

Energy Laboratories Inc

ANALYTICAL RUN Summary

03-Nov-21

Run ID GCFID-HP5-B_211102A

Run Start Date: 11/2/2021
Analyst: Ann Nebel
Ical:
Column ID:
Comments: ICAL for 8015C_DRO211002IA

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO211012A	Diesel Fuel #2 50,000 ug/mL in DCM					CAL-DIESE	4/30/2023
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL					SECOND S	11/5/2023
DRO211025A	ALI CCV Mix-200ug/mL					MARKER	5/31/2022
DRO211101A	OTP-4000 ug/mL DCM					CAL-SURR	9/30/2024

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist						
14822192	CCV_1102HP50	HC-8015-DRO-	CCV		11/2/2021 8:31:3	1	R369667		0	0							
Analyte		T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Total Extractable Hydrocarbons		A	mg/L		3.665751		15	0	0	0.0749	0.3	50	24%	80	120	0%	S
o-Terphenyl		S	mg/L		0.2015393		0.2	0	0	0.000429	0.002	0	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist						
14822193	CCV_1102HP50	HC-8015-DRO-	CAL1		11/2/2021 9:57:0	1	R369667		0	0							
Analyte		T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl		S	mg/L		0.00195342		0.002	0	0	0.000429	0.002	0	98%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist						
14822194	CCV_1102HP50	HC-8015-DRO-	CAL2		11/2/2021 10:39:	1	R369667		0	0							
Analyte		T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl		S	mg/L		0.04992196		0.05	0	0	0.000429	0.002	0	100%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822195	CCV_1102HP50	HC-8015-DRO-	CAL3		11/2/2021 11:22:	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.1939565		0.2	0	0	0.000429	0.002	0	97%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822196	CCV_1102HP50	HC-8015-DRO-	CAL4		11/2/2021 12:05:	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.5113316		0.5	0	0	0.000429	0.002	0	102%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822197	CCV_1102HP50	HC-8015-DRO-	CAL5		11/2/2021 12:49:	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		1.032406		1	0	0	0.000429	0.002	0	103%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822198	CCV_1102HP51	HC-8015-DRO-	CAL1		11/2/2021 1:32:0	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Total Extractable Hydrocarbons	A	mg/L		0.1551854		0.15	0	0	0.0749	0.3	50	103%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822199	CCV_1102HP51	HC-8015-DRO-	CAL2		11/2/2021 2:15:0	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Total Extractable Hydrocarbons	A	mg/L		3.698073		3.75	0	0	0.0749	0.3	50	99%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822200	CCV_1102HP51	HC-8015-DRO-	CAL3		11/2/2021 2:58:2	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Total Extractable Hydrocarbons	A	mg/L		15.26249		15	0	0	0.0749	0.3	50	102%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822201	CCV_1102HP51	HC-8015-DRO-	CAL4		11/2/2021 3:41:3	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Total Extractable Hydrocarbons	A	mg/L		36.59341		37.5	0	0	0.0749	0.3	50	98%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822202	CCV_1102HP51	HC-8015-DRO-	CAL5		11/2/2021 4:24:5	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Total Extractable Hydrocarbons	A	mg/L		49.2977		50	0	0	0.0749	0.3	50	99%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14822203	CCV_1102HP51	HC-8015-DRO-	ICV		11/2/2021 5:51:3	1	R369667		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Total Extractable Hydrocarbons	A	mg/L		14.98994		15	0	0	0.0749	0.3	50	100%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
		CCV_1102HP508r, DRO ;1102HP5 , DRO211025A	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0
		DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0
		CCV_1102HP505r, CAL1 ;1102HP5 , 2 ug per mL OTP (10 uL of Cal3 + 990 uL DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0
		CCV_1102HP506r, CAL2 ;1102HP5 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0
		CCV_1102HP507r, CAL3 ;1102HP5 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0
		CCV_1102HP508r, CAL4 ;1102HP5 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0
		CCV_1102HP509r, CAL5 ;1102HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO21101A + 750 DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0
		CCV_1102HP510r, CAL1 ;1102HP5 , 150 ug per mL Diesel (10 uL of Cal3 + 990 uL DCM(14408),	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0
		CCV_1102HP511r, CAL2 ;1102HP5 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0
		CCV_1102HP512r, CAL3 ;1102HP5 , 15000 ug per mL Diesel (300 uL of DRO211012A + 700 uL DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0
		CCV_1102HP513r, CAL4 ;1102HP5 , 37500ug per mL Diesel (750 uL of DRO211012A + 250 uL DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0
		CCV_1102HP514r, CAL5 ;1102HP5 , 50000 ug per mL Diesel (200 uL of DRO211012A)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0
		DCM-Baseline Check-V15	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0
		CCV_1102HP516r, Second Source ;1102HP5 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0

File Name: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL

Version: 14

Creator: AMN 11/02/2021

Description: 8015C-DRO. New ICal Per 1102HP5 (2021)-2 uL Inj.; COD added using OTP RFs

Reason for change:

External standard calibration

Standard injection volume: 1

Standard sample weight: 1

Area reject threshold: 500

Reference peak area reject threshold: 500

Amount units: nanograms

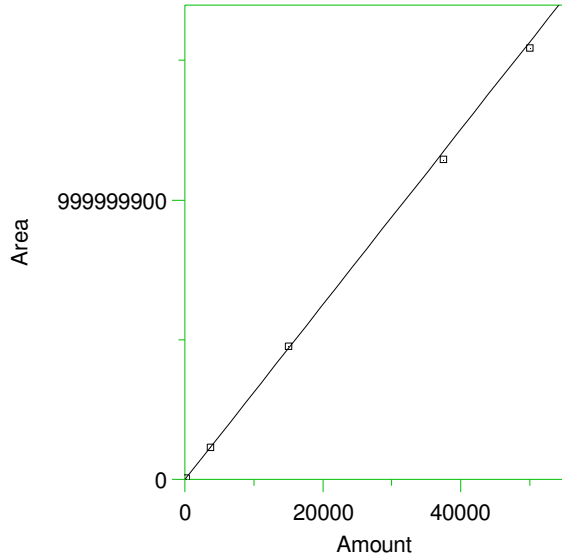
No default component

Method of calculating data point averages: Equal weight for all updates

No calibration update report

All levels are normal data points.

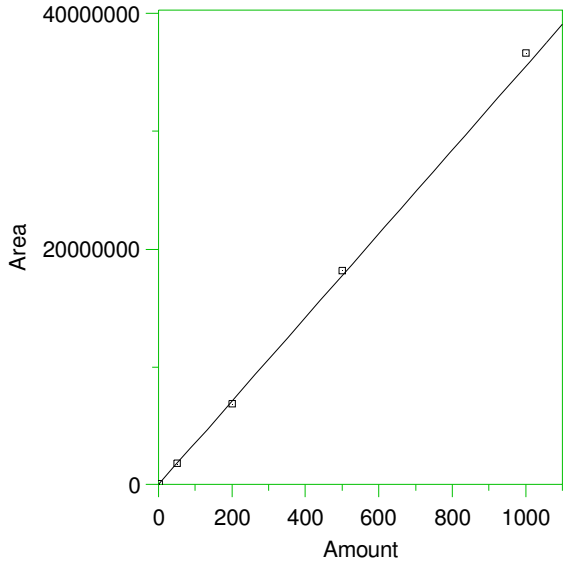
1 DRO Range Start



Expected retention time: 6.64 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 31353.19 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9992341
 Average error: 2.083%
 Average CF: 31353.19
 RSD: 2.487%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	4865557	32437.05	3.457	Manual	11/3/2021 6:44:55 AM
2	3750	1.159464E+08	30919.04	-1.385	Manual	11/3/2021 6:45:31 AM
3	15000	4.785279E+08	31901.86	1.750	Manual	11/3/2021 6:46:08 AM
4	37500	1.14732E+09	30595.2	-2.418	Manual	11/3/2021 6:45:45 AM
5	50000	1.54564E+09	30912.8	-1.405	Manual	11/3/2021 6:45:18 AM

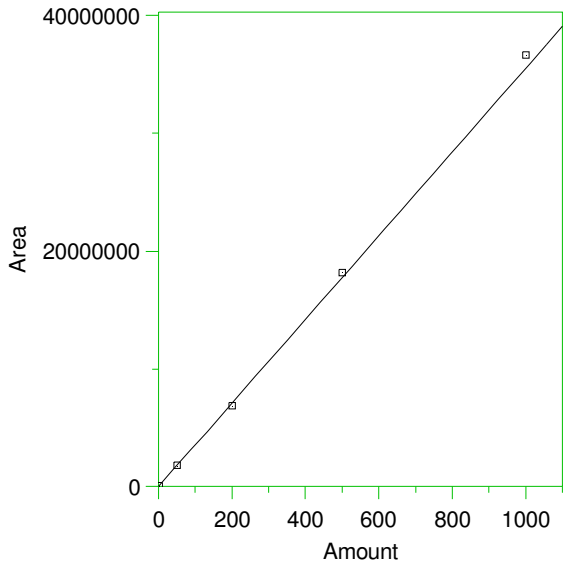
2 *o-Terphenyl



Expected retention time: 12.29 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 35509.21 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9983284
 Average error: 2.203%
 Average CF: 35509.21
 RSD: 2.749%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	69364.34	34682.17	-2.329	G:\Org\HP5\DAT\HP5110221_b\1102HP5.0005.BND	11/2/2021 2:21:29 PM
2	50	1772689	35453.78	-0.156	G:\Org\HP5\DAT\HP5110221_b\1102HP5.0006.BND	11/2/2021 2:21:35 PM
3	200	6887244	34436.22	-3.022	G:\Org\HP5\DAT\HP5110221_b\1102HP5.0007.BND	11/2/2021 2:21:41 PM
4	500	1.815698E+07	36313.96	2.266	G:\Org\HP5\DAT\HP5110221_b\1102HP5.0008.BND	11/2/2021 2:21:47 PM
5	1000	3.665993E+07	36659.93	3.241	G:\Org\HP5\DAT\HP5110221_b\1102HP5.0009.BND	11/2/2021 2:21:52 PM

3 *1-Chlorooctadecane

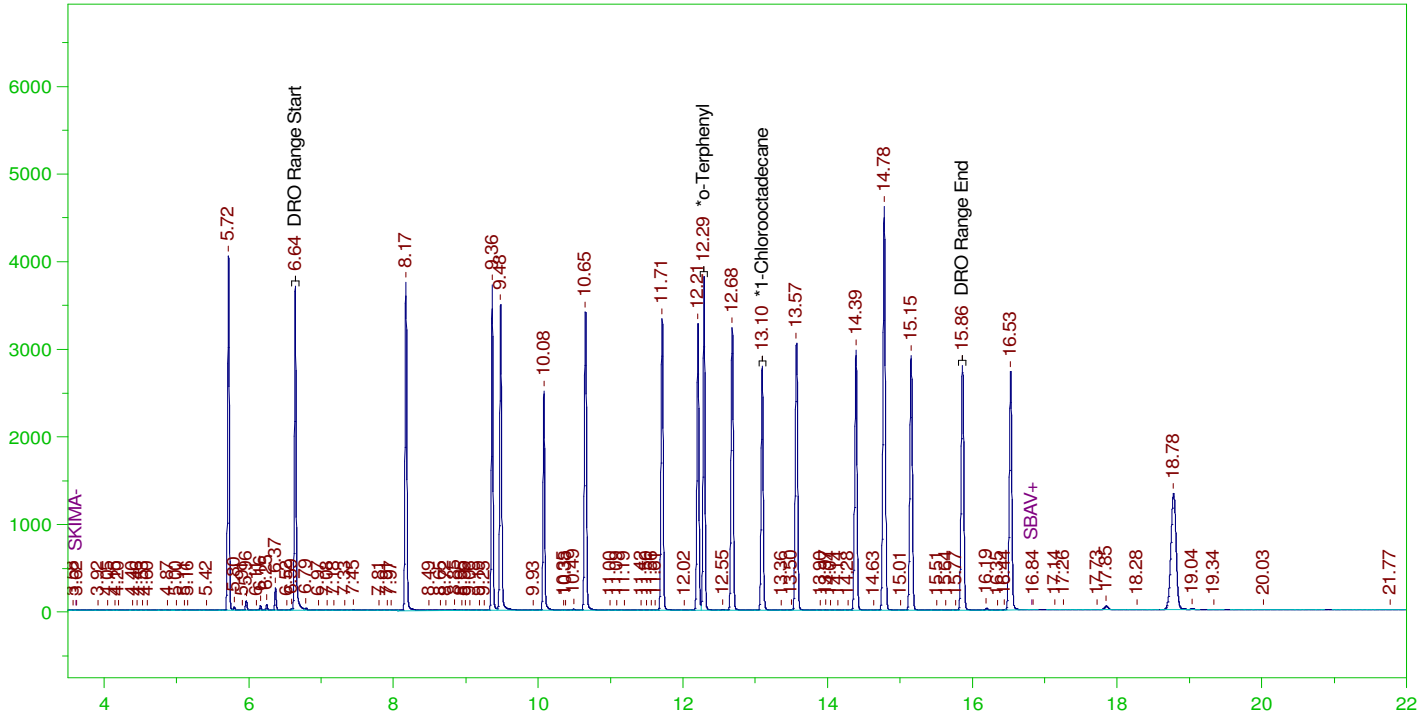


Expected retention time: 13.1 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 35509.21 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9983284
 Average error: 2.203%
 Average CF: 35509.21
 RSD: 2.749%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	69364.34	34682.17	-2.329	Manual	11/2/2021 2:21:57 PM
2	50	1772689	35453.78	-0.156	Manual	11/2/2021 2:21:58 PM
3	200	6887244	34436.22	-3.022	Manual	11/2/2021 2:22:00 PM
4	500	1.815698E+07	36313.96	2.266	Manual	11/2/2021 2:22:02 PM
5	1000	3.665993E+07	36659.93	3.241	Manual	11/2/2021 2:22:04 PM

G:\org\HP5\DAT\HP5110221_b\1102HP5.0003.RAW

CCV_1102HP508r, DRO ;1102HP5 , DRO211025A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP508r, DRO ;1102HP5 , DRO211025A
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0003.RAW
 Date & Time Acquired: 11/2/2021 8:31:35 AM
 Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO21102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

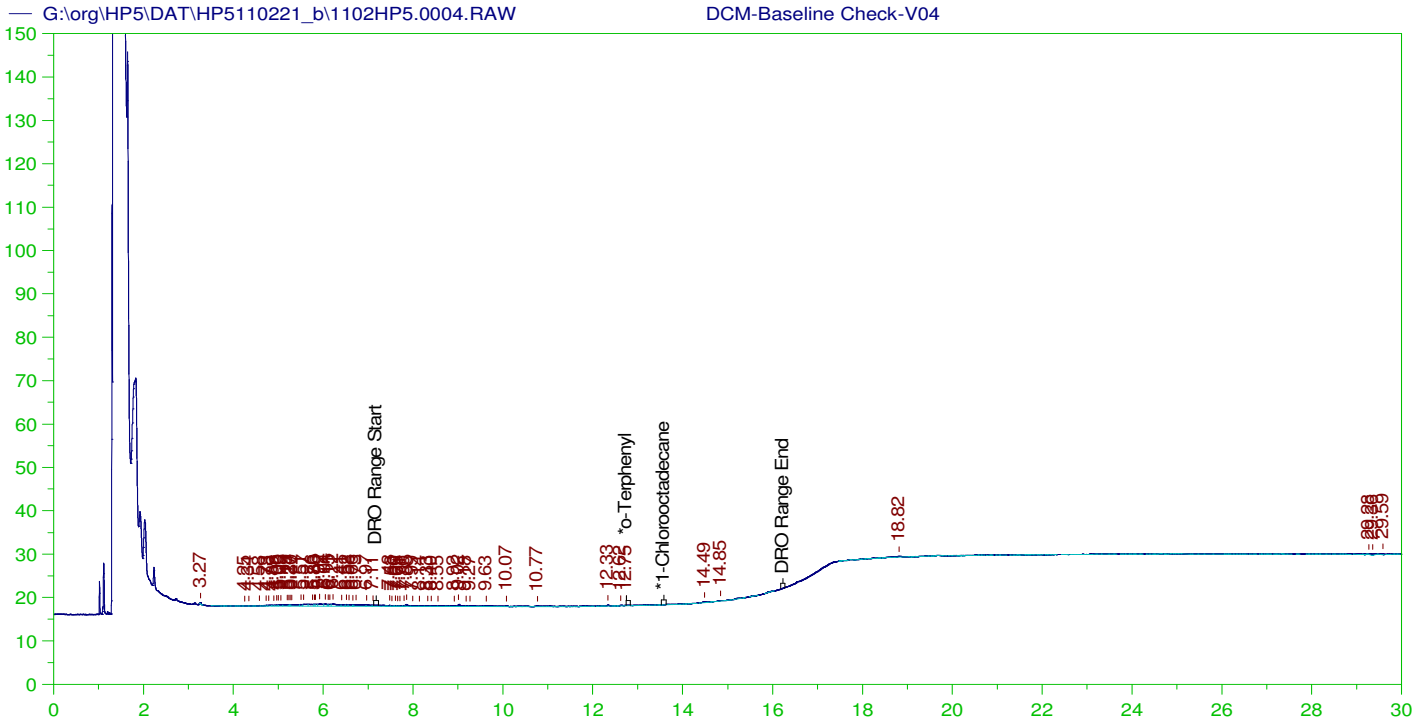
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.292	200.	201.539	100.77
*1-Chlorooctadecane	13.095	200.	163.573	81.79

DRO Area: 9.38791E+07 DRO Amount: 2994.244
 TEH Area: 1.14933E+08 TEH Amount: 3665.75

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0003.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	3665.75	24.44	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.292	200.	201.539	100.77	85-115
*1-Chlorooctadecane	13.095	200.	163.573	81.79	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V04
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0004.RAW
 Date & Time Acquired: 11/2/2021 9:14:27 AM
 Method File: G:\Org\HP5\Methods\DR_8015-HP-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HP.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

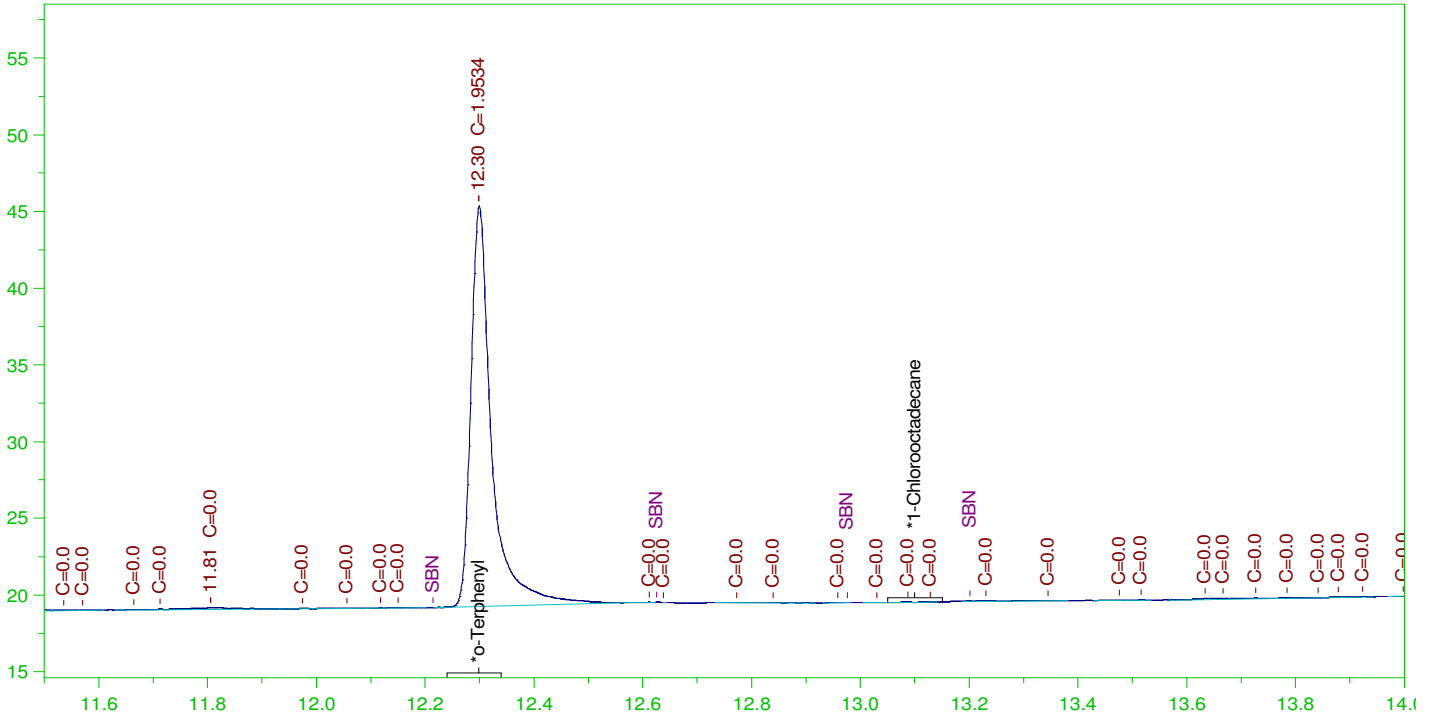
Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 7.125 to 16.28

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.746	200.	.026	.01	-
*1-Chlorooctadecane	29.929	200.	.	.	-

DRO Area: 35138 DRO Amount: 1.192844
 TEH Area: 110269.4 TEH Amount: 3.74336

G:\org\HP5\DAT\HP5110221_b\1102HP5.0005.RAW

CCV_1102HP505r, CAL1 ;1102HP5 , 2 ug per mL OTP



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP505r, CAL1 ;1102HP5 , 2 ug per mL OTP
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0005.RAW
 Date & Time Acquired: 11/2/2021 9:57:01 AM
 Method File: G:\Org\HP5\Methods\DS_8015-IA-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.299	200.	1.953	.98	-
*1-Chlorooctadecane	15.561	200.	.	.	-

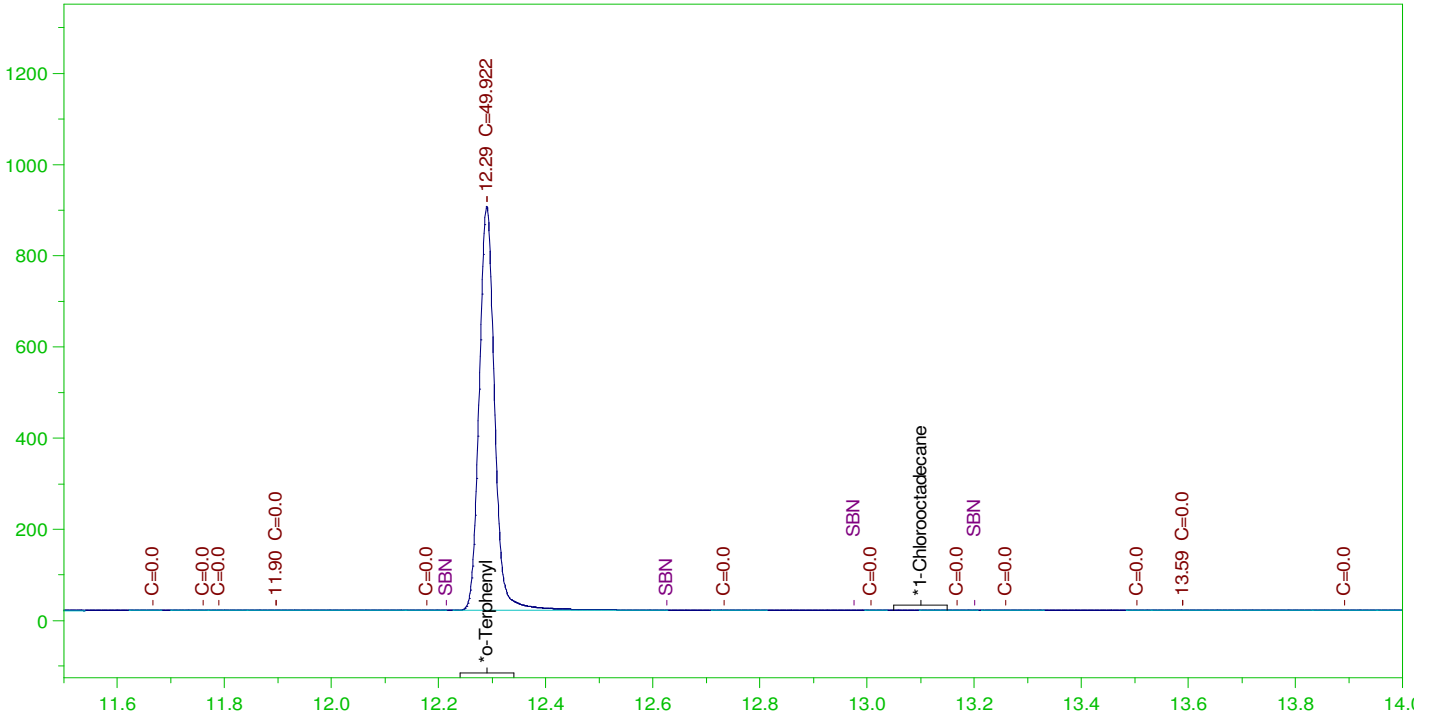
DRO Area:37026.36 DRO Amount: 1.180944
 TEH Area:88429.33 TEH Amount: 2.820425

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0005.RAW
 COMPOUND ACTUAL (NG) MEASURED (NG) %RECOVERY LIMITS
 TOTAL DRO 15000. . . 85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.299	200.	1.953	.98	85-115
*1-Chlorooctadecane	15.561	200.	.	.	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0006.RAW

CCV_1102HP506r, CAL2 ;1102HP5 , 50 ug per mL OTP



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP506r, CAL2 ;1102HP5 , 50 ug per mL OTP
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0006.RAW
 Date & Time Acquired: 11/2/2021 10:39:43 AM
 Method File: G:\Org\HP5\Methods\DS_8015-IA-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.29	200.	49.922	24.96	-
*1-Chlorooctadecane	15.697	200.	.	.	-

DRO Area:141449.5 DRO Amount: 4.511485
 TEH Area:310030.7 TEH Amount: 9.88833

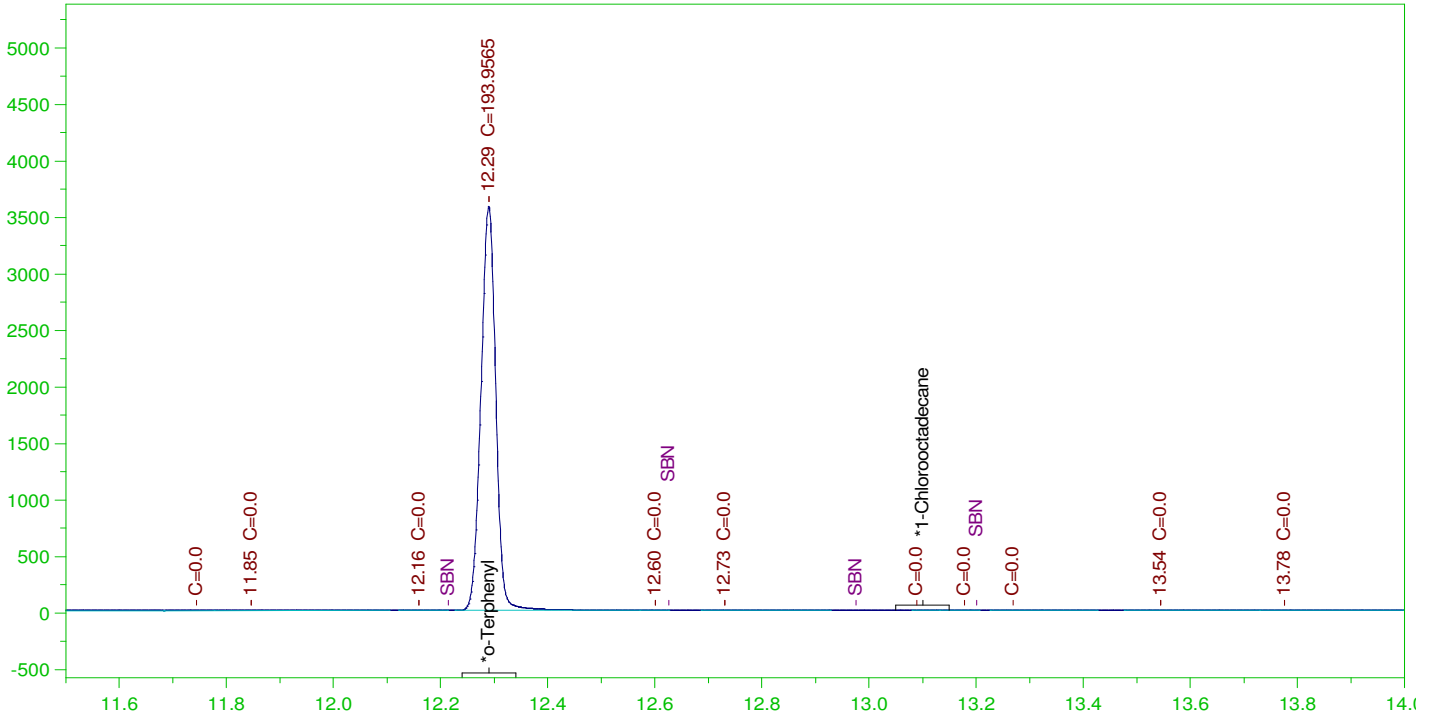
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0006.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	.	.	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.29	200.	49.922	24.96	85-115
*1-Chlorooctadecane	15.697	200.	.	.	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0007.RAW

CCV_1102HP507r, CAL3 ;1102HP5 , 200 ug per mL OTP



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP507r, CAL3 ;1102HP5 , 200 ug per mL OTP
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0007.RAW
 Date & Time Acquired: 11/2/2021 11:22:37 AM
 Method File: G:\Org\HP5\Methods\DS_8015-IA-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

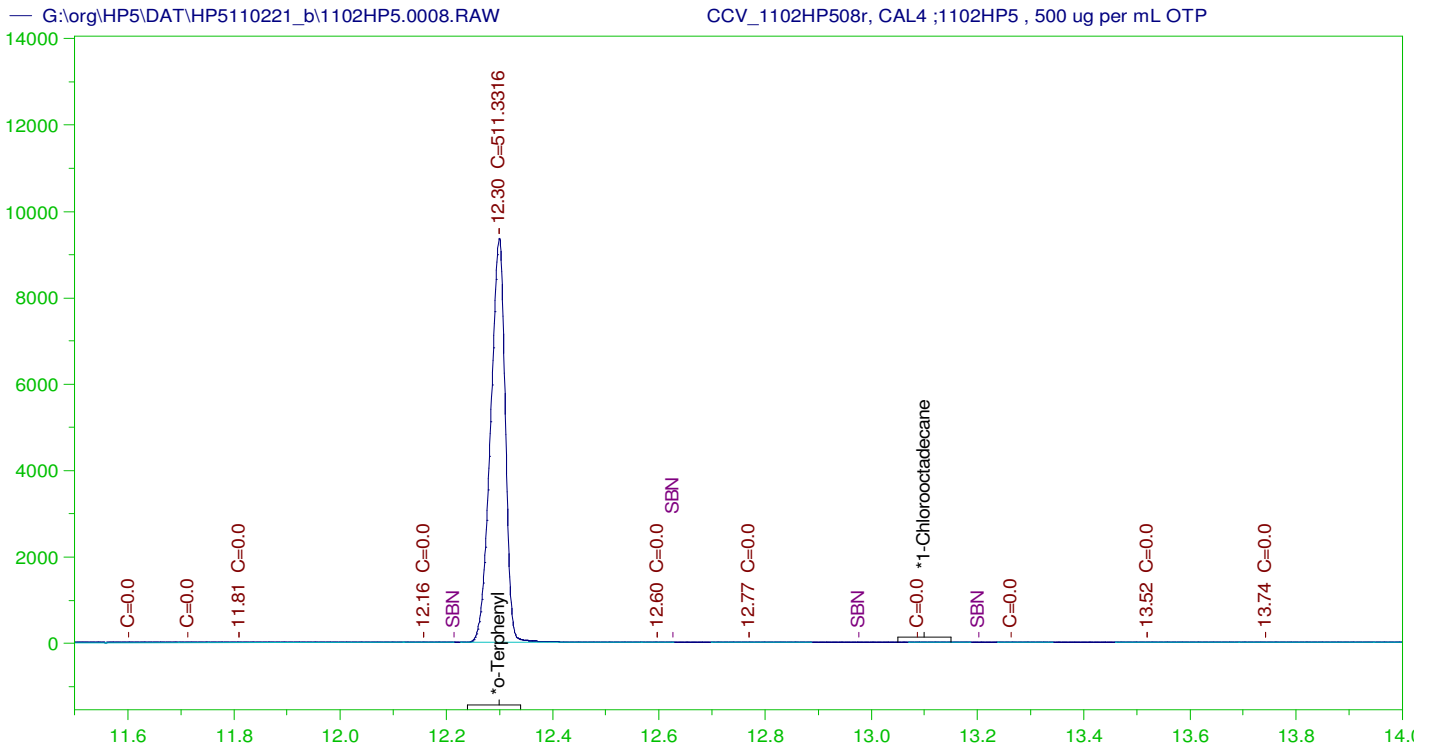
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.29	200.	193.957	96.98
*1-Chlorooctadecane	15.779	200.	.	-

DRO Area:338082.7 DRO Amount: 10.78304
 TEH Area:638415.8 TEH Amount: 20.36207

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0007.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	20.36	.14	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.29	200.	193.957	96.98	85-115
*1-Chlorooctadecane	15.779	200.	.	.	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP508r, CAL4 ;1102HP5 , 500 ug per mL OTP
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0008.RAW
 Date & Time Acquired: 11/2/2021 12:05:44 PM
 Method File: G:\Org\HP5\Methods\DS_8015-IA-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.3	200.	511.332	255.67
*1-Chlorooctadecane	15.798	200.	.	-

DRO Area:456992 DRO Amount: 14.57561
 TEH Area:825752.1 TEH Amount: 26.3371

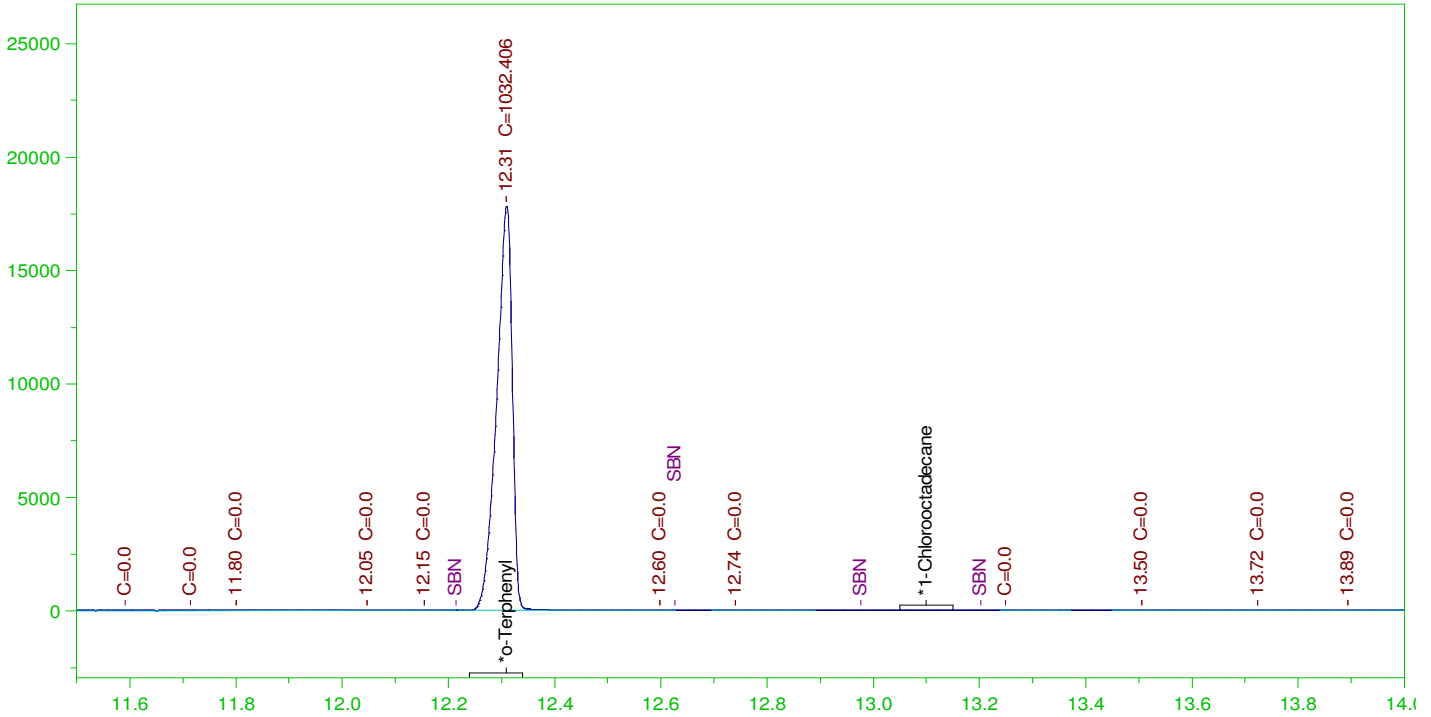
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0008.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	26.34	.18	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.3	200.	511.332	255.67	85-115
*1-Chlorooctadecane	15.798	200.	.	.	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0009.RAW

CCV_1102HP509r, CAL5 ;1102HP5 , 1000 ug per mL OTP



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP509r, CAL5 ;1102HP5 , 1000 ug per mL OTP
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0009.RAW
 Date & Time Acquired: 11/2/2021 12:49:02 PM
 Method File: G:\Org\HP5\Methods\DS_8015-IA-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.31	200.	1032.406	516.2	-
*1-Chlorooctadecane	15.803	200.	.	.	-

DRO Area:461032.4 DRO Amount: 14.70448
 TEH Area:724020.4 TEH Amount: 23.0924

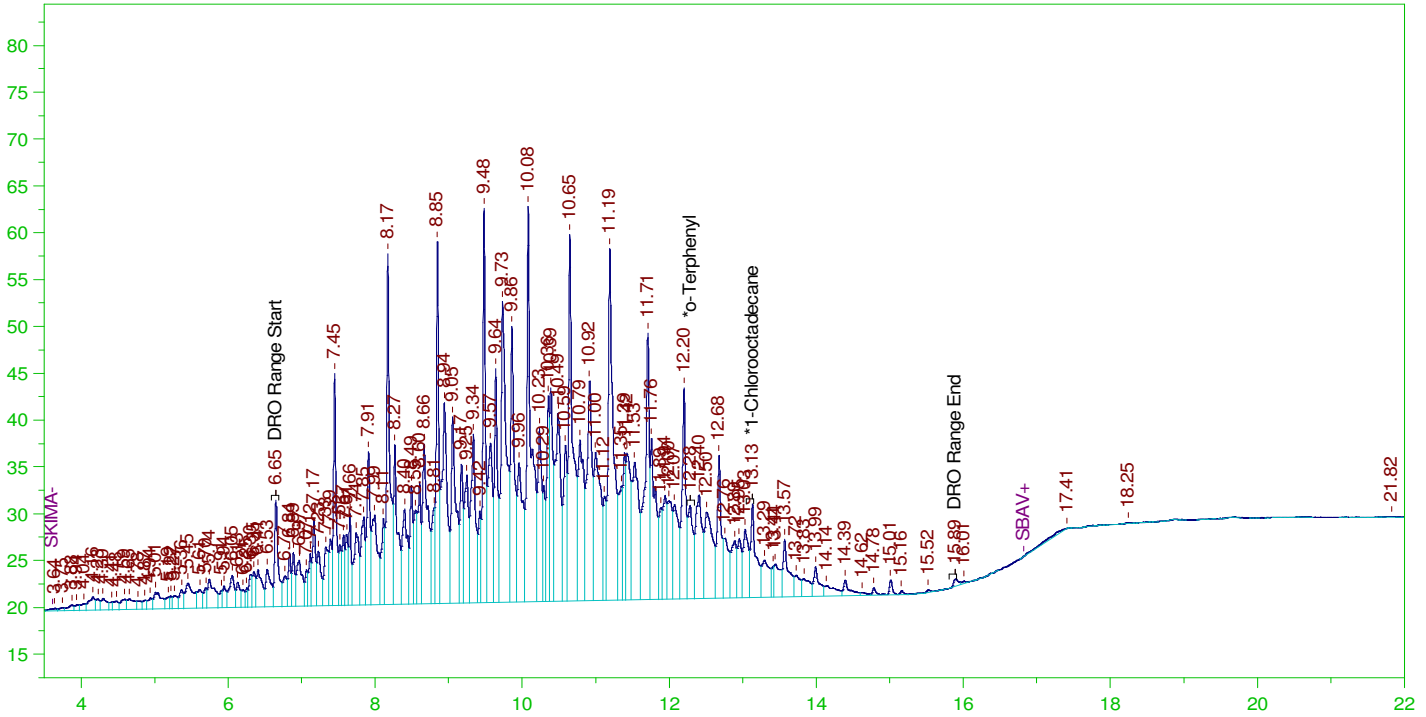
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0009.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	23.09	.15	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.31	200.	1032.406	516.2	85-115
*1-Chlorooctadecane	15.803	200.	.	.	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0010.RAW

CCV_1102HP510r, CAL1 ;1102HP5 , 150 ug per mL Diesel



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP510r, CAL1 ;1102HP5 , 150 ug per mL Diesel
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0010.RAW
 Date & Time Acquired: 11/2/2021 1:32:06 PM
 Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.285	200.	1.416	.71	-
*1-Chlorooctadecane	13.13	200.	1.44	.72	-

DRO Area:4571415 DRO Amount: 145.8038
 TEH Area:4865557 TEH Amount: 155.1854

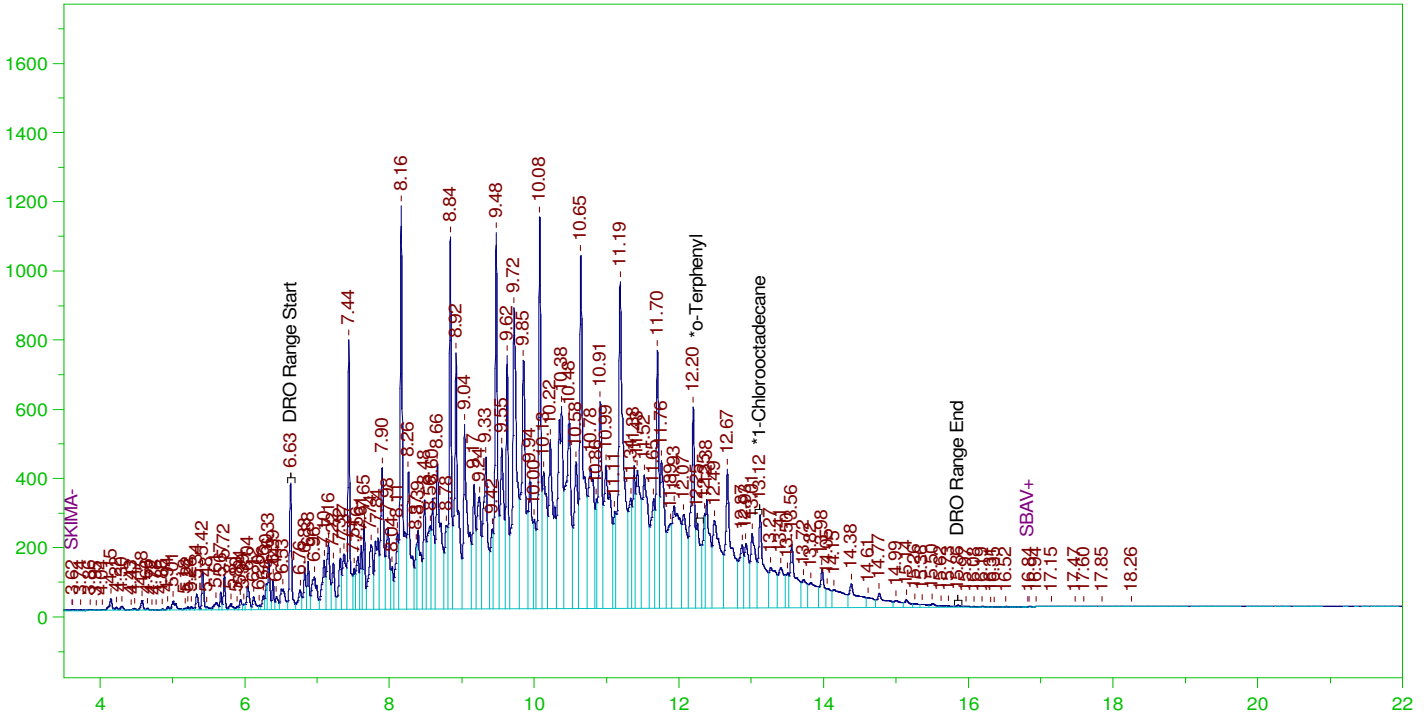
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0010.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	155.19	1.03	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.285	200.	1.416	.71	85-115
*1-Chlorooctadecane	13.13	200.	1.44	.72	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0011.RAW

CCV_1102HP511r, CAL2 ;1102HP5 , 3750 ug per mL Diesel



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP511r, CAL2 ;1102HP5 , 3750 ug per mL Diesel
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0011.RAW
 Date & Time Acquired: 11/2/2021 2:15:08 PM
 Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.252	200.	28.988	14.49	-
*1-Chlorooctadecane	13.122	200.	39.19	19.59	-

DRO Area:1.131291E+08 DRO Amount: 3608.216
 TEH Area:1.159464E+08 TEH Amount: 3698.073

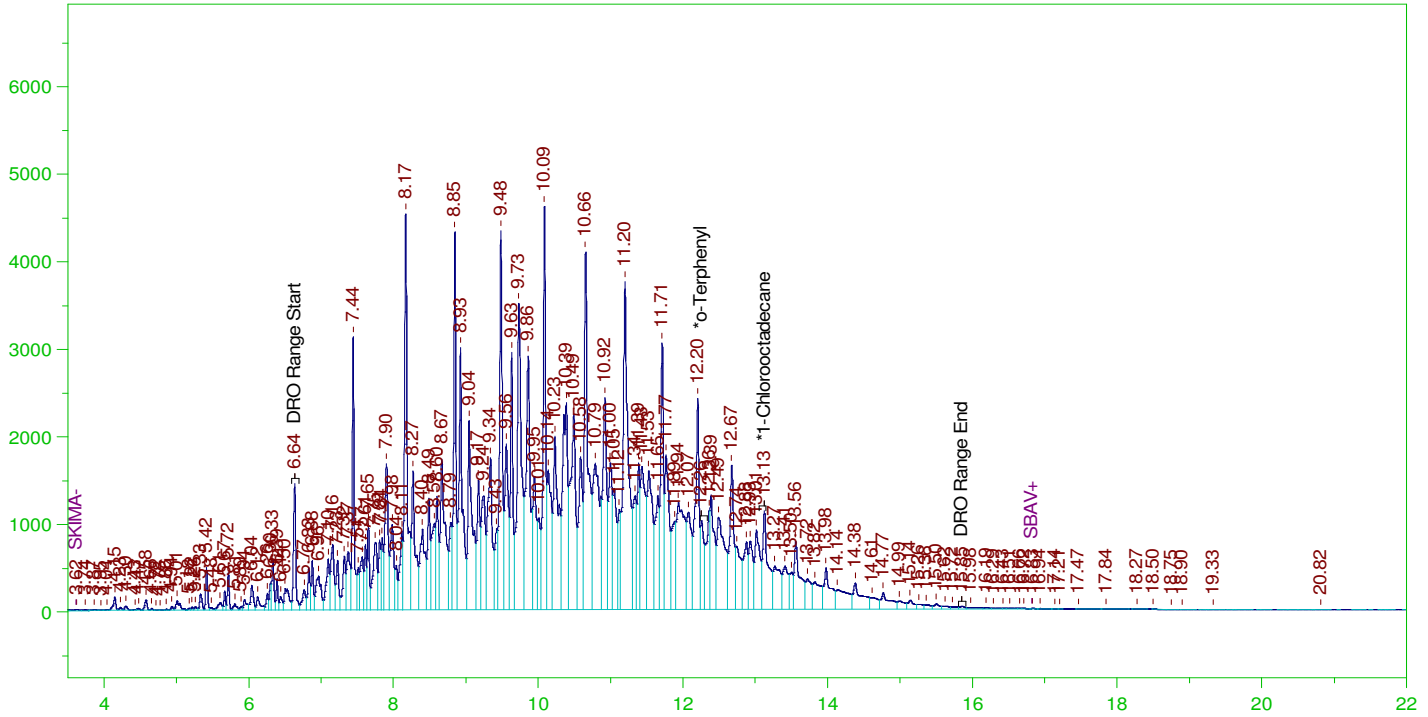
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0011.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	3698.07	24.65	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.252	200.	28.988	14.49	85-115
*1-Chlorooctadecane	13.122	200.	39.19	19.59	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0012.RAW

CCV_1102HP512r, CAL3 ;1102HP5 , 15000 ug per mL Diesel



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP512r, CAL3 ;1102HP5 , 15000 ug per mL Diesel
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0012.RAW
 Date & Time Acquired: 11/2/2021 2:58:26 PM
 Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.257	200.	92.35	46.18	-
*1-Chlorooctadecane	13.125	200.	158.994	79.5	-

DRO Area: 4.667999E+08 DRO Amount: 14888.43
 TEH Area: 4.785279E+08 TEH Amount: 15262.49

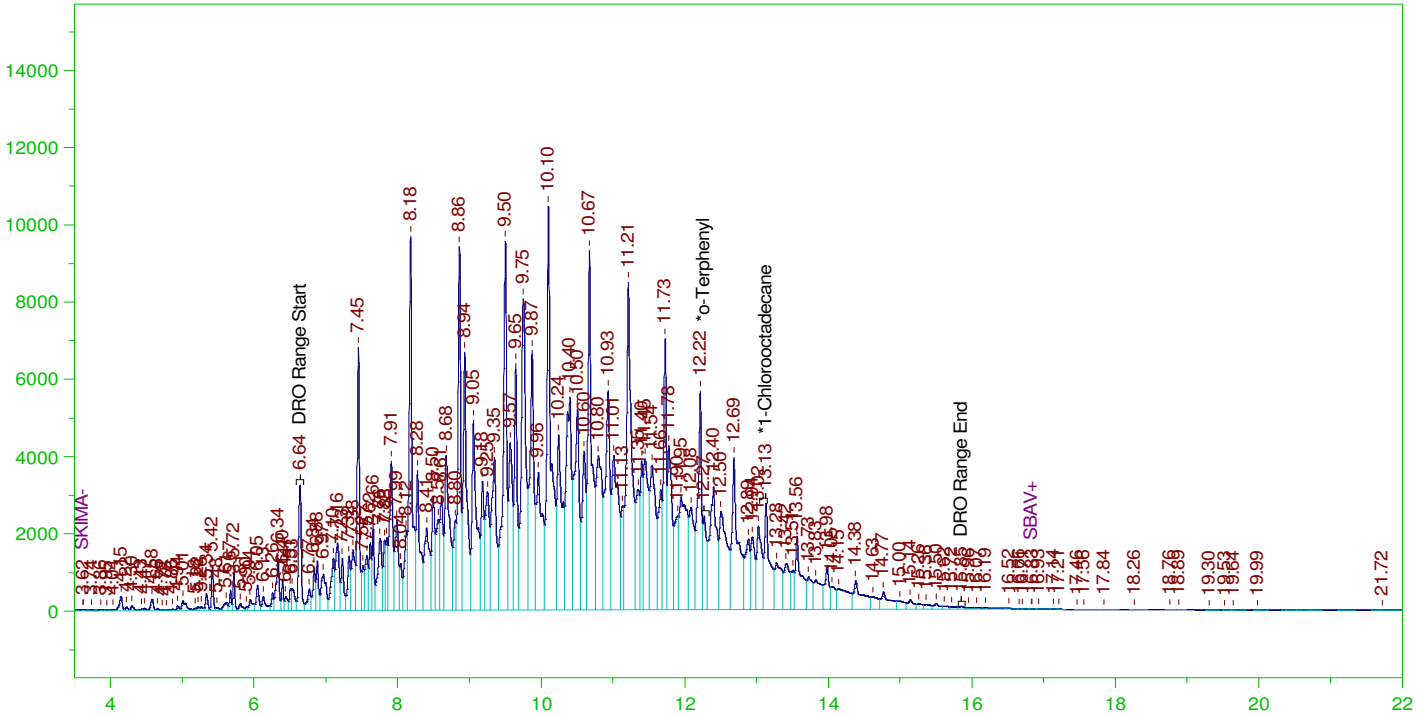
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0012.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15262.49	101.75	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.257	200.	92.35	46.18	85-115
*1-Chlorooctadecane	13.125	200.	158.994	79.5	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0013.RAW

CCV_1102HP513r, CAL4 ;1102HP5 , 37500ug per mL Diesel



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP513r, CAL4 ;1102HP5 , 37500ug per mL Diesel
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0013.RAW
 Date & Time Acquired: 11/2/2021 3:41:37 PM
 Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	238.956	119.48
*1-Chlorooctadecane	13.133	200.	386.008	193.

DRO Area:1.118993E+09 DRO Amount: 35689.91
 TEH Area:1.14732E+09 TEH Amount: 36593.41

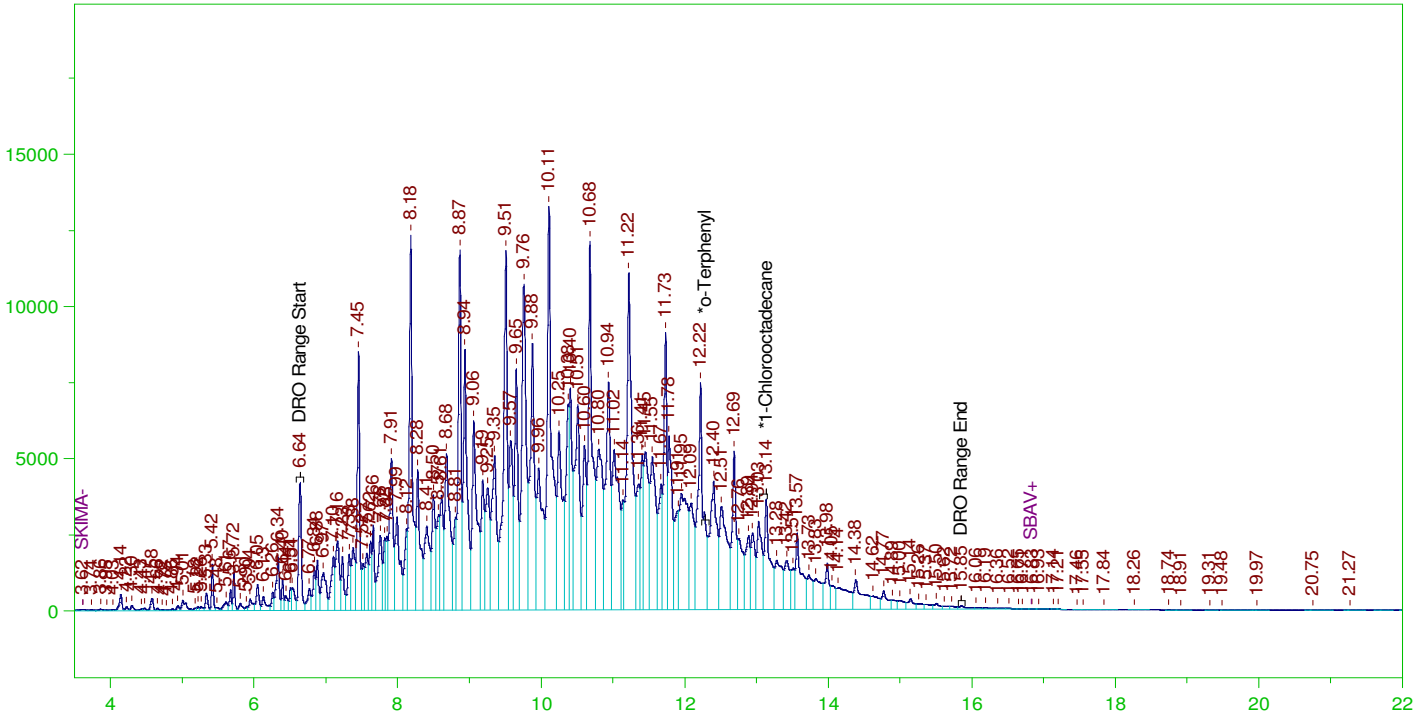
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0013.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	36593.41	243.96	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	238.956	119.48	85-115
*1-Chlorooctadecane	13.133	200.	386.008	193.	85-115

G:\org\HP5\DAT\HP5110221_b\1102HP5.0014.RAW

CCV_1102HP514r, CAL5 ;1102HP5 , 50000 ug per mL Diesel



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP514r, CAL5 ;1102HP5 , 50000 ug per mL Diesel
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0014.RAW
 Date & Time Acquired: 11/2/2021 4:24:53 PM
 Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

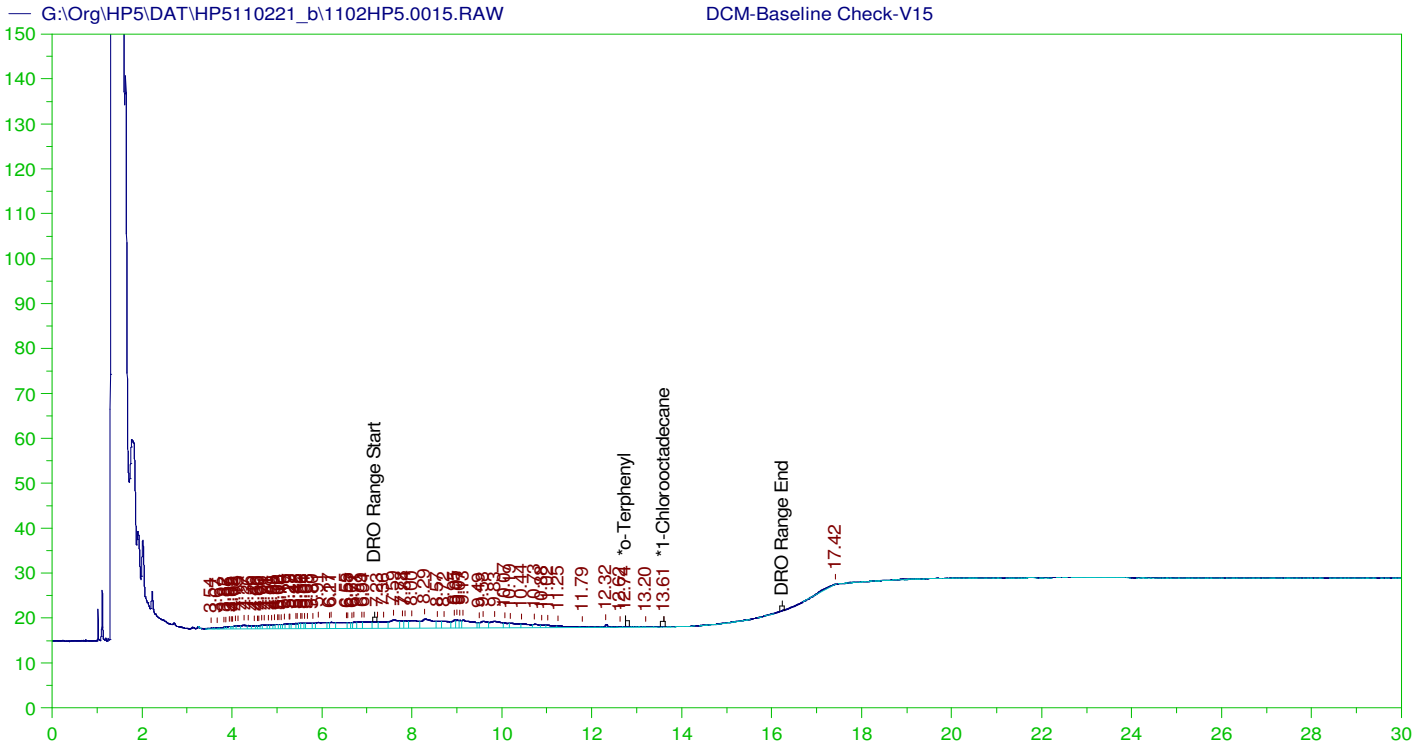
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.921	200.	.	-
*1-Chlorooctadecane	13.135	200.	512.63	256.31

DRO Area: 1.507978E+09 DRO Amount: 48096.49
 TEH Area: 1.54564E+09 TEH Amount: 49297.7

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0014.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	49297.7	328.65	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	29.921	200.	.	.	85-115
*1-Chlorooctadecane	13.135	200.	512.63	256.31	85-115



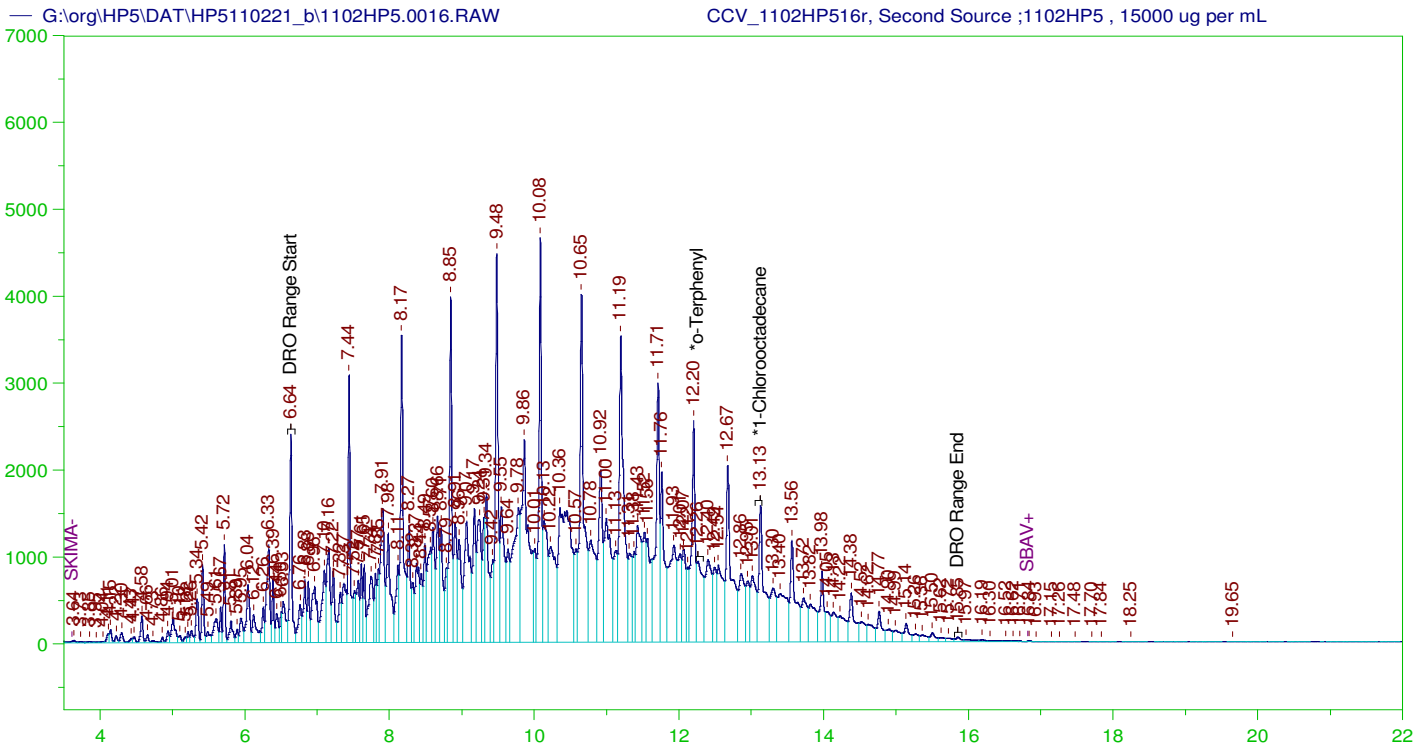
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V15
 Raw File: G:\Org\HP5\DAT\HP5110221_b\1102HP5.0015.RAW
 Date & Time Acquired: 11/2/2021 5:08:11 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HP-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HP.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 7.125 to 16.28

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.744	200.	.041	.02	-
*1-Chlorooctadecane	13.606	200.	.017	.01	-

DRO Area:305831.5 DRO Amount: 10.38219
 TEH Area:517467.1 TEH Amount: 17.56667



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP516r, Second Source ;1102HP5 , 15000 ug per mL
 Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0016.RAW
 Date & Time Acquired: 11/2/2021 5:51:31 PM
 Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.261	200.	146.398	73.2
*1-Chlorooctadecane	13.127	200.	209.876	104.94

DRO Area: 4.432555E+08 DRO Amount: 14137.49
 TEH Area: 4.699825E+08 TEH Amount: 14989.94

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0016.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14989.94	99.93	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.261	200.	146.398	73.2	85-115
*1-Chlorooctadecane	13.127	200.	209.876	104.94	85-115

Energy Laboratories Inc

ANALYTICAL RUN Summary

31-Mar-21

Run ID GCFID-HP5-B_210218B

Run Start Date: 2/18/2021
Analyst: Ann Nebel
Ical:
Column ID:
Comments: 8015 OIL range calibration SW8015_OIL210218

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO180918C	50,000 ug/mL Oil Std For AK103 RRO-In DCM					CAL	8/31/2025
DRO210204A	Carbon Scan STD					MARKER	3/5/2028
DRO210217A	20,000 ug/mL Oil Std For AK103 RRO-In DCM					ICV	8/23/2021

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist				
14282665	CCV_0218HP50	HC-8015-DRO-	CAL1		2/18/2021 12:03:	1	R356533		0	0					
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
TEH(Oil Range)		A mg/L		0.1468323		0.15	0	0	0	0.3	0	98%	80	120	0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist				
14282666	CCV_0218HP50	HC-8015-DRO-	CAL2		2/18/2021 1:27:3	1	R356533		0	0					
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
TEH(Oil Range)		A mg/L		1.062811		1	0	0	0.15	0.3	0	106%	80	120	0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist				
14282667	CCV_0218HP50	HC-8015-DRO-	CAL3		2/18/2021 2:51:0	1	R356533		0	0					
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
TEH(Oil Range)		A mg/L		5.035713		5	0	0	0.15	0.3	0	101%	80	120	0%

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14282668	CCV_0218HP50	HC-8015-DRO-	CAL4		2/18/2021 4:14:3	1	R356533		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		14.69295		15	0	0	0.15	0.3	0	98%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14282669	CCV_0218HP51	HC-8015-DRO-	CAL5		2/18/2021 5:38:3	1	R356533		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		28.20769		30	0	0	0.15	0.3	0	94%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14282670	CCV_0218HP51	HC-8015-DRO-	ICV		2/18/2021 8:27:3	1	R356533		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.474465		5	0	0	0.15	0.3	0	109%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
		Marker_0218HP501r, DRO C40_0218HP5_0218HP5 , DRO210204A	G:\Org\HP5\Methods\CSC210212.met	1	1	1	1	0
		DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP503r, CAL1_0218HP5 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021803-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP505r, CAL2_0218HP5 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021805-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP507r, CAL3_0218HP5 , 5000 ug per mL Oil (100 uL of DRO180918C + 900 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021807-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V08	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP509r, CAL4_0218HP5 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021807-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V10	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP511r, CAL5_0218HP5 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)	G:\Org\HP5\Methods\DR_OIL-021811-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V12	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		DCM-Baseline Check-V13	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		DCM-Baseline Check-V14	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP515r, Second Source_0218HP5 , 5000 ug per mL (100uL of DRO210217A + 300uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021811-AA-L0.MET	1	1	1	1	0

File Name: G:\Org\HP5\Cals\SW8015C_OIL210218AA.CAL

Version: 4

Creator: AMN 3/31/2021

Description: DRO-8015-Oil range. New ICal Per 0218HP5 (2021)-2 uL Inj.; COD added using OTP RFs

Reason for change:

External standard calibration

Standard injection volume: 1

Standard sample weight: 1

Area reject threshold: 500

Reference peak area reject threshold: 500

Amount units: nanograms

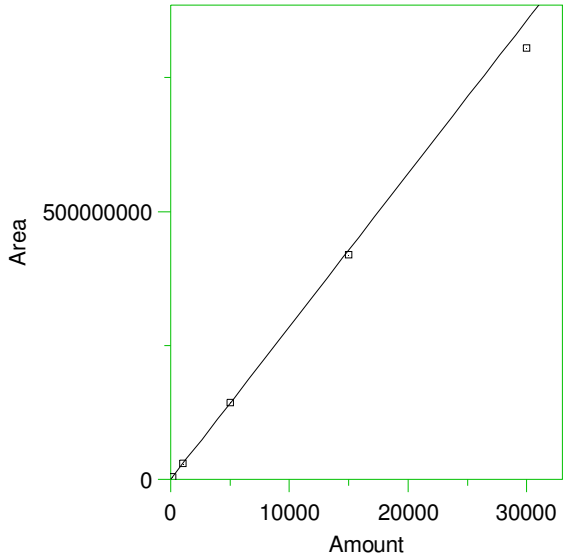
No default component

Method of calculating data point averages: Equal weight for all updates

No calibration update report

All levels are normal data points.

1 DRO Range Start



Expected retention time: 6.54 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

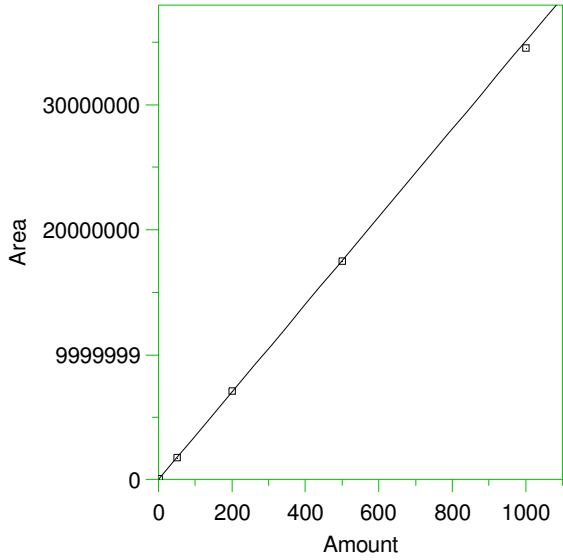
Single peak quantification by area

$Y = 28542.41 X + 0$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9940317
 Average error: 3.209%
 Average CF: 28542.41
 RSD: 4.497%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	4325287	28835.25	1.026	Manual	3/30/2021 11:50:57 AM
2	1000	3.03352E+07	30335.2	6.281	Manual	3/30/2021 11:51:41 AM
3	5000	1.437314E+08	28746.28	0.714	Manual	3/30/2021 11:52:00 AM
4	15000	4.193721E+08	27958.14	-2.047	Manual	3/30/2021 11:52:55 AM
5	30000	8.051155E+08	26837.18	-5.974	Manual	3/30/2021 11:52:32 AM

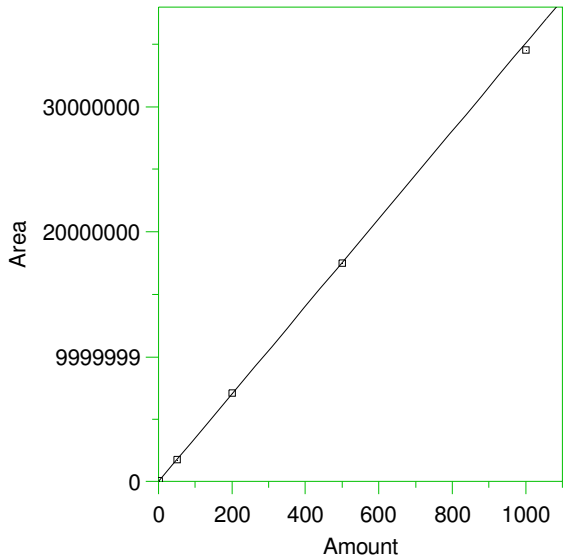
2 *o-Terphenyl



Expected retention time: 12.14 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 35071.26 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9996535
 Average error: 0.838%
 Average CF: 35071.26
 RSD: 1.097%

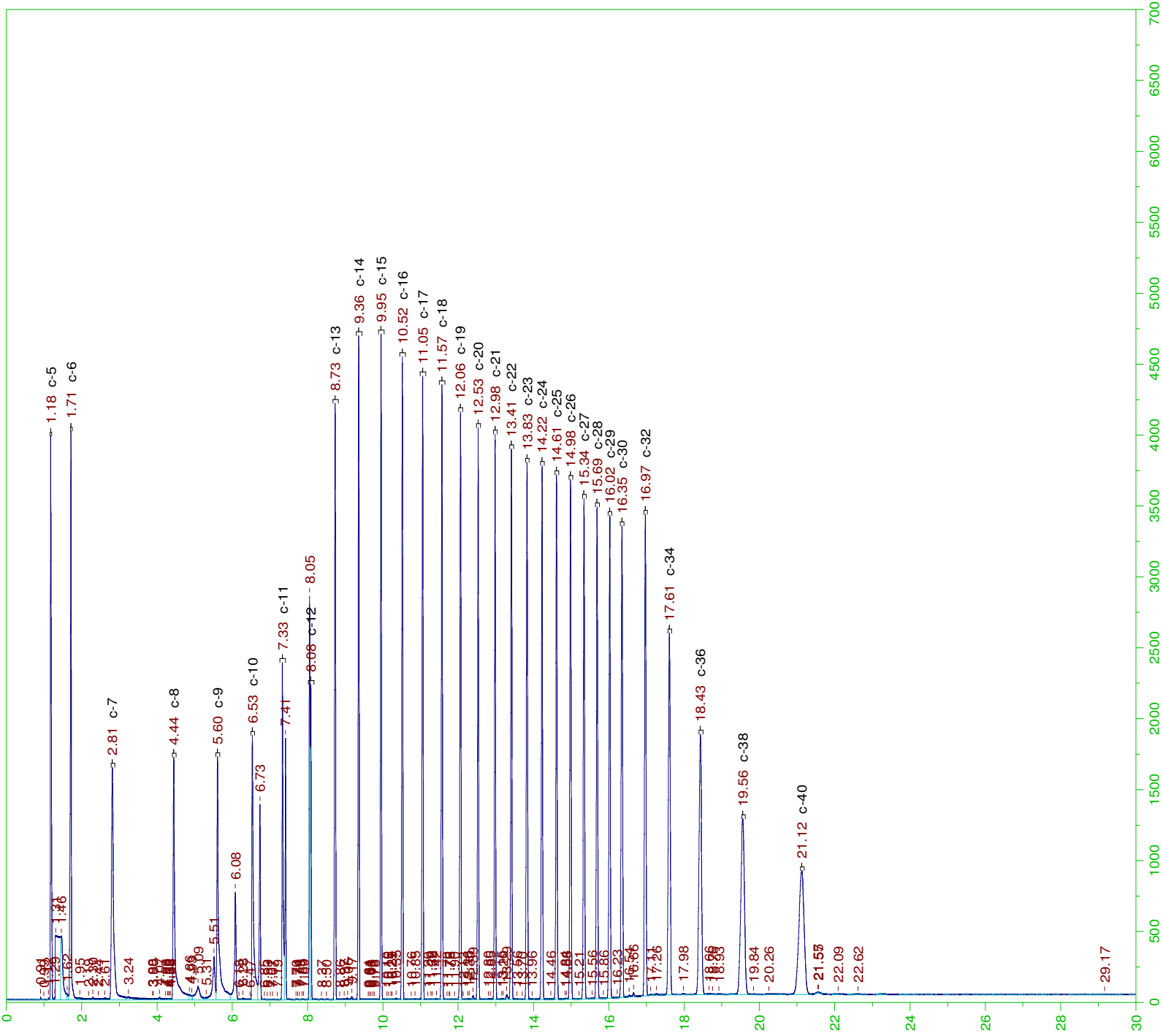
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	70648.41	35324.2	0.721	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0011.BND	1/11/2021 9:44:43 AM
2	50	1746406	34928.12	-0.408	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0012.BND	1/11/2021 9:44:50 AM
3	200	7110604	35553.02	1.374	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0013.BND	1/11/2021 9:44:58 AM
4	500	1.749965E+07	34999.3	-0.205	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0014.BND	1/11/2021 9:45:02 AM
5	1000	3.455164E+07	34551.64	-1.482	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0015.BND	1/11/2021 9:45:07 AM

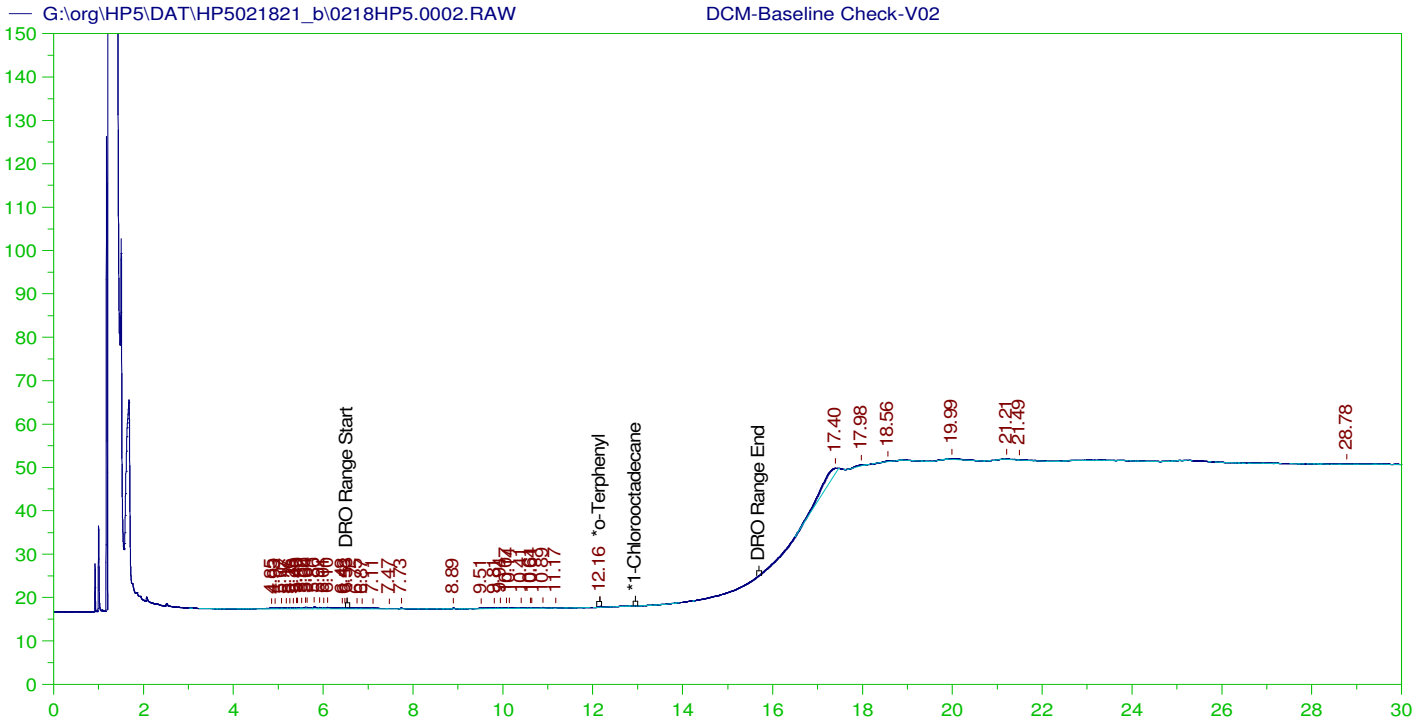
3 *1-Chlorooctadecane



Expected retention time: 12.95 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 $Y = 35071.26 X + 0$
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9996535
 Average error: 0.838%
 Average CF: 35071.26
 RSD: 1.097%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	70648.41	35324.2	0.721	Manual	1/11/2021 9:45:13 AM
2	50	1746406	34928.12	-0.408	Manual	1/11/2021 9:45:15 AM
3	200	7110604	35553.02	1.374	Manual	1/11/2021 9:45:17 AM
4	500	1.749965E+07	34999.3	-0.205	Manual	1/11/2021 9:45:19 AM
5	1000	3.455164E+07	34551.64	-1.482	Manual	1/11/2021 9:45:21 AM





DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

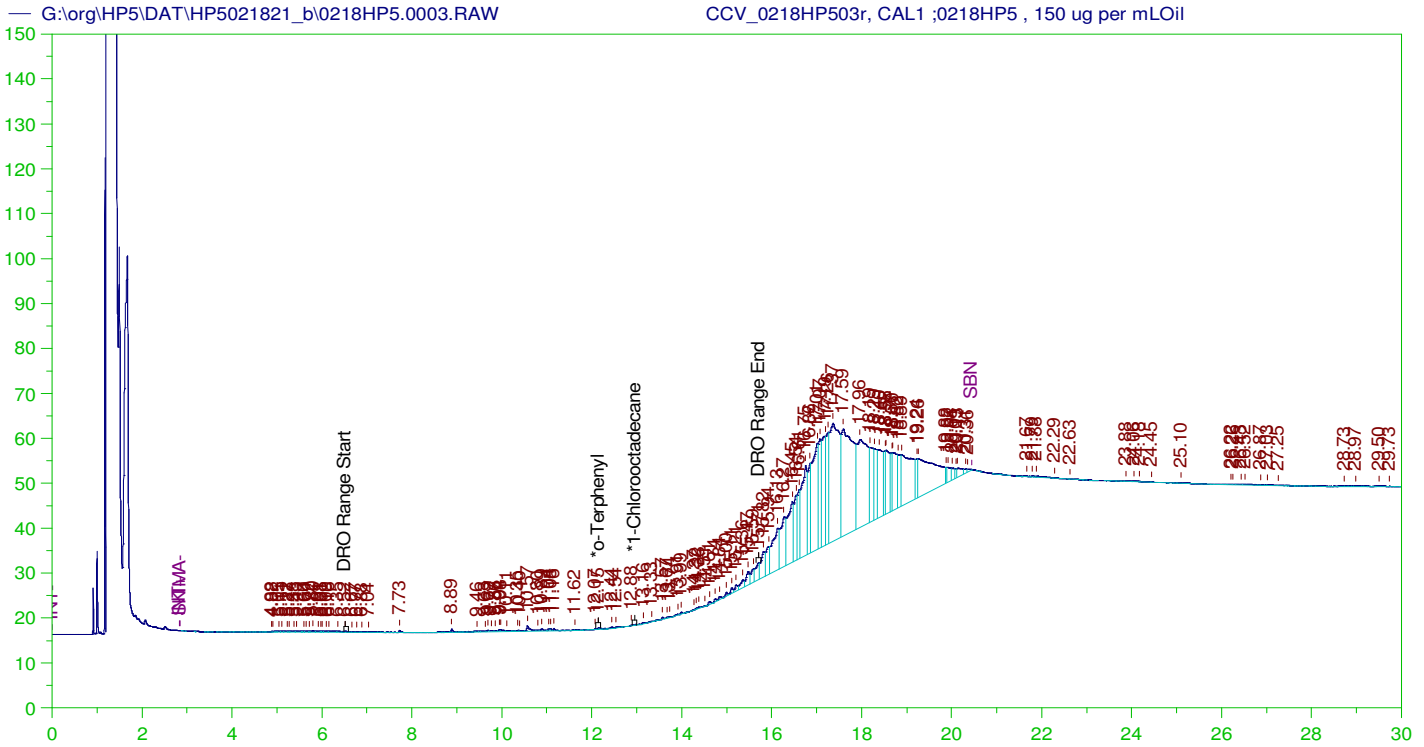
Sample Name: DCM-Baseline Check-V02
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0002.RAW
 Date & Time Acquired: 2/18/2021 11:21:40 AM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33

Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.158	200.	.034	.02
*1-Chlorooctadecane	29.927	200.	.	.

DRO Area:29553.31 DRO Amount: 1.003258
 TEH Area:144057.3 TEH Amount: 4.890373



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0218HP503r, CAL1 ;0218HP5 , 150 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0003.RAW
 Date & Time Acquired: 2/18/2021 12:03:33 PM
 Method File: G:\ORG\HP5\METHODS\DR_OIL-021803-AA-L0.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_OIL210218AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

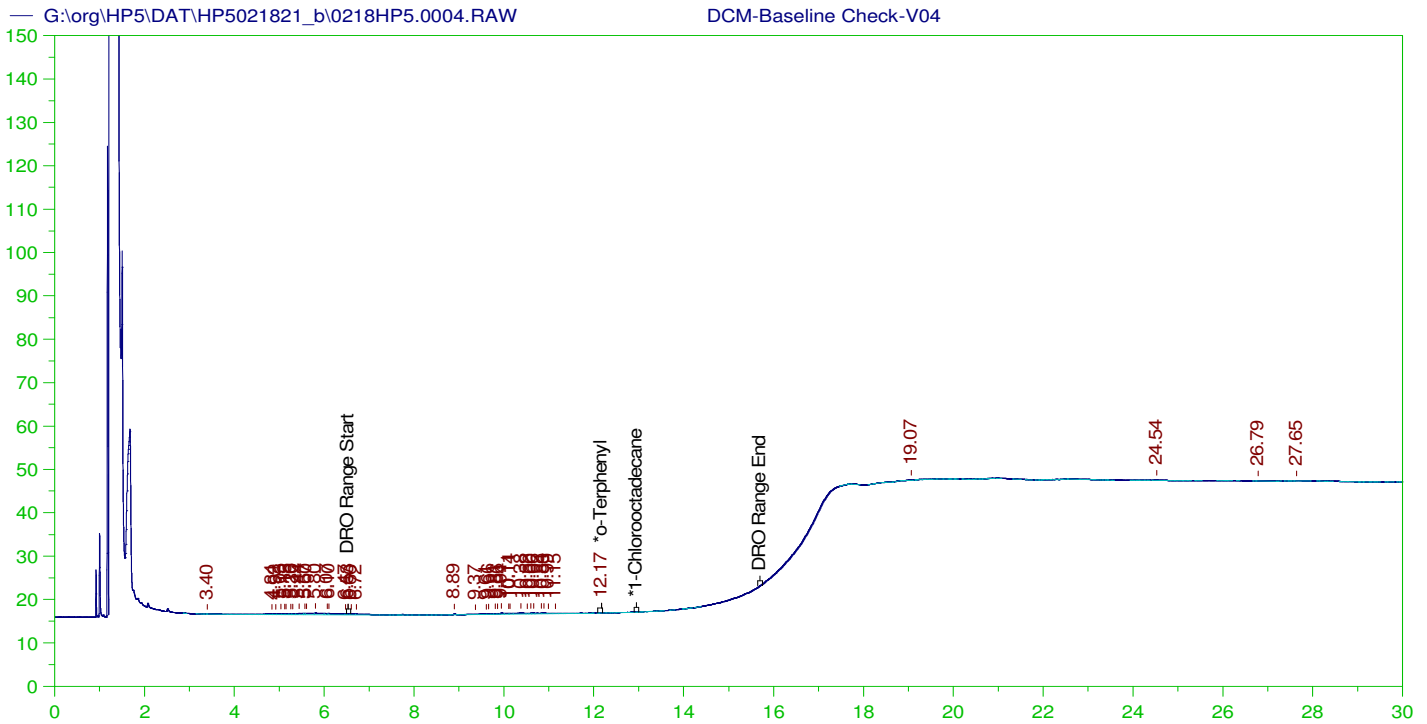
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.146	200.	.02	.01	-
*1-Chlorooctadecane	29.979	200.	.	.	-

DRO Area: 141843.8 DRO Amount: 4.969579
 TEH Area: 3766485 TEH Amount: 131.961

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5021821_b\0218HP5.0003.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	131.96	2.64	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.146	200.	.02	.01	85-115
*1-Chlorooctadecane	29.979	200.	.	.	85-115



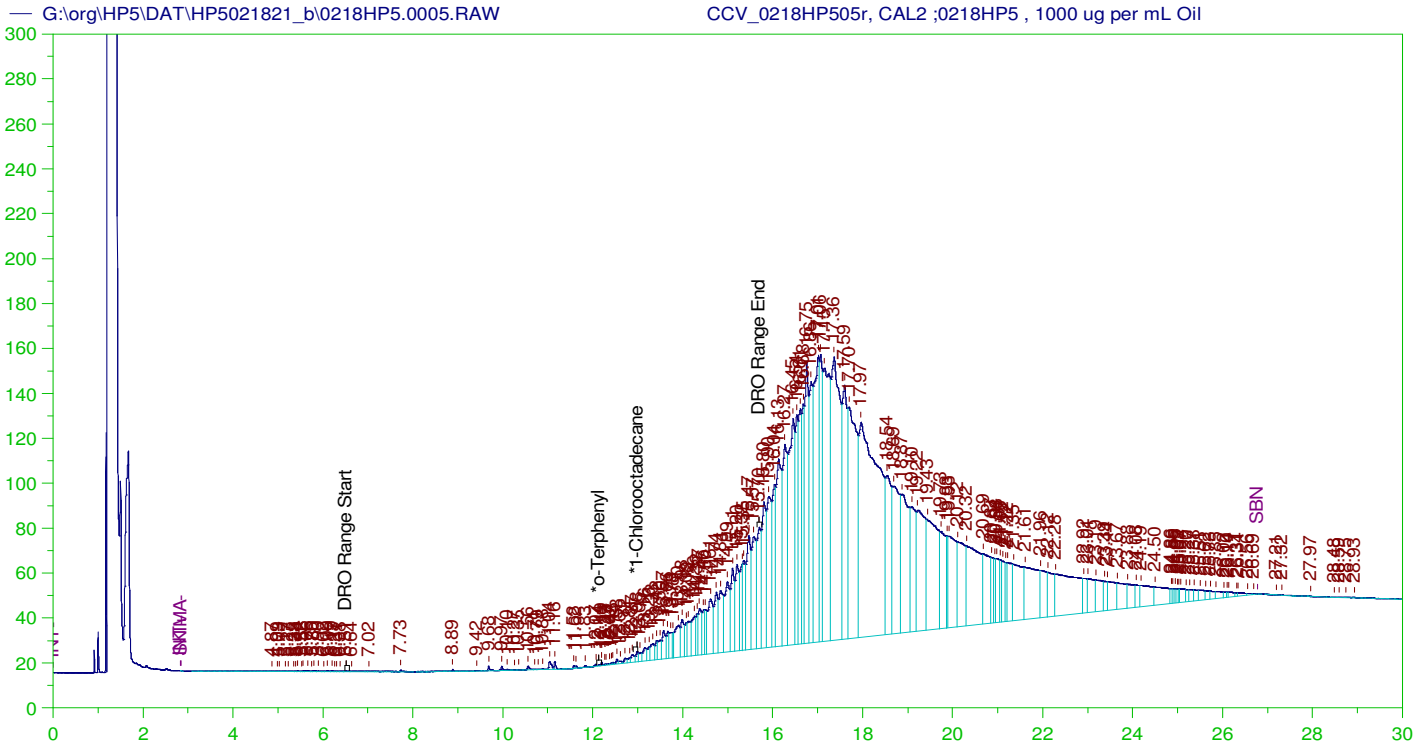
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V04
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0004.RAW
 Date & Time Acquired: 2/18/2021 12:45:36 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.171	200.	.017	.01
*1-Chlorooctadecane	29.958	200.	.	.

DRO Area: 27245.38 DRO Amount: 0.9249101
 TEH Area: 63574.01 TEH Amount: 2.158173



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0218HP505r, CAL2 ;0218HP5 , 1000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0005.RAW
 Date & Time Acquired: 2/18/2021 1:27:30 PM
 Method File: G:\ORG\HP5\METHODS\DR_OIL-021805-AA-L0.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_OIL210218AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

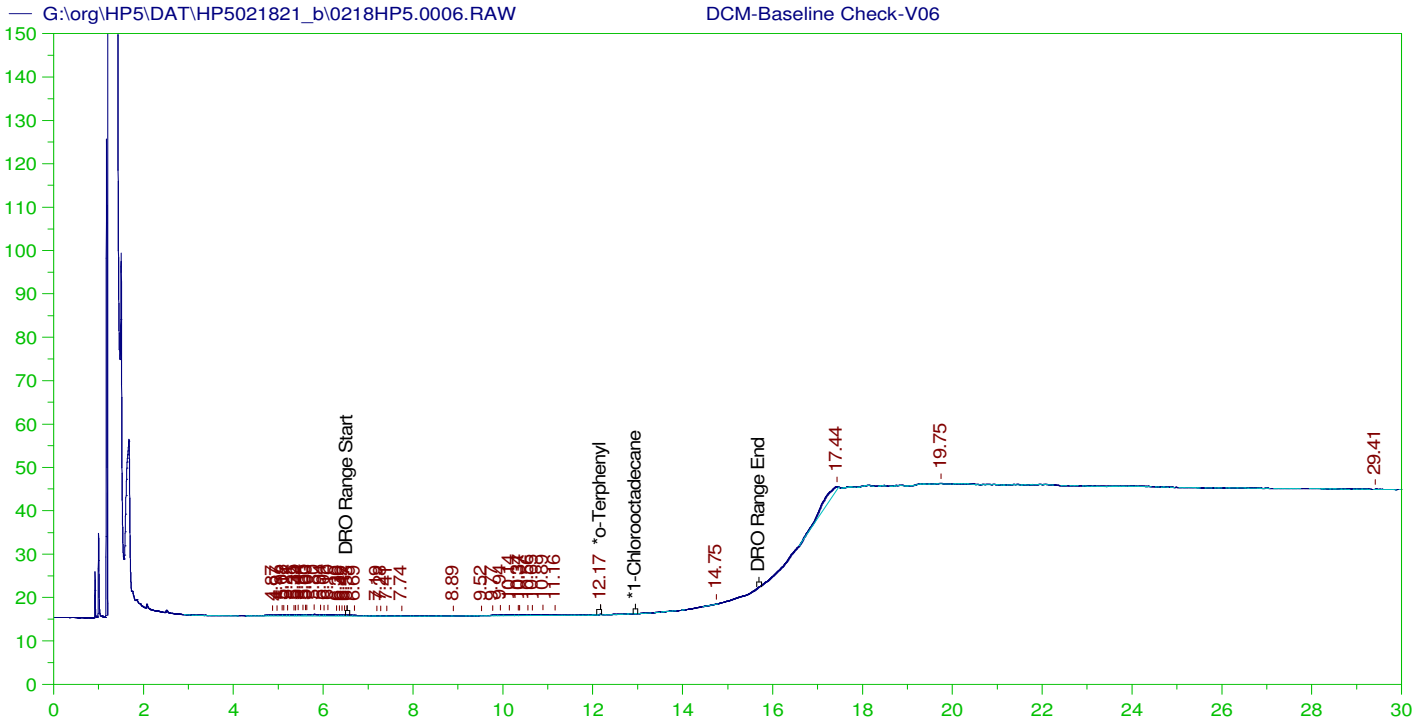
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.136	200.	.034	.02
*1-Chlorooctadecane	12.983	200.	.496	.25

DRO Area: 3721460 DRO Amount: 130.3835
 TEH Area: 3.03352E+07 TEH Amount: 1062.811

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5021821_b\0218HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	1062.81	21.26	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.136	200.	.034	.02	85-115
*1-Chlorooctadecane	12.983	200.	.496	.25	85-115



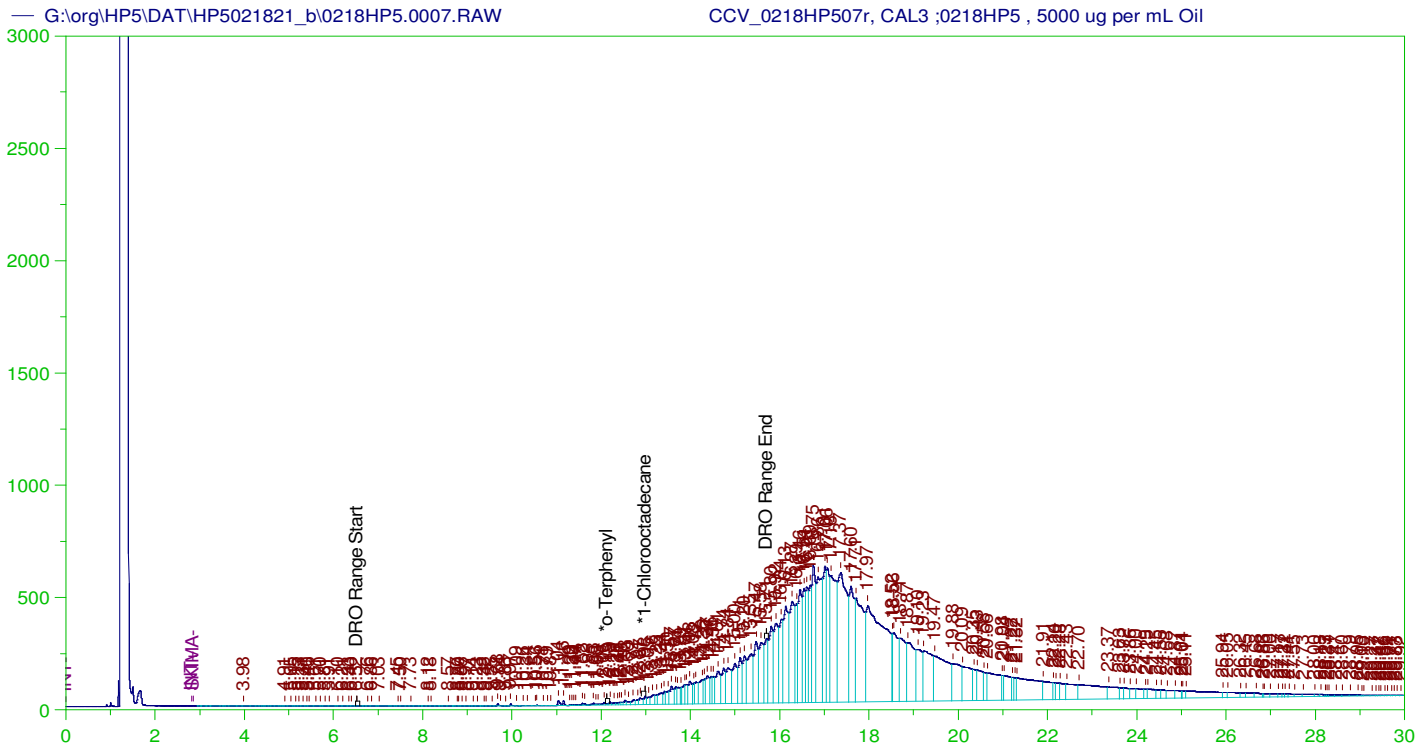
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V06
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0006.RAW
 Date & Time Acquired: 2/18/2021 2:09:12 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.17	200.	.017	.01
*1-Chlorooctadecane	29.977	200.	.	.

DRO Area:29249.25 DRO Amount: 0.9929362
 TEH Area:123949.1 TEH Amount: 4.20775



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0218HP507r, CAL3 ;0218HP5 , 5000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0007.RAW
 Date & Time Acquired: 2/18/2021 2:51:00 PM
 Method File: G:\ORG\HP5\METHODS\DR_OIL-021807-AA-L0.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_OIL210218AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

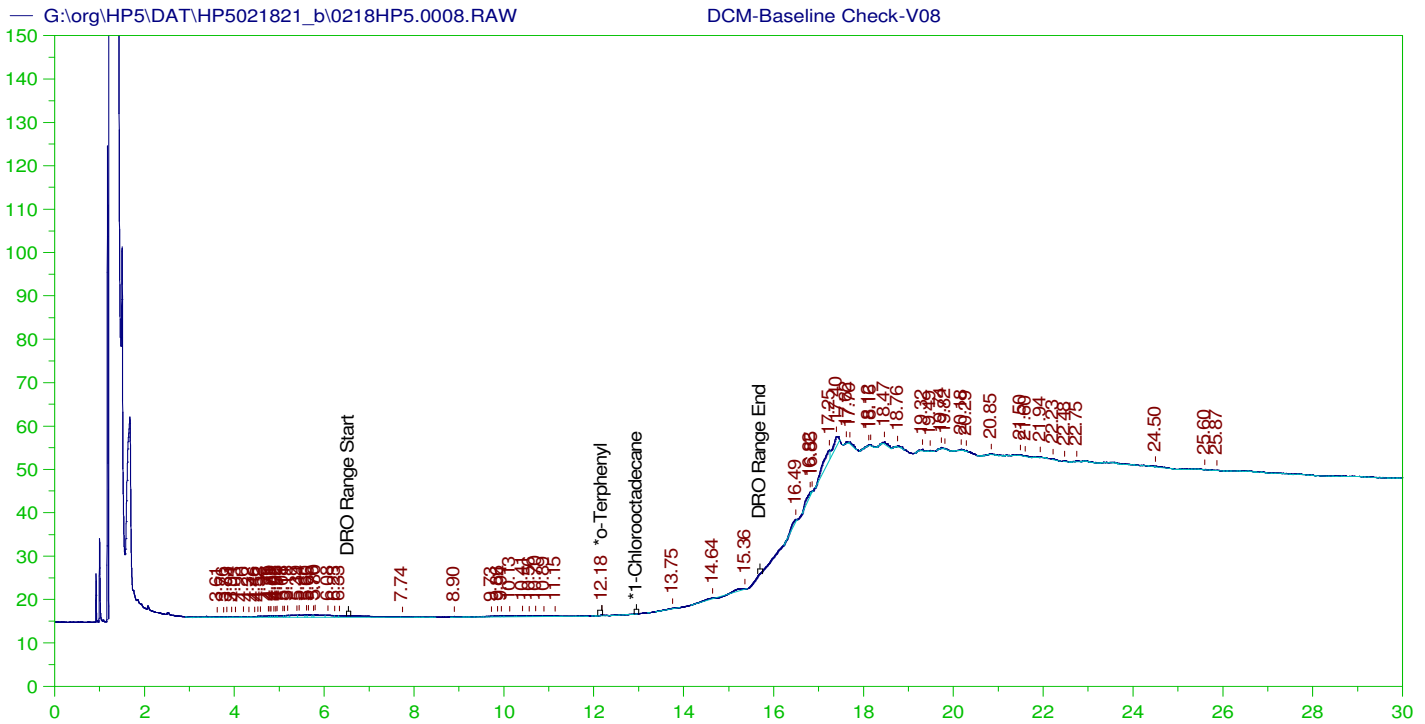
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.129	200.	.538	.27	-
*1-Chlorooctadecane	12.981	200.	4.244	2.12	-

DRO Area: 2.19239E+07 DRO Amount: 768.1166
 TEH Area: 1.437314E+08 TEH Amount: 5035.713

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5021821_b\0218HP5.0007.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	5035.71	100.71	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.129	200.	.538	.27	85-115
*1-Chlorooctadecane	12.981	200.	4.244	2.12	85-115



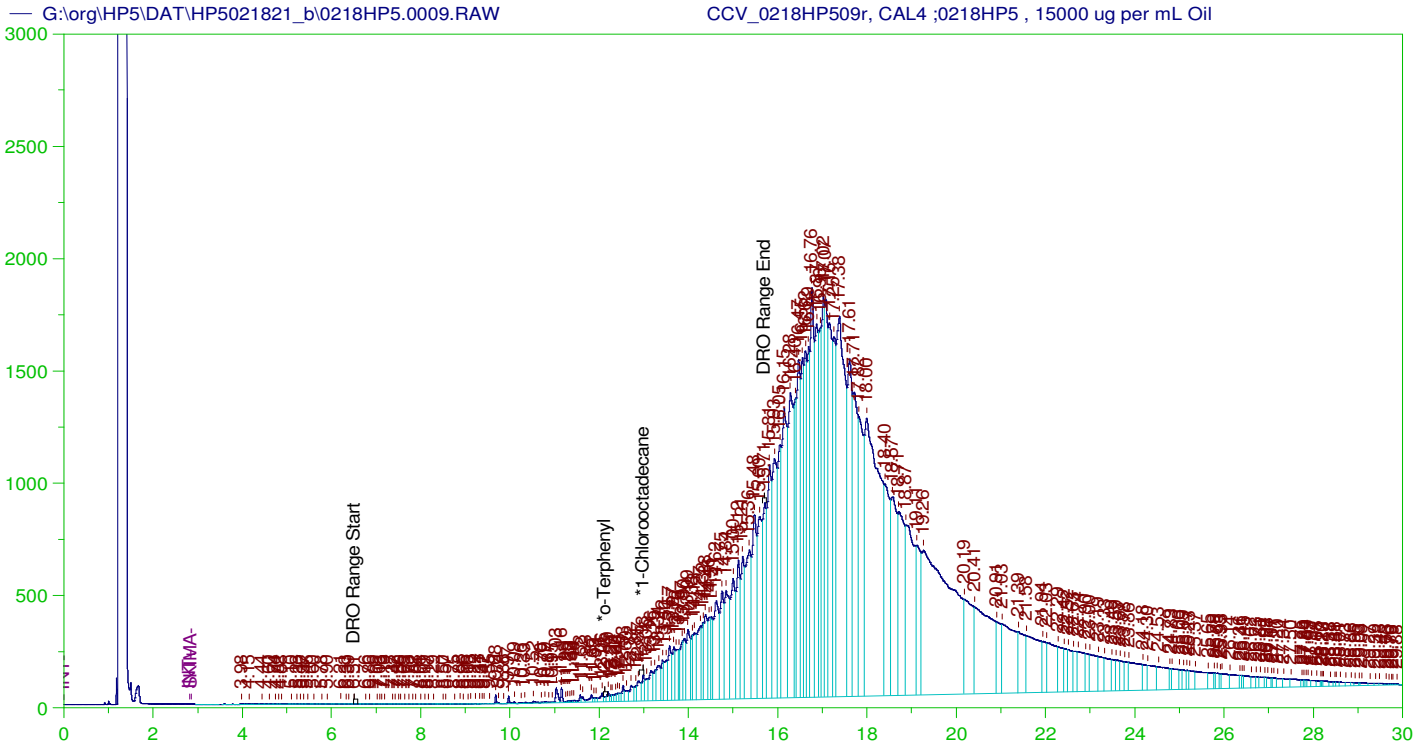
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V08
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0008.RAW
 Date & Time Acquired: 2/18/2021 3:32:46 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.176	200.	.026	.01
*1-Chlorooctadecane	29.982	200.	.	-

DRO Area:30717.07 DRO Amount: 1.042765
 TEH Area:223672.8 TEH Amount: 7.593112



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0218HP509r, CAL4 ;0218HP5 , 15000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0009.RAW
 Date & Time Acquired: 2/18/2021 4:14:34 PM
 Method File: G:\ORG\HP5\METHODS\DR_OIL-021807-AA-L0.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_OIL210218AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 28542.41
 Rt range for Diesel Range Organics: 6.49 to 15.75

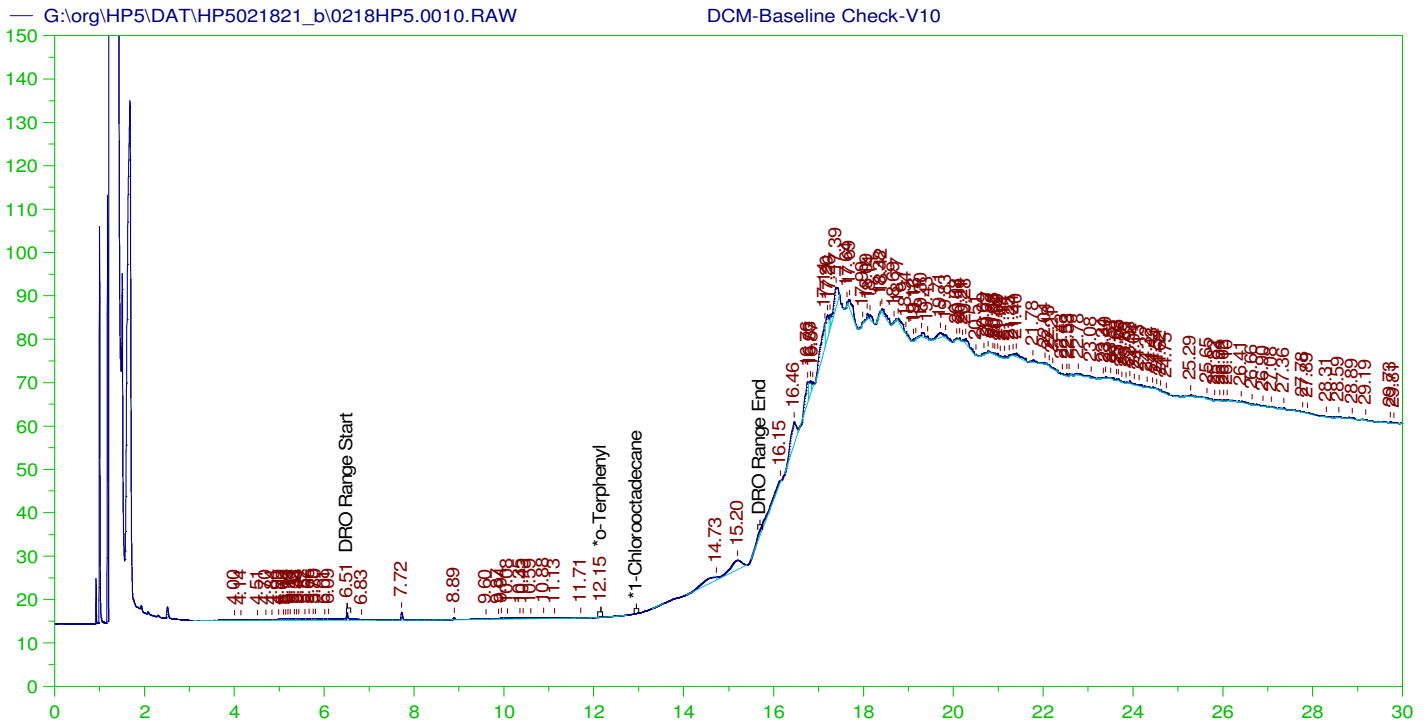
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.124	200.	1.888	.94	-
*1-Chlorooctadecane	12.984	200.	13.129	6.56	-

DRO Area: 6.73131E+07 DRO Amount: 2358.354
 TEH Area: 4.193721E+08 TEH Amount: 14692.95

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5021821_b\0218HP5.0009.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	14692.95	293.86	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.124	200.	1.888	.94	85-115
*1-Chlorooctadecane	12.984	200.	13.129	6.56	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

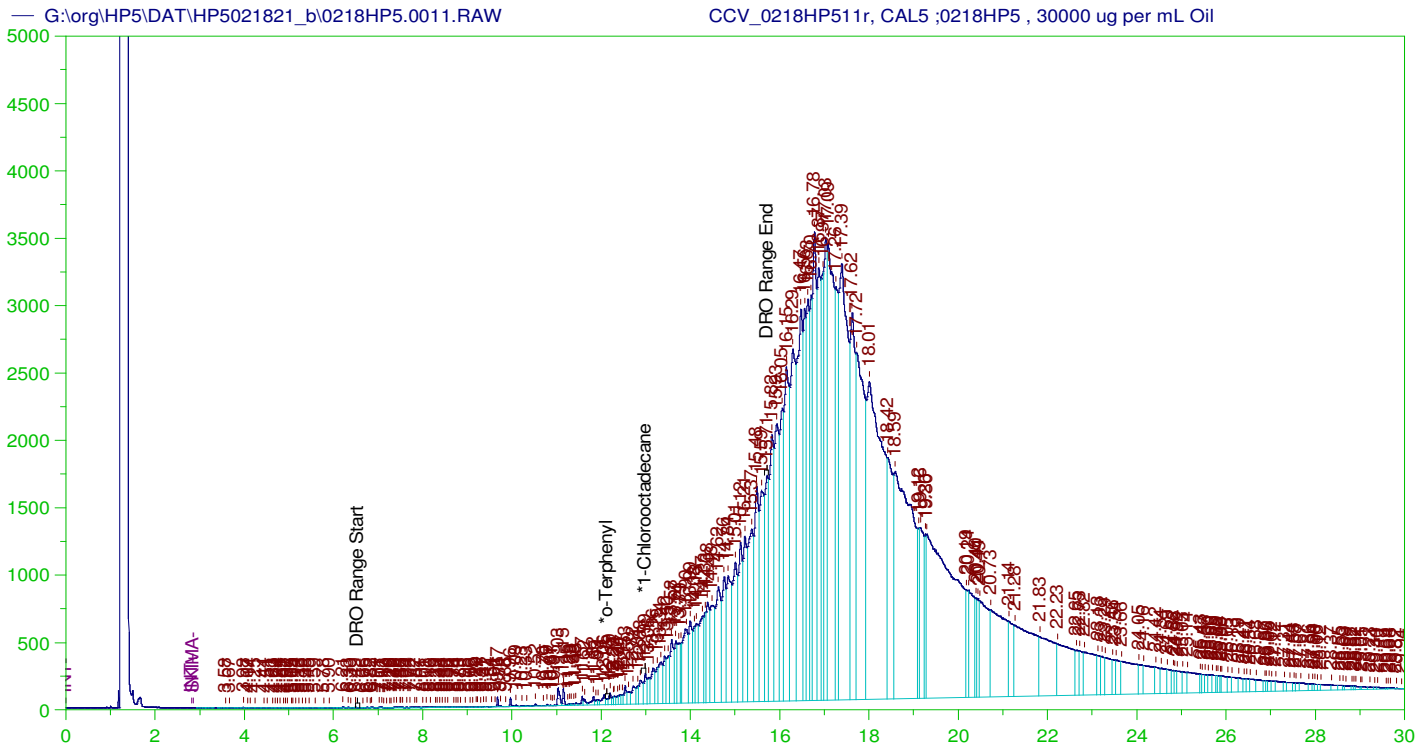
Sample Name: DCM-Baseline Check-V10
Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0010.RAW
Date & Time Acquired: 2/18/2021 4:56:16 PM
Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33

Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.153	200.	.023	.01	-
*1-Chlorooctadecane	29.957	200.	.	.	-

DRO Area: 108629.1 DRO Amount: 3.687675
TEH Area: 543425.7 TEH Amount: 18.44789



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0218HP511r, CAL5 ;0218HP5 , 30000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0011.RAW
 Date & Time Acquired: 2/18/2021 5:38:33 PM
 Method File: G:\ORG\HP5\METHODS\DR_OIL-021811-AA-L0.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_OIL210218AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 28542.41
 Rt range for Diesel Range Organics: 6.49 to 15.75

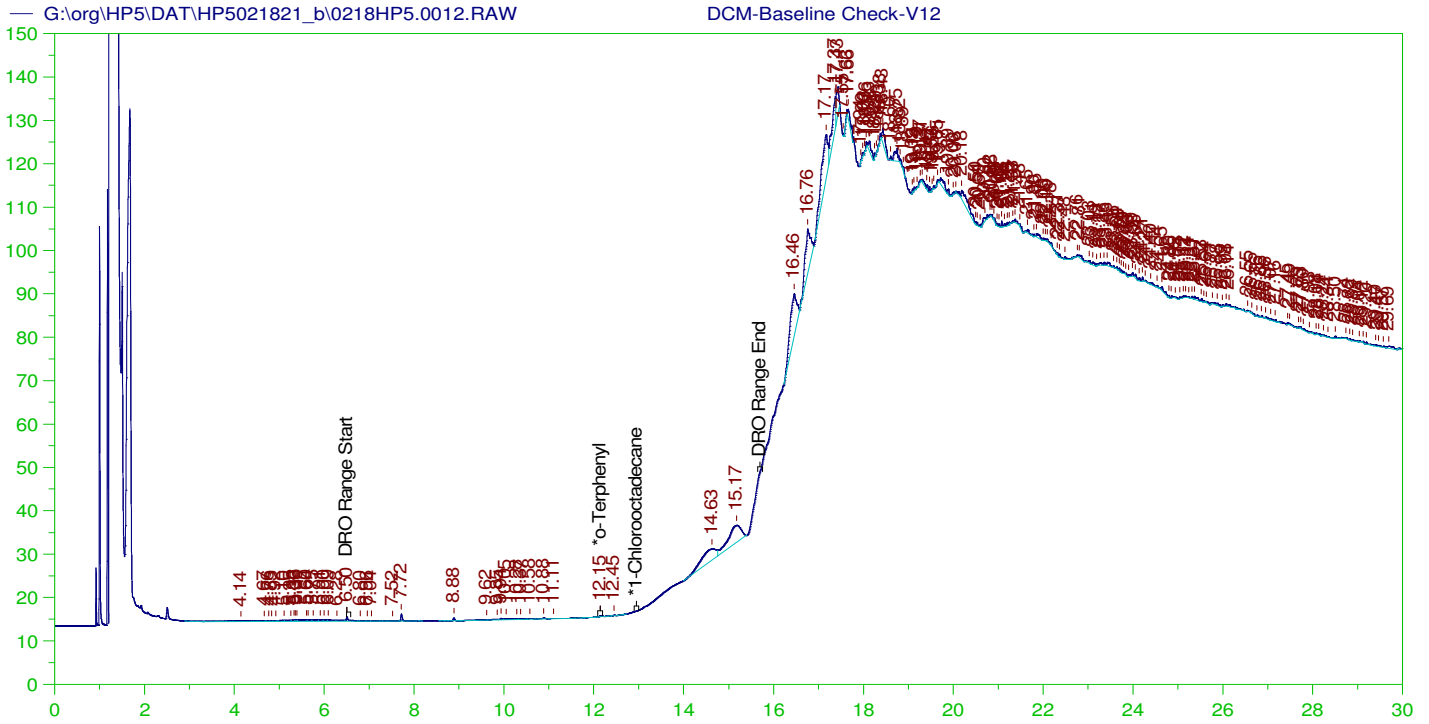
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.128	200.	3.828	1.91	-
*1-Chlorooctadecane	12.985	200.	28.22	14.11	-

DRO Area: 1.319327E+08 DRO Amount: 4622.338
 TEH Area: 8.051155E+08 TEH Amount: 28207.69

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5021821_b\0218HP5.0011.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	28207.69	564.15	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.128	200.	3.828	1.91	85-115
*1-Chlorooctadecane	12.985	200.	28.22	14.11	85-115



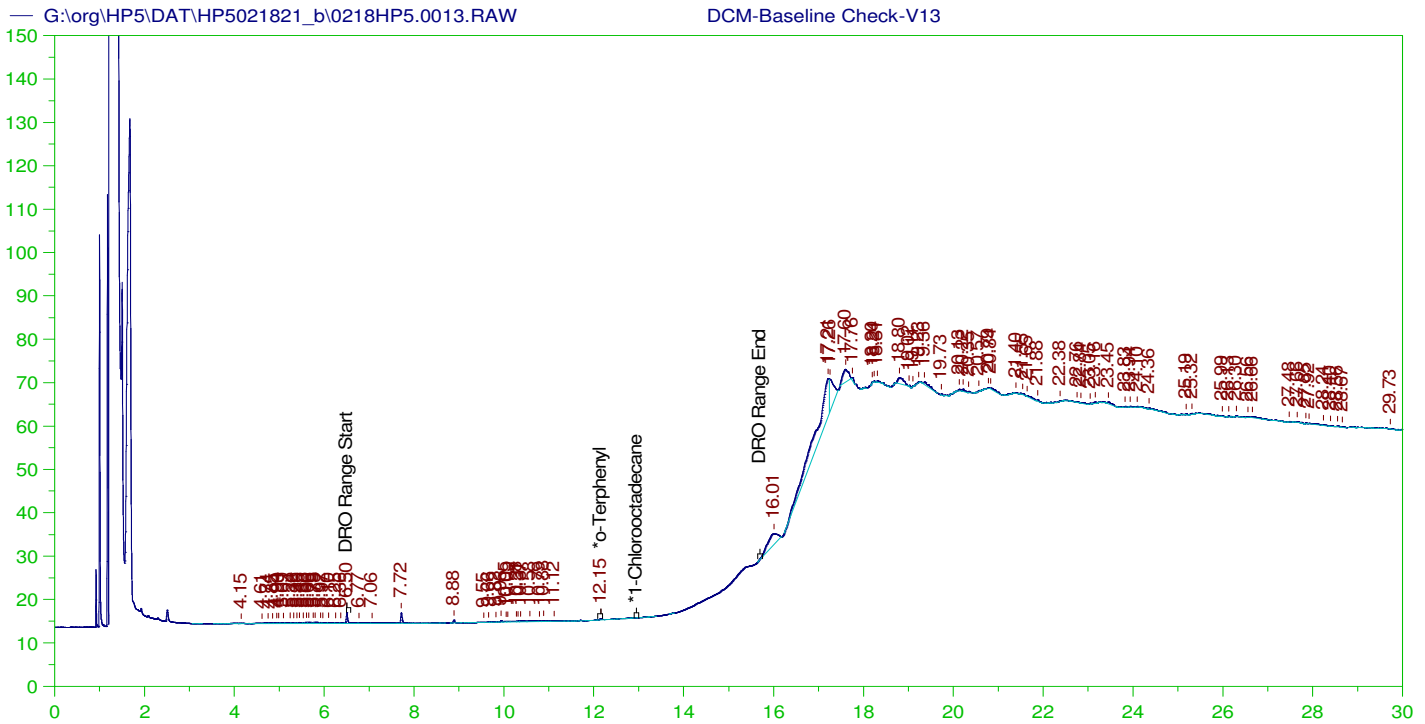
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V12
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0012.RAW
 Date & Time Acquired: 2/18/2021 6:20:48 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.146	200.	.024	.01	-
*1-Chlorooctadecane	29.981	200.	.	.	-

DRO Area:186033.1 DRO Amount: 6.31534
 TEH Area:888262.2 TEH Amount: 30.1542



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

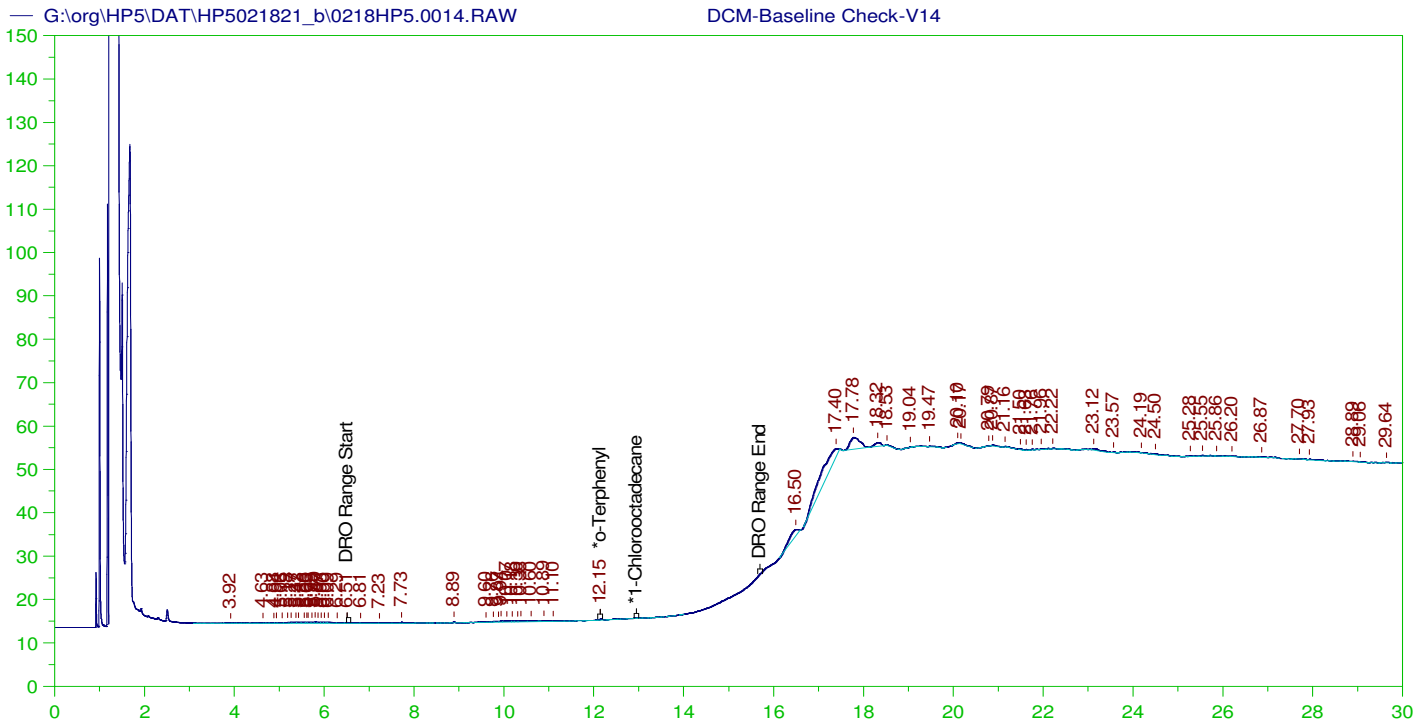
Sample Name: DCM-Baseline Check-V13
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0013.RAW
 Date & Time Acquired: 2/18/2021 7:03:01 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33

Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.152	200.	.033	.02
*1-Chlorooctadecane	29.967	200.	.	.

DRO Area:40824.55 DRO Amount: 1.385888
 TEH Area:476705.3 TEH Amount: 16.18291



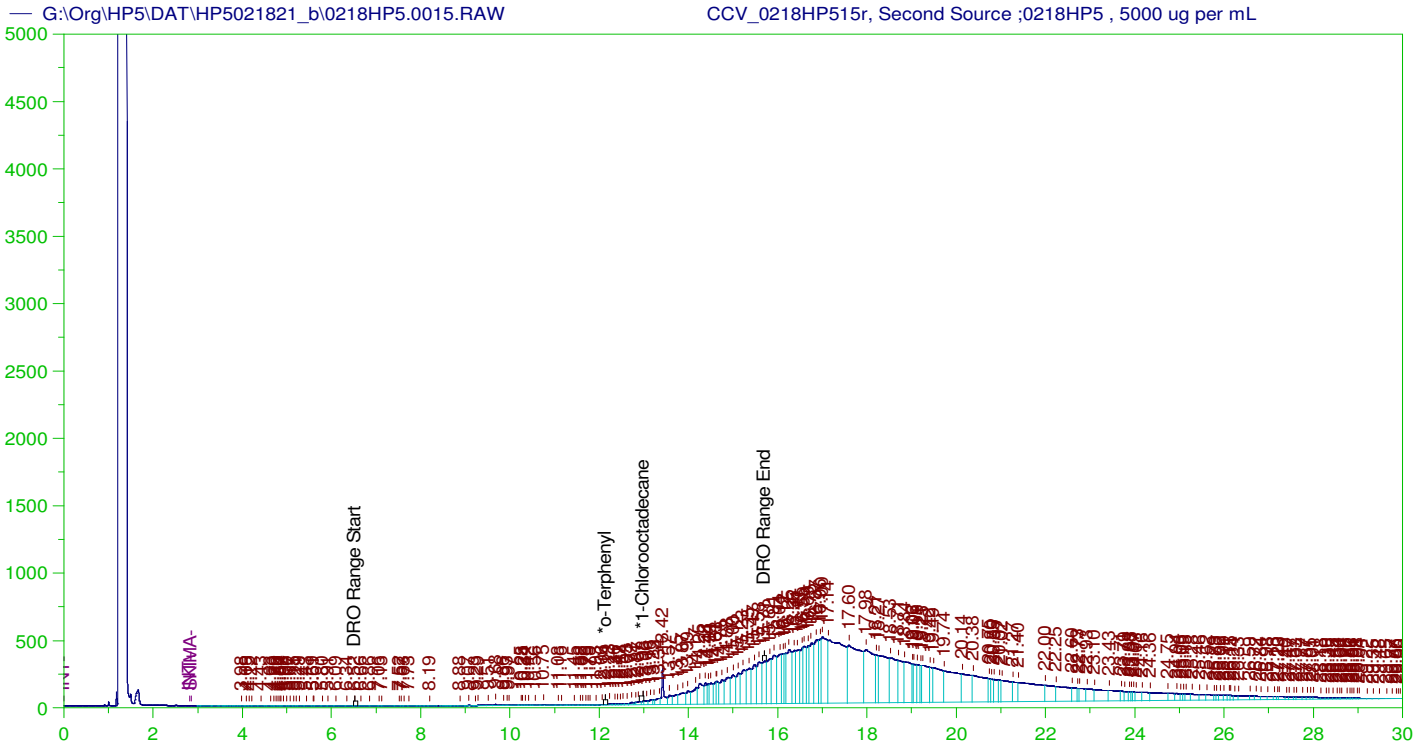
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0014.RAW
 Date & Time Acquired: 2/18/2021 7:45:21 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.148	200.	.03	.01
*1-Chlorooctadecane	29.949	200.	.	.

DRO Area:30445.24 DRO Amount: 1.033537
 TEH Area:297634.4 TEH Amount: 10.10392



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0218HP515r, Second Source ;0218HP5 , 5000 ug per mL
 Raw File: G:\Org\HP5\DAT\HP5021821_b\0218HP5.0015.RAW
 Date & Time Acquired: 2/18/2021 8:27:37 PM
 Method File: G:\ORG\HP5\METHODS\DR_OIL-021811-AA-L0.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_OIL210218AA.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.137	.2	.19	-
*1-Chlorooctadecane	12.984	.2	.003	1.62

DRO Area: 2.558549E+07 DRO Amount: 0.8964027
 TEH Area: 1.562544E+08 TEH Amount: 5.474465

CONTINUING CALIBRATION REPORT: G:\Org\HP5\DAT\HP5021821_b\0218HP5.0015.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	5.47	.11	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.137	.2	.19	1.62	85-115
*1-Chlorooctadecane	12.984	.2	.003	1.62	85-115

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj	IS	Cal ID	Manual Integration
		Marker_0218HP501r, DRO C40 ;0218HP5 , DRO210204A	G:\Org\HP5\Methods\CSC210212.met	1	1	1	1	0	No Integration
		DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		CCV_0218HP503r, CAL1 ;0218HP5 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021803-AA-L0.MET						The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 20.91 changed peak width and scale was set at 150 for the Yaxis.
		DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		CCV_0218HP505r, CAL2 ;0218HP5 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021805-AA-L0.MET						The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 26.79 changed peak width and scale was set at 300 for the Yaxis.
		DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		CCV_0218HP507r, CAL3 ;0218HP5 , 5000 ug per mL Oil (100 uL of DRO180918C + 900 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021807-AA-L0.MET						The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the baseline. Scale was set at 3000 for the Yaxis.
		DCM-Baseline Check-V08	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		CCV_0218HP509r, CAL4 ;0218HP5 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021807-AA-L0.MET						The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the baseline. Scale was set at 3000 for the Yaxis.
		DCM-Baseline Check-V10	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		CCV_0218HP511r, CAL5 ;0218HP5 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)	G:\Org\HP5\Methods\DR_OIL-021811-AA-L0.MET						The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the baseline. Scale was set at 5000 for the Yaxis.
		DCM-Baseline Check-V12	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		DCM-Baseline Check-V13	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		DCM-Baseline Check-V14	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
		CCV_0218HP515r, Second Source ;0218HP5 , 5000 ug per mL (100uL of DRO210217A + 300uL DCM(13510))	G:\Org\HP5\Methods\DR_OIL-021811-AA-L0.MET						The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the baseline. Scale was set at 5000 for the Yaxis.



Digitally signed by
Ann Nebel
Date: 2021.10.29 12:03:40 -06:00

Energy Laboratories Inc

ANALYTICAL RUN Summary

25-Oct-21

Run ID GCFID-HP5-B_211017A

Run Start Date: 10/17/2021
Analyst: Ann Nebel
Ical:
Column ID:
Comments: Triacontane ICAL

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO211006A	Triacontane SURR 2000 ug/mL					SURR	4/6/2026

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14777567	CCV_1017HP50	HC-8015-DRO-	CAL1		10/17/2021 3:30:	1	R368813		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.00202757		0.002	0	0	0.002	0.002	0	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14777568	CCV_1017HP50	HC-8015-DRO-	CAL2		10/17/2021 4:12:	1	R368813		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.04817772		0.05	0	0	0.002	0.002	0	96%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14777569	CCV_1017HP50	HC-8015-DRO-	CAL3		10/17/2021 4:55:	1	R368813		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.2231112		0.2	0	0	0.002	0.002	0	112%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14777570	CCV_1017HP50	HC-8015-DRO-	CAL4		10/17/2021 5:38:	1	R368813		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.4700634		0.5	0	0	0.002	0.002	0	94%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
14777571	CCV_1017HP50	HC-8015-DRO-	CAL5		10/17/2021 6:20:	1	R368813		0	0						
n-Triacontane	S	mg/L		0.9372648		1	0	0	0.002	0.002	0	94%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
	G:\org\HP5\DAT\HP5101721_b\1017HP5.01r	DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.02r	DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.03r	CCV_1017HP503r, DRO ;1017HP5 , DRO210708A	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.04r	DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.05r	CCV_1017HP505r, CAL1 ;1017HP5 , 2 ug per mL Triacotane (10 uL of Cal3 + 990 uL DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.06r	CCV_1017HP506r, CAL2 ;1017HP5 , 50 ug per mL Triacotane (100 uL Cal4 + 900 uL of DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.07r	CCV_1017HP507r, CAL3 ;1017HP5 , 200 ug per mL Triacotane (100uL of Cal5 + 400 uL DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.08r	CCV_1017HP508r, CAL4 ;1017HP5 , 500 ug per mL Triacotane (250uL of Cal5 + 250 uL DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.09r	CCV_1017HP509r, CAL5 ;1017HP5 , 1000 ug per mL Triacotane (500 uL 2000 ug/mL Triacotane DRO211006A + 500 DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0

File Name: G:\Org\HP5\Cals\SW8015C_ORO211017AA.CAL

Version: 11

Creator: AMN

Description: 8015C-Oil Range. New ICal Per 1017HP5 (2021)-2 uL Inj.; RRO copied from 8015 cal for Oil

Reason for change:

External standard calibration

Standard injection volume: 1

Standard sample weight: 1

Area reject threshold: 500

Reference peak area reject threshold: 500

Amount units: nanograms

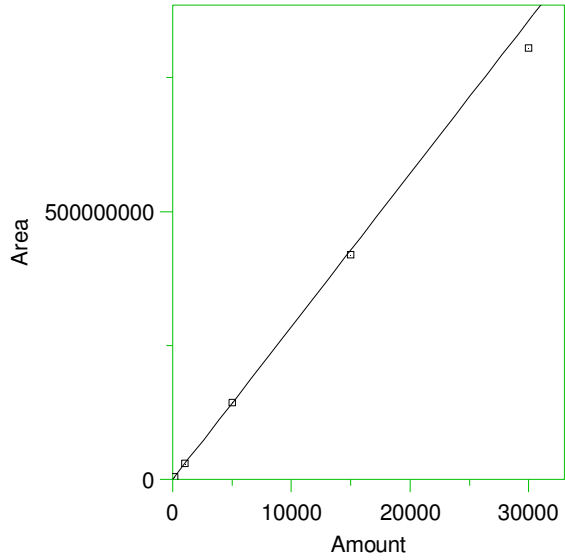
No default component

Method of calculating data point averages: Equal weight for all updates

No calibration update report

All levels are normal data points.

1 *30-40 Motor Oil



Expected retention time: 6.4 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

Single peak quantification by area

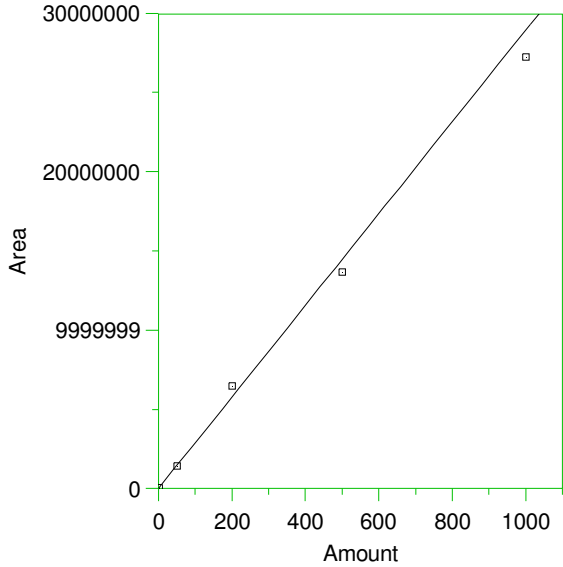
$Y = 28542.41 X + 0$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9940317
 Average error: 3.209%
 Average CF: 28542.41
 RSD: 4.497%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	4325287	28835.25	1.026	Manual	10/18/2021 2:26:35 PM
2	1000	3.03352E+07	30335.2	6.281	Manual	10/18/2021 2:26:39 PM
3	5000	1.437314E+08	28746.28	0.714	Manual	10/18/2021 2:26:42 PM
4	15000	4.193721E+08	27958.14	-2.047	Manual	10/18/2021 2:26:45 PM
5	30000	8.051155E+08	26837.18	-5.974	Manual	10/18/2021 2:26:47 PM

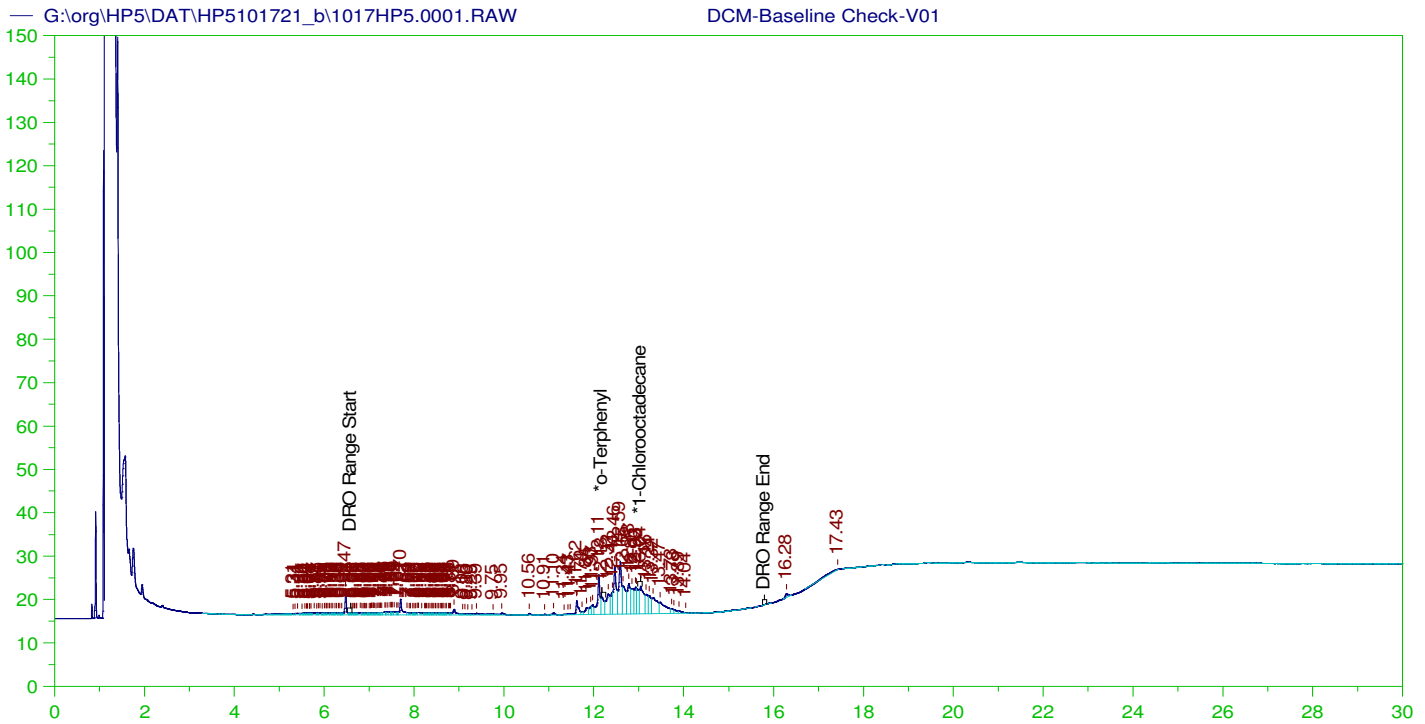
3

*#Triacontane



Expected retention time: 16.26 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 28930.14 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9919451
 Average error: 5.737%
 Average CF: 28930.14
 RSD: 7.577%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	59020.1	29510.05	2.005	Manual	10/18/2021 2:42:38 PM
2	50	1403134	28062.68	-2.998	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0015.BND	10/7/2021 12:47:26 PM
3	200	6499949	32499.74	12.339	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0017.BND	10/7/2021 12:47:56 PM
4	500	1.366713E+07	27334.26	-5.516	Manual	10/18/2021 2:44:43 PM
5	1000	2.724398E+07	27243.98	-5.828	Manual	10/18/2021 2:43:45 PM



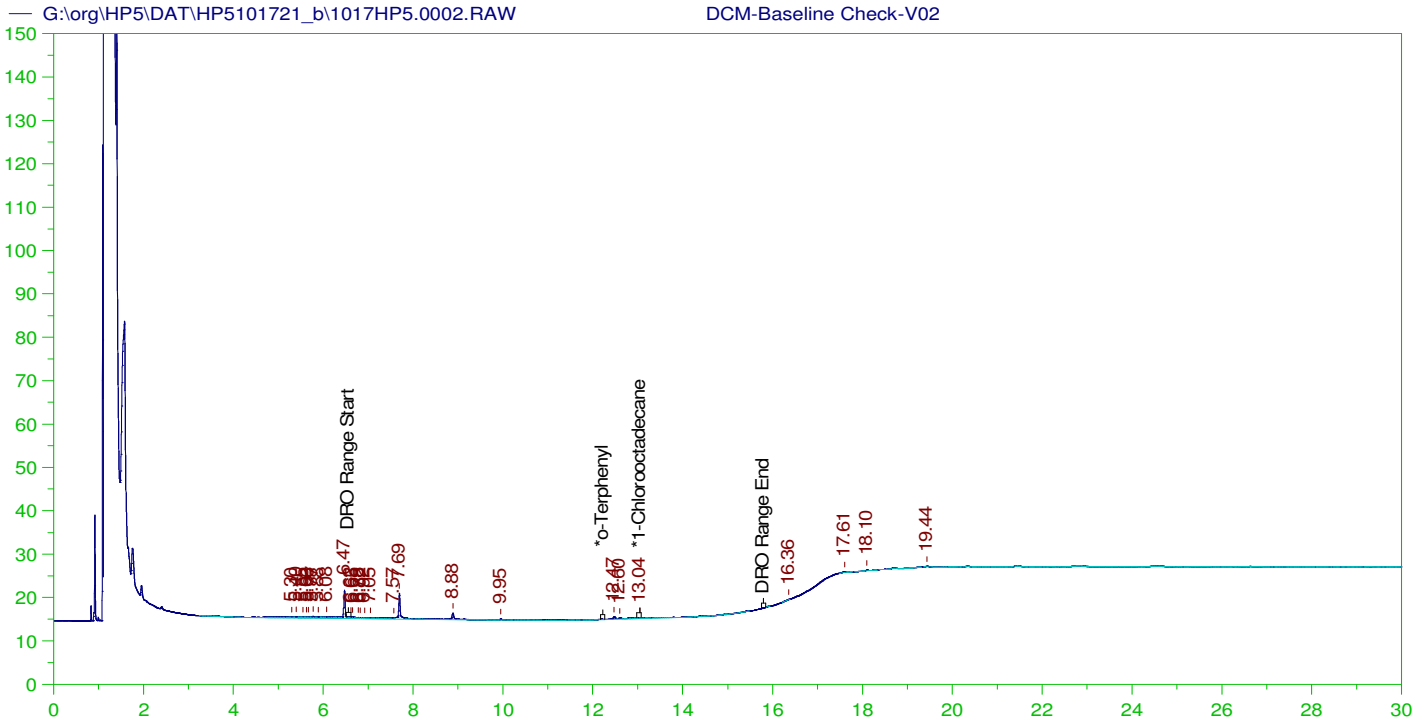
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0001.RAW
 Date & Time Acquired: 10/17/2021 12:40:02 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HS-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108Hs.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.51 to 15.85

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.178	200.	.522	.26	-
*1-Chlorooctadecane	13.04	200.	1.235	.62	-

DRO Area: 571771.5 DRO Amount: 19.41016
 TEH Area: 639555.1 TEH Amount: 21.71124



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

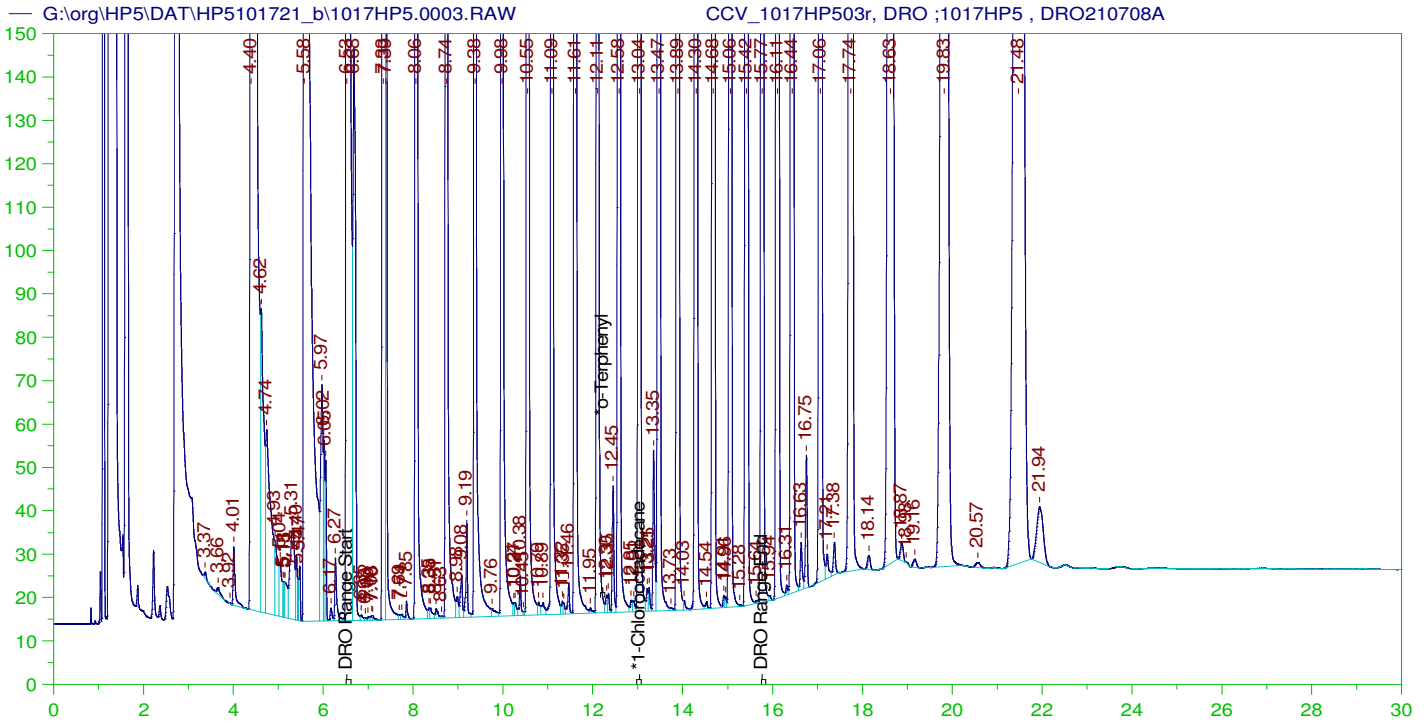
Sample Name: DCM-Baseline Check-V02
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0002.RAW
 Date & Time Acquired: 10/17/2021 1:22:21 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HS-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108Hs.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33

Rt range for Diesel Range Organics: 6.51 to 15.85

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.973	200.	.	-
*1-Chlorooctadecane	13.043	200.	.018	.01 -

DRO Area:58862.56 DRO Amount: 1.998231
 TEH Area:105899.4 TEH Amount: 3.595009



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1017HP503r, DRO ;1017HP5 , DRO210708A
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0003.RAW
 Date & Time Acquired: 10/17/2021 2:04:53 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HS-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108Hs.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.51 to 15.85

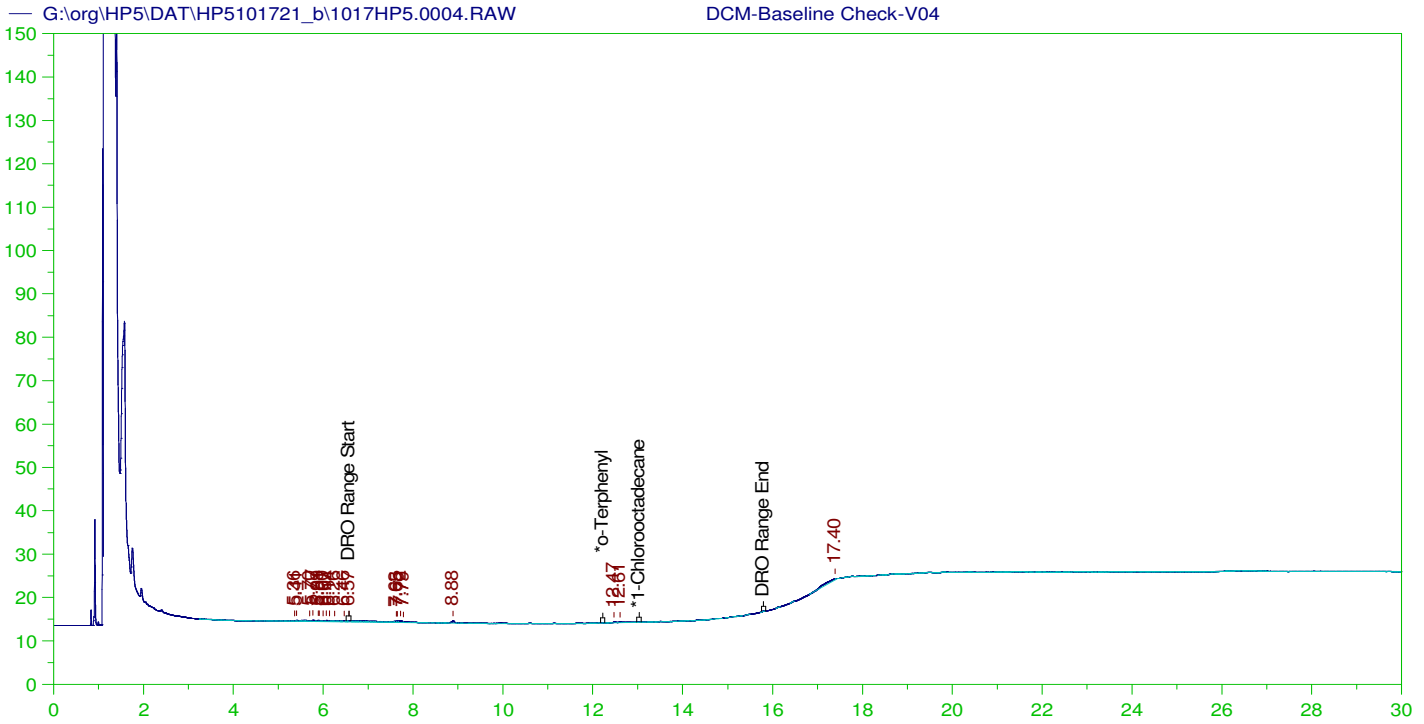
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.982	200.	.	-
*1-Chlorooctadecane	13.037	200.	255.634	127.82 -

DRO Area: 1.592713E+08 DRO Amount: 5406.847
 TEH Area: 2.370861E+08 TEH Amount: 8048.458

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0003.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8048.46	53.66	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	29.982	200.	.	.	85-115
*1-Chlorooctadecane	13.037	200.	255.634	127.82	85-115



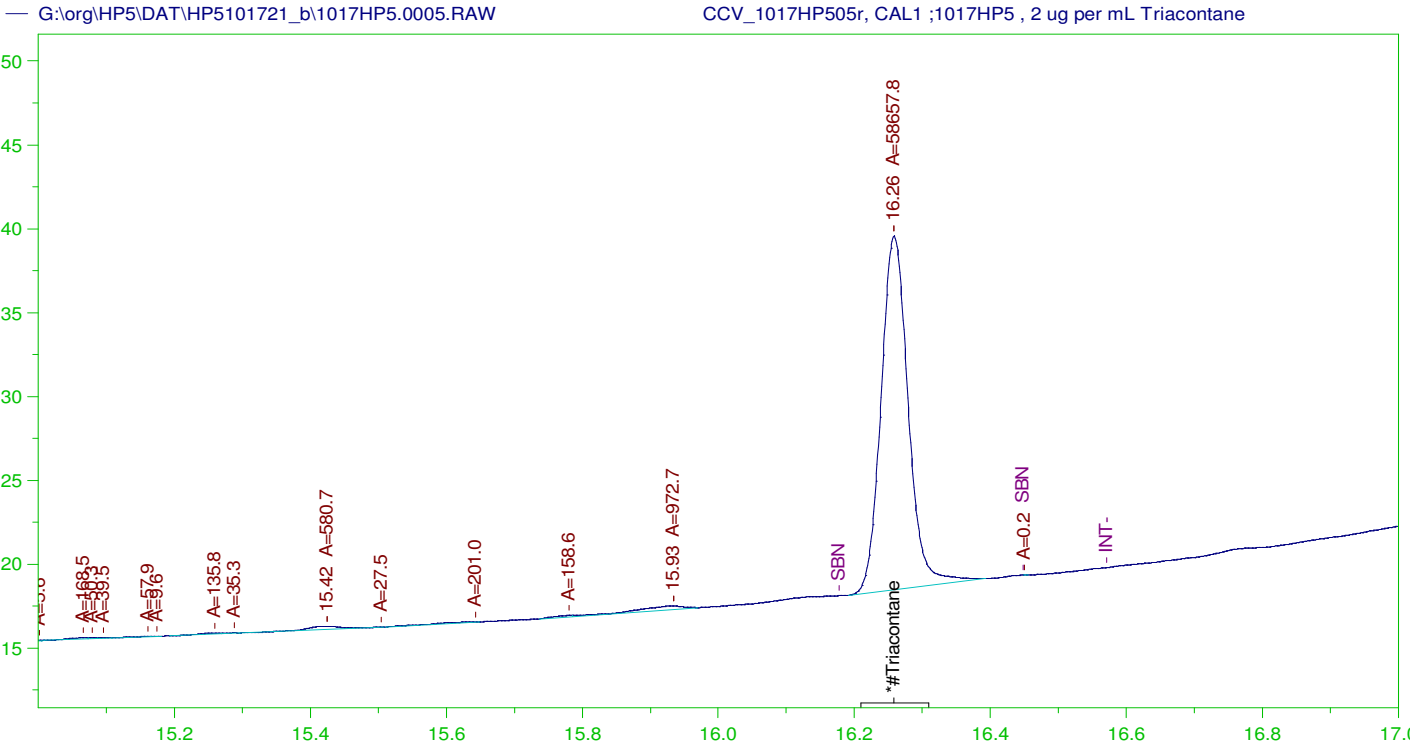
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V04
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0004.RAW
 Date & Time Acquired: 10/17/2021 2:47:29 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HS-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108Hs.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.51 to 15.85

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.987	200.	.	-
*1-Chlorooctadecane	29.987	200.	.	-

DRO Area:32637.46 DRO Amount: 1.107957
 TEH Area:75218.02 TEH Amount: 2.553457



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1017HP505r, CAL1 ;1017HP5 , 2 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0005.RAW
 Date & Time Acquired: 10/17/2021 3:30:16 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AA-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.258	500.	2.028	.41	-

RRO Area:2747.039 RRO AMOUNT: 9.624412E-02

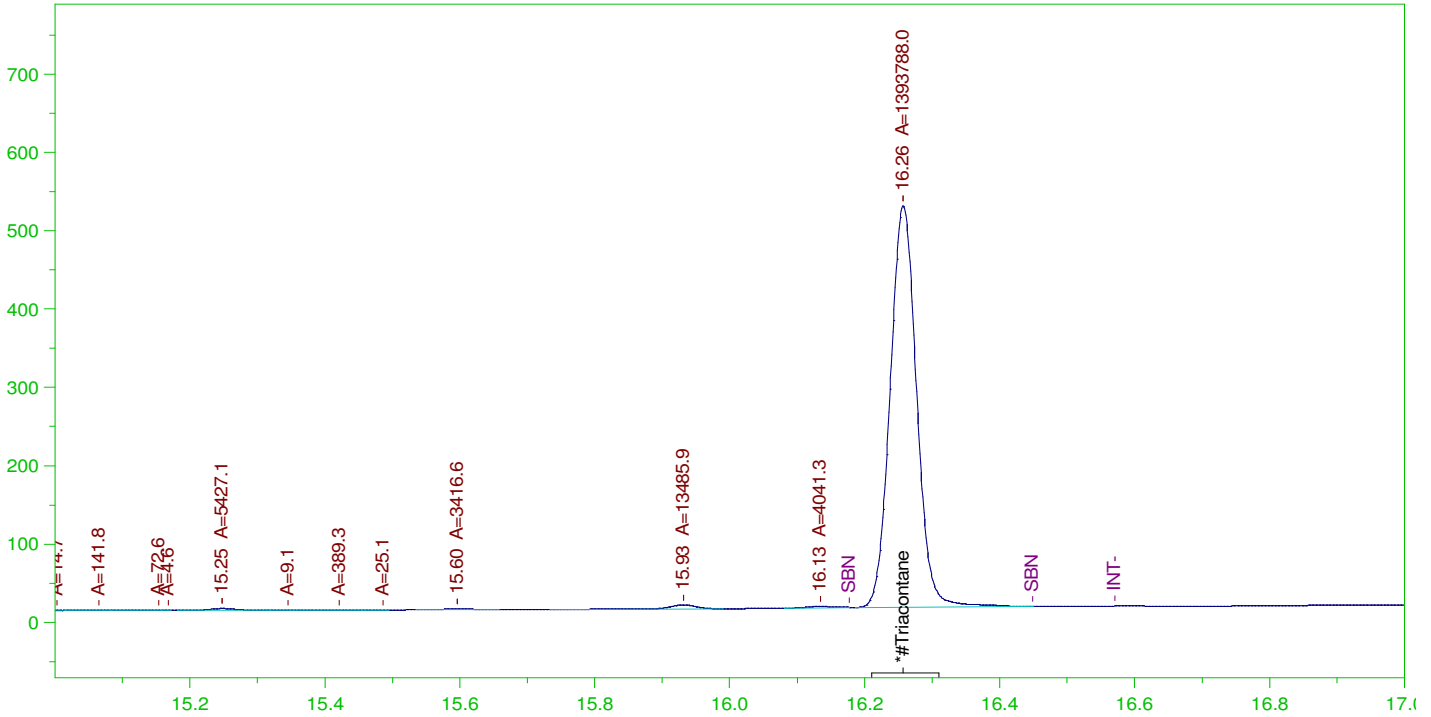
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.	75-125	

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.258	200.	2.028	1.01	75-125

G:\org\HP5\DAT\HP5101721_b\1017HP5.0006.RAW

CCV_1017HP506r, CAL2 ;1017HP5 , 50 ug per mL Triacontane



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1017HP506r, CAL2 ;1017HP5 , 50 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0006.RAW
 Date & Time Acquired: 10/17/2021 4:12:57 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AA-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.53 to 30.05

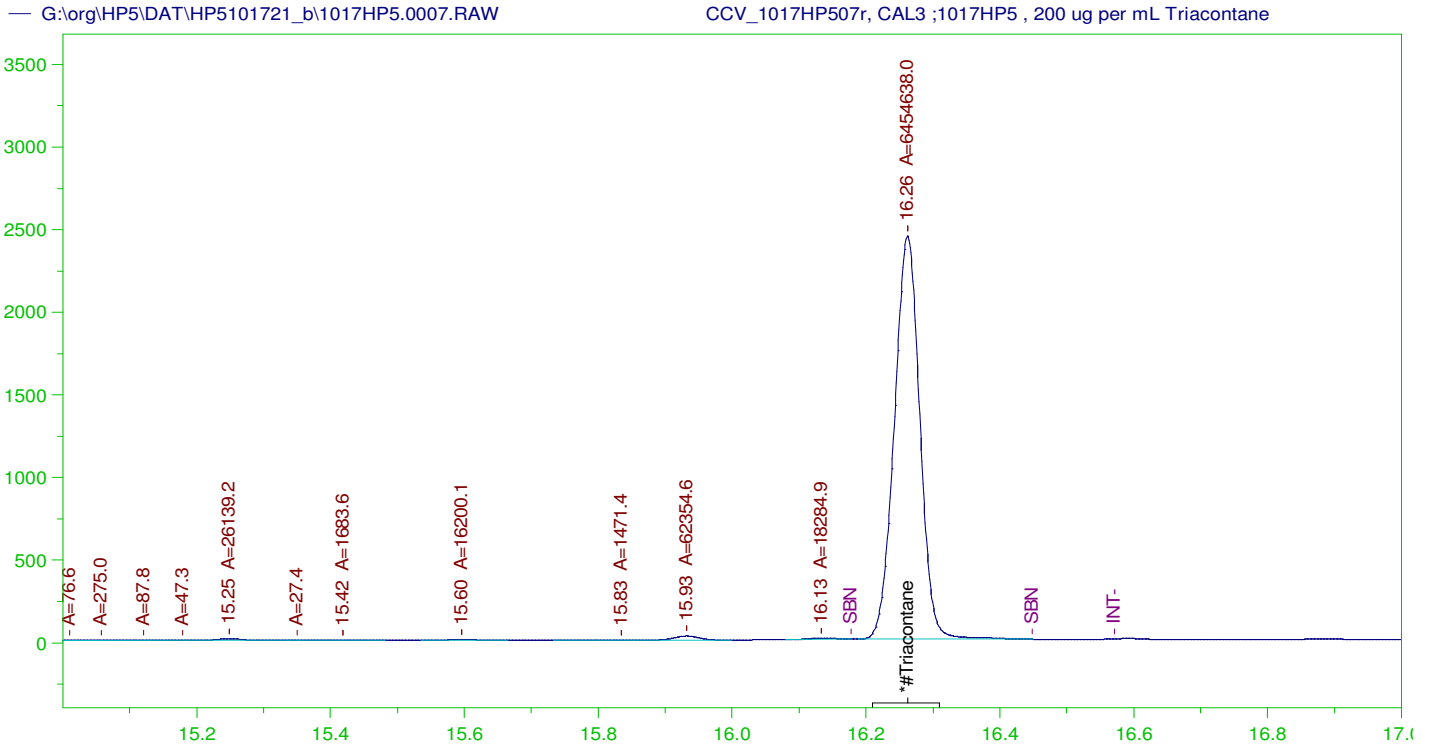
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.257	500.	48.178	9.64	-

RRO Area:45902.25 RRO AMOUNT: 1.608212

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0006.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.	75-125	

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.257	200.	48.178	24.09	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1017HP507r, CAL3 ;1017HP5 , 200 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0007.RAW
 Date & Time Acquired: 10/17/2021 4:55:33 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AA-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.53 to 30.05

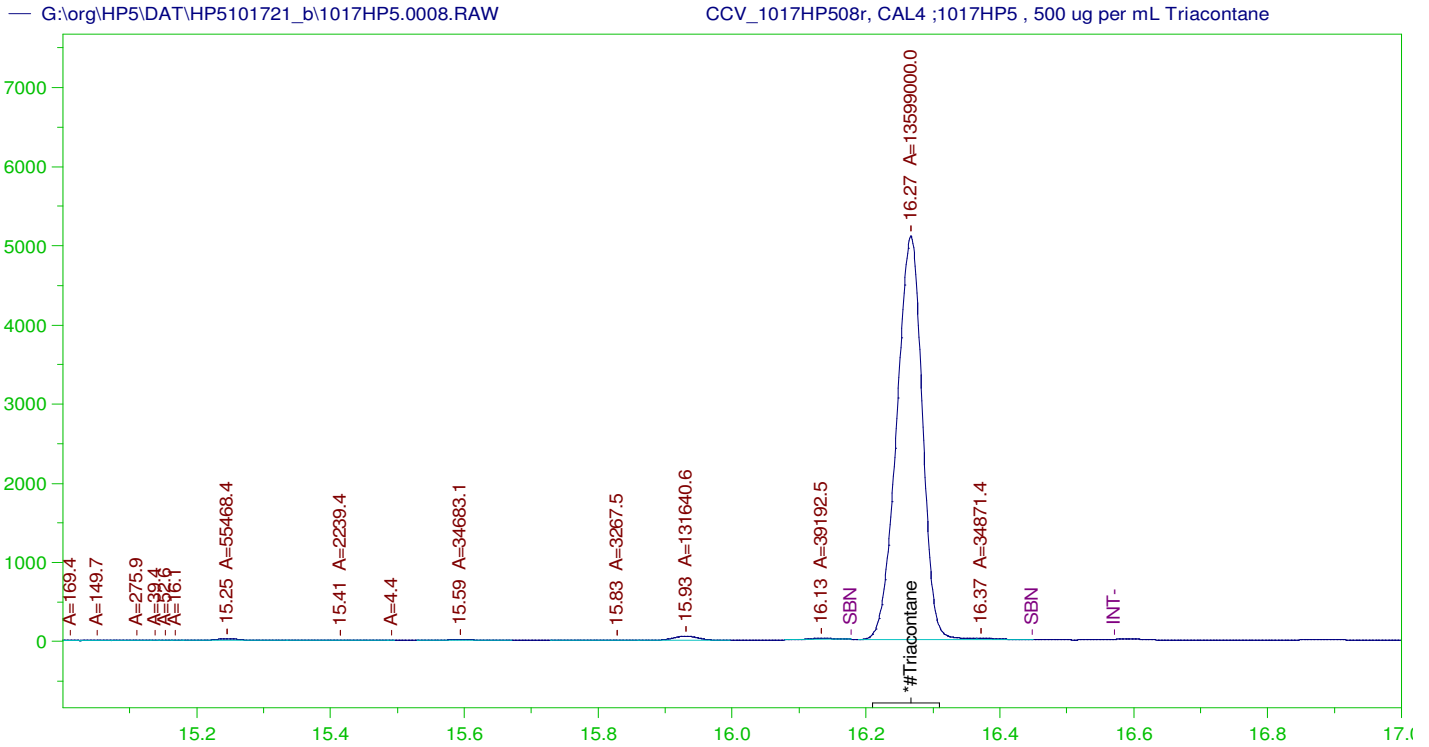
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.262	500.	223.111	44.62

RRO Area:219754.5 RRO AMOUNT: 7.699227

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0007.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.	75-125	

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.262	200.	223.111	111.56	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1017HP508r, CAL4 ;1017HP5 , 500 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0008.RAW
 Date & Time Acquired: 10/17/2021 5:38:10 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AA-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.53 to 30.05

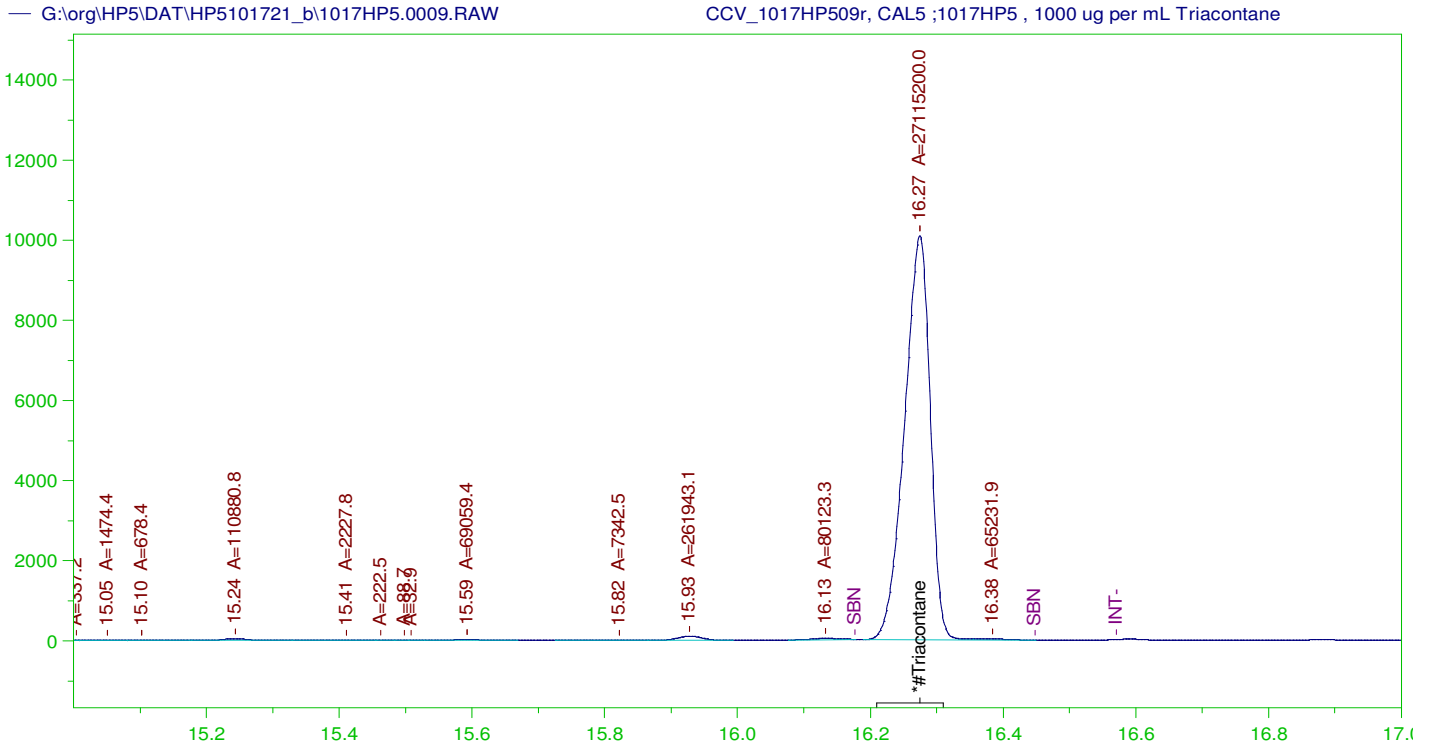
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.267	500.	470.063	94.01

RRO Area:496538.4 RRO AMOUNT: 17.39651

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0008.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.	75-125	

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.267	200.	470.063	235.03	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1017HP509r, CAL5 ;1017HP5 , 1000 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0009.RAW
 Date & Time Acquired: 10/17/2021 6:20:57 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AA-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.275	500.	937.265	187.45

RRO Area:979213.9 RRO AMOUNT: 34.30733

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0009.RAW
 COMPOUND ACTUAL (NG) MEASURED (NG) %RECOVERY LIMITS
 *30-40 Motor Oil 5000. . . 75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.275	200.	937.265	468.63	75-125

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integration
	G:\org\HP5\DAT\HP5101721_b\1017HP5.01r	DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0	No integration
	G:\org\HP5\DAT\HP5101721_b\1017HP5.02r	DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0	No integration
	G:\org\HP5\DAT\HP5101721_b\1017HP5.03r	CCV_1017HP503r, DRO :1017HP5 , DRO210708A	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0	No integration
	G:\org\HP5\DAT\HP5101721_b\1017HP5.04r	DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0	No integration
	G:\org\HP5\DAT\HP5101721_b\1017HP5.05r	CCV_1017HP505r, CAL1 ;1017HP5 , 2 ug per mL Triacotane (10 uL of Cal3 + 990 uL DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 and slightly after the surrogate peak at 16.45 and scaling showing surrogate peak from 15.0-17.0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.06r	CCV_1017HP506r, CAL2 ;1017HP5 , 50 ug per mL Triacotane (100 uL Cal4 + 900 uL of DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 and slightly after the surrogate peak at 16.45 and scaling showing surrogate peak from 15.0-17.0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.07r	CCV_1017HP507r, CAL3 ;1017HP5 , 200 ug per mL Triacotane (100uL of Cal5 + 400 uL DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 and slightly after the surrogate peak at 16.45 and scaling showing surrogate peak from 15.0-17.0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.08r	CCV_1017HP508r, CAL4 ;1017HP5 , 500 ug per mL Triacotane (250uL of Cal5 + 250 uL DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 and slightly after the surrogate peak at 16.45 and scaling showing surrogate peak from 15.0-17.0
	G:\org\HP5\DAT\HP5101721_b\1017HP5.09r	CCV_1017HP509r, CAL5 ;1017HP5 , 1000 ug per mL Triacotane (500 uL 2000 ug/mL Triacotane DRO211006A + 500 DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 and slightly after the surrogate peak at 16.45 and scaling showing surrogate peak from 15.0-17.0



Digitally signed by
Ann Nebel
Date: 2021.10.25 17:42:58 -06:00

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **162703** Prep Temp **NA °C**

Technician: **Jillian L Bostwick**
 Batch Units: **ML**

Prep Start Date: **1/4/2022 4:45:04 PM**
 Prep End Date: **1/6/2022 12:29:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-162703			1000	0	0	1.00	0.001		1/4/2022	1/5/2022
Start time: 01/04/2022 at 4:45 PM. End time: 01/05/2022 at 10:47 AM SGT was done by ALN on remainder of sample on 1/7/2022.										
LCS-162703			1000	0	0	1.00	0.001		1/4/2022	1/5/2022
All bottles were completely used, defaced and disposed of on 01/04/2022 GT was done by ALN on remainder of sample on 1/7/2022.										
LCSD-162703			1000	0	0	1.00	0.001		1/4/2022	1/5/2022
GT was done by ALN on remainder of sample on 1/7/2022.										
LCSD-162703-RRO			1000	0	0	1.00	0.001		1/4/2022	1/5/2022
GT was done by ALN on remainder of sample on 1/7/2022.										
LCS-162703-RRO			1000	0	0	1.00	0.001		1/4/2022	1/5/2022
GT was done by ALN on remainder of sample on 1/7/2022.										
B22010096-001D	Ground Water	2	1010	0	0	1.00	0.00099		1/4/2022	1/5/2022
Bottle 1/2 Clear GT was done by ALN on remainder of sample on 1/7/2022.										
B22010096-001DMS	Ground Water	2	1030	0	0	1.00	0.000971		1/4/2022	1/5/2022
Bottle 2/2 Clear GT was done by ALN on remainder of sample on 1/7/2022.										
B22010120-001D	Ground Water	2	1000	0	0	1.00	0.001		1/4/2022	1/5/2022
Bottle 1/2 Clear GT was done by ALN on remainder of sample on 1/7/2022.										
B22010120-001DMS-RRO	Ground Water	2	1030	0	0	1.00	0.000971		1/4/2022	1/5/2022
Bottle 2/2 Clear GT was done by ALN on remainder of sample on 1/7/2022.										
B22010134-001D	Ground Water	2	1040	0	0	1.00	0.000962		1/4/2022	1/5/2022
Bottle 1/2 Clear GT was done by ALN on remainder of sample on 1/7/2022.										
B22010141-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/4/2022	1/5/2022
Bottle 1/2 Light sediment.										
B22010142-001D	Ground Water	2	970	0	0	1.00	0.00103		1/4/2022	1/5/2022
Bottle 1/2 Clear										
B22010143-001D	Ground Water	2	1050	0	0	1.00	0.000952		1/4/2022	1/5/2022
Bottle 1/2 Clear SGT was done by ALN on remainder of sample on 1/7/2022.										
B22010145-001D	Ground Water	2	1000	0	0	1.00	0.001		1/4/2022	1/5/2022
Bottle 1/2 Clear SGT was done by ALN on remainder of sample on 1/7/2022.										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14563	4ML, Amber Vial, 171001407106	11/30/2022
14647	Dichloromethane EC832	10/28/2023
14719	4ML, Amber Vial, 20220104	1/4/2027

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220102 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
SG220101(13376)	Baked Silica Gel	all	5g	2/28/2030
Sulfate 12/27/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026
DRO211220D	Triacotane SURR 1000 ug/mL	Lines 1-15 except	100 uL	4/6/2026
DRO220105A	Triacotane SURR 1000 ug/mL	Lines 15-23 excep	100 uL	4/6/2026

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **162703** Prep Temp **NA °C**

Technician: **Jillian L Bostwick**
 Batch Units: **ML**

Prep Start Date: **1/4/2022 4:45:04 PM**
 Prep End Date: **1/6/2022 12:29:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B22010148-001D Bottle 1/2 Clear	Ground Water	2	1040	0	0	1.00	0.000962		1/4/2022	1/5/2022
B22010209-001D Bottle 1/2 Clear. Lines 16-22 Start time: 01/05/2022 at 2:55 PM. End time: 01/06/2022 at 8:55 AM	Ground Water	2	1040	0	0	1.00	0.000962		1/5/2022	1/6/2022
B22010211-001D Bottle 1/2 Turbid, light sediment.	Ground Water	2	1030	0	0	1.00	0.000971		1/5/2022	1/6/2022
B22010212-001D Bottle 1/2 Clear	Ground Water	2	1050	0	0	1.00	0.000952		1/5/2022	1/6/2022
B22010213-001D Bottle 1/2 Clear	Ground Water	2	1030	0	0	1.00	0.000971		1/5/2022	1/6/2022
B22010213-002B Bottle 1/2 Clear	Ground Water	2	1000	0	0	1.00	0.001		1/5/2022	1/6/2022
B22010213-003D Bottle 1/2 Clear	Ground Water	2	1020	0	0	1.00	0.00098		1/5/2022	1/6/2022
B22010214-001D Bottle 1/2 Clear	Ground Water	2	1050	0	0	1.00	0.000952		1/5/2022	1/6/2022
B22010219-001D Bottle 1/2 Clear Start time: 01/05/2022 at 3:15 PM. End time: 01/06/2022 at 9:15 AM.	Drinking Water	2	1000	0	0	1.00	0.001		1/5/2022	1/6/2022

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14563	4ML, Amber Vial, 171001407106	11/30/2022
14647	Dichloromethane EC832	10/28/2023
14719	4ML, Amber Vial, 20220104	1/4/2027

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220102 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
SG220101(13376)	Baked Silica Gel	all	5g	2/28/2030
Sulfate 12/27/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026
DRO211220D	Triacotane SURR 1000 ug/mL	Lines 1-15 except	100 uL	4/6/2026
DRO220105A	Triacotane SURR 1000 ug/mL	Lines 15-23 excep	100 uL	4/6/2026

Energy Laboratories Inc

ANALYTICAL RUN Summary

10-Jan-22

Run ID GCFID-HP5-B_220106A

Run Start Date: 1/6/2022
Analyst: Ann Nebel
Ical:
Column ID:
Comments: DRO-8015-ICAL information is in Index GCFID-HP5-B_211102A 8015C OIL range calibration GCFID-HP5-B_210218B

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO211220B	Carbon Scan STD-Marker					MARKER	3/5/2028
DRO220105B	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023
DRO220106A	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-RRO	4/6/2026

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967547	CCV_0106HP50	HC-8015-DRO-	CCV		1/6/2022 9:56:57	1	R372834		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.49463037		5	0	0	0.0879	0.3	0	90%	80	120	0%	
n-Triacontane	S	mg/L		0.2061814		0.2	0	0	0.000336	0.002	0	103%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967548	CCV_0106HP50	HC-8015-DRO-	CCV		1/6/2022 10:40:0	1	R372834		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		16.68486		15	0	0	0.0389	0.3	0	111%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		17.29743		15	0	0	0.0749	0.3	50	115%	80	120	0%	
o-Terphenyl	S	mg/L		0.2199382		0.2	0	0	0.000429	0.002	0	110%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967549	LCS-162703	HC-8015-DRO-	LCS-DOD		1/6/2022 12:06:3	1	162703	1/4/2022 4:4	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
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Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967549	LCS-162703	HC-8015-DRO-	LCS-DOD		1/6/2022 12:06:3	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		17.38333		15	0	0	0.0389	0.3	0	116%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		18.58735		15	0	0	0.0749	0.3	50	124%	60	132	0%	
o-Terphenyl	S	mg/L		0.2379754		0.2	0	0	0.000429	0.002	0	119%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967550	LCSD-162703	HC-8015-DRO-	LCSD-DOD		1/6/2022 12:49:3	1	162703	1/4/2022 4:4	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		16.1535		15	0	17.38333	0.0389	0.3	0	108%	36	132	7%	
Total Extractable Hydrocarbons	A	mg/L		17.27746		15	0	18.58735	0.0749	0.3	50	115%	60	132	7%	
o-Terphenyl	S	mg/L		0.2280729		0.2	0	0	0.000429	0.002	0	114%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967551	MB-162703	HC-8015-DRO-	MBLK		1/6/2022 1:32:50	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0389	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0879	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0749	0.15	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1291		0.1	0	0	0.000336	0.002	0	129%	50	150	0%	
o-Terphenyl	S	mg/L		0.2286053		0.2	0	0	0.000429	0.002	0	114%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967552	B22010096-001	HC-8015-DRO-	SAMP		1/6/2022 2:16:04	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.038511	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.087021	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.074151	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1224		0.099	0	0	0.0003326	0.00198	0	124%	50	150	0%	
o-Terphenyl	S	mg/L		0.2144008		0.198	0	0	0.0004247	0.002	0	108%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967553	B22010120-001	HC-8015-DRO-	SAMP		1/6/2022 2:59:14	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.2549659		0	0	0	0.0389	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.50763142		0	0	0	0.0879	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.8623871		0	0	0	0.0749	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1248		0.1	0	0	0.000336	0.002	0	125%	50	150	0%	
o-Terphenyl	S	mg/L		0.1581854		0.2	0	0	0.000429	0.002	0	79%	56	125	0%	
TEH(Oil Range)	X	mg/L		0.79904789		0	0	0	0.0879	0.3	0	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967554	B22010096-001	HC-8015-DRO-	MS-DOD		1/6/2022 3:42:14	1	162703	1/4/2022 4:4	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		16.04183		14.565	0	0	0.0377719	0.3	0	110%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		17.26941		14.565	0	0	0.0727279	0.3	50	119%	60	132	0%	
o-Terphenyl	S	mg/L		0.2190913		0.1942	0	0	0.0004166	0.002	0	113%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967555	B22010143-001	HC-8015-DRO-	SAMP		1/6/2022 5:10:38	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0370328	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.16089213		0	0	0	0.0836808	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2566702		0	0	0	0.0713048	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1233		0.0952	0	0	0.0003199	0.001904	0	130%	50	150	0%	
o-Terphenyl	S	mg/L		0.2024247		0.1904	0	0	0.0004084	0.002	0	106%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967556	B22010148-001	HC-8015-DRO-	SAMP		1/6/2022 5:53:59	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.1024833		0	0	0	0.0374218	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.26625207		0	0	0	0.0845598	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.4836984		0	0	0	0.0720538	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1226		0.0962	0	0	0.0003232	0.001924	0	127%	50	150	0%	
o-Terphenyl	S	mg/L		0.2105761		0.1924	0	0	0.0004127	0.002	0	109%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967557	B22010212-001	HC-8015-DRO-	SAMP		1/6/2022 6:37:18	1	162703	1/5/2022 3:0	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0370328	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0836808	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0713048	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1112		0.0952	0	0	0.0003199	0.001904	0	117%	50	150	0%	
o-Terphenyl	S	mg/L		0.200652		0.1904	0	0	0.0004084	0.002	0	105%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967558	CCV_0106HP51	HC-8015-DRO-	CCV		1/6/2022 8:03:53	1	R372834				0	0				
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.86592285		5	0	0	0.0879	0.3	0	97%	80	120	0%	
n-Triacontane	S	mg/L		0.2053518		0.2	0	0	0.000336	0.002	0	103%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967559	CCV_0106HP51	HC-8015-DRO-	CCV		1/6/2022 8:47:05	1	R372834				0	0				
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		15.32353		15	0	0	0.0389	0.3	0	102%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.87178		15	0	0	0.0749	0.3	50	106%	80	120	0%	
o-Terphenyl	S	mg/L		0.201982		0.2	0	0	0.000429	0.002	0	101%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967560	B22010213-002	HC-8015-DRO-	SAMP		1/6/2022 10:13:5	1	162703	1/5/2022 3:0	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		1.62555		0	0	0	0.0389	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.29477289		0	0	0	0.0879	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		1.99444		0	0	0	0.0749	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1145		0.1	0	0	0.000336	0.002	0	115%	50	150	0%	
o-Terphenyl	S	mg/L		0.1865803		0.2	0	0	0.000429	0.002	0	93%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
14967561	B22010213-001	HC-8015-DRO-	SAMP		1/6/2022 10:57:1	1	162703	1/5/2022 3:0	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		2.34331		0	0	0	0.0377719	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.57574695		0	0	0	0.0853509	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.028753		0	0	0	0.0727279	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1099		0.0971	0	0	0.0003263	0.001942	0	113%	50	150	0%	
o-Terphenyl	S	mg/L		0.1934539		0.1942	0	0	0.0004166	0.002	0	100%	56	125	0%	
14967562	B22010213-003	HC-8015-DRO-	SAMP		1/6/2022 11:40:3	1	162703	1/5/2022 3:0	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0.1494143		0	0	0	0.038122	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.17452560		0	0	0	0.086142	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.393777		0	0	0	0.073402	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1105		0.098	0	0	0.0003293	0.00196	0	113%	50	150	0%	
o-Terphenyl	S	mg/L		0.1979284		0.196	0	0	0.0004204	0.002	0	101%	56	125	0%	
14967563	B22010141-001	HC-8015-DRO-	SAMP		1/7/2022 1:07:28	1	162703	1/4/2022 4:4	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0377719	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0853509	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0727279	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1233		0.0971	0	0	0.0003263	0.001942	0	127%	50	150	0%	
o-Terphenyl	S	mg/L		0.2201778		0.1942	0	0	0.0004166	0.002	0	113%	56	125	0%	
14967564	B22010214-001	HC-8015-DRO-	SAMP		1/7/2022 1:50:50	1	162703	1/5/2022 3:0	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0.0379938		0	0	0	0.0370328	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0836808	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0713048	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1065		0.0952	0	0	0.0003199	0.001904	0	112%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967564	B22010214-001	HC-8015-DRO-	SAMP		1/7/2022 1:50:50	1	162703	1/5/2022 3:0	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.1892108		0.1904	0	0	0.0004084	0.002	0	99%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967565	B22010219-001	HC-8015-DRO-	SAMP		1/7/2022 2:34:15	1	162703	1/5/2022 3:1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.05663655		0	0	0	0.0389	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.12452009		0	0	0	0.0879	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2349372		0	0	0	0.0749	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1135		0.1	0	0	0.000336	0.002	0	114%	50	150	0%	
o-Terphenyl	S	mg/L		0.2005624		0.2	0	0	0.000429	0.002	0	100%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967566	B22010211-001	HC-8015-DRO-	SAMP		1/7/2022 3:17:33	10	162703	1/5/2022 3:0	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		171.1043		0	0	0	0.377719	2.913	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		173.8855		0	0	0	0.727279	2.913	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1129		0.0971	0	0	0.0032626	0.01942	0	116%	50	150	0%	
o-Terphenyl	S	mg/L		0.1906986		0.1942	0	0	0.0041656	0.01942	0	98%	56	125	0%	

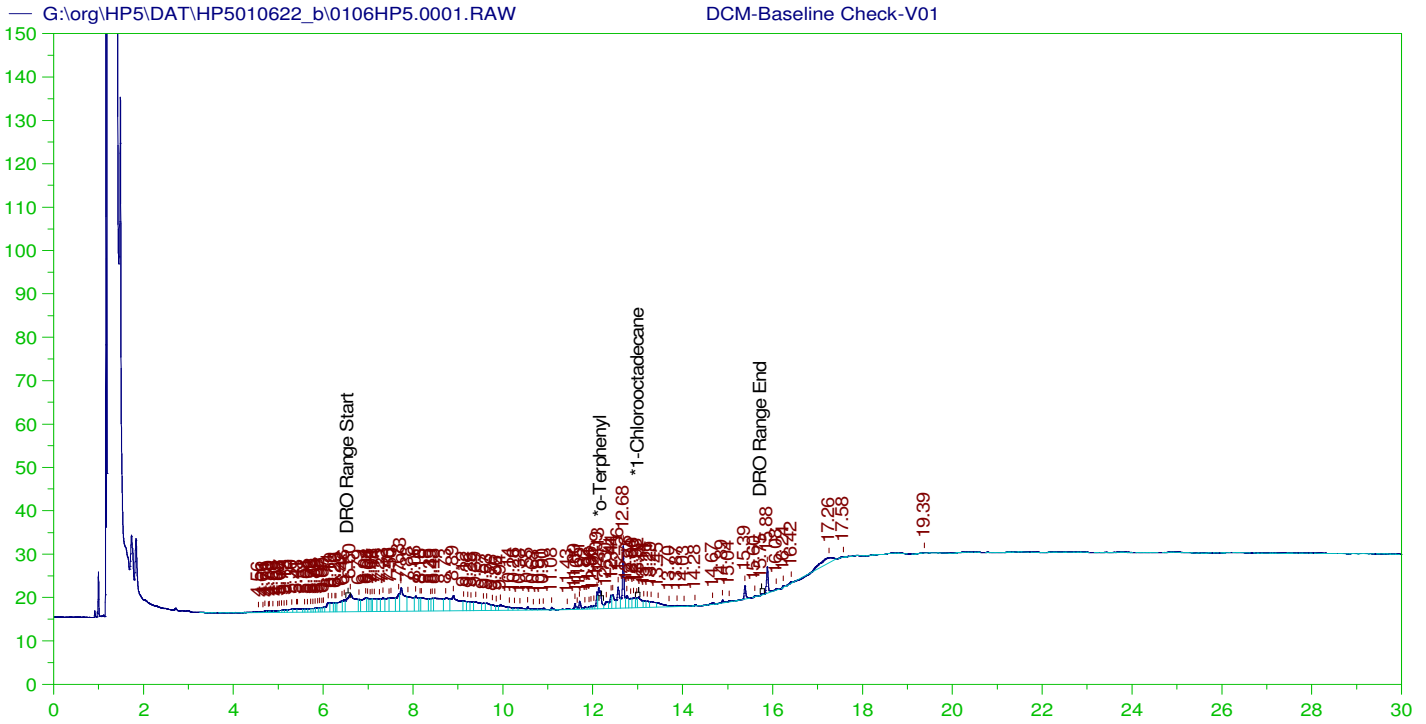
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14967567	B22010134-001	HC-8015-DRO-	SAMP		1/7/2022 4:44:24	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.03859679		0	0	0	0.0374218	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0845598	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0720538	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1321		0.0962	0	0	0.0003232	0.001924	0	137%	50	150	0%	
o-Terphenyl	S	mg/L		0.2283984		0.1924	0	0	0.0004127	0.002	0	119%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967568	B22010142-001	HC-8015-DRO-	SAMP		1/7/2022 5:27:56	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.040067	0.309	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.090537	0.309	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.077147	0.309	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.136		0.103	0	0	0.0003461	0.00206	0	132%	50	150	0%	
o-Terphenyl	S	mg/L		0.2392724		0.206	0	0	0.0004419	0.00206	0	116%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967569	B22010145-001	HC-8015-DRO-	SAMP		1/7/2022 6:11:21	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.2039307		0	0	0	0.0389	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.30494985		0	0	0	0.0879	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.5771101		0	0	0	0.0749	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1351		0.1	0	0	0.000336	0.002	0	135%	50	150	0%	
o-Terphenyl	S	mg/L		0.2357238		0.2	0	0	0.000429	0.002	0	118%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967570	CCV_0106HP53	HC-8015-DRO-	CCV		1/7/2022 7:37:51	1	R372834				0	0				
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.00354395		5	0	0	0.0879	0.3	0	100%	80	120	0%	
n-Triacontane	S	mg/L		0.212323		0.2	0	0	0.000336	0.002	0	106%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14967571	CCV_0106HP53	HC-8015-DRO-	CCV		1/7/2022 8:20:50	1	R372834				0	0				
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		15.59393		15	0	0	0.0389	0.3	0	104%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.16666		15	0	0	0.0749	0.3	50	108%	80	120	0%	
o-Terphenyl	S	mg/L		0.2067635		0.2	0	0	0.000429	0.002	0	103%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14968255	B22010209-001	HC-8015-DRO-	SAMP		1/7/2022 10:02:4	1	162703	1/5/2022 3:0	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0374218	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L	0.14390659			0	0	0	0.0845598	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L	0.2299943			0	0	0	0.0720538	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L	0.1115			0.0962	0	0	0.0003232	0.001924	0	116%	50	150	0%	
o-Terphenyl	S	mg/L	0.2057355			0.1924	0	0	0.0004127	0.002	0	107%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14968256	B22010211-001	HC-8015-DRO-	SAMP		1/7/2022 10:45:5	1	162703	1/5/2022 3:0	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Oil Range Hydrocarbons (C24 to C40)	A	mg/L	0.63961971			0	0	0	0.0853509	0.3	0	0%	0	0	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14968257	LCS-162703-RR	HC-8015-DRO-	LCS-DOD		1/7/2022 12:16:0	1	162703	1/4/2022 4:4	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L	5.51410723			5	0	0	0.0879	0.3	0	110%	41	113	0%	
n-Triacontane	S	mg/L	0.1103			0.1	0	0	0.000336	0.002	0	110%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14968258	LCSD-162703-R	HC-8015-DRO-	LCSD-DOD		1/7/2022 1:01:28	1	162703	1/4/2022 4:4	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L	5.66312313			5	0	5.5141072	0.0879	0.3	0	113%	41	113	3%	
n-Triacontane	S	mg/L	0.1139			0.1	0	0	0.000336	0.002	0	114%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14968259	B22010120-001	HC-8015-DRO-	MS-DOD		1/7/2022 1:44:11	1	162703	1/4/2022 4:4	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L	5.79162359			4.855	0.7990479	0	0.0853509	0.3	0	103%	41	113	0%	
n-Triacontane	S	mg/L	0.108			0.0971	0	0	0.0003263	0.002	0	111%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14970019	CCV_0106HP54	HC-8015-DRO-	CCV		1/7/2022 3:09:41	1	R372834		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.23910889		5	0	0	0.0879	0.3	0	105%	80	120	0%	
n-Triacontane	S	mg/L		0.2179482		0.2	0	0	0.000336	0.002	0	109%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14970020	CCV_0106HP54	HC-8015-DRO-	CCV		1/7/2022 3:52:32	1	R372834		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		16.06031		15	0	0	0.0389	0.3	0	107%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.63664		15	0	0	0.0749	0.3	50	111%	80	120	0%	
o-Terphenyl	S	mg/L		0.2124345		0.2	0	0	0.000429	0.002	0	106%	80	120	0%	



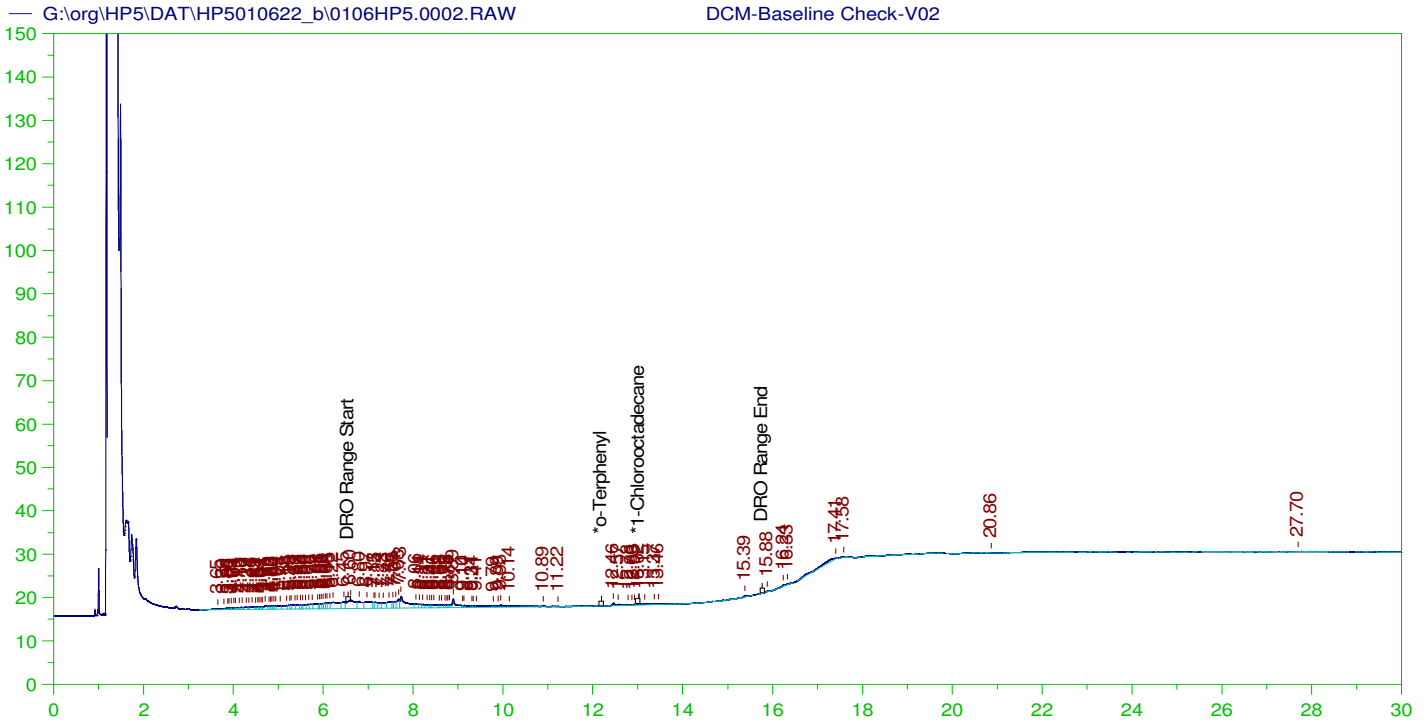
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0001.RAW
 Date & Time Acquired: 1/6/2022 6:59:44 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.874	200.	.412	.21
*1-Chlorooctadecane	13.018	200.		

DRO Area:809014.1 DRO Amount: 25.80324
 TEH Area:982414.3 TEH Amount: 31.33379



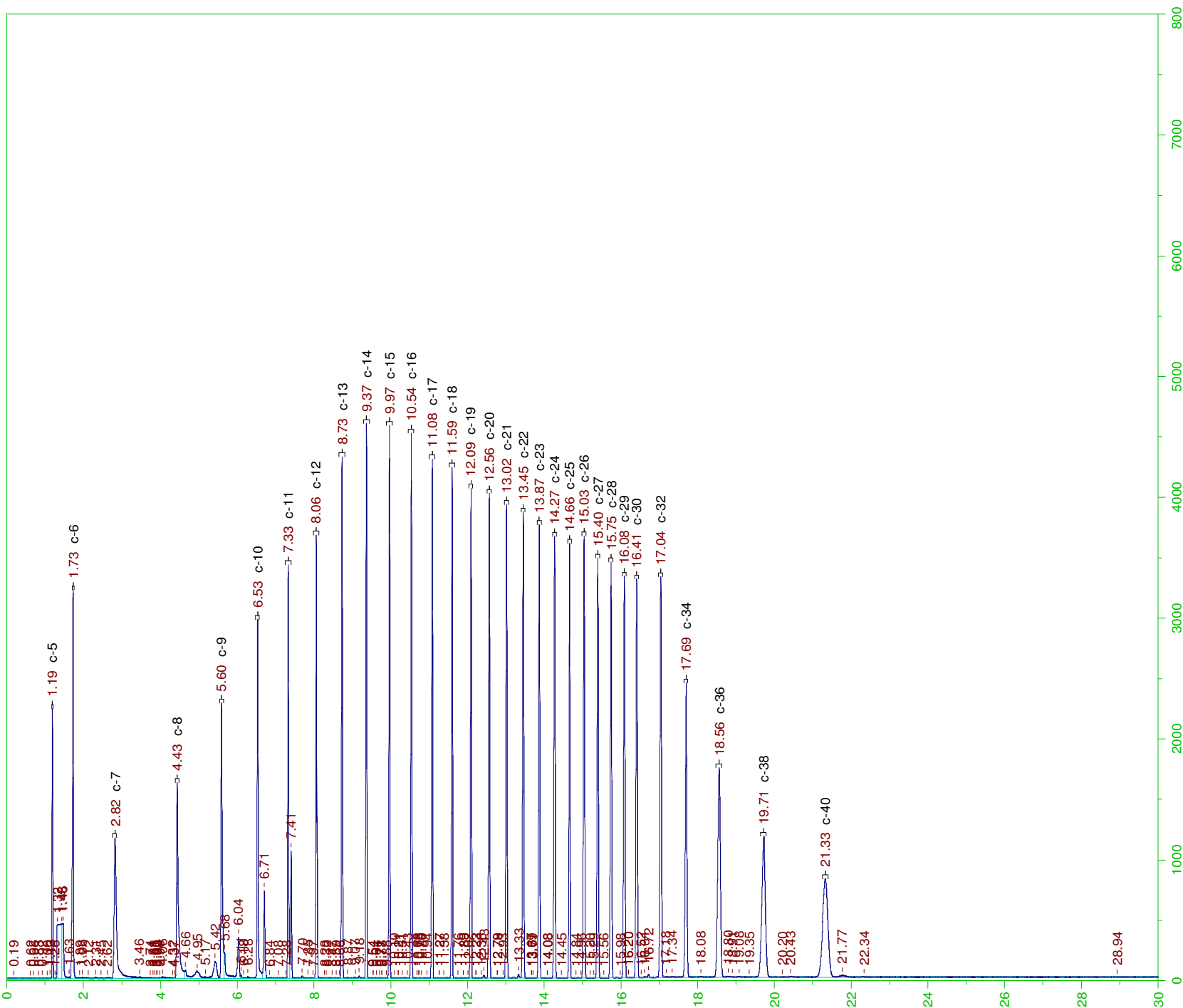
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

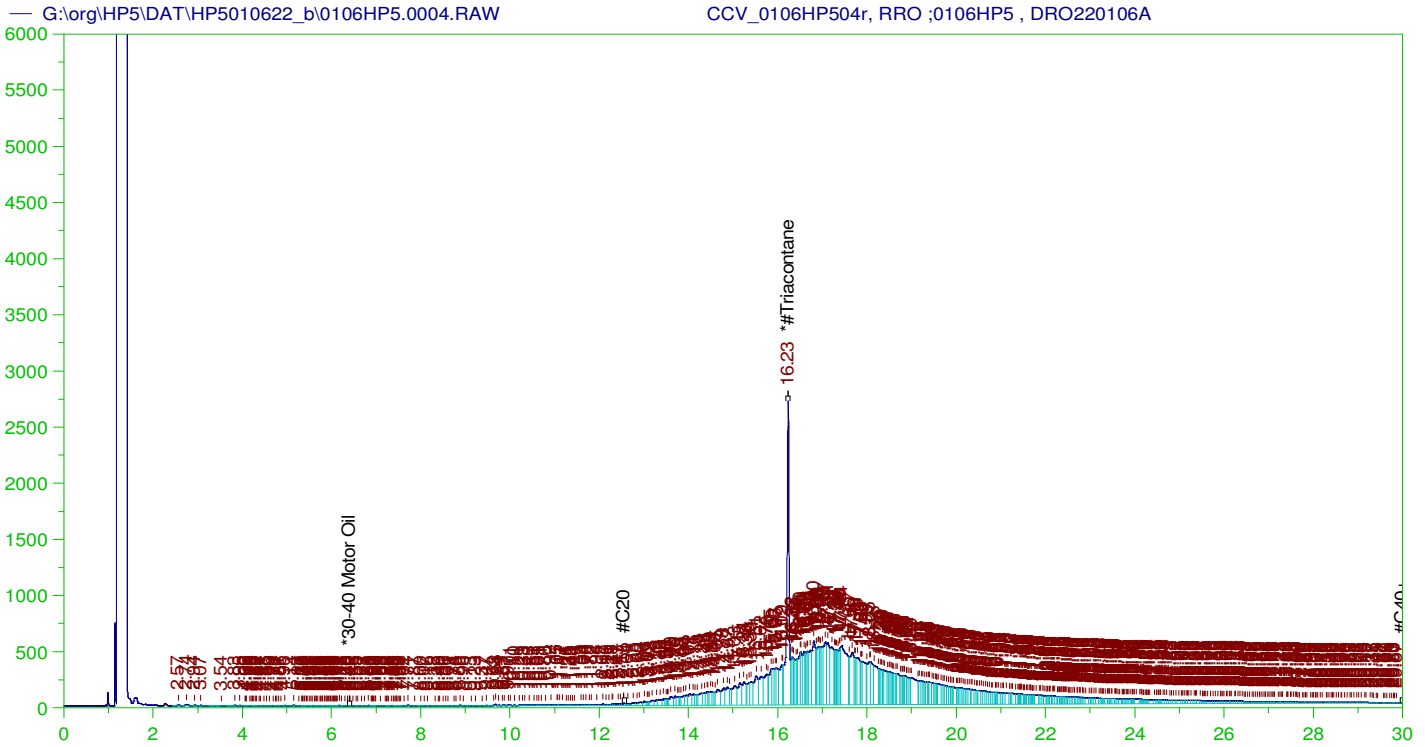
Sample Name: DCM-Baseline Check-V02
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0002.RAW
 Date & Time Acquired: 1/6/2022 7:42:43 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.926	200.	.	-
*1-Chlorooctadecane	13.022	200.	.072	.04

DRO Area: 229372.9 DRO Amount: 7.315774
 TEH Area: 402772 TEH Amount: 12.84628





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP504r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0004.RAW
 Date & Time Acquired: 1/6/2022 9:56:57 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.229	500.	327.987	65.6	-

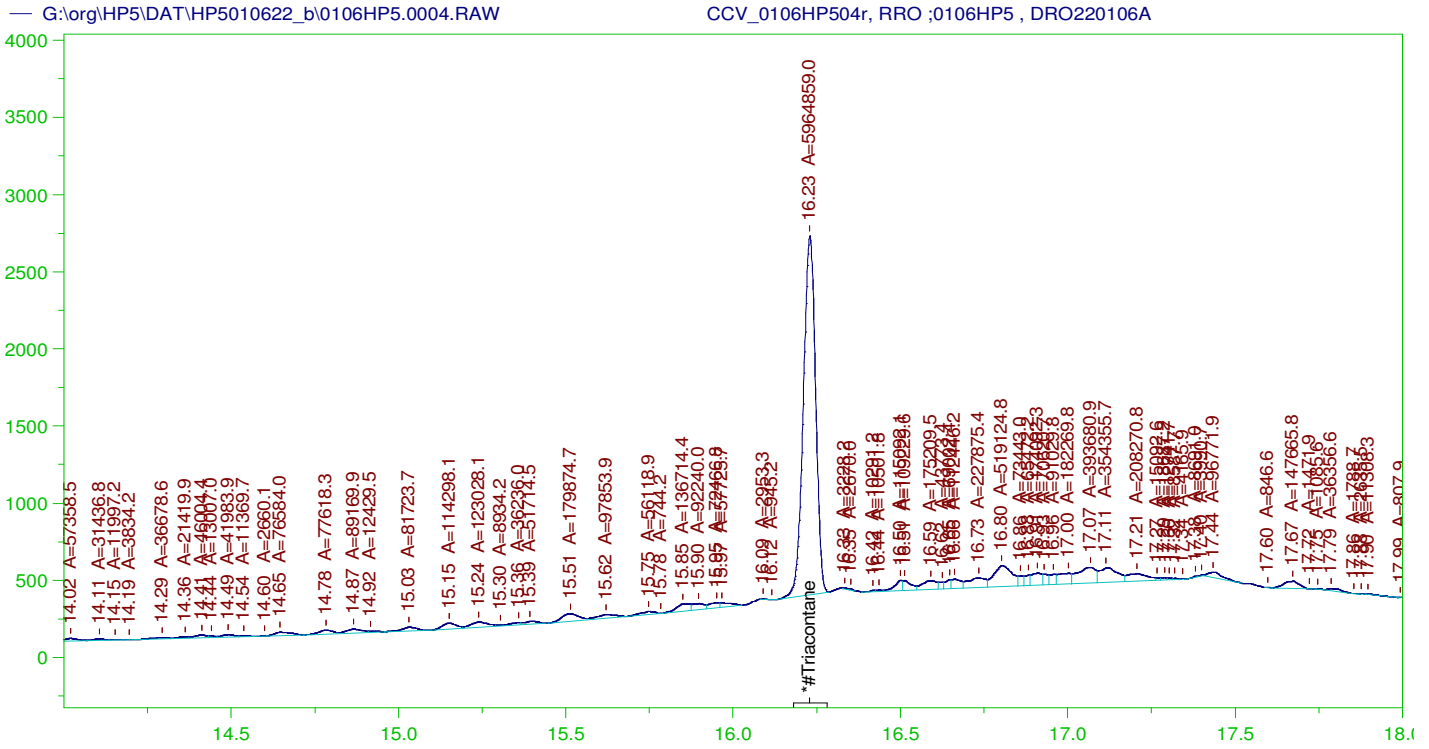
~~RRO~~ TEH (Oil Range) Area:1.282876E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4494.63

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0004.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.035	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.229	200.	327.987	163.99	75-125

AMN 01/31/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP504r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0004.RAW
 Date & Time Acquired: 1/6/2022 9:56:57 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.51 to 30.05

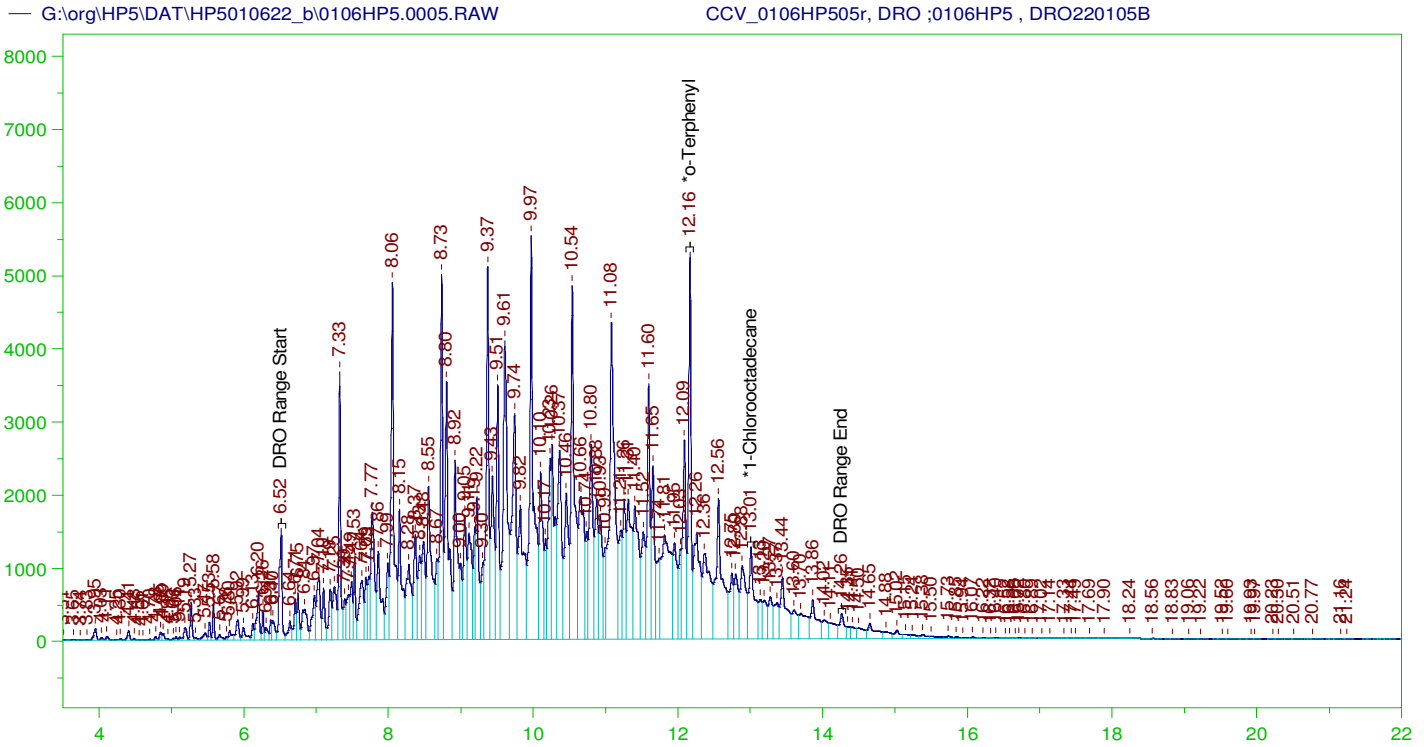
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.229	500.	206.181	41.24

RRO Area:5659553 RRO AMOUNT: 198.2857

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0004.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.035	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.229	200.	206.181	103.09	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP505r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0005.RAW
 Date & Time Acquired: 1/6/2022 10:40:02 AM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.165	200.	361.684	180.84
*1-Chlorooctadecane	13.009	200.	182.542	91.27

DRO Area: 5.231236E+08 DRO Amount: 16684.86
 TEH Area: 5.423295E+08 TEH Amount: 17297.43

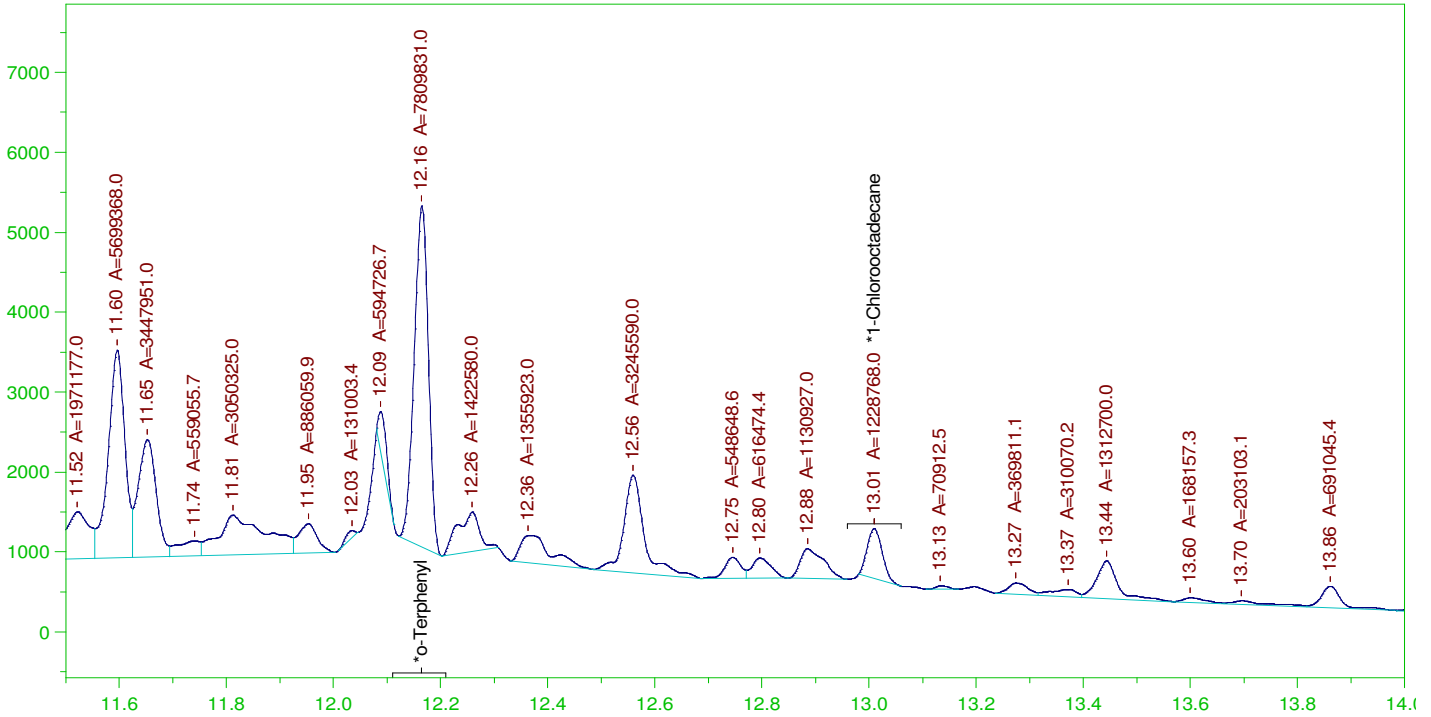
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	17297.43	115.32	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.165	200.	361.684	180.84	85-115
*1-Chlorooctadecane	13.009	200.	182.542	91.27	85-115

G:\org\HP5\DAT\HP5010622_b\0106HP5.0005.RAW

CCV_0106HP505r, DRO ;0106HP5 , DRO220105B



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP505r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0005.RAW
 Date & Time Acquired: 1/6/2022 10:40:02 AM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

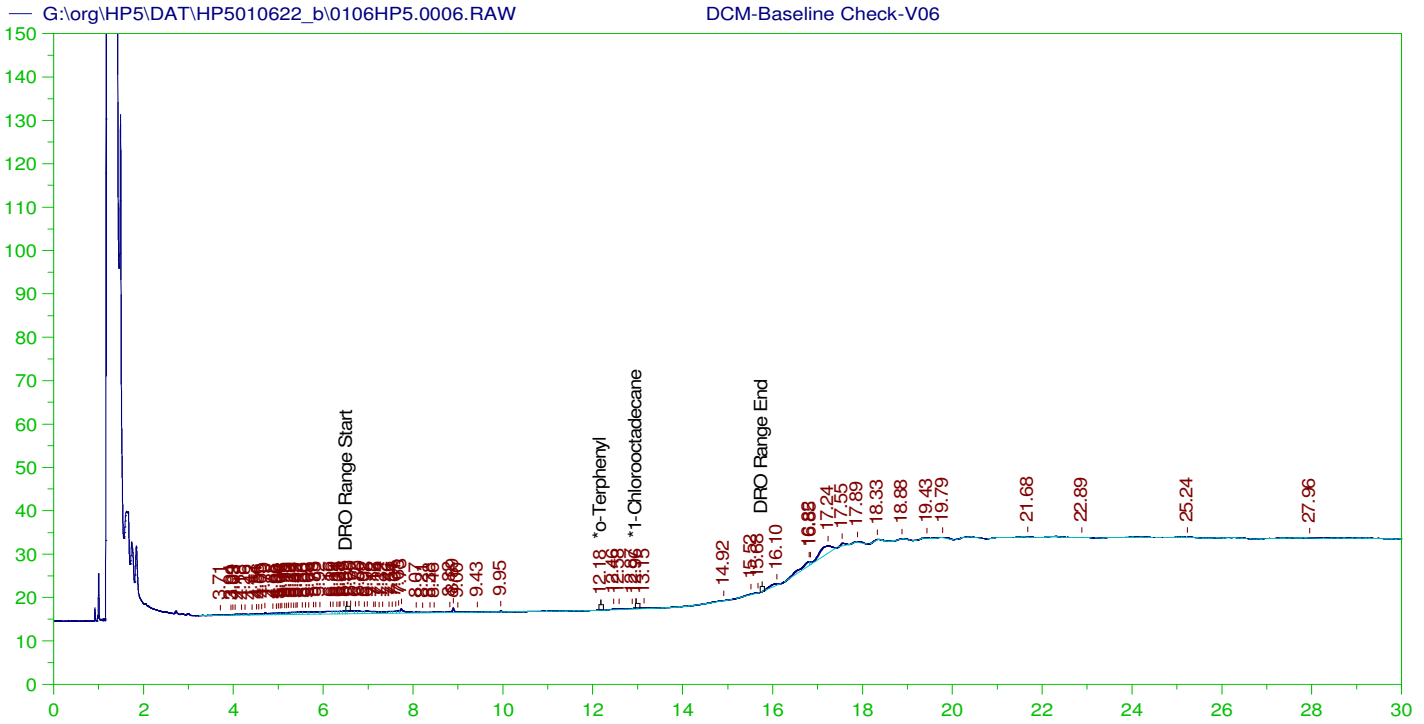
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.165	200.	219.938	109.97
*1-Chlorooctadecane	13.009	200.	34.604	17.3

DRO Area: 2.900371E+08 DRO Amount: 9250.64
 TEH Area: 3.017861E+08 TEH Amount: 9625.37

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	9625.37	64.17	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.165	200.	219.938	109.97	85-115
*1-Chlorooctadecane	13.009	200.	34.604	17.3	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V06
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0006.RAW
 Date & Time Acquired: 1/6/2022 11:23:20 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

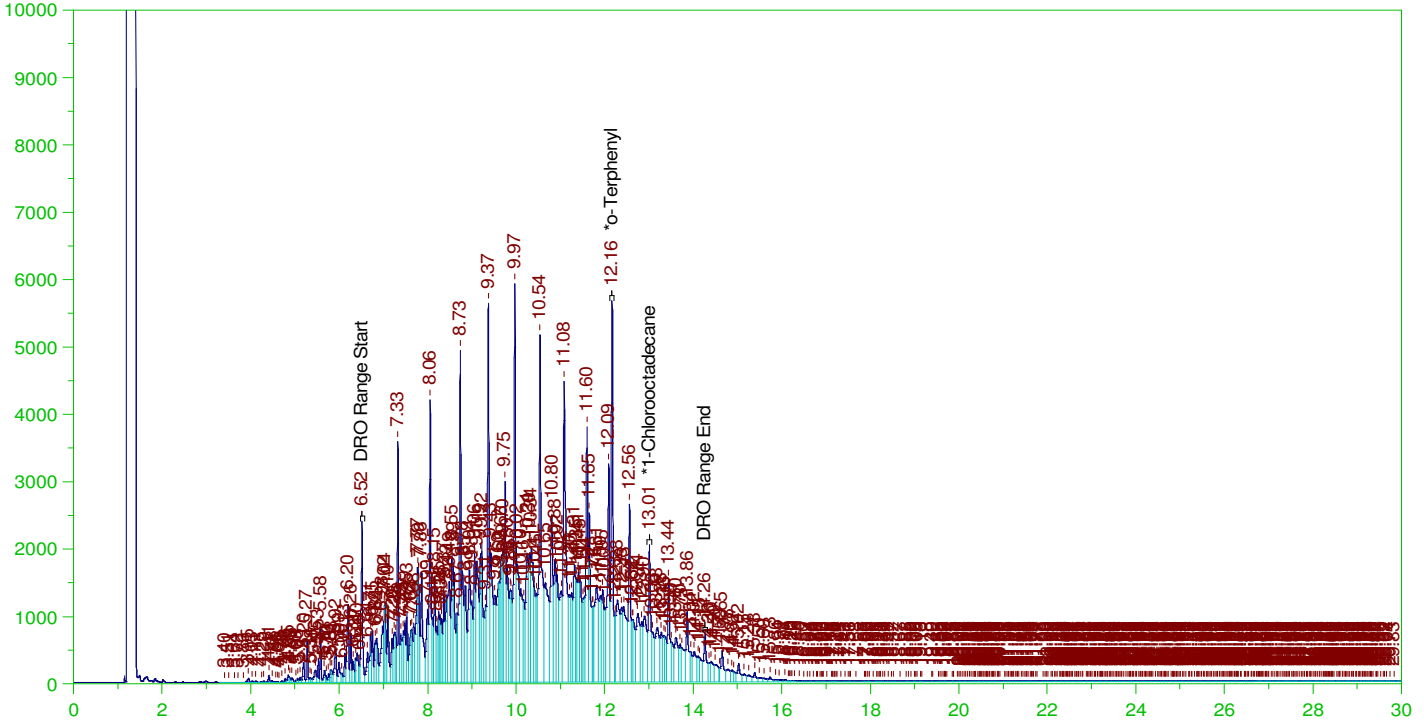
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.176	200.	.017	.01
*1-Chlorooctadecane	12.963	200.	.024	.01

DRO Area:75536.8 DRO Amount: 2.409222
 TEH Area:235085.8 TEH Amount: 7.497986

Batch ID: 162703

LCS-162703 ;0106HP5 ,

G:\org\HP5\DAT\HP5010622_b\0106HP5.0007.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-162703 ;0106HP5 ,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0007.RAW
Date & Time Acquired: 1/6/2022 12:06:33 PM
Method File: G:\Org\HP5\Methods\D3_8015-24-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

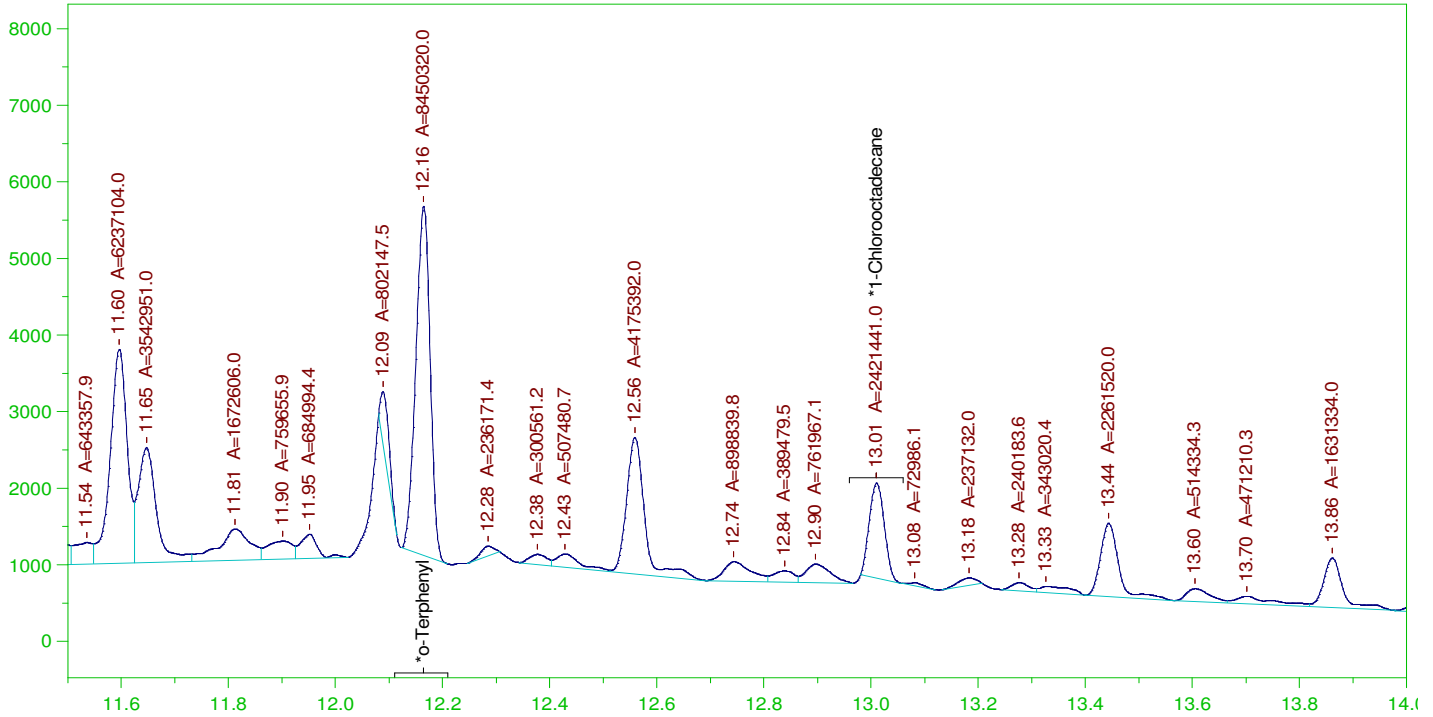
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.165	.2	.412	205.93	-
*1-Chlorooctadecane	13.01	.2	.191	95.5	-

DRO Area: 5.450228E+08 DRO Amount: 17.38333
TEH Area: 5.827727E+08 TEH Amount: 18.58735

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0007.RAW

LCS-162703 ;0106HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-162703 ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0007.RAW
 Date & Time Acquired: 1/6/2022 12:06:33 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

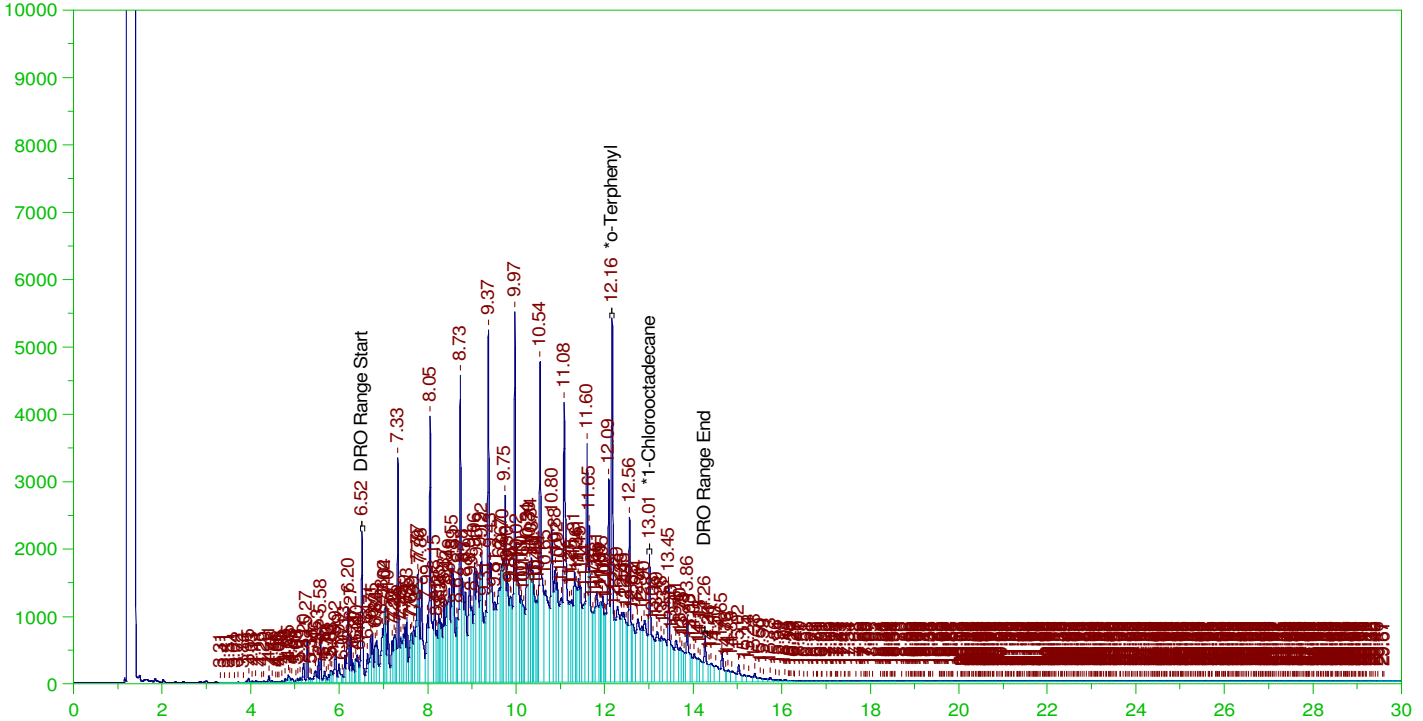
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.165	.2	.238	118.99
*1-Chlorooctadecane	13.01	.2	.068	34.1

DRO Area: 2.669178E+08 DRO Amount: 8.513258
 TEH Area: 2.856601E+08 TEH Amount: 9.111038

Batch ID: 162703

LCSD-162703 ;0106HP5 ,

G:\org\HP5\DAT\HP5010622_b\0106HP5.0008.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCSD-162703 ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0008.RAW
 Date & Time Acquired: 1/6/2022 12:49:37 PM
 Method File: G:\Org\HP5\Methods\D3_8015-24-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

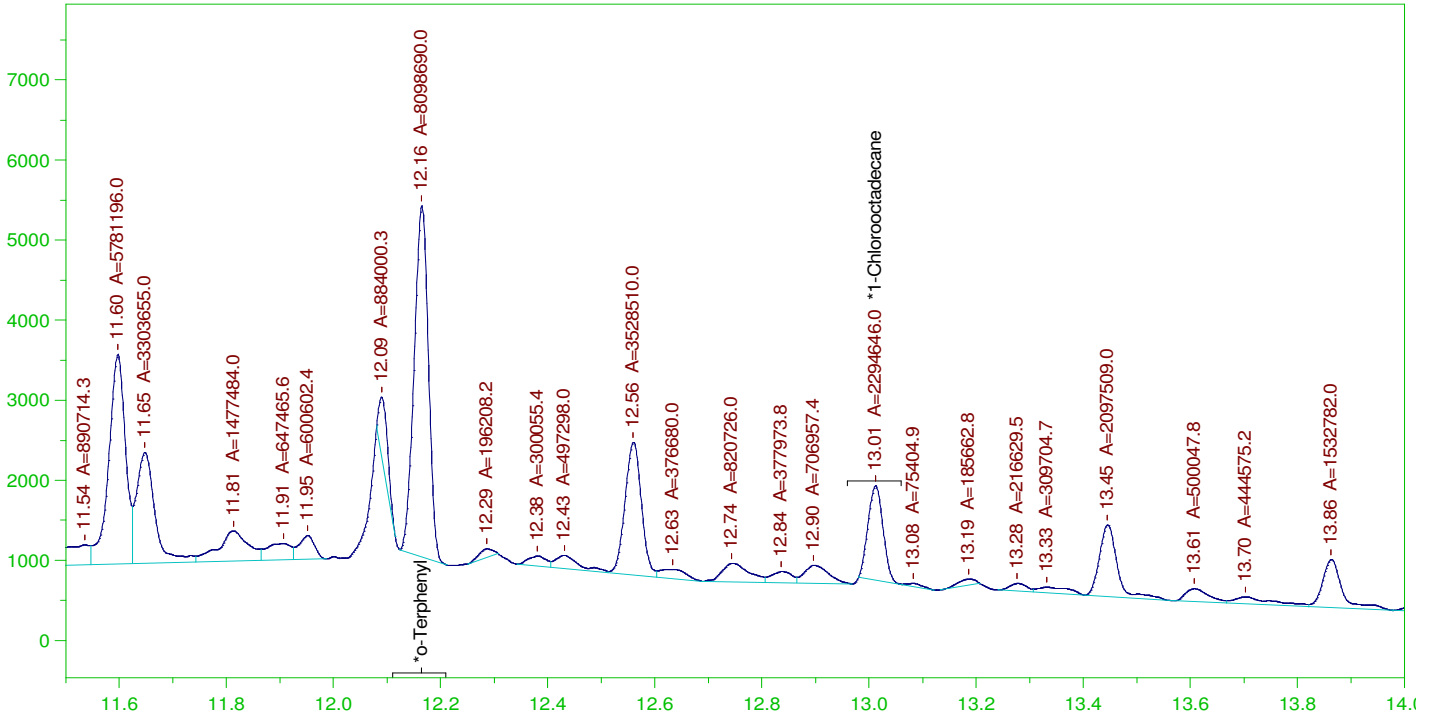
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.165	.2	.386	192.89	-
*1-Chlorooctadecane	13.012	.2	.178	88.95	-

DRO Area: 5.064639E+08 DRO Amount: 16.1535
 TEH Area: 5.417034E+08 TEH Amount: 17.27746

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0008.RAW

LCSD-162703 ;0106HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

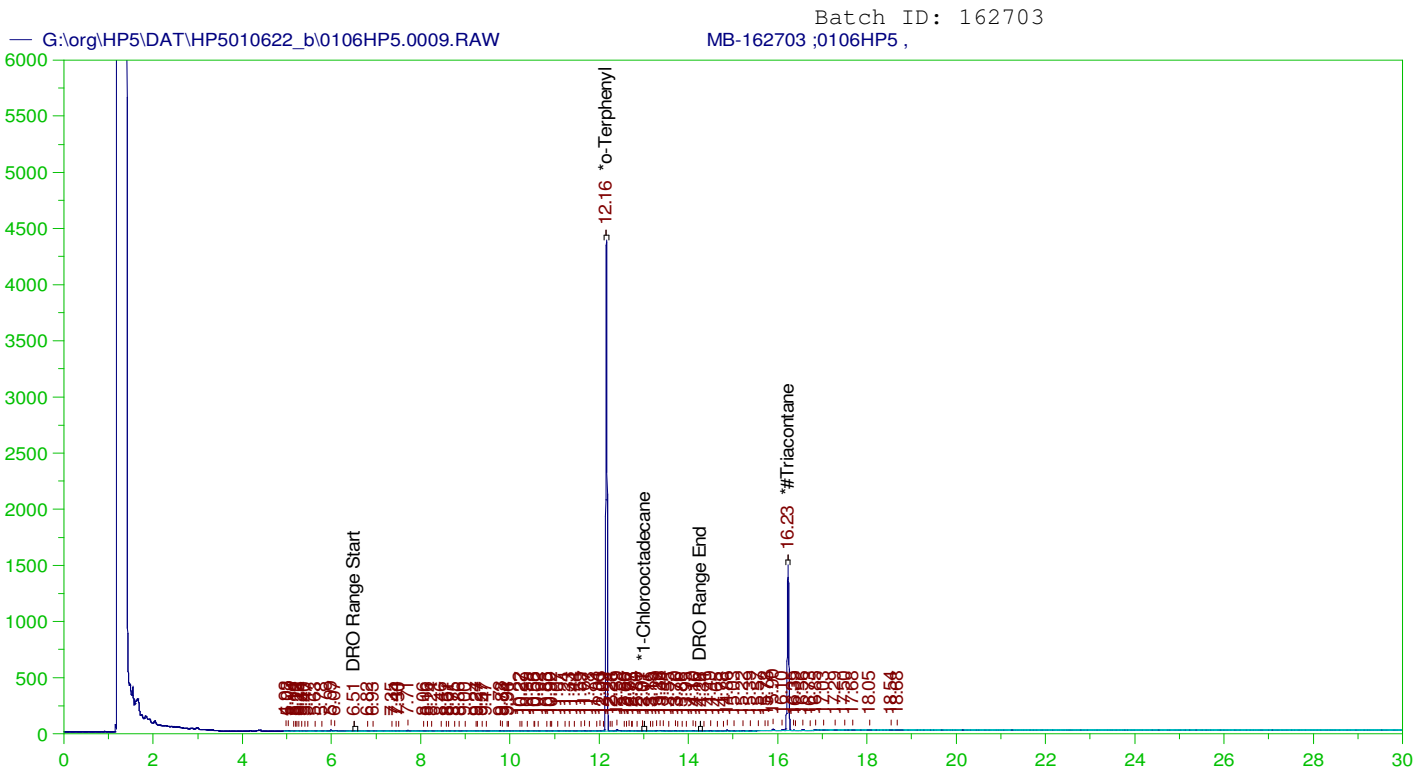
Sample Name: LCSD-162703 ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0008.RAW
 Date & Time Acquired: 1/6/2022 12:49:37 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.165	.2	.228	114.04
*1-Chlorooctadecane	13.012	.2	.065	32.31

DRO Area: 2.476856E+08 DRO Amount: 7.899854
 TEH Area: 2.653828E+08 TEH Amount: 8.464298



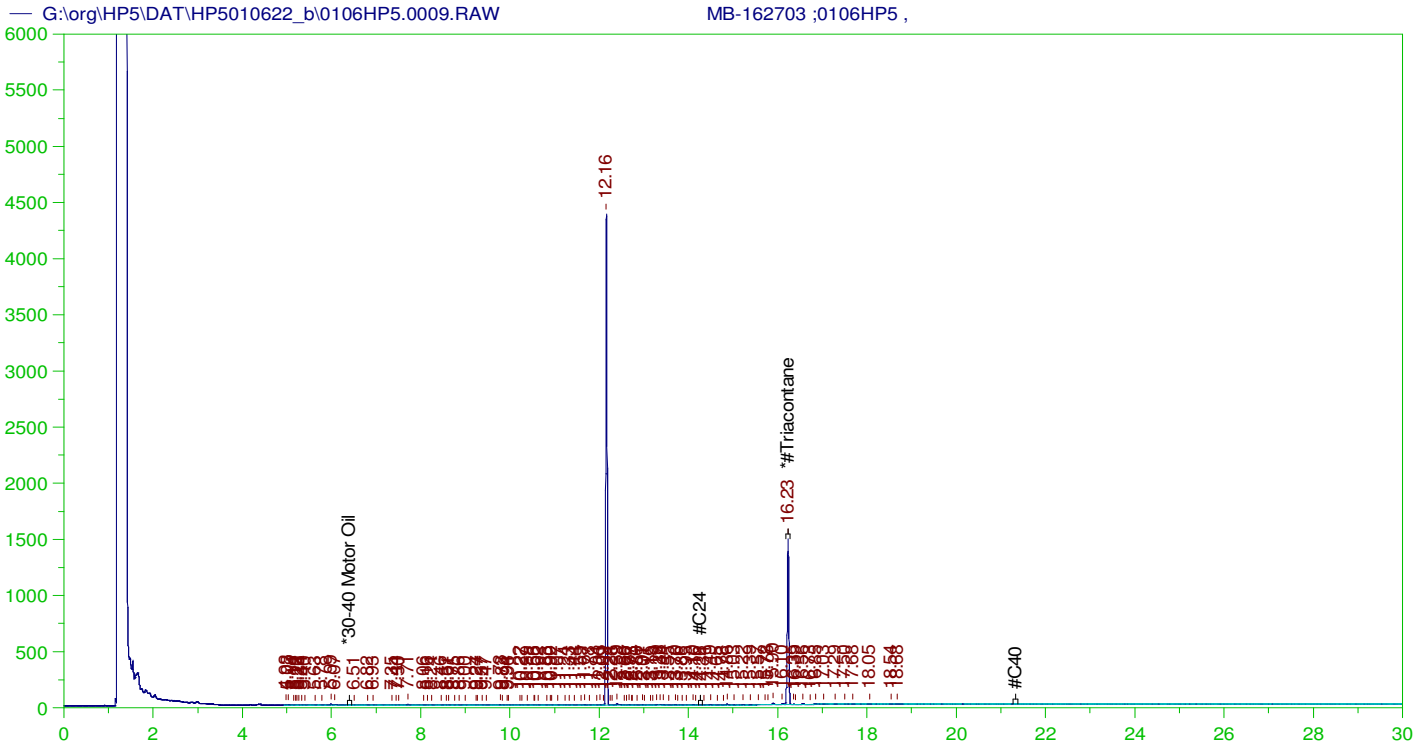
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162703 ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0009.RAW
 Date & Time Acquired: 1/6/2022 1:32:50 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.161	.2	.229	114.44 -
*1-Chlorooctadecane	13.007	.2	.04	-
*#Triacontane	16.228	.2	.13	64.76 -

DRO Area:332434.3 DRO Amount: 1.060288E-02
 TEH Area:672234.9 TEH Amount: 2.144072E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-162703 ;0106HP5 ,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0009.RAW
Date & Time Acquired: 1/6/2022 1:32:50 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

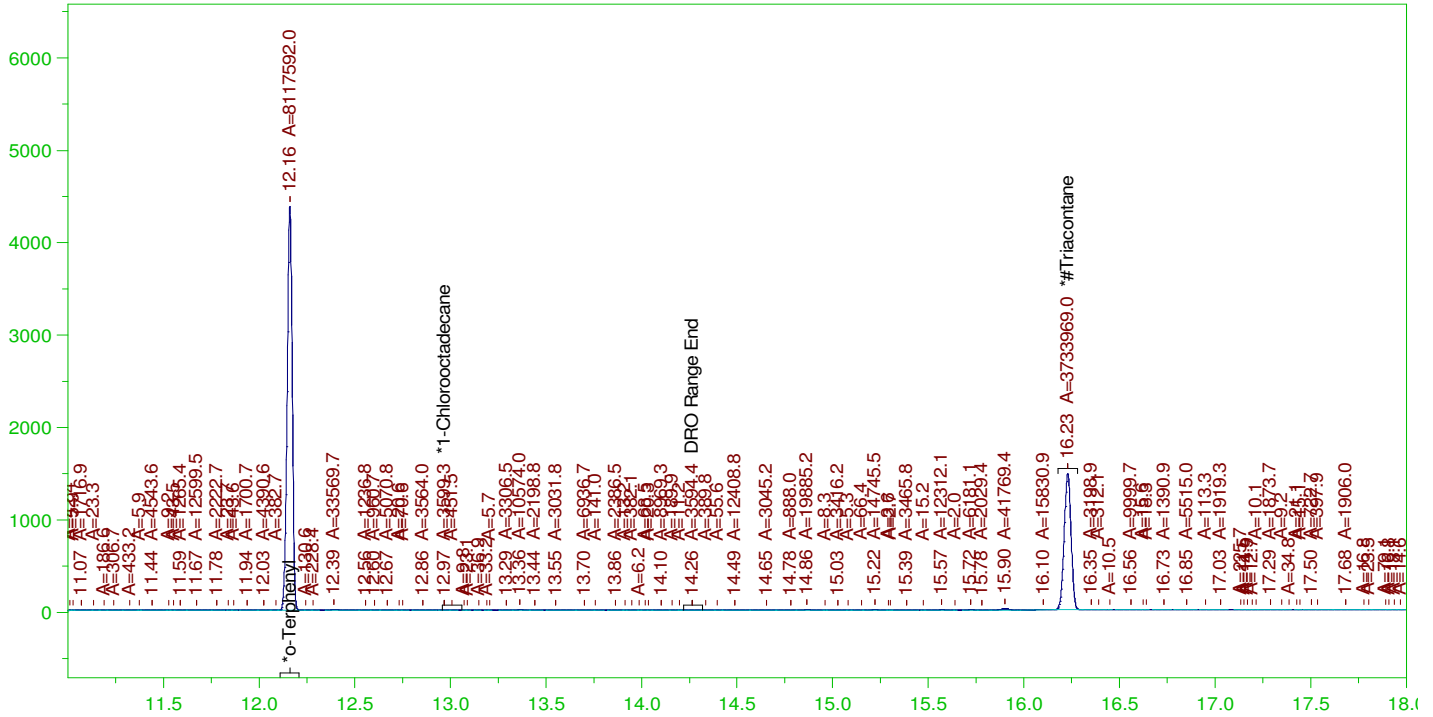
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.228	.5	.13	25.9

RRO Area:204385.9 RRO AMOUNT: 7.160778E-03

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0009.RAW

MB-162703 ;0106HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162703 ;0106HP5 ,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0009.RAW
Date & Time Acquired: 1/6/2022 1:32:50 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.161	.2	.229	114.3
*1-Chlorooctadecane	12.971	.2	.05	-
*#Triacontane	16.228	.2	.129	64.53

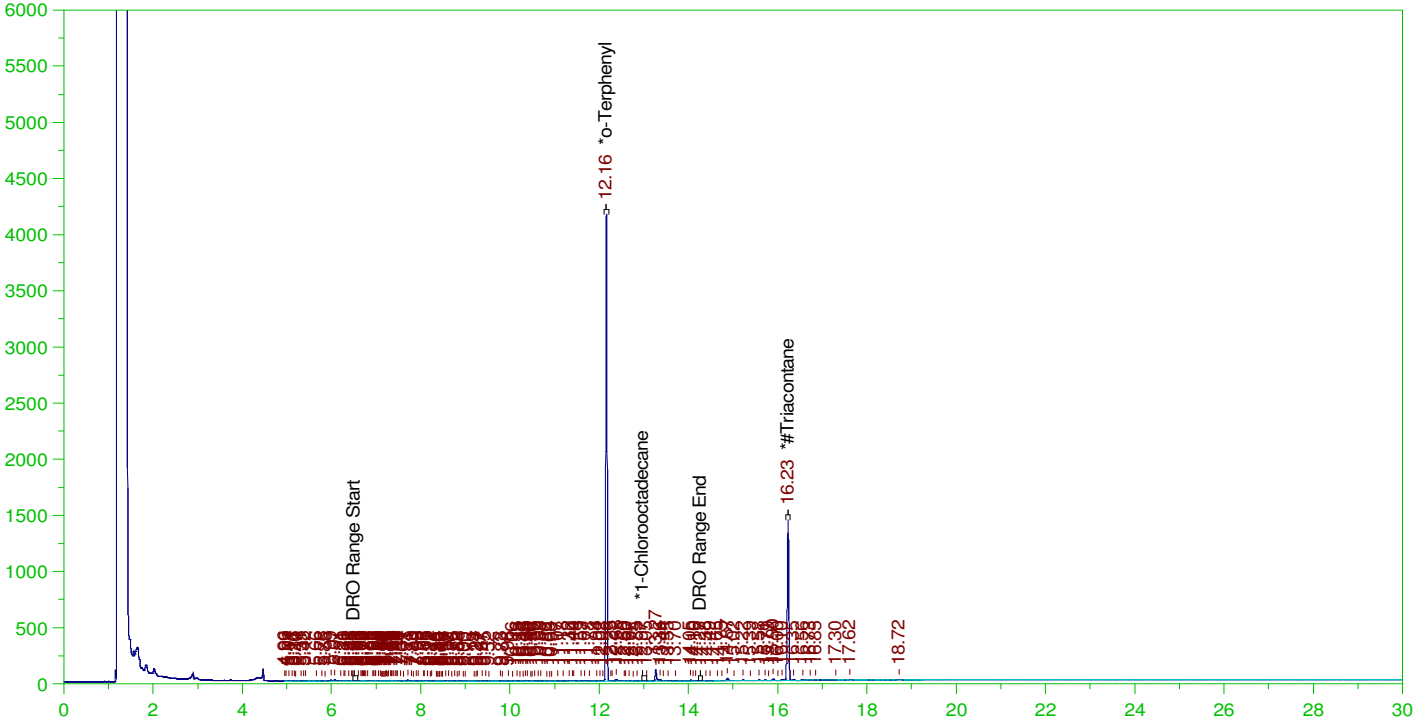
DRO Area:222866.8 DRO Amount: 7.108264E-03
TEH Area:656391.4 TEH Amount: 2.093539E-02

ERH2297 (RHMW15 zone5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0010.RAW

B22010096-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010096-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0010.RAW
Date & Time Acquired: 1/6/2022 2:16:04 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.16	.198	.215	108.38	-
*1-Chlorooctadecane	12.969	.198	.	.16	-
*#Triacontane	16.228	.198	.123	62.03	-

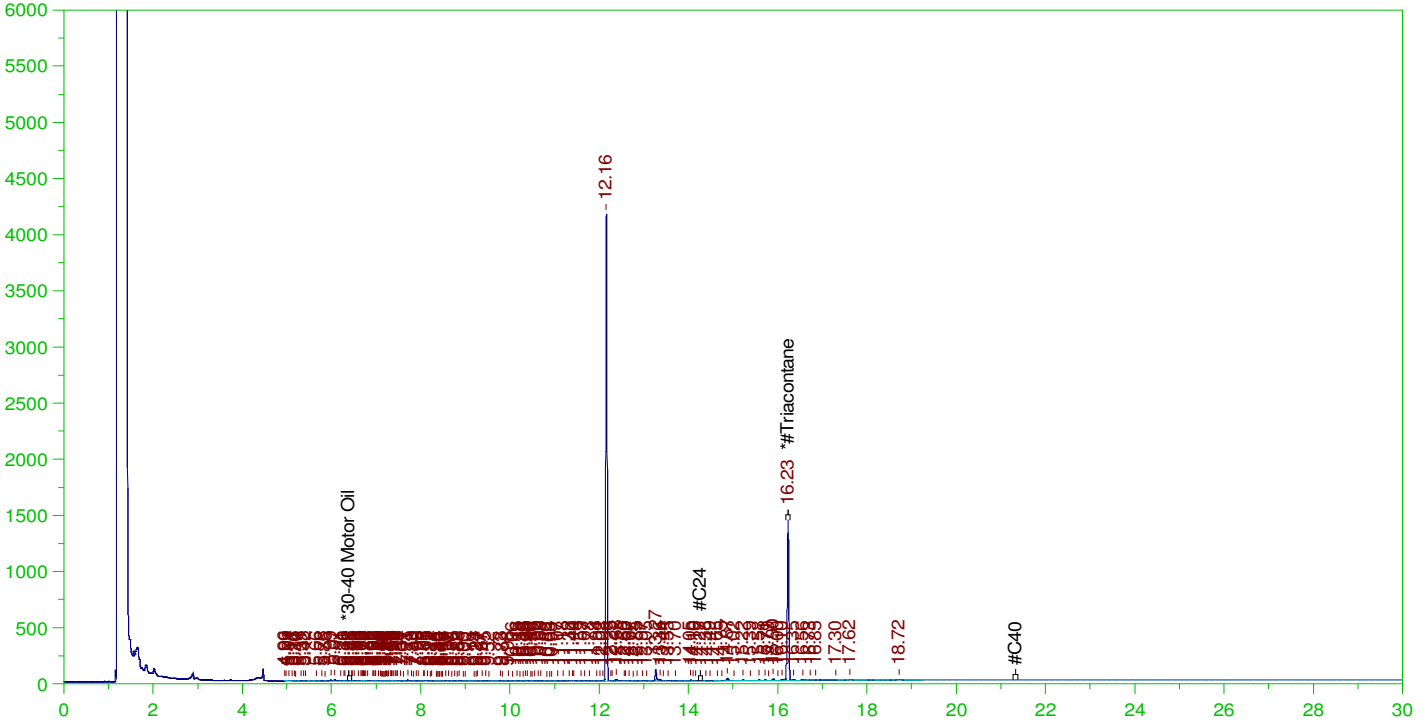
DRO Area:714725.7 DRO Amount: 2.257024E-02
TEH Area:1093069 TEH Amount: 3.451791E-02

ERH2297 (RHMW15 zone5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0010.RAW

B22010096-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010096-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0010.RAW
Date & Time Acquired: 1/6/2022 2:16:04 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.228	.495	.123	24.81

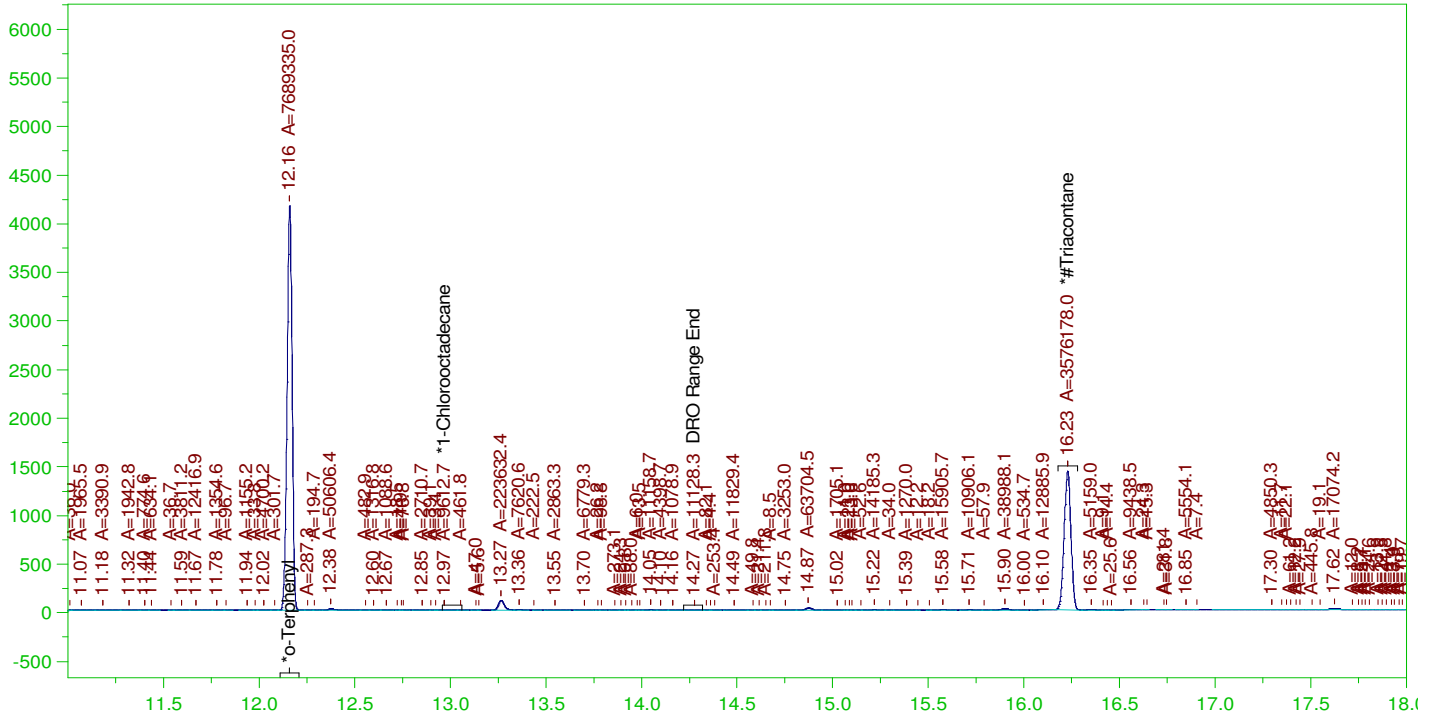
RRO Area:264894.6 RRO AMOUNT: 9.188848E-03

ERH2297 (RHMW15 zone5)

Batch ID: 162703

G:\Org\HP5\DAT\HP5010622_b\0106HP5.0010.RAW

B22010096-001D ; 0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010096-001D ; 0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5010622_b\0106HP5.0010.RAW
Date & Time Acquired: 1/6/2022 2:16:04 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.16	.198	.214	108.27
*1-Chlorooctadecane	12.969	.198	.14	-
*#Triacontane	16.228	.198	.122	61.81

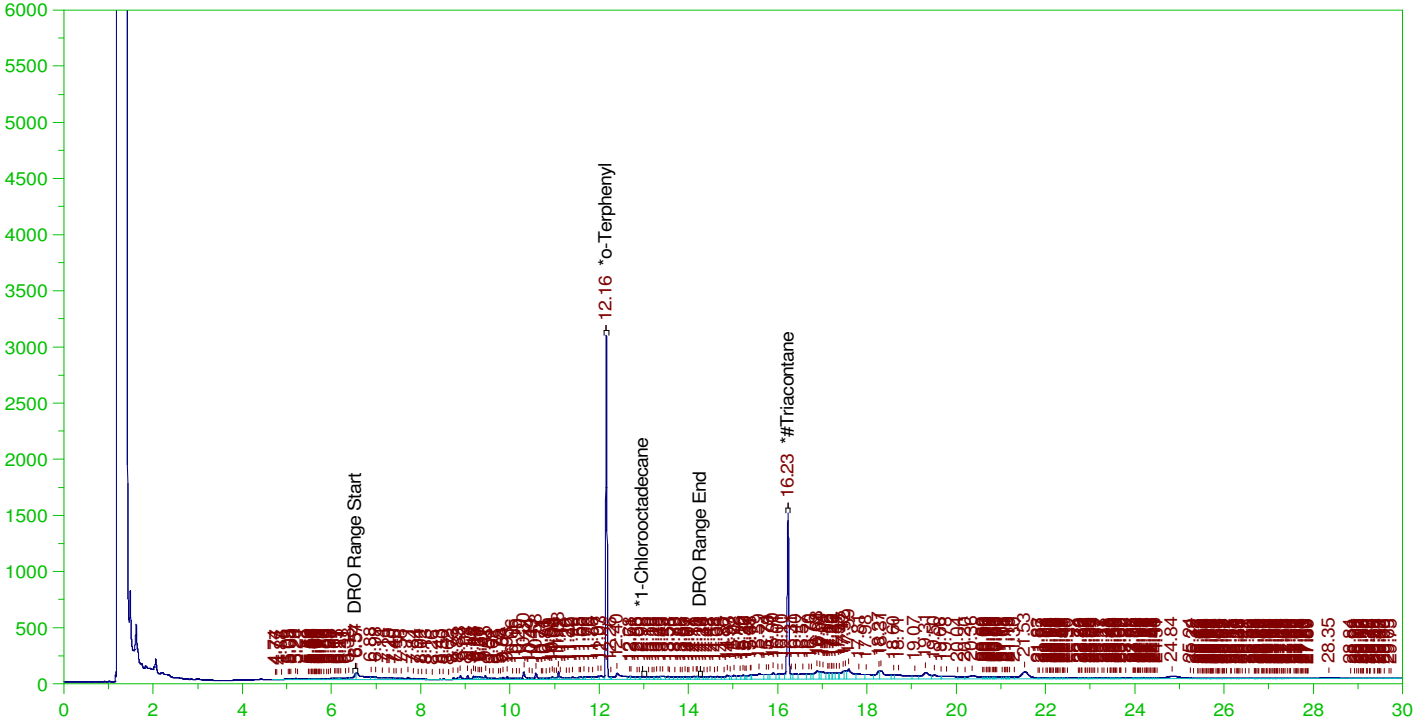
DRO Area: 611576.9 DRO Amount: 1.931292E-02
TEH Area: 1655909 TEH Amount: 5.229177E-02

ERH2315 (RHMW08)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0011.RAW

B22010120-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010120-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0011.RAW
Date & Time Acquired: 1/6/2022 2:59:14 PM
Method File: G:\Org\HP5\Methods\DR_8015-010611-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.159	.2	.164	81.78	-
*1-Chlorooctadecane	12.977	.2	.005	2.52	-
*#Triacontane	16.226	.2	.137	68.55	-

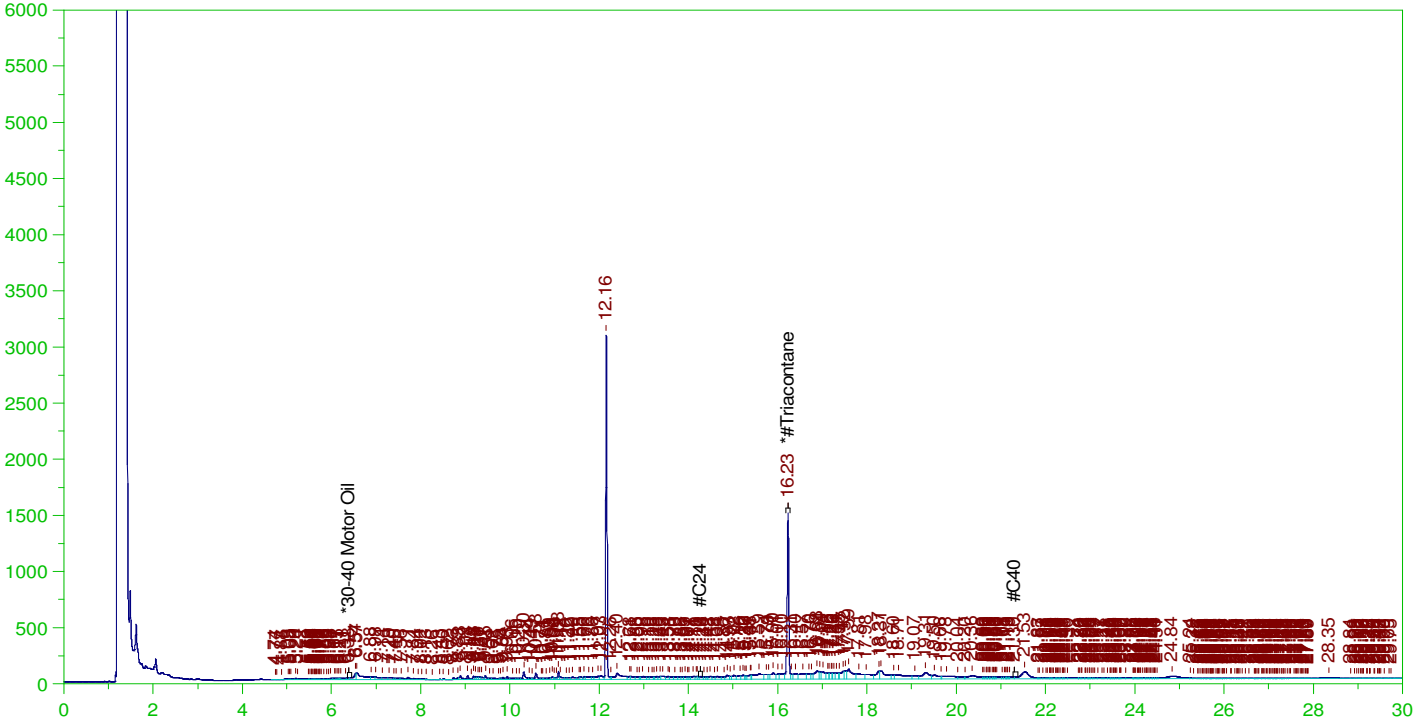
DRO Area:7993996 DRO Amount: 0.2549659
TEH Area:2.703859E+07 TEH Amount: 0.8623871

ERH2315 (RHMW08)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0011.RAW

Batch ID: 162703

B22010120-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010120-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0011.RAW
Date & Time Acquired: 1/6/2022 2:59:14 PM
Method File: G:\Org\HP5\Methods\DR_OROS-010611-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.226	.5	.137	27.42

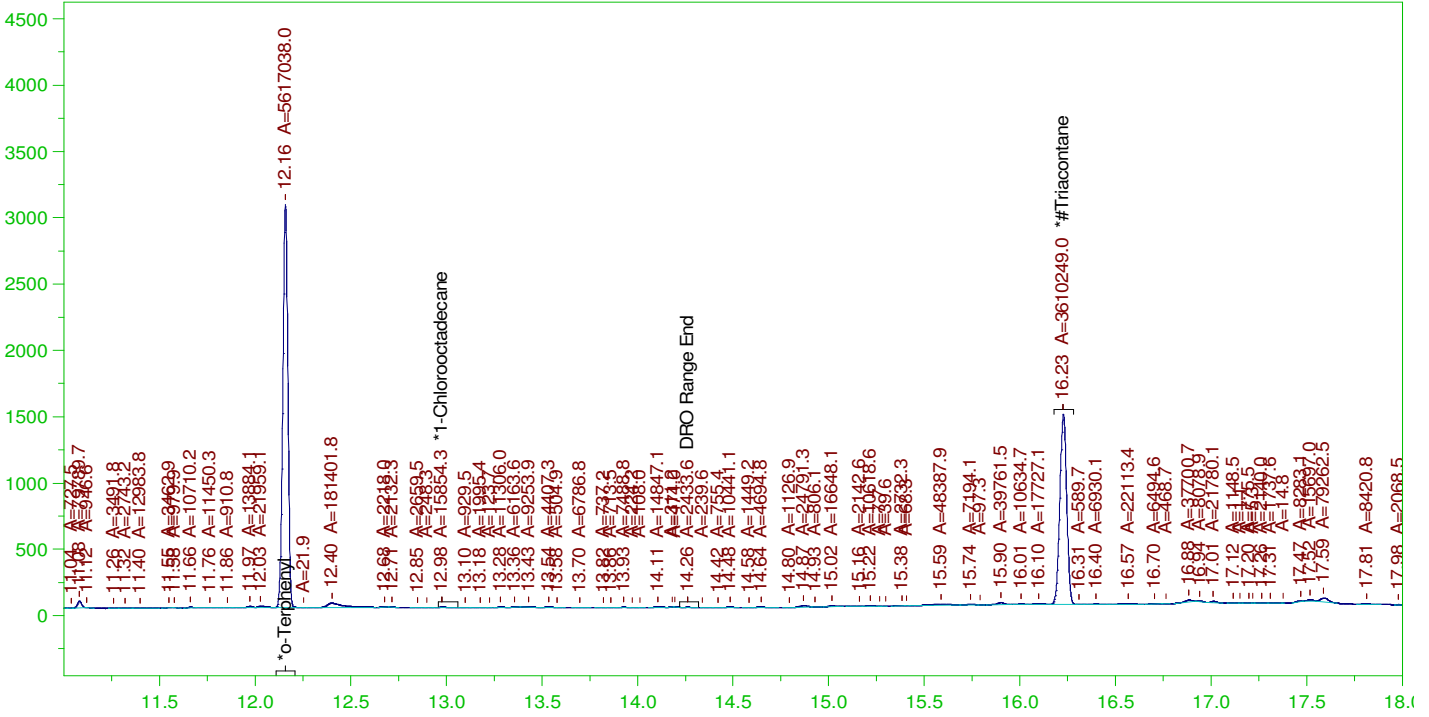
RRO Area:1.448902E+07 RRO AMOUNT: 0.5076314

ERH2315 (RHMW08)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0011.RAW

B22010120-001D ; 0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010120-001D ; 0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0011.RAW
Date & Time Acquired: 1/6/2022 2:59:14 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

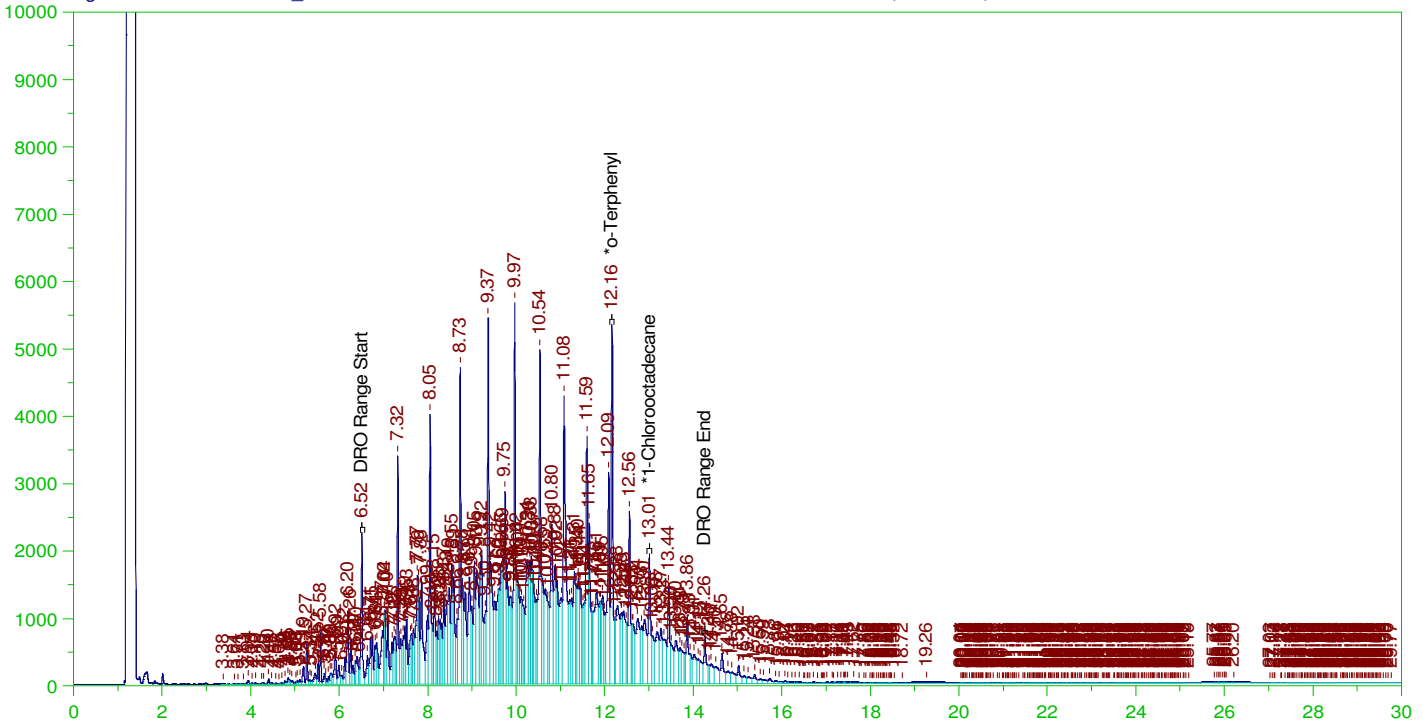
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.159	.2	.158	79.09
*1-Chlorooctadecane	12.977	.2	.22	-
*#Triacontane	16.226	.2	.125	62.4

DRO Area:3672727 DRO Amount: 0.1171404
TEH Area:6999897 TEH Amount: 0.2232595

Batch ID: 162703

B22010096-001DMS ;0106HP5 ,

G:\org\HP5\DAT\HP5010622_b\0106HP5.0012.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010096-001DMS ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0012.RAW
 Date & Time Acquired: 1/6/2022 3:42:14 PM
 Method File: G:\Org\HP5\Methods\D3_8015-24-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

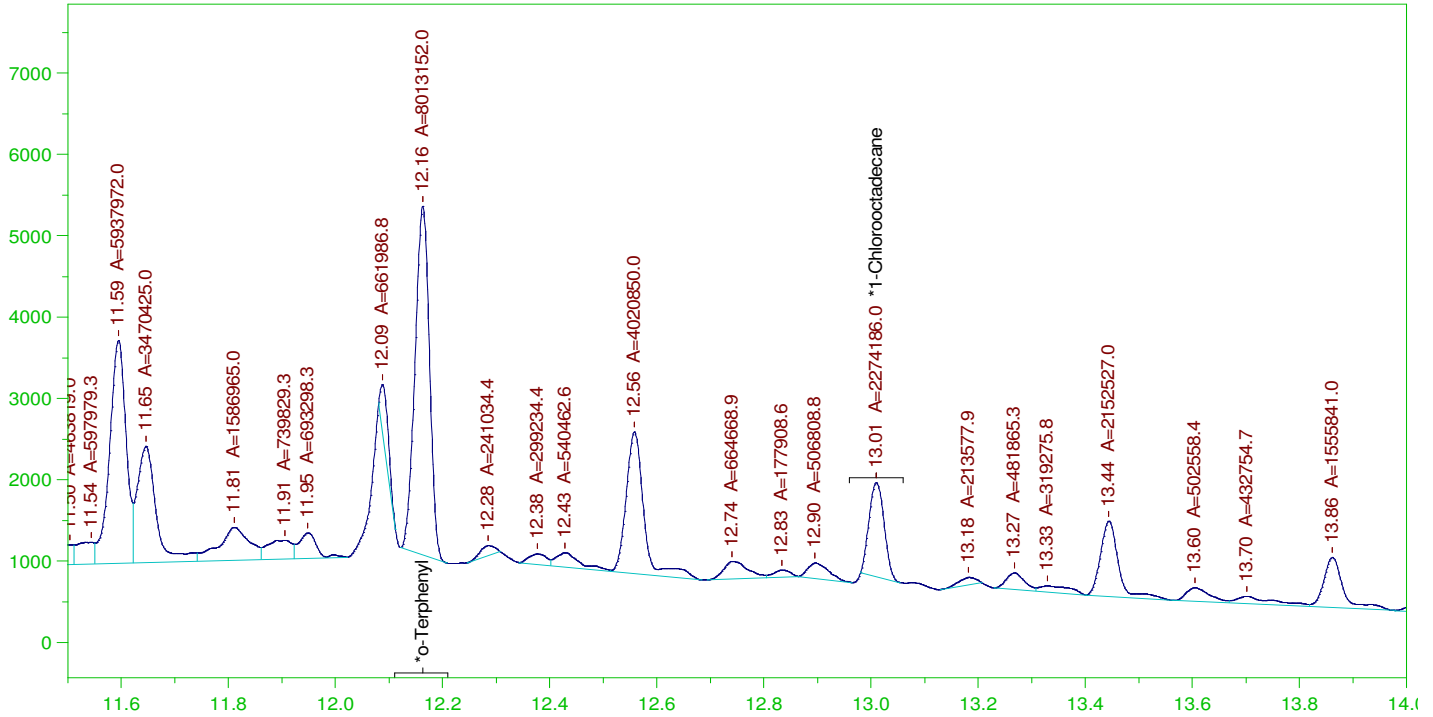
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.163	.194	.389	200.34	-
*1-Chlorooctadecane	13.01	.194	.186	95.81	-

DRO Area: 5.180513E+08 DRO Amount: 16.04183
 TEH Area: 5.576945E+08 TEH Amount: 17.26941

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0012.RAW

B22010096-001DMS ;0106HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

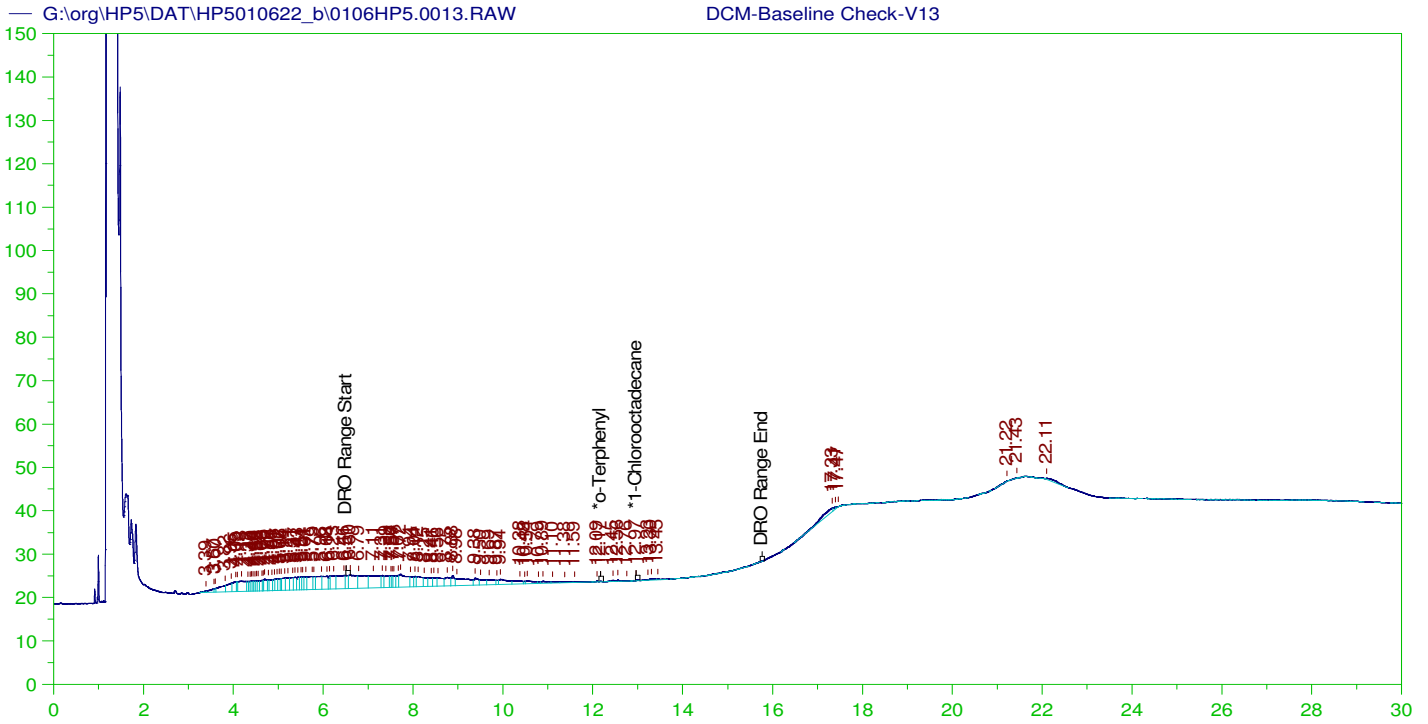
Sample Name: B22010096-001DMS ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0012.RAW
 Date & Time Acquired: 1/6/2022 3:42:14 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.163	.194	.219	112.83
*1-Chlorooctadecane	13.01	.194	.062	32.02

DRO Area: 2.535072E+08 DRO Amount: 7.85003
 TEH Area: 2.706487E+08 TEH Amount: 8.38083



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V13
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0013.RAW
 Date & Time Acquired: 1/6/2022 4:25:39 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.166	200.	.017	.01	-
*1-Chlorooctadecane	12.966	200.	.023	.01	-

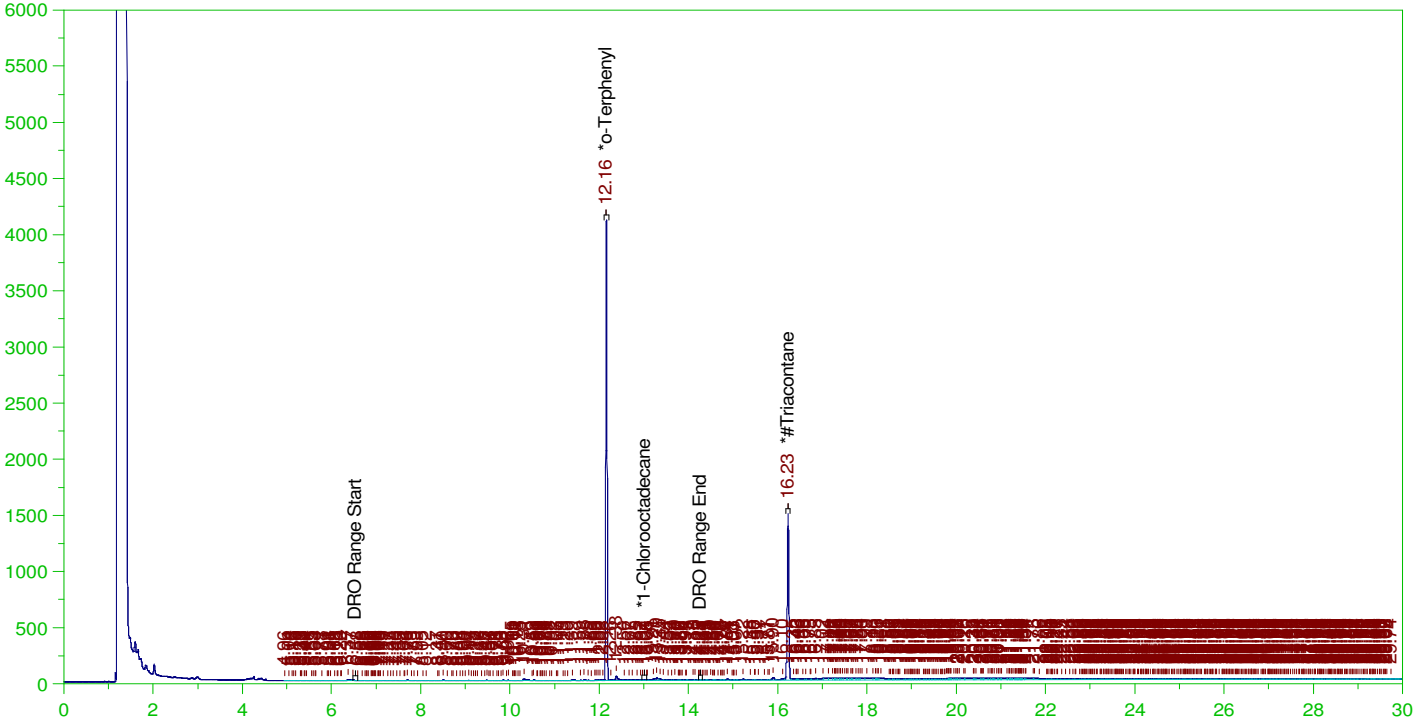
DRO Area:505317.8 DRO Amount: 16.11695
 TEH Area:1003452 TEH Amount: 32.0048

ERH2299 (OWDFMW04A)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0014.RAW

Batch ID: 162703

B22010143-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010143-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0014.RAW
Date & Time Acquired: 1/6/2022 5:10:38 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.16	.19	.203	106.42	-
*1-Chlorooctadecane	13.007	.19	.	.13	-
*#Triacontane	16.228	.19	.126	66.31	-

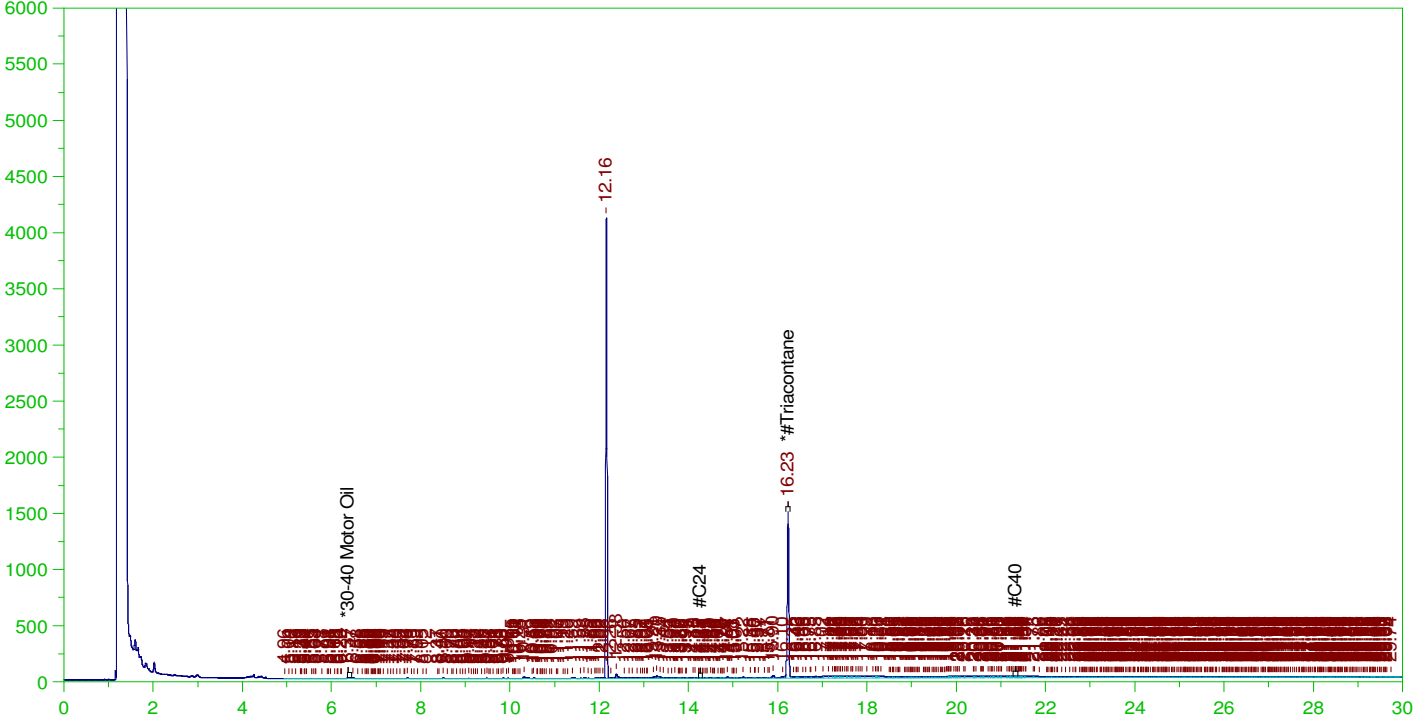
DRO Area:1134597 DRO Amount: 3.446438E-02
TEH Area:8449801 TEH Amount: 0.2566702

ERH2299 (OWDFMW04A)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0014.RAW

B22010143-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010143-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0014.RAW
Date & Time Acquired: 1/6/2022 5:10:38 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.228	.476	.126	26.52	-

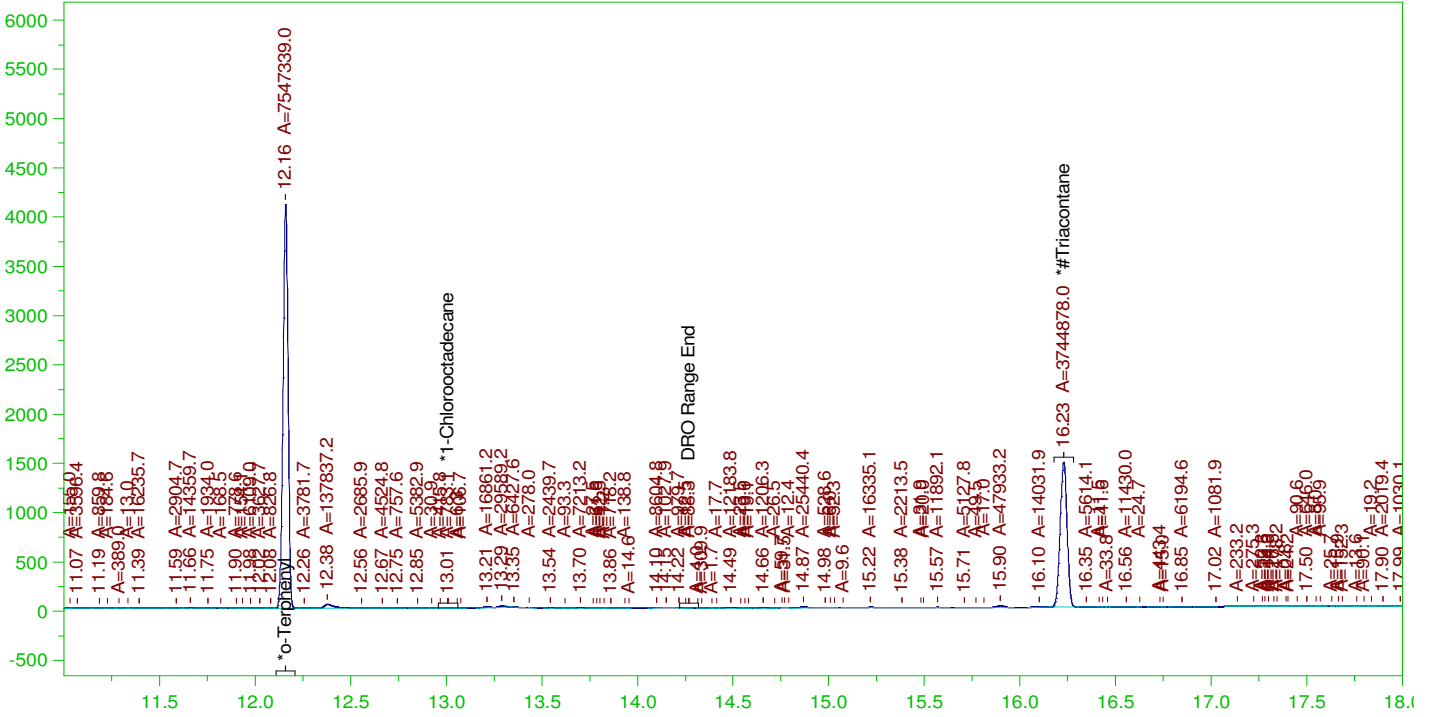
RRO Area:4821862 RRO AMOUNT: 0.1608921

ERH2299 (OWDFMW04A)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0014.RAW

B22010143-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010143-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0014.RAW
Date & Time Acquired: 1/6/2022 5:10:38 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.16	.19	.202	106.27	-
*1-Chlorooctadecane	13.007	.19	.	.01	-
*#Triacontane	16.228	.19	.123	64.72	-

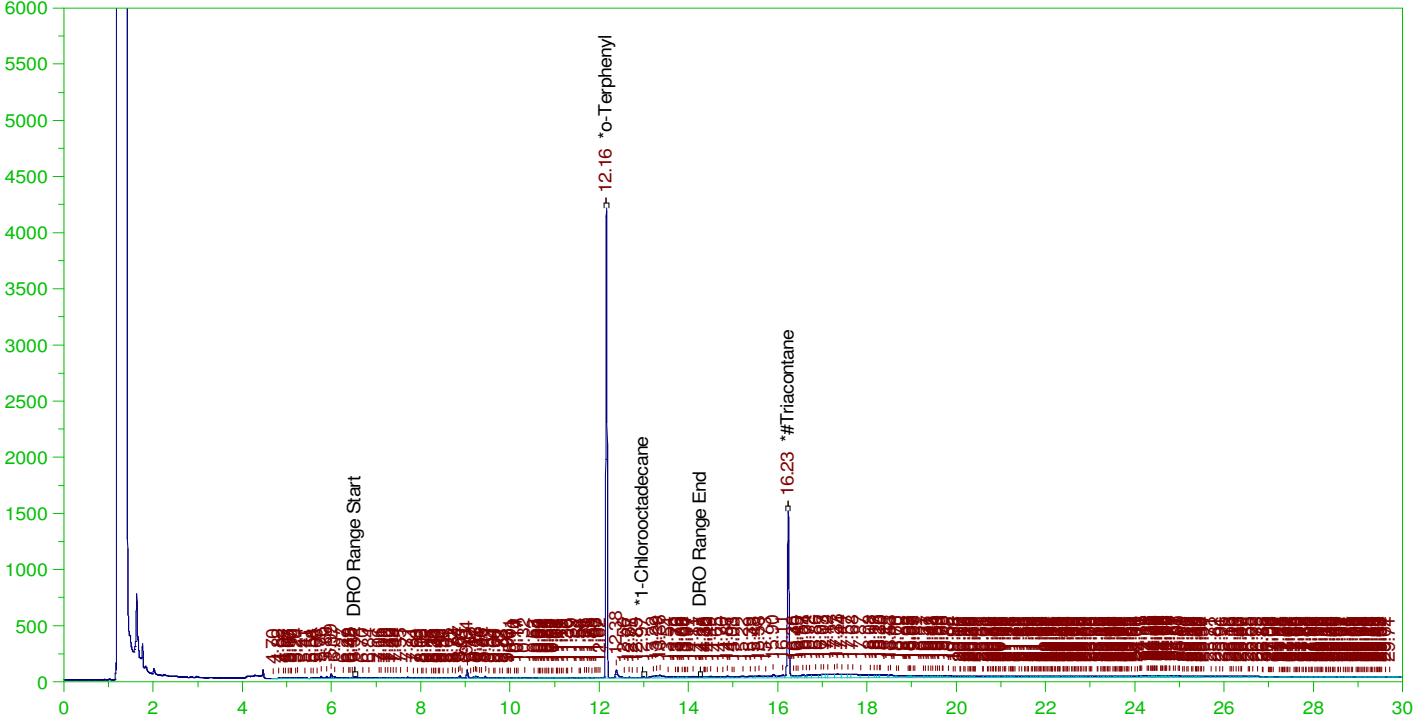
DRO Area:607905.9 DRO Amount: 1.846568E-02
TEH Area:1491551 TEH Amount: 4.530719E-02

ERH2305 (OWDFMW08A)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0015.RAW

Batch ID: 162703

B22010148-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010148-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0015.RAW
Date & Time Acquired: 1/6/2022 5:53:59 PM
Method File: G:\Org\HP5\Methods\DR_8015-010615-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.162	.192	.212	110.19	-
*1-Chlorooctadecane	12.973	.192	.002	1.07	-
*#Triacontane	16.231	.192	.128	66.8	-

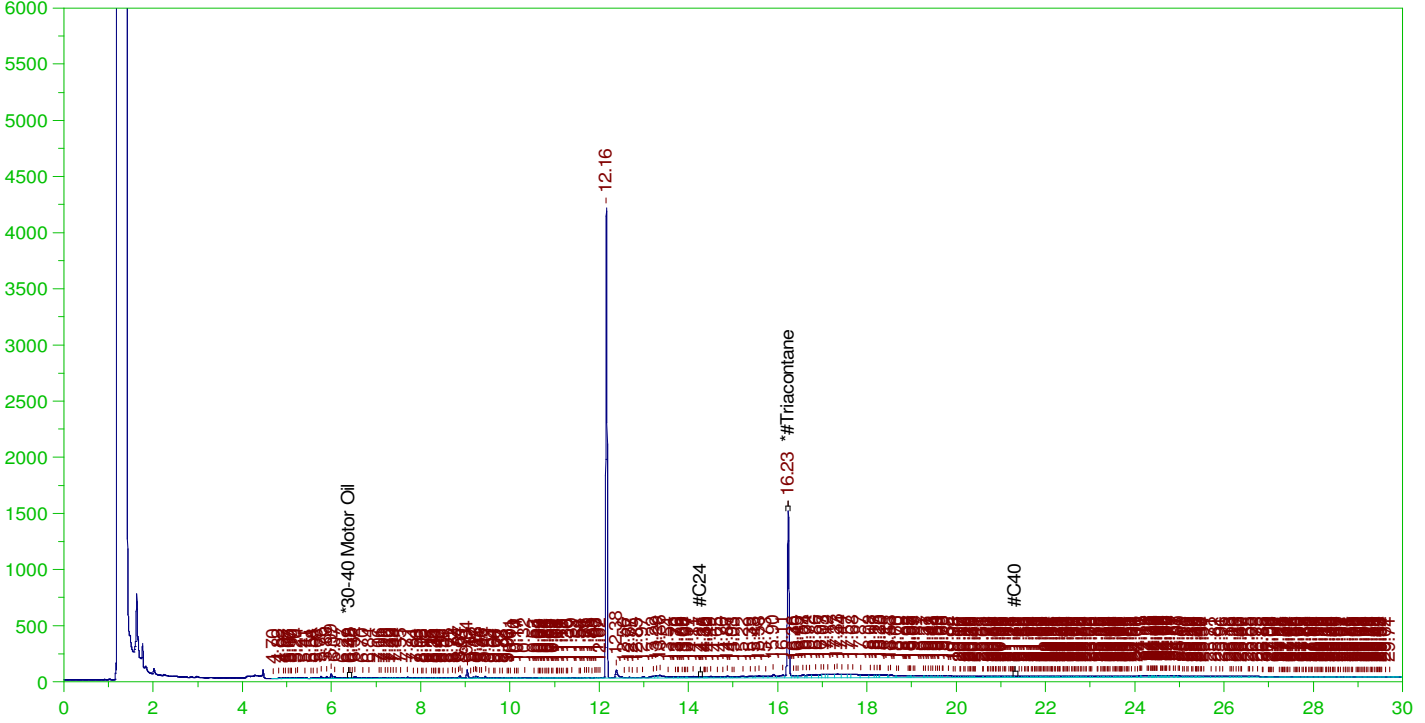
DRO Area:3341707 DRO Amount: 0.1024833
TEH Area:1.57211E+07 TEH Amount: 0.4836984

ERH2305 (OWDFMW08A)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0015.RAW

Batch ID: 162703

B22010148-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010148-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0015.RAW
Date & Time Acquired: 1/6/2022 5:53:59 PM
Method File: G:\Org\HP5\Methods\DR_OROS-010615-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.231	.481	.128	26.72

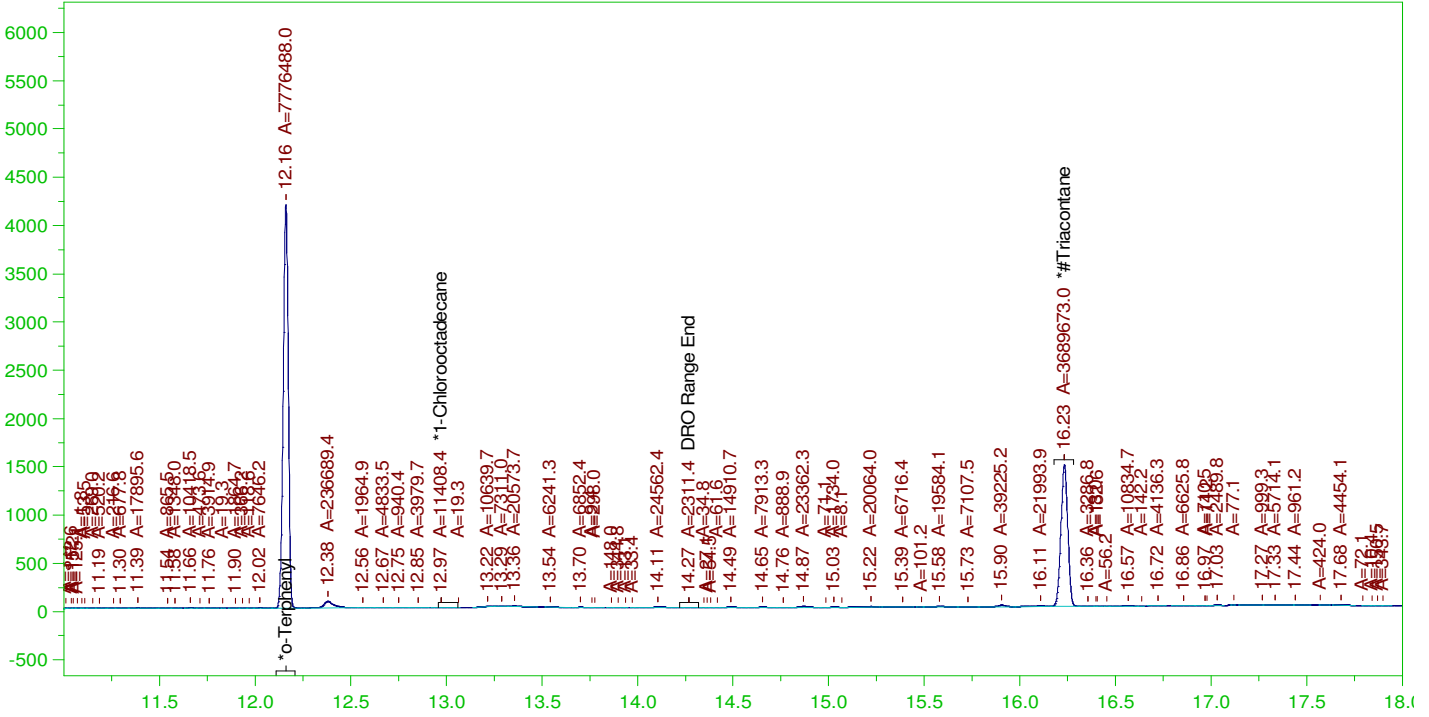
RRO Area:7903455 RRO AMOUNT: 0.2662521

ERH2305 (OWDFMW08A)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0015.RAW

B22010148-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010148-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0015.RAW
Date & Time Acquired: 1/6/2022 5:53:59 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.162	.192	.211	109.5	-
*1-Chlorooctadecane	12.973	.192	.	.16	-
*#Triacontane	16.231	.192	.123	63.77	-

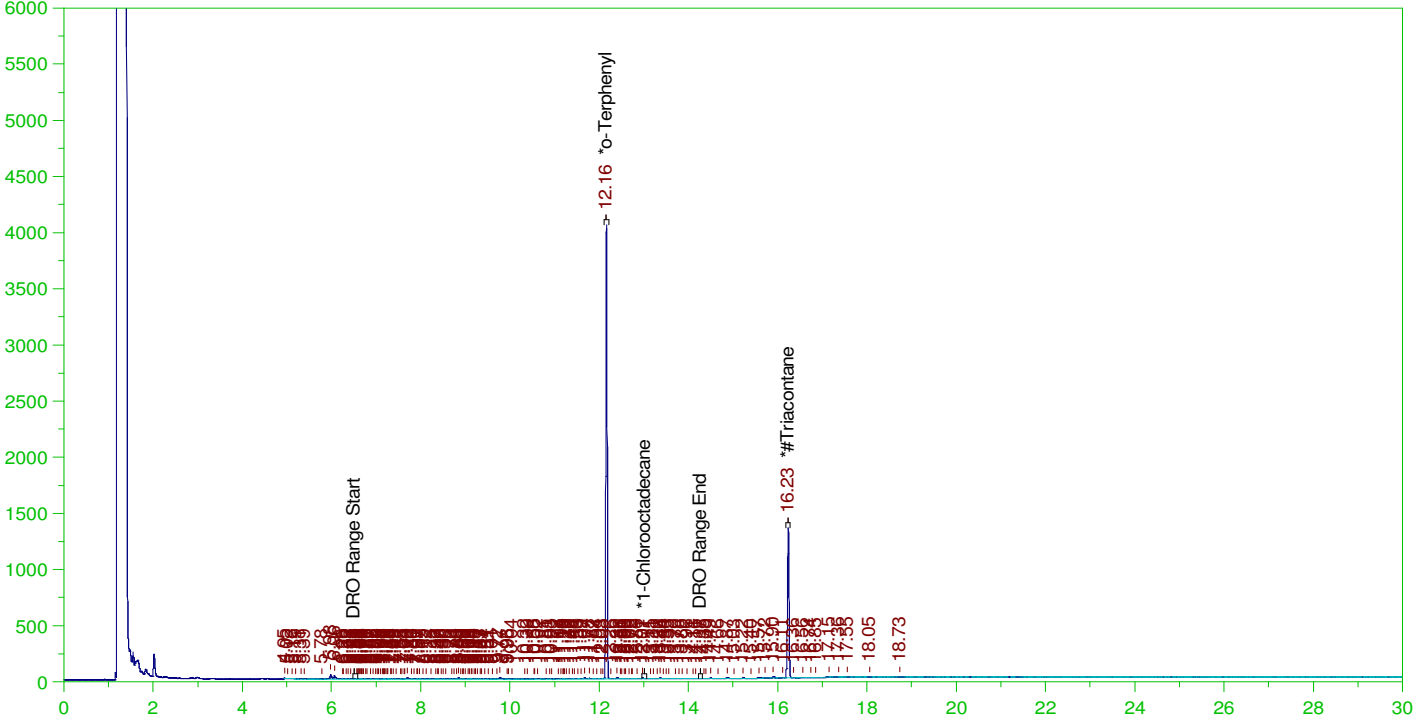
DRO Area:1867877 DRO Amount: 5.728398E-02
TEH Area:3460544 TEH Amount: 0.1061278

ERH2303 (OWDFMW07A)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0016.RAW

Batch ID: 162703

B22010212-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010212-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0016.RAW
Date & Time Acquired: 1/6/2022 6:37:18 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.19	.201	105.55	-
*1-Chlorooctadecane	13.01	.19	.	.07	-
*#Triacontane	16.231	.19	.112	58.61	-

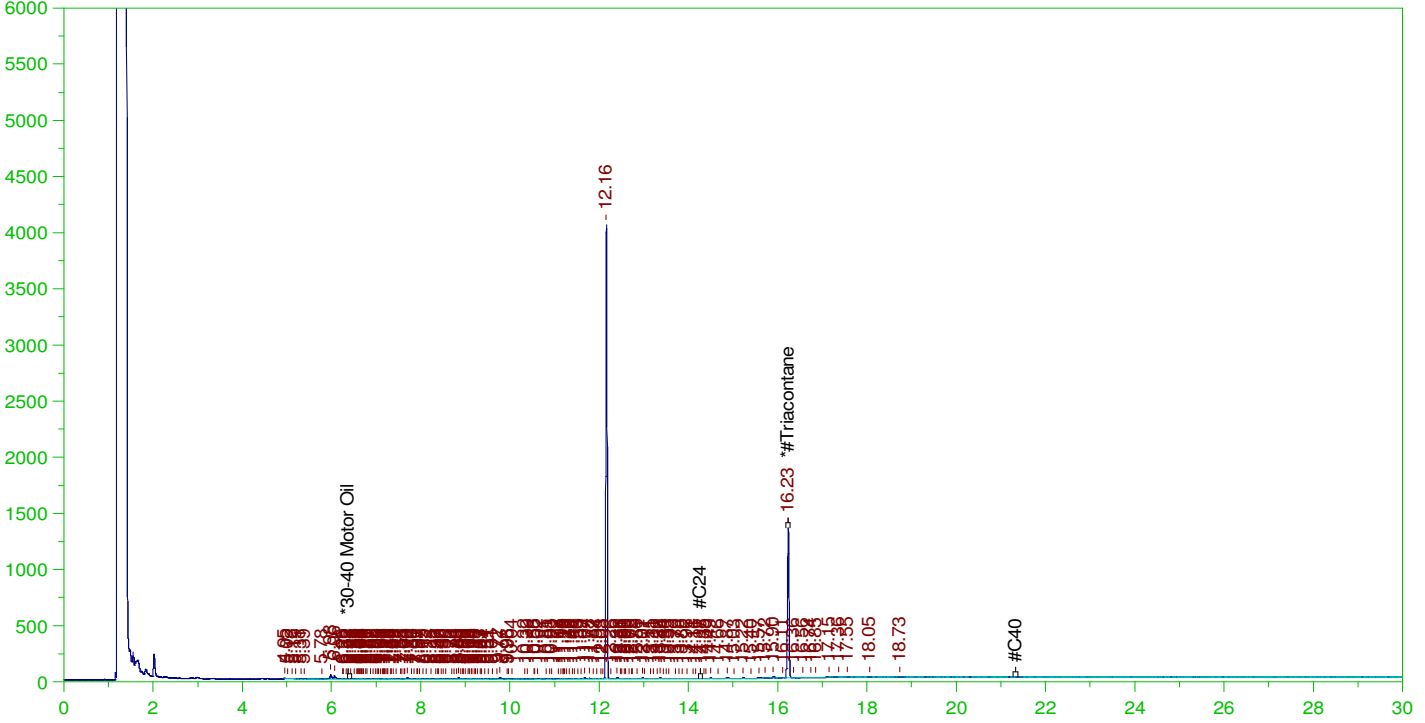
DRO Area:555979.1 DRO Amount: 1.688836E-02
TEH Area:996550.5 TEH Amount: 0.0302711

ERH2303 (OWDFMW07A)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0016.RAW

Batch ID: 162703

B22010212-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010212-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0016.RAW
Date & Time Acquired: 1/6/2022 6:37:18 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.231	.476	.112	23.45

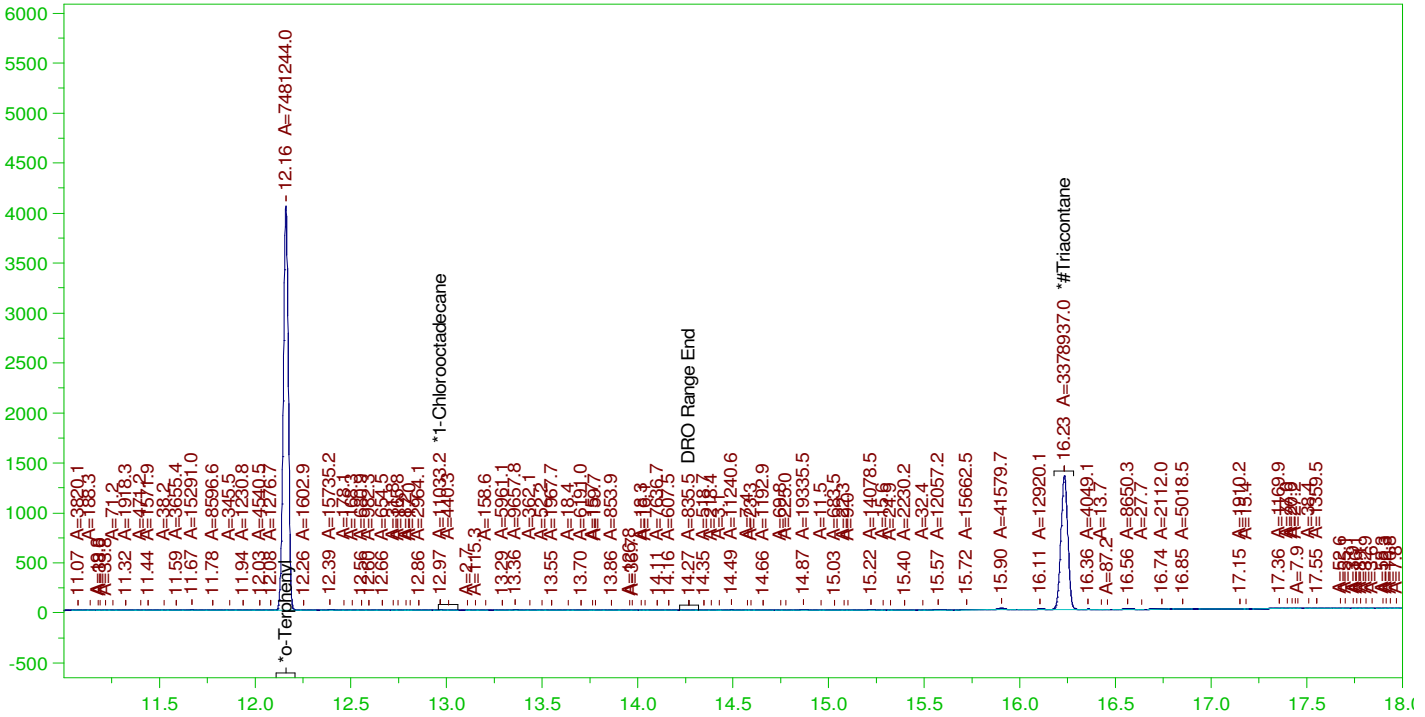
RRO Area:181490.7 RRO AMOUNT: 6.05584E-03

ERH2303 (OWDFMW07A)

Batch ID: 162703

G:\Org\HP5\DAT\HP5010622_b\0106HP5.0016.RAW

B22010212-001D ; 0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

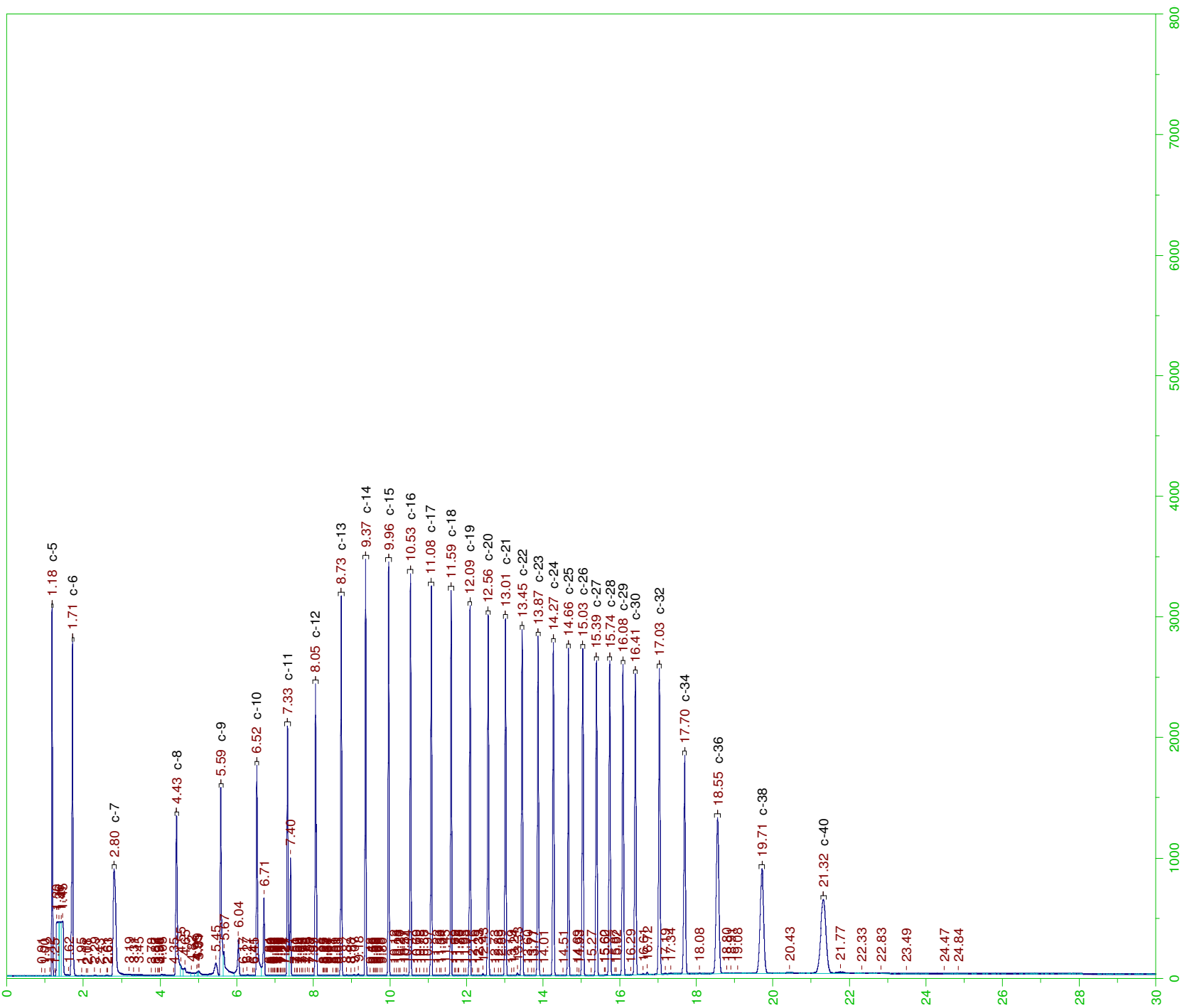
Sample Name: B22010212-001D ; 0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5010622_b\0106HP5.0016.RAW
Date & Time Acquired: 1/6/2022 6:37:18 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

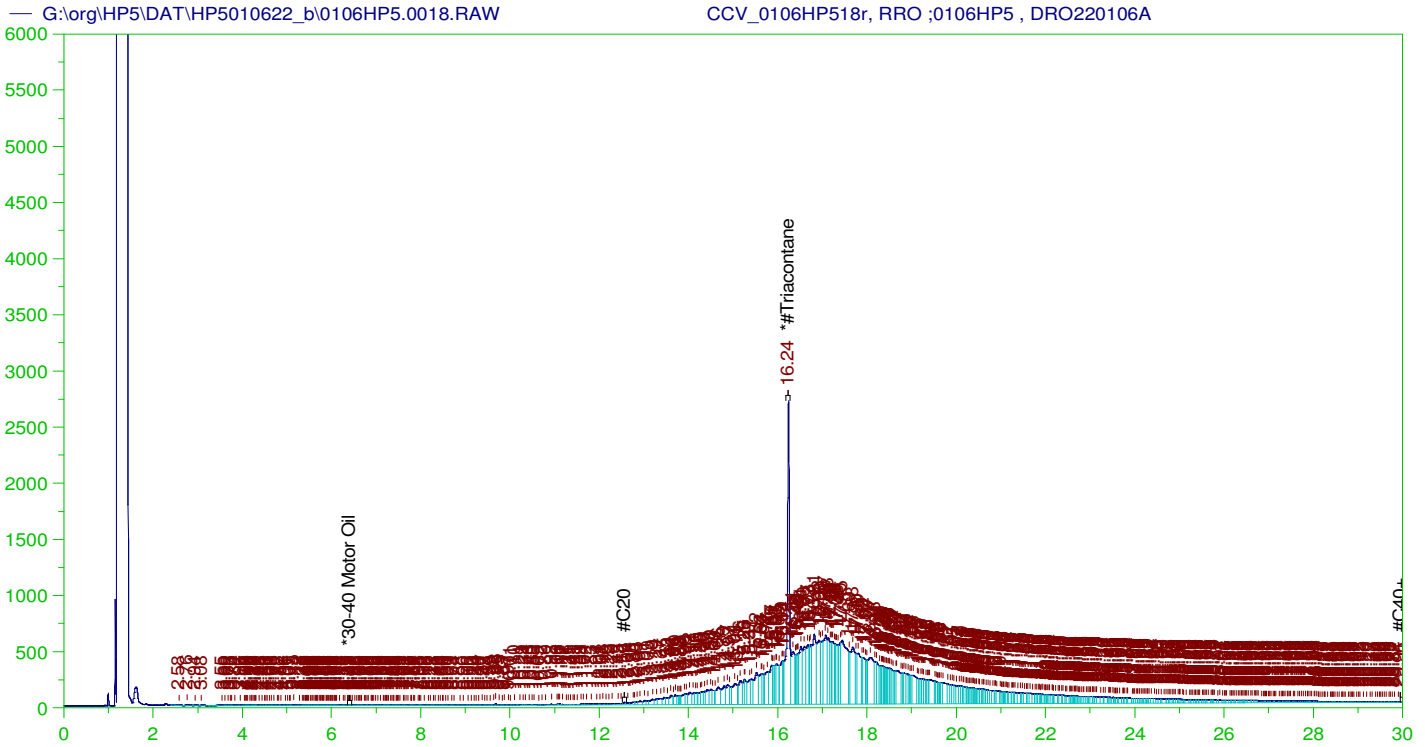
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.19	.201	105.34	-
*1-Chlorooctadecane	12.971	.19	.	.16	-
*#Triacontane	16.231	.19	.111	58.4	-

DRO Area: 479471.5 DRO Amount: 1.456437E-02
TEH Area: 1132421 TEH Amount: 3.439829E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP518r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0018.RAW
 Date & Time Acquired: 1/6/2022 8:03:53 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.238	500.	336.853	67.37	-

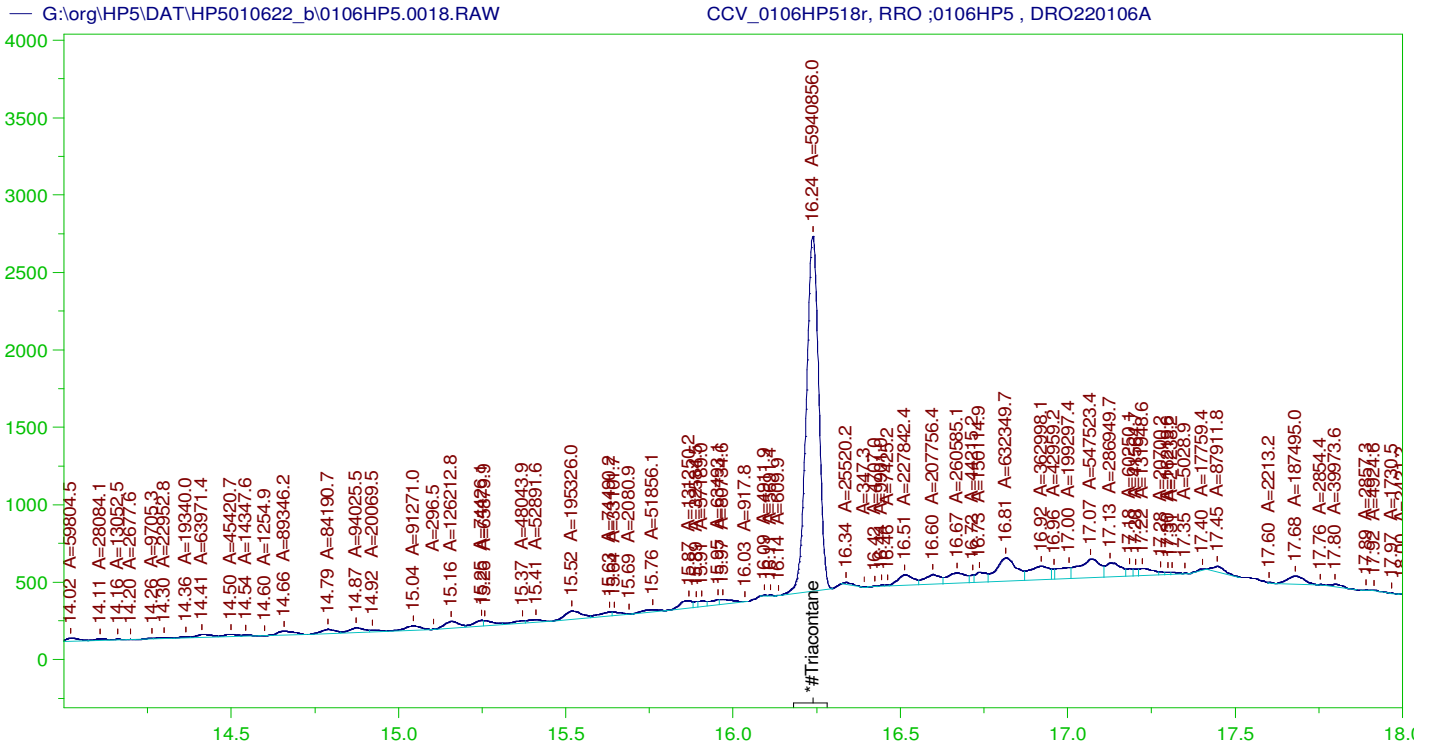
~~RRO~~ TEH (Oil Range) Area:1.388852E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4865.923

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.05	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.238	200.	336.853	168.43	75-125

AMN 01/31/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP518r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0018.RAW
 Date & Time Acquired: 1/6/2022 8:03:53 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.238	500.	205.352	41.07	-

RRO Area:6266565 RRO AMOUNT: 219.5528

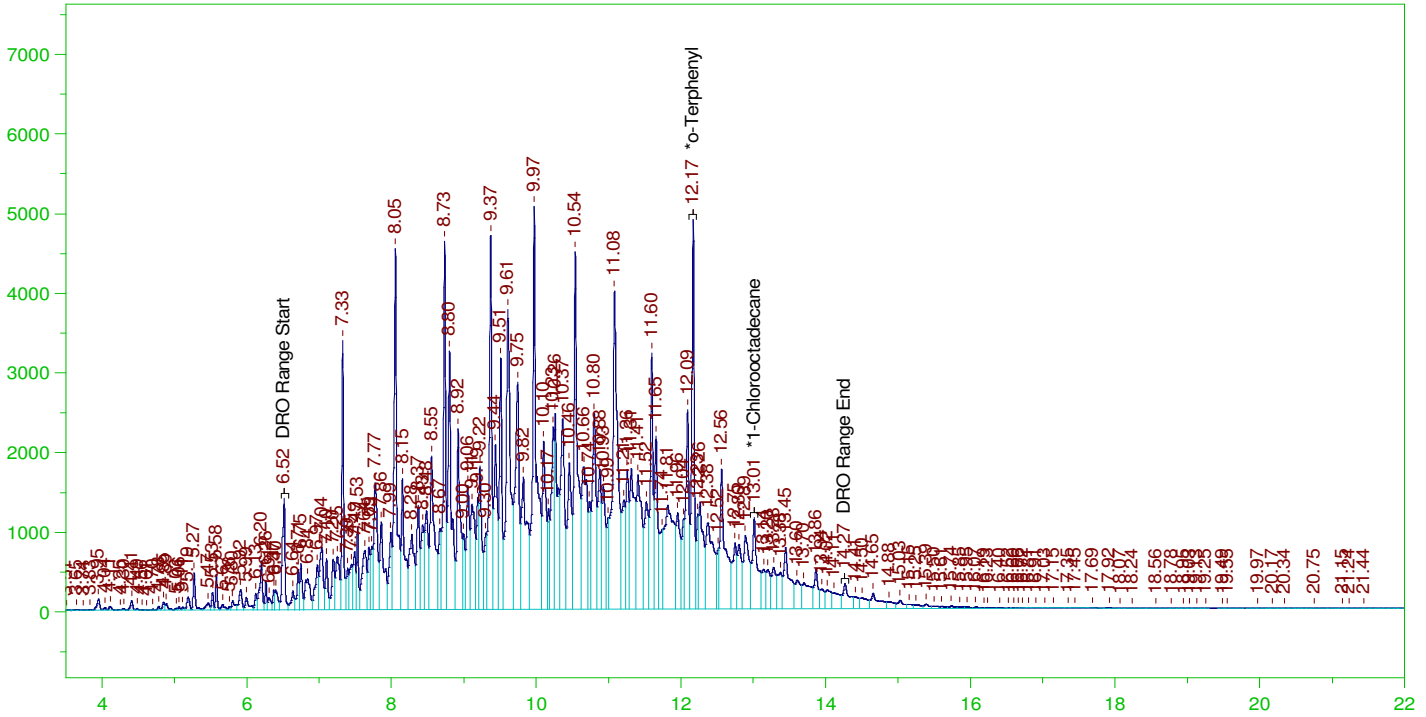
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.05	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.238	200.	205.352	102.68	75-125

G:\org\HP5\DAT\HP5010622_b\0106HP5.0019.RAW

CCV_0106HP519r, DRO ;0106HP5 , DRO220105B



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP519r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0019.RAW
 Date & Time Acquired: 1/6/2022 8:47:05 PM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.167	200.	331.893	165.95
*1-Chlorooctadecane	13.013	200.	165.038	82.52

DRO Area: 4.804415E+08 DRO Amount: 15323.53
 TEH Area: 4.976311E+08 TEH Amount: 15871.78

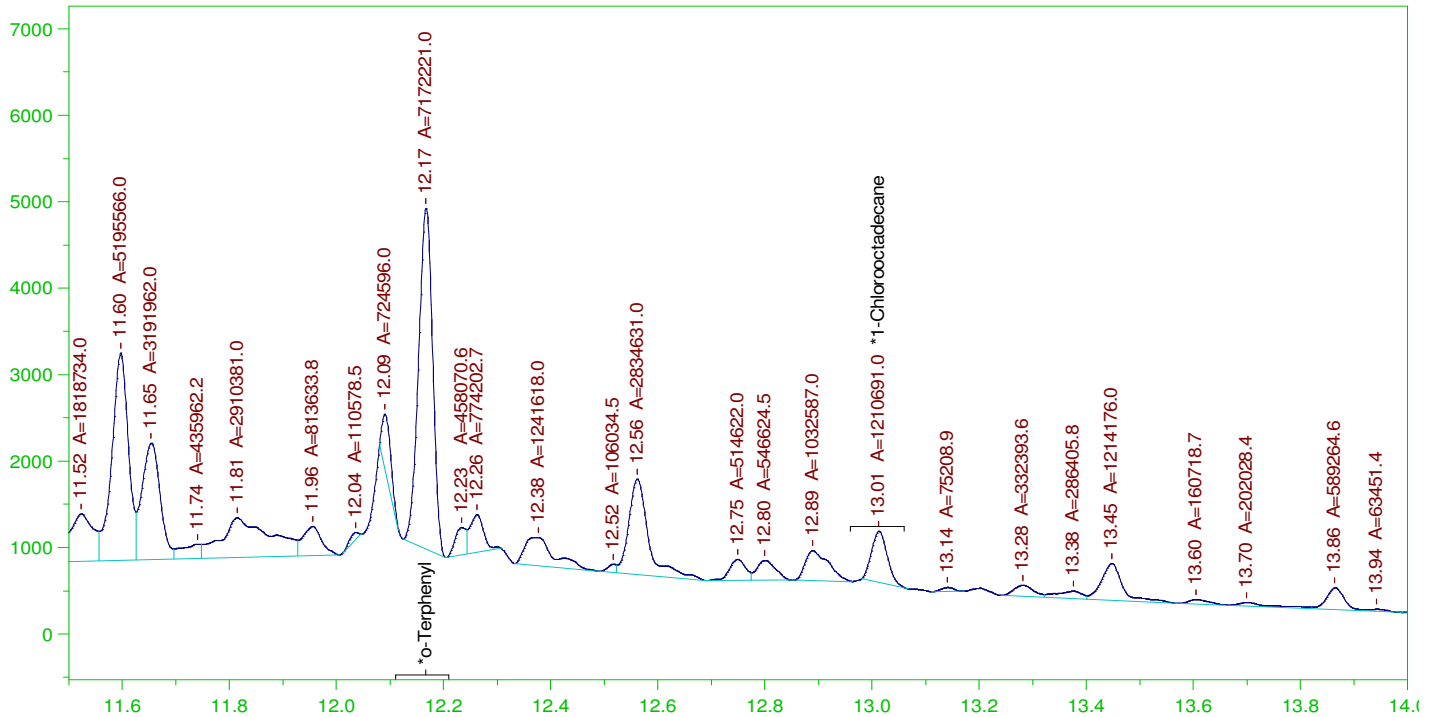
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15871.78	105.81	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.167	200.	331.893	165.95	85-115
*1-Chlorooctadecane	13.013	200.	165.038	82.52	85-115

G:\org\HP5\DAT\HP5010622_b\0106HP5.0019.RAW

CCV_0106HP519r, DRO ;0106HP5 , DRO220105B



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP519r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0019.RAW
 Date & Time Acquired: 1/6/2022 8:47:05 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

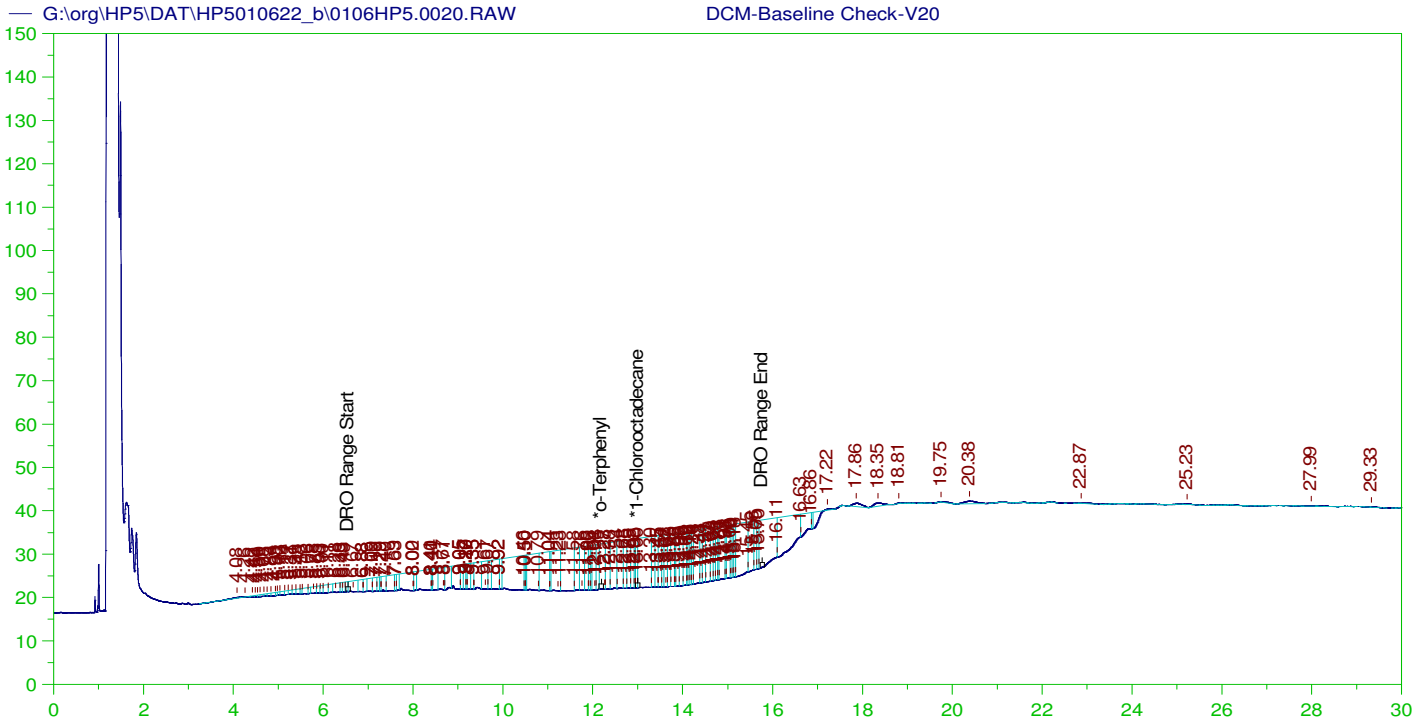
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.167	200.	201.982	100.99
*1-Chlorooctadecane	13.013	200.	34.095	17.05

DRO Area: 2.667776E+08 DRO Amount: 8508.787
 TEH Area: 2.774924E+08 TEH Amount: 8850.532

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8850.53	59.	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.167	200.	201.982	100.99	85-115
*1-Chlorooctadecane	13.013	200.	34.095	17.05	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V20
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0020.RAW
 Date & Time Acquired: 1/6/2022 9:30:30 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.961	200.	.	-
*1-Chlorooctadecane	13.003	200.	5.782	2.89

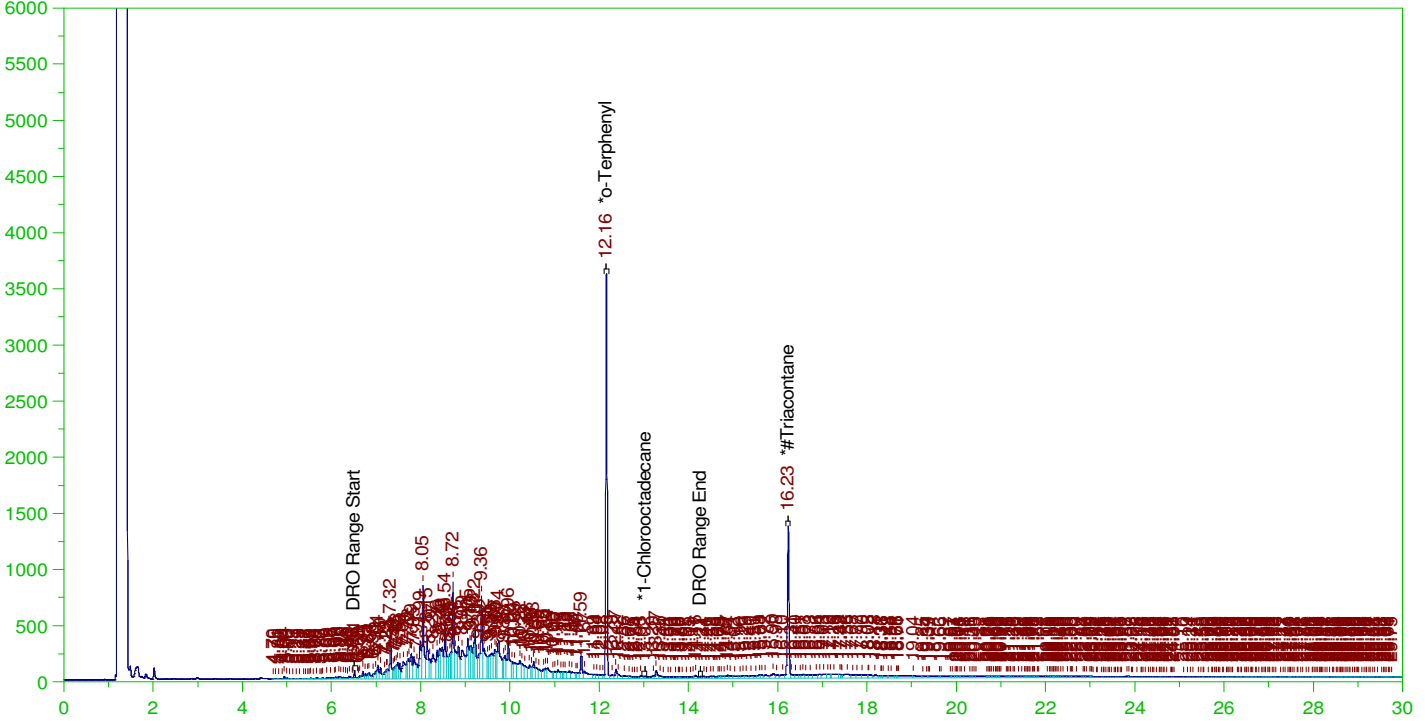
DRO Area: 4633478 DRO Amount: 147.7833
 TEH Area: 5123727 TEH Amount: 163.4196

ERH2333 (RHMW2254-01 Bailer)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0021.RAW

B22010213-002B ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010213-002B ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0021.RAW
Date & Time Acquired: 1/6/2022 10:13:54 PM
Method File: G:\Org\HP5\Methods\D3_8015-010621-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.16	.2	.192	96.18	-
*1-Chlorooctadecane	13.024	.2	.003	1.64	-
*#Triacontane	16.231	.2	.122	61.12	-

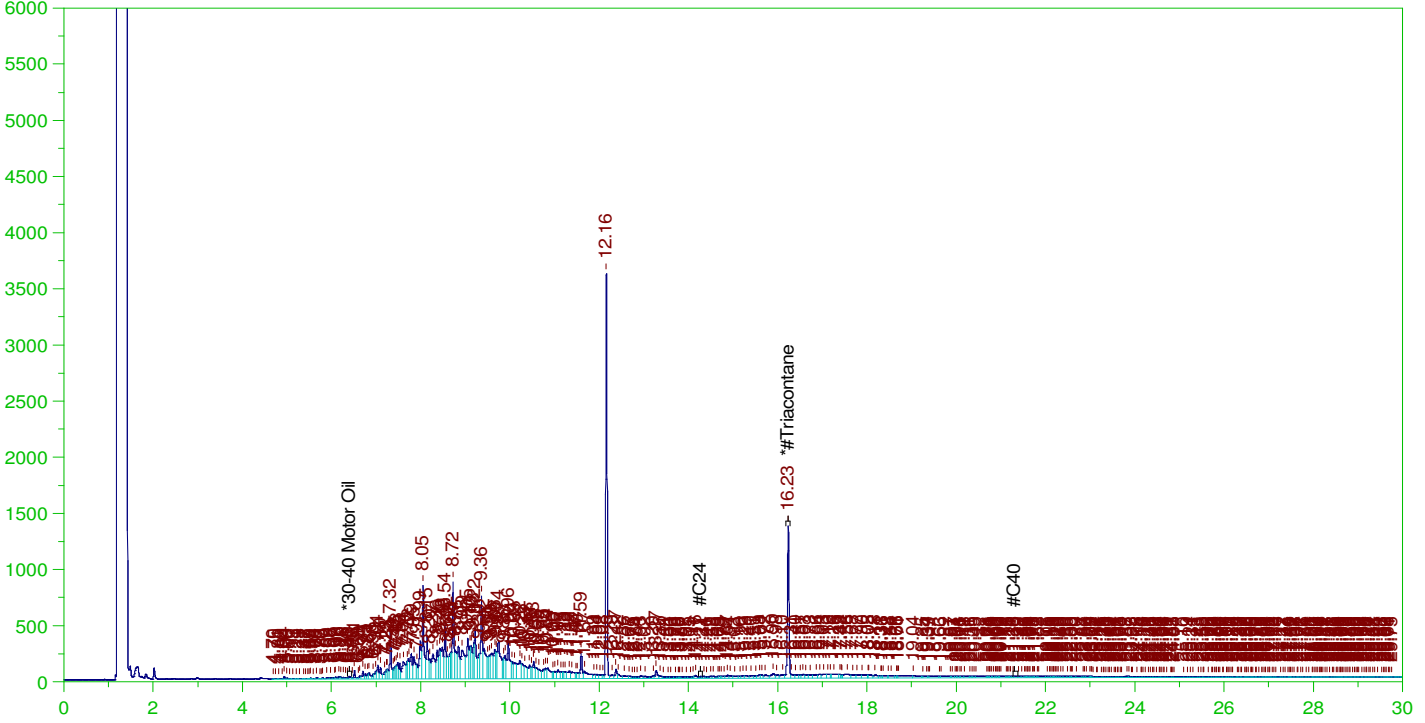
DRO Area: 5.096619E+07 DRO Amount: 1.62555
TEH Area: 6.253207E+07 TEH Amount: 1.99444

ERH2333 (RHMW2254-01 Bailer)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0021.RAW

B22010213-002B ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010213-002B ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0021.RAW
Date & Time Acquired: 1/6/2022 10:13:54 PM
Method File: G:\Org\HP5\Methods\DR_OROS-010621-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.231	.5	.122	24.45

RRO Area:8413529

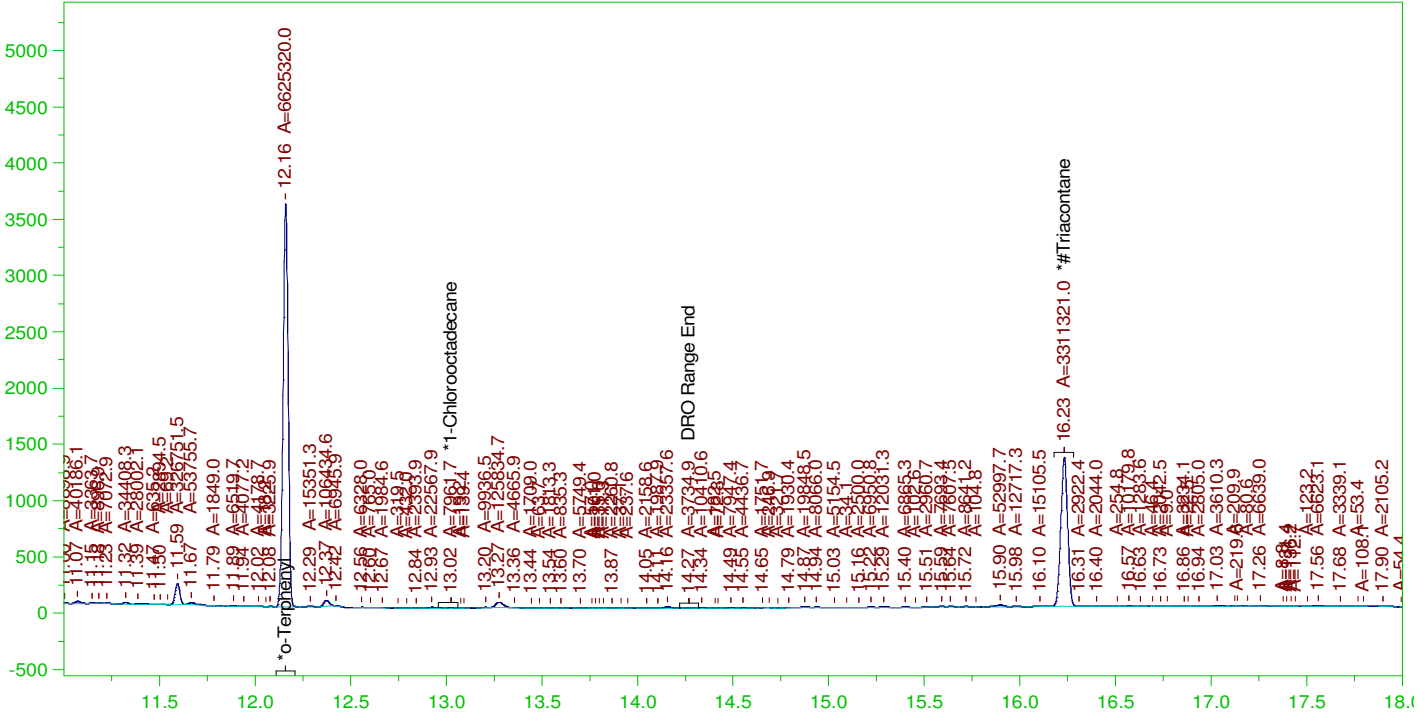
RRO AMOUNT: 0.2947729

ERH2333 (RHMW2254-01 Bailer)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0021.RAW

B22010213-002B ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010213-002B ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0021.RAW
Date & Time Acquired: 1/6/2022 10:13:54 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.16	.2	.187	93.29
*1-Chlorooctadecane	13.024	.2	.11	-
*#Triacontane	16.231	.2	.114	57.23

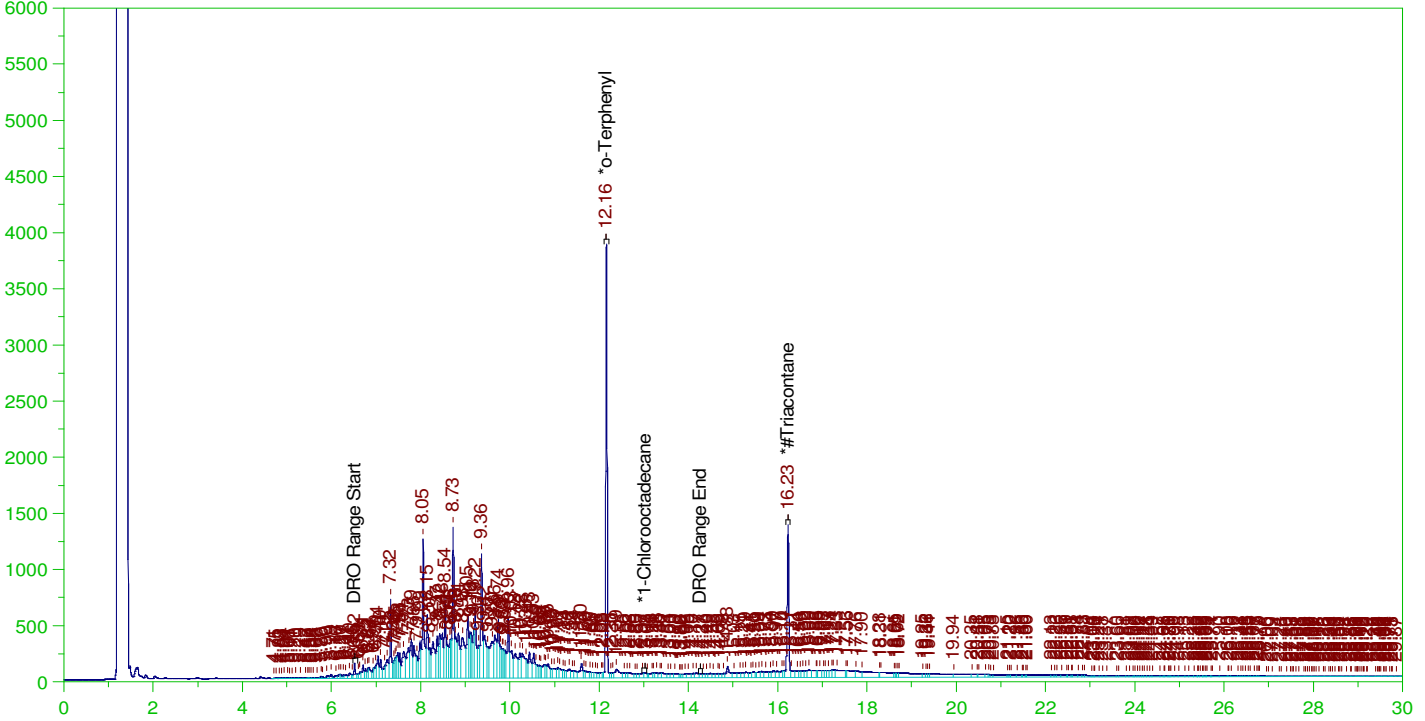
DRO Area: 3.53986E+07 DRO Amount: 1.129027
TEH Area: 3.61274E+07 TEH Amount: 1.152272

ERH2332 (RHMW2254-01 Bailer)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0022.RAW

B22010213-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010213-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0022.RAW
Date & Time Acquired: 1/6/2022 10:57:16 PM
Method File: G:\Org\HP5\Methods\D3_8015-010621-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.194	.203	104.46	-
*1-Chlorooctadecane	13.031	.194	.004	2.18	-
*#Triacontane	16.227	.194	.124	64.07	-

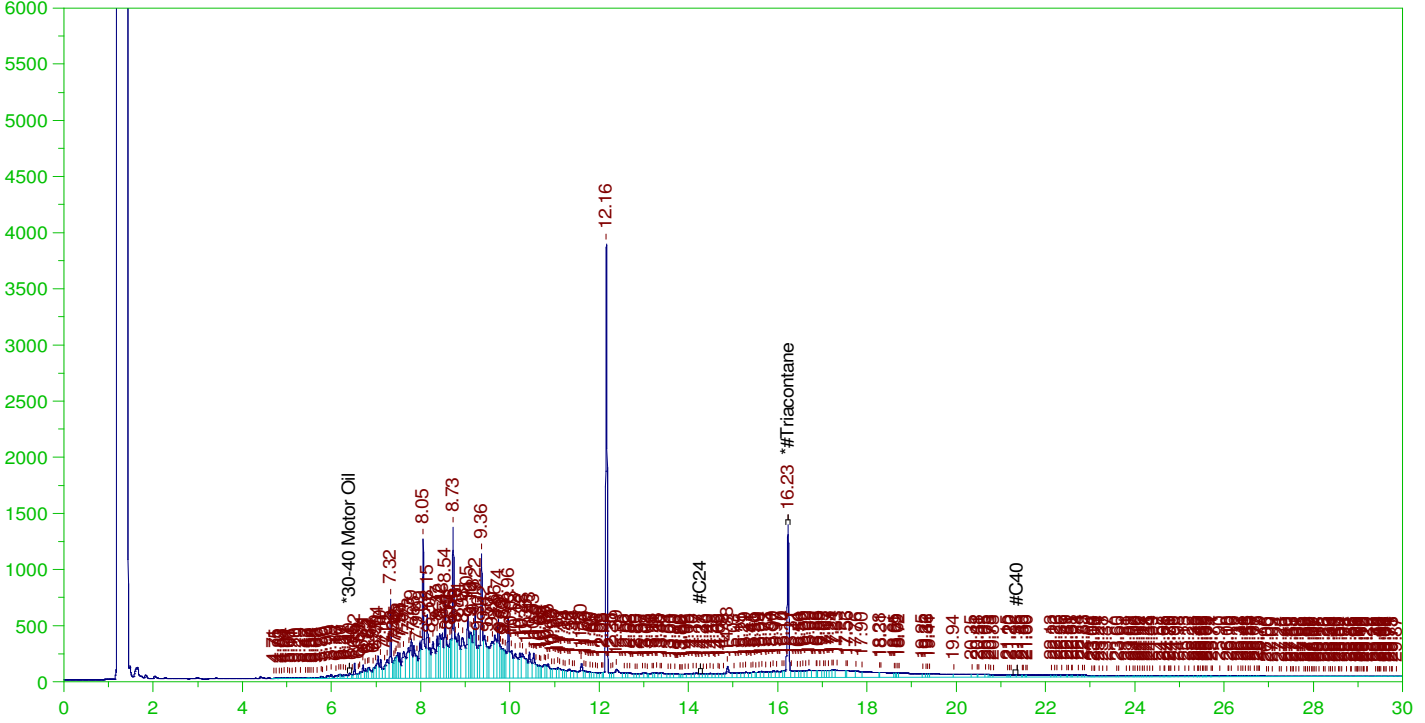
DRO Area: 7.567436E+07 DRO Amount: 2.34331
TEH Area: 9.78099E+07 TEH Amount: 3.028753

ERH2332 (RHMW2254-01 Bailer)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0022.RAW

B22010213-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010213-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0022.RAW
Date & Time Acquired: 1/6/2022 10:57:16 PM
Method File: G:\Org\HP5\Methods\DR_OROS-010621-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.227	.485	.124	25.63	-

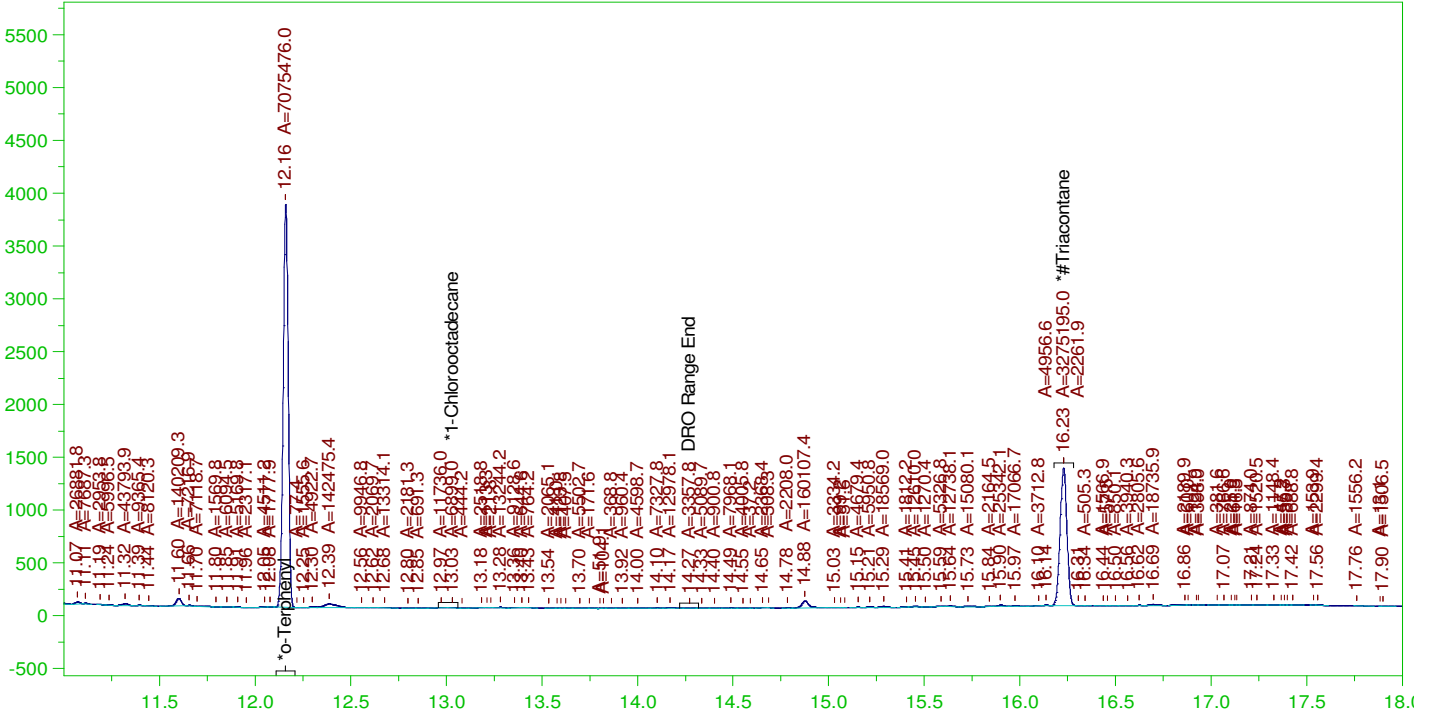
RRO Area:1.69262E+07 RRO AMOUNT: 0.575747

ERH2332 (RHMW2254-01 Bailer)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0022.RAW

B22010213-001D ; 0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010213-001D ; 0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0022.RAW
Date & Time Acquired: 1/6/2022 10:57:16 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.194	.193	99.63	-
*1-Chlorooctadecane	13.031	.194	.	.1	-
*#Triacontane	16.227	.194	.11	56.61	-

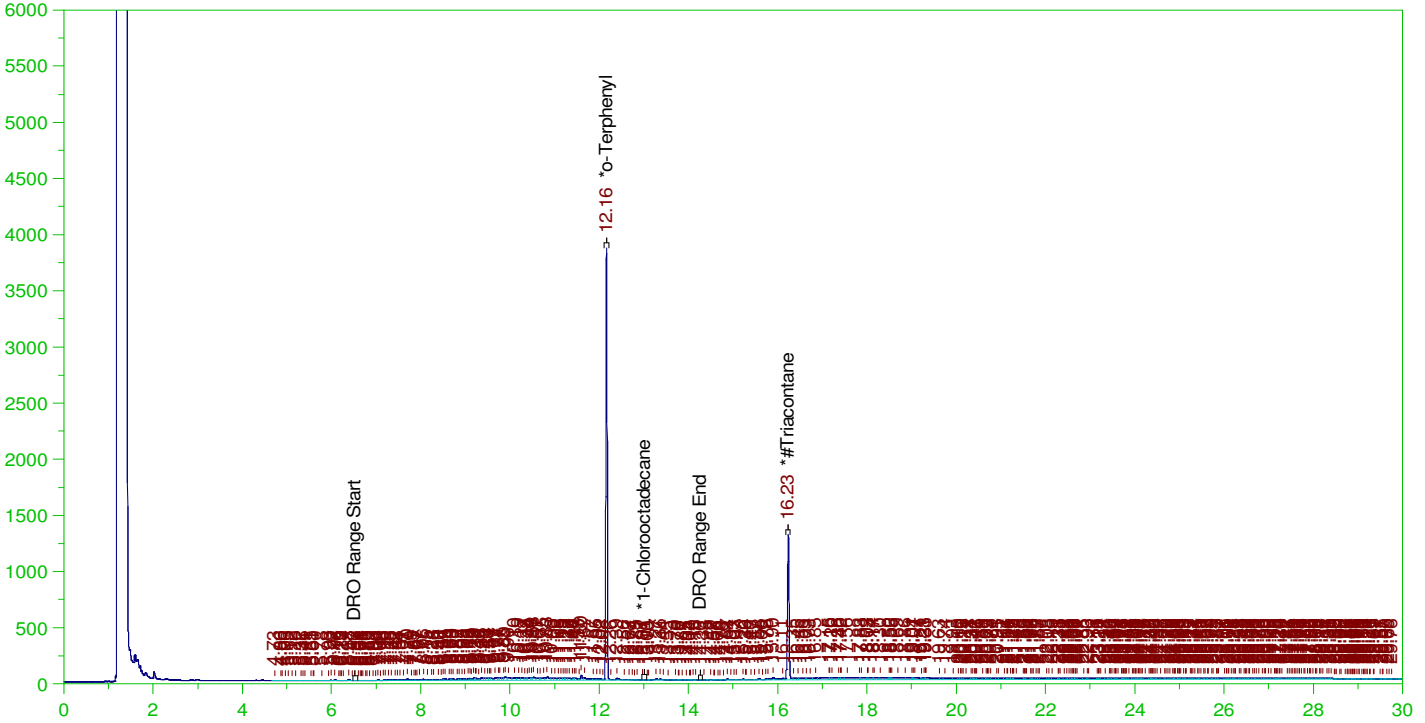
DRO Area: 5.104516E+07 DRO Amount: 1.580649
TEH Area: 5.216387E+07 TEH Amount: 1.615291

ERH2334 (RHMW2254-01 LF)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0023.RAW

B22010213-003D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010213-003D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0023.RAW
Date & Time Acquired: 1/6/2022 11:40:39 PM
Method File: G:\Org\HP5\Methods\D3_8015-010621-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.162	.196	.2	101.94	-
*1-Chlorooctadecane	13.012	.196	.	.15	-
*#Triacontane	16.232	.196	.115	58.44	-

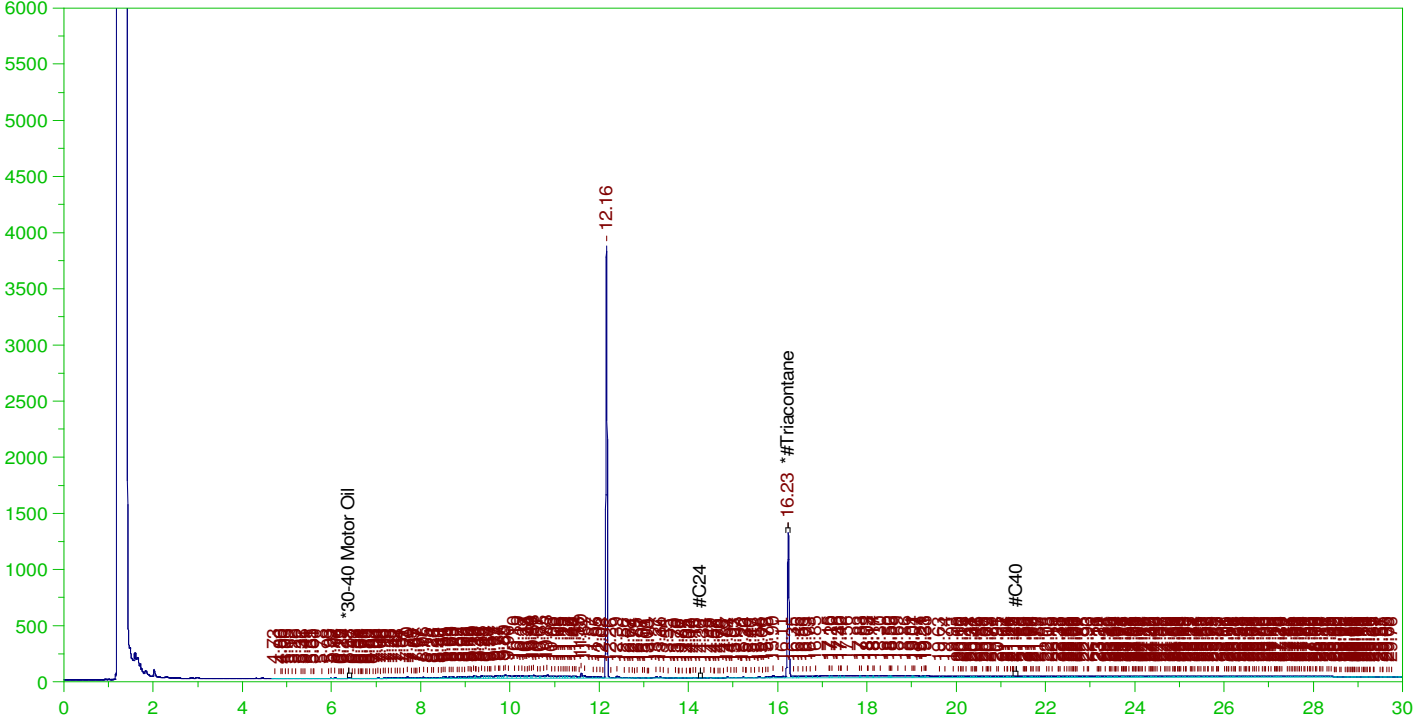
DRO Area:4778307 DRO Amount: 0.1494143
TEH Area:1.259309E+07 TEH Amount: 0.393777

ERH2334 (RHMW2254-01 LF)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0023.RAW

B22010213-003D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010213-003D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0023.RAW
Date & Time Acquired: 1/6/2022 11:40:39 PM
Method File: G:\Org\HP5\Methods\DR_OROS-010621-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.232	.49	.115	23.38	-

RRO Area:5081009

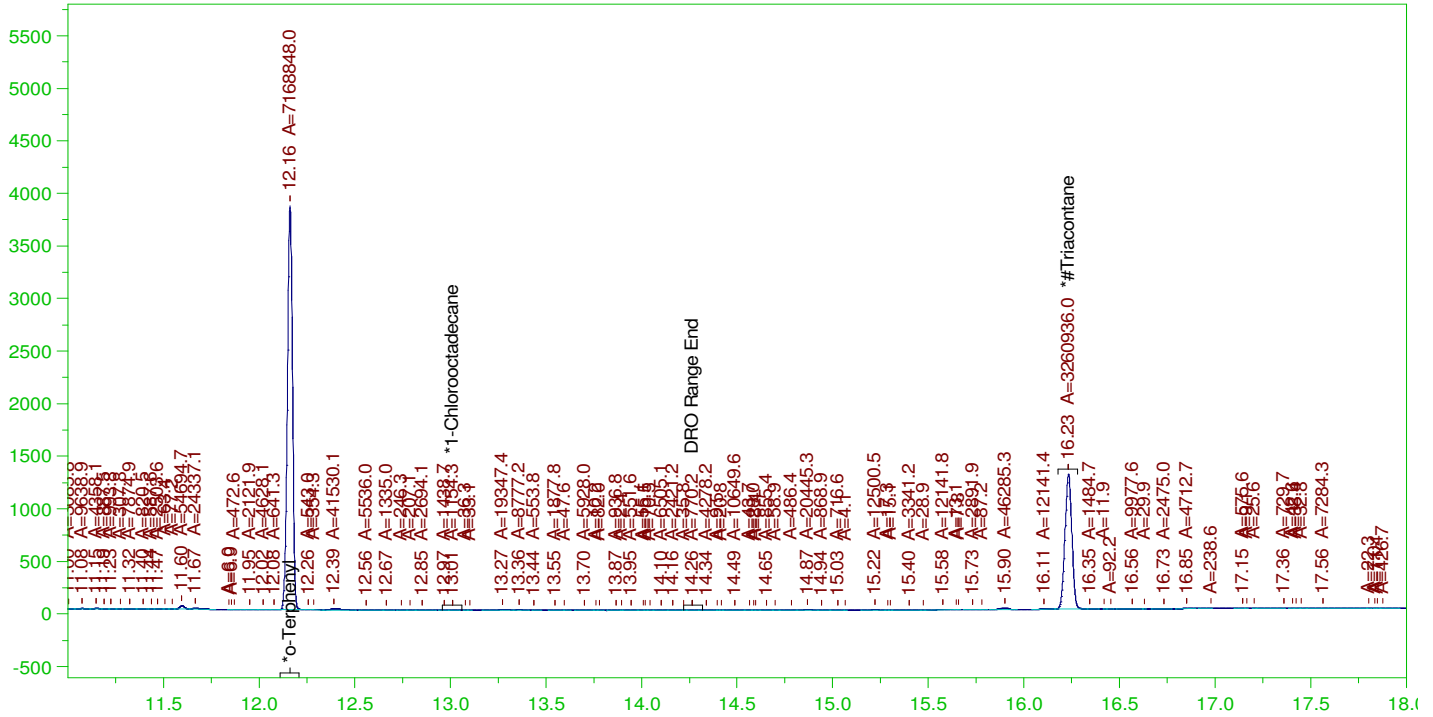
RRO AMOUNT: 0.1745256

ERH2334 (RHMW2254-01 LF)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0023.RAW

B22010213-003D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

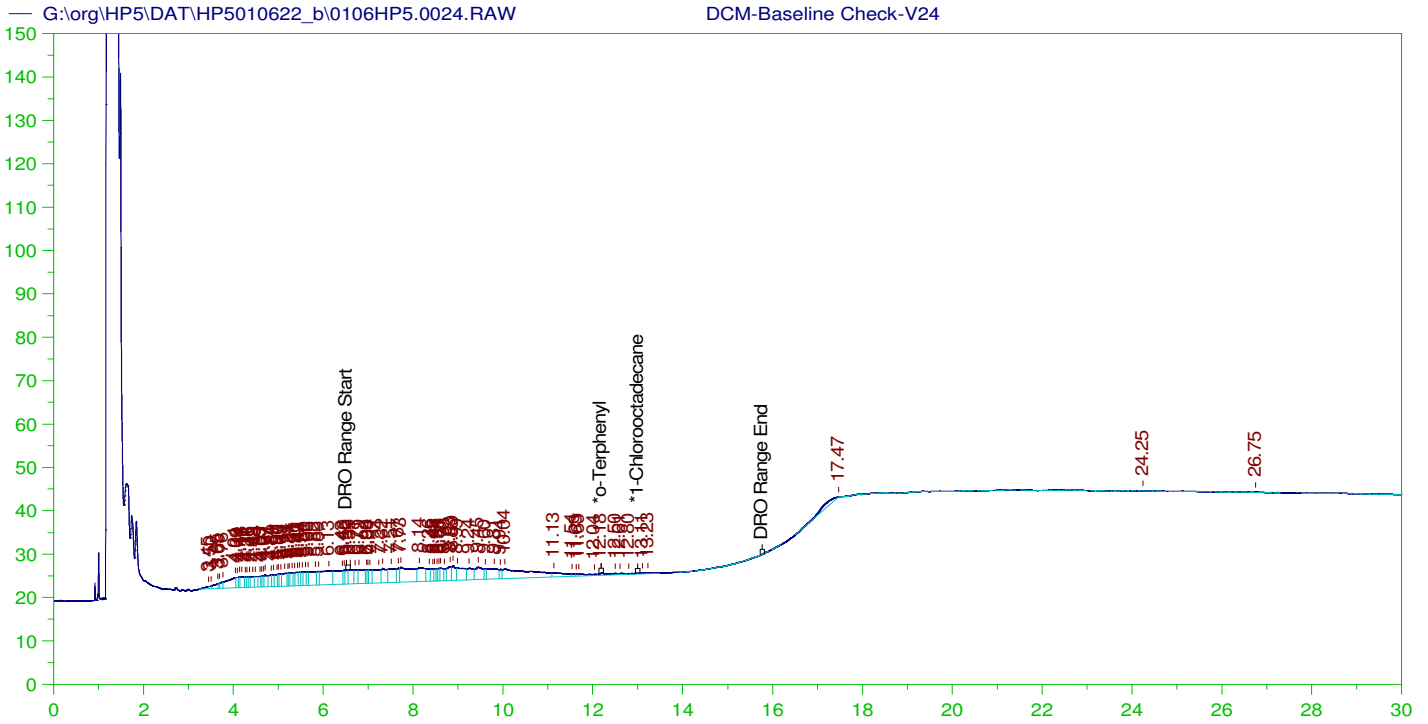
Sample Name: B22010213-003D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0023.RAW
Date & Time Acquired: 1/6/2022 11:40:39 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.162	.196	.198	100.94
*1-Chlorooctadecane	13.012	.196	.02	-
*#Triacantane	16.232	.196	.111	56.36

DRO Area:1408939 DRO Amount: 4.405653E-02
TEH Area:1826511 TEH Amount: 0.0571137



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V24
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0024.RAW
 Date & Time Acquired: 1/7/2022 12:24:04 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.182	200.	.177	.09
*1-Chlorooctadecane	29.938	200.	.	.

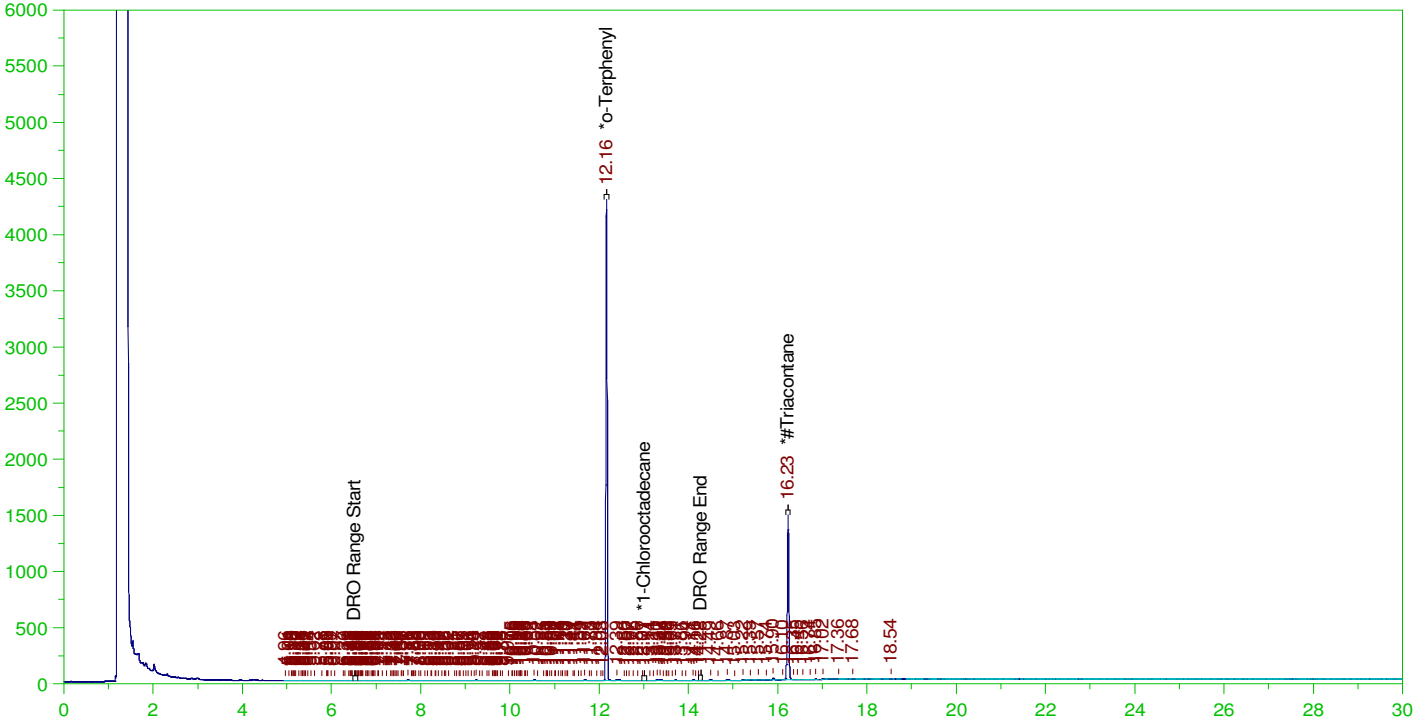
DRO Area:746266.5 DRO Amount: 23.80193
 TEH Area:1257505 TEH Amount: 40.10771

ERH2309 (RHMW16)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0025.RAW

B22010141-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010141-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0025.RAW
Date & Time Acquired: 1/7/2022 1:07:28 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.163	.194	.22	113.52	-
*1-Chlorooctadecane	13.013	.194	.	.02	-
*#Triacontane	16.228	.194	.124	64.06	-

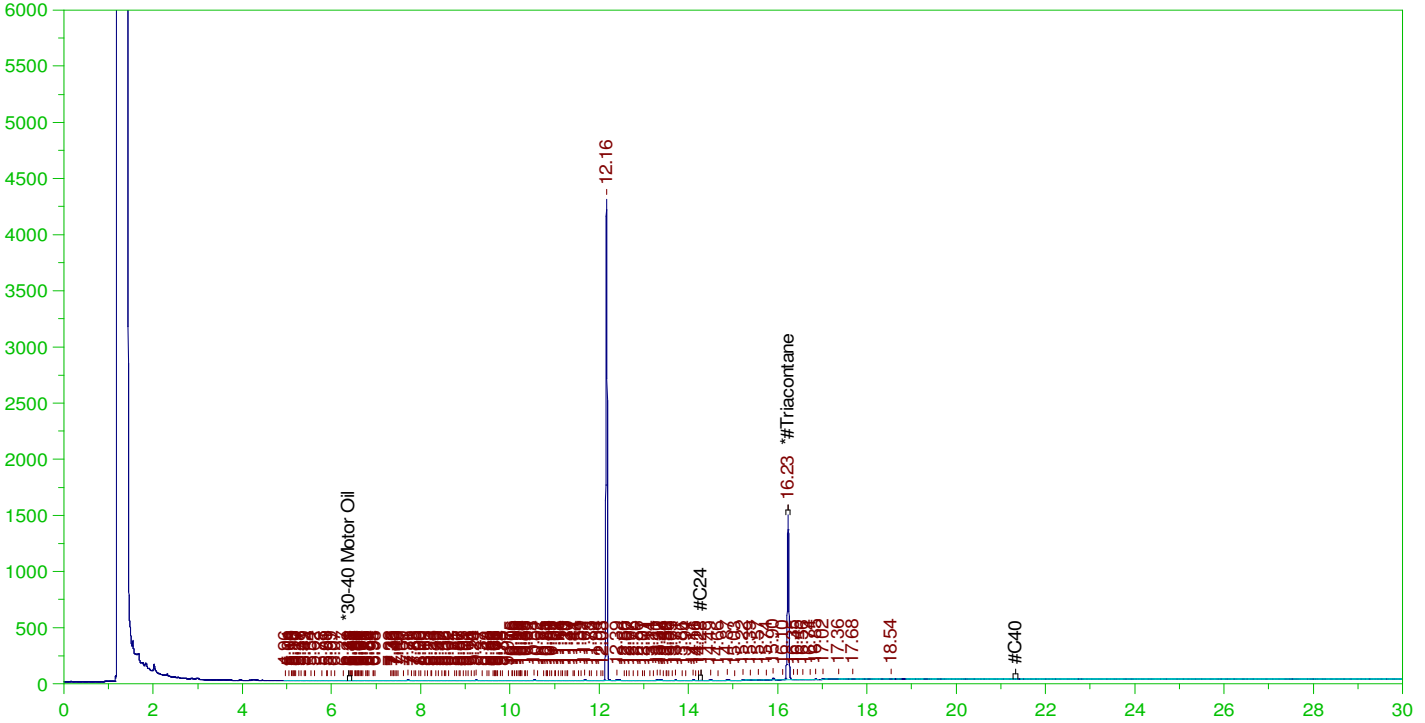
DRO Area:502897.8 DRO Amount: 1.557259E-02
TEH Area:808044.9 TEH Amount: 2.502168E-02

ERH2309 (RHMW16)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0025.RAW

B22010141-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010141-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0025.RAW
Date & Time Acquired: 1/7/2022 1:07:28 AM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.228	.485	.124	25.62

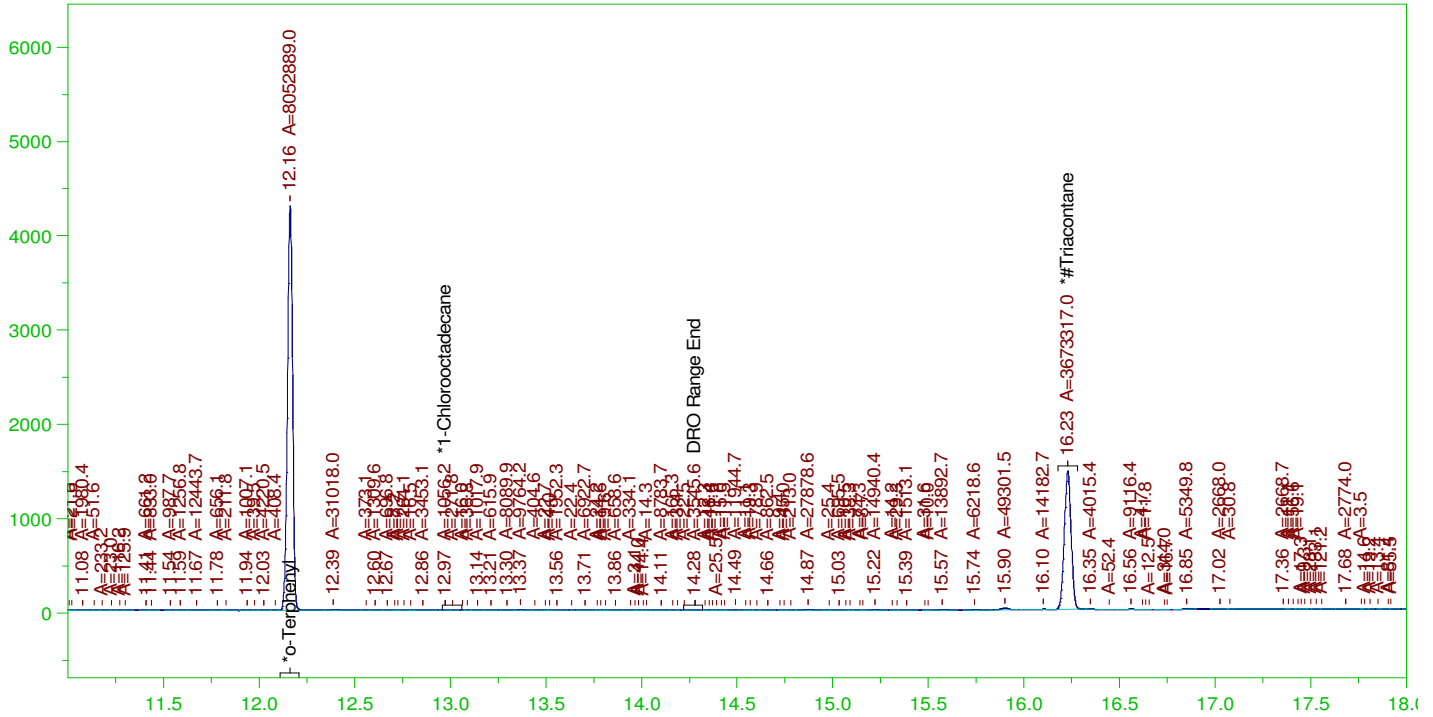
RRO Area:215033.2 RRO AMOUNT: 7.314381E-03

ERH2309 (RHMW16)

Batch ID: 162703

G:\Org\HP5\DAT\HP5010622_b\0106HP5.0025.RAW

B22010141-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010141-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5010622_b\0106HP5.0025.RAW
Date & Time Acquired: 1/7/2022 1:07:28 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.163	.194	.22	113.39	-
*1-Chlorooctadecane	12.974	.194	.	.01	-
*#Triacontane	16.228	.194	.123	63.49	-

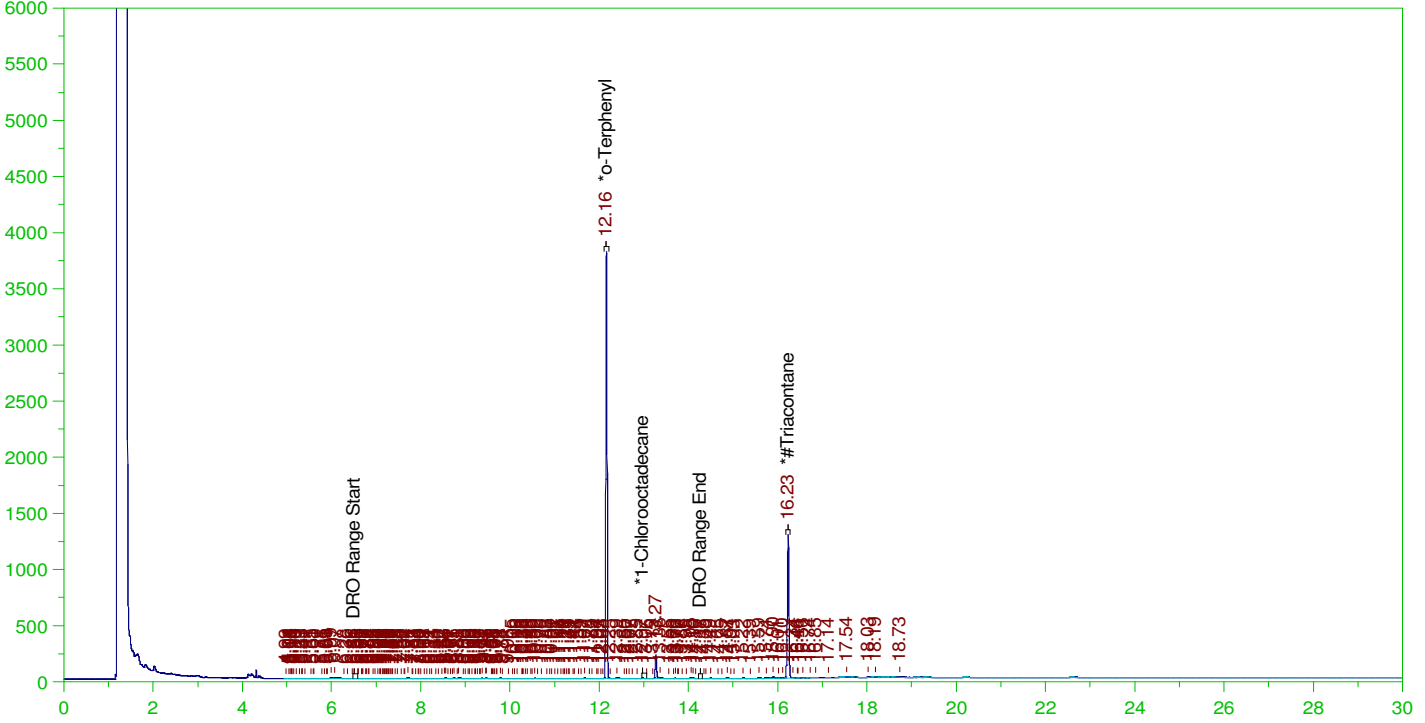
DRO Area:305989.1 DRO Amount: 9.475168E-03
TEH Area:710739.8 TEH Amount: 2.200856E-02

ERH2321 (RHMW14 Zone3)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0026.RAW

B22010214-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010214-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0026.RAW
Date & Time Acquired: 1/7/2022 1:50:50 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.19	.19	99.54	-
*1-Chlorooctadecane	12.971	.19	.001	.27	-
*#Triacontane	16.229	.19	.108	56.45	-

DRO Area:1250788

DRO Amount: 0.0379938

TEH Area:1671461

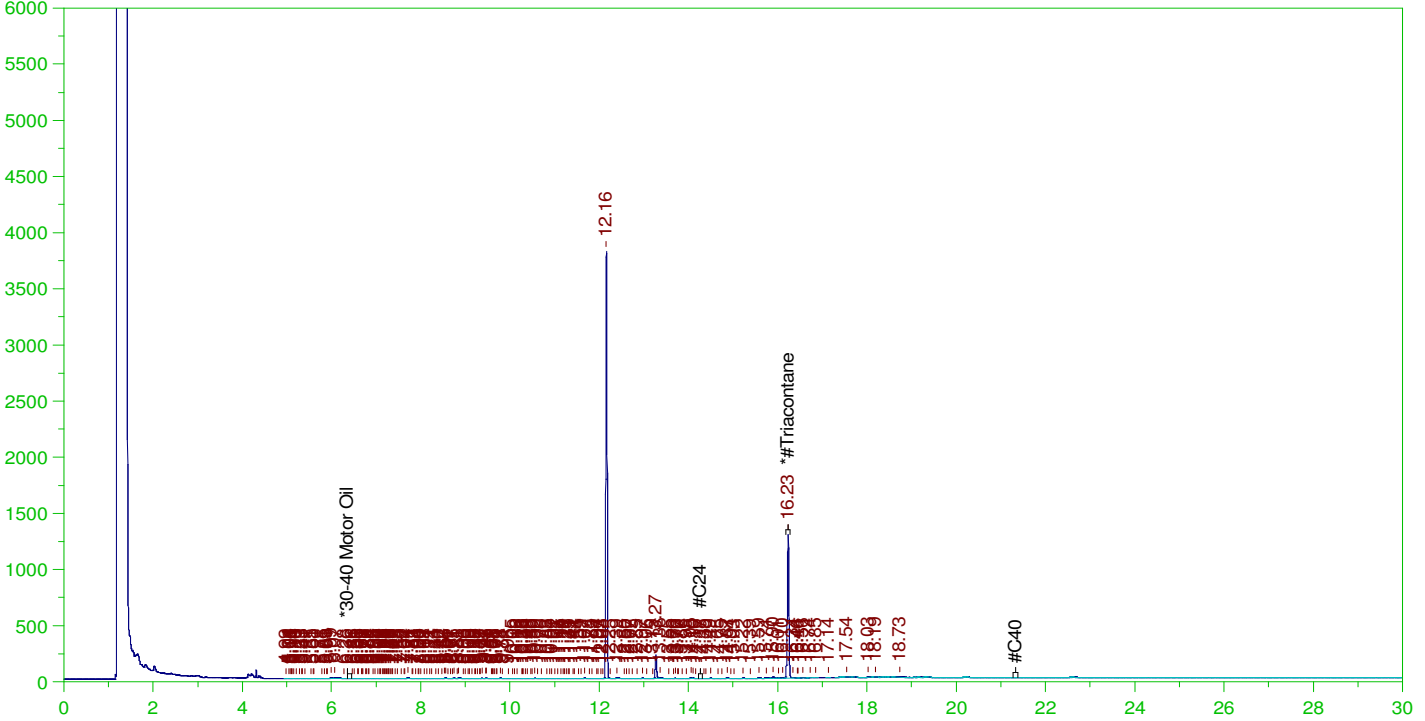
TEH Amount: 5.077209E-02

ERH2321 (RHMW14 Zone3)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0026.RAW

B22010214-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010214-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0026.RAW
Date & Time Acquired: 1/7/2022 1:50:50 AM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.229	.476	.108	22.58

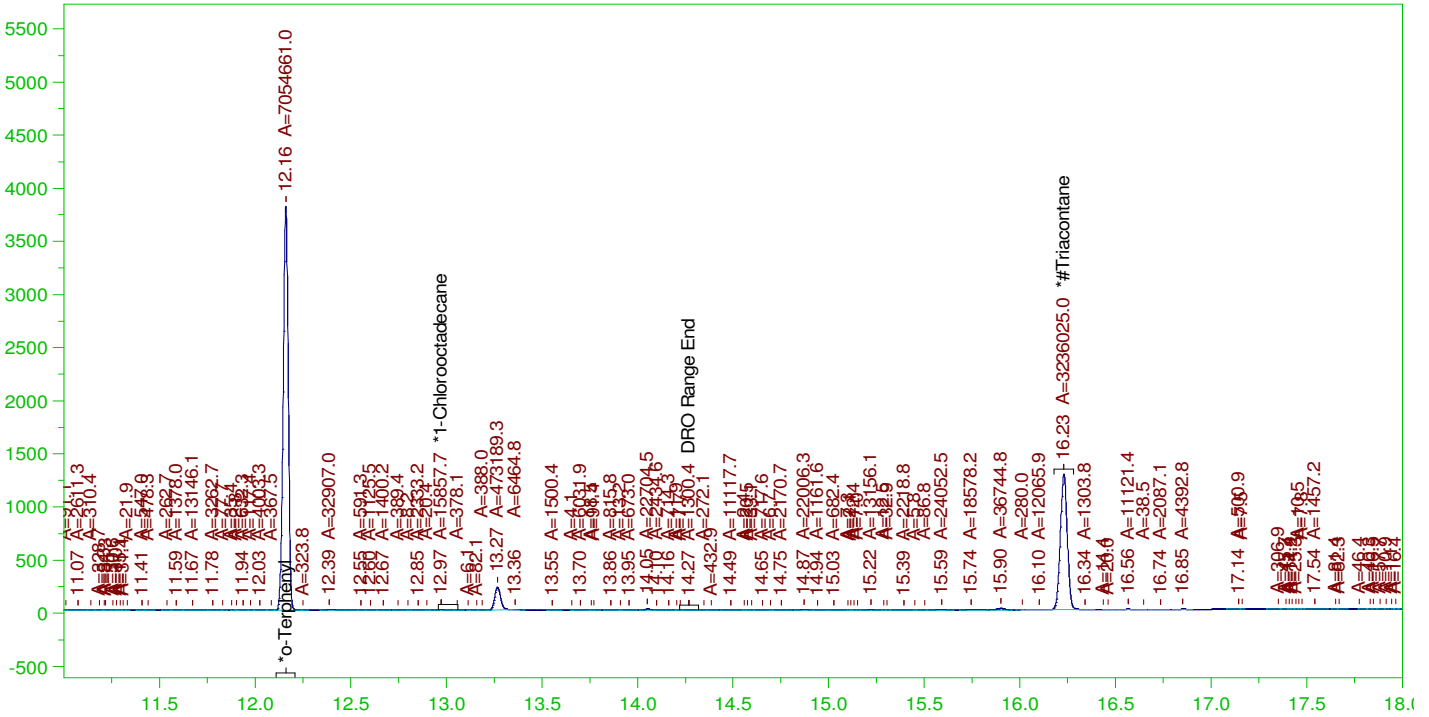
RRO Area:240144.4 RRO AMOUNT: 8.012951E-03

ERH2321 (RHMW14 Zone3)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0026.RAW

B22010214-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010214-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0026.RAW
Date & Time Acquired: 1/7/2022 1:50:50 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.19	.189	99.34	-
*1-Chlorooctadecane	12.971	.19	.	.22	-
*#Triacontane	16.229	.19	.107	55.93	-

DRO Area:1057582
TEH Area:2042025

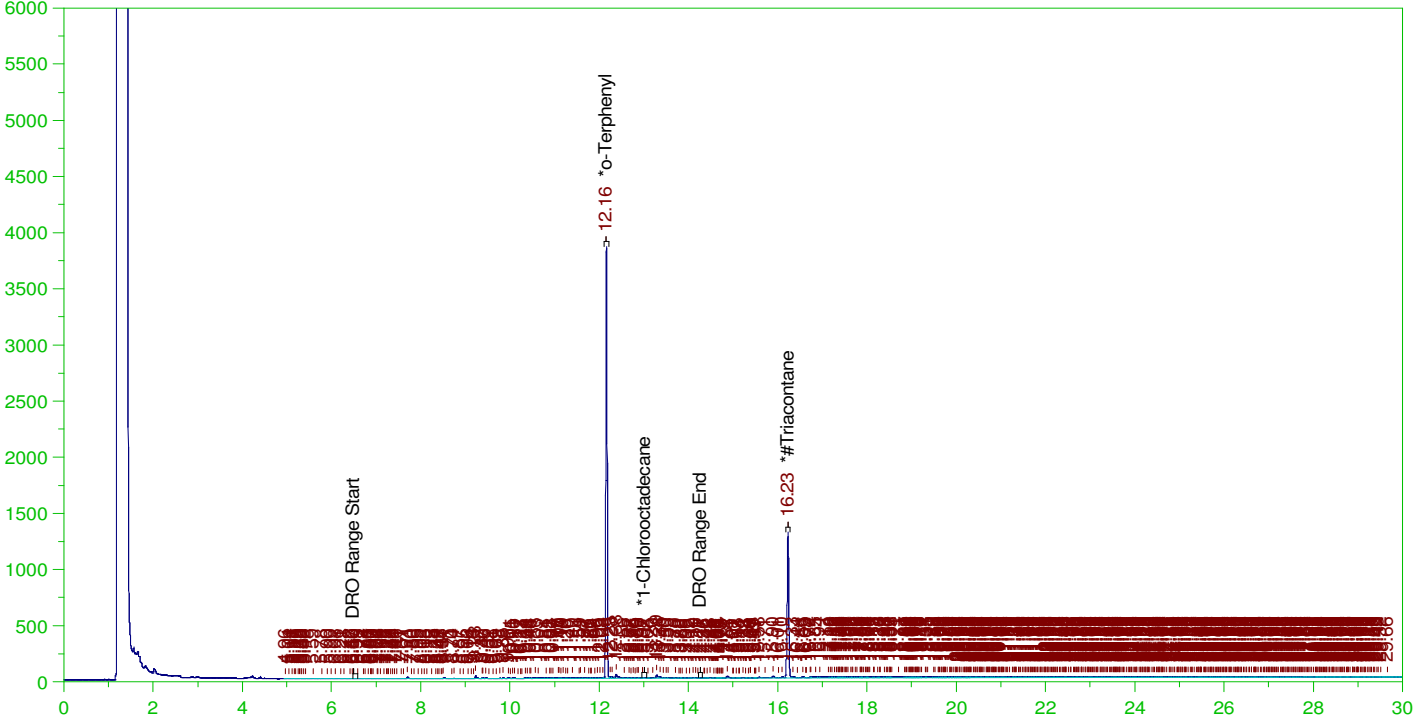
DRO Amount: 0.032125
TEH Amount: 6.202832E-02

ERH2301 (OWDFMW05A)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW

Batch ID: 162703

B22010219-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010219-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW
Date & Time Acquired: 1/7/2022 2:34:15 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.2	.203	101.3	-
*1-Chlorooctadecane	13.015	.2	.001	.34	-
*#Triacontane	16.225	.2	.117	58.26	-

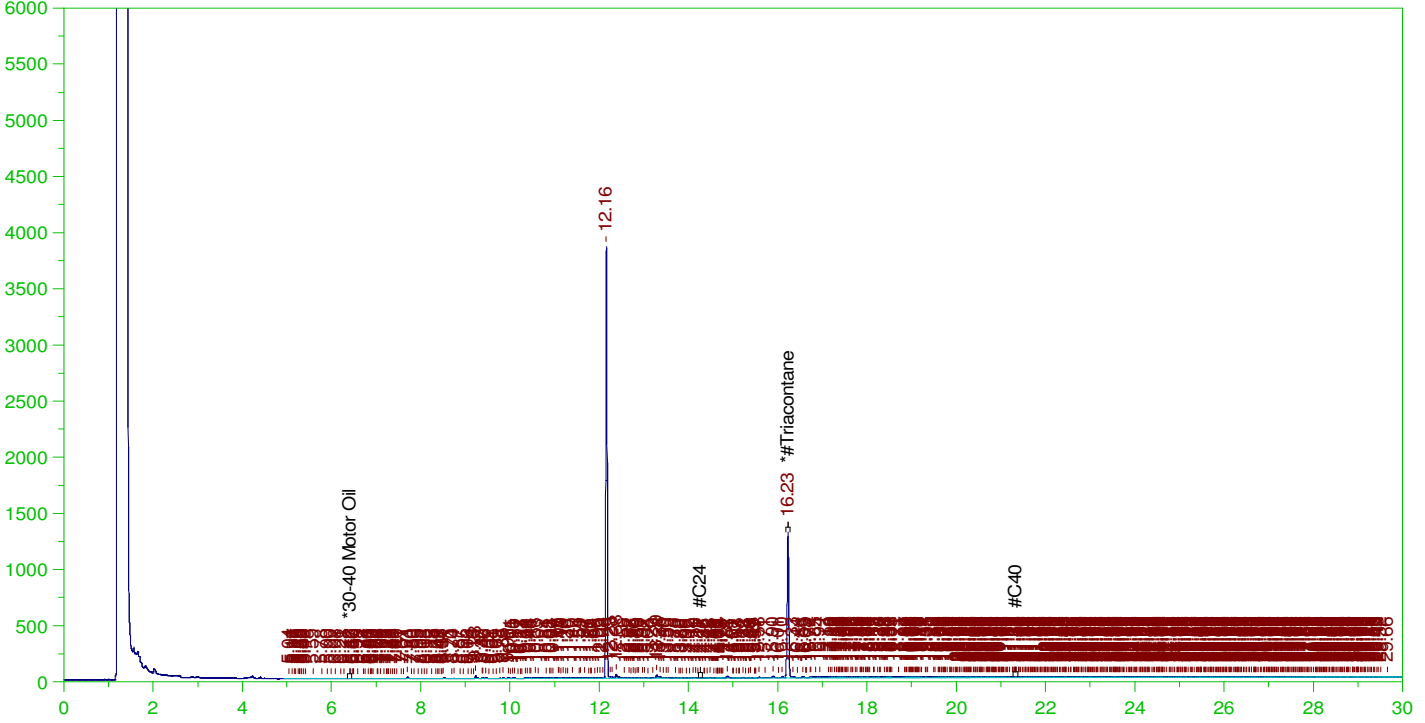
DRO Area:1775737 DRO Amount: 5.663655E-02
TEH Area:7366031 TEH Amount: 0.2349372

ERH2301 (OWDFMW05A)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW

Batch ID: 162703

B22010219-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010219-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW
Date & Time Acquired: 1/7/2022 2:34:15 AM
Method File: G:\Org\HP5\Methods\D3_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.225	.5	.117	23.31

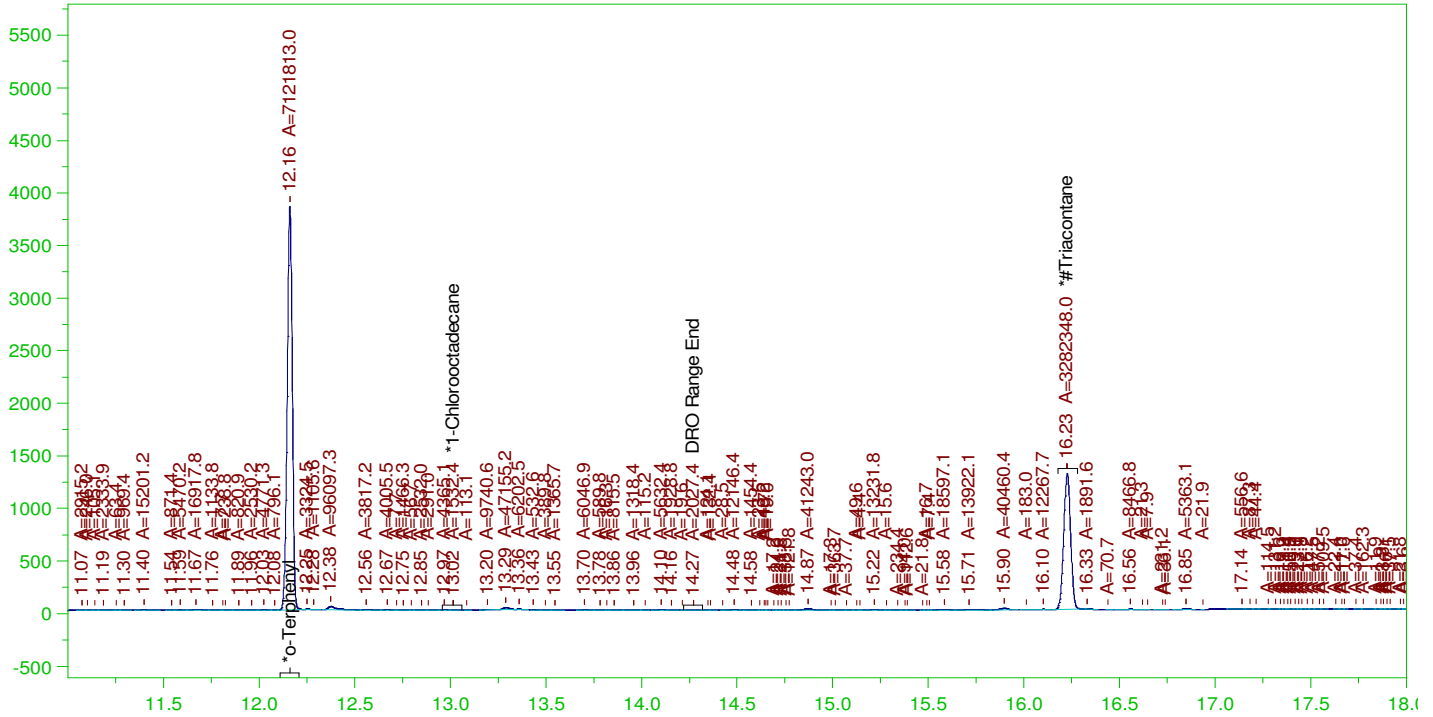
RRO Area:3554104 RRO AMOUNT: 0.1245201

ERH2301 (OWDFMW05A)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW

B22010219-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010219-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW
Date & Time Acquired: 1/7/2022 2:34:15 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.161	.2	.201	100.28
*1-Chlorooctadecane	13.015	.2	.02	-
*Triacontane	16.225	.2	.113	56.73

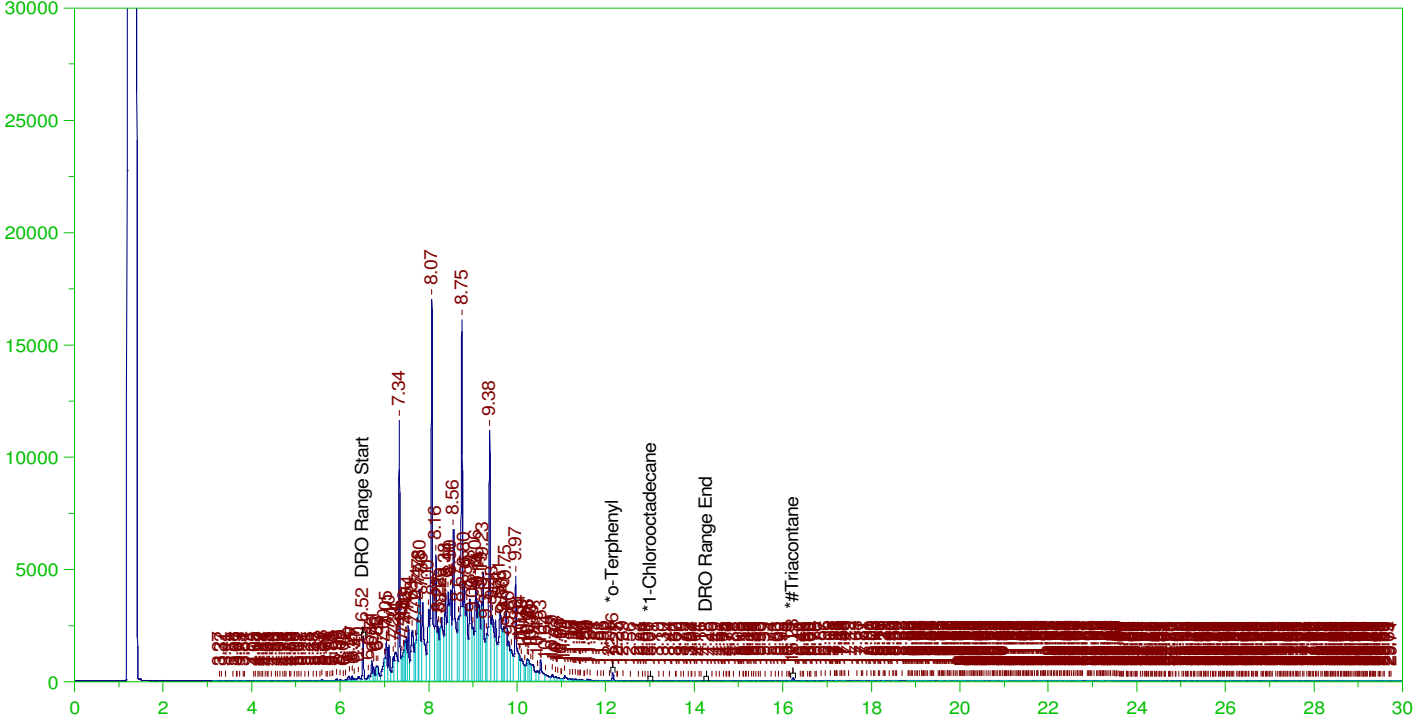
DRO Area:627850.7 DRO Amount: 0.0200251
TEH Area:1180517 TEH Amount: 3.765221E-02

ERH2336 (Sump Adit3)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0028.RAW

B22010211-001D ;0106HP5 , \$HC-8015-DRO-W, ,(1,10)



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010211-001D ;0106HP5 , \$HC-8015-DRO-W, ,(1,10)
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0028.RAW
 Date & Time Acquired: 1/7/2022 3:17:33 AM
 Method File: G:\Org\HP5\Methods\D3_8015-010628-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
 Sample Weight: 1030 Dilution: 10 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.157	.194	.218	112.13	-
*1-Chlorooctadecane	13.012	.194	.011	5.41	-
*#Triacontane	16.229	.194	.142	73.29	-

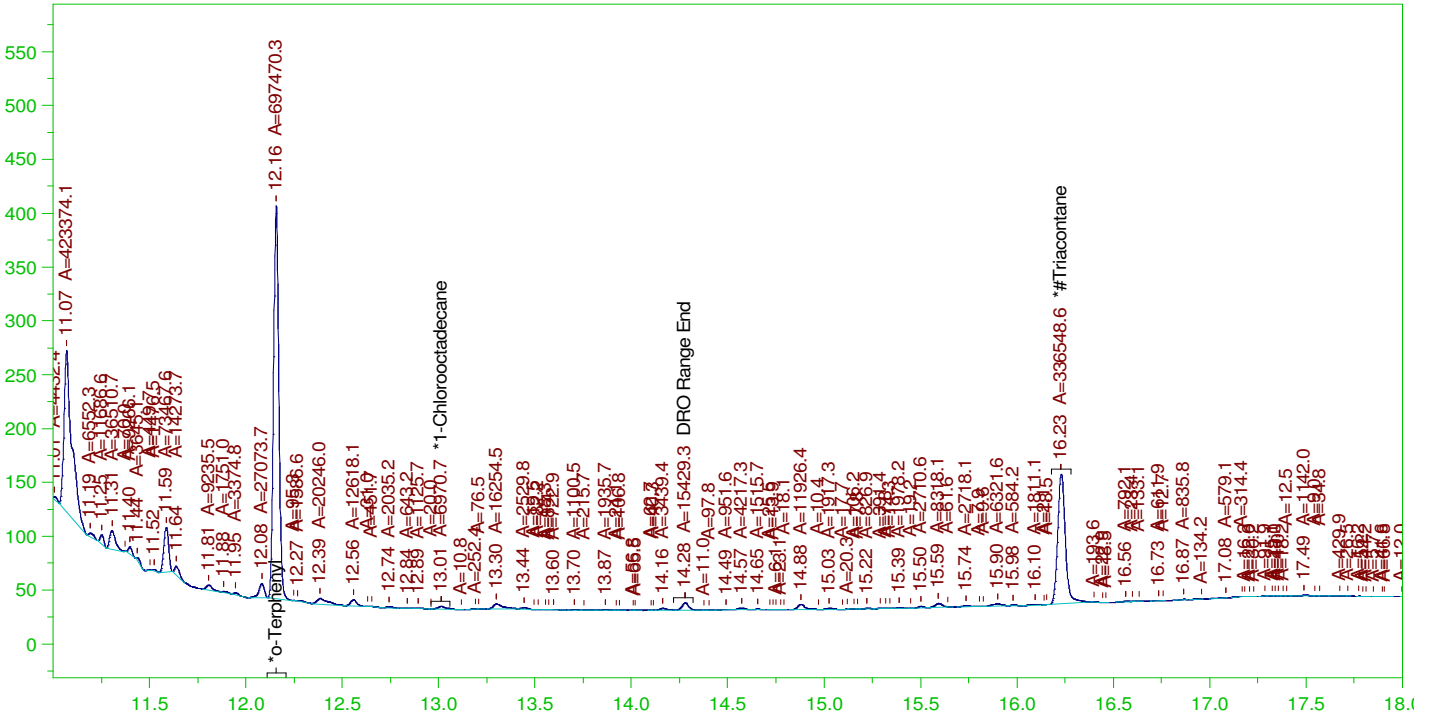
DRO Area: 5.525606E+08 DRO Amount: 171.1043
 TEH Area: 5.615422E+08 TEH Amount: 173.8855

ERH2336 (Sump Adit3)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0028.RAW

B22010211-001D ;0106HP5 , \$HC-8015-DRO-W, ,(1,10)



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

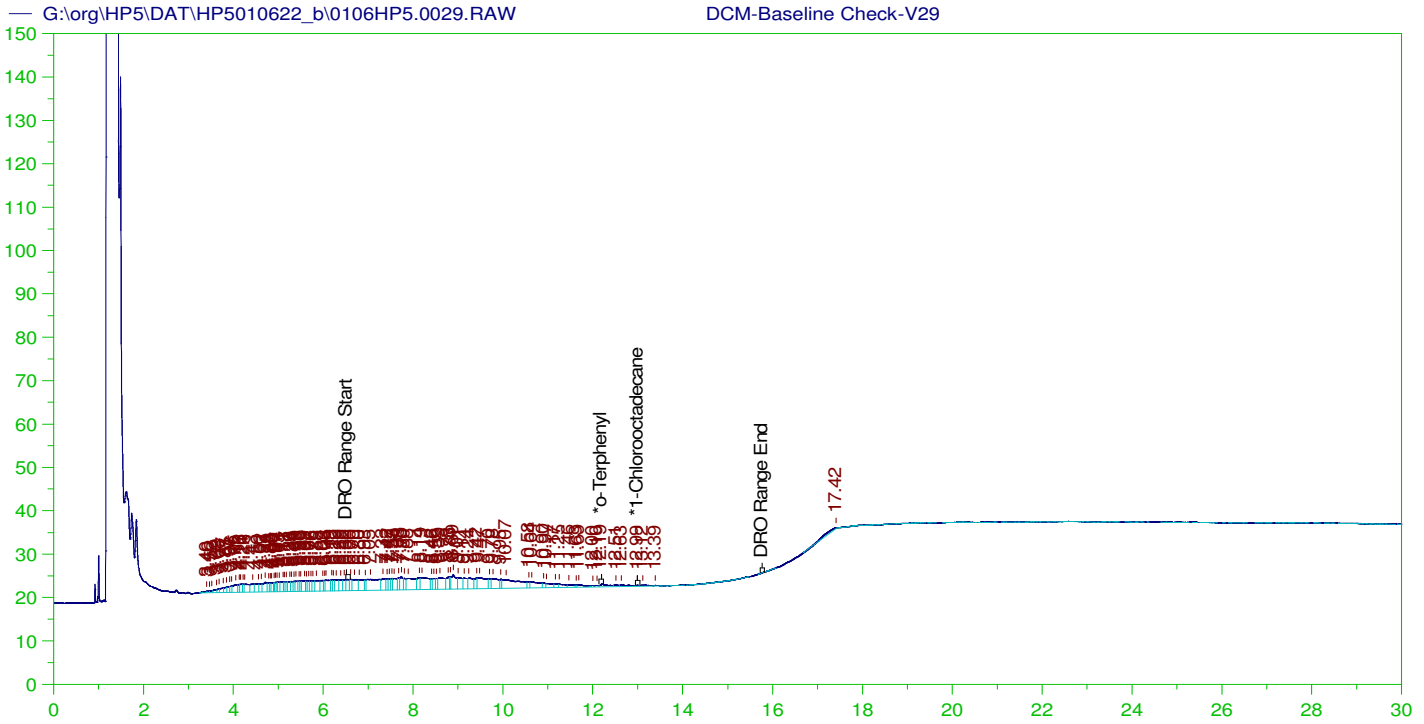
Sample Name: B22010211-001D ;0106HP5 , \$HC-8015-DRO-W, ,(1,10)
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0028.RAW
Date & Time Acquired: 1/7/2022 3:17:33 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1030 Dilution: 10 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.157	.194	.191	98.21	-
*1-Chlorooctadecane	13.012	.194	.002	.98	-
*#Triacontane	16.229	.194	.113	58.17	-

DRO Area:5.193835E+08 DRO Amount: 160.8308
TEH Area:5.221435E+08 TEH Amount: 161.6854



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V29
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0029.RAW
 Date & Time Acquired: 1/7/2022 4:01:02 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.195	200.	.188	.09	-
*1-Chlorooctadecane	12.994	200.	.028	.01	-

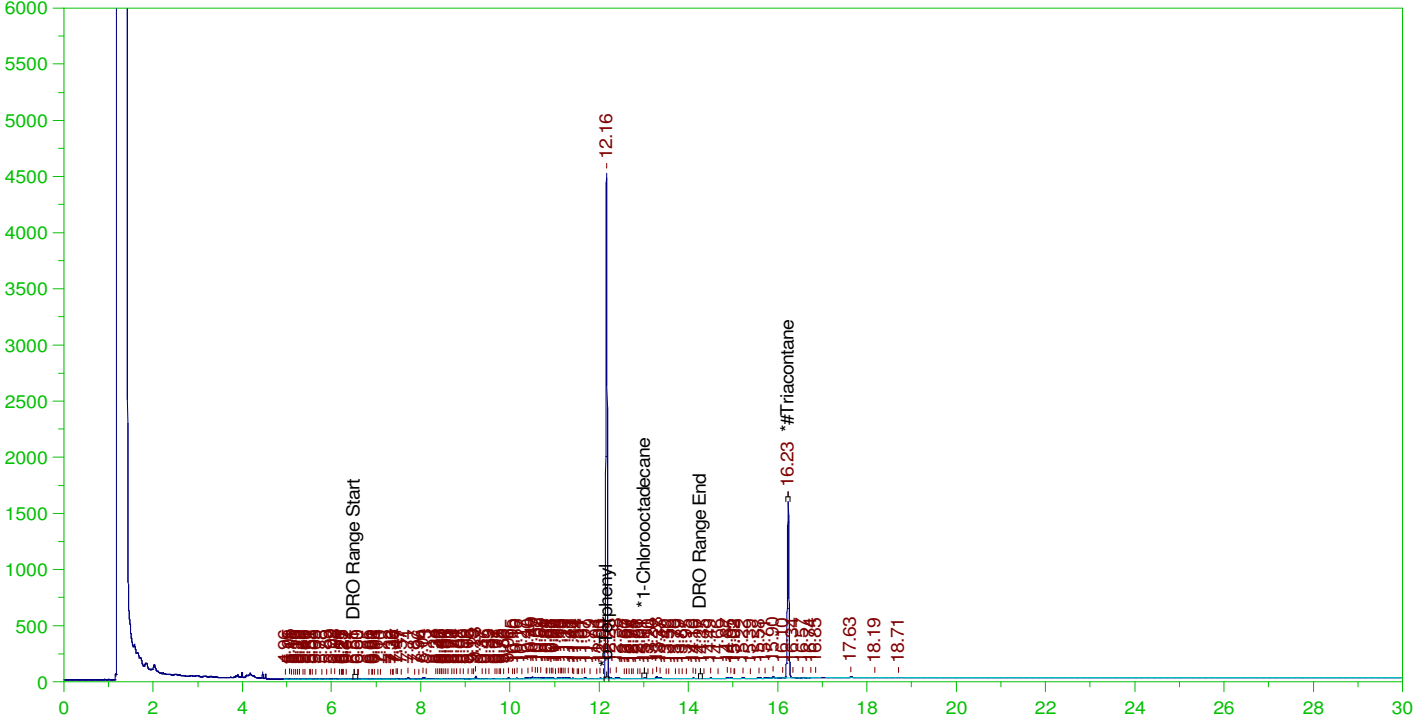
DRO Area:648458.4 DRO Amount: 20.68237
 TEH Area:1031307 TEH Amount: 32.89321

ERH2307 (RHMW13 zone 5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0030.RAW

B22010134-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010134-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0030.RAW
Date & Time Acquired: 1/7/2022 4:44:24 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.162	.192	.229	119.19	-
*1-Chlorooctadecane	13.014	.192	.001	.27	-
*#Triacontane	16.229	.192	.133	69.38	-

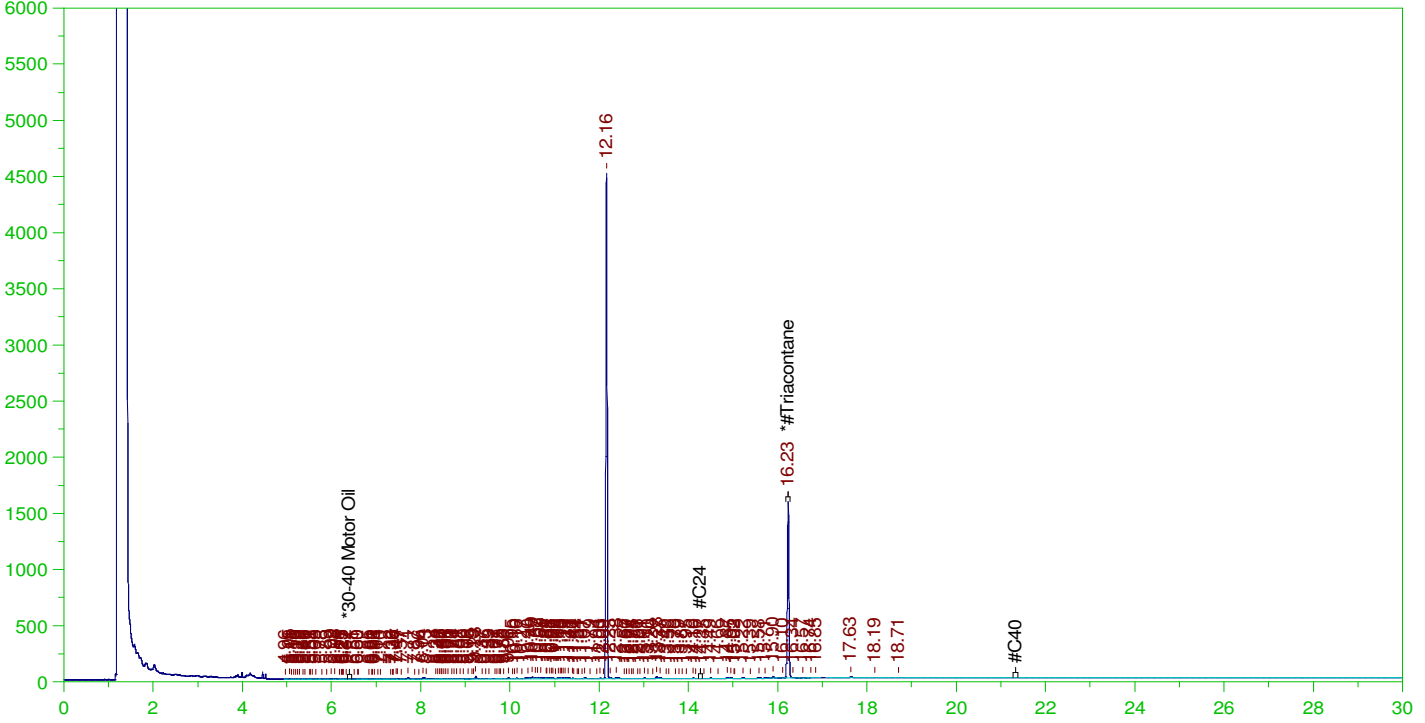
DRO Area:1258538 DRO Amount: 3.859679E-02
TEH Area:1592775 TEH Amount: 4.884716E-02

ERH2307 (RHMW13 zone 5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0030.RAW

B22010134-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010134-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0030.RAW
Date & Time Acquired: 1/7/2022 4:44:24 AM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.229	.481	.133	27.75

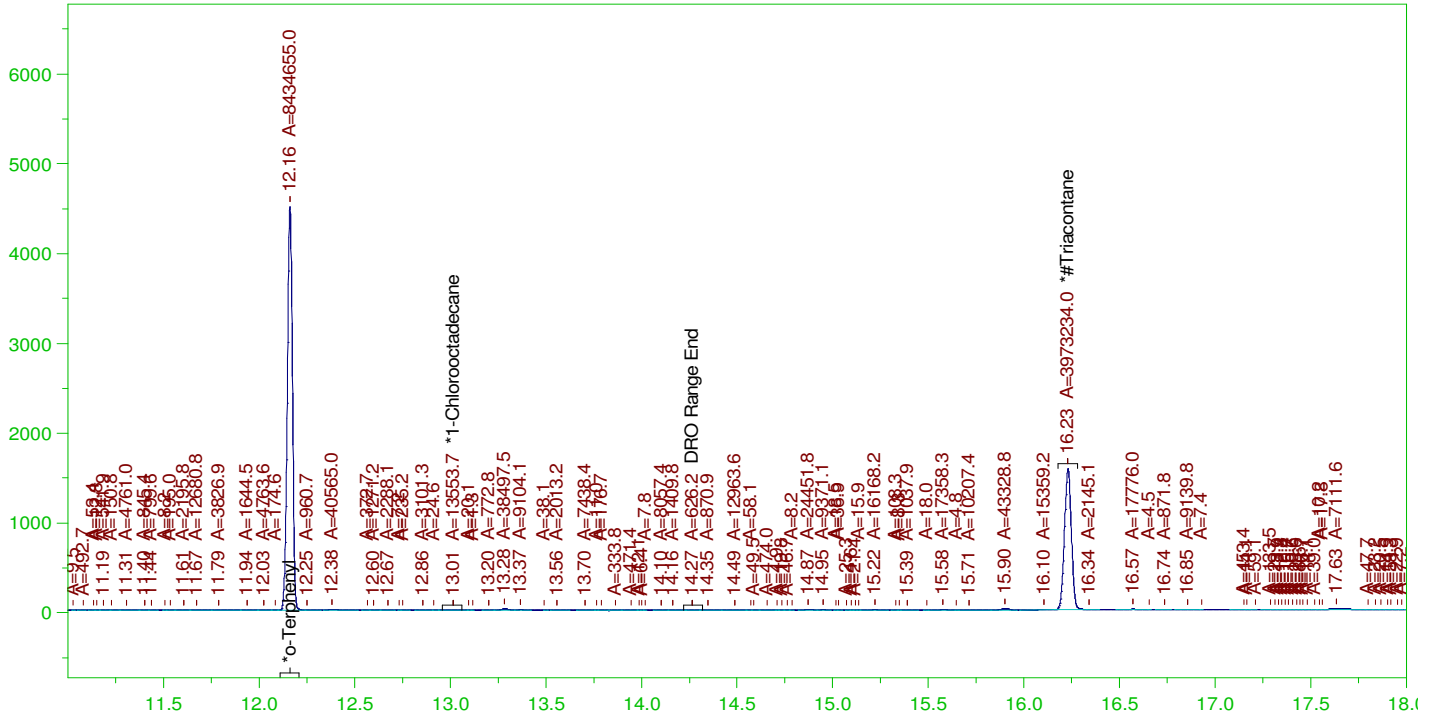
RRO Area:262152.8 RRO AMOUNT: 8.831421E-03

ERH2307 (RHMW13 zone 5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0030.RAW

B22010134-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010134-001D ;0106HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0030.RAW
 Date & Time Acquired: 1/7/2022 4:44:24 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.162	.192	.228	118.77 -
*1-Chlorooctadecane	13.014	.192	.	.19 -
*#Triacontane	16.229	.192	.132	68.67 -

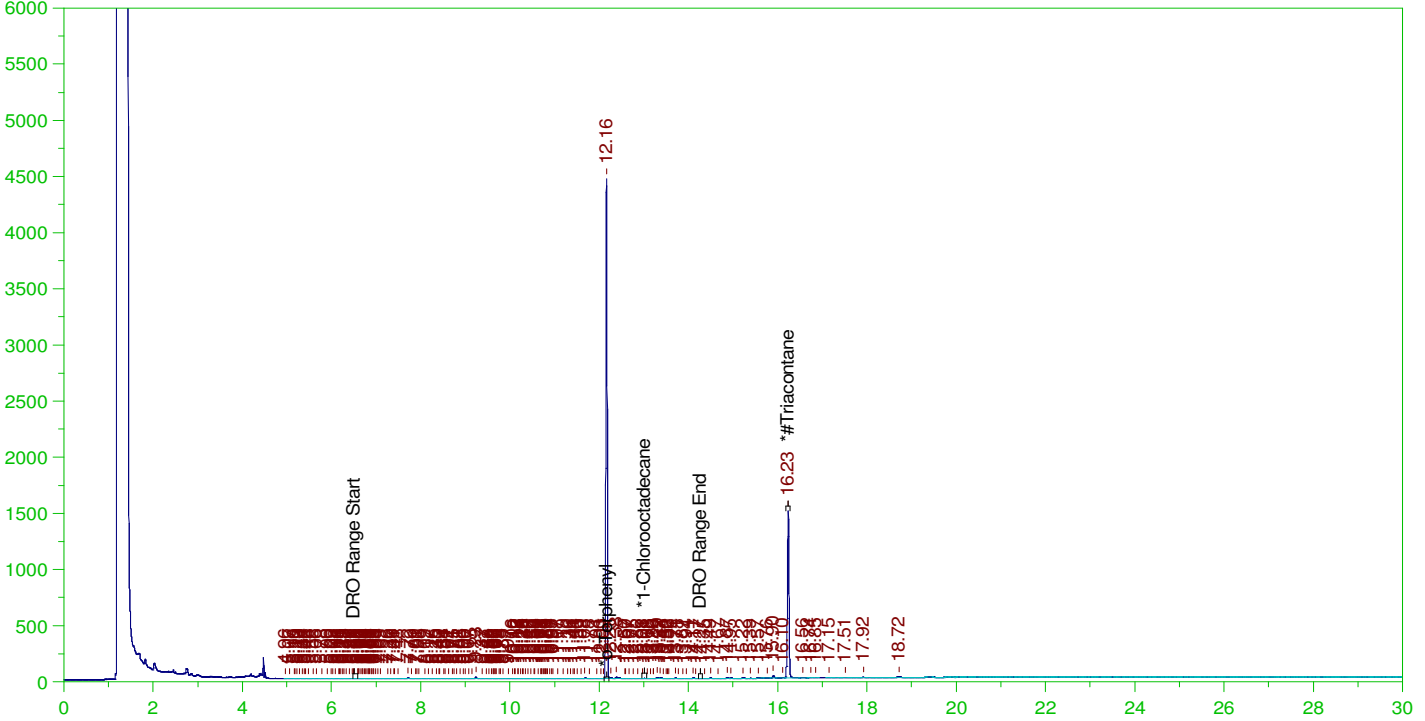
DRO Area:533993.6 DRO Amount: 0.0163765
 TEH Area:1703050 TEH Amount: 5.222908E-02

ERH2311 (RHMW12A)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0031.RAW

B22010142-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010142-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0031.RAW
Date & Time Acquired: 1/7/2022 5:27:56 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.162	.206	.24	116.41	-
*1-Chlorooctadecane	13.015	.206	.	.1	-
*#Triacontane	16.231	.206	.137	66.53	-

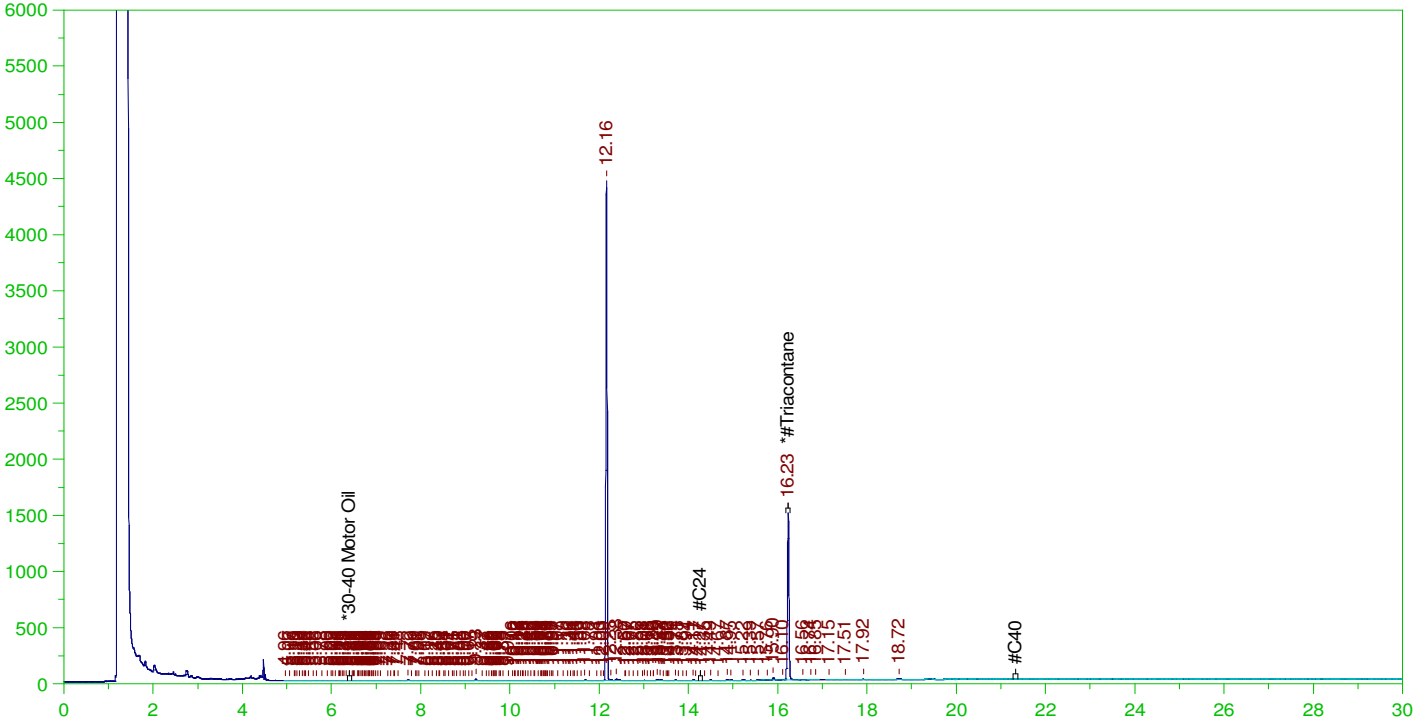
DRO Area:563225.8 DRO Amount: 1.851949E-02
TEH Area:875541.1 TEH Amount: 2.878876E-02

ERH2311 (RHMW12A)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0031.RAW

B22010142-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010142-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0031.RAW
Date & Time Acquired: 1/7/2022 5:27:56 AM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.231	.515	.137	26.61

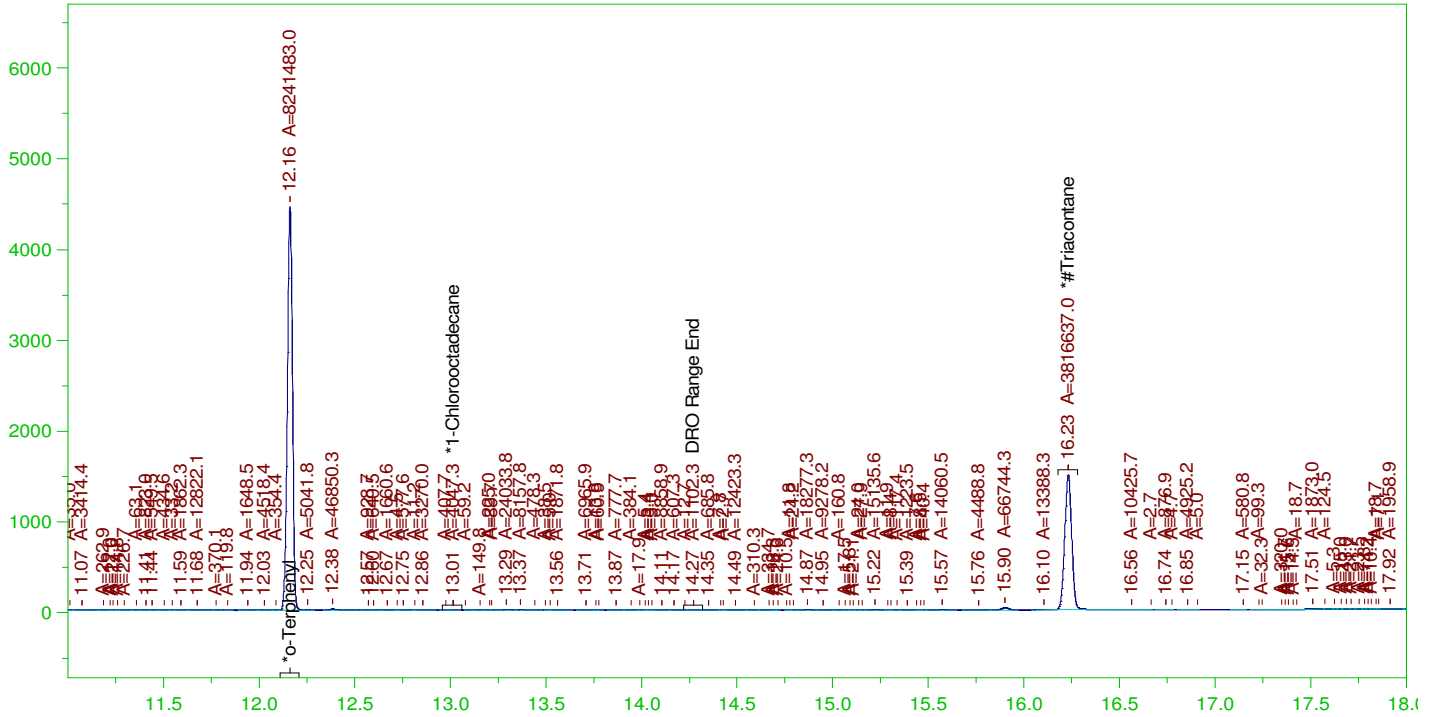
RRO Area:211636.8 RRO AMOUNT: 7.644144E-03

ERH2311 (RHMW12A)

Batch ID: 162703

G:\Org\HP5\DAT\HP5010622_b\0106HP5.0031.RAW

B22010142-001D ; 0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010142-001D ; 0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5010622_b\0106HP5.0031.RAW
Date & Time Acquired: 1/7/2022 5:27:56 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.162	.206	.239	116.05
*1-Chlorooctadecane	13.015	.206	.	.06
*Triacontane	16.231	.206	.136	65.96

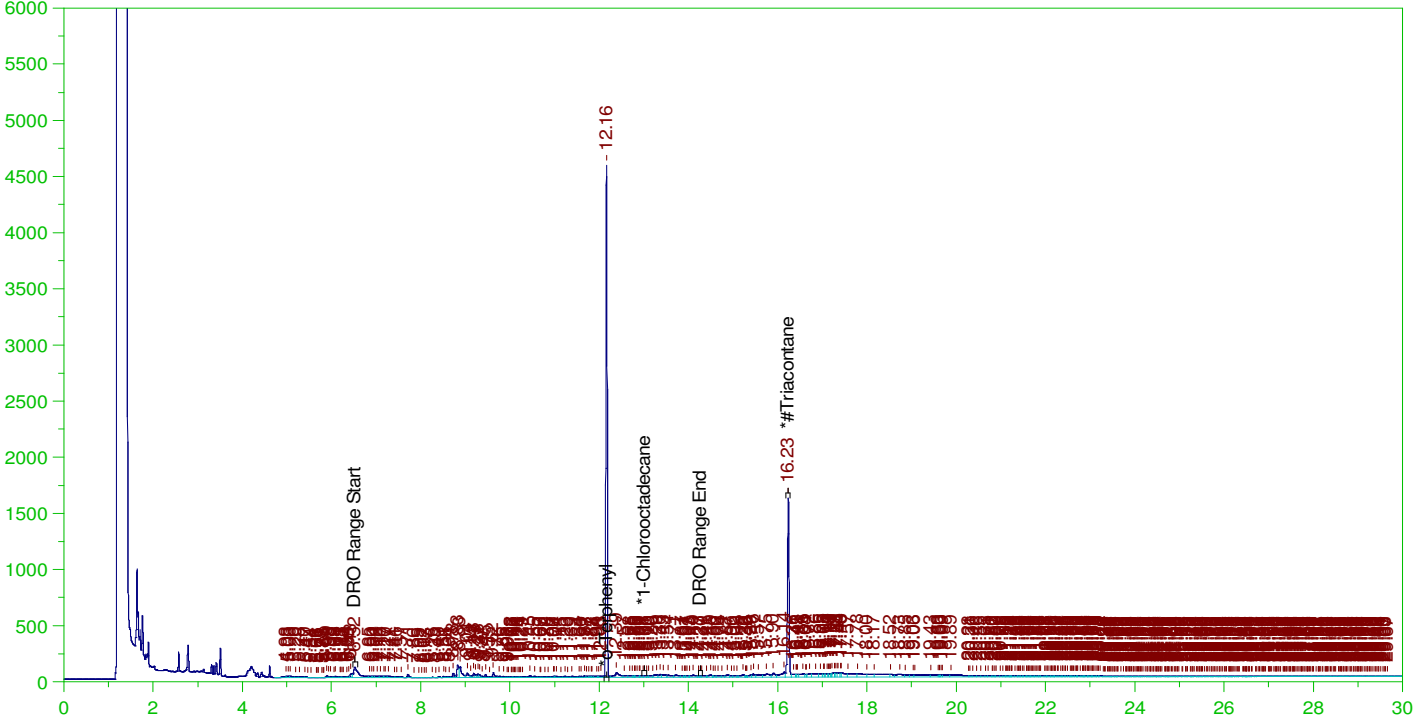
DRO Area: 363803.1 DRO Amount: 1.196225E-02
TEH Area: 1656256 TEH Amount: 5.445953E-02

ERH2313 (RHMW11 zone 5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0032.RAW

B22010145-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010145-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0032.RAW
Date & Time Acquired: 1/7/2022 6:11:21 AM
Method File: G:\Org\HP5\Methods\D3_8015-010632-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.163	.2	.238	119.2	-
*1-Chlorooctadecane	13.01	.2	.002	.84	-
*#Triacontane	16.232	.2	.143	71.68	-

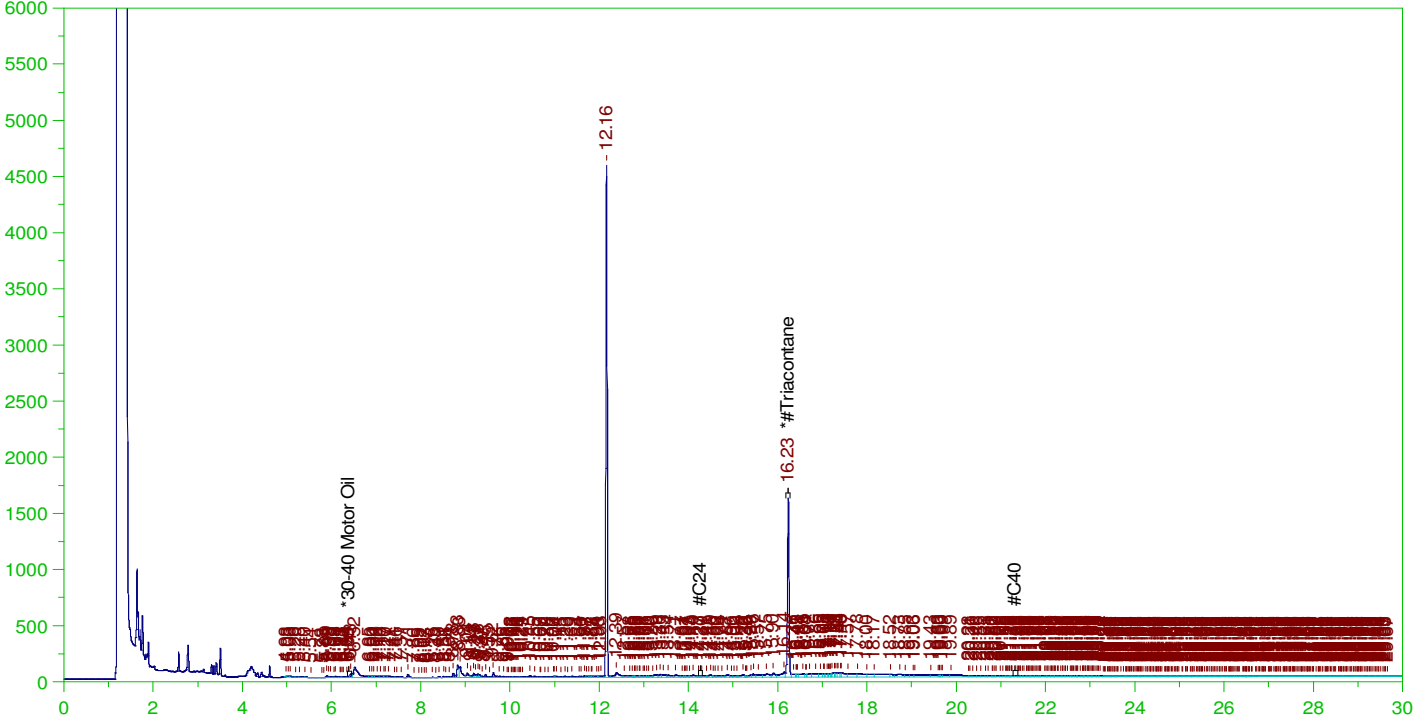
DRO Area:6393878 DRO Amount: 0.2039307
TEH Area:1.809424E+07 TEH Amount: 0.5771101

ERH2313 (RHMW11 zone 5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0032.RAW

B22010145-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010145-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0032.RAW
Date & Time Acquired: 1/7/2022 6:11:21 AM
Method File: G:\Org\HP5\Methods\D3_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.232	.5	.143	28.67

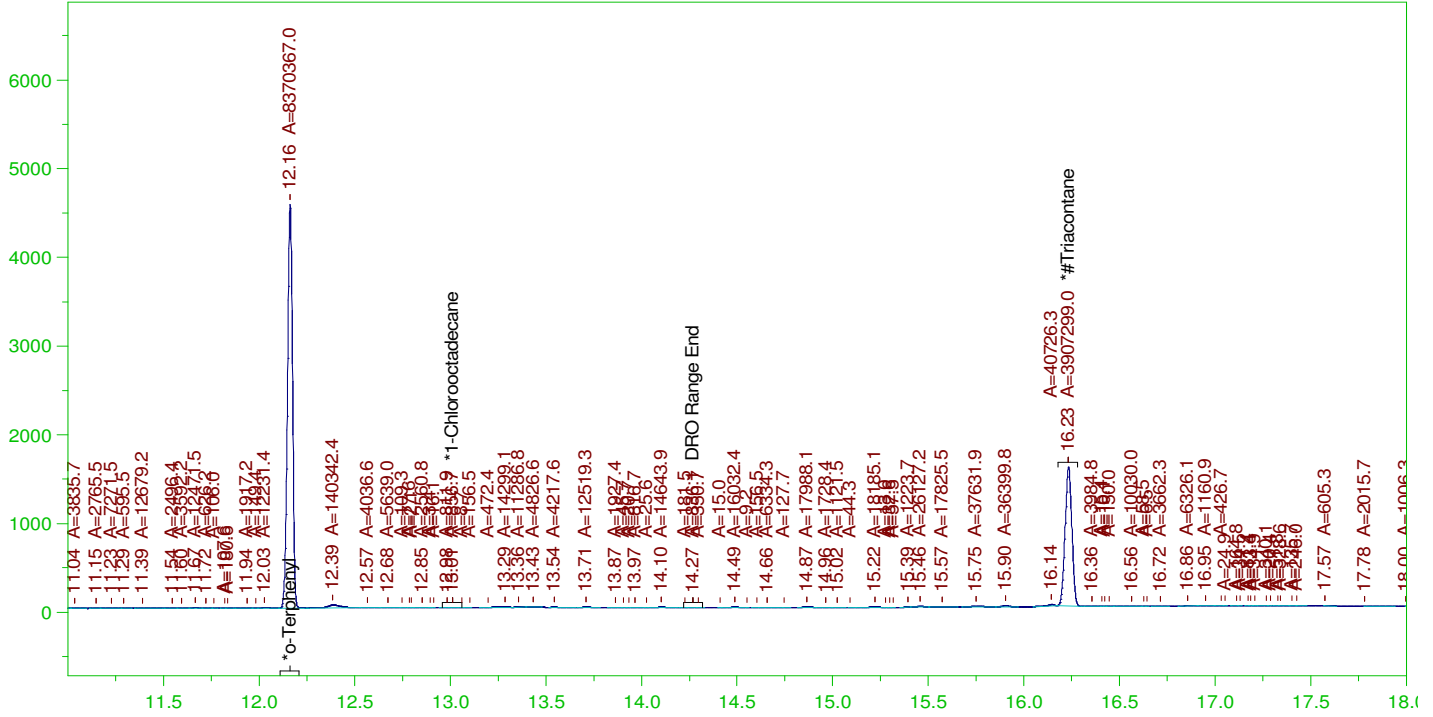
RRO Area:8704004 RRO AMOUNT: 0.3049498

ERH2313 (RHMW11 zone 5)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0032.RAW

B22010145-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

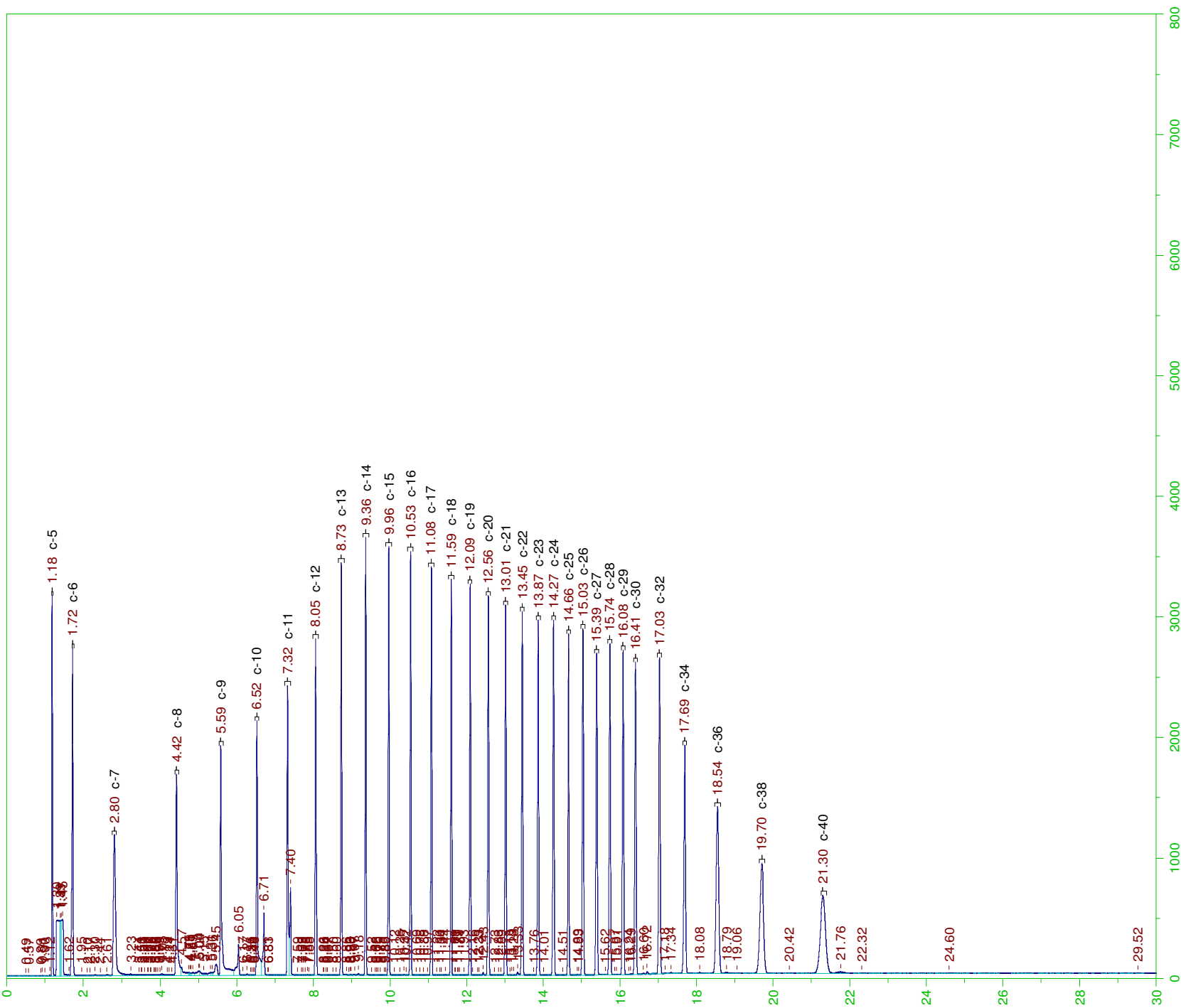
Sample Name: B22010145-001D ;0106HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0032.RAW
 Date & Time Acquired: 1/7/2022 6:11:21 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

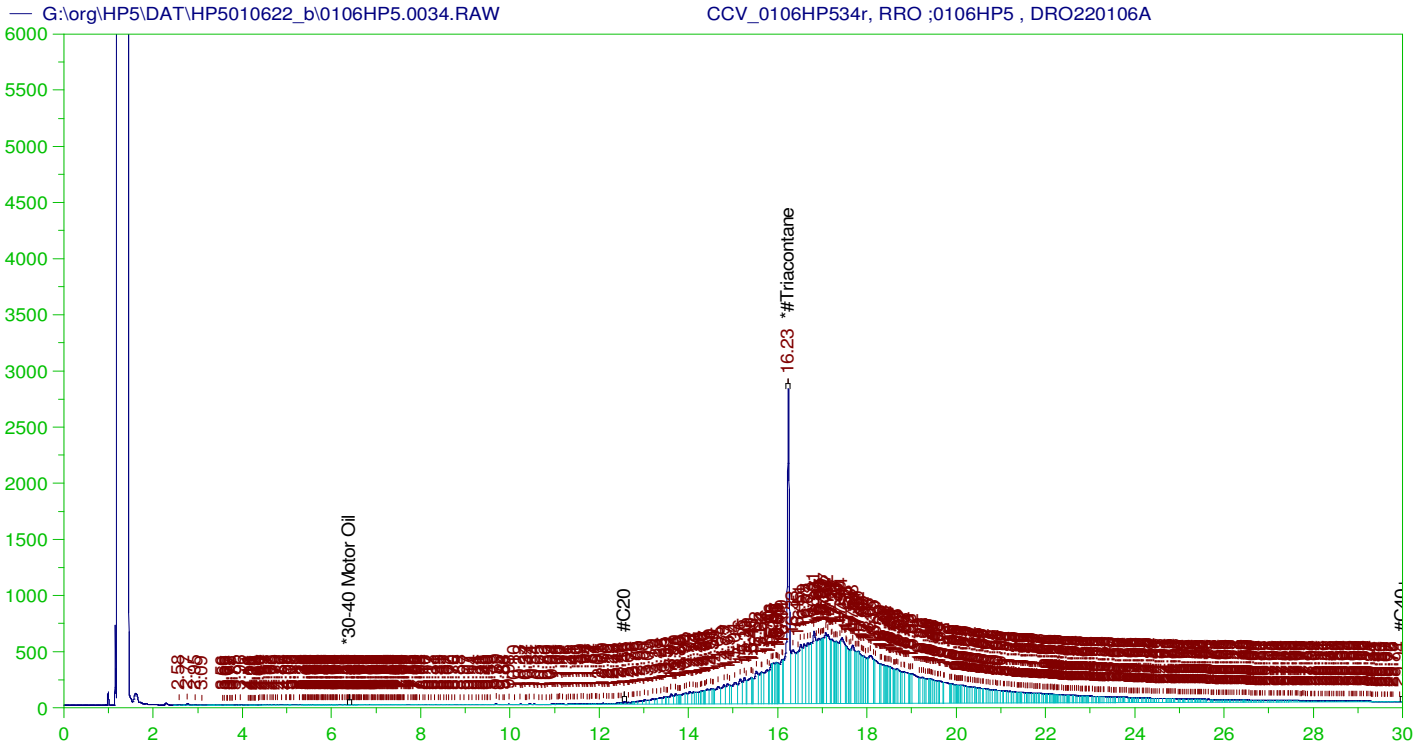
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.163	.2	.236	117.86
*1-Chlorooctadecane	13.01	.2	.01	-
*#Triacontane	16.232	.2	.135	67.53

DRO Area:3469748 DRO Amount: 0.1106665
 TEH Area:6721251 TEH Amount: 0.2143721





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP534r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0034.RAW
 Date & Time Acquired: 1/7/2022 7:37:51 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.235	500.	352.686	70.54	-

~~RRO~~ TEH (Oil Range) Area:1.428132E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 5003.544

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0034.RAW

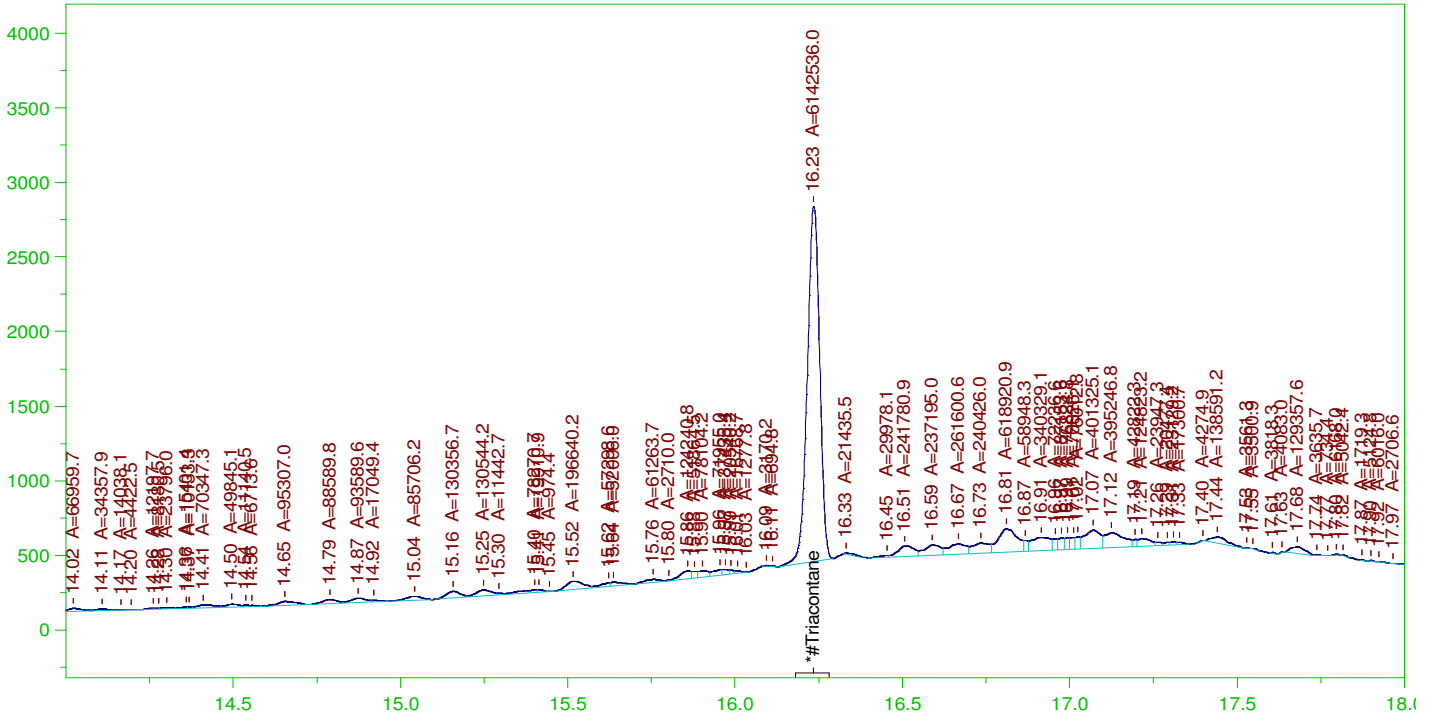
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.041	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.235	200.	352.686	176.34	75-125

AMN 01/31/2022

G:\org\HP5\DAT\HP5010622_b\0106HP5.0034.RAW

CCV_0106HP534r, RRO ;0106HP5 , DRO220106A



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP534r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0034.RAW
 Date & Time Acquired: 1/7/2022 7:37:51 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.235	500.	212.323	42.46	-

RRO Area:6466272 RRO AMOUNT: 226.5496

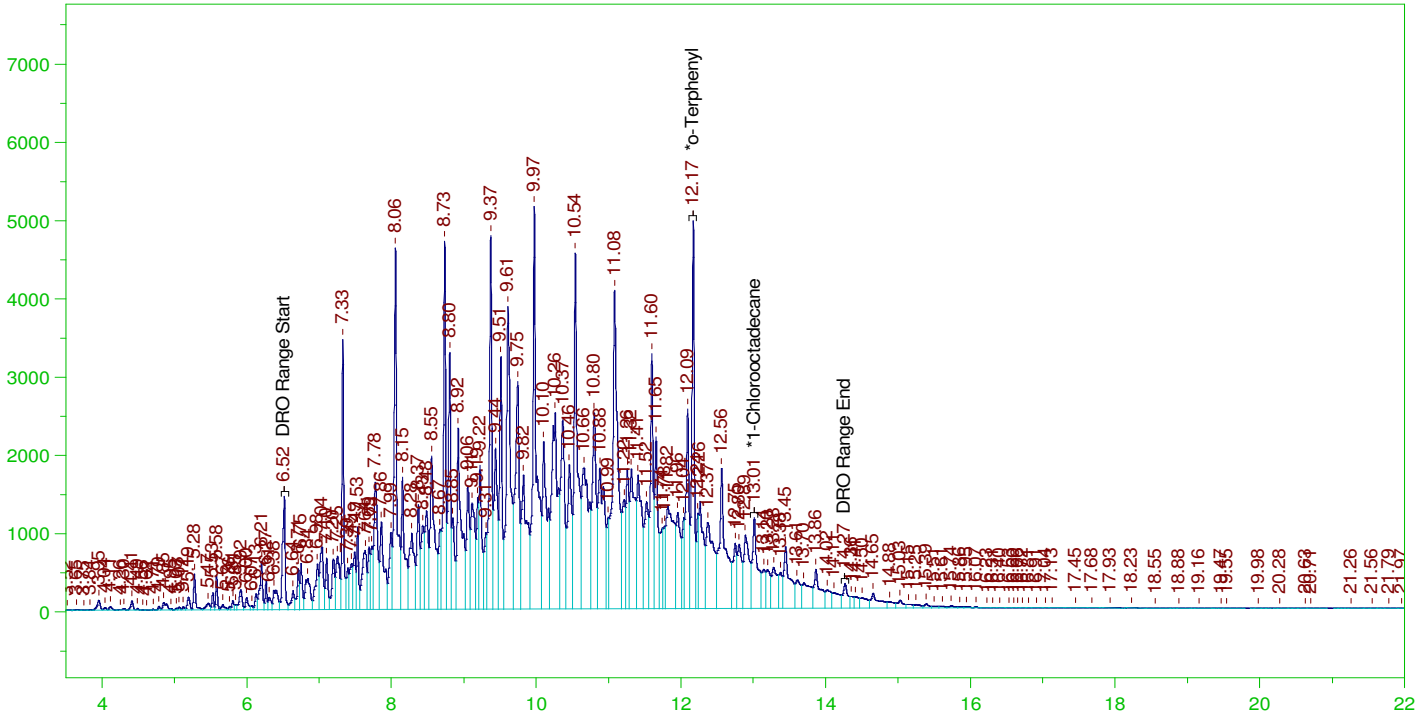
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0034.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.041	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.235	200.	212.323	106.16	75-125

G:\org\HP5\DAT\HP5010622_b\0106HP5.0035.RAW

CCV_0106HP535r, DRO ;0106HP5 , DRO220105B



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP535r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0035.RAW
 Date & Time Acquired: 1/7/2022 8:20:50 AM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.169	200.	337.684	168.84
*1-Chlorooctadecane	13.013	200.	167.562	83.78

DRO Area: 4.889194E+08 DRO Amount: 15593.93
 TEH Area: 5.068763E+08 TEH Amount: 16166.66

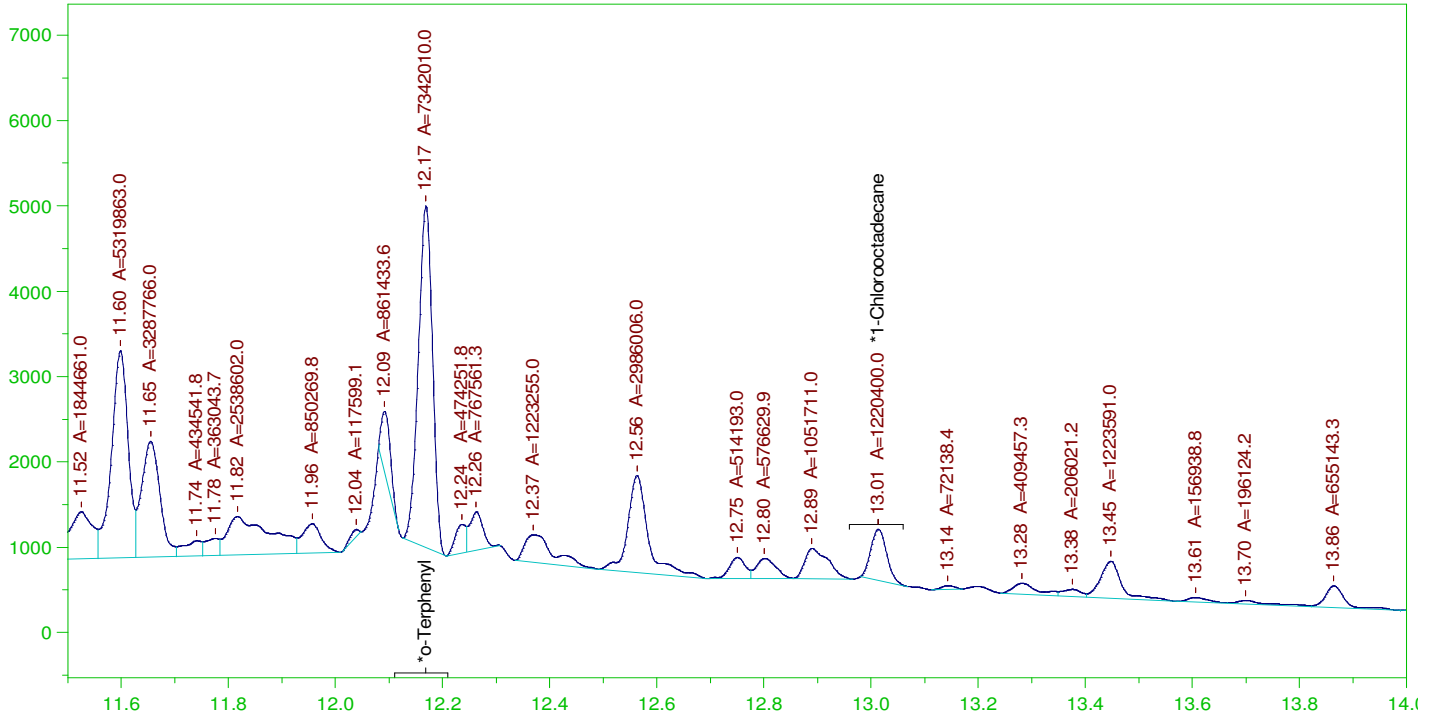
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16166.66	107.78	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.169	200.	337.684	168.84	85-115
*1-Chlorooctadecane	13.013	200.	167.562	83.78	85-115

G:\org\HP5\DAT\HP5010622_b\0106HP5.0035.RAW

CCV_0106HP535r, DRO ;0106HP5 , DRO220105B



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP535r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0035.RAW
 Date & Time Acquired: 1/7/2022 8:20:50 AM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

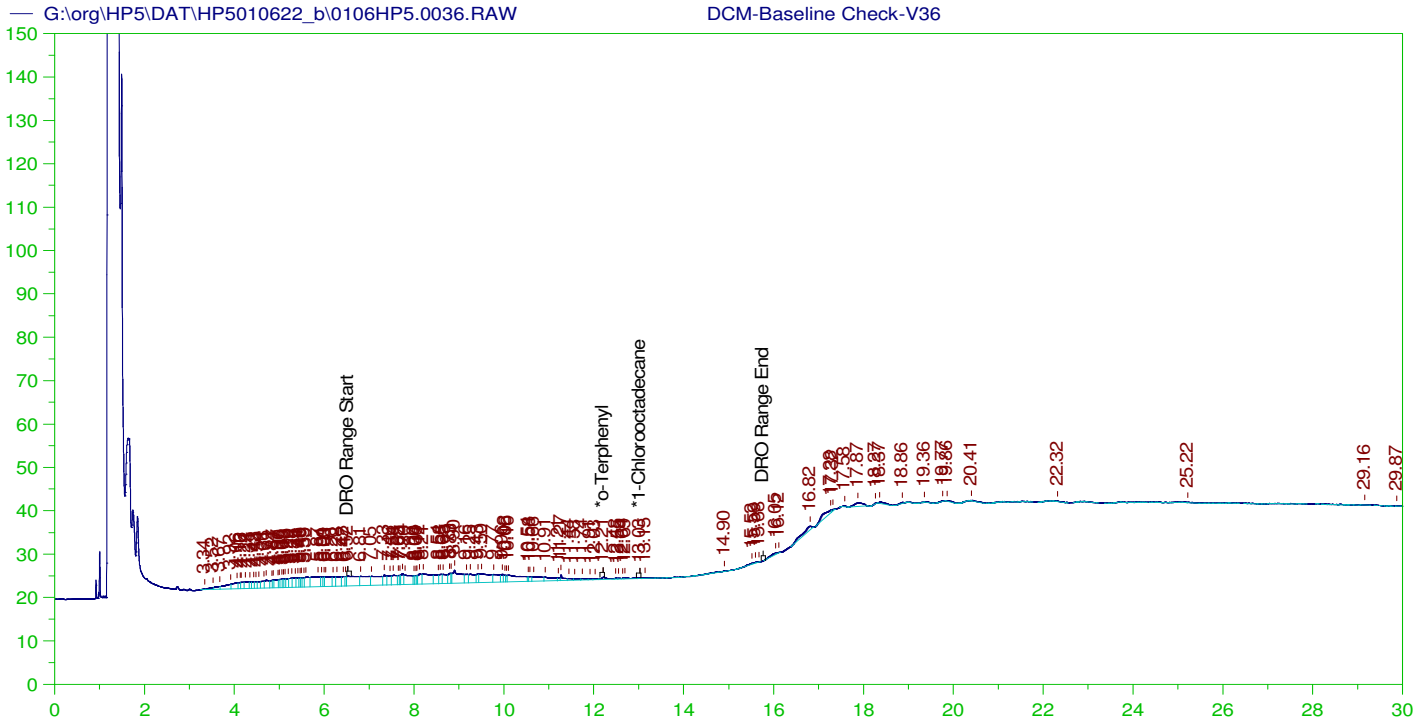
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.169	200.	206.764	103.38
*1-Chlorooctadecane	13.013	200.	34.369	17.18

DRO Area: 2.714112E+08 DRO Amount: 8656.574
 TEH Area: 2.822628E+08 TEH Amount: 9002.681

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	9002.68	60.02	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.169	200.	206.764	103.38	85-115
*1-Chlorooctadecane	13.013	200.	34.369	17.18	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V36
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0036.RAW
 Date & Time Acquired: 1/7/2022 9:19:37 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.207	200.	.156	.08	-
*1-Chlorooctadecane	13.027	200.	.02	.01	-

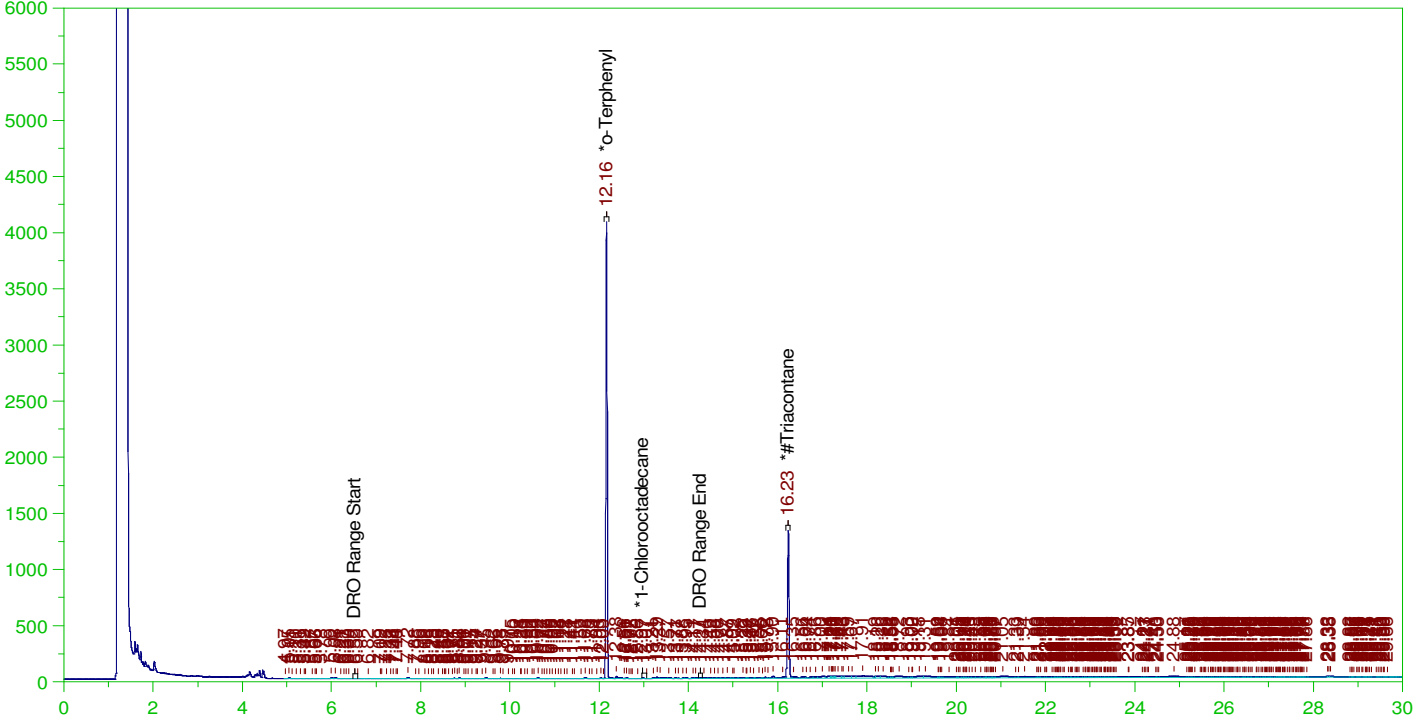
DRO Area:551078.6 DRO Amount: 17.57648
 TEH Area:946998.7 TEH Amount: 30.20422

ERH2317 (RHMW09)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0037.RAW

Batch ID: 162703

B22010209-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010209-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0037.RAW
Date & Time Acquired: 1/7/2022 10:02:40 AM
Method File: G:\Org\HP5\Methods\D3_8015-010637-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.163	.192	.206	107.13	-
*1-Chlorooctadecane	12.974	.192	.	.18	-
*#Triacontane	16.232	.192	.115	59.69	-

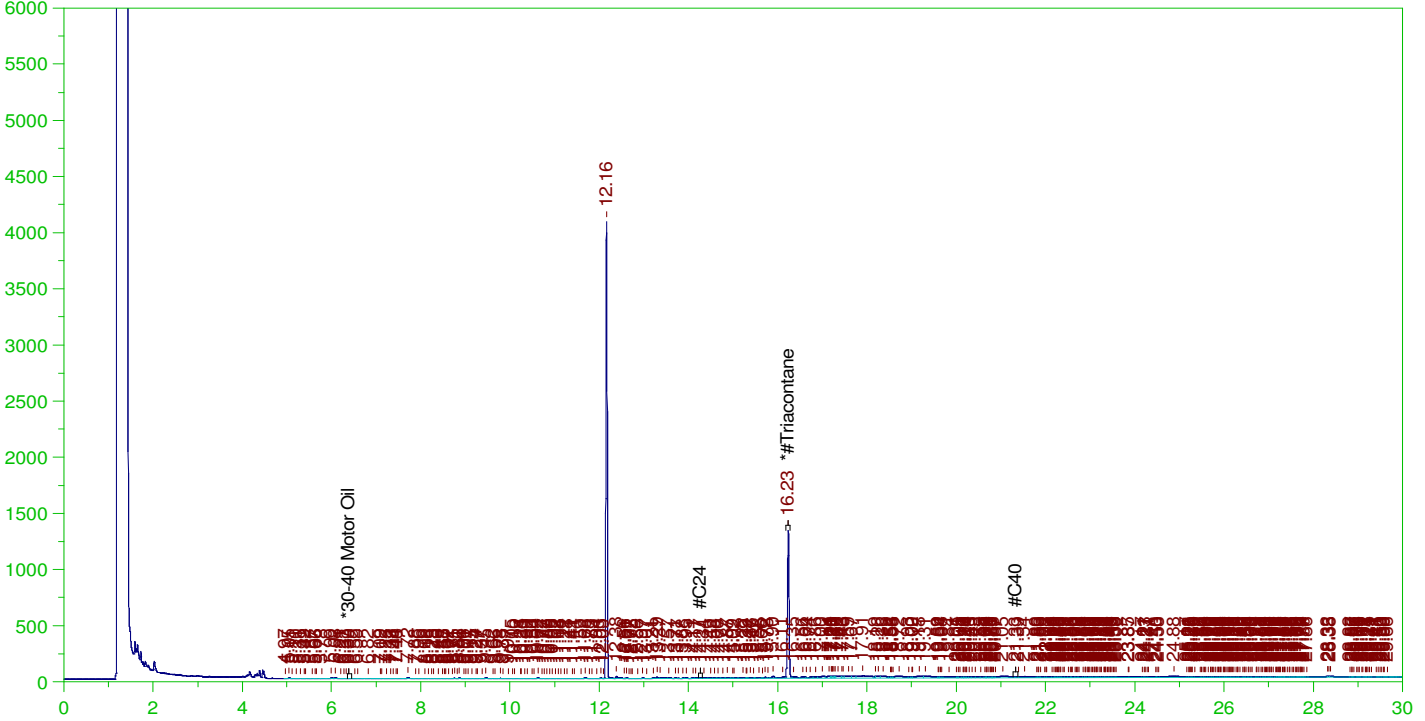
DRO Area:582541.8 DRO Amount: 1.786537E-02
TEH Area:7499497 TEH Amount: 0.2299943

ERH2317 (RHMW09)

G:\org\HP5\DAT\HP5010622_b\0106HP5.0037.RAW

Batch ID: 162703

B22010209-001D ;0106HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010209-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0037.RAW
Date & Time Acquired: 1/7/2022 10:02:40 AM
Method File: G:\Org\HP5\Methods\D3_OROS-010637-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacantane	16.232	.481	.115	23.87	-

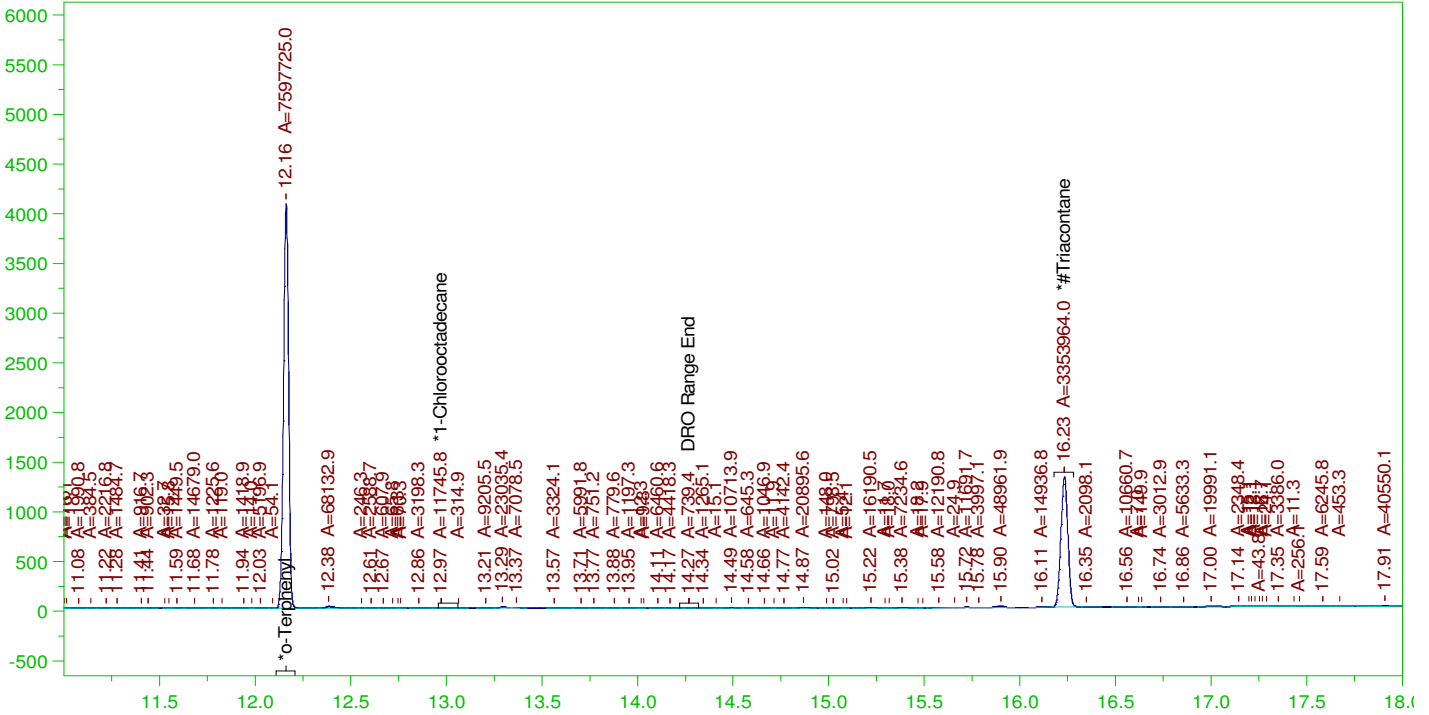
RRO Area:4271739 RRO AMOUNT: 0.1439066

ERH2317 (RHMW09)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0037.RAW

B22010209-001D ;0106HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010209-001D ;0106HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0037.RAW
Date & Time Acquired: 1/7/2022 10:02:40 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IN-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.163	.192	.206	106.98
*1-Chlorooctadecane	12.974	.192	.	.17
*#Triacontane	16.232	.192	.111	57.97

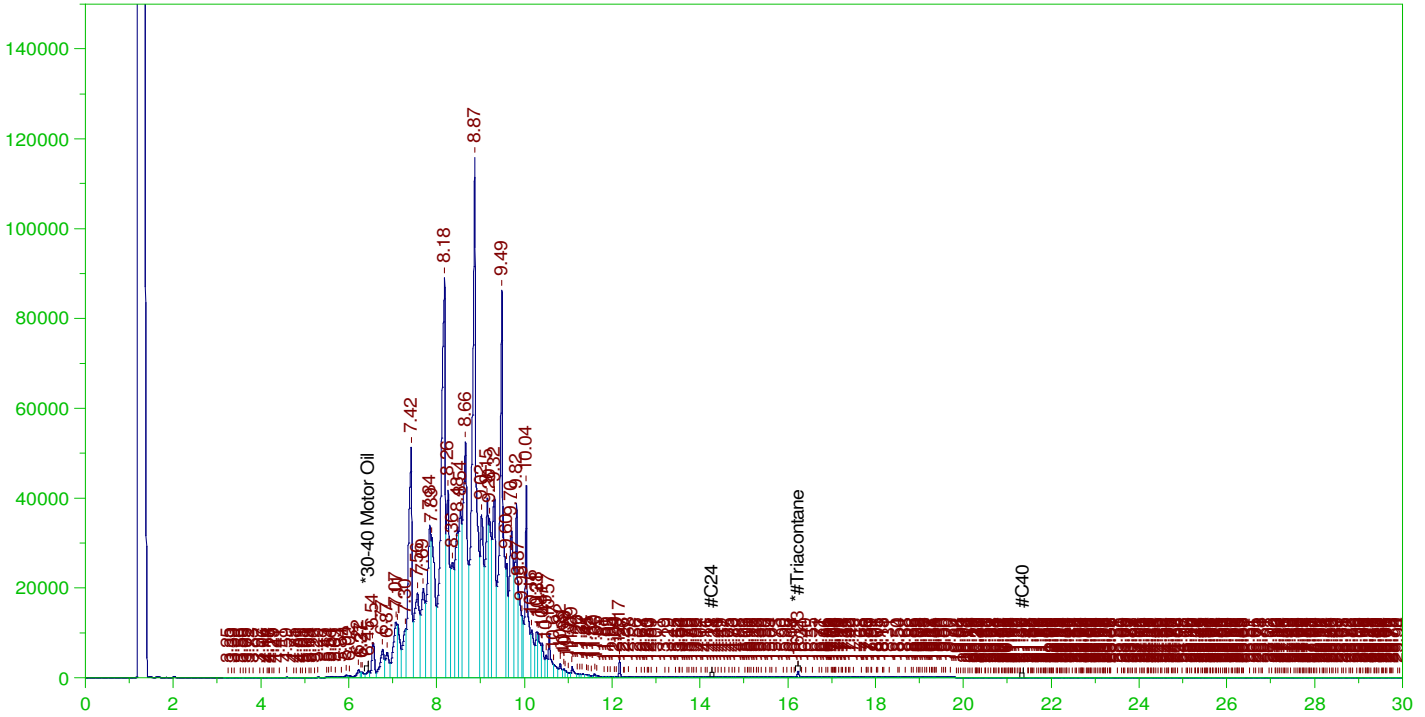
DRO Area:389687.4 DRO Amount: 1.195092E-02
TEH Area:1895445 TEH Amount: 5.812942E-02

ERH2336 (Sump Adit3)

Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0038.RAW

B22010211-001D ;0106HP5 , \$HC-8015-DRO-W, Oil range



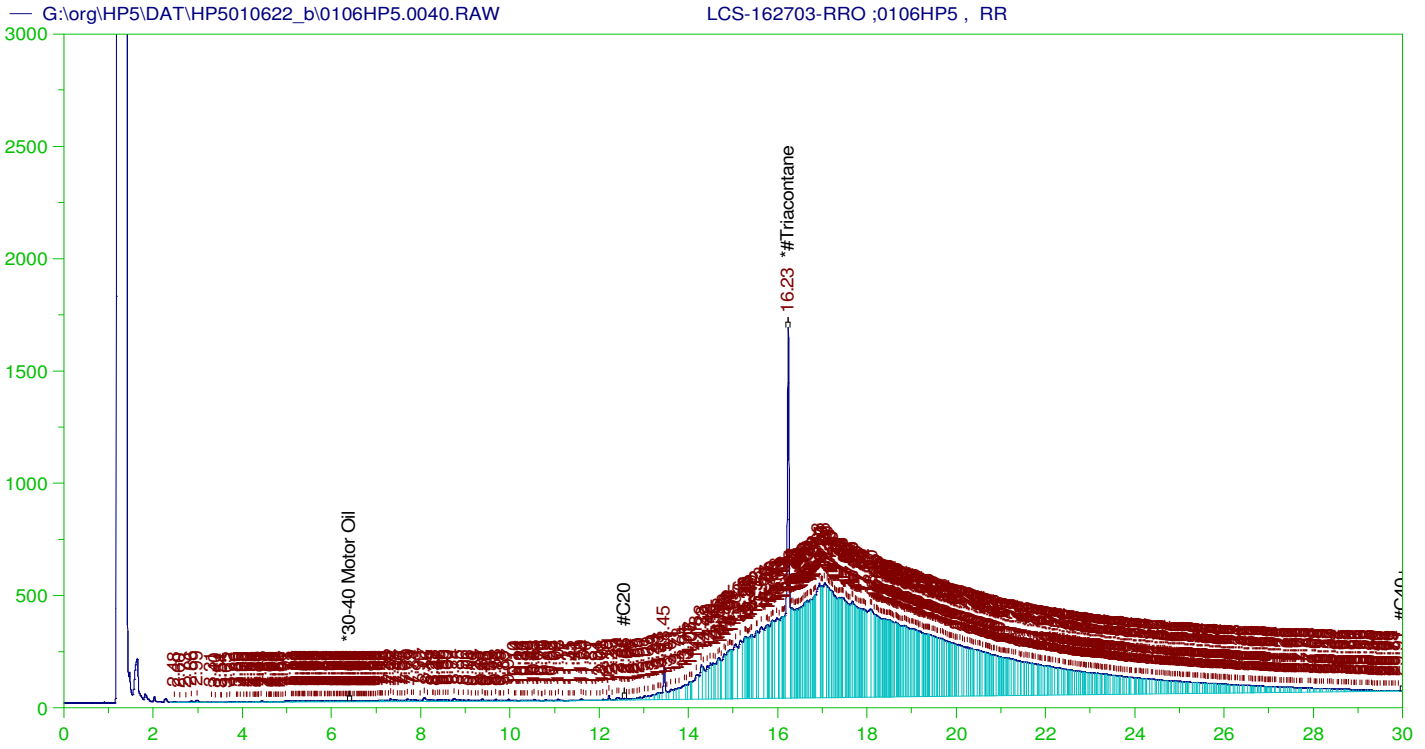
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010211-001D ;0106HP5 , \$HC-8015-DRO-W, Oil range
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0038.RAW
 Date & Time Acquired: 1/7/2022 10:45:59 AM
 Method File: G:\Org\HP5\Methods\D3_OROS-010638-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.232	.485	.134	27.63	-

RRO Area:1.880398E+07 RRO AMOUNT: 0.6396197



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162703-RRO ;0106HP5 , RR
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0040.RAW
 Date & Time Acquired: 1/7/2022 12:16:06 PM
 Method File: G:\Org\HP5\Methods\D3_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.51 to 30.05

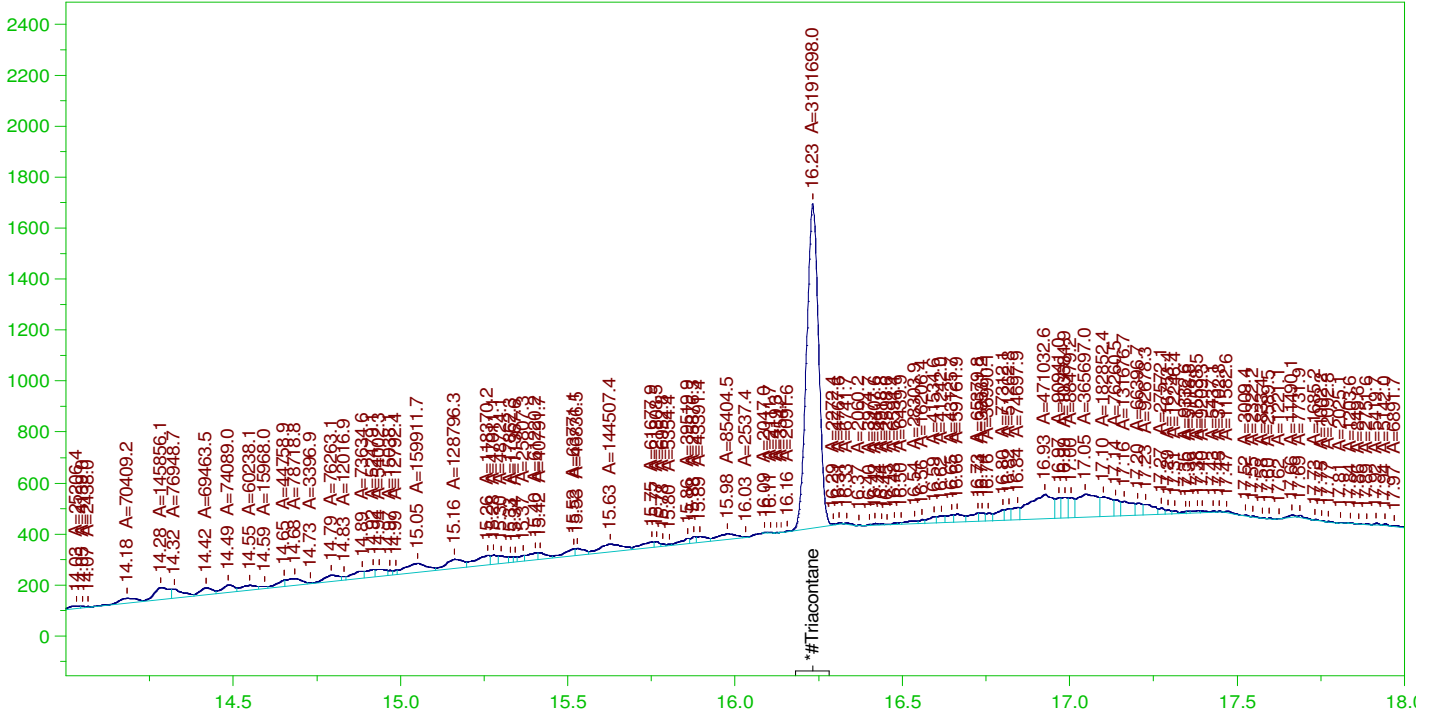
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.232	.5	.209	41.77

~~RRO~~ TEH (Oil Range) Area:1.573859E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 5.514107

AMN 01/31/2022

G:\org\HP5\DAT\HP5010622_b\0106HP5.0040.RAW

LCS-162703-RRO ;0106HP5 , RR



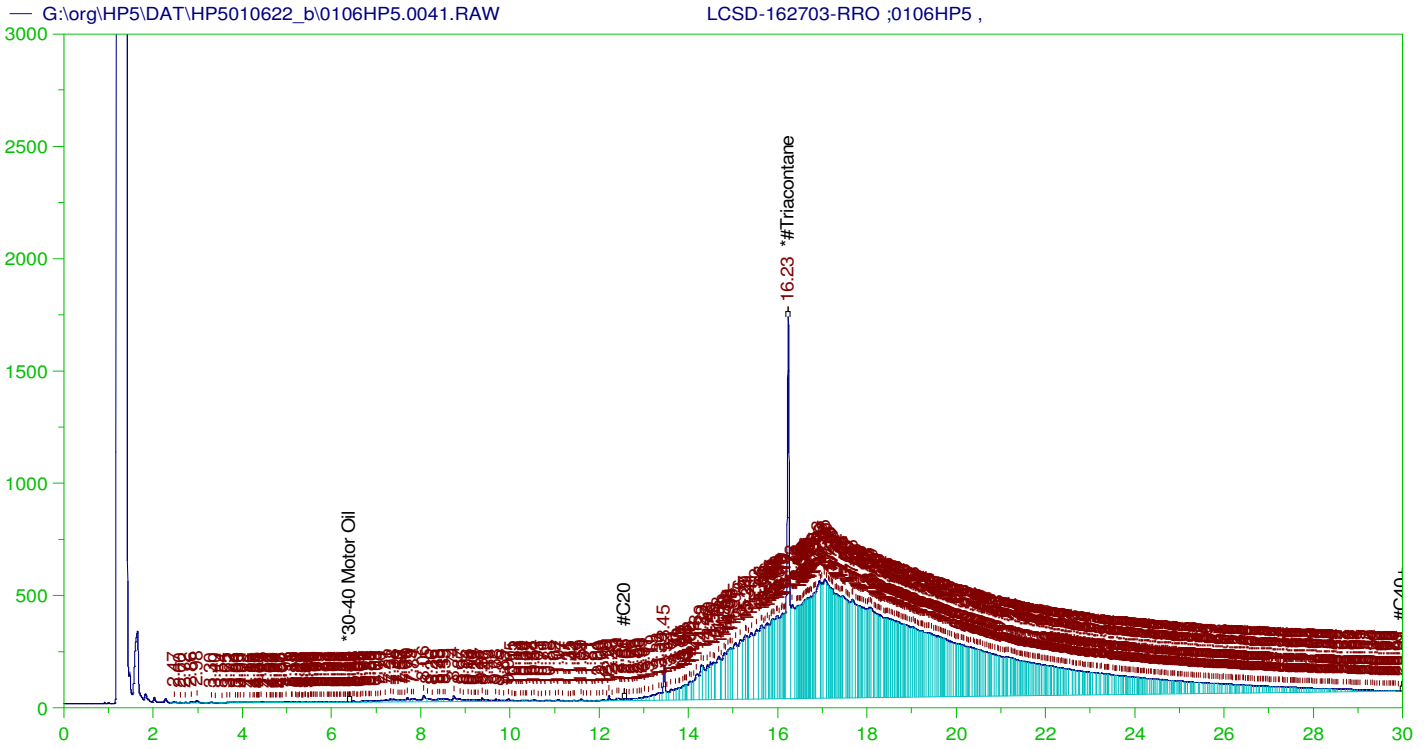
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162703-RRO ;0106HP5 , RR
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0040.RAW
 Date & Time Acquired: 1/7/2022 12:16:06 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.232	.5	.11	22.06

RRO Area:5441502 RRO AMOUNT: 0.1906462



RESIDUAL RANGE ORGANICS CHROMATOGRAM

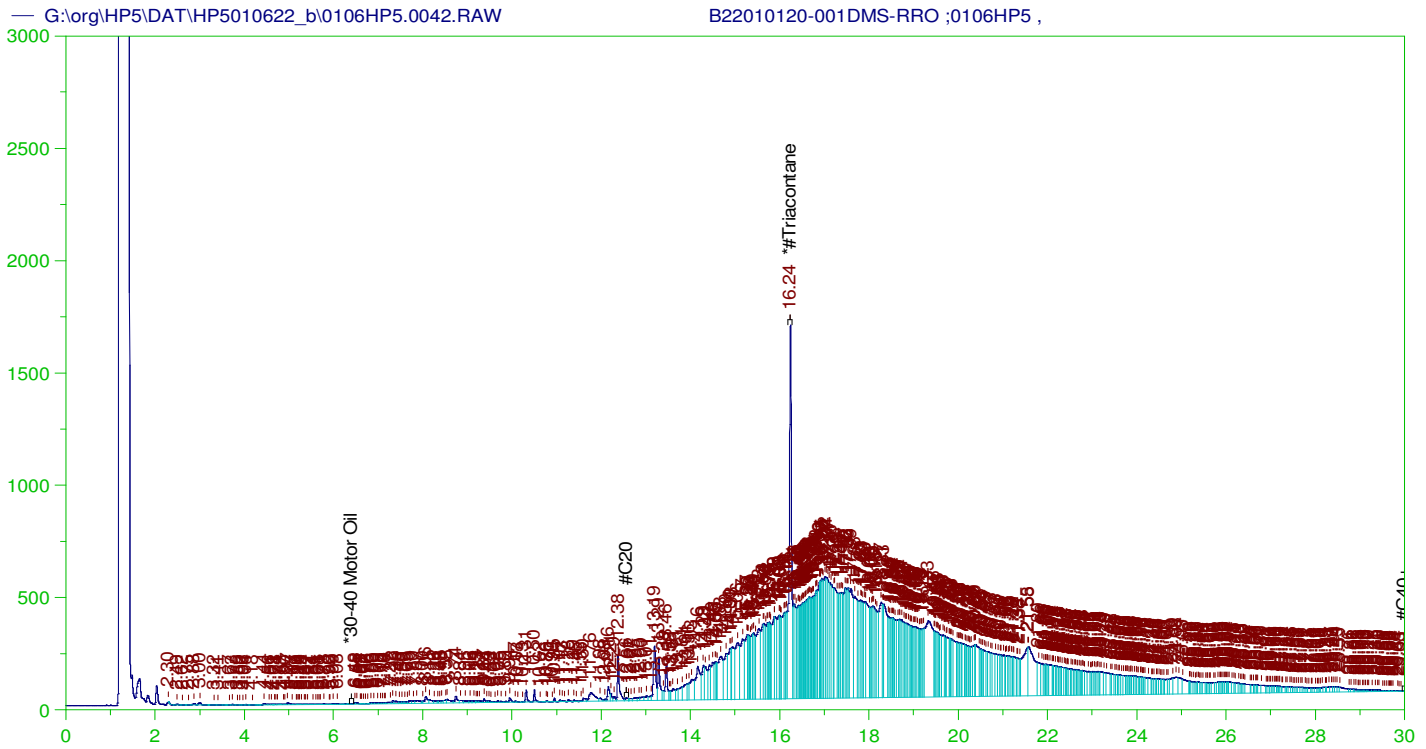
Sample Name: LCSD-162703-RRO ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0041.RAW
 Date & Time Acquired: 1/7/2022 1:01:28 PM
 Method File: G:\Org\HP5\Methods\D3_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.232	.5	.213	42.53

~~RRO~~ TEH (Oil Range) Area:1.616392E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 5.663123

AMN 01/31/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010120-001DMS-RRO ;0106HP5 ,
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0042.RAW
 Date & Time Acquired: 1/7/2022 1:44:11 PM
 Method File: G:\Org\HP5\Methods\D3_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.51 to 30.05

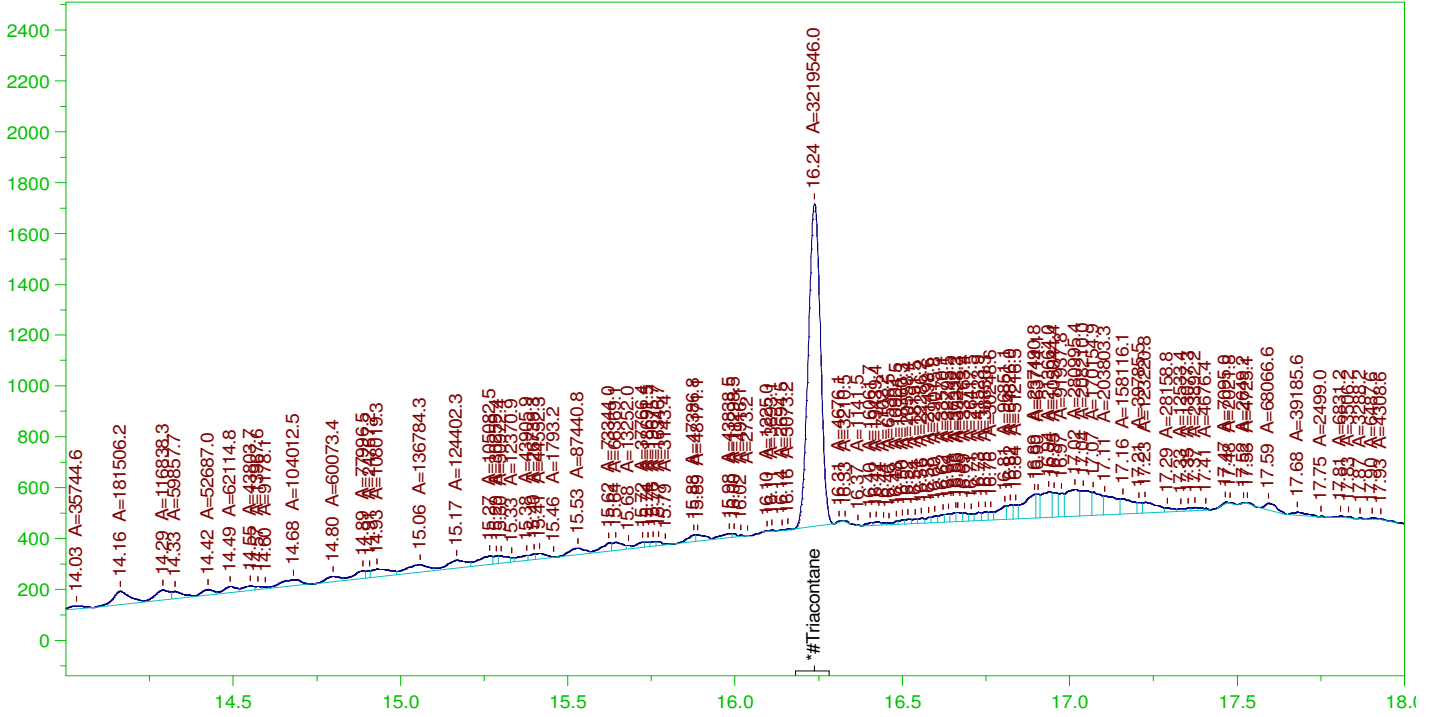
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.237	.485	.209	43.07	-

~~RRO~~ TEH (Oil Range) Area:1.702661E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 5.791624

AMN 01/31/2022

G:\org\HP5\DAT\HP5010622_b\0106HP5.0042.RAW

B22010120-001DMS-RRO ;0106HP5 ,



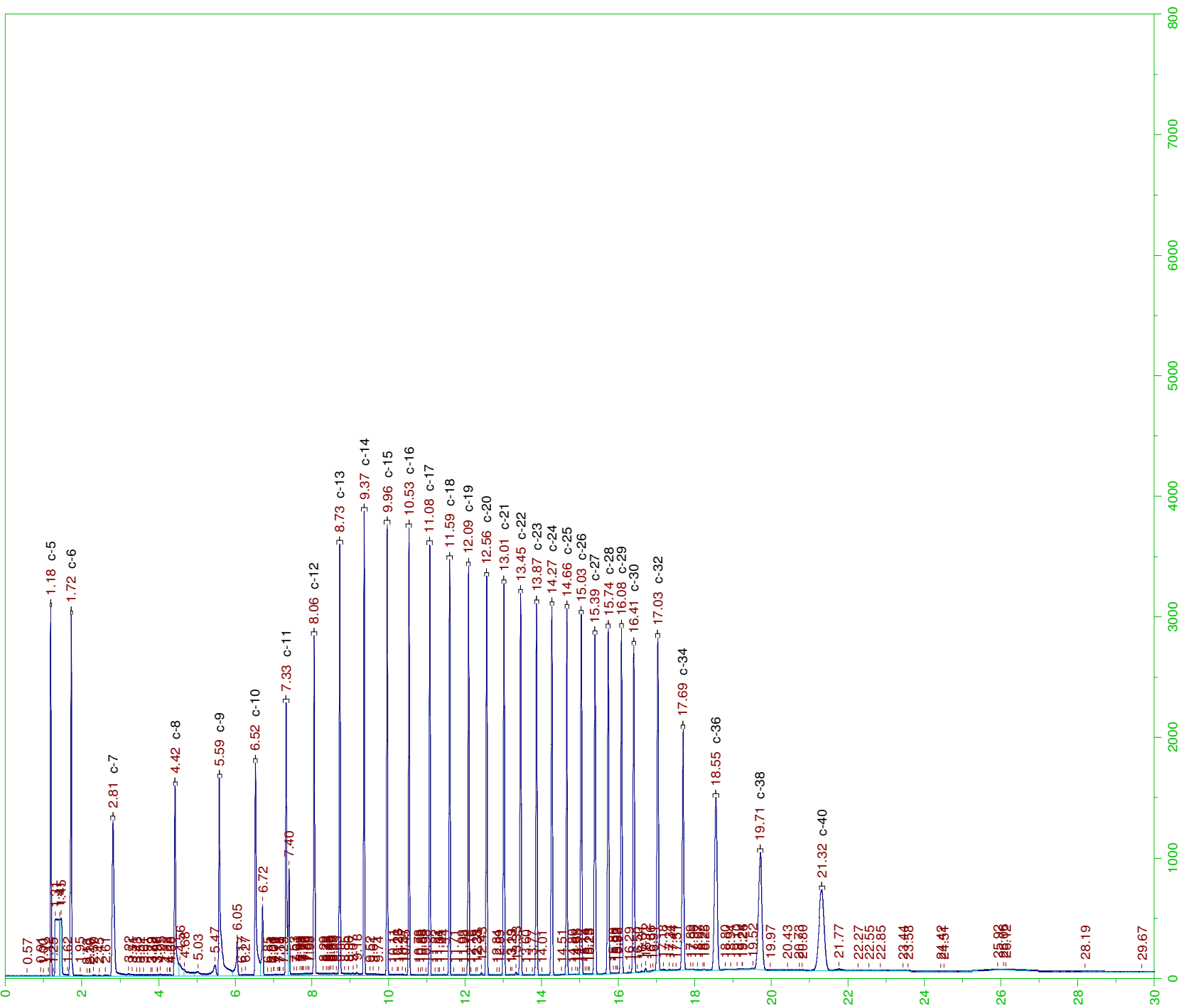
RESIDUAL RANGE ORGANICS CHROMATOGRAM

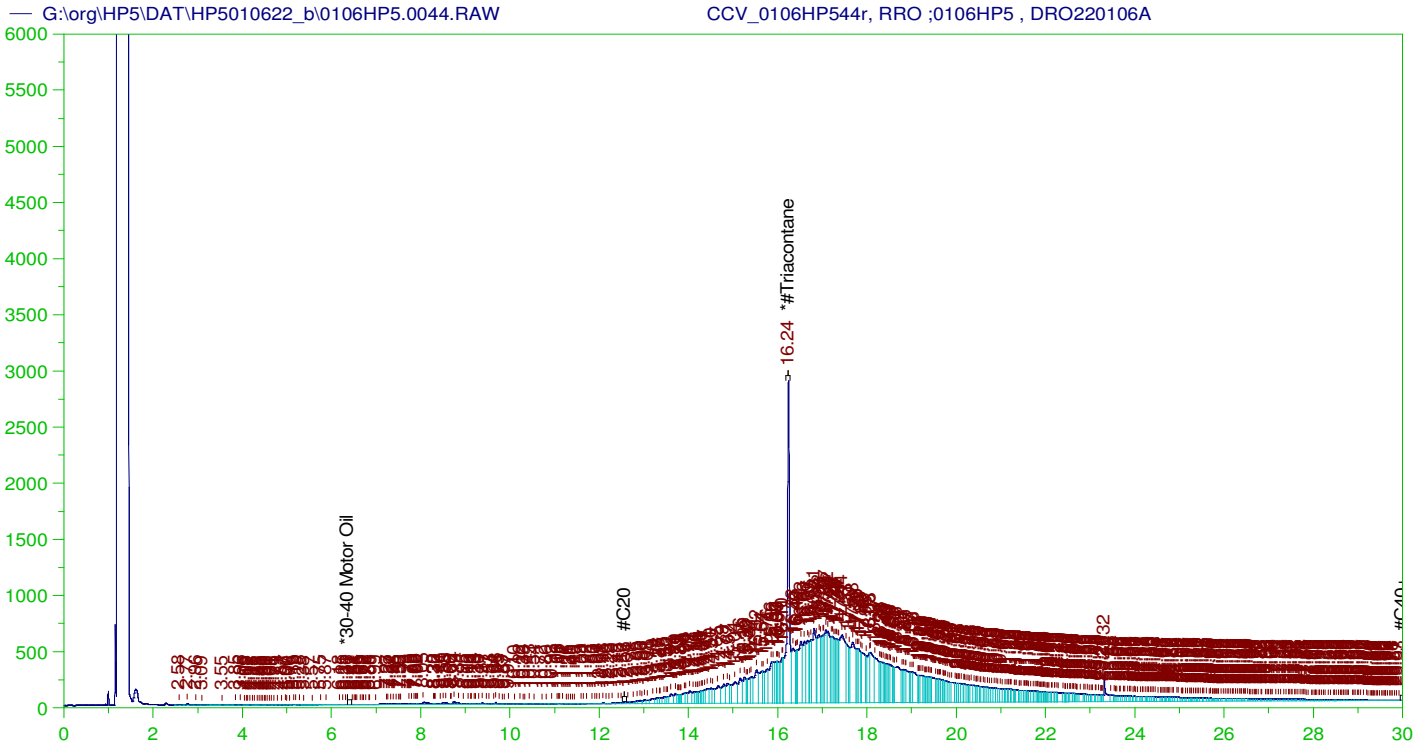
Sample Name: B22010120-001DMS-RRO ;0106HP5 ,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0042.RAW
Date & Time Acquired: 1/7/2022 1:44:11 PM
Method File: G:\Org\HP5\Methods\DS_ORO-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.237	.485	.108	22.26

RRO Area:7172832 RRO AMOUNT: 0.2439848





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP544r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0044.RAW
 Date & Time Acquired: 1/7/2022 3:09:41 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.237	500.	367.796	73.56	-

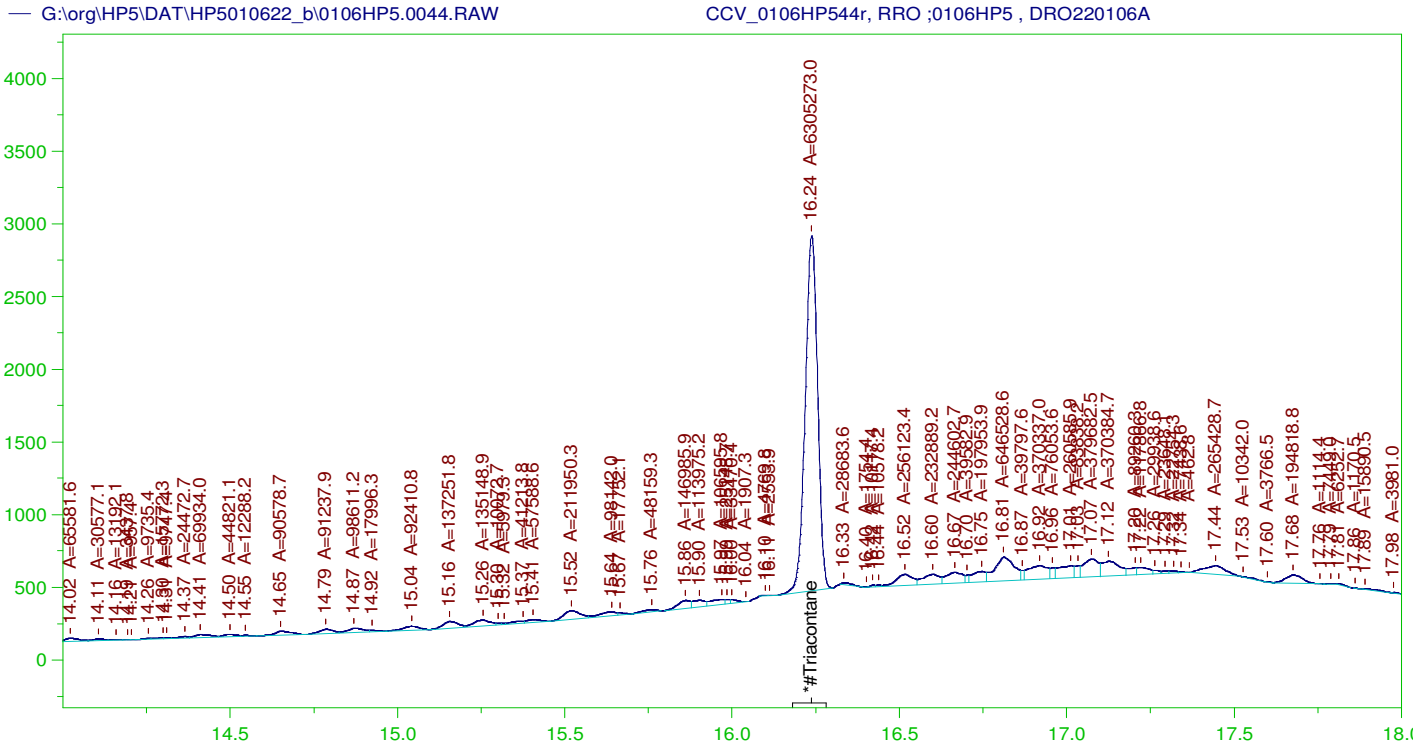
~~RRO~~ TEH (Oil Range) Area:1.495368E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 5239.109

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0044.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.071	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.237	200.	367.796	183.9	75-125

AMN 01/31/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP544r, RRO ;0106HP5 , DRO220106A
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0044.RAW
 Date & Time Acquired: 1/7/2022 3:09:41 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AN-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.51 to 30.05

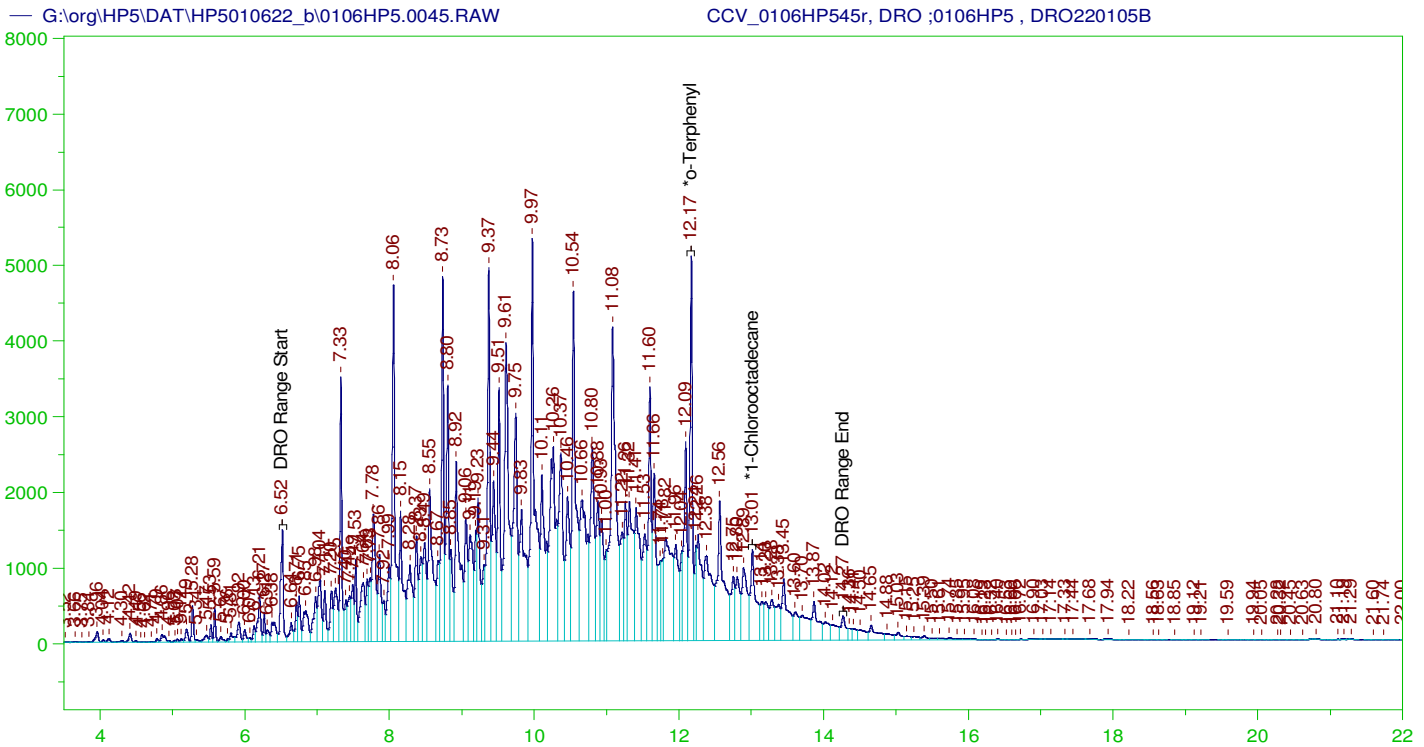
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.237	500.	217.948	43.59	-

RRO Area:6993164 RRO AMOUNT: 245.0096

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0044.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.071	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.237	200.	217.948	108.97	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP545r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0045.RAW
 Date & Time Acquired: 1/7/2022 3:52:32 PM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IN-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.169	200.	349.392	174.7
*1-Chlorooctadecane	13.015	200.	175.375	87.69

DRO Area: 5.03542E+08 DRO Amount: 16060.31
 TEH Area: 5.216117E+08 TEH Amount: 16636.64

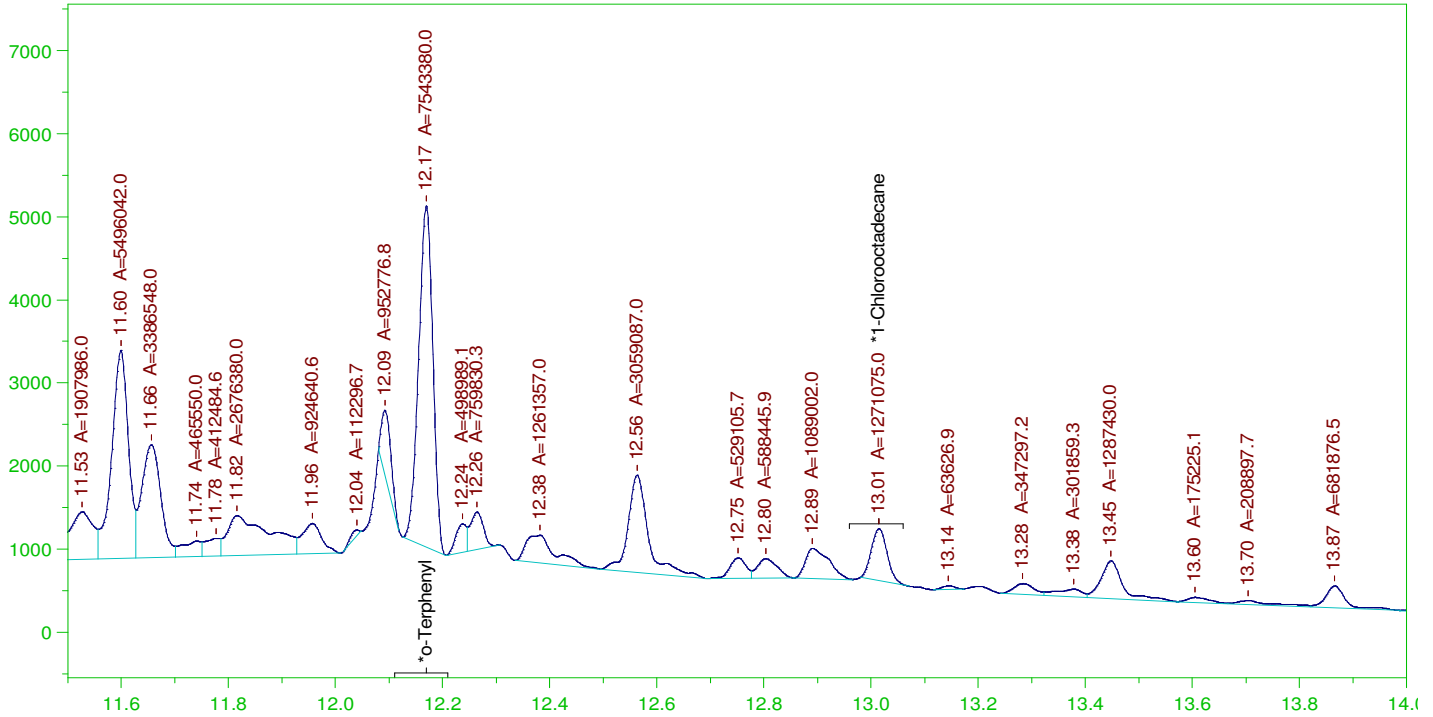
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0045.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16636.64	110.91	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.169	200.	349.392	174.7	85-115
*1-Chlorooctadecane	13.015	200.	175.375	87.69	85-115

G:\org\HP5\DAT\HP5010622_b\0106HP5.0045.RAW

CCV_0106HP545r, DRO ;0106HP5 , DRO220105B



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP545r, DRO ;0106HP5 , DRO220105B
 Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0045.RAW
 Date & Time Acquired: 1/7/2022 3:52:32 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IN-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.169	200.	212.435	106.22
*1-Chlorooctadecane	13.015	200.	35.796	17.9

DRO Area: 2.819767E+08 DRO Amount: 8993.556
 TEH Area: 2.93054E+08 TEH Amount: 9346.863

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5010622_b\0106HP5.0045.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	9346.86	62.31	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.169	200.	212.435	106.22	85-115
*1-Chlorooctadecane	13.015	200.	35.796	17.9	85-115

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj	IS	Cal ID	Manual Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.01r		DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.02r		DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.03r		MARKER_0106HP503r, DRO_0106HP5, DRO211220B	G:\org\HP5\Methods\GSC220106.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.04r		CCV_0106HP504r, RRO_0106HP5, DRO220106A	G:\Org\HP5\Methods\DC_ORO-AN-L%.MET G:\Org\HP5\Methods\DS_ORO-AN-L%.MET	1	1	1	1	1	0 The integration of Oil Range Hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.08 minutes slightly after the surrogate peak at 16.32 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.05r		CCV_0106HP505r, DRO_0106HP5, DRO220105B	G:\Org\HP5\Methods\DC_8015-24-IN-L%.met G:\Org\HP5\Methods\DS_8015-24-IN-L%.met	1	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.08 minutes and slightly after the surrogate peak at 12.3 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.06r		DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.07r		LCS-162703_0106HP5,	G:\Org\HP5\Methods\D3_8015-24-IN-L%.met G:\Org\HP5\Methods\DS_8015-24-IN-L%.met	1000	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.08 minutes and slightly after the surrogate peak at 12.3 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.08r		LCSD-162703_0106HP5,	G:\Org\HP5\Methods\D3_8015-24-IN-L%.met G:\Org\HP5\Methods\DS_8015-24-IN-L%.met	1000	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.08 minutes and slightly after the surrogate peak at 12.3 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.09r		MB-162703_0106HP5,	G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-L%.met	1000	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.10r		B22010096-001D_0106HP5, \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-L%.met	1010	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.11r		B22010120-001D_0106HP5, \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-010611-IN-L%.met G:\Org\HP5\Methods\DR_OROS-010611-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-L%.met	1000	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.12r		B22010096-001DMS_0106HP5,	G:\Org\HP5\Methods\D3_8015-24-IN-L%.met G:\Org\HP5\Methods\DS_8015-24-IN-L%.met	1030	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.08 minutes and slightly after the surrogate peak at 12.3 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.13r		DCM-Baseline Check-V13	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.14r		B22010143-001D_0106HP5, \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-L%.met	1050	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.15r		B22010148-001D_0106HP5, \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-010615-IN-L%.met G:\Org\HP5\Methods\DR_OROS-010615-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-L%.met	1040	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.16r		B22010212-001D_0106HP5, \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-L%.met	1050	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.17r		DCM-Baseline Check-V13	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.18r		MARKER_0106HP517r, DRO_0106HP5, DRO211220B	G:\org\HP5\Methods\GSC220106.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.19r		CCV_0106HP518r, RRO_0106HP5, DRO220106A	G:\Org\HP5\Methods\DC_ORO-AN-L%.MET G:\Org\HP5\Methods\DS_ORO-AN-L%.MET	1	1	1	1	1	0 The integration of Oil Range Hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.08 minutes slightly after the surrogate peak at 16.32 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.19r		CCV_0106HP519r, DRO_0106HP5, DRO220105B	G:\Org\HP5\Methods\DC_8015-24-IN-L%.met G:\Org\HP5\Methods\DS_8015-24-IN-L%.met	1	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.08 minutes and slightly after the surrogate peak at 12.3 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.20r		DCM-Baseline Check-V20	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	1	0 No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.21r		B22010213-002B_0106HP5, \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-010621-IN-L%.met G:\Org\HP5\Methods\DR_OROS-010621-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-L%.met	1000	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.

G:\org\HP5\DAT\HP5010622_b\0106HP5.22r	B22010213-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-010621-IN-L%.met G:\Org\HP5\Methods\DR_OROS-010621-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.23r	B22010213-003D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-010621-IN-L%.met G:\Org\HP5\Methods\DR_OROS-010621-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.24r	DCM-Baseline Check-V24	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.25r	B22010141-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.26r	B22010214-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.27r	B22010219-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-C24T-IN-L%.met G:\Org\HP5\Methods\D3_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.28r	B22010211-001D :0106HP5 , \$HC-8015-DRO-W,(1,10)	G:\Org\HP5\Methods\D3_8015-010628-IN-L%.met G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1030	10	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline with peak width and scale adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.29r	DCM-Baseline Check-V29	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.30r	B22010134-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.31r	B22010142-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met G:\Org\HP5\Methods\DR_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	970	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.32r	B22010145-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-010632-IN-L%.met G:\Org\HP5\Methods\D3_OROS-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.33r	MARKER_0106HP533r_DRO_0106HP5_DRO211220B	G:\Org\HP5\Methods\CSC220106.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.34r	CCV_0106HP534r_RRO_0106HP5_DRO220106A	G:\Org\HP5\Methods\DC_ORO-AN-L%.MET G:\Org\HP5\Methods\DS_ORO-AN-L%.MET	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.08 minutes slightly after the surrogate peak at 16.32 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.35r	CCV_0106HP535r_DRO_0106HP5_DRO220105B	G:\Org\HP5\Methods\DC_8015-24-IN-L%.met G:\Org\HP5\Methods\DS_8015-24-IN-Lf.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.08 minutes and slightly after the surrogate peak at 12.3 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.36r	DCM-Baseline Check-V36	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.37r	B22010209-001D :0106HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-010637-IN-L%.met G:\Org\HP5\Methods\D3_OROS-010637-AN-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IN-Lf.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.38r	B22010211-001D :0106HP5 , \$HC-8015-DRO-W, Oil range	G:\Org\HP5\Methods\D3_OROS-010638-AN-L%.MET	1030	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline with peak width and scale adjusted.
G:\org\HP5\DAT\HP5010622_b\0106HP5.39r	LCS-162703-RRO_0106HP5 , GC vial cap was loose appear sample	G:\Org\HP5\Methods\D3_ORO-AN-L0.MET	1000	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.40r	LCS-162703-RRO_0106HP5 , RR	G:\Org\HP5\Methods\D3_ORO-AN-L%.MET G:\Org\HP5\Methods\DS_ORO-AN-L%.MET	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.08 minutes slightly after the surrogate peak at 16.32 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.41r	LCSd-162703-RRO_0106HP5 ,	G:\Org\HP5\Methods\D3_ORO-AN-L%.MET G:\Org\HP5\Methods\DS_ORO-AN-L%.MET	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.08 minutes slightly after the surrogate peak at 16.32 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.

G:\org\HP5\DAT\HP5010622_b\0106HP5.43r	B22010120-001DMS-RRO .0106HP5 .	G:\Org\HP5\Methods\D3_ORO-AN-L%.MET G:\Org\HP5\Methods\DS_ORO-AN-L%.MET	1030	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.08 minutes slightly after the surrogate peak at 16.32 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.43r	MARKER_0106HP543r_DRO_0106HP5_DRO211220B	G:\org\HP5\Methods\CSC220106.met	1	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5010622_b\0106HP5.44r	CCV_0106HP544r_RRO_0106HP5_DRO220106A	G:\Org\HP5\Methods\DC_ORO-AN-L%.MET G:\Org\HP5\Methods\DS_ORO-AN-L%.MET	1	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.08 minutes slightly after the surrogate peak at 16.32 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5010622_b\0106HP5.45r	CCV_0106HP545r_DRO_0106HP5_DRO220105B	G:\Org\HP5\Methods\DC_8015-24-IN-L%.met G:\Org\HP5\Methods\DS_8015-24-IN-L%.met	1	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.08 minutes and slightly after the surrogate peak at 12.3 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.01.26 14:45:53 -07:00

Energy Laboratories Inc

Spike LOG

Standard ID: DRO211101A
Standard Name: OTP-4000 ug/mL DCM
Date Prepared: 11/1/2021
Date Expires: 9/30/2024
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Used to Prep DRO-8015 ICAL and CCV Solutions

Type: Secondary
BY: Ann Nebel
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC328	14408	25	mL	8/19/

Final Volume: 25 mL

Stock Source

DRO200430B O-Terphenyl

Base Units

ug/mL

Amount Added

0.1012 g

Analtes

A O-Terphenyl

CAS

84-15-1

Conc:

ug/mL

4000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO200430B
Standard Name: O-Terphenyl
Date Prepared: 4/30/2020
Date Expires: 9/30/2024
Department: dropr
Vendor: Chemservice
Lot Number: 9972100
Balance ID:
Comments: ID#: 6271

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	12650	500	mg	9/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

CATALOG NUMBER N-12693-500MG
LOT NUMBER 9972100
DATE CERTIFIED 09/23/19
EXPIRATION DATE 09/30/24
CAS NUMBER 84-15-1
MOLECULAR FORMULA C18H14
MOLECULAR WEIGHT 230.32
STORAGE Store in a cool dry place.
HANDLING See Safety Data Sheet
INTENDED USE For laboratory use only.

Analytical Test	Value
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
GC/MS SPECTRA ID	MATCHES NIST DATABASE
MELTING POINT (°C)	57.1
% PURITY (GC/FID)	99.5

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

Rec'd: 4/30/2020

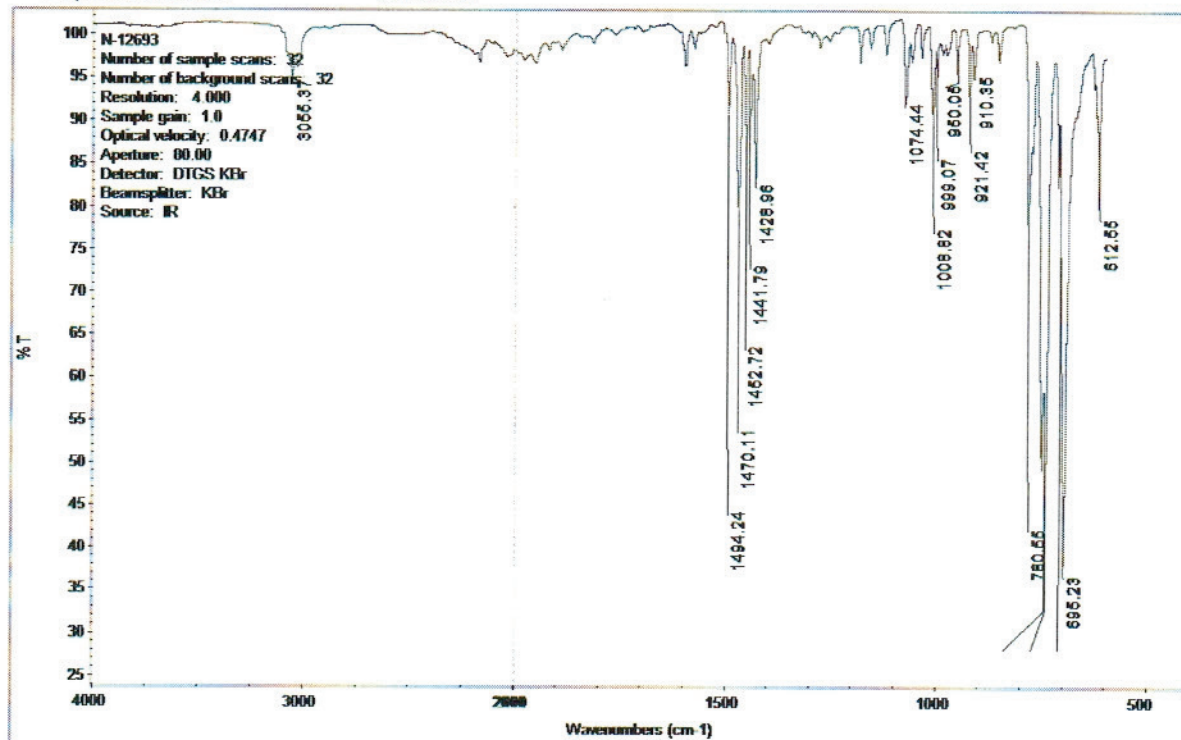
Energyl Laboratories Inc 1120 So. 27th Street

Billings MT 59107

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24



Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24

Chem Service Inc Area Percent Report

Data File: D:\msdchem\2019 DATA\0919\0923-01.D
Acq On : 23 Sep 2019 10:40
Operator :
Sample : n-12693
Misc :
ALS Vial : 95

Integration Parameters: autoint1.e
Integrator: ChemStation

DataAcq Meth: SCREEN.M
Method : D:\msdchem\2019 DATA\0919\0903-09.D\ERIN.M

Signal : TIC: 0923-01.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	11.844	1597	1606	1613	BB	32038221	432253484	100.00%	100.000%

Sum of corrected areas: 432253484

ERIN.M Mon Sep 23 10:55:51 2019

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



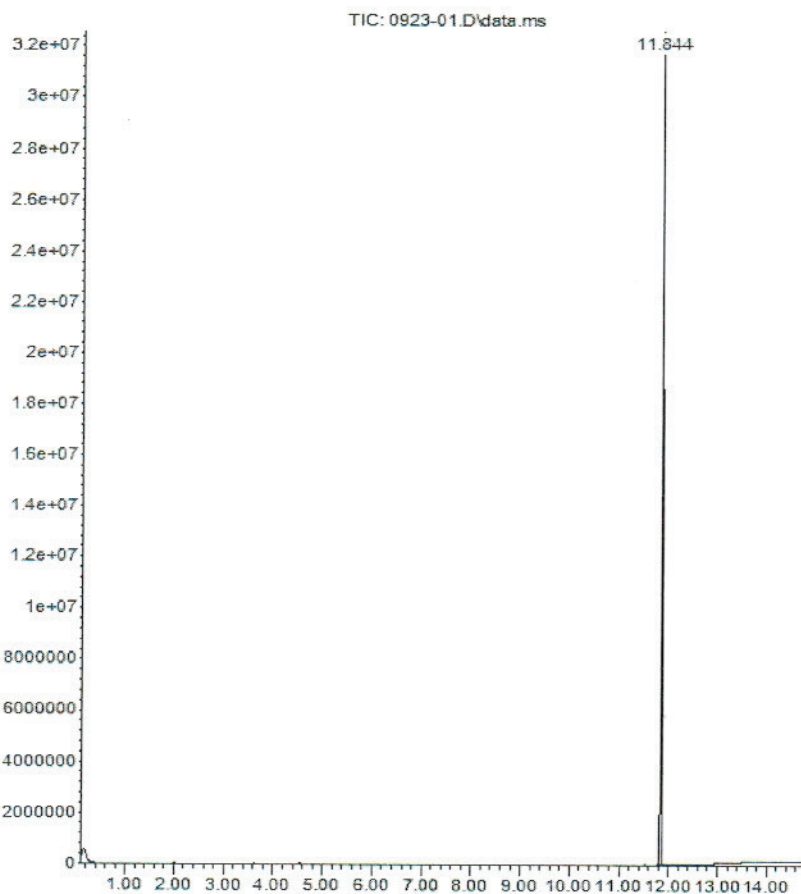
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24

Abundance



Time-->

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



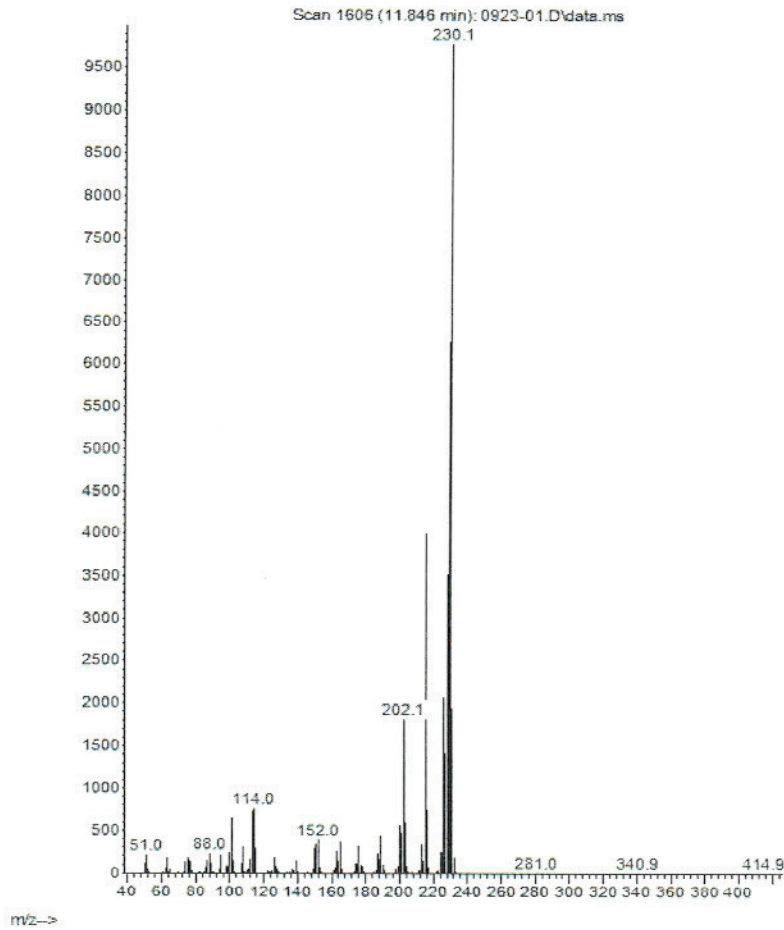
660 Tower Lane • P. O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24

Abundance



Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



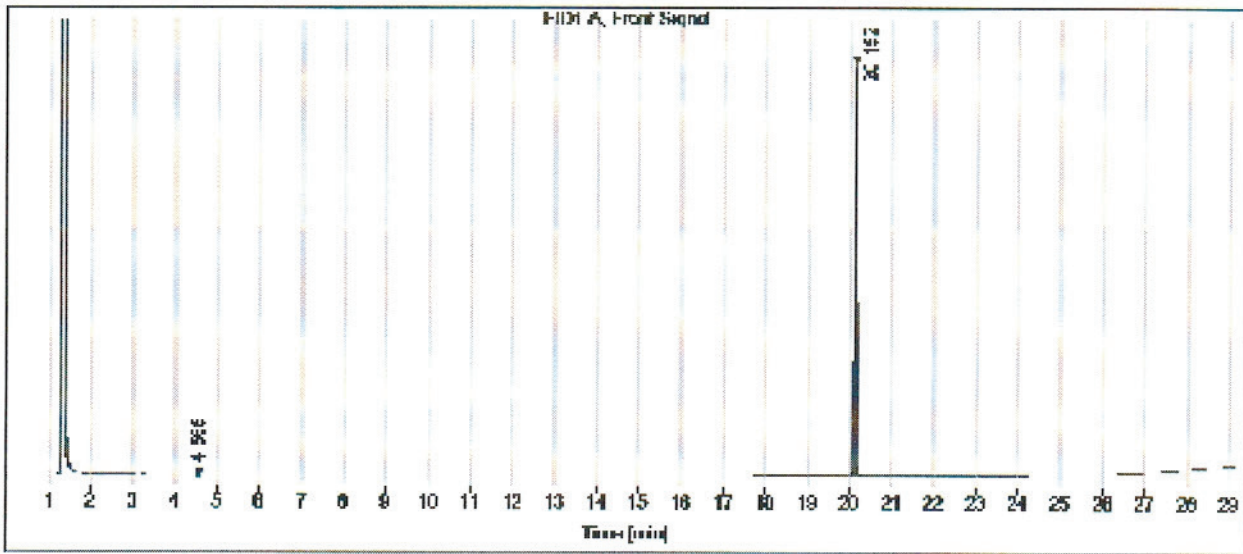
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\
 Sample name: N-12893
 Instrument: GC 2
 Injection date: 8/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
4.565	BB	0.0305	1.2408	0.5122	0.11
20.152	BB	0.0391	1171.9556	439.4599	99.89
		Sum	1173.1963		

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



Energy Laboratories Inc

Standard LOG

Standard ID: DRO211012A
Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM
Date Prepared: 10/12/2021
Date Expires: 4/30/2023
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: LRAC6316
Balance ID:
Comments: Diesel Fuel #2 For CCVs.

Type: Primary
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Diesel Fuel No. 2	14376	1	mL	4/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

Diesel Fuel #2

0

Certificate of Analysis

Certified
Reference
Material

Diesel Fuel No. 2

Description

Product ID UST148
Lot LRAC6316
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14376

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

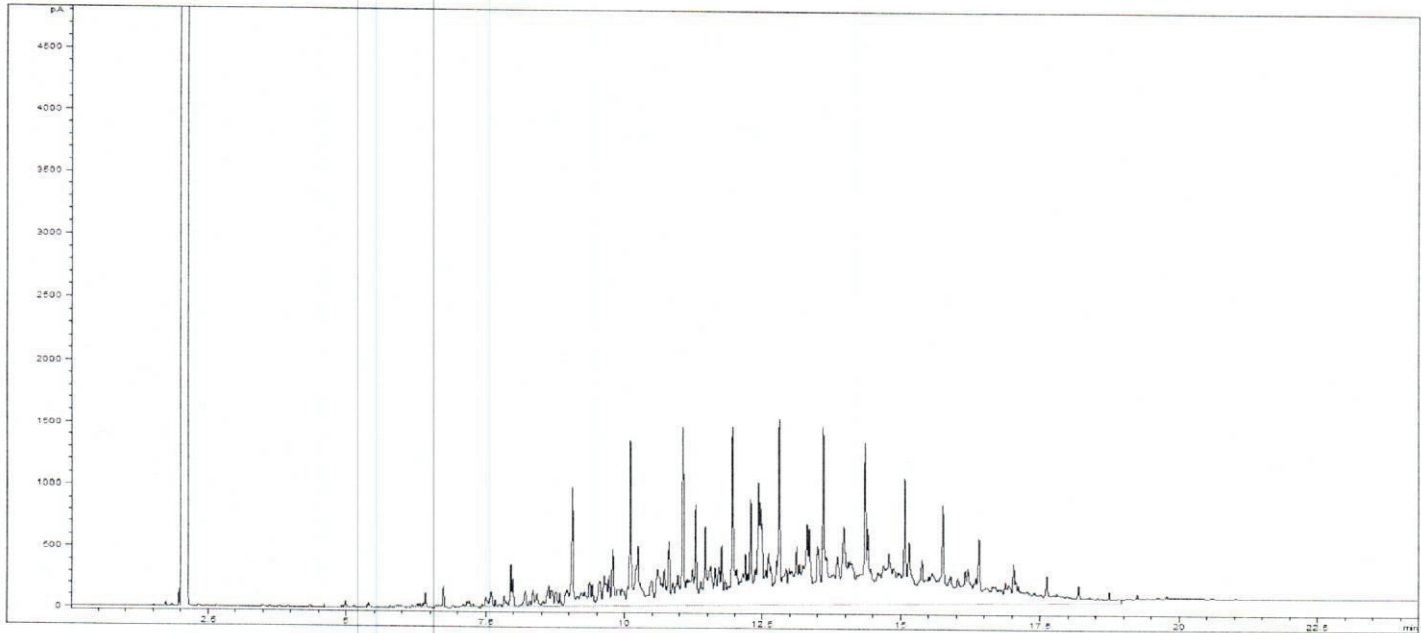
Rec'd: 10/12/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

Analyte	Certified Value ^{1,4}	Units	Raw Material Purity,%	Raw Material Lot	CAS
NO.2 FUEL OIL	50001 ± 2770	µg/mL	100.0	LA80505	68476-34-6

Informational Values



Additional Information:

Analytical Method Parameters:

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)

Carrier Gas: H₂, Flow: 4.0 mL/min

Inlet Temperature: 250 °C, Injection Volume: 1.0 µL

Injection Mode: Split, Split Ratio: 10:1

Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA

800-325-5832

TechService@milliporesigma.com www.sigma-aldrich.com

Description

Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

1 Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

k: Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

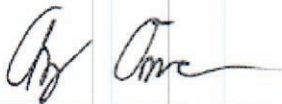
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

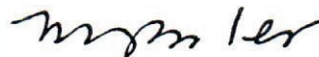
Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH ISO/IEC 17025:2017 (ANAB Cert AT-1467) and ISO 17034:2016 (ANAB Cert AR-1470).



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020



Energy Laboratories Inc

Standard LOG

Standard ID: DRO180918C
Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DC
Date Prepared: 9/18/2018
Date Expires: 8/31/2025
Department: dropr
Vendor: Restek
Lot Number: A0140080
Balance ID: Sartorius 4 place balance

Type: Primary
BY: Ann Nebel
Status: Open

Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Residual Range Calibration Standard	10787	1	mL	8/31/

Final Volume: 1 mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: **ug/mL**



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31817 Lot No.: A0140080

Description : Residual Range Calibration Standard (RCS)
Residual Range Calib Std (RCS) 50,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : August 31, 2025 Storage: 25°C nominal

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil) CAS # 64742-65-0.F (Lot A0126386) Purity ----%	50,113.0 µg/mL	+/- 293.4226	µg/mL	Gravimetric
			+/- 1,492.4284	µg/mL	Unstressed
			+/- 1,591.6738	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

ID #: 10787
Opened: _____
Residual Range Calibration Standard
Expires: **8/31/2025**
Rec'd: 9/18/2018
Eneray Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

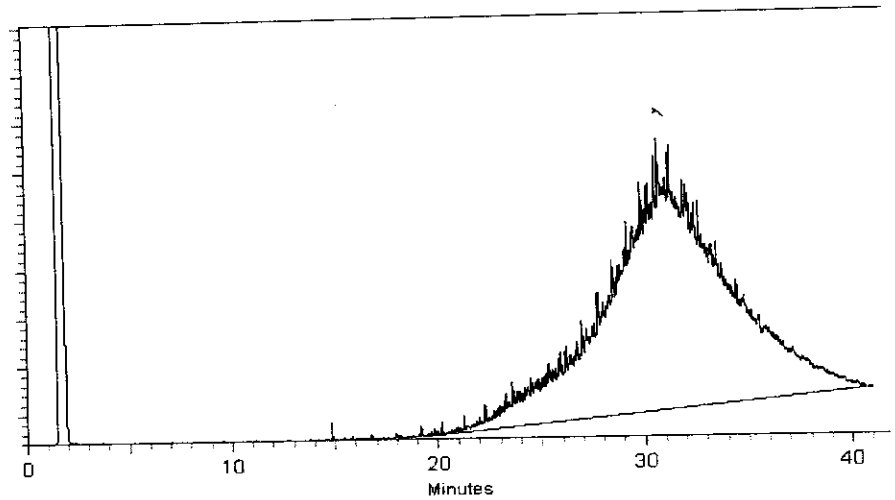
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish
Brandon Reish - Mix Technician

Date Mixed: 28-Jul-2018

Balance: B345965662

Diane Shaffer
Diane Shaffer - Operations Tech-ARM QC

Date Passed: 30-Jul-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: **ug/mL**
2000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Date Prepared: 4/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A Triacontane-d62

1

3050 Spruce Street, Saint Louis, MO 63103, USA
 Website: www.sigmaaldrich.com
 Email USA: techserv@sial.com
 Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
 Triacontane-d62 - 98 atom % D

Product Number: 451789
 Batch Number: MBBC4347
 Brand: ALDRICH
 CAS Number: 93952-07-9
 MDL Number: MFCD00209794
 Formula: C30D62
 Formula Weight: 485.20 g/mol
 Quality Release Date: 27 APR 2018



ID #: 13736

Opened: _____

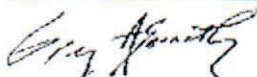
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

Energx Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211012B
Standard Name #2 Diesel in Acetone 150,000 ug/mL Type: Secondary
Date Prepared 10/12/2021 BY: Ann Nebel
Date Expires: 11/5/2023
Department dropr Status: New
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: #2 Diesel in Acetone 150,000 ug/mL.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone EA662	14050	25	mL	1/7/2

Final Volume: 25 mL

Stock Source

DRO181105A #2 Diesel (NEAT)

Base Units

ug/mL

Amount Added

3.7507 g

Analtes

A #2 Diesel

CAS

68476-34-6

Conc:

ug/mL

150000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO181105A
Standard Name #2 Diesel (NEAT) Type: Neat
Date Prepared 11/5/2018 BY: Ann Nebel
Date Expires: 11/5/2023
Department dropr Status: New
Vendor: conoco
Lot Number:
Balance ID:
Comments: -18 Cloud peak. (Conoco Gas Station 1240 S. 27th Billings, MT) 2nd Source

<u>Stock Source</u>	<u>Base Units</u>	<u>Final Volume:</u>	<u>Amount Added</u>
<u>Analvtes</u>	<u>CAS</u>	250 mL	
A #2 Diesel	68476-34-6	Conc:	ug/mL 1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210217A
 Standard Name: 20,000 ug/mL Oil Std For AK103 RRO-In DC
 Date Prepared: 2/17/2021
 Date Expires: 8/23/2021
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID: Sartorius 4 place balance
 Type: Secondary
 BY: Ann Nebel
 Status: Expired
 Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EA342	13510	25	mL	11/17

Final Volume: 25 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO160823C 30W Motor Oil-Valvoline	ug/mL	0.2501 g
DRO160823D 40W Motor Oil-Valvoline	ug/mL	0.2527 g

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A 30W Motor Oil			10000
A 30W-Motor oil			0
A 40W Motor Oil			10000
A 40W-Motor oil			0

Energy Laboratories Inc

Standard LOG

Standard ID: DRO160823C
Standard Name: 30W Motor Oil-Valvoline
Date Prepared: 8/23/2016
Date Expires: 8/23/2021
Department: dropr
Vendor:
Lot Number:
Balance ID:

Type: Primary
BY: Todd C Cooper
Status: Expired

Comments: Used to make 2nd Source Standard for AK103 method.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 30 Motor Oil	8637		mL	8/23/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 30W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO160823D
Standard Name: 40W Motor Oil-Valvoline
Date Prepared: 8/23/2016
Date Expires: 8/23/2021
Department: dropr
Vendor:
Lot Number:
Balance ID:
Type: Primary
BY: Todd C Cooper
Status: Expired
Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 40 Motor Oil	8638		mL	8/23/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 40W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO220105B
 Standard Name: 8015 CCV-15,000ug/mL + 200 OTP
 Date Prepared: 1/5/2022
 Date Expires: 4/30/2023
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID:
 Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel

Type: Secondary
 BY: Ann Nebel
 Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	2.6	mL	10/28

Final Volume: 4 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO211101A OTP-4000 ug/mL DCM	ug/mL	0.2 mL
DRO211214C Diesel Fuel #2 50,000 ug/mL in DCM	ug/mL	1.2 mL

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A #2 Diesel			15000
Diesel Fuel #2			0
A O-Terphenyl	84-15-1		200

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211214C
Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM
Date Prepared: 12/14/2021
Date Expires: 4/30/2023
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: LRAC6316
Balance ID:
Comments: Diesel Fuel #2 For CCVs.

Type: Primary
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Diesel Fuel No. 2	14623	1	mL	4/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

Diesel Fuel #2

0

Certificate of Analysis

Diesel Fuel No. 2

*Certified
Reference
Material*

Description

Product ID UST148
Lot LRAC6316
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14623

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

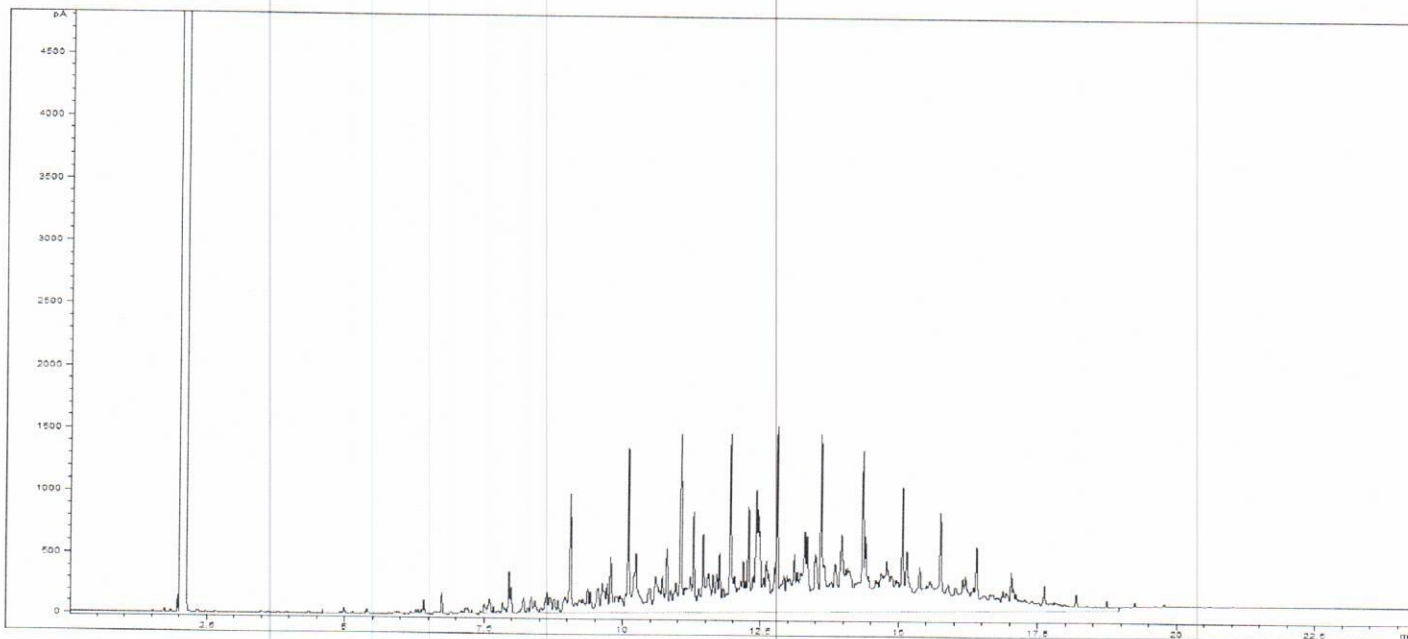
Rec'd: 12/14/2021

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

Analyte	Certified Value ^{1,4}	Units	Raw Material Purity,%	Raw Material Lot	CAS
NO.2 FUEL OIL	50001 ± 2770	µg/mL	100.0	LA80505	68476-34-6

Informational Values



Additional Information:

Analytical Method Parameters:

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)

Carrier Gas: H₂, Flow: 4.0 mL/min

Inlet Temperature: 250 °C, Injection Volume: 1.0 µL

Injection Mode: Split, Split Ratio: 10: 1

Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

1 Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$U_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

k: Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

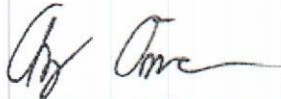
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH ISO/IEC 17025:2017 (ANAB Cert AT-1467) and ISO 17034:2016 (ANAB Cert AR-1470).



Andy Ommen - QC Manager

Certification Date April 30, 2020
Version 0-4302020



Mark Pooler - QA Supervisor



Energy Laboratories Inc

Spike LOG

Standard ID: DRO211101A
Standard Name: OTP-4000 ug/mL DCM
Date Prepared: 11/1/2021
Date Expires: 9/30/2024
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Used to Prep DRO-8015 ICAL and CCV Solutions

Type: Secondary
BY: Ann Nebel
Status: Open

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC328	14408	25	mL	8/19/

Final Volume: 25 mL

Stock Source

DRO200430B O-Terphenyl

Base Units

ug/mL

Amount Added

0.1012 g

Analtes

A O-Terphenyl

CAS

84-15-1

Conc:

ug/mL

4000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO200430B
Standard Name: O-Terphenyl
Date Prepared: 4/30/2020
Date Expires: 9/30/2024
Department: dropr
Vendor: Chemservice
Lot Number: 9972100
Balance ID:
Comments: ID#: 6271

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	12650	500	mg	9/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

CATALOG NUMBER N-12693-500MG
LOT NUMBER 9972100
DATE CERTIFIED 09/23/19
EXPIRATION DATE 09/30/24
CAS NUMBER 84-15-1
MOLECULAR FORMULA C₁₈H₁₄
MOLECULAR WEIGHT 230.32
STORAGE Store in a cool dry place.
HANDLING See Safety Data Sheet
INTENDED USE For laboratory use only.

Analytical Test	Value
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
GC/MS SPECTRA ID	MATCHES NIST DATABASE
MELTING POINT (°C)	57.1
% PURITY (GC/FID)	99.5

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

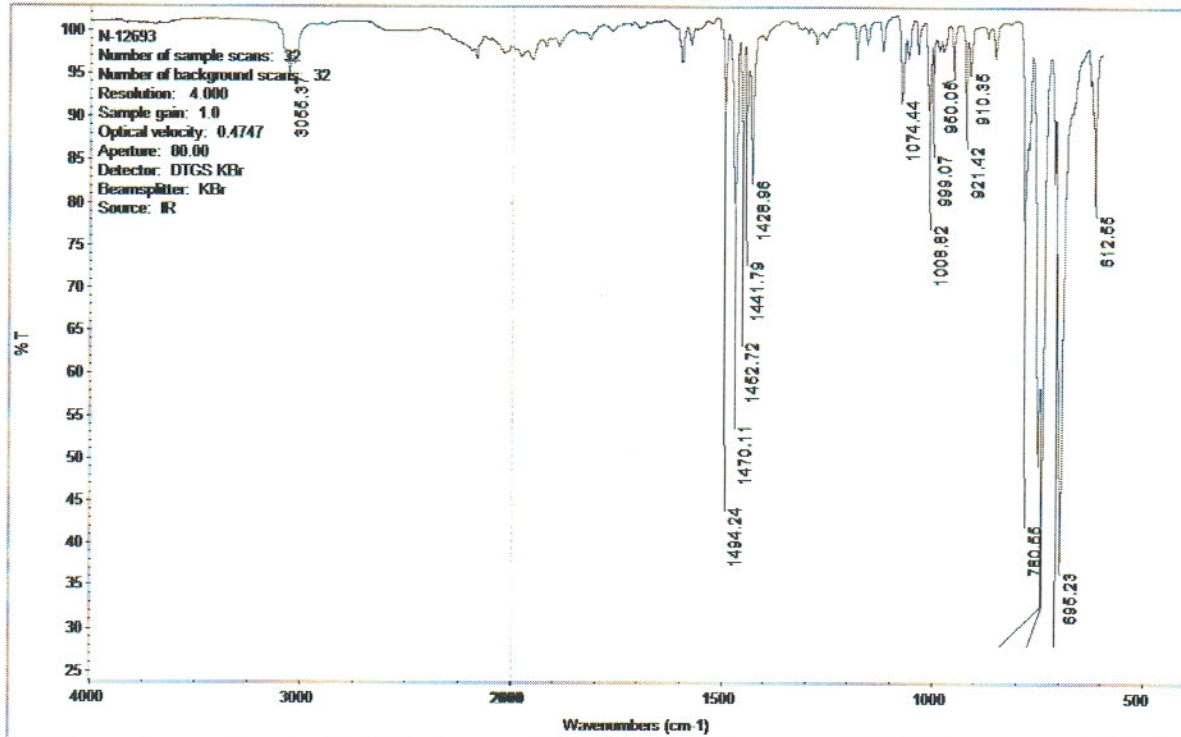
Rec'd: 4/30/2020

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24



Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24
Chem Service Inc Area Percent Report

Data File: D:\msdchem\2019 DATA\0919\0923-01.D
Acq On : 23 Sep 2019 10:40
Operator :
Sample : n-12693
Misc :
ALS Vial : 95

Integration Parameters: autoint1.e
Integrator: ChemStation

DataAcq Meth: SCREEN.M
Method : D:\msdchem\2019 DATA\0919\0903-09.D\ERIN.M

Signal : TIC: 0923-01.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	11.844	1597	1606	1613	BB	32038221	432253484	100.00%	100.000%

Sum of corrected areas: 432253484

ERIN.M Mon Sep 23 10:55:51 2019

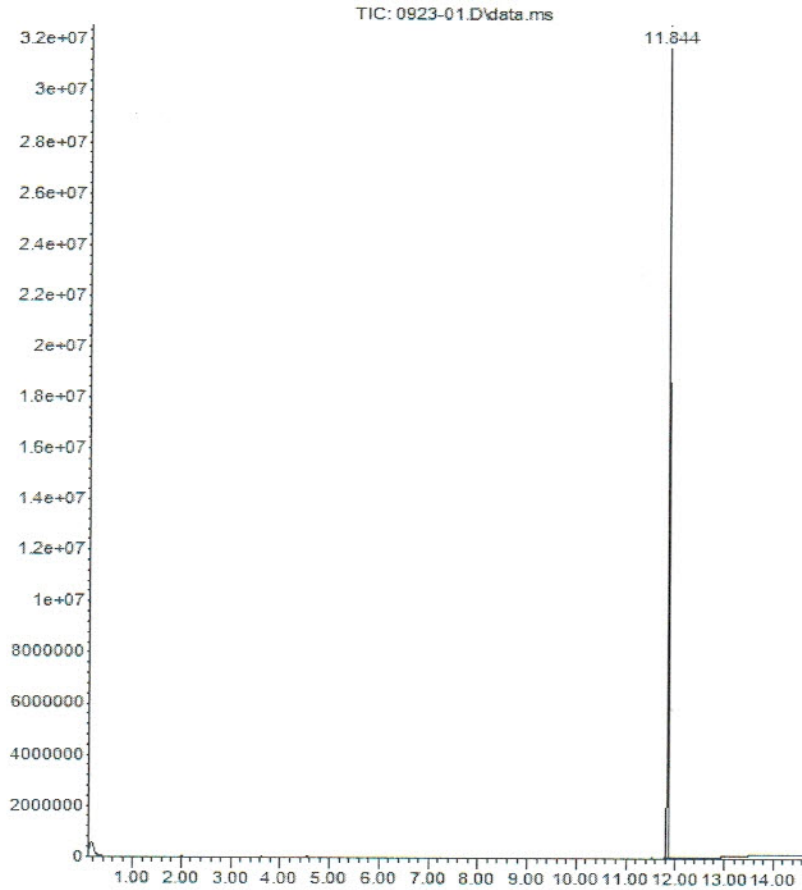
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24

Abundance



Chem. Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



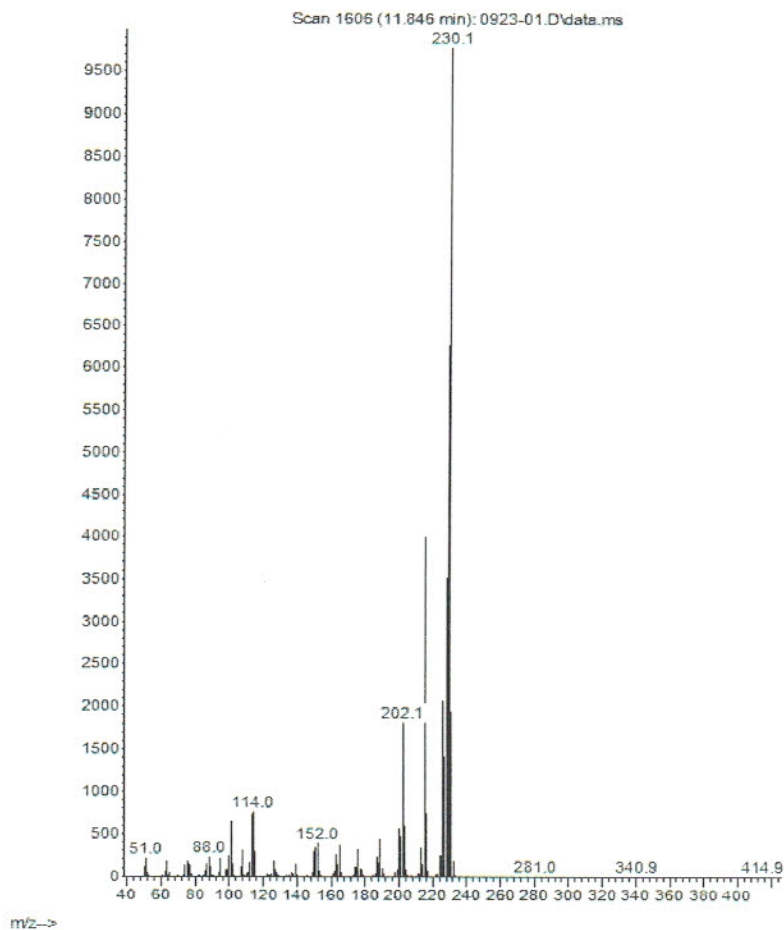
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24

Abundance



Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



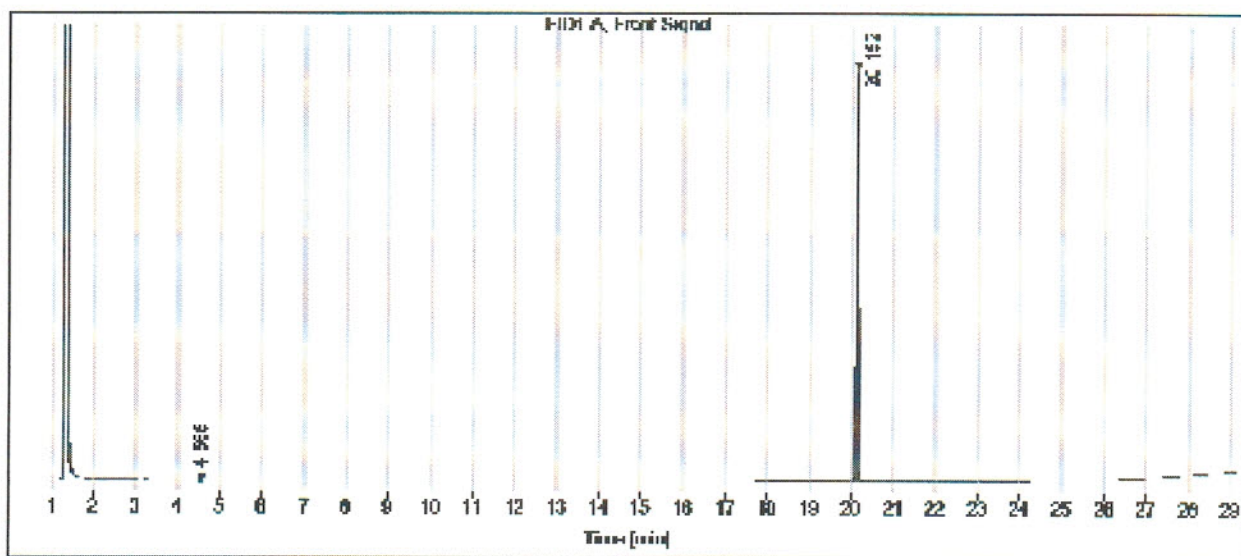
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\
 Sample name: N-12683
 Instrument: GC 2
 Injection date: 9/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Sample type:
 Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
4.565	BB	0.0305	1.2408	0.5122	0.11
20.152	BB	0.0391	1171.9556	439.4599	99.89
		Sum	1173.1963		

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



Energy Laboratories Inc

Standard LOG

Standard ID: DRO220106A
Standard Name 5,000 ug/mL RRO CCV 200 ug/mL Triaconta Type: Secondary
Date Prepared 1/6/2022 BY: Ann Nebel
Date Expires: 4/6/2026
Department dropr Status: New
Vendor:
Lot Number:
Balance ID: Sartorius 4 place balance
Comments: CCV for AK102 and 8015C RRO.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	2.8	mL	10/28

Final Volume: 4 mL

<u>Stock Source</u>		Base Units	Amount Added
DRO210401B	50,000 ug/mL Oil Std For AK103 RRO-I	ug/mL	400 µL
DRO220105A	Triacontane SURR 1000 ug/mL	ug/mL	800 µL

<u>Analtes</u>		CAS	Conc:	ug/mL
A	30/40W Motor Oil			5000
A	Triacontane-d62			200

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210401B
Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DC
Date Prepared: 4/1/2021
Date Expires: 1/31/2028
Department: dropr
Vendor: Restek
Lot Number: A0166827
Balance ID: Sartorius 4 place balance

Type: Primary
BY: Ann Nebel
Status: Open

Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Residual Range Calibration Standard (	13714	1	mL	1/31/

Final Volume: 1 mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: **ug/mL**



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31817 **Lot No.:** A0166827

Description : Residual Range Calibration Standard (RCS)
Residual Range Calib Std (RCS) 50,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil) CAS # 64742-65-0.F (Lot A0126386) Purity ----%	50,056.0 µg/mL	+/- 293.0889 µg/mL	Gravimetric	
			+/- 1,490.7309 µg/mL	Unstressed	
			+/- 1,589.8634 µg/mL	Stressed	

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

ID #: 13714
Opened: _____
Residual Range Calibration Standard (RCS)
Expires: 1/31/2028
Rec'd: 4/1/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

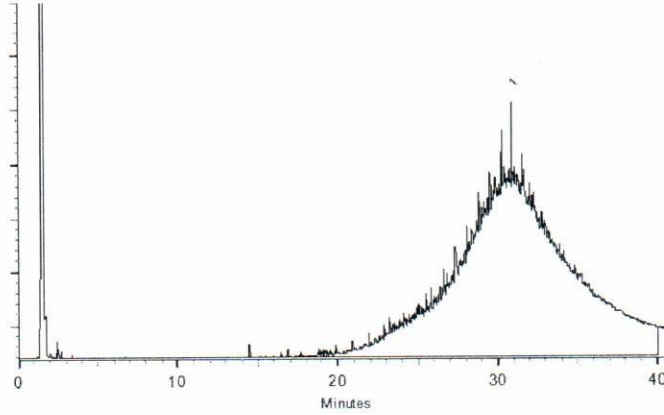
250°C

Det. Temp:

330°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kylie Struble
Kylie Struble - Operations Technician I

Date Mixed: 02-Dec-2020

Balance: 1128353505

Justin Albertson
Justin Albertson - Operations Tech-ARM QC

Date Passed: 07-Dec-2020

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO220105A
Standard Name: Triacotane SURR 1000 ug/mL
Date Prepared: 1/5/2022
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacotane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	5	mL	10/28

Final Volume: 10 mL

Stock Source
DRO211006A Triacotane SURR 2000 ug/mL

Base Units
ug/mL

Amount Added
5 mL

Analtes
A Triacotane-d62

CAS

Conc: ug/mL
1000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: **ug/mL**
2000

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

Product Number: 451789
 Batch Number: MBBC4347
 Brand: ALDRICH
 CAS Number: 93952-07-9
 MDL Number: MFCD00209794
 Formula: C30D62
 Formula Weight: 485.20 g/mol
 Quality Release Date: 27 APR 2018



ID #: 13736

Opened: _____

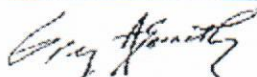
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211012B
Standard Name #2 Diesel in Acetone 150,000 ug/mL Type: Secondary
Date Prepared 10/12/2021 BY: Ann Nebel
Date Expires: 11/5/2023
Department dropr Status: New
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: #2 Diesel in Acetone 150,000 ug/mL.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone EA662	14050	25	mL	1/7/2

Final Volume: 25 mL

Stock Source
DRO181105A #2 Diesel (NEAT)

Base Units
ug/mL

Amount Added
3.7507 g

Analtes
A #2 Diesel

CAS
68476-34-6

Conc: ug/mL
150000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO181105A
Standard Name #2 Diesel (NEAT) Type: Neat
Date Prepared 11/5/2018 BY: Ann Nebel
Date Expires: 11/5/2023
Department dropr Status: New
Vendor: conoco
Lot Number:
Balance ID:
Comments: -18 Cloud peak. (Conoco Gas Station 1240 S. 27th Billings, MT) 2nd Source

<u>Stock Source</u>	<u>Base Units</u>	<u>Final Volume:</u>	<u>Amount Added</u>
<u>Analvtes</u>	<u>CAS</u>	250 mL	
A #2 Diesel	68476-34-6	Conc:	ug/mL 1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210902A
 Standard Name: 50,000 ug/mL Oil Std for RRO-In DCM
 Date Prepared: 9/2/2021
 Date Expires: 9/1/2026
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID: BAL-DRO
 Comments: .625 g of 30W and 40 W each LCS for Oil range

Type: Secondary
 BY: Jillian L Bostwick
 Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EB867	14196	25	mL	6/18/

Final Volume: 25 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO210901B 40W Motor Oil-Valvoline	ug/mL	0.6261 g
DRO210901A 30W Motor Oil-Valvoline	ug/mL	0.6254 g

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A 30W Motor Oil			10000
A 30W-Motor oil			0
A 40W Motor Oil			10000
A 40W-Motor oil			0

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210901B
Standard Name: 40W Motor Oil-Valvoline
Date Prepared: 9/1/2021
Date Expires: 9/1/2026
Department: dropr
Vendor:
Lot Number:
Balance ID:

Type: Primary
BY: Jillian L Bostwick
Status: New

Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 40 Motor Oil	14231		mL	9/1/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 40W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210901A
Standard Name: 30W Motor Oil-Valvoline
Date Prepared: 9/1/2021
Date Expires: 9/1/2026
Department: dropr
Vendor:
Lot Number:
Balance ID:
Type: Primary
BY: Jillian L Bostwick
Status: New
Comments: Used to make 2nd Source Standard for AK103 method.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 30 Motor Oil	14232		mL	9/1/26

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 30W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211220D
Standard Name: Triacotane SURR 1000 ug/mL
Date Prepared: 12/20/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacotane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC757	14596	5	mL	10/20

Final Volume: 10 mL

Stock Source
DRO211006A Triacotane SURR 2000 ug/mL

Base Units
ug/mL

Amount Added
5 mL

Analtes
A Triacotane-d62

CAS

Conc: ug/mL
1000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: **ug/mL**
2000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Date Prepared: 4/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A Triacontane-d62

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

Product Number: 451789
 Batch Number: MBBC4347
 Brand: ALDRICH
 CAS Number: 93952-07-9
 MDL Number: MFCD00209794
 Formula: C30D62
 Formula Weight: 485.20 g/mol
 Quality Release Date: 27 APR 2018



ID #: 13736

Opened: _____

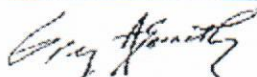
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO220105A
Standard Name: Triacontane SURR 1000 ug/mL
Date Prepared: 1/5/2022
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	5	mL	10/28

Final Volume: 10 mL

Stock Source

DRO211006A Triacontane SURR 2000 ug/mL

Base Units

ug/mL

Amount Added

5 mL

Analvtes

A Triacontane-d62

CAS

Conc: **ug/mL**

1000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: **ug/mL**
2000

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

Product Number: 451789
 Batch Number: MBBC4347
 Brand: ALDRICH
 CAS Number: 93952-07-9
 MDL Number: MFCD00209794
 Formula: C30D62
 Formula Weight: 485.20 g/mol
 Quality Release Date: 27 APR 2018



ID #: 13736

Opened: _____

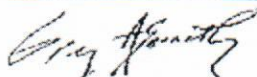
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

Energy Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211213A
Standard Name: OTP only SURR 2000 ug/mL
Date Prepared: 12/13/2021
Date Expires: 9/30/2024
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: OTP SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	100	mL	7/22/

Final Volume: 100 mL

Stock Source

DRO200430B O-Terphenyl

Base Units

ug/mL

Amount Added

0.2015 g

Analtes

A 1-Chlorooctadecane

CAS

3386-33-2

Conc:

ug/mL

2000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO200430B
Standard Name: O-Terphenyl
Date Prepared: 4/30/2020
Date Expires: 9/30/2024
Department: dropr
Vendor: Chemservice
Lot Number: 9972100
Balance ID:
Comments: ID#: 6271

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	12650	500	mg	9/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

CATALOG NUMBER N-12693-500MG
LOT NUMBER 9972100
DATE CERTIFIED 09/23/19
EXPIRATION DATE 09/30/24
CAS NUMBER 84-15-1
MOLECULAR FORMULA C₁₈H₁₄
MOLECULAR WEIGHT 230.32
STORAGE Store in a cool dry place.
HANDLING See Safety Data Sheet
INTENDED USE For laboratory use only.

Analytical Test	Value
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
GC/MS SPECTRA ID	MATCHES NIST DATABASE
MELTING POINT (°C)	57.1
% PURITY (GC/FID)	99.5

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

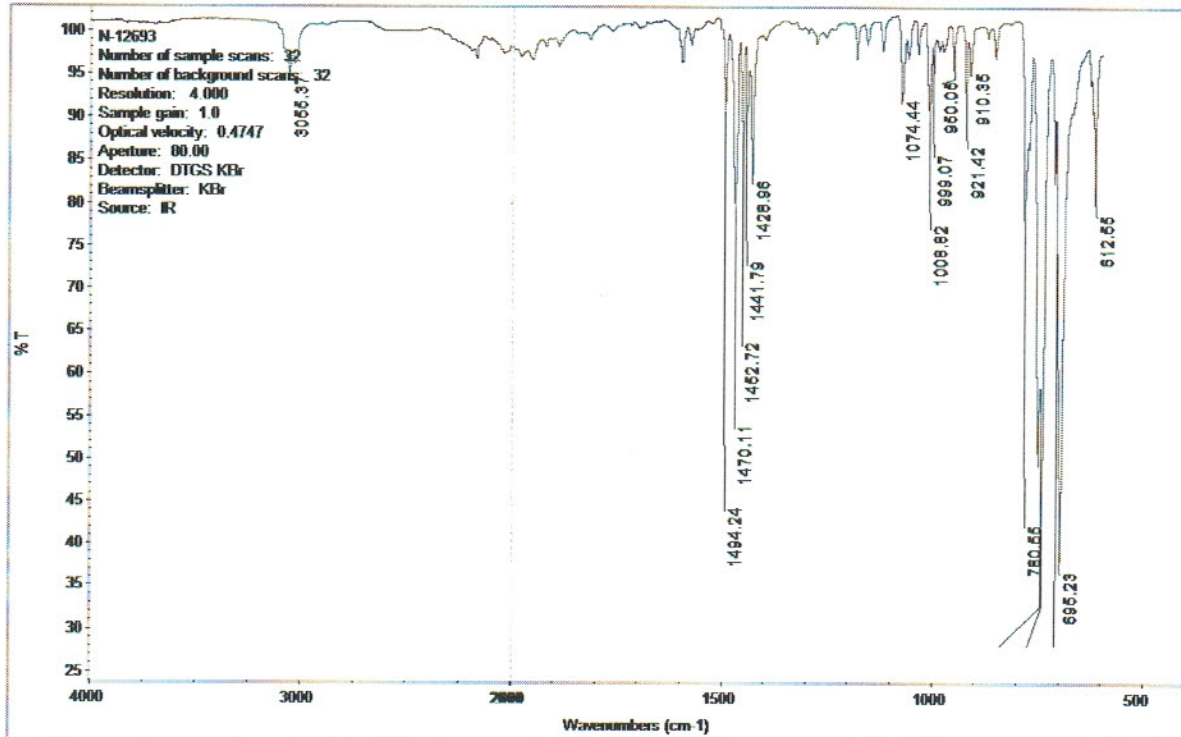
Rec'd: 4/30/2020

Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24



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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24
Chem Service Inc Area Percent Report

Data File: D:\msdchem\2019 DATA\0919\0923-01.D
Acq On : 23 Sep 2019 10:40
Operator :
Sample : n-12693
Misc :
ALS Vial : 95

Integration Parameters: autoint1.e
Integrator: ChemStation

DataAcq Meth: SCREEN.M
Method : D:\msdchem\2019 DATA\0919\0903-09.D\ERIN.M

Signal : TIC: 0923-01.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	11.844	1597	1606	1613	BB	32038221	432253484	100.00%	100.000%

Sum of corrected areas: 432253484

ERIN.M Mon Sep 23 10:55:51 2019

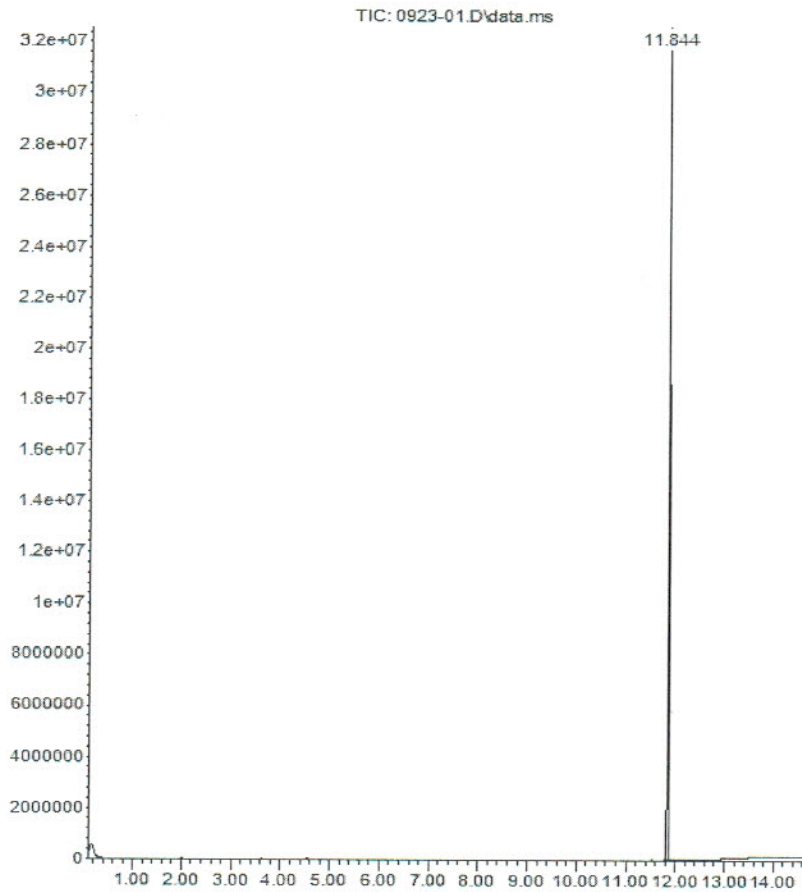
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CERTIFICATE OF ANALYSIS

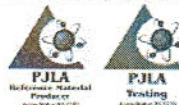
Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24

Abundance



Chem. Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



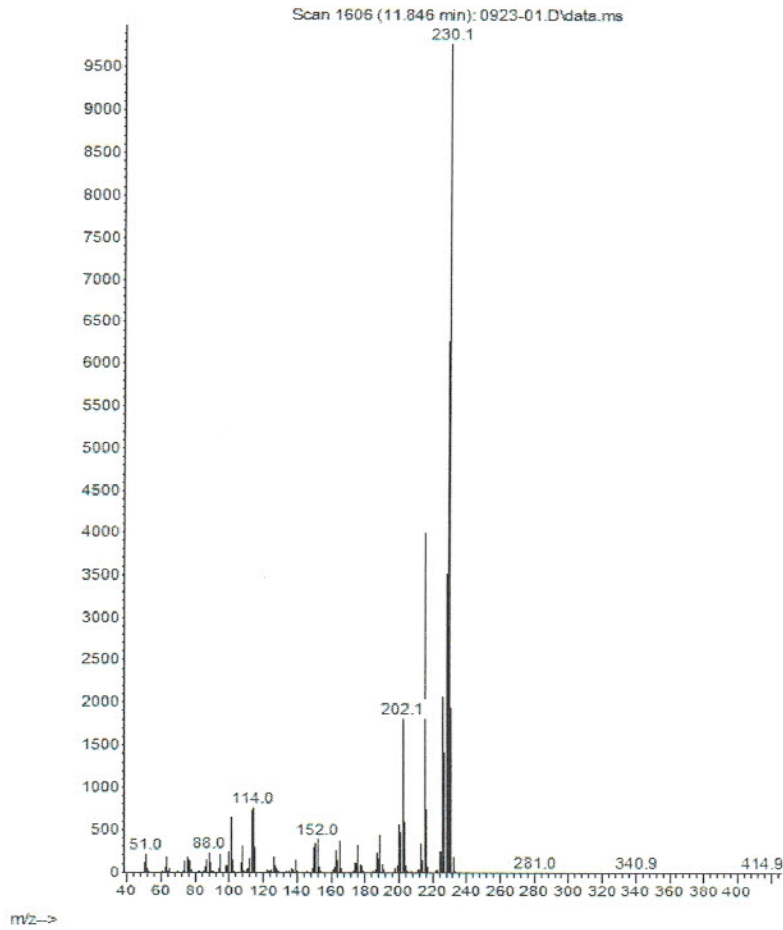
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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
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Abundance



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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

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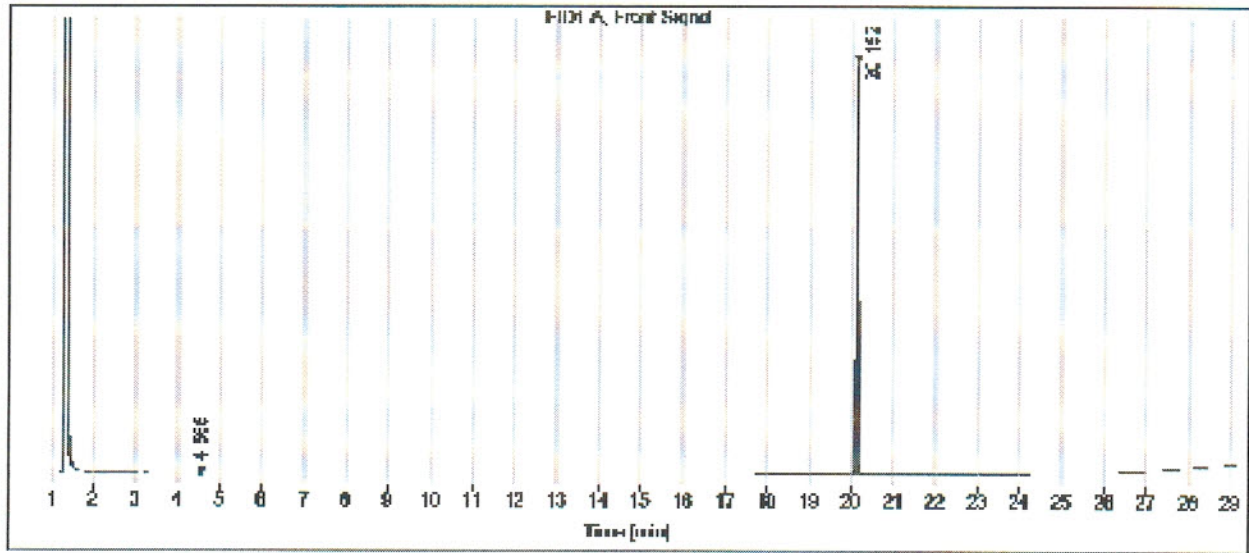
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Gas

Data file: C:\CHEM3\
 Sample name: N-12693
 Instrument: GC 2
 Injection date: 9/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Sample type:
 Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
4.565	BB	0.0305	1.2408	0.5122	0.11
20.152	BB	0.0391	1171.9556	439.4599	99.89
		Sum	1173.1963		

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