Log-In Checklist

Vista Work Orde	r#: 19031	e4-	1					age # ₋			
Samples Arrival:	Date/Time	851		In	itials:	1	Loca		WR-2		
Delivered By:	FedEx U	PS	On Tra	ac GSO DHL			Hand			Otl	ner
Preservation:	lce		Blu	ıe l	ce		Dry	lce		No	ne
Temp °C: 3,6	(uncorrected	1)		I.	V (O				TO 2		
Temp °C: 3.6 (corrected) Probe used: Y / N Thermome								mome	eter ID: IR-3		
			*	12.2					YES	NO	NA
Shipping Contain									/	-	
Shipping Custody	- 0.2		-						/		
Airbill 4 of 1	Trk # 77	67	1463 80.	21					√		
Shipping Docume	entation Preser	ıt?							√		
							Re	eturn	Dis	oose	
Chain of Custody / Sample Documentation Present? Workson in the content of the co							rer conter		1	1	
Chain of Custody / Sample Documentation Complete?										/	/
Holding Time Acceptable?										/	/
Logged In:	Date/Time	6			itials:			ition:	WF-2	2	

Comments:

ID.: LR - SLC

Rev No.: 4

COC Anomaly/Sample Acceptance Form completed?

Rev Date: 10/08/2019

Page: 1 of 1

CoC/Label Reconciliation Report WO# 1903647

LabNumber	CoC Sample ID	Label ID matches COCID	SampleAlias	Sampled	Label Sampled matches	Sampled doesn't match	Container	Container Correct /	Sample BaseMatrix Comments
1903647-01	A PDI-045SC-B-04-06-191010	V	001	10-Oct-19 17:01	Ø		Amber Glass, 120 mL	9	Solid
4 1903647-02	A PDI-067SC-B-00-02-191010		002	10-Oct-19 15:48			Amber Glass, 120 mL		Solid
1903647-03	A PDI-067SC-B-02-04-191010		003	10-Oct-19 15:48	Ø,		Amber Glass, 120 mL	Ø,	Solid
1903647-04	A PDI-067SC-B-04-06-191010	\overline{\top}	004	10-Oct-19 15:48			Amber Glass, 120 mL		Solid Dup
1903647-05	A PDI-067SC-B-06-08-191010	Q	005	10-Oct-19 15:48			Amber Glass, 120 mL	U	Solid

	Yes	No	NA	Comments:
Sample Container Intact?	/		,	
Sample Custody Seals Intact?	,			
Adequate Sample Volume?				
Preservation Documented: Na2S2O3 Trizma None Other		1		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				4" = cooler 4
Varified by 10cm HDC 10/13/19				4 = 600 er 4

Verifed by/Date: HDG 10/17/19

Printed: 10/16/2019 9:49:04AM

Work Order 1903647

EXTRACTION INFORMATION

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Process Sheet

Workorder: 1903647

Prep Expiration: 2020-10-09

Client: Anchor QEA, LLC

Workorder Due: 03-Jan-20 00:00

TAT: 80

Method: 1613 Full List

Matrix: Solid Client Matrix: Sediment Also run: Percent Solids Prep Batch: BUA 001 6

Prep Data Entered:

RR ol- 09- 20
Date and Initials

Initial Sequence:

S040068

LabSampleID	Recon ClientSampleID	Date Received	Location Comments	
1903647-01	PDI-045SC-B-04-06-191010	15-Oct-19 08:51	WF-2 D-1	
1903647-02	PDI-067SC-B-00-02-191010	15-Oct-19 08:51	WF-2 D-1	
1903647-03	PDI-067SC-B-02-04-191010	15-Oct-19 08:51	WF-2 D-1	
1903647-04	PDI-067SC-B-04-06-191010	15-Oct-19 08:51	WF-2 D-1 Dup	
1903647-05	/PDI-067SC-B-06-08-191010	15-Oct-19 08:51	WF-2 D-1	

WO Comments: Dioxin - 10g (dry weight)

Pre-Prep Check Out: A7 12 31 19 Pre-Prep Check In: At 12/31/19

Prep Check Out: DF 01 105 20

Prep Check In: DF 01 105 20

Prep Reconciled Initals/Date: IAZ (2 31) 19 Spike Reconciled Initals/Date: D+ 61/05120 VialBoxID: THEA

Page 1 of 1

PREPARATION BENCH SHEET

Matrix	. Salid
MINITALIX	: Solia

Method: 1613 Full List

B0A0016	

Prepared using: HRMS - Soxhlet

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

С	VISTA Sample ID	G Eqv	Sample Amt. (g)	CH	IS/NS IEM/WIT DATE		CRS CHEM/WIT DATE		AP CHEM/ DATE		ABSG CHEM/ DATE		AA CHEM/ DATE		(Florisil CHEM/ DATE		RS EM/WIT DATE
	B0A0016-BLK1	NA	(1000)	77#	MM 01/05/19	ao	71=01	06/20	M	0162119	ao	01/07/20	90	01/07/20	ao	01/07/20	1	sus 01/07/2
	B0A0016-BS1	1	(10.00)		T		+	1	_	J		T		T		†	V-	
	B0A0016-DUP1 1903647-04	15.36	15.46						h	/A		1						
	B0A0016-DUP2	10.89	11.00															
	1903647-01	10.93	10.99							Ţ								
	1903647-02	1899	18.90						10	1107120		l —						
	1903647-03	17.31	17.58															
	1903647-04	15,36	15.56							/								
	1903647-05	1204	12.18						N	M						/		
	1903649-01	14.3	14.36												B	01/07/20		
	1904210-03	11.74	11-96												5	1		
	1904210-04	11.95	11.95											_				
	1904210-05	1277	12.97						,	7								
	1904210-06	1262	しも						Z	0167/20								
	1904210-07	15,10	13.50			N/S	\ \		1	A		V	7	•		3		V
S Na	D/F ac 1902 10A	NS Name	(3)	0ml	CRS Name PCDD/F 197	C		RS Name		5 3,10m	Start	Date/Time So	OLV:		<u>. </u>)F 01 <u>105120</u>
PCB		PCB			PCB			PCB			oAd	5/19 0 :58 Date/Time Fi	ther	NA	_	- 1		DFOILOSIZE
PAH		РАН			PAH			PAH					nal Volu			Balance	ID: <u>#</u>	<u> </u>
												6119 1015		<u> </u>	14			

1 = Sample approached dryness on rotovap

2 = Sample bumped on rotovap; lost < 5%

Work Order 1903647

3 = Sample poured through Na2SO4 to remove water

4 = Precipitate present at Final Volume

5 = Sample homogenized in secondary container

6 = Sample clogged during extaction; pipetted and used Nitrogen to assist

PREPARATION BENCH SHEET

Matrix: Solid

Method: 1613 Full List

_	
B0A0016	

Prepared using: HRMS - Soxhlet

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

С	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
	1904210-08	13.51	13.69	DF Wm 01/05/19	00 08 01/06/20	N/A	a0 1/07/20	90 01/07/20	· 1/07/20	M 300 01/07/2
	1904210-09	10.89	10.92		T		+	+ 1		12
	1904210-10	10.84	10.88							/
	1904210-11	10.86	10.91	→	4	7	\		5	

* m 01/07/20

IS Name	NS Name V(5)	CRS Name	RS Name	Cycle Time	APP: SEFUN SOX SDS	Check Out: Chemist/Date: D 105120
PCDD/F 19C1902,10mL	PCDD/F 1851913, 10ml	PCDD/F 19 I 1002,19	46 PCDD/F 1951603, 10 al	Start Date/Time	SOLV: Toluene	
PCB	PCB	PCB	PCB	0/05/19	Other NA	Check In: Chemist/Date: Follosha
PAH	PAH	PAH	PAH	Stop Date/Time	Final Volume(s) 10 m	Balance ID: HRMS-8
				01/06/19	City	
Comments:				<i>U</i> 15	,	

Comments:

Work Order 1903647

^{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

^{6 =} Sample elogged during extaction; pipetted and used Nitrogen to assist

Percent Moisture/ Percent Solids

D2216-90

BATCH ID B9L0076

Analyst: AZ	Test Code: %Moist/%Solids	799 000071071171
Analyte:	Units: %	Data Entry Verified by:
Dried at 110°C+/-5°C Oven ID: _ <i>01</i> 02		011021120

 Inst
 HRMS-8
 Date/Time IN: 12/31/19 1038
 Date/Time OUT 12/31/19 1038
 01/02/20 1443

	В	С	D	E	F	G	Н	ı	К	L	M	N	0	Р
				Intial and Date:		JC 01/02/20			AZ 12/31/19	1		NA		AZ 12/31/19
Particle Size	SamplD		SampType	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Inspection		Before	pH After	Acid Added	Sample Homogenized*
	1903647-01	A	Sample	1.2700	7.4800	6.9500	5.6800	91.47	MUD	NA	NA	NA	NA	Y
	1903647-02	A	Sample	1.2900	10.3400	6.0800	4.7900	52.93	MUD	NA		NA	NA	Y
	1903647-03	A	Sample	1.2900	7.4000	4.8200	3.5300	57.77	MUD	NA		NA	NA	Y
	1903647-04	A	Sample	1,3000	12.4200	8.5400	7.2400	65.11	MUD	NA	NA	NA	NA	Υ
	1903647-05	A	Sample	1.3000	7.0300	6,0600	4.7600	83,07	MUD	NA	NA	NA	NA	Y
														I
_														
	<u> </u>													
											1			I
														I

^{*}Sample homogenized in sample container unless otherwise noted.

BCH_PMOIST_B9L0076

Percent Moisture/ Percent Solids

D2216-90

BATCH ID B9L0076

Analyst: A Z	Test Code: %Moist/%Solids	
Analyte:	Units: %	Data Entry Verified by: ((initial and Date)
ਨਿਜੇਵੇਰ at 110°C+/-5°C Oven ID: 01 02		

Date/Time IN: Date/Time OUT Inst HEMS-8 1038 1443 AZ 12/31/19 AZ 12/31/19 N 01/02/20 Intial and Date: At 17/31/19 Dry Sample Weight (g) Visual pH pH Acid Sample Before After Added Homogenized* Particle Size SamplD SampType Pan Wet Pan and Sample Dry Pan and Sample %Solids Tare Wt. (gms) RawVal Weight (g) Weight (g) Inspection 6.95 mud 1.27 7.48 1903647-01 Sample 1.29 10.34 6.08 Mud 1903647-02 Sample 7.40 1.29 482 md 1903647-03 Sample 12.42 854 1.30 1903647-04 mud Sample 7.03 1 50 6.06 1903647-05 Sample MUR

BCH_PMOIST_B9L0076.xls

12/6/2019 6:56 AM

^{*}Sample homogenized in sample container unless otherwise noted.

Batch: B0A0016

Matrix: Solid

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike Sp	ikeAmount	ClientMatrix	Analysis
1903647-01	10.99	91.46538	10.0520	20√-	- 05-Jan-20 10:28√	DFO	<u> </u>		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
B0A0016-BLK1	10			20	05-Jan-20 10:28	DFO				QC
B0A0016-BS1	10	,		20	05-Jan-20 10:28	DFO	18F1913 🗸	10 🗸		QC
B0A0016-DUP1	15.46			20	05-Jan-20 10:28	DFO				QC
B0A0016-DUP2	11 🗸			20	05-Jan-20 10:28	/ DFO				QC

Printed: 1/9/2020 1:11:48PM Page 1 of 1

SAMPLE DATA – EPA METHOD 1613

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Page 1 of 2

Dataset:

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

Last Attered:

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

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

	# Name	Resp	RA	n/y	RRF	wt/val	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD			110	0.824	(0.000	25.721		1.001				0.241	1
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	86.0	YES	0.800	10.000	40.889	40.89	1.000	1.000	0.32141		0.268	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	0.17827		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	0.042418		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	
16.	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 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	1
20	20 13C-1,2,3,4,7,8-HxCDD	6.19e5	1.26	Ю	0.938	10.000	33.966	33.97	1.014	1.014	160.75	80.4	0.325	
	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 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 13C-OCDD	9.51e5	88.0	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 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 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 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 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	

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Page 2 of 2

Dataset:

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

Last Altered: Printed:

Monday, February 03, 2020 15:25:22 Pacific Standard Time 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	niy	RRF	wt/vot	Pred.RT	स्त	Pred.RRT	RRT	Conc.	%Rec	61 4.	EMPC
32	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]
32 33	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	. 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	35 37CI-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	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	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	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	39 Total Tetra-Dioxins				0.824	10.000	24.620		0.000		0.10954		0.241	0.289
40	40 Total Penta-Dioxins				0.912	10.000	29.960		0.000				0.0613	
41.	41 Total Hexa-Dioxins				0.784	10.000	33.635		0.000				0.0695	
42	42 Total Hepta-Dioxins				0.737	10.000	37.640		0.000				0.0873	
43	43 Total Tetra-Furans				0.588	10.000	23.610		0.000		0.00000		0.122	0.269
44	44 1st Func. Penta-Furans				0.826	10.000	27,090		0.000				0.0576	
45	45 Total Penta-Furans				0.826	10.000	29.275		0.000		0.00000		0.0348	0.0436
46	46 Total Hexa-Furans				0.766	10.000	33.555		0.000		0.00000		0.0726	0.0293
47	47 Total Hepta-Furans				0.732	10.000	37.835		0.000				0.0768	

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Vista Analytical Laboratory

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

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	R	mit Height m2 Height	mt Resp m2 Resp	RA MY	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

١	Name	 RT	m1 Height m2 Height	m1 Resp	m2 Resp	RA	nly	Resp	Conc.	EMPC	DL
ŀ	1										1

Hexa-Dioxins

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

Hepta-Dioxins

Name	• स्त	m1 Height m2 Height	mi Dam	m2 Been		y Reep	Conc.	EMPC	- 1
(40110	14.1	ter a randing state a conflict	ter (coop)	ure canala	140	h szeph	~~~	CIMI C	и
									1
PT									

Tetra-Furans

Total Tetra-Furans 2,3,7,8-TCDF Total Tetra-Furans		ent Haid	m2 Height	al flags	mil Floop	FAA ON	Reap	Conte.	EMPC	
Total Tetra-Furans	24.27	1.748e4	5.115e3	2.608e2	8.866e1	2.94 YES	0.000e0	0.00000	0.051600	0.122
2,3,7,8-TCDF	24.76	1.680e4	9.609e3	3.376e2	1.985e2	1.70 YES	5.361e2	0.00000	0.11553	0.122
Total Tetra-Furans	25.60	4.772e3	1.3 98e4	1.351e2	2.750e2	0.49 YES	0.000e0	0.00000	0.10212	0.273

Penta-Furans function 1

	The the say the	Comt. EMPC EL
26 C C C C C C C C C C C C C C C C C C C		

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Vista Analytical Laboratory

Dataset:

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

Last Altered: Printed:

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

Γ	Name :	RT	m1 Height m2 Height	'. mt Resp	m2 Resp	RA n/y	Resp	Conc.	EMPC	DU
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	rity	Resp	Conc.	EMPC	DL
14										

Work Order 1903647

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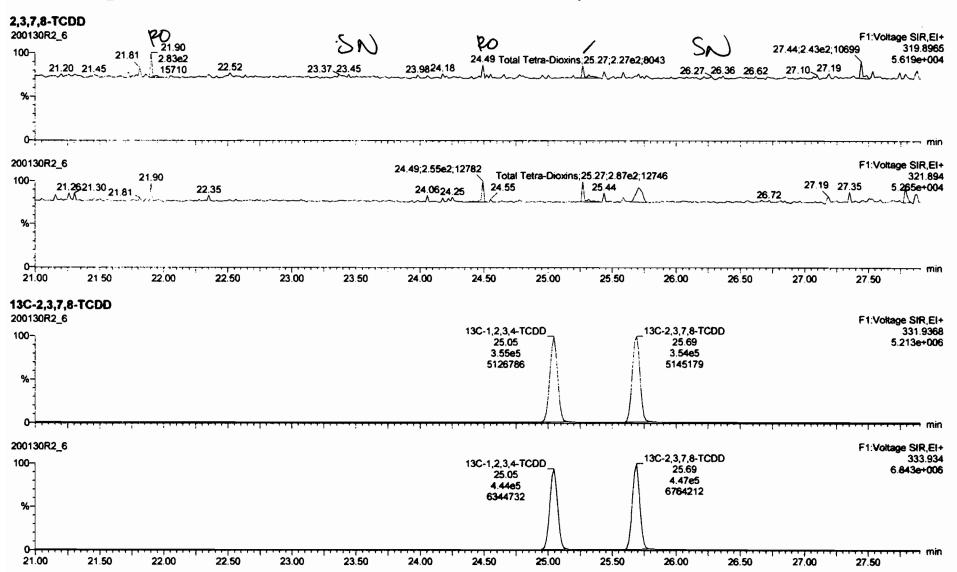
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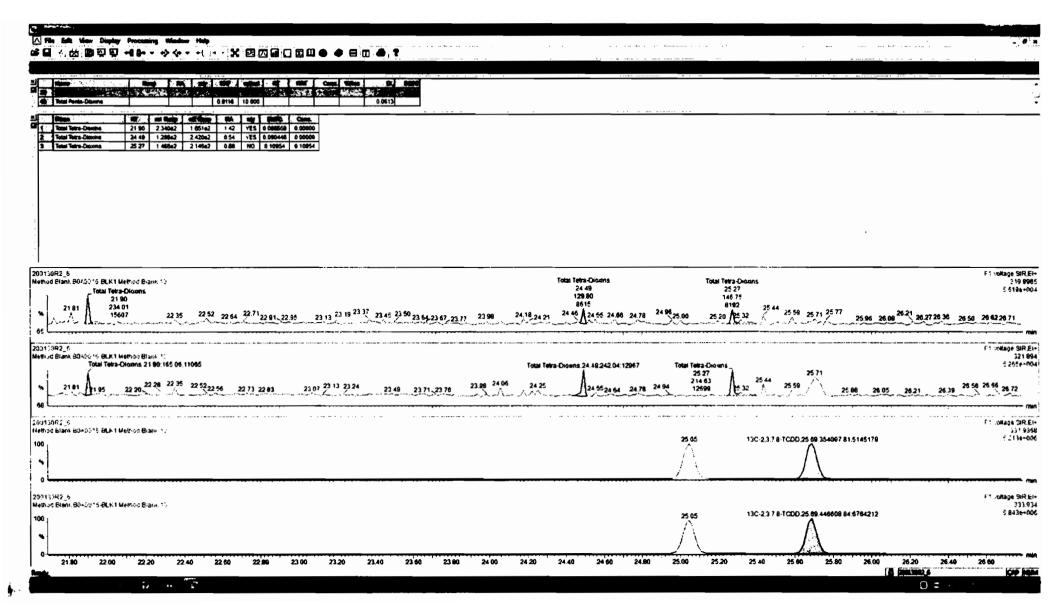
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Last Altered: Printed:

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

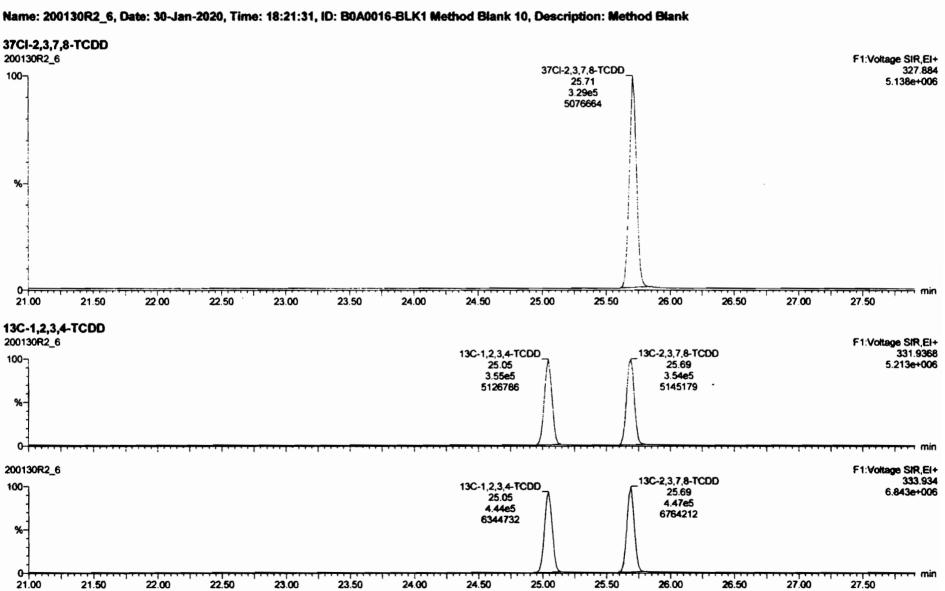




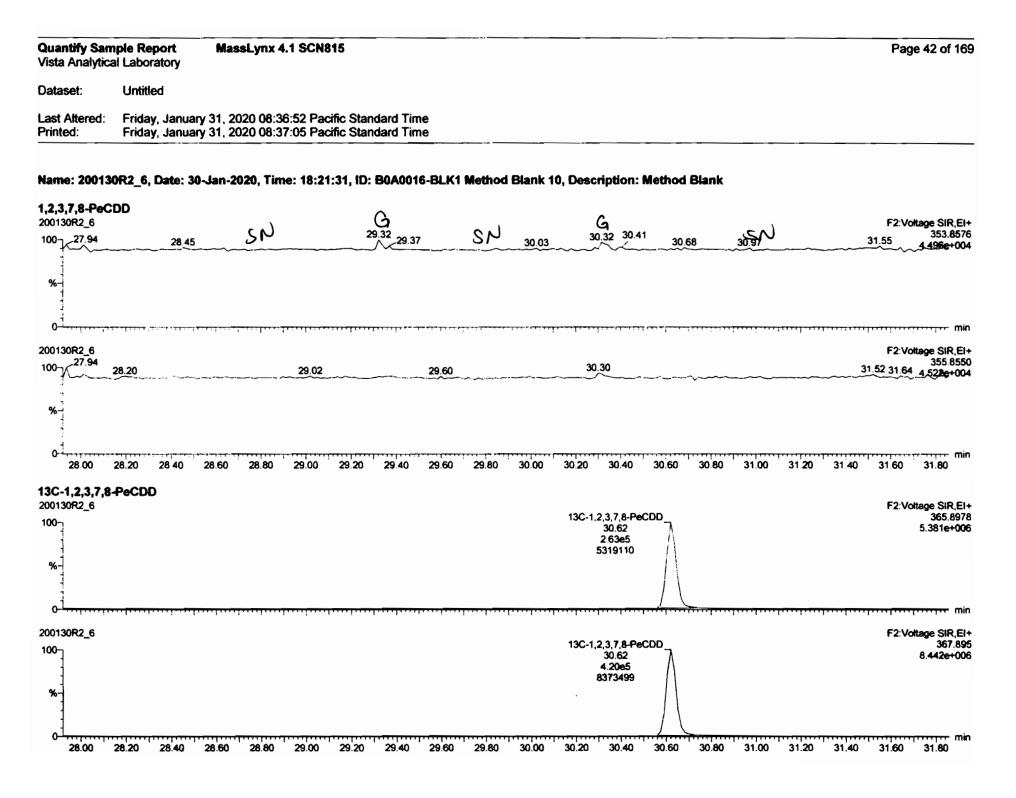
Work Order 1903647 Page 35 of 523



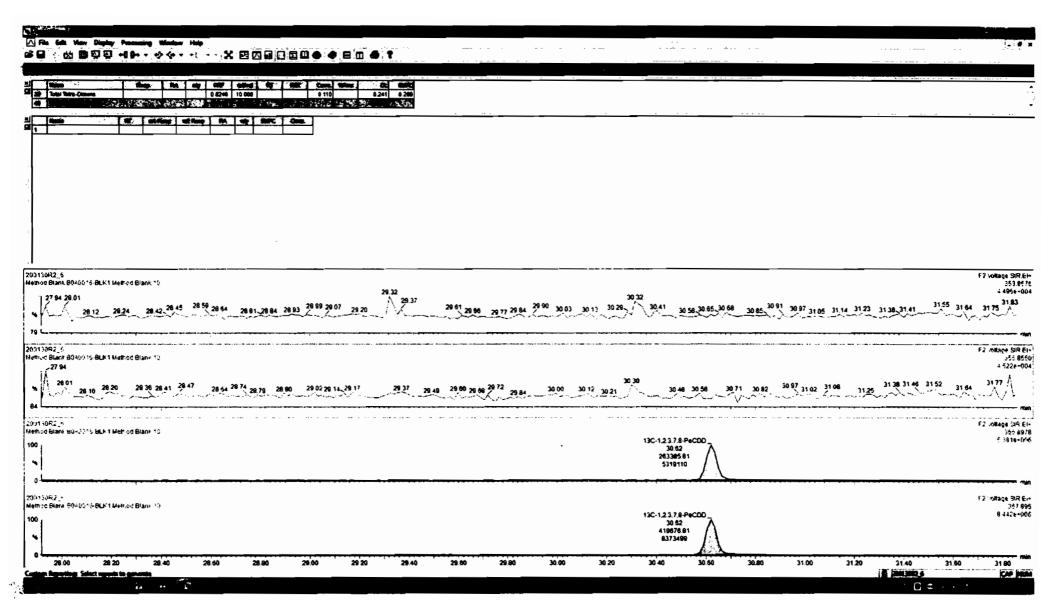




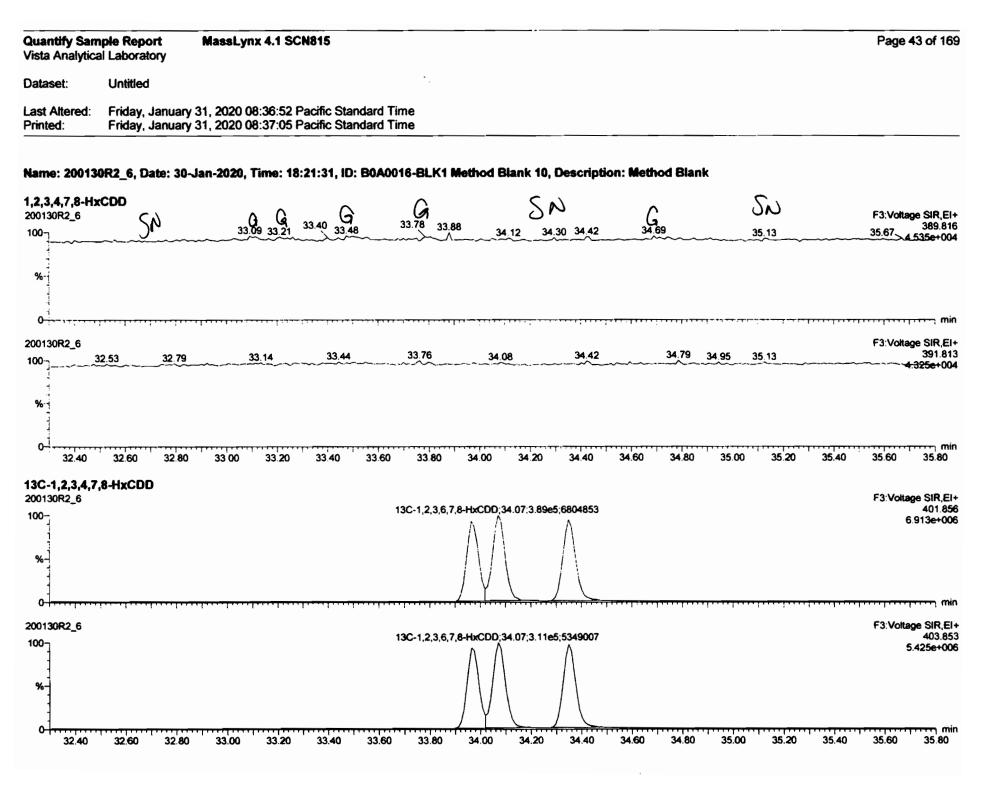
Work Order 1903647 Page 36 of 523

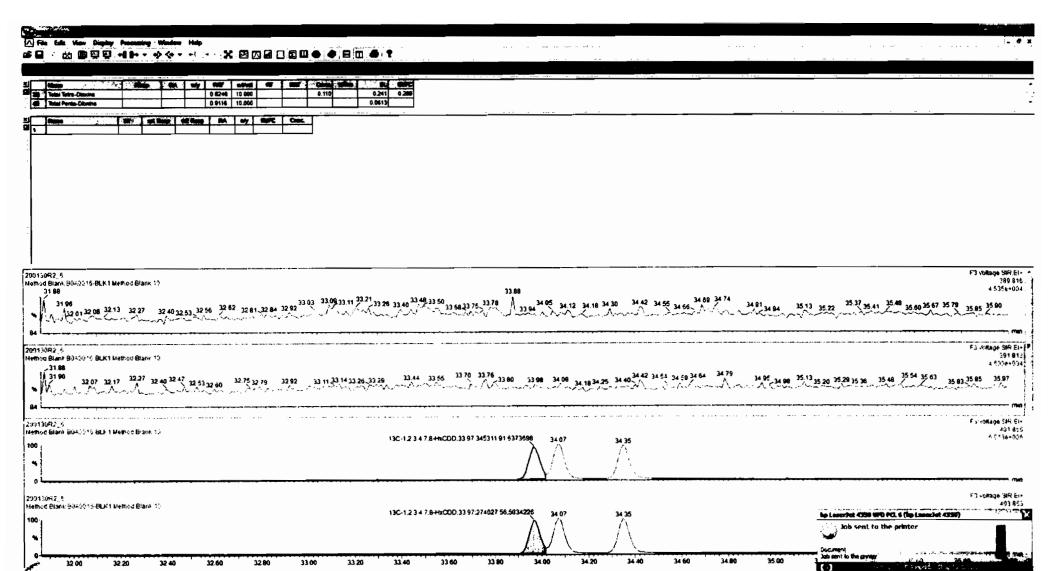


Work Order 1903647 Page 37 of 523



Work Order 1903647 Page 38 of 523

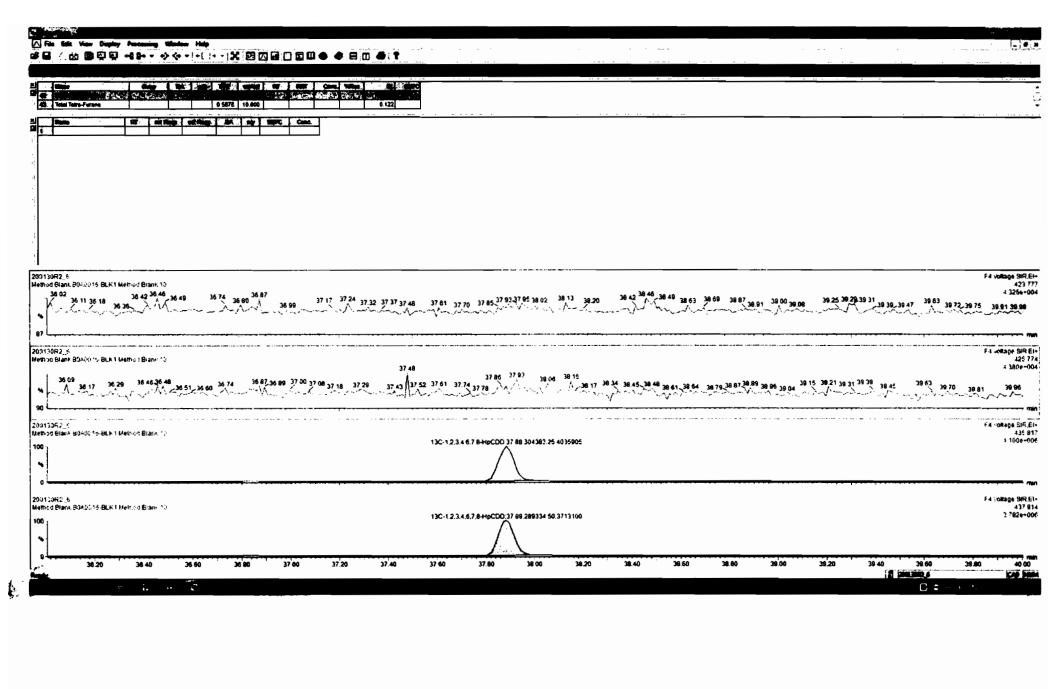




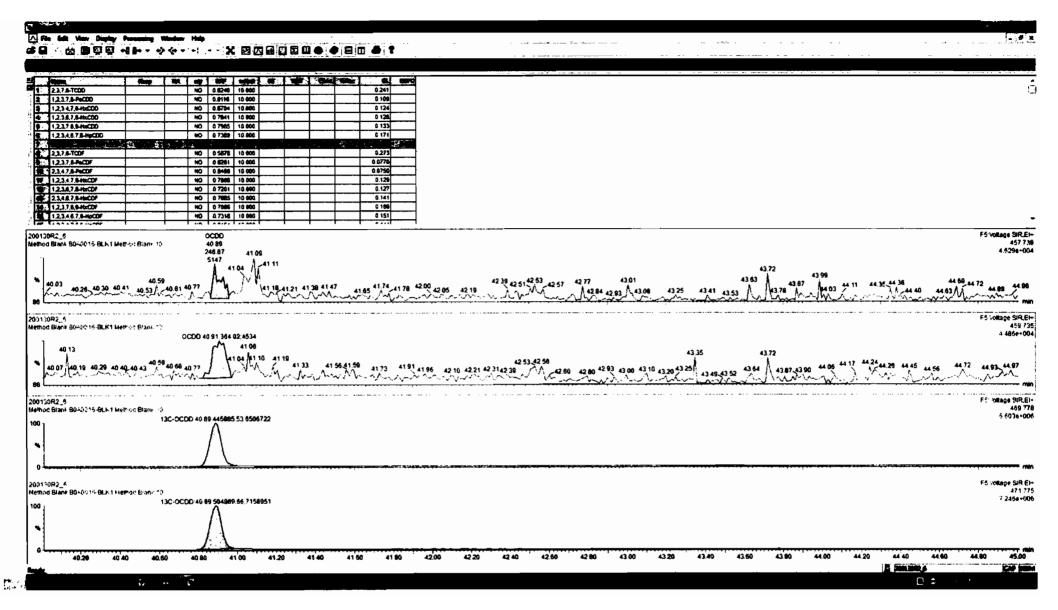
Work Order 1903647 Page 40 of 523

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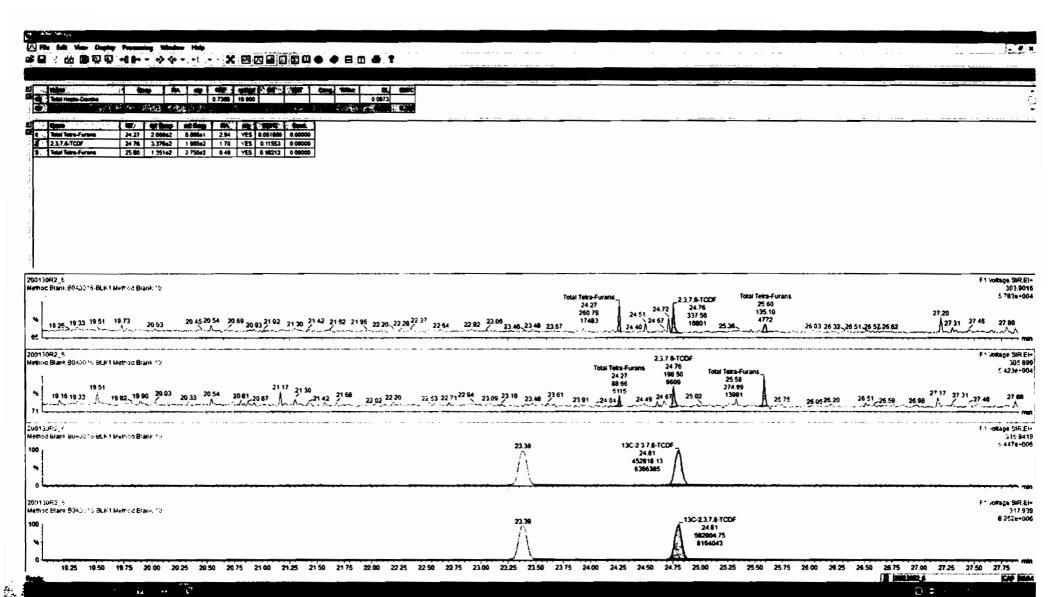
0 =



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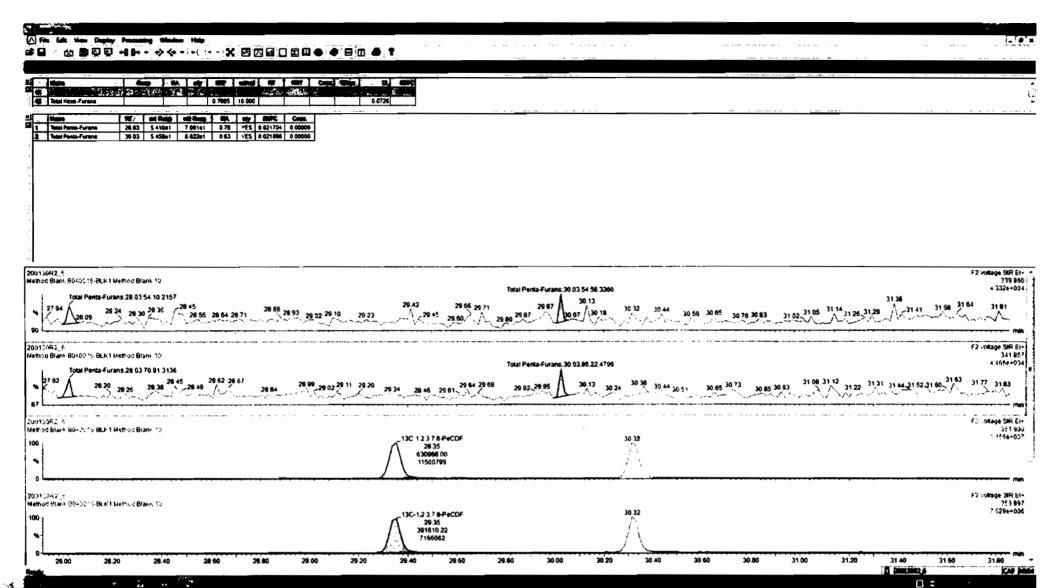
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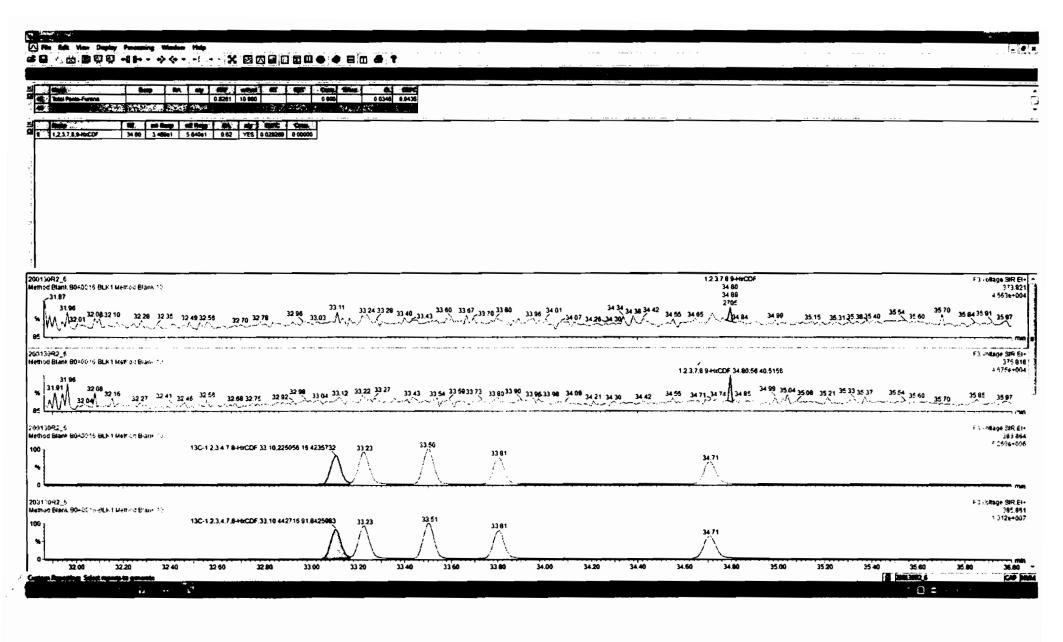
Work Order 1903647 Page 46 of 523

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38.00

38,20

38.40

38.60

38.80

39.00

39.20

39.40

39.60

39.80

40.00

36.40

36.20

36.60

36.80

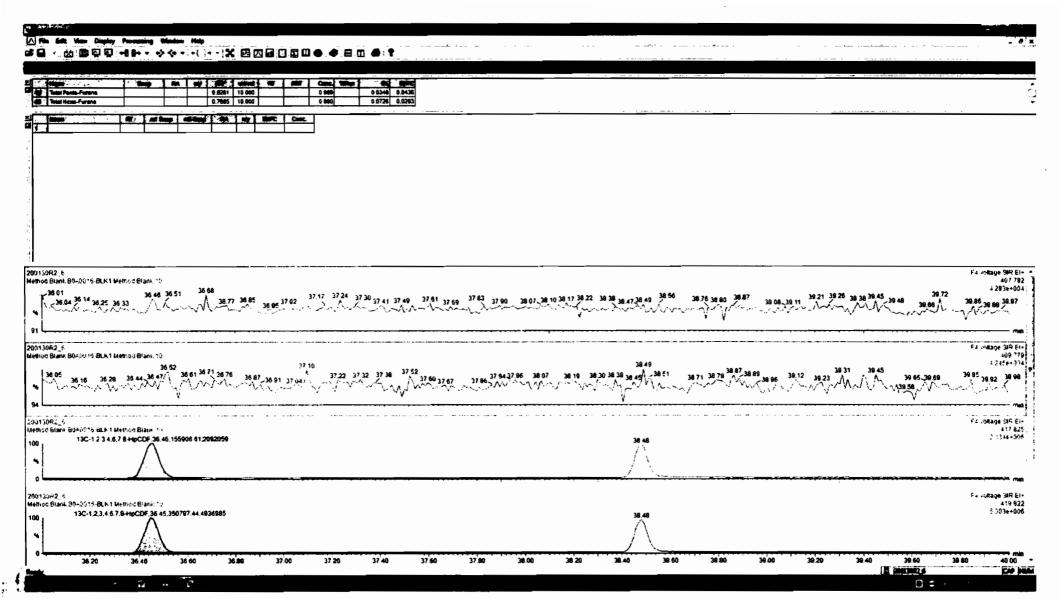
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37.20

37.40

37.60

37.80



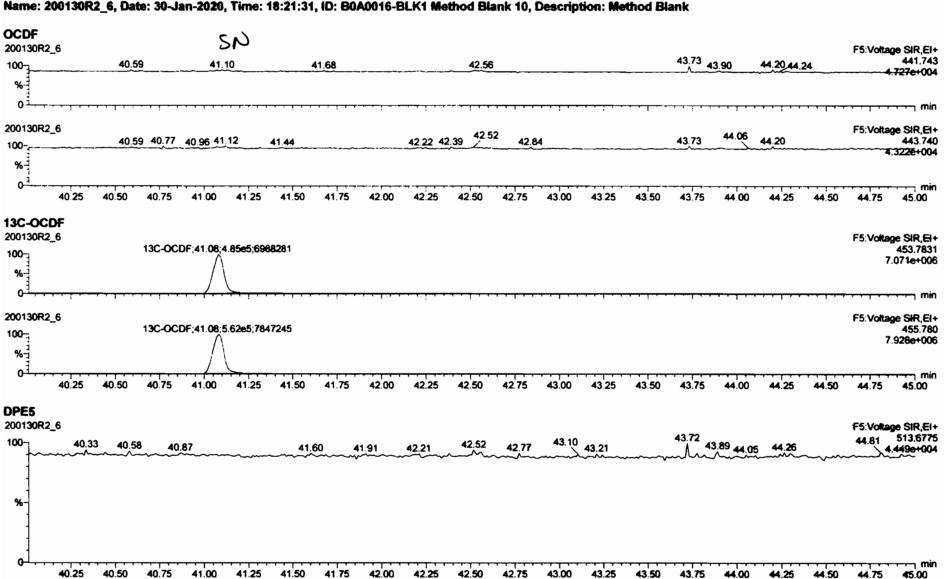
Work Order 1903647 Page 53 of 523

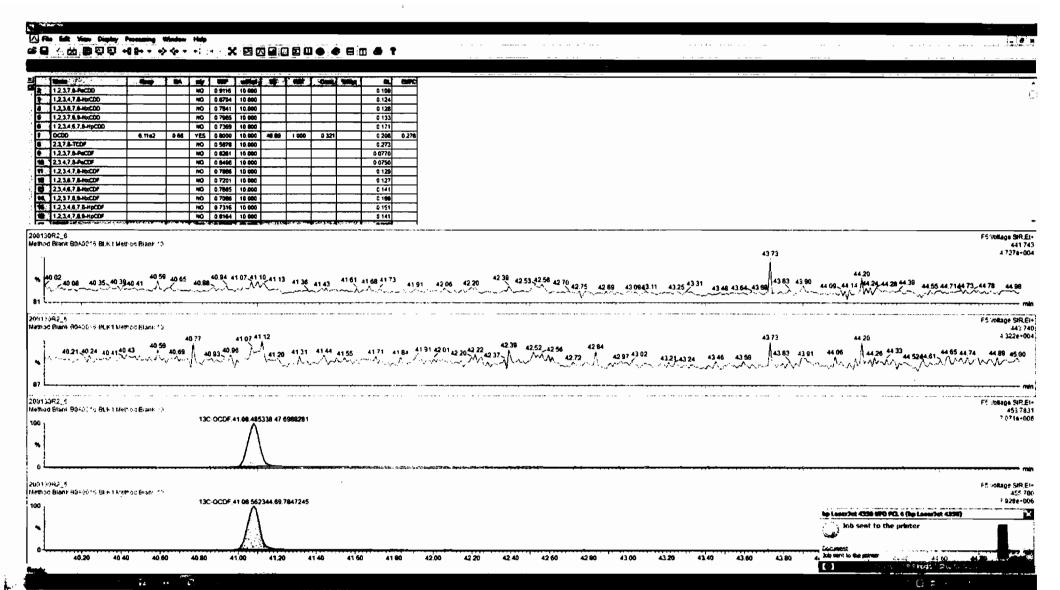
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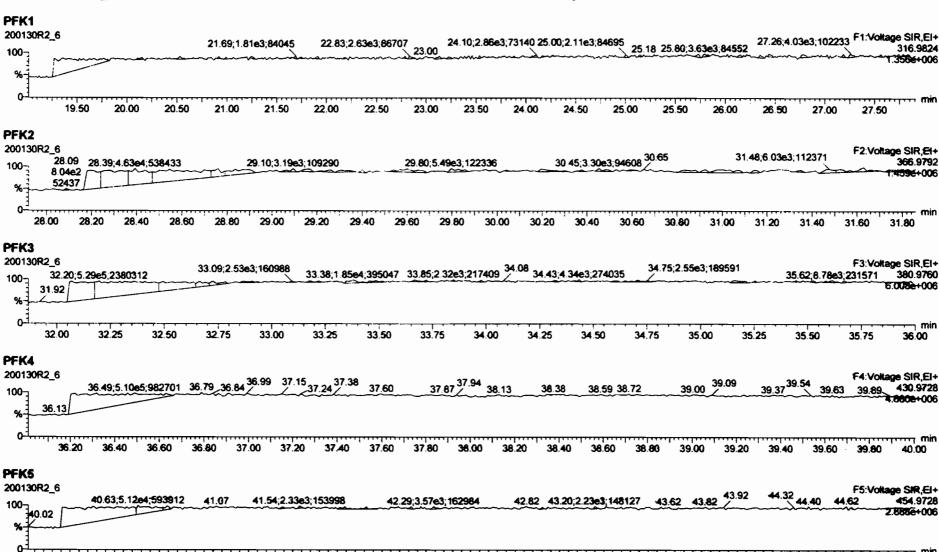
Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time







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40.25 40.50 40.75 41.00 41.25 41.50 41.75 42.00 42.50 42.25 42.75 43.00 43.25 43.50 43.75 44.25 44.00 44.50 44.75 45.00

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

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

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	Reep	RA	n/y	RRF	WEAVOR	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
ž	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	88.0	NO	0.800	10.000	40.900	40.91	1.000	1.000	227.84		0.247	228
6	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	6.7 4e 5	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	1
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	1
24 25	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	1
	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	
	्हें 25 13C-2,3,7,8-TCDF	2.19 e 6	0.78	NO	1.04	10.000	24.886	24.84	0.993	0.991	173. 48	86.7	0.269	1
	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	1
	ੂੰ, 27 13C-2,3,4,7,8-PeCDF	2.0 4e6	1.60	NO	0.903	10.000	30.174	30.33	1.204	1.210	185.50	92.8	0.423	1
	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 13C-1,2,3,6,7,8-HarCDF	1.66e6	0.51	NO	1.05	10.000	33.217	33.24	0.991	0.992	208.21	104	0.343	
	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 13C-1,2,3,7,8,9-HxCDF	1.29e6	0.51	NO	0.816	10.000	34.725	34.72	1.036	1.036	207.20	104	0.440	

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Quantify Sample Summary Report Vista Analytical Laboratory MassLynx 4.1 SCN815

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Dataset:

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

Last Altered: Printed:

Friday, January 31, 2020 08:46:22 Pacific Standard Time 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	Rew	RA	nly	RIPUF	wthtal !	Pred.RT	RT	Pred.RRT	RRT	Conc.	XRec	DL.	SAPQ
32	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	1
\$3	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	34 13C-OCDF	1.9 6e6	88.0	NO	0.586	10.000	41.060	41.09	1.225	1.226	439.14	110	0.307	
35	35 37CI-2,3,7,8-TCDD	6.32e5			1.09	10.000	25.738	25.74	1.027	1.027	81.067	101	0.0885	1
36	36 13C-1,2,3,4-TCDD	1. 44e 6	08.0	NO	1.00	10.000	25.080	25.06	1.000	1.000	200.00	100	0.240	
37	37 13C-1,2,3,4-TCDF	2. 44e 6	0.78	NO	1.00	10.000	23.420	23.42	1.000	1.000	200.00	100	0.279	
38	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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Dataset:

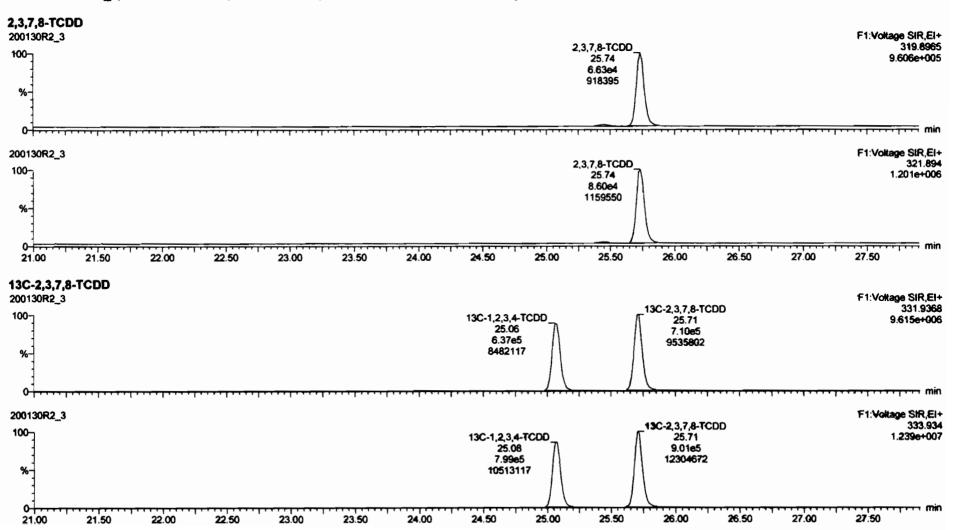
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Last Altered: Printed: Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time

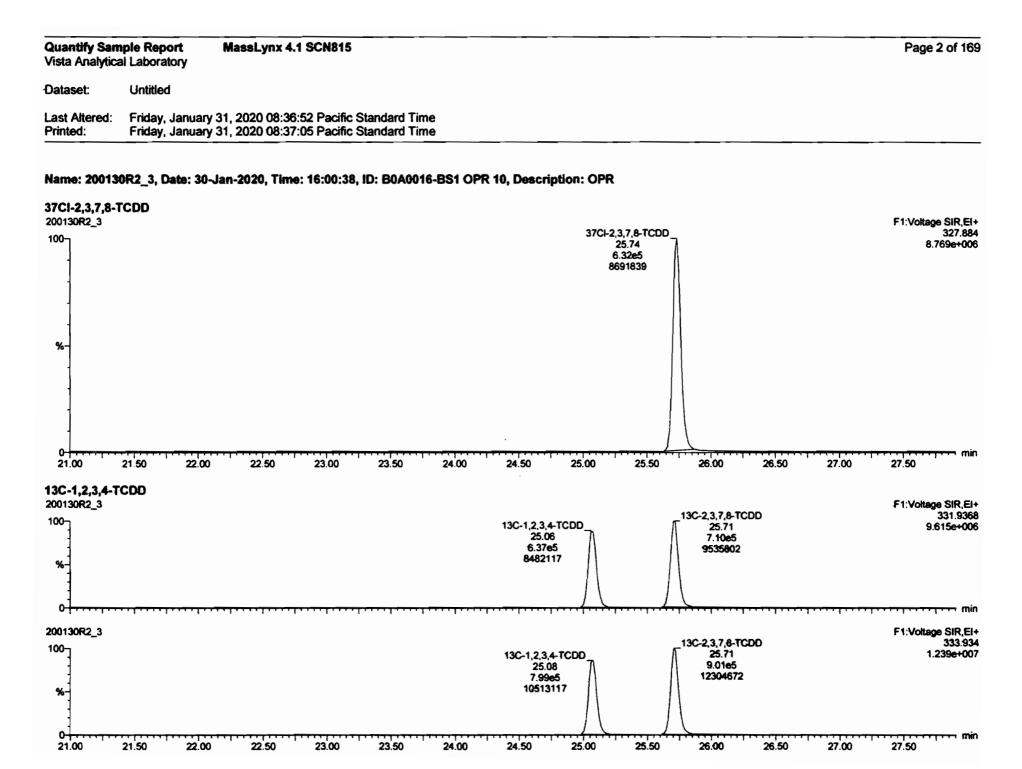
Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5 1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200130R2 3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR



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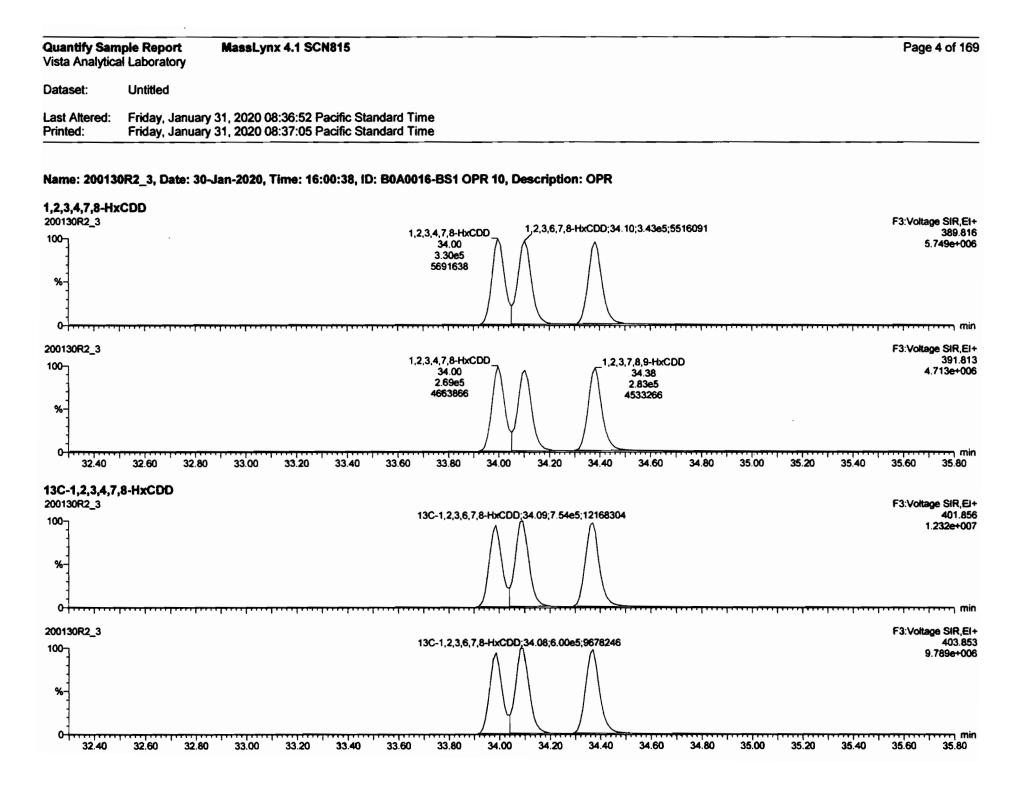
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29.00

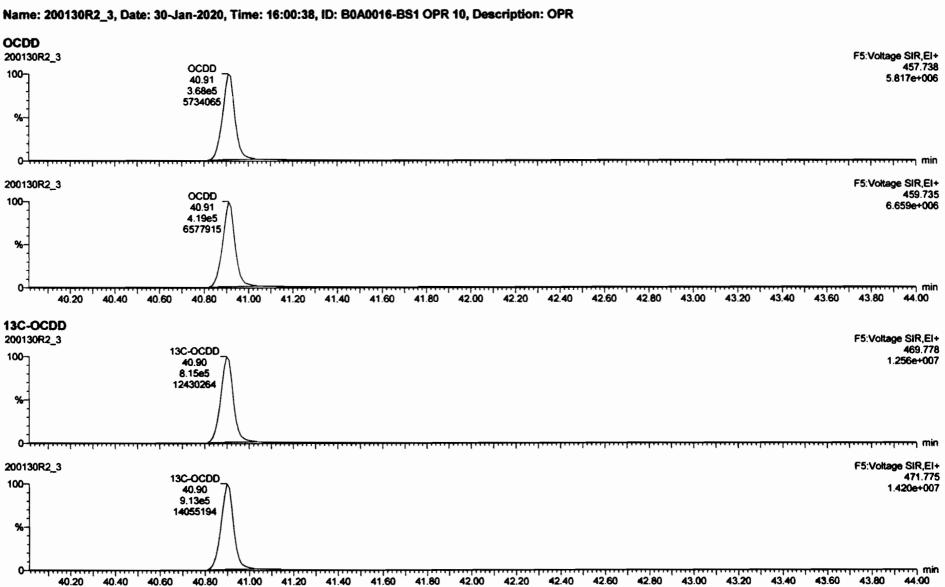
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29.40

29.60



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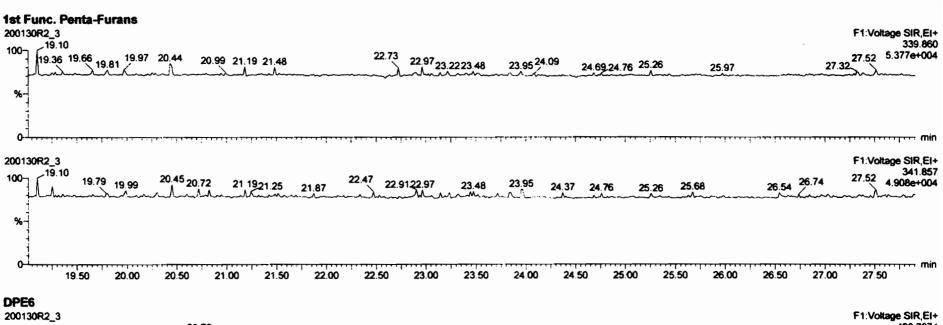
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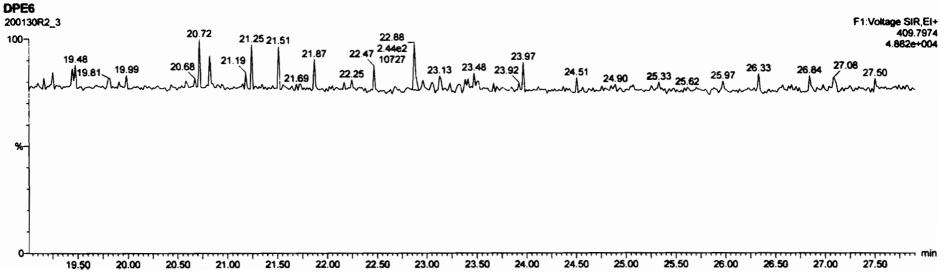
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Last Altered: Printed:

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Name: 200130R2_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR





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33.80

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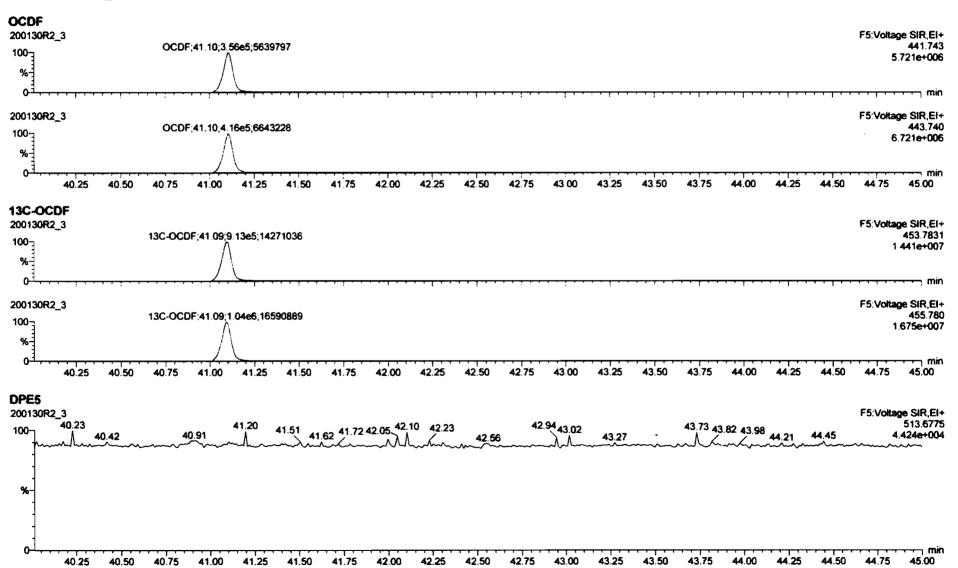
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Name: 200130R2_3, Date: 30-Jan-2020, Time: 16:00:38, ID: B0A0016-BS1 OPR 10, Description: OPR



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Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-11.qld

Last Altered: Printed: Tuesday, February 04, 2020 12:20:33 Pacific Standard Time Tuesday, February 04, 2020 12:23:10 Pacific Standard Time

8102/04/2020 202/03/

OT 02/05/2020

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_11, Date: 30-Jan-2020, Time: 22:16:27, ID: 1903647-01 PDI-045SC-B-04-06-191010 10.99, Description: PDI-045SC-B-04-06-191010

THE REAL PROPERTY.	# Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check IRRT	Conc.	%Rec	DL	EMPC
100000	1 2,3.7,8-TCDD				0.824	10.052	25.74		1.00		NO			0.0799	
2	2 1,2,3,7,8-PeCDD				0.912	10.052	30.66		1.00		NO			0.0753	
3	3 1,2,3,4,7,8-HxCDD				0.870	10.052	34.00		1.00		NO			0.0853	
4	4 1,2,3,6,7,8-HxCDD				0.784	10.052	34.08		1.00		NO			0.0891	
5	5 1,2.3,7.8,9-HxCDD				0.798	10.052	34.39		1.00		NO			0.0869	
6	6 1,2,3,4 6,7,8-HpCDD	2324.285	1.007	NO	0.737	10.052	37.91	37.92	1.00	1.00	NO	0.7973		0.122	0.7973
7 500000	7 OCDD	21529.375	0.892	NO	0.800	10.052	40.90	40.91	1.00	1.00	NO	8.786		0.116	8.786
8	8 2.3,7,6-TCDF	699.895	0.530	YES	0.588	10.052	24.85	24.88	1.00	1.00	NO	0.1760		0.0923	0.1402
9	9 1,2,3,7,8-PeCDF	764.644	1.468	NO	0.826	10.052	29.38	29.37	1.00	1.00	NO	0.1404		0.0604	0.1404
10	10 2,3,4,7,8-PeCDF	498.208	1.468	NO	0.850	10.052	30.36	30.35	1.00	1.00	NO	0.09117		0.0624	0.09117
115	11 1,2,3,4,7,8-HxCDF	957.559	1.254	NO	0.787	10.052	33.11	33.14	1.00	1.00	NO	0.2678		0.0648	0.2678
12	12 1,2,3,6,7,8-HxCDF	404.207	1.403	NO	0.720	10.052	33.24	33.25	1.00	1.00	NO ·	0.1089		0.0652	0.1089
13	13 2,3,4,6,7,8-HxCDF				0.766	10.052	33.85		1.00		NO			0.0712	ļ
14是前途已罗	14 1.2,3,7,8,9-HxCDF				0.709	10.052	34.72		1.00		NO			0.0986	
15	15 1,2,3,4,6,7,8-HpCDF	612,969	0.825	YES	0.732	10.052	36.49	36.49	1.00	1.00	NO	0.2404		0.12:3	0.2212
16	16 1,2,3,4,7,8,9-HpCDF				0.816	10.052	38.48		1.00		NO			0.120	
17	17 OCDF	1030.979	0.789	NO	0.639	10.052	41.09	41.11	1.00	1.00	NO	0.4801		0.110	0.4801
18	18 13C-2,3,7,8-TCDD	1013305.6	0.779	NO	1.12	10.052	25.71	25.70	1.03	1.03	NO	197.2	99.1	0.235	
19	19 13C-1,2,3,7,8-PeCDD	903565.626	0.642	NO	0.841	10.052	30.45	30.64	1.22	1.22	NO	233.2	117	0.279	
20	20 13C-1,2,3,4,7,8-HxCDD	804709.344	1.264	NO	0.938	10.052	33.98	33.99	1.01	1.01	NO	174.7	87.8	0.336	
21	21 13C-1,2,3,6,7,8-HxCDD	875060.406	1.274	NO	1 07	10.052	34.08	34.08	1.02	1.02	NO	167.3	84.1	0.296	
22	22 13C-1,2,3,7,8,9-HxCDD	899775.063	1.239	NO	1.03	10.052	34.38	34.36	1.03	1.03	NO	-177.8	89.4	0.306	
23	23 13C-1,2 3,4,6,7,8-HpCDD	787123.344	1.044	NO	0.710	10.052	37.93	37.90	1.13	1.13	NO	225.8	113	0.662	
24	24 13C-OCDD	1218895.3	0.898	NO	0.601	10.052	40.81	40.90	1.22	1.22	NO	413.0	104	0.408	
25	25 13C-2,3,7,8-TCDF	1345866.0	0.784	NO	1.04	10.052	24.89	24.82	0.99	0.99	NO	175.6	88.2	0.296	
26	26 13C-1,2,3.7.8-PeCDF	1312058.4	1.601	NO	0.917	10.052	29.22	29.35	1.17	1.17	NO	193.5	97.3	0.442	
27	27 13C-2,3,4,7,8-FeCDF	1279449.3	1.556	NO	0.903	10.052	30.17	30.33	1.20	1.21	Ю	191.7	96.3	0.449	
28.	28 13C-1.2.3,4.7,8-HxCDF	904356.250	0.510	МО	0.861	10.052	33.11	33.11	0.99	0.99	NO	213.8	107	0.620	
29	29 13C-1,2,3,6,7,8-HxCDF	1025188.7	0.516	NO	1.05	10.052	33.21	33.23	0.99	0.99	NO	199.5	100	0.510	
30	30 13C-2,3,4,6,7,8-HxCDF	877356.469	0.510	NO	0.946	10.052	33.81	33.82	1.01	1.01	NO	188.9	95.0	0.565	

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Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-11.qld

Last Altered: Printed:

Tuesday, February 04, 2020 12:20:33 Pacific Standard Time Tuesday, February 04, 2020 12:23:10 Pacific Standard Time

Name: 200130R2_11, Date: 30-Jan-2020, Time: 22:16:27, ID: 1903647-01 PDI-045SC-B-04-06-191010 10.99, Description: PDI-045SC-B-04-06-191010

THE STREET	# Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	785349.500	0.511	NO	0.816	10.052	34.71	34.72	1.04	1.04	NO	196.1	98.6	0.655	
32	32 13C-1,2,3,4,6,7,8-HpCDF	668383.313	0.439	NO	0.589	10.052	36.46	36.46	1.09	1.09	NO	231.0	116	0.726	
33	33 13C-1,2,3,4,7,8,9-HpCDF	525646.282	0.424	NO	0.448	10.052	38.47	38.48	1.15	1.15	NO	239.0	120	0.955	
34	34 13C-OCDF	1337847.4	0.861	NO	0.586	10.052	41.05	41.09	1.23	1.23	NO	465.2	117	0.455	
35	35 37CI-2,3,7,8-TCDD	413405.906			1.09	10.052	25.74	25.72	1.03	1.03	NO	82.67	104	0.0545	
36	36 13C-1,2,3,4-TCDD	916486.094	0.804	NO	1.00	10.052	25.08	25.06	1.00	1.00	NO	199.0	100	0.263	
37	37 13C-1,2,3,4-TCDF	1471378.5	0.798	NO	1.00	10.052	23.42	23.42	1.00	1.00	NO	199.0	100	0.307	
38	38 13C-1,2,3,4,6,9-HxCDF	977022.813	0.508	NO	1.00	10.052	33.52	33.51	1.00	1.00	NO	199.0	100	0.534	
39	39 Total Tetra-Dioxins				0.824	10.052	24.62		0.00		NO			0.0424	
40	40 Total Penta-Dioxins				0.912	10.052	29.96		0.00		NO			0.0315	200
41	41 Total Hexa-Dioxins				0.784	10.052	33.63		0.00		NO	0.0000		0.0480	0.1763
42	42 Total Hepta-Dioxins				0.737	10.052	37.64		0.00		NO	1.694		0.122	1.694
43	43 Total Tetra-Furans				0.588	10.052	23.61		0.00		NO	0.0000		0.0439	0.1402
44	44 1st Func. Penta-Furans				0.826	10.052	27.09		0.00		NO			0.0191	
45	45 Total Penta-Furans				0.826	10.052	29.27		0.00		NO .	0.3451		0.0623	0.3612
46	46 Total Hexa-Furans				0.766	10.052	33.56		0.00		NO	0.5071		0.0715	0.5071
47	47 Total Hepta-Furans				0.732	10.052	37.83		0.00		NO	0.0000		0.0658	0.5248

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-11.qld

Last Altered: Printed:

Tuesday, February 04, 2020 12:20:33 Pacific Standard Time Tuesday, February 04, 2020 12:21:36 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 11, Date: 30-Jan-2020, Time: 22:16:27, ID: 1903647-01 PDI-045SC-B-04-06-191010 10.99, Description: PDI-045SC-B-04-06-191010

Tetra-Dioxins

# Name	Area IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
Tana de Paris							

Penta-Dioxins

# Name	9	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1,43,419,14							2,000,000		

Hexa-Dioxins

THE PARTY OF	# Name	Area	IS Area	RA:	Y/N	Pred.RT	RT	Conc.	EMPC
1 PARTIES	41 Total Hexa-Dioxins	0.00e0	0.00e0	1.525	YES	33.63	32.50	0.0000	0.1763

Hepta-Dioxins

The same	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1/6/25/25/25	6 1,2,3,4,6,7,8-HpCDD	2.32e3	7.87e5	1.007	NO	37.91	37.92	0.7973	0.7973
2	42 Total Hepta-Dioxins	2.61e3	7.87e5	0.895	NO	37.64	36.85	0.8969	0.8969

Tetra-Furans

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1 国民群岛强	8 2,3,7,8-TCDF	7.00e2	1.35e6	0.530	YES	24.85	24.88	0.0000	0.1402

Penta-Furans function 1

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

Quantify Totals Report MassLynx MassLynx V4.1 SCN 945

Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200130R2\200130R2-11.qld

Last Altered: Tuesday, February 04, 2020 12:20:33 Pacific Standard Time Printed: Tuesday, February 04, 2020 12:21:36 Pacific Standard Time

Name: 200130R2_11, Date: 30-Jan-2020, Time: 22:16:27, ID: 1903647-01 PDI-045SC-B-04-06-191010 10.99, Description: PDI-045SC-B-04-06-191010

Penta-Furans

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	10 2,3,4,7,8-PeCDF	4.98e2	1.28e6	1.468	NO	30.36	30.35	0.09117	0.09117
2	9 1,2,3,7,8-PeCDF	7.65e2	1.31e6	1.468	NO	29.38	29.37	0.1404	0.1404
3	45 Total Penta-Furans	6.11e2	0.00e0	1.618	NO	29.27	28.39	0.1136	0.1136
43 FERRISH STREET	45 Total Penta-Furans	0.00e0	0.00e0	0.738	YES	29.27	30.39	0.0000	0.01609

Hexa-Furans

PARTY AND ADDRESS OF	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
125	12 1,2,3,6,7,8-HxCDF	4.04e2	1.03e6	1.403	NO	33.24	33.25	0.1089	0.1089
2	11 1,2,3,4,7,8-HxCDF	9.58e2	9.04e5	1.254	NO	33.11	33.14	0.2678	0.2678
3	46 Total Hexa-Furans	4.51e2	0.00e0	1.166	NO	33.56	32.67	0.1304	0.1304

Hepta-Furans

nation of	# Name	Area	IS Area	IRA .	Y/N	Pred.RT	RT	Conc.	EMPC
1	47 Total Hepta-Furans	0.00e0	0.00e0	1.202	YES	37.83	37.11	0.0000	0.3036
2	15 1,2,3,4,6,7,8-HpCDF	6.13e2	6.68e5	0.825	YES	36.49	36.49	0.0000	0.2212

Work Order 1903647

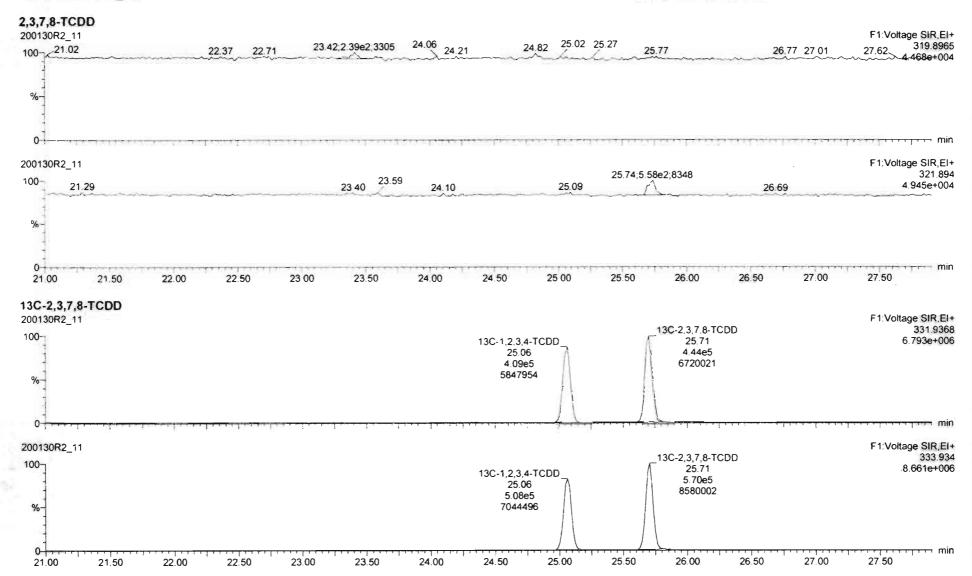
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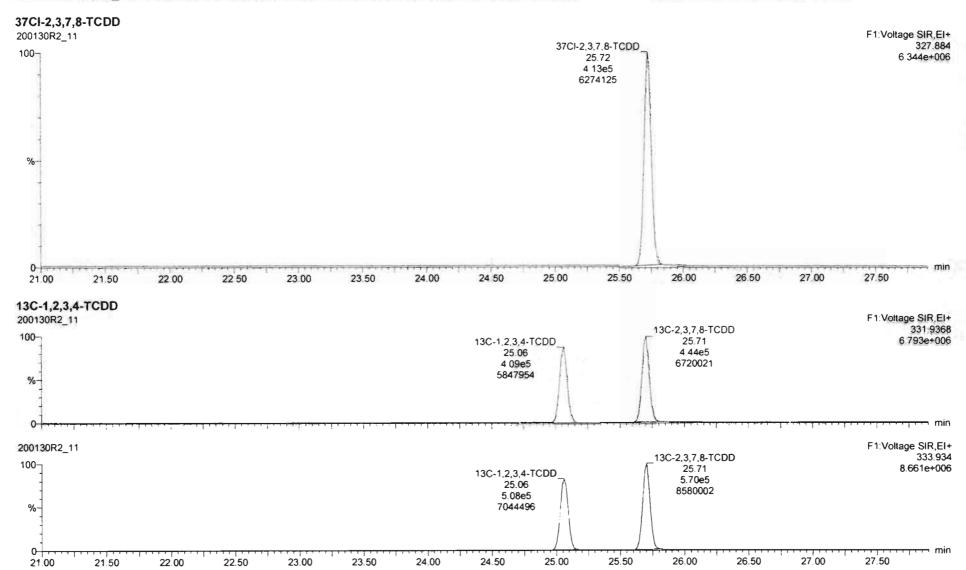
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Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time



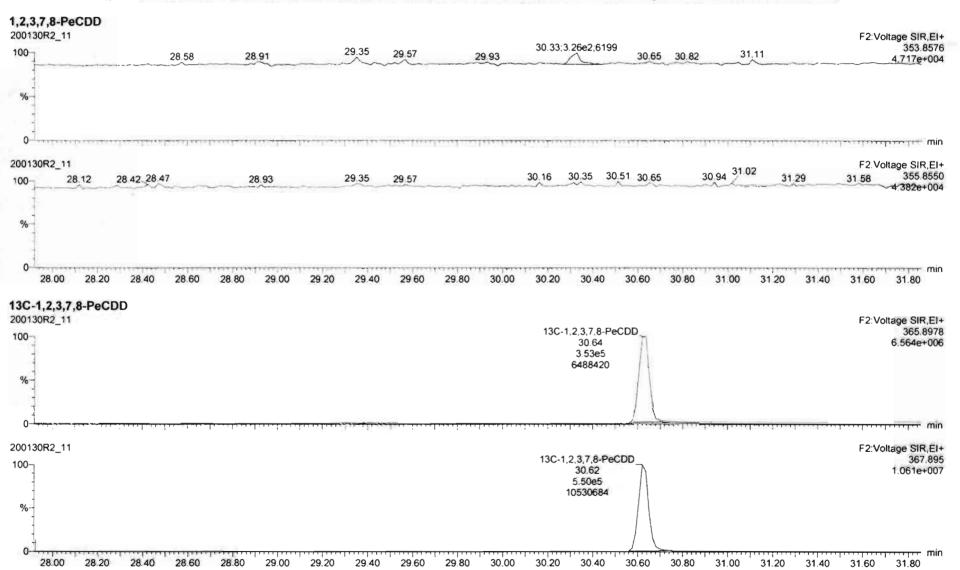
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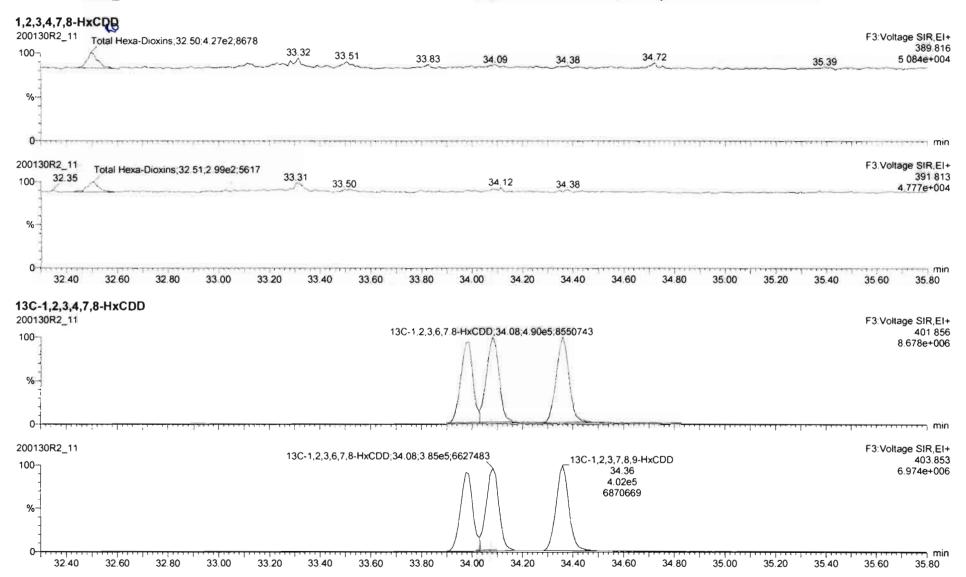
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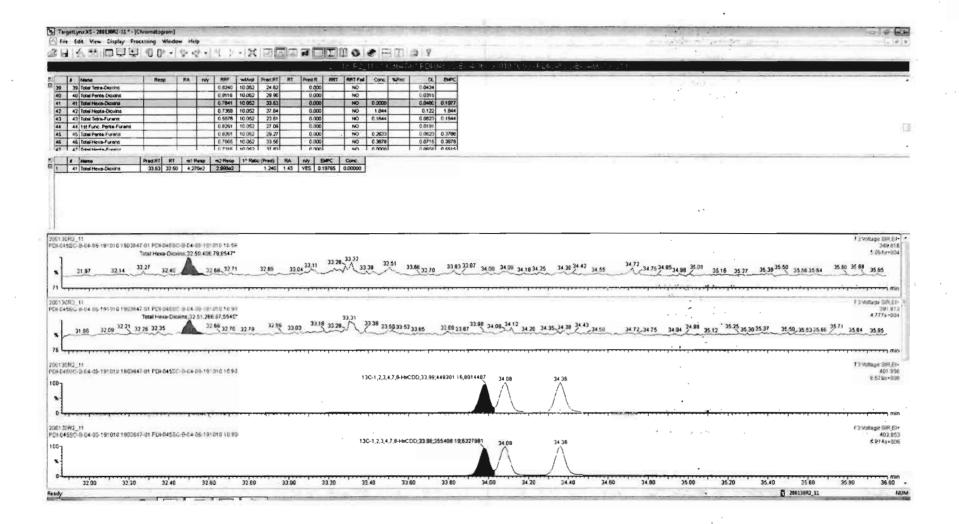


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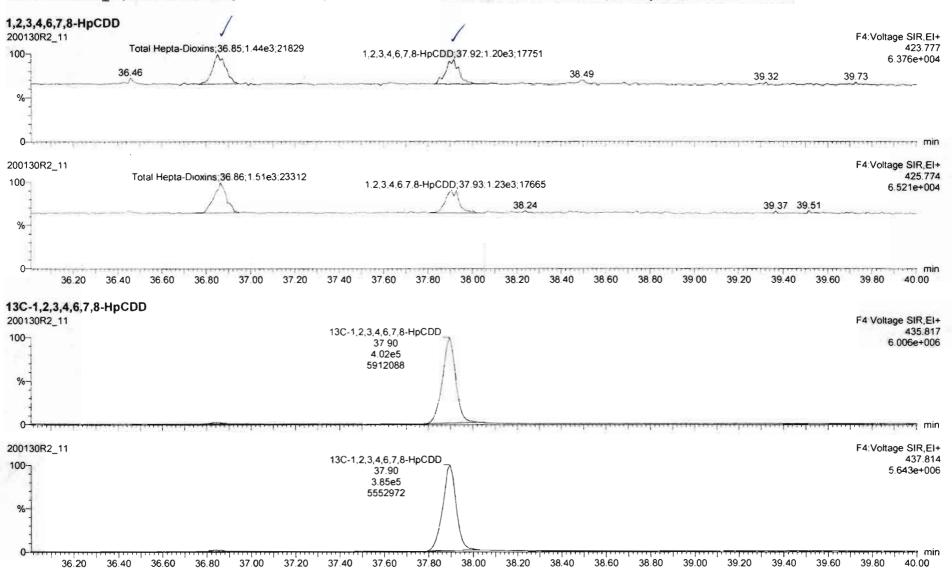


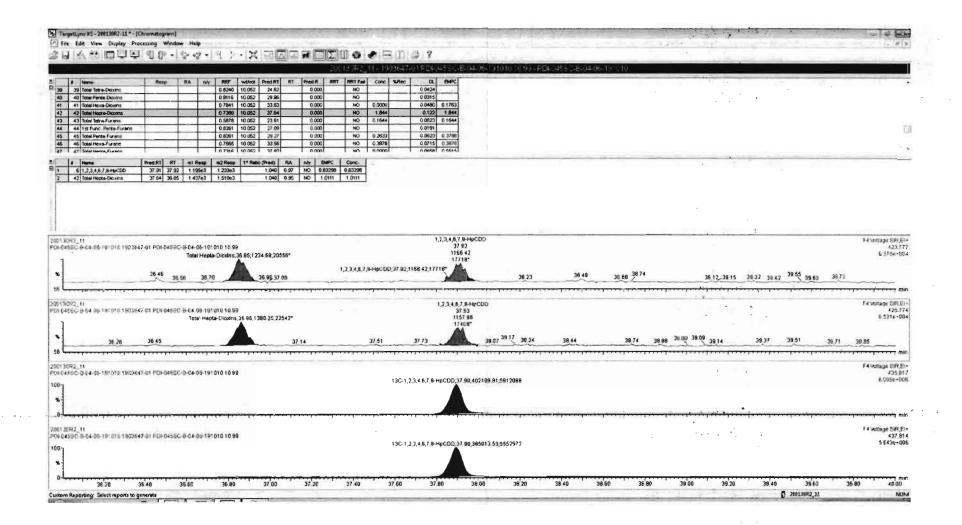


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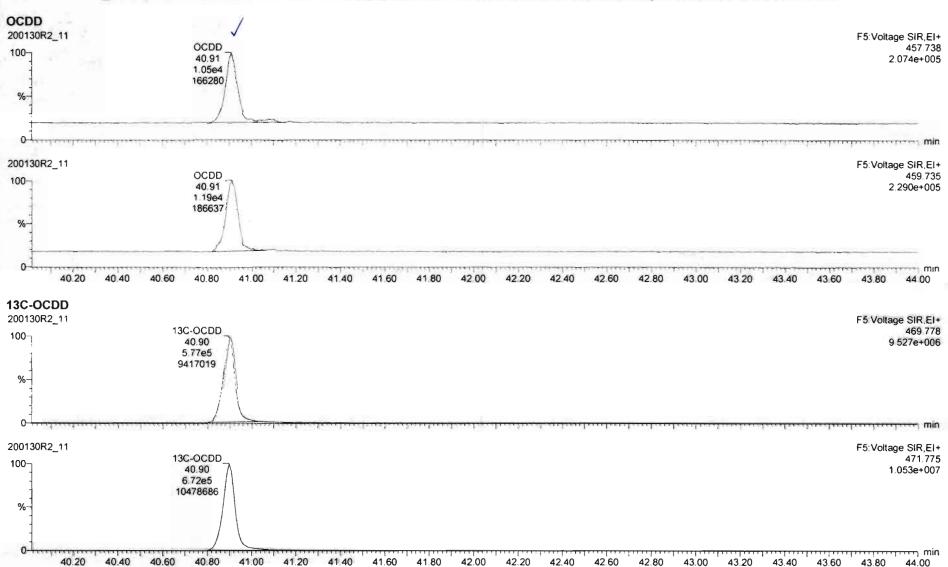


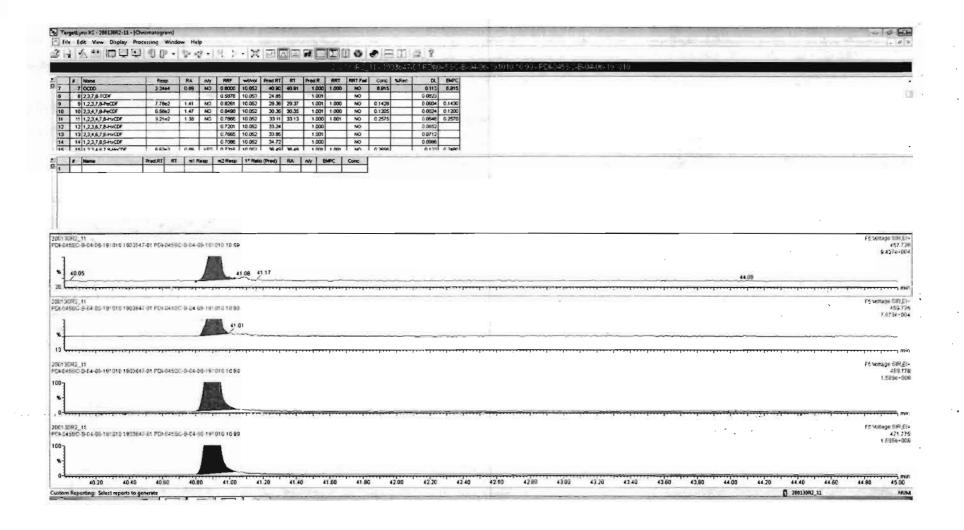


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Last Altered: Printed: Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time



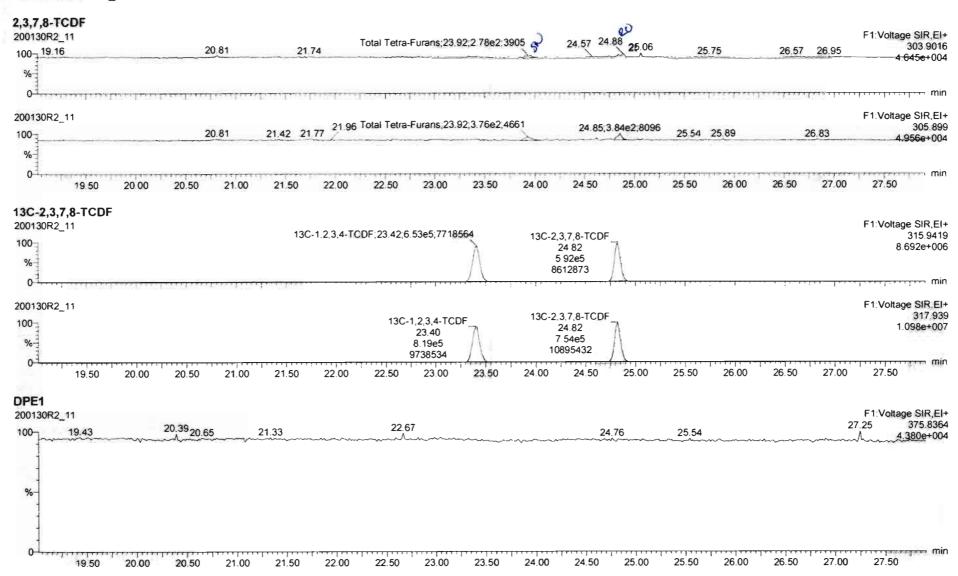


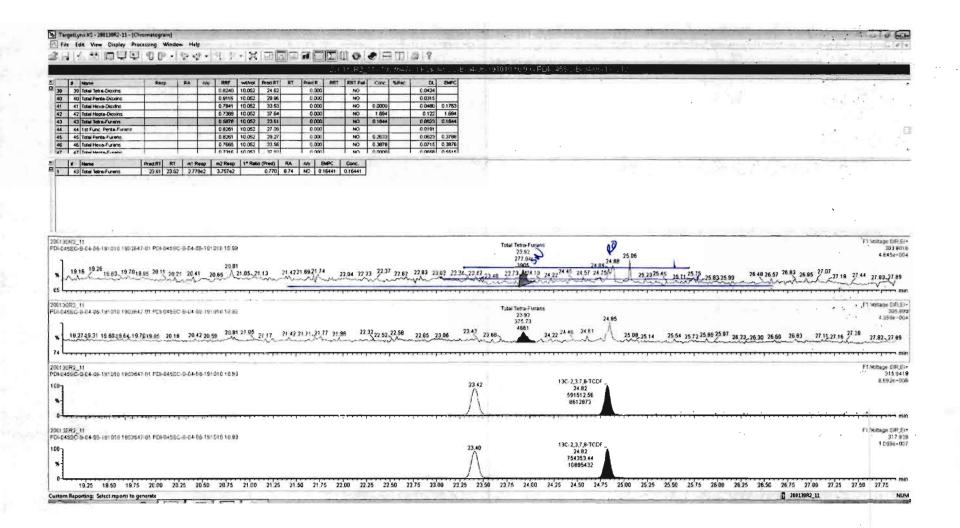
Work Order 1903647

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



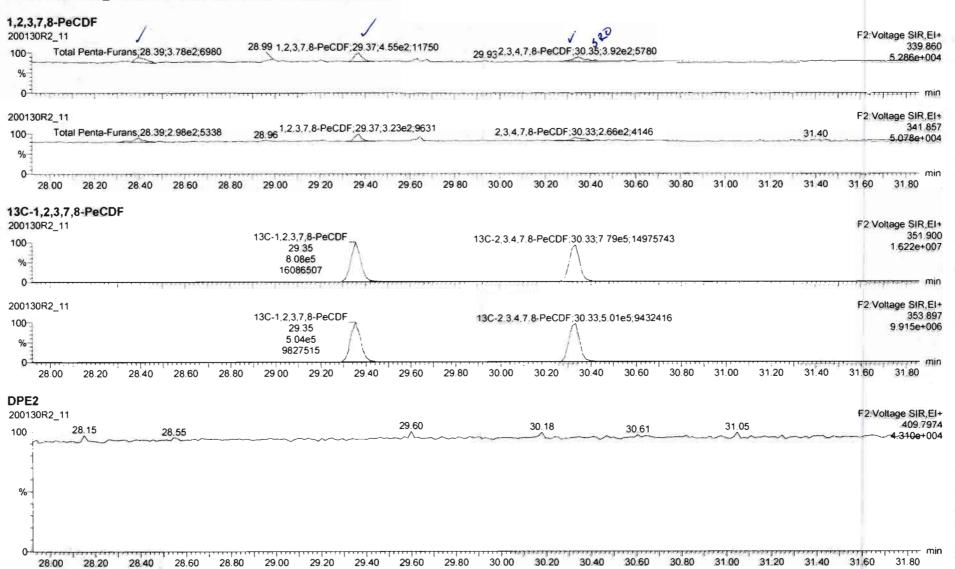


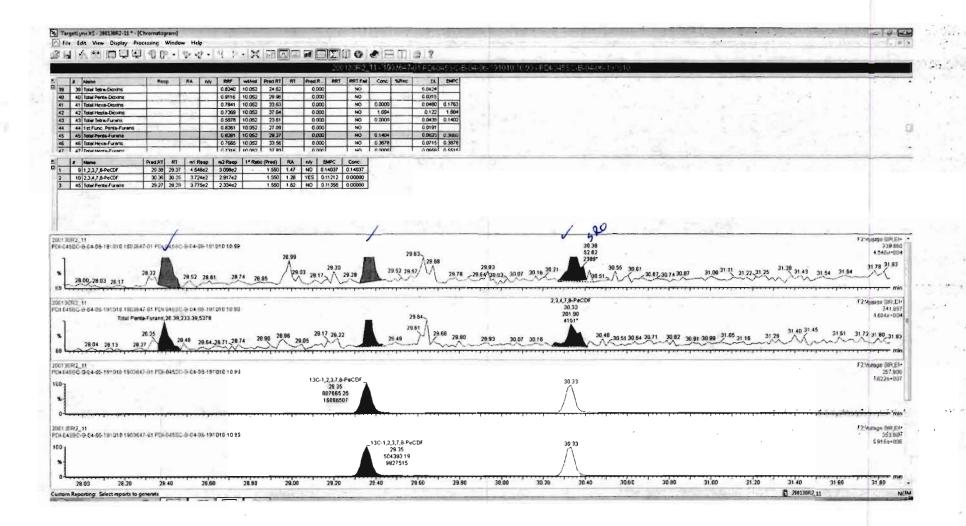
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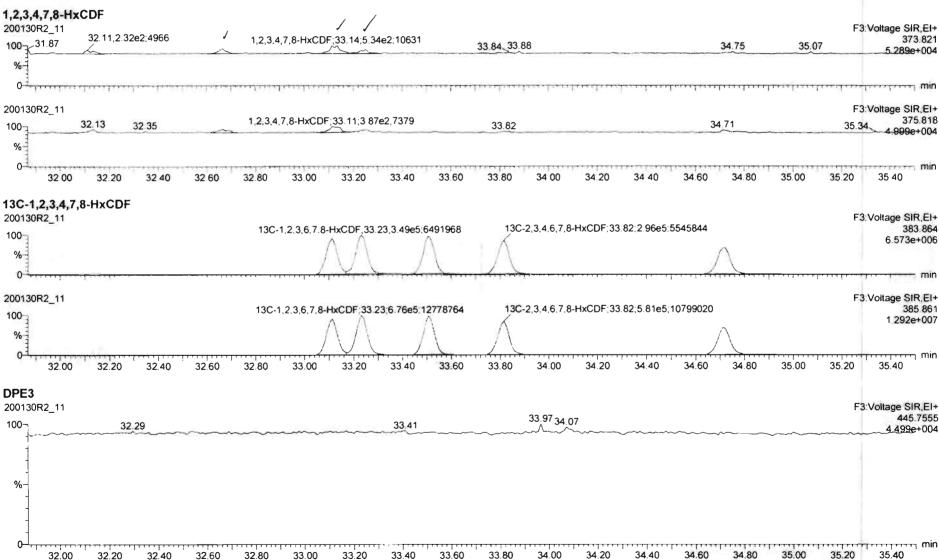
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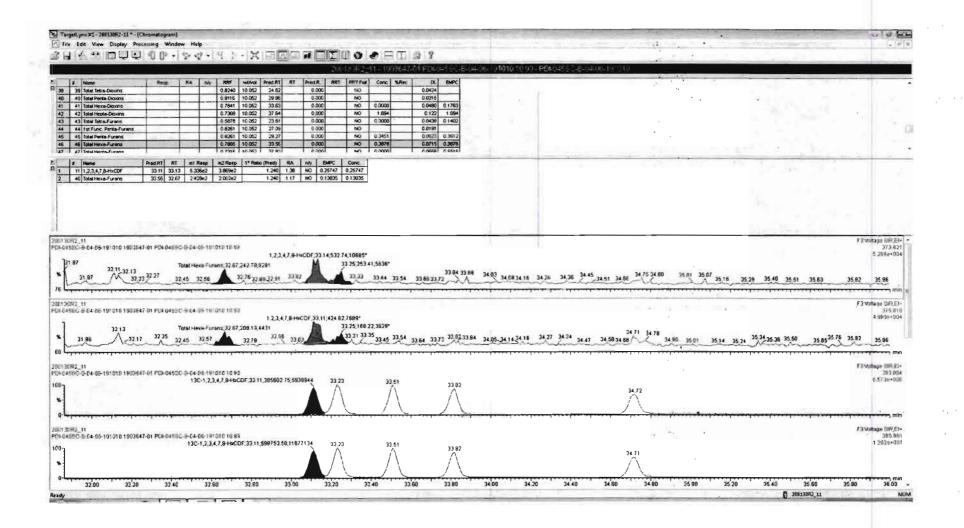




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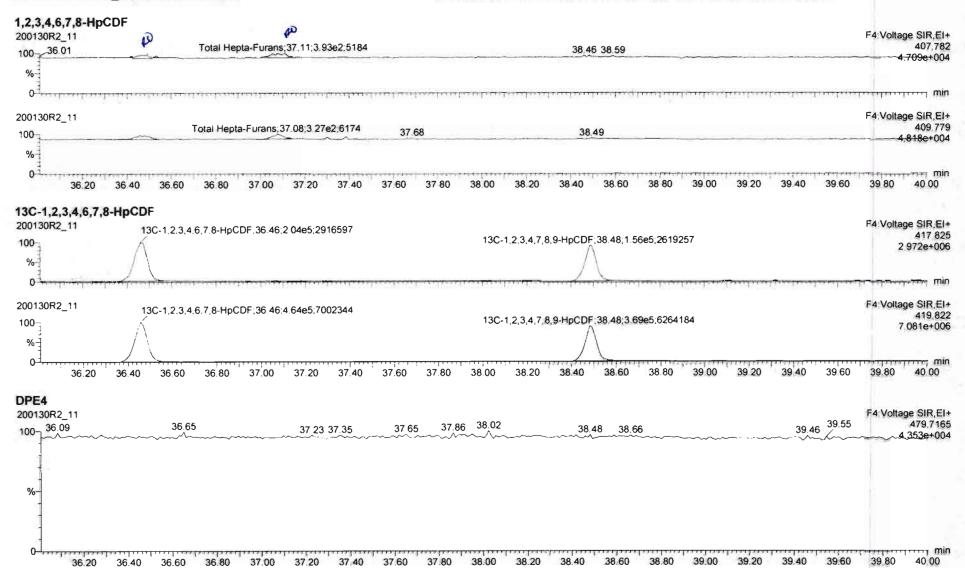


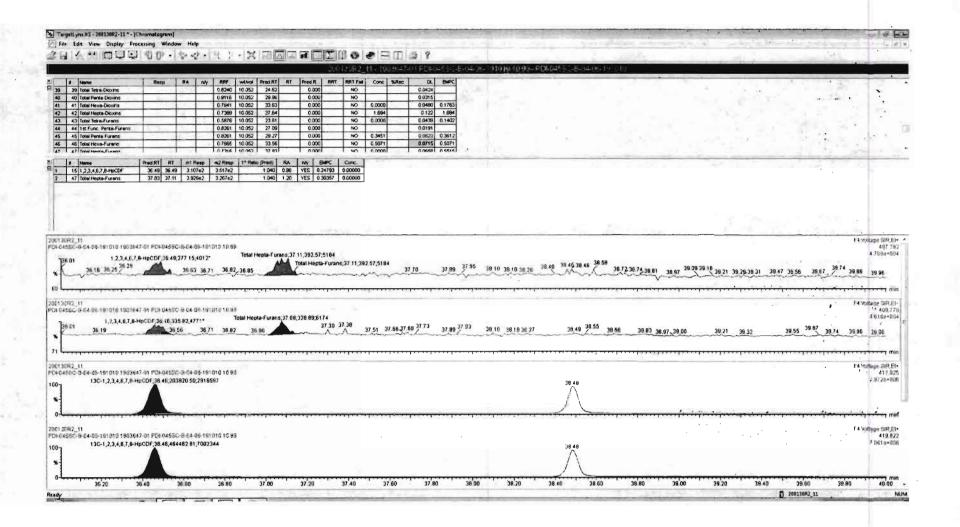


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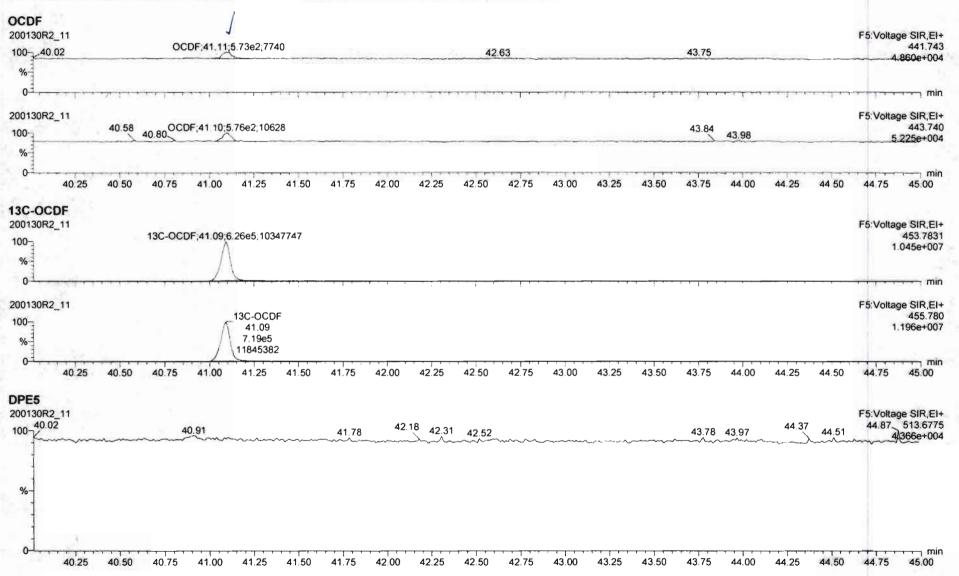


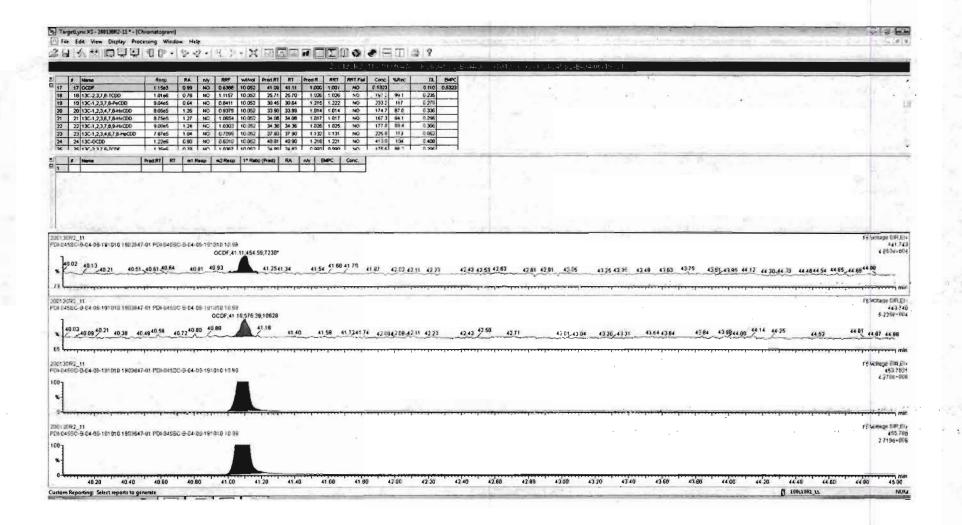


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Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time



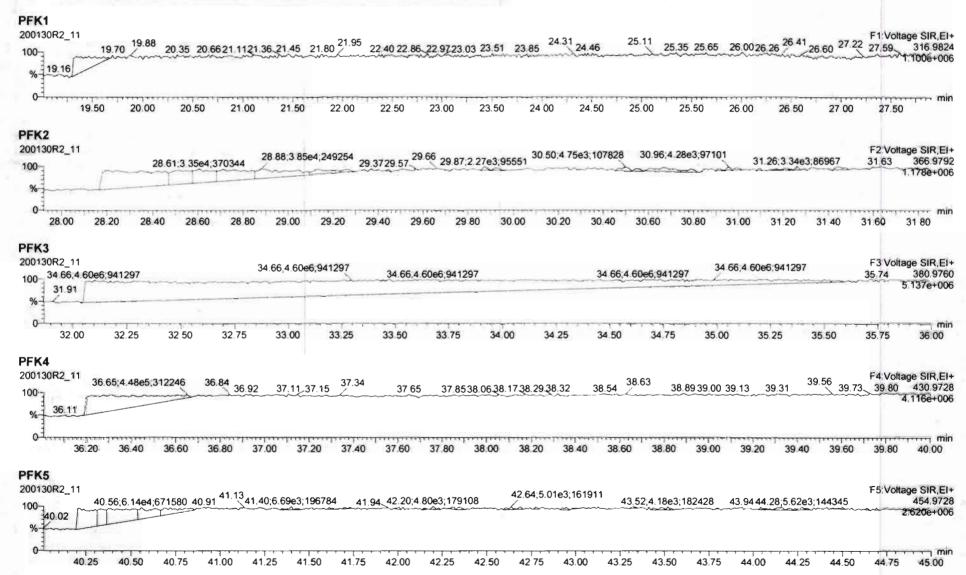


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Last Altered: Printed: Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time



U:\VG12.PRO\Results\200130R2\200130R2-12.qld

Last Altered:

Tuesday, February 04, 2020 12:59:53 Pacific Standard Time

Printed:

Tuesday, February 04, 2020 13:00:45 Pacific Standard Time

GRB 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

* SEE DIL.

Name: 200130R2 12, Date: 30-Jan-2020, Time: 23:03:32, ID: 1903647-02 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010

ant to	# 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	1.19e4	0.70	NO	0.824	10.003 -	25.736	25.74	1.001	1.001	2.4094		0.114	2.41
2	2 1.2.3.7,8-PeCDD	1.75e4	0.67	NO	0.912	10.003	30.657	30.65	1.001	1.001	4.1152		0.201	4.12
3	3 1,2,3,4,7,8-HxCDD	2.97e4	1.19	NO	0.870	10.003	33.997	34.00	1.000	1.000	8.9475		0.952	8.95
4	4 1,2,3,6,7.8-HxCDD	2.74e5	1.21	NO	0.784	10.003	34 083	34.10	1.000	1.001	81.071		0.994	81.1
5	5 1.2.3.7.8,9-HxCDD	7.41e4	1 18	NO	0.798	10.003	34.394	34.38	1 001	1.001	22 765		1.07	22.8
6	6 1,2.3,4,6,7,8-HpCDD	1 52e7	1.00	NO	0.737	10.003	37.918	37.92	1.000	1.000	6173.1 E	k	4.53	6170
7	7 OCDD	6.23e7	88.0	NO	0.800	10 003	40 921	40.93	1.000	1 000	40976 €:	*	2.67	41000
8	8 2.3,7.8-TCDF	1.18e6	0.74	NO	0.588	10.003	24.847	24.85	1.001	1.001	267.94 (1	83)	0.212	268
9	9 1,2,3,7,8-PeCDF	1.69e6	1.54	NO	0.826	10.003	29 376	29.37	1.001	1.001	301.66		0.347	302
10	10 2.3.4.7,8-PeCDF	7.94e5	1 53	NO	0.850	10.003	30.361	30.35	1.001	1.001	147.63		0.330	148
11	11 1,2,3,4,7,8-HxCDF	1.60e6	1.16	NO	0.787	10.003	33.114	33.13	1.000	1 001	468.30		0 500	468
12	12 1,2.3.6.7.8-HxCDF	4.18e5	1.13	NO	0.720	10.003	33.241	33.25	1.000	1 001	119.95		0.515	120
13	13 2.3.4.6.7.8-HxCDF	1.11e5	1 15	NO	0.766	10.003	33.851	33.83	1.001	1.000	37.828		0.623	37.8
14	14 1,2,3,7,8,9-HxCDF	8 13e4	1.12	NO	0.709	10.003	34.722	34 76	1.000	1.001	29.837		0.728	29.8
15	15 1,2.3,4.6,7,8-HpCDF	7.99e5	0.96	NO	0.732	10.003	36.505	36.49	1.001	1.001	359.44		1.26	359
16	16 1,2,3,4,7,8,9-HpCDF	1.77e5	0.95	NO	0.816	10.003	38.493	38.50	1.000	1.000	91.480		1.27	91 5
17	17 OCDF	2.80e6	0.85	NO	0.639	10.003	41 102	41.11	1.000	1.000	1807.7		0.690	1810
18	18 13C-2,3,7,8-TCDD	1.20e6	0.79	NO	1 12	10.003	25.721	25.70	1.026	1.025	168.03	84 0	0.150	
19	19 13C-1,2,3,7,8-PeCDD	9.33e5	0.63	NO	0.841	10.003	30.469	30.64	1.215	1.222	173.18	86.6	0.259	
20	20 13C-1,2,3,4,7,8-HxCDD	7.63e5	1.26	NO	0.938	10.003	33.977	33.99	1.014	1.014	130.65	65.3	0.247	
21	21 13C-1.2,3,6,7,8-HxCDD	8.61e5	1.25	NO	1.07	10.003	34.078	34.08	1.017	1.017	129.78	64.9	0.217	
22	22 13C-1,2,3,7,8,9-HxCDD	8.15e5	1.25	NO	1.03	10.003	34.379	34.36	1.026	1.025	126.95	63.5	0.225	
23	23 13C-1,2,3,4,6,7,8-HpCDD	6.67e5	1.01	NO	0.710	10.003	37.931	37.91	1.132	1.131	150.88	75.5	0.367	
24	24 13C-OCDD	7.60e5	0.90	NO	0.601	10.003	40.813	40.92	1.218	1.221	202.90	50.7	0.330	
25	25 13C-2,3,7,8-TCDF	1.49e6	0.77	NO	1.04	10.003	24.901	24.82	0.993	0.990	159.18	79.6	0.239	
26	26 13C-1,2,3,7,8-PeCDF	1.36e6	1.57	NO	0.917	10.003	29.240	29.35	1.166	1.171	163.48	81.8	0.402	
27	27 13C-2,3,4,7,8-PeCDF	1.27e6	1.56	NO	0.903	10.003	30.193	30.33	1.204	1.210	154.77	77.4	0.408	
28	28 13C-1,2,3,4,7.8-HxCDF	8.69 e 5	0.51	NO	0.861	10.003	33.106	33.11	0.988	0.988	162.06	81.1	0.444	
29	29 13C-1,2,3,6,7,8-HxCDF	9.67e5	0.51	NO	1.05	10.003	33.206	33.23	0.991	0.992	148.38	74.2	0.365	
30	30 13C-2,3,4,6,7,8-HxCDF	7.66e5	0.52	NO	0.946	10.003	33.813	33.82	1.009	1.009	130.00	65.0	0.404	
31	31 13C-1,2,3,7,8,9-HxCDF	7.69e5	0.50	NO	0.816	10.003	34.714	34.72	1.036	1.036	151.39	75.7	0.469	

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Page 2 of 2

Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-12.qld

Last Altered: Printed: Tuesday, February 04, 2020 12:59:53 Pacific Standard Time Tuesday, February 04, 2020 13:00:45 Pacific Standard Time

Name: 200130R2_12, Date: 30-Jan-2020, Time: 23:03:32, ID: 1903647-02 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010

Markey.	# Name	Resp	RA	n/y	RRF	wt/voi	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	6.08e5	0.44	NO	0.589	10.003	36.457	36.47	1.088	1.088	165.60	82.8	0.515	
33	33 13C-1.2,3,4,7.8,9-HpCDF	4.74e5	0.42	NO	0.448	10.003	38.467	38.49	1.148	1.149	169.96	85.0	0.677	
34	34 13C-OCDF	9.71e5	0.88	NO	0.586	10.003	41.047	41.10	1.225	1.227	266.25	66.6	0.308	
35	35 37CI-2,3,7,8-TCDD	4.73e5			1.09	10.003	25.754	25.74	1.027	1.026	68.083	85.1	0.0789	
36	36 13C-1,2,3,4-TCDD	1.28e6	0.80	NO	1.00	10.003	25.080	25.08	1.000	1.000	199.93	100	0.167	
37	37 13C-1,2,3,4-TCDF	1.81e6	0.79	NO	1.00	10.003	23.420	23.42	1.000	1.000	199.93	100	0.248	
38	38 13C-1,2,3,4,6,9-HxCDF	1.25 e 6	0.51	NO	1.00	10.003	33.520	33.51	1.000	1.000	199.93	100	0.382	
39	39 Total Tetra-Dioxins				0.824	10.003	24.620		0.000		41.066		0.114	46.0
40	40 Total Penta-Dioxins				0.912	10.003	29.960		0.000		57.909		0.201	72.1
41	41 Total Hexa-Dioxins				0.784	10.003	33.635		0.000		1255.9		1.05	1260
42	42 Total Hepta-Dioxins				0.737	10.003	37.640		0.000		15115		4.53	15100
43	43 Total Tetra-Furans				0.588	10.003	23.610		0.000		810.13		0.212	811
44	44 1st Func. Penta-Furans				0.826	10.003	27.090		0.000		73.962		0.0567	74.0
45	45 Total Penta-Furans				0.826	10.003	29.275		0.000		857.53		0.343	858
46	46 Total Hexa-Furans				0.766	10.003	33.555		0.000		1072.8		0.566	1070
47	47 Total Hepta-Furans				0.732	10.003	37.835		0.000		1849.7		1.33	1850

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Printed:

U:\VG12.PRO\Results\200130R2\200130R2-12.qld

Last Altered:

Tuesday, February 04, 2020 12:59:53 Pacific Standard Time Tuesday, February 04, 2020 13:00:45 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_12, Date: 30-Jan-2020, Time: 23:03:32, ID: 1903647-02 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010

Tetra-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Dioxins	21.78	2.095e5	2.697e5	2.215e4	2.786e4	0.80	NO	5.002e4	10.112	10.112	0.114
2	Total Tetra-Dioxins	22.22	7.314e4	9.238e4	7.056e3	8.767e3	0.80	NO	1.582e4	3.1988	3.1988	0.114
3	Total Tetra-Dioxins	22.71	7.020e4	9.584e4	6.232e3	8.293e3	0.75	NO	1.453e4	2.9366	2.9366	0.114
4	Total Tetra-Dioxins	23.58	3.459e4	4.915e4	2.768e3	3.833e3	0.72	NO	6.601e3	1 3344	1.3344	0.114
5	Total Tetra-Dioxins	23.83	1.057e5	1.324e5	8.149e3	1.072e4	0.76	NO	0.000e0	0.00000	3.8156	0.114
6	Total Tetra-Dioxins	23.88	3.959e4	5.240e4	2.390e3	3.277e3	0.73	NO	0.000e0	0.00000	1.1458	0.114
7	Total Tetra-Dioxins	24.06	8.948e4	1.364e5	7.513e3	9.663e3	0.78	NO	1.718e4	3.4724	3.4724	0.114
8	Total Tetra-Dioxins	24.27	4.688e4	6.396e4	3.743e3	4.769e3	0.78	NO	8.512e3	1.7209	1.7209	0.114
9	Total Tetra-Dioxins	24.52	4.370e4	5.628e4	3.153e3	4.299e3	0.73	NO	7.452e3	1.5065	1.5065	0.114
10	Total Tetra-Dioxins	24.69	7.603e4	8.642e4	5.177e3	6.200e3	0.83	NO	1.138e4	2.3001	2.3001	0.114
11	Total Tetra-Dioxins	25.05	6.690e4	8.252e4	5.514e3	6.834e3	0.81	NO	1.235e4	2.4963	2.4963	0.114
12	Total Tetra-Dioxins	25.18	2.551e4	2.515e4	1.635e3	1.984e3	0.82	NO	3 620e3	0.73174	0.73174	0.114
13	Total Tetra-Dioxins	25.48	9.706e4	1.278e5	8.583e3	1.067e4	0.80	NO	1.925e4	3.8921	3.8921	0.114
14	Total Tetra-Dioxins	25.60	2.429e4	4.231e4	1.868e3	2.360e3	0.79	NO	4.227e3	0.85463	0.85463	0.114
15	2,3,7,8-TCDD	25.74	7.010e4	1.078e5	4.889e3	7.029e3	0.70	NO	1.192e4	2.4094	2.4094	0.114
16	Total Tetra-Dioxins	26.05	8.019e4	9.603e4	5.153e3	6.682e3	0.77	NO	1.183e4	2.3925	2.3925	0 114
17	Total Tetra-Dioxins	26.18	1.897e4	2.187e4	1.263e3	1.503e3	0.84	NO	2.766e3	0 55914	0.55914	0.114
18	Total Tetra-Dioxins	26.68	4.357e4	4.930e4	2.553e3	3.128e3	0.82	NO	5.681e3	1.1484	1.1484	0.114

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Tuesday, February 04, 2020 12:59:53 Pacific Standard Time Tuesday, February 04, 2020 13:00:45 Pacific Standard Time

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Name: 200130R2_12, Date: 30-Jan-2020, Time: 23:03:32, ID: 1903647-02 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010

Penta-Dioxins

-J.	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.45	4.312e5	6.710e5	3.191e4	5.097e4	0.63	NO	8.288e4	19.490	19.490	0.201
2	Total Penta-Dioxins	28.91	2.657e5	4.077e5	1.464e4	2.282e4	0.64	NO	3.746e4	8.8089	8.8089	0.201
3	Total Penta-Dioxins	29.42	2.507e5	3.922e5	1.330e4	2.038e4	0.65	NO	3.369e4	7.9222	7.9222	0.201
4	Total Penta-Dioxins	29.58	1.891e5	3.000e5	1 002e4	1.567e4	0.64	NO	2.569e4	6.0425	6.0425	0.201
5	Total Penta-Dioxins	29.66	1.259e5	1.971e5	6.461e3	1.011e4	0.64	NO	1.657e4	3.8972	3.8972	0.201
6	Total Penta-Dioxins	29.89	2.480e5	3.805e5	1.256e4	1 999e4	0.63	NO	0.000e0	0.00000	7.6527	0.201
7	Total Penta-Dioxins	29.90	2.259e5	3.773e5	1.065e4	1.701e4	0.63	NO	0.000e0	0.00000	6.5046	0.201
8	Total Penta-Dioxins	30.23	7.293e4	1.043e5	3.879e3	6.240e3	0.62	NO	1.012e4	2.3796	2.3796	0.201
9	1.2.3,7,8-PeCDD	30.65	1.278e5	1.941e5	7.000e3	1.050e4	0.67	NO	1.750e4	4.1152	4.1152	0.201
10	Total Penta-Dioxins	30.73	9.435e4	1.599e5	5.133e3	7.758e3	0.66	NO	1.289e4	3.0316	3.0316	0.201
11	Total Penta-Dioxins	31.03	6.758e4	1 112e5	3.702e3	5 745e3	0.64	NO	9.446e3	2 2215	2.2215	0.201

Hexa-Dioxins

1000	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.51	2.009e7	1.664e7	9.950e5	8.157e5	1.22	NO	1.811e6	567.88	567.88	1.05
2	Total Hexa-Dioxins	33.06	1.822e6	1.499e6	9 603e4	7.816e4	1.23	NO	1.742e5	54.629	54.629	1.05
3	Total Hexa-Dioxins	33.32	1.164e7	9.532e6	7.892e5	6.521e5	1.21	NO	1.441e6	452.00	452.00	1.05
4	Total Hexa-Dioxins	33.43	1.385e6	1.151e6	7.820e4	6.444e4	1.21	NO	1.426e5	44 732	44.732	1.05
5	1,2,3,4,7.8-HxCDD	34 00	3.257e5	2.440e5	1.618e4	1.355e4	1.19	NO	2.973e4	8.9475	8.9475	0.952
6	1.2,3,6,7,8-HxCDD	34.10	2.617e6	2.133e6	1.500e5	1.239e5	1.21	NO	2.738e5	81.071	81.071	0 994
7	Total Hexa-Dioxins	34.29	7.259e5	5.696e5	4.120e4	3.490e4	1.18	NO	7.610e4	23.867	23.867	1.05
8	1,2,3,7,8,9-HxCDD	34.38	6.551e5	5.433e5	4.016e4	3.391e4	1.18	NO	7.407e4	22.765	22.765	1.07

Hepta-Dioxins

100	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.88	1.500e8	1.493e8	1.107e7	1.092e7	1.01	NO	2.199e7	8941.5	8941.3XE	4.53
2	1,2,3,4,6,7,8-HpCDD	37.92	1.119e8	1.127e8	7.596e6	7.584e6	1.00	NO	1.518e7	6173.1	6173.1	4.53

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Dataset: U:\VG12.PRO\Results\200130R2\200130R2-12.qld

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Name: 200130R2_12, Date: 30-Jan-2020, Time: 23:03:32, ID: 1903647-02 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010

Tetra-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	19.70	4.045e4	5.416e4	3.335e3	4.392e3	0.76	NO	7.726e3	1.7585	1.7585	0.212
2	Total Tetra-Furans	20.21	1.015e5	1.352e5	8.537e3	1.160e4	0.74	NO	2.013e4	4.5824	4.5824	0.212
3	Total Tetra-Furans	20.83	8.289e5	1.118e6	7.614e4	1.018e5	0.75	NO	1.779e5	40 489	40.489	0.212
4	Total Tetra-Furans	21.29	8.077e4	1.023e5	5.133e3	7.425e3	0.69	NO	1.256e4	2.8582	2.8582	0.212
5	Total Tetra-Furans	21.38	1.730e5	2.128e5	2.225e4	2.961e4	0.75	NO	5.186e4	11.803	11.803	0.212
6	Total Tetra-Furans	21.77	1.262e6	1 658e6	1.254e5	1.687e5	0.74	NO	2.942e5	66.953	66.953	0.212
7	Total Tetra-Furans	22.25	4.663e5	6.343e5	4.462e4	6.123e4	0.73	NO	1.058e5	24.090	24.090	0.212
8	Total Tetra-Furans	22.40	5.485e4	7.409e4	4.566e3	6.389e3	0.71	NO	1.095e4	2.4932	2.4932	0.212
9	Total Tetra-Furans	22.59	2.293e5	3.263e5	2.156e4	2.935e4	0.73	NO	5.091e4	11.587	11.587	0.212
10	Total Tetra-Furans	23.04	5.577e4	7.272e4	5.100e3	6.785e3	0.75	NO	1.188e4	2.7049	2.7049	0.212
11	Total Tetra-Furans	23.16	4.355e4	5.901e4	3.344e3	4.891e3	0.68	NO	8.235e3	1.8742	1.8742	0.212
12	Total Tetra-Furans	23.34	4.022e5	5.517e5	2.797e4	3.902e4	0.72	NO	6.699e4	15.245	15.245	0.212
13	Total Tetra-Furans	23.42	7.142e5	9.308e5	6.746e4	8.954e4	0.75	NO	1,570e5	35.731	35.731	0.212
14	Total Tetra-Furans	23.92	5.973e6	8.016e6	4.576e5	6.139e5	0.75	NO	1.072e6	243.88	243.88	0.212
15	Total Tetra-Furans	24.22	2.206e5	2.847e5	1.655e4	2.191e4	0.76	NO	3.846e4	8.7541	8.7541	0.212
16	Total Tetra-Furans	24.42	2.930e4	4.151e4	2.863e3	3.431e3	0.83	NO	6.294e3	1.4326	1.4326	0.212
17	Total Tetra-Furans	24.64	7.876e4	1.068e5	4.774e3	6.139e3	0.78	NO	1.091e4	2.4838	2.4838	0.212
18	Total Tetra-Furans	24.75	8.049e5	1 119e6	4.390e4	6.040e4	0.73	NO	1.043e5	23.737	23.737	0.212
19	2,3,7.8-TCDF	24.85	6.704e6	9.133e6	4.996e5	6.777e5	0.74	NO	1.177e6	267.94	267.94	0.212
20	Total Tetra-Furans	25.21	3.260e5	4.366e5	2.354e4	3.127e4	0.75	NO	5.481e4	12.474	12.474	0.212
21	Total Tetra-Furans	25.47	6.440e4	8.712e4	4.208e3	5.680e3	0.74	NO	9.888e3	2.2504	2.2504	0.212
22	Total Tetra-Furans	26.27	2.610e4	1.197e4	1.486e3	7.558e2	1.97	YES	0.000e0	0.00000	0.30448	0.212
23	Total Tetra-Furans	26.36	1.617e4	2.702e4	1.037e3	1.459e3	0.71	NO	2.496e3	0.56808	0.56808	0.212
24	Total Tetra-Furans	26.53	3.474e4	3.317e4	2.102e3	1.952e3	1.08	YES	0.000e0	0.00000	0.78626	0.212
25	Total Tetra-Furans	26.83	7.238e5	9.31 3 e5	4.694e4	6.046e4	0.78	NO	1.074e5	24.444	24.444	0.212

Penta-Furans function 1

100.00	Name	RT	m1 Height m2 Height	m1 Resp m2	2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.81	3.801e6 2.447e6	2.454e5 1.5	554e5	1.58	NO	4.008e5	73.962	73.962	0.0567

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Dataset:

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Name: 200130R2_12, Date: 30-Jan-2020, Time: 23:03:32, ID: 1903647-02 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010

Penta-Furans

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.26	3.654e5	2.546e5	2.286e4	1.633e4	1.40	NO	3.919e4	7.2323	7.2323	0.343
2	Total Penta-Furans	28.39	8.908e6	5.949e6	5.610e5	3.770e5	1.49	NO	9.380e5	173.10	173.10	0.343
3	Total Penta-Furans	28.97	7.096e5	4.807e5	4.255e4	3.086e4	1.38	NO	7.342e4	13.549	13.549	0.343
4	Total Penta-Furans	29.05	3.063e5	2.066e5	1.599e4	1.077e4	1.48	NO	2.676e4	4.9377	4.9377	0.343
5	Total Penta-Furans	29.19	2.568e6	1.694e6	1.331e5	8.651e4	1.54	NO	2.196e5	40.523	40.523	0.343
6	1,2,3,7,8-PeCDF	29.37	1.912e7	1.238e7	1.027e6	6.652e5	1.54	NO	1.692e6	301.66	301.66	0.347
7	Total Penta-Furans	29.63	6.807e6	4.584e6	3.863e5	2.564e5	1.51	NO	6.427e5	118.60	118.60	0.343
8	Total Penta-Furans	30.12	5.467e4	2.612e4	2.605e3	1.401e3	1.86	YES	0.000e0	0 00000	0.65907	0.343
9	Total Penta-Furans	30.24	1.828e5	1.208e5	9.080e3	5.940e3	1.53	NO	1.502e4	2.7719	2.7719	0.343
10	2,3,4.7,8-PeCDF	30.35	9.887e6	6.370e6	4.807e5	3.133e5	1.53	NO	7.940e5	147.63	147.63	0.330
11	Total Penta-Furans	30.38	5.430e6	3.419e6	1.278e5	7.960e4	1.61	NO	2.074e5	38.272	38.272	0.343
12	Total Penta-Furans	31.28	5.585e5	3.909e5	2.998e4	2.011e4	1.49	NO	5.009e4	9.2445	9.2445	0.343

Hexa-Furans

ELW No.	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Furans	31.96	8.637e5	7.406e5	4.247e4	3.559e4	1.19	NO	7.806e4	24.157	24 157	0.566
2	Total Hexa-Furans	32.12	3.466e6	3.026e6	1.714e5	1 459e5	1.17	NO	3.173e5	98.206	98.206	0.566
3	Total Hexa-Furans	32.50	9.047e4	7.252e4	4.678e3	3.835e3	1.22	NO	8.513e3	2.6345	2.6345	0.566
4	Total Hexa-Furans	32.67	8.880e6	7.640e6	4.345e5	3.719e5	1.17	NO	8.064e5	249.56	249.56	0.566
5	Total Hexa-Furans	33.04	1.915e5	1.829e5	8.513e3	7.806e3	1.09	NO	1.632e4	5.0502	5.0502	0.566
6	1,2,3,4,7,8-HxCDF	33.13	1.586e7	1.367e7	8.610e5	7.409e5	1.16	NO	1.602e6	468.30	468.30	0.500
7	1,2,3,6,7,8-HxCDF	33.25	4.028e6	3.503e6	2.219e5	1.961e5	1.13	NO	4.180e5	119.95	119.95	0.515
8	Total Hexa-Furans	33.52	9.626e4	8.109e4	5.65 4e 3	4.961e3	1.14	NO	1.061e4	3.2849	3.2849	0.566
9	2,3,4,6,7,8-HxCDF	33.83	1.043e6	9.353e5	5.937e4	5.168e4	1.15	NO	1.110e5	37.828	37.828	0.623
10	1,2,3,7,8,9-HxCDF	34.76	1.422e6	1.238e6	4.306e4	3.827e4	1.12	NO	8.133e4	29.837	29.837	0.728
11	Total Hexa-Furans	34.78	1.531e6	1.312e6	6.030e4	4.957e4	1.22	NO	1.099e5	34.003	34.003	0.566

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Hepta-Furans

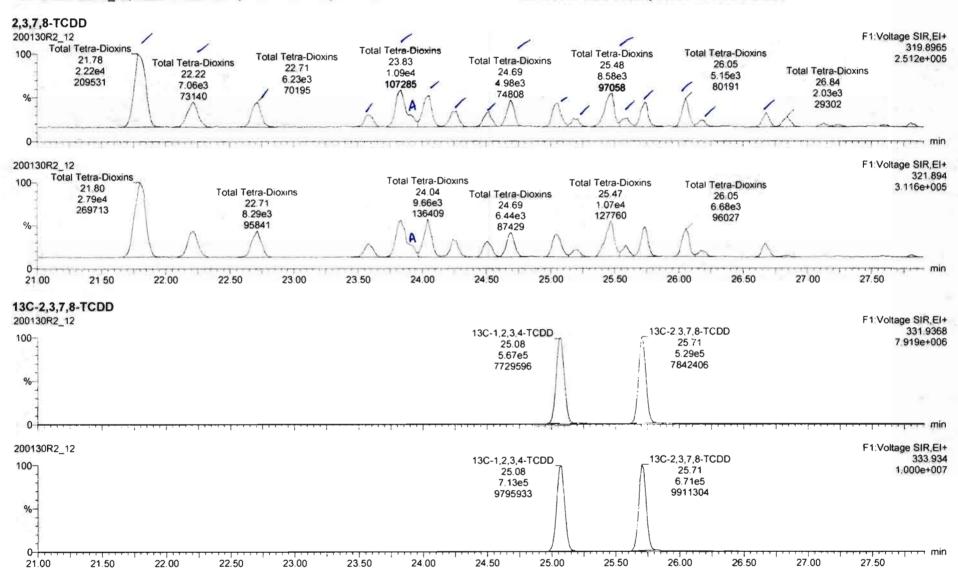
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1	1,2,3,4,6,7,8-HpCDF	36.49	5.616e6	5.724e6	3.922e5	4.072e5	0.96	NO	7.994e5	359.44	359.44	1.26
2	Total Hepta-Furans	36.88	1.596e5	1.633e5	1.211e4	1.199e4	1.01	NO	2.410e4	12.174	12.174	1.33
3	Total Hepta-Furans	37.10	1.801e7	1.846e7	1.348e6	1.397e6	0.96	NO	2.745e6	1386.6	1386.6	1.33
4	1,2,3,4,7,8,9-HpCDF	38.50	1.421e6	1 535e6	8.639e4	9.076 e 4	0.95	NO	1.772e5	91.480	91.480	1.27

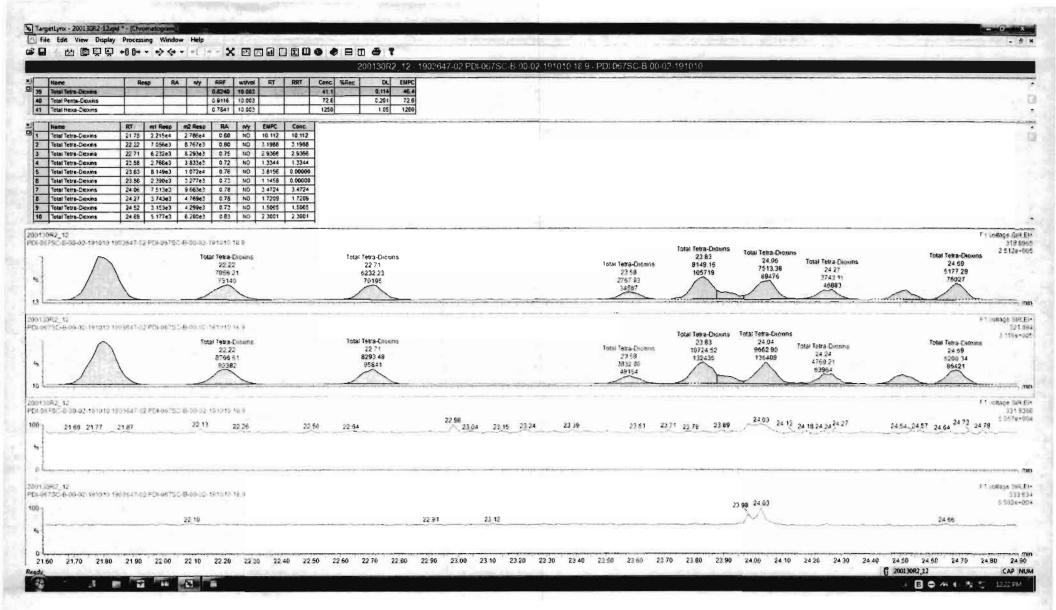
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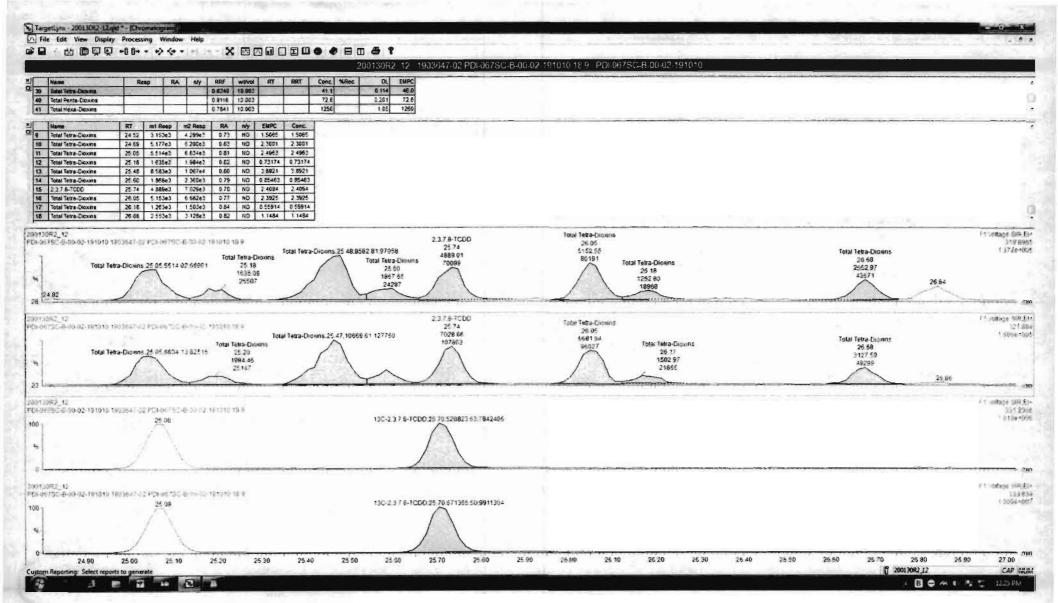
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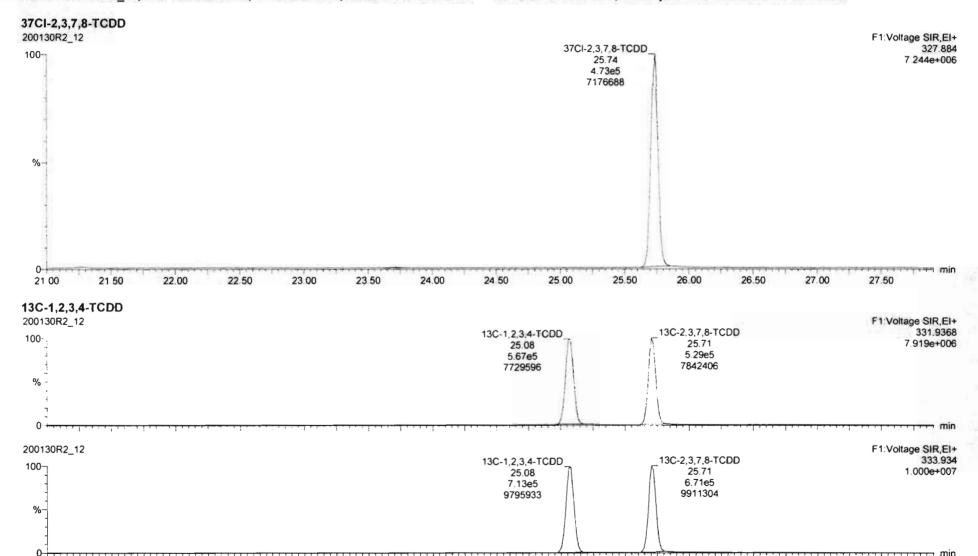
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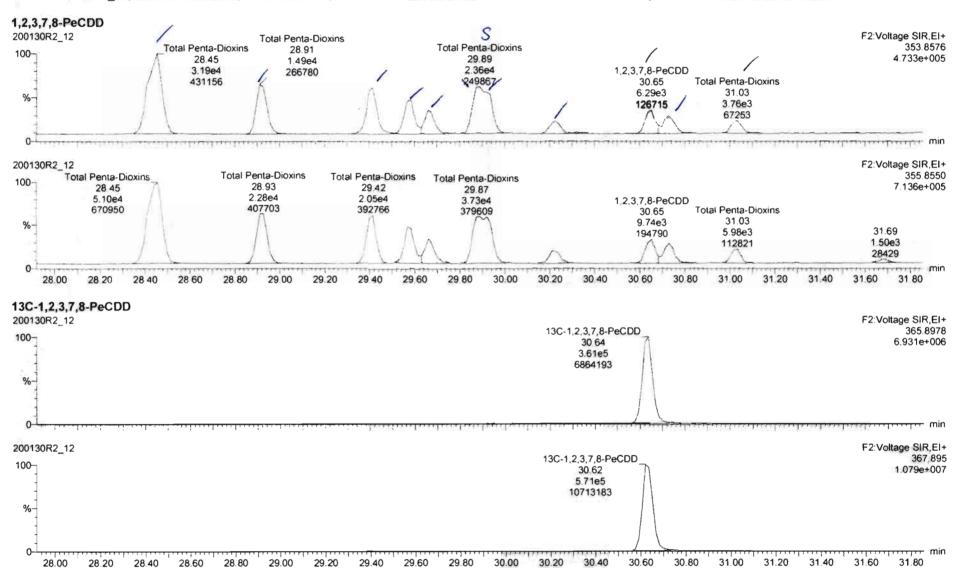
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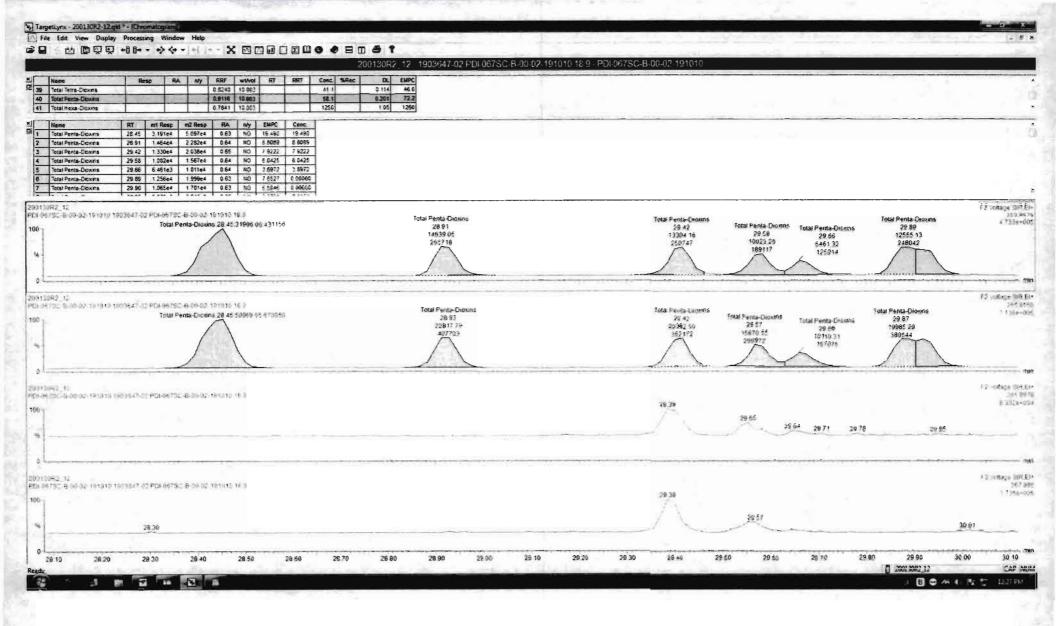
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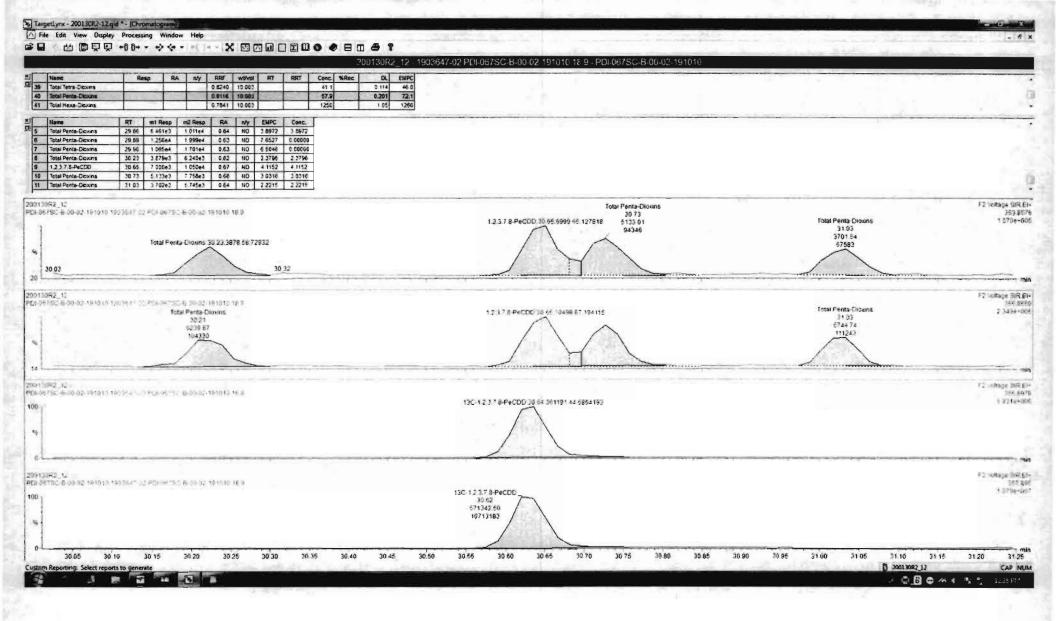
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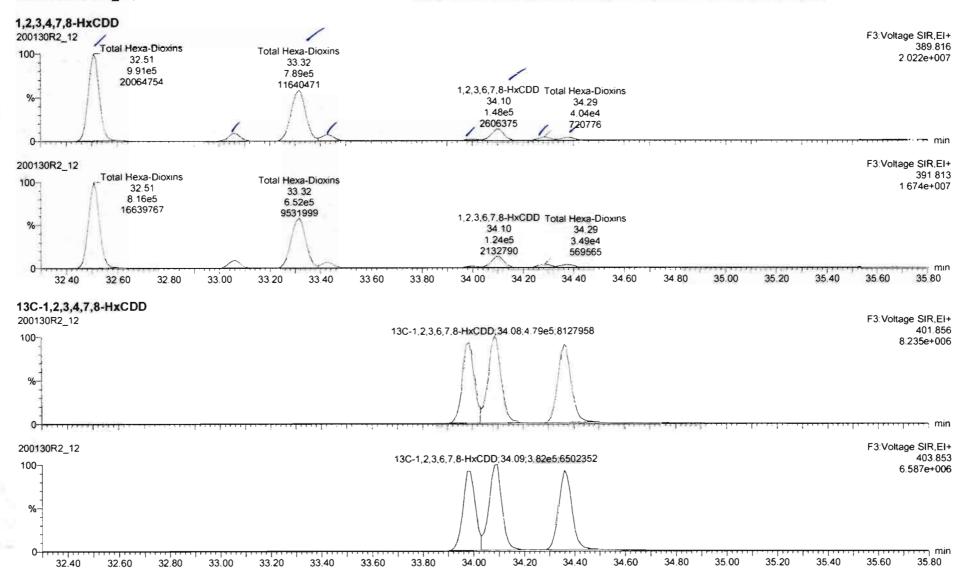


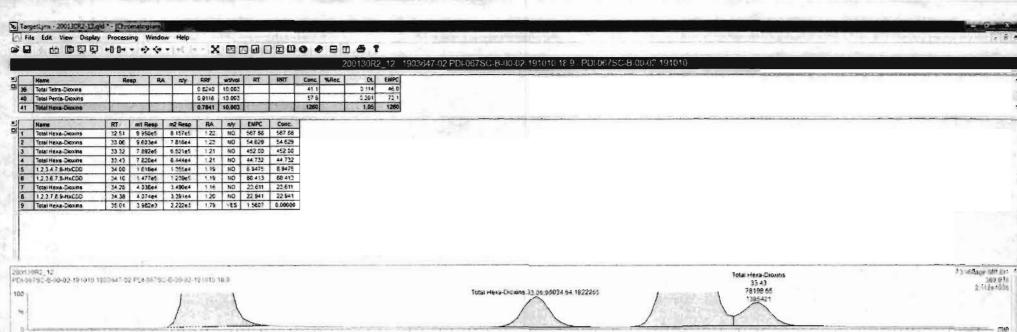


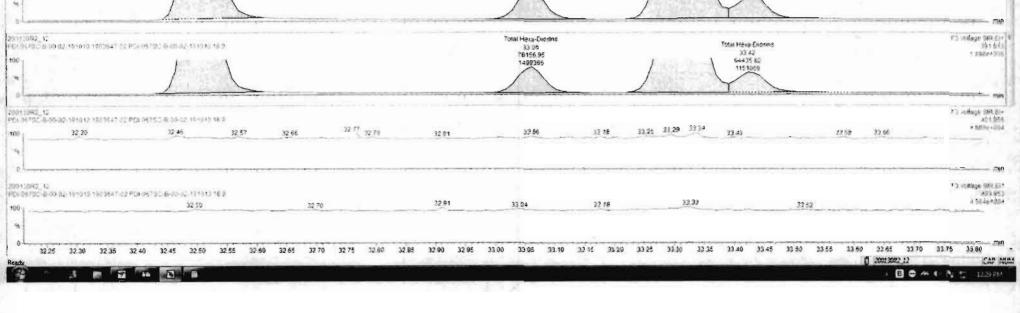
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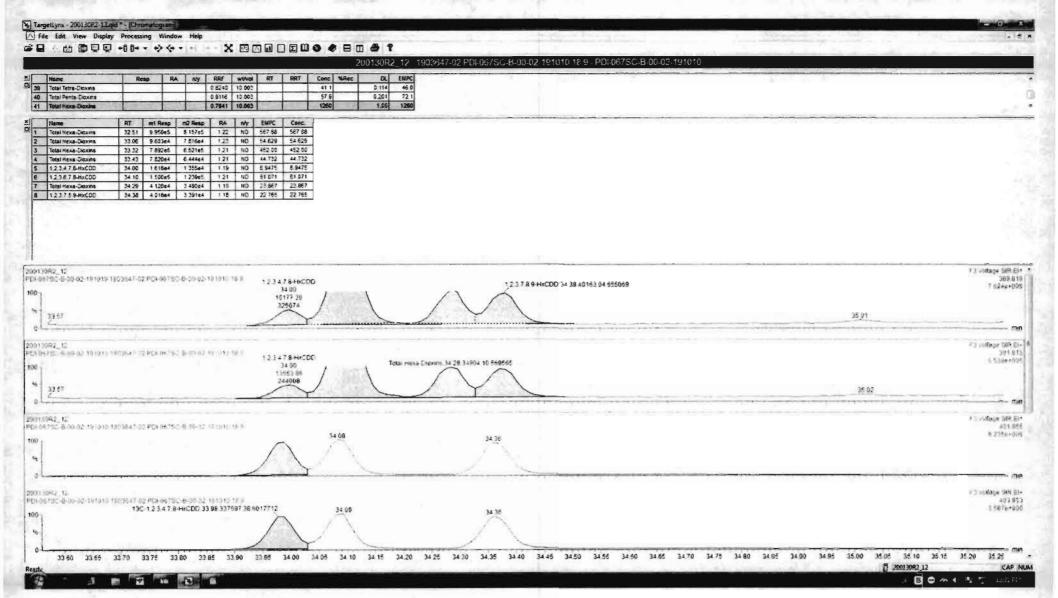
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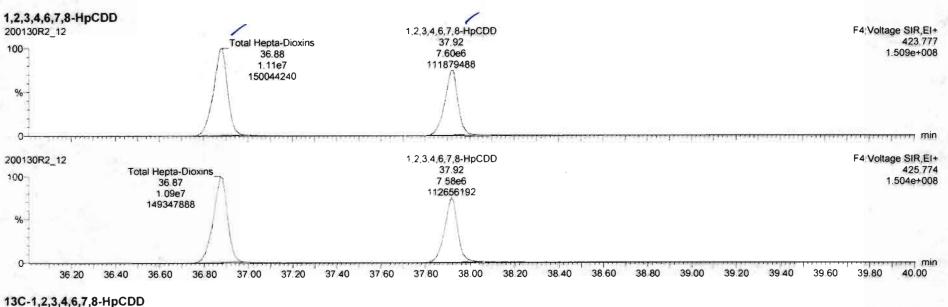
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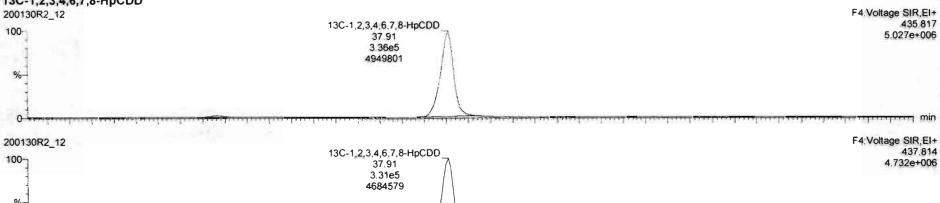
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37.80

Name: 200130R2_12, Date: 30-Jan-2020, Time: 23:03:32, ID: 1903647-02 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010





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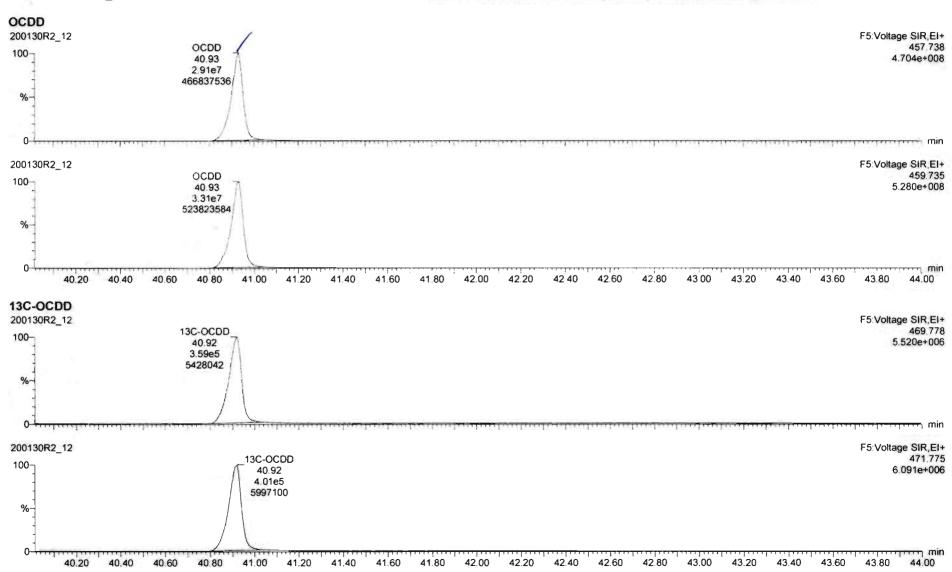
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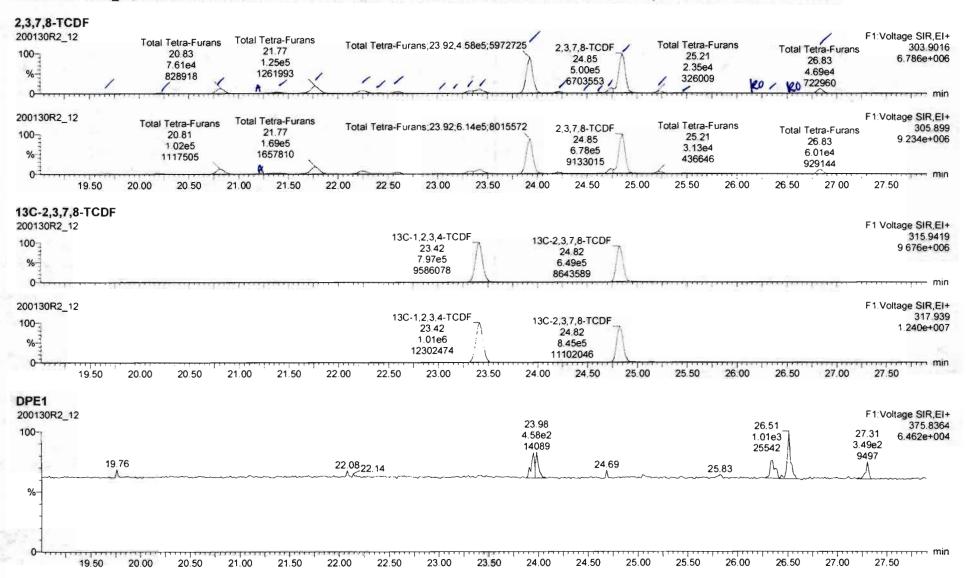
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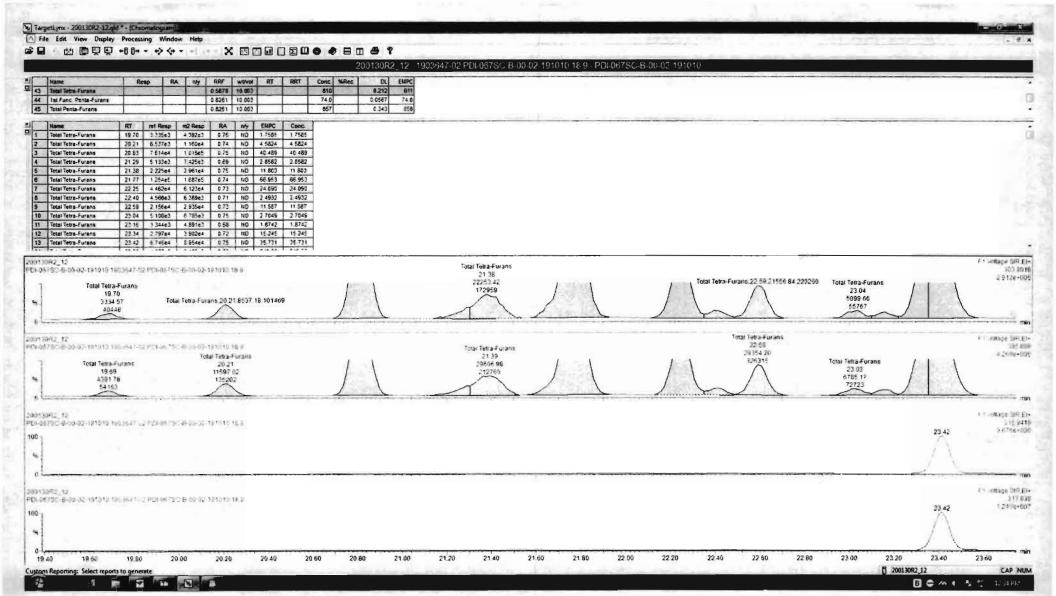
Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time



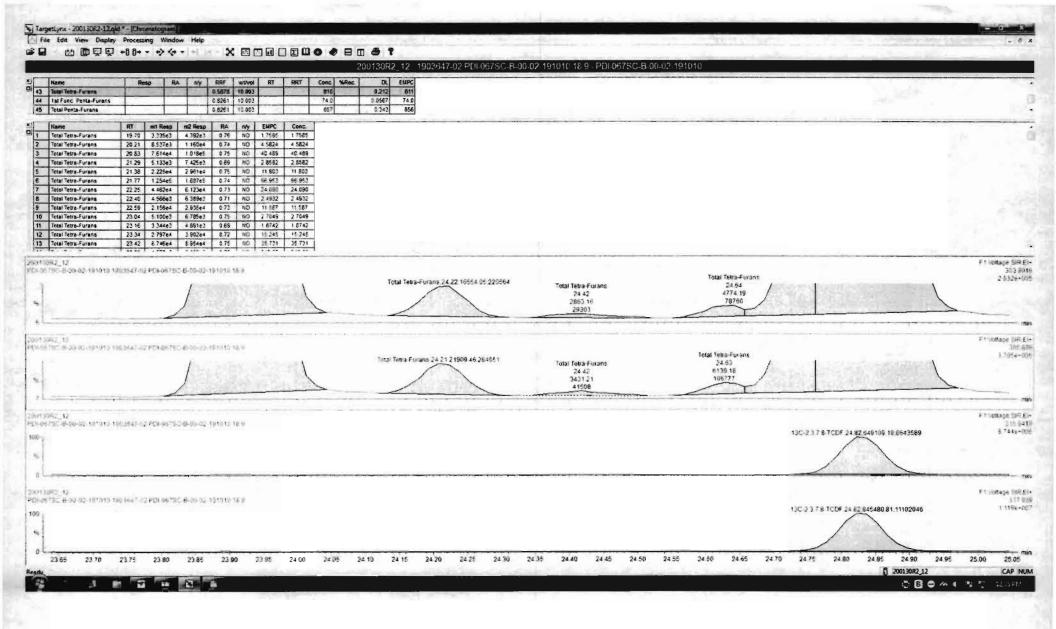
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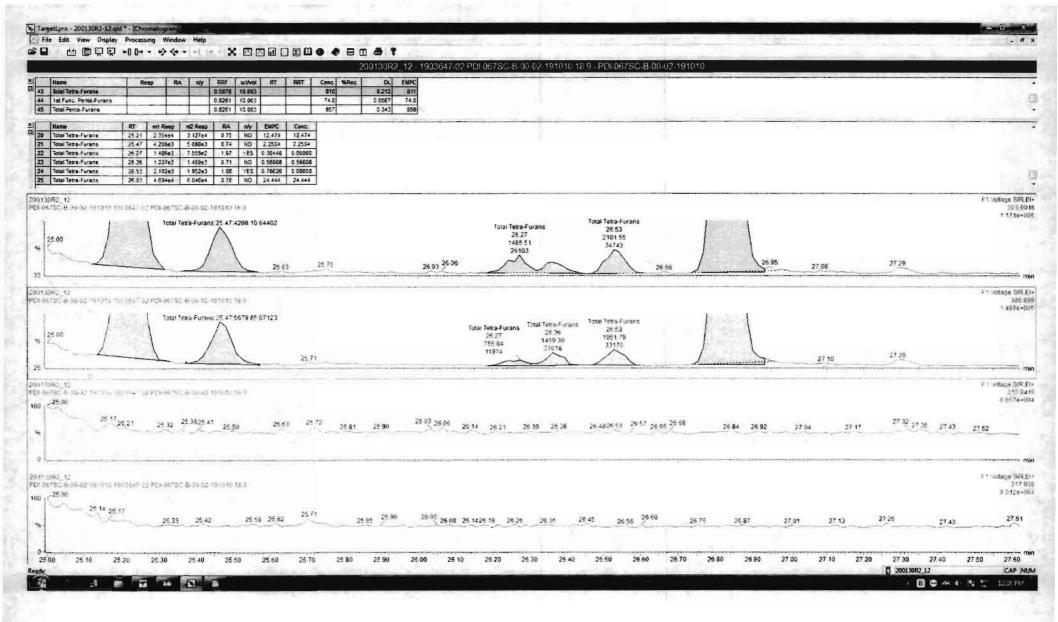




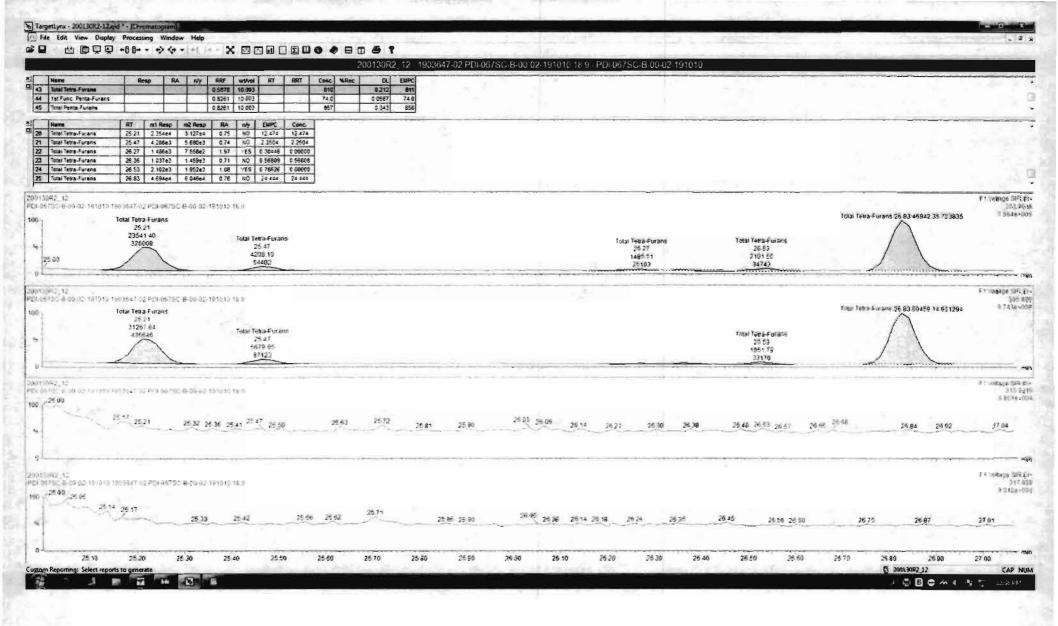
Work Order 1903647 Page 116 of 523



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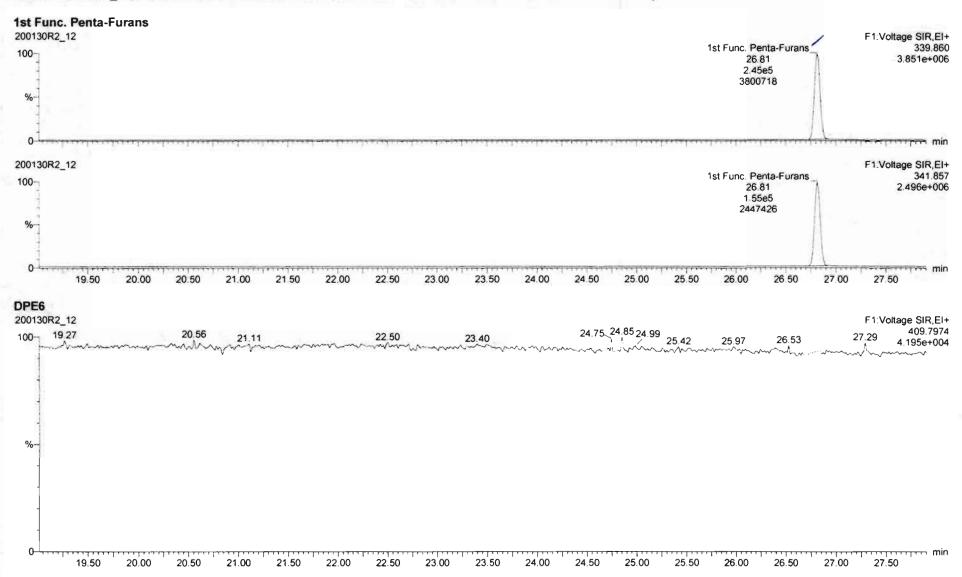
Work Order 1903647 Page 118 of 523



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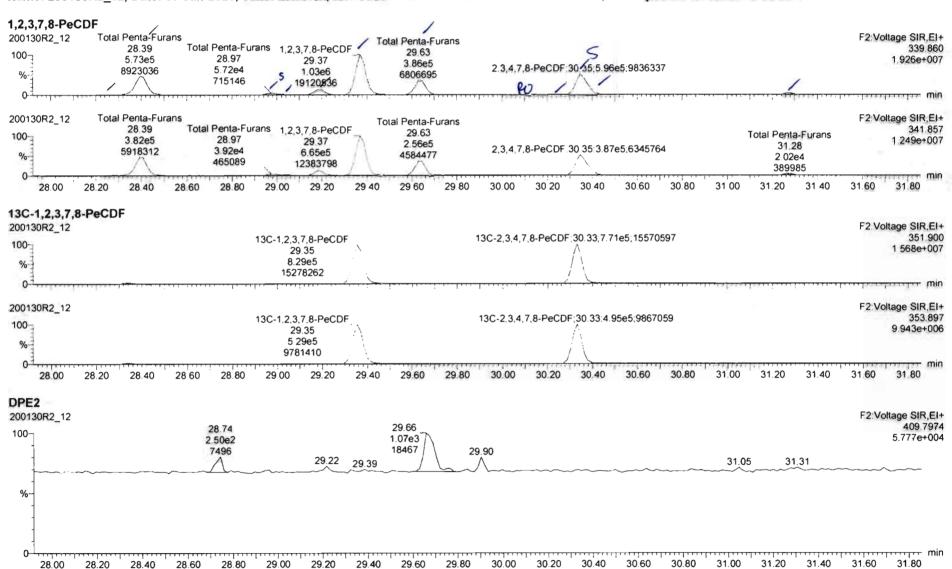
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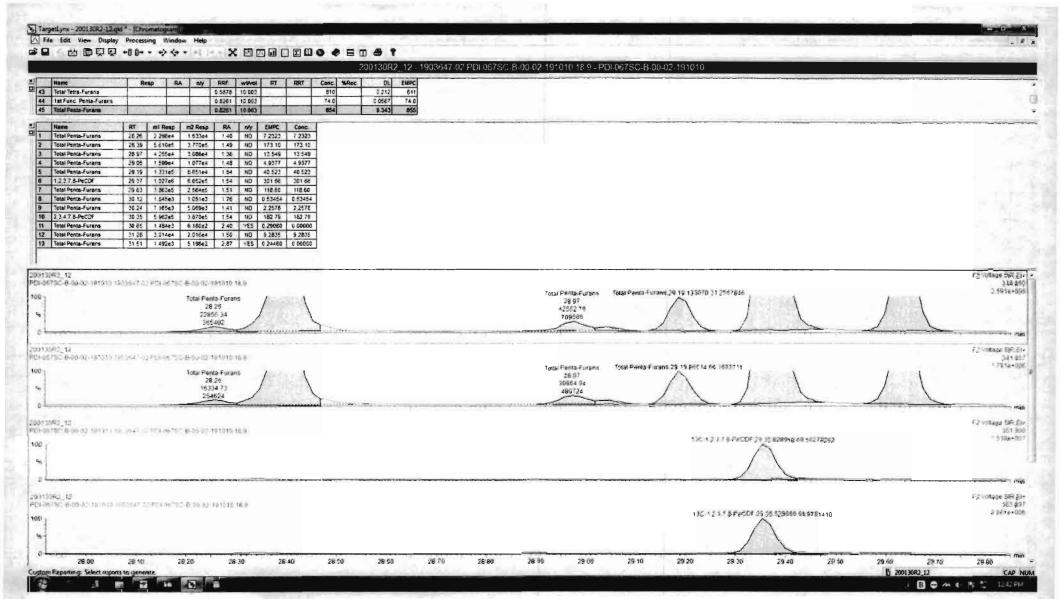
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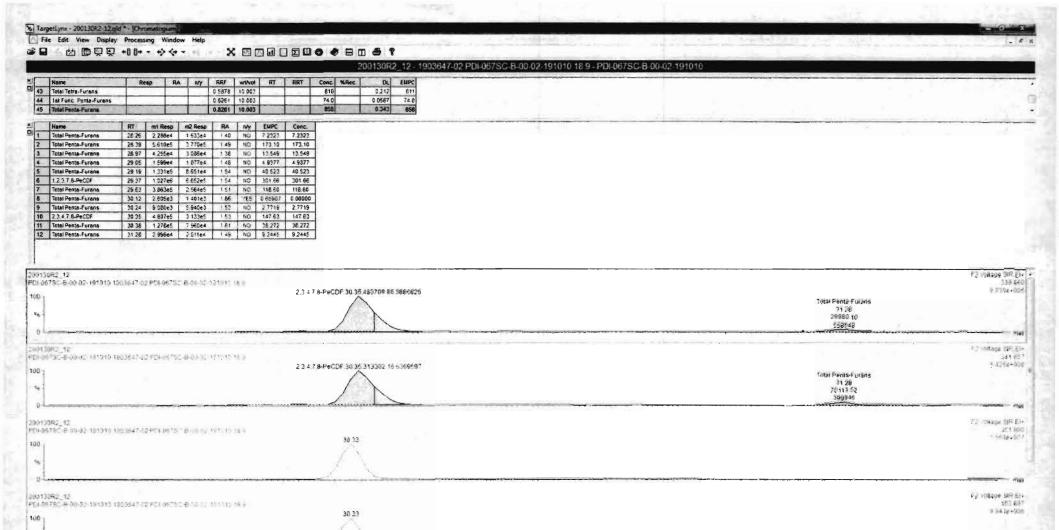
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Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time





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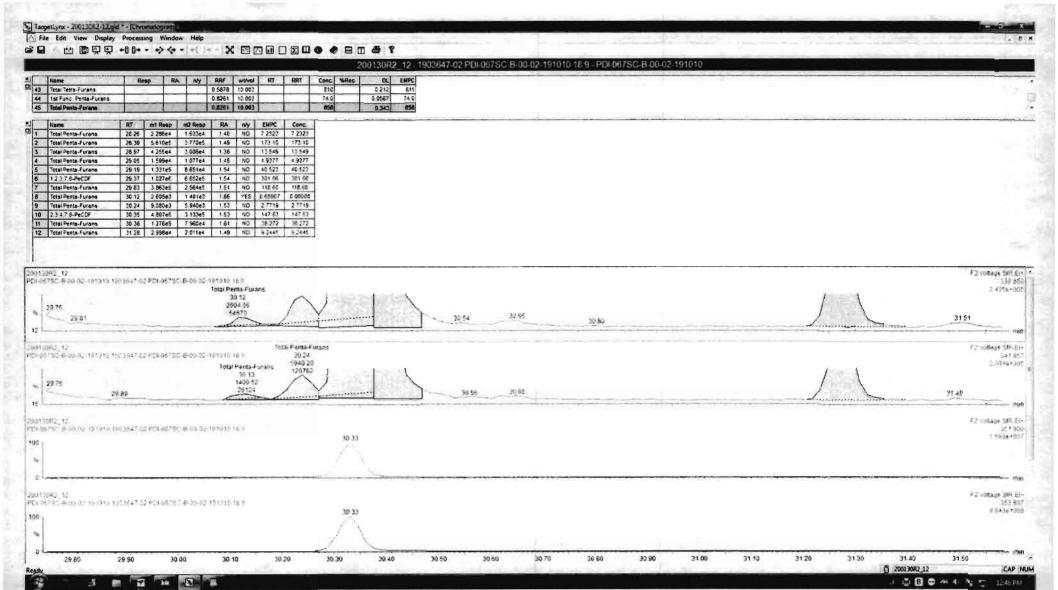
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30.40

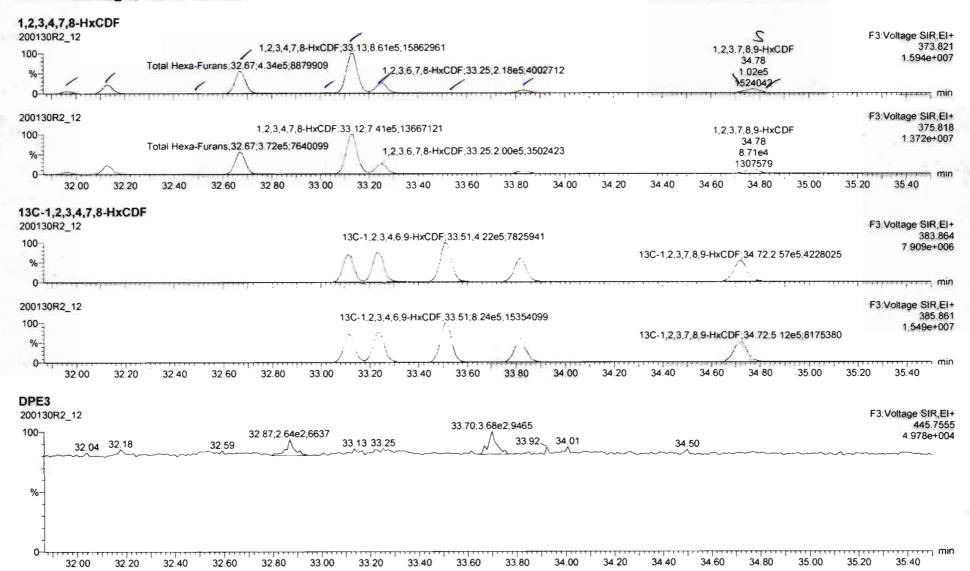
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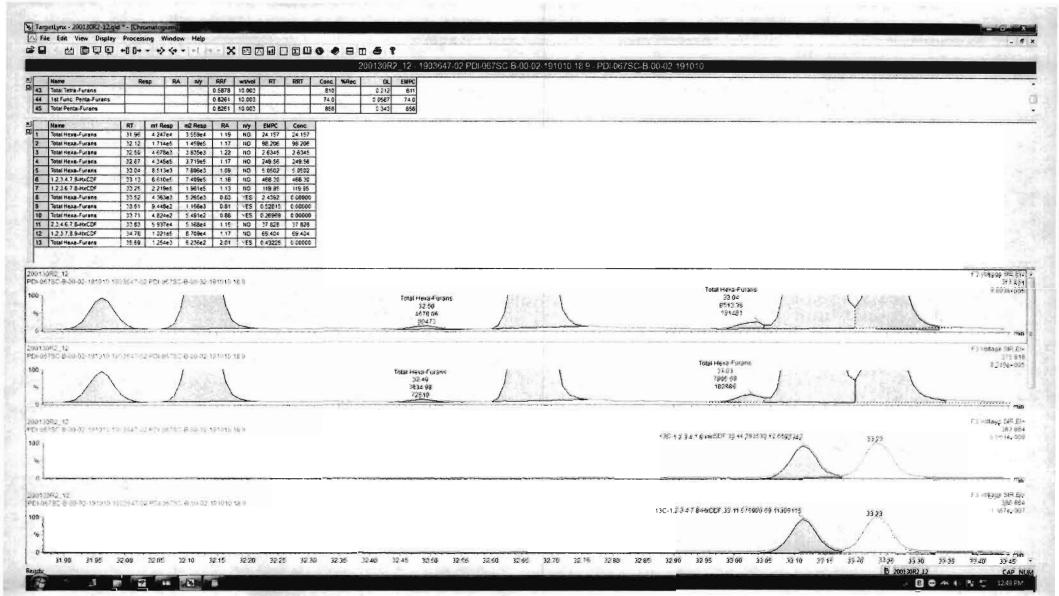


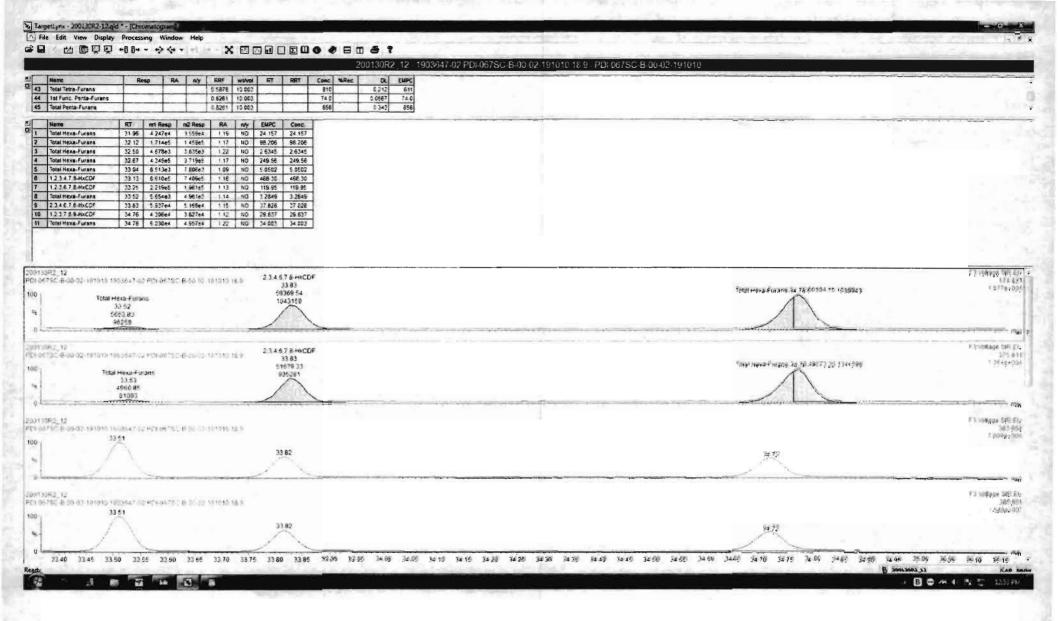
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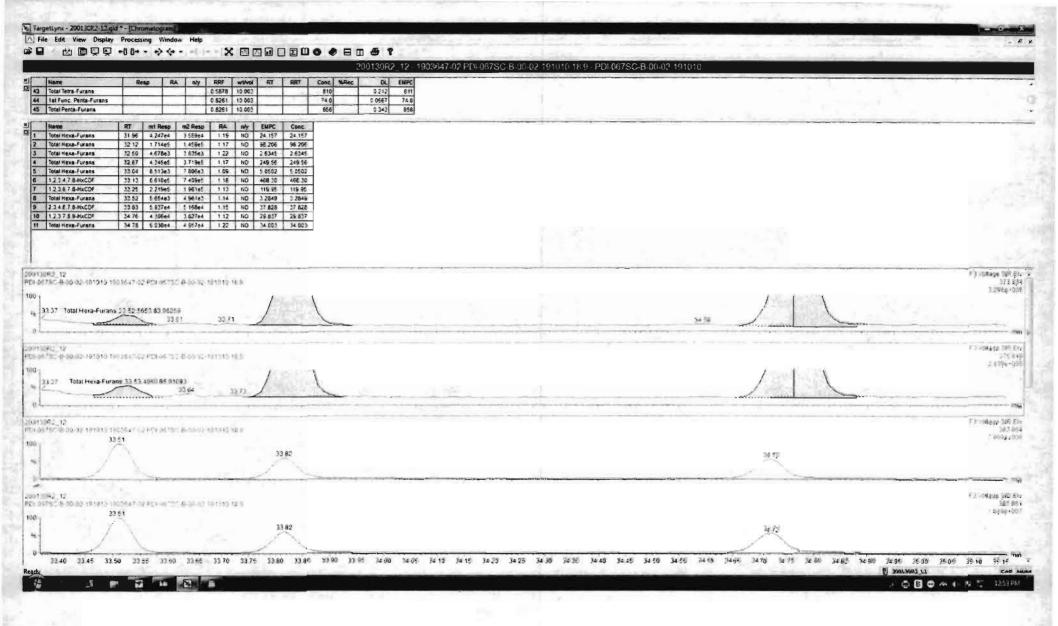
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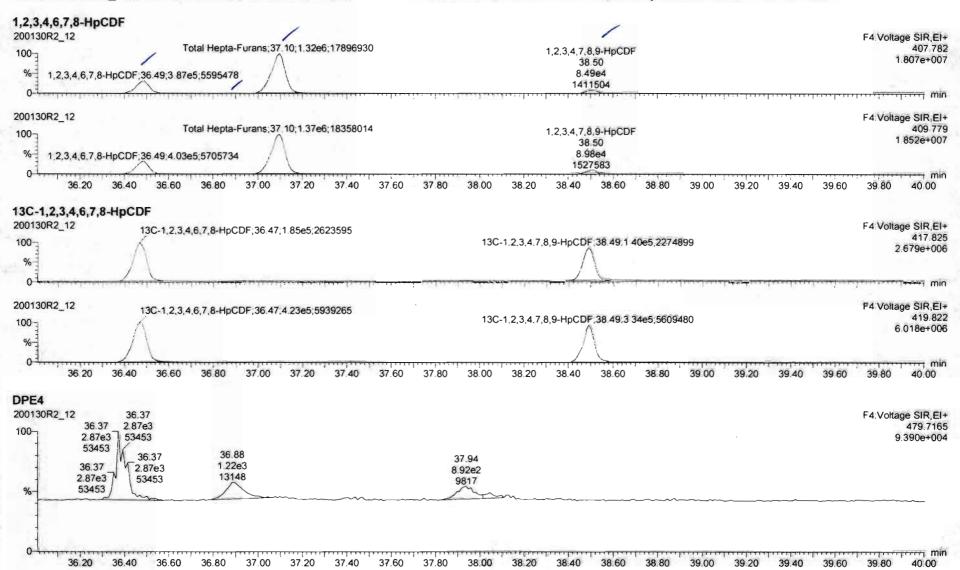


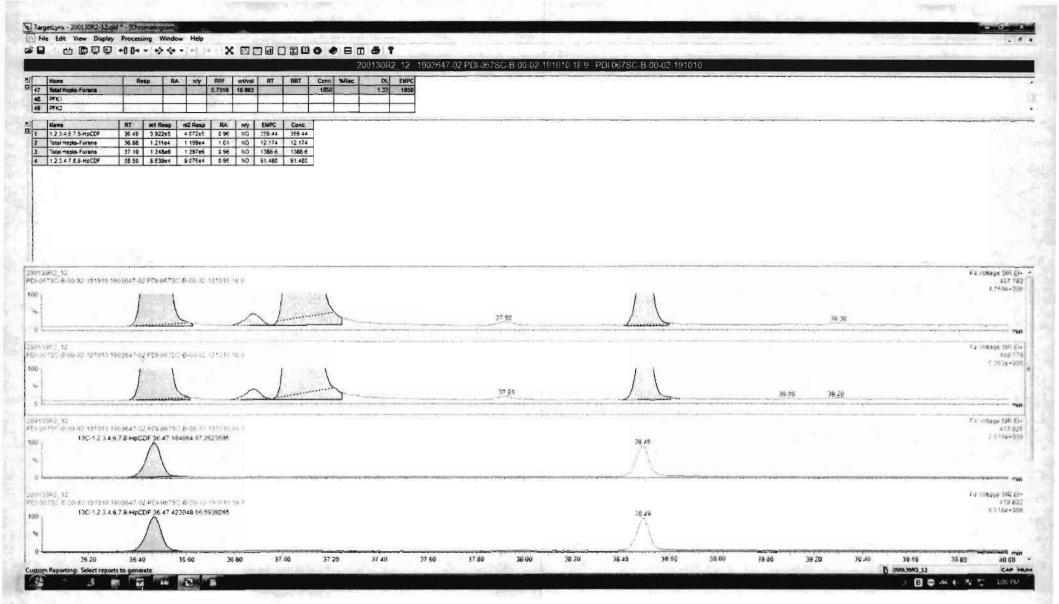
Work Order 1903647 Page 128 of 523

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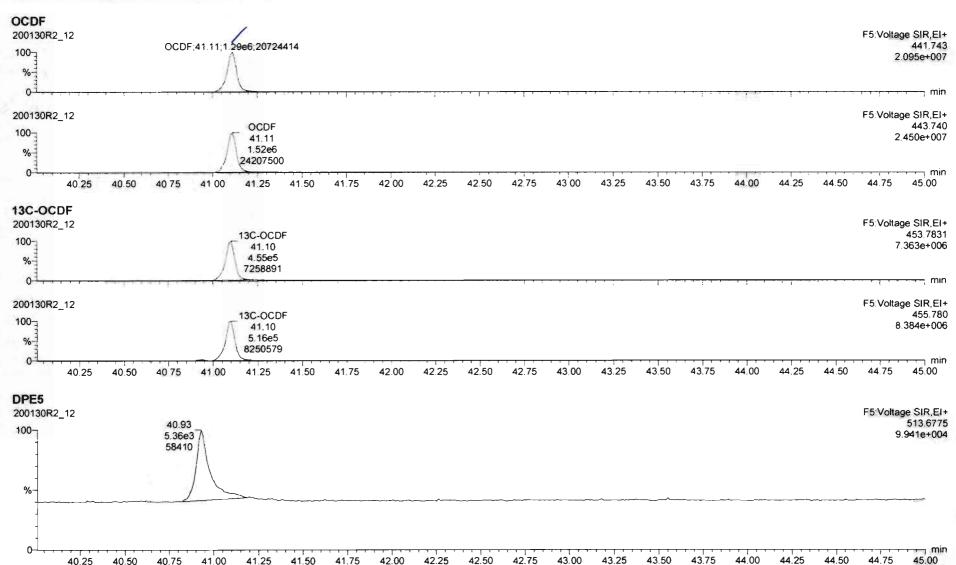
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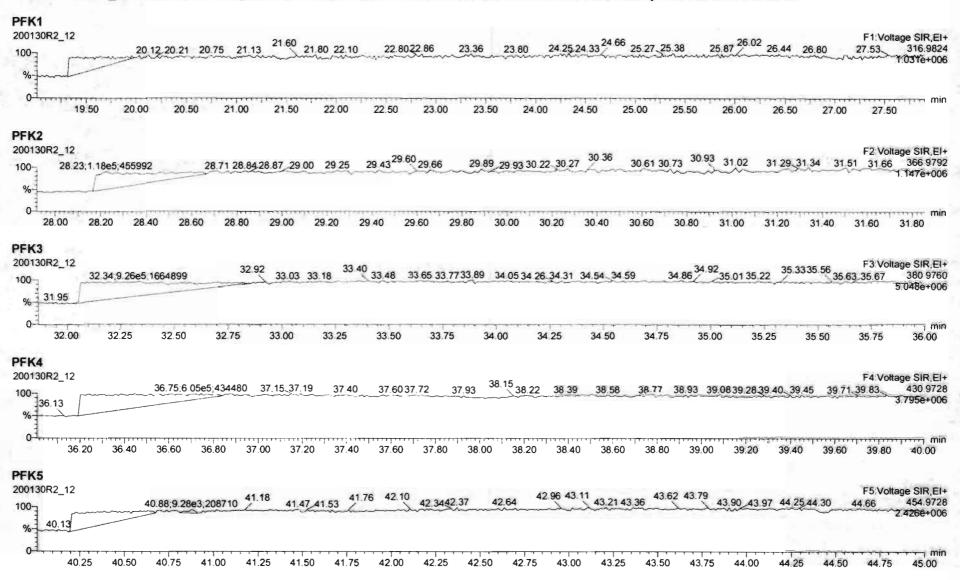
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Last Altered: Printed:

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



U:\VG12.PRO\Results\200130R2\200130R2-13.qld

Last Altered: Printed:

Tuesday, February 04, 2020 14:56:19 Pacific Standard Time Tuesday, February 04, 2020 14:57:48 Pacific Standard Time

EL 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 13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010

3300000	# Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1/35/5/20	1 2,3,7,8-TCDD				0.824	10.157	25.74		1.00		NO			0.105	
2	2 1,2,3,7,8-PeCDD	771.329	0.903	YES	0.912	10.157	30.66	30.67	1.00	1.00	NO	0.1549		0.104	0.1301
3	3 1,2,3,4,7,8-HxCDD	312.320	1.029	YES	0.870	10.157	34.01	34.03	1.00	1.00	NO	0.07289		0.105	0.06679
4	4 1,2,3,6,7,8-HxCDD	1171.937	1.176	NO	0.784	10.157	34.09	34.12	1.00	1.00	NO	0.2672		0.107	0.2672
5 4 1 1	5 1,2,3,7,8,9-HxCDD	773.373	1.199	NO	0.798	10.157	34.41	34.39	1.00	1.00	NO	0.1721		0.110	0.1721
6	6 1,2,3,4,6,7,8-HpCDD	35585.584	1.025	NO	0.737	10.157	37.92	37.93	1.00	1.00	NO	9.778		0.274	9.778
7	7 OCDD	370147.626	0.879	NO	0.800	10.157	40.91	40.92	1.00	1.00	NO	107.8		0.151	107.8
8	8 2,3,7.8-TCDF	2396.740	0.673	NO	0.588	10.157	24.86	24.85	1.00	1.00	NO	0.5039 (0,326)	0.128	0.5039
9	9 1,2,3,7.8-PeCDF	2846.415	1.174	YES	0.826	10.157	29.39	29.39	1.00	1.00	NO	0.4292		0.6700	0.3813
10	10 2,3,4,7.8-PeCDF	3256.320	3.269	YES	0.850	10.157	30.38	30.38	1.00	1.00	NO	0.4972		0.0727	0.2970
11	11 1,2,3,4,7,8-HxCDF	3521.702	1.137	NO	0.787	10.157	33.13	33.15	1.00	1.00	NO	0.8081		0.0771	0.8081
12	12 1,2,3,6,7,8-HxCDF	1573.096	1.088	NO	0.720	10.157	33.26	33.26	1.00	1.00	NO	0.3572		0.0750	0.3572
13	13 2,3,4,6,7,8-HxCDF	1742.905	0.987	YES	0.766	10.157	33.86	33.85	1.00	1.00	NO	0.4243		0.0854	0.3807
149(937)(6	14 1,2,3,7,8,9-HxCDF	214.074	0.763	YES	0.709	10.157	34.73	34.74	1.00	1.00	NO	0.05989		0.209	0.04684
15	15 1,2,3,4,6,7,8-HpCDF	3497.077	0.955	NO	0.732	10.157	36.52	36.48	1.00	1.00	NO	1.123		0.0916	1.123
16	16 1,2,3,4,7,8,9-HpCDF	539.210	1.402	YES	0.816	10.157	38.50	38.51	1.00	1.00	NO	0.1884		0.0916	0.1609
17	17 OCDF	7696.500	0.839	NO	0.639	10.157	41.10	41.11	1.00	1.00	NO	2.610		0.0947	2.610
18	18 13C-2,3,7,8-TCDD	1227748.5	0.782	NO	1.12	10.157	25.72	25.70	1.03	1.03	NO	203.9	104	0.224	
19	19 13C-1,2,3,7,8-PeCDD	1097162.1	0.634	NO	0.841	10.157	30.47	30.64	1.22	1.22	NO	241.7	123	0.294	
20	20 13C-1,2,3,4.7,8-HxCDD	969355.782	1.271	NO	0.938	10.157	33.99	34.00	1.01	1.01	NO	176.7	89.7	0.384	
21	21 13C-1,2,3,6,7,8-HxCDD	1101708.7	1.258	NO	1.07	10.157	34.09	34.09	1.02	1.02	NO	176.8	89.8	0.338	
22	22 13C-1,2,3,7,8,9-HxCDD	1107882.2	1.248	NO	1.03	10.157	34.39	34.37	1.03	1.03	NO	183.8	93.4	0.350	
23	23 13C-1,2,3,4,6,7 8-HpCDD	972460.531	1.036	NO	0.710	10.157	37.94	37.91	1.13	1.13	NO	234.2	119	0.651	
24	24 13C-OCDD	1689706.4	0.880	NO	0.601	10.157	40.83	40.91	1.22	1.22	NO	480.7	122	0.331	
25	25 13C-2,3,7,8-TCDF	1593480.8	0.777	NO	1.04	10.157	24.90	24.84	0.99	0.99	NO	182.3	92.6	0.256	
26	26 13C-1,2,3,7,8-PeCDF	1580703.1	1.589	NO	0.917	10.157	29.24	29 37	1.17	1.17	NO	204.5	104	0.488	
27	27 13C-2,3,4,7,8-PeCDF	1517551.5	1.599	NO	0.903	10.157	30.19	30.35	1.20	1.21	NO	199.4	101	0.496	
28	28 13C-1,2,3,4,7,8-HxCDF .	1090873.5	ე.506	NO	0.861	10.157	33.12	33.13	0.99	0.99	NO	216.5	110	0.532	
29	29 13C-1,2,3,6.7,8-HxCDF	1204282.8	0.513	NO	1.05	10.157	33.22	33.25	0.99	0.99	NO	196.7	99.9	0.438	
30	30 13C-2,3,4,5,7,8-HxCDF	1055318.7	0.506	NO	0.946	10.157	33.82	33.83	1.01	1.01	NO	190.8	96.9	0.485	

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U:\VG12.PRO\Results\200130R2\200130R2-13.qld

Last Altered: Printed:

Dataset:

Tuesday, February 04, 2020 14:56:19 Pacific Standard Time Tuesday, February 04, 2020 14:57:48 Pacific Standard Time

Name: 200130R2_13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010

65 55	# Name	Abs Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	993223.250	0.504	NO	0.816	10.157	34.73	34.73	1.04	1.04	NO	208.2	106	0.562	
32	32 13C-1,2,3,4,6,7,8-HpCDF	838112.234	0.433	NO	0.589	10.157	36.47	36.48	1.09	1.09	NO	243.2	124	0.538	
33	33 13C-1,2,3,4,7,8,9-HpCDF	686549.094	0.436	NO	0.448	10.157	38.48	38.50	1.15	1 .15	NO	262.0	133	0.708	
34	34 13C-OCDF	1818145.5	0.864	NO	0.586	10.157	41.06	41.10	1.23	1.23	NO	530.7	135	0.371	
35	35 37CI-2.3,7,8-TCDD	479559.188			1.09	10.157	25.75	25.74	1.03	1.03	NO	81.84	104	0.0472	
36	36 13C-1,2,3,4-TCDD	1062796.6	0.793	NO	1.00	10.157	25.08	25.08	1.00	1.00	NO	196.9	100	0.250	
37	37 13C-1,2,3,4-TCDF	1660453.0	0.784	NO	1.00	10.157	23.42	23.42	1.00	1.00	NO	196.9	100	0.265	
38	38 13C-1,2,3,4,6,9-HxCDF	1151772.5	0.507	NO	1.00	10.157	33.52	33.52	1.00	1.00	NO	196.9	100	0.458	
39	39 Total Tetra-Dioxins				0.824	10.157	24.62		0.00		NO	0.3483		0.105	0.4797
40	40 Total Penta-Dioxins				0.912	10.157	29.96		0.00		NO .	0.5063		0.104	1.145
41	41 Total Hexa-Dioxins				0.784	10.157	33.63		0.00		NO	2.943		0.111	3.184
42	42 Total Hepta-Dioxins				0.737	10.157	37 64		0.00		NO	20.90		0.274	20.90
43	43 Total Tetra-Furans				0.588	10.157	23.61		0.00		NO	5.762		0.128	5.955
44	44 1st Func. Penta-Furans				0.826	10.157	27.09		0.00		NO	4.254		0.0336	4.254
45	45 Total Penta-Furans				0.826	10.157	29.27		0.00		NO	2.257		0.0723	3.766
46	46 Total Hexa-Furans				0.766	10.157	33.56		0.00		NO	4.551		0.0832	5.369
47	47 Total Hepta-Furans				0.732	10.157	37.83		0.00		NO	2.937		0.0964	3.098

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-13.qld

Last Altered:

Tuesday, February 04, 2020 14:56:19 Pacific Standard Time

Printed:

Tuesday, February 04, 2020 14:58:07 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_13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010

Tetra-Dioxins

STATE	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
10000	39 Total Tetra-Dioxins	6.89e2	1.23e6	0.810	NO	24.62	24.07	0.1341	0.1341
2 1114	39 Total Tetra-Dioxins	0.00e0	1.23e6	1.191	YES	24.62	23.82	0.0000	0.1315
3	39 Total Tetra-Dioxins	7.11e2	1.23e6	0.775	NO	24.62	21.80	0.1383	0.1383
4	39 Total Tetra-Dioxins	3.90e2	1.23e6	0.700	NO	24.62	23.59	0.07585	0.07585

Penta-Dioxins

755 E-71	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	0.00e0	1.10e6	0.893	YES	29.96	28.93	0.0000	0.07524
2	40 Total Penta-Dioxins	1.84e3	1.10e6	0.660	NO	29.96	28.47	0.3623	0.3623
3	2 1,2,3,7,8-PeCDD	7.71e2	1.10e6	0.903	YES	30.66	30.67	0.0000	0.1301
4 63500 34	40 Total Penta-Dioxins	7.31e2	. 1.10e6	0.693	NO	29.96	29.68	0.1440	0.1440
5	40 Total Penta-Dioxins	0.00e0	1.10e6	0.519	YES	29.96	29.57	0.0000	0.1313
6 440	40 Total Penta-Dioxins	0.00e0	1.10e6	0.872	YES	29.96	29.42	0.0000	0.3022

Hexa-Dioxins

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1.5	5 1,2,3,7,8,9-HxCDD	7.73e2	1.11e6	1.199	NO	34.41	34.39	0.1721	0.1721
2 100 000	4 1,2,3,6,7,8-HxCDD	1.17e3	1.10e6	1.176	NO	34.09	34.12	0.2672	0.2672
3	41 Total Hexa-Dioxins	5.32e3	0.00e0	1.218	NO	33.63	33.33	1.262	1.262
4	41 Total Hexa-Dioxins	0.00e0	0.00e0	0.863	YES	33.63	33.06	0.0000	0.1742
5	41 Total Hexa-Dioxins	5.24e3	0.00e0	1.390	NO	33.63	32.52	1.242	1.242
6	3 1,2,3,4,7,8-HxCDD	3.12e2	9.69e5	1.029	YES	34.01	34.03	0.0000	0.06679

Hepta-Dioxins

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1 Mark State	6 1,2,3,4,6,7,8-HpCDD	3.56e4	9.72e5	1.025	NO	37.92	37.93	9.778	9.778
2	42 Total Hepta-Dioxins	4.05e4	9.72e5	0.993	NO	37.64	36.87	11.12	11.12

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Quantify Totals Report MassLynx MassLynx V4.1 SCN 945

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-13.qld

Last Altered:

Tuesday, February 04, 2020 14:56:19 Pacific Standard Time

Printed:

Tuesday, February 04, 2020 14:58:07 Pacific Standard Time

Name: 200130R2_13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010

Tetra-Furans

- Constilla	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	43 Total Tetra-Furans	7.02e3	1.59e6	0.722	NO	23.61	20.81	1.476	1.476
2	43 Total Tetra-Furans	0.00e0	1.59e6	0.475	YES	23.61	20.24	0.0000	0.1926
3	43 Total Tetra-Furans	1.18e3	1.59e6	0.868	NO	23.61	26.84	0.2484	0.2484
4 3 22 1	43 Total Tetra-Furans	8.78e2	1.59e6	0.732	NO	23.61	25.24	0.1845	0.1845
5	8 2,3,7,8-TCDF	2.40e3	1.59e6	0.673	NO	24.86	24.85	0.5039	0.5039
6	43 Total Tetra-Furans	5.91e2	1.59e6	0.784	NO	23.61	24.75	0.1242	0.1242
7	43 Total Tetra-Furans	3.06e3	1.59e6	0.811	NO	23.61	23.94	0.6423	0.6423
8	43 Total Tetra-Furans	4.01e3	1.59e6	0.692	NO	23.61	23.34	0.8431	0.8431
9	43 Total Tetra-Furans	3.62e3	1.59e6	0.739	NO	23.61	22.22	0.7607	0.7607
10	43 Total Tetra-Furans	3.50e3	1.59e6	0.668	NO	23.61	21.75	0.7367	0.7367
11	43 Total Tetra-Furans	1.15e3	1.59e6	0.697	NO	23.61	21.38	0.2427	0.2427

Penta-Furans function 1

SAFER	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1 081 000	44 1st Func. Penta-Fura	2.76e4	0.00e0	1.635	NO	27.09	26.83	4.254	4.254

Penta-Furans

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
125	45 Total Penta-Furans	0.00e0	0.00e0	0.537	YES	29.27	30.36	0.0000	0.2467
2	45 Total Penta-Furans	5.26e2	0.00e0	1.454	NO	29.27	30.25	0.08099	0.08099
3	45 Total Penta-Furans	2.37e3	0.00e0	1.603	NO	29.27	29.64	0.3643	0.3643
4	9 1,2,3,7,8-PeCDF	2.85e3	1.58e6	1.174	YES	29.39	29.39	0.0000	0.3813
5	45 Total Penta-Furans	0.00e0	0.00e0	1.809	YES	29.27	28.97	0.0000	0.5842
6	45 Total Penta-Furans	1.18e4	0.00e0	1.484	NO	29.27	28.41	1.811	1.811
7 3000	10 2,3,4,7,8-PeCDF	3.26e3	1.52e6	3.269	YES	30.38	30.38	0.0000	0.2970

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Quantify Totals Report MassLynx MassLynx V4.1 SCN 945

Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-13.qld

Last Altered:

Tuesday, February 04, 2020 14:56:19 Pacific Standard Time

Printed: Tuesday, February 04, 2020 14:58:07 Pacific Standard Time

Name: 200130R2_13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010

Page 3 of 3

Hexa-Furans

dula Cal	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	14 1,2,3,7,8,9-HxCDF	2.14e2	9.93e5	0.763	YES	34.73	34.74	0.0000	0.04684
2	13 2,3,4,6,7,8-HxCDF	1.74e3	1.06e6	0.987	YES	33.86	33.85	0.0000	0.3807
3	12 1,2,3,6,7,8-HxCDF	1.57e3	1.20e6	1.088	NO	33.26	33.26	0.3572	0.3572
4	11 1,2,3,4,7,8-HxCDF	3.52e3	1.09e6	1.137	NO	33.13	33.15	0.8081	0.8081
5	46 Total Hexa-Furans	7.24e3	0.00e0	1.246	NO	33.56	32.68	1.713	1.713
6	46 Total Hexa-Furans	7.07e3	0.00e0	1.202	NO	33.56	32.16	1.672	1.672
7	46 Total Hexa-Furans	0.00e0	0.00e0	0.901	YES	33.56	31.98	0.0000	0.2852
8	46 Total Hexa-Furans	0.00e0	0.00e0	1.034	YES	33.56	34.78	0.0000	0.1056

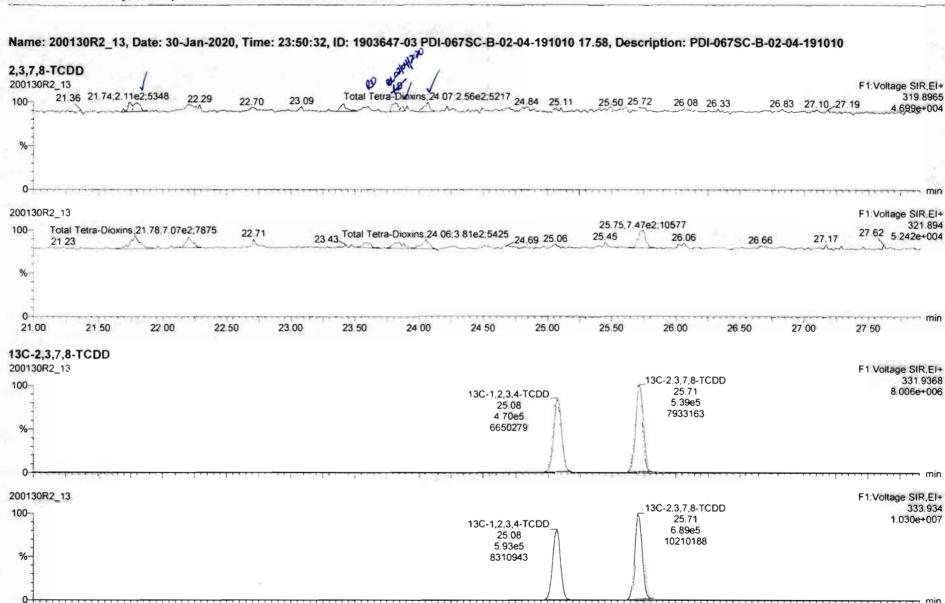
Hepta-Furans

1000	# Name	Area	IS Avea	RA	YAN	Pred.RT	RT	Conc.	EMPC
1 PERSON	16 1,2,3,4,7,8,9-HpCDF	5.39e2	6.87e5	1.402	YES	38.50	38.51	0.0000	0.1609
2	47 Total Hepta-Furans	5.14e3	0.00e0	0.986	NO	37.83	37.10	1.814	1.814
3	15 1,2,3,4,6,7,8-HpCDF	3.50e3	8.38e5	0.955	NO	36.52	36.48	1.123	1.123

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



21.50

22.00

22.50

23.00

23.50

24.00

24.50

25.00

25.50

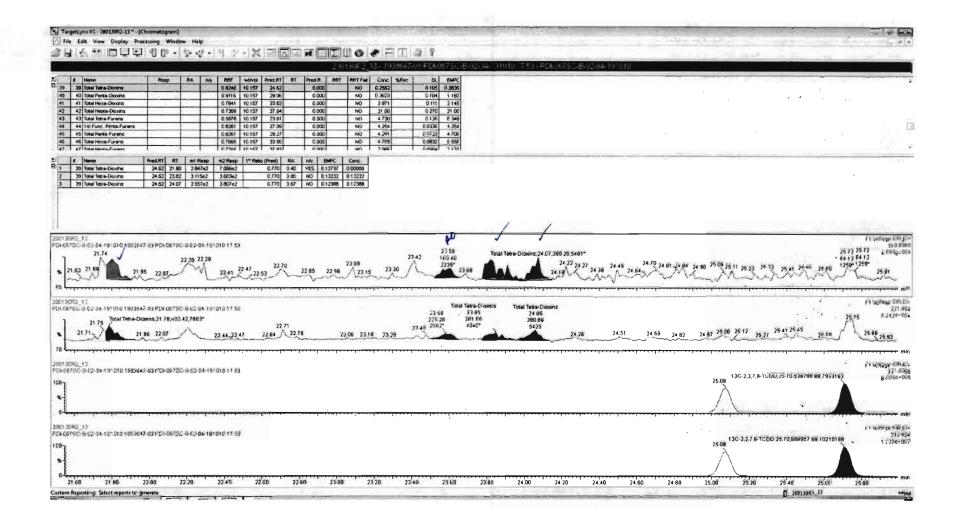
26.00

26.50

27.00

21.00

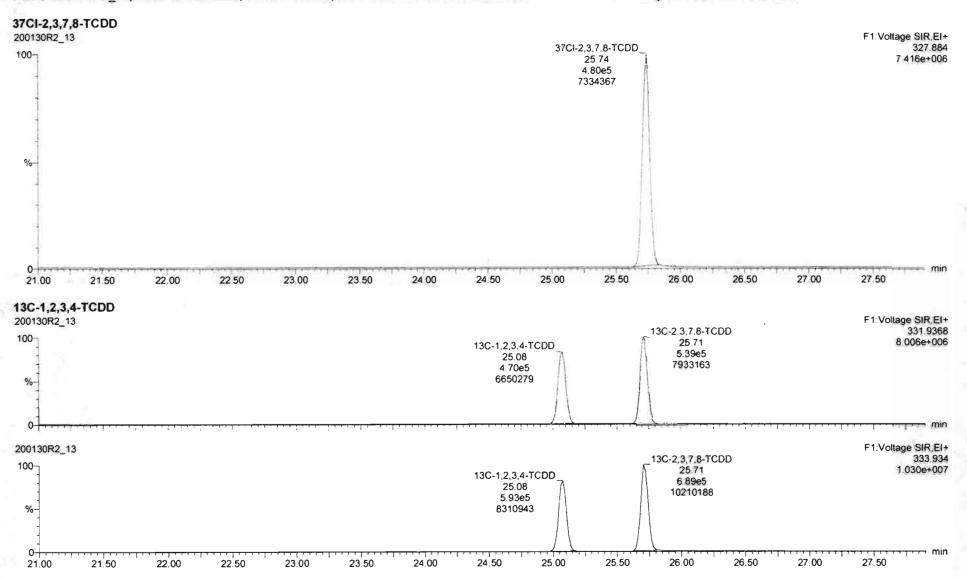
27.50



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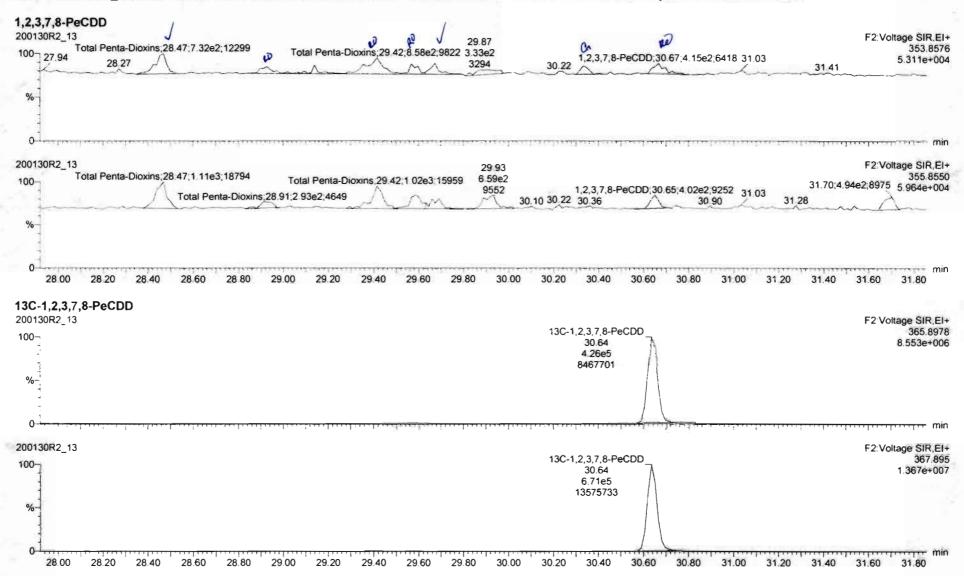
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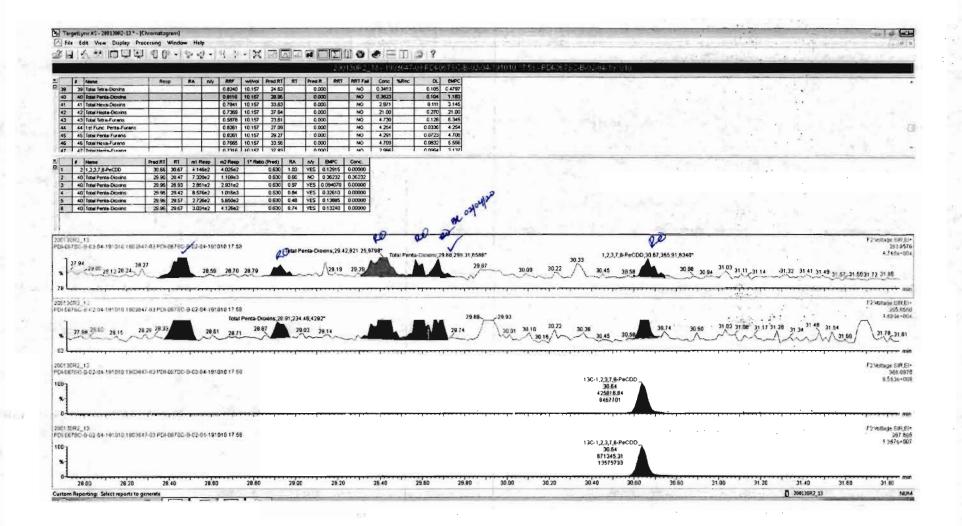
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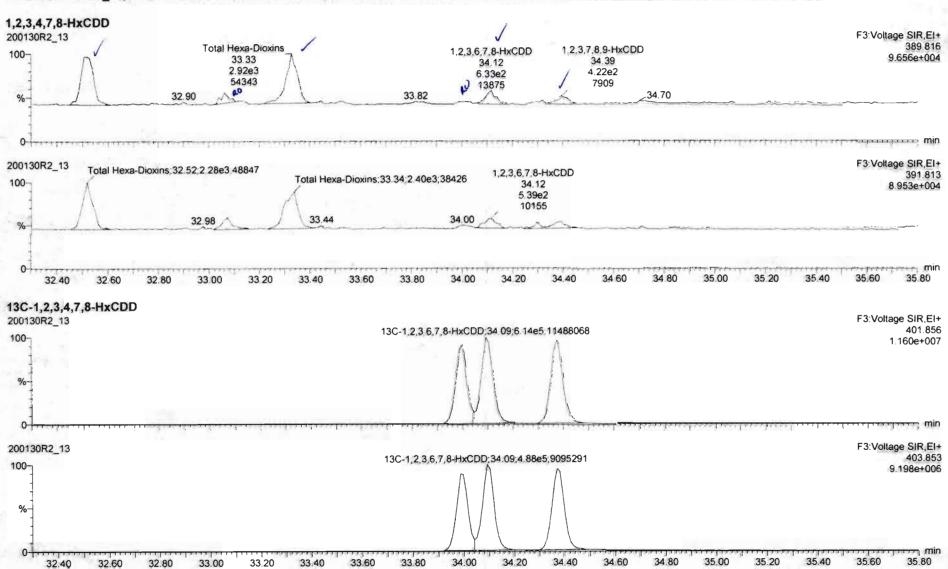


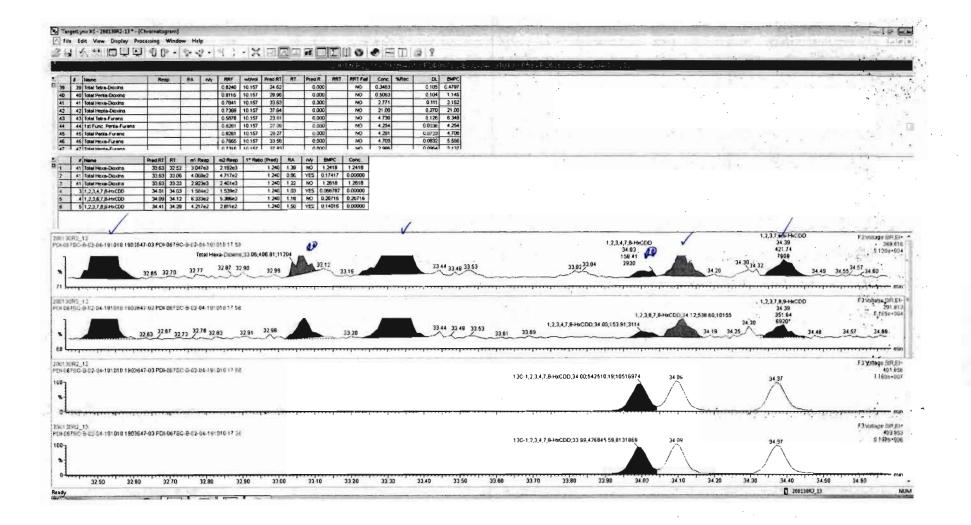


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Last Altered: Printed: Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time



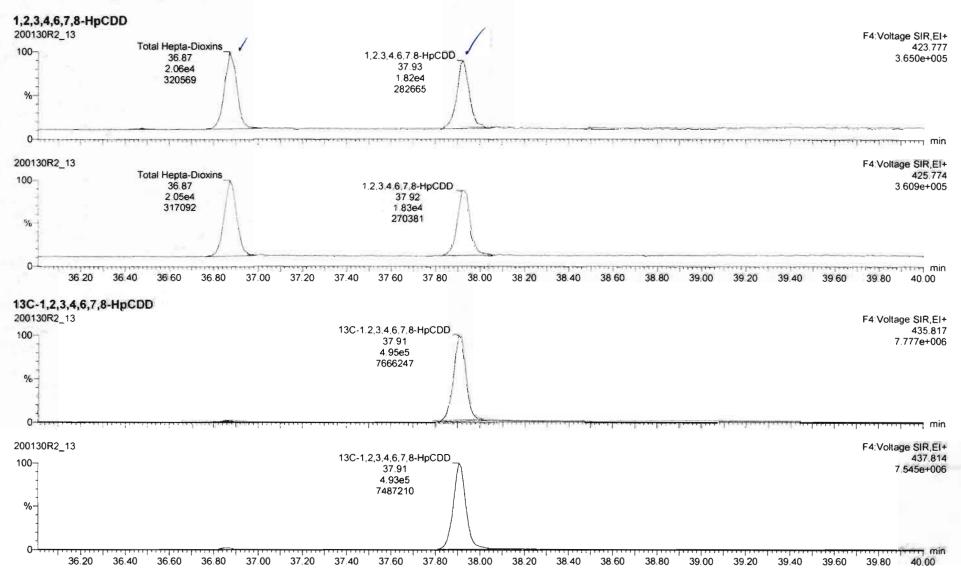


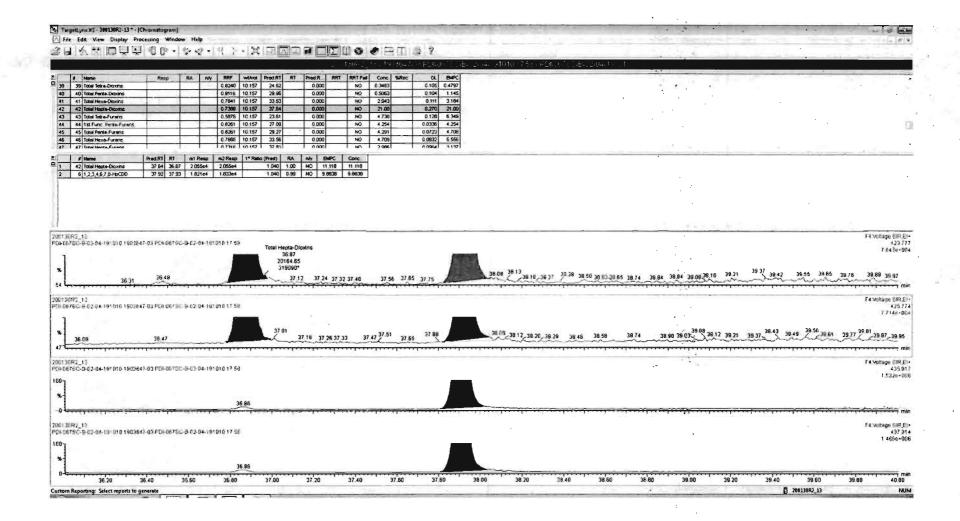
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Untitled

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Name: 200130R2_13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010



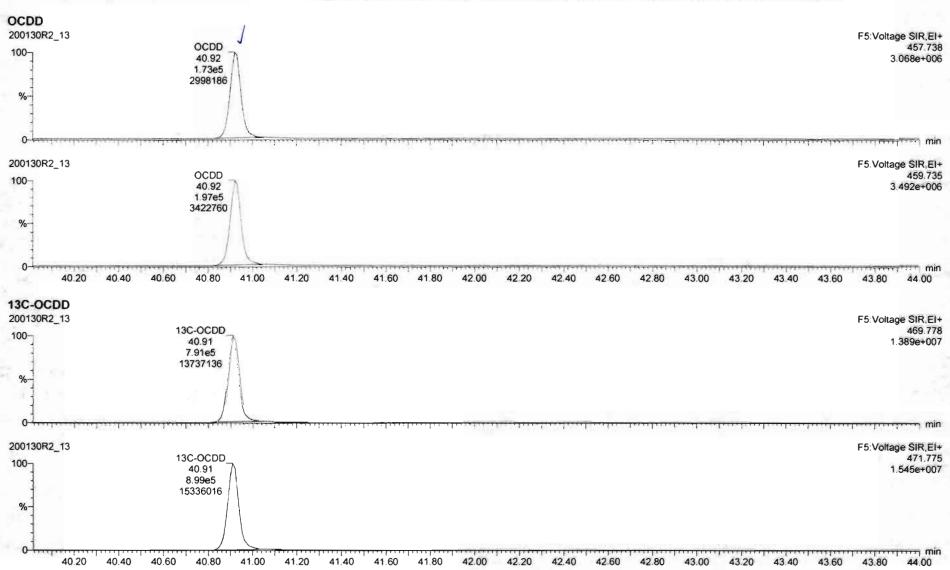


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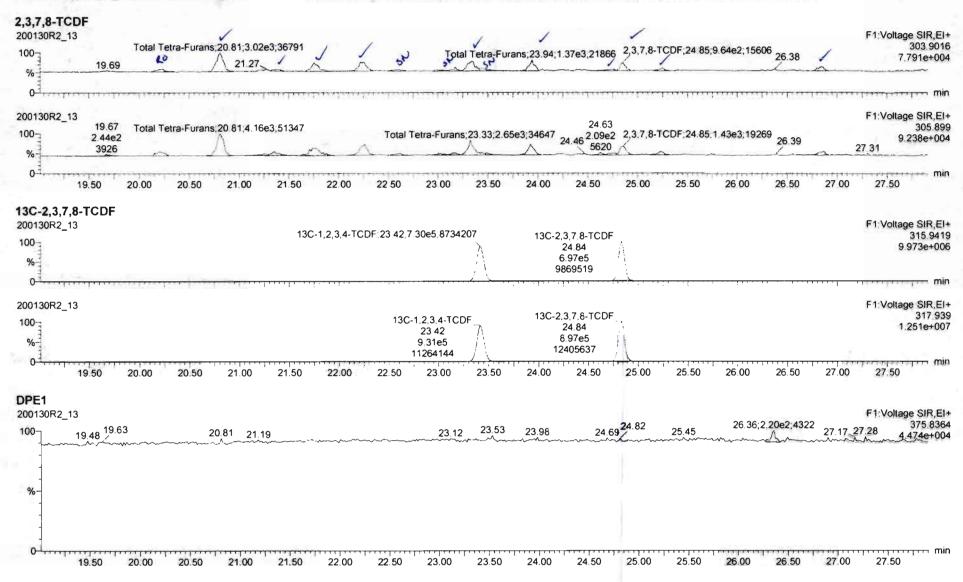
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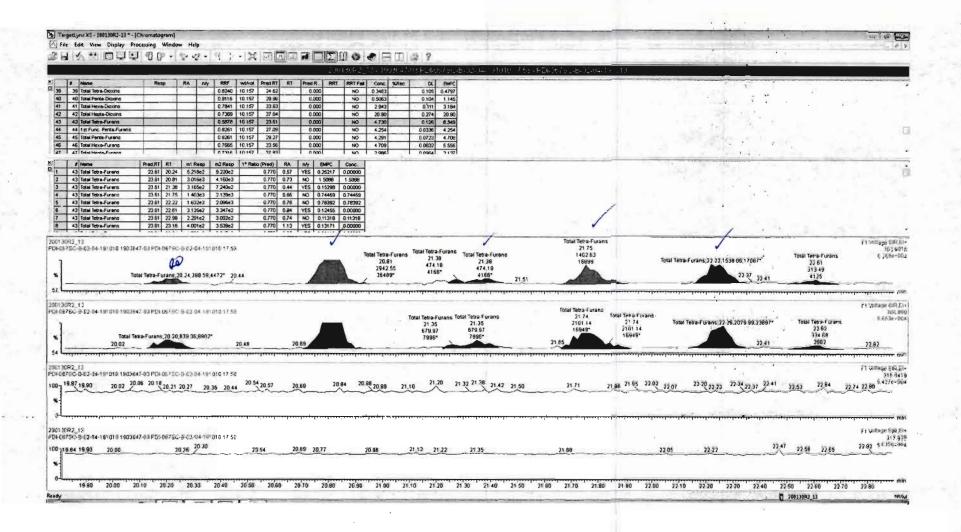


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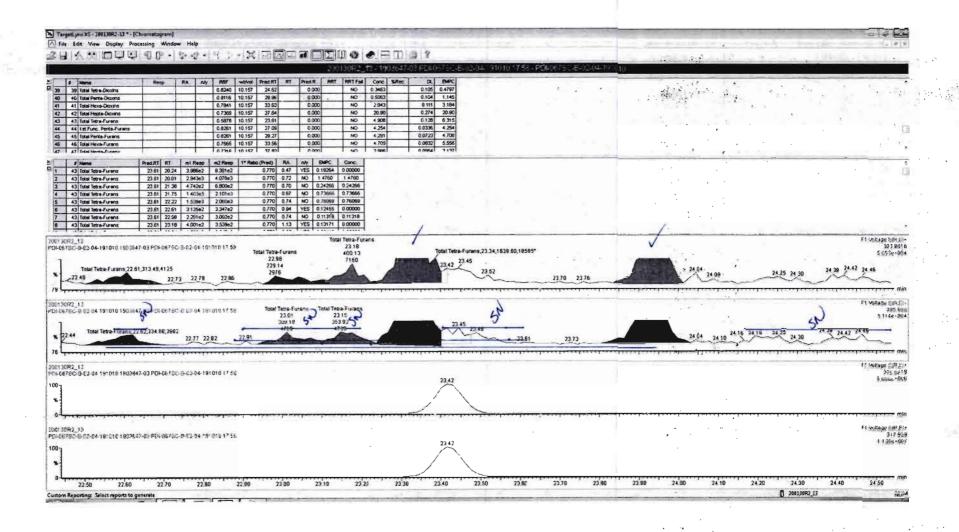
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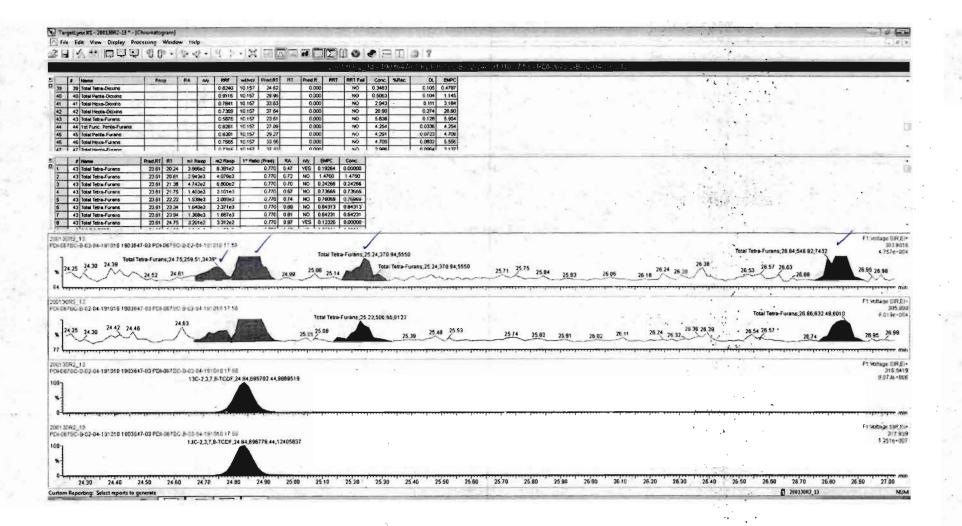




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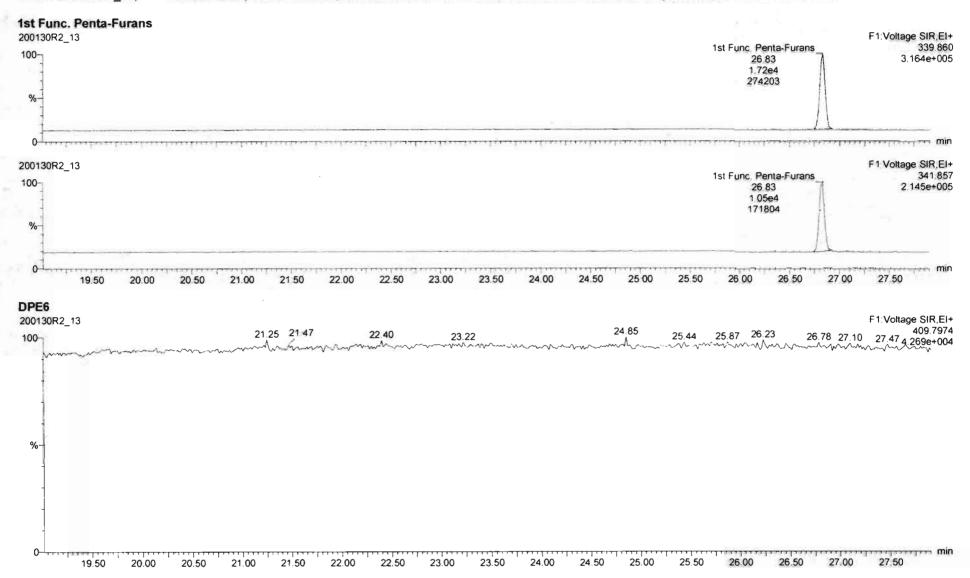


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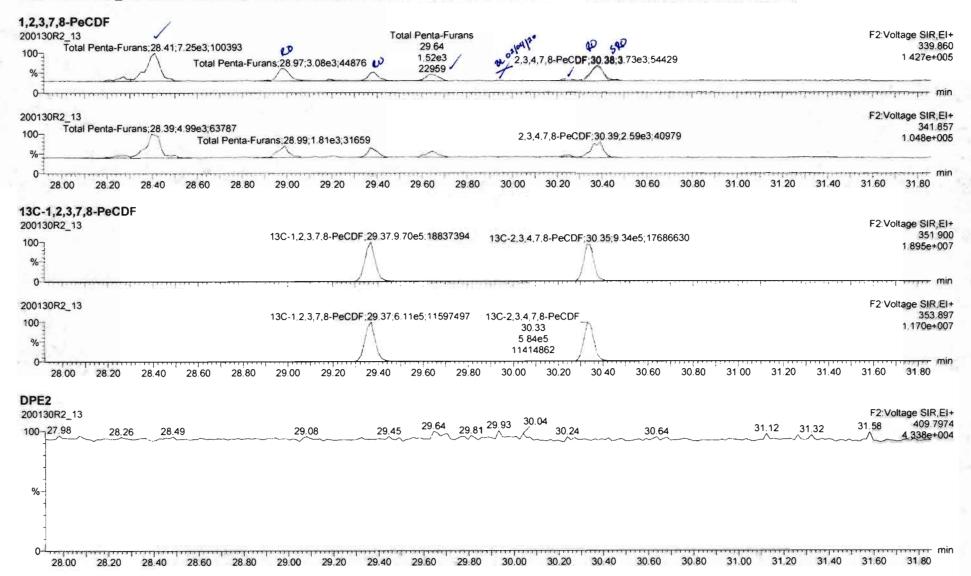
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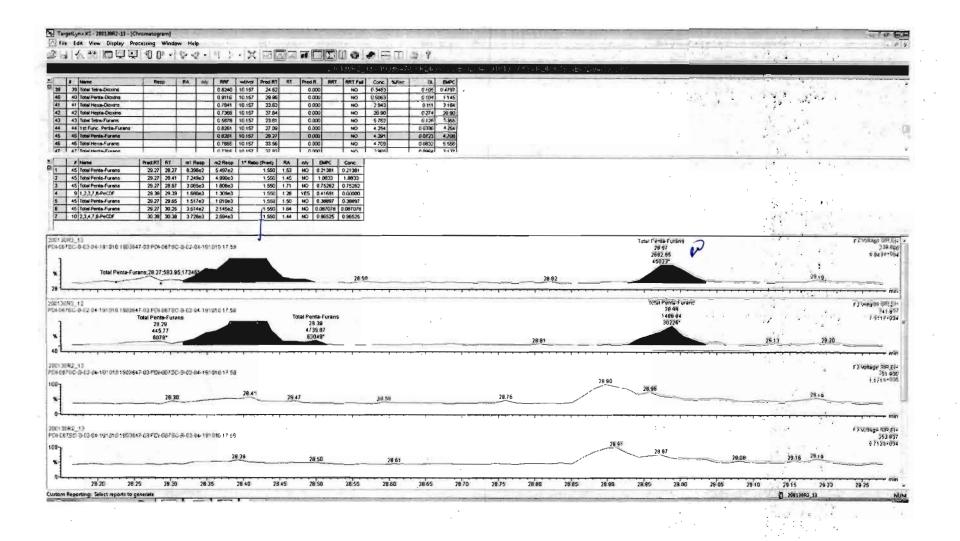


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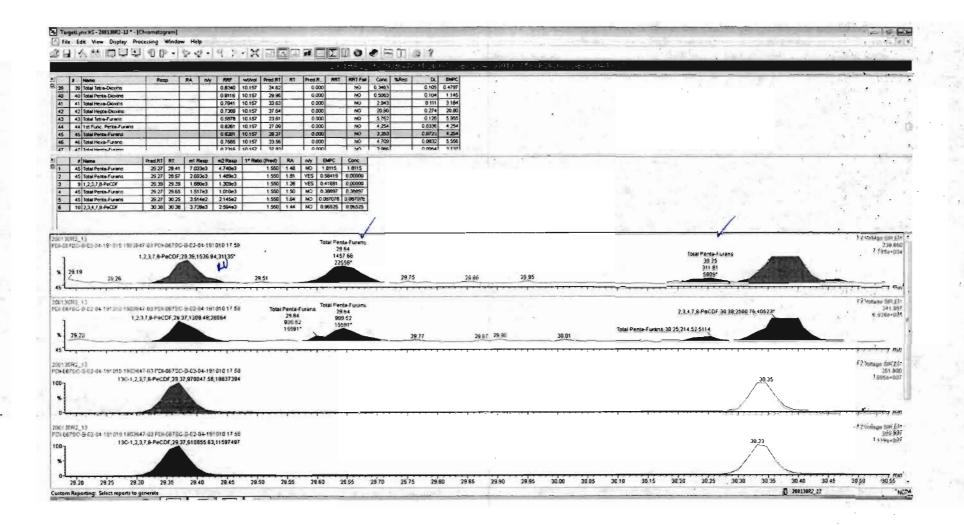
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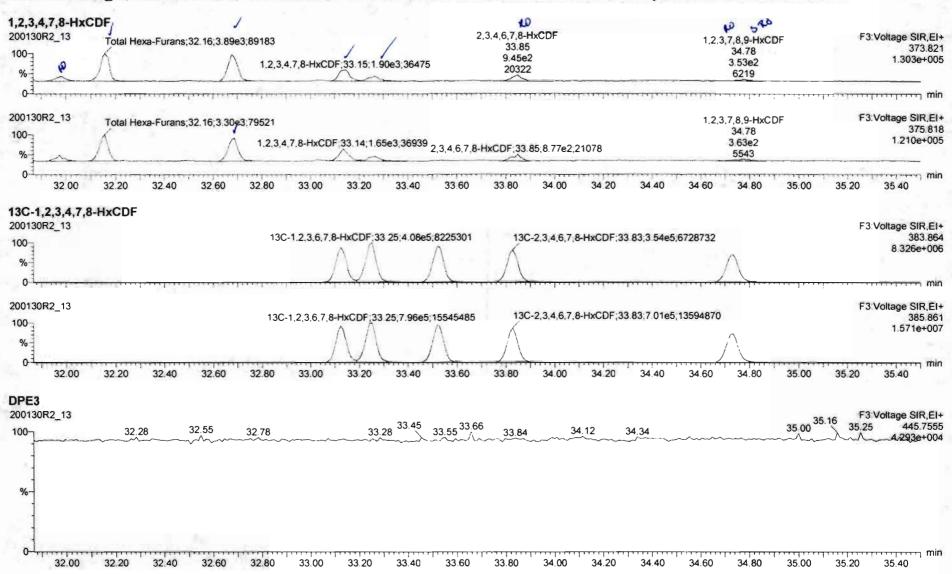


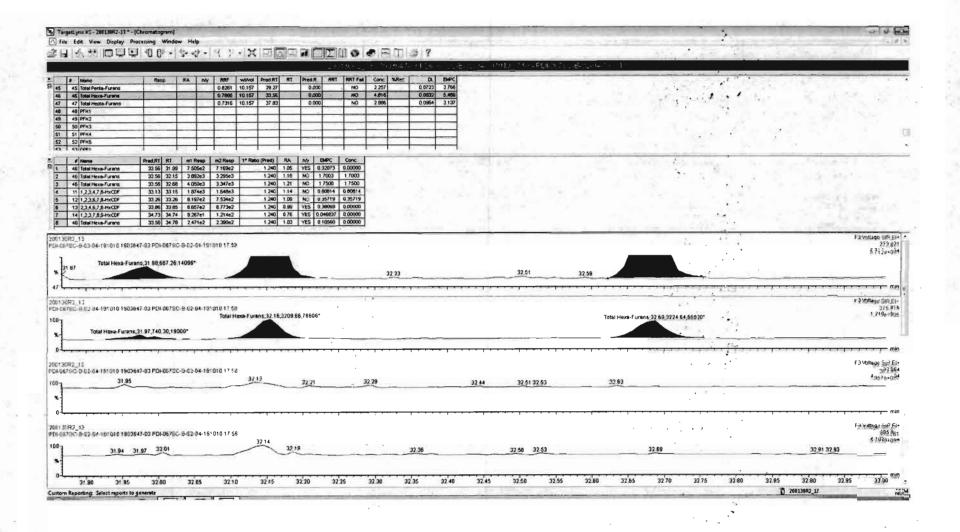
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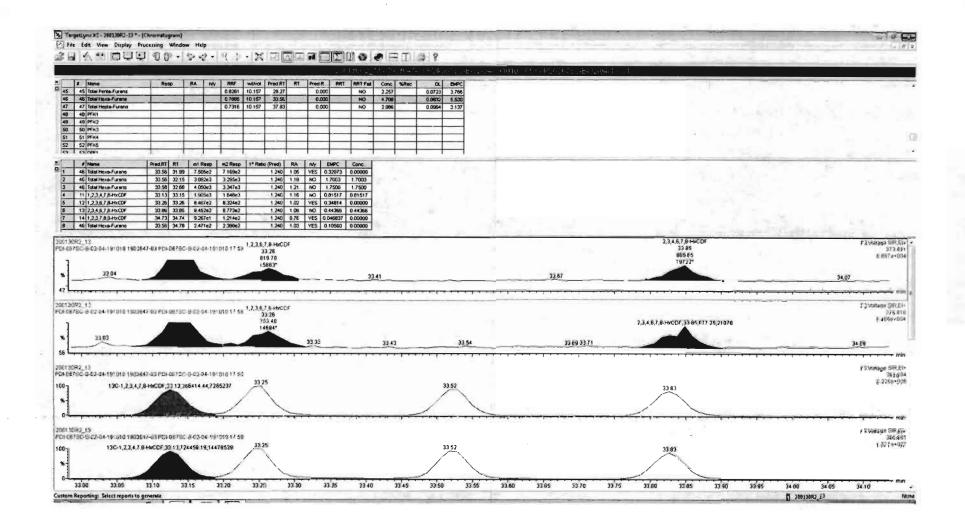
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Name: 200130R2 13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010

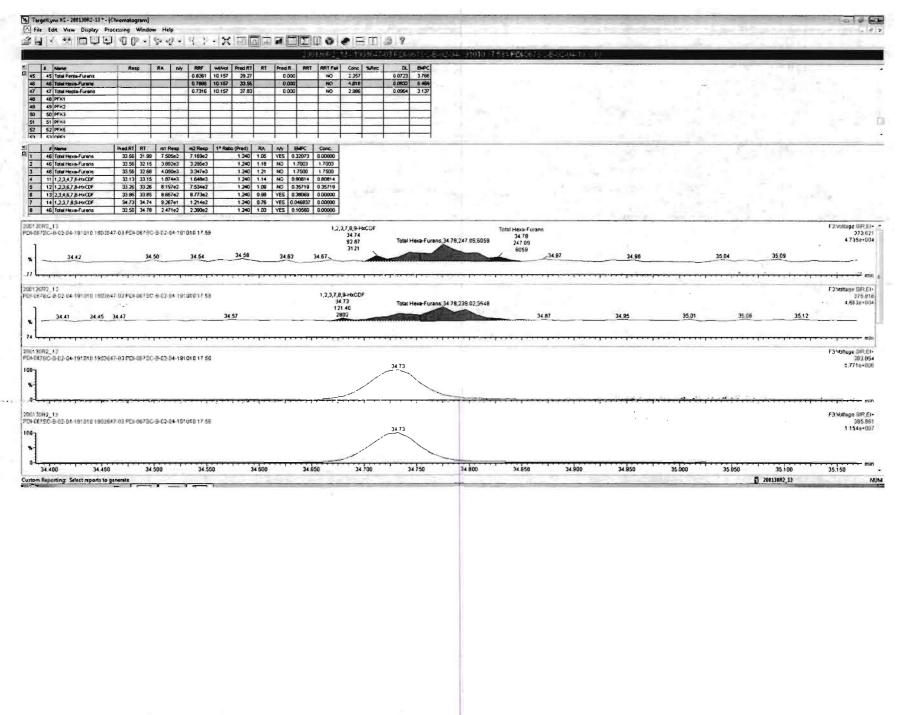




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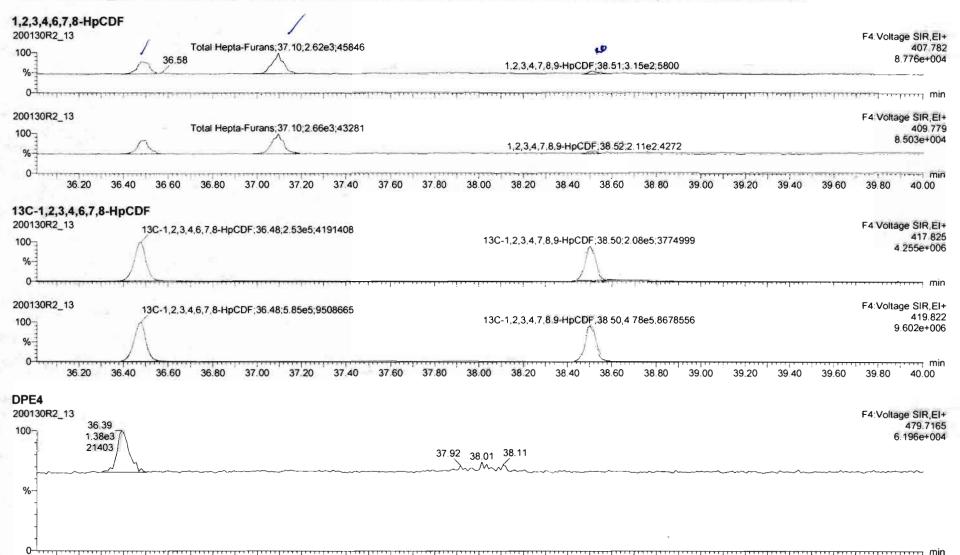
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Untitled

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

Name: 200130R2_13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010



36.20

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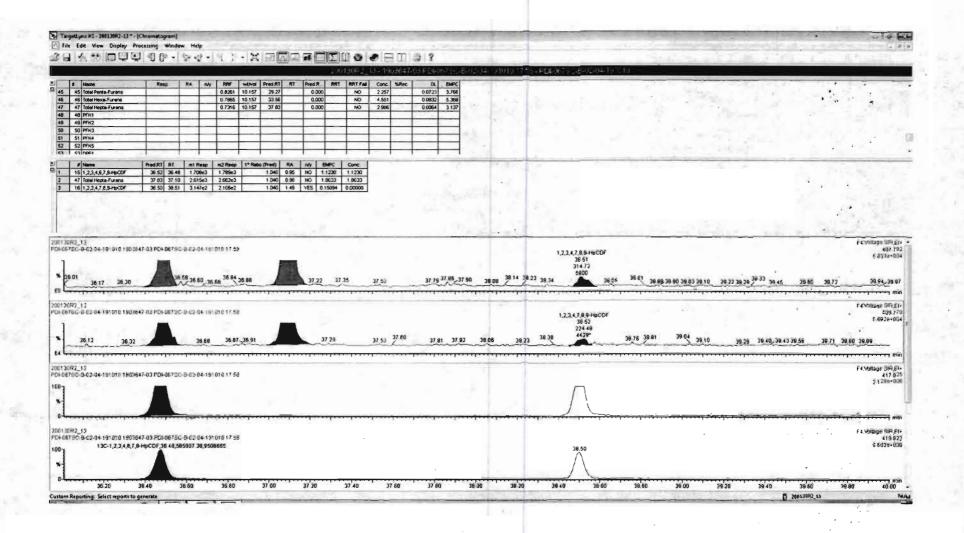
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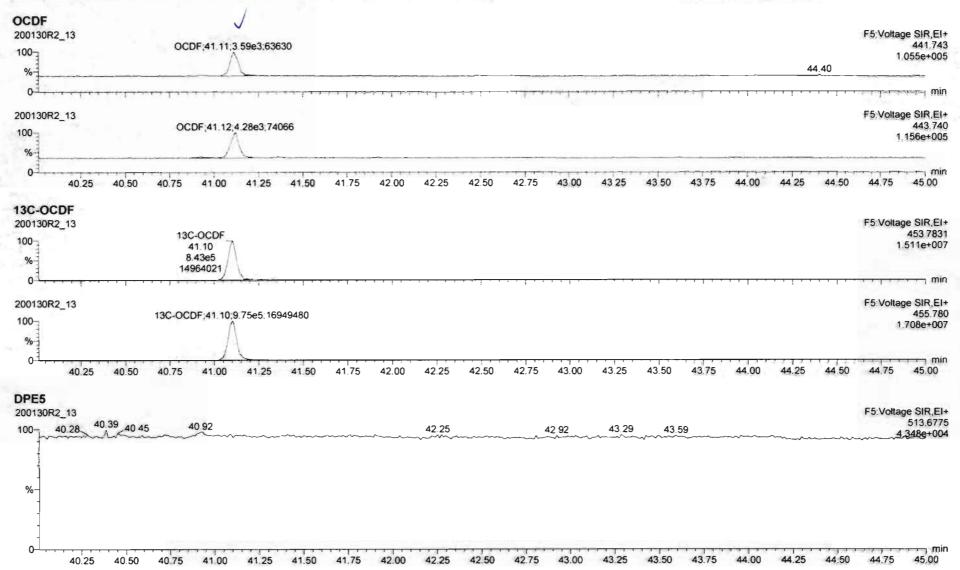


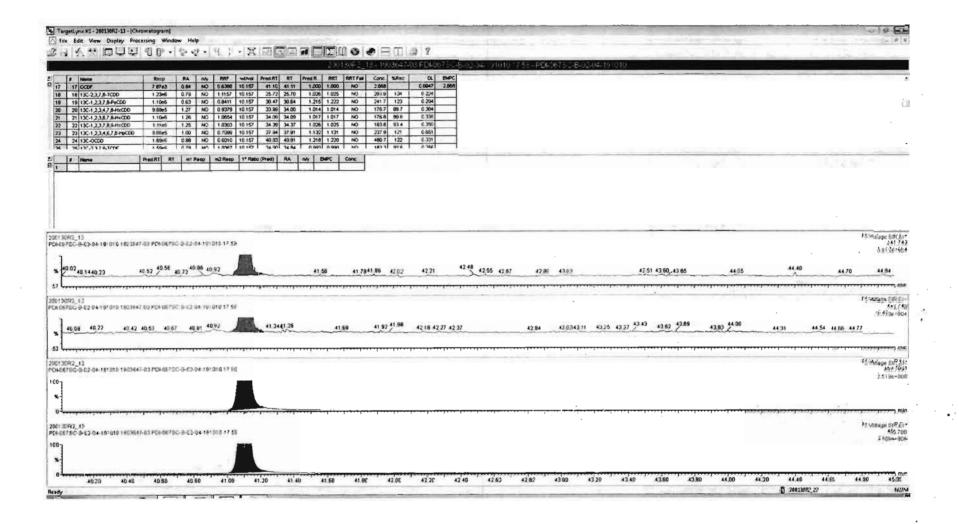
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Last Altered: Friday, January 31, 2020 08:36:52 Pacific Standard Time Printed: Friday, January 31, 2020 08:37:05 Pacific Standard Time

Name: 200130R2 13, Date: 30-Jan-2020, Time: 23:50:32, ID: 1903647-03 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010



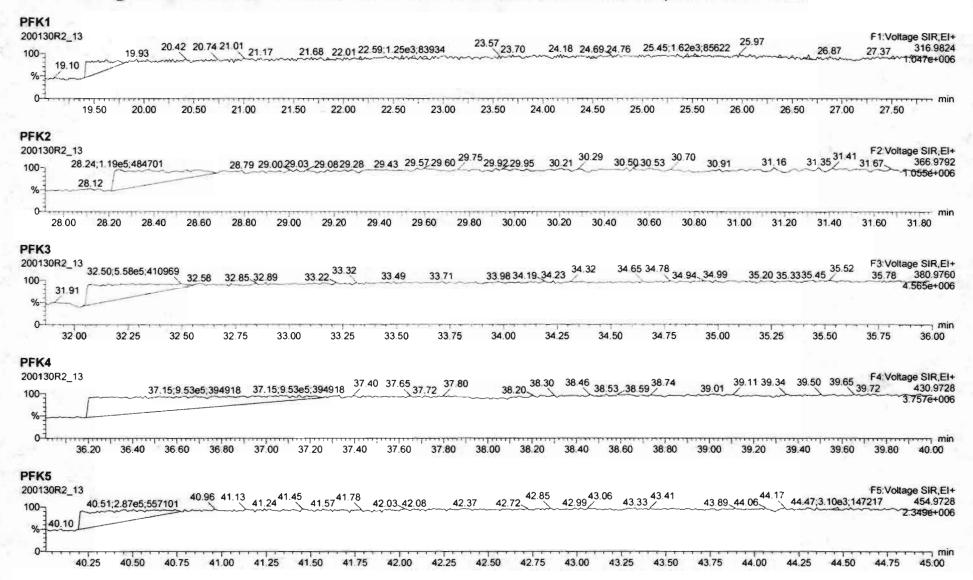


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Untitled

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

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U:\VG12.PRO\Results\200130R2\200130R2-14.qld

Last Altered:

Tuesday, February 04, 2020 13:53:48 Pacific Standard Time

Printed:

Tuesday, February 04, 2020 13:56:29 Pacific Standard Time

GRB 02/04/2020 C7 02/05/2020

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_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

	# 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	0.824	10.131	25.736		1.001				0.0723	
2	2 1,2,3,7,8-PeCDD			NO	0.912	10.131	30.657		1.001				0.0737	
3	3 1,2.3,4,7,8-HxCDD			NO	0.870	10.131	33.997		1.000				0.0822	
4	4 1,2.3.6.7.8-HxCDD			NO	0.784	10.131	34.094		1.000				0.0847	
5	5 1,2.3,7,8.9-HxCDD			NO	0.798	10.131	34.405		1.001				0.0874	
6	6 1,2,3,4,6,7,8-HpCDD	1.47e3	1.07	NO	0.737	10.131	37.918	37.93	1.000	1.001	0.43265		0.131	0.433
7	7 OCDD	7.43e3	0.91	NO	0.800	10.131	40.910	40.91	1.000	1.000	2.3204		0.107	2.32
8	8 2,3,7,8-TCDF			NO	0.588	10.131	24.847		1.001				0.0798	
9	9 1,2,3,7,8-PeCDF			NO	0.826	10.131	29.376		1.001				0.0519	
10	10 2,3,4,7,8-PeCDF			NO	0.850	10.131	30.361		1.001				0.0489	
11	11 1,2.3,4,7,8-HxCDF			NO	0.787	10.131	33.125		1.000				0.0602	
12	12 1,2,3,6,7.8-HxCDF			NO	0.720	10.131	33.252		1.000				0.0582	
13	13 2.3.4,6,7,8-HxCDF			NO	0.766	10.131	33.851		1.001				0.0644	
14	14 1,2.3,7,8,9-HxCDF			NO	0.709	10.131	34.722		1.000				0.0864	
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.732	10.131	36.505		1.001				0.0942	
16	16 1 2.3.4,7.8,9-HpCDF			NO	0.816	10.131	38.503		1.000				0.0877	
17	17 OCDF	4.38e2	1.09	YES	0.639	10.131	41.102	41.13	1.000	1.001	0.15350		0.9838	0.143
18	18 13C-2,3,7.8-TCDD	1.16e6	0.79	NO	1.12	10.131	25.706	25.70	1.026	1.026	197.87	100	0.201	
19	19 13C-1,2,3,7,8-PeCDD	1:01e6	0.65	NO	0.841	10.131	30.450	30.64	1.215	1.222	230.08	117	0.279	
20	20 13C-1.2,3,4,7.8-HxCDD	9.61e5	1.26	NO	0.938	10.131	33.988	33.99	1.014	1.014	180.38	91.4	0.252	
21	21 13C-1,2,3,6,7,8-HxCDD	1.05e6	1.26	NO	1.07	10.131	34.089	34.09	1.017	1.017	173.34	87.8	0.222	
22	22 13C-1,2,3,7,8,9-HxCDD	1.03e6	1.24	NO	1.03	10.131	34.390	34.37	1.026	1.025	175.10	88.7	0.230	
23	23 13C-1,2,3,4,6,7,8-HpCDD	9.13e5	1.03	NO	0.710	10.131	37.944	37.91	1.132	1.131	226.24	115	0.520	
24	24 13C-OCDD	1.58e6	0.90	NO	0.601	10.131	40.826	40.91	1.218	1.221	462.56	117	0.340	
25	25 13C-2,3,7,8-TCDF	1.53e6	0.77	NO	1.04	10.131	24.887	24.82	0.993	0.990	180.93	91.6	0.261	
26	26 13C-1,2,3,7,8-PeCDF	1.49e6	1.59	NO	0.917	10.131	29.222	29.35	1.166	1.171	198.31	100	0.397	
27	27 13C-2,3,4,7,8-PeCDF	1.47e6	1.56	NO	0.903	10.131	30.175	30.33	1.204	1.210	199.37	101	0.403	
28	28 13C-1,2,3,4,7,8-HxCDF	1.02e6	0.51	NO	0.861	10.131	33.117	33.13	0.988	0.988	209.17	106	0.511	
29	29 13C-1,2,3,6,7,8-HxCDF	1.17e6	0.51	NO	1.05	10.131	33.217	33.24	0.991	0.992	196.25	99.4	0.420	
30	30 13C-2,3,4,6,7,8-HxCDF	1.04e6	0.50	NO	0.946	10.131	33.824	33.82	1.009	1.009	193.12	97.8	0.465	
31	31 13C-1,2,3,7,8,9-HxCDF	9.25e5	0.50	NO	0.816	10.131	34.726	34.72	1.036	1.036	199.56	101	0.539	

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U:\VG12.PRO\Results\200130R2\200130R2-14.qld

Last Altered: Printed:

Tuesday, February 04, 2020 13:53:48 Pacific Standard Time Tuesday, February 04, 2020 13:56:29 Pacific Standard Time

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	7.95e5	0.43	NO	0.589	10.131	36.469	36.47	1.088	1.088	237.43	120	0.550	1000
33	33 13C-1,2,3,4,7,8,9-HpCDF	6.45e5	0.43	NO	0.448	10.131	38.480	38.50	1.148	1.149	253.48	128	0.724	
34	34 13C-OCDF	1.71e6	0.88	NO	0.586	10.131	41.061	41.10	1.225	1.226	513.03	130	0.340	
35	35 37CI-2,3,7,8-TCDD	4.57e5			1.09	10.131	25.739	25.72	1.027	1.026	80.382	102	0.0984	
36	36 13C-1,2,3,4-TCDD	1.03e6	0.80	NO	1.00	10,131	25.080	25.06	1.000	1.000	197.42	100	0.224	
37	37 13C-1,2,3,4-TCDF	1.61e6	0.79	NO	1.00	10.131	23.420	23.40	1.000	1.000	197.42	100	0.270	
38	38 13C-1,2,3,4,6,9-HxCDF	1.12e6	0.51	NO	1.00	10.131	33.520	33.52	1.000	1.000	197.42	100	0.440	
39	39 Total Tetra-Dioxins				0.824	10.131	24.620		0.000				0.0411	
40	40 Total Penta-Dioxins				0.912	10.131	29.960		0.000				0.0331	
41	41 Total Hexa-Dioxins				0.784	10.131	33.635		0.000		0.00000		0.0539	0.125
42	42 Total Hepta-Dioxins				0.737	10.131	37.640		0.000		0.92577		0.131	0.926
43	43 Total Tetra-Furans				0.588	10.131	23.610		0.000		0.00000		0.0355	0.150
44	44 1st Func. Penta-Furans				0.826	10.131	27.090		0.000				0.0164	
45	45 Total Penta-Furans				0.826	10.131	29.275		0.000				0.0220	
46	46 Total Hexa-Furans				0.766	10.131	33.555		0.000				0.0338	
47	47 Total Hepta-Furans				0.732	10.131	37.835		0.000				0.0479	

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R2\200130R2-14.qld

Last Altered: Printed: Tuesday, February 04, 2020 13:53:48 Pacific Standard Time Tuesday, February 04, 2020 13:56:29 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_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

Tetra-Dioxins

Name	RT	m1 Height m2 Height	m1 Resp m2 Resp	RA n/y	Resp	Conc.	EMPC	DL
1 0000000000000000000000000000000000000								

Penta-Dioxins

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

Hexa-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.52	7.066e3	6.439e3	3.307e2	2.243e2	1.47	YES	0.000e0	0.00000	0.12502	0.0882

Hepta-Dioxins

W. Lie	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.90	1.384e4	1.206e4	8.345e2	8.456e2	0.99	NO	1.680e3	0.49312	0.49312	0.131
2	1,2,3,4,6,7,8-HpCDD	37.93	1.150e4	1.014e4	7.629e2	7.112e2	1.07	NO	1.474e3	0.43265	0.43265	0.131

Tetra-Furans

1	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	20.78	4.411e3	3.988e3	4.306e2	3.872e2	1.11	YES	0.000e0	0.00000	0.15010	0.0798

Penta-Furans function 1

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

Work Order 1903647 Page 168 of 523

U:\VG12.PRO\Results\200130R2\200130R2-14.qld

Last Altered:

Tuesday, February 04, 2020 13:53:48 Pacific Standard Time Tuesday, February 04, 2020 13:56:29 Pacific Standard Time

Printed:

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

Penta-Furans

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

Hexa-Furans

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

Hepta-Furans

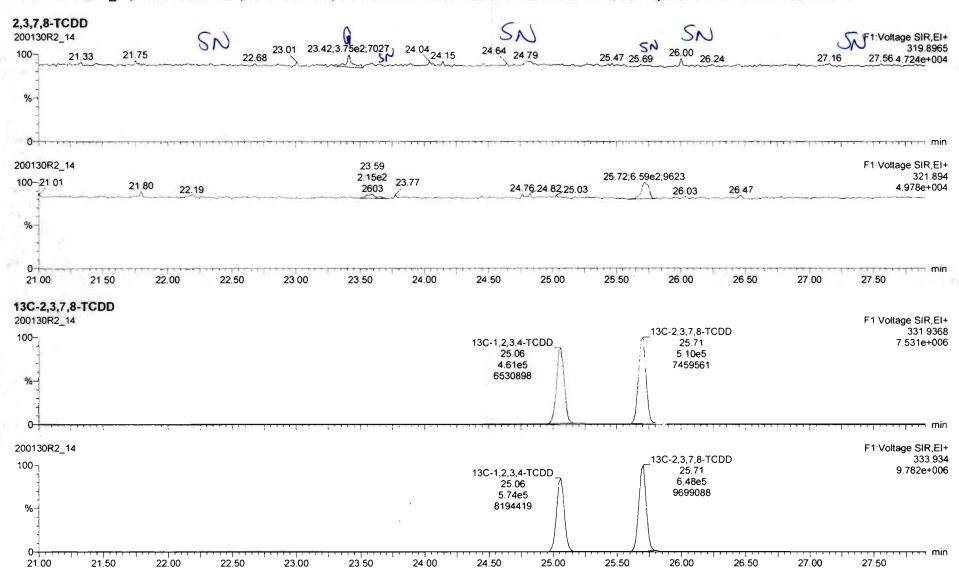
Name	RT	m1 Height m2 Height	m1 Resp m2 Resp	RA n/y	Resp	Conc.	EMPC	DL
1								

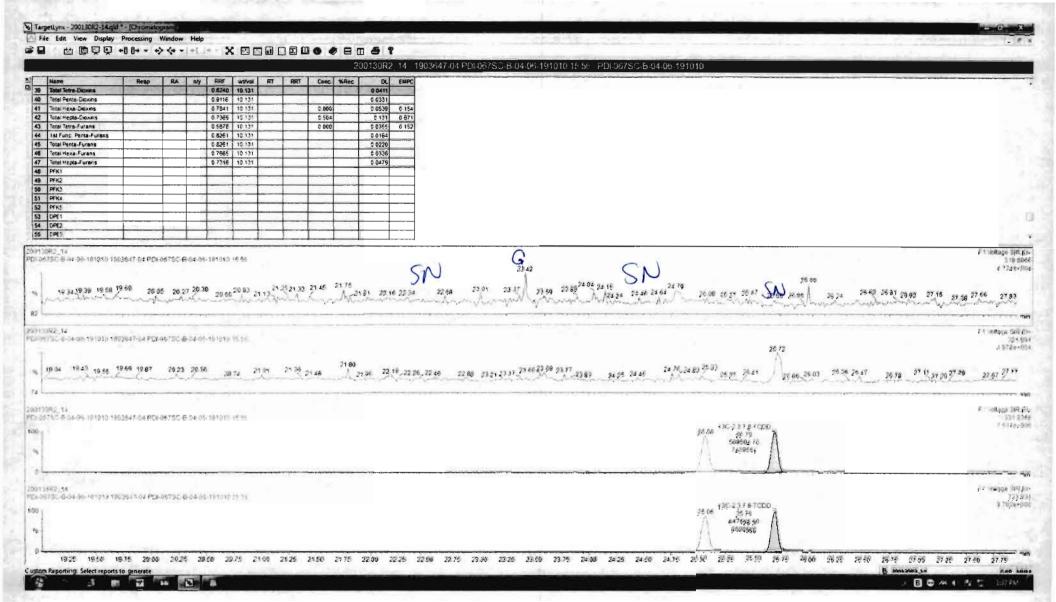
Page 169 of 523 Work Order 1903647

Untitled

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

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010



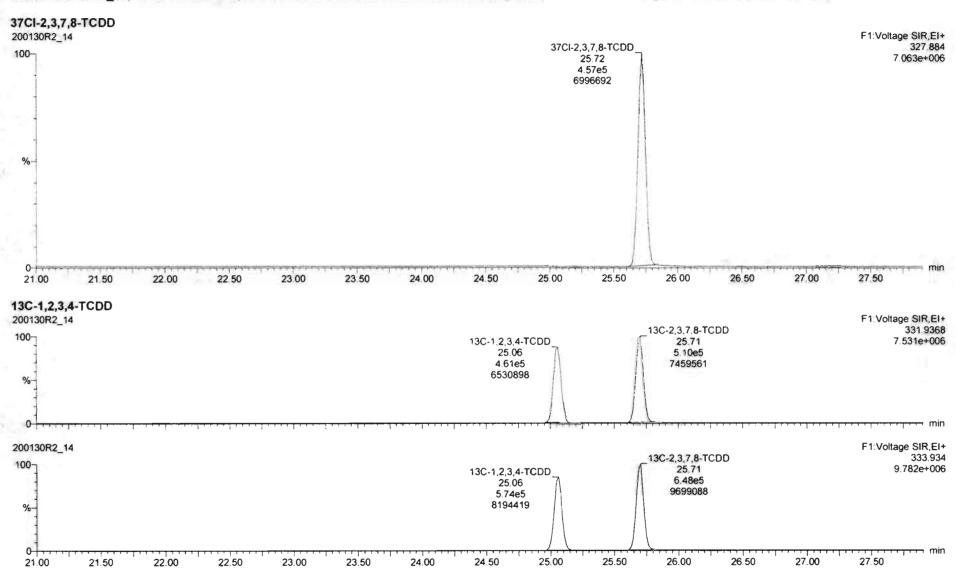


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Untitled

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

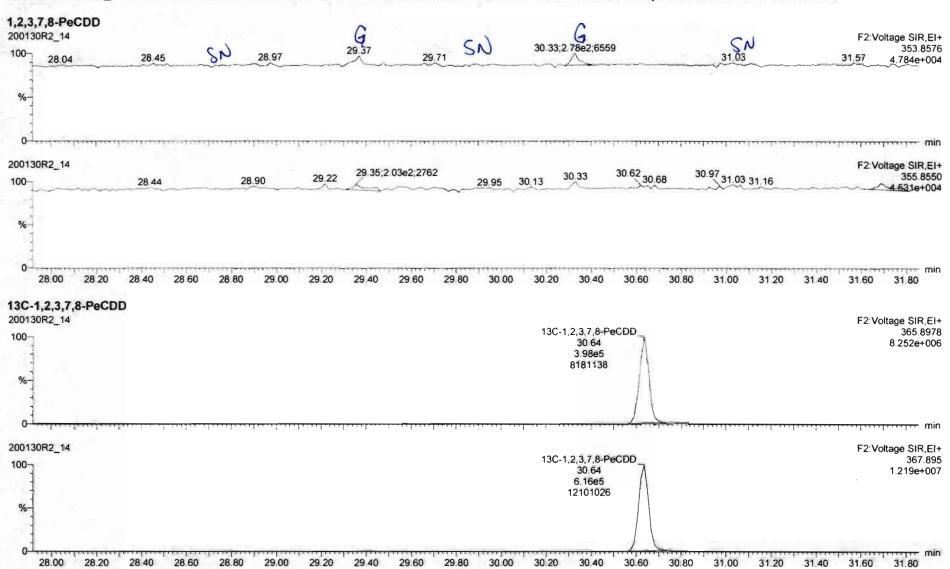
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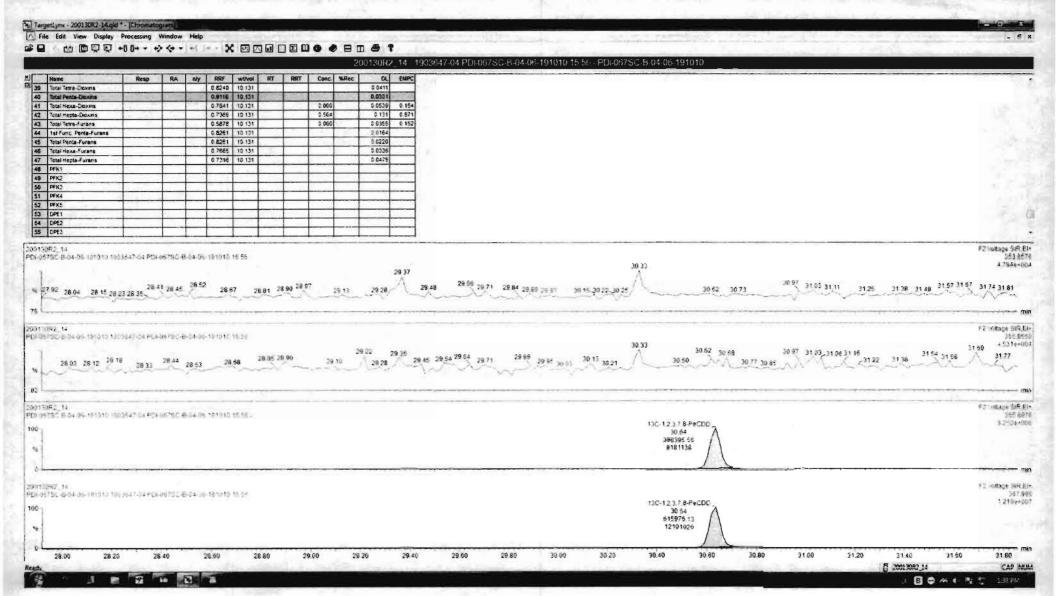


Untitled

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

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010



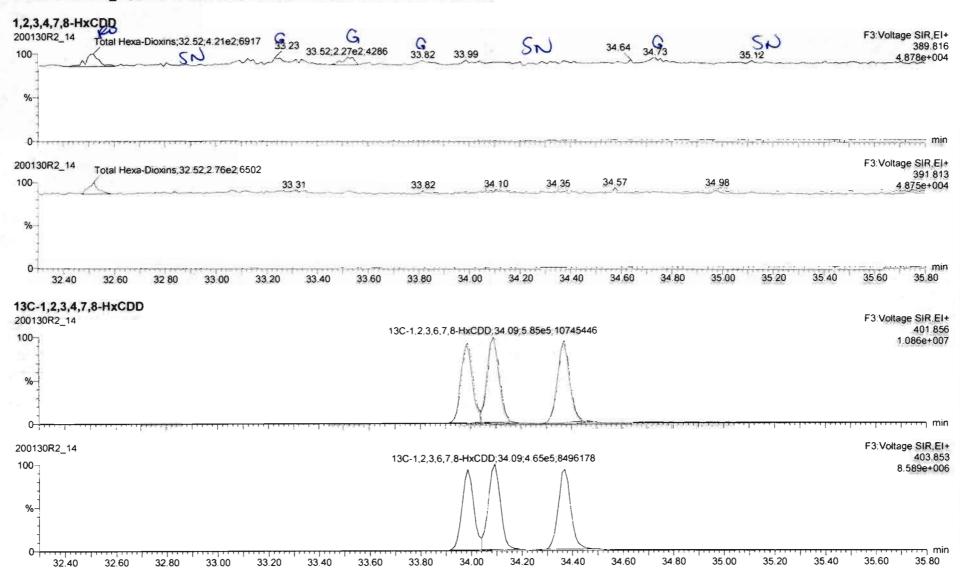


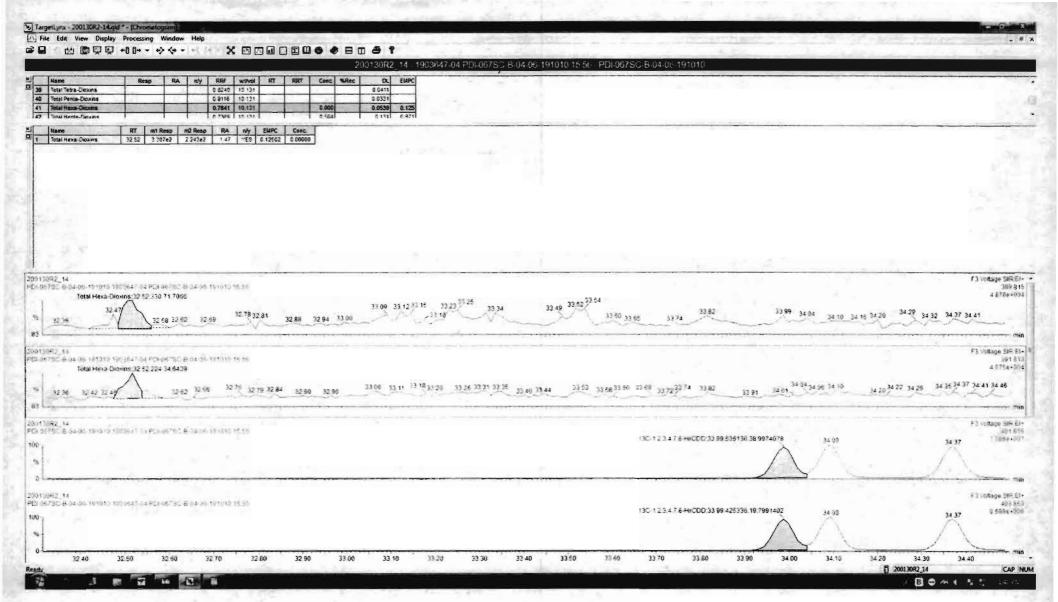
Work Order 1903647 Page 174 of 523

Untitled

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

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

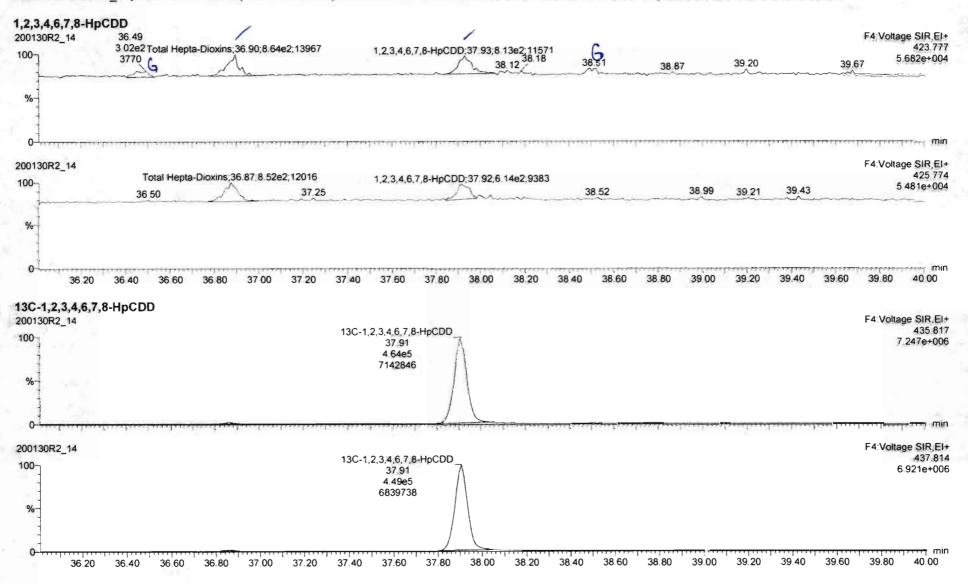




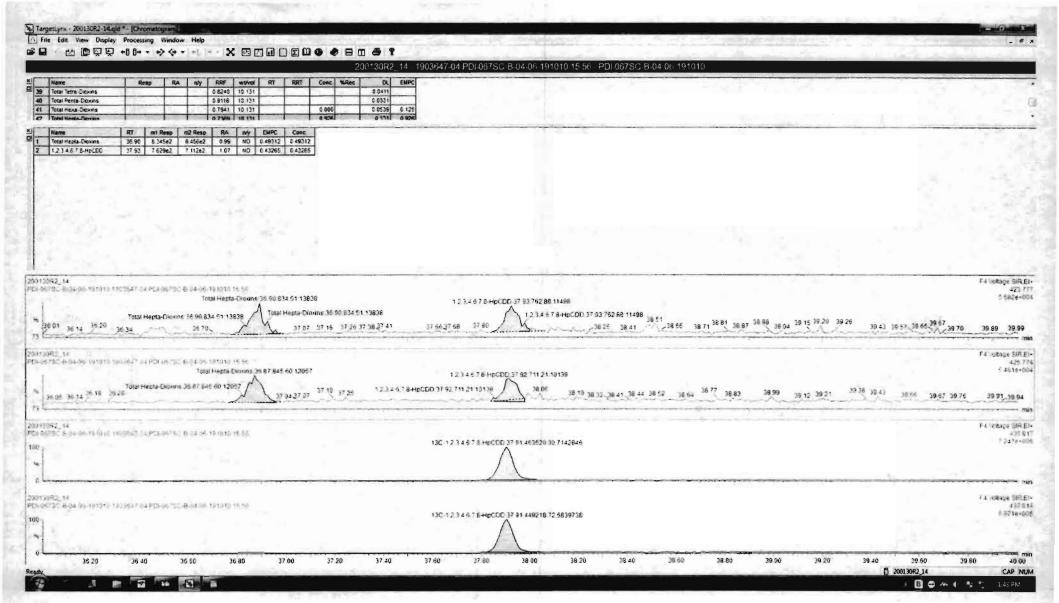
Work Order 1903647 Page 176 of 523

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

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



Printed:



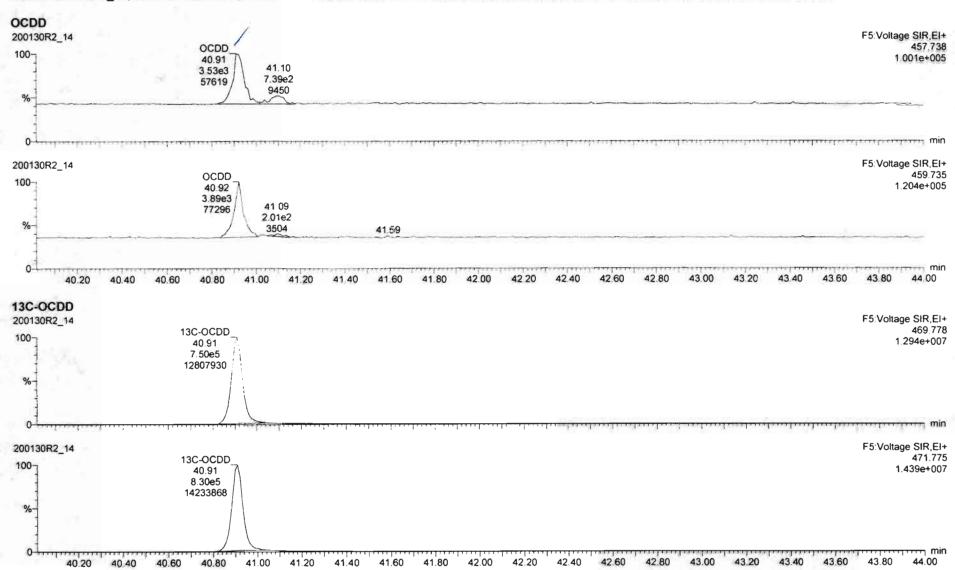
Work Order 1903647 Page 178 of 523

Untitled

Last Altered: Printed:

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

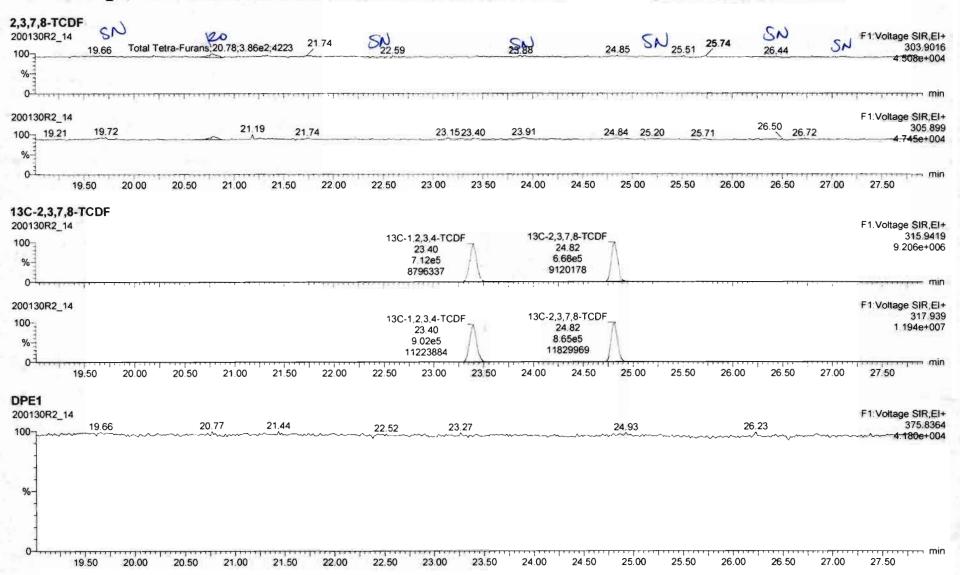
Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

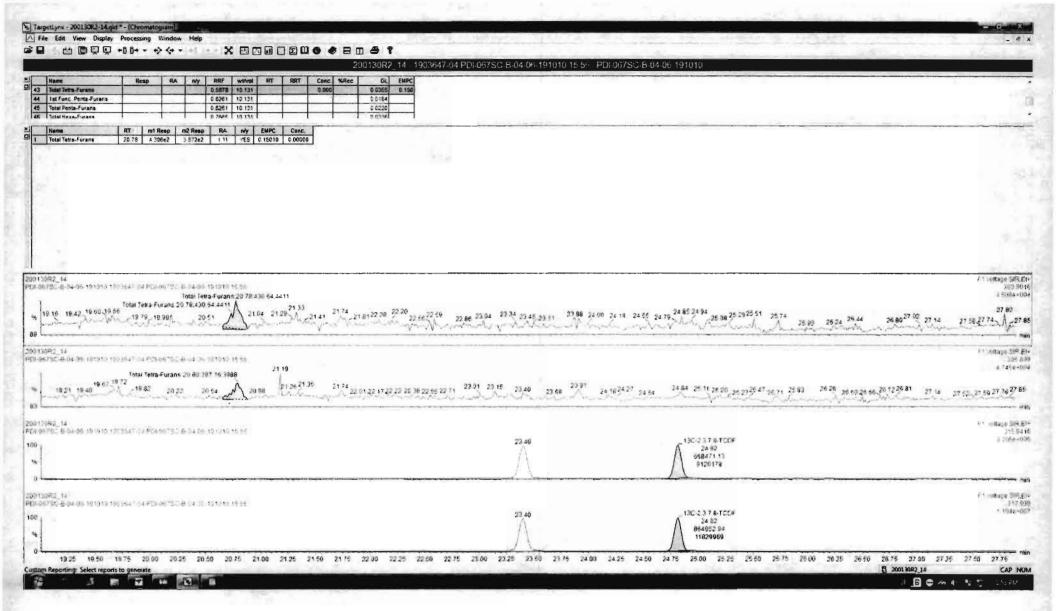


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Last Altered: Printed: Friday, January 31, 2020 08:36:52 Pacific Standard Time Friday, January 31, 2020 08:37:05 Pacific Standard Time

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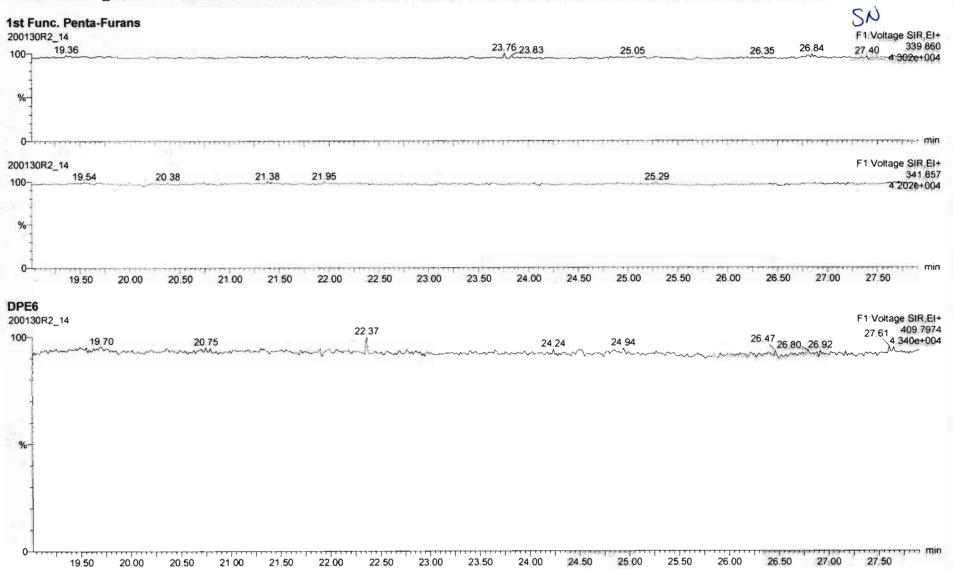


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Untitled

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

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010

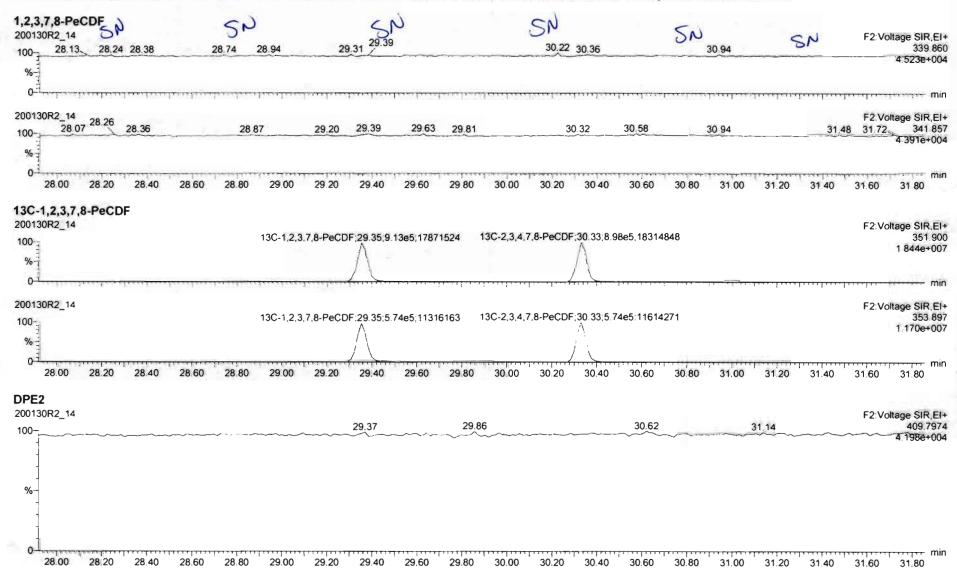


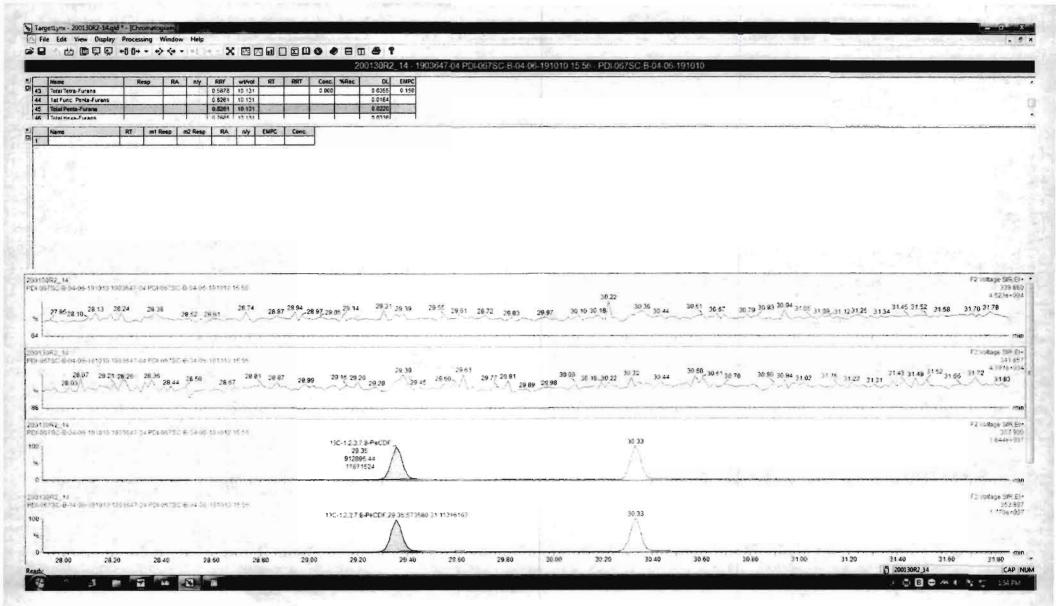
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Last Altered: Printed:

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

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010



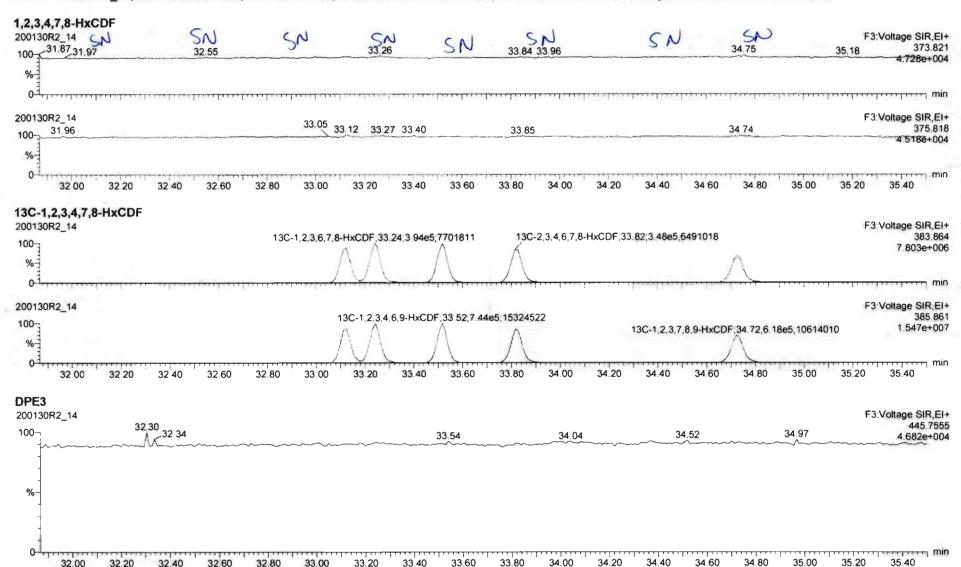


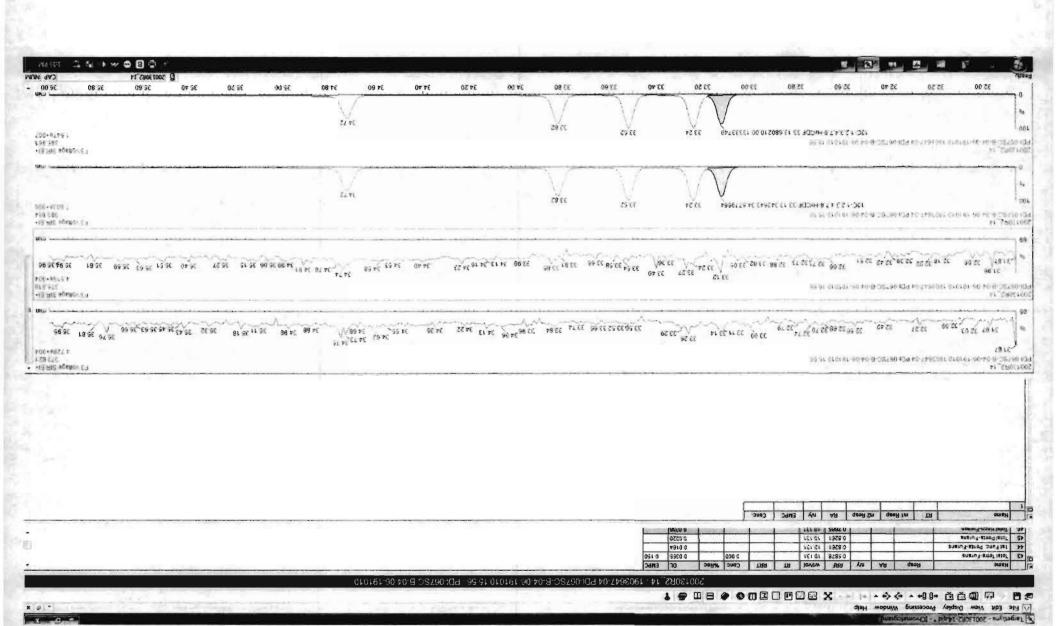
Work Order 1903647 Page 184 of 523

Untitled

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

Name: 200130R2 14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010





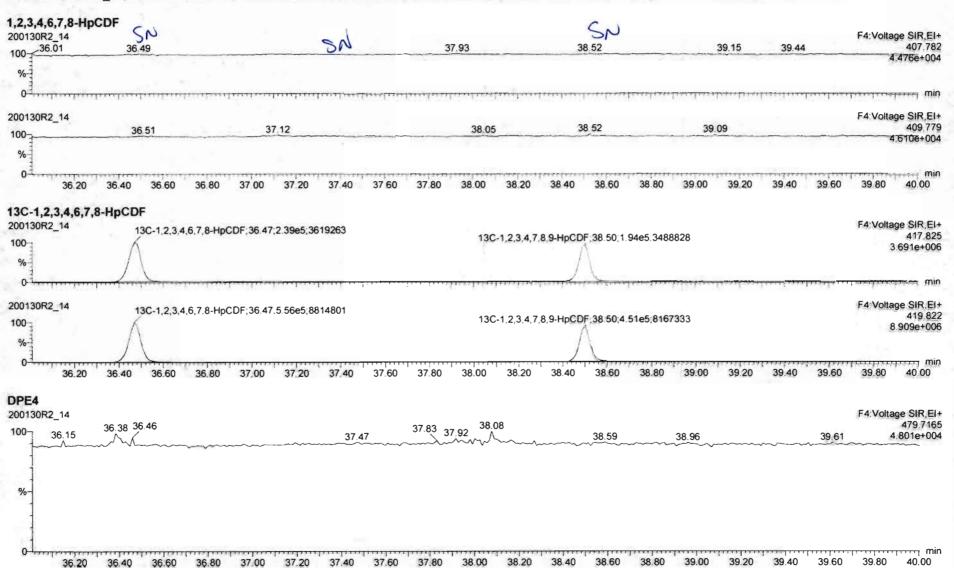
Work Order 1903647

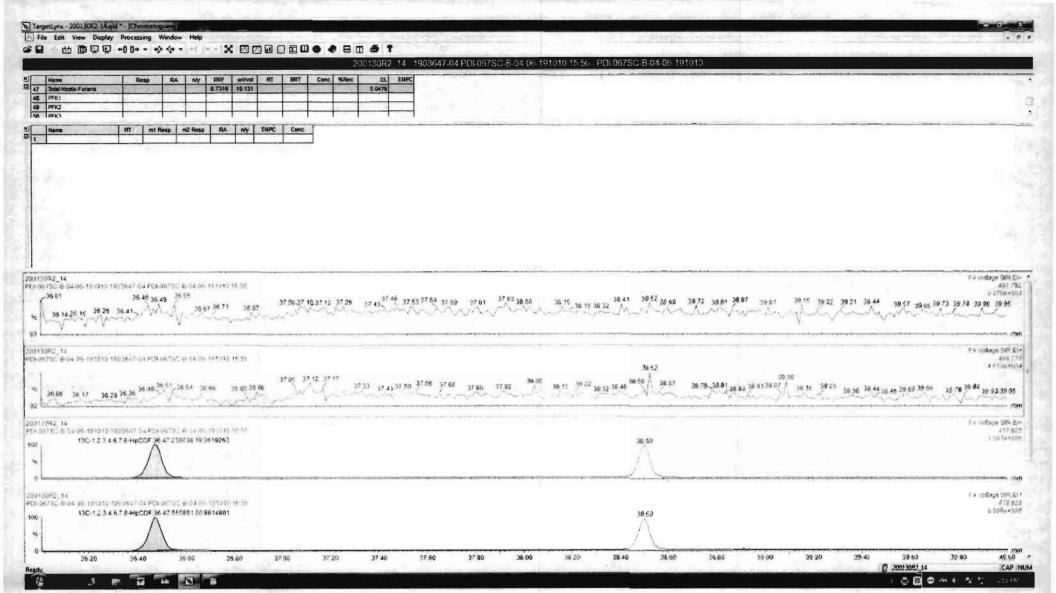
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Untitled

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

Name: 200130R2 14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010



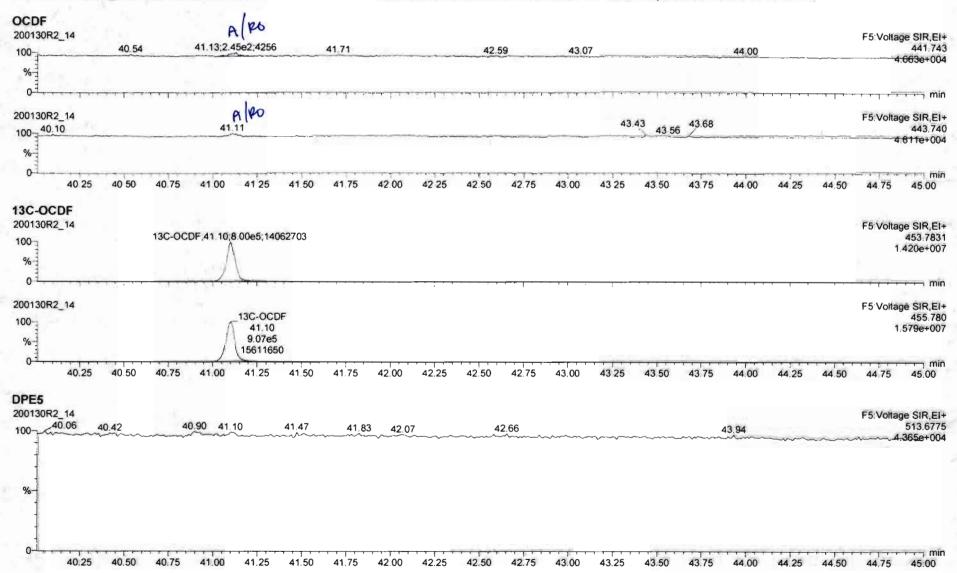


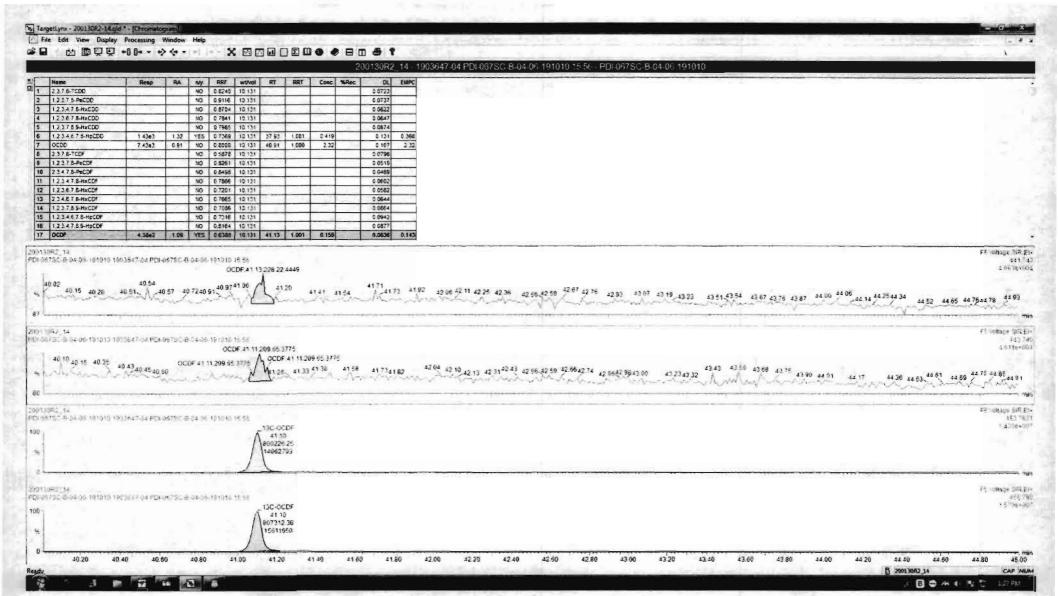
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Last Altered: Printed:

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

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010



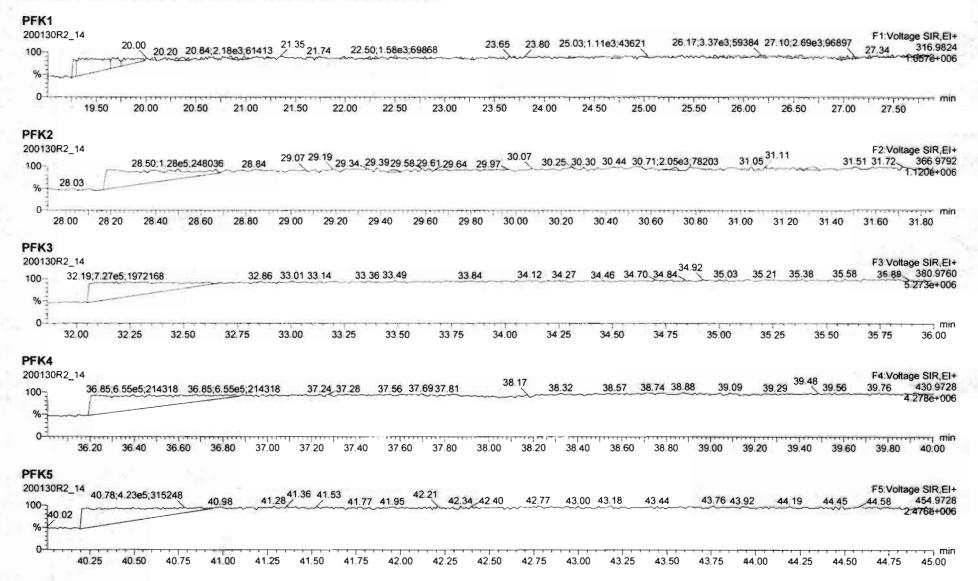


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Untitled

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

Name: 200130R2_14, Date: 31-Jan-2020, Time: 00:37:32, ID: 1903647-04 PDI-067SC-B-04-06-191010 15.56, Description: PDI-067SC-B-04-06-191010



Page 1 of 2

Dataset:

U:\VG12.PRO\Results\200130R3\200130R3-4.qld

Last Altered: Printed: Tuesday, February 04, 2020 10:31:38 Pacific Standard Time Tuesday, February 04, 2020 10:32:59 Pacific Standard Time

Canalos (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_4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate

64(0.0823)	# Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD			NO	0.824	10.060	25.71		1.00					0.0911	
2	2 1,2,3,7,8-PeCDD	379.982	0.689	NO	0.912	10.066	30.64	30.65	1.00	1.00	NO	0.09234		0.0777	0.09234
3	3 1,2.3,4,7,8-HxCDD				0.870	10.066	33.98		1.00		NO			0.133	
4	4 1.2,3,6,7,8-HxCDD	692.625	1.323	NO	0.784	10.066	34.07	34.10	1.00	1.00	NO	0.2012		0.144	0.2012
5	5 1,2,3,7,8,9-HxCDD	961.710	1.768	YES	0.798	10.066	34.38	34.36	1.00	1.00	NO	0.2789		0.145	0.2257
6	6 1,2,3,4,6,7,8-HpCDD	9537.265	1.056	NO.	0.737	10.066	37.89	37.90	1.00	1.00	NO.	3.279		0.182	3.279
7	7 OCDD	58123.474	0.872	NO	0.800	10.066	40.88	40.90	1.00	1.00	NO	23.95		0.173	23.95
8	8 2,3,7,8-TCDF	1046.975	0.932	YES	0.588	10.066	24.82	24.82	1.00	1.00	NO	0.2544		0.152	0.2331
9	9 1.2.3.7,8-PeCDF	772.058	2.053	YES	0.826	10.066	29.36	29.35	1.00	1.00	NO	0.1404		0.0746	0.1173
10	10 2,3.4.7,8-PeCDF				0.850	10.066	30.35		1.00		NO			0.0714	
11	11 1,2,3,4,7,8-HxCDF	841.425	1.173	NO	0.787	10.066	33.10	33.12	1.00	1.00	NO	0.2340		0.0782	0.2340
12	12 1,2,3,6,7,8-HxCDF	479.374	1.001	YES	0.720	10.066	33.23	33.24	1.00	1.00	NO	0.1277		0.0782	0.1154
13	13 2,3,4,6,7,8-HxCDF				0.766	10.066	33.83		1.00		NO			0.0895	
14 (150) (150)	14 1,2,3,7,8,9-HxCDF				0.709	10.066	34.70		1.00		NO			0.116	1
15	15 1.2,3.4,6,7,8-HpCDF	1146.986	0.973	NO	0.732	10.066	36.48	36.47	1.00	1.00	NO	0.4617		0.106	0.4617
16	16 1,2,3,4,7,8,9-HpCDF				0.816	10.066	38.47		1.00		NO			0.109	
17	17 OCDF	1227.437	0.884	NO	0.639	10.066	41.08	41.09	1.00	1.00	NO	0.5820		0.138	0.5820
18	18 13C-2,3,7,8-TCDD	1027655.9	0.794	NO	1.12	10.066	25.68	25.67	1.03	1.03	NO	192.8	97.0	0.218	
19	19 13C-1,2,3,7,8-PeCDD	896889.031	0.643	NO	0.841	10.066	30.41	30.62	1.22	1.22	NO	223.2	112	0.280	
20	20 13C-1,2,3,4,7,8-HxCDD	774781.907	1.282	NO	0.938	10.066	33.97	33.97	1.01	1.01	NO	164.7	82.9	0.287	}
21	21 13C-1,2,3,6,7,8-HxCDD	872563.188	1.272	NO	1.07	10.066	34.07	34,07	1.02	1.02	NO	163.3	82.2	0.253	
22	22 13C-1,2,3,7,8.9-HxCDD	857954.750	1.223	NO	1.03	10.066	34.37	34.35	1.03	1.03	NO	166.0	83.6	0.261	
23	23 13C-1,2,3,4,6,7,8-HpCDD	784146.250	1.036	NO	0.710	10.066	37.92	37.87	1.13	1.13	NO	220.2	111	0.584	
24	24 13C-OCDD	1205751.8	0.875	NO	0.601	10.066	40.80	40.88	1.22	1.22	NO	400.1	101	0.388	
25	25 13C-2,3,7.8-TCDF	1391102.2	0.786	NO	1.04	10.066	24.86	24.79	0.99	0.99	NO	178.8	90.0	0.314	
26	26 13C-1,2,3,7,8-PeCDF	1322498.1	1.569	NO	0.917	10.066	29.19	29.34	1.17	1.17	NO	192.2	96.7	0.549	
27	27 13C-2,3,4,7,8-PeCDF	1287235.5	1 578	NO	0.903	10.066	30.14	30.32	1.20	1.21	NO	190.0	95.6	0.558	
28	28 13C-1,2.3,4.7,8-HxCDF	908258.313	0.506	NO	0.861	10.066	33.10	33.10	0.99	0.99	NO.	210.3	106	0.500	
29	29 13C-1.2,3.6,7,8-HxCDF	1035754.7	0.500	NO	1.05	10.066	33.20	33.22	0.99	0.99	NO	197.3	99.3	0 411	
30	30 13C-2,3,4,6,7,8-HxCDF	874857.719	0.505	NO	0.946	10.066	33.80	33.80	1.01	1.01	NO	184.5	92.8	0.455	

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U:\VG12.PRO\Results\200130R3\200130R3-4.qld

Last Altered: Printed:

Tuesday, February 04, 2020 10:31:38 Pacific Standard Time Tuesday, February 04, 2020 10:32:59 Pacific Standard Time

Name: 200130R3_4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate

ME ASIE	# Name	Abs.Resp	RA	n/y	RRF	wt./vol.	Pred.RT	RT	Pred.RRT	RRT	Check RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	782295.000	0.526	NO	0.816	10.066	34.70	34.70	1.04	1.04	NO	191.3	96.3	0.528	
32	32 13C-1.2,3,4,6,7,8-HpCDF	674667.000	0.433	NO	0.589	10.066	36.44	36.45	1.09	1.09	NO	228.3	115	0.789	
33	33 13C-1,2,3,4,7,8,9-HpCDF	531415.875	0.434	NO	0.448	10.066	38.45	38.47	1.15	1.15	NO	236.5	119	1.04	
34	34 13C-OCDF	1311936.8	0.860	NO	0.586	10.066	41.03	41.08	1.23	1.23	NO	446.6	112	0.519	
35	35 37CI-2,3,7,8-TCDD	406418.125			1.09	10.066	25.71	25.69	1.03	1.03	NO	78.37	98.6	0.0567	
36	36 13C-1,2,3,4-TCDD	949139.719	0.799	NO	1.00	10.066	25.08	25.03	1.00	1.00	NO	198.7	100	0.243	
37	37 13C-1,2,3,4-TCDF	1491504.1	0.783	NO	1.00	10.066	23.42	23.37	1.00	1.00	NO	198.7	100	0.326	
38	38 13C-1,2,3,4,6,9-HxCDF	996510.250	0.507	NO	1.00	10.066	33.52	33.50	1.00	1.00	NO	198.7	100	0.431	
39	39 Total Tetra-Dioxins				0.824	10.066	24.62		0.00		NO	0.9684		0.0911	1.349
40	40 Total Penta-Dioxins				0.912	10.066	29.96		0.00		NO	0.3054		0.0777	1.447
41	41 Total Hexa-Dioxins				0.784	10.066	33.63		0.00		NO	3.694		0.147	3.919
42	42 Total Hepta-Dioxins				0.737	10.066	37.64		0.00		NO	7.402		0.182	7.402
43	43 Total Tetra-Furans				0.588	10.066	23.61		0.00		NO	1.802		0.152	2.392
44	44 1st Func. Penta-Furans				0.826	10.066	27.09		0.00		NO			0.0168	
45	45 Total Penta-Furans				0.826	10.066	29.27		0.00		NO	0.3280		0.0740	0.9390
46	46 Total Hexa-Furans				0.766	10.066	33.56		0.00		NO	0.2340		0.0859	0.7042
47	47 Total Hepta-Furans				0.732	10.066	37.83		0.00		NO	0.4617		0.113	0.6597

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Vista Analytical Laboratory

Dataset: U:\

U:\VG12.PRO\Results\200130R3\200130R3-4.qld

Last Altered: Printed:

Tuesday, February 04, 2020 10:31:38 Pacific Standard Time Tuesday, February 04, 2020 10:33:19 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 4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate

Tetra-Dioxins

SE GATE	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1/23/2015	39 Total Tetra-Dioxins	1.76e3	1.03e6	0.840	NO	24.62	23.52	0.4134	0.4134
2	39 Total Tetra-Dioxins	0.00e0	1.03e6	0.925	YES	24.62	22.14	0.0000	0.3801
3	39 Total Tetra-Dioxins	2.37e3	1.03e6	0.744	NO	24.62	21.72	0.5550	0.5550

Penta-Dioxins

	# Name	Area	IS Area	RA	Y/N.	Pred.RT	RT	Conc.	EMPC
1	40 Total Penta-Dioxins	8.77e2	8.97e5	0.586	NO	29.96	28.90	0.2131	0.2131
2	40 Total Penta-Dioxins	0.00e0	8.97e5	0.506	YES	29.96	28.41	0.0000	0.3763
3	40 Total Penta-Dioxins	0.00e0	8.97e5	0.519	YES	29.96	29.89	0.0000	0.1687
43117	40 Total Penta-Dioxins	0.00e0	8.97e5	0.485	YES	29.96	29.64	0.0000	0.1770
5	40 Total Penta-Dioxins	0.00e0	8.97e5	0.520	YES	29.96	29.39	0.0000	0.2698
6	40 Total Penta-Dioxins	0.00e0	8.97e5	0.461	YES	29.96	29.58	0.0000	0.07414
7/19/19/19	2 1,2,3,7,8-PeCDD	3.80e2	8.97e5	0.689	NO	30.64	30.65	0.09234	0.09234
8	40 Total Penta-Dioxins	0.00e0	8.97e5	0.587	NO	29.96	30.21	0.0000	0.07568

Hexa-Dioxins

91152/201	# Name	Area	IS Area	RA	YIN	Pred.RT	RT	Conc.	EMPC
1000000000	41 Total Hexa-Dioxins	3.45e3	0.00e0	1.222	NO	33.63	33.04	1.048	1.048
2	41 Total Hexa-Dioxins	5.37e3	0.00e0	1.176	NO	33.63	32.49	1.629	1.629
3	5 1,2,3,7,8,9-HxCDD	9.62e2	8.58e5	1.768	YES	34.38	34.36	0.0000	0.2257
42-30-21	4 1,2,3,6,7,8-HxCDD	6.93e2	8.73e5	1.323	NO	34.07	34.10	0.2012	0.2012
5	41 Total Hexa-Dioxins	2.69e3	0.00e0	1.213	NO	33.63	33.32	0.8148	0.8148

Hepta-Dioxins

	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1170023000	6 1,2,3,4,6,7,8-HpCDD	9.54e3	7.84e5	1.056	NO	37.89	37.90	3.279	3.279
2	42 Total Hepta-Dioxins	1.20e4	7.84e5	0.968	NO	37.64	36.85	4.123	4.123

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R3\200130R3-4.qld

Last Altered: Printed:

Tuesday, February 04, 2020 10:31:38 Pacific Standard Time Tuesday, February 04, 2020 10:33:19 Pacific Standard Time

Name: 200130R3_4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate

Tetra-Furans

113	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	43 Total Tetra-Furans	4.11e3	1.39e6	0.843	NO	23.61	20.74	0.9987	0.9987
2	43 Total Tetra-Furans	7.63e2	1.39e6	0.847	NO	23.61	19.61	0.1853	0.1853
3	43 Total Tetra-Furans	0.00e0	1.39e6	1.068	YES	23.61	25.20	0.0000	0.2115
4	8 2,3,7,8-TCDF	1.05e3	1.39e6	0.932	YES	24.82	24.82	0.0000	0.2331
5	43 Total Tetra-Furans	0.00e0	1.39e6	1.050	YES	23.61	24.19	0.0000	0.1455
6	43 Total Tetra-Furans	1.43e3	1.39e6	0.846	NO	23.61	23.89	0.3469	0.3469
7	43 Total Tetra-Furans	1.12e3	1.39e6	0.821	NO	23.61	23.40	0.2713	0.2713

Penta-Furans function 1

# Name	The Real Property lies	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
13/19/06/00/09									

Penta-Furans

ME AT	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1 PER LUNIO	45 Total Penta-Furans	8.48e2	0.00e0	1.454	NO	29.27	29.61	0.1564	0.1564
2	9 1,2,3,7,8-PeCDF	7.72e2	1.32e6	2.053	YES	29.36	29.35	0.0000	0.1173
3	45 Total Penta-Furans	0.00e0	0.00e0	1.282	YES	29.27	28.38	0.0000	0.2047
4	45 Total Penta-Furans	9.31e2	0.00e0	1.697	NO	29.27	28.20	0.1716	0.1716
5	45 Total Penta-Furans	0.00e0	0.00e0	0.495	YES	29.27	30.21	0.0000	0.04441
6	45 Total Penta-Furans	0.00e0	0.00e0	1.235	YES	29.27	28.97	0.0000	0.1795
7	45 Total Penta-Furans	0.00e0	0.00e0	1.143	YES	29.27	29.39	0.0000	0.06519

Hexa-Furans

The Lates	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1536 150	12 1,2,3,6,7,8-HxCDF	4.79e2	1.04e6	1.001	YES	33.23	33.24	0.0000	0.1154
2	11 1,2,3,4,7,8-HxCDF	8.41e2	9.08e5	1.173	NO	33.10	33.12	0.2340	0.2340
3	46 Total Hexa-Furans	0.00e0	0.00e0	0.939	YES	33.56	32.10	0.0000	0.2248
4	46 Total Hexa-Furans	0.00e0	0.00e0	0.940	YES	33.56	33.02	0.0000	0.1301

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R3\200130R3-4.qld

Last Altered:

Tuesday, February 04, 2020 10:31:38 Pacific Standard Time

Printed:

Tuesday, February 04, 2020 10:33:19 Pacific Standard Time

Name: 200130R3_4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate

Hepta-Furans

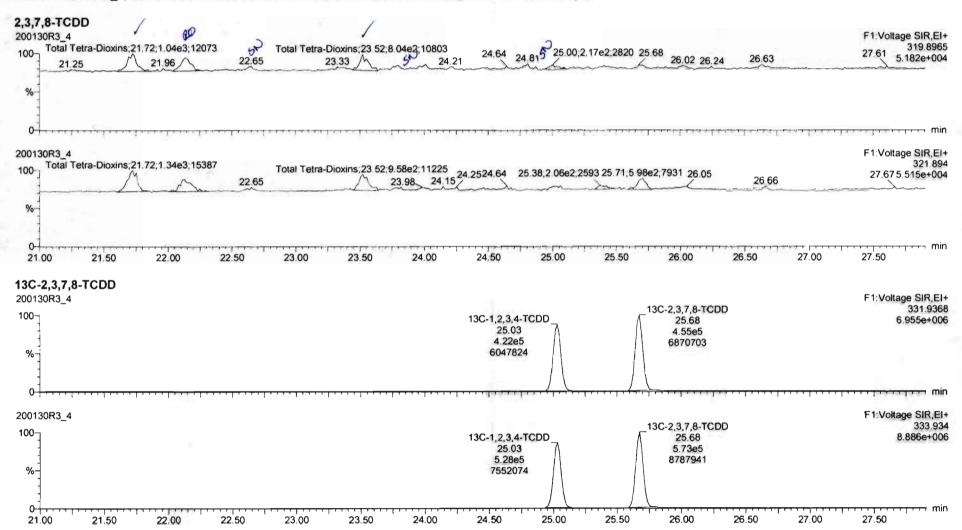
The state of	# Name	Area	IS Area	RA	Y/N	Pred.RT	RT	Conc.	EMPC
1	15 1,2,3,4,6,7,8-HpCDF	1.15e3	6.75e5	0.973	NO	36.48	36.47	0.4617	0.4617
2	47 Total Hepta-Furans	0.00e0	0.00e0	0.740	YES	37.83	37.08	0.0000	0.1980

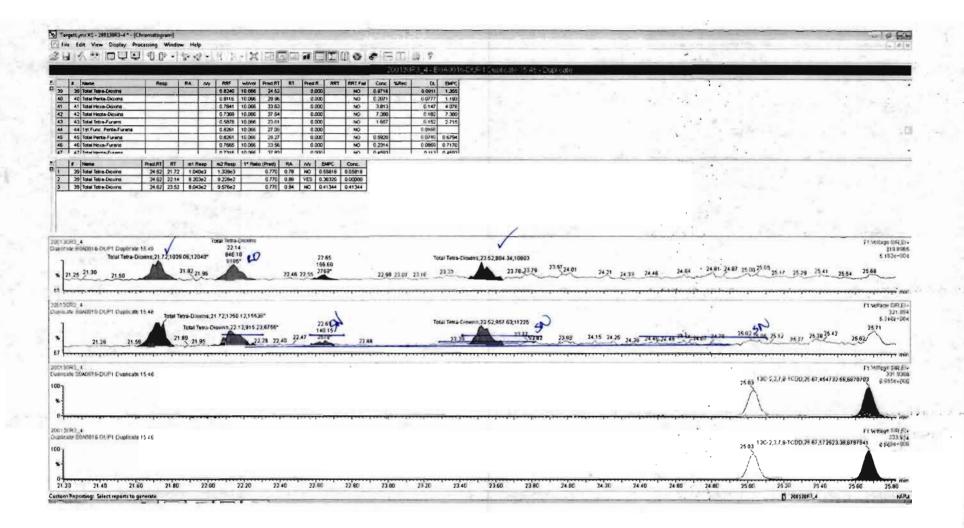
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Calibration: U:\VG12.PRO\CurveDB\db5 1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50





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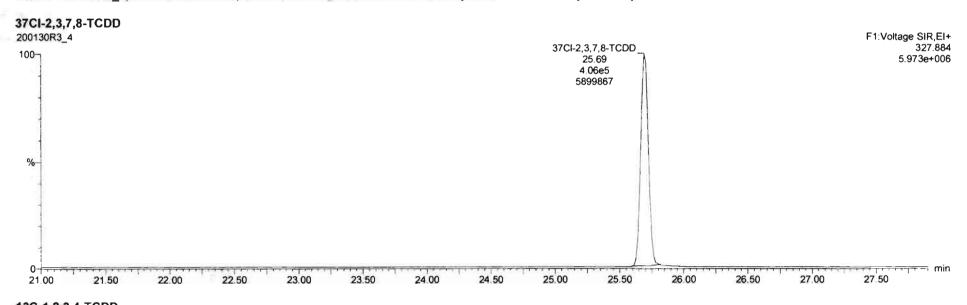
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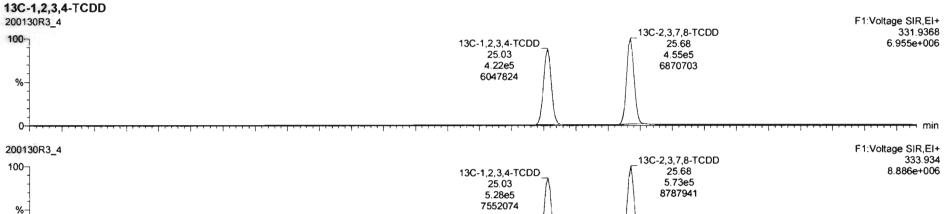
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Name: 200130R3_4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate





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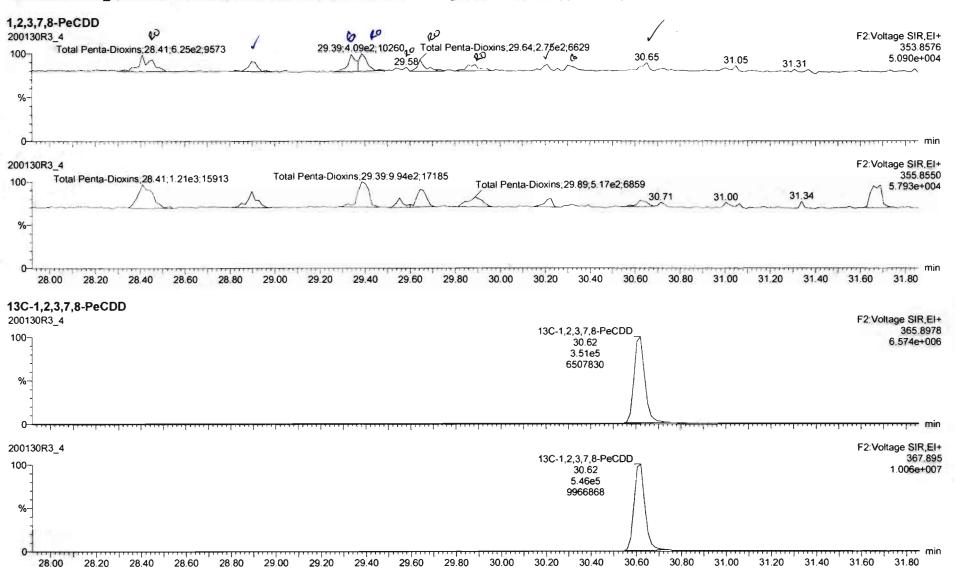
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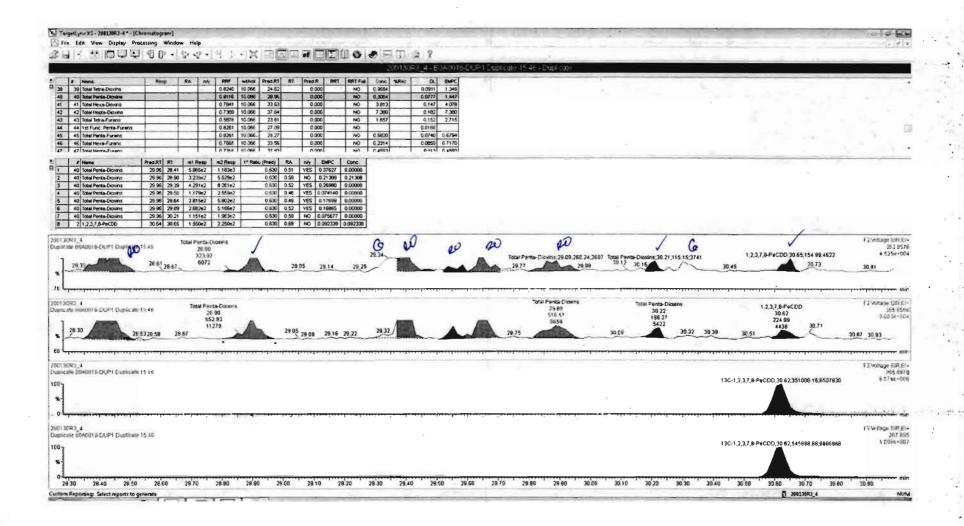
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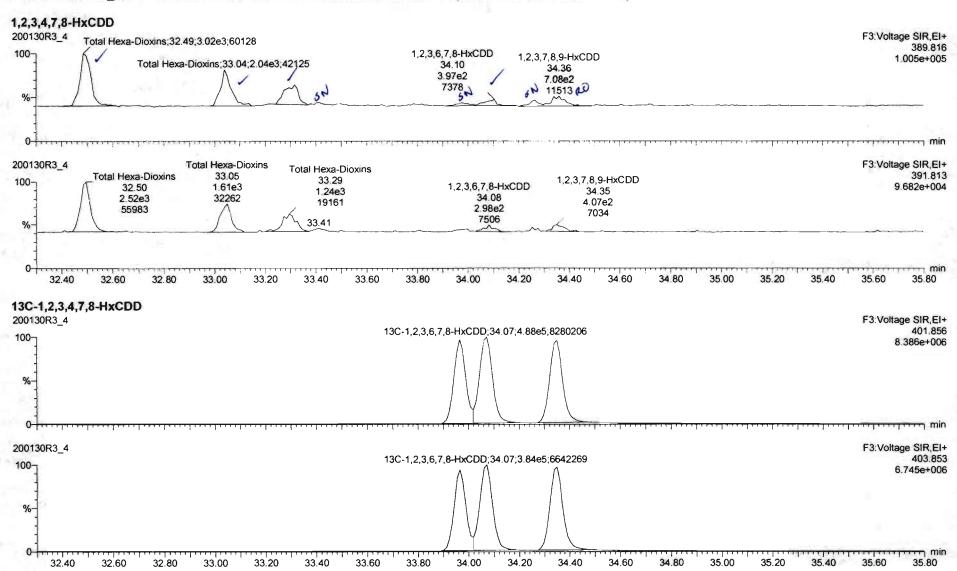


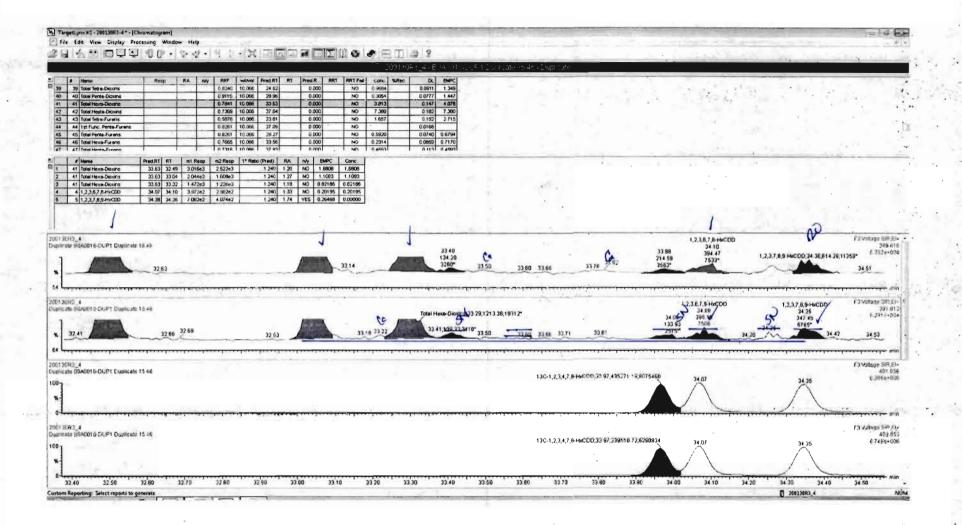
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Friday, January 31, 2020 16:23:54 Pacific Standard Time Friday, January 31, 2020 16:24:31 Pacific Standard Time

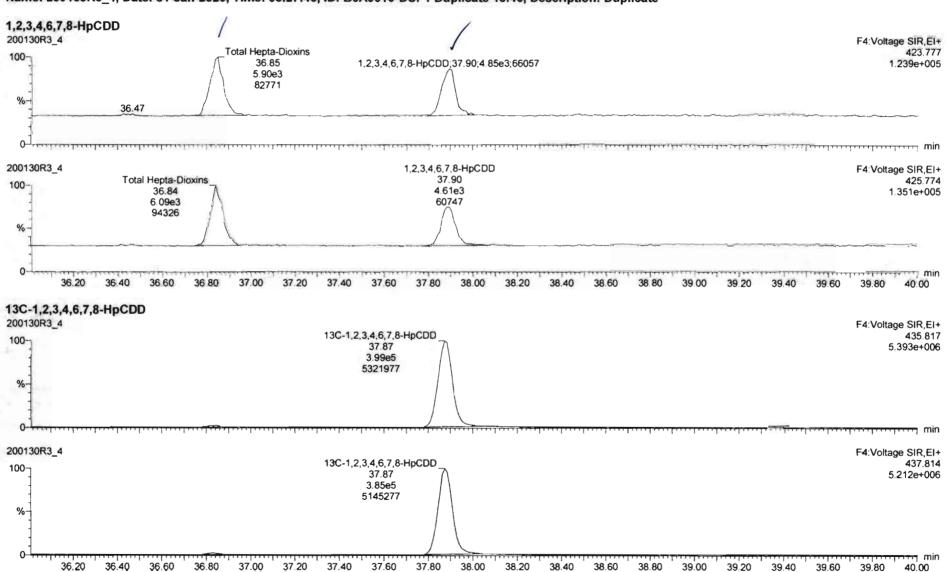


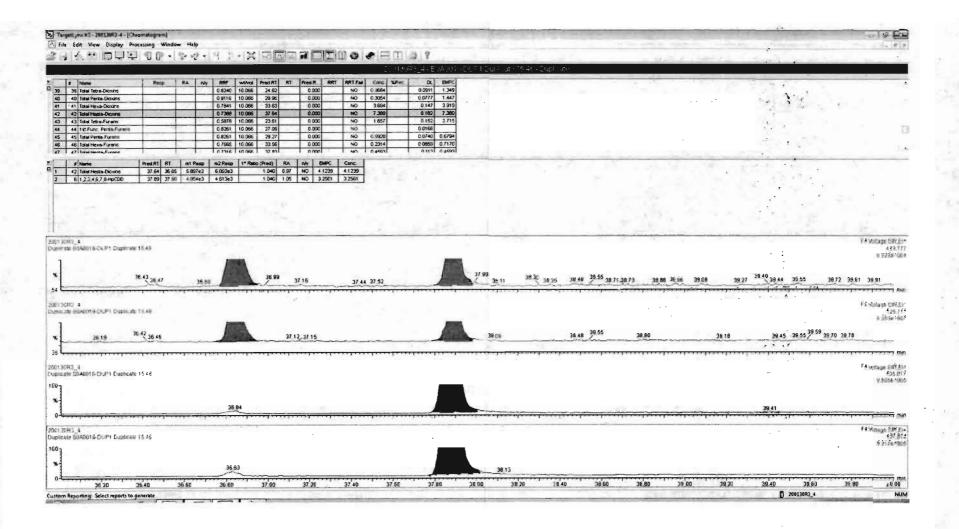


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Last Altered: Friday, January 31, 2020 16:23:54 Pacific Standard Time Friday, January 31, 2020 16:24:31 Pacific Standard Time





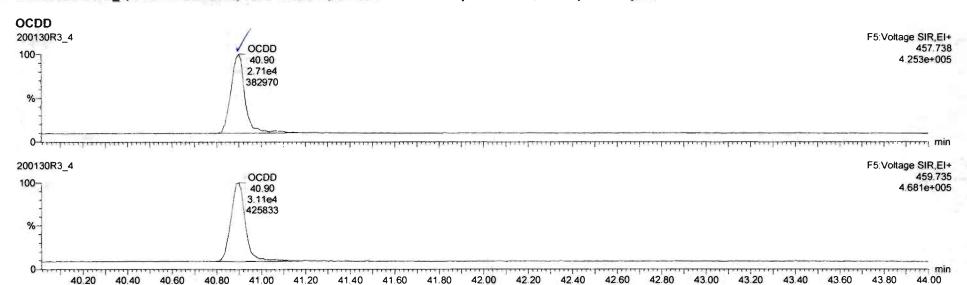
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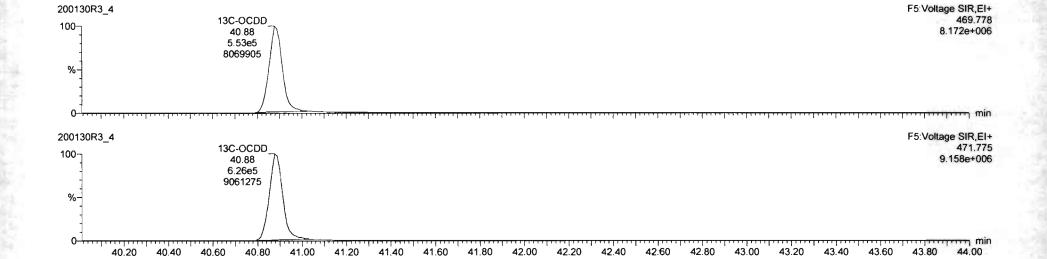
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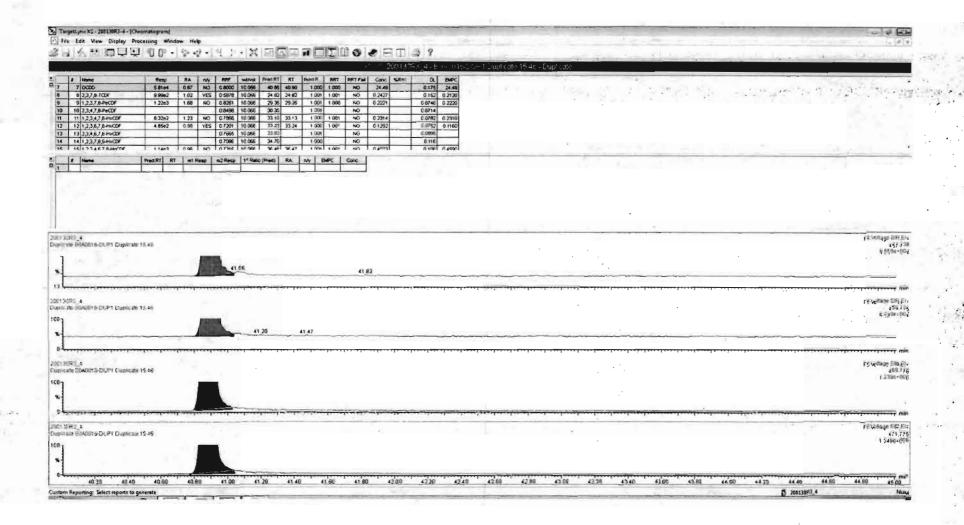
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Friday, January 31, 2020 16:23:54 Pacific Standard Time Friday, January 31, 2020 16:24:31 Pacific Standard Time





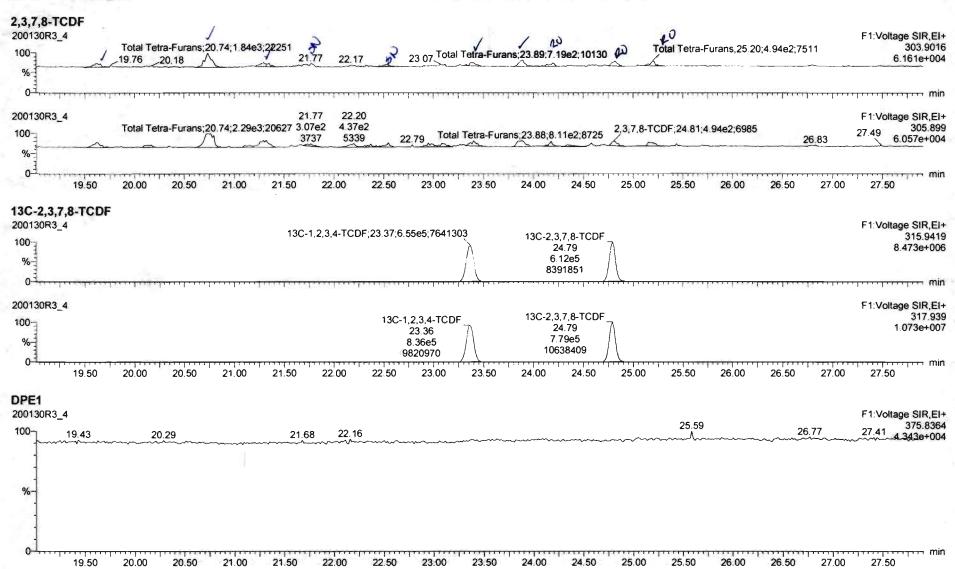


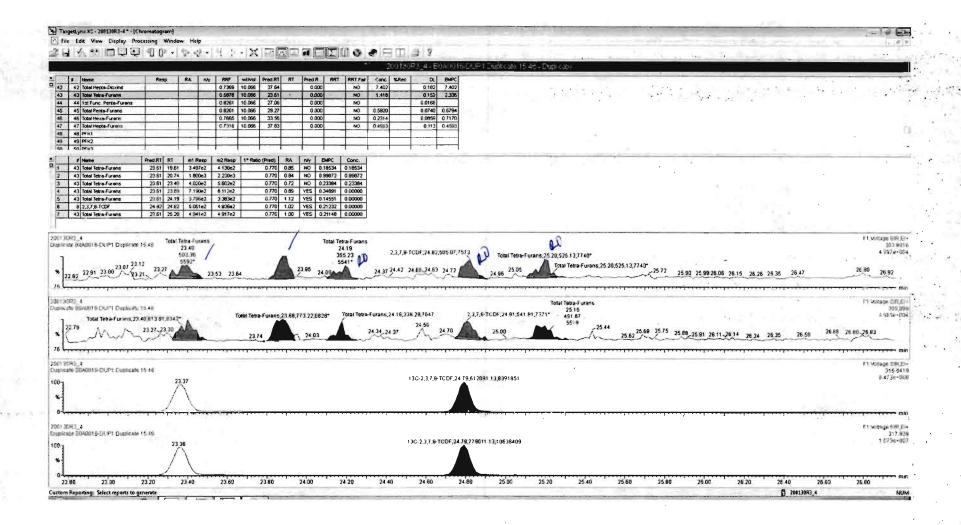
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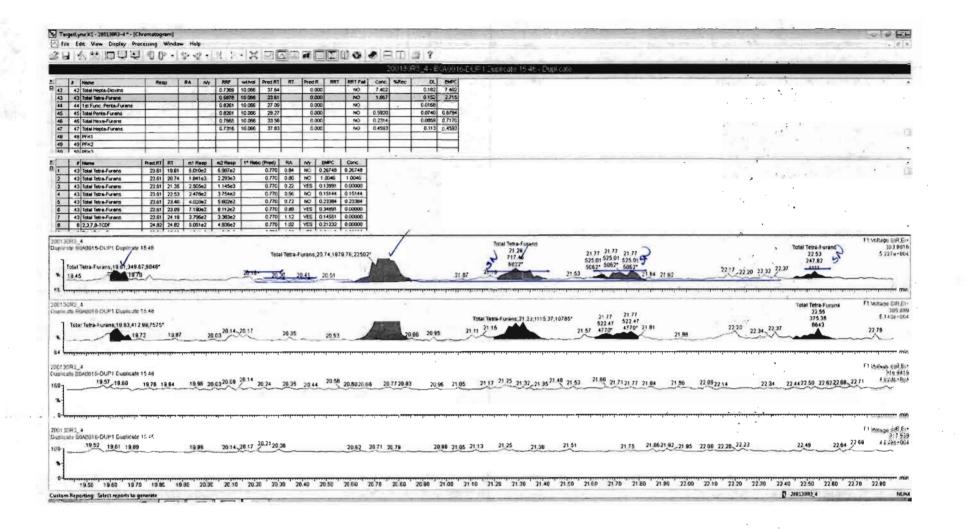
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Friday, January 31, 2020 16:23:54 Pacific Standard Time Friday, January 31, 2020 16:24:31 Pacific Standard Time





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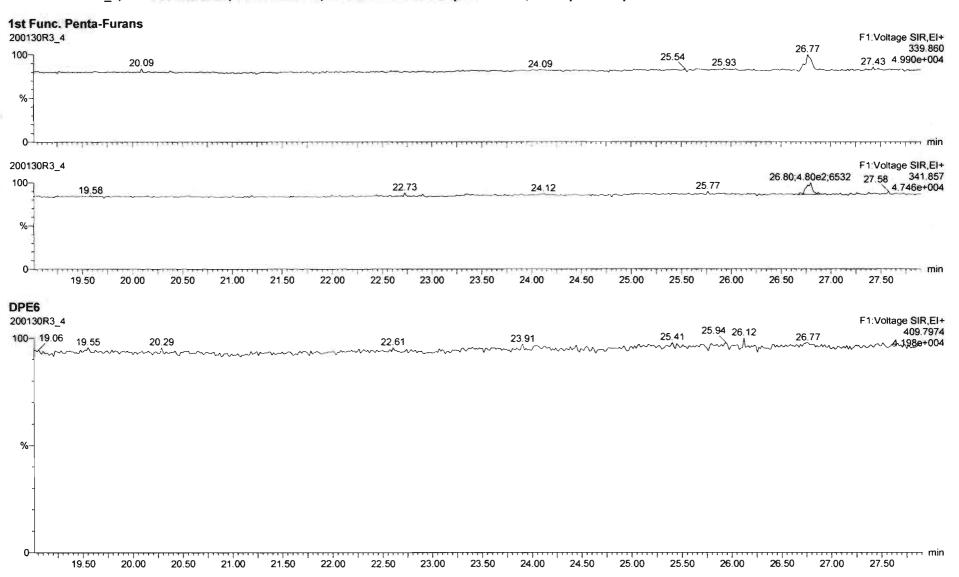


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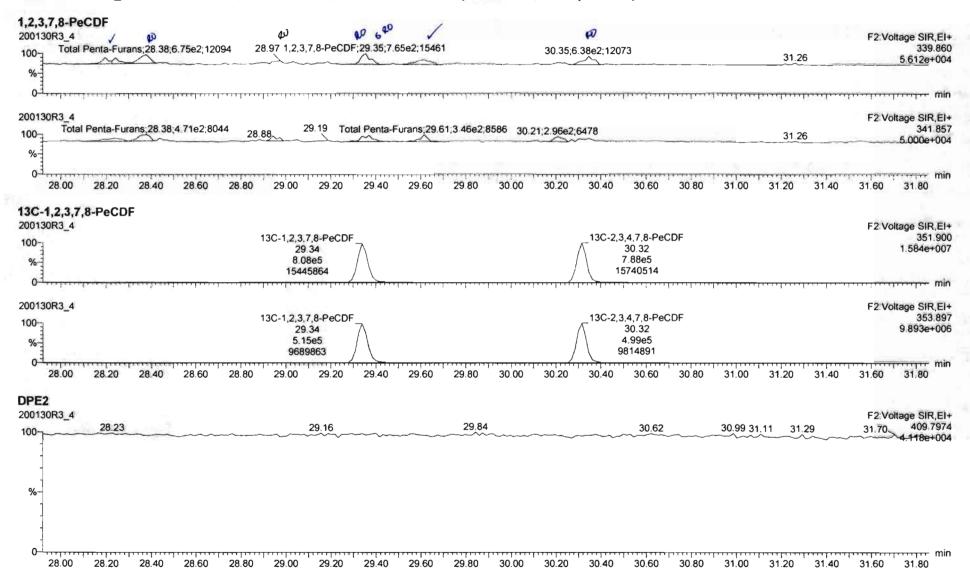
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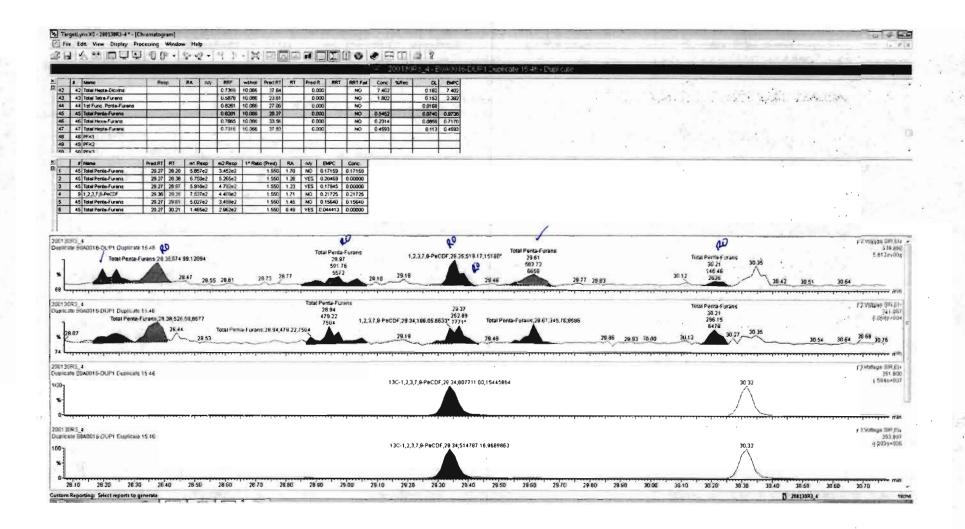
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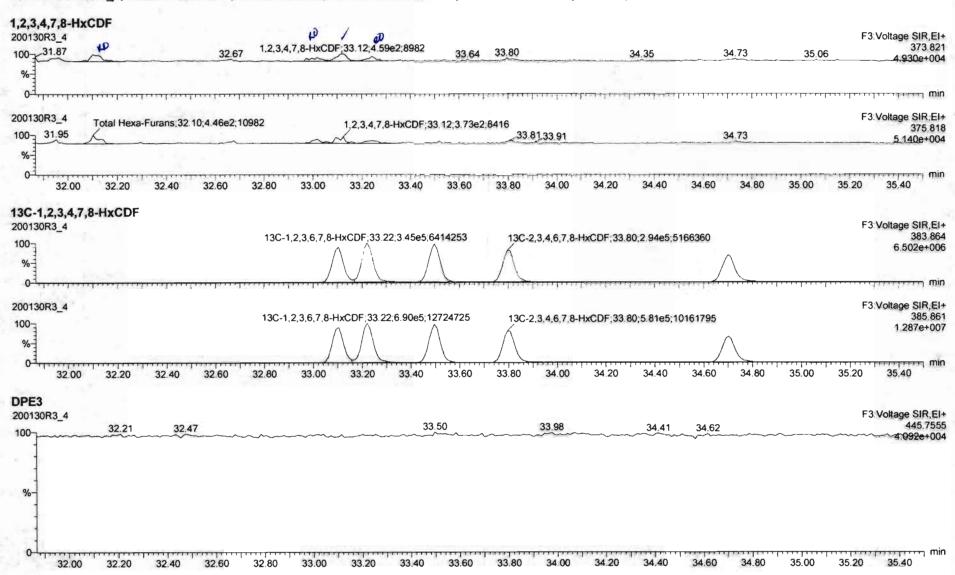


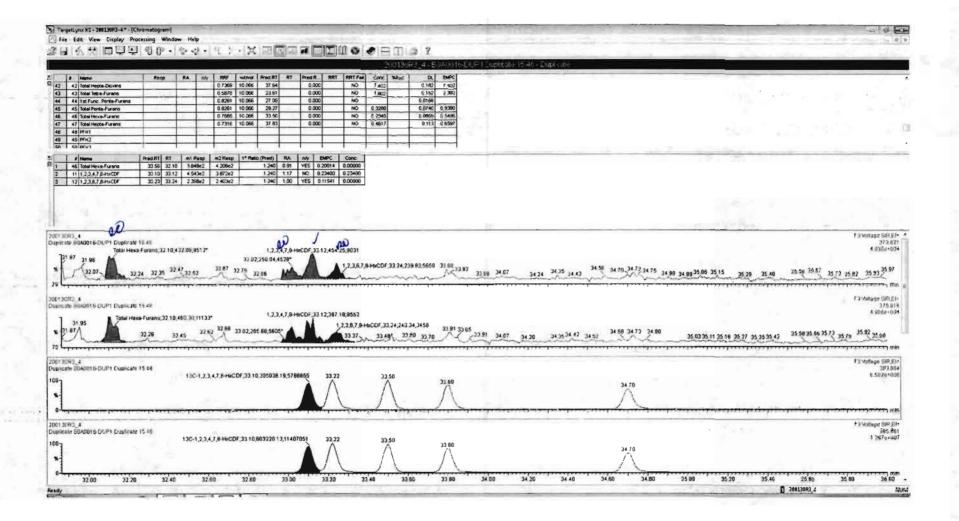


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Last Altered: Printed: Friday, January 31, 2020 16:23:54 Pacific Standard Time Friday, January 31, 2020 16:24:31 Pacific Standard Time





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Last Altered: Friday, January 31, 2020 16:23:54 Pacific Standard Time Friday, January 31, 2020 16:24:31 Pacific Standard Time Printed:

Name: 200130R3_4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate

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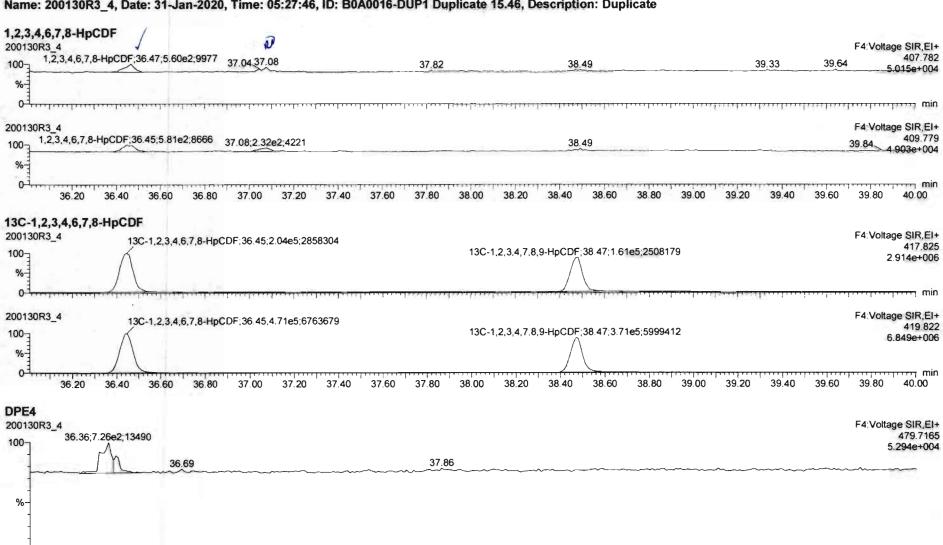
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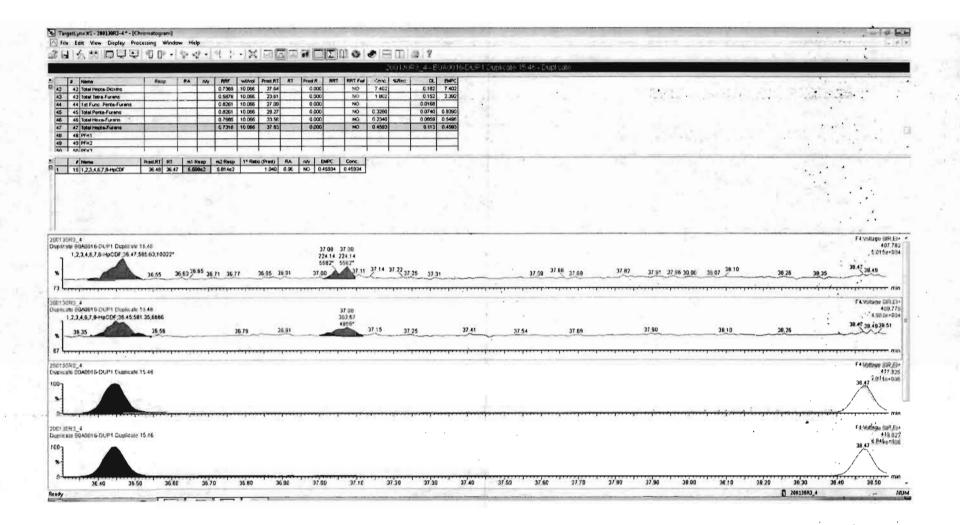
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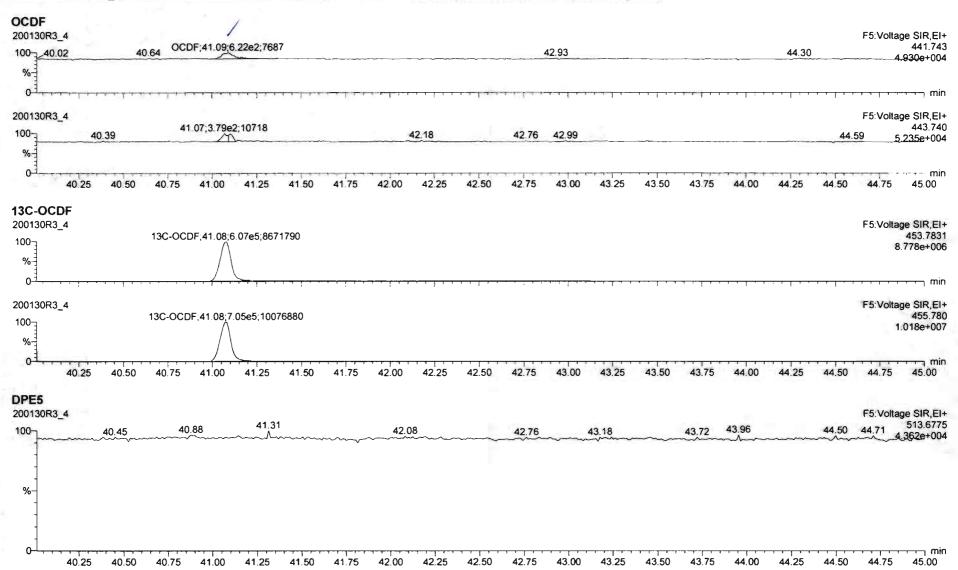
Quantify Sample Report Vista Analytical Laboratory

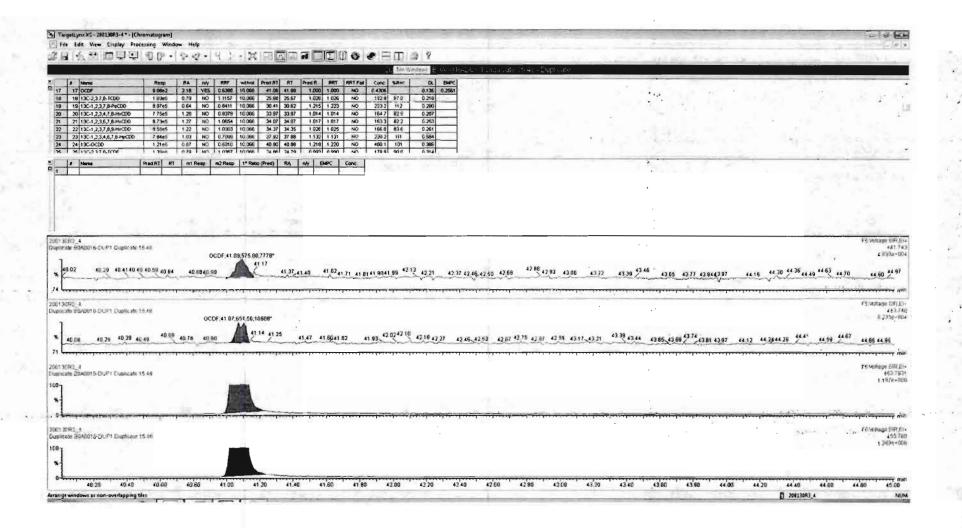
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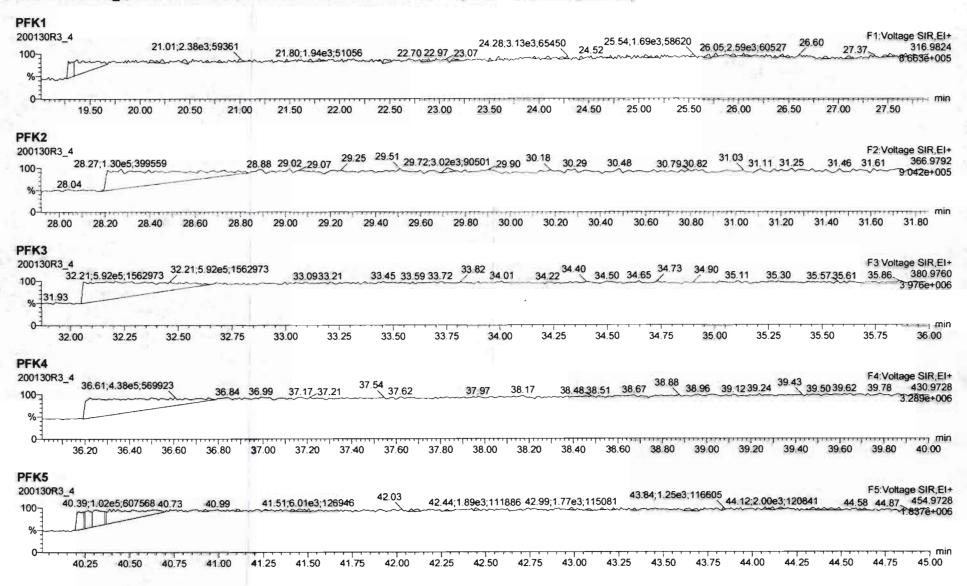


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Last Altered: Printed: Friday, January 31, 2020 16:23:54 Pacific Standard Time Friday, January 31, 2020 16:24:31 Pacific Standard Time

Name: 200130R3_4, Date: 31-Jan-2020, Time: 05:27:46, ID: B0A0016-DUP1 Duplicate 15.46, Description: Duplicate



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Dataset:

Printed:

U:\VG12.PRO\Results\200130R3\200130R3-5.qld

Last Altered:

Tuesday, February 04, 2020 15:05:43 Pacific Standard Time Tuesday, February 04, 2020 15:06:18 Pacific Standard Time

GRB 02/04/2020 C7 U2/05/2020

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

9/40	# 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	8.27e2	0.37	YES	0.824	10.118	25.736	25.72	1.001	1.001	0.18827		0.0845	0.116
2	2 1.2,3,7,8-PeCDD			NO	0.912	10.118	30.642		1.001				0.0999	
3	3 1,2.3,4,7,8-HxCDD			NO	0.870	10.118	33.987		1.000				0.0799	
4	4 1,2,3.6,7,8-HxCDD			NO	0.784	10.118	34.083		1.000				0.0820	
5	5 1.2,3,7.8,9-HxCDD			NO	0.798	10.118	34 394		1.001				0.0846	
6	6 1,2,3,4,6,7,8-HpCDD	7.97e3	0.99	NO	0.737	10.118	37.907	37.92	1.000	1.001	2.5290		0.135	2.53
7	7 OCDD	5.35e4	0.88	NO	0.800	10.118	40.900	40.91	1.000	1.000	18.558		0.133	18.6
8	8 2,3.7.8-TCDF	. 1		NO	0.588	10.118	24.847		1.001				0.0981	
9	9 1.2,3,7,8-PeCDF	8.40e2	1.56	NO	0.826	10.118	29 376	29.39	1.001	1.001	0.15119		0.0598	0.151
10	10 2,3,4,7,8-PeCDF	4.59e2	1.83	YES	0.850	10.118	30.361	30.35	1.001	1.001	0.083177		0.0571	0.0749
11	11 1,2,3,4,7,8-HxCDF	1.29e3	1.11	NO	0.787	10.118	33.114	33.15	1 000	1.001	0.35068		0 0633	0.351
12	12 1,2,3,6,7,8-HxCDF	4.38e2	1.72	YES	0.720	10.118	33.252	33.25	1.000	1.000	0.11595		0.00	0.0956
13	13 2.3.4,6,7,8-HxCDF	-		NO	0.766	10.118	33.851		1.001				0.0710	
14	14 1.2.3.7.8.9-HxCDF			NO	0.709	10.118	34.722		1.000				0.0914	
15	15 1.2.3,4.6,7.8-HpCDF	1 52e3	0.97	NO	0.732	10.118	36.494	36.48	1.001	1.001	0.59439		0.146	0.594
16	16 1,2,3,4,7,8,9-HpCDF	5.38e2	1.11	NO	0.816	10.118	38.493	38.50	1.000	1.000	0.22462		0.136	0.225
17	17 OCDF	7.03e3	0.88	NO	0.639	10.118	41.091	41.11	1.000	1.001	2.8515		0.0974	2.85
18	18 13C-2,3,7,8-TCDD	1.05e6	0.81	NO	1.12	10.118	25.706	25.70	1.026	1.026	206.29	104	0.276	
19	19 13C-1,2,3,7,8-PeCDD	9.17e5	0.63	NO	0.841	10.118	30.450	30.62	1.215	1.222	238.35	121	0.398	
20	20 13C-1,2,3,4,7,8-HxCDD	8.08e5	1.27	NO	0.938	10.118	33.977	33.98	1.014	1.014	172.34	87.2	0.339	
21	21 13C-1.2,3,6,7,8-HxCDD	9.06e5	1.27	NO	1.07	10.118	34.078	34.08	1.017	1.017	170.05	86.0	0.299	
22	22 13C-1,2,3,7,8,9-HxCDD	9.17e5	1.25	NO	1.03	10.118	34.379	34.36	1.026	1.025	177.91	90.0	0.309	
23	23 13C-1,2,3,4.6,7,8-HpCDD	8.45e5	1.05	NO	0.710	10.118	37.931	37.90	1.132	1.131	237.96	120	0.752	
24	24 13C-OCDD	1.42e6	0.86	NO	0.601	10.118	40.813	40.90	1.218	1.221	473.63	120	0.407	
25	25 13C-2,3,7,8-TCDF	1.36e6	0.77	NO	1.04	10.118	24.887	24.82	0.993	0.990	179.17	90.6	0.234	
26	26 13C-1,2,3,7,8-PeCDF	1.33e6	1.60	NO	0.917	10.118	29.222	29.35	1.166	1.171	198.35	100	0.447	
27	27 13C-2,3,4,7,8-PeCDF	1.29e6	1.58	NO	0.903	10.118	30.175	30.33	1.204	1.210	194.89	98.6	0.454	
28	28 13C-1,2,3,4,7,8-HxCDF	9.24e5	0.51	NO	0.861	10.118	33.106	33.11	0.988	0.988	214.60	109	0.548	
29	29 13C-1,2,3,6,7,8-HxCDF	1.04e6	0.50	NO	1.05	10.118	33. 2 06	33.24	0.991	0.992	198.29	100	0.451	
30	30 13C-2,3,4,6,7,8-HxCDF	8.98e5	0.51	NO	0.946	10.118	33.813	33.82	1.009	1.009	189.86	96.1	0.500	
31	31 13C-1,2,3,7,8,9-HxCDF	8.48e5	0.50	NO	0.816	10.118	34.714	34.72	1.036	1.036	207.81	105	0.579	

U:\VG12.PRO\Results\200130R3\200130R3-5.qld

Last Altered: Printed:

Tuesday, February 04, 2020 15:05:43 Pacific Standard Time Tuesday, February 04, 2020 15:06:18 Pacific Standard Time

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32	32 13C-1,2,3,4,6.7,8-HpCDF	6.91e5	0.44	NO	0.589	10.118	36.457	36.46	1.088	1.088	234.61	119	0.779	
33	33 13C-1,2,3,4,7,8,9-HpCDF	5.80e5	0.45	NO	0.448	10.118	38.467	38.49	1.148	1.149	258.87	131	1.02	
34	34 13C-OCDF	1.53e6	0.90	NO	0.586	10.118	41.047	41.09	1.225	1.226	520.94	132	0.560	
35	35 37CI-2,3,7,8-TCDD	4.28e5			1.09	10.118	25.739	25.72	1.027	1.026	86.207	109	0.0910	
36	36 13C-1,2,3,4-TCDD	9.05e5	0.80	NO	1.00	10.118	25.080	25.06	1.000	1.000	197.67	100	0.308	
37	37 13C-1,2,3,4-TCDF	1.44e6	0.79	NO	1.00	10.118	23.420	23.40	1.000	1.000	197.67	100	0.243	
38	38 13C-1,2,3,4,6,9-HxCDF	9.88e5	0.50	NO	1.00	10.118	33.520	33.51	1.000	1.000	197.67	100	0.472	
39	39 Total Tetra-Dioxins				0.824	10.118	24.620		0.000		0.00000		0.0445	0.116
40	40 Total Penta-Dioxins				0.912	10.118	29.960		0.000		0.078516		0.0538	0.133
41	41 Total Hexa-Dioxins				0.784	10.118	33.635		0.000		0.66417		0.0855	0.664
42	42 Total Hepta-Dioxins				0.737	10.118	37.640		0.000		5.4595		0.135	5.46
43	43 Total Tetra-Furans				0.588	10.118	23.610		0.000		0.12277		0.0981	0.123
44	44 1st Func. Penta-Furans				0.826	10.118	27.090		0.000		0.00000		0.0169	0.0615
45	45 Total Penta-Furans				0.826	10.118	29.275		0.000		0.15119		0.0592	0.310
46	46 Total Hexa-Furans				0.766	10.118	33.555		0.000		0.45737		0.0695	0.553
47	47 Total Hepta-Furans				0.732	10.118	37.835		0.000		1.4520		0.149	1.45

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R3\200130R3-5.qld

Last Altered: Printed: Tuesday, February 04, 2020 15:05:43 Pacific Standard Time Tuesday, February 04, 2020 15:06:18 Pacific Standard Time

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Name: 200130R3_5, Date: 31-Jan-2020, Time: 06:14:54, ID: 1903647-05 PDI-067SC-B-06-08-191010 12.18, Description: PDI-067SC-B-06-08-191010

Tetra-Dioxins

S. Birth	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	2,3,7,8-TCDD	25.72	3.514e3	9.417e3	2.212e2	6.054e2	0.37	YES	8.266e2	0.00000	0.11581	0.0815

Penta-Dioxins

学三师 能	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Dioxins	28.45	2.534e3	2.880e3	1.141e2	1.411e2	0.81	YES	0.000e0	0.00000	0.054355	0.0538
2	Total Penta-Dioxins	28.91	2.861e3	5.116e3	1.365e2	1.957e2	0.70	NO	3.322e2	0.078516	0.078516	0.0538

Hexa-Dioxins

643.7	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.50	2.044e4	1.391e4	9.101e2	6.748e2	1.35	NO	1.585e3	0.45559	0.45559	0.0855
2	Total Hexa-Dioxins	33.29	6.605e3	7.500e3	3.870e2	3.386e2	1.14	NO	7.256e2	0.20858	0.20858	0.0855

Hepta-Dioxins

H-8112	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.86	6.962e4	7.079e4	4.622e3	4.607e3	1.00	NO	9.230e3	2.9306	2.9306	0.135
2	1,2,3,4,6,7,8-HpCDD	37.92	5.789e4	5.565e4	3.964e3	4.002e3	0.99	NO	7.965e3	2.5290	2.5290	0.135

Tetra-Furans

	Name	RT	m1 Height n	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Tetra-Furans	23.91	2.767e3	3.790e3	1.977e2	2.977e2	0.66	NO	4.954e2	0.12277	0.12277	0.0981

Penta-Furans function 1

3.00	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.81	3.373e3	3.994e3	2.043e2	1.751e2	1.17	YES	0.000e0	0.00000	0.061530	0.0169

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200130R3\200130R3-5.qld

Last Altered: Printed: Tuesday, February 04, 2020 15:05:43 Pacific Standard Time Tuesday, February 04, 2020 15:06:18 Pacific Standard Time

Name: 200130R3_5, Date: 31-Jan-2020, Time: 06:14:54, ID: 1903647-05 PDI-067SC-B-06-08-191010 12.18, Description: PDI-067SC-B-06-08-191010

Penta-Furans

6 6	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Penta-Furans	28.41	5.206e3	3.317e3	1.991e2	1.615e2	1.23	YES	0.000e0	0.00000	0.059962	0.0592
2	1,2,3,7,8-PeCDF	29.39	8.173e3	7.146e3	5.115e2	3.280e2	1.56	NO	8.395e2	0.15119	0.15119	0.0598
3	2,3,4,7,8-PeCDF	30.35	5.886e3	2.755e3	2.970e2	1.623e2	1.83	YES	4.593e2	0.00000	0.074907	0.0571
4	Total Penta-Furans	30.41	2.235e3	6.237e3	7.875e1	1.577e2	0.50	YES	0.000e0	0.00000	0.023719	0.0592

Hexa-Furans

District Control	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Furans	32.68	5.049e3	3.733e3	2.106e2	1.728e2	1.22	NO	3.835e2	0.10669	0.10669	0.0695
2	1,2,3,4,7,8-HxCDF	33.15	1.257e4	1.293e4	6.779e2	6.121e2	1.11	NO	1.290e3	0.35068	0.35068	0.0633
3	1,2,3,6,7.8-HxCDF	33.25	6.190e3	3.540e3	2.771e2	1.614e2	1.72	YES	4.384e2	0.00000	0.095595	0.0638

Hepta-Furans

18 PGI	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.48	1.257e4	1 381e4	7.485e2	7.722e2	0.97	NO	1.521e3	0.59439	0.59439	0.146
2	Total Hepta-Furans	37.09	1.365e4	1.053e4	7.249e2	7.641e2	0.95	NO	1.489e3	0.63294	0.63294	0.149
3	1,2,3,4,7.8,9-HpCDF	38.50	5.693e3	5.112e3	2.825e2	2.555e2	1.11	NO	5.380e2	0.22462	0.22462	0.136

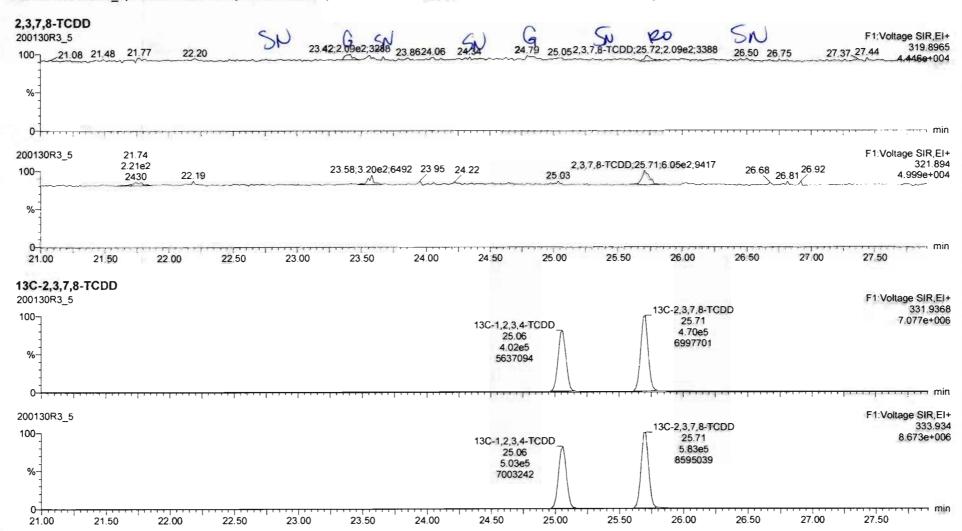
Work Order 1903647 Page 224 of 523

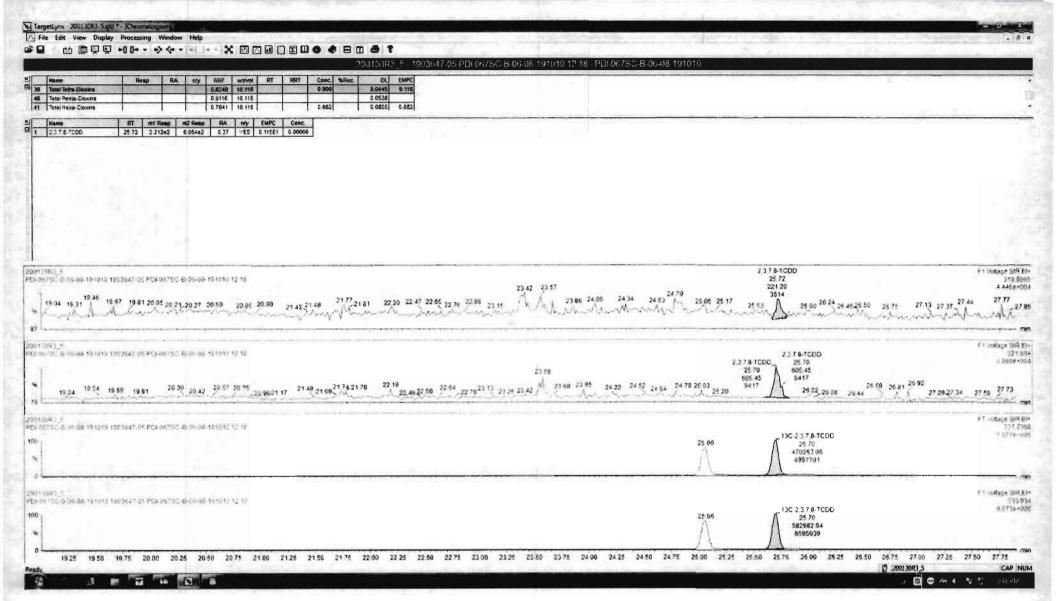
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Calibration: U:\VG12.PRO\CurveDB\db5_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50



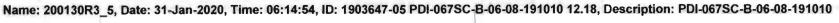


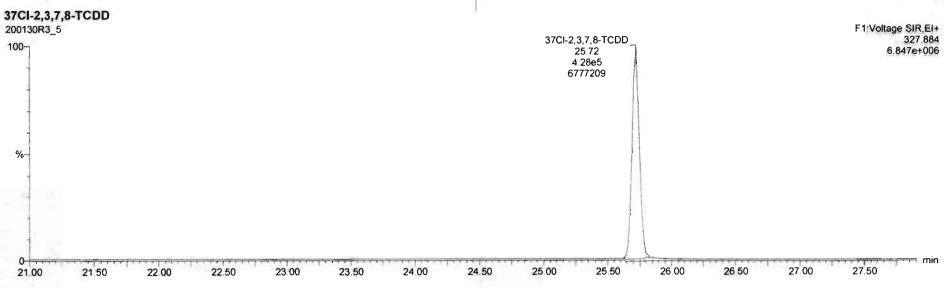
Work Order 1903647 Page 226 of 523

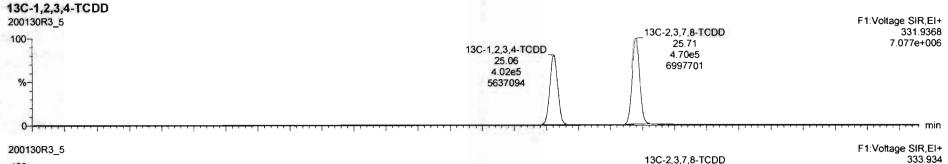
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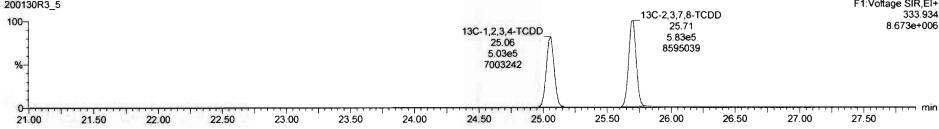
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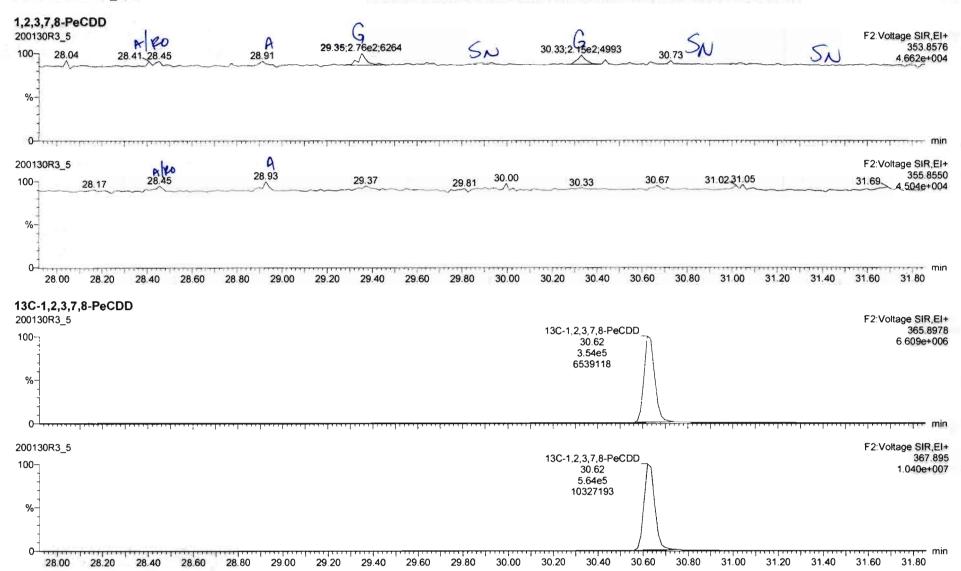


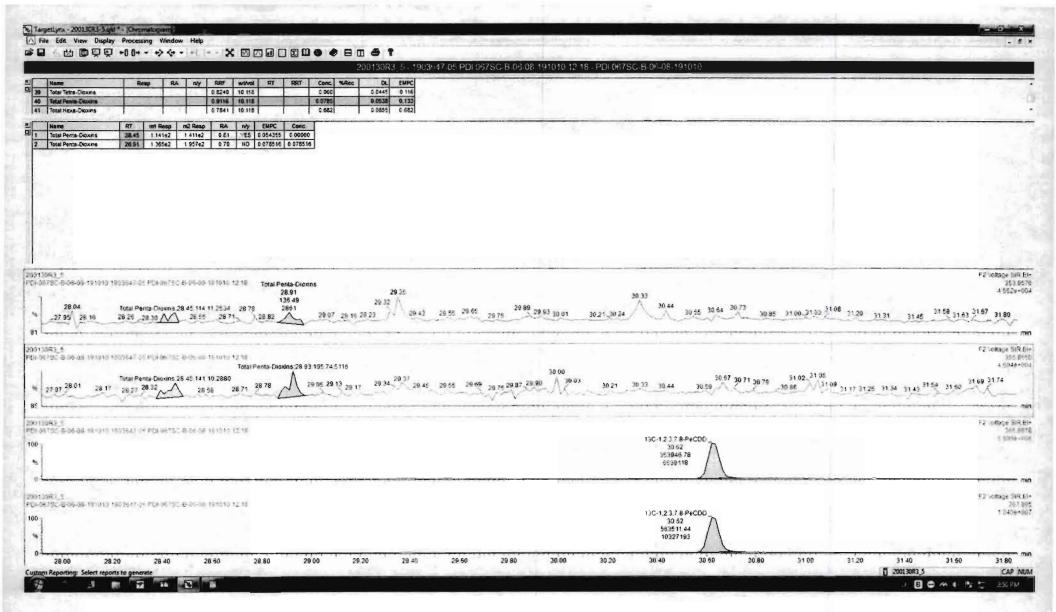


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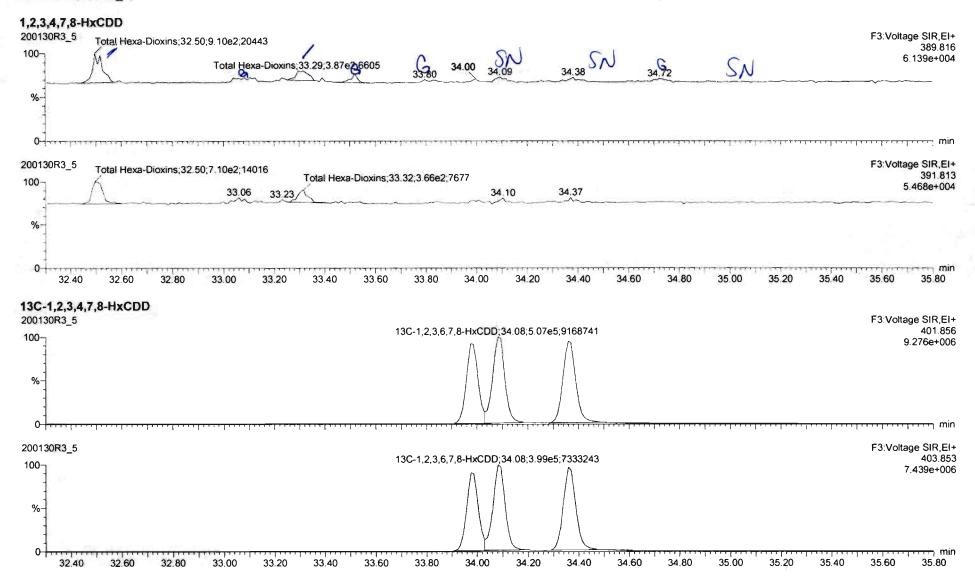


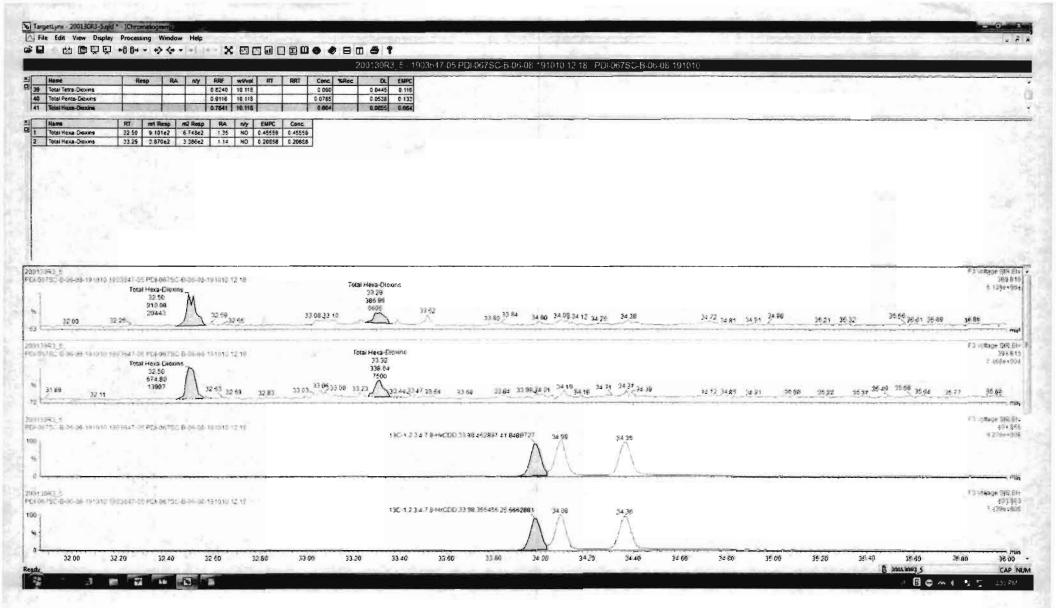


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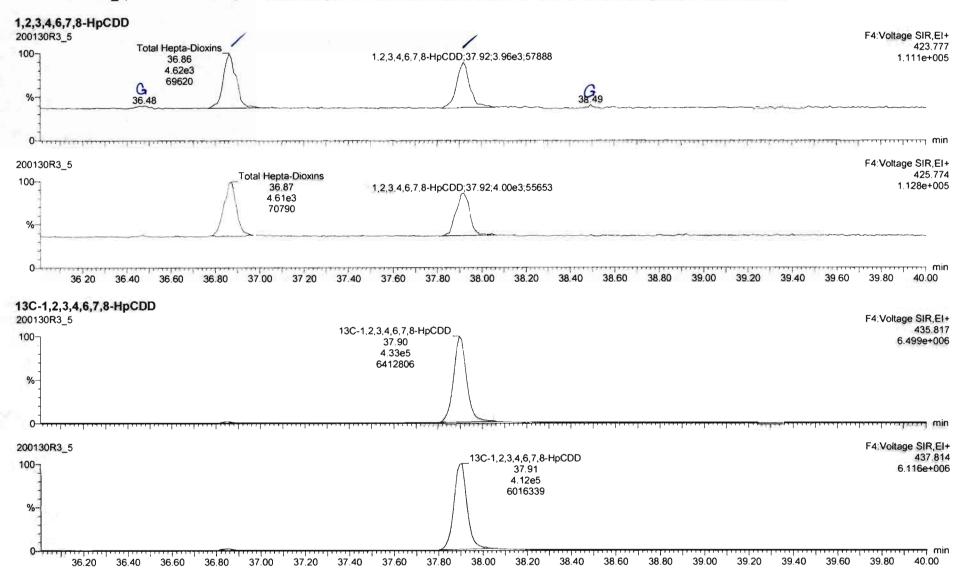


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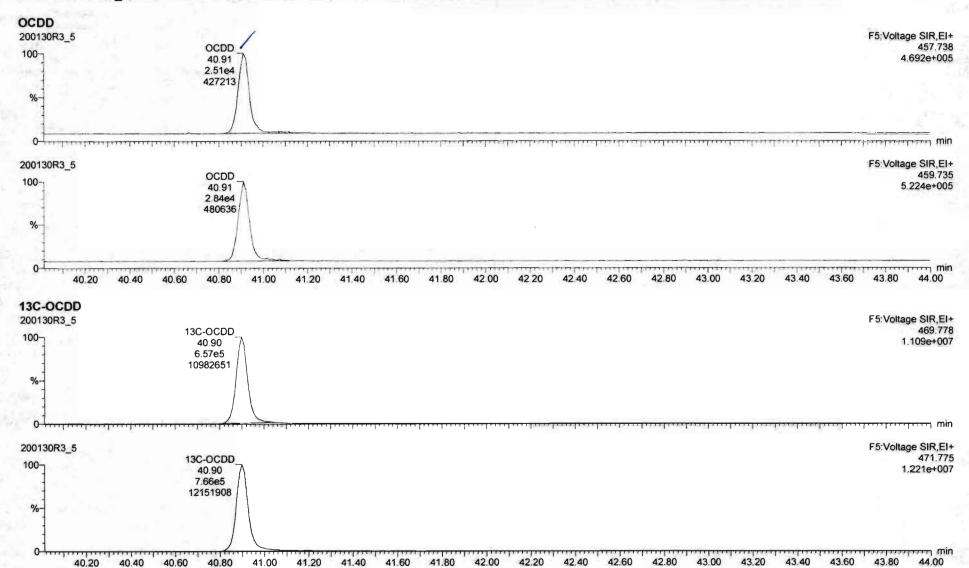
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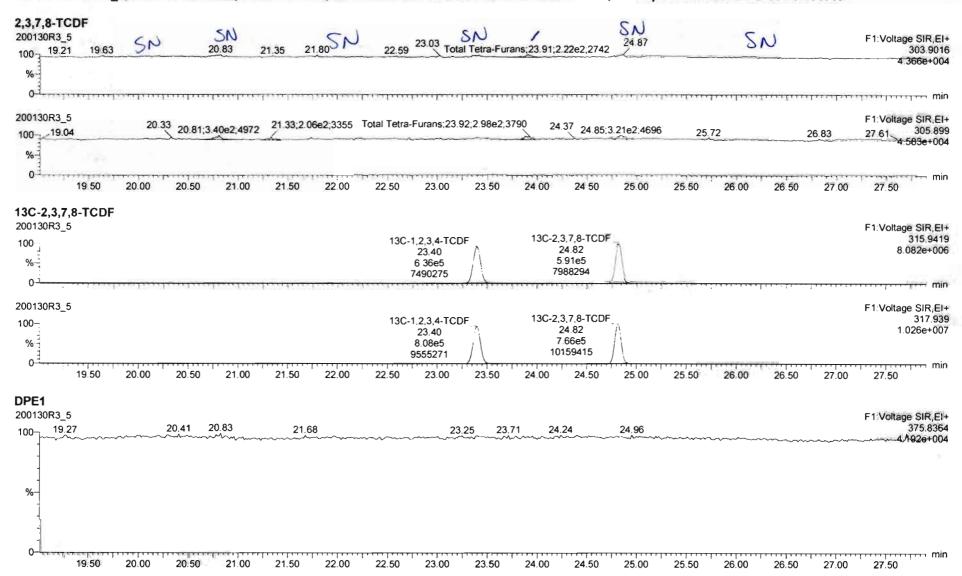
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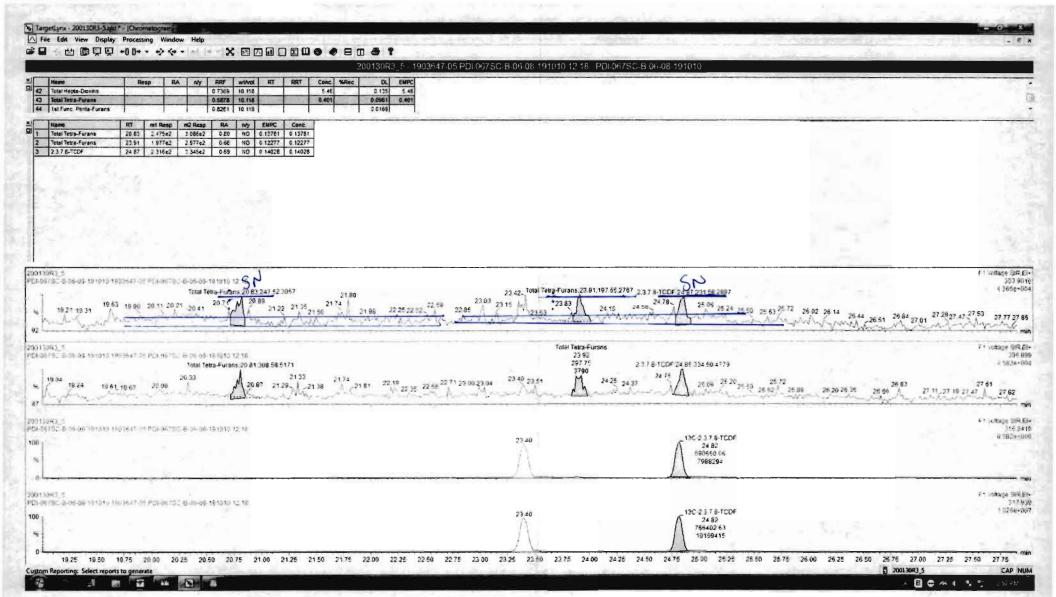
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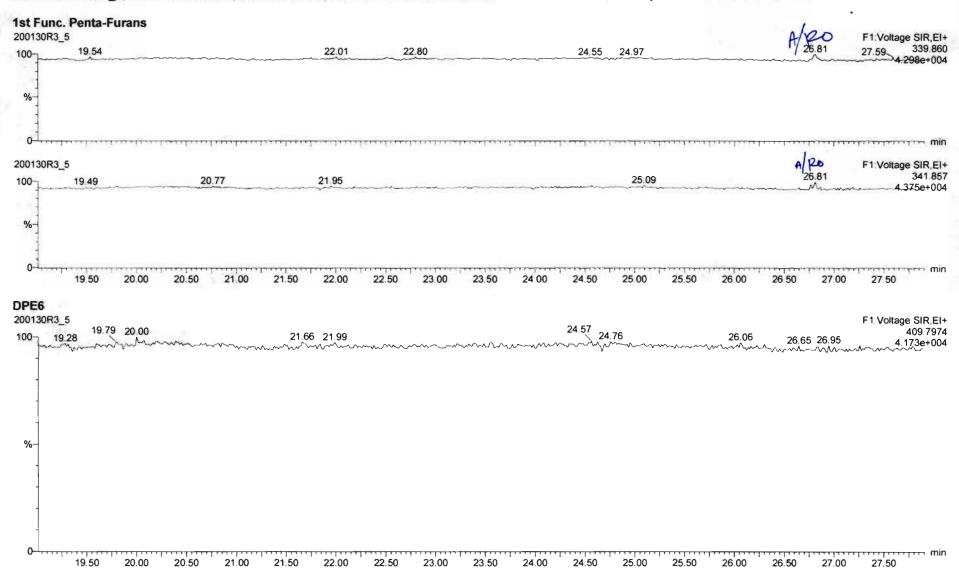
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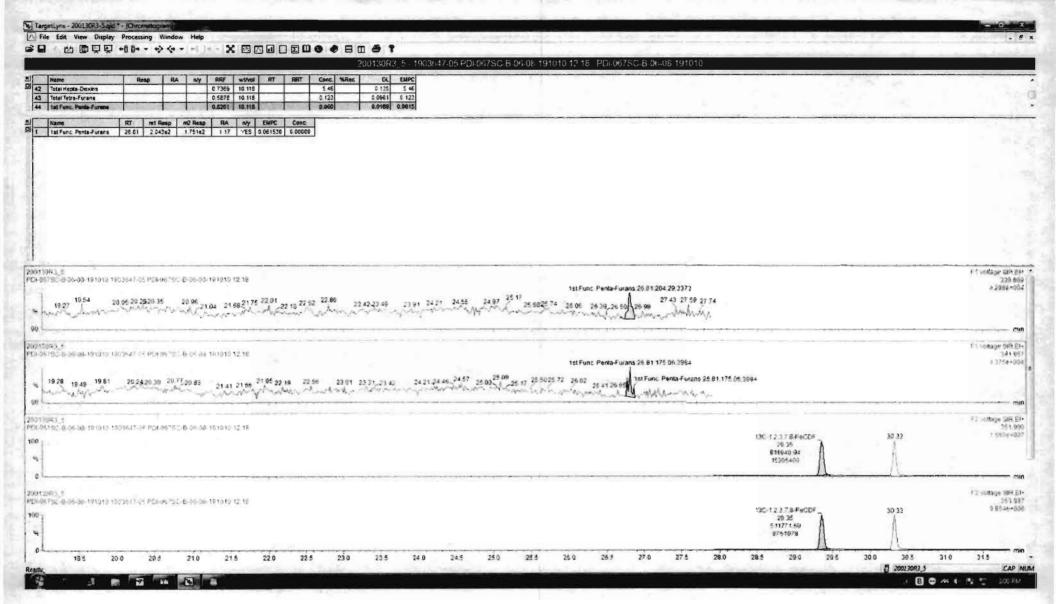




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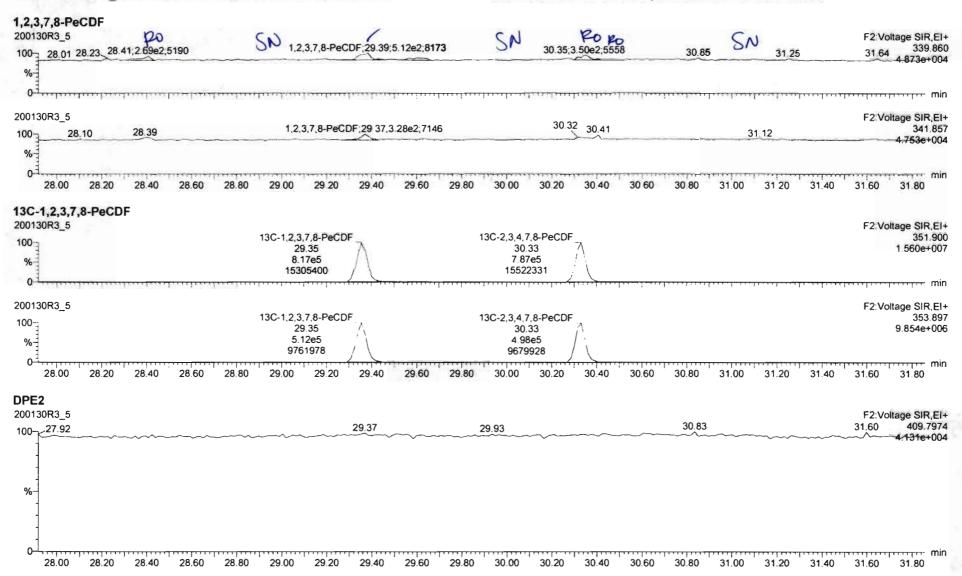


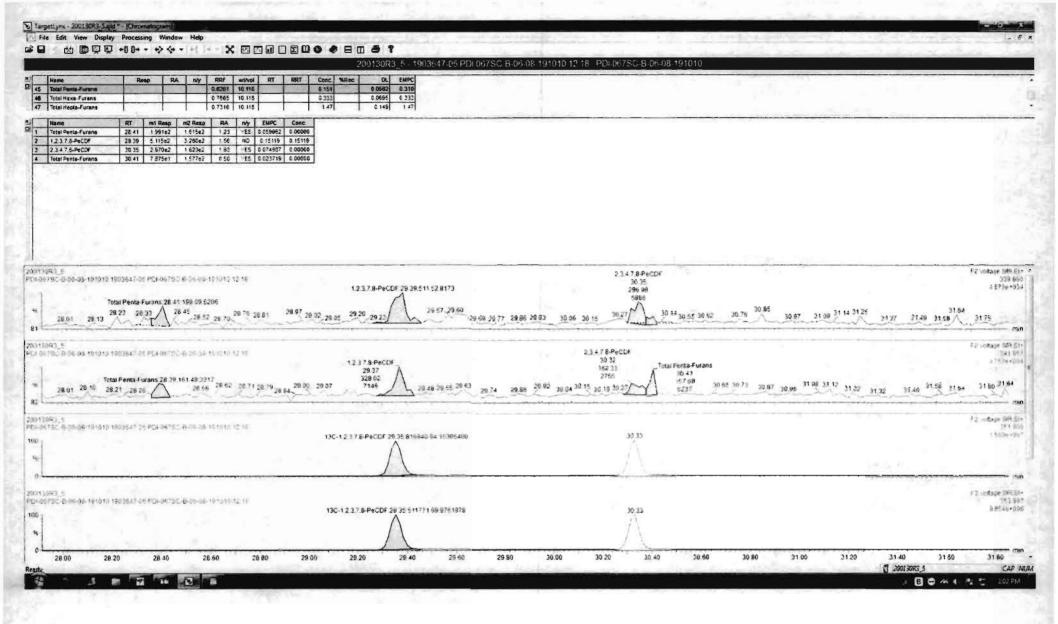


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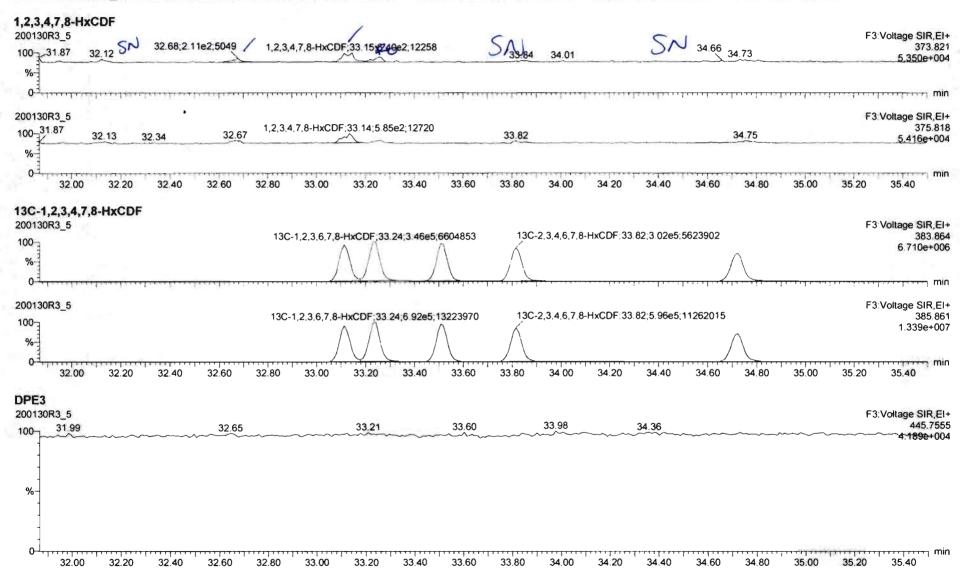
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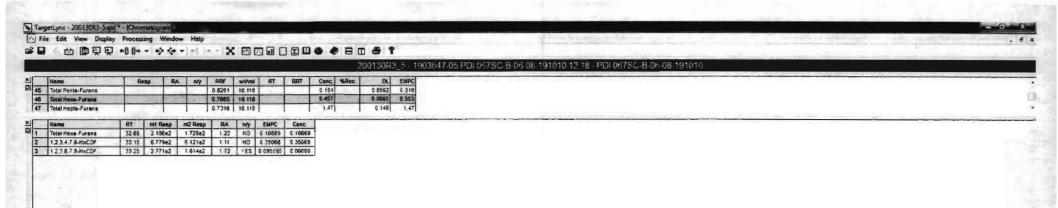


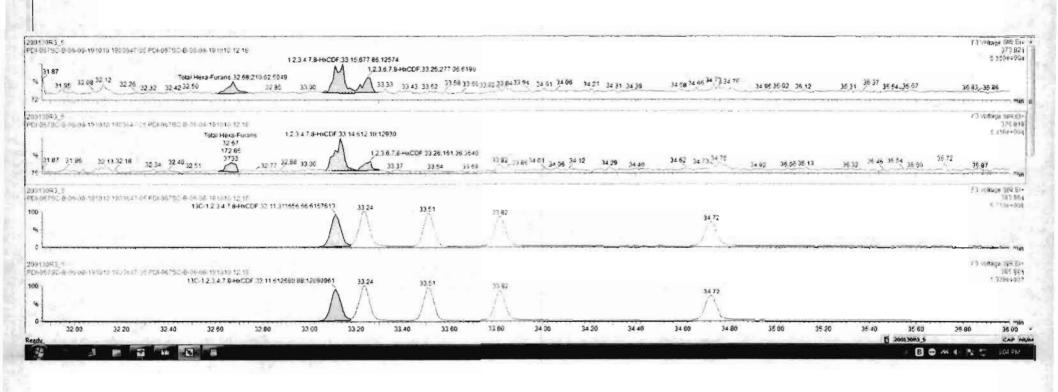


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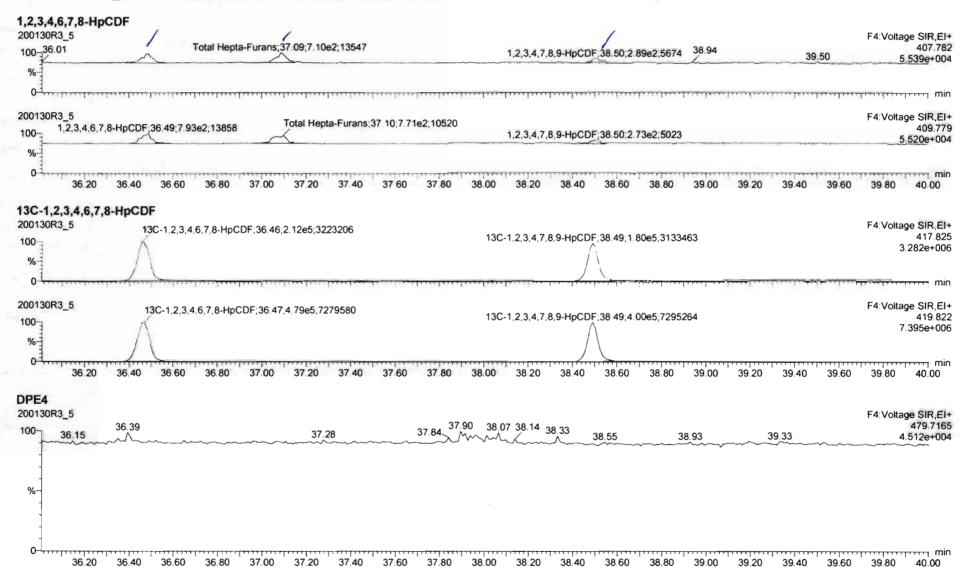


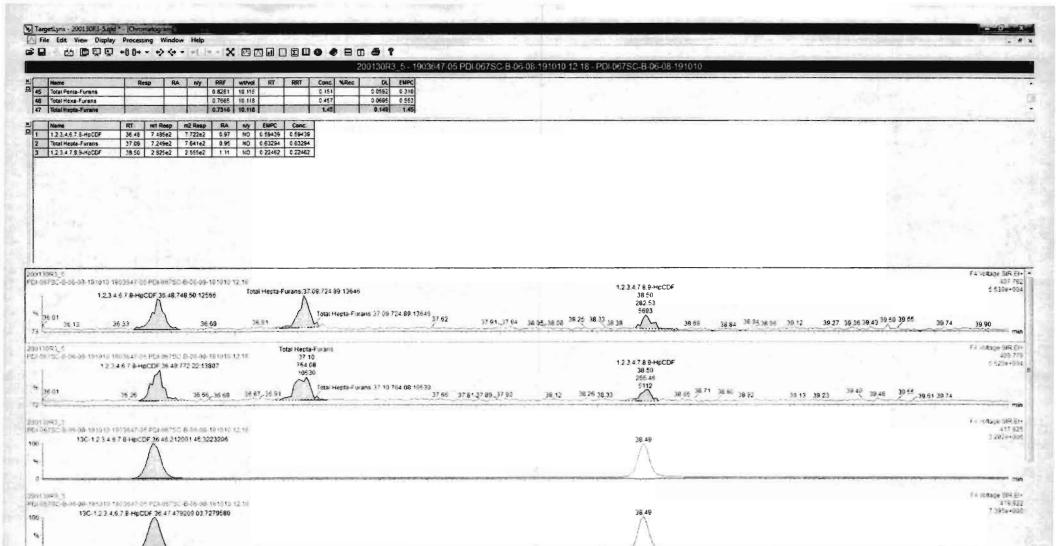




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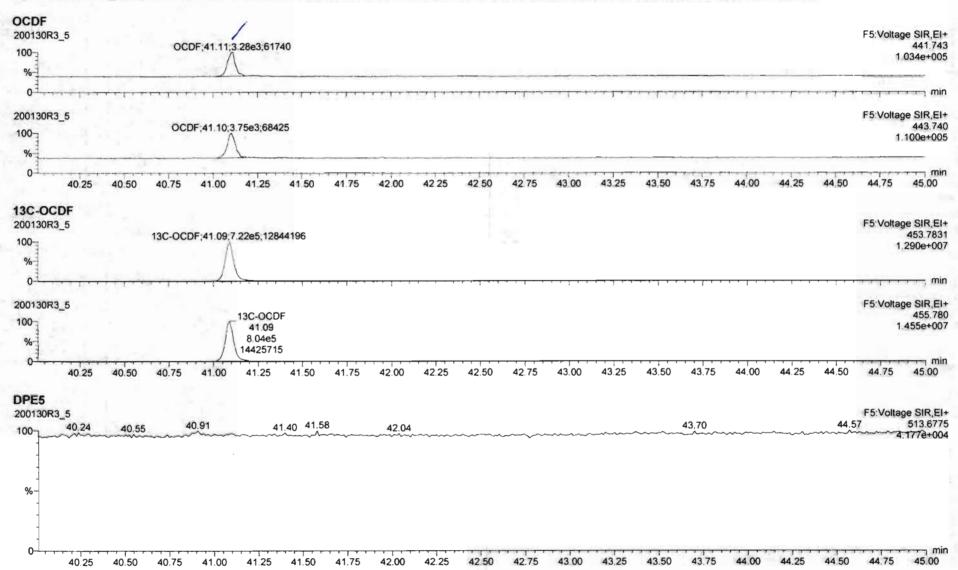
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39 80

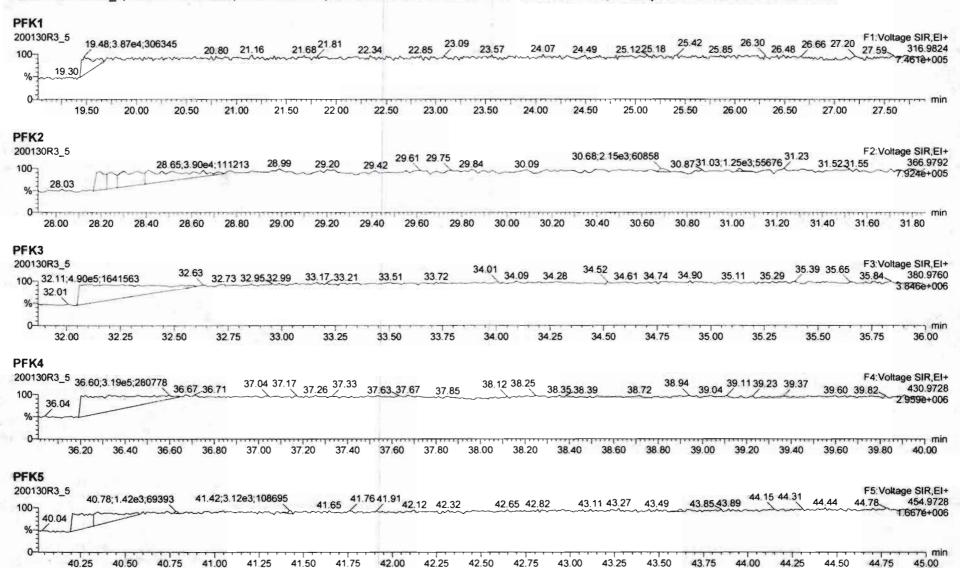
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Last Altered: Printed: Friday, January 31, 2020 16:15:53 Pacific Standard Time Friday, January 31, 2020 16:16:17 Pacific Standard Time



CONFIRMATION

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MassLynx 4.1 SCN815

Page 1 of 1

Dataset:

U:\VG11.PRO\Results\200131K1\200131K1-27.qld

Last Altered:

Saturday, February 01, 2020 08:36:14 Pacific Standard Time

Printed:

Saturday, February 01, 2020 08:37:01 Pacific Standard Time

HC 2.1. ZOW

C7 02/05/2020

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1 27, Date: 31-Jan-2020, Time: 23:44:04, ID: 1903647-02RE1 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010

Nave Inches	; #-Name	100	Resp	RA	2.0	n/y	'RRF M :	wt/vol	; RT	9.00	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF		1.83e6	0.78		NO	1.04	10.003	₹16.41		183.06		0.188
2	2 13C-2,3,7,8-TCDF		1.93e6	0.80		NO	1.02	10.003	16.40		176.40	88.2	0.215
3	3 13C-1,2,3,4-TCDF		2.13e6	0.78		NO	1.00	10.003	14.51		199.93	100	0.220
4	4 13C-1,2,3,4-TCDD		1.16e6	0.77		NO		10.003	15.08				

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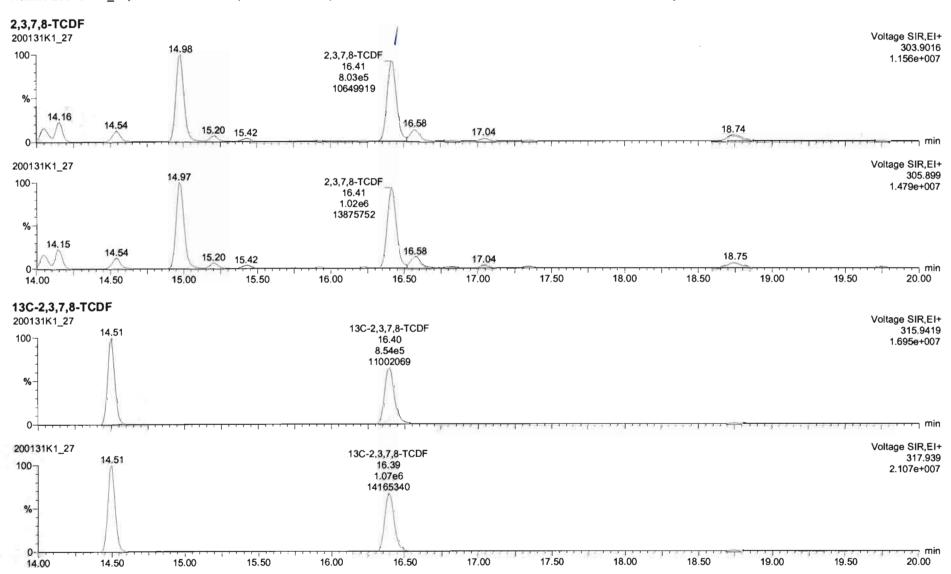
Quantify Sample Report MassLynx 4.1 SCN815 Vista Analytical Laboratory VG-11

Dataset:

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Name: 200131K1_27, Date: 31-Jan-2020, Time: 23:44:04, ID: 1903647-02RE1 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010



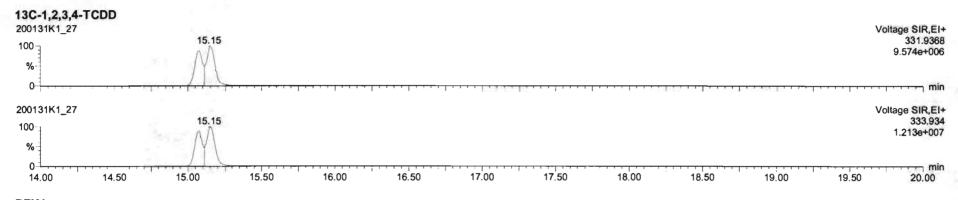
Vista Analytical Laboratory VG-11

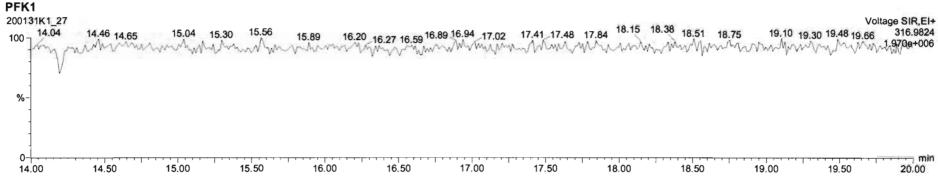
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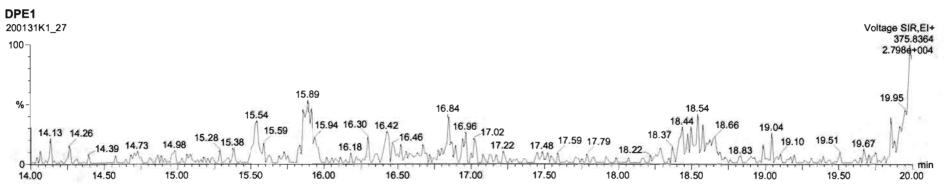
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Name: 200131K1_27, Date: 31-Jan-2020, Time: 23:44:04, ID: 1903647-02RE1 PDI-067SC-B-00-02-191010 18.9, Description: PDI-067SC-B-00-02-191010







Quantify Sample Summary Report

MassLynx 4.1 SCN815

Page 1 of 1

Dataset:

U:\VG11.PRO\Results\200131K1\200131K1-11.qld

Last Altered:

Saturday, February 01, 2020 08:35:07 Pacific Standard Time

Printed:

Saturday, February 01, 2020 08:35:29 Pacific Standard Time

th 21-200

CT 02/05/2020

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1_11, Date: 31-Jan-2020, Time: 15:20:42, ID: 1903647-03RE1 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010

ALC: CAR	#-Name	Resp	7	RA	n/y	'RRF M ;	wt/vol	; F	₹T :	Conc.	%Rec	DL
1	1 2,3,7,8-TCDF	4.91e3		0.75	NO	1.04	10.157	/ 16	.40	0.32587		0.0625
2	2 13C-2,3,7,8-TCDF	2.86e6		0.78	NO	1.02	10.157	16	.39	225.66	115	0.192
3	3 13C-1,2,3,4-TCDF	2.45e6		0.79	NO	1.00	10.157	14	.49	196.91	100	0.197
4	4 13C-1,2,3,4-TCDD	1.65e6		0.78	NO		10.157	15	.06			

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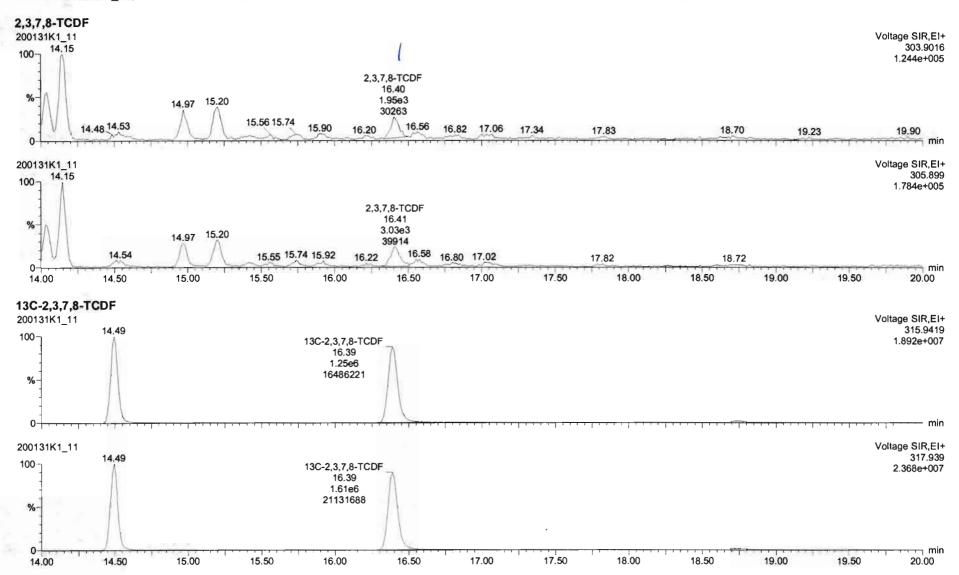
Vista Analytical Laboratory VG-11

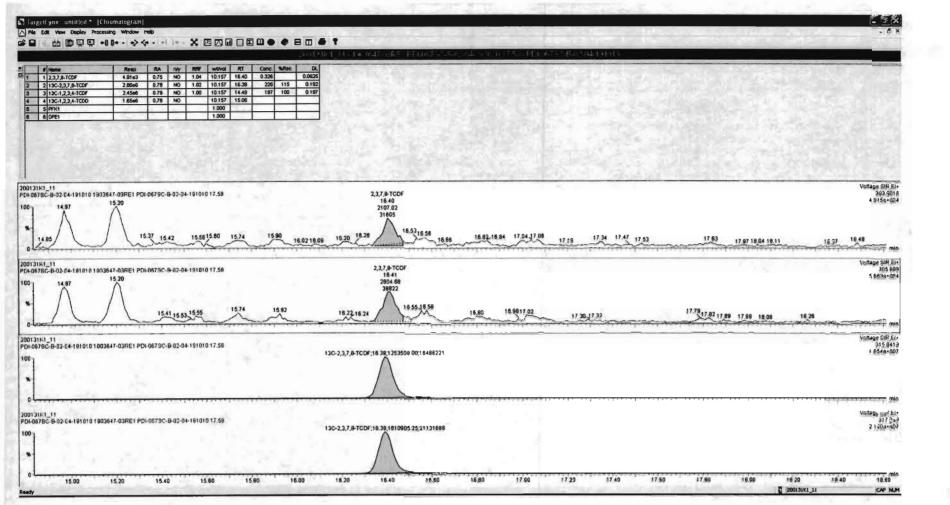
Dataset:

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Last Altered: Printed: Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:58:45 Pacific Standard Time

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Work Order 1903647 Page 252 of 523

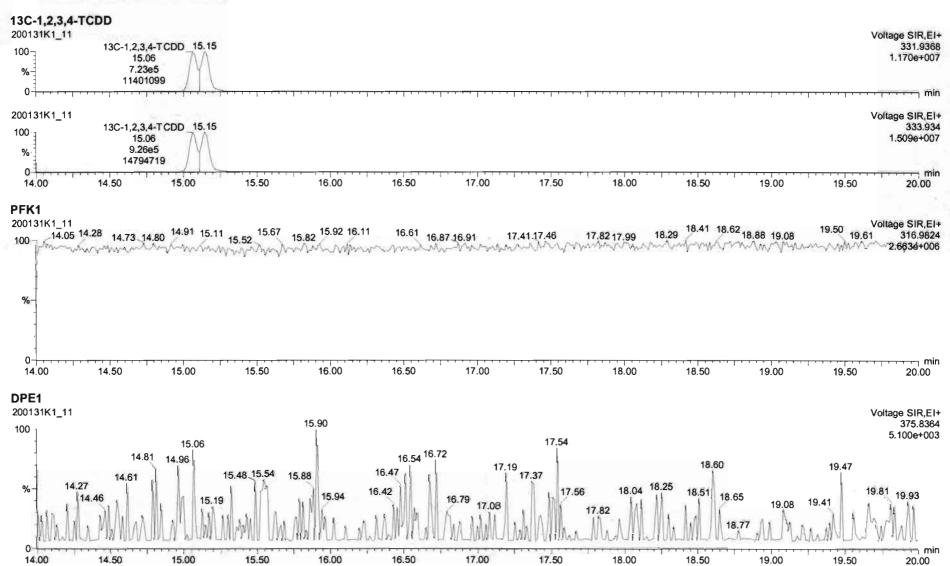
Vista Analytical Laboratory VG-11

Dataset:

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Name: 200131K1_11, Date: 31-Jan-2020, Time: 15:20:42, ID: 1903647-03RE1 PDI-067SC-B-02-04-191010 17.58, Description: PDI-067SC-B-02-04-191010



CONTINUING CALIBRATION

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HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: STZ00130RZ-I	_	R	eviewed By: <u>C7 02/03/2020</u>	_	
End Calibration ID: NA	_		Initials & Date		~
	Beg.	<u>End</u>		Beg.	End
Ion abundance within QC limits?		NA	Mass resolution >	7	V
Concentrations within criteria?		Ф	□ 5k □ 6-8K □ 8K 対 10K 1614 1699 429 1613/1668/8280		
TCDD/TCDF Valleys <25%			Intergrated peaks display correctly?	V	NA
First and last eluters present?		ф	GC Break <20%		
Retention Times within criteria?			8280 CS1 End Standard:		
Verification Std. named correctly?		Ф	- Ratios within limits, S/N <2.5:1, CS1 within 12 hours		NA
(ST-Year-Month-Day-VG ID)					
Forms signed and dated?		ф	Comments: (A) END RES CHECK HAD ONE MASS < 10K		
Correct ICAL referenced?	GRB				
Run Log:					
- Correct instrument listed?	V	J			
- Samples within 12 hour clock?	\bigcirc	N			
- Bottle position verfied?	G	PB			

Rev. No.: 0 Rev. Date: 06/06/2017

Page: 1 of 1

Page 1 of 2

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

GRB 01/30/2020 C7 02/03/2020

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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 19I1604, Description: 1613 CS3 19I1604

1 1	# 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

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Vista Analytical Laboratory

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 19I1604, Description: 1613 CS3 19I1604

	# 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 37Ci-2,3,7,8-TCDD	7.58e4	6.33 e 5			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 OF
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

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Page 1 of 1

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\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 19I1604, Description: 1613 CS3 19I1604

000	# 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

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Dataset:

Untitled

Last Altered: Printed:

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

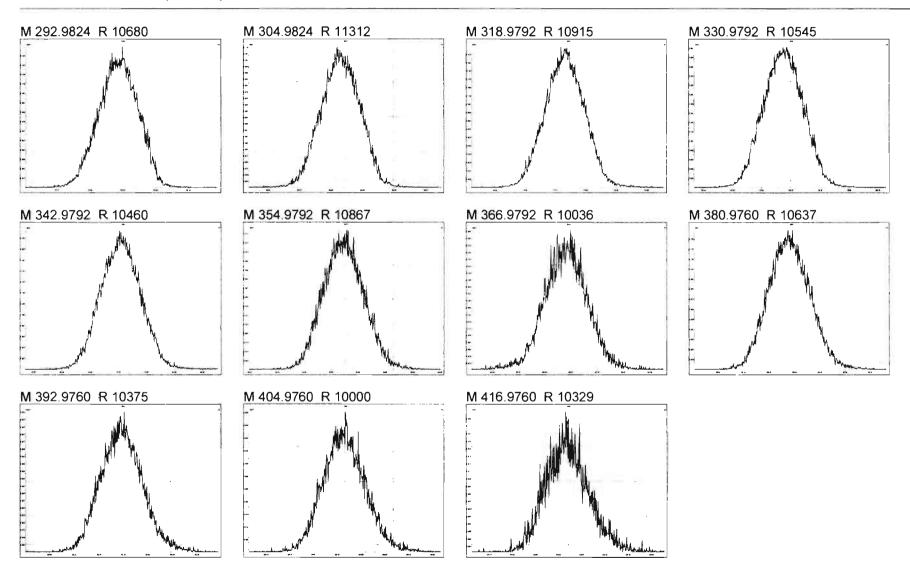
	Name	ID	Acq.Date	Acq.Time
1	200130R2_1	ST200130R2_1 1613 CS3 19I1604	30-Jan-20	14:14:22
2	200130R2_2	B0A0133-BS1 OPR 1	30-Jan-20	15:14:19
3	200130R2_3	B0A0016-BS1 OPR 10	30-Jan-20	16:00:38
4	200130R2_4	SOLVENT BLANK	30-Jan-20	16:47:35
5	200130R2_5	B0A0133-BLK1 Method Blank 1	30-Jan-20	17:34:32
6	200130R2_6	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

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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed:

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

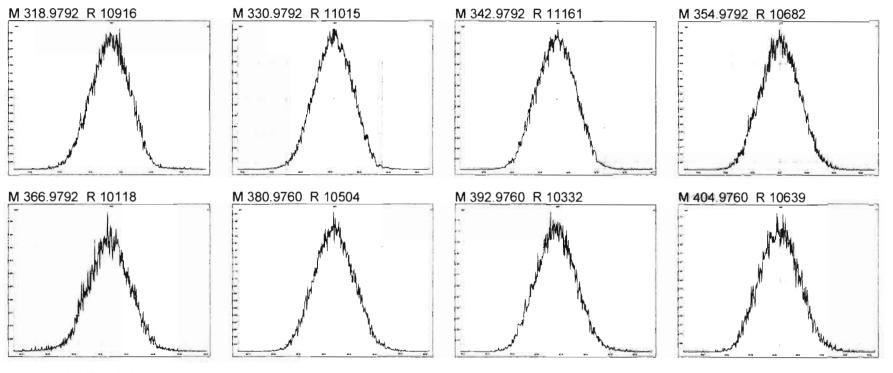


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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed:

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



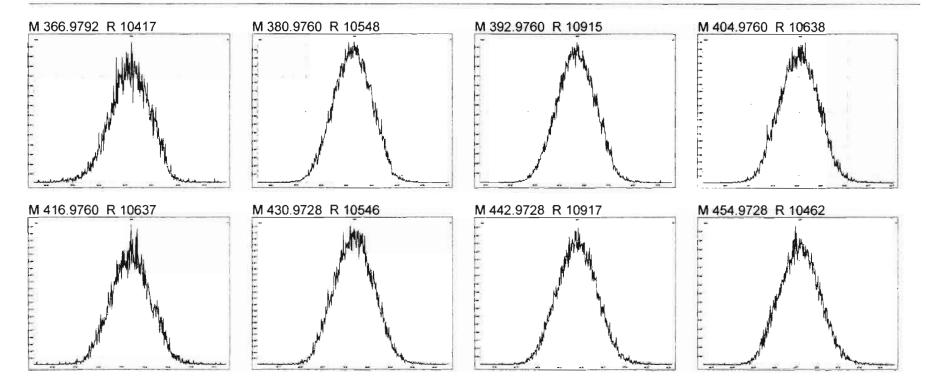
M 416.9760 R 10203

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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed:

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

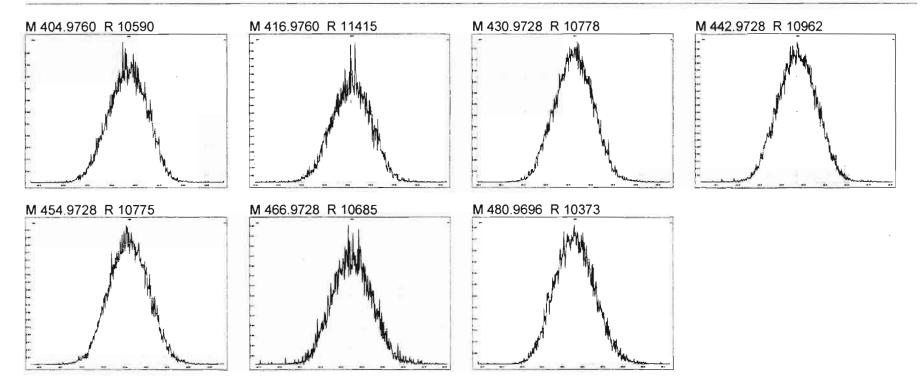


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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed:

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

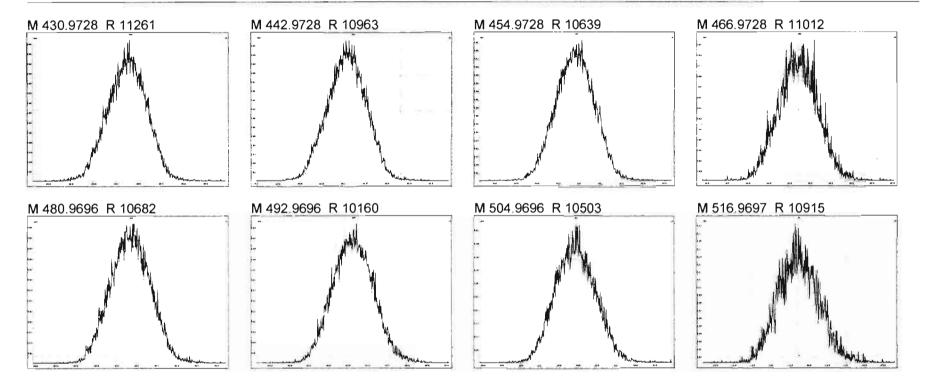


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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed:

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



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MassLynx 4.1 SCN815

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Vista Analytical Laboratory VG-11

Dataset:

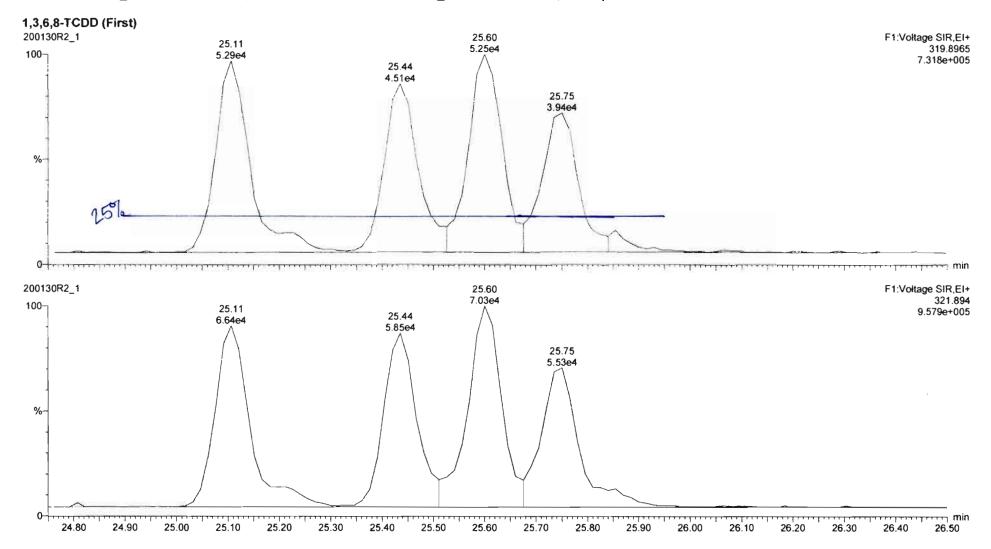
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Last Altered: Thu

Thursday, January 30, 2020 15:27:11 Pacific Standard Time 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\db5_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

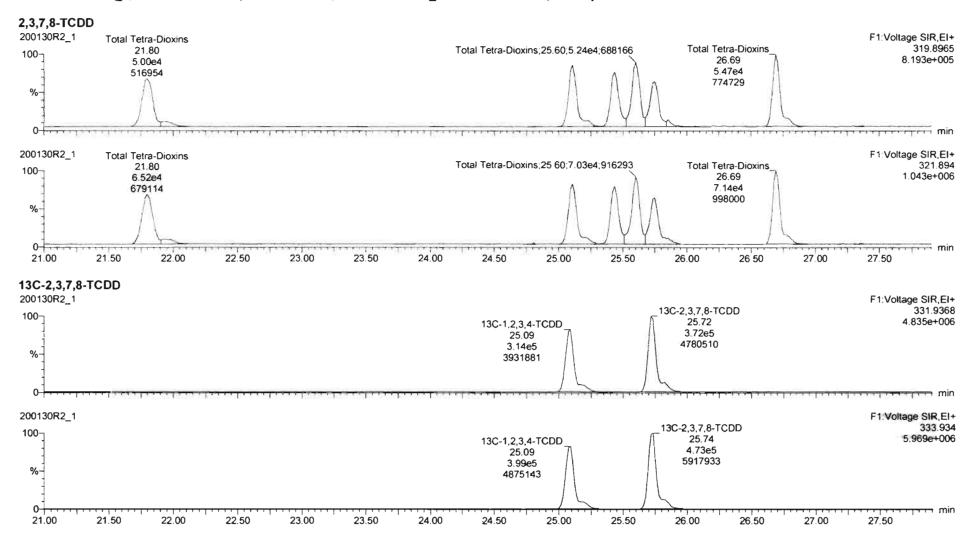


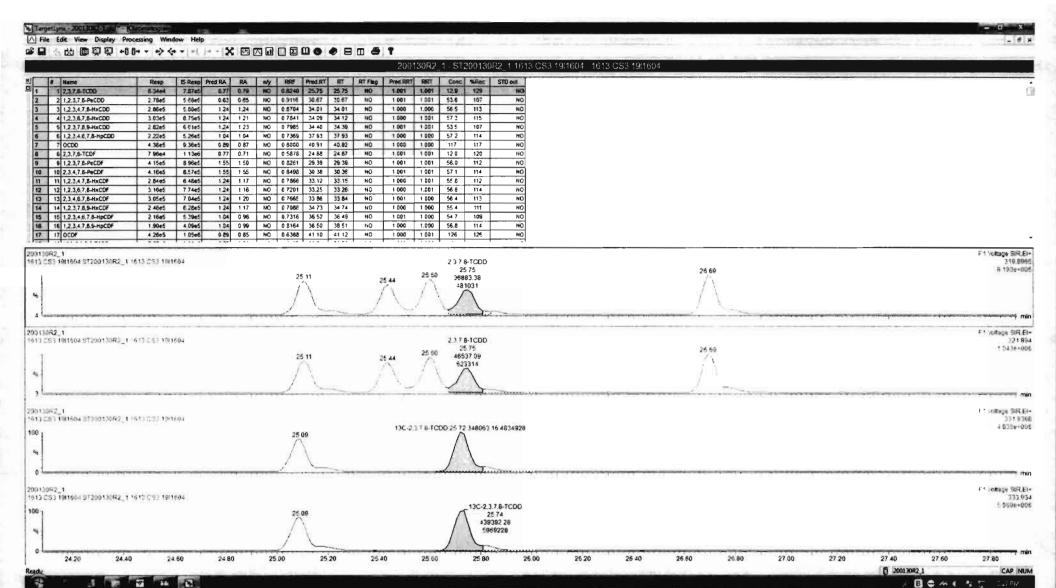
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Method: U:\VG12.PRO\MethDB\1613rrt-1-28-20.mdb 28 Jan 2020 16:09:23

Calibration: U:\VG12.PRO\CurveDB\db5 1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50



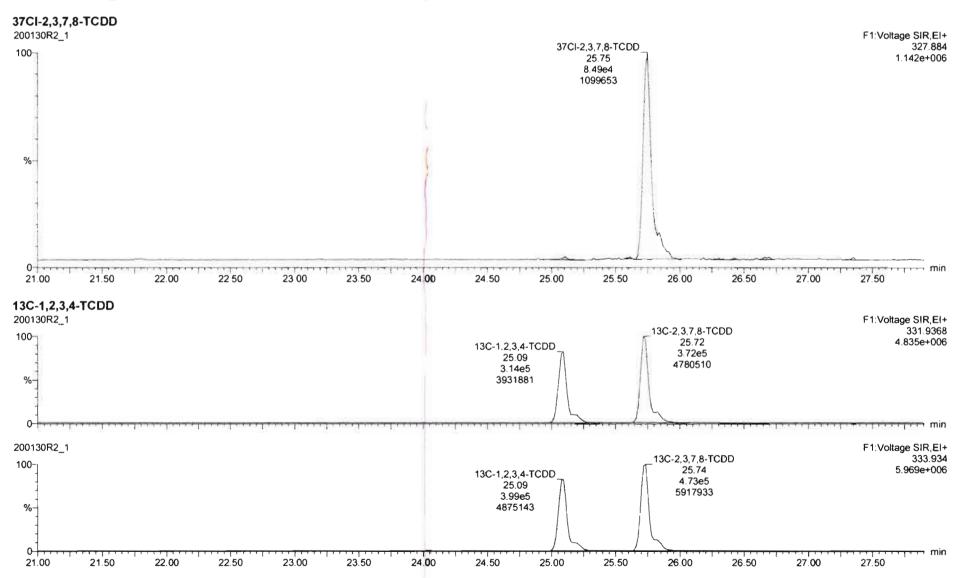


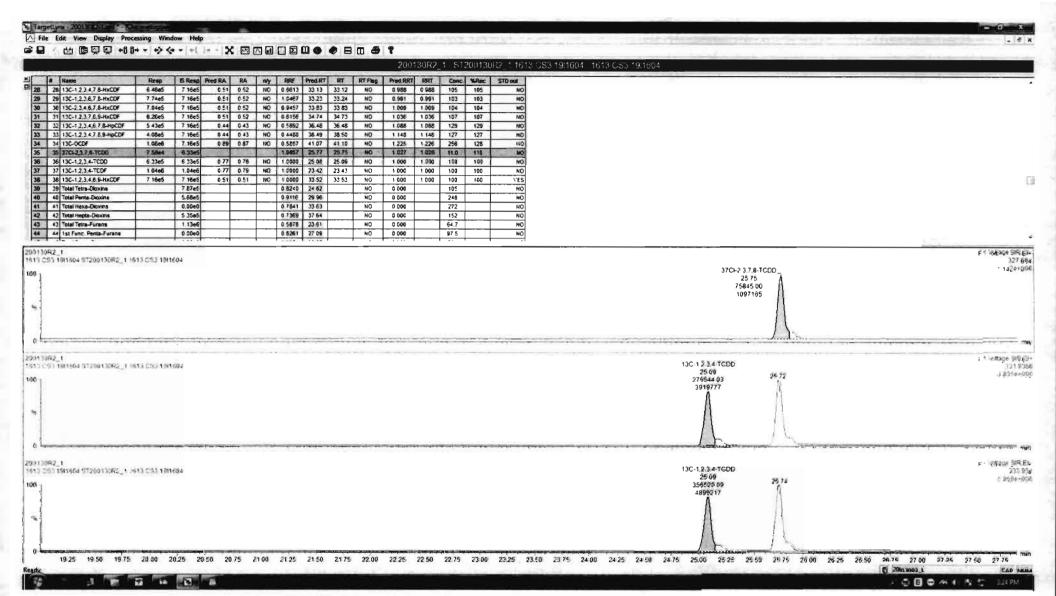
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Last Altered: Printed:

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

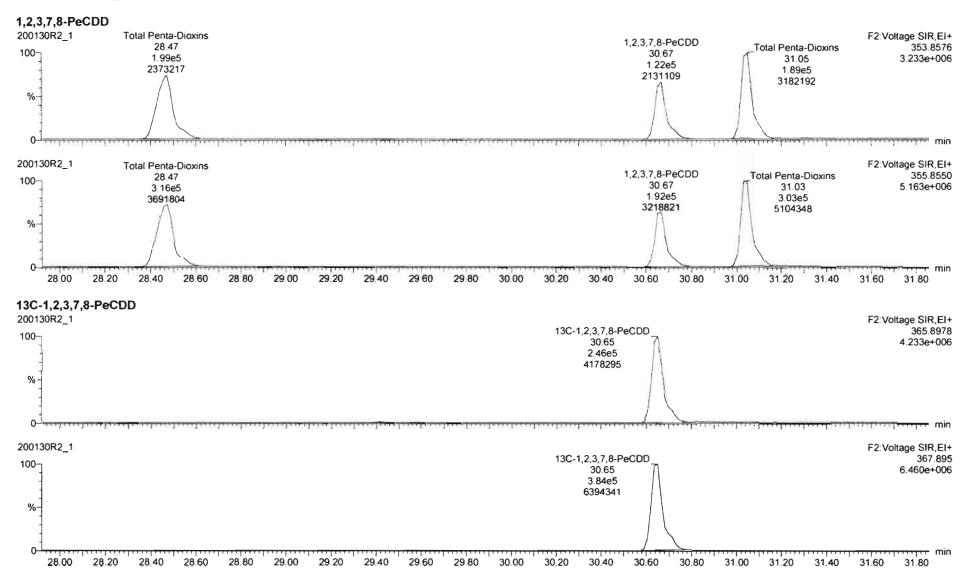


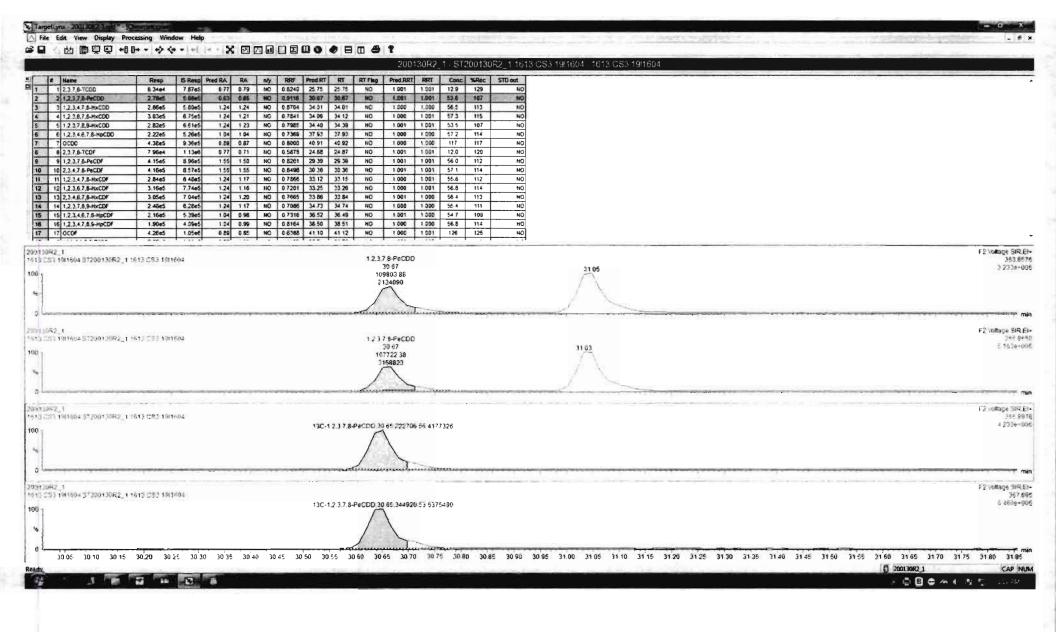


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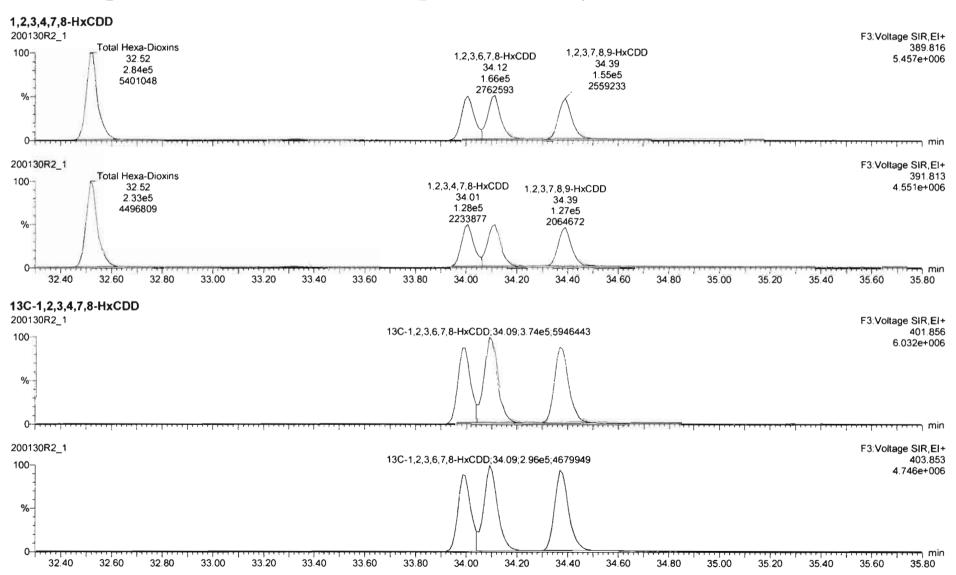
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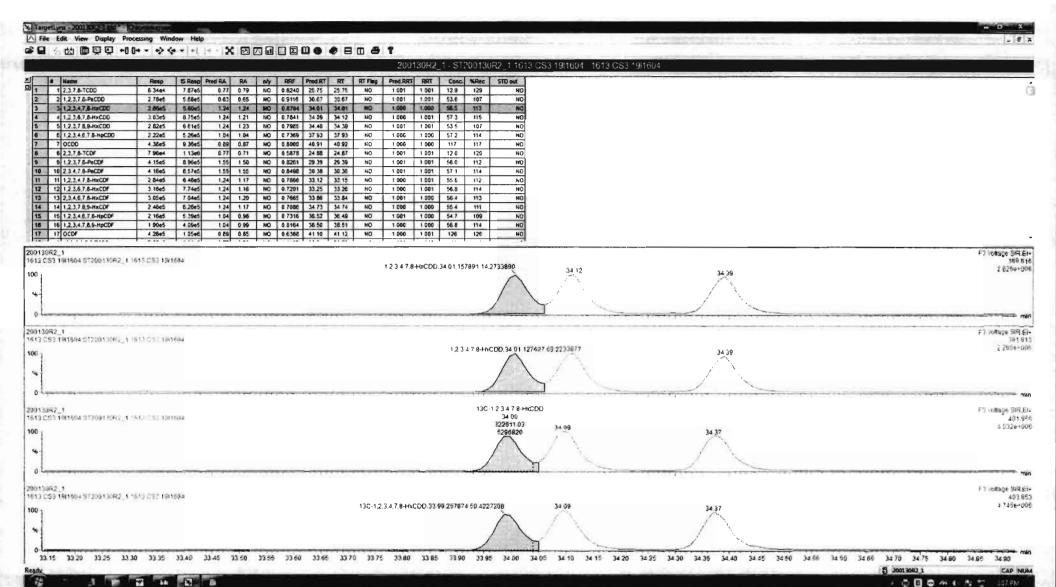




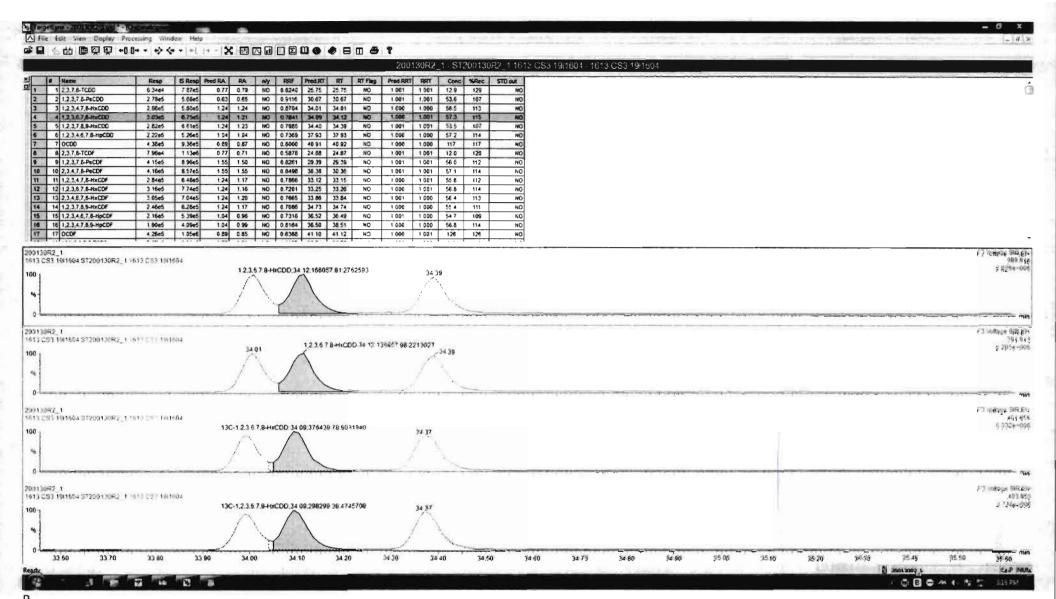
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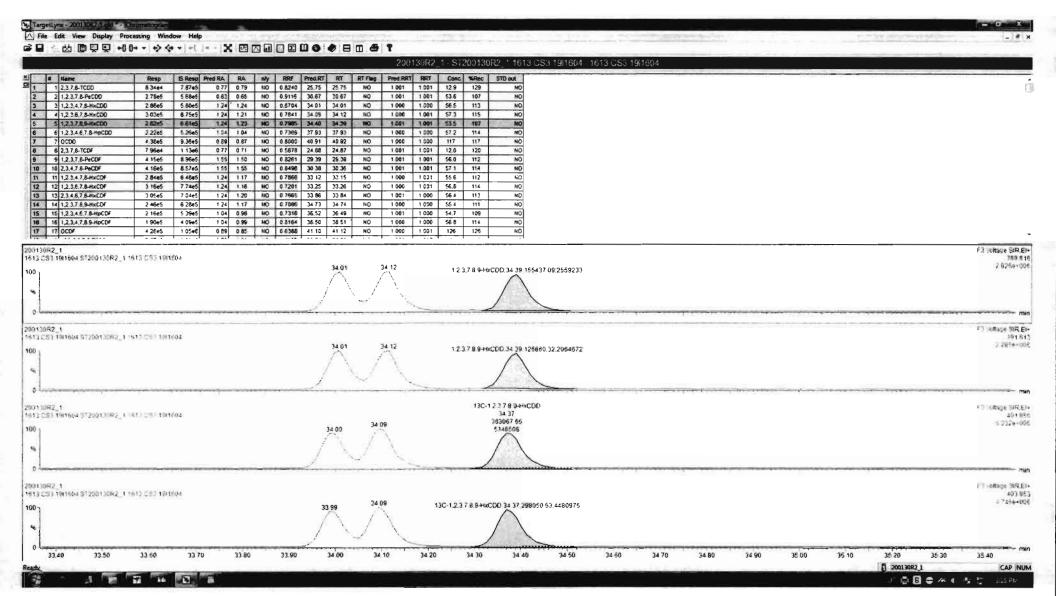




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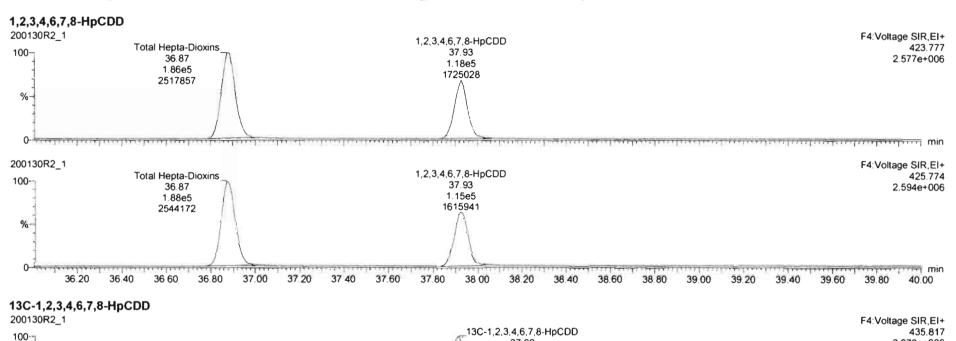
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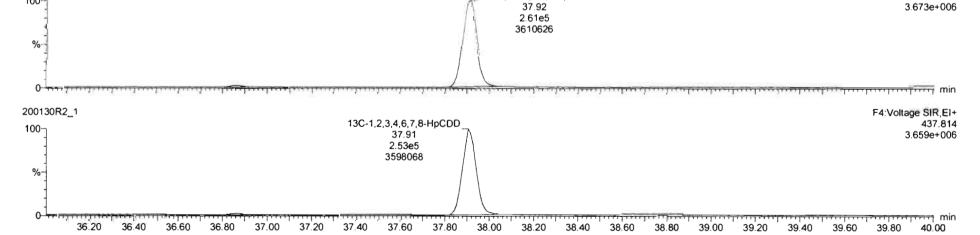


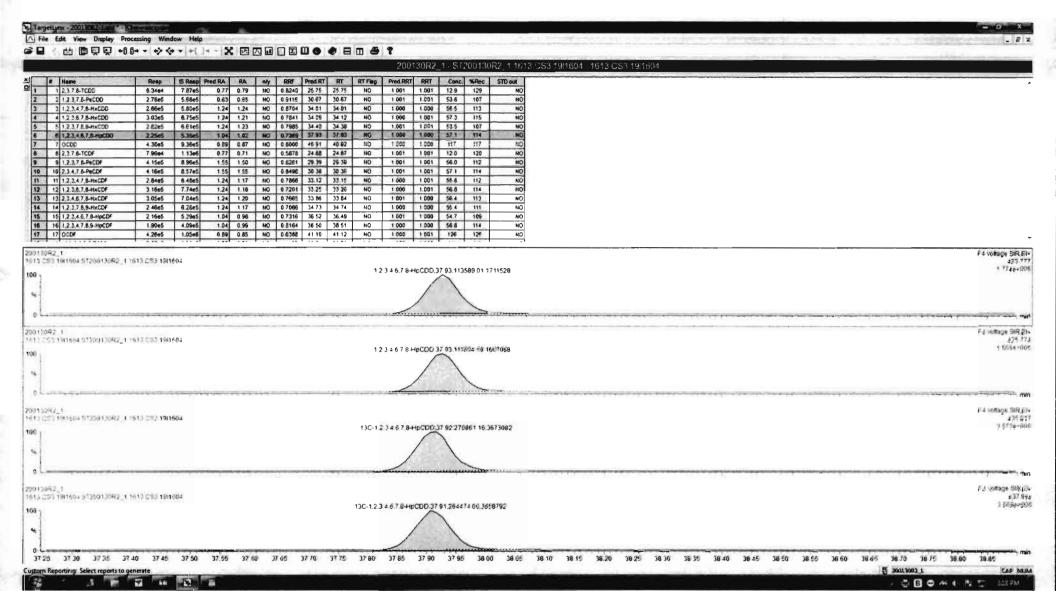
Work Order 1903647 Page 275 of 523

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





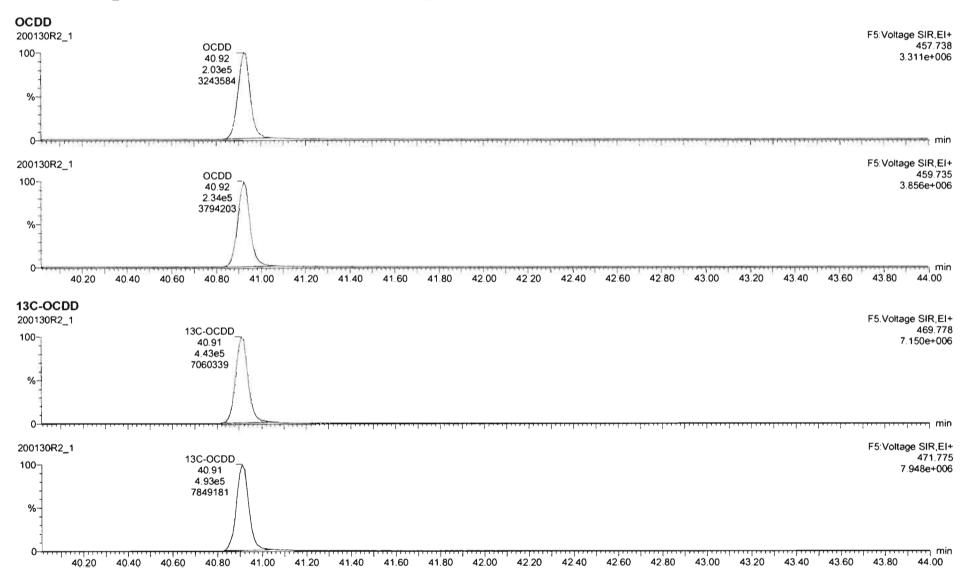


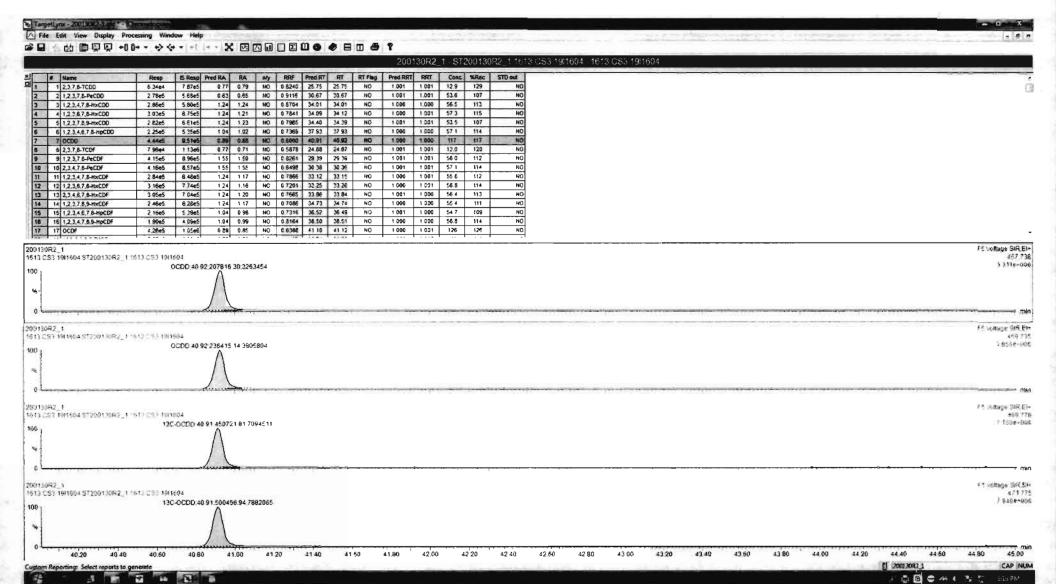
Work Order 1903647 Page 277 of 523

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Last Altered: Printed:

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

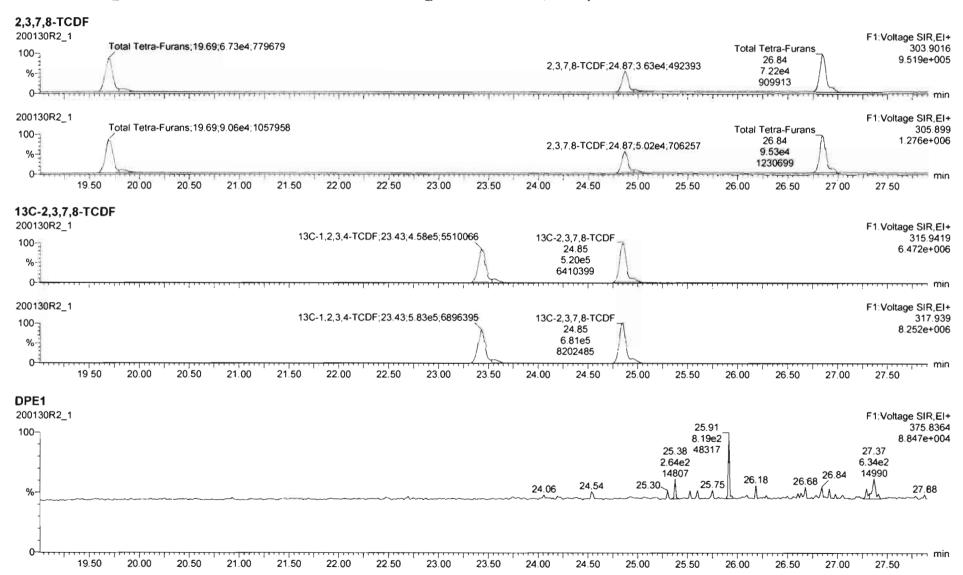


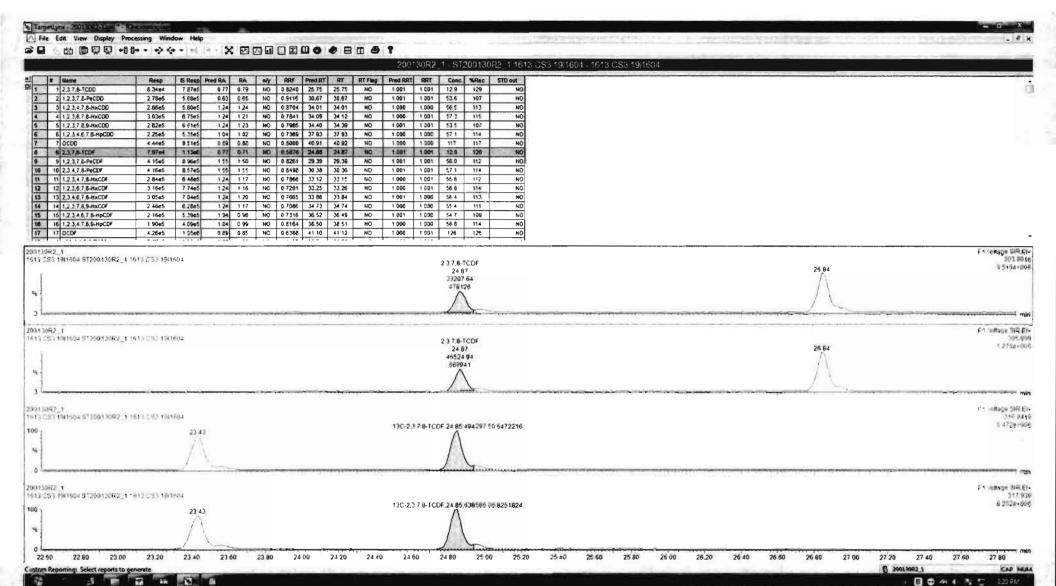


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Last Altered: Printed: Thursday, January 30, 2020 15:26:25 Pacific Standard Time Thursday, January 30, 2020 15:26:36 Pacific Standard Time

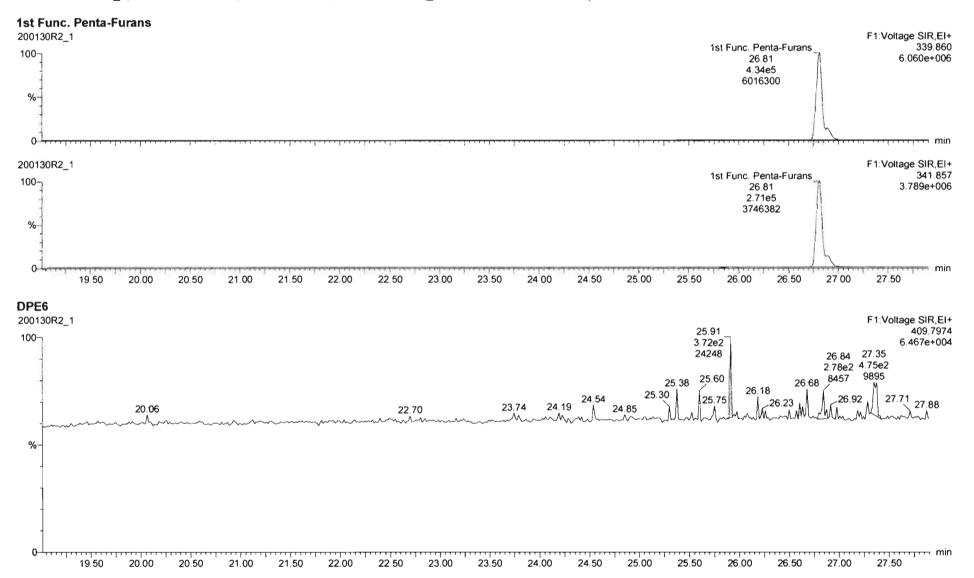




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Thursday, January 30, 2020 15:26:25 Pacific Standard Time Thursday, January 30, 2020 15:26:36 Pacific Standard Time

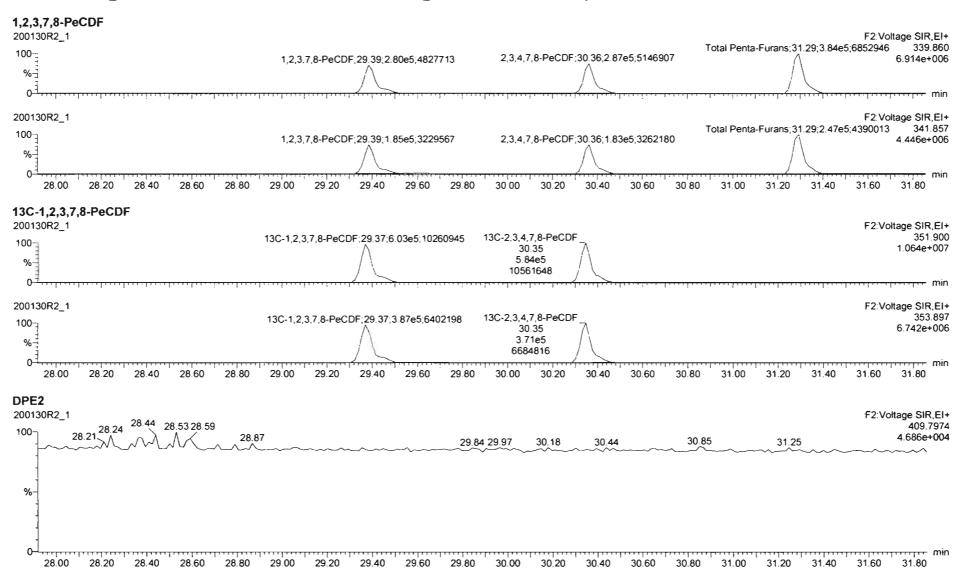


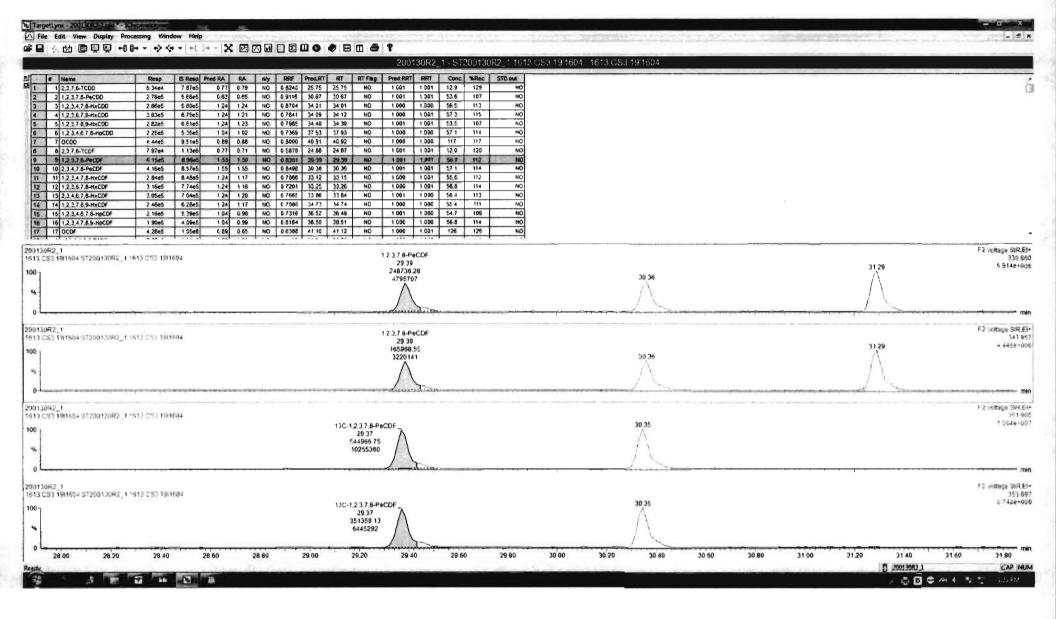
Quantify Sample Report Vista Analytical Laboratory

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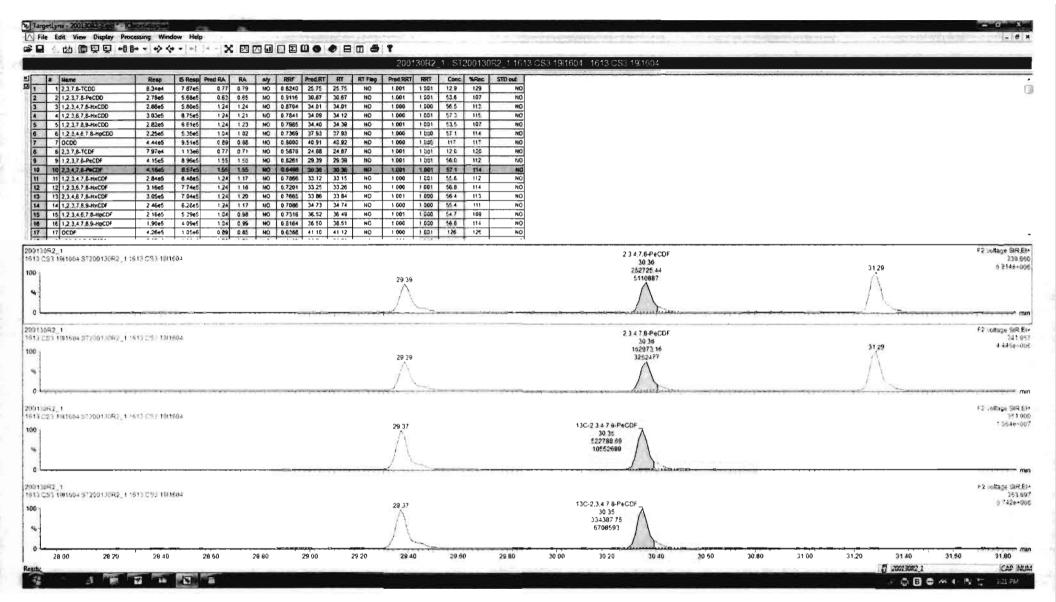
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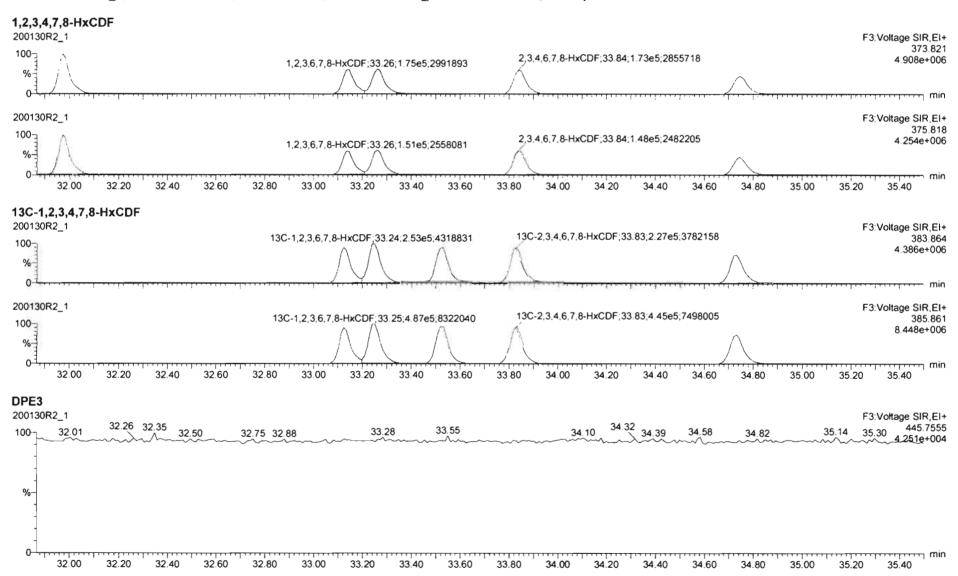
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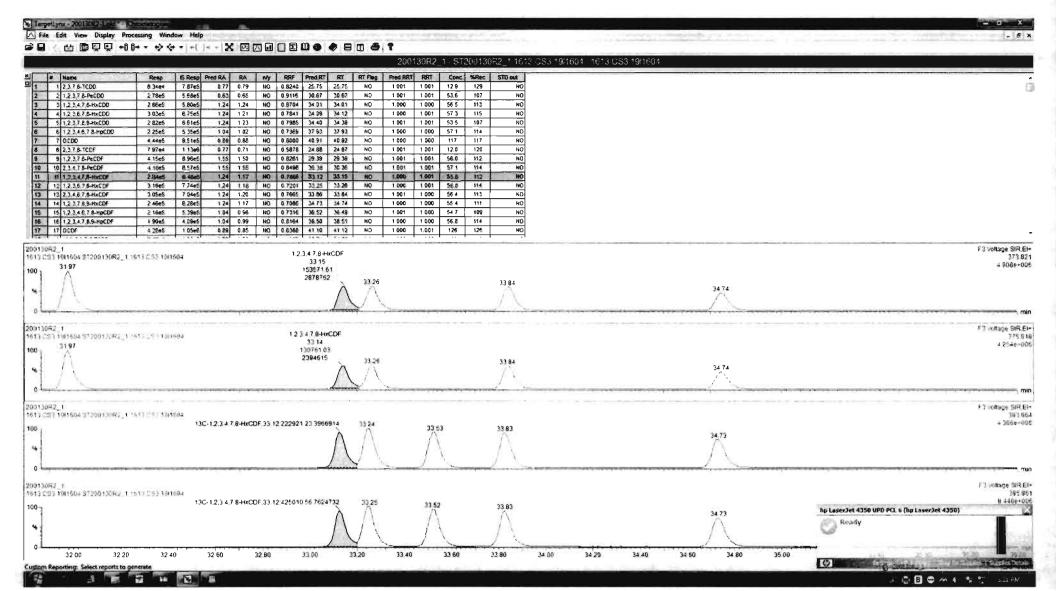


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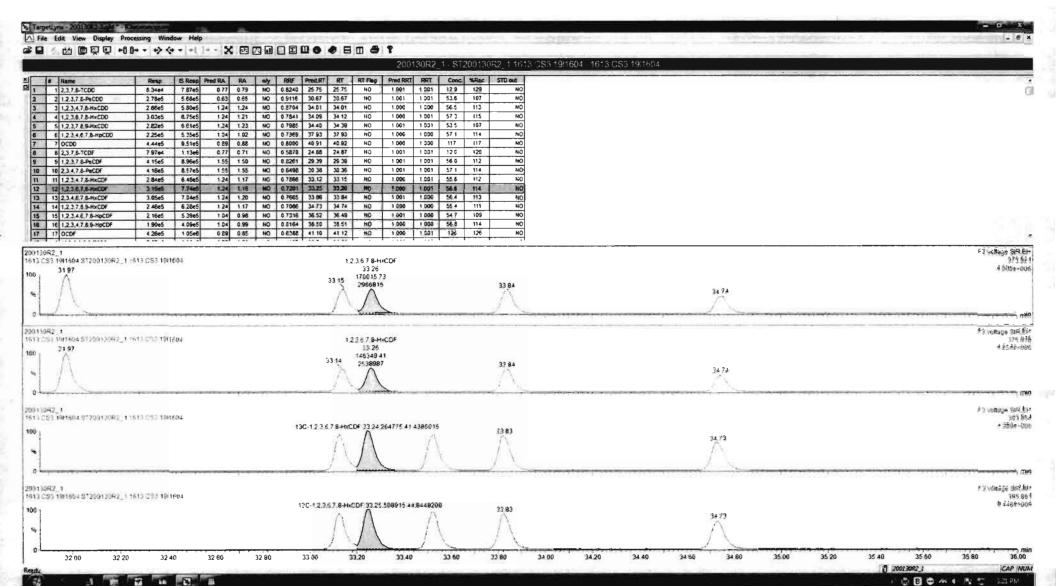
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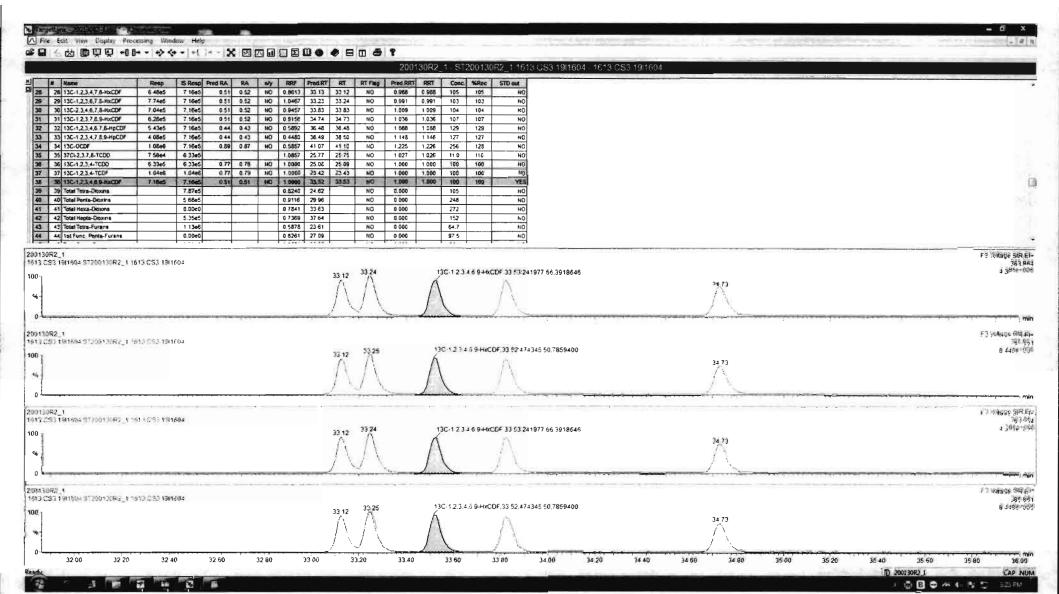




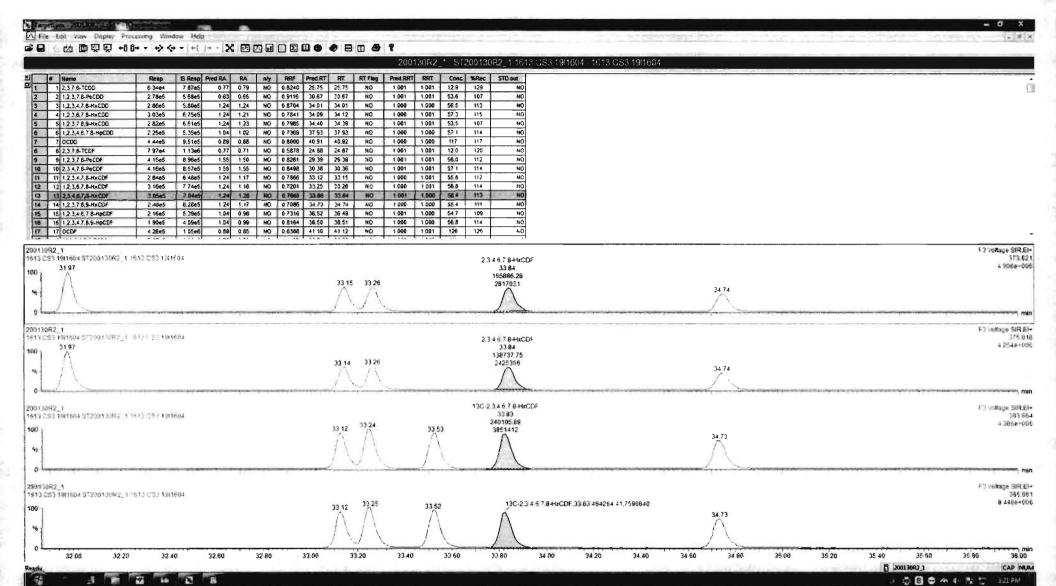
Work Order 1903647 Page 287 of 523



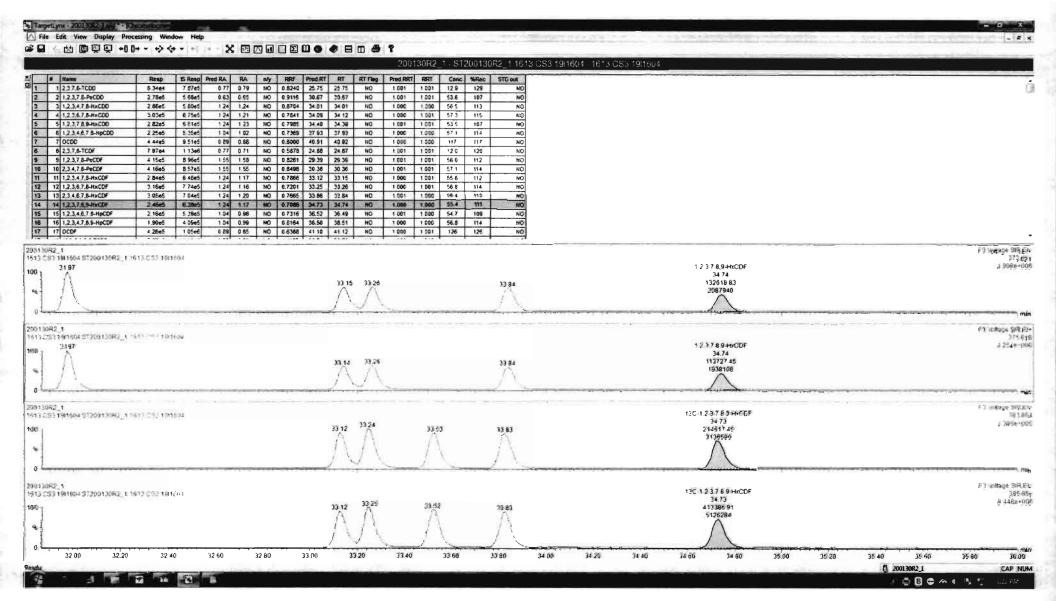
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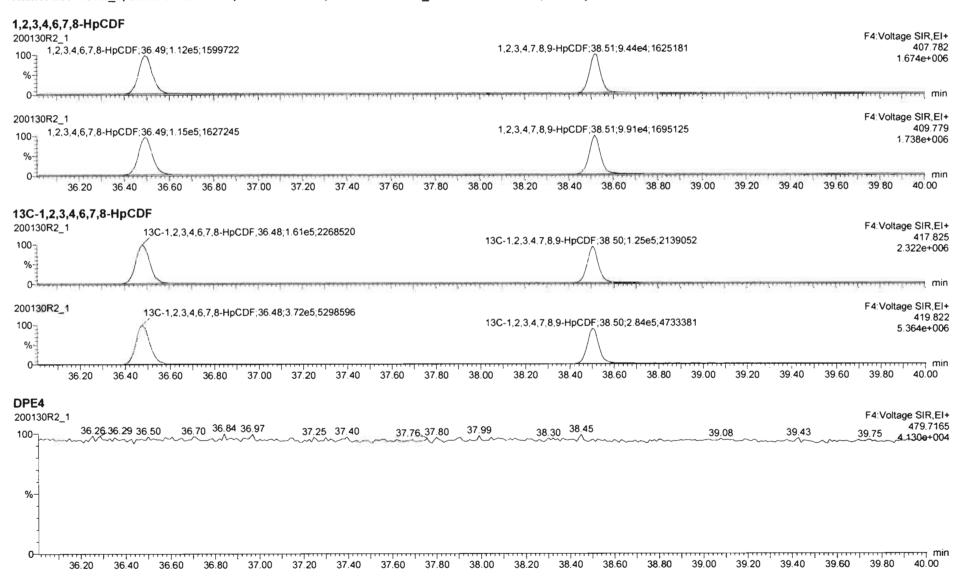
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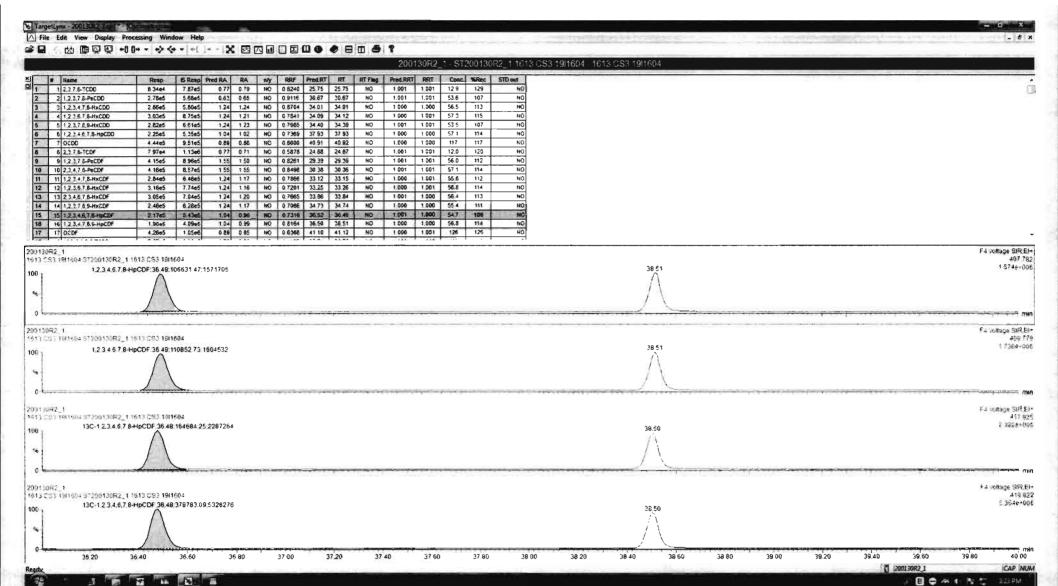
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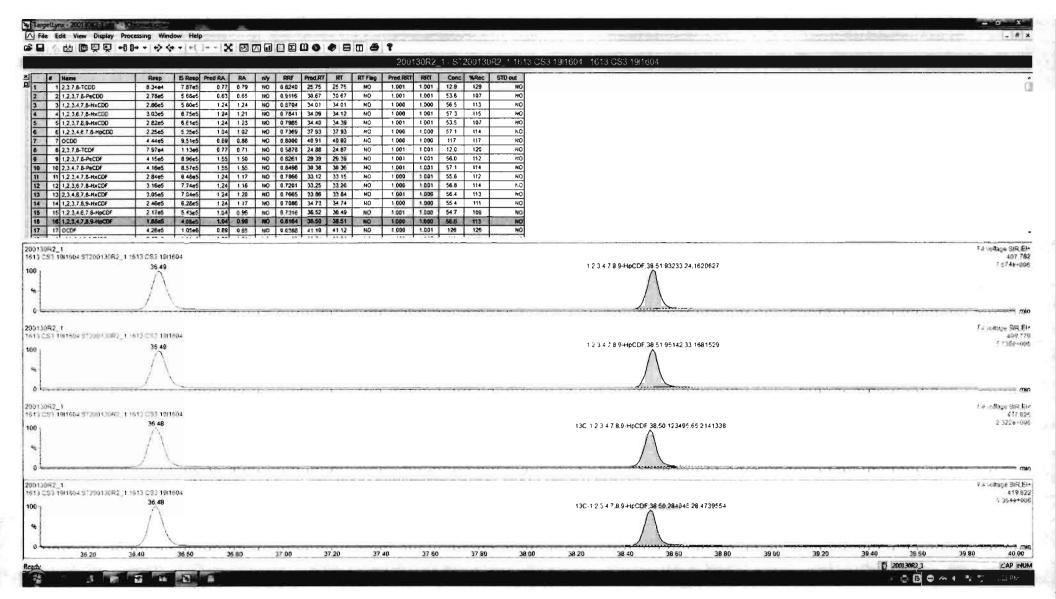
Last Altered: Thursday, January 30, 2020 15:26:25 Pacific Standard Time Thursday, January 30, 2020 15:26:36 Pacific Standard Time

Name: 200130R2 1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2_1 1613 CS3 19I1604, Description: 1613 CS3 19I1604





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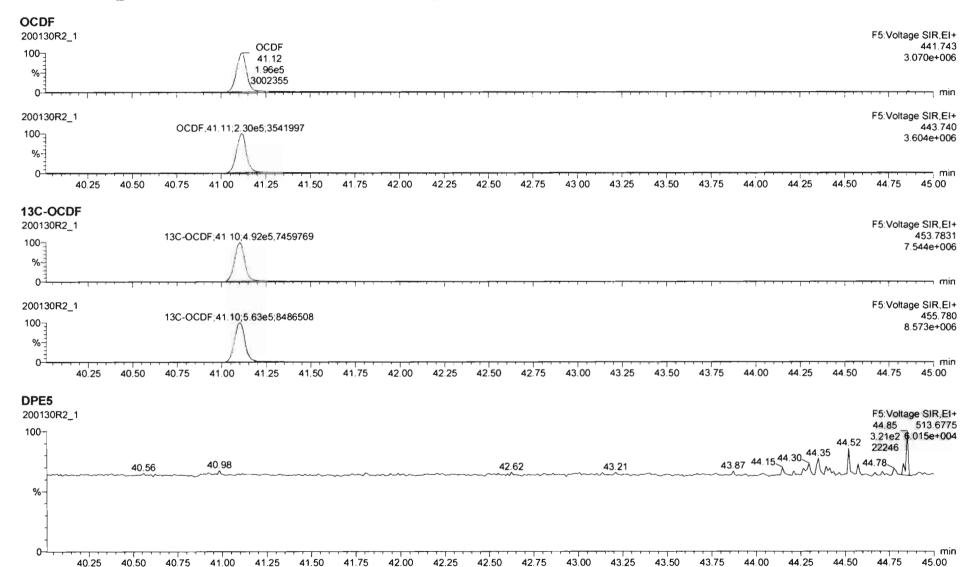
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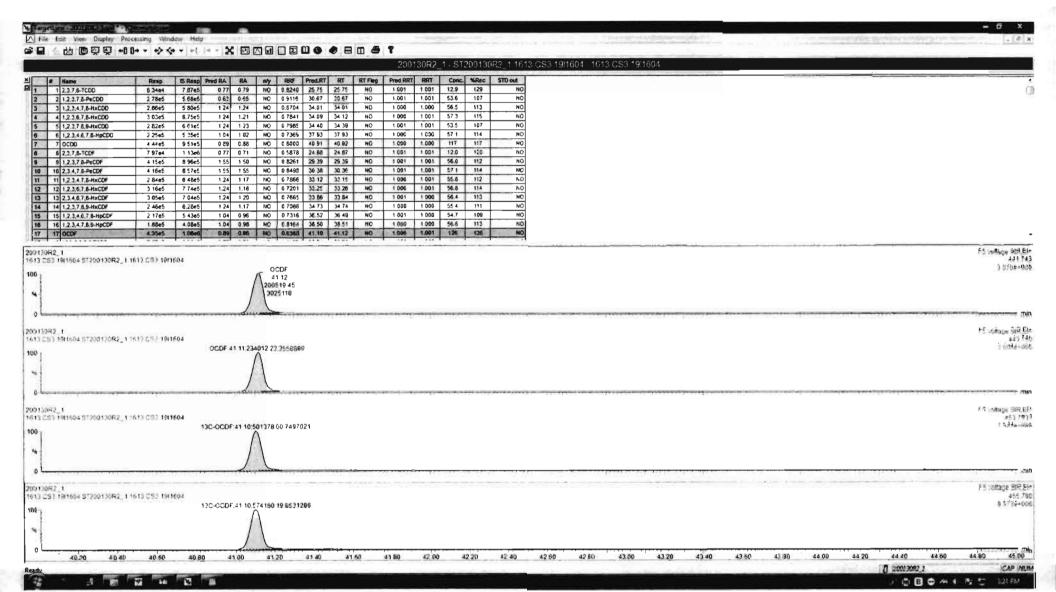
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Last Altered: Printed: Thursday, January 30, 2020 15:26:25 Pacific Standard Time Thursday, January 30, 2020 15:26:36 Pacific Standard Time

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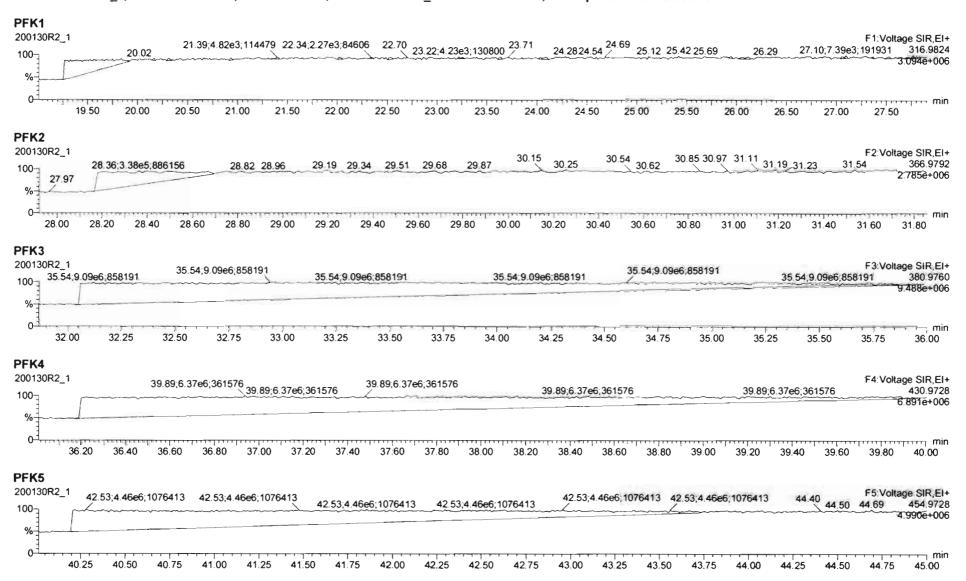
Work Order 1903647 Page 296 of 523

Dataset:

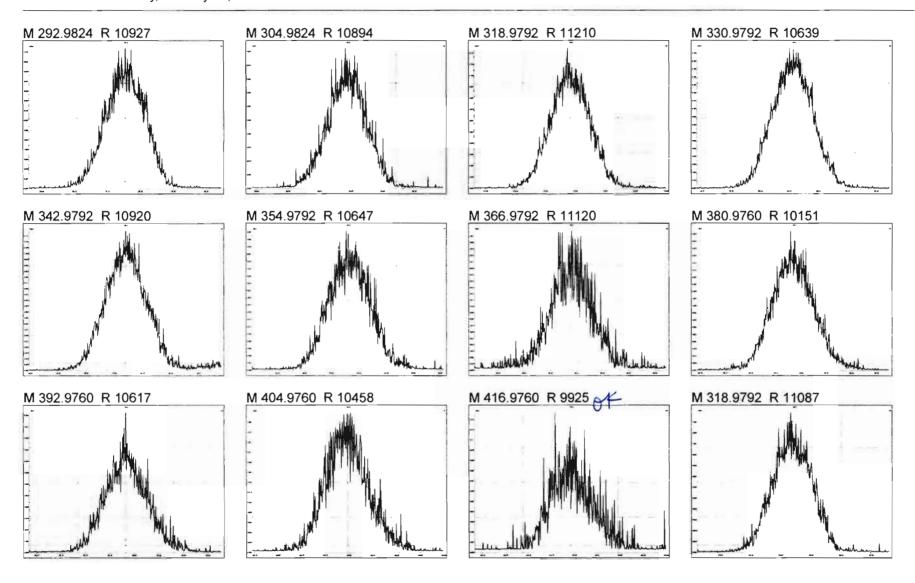
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Last Altered: Printed: Thursday, January 30, 2020 15:26:25 Pacific Standard Time Thursday, January 30, 2020 15:26:36 Pacific Standard Time

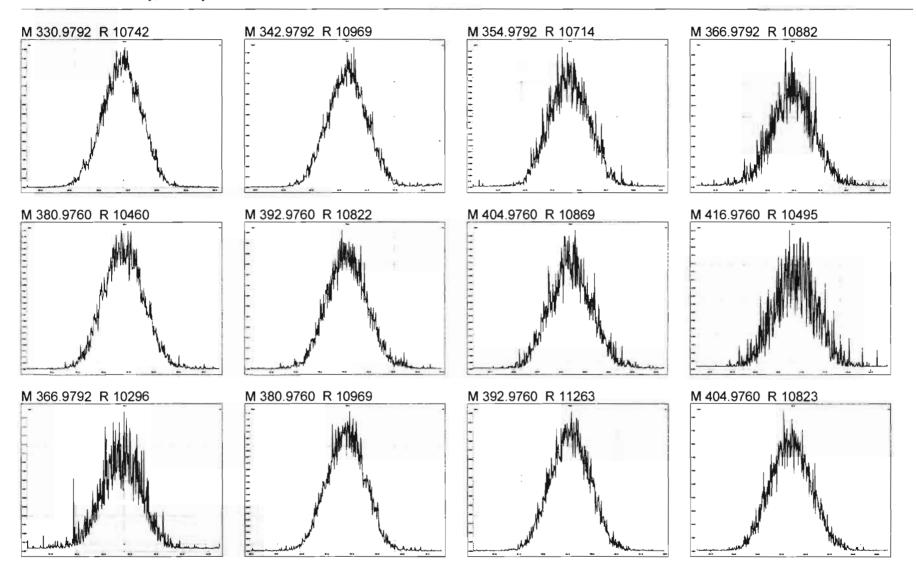
Name: 200130R2 1, Date: 30-Jan-2020, Time: 14:14:22, ID: ST200130R2 1 1613 CS3 19I1604, Description: 1613 CS3 19I1604



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

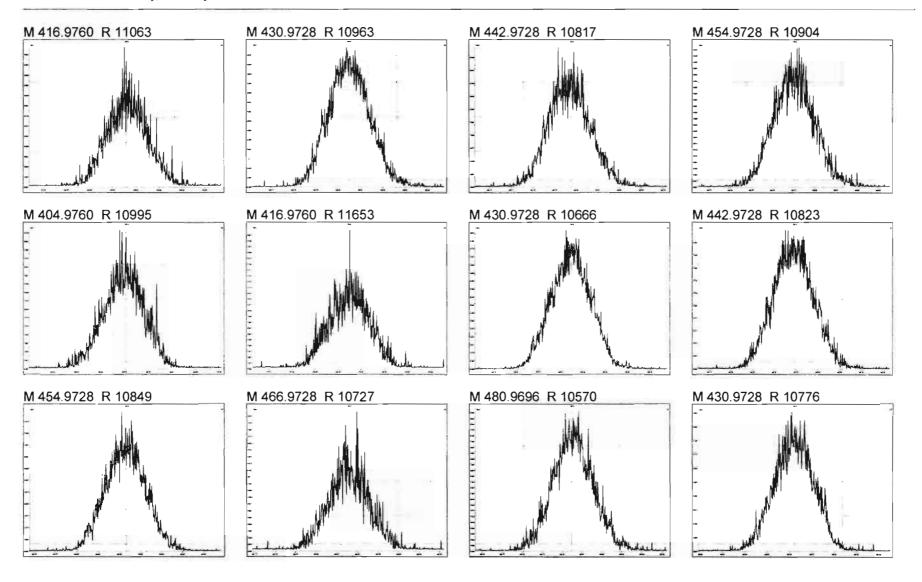


Friday, January 31, 2020 02:20:30 Pacific Standard Time



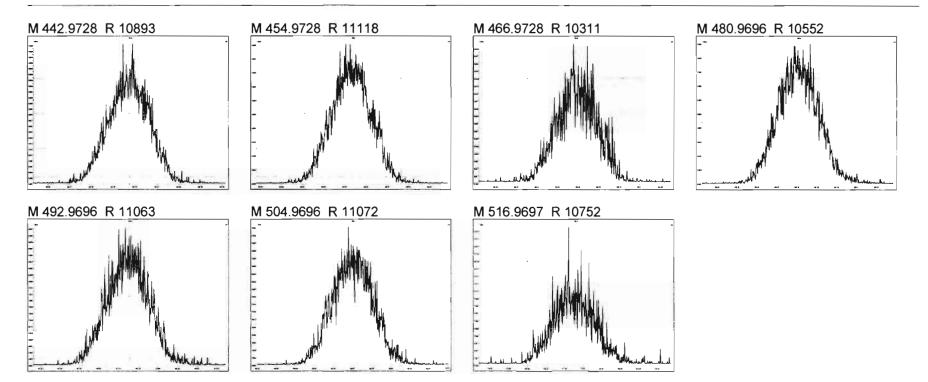
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Friday, January 31, 2020 02:20:30 Pacific Standard Time



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



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HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST20013023-1			Reviewed By: 17 00/04/2020		
End Calibration ID: NA	_			~	•
	Beg.	End		Beg.	© End
Ion abundance within QC limits?		NA	Mass resolution ≥		
Concentrations within criteria?	V	中	□ 5k □ 6-8K □ 8K + 10K 1614 1699 429 1613/1668/8280		
TCDD/TCDF Valleys <25%		中	Intergrated peaks display correctly?		PA
First and last cluters present?	Ø	中	GC Break <20%		
Retention Times within criteria?		ф	8280 CS1 End Standard:		
Verification Std. named correctly?		中	- Ratios within limits, S/N <2.5:1, CS1 within 12 hours		AM
(ST-Year-Month-Day-VG ID)					
Forms signed and dated?	Image: section of the	中	Comments: (A) BOTH BEG. 4 END PER CHECK HAD BELOW IOK.	1-2 m	ACCET
Correct ICAL referenced?	GRO		Bern (O()		
Run Log:					
- Correct Instrument listed?	7	V			
- Samples within 12 hour clock?	\bigcirc	N			
- Bottle position verfled?	G	SPB			

Rev. No.: 0 Rev. Date: 06/06/2017

Page: 1 of

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Dataset:

U:\VG12.PRO\Results\200130R3\200130R3-2.ald

Last Altered: Printed:

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

GRB 01/31/2020 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: 200130R3_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3_1 1613 CS3 19I1604, Description: 1613 CS3 19I1604

	Plent Act	Pleas		ALL.	ndy.	FORE	Protest	FEE	RF Plag	Photography	1	Cours !	Miles	540 cm
	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	30.86	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
6 7	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	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	55.51 6	111	NO
7	7 OCDD	3.60e5	7.79e5	0.86	NO	0.800	40.90	40.91	NO	1.000	1.000	115.38	115	NO
6	8 2,3,7,6-TCDF	6.40e4	9.08e5	0.74	NO	0.588	24.83	24.84	NO	1.001	1.001	11.984	120	NO
9	9 1,2,3,7,8-PeCDF	3.4 5e 5	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	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	12 1,2,3,6,7,8-HxCDF	2.40e5	5.88e5	1.15	NO	0.720	33.24	33.25	NO	1.900	1.001	56.740	113	NO
13 14	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	54.360	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
Str. Shear	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 19C-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. 51e 5	0.63	NO	0.641	30.43	30.64	NO	1.215	1.223	108.53	109	NO
	20 13C-1,2,3,4,7,6-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	66.448	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	0.601	40.81	40.90	NO	1.218	1.221	238.04	119	MO
	25 13C-2,3,7,8-TCDF	9.08e5	7.97e5	9.78	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. 97e 5	1.58	NO	0.917	29.20	29.35	NO	1.166	1.172	102.08	102	NO
3/XX	27 13C-2,3,4,7,8-PeCDF	7.32e5	7.97e5	1.58	NO	0.903	30.16	30.33	NO	1.284	1.211	101.77	102	NO
	26 13C-1,2,3,4,7,8-HxCDF	4.95e5	5.45e5	0.52	NO	0.661	33.11	33.11	NO	0.988	0.988	105.55	106	NO
	29 13C-1,2,3,6,7,6-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-2,3,4,6,7,6-HxCDF	5.30e5	5.45e5	0.52	NO	0.946	33.81	33.82	NO	1.009	1.009	183.00	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 ·

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Vista Analytical Laboratory

Dataset:

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

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

A.			O Comp		100		The state of	400			THE TANK			Water Care
	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
71.5 L	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 37CI-2,3,7,8-TCDD	6.30 e4	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
A STATE OF THE STA	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 814
	39 Total Tetra-Dioxins		6.36e5			0.824	24.62		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
4	44 1st Func. Penta-Furans		0.00e0			0.826	27.09		NO	0.000				NO
ris.	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

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Quantify Compound Summary Report MassLynx 4.1 SCN815

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Dataset:

Untitled

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

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

	Marie .		Acq Digit	
	200130R3_1	SOLVENT BLANK	31-Jan-20	03:06:50
	200130R3_2	ST200130R3_1 1613 CS3 19I1604	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
6	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
98	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

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Dataset: L

Untitled

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

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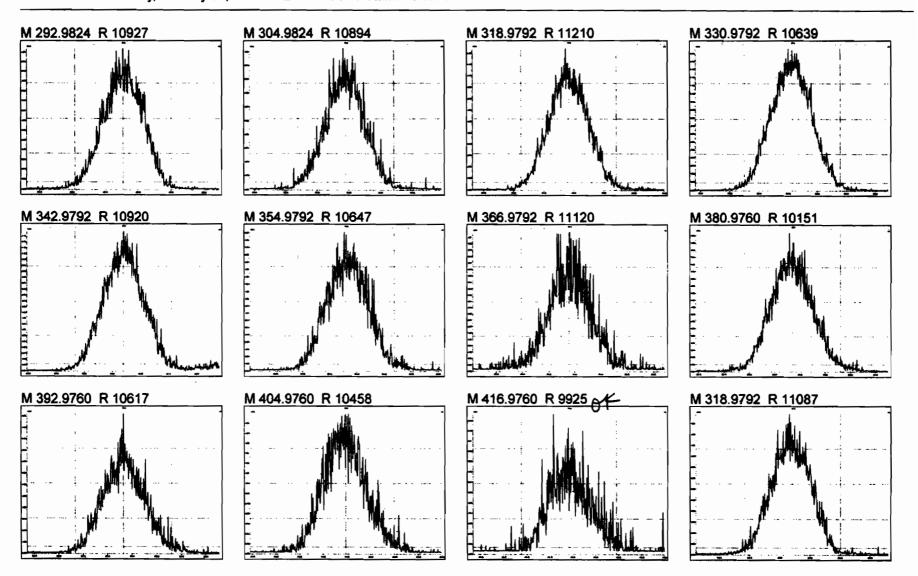
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Name: 200130R3_2, Date: 31-Jan-2020, Time: 03:53:47, ID: ST200130R3_1 1613 CS3 19I1604, Description: 1613 CS3 19I1604

		AUT
1	1 1,3,6,8-TCDD (First)	21.74
2 .	2 1,2,8,9-TCDD (Last)	26. 6 6
2 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
19	13 1,2,3,4,6,8-HxCDF (First)	31.96
14	14 1,2,3,7,8,9-HxCDF (Last)	34.73
接	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

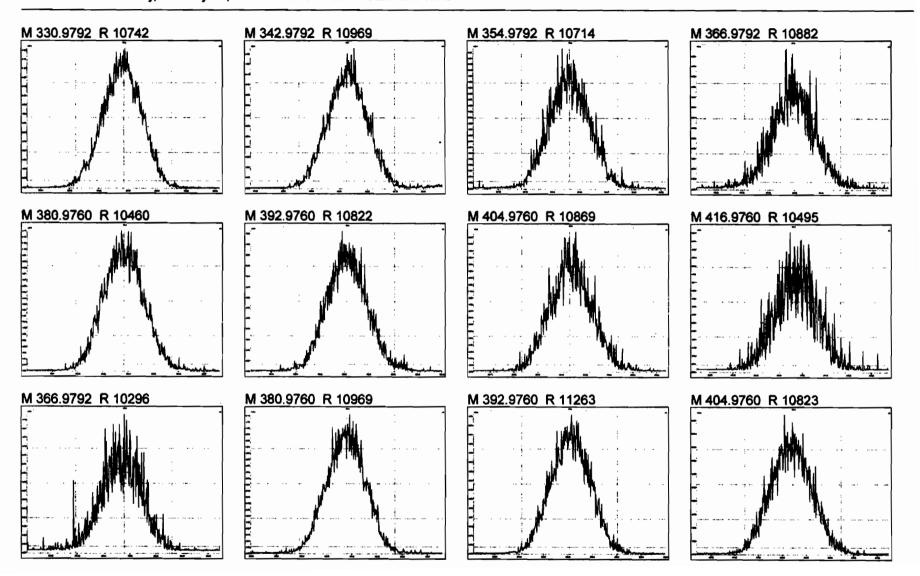
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Friday, January 31, 2020 02:20:30 Pacific Standard Time



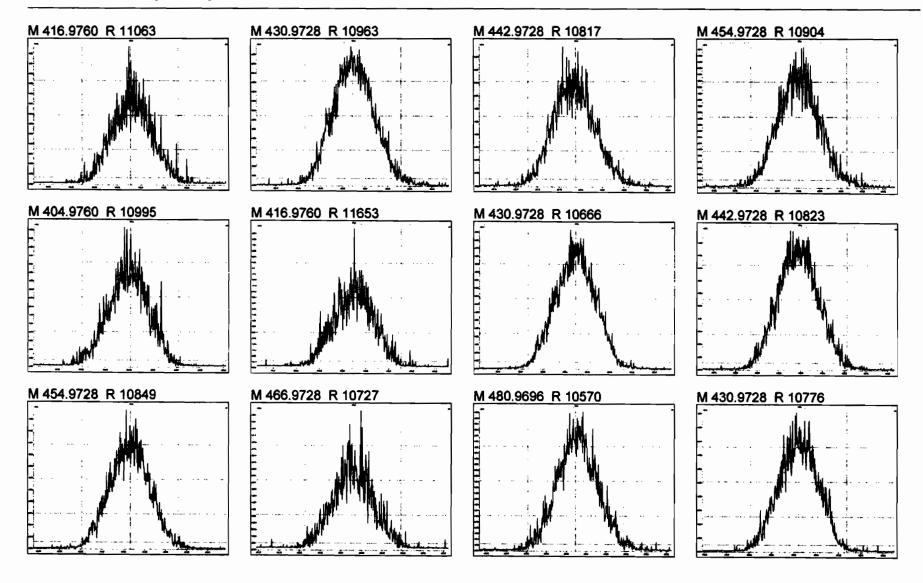
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Friday, January 31, 2020 02:20:30 Pacific Standard Time



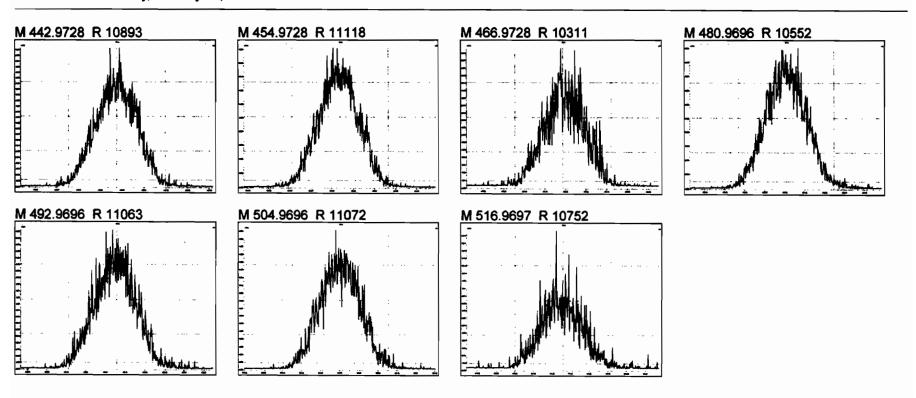
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Friday, January 31, 2020 02:20:30 Pacific Standard Time



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



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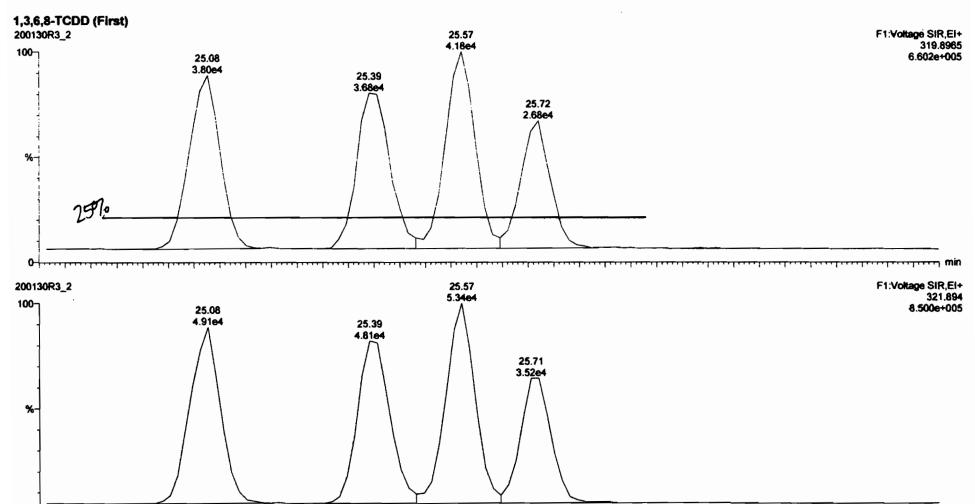
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Friday, January 31, 2020 15:49:38 Pacific Standard Time Friday, January 31, 2020 15:49:43 Pacific Standard Time

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

Calibration: U:\VG12.PRO\CurveDB\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 19l1604, Description: 1613 CS3 19l1604



25.90

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26.10

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Work Order 1903647

24.90

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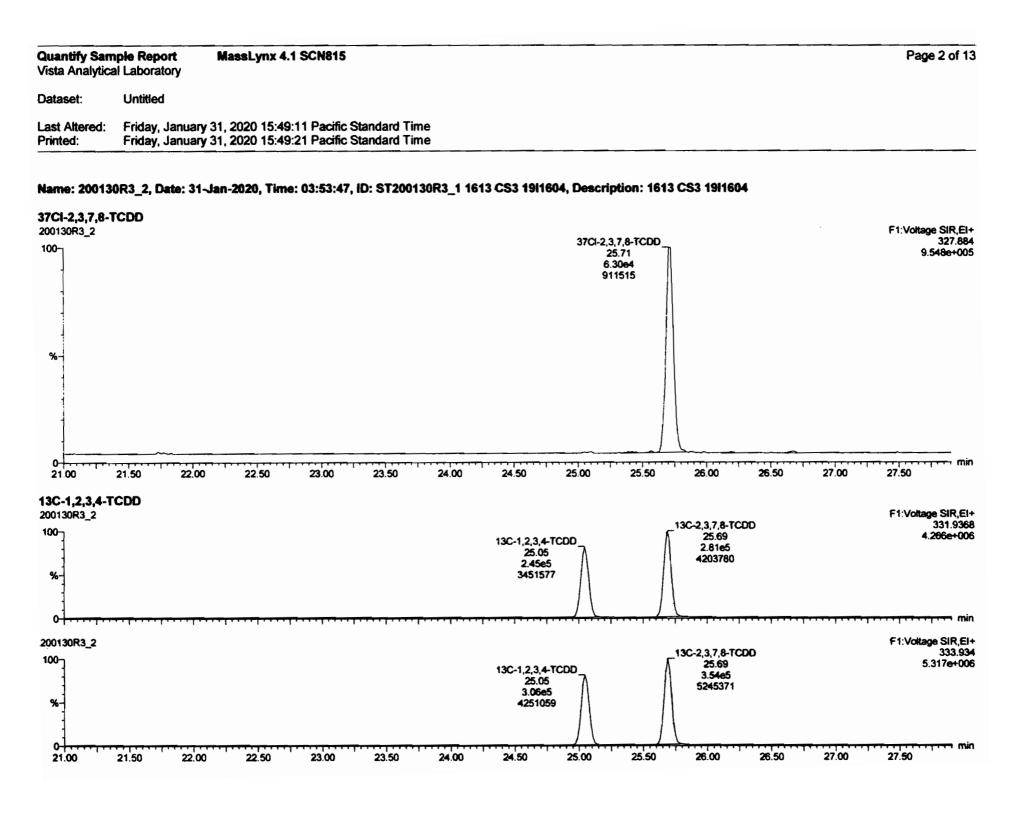
24.80

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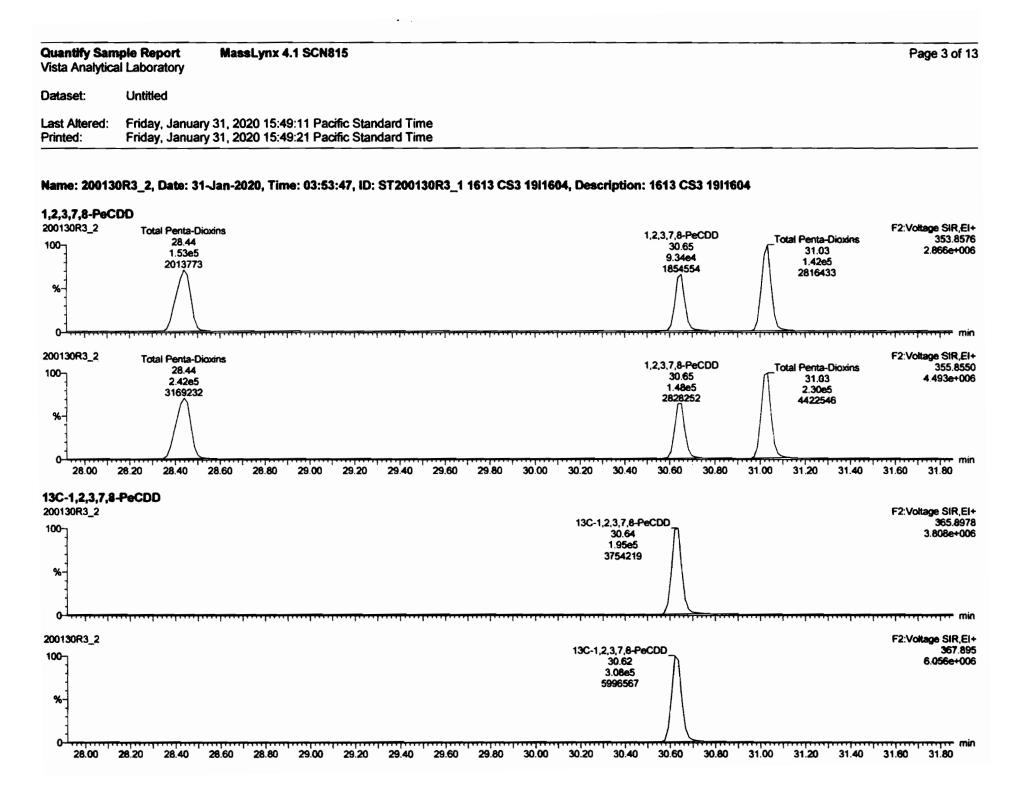
26.50

26.40

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34.00

34,20

34.40

34.60

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33.80

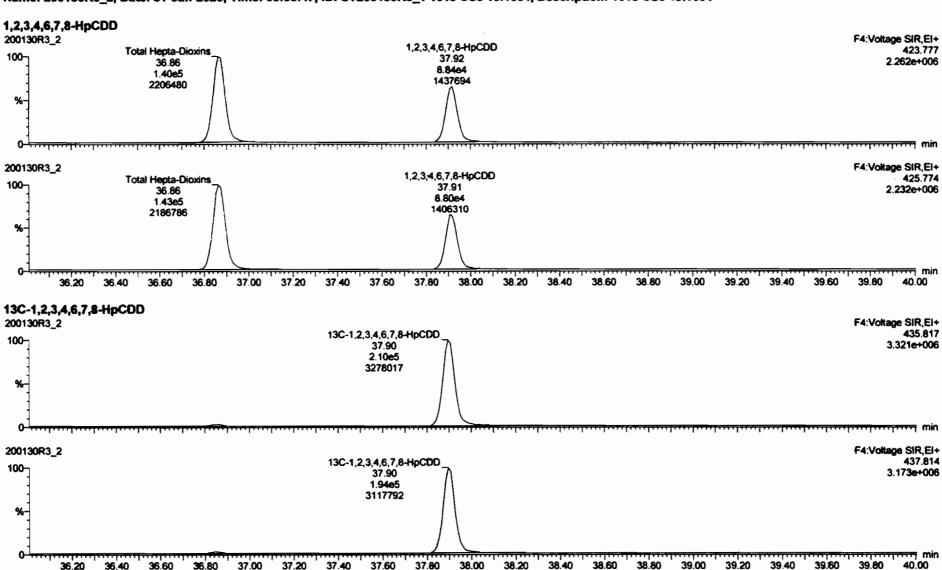
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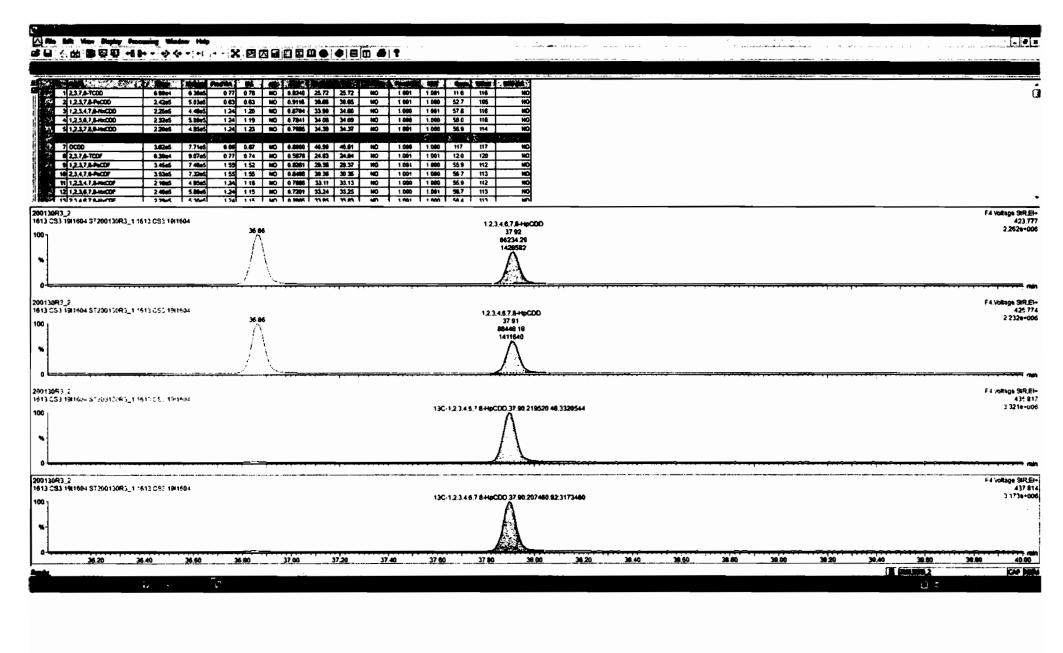
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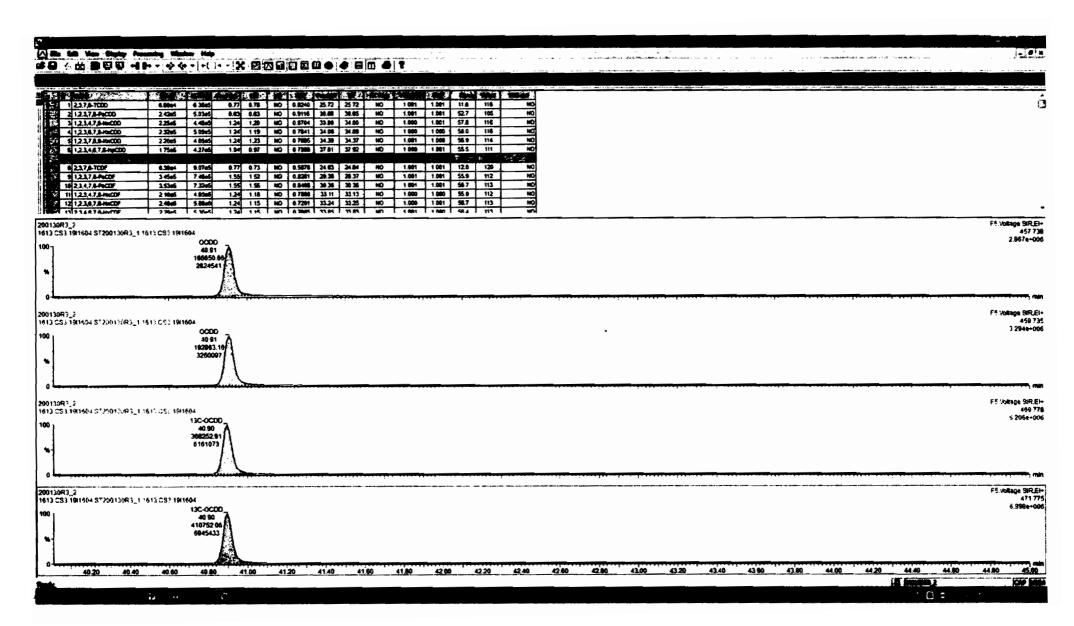
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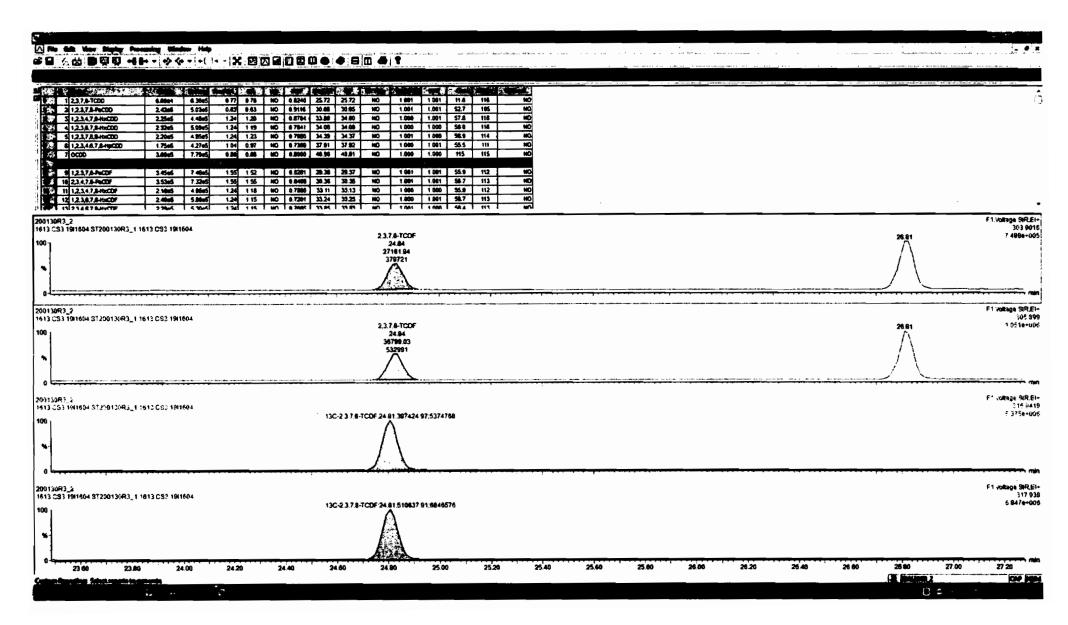
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30.00

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29.00

29.20

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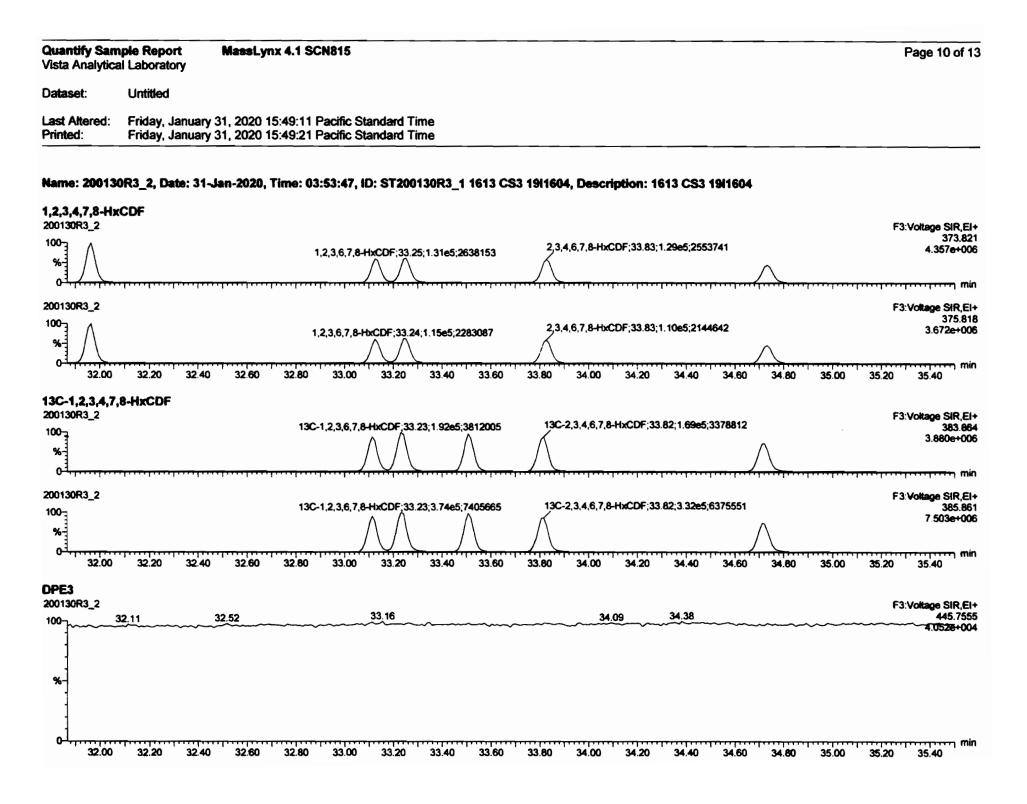
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30.60

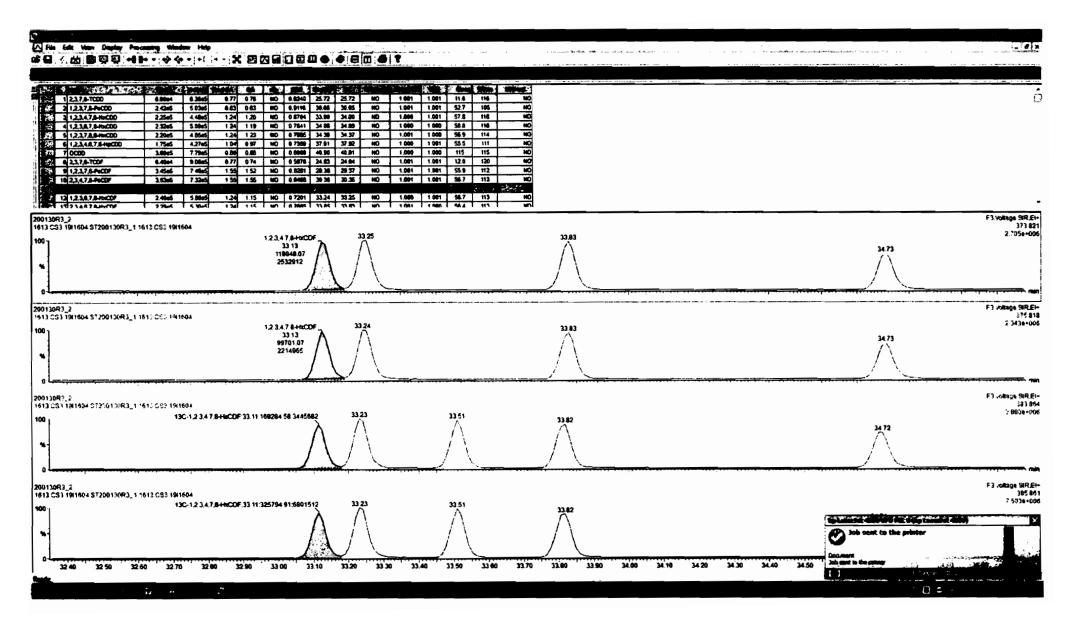
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31.00

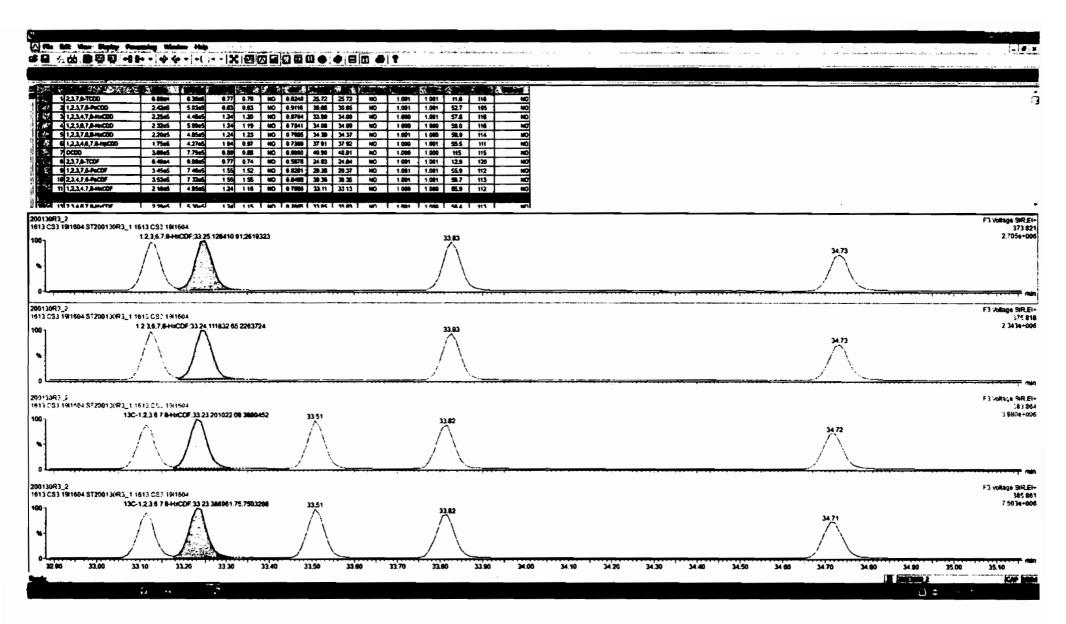
31.20



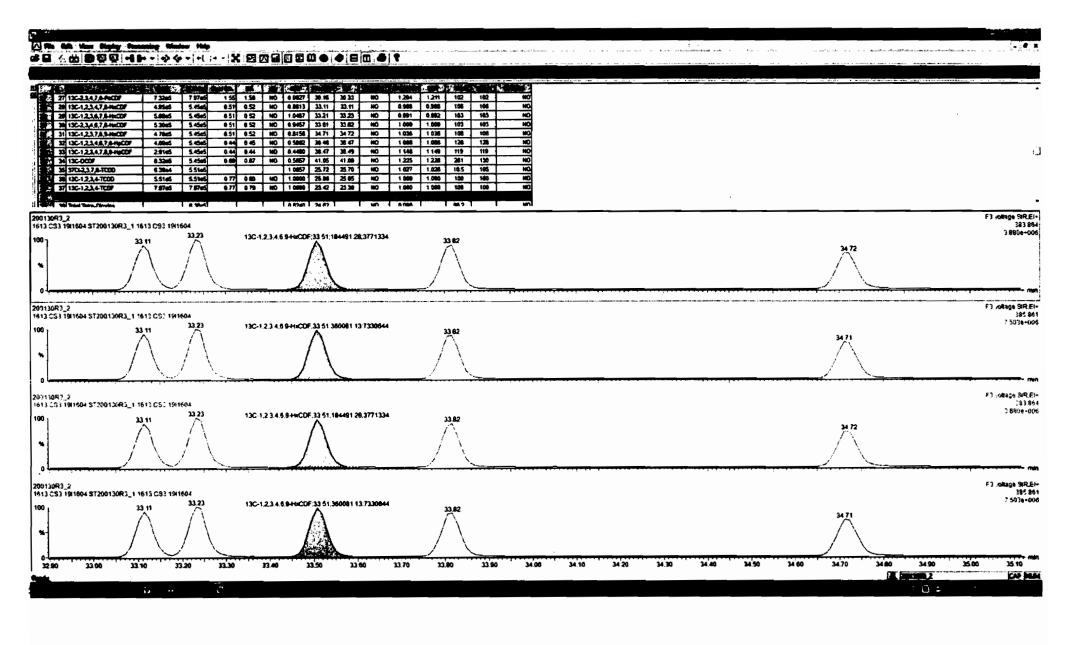
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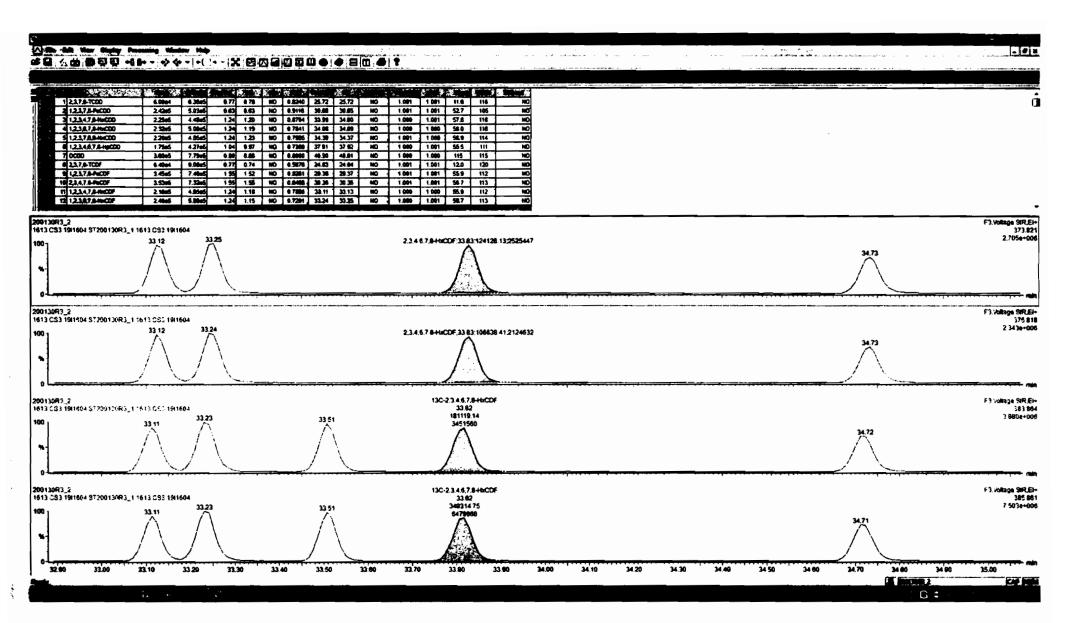
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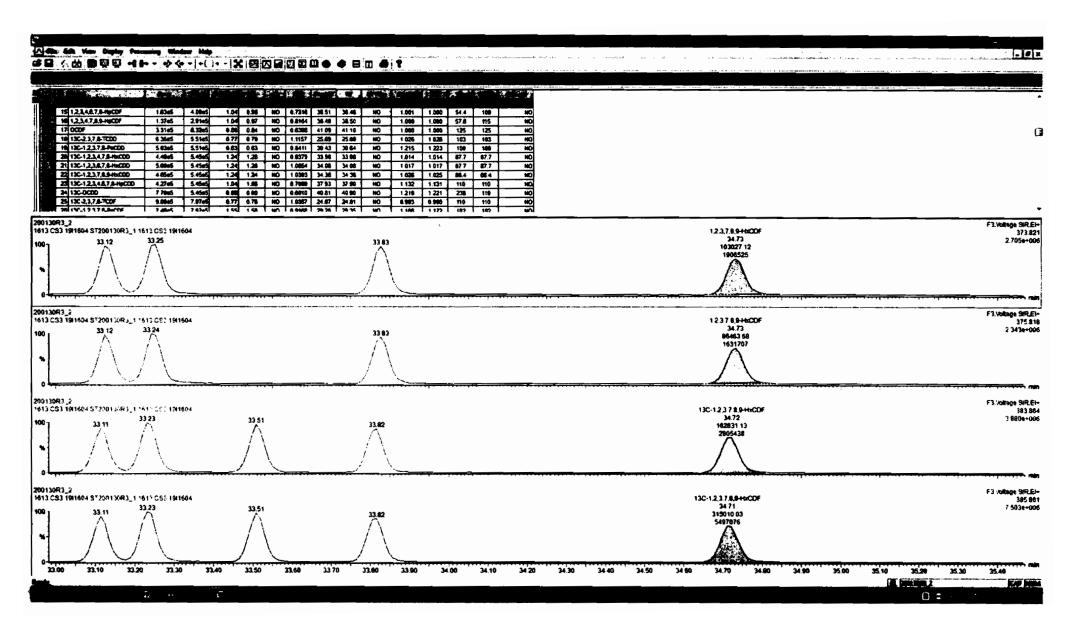
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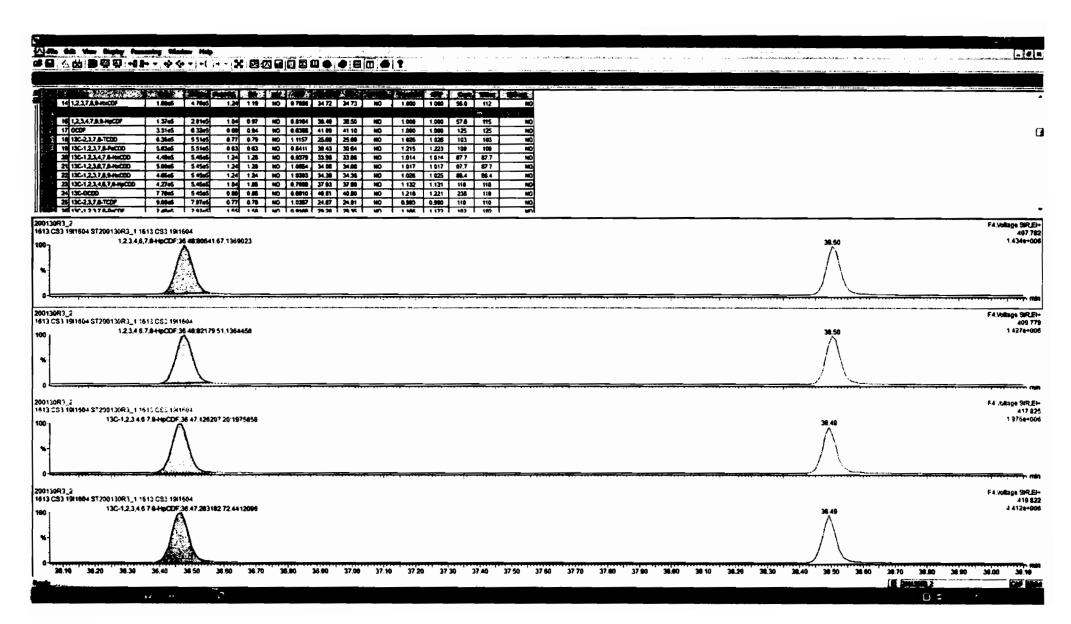


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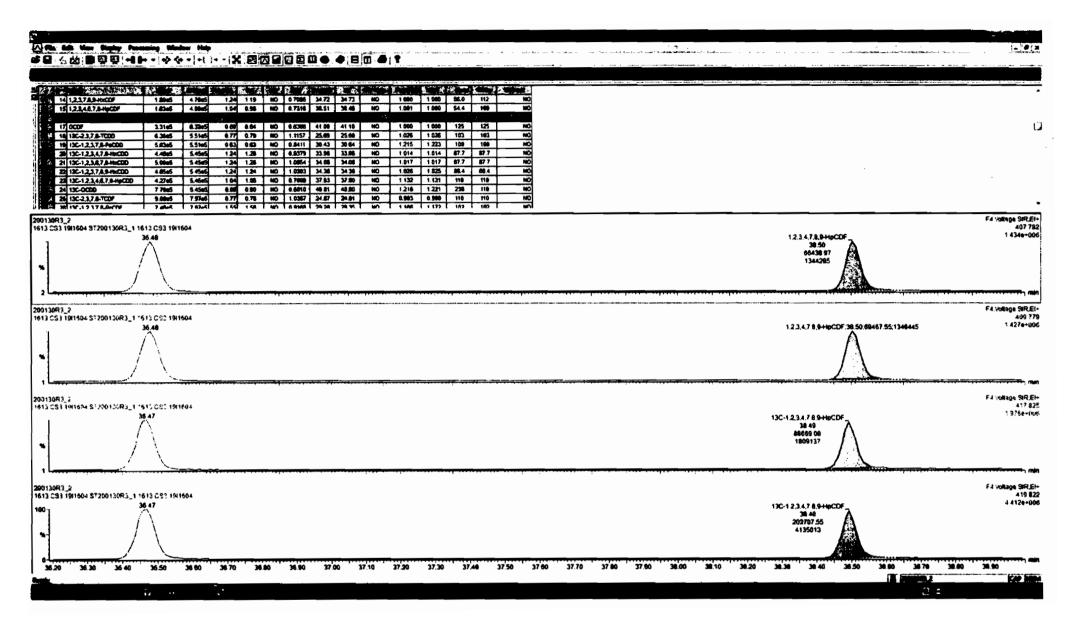


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40.25

40.50

40.75

41.00

41.25

41.50

41.75

42.00

42.25

42.50

42.75

43.00

43.25

43.50

43.75

44.00

44.25

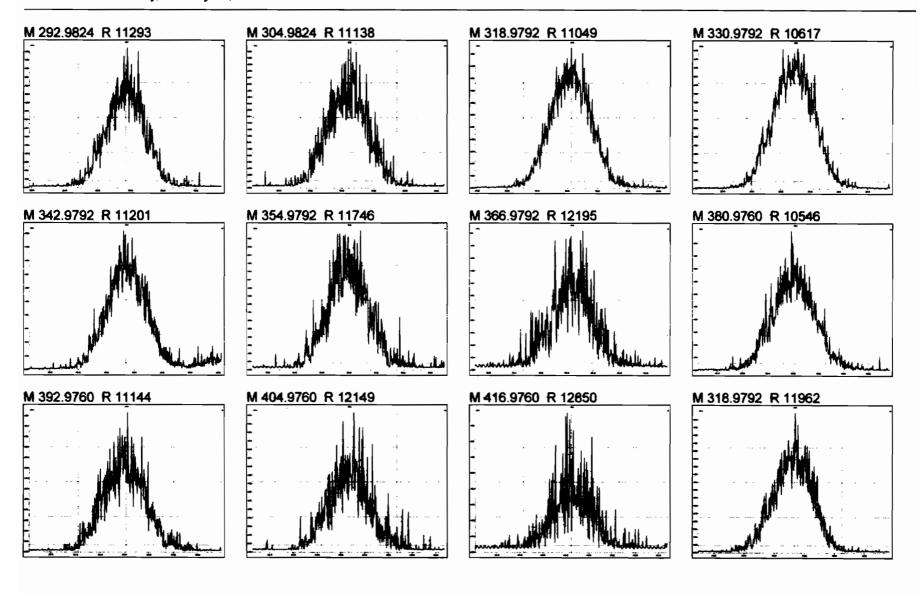
44.50

44,75

— min

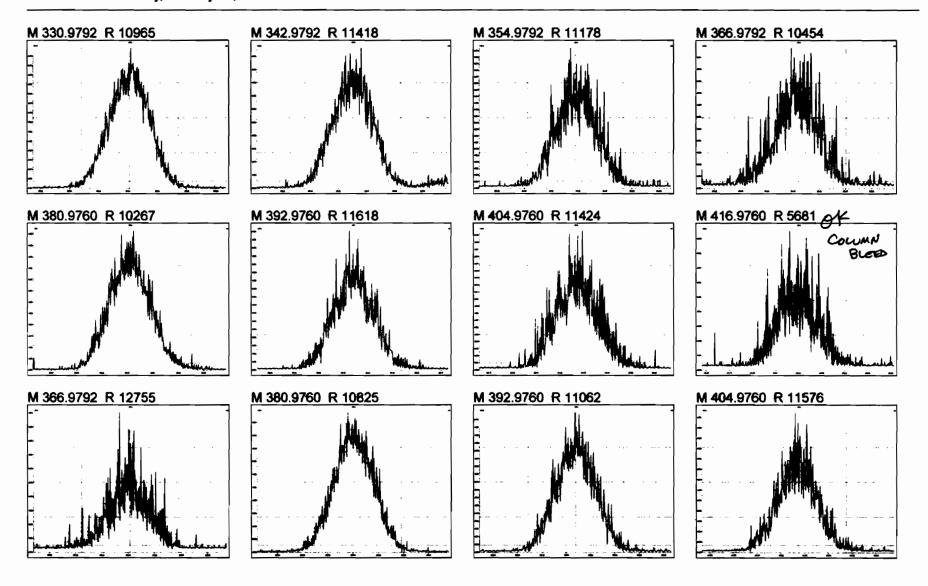
Work Order 1903647 Page 334 of 523

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



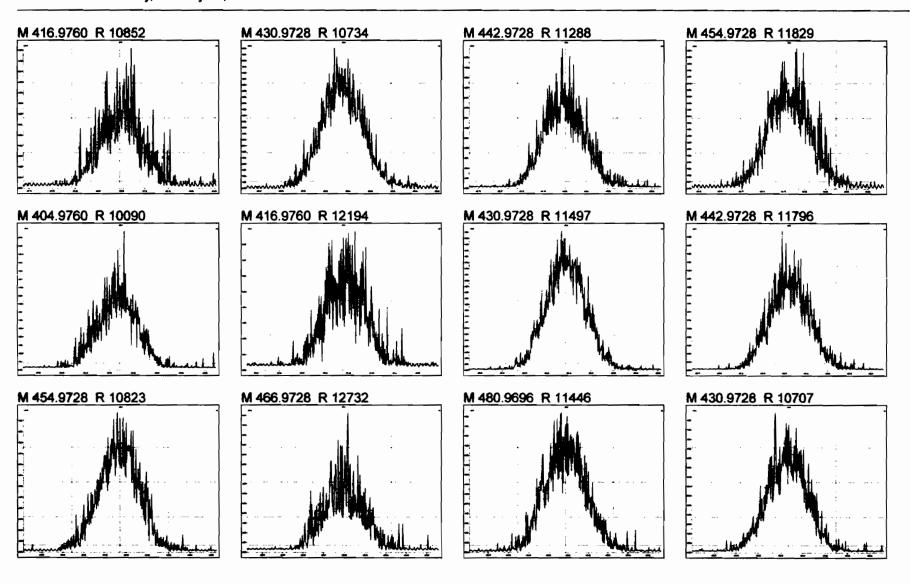
Work Order 1903647 Page 335 of 523

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



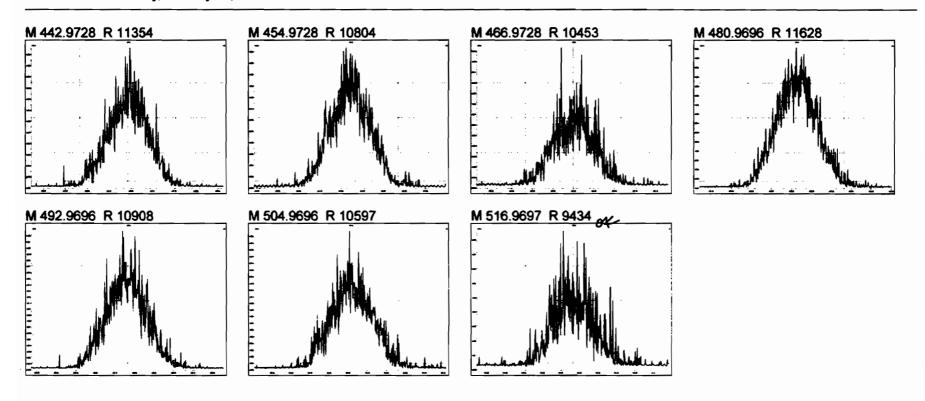
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Friday, January 31, 2020 15:47:45 Pacific Standard Time



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



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HRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST200(31R1-7	_		Reviewed By: 1.5. WW		
End Calibration ID: NA	Beg.	<u>End</u>	Initials & Date	Beg. /	A End
Ion abundance within QC limits?	I	NA	Mass resolution >	$\overline{\smile}$	
Concentrations within criteria?			□ 5k □ 6-8K □ 8K № 10 K 1614 1699 429 1613/1668/8280		
TCDD/TCDF Valleys <25%	J	Ш	Intergrated peaks display correctly?	\vee	NA
First and last eluters present?			GC Break <20%		
Retention Times within criteria?	V/		8280 CS1 End Standard:		
Verification Std. named correctly?	9		- Ratios within limits, S/N <2.5:1, CS1 within 12 hours		NA
(ST-Year-Month-Day-VG ID)					
Forms signed and dated?	4		Comments: A END PES CHECK HAD ONE MASS W/ COLUMN	BLEED	
Correct ICAL referenced?	GRB				
Run Log:					
- Correct instrument listed?	J	V			
- Samples within 12 hour clock?	Υ	N			
- Bottle position verfied?	GRA)		_	

Rev. No.: 0 Rev. Date: 06/06/2017 Page: 1 of 1

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ID: LR - HCSRC

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\200131R1\200131R1-9.qld

Last Altered: Printed:

Sunday, February 02, 2020 10:38:51 Pacific Standard Time Sunday, February 02, 2020 10:41:20 Pacific Standard Time

GRB 02/03/2020 Hz 2.3.200

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: 200131R1 9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604

LULIO N	# Name	Resp	IS Resp	RA	n/y	RRF	Pred.RT	RT	RT Flag	Pred.RRT	RRT	Conc.	%Rec	STD out
1	1 2,3,7,8-TCDD	1.02e5	1.05e6	0.81	NO	0.824	25.69	25.69	NO	1.001	1.001	11.772	118	NO
2	2 1,2,3,7,8-PeCDD	3.87e5	7.88e5	0.61	NO	0.912	30.63	30.62	NO	1.001	1.001	53.928	108	NO
3	3 1,2,3,4,7,8-HxCDD	3.49e5	7.0 4e 5	1.22	NO	0.870	33.97	33.98	NO	1.000	1.001	56.894	114	NO
4	4 1,2,3,6,7,8-HxCDD	3.62e5	8.04e5	1.21	NO	0.784	34.06	34.07	NO	1.000	1.000	57.427	115	NO
5	5 1,2,3,7,8,9-HxCDD	3.31e5	7.35e5	1.24	NO	0.798	34.37	34.35	NO	1.001	1.000	56.415	113	NO
6	6 1,2,3,4,6,7,8-HpCDD	2.48e5	5.80e5	1.02	NO	0.737	37.90	37.90	NO	1.000	1.000	57.963	116	NO
7	7 OCDD	4.87e5	1.04e6	0.88	NO	0.800	40.88	40.90	NO	1.000	1.001	117.53	118	NO
8	8 2,3,7,8-TCDF	1.04e5	1.49e6	0.72	NO	0.588	24.80	24.81	NO	1.001	1.001	11.945	119	NO
9	9 1,2,3,7,8-PeCDF	5.87e5	1.26e6	1.55	NO	0.826	29.36	29.34	NO	1.001	1.000	56.245	112	NO
10	10 2,3,4,7,8-PeCDF	5.81e5	1.22e6	1.53	NO	0.850	30.33	30.32	NO	1.001	1.001	56.050	112	NO
11	11 1,2,3,4,7,8-HxCDF	3.30e5	7.51e5	1.19	NO	0.787	33.09	33.10	NO	1.000	1.000	55.928	112	NO
12	12 1.2,3.6,7,8-HxCDF	3.77e5	9.32e5	1.19	NO	0.720	33.23	33.23	NO	1.000	1.000	56.158	112	NO
13	13 2,3,4,6,7,8-HxCDF	3.63e5	8.34e5	1.17	NO	0.766	33.83	33.81	NO	1.001	1.000	56.768	114	NO
14	14 1,2,3,7,8,9-HxCDF	2.86e5	7.22e5	1.17	NO	0.709	34.69	34.71	NO	1.000	1.001	55.797	112	NO
15	15 1,2,3,4,6,7,8-HpCDF	2.32e5	5.81e5	0.96	NO	0.732	36.48	36.46	NO	1.001	1.000	54.594	109	NO
16	16 1,2,3,4,7,8,9-HpCDF	1.97e5	4.31e5	0.95	NO	0.816	38.47	38.49	NO	1.000	1.001	56.044	112	NO
17	17 OCDF	4.56e5	1.14e6	0.87	NO	0.639	41.07	41.08	NO	1.000	1.000	124.60	125	NO
18	18 13C-2,3,7,8-TCDD	1.05e6	8.91e5	0.80	NO	1.12	25.66	25.66	NO	1.026	1.026	105.46	105	NO
19	19 13C-1,2,3,7,8-PeCDD	7.88e5	8.91e5	0.65	NO	0.841	30.40	30.61	NO	1.215	1.223	105.21	105	NO
20	20 13C-1,2,3,4,7,8-HxCDD	7.04e5	7.96e5	1.29	NO	0.938	33.96	33.96	NO	1.014	1.014	94.321	94.3	NO
21	21 13C-1,2,3,6,7,8-HxCDD	8.04e5	7.96e5	1.26	NO	1.07	34.06	34.06	NO	1.017	1.017	94.783	94.8	NO
22	22 13C-1,2,3,7,8,9-HxCDD	7.35e5	7.96e5	1.23	NO	1.03	34.36	34.34	NO	1.026	1.025	89.638	89.6	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	5.80e5	7.96e5	1.04	NO	0.710	37.91	37.89	NO	1.132	1.131	102,65	103	NO
24	24 13C-OCDD	1.04e6	7.96e5	0.89	NO	0.601	40.79	40.88	NO	1.218	1.221	216.50	108	NO
25	25 13C-2,3,7.8-TCDF	1. 4 9e6	1.35e6	0.78	NO	1.04	24.84	24.78	NO	0.993	0.990	105.91	106	NO
26	26 13C-1,2,3,7,8-PeCDF	1.26e6	1.35e6	1.55	NO	0.917	29.17	29.34	NO	1.166	1.173	101.85	102	NO
27	27 13C-2,3,4,7,8-PeCDF	1.22e6	1.35e6	1.56	NO	0.903	30.12	30.30	NO	1.204	1.211	99.756	99.8	NO
28	28 13C-1,2,3,4,7,8-HxCDF	7.51e5	7.96e5	0.51	NO	0.861	33.08	33.09	NO	0.988	0.988	109.45	109	NO ·
29	29 13C-1,2,3,6,7,8-HxCDF	9.32e5	7.96e5	0.51	NO	1.05	33.19	33.22	NO	0.991	0.992	111.85	112	NO
30	30 13C-2,3,4,6,7,8-HxCDF	8.34e5	7.96e5	0.51	NO	0.946	33.79	33.80	NO	1.009	1.009	110.73	111	NO
31	31 13C-1,2,3,7,8,9-HxCDF	7.22e5	7.96e5	0.51	NO	0.816	34.69	34.69	NO	1.036	1.036	111.24	111	NO

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Vista Analytical Laboratory

Dataset: U:\VG12.PR0\Results\200131R1\200131R1-9.qld

Last Altered: Sunday, February 02, 2020 10:38:51 Pacific Standard Time Printed: Sunday, February 02, 2020 10:41:20 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 1911604, Description: 1613 CS3 1911604

3 1 / 10	# 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	5.81e5	7.96e5	0.42	NO	0.589	36.43	36.45	NO	1.088	1.088	123.82	124	NO
33	33 13C-1,2,3,4,7,8,9-HpCDF	4.31e5	7.96e5	0.44	NO	0.448	38.44	38.47	NO	1.148	1.149	120.83	121	NO
34	34 13C-OCDF	1.14e6	7.96e5	0.86	NO	0.586	41.02	41.07	NO	1.225	1.226	245.46	123	NO
35	35 37Cl-2,3,7,8-TCDD	1.05e5	8.91e5			1.09	25.69	25.69	NO	1.027	1.027	10.828	108	NO
36	36 13C-1,2,3,4-TCDD	8.91e5	8.91e5	0.80	NO	1.00	25.08	25.02	NO	1.000	1.000	100.00	100	NO
37	37 13C-1,2,3,4-TCDF	1.35e6	1.35e6	0.78	NO	1.00	23.42	23.36	NO	1.000	1.000	100.00	100	NO
38	38 13C-1,2,3,4,6,9-HxCDF	7.96e5	7.96e5	0.49	NO	1.00	33.52	33.49	NO	1.000	1.000	100.00	100	YES OF
39	39 Total Tetra-Dioxins		1.05e6			0.824	24.62		NO	0.000		97.751		NO
40	40 Total Penta-Dioxins		7.88e5			0.912	29.96		NO	0.000		230.57		NO
41	41 Total Hexa-Dioxins		0.00e0			0.784	33.63		NO	0.000		282.06		NO
42	42 Total Hepta-Dioxins		5.80e5			0.737	37.64		NO	0.000		152 81		NO
43	43 Total Tetra-Furans		1.49e6			0.588	23.61		NO	0.000		55.952		NO
44	44 1st Func. Penta-Furans		0.00e0			0.826	27.09		NO	0.000				NO
45	45 Total Penta-Furans		0.00e0			0.826	29.27		NO	0.000		188.91		NO
46	46 Total Hexa-Furans		0.00e0			0.766	33.56		NO	0.000		315.86		NO
47	47 Total Hepta-Furans		0.00e0			0.732	37.83		NO	0.000		110.64		NO

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Dataset:

Untitled

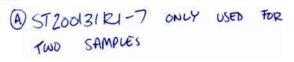
Last Altered: Printed:

Sunday, February 02, 2020 10:48:35 Pacific Standard Time Sunday, February 02, 2020 10:48:43 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 9
1	200131R1_1	ST200131R1_1 1613 CS0 19L2302	31-Jan-20	16:48:41	
2	200131R1_2	ST200131R1_2 1613 CS1 19L2303	31-Jan-20	17:37:04	
3	200131R1_3	ST200131R1_3 1613 CS2 19L2304	31-Jan-20	18:23:19	
4	200131R1_4	ST200131R1_4 1613 CS3 19L2305	31-Jan-20	19:10:18	
5	200131R1_5	ST200131R1_5 1613 CS4 19L2306	31-Jan-20	19:57:17	
6	200131R1_6	ST200131R1_6 1613 CS5 19L2307	31-Jan-20	20:44:23	
7	200131R1_7	SOLVENT BLANK	31-Jan-20	21:31:31	
8	200131R1_8	SS200131R1_1 1613 SSS 19L2308	31-Jan-20	22:18:30	
9	(A)200131R1_9	ST200131R1_7 1613 CS3 19I1604	31-Jan-20	23:05:36	
10	200131R1_10	B0A0133-BS1 OPR 1	31-Jan-20	23:52:35	
11	200131R1_11	B0A0226-BS1 OPR 10	01-Feb-20	00:39:35	
12	200131R1_12	SOLVENT BLANK	01-Feb-20	01:26:32	
13	200131R1_13	B0A0133-BLK1 Method Blank 1	01-Feb-20	02:13:32	
14	200131R1_14	B0A0226-BLK1 Method Blank 10	01-Feb-20	03:00:32	
15	200131R1_15	1904161-10RE1 PDI-046SC-A-02-03-191001	01-Feb-20	03:47:38	- 1
16	200131R1_16	1904161-16RE1 PDI-066SC-A-06-07-191011	01-Feb-20	04:34:37	
17	200131R1_17	1904207-04RE1 PDI-076SC-A-05-06-191013	. 01-Feb-20	05:21:38	
18	@ 200131R1_18	1903647-05@2X PDI-067SC-B-06-08-191010 .	01-Feb-20	06:08:35	ļ
19	A)200131R1_19	1903647-02@10X PDI-067SC-B-00-02-19101	01-Feb-20	06:55:34	

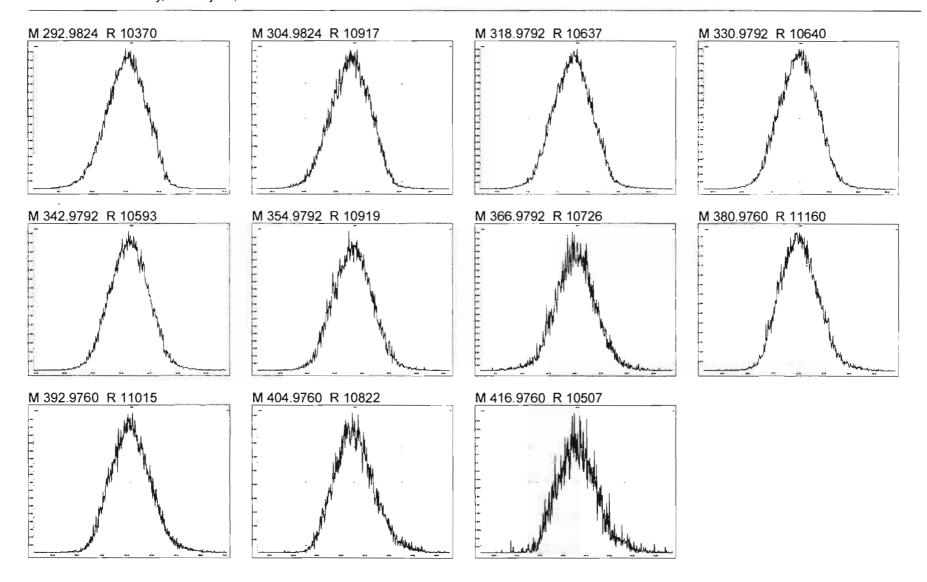


Work Order 1903647 Page 342 of 523

Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed:

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

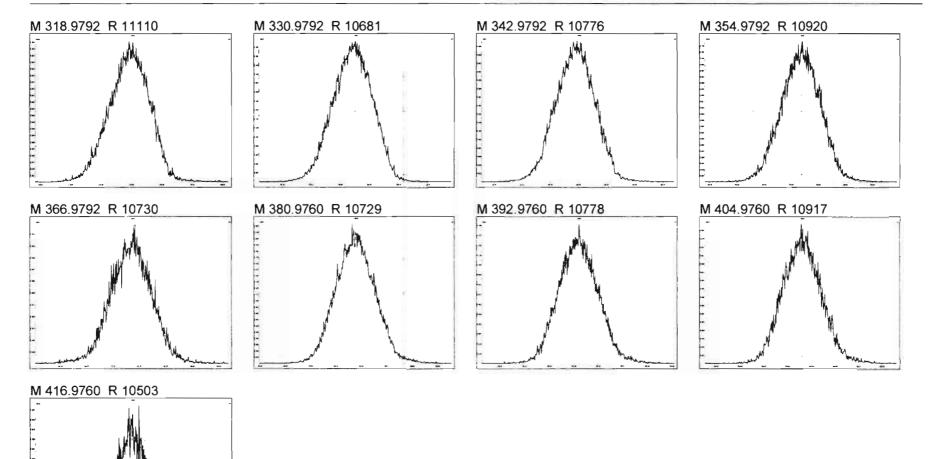


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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

Printed:

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

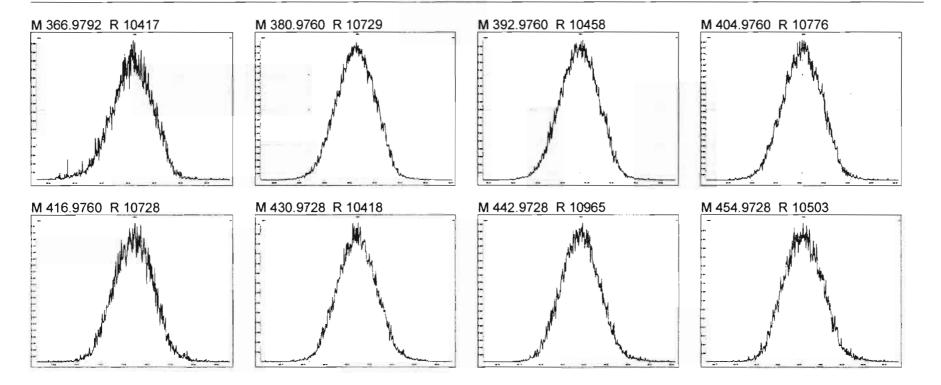


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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed:

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

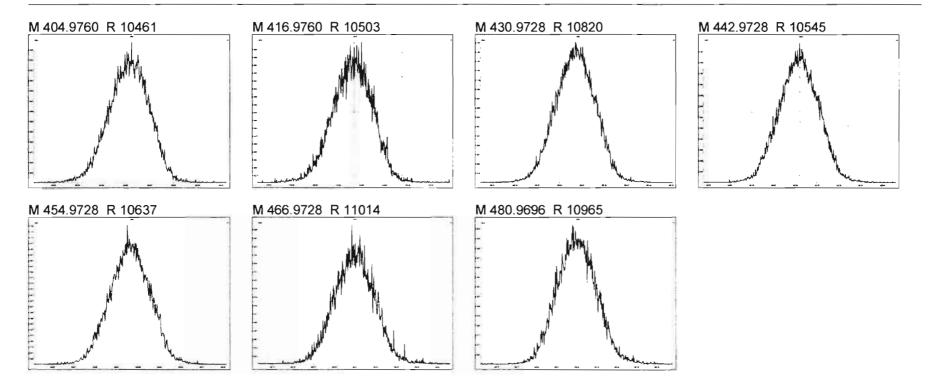


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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed:

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

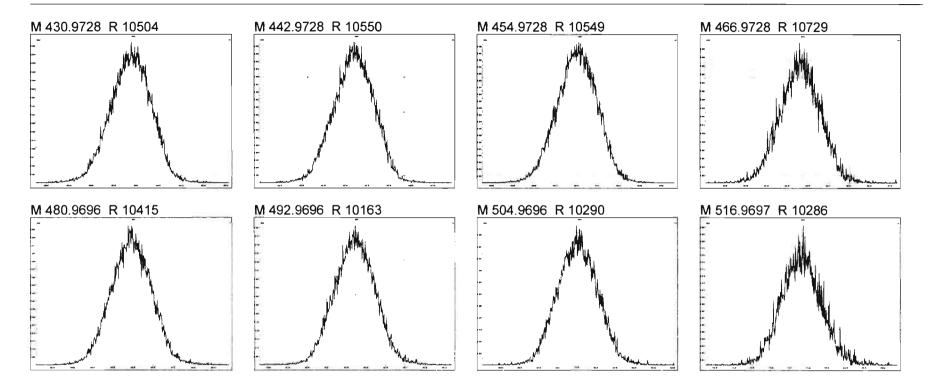


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Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed:

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



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MassLynx 4.1 SCN815

Page 1 of 1

Dataset:

Untitled

Last Altered: Printed:

Sunday, February 02, 2020 10:41:59 Pacific Standard Time Sunday, February 02, 2020 10:42:09 Pacific Standard Time

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

Calibration: U:\VG12.PRO\CurveDB\db5_1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604

1770	# Name	RT
1	1 1,3,6,8-TCDD (First)	21.71
2	2 1,2,8,9-TCDD (Last)	26.65
3	3 1,2,4,7,9-PeCDD (First)	28.42
4	4 1,2,3,8,9-PeCDD (Last)	31.00
5	5 1,2,4,6,7,9-HxCDD (First)	32.49
6	6 1,2,3,7,8,9-HxCDD (Last)	34.35
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.84
8	8 1,2,3,4,6,7,8-HpCDD (Last)	37.90
9	9 1,3,6,8-TCDF (First)	19.61
10	10 1,2,8,9-TCDF (Last)	26.80
11	11 1,3,4,6,8-PeCDF (First)	26.75
12	12 1,2,3,8,9-PeCDF (Last)	31.25
13	13 1,2,3,4,6,8-HxCDF (First)	31.94
14	14 1,2,3,7,8,9-HxCDF (Last)	34.71
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.46
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.80

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MassLynx 4.1 SCN815

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Vista Analytical Laboratory VG-11

Dataset:

Untitled

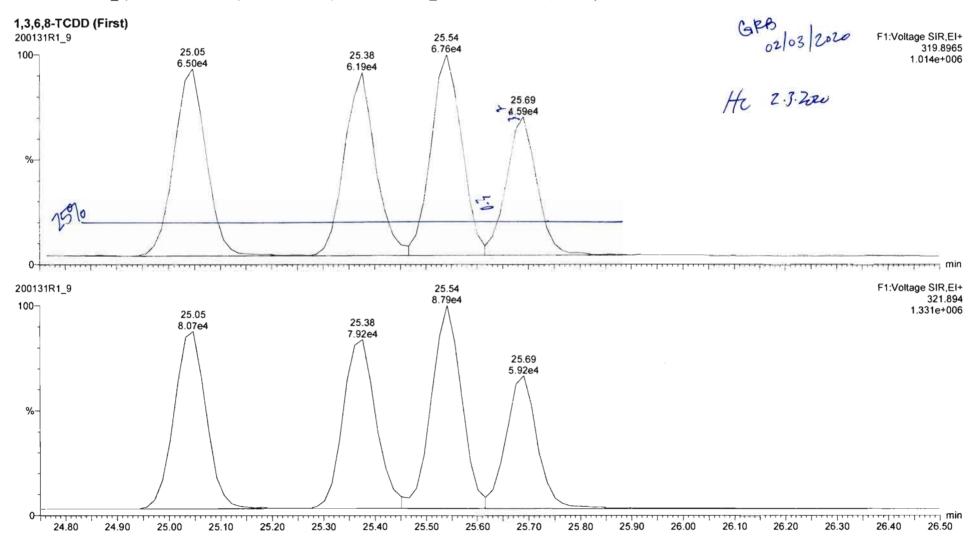
Last Altered: Printed:

Sunday, February 02, 2020 10:41:59 Pacific Standard Time Sunday, February 02, 2020 10:42:09 Pacific Standard Time

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

Calibration: U:\VG12.PRO\CurveDB\db5 1613vg12-1-21-20.cdb 22 Jan 2020 09:29:50

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604



Work Order 1903647

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Dataset:

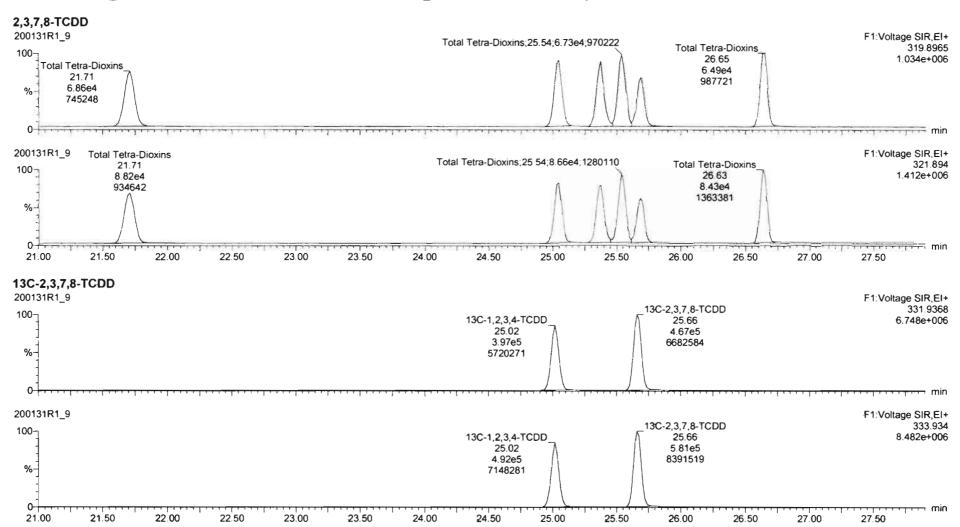
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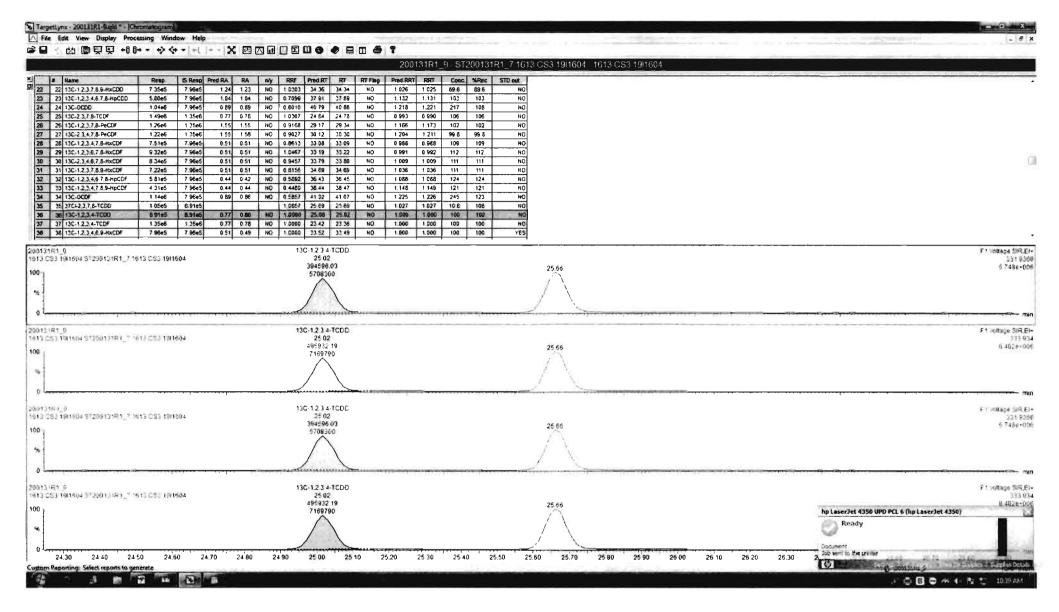
Last Altered: Printed: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

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: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604





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Quantify Sample Report Vista Analytical Laboratory

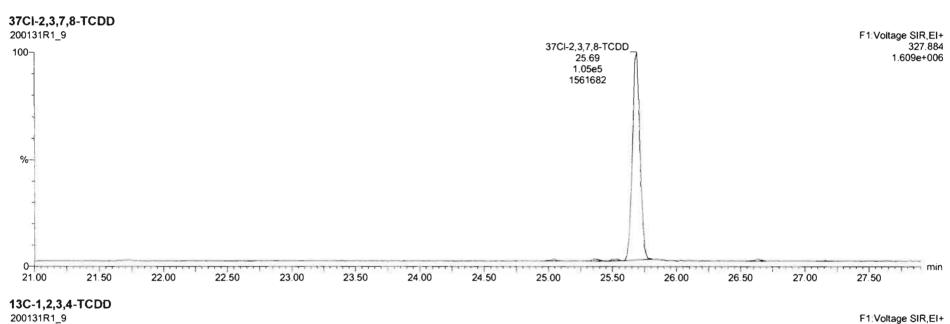
Dataset:

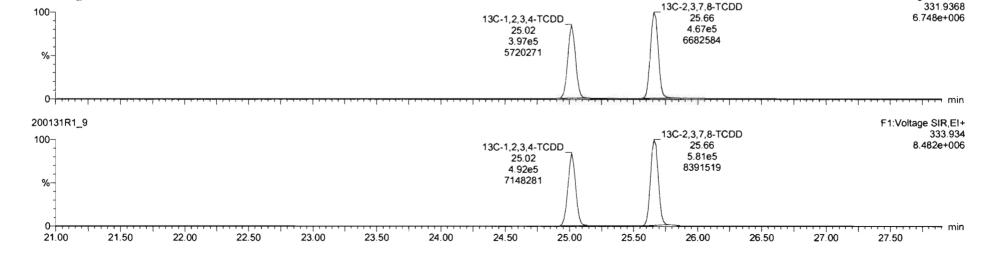
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Last Altered: Printed:

Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604





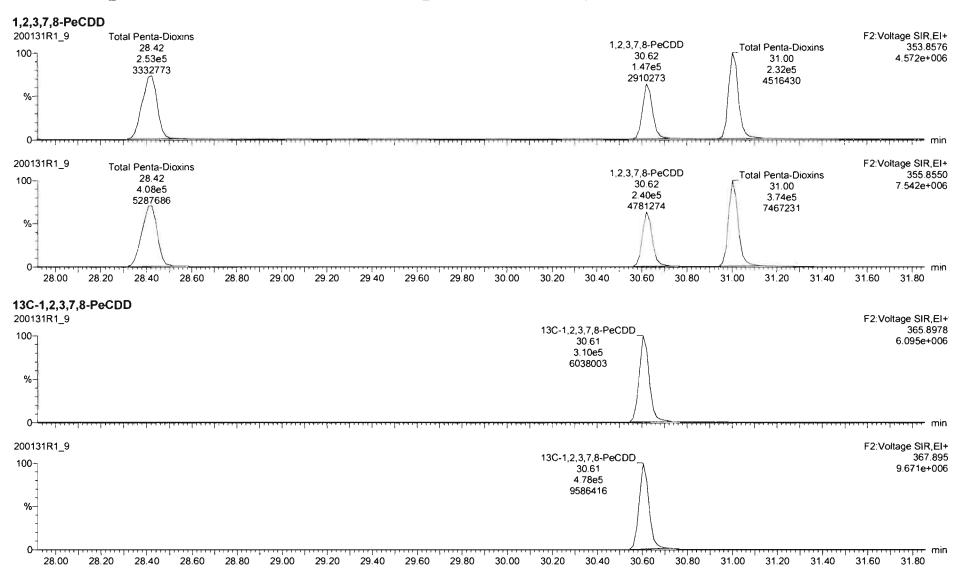
Dataset:

Untitled

Last Altered: Sunday, Feb Printed: Sunday, Feb

Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604



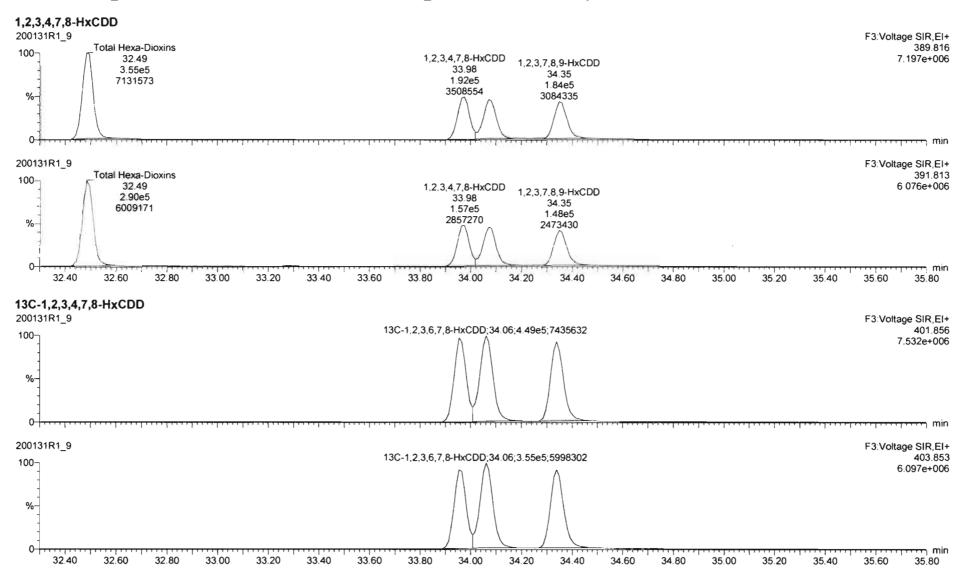
Quantify Sample Report Vista Analytical Laboratory

Dataset:

Untitled

Last Altered: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604



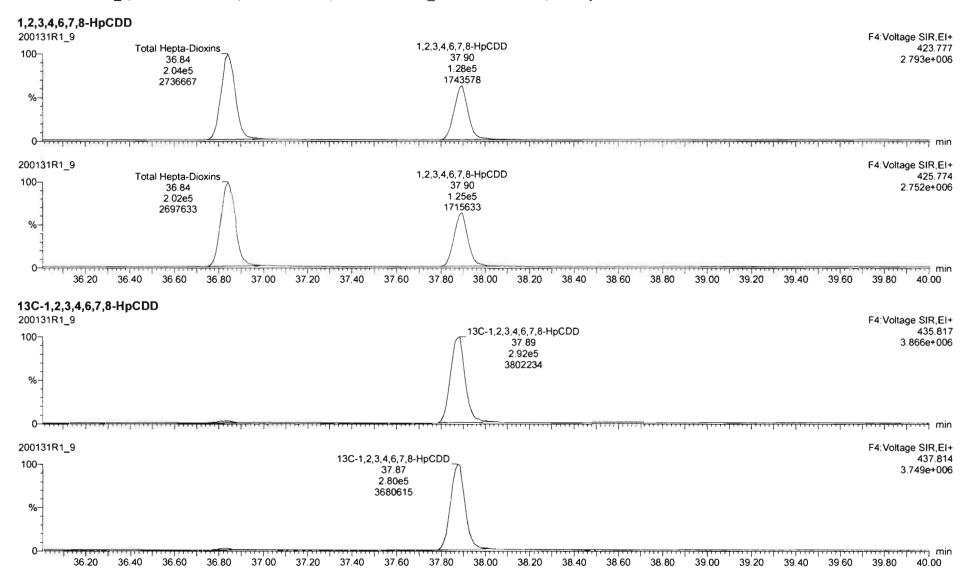
Work Order 1903647

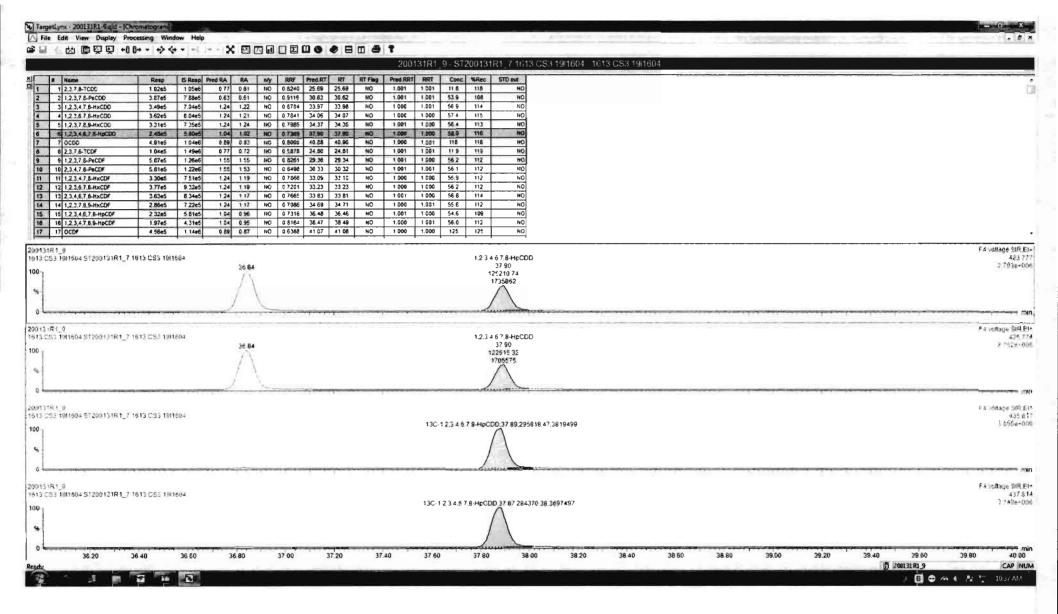
Dataset:

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Last Altered: Printed: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604





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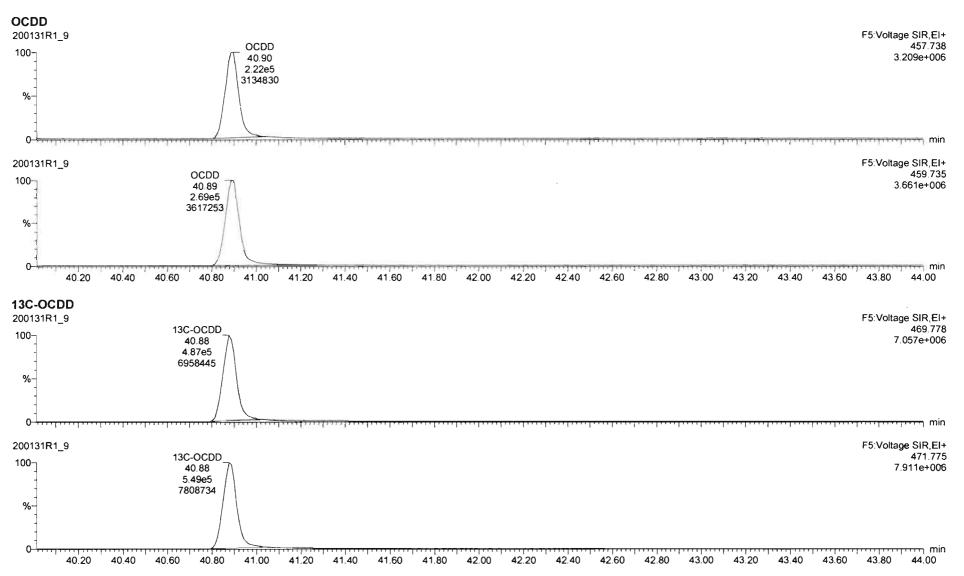
Quantify Sample Report Vista Analytical Laboratory

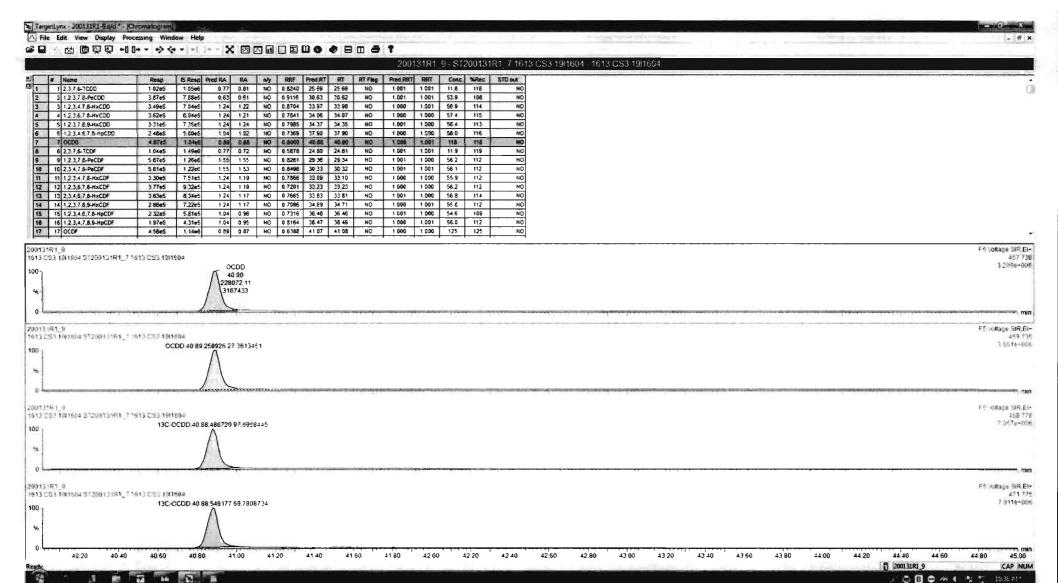
Dataset:

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Last Altered: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604



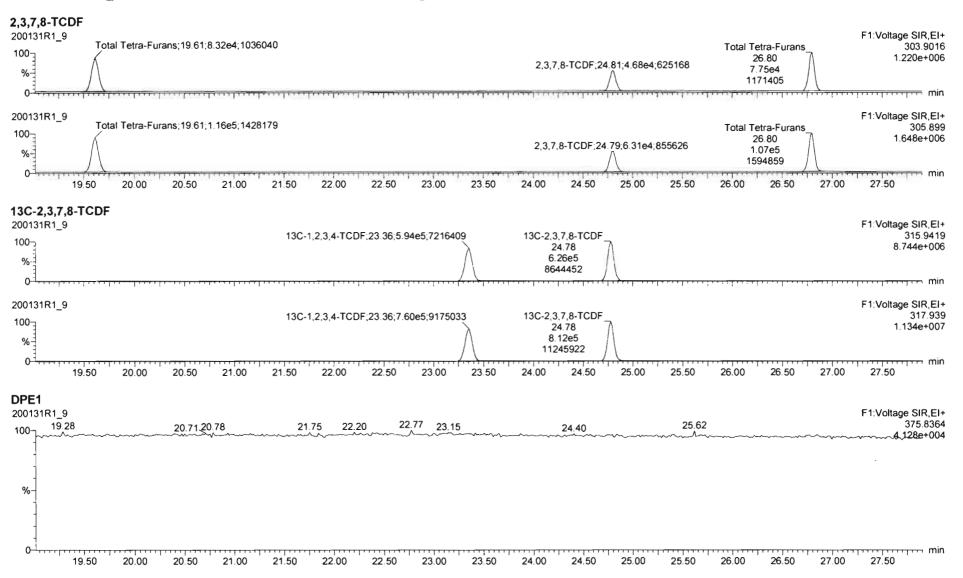


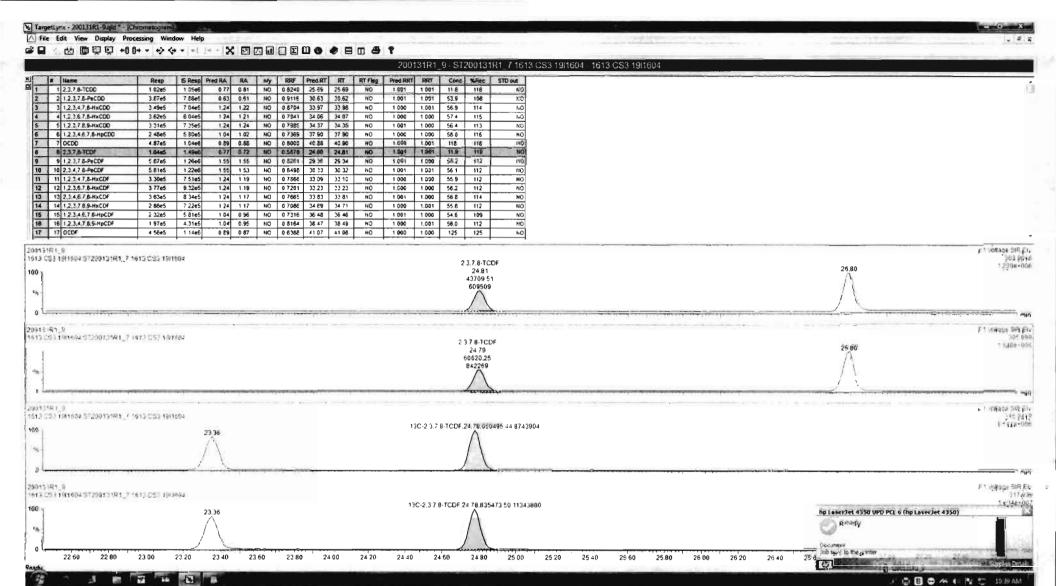
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Last Altered: Printed: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604





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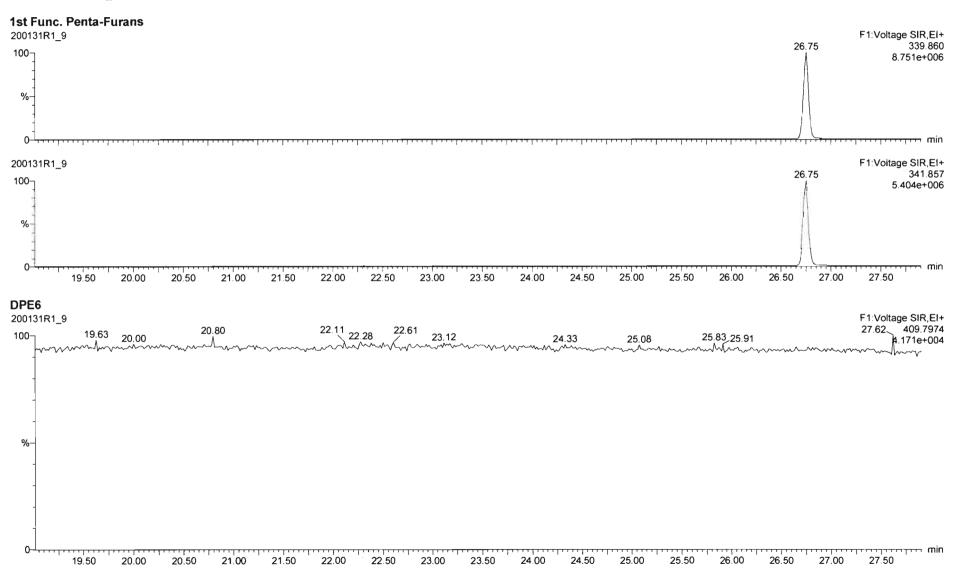
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Last Altered: Printed:

Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604



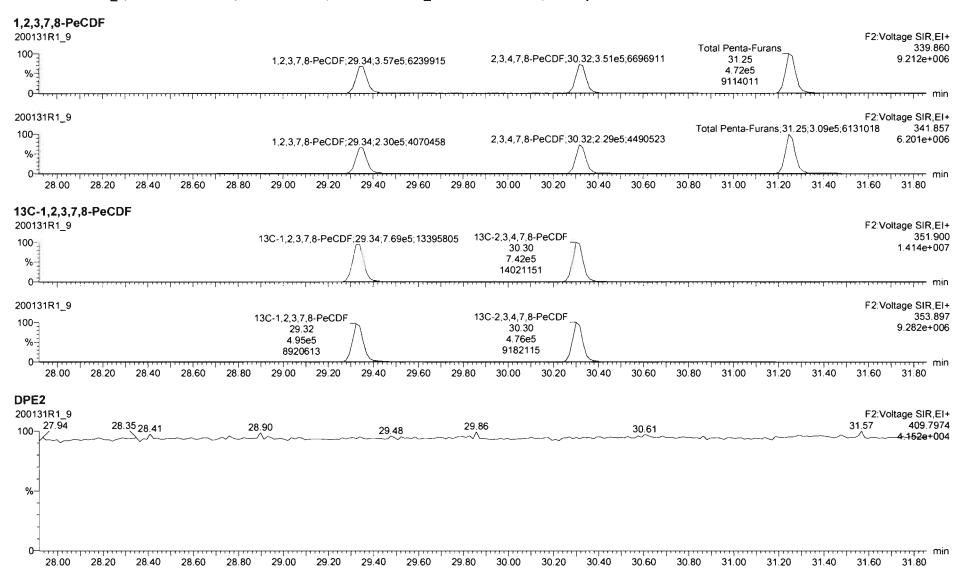
Quantify Sample Report Vista Analytical Laboratory

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Last Altered: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

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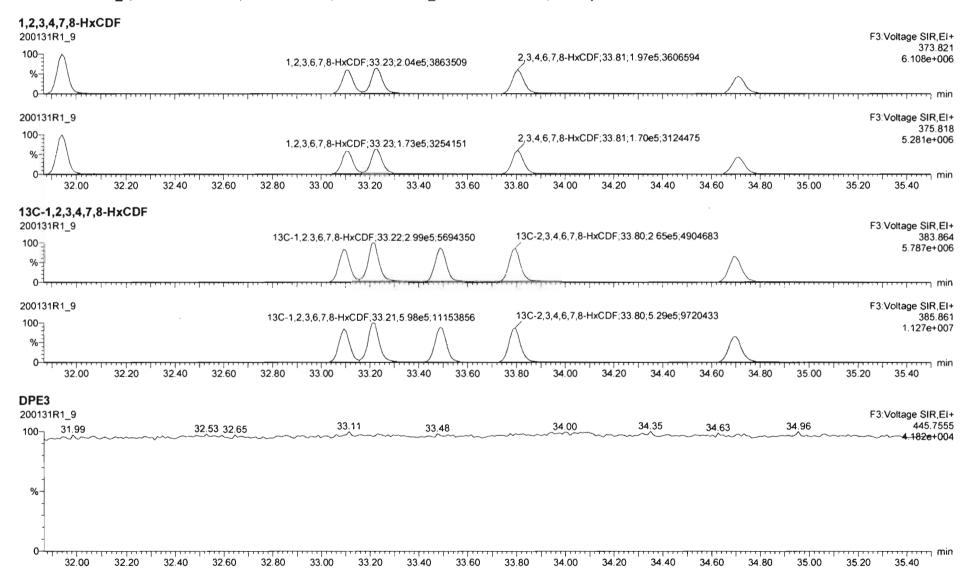


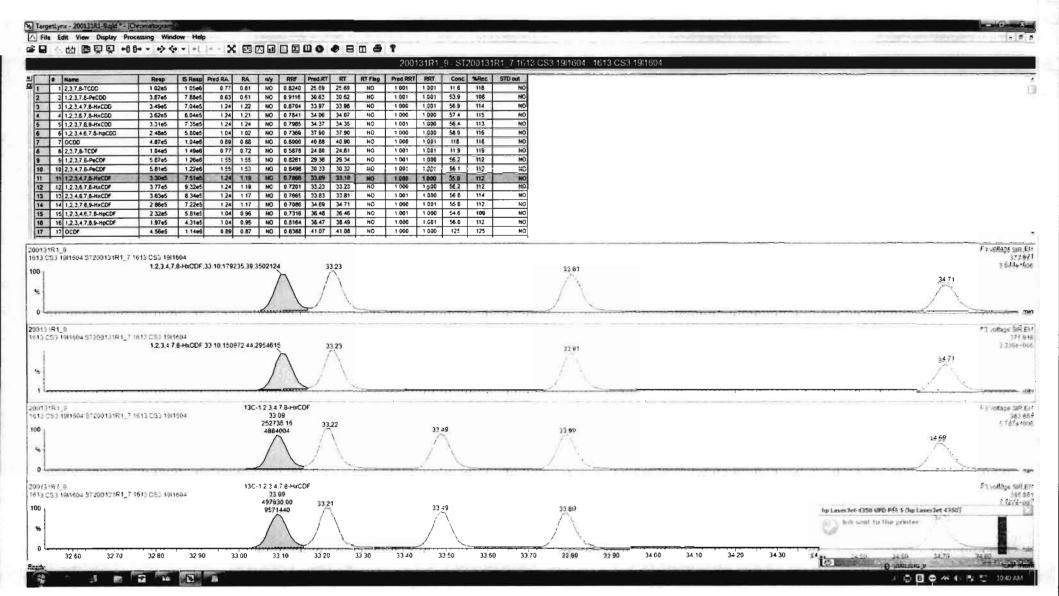
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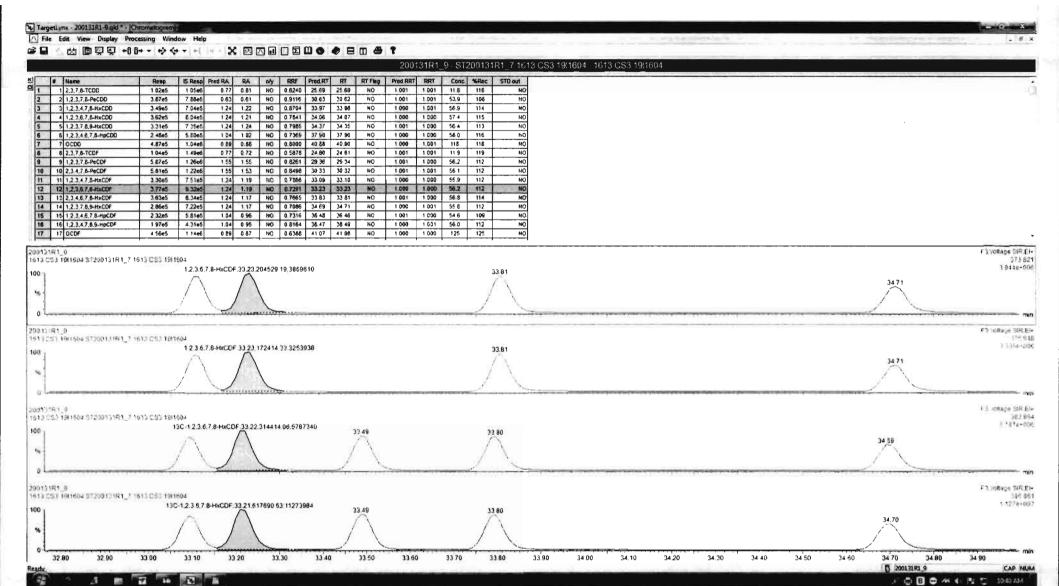
Last Altered: Printed: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

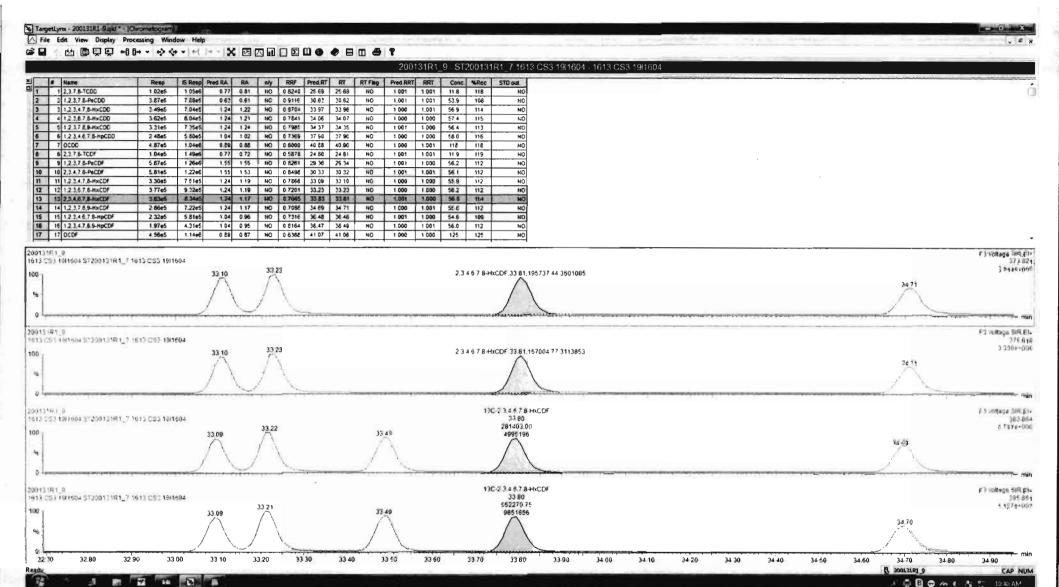
Name: 200131R1 9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604



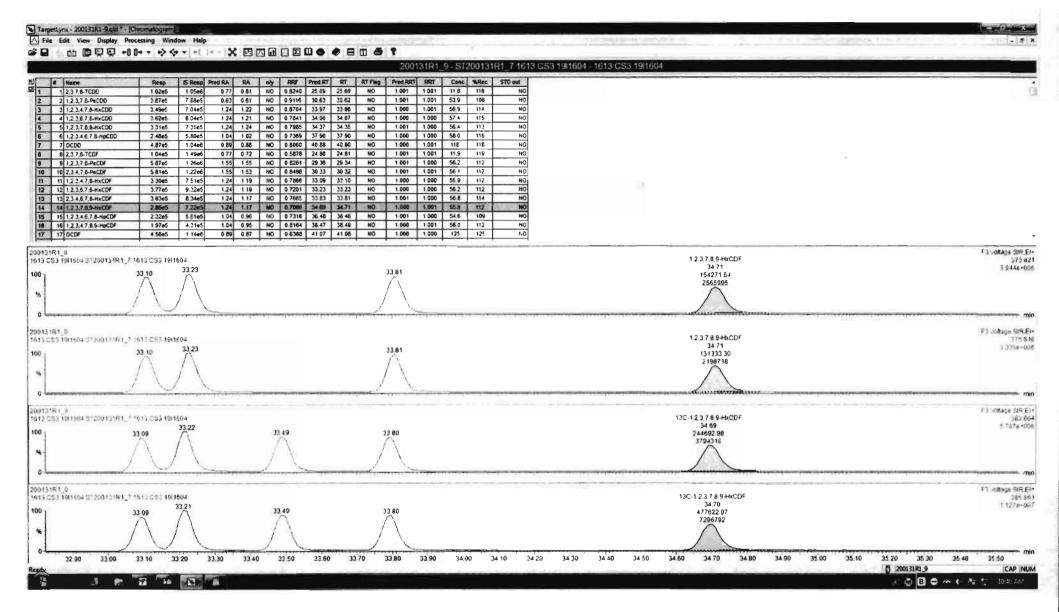


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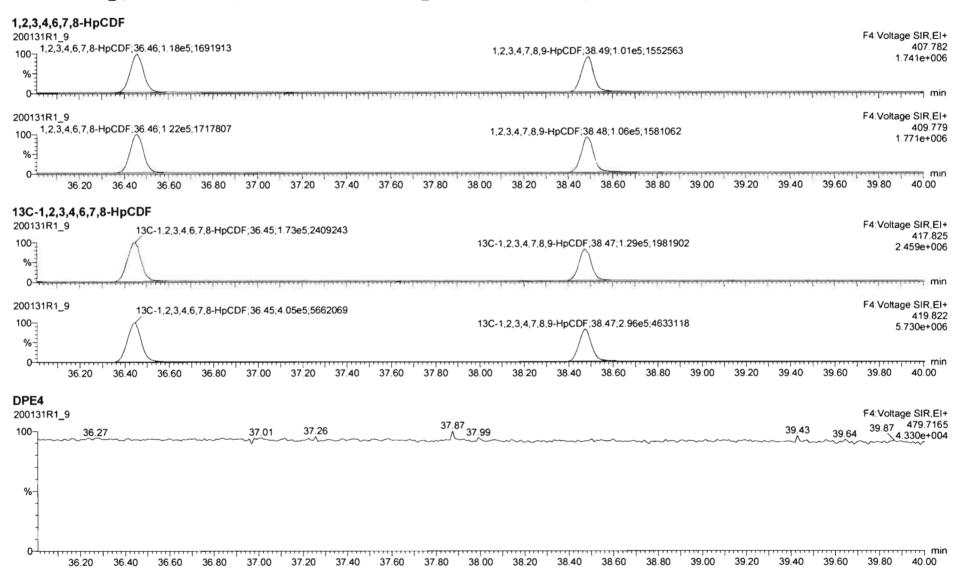
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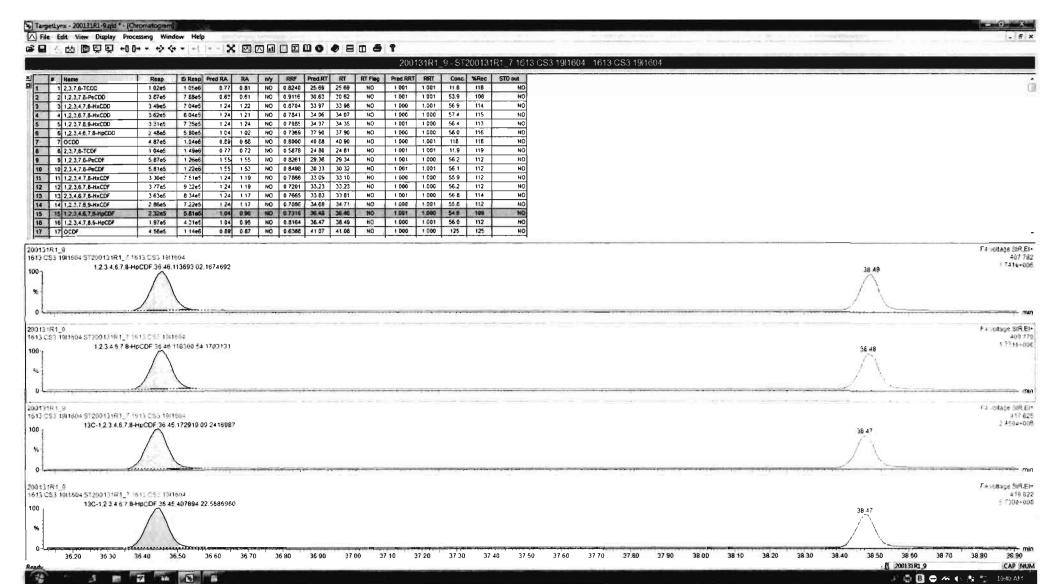
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Last Altered: Printed: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604

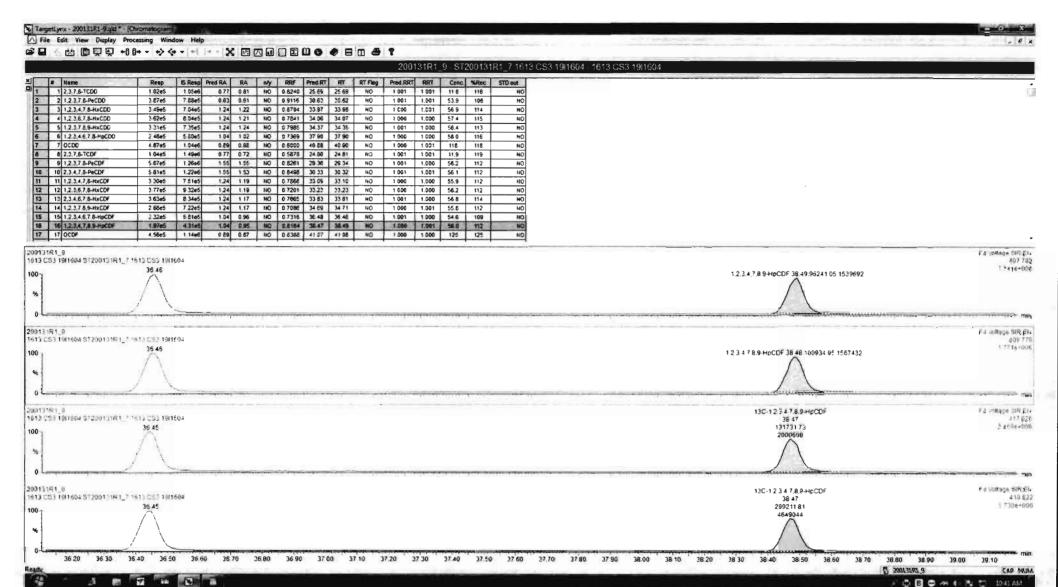




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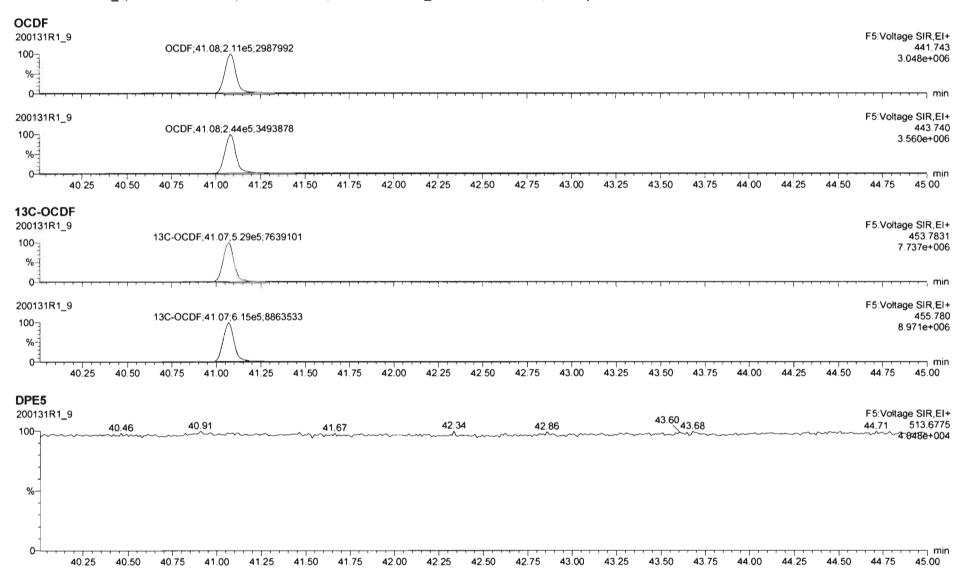
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Dataset:

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Last Altered: Printed: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1 9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 19I1604, Description: 1613 CS3 19I1604

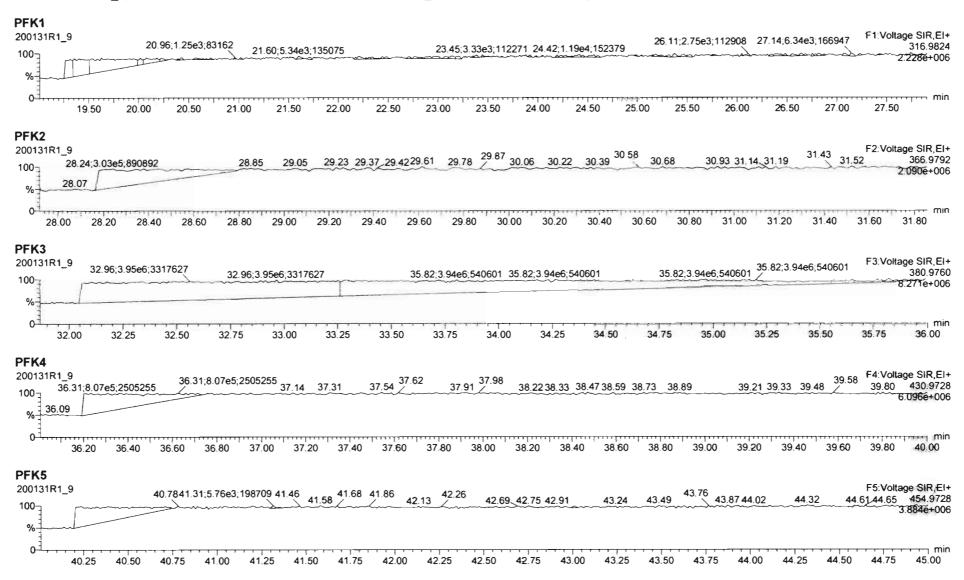


Dataset:

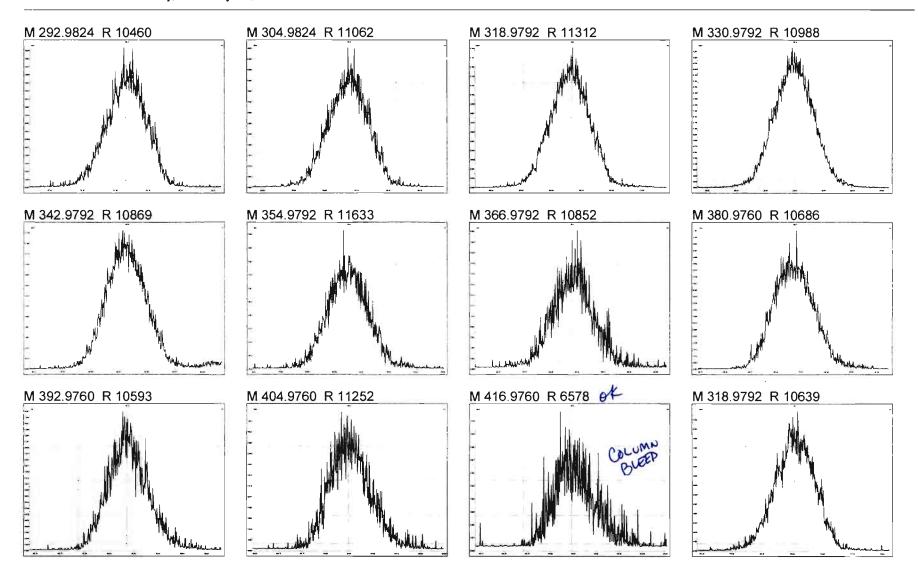
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Last Altered: Sunday, February 02, 2020 10:41:30 Pacific Standard Time Sunday, February 02, 2020 10:41:49 Pacific Standard Time

Name: 200131R1_9, Date: 31-Jan-2020, Time: 23:05:36, ID: ST200131R1_7 1613 CS3 1911604, Description: 1613 CS3 1911604

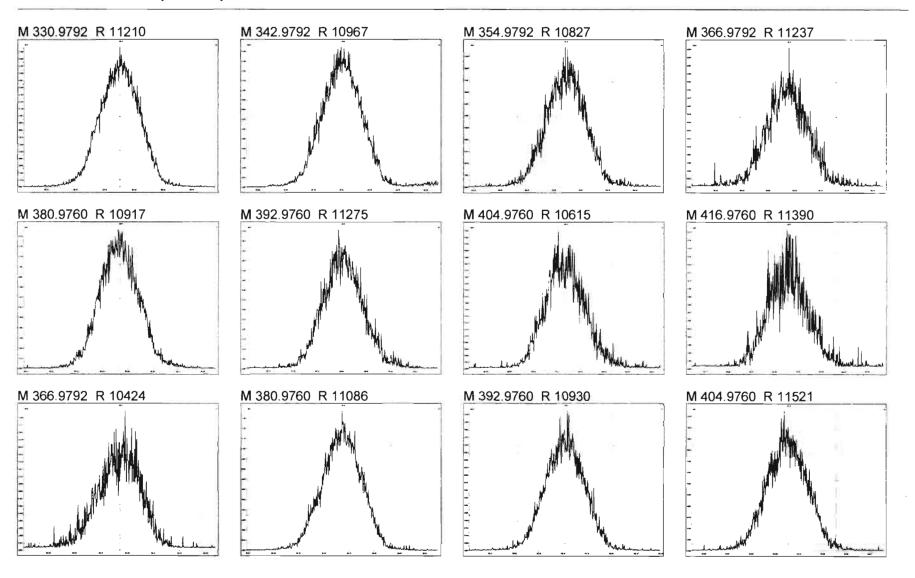


Saturday, February 01, 2020 07:51:26 Pacific Standard Time



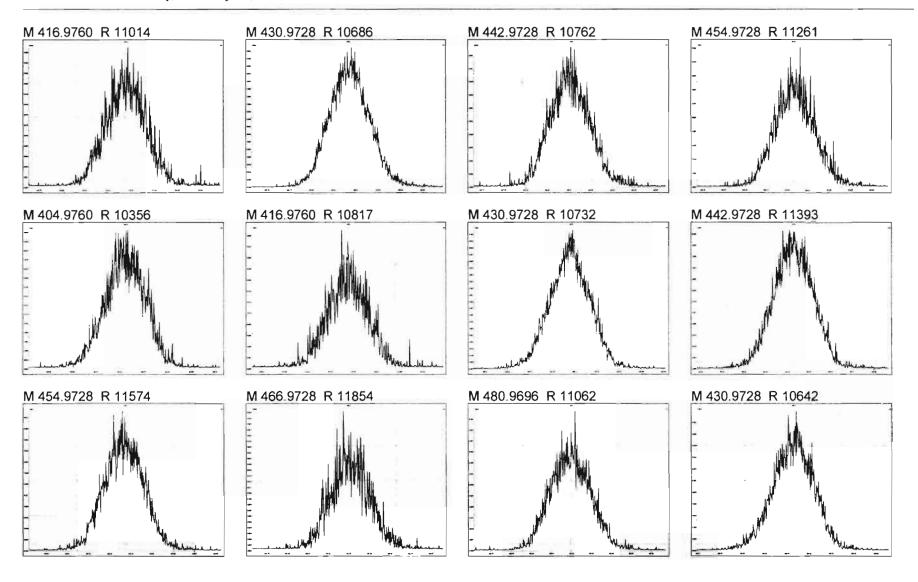
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Saturday, February 01, 2020 07:51:26 Pacific Standard Time

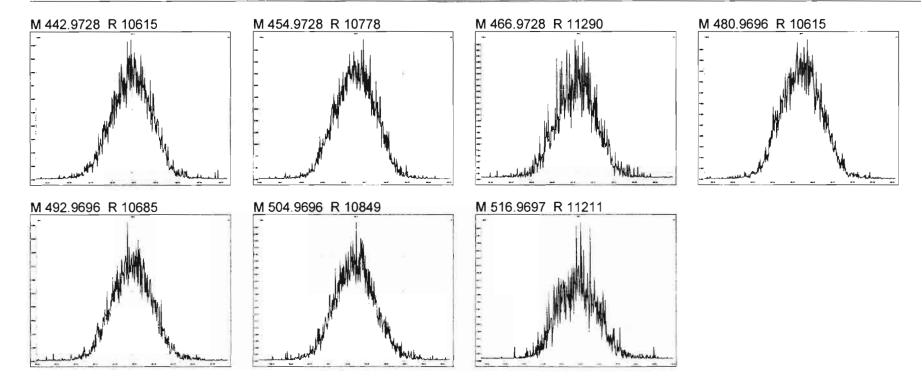


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Saturday, February 01, 2020 07:51:26 Pacific Standard Time



Saturday, February 01, 2020 07:51:26 Pacific Standard Time



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INITIAL CALIBRATION

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

Last Altered: Printed:

Wednesday, January 22, 2020 09:29:50 Pacific Standard Time Wednesday, January 22, 2020 09:53:59 Pacific Standard Time DB 1/22/2020

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

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

1000	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

300	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

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

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

100	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	100	Std. Conc	R/A	n/y	RT	RRT	Resp	IS Flesp	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

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

Last Altered: Printed:

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

1000	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

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

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

Last Altered: Printed:

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

50	2 HE	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	24 390	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
1 534	200121R1_1	1.25	1.56	NO	29.49	1.001	2.06e4	2.18e6	1.14	-8.7	0.754	bb
2	200121R1_2	2.50	1.47	NO	29.48	1.001	3.89e4	2.14e6	2.20	-12.0	0.727	bb
3	200121R1_3	10.0	1.55	NO	29.49	1.001	1.94e5	2.43e6	9.65	-3.5	0.797	bb
4	200121R1_4	50.0	1.52	NO	29.48	1.001	7.65e5	1.78e6	51.9	3.8	0.857	bb
5	200121R1_5	200	1.50	NO	29.48	1.001	4.89e6	2.70e6	219	9.6	0.906	bb
6	200121R1_6	1500	1.50	NO	29.49	1.001	4.35e7	3.17e6	1660	10.7	0.915	bb

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

Response Factor: 0.84982

RRF SD: 0.0827911, Relative SD: 9.74219

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

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

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

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

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

W/P PO	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 50 0	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

LAT	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1 3335	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

100	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	1.29e5	1.14	-9.1	0.655	db
2	200121R1_2	2.50	1.20	NO	33.35	1.000	1.95e4	1.27e6	2.13	-14.8	0.614	db
3	200121R1_3	10.0	1.17	NO	33.36	1.000	9.98e4	1.45e6	9.57	-4.3	0.689	db
4	200121R1_4	50.0	1.15	NO	33.35	1.000	3.92e5	1.04e6	52.3	4.6	0.753	db
5	200121R1_5	200	1.15	NO	33.36	1.001	2.68e6	1.68e6	221	10.7	0.797	db
6	200121R1_6	1500	1.15	NO	33.37	1.001	2.42e7	1.98e6	1690	12.9	0.813	db

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

Last Altered: Printed:

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

12 (19)	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 33 05	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
1 340	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 38.5	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

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

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Dataset: U:\VG12.PR0\Results\200121R1\200121R1 CRV.gld

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

POT TO A	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

1900	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

1000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	200121R1_1	2.50	0.86	NO	41.22	1.000	1.03e4	1.48e6	2.17	-13.1	0.555	bb
2	200121R1_2	5.00	0.86	NO	41.20	1.000	2.07e4	1.50e6	4.33	-13.4	0.553	bb
3	200121R1_3	20.0	0.80	NO	41.21	1.000	8.44e4	1.41e6	18.8	-6.2	0.599	bb
4	200121R1_4	100	0.84	NO	41.20	1.000	2.96e5	8.88e5	104	4.5	0.667	bb
5	200121R1_5	400	0.84	NO	41.21	1.000	2.87e6	1.98e6	455	13.6	0.726	bb
6	200121R1_6	3000	0.84	NO	41.23	1.000	2.97e7	2.70e6	3430	14.5	0.731	bb

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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

Dataset:

	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

200	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.	%E)ev	RRF	X = dropped
1	200121R1_1	100	1.26	NO	34.10	1.014	1.15e6	1.28e6	95.1	-4.9	0.892	bd
2	200121R1_2	100	1.26	NO	34.08	1.014	1.15e6	1.28e6	95.8	-4.2	0.898	bd

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

Last Altered: Printed:

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

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

1000	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 = aropped
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

300	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

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Dataset:

U:\VG12.PR0\Results\200121R1\200121R1_CRV.qld

Last Altered: Printed:

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

3 115	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

	1170	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

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Dataset:

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Last Altered: Printed:

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

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

100	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

4-2-	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

1000	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

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Dataset: U:\VG12.PR0\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

154	10808	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	1.28 e 6	96.7	-3.3	0.833	bd
2	3/20	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	bď
6	21 153	200121R1_6	100	0.49	NO	33.23	0.988	1.62e6	1.69 e 6	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

1000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1 38 38	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	1.27 e 6	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

EX III	Name	Std. Conc	RA	Π/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

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

Last Altered: Printed:

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

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

NO THE	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3 31 97	200121R1_3	100	0.49	NO	33.92	1.009	1.31e6	1.44e6	96.0	-4.0	0.908	bb
4 3191	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

	700	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	34 83 N	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	3465	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

100	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1 30.0	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
3 385	200121R1_3	100	0.41	NO	36.60	1.088	8.04e5	1.44e6	94.9	-5.1	0.559	bd
4 100	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

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Vista Analytical Laboratory

Dataset: U:\VG12.PR0\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

34 3	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	bď
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

TEAR	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: 37CI-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

39991	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

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Dataset:

U:\VG12.PRO\Results\200121R1\200121R1_CRV.qld

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

Compound name: 37CI-2,3,7,8-TCDD

0.7	F PITZ-	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

- 3	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1 25.2	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 7 7	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

1	.77	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	23.58	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

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Dataset:

U:\VG12.PR0\Results\200121R1\200121R1_CRV.qld

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

1000	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

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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

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

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Dataset:

Untitled

Last Altered: Printed:

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

4,400	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

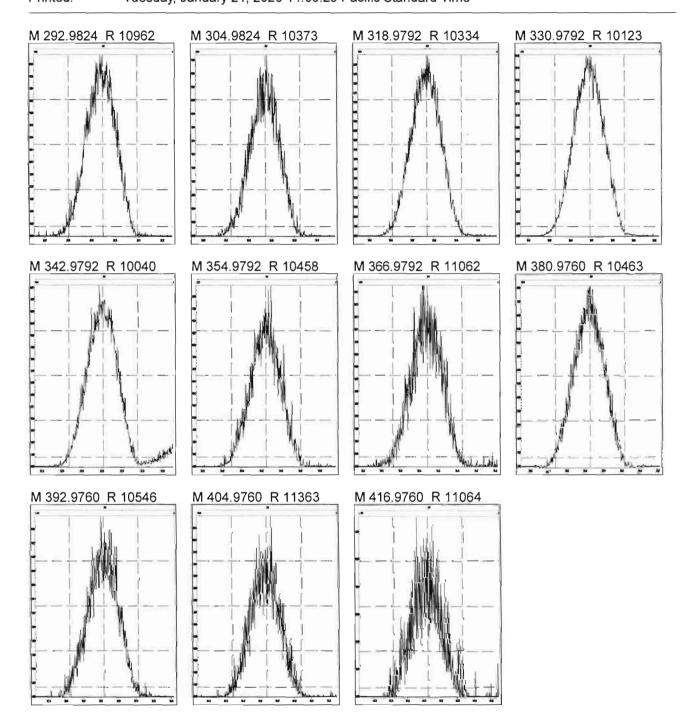
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File:

Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 1 @ 200 (ppm)

Printed:

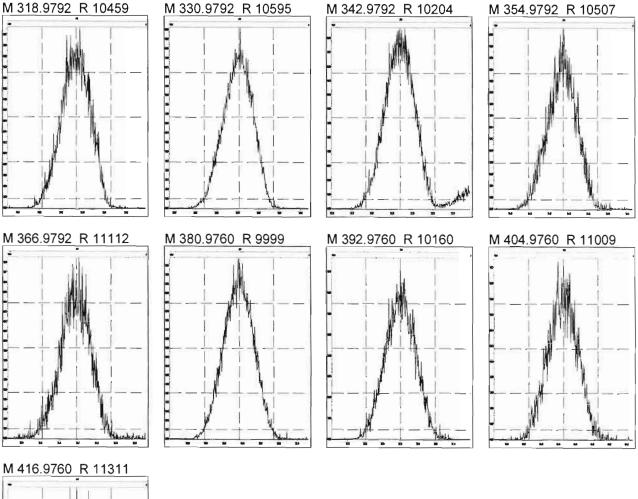
Tuesday, January 21, 2020 14:06:23 Pacific Standard Time

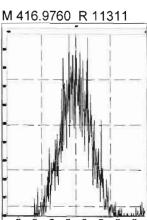


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File: Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 2 @ 200 (ppm)

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





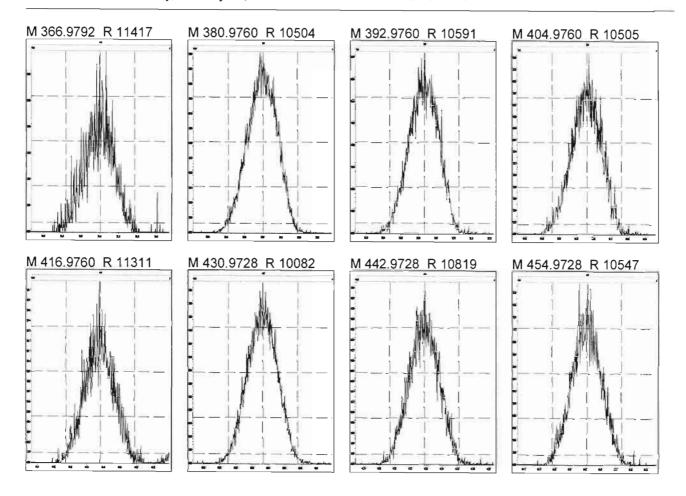
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File:

Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 3 @ 200 (ppm)

Printed:

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



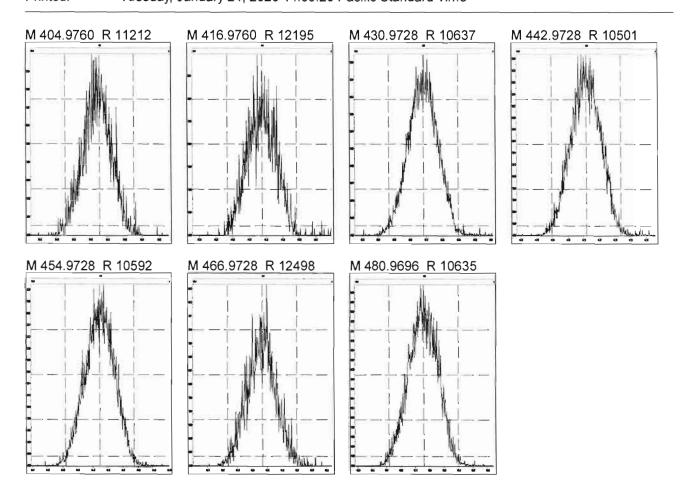
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File:

Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 4 @ 200 (ppm)

Printed:

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



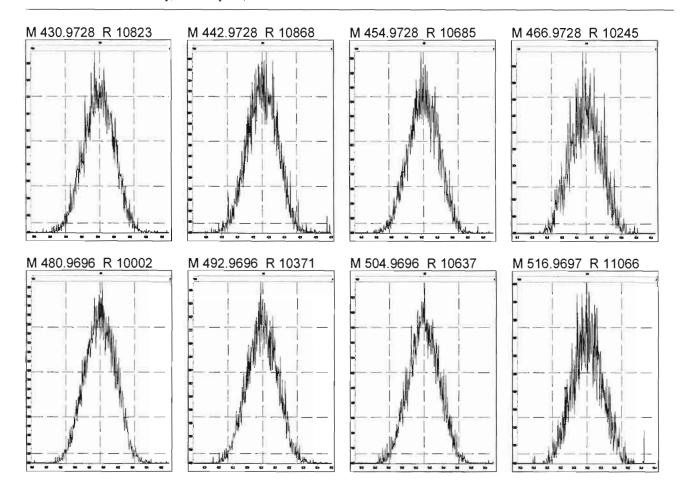
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File:

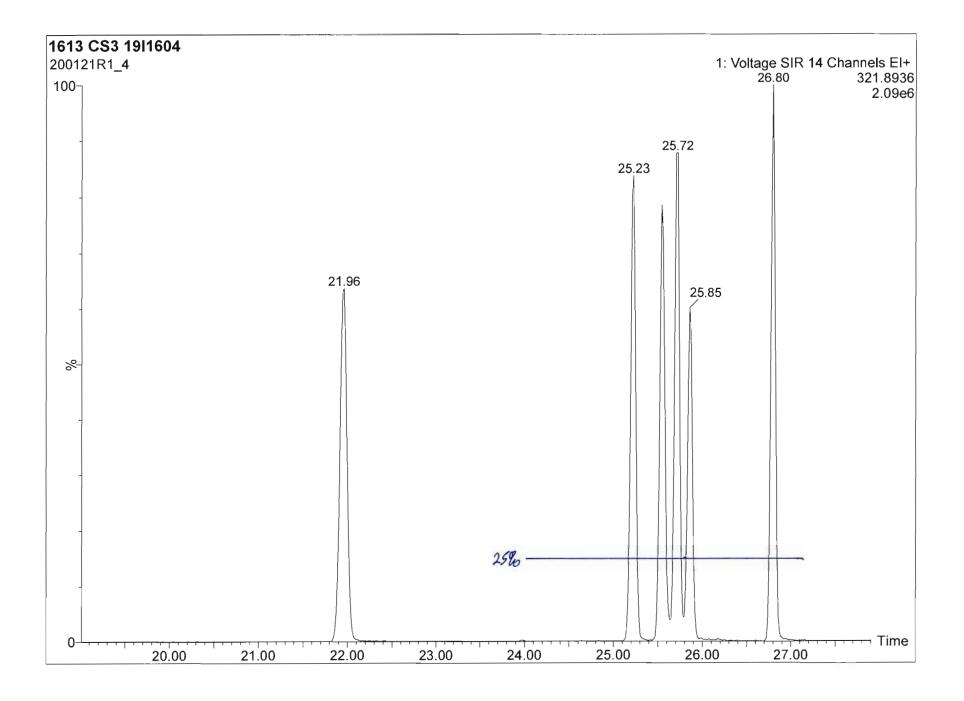
Experiment: OCDD_DB5.exp Reference: pfk.ref Function: 5 @ 200 (ppm)

Printed:

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



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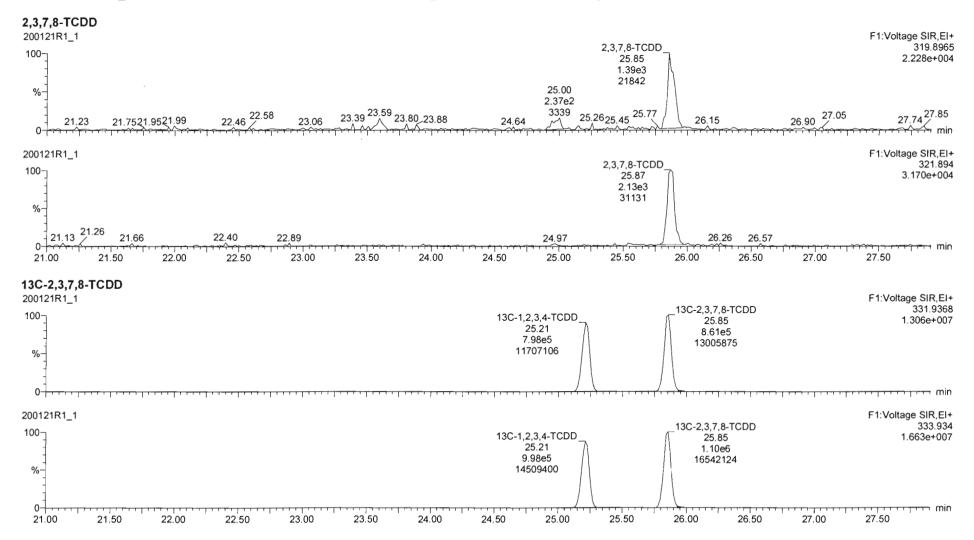
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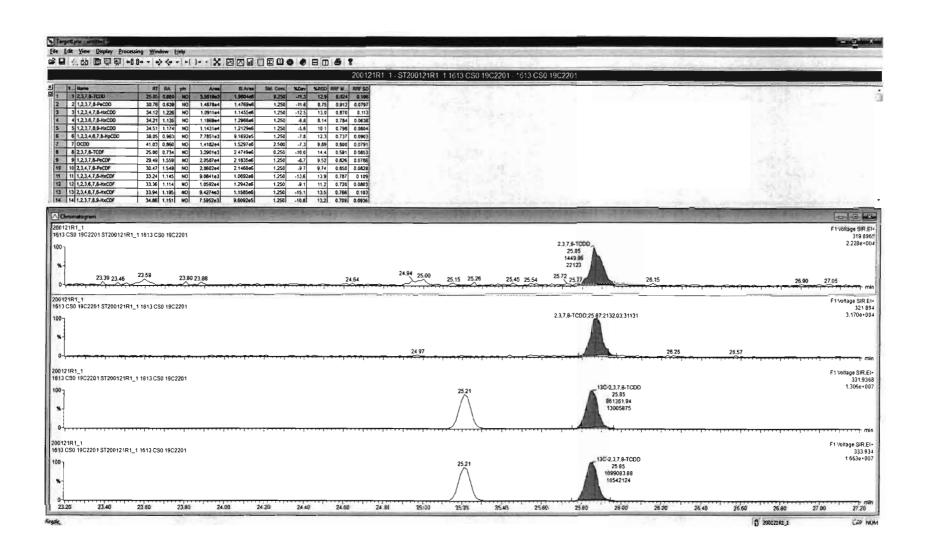
Last Altered:

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





1

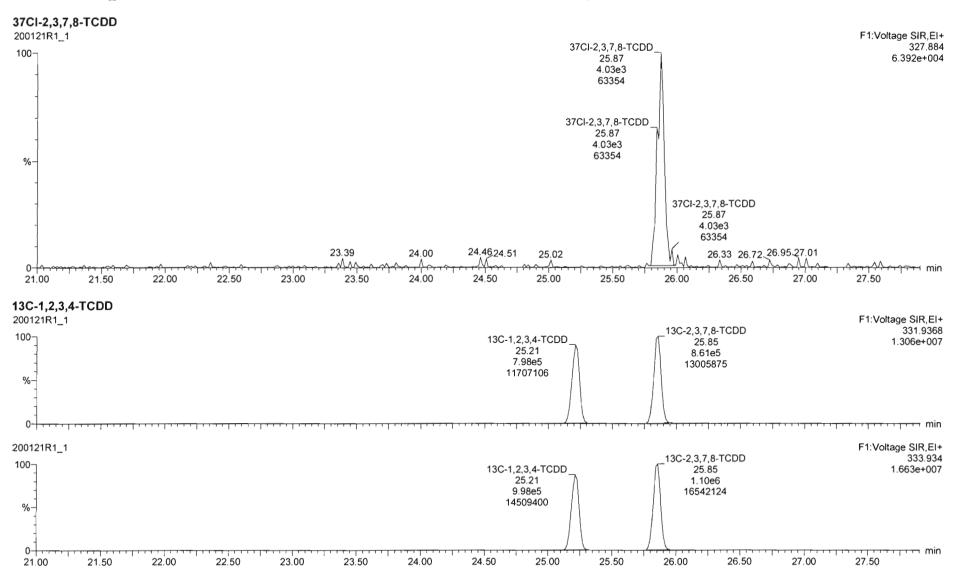
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Dataset:

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Last Altered:

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

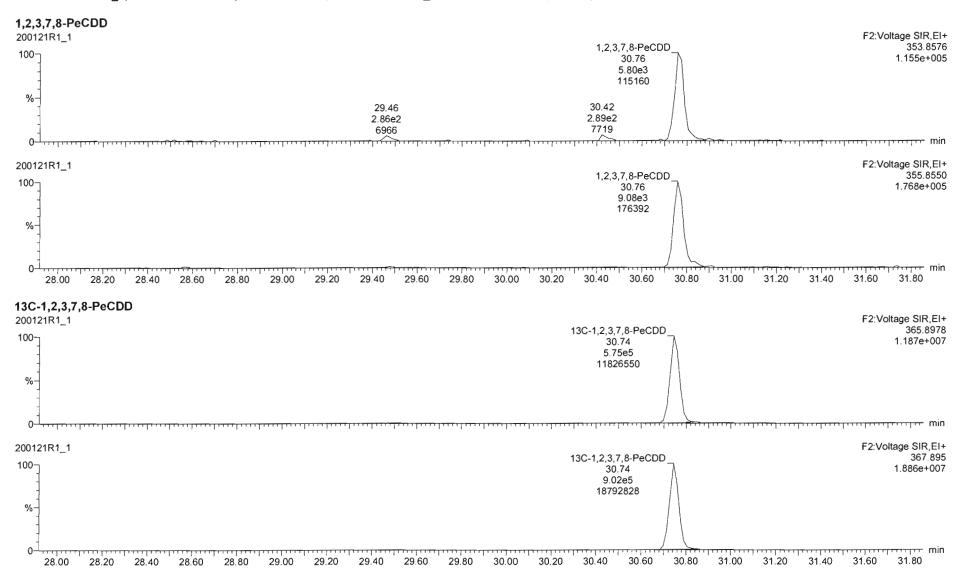


Vista Analytical Laboratory

Dataset:

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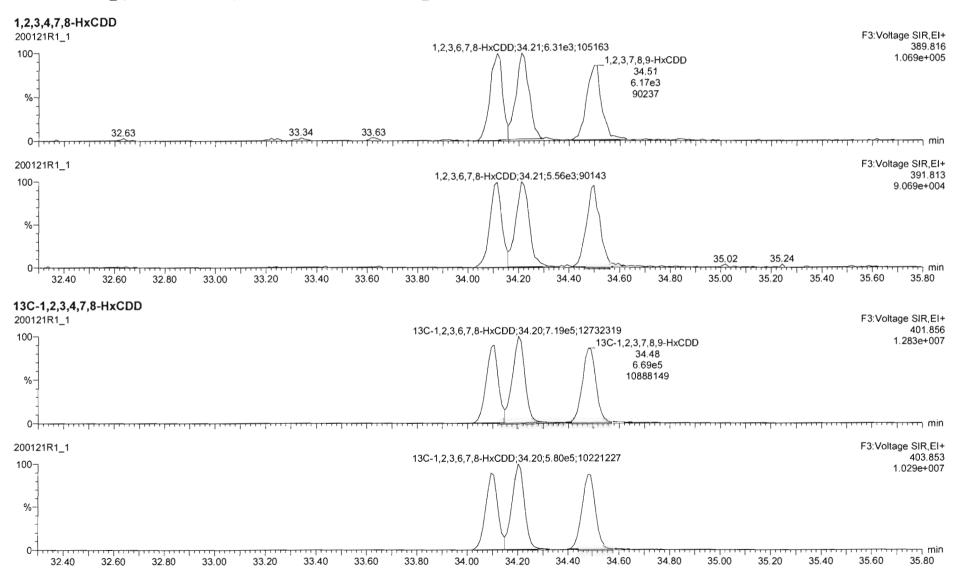
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Wednesday, January 22, 2020 09:03:58 Pacific Standard Time Wednesday, January 22, 2020 09:17:36 Pacific Standard Time



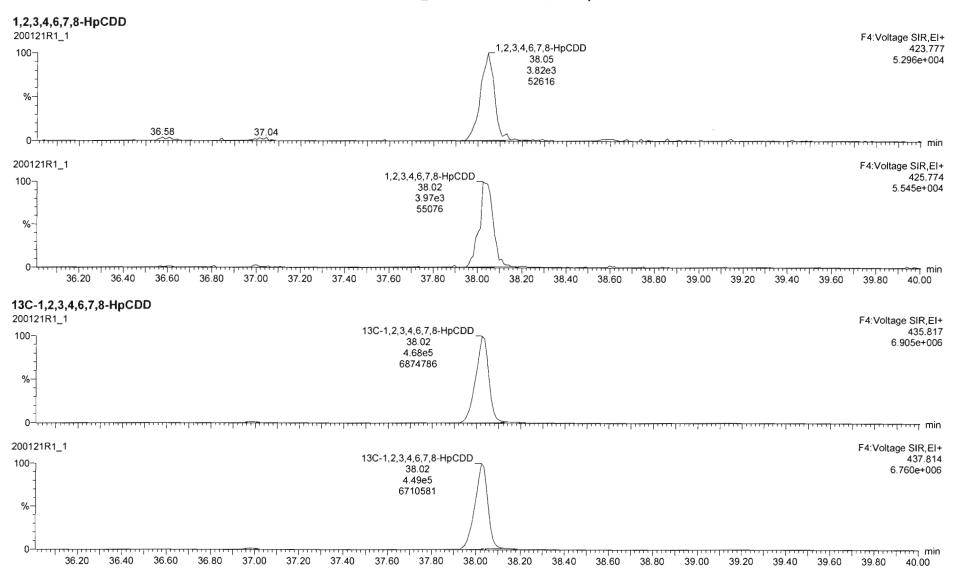
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Dataset:

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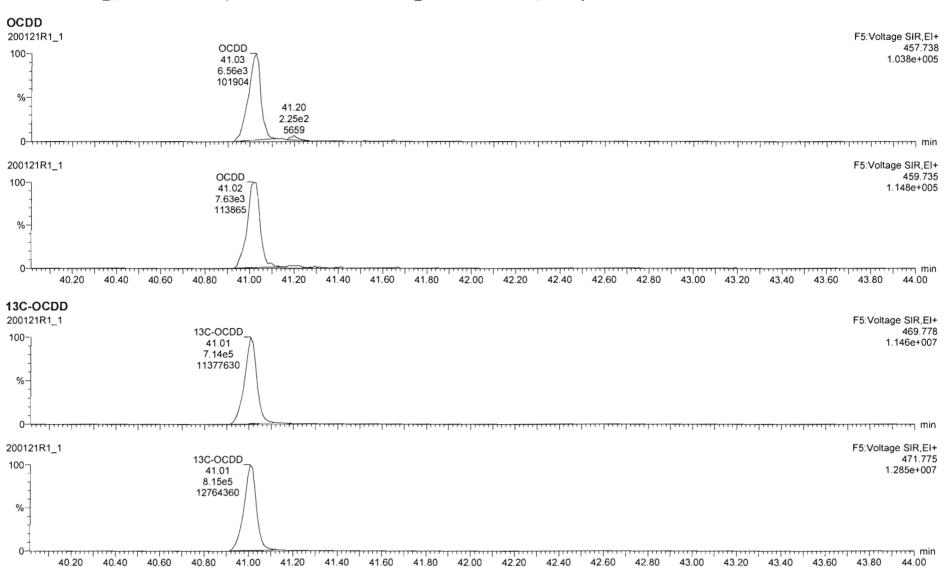
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Wednesday, January 22, 2020 09:03:58 Pacific Standard Time Wednesday, January 22, 2020 09:17:36 Pacific Standard Time



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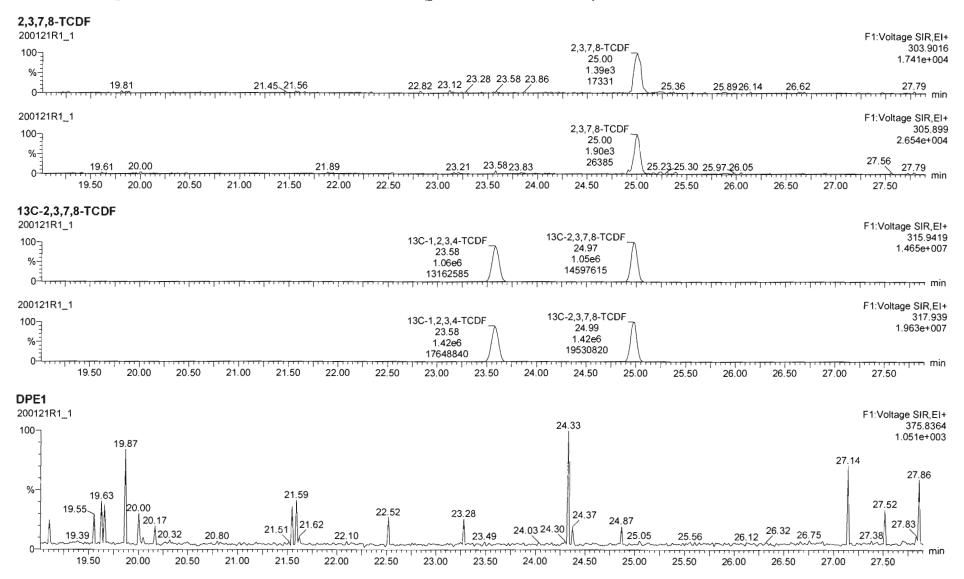
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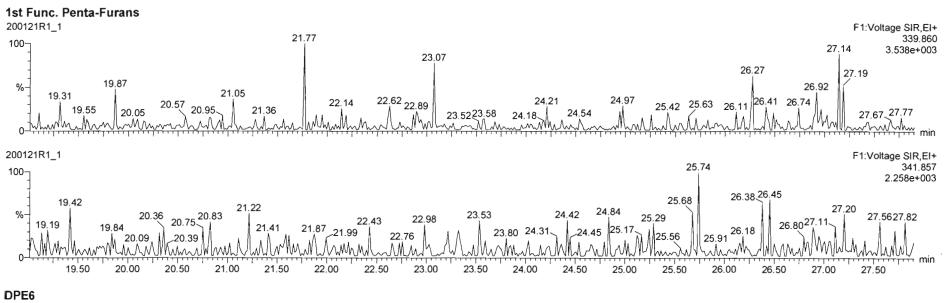
Wednesday, January 22, 2020 09:03:58 Pacific Standard Time Wednesday, January 22, 2020 09:17:36 Pacific Standard Time

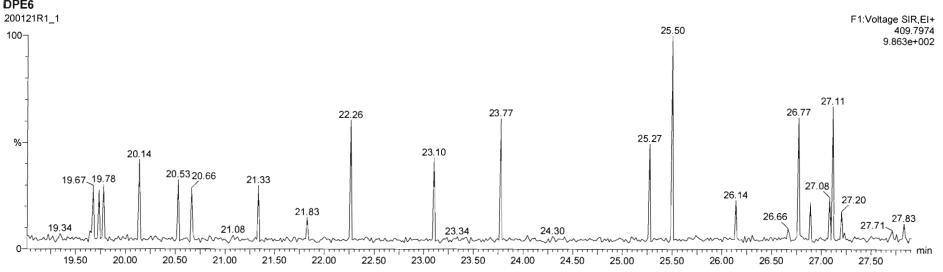


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Wednesday, January 22, 2020 09:03:58 Pacific Standard Time Wednesday, January 22, 2020 09:17:36 Pacific Standard Time



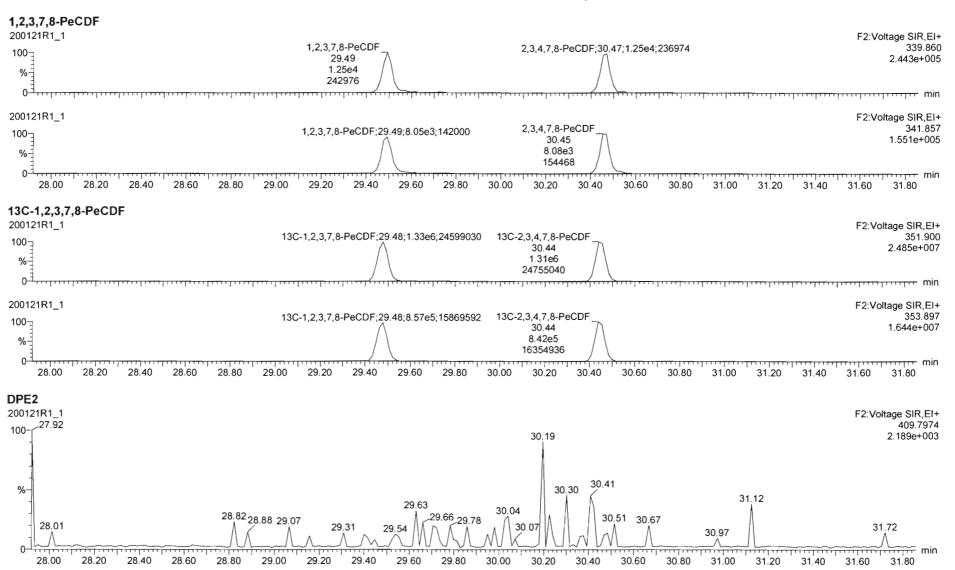


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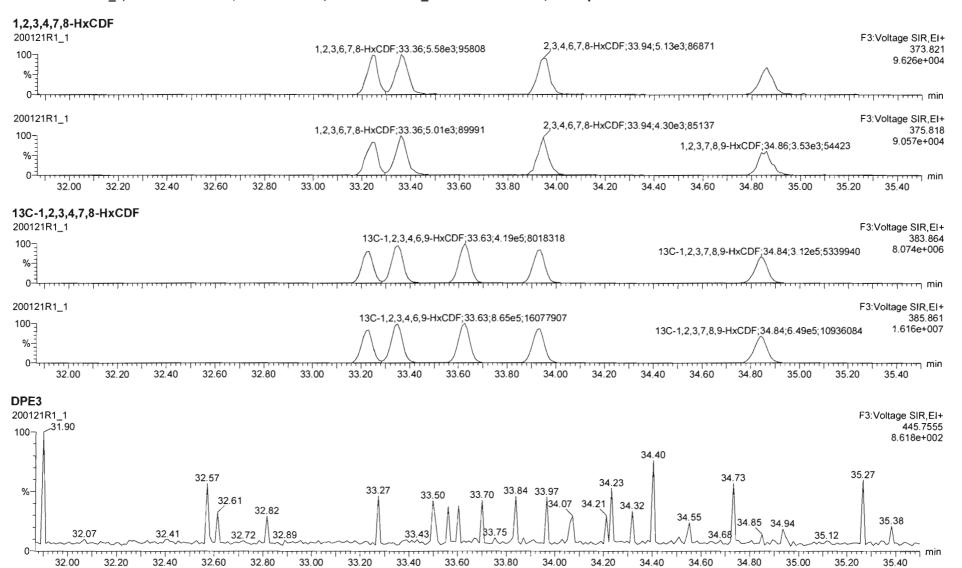


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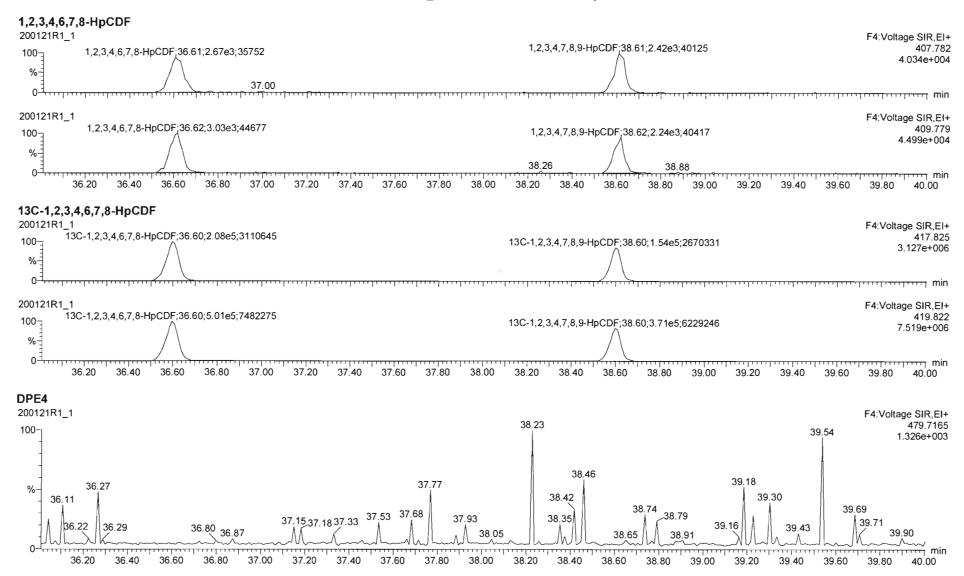
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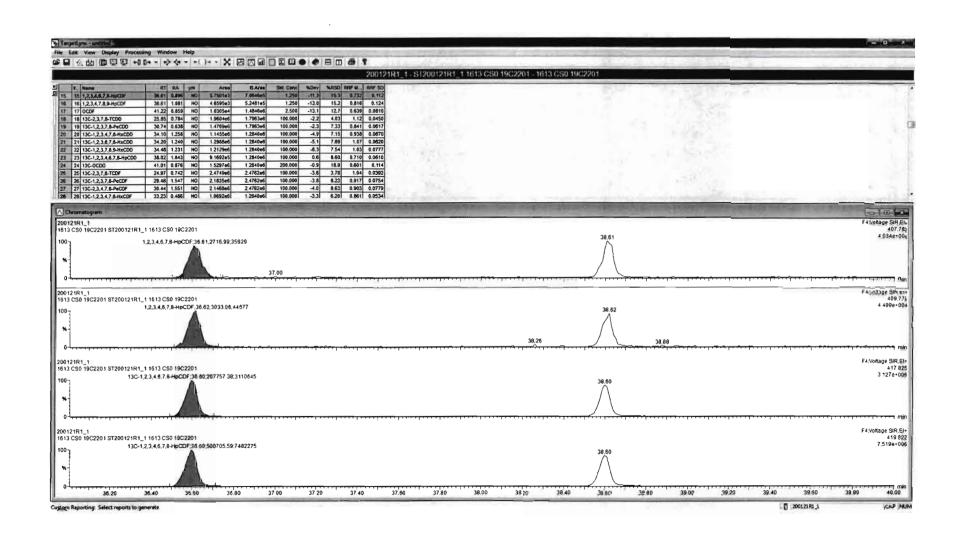


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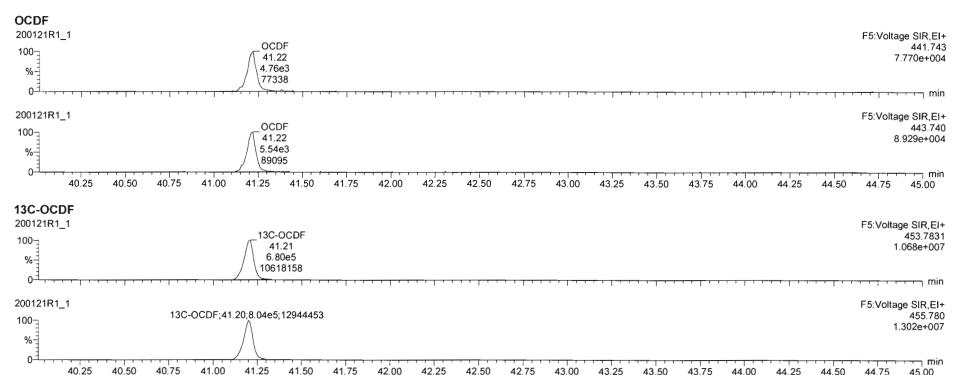
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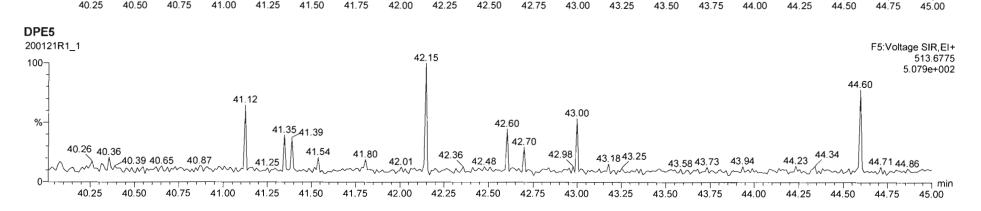
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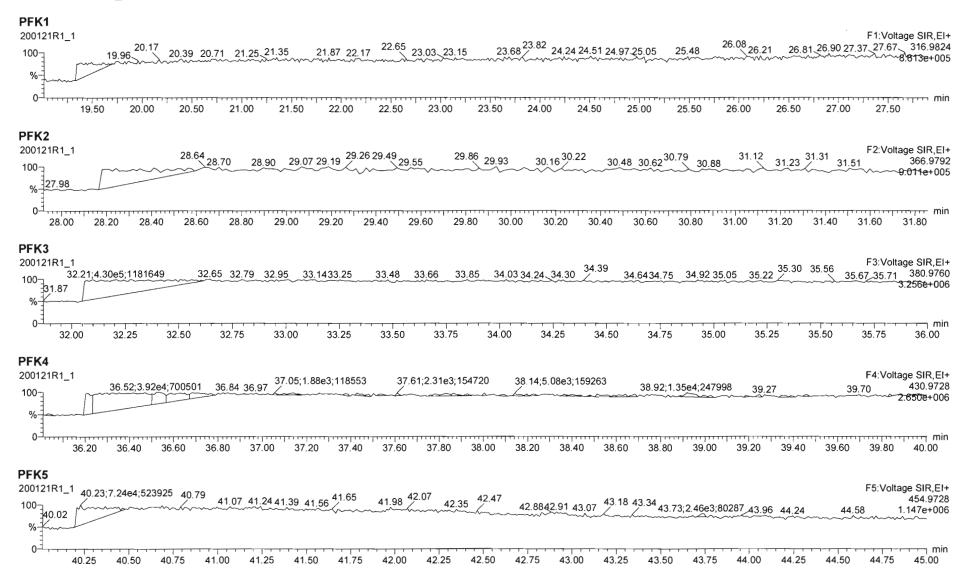
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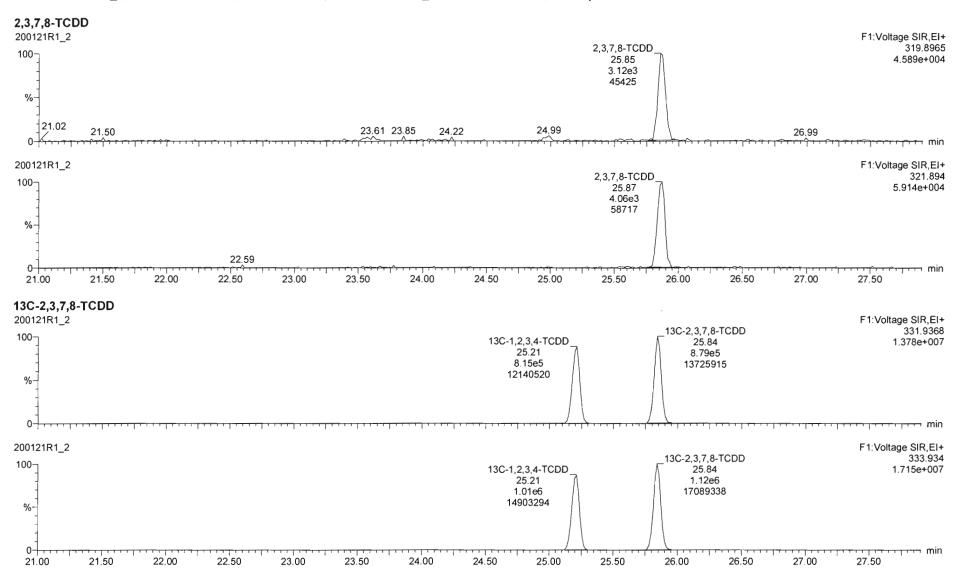


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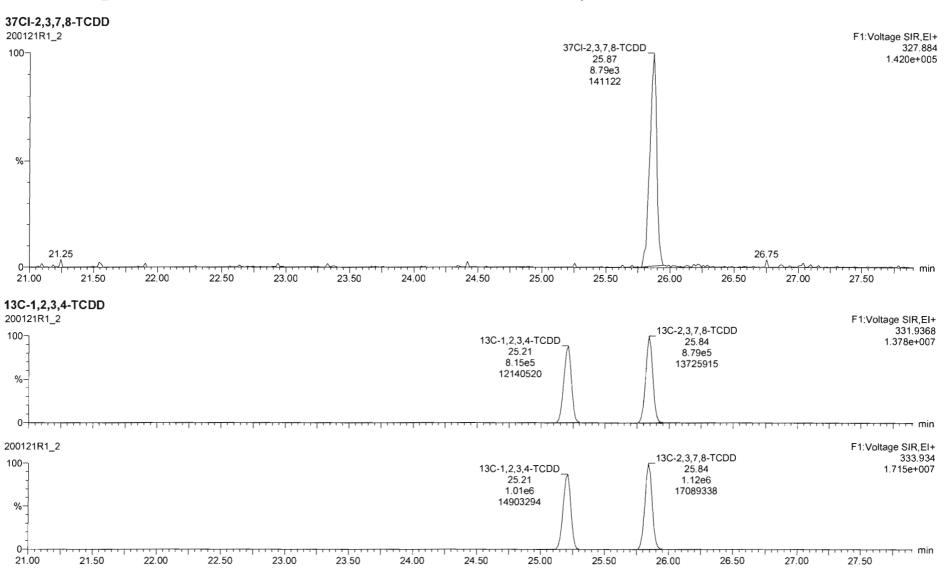


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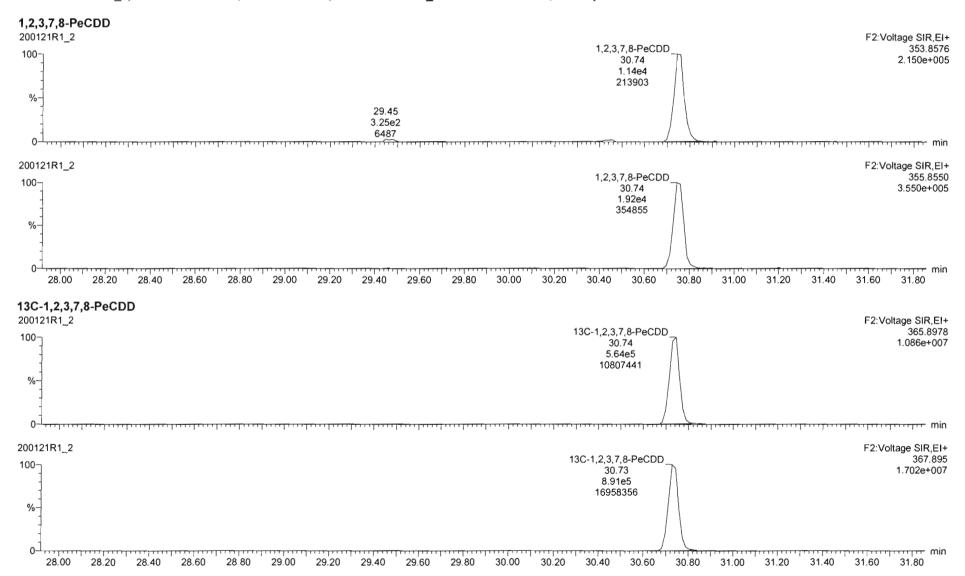
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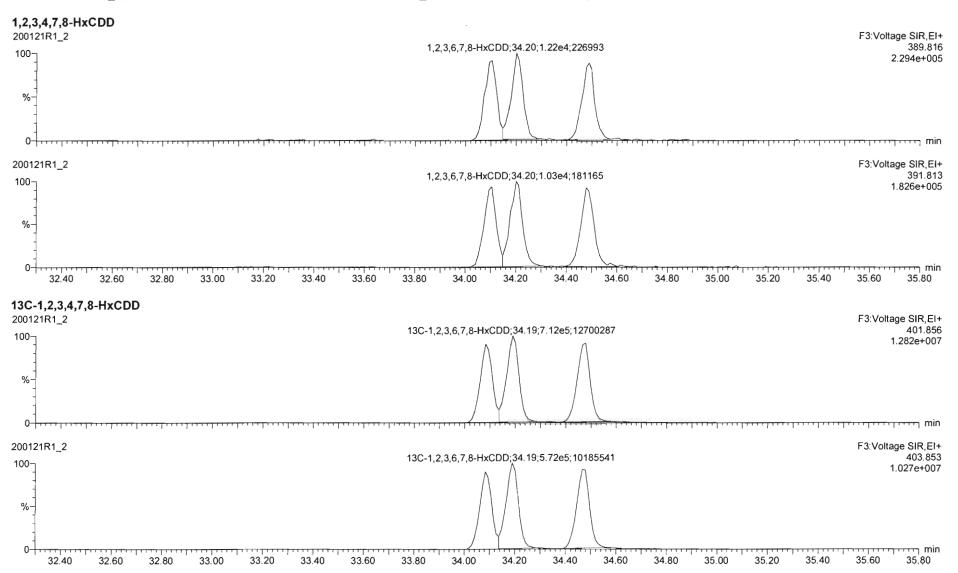
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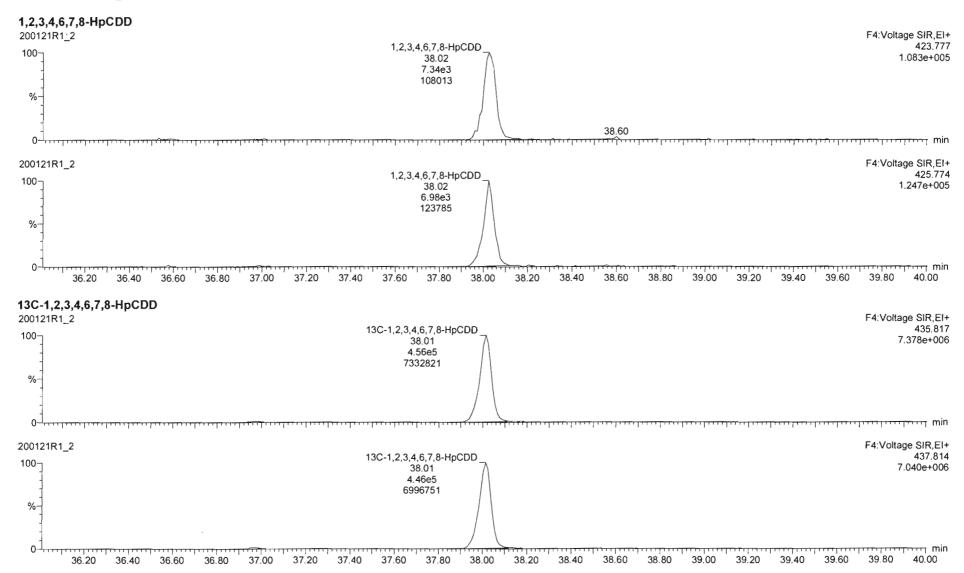
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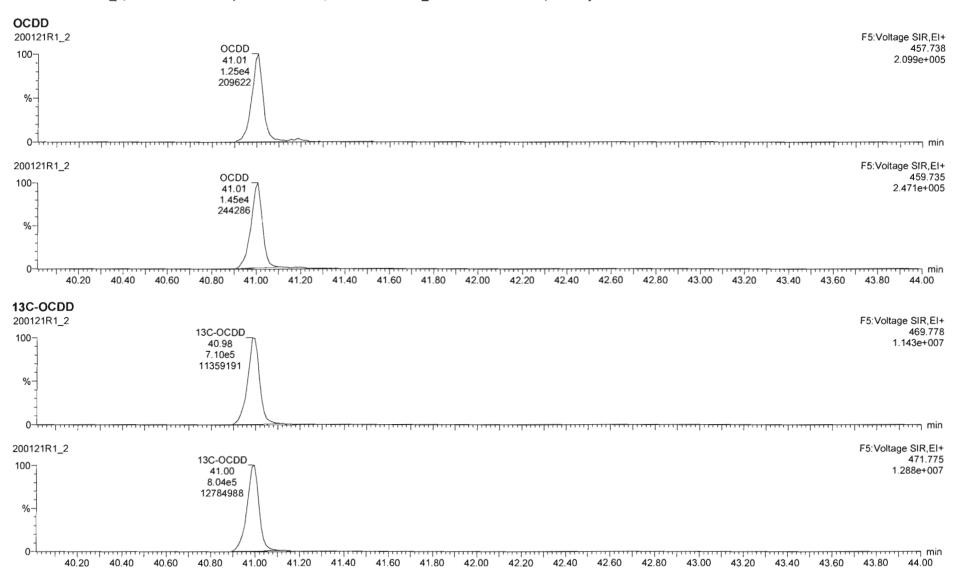
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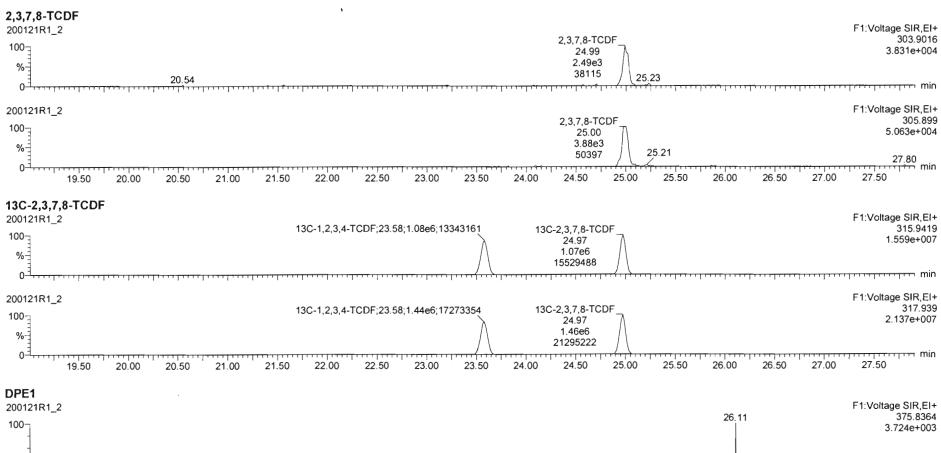
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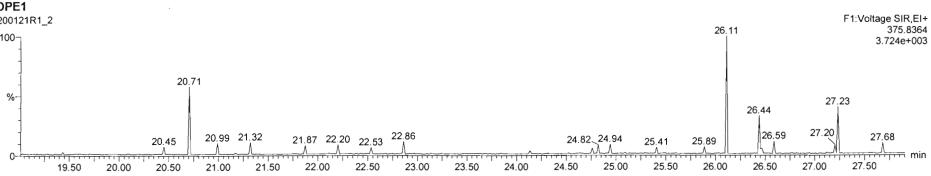


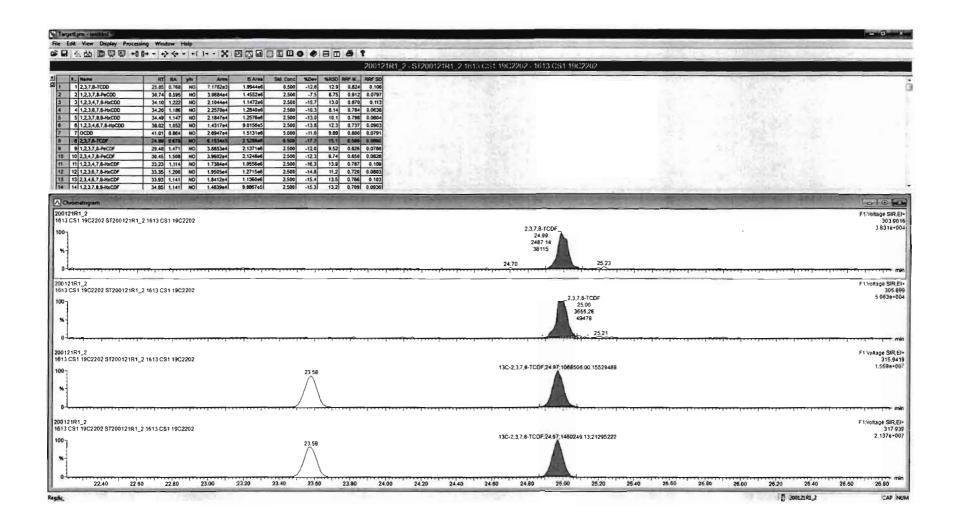
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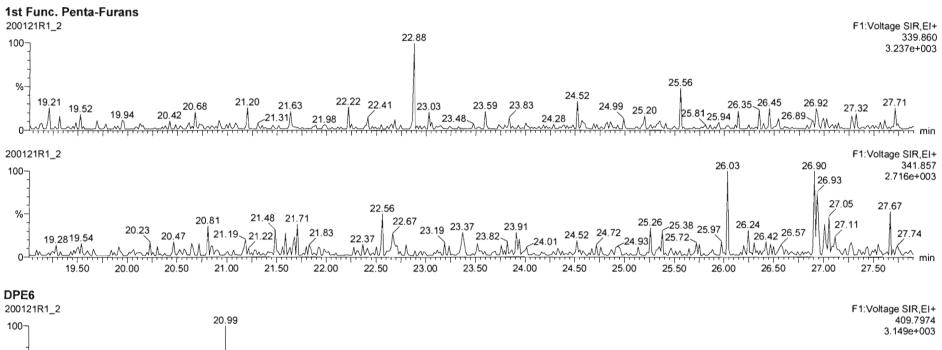
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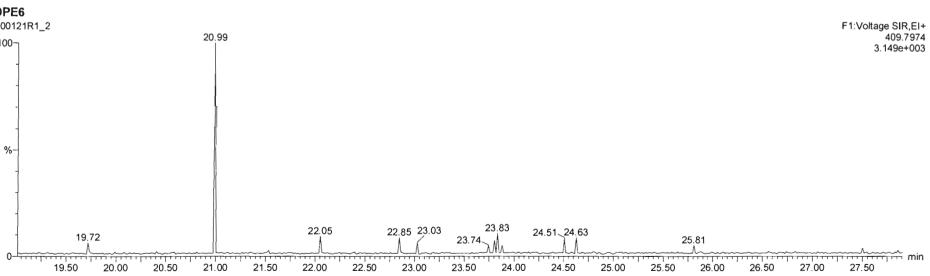
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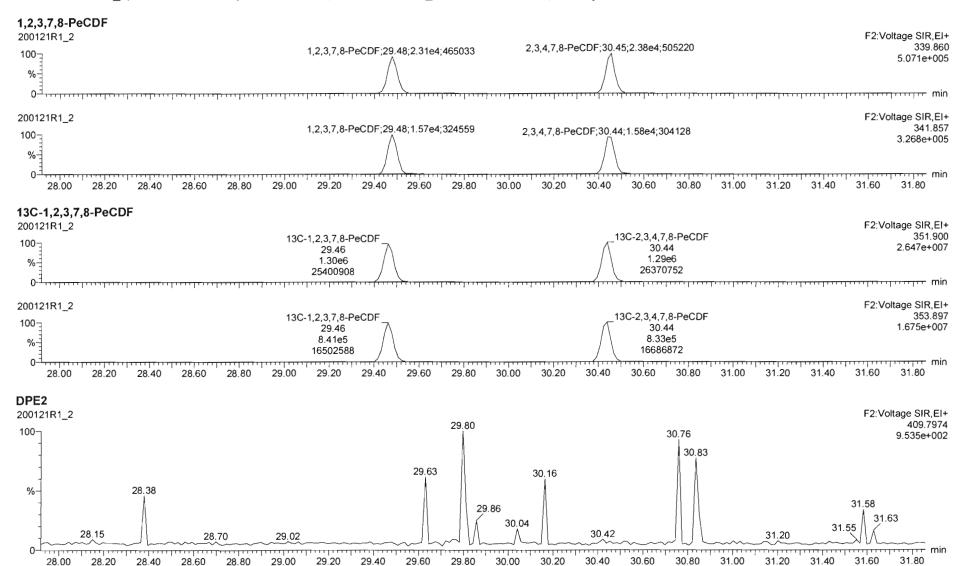
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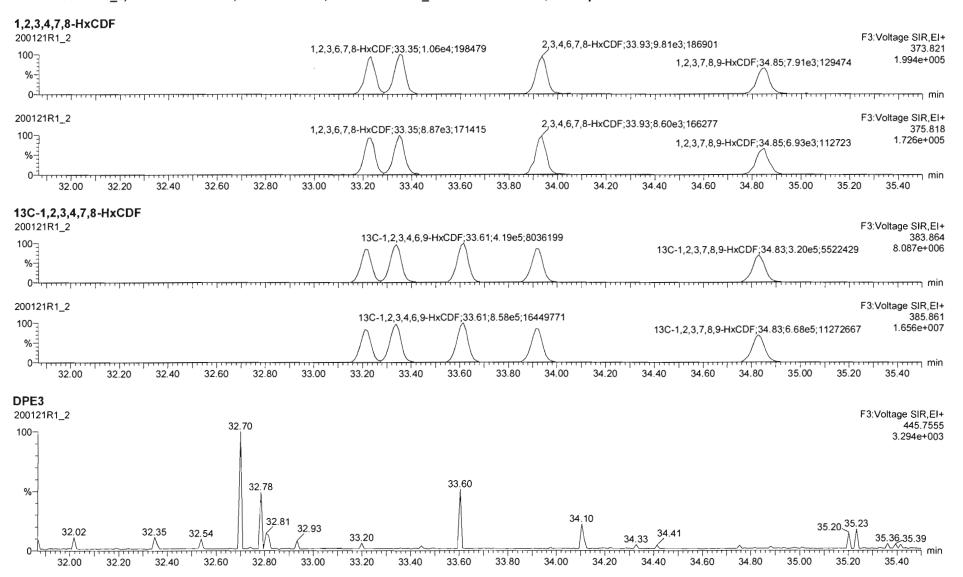
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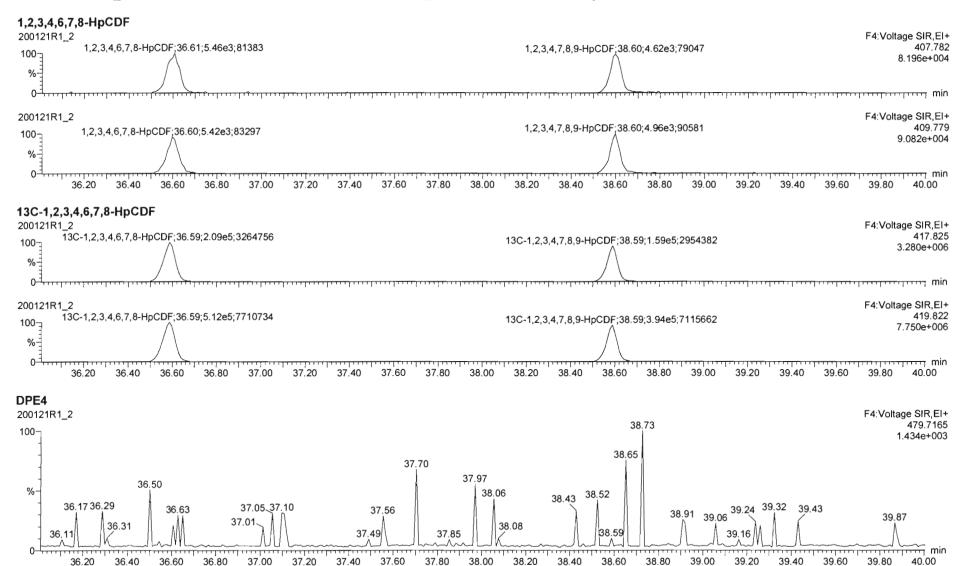
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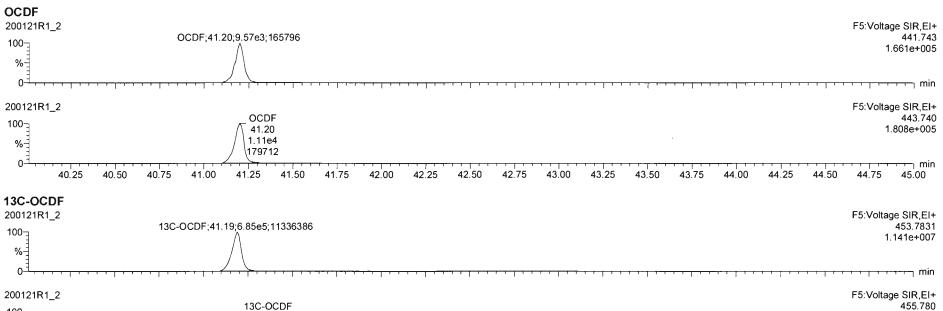
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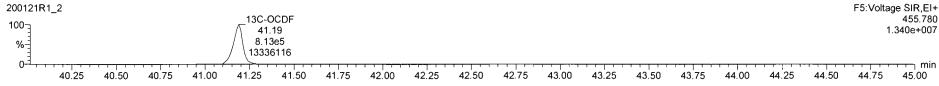


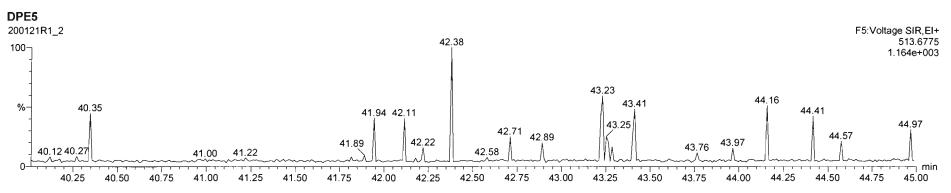
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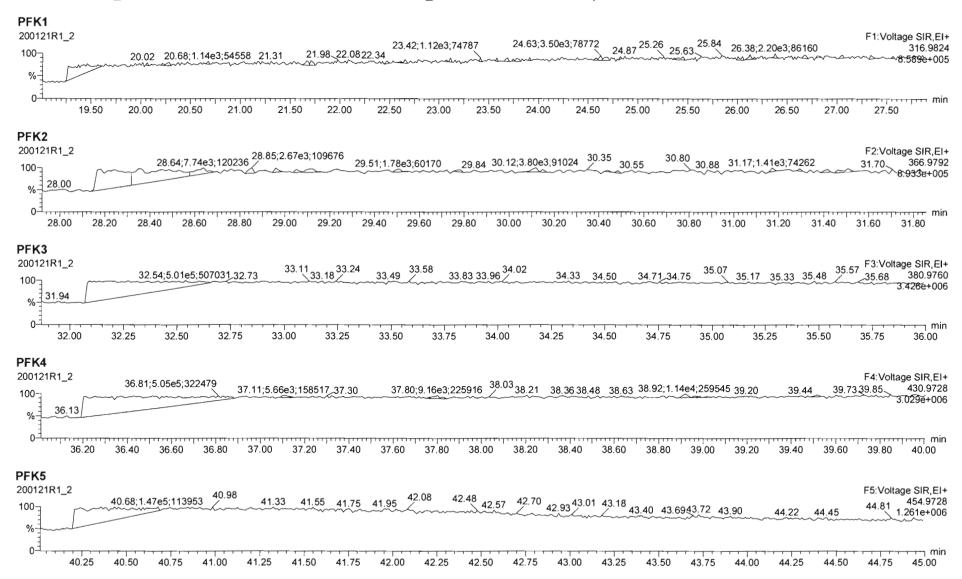


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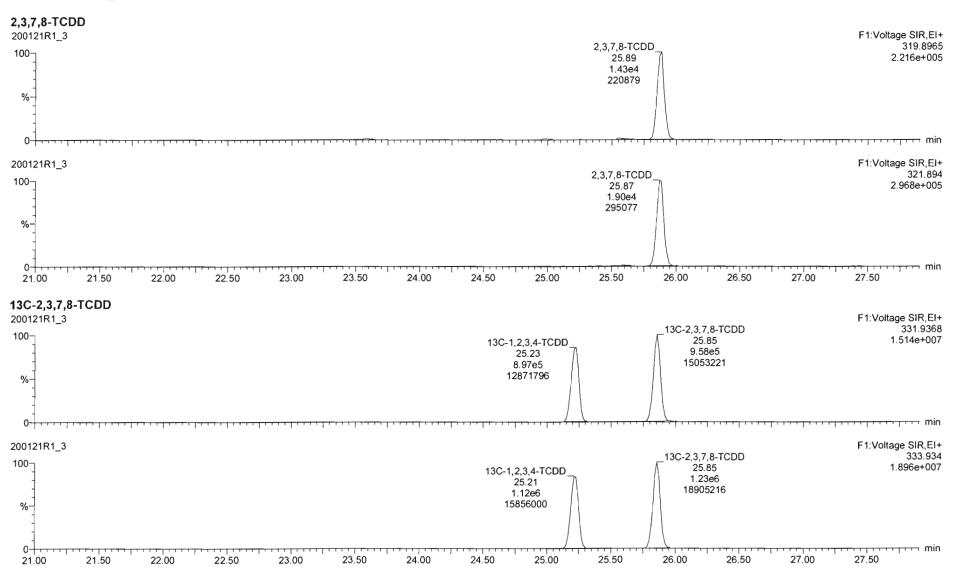


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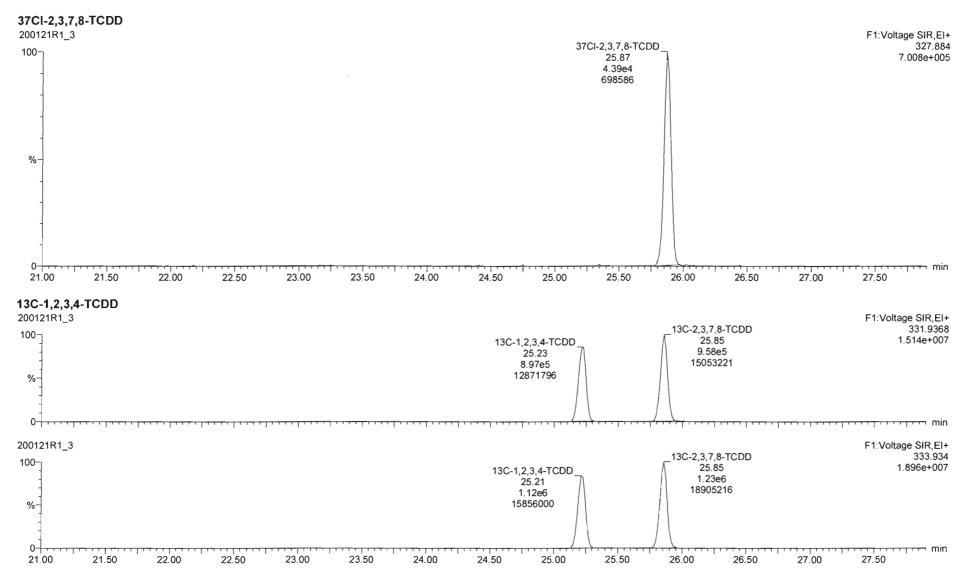
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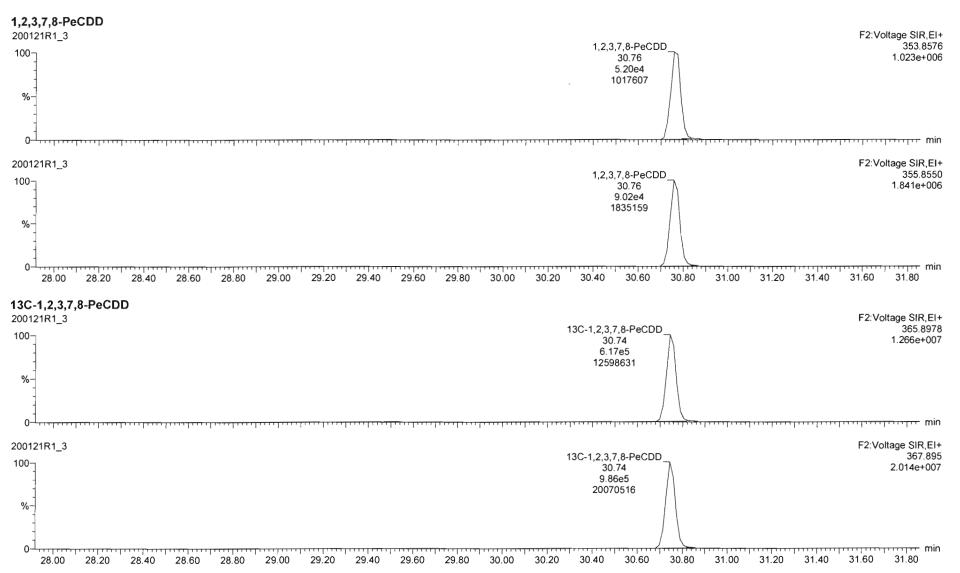
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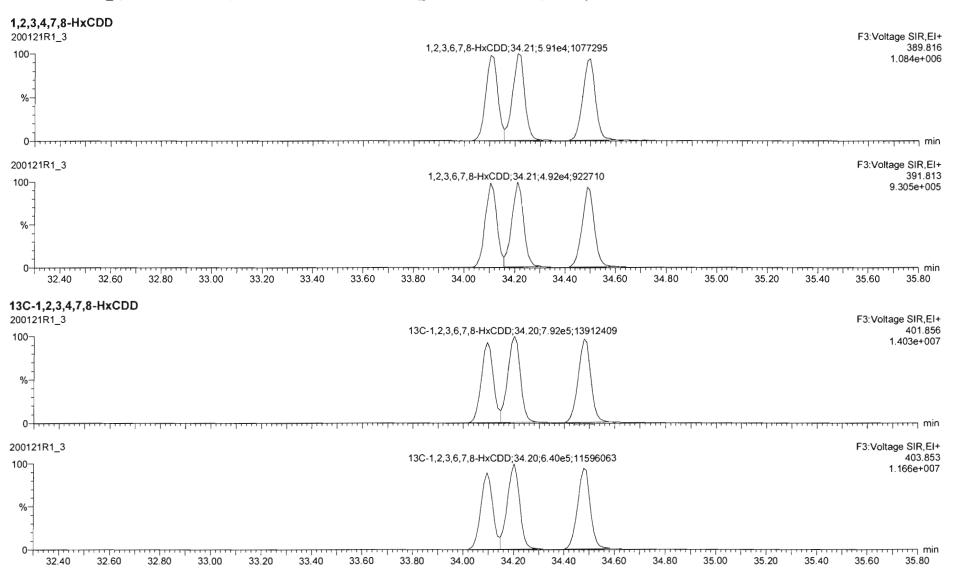
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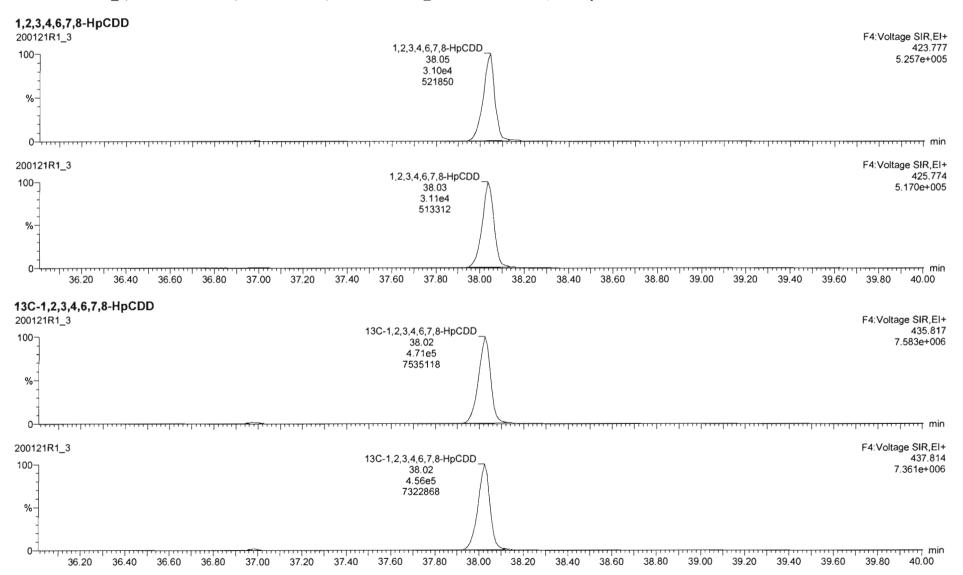
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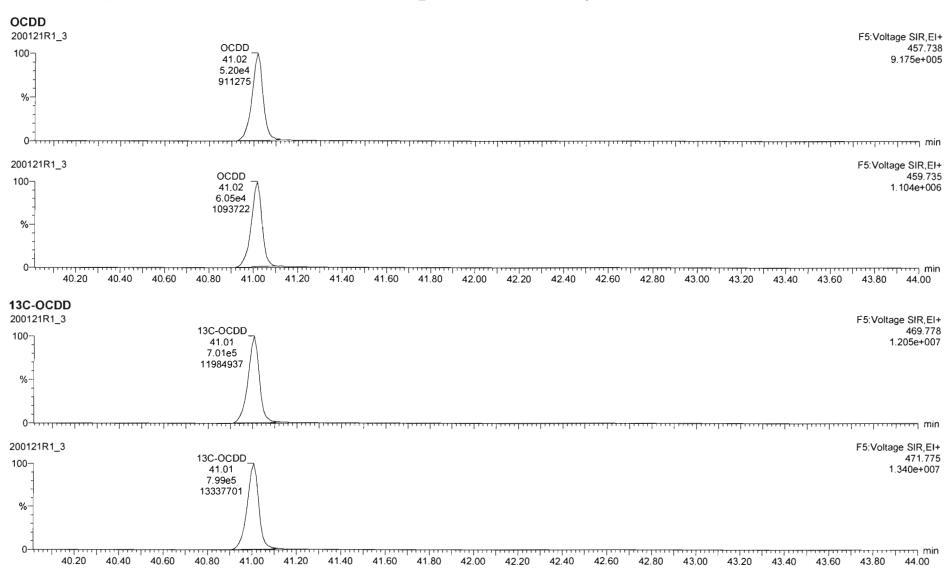


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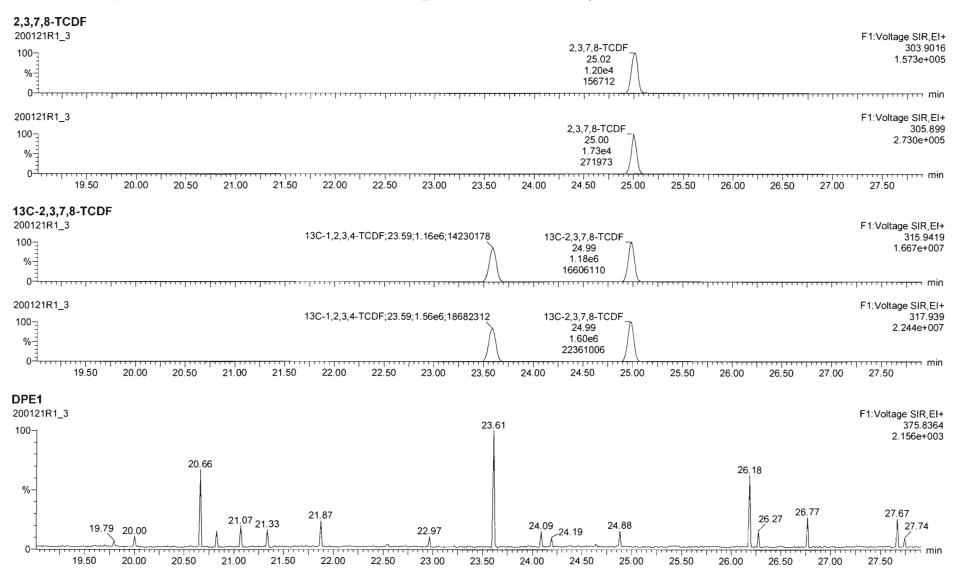


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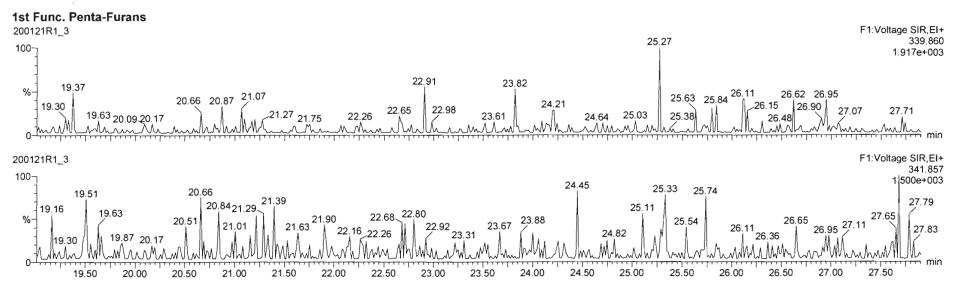
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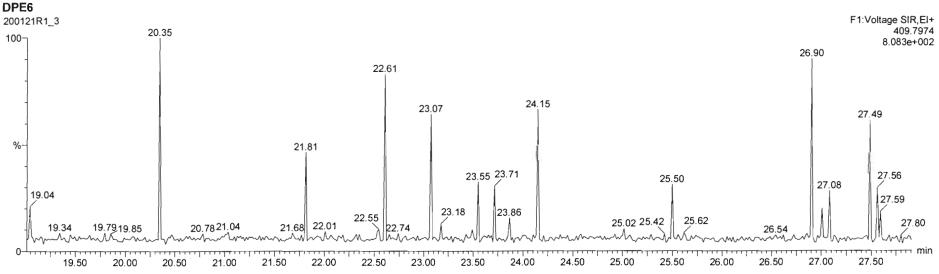


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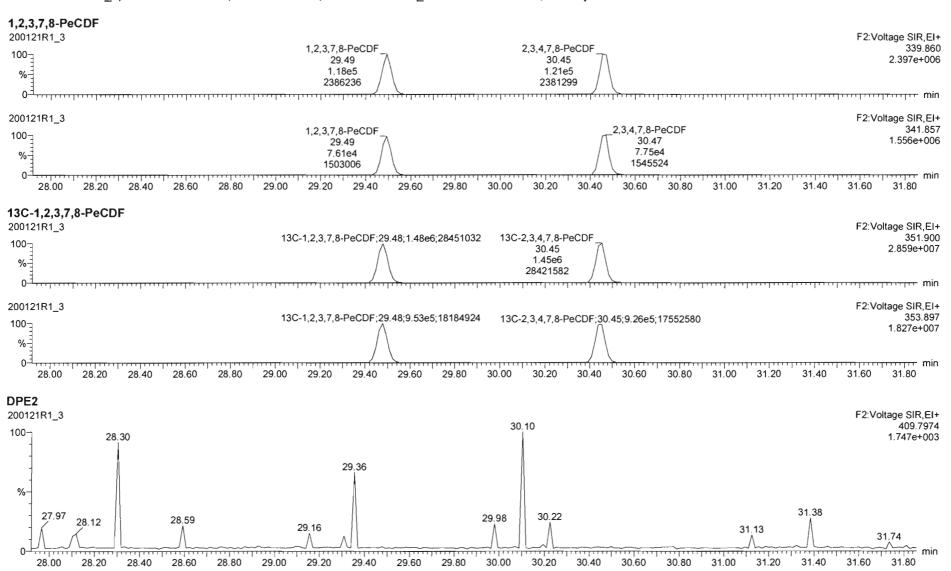




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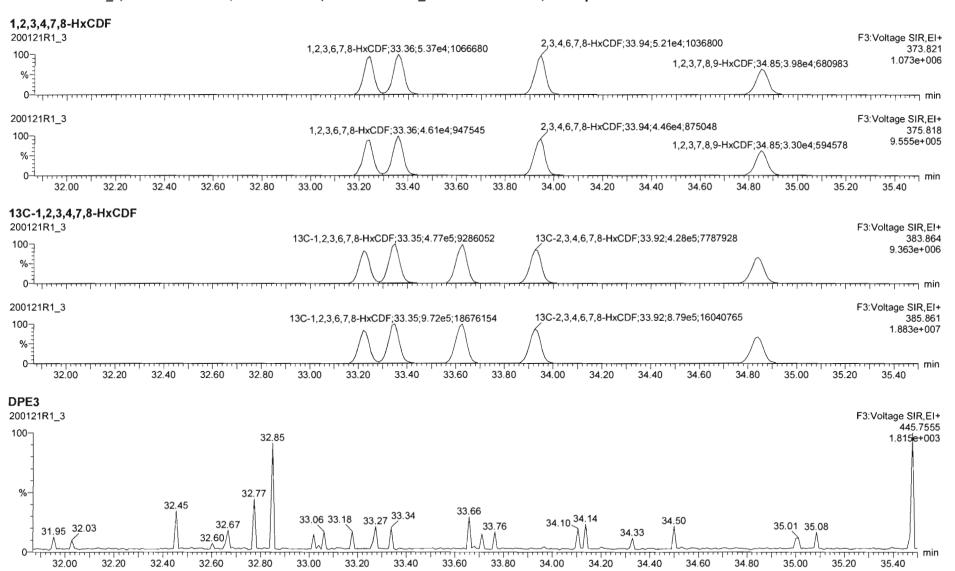
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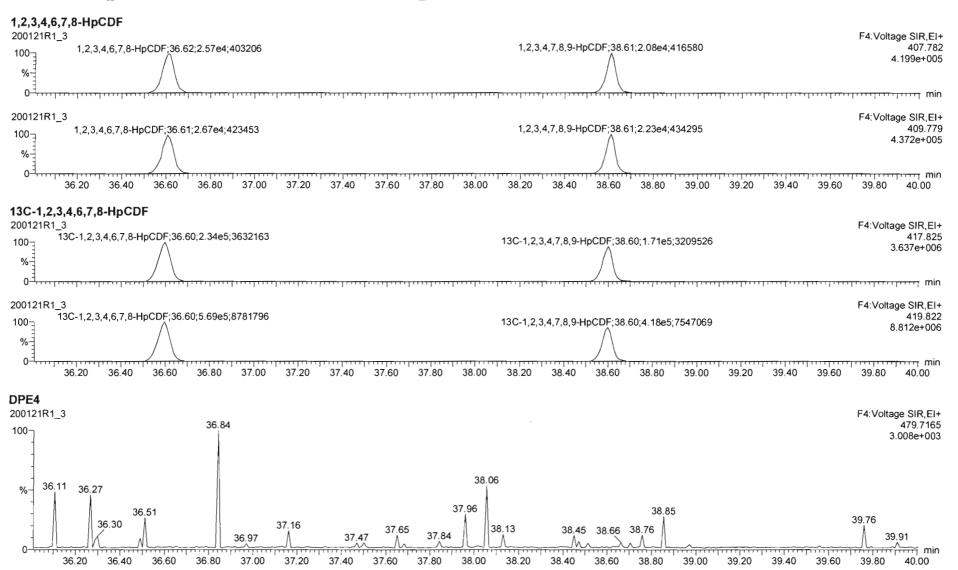


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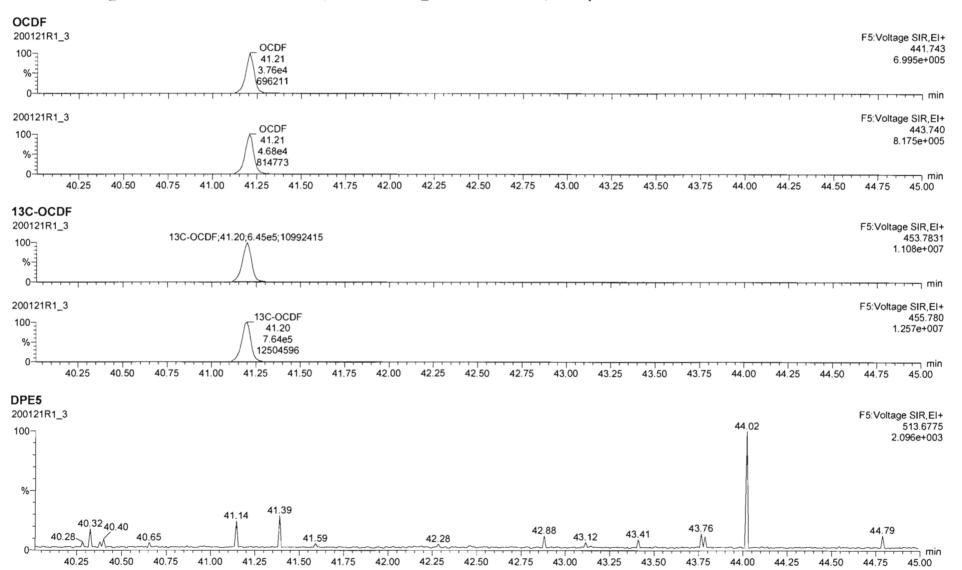
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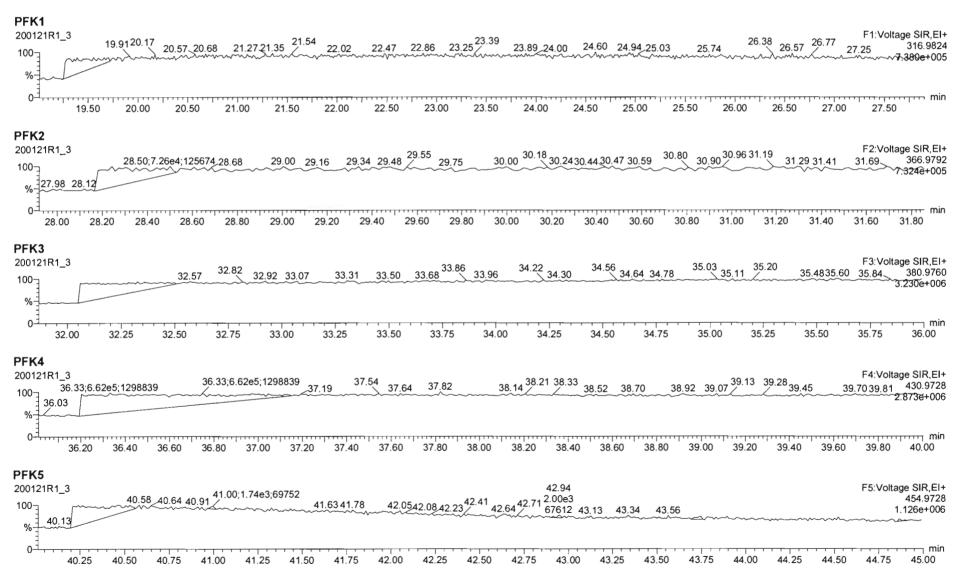
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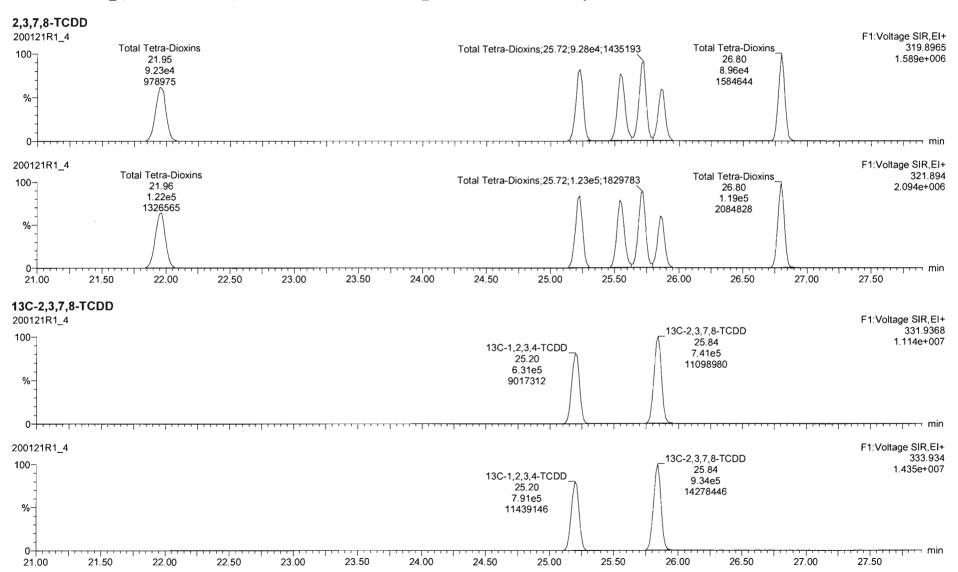
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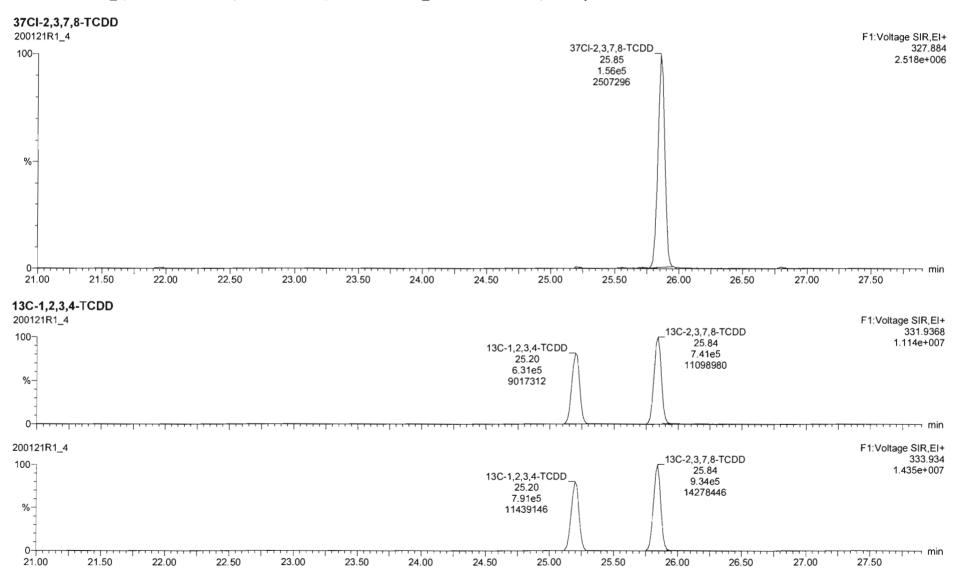


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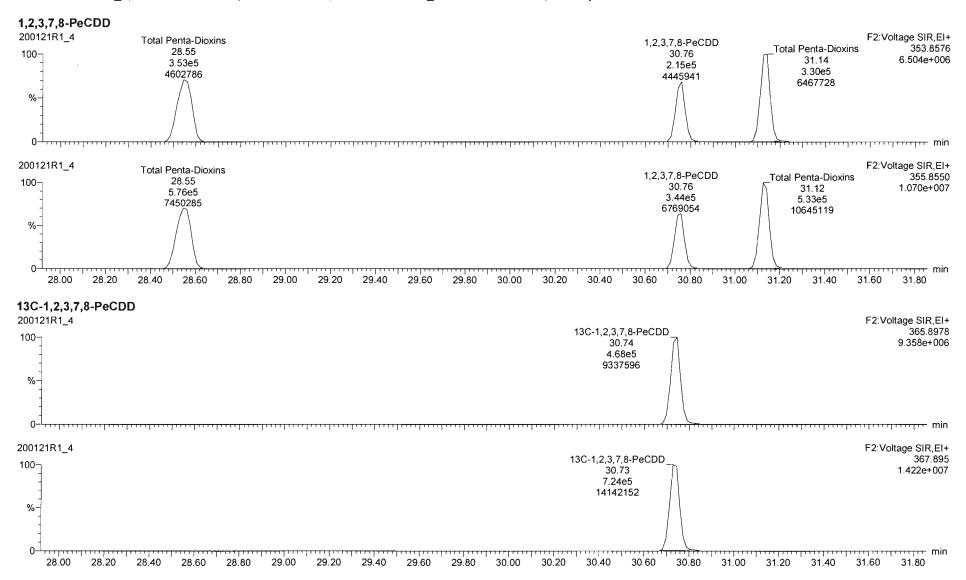


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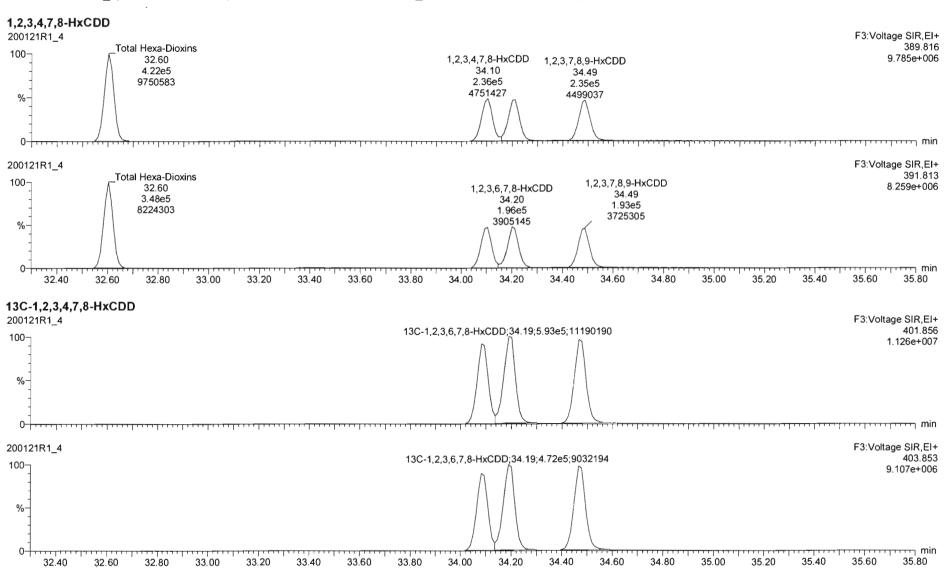
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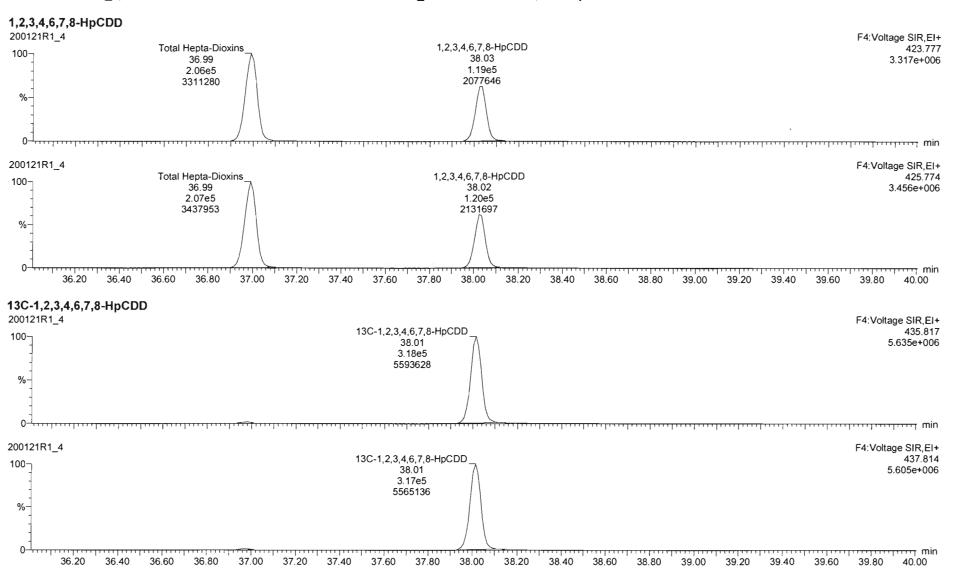
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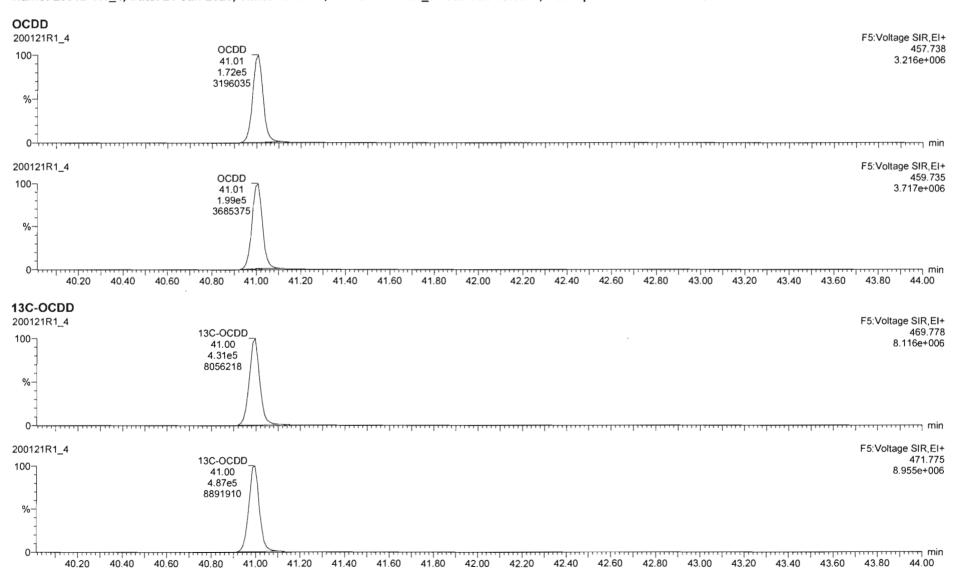
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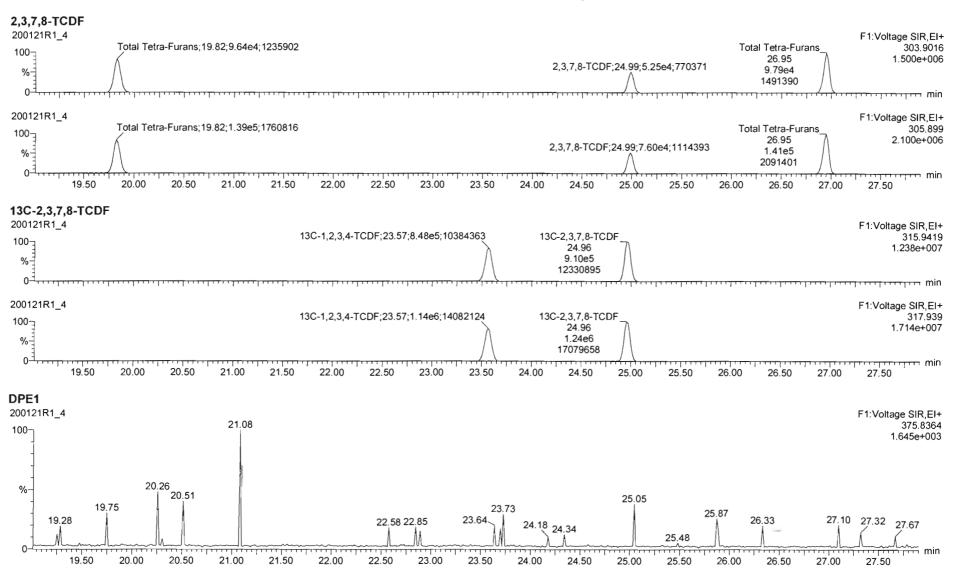
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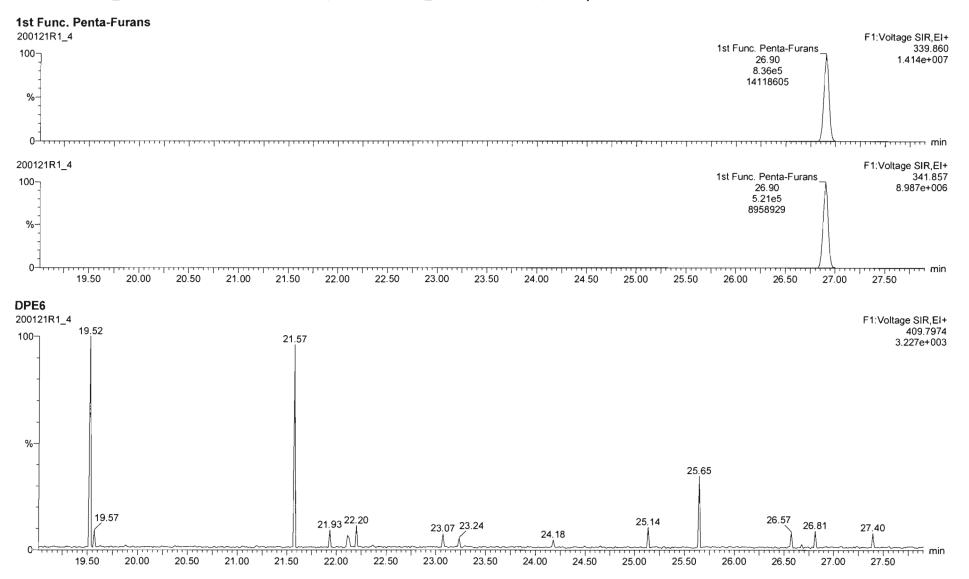
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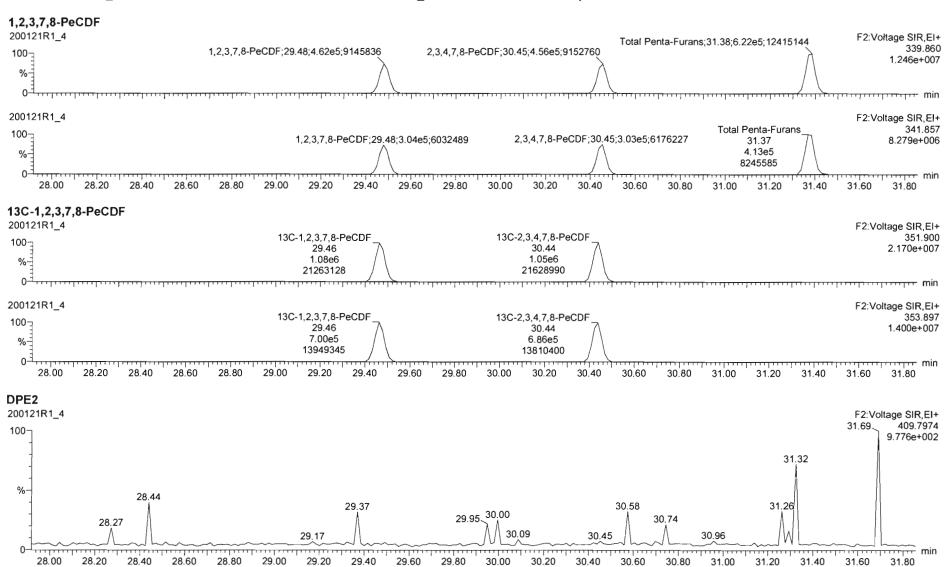
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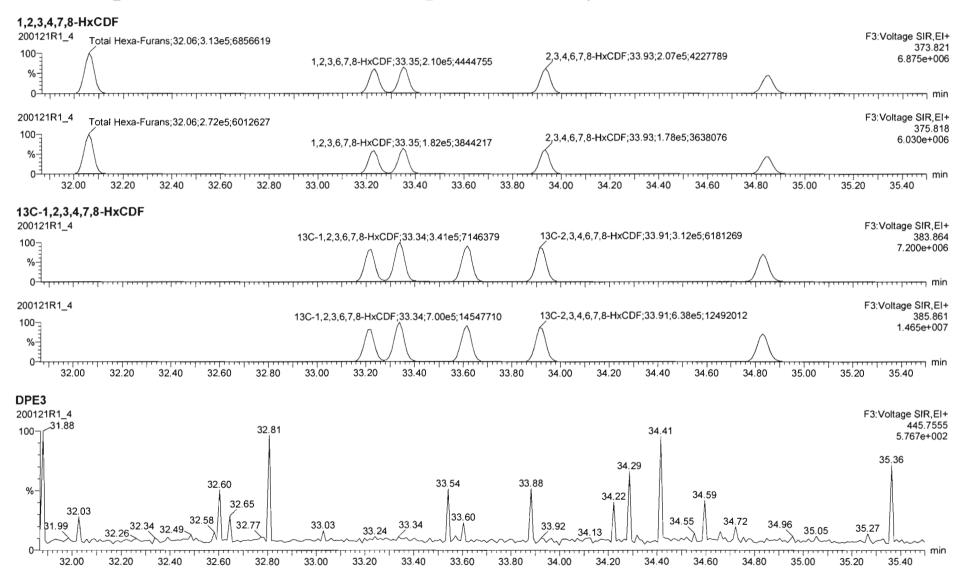
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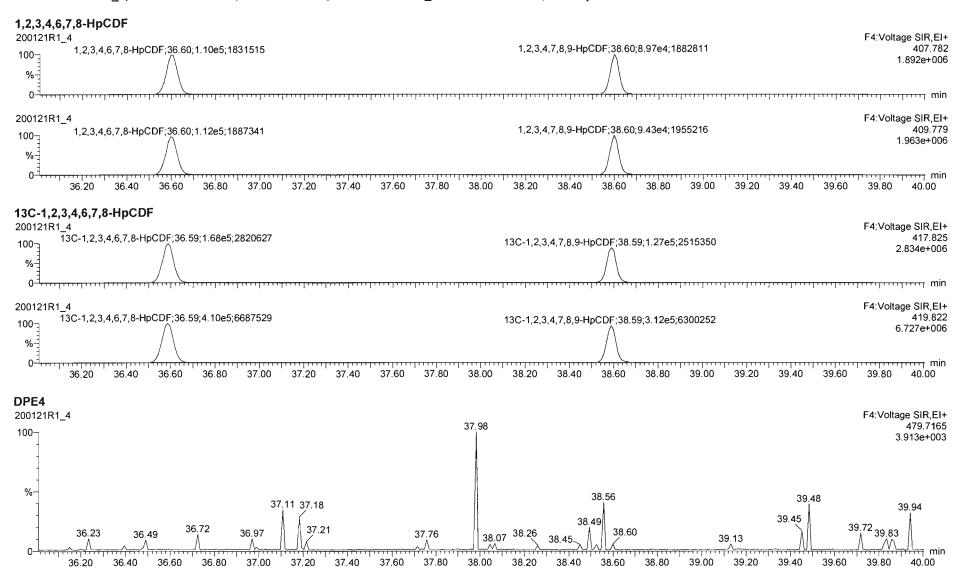
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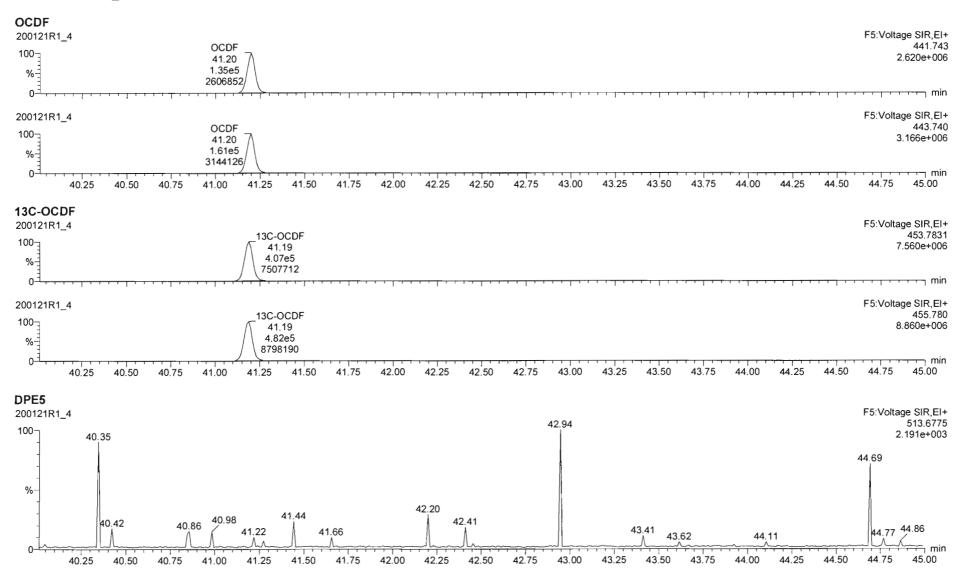
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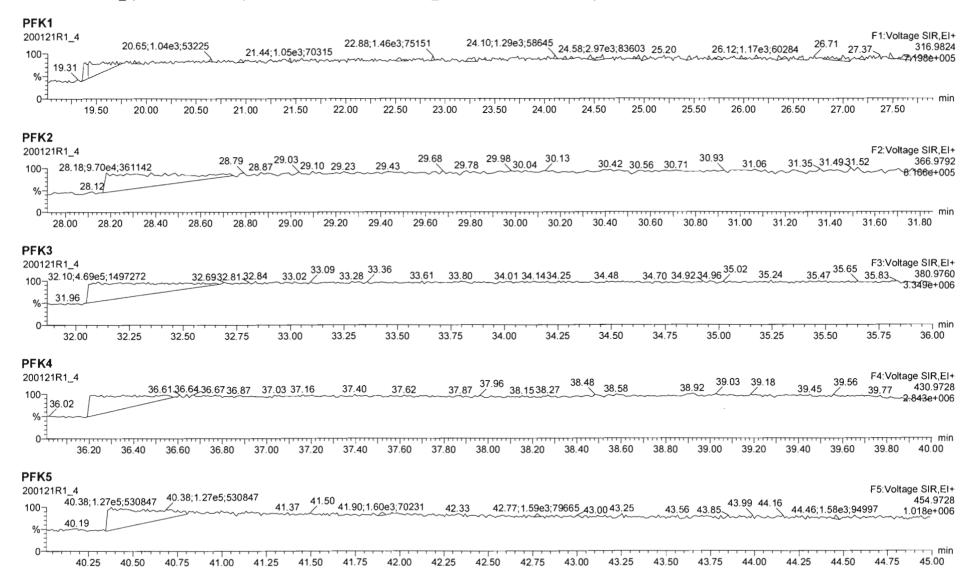
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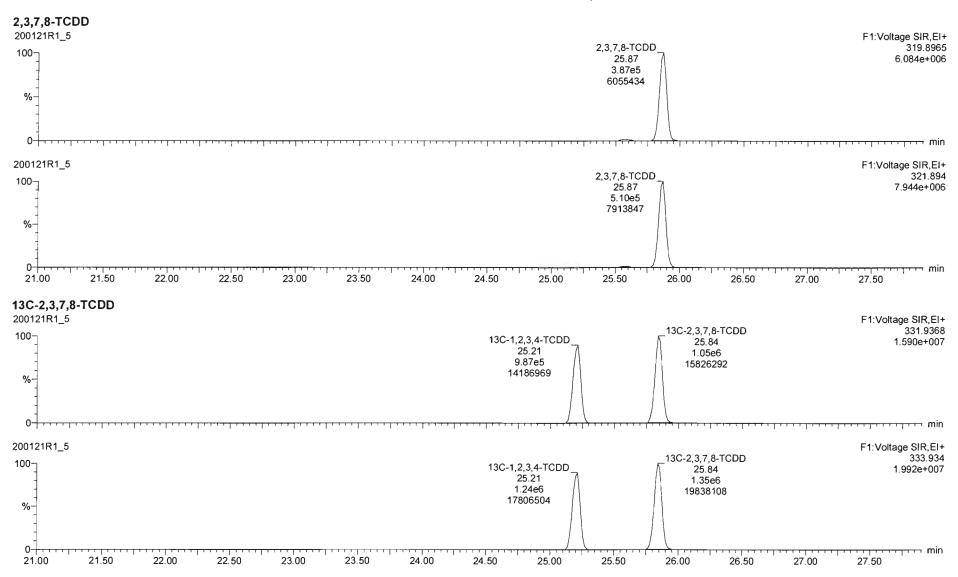
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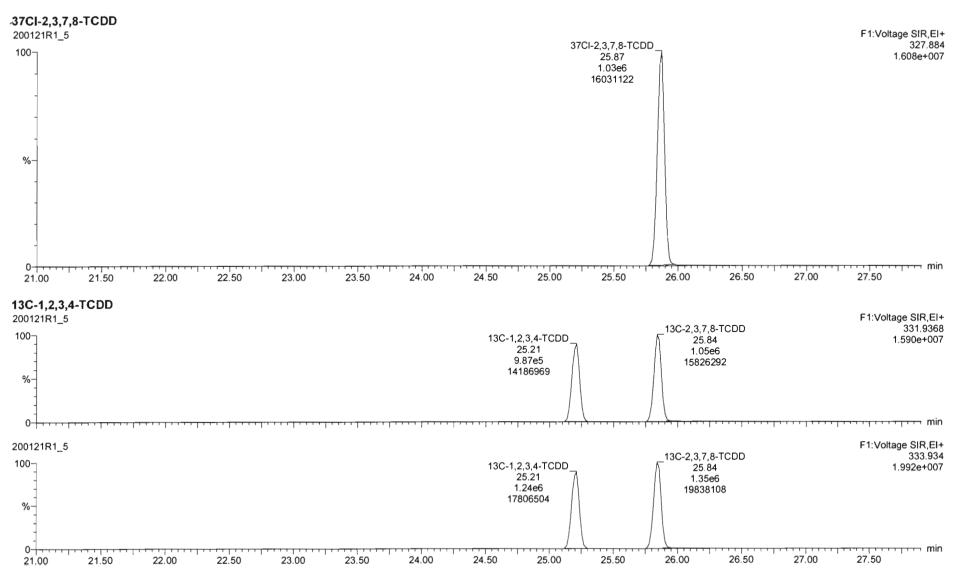
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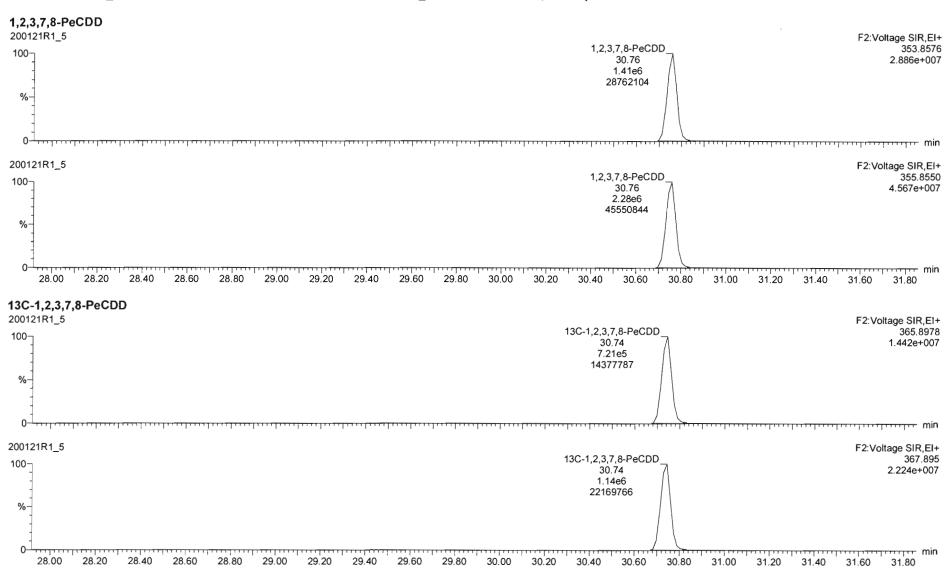




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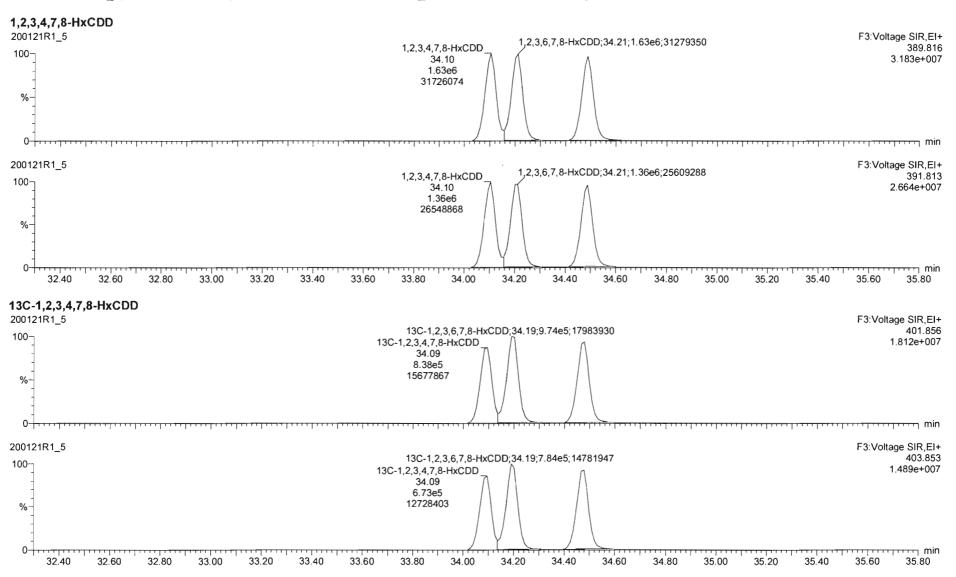
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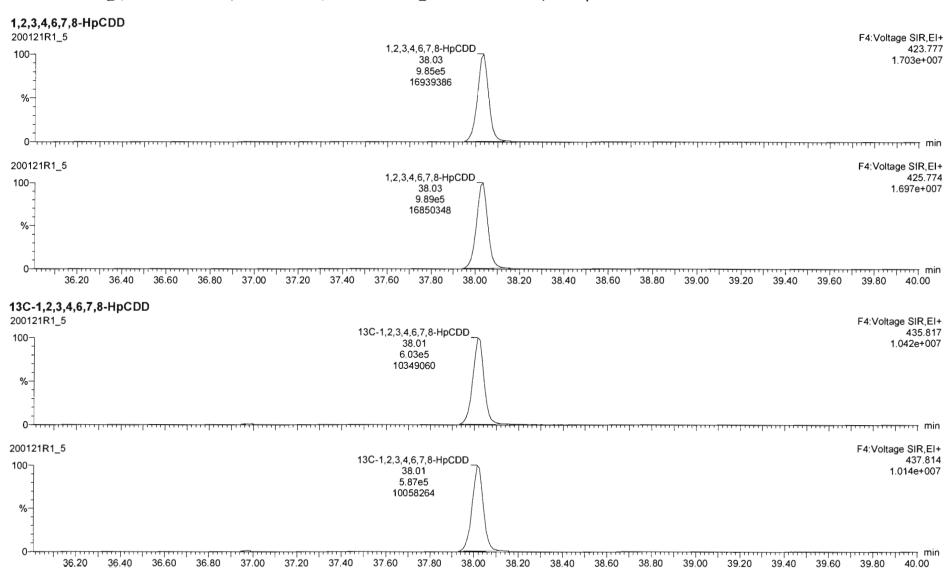
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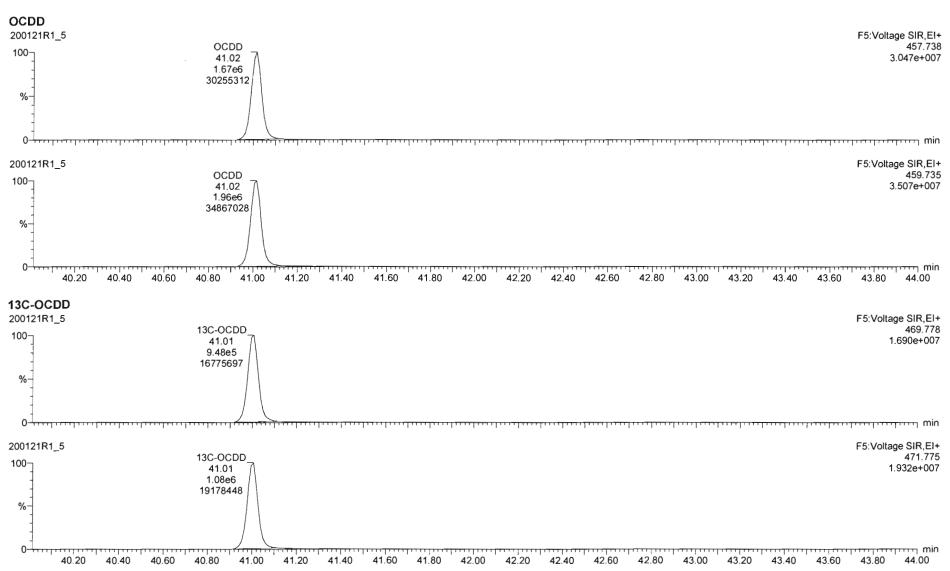
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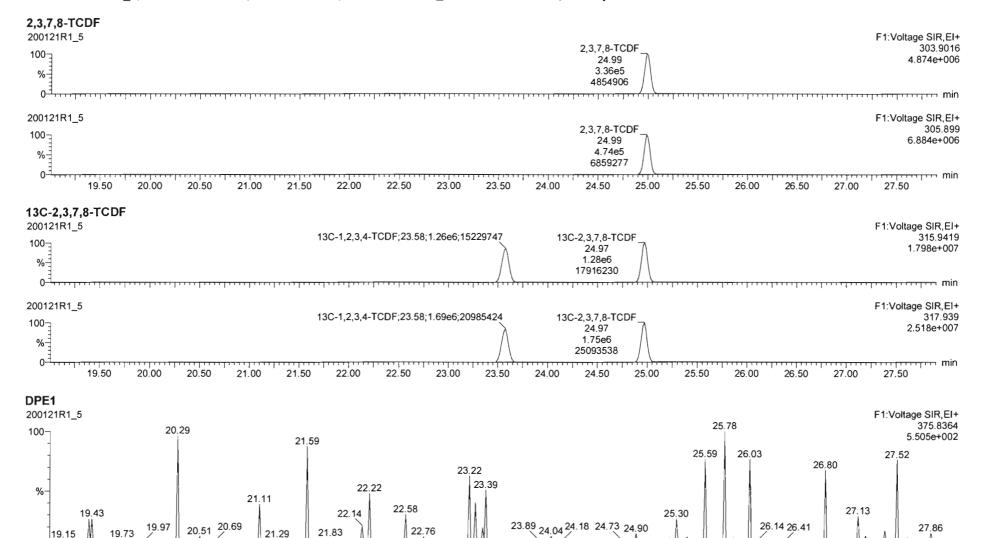
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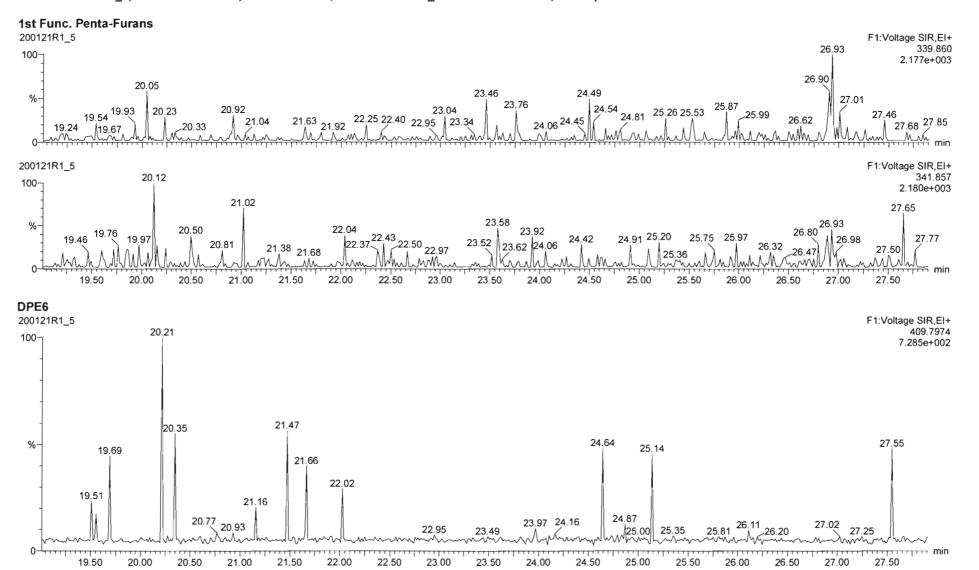
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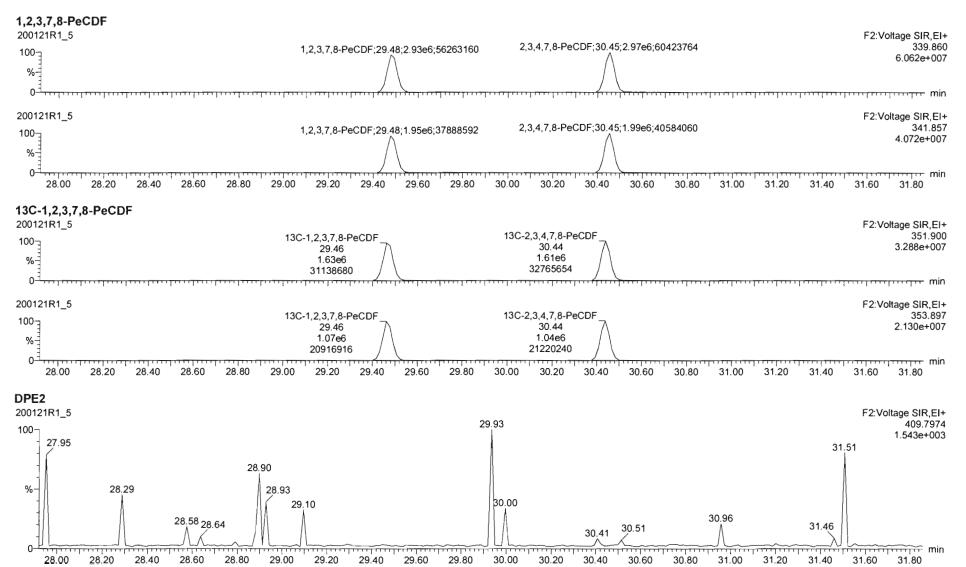
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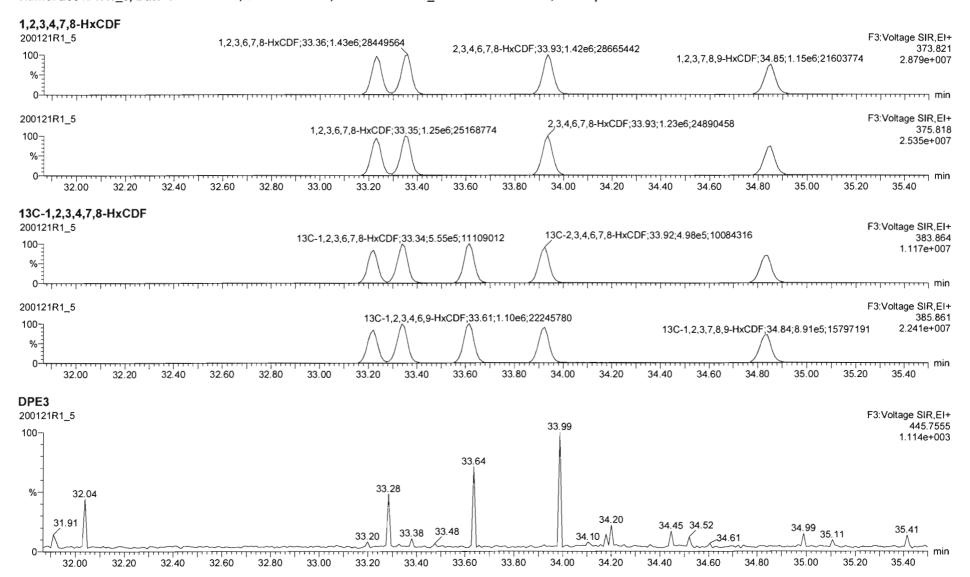
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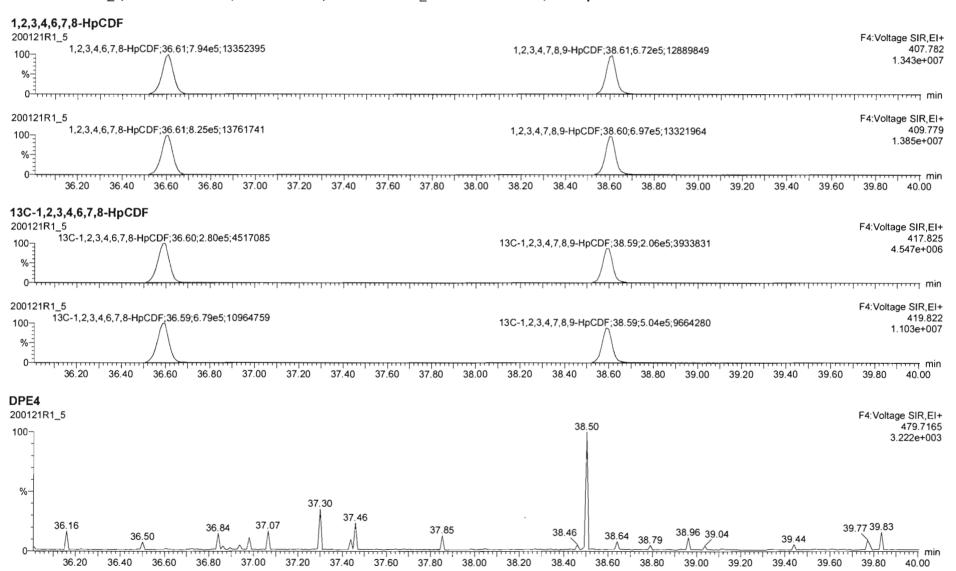


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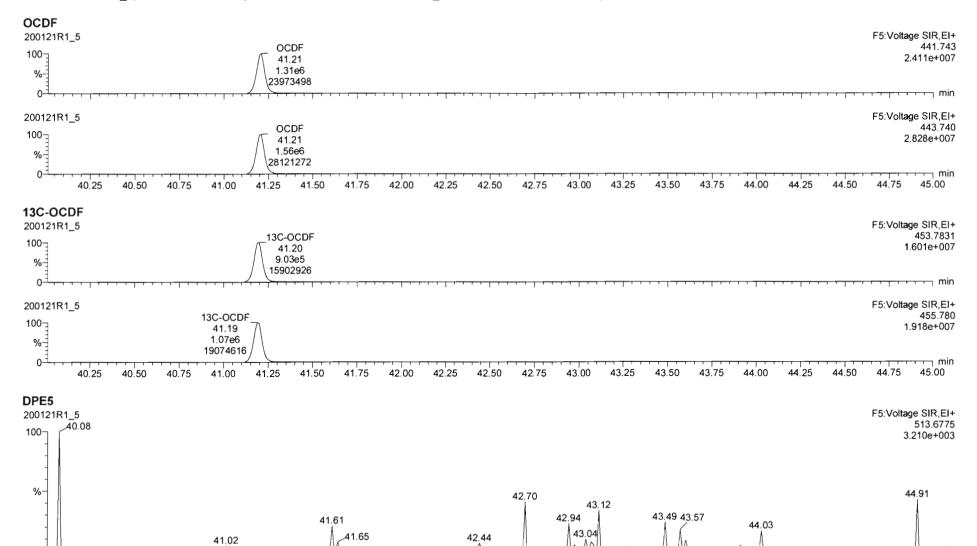
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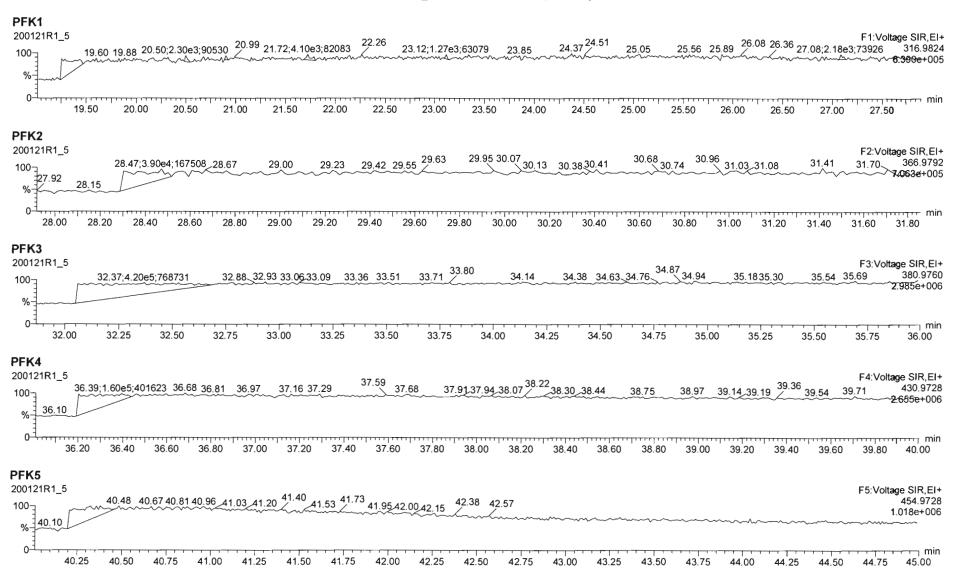
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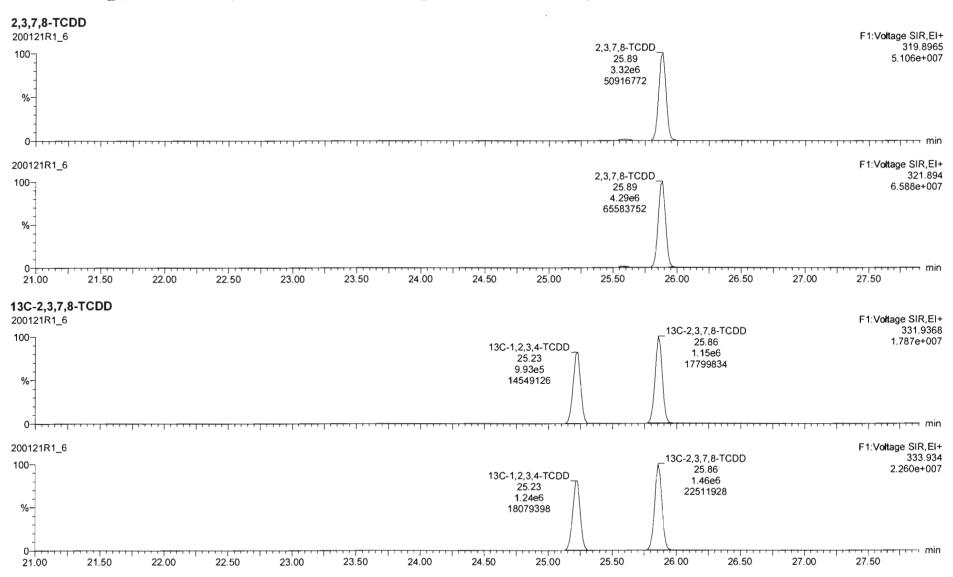
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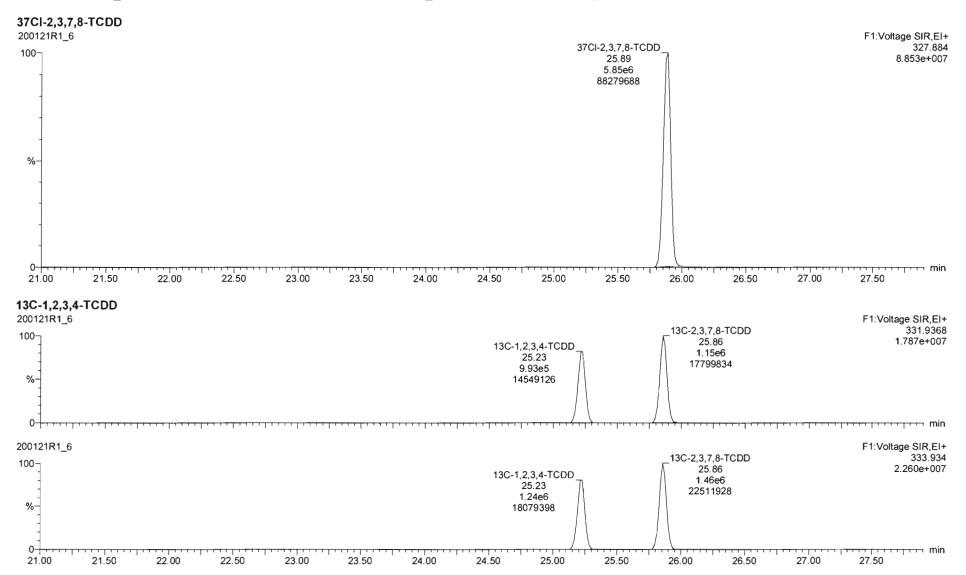
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Last Altered: Printed:

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



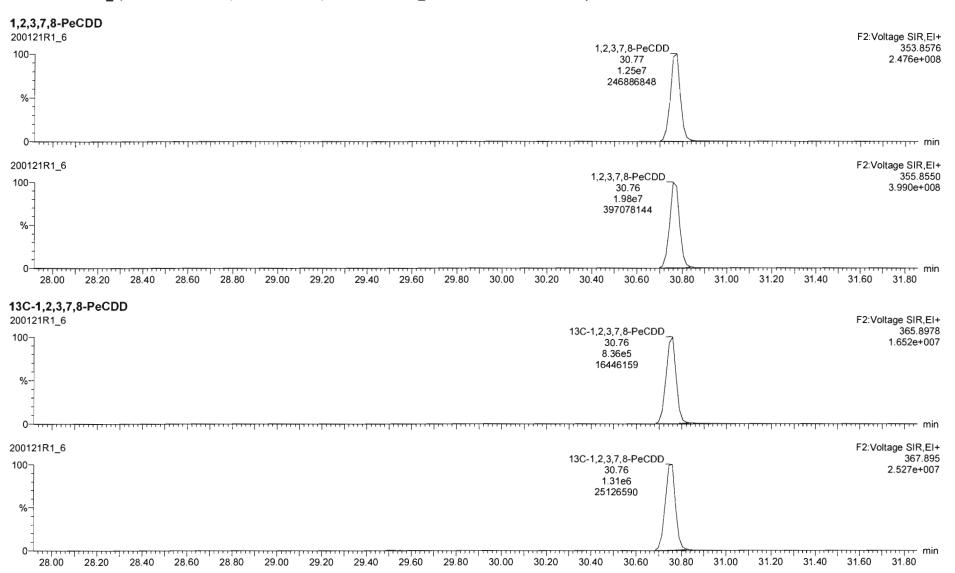
Vista Analytical Laboratory

Dataset:

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MassLynx 4.1 SCN815

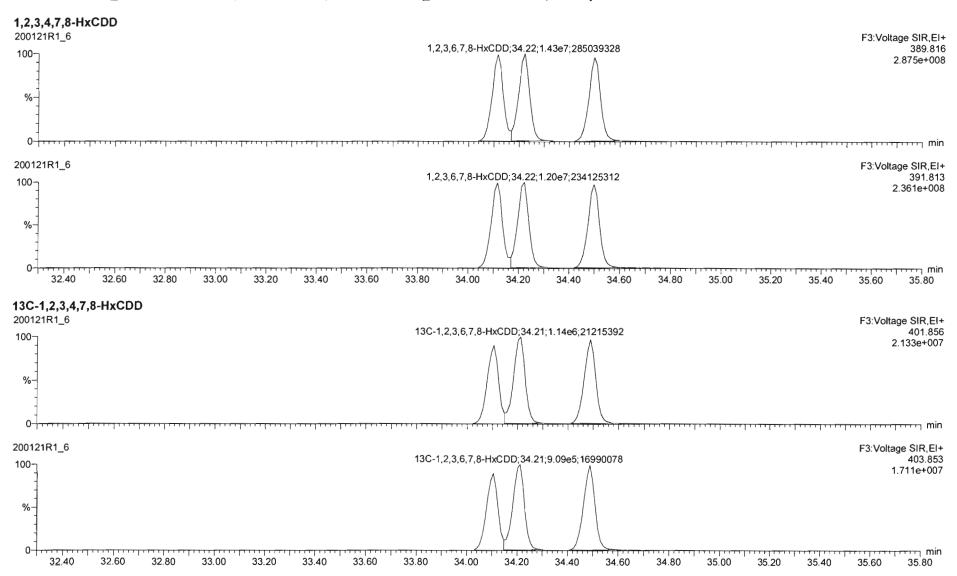
Page 69 of 78

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Last Altered: Printed:

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



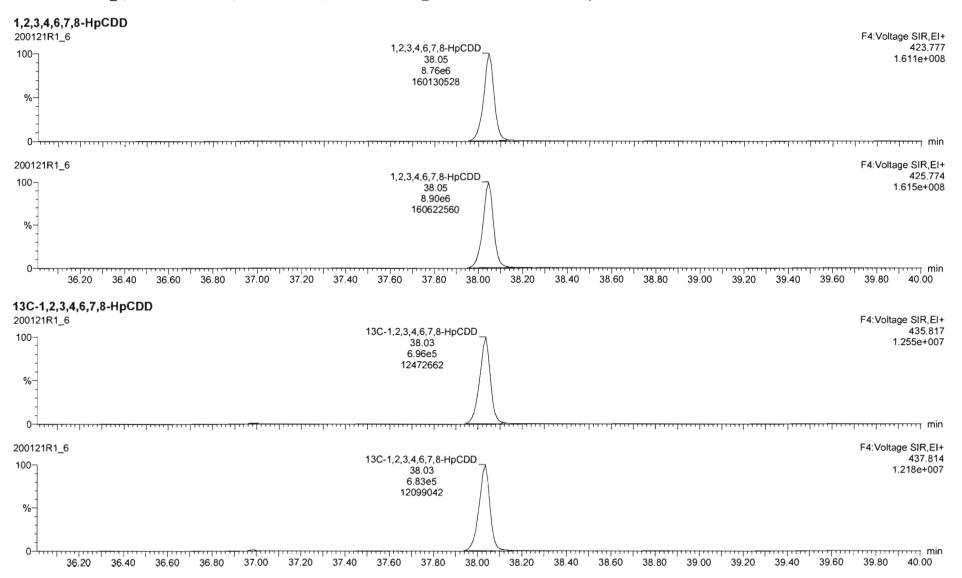
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Vista Analytical Laboratory

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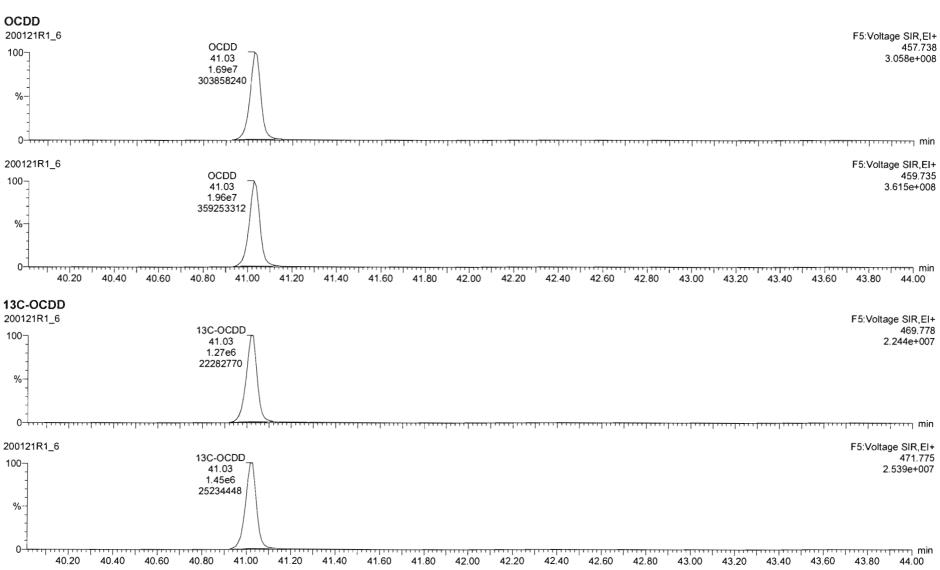
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Wednesday, January 22, 2020 09:03:58 Pacific Standard Time Wednesday, January 22, 2020 09:17:36 Pacific Standard Time



Vista Analytical Laboratory

Dataset:

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20.00

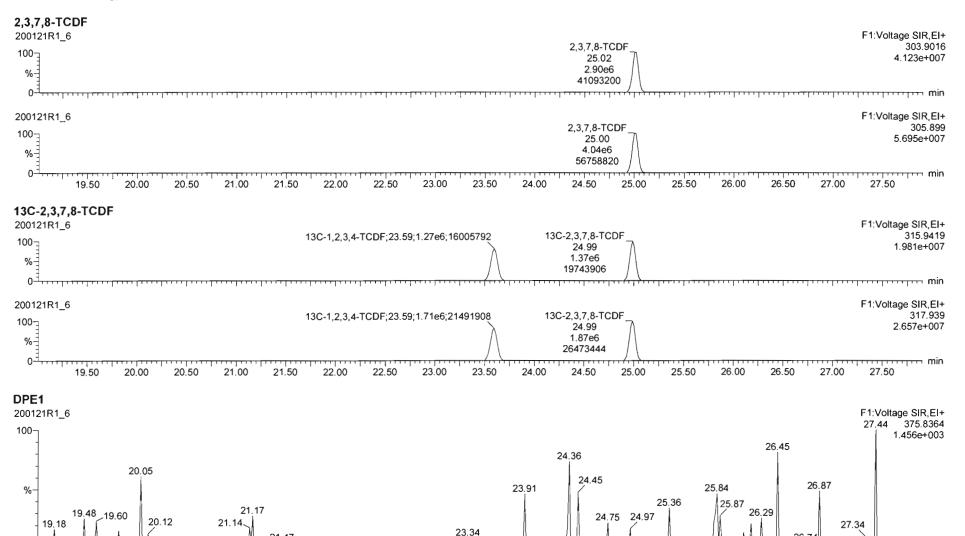
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20.50

21.00

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

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21.47

21.50

22.00

22.50

23.00

23.50

24.00

24.50

25.00

25.50

26.00

27.50

min.

26.74

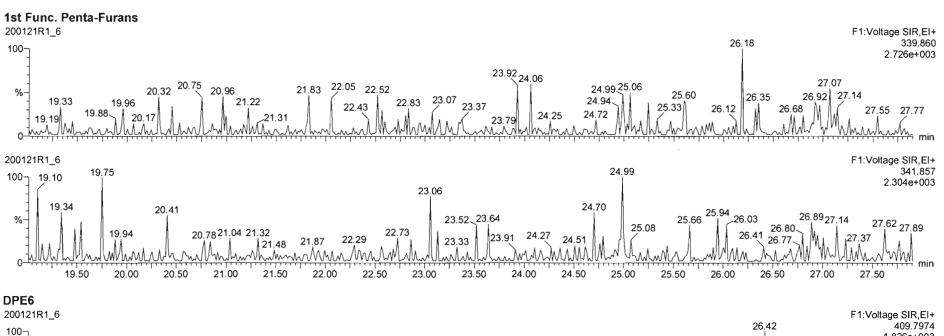
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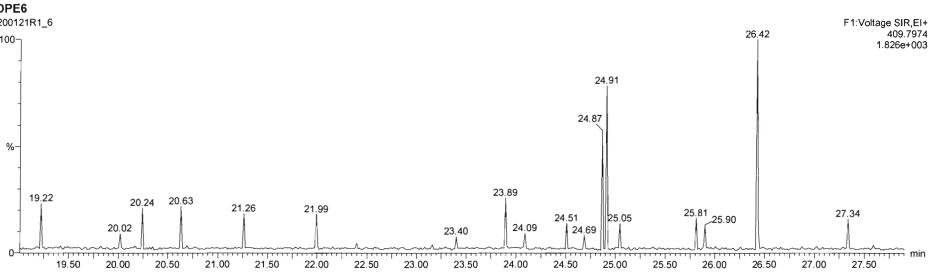
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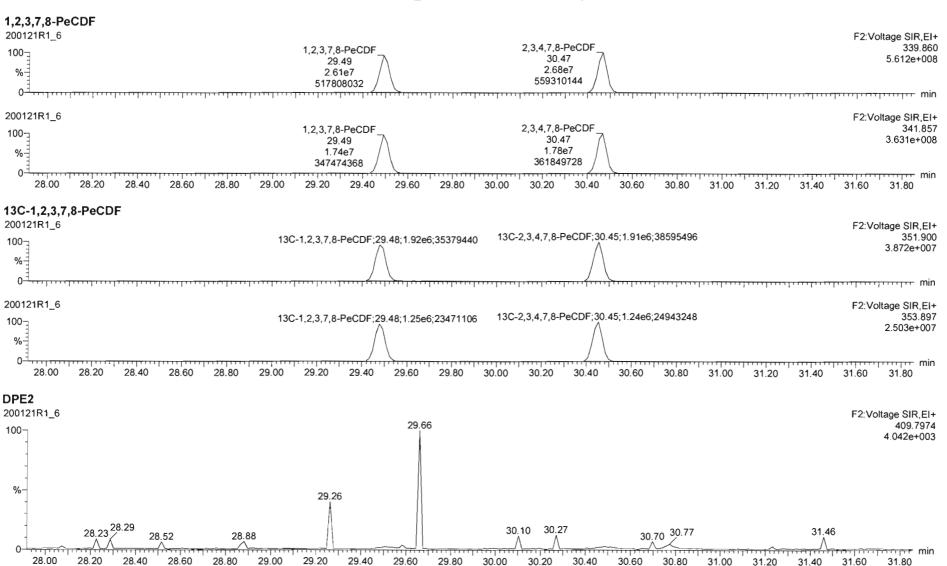




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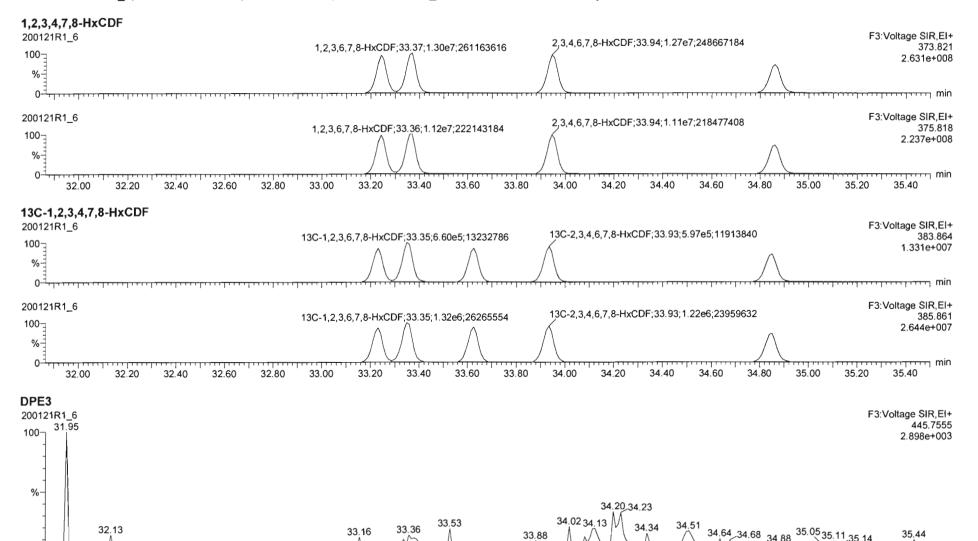


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32.20

32.40

32.60

32.80

33.00

33.20

33.40

33.60

33.80

34.00

34.20

34.40

34.60

34.80

35.00

35.20

32.00

min

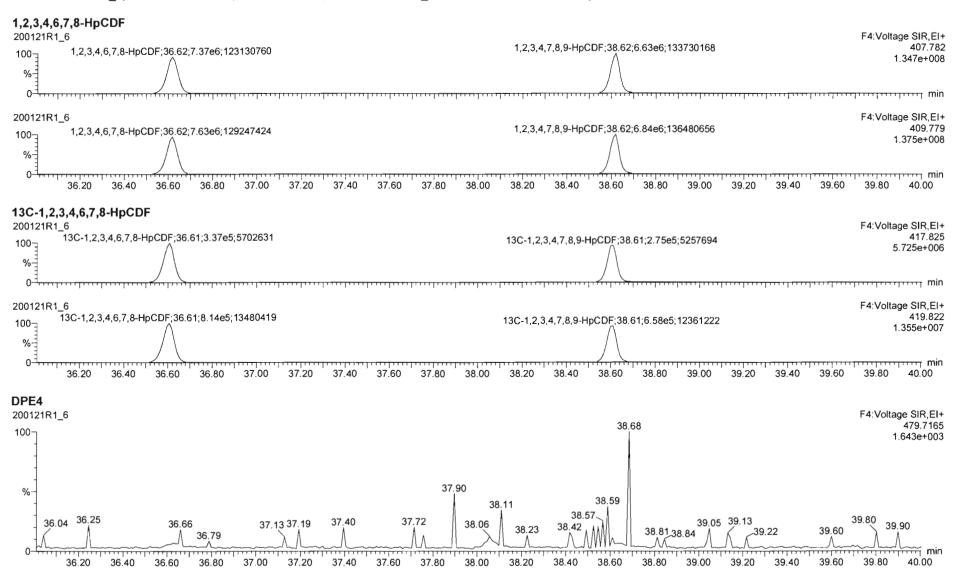
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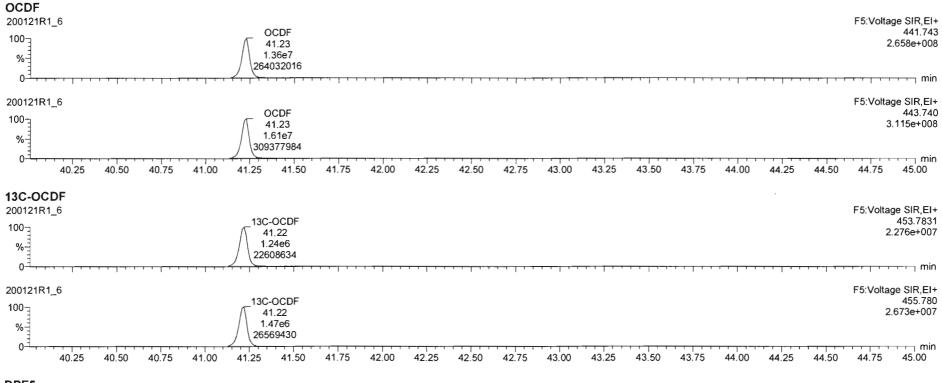
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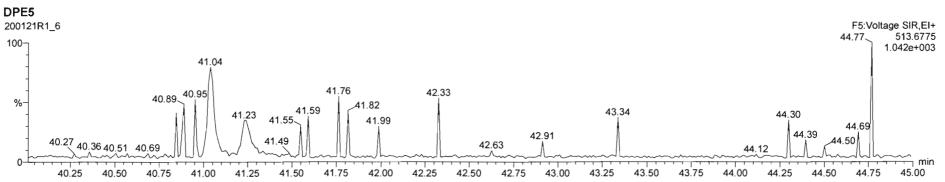


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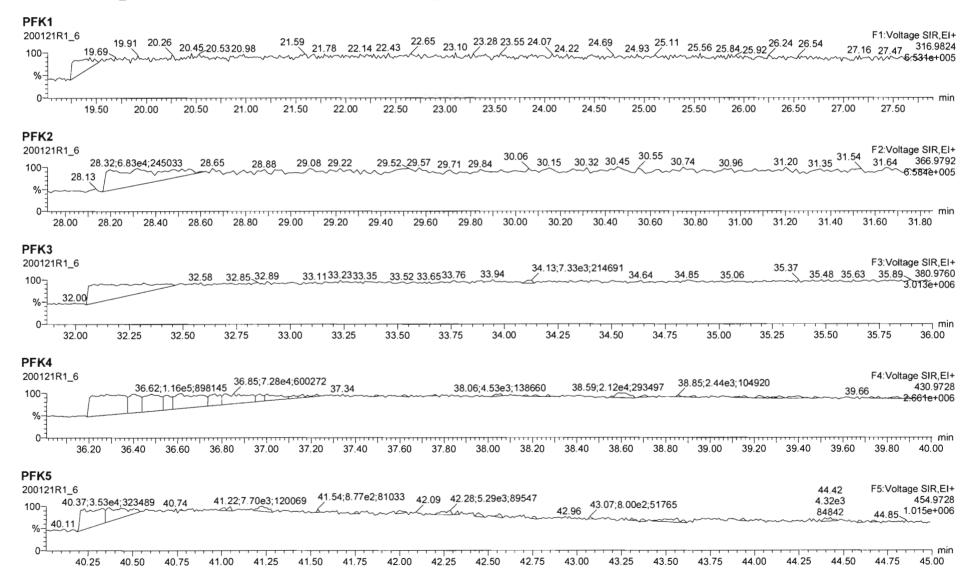
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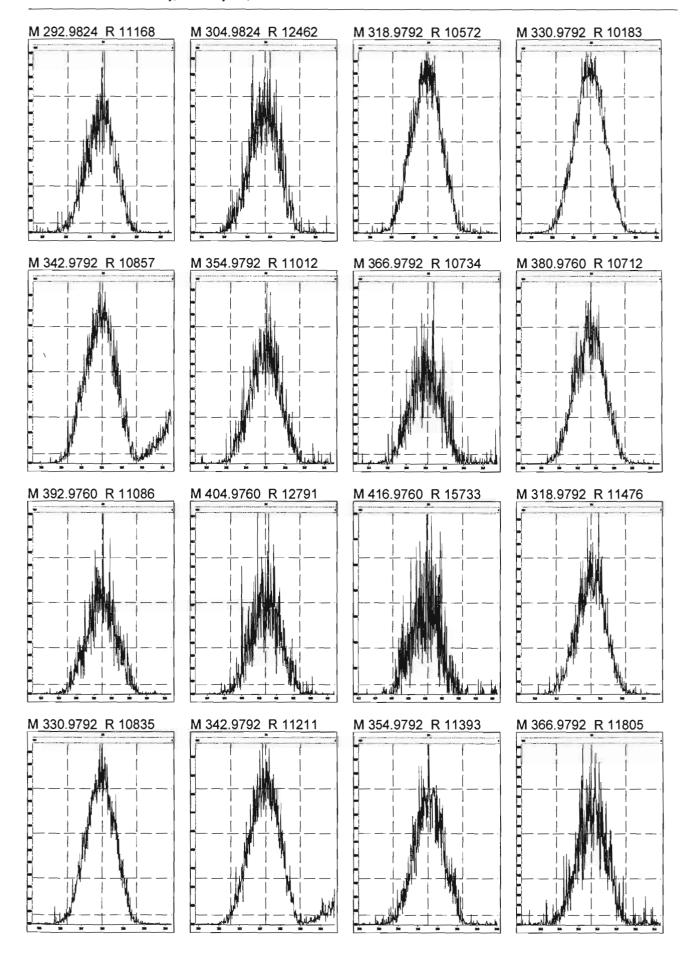
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Printed:

Tuesday, January 21, 2020 22:57:12 Pacific Standard Time

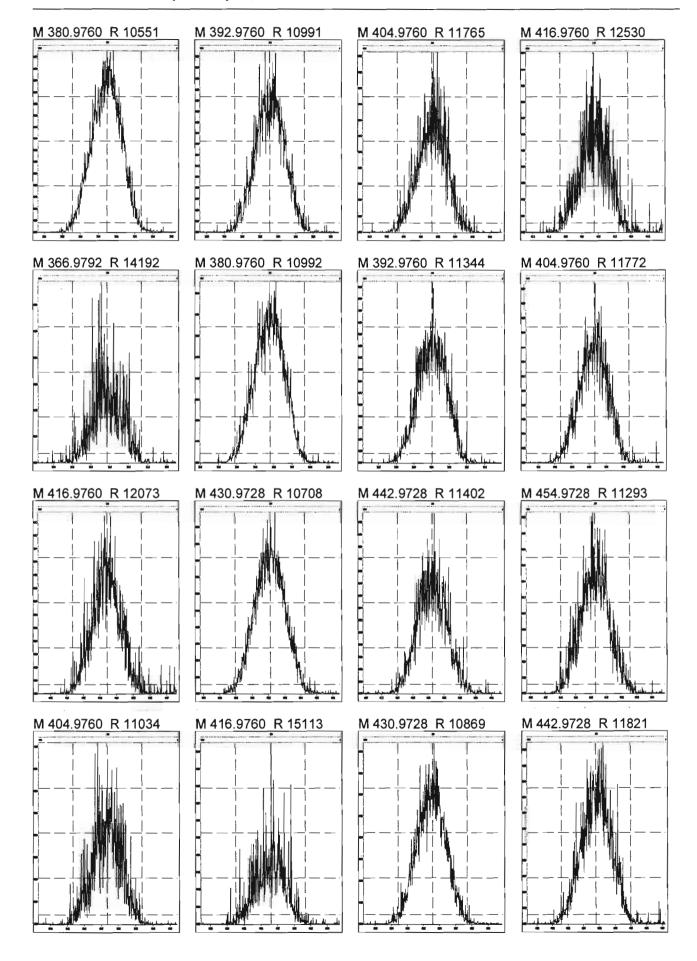


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Printed:

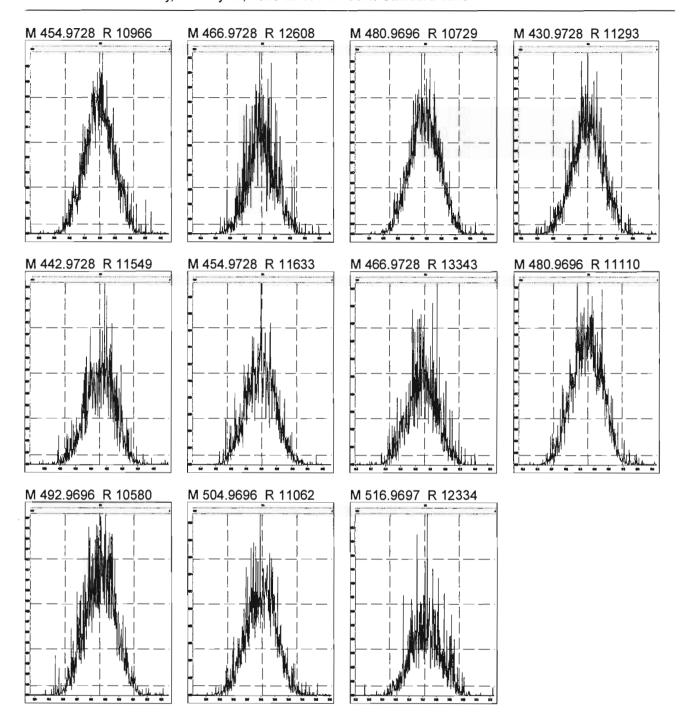
Tuesday, January 21, 2020 22:57:12 Pacific Standard Time



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Printed:

Tuesday, January 21, 2020 22:57:12 Pacific Standard Time



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Dataset:

U:\VG12.PR0\Results\200121R1\200121R1_SSS.qld

Last Altered: Printed:

Wednesday, January 22, 2020 09:58:49 Pacific Standard Time Wednesday, January 22, 2020 10:02:30 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

Name: 200121R1_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

10 p 30	# 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	

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Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\200121R1\200121R1_SSS.qld

Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time Printed: Wednesday, January 22, 2020 10:02:30 Pacific Standard Time

Name: 200121R1_8, Date: 21-Jan-2020, Time: 19:40:22, ID: SS200121R1_1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

THE F	# 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 37CI-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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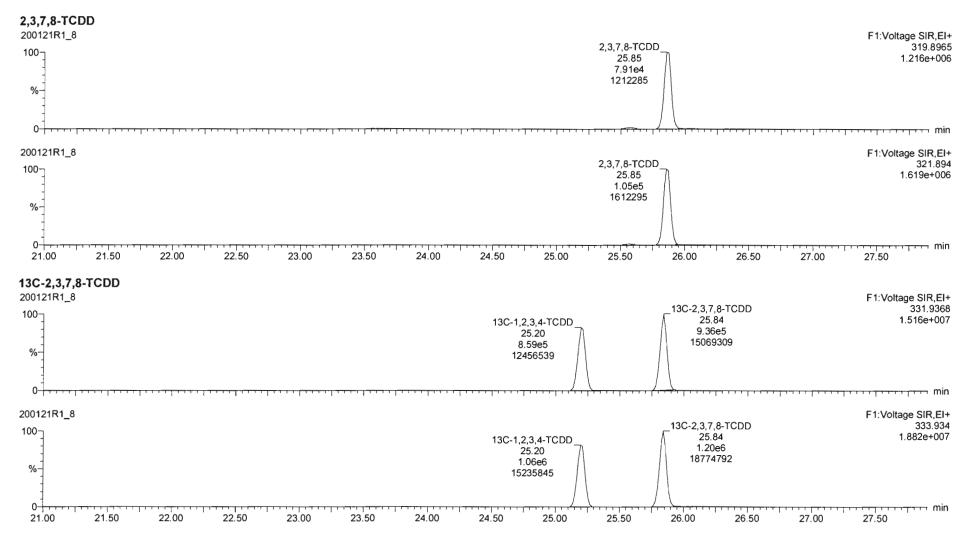
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Dataset:

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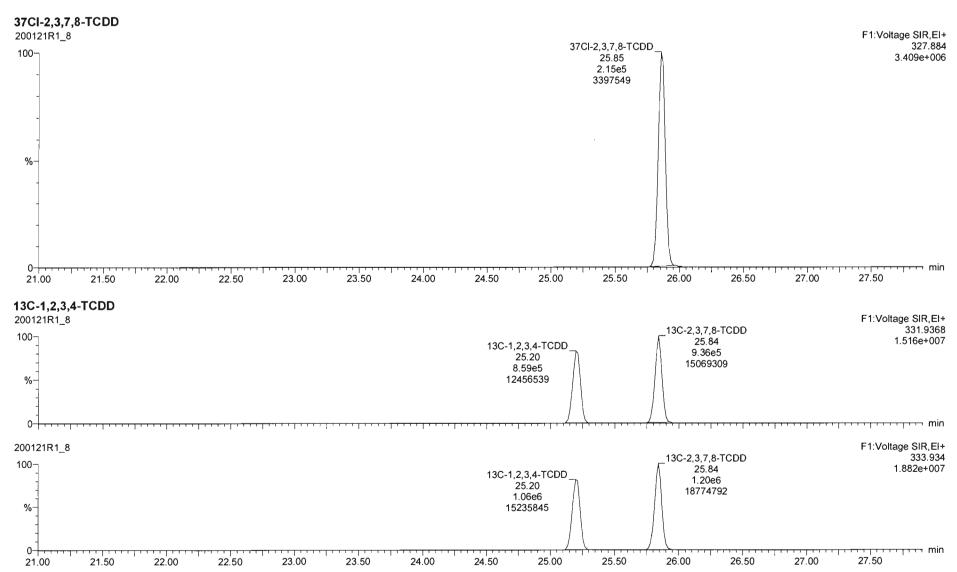
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Wednesday, January 22, 2020 09:58:49 Pacific Standard Time Wednesday, January 22, 2020 09:59:05 Pacific Standard Time



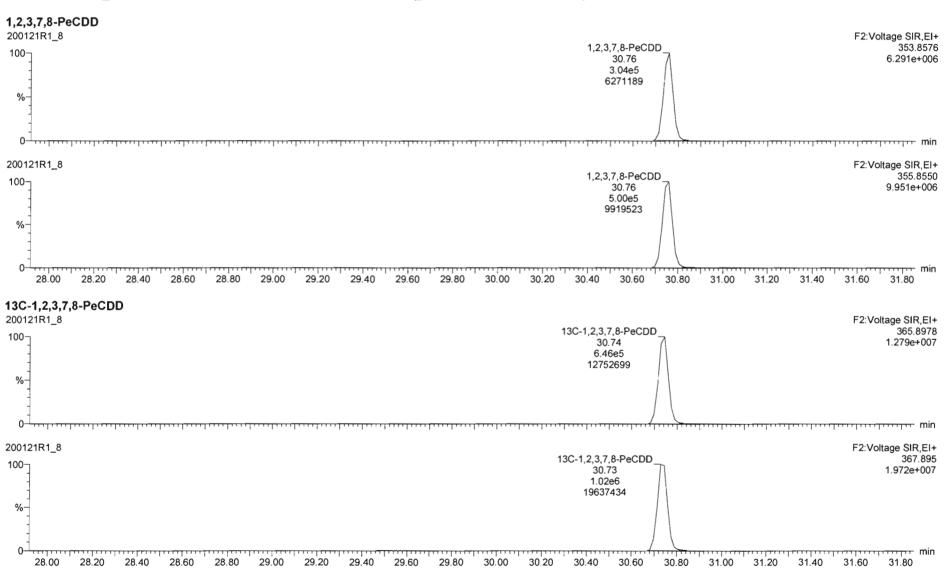
Page 3 of 13

Dataset:

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Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time 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

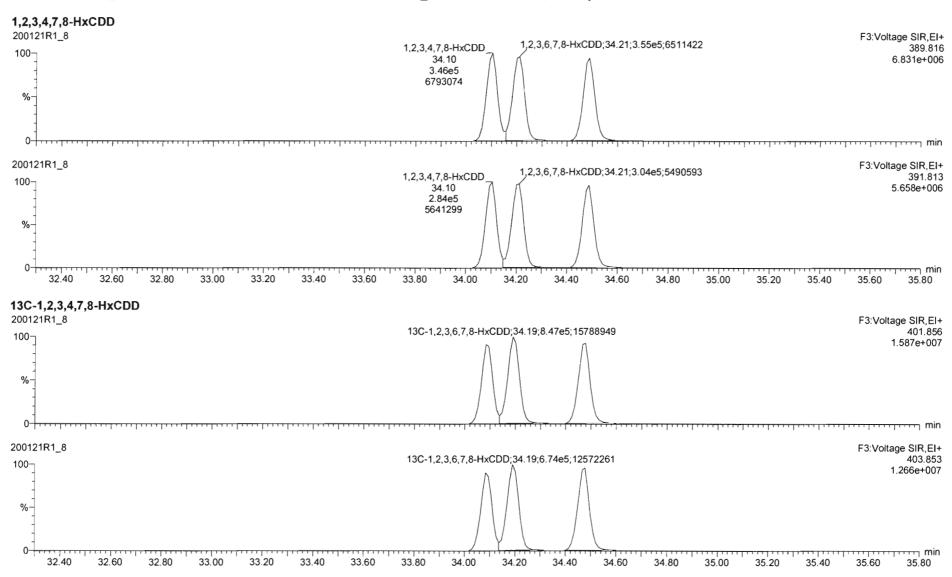


Work Order 1903647

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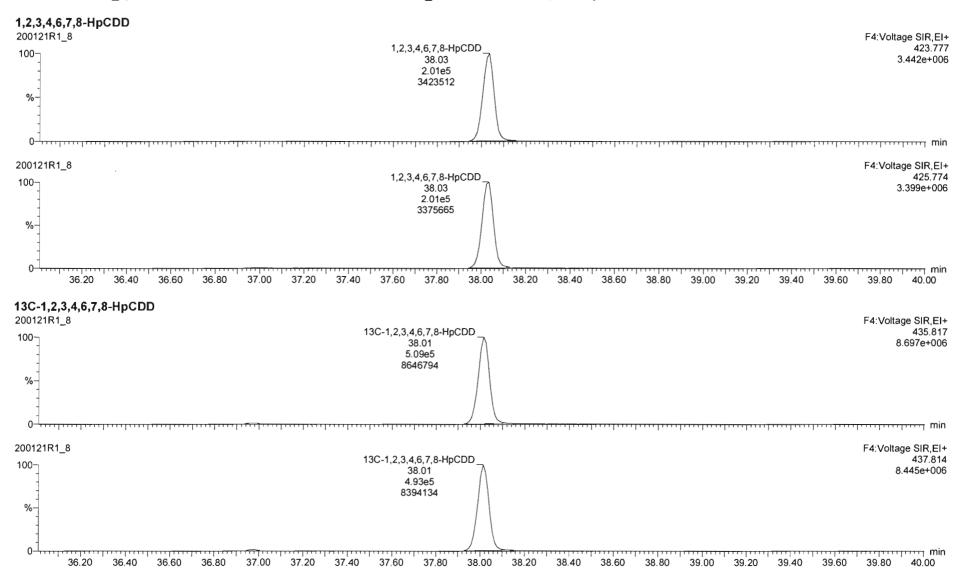
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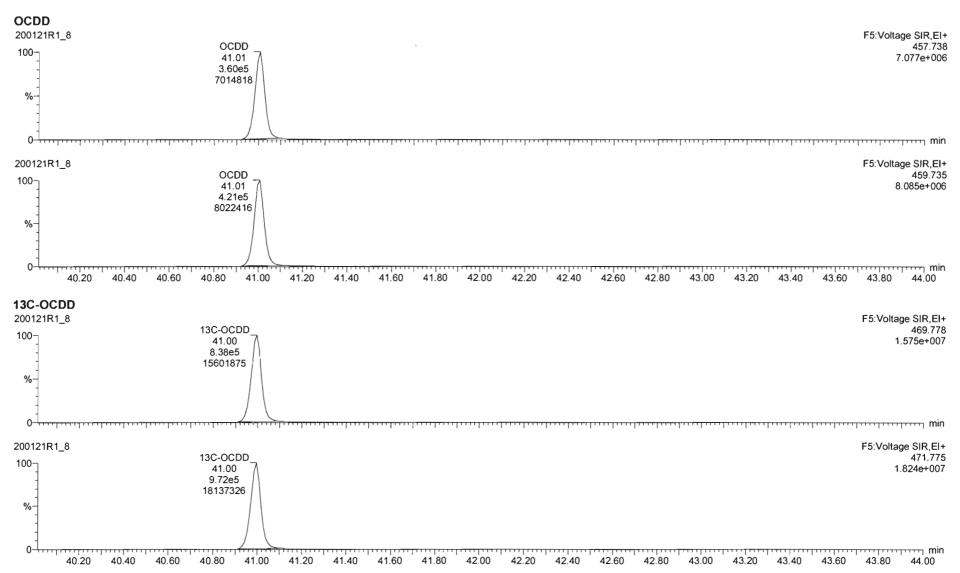
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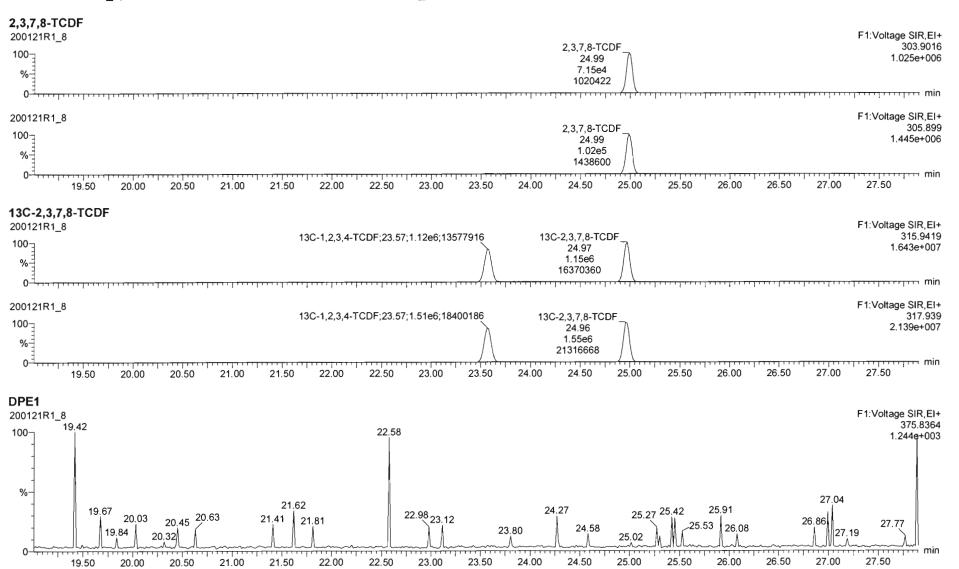
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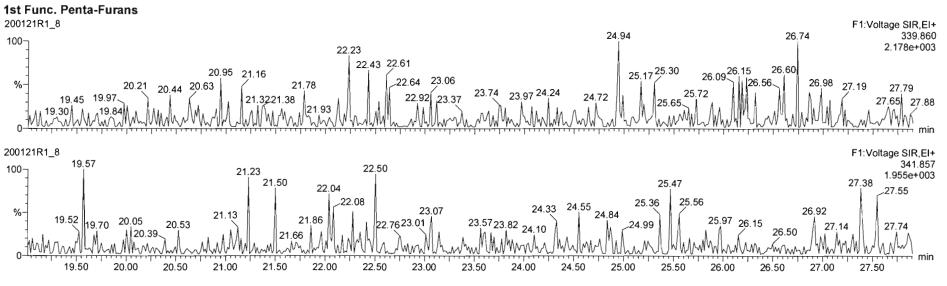
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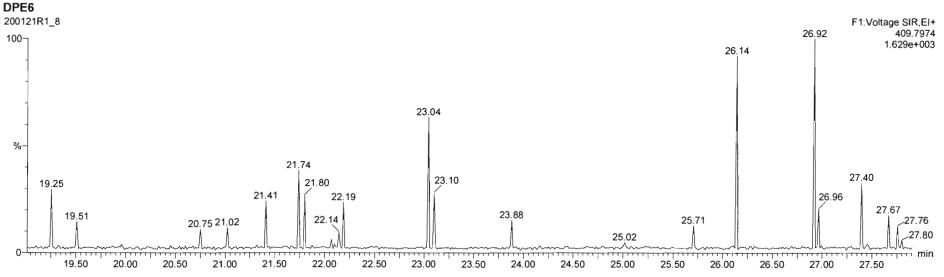


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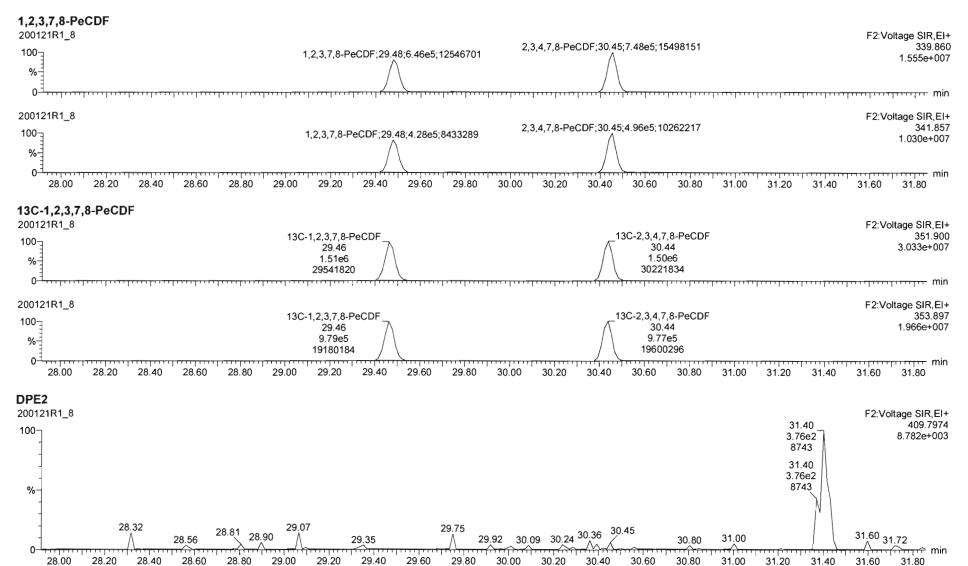
Page 9 of 13

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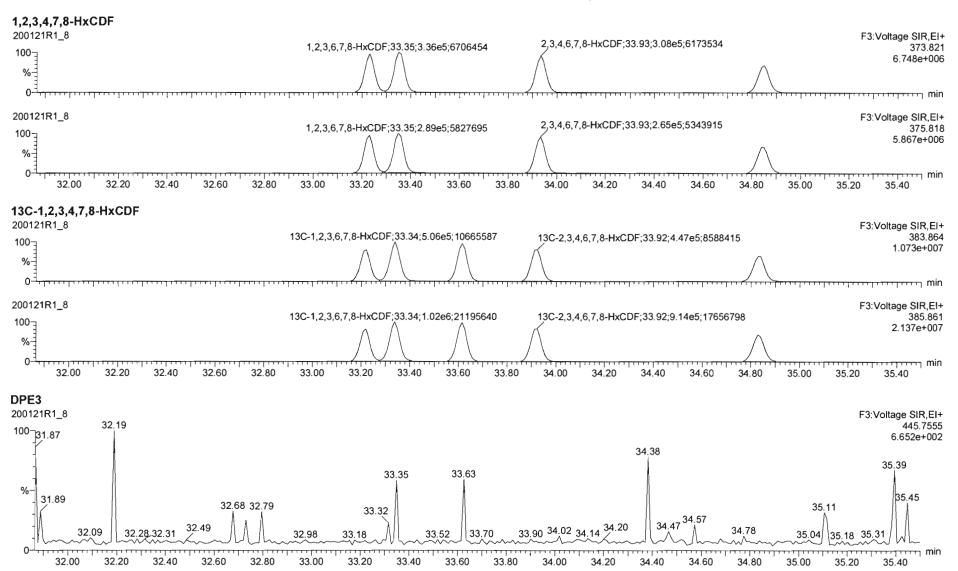
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Last Altered: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time Wednesday, January 22, 2020 09:59:05 Pacific Standard Time



MassLynx 4.1 SCN815

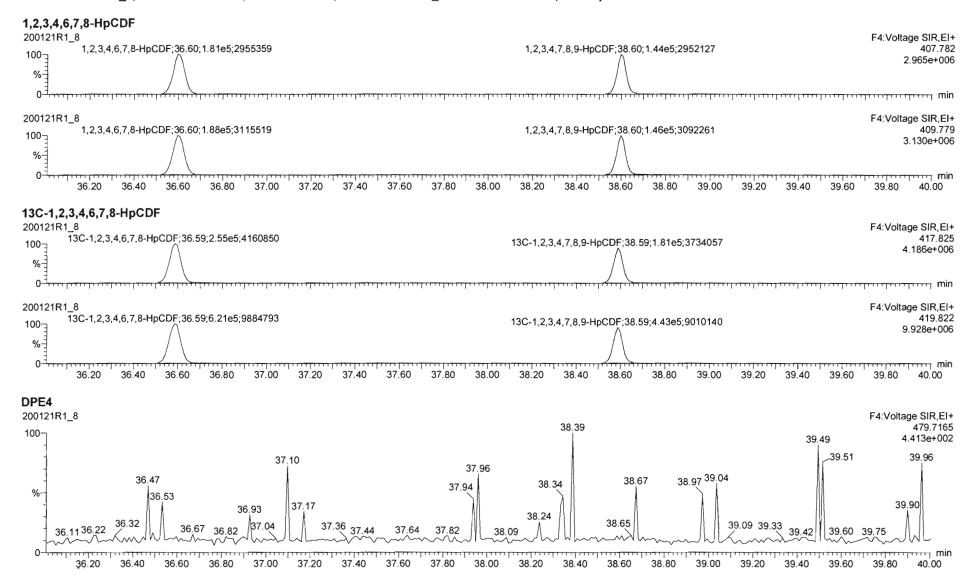
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Dataset:

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Last Altered: Printed:

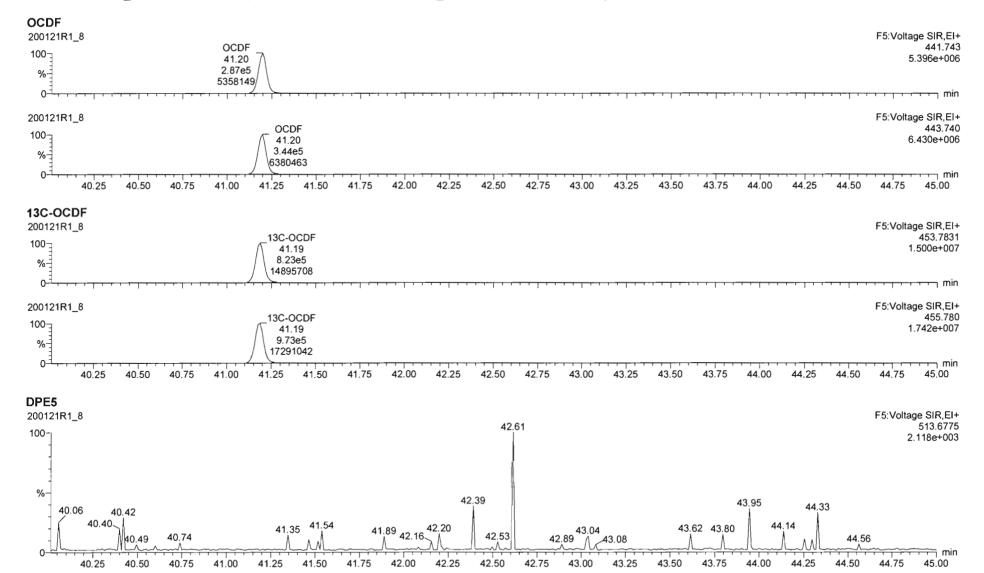
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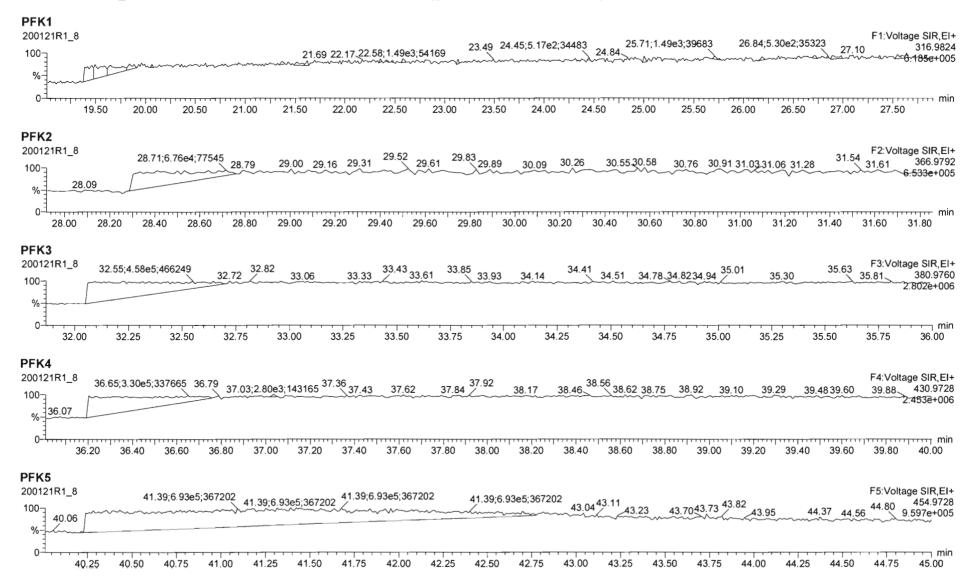
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Last Altered: Printed: Wednesday, January 22, 2020 09:58:49 Pacific Standard Time Wednesday, January 22, 2020 09:59:05 Pacific Standard Time



Quantify Compound Summary Report MassLynx 4.1 SCN815

Vista Analytical Laboratory

Dataset:

U:\VG11.PRO\Results\200131K1\200131K1-CRV.qld

Last Altered: Friday, January 31, 2020 13:49:37 Pacific Standard Time
Printed: Saturday, February 01, 2020 08:27:10 Pacific Standard Time

HC 2.1.7020 C1 02/03/2020

Page 1 of 2

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

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

Response Factor: 1.03616

RRF SD: 0.0951655, Relative SD: 9.1844

Response type: Internal Std (Ref 2), Area * (IS Conc. / IS Area)

Curve type: RF

	Name	; Std. Conc ;	RA -	n/y ;	RT.	RRT.	Resp;	IS Resp ;	Conc.	; %Dev ;	RRF;	X = dropped
1	200131K1_2	0.250	0.80	NO	16.38	1.001	9.45e3	3.12e6	0.292	16.8	1.21	MM
2	[200131K1_3	0.500	0.76	NO	16.38	1.000	1.03e4	2.13e6	0.470	-6.1	0.973	MM
3	;200131K1_4	2.00	0.77	NO	16.39	1.001	5.32e4	2.79e6	1.84	-7.9	0.954	bb
4	200131K1_5	10.0	0.78	NO	16.39	1.001	1.80e5	1.84e6	9.43	-5.7	0.977	bb
5	200131K1_6	40.0	0.79	NO	16.39	1.001	1.05e6	2.53e6	40.1	0.2	1.04	bb
6	200131K1_7	300	0.79	NO	16.40	1.001	7.90e6	2.47e6	308	2.7	1.06	bb

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

Response Factor: 1.02222

RRF SD: 0.0218203, Relative SD: 2.1346

Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)

Curve type: RF

Name	: Std. Conc :	RA -	n/y	RT.	RRT.	Resp;	IS Resp ;	Conc.	; %Dev ;	RRF;	X = dropped
1 ;200131K1_2	100	0.79	NO	16.37	1.131	3.12e6	3.08e6	99.2	-0.8	1.01	bb
2 ;200131K1_3	100	0.79	NO	16.38	1.132	2.13e6	2.14e6	97.4	-2.6	0.996	bb
3 200131K1_4	100	0.77	NO	16.37	1.131	2.79e6	2.75e6	99.1	-0.9	1.01	bb
4 200131K1_5	100	0.79	NO	16.38	1.131	1.84e6	1.78e6	101	1.2	1.03	bd
5 200131K1_6	100	0.78	NO	16.38	1.132	2.53e6	2.48e6	99.5	-0.5	1.02	bb
6 200131K1_7	100	0.77	NO	16.39	1.131	2.47e6	2.34e6	104	3.6	1.06	bb

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Quantify Compound Summary Report MassLynx 4.1 SCN815

Vista Analytical Laboratory

U:\VG11.PRO\Results\200131K1\200131K1-CRV.qld

Last Altered: Printed:

Dataset:

Friday, January 31, 2020 13:49:37 Pacific Standard Time Saturday, February 01, 2020 08:27:10 Pacific Standard Time

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

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 3), Area * (IS Conc. / IS Area)

Curve type: RF

	Name ;	Std. Conc ;	RA .	n/y ;	RT.	RRT.	Resp;	IS Resp	Conc.	%Dev :	RRF; X =	dropped
1	200131K1_2	100	0.78	NO	14.47	1.000	3.08e6	3.08e6	100	0.0	1.00	bb
2	200131K1_3	100	0.80	NO	14.47	1.000	2.14e6	2.14e6	100	0.0	1.00	bb
3	200131K1_4	100	0.79	NO	14.47	1.000	2.75e6	2.75e6	100	0.0	1.00	bb
4	200131K1_5	100	0.79	NO	14.48	1.000	1.78e6	1.78e6	100	0.0	1.00	bb
5	200131K1_6	100	0.79	NO	14.47	1.000	2.48e6	2.48e6	100	0.0	1.00	bb
6	200131K1_7	100	0.79	NO	14.49	1.000	2.34e6	2.34e6	100	0.0	1.00	bb

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

No Calibration

Response type: External Std, Area

Curve type: RF

Name	; Std. Conc ;	RA .	n/y ;	RT.	RRT.	Resp; IS Re	sp ;	Conc.	; %Dev ;	RRF:	X = dropped
1 ;200131K1_2	0.000	0.79	NO	15.12	0.000	2.23e6				0.000	db
2 ,200131K1_3	0.000	0.77	NO	15.13	0.000	1.53e6				0.000	db
3 200131K1_4	0.000	0.80	NO	15.12	0.000	1.90e6				0.000	db
4 200131K1_5	0.000	0.79	NO	15.13	0.000	1.30e6				0.000	dd
5 200131K1_6	0.000	0.78	NO	15.13	0.000	1.74e6				0.000	db
6 -200131K1_7	0.000	0.76	NO	15.06	0.000	1.62e6				0.000	bd

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Dataset:

Untitled

Last Altered: Printed:

Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:56:50 Pacific Standard Time

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Calibration: U:\VG11.PRO\CurveDB\db225_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

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

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1	;200131K1_1	CP200131K1-1 225 CPSM	31-Jan-20	10:07:42
2	;200131K1_2	ST200131K1-1 1613 CS0 19C2201	31-Jan-20	10:37:56
3	;200131K1_3	ST200131K1-2 1613 CS1 19C2202	31-Jan-20	11:09:19
4	200131K1_4	ST200131K1-3 1613 CS2 19C2203	31-Jan-20	11:40:42
5	200131K1_5	ST200131K1-4 1613 CS3 19C2204	31-Jan-20	12:13:33
6	200131K1_6	ST200131K1-5 1613 CS4 19C2205	31-Jan-20	12:43:47
7	200131K1_7	ST200131K1-6 1613 CS5 19C2206	31-Jan-20	13:16:14
8	200131K1_8	SOLVENT BLANK	31-Jan-20	13:46:37
9	;200131K1_9	SS200131K1-1 1613 SSS 19C2207	31-Jan-20	14:19:06
10	200131K1_10	SOLVENT BLANK	31-Jan-20	14:49:31
11	;200131K1_11	1903647-03RE1 PDI-067SC-B-02-04-191010	31-Jan-20	15:20:42
12	200131K1_12	1904160-04RE1 PDI-032SC-A-01-02-191010	31-Jan-20	15:52:01
13	200131K1_13	B0A0001-DUP1 Duplicate	31-Jan-20	16:23:24
14	200131K1_14	1904159-01RE1 PDI-013SC-A-02-03-190925	31-Jan-20	16:54:44
15	200131K1_15	1904159-03RE1 PDI-015SC-A-07-08-191012	31-Jan-20	17:26:05
16	200131K1_16	1904159-06RE1 PDI-016SC-A-01-02-191009	31-Jan-20	17:57:25
17	;200131K1_17	1904159-07RE1 PDI-018SC-A-06-07-190926	31-Jan-20	18:30:13
18	;200131K1_18	1904159-16RE1 PDI-024SC-A-03-04-190927	31-Jan-20	19:00:33
19	;200131K1_19	1904159-17RE1 PDI-025SC-A-02-03-190927	31 - Jan-20	19:32:58
20	200131K1_20	1904159-19RE1 PDI-026SC-A-04-05-191014	31-Jan-20	20:03:17
21	200131K1_21	1904207-05RE1 PDI-077SC-A-00-01-191014	31-Jan-20	20:34:41
22	200131K1_22	1904207-06RE1 PDI-077SC-A-01-02-191014	31-Jan-20	21:06:06
23	200131K1_23	1904159-11RE1 PDI-020SC-A-02-03-191008	31-Jan-20	21:37:30
24	200131K1_24	1904159-15RE1 PDI-024SC-A-02-03-190927	31-Jan-20	22:10:18
25	200131K1_25	1904159-05RE1 PDI-016SC-A-00-01-191009	31-Jan-20	22:41:56
26	;200131K1_26	1904207-03RE1 PDI-076SC-A-04-05-191013	31-Jan-20	23:13:28
27	200131K1_27	1903647-02RE1 PDI-067SC-B-00-02-191010	31-Jan-20	23:44:04

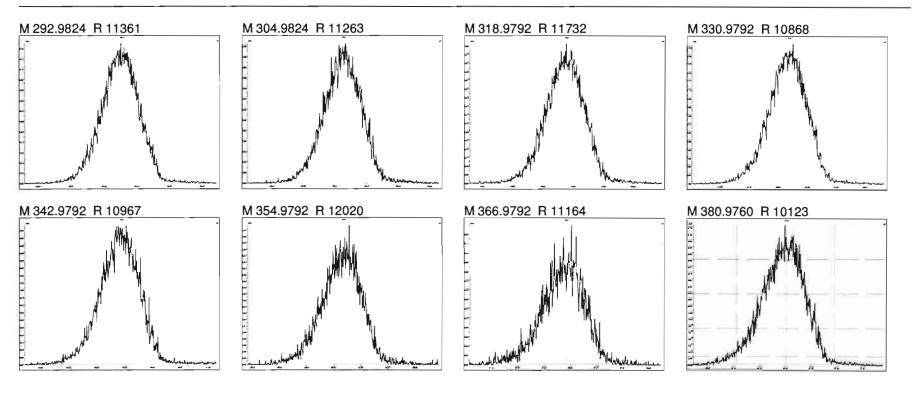
Work Order 1903647 Page 503 of 523

File:

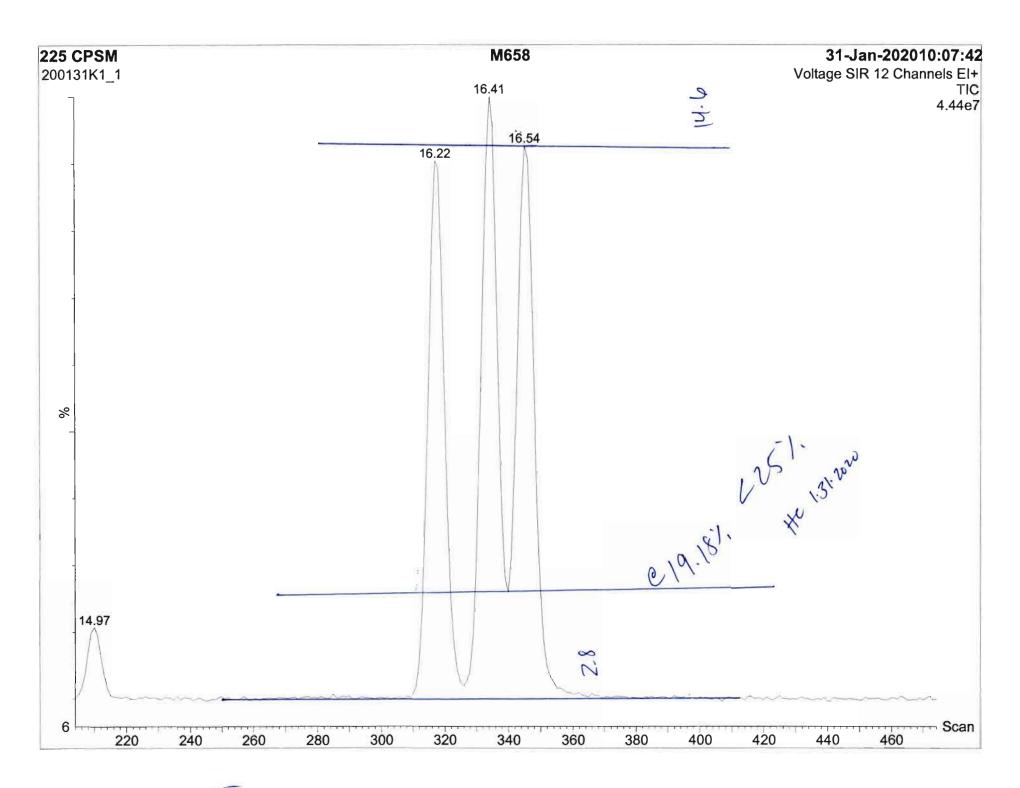
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Printed:

Friday, January 31, 2020 10:05:02 Pacific Standard Time



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Vista Analytical Laboratory VG-11

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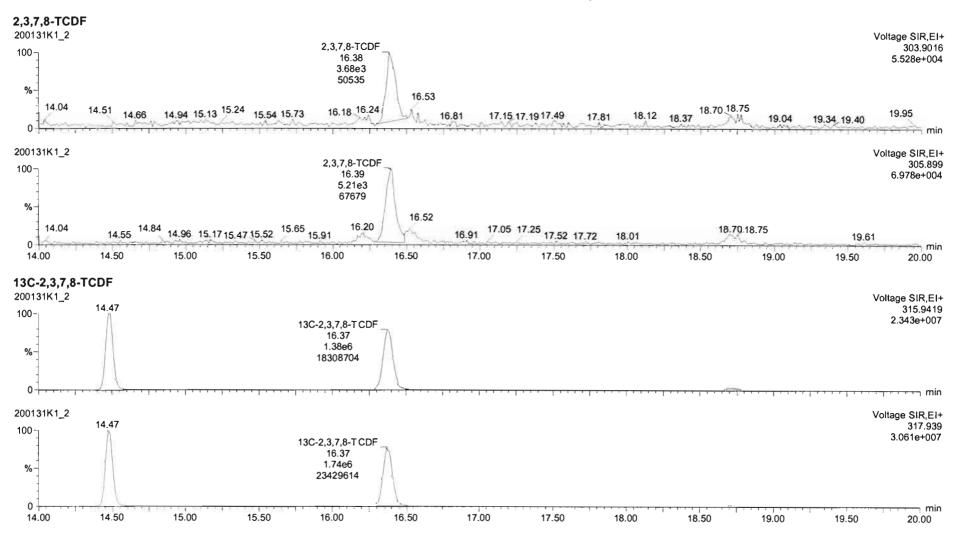
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Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:58:45 Pacific Standard Time

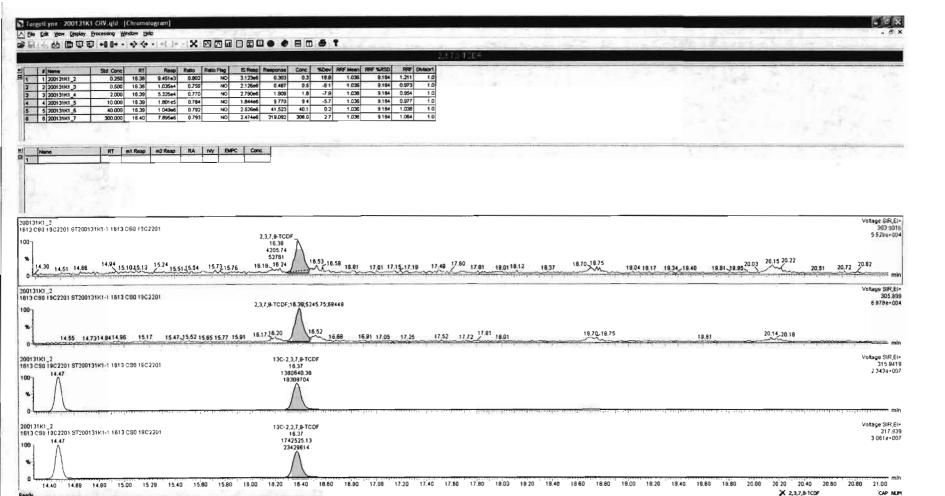
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Calibration: U:\VG11.PRO\CurveDB\db225_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

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Quantify Sample Report

MassLynx 4.1 SCN815

Vista Analytical Laboratory VG-11

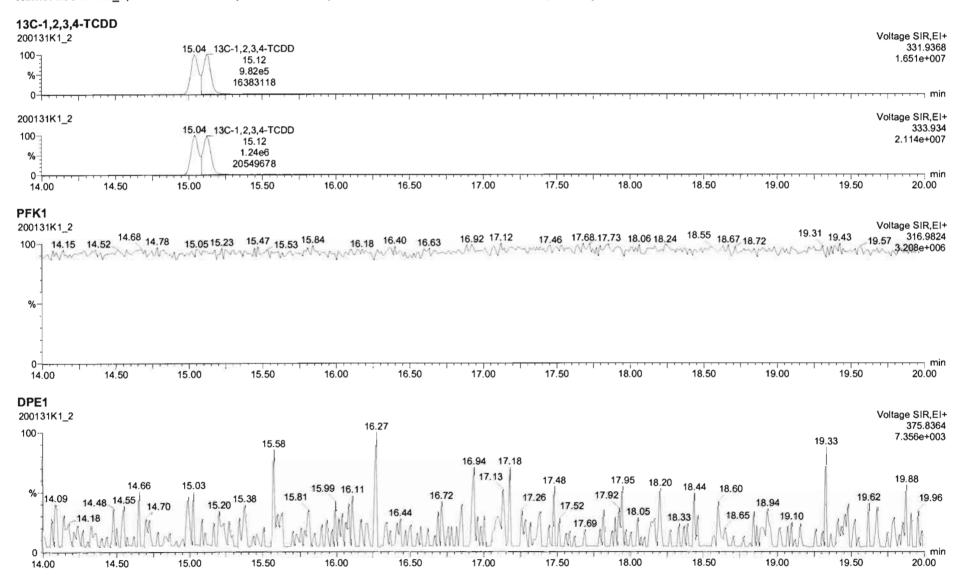
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Last Altered: Printed:

Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:58:45 Pacific Standard Time

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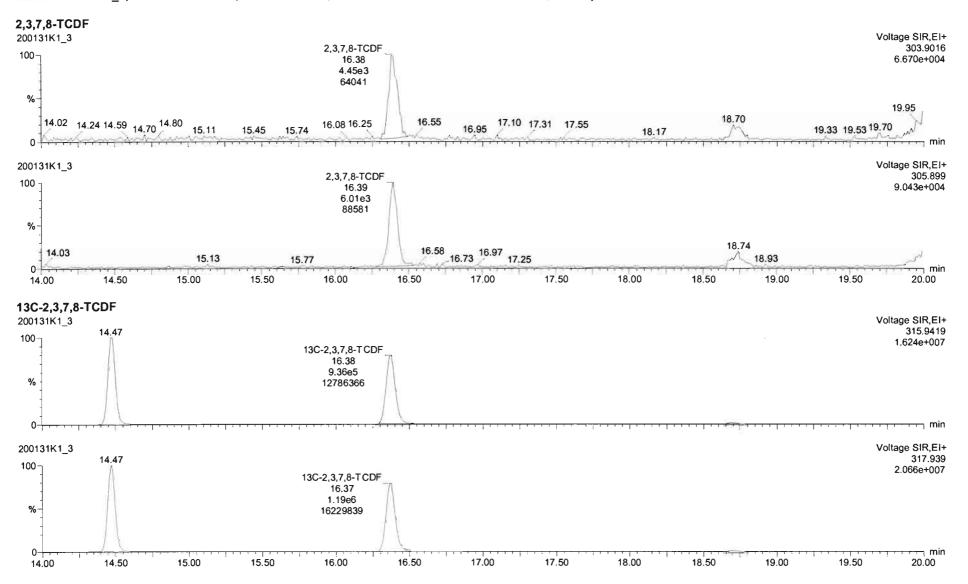


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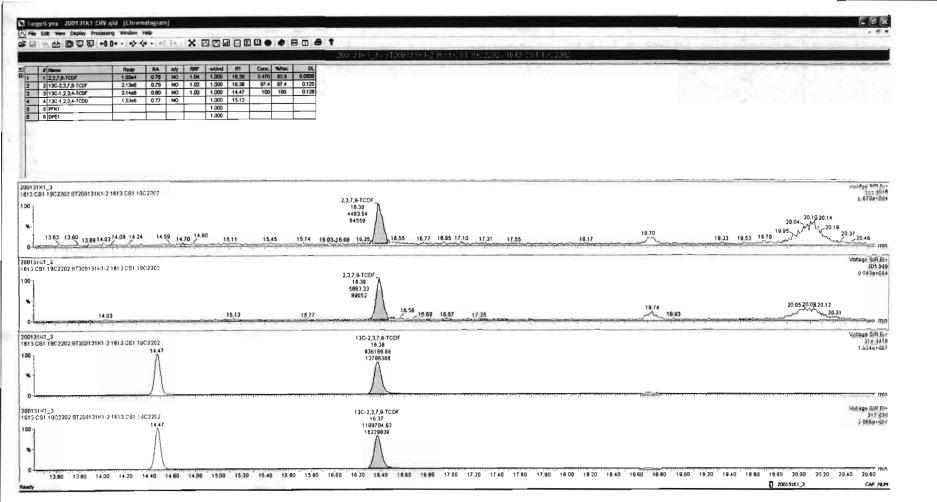
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Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1 3, Date: 31-Jan-2020, Time: 11:09:19, ID: ST200131K1-2 1613 CS1 19C2202, Description: 1613 CS1 19C2202



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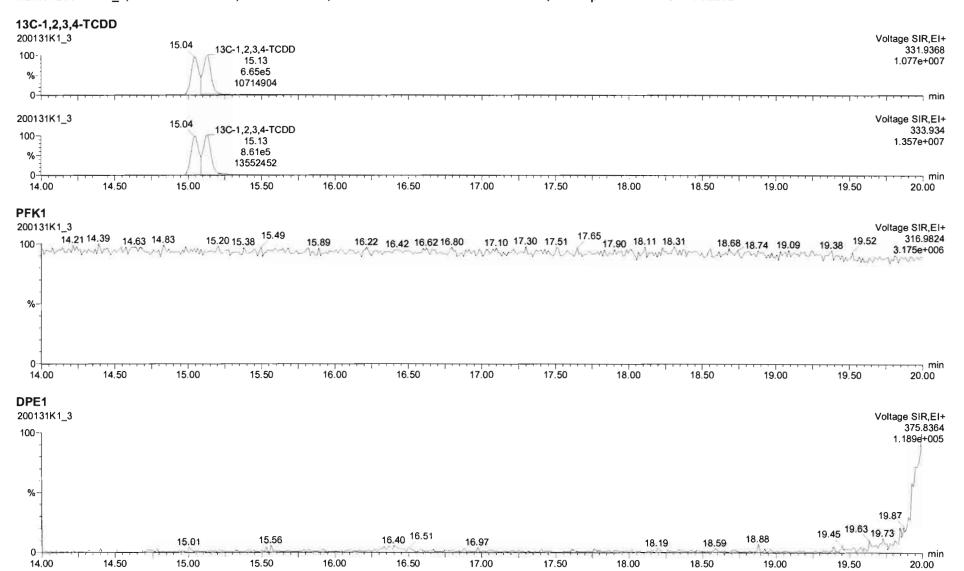
Work Order 1903647 Page 510 of 523

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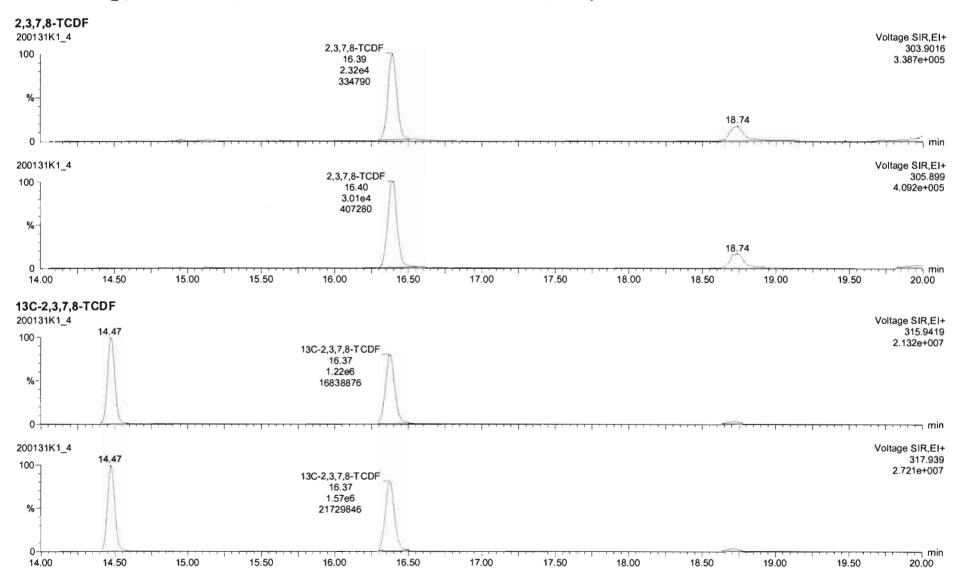
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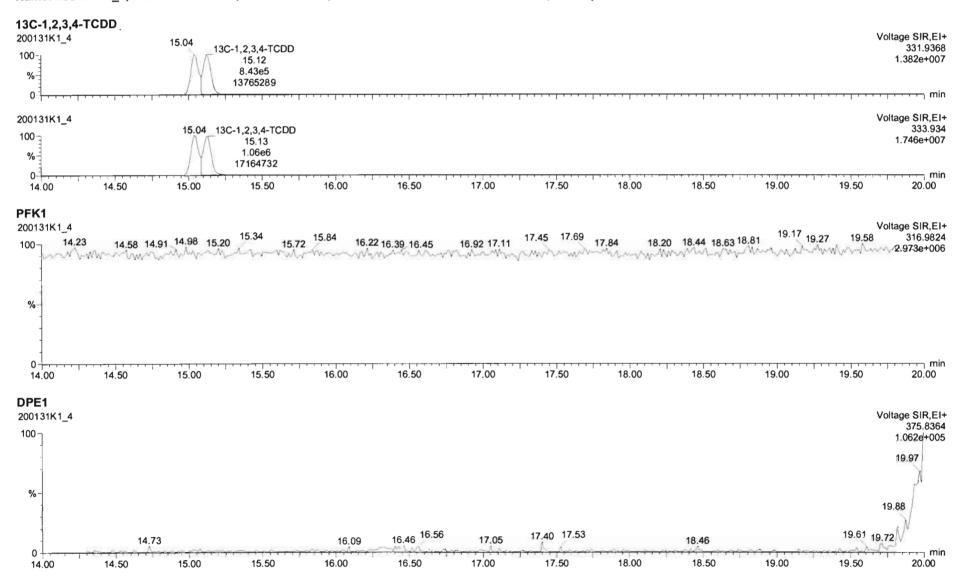
Page 6 of 48

Vista Analytical Laboratory VG-11

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Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

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MassLynx 4.1 SCN815

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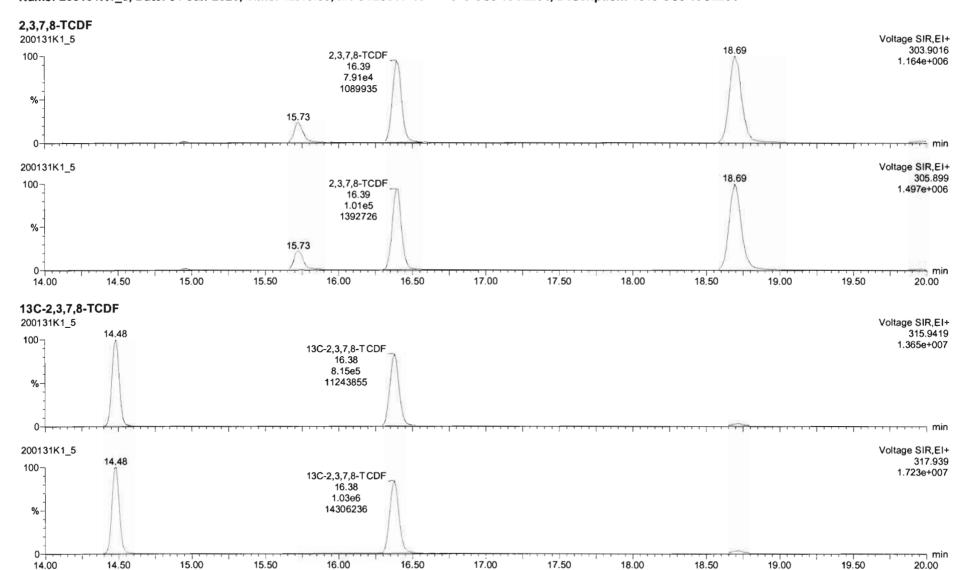
Vista Analytical Laboratory VG-11

Dataset:

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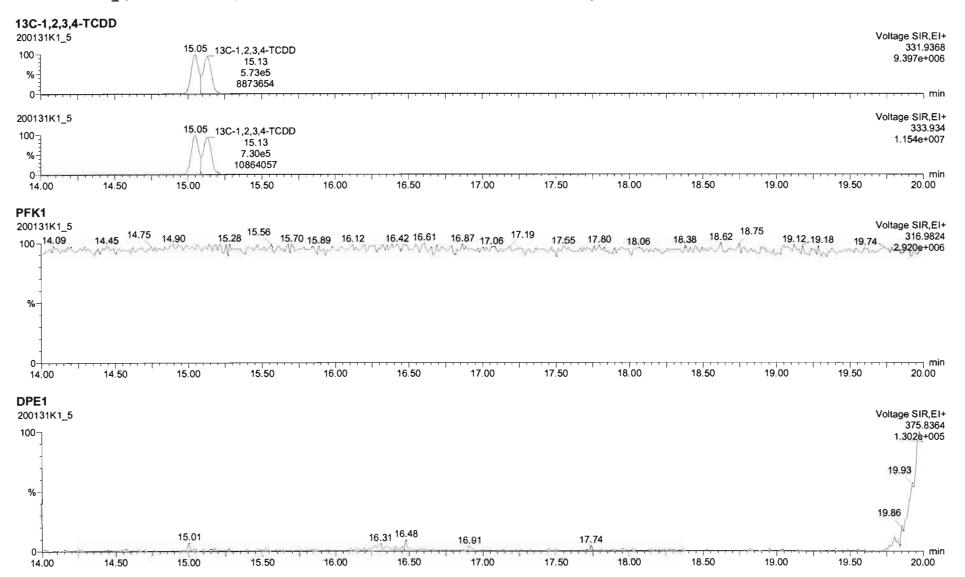


Work Order 1903647 Page 514 of 523

Dataset: Untitled

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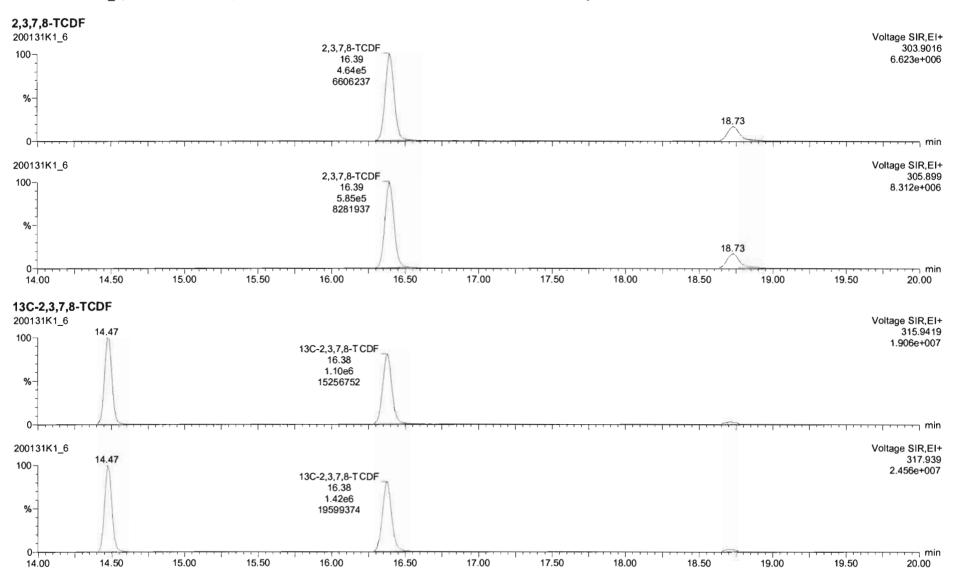
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Last Altered: Printed:

Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:58:45 Pacific Standard Time

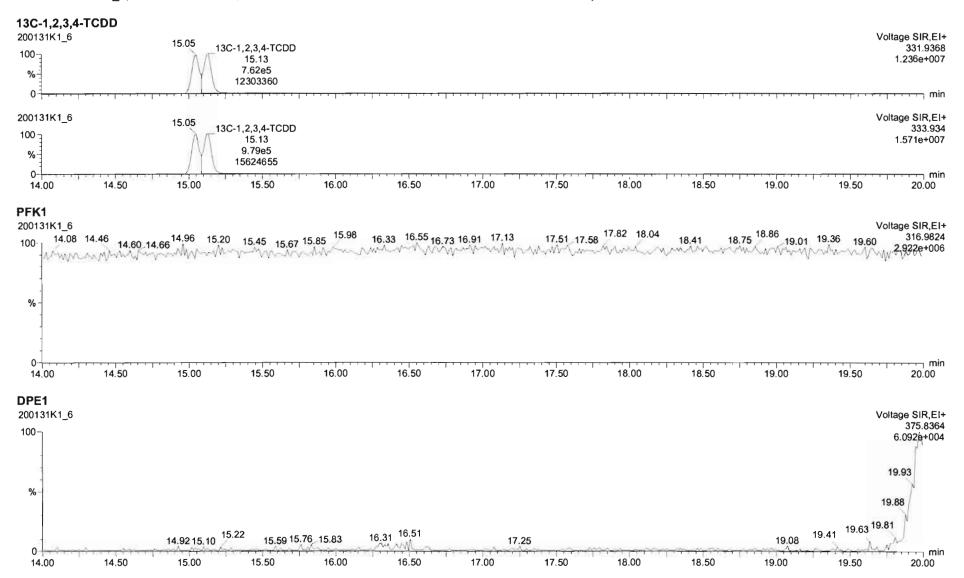
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Dataset: Untitled

Last Altered: Saturday, February 01, 2020 07:48:11 Pacific Standard Time Printed: Saturday, February 01, 2020 07:58:45 Pacific Standard Time

Name: 200131K1_6, Date: 31-Jan-2020, Time: 12:43:47, ID: ST200131K1-5 1613 CS4 19C2205, Description: 1613 CS4 19C2205



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Quantify Sample Report

MassLynx 4.1 SCN815

Vista Analytical Laboratory VG-11

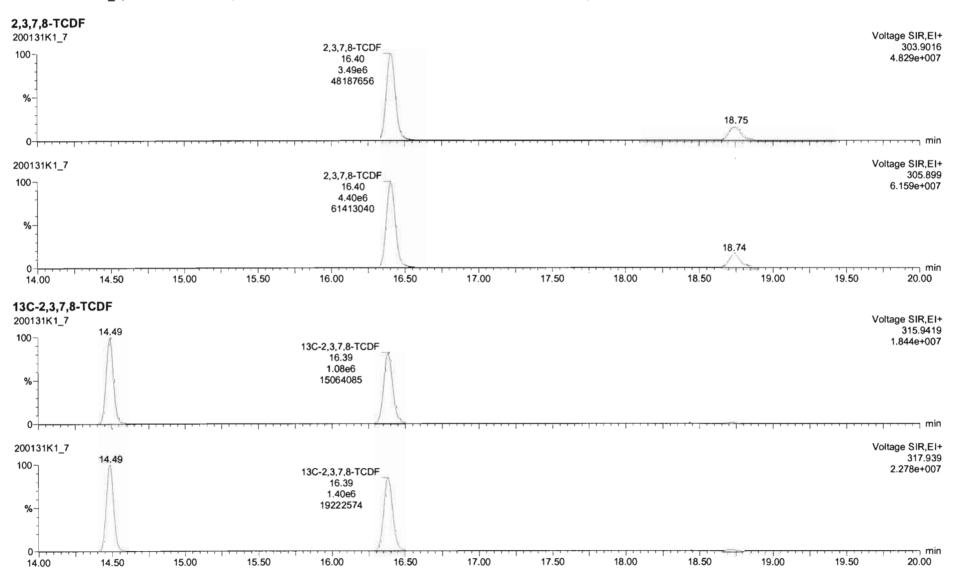
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Last Altered: Printed:

Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:58:45 Pacific Standard Time

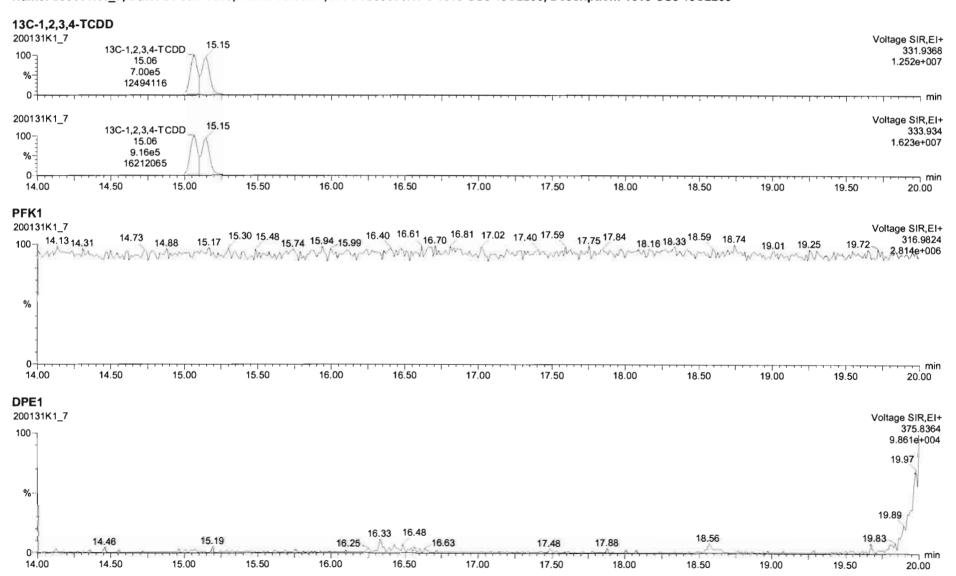
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Dataset: Untitled

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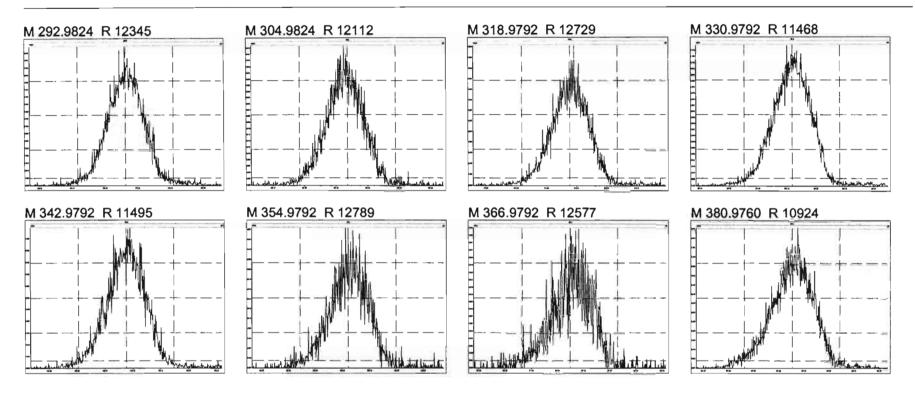


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Printed:

Saturday, February 01, 2020 00:16:52 Pacific Standard Time



Work Order 1903647 Page 520 of 523

MassLynx 4.1 SCN815

Page 1 of 1

Dataset:

U:\VG11.PRO\Results\200131K1\200131K1-9.qld

Last Altered:

Saturday, February 01, 2020 08:31:58 Pacific Standard Time

Printed:

Saturday, February 01, 2020 08:32:13 Pacific Standard Time

HU2.1.200

CT 02/03/2020

Method: U:\VG11.PRO\MethDB\tcdf.mdb 31 Jan 2020 07:42:36

Calibration: U:\VG11.PRO\CurveDB\db225_1613TCDFvg11-1-31-20.cdb 31 Jan 2020 13:49:37

Name: 200131K1_9, Date: 31-Jan-2020, Time: 14:19:06, ID: SS200131K1-1 1613 SSS 19C2207, Description: 1613 SSS 19C2207

	#-Name	Resp	RA	1.0	n/y	'RRF M;	wt/vol	;	RT	Ŷ	Conc.	: %R	ec : 14.79/VDI
1	1 2,3,7,8-TCDF	2.08e5	0.78		NO	1.04	1.000		16.40		10.088	10	0.061
2	2 13C-2,3,7,8-TCDF	1.99e6	0.76		NO	1.02	1.000		16.39		94.052	94	.1 0.102
3	3 13C-1,2,3,4-TCDF	2.07e6	0.80		NO	1.00	1.000		14.48		100.00	10	0 0.10
4	4 13C-1,2,3,4-TCDD	1.39e6	0.79		NO		1.000		15.13				

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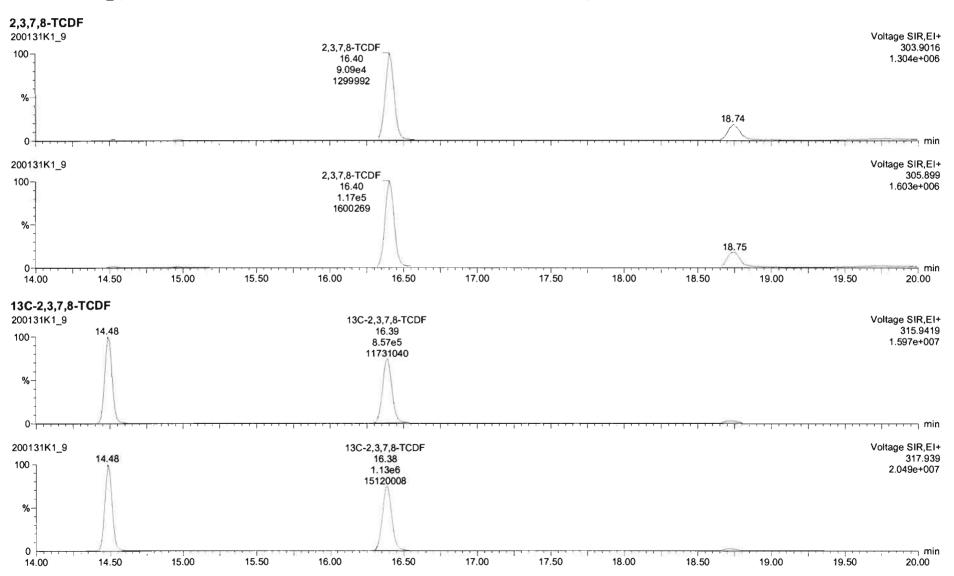
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Dataset:

Untitled

Last Altered: Printed:

Saturday, February 01, 2020 07:48:11 Pacific Standard Time Saturday, February 01, 2020 07:58:45 Pacific Standard Time

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