

December 08, 2020

Vista Work Order No. 2002436

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

Dear Ms. Peterson,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 10, 2020 under your Project Name 'GascoSiltronic: US Moorings'.

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. 2002436 Case Narrative

Sample Condition on Receipt:

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

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-DIOXIN GC column.

Holding Times

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

Quality Control

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

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

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

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2002436-01	USMPDI-027SC-A-01-02-201106	06-Nov-20 16:40	10-Nov-20 10:05	Amber Glass, 120 mL
2002436-02	USMPDI-027SC-A-02-03-201106	06-Nov-20 16:40	10-Nov-20 10:05	Amber Glass, 120 mL
2002436-03	USMPDI-027SC-A-03-04-201106	06-Nov-20 16:40	10-Nov-20 10:05	Amber Glass, 120 mL
2002436-04	USMPDI-027SC-A-04-05-201106	06-Nov-20 16:40	10-Nov-20 10:05	Amber Glass, 120 mL

Vista Project: 2002436 Client Project: GascoSiltronic: US Moorings

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ANALYTICAL RESULTS

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Sample ID: Method	l Blank						EPA Me	ethod 1613B
Matrix: Solid Sample Size: 10.0 g		QC Batch: B0K0129 Date Extracted: 16-Nov-2020	0 15:37	1	ab Sample: B0K0129-BLK1 ate Analyzed: 24-Nov-20 14:2		OXIN	
Analyte Conc.	(pg/g)	DL EMPC	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0488		IS	13C-2,3,7,8-TCDD	83.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0769			13C-1,2,3,7,8-PeCDD	80.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0872			13C-1,2,3,4,7,8-HxCDD	77.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0892			13C-1,2,3,6,7,8-HxCDD	79.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0997			13C-1,2,3,7,8,9-HxCDD	77.4	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.119			13C-1,2,3,4,6,7,8-HpCDD	73.3	23 - 140	
OCDD	ND	0.252			13C-OCDD	61.6	17 - 157	
2,3,7,8-TCDF	ND	0.0326			13C-2,3,7,8-TCDF	83.4	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0455			13C-1,2,3,7,8-PeCDF	82.4	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0370			13C-2,3,4,7,8-PeCDF	83.2	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0645			13C-1,2,3,4,7,8-HxCDF	79.5	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0652			13C-1,2,3,6,7,8-HxCDF	78.8	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0765			13C-2,3,4,6,7,8-HxCDF	76.8	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.119			13C-1,2,3,7,8,9-HxCDF	78.5	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.104			13C-1,2,3,4,6,7,8-HpCDF	72.2	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.111			13C-1,2,3,4,7,8,9-HpCDF	69.3	26 - 138	
OCDF	0.327		J		13C-OCDF	61.5	17 - 157	
				CRS	37Cl-2,3,7,8-TCDD	94.5	35 - 197	
					Toxic Equivalent Quotient (T	EQ) Data (pg/g dr	y wt)	
					TEQMinWHO2005Dioxin	0.000098		
TOTALS								
Total TCDD	ND	0.0488	<u> </u>					
Total PeCDD	ND	0.0769						
Total HxCDD	ND	0.0997						
Total HpCDD	ND	0.119						
Total TCDF	ND	0.0326						
Total PeCDF	ND	0.0455						
Total HxCDF	ND	0.119						
Total HpCDF	ND	0.111			CI - Lower control limit - unner control liv			

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	· ·	Batch: e Extracted:	B0K0129 16-Nov-2020) 15:37		Lab Sample: B0K0129-BS1 Date Analyzed: 24-Nov-20 12:43	Column: ZB-DIOXIN	
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	21.7	20.0	108	67 - 158	IS	13C-2,3,7,8-TCDD	88.0	20 - 175
1,2,3,7,8-PeCDD	115	100	115	70 - 142		13C-1,2,3,7,8-PeCDD	83.9	21 - 227
1,2,3,4,7,8-HxCDD	113	100	113	70 - 164		13C-1,2,3,4,7,8-HxCDD	82.3	21 - 193
1,2,3,6,7,8-HxCDD	107	100	107	76 - 134		13C-1,2,3,6,7,8-HxCDD	82.6	25 - 163
1,2,3,7,8,9-HxCDD	109	100	109	64 - 162		13C-1,2,3,7,8,9-HxCDD	84.3	21 - 193
1,2,3,4,6,7,8-HpCDD	107	100	107	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	79.3	26 - 166
OCDD	209	200	105	78 - 144		13C-OCDD	69.8	13 - 199
2,3,7,8-TCDF	19.8	20.0	98.8	75 - 158		13C-2,3,7,8-TCDF	87.2	22 - 152
1,2,3,7,8-PeCDF	106	100	106	80 - 134		13C-1,2,3,7,8-PeCDF	86.1	21 - 192
2,3,4,7,8-PeCDF	107	100	107	68 - 160		13C-2,3,4,7,8-PeCDF	87.1	13 - 328
1,2,3,4,7,8-HxCDF	105	100	105	72 - 134		13C-1,2,3,4,7,8-HxCDF	84.6	19 - 202
1,2,3,6,7,8-HxCDF	104	100	104	84 - 130		13C-1,2,3,6,7,8-HxCDF	82.7	21 - 159
2,3,4,6,7,8-HxCDF	104	100	104	70 - 156		13C-2,3,4,6,7,8-HxCDF	81.7	22 - 176
1,2,3,7,8,9-HxCDF	104	100	104	78 - 130		13C-1,2,3,7,8,9-HxCDF	84.0	17 - 205
1,2,3,4,6,7,8-HpCDF	105	100	105	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	75.0	21 - 158
1,2,3,4,7,8,9-HpCDF	102	100	102	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	73.4	20 - 186
OCDF	209	200	105	63 - 170		13C-OCDF	68.2	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	99.5	31 - 191

LCL-UCL - Lower control limit - upper control limit

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Sample ID: Method	l Blank						EPA Me	ethod 1613B
Matrix: Solid Sample Size: 10.0 g		QC Batch: B0K0172 Date Extracted: 19-Nov-2	2 2020 12:50	1	ab Sample: B0K0172-BLK1 pate Analyzed: 25-Nov-20 13:0		OXIN	
Analyte Conc.	(pg/g)	DL EMPC	Qualifiers		Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.100		IS	13C-2,3,7,8-TCDD	105	25 - 164	
1,2,3,7,8-PeCDD	ND	0.152			13C-1,2,3,7,8-PeCDD	77.2	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.172			13C-1,2,3,4,7,8-HxCDD	81.8	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.172			13C-1,2,3,6,7,8-HxCDD	81.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.186			13C-1,2,3,7,8,9-HxCDD	83.7	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.206			13C-1,2,3,4,6,7,8-HpCDD	81.2	23 - 140	
OCDD	1.29		J		13C-OCDD	74.2	17 - 157	
2,3,7,8-TCDF	ND	0.0511			13C-2,3,7,8-TCDF	92.0	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0803			13C-1,2,3,7,8-PeCDF	81.0	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0684			13C-2,3,4,7,8-PeCDF	77.5	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0593			13C-1,2,3,4,7,8-HxCDF	93.1	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0575			13C-1,2,3,6,7,8-HxCDF	91.0	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0694			13C-2,3,4,6,7,8-HxCDF	90.1	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.105			13C-1,2,3,7,8,9-HxCDF	88.8	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.119			13C-1,2,3,4,6,7,8-HpCDF	90.7	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.142			13C-1,2,3,4,7,8,9-HpCDF	81.5	26 - 138	
OCDF	ND	0.246			13C-OCDF	82.6	17 - 157	
				CRS	37Cl-2,3,7,8-TCDD	123	35 - 197	
					Toxic Equivalent Quotient (T	EQ) Data (pg/g dr	y wt)	
					TEQMinWHO2005Dioxin	0.000387		
TOTALS								
Total TCDD	ND	0.100						
Total PeCDD	ND	0.152						
Total HxCDD	ND	0.186						
Total HpCDD	ND	0.206						
Total TCDF	ND	0.0511						
Total PeCDF	ND	0.0803						
Total HxCDF	ND	0.105						
Total HpCDF	ND	0.142			CI - Lower control limit - unner control li			

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		Batch: e Extracted:	B0K0172 19-Nov-2020) 12:50		Lab Sample: B0K0172-BS1 Date Analyzed: 25-Nov-20 11:38	Column: ZB-DIOXIN	
Analyte	Amt Found (pg/g)	Spike Amt	%R	Limits		Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	26.2	20.0	131	67 - 158	IS	13C-2,3,7,8-TCDD	93.5	20 - 175
1,2,3,7,8-PeCDD	136	100	136	70 - 142		13C-1,2,3,7,8-PeCDD	75.4	21 - 227
1,2,3,4,7,8-HxCDD	116	100	116	70 - 164		13C-1,2,3,4,7,8-HxCDD	78.4	21 - 193
1,2,3,6,7,8-HxCDD	114	100	114	76 - 134		13C-1,2,3,6,7,8-HxCDD	78.2	25 - 163
1,2,3,7,8,9-HxCDD	117	100	117	64 - 162		13C-1,2,3,7,8,9-HxCDD	78.9	21 - 193
1,2,3,4,6,7,8-HpCDD	109	100	109	70 - 140		13C-1,2,3,4,6,7,8-HpCDD	79.1	26 - 166
OCDD	226	200	113	78 - 144		13C-OCDD	71.3	13 - 199
2,3,7,8-TCDF	20.7	20.0	103	75 - 158		13C-2,3,7,8-TCDF	86.9	22 - 152
1,2,3,7,8-PeCDF	119	100	119	80 - 134		13C-1,2,3,7,8-PeCDF	77.6	21 - 192
2,3,4,7,8-PeCDF	116	100	116	68 - 160		13C-2,3,4,7,8-PeCDF	76.2	13 - 328
1,2,3,4,7,8-HxCDF	97.9	100	97.9	72 - 134		13C-1,2,3,4,7,8-HxCDF	89.6	19 - 202
1,2,3,6,7,8-HxCDF	97.1	100	97.1	84 - 130		13C-1,2,3,6,7,8-HxCDF	88.5	21 - 159
2,3,4,6,7,8-HxCDF	99.6	100	99.6	70 - 156		13C-2,3,4,6,7,8-HxCDF	84.8	22 - 176
1,2,3,7,8,9-HxCDF	96.8	100	96.8	78 - 130		13C-1,2,3,7,8,9-HxCDF	83.7	17 - 205
1,2,3,4,6,7,8-HpCDF	99.2	100	99.2	82 - 122		13C-1,2,3,4,6,7,8-HpCDF	85.3	21 - 158
1,2,3,4,7,8,9-HpCDF	96.2	100	96.2	78 - 138		13C-1,2,3,4,7,8,9-HpCDF	78.3	20 - 186
OCDF	200	200	99.8	63 - 170		13C-OCDF	78.3	13 - 199
					CRS	37Cl-2,3,7,8-TCDD	115	31 - 191

LCL-UCL - Lower control limit - upper control limit

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Sample ID: USMPI	DI-027SC-A-01-02-201106					EPA Meth	od 1613B
Project: Gasco	or QEA, LLC oSiltronic: US Moorings ov-2020 16:40	Sample Data Matrix: Sediment Sample Size: 11.5 g % Solids: 88.3	t	Laboratory Data Lab Sample: 2002436-01 QC Batch: B0K0129 Date Analyzed: 24-Nov-20 18:5	Date Recei Date Extra 3 Column: ZB	cted: 16-Nov-2020	
Analyte Conc.	. (pg/g)	DL EMPC	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0488		IS 13C-2,3,7,8-TCDD	104	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0841		13C-1,2,3,7,8-PeCDD	100	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.109		13C-1,2,3,4,7,8-HxCDD	95.7	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.107		13C-1,2,3,6,7,8-HxCDD	94.2	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.125		13C-1,2,3,7,8,9-HxCDD	97.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	1.96		J	13C-1,2,3,4,6,7,8-HpCDD	91.4	23 - 140	
OCDD	23.9			13C-OCDD	85.1	17 - 157	
2,3,7,8-TCDF	ND	0.0325		13C-2,3,7,8-TCDF	106	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0293		13C-1,2,3,7,8-PeCDF	103	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0257		13C-2,3,4,7,8-PeCDF	107	21 - 178	
1,2,3,4,7,8-HxCDF	0.151		J	13C-1,2,3,4,7,8-HxCDF	97.9	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0584		13C-1,2,3,6,7,8-HxCDF	94.1	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0669		13C-2,3,4,6,7,8-HxCDF	95.3	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0996		13C-1,2,3,7,8,9-HxCDF	97.0	29 - 147	
1,2,3,4,6,7,8-HpCDF	0.334		J	13C-1,2,3,4,6,7,8-HpCDF	90.2	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.106		13C-1,2,3,4,7,8,9-HpCDF	90.7	26 - 138	
OCDF	0.586		J, B	13C-OCDF	82.0	17 - 157	
				CRS 37Cl-2,3,7,8-TCDD	118	35 - 197	
				Toxic Equivalent Quotient (TE	Q) Data (pg/g	dry wt)	
				TEQMinWHO2005Dioxin	0.0454		
TOTALS							
Total TCDD	0.128						
Total PeCDD	ND	0.157					
Total HxCDD	1.40						
Total HpCDD	4.92						
Total TCDF	ND	0.0325					
Total PeCDF	0.0914	0.0914					
Total HxCDF	0.239	0.320					
Total HpCDF DL - Sample specifc esti	0.620			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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Sample ID: USM	1PDI-027SC-A-02-03-20110						EPA Me	thod 1613B
Project: G	nchor QEA, LLC ascoSiltronic: US Moorings 6-Nov-2020 16:40	Sample Data Matrix: Sedi Sample Size: 12.6 % Solids: 82.5	~	Laboratory D Lab Sample: QC Batch: Date Analyzed	2002436-02 B0K0172	Date Received Date Extracte 5 Column: ZB-D	d: 19-Nov-2020	
Analyte Co	onc. (pg/g)	DL EMPC	Qualifiers	Labeled	Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0571		IS 13C-2,3,7	,8-TCDD	108	25 - 164	
1,2,3,7,8-PeCDD	ND	0.101		13C-1,2,3	,7,8-PeCDD	84.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.109		13C-1,2,3	,4,7,8-HxCDD	83.2	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.111		13C-1,2,3	,6,7,8-HxCDD	84.0	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.124		13C-1,2,3	,7,8,9-HxCDD	89.0	32 - 141	
1,2,3,4,6,7,8-HpCDI	D 1.11		J	13C-1,2,3	,4,6,7,8-HpCDD	78.9	23 - 140	
OCDD	13.2		В	13C-OCI)D	69.6	17 - 157	
2,3,7,8-TCDF	ND	0.0384		13C-2,3,7	,8-TCDF	99.2	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0606		13C-1,2,3	,7,8-PeCDF	88.6	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0544		13C-2,3,4	,7,8-PeCDF	90.1	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0634		13C-1,2,3	,4,7,8-HxCDF	91.1	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0583		13C-1,2,3	,6,7,8-HxCDF	92.5	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0658		13C-2,3,4	,6,7,8-HxCDF	93.1	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.105		13C-1,2,3	,7,8,9-HxCDF	89.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	F ND	0.358		13C-1,2,3	,4,6,7,8-HpCDF	84.6	28 - 143	
1,2,3,4,7,8,9-HpCDF	F ND	0.120		13C-1,2,3	,4,7,8,9-HpCDF	77.6	26 - 138	
OCDF	ND	0.372		13C-OCI)F	73.8	17 - 157	
				CRS 37C1-2,3,	7,8-TCDD	134	35 - 197	
				Toxic Eq	uivalent Quotient (TEQ	Q) Data (pg/g dry	wt)	
				TEQMinV	VHO2005Dioxin	0.0151		
TOTALS								
Total TCDD	ND	0.0571						
Total PeCDD	ND	0.101						
Total HxCDD	0.176							
Total HpCDD	2.50							
Total TCDF	ND	0.0384						
Total PeCDF	ND	0.108						
Total HxCDF	0.369							
Total HpCDF	ND c estimated detection limit	0.738			trol 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: USMPD	I-027SC-A-03-04-201106									EPA Met	thod 1613B
Project: Gascos	r QEA, LLC Siltronic: US Moorings v-2020 16:40	N S	mple Data Matrix: Sample Size: % Solids:	Sediment 13.0 g 79.4		Lab QC	boratory Data o Sample: Batch: te Analyzed :	2002436-03 B0K0129 24-Nov-20 19:3		ted: 16-Nov-2020	
Analyte Conc. ((pg/g)	DL	EMP	C	Qualifiers	<u> </u>	Labeled Stan	dard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0480	1			IS	13C-2,3,7,8-T	CDD	89.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.110					13C-1,2,3,7,8	-PeCDD	90.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0960					13C-1,2,3,4,7	,8-HxCDD	89.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0973					13C-1,2,3,6,7	,8-HxCDD	88.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.110					13C-1,2,3,7,8	,9-HxCDD	90.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	0.740				J		13C-1,2,3,4,6	,7,8-HpCDD	89.2	23 - 140	
OCDD	17.9						13C-OCDD		79.8	17 - 157	
2,3,7,8-TCDF	ND	0.0248	1				13C-2,3,7,8-T	CDF	91.0	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0384	-				13C-1,2,3,7,8	-PeCDF	93.8	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0319					13C-2,3,4,7,8	-PeCDF	96.3	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0397					13C-1,2,3,4,7	,8-HxCDF	90.9	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0396	,				13C-1,2,3,6,7	,8-HxCDF	87.7	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0441					13C-2,3,4,6,7	,8-HxCDF	89.8	28 - 136	
1,2,3,7,8,9-HxCDF	0.0326				J		13C-1,2,3,7,8	,9-HxCDF	90.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	0.153				J		13C-1,2,3,4,6	,7,8-HpCDF	88.1	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0718					13C-1,2,3,4,7	,8,9-HpCDF	86.8	26 - 138	
OCDF	ND	0.0800					13C-OCDF		77.1	17 - 157	
						CRS	37Cl-2,3,7,8-7	ГCDD	99.6	35 - 197	
							Toxic Equiva	lent Quotient (TEC	Q) Data (pg/g di	ry wt)	
							TEQMinWHO	02005Dioxin	0.0176		
TOTALS											
Total TCDD	0.157										
Total PeCDD	ND	0.110									
Total HxCDD	0.589										
Total HpCDD	1.84										
Total TCDF	ND	0.0248									
Total PeCDF	ND	0.0384									
Total HxCDF	0.140										
Total HpCDF DL - Sample specife estin	0.153							mit - 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: USMPD	I-027SC-A-04-05-201106						EPA Met	hod 1613B
Project: Gascos	r QEA, LLC Siltronic: US Moorings y-2020 16:40	Sample Data Matrix: Sediment Sample Size: 11.2 g % Solids: 91.1		Lab S QC B	ratory Data ample: 2002436-04 atch: B0K0129 Analyzed: 24-Nov-20 20:23		16-Nov-2020	
Analyte Conc. (pg/g)	DL EMPC	Qualifiers	1	Labeled Standard	%R	LCL-UCL	Qualifiers
2,3,7,8-TCDD	ND	0.0460		IS 1	13C-2,3,7,8-TCDD	81.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.105		1	13C-1,2,3,7,8-PeCDD	81.2	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.113		1	13C-1,2,3,4,7,8-HxCDD	81.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.114		1	13C-1,2,3,6,7,8-HxCDD	79.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.121		1	13C-1,2,3,7,8,9-HxCDD	83.9	32 - 141	
1,2,3,4,6,7,8-HpCDD	ND	0.199		1	13C-1,2,3,4,6,7,8-HpCDD	80.2	23 - 140	
OCDD	2.67		J	1	13C-OCDD	68.5	17 - 157	
2,3,7,8-TCDF	ND	0.0227		1	13C-2,3,7,8-TCDF	83.2	24 - 169	
1,2,3,7,8-PeCDF	ND	0.0389		1	13C-1,2,3,7,8-PeCDF	85.4	24 - 185	
2,3,4,7,8-PeCDF	ND	0.0362		1	13C-2,3,4,7,8-PeCDF	84.4	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.0290		1	13C-1,2,3,4,7,8-HxCDF	81.4	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.0268		1	13C-1,2,3,6,7,8-HxCDF	79.7	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.0311		1	13C-2,3,4,6,7,8-HxCDF	82.4	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.0467		1	13C-1,2,3,7,8,9-HxCDF	82.6	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.0576		1	13C-1,2,3,4,6,7,8-HpCDF	78.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.0647		1	13C-1,2,3,4,7,8,9-HpCDF	74.8	26 - 138	
OCDF	ND	0.113			13C-OCDF	68.1	17 - 157	
				CRS 3	37C1-2,3,7,8-TCDD	95.8	35 - 197	
				7	Toxic Equivalent Quotient (TEQ)	Data (pg/g dry w	vt)	
				Г	TEQMinWHO2005Dioxin	0.000801		
TOTALS								
Total TCDD		0.0460						
Total PeCDD		0.105						
Total HxCDD	0.179							
Total HpCDD		0.199						
Total TCDF		0.0227						
Total PeCDF		0.0389						
Total HxCDF		0.0467						
Total HpCDF DL - Sample specifc estin		0.0647			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

K EMPC (specific projects only)

LOD Limit of Detection

LOQ Limit of Quantitation

M Estimated Maximum Possible Concentration (CA Region 2 projects only)

MDL Method Detection Limit

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)

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

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2002436

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

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

3.3℃

COC ID:

Lab:

VISTA-20201106-171341

POC: *

Delaney Peterson (360-715-2707)

Project:

GascoSiltronic: US Moorings

Sample Custodian:

CO VISTA

1605 Cornwall Avenue, Bellingham, WA 98225

Client:

NW Natural

COC Sample Number	Field Sample ID	Type	Sample Matrix	Collect Date	ed Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
001	USMPDI-027SC-A-01-02-201106		I SE	11/06/2020	16:40	1					建
			•	•			•	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
002	USMPDI-027SC-A-02-03-201106	N	SE	11/06/2020	16:40	1					
						Dioxin/Furans	E1613B	30	4°C		
								Total solids (VISTA)	SM2540G	30	4°C
003	USMPDI-027SC-A-03-04-201106	N	SE	11/06/2020	16:40	1				EMPEDIA.	IN PROPERTY.
	<u> </u>		_	•				Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C
004	USMPDI-027SC-A-04-05-201106	N	SE	11/06/2020	16:40	1					redinities:
- 004			_				•	Dioxin/Furans	E1613B	30	4°C
								Total solids (VISTA)	SM2540G	30	4°C

Comment:					
Relinquistred/Rv:	Received By	Relinguished By:	Received By:	Relinguished By:	Received Rv
<u> </u>	Signatord			Signature	Signature
Print Name X NEXCL	Promotellum RWaght	Print Name	Print Name	Print Name	Print Name
140	Company AL	Company	Company	Сотрапу	Company
Date/Time 11920 0230	Date/Time (10/20 (0:09)	Date/Time	Date/Time	Date/Time	Date/Time

Date Printed: 11/6/2020



Sample Log-In Checklist

Vista Work Orde	r#:	200	2431	, 0			age # _	L.o Sta	of <u> </u>	_
Samples Date/Time Initials: Location									112-2	2
Arrival:	11/10	20 1	0,00	Ule	J			:^		
Delivered By:	FedEx	UPS	On Tra	ac GLS	DHI	L	Hand Delive		Oth	ner
Preservation:	(lo	Se)	Blue Ice Techni Ice Dry				Dry	Ice	No	ne
Temp °C: 3.3 (uncorrected) Temp °C: 3.3 (corrected) Temp °C: 3.3 (corrected)							mome	ter ID:	TR.	<u>ろ</u>
1	医黄疸灵							YES	No	NA
Shipping Contain	er(s) Intac	t?				然 - 神 漢		V		1.0.1
Shipping Custody	y Seals Int	act?		-				V		
Airbill 3of	ろ Trk	# 77	203	139 019	51			V		
Shipping Docume	entation P	resent?					_	V		
Shipping Contain	er		Vista	Stient	R	etain	₽€	eturn	Dis	pose
Chain of Custody	/ / Sample	Docume	ntation Pr	esent?						
Chain of Custody / Sample Documentation Complete?										
Holding Time Acceptable?										
Logged In:	Date/Tin		1225	Initials:)			WR- :: <u>H</u>	_	
COC Anomaly/Sa	ample Acc	eptance	Form com	pleted?					V	V

Comments:

ID.: LR - SLC Rev No.: 6 Rev Date: 07/16/2020 Page: 1 of 1

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CoC/Label Reconciliation Report WO# 2002436

LabNumber CoC Sample ID		Sample Alias	mple te/Time		Container	Sample BaseMatrix Comments
2002436-01 A USMPDI-027SC-A-01-02	-201106	06-	Nov-20 16:40	4	Amber Glass, 120 mL	Solid
2002436-02 A USMPDI-027SC-A-02-03-	-201106	06-	Nov-20 16:40		Amber Glass, 120 mL	Solid
2002436-03 A USMPDI-027SC-A-03-04	-201106	06-	Nov-20 16:40	日	Amber Glass, 120 mL	Solid
2002436-04 A USMPDI-027SC-A-04-05	-201106	06-	Nov-20 16:40	d	Amber Glass, 120 mL	Solid

Checkmarks indicate that information on the COC reconciled with the sample label.

Any discrepancies are noted in the following columns.

Sample Container Intact? Sample Custody Seals Intact? Adequate Sample Volume? Container Type Appropriate for Analysis(es) Preservation Documented: Na2S2O3 Trizma None Other If Chlorinated or Drinking Water Samples, Acceptable Preservation?	my discrepancies are noted in the following columns.					0 -	C 1.	
Sample Custody Seals Intact? Adequate Sample Volume? Container Type Appropriate for Analysis(es) Preservation Documented: Na2S2O3 Trizma None Other		Yes	No	NA	Comments:	63 =	hoolen	3043
Adequate Sample Volume? Container Type Appropriate for Analysis(es) Preservation Documented: Na2S2O3 Trizma None Other	Sample Container Intact?	/						
Container Type Appropriate for Analysis(es) Preservation Documented: Na2S2O3 Trizma None Other	Sample Custody Seals Intact?			_				
Preservation Documented: Na2S2O3 Trizma None Other	Adequate Sample Volume?	V						
	Container Type Appropriate for Analysis(es)	/						
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	Preservation Documented: Na2S2O3 Trizma None Other		/	V				
	If Chlorinated or Drinking Water Samples, Acceptable Preservation?			1				

Verifed by/Date: (A)

Printed: 11/10/2020 3:49:46PM

2002436

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Work Order 2002436

EXTRACTION INFORMATION

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Process Sheet

Workorder: 2002436

Prep Expiration: 2021-11-06

Client: Anchor QEA, LLC

Workorder Due: 08-Dec-20 00:00

TAT: 28

Method: 1613 Full List

Matrix: Solid Client Matrix: Sediment Also run: Percent Solids Prep Batch: BOK0129

Prep Data Entered:

Initial Sequence: School 2

LabSampleID	Recon ClientSampleID	Date Received	Location Comments	
2002436-01	USMPDI-027SC-A-01-02-201106	10-Nov-20 10:08	WR-2 H-3	
2002436-02	USMPDI-027SC-A-02-03-201106	10-Nov-20 10:08	WR-2 H-3	
2002436-03	USMPDI-027SC-A-03-04-201106	10-Nov-20 10:08	WR-2 H-3	
2002436-04	USMPDI-027SC-A-04-05-201106	10-Nov-20 10:08	WR-2 H-3	

WO Comments: 1613: 10g dw

Prep Check Out: 1M 11/16
Prep Check In: 1M 11/16

Prep Reconciled Initals/Date: HS

Page 1 of 1

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PREPARATION BENCH SHEET

Madulus Calid	
Matrix: Solid	B0K0129
Method: 1613 Full List	D MDMC C

Chemist:

Prep Date/Time: 16-Nov-20 15:37 1155 ומ ווווווים

Prepared using: HRMS - Soxhlet

11/17/20 Column Packer: IM 11/17/20 IH 11/18/20 11/17/20 VISTA IS/NS CRS/PS Sample AP ABSG ÁΑ Florisil' RS CHEM/WIT Sample ID Eqv CHEM/WIT CHEM/ CHEM/ CHEM/ CHEM/ CHEM/WIT Sox Amt. DATE DATE DATE DATE DATE DATE DATE (g) HE 11/16/20 14 DG 11/17/20 14 B0K0129-BLK1 IM 11/17/20 14 RR 11/13/20 IM 11/17/20 IM 11/18/20 (00.01) NA B0K0129-BS1 (00.01)AS HOW B0K0129-DUP1 6.19 5.70 NA 2002359-04 brown lines 2002356-01 5.74 6.69 2002356-02 6.48 6.03 maroon yellow 2002359-01 6.10 Ab 5.83 bilde a 2002359-02 6.65 6.15 2002359-03 5.85 6.12 MAYOUN HALLIN 2002359-04 5.70 6.04 mores A 2002359-05 6.01 6.38 grey, 2002359-06 Brown 8.09 7.16 lines M PLACETY 2002359-07 7.57 6.87 2002359-08 line 6.78 7.02 maroda into t 2002359-09 6.66 7.36 herne & 2002425-01 28.34 11/17/20 27.57

15: 20 F 101, HOME (V3)	Су
NS: 20F0107 10mL (V4)	Sta
PS/CRS: 2060701 1946 (VI)	11
RS: 2060702, 1011(1)	Sto
Diox/F PCB PAH PEST PBDE HCB	'''

cle Time rt Date/Time 16/20 55 poo op Date/Time

600

APP: SEFUN SOX SDS SOLV: TO Other NA

Chemist/Date: | M | Balance ID: HRUS-8

Chemist/Date: IM [1/16/20

Check Out:

Soxhlet Siphoned Chemist/Date:

Notes:

14 11/16/20

Vial Transfer

Chemist/Date: IM 11/18/20

ore broken glass in 4/13/20 soxhet stuck in opening of Rinsed and transferred to how (refer to (B)) IM 11/17/20 flouril collinh 11/18/20

Comments: # IM 11/17 20

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

Final Volume(s) 20µl

PREPARATION BENCH SHEET

B0K0129

Chemist: 1 M

Method: 1613 Full List

Prepared using: HRMS - Soxhlet

Prep Date/Time: 16-Nov-20 15:37

ŗ

						Column Packer:	IM 11/17/20	DG 11/17/20	IM 11/17/20	IM 11/18/20	
Γ		VISTA	G	Sample	IS/NS	CRS/PS	AP	ABSG'	A'A	Florisil '	RS
- 1	Sox	Sample ID	Eqv	Amt.	CHEM/WIT	CHEM/WIT	CHEM/	CHEM/	CHEM/	CHEM/	CHEM/WIT
				(g)	DATE	DATE	DATE	DATE	DATE	DATE	DATE
L	כש		11.32	11.53	IM HR H/16/20	IM DG 11/17/20		1M 11/17/20	IM 11/17/20	IM 11/18/20	IMRQ1/18/20
2/	22	2002436-02	10.12	12 41			_		·		
אצ	2 √0		1251111					like			
	B7	2002436-03	12.59	12.99	IM HK 11/16/20	14_DG 11/17/20	TNA	maroch line	IM TILLIAM	IM 11/18/20	IM PAI/18/20
	88	2002436-04	10.97	11.23	V	\	V	∇	V	T	V

IS:	20F1101, 10ml (V3)	0,010 111111	APP: SEFUN SOX SDS	Check Out: Chemist/Date: \\\\/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Soxhlet Siphoned Chemist/Date:	Summer tell off of into and laws
NS:	20F0107, 10ML (VY)	Start Date/Time	SOLV: 10L	Check In:	10 10 10 10 0	water both 1m 11/1/20
PS/	CRS: 2060701, 10pl(VI)	455	Other N A	Chemist/Date: 14 11/16/20	Vial Transfer	Oslow to electe plovist column with
RS:	2060702, Igul (1)	Stop Date/Time		Balance ID: HRUS-8	Chemist/Date:	gort in apole
Dio	x/F PCB PAH PEST PBDE HCB	0600	44		IM WISho	

Comments:

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

Batch: B0K0129 Matrix: Solid

. LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike S	pikeAmount	ClientMatrix	Analysis
2002356-01	6.69 🗸	87.17277	5.8319	20 🗸	16-Nov-20 15:37	/ IM /			Sediment	1613 Full List
2002356-02	6.48 🗸	82.89787	5.3718	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-01	6.1 /	85.8006	5.2338	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-02	6.65 🗸	81.33333	5.4087	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-03	6.12 /	85.48897	5.2319	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-04	6.04 /	87.77506	5.3016	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-05	6.38 🗸	83.22296	5.3096	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-06	8.09 /	69.80676	5.6474	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-07	7.57 /	72.74549	5.5068	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-08	7.02 🗸	73.76726	5.1785	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002359-09	7.36 V	75.10639	5.5278	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002425-01	28.34 🗸	36.26943	10.2788	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
2002436-01	11.53 🗸	88.33923	10.1855	20 🖔	16-Nov-20 15:37	IM V	/		Sediment	1613 Full List
-2002436-02	12.66	82:49337	10.4437	20	16-Nov-20 15:37	-IM			Sediment	1613 Full List
2002436-03	12.99 /	79.42857	10.3178	20 🗸	16-Nov-20 15:37~	IM.			Sediment	1613 Full List
2002436-04	11.23 🗸	91.13474	10.2344	20	16-Nov-20 15:37	IM			Sediment	1613 Full List
B0K0129-BLK1	10 🗸			20	16-Nov-20 15:37	IM				QC
B0K0129-BS1	10 /			20	16-Nov-20 15:37	IM	20F0107 🗸	10 🗸	· · · · · · · · · · · · · · · · · · ·	QC
B0K0129-DUP1	6.19 🗸			20 V	16-Nov-20 15:37	IM V				QC

All bolded data on report verified against written benchsheet by (initial/date) IH II/18/20

Work Order 2002436

Printed: 11/18/2020 1:06:41PM Page 1 of 1

Percent Moisture/ Percent Solids

D2216-90

BATCH ID B0K0090

Analyst: HS V	Test Code: %Moist/%Solids	
Analyte:	Units: %	Data Entry Verified by: (Initial and Date) HS II/12/2021
Dried at 110°C+/-5°C Oven ID : 01 <u>02</u> ✓		

Inst HRMS-9 V

<u>Date/Time IN:</u> <u>Date/Time OUT</u> 11/11/20 14:32√ 11/12/20 8:03 √

	В	С	D	E	F	G	н	I	K	L	M	N	0	Р
				Intial and Date:	HS 11/11/20	HS 11/12/20			11/11/20 HS					11/11/20 HS
Particle Size	SampID		SampType	Pan Tare Wt. (gms)	Weight (g)	Dry Pan and Sample Weight (g)	Dry Sample Weight (g)	%Solids RawVal	Visual Inspection	CI-	pH Before	pH After	Acid Added	Sample Homogenized*
	2002436-01	A V	Sample	1.2500 🗸	4.0800	3.7500	2.5000	88.34	Soil V	n/a	n/a	n/a	n/a	x <u>√</u>
	2002436-02	A	Sample	1.2500	5.0200 🗸	4.3600 🗸	3.1100	82.49	Soil	n/a	n/a	n/a	n/a	x
	2002436-03	A	Sample	1.2700 ✓	4.7700 🗸	4.0500 🗸	2.7800	79.43	Soil	n/a	n/a	n/a	n/a	×
	2002436-04	A 1/_	Sample	1.2500 ✓	4.0700 🗸	3.8200	2.5700	91.13	Soil 🗸	n/a	n/a	n/a	n/a	× V
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^{*}Sample homogenized in sample container unless otherwise noted.

BCH_PMOIST_B0K0090.xls

11/12/2020 8:51 AM

Percent Moisture/ Percent Solids

D2216-90

BATCHID B0K0090

Analyst: H.S	Test Code: %Moist/%Solids	Data Entry Verified by: 4.4
Analyte:	Units: %	Data Entry Verified by: NA (Initial and Date)
Dried at 110°C+/-5°C Oven ID: 01 (02)		

Inst HRMS-9

Date/Time IN: Date/Time OUT

11/11/20 14:32 11/12/20 08 0 3

	В	С	D	E	F	G	н	i i	К	L	M	N	0	Р
				Intial and Date:	HS 11/11/20	HS 11/12/20			11/11/20) H	15			Sample Homogenized*
Particle Size	SampID		SampType	Pan	Wet Pan and Sample	Dry Pan and Sample	Dry Sample Weight (g)	%Solids RawVal	Visual	CI-	pH Before	pH /	Acid	Sample
	2002436-01	A	Sample	Pan Tare Wt. (gms)	Wet Pan and Sample Weight (g)	Dry Pan and Sample Weight (g)	vveight (g)	I Nawvai	Inspection	11	Delote	Aitei	- dueu	Violitogenized
	2002436-02	Â	Sample	1 76 **	5 02	4.36 4.05 3.82								<u> </u>
	2002436-03	Ä	Sample	1.24 **	5.02 4.77	4.05			 		$\overline{}$			
	2002436-04	 7	Sample	1.25	4.07	202			1,	$ \mathcal{A} $				1
	2002436-04	- A	Sample	(12)	1,0	7.0-			V					
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^{*}Sample homogenized in sample container unless otherwise noted.

* 1.25 HS 11/11/20 ** 1.25 HS 11/11/20

BCH_PMOIST_B0K0090.xls

11/11/2020 1:43 PM

Process Sheet

Prep Expiration: 2021-11-06 Client: Anchor QEA, LLC Workorder: 2002436

C7 ///e/wzo Workorder Due:08-Dec-20 00:00

TAT: 28 /

Method: 1613 Full List

Matrix: Solid Client Matrix: Sediment Also run: Percent Solids Prep Batch: 30ko 172

Prep Data Entered:

Initial Sequence: So K-0075

LabSampleID	Recon ClientSampleID	Date Received	Location	Comments	_		
2002436-01	USMPDI-027SC-A-01-02-2011 06	10-Nov-20 10:08	WR-2-H-3				
2002436-02	USMPDI-027SC-A-02-03-201106	10-Nov-20 10:08	WR-2 H-3		13-Dec-20 00:00		
-2002436-03	USMPDI-027SC-A-03-04-201106	10-Nov-20 10:08	WR-2 H -3		- 23		
2002436-04	USMPDI-027SC-A-04-05-201106	10-Nov-20 10:08	WR-2 H-3		and the state of the state of the state of		

Lucia 10:00

WO Comments: 1613: 10g dw

Pre-Prep Check Out: ___ Pre-Prep Check In: ___

Prep Check Out: RN

Prep Reconciled Initals/Date:

Spike Reconciled Initals/Date: ME 1111917020.

VialBoxID:

Page 1 of 1

PREPARATION BENCH SHEET

		,
Matrix: Solid	B0K0172	Chemist: PR

Method: 1613 Full List Prepared using: HRMS - Soxhlet

Pren	Date/Time:	19-Nov-20	12:50

. 3

•															
~						lumn Packer:	NA	No	11/22/20	Do	11/22/20	05	11/23/20		
Sox	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CH	CRS/PS IEM/WIT DATE	AP CHEM/ DATE	(ABSG CHEM/ DATE		AA CHEM/ DATE	C	lorisil HEM/ DATE	R CHEM DA	1/WIT
Al	B0K0172-BLK1	ŊΑ	(10.00)	RRMEN/19/20	OG!	M 11/2/20	NA_	07	_11/22/20	DG.	1/12/20	Nr.	11/23/20	No 11	1/24/20
AZ	B0K0172-BS1	1	(10.00)	Ī											
A3	B0K0172-DUP1 2002374-08	11.45	11.57					green	penk, and vings						
A4	2002374-01	11.28	11.36						Salmon, ring						
A5	2002374-02	15.42	15.53					Indiao	uplions and						
A6	2002374-03	16.10	16.27					yellow	and mageria 19845						
A7	2002374-04	11.50	11.58						Salmon vina						
A8	2002374-05 (A)	16.63	100					black,	yellow, and areen						
A9	2002374-06	13.87	13.91					yellow	, black, teal						
A10	2002374-07	13.28	13.37						and purple						
All	2002374-08	11.45	11.65						green ring						
A12		19.68	19.72					Marro	yellow, on, teal						
BI	2002375-02	16.42	16,90					black tea.	purple	\	:				-1
132	2002375-03	11.51							blue, plak, beige nings	_					95
133	2002375-04	11.38	11.44	V		/			/beige rong		V		<u>, </u>	V	1
IS:	20F1101, 1004		cle Time	APP: SEFUN SC		Check Out:	RR11/19/20	Soxhlet S	phoned Not	es:	Particular Served to 11/24/20	e stu	kan 60	Onl 16	unable to
NS:	20F0107, 10mm	Sta	nt Date/Time	SOLV: Tolue	ne	J	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Chemist/I	Jate: be	trans	Genred to	COKU	in. WG	11/22/20	16
PS/CR	s: 20E070, 10ml	B -	1517	Other MA		Chemist/Date:	•	Vial Trans		M	11/24/2	0			
RS:	20E0702, 10 ml	(VI) Sto	p Date/Time /20/20	Final Volume(s)		Balance ID:	2MS- 10	Chemist/I							
Diox/F	E PCB PAH PEST PBDE		c754		POML			1M 11/2	14/20						

Comments:

I = Sample approached dryness on rotovap

^{2 =} Sample bumped on rotovap; lost < 5%

^{3 =} Sample poured through Na2SO4 to remove water

^{5 =} Sample homogenized in secondary container

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

^{7 =} Sohxlet approached dryness

PREPARATION BENCH SHEET

Method:	1613	Full List

B0K0172

Prepared using: HRMS - Soxhlet

Chemist: DR

Prep Date/Time: 19-Nov-20 12:50

•					Column Packer:	NA	OF 11/2/20	Dr 11/2/20	DG 11/23/20	
Sox	VISTA Sample ID	G Eqv	Sample Amt. (g)	IS/NS CHEM/WIT DATE	CRS/PS CHEM/WIT DATE	AP CHEM/ DATE	ABSG CHEM/ DATE	AA CHEM/ DATE	Florisil CHEM/ DATE	RS CHEM/WIT DATE
B4	2002375-05	19,80	19.86	RRME11/19/20	DG IM 11/22/20	NA	D(11/22/20	DG_ 11/22/20	Do- 11/23/20	DG 14/1/24/20
35	2002375-06	18.28	18.39				₩ 11/22/40	yellow, Hack,		
Bb	2002375-07	17.14	17.62				06-1422	betge wing		
121	2002375-08	11.89	11.91				11/2/20	uellow, salmon,		
00	2002375-09	18.14	19.18					vellow, black,		
39	2002436-02RE1	12.12	12.58	\lor		V		pale yellow and	1	

IS: 20F 1101, 10AL NS: 20F 0107, 10AL PS/CRS: 20F0701, 10ML (VI) RS: 20F0702, 10ML (VI)	Start Date/Time 11 /19 /20	Other NA	Check In: Chemist/Date: 2211/19/20	DRILLIAMO	10(18981). VV- 11/22/20
RS: 20E0702, Oul (1)	Stop Date/Time	Final Volume(s) 704L	Balance ID: HLIMY-10		

- 4 = Precipitate present at Final Volume
- 5 = Sample homogenized in secondary container
- 6 = Sample clogged during extaction; pipetted and used Nitrogen to assist
- 7 = Sohxlet approached dryness

^{1 =} Sample approached dryness on rotovap

^{2 =} Sample bumped on rotovap; lost < 5% 3 = Sample poured through Na2SO4 to remove water Work Order 2002436

Batch: B0K0172 Matrix: Solid

·LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
2002374-01	11.36 /	88.6628	10.0721	20 /	19-Nov-20 12:50	\sqrt{RR}			Sediment	1613 Full List
2002374-02	15.53 /	64.86487	10.0735	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002374-03	16.27 /	62.12121	10.1071	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002374-04	11.58 /	86.96538	10.0706	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002374-05	16.81 🗸	60.13289	10.1083	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002374-06	13.91 /	72.07793	10.0260	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002374-07	13.37 🗸	75.30434	10.0682	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002374-08	11.65 🗸	87.34567	10.1758	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-01	19.72	50.80128	10.0180	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-02	16.9	60.89325	10.2910	20	19-Nov-20 12:50	RR		*;	Sediment	1613 Full List
2002375-03	11.52 🗸	86.86868	10.0073	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-04	11.44 /	87.88991	10.0546	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-05	19.86 /	50.51078	10.0314	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-06	18.39 /	54.71204	10.0615	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-07	17.62 🗸	58.34522	10.2804	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-08	11.91 🗸	84.10351	10.0167	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002375-09	19.18 🦯	55.13595	10.5751	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
2002436-02RE1	12.58	82.49337	10.3777	20	19-Nov-20 12:50	RR			Sediment	1613 Full List
B0K0172-BLK1	10 🗸			20	19-Nov-20 12:50	RR				QC
B0K0172-BS1	10 /			20	19-Nov-20 12:50	RR	20F0107 V	10 /		QC
B0K0172-DUP1	11.57 /			20	19-Nov-20 12:50	RR	;			QC

SAMPLE DATA – EPA METHOD 1613

Work Order 2002436 Page 32 of 441

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-5.qld

Last Altered:

Wednesday, November 25, 2020 10:25:36 Pacific Standard Time

Printed:

Wednesday, November 25, 2020 10:27:32 Pacific Standard Time

GPB 11/25/2020

Method: Untitled 12 Nov 2020 07:51:39

Calibration: U:\VG12.PRO\CurveDB\dbDlOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_5, Date: 24-Nov-2020, Time: 14:23:22, ID: B0K0129-BLK1 Method Blank 10, Description: Method Blank

25715	# 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	0.950	10.000	26.097		1.001				0.0488	
2	2 1,2,3,7,8-PeCDD			NO	0.885	10.000	30.803		1.000				0.0769	
2	3 1.2,3,4,7,8-HxCDD			NO	1.02	10.000	34.135		1.000				0.0872	
4	4 1,2,3,6,7,8-HxCDD			NO	0.915	10.000	34.252		1.000				0.0892	
5 6 7	5 1,2,3,7,8,9-HxCDD			NO	0.934	10.000	34.529		1.000				0.0997	
6	6 1,2,3,4,6,7.8-HpCDD			NO	0.870	10.000	38.030		1.000				0.119	
7	7 OCDD			NO	0.872	10.000	40.977		1.000				0.252	
8	8 2,3,7,8-TCDF			NO	0.824	10.000	25.381		1.000				0.0326	
8 9	9 1,2,3,7,8-PeCDF			NO	0.963	10.000	29.542		1.000				0.0455	
10	10 2,3,4,7,8-PeCDF			NO	1.07	10.000	30.607		1.000				0.0370	
11	11 1,2,3,4,7,8-HxCDF			NO	0.953	10.000	33.220		1.000				0.0645	
12	12 1,2,3,6,7,8-HxCDF			NO	1.01	10.000	33.347		1.000				0.0652	
13	13 2,3,4,6,7,8-HxCDF			NO	0.991	10.000	34.021		1.000				0.0765	
14	14 1,2,3,7,8,9-HxCDF			NO	0.951	10.000	35.009		1.000				0.119	
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.999	10.000	36.596		1.000				0.104	
16	16 1,2,3,4,7,8,9-HpCDF			NO	1.12	10.000	38.648		1.000				0.111	
17	17 OCDF	3.32e2	0.95	NO	0.868	10.000	41.272	41.25	1.000	1.000	0.32749		0.220	0.327
18	18 13C-2,3,7,8-TCDD	5.87e5	0.82	NO	1.11	10.000	26.058	26.07	1.030	1.030	167.17	83.6	0.226	
19	19 13C-1,2,3,7,8-PeCDD	4.38e5	0.63	NO	0.859	10.000	30.774	30.79	1.216	1.217	161.10	80.5	0.308	
20	20 13C-1,2,3,4,7,8-HxCDD	3.27e5	1.27	NO	0.700	10.000	34.124	34.13	1.014	1.014	155.14	77.6	0.400	
21	21 13C-1,2,3,6,7,8-HxCDD	4.01e5	1.27	NO	0.833	10.000	34.262	34.24	1.018	1.017	159.61	79.8	0.336	
22	22 13C-1,2,3,7,8,9-HxCDD	3.55e5	1.22	NO	0.762	10.000	34.504	34.52	1.025	1.026	154.72	77.4	0.367	
23	23 13C-1,2,3,4,6,7,8-HpCDD	2.87e5	1.07	NO	0.650	10.000	37.988	38.03	1.129	1.130	146.67	73.3	0.736	
24	24 13C-OCDD	4.01e5	0.86	NO	0.539	10.000	40.953	40.98	1.217	1.218	246.46	61.6	0.622	
25	25 13C-2,3,7,8-TCDF	8.42e5	0.78	NO	0.981	10.000	25.380	25.37	1.003	1.003	166.85	83.4	0.290	
26	26 13C-1,2,3,7,8-PeCDF	6.71e5	1.64	NO	0.792	10.000	29.506	29.53	1.166	1.167	164.80	82.4	0.578	
27	27 13C-2,3,4,7,8-PeCDF	6.65e5	1.59	NO	0.778	10.000	30.564	30.61	1.208	1.210	166.33	83.2	0.588	
28	28 13C-1,2,3,4,7,8-HxCDF	4.57e5	0.51	NO	0.954	10.000	33.215	33.22	0.987	0.987	159.10	79.5	0.711	
29	29 13C-1,2,3,6,7,8-HxCDF	4.78e5	0.50	NO	1.01	10.000	33.346	33.35	0.991	0.991	157.58	78.8	0.674	
30	30 13C-2,3,4,6,7,8-HxCDF	4.27e5	0.49	NO	0.921	10.000	34.016	34.02	1.011	1.011	153.64	76.8	0.737	

Work Order 2002436 Page 33 of 441

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-5.qld

Last Altered: Printed:

Wednesday, November 25, 2020 10:25:36 Pacific Standard Time Wednesday, November 25, 2020 10:27:32 Pacific Standard Time

Name: 201124R1_5, Date: 24-Nov-2020, Time: 14:23:22, ID: B0K0129-BLK1 Method Blank 10, Description: Method Blank

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	3.80e5	0.50	NO	0.803	10.000	35.012	35.01	1.040	1.040	157.01	78.5	0.845	
32	32 13C-1,2,3,4,6,7,8-HpCDF	3.20e5	0.41	NO	0.735	10.000	36.581	36.59	1.087	1.087	144.44	72.2	0.715	
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.37e5	0.43	NO	0.568	10.000	38.617	38.65	1.147	1.148	138.62	69.3	0.926	
34	34 13C-OCDF	4.67e5	0.90	NO	0.629	10.000	41.235	41.26	1.225	1.226	246.10	61.5	0.589	
35	35 37CI-2,3,7,8-TCDD	2.60e5			1.09	10.000	26.058	26.10	1.030	1.032	75.573	94.5	0.101	
36	36 13C-1,2,3,4-TCDD	6.33e5	0.81	NO	1.00	10.000	25.370	25.30	1.000	1.000	200.00	100	0.250	
37	37 13C-1,2,3,4-TCDF	1.03e6	0.79	NO	1.00	10.000	23.870	23.81	1.000	1.000	200.00	100	0.284	
38	38 13C-1,2,3,4,6,9-HxCDF	6.03e5	0.50	NO	1.00	10.000	33.710	33.66	1.000	1.000	200.00	100	0.679	
39	39 Total Tetra-Dioxins				0.950	10.000	24.620		0.000				0.0309	
40	40 Total Penta-Dioxins				0.885	10.000	29.960		0.000				0.0269	
41	41 Total Hexa-Dioxins				0.915	10.000	33.635		0.000				0.0455	
42	42 Total Hepta-Dioxins				0.870	10.000	37.640		0.000				0.0744	
43	43 Total Tetra-Furans				0.824	10.000	23.610		0.000				0.0163	
44	44 1st Func. Penta-Furans				0.963	10.000	26.930		0.000				0.00849	
45	45 Total Penta-Furans				0.963	10.000	29.275		0.000				0.0166	
46	46 Total Hexa-Furans				0.991	10.000	33.555		0.000				0.0347	
47	47 Total Hepta-Furans				0.999	10.000	37.835		0.000				0.0670	

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-5.qld

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Name: 201124R1_5, Date: 24-Nov-2020, Time: 14:23:22, ID: B0K0129-BLK1 Method Blank 10, Description: Method Blank

Tetra-Dioxins

Name 1	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
Penta-Dioxins											
Name 1	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y -	Resp	Conc.	ЕМРС	DL
Hexa-Dioxins											

Name	RT	m1 Height m2 Height	m1 Resp m2 Resp	RA n/y	Resp	Conc.	EMPC	DL
1 1 1 2 1 2								

Hepta-Dioxins

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

Tetra-Furans

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

Penta-Furans function 1

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

Quantify Totals Report MassLynx 4.1 SCN815

Vista Analytical Laboratory

Page 2 of 2

Dataset:

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Name: 201124R1_5, Date: 24-Nov-2020, Time: 14:23:22, ID: B0K0129-BLK1 Method Blank 10, Description: Method Blank

Penta-Furans

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

Hexa-Furans

Name	RT	m1 Height m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
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Hepta-Furans

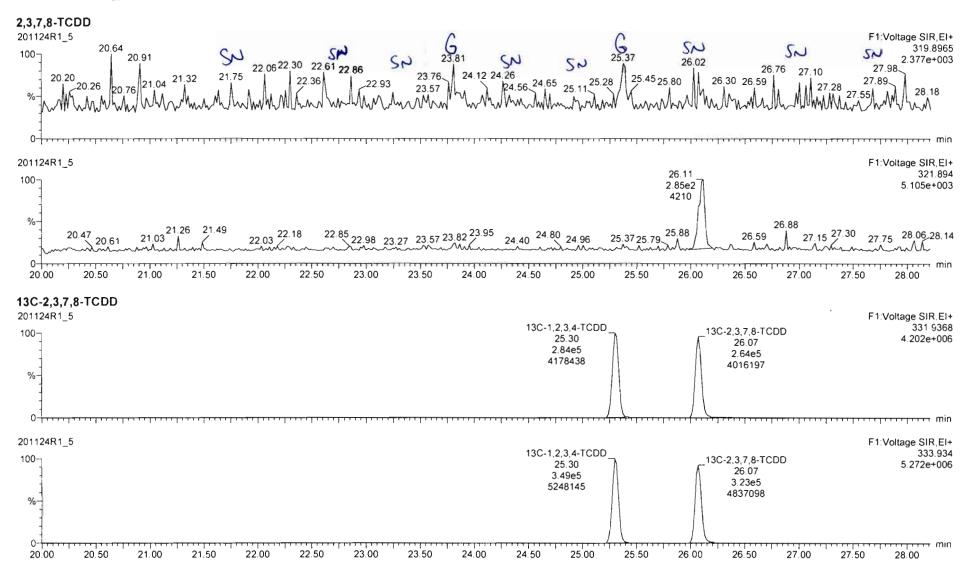
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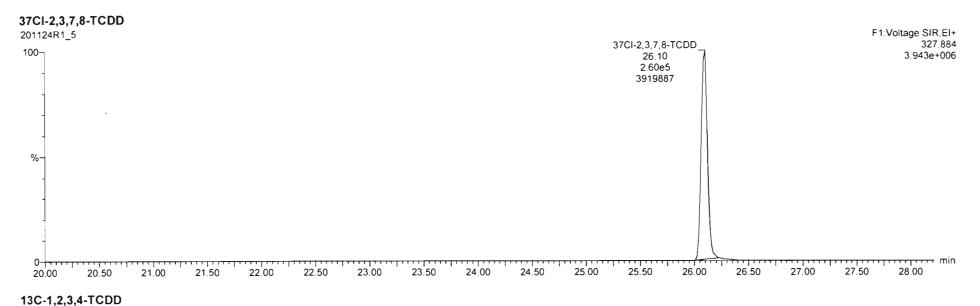
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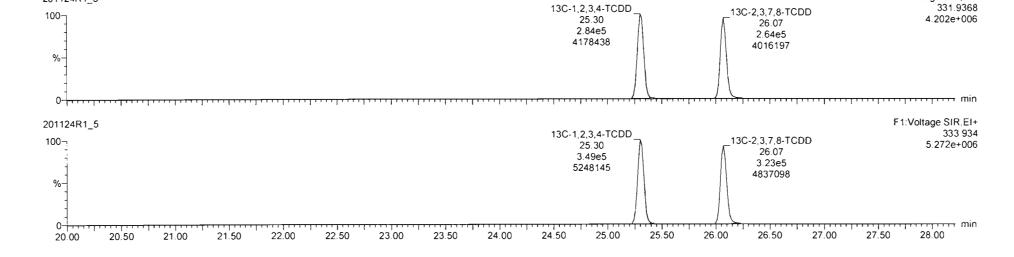
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Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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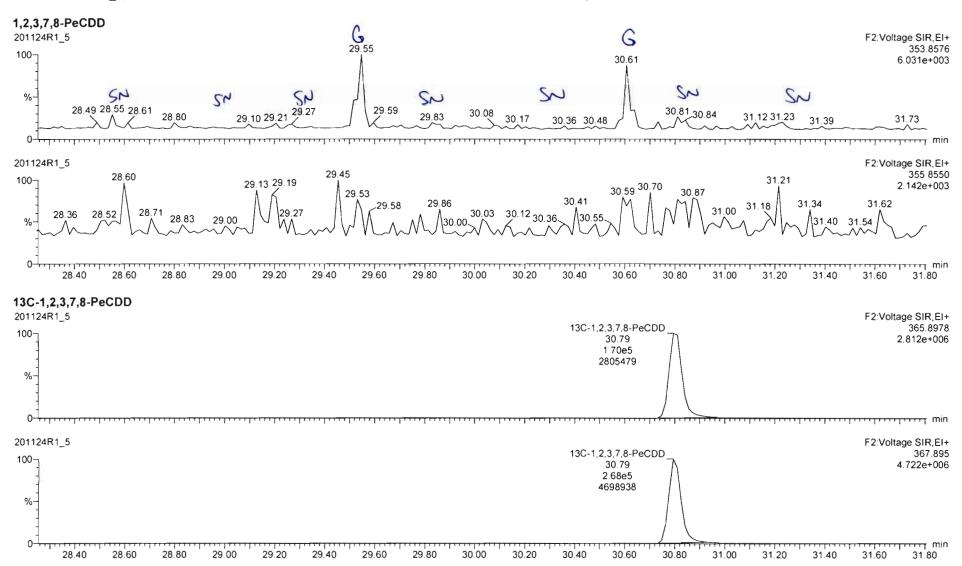




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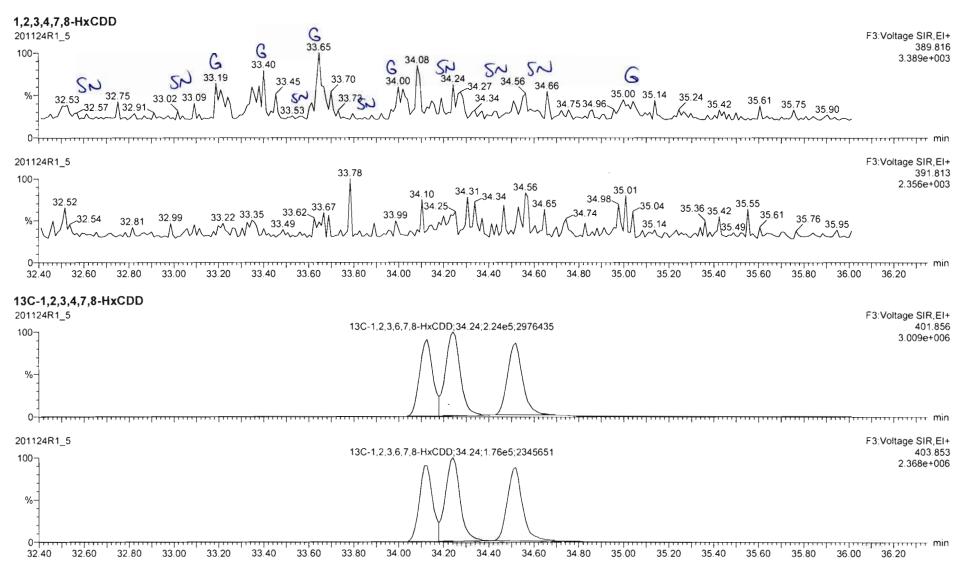
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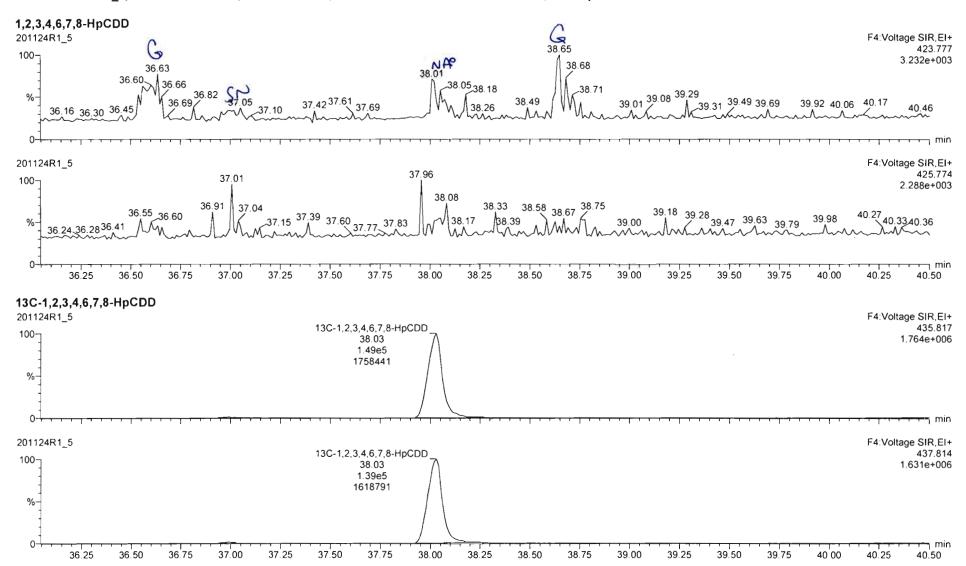
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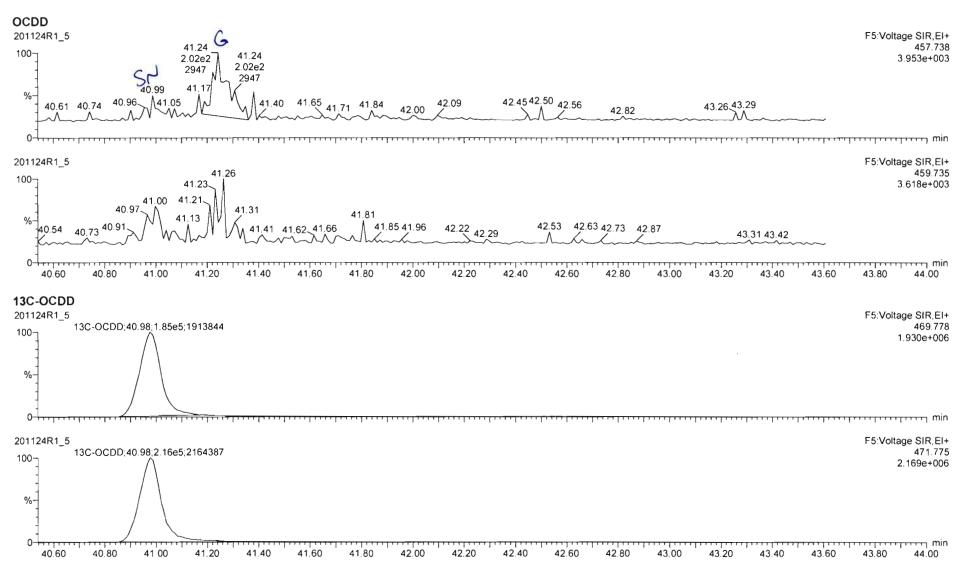
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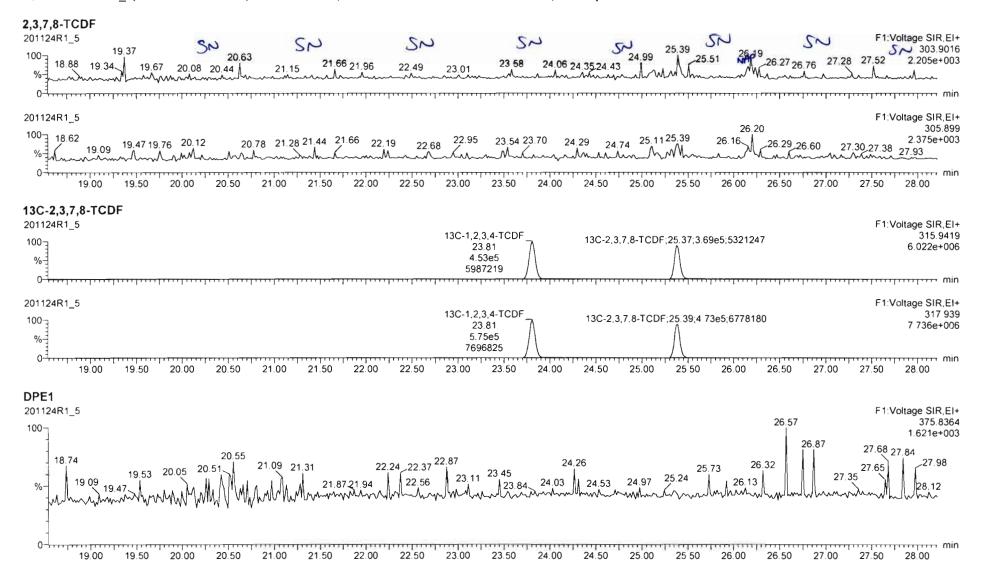
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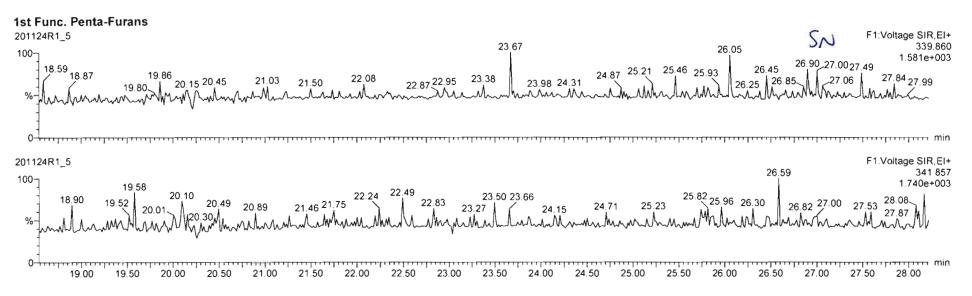
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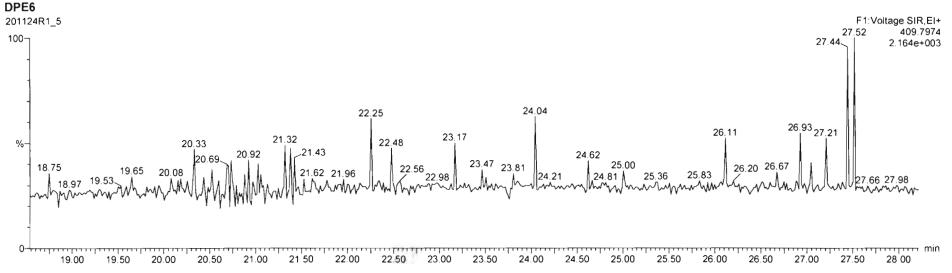
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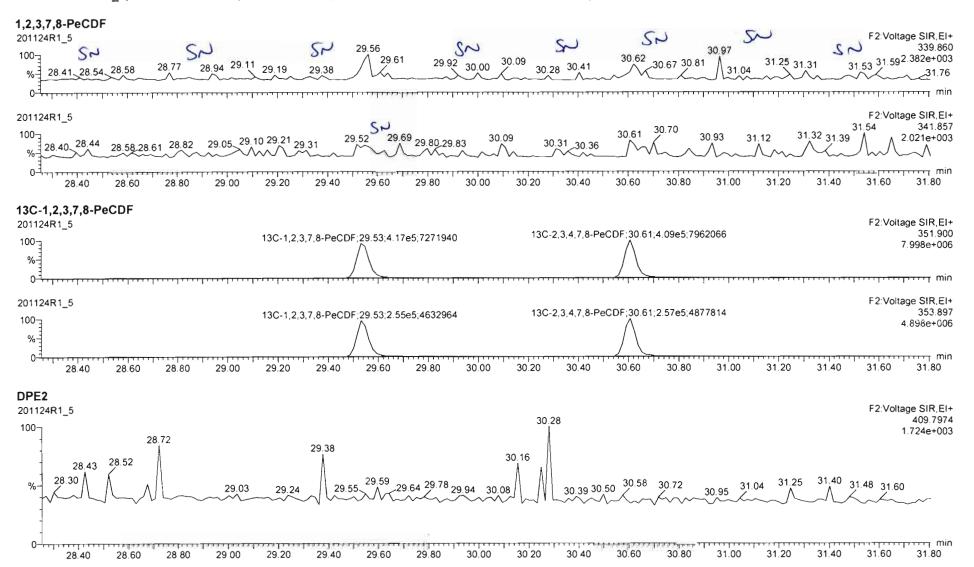
Vista Analytical Laboratory

Dataset:

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Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

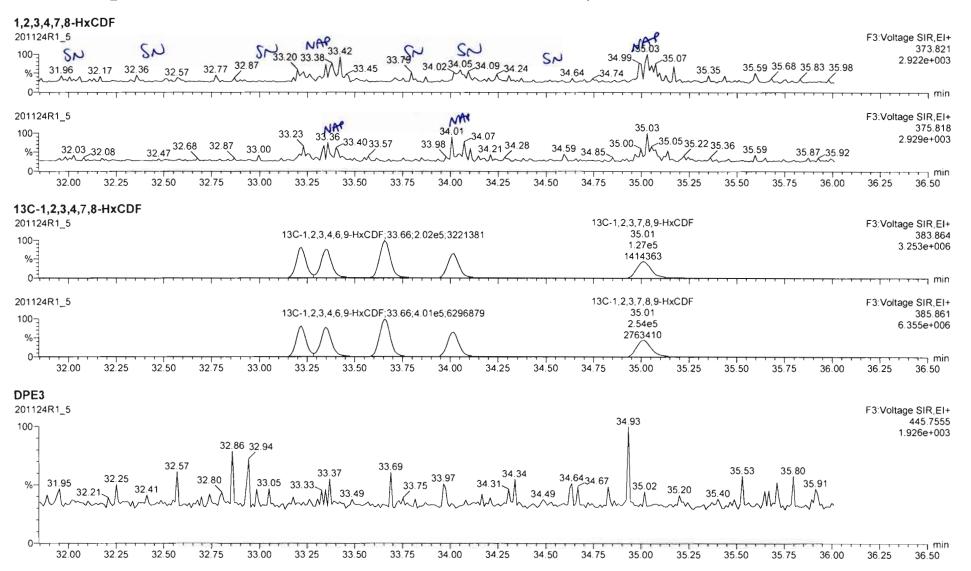


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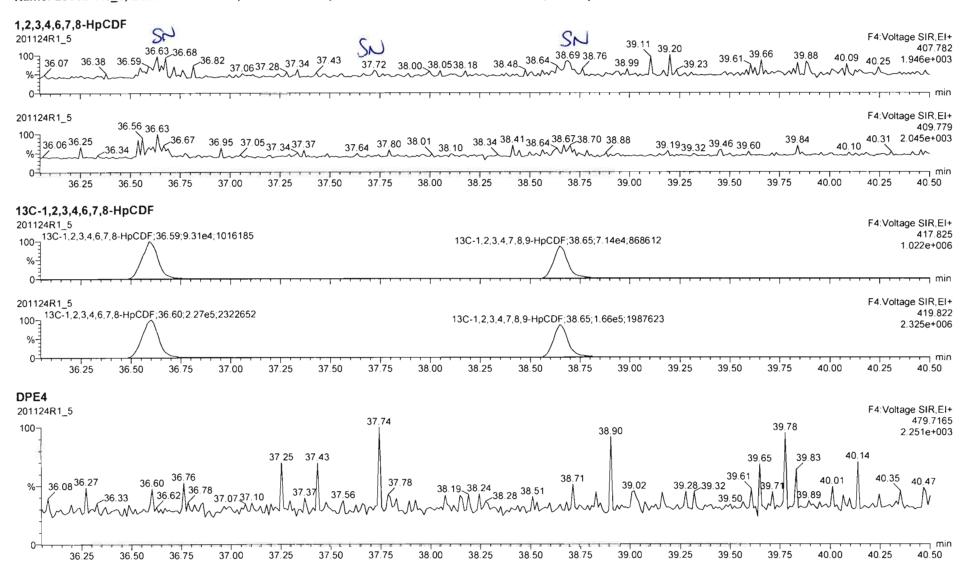


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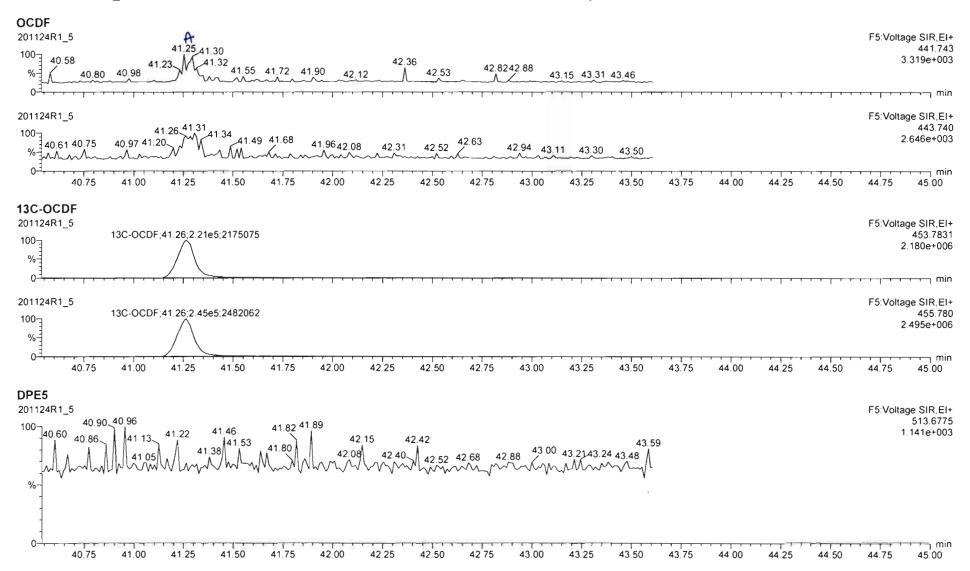
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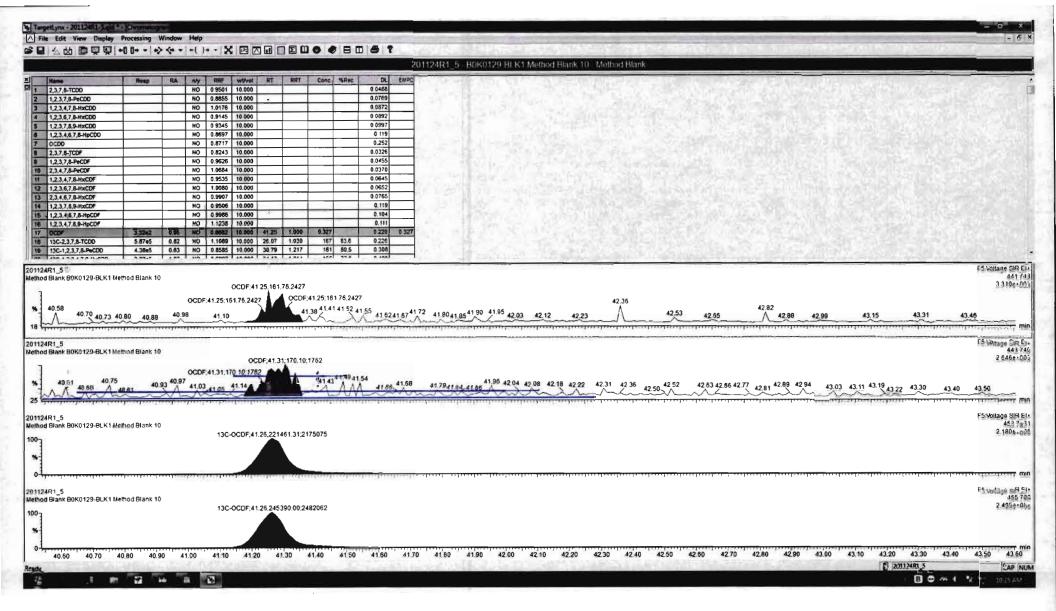
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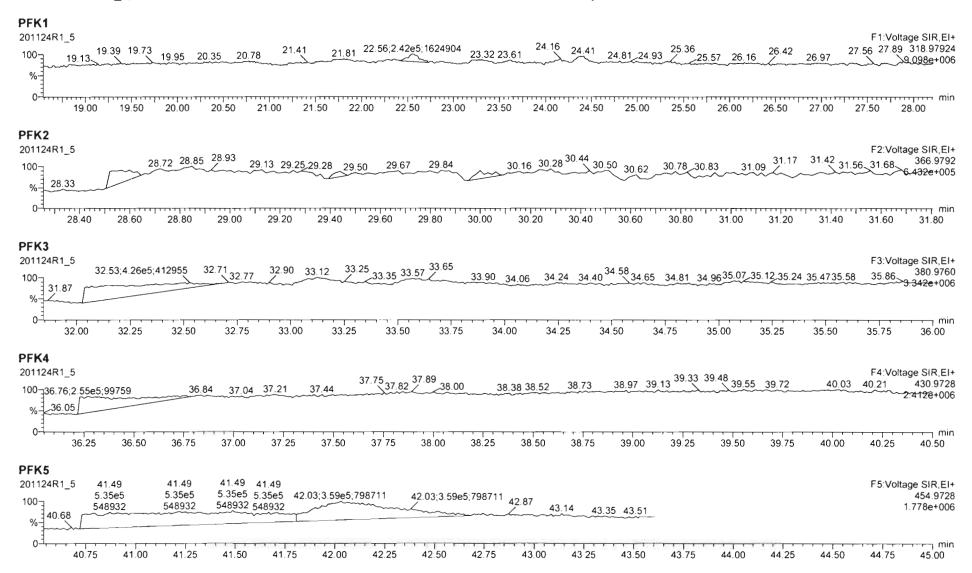


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Last Altered: Printed: Wednesday, November 25, 2020 07:04:08 Pacific Standard Time

Wednesday, November 25, 2020 07:52:33 Pacific Standard Time



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Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-3.qld

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Printed:

Wednesday, November 25, 2020 09:56:54 Pacific Standard Time

GRB 11/25/2020

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Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_3, Date: 24-Nov-2020, Time: 12:43:35, ID: B0K0129-BS1 OPR 10, Description: OPR

To reduce	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	6.18e4	0.79	NO	0.950	10.000	26.097	26.08	1.001	1.001	21.650		0.0737	21.7
2	2 1,2,3,7,8-PeCDD	2.25e5	0.61	NO	0.885	10.000	30.804	30.81	1.000	1.000	114.84		0.237	115
3	3 1,2,3,4,7,8-HxCDD	1.91e5	1.26	NO	1.02	10.000	34.124	34.14	1.000	1.001	112.58		0.242	113
4	4 1,2,3,6,7,8-HxCDD	1.95e5	1.25	NO	0.915	10.000	34.252	34.25	1.000	1.000	107.09		0.247	107
5	5 1,2,3,7,8,9-HxCDD	1.89e5	1.25	NO	0.934	10.000	34.518	34.52	1.000	1.000	108.90		0.267	109
6	6 1,2,3,4,6,7,8-HpCDD	1.39e5	1.03	NO	0.870	10.000	37.998	38.01	1.000	1.000	106.65		0.520	107
7	7 OCDD	1.99e5	0.87	NO	0.872	10.000	40.955	40.98	1.000	1.001	209.20		0.632	209
8	8 2,3,7,8-TCDF	7.06e4	0.75	NO	0.824	10.000	25.381	25.40	1.000	1.001	19.756		0.0604	19.8
9	9 1,2,3,7,8-PeCDF	3.53e5	1.60	NO	0.963	10.000	29.542	29.55	1.000	1.001	106.07		0.257	106
10	10 2,3,4,7,8-PeCDF	3.92e5	1.55	NO	1.07	10.000	30.608	30.62	1.000	1.000	106.87		0.224	107
11	11 1,2,3,4,7,8-HxCDF	2.33e5	1.25	NO	0.953	10.000	33.209	33.23	1.000	1.001	104.54		0.285	105
12	12 1,2,3,6,7,8-HxCDF	2.52e5	1.19	NO	1.01	10.000	33.348	33.36	1.000	1.000	103.77		0.279	104
13	13 2,3,4,6,7,8-HxCDF	2.24e5	1.21	NO	0.991	10.000	34.011	34.03	1.000	1.001	103.51		0.334	104
14	14 1,2,3,7,8,9-HxCDF	1.94e5	1.26	NO	0.951	10.000	35.009	35.03	1.000	1.001	104.23		0.497	104
15	15 1,2,3,4,6,7,8-HpCDF	1.68e5	1.00	NO	0.999	10.000	36.586	36.59	1.000	1.000	105.08		0.548	105
16	16 1,2,3,4,7,8,9-HpCDF	1.39e5	1.00	NO	1.12	10.000	38.627	38.65	1.000	1.001	102.20		0.584	102
17	17 OCDF	2.26e5	0.89	NO	0.868	10.000	41.251	41.26	1.000	1.001	209.24		0.718	209
18	18 13C-2,3,7,8-TCDD	6.01e5	0.80	NO	1.11	10.000	26.058	26.07	1.030	1.030	175.91	88.0	0.264	
19	19 13C-1,2,3,7,8-PeCDD	4.43e5	0.64	NO	0.859	10.000	30.774	30.80	1.216	1.217	167.72	83.9	0.178	
20	20 13C-1,2,3,4,7,8-HxCDD	3.34e5	1.30	NO	0.700	10.000	34.125	34.11	1.014	1.014	164.58	82.3	0.520	
21	21 13C-1,2,3,6,7,8-HxCDD	3.99e5	1.28	NO	0.833	10.000	34.263	34.24	1.018	1.017	165.27	82.6	0.437	1
22	22 13C-1,2,3,7,8.9-HxCDD	3.72e5	1.26	NO	0.762	10.000	34.505	34.51	1.025	1.025	168.57	84.3	0.478	
23	23 13C-1,2,3,4,6,7,8-HpCDD	2.99e5	1.06	NO	0.650	10.000	37.989	38.00	1.129	1.129	158.66	79.3	0.743	
24	24 13C-OCDD	4.36e5	0.90	NO	0.539	10.000	40.954	40.96	1.217	1.217	279.16	69.8	0.625	
25	25 13C-2,3,7,8-TCDF	8.67e5	0.77	NO	0.981	10.000	25.380	25.37	1.003	1.003	174.43	87.2	0.300	
26	26 13C-1,2,3,7,8-PeCDF	6.91e5	1.60	NO	0.792	10.000	29.506	29.53	1.166	1.167	172.28	86.1	0.640	
27	27 13C-2,3,4,7,8-PeCDF	6.86e5	1.60	NO	0.778	10.000	30.564	30.61	1.208	1.210	174.21	87.1	0.651	
28	28 13C-1,2,3,4,7,8-HxCDF	4.68e5	0.50	NO	0.954	10.000	33.216	33.21	0.987	0.987	169.15	84.6	0.694	
29	29 13C-1,2,3,6,7,8-HxCDF	4.82e5	0.50	NO	1.01	10.000	33.347	33.35	0.991	0.991	165.45	82.7	0.658	
30	30 13C-2,3,4,6,7,8-HxCDF	4.36e5	0.50	NO	0.921	10.000	34.017	34.01	1.011	1.010	163.39	81.7	0.719	

Work Order 2002436

Page 2 of 2

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-3.qld

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Wednesday, November 25, 2020 09:56:54 Pacific Standard Time

Name: 201124R1_3, Date: 24-Nov-2020, Time: 12:43:35, ID: B0K0129-BS1 OPR 10, Description: OPR

13 173	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	3.91e5	0.49	NO	0.803	10.000	35.013	35.01	1.040	1.040	168.06	84.0	0.824	
32	32 13C-1,2,3,4,6,7,8-HpCDF	3.20e5	0.42	NO	0.735	10.000	36.582	36.58	1.087	1.087	149.95	75.0	0.590	
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.42e5	0.41	NO	0.568	10.000	38.618	38.63	1.147	1.148	146.82	73.4	0.764	
34	34 13C-OCDF	4.98e5	0.87	NO	0.629	10.000	41.237	41.24	1.225	1.225	272.74	68.2	0.708	
35	35 37CI-2,3,7,8-TCDD	2.67e5			1.09	10.000	26.058	26.08	1.030	1.031	79.639	99.5	0.0838	
36	36 13C-1,2,3,4-TCDD	6.16e5	0.80	NO	1.00	10.000	25.370	25.30	1.000	1.000	200.00	100	0.293	
37	37 13C-1,2,3,4-TCDF	1.01e6	0.79	NO	1.00	10.000	23.870	23.79	1.000	1.000	200.00	100	0.294	
38	38 13C-1,2,3,4,6,9-HxCDF	5.80e5	0.50	NO	1.00	10.000	33.710	33.66	1.000	1.000	200.00	100	0.662	

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Vista Analytical Laboratory

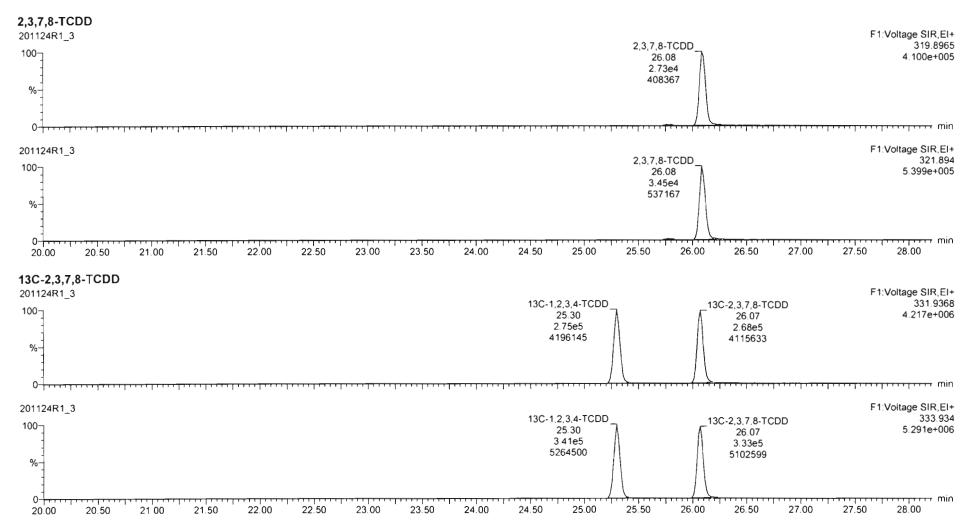
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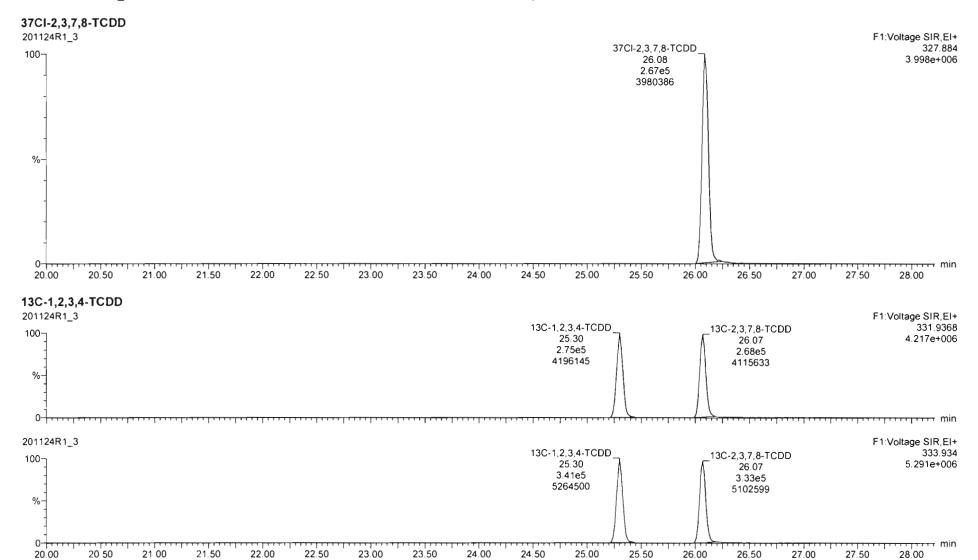


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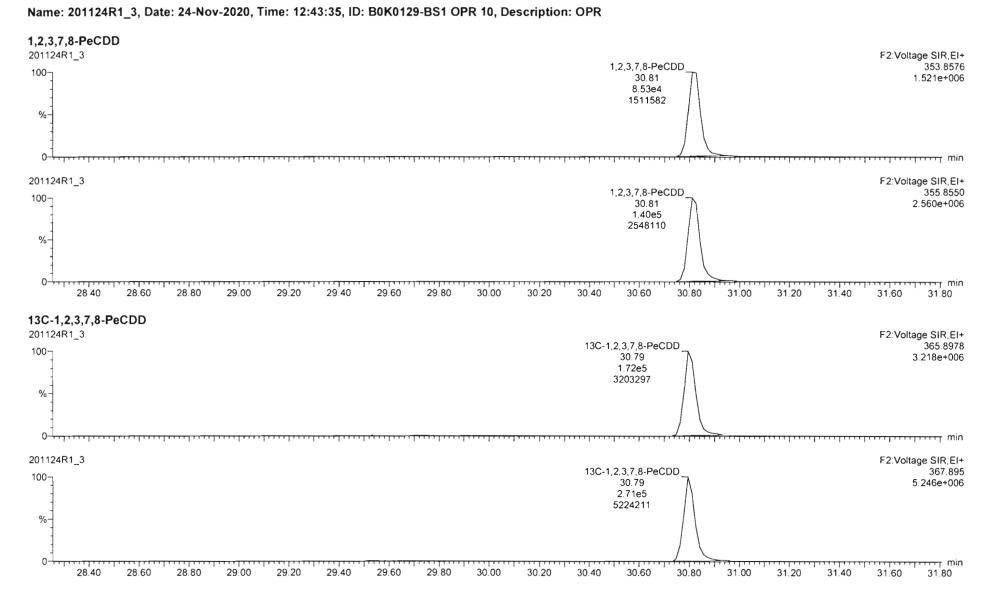
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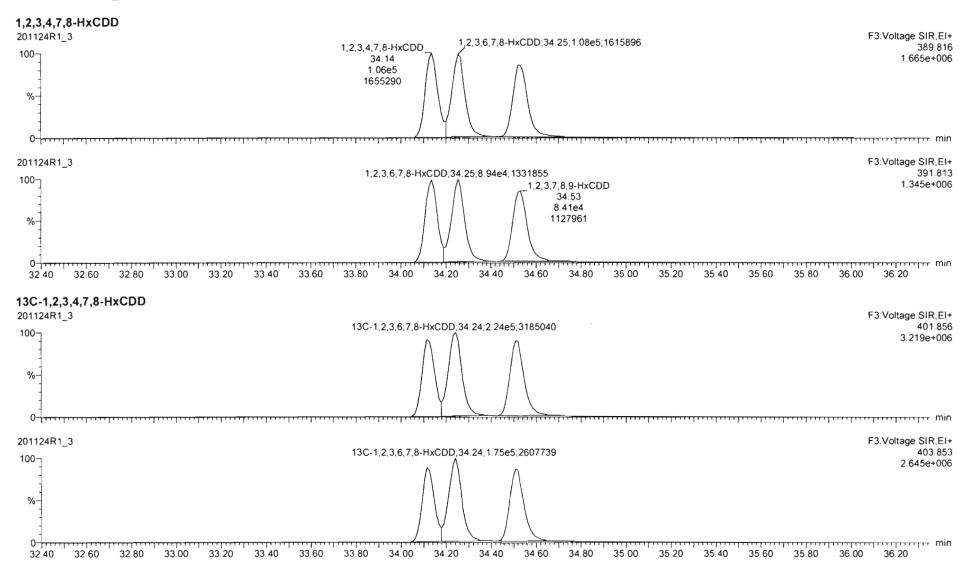
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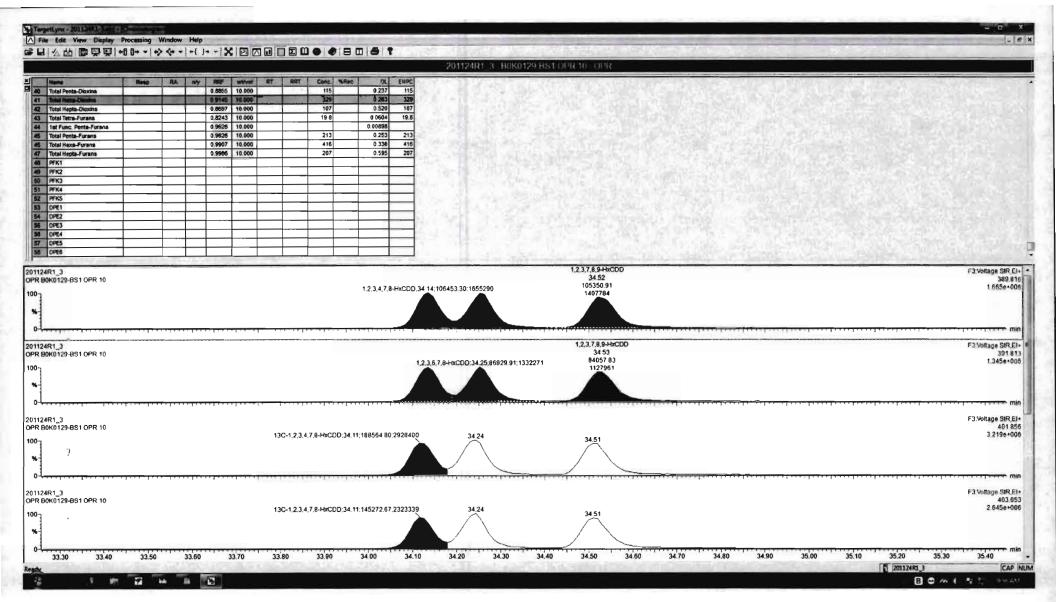
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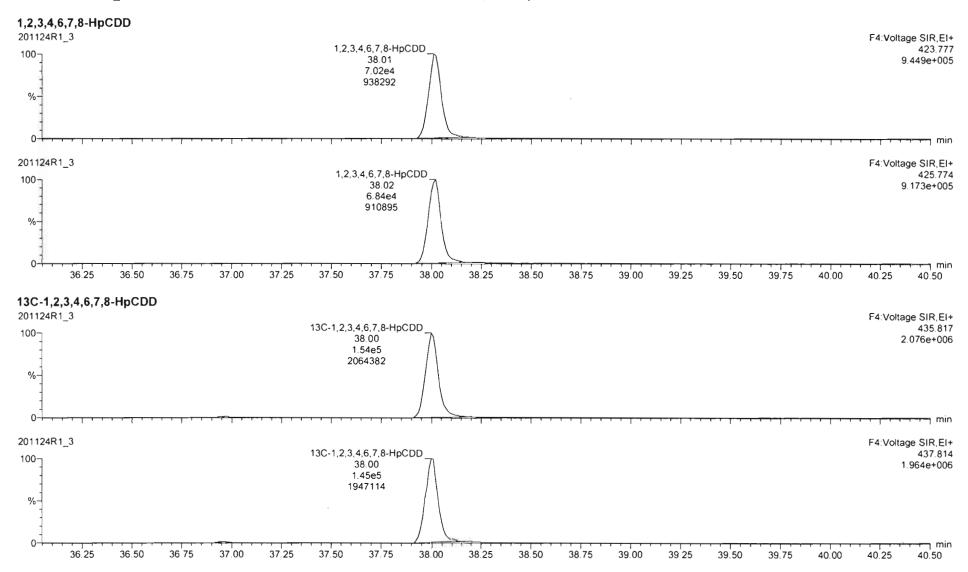
Work Order 2002436 Page 57 of 441

Page 5 of 156

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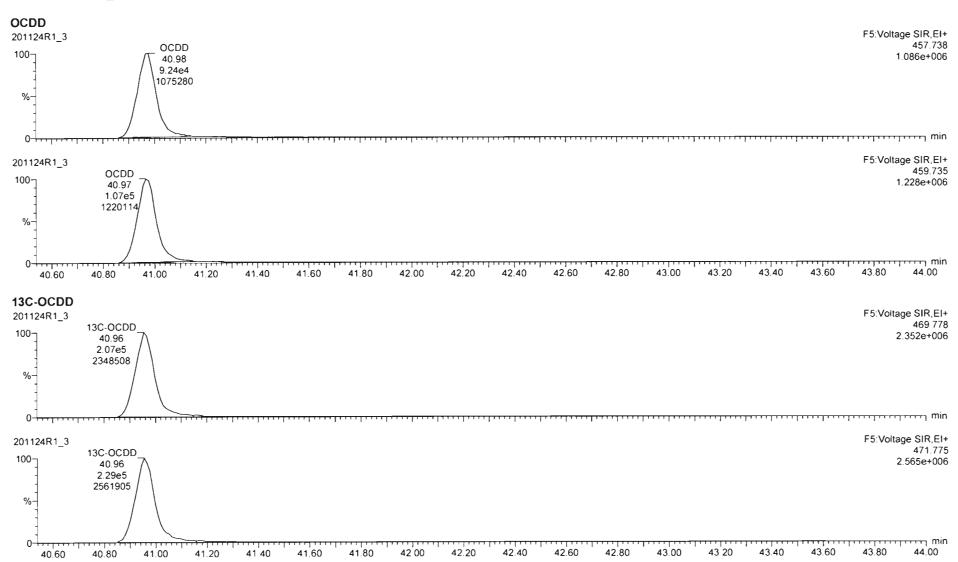
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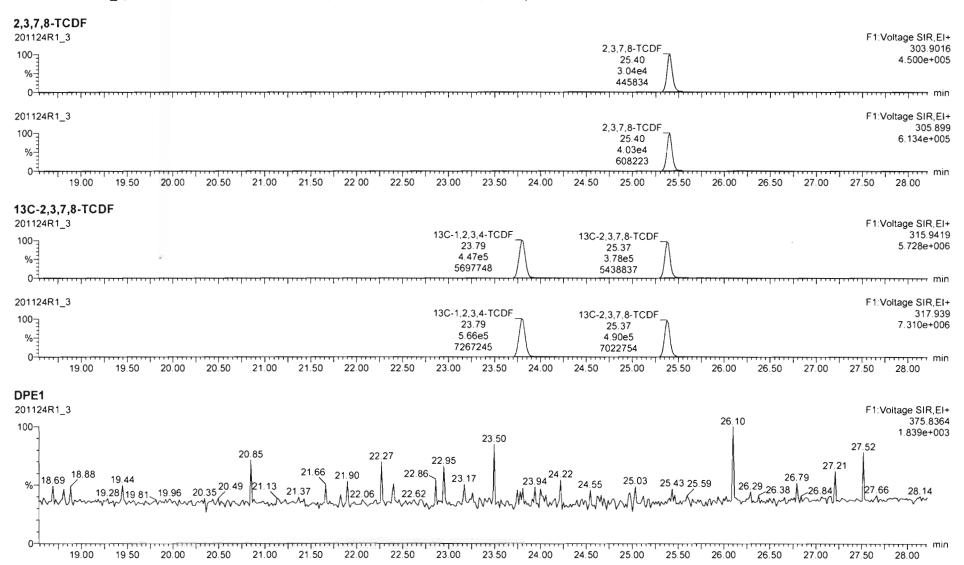
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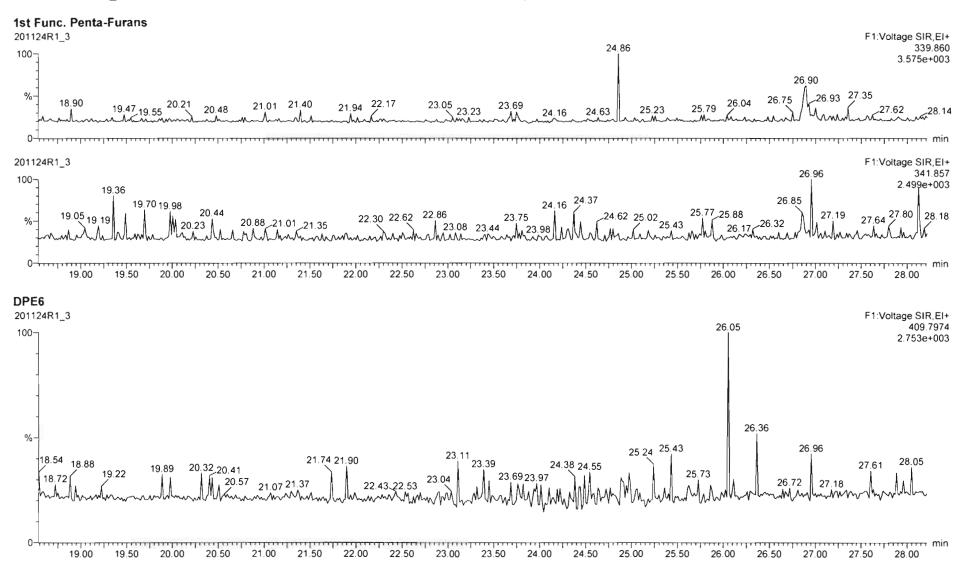


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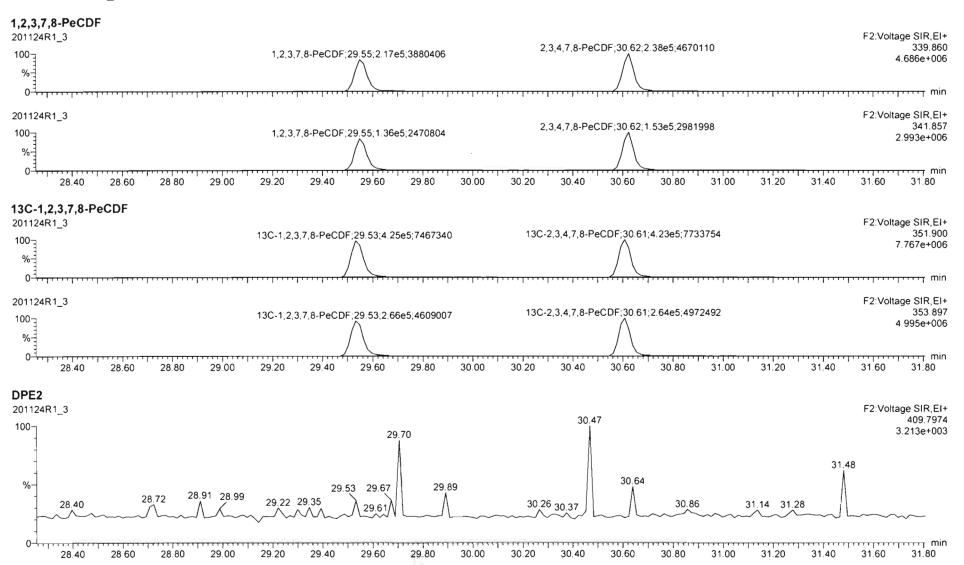
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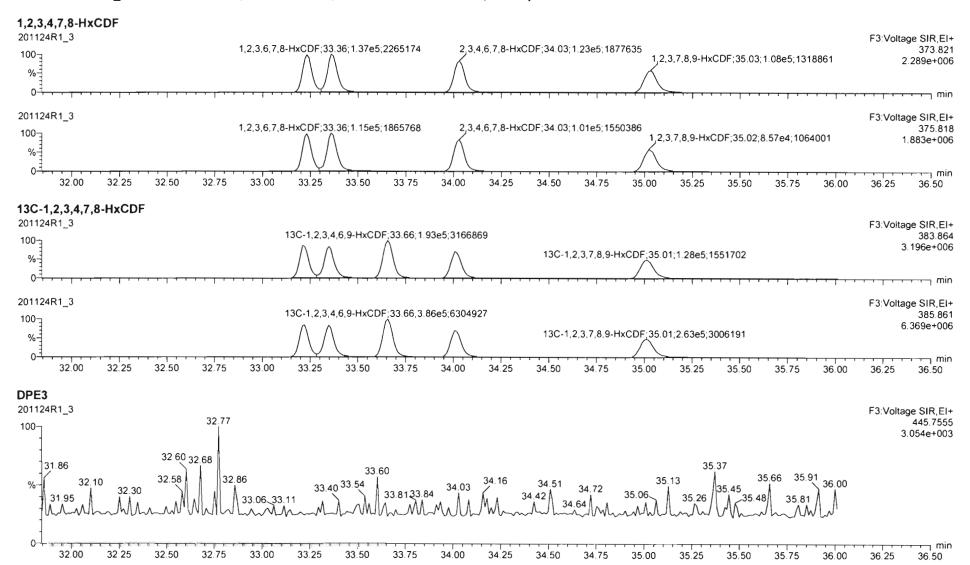


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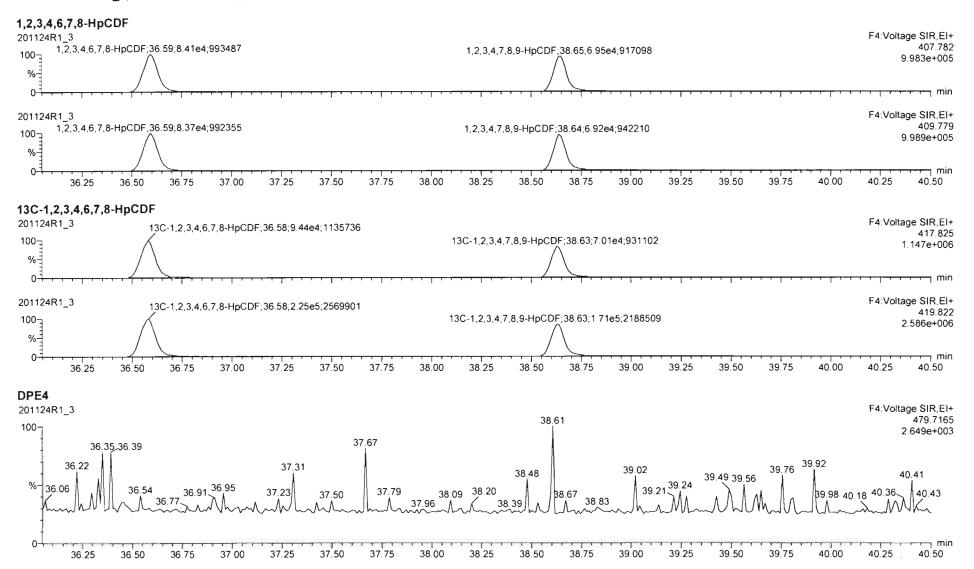


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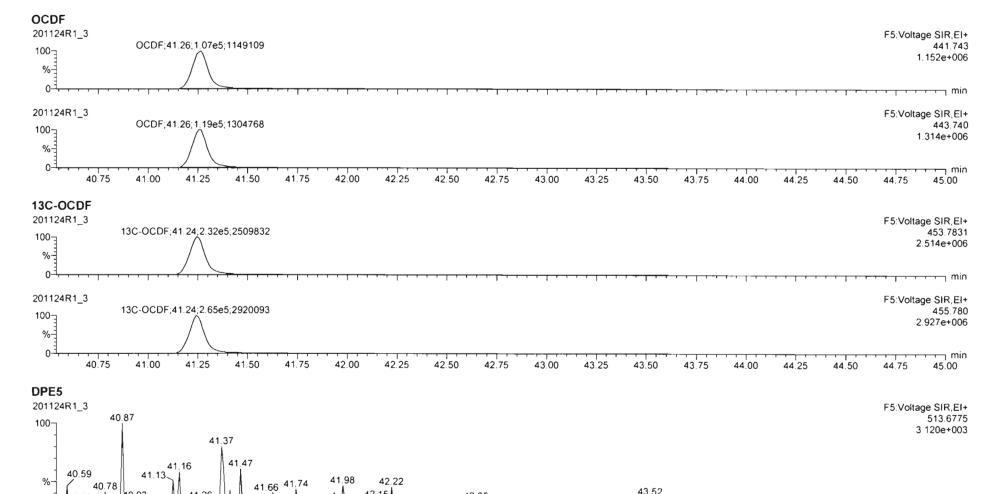


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Name: 201124R1_3, Date: 24-Nov-2020, Time: 12:43:35, ID: B0K0129-BS1 OPR 10, Description: OPR



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42.75

43.00

43.25

42.50

43.52

43.50

43.75

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44.25

44.50

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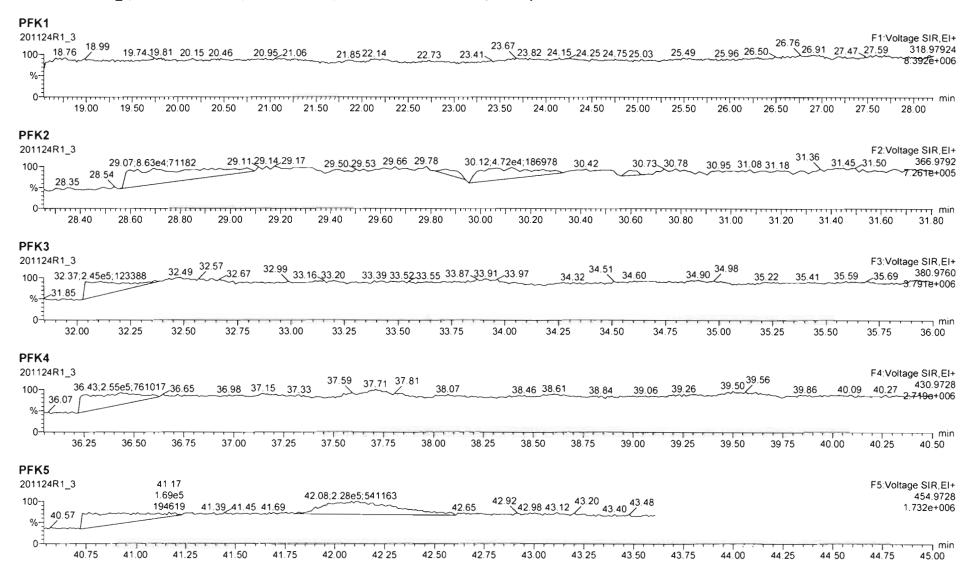
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MassLynx 4.1 SCN815

Page 1 of 2

Dataset:

U:\VG12.PRO\Results\201125R1\201125R1-6.qld

Last Altered:

Wednesday, November 25, 2020 13:55:02 Pacific Standard Time

Printed:

Thursday, November 26, 2020 09:35:28 Pacific Standard Time

GRB 11/26/2020

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201125R1_6, Date: 25-Nov-2020, Time: 13:08:34, ID: B0K0172-BLK1 Method Blank 10, Description: Method Blank

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD			NO	0.950	10.000	26.097		1.001				0.100	
2	2 1,2,3,7,8-PeCDD			NO	0.885	10.000	30.816		1.000				0.152	
3	3 1,2,3,4,7,8-HxCDD			NO	1.02	10.000	34.143		1.000				0.172	
4	4 1,2,3,6,7,8-HxCDD			NO	0.915	10.000	34.260		1.000				0.172	
5	5 1,2,3,7,8,9-HxCDD			NO	0.934	10.000	34.527		1.000				0.186	
6	6 1,2,3,4,6,7,8-HpCDD			NO	0.870	10.000	38.017		1.000				0.206	
7	7 OCDD	8.17e2	0.90	NO	0.872	10.000	40.963	40.99	1.000	1.001	1.2902		0.416	1.29
8	8 2,3,7,8-TCDF			NO	0.824	10.000	25.396		1.000				0.0511	
9	9 1,2,3,7,8-PeCDF			NO	0.963	10.000	29.540		1.000				0.0803	
10	10 2,3,4,7,8-PeCDF			NO	1.07	10.000	30.602		1.000				0.0684	
11	11 1,2,3,4,7,8-HxCDF			NO	0.953	10.000	33.217		1.000				0.0593	
12	12 1,2,3,6,7,8-HxCDF			NO	1.01	10.000	33.355		1.000				0.0575	
13	13 2,3,4,6,7,8-HxCDF			NO	0.991	10.000	34.030		1.000				0.0694	
14	14 1,2,3,7,8,9-HxCDF			NO	0.951	10.000	35.028		1.000				0.105	
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.999	10.000	36.604		1.000				0.119	
16	16 1,2,3,4,7,8,9-HpCDF			NO	1.12	10.000	38.645		1.000				0.142	
17	17 OCDF			NO	0.868	10.000	41.248		1.000				0.246	
18	18 13C-2,3,7,8-TCDD	3.75e5	0.82	NO	1.11	10.000	26.058	26.07	1.030	1.030	209.65	105	0.531	
19	19 13C-1,2,3,7,8-PeCDD	2.14e5	0.66	NO	0.859	10.000	30.774	30.81	1.216	1.218	154.39	77.2	0.502	
20	20 13C-1,2,3,4,7,8-HxCDD	2.08e5	1.30	NO	0.700	10.000	34.132	34.13	1.014	1.014	163.65	81.8	0.729	
21	21 13C-1,2,3,6,7,8-HxCDD	2.48e5	1.27	NO	0.833	10.000	34.270	34.25	1.018	1.017	163.67	81.8	0.612	
22	22 13C-1,2,3,7,8,9-HxCDD	2.32e5	1.26	NO	0.762	10.000	34.513	34.52	1.025	1.025	167.41	83.7	0.669	
23	23 13C-1,2,3,4,6,7,8-HpCDD	1.92e5	1.09	NO	0.650	10.000	37.997	38.02	1.129	1.129	162.39	81.2	1.12	
24	24 13C-OCDD	2.91e5	0.93	NO	0.539	10.000	40.963	40.96	1.217	1.217	296.77	74.2	1.12	
25	25 13C-2,3,7,8-TCDF	6.12e5	0.80	NO	0.981	10.000	25.380	25.39	1.003	1.003	184.02	92.0	0.522	
26	26 13C-1,2,3,7,8-PeCDF	4.35e5	1.67	NO	0.792	10.000	29.507	29.53	1.166	1.167	162.01	81.0	0.795	
27	27 13C-2,3,4,7,8-PeCDF	4.08e5	1.63	NO	0.778	10.000	30.564	30.60	1.208	1.210	155.03	77.5	0.810	
28	28 13C-1,2,3,4,7,8-HxCDF	3.22e5	0.49	NO	0.954	10.000	33.223	33.22	0.987	0.987	186.12	93.1	0.986	
29	29 13C-1,2,3,6,7,8-HxCDF	3.33e5	0.50	NO	1.01	10.000	33.355	33.35	0.991	0.991	182.10	91.0	0.934	
30	30 13C-2,3,4,6,7,8-HxCDF	3.02e5	0.50	NO	0.921	10.000	34.025	34.03	1.011	1.011	180.27	90.1	1.02	
31	31 13C-1,2,3,7,8,9-HxCDF	2.59e5	0.50	NO	0.803	10.000	35.021	35.03	1.040	1.041	177.52	88.8	1.17	

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Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\201125R1\201125R1-6.qld

Last Altered: Wednesday, November 25, 2020 13:55:02 Pacific Standard Time Thursday, November 26, 2020 09:35:28 Pacific Standard Time

Name: 201125R1_6, Date: 25-Nov-2020, Time: 13:08:34, ID: B0K0172-BLK1 Method Blank 10, Description: Method Blank

TOTAL	# 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	2.42e5	0.42	NO	0.735	10.000	36.590	36.60	1.087	1.087	181.34	90.7	0.910	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.68e5	0.43	NO	0.568	10.000	38.626	38.65	1.147	1.148	163.02	81.5	1.18	
34	34 13C-OCDF	3.77e5	0.88	NO	0.629	10.000	41.246	41.24	1.225	1.225	330.32	82.6	0.677	
35	35 37Cl-2,3,7,8-TCDD	1.72e5			1.09	10.000	26.058	26.10	1.030	1.032	98.229	123	0.233	
36	36 13C-1,2,3,4-TCDD	3.23e5	0.85	NO	1.00	10.000	25.370	25.30	1.000	1.000	200.00	100	0.589	
37	37 13C-1,2,3,4-TCDF	6.78e5	0.80	NO	1.00	10.000	23.870	23.81	1.000	1.000	200.00	100	0.513	
38	38 13C-1,2,3,4,6,9-HxCDF	3.63e5	0.51	NO	1.00	10.000	33.710	33.66	1.000	1.000	200.00	100	0.940	
39	39 Total Tetra-Dioxins				0.950	10.000	24.620		0.000				0.0627	
40	40 Total Penta-Dioxins				0.885	10.000	29.960		0.000				0.0658	
41	41 Total Hexa-Dioxins				0.915	10.000	33.635		0.000				0.0985	
42	42 Total Hepta-Dioxins				0.870	10.000	37.640		0.000				0.123	
43	43 Total Tetra-Furans				0.824	10.000	23.610		0.000				0.0201	
44	44 1st Func. Penta-Furans				0.963	10.000	26.930		0.000				0.0122	
45	45 Total Penta-Furans				0.963	10.000	29.275		0.000				0.0412	
46	46 Total Hexa-Furans				0.991	10.000	33.555		0.000				0.0354	
47	47 Total Hepta-Furans				0.999	10.000	37.835		0.000				0.0667	

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201125R1\201125R1-6.qld

Last Altered: Printed:

Wednesday, November 25, 2020 13:55:02 Pacific Standard Time Thursday, November 26, 2020 09:35:28 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

Calibration: U:\VG12.PR0\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201125R1_6, Date: 25-Nov-2020, Time: 13:08:34, ID: B0K0172-BLK1 Method Blank 10, Description: Method Blank

Tetra-Dioxins

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

Penta-Dioxins

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

Hexa-Dioxins

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

Hepta-Dioxins

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

Tetra-Furans

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

Penta-Furans function 1

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

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Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\201125R1\201125R1-6.qld

Last Altered: Wednesday, November 25, 2020 13:55:02 Pacific Standard Time Printed: Thursday, November 26, 2020 09:35:28 Pacific Standard Time

Name: 201125R1_6, Date: 25-Nov-2020, Time: 13:08:34, ID: B0K0172-BLK1 Method Blank 10, Description: Method Blank

Penta-Furans

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

Hexa-Furans

Name	RT	m1 Height m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
10										

Hepta-Furans

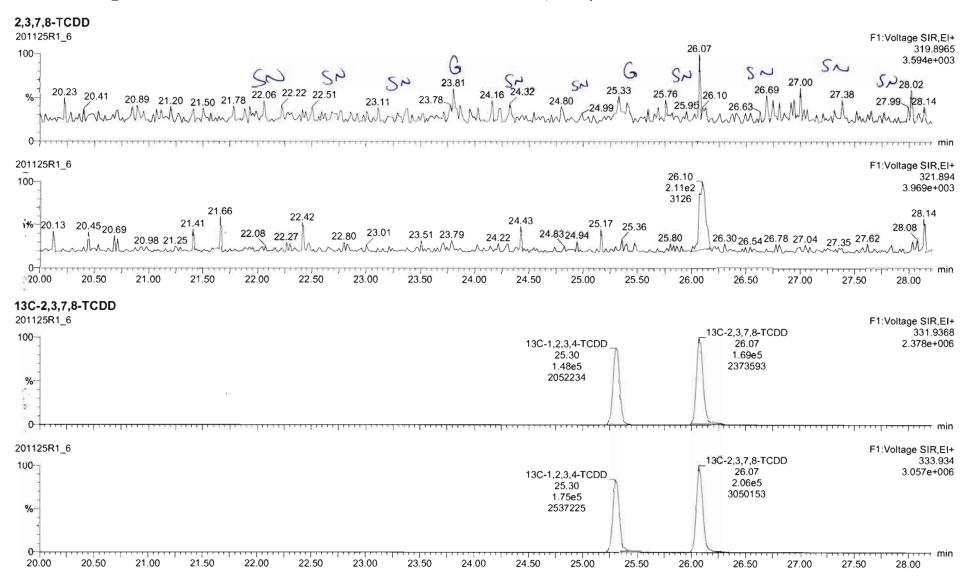
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1										

Work Order 2002436 Page 70 of 441

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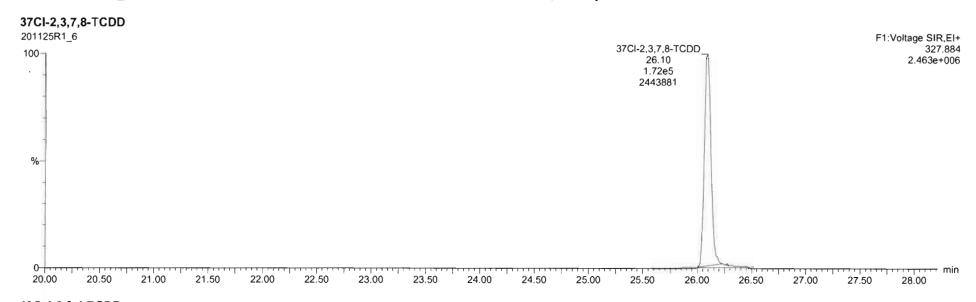
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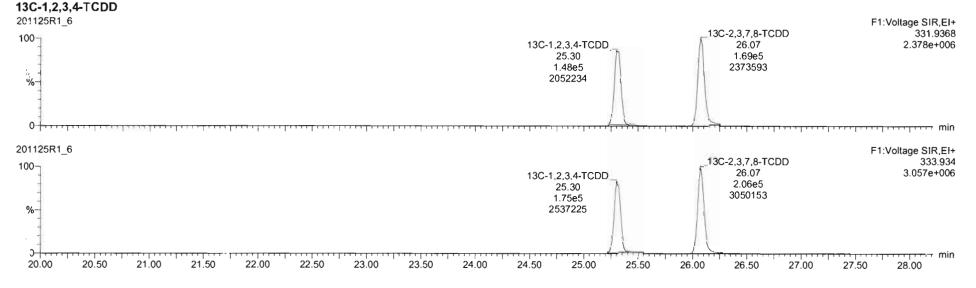


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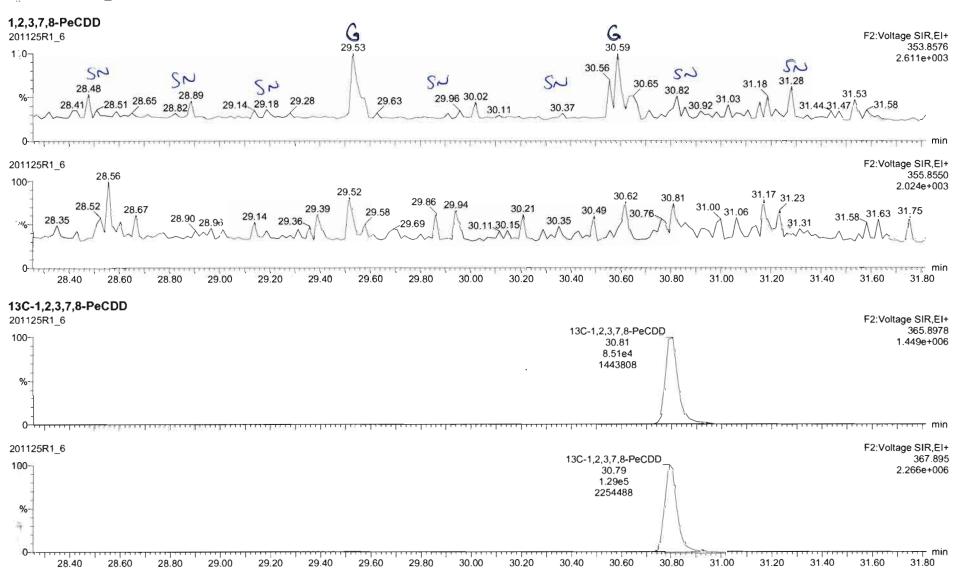




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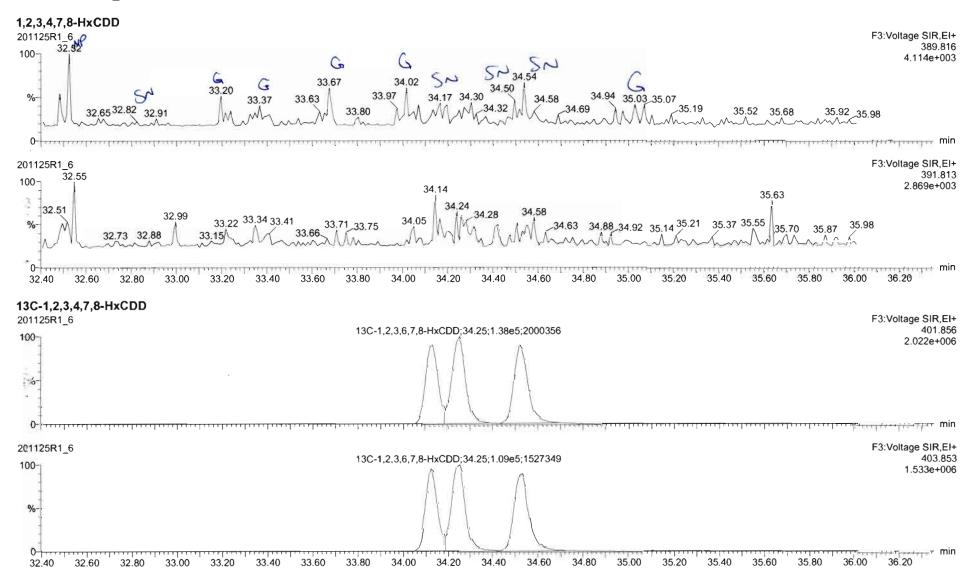


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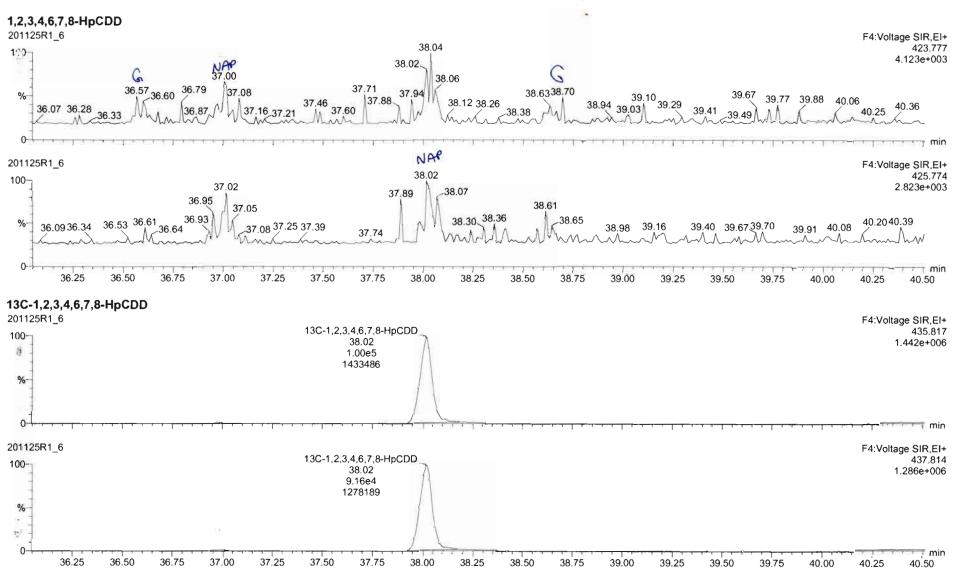
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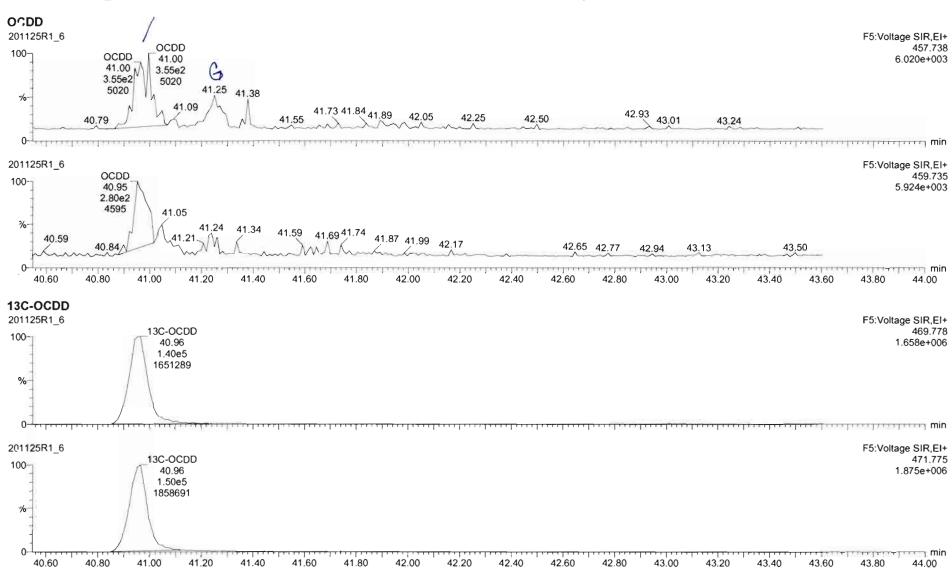
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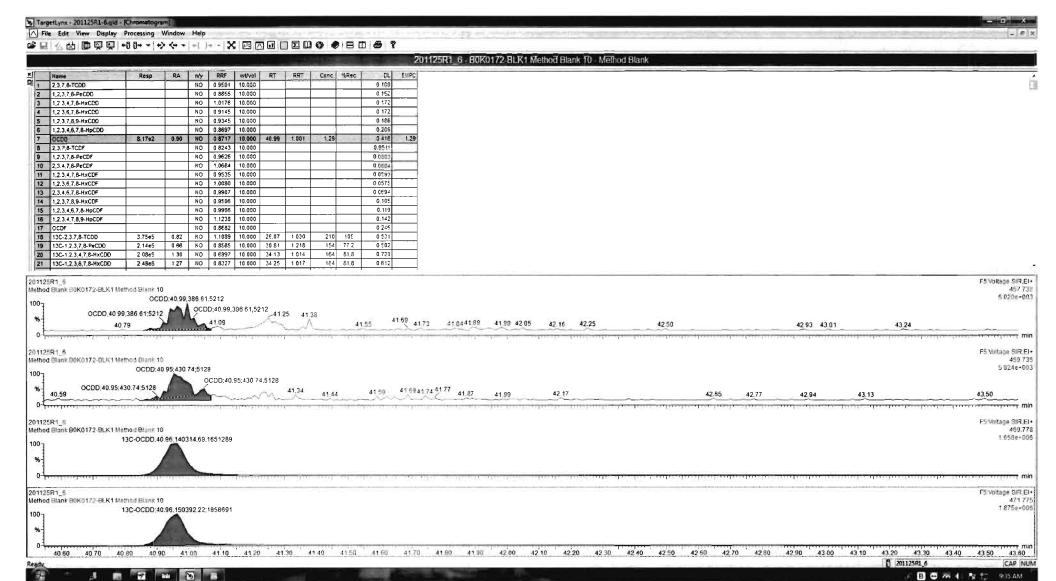
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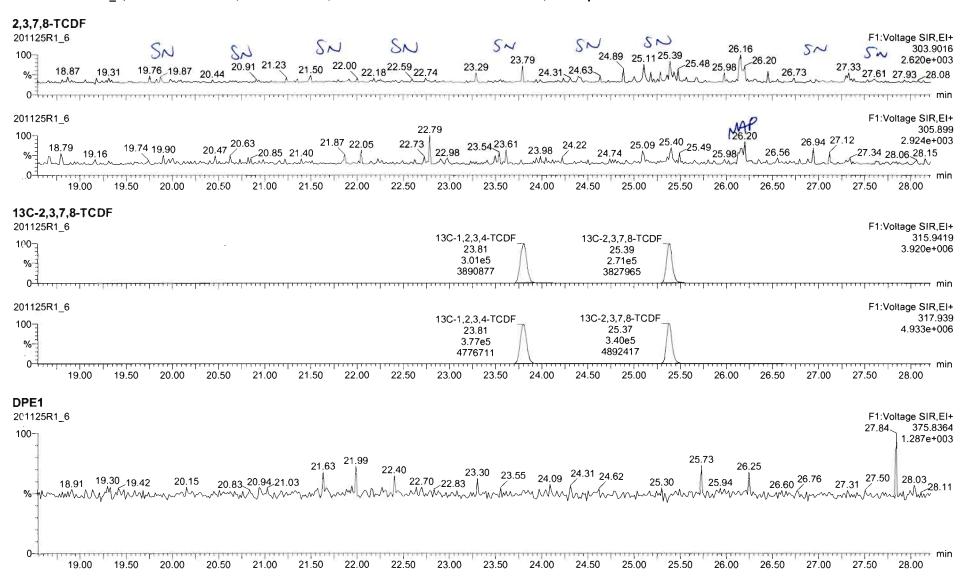


Work Order 2002436 Page 77 of 441

Untitled

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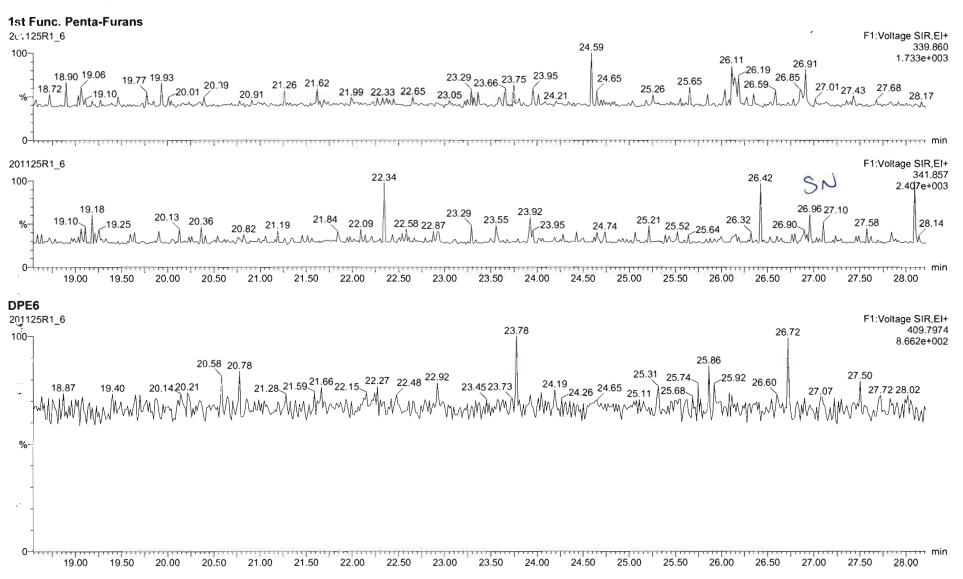
Thursday, November 26, 2020 07:36:03 Pacific Standard Time Thursday, November 26, 2020 07:36:22 Pacific Standard Time



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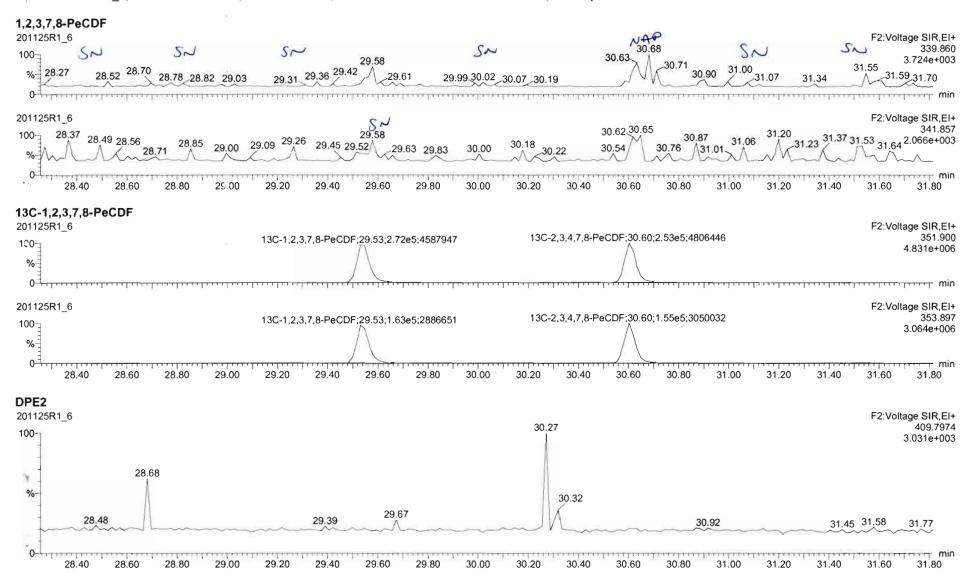
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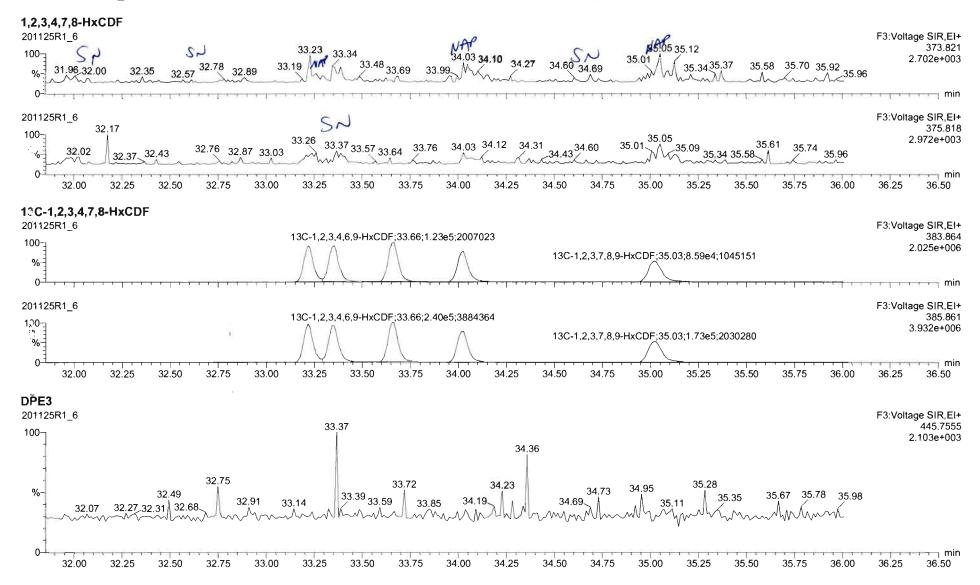
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Thursday, November 26, 2020 07:36:03 Pacific Standard Time Thursday, November 26, 2020 07:36:22 Pacific Standard Time



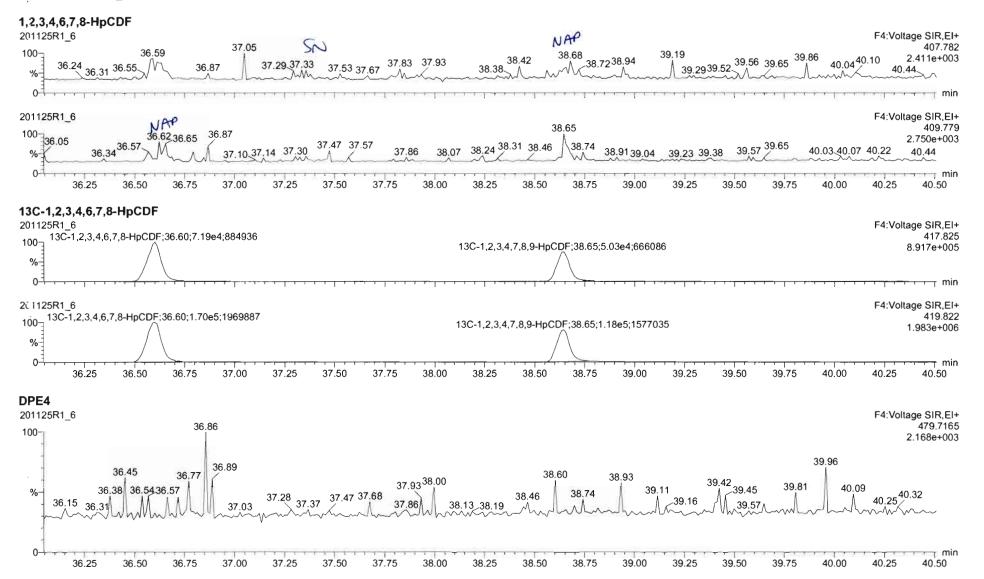
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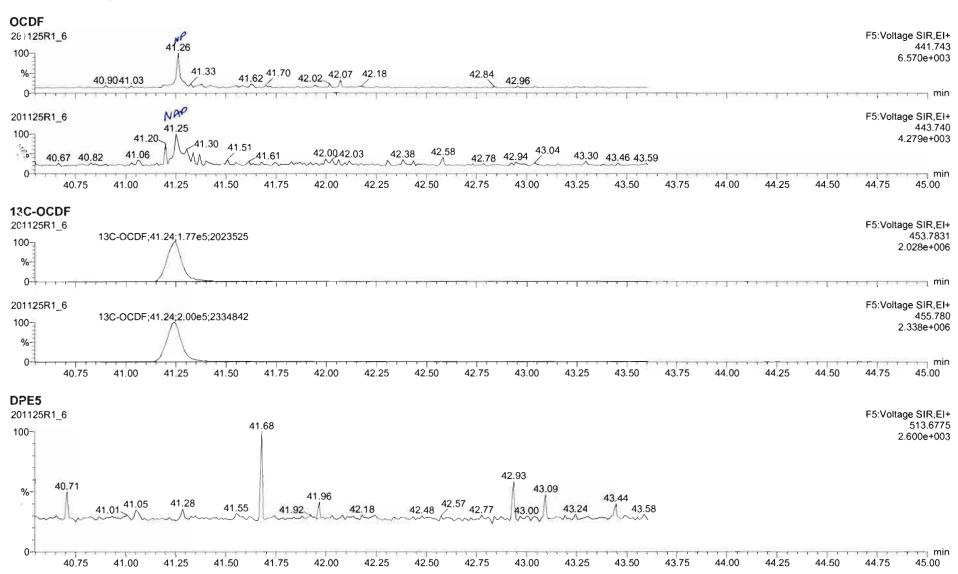


Vista Analytical Laboratory

Dataset:

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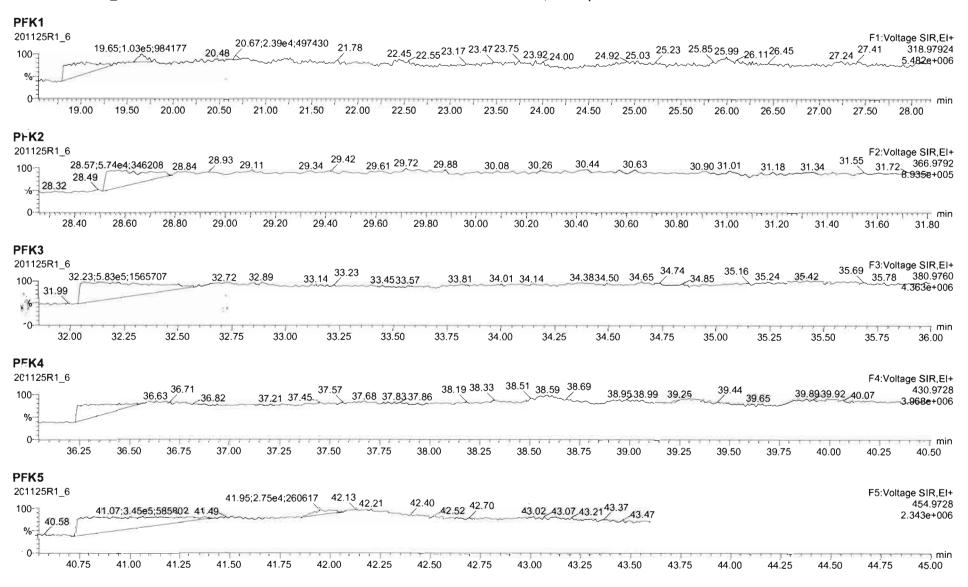
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Printed: Thurs

Thursday, November 26, 2020 07:36:03 Pacific Standard Time Thursday, November 26, 2020 07:36:22 Pacific Standard Time



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U:\VG12.PRO\Results\201125R1\201125R1-4.qld Dataset:

Thursday, November 26, 2020 09:30:35 Pacific Standard Time Last Altered:

Thursday, November 26, 2020 09:31:14 Pacific Standard Time Printed:

CT 12/04/2020

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39 Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201125R1_4, Date: 25-Nov-2020, Time: 11:38:02, ID: B0K0172-BS1 OPR 10, Description: OPR

Lante	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
1	1 2,3,7,8-TCDD	4.59e4	0.78	NO	0.950	10.000	26.097	26.08	1.001	1.001	26.152		0.141	26.2
2	2 1,2,3,7,8-PeCDD	1.39e5	0.64	NO	0.885	10.000	30.800	30.81	1.000	1.001	135.79		0.511	136
3	3 1,2,3,4,7,8-HxCDD	1.32e5	1.28	NO	1.02	10.000	34.121	34.13	1.000	1.001	115.56		0.546	116
4	4 1,2,3,6,7,8-HxCDD	1.39e5	1.28	NO	0.915	10.000	34.239	34.25	1.000	1.001	114.08		0.552	114
5	5 1,2,3,7,8,9-HxCDD	1.34e5	1.23	NO	0.934	10.000	34.515	34.52	1.000	1.000	116.85		0.599	117
6	6 1,2,3,4,6,7,8-HpCDD	1.00e5	1.02	NO	0.870	10.000	38.006	38.02	1.000	1.000	109.22		0.721	109
7	7 OCDD	1.55e5	0.88	NO	0.872	10.000	40.963	40.99	1.000	1.001	226.21		0.764	226
8	8 2,3,7,8-TCDF	5.39e4	0.73	NO	0.824	10.000	25.381	25.39	1.000	1.001	20.667		0.0860	20.7
9	9 1,2,3,7,8-PeCDF	2.62e5	1.64	NO	0.963	10.000	29.540	29.55	1.000	1.001	119.16		0.463	119
10	10 2,3,4,7,8-PeCDF	2.72e5	1.64	NO	1.07	10.000	30.602	30.62	1.000	1.001	115.92		0.422	116
11	11 1,2,3,4,7,8-HxCDF	1.63e5	1.21	NO	0.953	10.000	33.206	33.23	1.000	1.001	97.855		0.366	97.9
12	12 1,2,3,6,7,8-HxCDF	1.79e5	1.20	NO	1.01	10.000	33.334	33.35	1.000	1.001	97.150		0.356	97.1
13	13 2,3,4,6,7,8-HxCDF	1.58e5	1.21	NO	0.991	10.000	34.008	34.03	1.000	1.001	99.575		0.422	99.6
14	14 1,2,3,7,8,9-HxCDF	1.27e5	1.20	NO	0.951	10.000	34.995	35.02	1.000	1.001	96.819		0.638	96.8
15	15 1,2,3,4,6,7,8-HpCDF	1.27e5	0.99	NO	0.999	10.000	36.583	36.59	1.000	1.000	99.163		0.521	99.2
16	16 1,2,3,4,7,8,9-HpCDF	9.83e4	0.95	NO	1.12	10.000	38.634	38.65	1.000	1.000	96.186		0.562	96.2
17	17 OCDF	1.75e5	0.86	NO	0.868	10.000	41.259	41.27	1.000	1.001	199.56		0.640	200
18	18 13C-2,3,7,8-TCDD	3.69e5	0.80	NO	1.11	10.000	26.058	26.07	1.030	1.030	186.93	93.5	0.467	
19	19 13C-1,2,3,7,8-PeCDD	2.31e5	0.65	NO	0.859	10.000	30.774	30.79	1.216	1.217	150.86	75.4	0.484	
20	20 13C-1,2,3,4,7,8-HxCDD	2.25e5	1.30	NO	0.700	10.000	34.111	34.11	1.014	1.014	156.83	78.4	0.807	
21	21 13C-1,2,3,6,7,8-HxCDD	2.67e5	1.30	NO	0.833	10.000	34.249	34.23	1.018	1.017	156.33	78.2	0.678	
22	22 13C-1,2,3,7,8,9-HxCDD	2.46e5	1.29	NO	0.762	10.000	34.491	34.51	1.025	1.026	157.81	78.9	0.741	
23	23 13C-1,2,3,4,6,7,8-HpCDD	2.10e5	1.09	NO	0.650	10.000	37.973	38.01	1.129	1.130	158.23	79.1	0.907	
24	24 13C-OCDD	3.15e5	0.91	NO	0.539	10.000	40.937	40.96	1.217	1.218	285.21	71.3	1.15	
25	25 13C-2,3,7,8-TCDF	6.33e5	0.80	NO	0.981	10.000	25.380	25.37	1.003	1.003	173.88	86.9	0.532	
26	26 13C-1,2,3,7,8-PeCDF	4.56e5	1.69	NO	0.792	10.000	29.506	29.53	1.166	1.167	155.28	77.6	0.736	
27	27 13C-2,3,4,7,8-PeCDF	4.40e5	1.64	NO	0.778	10.000	30.564	30.60	1.208	1.210	152.43	76.2	0.750	
28	28 13C-1,2,3,4,7,8-HxCDF	3.50e5	0.50	NO	0.954	10.000	33.202	33.21	0.987	0.987	179.25	89.6	0.928	
29	29 13C-1,2,3,6,7,8-HxCDF	3.65e5	0.50	NO	1.01	10.000	33.333	33.33	0.991	0.991	177.05	88.5	0.880	
30	30 13C-2,3,4,6,7,8-HxCDF	3.20e5	0.51	NO	0.921	10.000	34.003	34.01	1.011	1.011	169.51	84.8	0.961	
31	31 13C-1,2,3,7,8,9-HxCDF	2.75e5	0.50	NO	0.803	10.000	34.999	34.99	1.040	1.040	167.33	83.7	1.10	

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Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\201125R1\201125R1-4.qld

Last Altered: Thursday, November 26, 2020 09:30:35 Pacific Standard Time

Thursday, November 26, 2020 09:31:14 Pacific Standard Time Printed:

Name: 201125R1_4, Date: 25-Nov-2020, Time: 11:38:02, ID: B0K0172-BS1 OPR 10, Description: OPR

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
32	32 13C-1,2,3,4,6,7,8-HpCDF	2.57e5	0.41	NO	0.735	10.000	36.567	36.58	1.087	1.087	170.55	85.3	0.765	
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.82e5	0.41	NO	0.568	10.000	38.602	38.63	1.147	1.148	156.53	78.3	0.991	
34	34 13C-OCDF	4.03e5	0.89	NO	0.629	10.000	41.219	41.25	1.225	1.226	313.03	78.3	0.612	
35	35 37CI-2,3,7,8-TCDD	1.79e5			1.09	10.000	26.058	26.08	1.030	1.031	92.290	115	0.155	
36	36 13C-1,2,3,4-TCDD	3.56e5	0.83	NO	1.00	10.000	25.370	25.30	1.000	1.000	200.00	100	0.518	
37	37 13C-1,2,3,4-TCDF	7.42e5	0.80	NO	1.00	10.000	23.870	23.79	1.000	1.000	200.00	100	0.522	
38	38 13C-1,2,3,4,6,9-HxCDF	4.10e5	0.49	NO	1.00	10.000	33.710	33.64	1.000	1.000	200.00	100	0.885	

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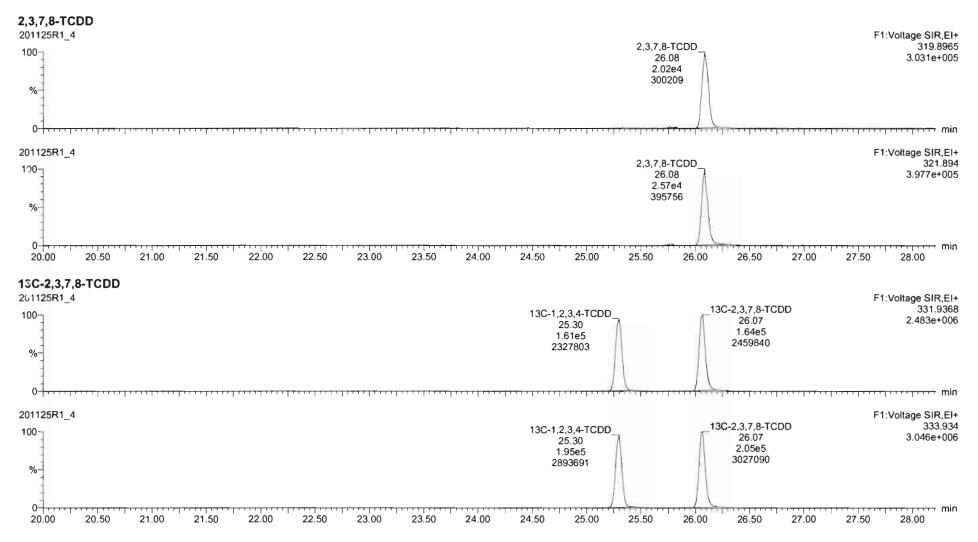
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Quantify Sample Report

Vista Analytical Laboratory

MassLynx 4.1 SCN815

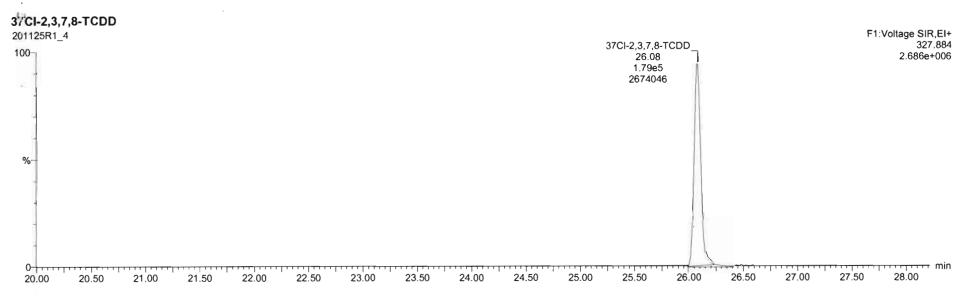
Page 2 of 156

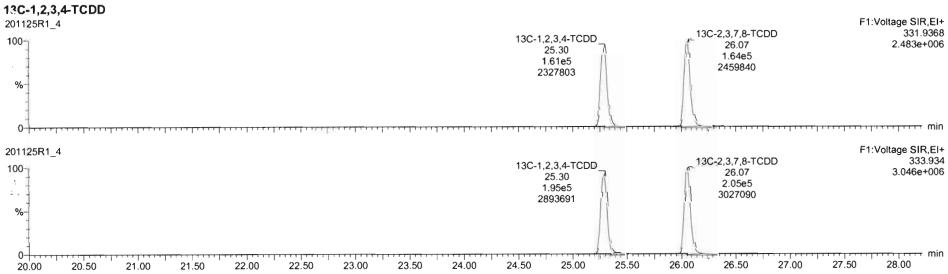
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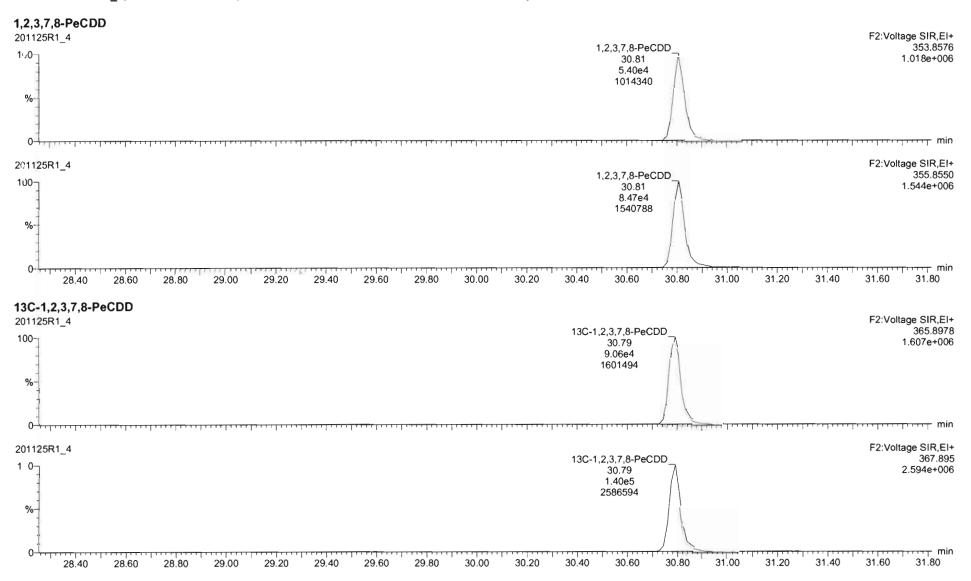
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Quantify Sample Report Vista Analytical Laboratory MassLynx 4.1 SCN815

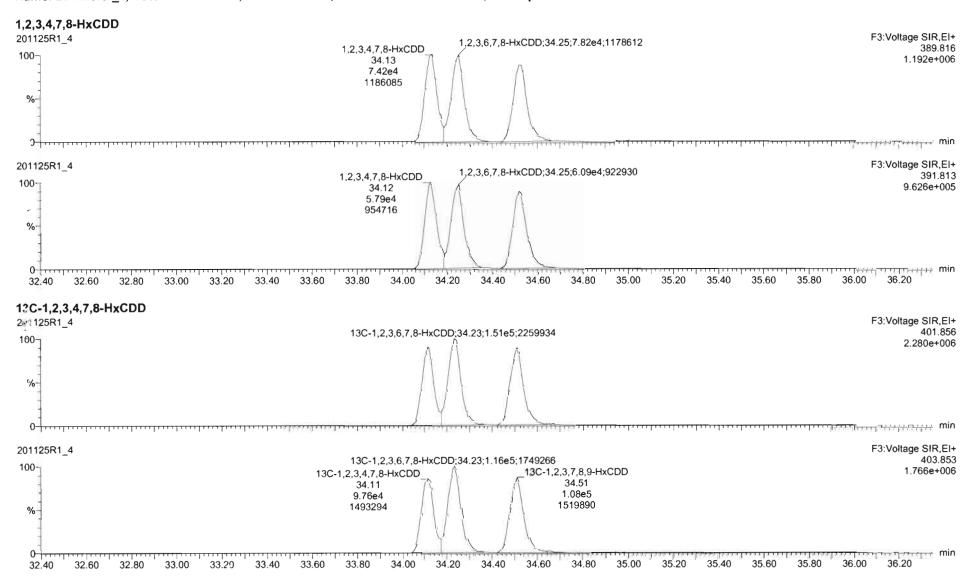
Page 4 of 156

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Work Order 2002436

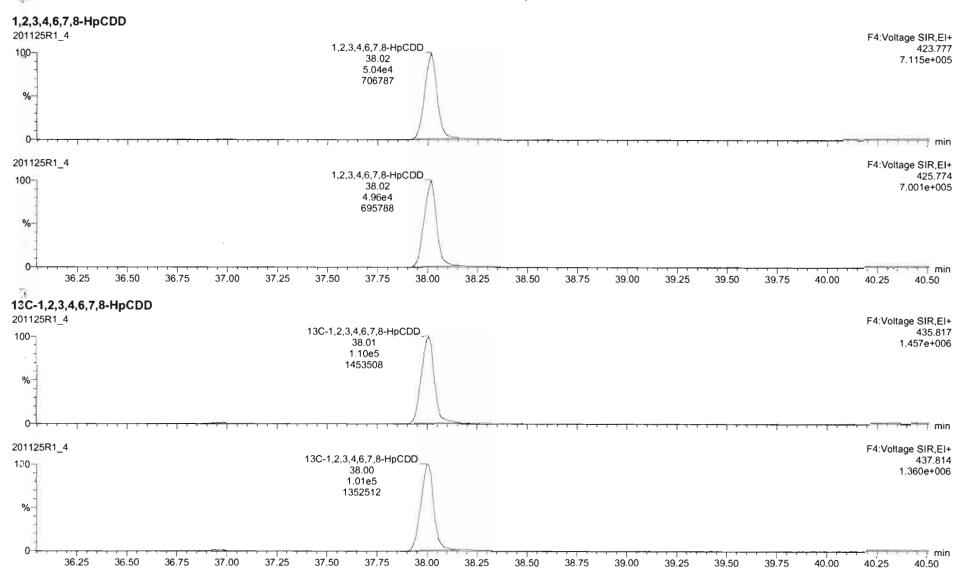
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Vista Analytical Laboratory

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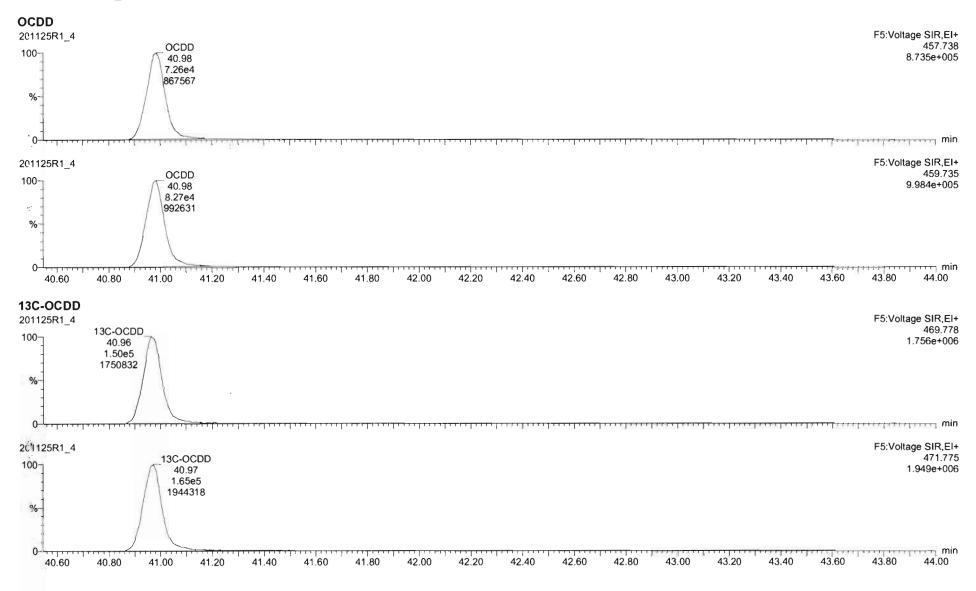
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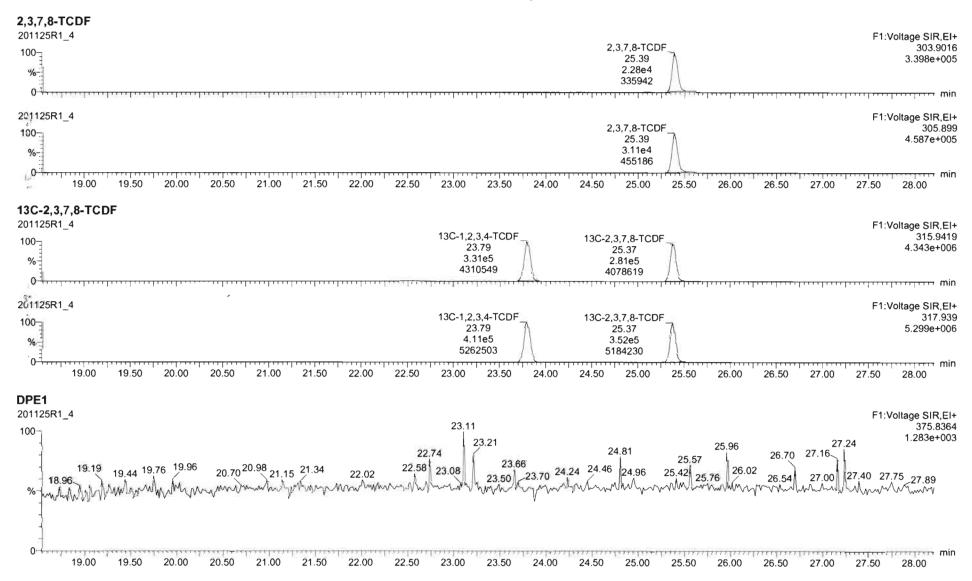
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Quantify Sample Report

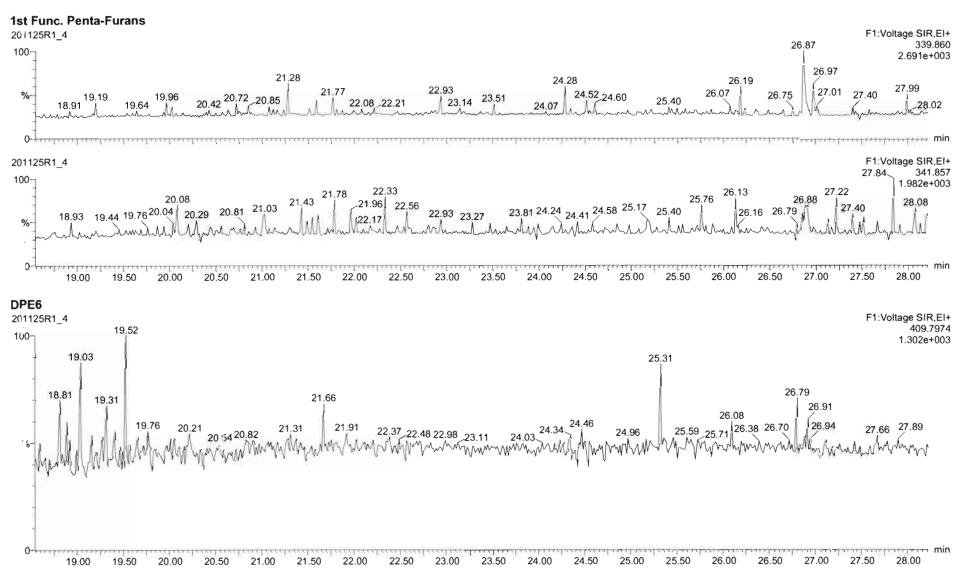
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Vista Analytical Laboratory

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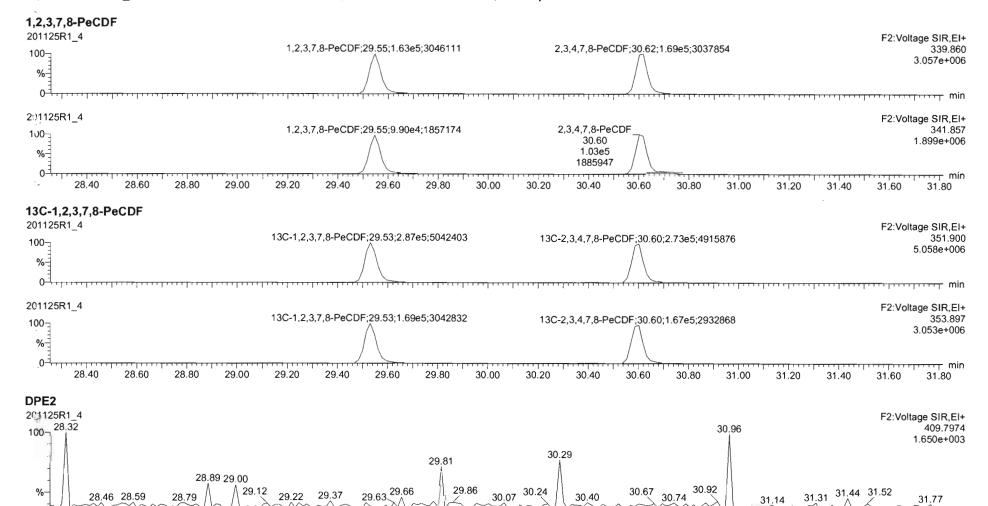


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Name: 201125R1_4, Date: 25-Nov-2020, Time: 11:38:02, ID: B0K0172-BS1 OPR 10, Description: OPR



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28.80

29.00

29.20

29.40

29.60

29.80

30.00

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31.00

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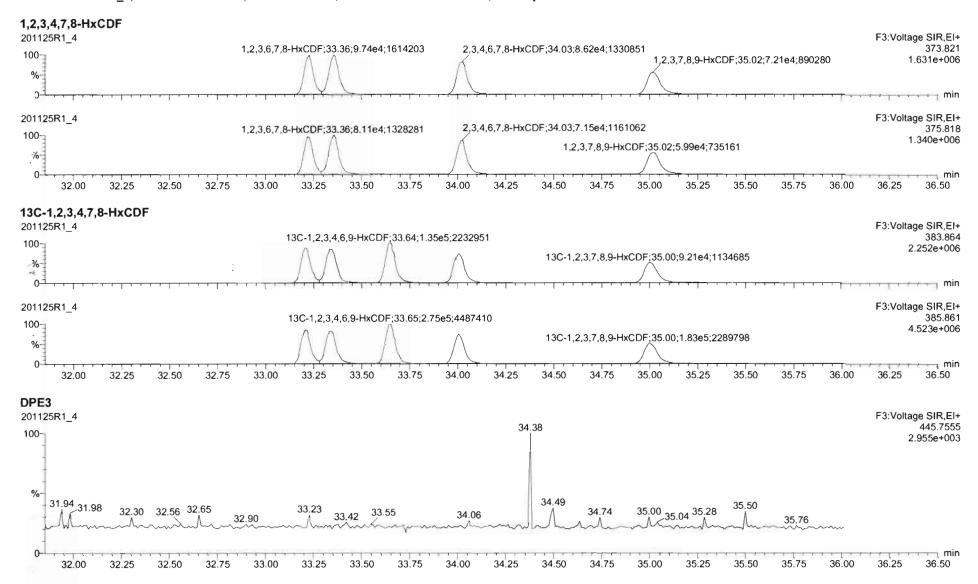
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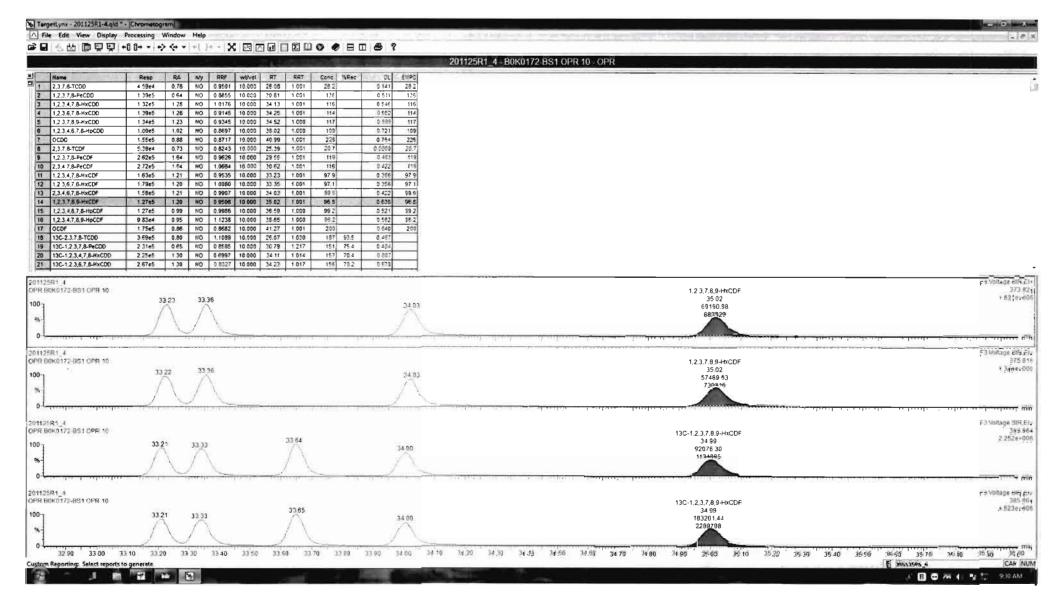
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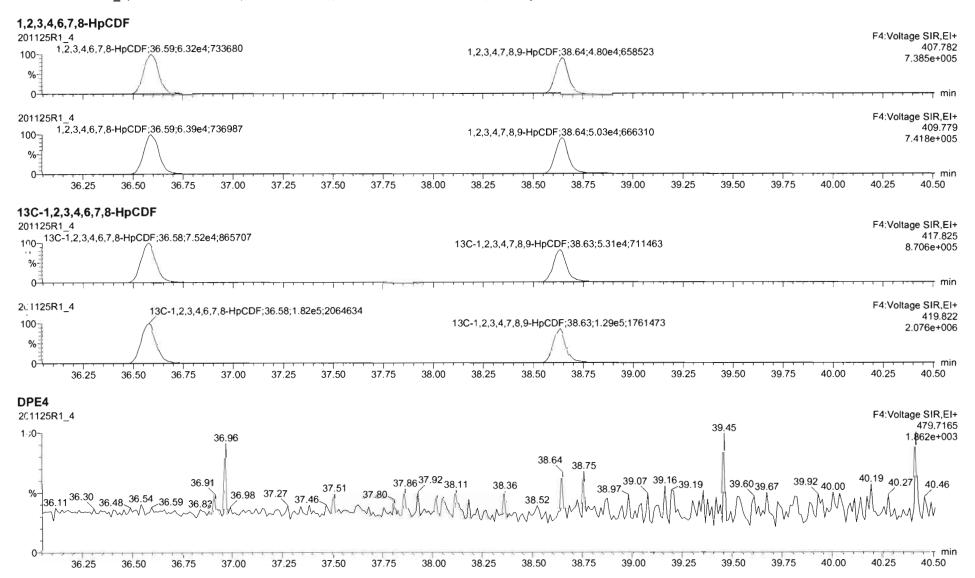
Work Order 2002436 Page 97 of 441

Vista Analytical Laboratory

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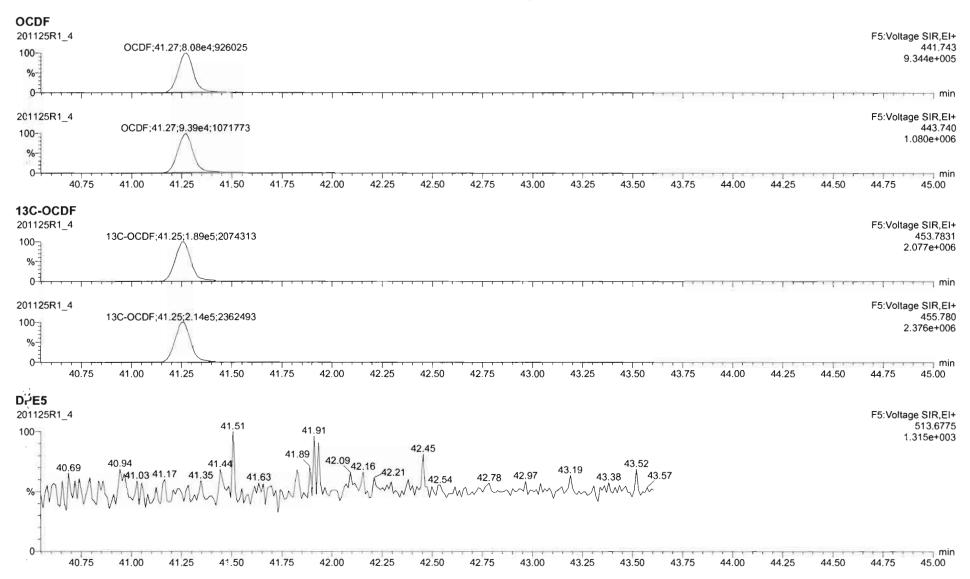
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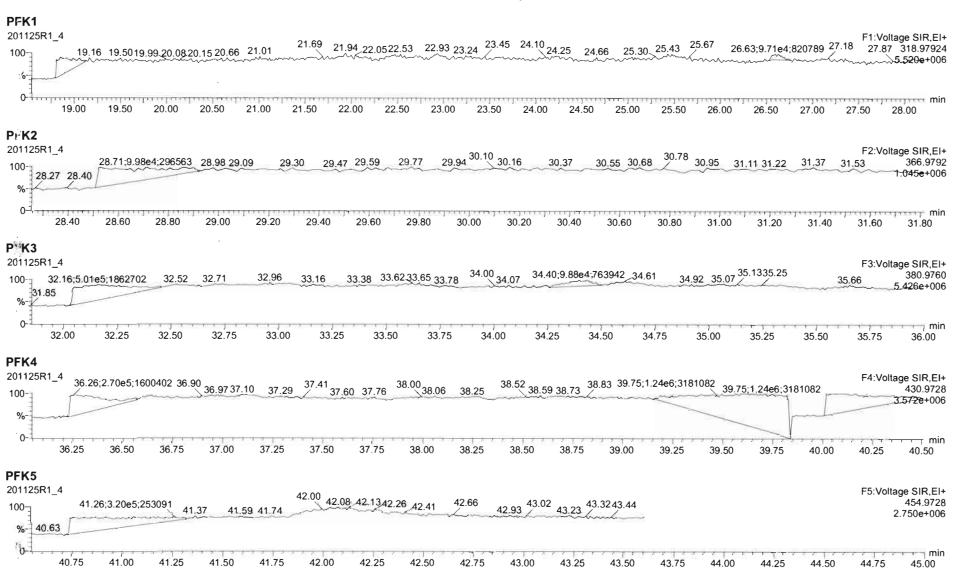
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U:\VG12.PRO\Results\201124R1\201124R1-11.qld

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Wednesday, November 25, 2020 12:08:57 Pacific Standard Time

Printed:

Wednesday, November 25, 2020 12:30:18 Pacific Standard Time

GPB 11/25/2020

Method: Untitled 12 Nov 2020 07:51:39

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_11, Date: 24-Nov-2020, Time: 18:53:16, ID: 2002436-01 USMPDI-027SC-A-01-02-201106 11.53, Description: USMPDI-027SC-A-01-02-201106

	# 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	0.950	10.186	26.097		1.001				0.0488	-
2	2 1,2,3,7,8-PeCDD			NO	0.885	10.186	30.804		1.000				0.0841	
3	3 1,2,3,4,7,8-HxCDD			NO	1.02	10.186	34.124		1.000				0.109	
4	4 1,2,3,6,7,8-HxCDD			NO	0.915	10.186	34.242		1.000				0.107	
5	5 1,2,3,7,8,9-HxCDD												0.125	
6	6 1,2,3,4,6,7,8-HpCDD	2.89e3	1.13	NO	0.870	10.186	38.020	38.04	1.000	1.001	1.9610		0.259	1.96
7	7 OCDD	2.73e4	0.88	NO	0.872	10.186	40.966	40.99	1.000	1.000	23.886		0.409	23.9
8	8 2,3,7,8-TCDF			NO	0.824	10.186	25.381		1.000				0.0325	
9	9 1,2,3,7.8-PeCDF			NO	0.963	10.186	29.542		1.000				0.0293	
10	10 2,3,4,7,8-PeCDF			NO	1.07	10.186	30.608		1.000				0.0257	
11	11 1,2,3,4,7,8-HxCDF	3.83e2	1.10	NO	0.953	10.186	33.209	33.22	1.000	1.000	0.15085		0.0413	0.151
12	12 1,2,3,6,7,8-HxCDF			NO	1.01	10.186	33.348		1.000				0.0584	
13	13 2,3,4,6,7,8-HxCDF			NO	0.991	10.186	34.011		1.000				0.0669	
14	14 1,2,3,7,8,9-HxCDF			NO	0.951	10.186	35.009		1.000				0.0996	
15	15 1,2,3,4,6,7,8-HpCDF	6.30e2	0.99	NO	0.999	10.186	36.586	36.59	1.000	1.000	0.33357		0.0675	0.334
16	16 1,2,3,4,7,8,9-HpCDF			NO	1.12	10.186	38.648		1.000				0.106	
17	17 OCDF	7.48e2	0.78	NO	0.868	10.186	41.262	41.25	1.000	1.000	0.58557		0.138	0.586
18	18 13C-2,3,7,8-TCDD	6.41e5	0.79	NO	1.11	10.186	26.058	26.07	1.030	1.030	203.91	104	0.246	
19	19 13C-1,2,3,7,8-PeCDD	4.80e5	0.62	NO	0.859	10.186	30.774	30.80	1.216	1.217	197.09	100	0.409	
20	20 13C-1,2,3,4,7,8-HxCDD	3.75e5	1.28	NO	0.700	10.186	34.114	34.11	1.014	1.014	187.84	95.7	0.648	
21	21 13C-1,2,3,6,7,8-HxCDD	4.39e5	1.27	NO	0.833	10.186	34.252	34.23	1.018	1.017	184.87	94.2	0.544	1
22	22 13C-1,2,3,7,8,9-HxCDD	4.18e5	1.32	NO	0.762	10.186	34.494	34.51	1.025	1.026	192.15	97.9	0.595	
23	23 13C-1,2,3,4,6,7,8-HpCDD	3.33e5	1.07	NO	0.650	10.186	37.976	38.02	1.129	1.130	179.46	91.4	0.845	
24	24 13C-OCDD	5.14e5	0.88	NO	0.539	10.186	40.940	40.97	1.217	1.218	334.23	85.1	0.806	
25	25 13C-2,3,7,8-TCDF	9.28e5	0.78	NO	0.981	10.186	25.380	25.37	1.003	1.003	207.31	106	0.336	
26	26 13C-1,2,3,7,8-PeCDF	7.30e5	1.61	NO	0.792	10.186	29.506	29.53	1.166	1.167	202.07	103	0.701	
27	27 13C-2,3,4,7,8-PeCDF	7.48e5	1.59	NO	0.778	10.186	30.564	30.61	1.208	1.210	210.69	107	0.714	
28	28 13C-1,2.3,4,7,8-HxCDF	5.23e5	0.50	NO	0.954	10.186	33.205	33.21	0.987	0.987	192.32	97.9	0.827	
29	29 13C-1,2,3,6,7,8-HxCDF	5.30e5	0.51	NO	1.01	10.186	33.336	33.35	0.991	0.991	184.82	94.1	0.784	
30	30 13C-2,3,4,6,7,8-HxCDF	4.92e5	0.50	NO	0.921	10.186	34.006	34.01	1.011	1.011	187.15	95.3	0.856	.

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U:\VG12.PRO\Results\201124R1\201124R1-11.qld

Last Altered: Printed: Wednesday, November 25, 2020 12:08:57 Pacific Standard Time Wednesday, November 25, 2020 12:30:18 Pacific Standard Time

Name: 201124R1_11, Date: 24-Nov-2020, Time: 18:53:16, ID: 2002436-01 USMPDI-027SC-A-01-02-201106 11.53, Description: USMPDI-027SC-A-01-02-201106

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	4.36 e 5	0.52	NO	0.803	10.186	35.002	35.01	1.040	1.041	190.42	97.0	0.982	
32	32 13C-1,2,3,4,6,7,8-HpCDF	3.71e5	0.43	NO	0.735	10.186	36.570	36.58	1.087	1.087	177.04	90.2	0.705	
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.88e5	0.41	NO	0.568	10.186	38.605	38.65	1.147	1.149	178.13	90.7	0.913	
34	34 13C-OCDF	5.78e5	0.91	NO	0.629	10.186	41.223	41.25	1.225	1.226	321.92	82.0	0.629	
35	35 37Cl-2,3,7,8-TCDD	2.85e5			1.09	10.186	26.058	26.08	1.030	1.031	92.463	118	0.0499	
36	36 13C-1,2,3,4-TCDD	5.57e5	0.81	NO	1.00	10.186	25.370	25.30	1.000	1.000	196.36	100	0.273	
37	37 13C-1,2,3,4-TCDF	8.96e5	0.78	NO	1.00	10.186	23.870	23.79	1.000	1.000	196.36	100	0.329	
38	38 13C-1,2,3,4,6,9-HxCDF	5.60e5	0.50	NO	1.00	10.186	33.710	33.65	1.000	1.000	196.36	100	0.789	
39	39 Total Tetra-Dioxins				0.950	10.186	24.620		0.000		0.12800		0.0488	0.128
40	40 Total Penta-Dioxins				0.885	10.186	29.960		0.000		0.00000		0.0372	0.157
41	41 Total Hexa-Dioxins				0.915	10.186	33.635		0.000		1.3951		0.118	1.40
42	42 Total Hepta-Dioxins				0.870	10.186	37.640		0.000		4.9168		0.259	4.92
43	43 Total Tetra-Furans				0.824	10.186	23.610		0.000				0.0151	
44	44 1st Func. Penta-Furans				0.963	10.186	26.930		0.000		0.091377		0.00760	0.0910
45	45 Total Penta-Furans				0.963	10.186	29.275		0.000				0.0149	
46	46 Total Hexa-Furans				0.991	10.186	33.555		0.000		0.23882		0.0473	0.320
47	47 Total Hepta-Furans				0.999	10.186	37.835		0.000		0.61995		0.0732	0.620

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-11.qld

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Tetra-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 Total Tetra-Dioxins	24.00	3.174e3	2.849e3	1.788e2	2.181e2	0.82	NO	3.969e2	0.12800	0.12800	0.0488

Penta-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA n/	y Resp	Conc.	EMPC	DL
1	1 Total Penta-Dioxins	28.57	9.110e2	1.763e3	5.334e1	1.085e2	0.49 YE	ES 0.000e0	0.00000	0.064000	0.0372
	2 Total Penta-Dioxins	29.02	2.430e3	2.978e3	9.762e1	1.233e2	0.79 YE	ES 0.000e0	0.00000	0.093000	0.0372

Hexa-Dioxins

Γ	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.50	1.559e4	1.256e4	8.899e2	6.634e2	1.34	NO	1.553e3	0.81223	0.81200	0.118
2	2 Total Hexa-Dioxins	33.37	9.707e3	7.046e3	6.185e2	4.961e2	1.25	NO	1.115e3	0.58285	0.58300	0.118

Hepta-Dioxins

Г	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.99	2.614e4	2.012e4	2.246e3	2.108e3	1.07	NO	4.354e3	2.9558	2.9560	0.259
2	1,2,3,4,6,7,8-HpCDD	38.04	1.791e4	1.588e4	1.531e3	1.358e3	1.13	NO	2.889e3	1.9610	1.9610	0.259

Tetra-Furans

Name	RT	m1 Height m2 Height	m1 Resp m2 Res	R	A n/y	Resp	Conc.	EMPC	DL
1									

Penta-Furans function 1

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 1st Func. Penta-Furans	26.93	5.292e3	2.540e3	1.955e2	1.35 4e 2	1.44	NO	3.309e2	0.091377	0.091000	0.00760

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Vista Analytical Laboratory

Dataset:

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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	Total Hexa-Furans	32.13	3.107e3	2.173e3	1.200e2	9.996e1	1.20	NO	2.199e2	0.087974	0.088000	0.0473
2	Total Hexa-Furans	32.75	3.436e3	1.791e3	1.334e2	9.026e1	1.48	YES	0.000e0	0.00000	0.081000	0.0473
3	1,2,3,4,7,8-HxCDF	33.22	3.498e3	2.859e3	2.006e2	1.828e2	1.10	NO	3.833e2	0.15085	0.15100	0.0413

Hepta-Furans

	Name	ŔŤ	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.59	4.339e3	4.246e3	3.138e2	3.164e2	0.99	NO	6.302e2	0.33357	0.33400	0.0675
2	Total Hepta-Furans	37.34	3.207e3	3.237e3	2.437e2	2.368e2	1.03	NO	4.806e2	0.28638	0.28600	0.0732

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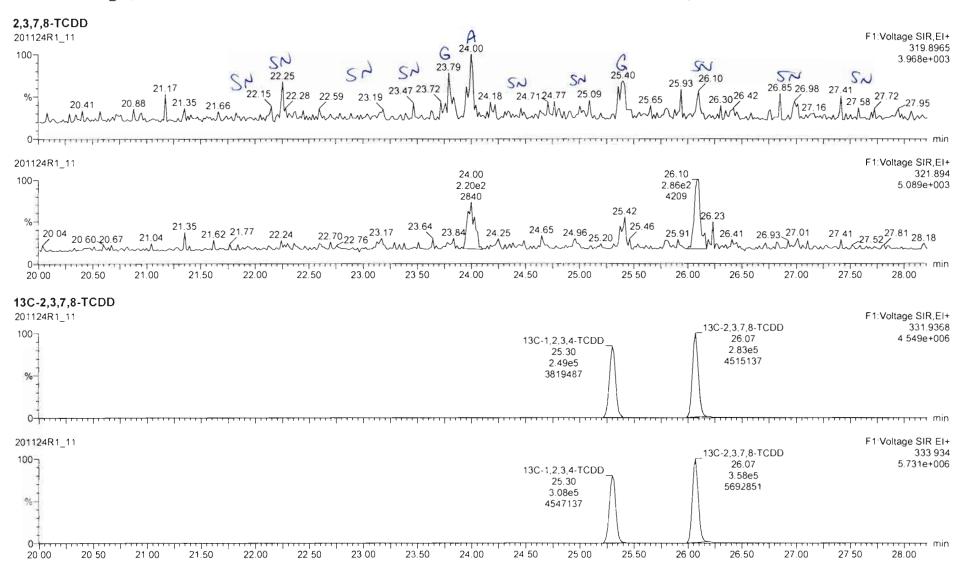
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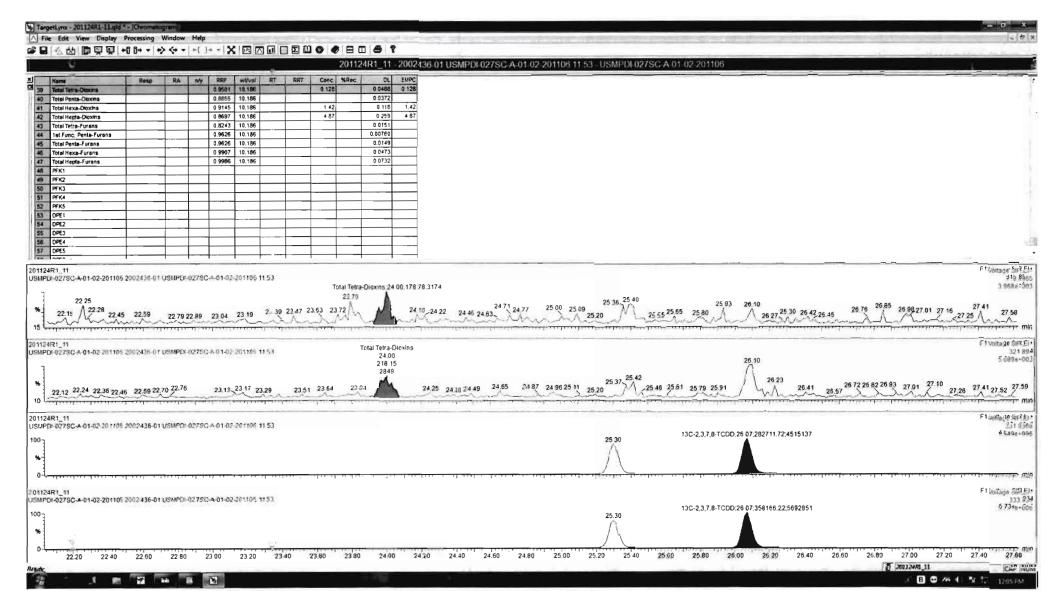
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Vista Analytical Laboratory

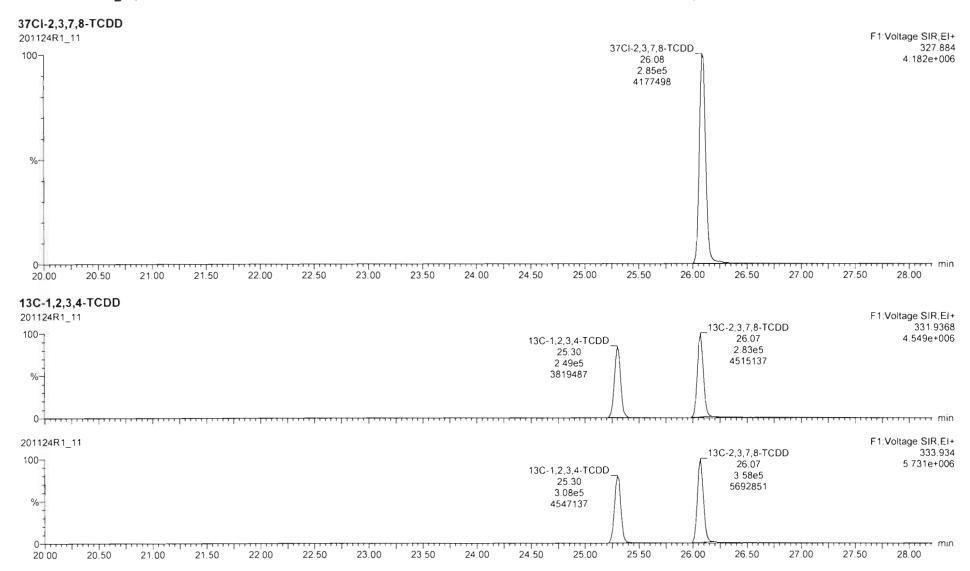
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MassLynx 4.1 SCN815

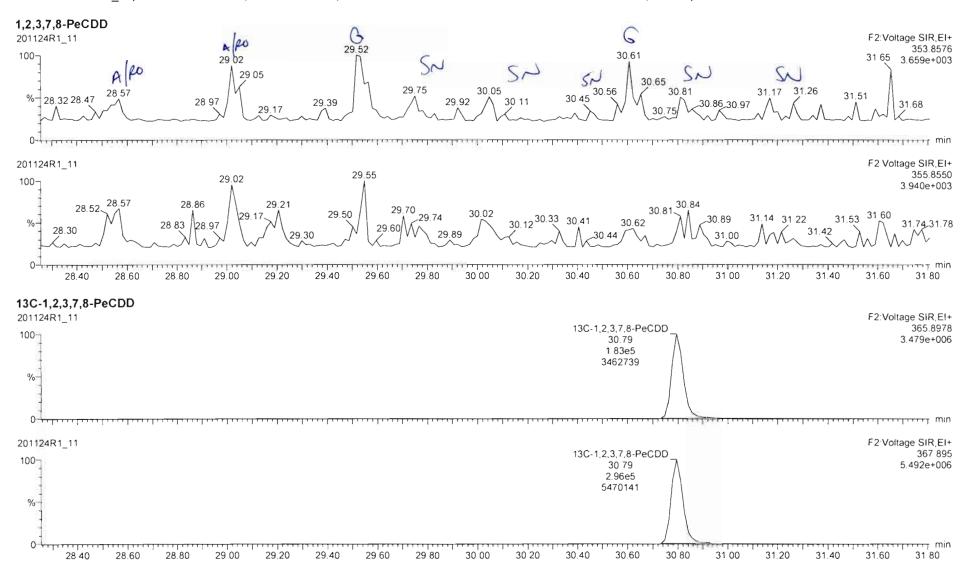
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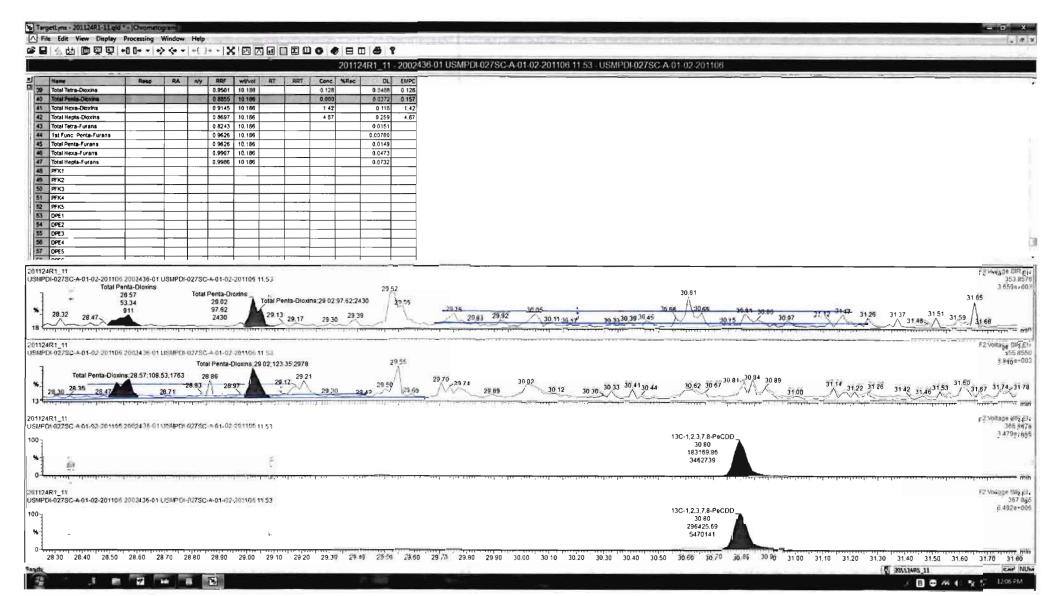


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Name: 201124R1_11, Date: 24-Nov-2020, Time: 18:53:16, ID: 2002436-01 USMPDI-027SC-A-01-02-201106 11.53, Description: USMPDI-027SC-A-01-02-201106





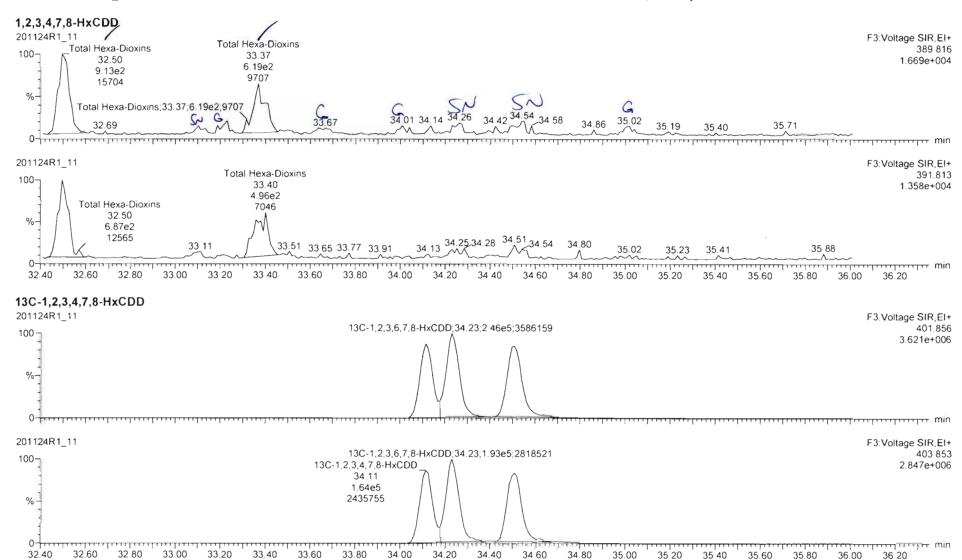
Work Order 2002436 Page 109 of 441

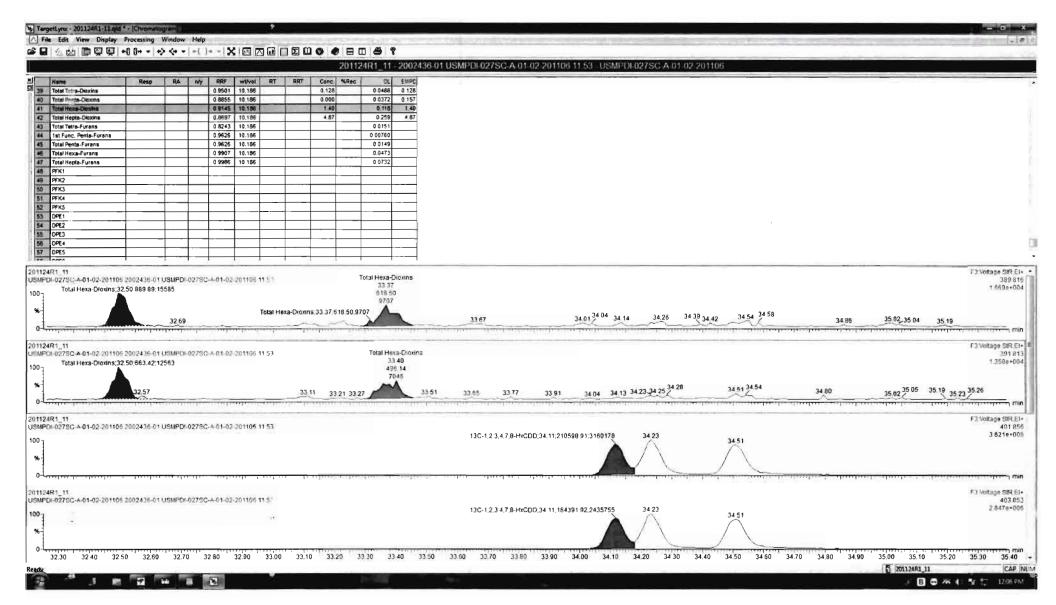
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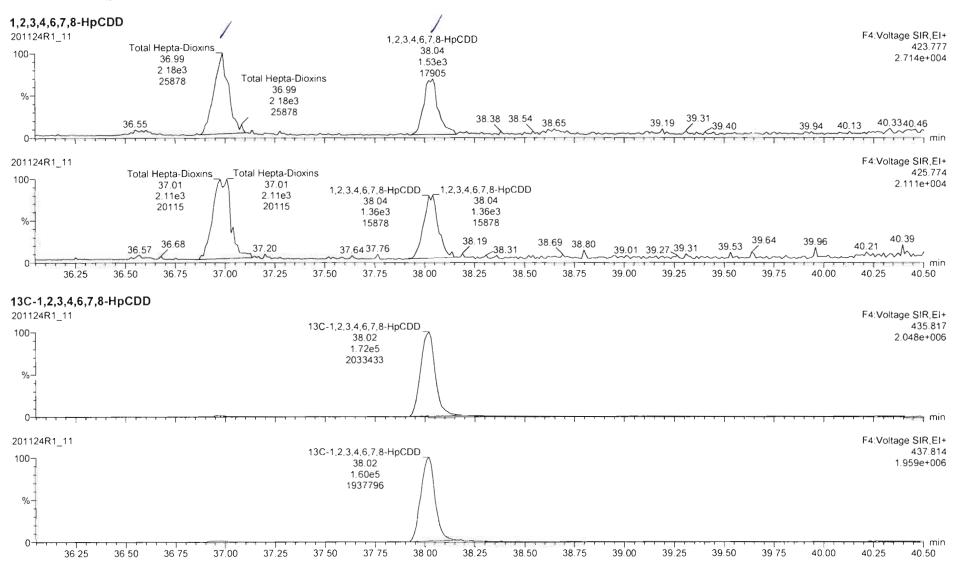


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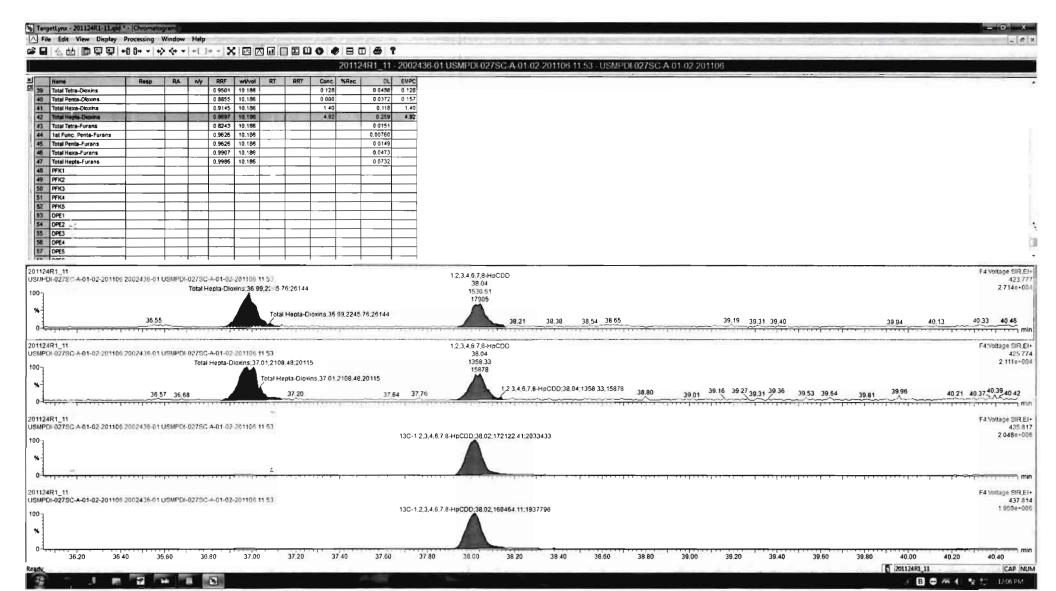
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Work Order 2002436



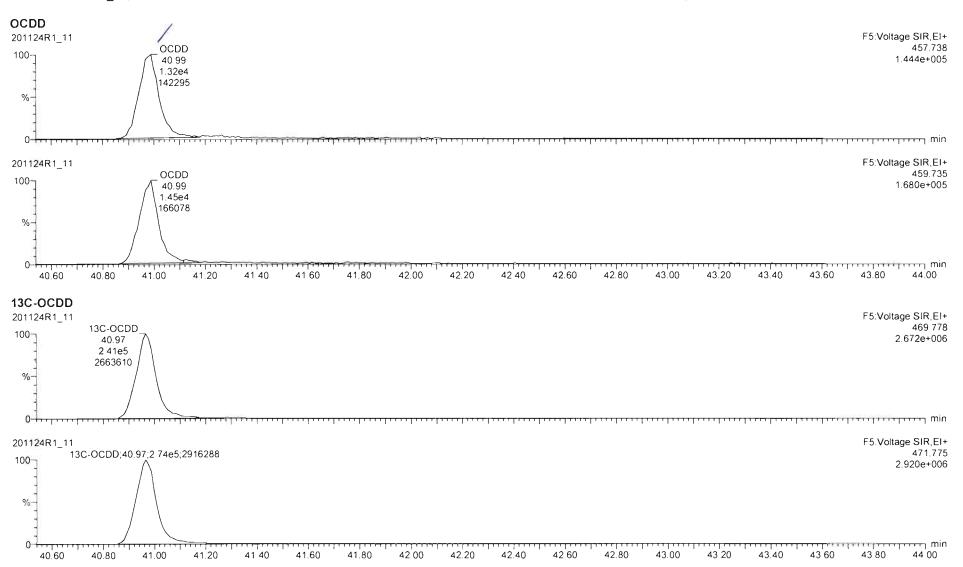
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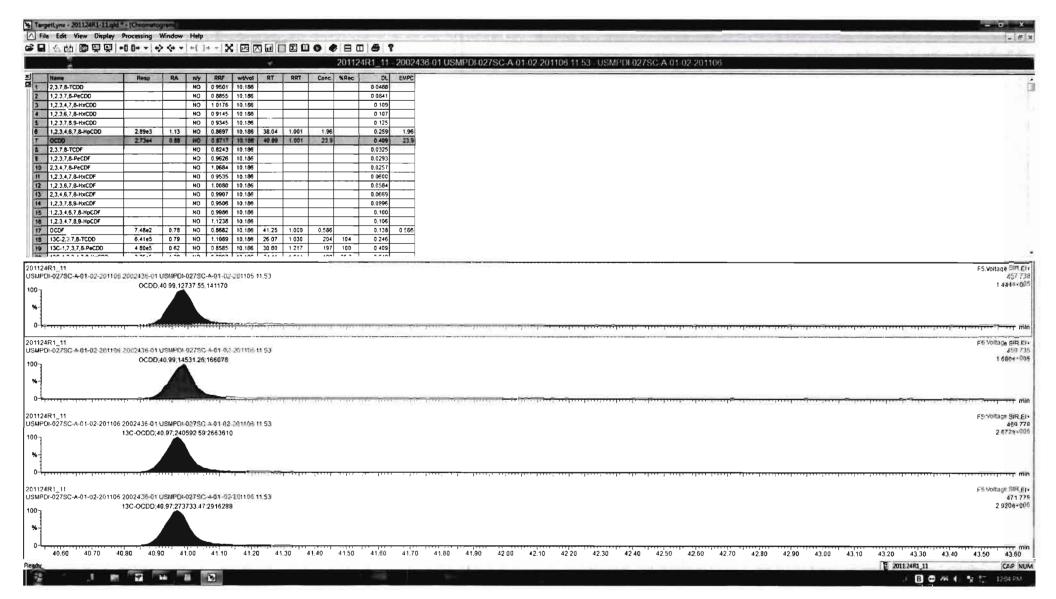
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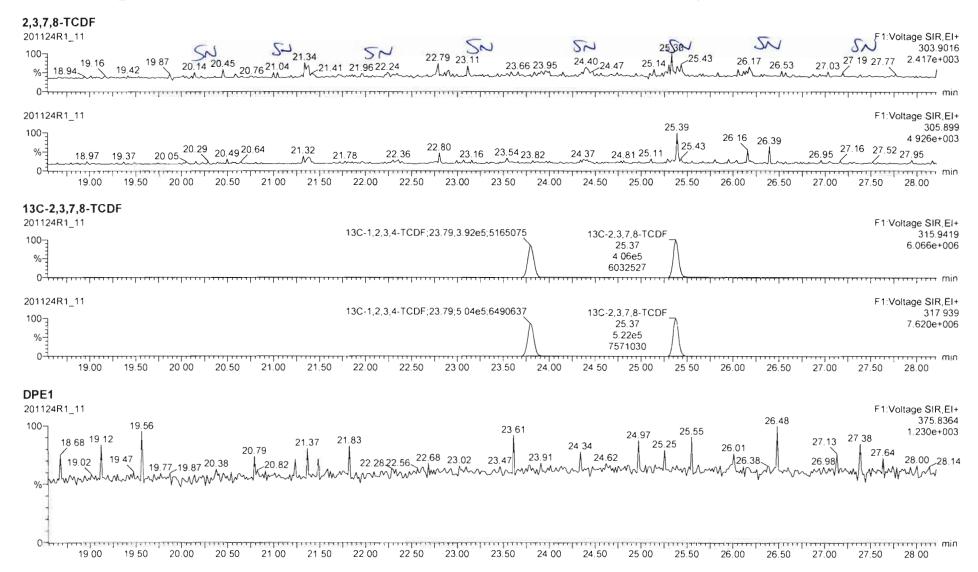
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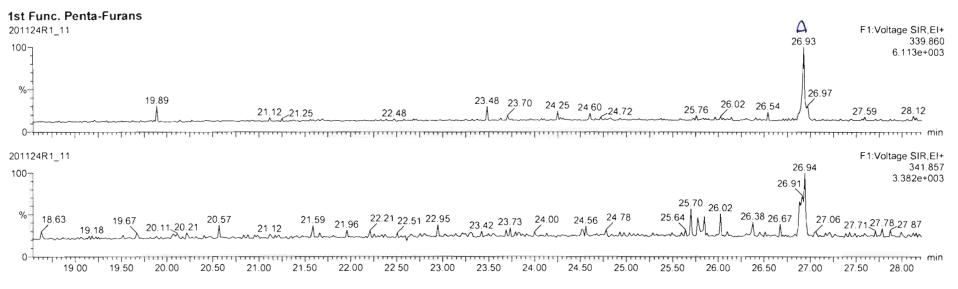
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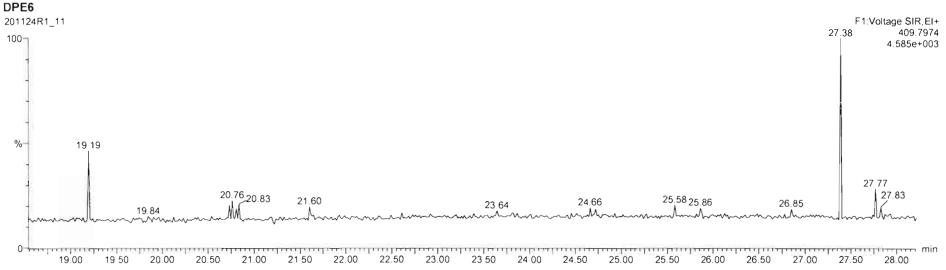
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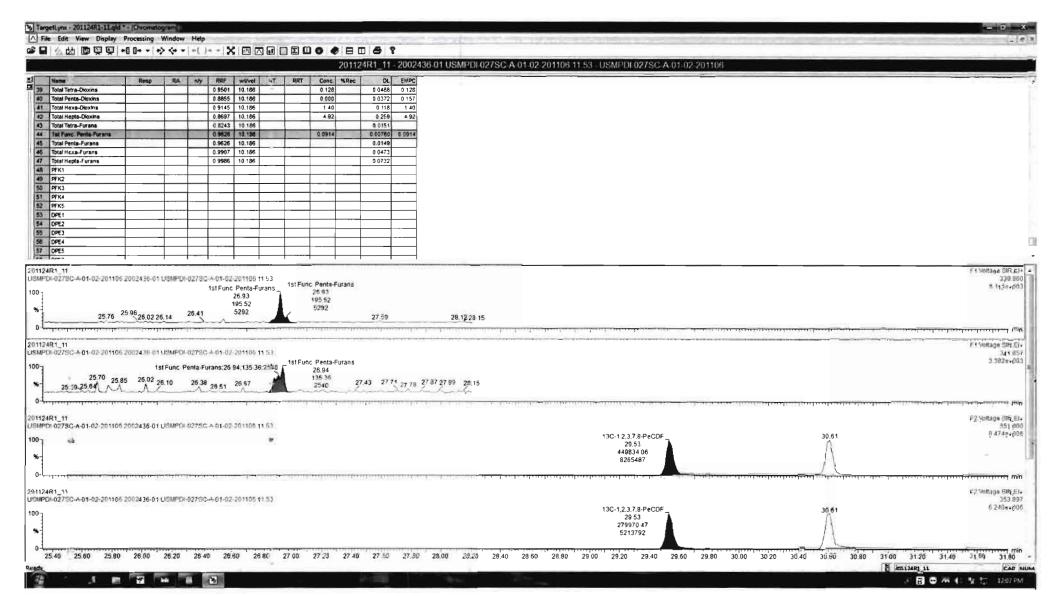
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Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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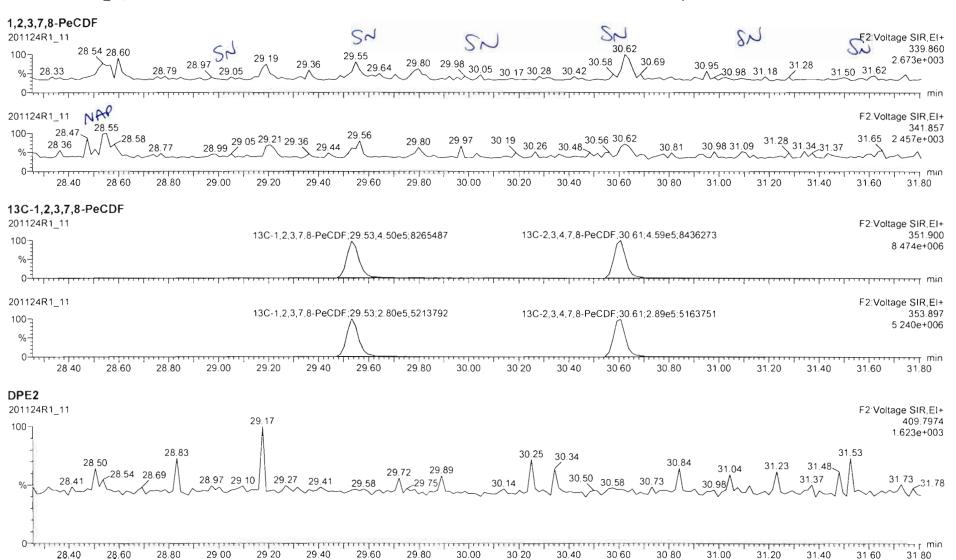
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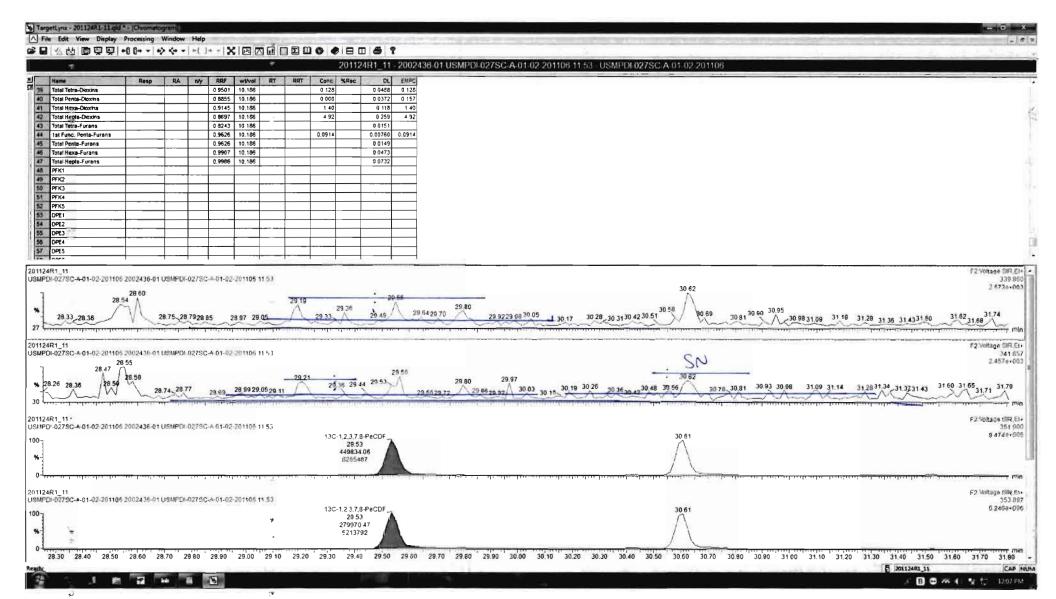
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Printed: Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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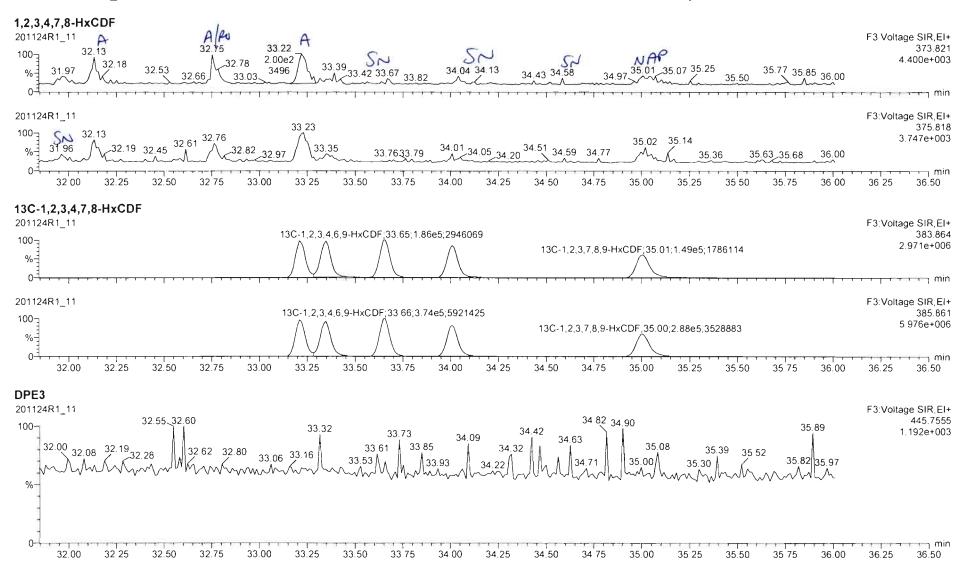
Work Order 2002436 Page 120 of 441

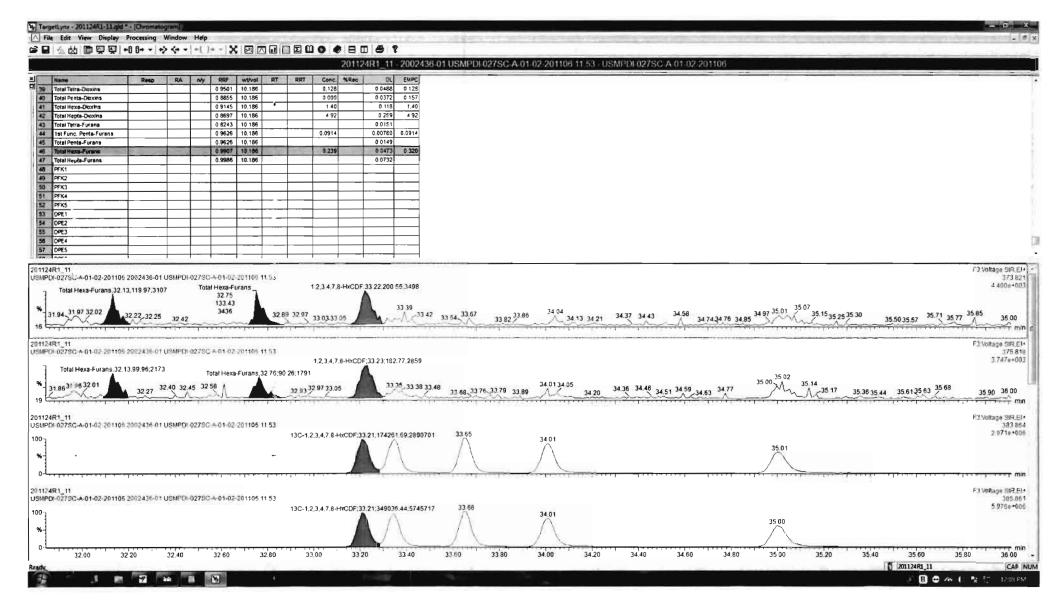
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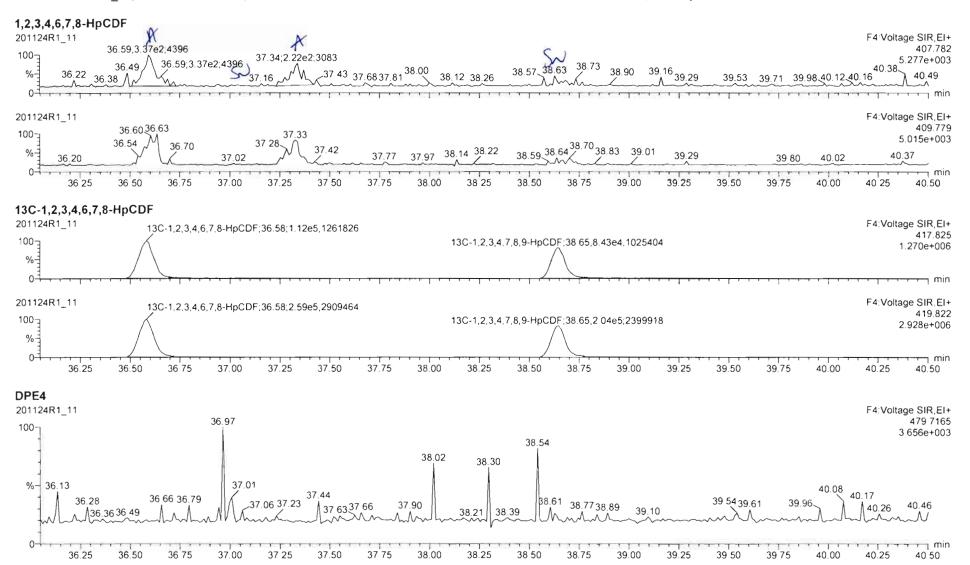
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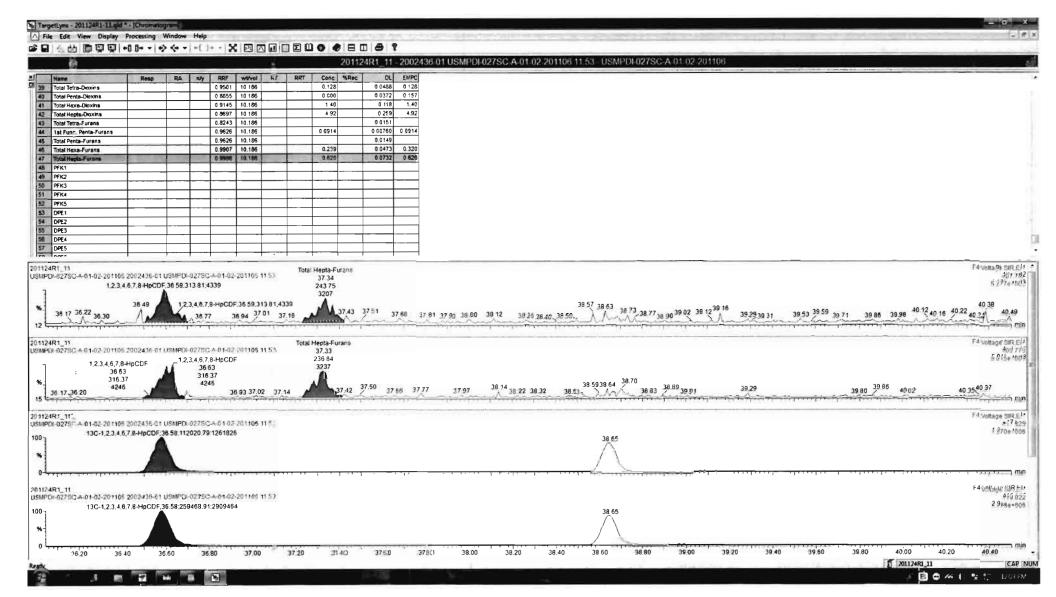
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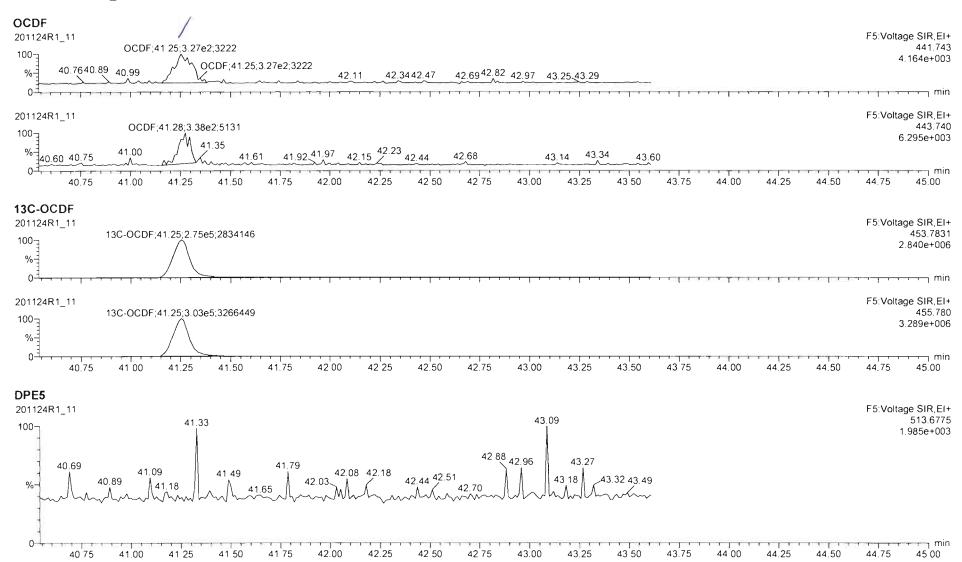


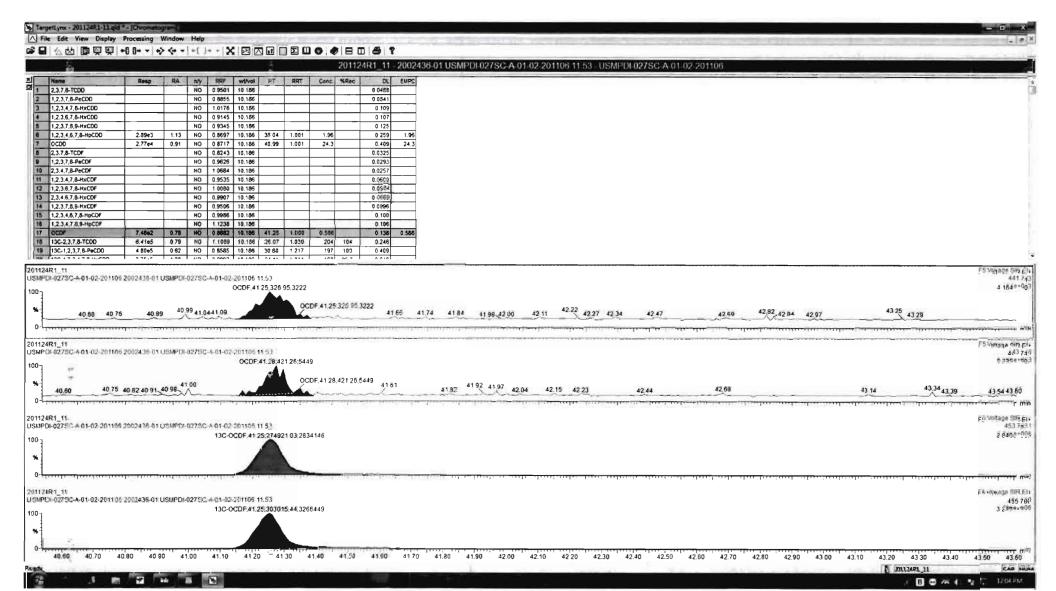
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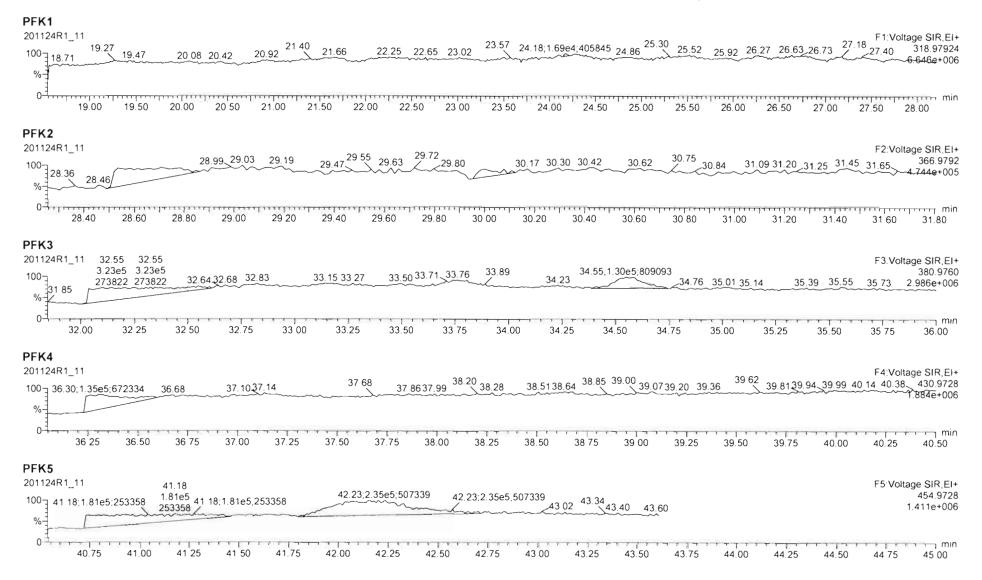
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Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

Name: 201124R1_11, Date: 24-Nov-2020, Time: 18:53:16, ID: 2002436-01 USMPDI-027SC-A-01-02-201106 11.53, Description: USMPDI-027SC-A-01-02-201106



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U:\VG12.PRO\Results\201125R2\201125R2-14.qld Dataset:

Last Altered: Thursday, November 26, 2020 09:45:57 Pacific Standard Time

Printed: Thursday, November 26, 2020 09:46:21 Pacific Standard Time GPB 11/26/2020

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Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106

	# 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	0.950	10.378	26.097		1.001				0.0571	
2	2 1,2,3,7,8-PeCDD			NO	0.885	10.378	30.816		1.000				0.101	
3	3 1,2,3,4,7,8-HxCDD			NO	1.02	10.378	34.132		1.000				0.109	
4	4 1,2,3,6,7,8-HxCDD			NO	0.915	10.378	34.260		1.000				0.111	
5	5 1,2,3,7,8,9-HxCDD			NO	0.934	10.378	34.537		1.000				0.124	
6	6 1,2,3,4,6,7,8-HpCDD	1.28 e 3	0.96	NO	0.870	10.378	38.028	38.06	1.000	1.001	1.1064		0.333	1.11
7	7 OCDD	1.12e4	0.88	NO	0.872	10.378	40.985	40.99	1.000	1.000	13.189		0.463	13.2
8	8 2,3,7,8-TCDF			NO	0.824	10.378	25.381		1.000				0.0384	
9	9 1,2,3,7,8-PeCDF			NO	0.963	10.378	29.540		1.000				0.0606	
10	10 2,3,4,7,8-PeCDF			NO	1.07	10.378	30.602		1.000				0.0544	
11	11 1,2,3,4,7,8-HxCDF			NO	0.953	10.378	33.217		1.000				0.0634	
12	12 1,2,3,6,7,8-HxCDF			NO	1.01	10.378	33.355		1.000				0.0583	
13	13 2,3,4,6,7,8-HxCDF			NO	0.991	10.378	34.019		1.000				0.0658	
14	14 1,2,3,7,8,9-HxCDF			NO	0.951	10.378	35.017		1.000				0.105	
15	15 1,2,3,4,6,7,8-HpCDF	6.39e2	1.25	YES	0.999	10.378	36.594	36.62	1.000	1.001	0.39476		0.198	0.358
16	16 1,2,3,4,7,8,9-HpCDF			NO	1.12	10.378	38.656		1.000		·		0.120	
17	17 OCDF	4.54e2	0.68	YES	0.868	10.378	41.280	41.30	1.000	1.001	0.43240		0.229	0.372
18	18 13C-2,3,7,8-TCDD	5.25e5	0.84	NO	1.11	10.378	26.058	26.07	1.030	1.030	207.50	108	0.300	
19	19 13C-1,2,3,7,8-PeCDD	3.20e5	0.67	NO	0.859	10.378	30.774	30.81	1.216	1.218	163.26	84.7	0.547	
20	20 13C-1,2,3,4,7,8-HxCDD	2.92e5	1.32	NO	0.700	10.378	34.132	34.12	1.014	1.014	160.32	83.2	0.592	
21	21 13C-1,2,3,6,7,8-HxCDD	3.51e5	1.30	NO	0.833	10.378	34.270	34.25	1.018	1.017	161.91	84.0	0.497	
22	22 13C-1,2,3,7,8,9-HxCDD	3.40e5	1.25	NO	0.762	10.378	34.512	34.53	1.025	1.026	171.50	89.0	0.544	
23	23 13C-1,2,3,4,6,7,8-HpCDD	2.57e5	1.01	NO	0.650	10.378	37.997	38.03	1.129	1.130	151.98	78.9	0.939	
24	24 13C-OCDD	3.77e5	0.97	NO	0.539	10.378	40.962	40.99	1.217	1.217	268.31	69.6	0.642	
25	25 13C-2,3,7,8-TCDF	8.84e5	0.78	NO	0.981	10.378	25.380	25.37	1.003	1.003	191.21	99.2	0.292	
26	26 13C-1,2,3,7,8-PeCDF	6.37e5	1.60	NO	0.792	10.378	29.506	29.53	1.166	1.167	170.81	88.6	0.639	
27	27 13C-2,3,4,7,8-PeCDF	6.36e5	1.63	NO	0.778	10.378	30.564	30.60	1.208	1.210	173.55	90.1	0.650	
28	28 13C-1,2,3,4,7,8-HxCDF	4.36e5	0.51	NO	0.954	10.378	33.223	33.22	0.987	0.987	175.57	91.1	0.877	
29	29 13C-1,2,3,6,7,8-HxCDF	4.67e5	0.51	NO	1.01	10.378	33.354	33.35	0.991	0.991	178.34	92.5	0.831	
30	30 13C-2,3,4,6,7,8-HxCDF	4.30e5	0.52	NO	0.921	10.378	34.024	34.02	1.011	1.010	179.34	93.1	0.908	
31	31 13C-1,2,3,7,8,9-HxCDF	3.62e5	0.51	NO	0.803	10.378	35.021	35.02	1.040	1.040	172.72	89.6	1.04	

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Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\201125R2\201125R2-14.qld

Last Altered: Thursday, November 26, 2020 09:45:57 Pacific Standard Time Printed: Thursday, November 26, 2020 09:46:21 Pacific Standard Time

Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106

7	# 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	3.13e5	0.42	NO	0.735	10.378	36.589	36.59	1.087	1.087	163.13	84.6	0.749	
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.21e5	0.40	NO	0.568	10.378	38.626	38.66	1.147	1.148	149.62	77.6	0.970	
34	34 13C-OCDF	4.66e5	0.88	NO	0.629	10.378	41.245	41.27	1.225	1.226	284.29	73.8	0.726	
35	35 37CI-2,3,7,8-TCDD	2.57e5			1.09	10.378	26.058	26.10	1.030	1.032	103.50	134	0.0833	
36	36 13C-1,2,3,4-TCDD	4.40e5	0.82	NO	1.00	10.378	25.370	25.30	1.000	1.000	192.72	100	0.333	
37	37 13C-1,2,3,4-TCDF	9.08e5	0.80	NO	1.00	10.378	23.870	23.81	1.000	1.000	192.72	100	0.287	
38	38 13C-1,2,3,4,6,9-HxCDF	5.02e5	0.50	NO	1.00	10.378	33.710	33.66	1.000	1.000	192.72	100	0.836	
39	39 Total Tetra-Dioxins				0.950	10.378	24.620		0.000				0.0292	
40	40 Total Penta-Dioxins				0.885	10.378	29.960		0.000				0.0508	
41	41 Total Hexa-Dioxins				0.915	10.378	33.635		0.000		0.17628		0.0657	0.176
42	42 Total Hepta-Dioxins				0.870	10.378	37.640		0.000		2.5000		0.333	2.50
43	43 Total Tetra-Furans				0.824	10.378	23.610		0.000				0.0175	
44	44 1st Func. Penta-Furans				0.963	10.378	26.930		0.000		0.00000		0.0126	0.108
45	45 Total Penta-Furans				0.963	10.378	29.275		0.000				0.0268	
46	46 Total Hexa-Furans				0.991	10.378	33.555		0.000		0.36862		0.0255	0.369
47	47 Total Hepta-Furans				0.999	10.378	37.835		0.000		0.00000		0.0508	0.738

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Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\201125R2\201125R2-14.qld

Last Altered: Thursday, November 26, 2020 09:45:57 Pacific Standard Time

Printed: Thursday, November 26, 2020 09:46:21 Pacific Standard Time

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Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106

Tetra-Dioxins

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

Penta-Dioxins

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

Hexa-Dioxins

4 2 2 3	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hexa-Dioxins	32.51	3.766e3	2.434e3	1.563e2	1.181e2	1.32	NO	2.744e2	0.17628	0.17628	0.0657

Hepta-Dioxins

7.40	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	36.99	1.265e4	9.039e3	7.971e2	8.206e2	0.97	NO	1.618e3	1.3936	1.3936	0.333
2	1,2,3,4,6,7,8-HpCDD	38.06	9.095e3	9.605e3	6.280e2	6.563e2	0.96	NO	1.284e3	1.1064	1.1064	0.333

Tetra-Furans

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

Penta-Furans function 1

1000	Name	RT	m1 Height n	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1st Func. Penta-Furans	26.91	4.438e3	2.682e3	2.551e2	1.341e2	1.90	YES	0.000e0	0.00000	0.10756	0.0126

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Vista Analytical Laboratory

Dataset: U:\VG12.PRO\Results\201125R2\201125R2-14.qld

Last Altered: Thursday, November 26, 2020 09:45:57 Pacific Standard Time Thursday, November 26, 2020 09:46:21 Pacific Standard Time

Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106

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	Total Hexa-Furans	31.98	1.591e3	1.555e3	7.934e1	6.047e1	1.31	NO	1.398e2	0.064158	0.064158	0.0255
2	Total Hexa-Furans	32.15	4.839e3	2.770e3	1.618e2	1.307e2	1.24	NO	2.925e2	0.13423	0.13423	0.0255
3	Total Hexa-Furans	32.76	4.147e3	2.953e3	1.980e2	1.729e2	1.15	NO	3.710e2	0.17024	0.17024	0.0255

Hepta-Furans

-3-	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	1,2,3,4,6,7,8-HpCDF	36.62	4.610e3	3.989e3	3.554e2	2.840e2	1.25	YES	6.394e2	0.00000	0.35767	0.108
2	Total Hepta-Furans	37.36	3.661e3	5.416e3	2.681e2	3.087e2	0.87	YES	0.000e0	0.00000	0.38023	0.119

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Vista Analytical Laboratory

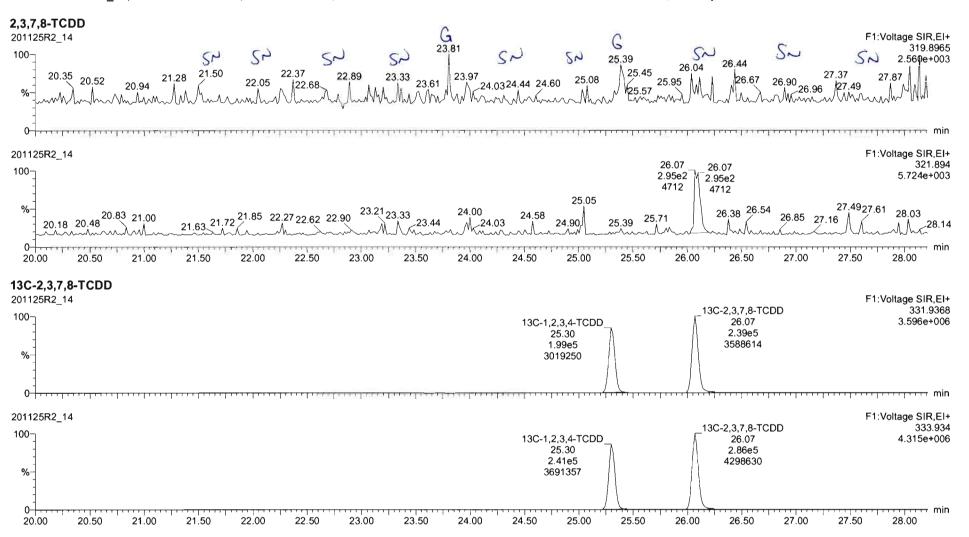
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Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106



Dataset:

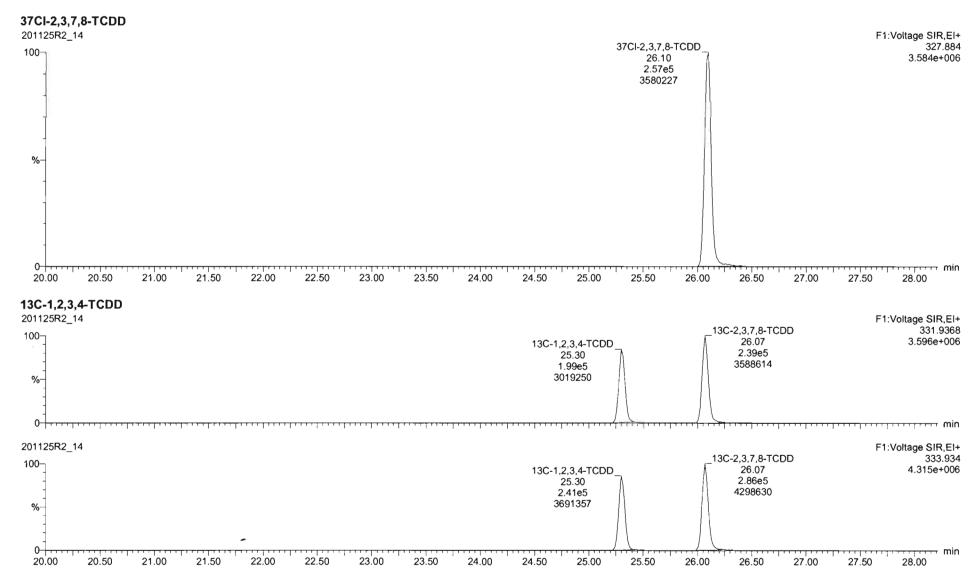
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Last Altered: Printed:

Thursday, November 26, 2020 07:59:52 Pacific Standard Time

d: Thursday, November 26, 2020 08:00:05 Pacific Standard Time

Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106

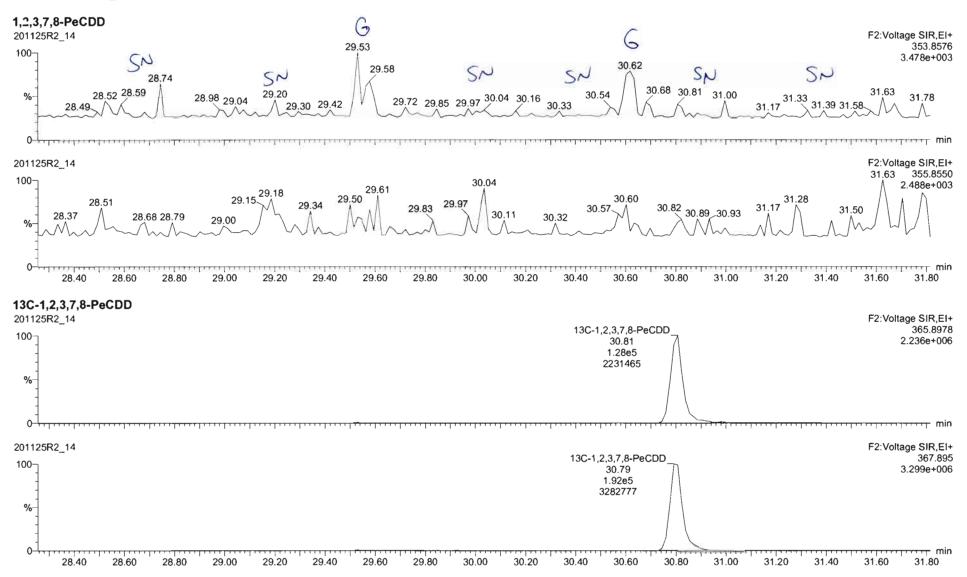


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Last Altered: Thursday, November 26, 2020 07:59:52 Pacific Standard Time Thursday, November 26, 2020 08:00:05 Pacific Standard Time

Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106



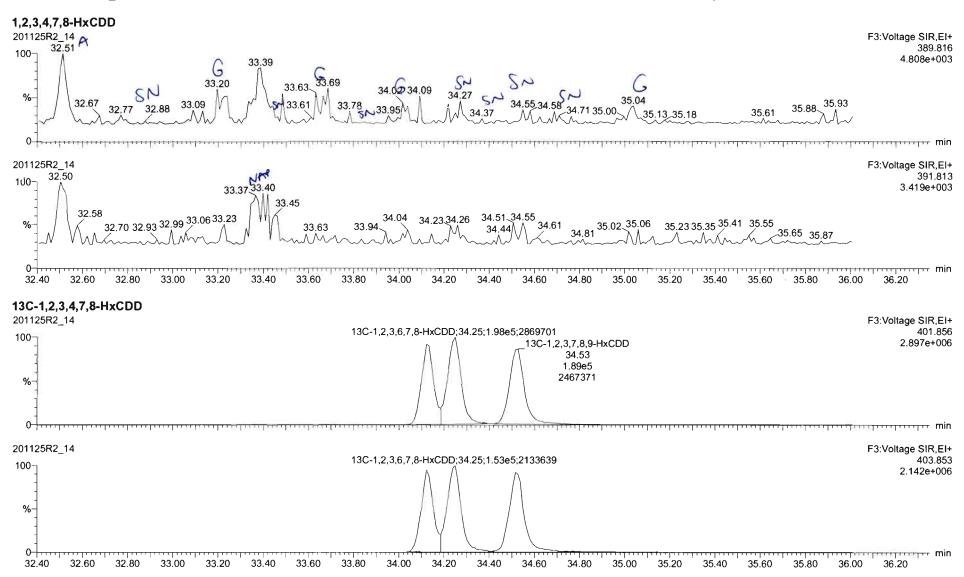
Work Order 2002436

Dataset:

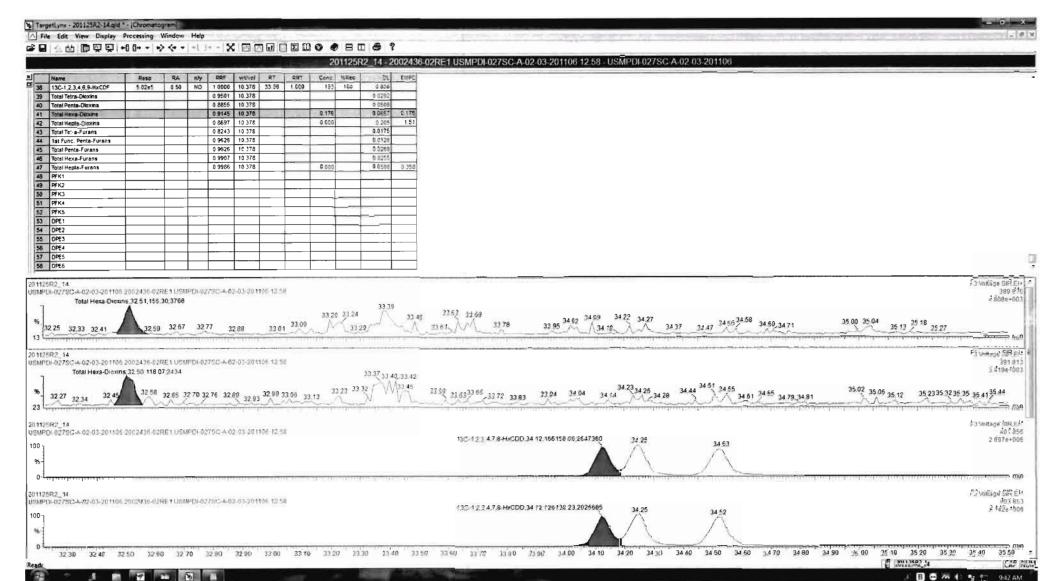
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Last Altered: Thursday, November 26, 2020 07:59:52 Pacific Standard Time Thursday, November 26, 2020 08:00:05 Pacific Standard Time

Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106



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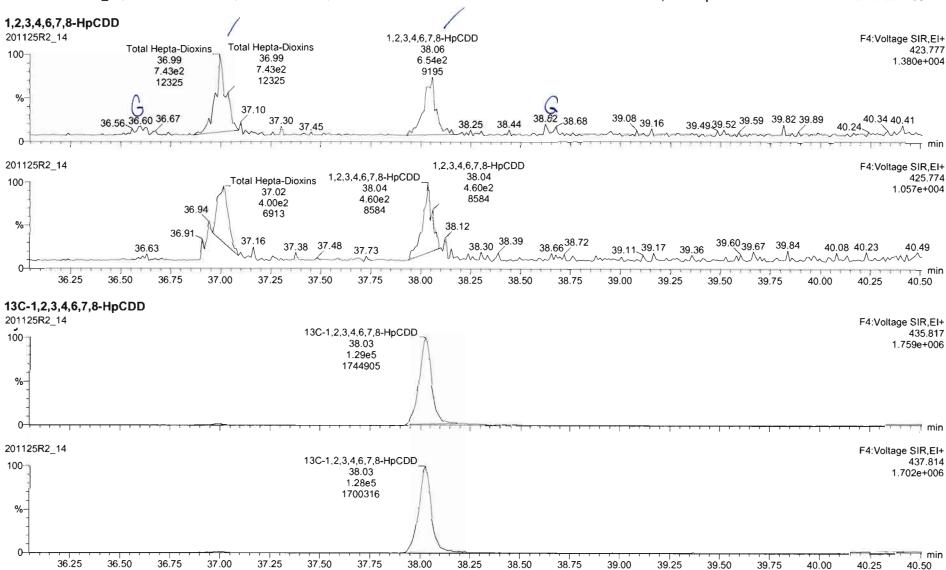


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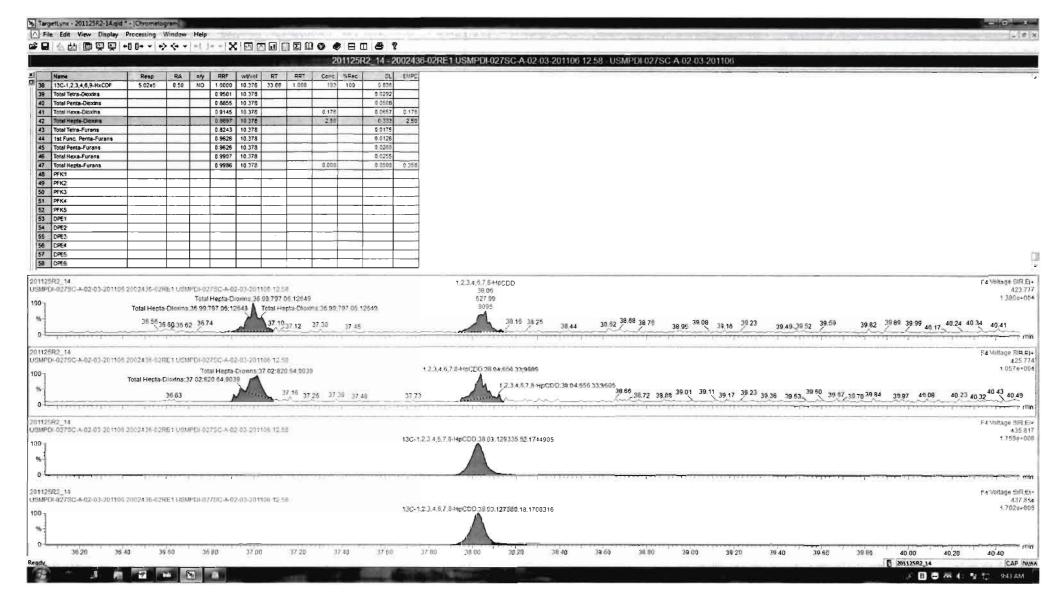
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Last Altered: Thursday, November 26, 2020 07:59:52 Pacific Standard Time Printed: Thursday, November 26, 2020 08:00:05 Pacific Standard Time





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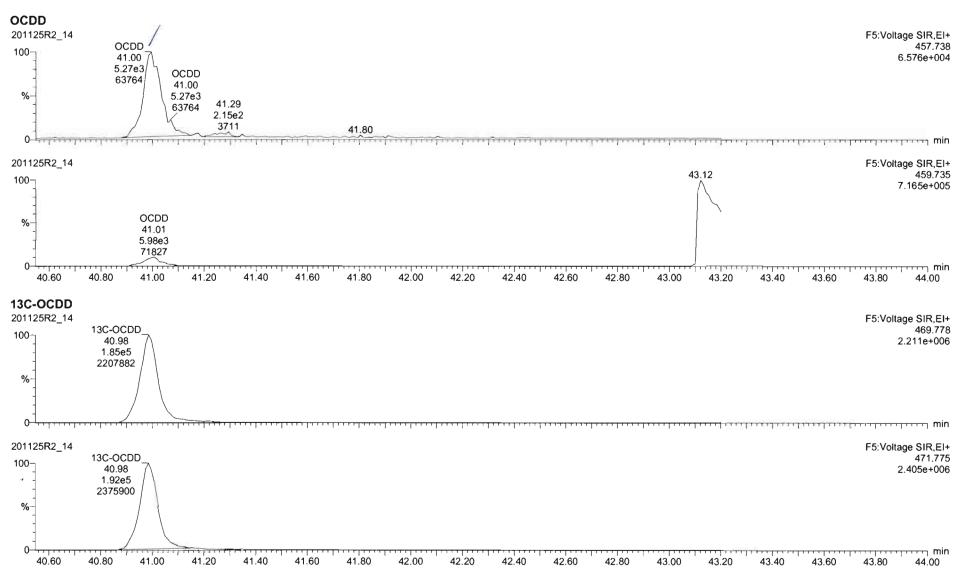


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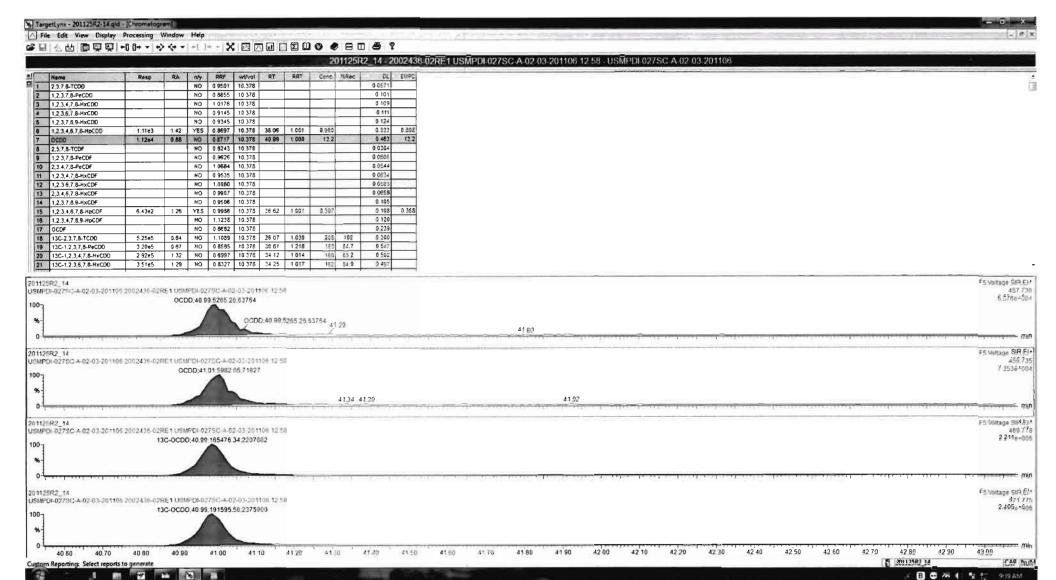
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Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106



Work Order 2002436

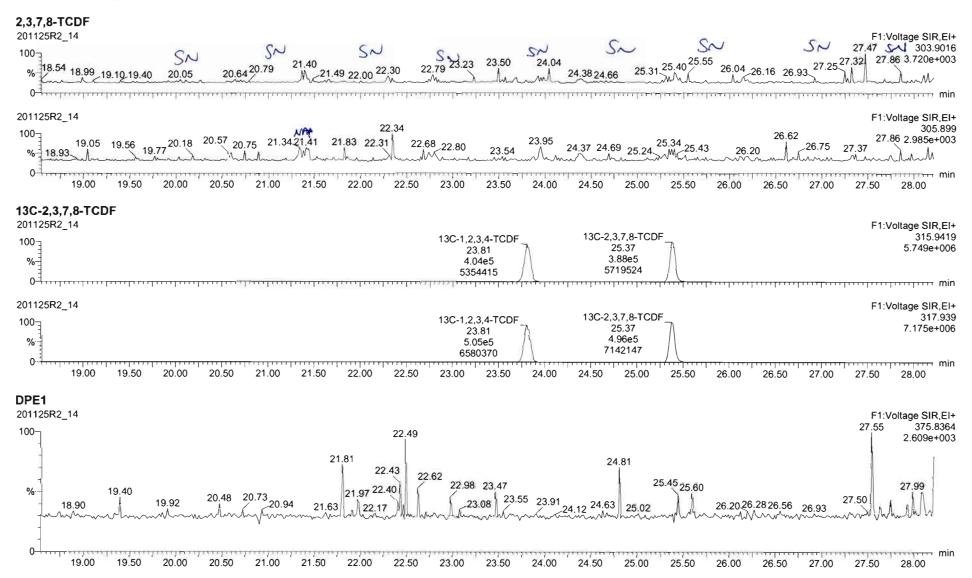


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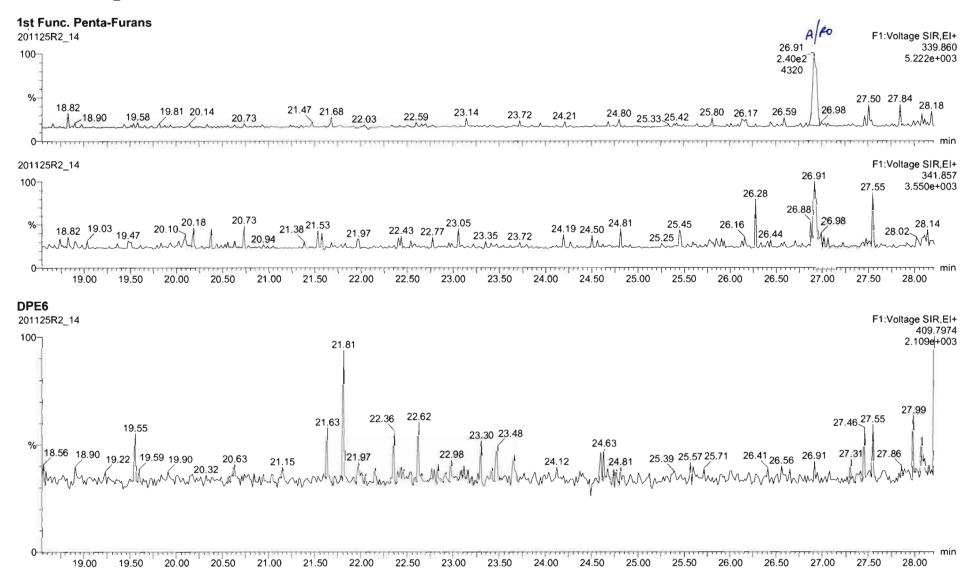
Work Order 2002436

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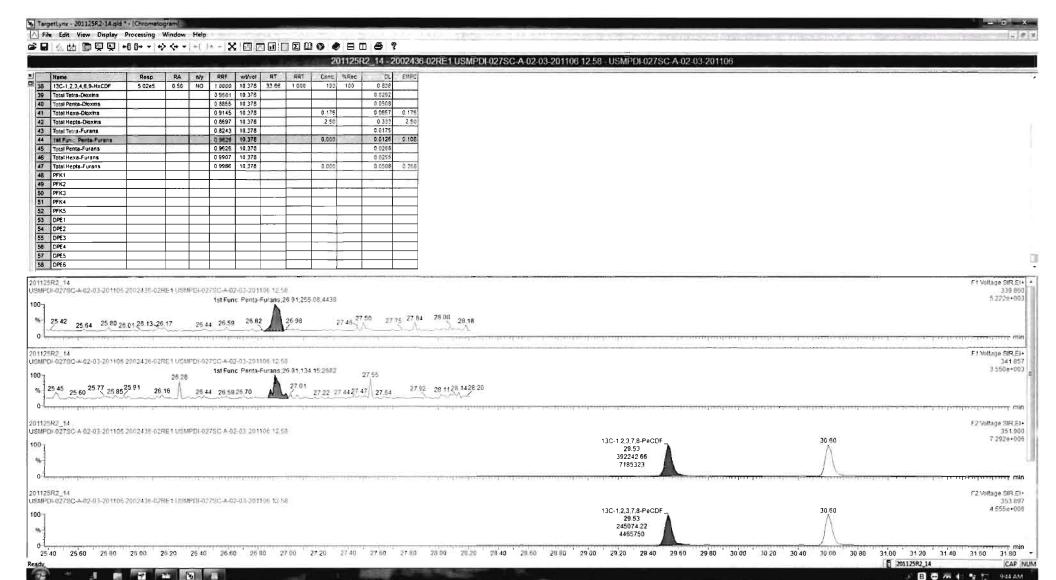
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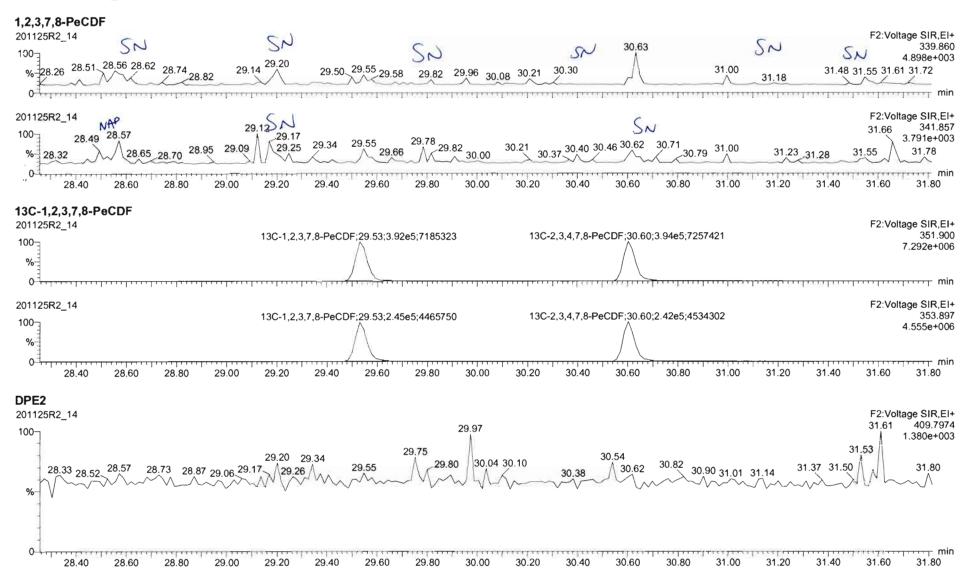
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Dataset:

Last Altered: Thursday, November 26, 2020 07:59:52 Pacific Standard Time Printed: Thursday, November 26, 2020 08:00:05 Pacific Standard Time

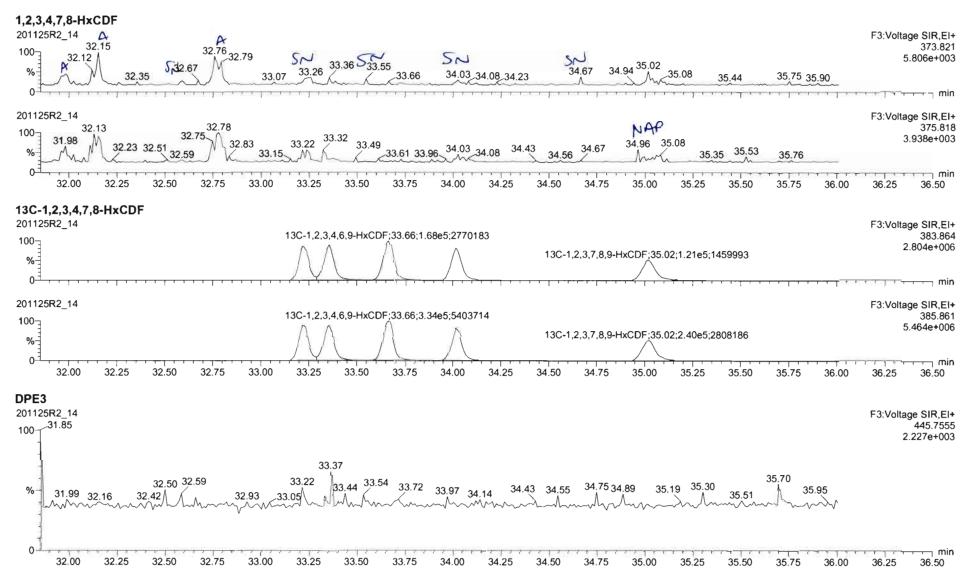
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Untitled

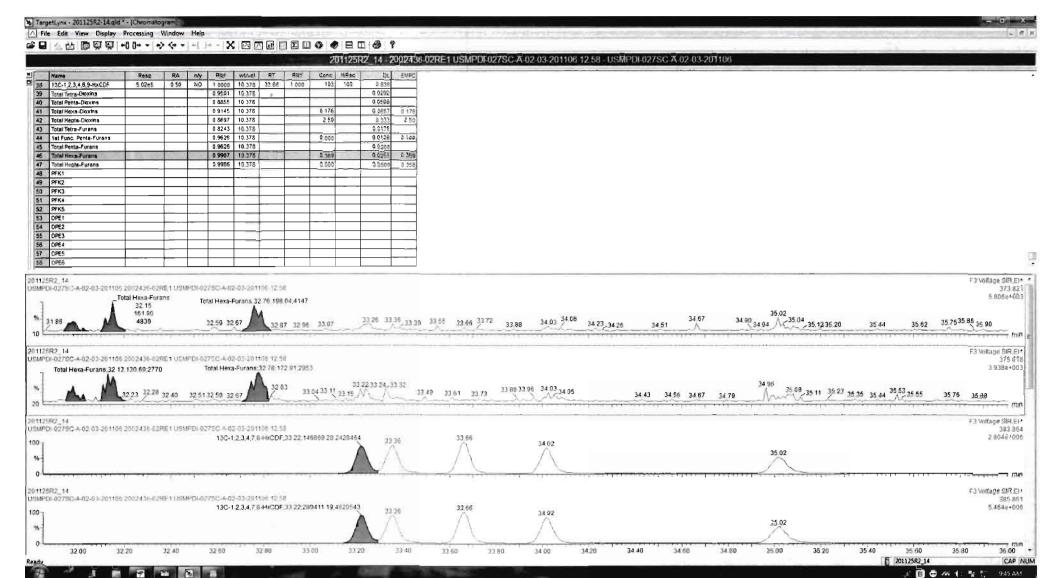
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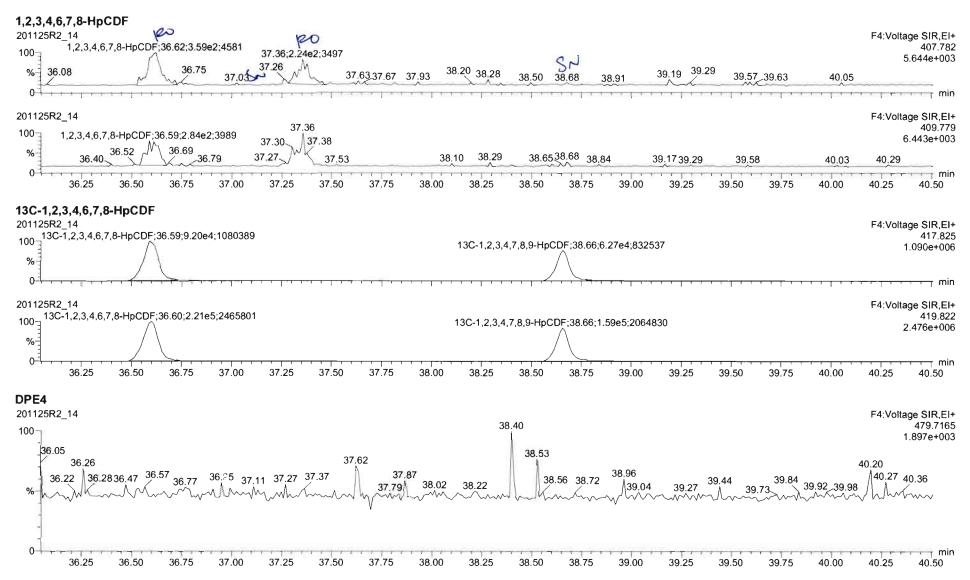


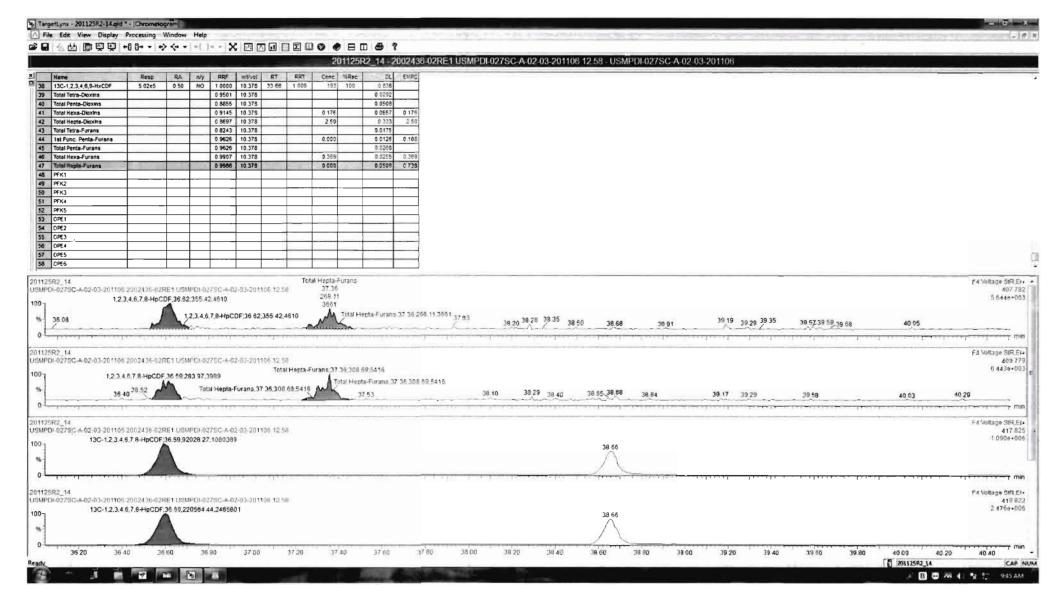
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Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106





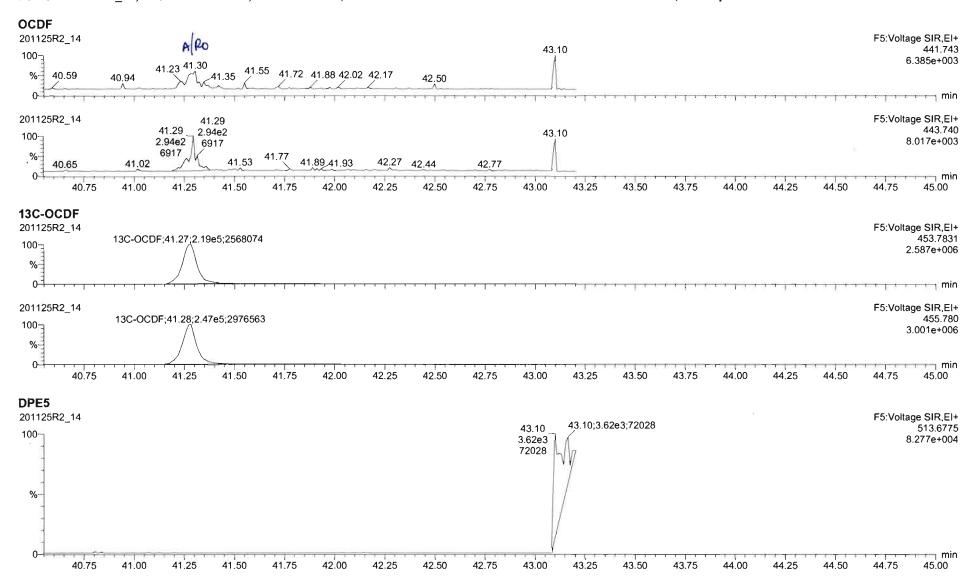
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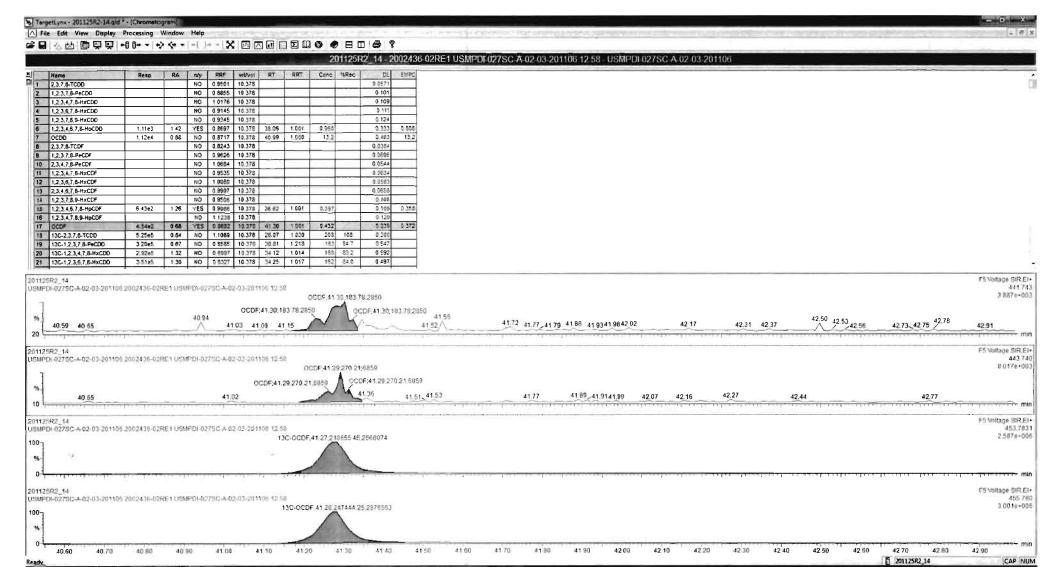
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Thursday, November 26, 2020 07:59:52 Pacific Standard Time Thursday, November 26, 2020 08:00:05 Pacific Standard Time

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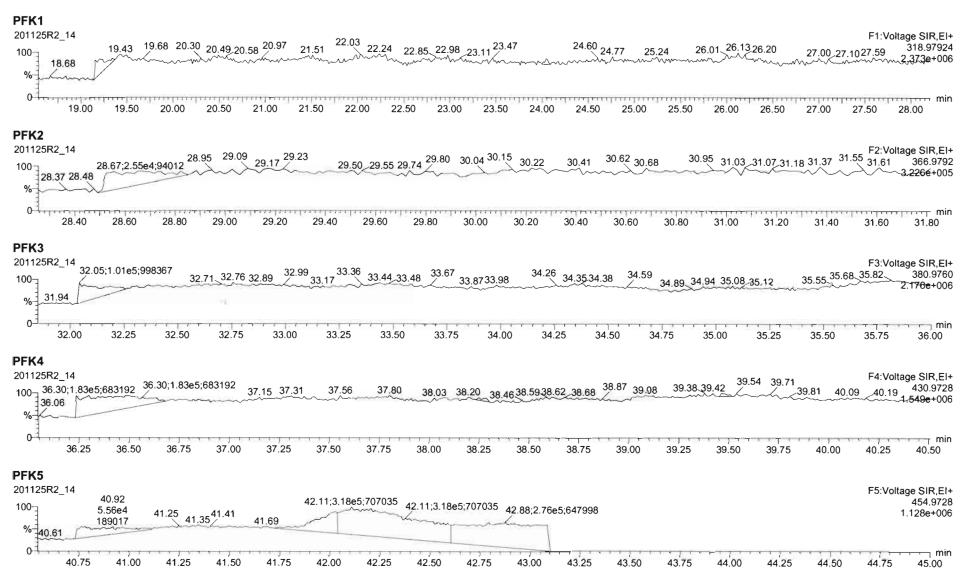
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Name: 201125R2_14, Date: 26-Nov-2020, Time: 07:15:21, ID: 2002436-02RE1 USMPDI-027SC-A-02-03-201106 12.58, Description: USMPDI-027SC-A-02-03-201106



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Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-12.qld

Last Altered:

Printed:

Wednesday, November 25, 2020 12:41:52 Pacific Standard Time Wednesday, November 25, 2020 12:43:29 Pacific Standard Time

GRB 11/25/2020 CT 12/04/2020

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39 Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_12, Date: 24-Nov-2020, Time: 19:38:09, ID: 2002436-03 USMPDI-027SC-A-03-04-201106 12:99, Description: USMPDI-027SC-A-03-04-201106

	# 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	0.950	10.318	2 6.112		1.001				0.0480	
2	2 1,2,3,7,8-PeCDD			NO	0.885	10.318	30.835		1.000				0.110	
3	3 1,2,3,4,7,8-HxCDD			NO	1.02	10.318	34.146		1.000				0.0960	
4	4 1,2,3,6,7,8-HxCDD			NO	0.915	10.318	34.263		1.000				0.0973	
5	5 1,2,3,7,8,9-HxCDD			NO	* 0.934	10.318	34.540		1.000				0.110	
6	6 1,2,3,4,6,7,8-HpCDD	1.10e3	1.01	NO	0.870	10.318	38.020	38.04	1.000	1.001	0.73975		0.154	0.740
7	7 OCDD	1.98e4	0.86	NO	0.872	10.318	40.966	40.98	1.000	1.000	17.929		0.215	17.9
8	8 2,3,7,8-TCDF			NO	0.824	10.318	25.396		1.000				0.0248	
9	9 1,2,3,7,8-PeCDF			NO	0.963	10.318	29.573		1.000				0.0384	
10	10 2,3,4,7,8-PeCDF			NO	1.07	10.318	30.623		1.000				0.0319	
11	11 1,2,3,4,7,8-HxCDF			NO	0.953	10.318	33.230		1.000				0.0397	
12	12 1,2,3,6,7,8-HxCDF			NO	1.01	10.318	33.369		1.000				0.0396	
13	13 2,3,4,6,7,8-HxCDF			NO	0.991	10.318	34.032		1.000				0.0441	
14	14 1,2,3,7,8,9-HxCDF	6.60e1	1.39	NO	0.951	10.318	35.030	35.03	1.000	1.000	0.032587		0.0409	0.0326
15	15 1,2,3,4,6,7,8-HpCDF	2.90e2	1.09	NO	0.999	10.318	36.607	36.58	1.000	0.999	0.15283		0.0347	0.153
16	16 1,2,3,4,7,8,9-HpCDF			NO	1.12	10.318	38.648		1.000				0.0718	
17	17 OCDF			NO	0.868	10.318	41.262		1.000				0.0800	
18	18 13C-2,3,7,8-TCDD	5.69e5	0.81	NO	1.11	10.318	26.073	26.08	1.030	1.030	173.96	89.7	0.248	
19	19 13C-1,2,3,7,8-PeCDD	4.42e5	0.63	NO	0.859	10.318	30.792	30.83	1,216	1.218	174.72	90.1	0.302	
20	20 13C-1,2,3,4,7,8-HxCDD	3.56e5	1.28	NO	0.700	10.318	34.146	34.14	1.014	1.014	173.36	89.4	0.405	
21	21 13C-1,2,3,6,7,8-HxCDD	4.21e5	1.24	NO	0.833	10.318	34.284	34.25	1.018	1.017	172.01	88.7	0.341	
22	22 13C-1,2,3,7,8,9-HxCDD	3.95e5	1.30	NO	0.762	10.318	34.527	34.53	1.025	1.025	176.21	90.9	0.372	
23	23 13C-1,2,3,4,6,7,8-HpCDD	3.30e5	1.05	NO	0.650	10.318	38.012	38.02	1.129	1.129	172.89	89.2	0.723	
24	24 13C-OCDD	4.90e5	0.89	NO	0.539	10.318	40.979	40.97	1.217	1 216	309.23	79.8	0.795	
25	25 13C-2,3,7,8-TCDF	8.14e5	0.77	NO	0.981	10.318	25.395	25.39	1.003	1.003	176.31	91.0	0.291	
26	26 13C-1,2,3,7,8-PeCDF	6.77e5	1.60	NO	0.792	10.318	29.524	29.56	1.166	1.168	181.77	93.8	0.620	
27	27 13C-2,3,4,7,8-PeCDF	6.82e5	1.64	NO	0.778	10.318	30.582	30.62	1.208	1.210	186.60	96.3	0.632	
28	28 13C-1,2,3,4,7,8-HxCDF	4.94e5	0.50	NO	0.954	10.318	33.237	33.23	0.987	0.987	176.26	90.9	0.576	
29	29 13C-1,2,3,6,7,8-HxCDF	5.02e5	0.51	NO	1.01	10.318	33.368	33.37	0.991	0.991	169.97	87.7	0.546	
30	30 13C-2,3,4,6,7,8-HxCDF	4.71e5	0.50	NO	0.921	10.318	34.038	34.03	1.011	1.010	174.08	89.8	0.597	

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U:\VG12.PRO\Results\201124R1\201124R1-12.qld

Last Altered: Printed: Wednesday, November 25, 2020 12:41:52 Pacific Standard Time Wednesday, November 25, 2020 12:43:29 Pacific Standard Time

Name: 201124R1_12, Date: 24-Nov-2020, Time: 19:38:09, ID: 2002436-03 USMPDI-027SC-A-03-04-201106 12.99, Description: USMPDI-027SC-A-03-04-201106

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	4.13e5	0.52	NO	0.803	10.318	35.035	35.03	1.040	1.040	175.02	90.3	0.684	
32	32 13C-1,2,3,4,6,7,8-HpCDF	3.69e5	0.43	NO	0.735	10.318	36.605	36.60	1.087	1.087	170.69	88.1	0.584	1
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.81e5	0.41	NO	0.568	10.318	38.642	38.65	1.147	1.148	168.33	86.8	0.756	
34	34 13C-OCDF	5.52e5	0.87	NO	0.629	10.318	41.262	41.25	1.225	1.225	298.71	77.1	0.538	
35	35 37CI-2,3,7,8-TCDD	2.48e5			1.09	10.318	26.073	26.10	1.030	1.031	77.188	99.6	0.0681	
36	36 13C-1,2,3,4-TCDD	5.72e5	0.80	NO	1.00	10.318	25.370	25.31	1.000	1.000	193.84	100	0.275	
37	37 13C-1,2,3,4-TCDF	9.11e5	0.79	NO	1.00	10.318	23.870	23.81	1.000	1.000	193.84	100	0.285	
38	38 13C-1,2,3,4,6,9-HxCDF	5.70e5	0.51	NO	1.00	10.318	33.710	33.68	1.000	1.000	193.84	100	0.550	
39	39 Total Tetra-Dioxins				0.950	10.318	24.620		0.000		0.15703		0.0286	0.157
40	40 Total Penta-Dioxins				0.885	10.318	29.960		0.000				0.0489	
41	41 Total Hexa-Dioxins				0.915	10.318	33.635		0.000		0.58898		0.105	0.589
42	42 Total Hepta-Dioxins				0.870	10.318	37.640		0.000		1.8410		0.154	1.84
43	43 Total Tetra-Furans				0.824	10.318	23.610		0.000				0.0106	
44	44 1st Func. Penta-Furans				0.963	10.318	26.930		0.000				0.00966	
45	45 Total Penta-Furans				0.963	10.318	29.275		0.000				0.0172	
46	46 Total Hexa-Furans				0.991	10.318	33.555		0.000		0.14022		0.0285	0.140
47	47 Total Hepta-Furans				0.999	10.318	37.835		0.000		0.15283		0.0362	0.153

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-12.qld

Last Altered:

Wednesday, November 25, 2020 12:41:52 Pacific Standard Time

Printed:

Wednesday, November 25, 2020 12:43:29 Pacific Standard Time

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Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_12, Date: 24-Nov-2020, Time: 19:38:09, ID: 2002436-03 USMPDI-027SC-A-03-04-201106 12.99, Description: USMPDI-027SC-A-03-04-201106

Tetra-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 Total Tetra-Dioxins	24.03	3.132e3	4.351e3	1.939e2	2.441e2	0.79	NO	4.380e2	0.15703	0.15703	0.0286

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	8.725e3	8.816e3	3.686e2	3.211e2	1.15	NO	6.898e2	0.37425	0.37425	0.105
2 Total Hexa-Dioxins	33.38	3.510e3	2.944e3	2.258e2	1.699e2	1.33	NO	3.957e2	0.21472	0.21472	0.105

Hepta-Dioxins

	Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1	Total Hepta-Dioxins	37.02	9.718e3	1.083e4	8.371e2	7.936e2	1.05	NO	1.631e3	1.1012	1.1012	0.154
2	1,2,3,4,6,7,8-HpCDD	38.04	8.357e3	8.811e3	5.498e2	5.456e2	1.01	NO	1.095e3	0.73975	0.73975	0.154

Tetra-Furans

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

Penta-Furans function 1

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

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-12.qld

Last Altered:

Wednesday, November 25, 2020 12:41:52 Pacific Standard Time

Printed: Wednesday, November 25, 2020 12:43:29 Pacific Standard Time

Name: 201124R1_12, Date: 24-Nov-2020, Time: 19:38:09, ID: 2002436-03 USMPDI-027SC-A-03-04-201106 12:99, Description: USMPDI-027SC-A-03-04-201106

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	Total Hexa-Furans	32.15	2.192e3	1.398e3	6.717e1	5.156e1	1.30	NO	1.187e2	0.049406	0.049406	0.0285
2	Total Hexa-Furans	32.82	1.876e3	1.342e3	7.682e1	6.312e1	1.22	NO	1.399e2	0.058228	0.058228	0.0285
3	1,2,3,7,8,9-HxCDF	35.03	1.198e3	9.860e2	3.842e1	2.762e1	1.39	NO	6.603e1	0.032587	0.032587	0.0409

Hepta-Furans

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 1,2,3,4,	6,7,8-HpCDF 36.5	3 2.191e3	2.171e3	1.512e2	1.393e2	1.09	NO	2.904e2	0.15283	0.15283	0.0347

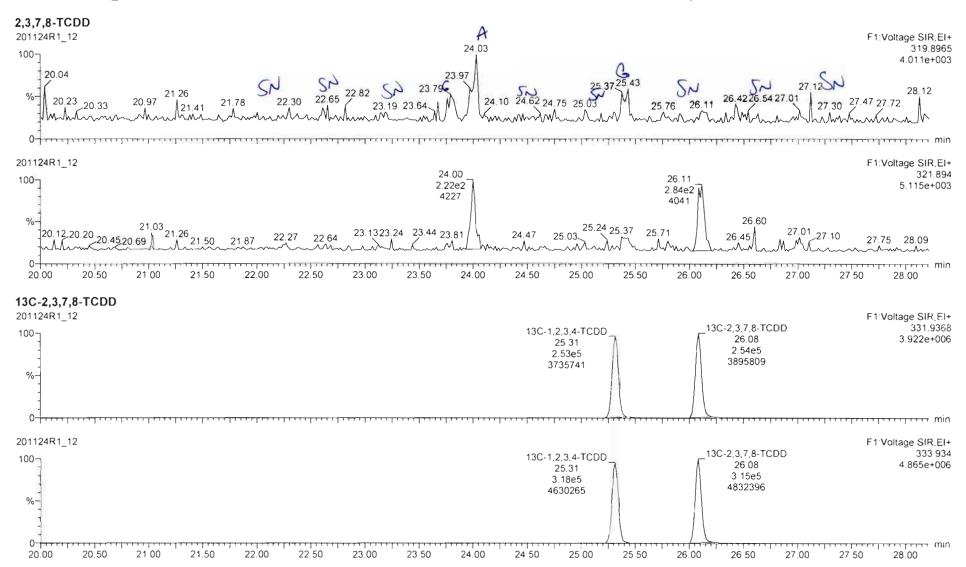
Work Order 2002436 Page 155 of 441

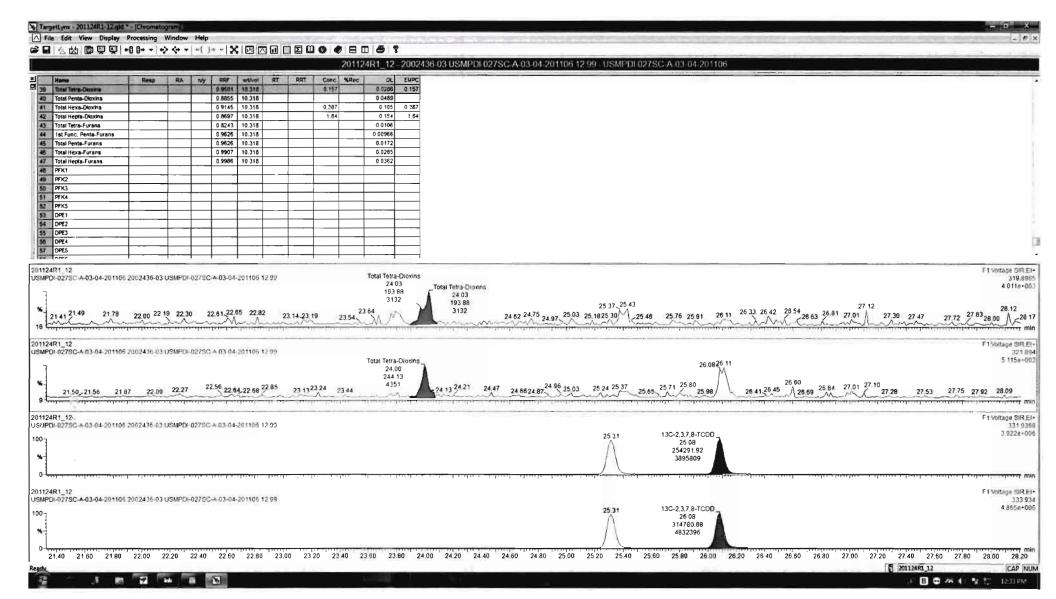
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Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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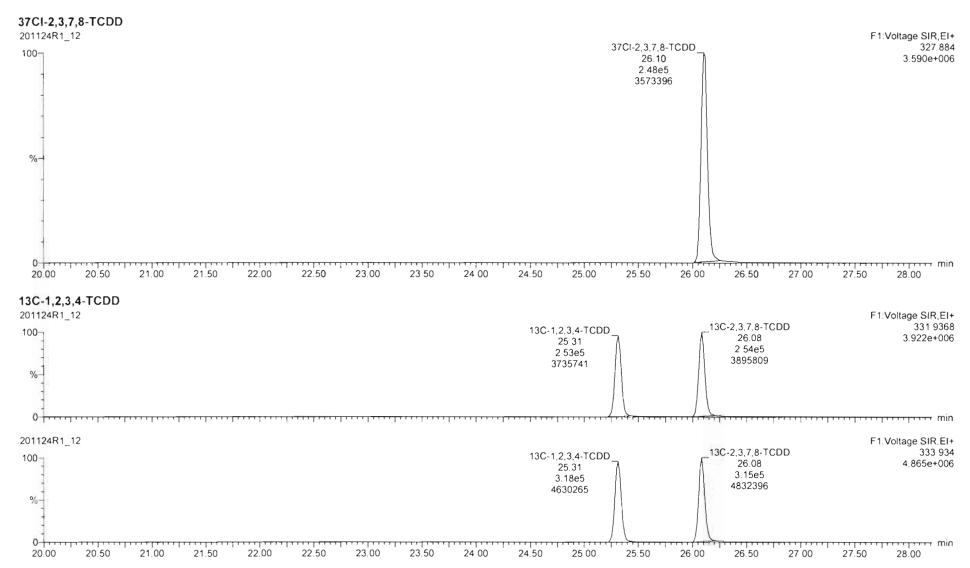


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Last Altered: Printed: Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

Name: 201124R1_12, Date: 24-Nov-2020, Time: 19:38:09, ID: 2002436-03 USMPDI-027SC-A-03-04-201106 12.99, Description: USMPDI-027SC-A-03-04-201106



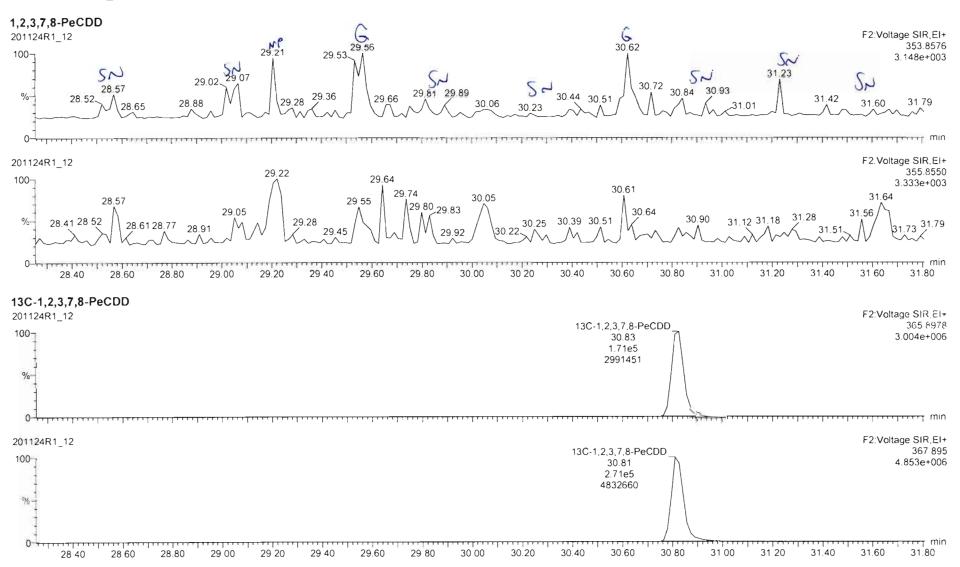
Vista Analytical Laboratory

Dataset:

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Name: 201124R1_12, Date: 24-Nov-2020, Time: 19:38:09, ID: 2002436-03 USMPDI-027SC-A-03-04-201106 12:99, Description: USMPDI-027SC-A-03-04-201106



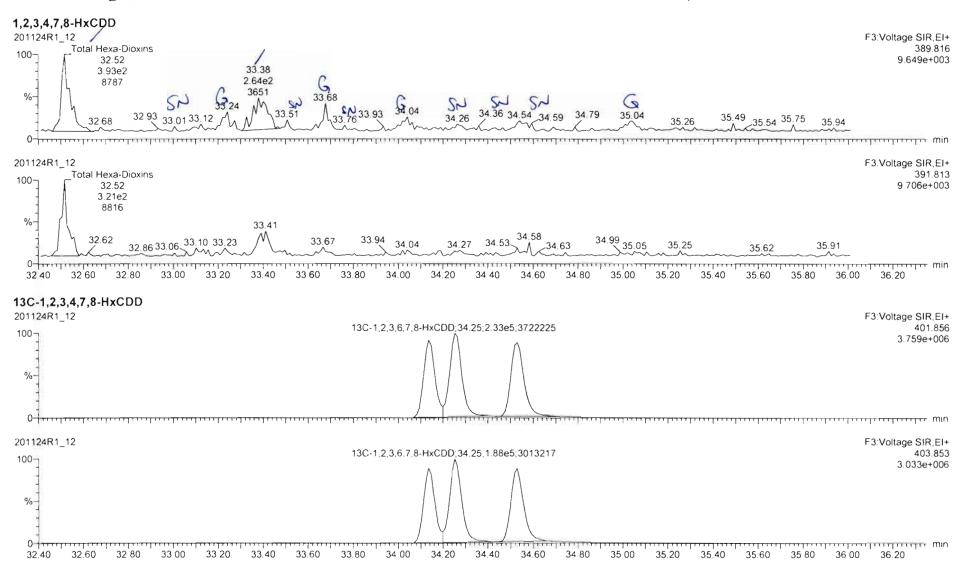
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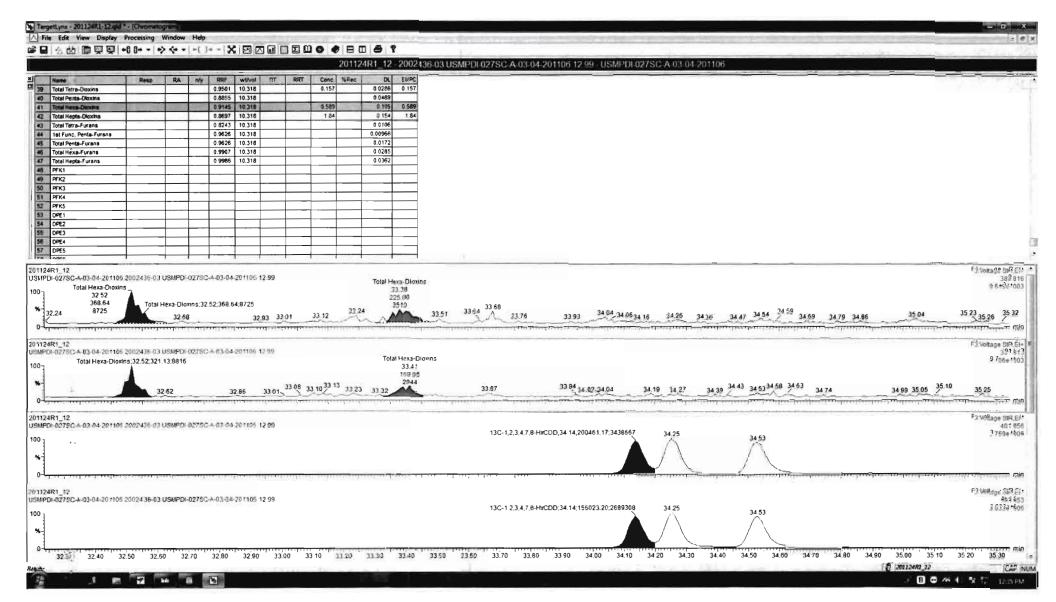
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Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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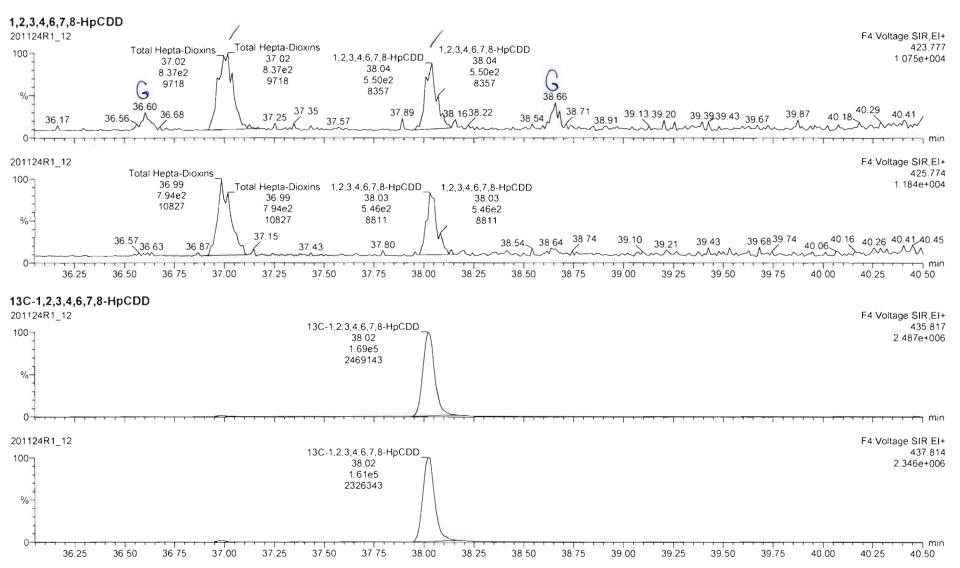


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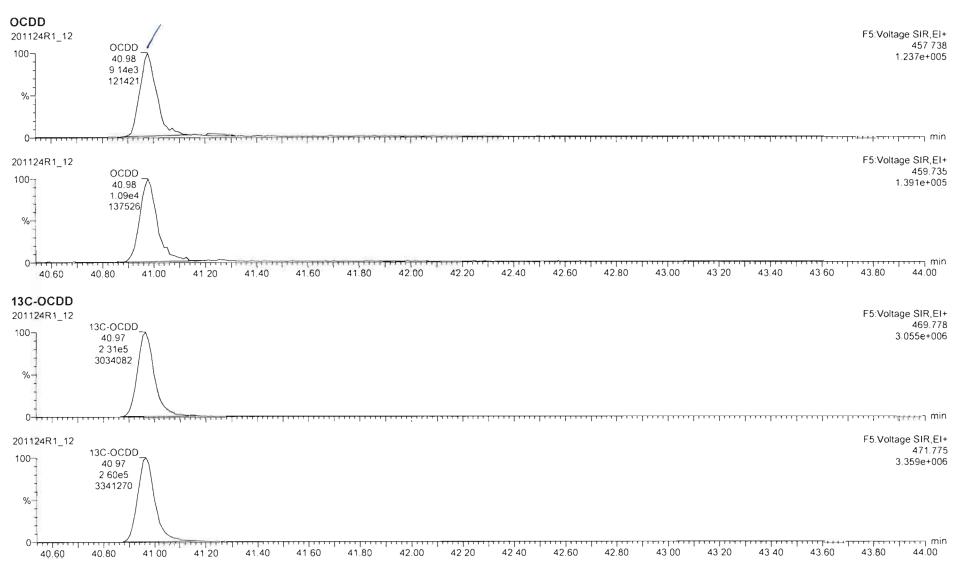
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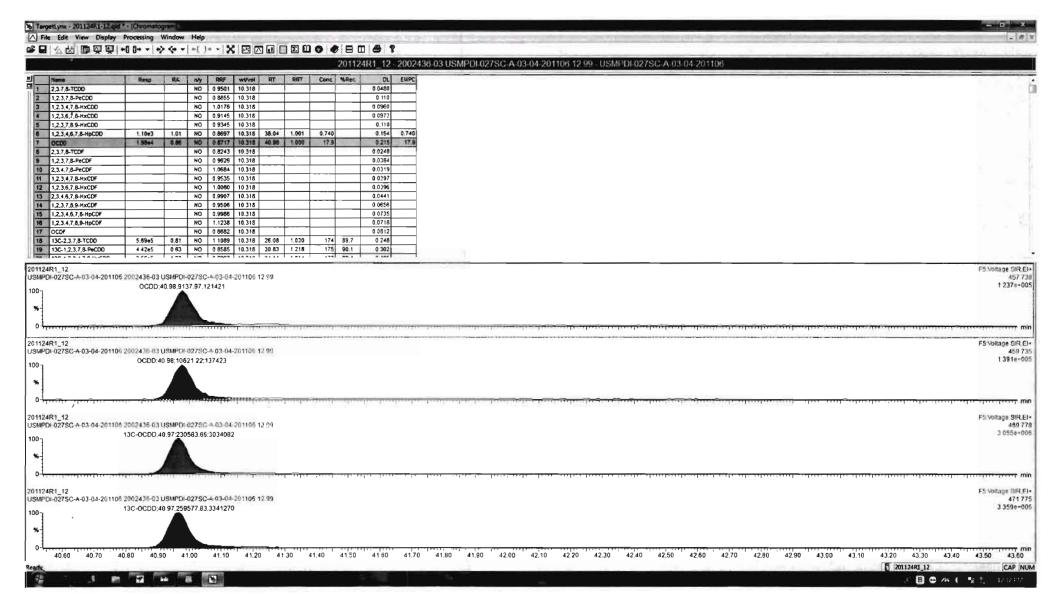


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Work Order 2002436 Page 164 of 441

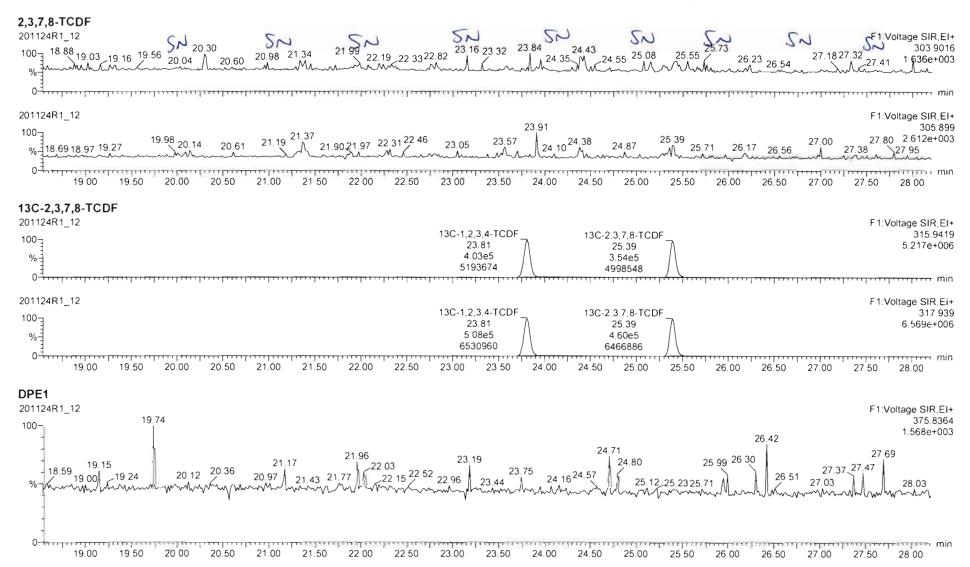
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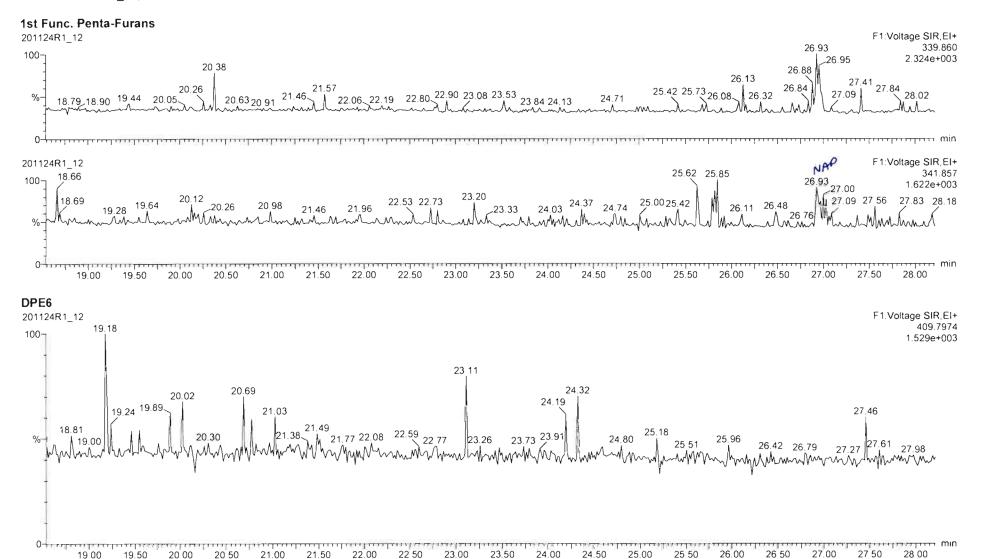
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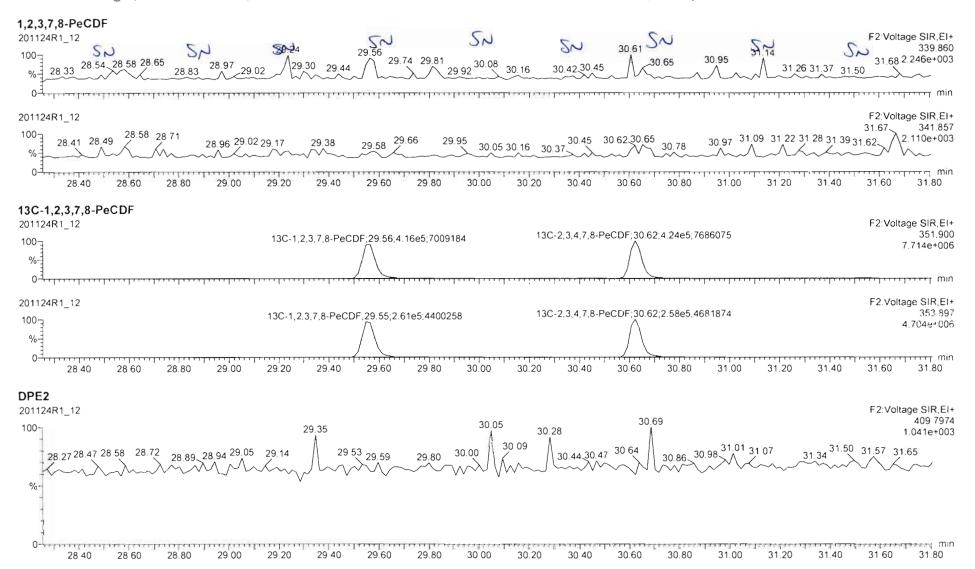
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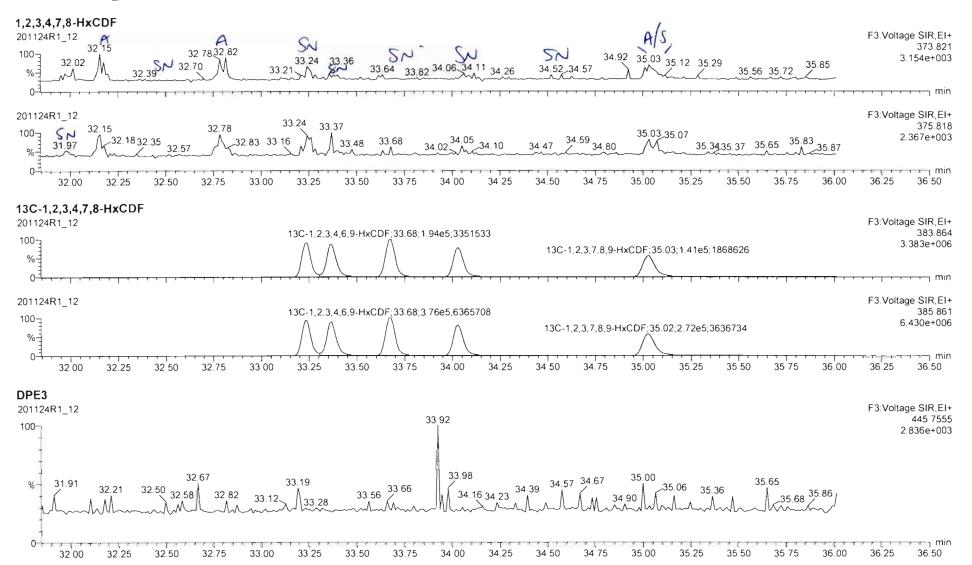


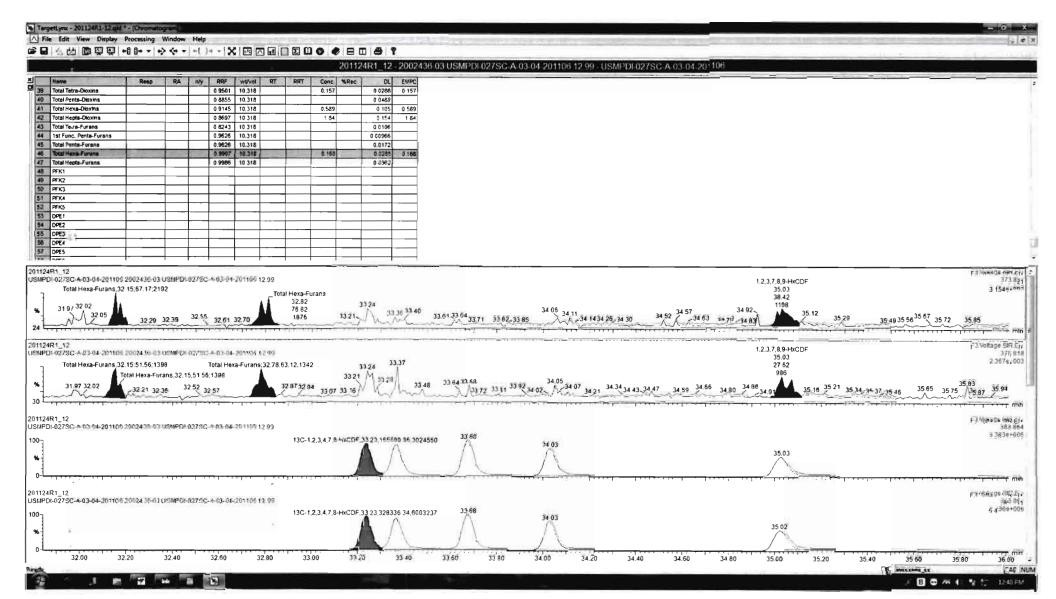
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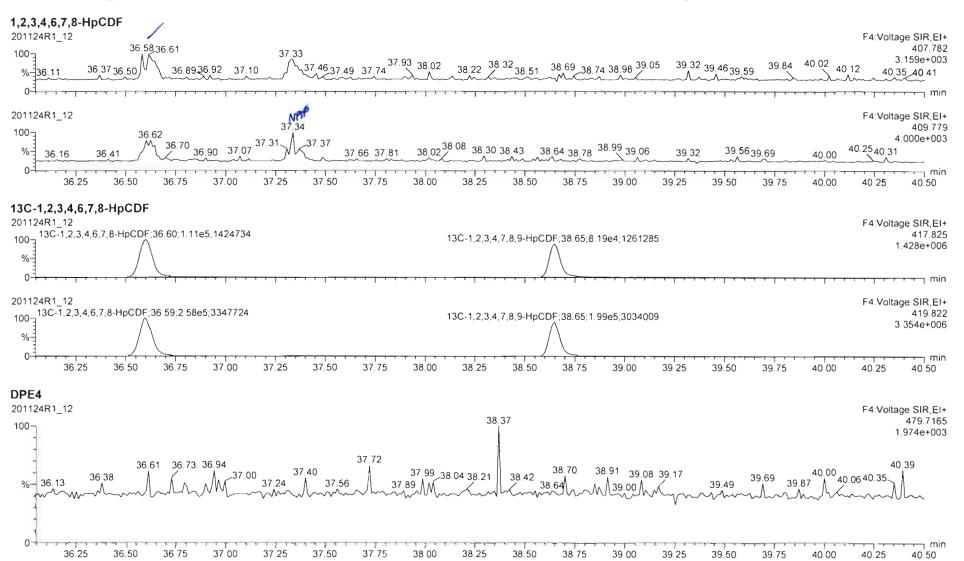
Work Order 2002436 Page 169 of 441

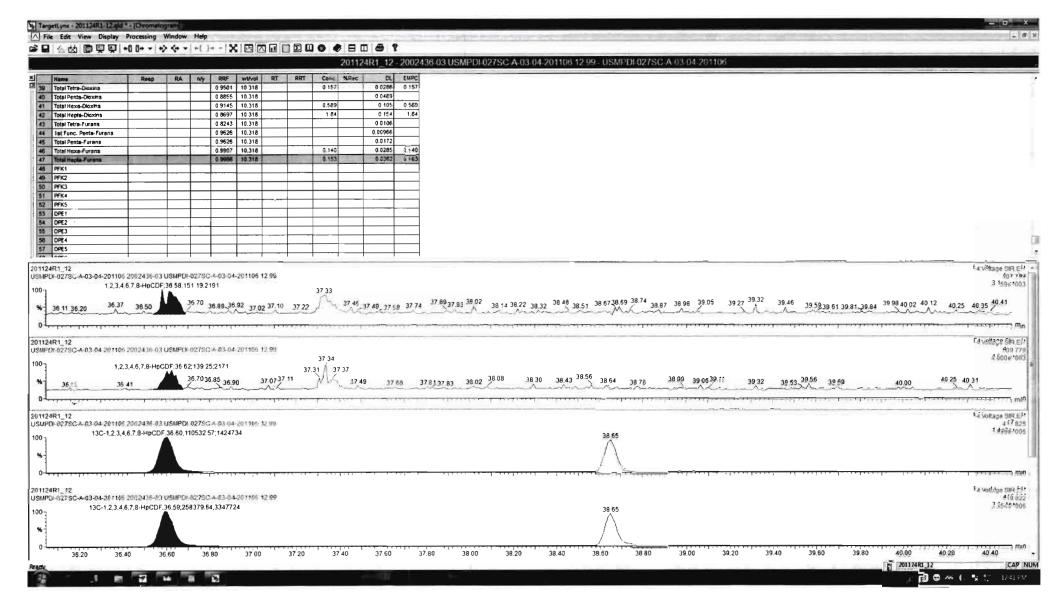
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Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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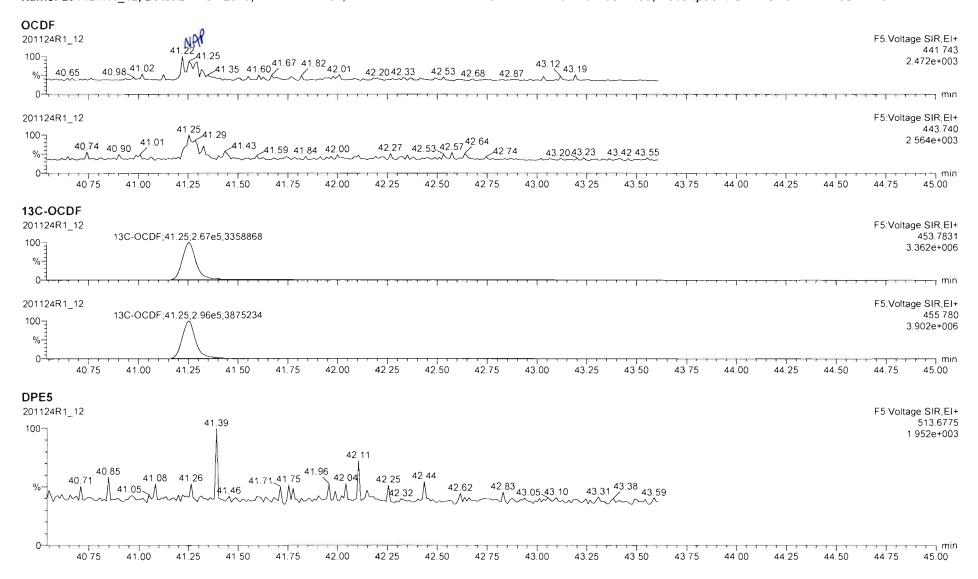


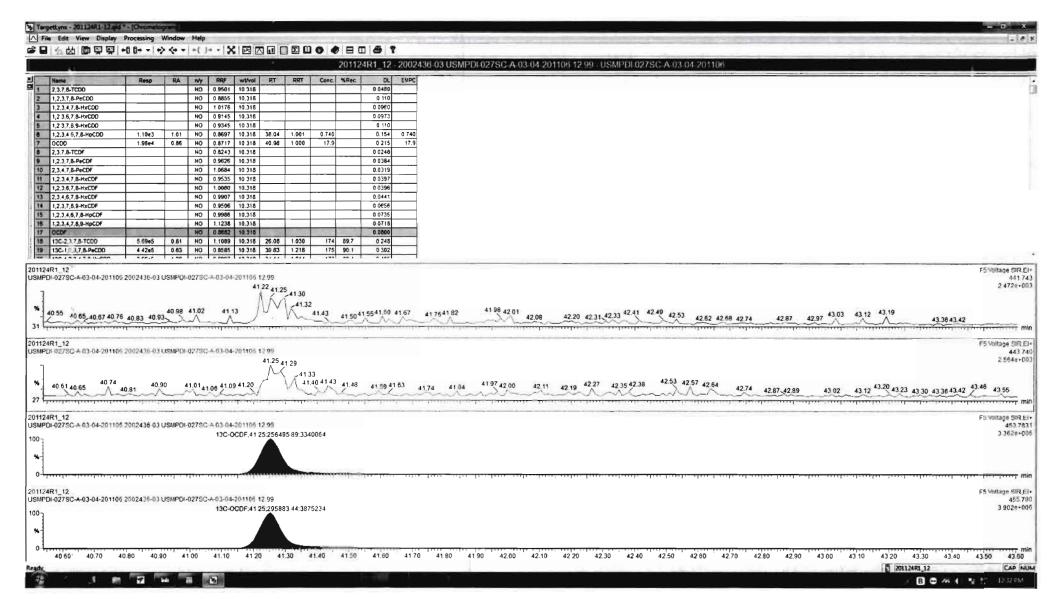
Work Order 2002436 Page 171 of 441

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Last Altered: Printed: Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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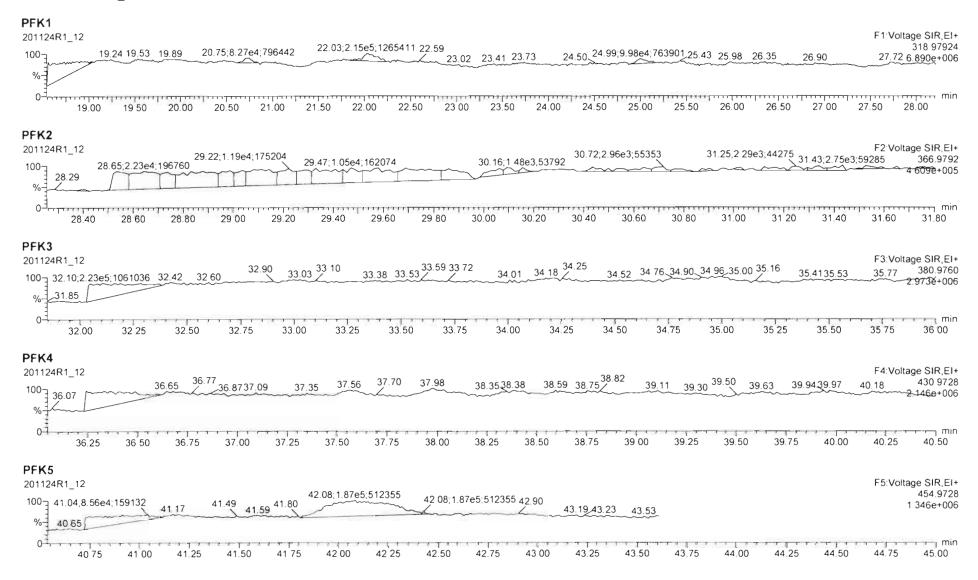


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Last Altered: Wednesday, November 25, 2020 07:04:08 Pacific Standard Time Wednesday, November 25, 2020 07:52:33 Pacific Standard Time

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Work Order 2002436 Page 174 of 441

Page 1 of 2

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-13.qld

Last Altered:

Printed:

Wednesday, November 25, 2020 12:47:04 Pacific Standard Time Wednesday, November 25, 2020 12:48:18 Pacific Standard Time

C7 17/04/2020

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_13, Date: 24-Nov-2020, Time: 20:23:02, ID: 2002436-04 USMPDI-027SC-A-04-05-201106 11.23, Description: USMPDI-027SC-A-04-05-201106

_	# 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	0.950	10.234	26.112		1.001				0.0460	
2	2 1,2,3,7,8-PeCDD			NO	0.885	10.234	30.819		1.000				0.105	
3	3 1,2,3,4,7,8-HxCDD			NO	1.02	10.234	34.135		1.000				0.113	
4	4 1,2,3,6,7,8-HxCDD			NO	0.915	10.234	34.252		1.000				0.114	
5	5 1,2,3,7,8,9-HxCDD			NO	0.934	10.234	34.529		1.000				0.121	
6	6 1,2,3,4,6,7,8-HpCDD			NO	0.870	10.234	38.020		1.000				0.199	
7	7 OCDD	2.59e3	0.83	NO	0.872	10.234	40.998	41.01	1.000	1.000	2.6663		0.291	2.67
8	8 2,3,7,8-TCDF			NO	0.824	10.234	25.396		1.000				0.0227	
9	9 1,2,3,7,8-PeCDF			NO	0.963	10.234	29.558		1.000				0.0389	
10	10 2,3,4,7,8-PeCDF			NO	1.07	10.234	30.623		1.000				0.0362	
11	11 1,2,3,4,7,8-HxCDF			NO	0.953	10.234	33.220		1.000				0.0290	
12	12 1,2,3,6,7,8-HxCDF			NO	1.01	10.234	33.348		1.000				0.0268	
13	13 2,3,4,6,7,8-HxCDF			NO	0.991	10.234	34.022		1.000				0.0311	
14	14 1,2,3,7,8,9-HxCDF			NO	0.951	10.234	35.009		1.000				0.0467	
15	15 1,2,3,4,6,7,8-HpCDF			NO	0.999	10.234	36.596		1.000				0.0576	
16	16 1,2,3,4,7,8,9-HpCDF			NO	1.12	10.234	38.659		1.000				0.0647	
17	17 OCDF			NO	0.868	10.234	41.294		1.000				0.113	
18	18 13C-2,3,7,8-TCDD	5.40e5	0.81	NO	1.11	10.234	26.073	26.08	1.030	1.030	158.63	81.2	0.183	
19	19 13C-1,2,3,7,8-PeCDD	4.18e5	0.63	NO	0.859	10.234	30.792	30.81	1.216	1.217	158.65	81.2	0.294	
20	20 13C-1,2,3,4,7,8-HxCDD	3.36e5	1.32	NO	0.700	10.234	34.125	34.13	1.014	1.014	159.39	81.6	0.489	
21	21 13C-1,2,3,6,7,8-HxCDD	3.91e5	1.31	NO	0.833	10.234	34.263	34.24	1.018	1.017	155.98	79.8	0.411	
22	22 13C-1,2,3,7,8,9-HxCDD	3.76e5	1.26	NO	0.762	10.234	34.505	34.52	1.025	1.026	163.97	83.9	0.449	
23	23 13C-1,2,3,4,6,7,8-HpCDD	3.06e5	1.12	NO	0.650	10.234	37.989	38.02	1.129	1.130	156.77	80.2	0.675	
24	24 13C-OCDD	4.35e5	0.89	NO	0.539	10.234	40.954	41.00	1.217	1.218	267.86	68.5	0.866	
25	25 13C-2,3,7,8-TCDF	7.81e5	0.77	NO	0.981	10.234	25.395	25.39	1.003	1.003	162.55	83.2	0.250	
26	26 13C-1,2,3,7,8-PeCDF	6.47e5	1.59	NO	0.792	10.234	29.524	29.55	1.166	1.167	166.81	85.4	0.618	
27	27 13C-2,3,4,7,8-PeCDF	6.28e5	1.64	NO	0.778	10 234	30.582	30.62	1.208	1.210	164.90	84.4	0.629	
28	28 13C-1,2,3,4,7,8-HxCDF	4.56e5	0.51	NO	0.954	10.234	33.216	33.22	0.987	0.987	159.00	81.4	0.645	
29	29 13C-1,2,3,6,7,8-HxCDF	4.72e5	0.49	NO	1.01	10.234	33.347	33.35	0.991	0.991	155.78	79.7	0.612	
30	30 13C-2,3,4,6,7,8-HxCDF	4.46e5	0.50	NO	0.921	10.234	34.017	34.02	1.011	1.011	160.96	82.4	0.668	

Work Order 2002436 Page 175 of 441 Vista Analytical Laboratory

Dataset: U:\VG12.PR0\Results\201124R1\201124R1-13.qld

Last Altered: Wednesday, November 25, 2020 12:47:04 Pacific Standard Time Printed: Wednesday, November 25, 2020 12:48:18 Pacific Standard Time

Name: 201124R1_13, Date: 24-Nov-2020, Time: 20:23:02, ID: 2002436-04 USMPDI-027SC-A-04-05-201106 11.23, Description: USMPDI-027SC-A-04-05-201106

	# Name	Resp	RA	n/y	RRF	wt/vol	Pred.RT	RT	Pred.RRT	RRT	Conc.	%Rec	DL	EMPC
31	31 13C-1,2,3,7,8,9-HxCDF	3.90e5	0.51	NO	0.803	10.234	35.013	35.01	1.040	1.040	161.37	82.6	0.766	1
32	32 13C-1,2,3,4,6,7,8-HpCDF	3.37e5	0.41	NO	0.735	10.234	36.582	36.59	1.087	1.087	152.39	78.0	0.589	
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.50e5	0.42	NO	0.568	10.234	38.618	38.66	1.147	1.149	146.10	74.8	0.763	
34	34 13C-OCDF	5.04e5	0.89	NO	0.629	10.234	41.237	41.29	1.225	1,227	266.15	68.1	0.597	
35	35 37CI-2,3,7,8-TCDD	2.50e5			1.09	10.234	26.073	26.10	1.030	1.031	74.858	95.8	0.0649	
36	36 13C-1,2,3,4-TCDD	5.99e5	0.80	NO	1.00	10.234	25.370	25.31	1.000	1.000	195.42	100	0.203	
37	37 13C-1,2,3,4-TCDF	9.57e5	0.79	NO	1.00	10.234	23.870	23.81	1.000	1.000	195.42	100	0.245	
38	38 13C-1,2,3,4,6,9-HxCDF	5.88e5	0.51	NO	1.00	10.234	33.710	33.66	1.000	1.000	195.42	100	0.615	
39	39 Total Tetra-Dioxins				0.950	10.234	24.620		0.000				0.0263	
40	40 Total Penta-Dioxins				0.885	10.234	29.960		0.000				0.0394	
41	41 Total Hexa-Dioxins				0.915	10.234	33.635		0.000		0.17854		0.0614	0.179
42	42 Total Hepta-Dioxins				0.870	10.234	37.640		0.000				0.103	
43	43 Total Tetra-Furans				0.824	10.234	23.610		0.000				0.00908	
44	44 1st Func. Penta-Furans				0.963	10.234	26.930		0.000				0.00886	
45	45 Total Penta-Furans				0.963	10.234	29.275		0.000				0.0165	
46	46 Total Hexa-Furans				0.991	10.234	33.555		0.000				0.0161	
47	47 Total Hepta-Furans				0.999	10.234	37.835		0.000				0.0319	

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-13.qld

Last Altered: Printed:

Wednesday, November 25, 2020 12:47:04 Pacific Standard Time Wednesday, November 25, 2020 12:48:18 Pacific Standard Time

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Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_13, Date: 24-Nov-2020, Time: 20:23:02, ID: 2002436-04 USMPDI-027SC-A-04-05-201106 11.23, Description: USMPDI-027SC-A-04-05-201106

Tetra-Dioxins

Name 1	RT	m1 Height m2 Height	m1 Resp m2 R	esp RA n/y	Resp	Conc.	EMPC	DL
Penta-Dioxins								
Name	RT	m1 Height m2 Height	m1 Resp m2 R	esp RA n/y	Resp	Conc.	EMPC	DL

Hexa-Dioxins

Name	RT	m1 Height	m2 Height	m1 Resp	m2 Resp	RA	n/y	Resp	Conc.	EMPC	DL
1 Total Hexa-Dioxins	32.51	4.127e3	3.078e3	1.642e2	1.428e2	1.15	NO	3.070e2	0.17854	0.17854	0.0614

Hepta-Dioxins

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

Tetra-Furans

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

Penta-Furans function 1

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

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-13.qld

Last Altered: Printed:

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Penta-Furans

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

Hexa-Furans

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

Hepta-Furans

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

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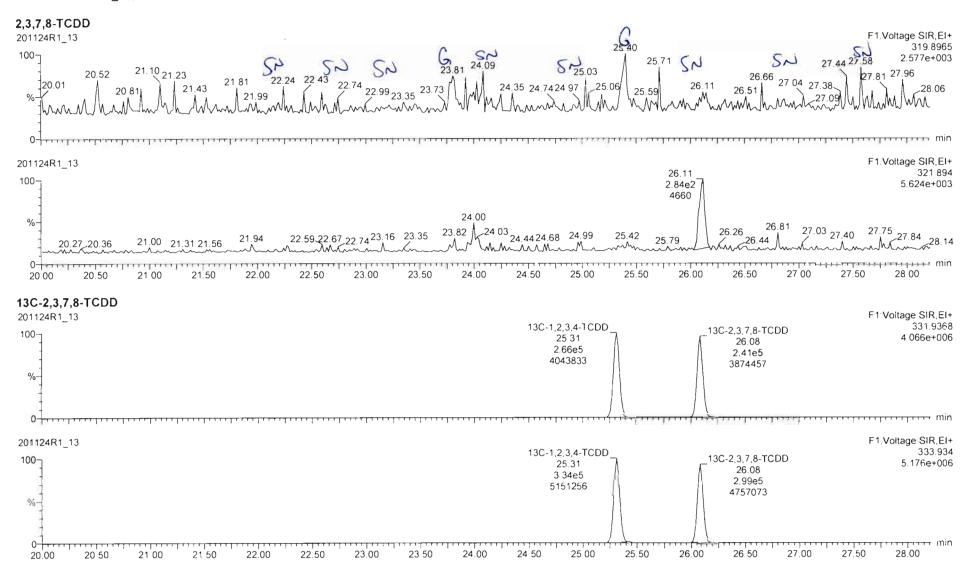
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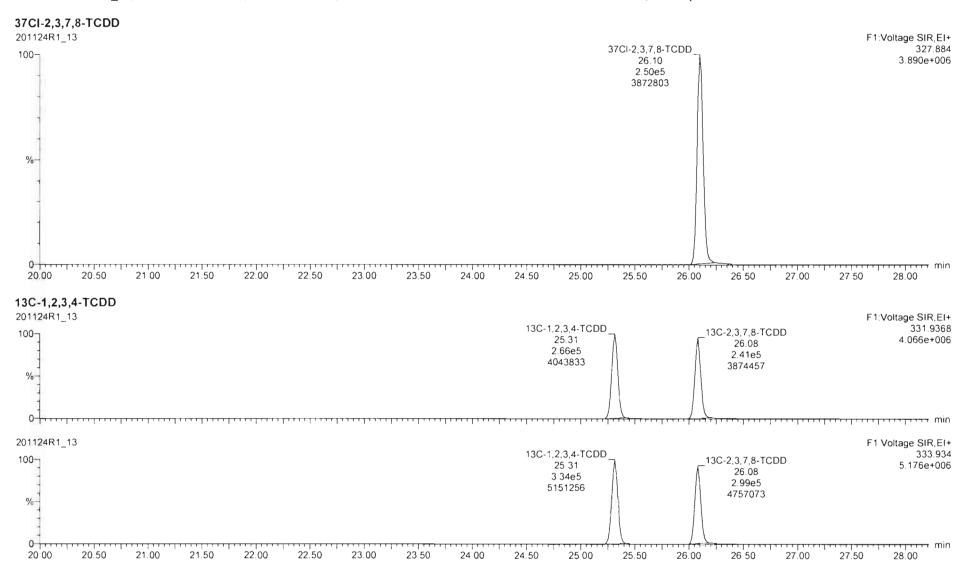


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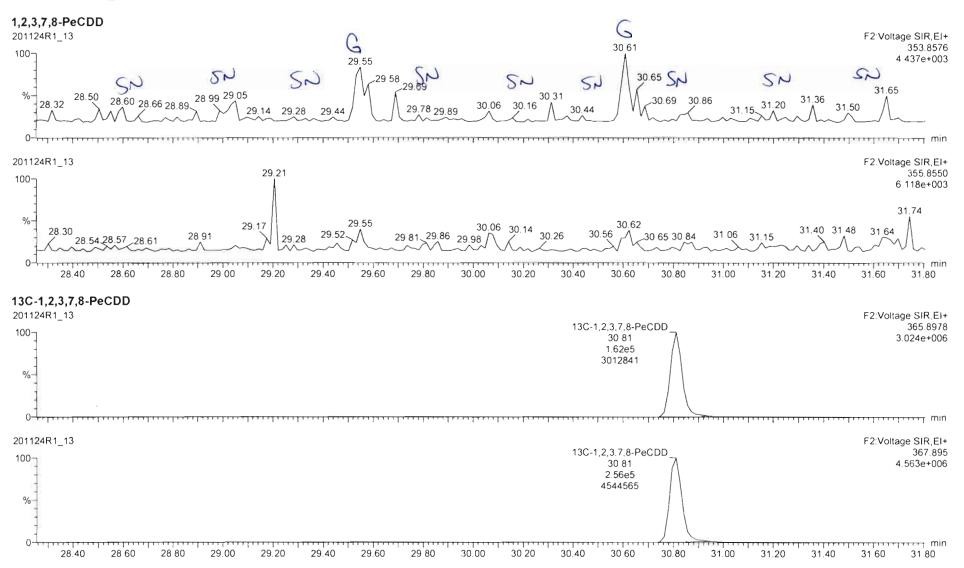
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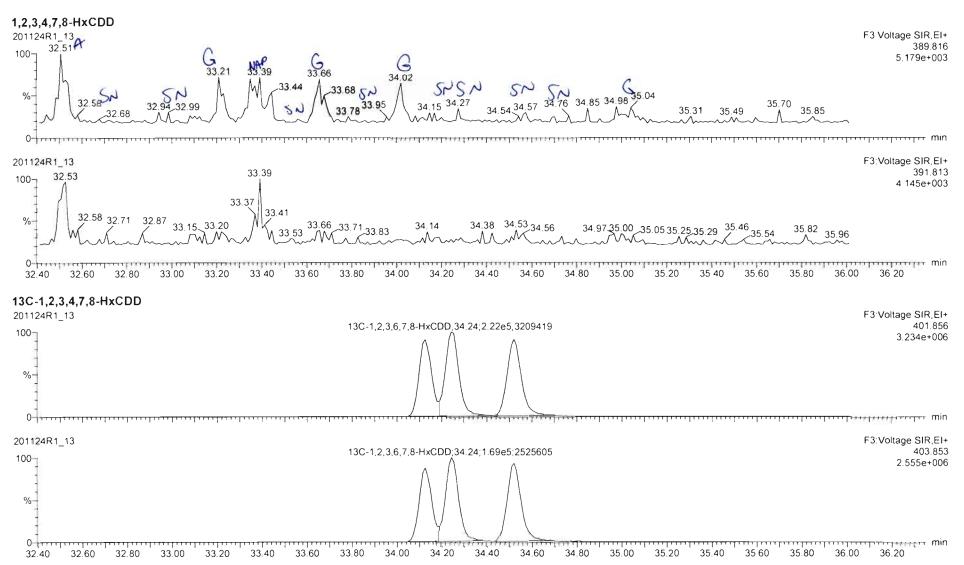
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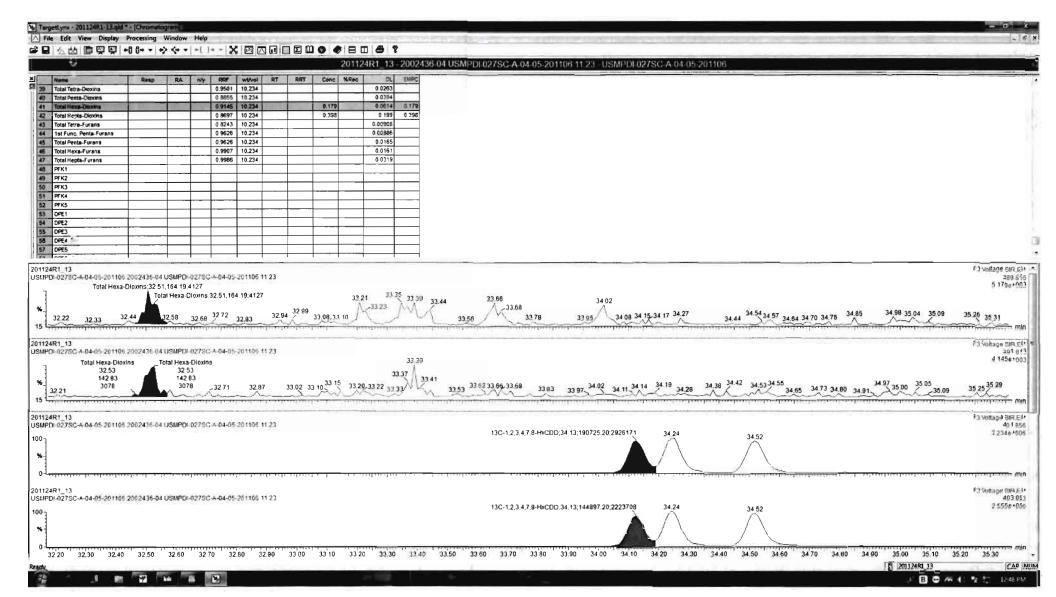
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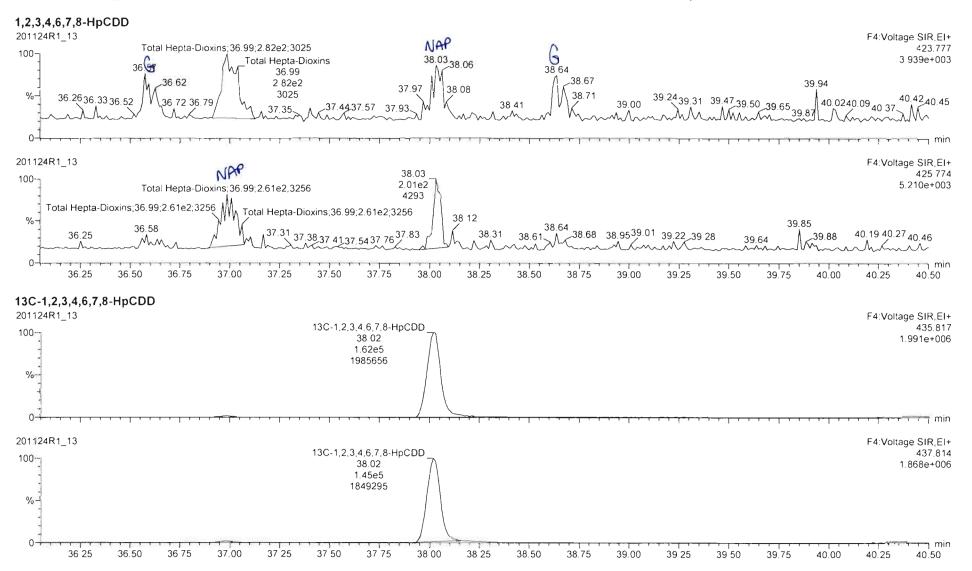
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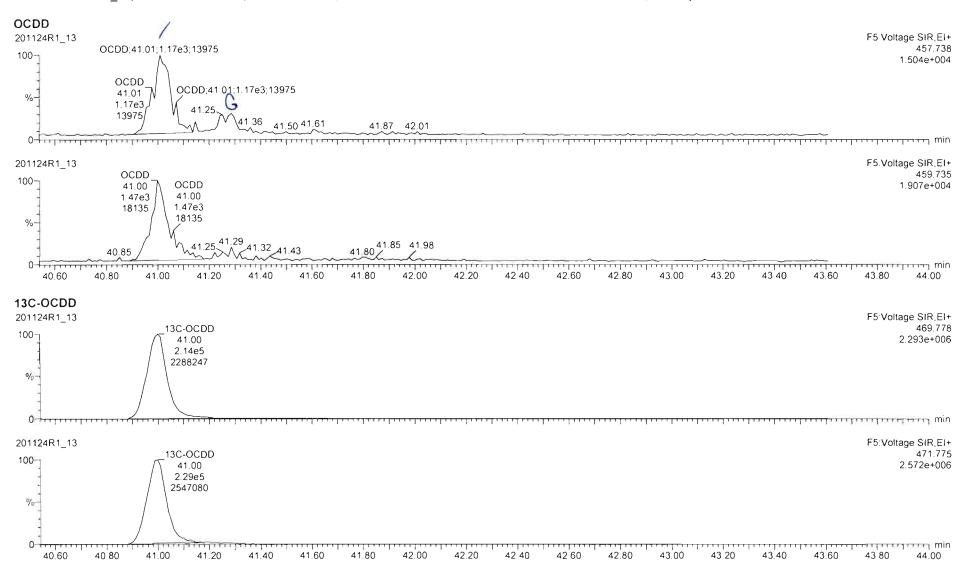
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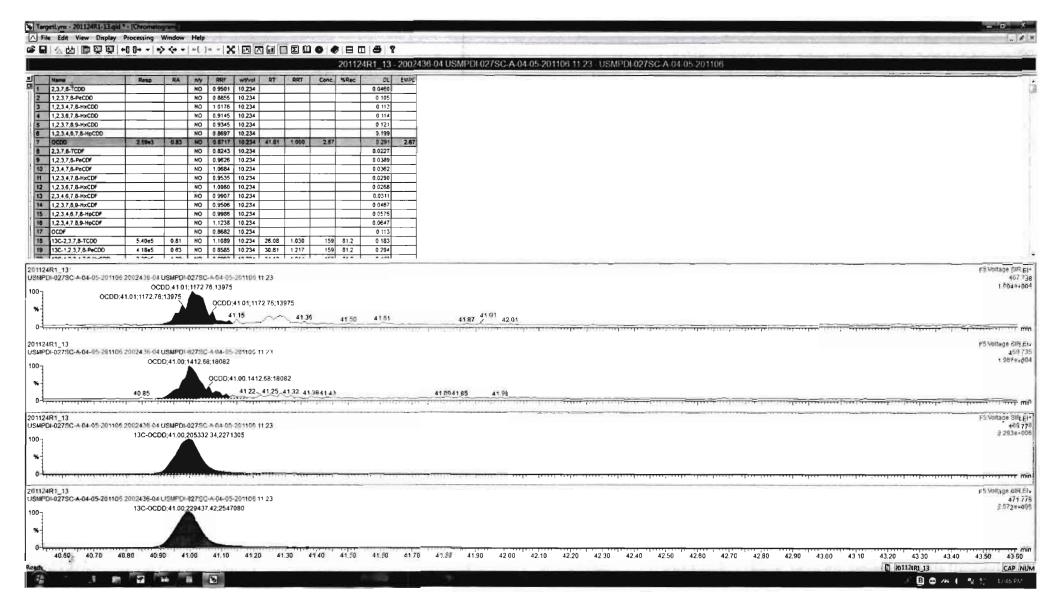
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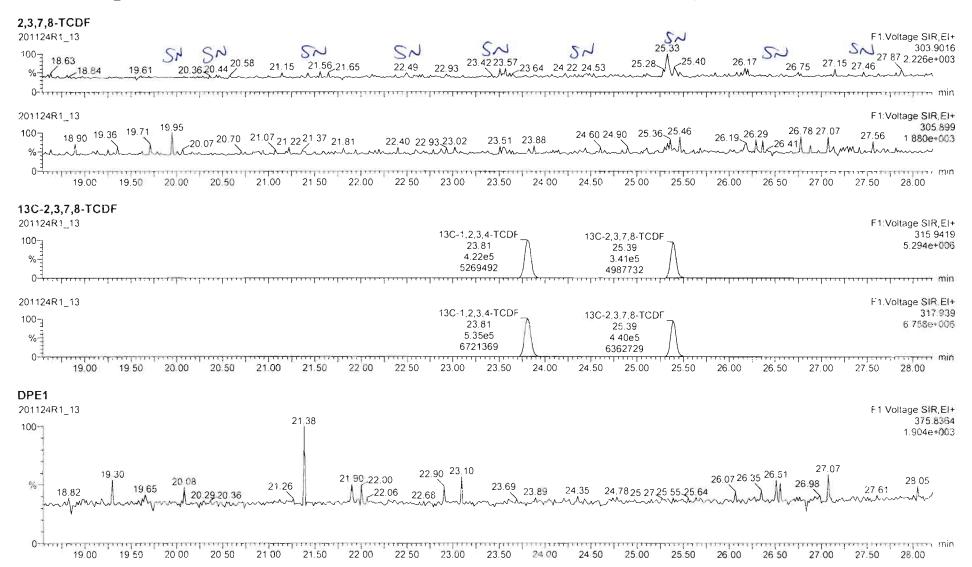


Work Order 2002436 Page 186 of 441

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Wednesday, November 25, 2020 07:52:33 Pacific Standard Time



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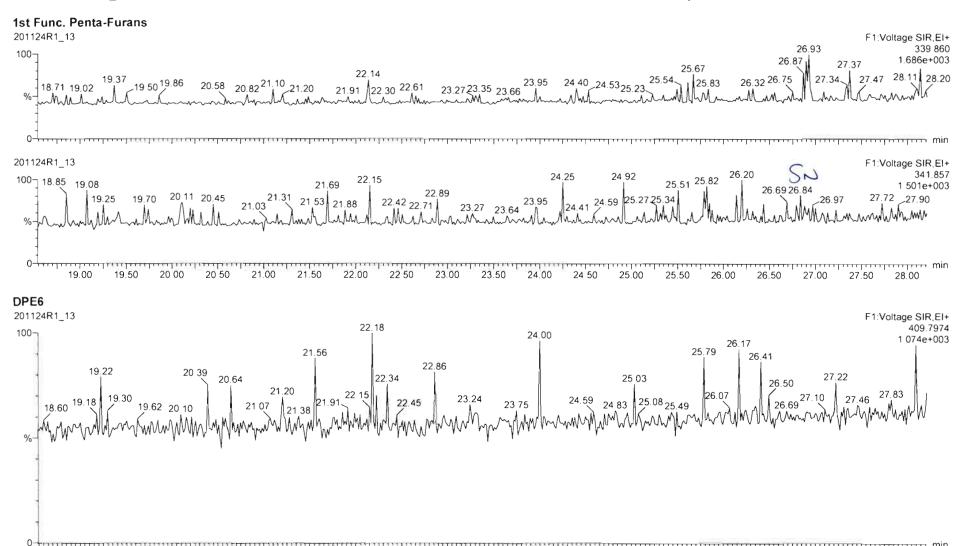
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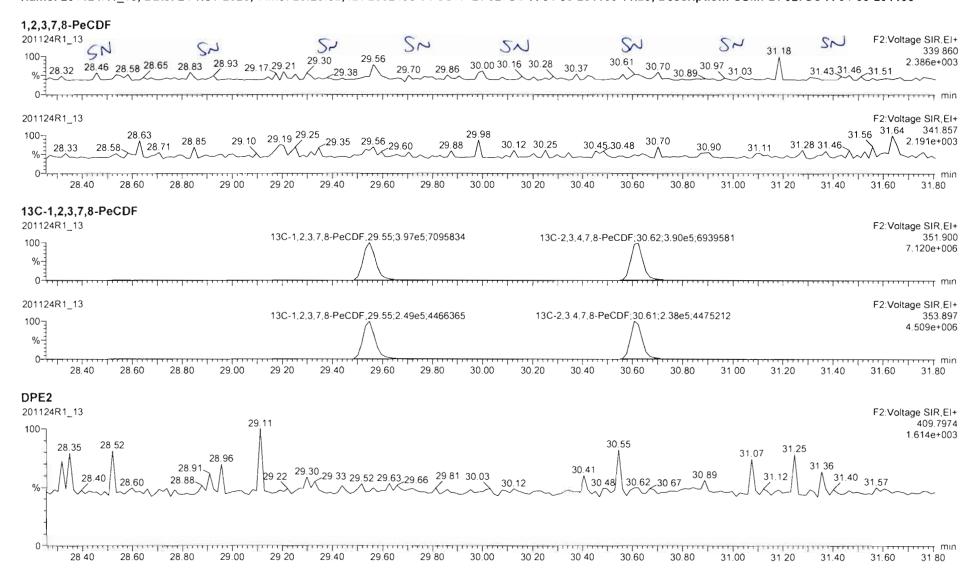
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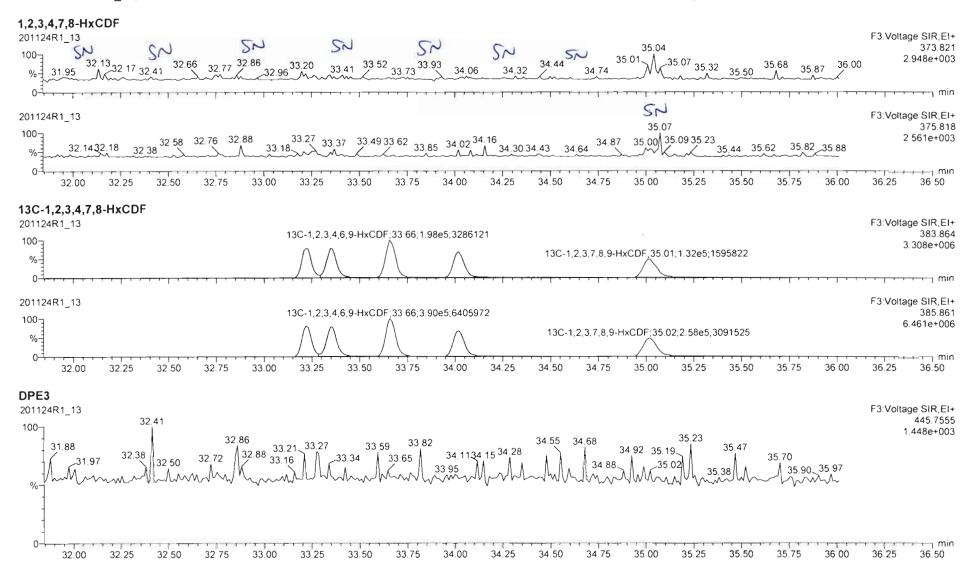
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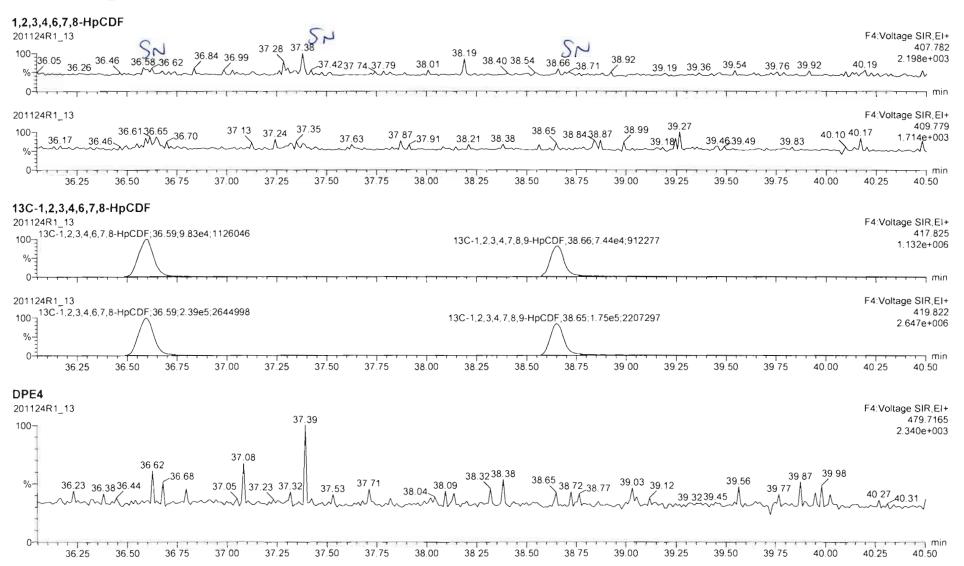
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Wednesday, November 25, 2020 07:52:33 Pacific Standard Time



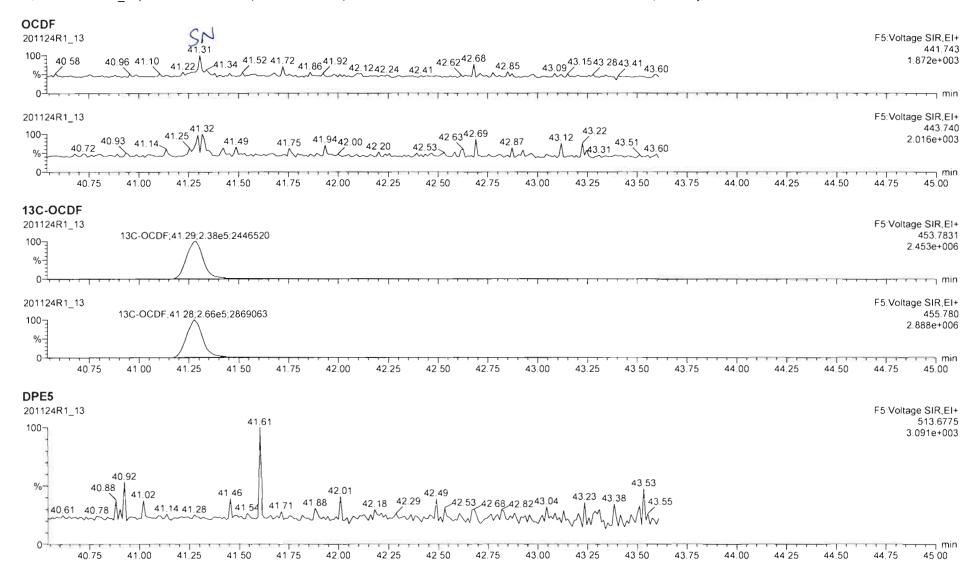
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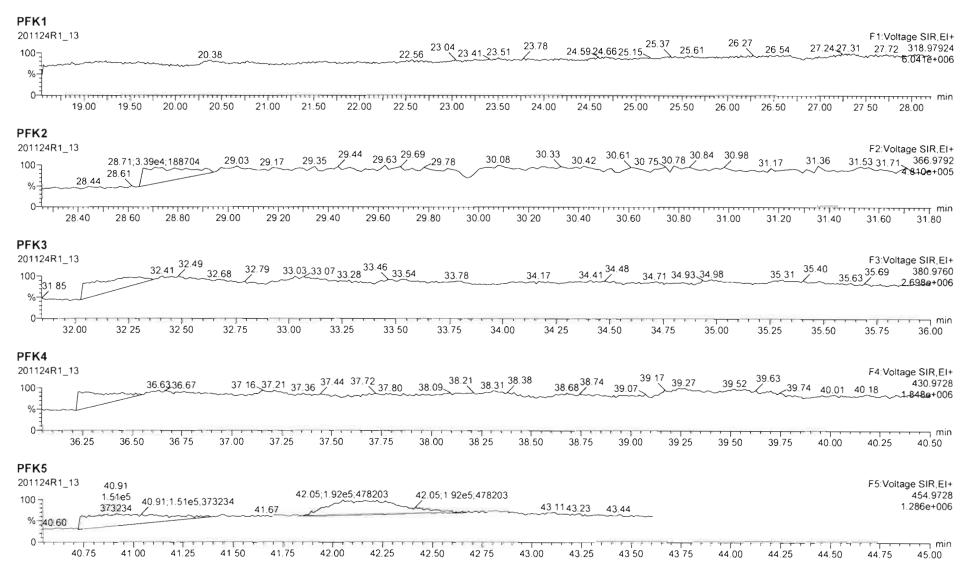
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Last Altered: Printed: Wednesday, November 25, 2020 07:04:08 Pacific Standard Time

Wednesday, November 25, 2020 07:52:33 Pacific Standard Time



CONTINUING CALIBRATION

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TIRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST201124R1-1			Reviewed By: 11.25.20		.1
End Calibration ID: ST20112422-1			Initials & Date		Θ
Ion abundance within QC limits?	Beg.	End	Mass resolution ≥	Beg.	End
Concentrations within criteria?			□ 5k □ 6-8K □ 8K ☑10K 1614 1699 429 1613/1668/8280		
TCDD/TCDF Valleys <25%			Intergrated peaks display correctly?		
First and last eluters present?			GC Break <20%		
Retention Times within criteria?			8280 CS1 End Standard:		
Verification Std. named correctly?			- Ratios within limits, S/N <2.5%, CS1 within 12 hours		NA
(ST-Year-Month-Day-VG ID)			. *		=
Forms signed and dated?			Comments: ® END PES CHECK FOR 201124R4 DID NOT	7.00	7.5
Correct ICAL referenced?	GRB	GRB	PROCESSED THE NEXT MORNING WITH NO TO TUNING.	CHANGE	s made
Run Log:			END RES CHECK HAD "SEVERAL MAS	ाह्य ८	TOK
- Correct instrument listed?		7	DUE TO PEK DRAIN.		*
- Samples within 12 hour clock?	$\langle \mathbf{y} \rangle$	N		•	
- Bottle position verfied?	G	PB			

ID: LR - HCSRC

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

Page: 1 of 1

Page 1 of 2

Dataset:

U:\VG12.PRO\Results\201124R1\201124R1-1.qld

Last Altered: Printed:

Wednesday, November 25, 2020 07:02:49 Pacific Standard Time Wednesday, November 25, 2020 07:03:00 Pacific Standard Time

GRB 11/25/2020 HZ 11-25-2020

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39
Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_1, Date: 24-Nov-2020, Time: 11:13:12, ID: ST201124R1_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

550 80	# 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	6.62e4	6.36e5	0.75	NO	0.950	26.10	26.10	NO	1.001	1.001	10.959	110	NO
2	2 1,2,3,7,8-PeCDD	2.23e5	4.41e5	0.62	NO	0.885	30.80	30.81	NO	1.000	1.000	56.991	114	NO
3	3 1,2,3,4,7,8-HxCDD	1.99e5	3.74e5	1.27	NO	1.02	34.14	34.14	NO	1.000	1.000	52.293	105	NO
4	4 1,2,3,6,7,8-HxCDD	2.21e5	4.52e5	1.33	NO	0.915	34.25	34.25	NO	1.000	1.000	53.425	107	NO
5	5 1,2,3,7,8,9-HxCDD	2.00e5	4.03e5	1.30	NO	0.934	34.52	34.53	NO	1.000	1.001	52.999	106	NO
6	6 1,2,3,4,6,7,8-HpCDD	1.52e5	3.43e5	1.02	NO	0.870	38.01	38.02	NO	1.000	1.000	50.809	102	NO
7	7 OCDD	2.56e5	5.51e5	0.90	NO	0.872	40.99	41.00	NO	1.000	1.000	106.39	106	NO
8	8 2,3,7,8-TCDF	7.44e4	9.26e5	0.74	NO	0.824	25.40	25.40	NO	1.000	1.001	9.7493	97.5	NO
9	9 1,2,3,7,8-PeCDF	3.70e5	7.27e5	1.58	NO	0.963	29.54	29.55	NO	1.000	1.001	52.839	106	NO
10	10 2,3,4,7,8-PeCDF	3.72e5	6.82e5	1.62	NO	1.07	30.61	30.62	NO	1.000	1.000	51.058	102	NO
11	11 1,2,3,4,7,8-HxCDF	2.40e5	4.99e5	1.20	NO	0.953	33.22	33.23	NO	1.000	1.000	50.408	101	NO
12	12 1,2,3,6,7,8-HxCDF	2.71e5	5.39e5	1.20	NO	1.01	33.35	33.36	NO	1.000	1.000	49.981	100	NO
13	13 2,3,4,6,7,8-HxCDF	2.57e5	5.08e5	1.21	NO	0.991	34.01	34.03	NO	1.000	1.001	51.003	102	NO
14	14 1,2,3,7,8,9-HxCDF	1.96e5	4.07e5	1.24	NO	0.951	35.01	35.02	NO	1.000	1.000	50.599	101	NO
15	15 1,2,3,4,6,7,8-HpCDF	1.95e5	3.81e5	1.01	NO	0.999	36.59	36.60	NO	1.000	1.001	51.222	102	NO
16	16 1,2,3,4,7,8,9-HpCDF	1.51e5	2.65e5	1.00	NO	1.12	38.64	38.65	NO	1.000	1.000	50.663	101	NO
17	17 OCDF	2.69e5	5.98e5	0.88	NO	0.868	41.28	41.29	NO	1.000	1.000	103.52	104	NO
18	18 13C-2,3,7,8-TCDD	6.36e5	5.64e5	0.82	NO	1.11	26.06	26.07	NO	1.030	1.030	101.62	102	NO
19	19 13C-1,2,3,7,8-PeCDD	4.41e5	5.64e5	0.63	NO	0.859	30.77	30.80	NO	1.216	1.217	91.060	91.1	NO
20	20 13C-1,2,3,4,7,8-HxCDD	3.74e5	5.31e5	1.30	NO	0.700	34.12	34.13	NO	1.014	1.014	100.61	101	NO
21	21 13C-1,2,3,6,7,8-HxCDD	4.52e5	5.31e5	1.28	NO	0.833	34.26	34.24	NO	1.018	1.017	102.24	102	NO
22	22 13C-1,2,3,7,8,9-HxCDD	4.03e5	5.31e5	1.27	NO	0.762	34.51	34.51	NO	1.025	1.025	99.626	99.6	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	3.43e5	5.31e5	1.06	NO	0.650	37.99	38.01	NO	1.129	1.129	99.499	99.5	NO
24	24 13C-OCDD	5.51e5	5.31e5	0.90	NO	0.539	40.95	40.99	NO	1.217	1.218	192.41	96.2	NO
25	25 13C-2,3,7,8-TCDF	9.26e5	9.31e5	0.77	NO	0.981	25.38	25.39	NO	1.003	1.004	101.38	101	NO
26	26 13C-1,2,3,7,8-PeCDF	7.27e5	9.31e5	1.59	NO	0.792	29.51	29.53	NO	1.166	1.167	98.613	98.6	NO
2/	27 13C-2,3,4,7,8-PeCDF	6.82e5	9.31e5	1.61	NO	0.778	30.56	30.61	NO	1.208	1.210	94.190	94.2	NO .
28	28 13C-1,2,3,4,7,8-HxCDF	4.99e5	5.31e5	0.50	NO	0.954	33.22	33.22	NO	0.987	0.987	98.579	98.6	NO
29	29 13C-1,2,3,6,7,8-HxCDF	5.39e5	5.31e5	0.50	NO	1.01	33.35	33.35	NO	0.991	0.991	100.81	101	NO'
30	30 13C-2,3,4,6,7,8-HxCDF	5.08e5	5.31e5	0.50	NO	0.921	34.02	34.01	NO	1.011	1.010	103.90	104	NO
31	31 13C-1,2,3,7,8,9-HxCDF	4.07e5	5.31e5	0.49	NO	0.803	35.01	35.01	NO	1.040	1.040	95.321	95.3	NO

Work Order 2002436

U:\VG12.PRO\Results\201124R1\201124R1-1.qld

Last Altered:

Wednesday, November 25, 2020 07:02:49 Pacific Standard Time

Printed:

Wednesday, November 25, 2020 07:03:00 Pacific Standard Time

Name: 201124R1_1, Date: 24-Nov-2020, Time: 11:13:12, ID: ST201124R1_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

10-10-1	# Name	Resp	IS Resp	RA	ny	RRF	Pred.RT	RT	RT Flag	Pred.RRT	RRT	Conc.	%Rec	STD out
32	32 13C-1,2,3,4,6,7,8-HpCDF	3.81e5	5.31e5	0.43	NO	0.735	36.58	36.58	NO	1.087	1.087	97.614	97.6	NO
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.65e5	5.31e5	0.42	NO	0.568	38.62	38.64	NO	1.147	1.148	87.880	87.9	NO
34	34 13C-OCDF	5.98e5	5.31e5	0.88	NO	0.629	41.24	41.28	NO	1.225	1.226	178.99	89.5	NO
35	35 37CI-2,3,7,8-TCDD	6.61e4	5.64e5			1.09	26.06	26.10	NO	1.030	1.032	10.762	108	NO
36	36 13C-1,2,3,4-TCDD	5.64e5	5.64e5	0.79	NO	1.00	25.37	25.30	NO	1.000	1.000	100.00	100	NO
37	37 13C-1,2,3,4-TCDF	9.31e5	9.31e5	0.78	NO	1.00	23.87	23.81	NO	1.000	1.000	100.00	100	NO
38	38 13C-1,2,3,4,6,9-HxCDF	5.31e5	5.31e5	0.51	NO	1.00	33.71	33.66	NO	1.000	1.000	100.00	100	YES O

Work Order 2002436 Page 197 of 441

Untitled

Last Altered: Printed:

Wednesday, November 25, 2020 06:58:36 Pacific Standard Time

Wednesday, November 25, 2020 06:58:41 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39 Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

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

	Name	ID	Acq.Date	Acq.Time
1	201124R1_1	ST201124R1_1 1613 CS3 20F1105	24-Nov-20	11:13:12
2	201124R1_2	TCDF CPSM	24-Nov-20	11:58:41
3	201124R1_3	B0K0129-BS1 OPR 10	24-Nov-20	12:43:35
4	201124R1_4	SOLVENT BLANK	24-Nov-20	13:38:26
5	201124R1_5	B0K0129-BLK1 Method Blank 10	24-Nov-20	14:23:22
6	201124R1_6	2002451-01 GW-1227 1.00024	24-Nov-20	15:08:44
7	201124R1_7	2002451-02 GW-1232 0.93108	24-Nov-20	15:53:39
8	201124R1_8	2002451-03 GW-1231 1.00711	24-Nov-20	16:38:35
9	201124R1_9	2002451-04 GW-1228 1.00796	24-Nov-20	17:23:28
10	201124R1_10	2002425-01 Comp 28.34	24-Nov-20	18:08:23
11	201124R1_11	2002436-01 USMPDI-027SC-A-01-02-201106	24-Nov-20	18:53:16
12	201124R1_12	2002436-03 USMPDI-027SC-A-03-04-201106	24-Nov-20	19:38:09
13	201124R1_13	2002436-04 USMPDI-027SC-A-04-05-201106	24-Nov-20	20:23:02
14	201124R1_14	2002356-01 NCPDI-065SC-01-02-201026 6.69	24-Nov-20	21:07:56
15	201124R1_15	2002356-02 NCPDI-065SC-02-03-201026 6.48	3 24-Nov-20	21:52:50
16	201124R2_1	SOLVENT BLANK	24-Nov-20	22:46:44
17	201124R2_2	ST201124R2_1 1613 CS3 20F1105	24-Nov-20	23:31:39
18	201124R2_3	TCDF CPSM	25-Nov-20	00:16:32

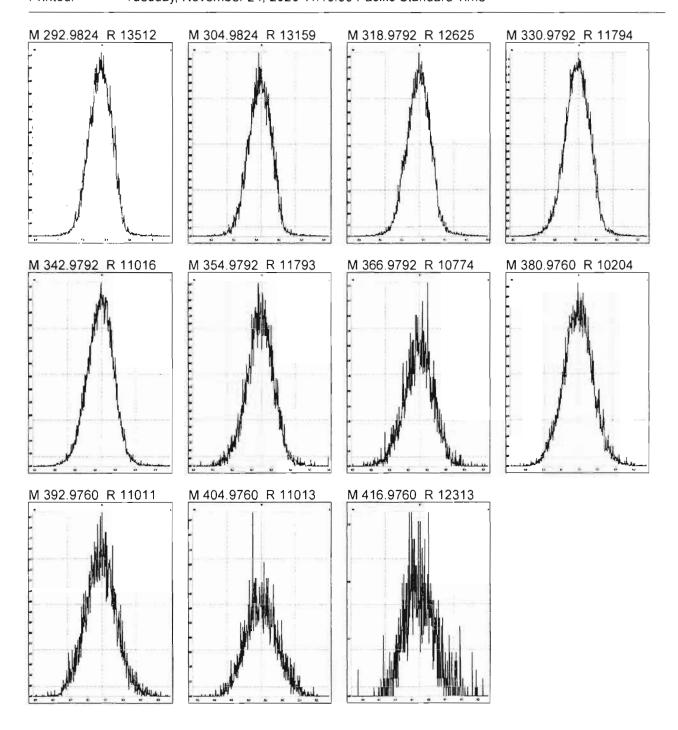
Page 198 of 441 Work Order 2002436

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Tuesday, November 24, 2020 11:10:50 Pacific Standard Time



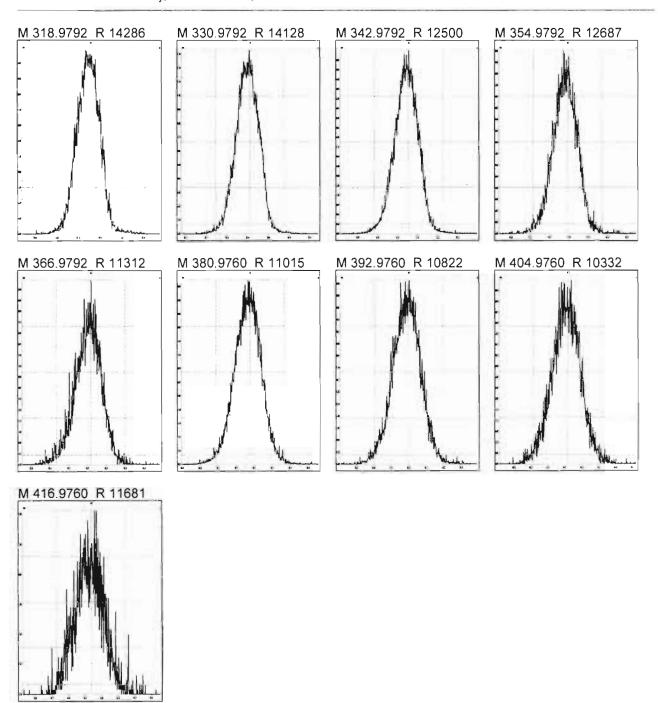
Work Order 2002436 Page 199 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Tuesday, November 24, 2020 11:11:12 Pacific Standard Time



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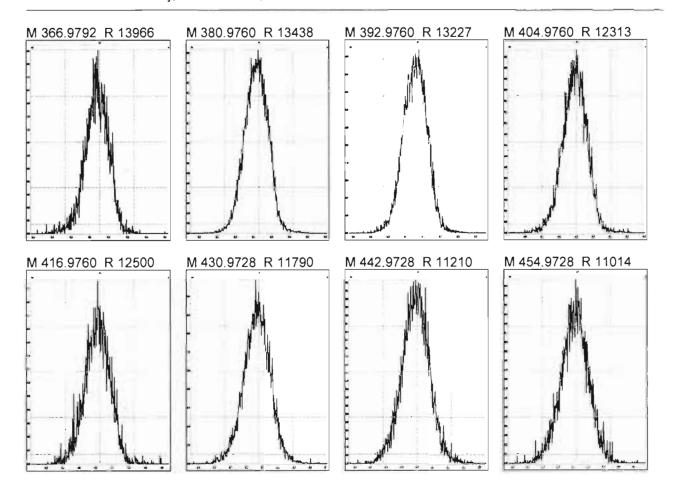
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed:

Tuesday, November 24, 2020 11:11:31 Pacific Standard Time



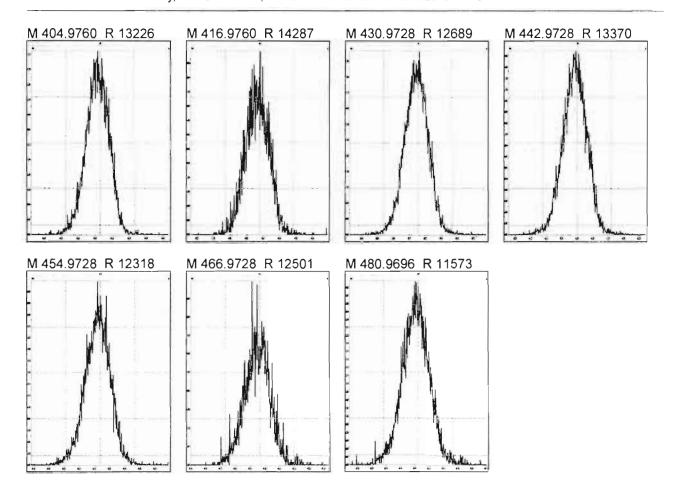
Work Order 2002436 Page 201 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Tuesday, November 24, 2020 11:11:48 Pacific Standard Time



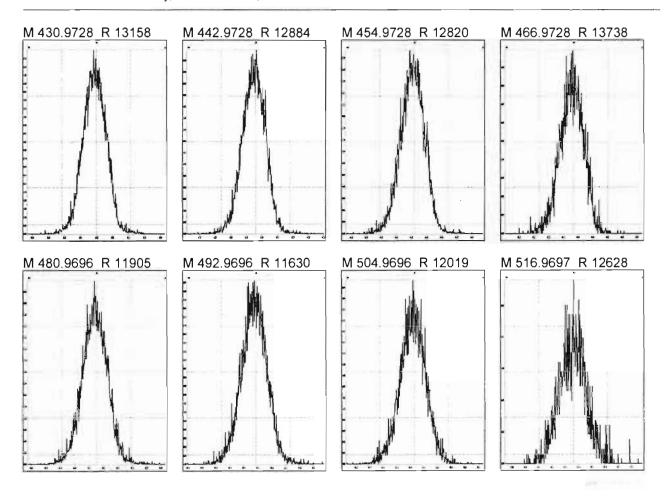
Work Order 2002436 Page 202 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Tuesday, November 24, 2020 11:12:10 Pacific Standard Time



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Page 1 of 1

Dataset:

Untitled

Last Altered: Printed: Wednesday, November 25, 2020 06:59:08 Pacific Standard Time Wednesday, November 25, 2020 06:59:21 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 10 Nov 2020 10:04:22

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201124R1_1, Date: 24-Nov-2020, Time: 11:13:12, ID: ST201124R1_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

3-57	# Name	RT
1	1 1,3,6,8-TCDD (First)	22.27
2	2 1,2,8,9-TCDD (Last)	26.98
3	3 1,2,4,7,9-PeCDD (First)	28.55
4	4 1,2,3,8,9-PeCDD (Last)	31.17
5	5 1,2,4,6,7,9-HxCDD (First)	32.50
6	6 1,2,3,7,8,9-HxCDD (Last)	34.53
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.99
8	8 1,2,3,4,6,7,8-HpCDD (Last)	38.02
9	9 1,3,6,8-TCDF (First)	20.04
10	10 1,2,8,9-TCDF (Last)	27.31
11	11 1,3,4,6,8-PeCDF (First)	26.88
12	12 1,2,3,8,9-PeCDF (Last)	31.54
13	13 1,2,3,4,6,8-HxCDF (First)	31.96
14	14 1,2,3,7,8,9-HxCDF (Last)	35.02
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.60
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.65

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Quantify Sample Report

MassLynx 4.1 SCN815

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Vista Analytical Laboratory VG-11

Dataset:

Untitled

Last Altered:

Wednesday, November 25, 2020 06:59:08 Pacific Standard Time

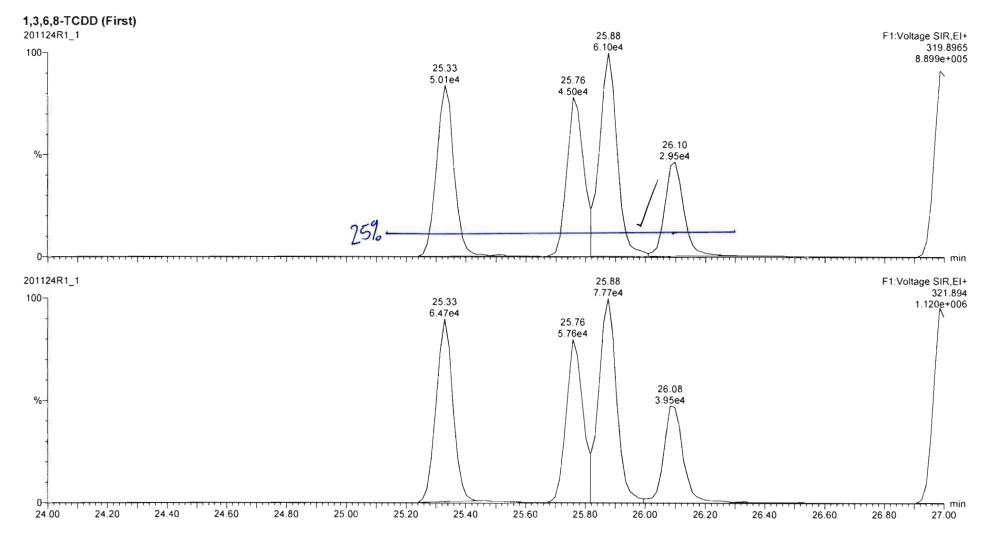
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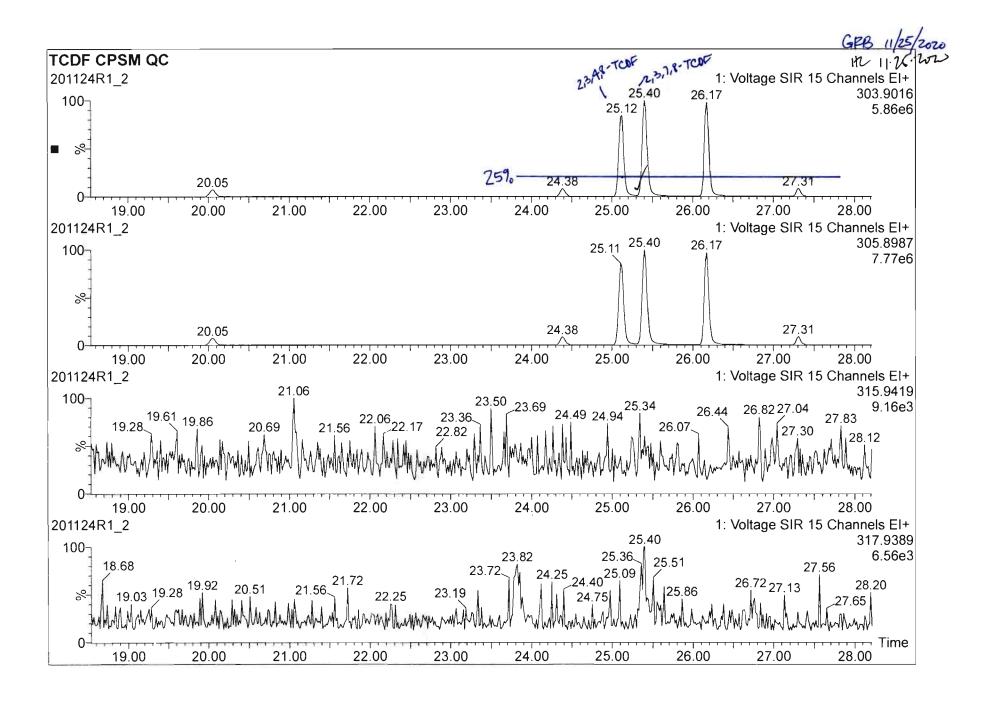
Wednesday, November 25, 2020 06:59:21 Pacific Standard Time

GRB 11/25/2020

Method: U:\VG12.PRO\MethDB\CPSM.mdb 10 Nov 2020 10:04:22

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10





Work Order 2002436 Page 206 of 441

Page 1 of 13

Dataset:

Untitled

Last Altered:

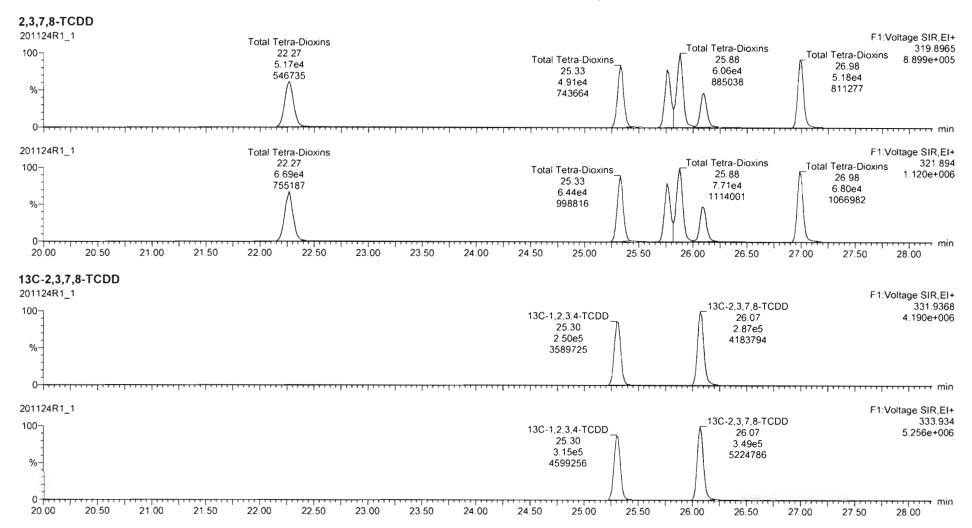
Wednesday, November 25, 2020 06:59:43 Pacific Standard Time

Printed: Wednesda

Wednesday, November 25, 2020 06:59:46 Pacific Standard Time

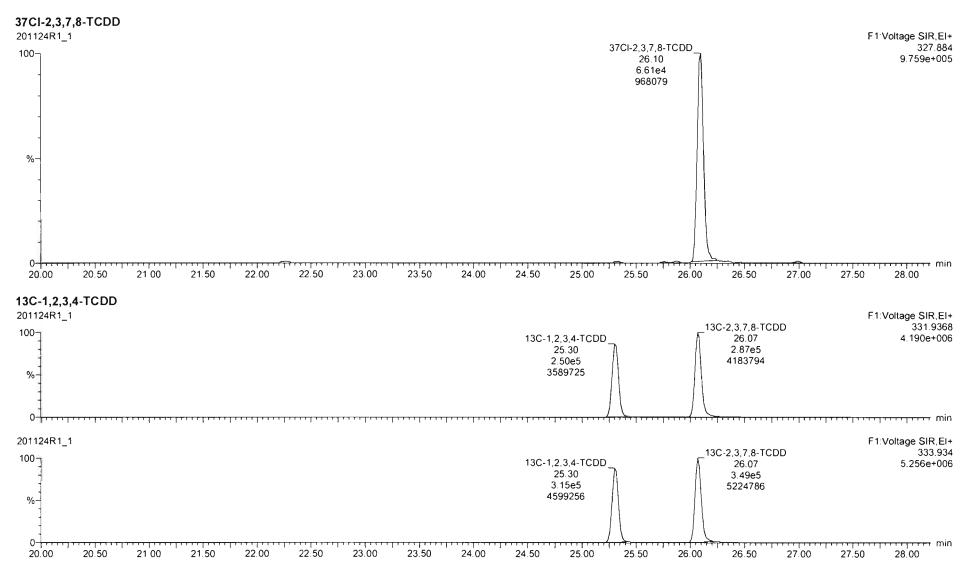
Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10



Untitled

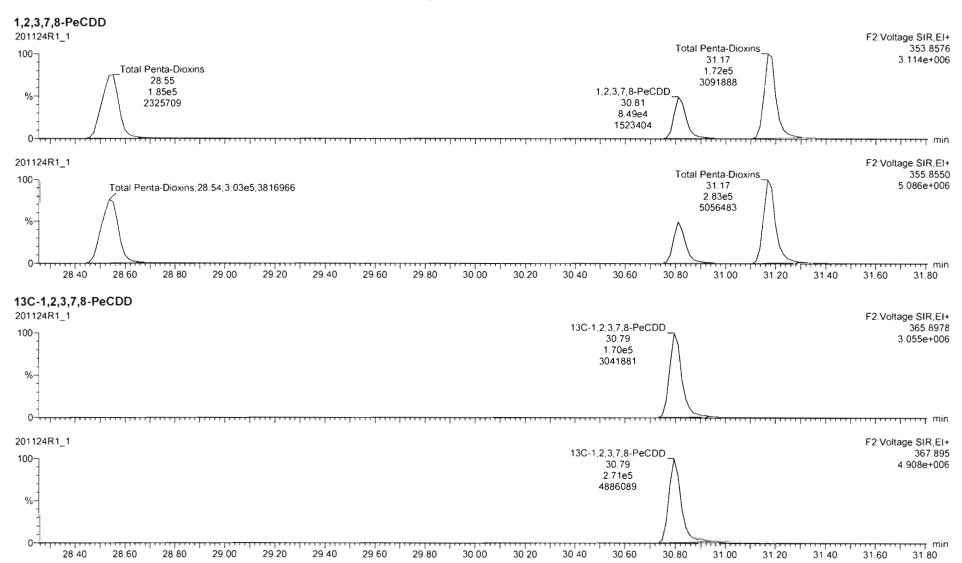
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Untitled

Last Altered: Printed:

Wednesday, November 25, 2020 06:59:43 Pacific Standard Time Wednesday, November 25, 2020 06:59:46 Pacific Standard Time

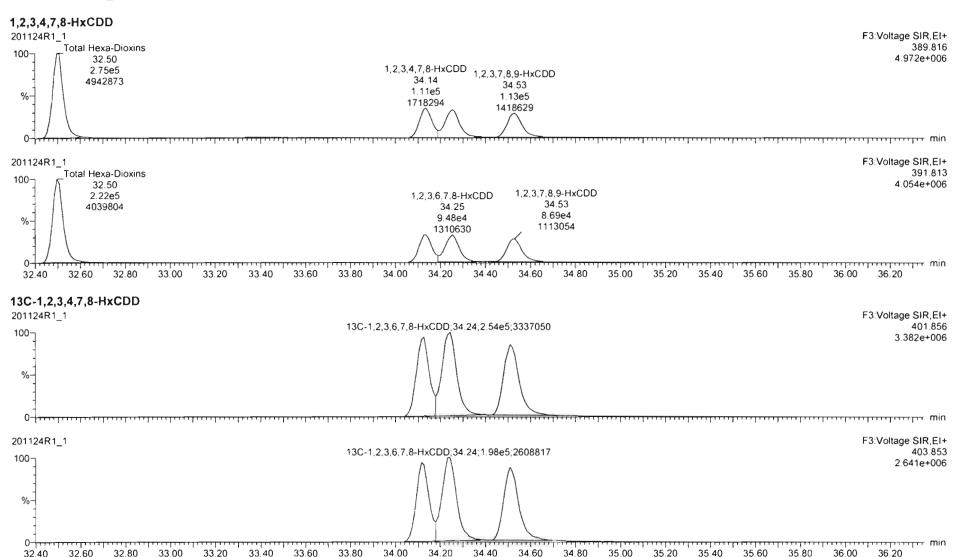


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Dataset:

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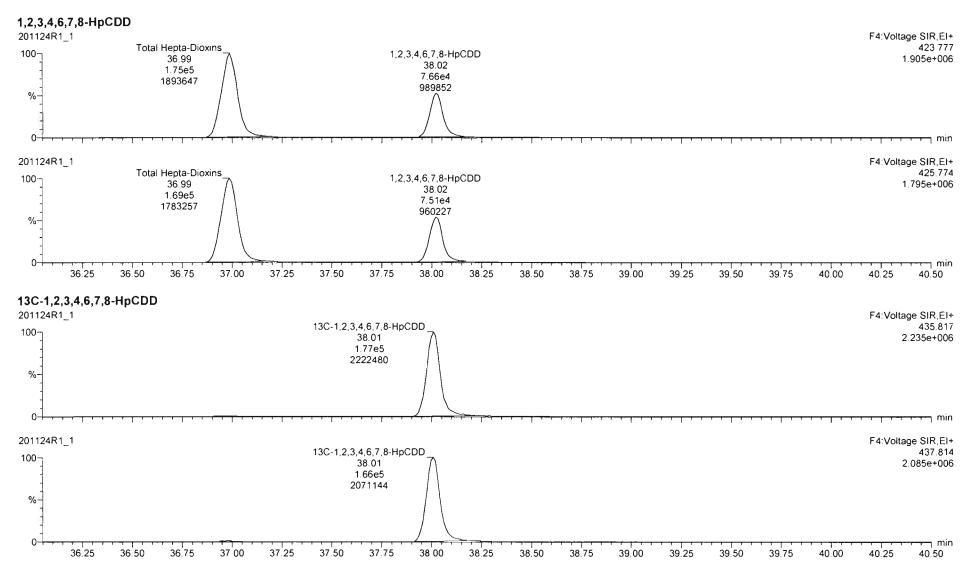
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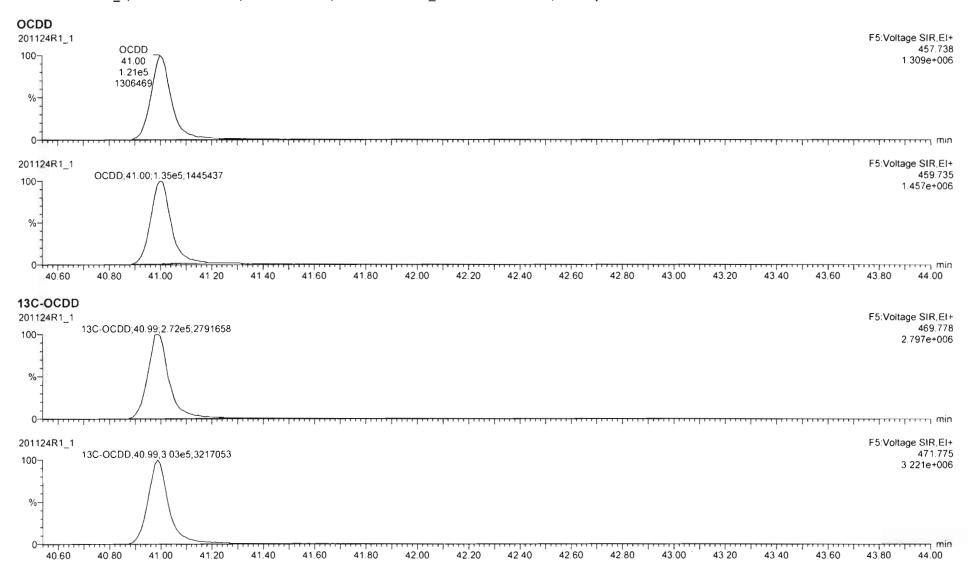
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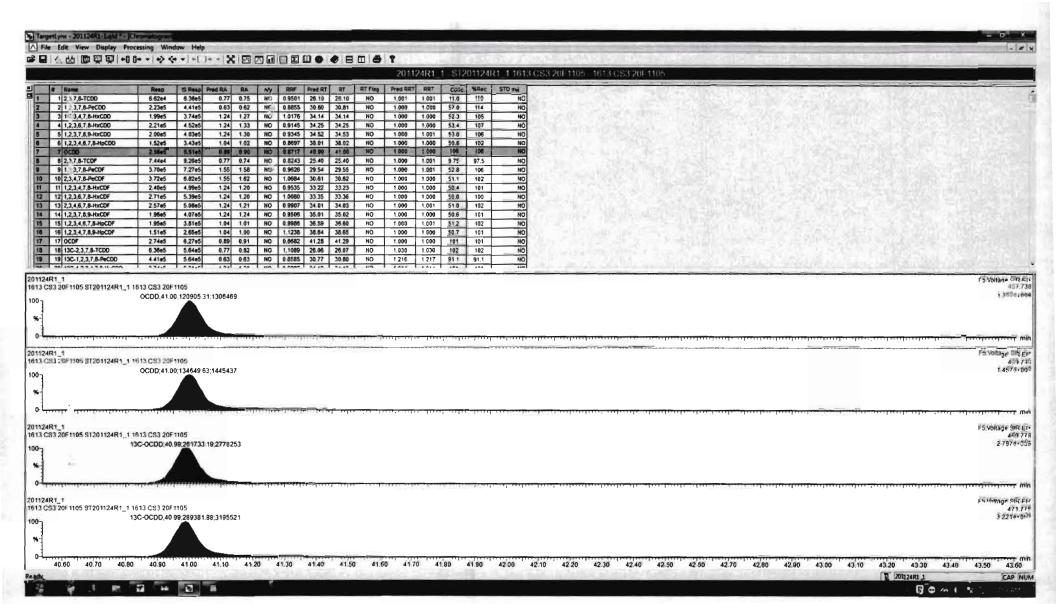
Wednesday, November 25, 2020 06:59:43 Pacific Standard Time Wednesday, November 25, 2020 06:59:46 Pacific Standard Time



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Last Altered: Printed: Wednesday, November 25, 2020 06:59:43 Pacific Standard Time Wednesday, November 25, 2020 06:59:46 Pacific Standard Time





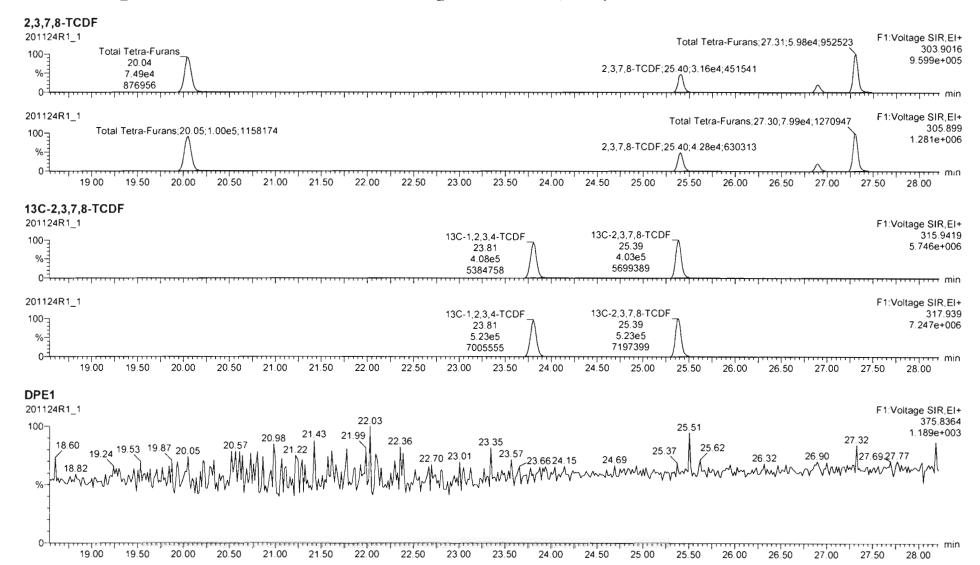
Work Order 2002436 Page 213 of 441

Page 7 of 13

Dataset:

Untitled

Last Altered: Printed: Wednesday, November 25, 2020 06:59:43 Pacific Standard Time Wednesday, November 25, 2020 06:59:46 Pacific Standard Time



Untitled

19.50

19.00

20.00

20.50

21 00

21.50

22.00

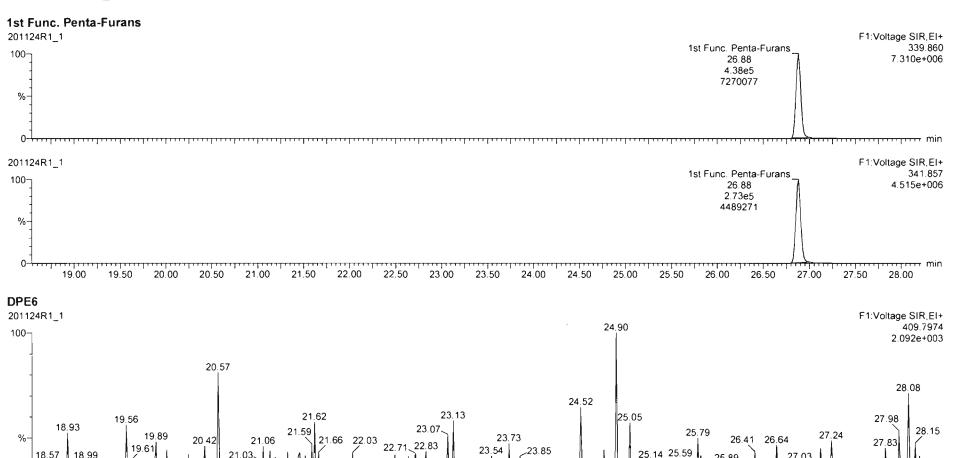
22.50

Last Altered: Printed:

Wednesday, November 25, 2020 06:59:43 Pacific Standard Time

Wednesday, November 25, 2020 06:59:46 Pacific Standard Time

Name: 201124R1_1, Date: 24-Nov-2020, Time: 11:13:12, ID: ST201124R1_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105



23.50

24 00

24.50

25.00

25.50

26.00

26.50

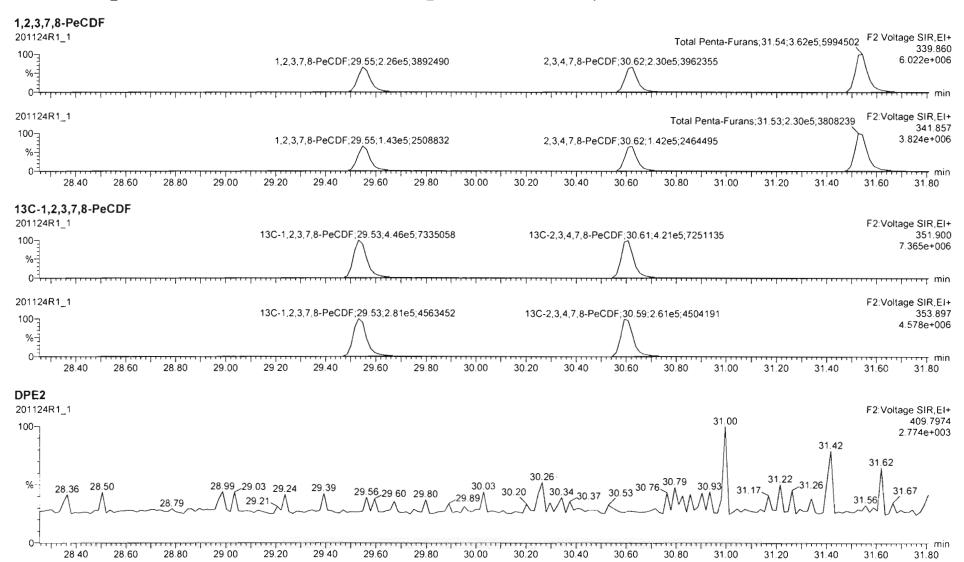
27.00

23.00

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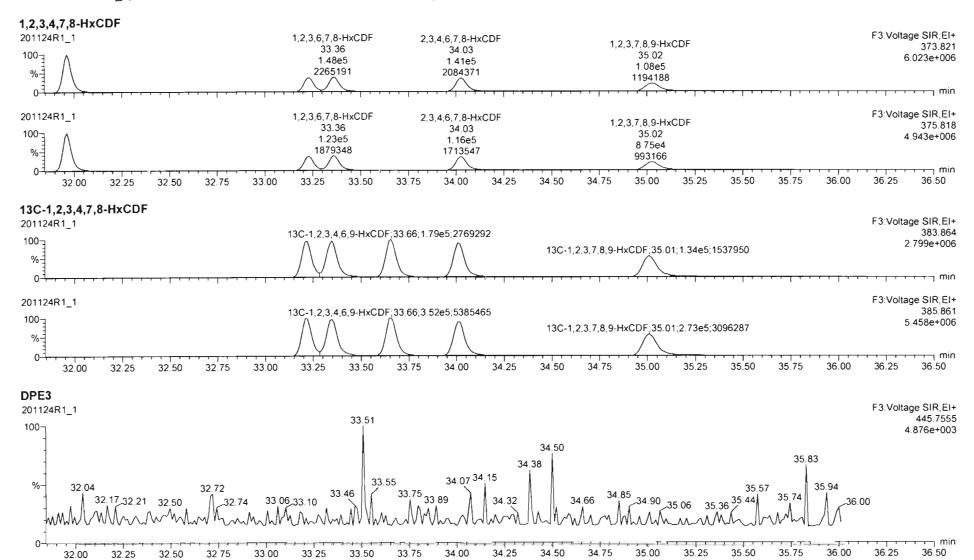
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Wednesday, November 25, 2020 06:59:46 Pacific Standard Time



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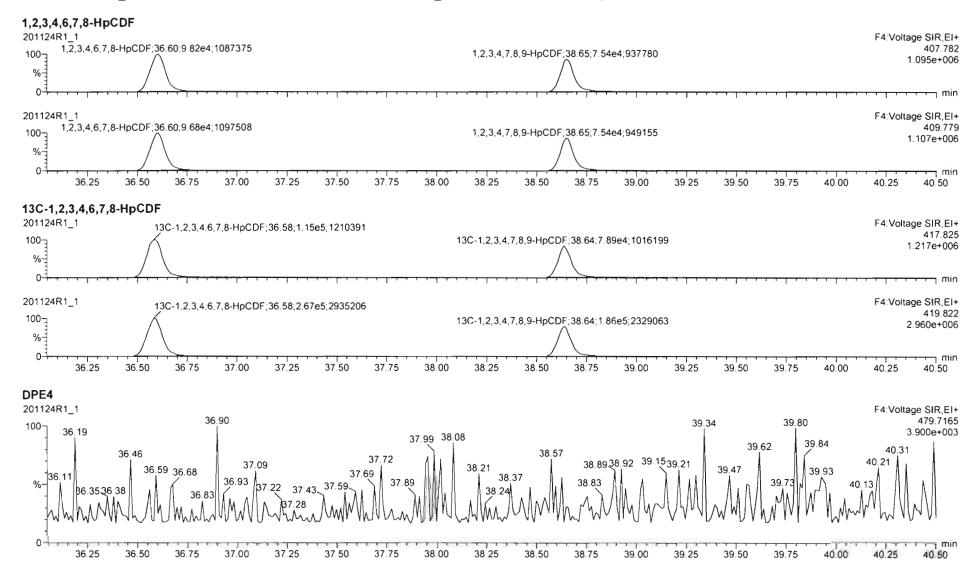
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Untitled

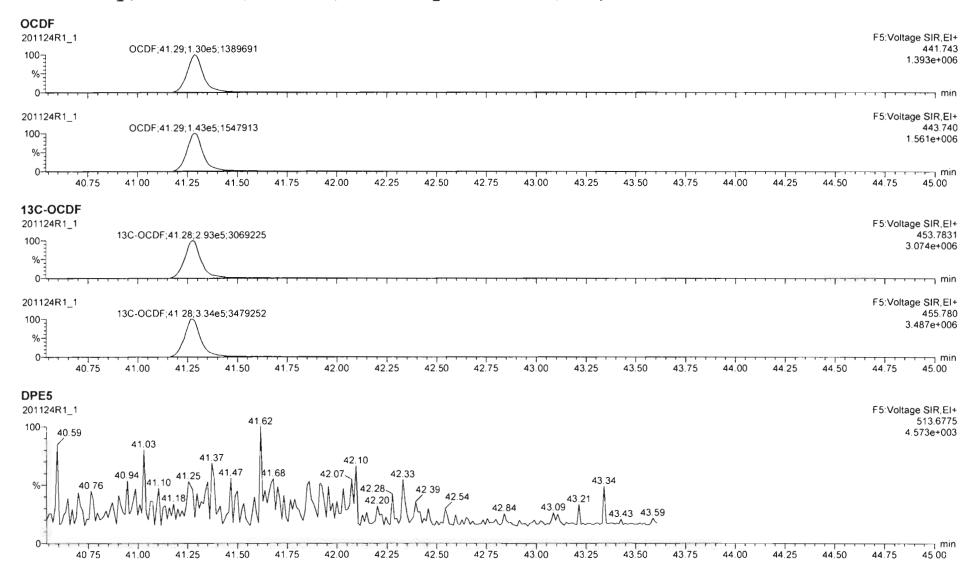
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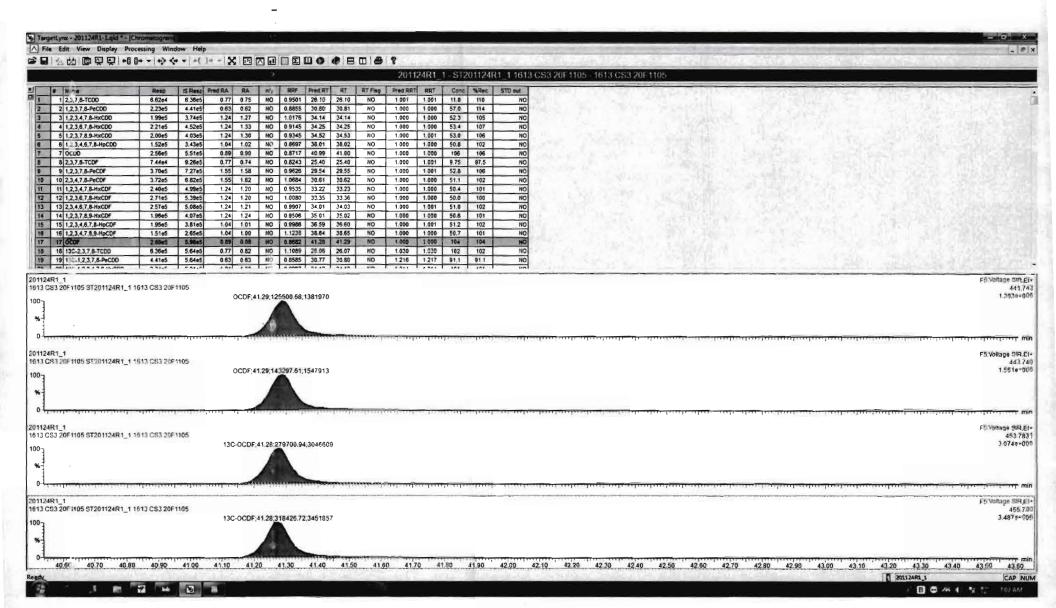
Wednesday, November 25, 2020 06:59:43 Pacific Standard Time Wednesday, November 25, 2020 06:59:46 Pacific Standard Time



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Last Altered: Printed: Wednesday, November 25, 2020 06:59:43 Pacific Standard Time Wednesday, November 25, 2020 06:59:46 Pacific Standard Time



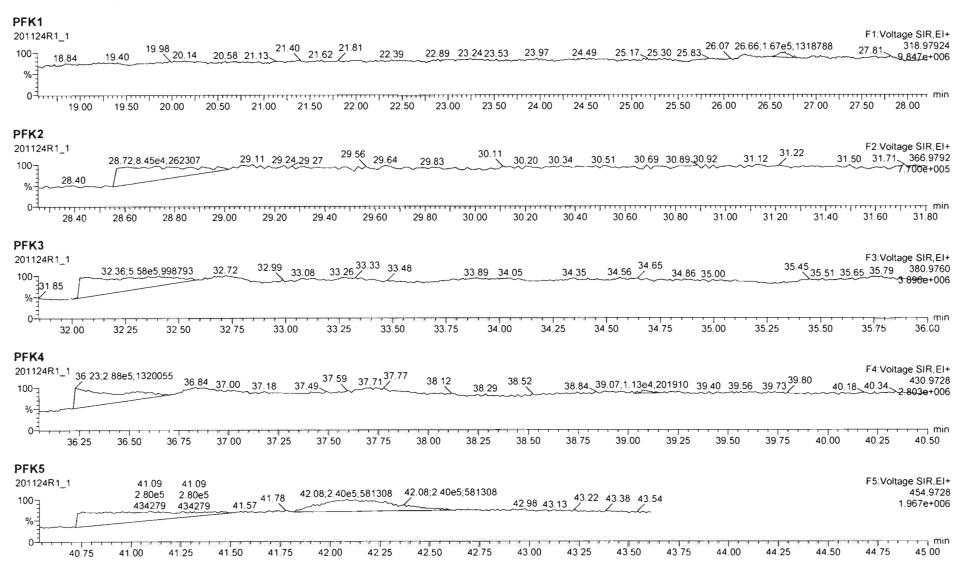


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Untitled

Last Altered: Printed: Wednesday, November 25, 2020 06:59:43 Pacific Standard Time

Wednesday, November 25, 2020 06:59:46 Pacific Standard Time



Experiment Calibration Report

MassLynx 4.1 SCN815

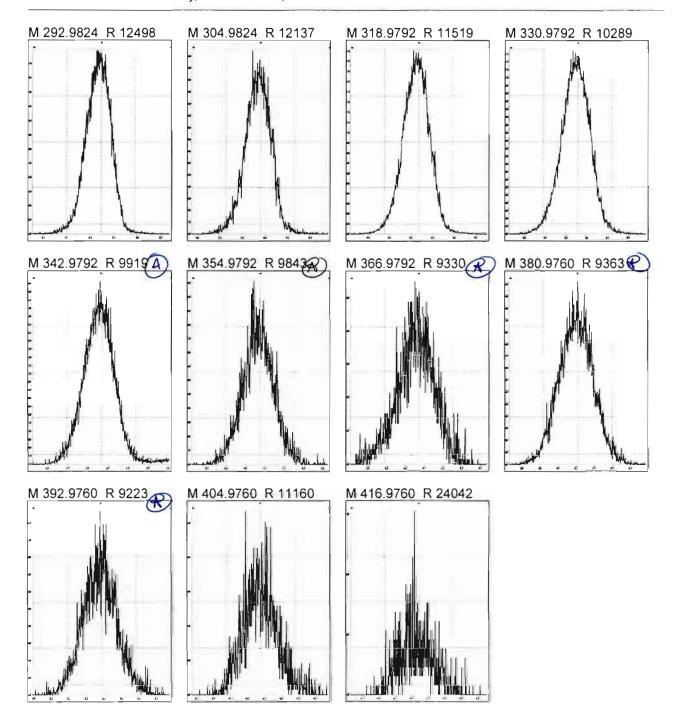
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 07:22:51 Pacific Standard Time

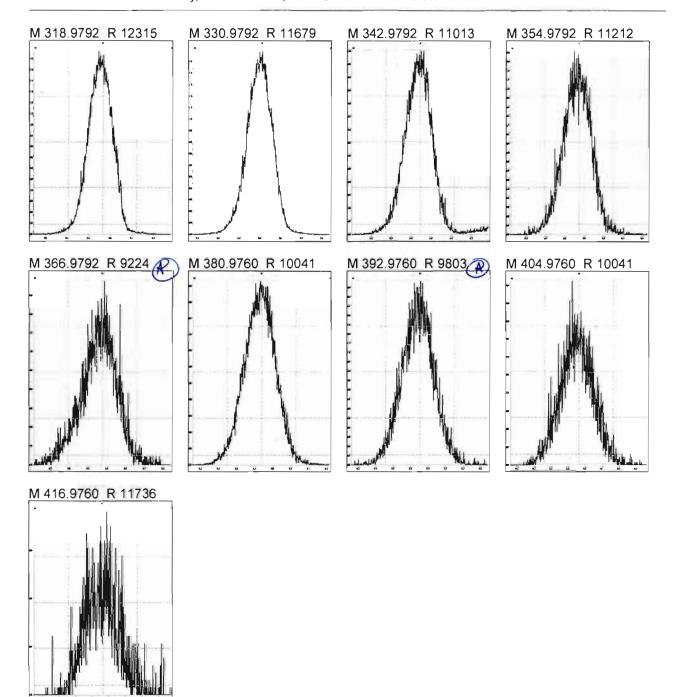


Work Order 2002436 Page 222 of 441

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 07:23:27 Pacific Standard Time

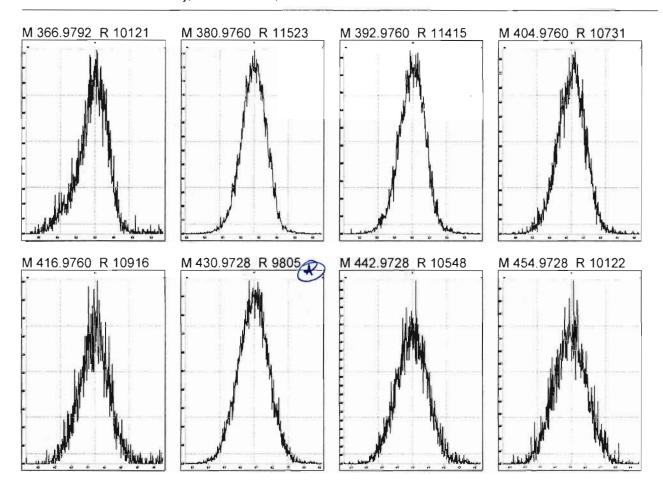


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Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 07:24:36 Pacific Standard Time

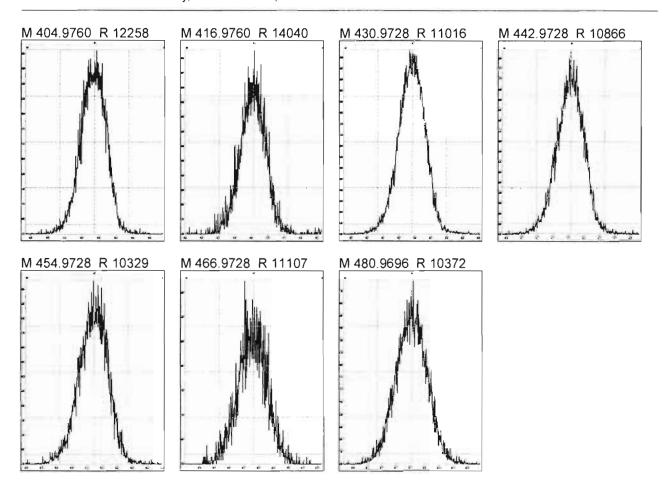


Work Order 2002436 Page 224 of 441

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 07:25:41 Pacific Standard Time

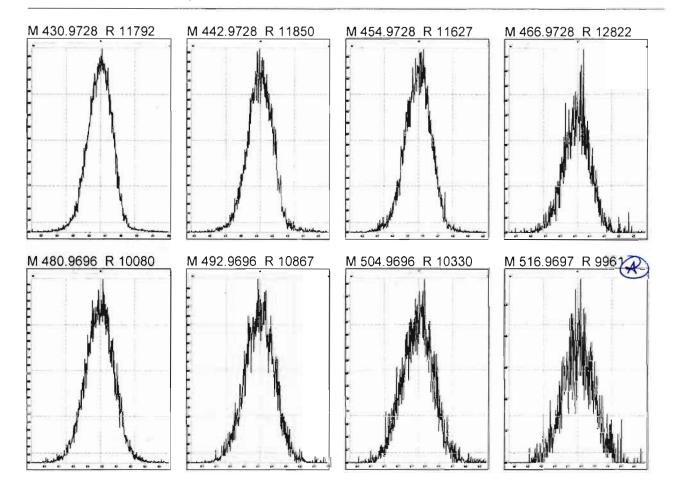


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Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 07:26:58 Pacific Standard Time



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TIRMS CALIBRATION STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: ST201125121-2			Reviewed By: UN 12/61/223	.X-
			Initials & Date	
End Calibration ID: NA			. ·	@
·	Beg.	End	<u>Be</u>	g. End
Ion abundance within QC limits?	\checkmark	14	Mass resolution >	\mathcal{I}
Concentrations within criteria?	\checkmark	Ф	□ 5k □ 6-8K □ 8K № 10K 1614 1699 429 1613/1668/8280	
TCDD/TCDF Valleys <25%	V		Intergrated peaks display correctly?	NA
First and last eluters present?		Ф	GC Break <20%	
Retention Times within criteria?	V		8280 CS1 End Standard:	
Verification Std. named correctly?	Y	Ф	- Ratios within limits, S/N <2.5:1, CS1 within 12 hours	No
(ST-Year-Month-Day-VG ID)				
Forms signed and dated?	V			125 PM SEQUENCE
Correct ICAL referenced?	GRB		END RES CHECK PROCESSED MANUALLY THE N	MORNING.
Run Log:				
- Correct Instrument listed?		V		•
- Samples within 12 hour clock?	(A)	N		
- Bottle position verfied?	G	28		

ID: LR - HCSRC

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

Page: 1 of 1

Page 1 of 2

Dataset:

U:\VG12.PRO\Results\201125R1\201125R1-2.qld

Last Altered:

Wednesday, November 25, 2020 10:54:11 Pacific Standard Time

Printed:

Thursday, November 26, 2020 07:14:42 Pacific Standard Time

GRB 11/26/2020 HIV R/01/2020

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

Calibration: U:\VG12.PR0\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201125R1_2, Date: 25-Nov-2020, Time: 10:06:48, ID: ST201125R1_2 1613 CS3 20F1105, Description: 1613 CS3 20F1105

1000	# 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	5.56e4	4.70e5	0.79	NO	0.950	26.10	26.08	NO	1.001	1.001	12.453	125	NO
2	2 1,2,3,7,8-PeCDD	1.70e5	3.06e5	0.63	NO	0.885	30.80	30.81	NO	1.000	1.000	62.893	126	NO
3	3 1,2,3,4,7,8-HxCDD	1.81e5	3.07e5	1.25	NO	1.02	34.12	34.13	NO	1.000	1.001	57.977	116	NO
4	4 1,2,3,6,7,8-HxCDD	1.81e5	3.55e5	1.26	NO	0.915	34.24	34.25	NO	1.000	1.001	55.867	112	NO
5	5 1,2,3,7,8,9-HxCDD	1.79e5	3.41e5	1.25	NO	0.934	34.52	34.52	NO	1.000	1.000	56.327	113	NO
5 6	6 1,2,3,4,6,7,8-HpCDD	1.39e5	2.91e5	1.00	NO	0.870	37.99	38.01	NO	1.000	1.000	54.739	109	NO
7	7 OCDD	2.22e5	4.57e5	0.92	NO	0.872	40.94	40.95	NO	1.000	1.000	111.63	112	NO
8	8 2,3,7,8-TCDF	7.01e4	8.66e5	0.75	NO	0.824	25.38	25.40	NO	1.000	1.001	9.8289	98.3	NO
9	9 1,2,3,7,8-PeCDF	3.48e5	6.09e5	1.63	NO	0.963	29.54	29.55	NO	1.000	1.000	59.353	119	NO
10	10 2,3,4,7,8-PeCDF	3.61e5	5.83e5	1.58	NO	1.07	30.60	30.60	NO	1.000	1.000	58.072	116	NO
11	11 1,2,3,4,7,8-HxCDF	2.20e5	4.63e5	1.21	NO	0.953	33.21	33.23	NO	1.000	1.001	49.831	99.7	NO
12	12 1,2,3,6,7,8-HxCDF	2.39e5	4.86e5	1.20	NO	1.01	33.35	33.35	NO	1.000	1.000	48.70 8	97.4	NO
13	13 2,3,4,6,7,8-HxCDF	2.20e5	4.50e5	1.24	NO	0.991	34.01	34.01	NO	1.000	1.000	49.278	98.6	NO
1.4	14 1,2,3,7,8,9-HxCDF	1.79e5	3.89e5	1.22	NO	0.951	35.01	35.02	NO	1.000	1.000	48.403	96.8	NO
15	15 1,2,3,4,6,7,8-HpCDF	1.66e5	3.44e5	1.00	NO	0.999	36.58	36.59	NO	1.000	1.000	48.281	96.6	NO
16	16 1,2,3,4,7,8,9-HpCDF	1.29e5	2.40e5	0.99	NO	1.12	38.62	38.63	NO	1.000	1.000	48.068	96.1	NO
17	17 OCDF	2.47e5	5.69e5	0.87	NO	0.868	41.24	41.24	NO	1.000	1.000	100.03	100	NO
18	18 13C-2,3,7,8-TCDD	4.70e5	4.14e5	0.82	NO	1.11	26.06	26.07	NO	1.030	1.030	102.28	102	NO
19	19 13C-1,2,3,7,8-PeCDD	3.06e5	4.14e5	0.65	NO	0.859	30.77	30.79	NO	1.216	1.217	86.054	86.1	NO
20	20 13C-1,2,3,4,7,8-HxCDD	3.07e5	4.88e5	1.36	NO	0.700	34.11	34.11	NO	1.014	1.014	89.973	90.0	NO
21	21 13C-1,2,3,6,7,8-HxCDD	3.55e5	4.88e5	1.29	NO	0.833	34.25	34.23	NO	1.018	1.017	87.404	87.4	NO
22	22 13C-1,2,3,7,8,9-HxCDD	3.41e5	4.88e5	1.29	NO	0.762	34.49	34.51	NO	1.025	1.026	91.766	91.8	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	2.91e5	4.88e5	1.08	NO	0.650	37.97	37.99	NO	1.129	1.129	91.978	92.0	NO
24	24 13C-OCDD	4.57e5	4.88e5	0.90	NO	0.539	40.94	40.94	NO	1.217	1.217	173.53	86.8	NO
25	25 13C-2,3,7,8-TCDF	8.66e5	8.56e5	0.80	NO	0.981	25.38	25.37	NO	1.003	1.003	103.08	103	NO
26	26 13C-1,2,3,7,8-PeCDF	6.09e5	8.56e5	1.65	NO	0.792	29.51	29.53	NO	1.166	1.167	89.855	89.9	NO
27	27 13C-2,3,4,7,8-PeCDF	5.83e5	8.56e5	1.65	NO	0.778	30.56	30.60	NO	1.208	1.210	87.548	87.5	NO
28	28 13C-1,2,3,4,7,8-HxCDF	4.63e5	4.88e5	0.50	NO	0.954	33.20	33.21	NO	0.987	0.987	99.608	99.6	NO
29	29 13C-1,2,3,6,7,8-HxCDF	4.86e5	4.88e5	0.51	NO	1.01	33.33	33.35	NO	0.991	0.991	99.074	99.1	NO
30	30 13C-2,3,4,6,7,8-HxCDF	4.50e5	4.88e5	0.51	NO	0.921	34.00	34.01	NO	1.011	1.011	100.11	100	NO
31	31 13C-1,2,3,7,8,9-HxCDF	3.89e5	4.88e5	0.50	NO	0.803	35.00	35.01	NO	1.040	1.041	99.350	99.3	NO

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Quantify Sample Summary Report Vista Analytical Laboratory MassLynx 4.1 SCN815

Page 2 of 2

Dataset:

U:\VG12.PRO\Results\201125R1\201125R1-2.qld

Last Altered:

Wednesday, November 25, 2020 10:54:11 Pacific Standard Time

Printed:

Thursday, November 26, 2020 07:14:42 Pacific Standard Time

Name: 201125R1_2, Date: 25-Nov-2020, Time: 10:06:48, ID: ST201125R1_2 1613 CS3 20F1105, Description: 1613 CS3 20F1105

	# 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	3.44e5	4.88e5	0.43	NO	0.735	36.57	36.58	NO	1.087	1.087	95.880	95.9	NO
33	33 13C-1,2,3,4,7,8,9-HpCDF	2.40e5	4.88e5	0.41	NO	0.568	38.60	38.62	NO	1.147	1.148	86.576	86.6	NO
34	34 13C-OCDF	5.69e5	4.88e5	0.89	NO	0.629	41.22	41.23	NO	1.225	1.225	185.47	92.7	NO
35	35 37Cl-2,3,7,8-TCDD	5.45e4	4.14e5			1.09	26.06	26.08	NO	1.030	1.031	12.094	121	NO
36	36 13C-1,2,3,4-TCDD	4.14e5	4.14e5	0.83	NO	1.00	25.37	25.30	NO	1.000	1.000	100.00	100	NO
37	37 13C-1,2,3,4-TCDF	8.56e5	8.56e5	0.82	NO	1.00	23.87	23.79	NO	1.000	1.000	100.00	100	NO
38	38 13C-1,2,3,4,6,9-HxCDF	4.88e5	4.88e5	0.50	NO	1.00	33.71	33.64	NO	1.000	1.000	100.00	100	YESOK

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MassLynx 4.1 SCN815

Page 1 of 1

Dataset:

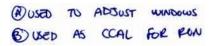
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Last Altered: Printed: Thursday, November 26, 2020 07:23:12 Pacific Standard Time Thursday, November 26, 2020 07:23:15 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39 Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

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

100	Name	ID Company of the second of th	Acq.Date	Acq.Time
1	201125R1_1	ST201125R1_1 1613 CS3 20F1105	25-Nov-20	09:12:37
2	201125R1_2®	ST201125R1_2 1613 CS3 20F1105	25-Nov-20	10:06:48
3	201125R1_3	TCDF CPSM	25-Nov-20	10:53:09
4	201125R1_4	B0K0172-BS1 OPR 10	25-Nov-20	11:38:02
5	201125R1_5	SOLVENT BLANK	25-Nov-20	12:23:39
6	201125R1_6	B0K0172-BLK1 Method Blank 10	25-Nov-20	13:08:34
7	201125R1_7	2002359-01 NCPDI-015SC-01-02-201028 6.1	25-Nov-20	13:54:02
8	201125R1_8	2002359-02 NCPDI-015SC-02-03-201028 6.65	25-Nov-20	14:38:58
9	201125R1_9	2002359-03 NCPDI-015SC-03-04-201028 6.12	25-Nov-20	15:23:53
10	201125R1_10	2002359-04 NCPDI-015SC-04-05-201028 6.04	25-Nov-20	16:08:46
11	201125R1_11	B0K0129-DUP1 Duplicate 6.19	25-Nov-20	16:53:39
12	201125R1_12	2002359-05 NCPDI-015SC-05-06-201028 6.38	25-Nov-20	17:38:28
13	201125R1_13	2002359-06 NCPDI-015SC-06-07-201028 8.09	25-Nov-20	18:23:21
14	201125R1_14	2002359-07 NCPDI-015SC-07-08-201028 7.57	25-Nov-20	19:08:13
15	201125R1_15	2002359-08 NCPDI-015SC-08-09-201028 7.02	25-Nov-20	19:53:03
16	201125R1_16	2002359-09 NCPDI-1015SC-07-08-201028 7.36	25-Nov-20	20:37:54



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MassLynx 4.1 SCN815

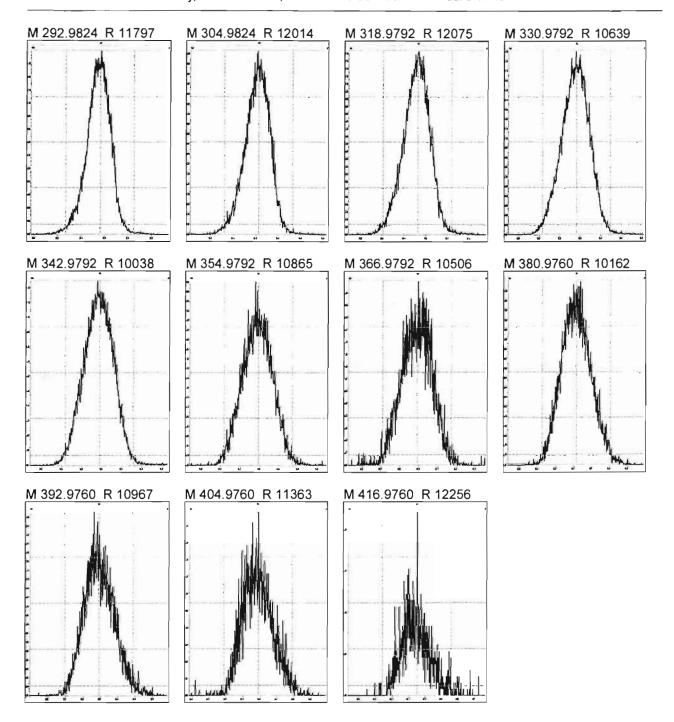
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:03:58 Pacific Standard Time

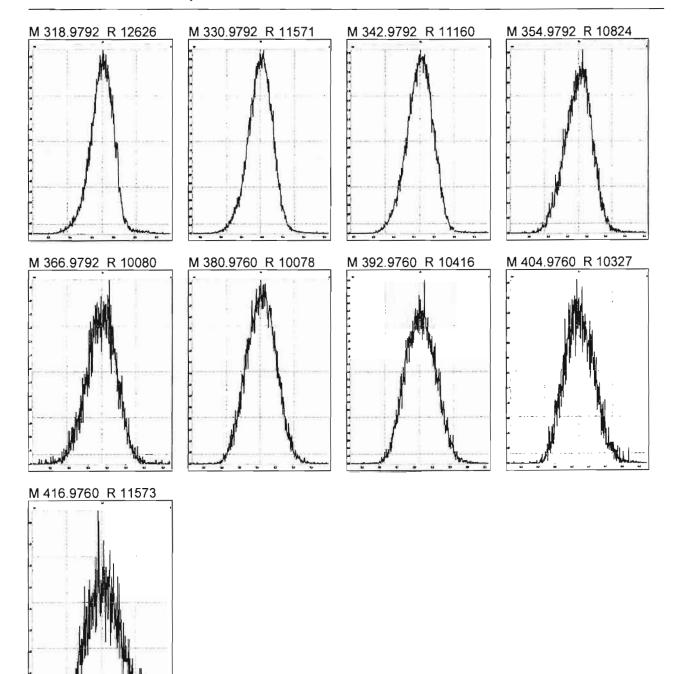


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Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:04:39 Pacific Standard Time



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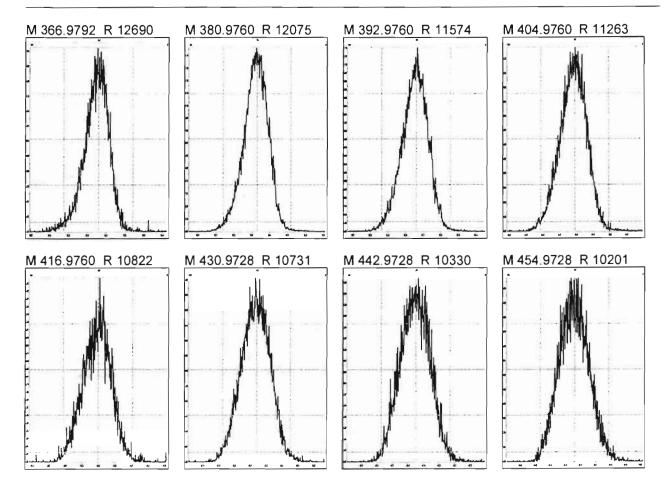
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:05:02 Pacific Standard Time

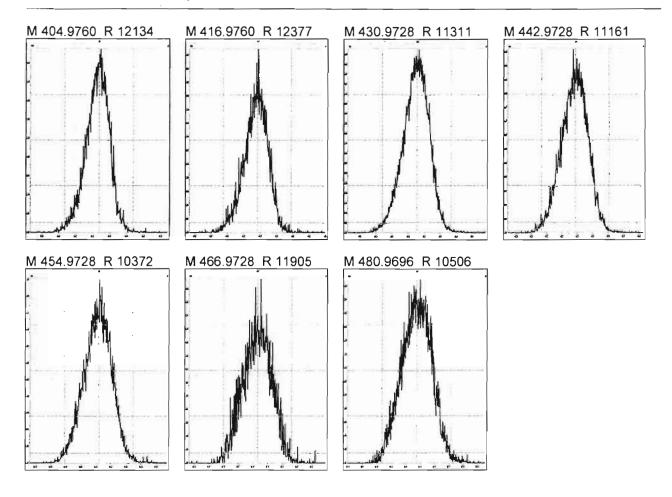


Work Order 2002436 Page 233 of 441

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:05:26 Pacific Standard Time

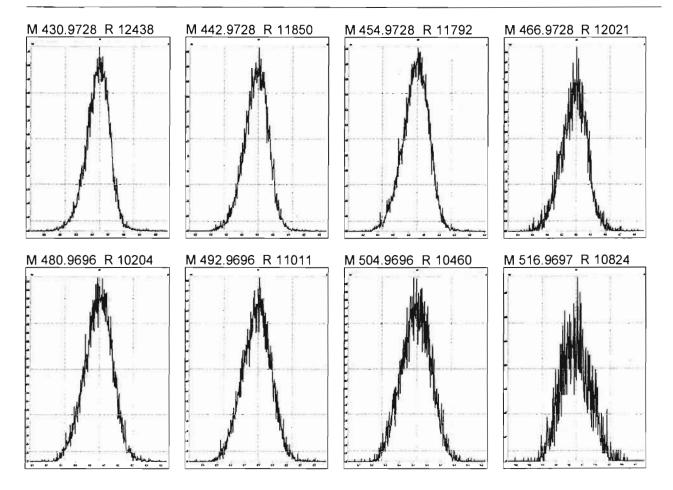


Work Order 2002436 Page 234 of 441

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:05:48 Pacific Standard Time



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Untitled

Last Altered:

Wednesday, November 25, 2020 12:51:42 Pacific Standard Time

Printed:

Wednesday, November 25, 2020 12:51:53 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 10 Nov 2020 10:04:22

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

1000	# Name	RT
1	1 1,3,6,8-TCDD (First)	22.25
2	2 1,2,8,9-TCDD (Last)	26.98
3	3 1,2,4,7,9-PeCDD (First)	28.54
4	4 1,2,3,8,9-PeCDD (Last)	31.17
5	5 1,2,4,6,7,9-HxCDD (First)	32.49
6	6 1,2,3,7,8,9-HxCDD (Last)	34.52
7	7 1,2,3,4,6,7,9-HpCDD (First)	36.97
8	8 1,2,3,4,6,7,8-HpCDD (Last)	38.01
9	9 1,3,6,8-TCDF (First)	20.05
10	10 1,2,8,9-TCDF (Last)	27.30
11	11 1,3,4,6,8-PeCDF (First)	26.87
12	12 1,2,3,8,9-PeCDF (Last)	31.53
13	13 1,2,3,4,6,8-HxCDF (First)	31.96
14	14 1,2,3,7,8,9-HxCDF (Last)	35.02
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.59
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.63

Page 1 of 1

Untitled

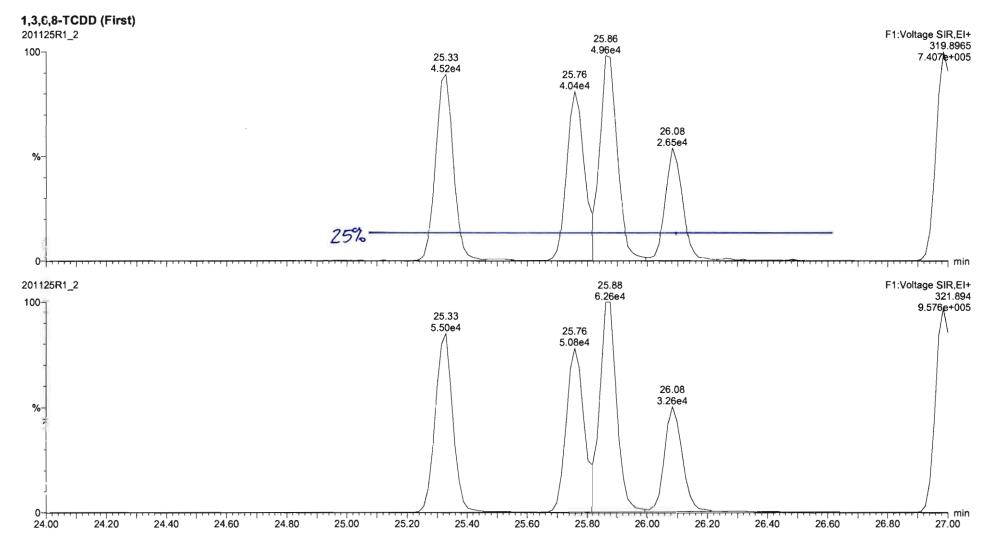
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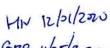
Dataset:

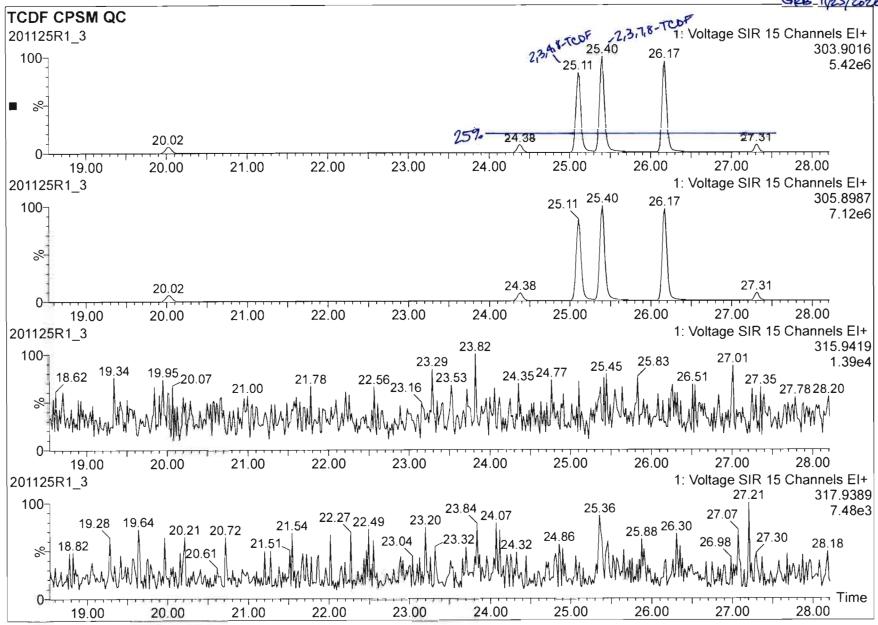
Wednesday, November 25, 2020 12:51:42 Pacific Standard Time Wednesday, November 25, 2020 12:51:53 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 10 Nov 2020 10:04:22

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10







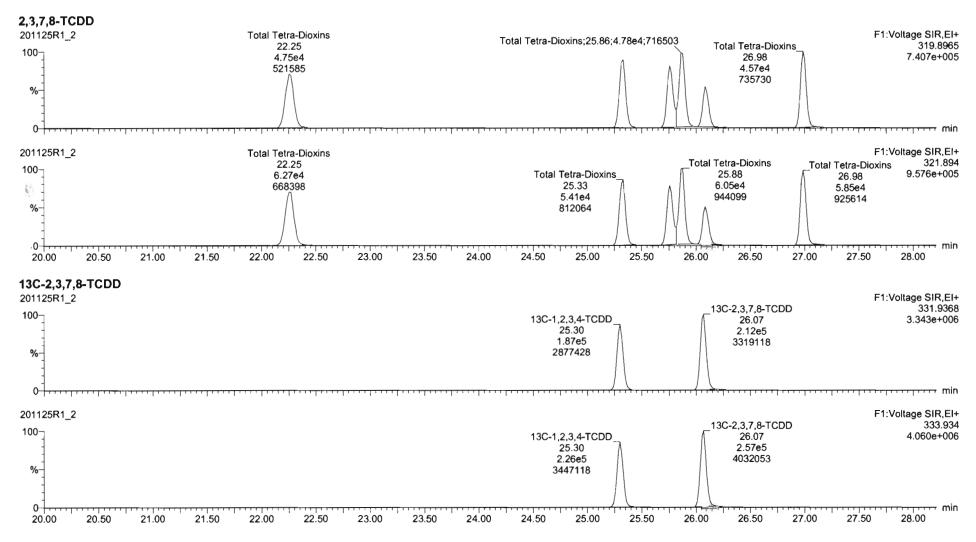
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Last Altered: Printed:

Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

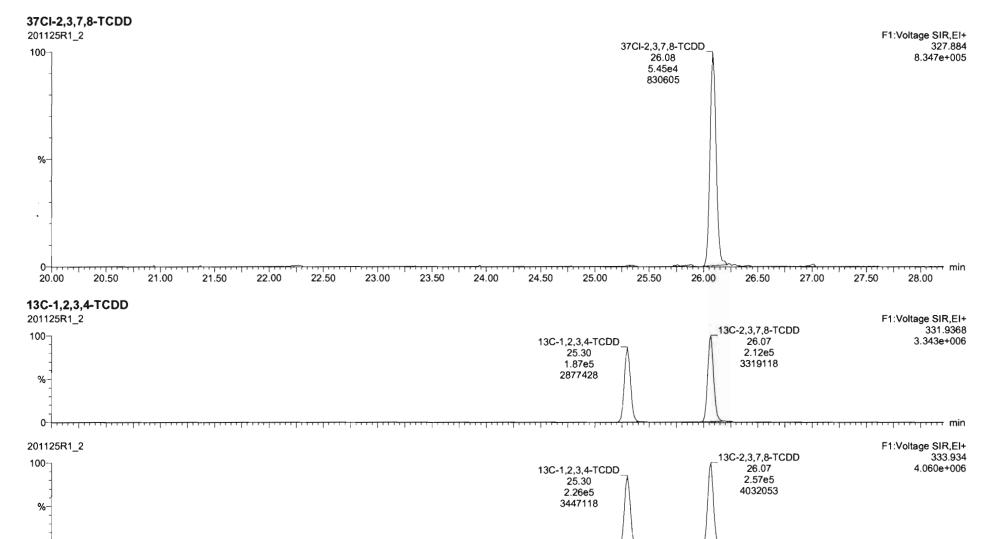


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Last Altered: Printed:

Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time

Name: 201125R1_2, Date: 25-Nov-2020, Time: 10:06:48, ID: ST201125R1_2 1613 CS3 20F1105, Description: 1613 CS3 20F1105



20.50

20.00

21.00

21.50

22.00

22.50

23.00

23.50

24.00

24.50

25.00

25.50

26.00

26.50

27.00

27.50

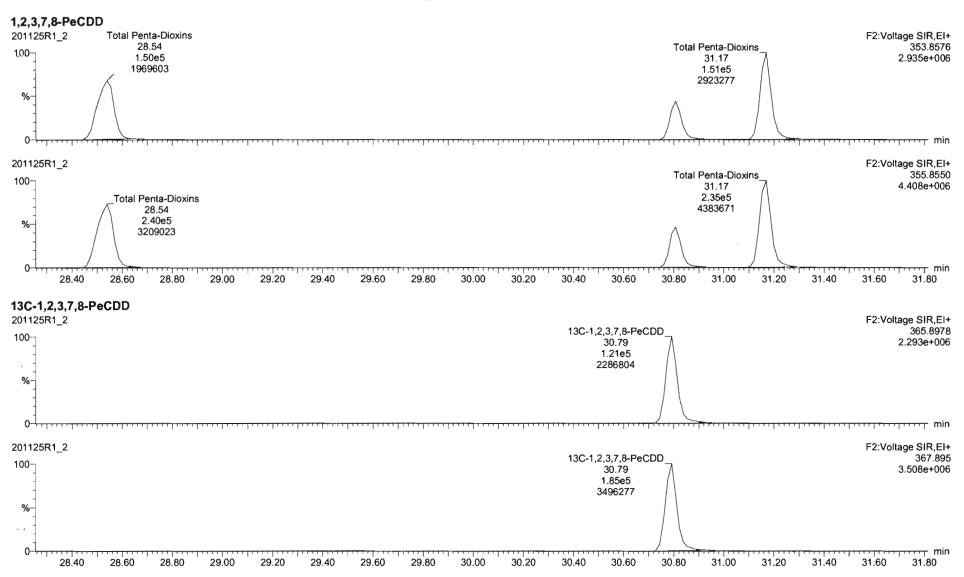
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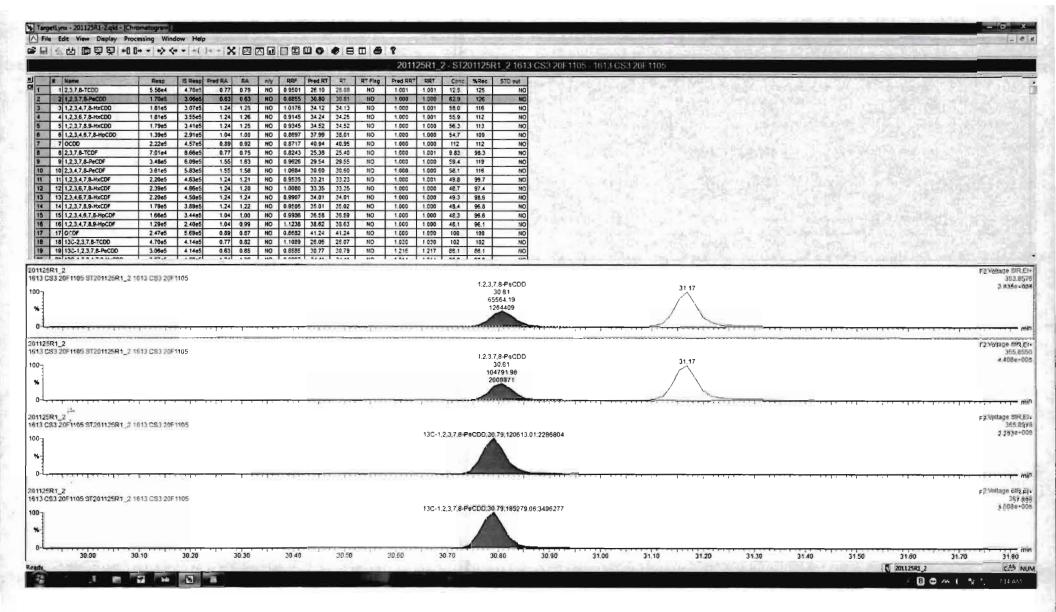
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Last Altered: Printed:

Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time



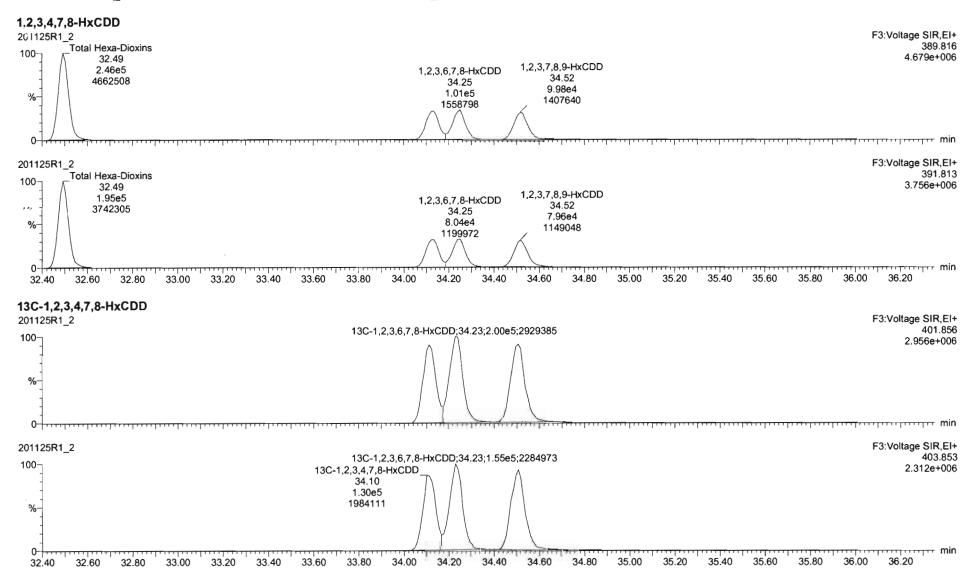


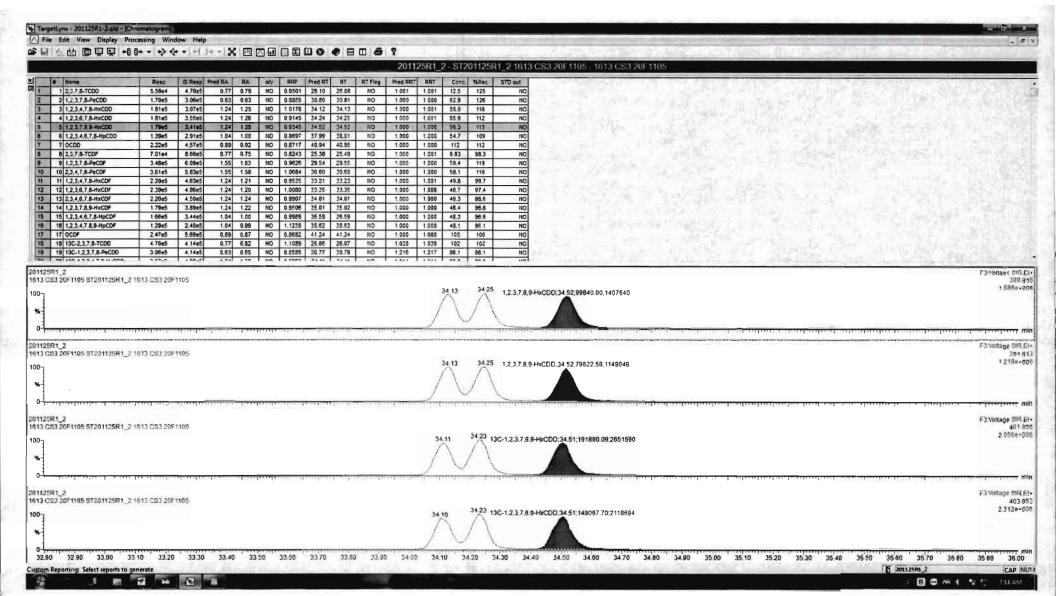
Work Order 2002436 Page 242 of 441

Untitled

Last Altered: Printed:

Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time

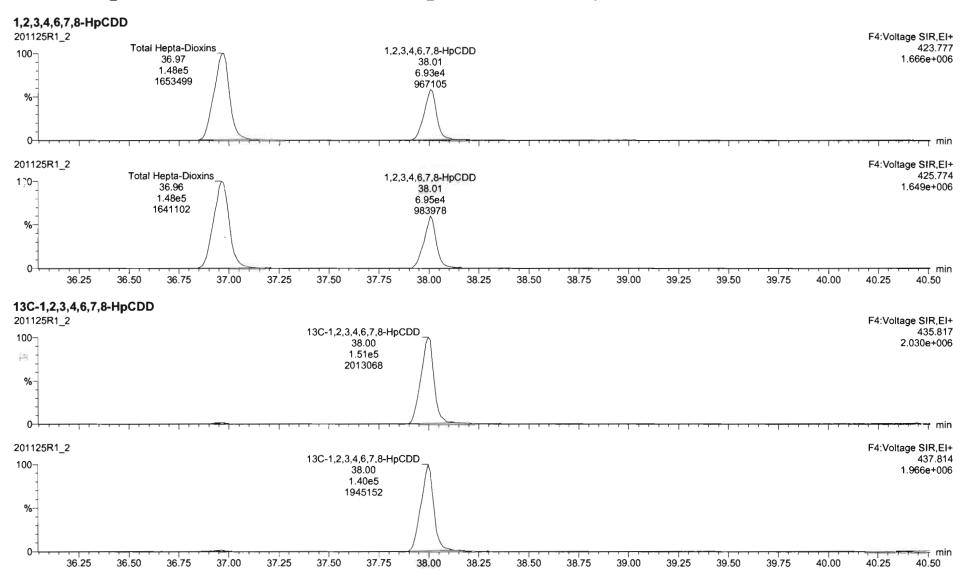




Work Order 2002436 Page 244 of 441

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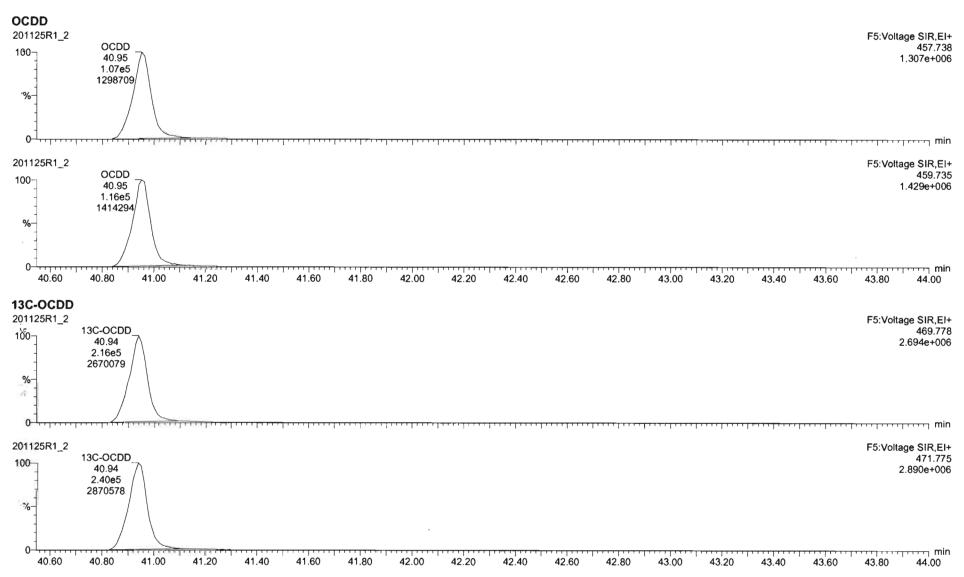
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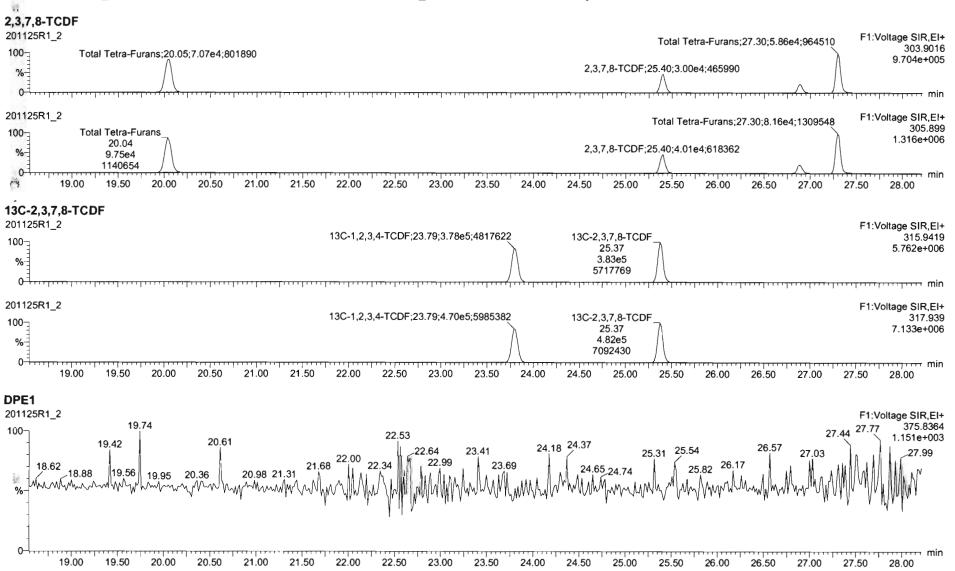
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Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time



Untitled

Last Altered: Printed: Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time



Guantify Sample Report MassLynx 4.1 SCN815

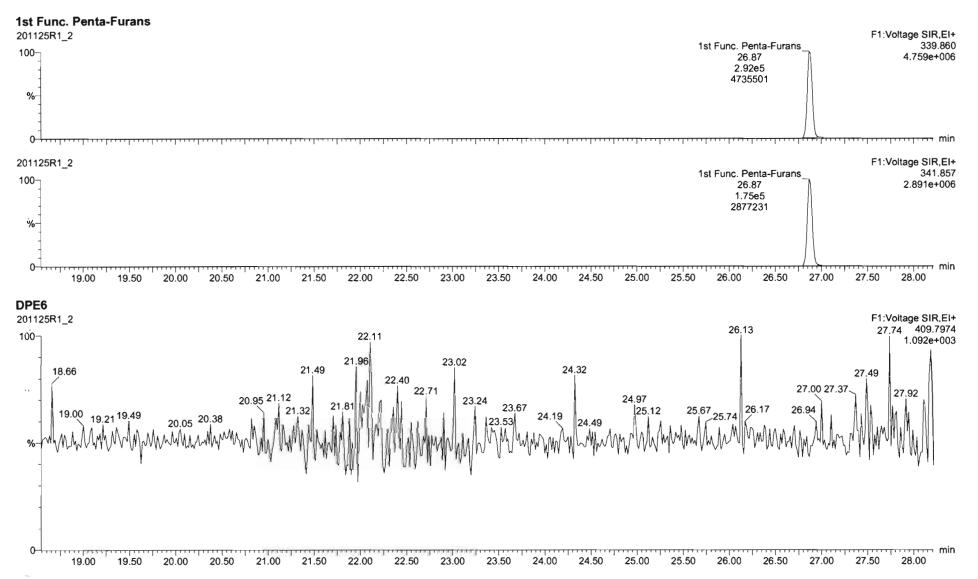
Vista Analytical Laboratory

Dataset:

Untitled

Last Altered: Printed:

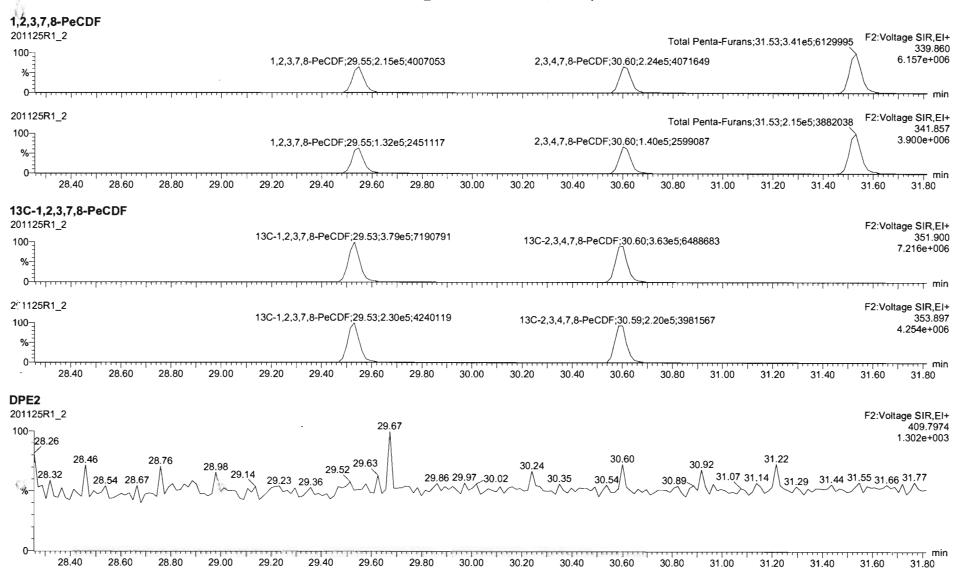
Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time

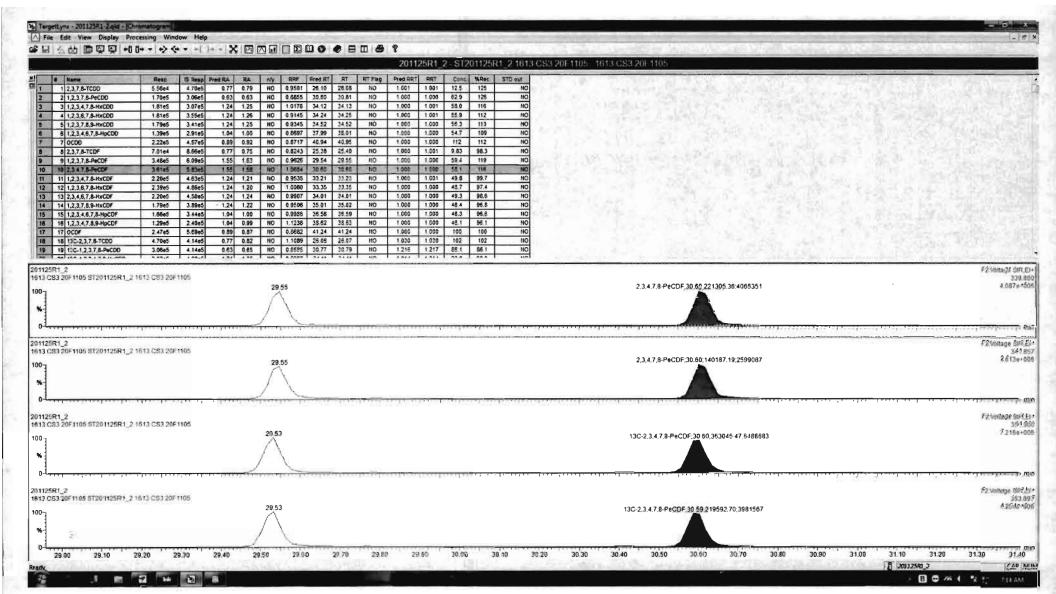


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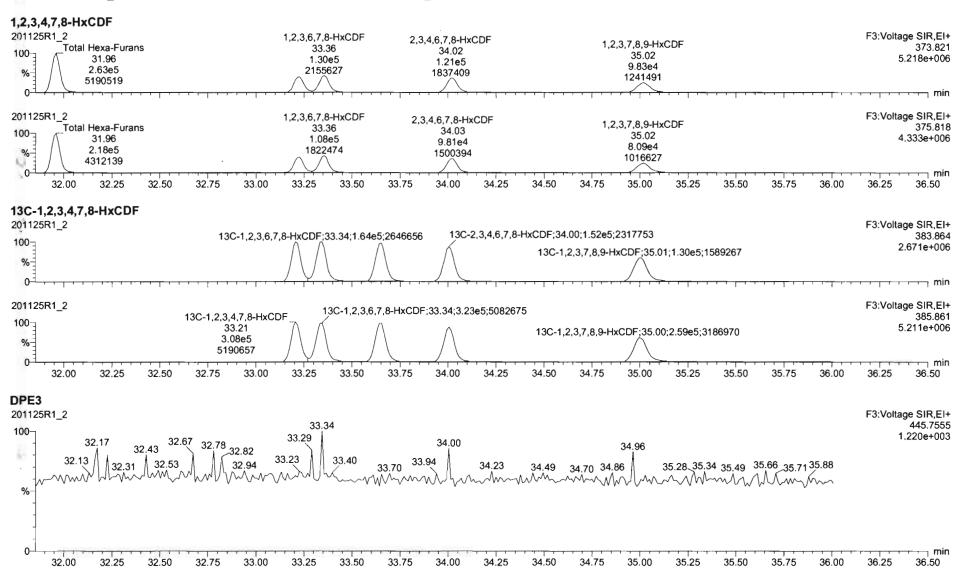
Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time





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Last Altered: Printed: Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time



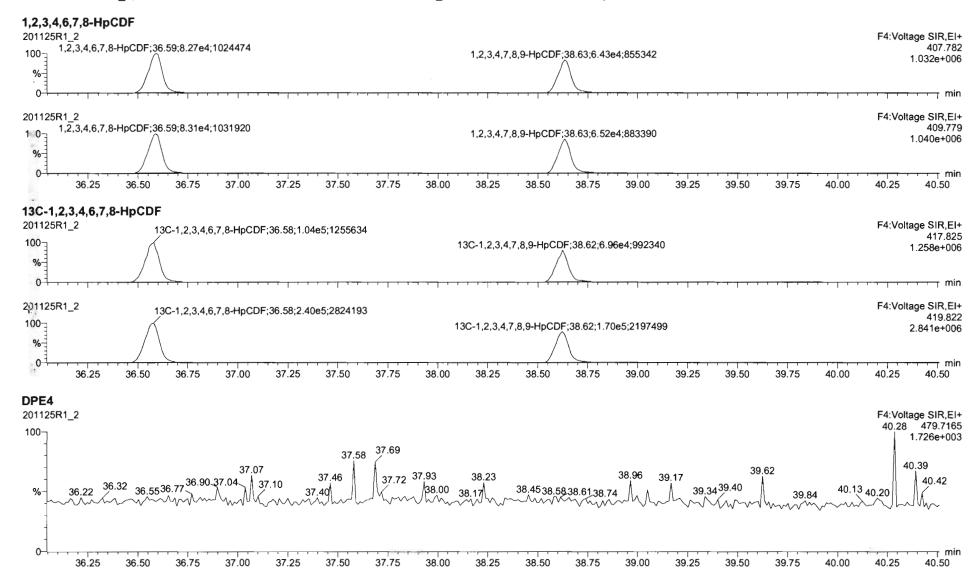
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Dataset:

6.3

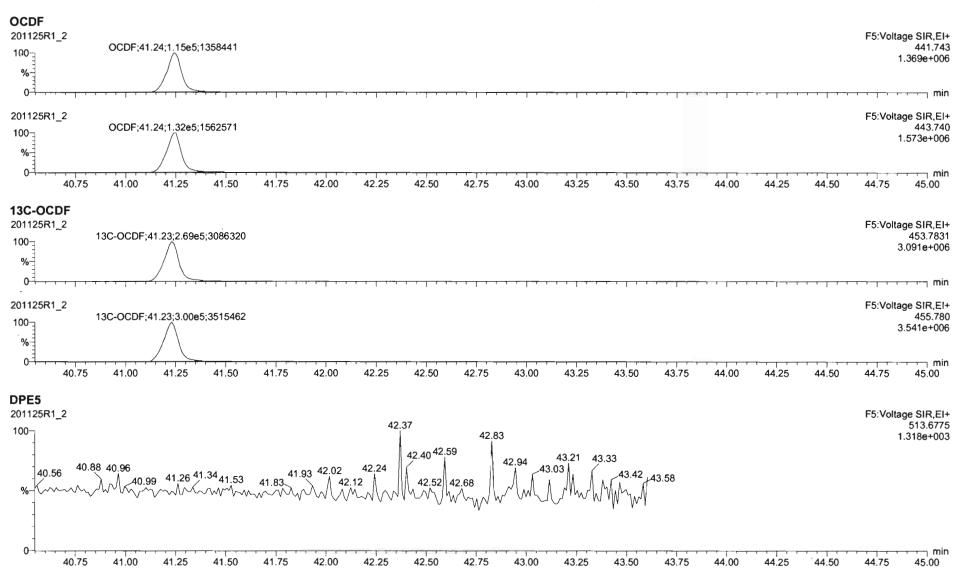
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Last Altered: Printed: Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time



Untitled

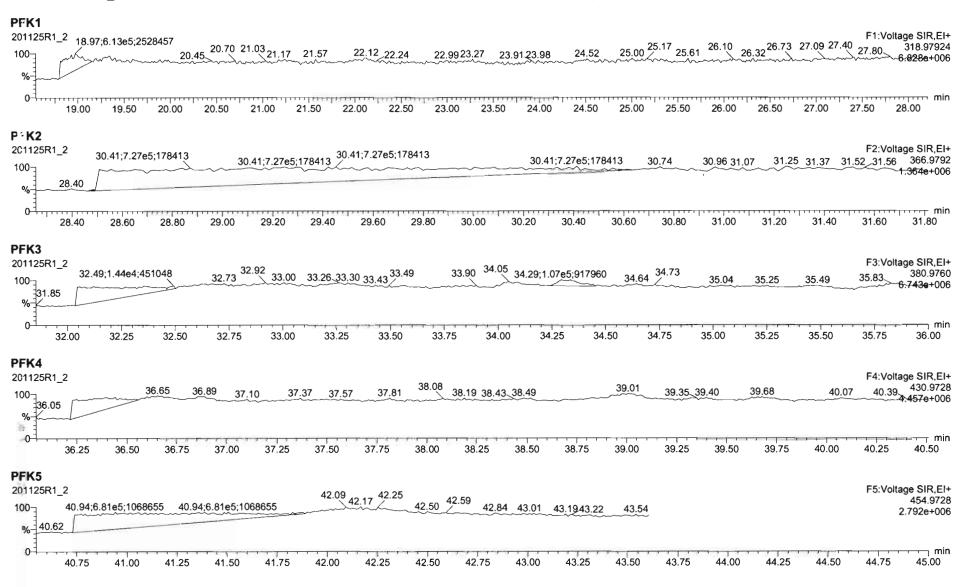
Last Altered: Printed: Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time



Untitled

Last Altered: Printed:

Thursday, November 26, 2020 07:15:51 Pacific Standard Time Thursday, November 26, 2020 07:16:01 Pacific Standard Time

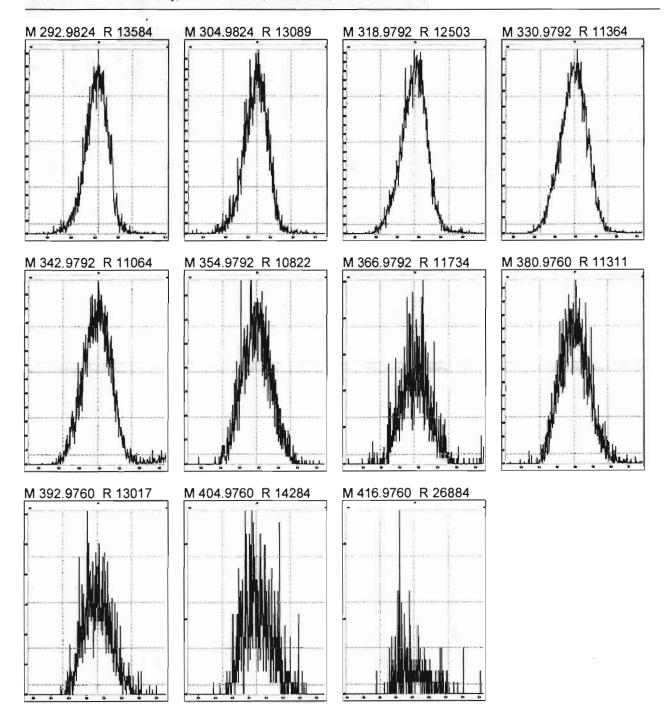


File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:02:03 Pacific Standard Time



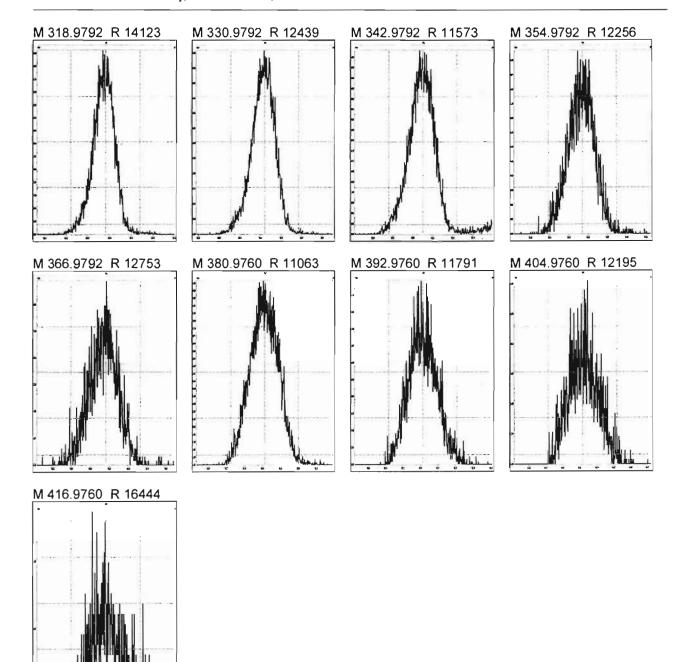
Work Order 2002436 Page 255 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:02:29 Pacific Standard Time



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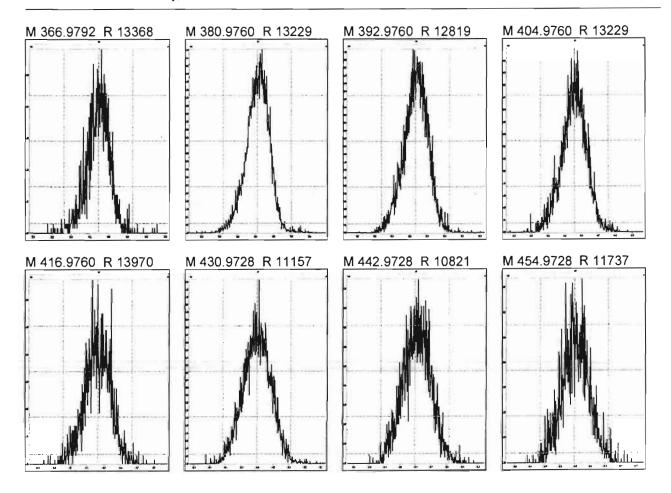
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:03:05 Pacific Standard Time



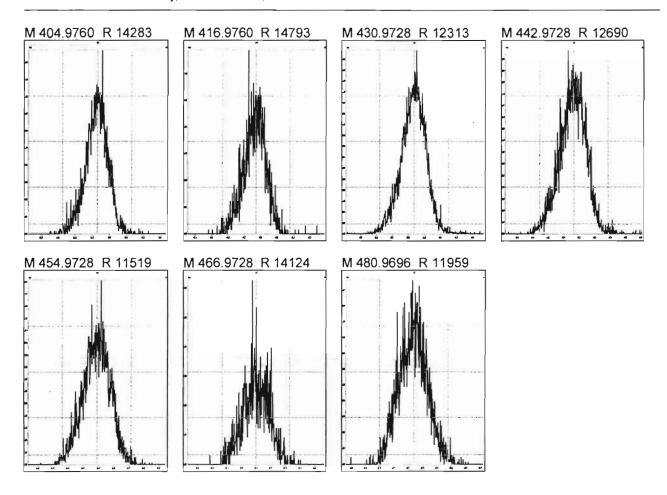
Work Order 2002436 Page 257 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:03:33 Pacific Standard Time



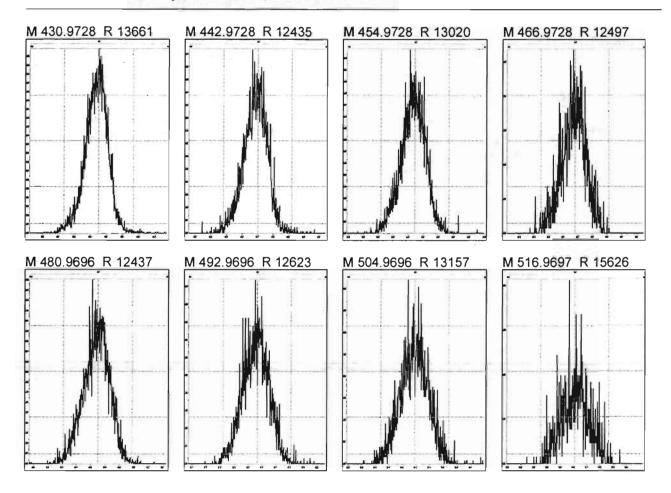
Work Order 2002436 Page 258 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:03:51 Pacific Standard Time



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nkms Calibration STANDARDS REVIEW CHECKLIST

Beg. Calbration ID: STZ0112522-1	_	Reviewed By: TIN 12/31/2027
		initials & Date
End Calibration ID: <u>NA</u>	-	®
	Beg. End	Beg. End
Ion abundance within QC limits?	NA	Mass resolution ≥
Concentrations within criteria?		□ 5k □ 6-8K □ 8K № 10K 1614 1699 429 1613/1668/8280
TCDD/TCDF Valleys <25%		Intergrated peaks display correctly?
First and last eluters present?		GC Break <20%
Retention Times within criteria?		8280 CS1 End Standard:
Verification Std. named correctly?	团 口	- Ratios within ilmits, S/N <2.51, CS1 within 12 hours
(ST-Year-Month-Day-VG ID)		
Forms signed and dated?		Comments: (A) BEGINNING RES CHECK FAILED TO PRINT DUE TO SOFTWARE 155UE. BEG. RET CHECK FOR ZOIZER ALSO USED AS
Correct ICAL referenced?	GRB	BEG RES CHECK FOR ZOIZERS ALSO USED AS
Run Log:	/	B END. PES CHECK PROCESSED MANUALLY AFTER SEQUENCE
- Correct Instrument listed?	\vee	
- Samples within 12 hour clock?	(Y) N	·
- Bottle position verfied?	GRA	<u> </u>

ID: LR - HCSRC

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

Page 1 of 2

Dataset:

U:\VG12.PRO\Results\201125R2\201125R2-2.qld

Last Altered: Printed:

Thursday, November 26, 2020 07:20:26 Pacific Standard Time Thursday, November 26, 2020 07:20:53 Pacific Standard Time

FIN 12/01/2020

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201125R2_2, Date: 25-Nov-2020, Time: 22:16:41, ID: ST201125R2_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

W. D.	# 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	4.84e4	4.22e5	0.86	NO	0.950	26.11	26.10	NO	1.001	1.001	12.069	121	NO
2	2 1,2,3,7,8-PeCDD	1.51e5	2.63e5	0.62	NO	0.885	30.82	30.82	NO	1.000	1.001	64.633	129	NO
3	3 1,2,3,4,7,8-HxCDD	1.52e5	2.57e5	1.29	NO	1.02	34.15	34.15	NO	1.000	1.000	58.315	117	NO
4	4 1,2,3,6,7,8-HxCDD	1.57e5	3.10e5	1.20	NO	0.915	34.27	34.27	NO	1.000	1.000	55.493	111	NO
5	5 1,2,3,7,8,9-HxCDD	1.56e5	2.90e5	1.22	NO	0.934	34.54	34.55	NO	1.000	1.001	57.703	115	NO
6	6 1,2,3,4,6,7,8-HpCDD	1.12e5	2.38e5	1.00	NO	0.870	38.04	38.05	NO	1.000	1.000	54.028	108	NO
7	7 OCDD	1.86e5	3.78e5	0.88	NO	0.872	41.01	41.03	NO	1.000	1.001	112.60	113	NO
8	8 2,3,7,8-TCDF	6.36e4	7.59e5	0.75	NO	0.824	25.40	25.42	NO	1.000	1.001	10.169	102	NO
9	9 1,2,3,7,8-PeCDF	2.90e5	5.30e5	1.61	NO	0.963	29.56	29.56	NO	1.000	1.001	56.801	114	NO
10	10 2,3,4,7,8-PeCDF	3.17e5	5.07e5	1.61	NO	1.07	30.62	30.63	NO	1.000	1.000	58.600	117	NO
11	11 1,2,3,4,7,8-HxCDF	1.86e5	3.92e5	1.21	NO	0.953	33.24	33.25	NO	1.000	1.000	49.747	99.5	NO
12	12 1,2,3,6,7,8-HxCDF	2.03e5	4.08e5	1.21	NO	1.01	33.37	33.38	NO	1.000	1.000	49.459	98.9	NO
13	13 2,3,4,6,7,8-HxCDF	1.87e5	3.88e5	1.18	NO	0.991	34.04	34.05	NO	1.000	1.000	48.602	97.2	NO
14	14 1,2,3,7,8,9-HxCDF	1.53e5	3.18e5	1.28	NO	0.951	35.03	35.05	NO	1.000	1.001	50.518	101	NO
15	15 1,2,3,4,6,7,8-HpCDF	1.37e5	2.81e5	0.98	NO	0.999	36.61	36.62	NO	1.000	1.000	48.989	98.0	NO
16	16 1,2,3,4,7,8,9-HpCDF	1.08e5	1.96e5	1.00	NO	1.12	38.67	38.68	NO	1.000	1.000	48.861	97.7	NO
17	17 OCDF	2.07e5	4.62e5	0.87	NO	0.868	41.30	41.31	NO	1.000	1.001	102.92	103	NO
18	18 13C-2,3,7,8-TCDD	4.22e5	3.75e5	0.84	NO	1.11	26.07	26.08	NO	1.030	1.030	101.56	102	NO
10	19 13C-1,2,3,7,8-PeCDD	2.63e5	3.75e5	0.65	NO	0.859	30.79	30.81	NO	1.216	1.217	81.778	81.8	NO
20	20 13C-1,2,3,4,7,8-HxCDD	2.57e5	4.18e5	1.33	NO	0.700	34.14	34.14	NO	1.014	1.014	87.902	87.9	NO
21	21 13C-1,2,3,6,7,8-HxCDD	3.10e5	4.18e5	1.26	NO	0.833	34.28	34.26	NO	1.018	1.017	89.182	89.2	NO
22	22 13C-1,2,3,7,8,9-HxCDD	2.90e5	4.18e5	1.33	NO	0.762	34.52	34.53	NO	1.025	1.025	91.129	91.1	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	2.38e5	4.18e5	1.06	NO	0.650	38.01	38.04	NO	1.129	1.130	87.662	87.7	NO
24	24 13C-OCDD	3.78e5	4.18e5	0.92	NO	0.539	40.97	41.01	NO	1.217	1.218	167.99	84.0	NO
25	25 13C-2,3,7,8-TCDF	7.59e5	7.51e5	0.79	NO	0.981	25.40	25.39	NO	1.003	1.003	103.00	103	NO
26	26 13C-1,2,3,7,8-PeCDF	5.30e5	7.51e5	1.64	NO	0.792	29.52	29.55	NO	1.166	1.167	89.272	89.3	NO
27	27 13C-2,3,4,7,8-PeCDF	5.07e5	7.51e5	1.59	NO	0.778	30.58	30.62	NO	1.208	1.210	86.802	86.8	NO
28	28 13C-1,2,3,4,7,8-HxCDF	3.92e5	4.18e5	0.50	NO	0.954	33.23	33.24	NO	0.987	0.987	98.469	98.5	NO
29	29 13C-1,2,3,6,7,8-HxCDF	4.08e5	4.18e5	0.50	NO	1.01	33.36	33.37	NO	0.991	0.991	96.992	97.0	NO
30	30 13C-2,3,4,6,7,8-HxCDF	3.88e5	4.18e5	0.49	NO	0.921	34.03	34.04	NO	1.011	1.011	100.80	101	NO
31	31 13C-1,2,3,7,8,9-HxCDF	3.18e5	4.18e5	0.51	NO	0.803	35.03	3 5 .03	NO	1.040	1.040	94.65 5	94.7	NO

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201125R2\201125R2-2.qld

Last Altered: Printed:

Thursday, November 26, 2020 07:20:26 Pacific Standard Time Thursday, November 26, 2020 07:20:53 Pacific Standard Time

Name: 201125R2_2, Date: 25-Nov-2020, Time: 22:16:41, ID: ST201125R2_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

1 25 P. L.	# 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	2.81e5	4.18e5	0.42	NO	0.735	36.60	36.61	NO	1.087	1.087	91.460	91.5	NO
33	33 13C-1,2,3,4,7,8,9-HpCDF	1.96e5	4.18e5	0.42	NO	0.568	38.64	38.67	NO	1.147	1.148	82.786	82.8	NO
34	34 13C-OCDF	4.62e5	4.18e5	0.89	NO	0.629	41.26	41.29	NO	1.225	1.226	175.96	88.0	NO
35	35 37CI-2,3,7,8-TCDD	4.88e4	3.75e5			1.09	26.07	26.10	NO	1.030	1.031	11.978	120	NO
36	36 13C-1,2,3,4-TCDD	3.75e5	3.75e5	0.83	NO	1.00	25.37	25.31	NO	1.000	1.000	100.00	100	NO
37	37 13C-1,2,3,4-TCDF	7.51e5	7.51e5	0.79	NO	1.00	23.87	23.82	NO	1.000	1.000	100.00	100	NO
38	38 13C-1,2,3,4,6,9-HxCDF	4.18e5	4.18e5	0.51	NO	1.00	33.71	33.67	NO	1.000	1.000	100.00	100	YES O

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Vista Analytical Laboratory VG-11

Dataset:

Untitled

Last Altered: Printed: Thursday, November 26, 2020 08:06:34 Pacific Standard Time Thursday, November 26, 2020 08:06:37 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39 Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

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

T _p = 1	Name	ID Acq.Date	Acq.Time
1	201125R2_1	SOLVENT BLANK 25-Nov-20	21:31:48
2	201125R2_2	ST201125R2_1 1613 CS3 20F1105 25-Nov-20	22:16:41
3	201125R2_3	TCDF CPSM 25-Nov-20	23:01:33
4	201125R2_4	SOLVENT BLANK 25-Nov-20	23:46:27
5	201125R2_5	2002374-01 USMPDI-046SC-A-01-02-201029 26-Nov-20	00:31:21
6	201125R2_6	2002374-02 USMPDI-046SC-A-02-03-201029 26-Nov-20	01:16:13
7	201125R2_7	2002374-03 USMPDI-046SC-A-03-04-201029 26-Nov-20	02:01:05
8	201125R2_8	2002374-04 USMPDI-046SC-A-04-05-201029 26-Nov-20	02:45:59
9	201125R2_9	2002374-05 USMPDI-054SC-A-05-06-201029 26-Nov-20	03:30:52
10	201125R2_10	2002374-06 USMPDI-054SC-A-06-07-201029 26-Nov-20	04:15:46
11	201125R2_11	2002374-07 USMPDI-054SC-A-07-08-201029 26-Nov-20	05:00:39
12	201125R2_12	2002374-08 USMPDI-054SC-A-08-09-201029 26-Nov-20	05:45:33
13	201125R2_13	B0K0172-DUP1 Duplicate 11.57 26-Nov-20	06:30:25
14	201125R2_14	2002436-02RE1 USMPDI-027SC-A-02-03-201 26-Nov-20	07:15:21

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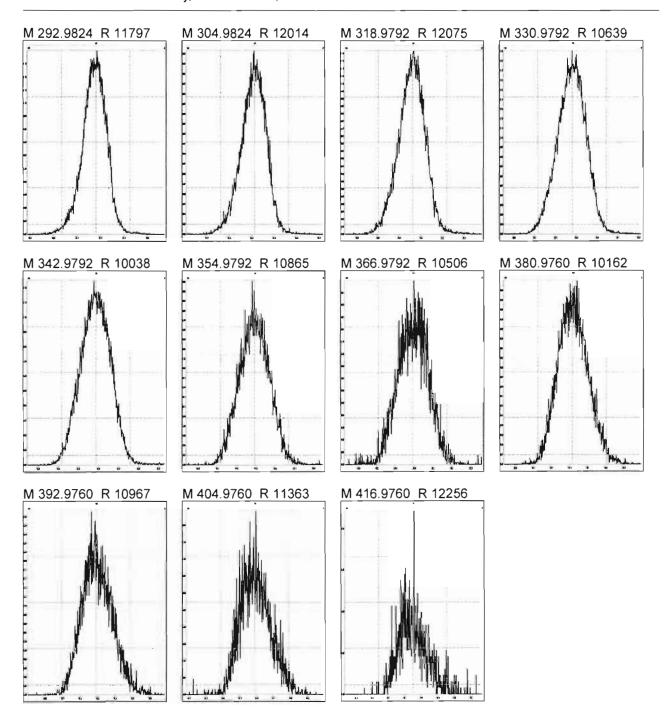
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:03:58 Pacific Standard Time



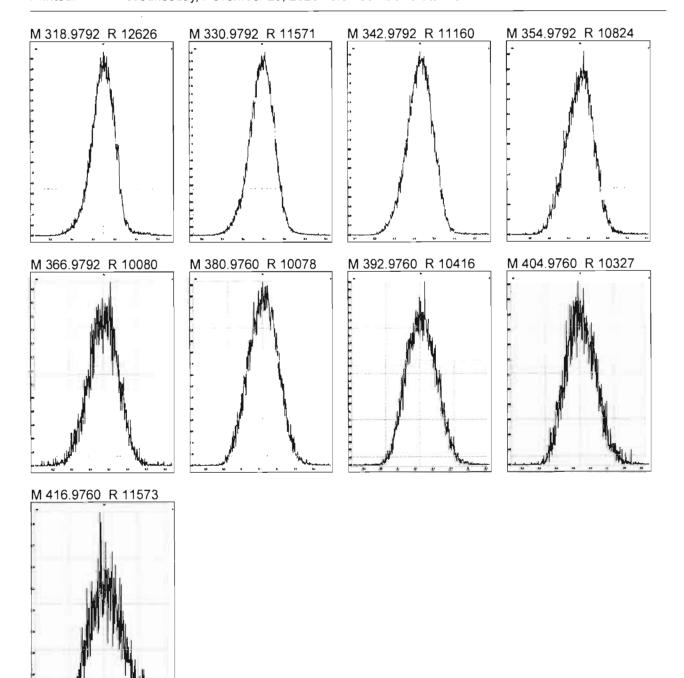
Work Order 2002436 Page 264 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:04:39 Pacific Standard Time



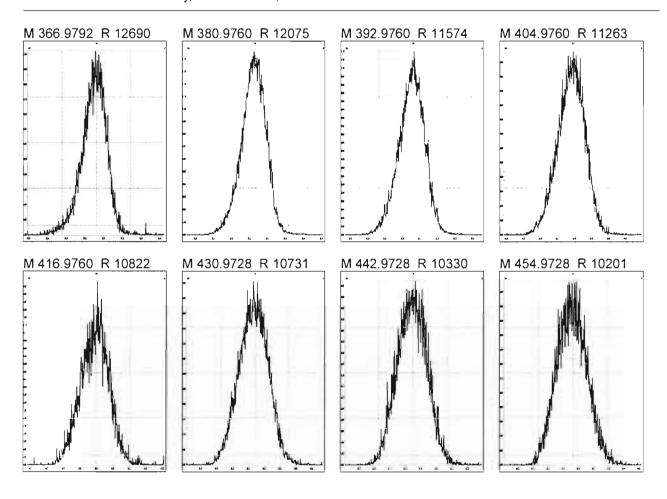
Work Order 2002436 Page 265 of 441

Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed: Wednesday, November 25, 2020 10:05:02 Pacific Standard Time



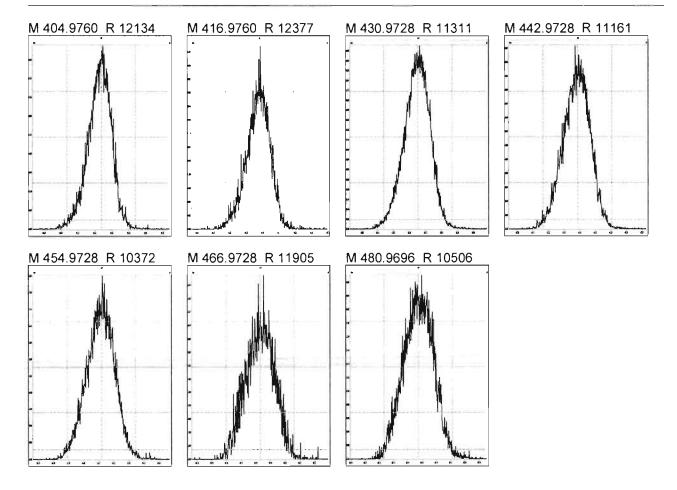
Work Order 2002436 Page 266 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:05:26 Pacific Standard Time



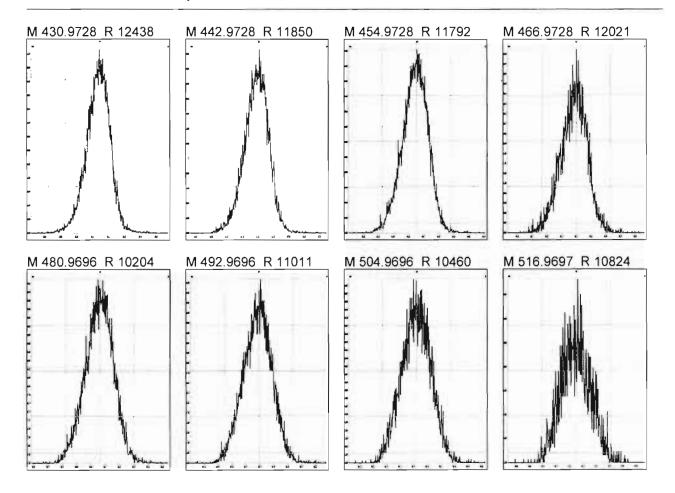
Work Order 2002436 Page 267 of 441

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Wednesday, November 25, 2020 10:05:48 Pacific Standard Time



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MassLynx 4.1 SCN815

Page 1 of 1

Dataset:

Untitled

Last Altered: Printed:

Thursday, November 26, 2020 07:14:55 Pacific Standard Time Thursday, November 26, 2020 07:15:07 Pacific Standard Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 10 Nov 2020 10:04:22

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10

Name: 201125R2_2, Date: 25-Nov-2020, Time: 22:16:41, ID: ST201125R2_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

William .	# Name	RT
1	1 1,3,6,8-TCDD (First)	22.27
2	2 1,2,8,9-TCDD (Last)	27.01
3	3 1,2,4,7,9-PeCDD (First)	28.55
4	4 1,2,3,8,9-PeCDD (Last)	31.18
5	5 1,2,4,6,7,9-HxCDD (First)	32.52
3	6 1,2,3,7,8,9-HxCDD (Last)	34.55
7	7 1,2,3,4,6,7,9-HpCDD (First)	37.02
3	8 1,2,3,4,6,7,8-HpCDD (Last)	38.05
9	9 1,3,6,8-TCDF (First)	20.05
10	10 1,2,8,9-TCDF (Last)	27.32
11	11 1,3,4,6,8-PeCDF (First)	26.90
12	12 1,2,3,8,9-PeCDF (Last)	31.55
13	13 1,2,3,4,6,8-HxCDF (First)	31.98
14	14 1,2,3,7,8,9-HxCDF (Last)	35.05
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.62
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.68

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Quantify Sample Report

MassLynx 4.1 SCN815

Page 1 of 1

Vista Analytical Laboratory VG-11

Dataset:

Untitled

Last Altered:

Thursday, November 26, 2020 07:14:55 Pacific Standard Time

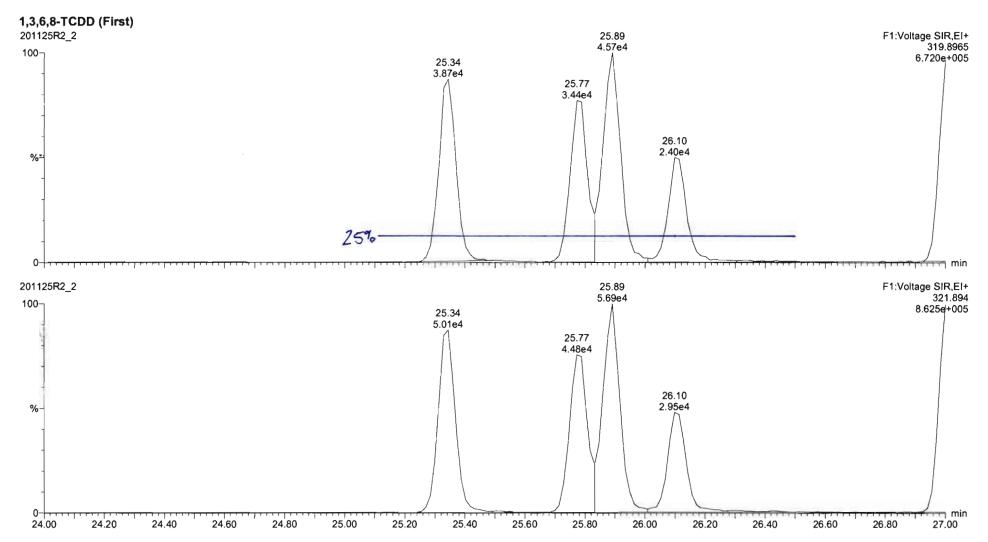
Printed:

Thursday, November 26, 2020 07:15:07 Pacific Standard Time

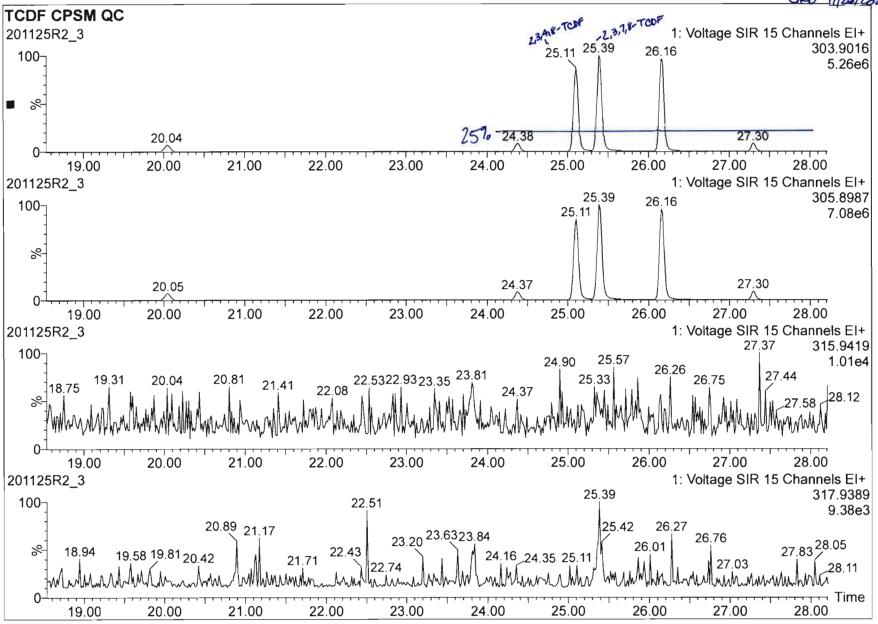
FIN 12/01/2020

Method: U:\VG12.PRO\MethDB\CPSM.mdb 10 Nov 2020 10:04:22

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10



GRB WZielzoro



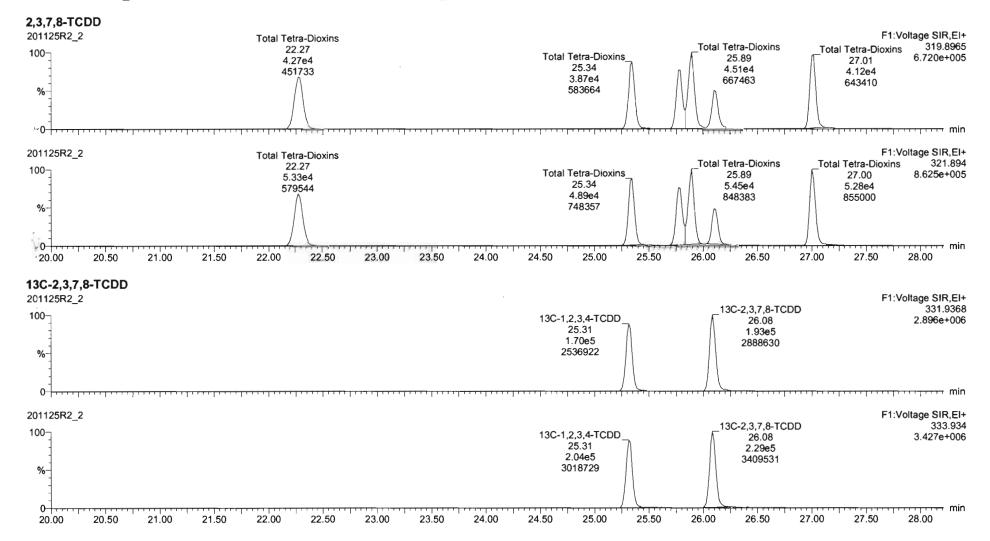
Work Order 2002436 Page 271 of 441

Untitled

Last Altered: Printed: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time

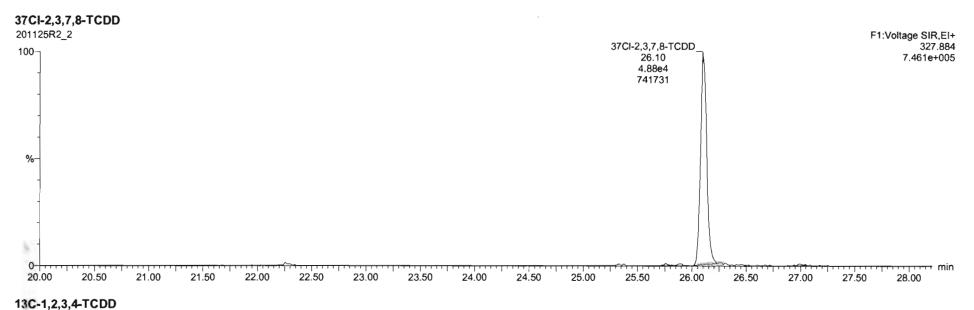
Method: U:\VG12.PRO\MethDB\1613rrt-11-11-20.mdb 12 Nov 2020 07:51:39

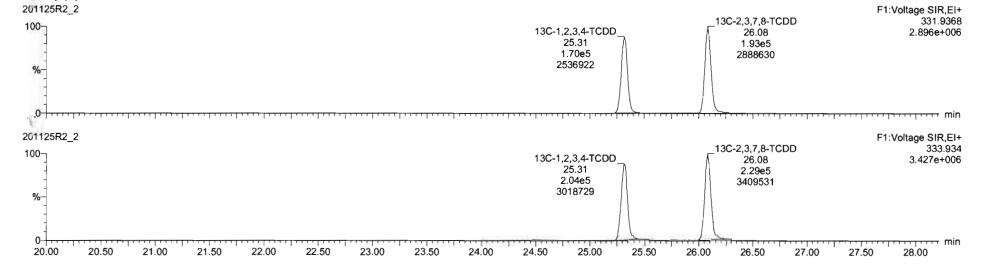
Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 13:36:10



Untitled

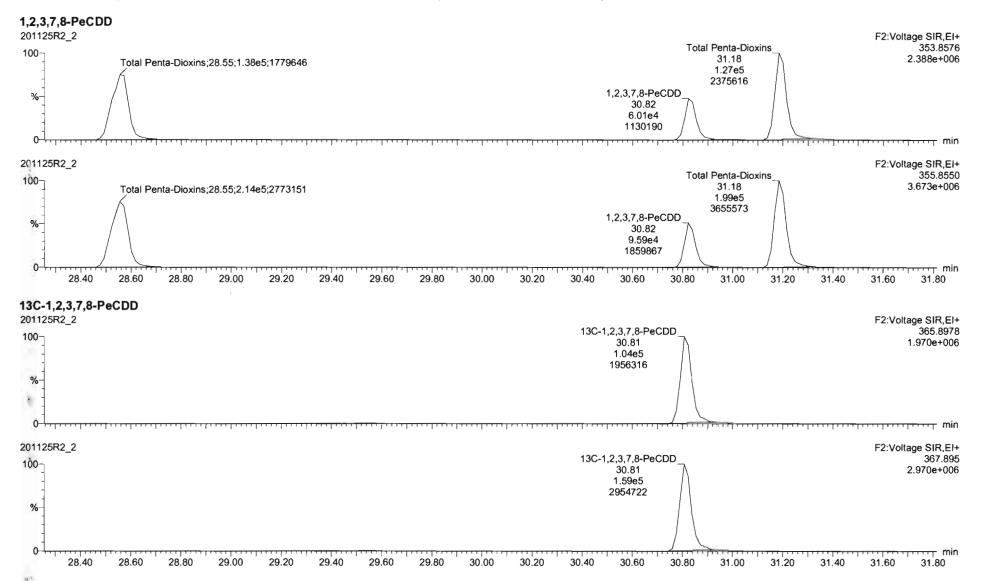
Last Altered: Printed: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time

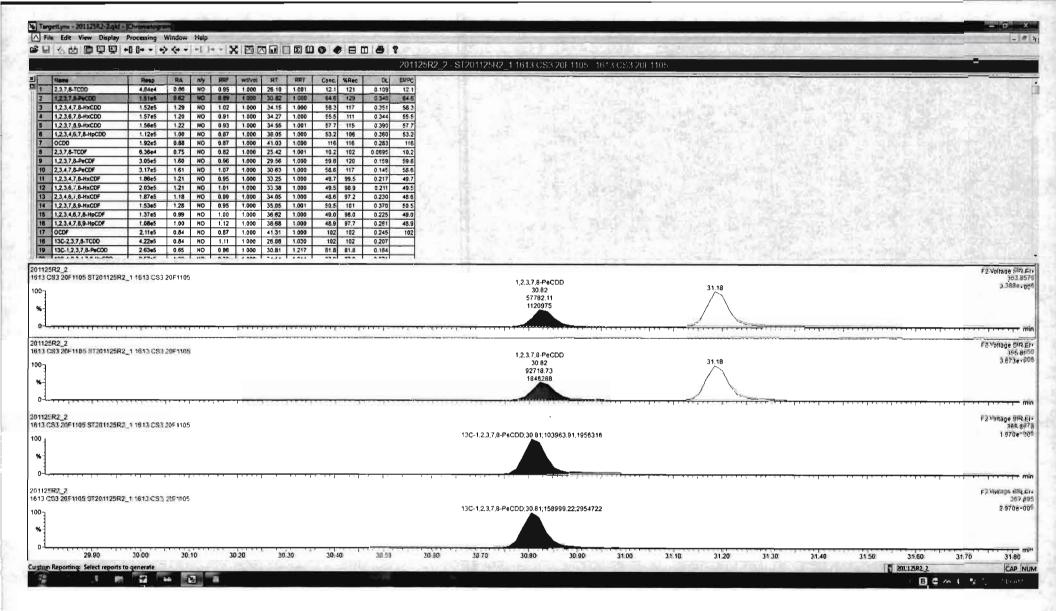




Untitled

Last Altered: Printed: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time

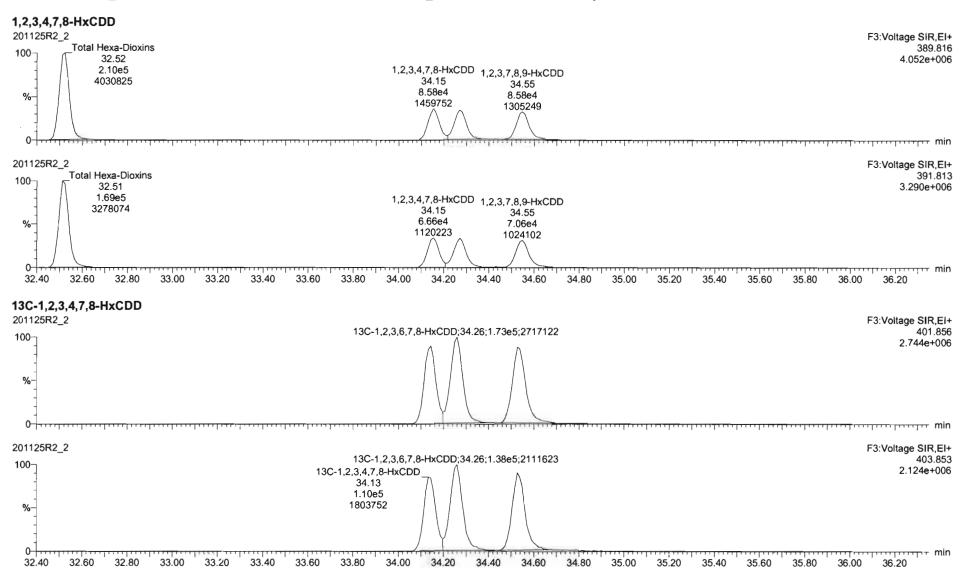




Work Order 2002436 Page 275 of 441

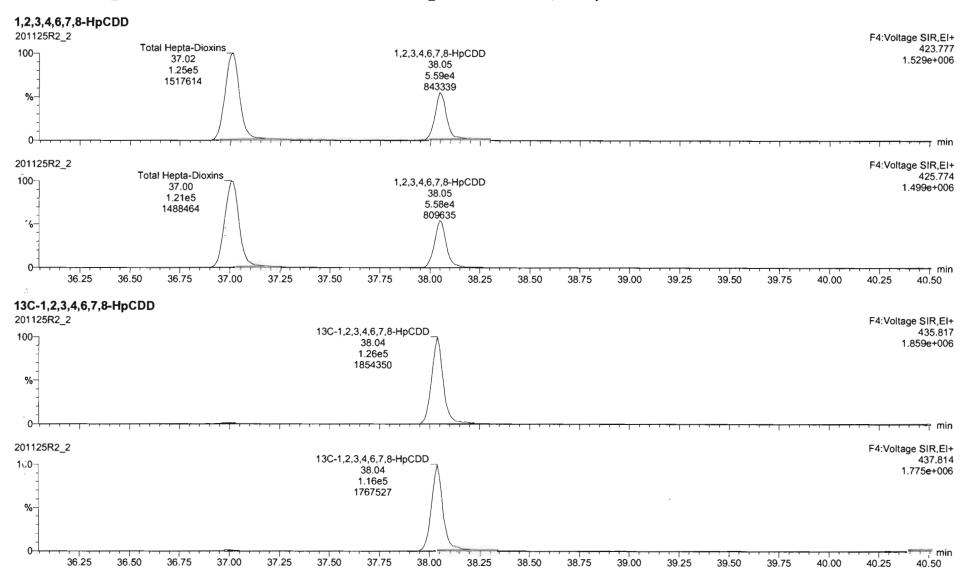
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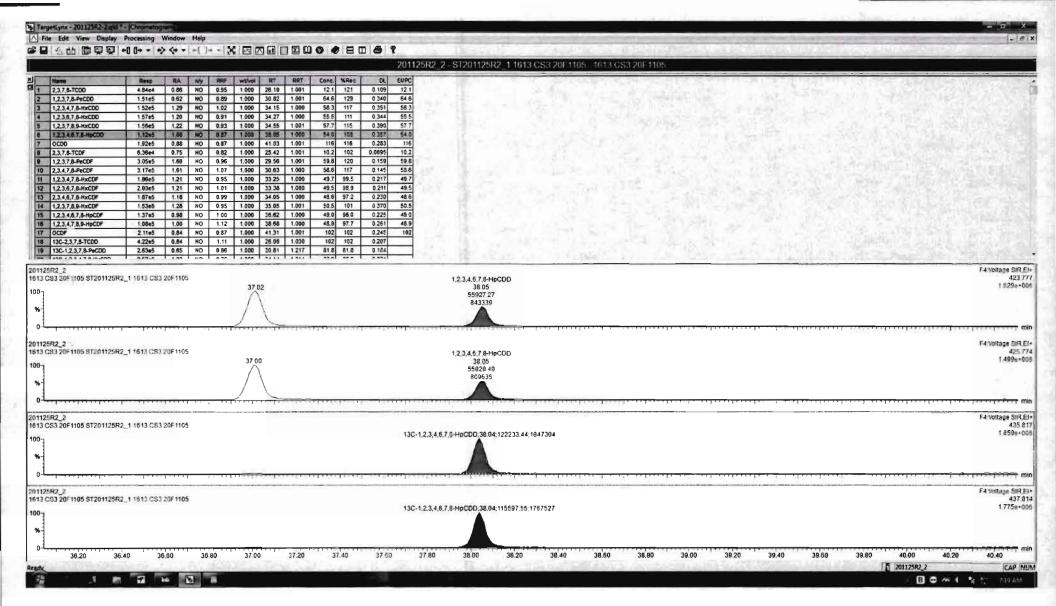
Last Altered: Printed: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time



Untitled

Last Altered: Printed: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time



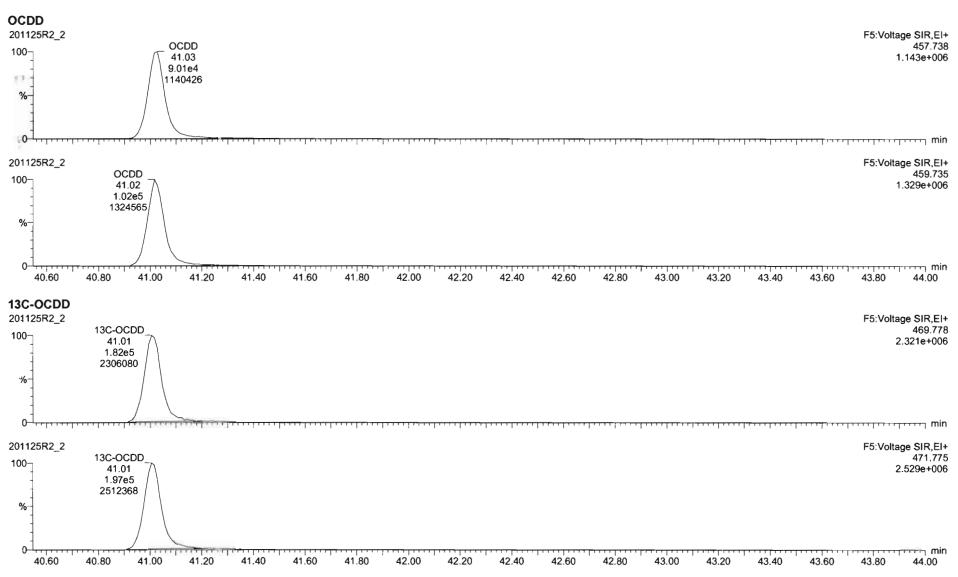


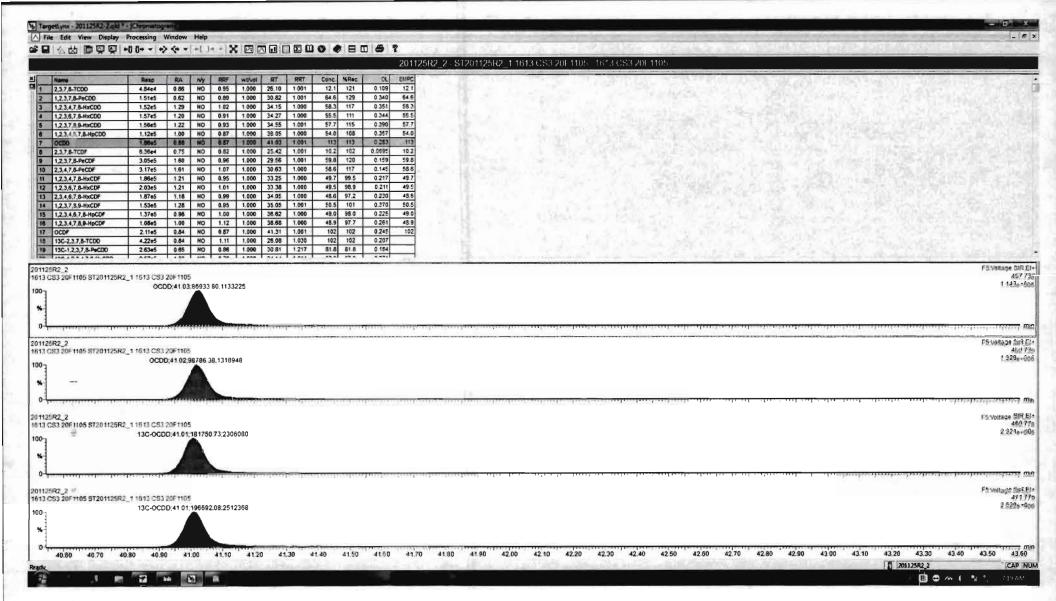
Work Order 2002436 Page 278 of 441

Untitled

Last Altered: Printed:

Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time





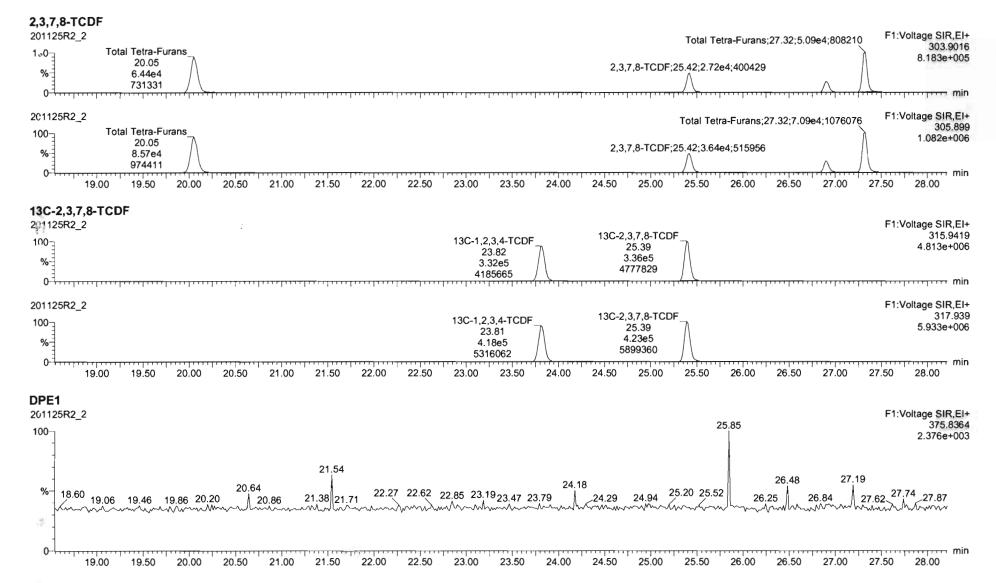
Work Order 2002436 Page 280 of 441

Page 7 of 13

Dataset:

Untitled

Last Altered: Printed: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time



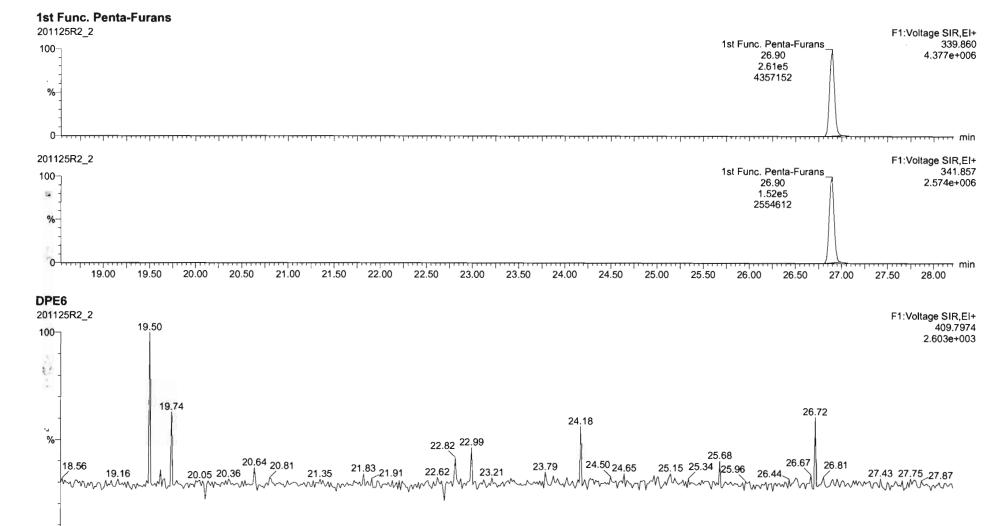
Distaset:

Untitled

Last Altered: Printed:

Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time

Name: 201125R2_2, Date: 25-Nov-2020, Time: 22:16:41, ID: ST201125R2_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105



19.00

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20.00

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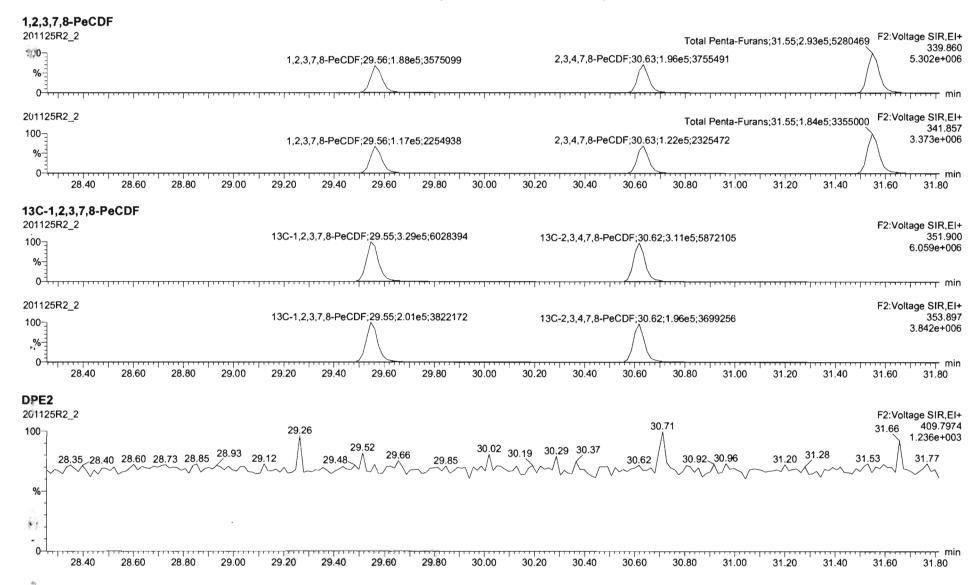
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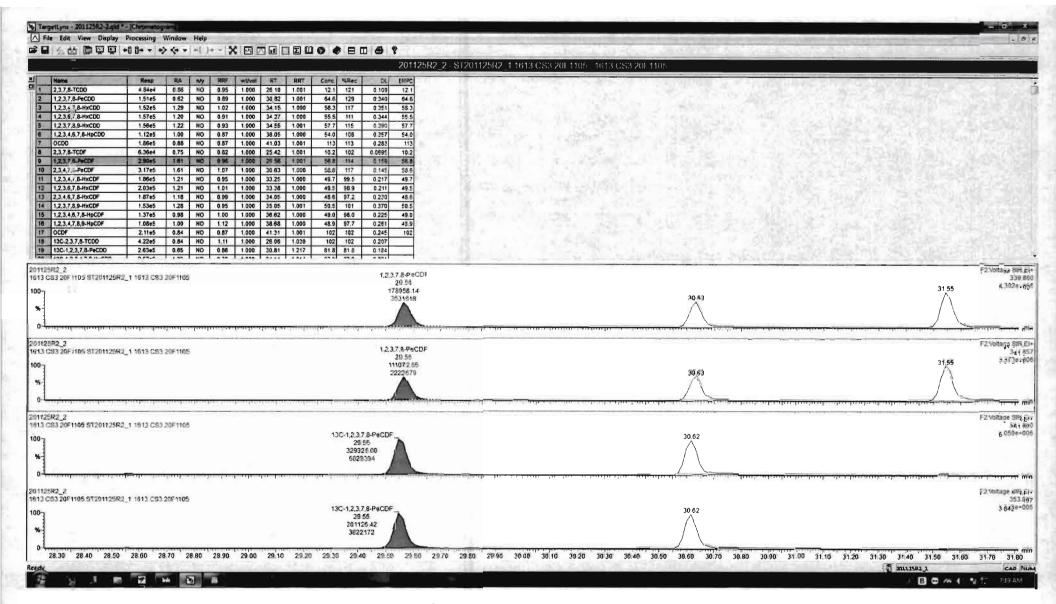
28.00

27.50

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Last Altered: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time



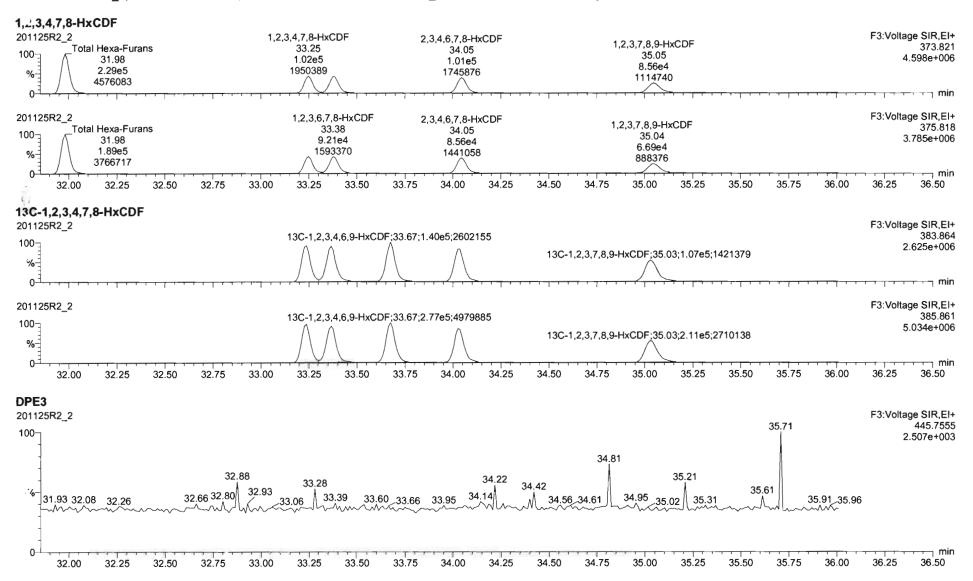


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Last Altered: Printed:

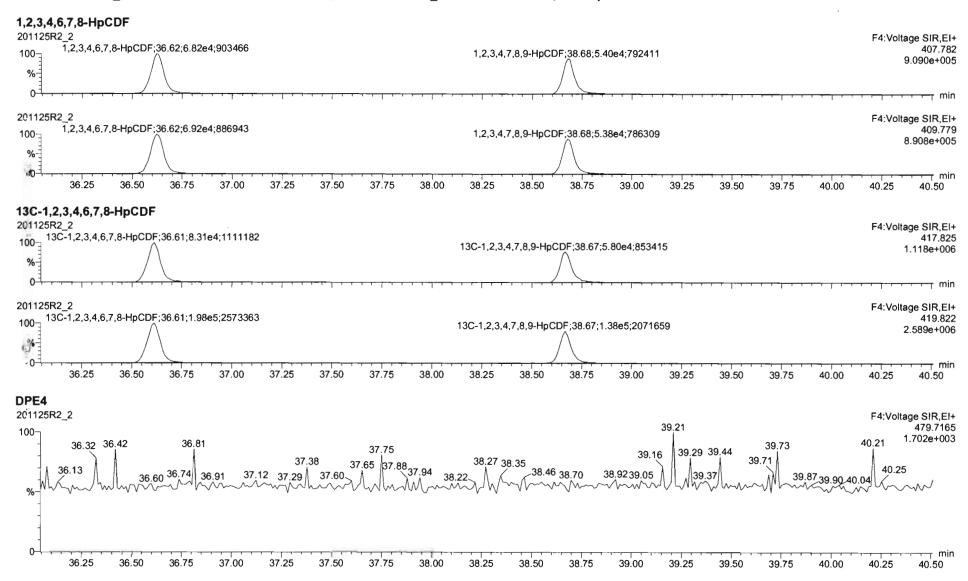
Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time



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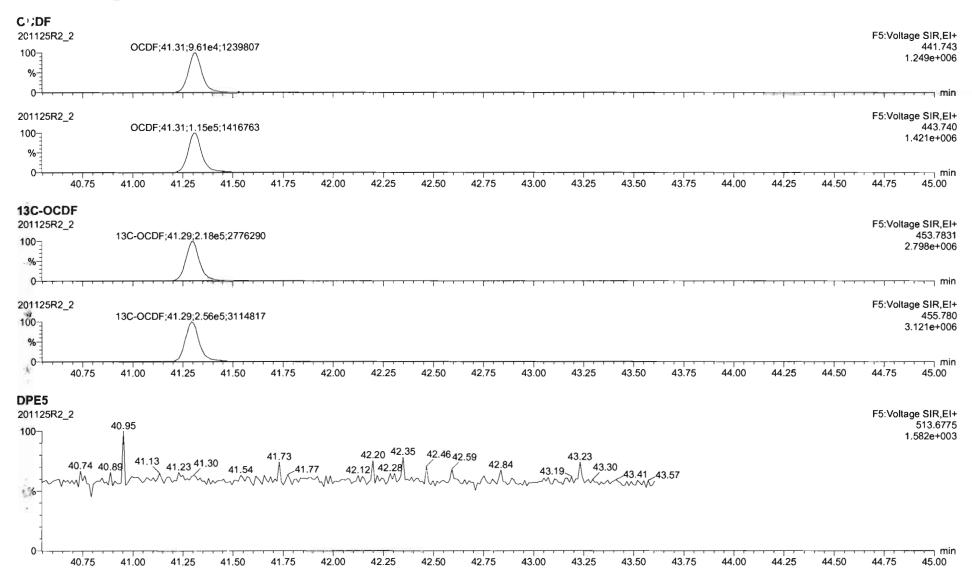
Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time

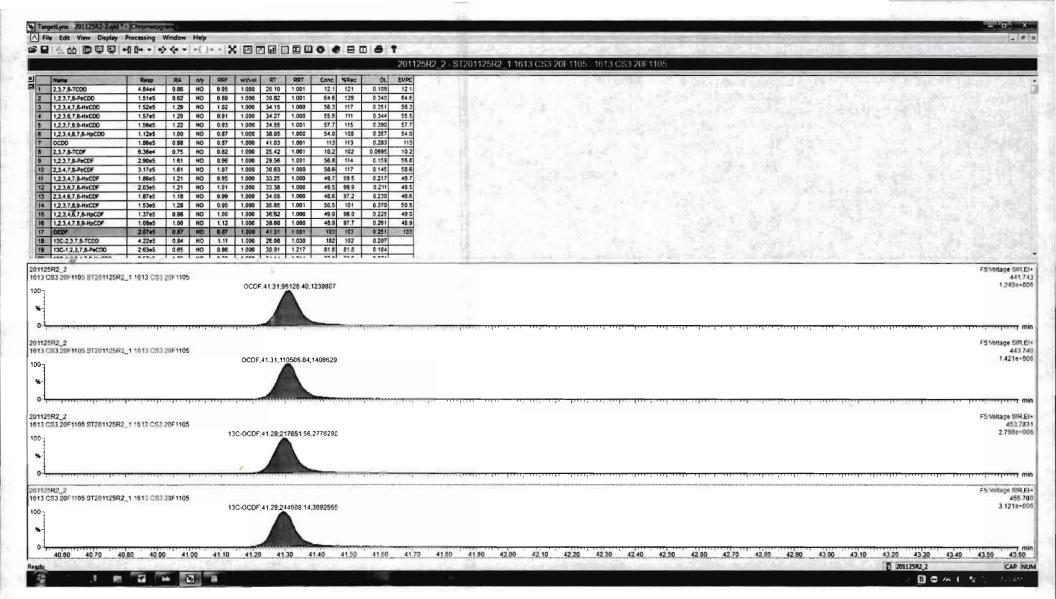


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Last Altered: Printed:

Thursday, November 26, 2020 07:16:09 Pacific Standard Time Thursday, November 26, 2020 07:16:12 Pacific Standard Time





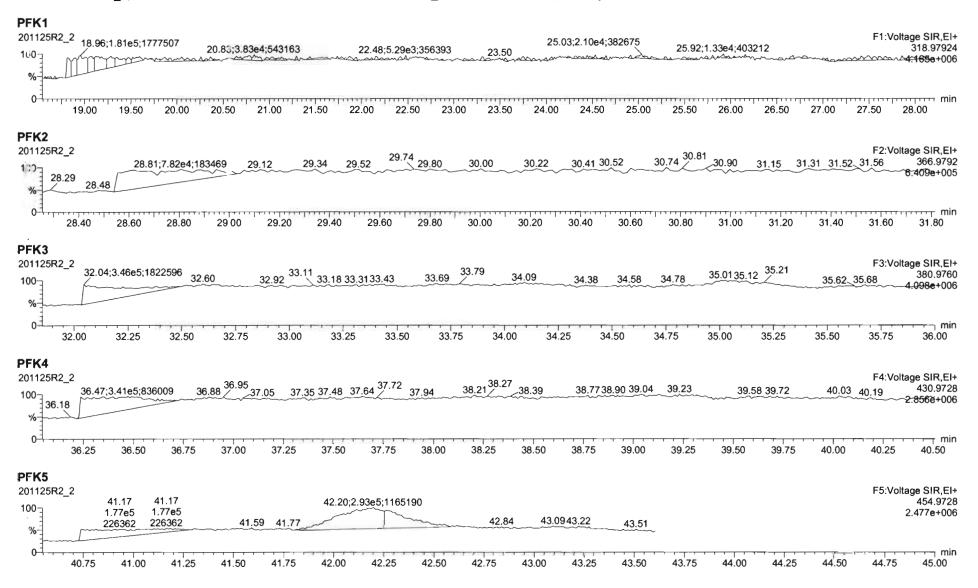
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Dataset:

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Last Altered: Thursday, November 26, 2020 07:16:09 Pacific Standard Time Printed: Thursday, November 26, 2020 07:16:12 Pacific Standard Time

Name: 201125R2_2, Date: 25-Nov-2020, Time: 22:16:41, ID: ST201125R2_1 1613 CS3 20F1105, Description: 1613 CS3 20F1105

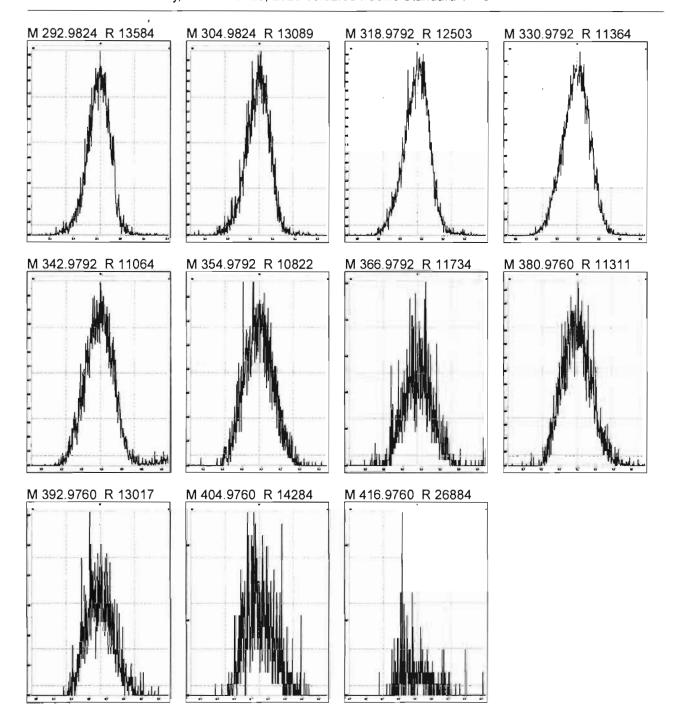


File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:02:03 Pacific Standard Time



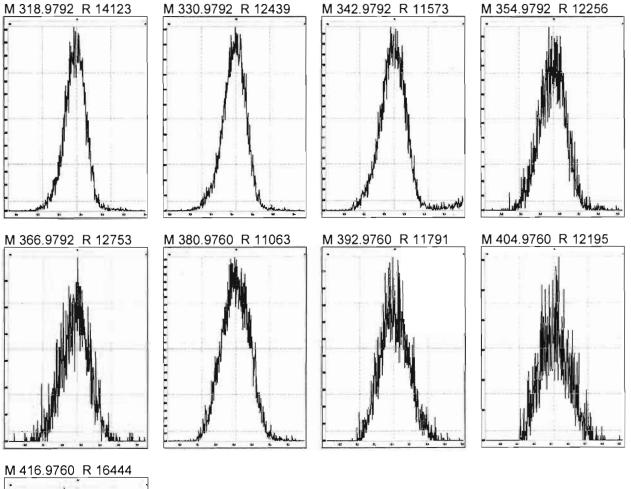
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File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:02:29 Pacific Standard Time



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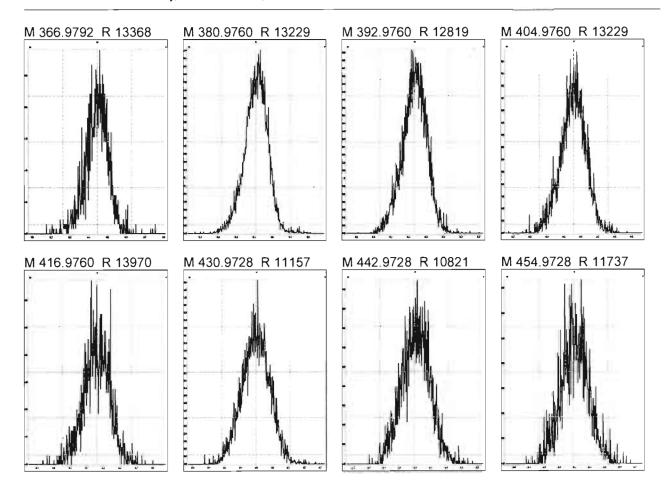
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:03:05 Pacific Standard Time



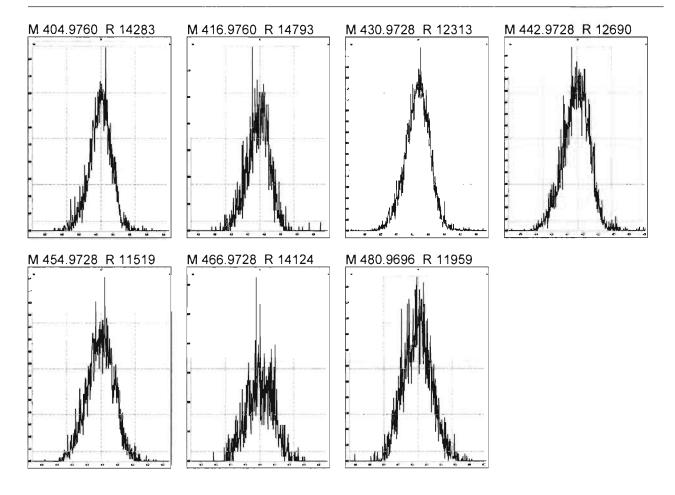
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File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:03:33 Pacific Standard Time



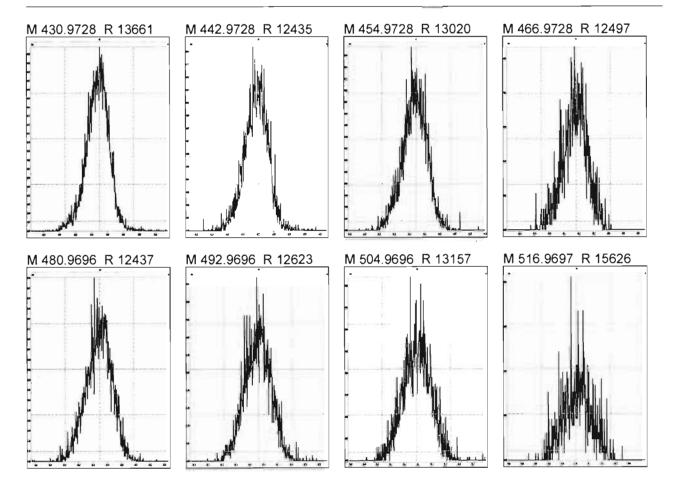
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File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Thursday, November 26, 2020 08:03:51 Pacific Standard Time



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INITIAL CALIBRATION

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Quantify Compound Summary Report Vista Analytical Laboratory

MassLynx 4.1 SCN815

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Dataset:

U:\VG12.PRO\Results\201020R1\201020R1-CRV.qld

Last Altered: Printed:

Tuesday, October 20, 2020 14:36:10 Pacific Daylight Time Tuesday, October 20, 2020 15:22:41 Pacific Daylight Time

GRB 10/2/2020

Method: U:\VG12.PRO\MethDB\1613rrt-10-20-20.mdb 20 Oct 2020 10:47:39

Calibration: U:\VG12.PR0\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 14:36:10

Compound name: 2,3,7,8-TCDD Response Factor: 0.950098

RRF SD: 0.10465, Relative SD: 11.0146

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: RF

F) (0 548	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	0.250	0.81	NO	26.29	1.001	2.37e3	1.11e6	0.224	-10.3	0.852	MM
2	201020R1_2	0.500	0.75	NO	26.31	1.001	5.59e3	1.28e6	0.460	-8.0	0.874	bb
3	201020R1_3	2.00	0.75	NO	26.29	1.001	2.28e4	1.32e6	1.82	-8.9	0.866	bb
4	201020R1_4	40.0	0.77	NO	26.32	1.000	3.56e5	8.62e5	43.4	8.6	1.03	bb
5	201020R1_5	300	0.78	NO	26.29	1.001	4.63e6	1.39e6	350	16.7	1,11	bb
6	201020R1_6	10.0	0.76	NO	26.29	1.001	1.18e5	1.22e6	10.2	1.9	0.969	MM

Compound name: 1,2,3,7,8-PeCDD

Response Factor: 0.885499

RRF SD: 0.0848416, Relative SD: 9.58122

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1 73 5	201020R1_1	1.25	0.59	NO	30.96	1.001	8.54e3	8.68e5	1.11	-11.0	0.788	bb
2	201020R1_2	2.50	0.63	NO	30.96	1.000	1.82e4	9.11e5	2.25	-9.8	0.798	bb
3	201020R1_3	10.0	0.61	NO	30.96	1.001	8.73e4	1.03e6	9.59	-4.1	0.849	bb
4	201020R1_4	200	0.62	NO	30.98	1.001	1.24e6	6.47e5	217	8.5	0.961	MM
5	201020R1_5	1500	0.62	NO	30.98	1.001	1.71e7	1.16e6	1670	11.0	0.983	bb
6	201020R1_6	50.0	0.62	NO	30.96	1.001	4.46e5	9.55e5	52.7	5.5	0.934	bb

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Dataset:

U:\VG12.PRO\Results\201020R1\201020R1-CRV.qld

Last Altered: Printed: Tuesday, October 20, 2020 14:36:10 Pacific Daylight Time Tuesday, October 20, 2020 15:22:41 Pacific Daylight Time

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

Response Factor: 1.01755

RRF SD: 0.10207, Relative SD: 10.0309

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: RF

TITLE	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.20	NO	34.28	1.000	6.99e3	6.21e5	1.11	-11.5	0.901	bd
2	201020R1_2	2.50	1.26	NO	34.27	1.000	1.48e4	6.65e5	2.19	-12.3	0.892	bd
3	201020R1_3	10.0	1.25	NO	34.28	1.001	7.13e4	7.07e5	9.91	-0.9	1.01	bd
4	201020R1_4	200	1.24	NO	34.29	1.000	1.04e6	4.71e5	218	8.9	1.11	bd
5	201020R1_5	1500	1.23	NO	34.28	1.000	1.49e7	8.81e5	1660	10.7	1.13	bd
6	201020R1_6	50.0	1.27	NO	34.28	1.000	3.59e5	6.72e5	52.5	5.0	1.07	bd

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

Response Factor: 0.914527

RRF SD: 0.0845585, Relative SD: 9.24614

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.17	NO	34.41	1.001	7.95e3	7.36e5	1.18	-5.5	0.864	db
2	201020R1_2	2.50	1.28	NO	34.40	1.001	1.57e4	7.73e5	2.22	-11.1	0.813	db
3	201020R1_3	10.0	1.29	NO	34.40	1.001	7.37e4	8.70e5	9.27	-7.3	0.847	db
4	201020R1_4	200	1.25	NO	34.41	1.001	1.17e6	5.87e5	218	8.9	0.996	db
5	201020R1_5	1500	1.24	NO	34.40	1.000	1.55e7	1.02e6	1670	11.1	1.02	db
6	201020R1_6	50.0	1.26	NO	34.41	1.001	3.73e5	7.84e5	52.0	4.0	0.951	db

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

Response Factor: 0.934452

RRF SD: 0.104124, Relative SD: 11.1428

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: RF

0.1700	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.17	NO	34.67	1.000	6.89e3	6.69e5	1.10	-11.8	0.824	bb
2	201020R1_2	2.50	1.24	NO	34.67	1.000	1.48e4	7.19e5	2.21	-11.8	0.825	bb

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Dataset:

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

A ROLL	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	201020R1_3	10.0	1.25	NO	34.66	1.000	7.04e4	8.01e5	9.42	-5.8	0.880	bb
4	201020R1_4	200	1.24	NO	34.69	1.000	1.07 e 6	5.18e5	222	10.9	1.04	bb
5	201020R1_5	1500	1.24	NO	34.67	1.000	1.48e7	9.42e5	1680	12.3	1.05	bb
6	201020R1_6	50.0	1.24	NO	34.67	1.000	3.59e5	7.24e5	53.1	6.2	0.992	bb

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

Response Factor: 0.869732

RRF SD: 0.101922, Relative SD: 11.7188

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: RF

SE PERSON	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1.100	201020R1_1	1.25	1.01	NO	38.16	1.001	5.19e3	5.60e5	1.07	-14.6	0.742	bb
2	201020R1_2	2.50	1.00	NO	38.14	1.000	1.26e4	6.39e5	2.27	-9.4	0.788	bb
3	201020R1_3	10.0	1.06	NO	38.15	1.000	5.46e4	6.69e5	9.38	-6.2	0.816	bd
4	201020R1_4	200	1.03	NO	38.16	1.000	8.51e5	4.44e5	221	10.3	0.960	bb
5	201020R1_5	1500	1.03	NO	38.16	1.001	1.20e7	8.00e5	1720	14.6	0.997	bb
6	201020R1_6	50.0	1.01	NO	38.16	1.000	2.81e5	6.15e5	52.6	5.2	0.915	bb

Compound name: OCDD Response Factor: 0.871682

RRF SD: 0.0918681, Relative SD: 10.5392

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: RF

A3-1000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X. = dropped
1	201020R1_1	2.50	0.91	NO	41.11	1.000	8.88e3	8.86e5	2.30	-8.0	0.802	MM
2	201020R1_2	5.00	0.83	NO	41.10	1.000	2.03e4	1.06e6	4.38	-12.3	0.764	bd
3	201020R1_3	20.0	0.91	NO	41.12	1.000	9.08e4	1.12e6	18.6	-7.0	0.811	bd
4	201020R1_4	400	0.89	NO	41.10	1.000	1.42e6	7.38e5	442	10.4	0.963	bb
5	201020R1_5	3000	0.87	NO	41.13	1.000	2.01e7	1.36e6	3380	12.8	0.983	bb
6	201020R1_6	100	0.88	NO	41.12	1.000	4.65e5	1.02e6	104	4.1	0.907	MM

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Dataset:

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Compound name: 2,3,7,8-TCDF Response Factor: 0.824288

RRF SD: 0.0905517, Relative SD: 10.9854

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	, Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	0.250	0.75	NO	25.61	1.001	2.81e3	1.53e6	0.223	-11.0	0.734	MM
2	201020R1_2	0.500	0.74	NO	25.61	1.001	6.37e3	1.70e6	0.454	-9.1	0.749	MM
3	201020R1_3	2.00	0.77	NO	25.61	1.001	2.79e4	1.82e6	1.86	-7.2	0.765	bb
4	201020R1_4	40.0	0.75	NO	25.64	1.000	4.26e5	1.19e6	43.4	8.5	0.895	bb
5	201020R1_5	300	0.76	NO	25.61	1.001	5.36e6	1.86e6	349	16.4	0.959	bb
6	201020R1_6	10.0	0.75	NO	25.61	1.001	1.42e5	1.69e6	10.2	2.4	0.844	bb

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

Response Factor: 0.962587

RRF SD: 0.0802385, Relative SD: 8.33572

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

THE STA	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.60	NO	29.71	1.001	1.34e4	1.22e6	1.14	-8.9	0.877	bb
2	201020R1_2	2.50	1.55	NO	29.71	1.001	2.85e4	1.30e6	2.27	-9.4	0.872	bb
3	201020R1_3	10.0	1.60	NO	29.71	1.001	1.32e5	1.42e6	9.68	-3.2	0.932	bb
4	201020R1_4	200	1.56	NO	29.73	1.001	1.94e6	9.55e5	211	5.6	1.02	bd
5	201020R1_5	1500	1.55	NO	29.71	1.000	2.60e7	1.63e6	1660	10.5	1.06	bb
6	201020R1_6	50.0	1.57	NO	29.71	1.001	7.00e5	1.38e6	52.7	5.4	1.01	bb

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

Response Factor: 1.06841

RRF SD: 0.0935936, Relative SD: 8.76011

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

Curve type: RF

9539	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.58	NO	30.76	1.000	1.39e4	1.16e6	1.13	-9.8	0.964	bb
2	201020R1_2	2.50	1.59	NO	30.77	1.001	3.11e4	1.29e6	2.26	-9.6	0.966	bb

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Dataset:

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Last Altered: Printed:

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

18	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	201020R1_3	10.0	1.62	NO	30.75	1.000	1.51e5	1.45e6	9.71	-2.9	1.04	bb
4	201020R1_4	200	1.56	NO	30.77	1.000	2.12e6	9.27e5	214	7.1	1.14	bd
5	201020R1_5	1500	1.55	NO	30.77	1.001	2.83e7	1.59e6	1660	10.9	1.18	bb
6	201020R1_6	50.0	1.55	NO	30.76	1.000	7.58e5	1.36e6	52.1	4.2	1,11	bb

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

Response Factor: 0.953478

RRF SD: 0.113056, Relative SD: 11.8572

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

Curve type: RF

10 2 12	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.21	NO	33.37	1.000	8.75e3	8.65e5	1.06	-15.1	0.809	bd
2	201020R1_2	2.50	1.22	NO	33.37	1.000	1.91e4	9.23e5	2.17	-13.2	0.828	bd
3	201020R1_3	10.0	1.23	NO	33.37	1.001	9.24e4	9.76e5	9.93	-0.7	0.947	bd
4	201020R1_4	200	1.22	NO	33.38	1.000	1.33e6	6.36e5	219	9.6	1.05	bd
5	201020R1_5	1500	1.22	NO	33.37	1.000	1.86e7	1.15e6	1690	12.9	1.08	bd
6	201020R1_6	50.0	1.23	NO	33.37	1.000	4.69e5	9.24e5	53.2	6.4	1.01	bd

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

Response Factor: 1.00798

RRF SD: 0.112388, Relative SD: 11.1498

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

Curve type: RF

1,000,00	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.18	NO	33.50	1.000	1.00e4	9.15e5	1.08	-13.2	0.875	db
2	201020R1_2	2.50	1.29	NO	33.50	1.000	2.13e4	9.59e5	2.20	-11.9	0.888	db
3	201020R1_3	10.0	1.23	NO	33.50	1.001	1.00e5	1.03e6	9.63	-3.7	0.971	db
4	201020R1_4	200	1.22	NO	33.51	1.000	1.55e6	6.96e5	221	10.5	1.11	db
5	201020R1_5	1500	1.22	NO	33.50	1.000	2.04e7	1.21e6	1680	11.7	1.13	db
6	201020R1_6	50.0	1.23	NO	33.50	1.000	5.13e5	9.53 e 5	53.3	6.7	1.08	db

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Dataset:

U:\VG12.PRO\Results\201020R1\201020R1-CRV.qld

Last Altered: Printed:

Tuesday, October 20, 2020 14:36:10 Pacific Daylight Time Tuesday, October 20, 2020 15:22:41 Pacific Daylight Time

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

Response Factor: 0.990683

RRF SD: 0.116635, Relative SD: 11.7732

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

Curve type: RF

RATER	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.19	NO	34.18	1.001	8.93e3	8.28e5	1.09	-12.9	0.863	bb
2	201020R1_2	2.50	1.24	NO	34.17	1.000	1.87e4	8.79e5	2.15	-13.9	0.853	bb
3	201020R1_3	10.0	1.27	NO	34.17	1.001	9.17e4	9.58e5	9.66	-3.4	0.957	bb
4	201020R1_4	200	1.23	NO	34.18	1.000	1.37e6	6.32e5	219	9.6	1.09	bb
5	201020R1_5	1500	1.22	NO	34.17	1.000	1.87e7	1.11e6	1700	13.3	1.12	bb
6	201020R1_6	50.0	1.22	NO	34.18	1.001	4.65e5	8.75e5	53.6	7.3	1.06	bb

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

Response Factor: 0.950625

RRF SD: 0.11684, Relative SD: 12.2908

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

Curve type: RF

N. State !	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.23	NO	35.18	1.001	7.16e3	6.87e5	1.10	-12.3	0.834	bb
2	201020R1_2	2.50	1.20	NO	35.18	1.001	1.62e4	7.96e5	2.14	-14.5	0.813	bb
3	201020R1_3	10.0	1.19	NO	35.17	1.001	7.41e4	8.23e5	9.48	-5.2	0.901	bb
4	201020R1_4	200	1.23	NO	35.19	1.001	1.15e6	5.57e5	217	8.6	1.03	bb
5	201020R1_5	1500	1.23	NO	35.18	1.001	1.60e7	9.75e5	1720	14.8	1.09	bb
6	201020R1_6	50.0	1.25	NO	35.18	1.000	3.95e5	7.65e5	54.3	8.6	1.03	bb

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

Response Factor: 0.998573

RRF SD: 0.149251, Relative SD: 14.9464

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

Curve type: RF

1993	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	0.94	NO	36.74	1.000	6.80e3	6.49e5	1.05	-16.2	0.837	bb
2	201020R1_2	2.50	0.96	NO	36.73	1.000	1.54e4	7.21e5	2.13	-14.7	0.852	bb

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

Market M.	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	201020R1_3	10.0	0.99	NO	36.74	1.000	7.28e4	8.00e5	9.11	-8.9	0.909	bb
4	201020R1_4	200	1.01	NO	36.76	1.000	1.11e6	4.85e5	230	14.9	1.15	bb
5	201020R1_5	1500	1.01	NO	36.76	1.001	1.52e7	8.73e5	1750	16.3	1.16	bb
6	201020R1_6	50.0	1.01	NO	36.76	1.000	3.78e5	6.97e5	54.2	8.5	1.08	bb

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

Response Factor: 1.12384

RRF SD: 0.136934, Relative SD: 12.1845

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

Curve type: RF

	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	1.25	1.02	NO	38.77	1.000	5.83e3	4.78e5	1.08	-13.2	0.975	MM
2	201020R1_2	2.50	1.00	NO	38.77	1.000	1.44e4	5.79e5	2.21	-11.4	0.995	MM
3	201020R1_3	10.0	1.02	NO	38.77	1.000	5.99e4	5.77e5	9.23	-7.7	1.04	bb
4	201020R1_4	200	1.01	NO	38.77	1.000	9.50e5	3.83e5	220	10.2	1.24	bb
5	201020R1_5	1500	1.00	NO	38.78	1.000	1.36e7	7.02e5	1720	14.8	1.29	bb
6	201020R1_6	50.0	1.01	NO	38.78	1.000	3.25e5	5.39e5	53.7	7.4	1.21	bb

Compound name: OCDF Response Factor: 0.868237

RRF SD: 0.10594, Relative SD: 12.2017

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

Curve type: RF

Charles	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
Tugin.	201020R1_1	2.50	0.84	NO	41.38	1.000	9.82e3	1.05e6	2.16	-13.7	0.749	MM
2	201020R1_2	5.00	0.90	NO	41.39	1.000	2.31e4	1.24 e 6	4.32	-13.7	0.750	MM
3	201020R1_3	20.0	0.88	NO	41.40	1.000	1.08e5	1.29 e 6	19.3	-3.6	0.837	bb
4	201020R1_4	400	0.89	NO	41.39	1.000	1.66e6	8.74e5	439	9.7	0.952	bb
5	201020R1_5	3000	0.89	NO	41.41	1.000	2.39e7	1.60e6	3450	14.9	0.998	bb
6	201020R1_6	100	0.87	NO	41.41	1.000	5.43e5	1.18e6	106	6.4	0.924	bb

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

Response Factor: 1.10889

RRF SD: 0.0354221, Relative SD: 3.19438

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

Curve type: RF

No. of State of	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.79	NO	26.27	1.030	1.11e6	1.05e6	95.9	-4.1	1.06	bb
2	201020R1_2	100	0.79	NO	26.27	1.030	1.28e6	1.12e6	103	2.6	1.14	bd
3	201020R1_3	100	0.79	NO	26.27	1.030	1.32e6	1.18e6	100	0.5	1.11	bb
4	201020R1_4	100	0.78	NO	26.31	1.030	8.62e5	7.98e5	97.4	-2.6	1.08	bb
5	201020R1_5	100	0.79	NO	26.27	1.030	1.39e6	1.20e6	104	4.4	1.16	bb
6	201020R1_6	100	0.78	NO	26.27	1.030	1.22e6	1.11e6	99.1	-0.9	1.10	bb

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

Response Factor: 0.858504

RRF SD: 0.0583655, Relative SD: 6.79851

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

Curve type: RF

FILMING	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	FIRE	X = dropped
1	201020R1_1	100	0.62	NO	30.94	1.212	8.68e5	1.05e6	96.7	-3.3	0.830	bb
2	201020R1_2	100	0.63	NO	30.96	1.213	9.11e5	1.12e6	94.4	-5.6	0.811	bb
3	201020R1_3	100	0.63	NO	30.94	1.212	1.03e6	1.18e6	101	1.4	0.871	bb
4	201020R1_4	100	0.62	NO	30.96	1.212	6.47e5	7.98e5	94.5	-5.5	0.811	MM
5	201020R1_5	100	0.63	NO	30.96	1.213	1.16e6	1.20e6	112	12.5	0.966	bb
6:	201020R1_6	100	0.63	NO	30.94	1.212	9.55e5	1.11e6	100	0.5	0.863	bb.

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

Response Factor: 0.699736

RRF SD: 0.0536682, Relative SD: 7.66977

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)<=dropped
1	201020R1_1	100	1.28	NO	34.27	1.014	6.21e5	9.36e5	94.9	-5.1	0.664	bd
2	201020R1_2	100	1.27	NO	34.27	1.014	6.65e5	9.80e5	97.0	-3.0	0.679	bđ

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

17 90	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	201020R1_3	100	1.29	NO	34.26	1.014	7.07e5	1.05e6	96.3	-3.7	0.674	bd
4	201020R1_4	100	1.27	NO	34.28	1.014	4.71e5	6.87e5	98.1	-1.9	0.686	bd
5	201020R1_5	100	1.28	NO	34.27	1.014	8.81e5	1.09e6	115	15.4	0.808	bd
6	201020R1_6	100	1.28	NO	34.27	1.014	6.72e5	9.76e5	98.4	-1.6	0.688	bd

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

Response Factor: 0.832718

RRF SD: 0.0561256, Relative SD: 6.74005

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

Curve type: RF

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	1.27	NO	34.38	1.017	7.36e5	9.36e5	94.5	-5.5	0.787	db
2	201020R1_2	100	1.27	NO	34.38	1.017	7.73e5	9.80e5	94.7	-5.3	0.789	db
3	201020R1_3	100	1.29	NO	34.38	1.017	8.70e5	1.05e6	99.5	-0.5	0.829	db
4	201020R1_4	100	1.28	NO	34.39	1.017	5.87e5	6.87 e 5	103	2.5	0.854	db
5	201020R1_5	100	1.26	NO	34.39	1.018	1.02e6	1.09e6	112	12.2	0.935	db
6	201020R1_6	100	1.27	NO	34.39	1.018	7.84e5	9.76e5	96.5	-3.5	0.803	db

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

Response Factor: 0.761805

RRF SD: 0.0524899, Relative SD: 6.8902

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

Curve type: RF

TENEST	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	1.24	NO	34.66	1.026	6.69e5	9.36e5	93.9	-6.1	0.715	bb
2	201020R1_2	100	1.21	NO	34.66	1.026	7.19e5	9.80e5	96.3	-3.7	0.733	bb
3	201020R1_3	100	1.23	NO	34.65	1.025	8.01e5	1.05e6	100	0.1	0.763	bb
4	201020R1_4	100	1.27	NO	34.67	1.026	5.18e5	6.87e5	99.1	-0.9	0.755	MM
5	201020R1_5	100	1.24	NO	34.66	1.026	9.42e5	1.09e6	113	13.3	0.863	MM
6	201020R1_6	100	1.25	NO	34.66	1.026	7.24e5	9.76e5	97.4	-2.6	0.742	bb

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

Response Factor: 0.649564

RRF SD: 0.0451664, Relative SD: 6.95334

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

Curve type: RF

STRUCK STRUCK	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	1.05	NO	38.14	1.128	5.60e5	9.36e5	92.1	-7.9	0.598	bb
2	201020R1_2	100	1.09	NO	38.14	1.128	6.39e5	9.80e5	100	0.4	0.652	MM
3	201020R1_3	100	1.04	NO	38.14	1.128	6.69e5	1.05e6	98.2	-1.8	0.638	bb
4	201020R1_4	100	1.07	NO	38.15	1.128	4.44e5	6.87e5	99.4	-0.6	0.646	MM
5	201020R1_5	100	1.07	NO	38.14	1.128	8.00e5	1.09e6	113	12.9	0.733	MM
6	201020R1_6	100	1.04	NO	38.15	1.129	6.15e5	9.76e5	97.0	-3.0	0.630	MM

Compound name: 13C-OCDD Response Factor: 0.539367

RRF SD: 0.0489023, Relative SD: 9.06662

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

Curve type: RF

10000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	200	0.92	NO	41.10	1.216	8.86e5	9.36e5	175	-12.3	0.473	bb
2	201020R1_2	200	0.90	NO	41.08	1.216	1.06e6	9.80e5	201	0.4	0.542	bb
3	201020R1_3	200	0.89	NO	41.11	1.216	1.12e6	1.05e6	198	-1.0	0.534	bb
4	201020R1_4	200	0.88	NO	41.08	1.215	7.38e5	6.87e5	199	-0.4	0.537	bb
5	201020R1_5	200	0.89	NO	41.10	1.216	1.36e6	1.09e6	232	15.9	0.625	bb
6	201020R1_6	200	0.89	NO	41.10	1.216	1.02e6	9.76e5	195	-2.6	0.525	bb

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

Response Factor: 0.981384

RRF SD: 0.0297957, Relative SD: 3.03609

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

Curve type: RF

9,000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.78	NO	25.59	1.003	1.53e6	1.65e6	94.6	-5.4	0.928	bb
2	201020R1_2	100	0.77	NO	25.59	1.003	1.70e6	1.75e6	99.3	-0.7	0.974	bb

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

HI I V MADO	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	201020R1_3	100	0.77	NO	25.59	1.003	1.82e6	1.83e6	101	1.3	0.994	bb
4	201020R1_4	100	0.77	NO	25.63	1.003	1.19e6	1.22e6	99.5	-0.5	0.976	bb
5	201020R1_5	100	0.78	NO	25.59	1.003	1.86e6	1.84e6	103	3.0	1.01	bb
6	201020R1_6	100	0.78	NO	25.59	1.003	1.69e6	1.68e6	102	2.3	1.00	pp

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

Response Factor: 0.791688

RRF SD: 0.0545703, Relative SD: 6.89291

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

Curve type: RF

30300	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	1.58	NO	29.69	1.163	1.22e6	1.65e6	93.5	-6.5	0.740	bb
2	201020R1_2	100	1.58	NO	29.69	1.163	1.30e6	1.75e6	94.3	-5.7	0.747	bb
3	201020R1_3	100	1.61	NO	29.69	1.163	1.42e6	1.83e6	97.5	-2.5	0.772	bb
4	201020R1_4	100	1.61	NO	29.71	1.163	9.55e5	1.22e6	99.0	-1.0	0.784	bd
5	201020R1_5	100	1.58	NO	29.71	1.164	1.63e6	1.84e6	112	11.9	0.886	bb
6	201020R1_6	100	1.59	NO	29.69	1.163	1.38e6	1.68e6	104	3.7	0.821	bb

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

Response Factor: 0.777714

RRF SD: 0.0578231, Relative SD: 7.435

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

Curve type: RF

Anna de	Name	Std. Conc	RA	nly	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	1.59	NO	30.76	1.205	1.15e6	1.65e6	90.1	-9.9	0.701	bb
2	201020R1_2	100	1.61	NO	30.75	1.205	1.29e6	1.75e6	94.8	-5.2	0.737	bb
3	201020R1_3	100	1.62	NO	30.75	1.205	1.45e6	1.83e6	102	1.9	0.793	bb
4	201020R1_4	100	1.60	NO	30.77	1.205	9.27e5	1.22e6	97.8	-2.2	0.761	dd
5	201020R1_5	100	1.60	NO	30.75	1.205	1.59e6	1.84e6	111	11.2	0.865	bb
6	201020R1_6	100	1.60	NO	30.76	1.205	1.36e6	1.68e6	104	4.1	0.810	bb

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

Response Factor: 0.953706

RRF SD: 0.0497892, Relative SD: 5.22061

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

Curve type: RF

888	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.51	NO	33.36	0.987	8.65e5	9.36e5	96.9	-3.1	0.924	bd
2	201020R1_2	100	0.51	NO	33.36	0.987	9.23e5	9.80e5	98.8	-1.2	0.942	bd
3	201020R1_3	100	0.51	NO	33.35	0.987	9.76e5	1.05e6	97.5	-2.5	0.930	bd
4	201020R1_4	100	0.51	NO	33.37	0.987	6.36e5	6.87e5	97.1	-2.9	0.926	bd
5	201020R1_5	100	0.51	NO	33.36	0.987	1.15e6	1.09e6	110	10.5	1.05	bd
6	201020R1_6	100	0.51	NO	33.36	0.987	9.24e5	9.76e5	99.3	-0.7	0.947	bd

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

Response Factor: 1.00595

RRF SD: 0.0507361, Relative SD: 5.04362

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

Curve type: RF

South	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.50	NO	33.49	0.991	9.15e5	9.36e5	97.2	-2.8	0.978	db
2	201020R1_2	100	0.52	NO	33.49	0.991	9.59e5	9.80e5	97.3	-2.7	0.979	db
3	201020R1_3	100	0.52	NO	33.48	0.991	1.03e6	1.05e6	97.7	-2.3	0.982	db
4	201020R1_4	100	0.51	NO	33.50	0.991	6.96e5	6.87e5	101	8.0	1.01	db
5	201020R1_5	100	0.51	NO	33.49	0.991	1.21e6	1.09e6	110	9.9	1.11	db
6	201020R1_6	100	0.51	NO	33.49	0.991	9.53e5	9.76e5	97.1	-2.9	0.977	db

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

Response Factor: 0.921049

RRF SD: 0.0481045, Relative SD: 5.2228

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

Curve type: RF

17.95	Name	Std. (Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.52	NO	34.16	1.011	8.28e5	9.36e5	96.1	-3.9	0.885	bd
2	201020R1_2	100	0.51	NO	34.16	1.011	8.79e5	9.80e5	97.4	-2.6	0.897	bb

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Dataset:

U:\VG12.PR0\Results\201020R1\201020R1-CRV.qld

Last Altered: Printed:

Tuesday, October 20, 2020 14:36:10 Pacific Daylight Time Tuesday, October 20, 2020 15:22:41 Pacific Daylight Time

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

18774	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	201020R1_3	100	0.51	NO	34.15	1.010	9.58e5	1.05e6	99.1	-0.9	0.913	bb
4	201020R1_4	100	0.51	NO	34.17	1.011	6.32e5	6.87e5	99.8	-0.2	0.919	bb
5	201020R1_5	100	0.51	NO	34.16	1.011	1.11e6	1.09e6	110	10.3	1.02	bb
6	201020R1_6	100	0.50	NO	34.16	1.011	8.75e5	9.76e5	97.3	-2.7	0.897	bb

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

Response Factor: 0.803358

RRF SD: 0.0529087, Relative SD: 6.58594

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

Curve type: RF

THE PARTY	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.51	NO	35.16	1.040	6.87e5	9.36e5	91.4	-8.6	0.734	MM
2	201020R1_2	100	0.50	NO	35.16	1.040	7.96e5	9.80e5	101	1.1	0.813	bb
3	201020R1_3	100	0.52	NO	35.15	1.040	8.23e5	1.05e6	97.6	-2.4	0.784	bd
4	201020R1_4	100	0.50	NO	35.17	1.040	5.57e5	6.87e5	101	1.0	0.811	bd
5	201020R1_5	100	0.51	NO	35.16	1.040	9.75e5	1.09e6	111	11.3	0.894	bb
6	201020R1_6	100	0.51	NO	35.17	1.041	7.65e5	9.76e5	97.6	-2.4	0.784	bb

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

Response Factor: 0.735455

RRF SD: 0.0398884, Relative SD: 5.42364

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

Curve type: RF

E 00.	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.42	NO	36.73	1.087	6.49e5	9.36e5	94.3	-5.7	0.694	bb
2	201020R1_2	100	0.44	NO	36.73	1.087	7.21e5	9.80e5	100	0.0	0.736	bd
3	201020R1_3	100	0.41	NO	36.73	1.087	8.00e5	1.05e6	104	3.6	0.762	bb
4	201020R1_4	100	0.43	NO	36.75	1.087	4.85e5	6.87e5	96.0	-4.0	0.706	bb
5	201020R1_5	100	0.44	NO	36.74	1.087	8.73e5	1.09e6	109	8.8	0.800	bb
6	201020R1_6	100	0.43	NO	36.75	1.087	6.97e5	9.76e5	97.2	-2.8	0.715	bb

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Dataset:

U:\VG12.PRO\Results\201020R1\201020R1-CRV.qld

Last Altered: Printed:

Tuesday, October 20, 2020 14:36:10 Pacific Daylight Time Tuesday, October 20, 2020 15:22:41 Pacific Daylight Time

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

Response Factor: 0.567644

RRF SD: 0.0450507, Relative SD: 7.93644

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

Curve type: RF

6000	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.44	NO	38.76	1.147	4.78e5	9.36e5	90.0	-10.0	0.511	bd
2	201020R1_2	100	0.43	NO	38.76	1.147	5.79e5	9.80e5	104	4.1	0.591	bb
3	201020R1_3	100	0.44	NO	38.76	1.147	5.77e5	1.05e6	96.9	-3.1	0.550	bd
4	201020R1_4	100	0.43	NO	38.76	1.147	3.83e5	6.87e5	98.3	-1.7	0.558	bd
5	201020R1_5	100	0.43	NO	38.77	1.147	7.02e5	1.09e6	113	13.4	0.644	bb
6	201020R1_6	100	0.45	NO	38.77	1.147	5.39e5	9.76e5	97.3	-2 .7	0.552	bd

Compound name: 13C-OCDF Response Factor: 0.629245

RRF SD: 0.0574861, Relative SD: 9.13572

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

Curve type: RF

8 10 86	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
	201020R1_1	200	0.91	NO	41.38	1.224	1.05e6	9.36e5	178	-11.0	0.560	MM
2	201020R1_2	200	0.87	NO	41.38	1.224	1.24e6	9.80e5	200	0.2	0.630	MM
3	201020R1_3	200	0.90	NO	41.40	1.225	1.29e6	1.05e6	195	-2.5	0.614	bd
4	201020R1_4	200	0.86	NO	41.38	1.224	8.74e5	6.87e5	202	1.1	0.636	bb
5	201020R1_5	200	0.88	NO	41.40	1.225	1.60e6	1.09e6	233	16.5	0.733	bb
6	201020R1 6	200	0.90	· NO	41.39	1.225	1.18e6	9.76e5	191	-4.3	0.602	bd

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

Response Factor: 1.08781

RRF SD: 0.174332, Relative SD: 16.0259

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

Curve type: RF

-0-0-40	Name	Std. Conc RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	0.250		26.29	1.030	2.24e3	1.05e6	0.197	-21.1	0.858	bb
2	201020R1_2	0.500		26.29	1.030	5.14e3	1.12e6	0.420	-15.9	0.915	bb

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Quantify Compound Summary Report Vista Analytical Laboratory MassLynx 4.1 SCN815

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Dataset:

U:\VG12.PRO\Results\201020R1\201020R1-CRV.qld

Last Altered: Printed:

Tuesday, October 20, 2020 14:36:10 Pacific Daylight Time Tuesday, October 20, 2020 15:22:41 Pacific Daylight Time

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

oto.	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
3	201020R1_3	2.00			26.29	1.030	2.59e4	1.18e6	2.02	0.8	1.10	bb
4	201020R1_4	40.0			26.32	1.031	3.82e5	7.98e5	44.0	10.0	1.20	bb
5	201020R1_5	200			26.29	1.030	3.17e6	1.20e6	243	21.4	1.32	bb
6	201020R1_6	10.0			26.29	1.030	1.26e5	1.11e6	10.5	4.8	1.14	bb

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

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

80 675	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.78	NO	25.52	1.000	1.05e6	1.05e6	100	0.0	1.00	bb
2	201020R1_2	100	0.79	NO	25.52	1.000	1.12e6	1.12e6	100	0.0	1.00	bb
3	201020R1_3	100	0.78	NO	25.52	1.000	1.18e6	1.18e6	100	0.0	1.00	bb
4	201020R1_4	100	0.77	NO	25.54	1.000	7.98e5	7.98 e 5	100	0.0	1.00	bb
5	201020R1_5	100	0.78	NO	25.52	1.000	1.20e6	1.20e6	100	0.0	1.00	bb
6	201020R1_6	100	0.79	NO	25.52	1.000	1.11e6	1.11 e 6	100	0.0	1.00	bb

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

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

STATISTICS.	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.80	NO	24.04	1.000	1.65e6	1.65e6	100	0.0	1.00	bb
2	201020R1_2	100	0.79	NO	24.06	1.000	1.75e6	1.75e6	100	0.0	1.00	bb
3	201020R1_3	100	0.79	NO	24.04	1.000	1.83e6	1.83e6	100	0.0	1.00	bb
4	201020R1_4	100	0.79	NO	24.07	1.000	1.22e6	1.22e6	100	0.0	1.00	bb
5	201020R1_5	100	0.79	NO	24.04	1.000	1.84e6	1.84e6	100	0.0	1.00	bb
6	201020R1_6	100	0.79	NO	24.04	1.000	1.68 e 6	1.68e6	100	0.0	1.00	bb

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Quantify Compound Summary Report

MassLynx 4.1 SCN815

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Vista Analytical Laboratory

Dataset:

U:\VG12.PRO\Results\201020R1\201020R1-CRV.qld

Last Altered: Printed:

Tuesday, October 20, 2020 14:36:10 Pacific Daylight Time Tuesday, October 20, 2020 15:22:41 Pacific Daylight Time

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

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

MAN COLOR	Name	Std. Conc	RA	n/y	RT	RRT	Resp	IS Resp	Conc.	%Dev	RRF	X = dropped
1	201020R1_1	100	0.51	NO	33.80	1.000	9.36e5	9.36e5	100	0.0	1.00	bb
2	201020R1_2	100	0.52	NO	33.80	1.000	9.80e5	9.80e5	100	0.0	1.00	bb
3	201020R1_3	100	0.51	NO	33.80	1.000	1.05e6	1.05e6	100	0.0	1.00	bb
4	201020R1_4	100	0.51	NO	33.81	1.000	6.87e5	6.87e5	100	0.0	1.00	bb
5	201020R1_5	100	0.51	NO	33.80	1.000	1.09e6	1.09e6	100	0.0	1.00	bb
6	201020R1_6	100	0.52	NO	33.80	1.000	9.76e5	9.76 e5	100	0.0	1.00	bd

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Vista Analytical Laboratory VG-11

Dataset: Untitled

Last Altered: Wednesday, October 21, 2020 06:53:54 Pacific Daylight Time Printed: Wednesday, October 21, 2020 06:54:05 Pacific Daylight Time

Method: U:\VG12.PRO\MethDB\1613rrt-10-10-20.mdb 12 Oct 2020 11:06:31 Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-10-20.cdb 12 Oct 2020 14:50:48

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

THE REAL PROPERTY.	Name	ID	Acq.Date	Acq.Time
1	201020R1_1	ST201020R1_1 1613 CS0 20F1102	20-Oct-20	09:17:10
2	201020R1_2	ST201020R1_2 1613 CS1 20F1103	20-Oct-20	10:04:05
3	201020R1_3	ST201020R1_3 1613 CS2 20F1104	20-Oct-20	10:48:17
4	201020R1_4	ST201020R1_4 1613 CS4 20F1106	20-Oct-20	11:32:31
5	201020R1_5	ST201020R1_5 1613 CS5 20F1107	20-Oct-20	12:16:56
6	201020R1_6	ST201020R1_6 1613 CS3 20F1105	20-Oct-20	13:01:38
7	201020R1_7	SOLVENT BLANK	20-Oct-20	13:45:46
8	201020R1_8	SS201020R1_1 1613 SSS 20F1108	20-Oct-20	14:29:33
9	201020R1_9	TCDF CPSM	20-Oct-20	15:13:50

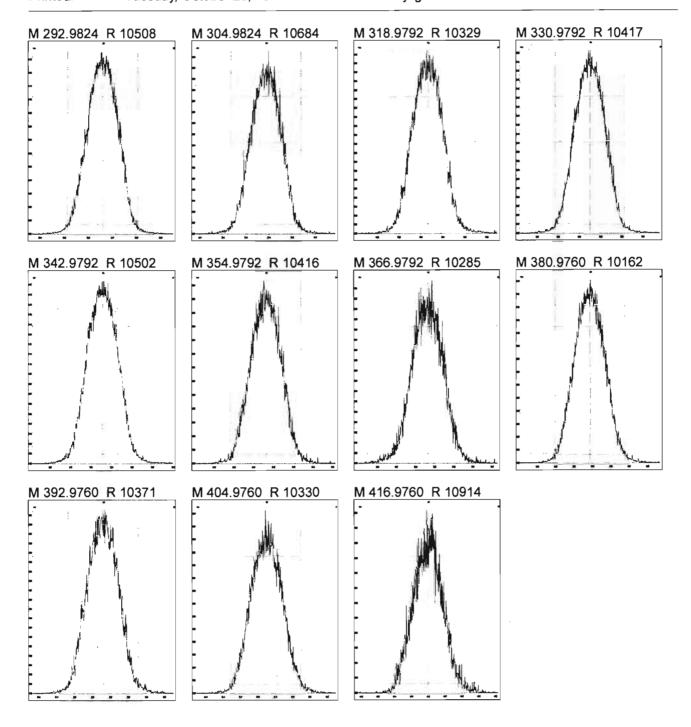
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File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 1 @ 200 (ppm)

Printed:

Tuesday, October 20, 2020 09:00:19 Pacific Daylight Time



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MassLynx 4.1 SCN815

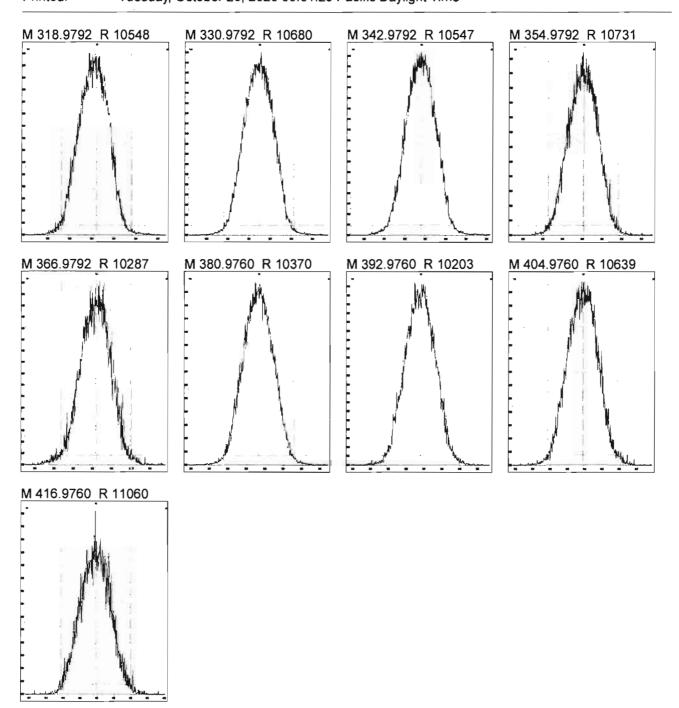
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 2 @ 200 (ppm)

Printed:

Tuesday, October 20, 2020 09:01:23 Pacific Daylight Time



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MassLynx 4.1 SCN815

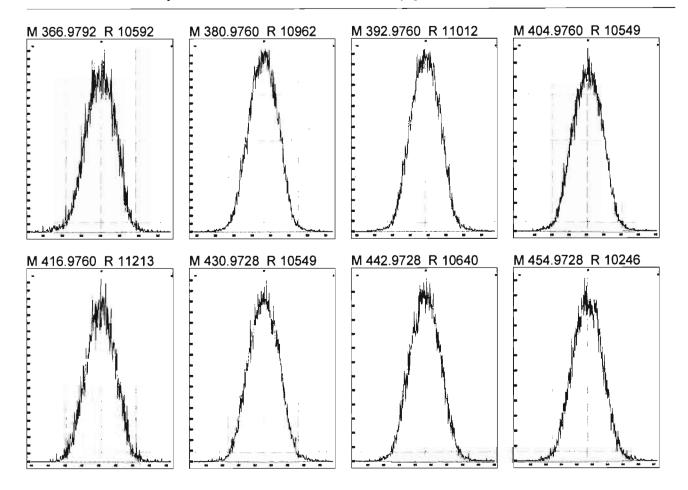
Page 1 of 1

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Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 3 @ 200 (ppm)

Printed:

Tuesday, October 20, 2020 09:02:28 Pacific Daylight Time



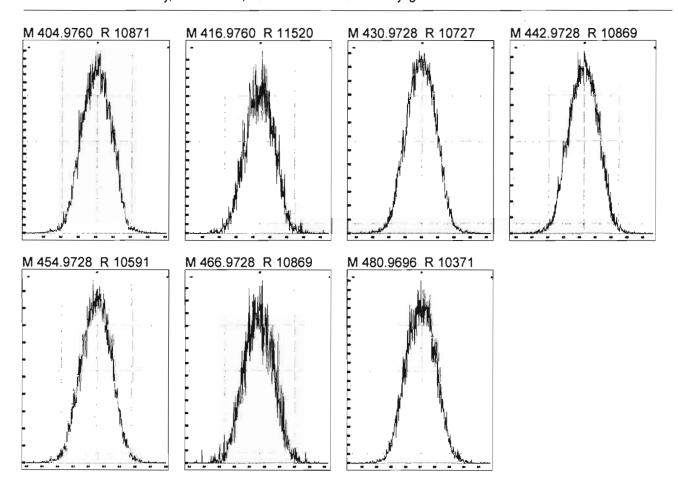
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File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 4 @ 200 (ppm)

Printed:

Tuesday, October 20, 2020 09:03:26 Pacific Daylight Time



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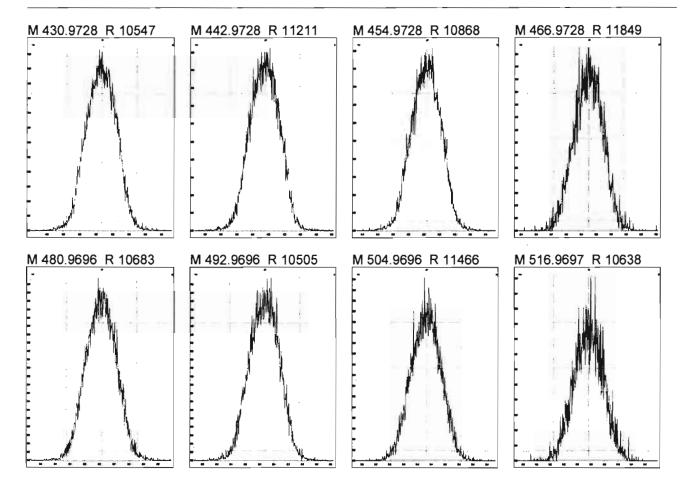
Page 1 of 1

File:

Experiment: OCDD_DB5_2.exp Reference: Pfk.ref Function: 5 @ 200 (ppm)

Printed:

Tuesday, October 20, 2020 09:04:30 Pacific Daylight Time



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Page 1 of 1

Dataset: Untitled

Last Altered: Tuesday, October 20, 2020 14:59:30 Pacific Daylight Time Printed: Tuesday, October 20, 2020 14:59:49 Pacific Daylight Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 20 Sep 2020 10:23:28

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-10-20.cdb 12 Oct 2020 14:50:48

Name: 201020R1_6, Date: 20-Oct-2020, Time: 13:01:38, ID: ST201020R1_6 1613 CS3 20F1105, Description: 1613 CS3 20F1105

9-10-1	# Name	RT
1	1 1,3,6,8-TCDD (First)	22.55
2	2 1,2,8,9-TCDD (Last)	27.18
3	3 1,2,4,7,9-PeCDD (First)	28.70
4	4 1,2,3,8,9-PeCDD (Last)	31.32
5	5 1,2,4,6,7,9-HxCDD (First)	32.63
6	6 1,2,3,7,8,9-HxCDD (Last)	34.67
7	7 1,2,3,4,6,7,9-HpCDD (First)	37.15
8	8 1,2,3,4,6,7,8-HpCDD (Last)	38.16
9	9 1,3,6,8-TCDF (First)	20.32
10	10 1,2,8,9-TCDF (Last)	27.49
11	11 1,3,4,6,8-PeCDF (First)	27.06
12	12 1,2,3,8,9-PeCDF (Last)	31.68
13	13 1,2,3,4,6,8-HxCDF (First)	32.10
14	14 1,2,3,7,8,9-HxCDF (Last)	35.18
15	15 1,2,3,4,6,7,8-HpCDF (First)	36.76
16	16 1,2,3,4,7,8,9-HpCDF (Last)	38.78

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Quantify Sample Report

Vista Analytical Laboratory VG-11

MassLynx 4.1 SCN815

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Dataset:

Untitled

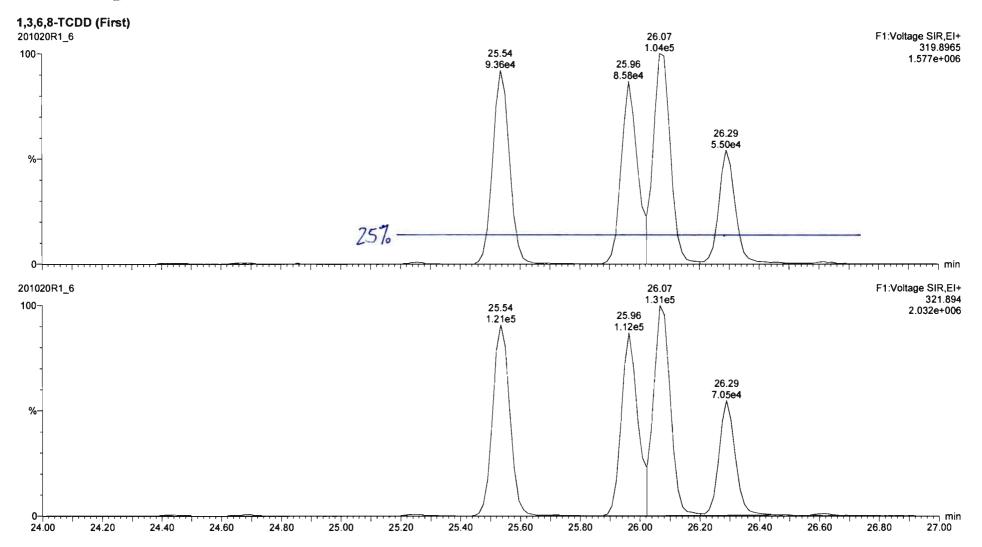
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Tuesday, October 20, 2020 14:59:30 Pacific Daylight Time Tuesday, October 20, 2020 14:59:49 Pacific Daylight Time

Method: U:\VG12.PRO\MethDB\CPSM.mdb 20 Sep 2020 10:23:28

Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-10-20.cdb 12 Oct 2020 14:50:48

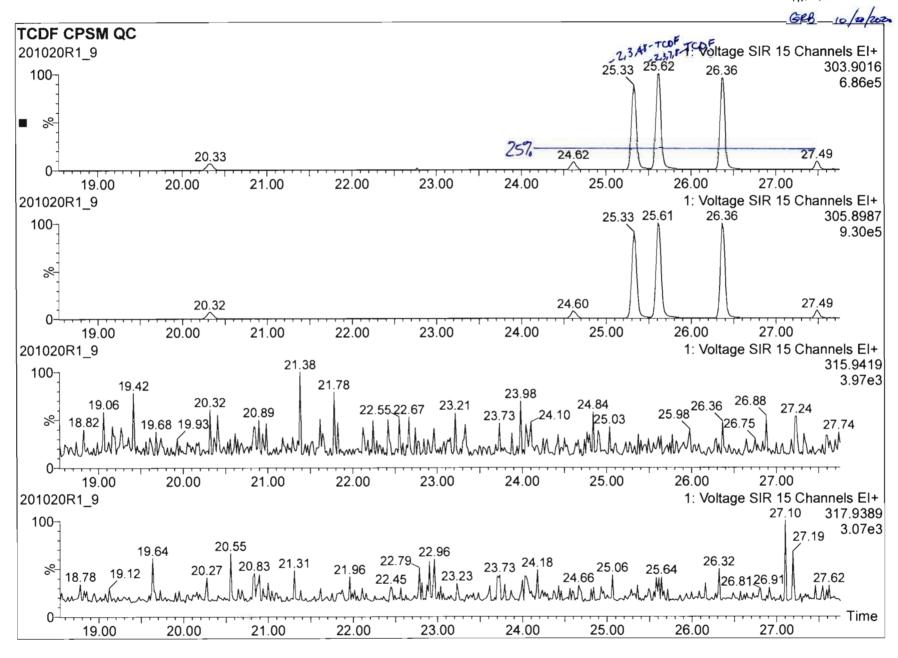
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Dataset:

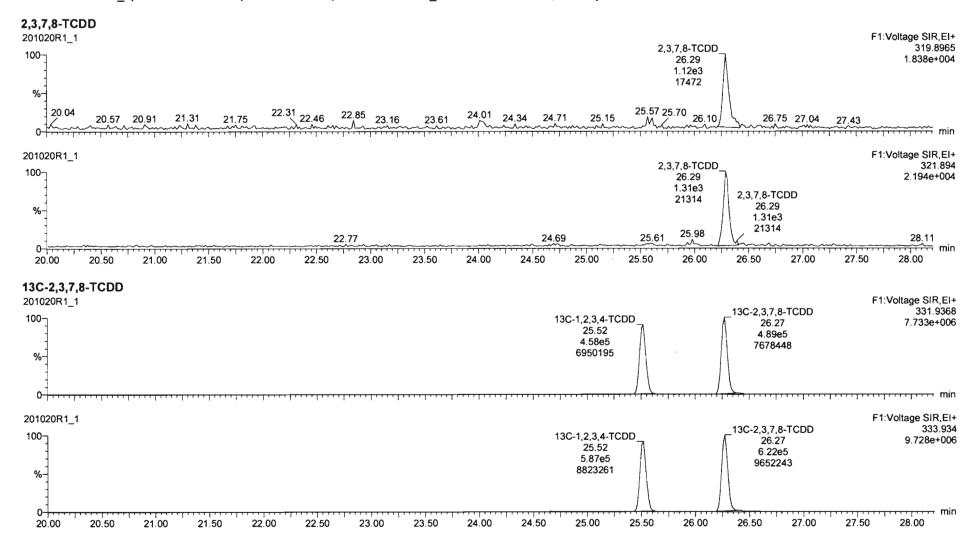
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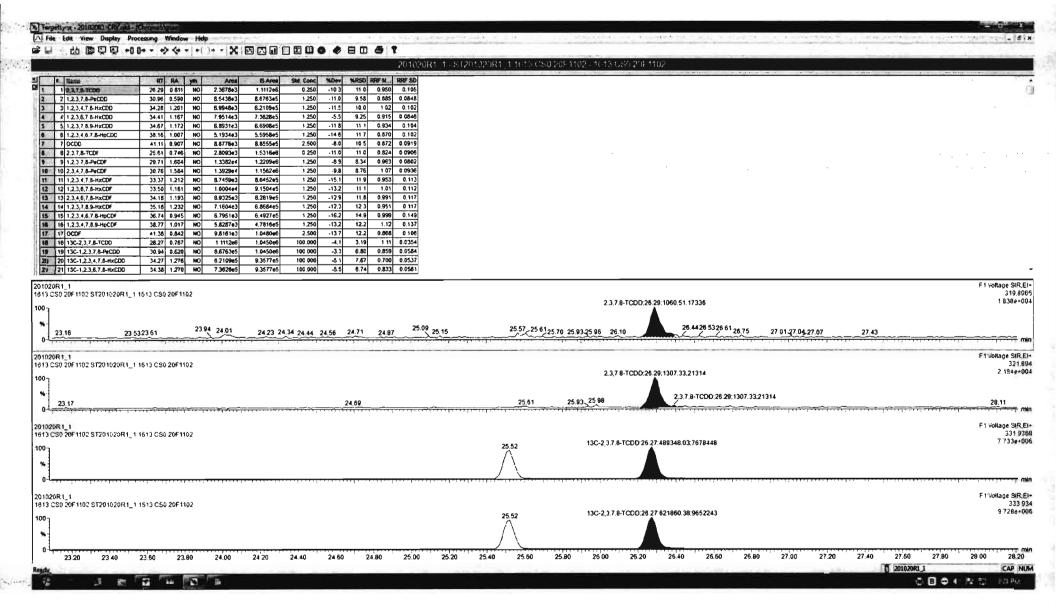
Last Altered: Printed:

Tuesday, October 20, 2020 15:17:40 Pacific Daylight Time Tuesday, October 20, 2020 15:18:47 Pacific Daylight Time

Method: U:\VG12.PRO\MethDB\1613rrt-10-20-20.mdb 20 Oct 2020 10:47:39 Calibration: 20 Oct 2020 15:17:40

Name: 201020R1 1, Date: 20-Oct-2020, Time: 09:17:10, ID: ST201020R1_1 1613 CS0 20F1102, Description: 1613 CS0 20F1102





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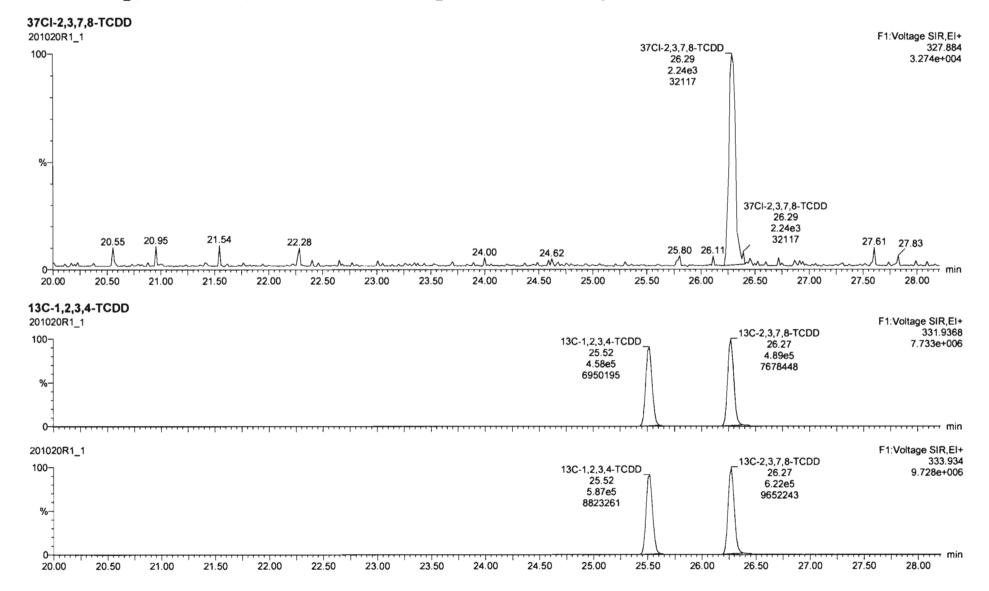
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Last Altered: Printed:

Tuesday, October 20, 2020 15:17:40 Pacific Daylight Time Tuesday, October 20, 2020 15:18:47 Pacific Daylight Time

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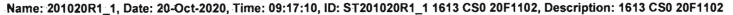


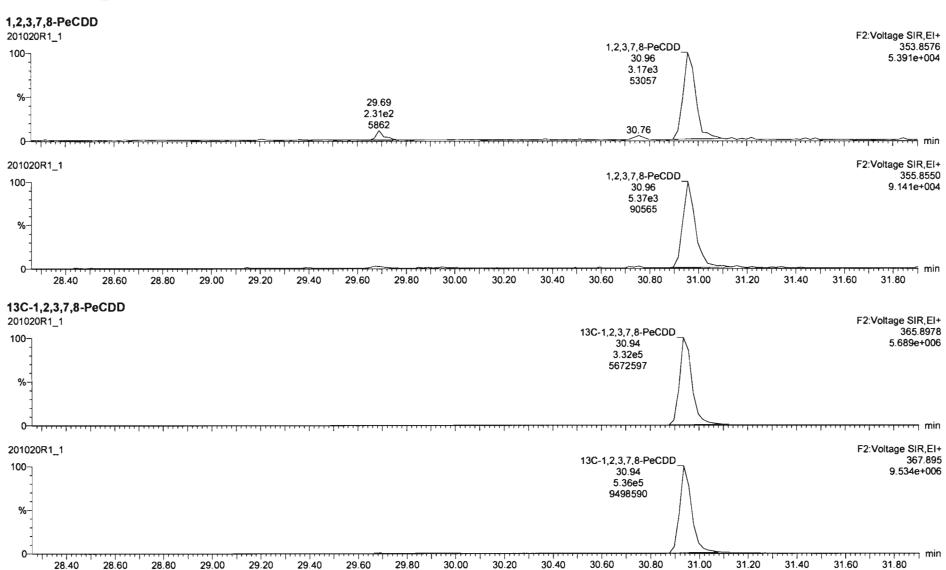
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Last Altered: Printed:

Tuesday, October 20, 2020 15:17:40 Pacific Daylight Time Tuesday, October 20, 2020 15:18:47 Pacific Daylight Time



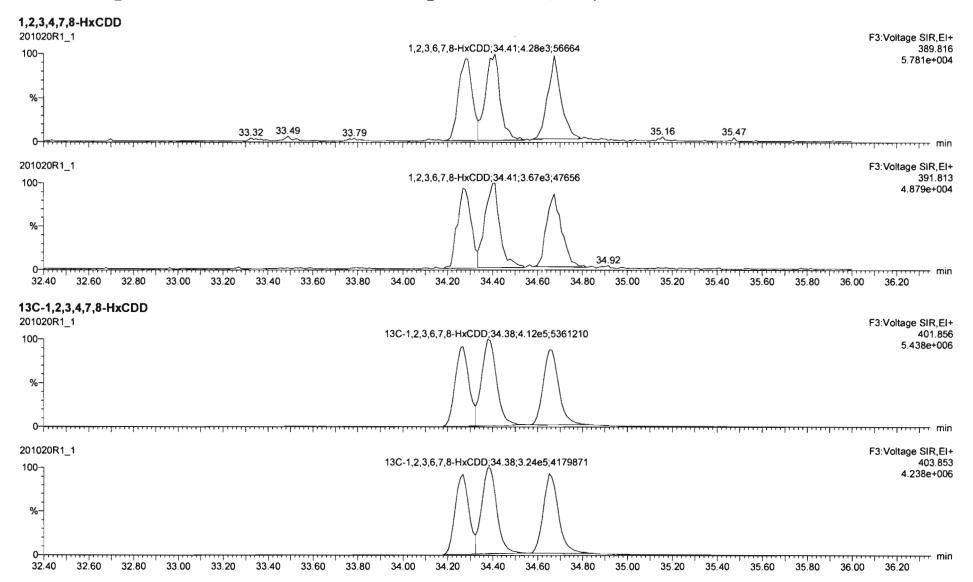


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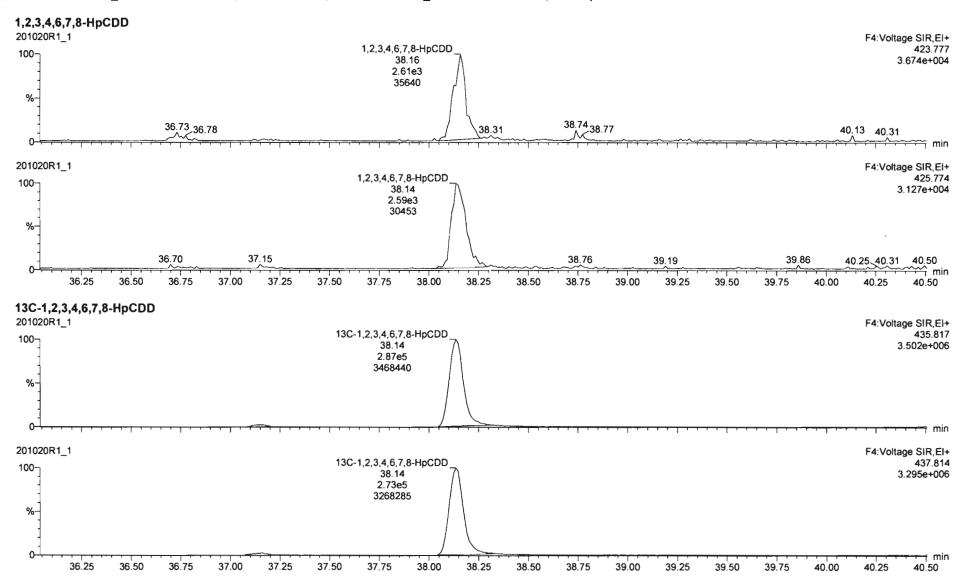


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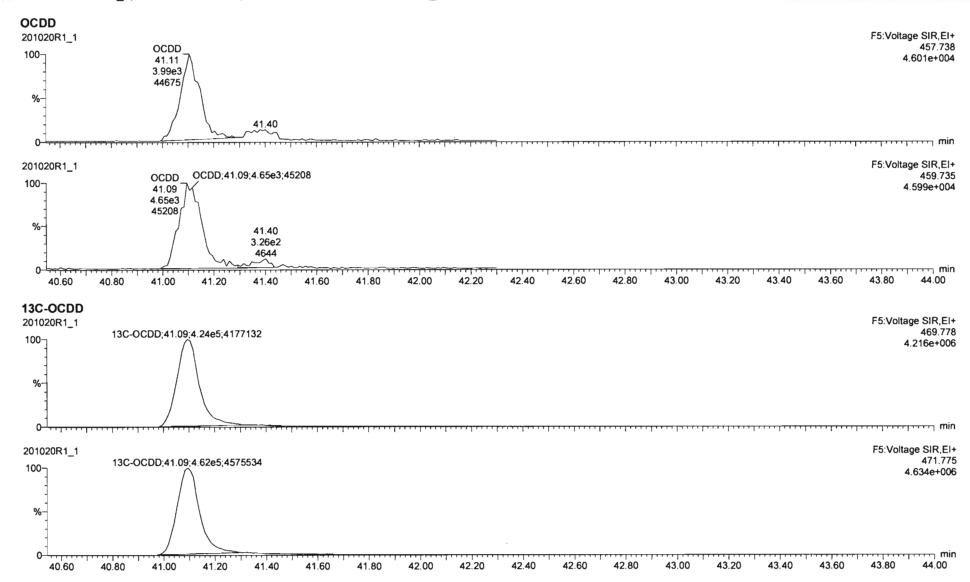


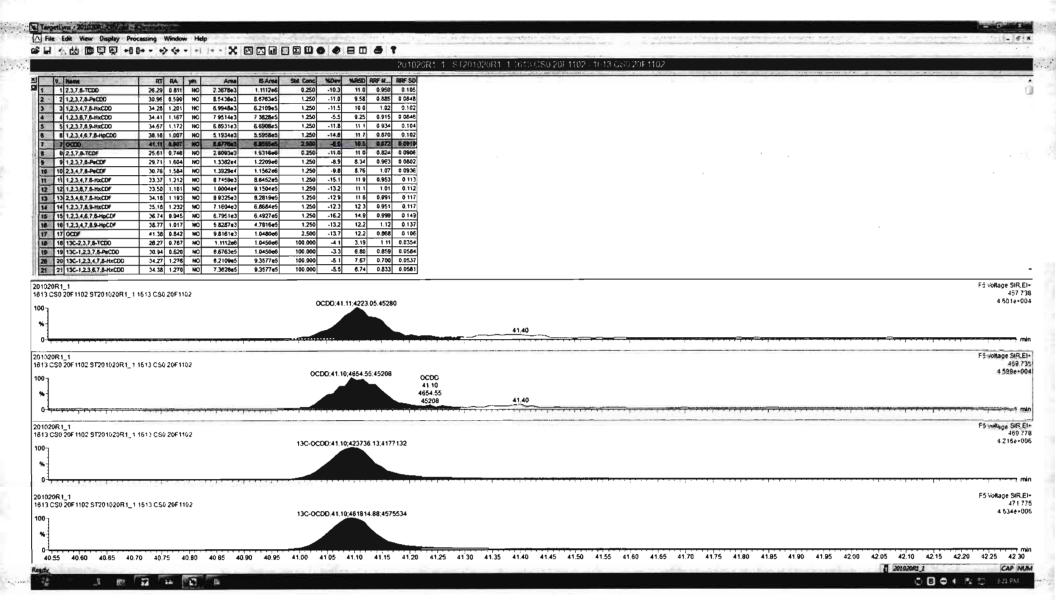
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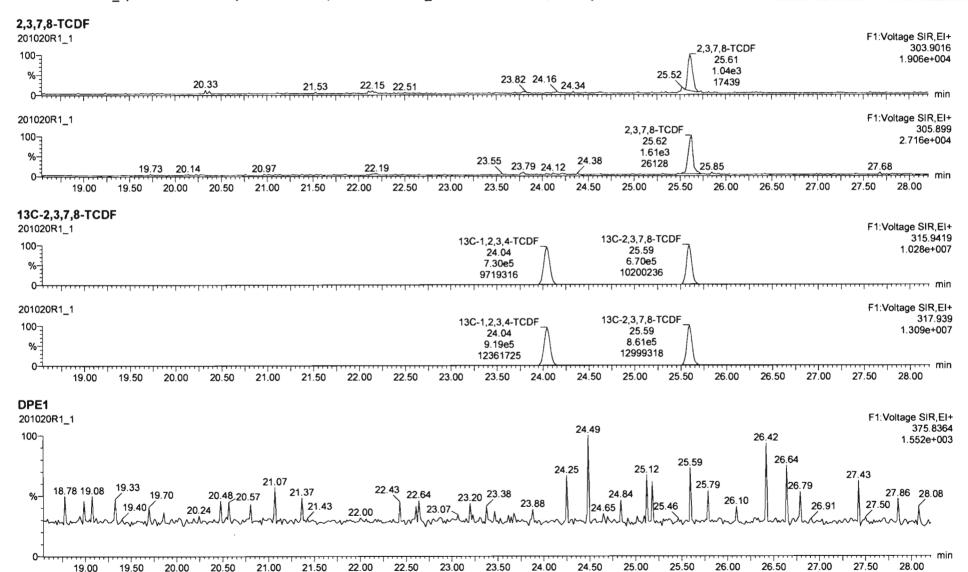
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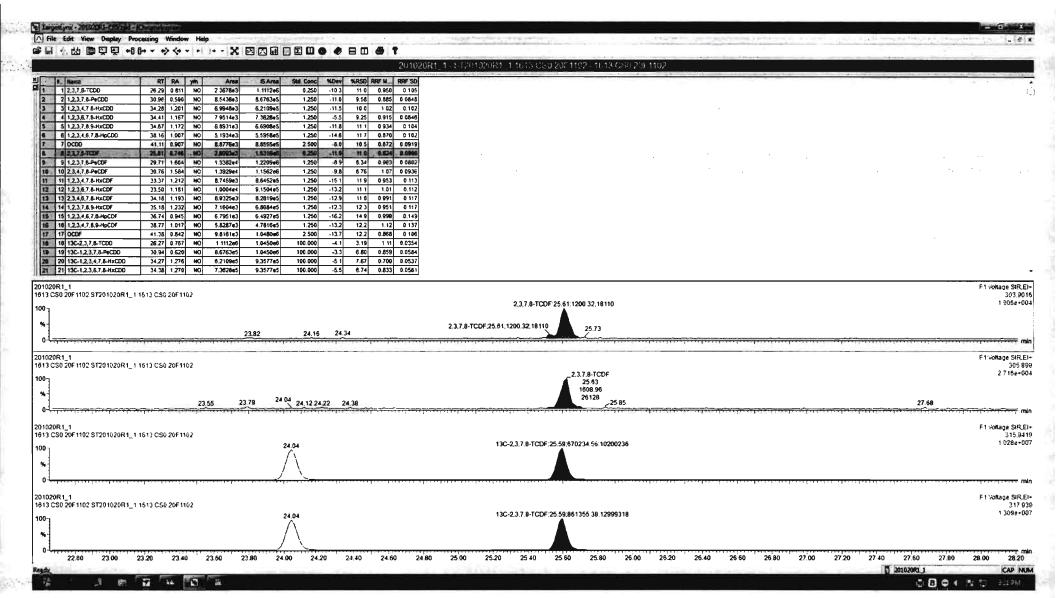
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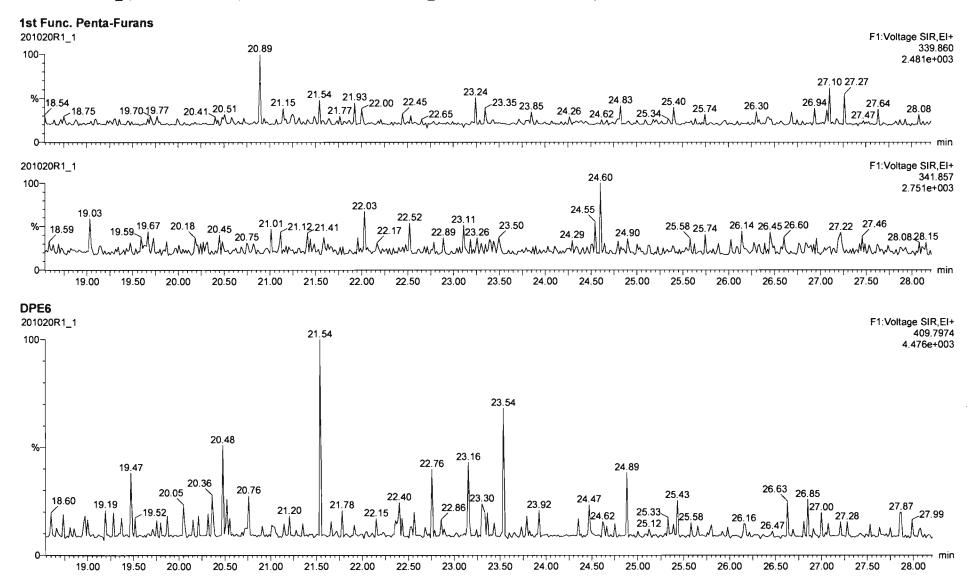
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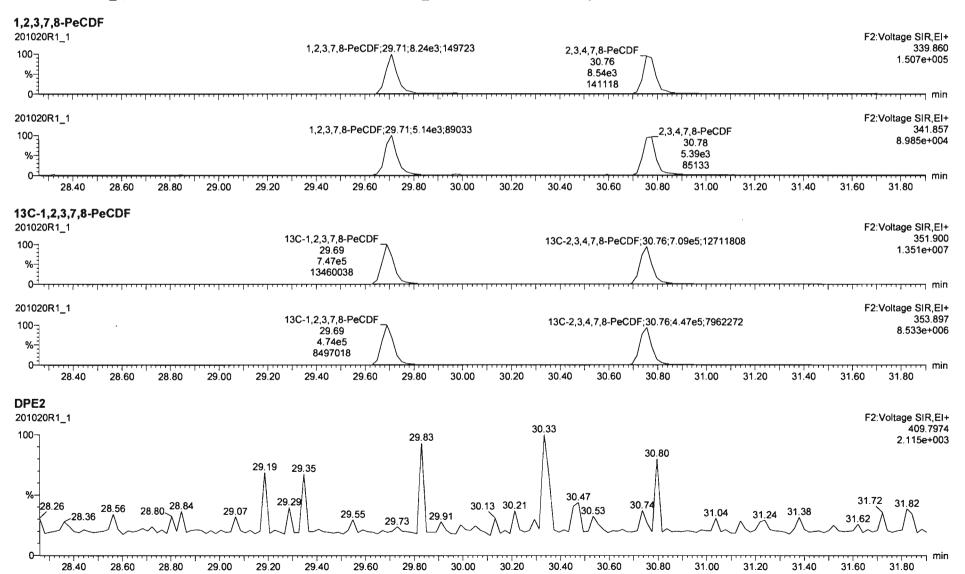
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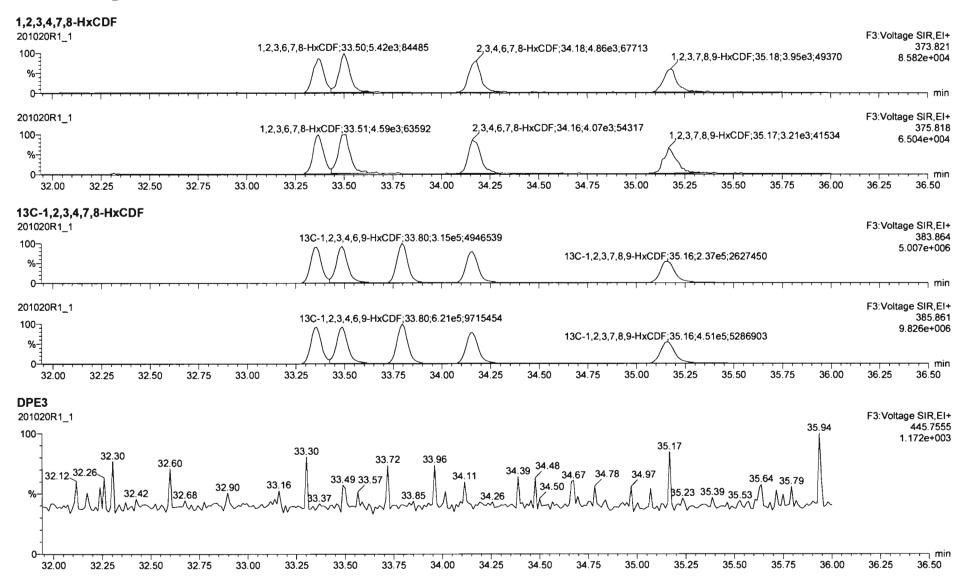
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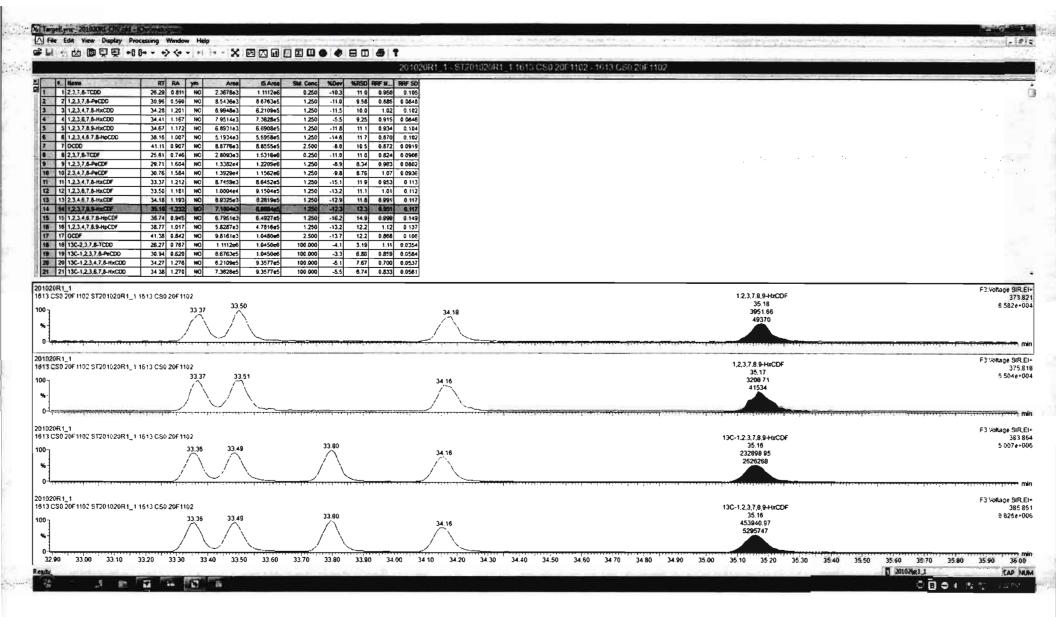


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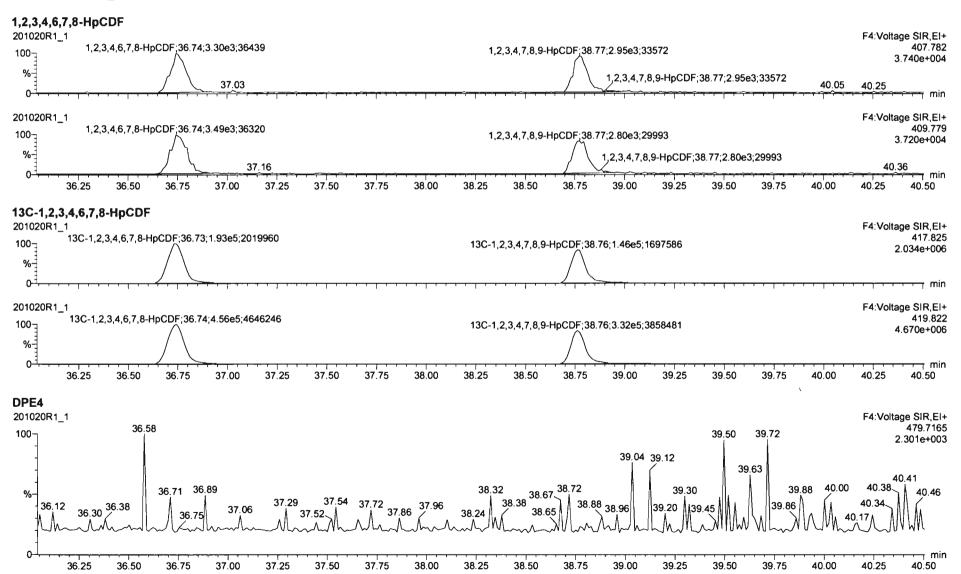
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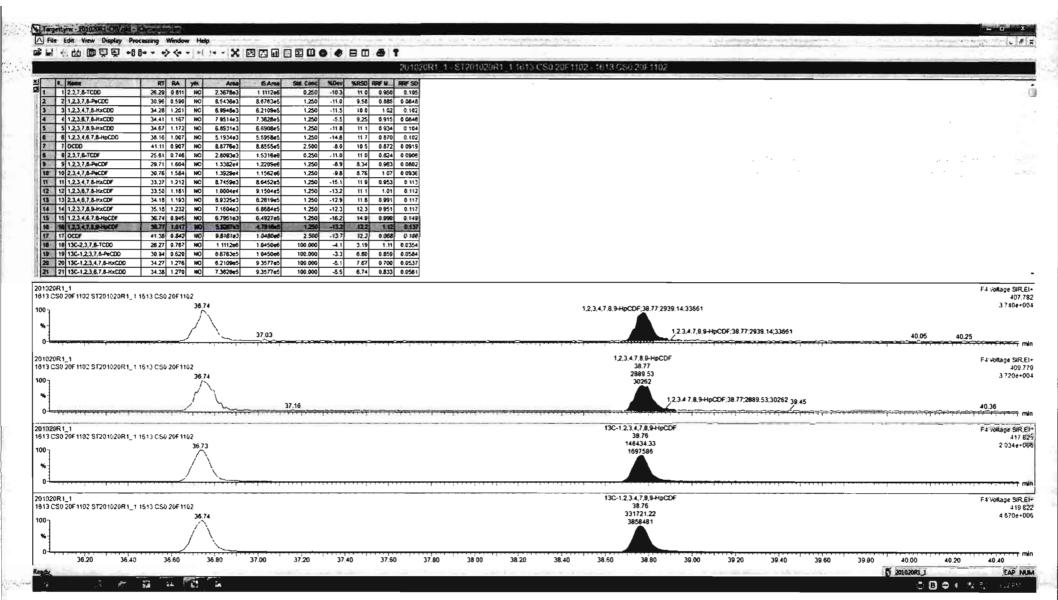
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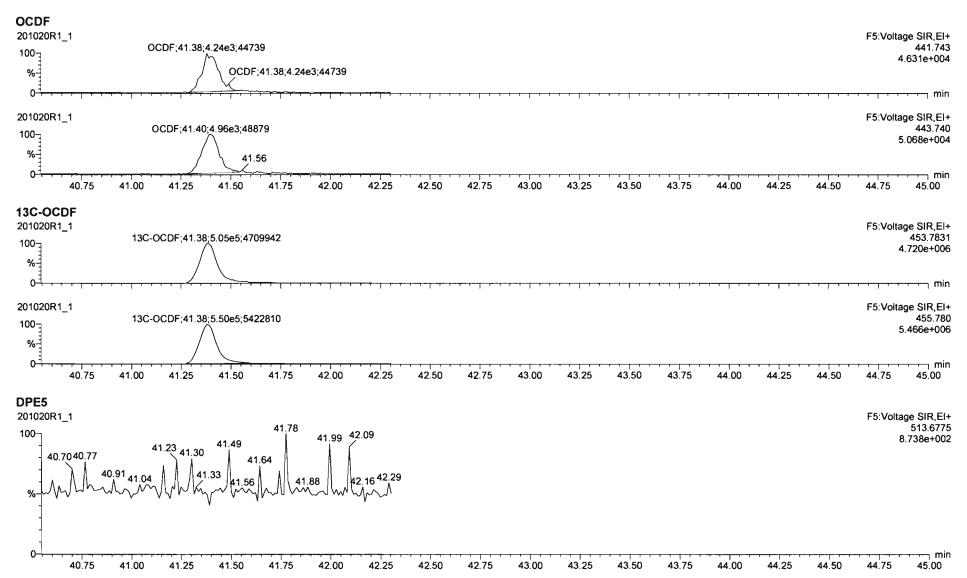
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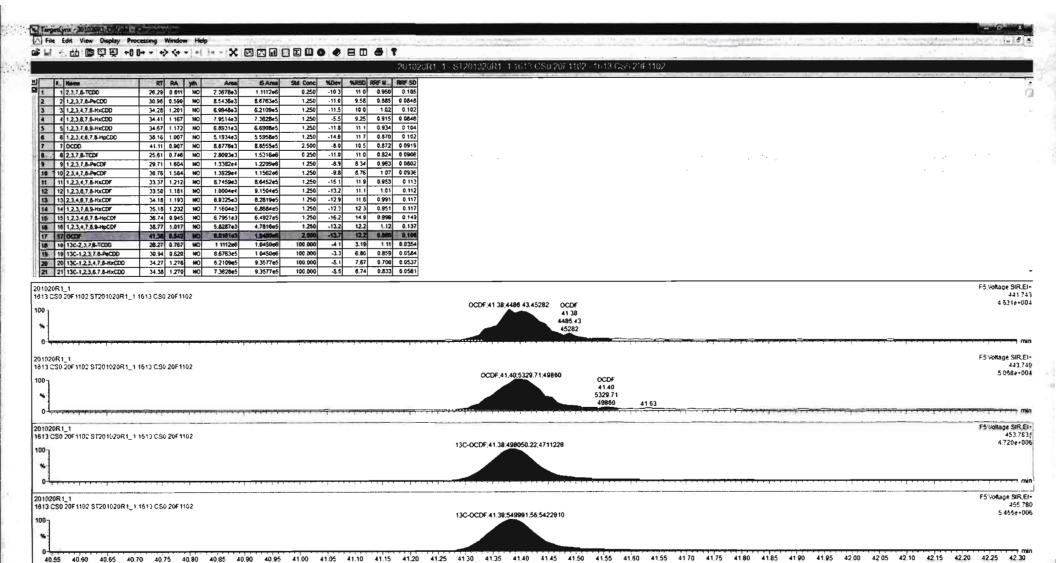
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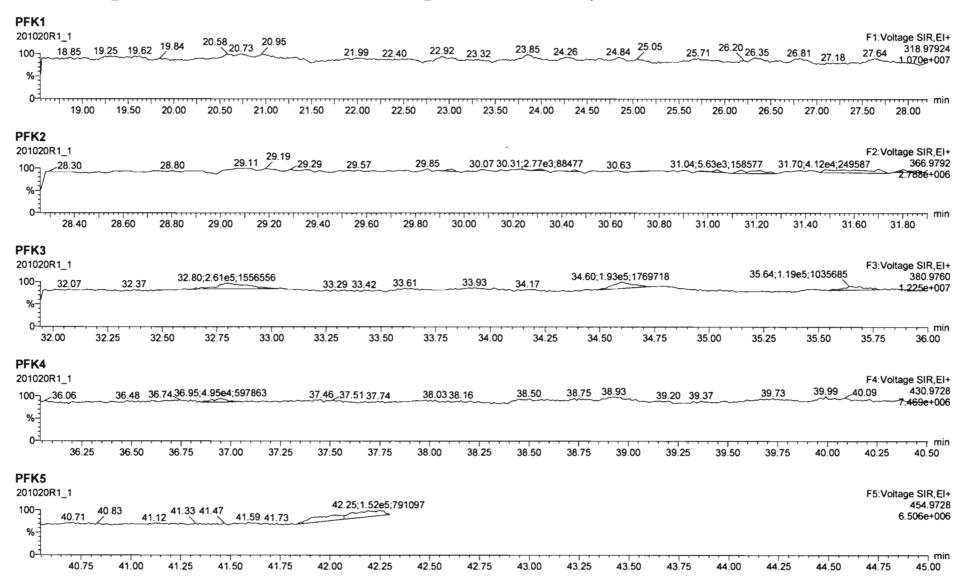
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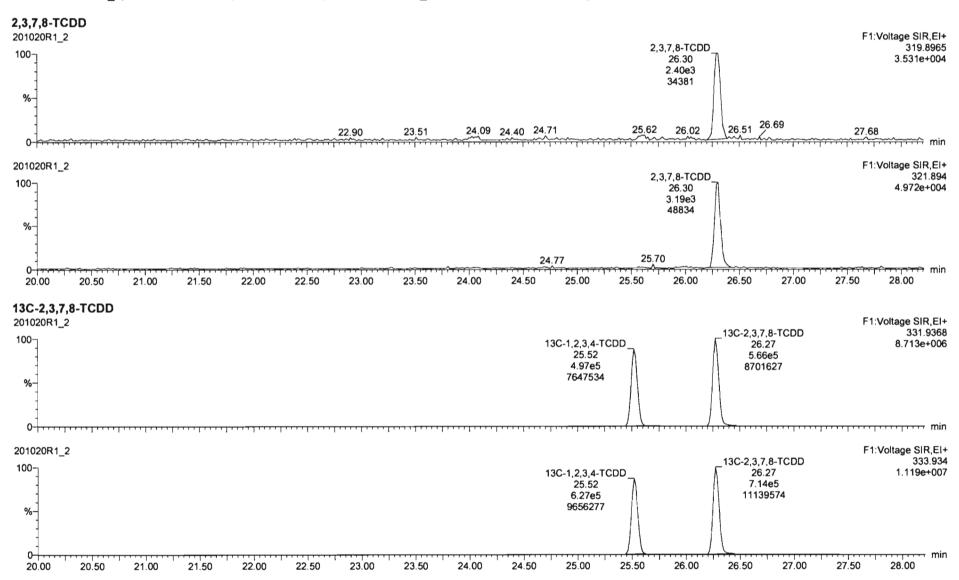
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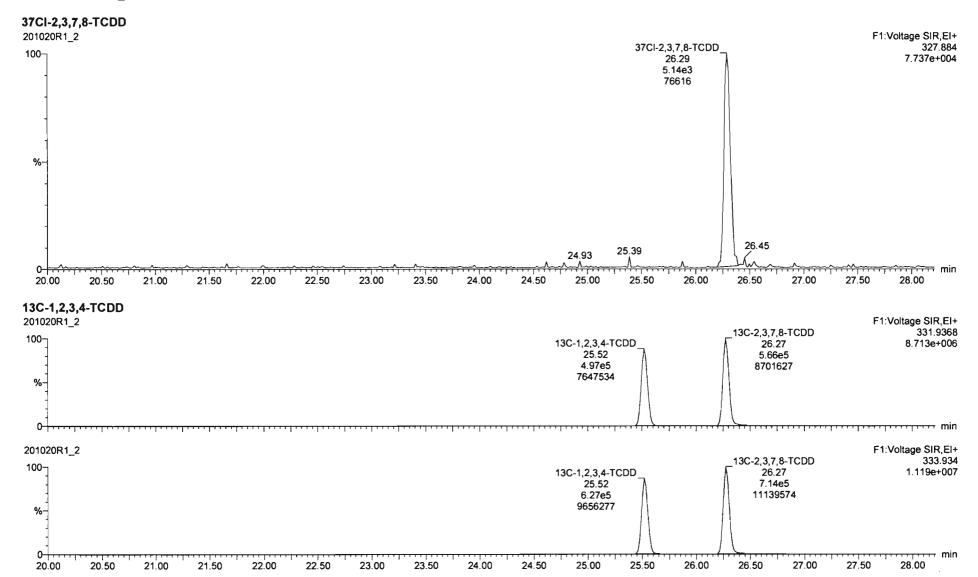
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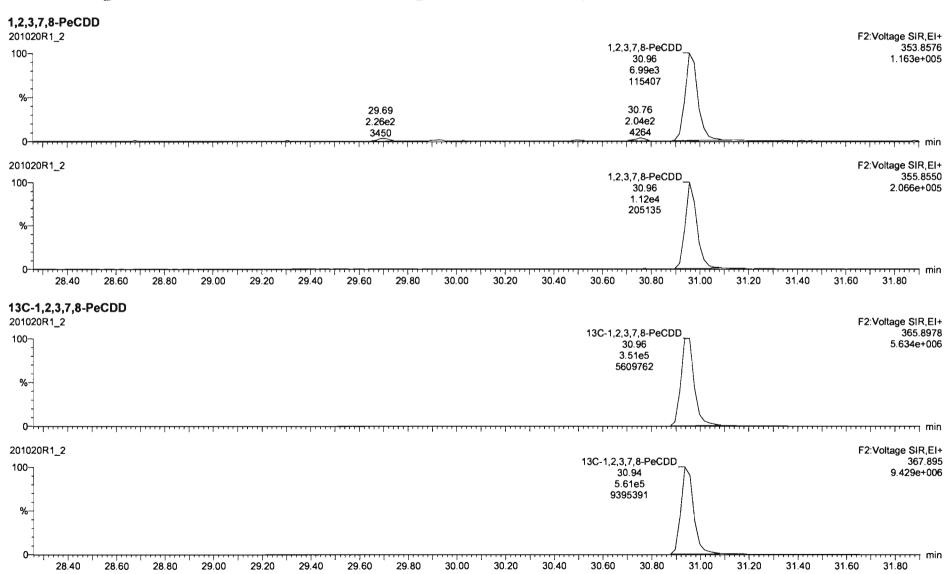


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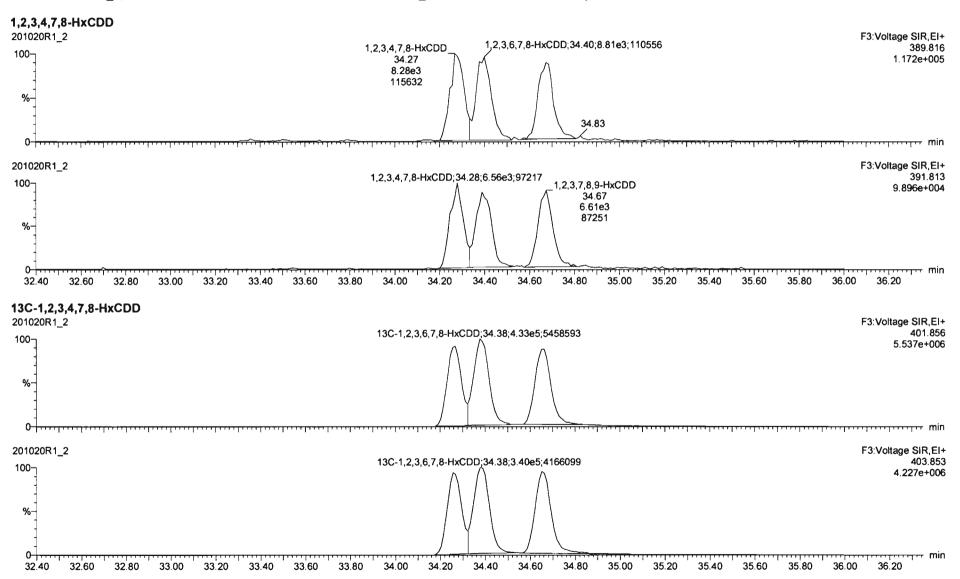


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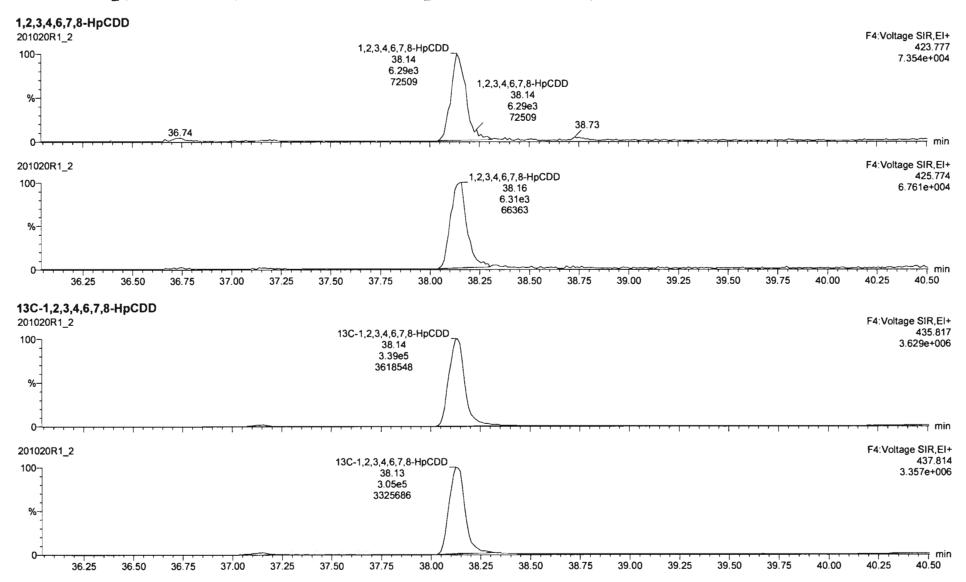
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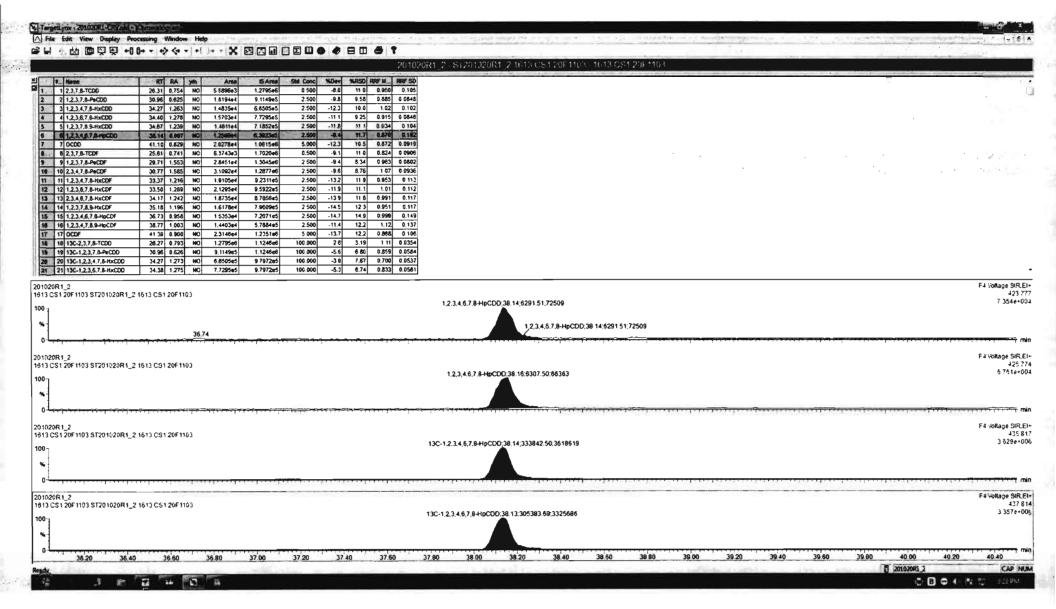


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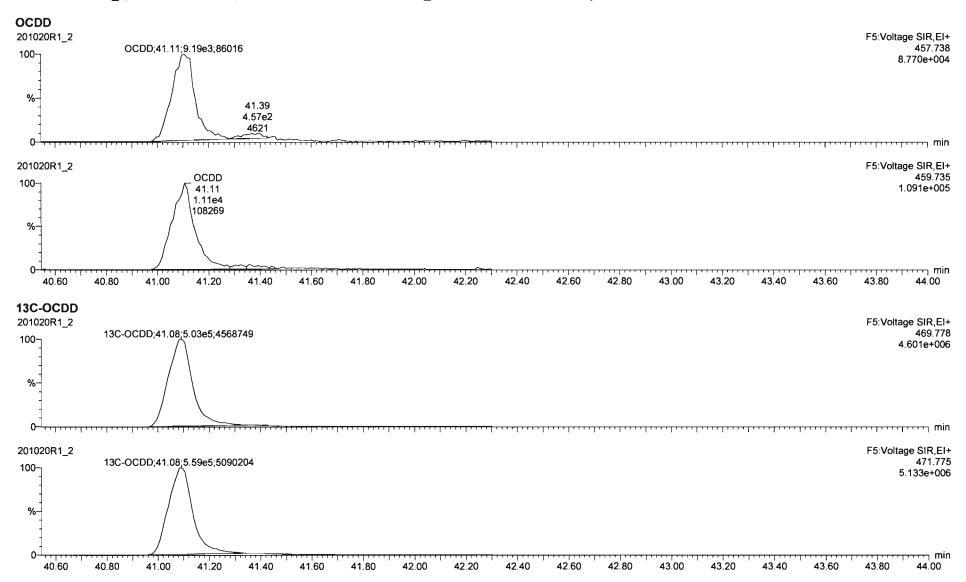




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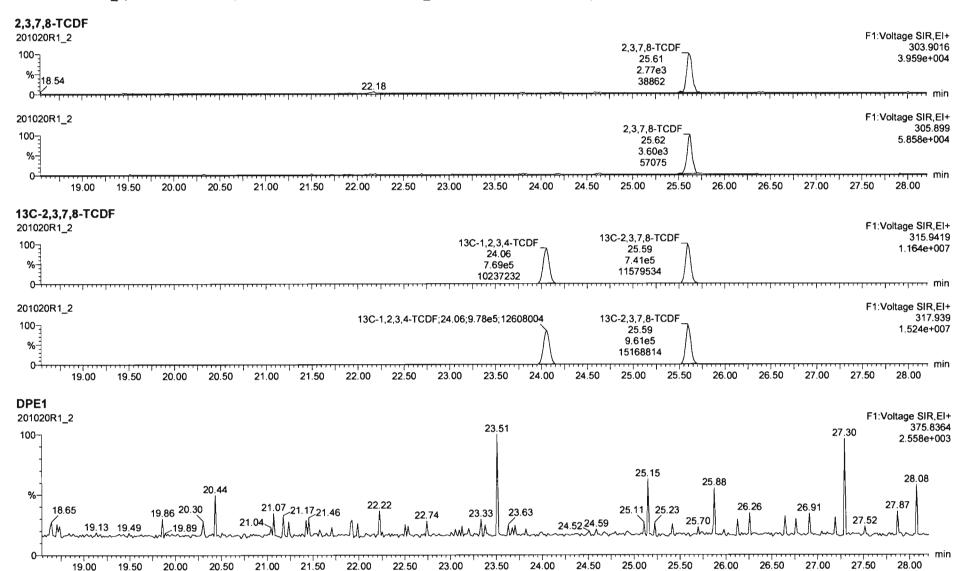
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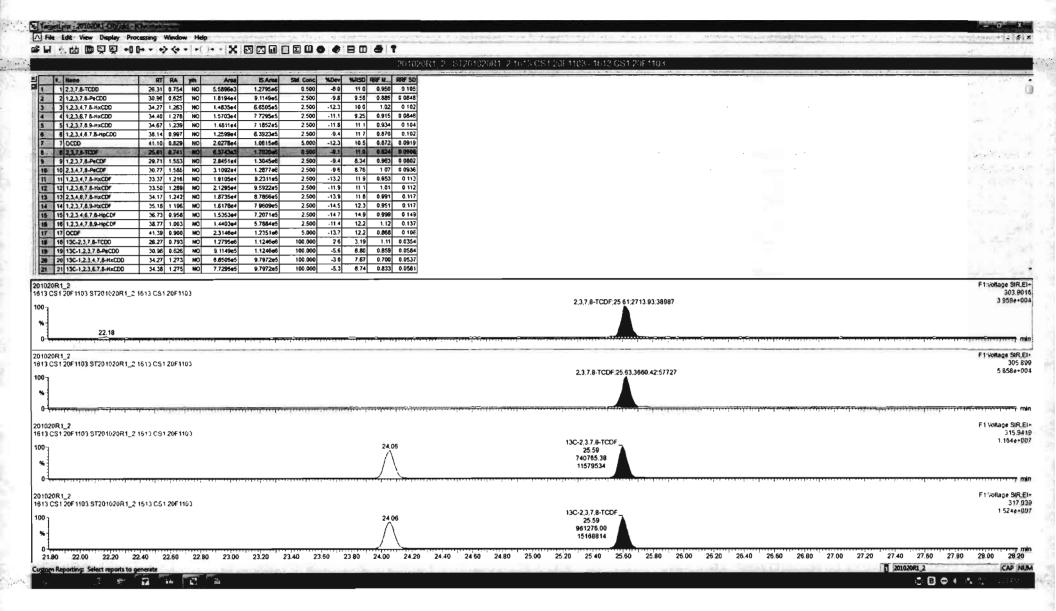


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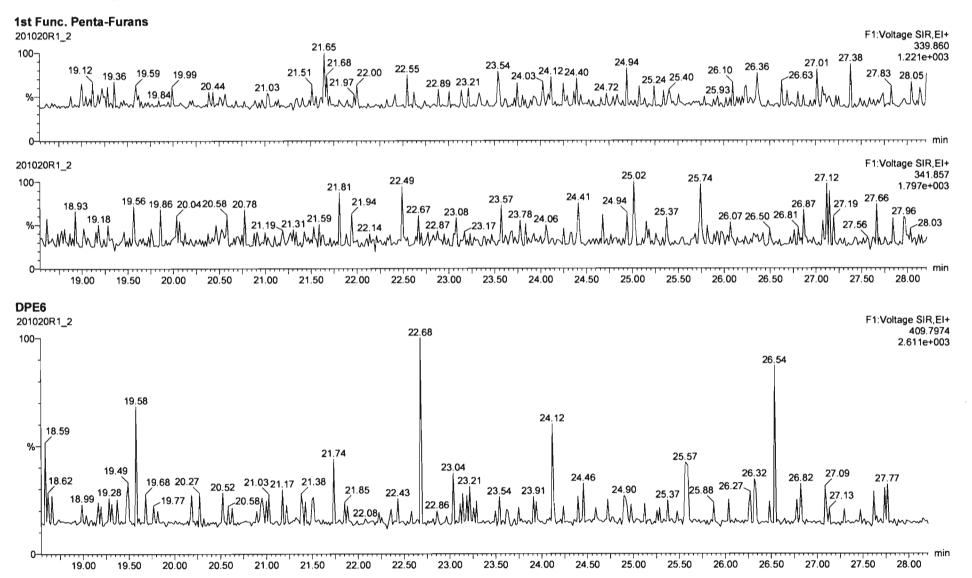


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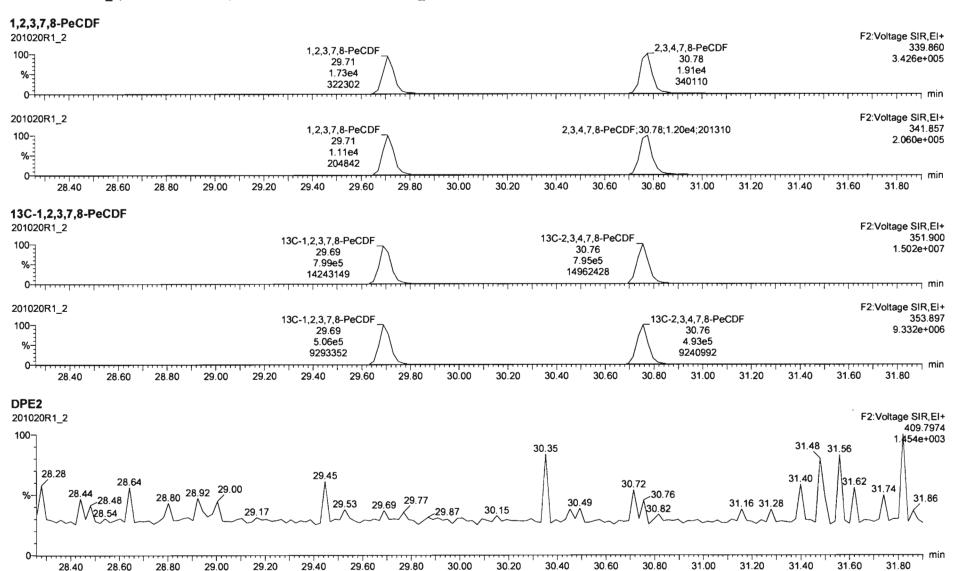
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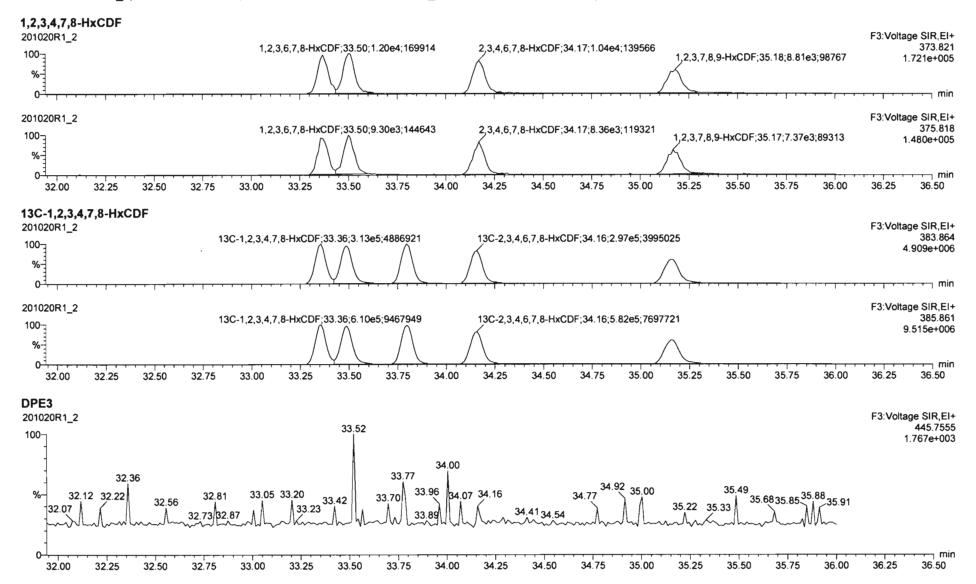
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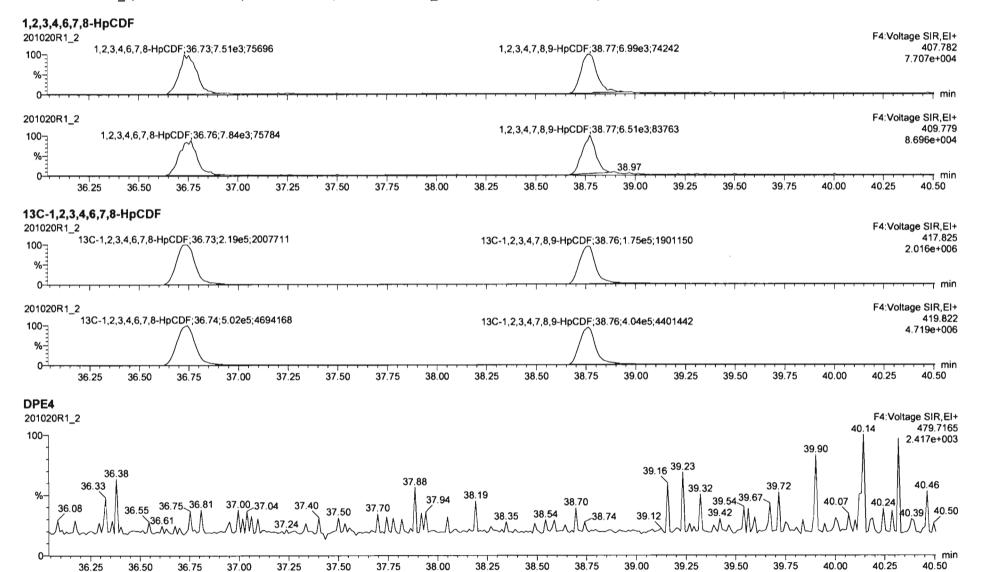
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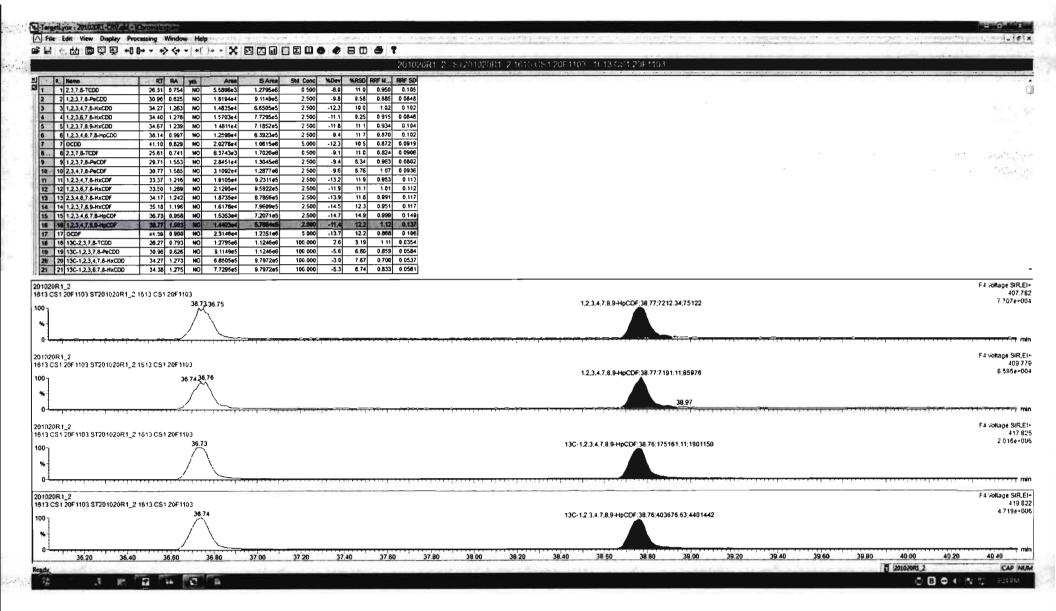


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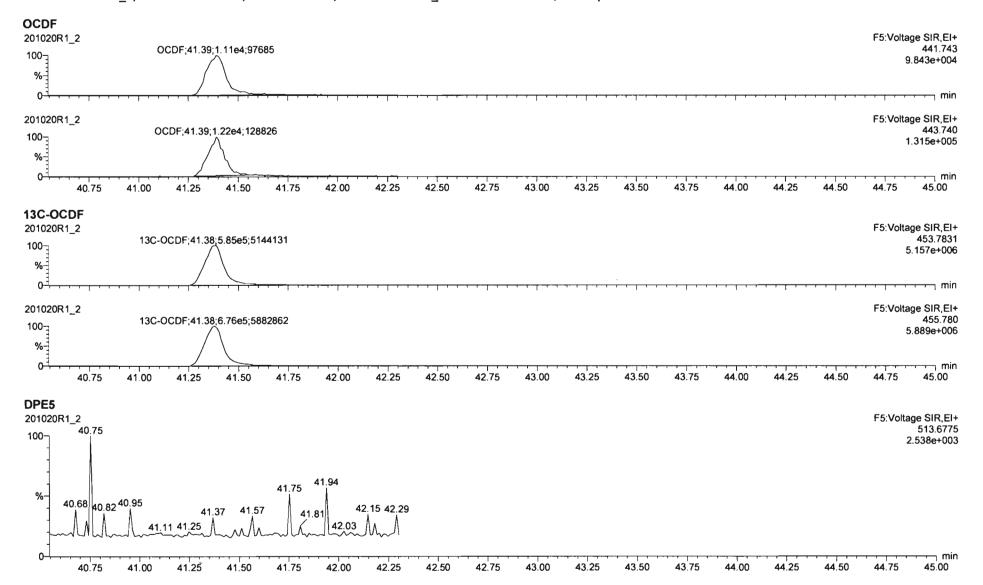


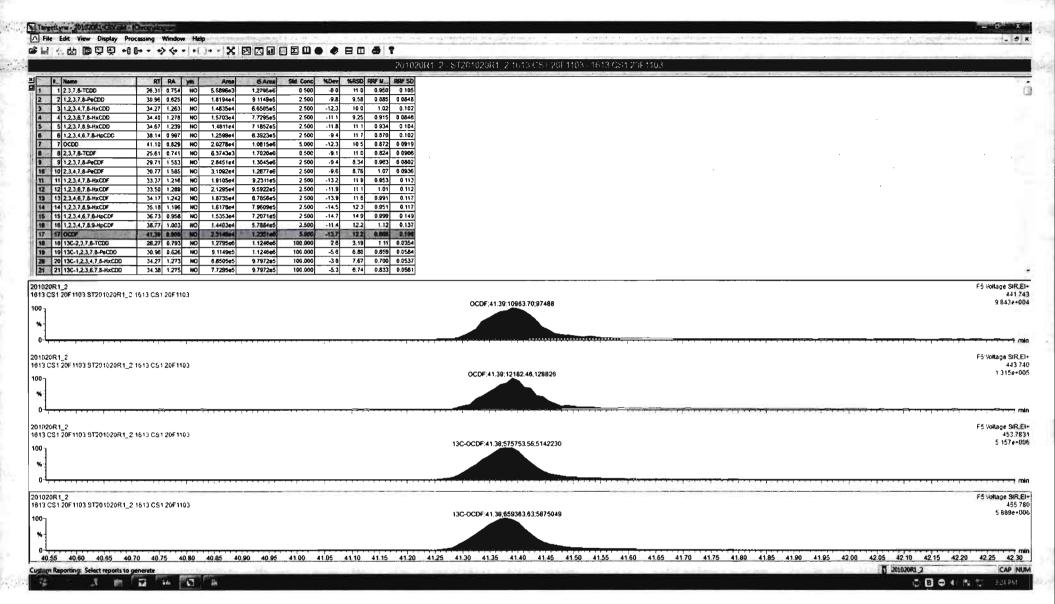
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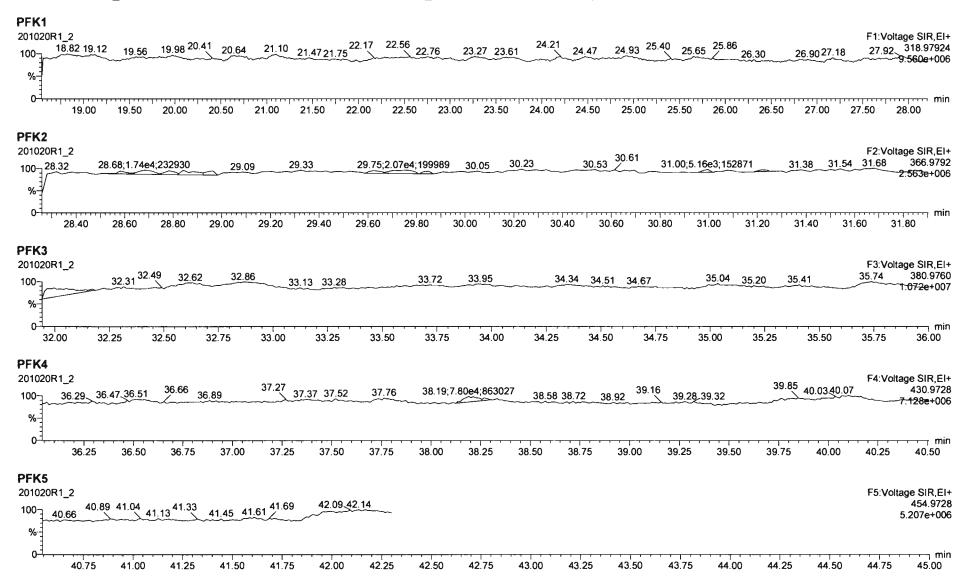


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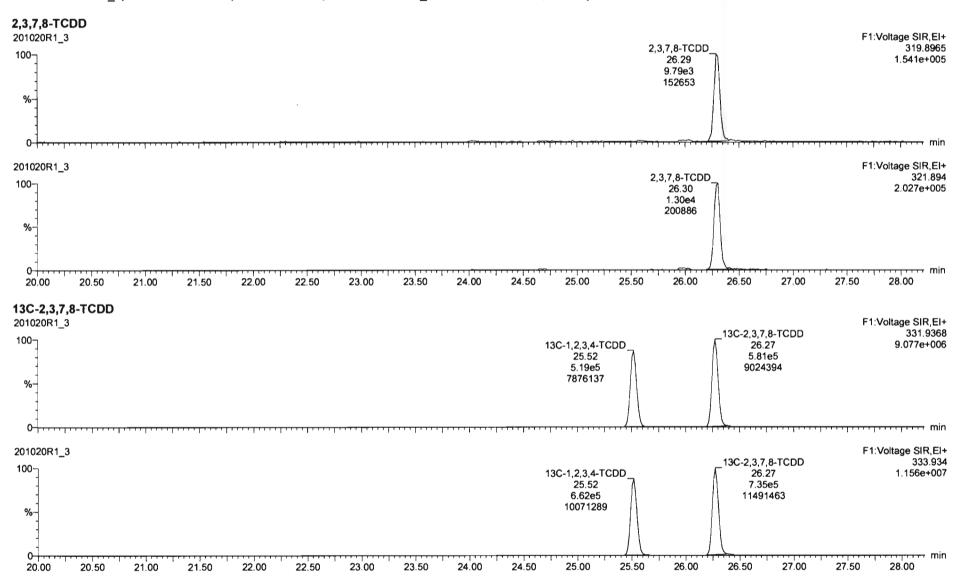
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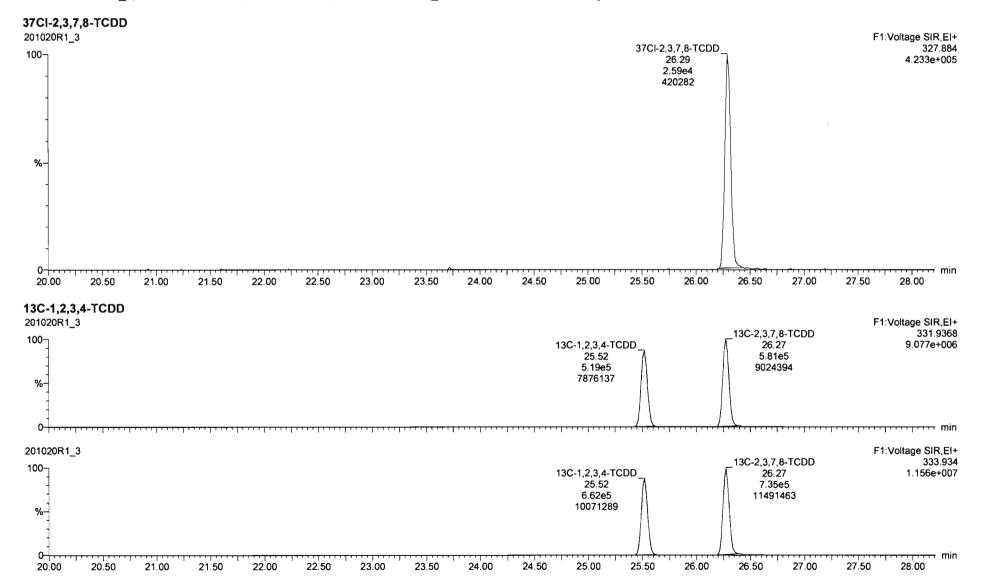
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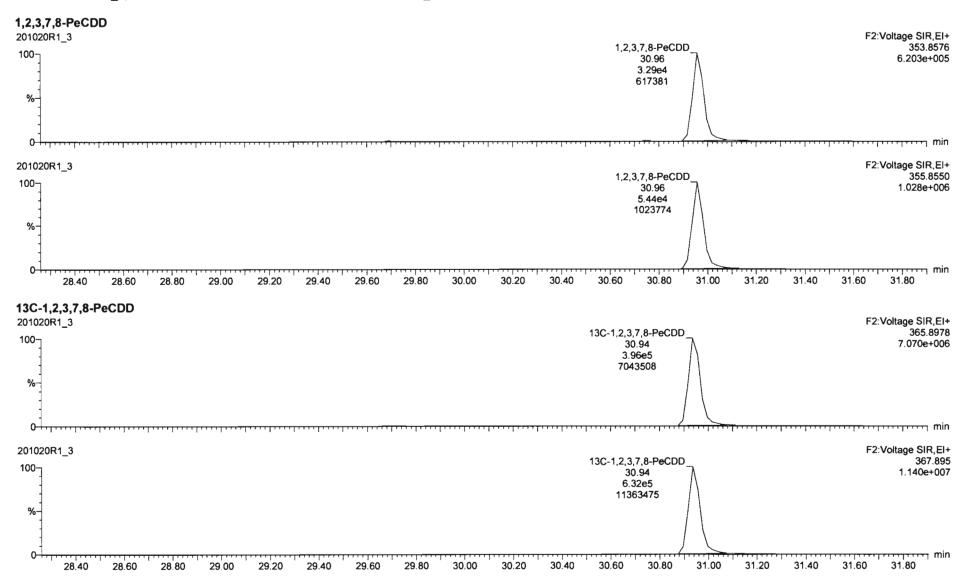
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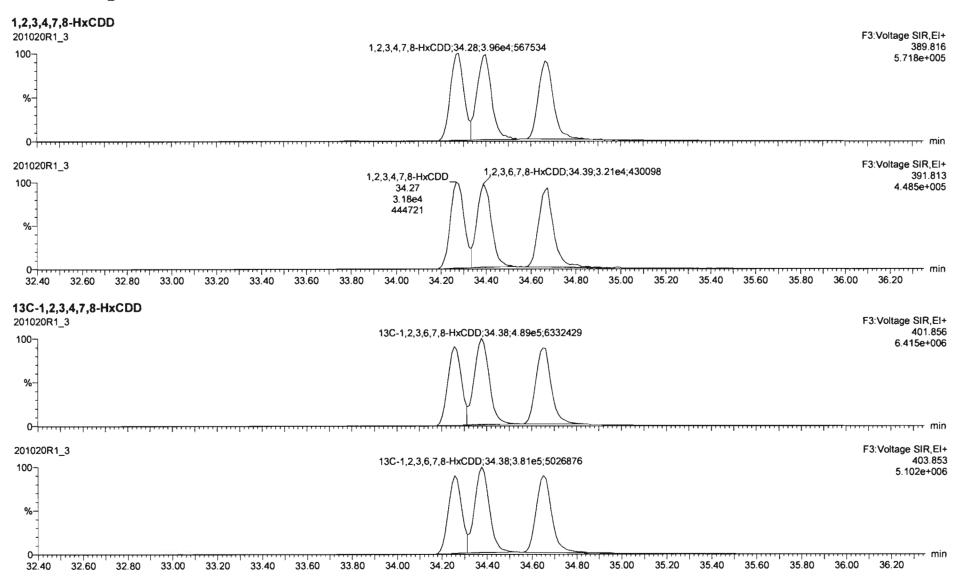
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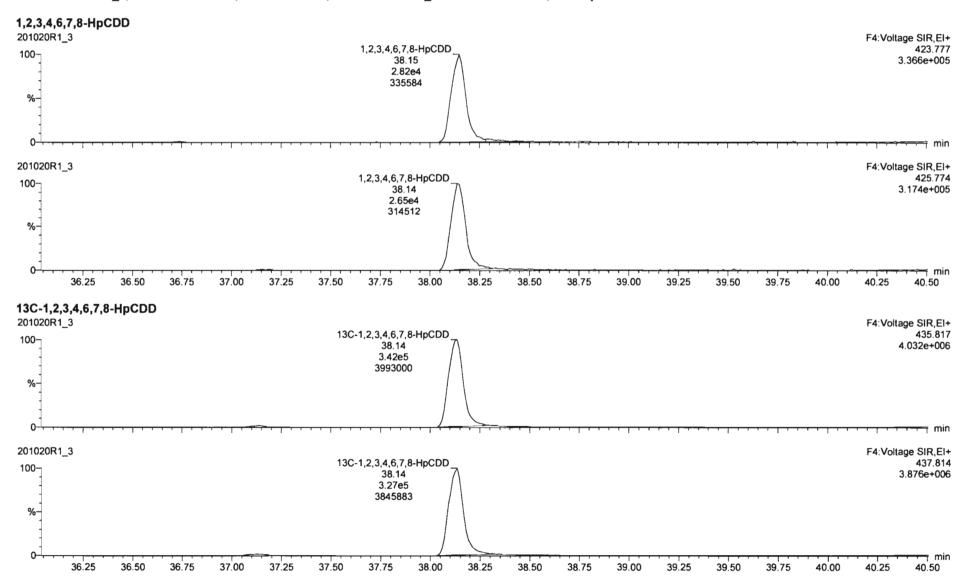
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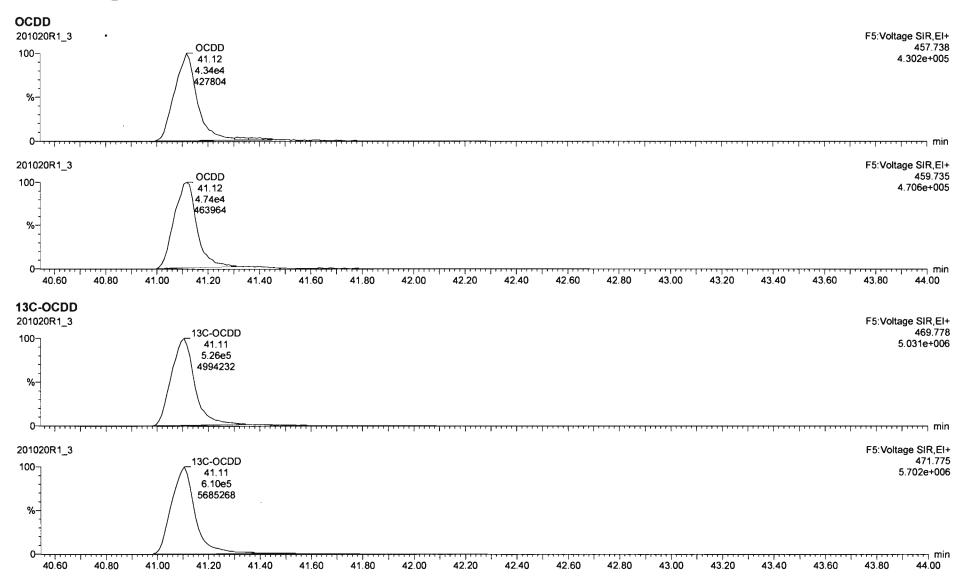
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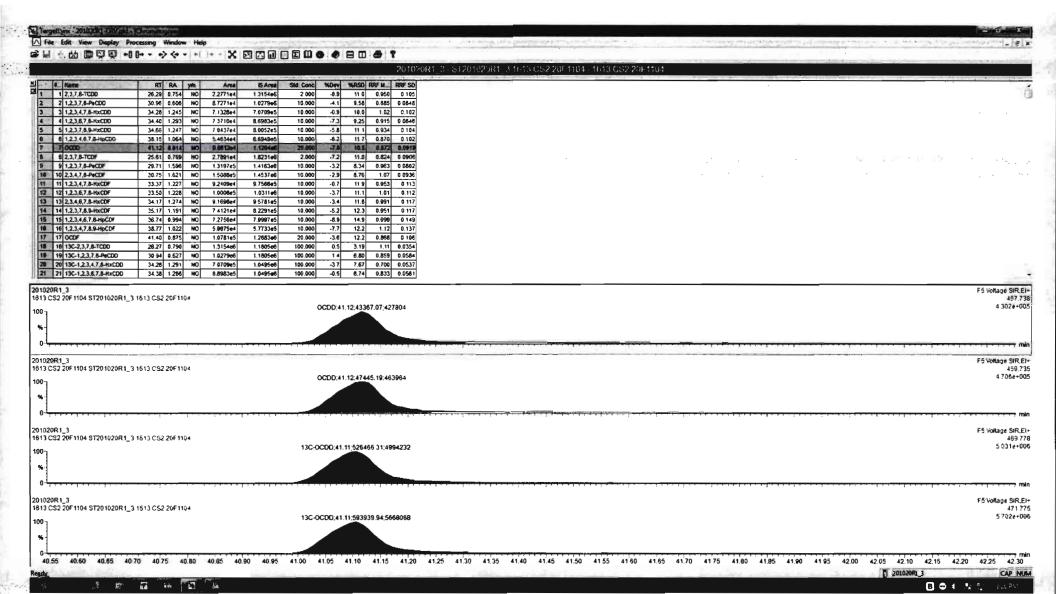


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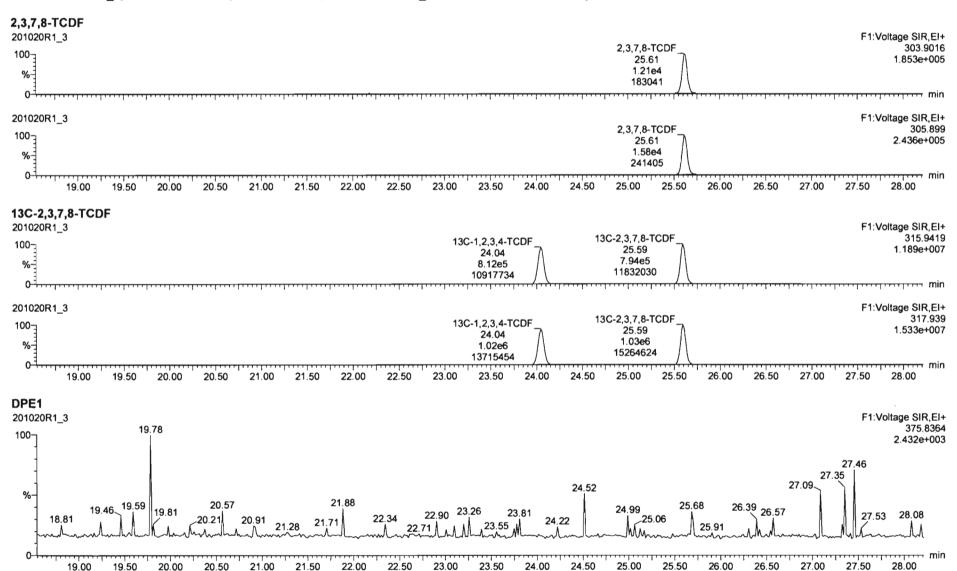
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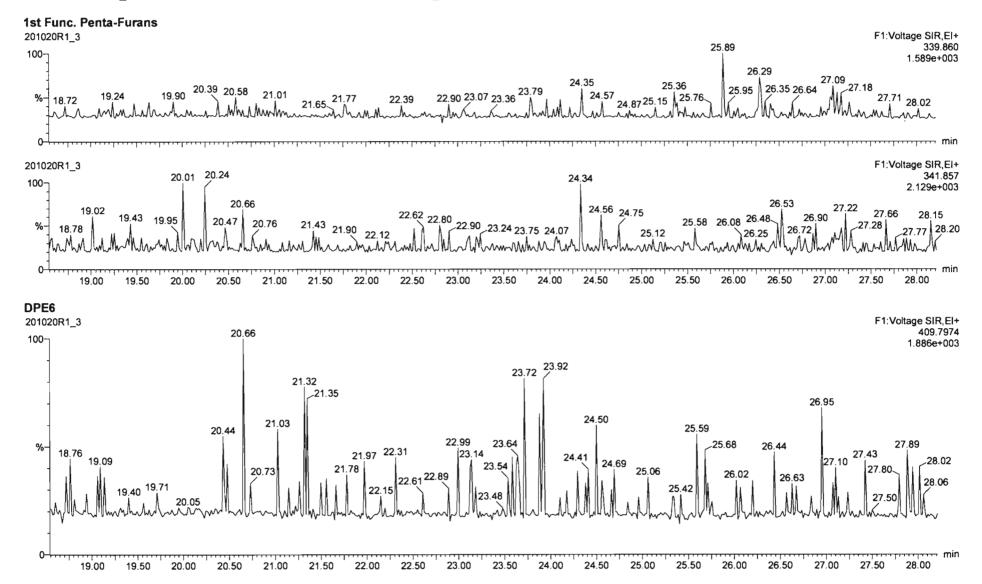
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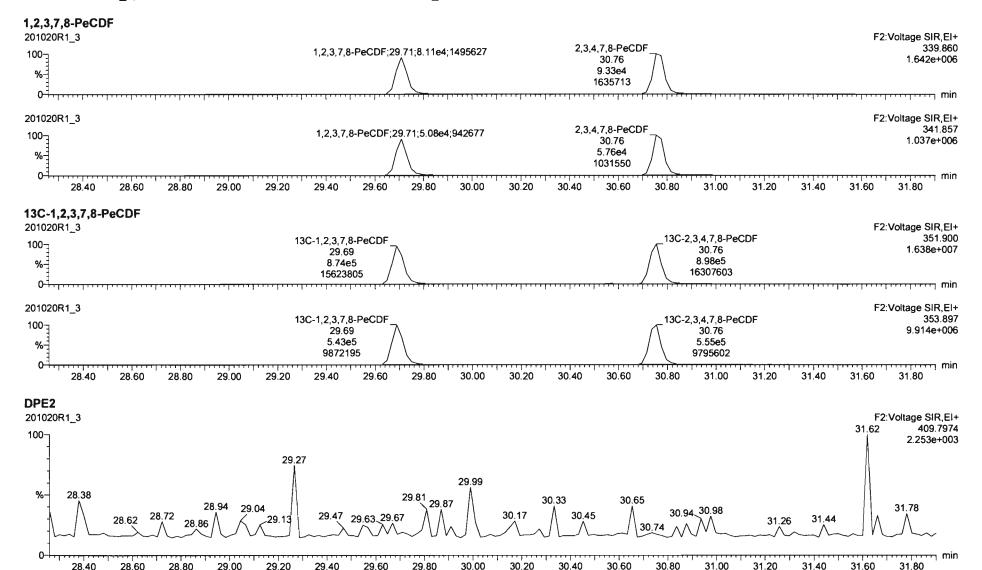
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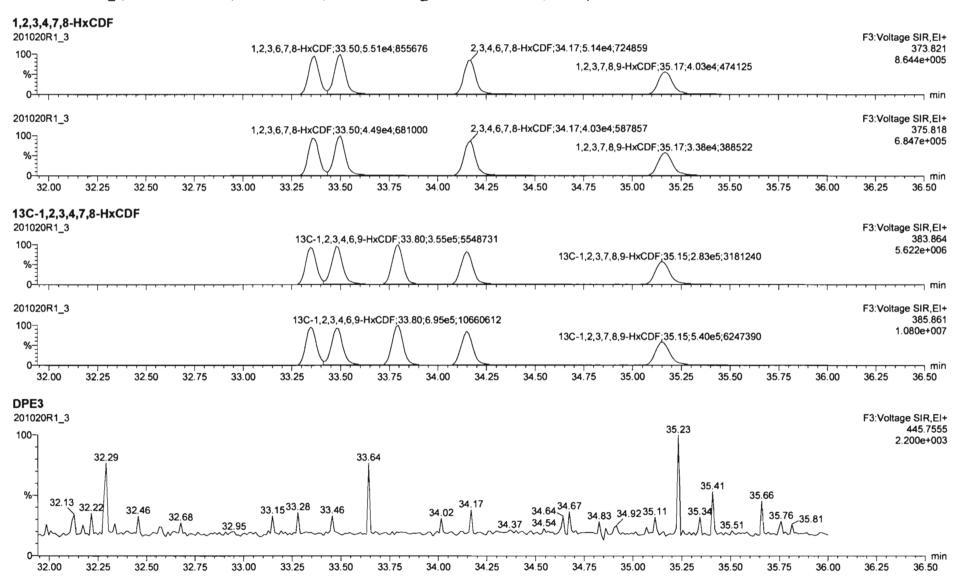
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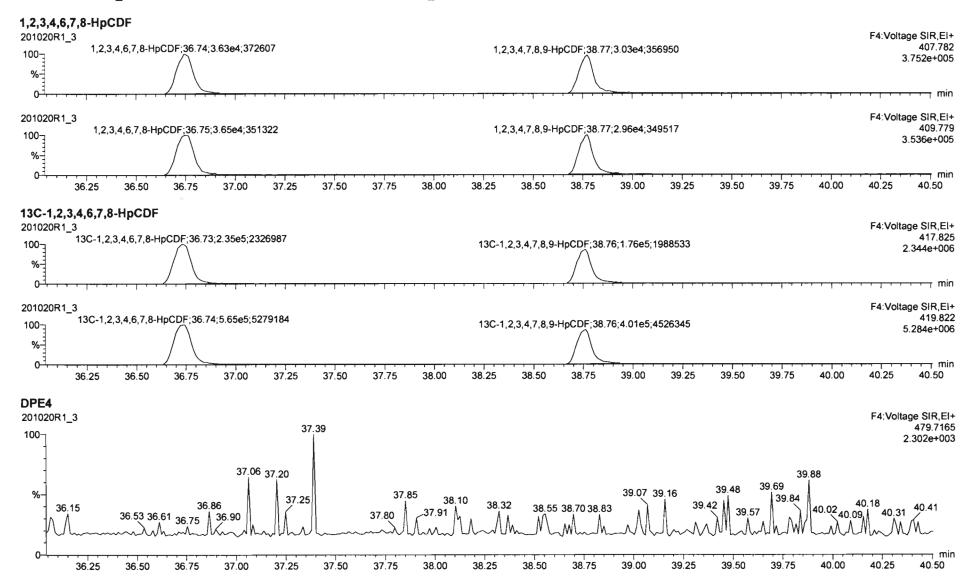
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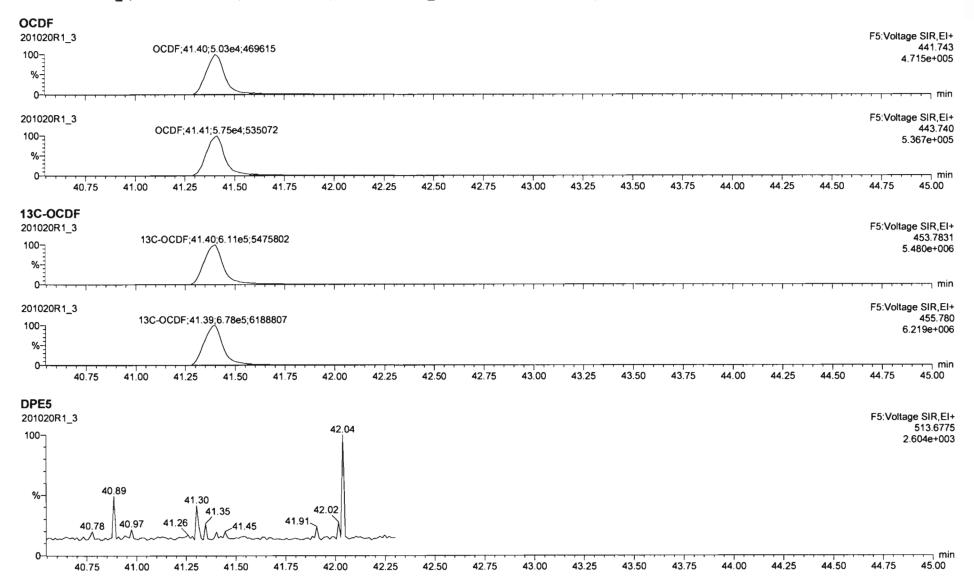
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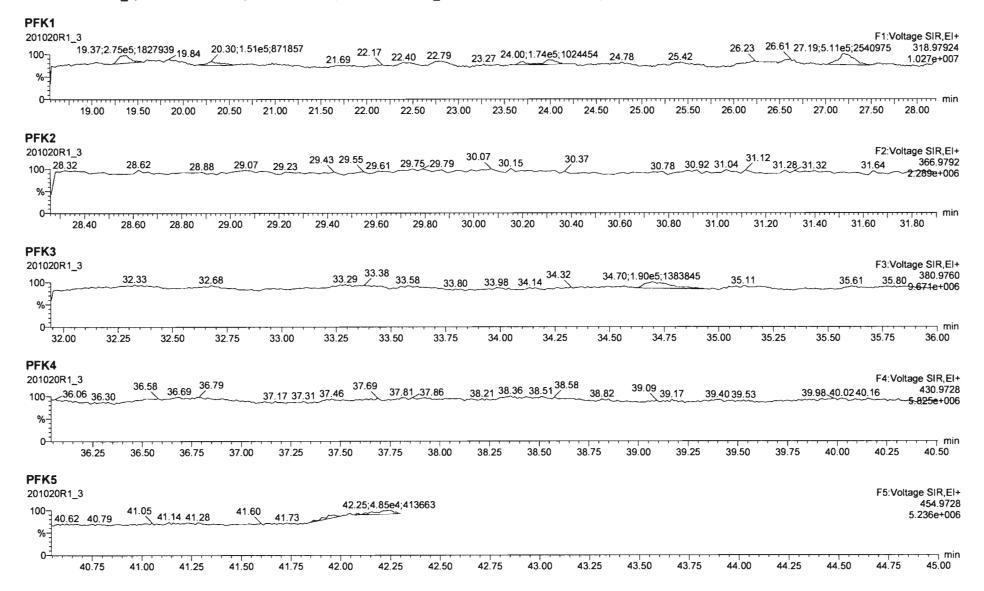
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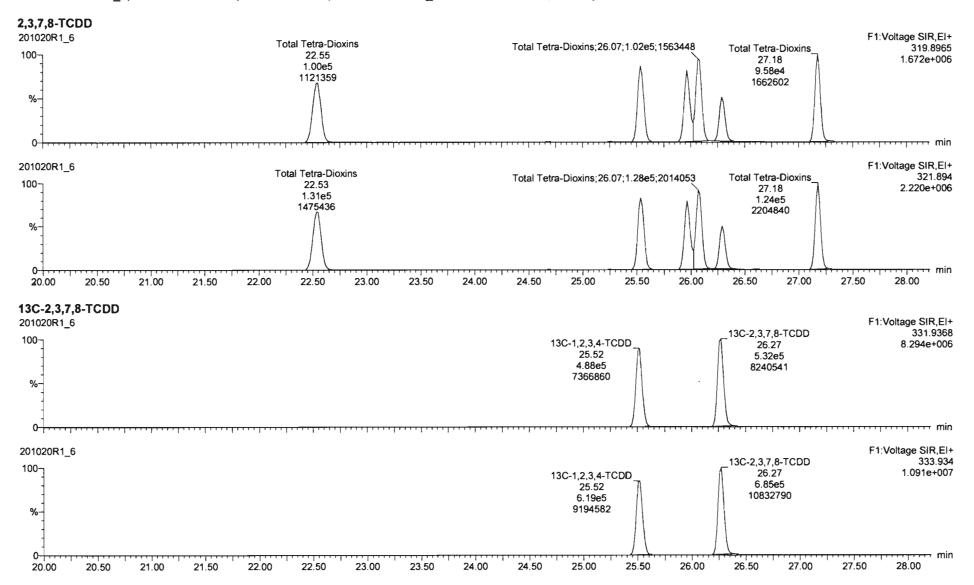
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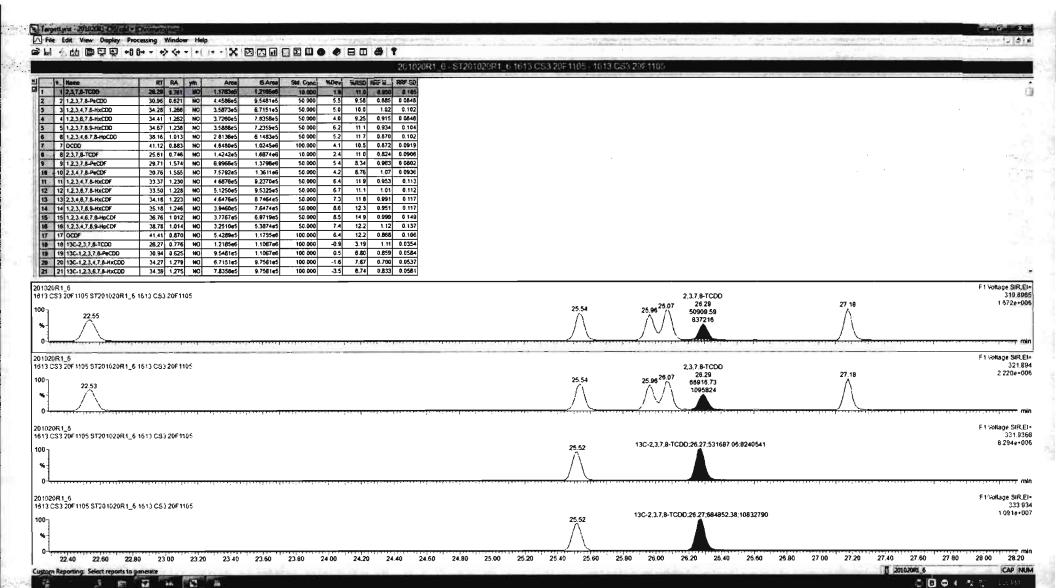
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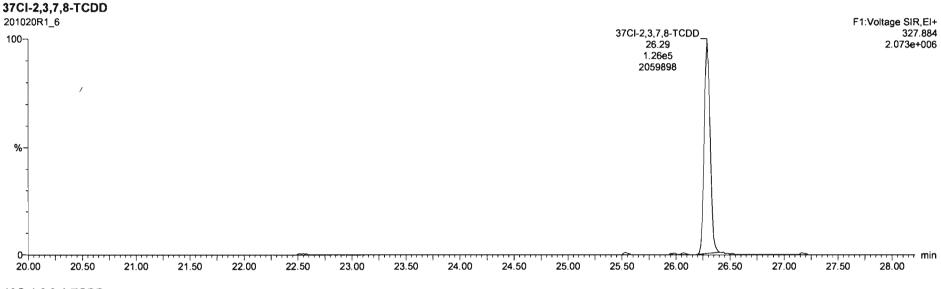
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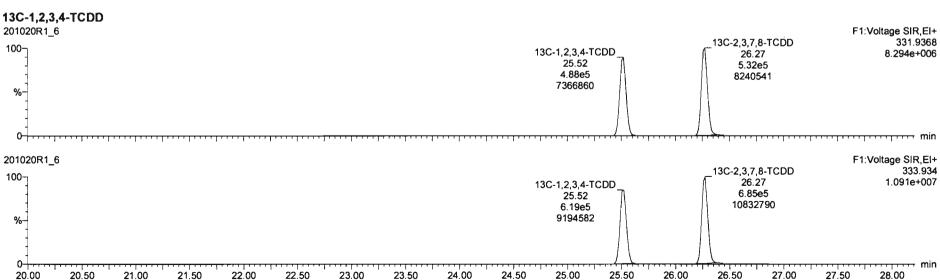
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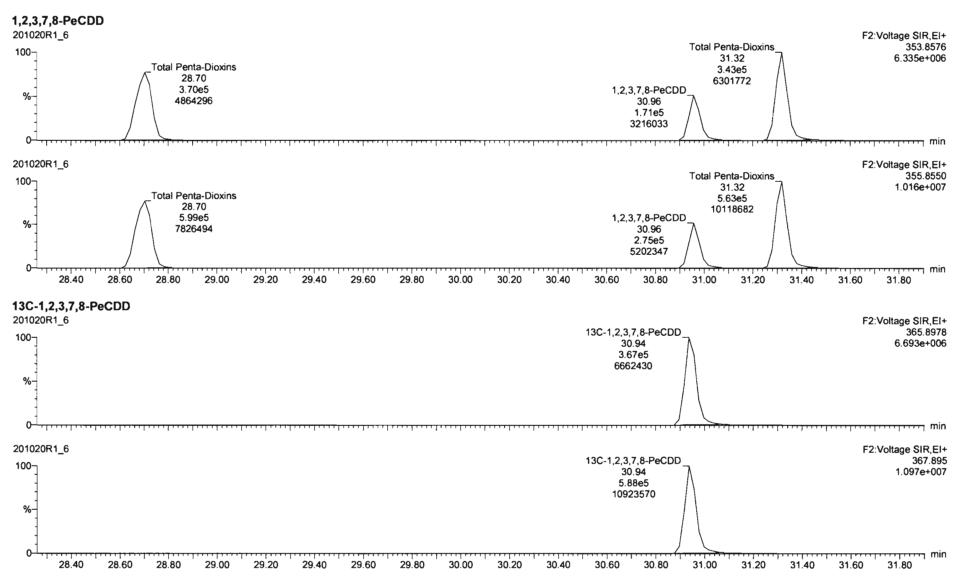
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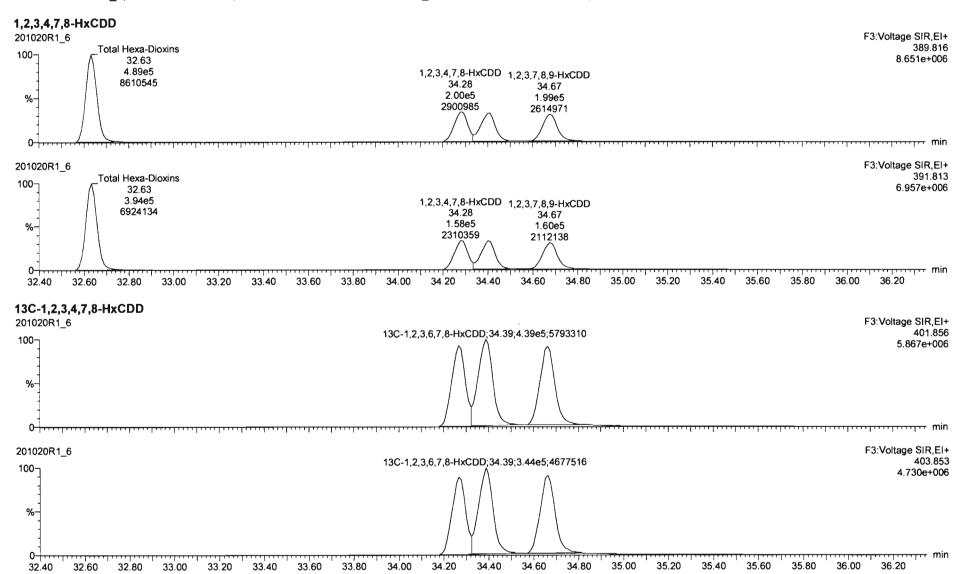
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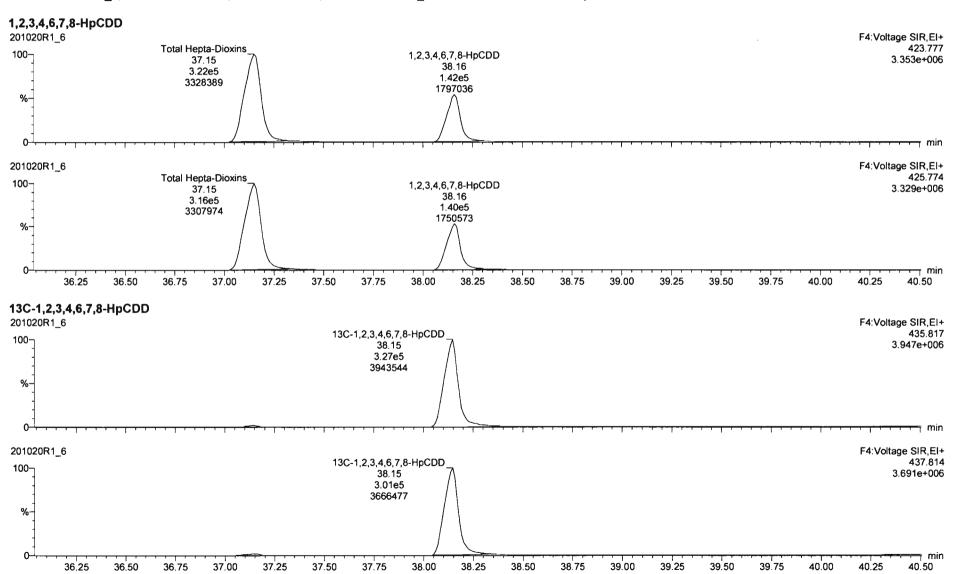
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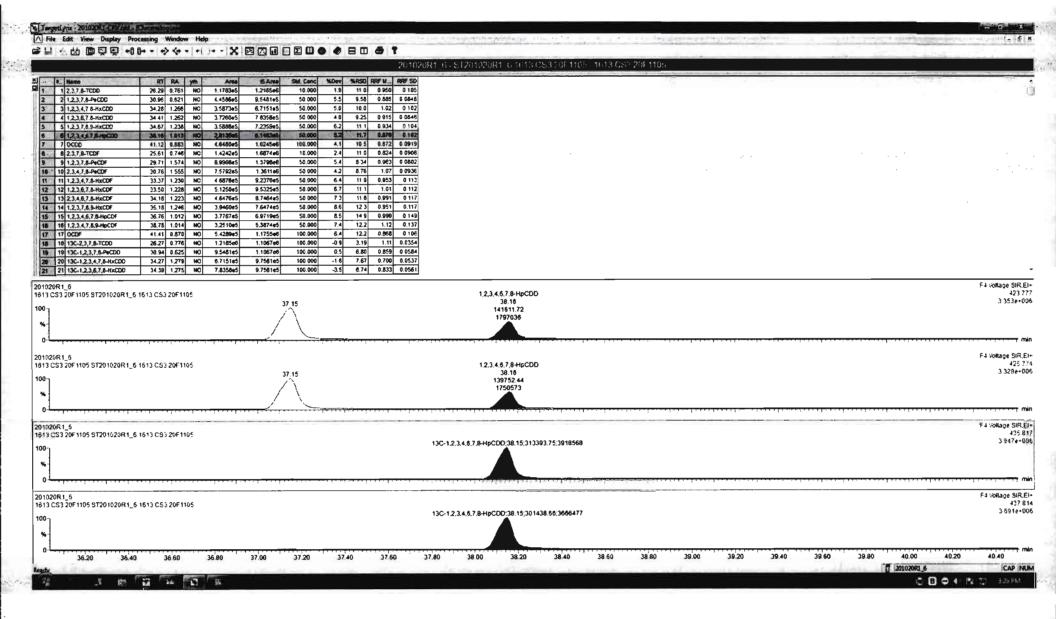


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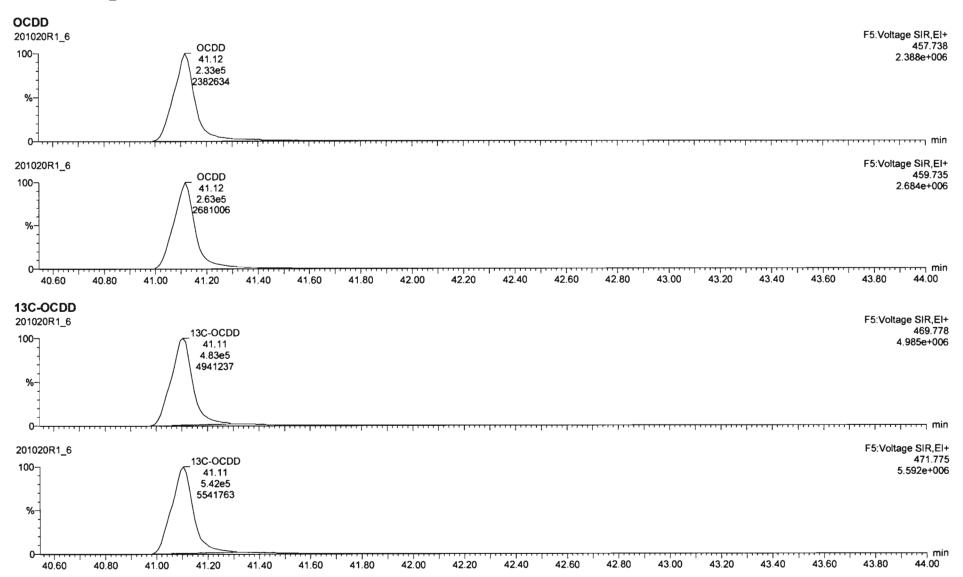
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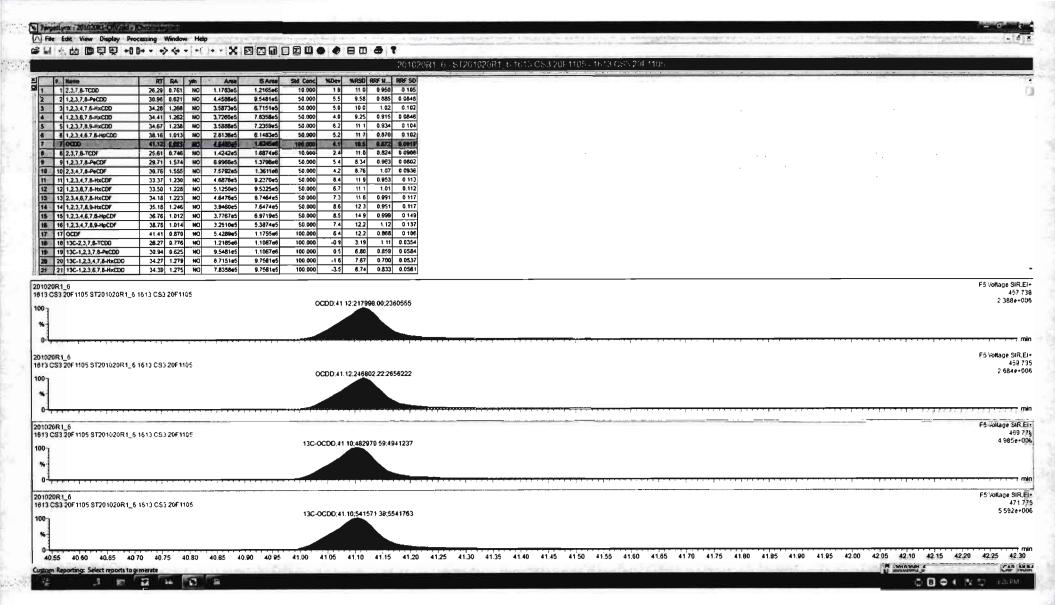
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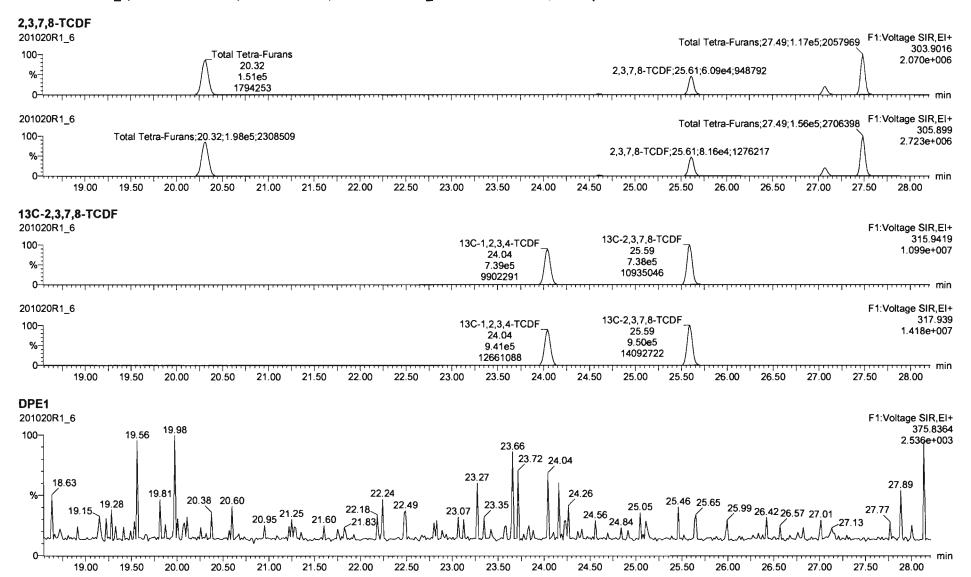




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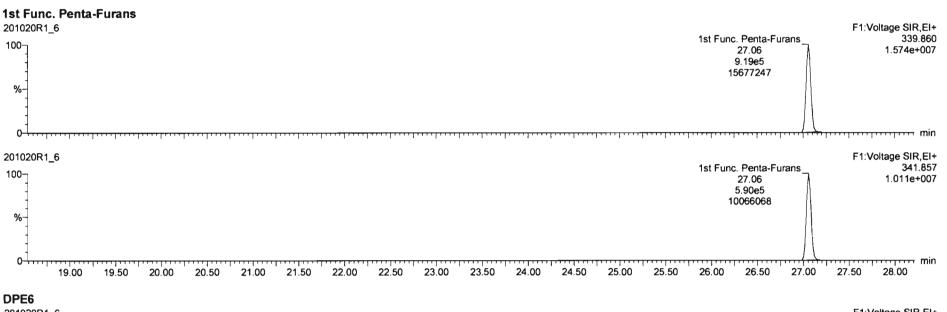
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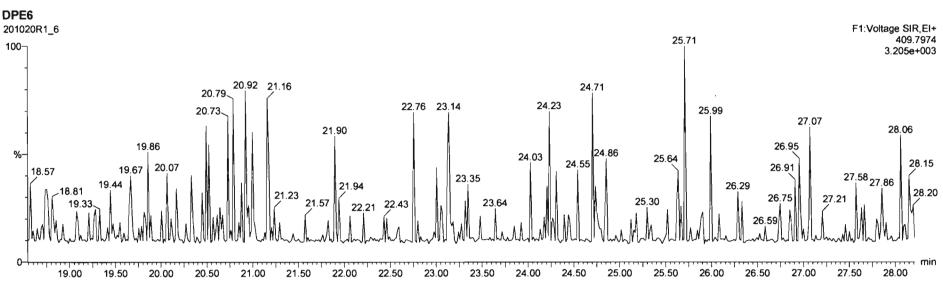


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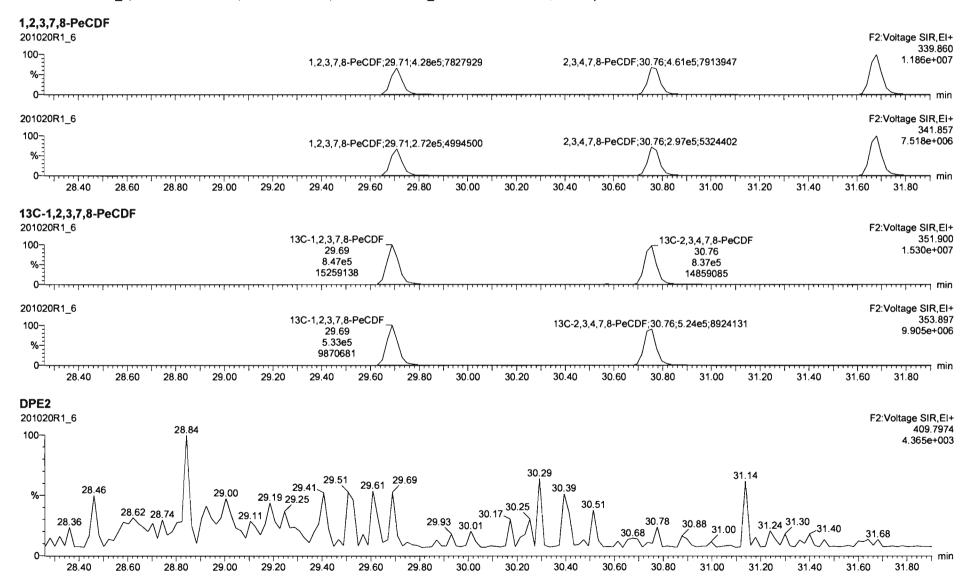




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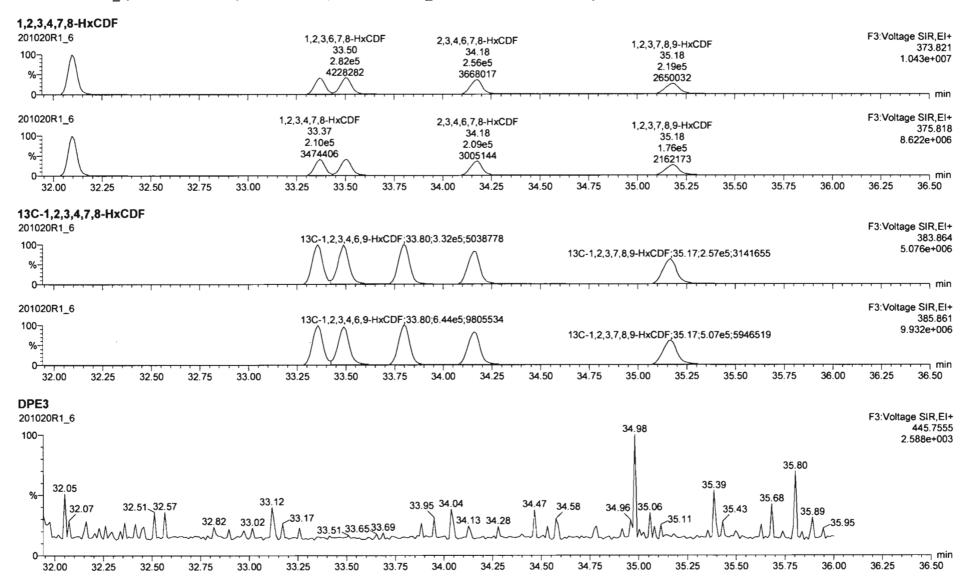
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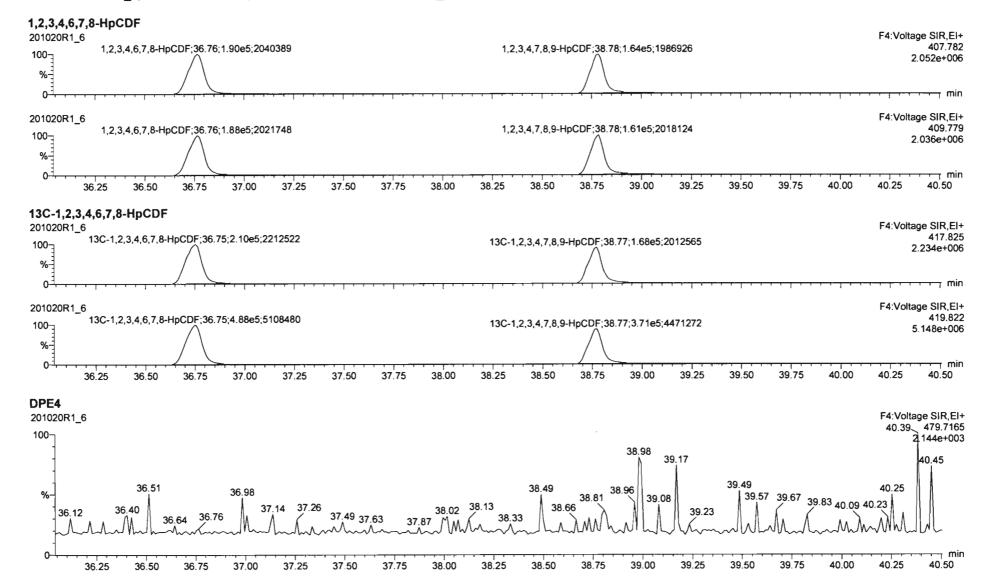
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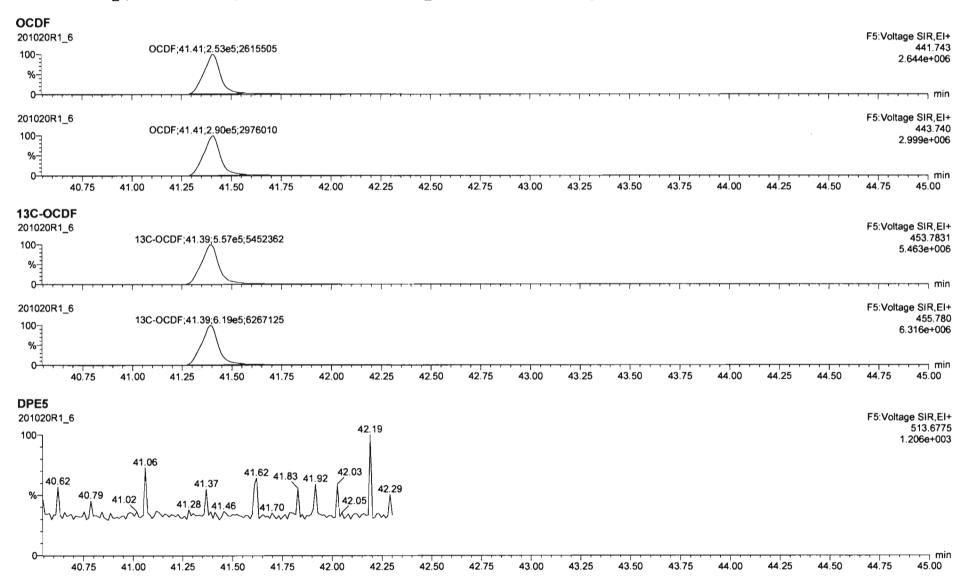
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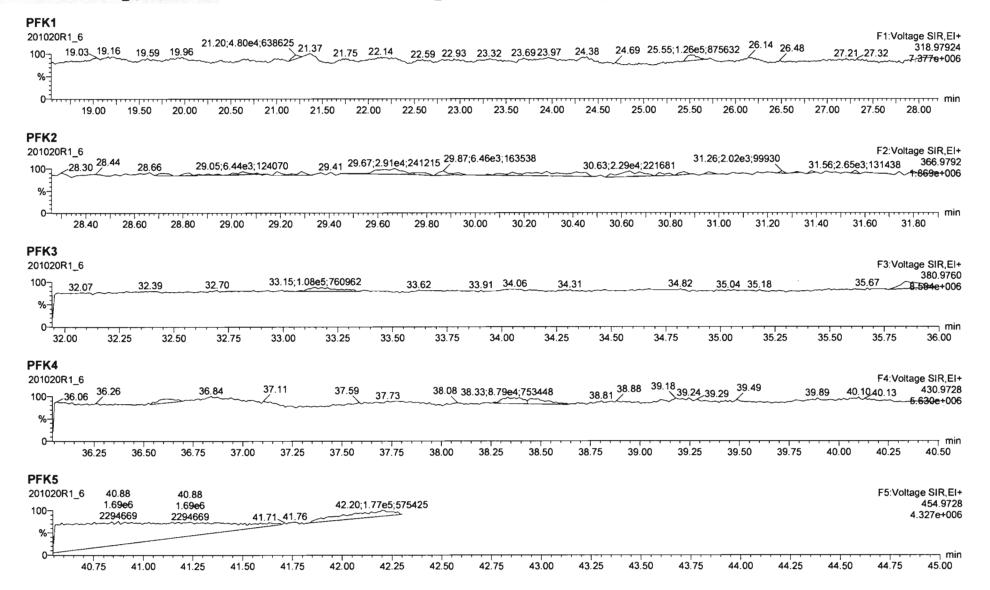
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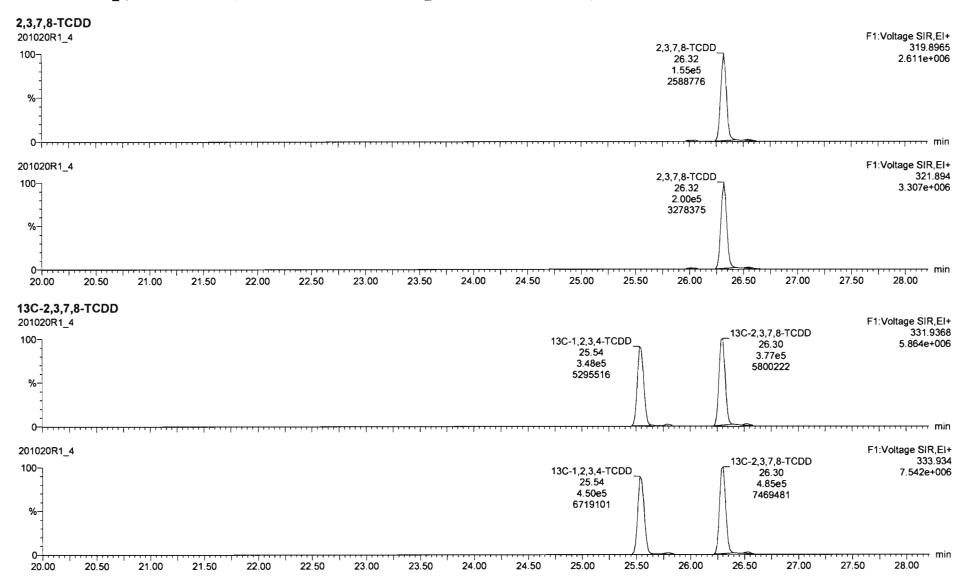


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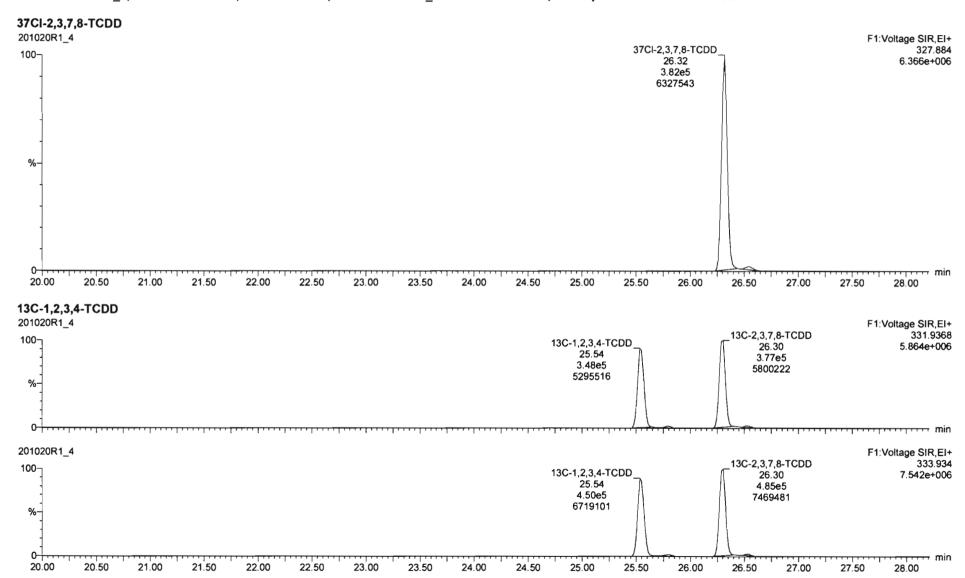
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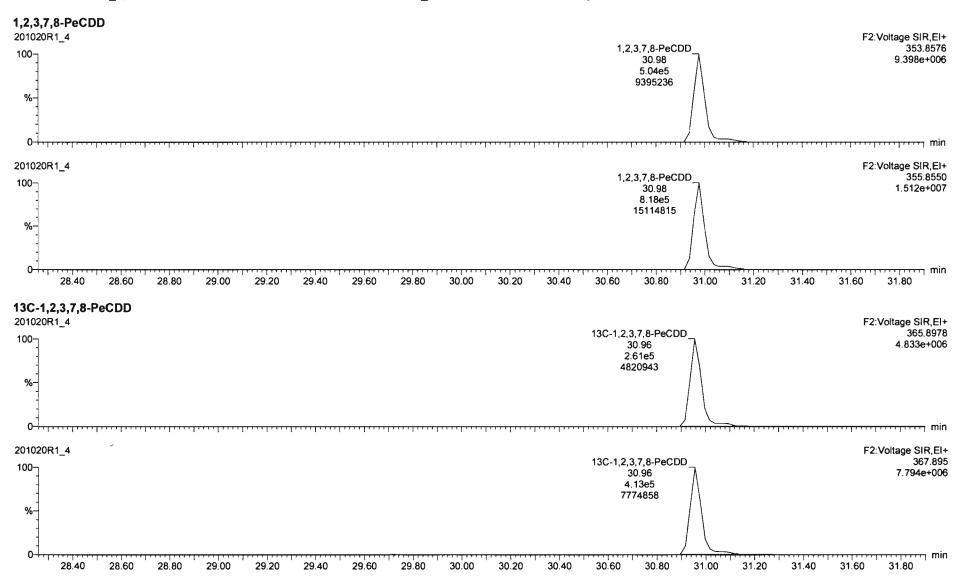
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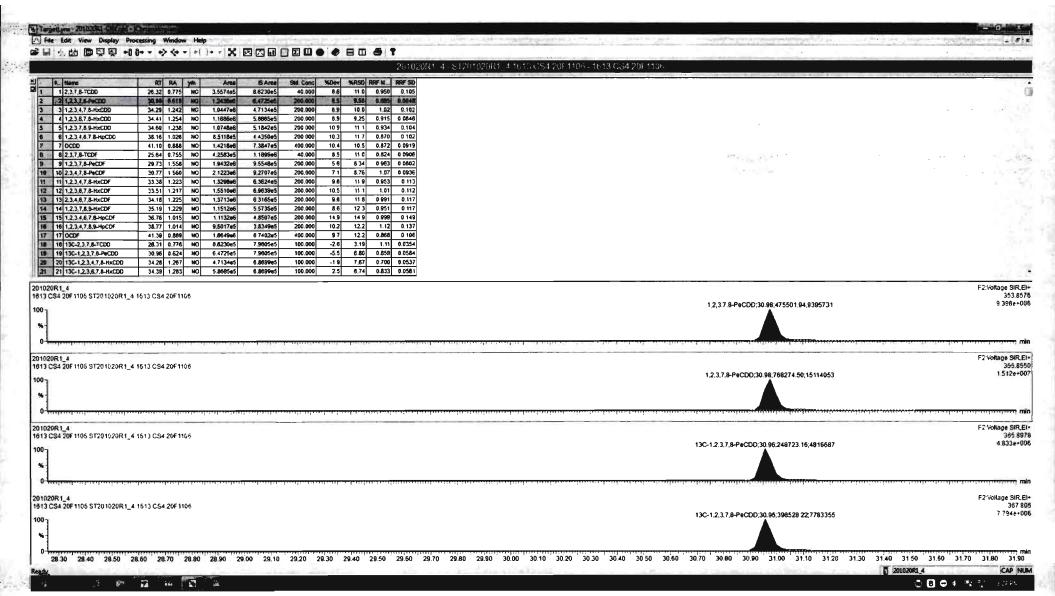


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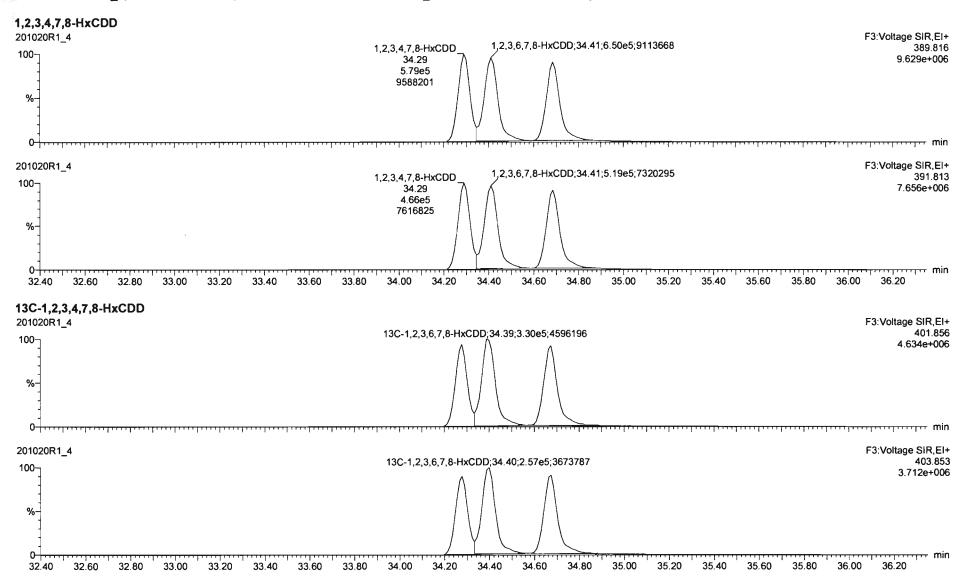


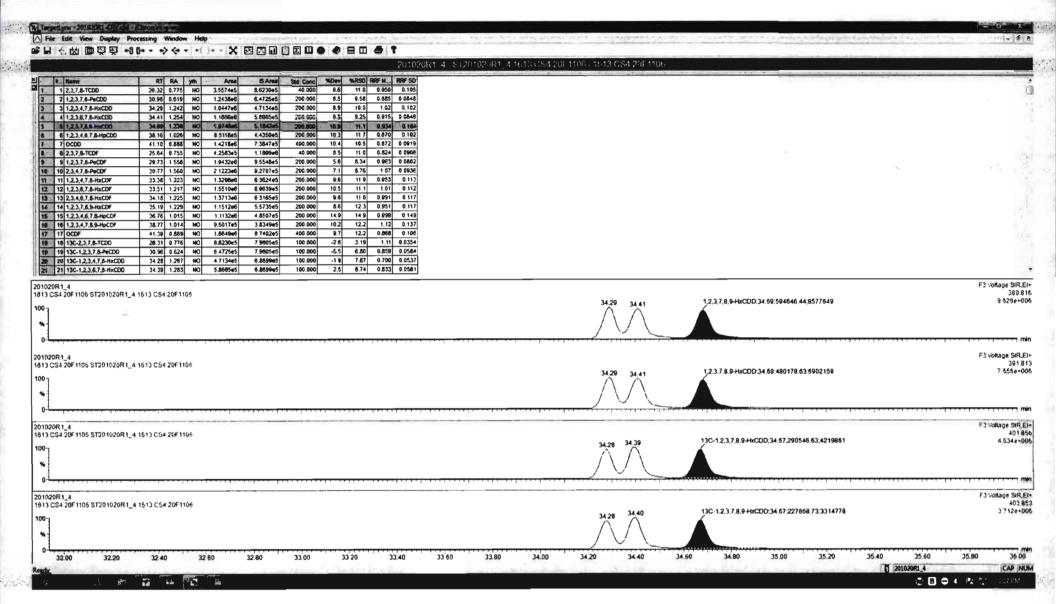
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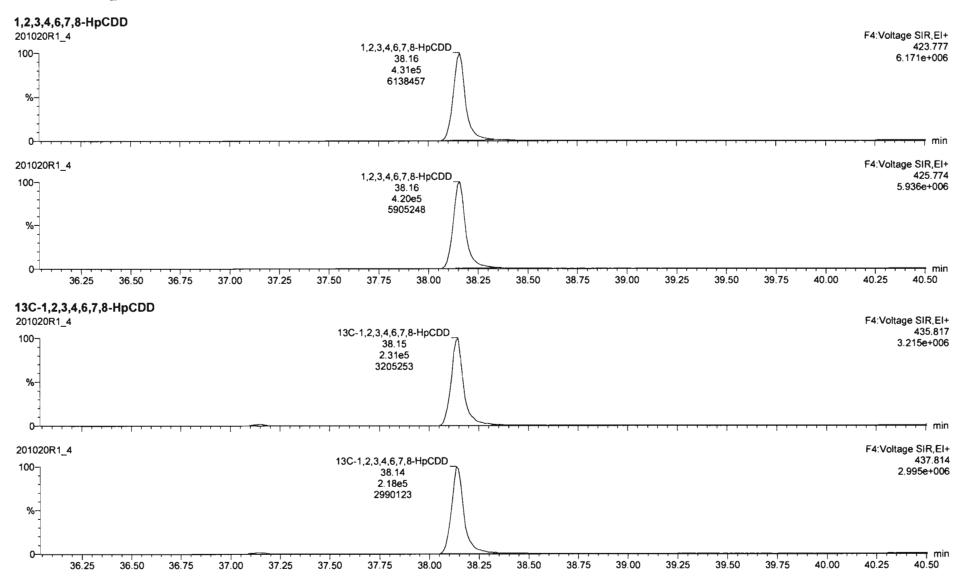
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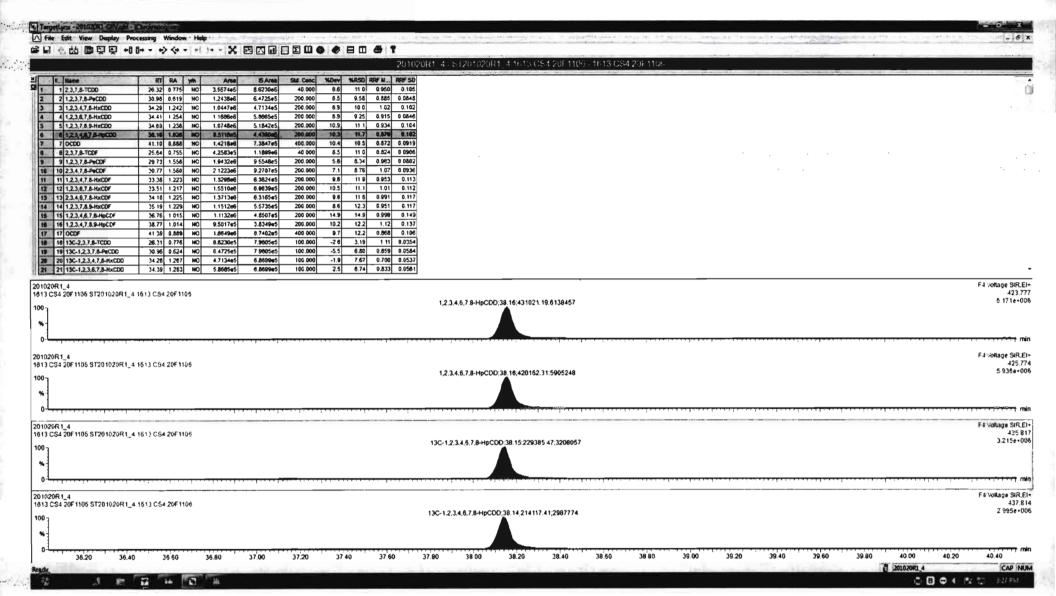
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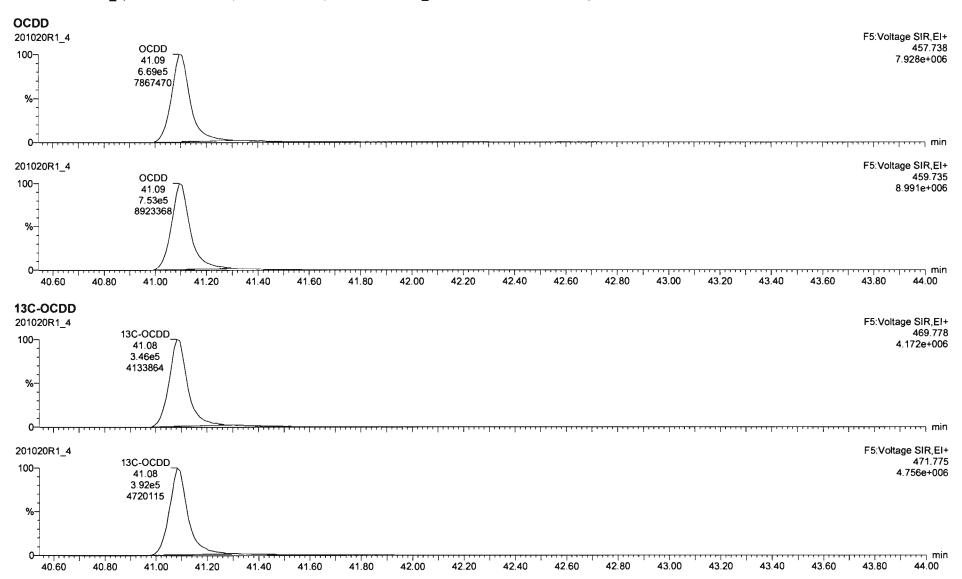
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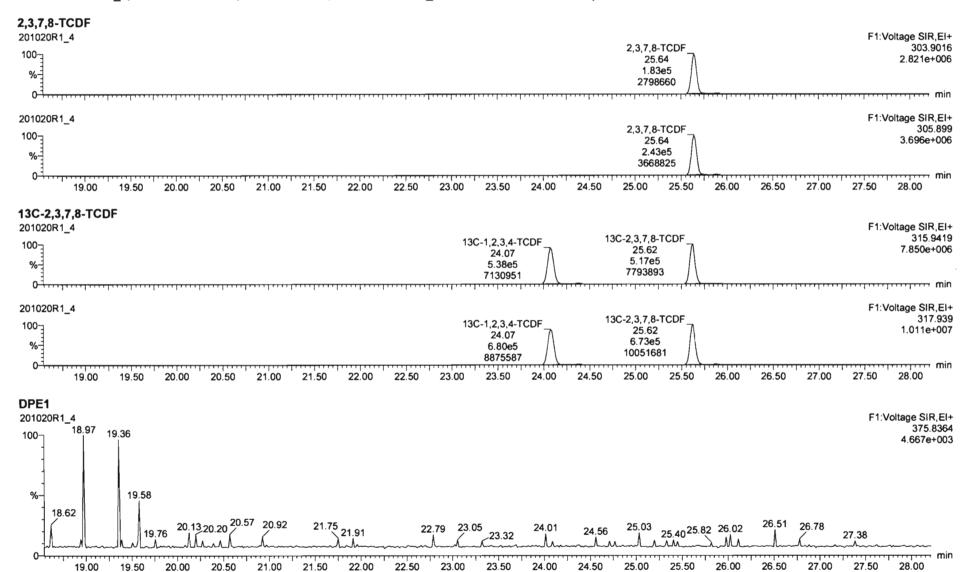
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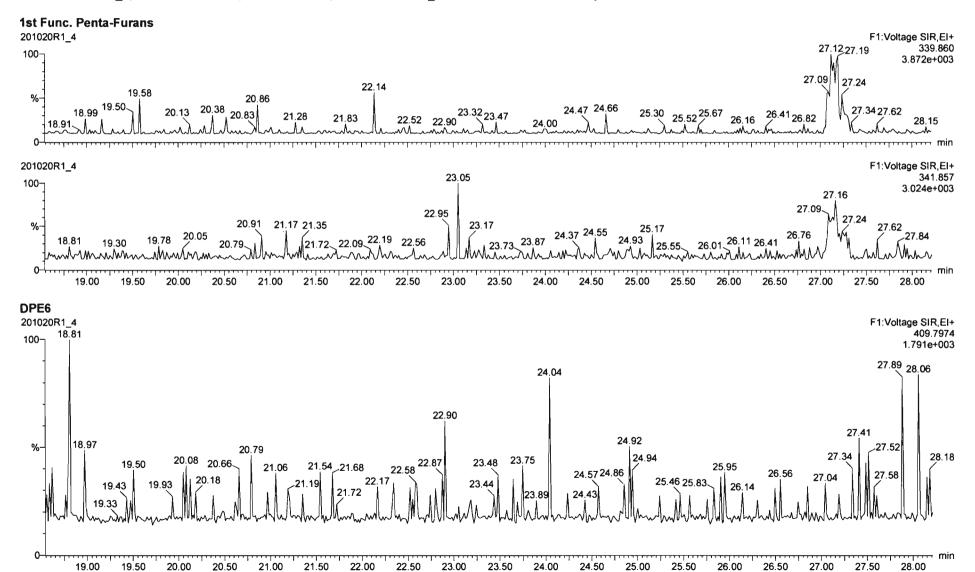
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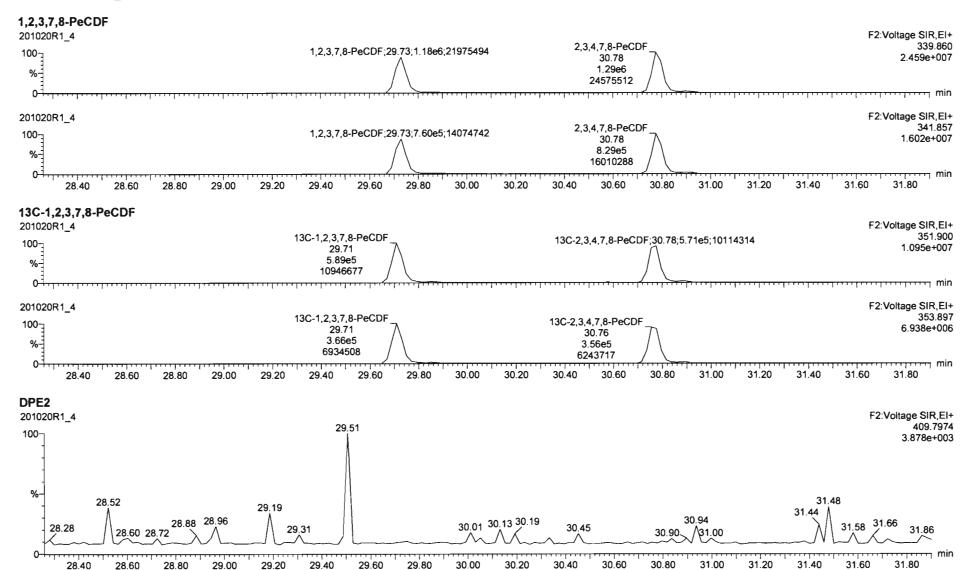
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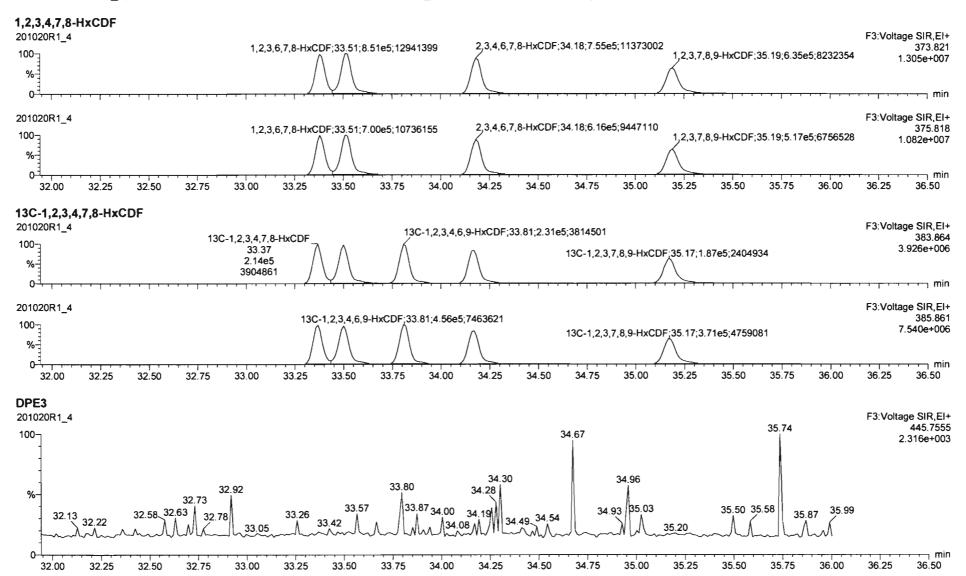
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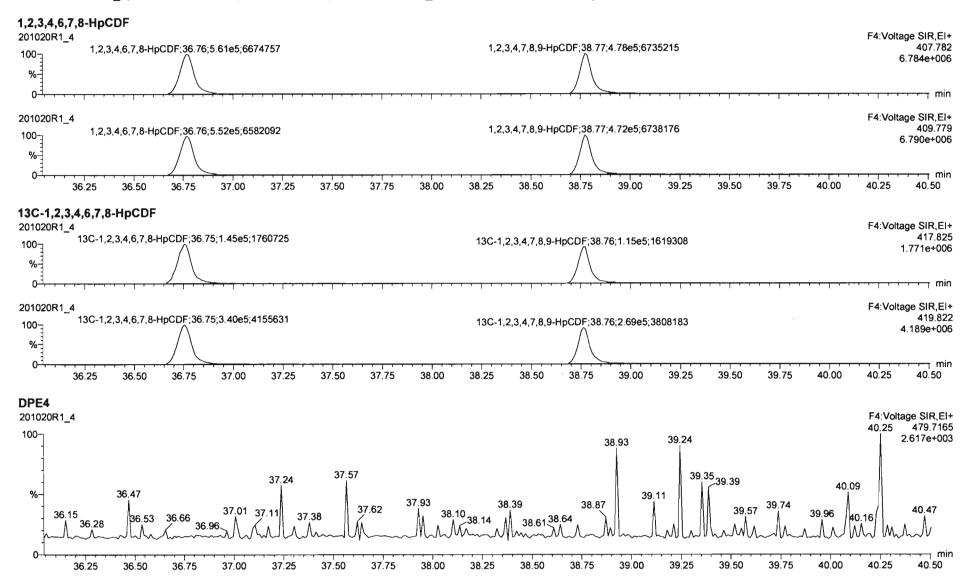
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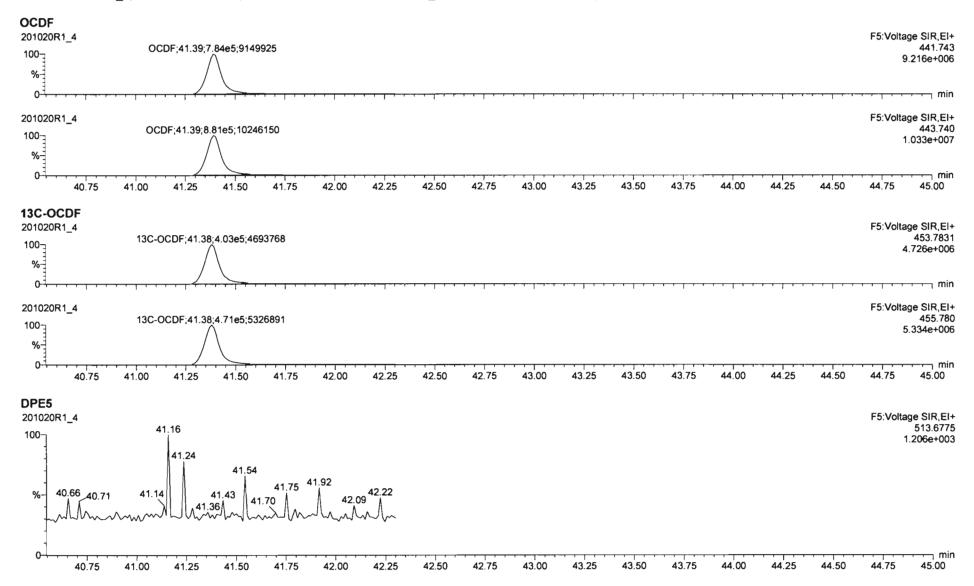
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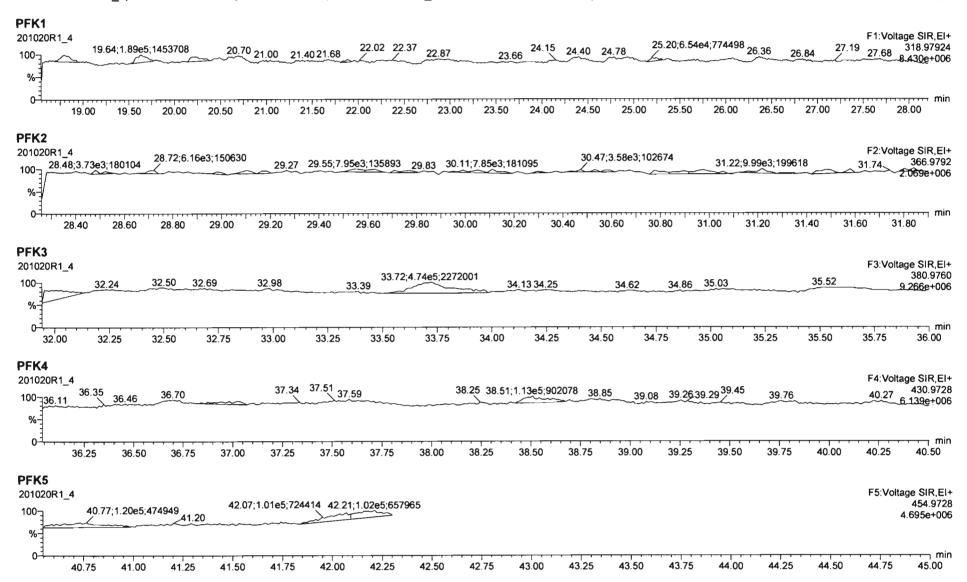
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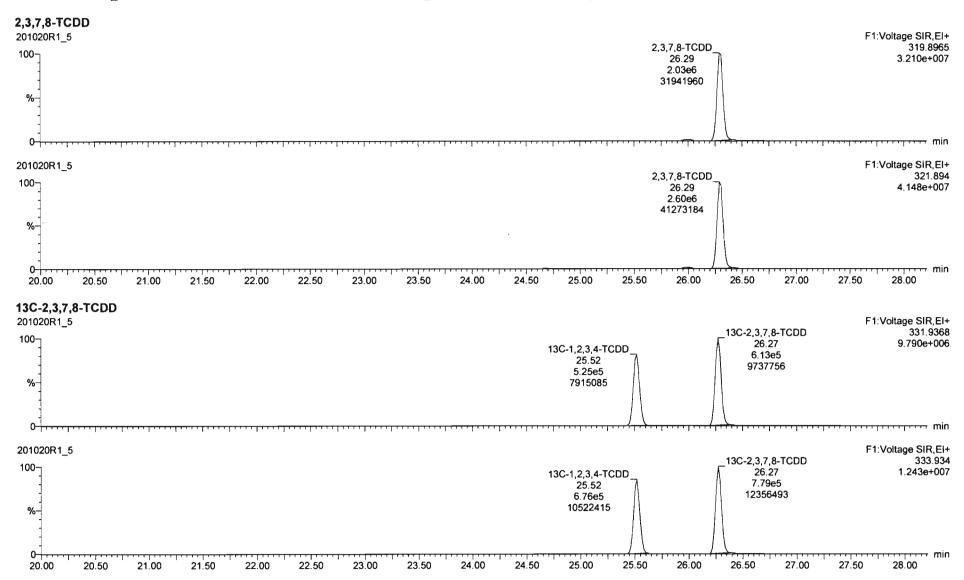
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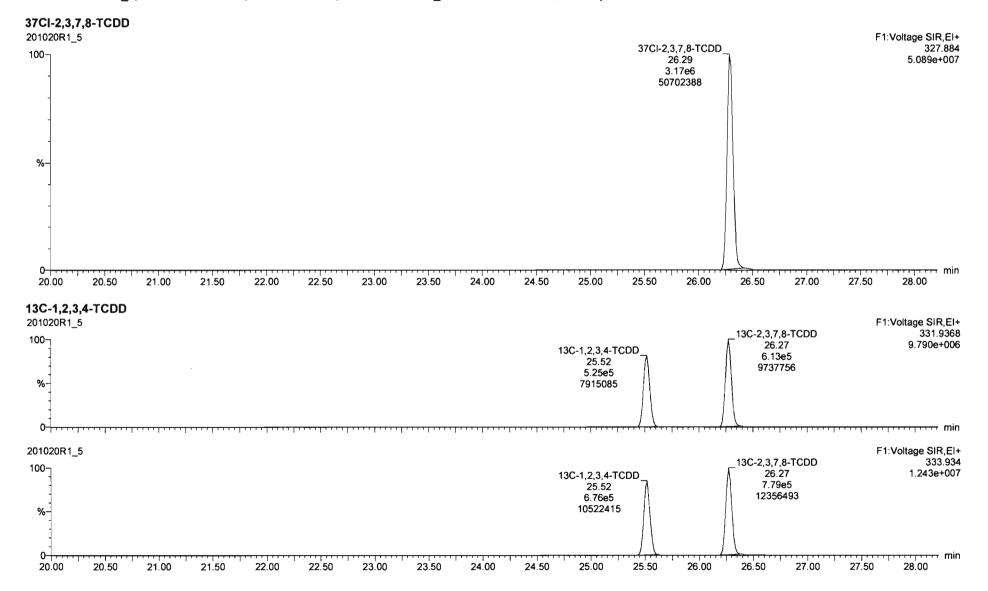
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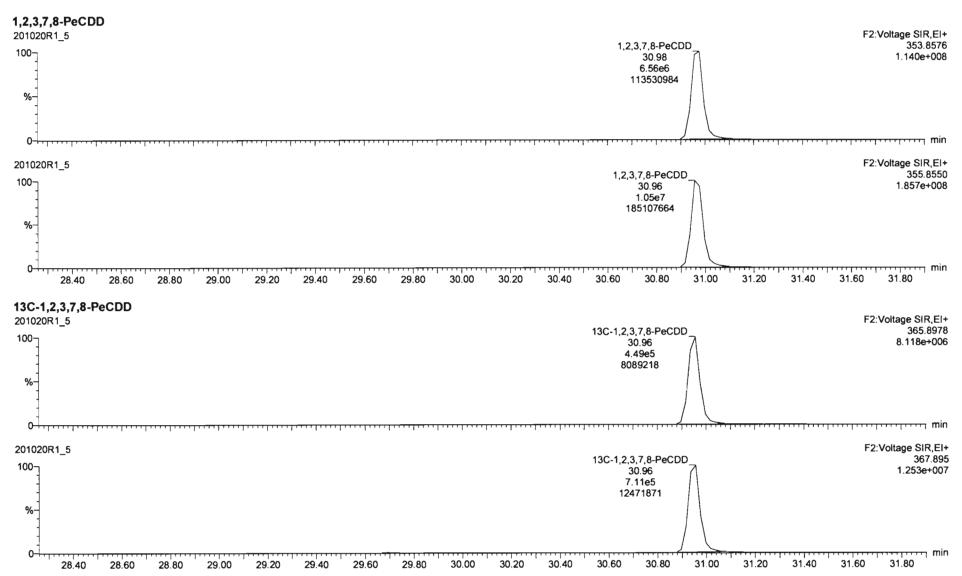
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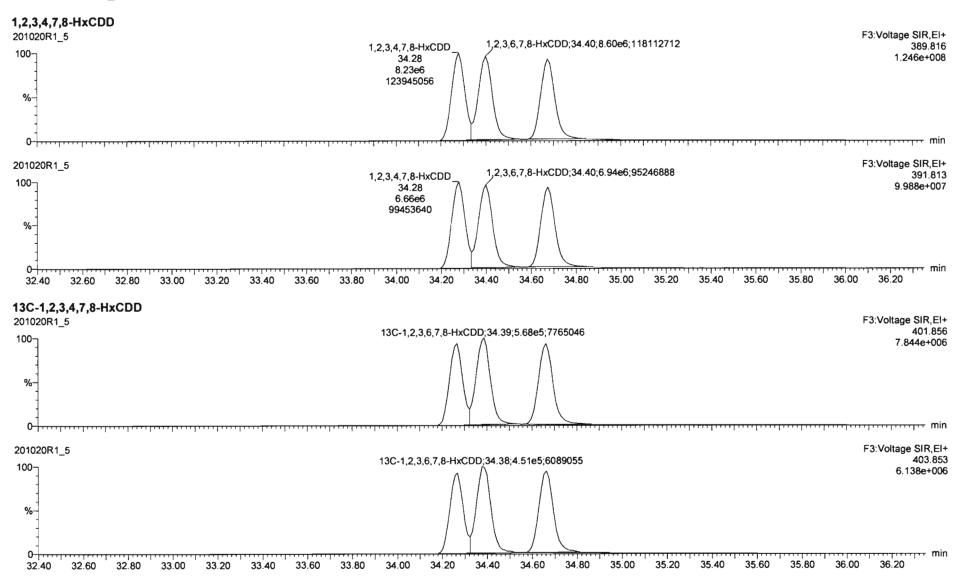
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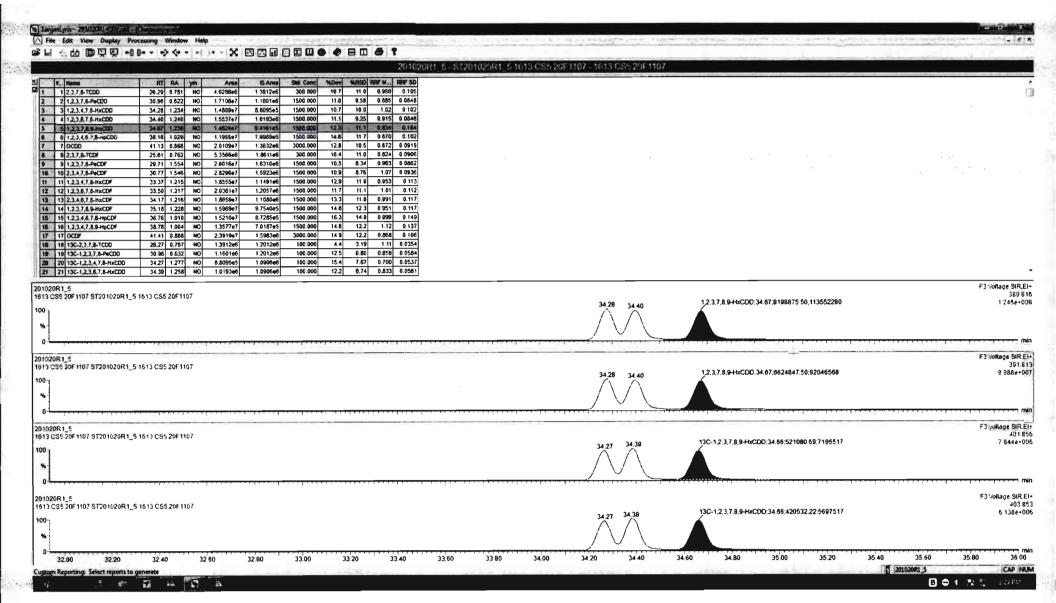


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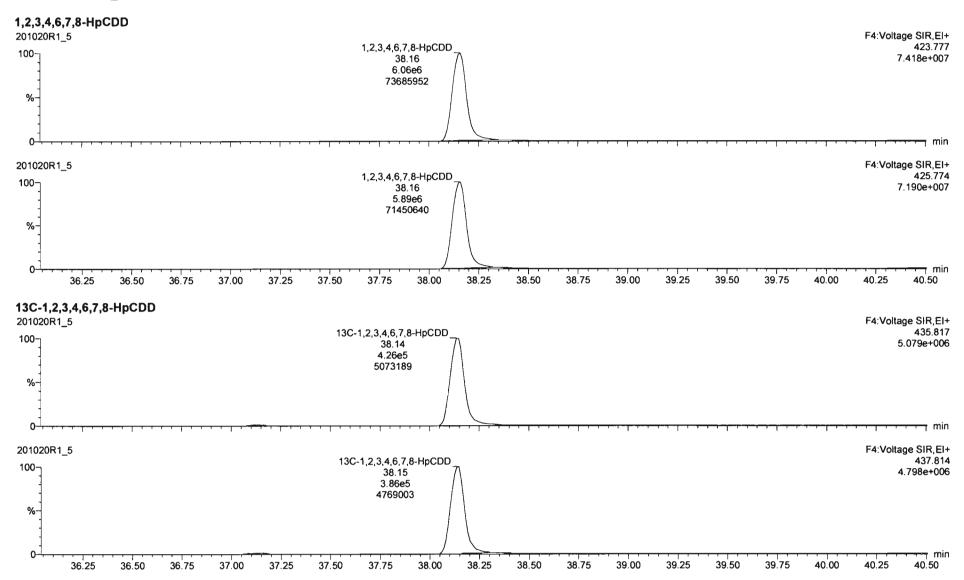


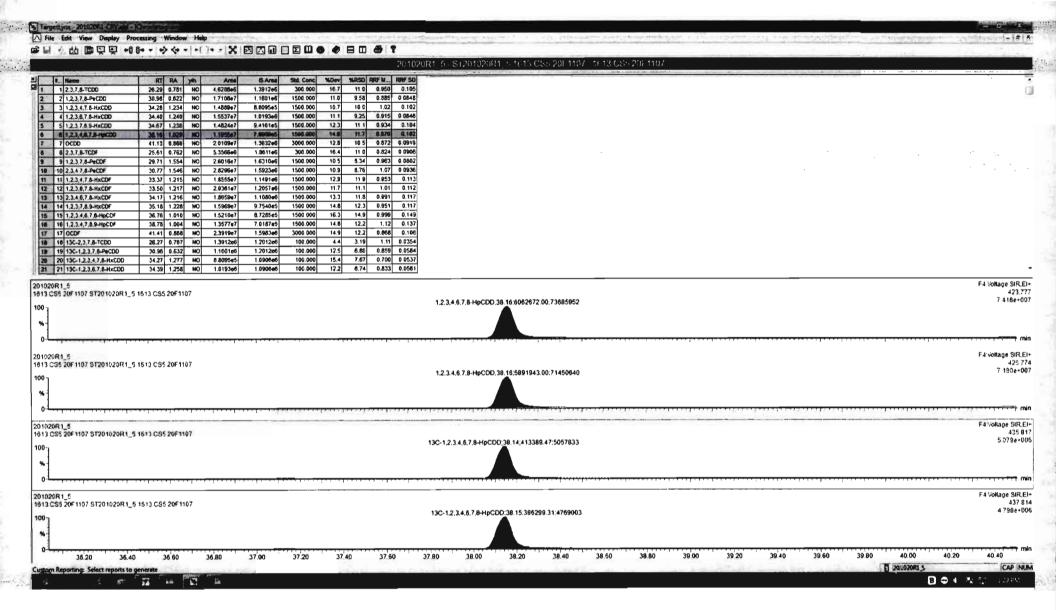
Work Order 2002436 Page 407 of 441

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Last Altered: Printed:

Tuesday, October 20, 2020 15:17:40 Pacific Daylight Time Tuesday, October 20, 2020 15:18:47 Pacific Daylight Time





Work Order 2002436 Page 409 of 441

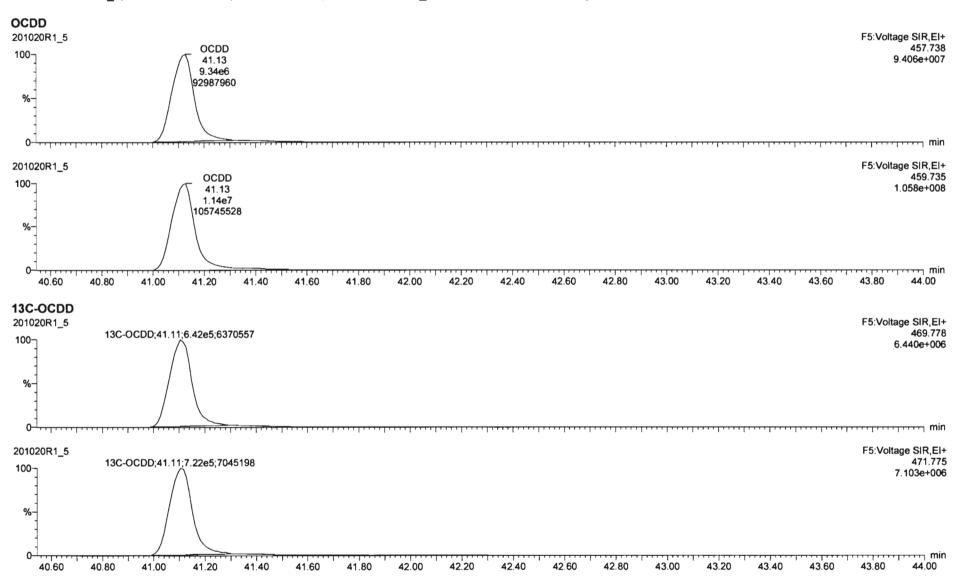
Quantify Sample Report Vista Analytical Laboratory

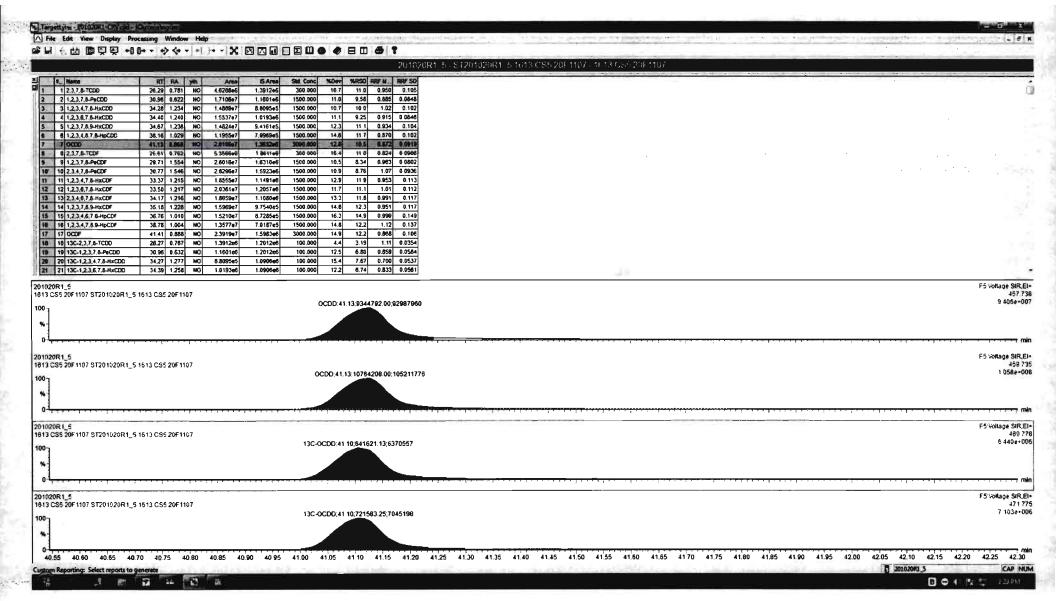
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Tuesday, October 20, 2020 15:17:40 Pacific Daylight Time Tuesday, October 20, 2020 15:18:47 Pacific Daylight Time

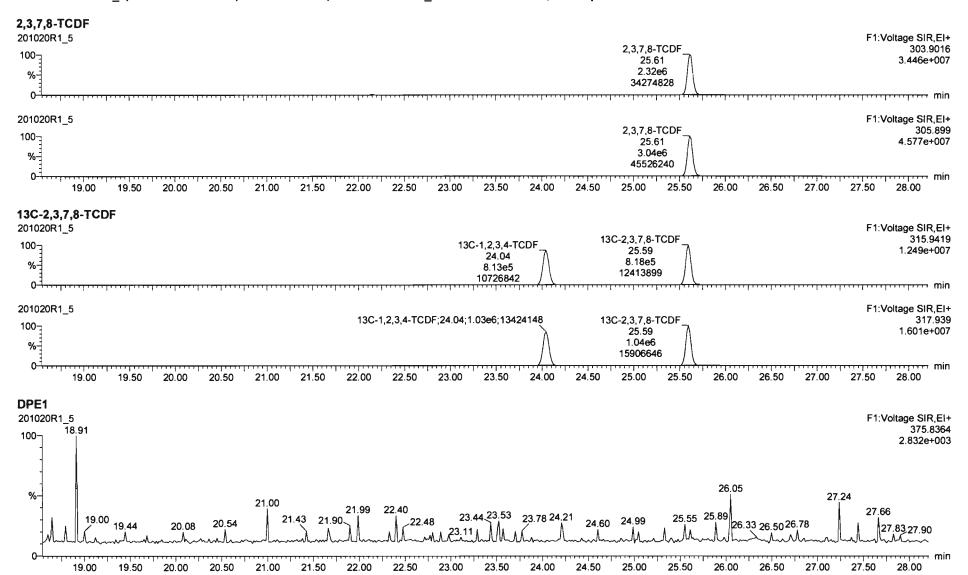




Work Order 2002436 Page 411 of 441

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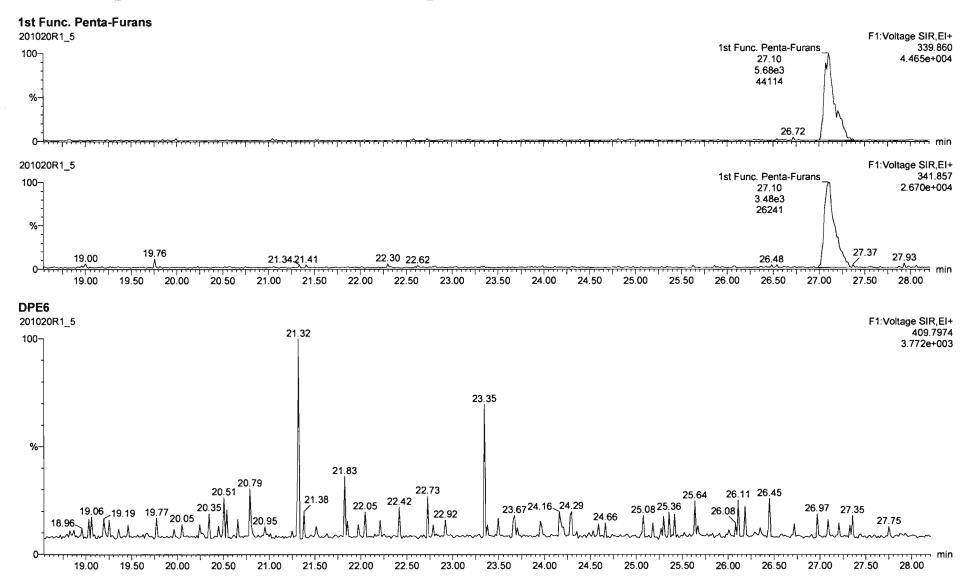
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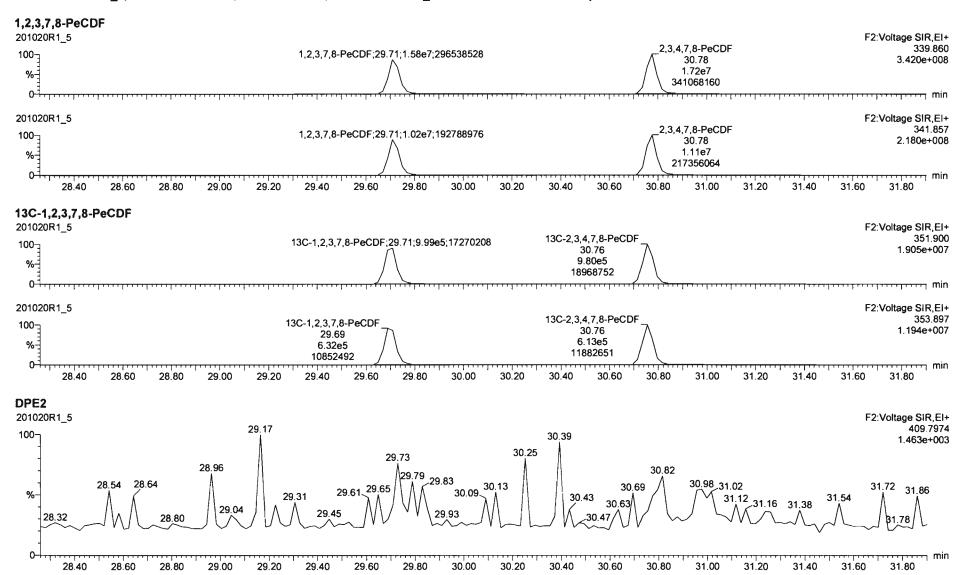


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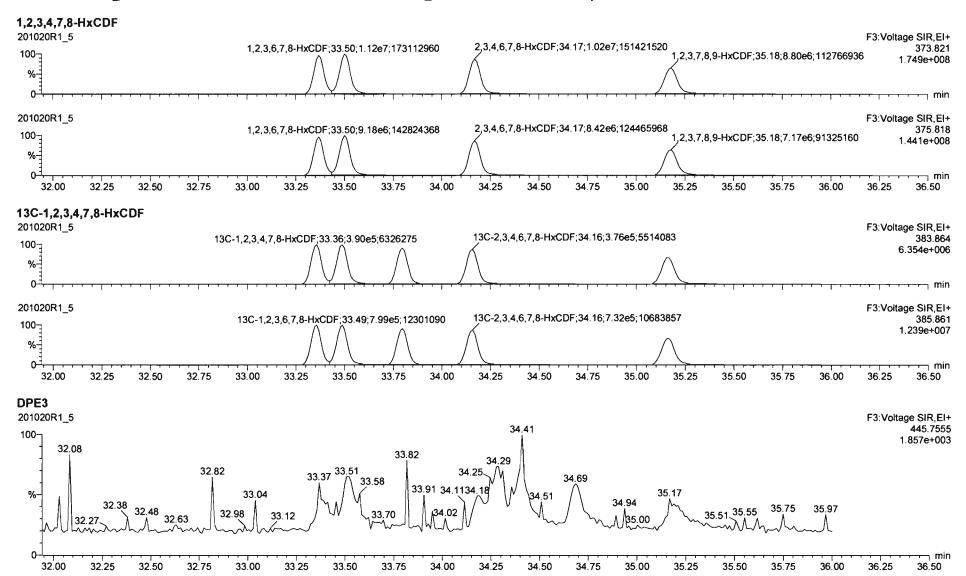
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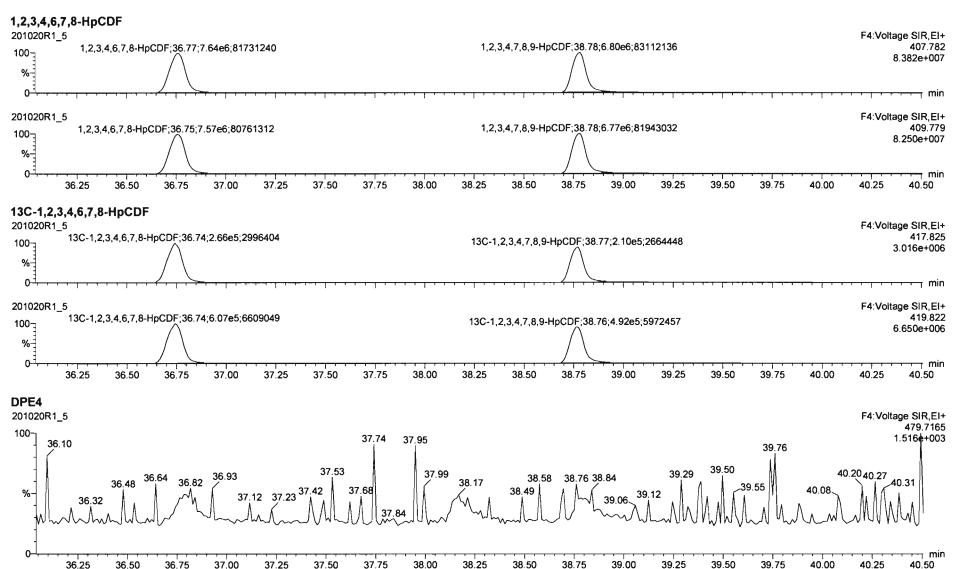
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Quantify Sample Report Vista Analytical Laboratory

Dataset:

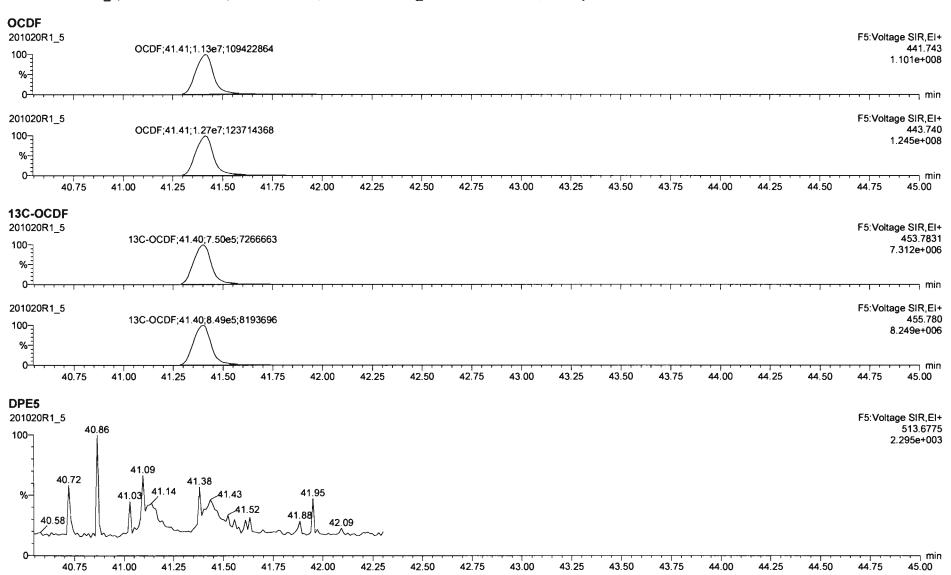
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Tuesday, October 20, 2020 15:18:47 Pacific Daylight Time



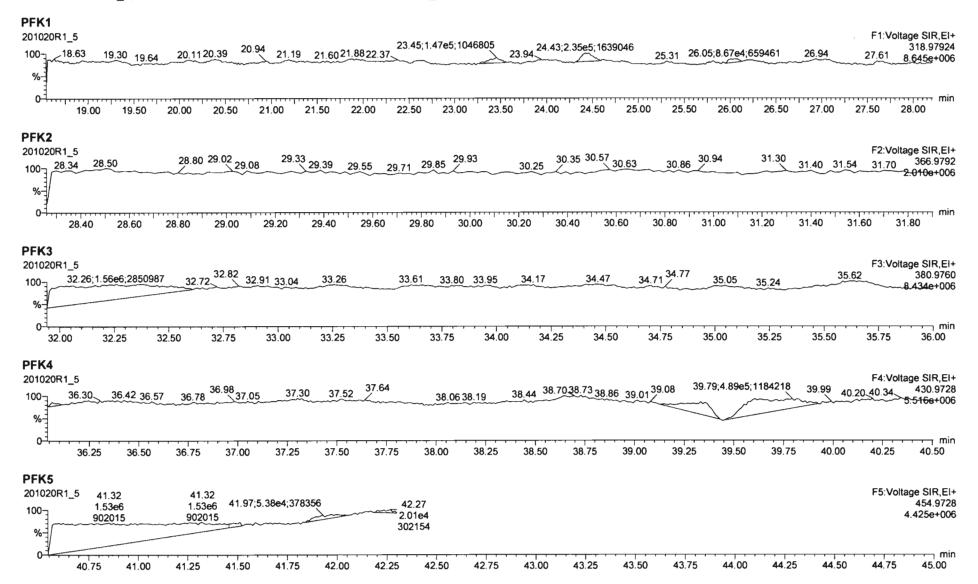
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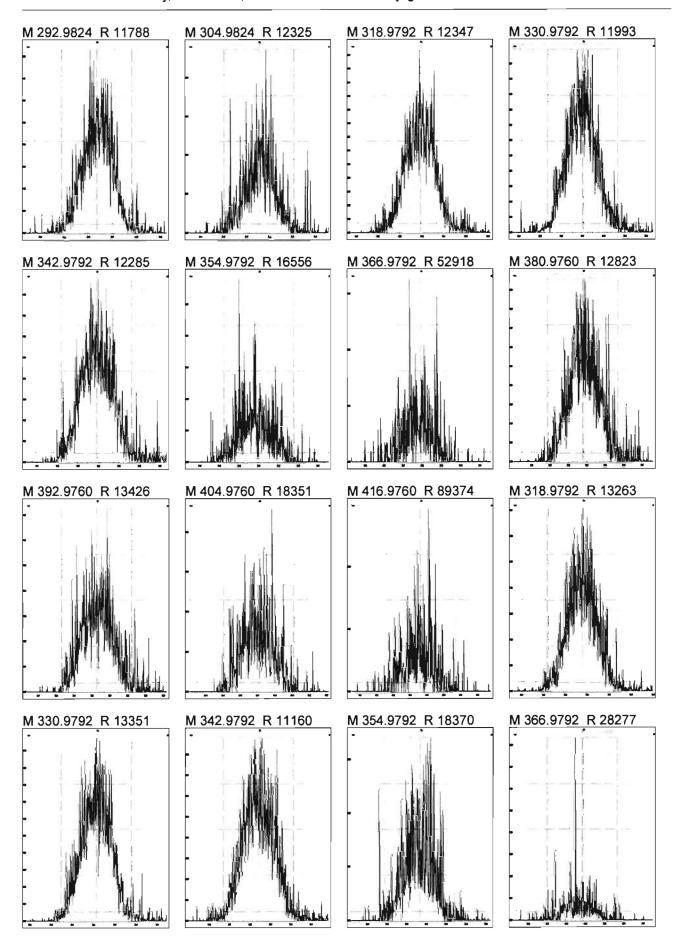
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Page 1 of 3

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Tuesday, October 20, 2020 16:06:25 Pacific Daylight Time

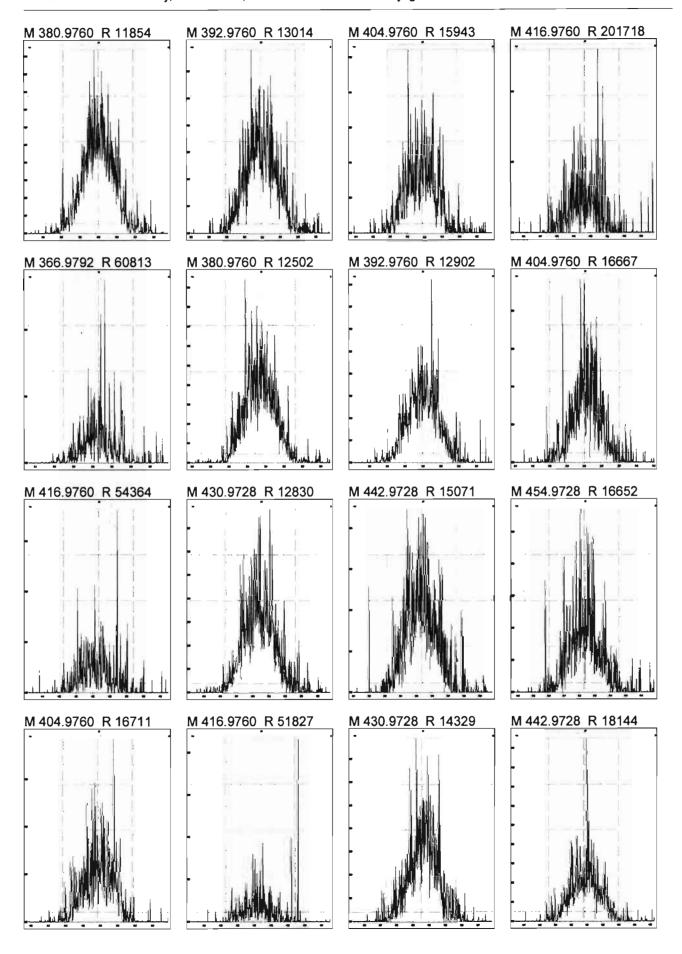


Work Order 2002436 Page 419 of 441

Page 2 of 3

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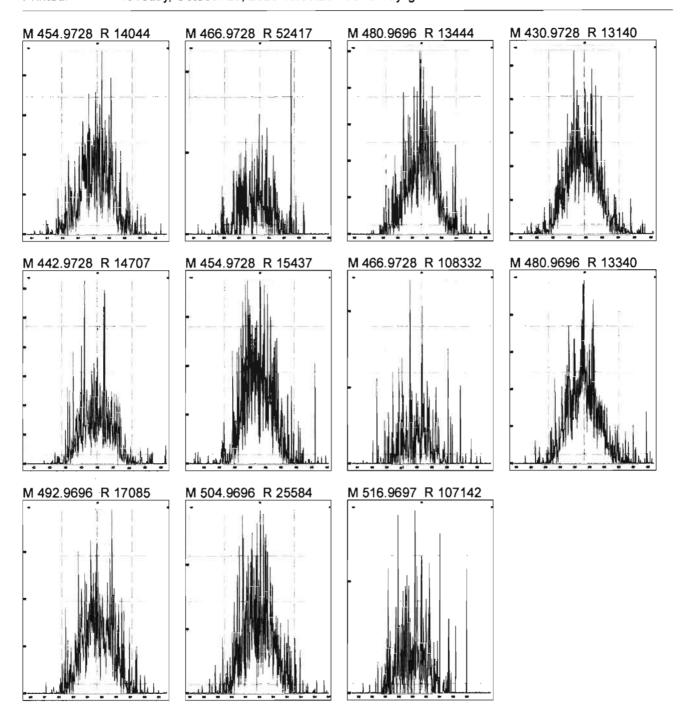
Tuesday, October 20, 2020 16:06:25 Pacific Daylight Time



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Printed:

Tuesday, October 20, 2020 16:06:25 Pacific Daylight Time



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Page 1 of 2

Dataset:

U:\VG12.PR0\Results\201020R1\201020R1-8.qld

Last Altered:

Tuesday, October 20, 2020 15:15:37 Pacific Daylight Time

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Tuesday, October 20, 2020 15:16:22 Pacific Daylight Time

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Calibration: U:\VG12.PRO\CurveDB\dbDIOXIN_1613vg12-10-20-20.cdb 20 Oct 2020 14:36:10

Name: 201020R1_8, Date: 20-Oct-2020, Time: 14:29:33, ID: SS201020R1_1 1613 SSS 20F1108, Description: 1613 SSS 20F1108

P C PROPERTY	# Name	Resp	IS Resp	RA	n/y	RRF	Pred.RT	RT	RT Flag	Pred.RRT	RRT	Conc.		STD out
1 4	1 2,3,7,8-TCDD	1.37e5	1.40e6	0.74	NO	0.950	26.30	26.30	NO	1.001	1.001	10.363	1045	NO NO
2	2 1,2,3,7,8-PeCDD	4.97e5	1.07e6	0.62	NO	0.885	30.97	30.96	NO	1.000	1.000	52.349	105	NO
3	3 1,2,3,4,7,8-HxCDD	4.14e5	7.58e5	1.30	NO	1.02	34.31	34.29	NO	1.001	1.000	53.693	107	NO
4	4 1,2,3,6,7,8-HxCDD	4.51e5	8.90e5	1.21	NO	0.915	34.40	34.41	NO	1.000	1.001	55.421	111	NO
5	5 1,2,3,7,8,9-HxCDD	4.02e5	8.09e5	1.25	NO	0.934	34.67	34.69	NO	1.000	1.001	53.130	106	NO
6	6 1,2,3,4,6,7,8-HpCDD	3.08e5	6.75e5	1.02	NO	0.870	38.15	38.17	NO	1.000	1.001	52.362	105	NO
7	7 OCDD	5.24e5	1.11e6	0.87	NO	0.872	41.11	41.12	NO	1.000	1.000	108.80	109	NO
8	8 2,3,7,8-TCDF	1.63e5	1.90e6	0.75	NO	0.824	25.60	25.62	NO	1.000	1.001	10.438	104	NO
9	9 1,2,3,7,8-PeCDF	7.63e5	1.57e6	1.57	NO	0.963	29.70	29.71	NO	1.000	1.001	50.613	101	NO
10	10 2,3,4,7,8-PeCDF	8.90e5	1.52e6	1.58	NO	1.07	30.76	30.78	NO	1.000	1.001	54.945	110	NO
11	11 1,2,3,4,7,8-HxCDF	5.48e5	1.04e6	1.22	NO	0.953	33.36	33.38	NO	1.000	1.001	55.545	111	NO
12	12 1,2,3,6,7,8-HxCDF	6.04e5	1.08e6	1.22	NO	1.01	33.50	33.51	NO	1.000	1.000	55.330	111	NO
13	13 2,3,4,6,7,8-HxCDF	5.48e5	1.01e6	1.23	NO	0.991	34.16	34.18	NO	1.000	1.001	54.856	110	NO
14	14 1,2,3,7,8,9-HxCDF	4.44e5	8.60e5	1.23	NO	0.951	35.17	35.18	NO	1.000	1.000	54.262	109	NO
15	15 1,2,3,4,6,7,8-HpCDF	4.29e5	7.84e5	1.01	NO	0.999	36.76	36.77	NO	1.000	1.000	54.767	110	NO
16	16 1,2,3,4,7,8,9-HpCDF	3.47e5	6.01e5	1.01	NO	1.12	38.77	38.78	NO	1.000	1.000	51.464	103	NO
17	17 OCDF	6.03e5	1.28e6	88.0	NO	0.868	41.41	41.41	NO	1.000	1.000	108.21	108 🗸	NO
18	18 13C-2,3,7,8-TCDD	1.40e6	1.26e6	0.78	NO	1.11	26.27	26.27	NO	1.029	1.030	100.10	100	NO
19	19 13C-1,2,3,7,8-PeCDD	1.07e6	1.26e6	0.62	NO	0.859	30.91	30.96	NO	1.211	1.213	99.348	99.3	NO
20	20 13C-1,2,3,4,7,8-HxCDD	7.58e5	1.11e6	1.28	NO	0.700	34.26	34.28	NO	1.013	1.014	97.536	97.5	NO
21	21 13C-1,2,3,6,7,8-HxCDD	8.90e5	1.11e6	1.26	NO	0.833	34.39	34.39	NO	1.017	1.017	96.285	96.3	NO
22	22 13C-1,2,3,7,8,9-HxCDD	8.09e5	1.11e6	1.26	NO	0:762	34.66	34.66	NO	1.025	1.025	95.612	95.6	NO
23	23 13C-1,2,3,4,6,7,8-HpCDD	6.75e5	1.11e6	1.05	NO	0.650	38.10	38.15	NO	1.127	1.128	93.625	93.6	NO
24	24 13C-OCDD	1.11e6	1.1 1e 6	0.89	NO	0.539	41.04	41.11	NO	1.214	1.216	184.54	92.3	NO
25	25 13C-2,3,7,8-TCDF	1.90e6	1.96e6	0.78	NO	0.981	25.60	25.59	NO	1.003	1.003	98.983	99.0	NO
26	26 13C-1,2,3,7,8-PeCDF	1.57e6	1.96e6	1.60	NO	0.792	29.66	29.69	NO	1.162	1.163	101.15	101	NO
27	27 13C-2,3,4,7,8-PeCDF	1.52e6	1.96e6	1.59	NO	0.778	30.72	30.76	NO	1.204	1.205	99.698	99.7	NO
28	28 13C-1,2,3,4,7,8-HxCDF	1.04e6	1.11e6	0.50	NO	0.954	33.36	33.36	NO	0.987	0.987	97.788	97.8	NO
29	29 13C-1,2,3,6,7,8-HxCDF	1.08e6	1.11e6	0.50	NO	1.01	33.50	3 3.50	NO	0.991	0.991	96.967	97.0	NO
30	30 13C-2,3,4,6,7,8-HxCDF	1.01e6	1.11e6	0.52	NO	0.921	34.16	34.16	NO	1.010	1.010	98.529	98.5	NO
31	31 13C-1,2,3,7,8,9-HxCDF	8.60e5	1.11e6	0.51	NO	0.803	35.16	3 5.17	NO	1.040	1.040	96.452	96.5	NO

Page 422 of 441 Work Order 2002436

Page 2 of 2

Dataset:

U:\VG12.PRO\Results\201020R1\201020R1-8.qld

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Name: 201020R1_8, Date: 20-Oct-2020, Time: 14:29:33, ID: SS201020R1_1 1613 SSS 20F1108, Description: 1613 SSS 20F1108

N. O. St. Person	# 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	7.84e5	1.11e6	0.44	NO	0.735	36.72	36.75	NO	1.086	1.087	96.055	96.1	NO
33	33 13C-1,2,3,4,7,8,9-HpCDF	6.01e5	1.11e6	0.42	NO	0.568	38.71	38.77	NO	1.145	1.147	95.309	95.3	NO
34	34 13C-OCDF	1.28e6	1.11 e 6	0.89	NO	0.629	41.33	41.40	NO	1.222	1.225	183.63	91.8	NO
35	35 37CI-2,3,7,8-TCDD	1.45e5	1.26e6			1.09	26.29	26.29	NO	1.030	1.030	10.596	106	NO
36	36 13C-1,2,3,4-TCDD	1.26e6	1.26e6	0.79	NO	1.00	25.59	25.52	NO	1.000	1.000	100.00	100	NO
37	37 13C-1,2,3,4-TCDF	1.96e6	1.96e6	0.80	NO	1.00	24.13	24.06	NO	1.000	1.000	100.00	100	NO
38	38 13C-1,2,3,4,6,9-HxCDF	1.11e6	1.11e6	0.51	NO	1.00	33.84	33.81	NO	1.000	1.000	100.00	100	YESOK

Work Order 2002436 Page 423 of 441

Page 1 of 13

Dataset:

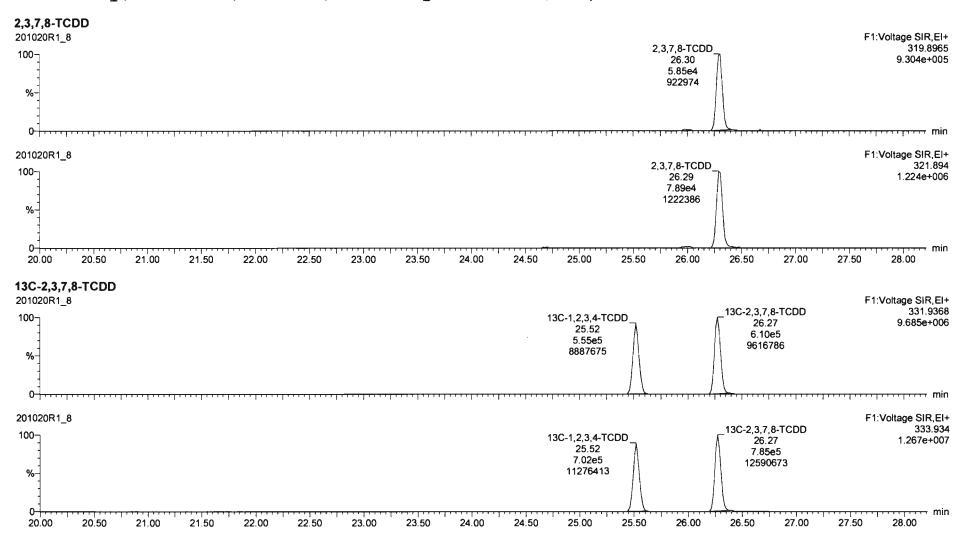
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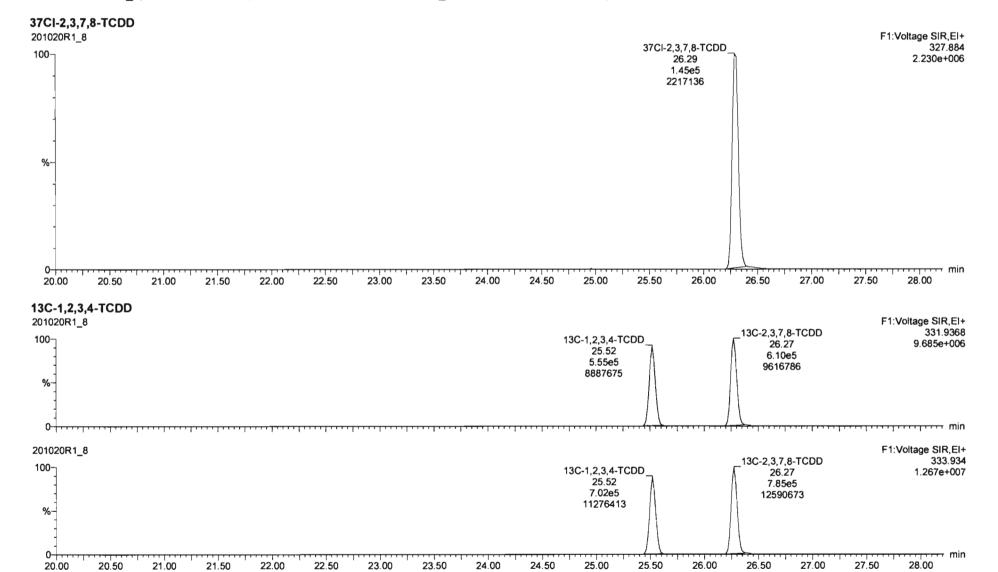
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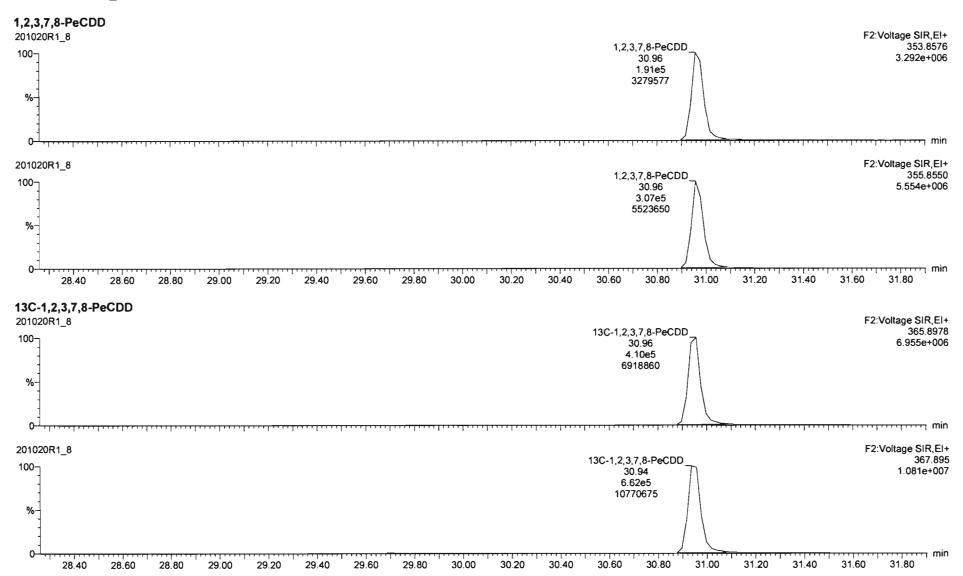
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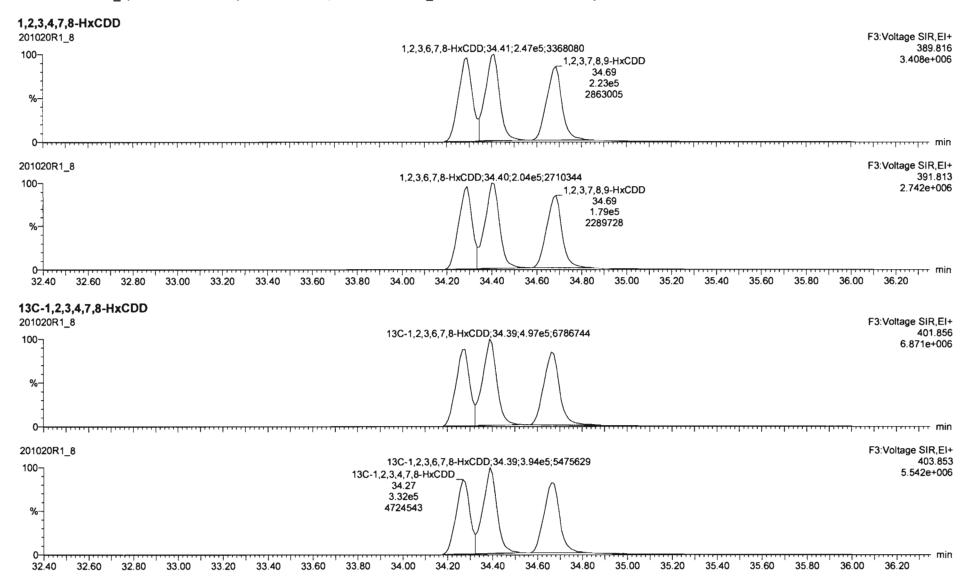
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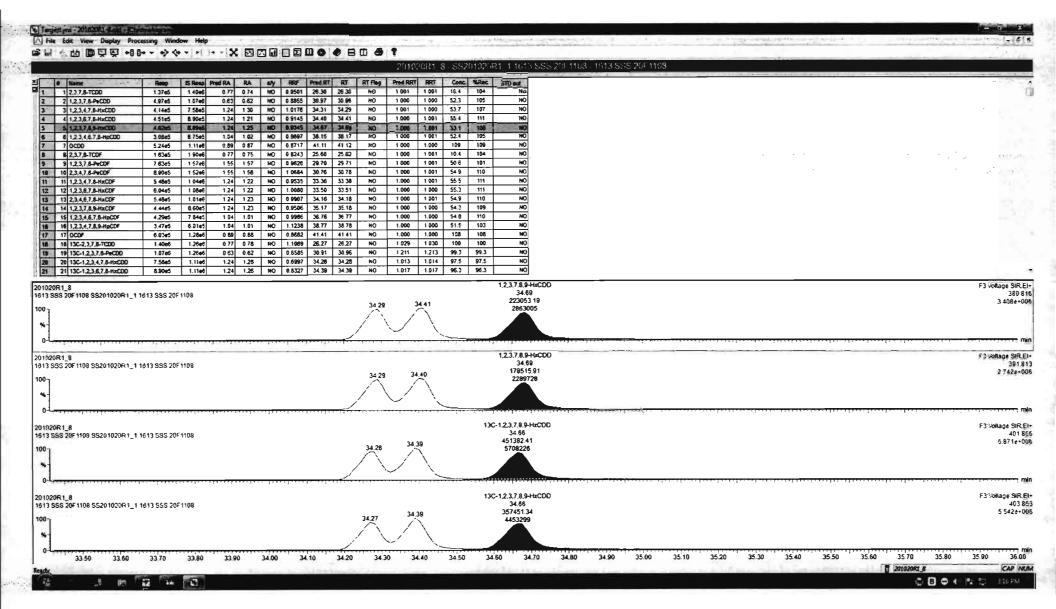


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Work Order 2002436 Page 428 of 441

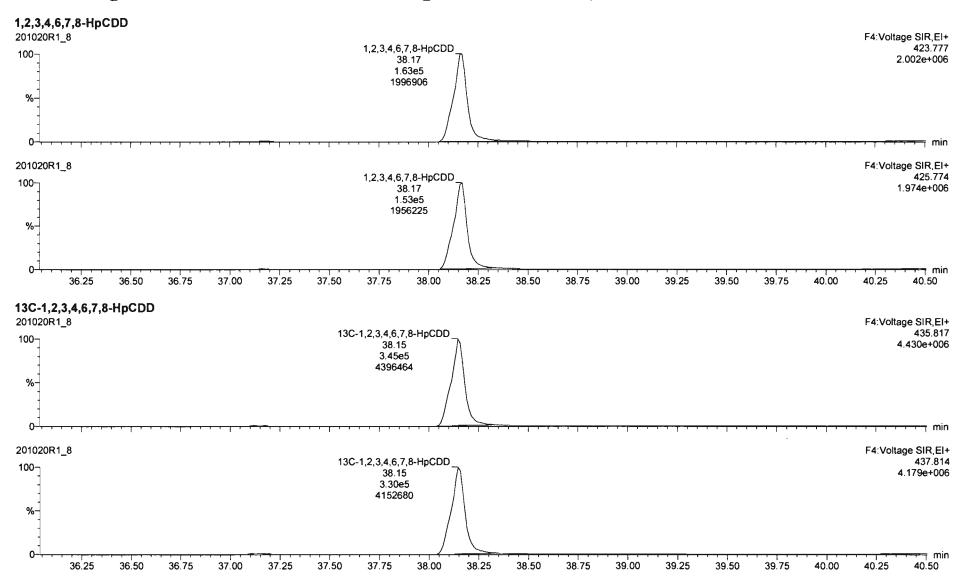
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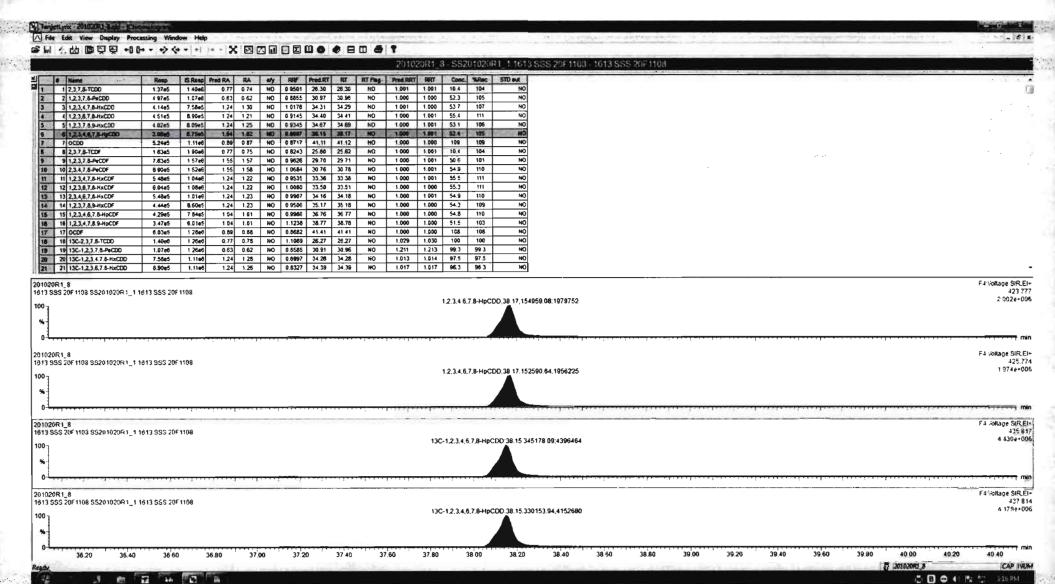
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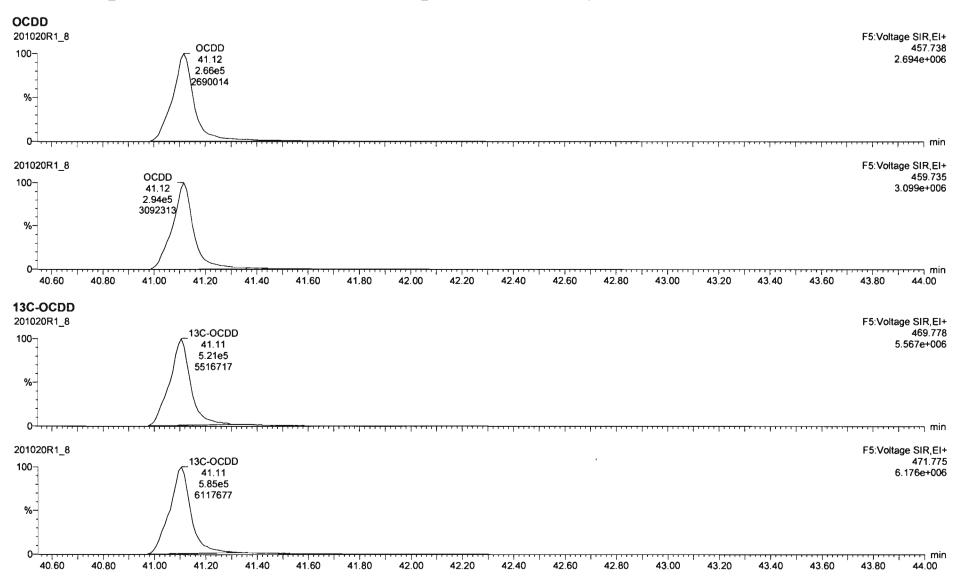


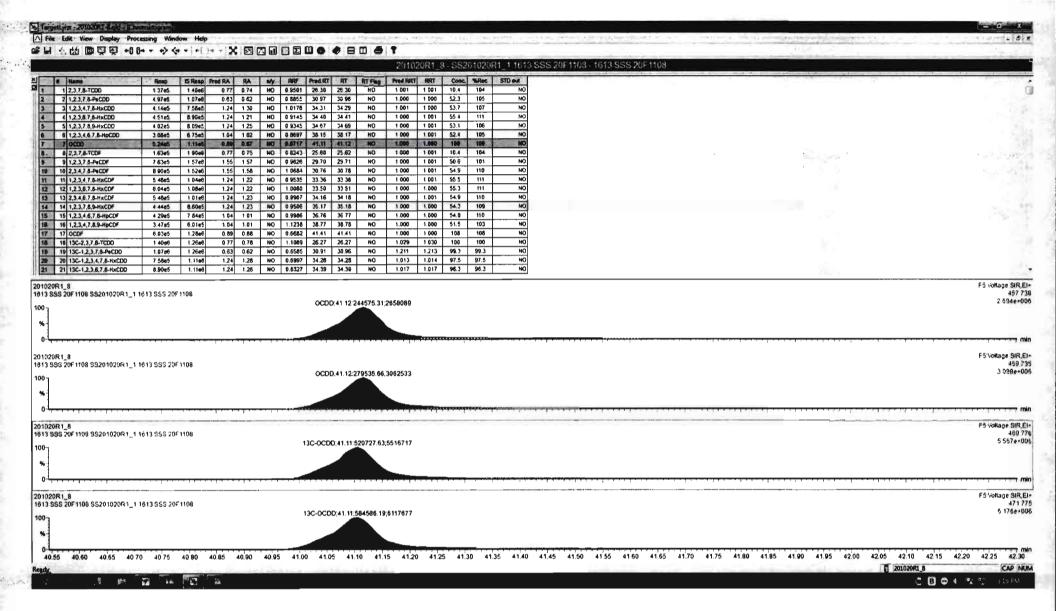
Work Order 2002436 Page 430 of 441

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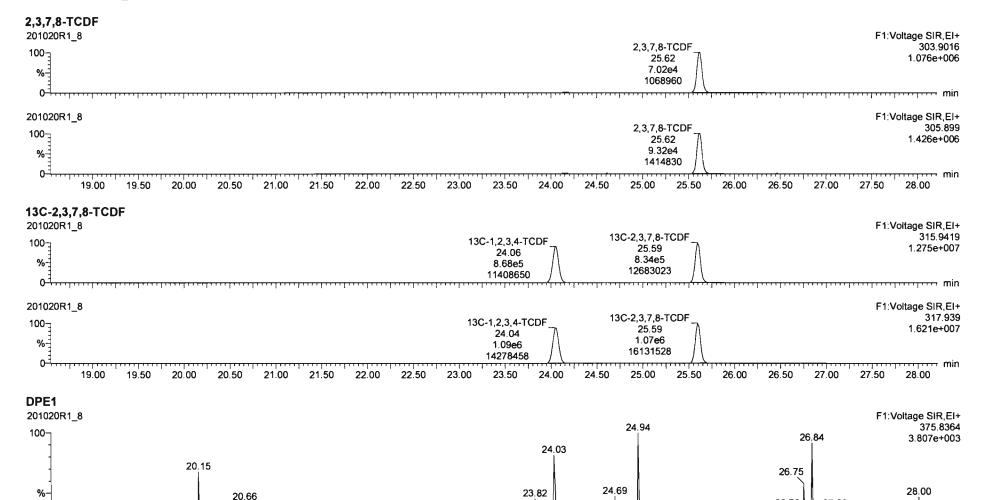


Work Order 2002436 Page 432 of 441

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Last Altered: Printed: Tuesday, October 20, 2020 15:17:24 Pacific Daylight Time Tuesday, October 20, 2020 15:17:27 Pacific Daylight Time

Name: 201020R1_8, Date: 20-Oct-2020, Time: 14:29:33, ID: SS201020R1_1 1613 SSS 20F1108, Description: 1613 SSS 20F1108



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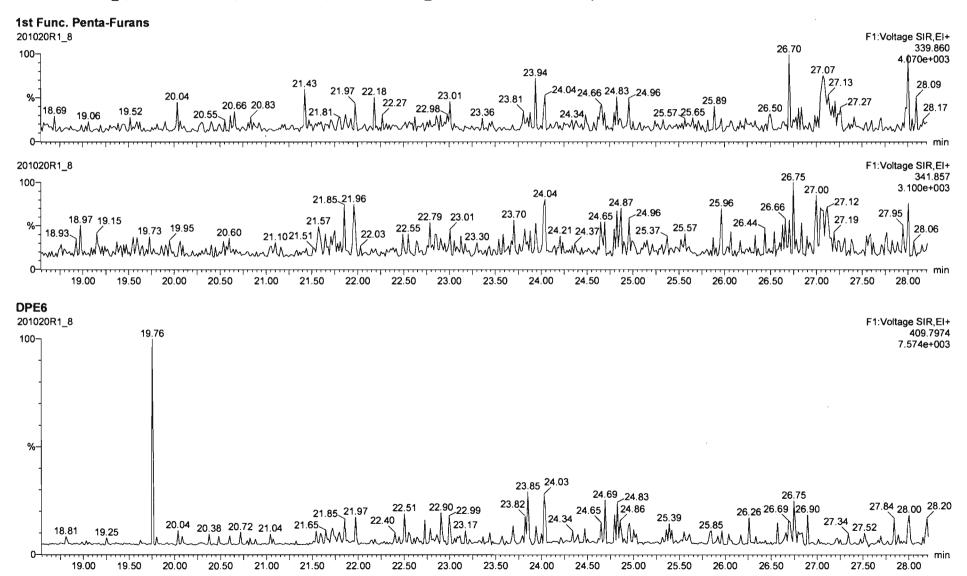
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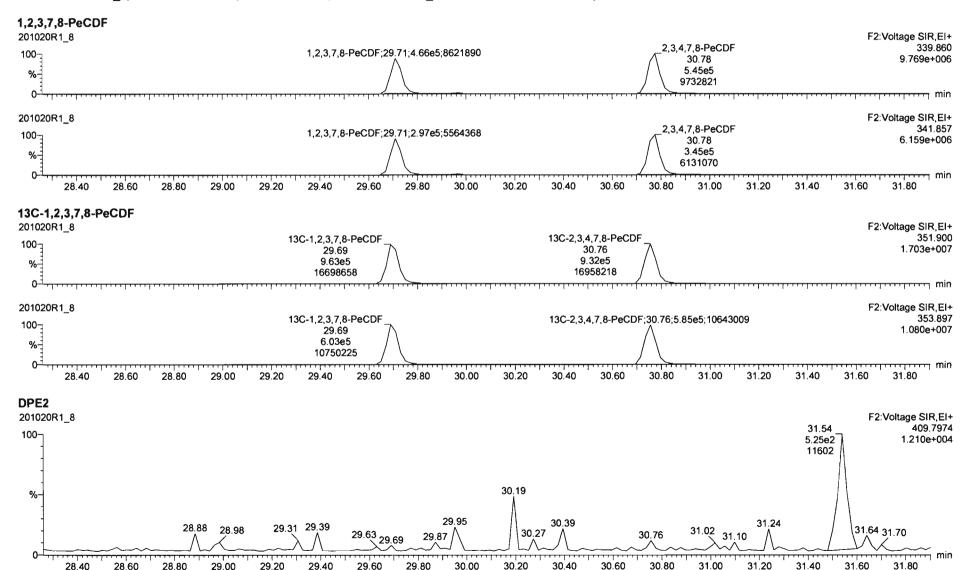
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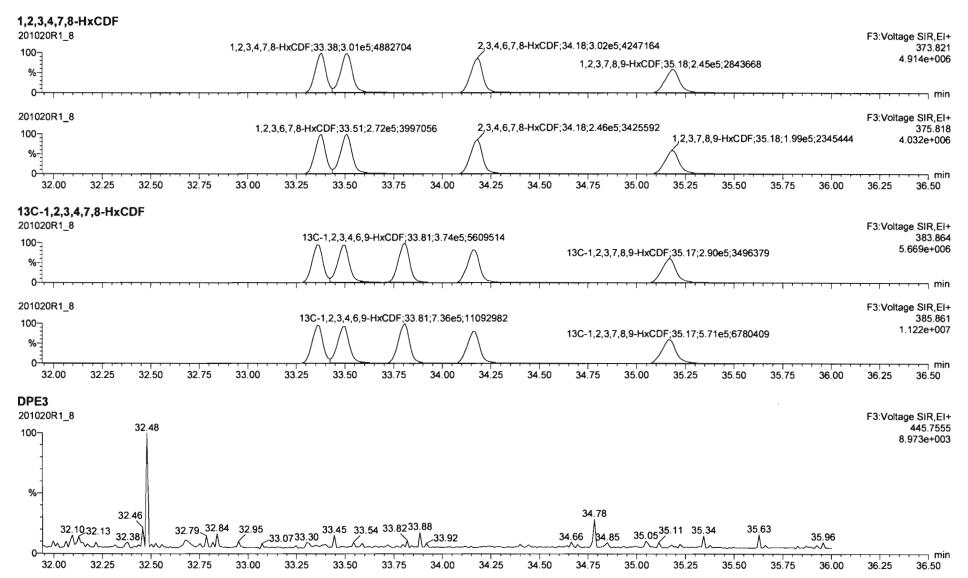
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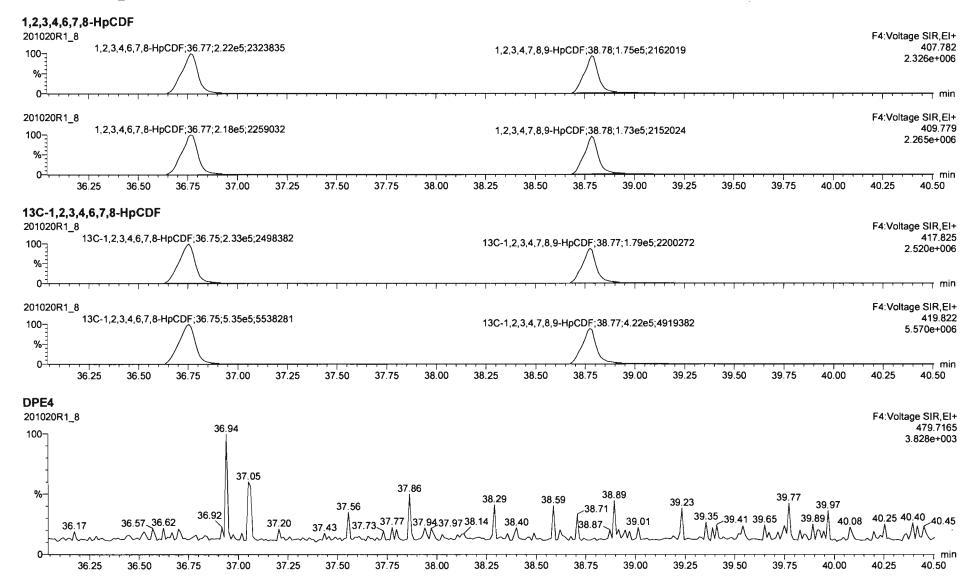
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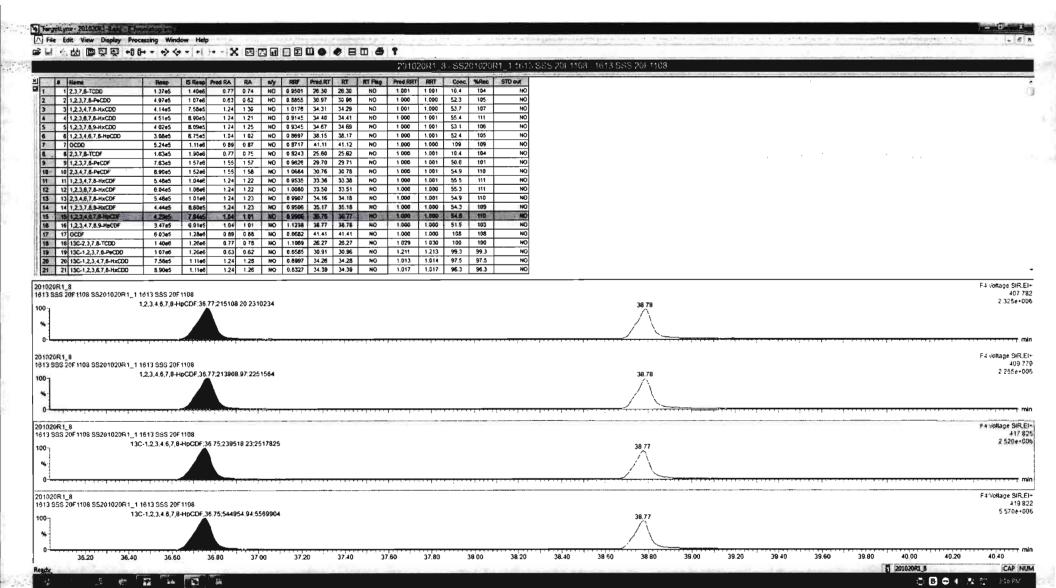


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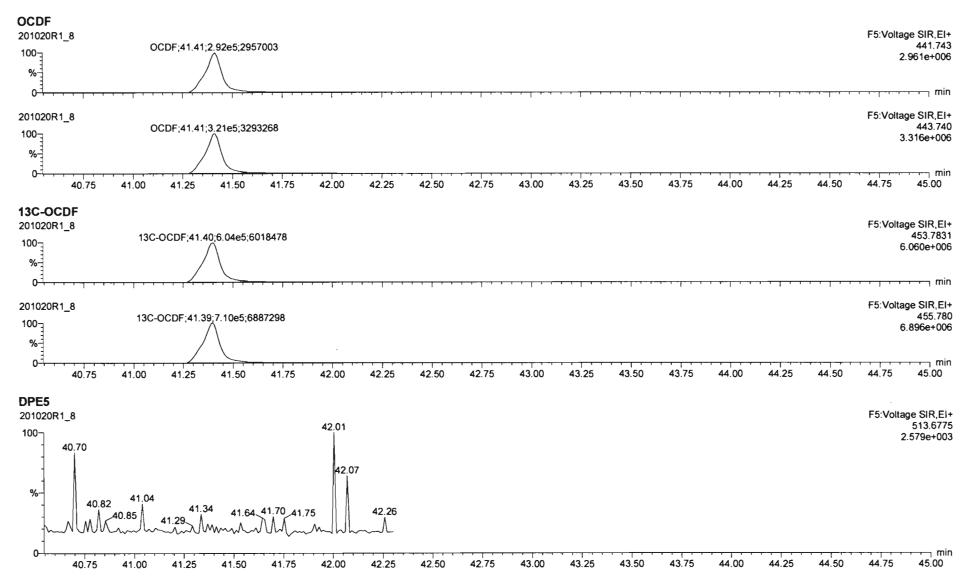


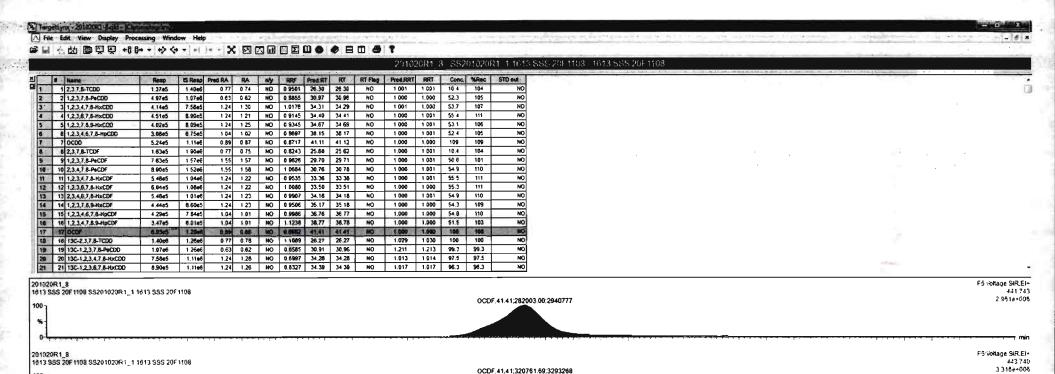


Work Order 2002436 Page 438 of 441

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