

# Energy Laboratories Inc

# ANALYTICAL RUN Summary

03-Nov-21

Run ID GCFID-HP5-B\_211102A

<b>Run Start Date:</b> 11/2/2021
<b>Analyst:</b> Ann Nebel
<b>Ical:</b>
<b>Column ID:</b>
<b>Comments:</b> 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 DRO211101A + 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:

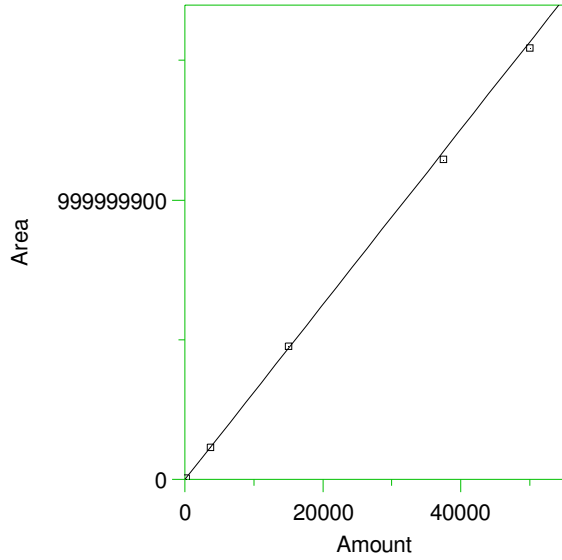
External standard calibration

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.

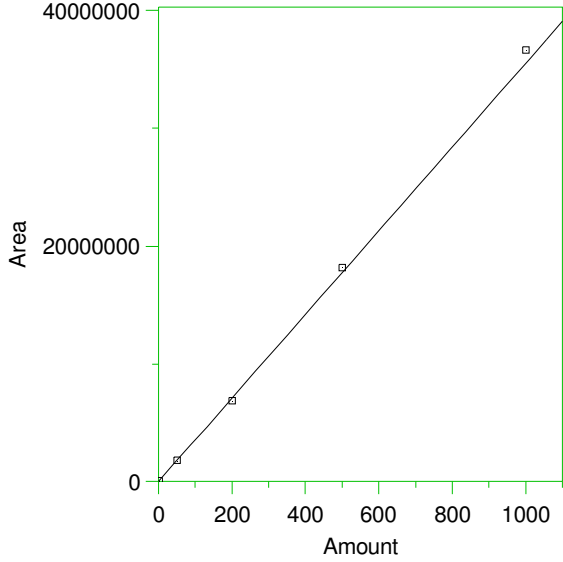
1 DRO Range Start



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

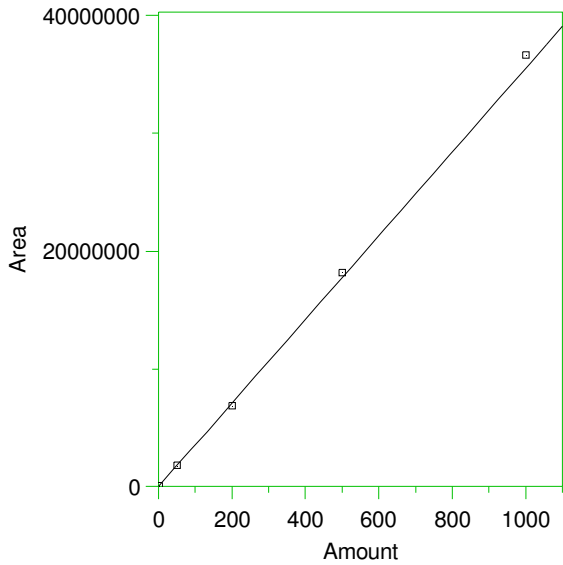
2 \*o-Terphenyl



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



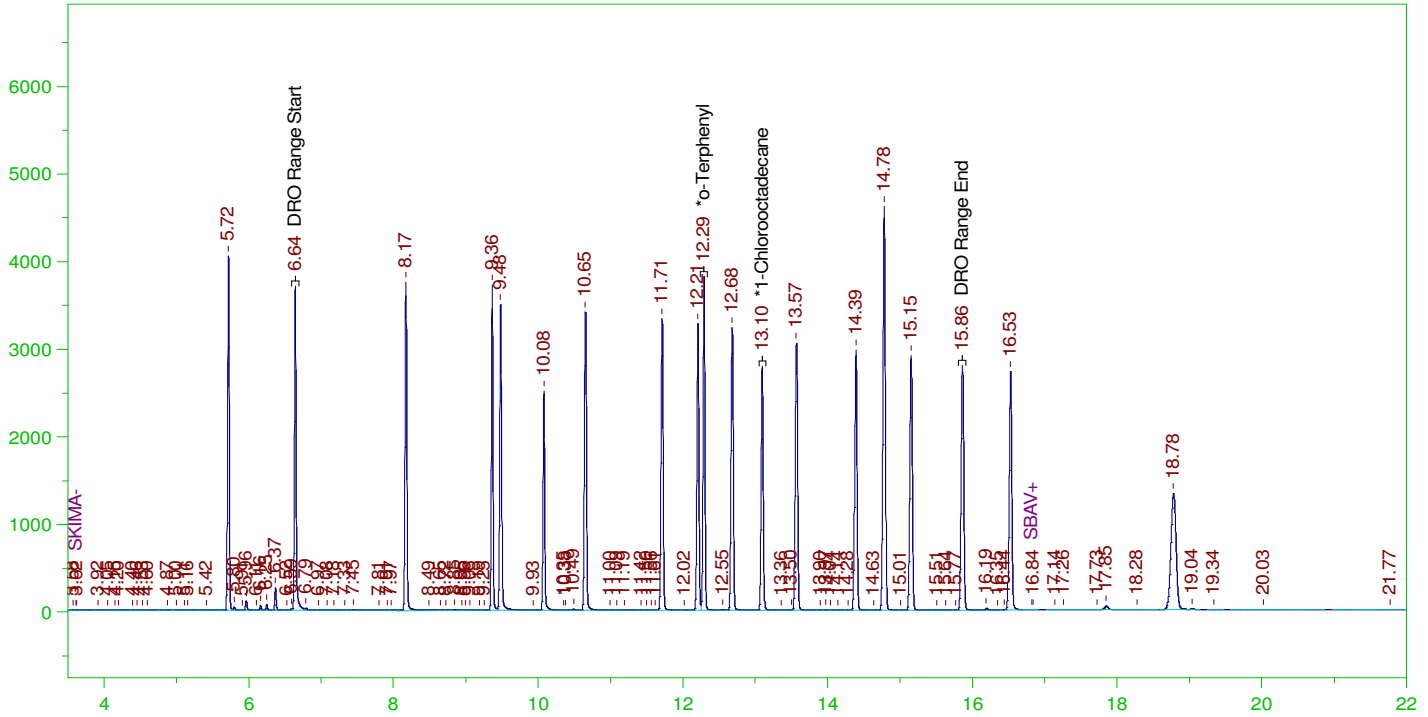
Expected retention time: 13.1 minutes  
 Search window: 0.05 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 35509.21 X + 0  
 Average CF fit with equal weighting, forced 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\_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

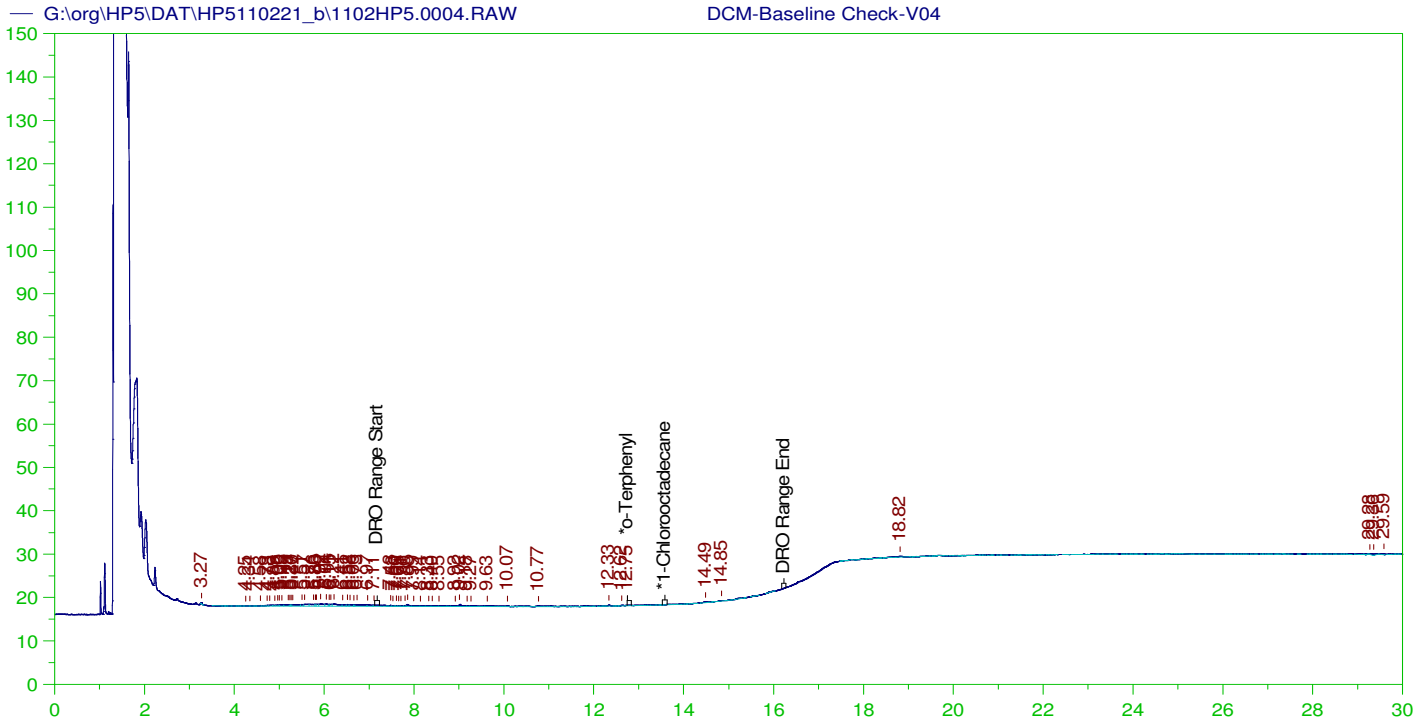
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.292	200.	201.539	100.77
*1-Chlorooctadecane	13.095	200.	163.573	81.79

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

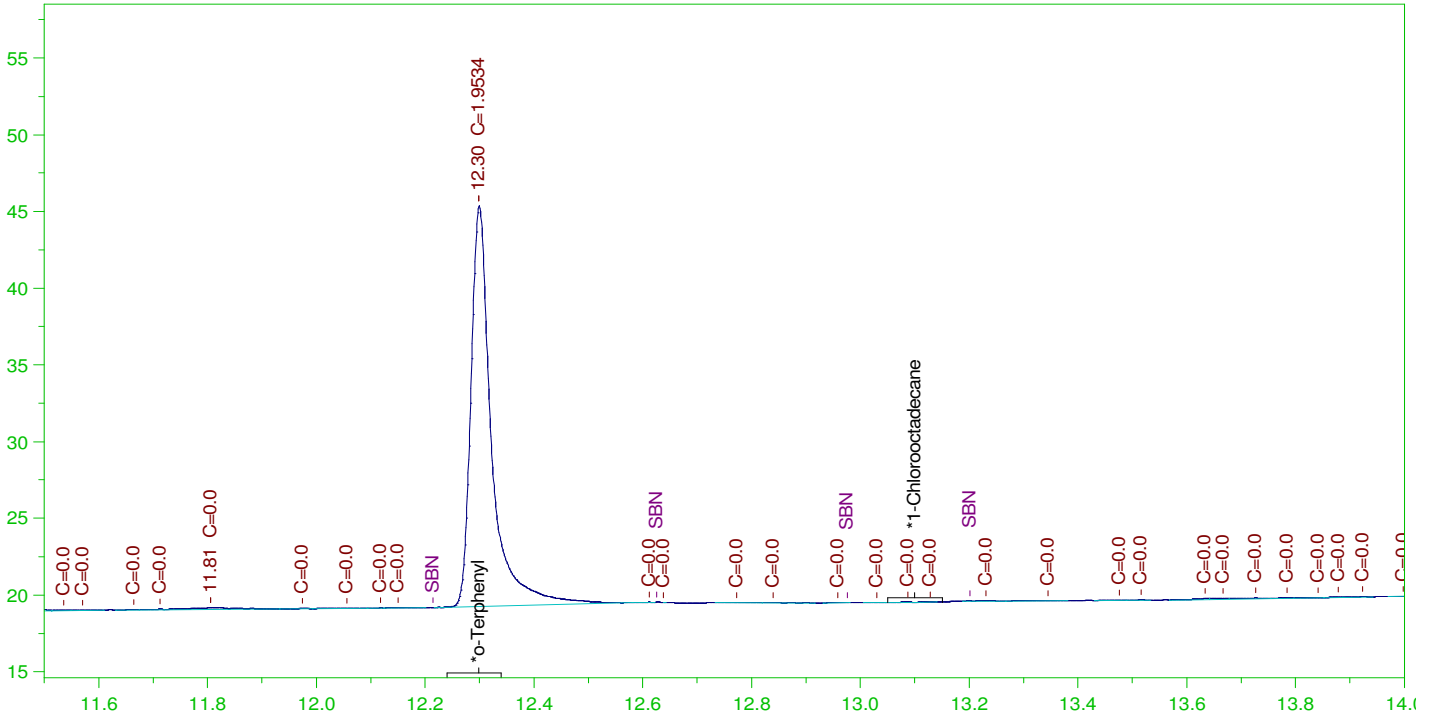
Mean RF for TEH: 29457.33  
 Rt range for Diesel Range Organics: 7.125 to 16.28

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

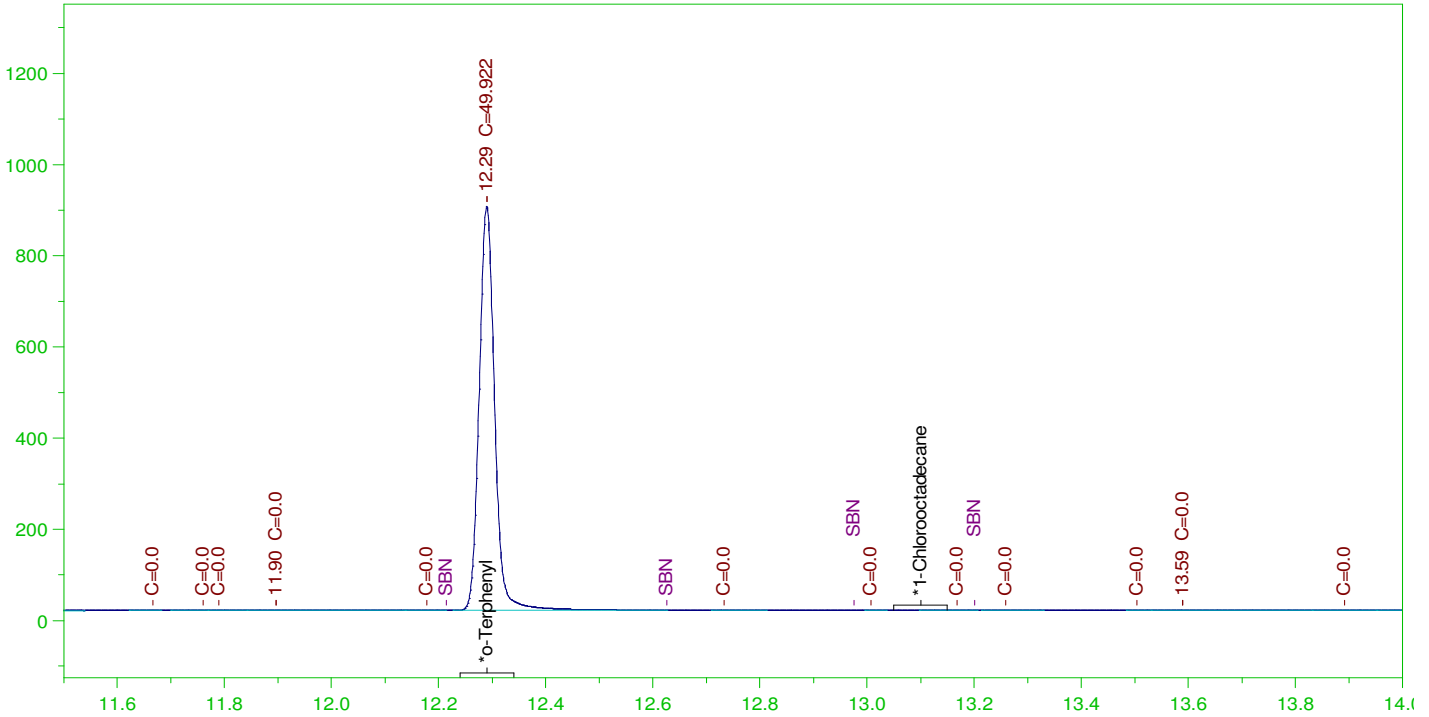
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221\_b\1102HP5.0005.RAW

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

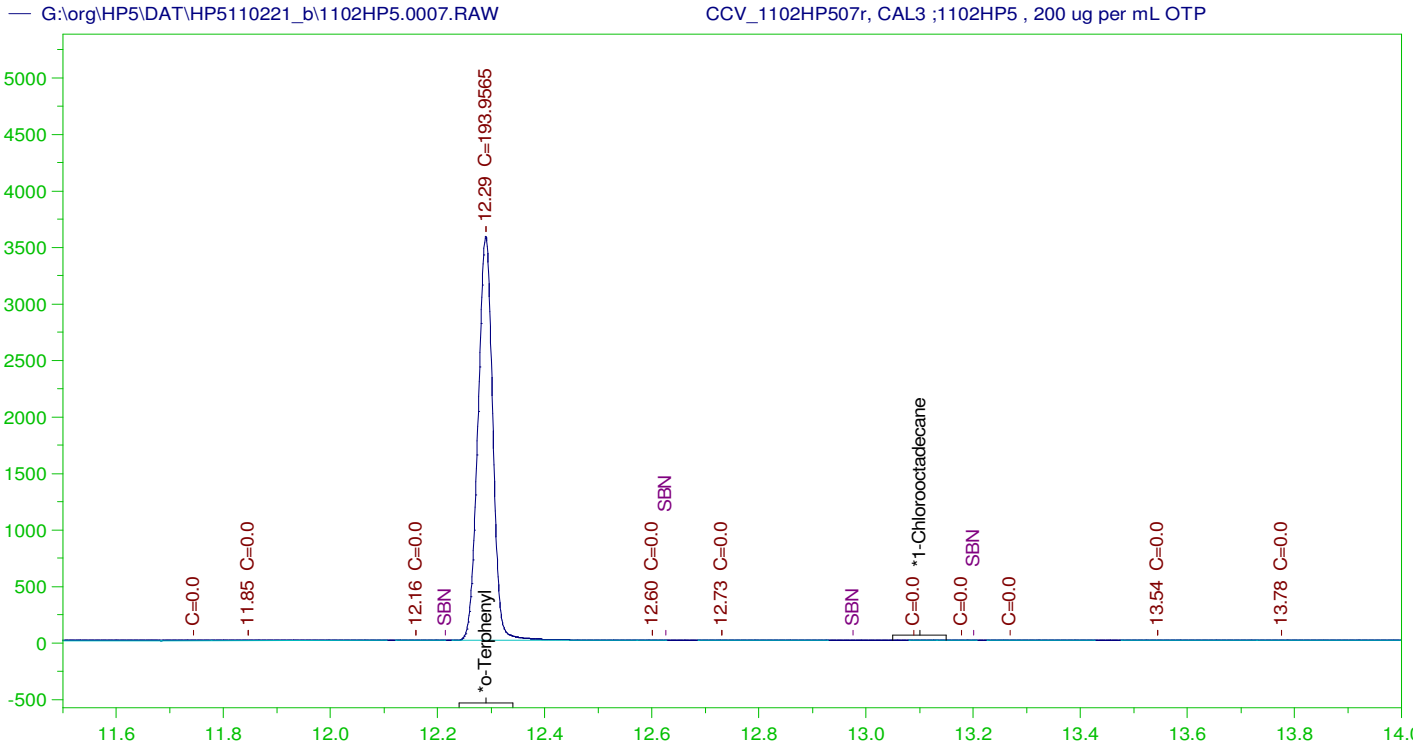
Rt range for Diesel Range Organics: 6.59 to 15.91

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



**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

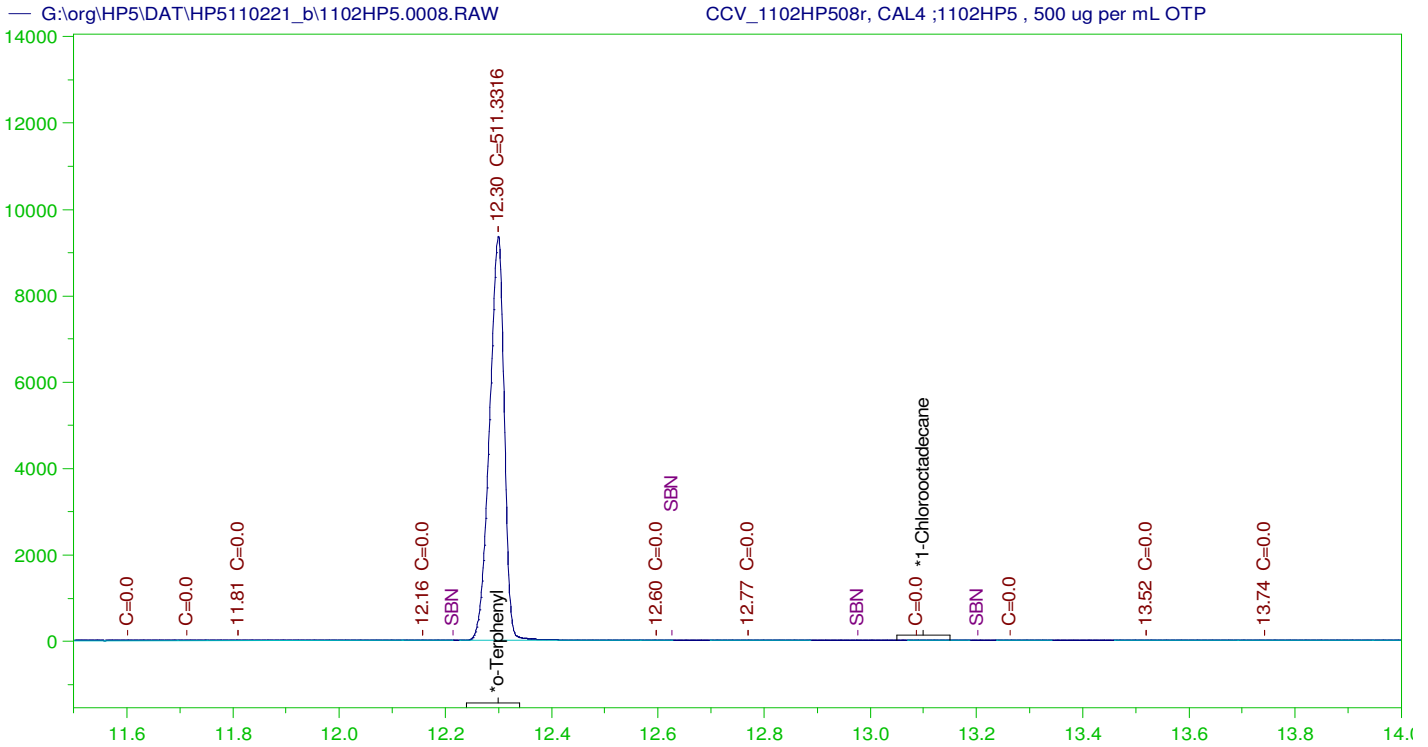
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.29	200.	193.957	96.98	-
*1-Chlorooctadecane	15.779	200.	.	.	-

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

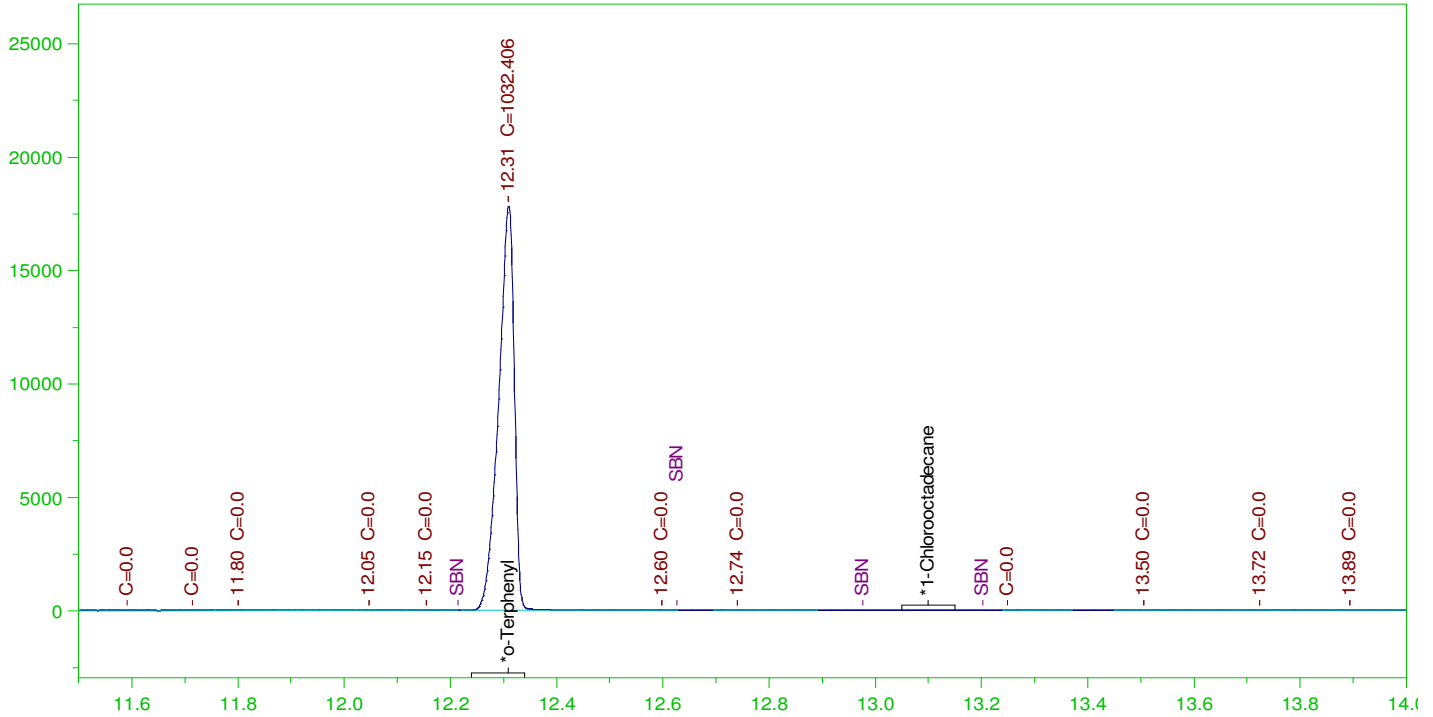
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221\_b\1102HP5.0008.RAW

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

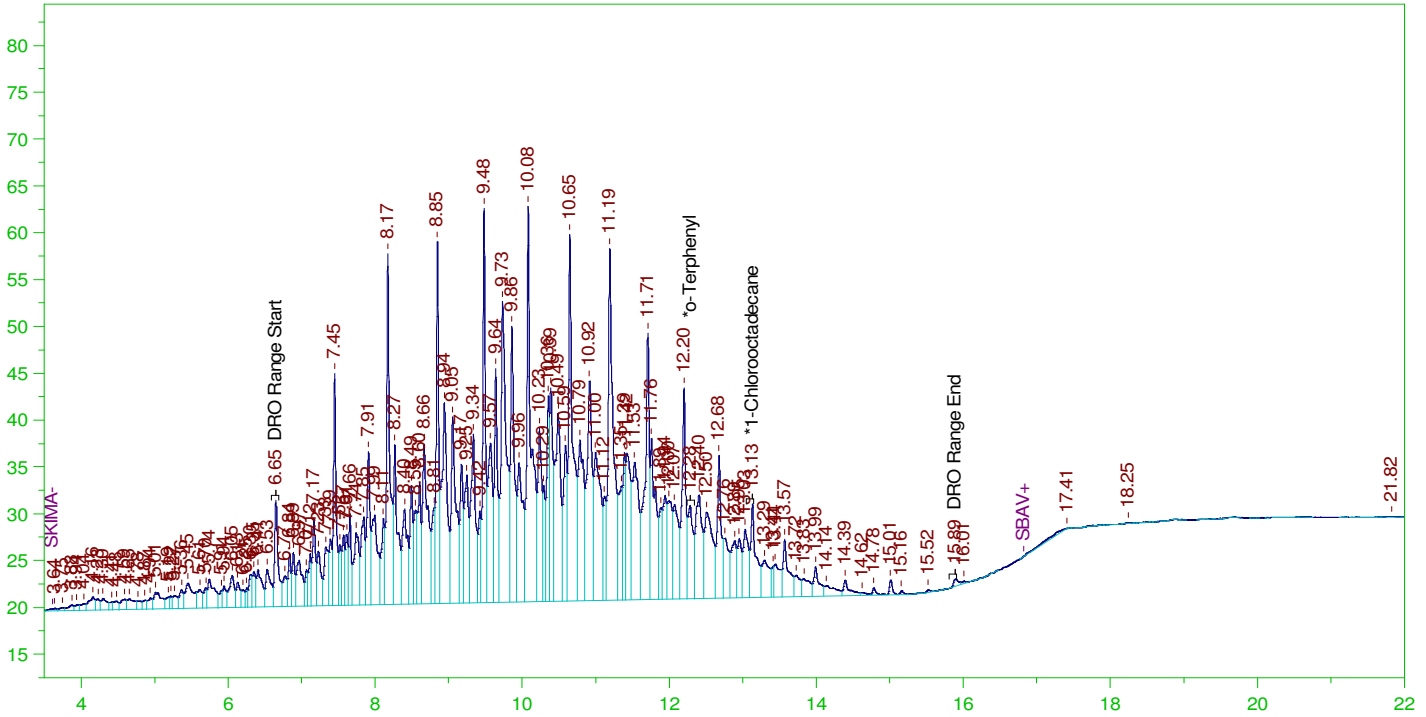
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221\_b\1102HP5.0009.RAW

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

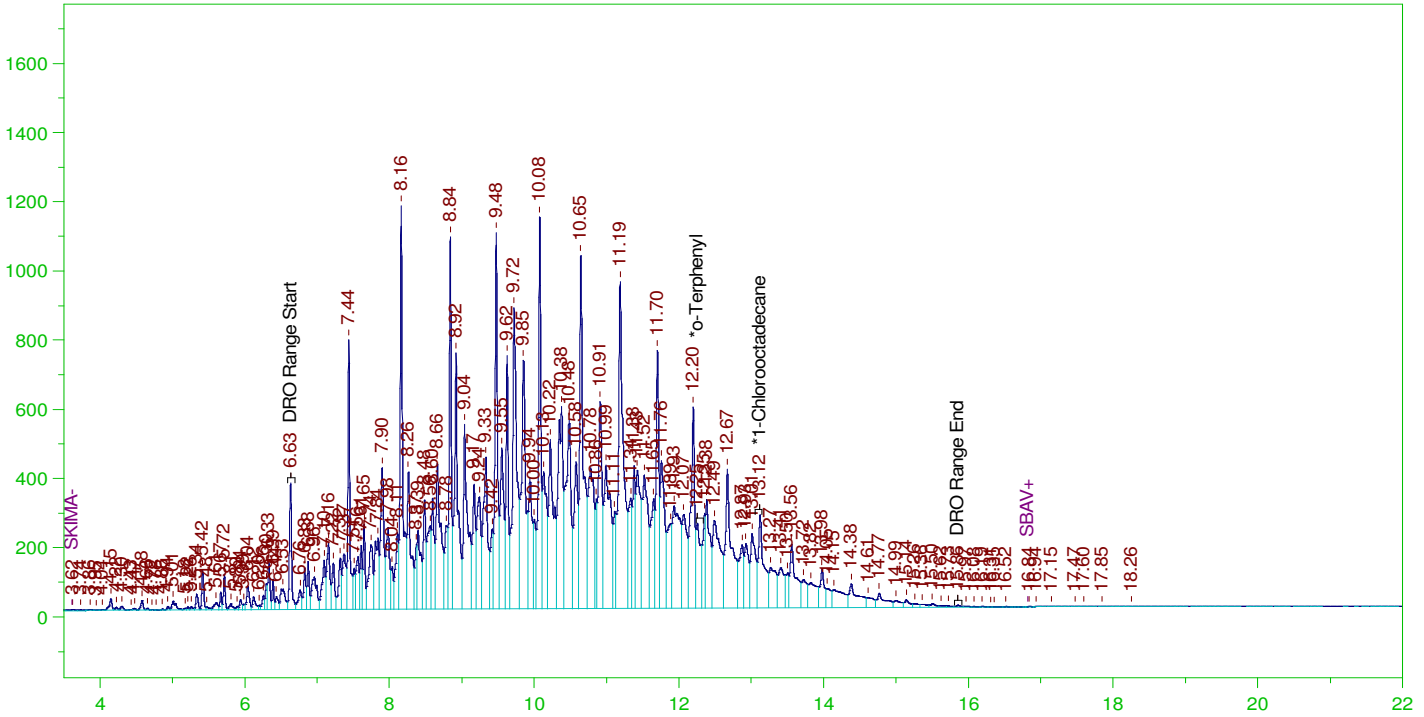
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	155.19	1.03	85-115

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

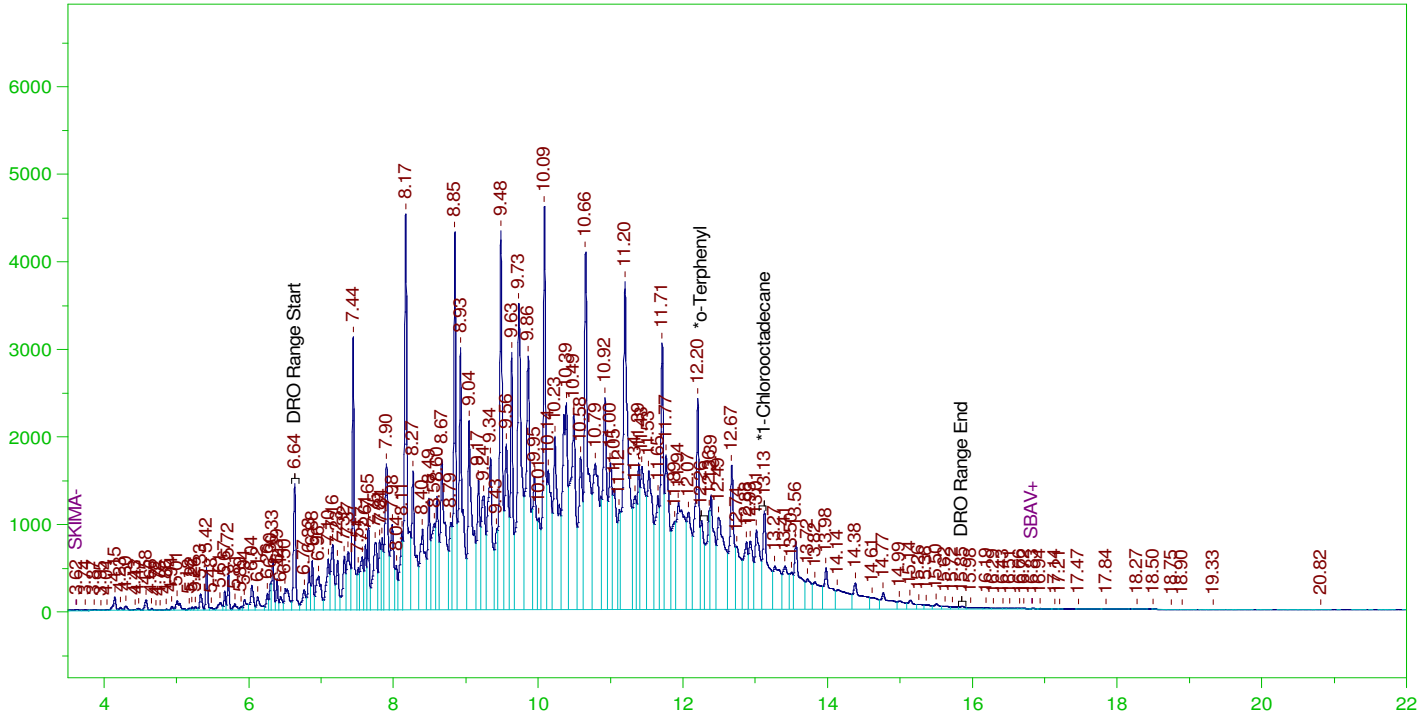
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221\_b\1102HP5.0011.RAW

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

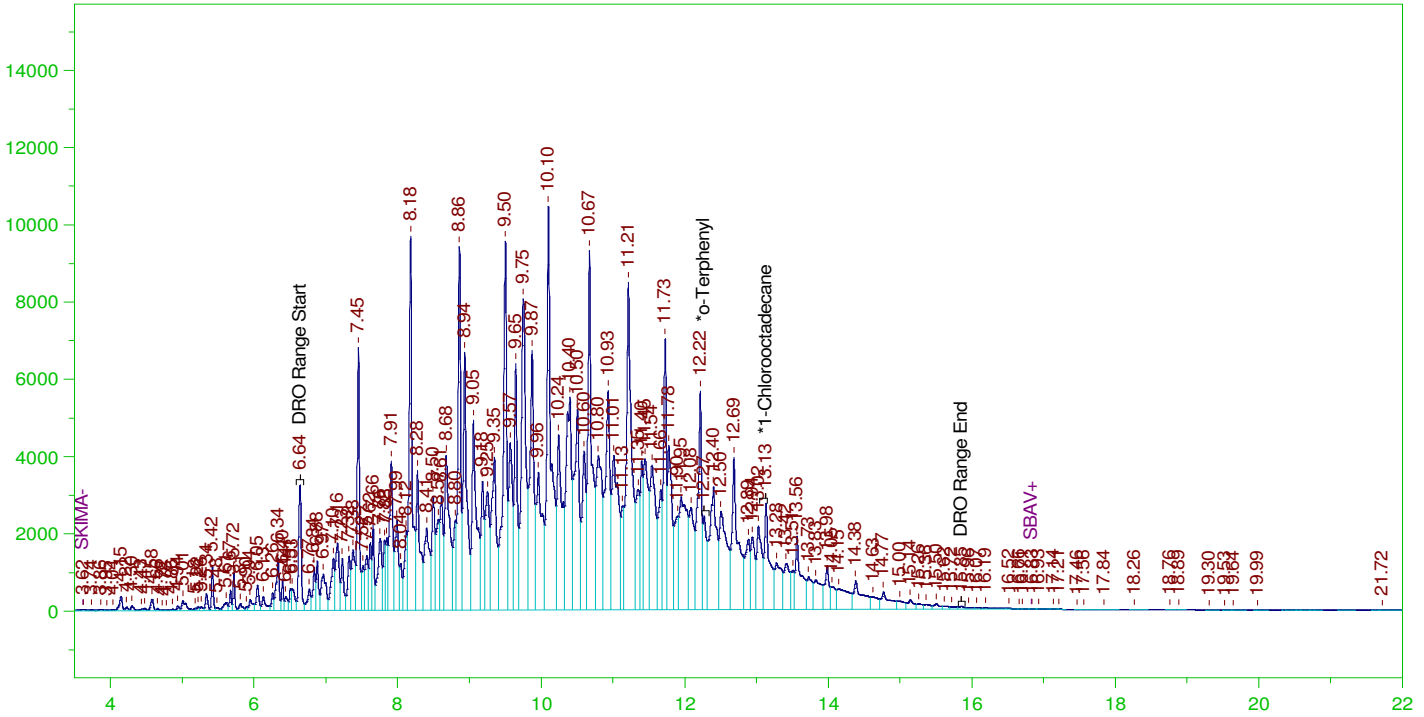
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221\_b\1102HP5.0012.RAW

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

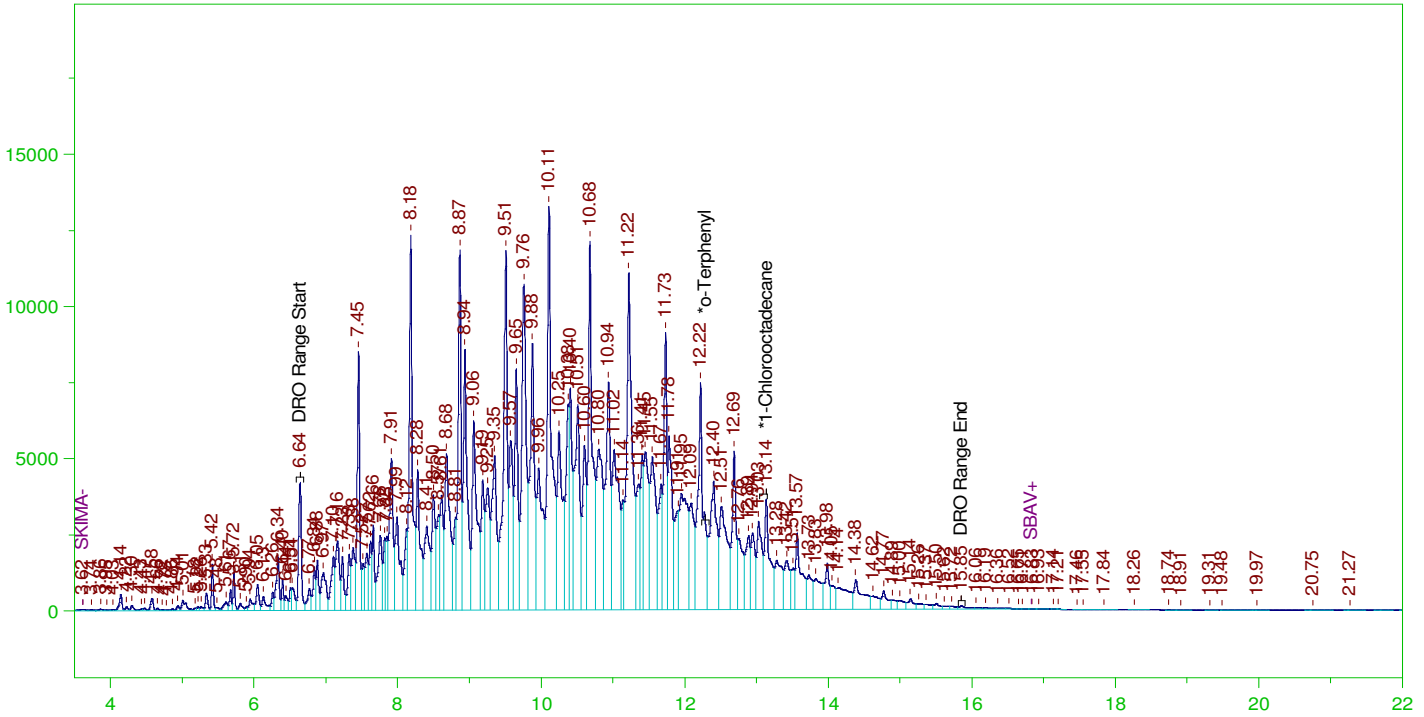
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221\_b\1102HP5.0013.RAW

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

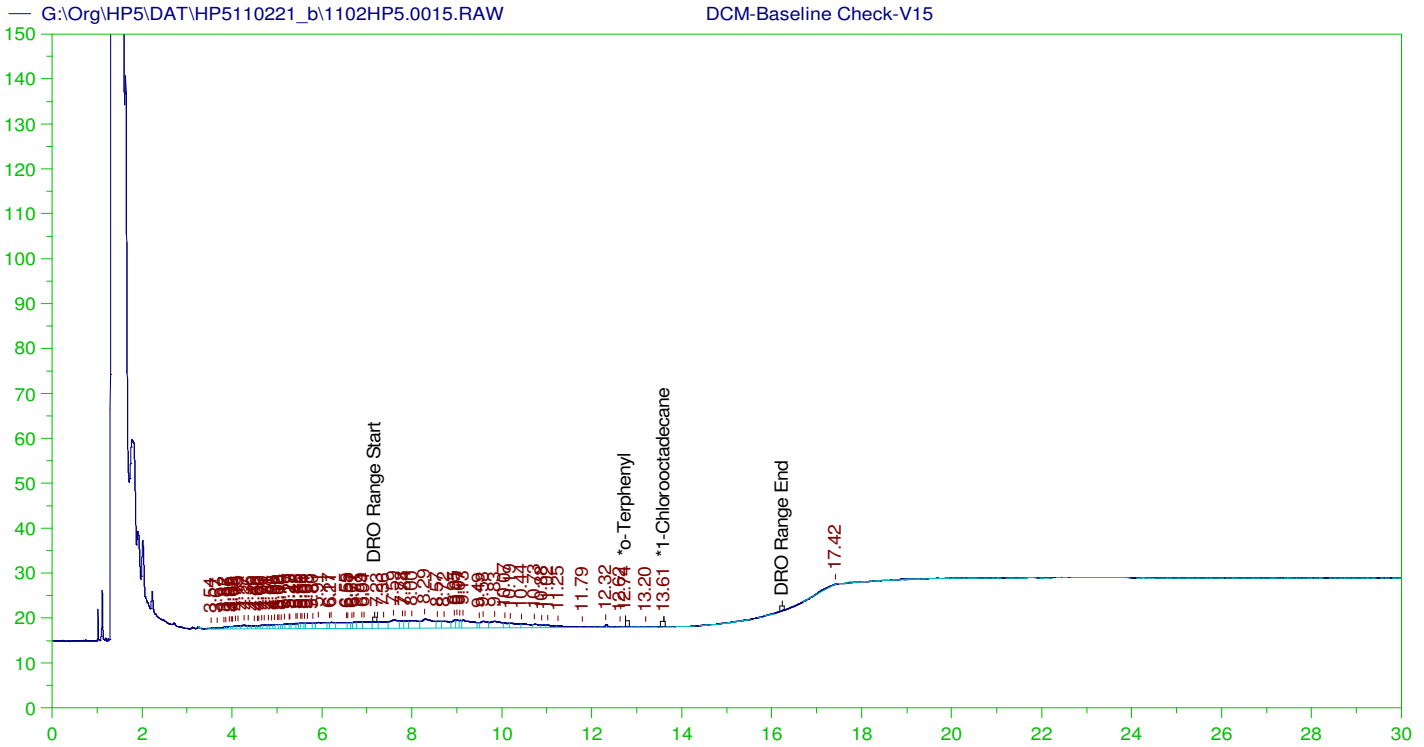
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.921	200.	.	-
*1-Chlorooctadecane	13.135	200.	512.63	256.31

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



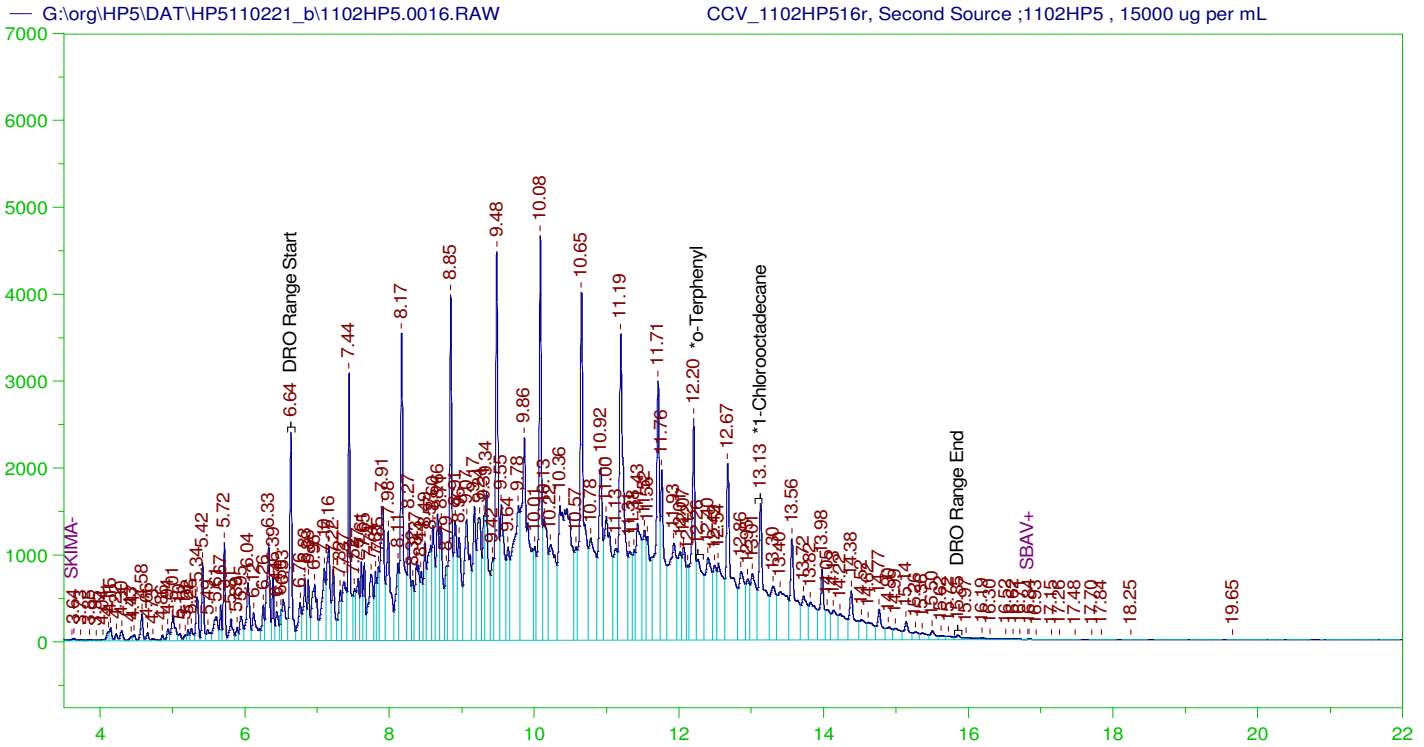
**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

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

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manul Integrations
		CCV_1102HP508r, DRO ;1102HP5 , DRO211025A	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	No integrations
		DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0	No integrations
		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	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		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	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		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	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		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	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		CCV_1102HP509r, CAL5 ;1102HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211011A + 750 DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		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	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.83
		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	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		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	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		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	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		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	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		DCM-Baseline Check-V15	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0	No integrations
		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	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5

*Ann Nebel*

Digitally signed by  
Ann Nebel  
Date: 2021.11.09 12:32:44 -07:00

# Energy Laboratories Inc

# ANALYTICAL RUN Summary

31-Mar-21

Run ID GCFID-HP5-B\_210218B

<b>Run Start Date:</b> 2/18/2021
<b>Analyst:</b> Ann Nebel
<b>Ical:</b>
<b>Column ID:</b>
<b>Comments:</b> 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					
<b>Analyte</b>		<b>T Units</b>	<b>RAW</b>	<b>Final</b>	<b>Text</b>	<b>Spike</b>	<b>SPKref</b>	<b>RPDref</b>	<b>MDL</b>	<b>PQL</b>	<b>UQL</b>	<b>%REC</b>	<b>LOW</b>	<b>HIGH</b>	<b>%RPD Q</b>
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					
<b>Analyte</b>		<b>T Units</b>	<b>RAW</b>	<b>Final</b>	<b>Text</b>	<b>Spike</b>	<b>SPKref</b>	<b>RPDref</b>	<b>MDL</b>	<b>PQL</b>	<b>UQL</b>	<b>%REC</b>	<b>LOW</b>	<b>HIGH</b>	<b>%RPD Q</b>
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					
<b>Analyte</b>		<b>T Units</b>	<b>RAW</b>	<b>Final</b>	<b>Text</b>	<b>Spike</b>	<b>SPKref</b>	<b>RPDref</b>	<b>MDL</b>	<b>PQL</b>	<b>UQL</b>	<b>%REC</b>	<b>LOW</b>	<b>HIGH</b>	<b>%RPD Q</b>
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 , 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

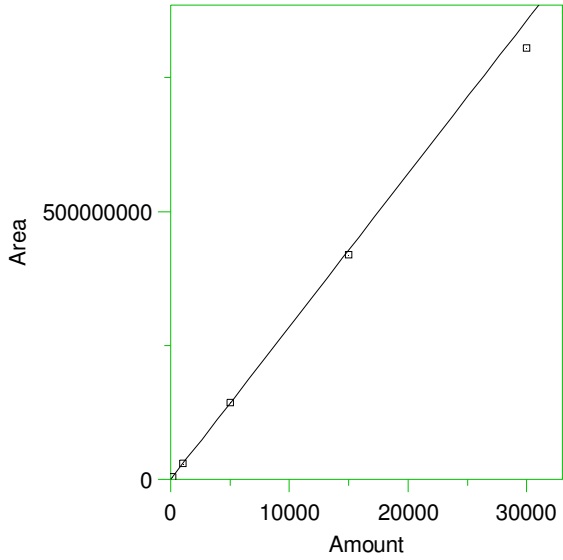
No default component

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

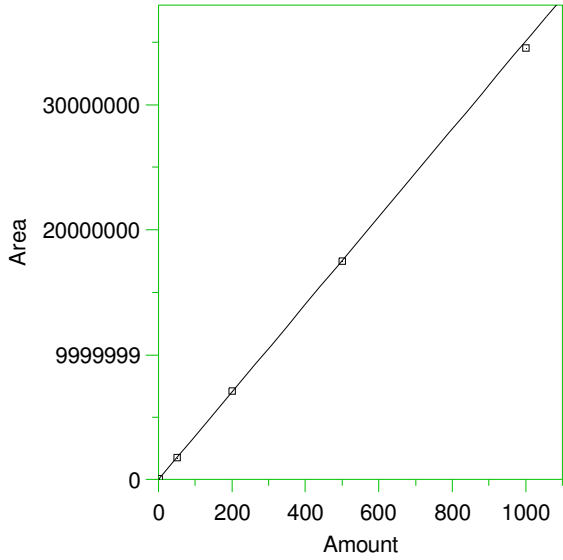
Single peak quantification by area

$Y = 28542.41 X + 0$

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

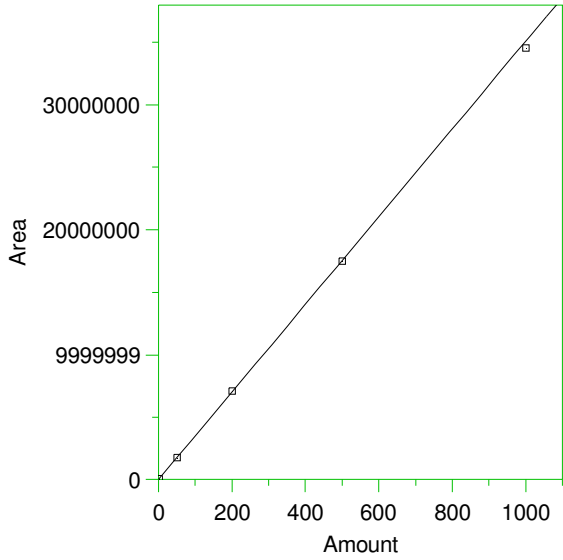
2 \*o-Terphenyl



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%

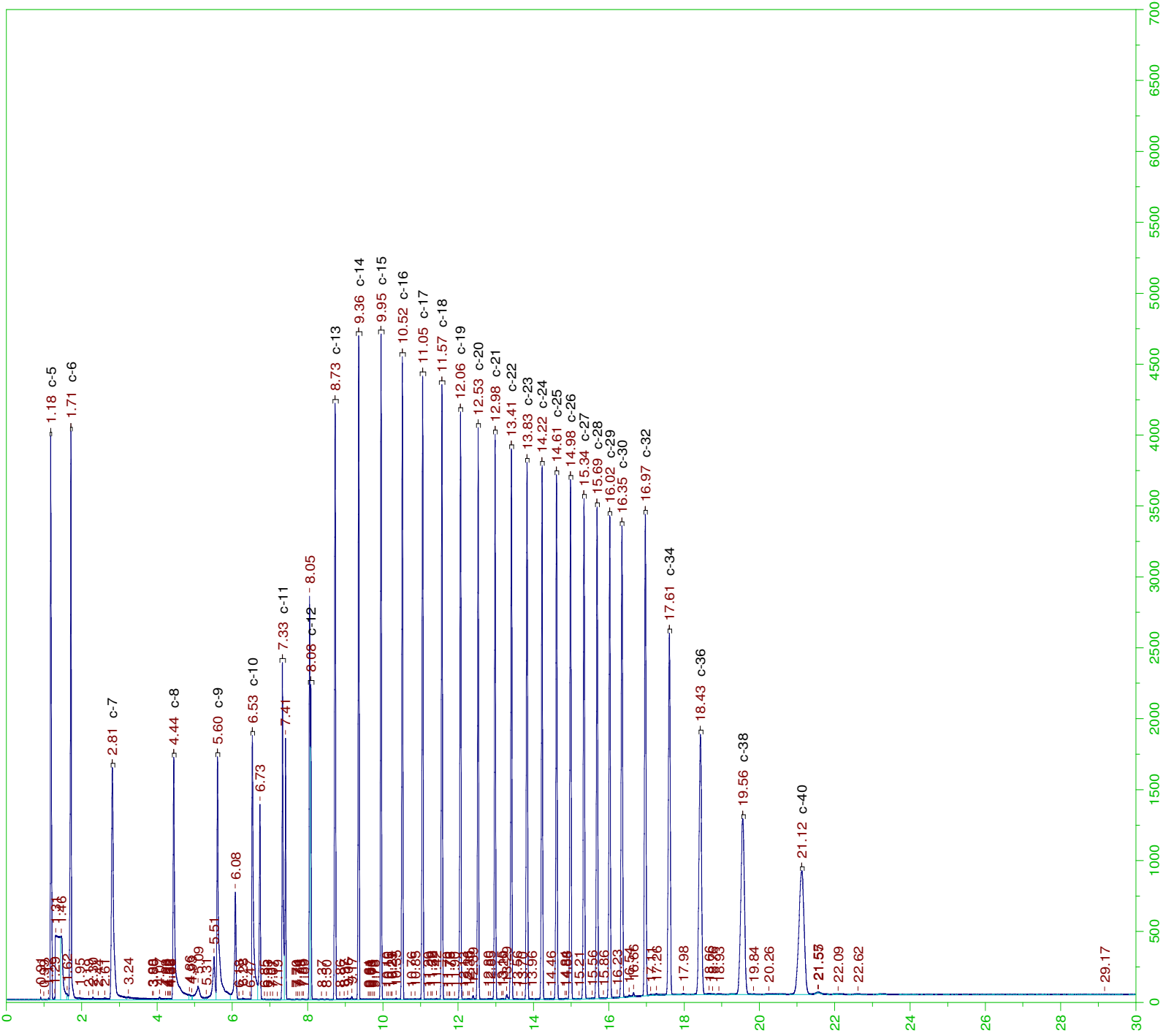
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	70648.41	35324.2	0.721	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0011.BND	1/11/2021 9:44:43 AM
2	50	1746406	34928.12	-0.408	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0012.BND	1/11/2021 9:44:50 AM
3	200	7110604	35553.02	1.374	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0013.BND	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

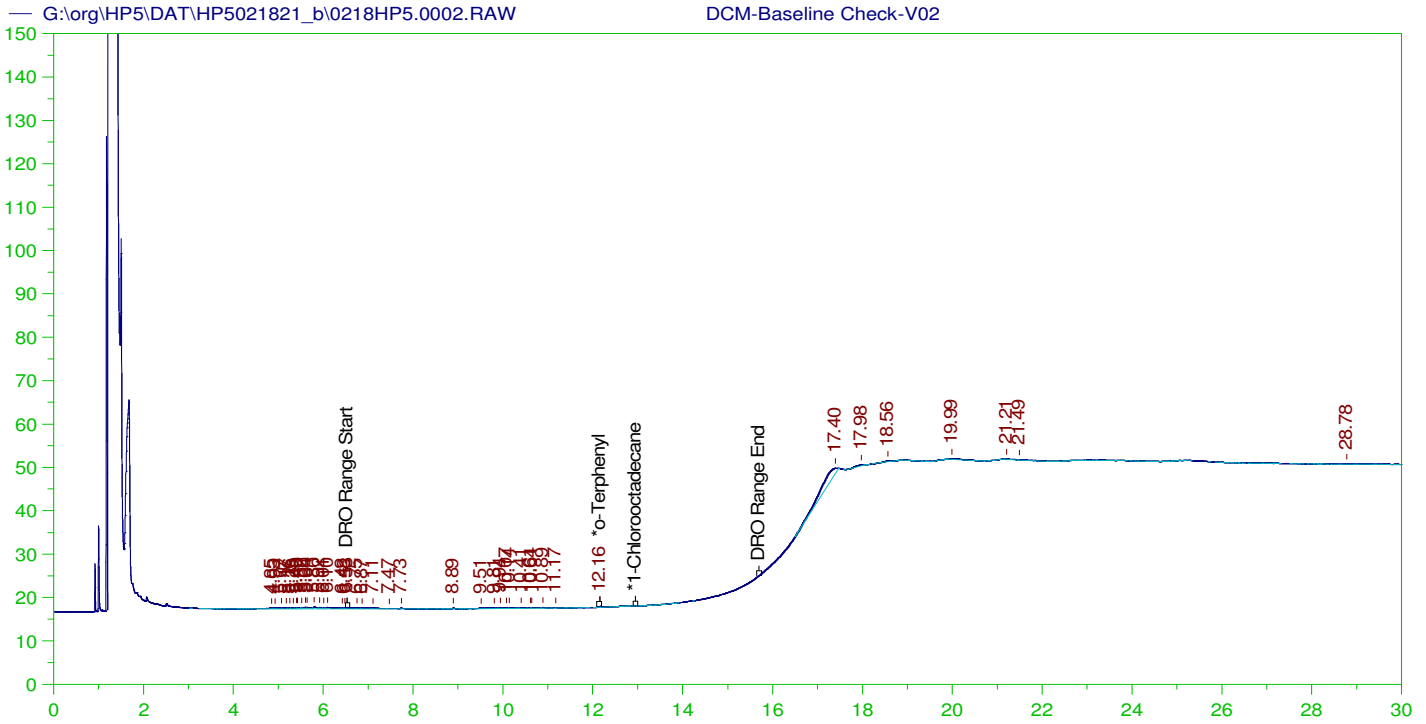
3 \*1-Chlorooctadecane



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

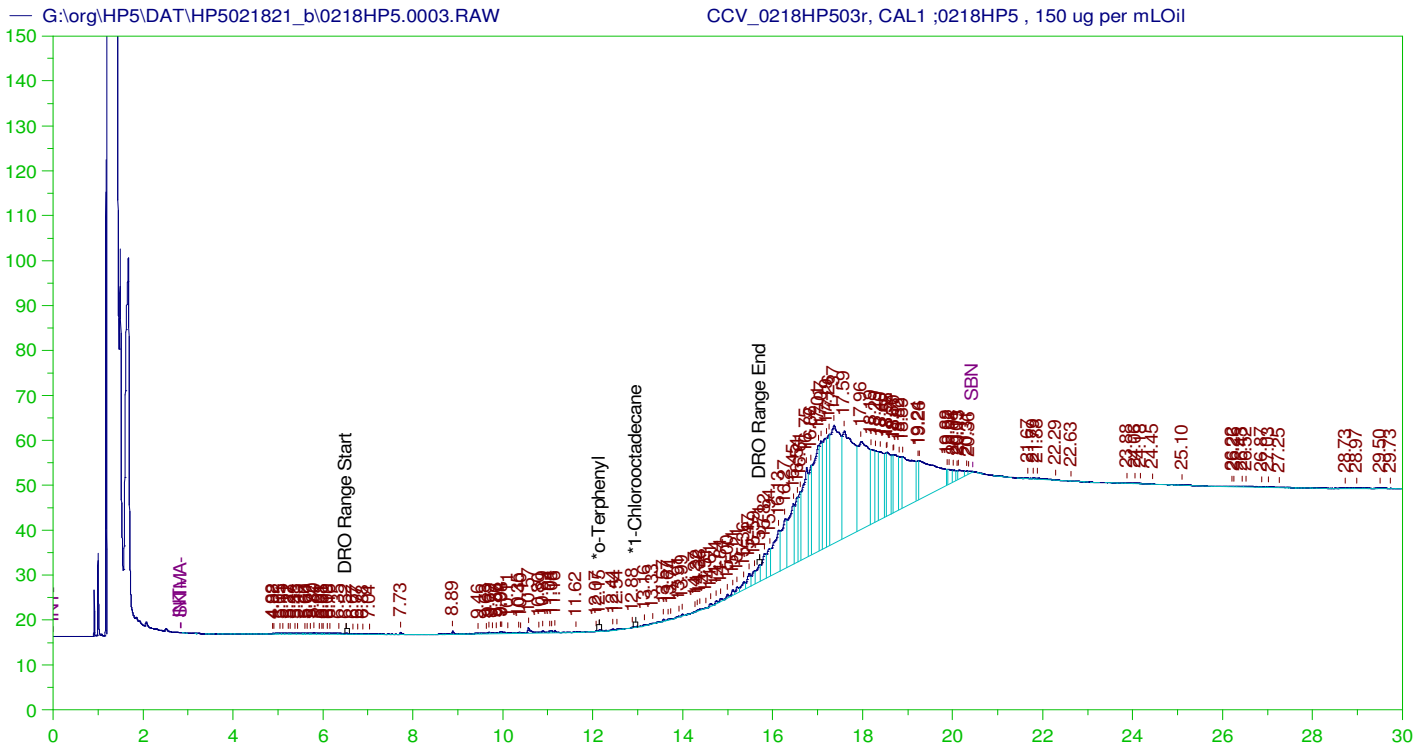
Mean RF for TEH: 29457.33

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

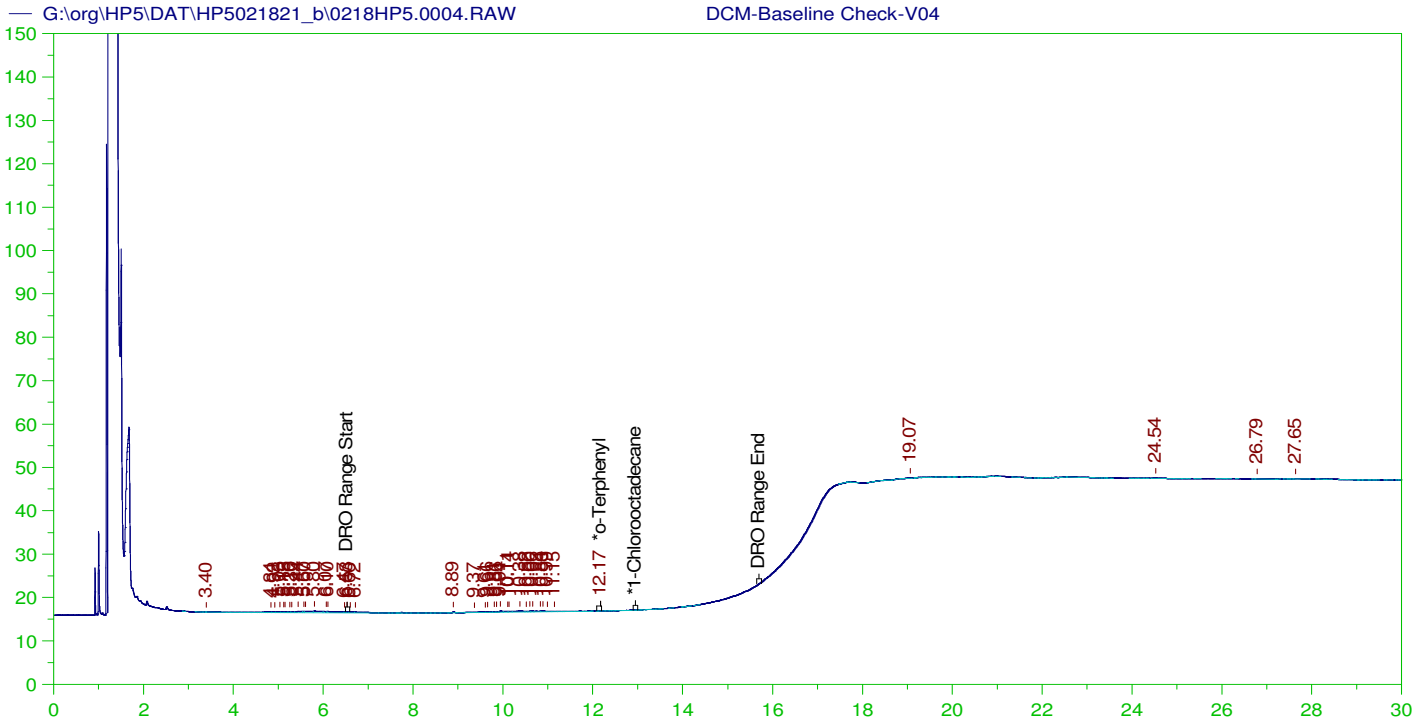
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.146	200.	.02	.01	-
*1-Chlorooctadecane	29.979	200.	.	.	-

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**

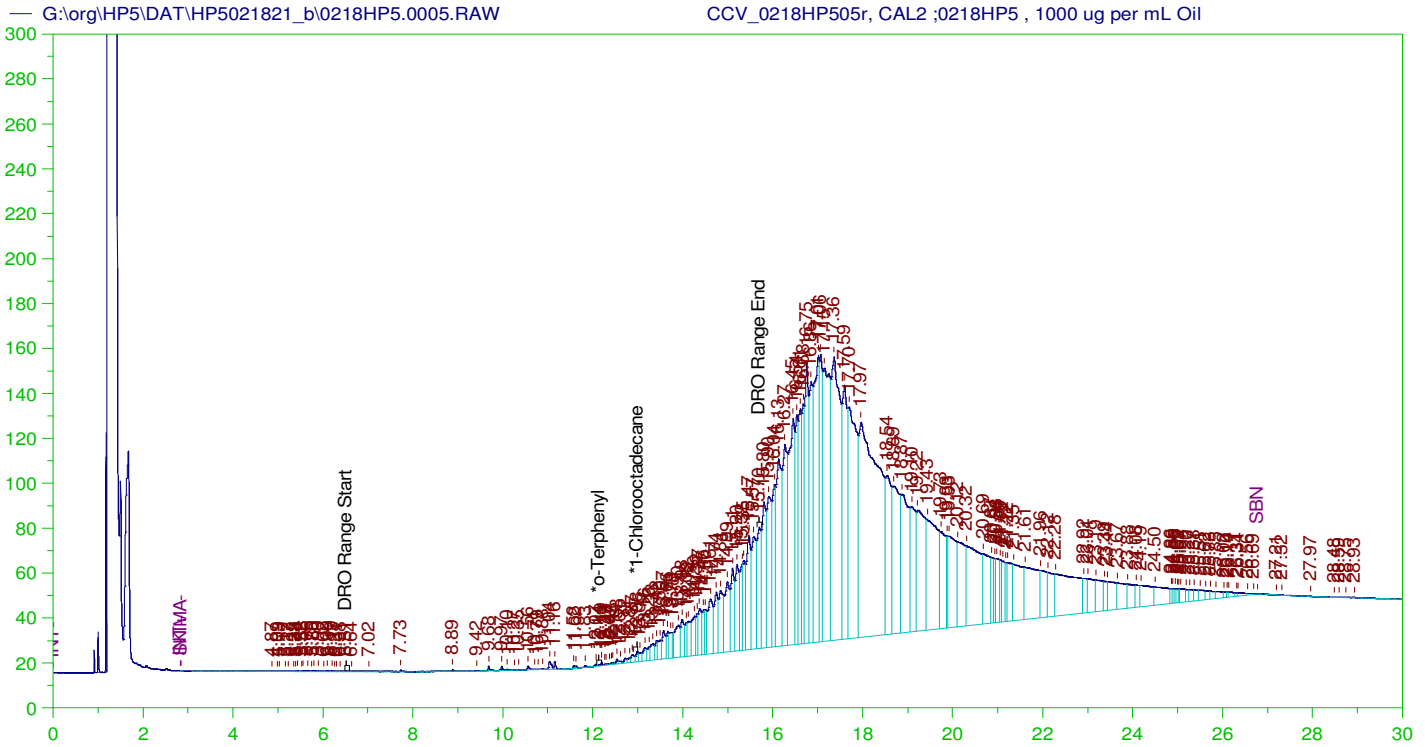
Sample Name: DCM-Baseline Check-V04  
 Raw File: G:\org\HP5\DAT\HP5021821\_b\0218HP5.0004.RAW  
 Date & Time Acquired: 2/18/2021 12:45:36 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-HE-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO210108HE.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

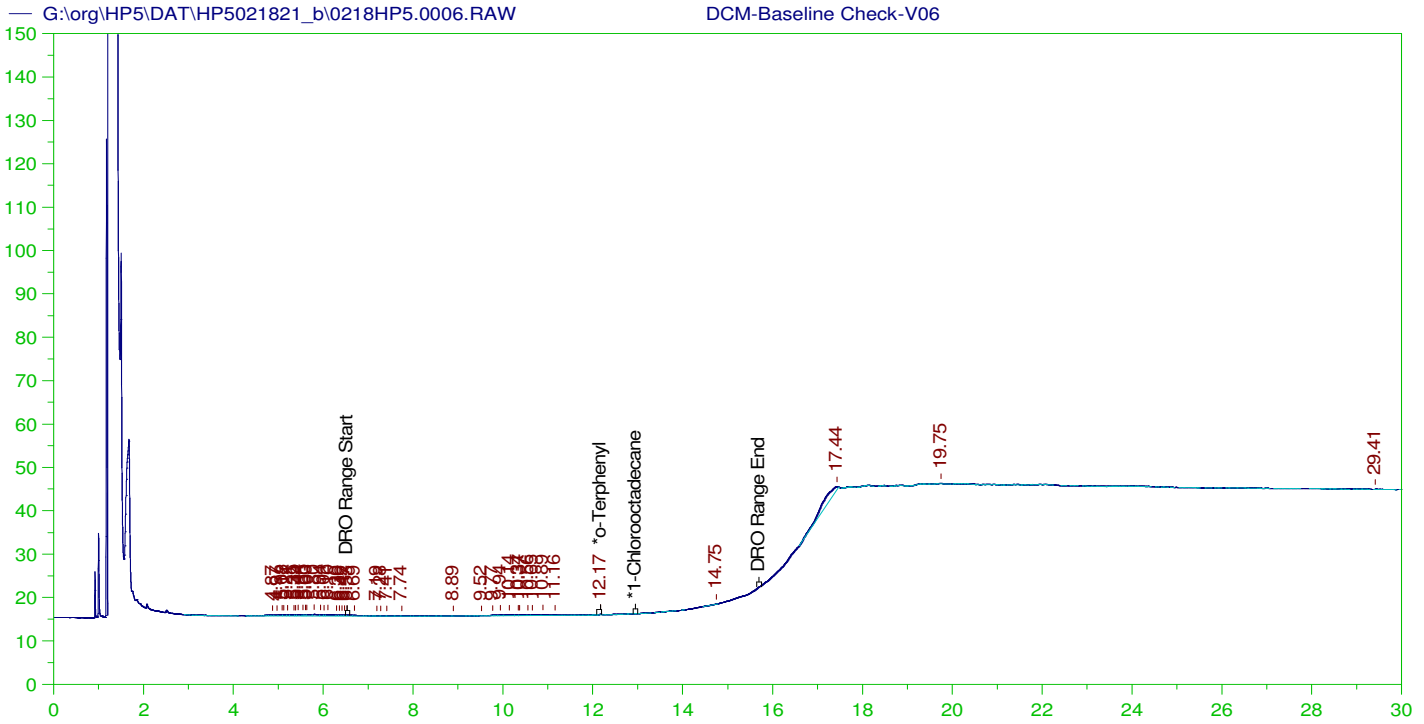
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.136	200.	.034	.02
*1-Chlorooctadecane	12.983	200.	.496	.25

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



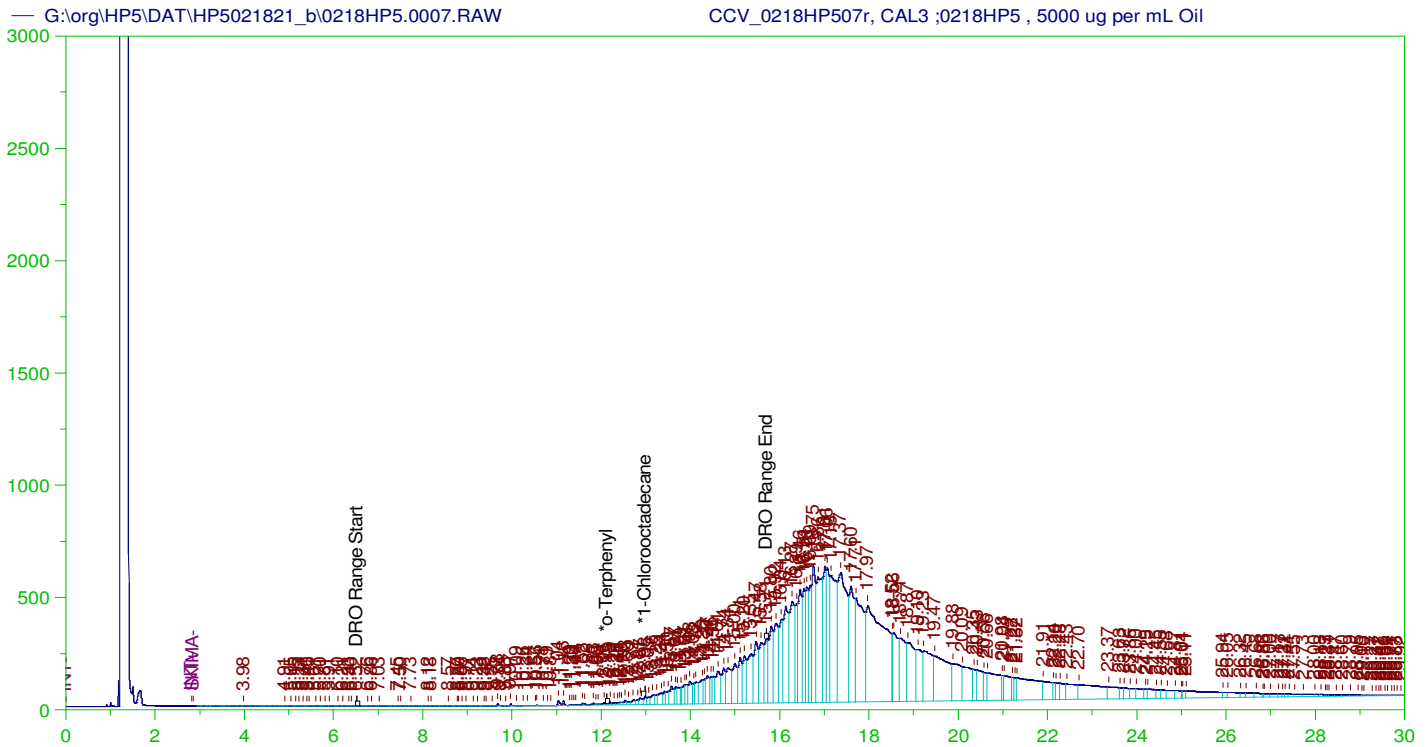
**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

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

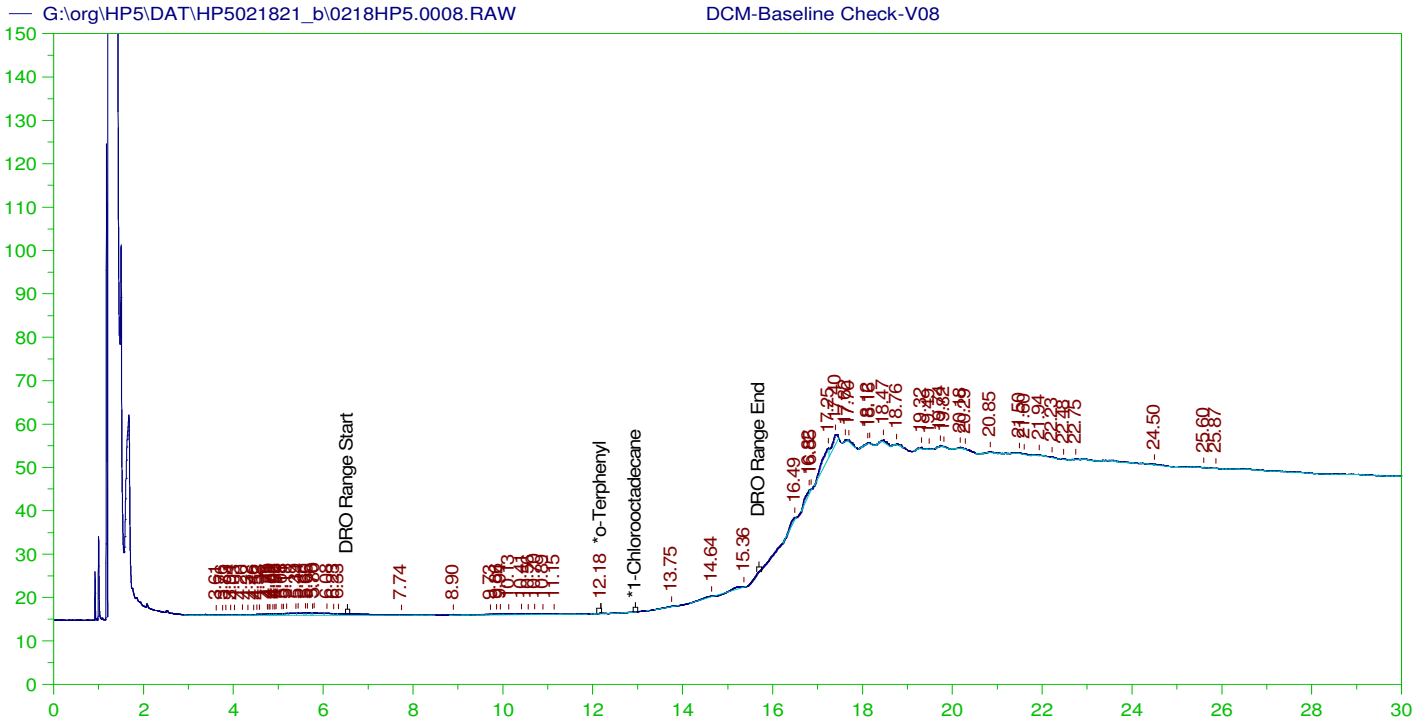
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.129	200.	.538	.27	-
*1-Chlorooctadecane	12.981	200.	4.244	2.12	-

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**

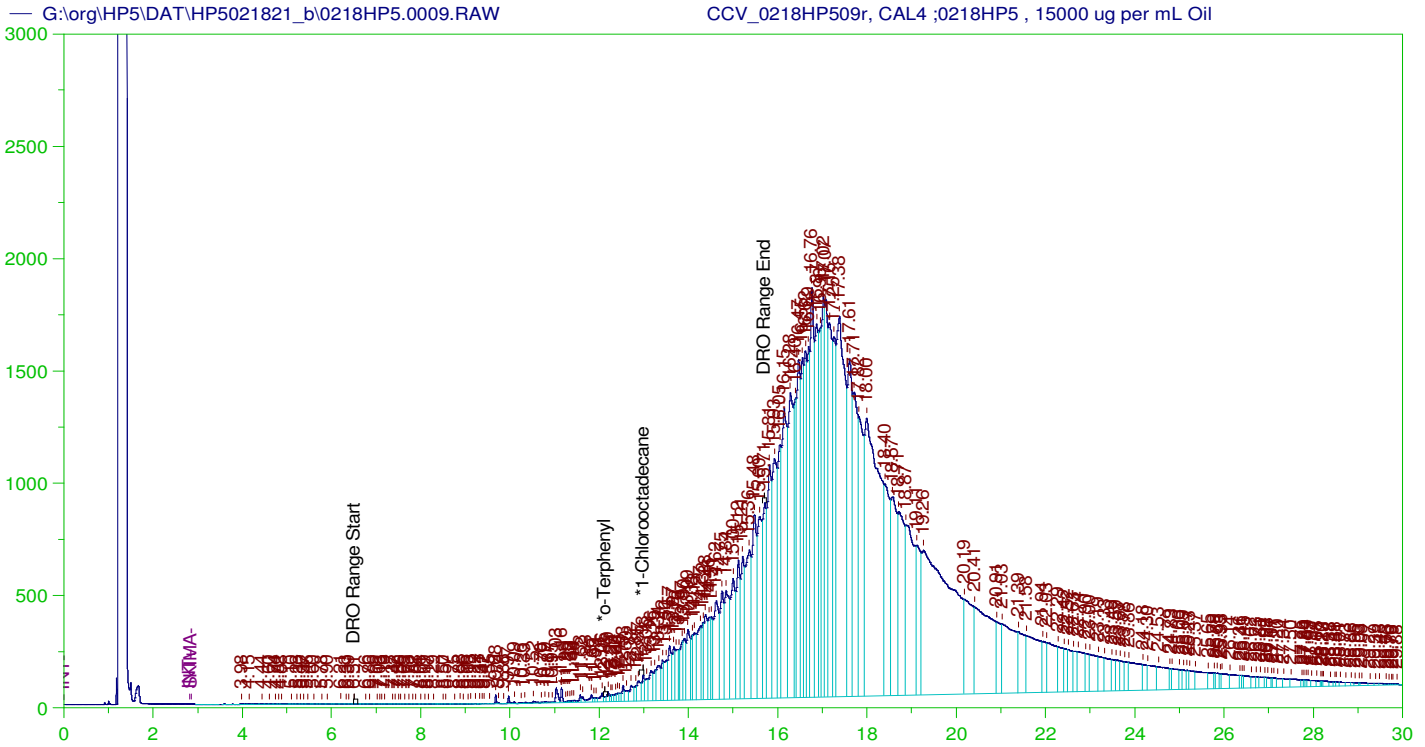
Sample Name: DCM-Baseline Check-V08  
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 Date & Time Acquired: 2/18/2021 3:32:46 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-HE-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO210108HE.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

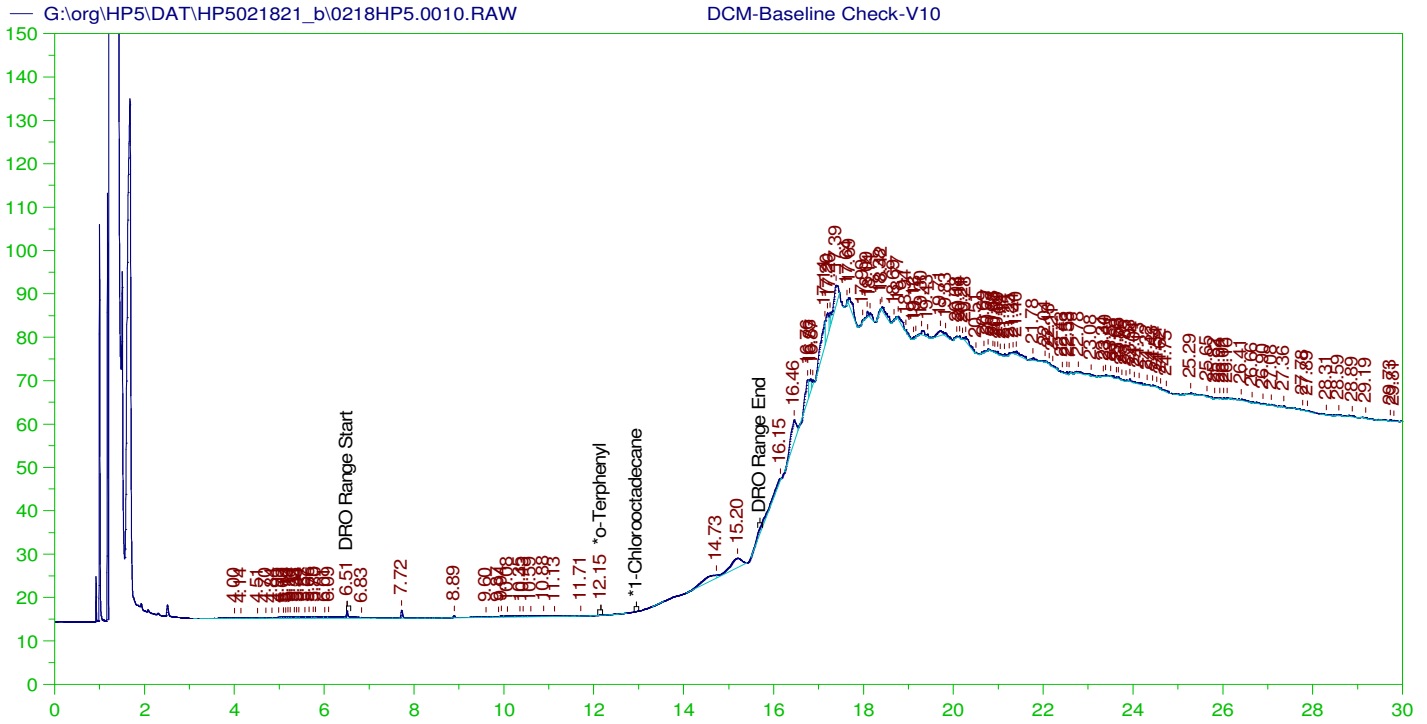
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.124	200.	1.888	.94	-
*1-Chlorooctadecane	12.984	200.	13.129	6.56	-

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**

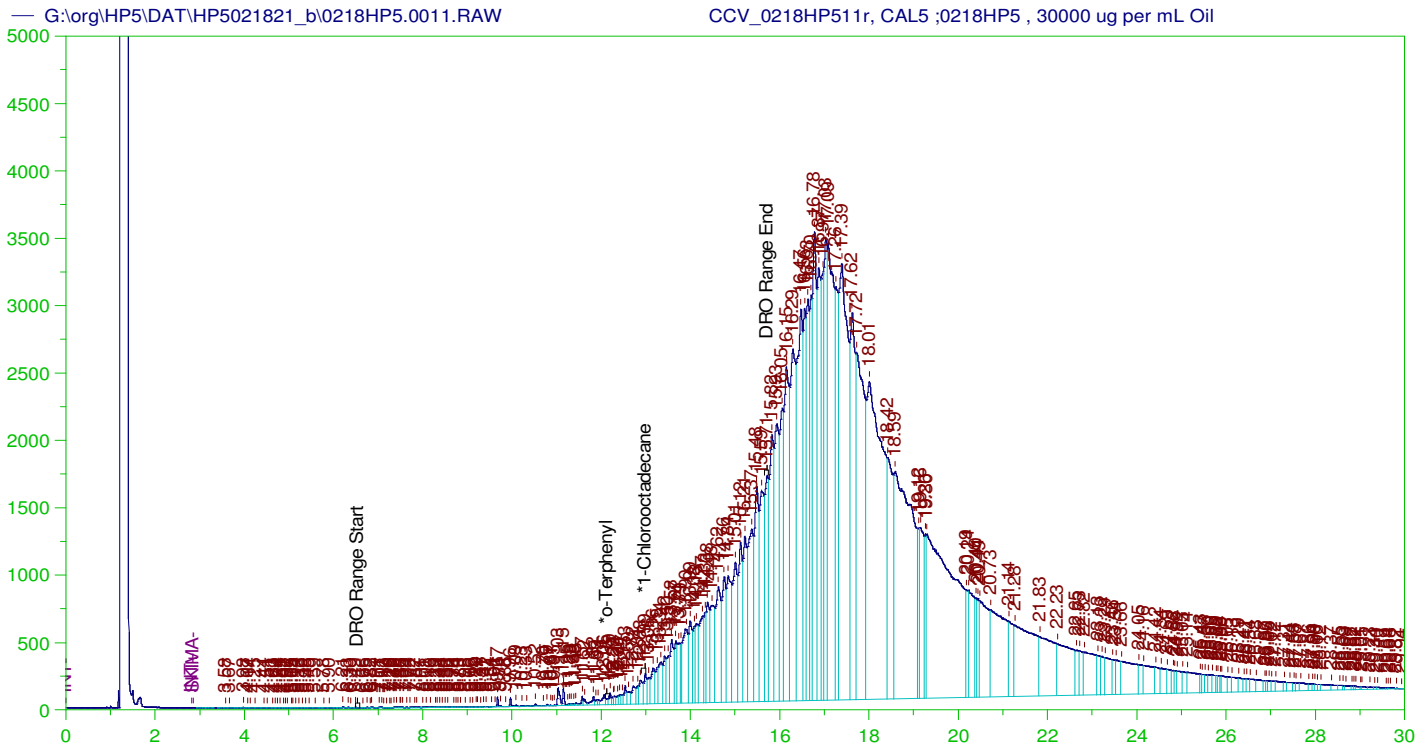
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 Date & Time Acquired: 2/18/2021 4:56:16 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-HE-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO210108HE.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

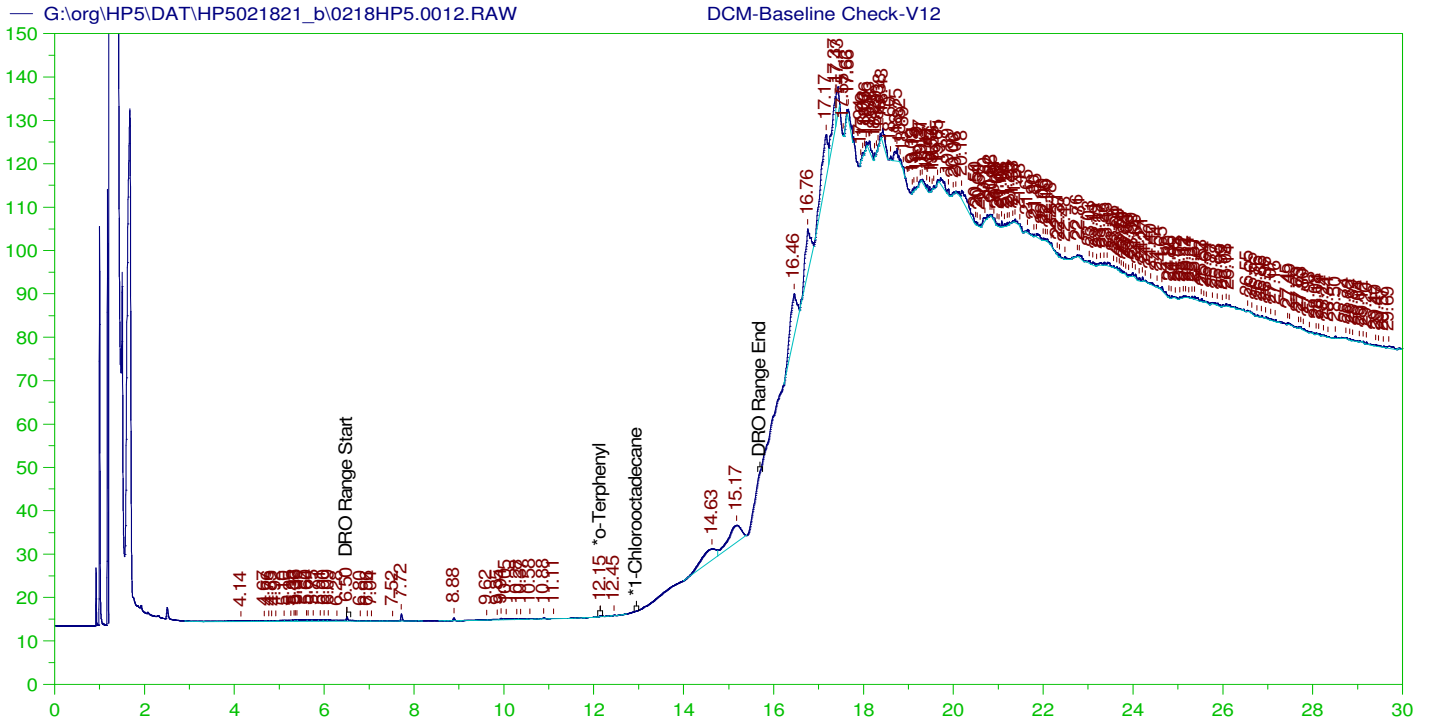
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.128	200.	3.828	1.91	-
*1-Chlorooctadecane	12.985	200.	28.22	14.11	-

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



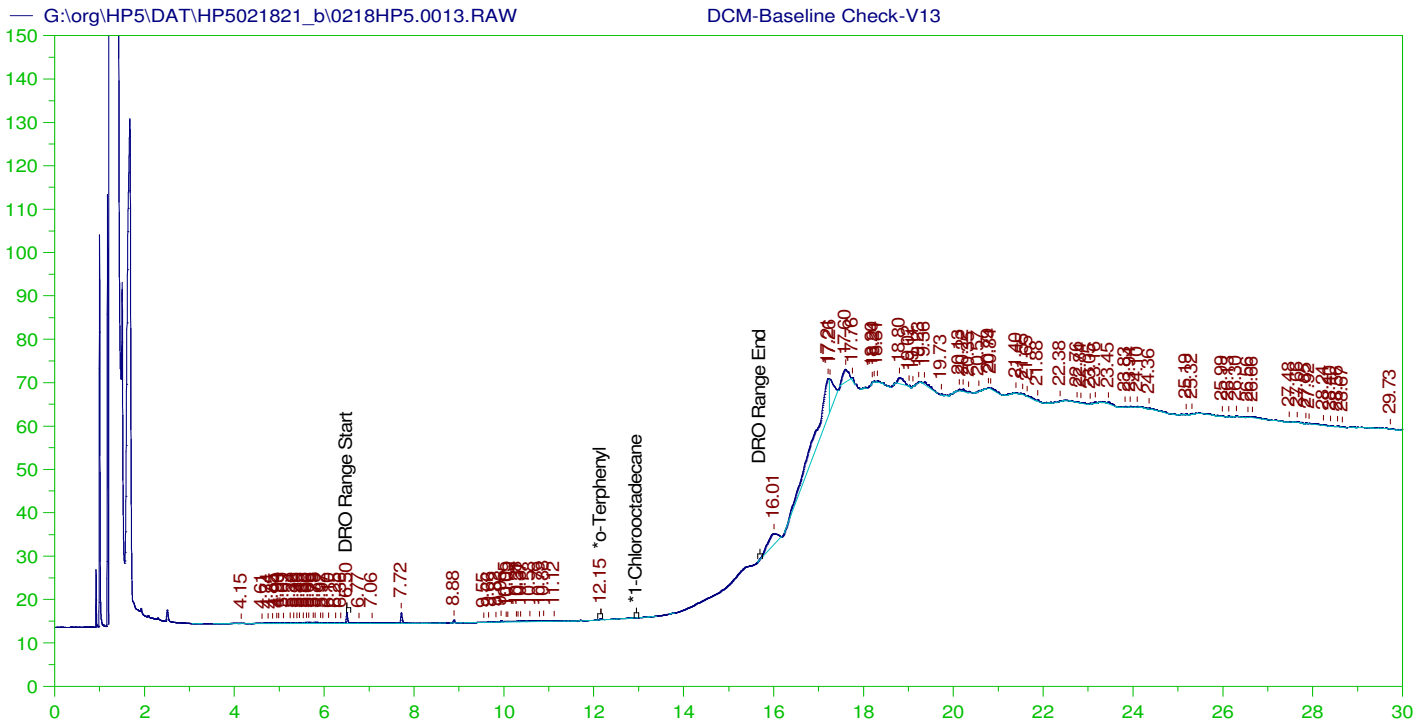
**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

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



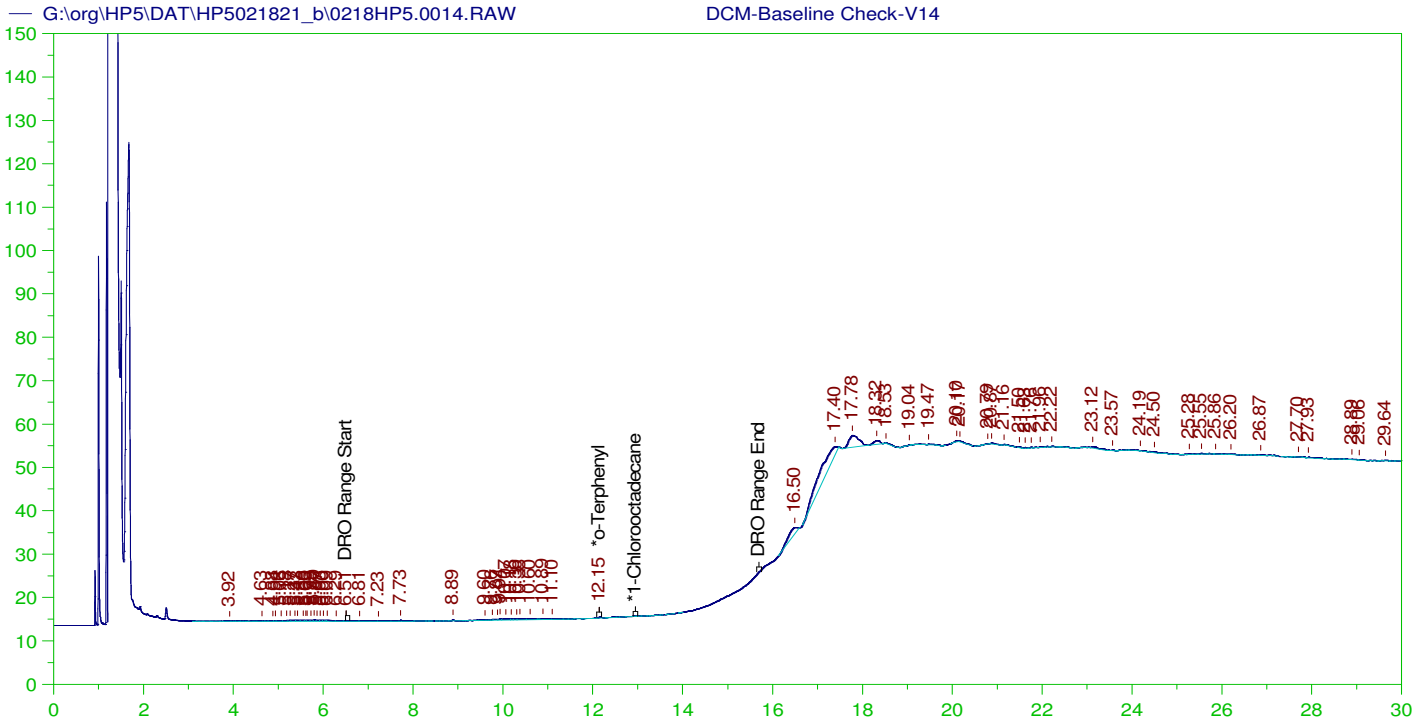
**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

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



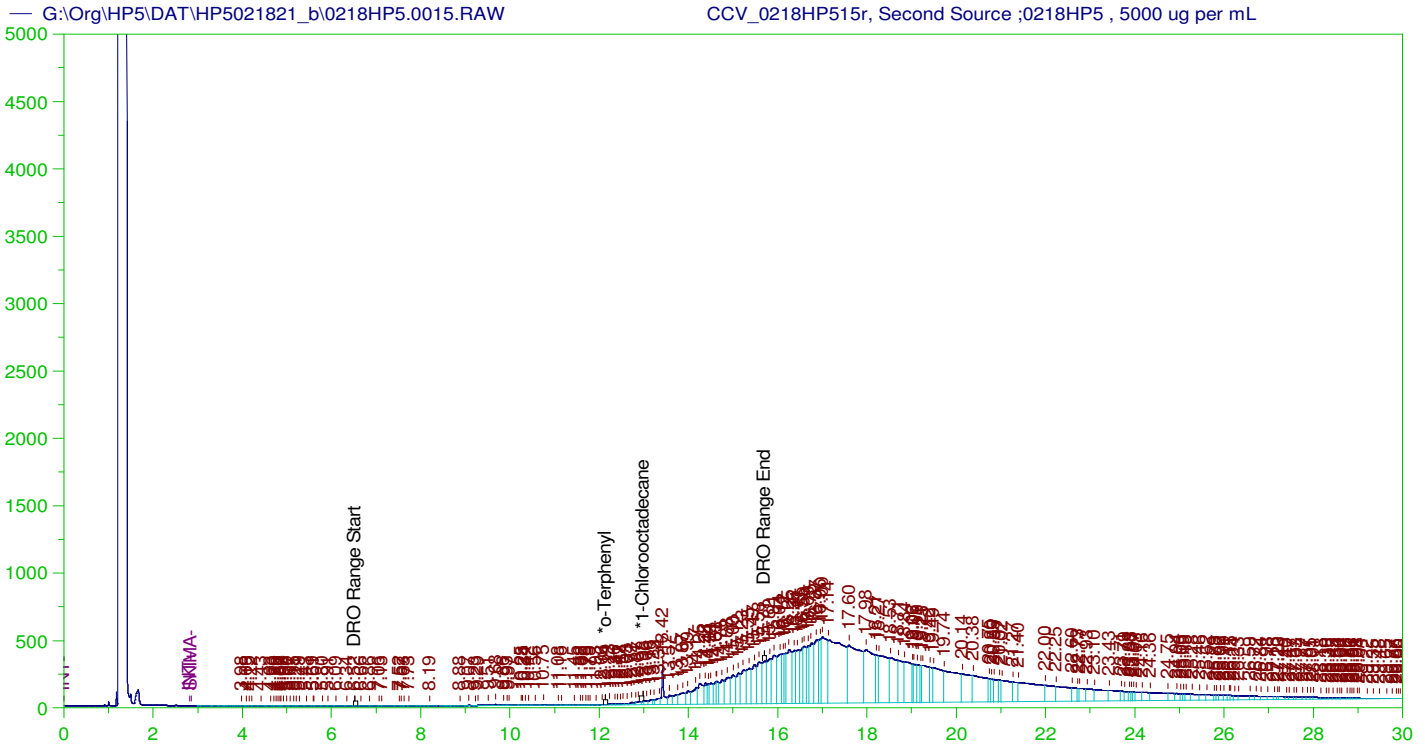
**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

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

<b>Run Start Date:</b> 10/17/2021
<b>Analyst:</b> Ann Nebel
<b>Ical:</b>
<b>Column ID:</b>
<b>Comments:</b> 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						
<b>Analyte</b>	<b>T</b>	<b>Units</b>	<b>RAW</b>	<b>Final</b>	<b>Text</b>	<b>Spike</b>	<b>SPKref</b>	<b>RPDref</b>	<b>MDL</b>	<b>PQL</b>	<b>UQL</b>	<b>%REC</b>	<b>LOW</b>	<b>HIGH</b>	<b>%RPD</b>	<b>Q</b>
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
--------	--------	-----------	------------	---------	---------------	----	----------	-----------	--------	--------	--------

14777568	CCV_1017HP50	HC-8015-DRO-	CAL2		10/17/2021 4:12:	1	R368813		0	0						
<b>Analyte</b>	<b>T</b>	<b>Units</b>	<b>RAW</b>	<b>Final</b>	<b>Text</b>	<b>Spike</b>	<b>SPKref</b>	<b>RPDref</b>	<b>MDL</b>	<b>PQL</b>	<b>UQL</b>	<b>%REC</b>	<b>LOW</b>	<b>HIGH</b>	<b>%RPD</b>	<b>Q</b>
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						
<b>Analyte</b>	<b>T</b>	<b>Units</b>	<b>RAW</b>	<b>Final</b>	<b>Text</b>	<b>Spike</b>	<b>SPKref</b>	<b>RPDref</b>	<b>MDL</b>	<b>PQL</b>	<b>UQL</b>	<b>%REC</b>	<b>LOW</b>	<b>HIGH</b>	<b>%RPD</b>	<b>Q</b>
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
--------	--------	-----------	------------	---------	---------------	----	----------	-----------	--------	--------	--------

14777570	CCV_1017HP50	HC-8015-DRO-	CAL4		10/17/2021 5:38:	1	R368813		0	0						
<b>Analyte</b>	<b>T</b>	<b>Units</b>	<b>RAW</b>	<b>Final</b>	<b>Text</b>	<b>Spike</b>	<b>SPKref</b>	<b>RPDref</b>	<b>MDL</b>	<b>PQL</b>	<b>UQL</b>	<b>%REC</b>	<b>LOW</b>	<b>HIGH</b>	<b>%RPD</b>	<b>Q</b>
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: 9

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

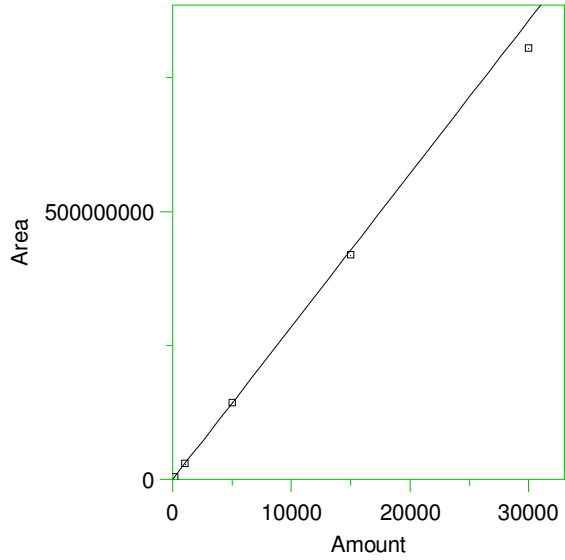
No default component

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

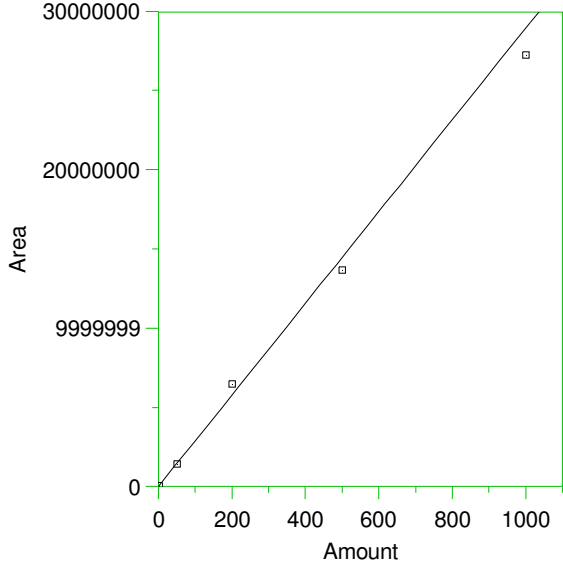
$Y = 28542.41 X + 0$

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

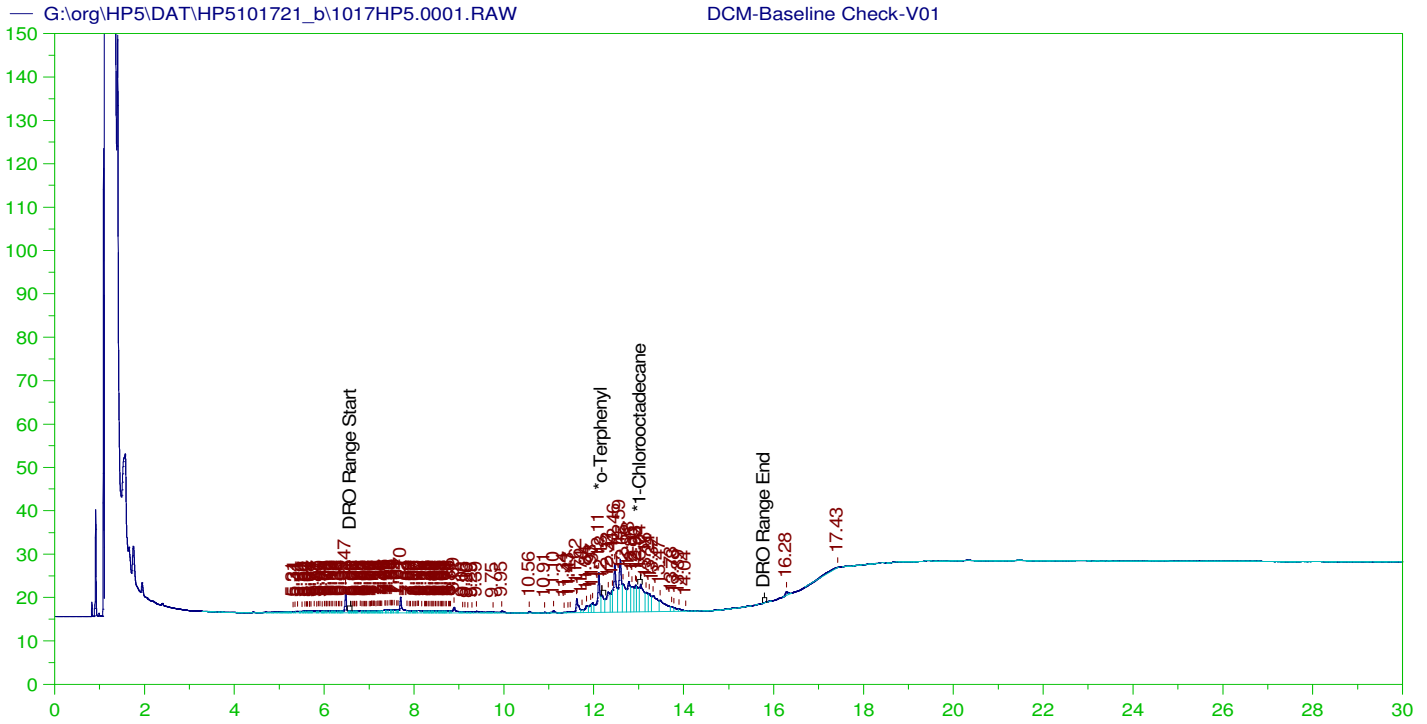
3

\*#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**

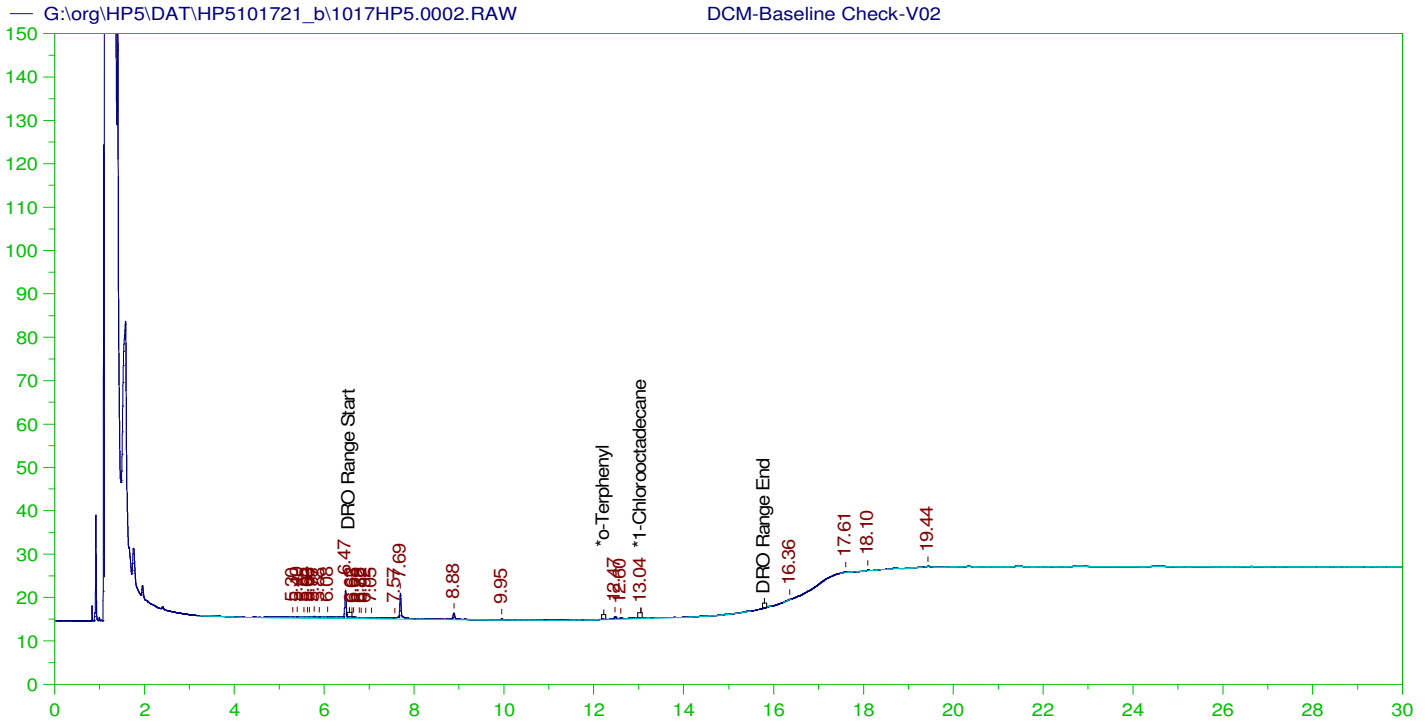
Sample Name: DCM-Baseline Check-V01  
 Raw File: G:\org\HP5\DAT\HP5101721\_b\1017HP5.0001.RAW  
 Date & Time Acquired: 10/17/2021 12:40:02 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-HS-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO210108Hs.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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**

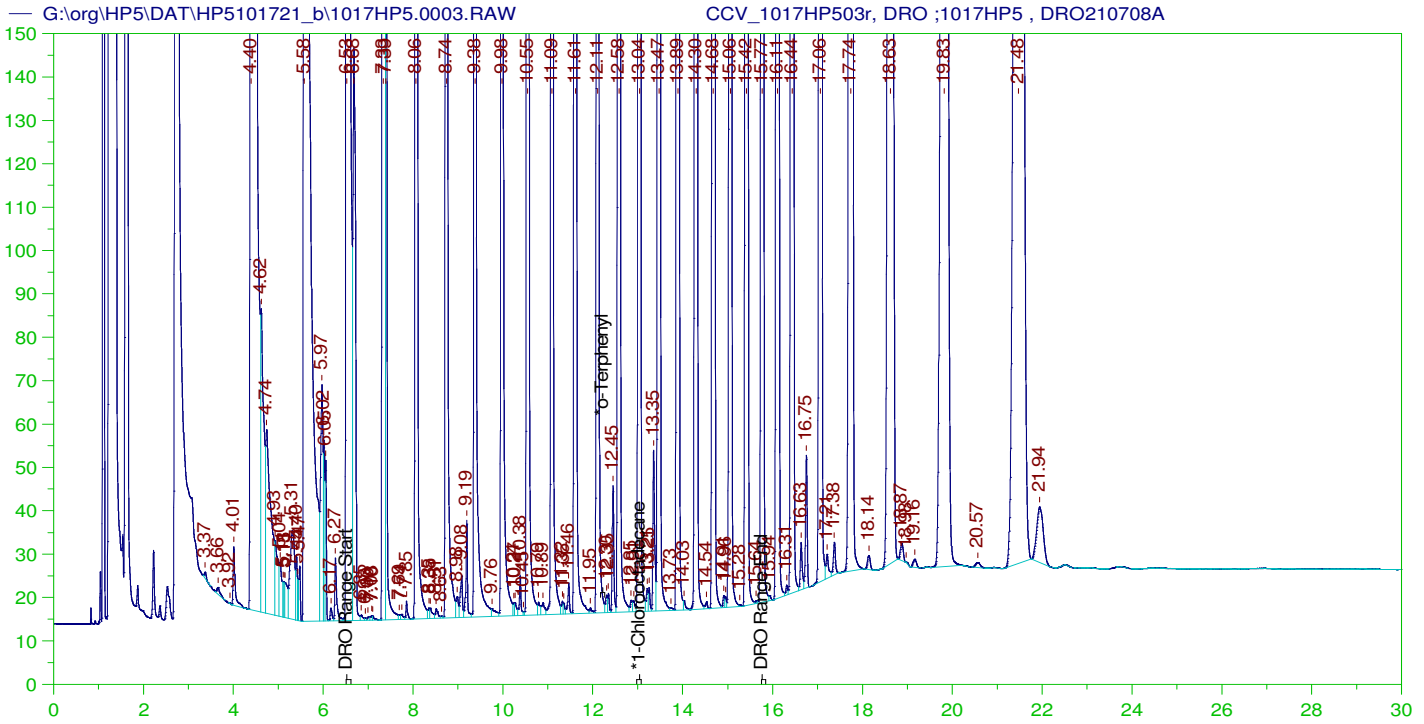
Sample Name: DCM-Baseline Check-V02  
 Raw File: G:\org\HP5\DAT\HP5101721\_b\1017HP5.0002.RAW  
 Date & Time Acquired: 10/17/2021 1:22:21 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-HS-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO210108Hs.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

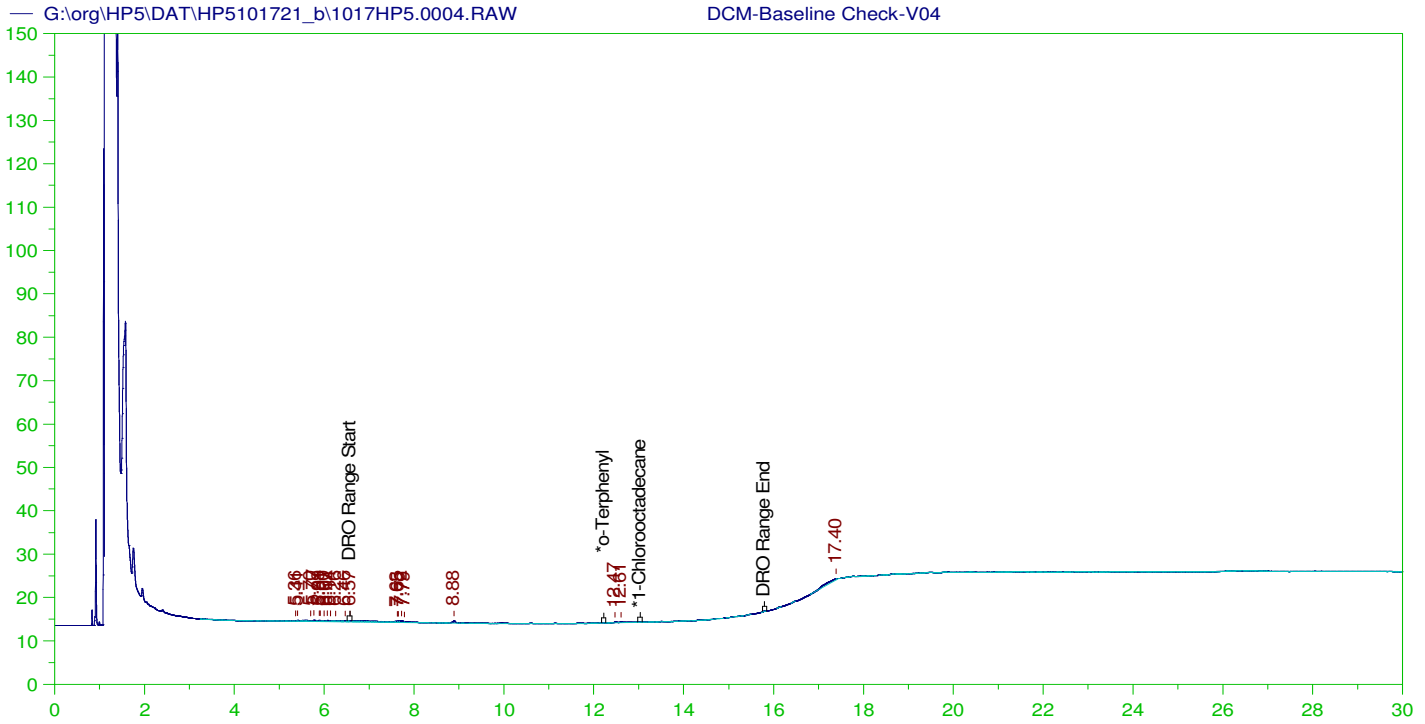
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.982	200.	.	-
*1-Chlorooctadecane	13.037	200.	255.634	127.82 -

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**

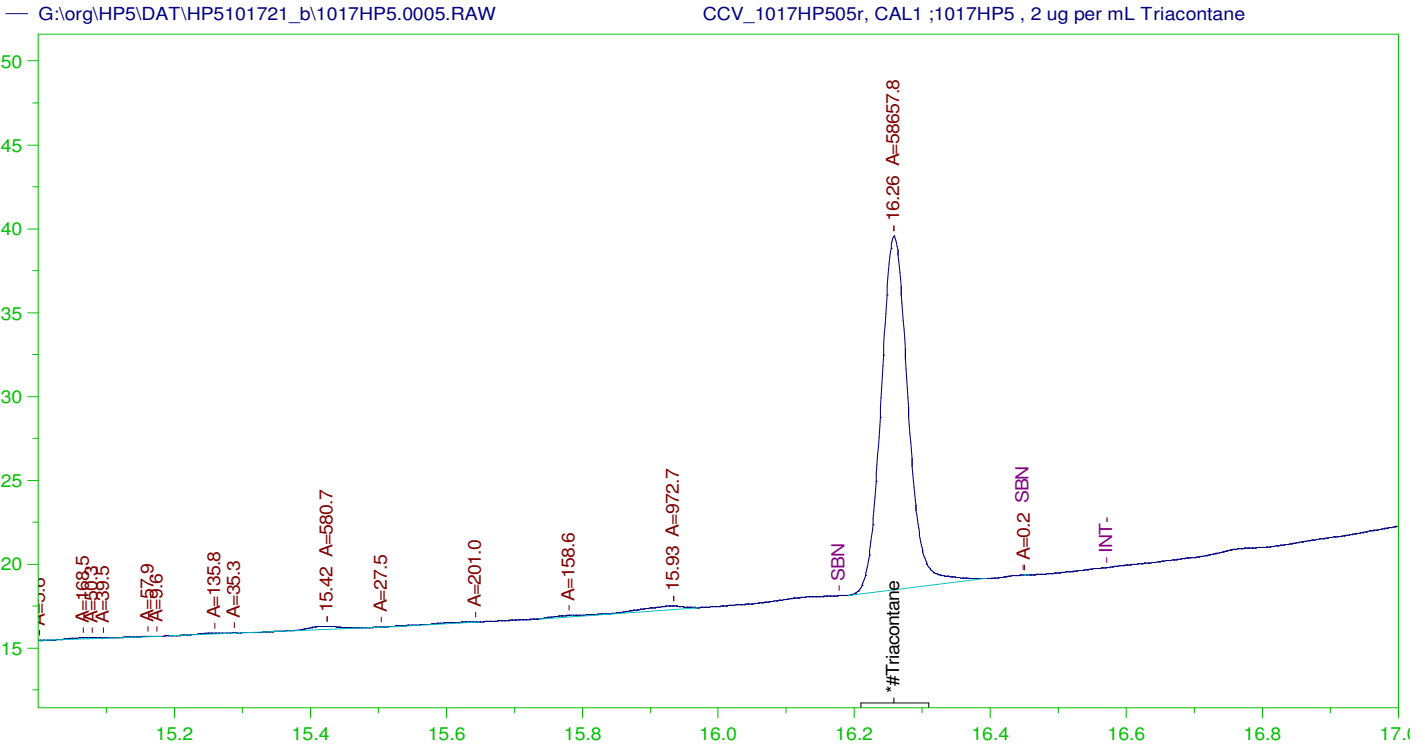
Sample Name: DCM-Baseline Check-V04  
 Raw File: G:\org\HP5\DAT\HP5101721\_b\1017HP5.0004.RAW  
 Date & Time Acquired: 10/17/2021 2:47:29 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-HS-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO210108Hs.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

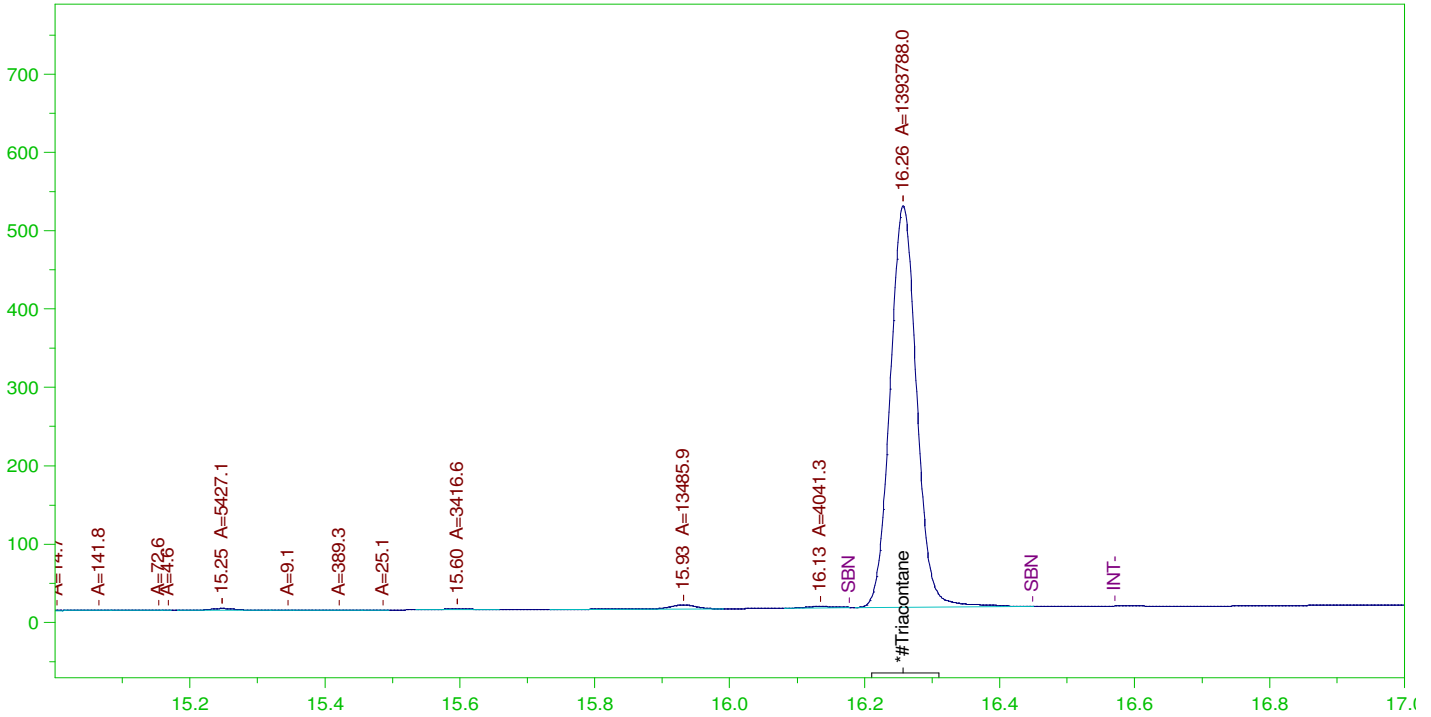
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.	75-125	

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

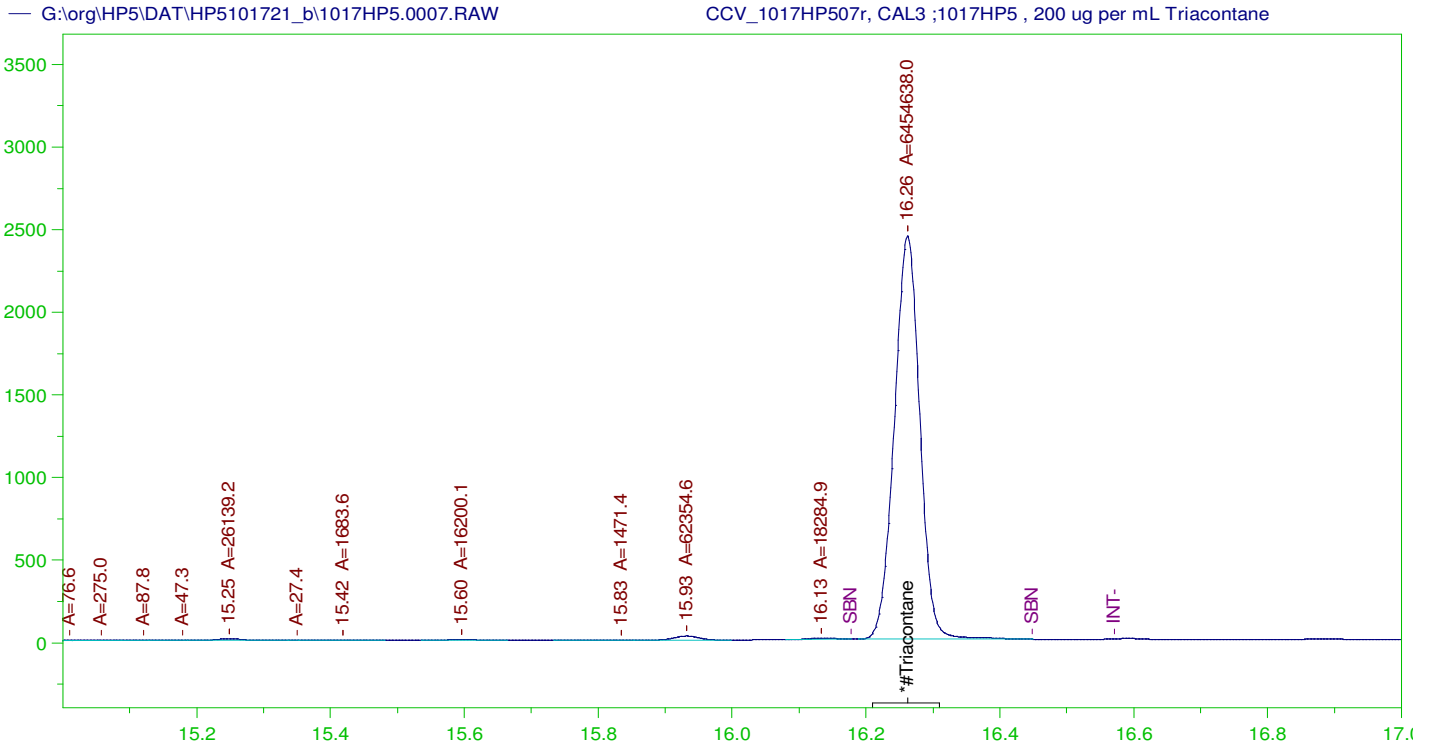
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.257	500.	48.178	9.64	-

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

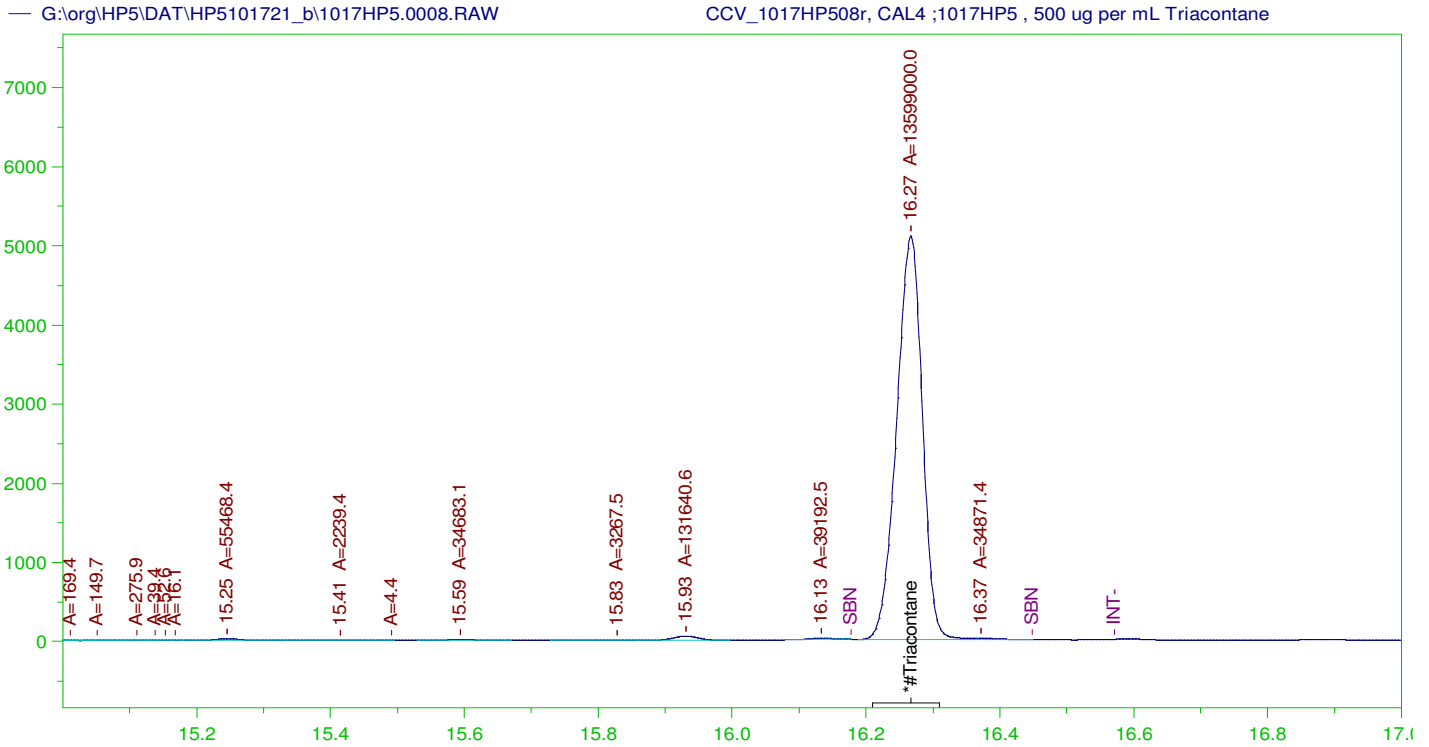
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.262	500.	223.111	44.62

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	-

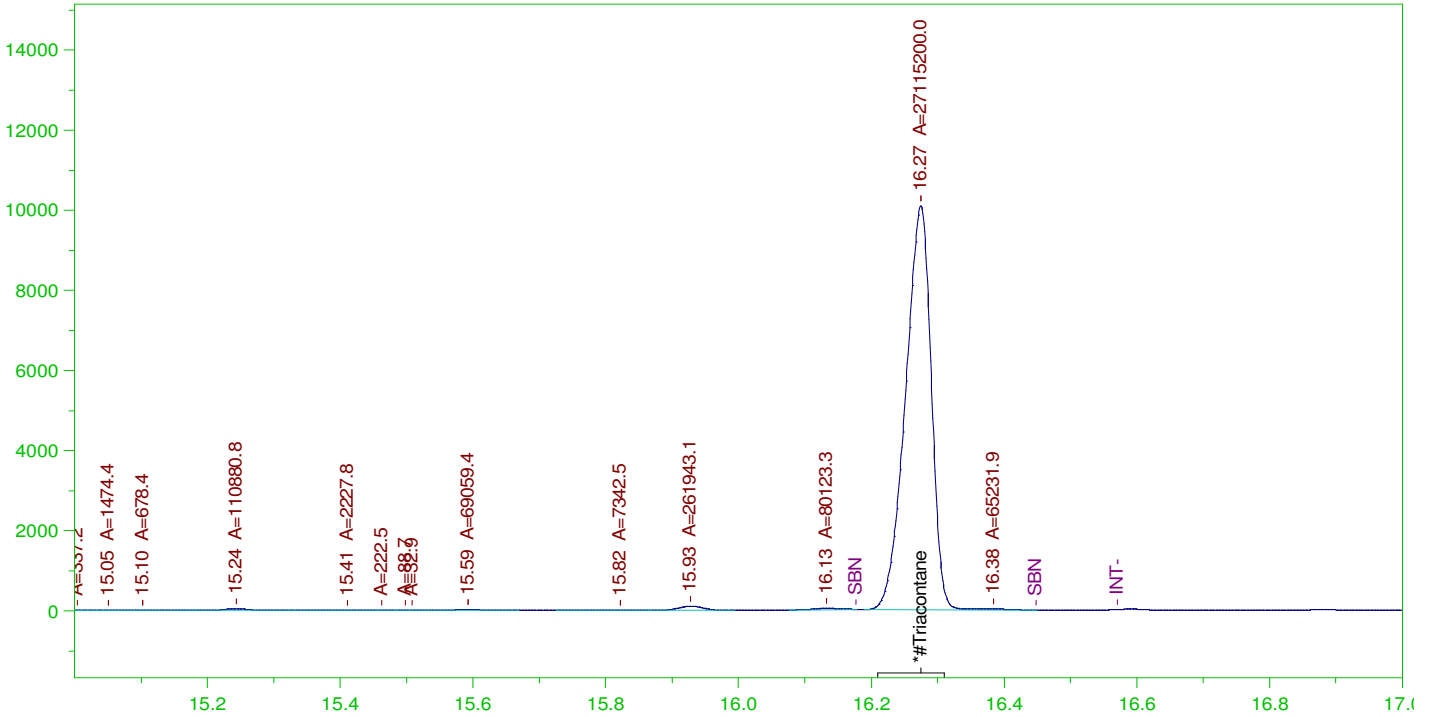
RRO Area:496538.4 RRO AMOUNT: 17.39651

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

G:\org\HP5\DAT\HP5101721\_b\1017HP5.0009.RAW

CCV\_1017HP509r, CAL5 ;1017HP5 , 1000 ug per mL Triacontane



**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 **161122** Prep Temp **NA °C**

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

Prep Start Date: **11/8/2021 3:08:49 PM**  
 Prep End Date: **11/9/2021 1:37:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-161122			1000	0	0	1.00	0.001		11/8/2021	11/9/2021
Start time: 3:05 PM, 11/8/2021. End time: 11/9/2021 at 9:10 AM. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
LCS-161122			1000	0	0	1.00	0.001		11/8/2021	11/9/2021
All bottles were completely used, defaced and disposed of on 11/08/2021. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
LCSD-161122			1000	0	0	1.00	0.001		11/8/2021	11/9/2021
Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
LCS-161122-RROx			1000	0	0	1.00	0.001		11/8/2021	11/9/2021
Sample not cycling correctly.										
LCSD-161122-RRO			1000	0	0	1.00	0.001		11/8/2021	11/9/2021
Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
B21110712-001A	Ground Water	2	1030	0	0	1.00	0.000971		11/8/2021	11/9/2021
Bottle 1/2. Clear. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
B21110712-001AMS	Ground Water	2	1000	0	0	1.00	0.001		11/8/2021	11/9/2021
Bottle 2/2. Clear. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
B21110712-002A	Ground Water	2	1060	0	0	1.00	0.000943		11/8/2021	11/9/2021
Bottle 1/2. Clear. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
B21110712-002AMS-RRO	Ground Water	2	1060	0	0	1.00	0.000948		11/8/2021	11/9/2021
Bottle 2/2. Clear. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
B21110712-003A	Ground Water	2	1020	0	0	1.00	0.00098		11/8/2021	11/9/2021
Bottle 1/2. Clear. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
B21110712-004A	Ground Water	2	1060	0	0	1.00	0.000948		11/8/2021	11/9/2021
Bottle 1/2. Clear, sediment. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
B21110712-005A	Ground Water	2	1020	0	0	1.00	0.00098		11/8/2021	11/9/2021
Bottle 1/2. Clear.										
B21110712-006A	Ground Water	2	1050	0	0	1.00	0.000952		11/8/2021	11/9/2021
Bottle 1/2. Clear.										
B21110712-007A	Ground Water	2	1030	0	0	1.00	0.000971		11/8/2021	11/9/2021
Bottle 1/2. Clear.										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14181	4ML, Amber Vial, 24166704	8/17/2026
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14448	Dichloromethane EC344	8/26/2023

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP211103 14244	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 11/01/21 (	Baked Sodium Sulfate	all	Varies	10/5/2026
DRO211101B	Triacotane SURR 1000 ug/mL	all except LCS, M	100 uL	4/6/2026
DRO211012J	OTP/COD SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
SG211103(13376)	Baked Silica Gel	all-SGT samples	5g	2/28/2030
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, MS-R	100 uL	9/1/2026

# PREP BATCH REPORT

Prep Code: **HC-3520-DRO**  
 Prep Batch **161122** Prep Temp **NA °C**

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

Prep Start Date: **11/8/2021 3:08:49 PM**  
 Prep End Date: **11/9/2021 1:37:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B21110057-002A	Ground Water	2	975	0	0	1.00	0.00103		11/8/2021	11/9/2021
Bottle 2/2. Clear, sediment. Lines 15-16 Start time: 3:45 PM, 11/8/2021. End time: 11/9/2021 at 9:45 AM. Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										
LCS-161122-RRO			1000	0	0	1.00	0.001		11/8/2021	11/9/2021
Sample was SGT with remaining 0.7 mL on 11/12/2021. AMN										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14181	4ML, Amber Vial, 24166704	8/17/2026
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14448	Dichloromethane EC344	8/26/2023

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP211103 14244	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 11/01/21 (	Baked Sodium Sulfate	all	Varies	10/5/2026
DRO211101B	Triacontane SURR 1000 ug/mL	all except LCS, M	100 uL	4/6/2026
DRO211012J	OTP/COD SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
SG211103(13376)	Baked Silica Gel	all-SGT samples	5g	2/28/2030
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, MS-R	100 uL	9/1/2026



# Energy Laboratories Inc

# ANALYTICAL RUN Summary

12-Nov-21

Run ID GCFID-HP5-B\_211111A

<b>Run Start Date:</b> 11/11/2021
<b>Analyst:</b> Ann Nebel
<b>Ical:</b>
<b>Column ID:</b>
<b>Comments:</b> 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
DRO210708A	Carbon Scan STD-Marker					MARKER-C	3/5/2028
DRO211008A	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-OIL	4/6/2026
DRO211012I	ALASKA MARKER-200ug/mL					MARKER	5/31/2022
DRO211103A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852550	MARKER_1111	HC-8015-DRO-	SAMP		11/11/2021 5:24:	1	R370204		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (DRO)	A	mg/L		2.246886		0	0	0	0.0389	0.3	50	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.632901		0	0	0	0.0749	0.3	50	0%	0	0	0%	
o-Terphenyl	S	mg/L		0.2083438		0.2	0	0	0.000429	0.002	0	104%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852551	CCV_1111HP50	HC-8015-DRO-	CCV		11/11/2021 6:07:	1	R370204		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		4.72484668		5	0	0	0.0879	0.3	0	94%	80	120	0%	
n-Triacontane	S	mg/L		0.1968096		0.2	0	0	0.000336	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					
14852552	CCV_1111HP50	HC-8015-DRO-	CCV		11/11/2021 6:49:	1	R370204		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		15.06205		15	0	0	0.0389	0.3	0	100%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.58335		15	0	0	0.0749	0.3	50	104%	80	120	0%	
o-Terphenyl	S	mg/L		0.204158		0.2	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					
14852553	LCS-161122	HC-8015-DRO-	LCS-DOD		11/11/2021 8:22:	1	161122	11/8/2021 3:	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		13.3259		15	0	0	0.0389	0.3	0	89%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		14.26814		15	0	0	0.0749	0.3	50	95%	60	132	0%	
o-Terphenyl	S	mg/L		0.2108702		0.2	0	0	0.000429	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					
14852554	LCSD-161122	HC-8015-DRO-	LCSD-DOD		11/11/2021 9:05:	1	161122	11/8/2021 3:	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		12.72302		15	0	13.3259	0.0389	0.3	0	85%	36	132	5%	
Total Extractable Hydrocarbons	A	mg/L		13.65493		15	0	14.26814	0.0749	0.3	50	91%	60	132	4%	
o-Terphenyl	S	mg/L		0.2013253		0.2	0	0	0.000429	0.002	0	101%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852555	MB-161122	HC-8015-DRO-	MBLK		11/11/2021 9:48:	1	161122	11/8/2021 3:	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		0.0871		0.1	0	0	0.000336	0.002	0	87%	50	150	0%	
o-Terphenyl	S	mg/L		0.1916295		0.2	0	0	0.000429	0.002	0	96%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852556	B21110712-007	HC-8015-DRO-	SAMP		11/11/2021 10:3	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852556	B21110712-007	HC-8015-DRO-	SAMP		11/11/2021 10:3	1	161122	11/8/2021 3:	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	0.0377719	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		0.0905		0.0971	0	0	0.0003263	0.001942	0	93%	50	150	0%	
o-Terphenyl	S	mg/L		0.1907901		0.1942	0	0	0.0004166	0.002	0	98%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852557	B21110712-006	HC-8015-DRO-	SAMP		11/11/2021 11:1	1	161122	11/8/2021 3:	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		0.0907		0.0952	0	0	0.0003199	0.001904	0	95%	50	150	0%	
o-Terphenyl	S	mg/L		0.1954708		0.1904	0	0	0.0004084	0.002	0	103%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852558	B21110712-005	HC-8015-DRO-	SAMP		11/11/2021 11:5	1	161122	11/8/2021 3:	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	0.038122	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.086142	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.073402	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.0912		0.098	0	0	0.0003293	0.00196	0	93%	50	150	0%	
o-Terphenyl	S	mg/L		0.1941375		0.196	0	0	0.0004204	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					
14852559	B21110712-003	HC-8015-DRO-	SAMP		11/11/2021 12:3	1	161122	11/8/2021 3:	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		0.1109254		0	0	0	0.038122	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.24991116		0	0	0	0.086142	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3872505		0	0	0	0.073402	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.0933		0.098	0	0	0.0003293	0.00196	0	95%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852559	B21110712-003	HC-8015-DRO-	SAMP		11/11/2021 12:3	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.1402821		0.196	0	0	0.0004204	0.002	0	72%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852560	B21110712-004	HC-8015-DRO-	SAMP		11/11/2021 1:22:	1	161122	11/8/2021 3:	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		0.1263266		0	0	0	0.0368772	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.18479970		0	0	0	0.0833292	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.4551913		0	0	0	0.0710052	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.0889		0.0948	0	0	0.0003185	0.001896	0	94%	50	150	0%	
o-Terphenyl	S	mg/L		0.1408402		0.1896	0	0	0.0004067	0.002	0	74%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852561	B21110712-002	HC-8015-DRO-	SAMP		11/11/2021 2:47:	1	161122	11/8/2021 3:	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		2.793668		0	0	0	0.0366827	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.34564838		0	0	0	0.0828897	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.213031		0	0	0	0.0706307	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.087		0.0943	0	0	0.0003168	0.001886	0	92%	50	150	0%	
o-Terphenyl	S	mg/L		0.1847741		0.1886	0	0	0.0004045	0.002	0	98%	56	125	0%	
TEH(Oil Range)	X	mg/L		1.01427794		0	0	0	0.0828897	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					
14852562	MARKER_1111	HC-8015-DRO-	SAMP		11/11/2021 4:12:	1	R370204				0	0				
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (DRO)	A	mg/L		2.267638		0	0	0	0.0389	0.3	50	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.66542		0	0	0	0.0749	0.3	50	0%	0	0	0%	
o-Terphenyl	S	mg/L		0.2104698		0.2	0	0	0.000429	0.002	0	105%	50	150	0%	
Diesel Range Organics (C10 to C24)	X	mg/L		2.267638		0	0	0	0.0389	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					
14852563	CCV_1111HP51	HC-8015-DRO-	CCV		11/11/2021 4:55:	1	R370204		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		4.60550586		5	0	0	0.0879	0.3	0	92%	80	120	0%	
n-Triacontane	S	mg/L		0.191957		0.2	0	0	0.000336	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					
14852564	CCV_1111HP52	HC-8015-DRO-	CCV		11/11/2021 5:38:	1	R370204		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		14.39426		15	0	0	0.0389	0.3	0	96%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.89184		15	0	0	0.0749	0.3	50	99%	80	120	0%	
o-Terphenyl	S	mg/L		0.1953674		0.2	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					
14852565	B21110057-002	HC-8015-DRO-	DUP		11/11/2021 7:04:	1	161122	11/8/2021 3:	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		3.642582		0	0	3.257849	0.040067	0.309	0	0%	0	0	11%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.46653065		0	0	0.3906036	0.090537	0.309	0	0%	0	0	18%	
Total Extractable Hydrocarbons	A	mg/L		4.197502		0	0	3.72987	0.077147	0.309	50	0%	0	0	12%	
n-Triacontane	S	mg/L		0.0961		0.103	0	0	0.0003461	0.00206	0	93%	50	150	0%	
o-Terphenyl	S	mg/L		0.1418308		0.206	0	0	0.0004419	0.00206	0	69%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852566	B21110712-001	HC-8015-DRO-	SAMP		11/11/2021 7:47:	1	161122	11/8/2021 3:	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		0.4700936		0	0	0	0.0377719	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.21736164		0	0	0	0.0853509	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.899461		0	0	0	0.0727279	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.0855		0.0971	0	0	0.0003263	0.001942	0	88%	50	150	0%	
o-Terphenyl	S	mg/L		0.1455257		0.1942	0	0	0.0004166	0.002	0	75%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852567	B21110712-001	HC-8015-DRO-	MS-DOD		11/11/2021 8:29:	1	161122	11/8/2021 3:	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		13.12767		15	0.4700936	0	0.0389	0.3	0	84%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		14.32977		15	0.899461	0	0.0749	0.3	50	90%	60	132	0%	
o-Terphenyl	S	mg/L		0.1943999		0.2	0	0	0.000429	0.002	0	97%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852568	LCS-161122-RR	HC-8015-DRO-	LCS-DOD		11/11/2021 9:55:	1	161122	11/8/2021 3:		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		4.75478601		5	0	0	0.0879	0.3	0	95%	41	113	0%	
n-Triacontane	S	mg/L		0.0901		0.1	0	0	0.000336	0.002	0	90%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852569	LCSD-161122-R	HC-8015-DRO-	LCSD-DOD		11/11/2021 11:2	1	161122	11/8/2021 3:		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		4.41584206		5	0	4.7547860	0.0879	0.3	0	88%	41	113	7%	
n-Triacontane	S	mg/L		0.0843		0.1	0	0	0.000336	0.002	0	84%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852570	B21110712-002	HC-8015-DRO-	MS-DOD		11/12/2021 12:4	1	161122	11/8/2021 3:	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		4.73254585		4.74	1.0142779	0	0.0833292	0.3	0	78%	41	113	0%	
n-Triacontane	S	mg/L		0.083		0.0948	0	0	0.0003185	0.002	0	88%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14852571	MARKER_1111	HC-8015-DRO-	SAMP		11/12/2021 2:12:	1	R370204			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (DRO)	A	mg/L		2.279169		0	0	0	0.0389	0.3	50	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.677947		0	0	0	0.0749	0.3	50	0%	0	0	0%	
o-Terphenyl	S	mg/L		0.2115148		0.2	0	0	0.000429	0.002	0	106%	50	150	0%	
Diesel Range Organics (C10 to C24)	X	mg/L		2.279169		0	0	0	0.0389	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					
14852572	CCV_1111HP53	HC-8015-DRO-	CCV		11/12/2021 2:55:	1	R370204		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		4.86861377		5	0	0	0.0879	0.3	0	97%	80	120	0%	
n-Triacontane	S	mg/L		0.201752		0.2	0	0	0.000336	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					
14852573	CCV_1111HP53	HC-8015-DRO-	CCV		11/12/2021 3:38:	1	R370204		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		14.89358		15	0	0	0.0389	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.40571		15	0	0	0.0749	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.2018117		0.2	0	0	0.000429	0.002	0	101%	80	120	0%	

# Energy Laboratories Inc

# ANALYTICAL RUN Summary

17-Nov-21

Run ID GCFID-HP5-B\_211111B

<b>Run Start Date:</b> 11/11/2021
<b>Analyst:</b> Ann Nebel
<b>Ical:</b>
<b>Column ID:</b>
<b>Comments:</b> 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
DRO210708A	Carbon Scan STD-Marker					MARKER-C	3/5/2028
DRO211008A	5,000 ug/mL RRO CCV 200 ug/mL Triacotane					CCV-OIL	4/6/2026
DRO211012I	ALASKA MARKER-200ug/mL					MARKER	5/31/2022
DRO211103A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859301	MARKER_1111	HC-8015-DRO-	SAMP		11/12/2021 2:12:	1	R370291		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (DRO)	A	mg/L		2.279169		0	0	0	0.0389	0.3	50	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.677947		0	0	0	0.0749	0.3	50	0%	0	0	0%	
o-Terphenyl	S	mg/L		0.2115148		0.2	0	0	0.000429	0.002	0	106%	50	150	0%	
Diesel Range Organics (C10 to C24)	X	mg/L		2.279169		0	0	0	0.0389	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					
14859302	CCV_1111HP53	HC-8015-DRO-	CCV		11/12/2021 2:55:	1	R370291		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		4.86861377		5	0	0	0.0879	0.3	0	97%	80	120	0%	
n-Triacotane	S	mg/L		0.201752		0.2	0	0	0.000336	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					
14859303	CCV_1111HP53	HC-8015-DRO-	CCV		11/12/2021 3:38:	1	R370291		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		14.89358		15	0	0	0.0389	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.40571		15	0	0	0.0749	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.2018117		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					
14859304	LCS-161122	HC-8015-DRO-	LCS-DOD		11/12/2021 7:46:	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		9.818629		15	0	0	0.0389	0.3	0	65%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		10.48462		15	0	0	0.0329	0.3	0	70%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1630385		0.2	0	0	0.000429	0.002	0	82%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859305	LCSD-161122	HC-8015-DRO-	LCSD-DOD		11/12/2021 8:29:	1	161122	11/8/2021 3:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		9.856694		15	0	9.818629	0.0389	0.3	0	66%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		10.50614		15	0	10.48462	0.0329	0.3	0	70%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1656786		0.2	0	0	0.000429	0.002	0	83%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859306	MB-161122	HC-8015-DRO-	MBLK		11/12/2021 9:12:	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0		0	0	0	0.0389	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0879	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0329	0.15	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.0631		0.1	0	0	0.000336	0.002	0	63%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1330931		0.2	0	0	0.000429	0.002	0	67%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859307	B21110712-003	HC-8015-DRO-	SAMP		11/12/2021 9:55:	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859307	B21110712-003	HC-8015-DRO-	SAMP		11/12/2021 9:55:	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0		0	0	0	0.038122	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.086142	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.032242	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.0658		0.098	0	0	0.0003293	0.00196	0	67%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1122655		0.196	0	0	0.0004204	0.00196	0	57%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859308	B21110712-001	HC-8015-DRO-	SAMP		11/12/2021 11:2	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0.07837881		0	0	0	0.0377719	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0853509	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0.08700512		0	0	0	0.0319459	0.3	0	0%	0	0	0%	J
n-Triacontane (SGT)	S	mg/L		0.0681		0.0971	0	0	0.0003263	0.001942	0	70%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1426982		0.1942	0	0	0.0004166	0.001942	0	73%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859309	B21110712-004	HC-8015-DRO-	SAMP		11/12/2021 12:0	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0		0	0	0	0.0368772	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0833292	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0311892	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.0641		0.0948	0	0	0.0003185	0.001896	0	68%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.124031		0.1896	0	0	0.0004067	0.001896	0	65%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859310	MARKER_1111	HC-8015-DRO-	SAMP		11/12/2021 1:31:	1	R370291		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (DRO)	A	mg/L		2.243799		0	0	0	0.0389	0.3	50	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.632517		0	0	0	0.0749	0.3	50	0%	0	0	0%	
o-Terphenyl	S	mg/L		0.208528		0.2	0	0	0.000429	0.002	0	104%	50	150	0%	
Diesel Range Organics (C10 to C24)	X	mg/L		2.243799		0	0	0	0.0389	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					
14859311	CCV_1111HP54	HC-8015-DRO-	CCV		11/12/2021 2:14:	1	R370291		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		4.52284912		5	0	0	0.0879	0.3	0	90%	80	120	0%	
n-Triacontane	S	mg/L		0.189718		0.2	0	0	0.000336	0.002	0	95%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859312	CCV_1111HP54	HC-8015-DRO-	CCV		11/12/2021 2:57:	1	R370291		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		14.93409		15	0	0	0.0389	0.3	0	100%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.4509		15	0	0	0.0749	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.2015956		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					
14859313	B21110057-002	HC-8015-DRO-	DUP		11/12/2021 4:22:	1	161122	11/8/2021 3:	0	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0.6802855		0	0	0.7552887	0.040067	0.309	0	0%	0	0	10%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0.11243441		0	0	0.1032304	0.090537	0.309	0	0%	0	0		U
Total Extractable Hydrocarbons (SGT	A	mg/L		0.8024402		0	0	0.8927249	0.033887	0.309	0	0%	0	0	11%	
n-Triacontane (SGT)	S	mg/L		0.0815		0.103	0	0	0.0003461	0.00206	0	79%	0	0	0%	S
o-Terphenyl (SGT)	S	mg/L		0.1149713		0.206	0	0	0.0004419	0.00206	0	56%	0	0	0%	S
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859314	B21110712-002	HC-8015-DRO-	SAMP		11/12/2021 5:05:	1	161122	11/8/2021 3:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0.5233978		0	0	0	0.0366827	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0828897	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0.5512023		0	0	0	0.0310247	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.0772		0.0943	0	0	0.0003168	0.001886	0	82%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1612341		0.1886	0	0	0.0004045	0.001886	0	85%	56	125	0%	
TEH(Oil Range)	X	mg/L		0		0	0	0	0.0828897	0.3	0	0%	0	0	0%	U

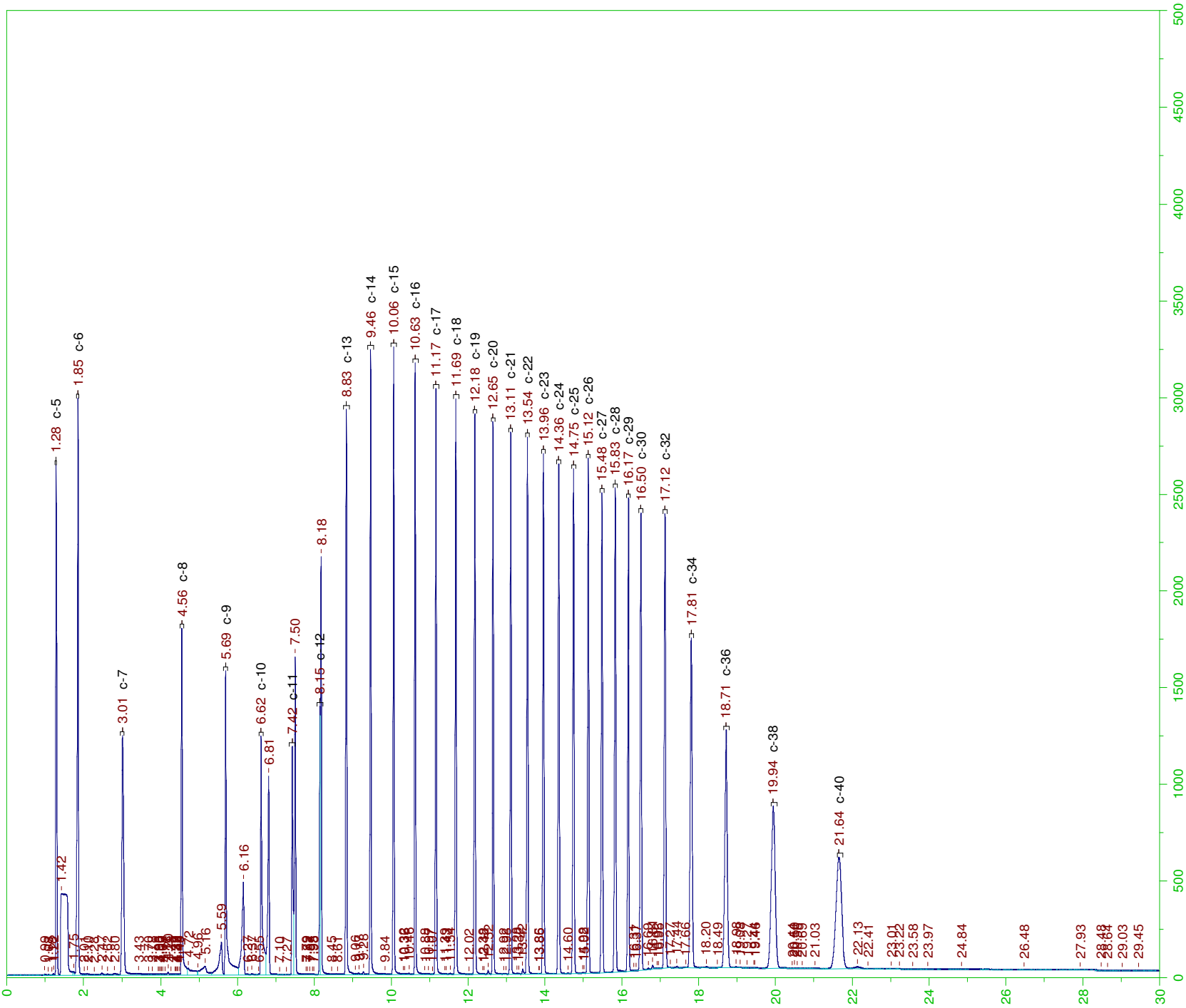
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859315	B21110712-001	HC-8015-DRO-	MS-DOD		11/12/2021 5:48:	1	161122	11/8/2021 3:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		12.38119		15	0.0783788	0	0.0389	0.3	0	82%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		13.20009		15	0.0870051	0	0.0329	0.3	0	87%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1926129		0.2	0	0	0.000429	0.002	0	96%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859316	LCS-161122-RR	HC-8015-DRO-	LCS-DOD		11/12/2021 7:14:	1	161122	11/8/2021 3:		0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		4.17166662		5	0	0	0.0879	0.3	0	83%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.0759		0.1	0	0	0.000336	0.002	0	76%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859317	LCSD-161122-R	HC-8015-DRO-	LCSD-DOD		11/12/2021 8:40:	1	161122	11/8/2021 3:		0	1E+07					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		3.87722039		5	0	4.1716666	0.0879	0.3	0	78%	41	113	7%	
n-Triacontane (SGT)	S	mg/L		0.0684		0.1	0	0	0.000336	0.002	0	68%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859318	B21110712-002	HC-8015-DRO-	MS-DOD		11/12/2021 10:0	1	161122	11/8/2021 3:	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		3.84098911		4.74	0	0	0.0833292	0.3	0	81%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.0683		0.0948	0	0	0.0003185	0.002	0	72%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14859319	MARKER_1111	HC-8015-DRO-	SAMP		11/12/2021 11:3	1	R370291			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (DRO)	A	mg/L		2.310179		0	0	0	0.0389	0.3	50	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.737043		0	0	0	0.0749	0.3	50	0%	0	0	0%	
o-Terphenyl	S	mg/L		0.2151303		0.2	0	0	0.000429	0.002	0	108%	50	150	0%	
Diesel Range Organics (C10 to C24)	X	mg/L		2.310179		0	0	0	0.0389	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					
14859320	CCV_1111HP55	HC-8015-DRO-	CCV		11/13/2021 12:1	1	R370291		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		4.65974072		5	0	0	0.0879	0.3	0	93%	80	120	0%	
n-Triacontane	S	mg/L		0.1927887		0.2	0	0	0.000336	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					
14859321	CCV_1111HP56	HC-8015-DRO-	CCV		11/13/2021 12:5	1	R370291		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		15.11129		15	0	0	0.0389	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.6321		15	0	0	0.0749	0.3	50	104%	80	120	0%	
o-Terphenyl	S	mg/L		0.204544		0.2	0	0	0.000429	0.002	0	102%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP5\DAT\HP5111121_b1111HP5.01	MARKER_1111HP501r, DRO ;1111HP5 , DRO210708A	G:\org\HP5\Methods\CS211108.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.02	MARKER_1111HP502r, DRO ;1111HP5 , DRO211012I	G:\org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.03	CCV_1111HP503r, RRO ;1111HP5 , DRO21108A	G:\org\HP5\Methods\DC_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-AD-L%.MET	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.04	CCV_1111HP504r, DRO ;1111HP5 , DRO21103A	G:\org\HP5\Methods\DC_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L%.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.05	DCM-Baseline Check-V05	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.06	LCS-161122 ;1111HP5 ,	G:\org\HP5\Methods\D3_8015-111106-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L%.met	1000	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.07	LCS-D-161122 ;1111HP5 ,	G:\org\HP5\Methods\D3_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L%.met	1000	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.08	MB-161122 ;1111HP5 ,	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1000	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.09	B21110712-007A ;1111HP5 , \$HC-8015-DRO-W,	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1030	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.10	B21110712-006A ;1111HP5 , \$HC-8015-DRO-W,	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1050	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.11	B21110712-005A ;1111HP5 , \$HC-8015-DRO-W,	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1020	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.12	B21110712-003A ;1111HP5 , \$HC-8015-DRO-W,	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1020	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.13	B21110712-004A ;1111HP5 , \$HC-8015-DRO-W,	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1055	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.14	DCM-Baseline Check-V14	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.15	B21110712-002A ;1111HP5 , \$HC-8015-DRO-W,	G:\org\HP5\Methods\D3_8015-111115-IB-L%.met G:\org\HP5\Methods\D3_OROS-111115-AD-L%.MET G:\org\HP5\Methods\DS_8015-111121-IB-L%.MET	1060	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.16	MARKER_1111HP517r, DRO ;1111HP5 , DRO210708A	G:\org\HP5\Methods\CS211108.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.17	MARKER_1111HP518r, DRO ;1111HP5 , DRO211012I	G:\org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.18	CCV_1111HP519r, RRO ;1111HP5 , DRO21108A	G:\org\HP5\Methods\DC_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-AD-L%.MET	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.19	CCV_1111HP520r, DRO ;1111HP5 , DRO21103A	G:\org\HP5\Methods\DC_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L%.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.20	DCM-Baseline Check-V20	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.21	B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX	G:\org\HP5\Methods\D3_8015-C24T-IB-L%.met G:\org\HP5\Methods\D3_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-111121-IB-L%.MET	975	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.22	B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,	G:\org\HP5\Methods\D3_8015-111115-IB-L%.met G:\org\HP5\Methods\D3_OROS-111115-AD-L%.MET G:\org\HP5\Methods\DS_8015-111121-IB-L%.MET	1030	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.23	B21110712-001AMS ;1111HP5 ,	G:\org\HP5\Methods\D3_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L%.met	1000	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.24	DCM-Baseline Check-V24	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.25	LCS-161122-RRO ;1111HP5 ,	G:\org\HP5\Methods\D3_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-111125-AD-L%.MET	1000	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.26	DCM-Baseline Check-V26	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.27	LCS-D-161122-RRO ;1111HP5 ,	G:\org\HP5\Methods\D3_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-111125-AD-L%.MET	1000	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.28	DCM-Baseline Check-V28	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.29	B21110712-002AMS-RRO ;1111HP5 ,	G:\org\HP5\Methods\D3_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-111125-AD-L%.MET	1055	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.30	MARKER_1111HP530r, DRO ;1111HP5 , DRO210708A	G:\org\HP5\Methods\CS211108.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.31	MARKER_1111HP531r, DRO ;1111HP5 , DRO211012I	G:\org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.32	CCV_1111HP532r, RRO ;1111HP5 , DRO21108A	G:\org\HP5\Methods\DC_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-AD-L%.MET	1	1	1	1	0	
G:\org\HP5\DAT\HP5111121_b1111HP5.33	CCV_1111HP533r, DRO ;1111HP5 , DRO21103A	G:\org\HP5\Methods\DC_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L%.met	1	1	1	1	0	

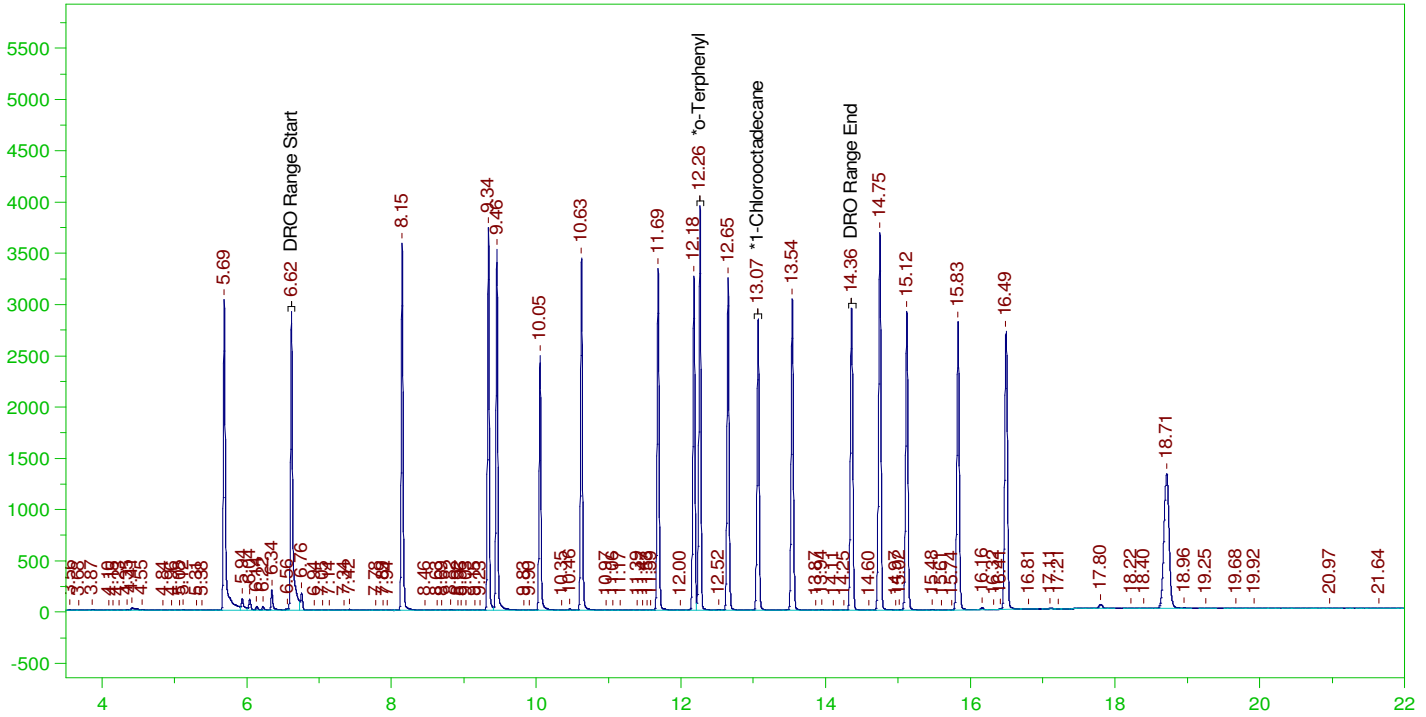
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	G:\org\HP5\DATA\HP5111121_b1111\HP5.31	MARKER_1111HP531r, DRO ;1111HP5 , DRO211012I	G:\org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.32	CCV_1111HP532r, RRO ;1111HP5 , DRO21108A	G:\org\HP5\Methods\DC_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-AD-L#.MET	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.33	CCV_1111HP533r, DRO ;1111HP5 , DRO21103A	G:\org\HP5\Methods\DC_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L#.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.34	DCM-Baseline Check-V34	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.35	DCM-Baseline Check-V35	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.36	LCS-161122 ;1111HP5 , SGT	G:\org\HP5\Methods\D3_8015-111106-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L#.met	1000	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.37	LCSD-161122 ;1111HP5 , SGT	G:\org\HP5\Methods\D3_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L#.met	1000	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.38	MB-161122 ;1111HP5 , SGT	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24Tb-IB-L#.MET	1000	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.39	B21110712-003A ;1111HP5 , \$HC-8015-DRO-W, SGT	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24Tb-IB-L#.MET	1020	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.40	B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, RR poked wrong vial	G:\org\HP5\Methods\DR_8015-C24T-IB-L0.met	1055	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.41	B21110712-001A ;1111HP5 , \$HC-8015-DRO-W, SGT	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24Tb-IB-L#.MET	1030	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.42	B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, SGT-RR	G:\org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\org\HP5\Methods\DR_OROS-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24Tb-IB-L#.MET	1055	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.43	MARKER_1111HP543r, DRO ;1111HP5 , DRO210708A	G:\org\HP5\Methods\CS211108.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.44	MARKER_1111HP544r, DRO ;1111HP5 , DRO211012I	G:\org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.45	CCV_1111HP545r, RRO ;1111HP5 , DRO21108A	G:\org\HP5\Methods\DC_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-AD-L#.MET	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.46	CCV_1111HP546r, DRO ;1111HP5 , DRO21103A	G:\org\HP5\Methods\DC_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L#.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.47	DCM-Baseline Check-V47	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.48	B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT	G:\org\HP5\Methods\DR_8015-111148-IB-L%.met G:\org\HP5\Methods\DR_OROS-111148-AD-L%.MET G:\org\HP5\Methods\DS_8015-C24Tb-IB-L#.MET	975	1	1	1	0
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	G:\org\HP5\DATA\HP5111121_b1111\HP5.50	B21110712-001AMS ;1111HP5 , SGT	G:\org\HP5\Methods\D3_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L#.met	1000	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.51	DCM-Baseline Check-V51	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0
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	G:\org\HP5\DATA\HP5111121_b1111\HP5.53	DCM-Baseline Check-V53	G:\org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.54	LCSD-161122-RRO ;1111HP5 , SGT	G:\org\HP5\Methods\D3_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-111125-AD-L#.MET	1000	1	1	1	0
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	G:\org\HP5\DATA\HP5111121_b1111\HP5.56	B21110712-002AMS-RRO ;1111HP5 , SGT	G:\org\HP5\Methods\D3_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-111125-AD-L#.MET	1055	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.57	MARKER_1111HP557r, DRO ;1111HP5 , DRO210708A	G:\org\HP5\Methods\CS211108.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.58	MARKER_1111HP558r, DRO ;1111HP5 , DRO211012I	G:\org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.59	CCV_1111HP559r, RRO ;1111HP5 , DRO21108A	G:\org\HP5\Methods\DC_ORO-AD-L%.MET G:\org\HP5\Methods\DS_ORO-AD-L#.MET	1	1	1	1	0
	G:\org\HP5\DATA\HP5111121_b1111\HP5.60	CCV_1111HP560r, DRO ;1111HP5 , DRO21103A	G:\org\HP5\Methods\DC_8015-24-IB-L%.met G:\org\HP5\Methods\DS_8015-24-IB-L#.met	1	1	1	1	0





G:\org\HP5\DAT\HP5111121\_b\1111HP5.0002.RAW

MARKER\_1111HP502r, DRO ;1111HP5 , DRO211012I



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

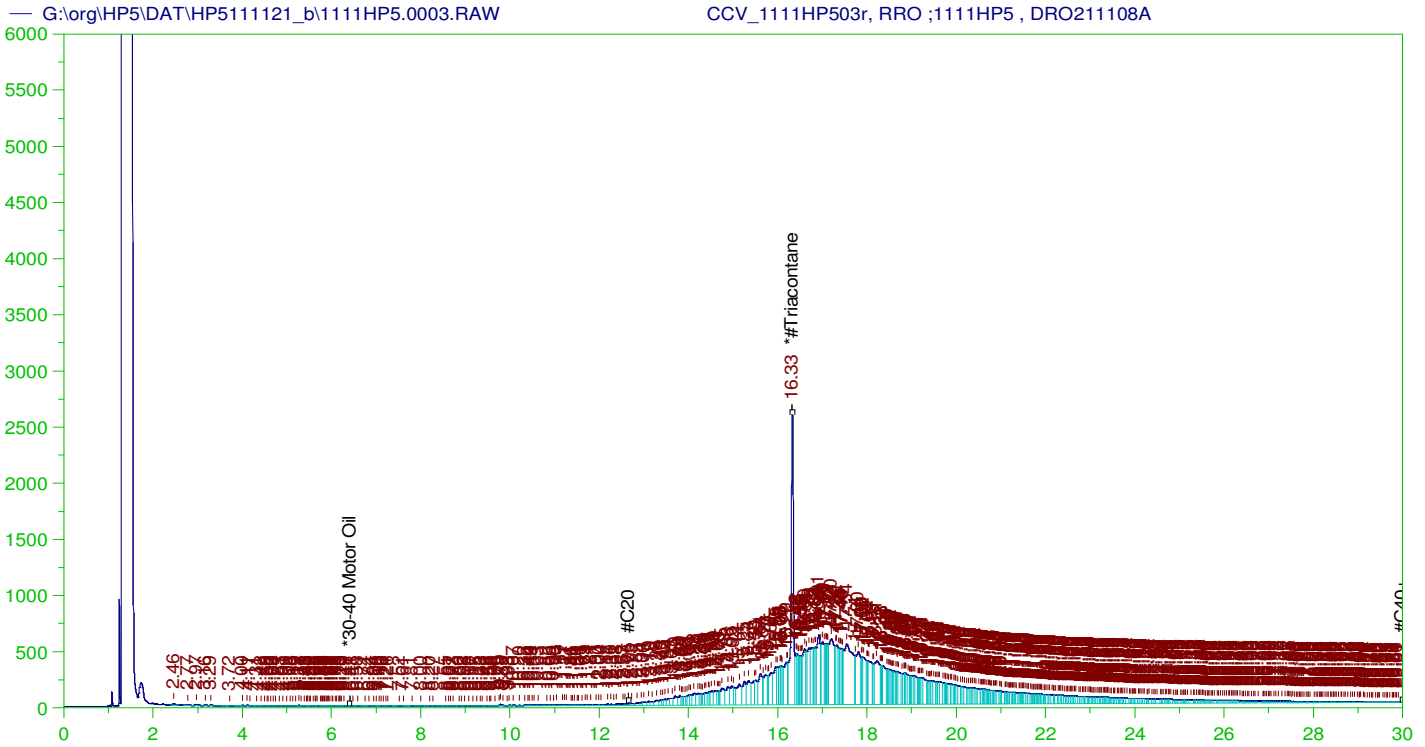
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 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211012IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.262	.2	.208	104.17
*1-Chlorooctadecane	13.066	.2	.168	84.24

DRO Area: 7.044704E+07 DRO Amount: 2.246886  
 TEH Area: 1.13903E+08 TEH Amount: 3.632901



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP503r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0003.RAW  
 Date & Time Acquired: 11/11/2021 6:07:04 AM  
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 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.325	500.	327.556	65.51	-

RRO TEH(Oil Range)Area:1.348585E+08 RRO TEH(Oil Range)AMOUNT: 4724.847

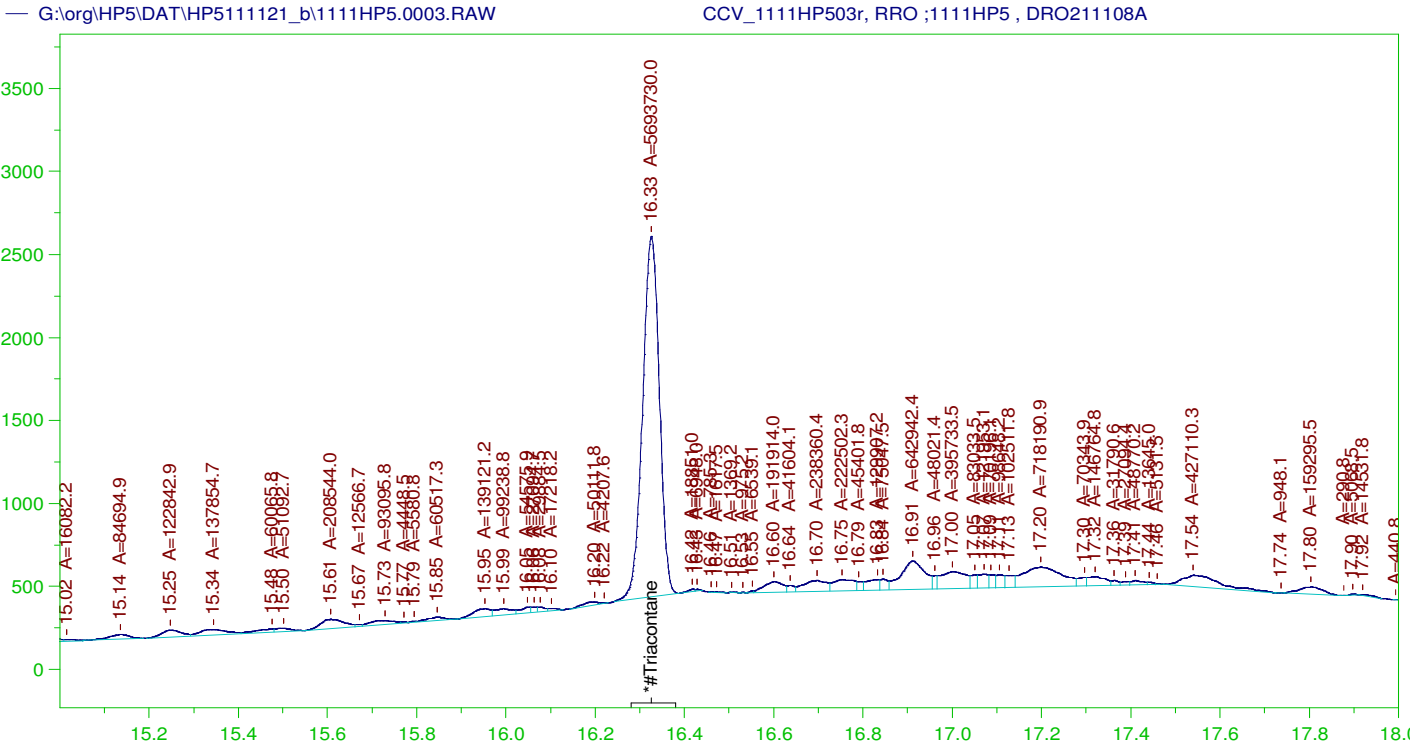
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COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.091	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.325	200.	327.556	163.78	75-125

AMN 11/18/2021



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP503r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0003.RAW  
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 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

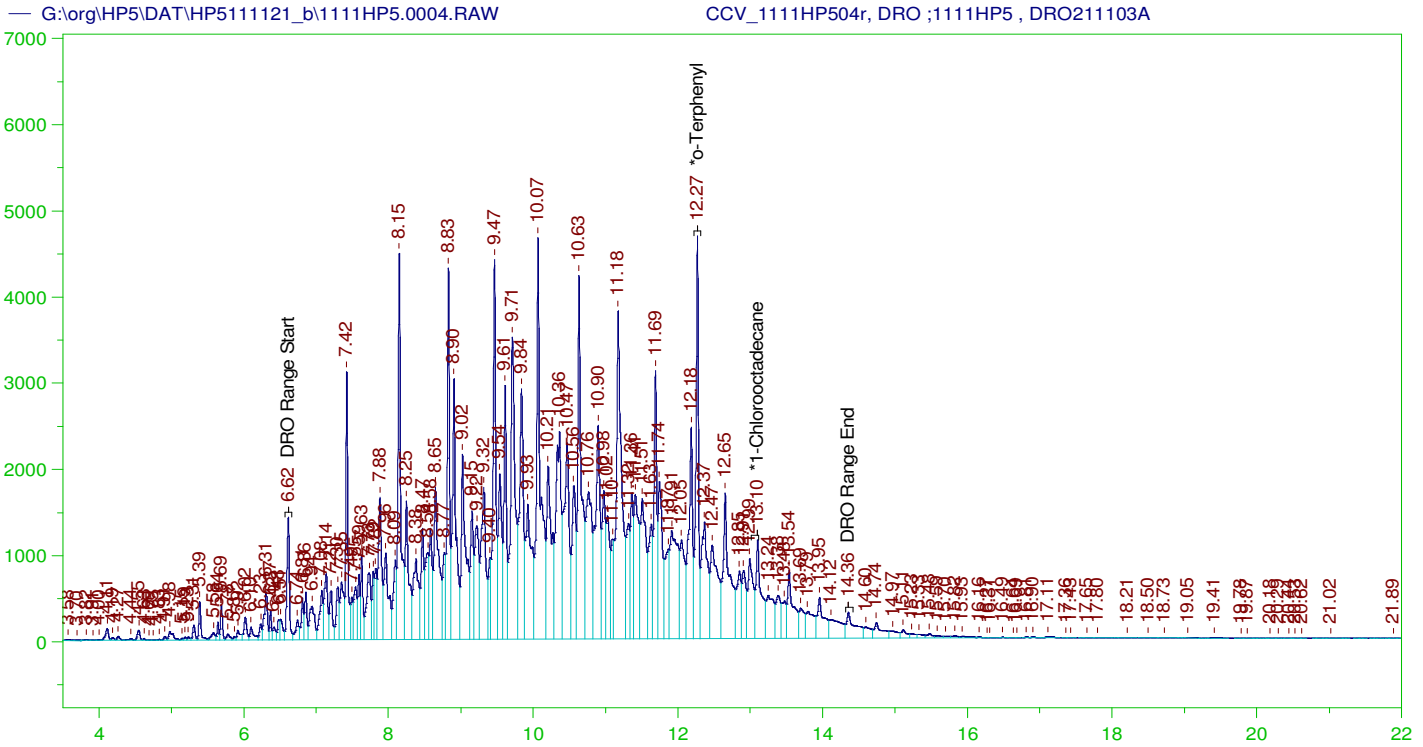
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.325	500.	196.81	39.36	-

RRO Area:6806253 RRO AMOUNT: 238.461

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0003.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.091	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.325	200.	196.81	98.4	75-125



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP504r, DRO ;1111HP5 , DRO211103A  
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 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	336.938	168.47
*1-Chlorooctadecane	13.102	200.	162.232	81.12

DRO Area: 4.722434E+08 DRO Amount: 15062.05  
 TEH Area: 4.885879E+08 TEH Amount: 15583.35

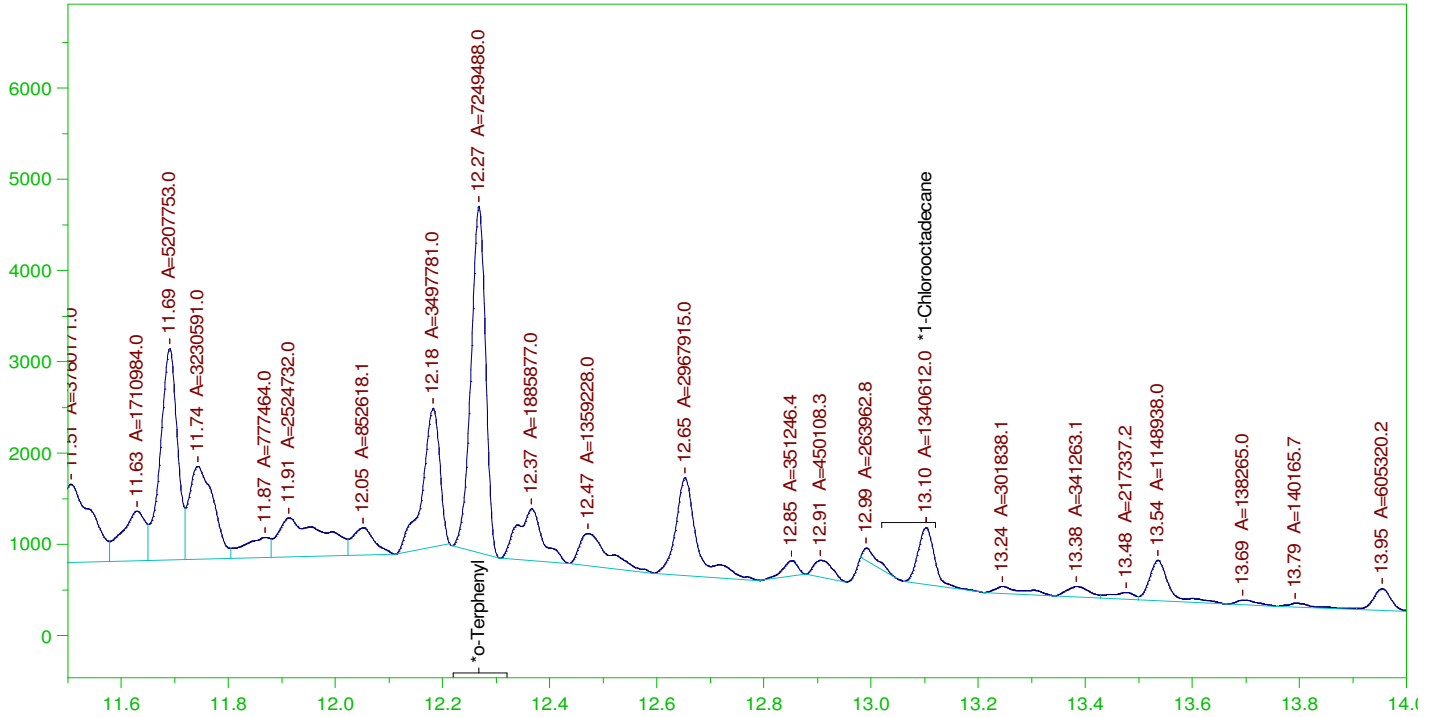
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COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15583.35	103.89	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	336.938	168.47	85-115
*1-Chlorooctadecane	13.102	200.	162.232	81.12	85-115

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0004.RAW

CCV\_1111HP504r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP504r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0004.RAW  
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Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

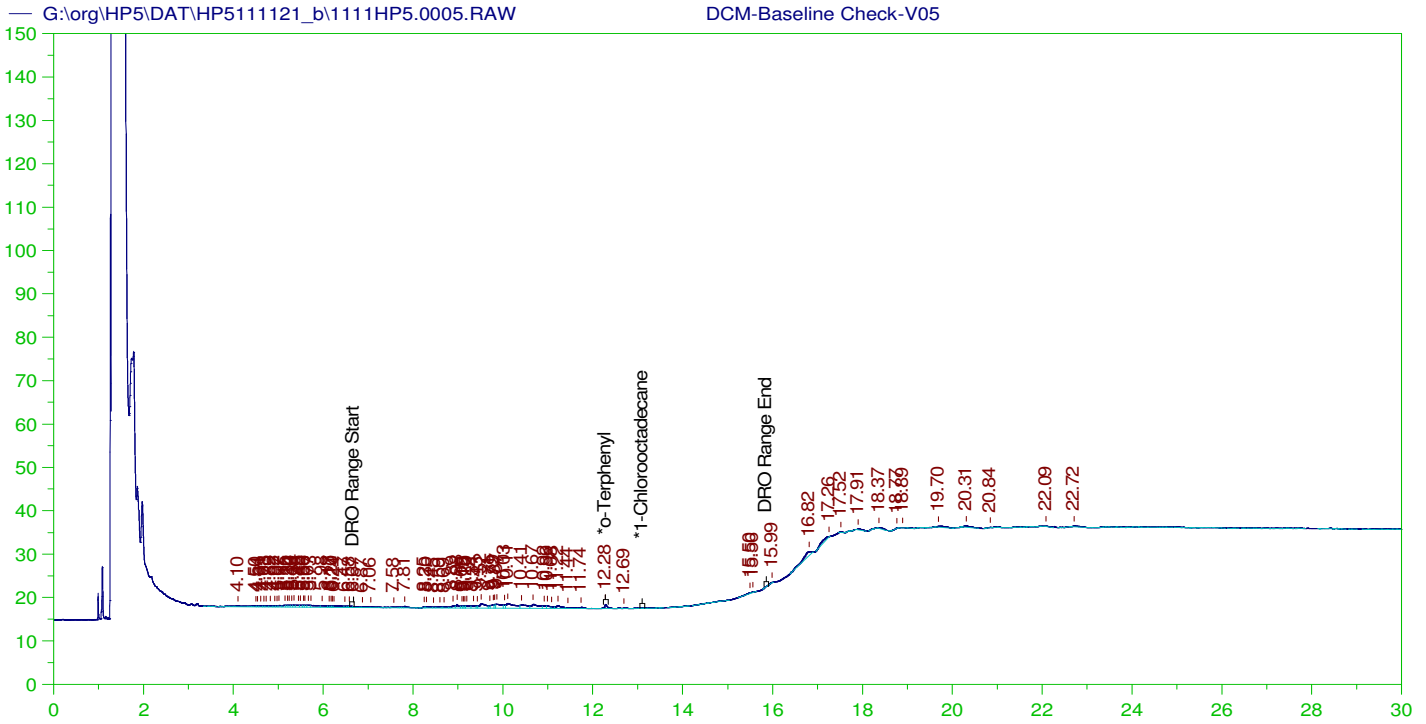
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	204.158	102.08
*1-Chlorooctadecane	13.102	200.	37.754	18.88

DRO Area: 2.664054E+08 DRO Amount: 8496.914  
 TEH Area: 2.768401E+08 TEH Amount: 8829.726

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0004.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8829.73	58.86	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	204.158	102.08	85-115
*1-Chlorooctadecane	13.102	200.	37.754	18.88	85-115



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V05  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0005.RAW  
 Date & Time Acquired: 11/11/2021 7:40:05 AM  
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 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

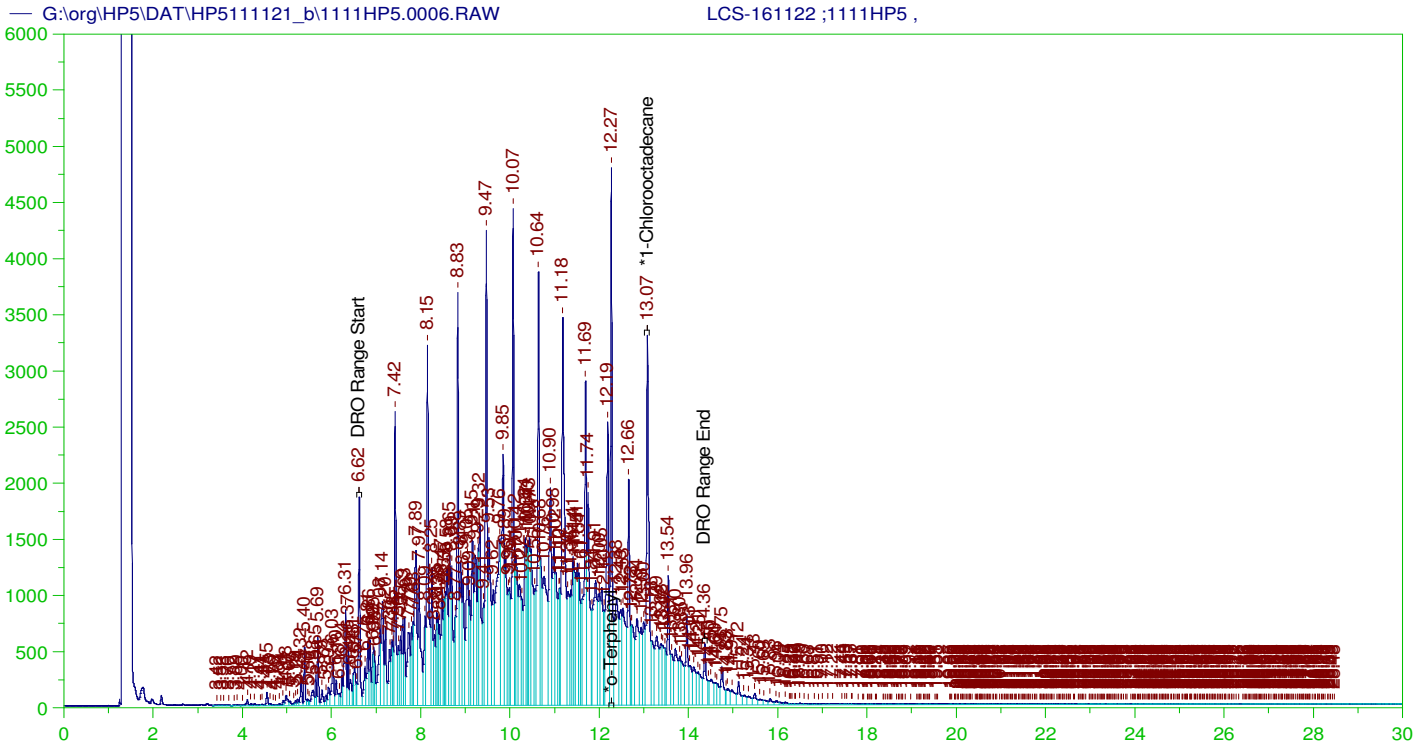
Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.284	200.	.128	.06	-
*1-Chlorooctadecane	29.964	200.	.	.	-

DRO Area:122181.8 DRO Amount: 3.89695  
 TEH Area:227997.8 TEH Amount: 7.271917

Batch ID: 161122

LCS-161122 ;1111HP5 ,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

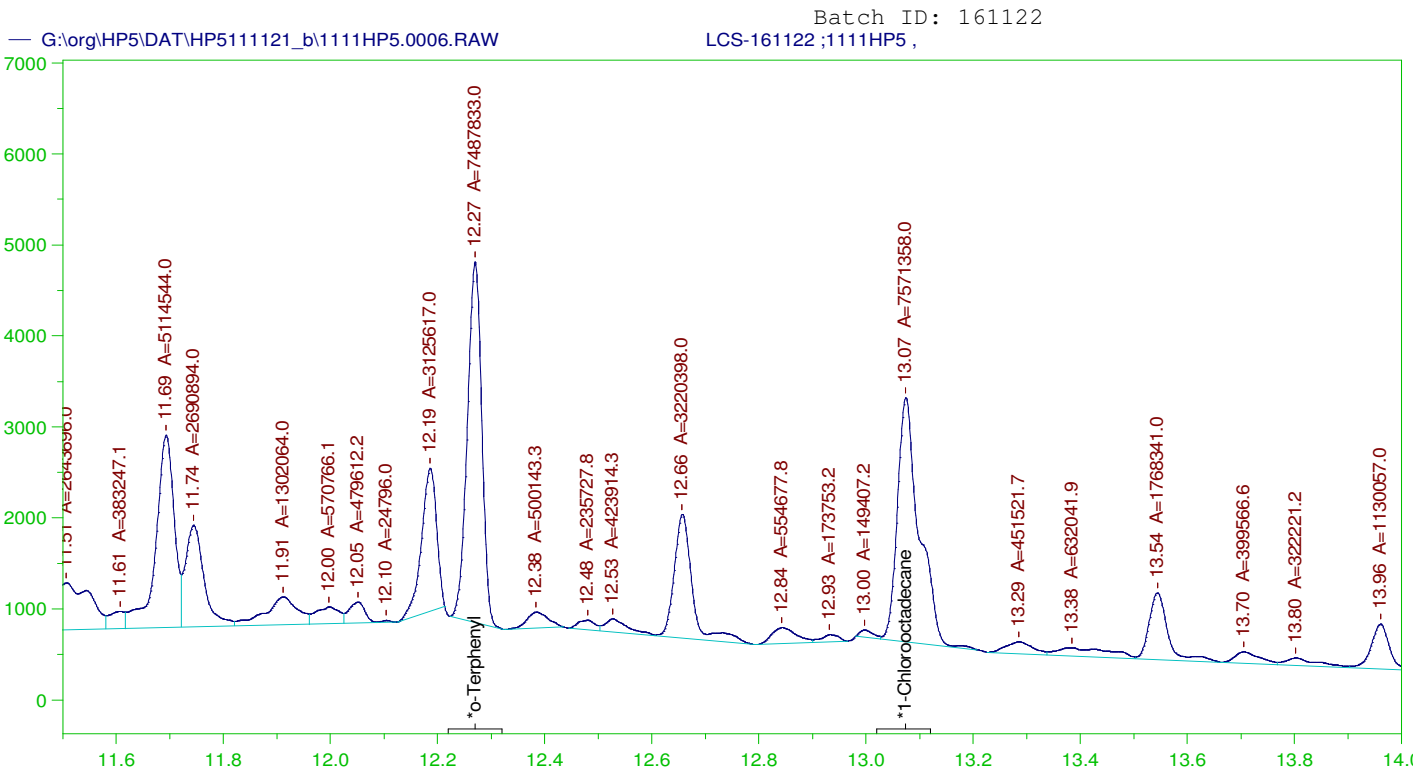
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Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.27	.2	.353	176.29	-
*1-Chlorooctadecane	13.074	.2	.348	174.19	-

DRO Area: 4.178093E+08 DRO Amount: 13.3259  
TEH Area: 4.473517E+08 TEH Amount: 14.26814



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: LCS-161122 ;1111HP5 ,  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0006.RAW  
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 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

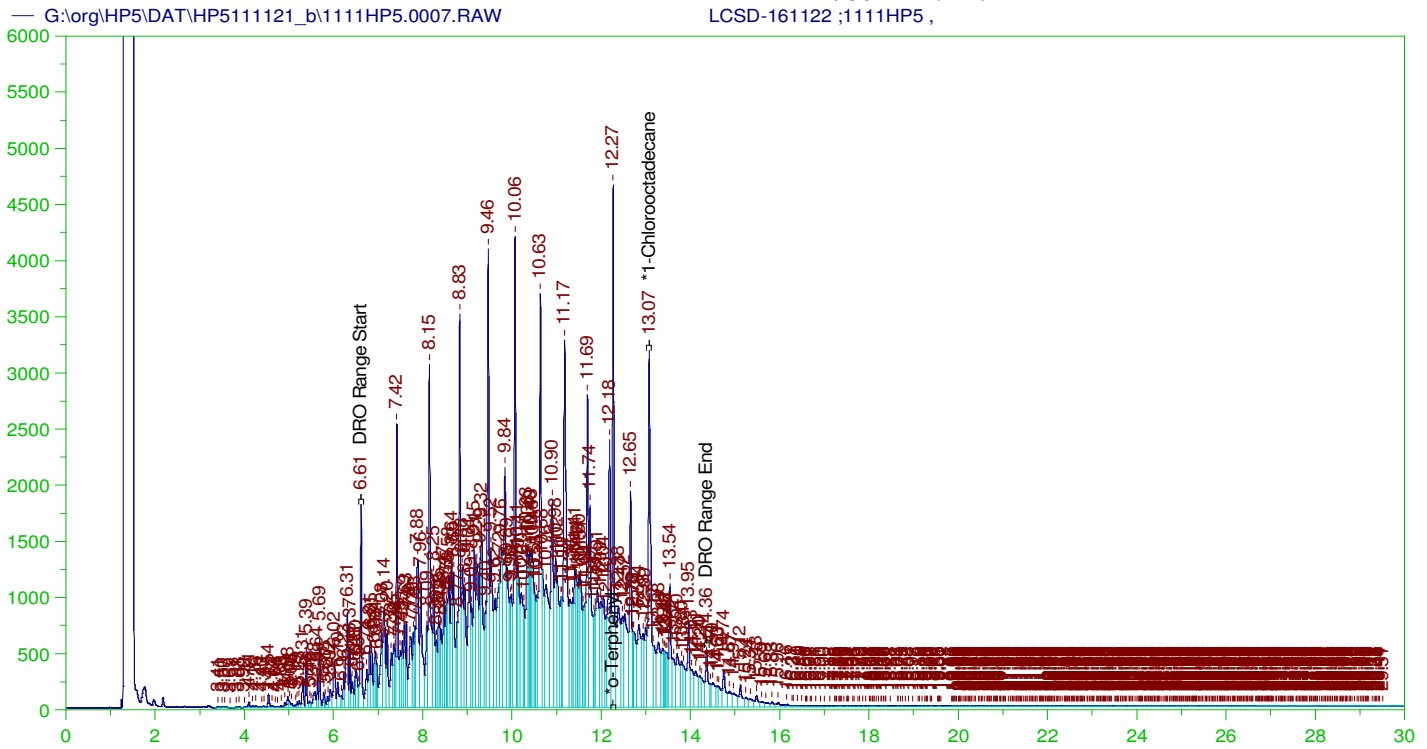
Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.27	.2	.211	105.44
*1-Chlorooctadecane	13.074	.2	.213	106.61

DRO Area: 2.07453E+08 DRO Amount: 6.616645  
 TEH Area: 2.217884E+08 TEH Amount: 7.07387



Batch ID: 161122  
LCSD-161122 ;1111HP5 ,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: LCSD-161122 ;1111HP5 ,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0007.RAW  
Date & Time Acquired: 11/11/2021 9:05:25 AM  
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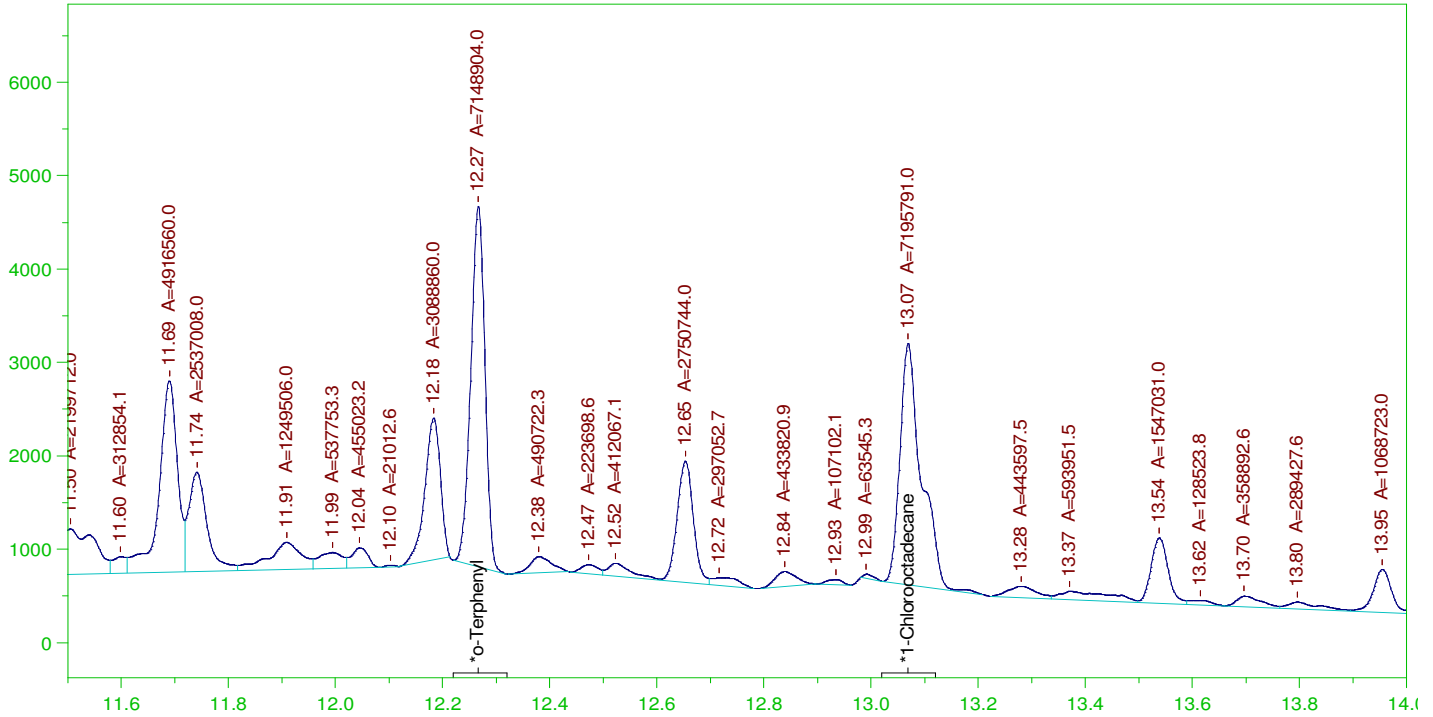
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.267	.2	.336	167.92	-
*1-Chlorooctadecane	13.069	.2	.336	167.84	-

DRO Area: 3.989072E+08 DRO Amount: 12.72302  
TEH Area: 4.281257E+08 TEH Amount: 13.65493

Batch ID: 161122  
G:\org\HP5\DAT\HP5111121\_b\1111HP5.0007.RAW LCSD-161122 ;1111HP5 ,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

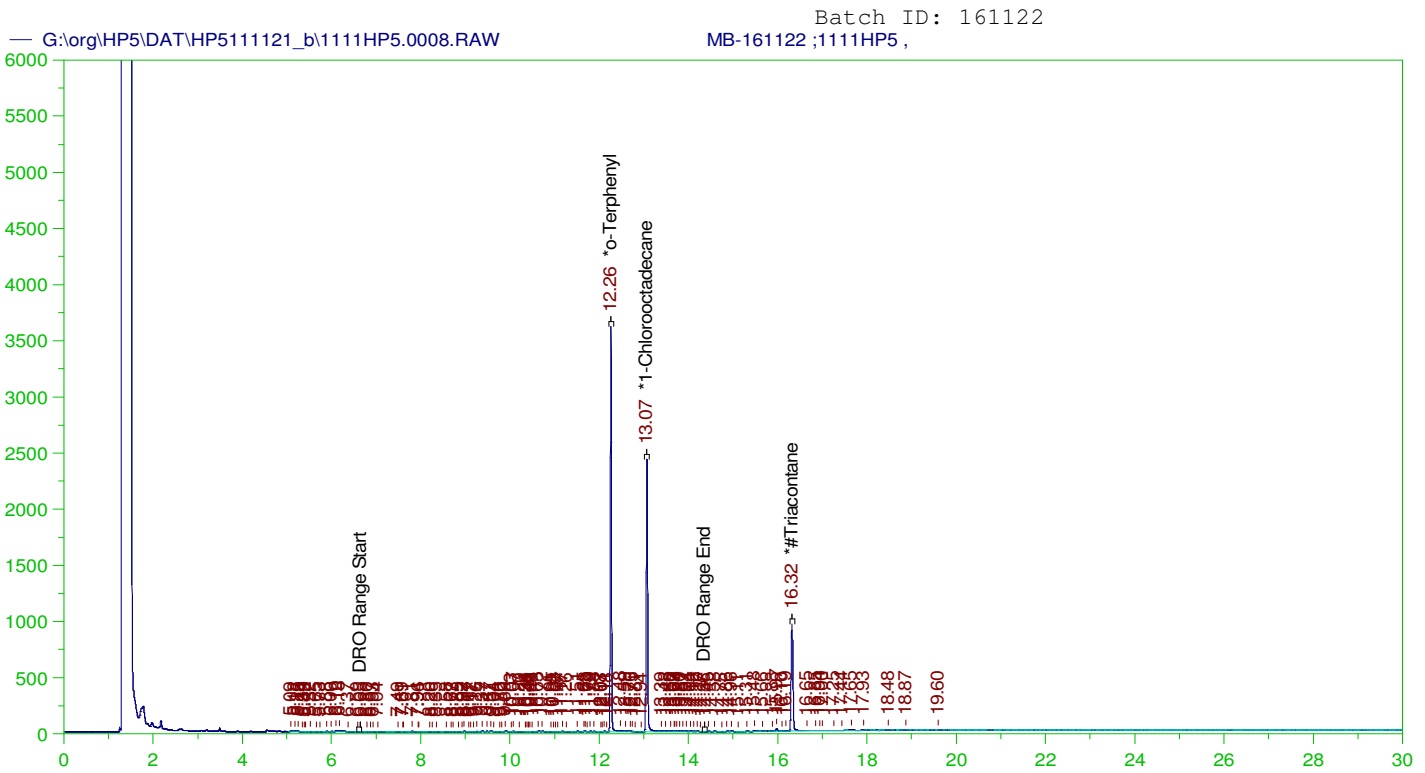
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Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.267	.2	.201	100.66
*1-Chlorooctadecane	13.069	.2	.203	101.32

DRO Area:1.985625E+08 DRO Amount: 6.333087  
TEH Area:2.127811E+08 TEH Amount: 6.786585



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

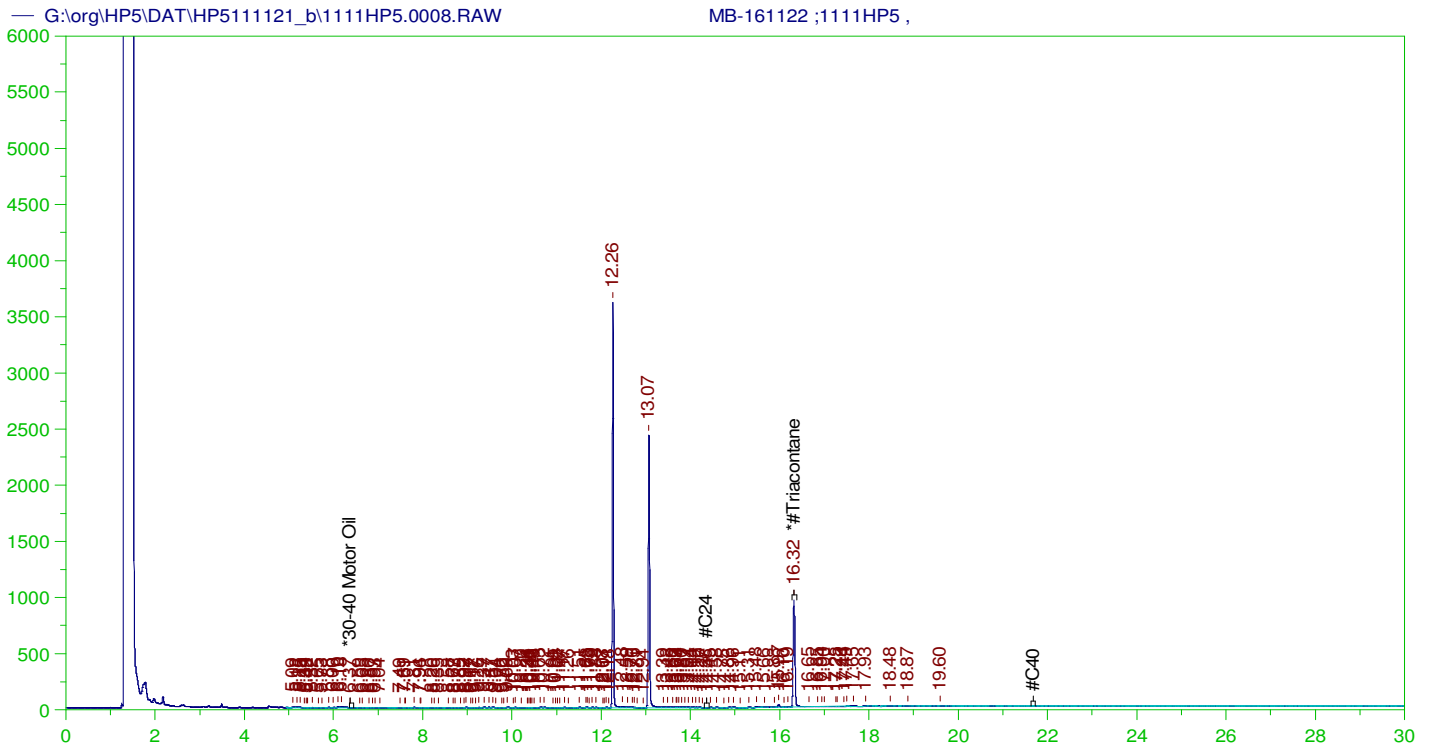
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Date & Time Acquired: 11/11/2021 9:48:03 AM  
Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.261	.2	.193	96.31	-
*1-Chlorooctadecane	13.065	.2	.151	75.53	-
*#Triacontane	16.317	.2	.088	43.99	-

DRO Area:552452.8 DRO Amount: 1.762031E-02  
TEH Area:889357.9 TEH Amount: 2.836579E-02



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: MB-161122 ;1111HP5 ,  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0008.RAW  
 Date & Time Acquired: 11/11/2021 9:48:03 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

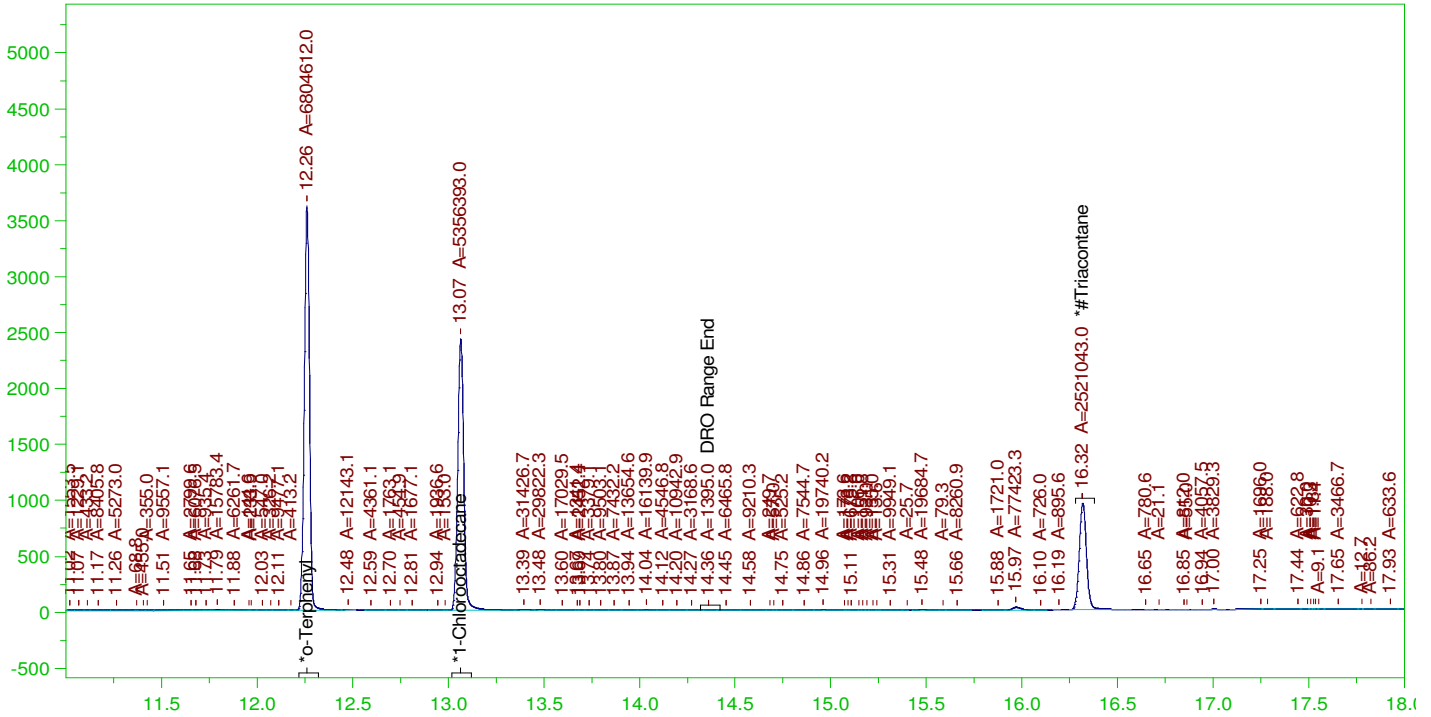
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.317	.5	.088	17.59

RRO Area:235690 RRO AMOUNT: 8.257538E-03

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0008.RAW

MB-161122 ;1111HP5 ,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: MB-161122 ;1111HP5 ,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0008.RAW  
Date & Time Acquired: 11/11/2021 9:48:03 AM  
Method File: G:\Org\HP5\Methods\DS\_8015-C24T-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.261	.2	.192	95.81
*1-Chlorooctadecane	13.065	.2	.151	75.42
*#Triacontane	16.317	.2	.087	43.57

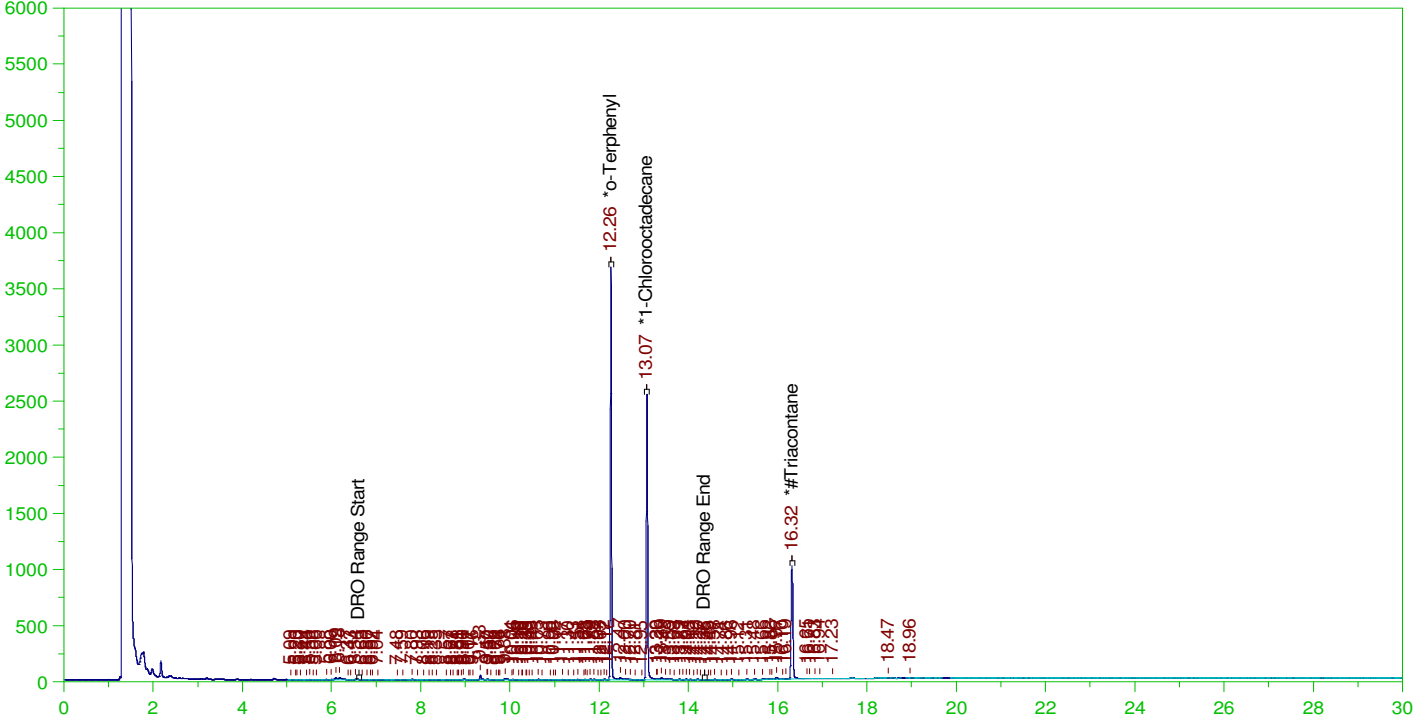
DRO Area:476140.9 DRO Amount: 1.518636E-02  
TEH Area:1080033 TEH Amount: 3.444732E-02

ERH1890 (RHSF)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0009.RAW

B21110712-007A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-007A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0009.RAW  
Date & Time Acquired: 11/11/2021 10:31:07 AM  
Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.262	.194	.192	98.68	-
*1-Chlorooctadecane	13.065	.194	.153	78.78	-
*#Triacontane	16.316	.194	.091	46.99	-

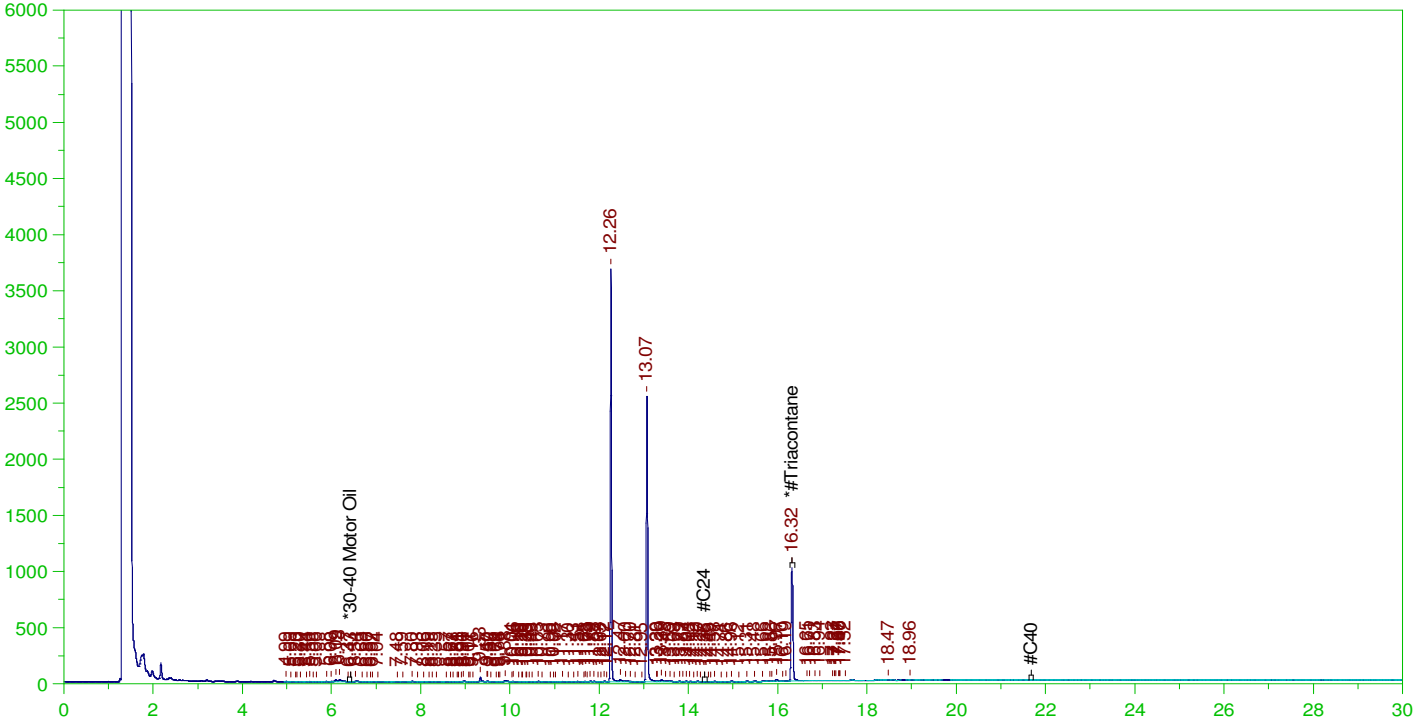
DRO Area:677380.7 DRO Amount: 2.097557E-02  
TEH Area:1066758 TEH Amount: 3.303293E-02

ERH1890 (RHSF)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0009.RAW

Batch ID: 161122

B21110712-007A ;1111HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-007A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0009.RAW  
Date & Time Acquired: 11/11/2021 10:31:07 AM  
Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.316	.485	.091	18.79

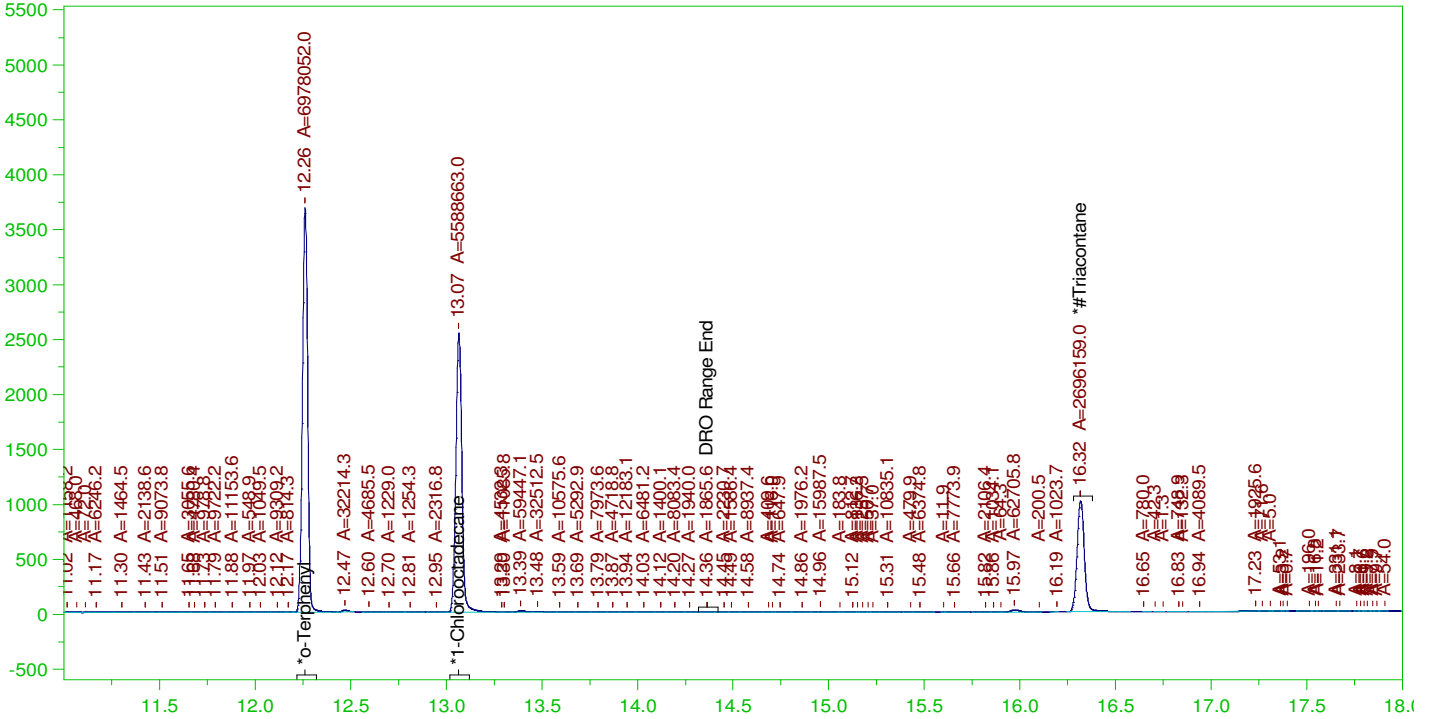
RRO Area:189160.7 RRO AMOUNT: 6.434327E-03

ERH1890 (RHSF)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0009.RAW

Batch ID: 161122

B21110712-007A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-007A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0009.RAW  
Date & Time Acquired: 11/11/2021 10:31:07 AM  
Method File: G:\Org\HP5\Methods\DS\_8015-C24T-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.262	.194	.191	98.26
*1-Chlorooctadecane	13.065	.194	.153	78.69
*#Triacontane	16.316	.194	.09	46.6

DRO Area:584512.6 DRO Amount: 1.809985E-02  
TEH Area:1155529 TEH Amount: 3.578176E-02

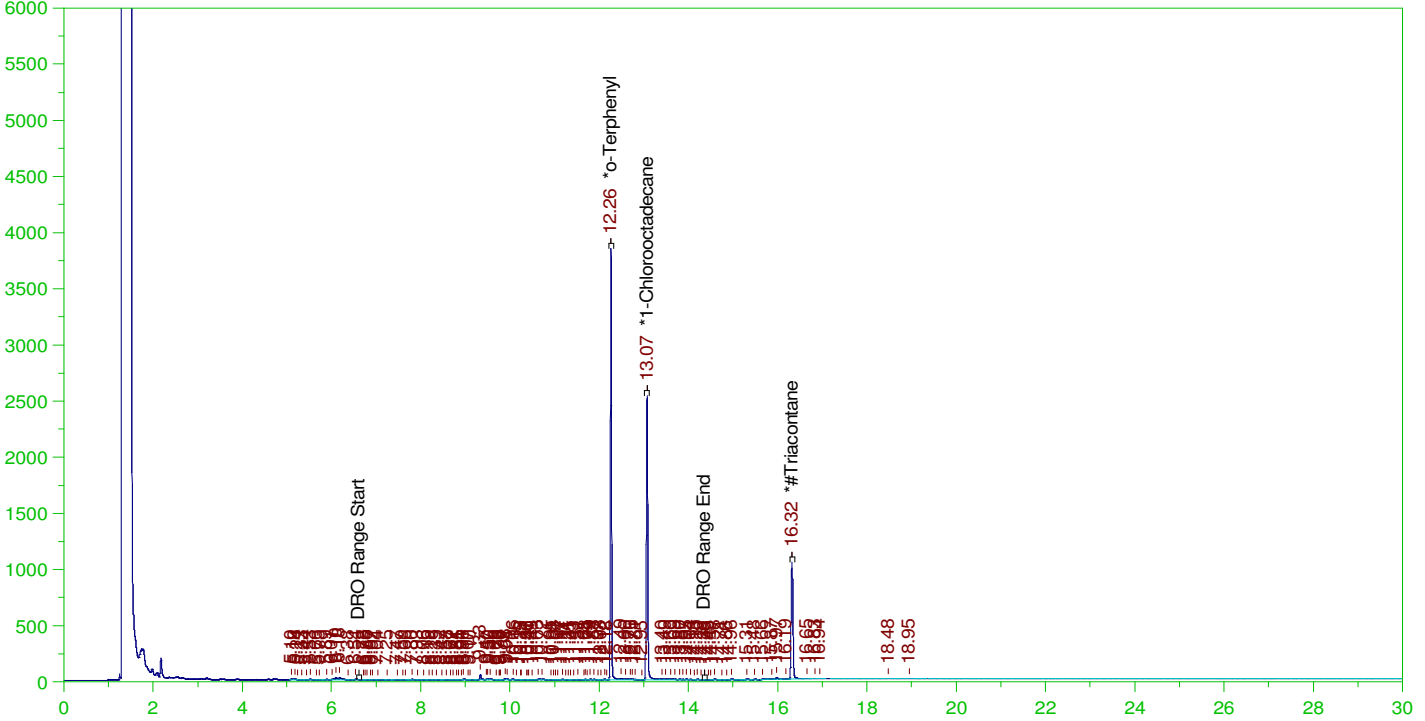


ERH1888 (RHSF)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0010.RAW

B21110712-006A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-006A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0010.RAW  
Date & Time Acquired: 11/11/2021 11:13:55 AM  
Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.263	.19	.196	103.04	-
*1-Chlorooctadecane	13.068	.19	.149	78.4	-
*#Triacontane	16.317	.19	.092	48.04	-

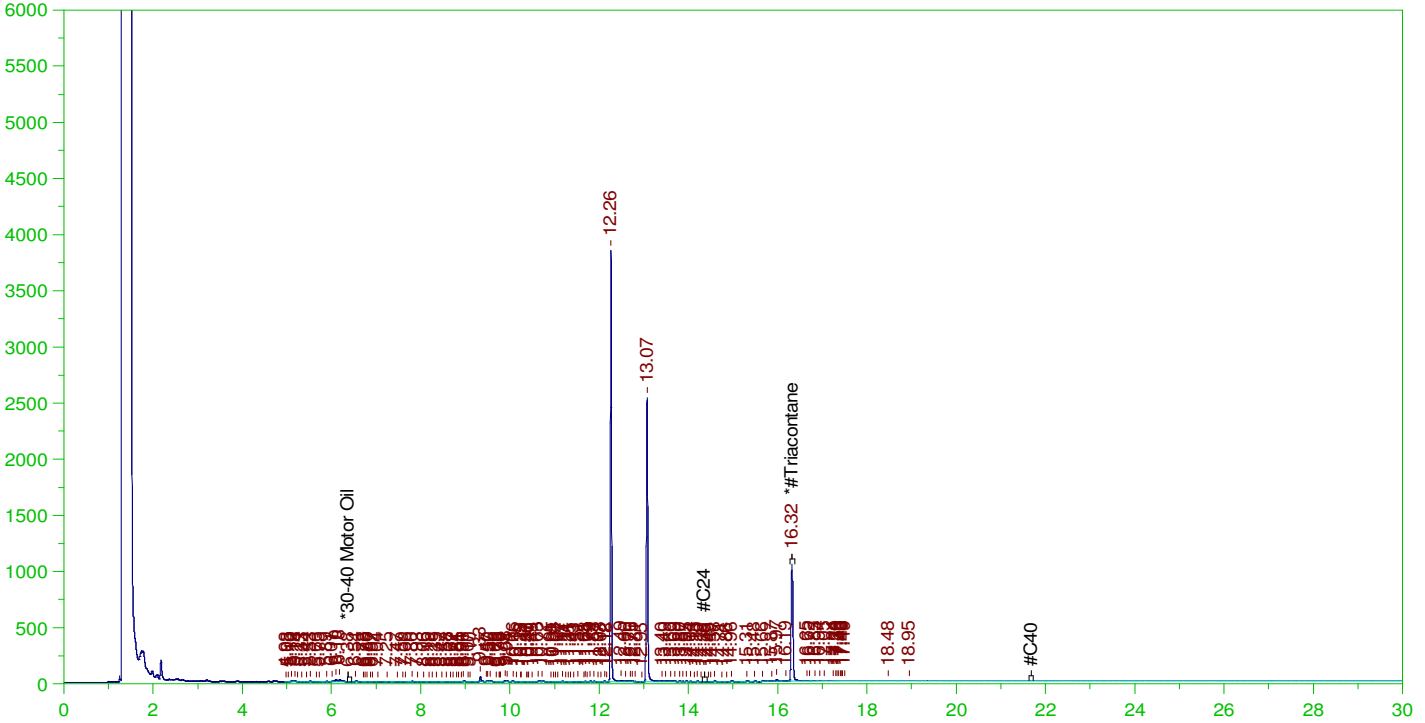
DRO Area:716120.9 DRO Amount: 2.175281E-02  
TEH Area:1107045 TEH Amount: 3.362748E-02

ERH1888 (RHSF)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0010.RAW

B21110712-006A ;1111HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-006A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0010.RAW  
Date & Time Acquired: 11/11/2021 11:13:55 AM  
Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.317	.476	.092	19.24

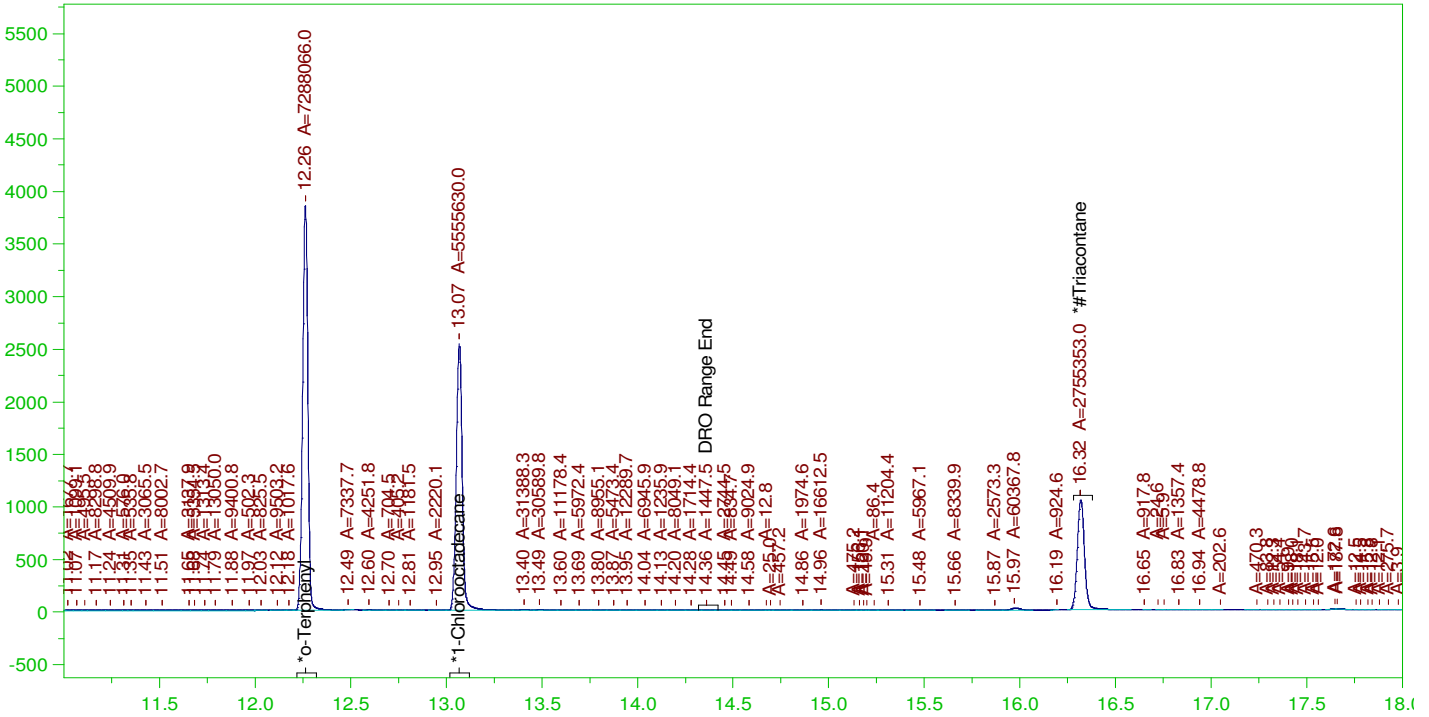
RRO Area:200150.9 RRO AMOUNT: 6.67848E-03

ERH1888 (RHSF)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0010.RAW

B21110712-006A ; 1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-006A ; 1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0010.RAW  
Date & Time Acquired: 11/11/2021 11:13:55 AM  
Method File: G:\Org\HP5\Methods\DS\_8015-C24T-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.263	.19	.195	102.62	-
*1-Chlorooctadecane	13.068	.19	.149	78.23	-
*#Triacontane	16.317	.19	.091	47.62	-

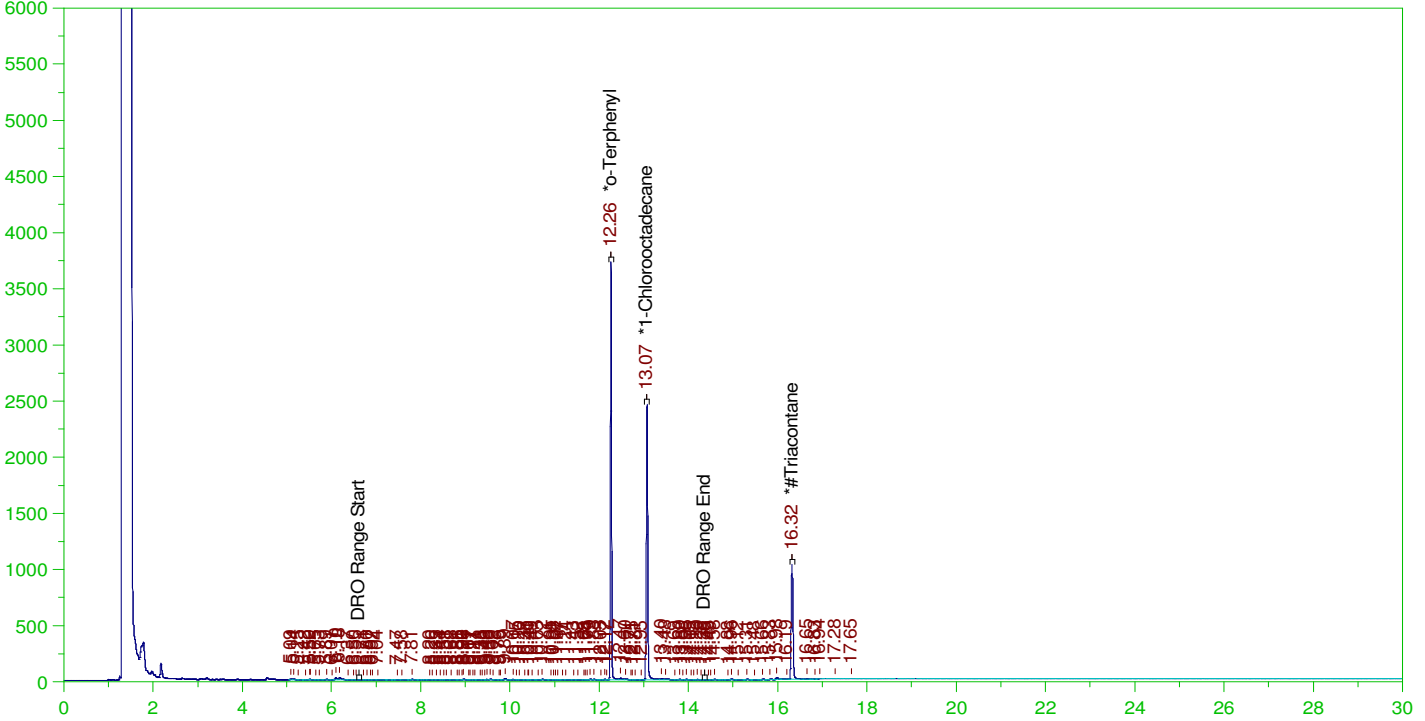
DRO Area: 605652.6 DRO Amount: 1.839723E-02  
TEH Area: 1170790 TEH Amount: 3.556378E-02

ERH1885 (RHMW2254-01)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0011.RAW

B21110712-005A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-005A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0011.RAW  
Date & Time Acquired: 11/11/2021 11:56:31 AM  
Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.263	.196	.195	99.41	-
*1-Chlorooctadecane	13.067	.196	.149	75.95	-
*#Triacontane	16.318	.196	.092	46.91	-

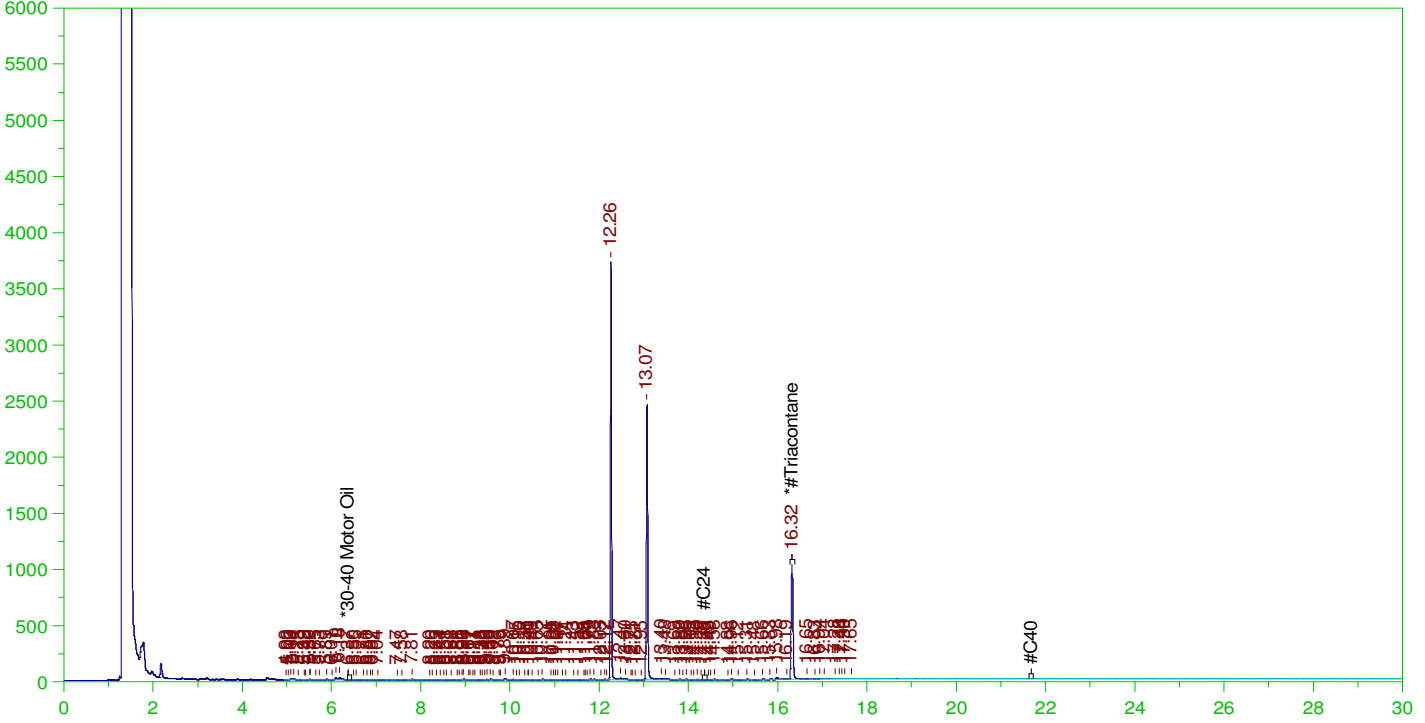
DRO Area:552610.3 DRO Amount: 1.727973E-02  
TEH Area:914796.4 TEH Amount: 2.860504E-02

ERH1885 (RHMW2254-01)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0011.RAW

Batch ID: 161122

B21110712-005A ; 1111HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-005A ; 1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0011.RAW  
Date & Time Acquired: 11/11/2021 11:56:31 AM  
Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.318	.49	.092	18.76	-

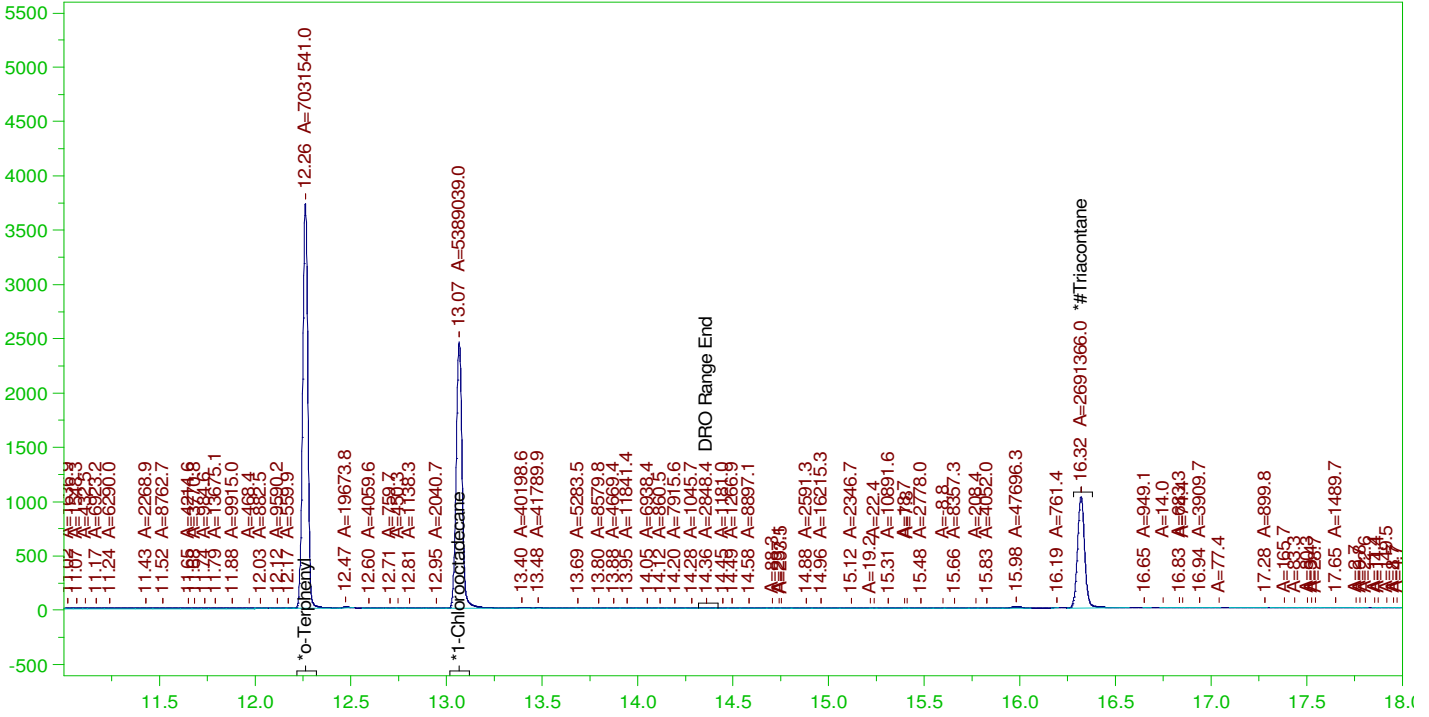
RRO Area:162930.2 RRO AMOUNT: 5.596427E-03

ERH1885 (RHMW2254-01)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0011.RAW

B21110712-005A ; 1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-005A ; 1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0011.RAW  
Date & Time Acquired: 11/11/2021 11:56:31 AM  
Method File: G:\Org\HP5\Methods\DS\_8015-C24T-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.263	.196	.194	99.01
*1-Chlorooctadecane	13.067	.196	.149	75.88
*#Triacontane	16.318	.196	.091	46.51

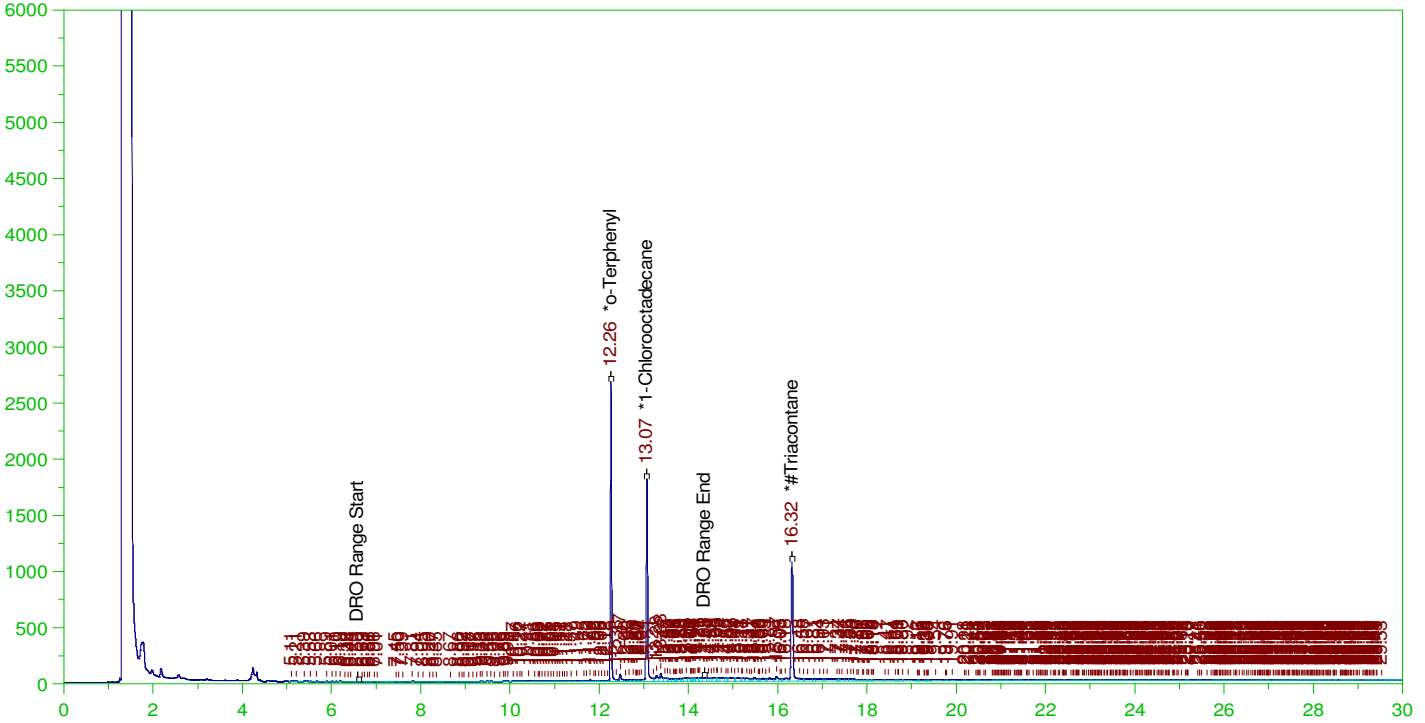
DRO Area: 486724.3 DRO Amount: 1.521953E-02  
TEH Area: 1093951 TEH Amount: 3.420706E-02

ERH1879 (RHMW03)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0012.RAW

B21110712-003A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-003A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0012.RAW  
Date & Time Acquired: 11/11/2021 12:39:26 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.262	.196	.143	72.92	-
*1-Chlorooctadecane	13.065	.196	.113	57.7	-
*#Triacontane	16.318	.196	.102	52.19	-

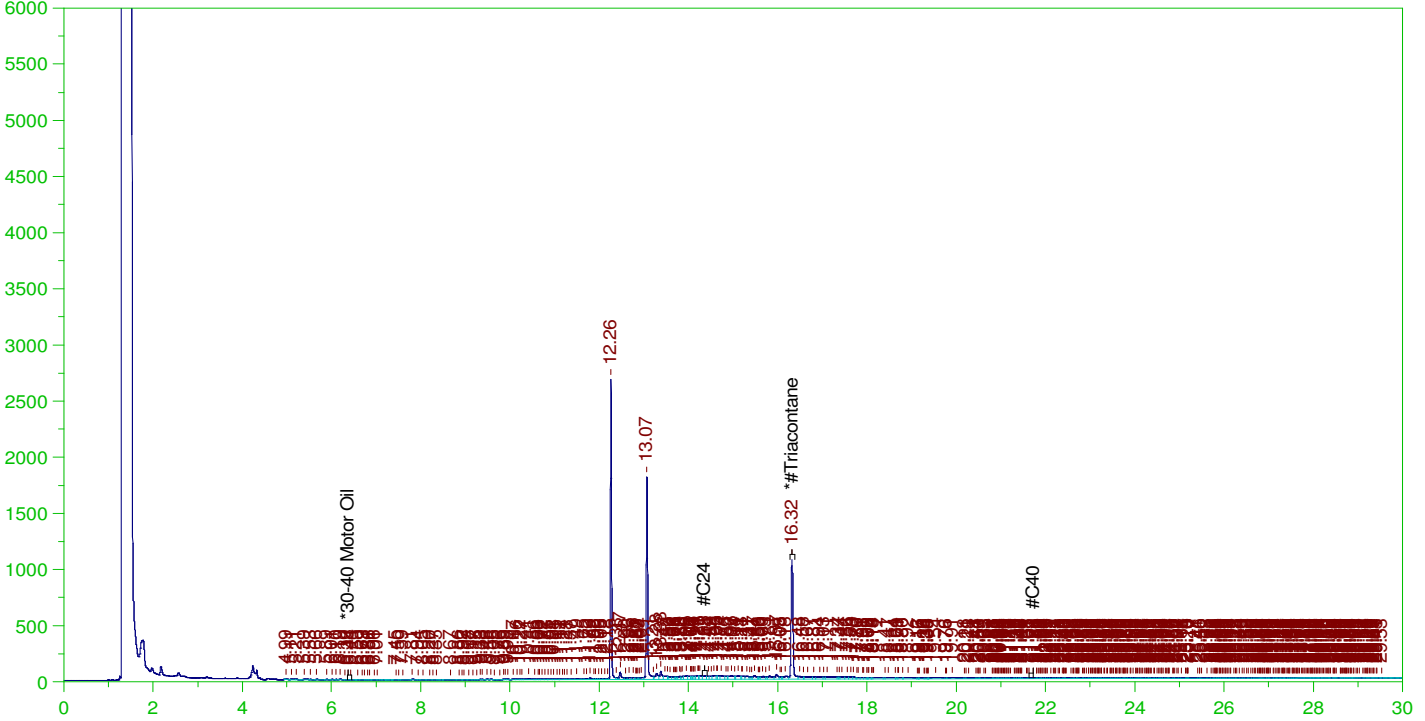
DRO Area:3547424 DRO Amount: 0.1109254  
TEH Area:1.238437E+07 TEH Amount: 0.3872505

ERH1879 (RHMW03)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0012.RAW

Batch ID: 161122

B21110712-003A ;1111HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-003A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0012.RAW  
Date & Time Acquired: 11/11/2021 12:39:26 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.318	.49	.102	20.87	-

RRO Area:7275728 RRO AMOUNT: 0.2499112

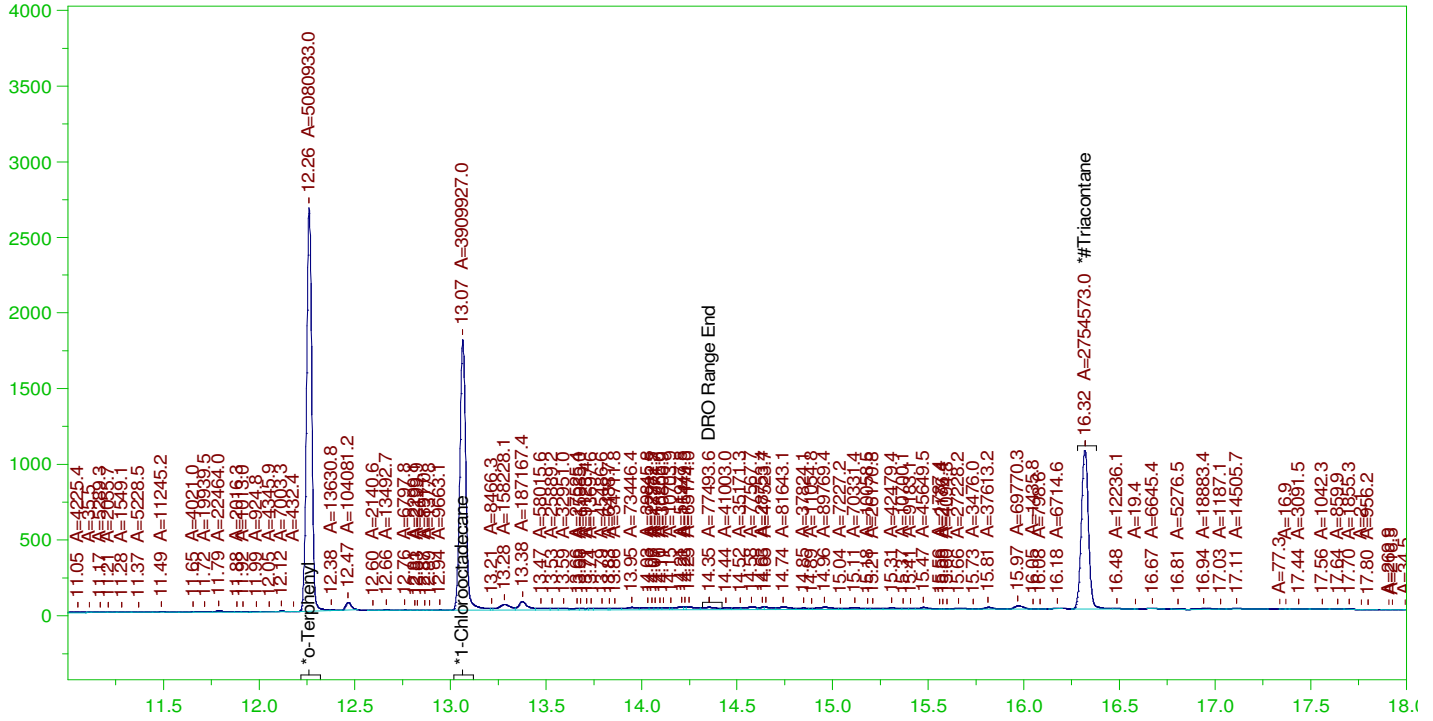


ERH1879 (RHMW03)

Batch ID: 161122

G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0012.RAW

B21110712-003A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-003A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0012.RAW  
Date & Time Acquired: 11/11/2021 12:39:26 PM  
Method File: G:\Org\HP5\Methods\DS\_8015-C24T-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.262	.196	.14	71.54	-
*1-Chlorooctadecane	13.065	.196	.108	55.06	-
*#Triacontane	16.318	.196	.093	47.61	-

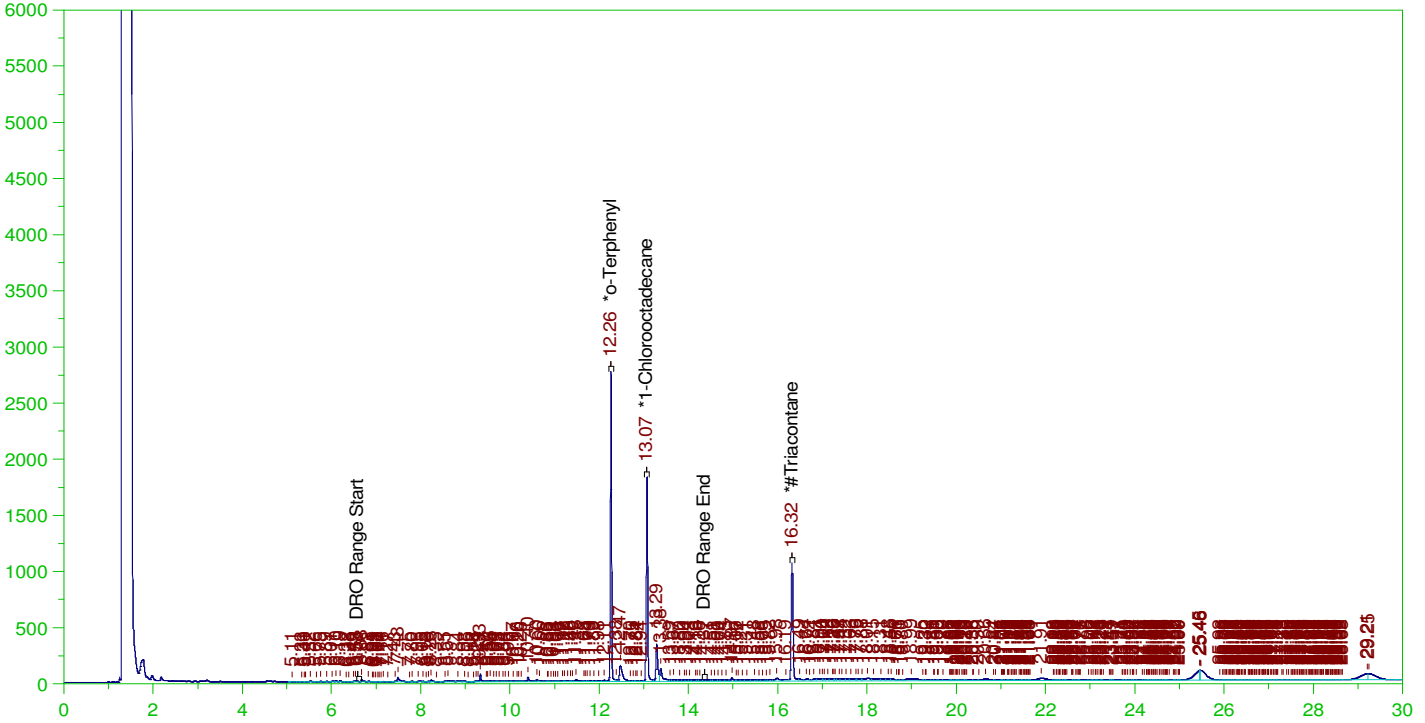
DRO Area:1492417 DRO Amount: 4.666683E-02  
TEH Area:3554143 TEH Amount: 0.1111355

ERH1882 (RHMW05)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0013.RAW

B21110712-004A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-004A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0013.RAW  
Date & Time Acquired: 11/11/2021 1:22:14 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.264	.19	.143	75.44	-
*1-Chlorooctadecane	13.066	.19	.106	55.78	-
*#Triacontane	16.319	.19	.095	50.03	-

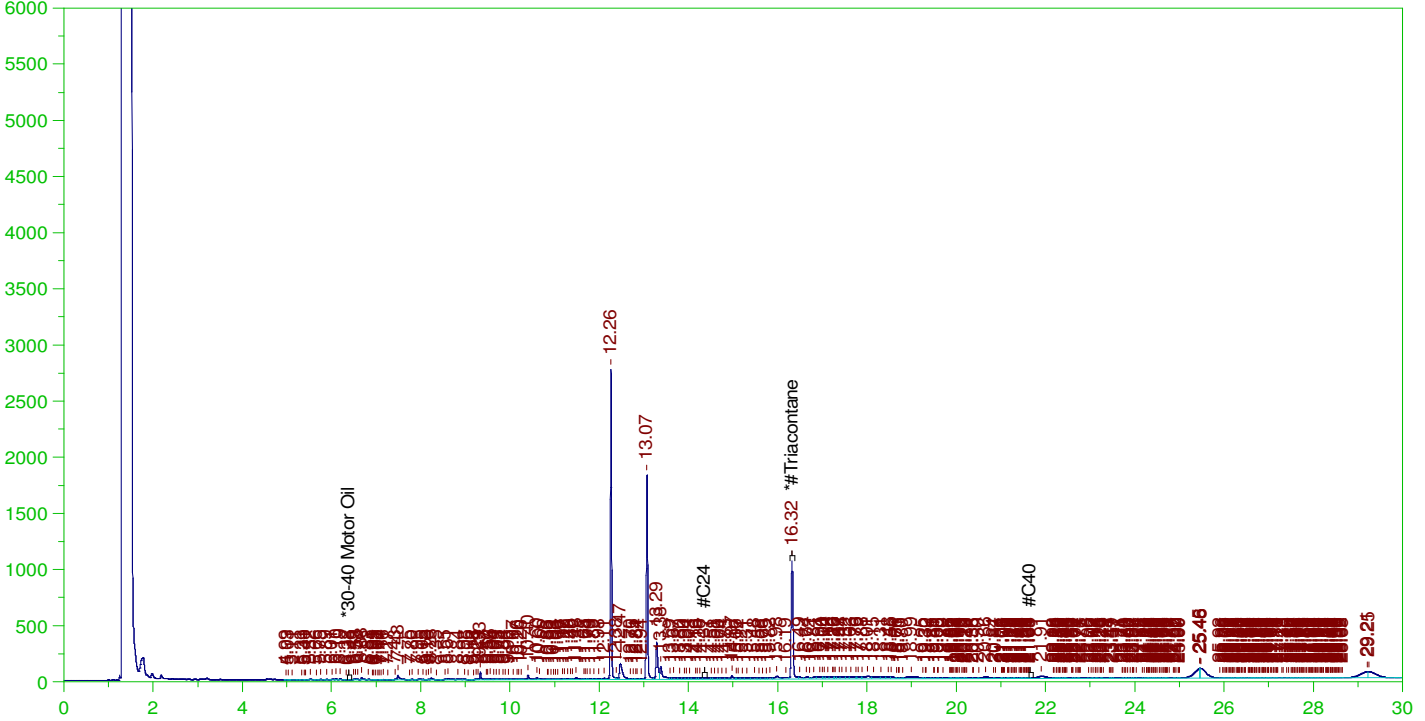
DRO Area:4178584 DRO Amount: 0.1263266  
TEH Area:1.505665E+07 TEH Amount: 0.4551913

ERH1882 (RHMW05)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0013.RAW

Batch ID: 161122

B21110712-004A ;1111HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-004A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0013.RAW  
Date & Time Acquired: 11/11/2021 1:22:14 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.319	.474	.095	20.01

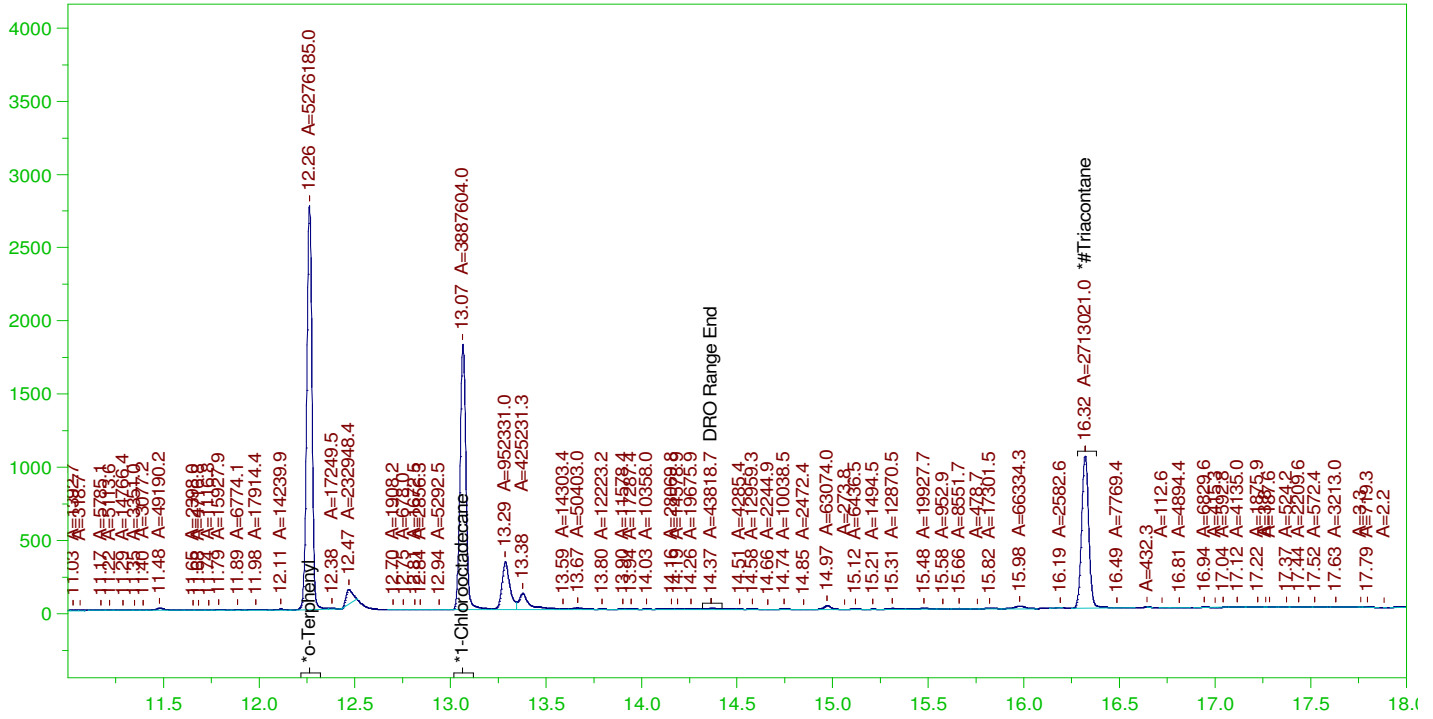
RRO Area:5564734 RRO AMOUNT: 0.1847997

ERH1882 (RHMW05)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0013.RAW

B21110712-004A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

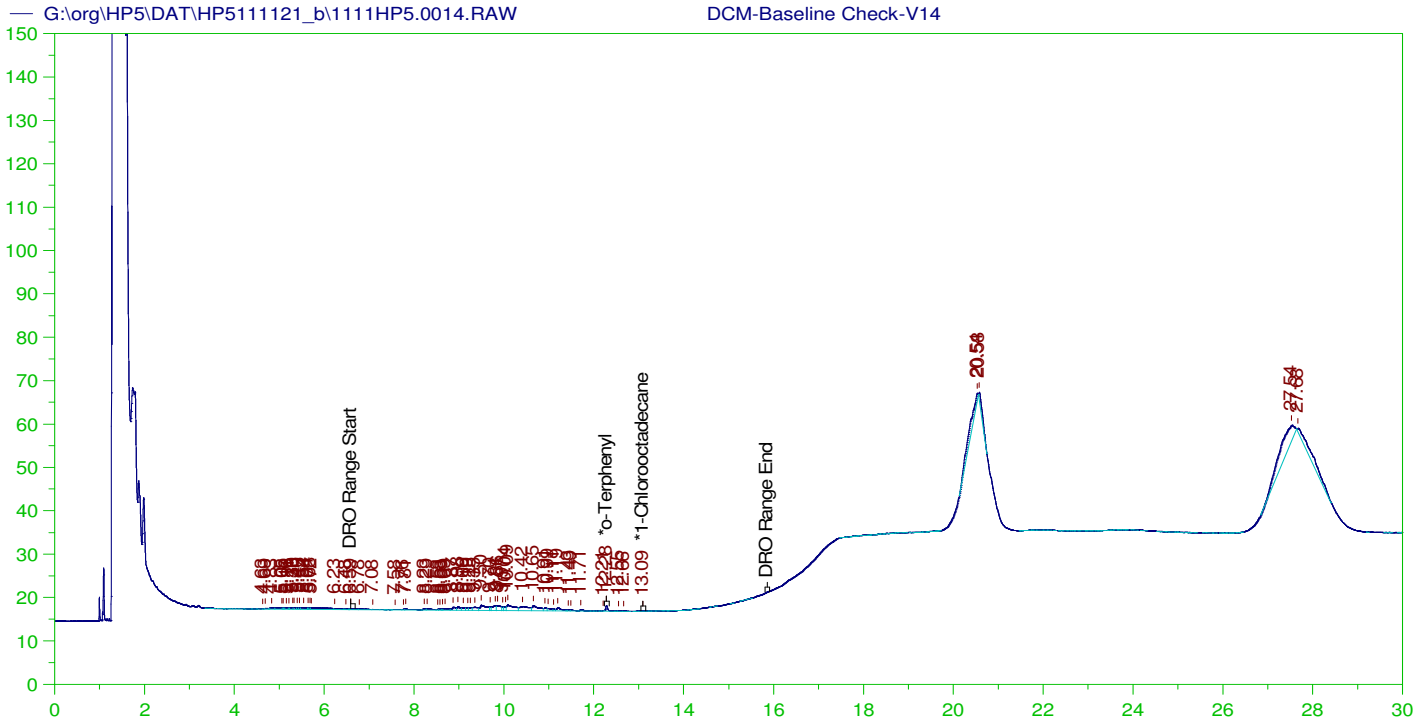
Sample Name: B21110712-004A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0013.RAW  
Date & Time Acquired: 11/11/2021 1:22:14 PM  
Method File: G:\Org\HP5\Methods\DS\_8015-C24T-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.264	.19	.141	74.29	-
*1-Chlorooctadecane	13.066	.19	.104	54.74	-
*#Triacontane	16.319	.19	.089	46.89	-

DRO Area:2834632 DRO Amount: 8.569638E-02  
TEH Area:3764761 TEH Amount: 0.113816



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V14  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0014.RAW  
 Date & Time Acquired: 11/11/2021 2:04:43 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.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	12.279	200.	.134	.07	-
*1-Chlorooctadecane	13.093	200.	.035	.02	-

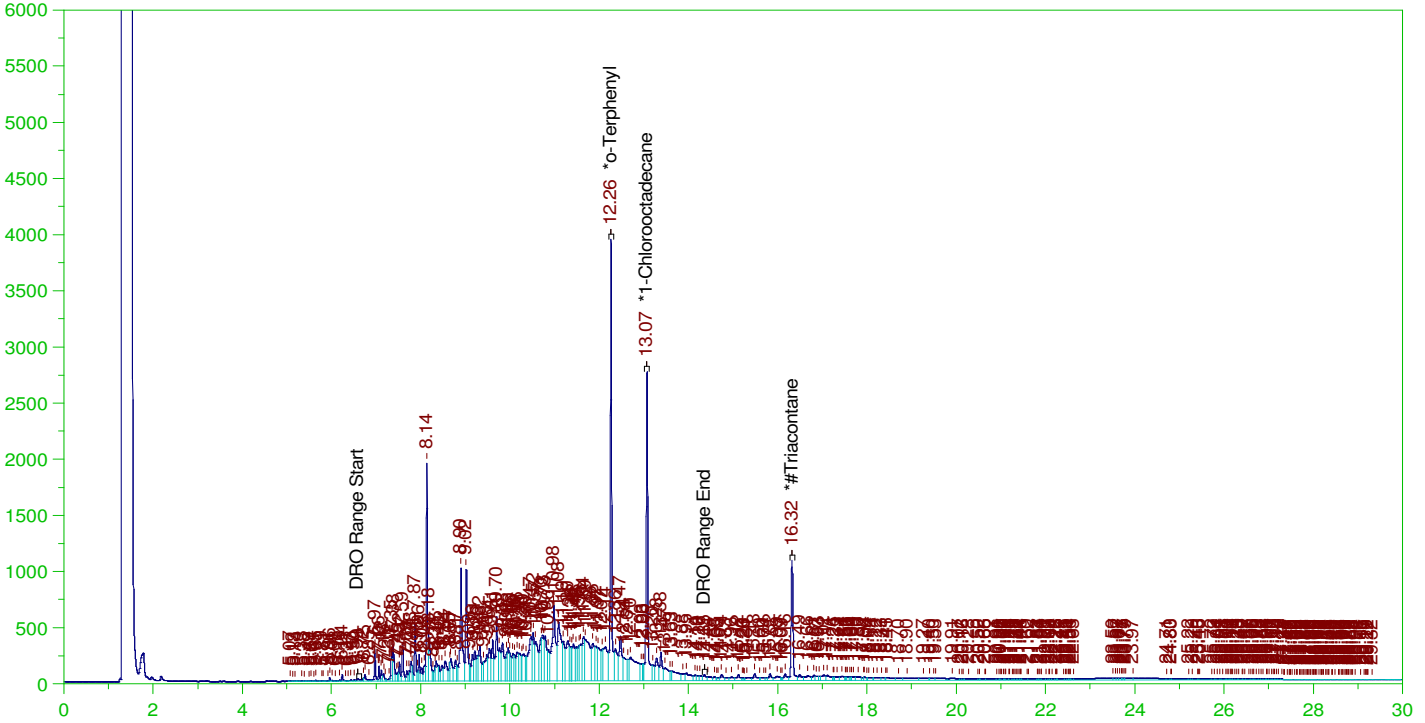
DRO Area:143570 DRO Amount: 4.57912  
 TEH Area:434378.2 TEH Amount: 13.85435

ERH1876 (RHMW02)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0015.RAW

B21110712-002A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-002A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0015.RAW  
Date & Time Acquired: 11/11/2021 2:47:24 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-111115-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.264	.189	.239	126.73	-
*1-Chlorooctadecane	13.066	.189	.183	97.1	-
*#Triacontane	16.318	.189	.099	52.69	-

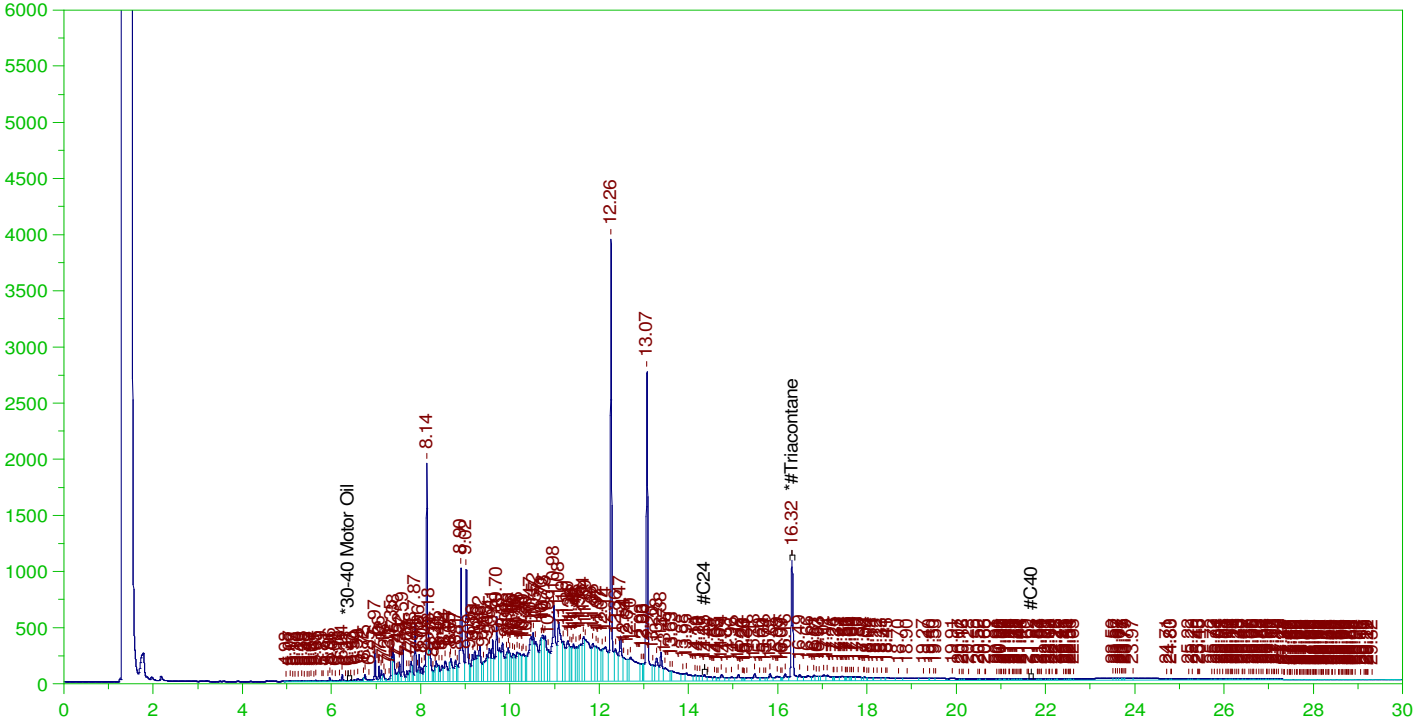
DRO Area: 9.284582E+07 DRO Amount: 2.793668  
TEH Area: 1.067831E+08 TEH Amount: 3.213031

ERH1876 (RHMW02)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0015.RAW

B21110712-002A ;1111HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-002A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0015.RAW  
Date & Time Acquired: 11/11/2021 2:47:24 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-111115-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.318	.472	.099	21.08

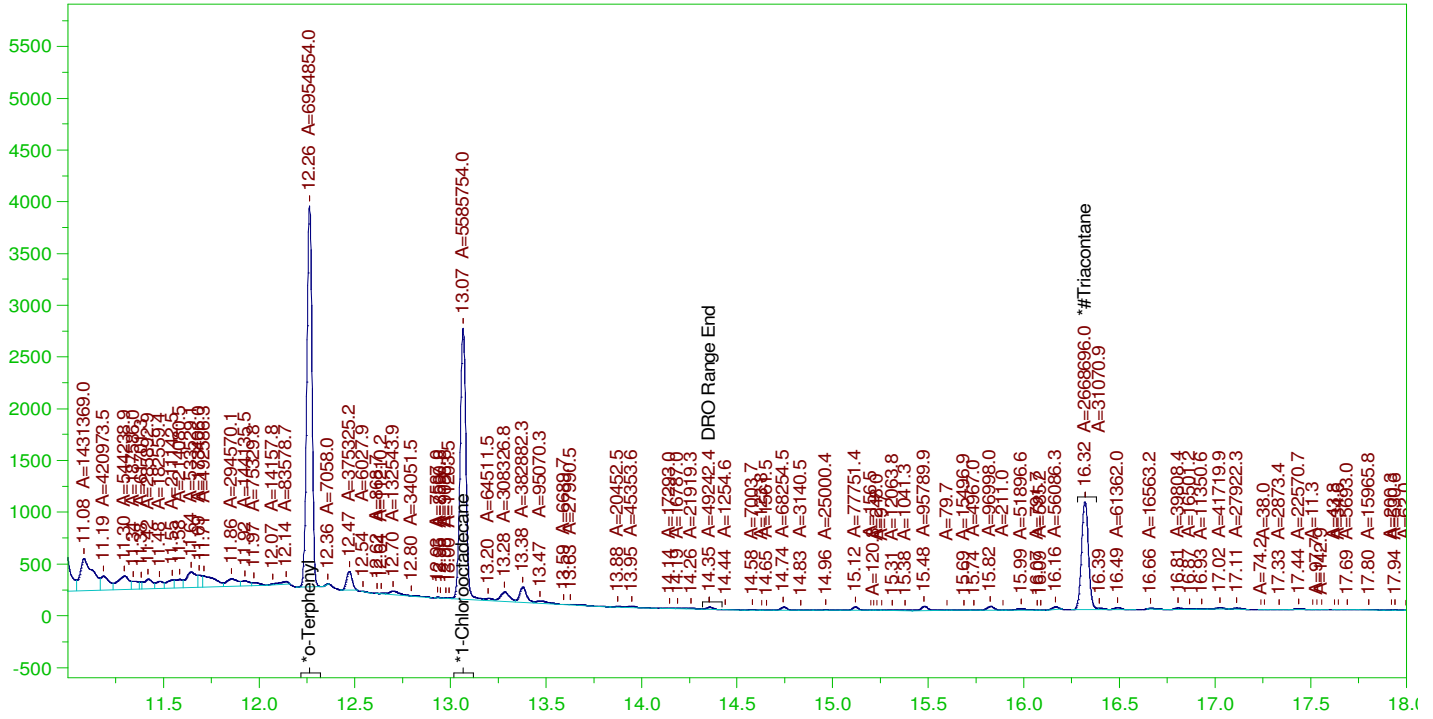
RRO Area:1.045758E+07 RRO AMOUNT: 0.3456484

ERH1876 (RHMW02)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0015.RAW

Batch ID: 161122

B21110712-002A ; 1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-002A ; 1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0015.RAW  
Date & Time Acquired: 11/11/2021 2:47:24 PM  
Method File: G:\Org\HP5\Methods\DS\_8015-111121-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1060 Dilution: 1 S.A.: 1

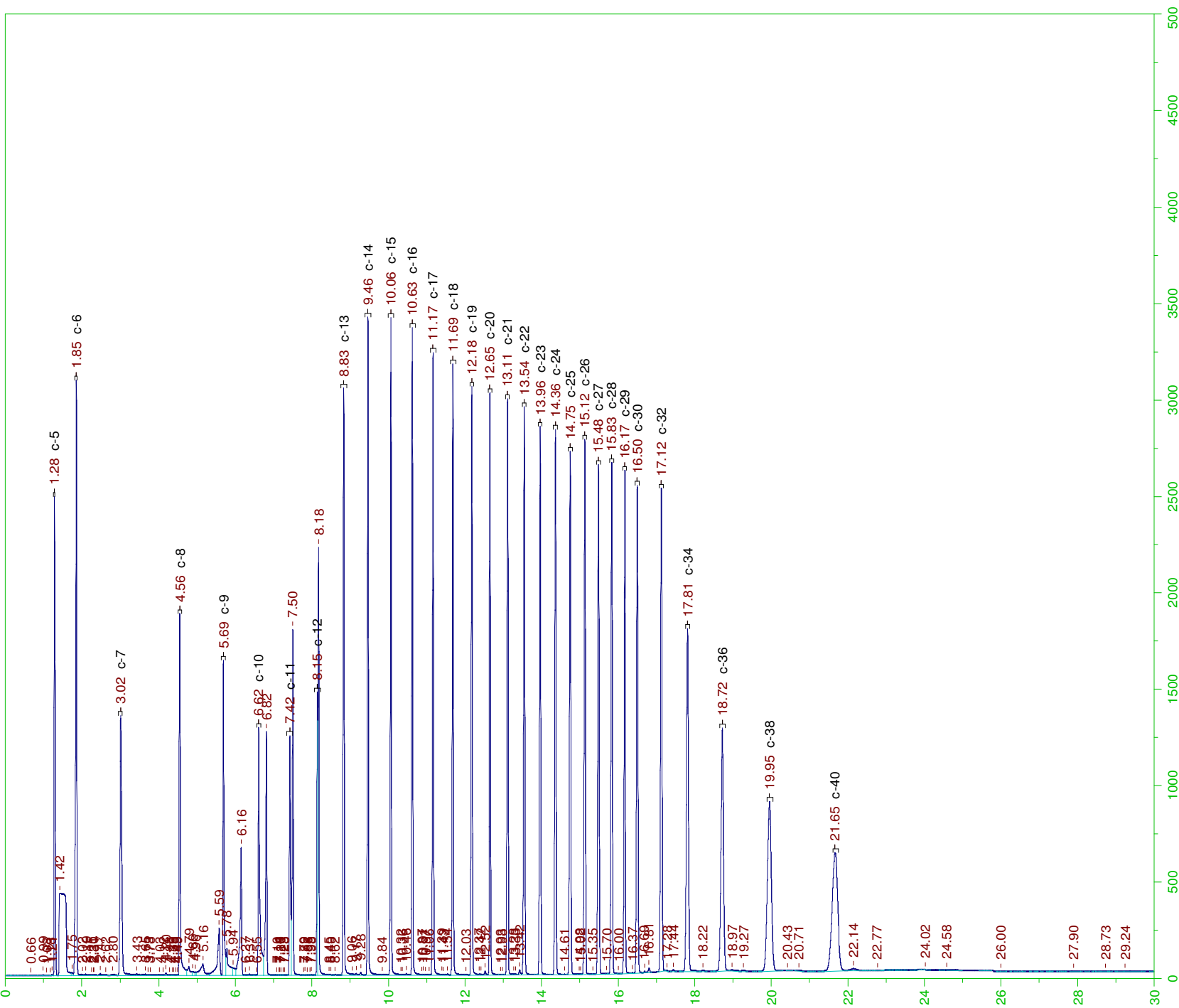
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.264	.189	.185	97.93
*1-Chlorooctadecane	13.066	.189	.148	78.65
*#Triacontane	16.318	.189	.087	46.12

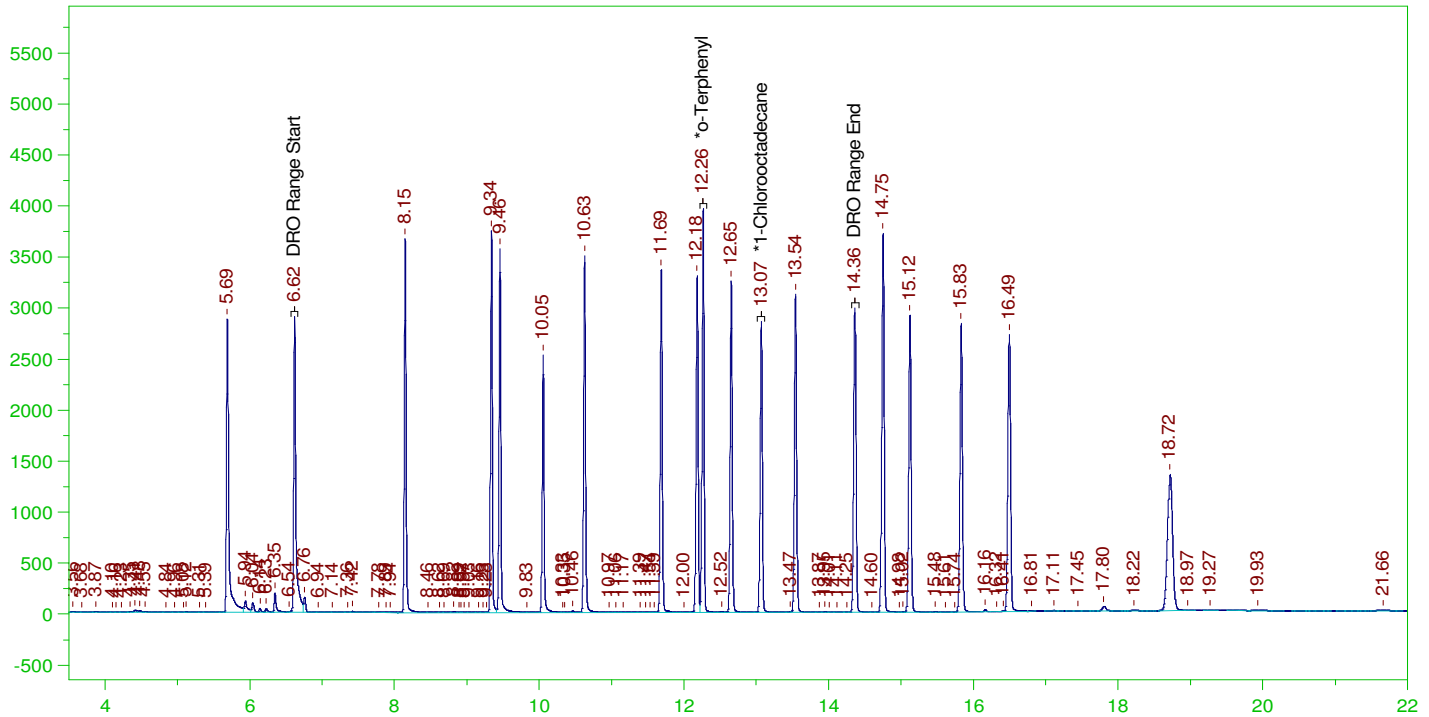
DRO Area: 3.614701E+07 DRO Amount: 1.087639  
TEH Area: 3.75222E+07 TEH Amount: 1.129017





G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0017.RAW

MARKER\_1111HP518r, DRO ;1111HP5 , DRO211012I



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

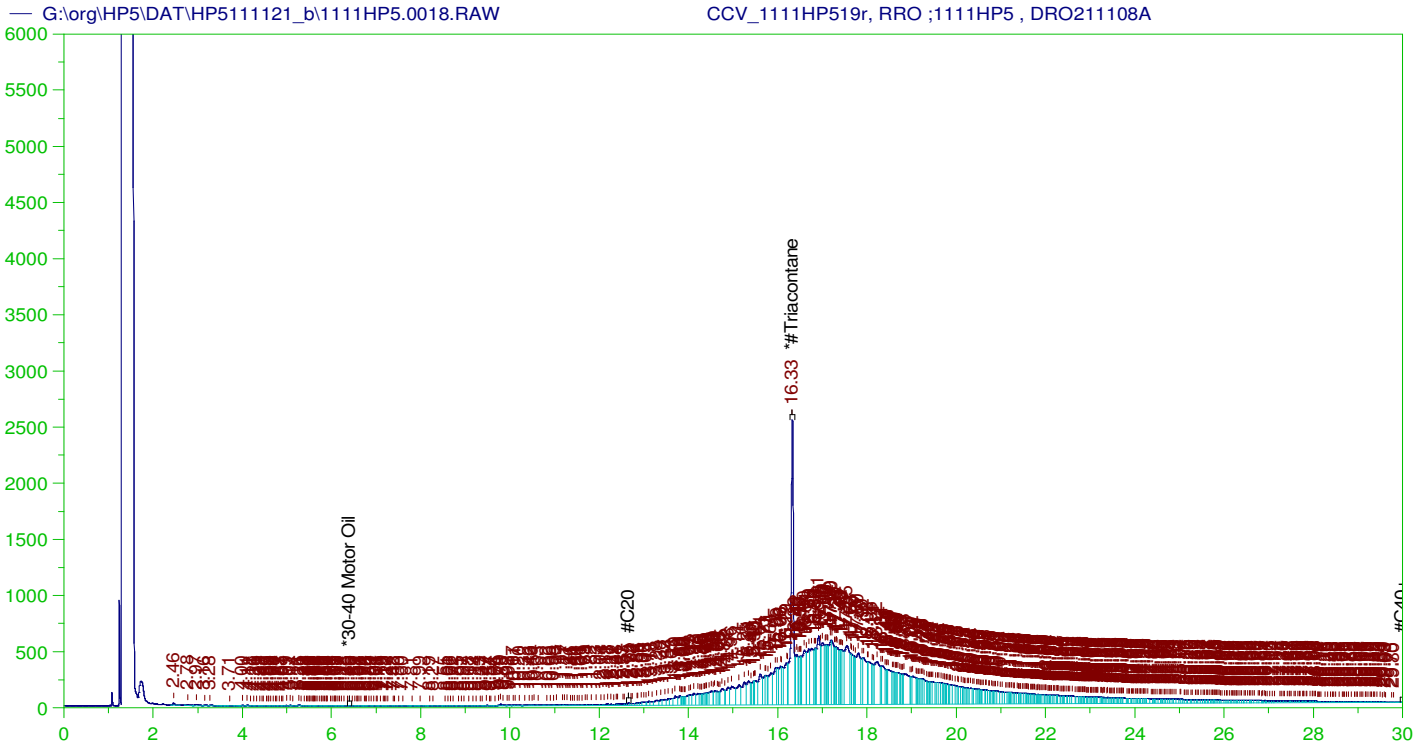
Sample Name: MARKER\_1111HP518r, DRO ;1111HP5 , DRO211012I  
 Raw File: G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0017.RAW  
 Date & Time Acquired: 11/11/2021 4:12:33 PM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.265	.2	.21	105.23
*1-Chlorooctadecane	13.068	.2	.17	84.94

DRO Area: 7.10977E+07 DRO Amount: 2.267638  
 TEH Area: 1.149226E+08 TEH Amount: 3.66542



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP519r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0018.RAW  
 Date & Time Acquired: 11/11/2021 4:55:11 PM  
 Method File: G:\Org\HP5\Methods\DC\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.325	500.	321.299	64.26	-

~~RRO~~ TEH(Oil Range)Area:1.314522E+08 ~~RRO~~ TEH(Oil Range)AMOUNT: 4605.506

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0018.RAW

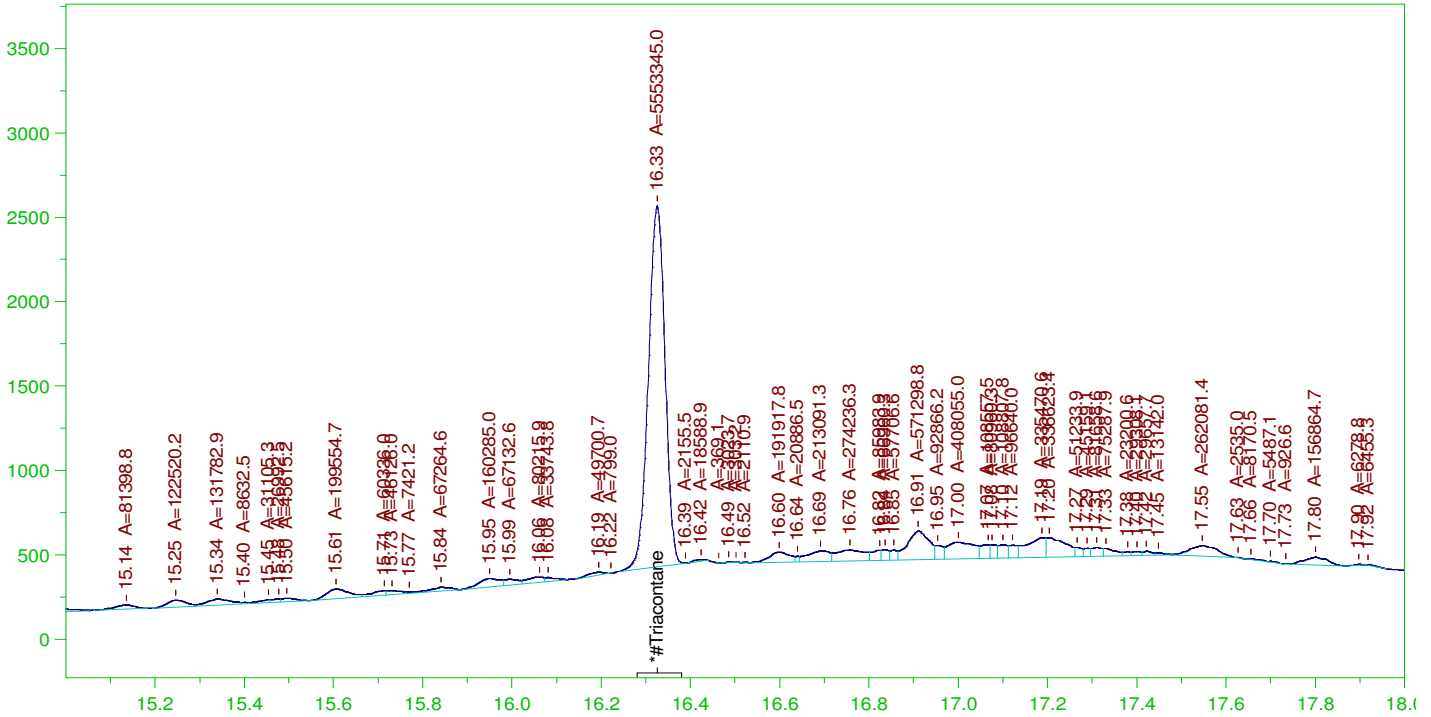
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.103	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.325	200.	321.299	160.65	75-125

AMN 11/18/2021

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0018.RAW

CCV\_1111HP519r, RRO ;1111HP5 , DRO211108A



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP519r, RRO ;1111HP5 , DRO211108A  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0018.RAW  
Date & Time Acquired: 11/11/2021 4:55:11 PM  
Method File: G:\Org\HP5\Methods\DS\_ORO-AD-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.325	500.	191.957	38.39	-

RRO Area:6437085 RRO AMOUNT: 225.527

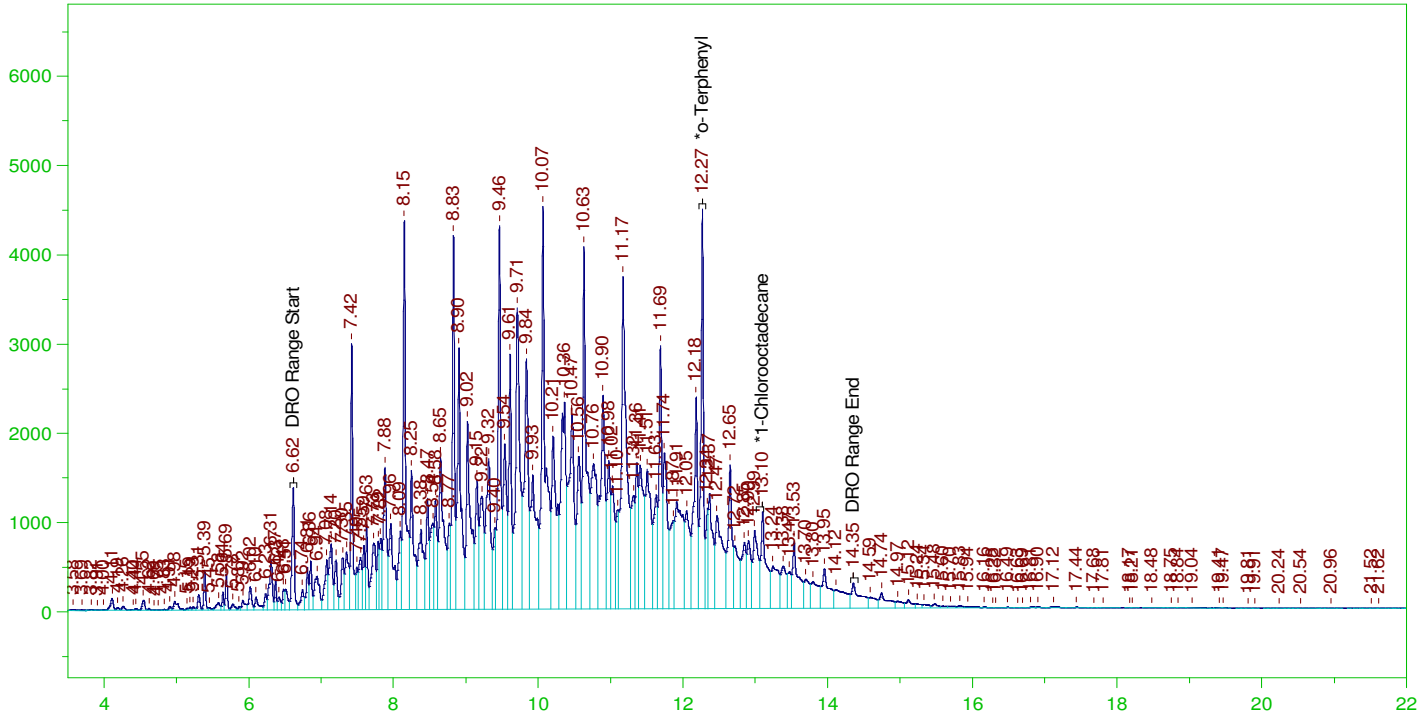
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.103	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.325	200.	191.957	95.98	75-125

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0019.RAW

CCV\_1111HP520r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP520r, DRO ;1111HP5 , DRO211103A  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0019.RAW  
Date & Time Acquired: 11/11/2021 5:38:24 PM  
Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.267	200.	325.034	162.52
*1-Chlorooctadecane	13.102	200.	157.508	78.75

DRO Area: 4.51306E+08 DRO Amount: 14394.26  
TEH Area: 4.669066E+08 TEH Amount: 14891.83

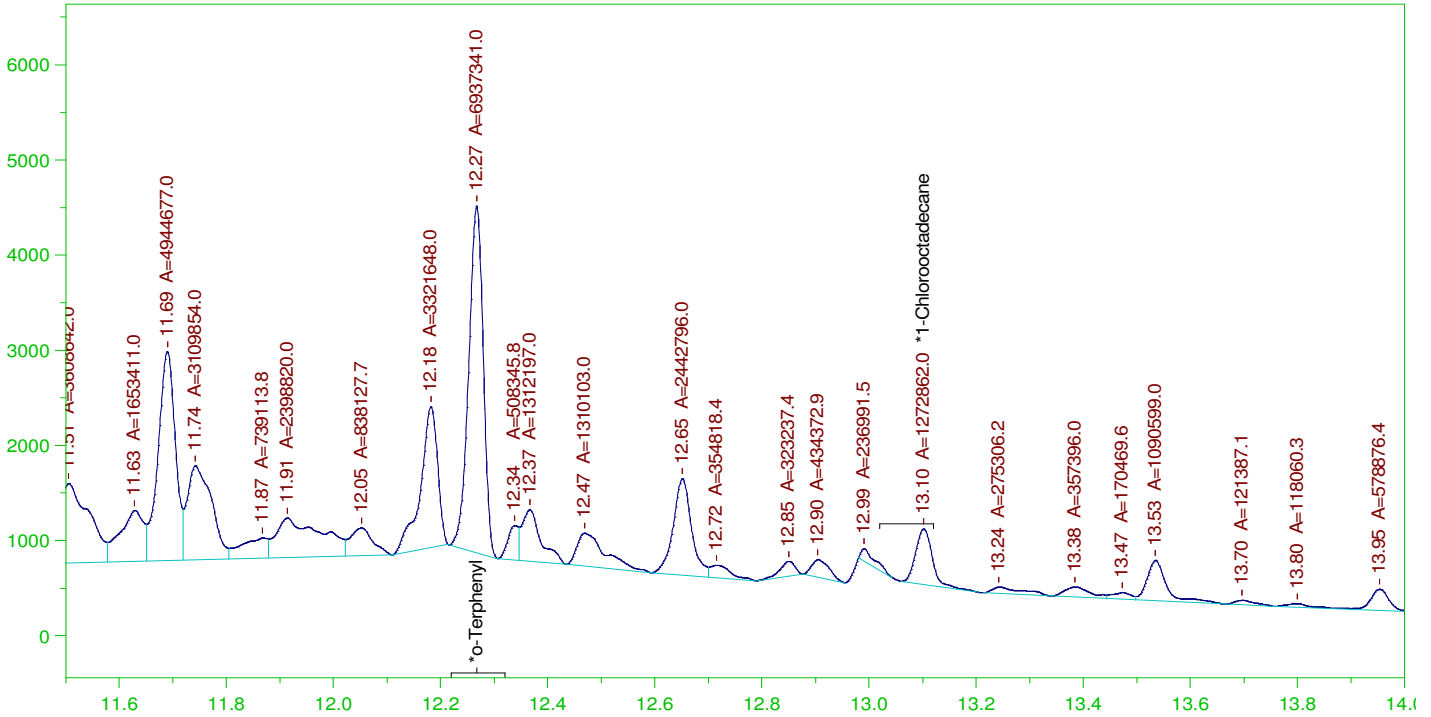
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14891.83	99.28	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.267	200.	325.034	162.52	85-115
*1-Chlorooctadecane	13.102	200.	157.508	78.75	85-115

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0019.RAW

CCV\_1111HP520r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP520r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0019.RAW  
 Date & Time Acquired: 11/11/2021 5:38:24 PM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

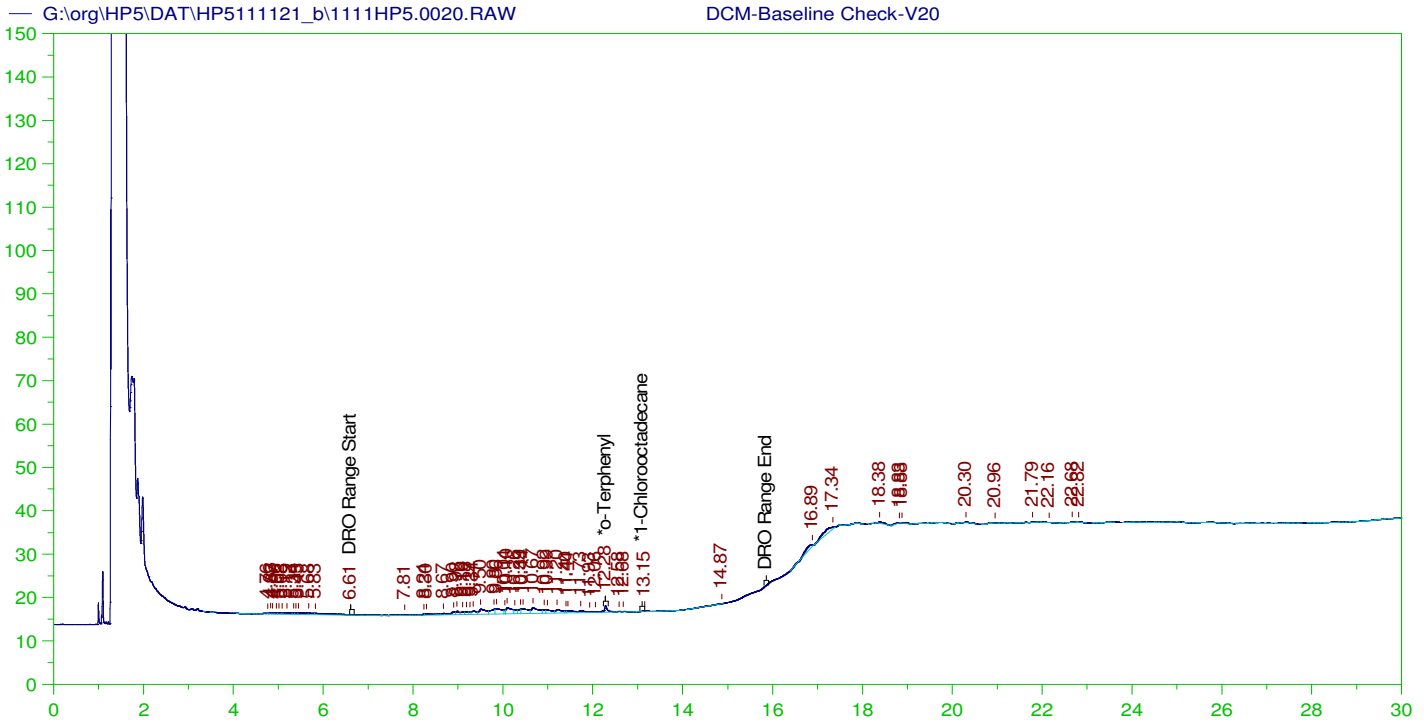
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.267	200.	195.367	97.68
*1-Chlorooctadecane	13.102	200.	35.846	17.92

DRO Area: 2.554717E+08 DRO Amount: 8148.188  
 TEH Area: 2.655945E+08 TEH Amount: 8471.053

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8471.05	56.47	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.267	200.	195.367	97.68	85-115
*1-Chlorooctadecane	13.102	200.	35.846	17.92	85-115



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V20  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0020.RAW  
 Date & Time Acquired: 11/11/2021 6:21:35 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.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	12.282	200.	.215	.11
*1-Chlorooctadecane	29.955	200.	.	.

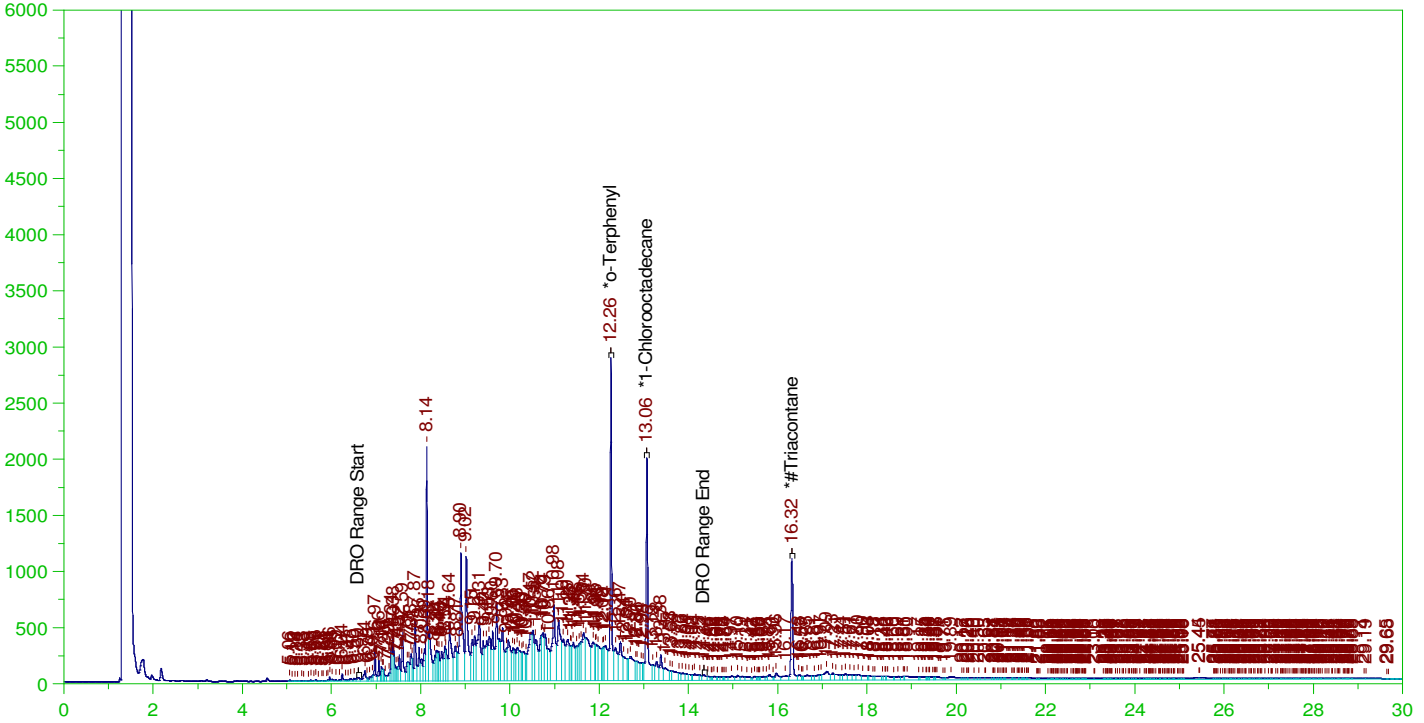
DRO Area:151571.7 DRO Amount: 4.834331  
 TEH Area:235079.5 TEH Amount: 7.497785

ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW

B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW  
 Date & Time Acquired: 11/11/2021 7:04:23 PM  
 Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.262	.205	.2	97.56	-
*1-Chlorooctadecane	13.064	.205	.156	76.12	-
*#Triacontane	16.315	.205	.11	53.75	-

DRO Area:1.113514E+08 DRO Amount: 3.642582  
 TEH Area:1.283149E+08 TEH Amount: 4.197502

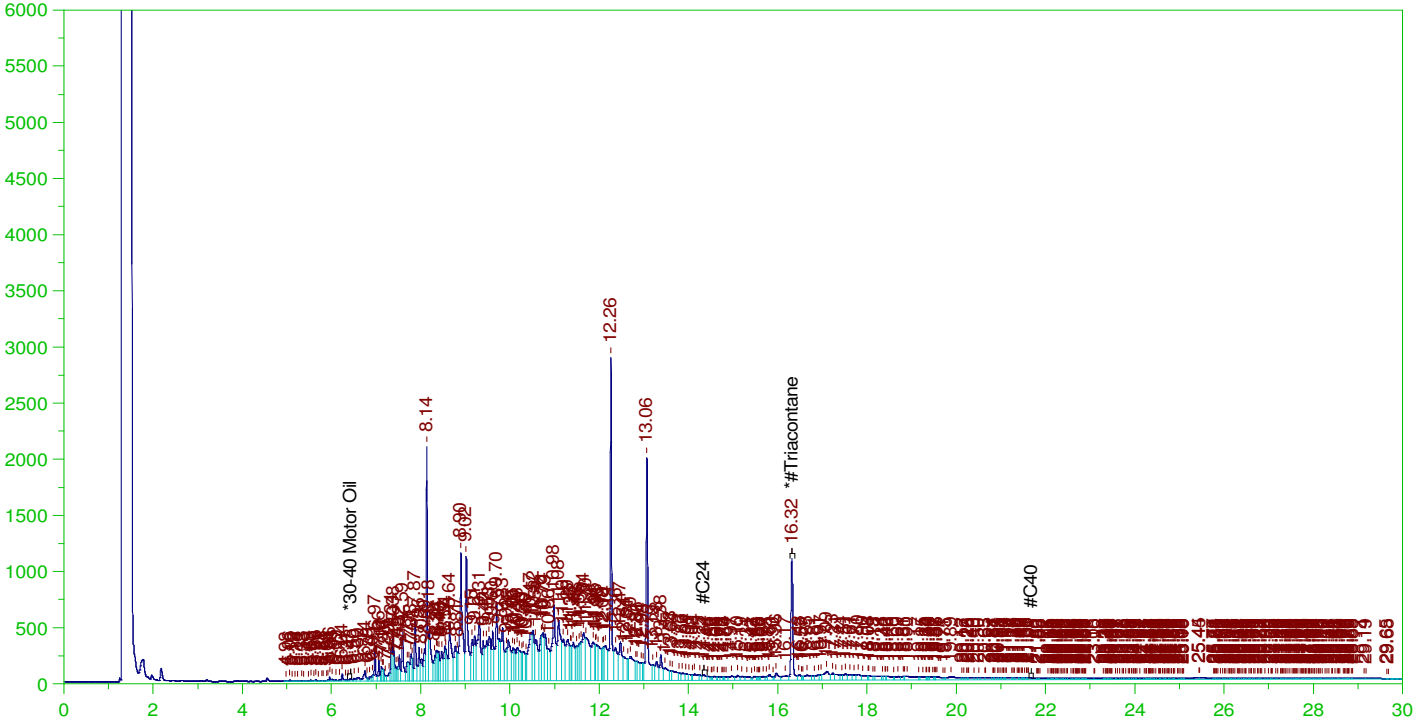


ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW

B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW  
 Date & Time Acquired: 11/11/2021 7:04:23 PM  
 Method File: G:\Org\HP5\Methods\D3\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.315	.513	.11	21.51	-

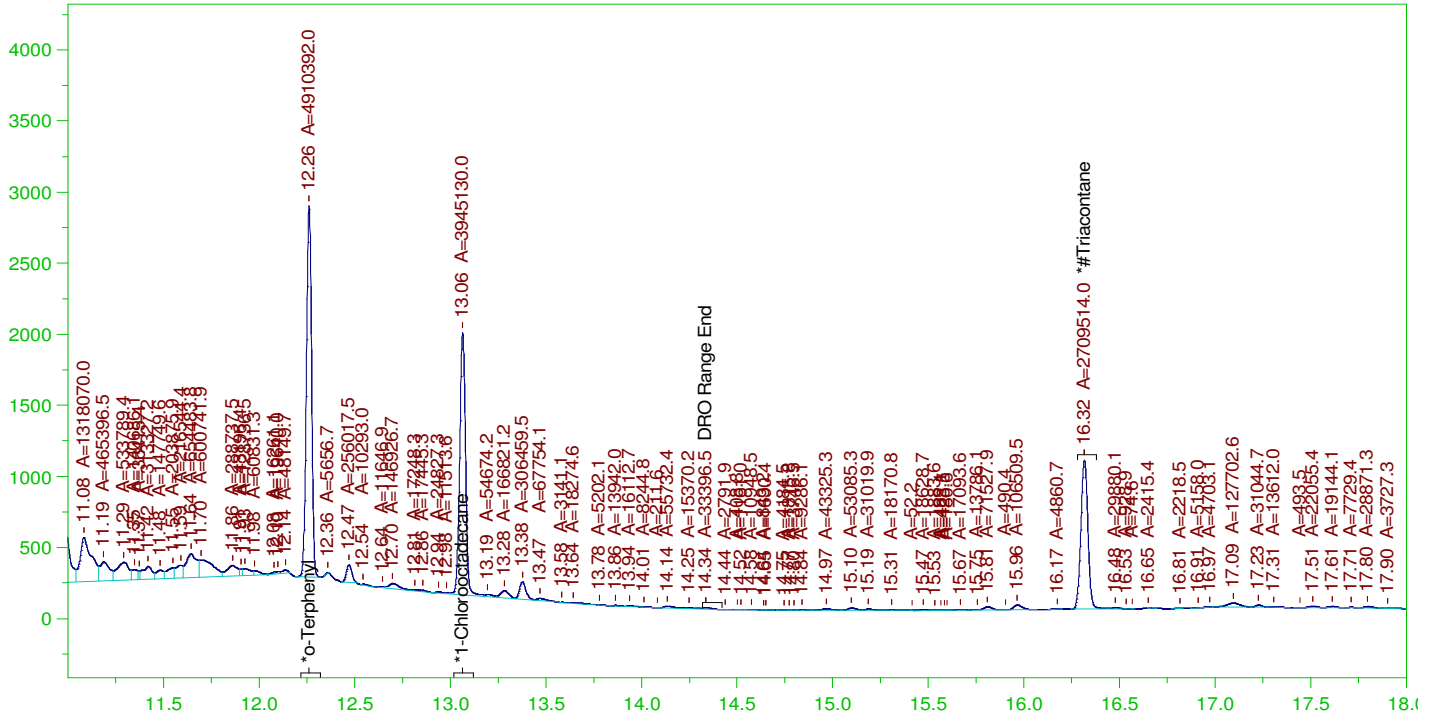
RRO Area:1.298301E+07 RRO AMOUNT: 0.4665307

ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW

B21110057-002A ; 1111HP5 , \$HC-8015-DRO-W, RX



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ; 1111HP5 , \$HC-8015-DRO-W, RX  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW  
 Date & Time Acquired: 11/11/2021 7:04:23 PM  
 Method File: G:\Org\HP5\Methods\DS\_8015-111121-IB-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.262	.205	.142	69.14
*1-Chlorooctadecane	13.064	.205	.114	55.55
*#Triacontane	16.315	.205	.096	46.83

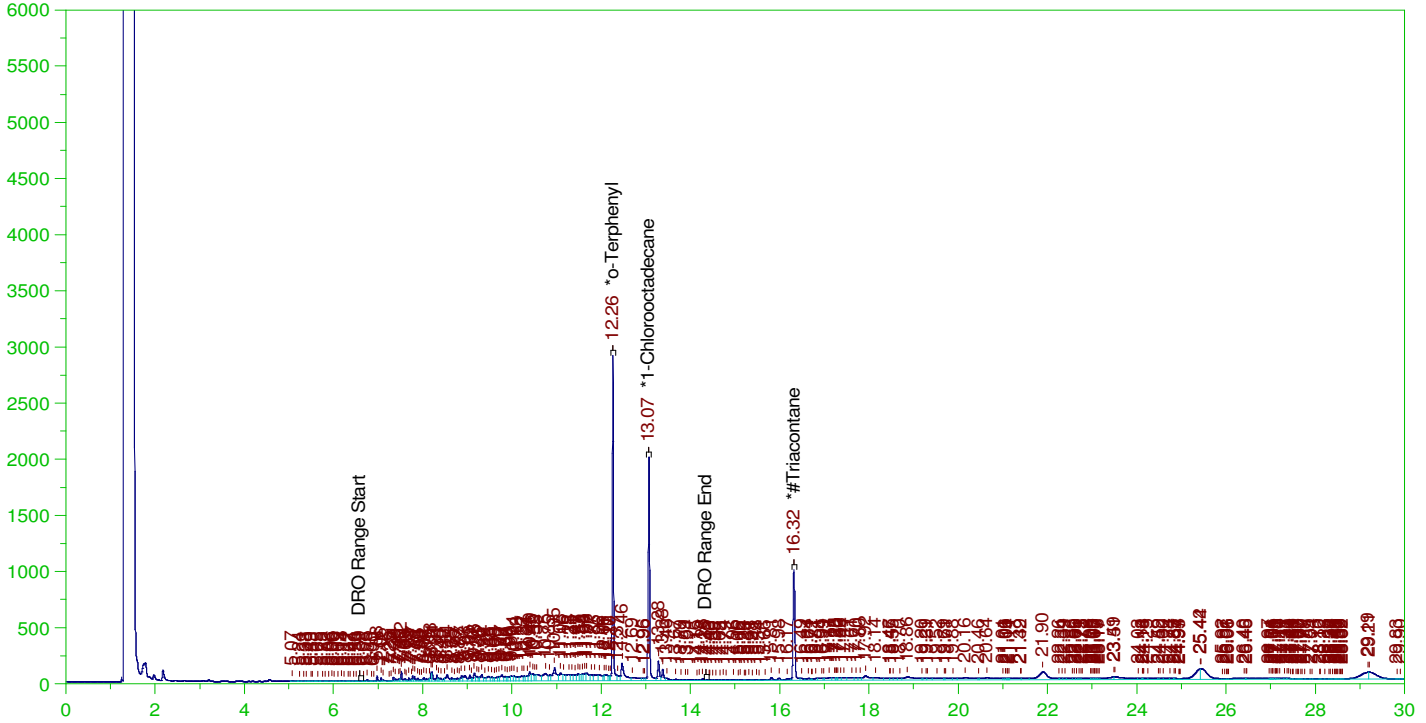
DRO Area: 4.832404E+07 DRO Amount: 1.5808  
 TEH Area: 4.991934E+07 TEH Amount: 1.632986

ERH1873 (RHMW01R)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0022.RAW

Batch ID: 161122

B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0022.RAW  
Date & Time Acquired: 11/11/2021 7:47:10 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-111115-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.261	.194	.157	80.8	-
*1-Chlorooctadecane	13.065	.194	.122	62.95	-
*#Triacontane	16.316	.194	.091	46.72	-

DRO Area: 1.51811E+07 DRO Amount: 0.4700936  
TEH Area: 2.9047E+07 TEH Amount: 0.899461

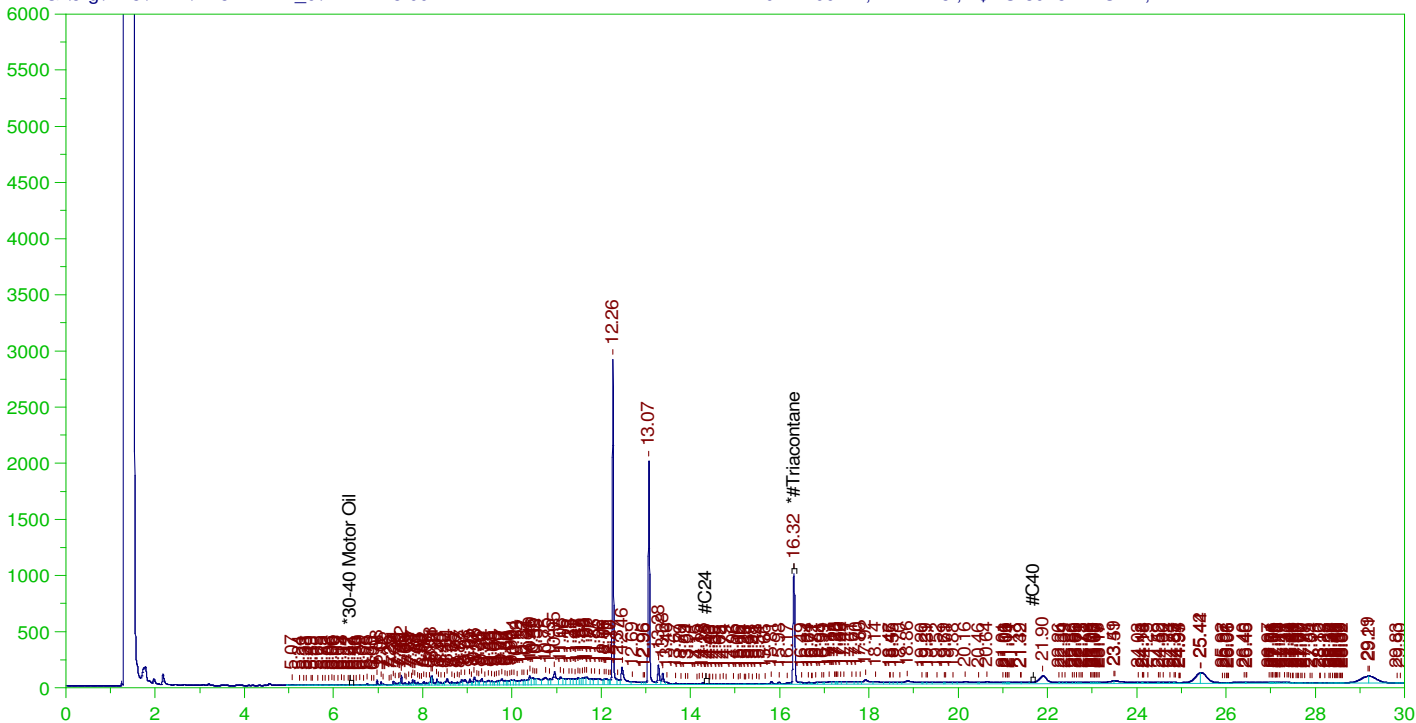


ERH1873 (RHMW01R)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0022.RAW

Batch ID: 161122

B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0022.RAW  
 Date & Time Acquired: 11/11/2021 7:47:10 PM  
 Method File: G:\Org\HP5\Methods\D3\_OROS-111115-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.316	.485	.091	18.69

RRO Area:6390146

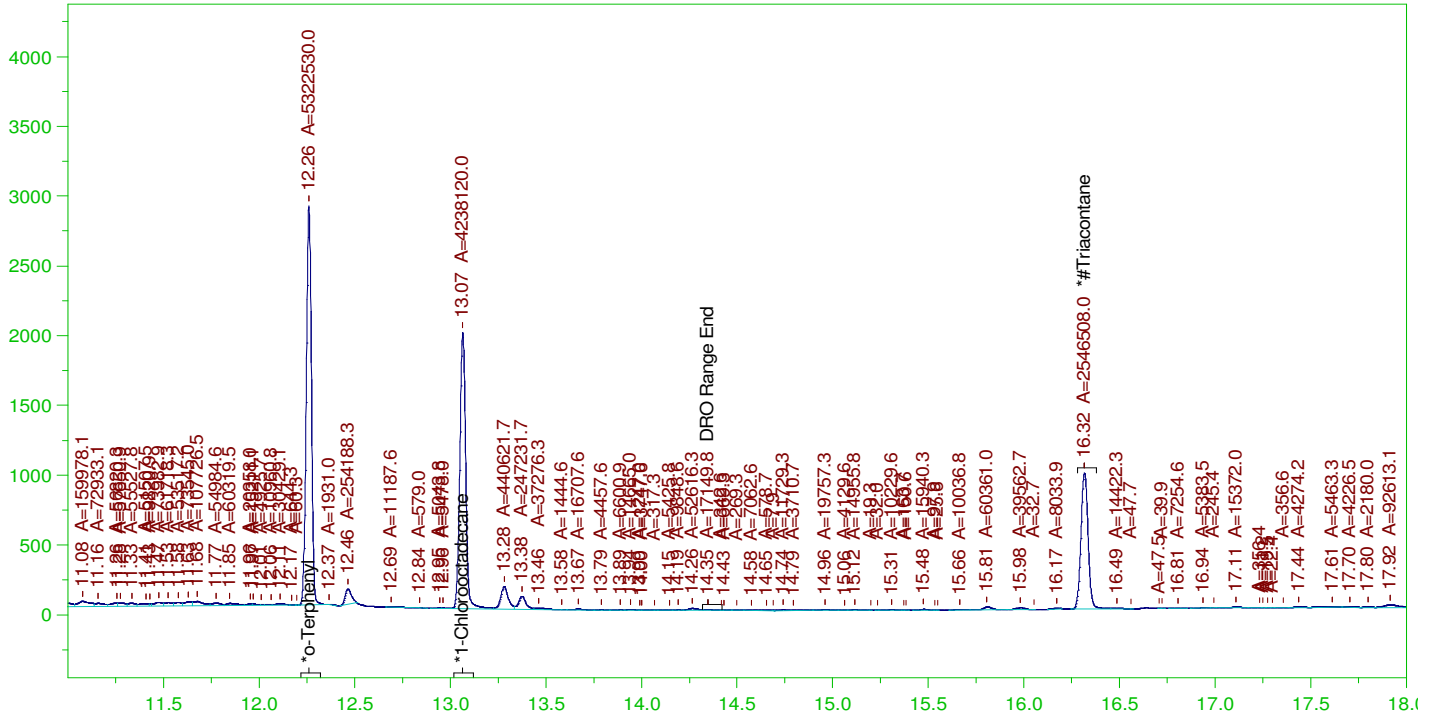
RRO AMOUNT: 0.2173616

ERH1873 (RHMW01R)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0022.RAW

Batch ID: 161122

B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0022.RAW  
Date & Time Acquired: 11/11/2021 7:47:10 PM  
Method File: G:\Org\HP5\Methods\DS\_8015-111121-IB-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

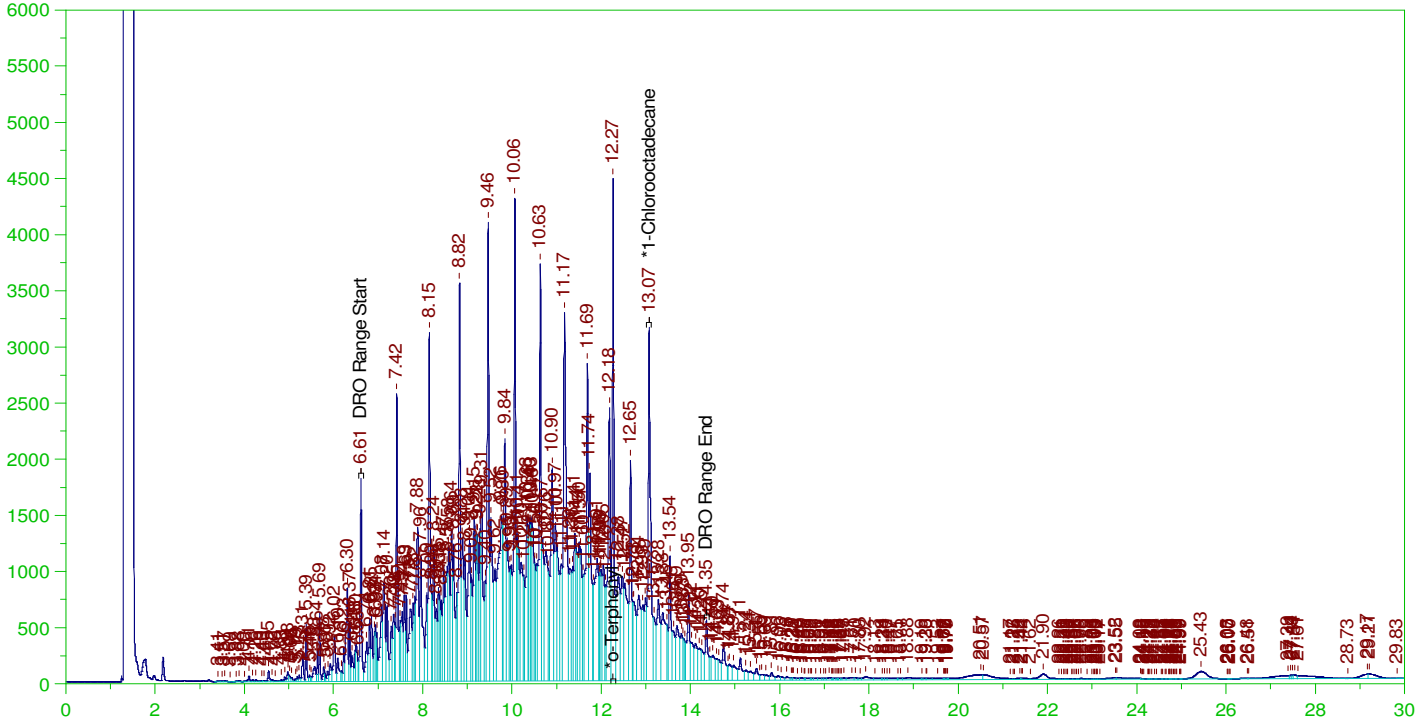
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.261	.194	.146	74.95	-
*1-Chlorooctadecane	13.065	.194	.116	59.68	-
*#Triacontane	16.316	.194	.085	44.01	-

DRO Area:6591062 DRO Amount: 0.2040969  
TEH Area:8307774 TEH Amount: 0.2572561

Batch ID: 161122

B21110712-001AMS ;1111HP5 ,

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0023.RAW



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-001AMS ;1111HP5 ,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0023.RAW  
Date & Time Acquired: 11/11/2021 8:29:53 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-24-IB-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
Sample Weight: 1000 Dilution: 1 S.A.: 1

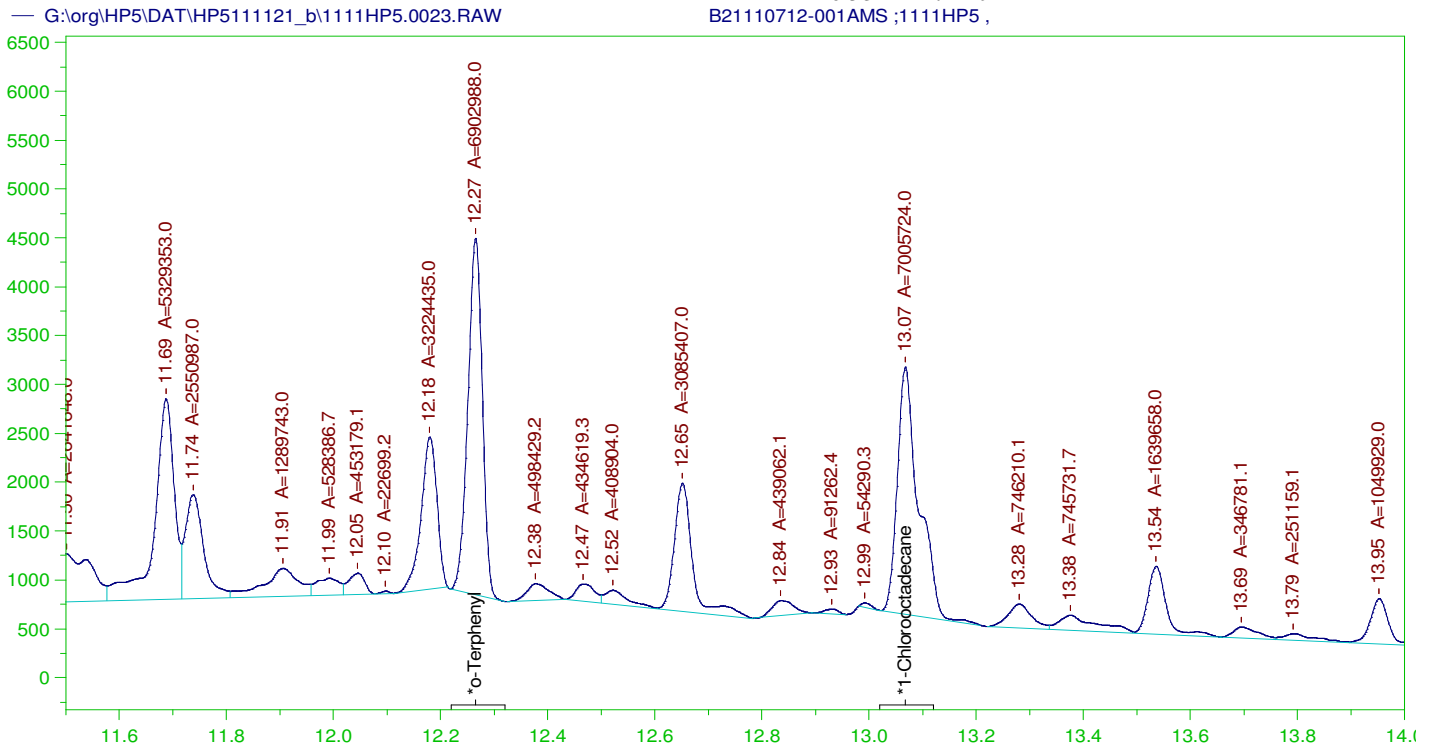
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.265	.2	.34	169.83
*1-Chlorooctadecane	13.068	.2	.343	171.51

DRO Area: 4.115943E+08 DRO Amount: 13.12767  
TEH Area: 4.492841E+08 TEH Amount: 14.32977

Batch ID: 161122  
B21110712-001AMS ;1111HP5 ,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

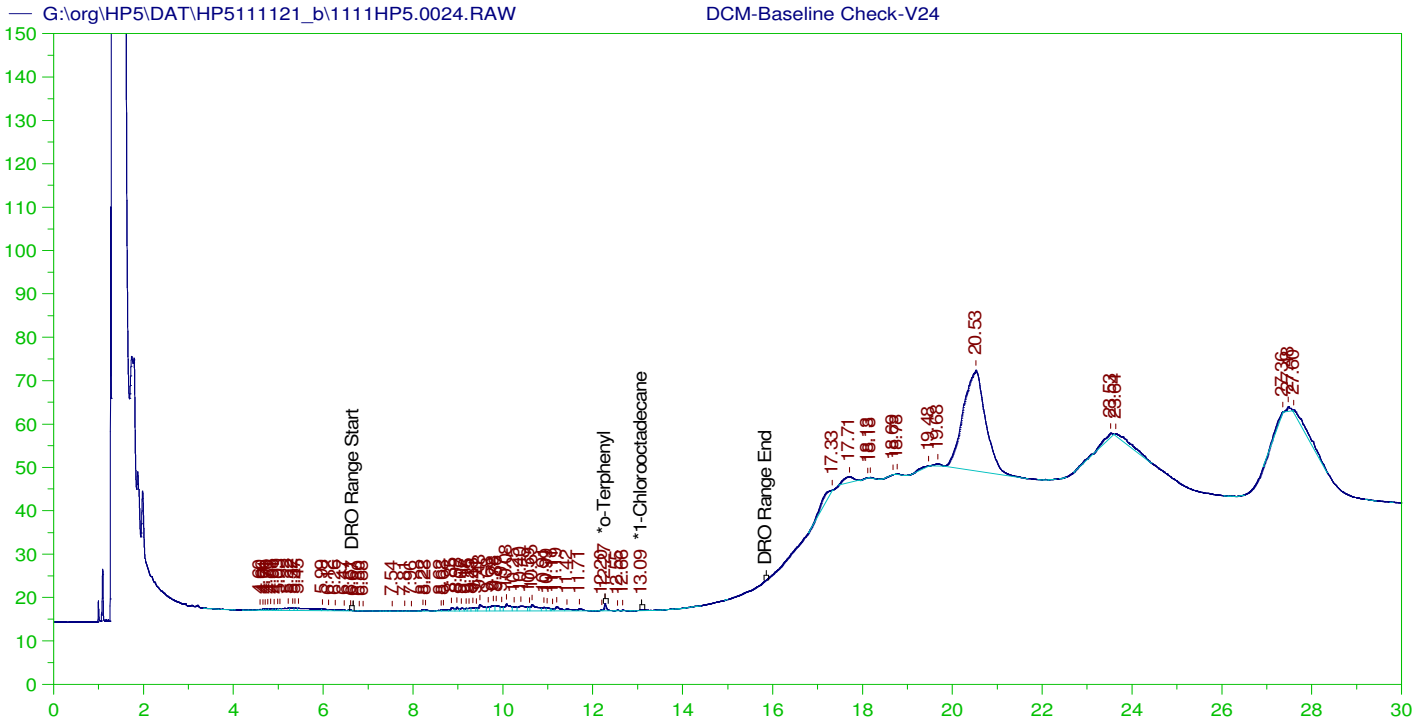
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 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0023.RAW  
 Date & Time Acquired: 11/11/2021 8:29:53 PM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.265	.2	.194	97.2
*1-Chlorooctadecane	13.068	.2	.197	98.65

DRO Area: 2.017733E+08 DRO Amount: 6.435494  
 TEH Area: 2.155516E+08 TEH Amount: 6.87495



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

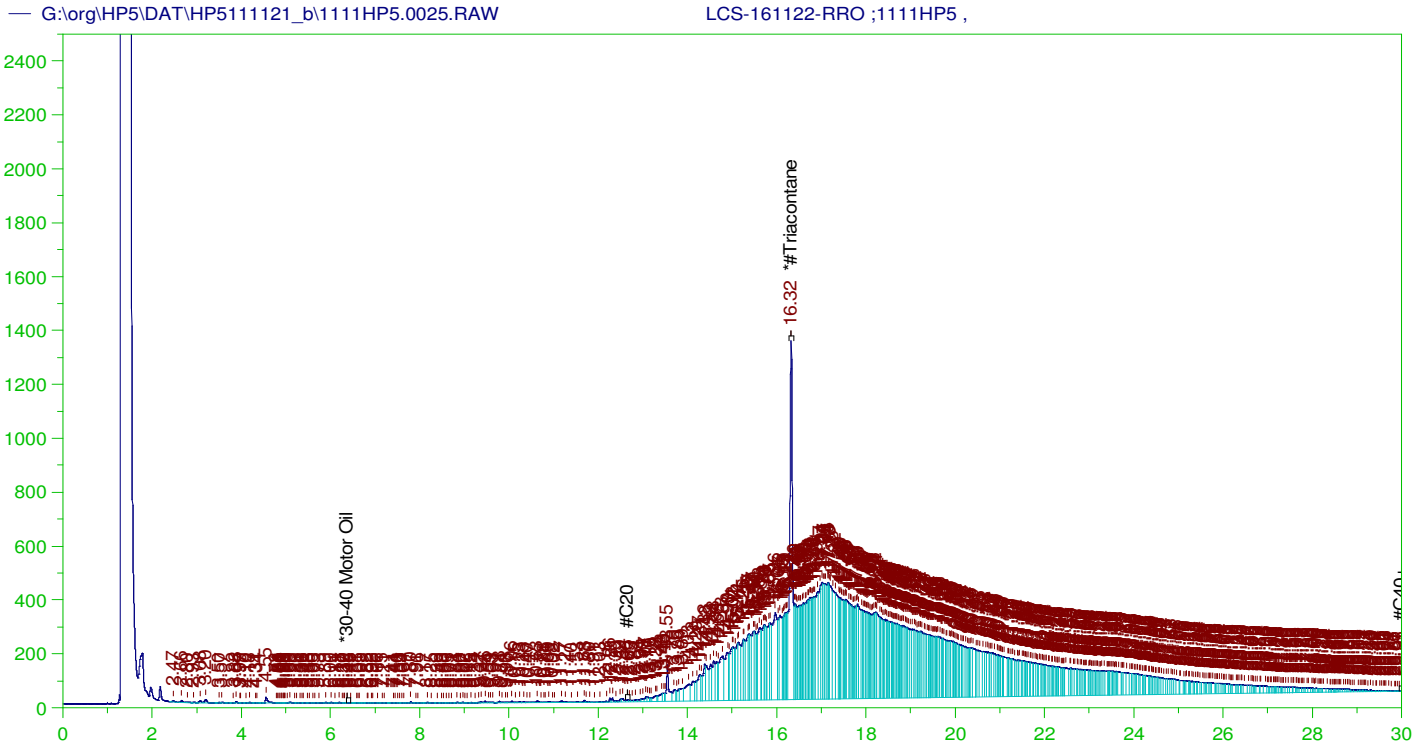
Sample Name: DCM-Baseline Check-V24  
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 Date & Time Acquired: 11/11/2021 9:12:36 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	12.274	200.	.164	.08	-
*1-Chlorooctadecane	13.086	200.	.04	.02	-

DRO Area:157823 DRO Amount: 5.033716  
 TEH Area:1192523 TEH Amount: 38.03515





**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: LCS-161122-RRO ;1111HP5 ,  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0025.RAW  
 Date & Time Acquired: 11/11/2021 9:55:28 PM  
 Method File: G:\Org\HP5\Methods\D3\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

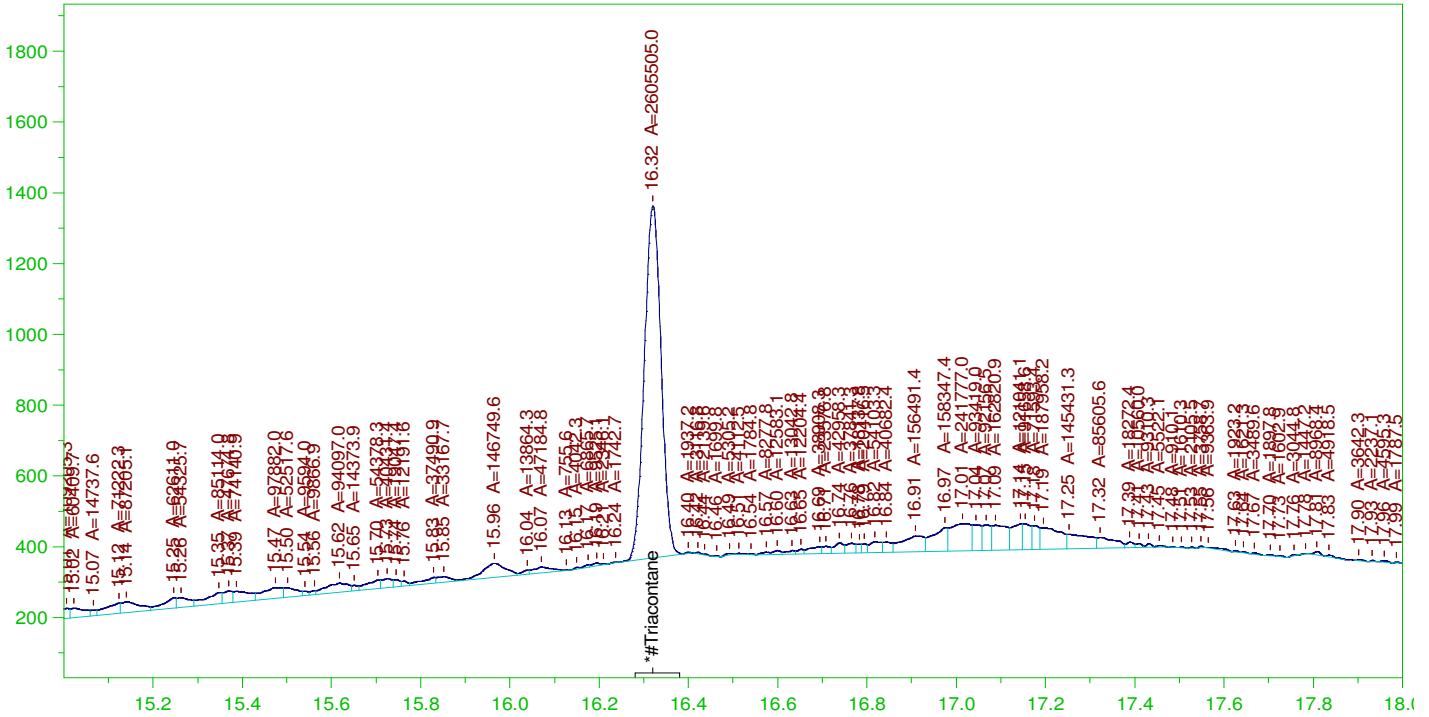
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.32	.5	.19	38.01	-

~~RRO~~ TEH(Oil Range)Area:1.357131E+08 ~~RRO~~ TEH(Oil Range)AMOUNT: 4.754786

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G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0025.RAW

LCS-161122-RRO ;1111HP5 ,



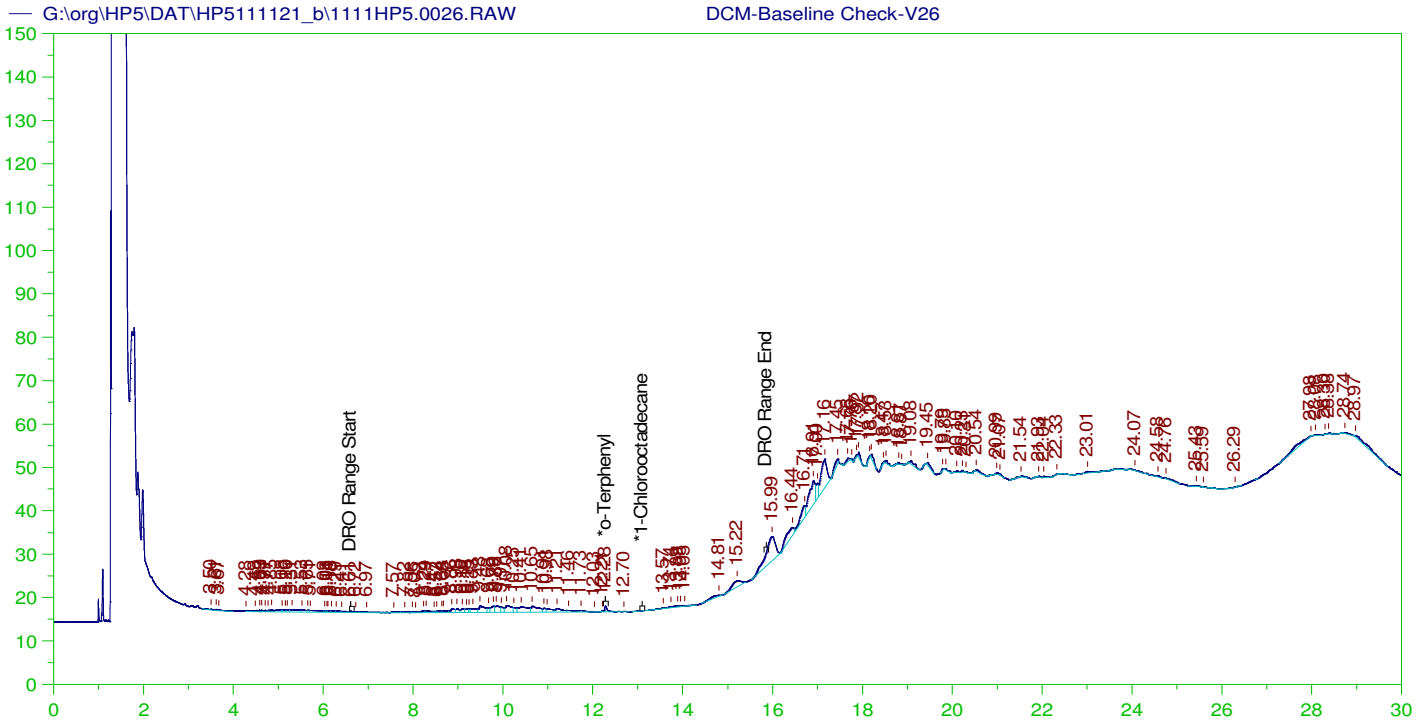
**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: LCS-161122-RRO ;1111HP5 ,  
 Raw File: G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0025.RAW  
 Date & Time Acquired: 11/11/2021 9:55:28 PM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-111125-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.32	.5	.09	18.01

RRO Area:4937837 RRO AMOUNT: 0.173



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V26  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0026.RAW  
 Date & Time Acquired: 11/11/2021 10:38:26 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

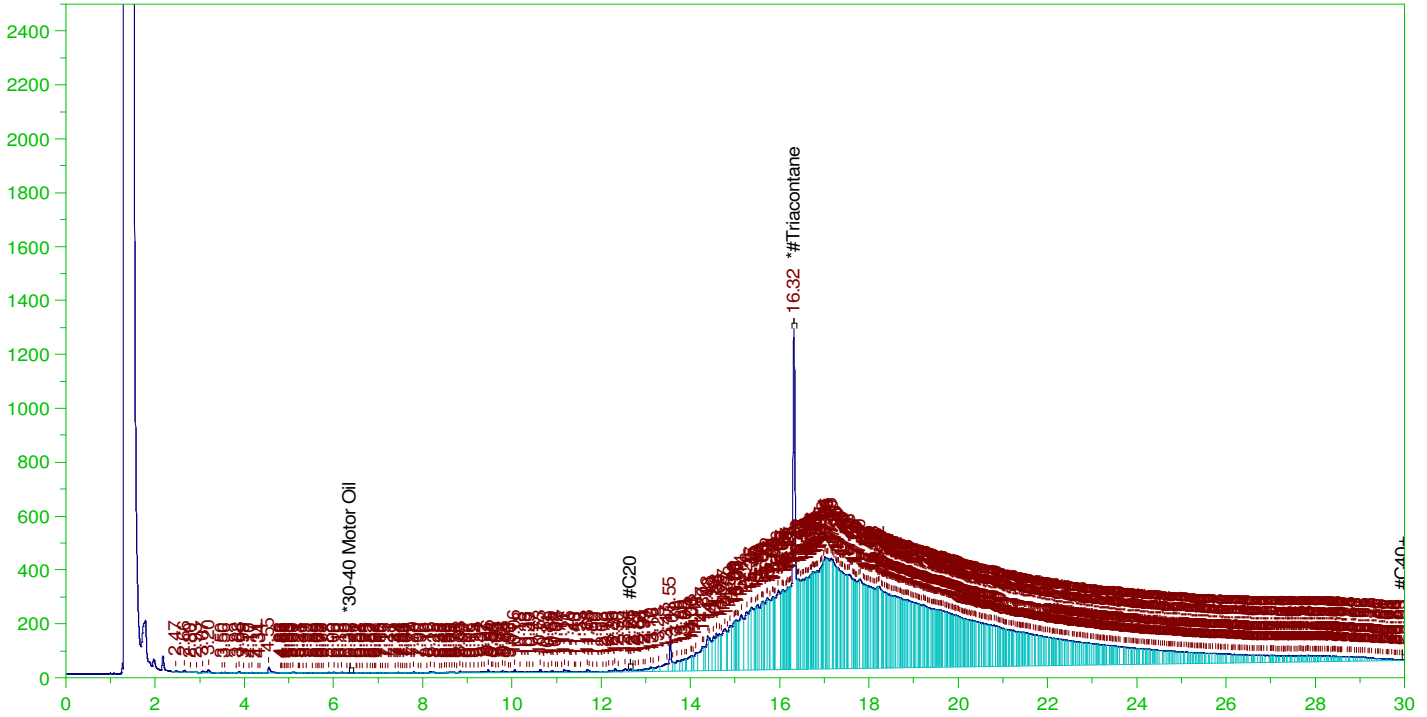
Mean RF for TEH: 31353.19  
 Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.281	200.	.159	.08
*1-Chlorooctadecane	28.971	200.	.	-

DRO Area: 216519.9 DRO Amount: 6.905833  
 TEH Area: 656705.1 TEH Amount: 20.9454

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0027.RAW

LCSD-161122-RRO ;1111HP5 ,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

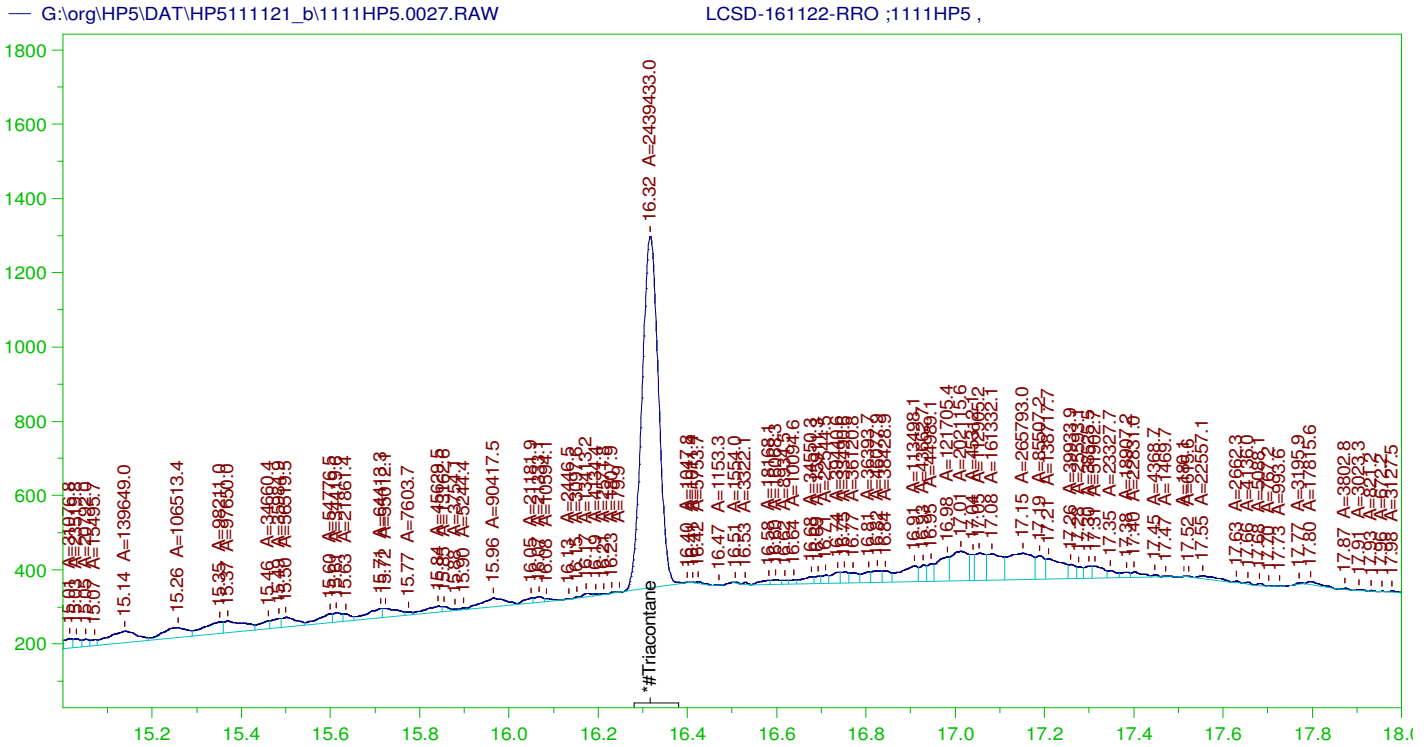
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Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0027.RAW  
Date & Time Acquired: 11/11/2021 11:21:12 PM  
Method File: G:\Org\HP5\Methods\D3\_ORO-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.CAL  
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 28542.41  
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.316	.5	.176	35.16 -

~~RRO~~ TEH(Oil Range)Area:1.260388E+08 ~~RRO~~ TEH(Oil Range)AMOUNT: 4.415842

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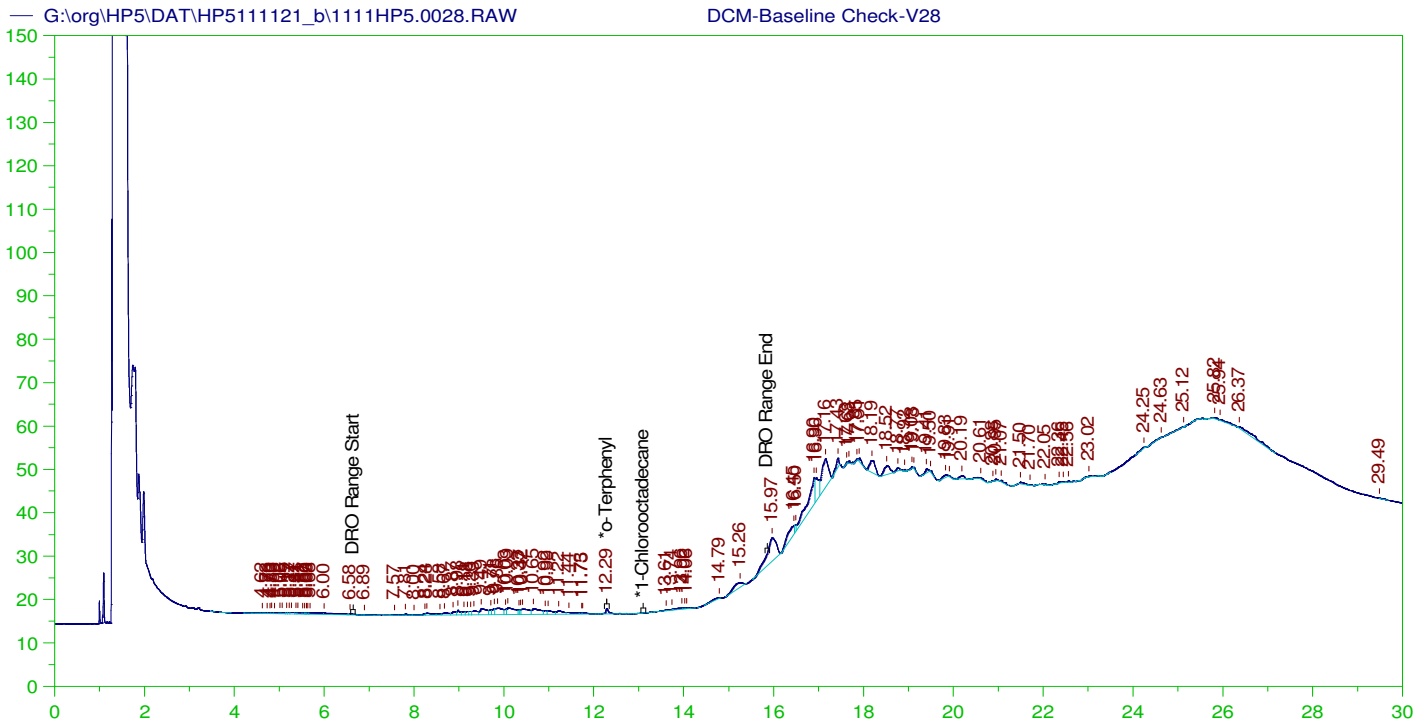
**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: LCSD-161122-RRO ;1111HP5 ,  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0027.RAW  
 Date & Time Acquired: 11/11/2021 11:21:12 PM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-111125-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.316	.5	.084	16.86

RRO Area:4544538 RRO AMOUNT: 0.1592205



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

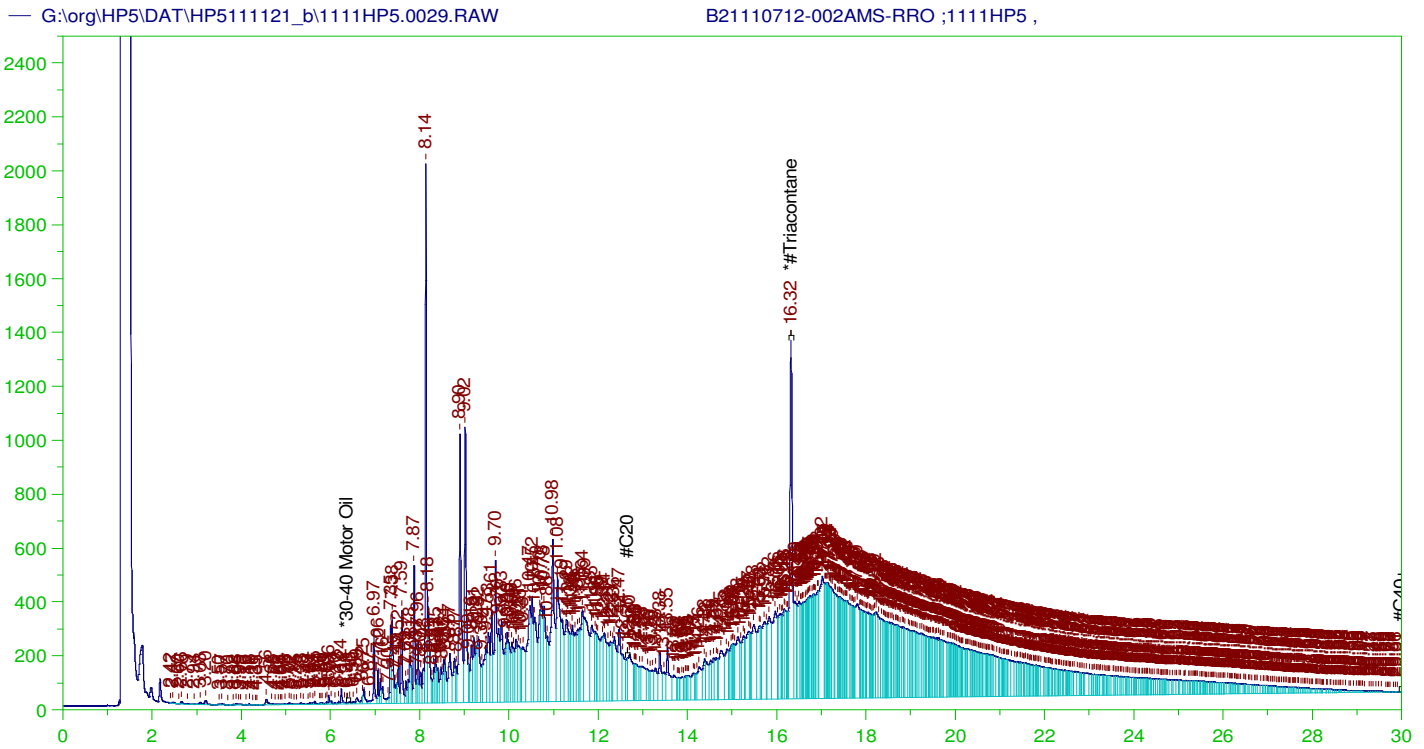
Sample Name: DCM-Baseline Check-V28  
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 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	12.287	200.	.165	.08	-
*1-Chlorooctadecane	29.494	200.	.	.	-

DRO Area: 212619.9 DRO Amount: 6.781444  
 TEH Area: 675093.4 TEH Amount: 21.53189



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

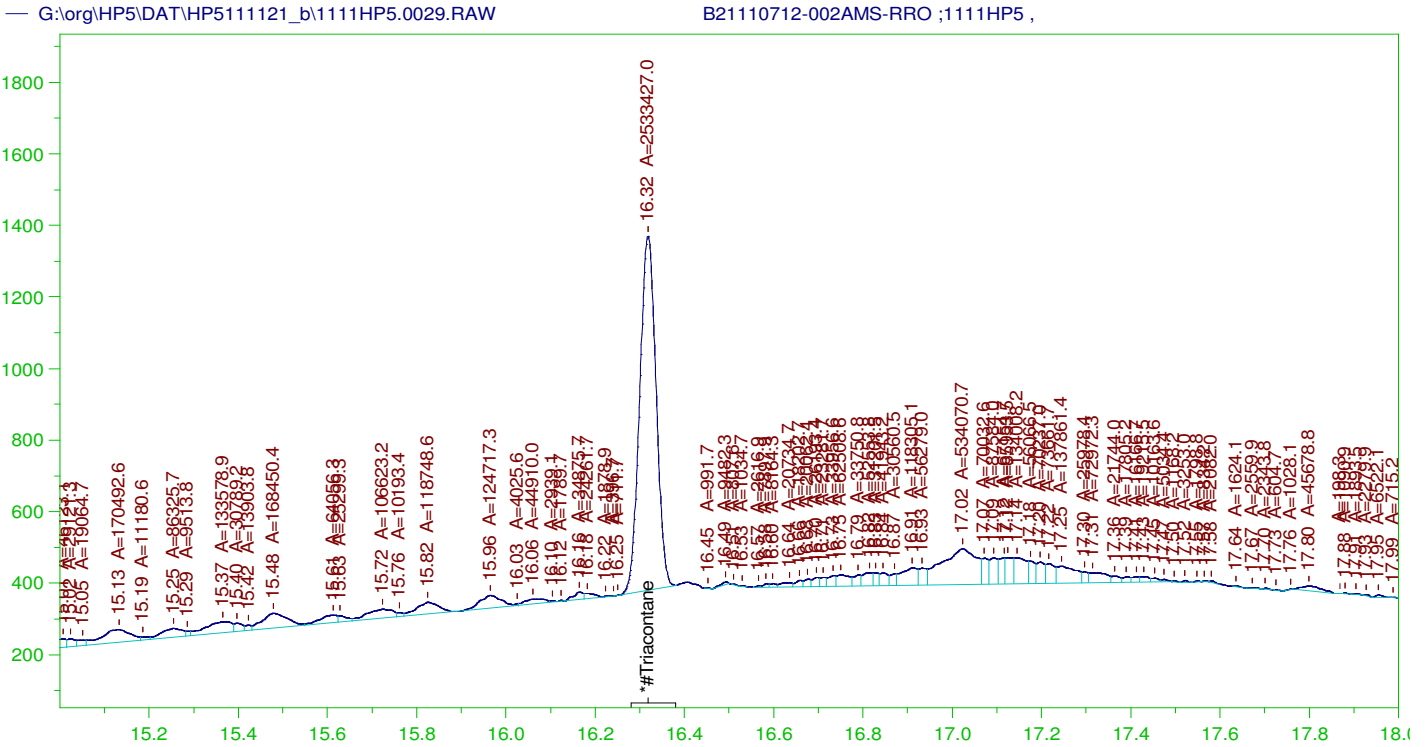
Sample Name: B21110712-002AMS-RRO ;1111HP5 ,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0029.RAW  
Date & Time Acquired: 11/12/2021 12:46:59 AM  
Method File: G:\Org\HP5\Methods\D3\_ORO-AD-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.CAL  
Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range)Organics Calculations: 28542.41  
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.318	.474	.166	35.12	-

RRO TEH(Oil Range)Area:1.425076E+08 RRO TEH(Oil Range)AMOUNT: 4.732546

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**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

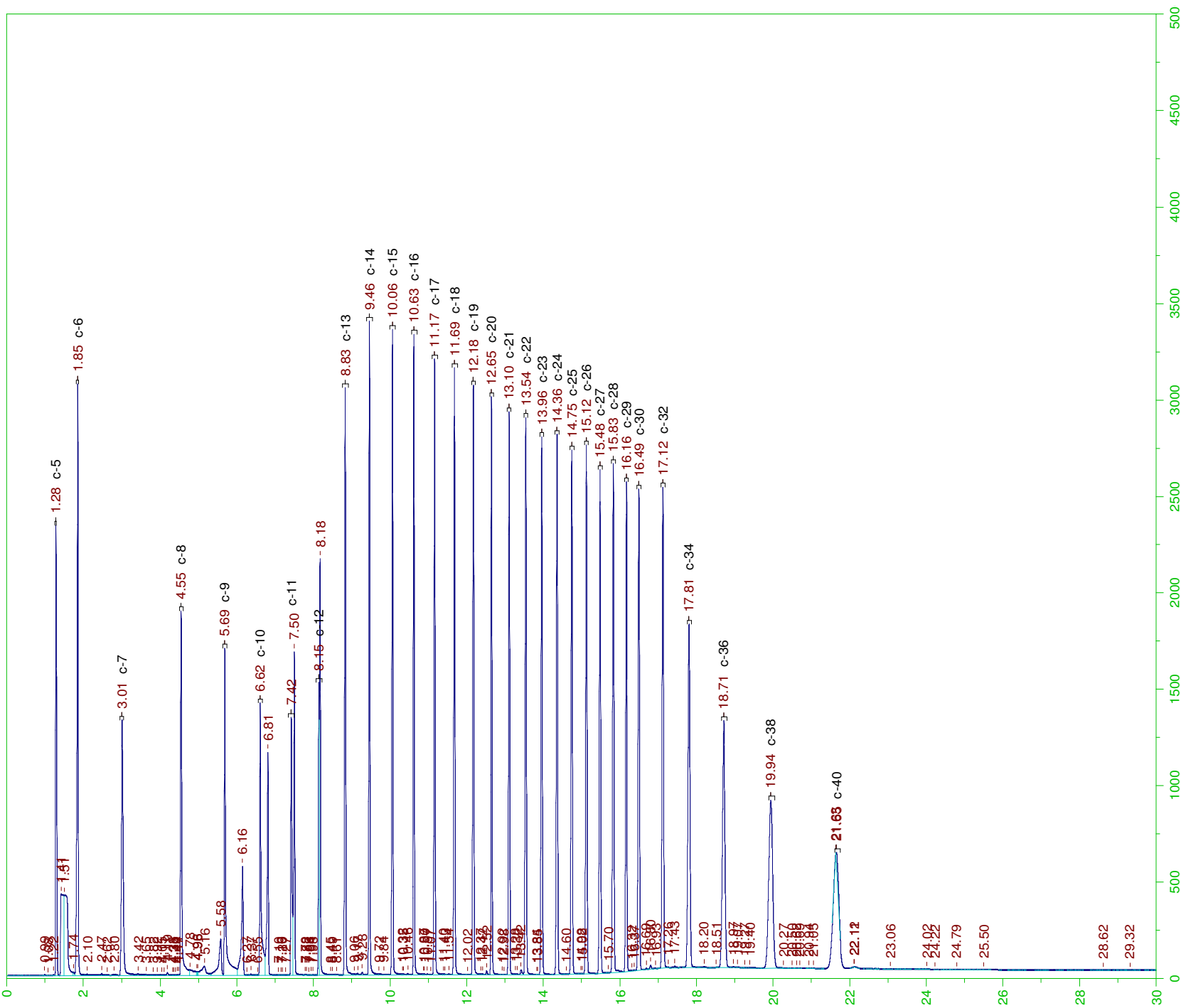
Sample Name: B21110712-002AMS-RRO ;1111HP5 ,  
Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0029.RAW  
Date & Time Acquired: 11/12/2021 12:46:59 AM  
Method File: G:\Org\HP5\Methods\DS\_ORO-111125-AD-L#.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.CAL  
Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.318	.474	.083	17.51

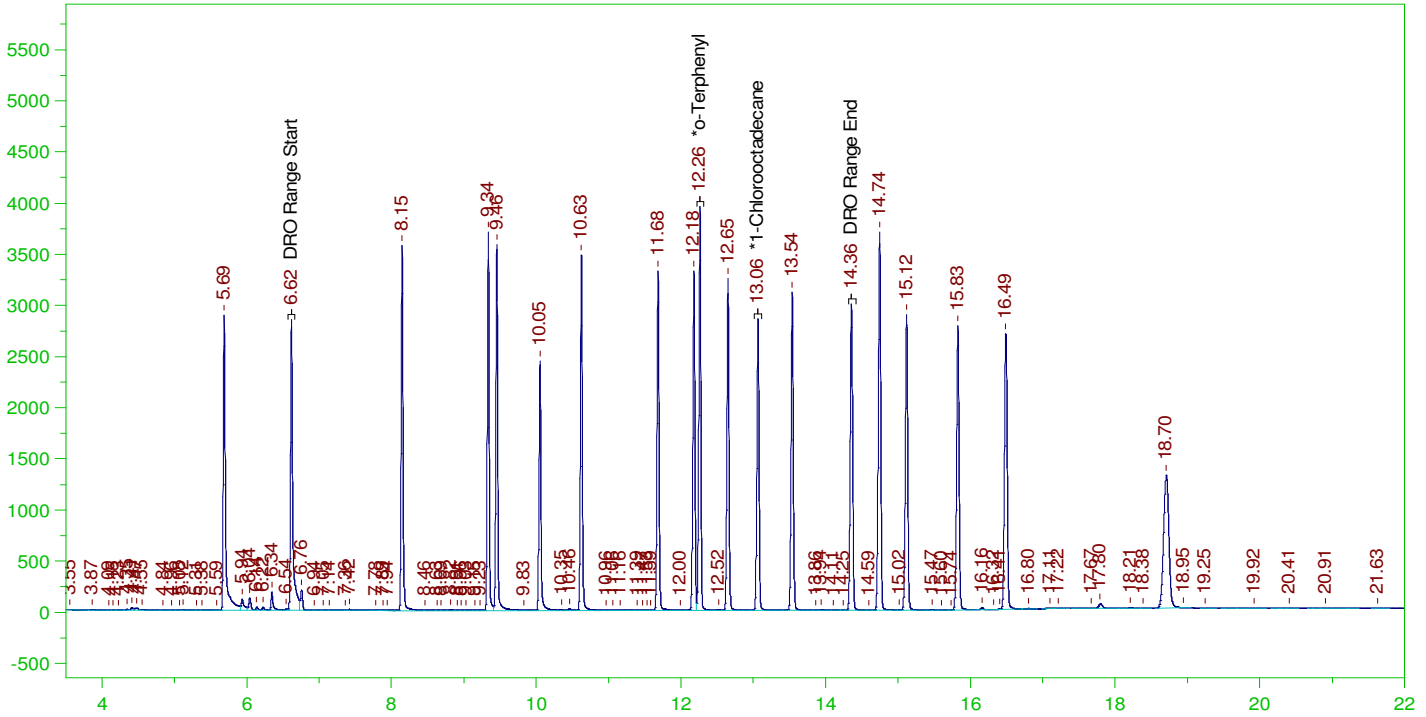
RRO Area:5238871 RRO AMOUNT: 0.1739781





G:\org\HP5\DAT\HP5111121\_b\1111HP5.0031.RAW

MARKER\_1111HP531r, DRO ;1111HP5 , DRO211012I



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

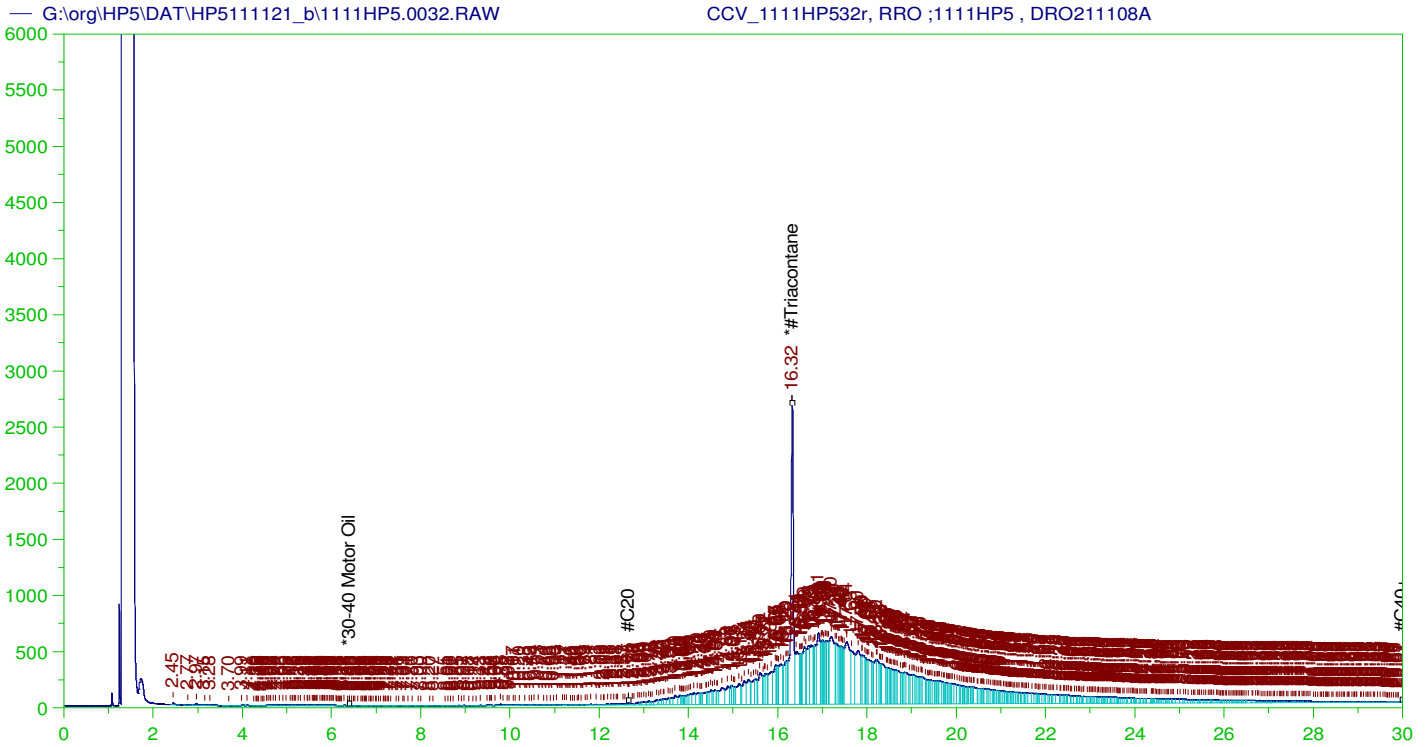
Sample Name: MARKER\_1111HP531r, DRO ;1111HP5 , DRO211012I  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0031.RAW  
 Date & Time Acquired: 11/12/2021 2:12:49 AM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.262	.2	.212	105.76
*1-Chlorooctadecane	13.064	.2	.17	85.21

DRO Area: 7.145922E+07 DRO Amount: 2.279169  
 TEH Area: 1.153154E+08 TEH Amount: 3.677947



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP532r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW  
 Date & Time Acquired: 11/12/2021 2:55:35 AM  
 Method File: G:\Org\HP5\Methods\DC\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.323	500.	336.657	67.33	-

~~RRO~~ TEH(Oil Range)Area:1.38962E+08 ~~-RRO~~ TEH(Oil Range)AMOUNT: 4868.614

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.146	.	75-125

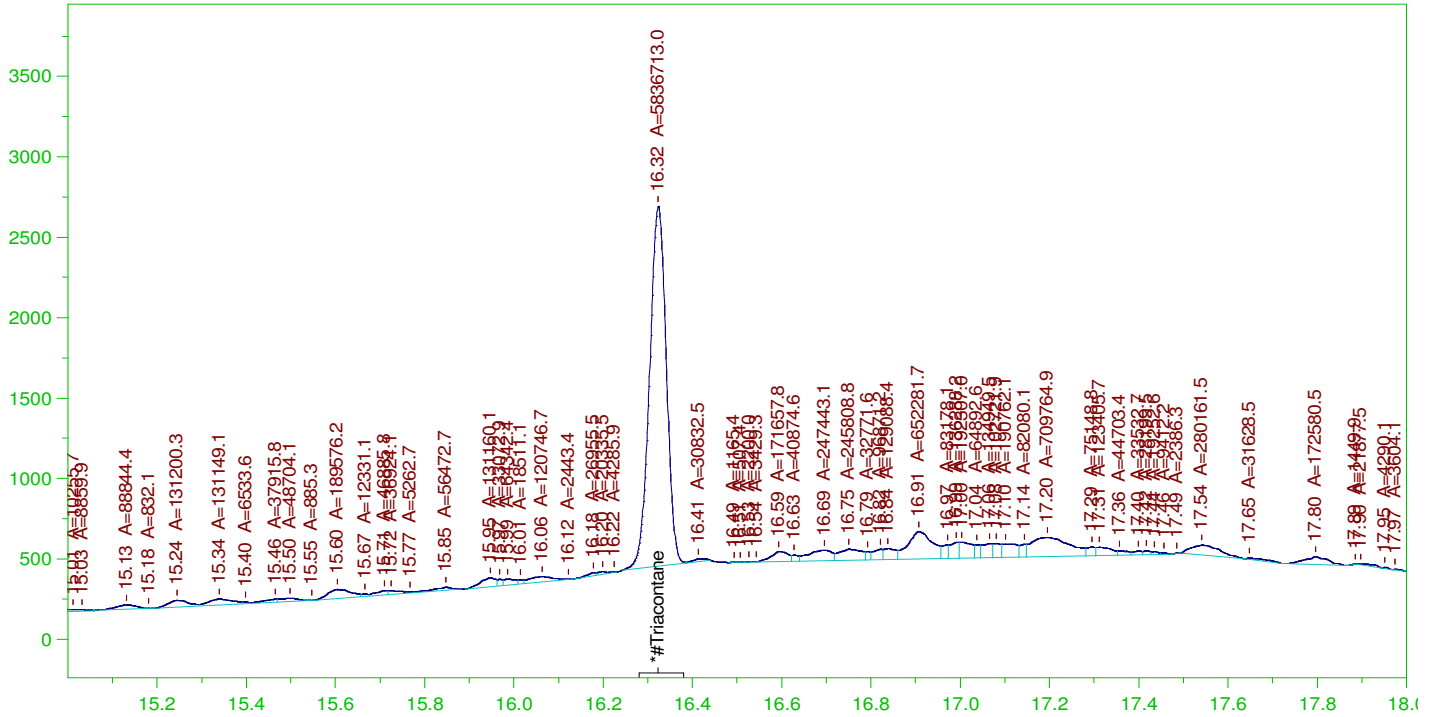
  

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.323	200.	336.657	168.33	75-125

AMN 11/18/2021

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW

CCV\_1111HP532r, RRO ;1111HP5 , DRO211108A



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP532r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW  
 Date & Time Acquired: 11/12/2021 2:55:35 AM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

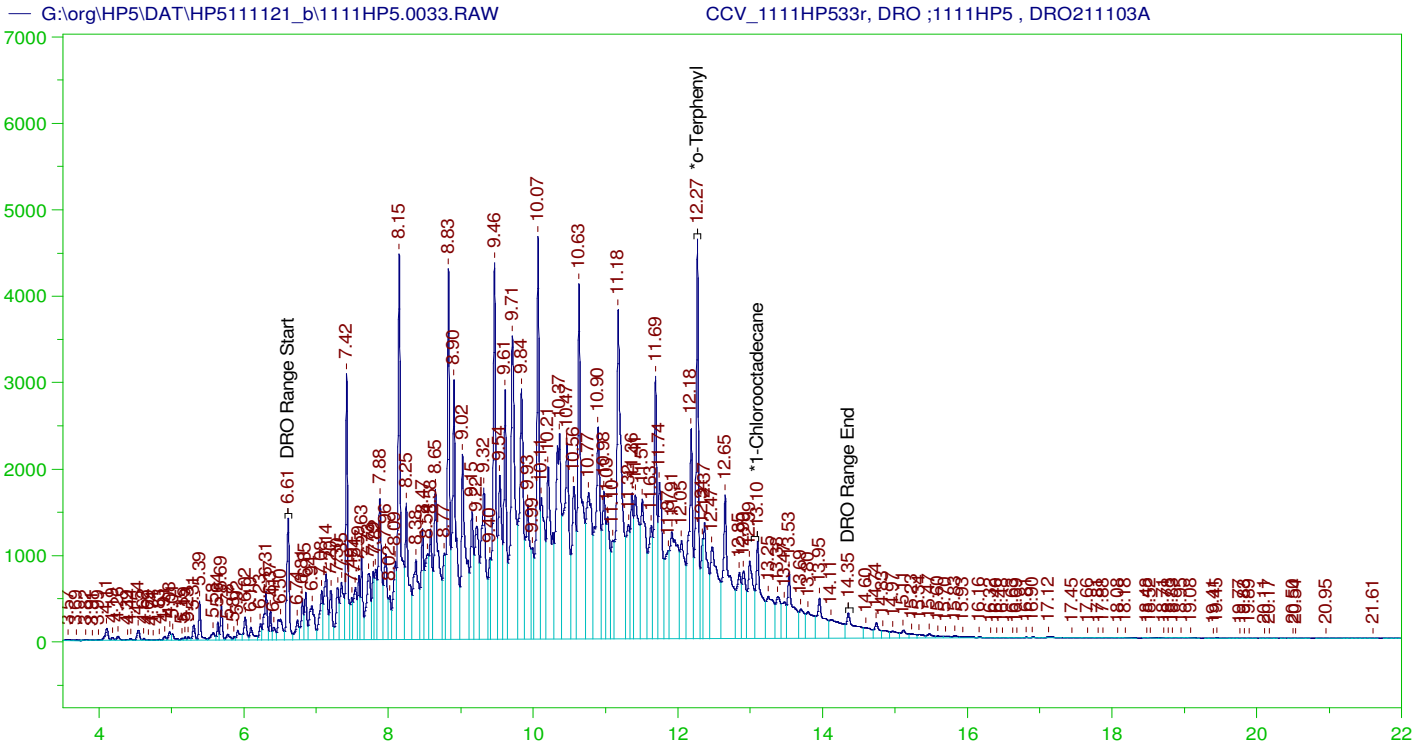
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.323	500.	201.752	40.35

RRO Area:6739023 RRO AMOUNT: 236.1056

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.146	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.323	200.	201.752	100.88	75-125



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP533r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW  
 Date & Time Acquired: 11/12/2021 3:38:25 AM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19  
 Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	332.873	166.44
*1-Chlorooctadecane	13.101	200.	160.497	80.25

DRO Area: 4.669614E+08 DRO Amount: 14893.58  
 TEH Area: 4.830182E+08 TEH Amount: 15405.71

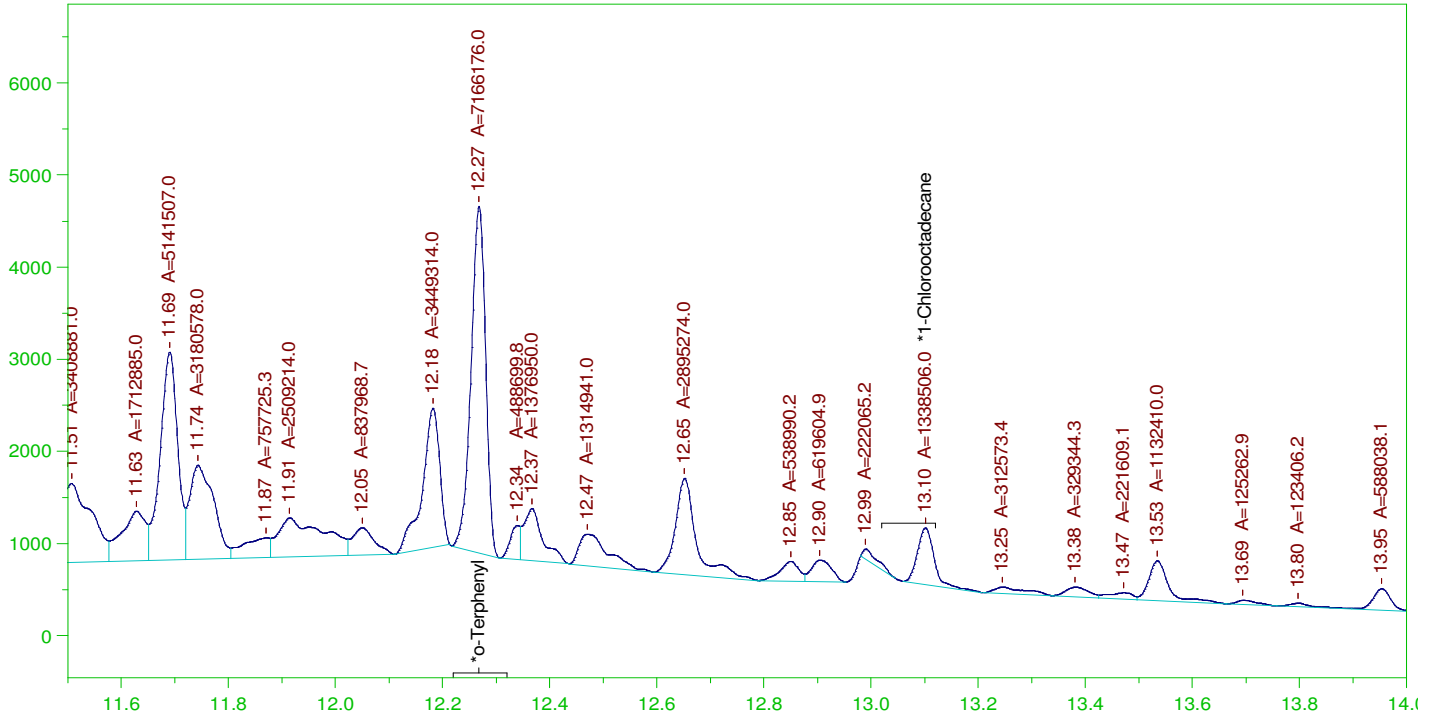
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15405.71	102.7	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	332.873	166.44	85-115
*1-Chlorooctadecane	13.101	200.	160.497	80.25	85-115

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW

CCV\_1111HP533r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP533r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW  
 Date & Time Acquired: 11/12/2021 3:38:25 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

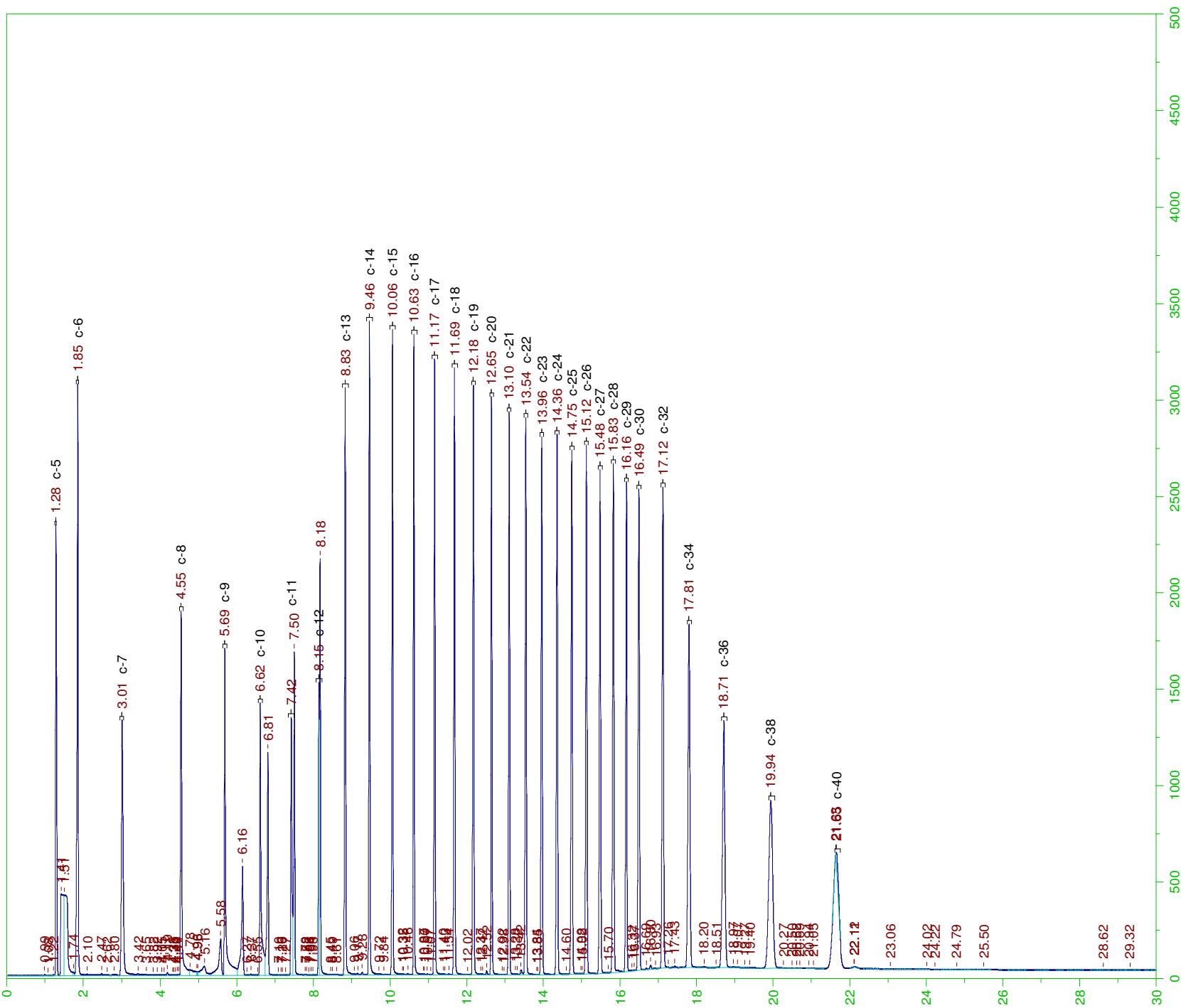
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	201.812	100.91
*1-Chlorooctadecane	13.101	200.	37.695	18.85

DRO Area: 2.638194E+08 DRO Amount: 8414.436  
 TEH Area: 2.741373E+08 TEH Amount: 8743.522

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW

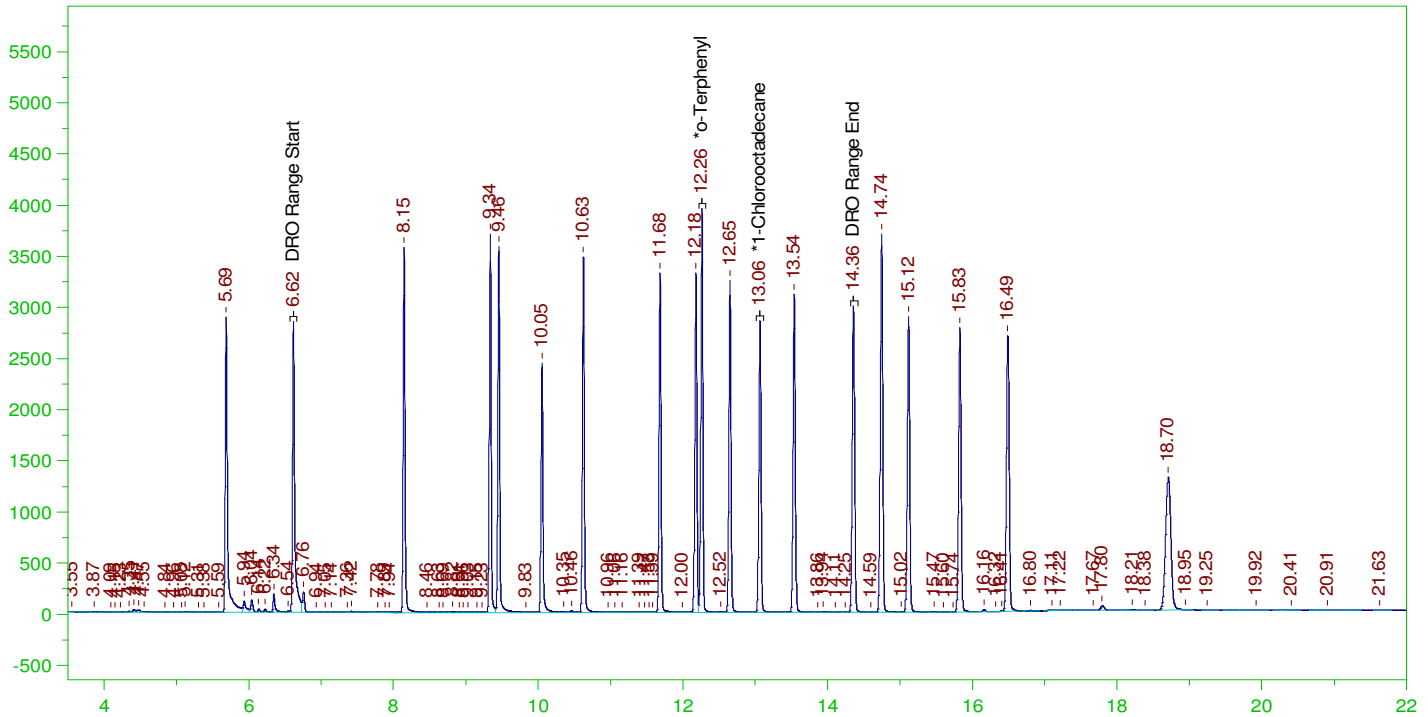
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8743.52	58.29	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	201.812	100.91	85-115
*1-Chlorooctadecane	13.101	200.	37.695	18.85	85-115



G:\org\HP5\DAT\HP5111121\_b\1111HP5.0031.RAW

MARKER\_1111HP531r, DRO ;1111HP5 , DRO211012I



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: MARKER\_1111HP531r, DRO ;1111HP5 , DRO211012I  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0031.RAW  
 Date & Time Acquired: 11/12/2021 2:12:49 AM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

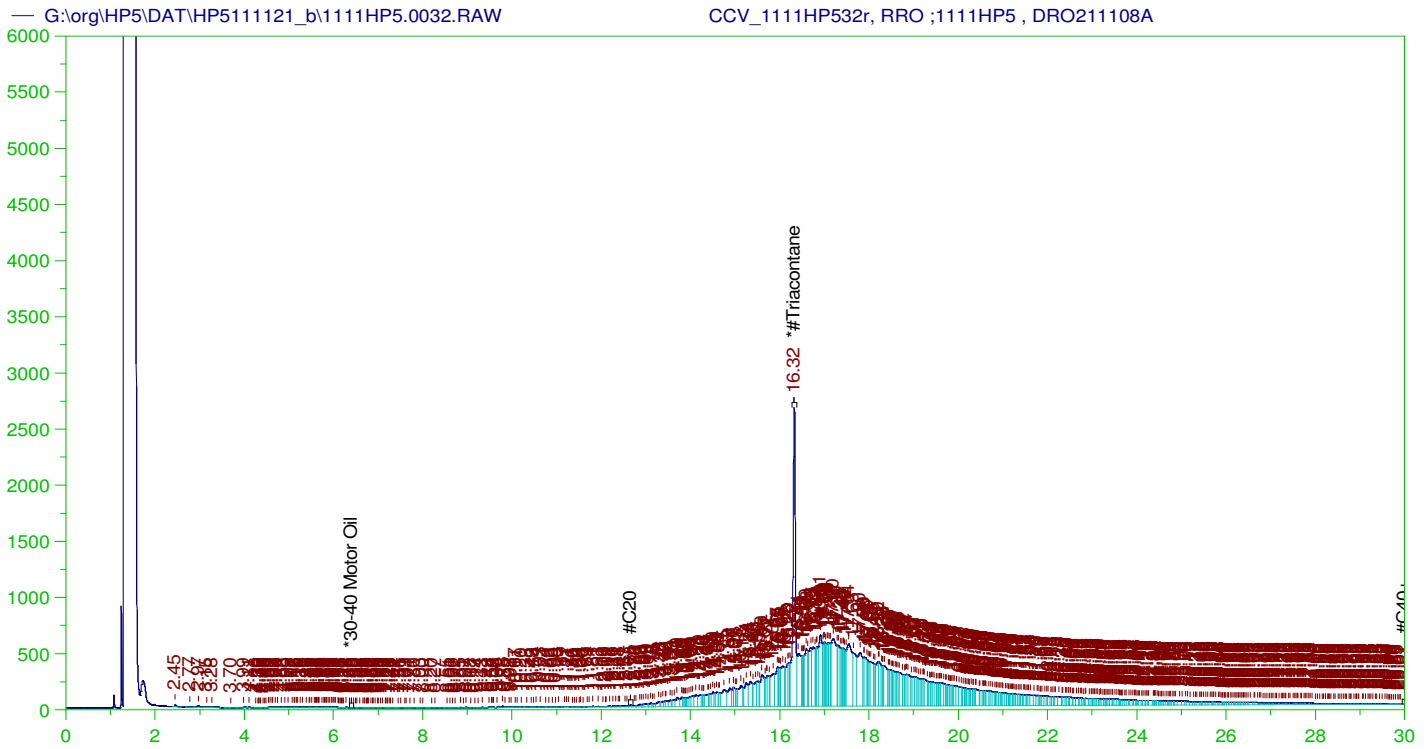
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.262	.2	.212	105.76
*1-Chlorooctadecane	13.064	.2	.17	85.21

DRO Area: 7.145922E+07 DRO Amount: 2.279169  
 TEH Area: 1.153154E+08 TEH Amount: 3.677947





**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP532r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW  
 Date & Time Acquired: 11/12/2021 2:55:35 AM  
 Method File: G:\Org\HP5\Methods\DC\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.323	500.	336.657	67.33	-

~~RRO~~ TEH(Oil Range)Area:1.38962E+08 ~~-RRO~~ TEH(Oil Range)AMOUNT: 4868.614

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW

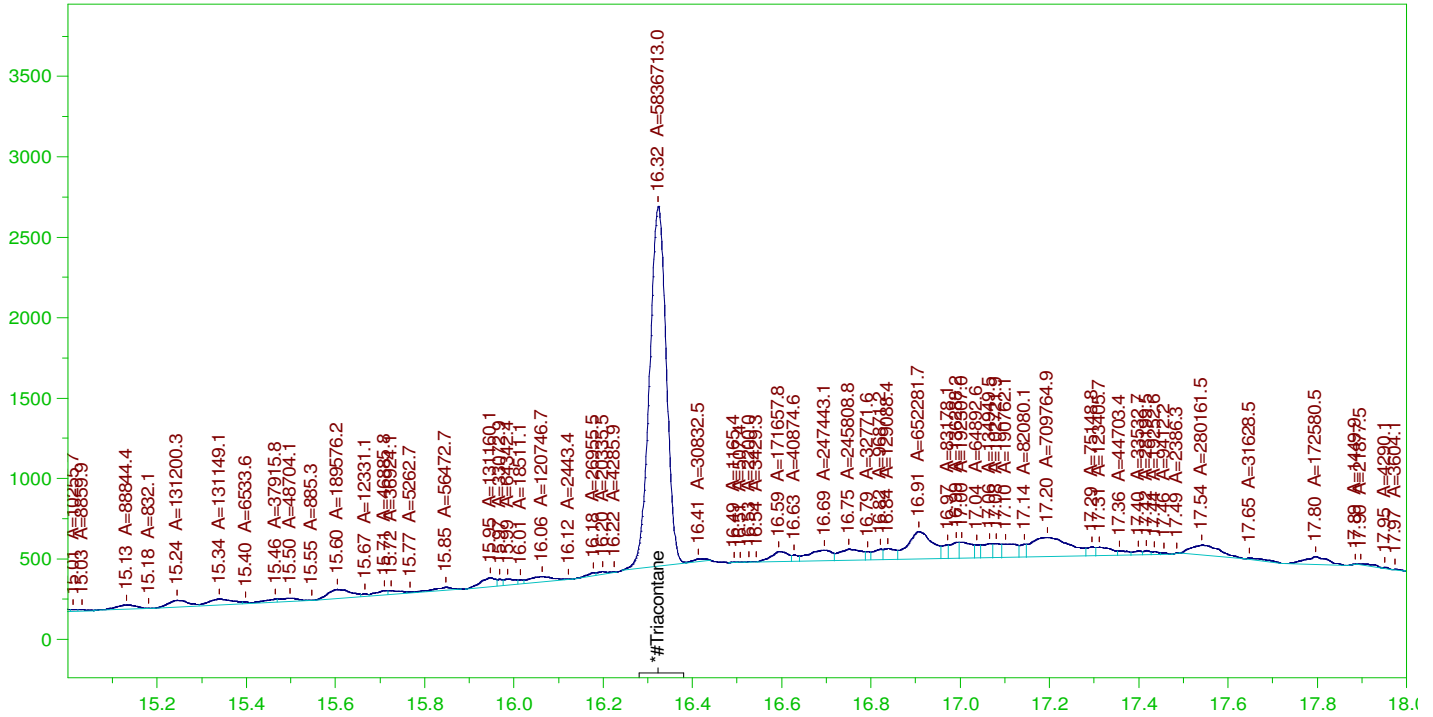
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.146	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.323	200.	336.657	168.33	75-125

AMN 11/18/2021

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW

CCV\_1111HP532r, RRO ;1111HP5 , DRO211108A



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP532r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW  
 Date & Time Acquired: 11/12/2021 2:55:35 AM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

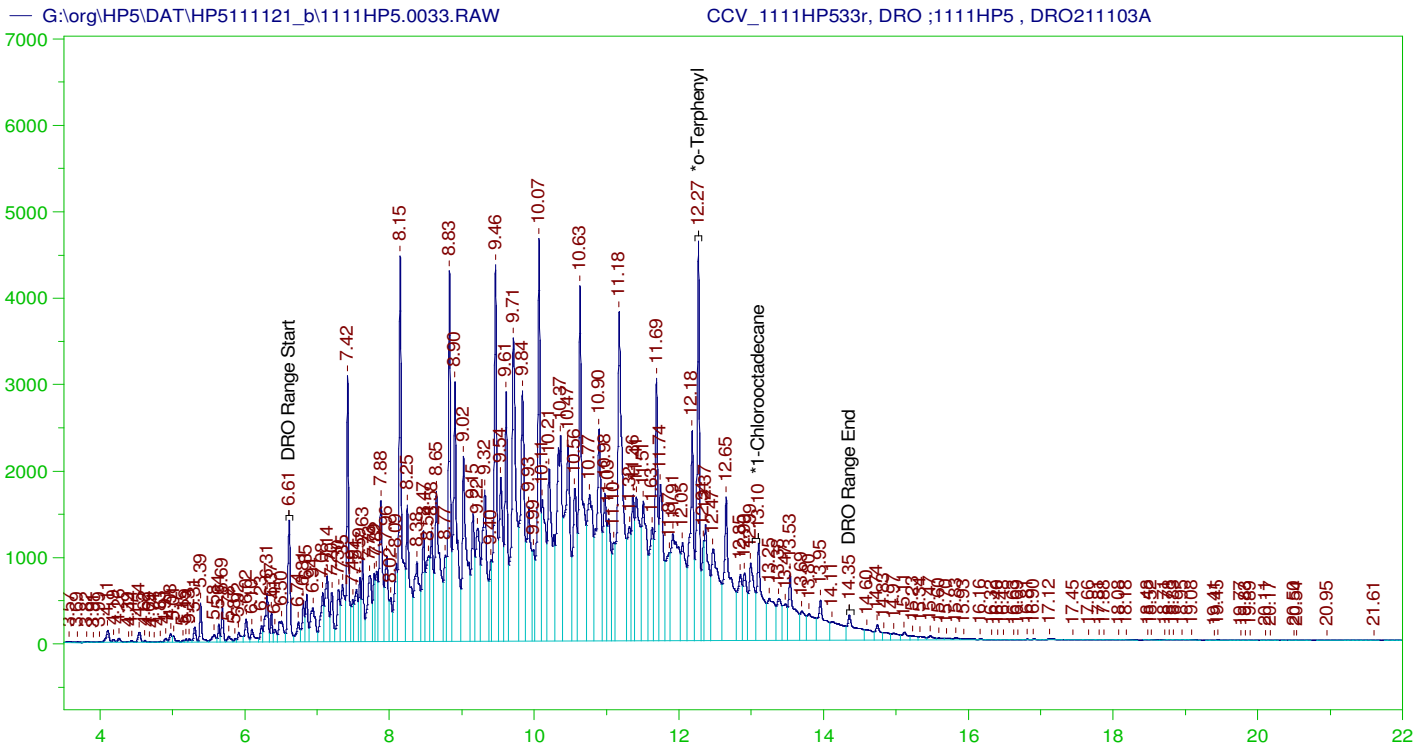
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.323	500.	201.752	40.35	-

RRO Area:6739023 RRO AMOUNT: 236.1056

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0032.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.146	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.323	200.	201.752	100.88	75-125



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP533r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW  
 Date & Time Acquired: 11/12/2021 3:38:25 AM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	332.873	166.44
*1-Chlorooctadecane	13.101	200.	160.497	80.25

DRO Area: 4.669614E+08 DRO Amount: 14893.58  
 TEH Area: 4.830182E+08 TEH Amount: 15405.71

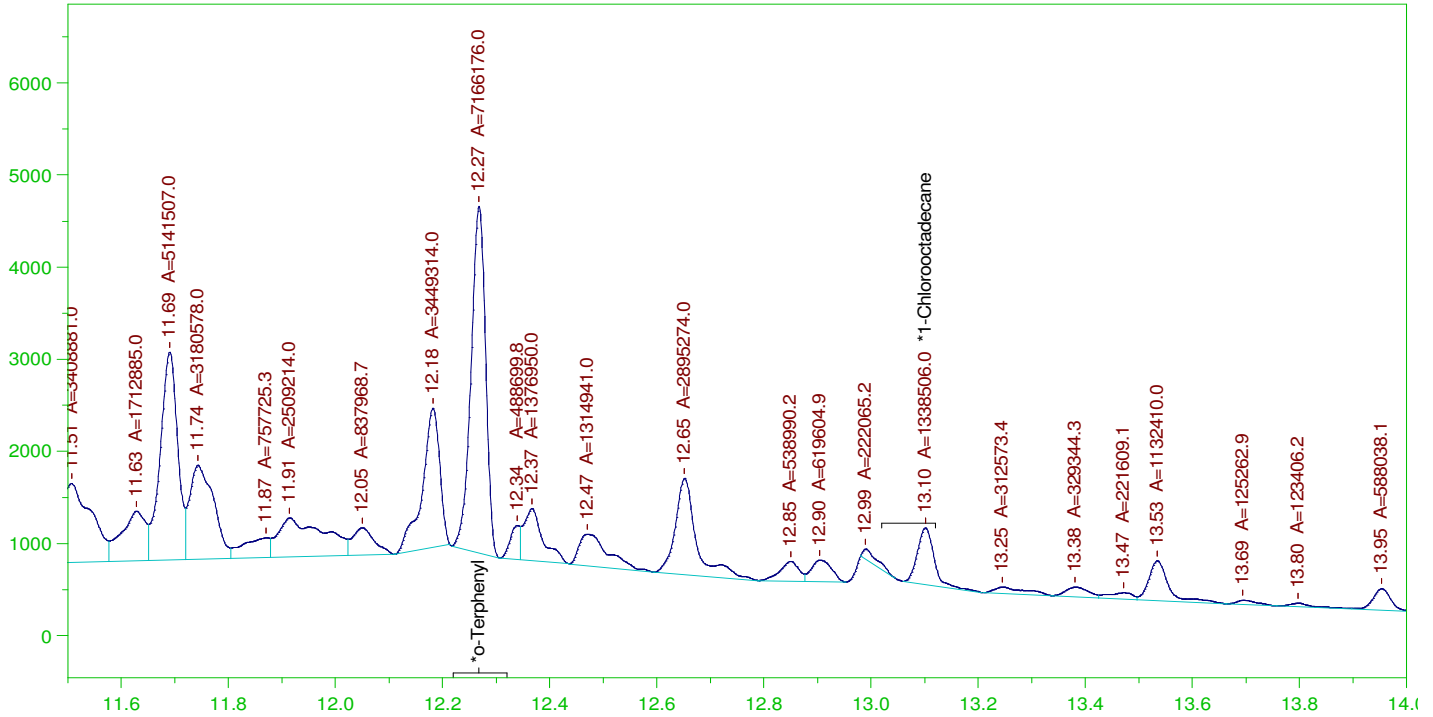
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15405.71	102.7	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	332.873	166.44	85-115
*1-Chlorooctadecane	13.101	200.	160.497	80.25	85-115

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW

CCV\_1111HP533r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP533r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW  
 Date & Time Acquired: 11/12/2021 3:38:25 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

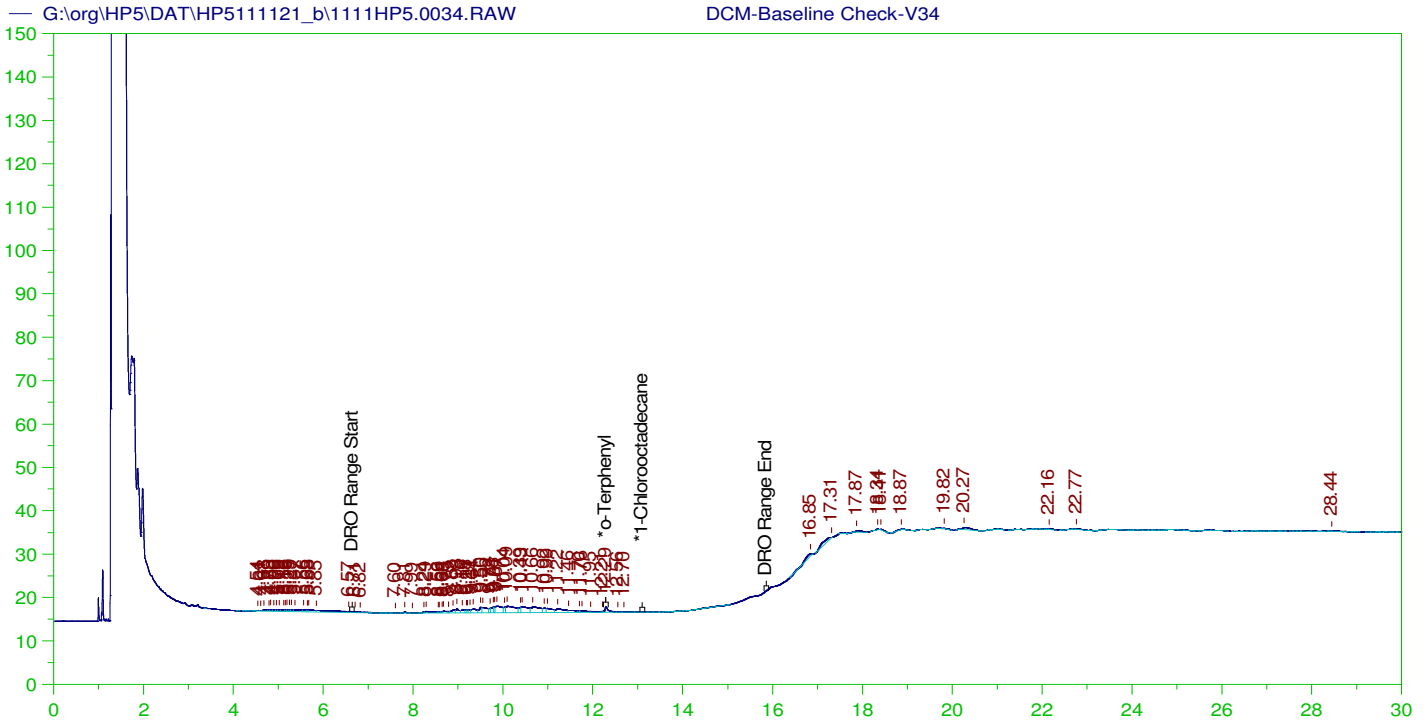
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	201.812	100.91
*1-Chlorooctadecane	13.101	200.	37.695	18.85

DRO Area: 2.638194E+08 DRO Amount: 8414.436  
 TEH Area: 2.741373E+08 TEH Amount: 8743.522

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8743.52	58.29	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	201.812	100.91	85-115
*1-Chlorooctadecane	13.101	200.	37.695	18.85	85-115



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

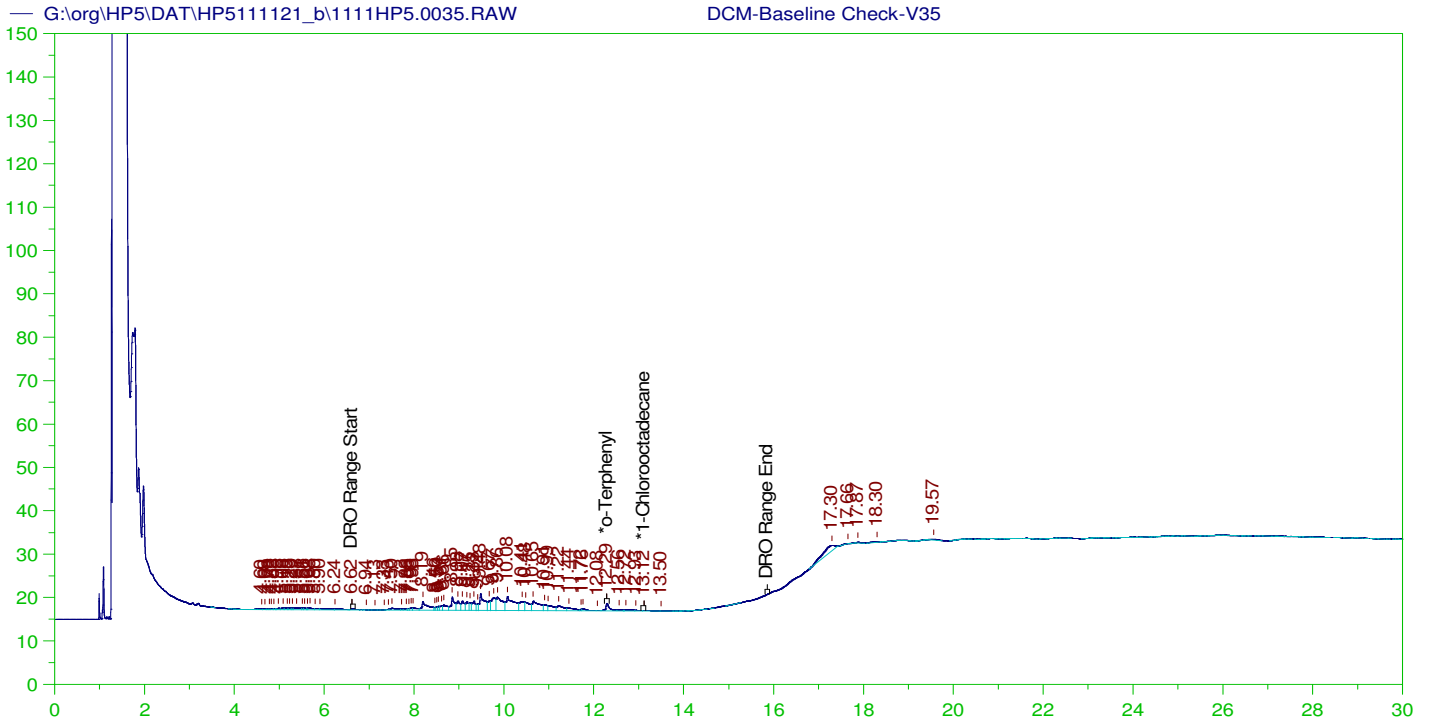
Sample Name: DCM-Baseline Check-V34  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0034.RAW  
 Date & Time Acquired: 11/12/2021 4:21:20 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	12.291	200.	.205	.1
*1-Chlorooctadecane	29.92	200.	.	.

DRO Area:187158.1 DRO Amount: 5.969349  
 TEH Area:282486.5 TEH Amount: 9.009817



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V35  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0035.RAW  
 Date & Time Acquired: 11/12/2021 7:03:33 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.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

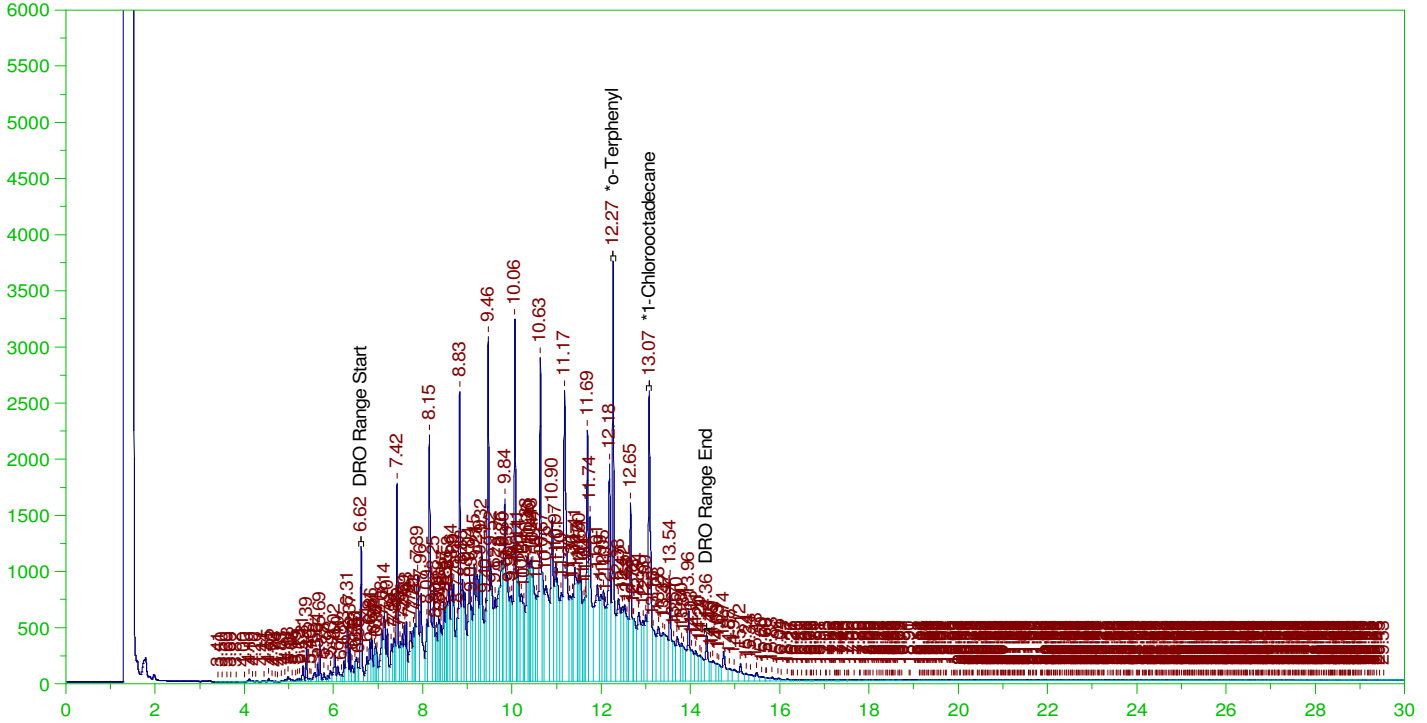
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.293	200.	.319	.16	-
*1-Chlorooctadecane	13.12	200.	.093	.05	-

DRO Area:360441.9 DRO Amount: 11.49618  
 TEH Area:438544.9 TEH Amount: 13.98725

Batch ID: 161122

LCS-161122 ;1111HP5 , SGT

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0036.RAW



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

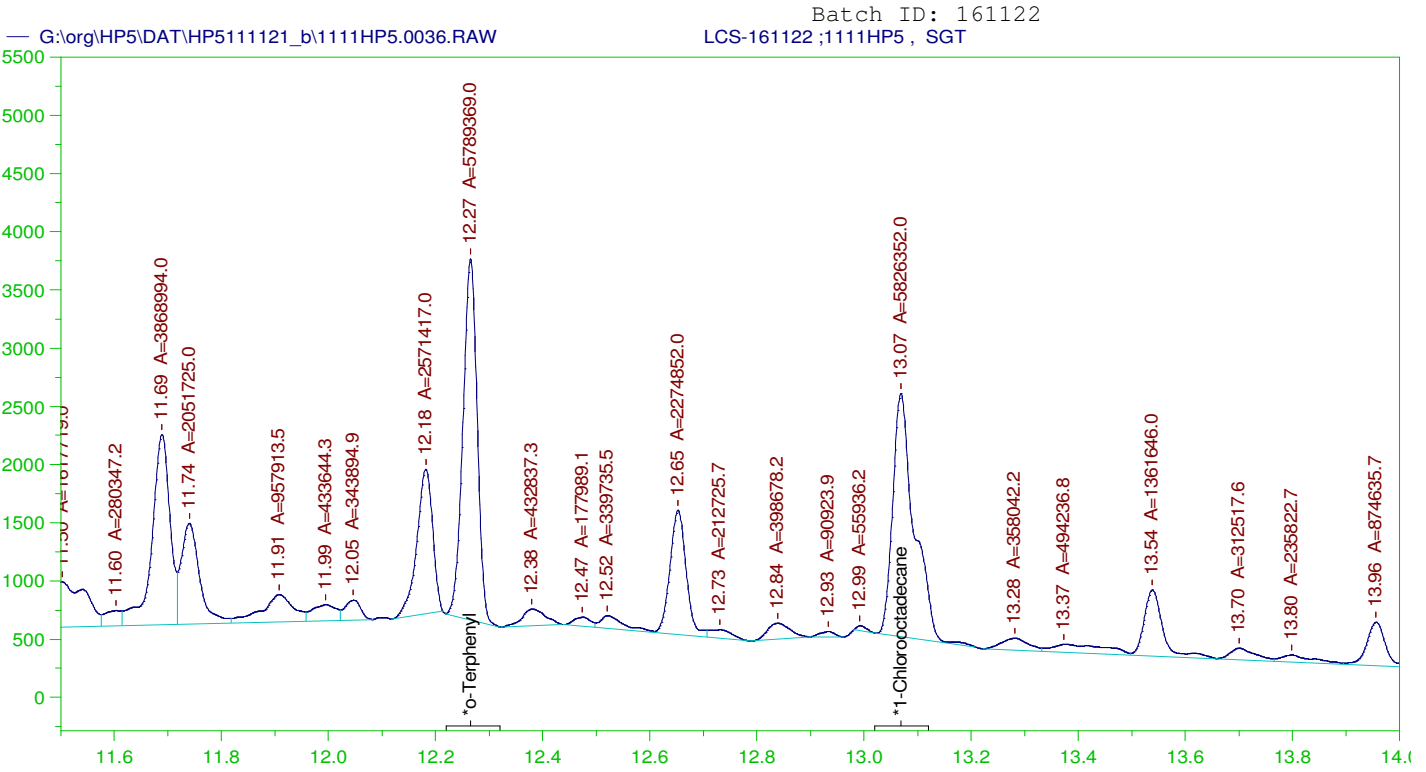
Sample Name: LCS-161122 ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0036.RAW  
 Date & Time Acquired: 11/12/2021 7:46:16 AM  
 Method File: G:\Org\HP5\Methods\D3\_8015-111106-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.265	.2	.275	137.65	-
*1-Chlorooctadecane	13.069	.2	.27	135.22	-

DRO Area: 3.078453E+08 DRO Amount: 9.818629  
 TEH Area: 3.287263E+08 TEH Amount: 10.48462



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: LCS-161122 ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0036.RAW  
 Date & Time Acquired: 11/12/2021 7:46:16 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

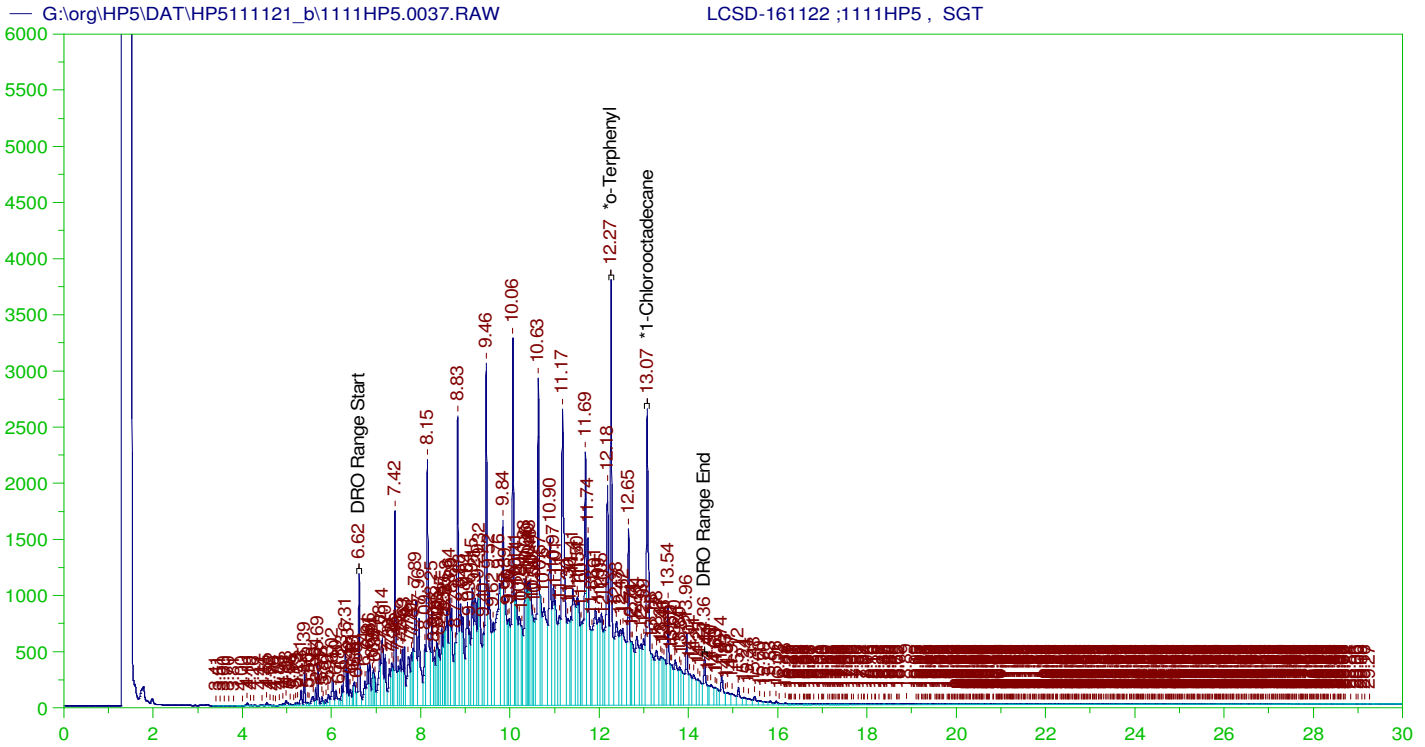
Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.265	.2	.163	81.52
*1-Chlorooctadecane	13.069	.2	.164	82.04

DRO Area: 1.442439E+08 DRO Amount: 4.600613  
 TEH Area: 1.528578E+08 TEH Amount: 4.87535



Batch ID: 161122  
LCSD-161122 ;1111HP5 , SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

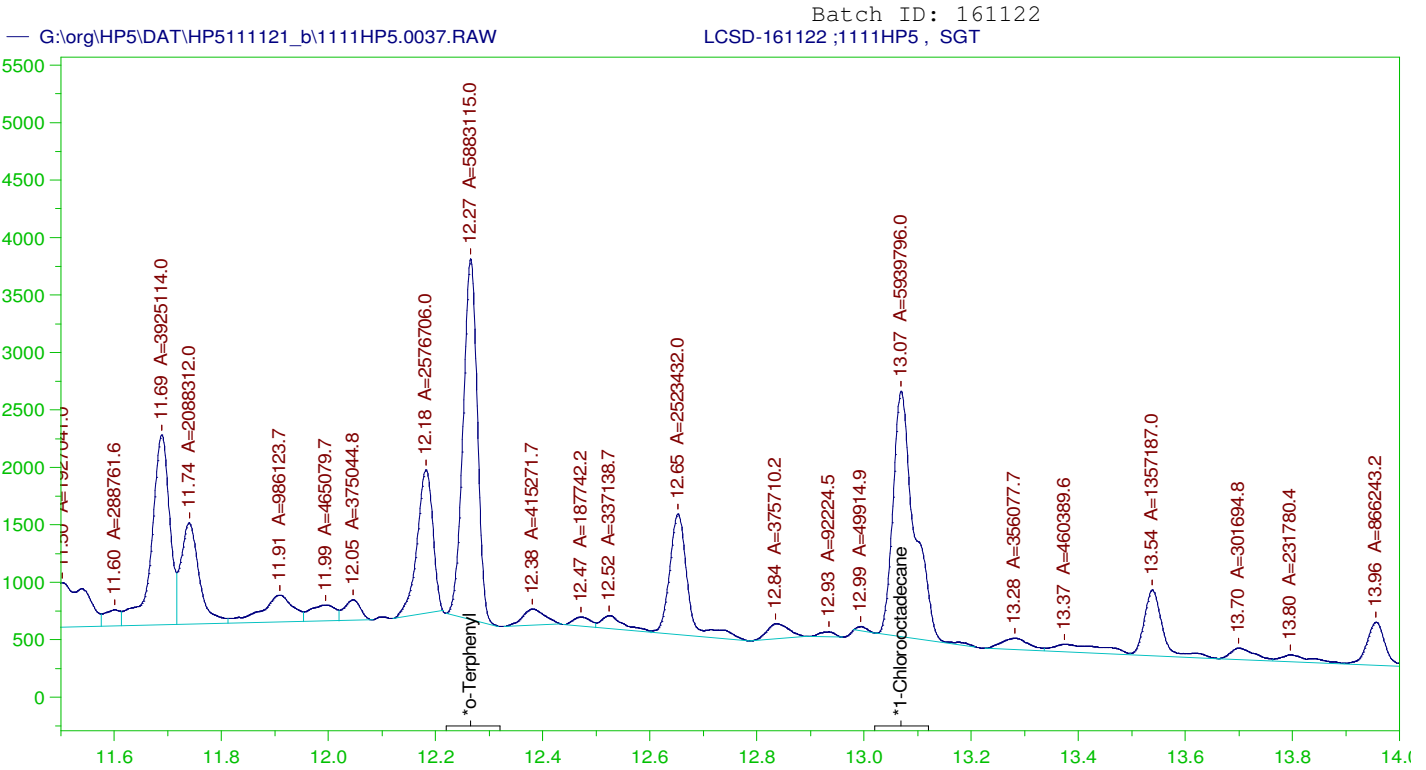
Sample Name: LCSD-161122 ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0037.RAW  
 Date & Time Acquired: 11/12/2021 8:29:06 AM  
 Method File: G:\Org\HP5\Methods\D3\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.265	.2	.277	138.48
*1-Chlorooctadecane	13.069	.2	.285	142.46

DRO Area: 3.090388E+08 DRO Amount: 9.856694  
 TEH Area: 3.294011E+08 TEH Amount: 10.50614



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

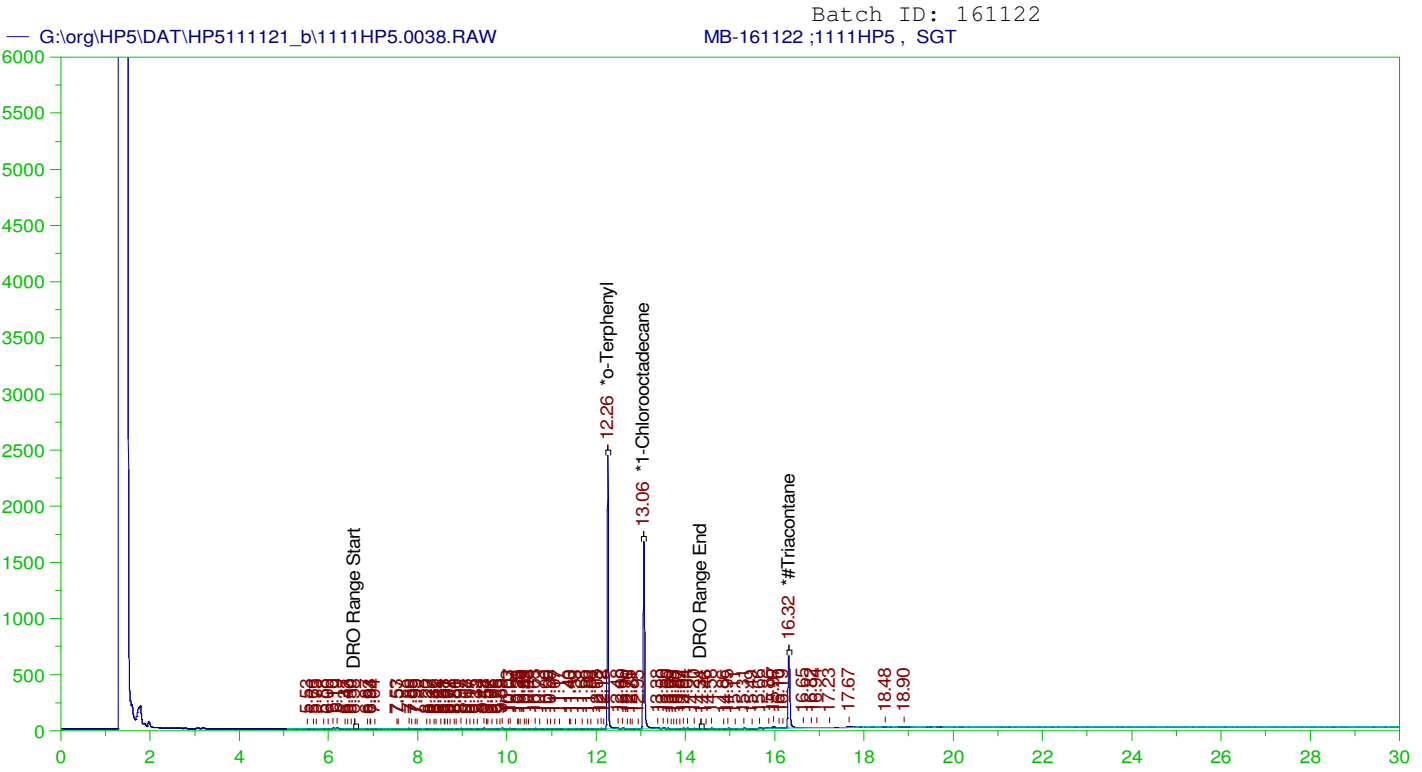
Sample Name: LCSD-161122 ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0037.RAW  
 Date & Time Acquired: 11/12/2021 8:29:06 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.265	.2	.166	82.84
*1-Chlorooctadecane	13.069	.2	.167	83.64

DRO Area:1.449177E+08 DRO Amount: 4.622104  
 TEH Area:1.534838E+08 TEH Amount: 4.895315



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

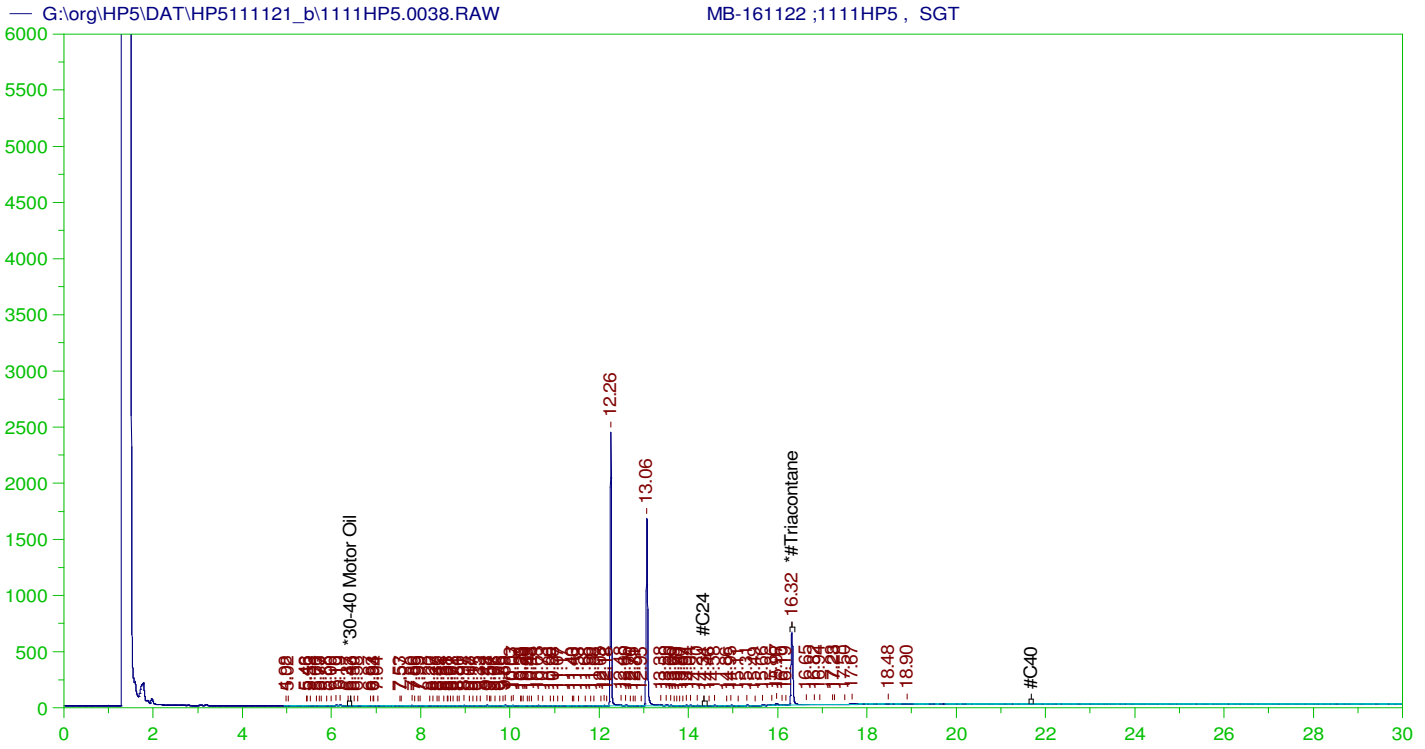
Sample Name: MB-161122 ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0038.RAW  
 Date & Time Acquired: 11/12/2021 9:12:29 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.259	.2	.134	66.9	-
*1-Chlorooctadecane	13.064	.2	.11	55.16	-
*#Triacontane	16.316	.2	.064	31.85	-

DRO Area:382368.5 DRO Amount: 1.219552E-02  
 TEH Area:592304.1 TEH Amount: 1.889135E-02



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: MB-161122 ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0038.RAW  
 Date & Time Acquired: 11/12/2021 9:12:29 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

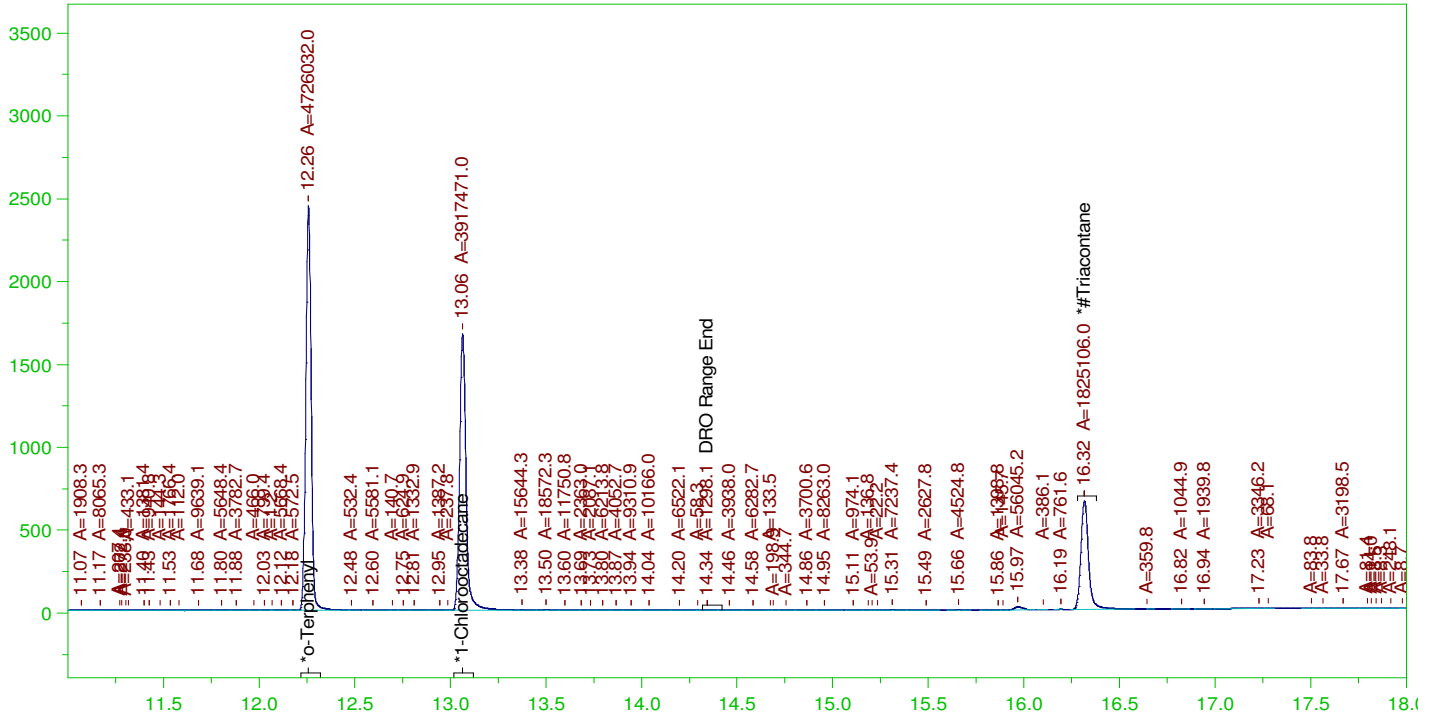
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.316	.5	.064	12.74

RRO Area:159269.8 RRO AMOUNT: 5.58011E-03

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0038.RAW

MB-161122 ;1111HP5 , SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: MB-161122 ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0038.RAW  
 Date & Time Acquired: 11/12/2021 9:12:29 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-C24Tb-IB-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.259	.2	.133	66.55
*1-Chlorooctadecane	13.064	.2	.11	55.16
*#Triacontane	16.316	.2	.063	31.54

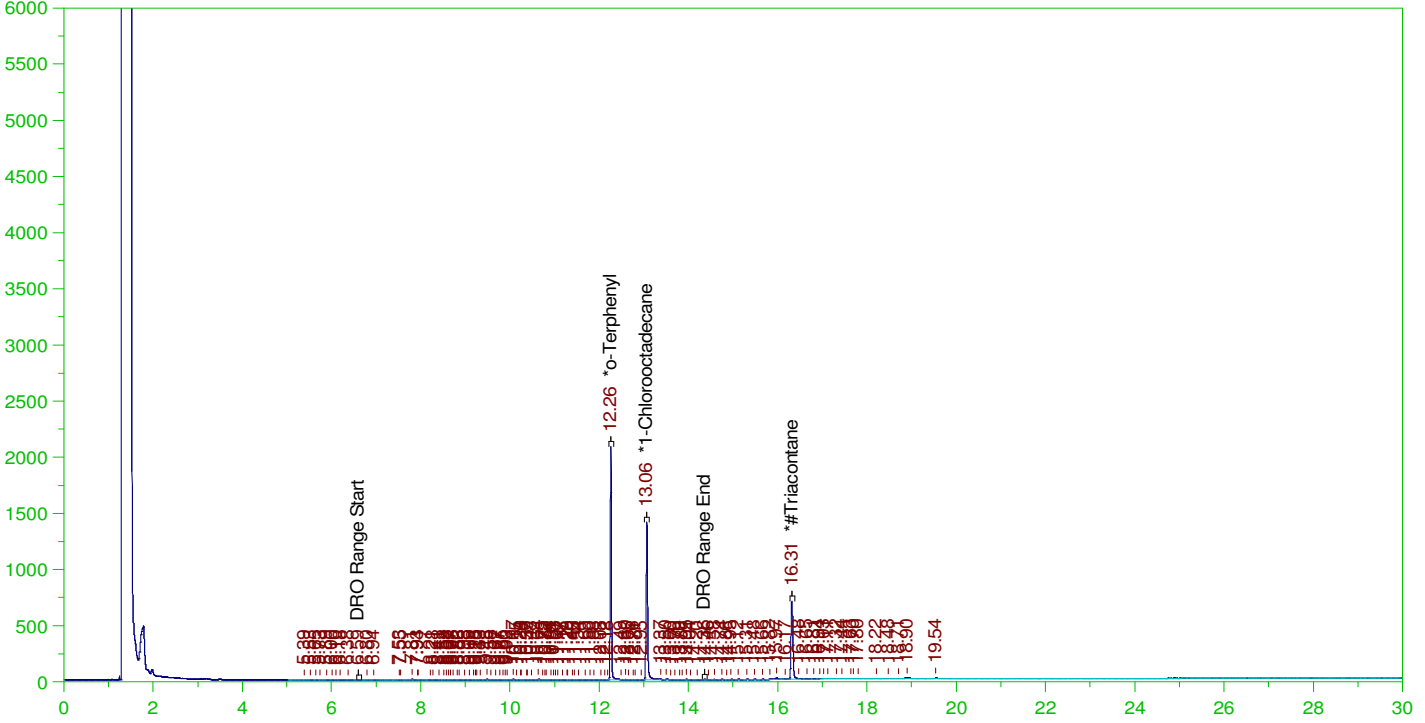
DRO Area:357509.8 DRO Amount: 1.140266E-02  
 TEH Area:597657 TEH Amount: 1.906208E-02

ERH1879 (RHMW03)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0039.RAW

B21110712-003A ;1111HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-003A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0039.RAW  
 Date & Time Acquired: 11/12/2021 9:55:34 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.259	.196	.113	57.58	-
*1-Chlorooctadecane	13.063	.196	.09	46.14	-
*#Triacontane	16.314	.196	.066	33.75	-

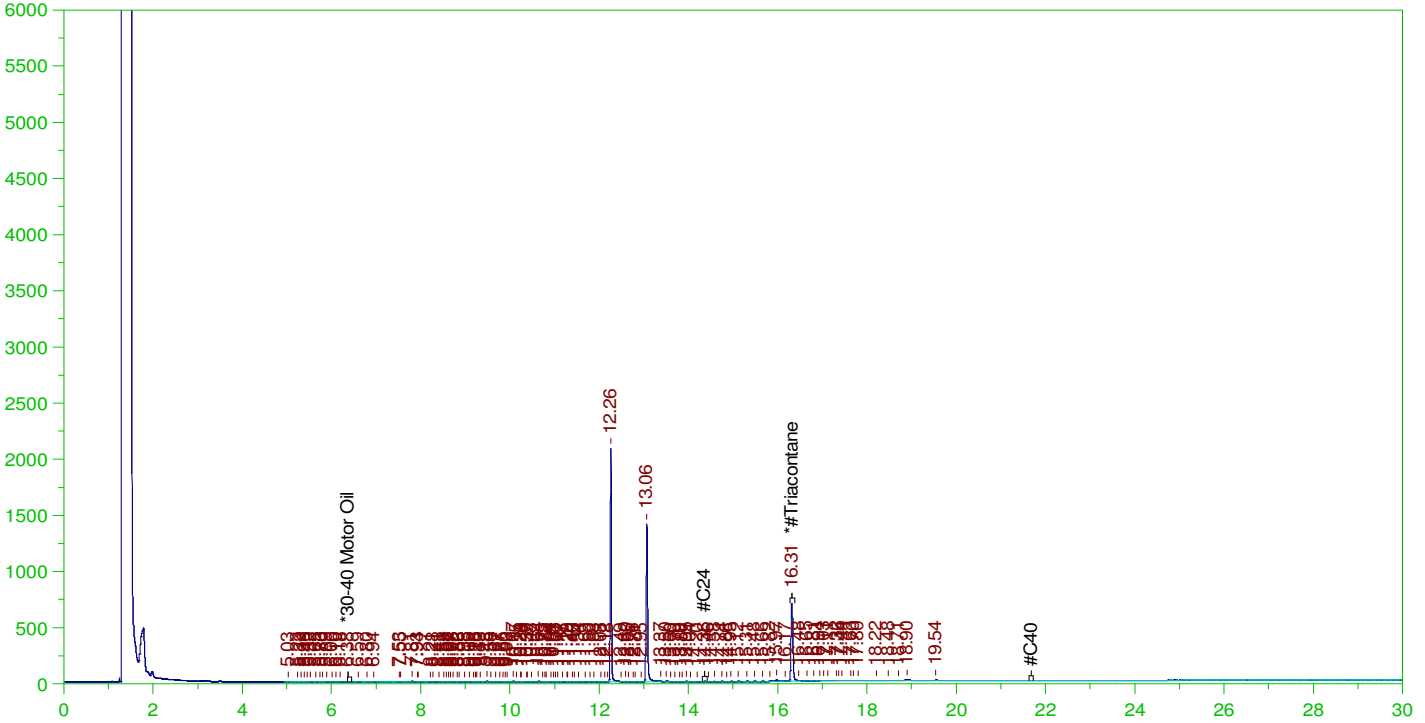
DRO Area:409112.7 DRO Amount: 1.279267E-02  
 TEH Area:678725.6 TEH Amount: 2.122327E-02

ERH1879 (RHMW03)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0039.RAW

Batch ID: 161122

B21110712-003A ;1111HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-003A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0039.RAW  
 Date & Time Acquired: 11/12/2021 9:55:34 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.314	.49	.066	13.5

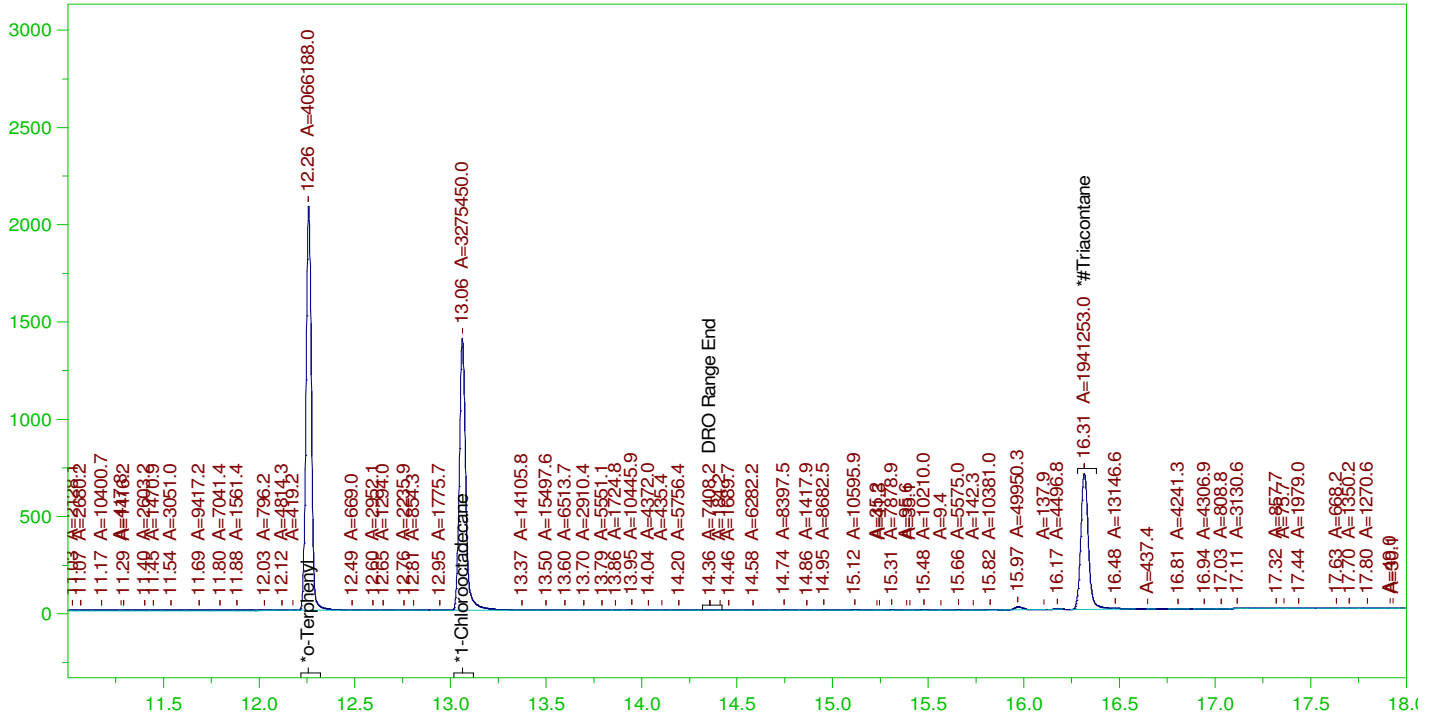
RRO Area:256613 RRO AMOUNT: 0.0088143

ERH1879 (RHMW03)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0039.RAW

B21110712-003A ;1111HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-003A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0039.RAW  
 Date & Time Acquired: 11/12/2021 9:55:34 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-C24Tb-IB-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.259	.196	.112	57.26
*1-Chlorooctadecane	13.063	.196	.09	46.12
*#Triacontane	16.314	.196	.066	33.55

DRO Area:364700.3 DRO Amount: 1.140392E-02  
 TEH Area:671871.3 TEH Amount: 2.100894E-02

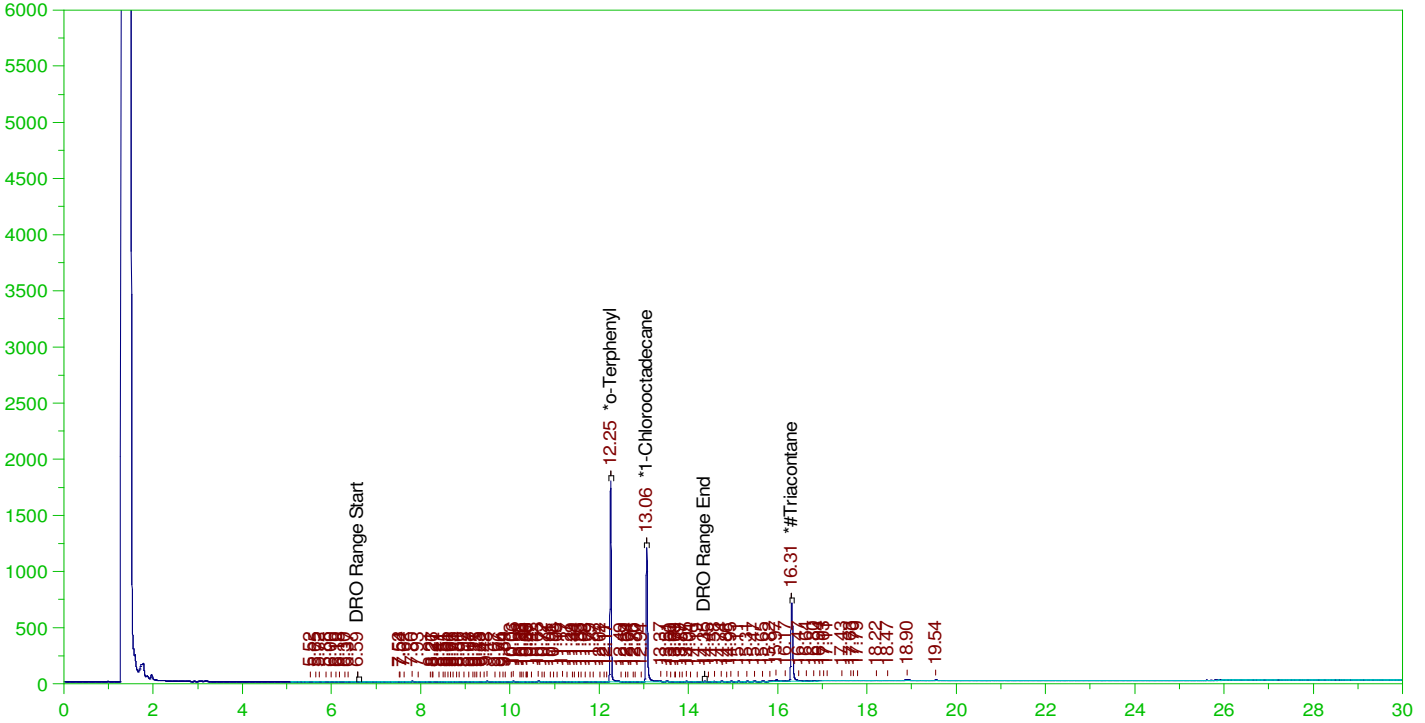


ERH1882 (RHMW05)

Batch ID: 161122

G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0040.RAW

B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, RR poked wrong v



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, RR poked wrong v  
 Raw File: G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0040.RAW  
 Date & Time Acquired: 11/12/2021 10:40:54 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L0.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.254	.19	.095	49.93	-
*1-Chlorooctadecane	13.06	.19	.076	40.04	-
*#Triacontane	16.312	.19	.064	33.74	-

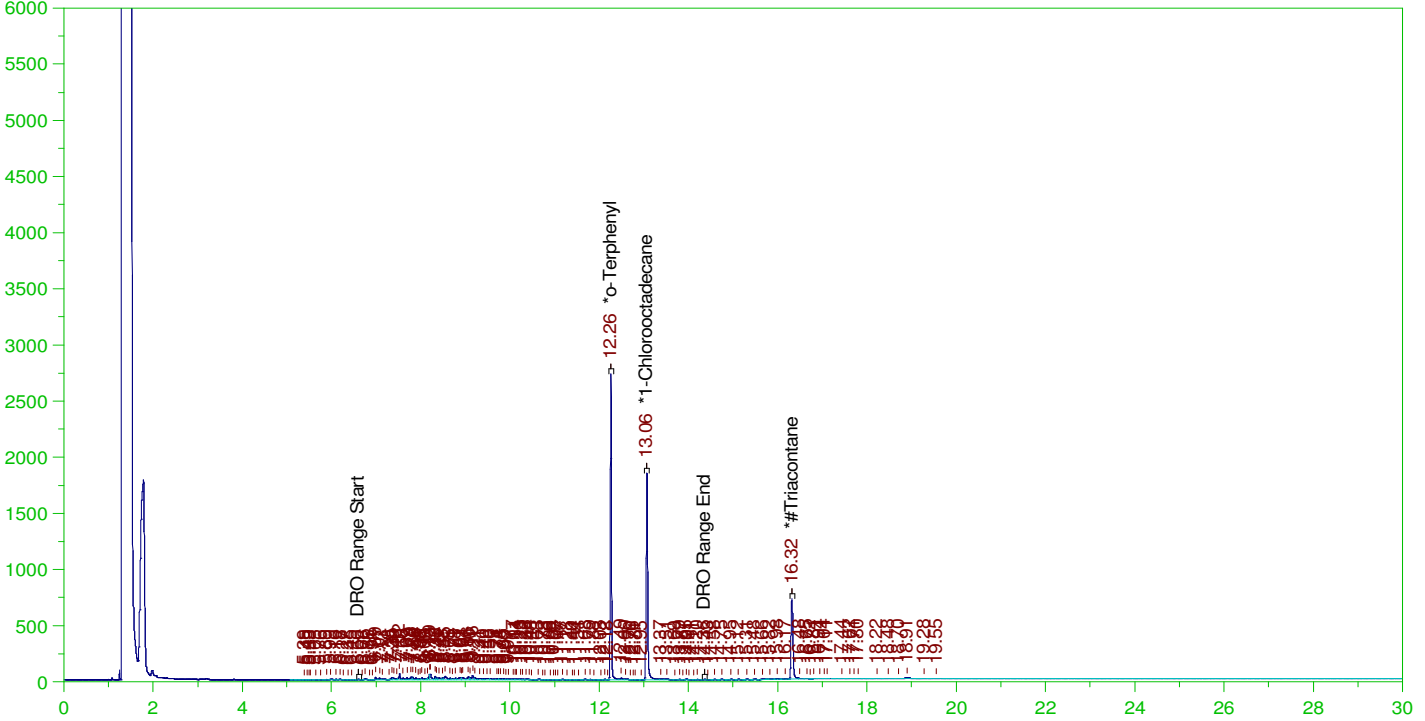
DRO Area:401853.9 DRO Amount: 1.214882E-02  
 TEH Area:668148.9 TEH Amount: 2.019943E-02

ERH1873 (RHMW01R)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0041.RAW

Batch ID: 161122

B21110712-001A ;1111HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-001A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0041.RAW  
 Date & Time Acquired: 11/12/2021 11:23:43 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.261	.194	.143	73.87	-
*1-Chlorooctadecane	13.065	.194	.118	60.51	-
*#Triacontane	16.315	.194	.069	35.33	-

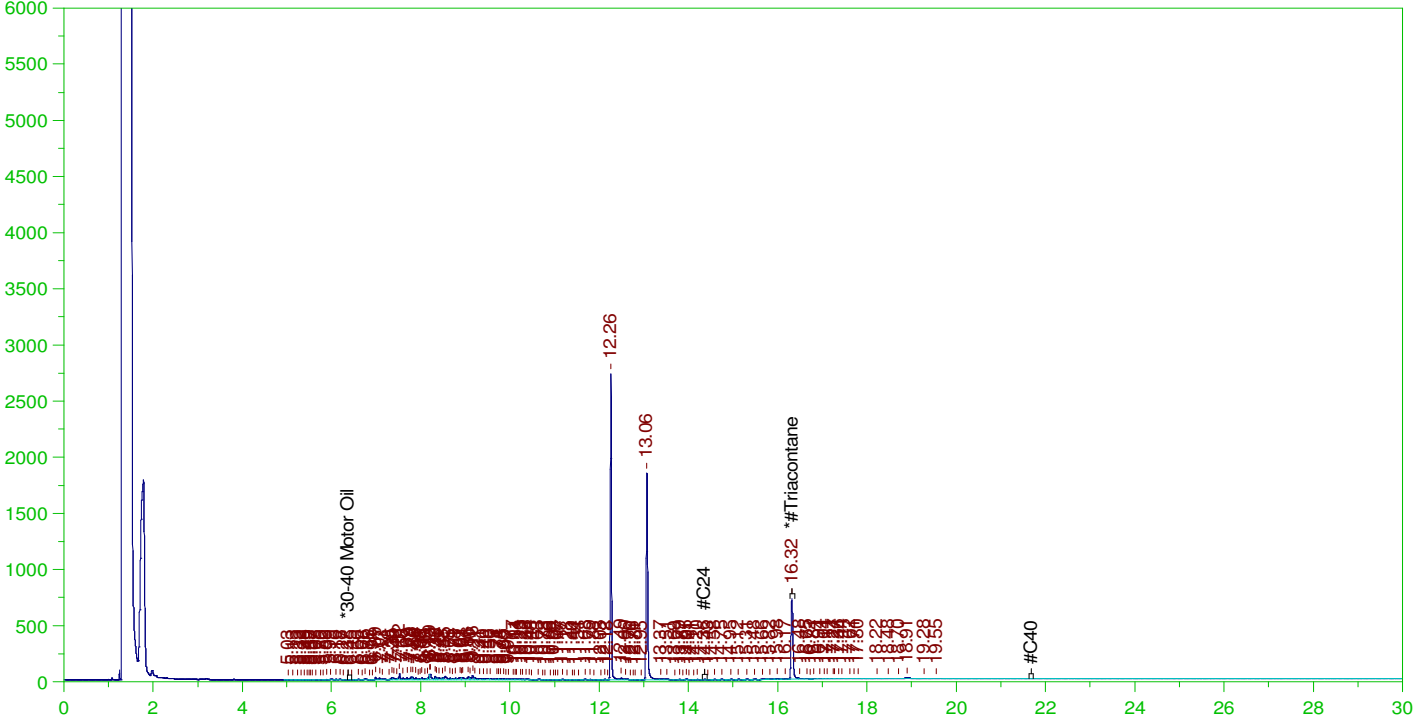
DRO Area:2531149 DRO Amount: 7.837881E-02  
 TEH Area:2809725 TEH Amount: 8.700512E-02

ERH1873 (RHMW01R)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0041.RAW

Batch ID: 161122

B21110712-001A ;1111HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-001A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0041.RAW  
 Date & Time Acquired: 11/12/2021 11:23:43 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-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: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.315	.485	.069	14.14

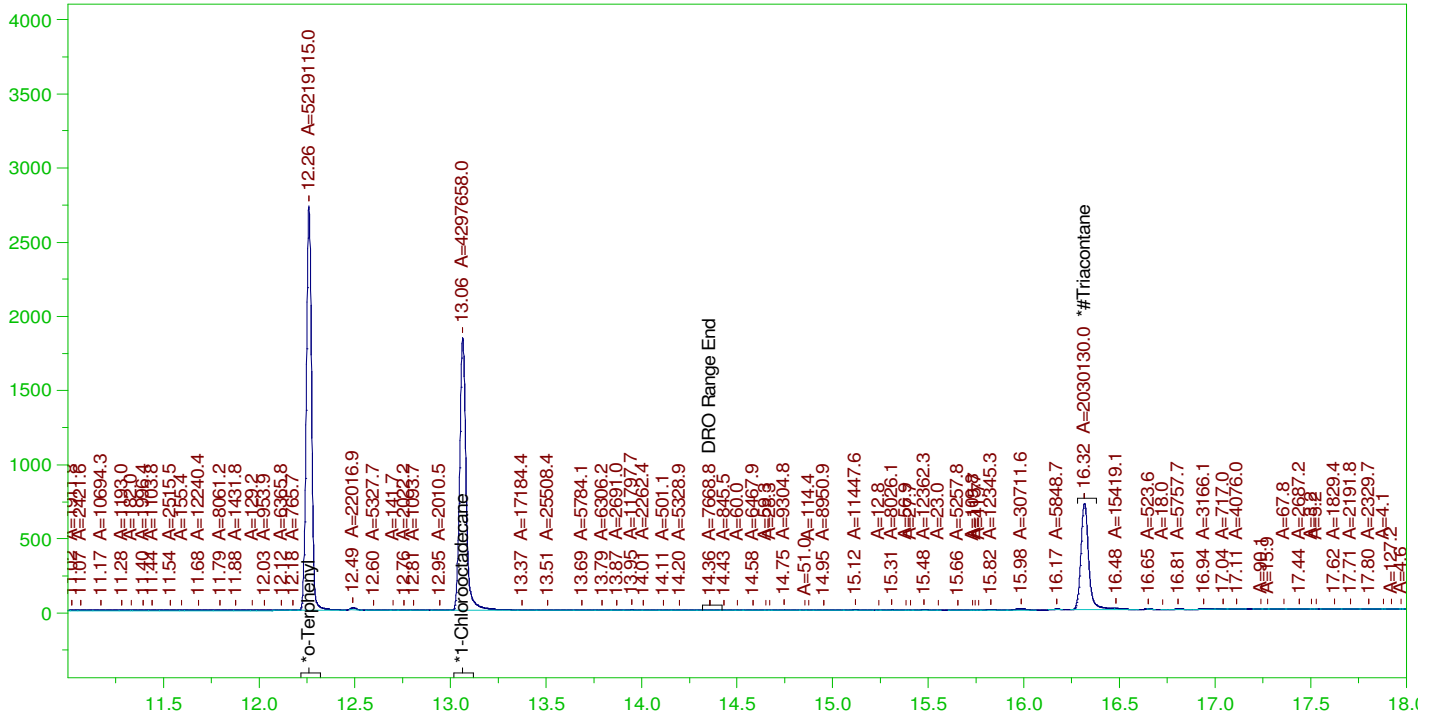
RRO Area:251162.3 RRO AMOUNT: 8.543318E-03

ERH1873 (RHMW01R)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0041.RAW

B21110712-001A ; 1111HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-001A ; 1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0041.RAW  
 Date & Time Acquired: 11/12/2021 11:23:43 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-C24Tb-IB-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.261	.194	.143	73.49	-
*1-Chlorooctadecane	13.065	.194	.118	60.51	-
*#Triacontane	16.315	.194	.068	35.09	-

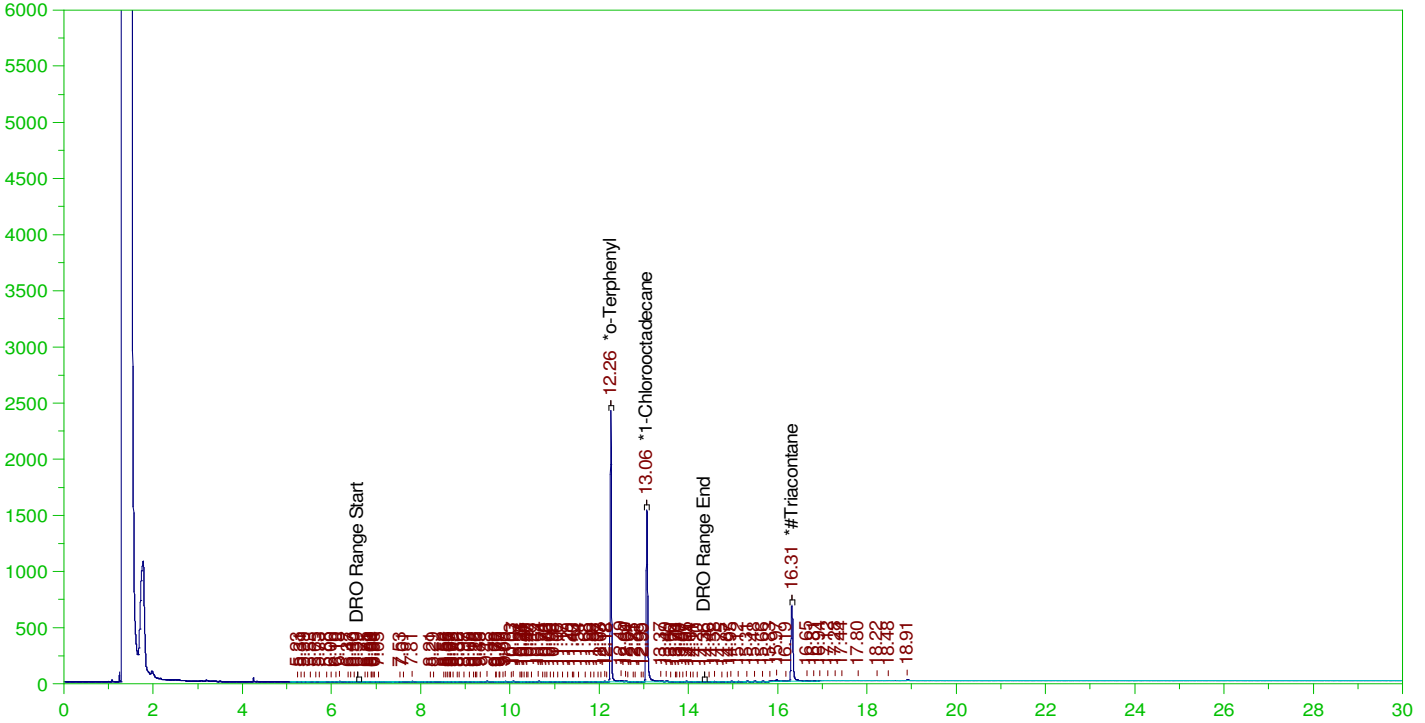
DRO Area: 2549112                      DRO Amount: 7.893504E-02  
 TEH Area: 2873622                     TEH Amount: 8.898374E-02

ERH1882 (RHMW05)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0042.RAW

B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, RR



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0042.RAW  
 Date & Time Acquired: 11/12/2021 12:06:23 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.259	.19	.125	65.85	-
*1-Chlorooctadecane	13.064	.19	.099	52.13	-
*#Triacontane	16.315	.19	.065	34.19	-

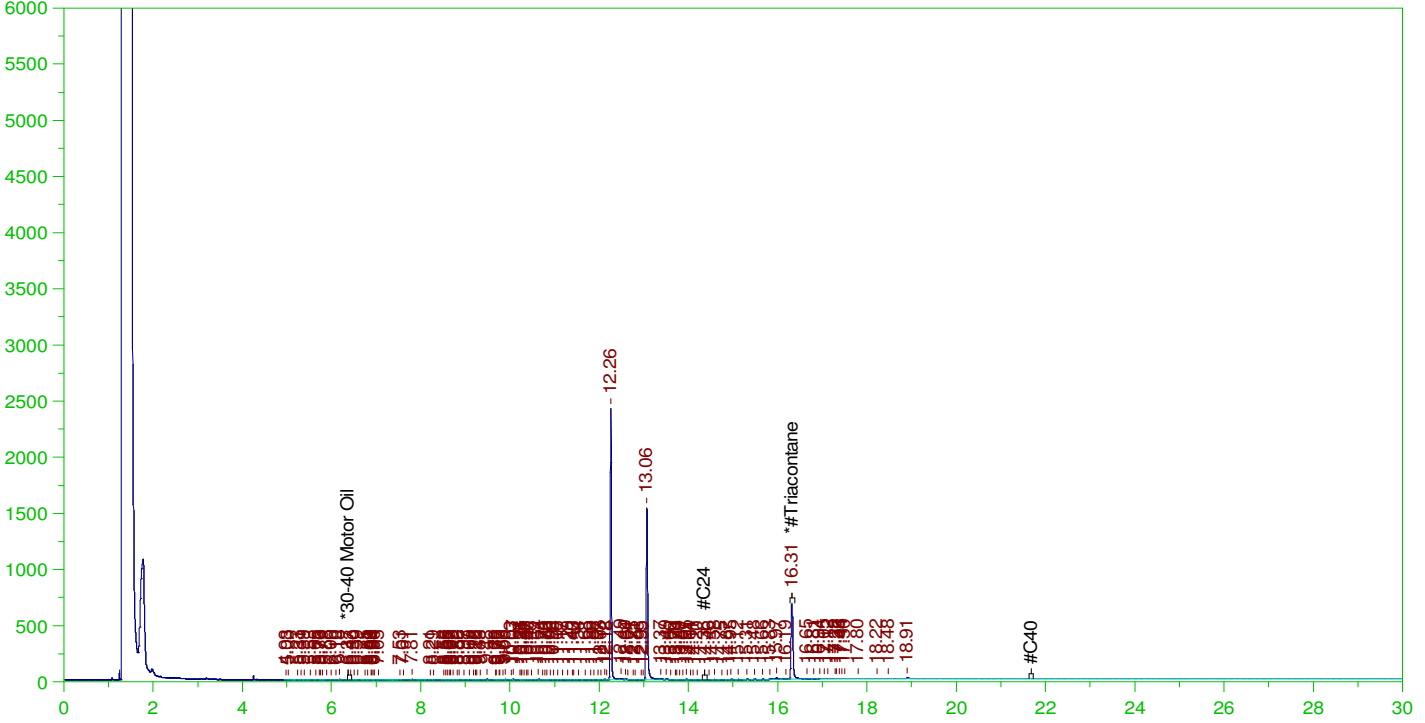
DRO Area:426995.4 DRO Amount: 1.290889E-02  
 TEH Area:637970.8 TEH Amount: 1.928708E-02

ERH1882 (RHMW05)

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0042.RAW

Batch ID: 161122

B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, RR



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-004A ;1111HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0042.RAW  
 Date & Time Acquired: 11/12/2021 12:06:23 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
 Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.315	.474	.065	13.68

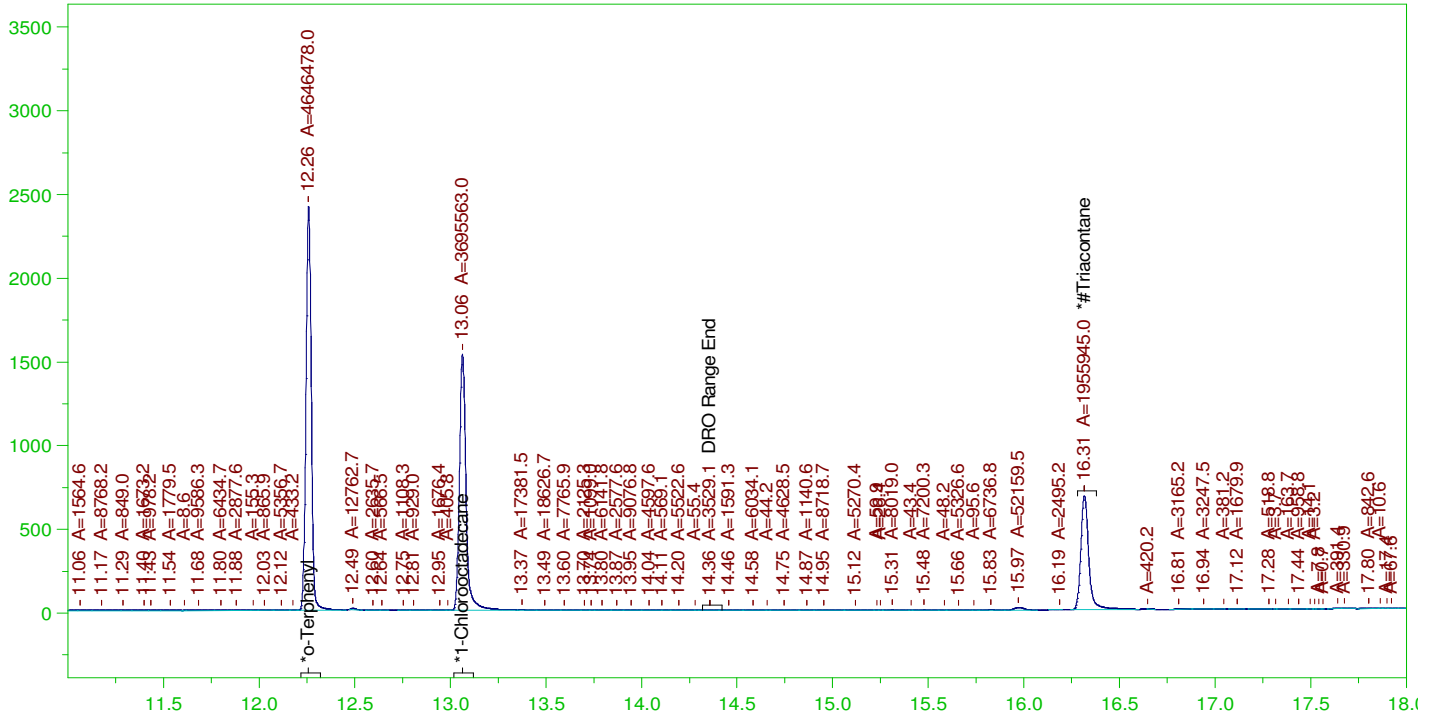
RRO Area:182285.4 RRO AMOUNT: 6.05353E-03

ERH1882 (RHMW05)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0042.RAW

B21110712-004A ; 1111HP5 , \$HC-8015-DRO-W, RR



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

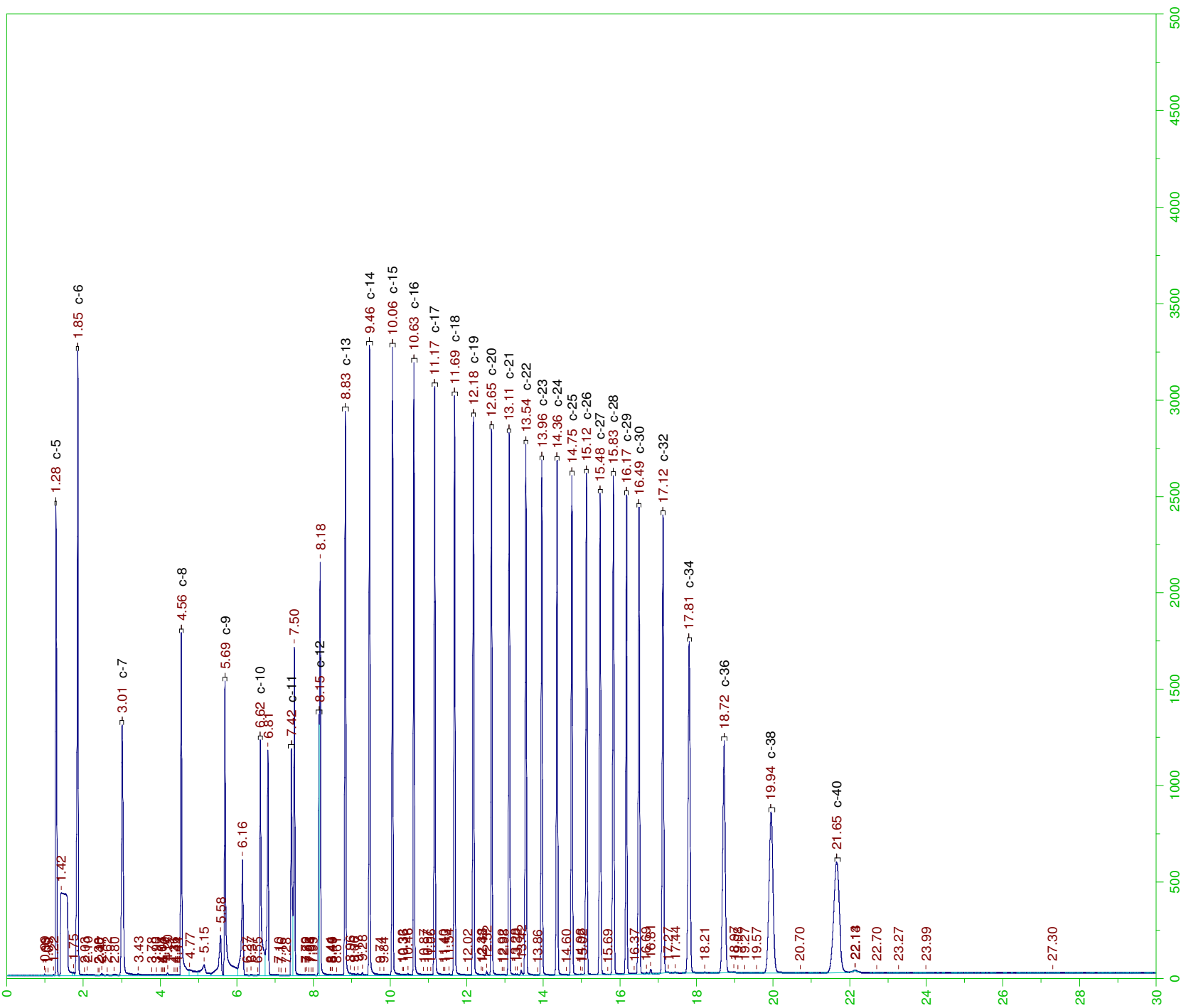
Sample Name: B21110712-004A ; 1111HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0042.RAW  
 Date & Time Acquired: 11/12/2021 12:06:23 PM  
 Method File: G:\Org\HP5\Methods\DS\_8015-C24Tb-IB-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.259	.19	.124	65.43	-
*1-Chlorooctadecane	13.064	.19	.099	52.04	-
*#Triacontane	16.315	.19	.064	33.8	-

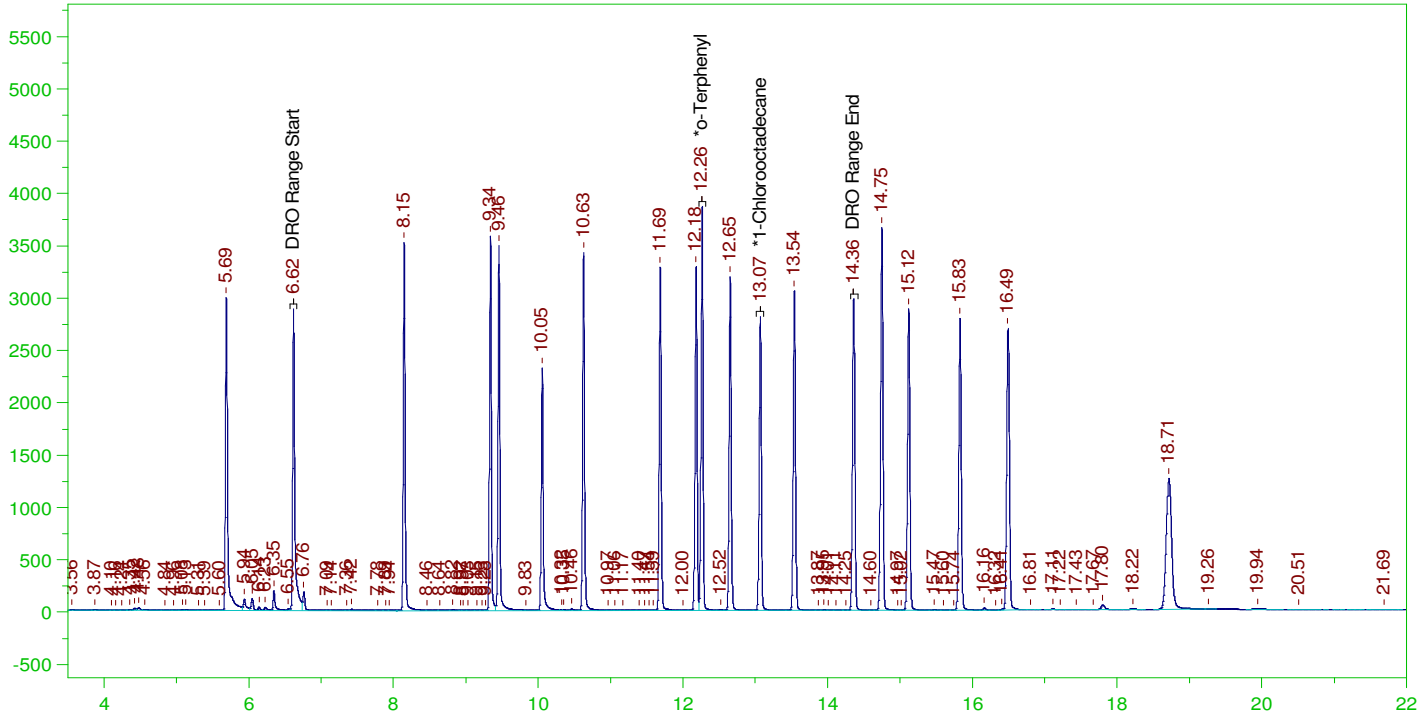
DRO Area: 347684.3 DRO Amount: 1.051116E-02  
 TEH Area: 628657.3 TEH Amount: 1.900552E-02





G:\org\HP5\DAT\HP5111121\_b\1111HP5.0044.RAW

MARKER\_1111HP544r, DRO ;1111HP5 , DRO211012I



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

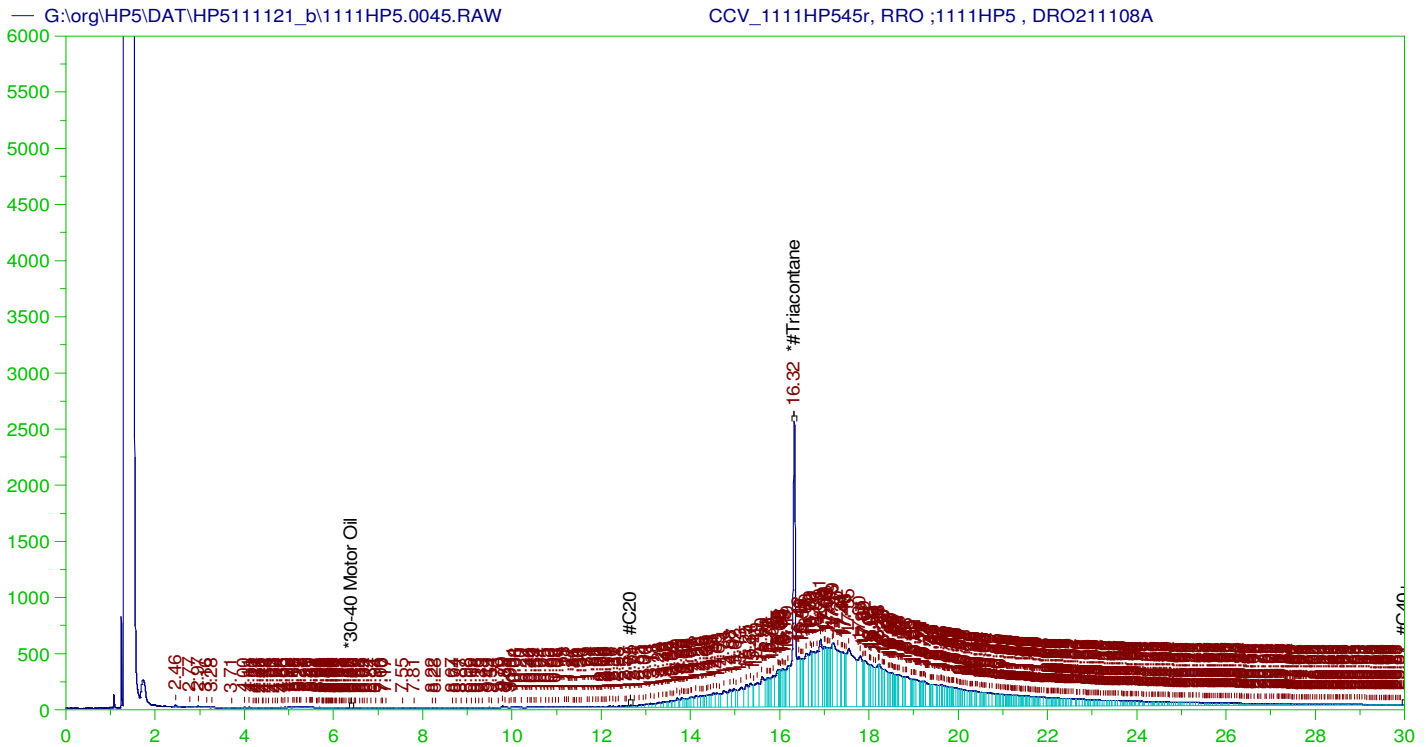
Sample Name: MARKER\_1111HP544r, DRO ;1111HP5 , DRO211012I  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0044.RAW  
 Date & Time Acquired: 11/12/2021 1:31:48 PM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.265	.2	.209	104.26	-
*1-Chlorooctadecane	13.068	.2	.168	84.	-

DRO Area: 7.035027E+07 DRO Amount: 2.243799  
 TEH Area: 1.13891E+08 TEH Amount: 3.632517



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP545r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0045.RAW  
 Date & Time Acquired: 11/12/2021 2:14:16 PM  
 Method File: G:\Org\HP5\Methods\DC\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.324	500.	326.681	65.34	-

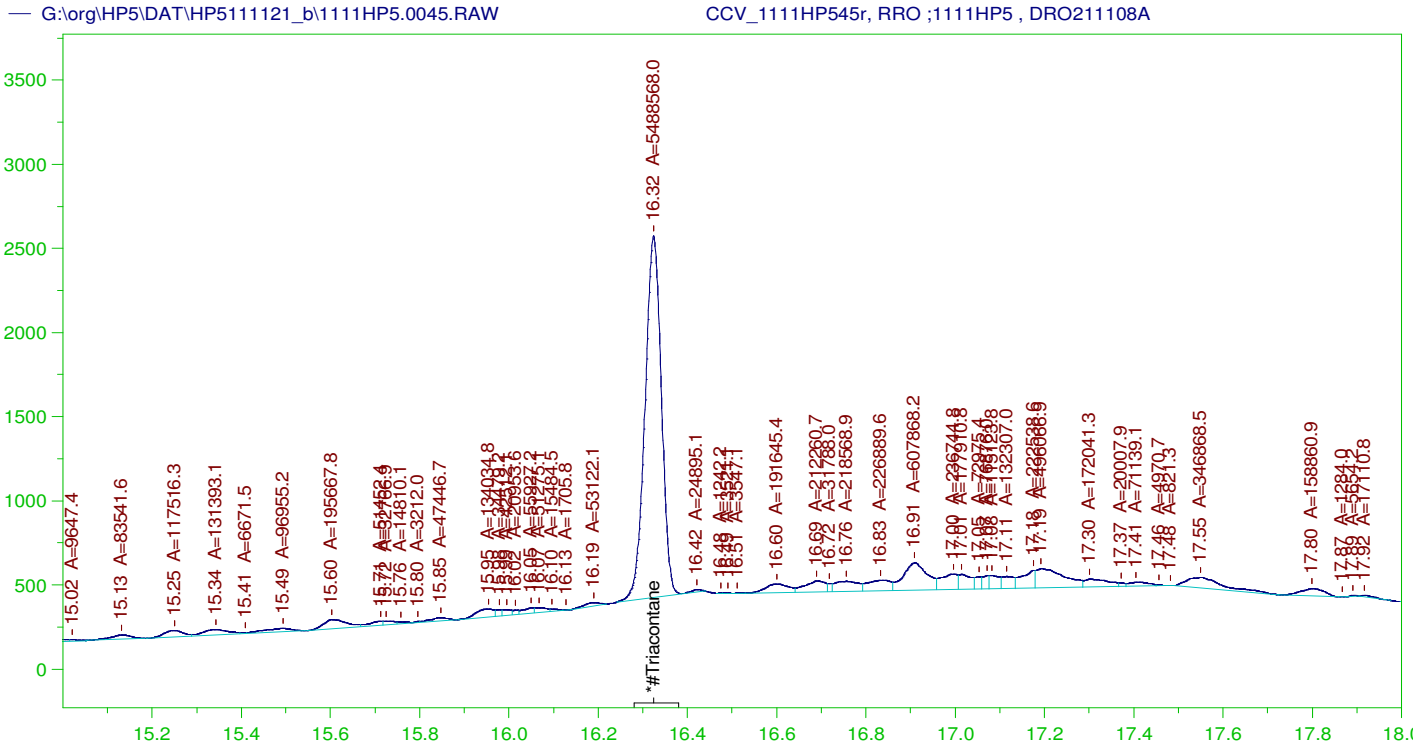
~~RRO~~ TEH(Oil Range) Area:1.29093E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4522.849

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0045.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.101	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.324	200.	326.681	163.34	75-125

AMN 11/18/2021



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP545r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0045.RAW  
 Date & Time Acquired: 11/12/2021 2:14:16 PM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.324	500.	189.718	37.94

RRO Area:6249073 RRO AMOUNT: 218.9399

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0045.RAW

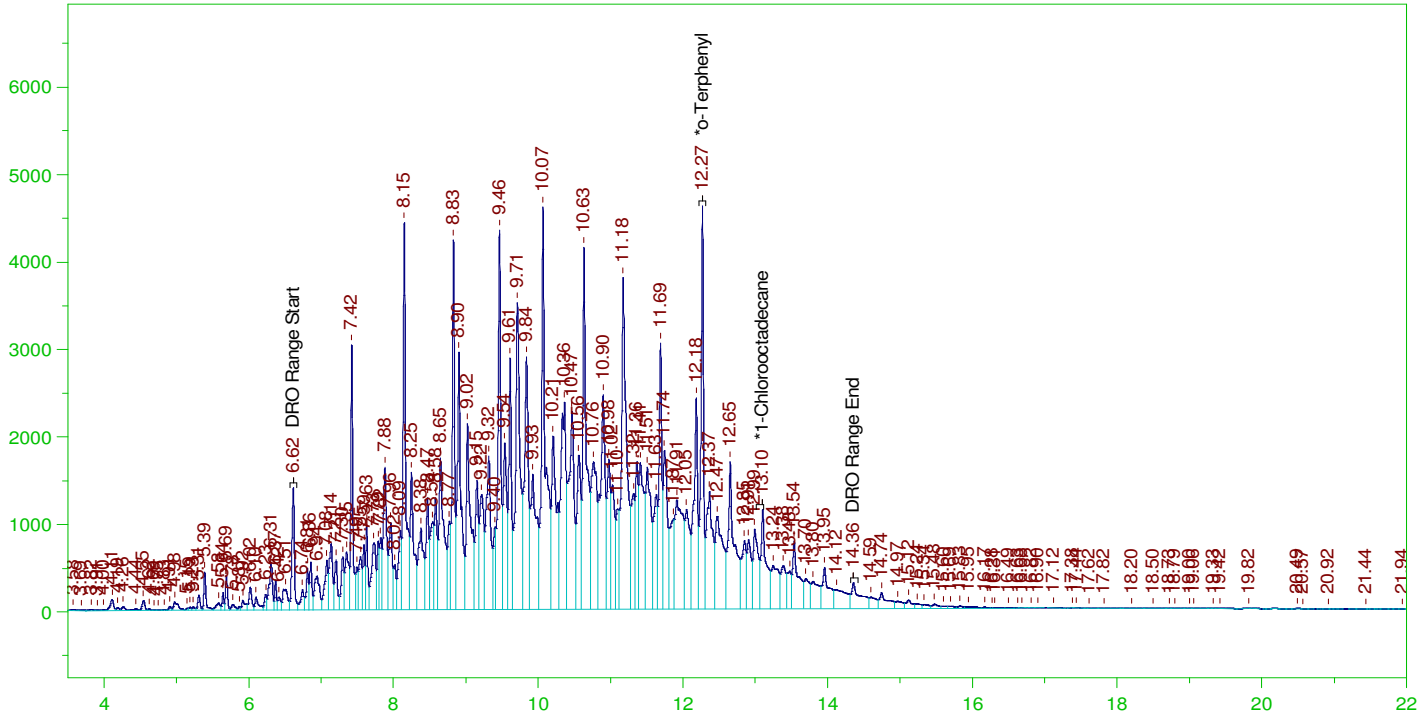
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.101	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.324	200.	189.718	94.86	75-125

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0046.RAW

CCV\_1111HP546r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP546r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0046.RAW  
 Date & Time Acquired: 11/12/2021 2:57:11 PM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	336.285	168.14
*1-Chlorooctadecane	13.103	200.	162.187	81.09

DRO Area: 4.682315E+08 DRO Amount: 14934.09  
 TEH Area: 4.844349E+08 TEH Amount: 15450.9

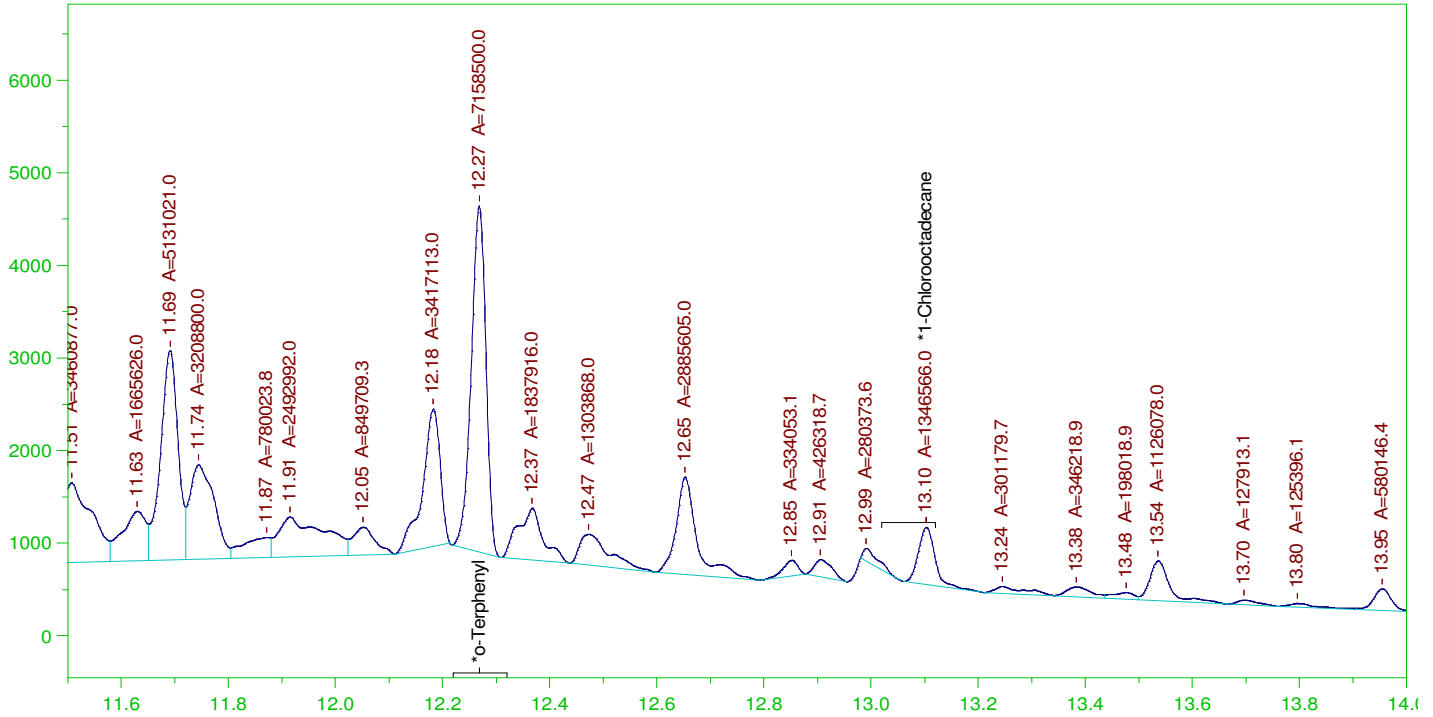
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0046.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15450.9	103.01	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	336.285	168.14	85-115
*1-Chlorooctadecane	13.103	200.	162.187	81.09	85-115

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0046.RAW

CCV\_1111HP546r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP546r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0046.RAW  
 Date & Time Acquired: 11/12/2021 2:57:11 PM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

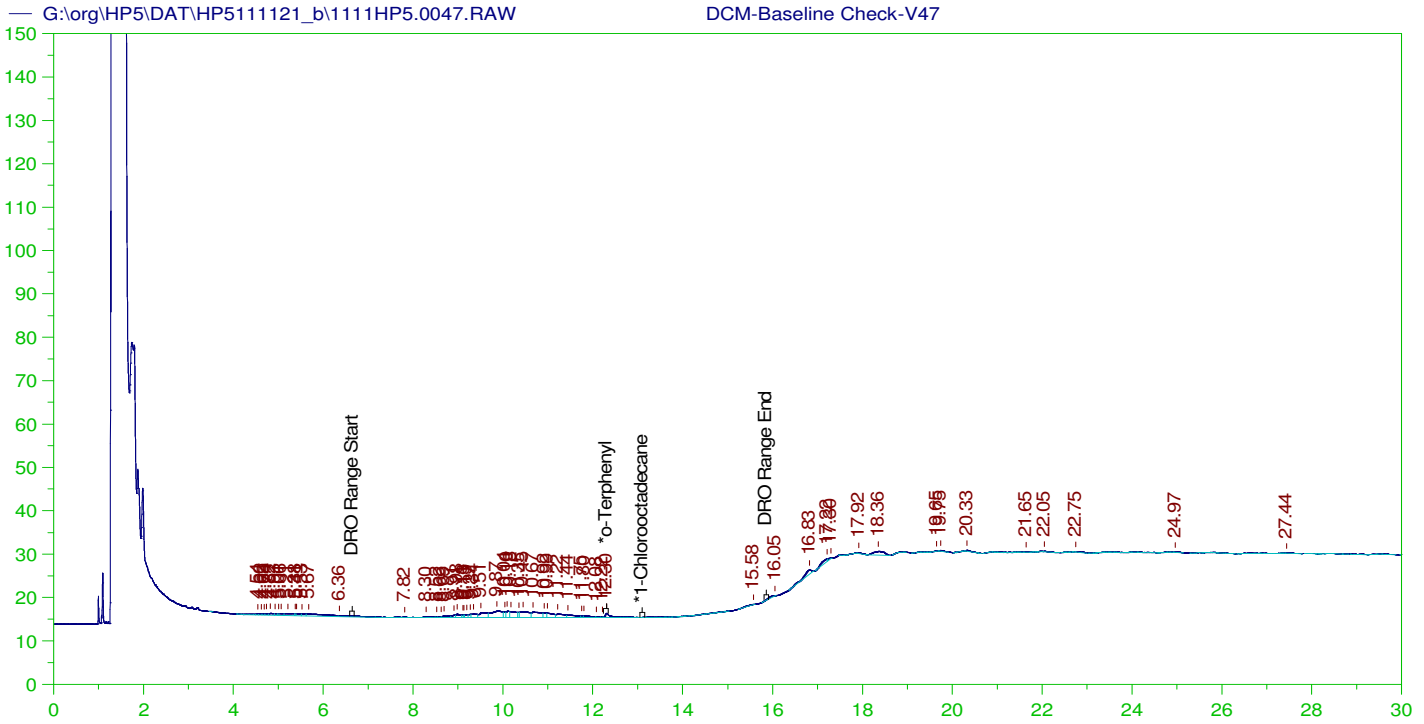
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.268	200.	201.596	100.8
*1-Chlorooctadecane	13.103	200.	37.922	18.96

DRO Area: 2.634427E+08 DRO Amount: 8402.42  
 TEH Area: 2.736353E+08 TEH Amount: 8727.511

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0046.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8727.51	58.18	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.268	200.	201.596	100.8	85-115
*1-Chlorooctadecane	13.103	200.	37.922	18.96	85-115



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V47  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0047.RAW  
 Date & Time Acquired: 11/12/2021 3:39:43 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.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	12.301	200.	.209	.1
*1-Chlorooctadecane	29.985	200.	.	.

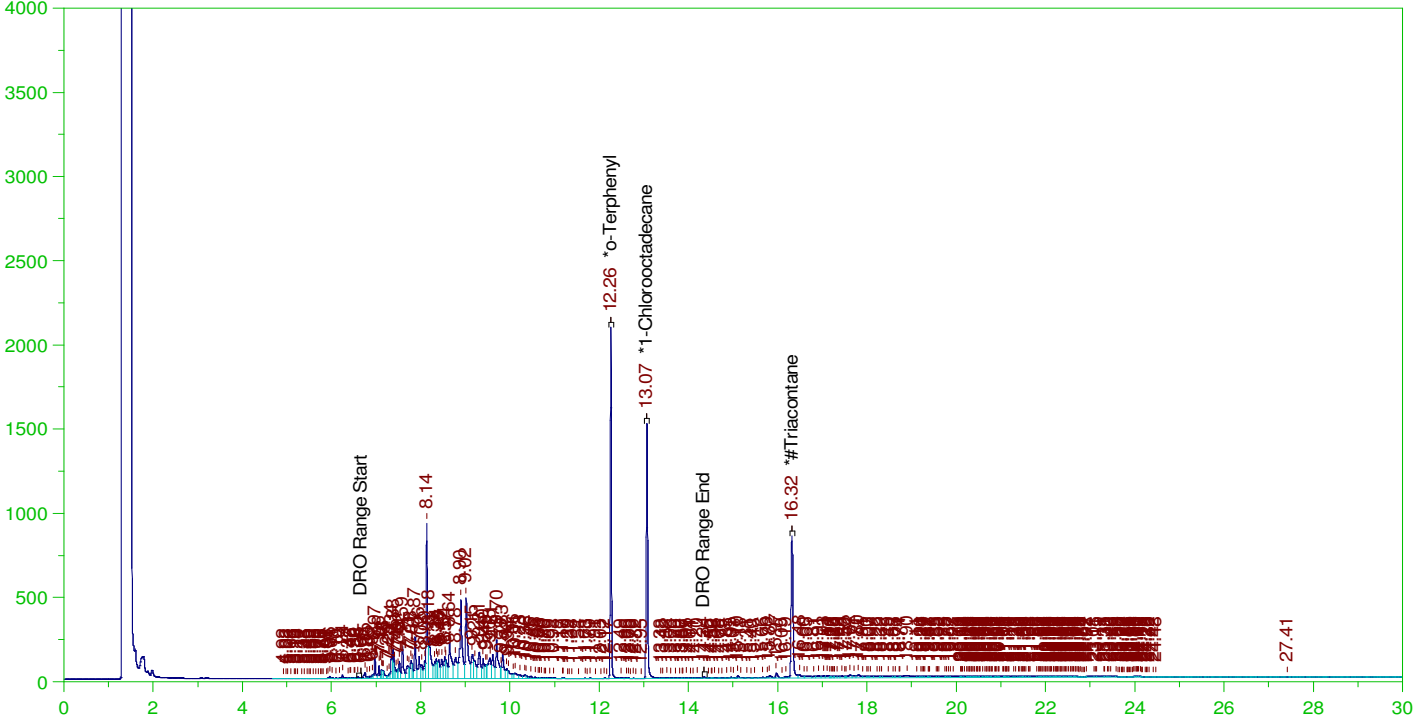
DRO Area:184137.4 DRO Amount: 5.873004  
 TEH Area:290586.5 TEH Amount: 9.268165

ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW

B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW  
 Date & Time Acquired: 11/12/2021 4:22:15 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-111148-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.26	.205	.116	56.33	-
*1-Chlorooctadecane	13.065	.205	.1	48.65	-
*#Triacontane	16.317	.205	.085	41.24	-

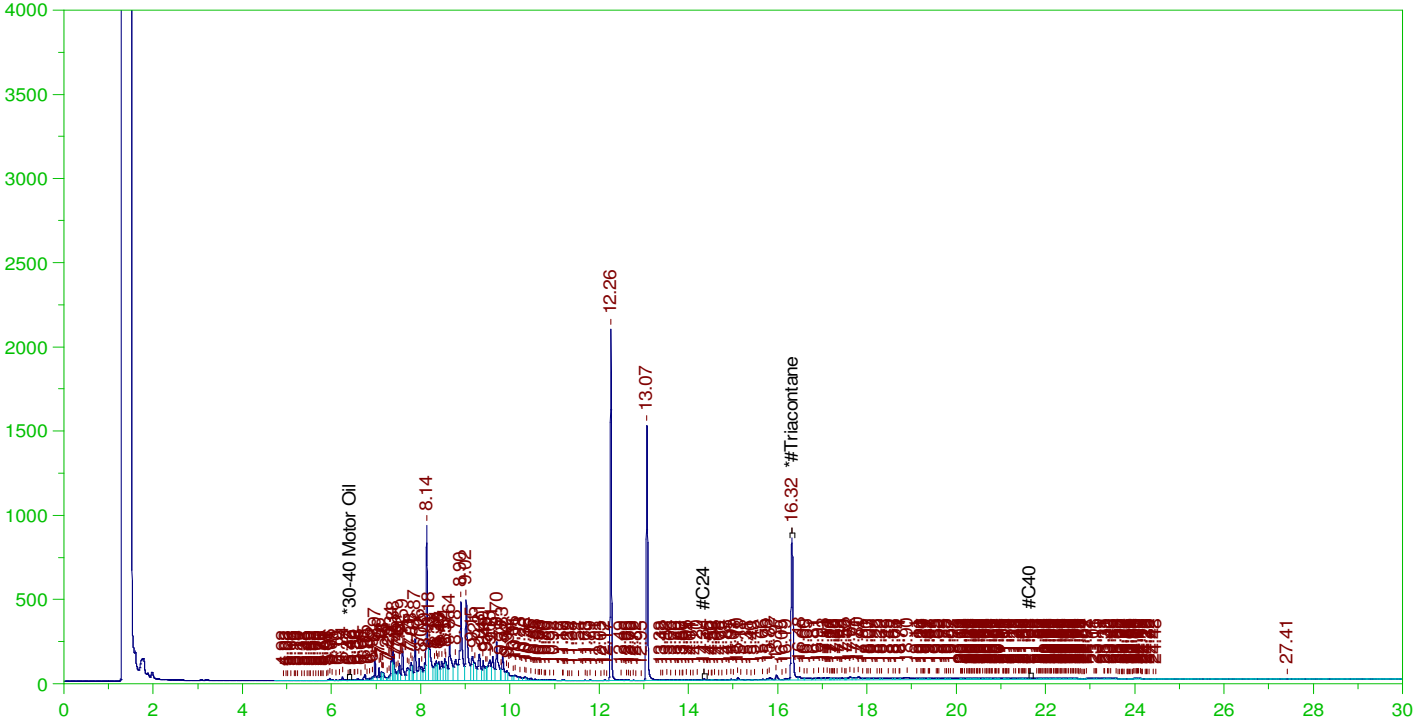
DRO Area: 2.079589E+07 DRO Amount: 0.6802855  
 TEH Area: 2.453008E+07 TEH Amount: 0.8024402

ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW

B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW  
 Date & Time Acquired: 11/12/2021 4:22:15 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-111148-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.317	.513	.085	16.5

RRO Area:3128920 RRO AMOUNT: 0.1124344

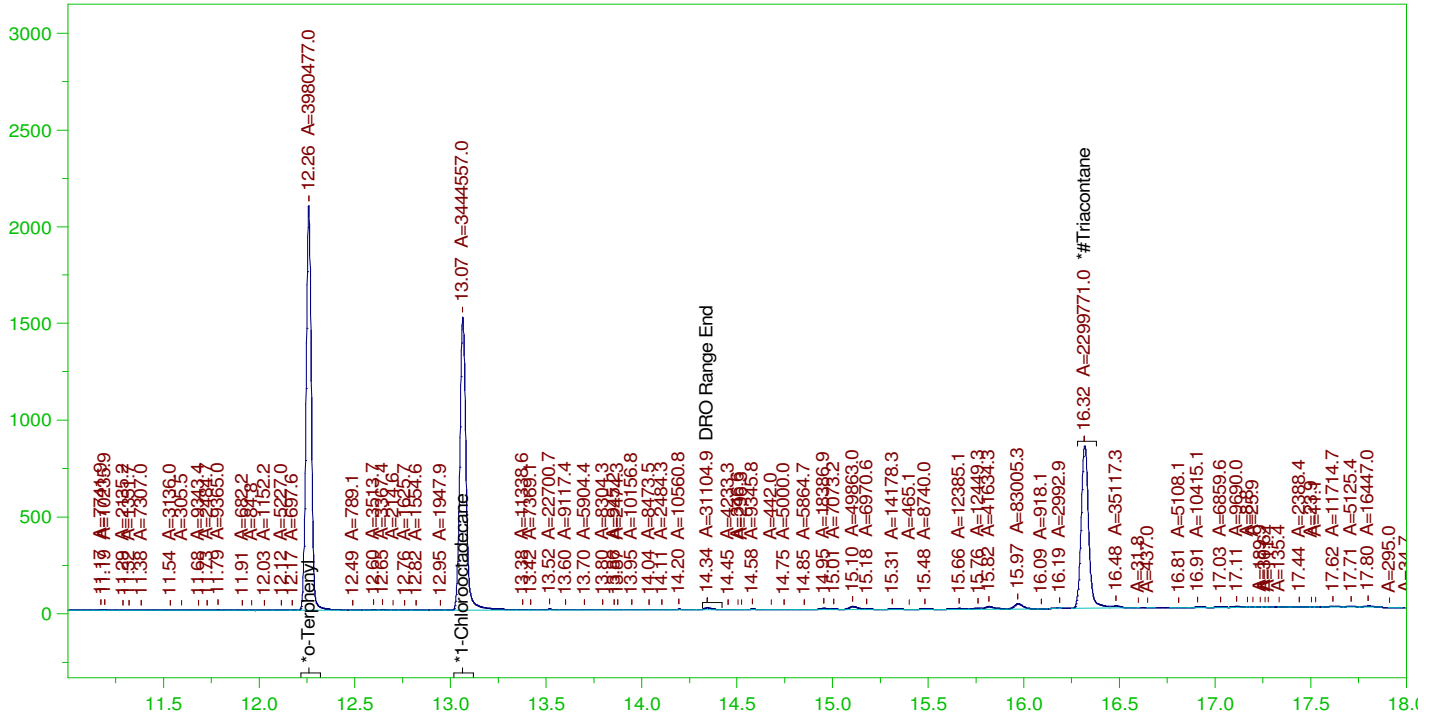


ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW

B21110057-002A ; 1111HP5 , \$HC-8015-DRO-W, RX-SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ; 1111HP5 , \$HC-8015-DRO-W, RX-SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW  
 Date & Time Acquired: 11/12/2021 4:22:15 PM  
 Method File: G:\Org\HP5\Methods\DS\_8015-C24Tb-IB-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.26	.205	.115	56.05
*1-Chlorooctadecane	13.065	.205	.099	48.5
*#Triacontane	16.317	.205	.082	39.75

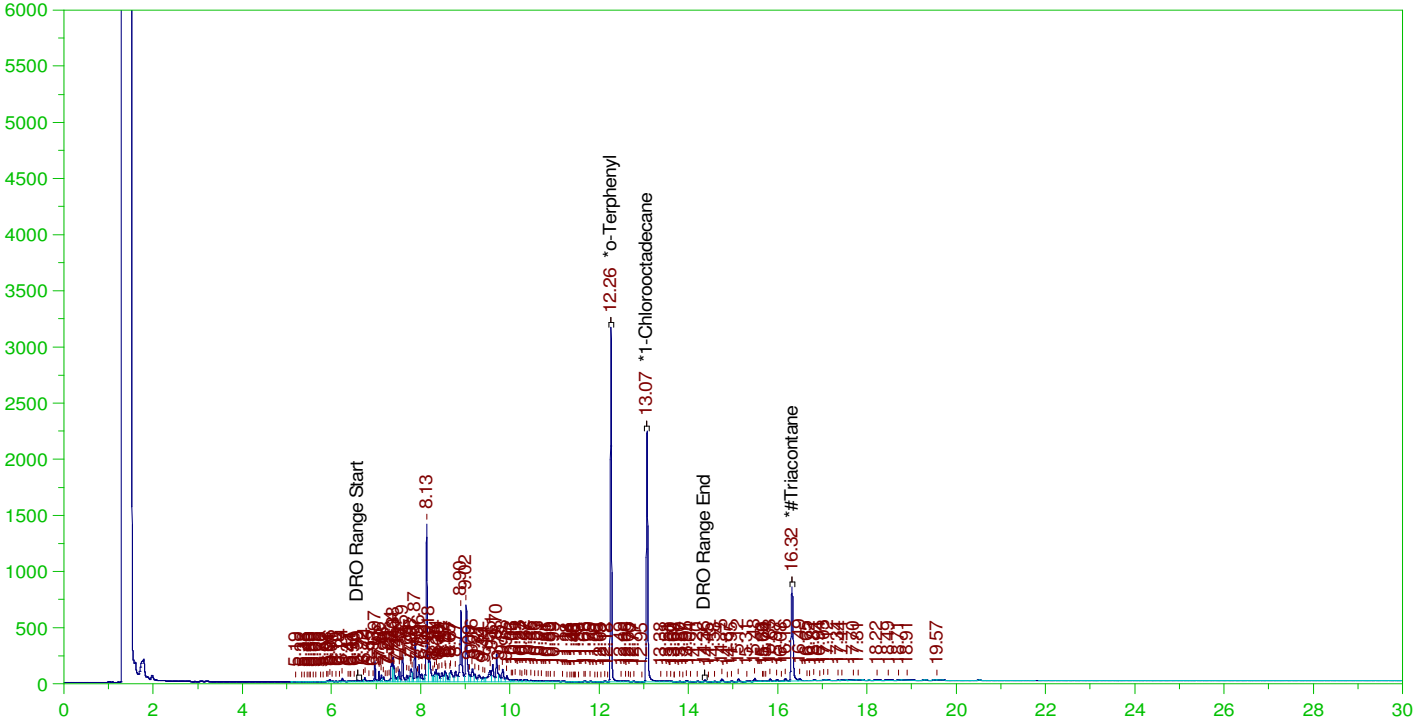
DRO Area: 2.073979E+07 DRO Amount: 0.6784503  
 TEH Area: 2.151215E+07 TEH Amount: 0.703716

ERH1876 (RHMW02)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0049.RAW

B21110712-002A ;1111HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-002A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0049.RAW  
 Date & Time Acquired: 11/12/2021 5:05:29 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.263	.189	.162	85.88	-
*1-Chlorooctadecane	13.067	.189	.136	71.9	-
*#Triacontane	16.318	.189	.078	41.16	-

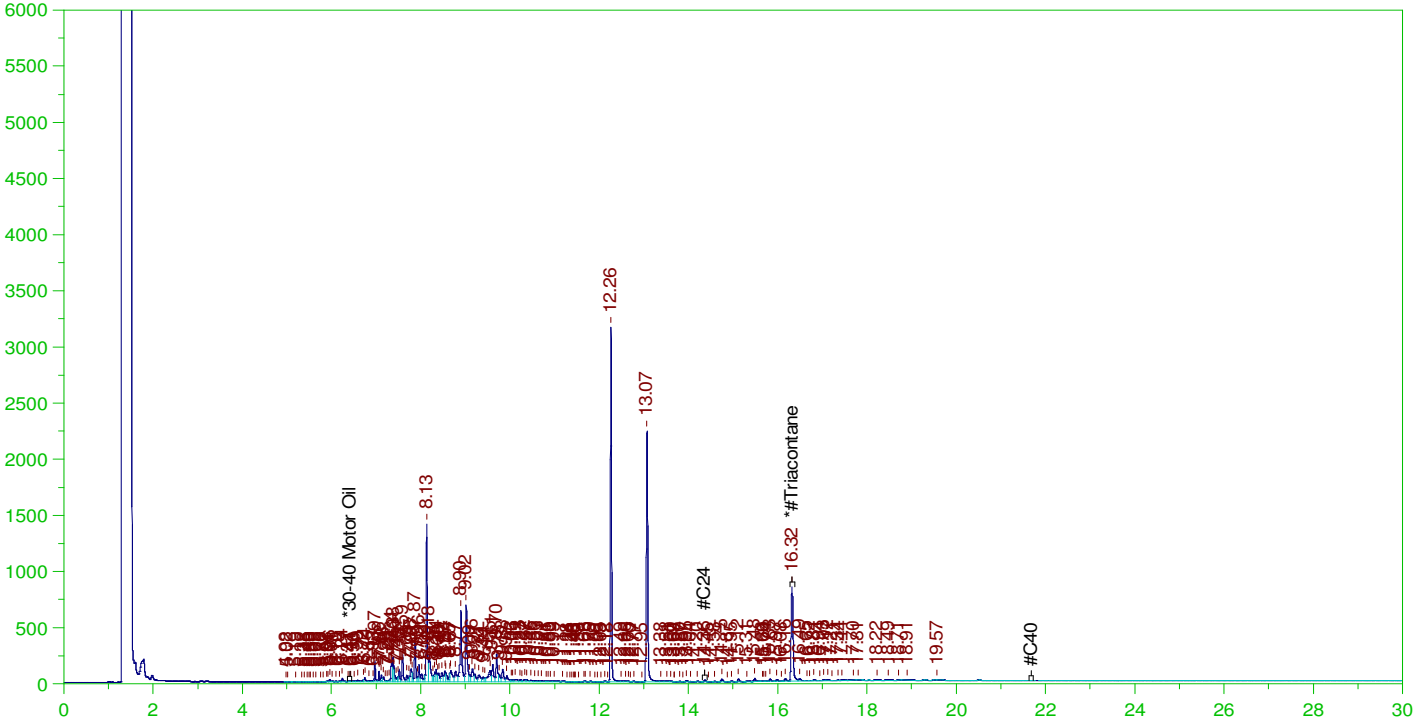
DRO Area: 1.73948E+07 DRO Amount: 0.5233978  
 TEH Area: 1.831887E+07 TEH Amount: 0.5512023

ERH1876 (RHMW02)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0049.RAW

B21110712-002A ;1111HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-002A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0049.RAW  
 Date & Time Acquired: 11/12/2021 5:05:29 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
 Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.318	.472	.078	16.48	-

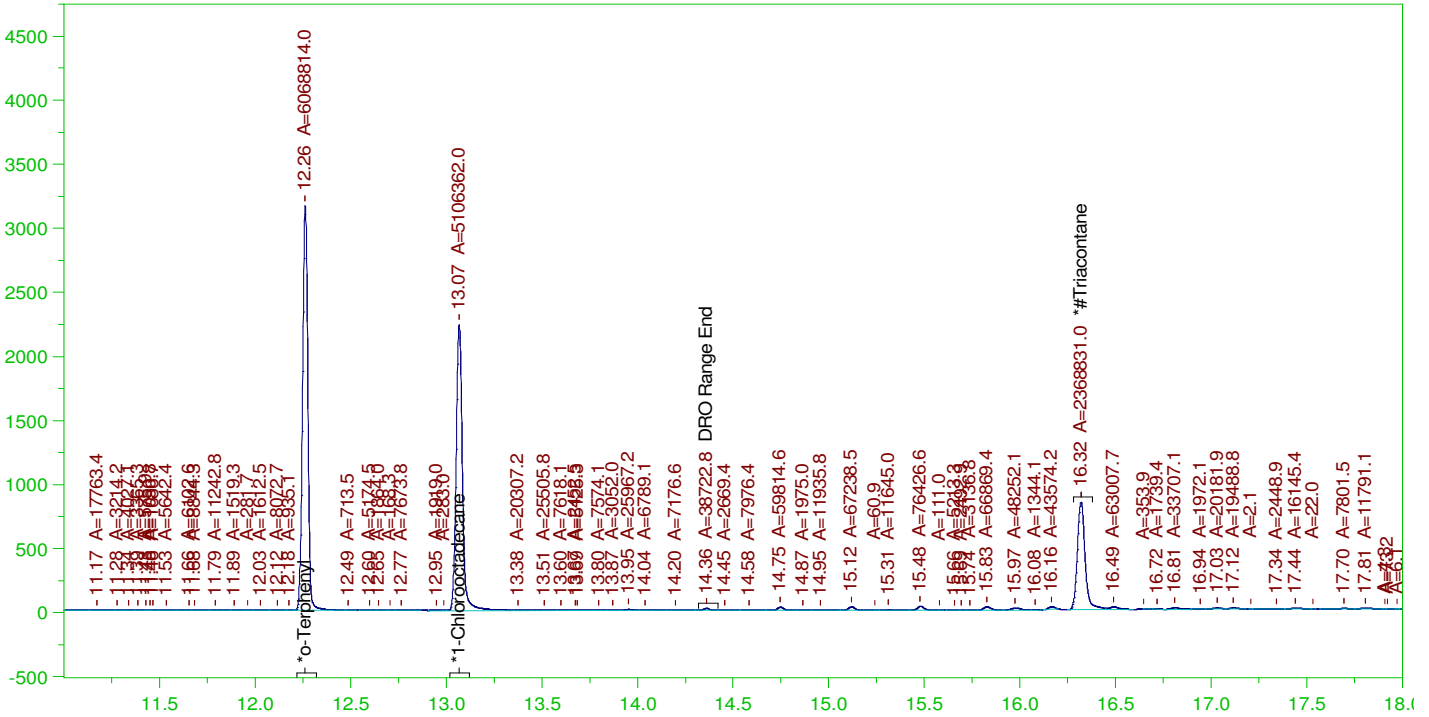
RRO Area:782253.7 RRO AMOUNT: 2.585539E-02

ERH1876 (RHMW02)

Batch ID: 161122

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0049.RAW

B21110712-002A ;1111HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-002A ;1111HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0049.RAW  
 Date & Time Acquired: 11/12/2021 5:05:29 PM  
 Method File: G:\Org\HP5\Methods\DS\_8015-C24Tb-IB-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

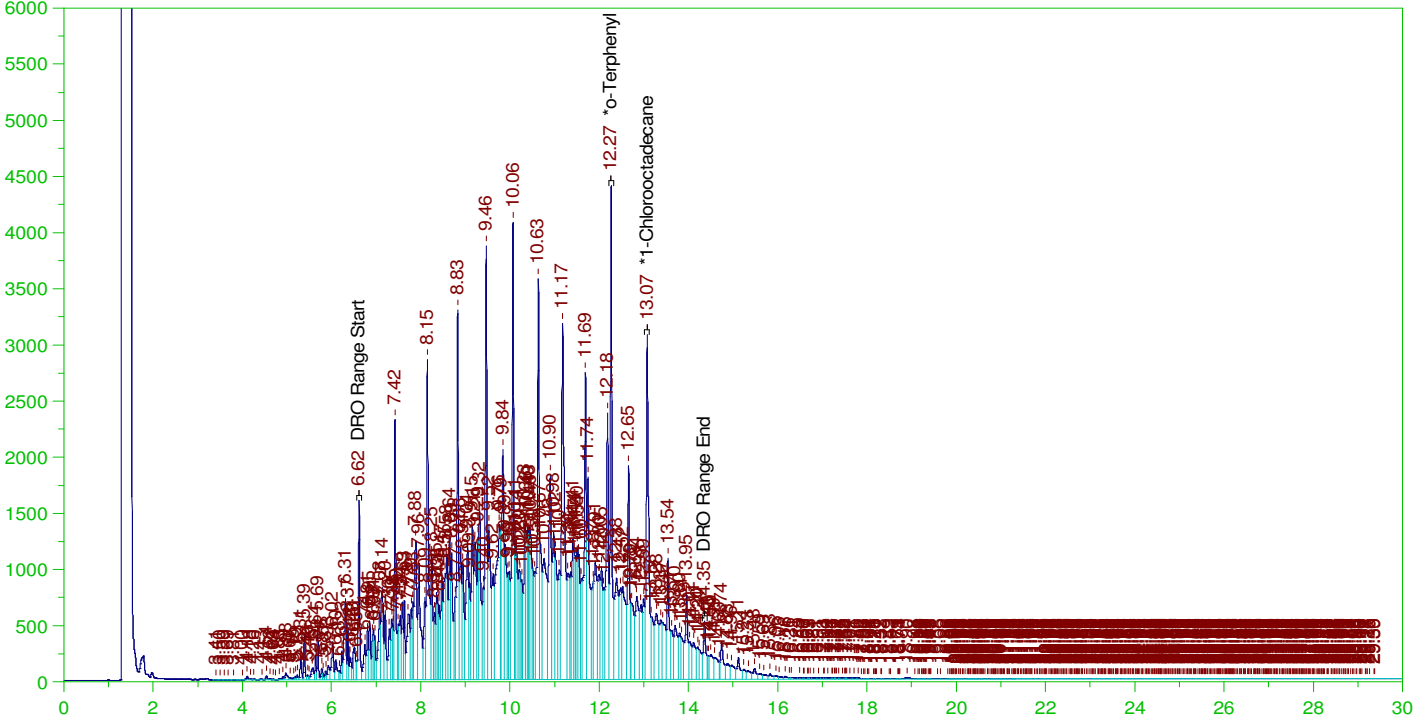
Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.263	.189	.161	85.45	-
*1-Chlorooctadecane	13.067	.189	.136	71.9	-
*Triacontane	16.318	.189	.077	40.94	-

DRO Area:1.737423E+07 DRO Amount: 0.5227787  
 TEH Area:1.830159E+07 TEH Amount: 0.5506824

Batch ID: 161122  
B21110712-001AMS ;1111HP5 , SGT

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0050.RAW



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110712-001AMS ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0050.RAW  
 Date & Time Acquired: 11/12/2021 5:48:37 PM  
 Method File: G:\Org\HP5\Methods\D3\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

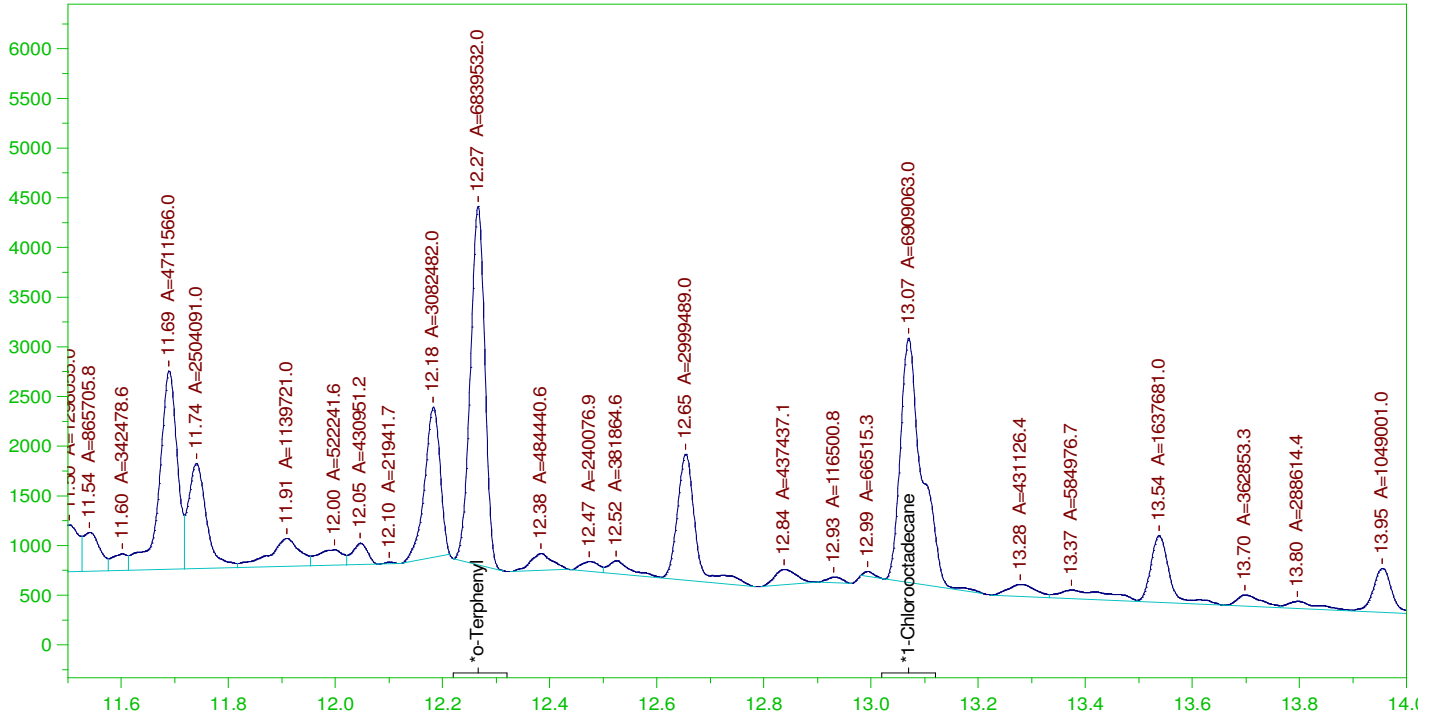
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.266	.2	.331	165.51
*1-Chlorooctadecane	13.07	.2	.33	164.97

DRO Area: 3.881899E+08 DRO Amount: 12.38119  
 TEH Area: 4.138648E+08 TEH Amount: 13.20009

Batch ID: 161122  
G:\org\HP5\DAT\HP5111121\_b\1111HP5.0050.RAW B21110712-001AMS ;1111HP5 , SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

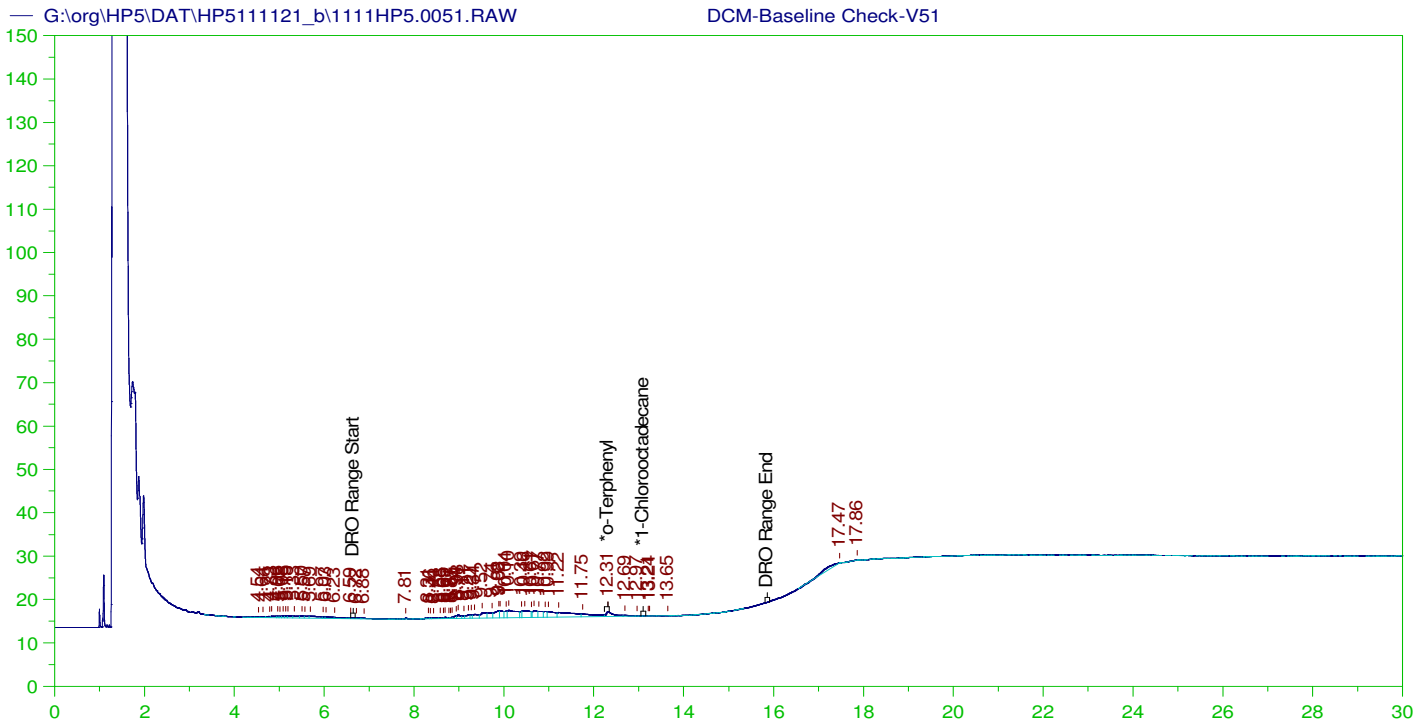
Sample Name: B21110712-001AMS ;1111HP5 , SGT  
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 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.266	.2	.193	96.31
*1-Chlorooctadecane	13.07	.2	.195	97.29

DRO Area: 1.871222E+08 DRO Amount: 5.968204  
 TEH Area: 1.983733E+08 TEH Amount: 6.327055



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V51  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0051.RAW  
 Date & Time Acquired: 11/12/2021 6:31:48 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

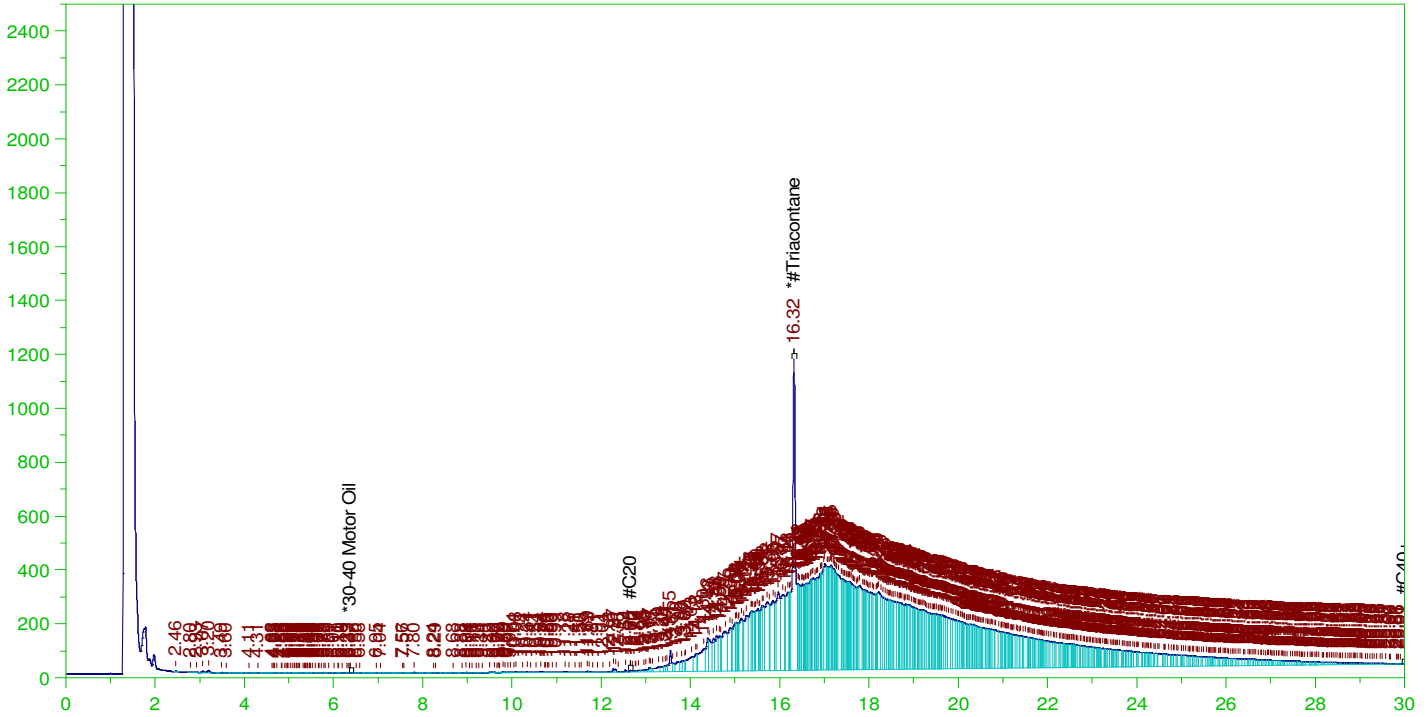
Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.308	200.	.358	.18	-
*1-Chlorooctadecane	29.941	200.	.	.	-

DRO Area:230912.1 DRO Amount: 7.364866  
 TEH Area:298212.6 TEH Amount: 9.511395

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0052.RAW

LCS-161122-RRO ;1111HP5 , SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: LCS-161122-RRO ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0052.RAW  
 Date & Time Acquired: 11/12/2021 7:14:56 PM  
 Method File: G:\Org\HP5\Methods\D3\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.318	.5	.163	32.53	-

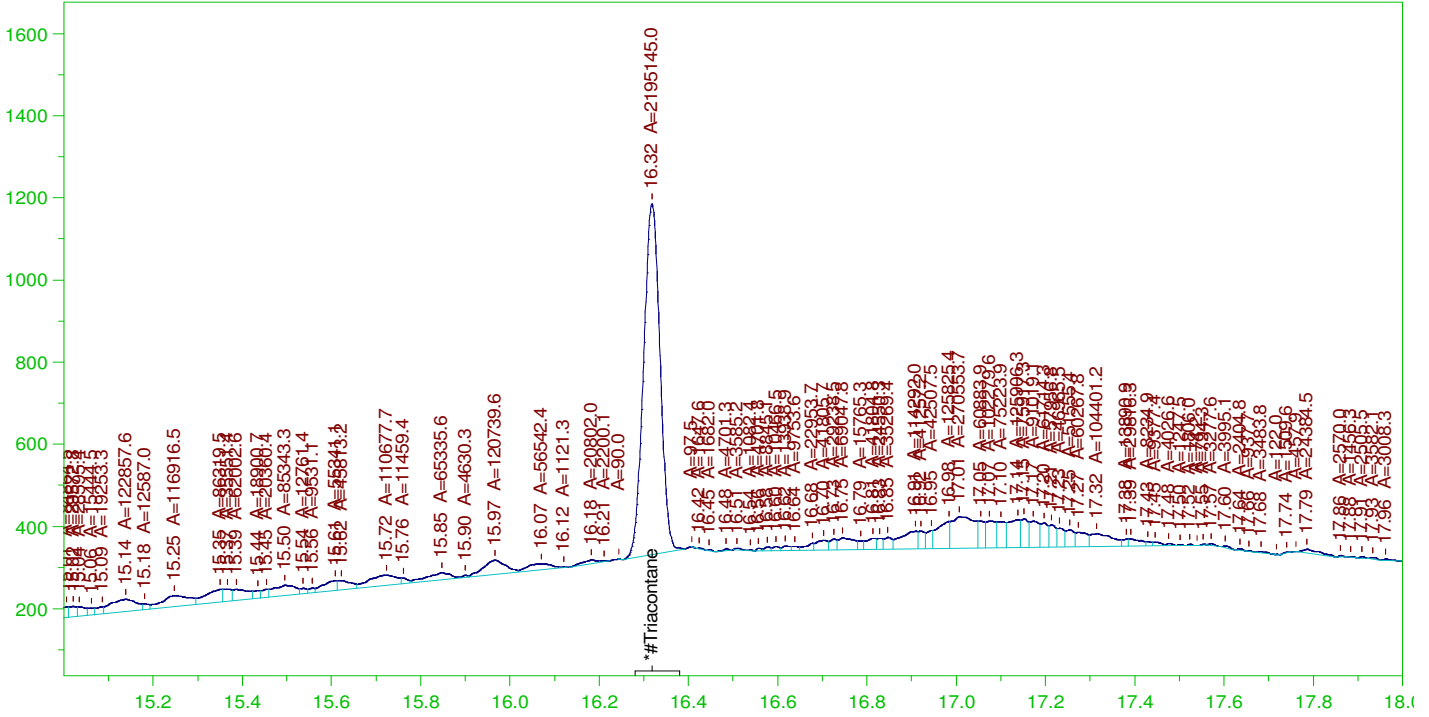
~~RRO~~ TEH(Oil Range) Area:1.190694E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.171667

AMN 11/18/2021



G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0052.RAW

LCS-161122-RRO ;1111HP5 , SGT



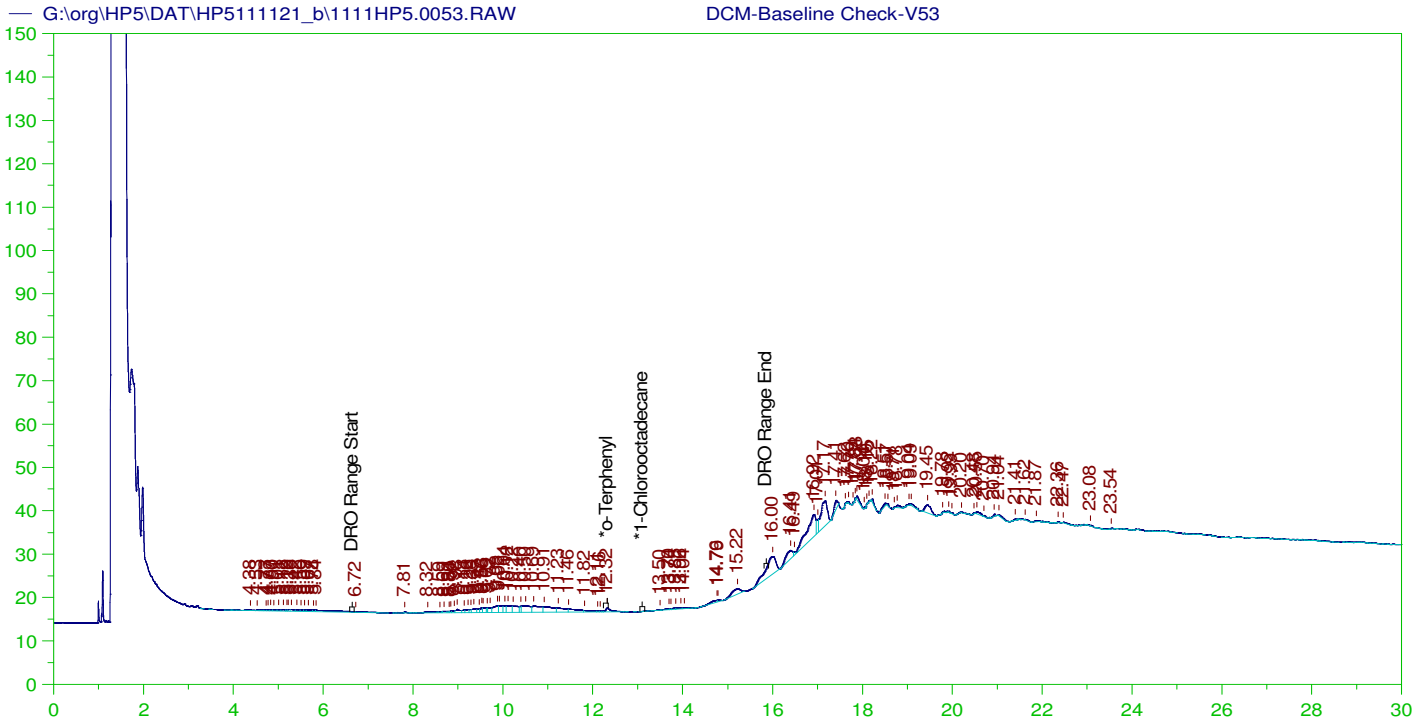
**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: LCS-161122-RRO ;1111HP5 , SGT  
 Raw File: G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0052.RAW  
 Date & Time Acquired: 11/12/2021 7:14:56 PM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-111125-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.318	.5	.076	15.18

RRO Area:4414685 RRO AMOUNT: 0.1546711



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V53  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0053.RAW  
 Date & Time Acquired: 11/12/2021 7:57:50 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

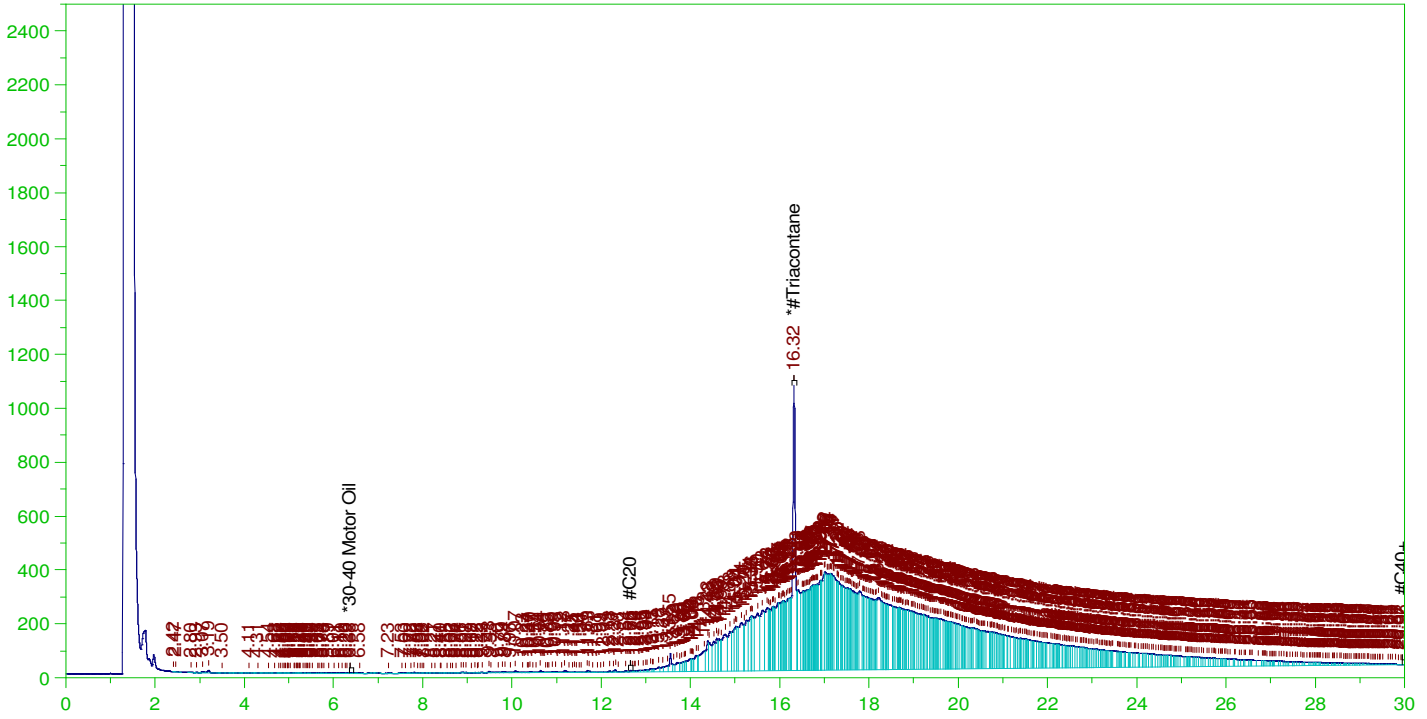
Mean RF for TEH: 31353.19  
 Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.319	200.	.227	.11
*1-Chlorooctadecane	29.948	200.	.	.

DRO Area: 235369 DRO Amount: 7.50702  
 TEH Area: 605493.6 TEH Amount: 19.31202

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0054.RAW

LCSD-161122-RRO ;1111HP5 , SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: LCSD-161122-RRO ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0054.RAW  
 Date & Time Acquired: 11/12/2021 8:40:46 PM  
 Method File: G:\Org\HP5\Methods\D3\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

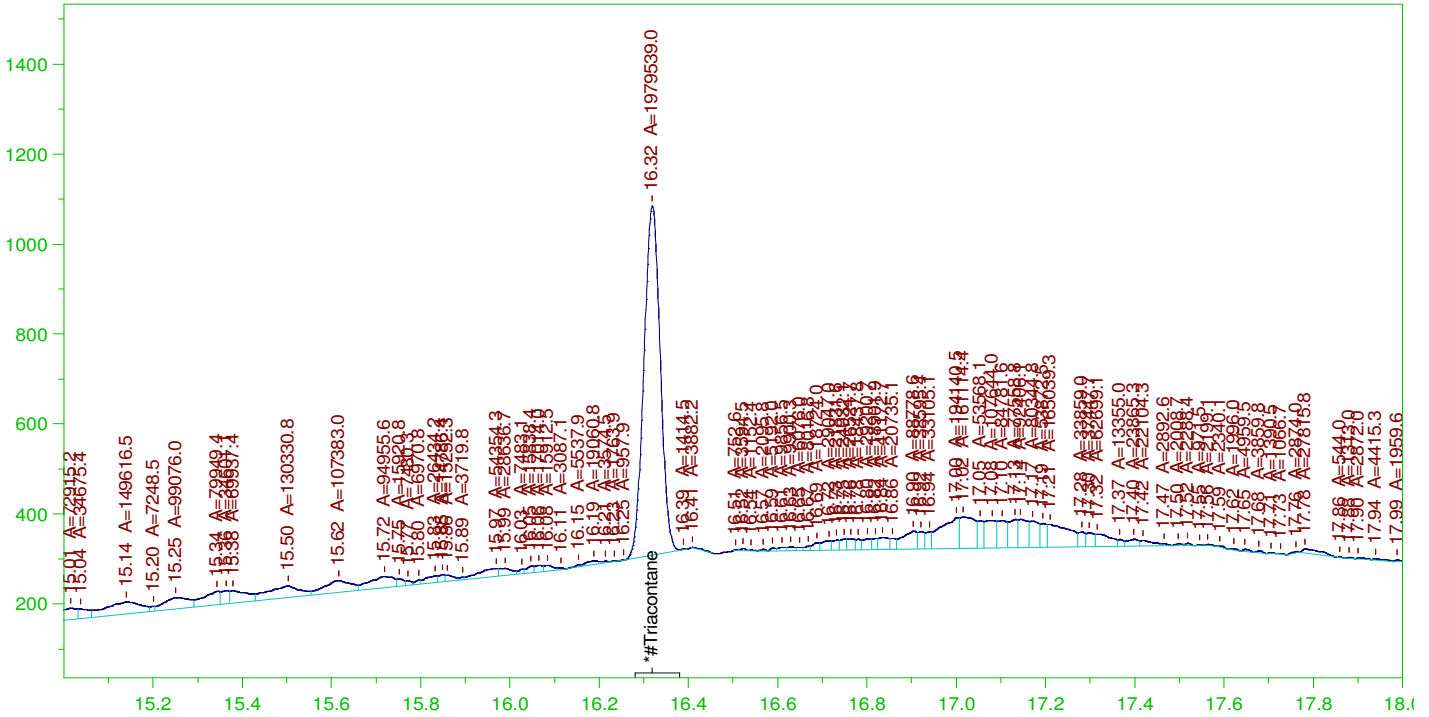
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.319	.5	.139	27.75 -

~~RRO~~ TEH(Oil Range) Area:1.106652E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 3.87722

AMN 11/18/2021

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0054.RAW

LCSD-161122-RRO ;1111HP5 , SGT



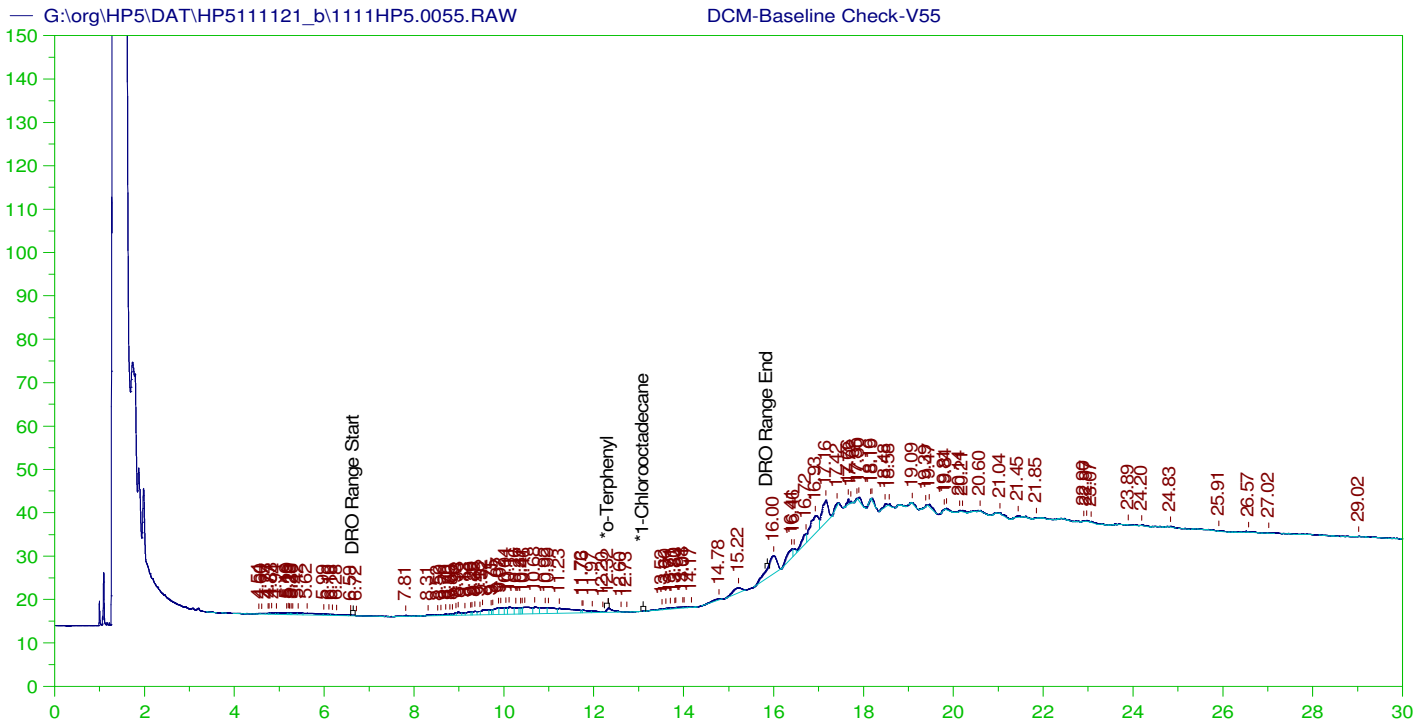
**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: LCSD-161122-RRO ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0054.RAW  
 Date & Time Acquired: 11/12/2021 8:40:46 PM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-111125-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.319	.5	.068	13.68

RRO Area:4142425 RRO AMOUNT: 0.1451323



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: DCM-Baseline Check-V55  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0055.RAW  
 Date & Time Acquired: 11/12/2021 9:23:40 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-IA-LEXP.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

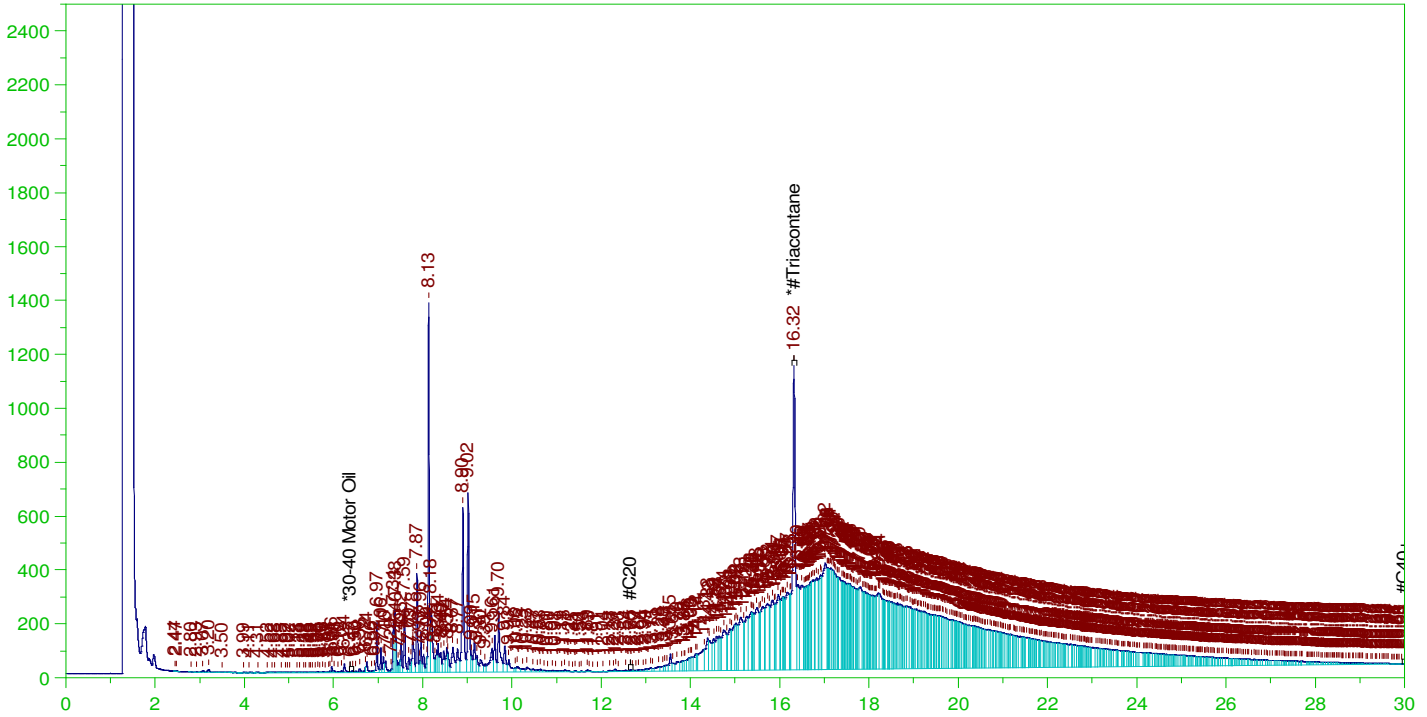
Mean RF for TEH: 31353.19  
 Rt range for Diesel Range Organics: 6.59 to 15.91

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.323	200.	.238	.12
*1-Chlorooctadecane	29.975	200.	.	.

DRO Area:247679.8 DRO Amount: 7.899669  
 TEH Area:575560.4 TEH Amount: 18.35731

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0056.RAW

B21110712-002AMS-RRO ;1111HP5 , SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-002AMS-RRO ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0056.RAW  
 Date & Time Acquired: 11/12/2021 10:06:43 PM  
 Method File: G:\Org\HP5\Methods\D3\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.CAL  
 Sample Weight: 1055 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: 12.61 to 30.05

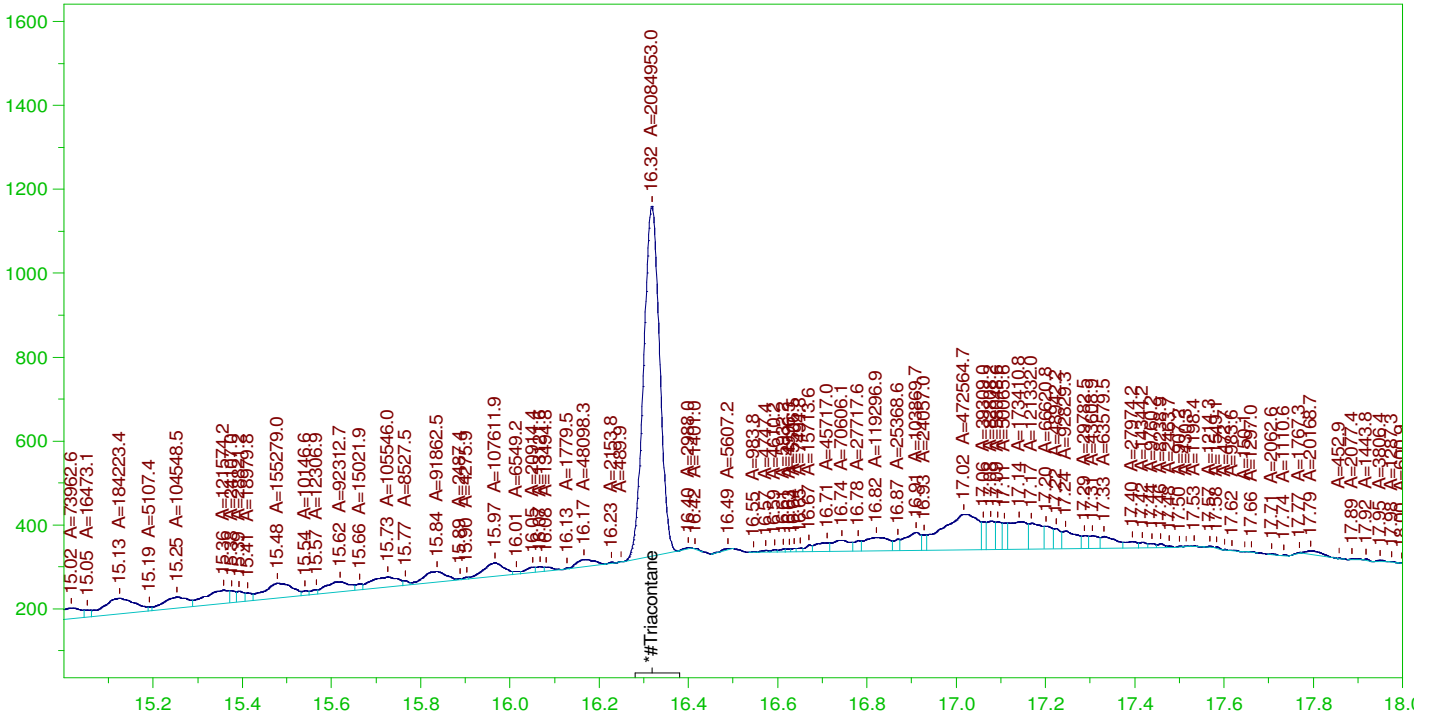
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.318	.474	.139	29.39

~~RRO~~ TEH(Oil Range) Area:1.156608E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 3.840989

AMN 11/18/2021

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0056.RAW

B21110712-002AMS-RRO ;1111HP5 , SGT



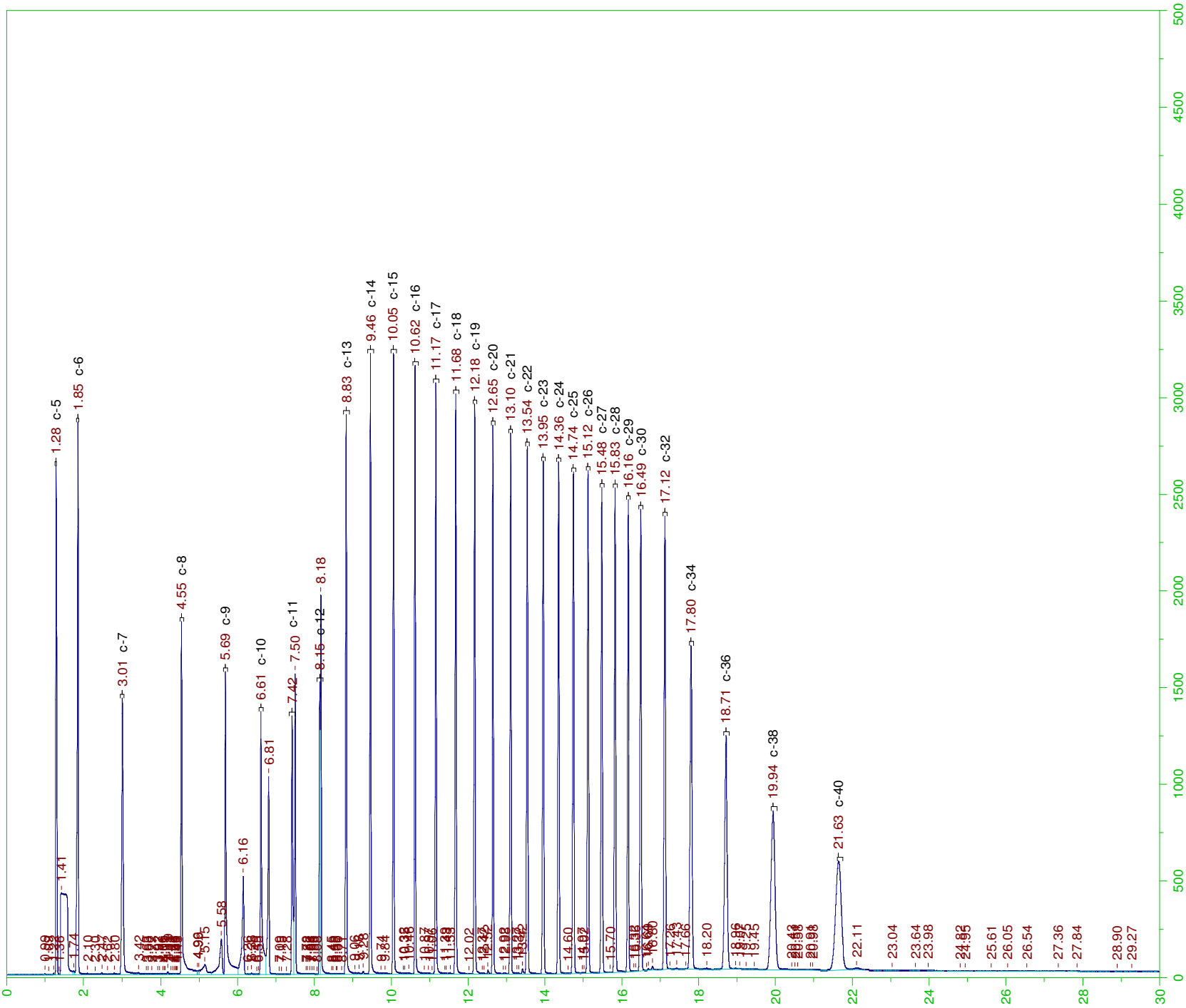
**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110712-002AMS-RRO ;1111HP5 , SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0056.RAW  
 Date & Time Acquired: 11/12/2021 10:06:43 PM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-111125-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.CAL  
 Sample Weight: 1055 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.318	.474	.068	14.41

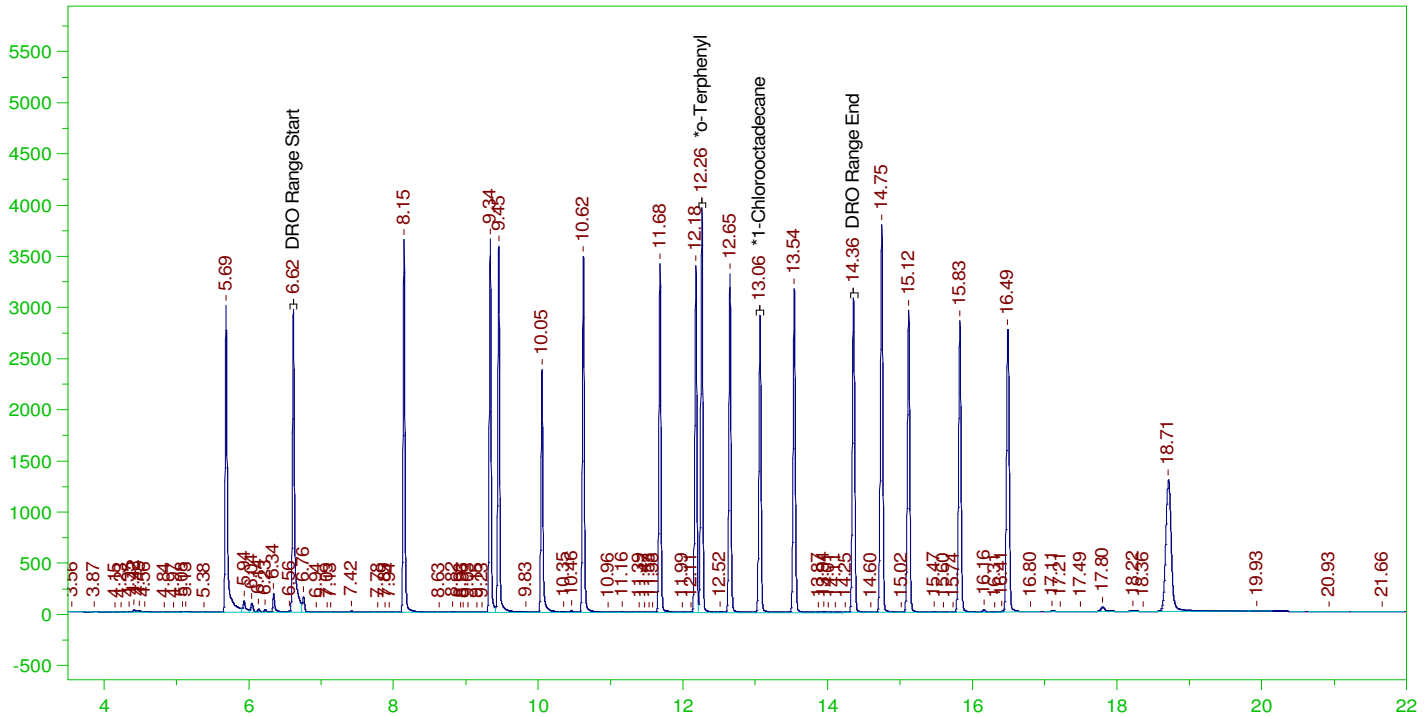
RRO Area:4449085 RRO AMOUNT: 0.14775





G:\org\HP5\DAT\HP5111121\_b\1111HP5.0058.RAW

MARKER\_1111HP558r, DRO ;1111HP5 , DRO211012I



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

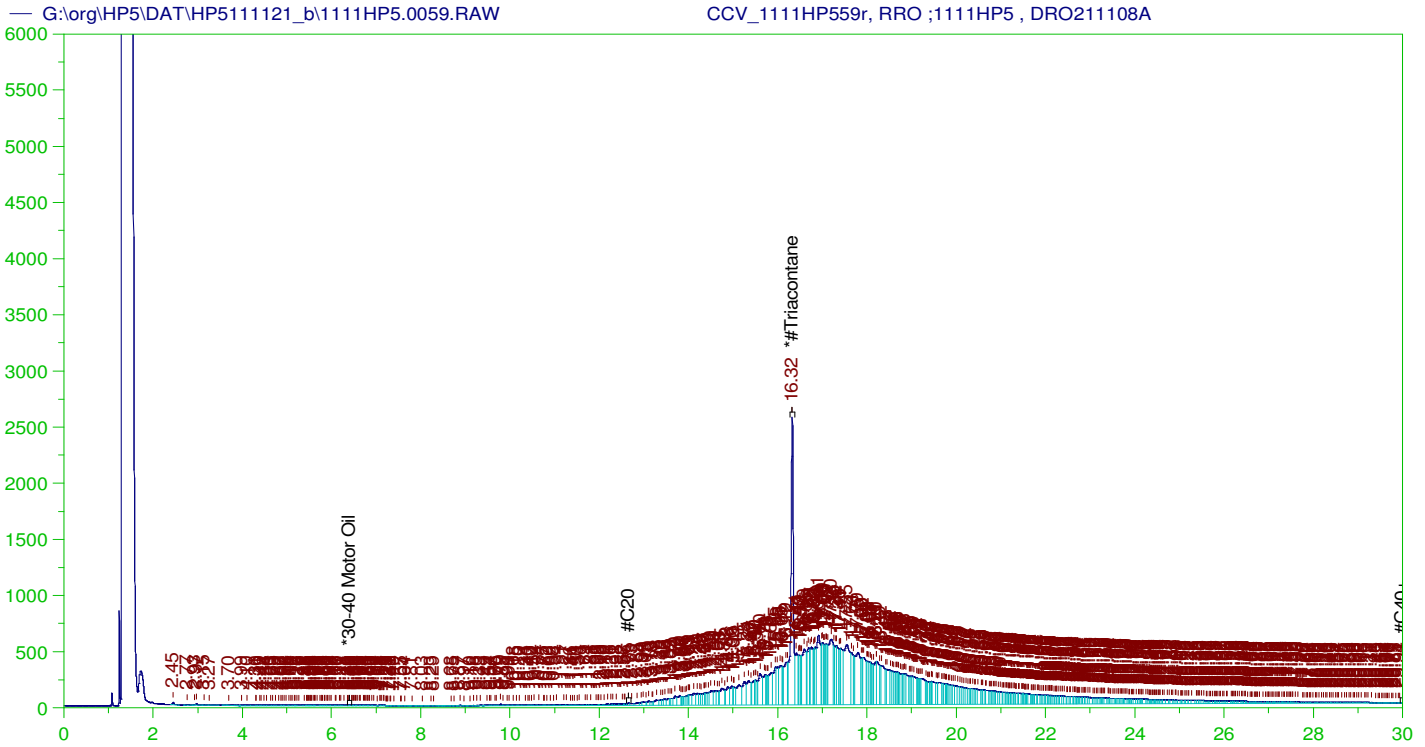
Sample Name: MARKER\_1111HP558r, DRO ;1111HP5 , DRO211012I  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0058.RAW  
 Date & Time Acquired: 11/12/2021 11:32:56 PM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.261	.2	.215	107.57
*1-Chlorooctadecane	13.064	.2	.173	86.42

DRO Area: 7.243147E+07 DRO Amount: 2.310179  
 TEH Area: 1.171682E+08 TEH Amount: 3.737043



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP559r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0059.RAW  
 Date & Time Acquired: 11/13/2021 12:16:06 AM  
 Method File: G:\Org\HP5\Methods\DC\_ORO-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.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: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.322	500.	325.391	65.08	-

~~RRO~~ TEH(Oil Range) Area:1.330002E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4659.741

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0059.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.13	.	75-125

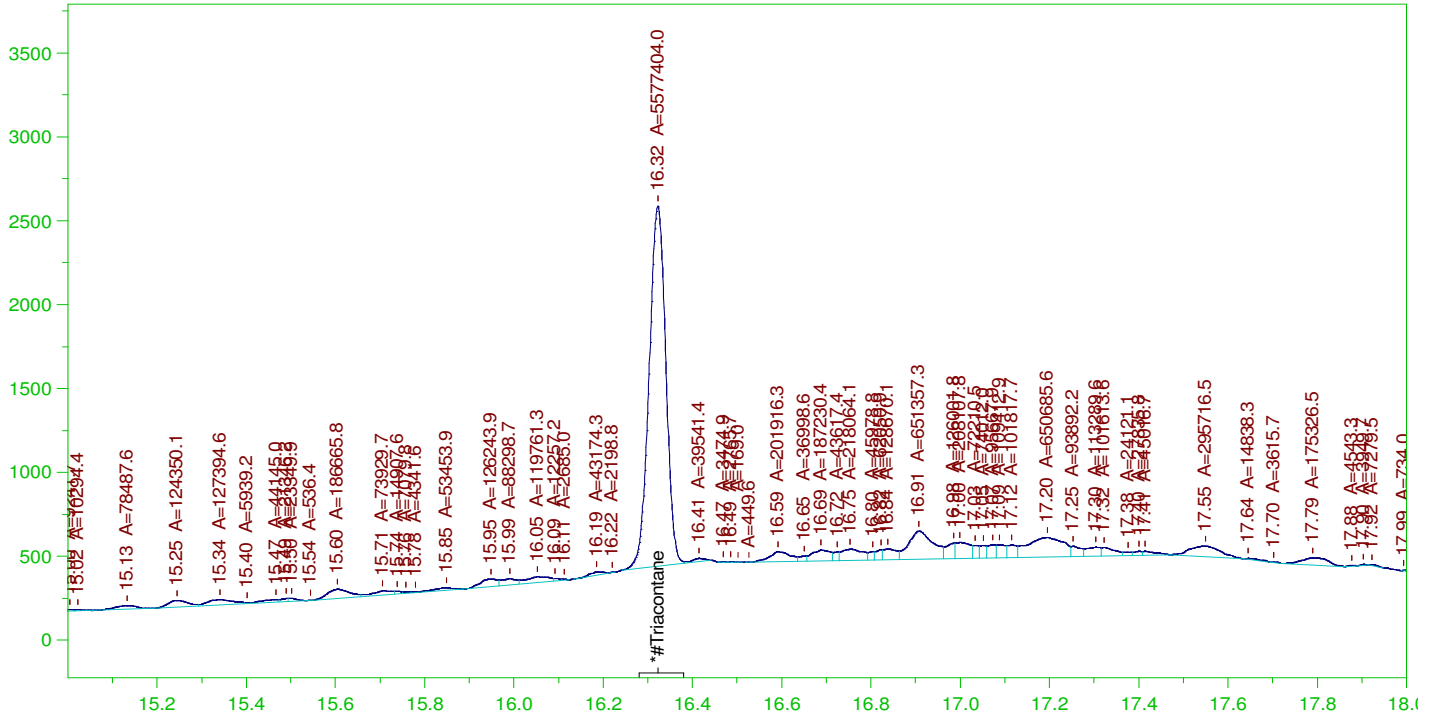
  

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.322	200.	325.391	162.7	75-125

AMN 11/18/2021

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0059.RAW

CCV\_1111HP559r, RRO ;1111HP5 , DRO211108A



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: CCV\_1111HP559r, RRO ;1111HP5 , DRO211108A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0059.RAW  
 Date & Time Acquired: 11/13/2021 12:16:06 AM  
 Method File: G:\Org\HP5\Methods\DS\_ORO-AD-L#.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

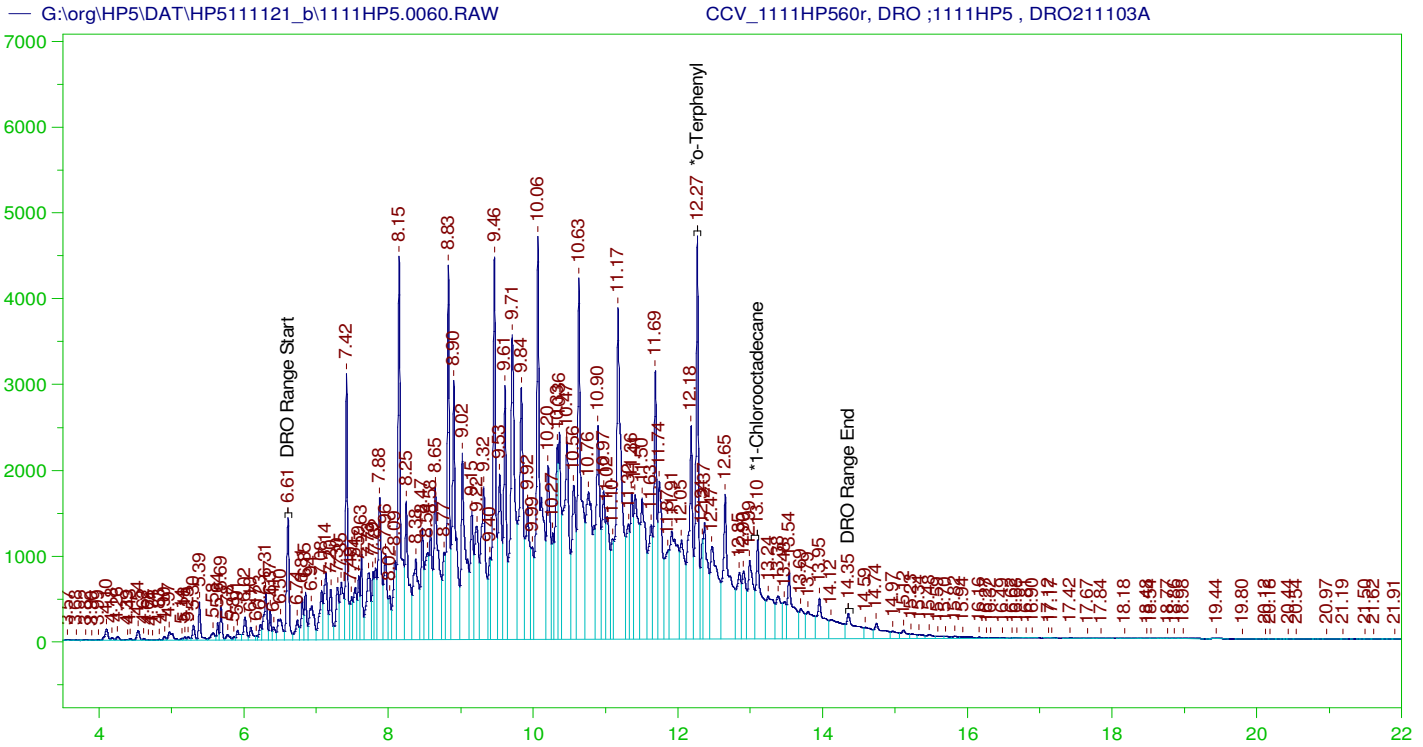
Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 12.61 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.322	500.	192.789	38.56	-

RRO Area:6366556 RRO AMOUNT: 223.056

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0059.RAW  
 COMPOUND ACTUAL (NG) MEASURED (NG) %RECOVERY LIMITS  
 \*30-40 Motor Oil 5000. .13 . 75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.322	200.	192.789	96.39	75-125



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP560r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0060.RAW  
 Date & Time Acquired: 11/13/2021 12:59:14 AM  
 Method File: G:\Org\HP5\Methods\DC\_8015-24-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.267	200.	340.402	170.2	-
*1-Chlorooctadecane	13.102	200.	162.806	81.4	-

DRO Area: 4.73787E+08 DRO Amount: 15111.29  
 TEH Area: 4.901163E+08 TEH Amount: 15632.1

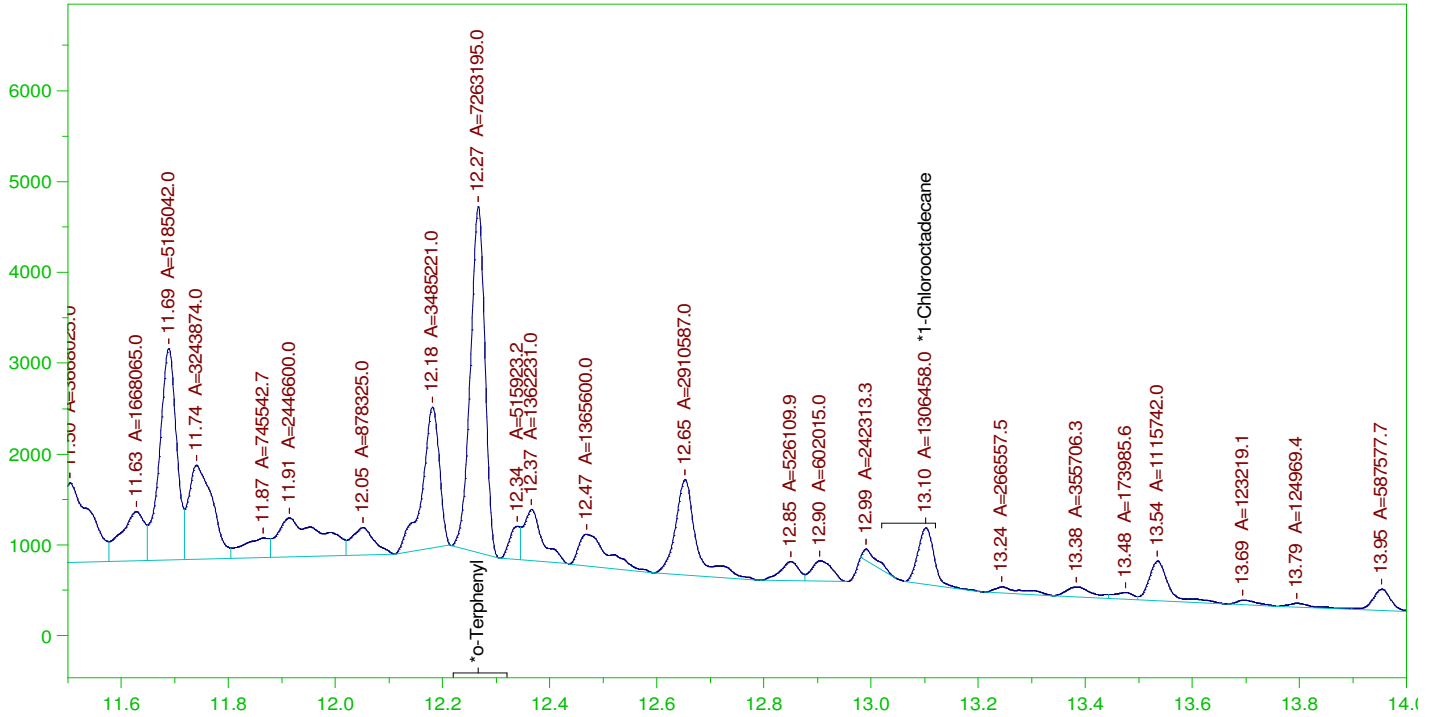
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0060.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15632.1	104.21	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.267	200.	340.402	170.2	85-115
*1-Chlorooctadecane	13.102	200.	162.806	81.4	85-115

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0060.RAW

CCV\_1111HP560r, DRO ;1111HP5 , DRO211103A



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: CCV\_1111HP560r, DRO ;1111HP5 , DRO211103A  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0060.RAW  
 Date & Time Acquired: 11/13/2021 12:59:14 AM  
 Method File: G:\Org\HP5\Methods\DS\_8015-24-IB-L#.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24.CAL  
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.267	200.	204.544	102.27
*1-Chlorooctadecane	13.102	200.	36.792	18.4

DRO Area: 2.663892E+08 DRO Amount: 8496.398  
 TEH Area: 2.766704E+08 TEH Amount: 8824.313

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0060.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8824.31	58.83	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.267	200.	204.544	102.27	85-115
*1-Chlorooctadecane	13.102	200.	36.792	18.4	85-115



G:\org\HP5\DAT\HP5111121_b\1111HP5.22	B21110712-001A ;1111HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-111115-IB-L%.met G:\Org\HP5\Methods\D3_OROS-111115-AD-L%.MET G:\Org\HP5\Methods\DS_8015-111121-IB-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 Now placed slight before at 12.16 minutes and 16.21 minutes and slightly after the surrogate peaks at 12.52 and 16.64 minutes. X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5111121_b\1111HP5.23	B21110712-001AMS ;1111HP5 ,	G:\Org\HP5\Methods\D3_8015-24-IB-L%.met G:\Org\HP5\Methods\DS_8015-24-IB-Lf.MET	1000	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 12.21 minutes and slightly after the surrogate peak at 12.43 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5111121_b\1111HP5.24	DCM-Baseline Check-V24	G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b\1111HP5.25	LCS-161122-RRO ;1111HP5 ,	G:\Org\HP5\Methods\D3_ORO-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-111125-AD-Lf.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 16.24 minutes slightly after the surrogate peak at 16.41 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b\1111HP5.26	DCM-Baseline Check-V26	G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b\1111HP5.27	LCS0-161122-RRO ;1111HP5 ,	G:\Org\HP5\Methods\D3_ORO-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-111125-AD-Lf.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 16.24 minutes slightly after the surrogate peak at 16.41 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b\1111HP5.28	DCM-Baseline Check-V28	G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b\1111HP5.29	B21110712-002AMS-RRO ;1111HP5 ,	G:\Org\HP5\Methods\D3_ORO-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-111125-AD-Lf.MET	1055	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 16.24 minutes slightly after the surrogate peak at 16.41 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b\1111HP5.30	MARKER_1111HP530r_DRO ;1111HP5_DRO210708A	G:\org\HP5\Methods\CSC211108.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b\1111HP5.31	MARKER_1111HP531r_DRO ;1111HP5_DRO211012I	G:\Org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b\1111HP5.32	CCV_1111HP532r_RRO ;1111HP5 , DRO211103A	G:\Org\HP5\Methods\DC_ORO-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-AD-Lf.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 16.24 minutes slightly after the surrogate peak at 16.44 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b\1111HP5.33	CCV_1111HP533r_DRO ;1111HP5 , DRO211103A	G:\Org\HP5\Methods\DC_8015-24-IB-L%.met G:\Org\HP5\Methods\DS_8015-24-IB-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 12.21 minutes and slightly after the surrogate peak at 12.43 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.

*Ann Nebel*

Digitally signed by  
Ann Nebel  
Date: 2021.11.18 15:55:35 -07:00

Write Sequence	Data File	Sample Name	Insert Entries(Have the first cell for entries selected)	Method	Weight	Dil Factor	Amnt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP5\DAT\HP5111121_b1111HP5.34	DCM-Baseline Check-V34			G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.35	DCM-Baseline Check-V35			G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.38	LCS-161122;1111HP5, SGT			G:\Org\HP5\Methods\DS_8015-111106-24-IB-L%.met G:\Org\HP5\Methods\DS_8015-24-IB-L%.met	1000	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 with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 minutes and slightly after the surrogate peak at 12.43 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.37	LCS0-161122;1111HP5, SGT			G:\Org\HP5\Methods\DS_8015-24-IB-L%.met G:\Org\HP5\Methods\DS_8015-24-IB-L%.met	1000	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 12.21 minutes and slightly after the surrogate peak at 12.43 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.38	MB-161122;1111HP5, SGT			G:\Org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\Org\HP5\Methods\DR_OROS-AD-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IB-L%.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. Assigned Set Baseline All Valley on at 17.12 minutes for C10-C24 and TEH and Assigned Set Baseline All Valley on at 17.56 minutes for C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.16 minutes and 16.21 minutes and slightly after the surrogate peaks at 12.47 and 16.64 minutes. X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.39	B2110712-003A;1111HP5, SHC-8015-DRO-W, SGT			G:\Org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\Org\HP5\Methods\DR_OROS-AD-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IB-L%.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. Assigned Set Baseline All Valley on at 17.12 minutes for C10-C24 and TEH and Assigned Set Baseline All Valley on at 17.56 minutes for C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.16 minutes and 16.21 minutes and slightly after the surrogate peaks at 12.47 and 16.64 minutes. X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.40	B2110712-004A;1111HP5, SHC-8015-DRO-W, RR poked wrong val			G:\Org\HP5\Methods\DR_8015-C24T-IB-L%.met	1055	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.41	B2110712-001A;1111HP5, SHC-8015-DRO-W, SGT			G:\Org\HP5\Methods\DR_OROS-AD-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IB-L%.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 for C10-C24 and TEH and Assigned Set Baseline All Valley on at 17.56 minutes for C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.16 minutes and 16.21 minutes and slightly after the surrogate peaks at 12.47 and 16.64 minutes. X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.42	B2110712-004A;1111HP5, SHC-8015-DRO-W, RR			G:\Org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\Org\HP5\Methods\DR_OROS-AD-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1055	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 for C10-C24 and TEH and Assigned Set Baseline All Valley on at 17.56 minutes for C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.16 minutes and 16.21 minutes and slightly after the surrogate peaks at 12.47 and 16.64 minutes. X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.43	MARKER_1111HP543; DRO :1111HP5_DRO210708A			G:\Org\HP5\Methods\CSC211108.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.44	MARKER_1111HP544; DRO :1111HP5_DRO211072			G:\Org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.45	CCV_1111HP545; RRD :1111HP5, DRO211108A			G:\Org\HP5\Methods\DC_ORO-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-AD-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 16.21 minutes and slightly after the surrogate peak at 16.44 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.46	CCV_1111HP546; RRD :1111HP5, DRO211103A			G:\Org\HP5\Methods\DC_8015-24-IB-L%.met G:\Org\HP5\Methods\DS_8015-24-IB-L%.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 12.43 minutes and slightly after the surrogate peak at 12.43 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.47	DCM-Baseline Check-V47			G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.48	B2110057-002A;1111HP5, SHC-8015-DRO-W, RX-SGT			G:\Org\HP5\Methods\DR_8015-111148-AD-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IB-L%.MET	975	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 24.79 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.16 minutes and 16.21 minutes and slightly after the surrogate peaks at 12.47 and 16.64 minutes. X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.49	B2110712-002A;1111HP5, SHC-8015-DRO-W, SGT			G:\Org\HP5\Methods\DR_8015-C24T-IB-L%.met G:\Org\HP5\Methods\DR_OROS-AD-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IB-L%.MET	1060	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 for C10-C24 and TEH and Assigned Set Baseline All Valley on at 17.56 minutes for C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.16 minutes and 16.21 minutes and slightly after the surrogate peaks at 12.47 and 16.64 minutes. X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.50	B2110712-001AMS;1111HP5, SGT			G:\Org\HP5\Methods\DS_8015-24-IB-L%.met G:\Org\HP5\Methods\DS_8015-24-IB-L%.met	1000	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 12.21 minutes and slightly after the surrogate peak at 12.43 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.51	DCM-Baseline Check-V51			G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.52	LCS-161122-RR0;1111HP5, SGT			G:\Org\HP5\Methods\DS_8015-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-111125-AD-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 16.21 minutes and slightly after the surrogate peak at 16.41 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.53	DCM-Baseline Check-V53			G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.54	LCS0-161122-RR0;1111HP5, SGT			G:\Org\HP5\Methods\DS_8015-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-111125-AD-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 16.24 minutes and slightly after the surrogate peak at 16.41 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.55	DCM-Baseline Check-V55			G:\Org\HP5\Methods\DR_8015-IA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b1111HP5.56	B2110712-002AMS-RR0;1111HP5, SGT			G:\Org\HP5\Methods\DS_ORO-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-111125-AD-L%.MET	1055	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 16.24 minutes and slightly after the surrogate peak at 16.41 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b1111HP5.57	MARKER_1111HP557; DRO :1111HP5_DRO210708A			G:\Org\HP5\Methods\CSC211108.met	1	1	1	1	0	No integrations.



G:\org\HP5\DAT\HP5111121_b11111HP5.58r	MARKER_1111HP558r, DRO :1111HP5 , DRO211012I	G:\Org\HP5\Methods\DC_8015-24-IB-L%.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5111121_b11111HP5.59r	CCV_1111HP559r, RRO :1111HP5 , DRO211108A	G:\Org\HP5\Methods\DC_ORO-AD-L%.MET G:\Org\HP5\Methods\DS_ORO-AD-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 16.24 minutes slightly after the surrogate peak at 16.44 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP5\DAT\HP5111121_b11111HP5.60r	CCV_1111HP560r, DRO :1111HP5 , DRO211103A	G:\Org\HP5\Methods\DC_8015-24-IB-L%.met G:\Org\HP5\Methods\DS_8015-24-IB-L#.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 12.21 minutes and slightly after the surrogate peak at 12.43 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.

*Ann Nebel*

Digitally signed by  
Ann Nebel  
Date: 2021.11.18 15:55:59 -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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## 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

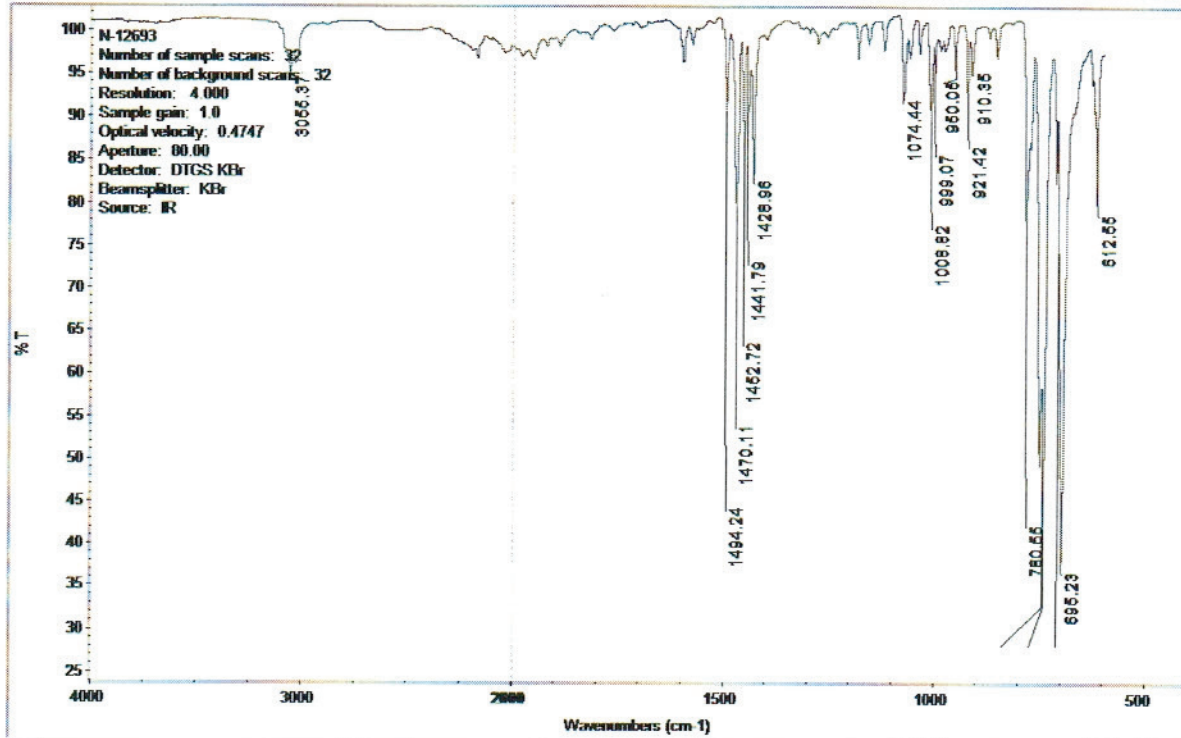
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



## 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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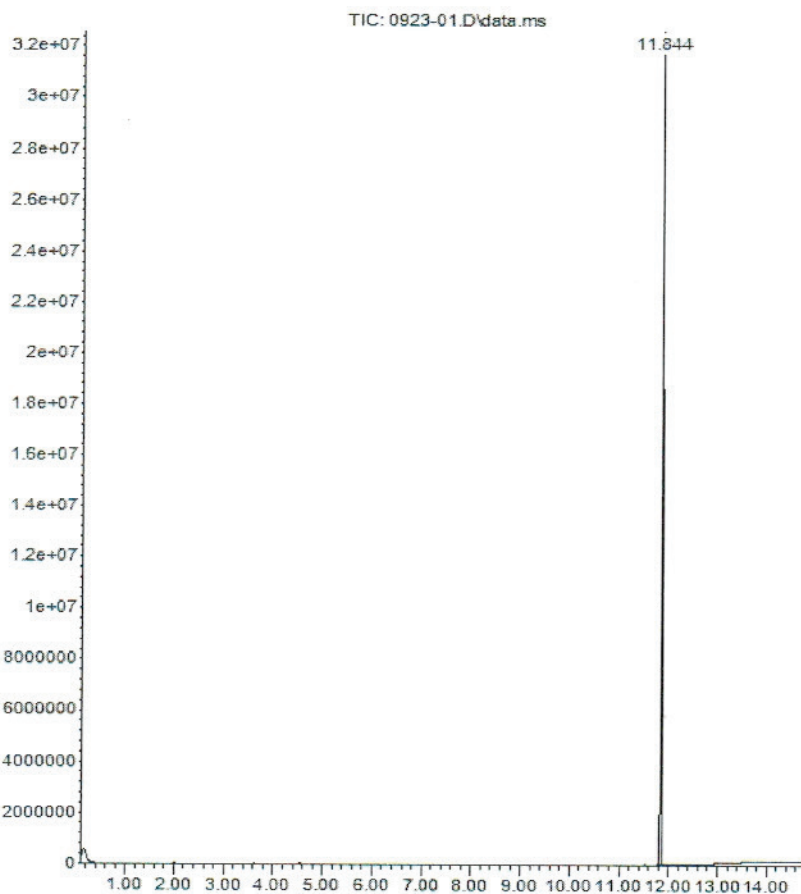
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## CERTIFICATE OF ANALYSIS

### Analysis Method:

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

Abundance



Time-->

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



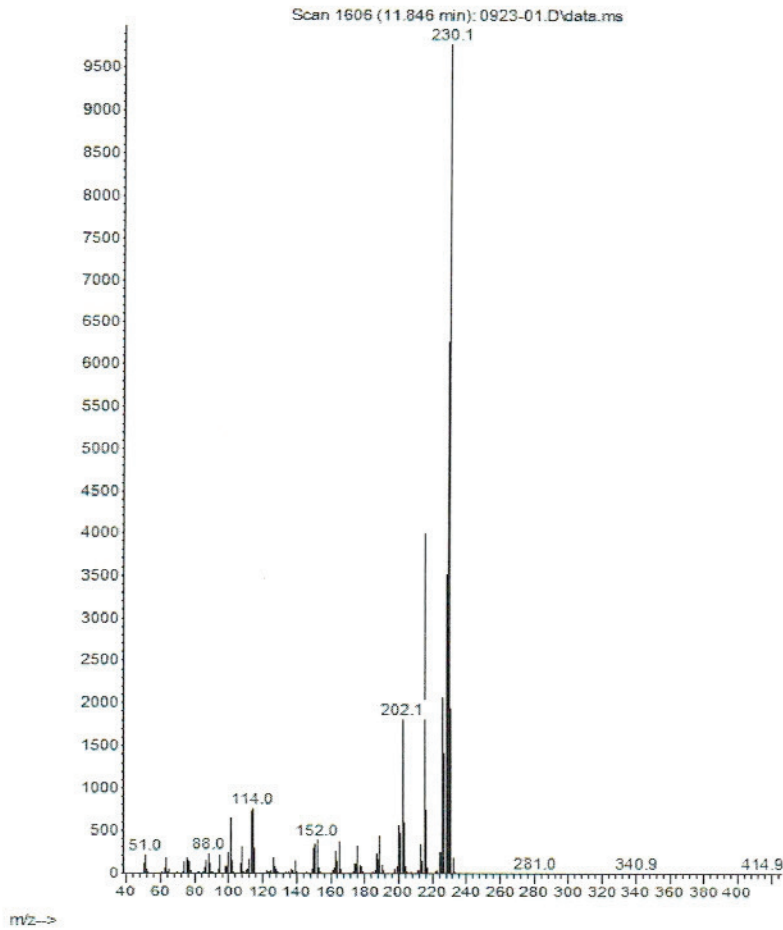
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## CERTIFICATE OF ANALYSIS

### Analysis Method:

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

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



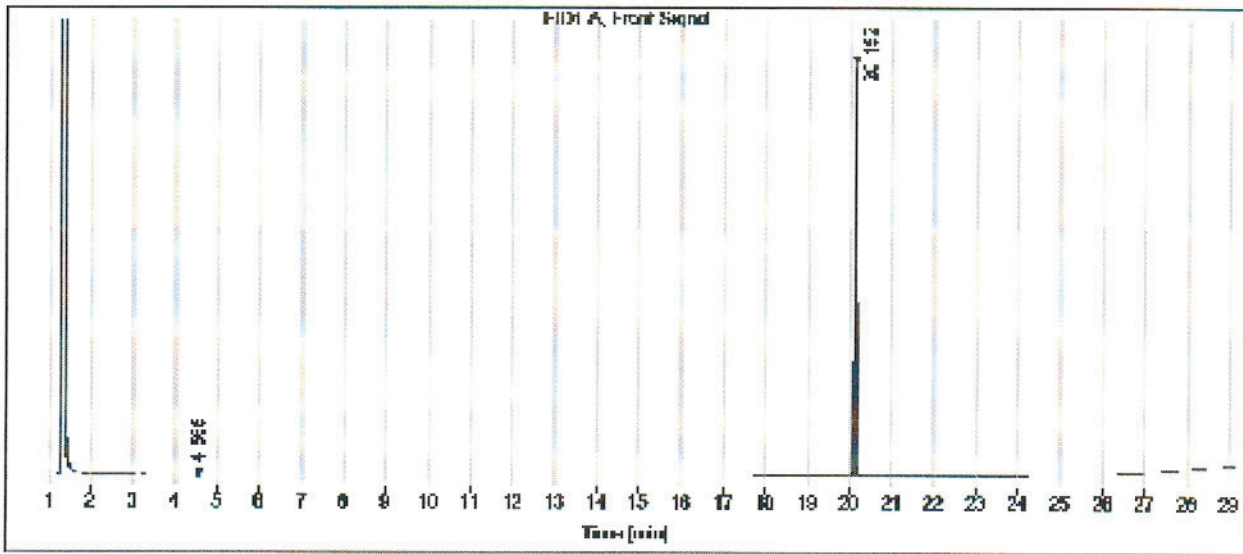
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Gas

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		

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# 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

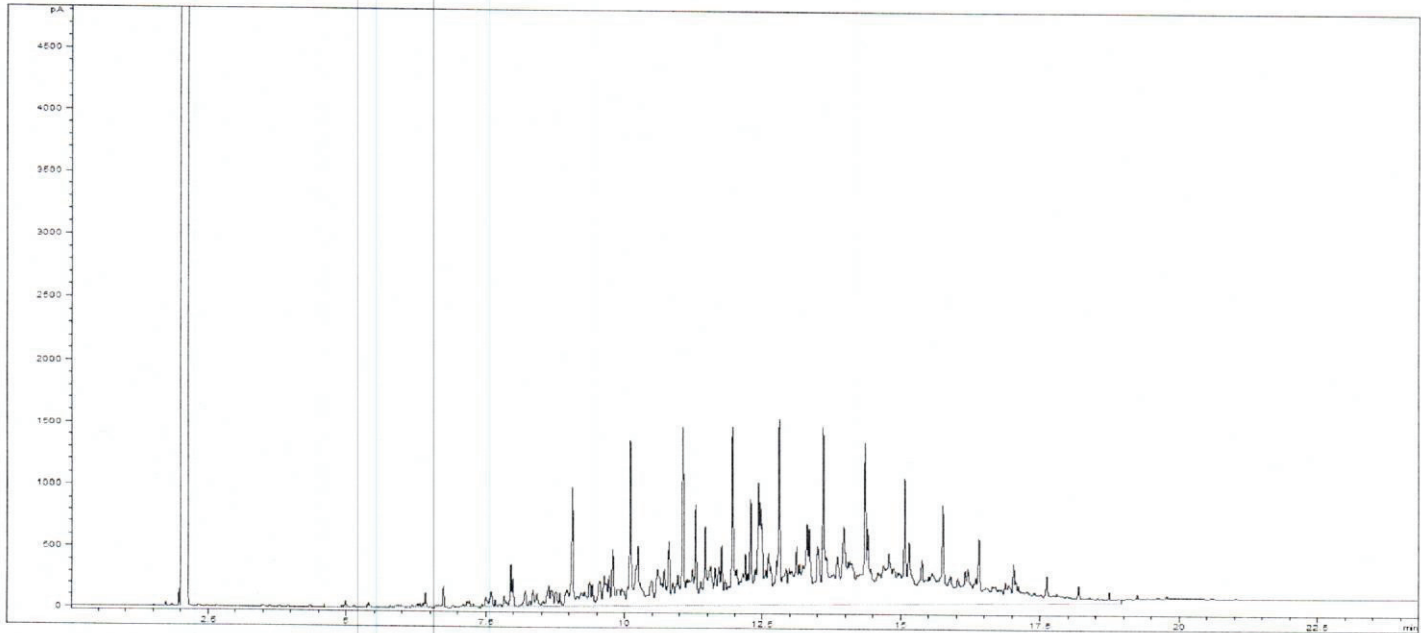
Rec'd: 10/12/2021

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

## Certified Values

Analyte	Certified Value <sup>1,4</sup>	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: H<sub>2</sub>, 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.

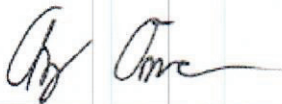
**Traceability:** The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

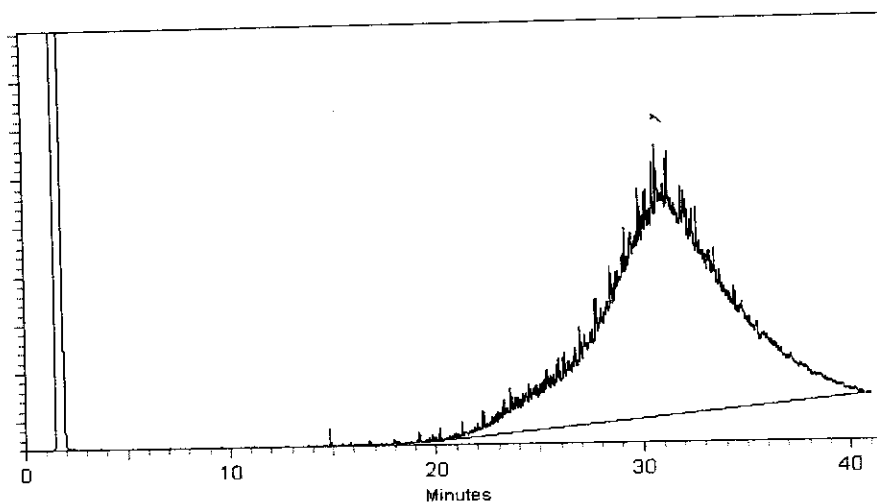
**Carrier Gas:**  
hydrogen-constant pressure 10 psi.

**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: \_\_\_\_\_

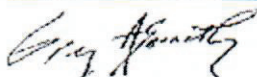
Triacontane-d62-98 atom % D

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 Sation 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>		<b>Base Units</b>	<b>Amount Added</b>
DRO160823C	30W Motor Oil-Valvoline	ug/mL	0.2501 g
DRO160823D	40W Motor Oil-Valvoline	ug/mL	0.2527 g

<u>Analtes</u>		<b>CAS</b>	<b>Conc:</b>	<b>ug/mL</b>
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: DRO211103A  
 Standard Name: 8015 CCV-15,000ug/mL + 200 OTP  
 Date Prepared: 11/3/2021  
 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: Open

---

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC344	14448	2.6	mL	8/26/

**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
DRO211012A 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
A O-Terphenyl	84-15-1		200

# 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  
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[info@chemservice.com](mailto:info@chemservice.com) • [www.chemservice.com](http://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

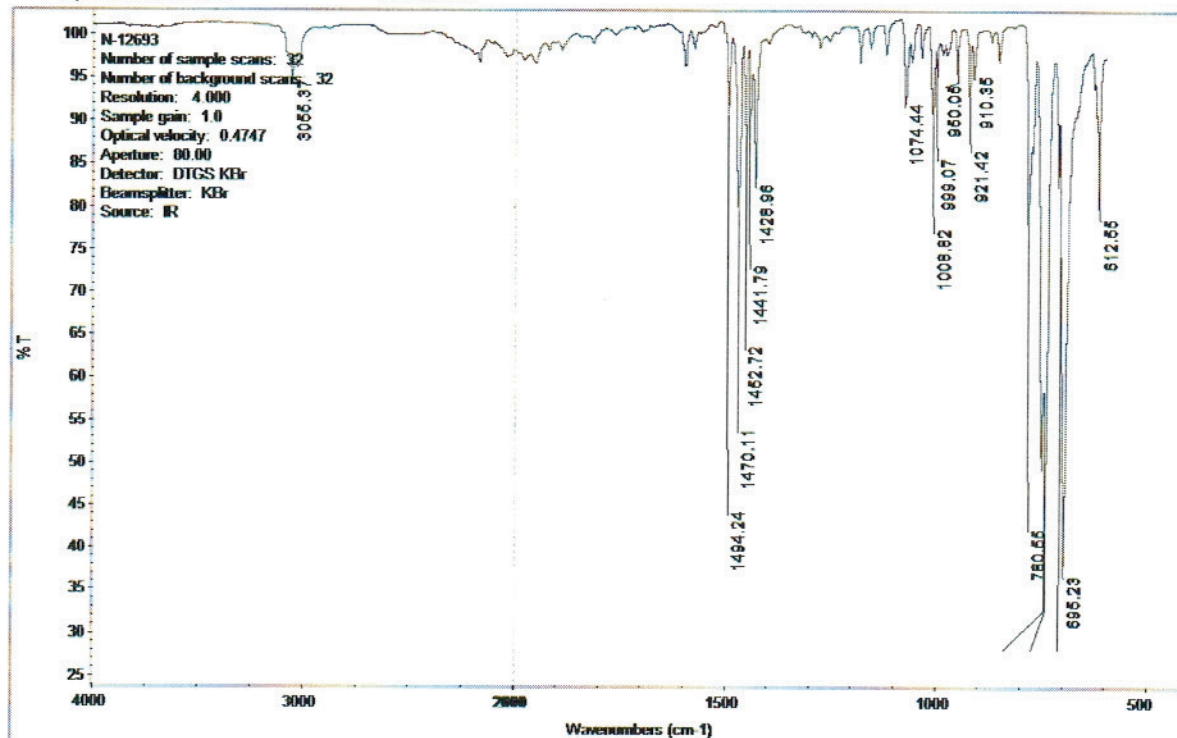
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



## 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](mailto:info@chemservice.com) • [www.chemservice.com](http://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



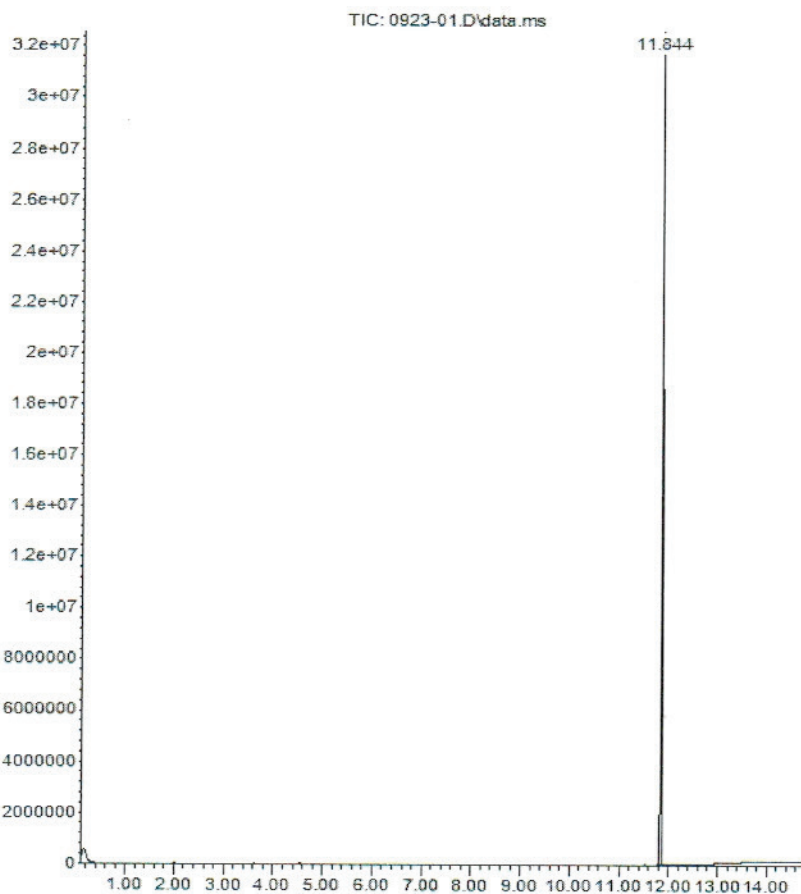
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599  
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729  
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## CERTIFICATE OF ANALYSIS

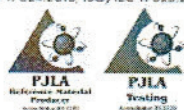
### Analysis Method:

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



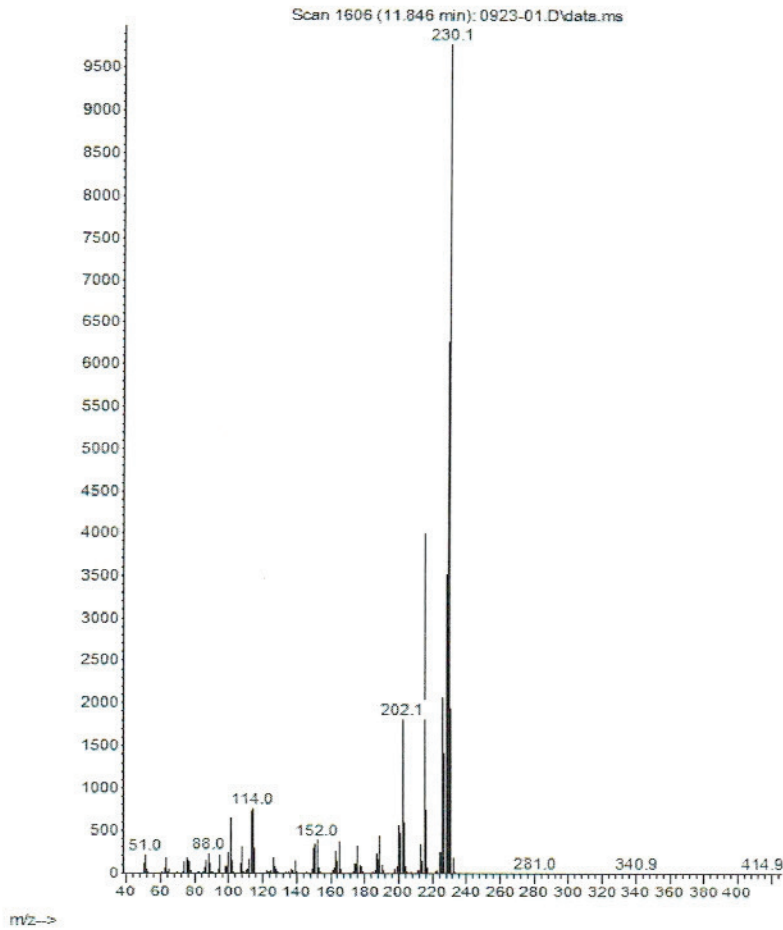
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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729  
[info@chemservice.com](mailto:info@chemservice.com) • [www.chemservice.com](http://www.chemservice.com)

## 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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[info@chemservice.com](mailto:info@chemservice.com) • [www.chemservice.com](http://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



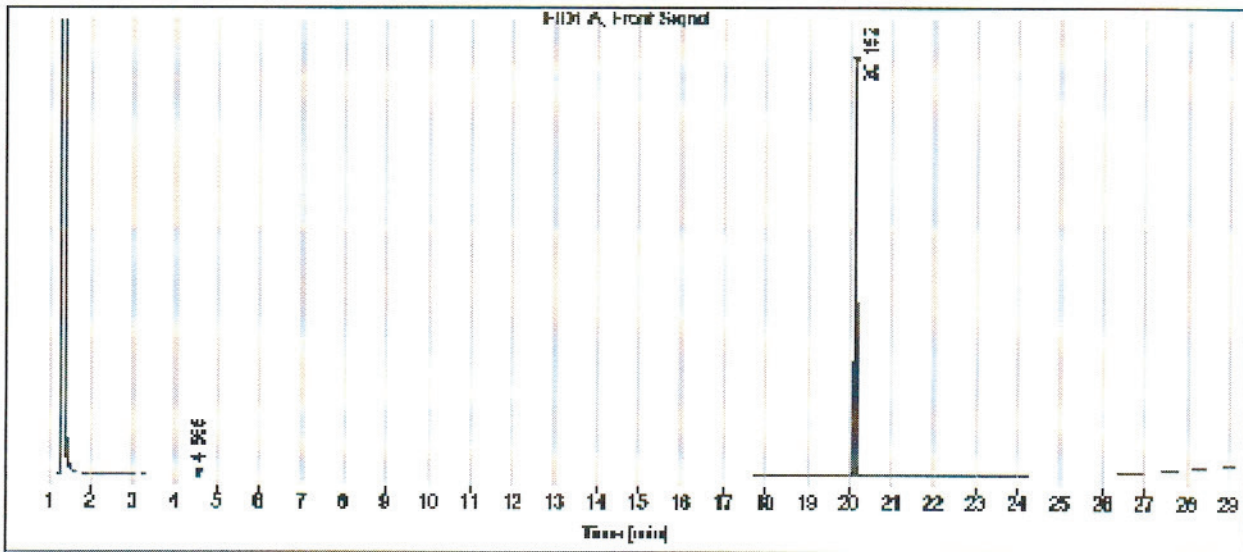
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599  
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[info@chemservice.com](mailto:info@chemservice.com) • [www.chemservice.com](http://www.chemservice.com)

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

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 #: 14376

Opened: \_\_\_\_\_

Diesel Fuel No. 2

Expires: 4/30/2023

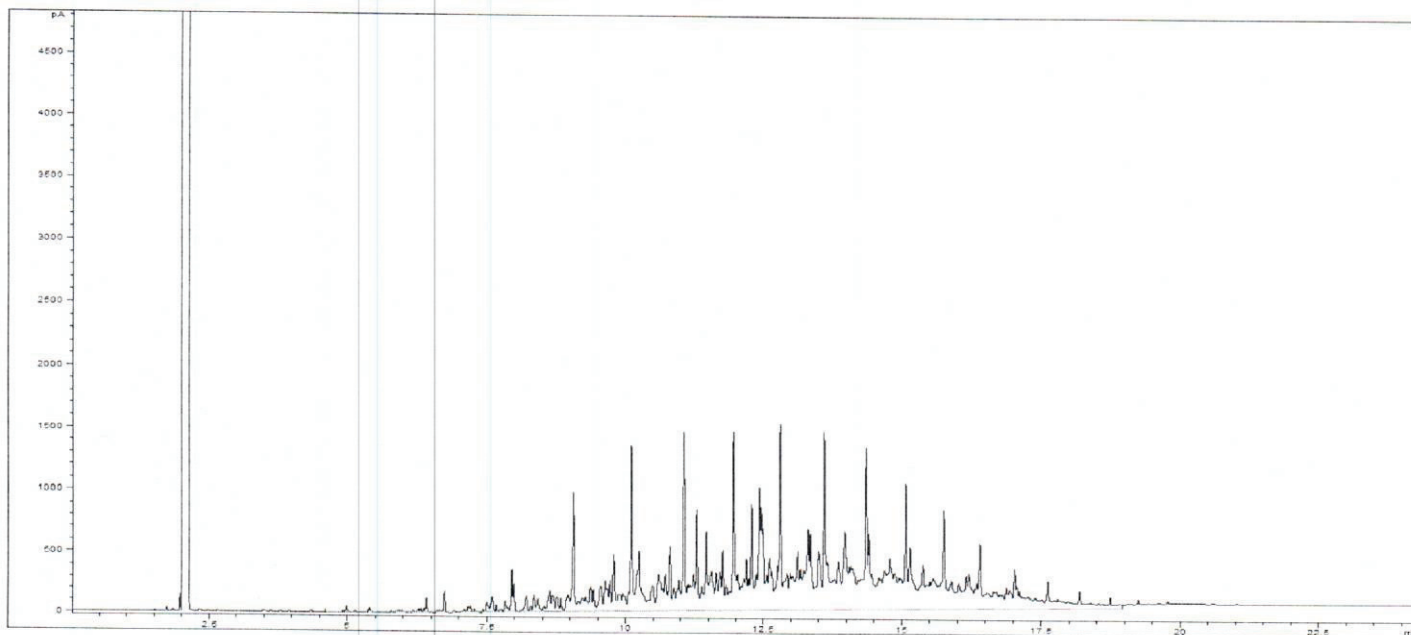
Rec'd: 10/12/2021

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

## Certified Values

Analyte	Certified Value <sup>1,4</sup>	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: H<sub>2</sub>, 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.

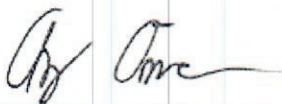
**Traceability:** The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

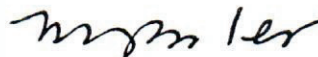
Expiration is at end of month given on certificate and label.

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: DRO211008A  
 Standard Name: 5,000 ug/mL RRO CCV 200 ug/mL Triaconta      Type: Secondary  
 Date Prepared: 10/8/2021      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 EC119	14354	2.8	mL	8/3/21

**Final Volume:** 4 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO210401B 50,000 ug/mL Oil Std For AK103 RRO-I	ug/mL	400 µL
DRO211006A Triacontane SURR 2000 ug/mL	ug/mL	800 µL

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A 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:**

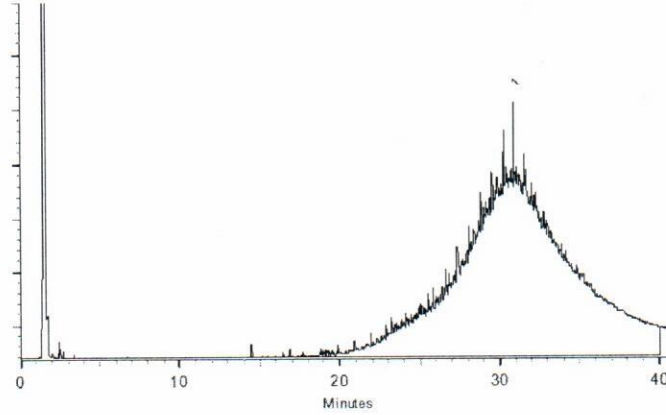
250°C

**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/ $\mu$ 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](http://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](http://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: 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](http://www.sigmaaldrich.com)

Email USA: [techserv@sial.com](mailto:techserv@sial.com)

Outside USA: [eurtechserv@sial.com](mailto: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: \_\_\_\_\_

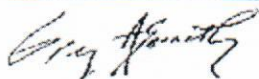
Triacontane-d62-98 atom % D

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: 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: DRO211012J  
 Standard Name: OTP/COD SURR 2000 ug/mL  
 Date Prepared: 10/12/2021  
 Date Expires: 9/30/2024  
 Department: dropr  
 Vendor:  
 Lot Number:  
 Balance ID: BAL-DRO  
 Comments: OTP/COD SURR 2000 ug/mL

Type: Secondary  
 BY: Ann Nebel  
 Status: New

---

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone EA662	14050	100	mL	1/7/2

**Final Volume:** 100 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO201014C 1-Chlorooctadecane	ug/mL	0.2002 g
DRO201014B O-Terphenyl	ug/mL	0.2009 g

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A 1-Chlorooctadecane	3386-33-2		2000
A O-Terphenyl	84-15-1		2000

# Energy Laboratories Inc

# Standard LOG

Standard ID: DRO201014B  
Standard Name: O-Terphenyl  
Date Prepared: 10/14/2020  
Date Expires: 9/30/2024  
Department: dropr  
Vendor: Chemservice  
Lot Number: 10029300  
Balance ID:  
Comments: ID#: 6271

Type: Neat  
BY: Ann Nebel  
Status: New

---

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	13191	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

Am

# CHEM SERVICE INC.

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](mailto:info@chemservice.com) • [www.chemservice.com](http://www.chemservice.com)

## CERTIFICATE OF ANALYSIS

### o-Terphenyl

CATALOG NUMBER	N-12693-500MG
LOT NUMBER	10029300
DATE CERTIFIED	09/23/19
EXPIRATION DATE	09/30/24
CAS NUMBER	84-15-1
MOLECULAR FORMULA	C18H14
MOLECULAR WEIGHT	230.32
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

<u>Analytical Test</u>	<u>Value</u>
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 #: 13191**  
 Opened: \_\_\_\_\_  
 o-Terphenyl  
**Expires: 9/30/2024**  
 Rec'd: 10/14/2020  
 Energy Laboratories Inc 1120 So. 27th Street  
 Billings MT 59107

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

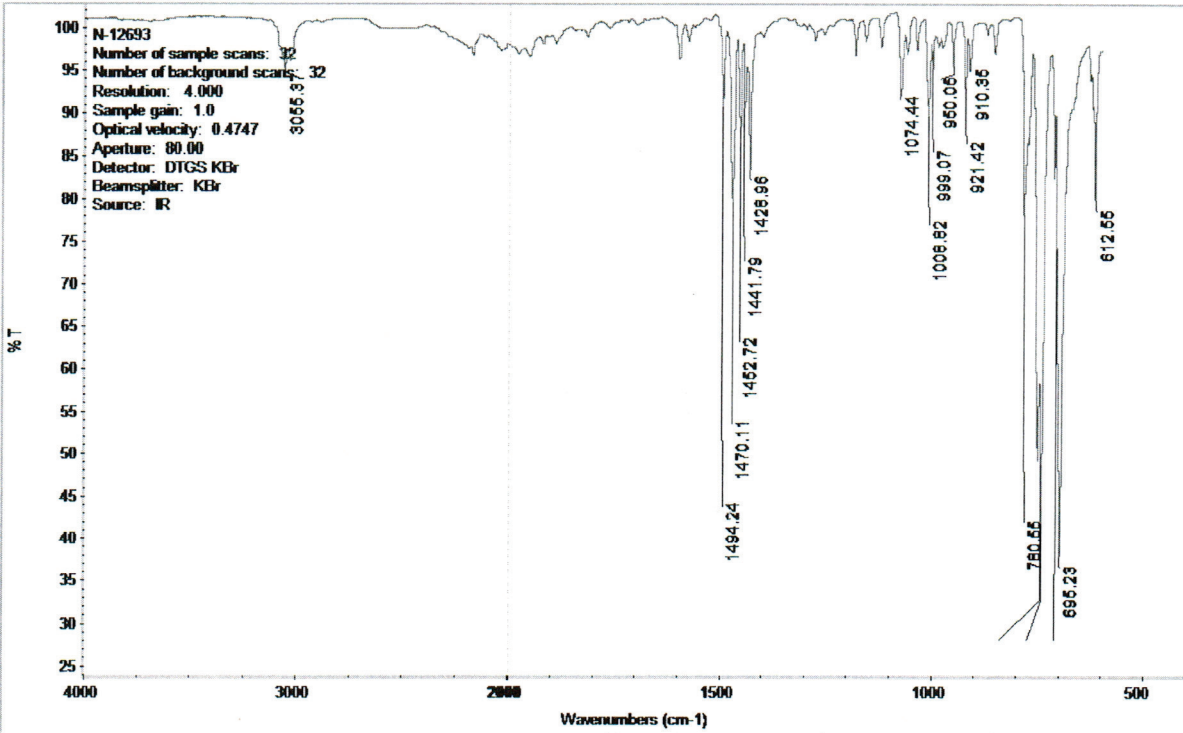
COA Form  
Revision 3 (3/2015)



## CERTIFICATE OF ANALYSIS

### Analysis Method:

Catalog Number: N-12693-500MG  
Description: o-Terphenyl  
Lot Number: 10029300  
Expiration Date: 09/30/24



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



## CERTIFICATE OF ANALYSIS

### Analysis Method:

Catalog Number: N-12693-500MG  
Description: o-Terphenyl  
Lot Number: 10029300  
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

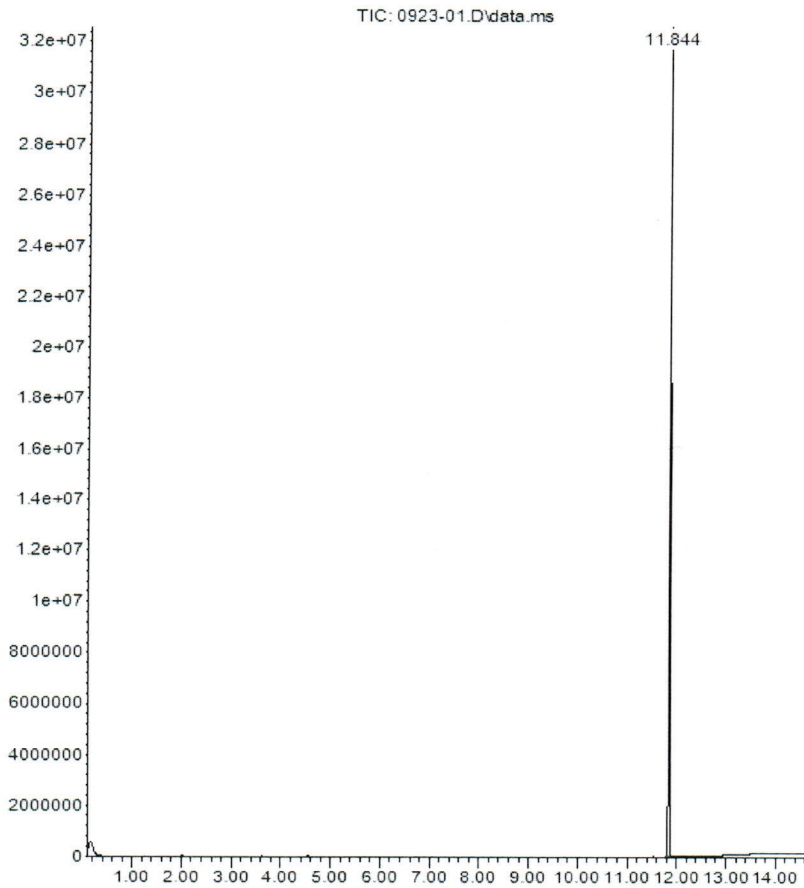
ERIN.M Mon Sep 23 10:55:51 2019

## CERTIFICATE OF ANALYSIS

### Analysis Method:

Catalog Number: N-12693-500MG  
Description: o-Terphenyl  
Lot Number: 10029300  
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

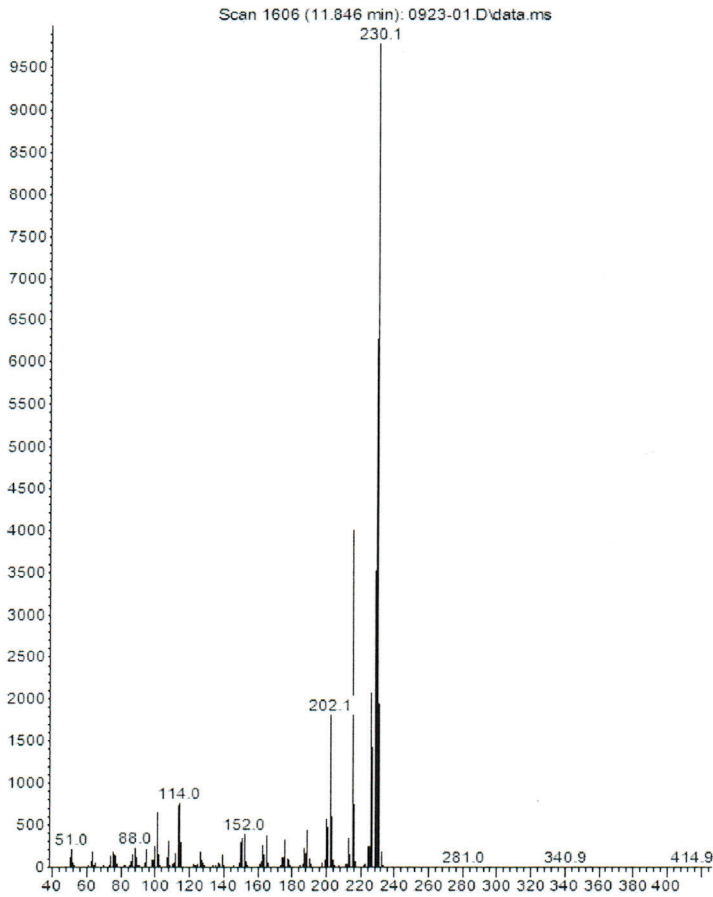


## CERTIFICATE OF ANALYSIS

### Analysis Method:

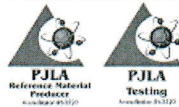
Catalog Number: N-12693-500MG  
Description: o-Terphenyl  
Lot Number: 10029300  
Expiration Date: 09/30/24

Abundance



m/z-->

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





## CERTIFICATE OF ANALYSIS

### Analysis Method:

Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	10029300
Expiration Date:	09/30/24

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



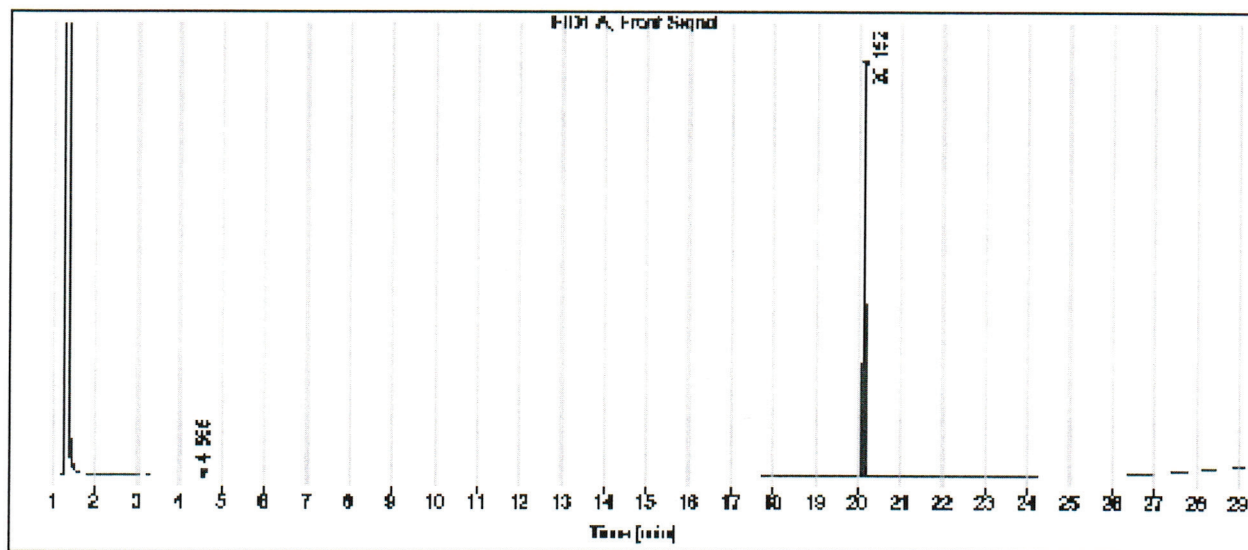
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599  
 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729  
[info@chemservice.com](mailto:info@chemservice.com) • [www.chemservice.com](http://www.chemservice.com)

Gas

Data file: C:\CHEM3:  
 Sample name: N-12893  
 Instrument: GC 2  
 Injection date: 9/23/2019 9:56:34 AM  
 Acq. method: SCREEN.M  
 Column name: HP-5

## CERTIFICATE OF ANALYSIS

Sample type: Sample  
 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: DRO211101B  
Standard Name: Triacotane SURR 1000 ug/mL  
Date Prepared: 11/1/2021  
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 EC344	14448	2	mL	8/26/

**Final Volume:** 4 mL

**Stock Source**  
DRO211006A Triacotane SURR 2000 ug/mL

**Base Units**  
ug/mL

**Amount Added**  
2 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

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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

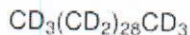
A Triacontane-d62

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

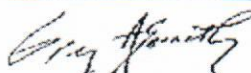
Product Name:  
 Triacontane-d62 - 98 atom % D

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.