

Energy Laboratories Inc

ANALYTICAL RUN Summary

18-Oct-21

Run ID GCFID-HP4-B_211006C

Run Start Date: 10/6/2021
Analyst: Ann Nebel
Ical:
Column ID:
Comments:

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO211006A	Triacontane SURR 2000 ug/mL					CAL-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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14764037	CCV_1006HP43	HC-8015-DRO-	CAL1		10/7/2021 1:07:4	1	R368536		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.0019847		0.002	0	0	0	0.002	0	99%	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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14764038	CCV_1006HP43	HC-8015-DRO-	CAL2		10/7/2021 1:53:0	1	R368536		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.04853713		0.05	0	0	0.002	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
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14764039	CCV_1006HP43	HC-8015-DRO-	CAL3		10/7/2021 2:38:3	1	R368536		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.2121789		0.2	0	0	0.002	0.002	0	106%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14764040	CCV_1006HP43	HC-8015-DRO-	CAL4		10/7/2021 3:23:5	1	R368536		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.4903055		0.5	0	0	0.002	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					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
14764041	CCV_1006HP43	HC-8015-DRO-	CAL5		10/7/2021 4:09:3	1	R368536		0	0						
n-Triacontane	S	mg/L		0.9788904		1	0	0	0.002	0.002	0	98%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
	G:\org\HP4\DAT\HP4100621_b\1006HP4.28r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	G:\org\HP4\Methods\CSC211006.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.29r	DCM-Baseline Check-V29	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.30r	CCV_1006HP407r, CAL1 ;1006HP4 , 2 ug per mL Triacotane (10 uL of Cal3 + 990 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.31r	CCV_1006HP408r, CAL2 ;1006HP4 , 50 ug per mL Triacotane (100 uL Cal4 + 900 uL of DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.32r	CCV_1006HP409r, CAL3 ;1006HP4 , 200 ug per mL Triacotane (100uL of Cal5 + 400 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.33r	CCV_1006HP404r, CAL4 ;1006HP4 , 500 ug per mL Triacotane (250uL of Cal5 + 250 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.34r	CCV_1006HP405r, CAL5 ;1006HP4 , 1000 ug per mL Triacotane (500 uL 2000 ug/mL Triacotane DRO211006A + 500 DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0

File Name: G:\Org\HP4\Cals\SW8015C_ORO211007AA.CAL
Version: 43

Creator: AMN
Description: 8015C-Oil Range w/Triacontane. New ICal Per 1006HP4 (2021)-2 uL Inj.;
Reason for change:

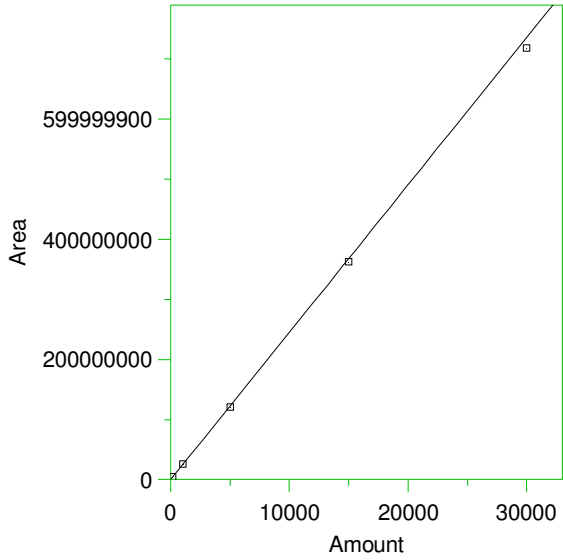
External standard calibration

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.

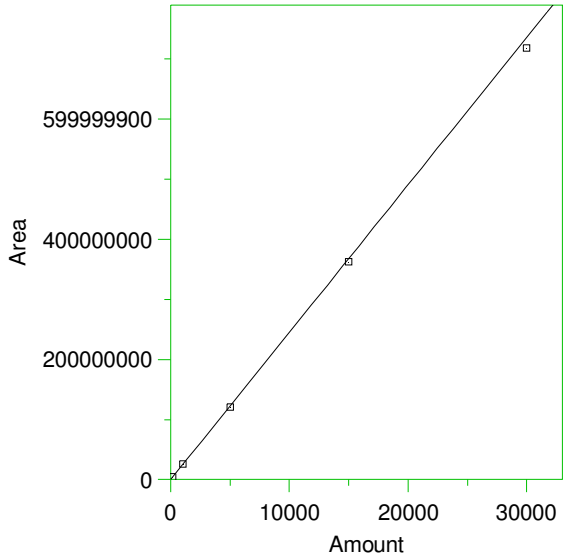
1 *30-40 Motor Oil



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 = 24529.56 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9990484
 Average error: 1.972%
 Average CF: 24529.56
 RSD: 2.304%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	3765836	25105.57	2.348	Manual	1/1/2022 10:32:22 AM
2	1000	2.516261E+07	25162.61	2.581	Manual	10/7/2021 12:56:01 PM
3	5000	1.213971E+08	24279.42	-1.020	Manual	10/7/2021 12:55:18 PM
4	15000	3.623479E+08	24156.53	-1.521	Manual	10/7/2021 12:55:30 PM
5	30000	7.183105E+08	23943.68	-2.388	Manual	10/7/2021 12:55:47 PM

2 #C20



Expected retention time: 12.58 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

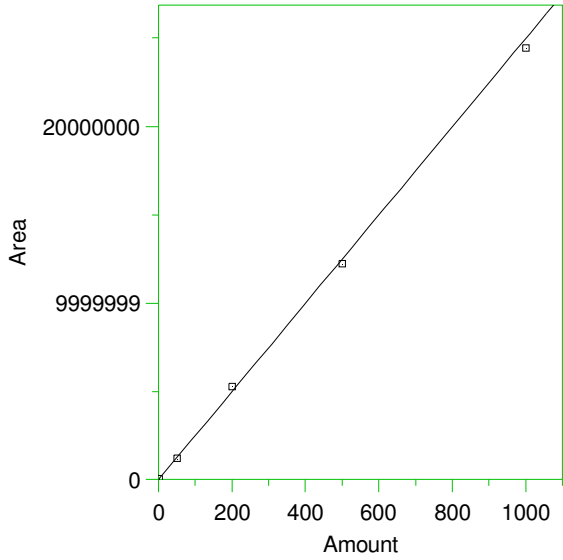
Single peak quantification by area

$Y = 24529.56 X + 0$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9990484
 Average error: 1.972%
 Average CF: 24529.56
 RSD: 2.304%

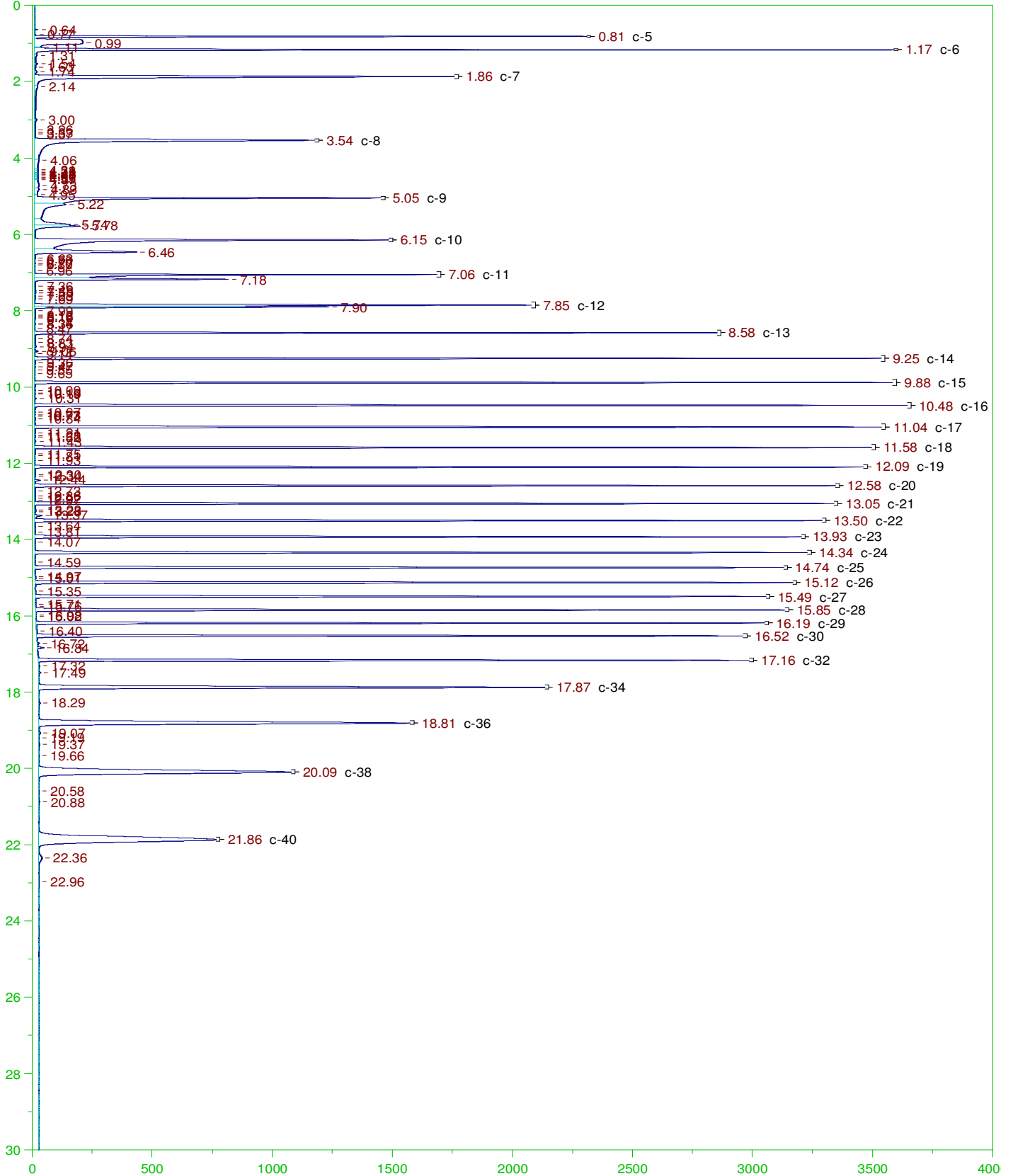
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	3765836	25105.57	2.348	Manual	1/1/2022 10:32:46 AM
2	1000	2.516261E+07	25162.61	2.581	Manual	1/1/2022 10:32:43 AM
3	5000	1.213971E+08	24279.42	-1.020	Manual	1/1/2022 10:32:41 AM
4	15000	3.623479E+08	24156.53	-1.521	Manual	1/1/2022 10:32:39 AM
5	30000	7.183105E+08	23943.68	-2.388	Manual	1/1/2022 10:32:36 AM

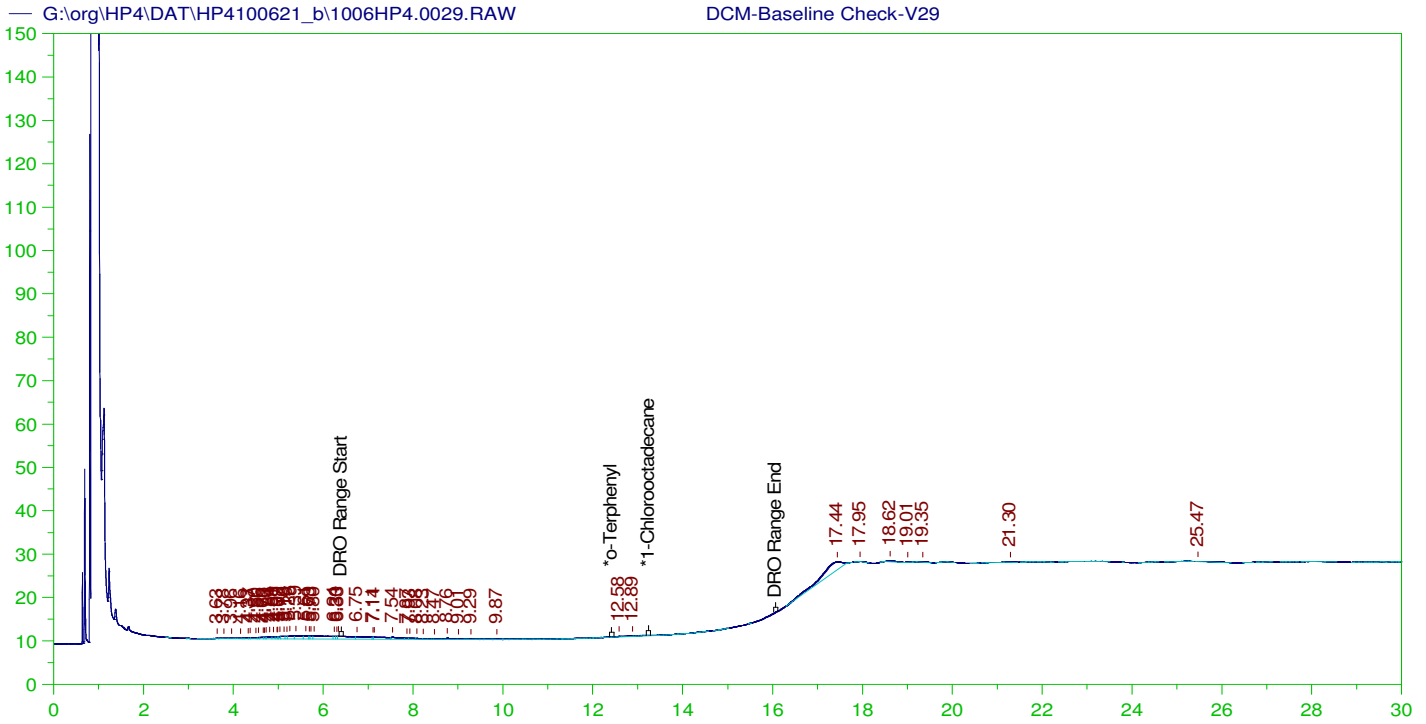
3 *#Triacontane



Expected retention time: 16.34 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 = 24973.81 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9989417
 Average error: 2.783%
 Average CF: 24973.81
 RSD: 3.701%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	50369.5	25184.75	0.845	Manual	10/7/2021 1:17:20 PM
2	50	1212157	24243.14	-2.926	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0015.BND	10/7/2021 12:47:26 PM
3	200	5300126	26500.63	6.114	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0017.BND	10/7/2021 12:47:56 PM
4	500	1.22448E+07	24489.6	-1.939	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0019.BND	10/7/2021 12:48:04 PM
5	1000	2.445095E+07	24450.95	-2.094	Manual	10/7/2021 4:09:51 PM





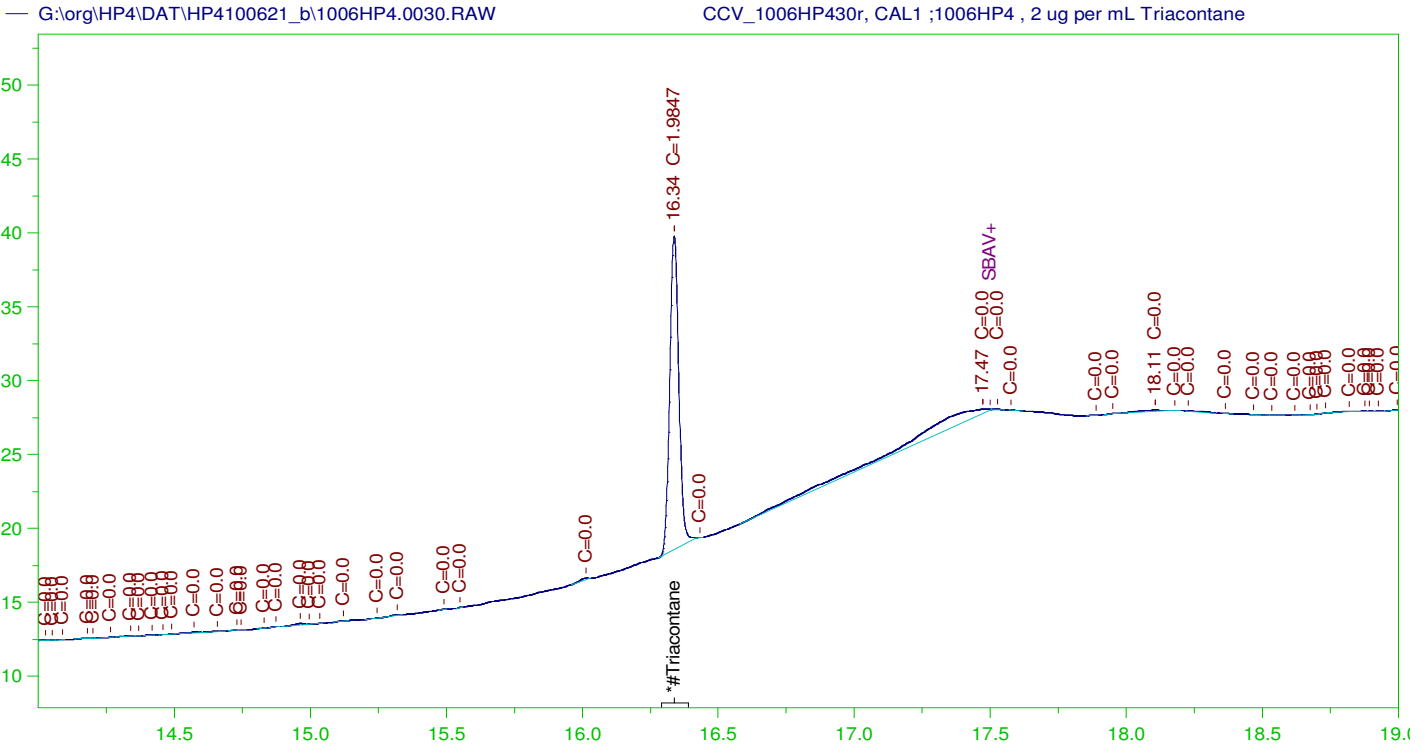
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V29
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0029.RAW
 Date & Time Acquired: 10/7/2021 12:22:20 PM
 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55
 Rt range for Diesel Range Organics: 6.35 to 16.12

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

DRO Area:46051.94 DRO Amount: 1.769218
 TEH Area:213678.8 TEH Amount: 8.209086



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1006HP430r, CAL1 ;1006HP4 , 2 ug per mL Triacontane
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0030.RAW
 Date & Time Acquired: 10/7/2021 1:07:43 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.53 to 30.05

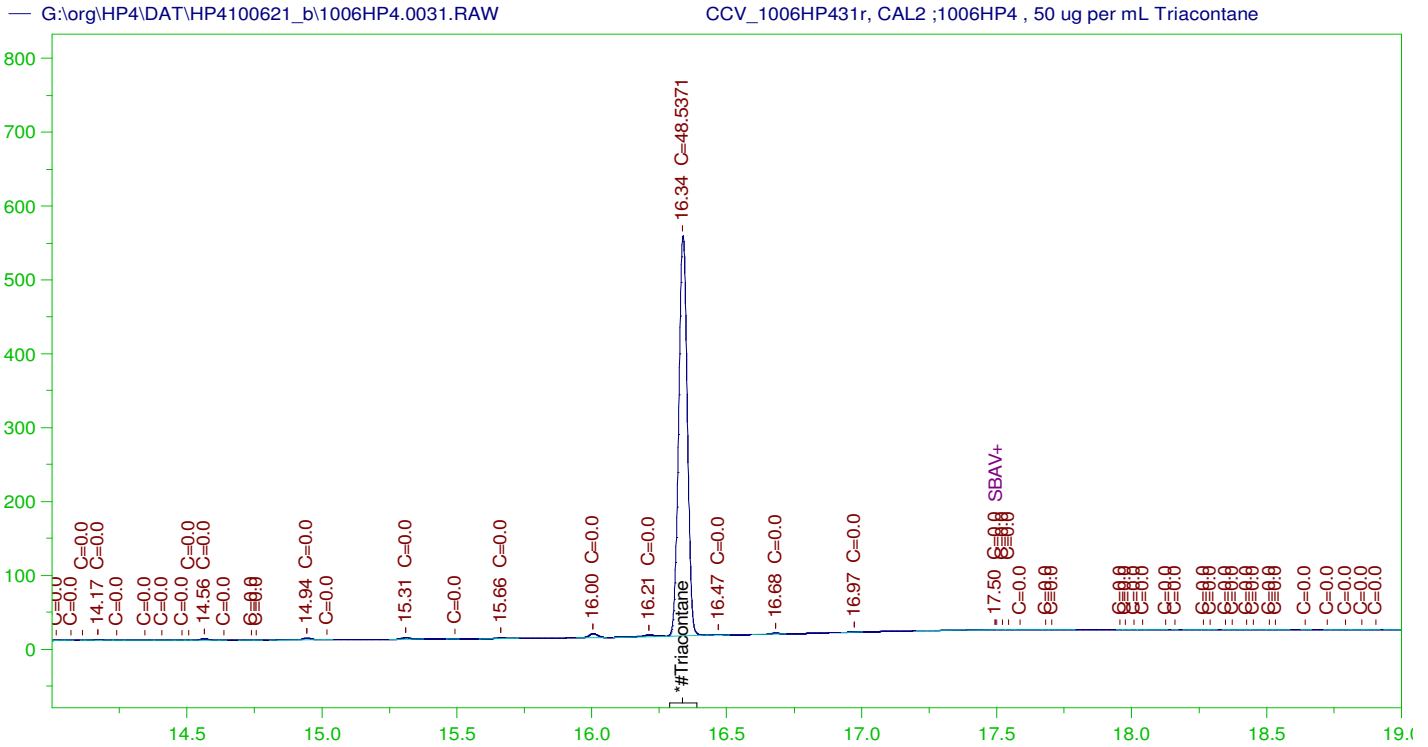
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.337	500.	1.985	.4

RRO Area:16216.42 RRO AMOUNT: 0.6610969

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0030.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.337	200.	1.985	.99	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1006HP431r, CAL2 ;1006HP4 , 50 ug per mL Triacontane
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0031.RAW
 Date & Time Acquired: 10/7/2021 1:53:07 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.53 to 30.05

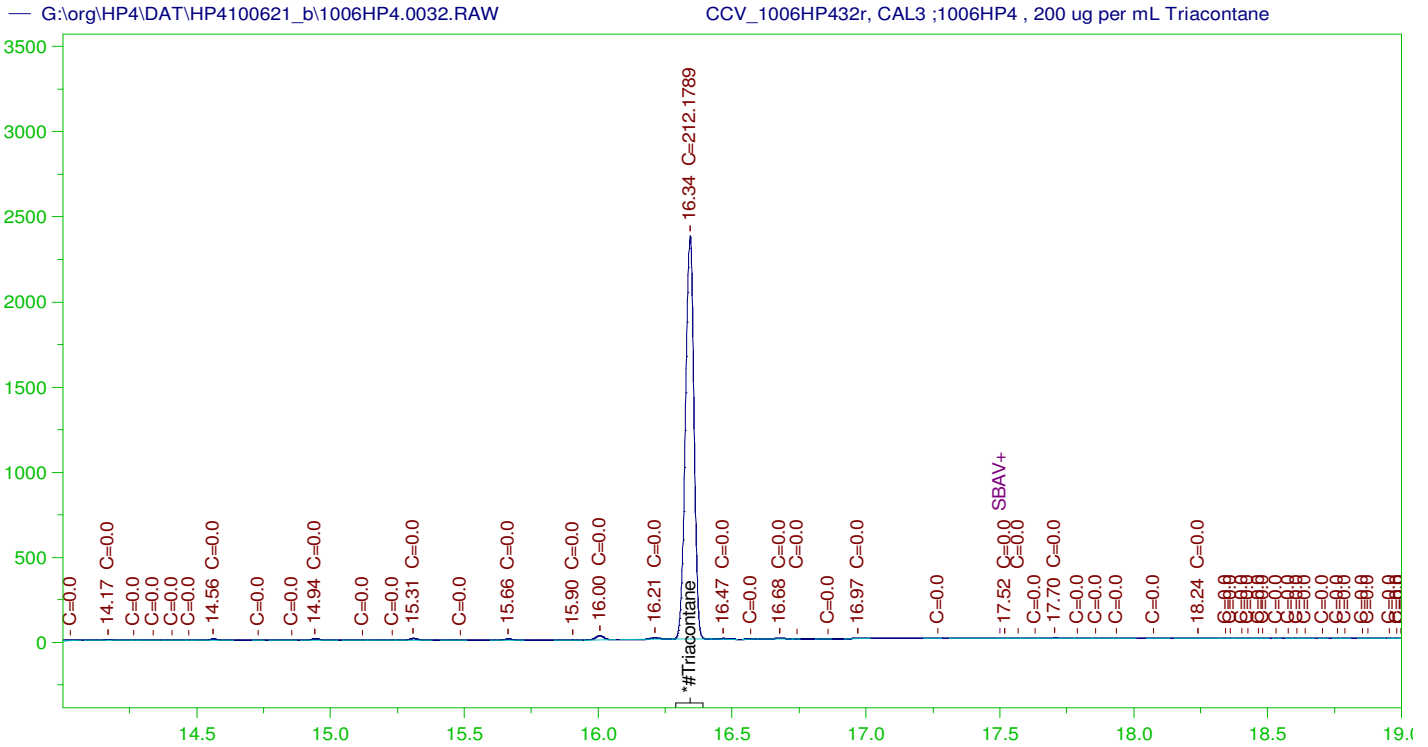
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.337	500.	48.537	9.71	-

RRO Area:50498.79 RRO AMOUNT: 2.058691

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0031.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.337	200.	48.537	24.27	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1006HP432r, CAL3 ;1006HP4 , 200 ug per mL Triacontane
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0032.RAW
 Date & Time Acquired: 10/7/2021 2:38:34 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.53 to 30.05

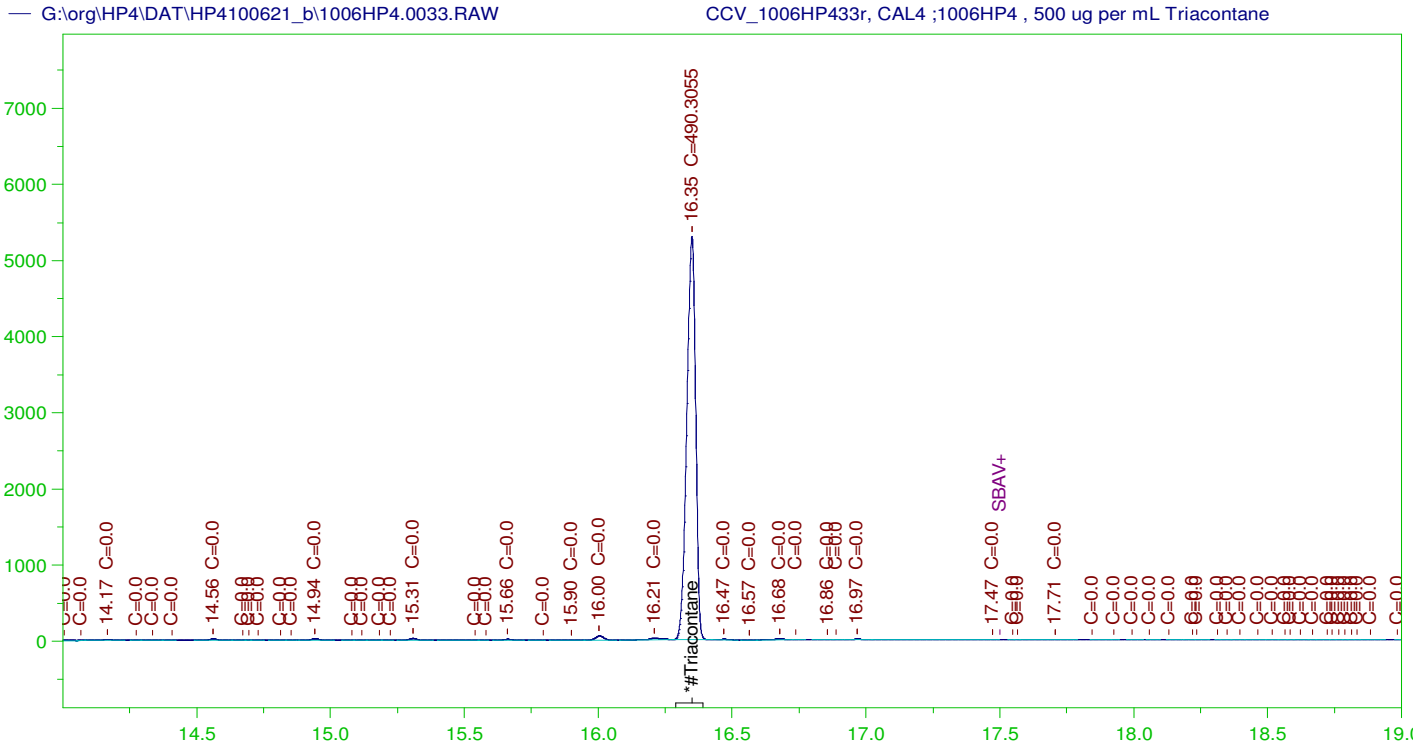
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.343	500.	212.179	42.44	-

RRO Area:223185.5 RRO AMOUNT: 9.098632

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0032.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.343	200.	212.179	106.09	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1006HP433r, CAL4 ;1006HP4 , 500 ug per mL Triacontane
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0033.RAW
 Date & Time Acquired: 10/7/2021 3:23:59 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.53 to 30.05

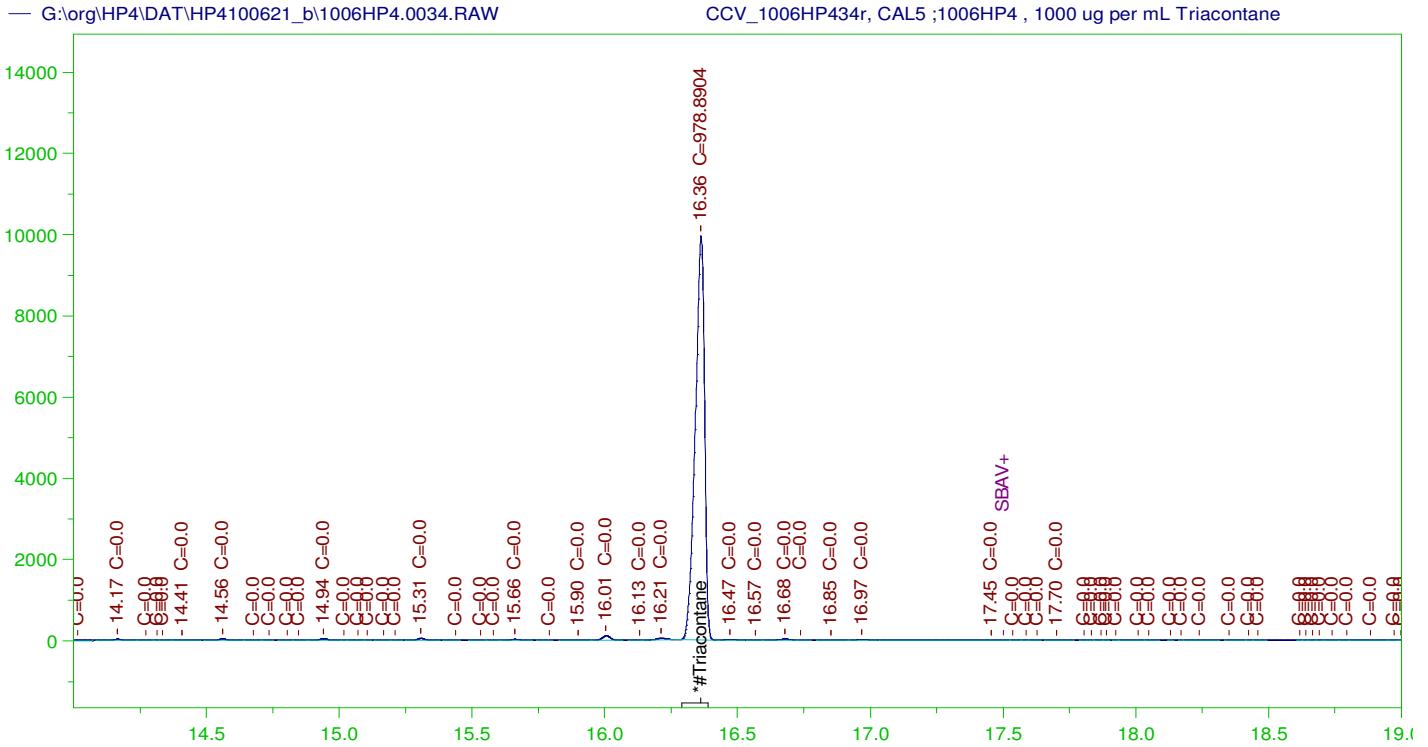
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.35	500.	490.306	98.06	-

RRO Area:522651.3 RRO AMOUNT: 21.307

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.023	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.35	200.	490.306	245.15	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1006HP434r, CAL5 ;1006HP4 , 1000 ug per mL Triacontane
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0034.RAW
 Date & Time Acquired: 10/7/2021 4:09:35 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.363	500.	978.89	195.78	-

RRO Area:1029665 RRO AMOUNT: 41.9765

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0034.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.363	200.	978.89	489.45	75-125

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.28r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	G:\org\HP4\Methods\CSC211006.met	1	1	1	1	0	No Integration
	G:\org\HP4\DAT\HP4100621_b1006HP4.29r	DCM-Baseline Check-V29	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No Integration
	G:\org\HP4\DAT\HP4100621_b1006HP4.30r	CCV_1006HP407r, CAL1 ;1006HP4 , 2 ug per mL Triacotane (10 uL of Cal3 + 990 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacotane is integrated using a valley to valley integration.
	G:\org\HP4\DAT\HP4100621_b1006HP4.31r	CCV_1006HP408r, CAL2 ;1006HP4 , 50 ug per mL Triacotane (100 uL Cal4 + 900 uL of DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacotane is integrated using a valley to valley integration.
	G:\org\HP4\DAT\HP4100621_b1006HP4.32r	CCV_1006HP409r, CAL3 ;1006HP4 , 200 ug per mL Triacotane (100uL of Cal5 + 400 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacotane is integrated using a valley to valley integration.
	G:\org\HP4\DAT\HP4100621_b1006HP4.33r	CCV_1006HP404r, CAL4 ;1006HP4 , 500 ug per mL Triacotane (250uL of Cal5 + 250 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacotane is integrated using a valley to valley integration.
	G:\org\HP4\DAT\HP4100621_b1006HP4.34r	CCV_1006HP405r, CAL5 ;1006HP4 , 1000 ug per mL Triacotane (500 uL 2000 ug/mL Triacotane DRO211006A + 500 DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacotane is integrated using a valley to valley integration.



Digitally signed by
Ann Nebel
Date: 2022.01.26 11:36:11 -07:00

Energy Laboratories Inc

ANALYTICAL RUN Summary

13-Oct-21

Run ID GCFID-HP4-B_211006B

Run Start Date: 10/6/2021
Analyst: Ann Nebel
Ical:
Column ID:
Comments: 8015C Oil Range

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-OIL	8/31/2025
DRO210902A	50,000 ug/mL Oil Std for RRO-In DCM					Second Sou	9/1/2026

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist				
14764069	CCV_1006HP41	HC-8015-DRO-	CAL1		10/7/2021 12:16:	1	R368535			0	0				
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
TEH(Oil Range)		A mg/L		0.1652093		0.15	0	0	0	0.3	0	110%	80	120	0%
14764070	CCV_1006HP41	HC-8015-DRO-	CAL2		10/7/2021 1:47:3	1	R368535			0	0				
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
TEH(Oil Range)		A mg/L		1.022149		1	0	0	0	0.3	0	102%	80	120	0%
14764071	CCV_1006HP41	HC-8015-DRO-	CAL3		10/7/2021 3:19:0	1	R368535			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		4.956371		5	0	0	0	0.3	0	99%	80	120	0%
14764072	CCV_1006HP41	HC-8015-DRO-	CAL4		10/7/2021 4:50:1	1	R368535			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					
14764072	CCV_1006HP41	HC-8015-DRO-	CAL4		10/7/2021 4:50:1	1	R368535		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		14.79833		15	0	0	0	0.3	0	99%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14764073	CCV_1006HP42	HC-8015-DRO-	CAL5		10/7/2021 6:21:2	1	R368535		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		29.29968		30	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					
14764074	CCV_1006HP42	HC-8015-DRO-	ICV		10/7/2021 9:21:4	1	R368535		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		5.390338		5	0	0	0	0.3	0	108%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
		Insert Entries(Have the first cell for entries select)						
	G:\org\HP4\DAT\HP4100621_b\1006HP4.11r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	G:\org\HP4\Methods\CSC211006.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.12r	DCM-Baseline Check-V12	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.13r	CCV_1006HP413r, CAL1 ;1006HP4 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-13-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.14r	DCM-Baseline Check-V14	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.15r	CCV_1006HP415r, CAL2 ;1006HP4 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-15-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.16r	DCM-Baseline Check-V16	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.17r	CCV_1006HP417r, CAL3 ;1006HP4 , 5000 ug per mL Oil (200 uL of Cal 4 + 400 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.18r	DCM-Baseline Check-V18	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.19r	CCV_1006HP419r, CAL4 ;1006HP4 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-19-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.20r	DCM-Baseline Check-V20	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.21r	CCV_1006HP423r, CAL5 ;1006HP4 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)(14354)	G:\Org\HP4\methods\DR_8015-21-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.22r	DCM-Baseline Check-V22	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.24r	DCM-Baseline Check-V24	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.25r	CCV_1006HP425r, Second Source ;1006HP4 , 5000 ug per mL Oil (100 uL of DRO210902A + 900 uL of DCM)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0

File Name: G:\Org\HP4\Cals\SW8015C_ORO211007AA.CAL
Version: 43

Creator: AMN
Description: 8015C-Oil Range w/Triacontane. New ICal Per 1006HP4 (2021)-2 uL Inj.;
Reason for change:

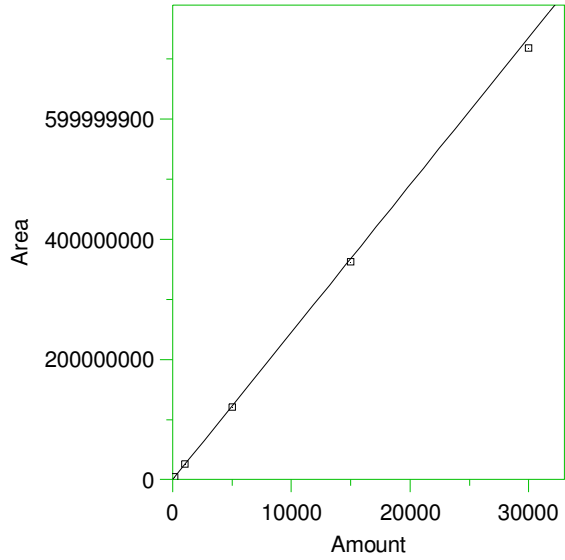
External standard calibration

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.

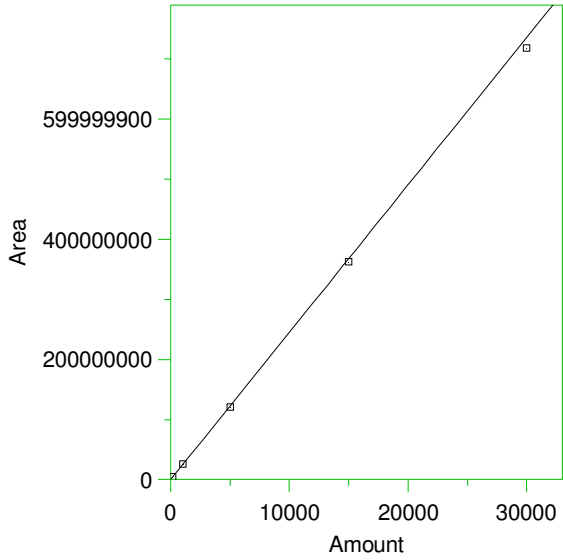
1 *30-40 Motor Oil



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
 $Y = 24529.56 X + 0$
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9990484
 Average error: 1.972%
 Average CF: 24529.56
 RSD: 2.304%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	3765836	25105.57	2.348	Manual	1/1/2022 10:32:22 AM
2	1000	2.516261E+07	25162.61	2.581	Manual	10/7/2021 12:56:01 PM
3	5000	1.213971E+08	24279.42	-1.020	Manual	10/7/2021 12:55:18 PM
4	15000	3.623479E+08	24156.53	-1.521	Manual	10/7/2021 12:55:30 PM
5	30000	7.183105E+08	23943.68	-2.388	Manual	10/7/2021 12:55:47 PM

2 #C20



Expected retention time: 12.58 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

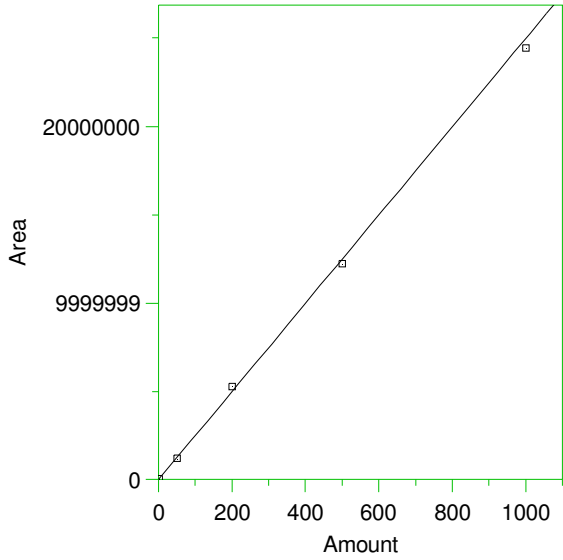
Single peak quantification by area

Y = 24529.56 X + 0

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9990484
 Average error: 1.972%
 Average CF: 24529.56
 RSD: 2.304%

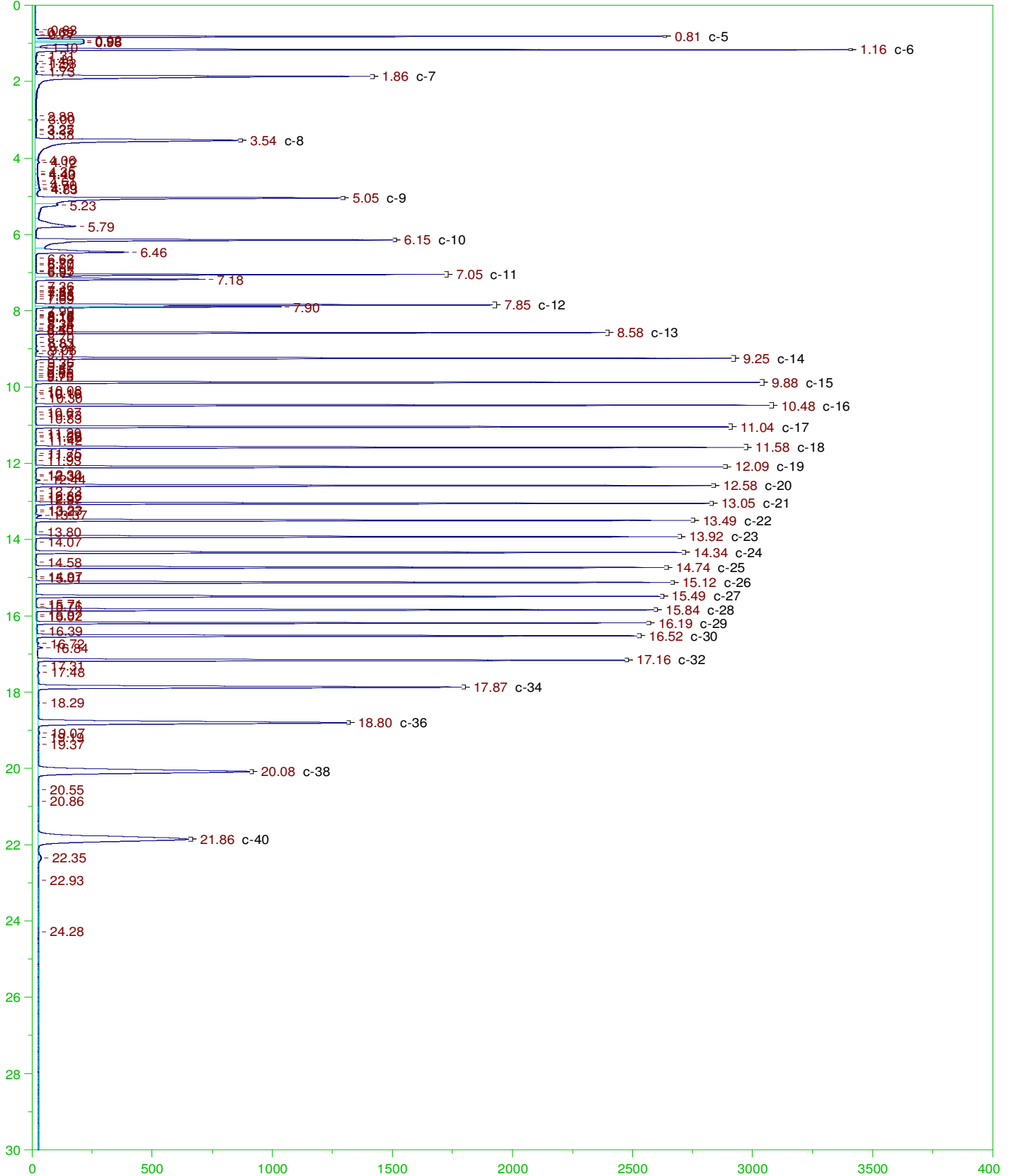
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	3765836	25105.57	2.348	Manual	1/1/2022 10:32:46 AM
2	1000	2.516261E+07	25162.61	2.581	Manual	1/1/2022 10:32:43 AM
3	5000	1.213971E+08	24279.42	-1.020	Manual	1/1/2022 10:32:41 AM
4	15000	3.623479E+08	24156.53	-1.521	Manual	1/1/2022 10:32:39 AM
5	30000	7.183105E+08	23943.68	-2.388	Manual	1/1/2022 10:32:36 AM

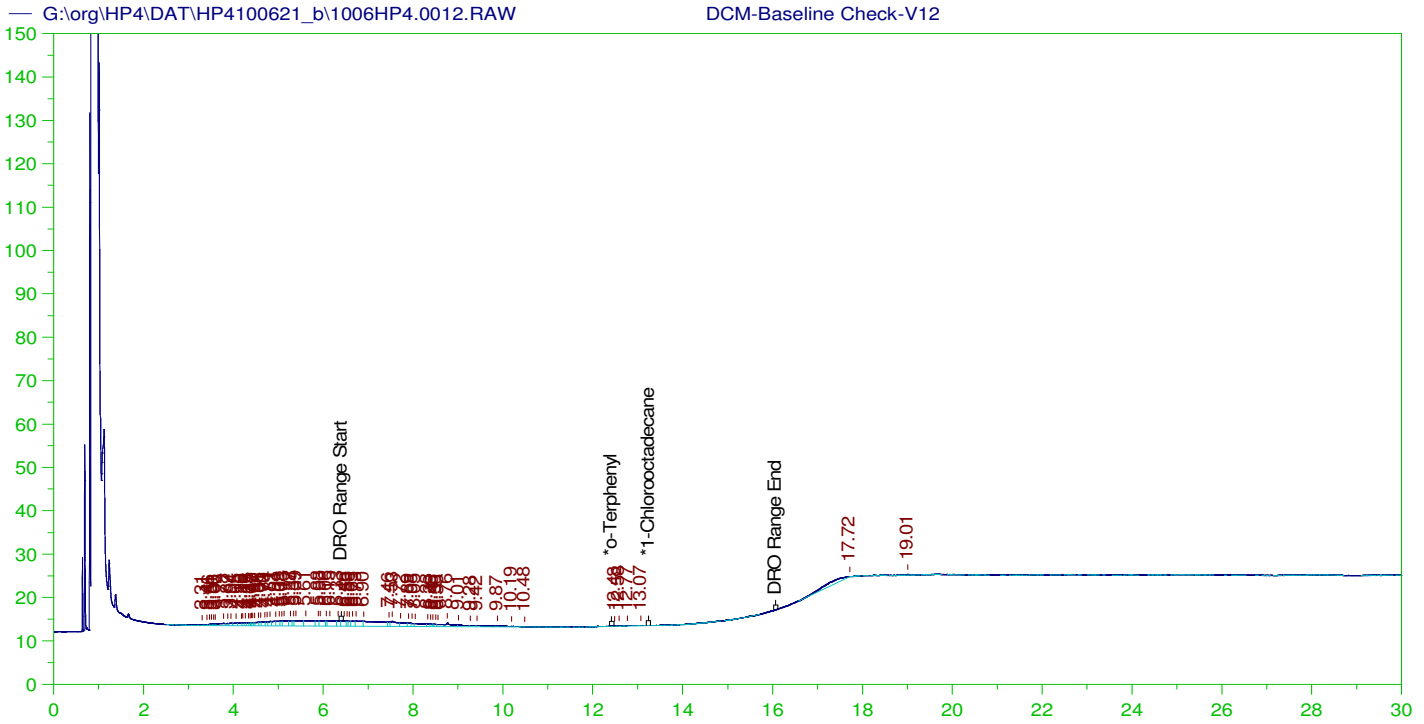
3 *#Triacontane



Expected retention time: 16.34 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 = 24973.81 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9989417
 Average error: 2.783%
 Average CF: 24973.81
 RSD: 3.701%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	50369.5	25184.75	0.845	Manual	10/7/2021 1:17:20 PM
2	50	1212157	24243.14	-2.926	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0015.BND	10/7/2021 12:47:26 PM
3	200	5300126	26500.63	6.114	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0017.BND	10/7/2021 12:47:56 PM
4	500	1.22448E+07	24489.6	-1.939	G:\Org\HP4\DAT\HP4100621_b\1006HP4.0019.BND	10/7/2021 12:48:04 PM
5	1000	2.445095E+07	24450.95	-2.094	Manual	10/7/2021 4:09:51 PM





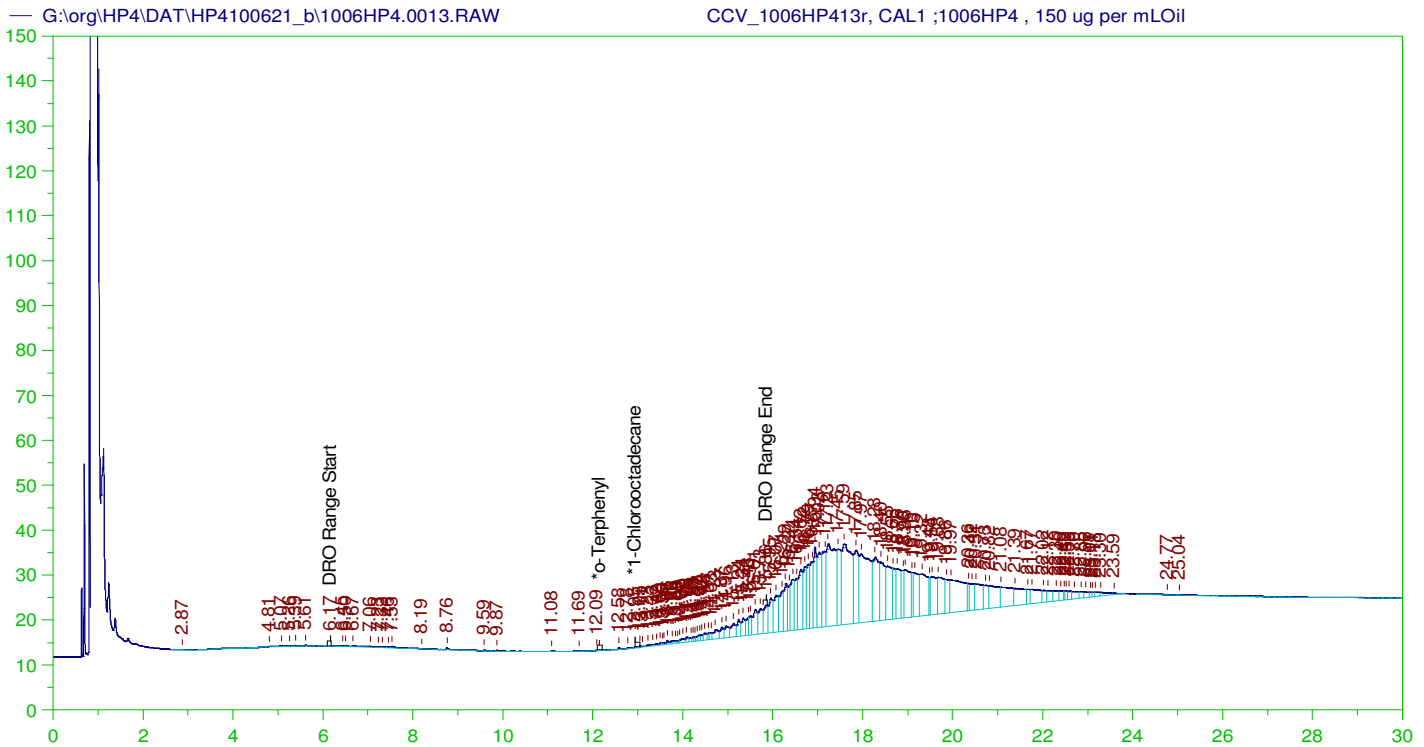
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V12
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0012.RAW
 Date & Time Acquired: 10/6/2021 11:30:37 PM
 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55
 Rt range for Diesel Range Organics: 6.35 to 16.12

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.914	200.	.	-
*1-Chlorooctadecane	29.914	200.	.	-

DRO Area:151604.2 DRO Amount: 5.824311
 TEH Area:344150.3 TEH Amount: 13.22152



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1006HP413r, CAL1 ;1006HP4 , 150 ug per mL Oil
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0013.RAW
 Date & Time Acquired: 10/7/2021 12:16:08 AM
 Method File: G:\Org\HP4\methods\DR_8015-13-OIL-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_Oil_210106AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 24529.56

Rt range for Diesel Range Organics: 6.09 to 15.88

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.973	200.	.	-
*1-Chlorooctadecane	12.946	200.	.024	.01

DRO Area: 350454.1

DRO Amount: 14.28701

TEH (Oil Range) Area: 4052512

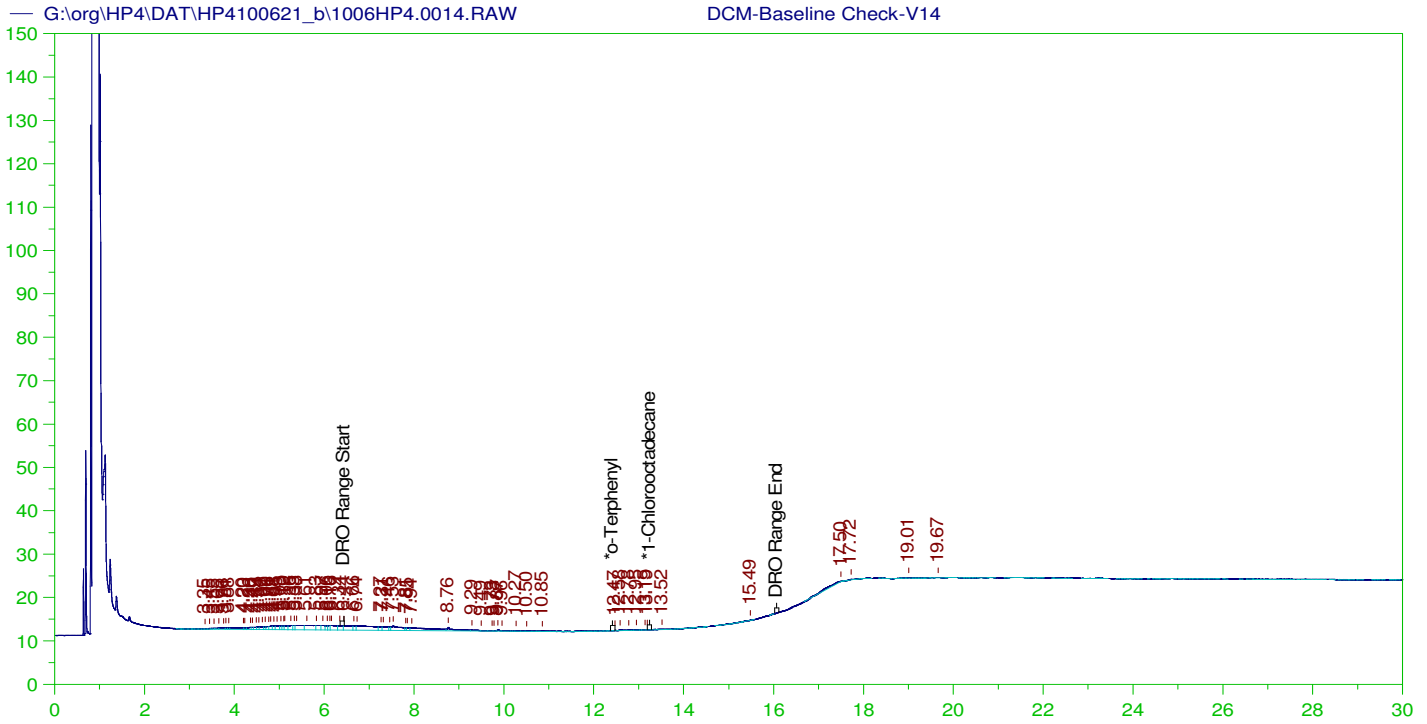
TEH (Oil Range) Amount: 165.2093

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0013.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	165.21	3.3	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	29.973	200.	.	.	85-115
*1-Chlorooctadecane	12.946	200.	.024	.01	85-115

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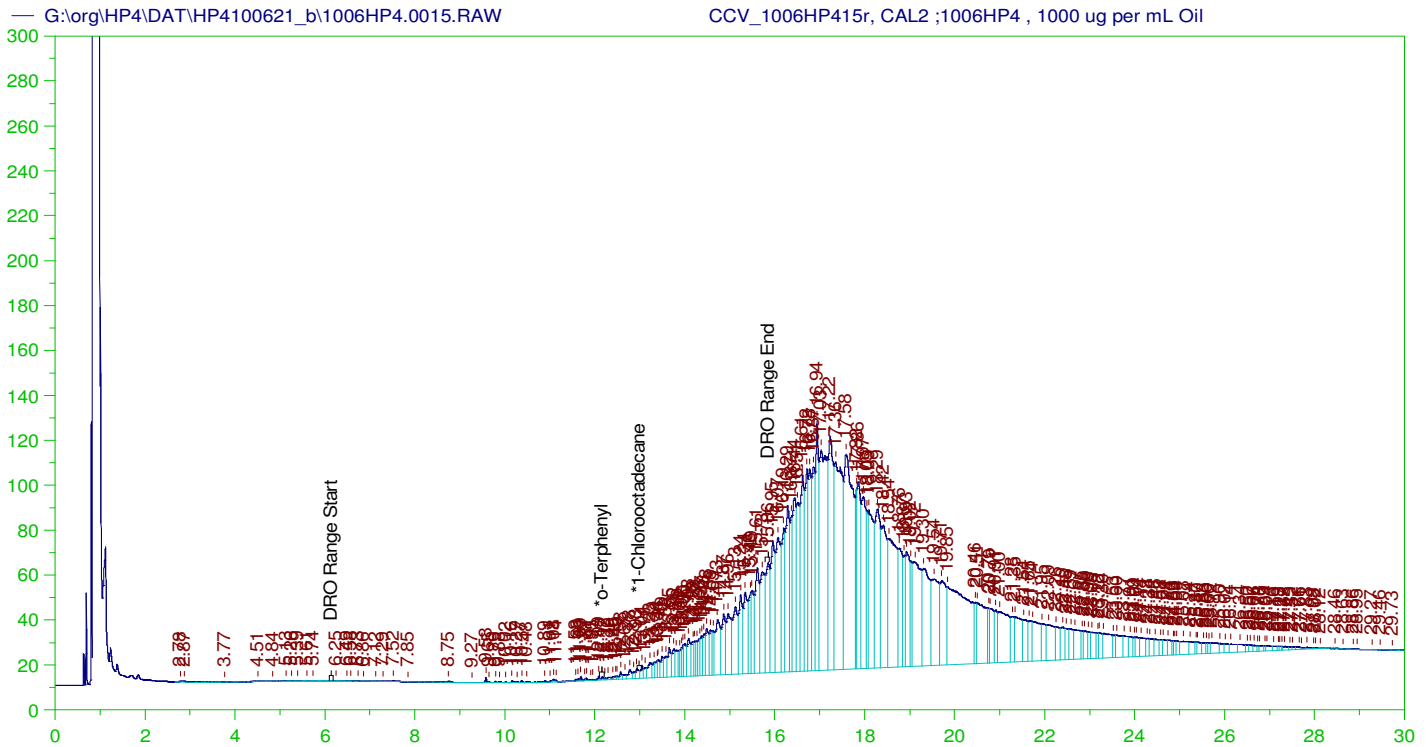
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

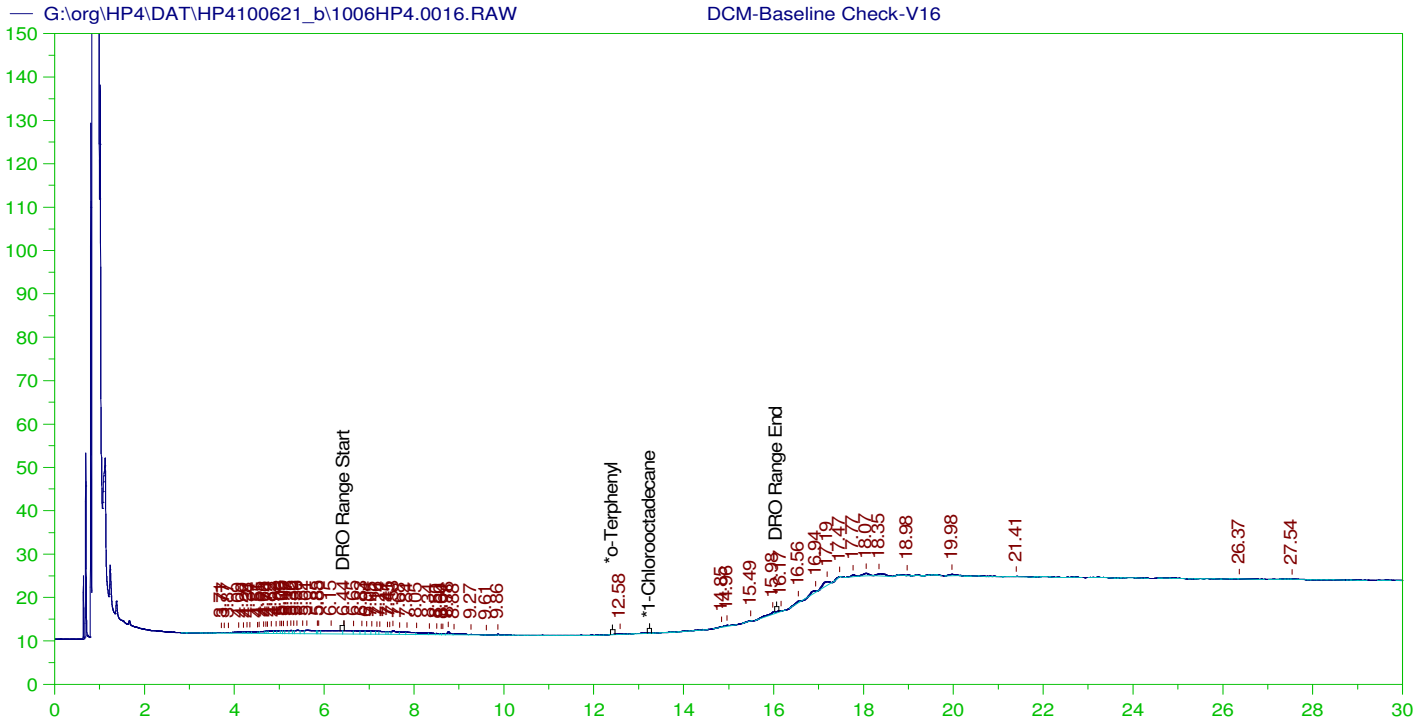
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 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55
 Rt range for Diesel Range Organics: 6.35 to 16.12

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.884	200.	.	-
*1-Chlorooctadecane	29.884	200.	.	-

DRO Area:131624.4 DRO Amount: 5.056731
 TEH Area:277425.9 TEH Amount: 10.65811





DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

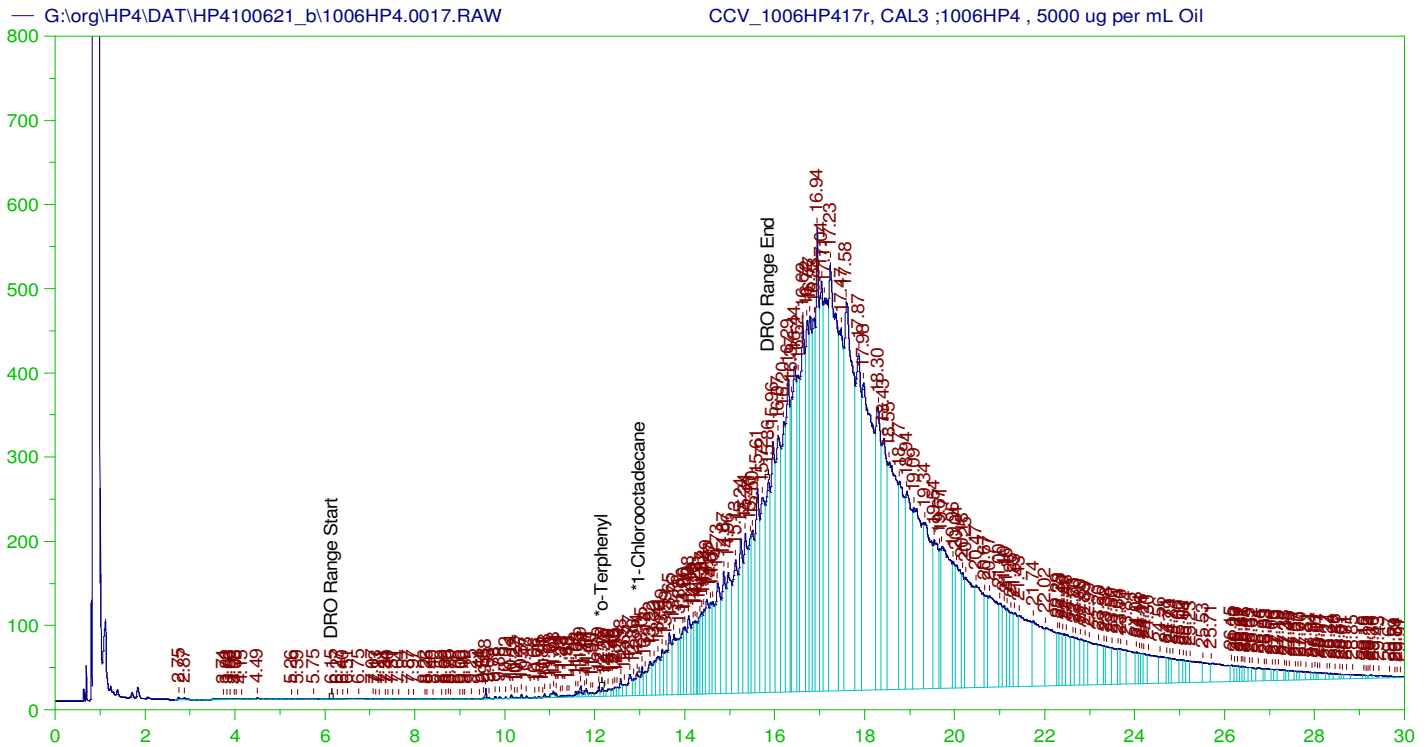
Sample Name: DCM-Baseline Check-V16
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0016.RAW
 Date & Time Acquired: 10/7/2021 2:33:20 AM
 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55

Rt range for Diesel Range Organics: 6.35 to 16.12

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.907	200.	.	-
*1-Chlorooctadecane	29.907	200.	.	-

DRO Area:114216.7 DRO Amount: 4.387964
 TEH Area:265335.9 TEH Amount: 10.19364



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1006HP417r, CAL3 ;1006HP4 , 5000 ug per mL Oil
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0017.RAW
 Date & Time Acquired: 10/7/2021 3:19:06 AM
 Method File: G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_Oil_210106AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 24529.56

Rt range for Diesel Range Organics: 6.09 to 15.88

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.165	200.	1.127	.56
*1-Chlorooctadecane	29.907	200.	.	-

DRO Area: 2.051403E+07

DRO Amount: 836.2982

TEH (Oil Range) Area: 1.215776E+08

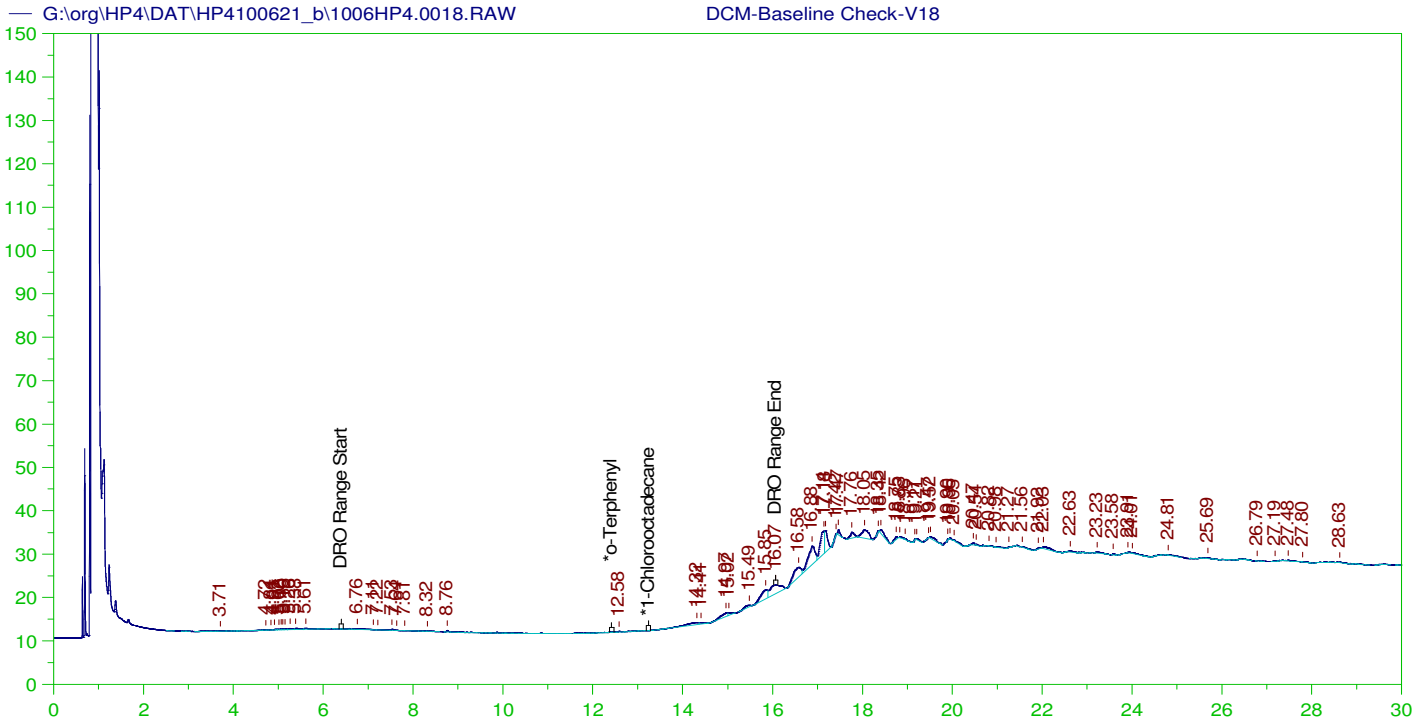
TEH (Oil Range) Amount: 4956.371

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0017.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	4956.37	99.13	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.165	200.	1.127	.56	85-115
*1-Chlorooctadecane	29.907	200.	.	.	85-115

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DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

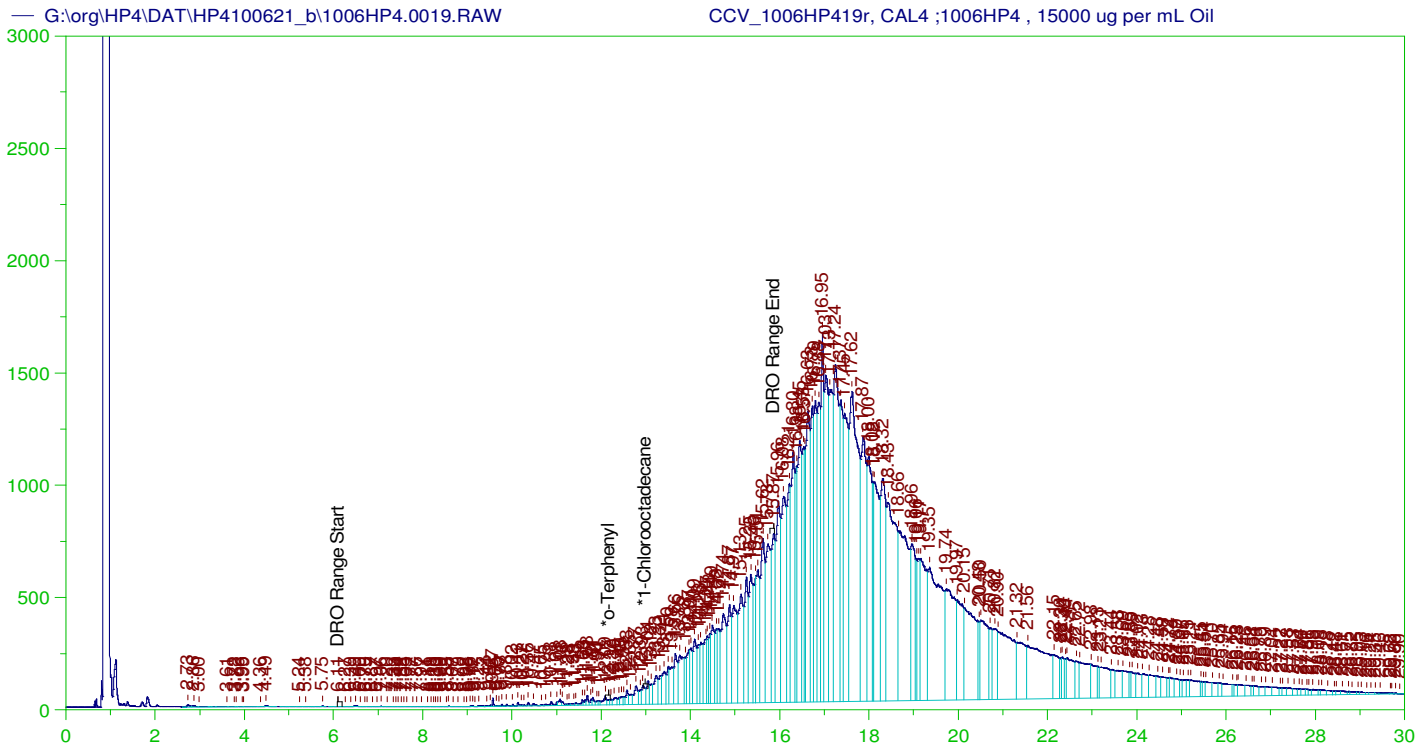
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55

Rt range for Diesel Range Organics: 6.35 to 16.12

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.931	200.	.	-
*1-Chlorooctadecane	29.931	200.	.	-

DRO Area:108588.8 DRO Amount: 4.171752
 TEH Area:364372 TEH Amount: 13.9984



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1006HP419r, CAL4 ;1006HP4 , 15000 ug per mL Oil
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0019.RAW
 Date & Time Acquired: 10/7/2021 4:50:17 AM
 Method File: G:\Org\HP4\methods\DR_8015-19-OIL-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_Oil_210106AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 24529.56
 Rt range for Diesel Range Organics: 6.09 to 15.88

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.166	200.	2.668	1.33	-
*1-Chlorooctadecane	29.898	200.	.	.	-

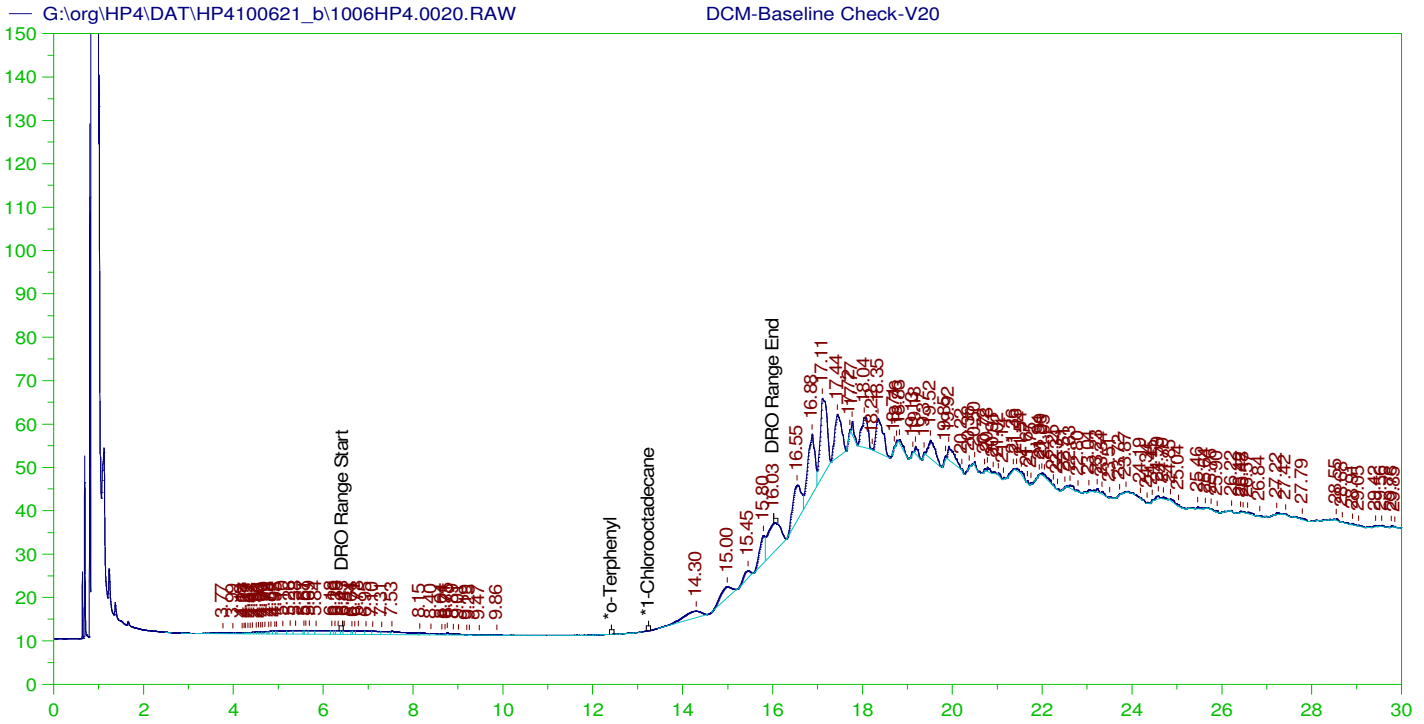
DRO Area: 6.321696E+07 DRO Amount: 2577.175
 TEH (Oil Range) Area: 3.629964E+08 TEH (Oil Range) Amount: 14798.33

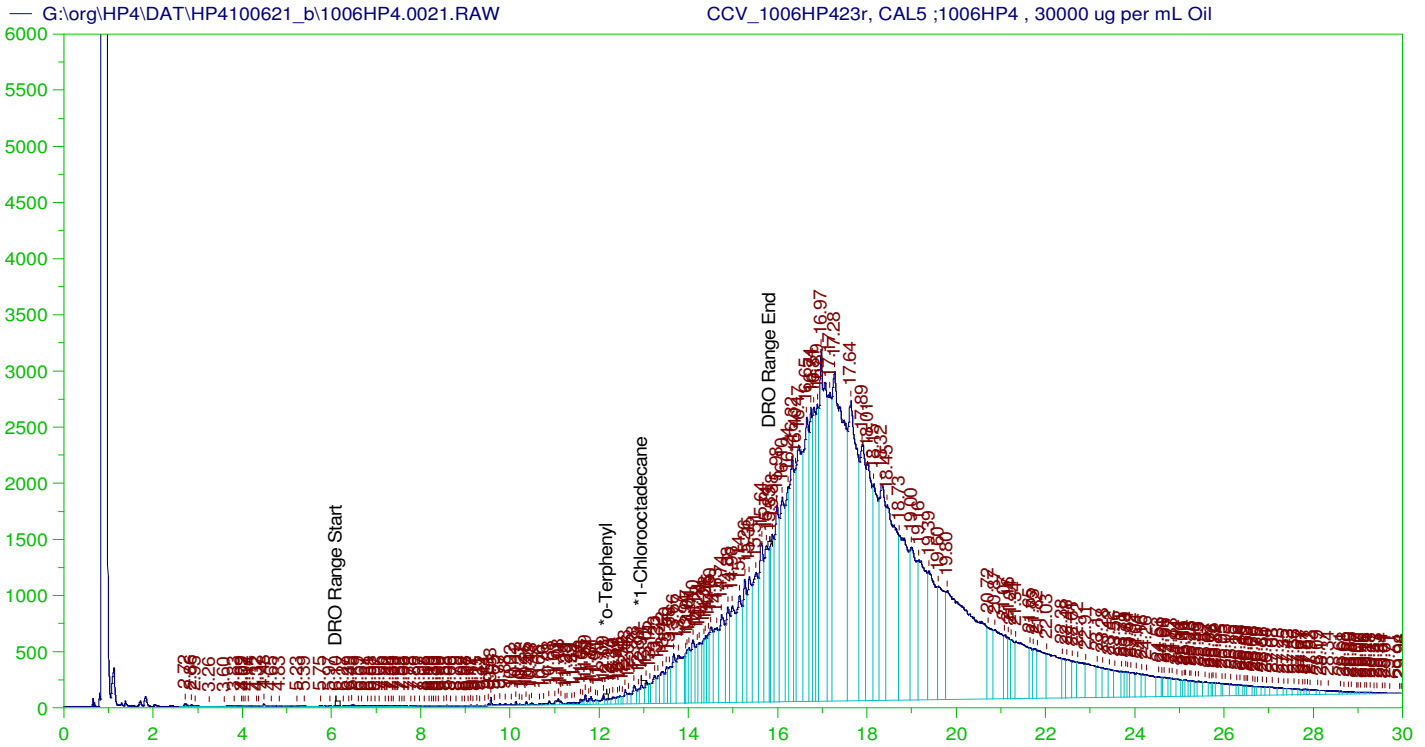
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	14798.33	295.97	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.166	200.	2.668	1.33	85-115
*1-Chlorooctadecane	29.898	200.	.	.	85-115

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DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1006HP423r, CAL5 ;1006HP4 , 30000 ug per mL Oil
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0021.RAW
 Date & Time Acquired: 10/7/2021 6:21:29 AM
 Method File: G:\Org\HP4\methods\DR_8015-21-OIL-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_Oil_210106AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 24529.56

Rt range for Diesel Range Organics: 6.09 to 15.88

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.17	200.	5.119	2.56	-
*1-Chlorooctadecane	12.944	200.	32.459	16.23	-

DRO Area: 1.18208E+08

DRO Amount: 4819.003

TEH (Oil Range) Area: 7.187084E+08

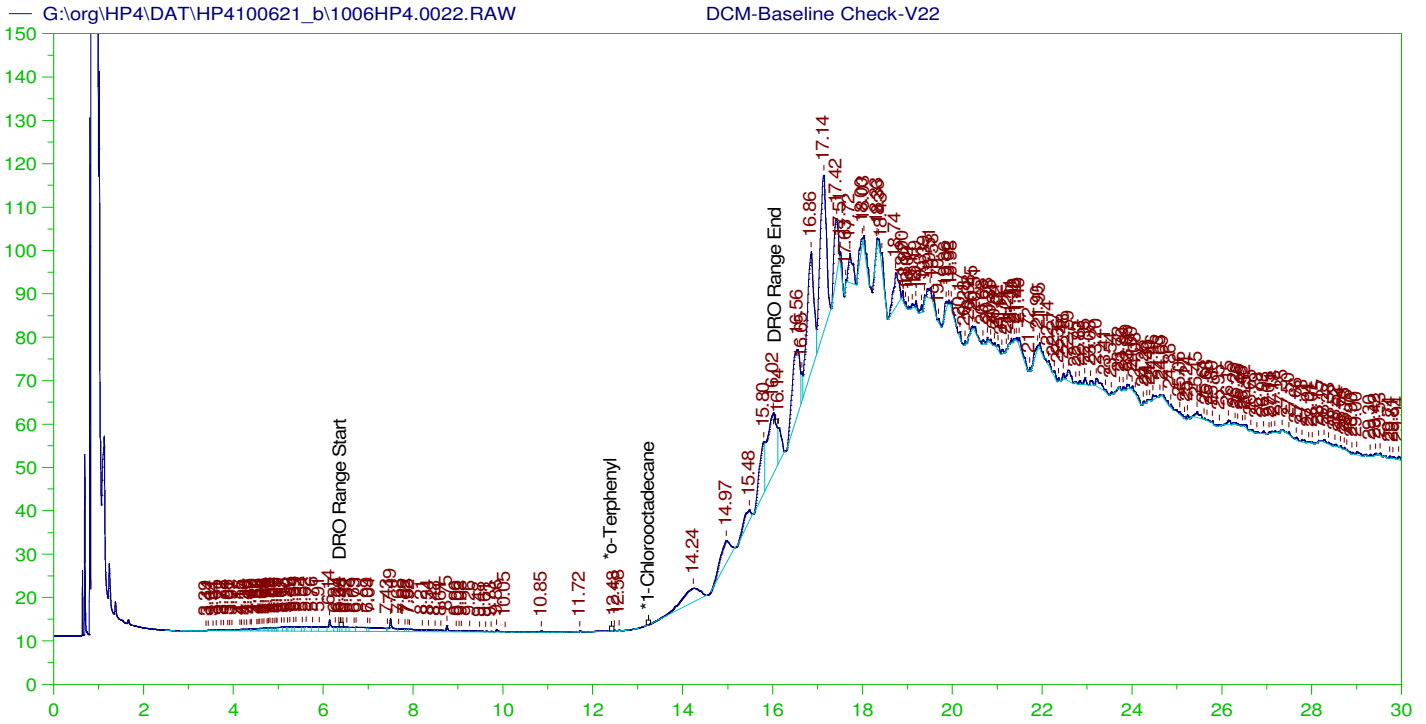
TEH (Oil Range) Amount: 29299.68

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0021.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	29299.68	585.99	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.17	200.	5.119	2.56	85-115
*1-Chlorooctadecane	12.944	200.	32.459	16.23	85-115

AMN 10/13/2021



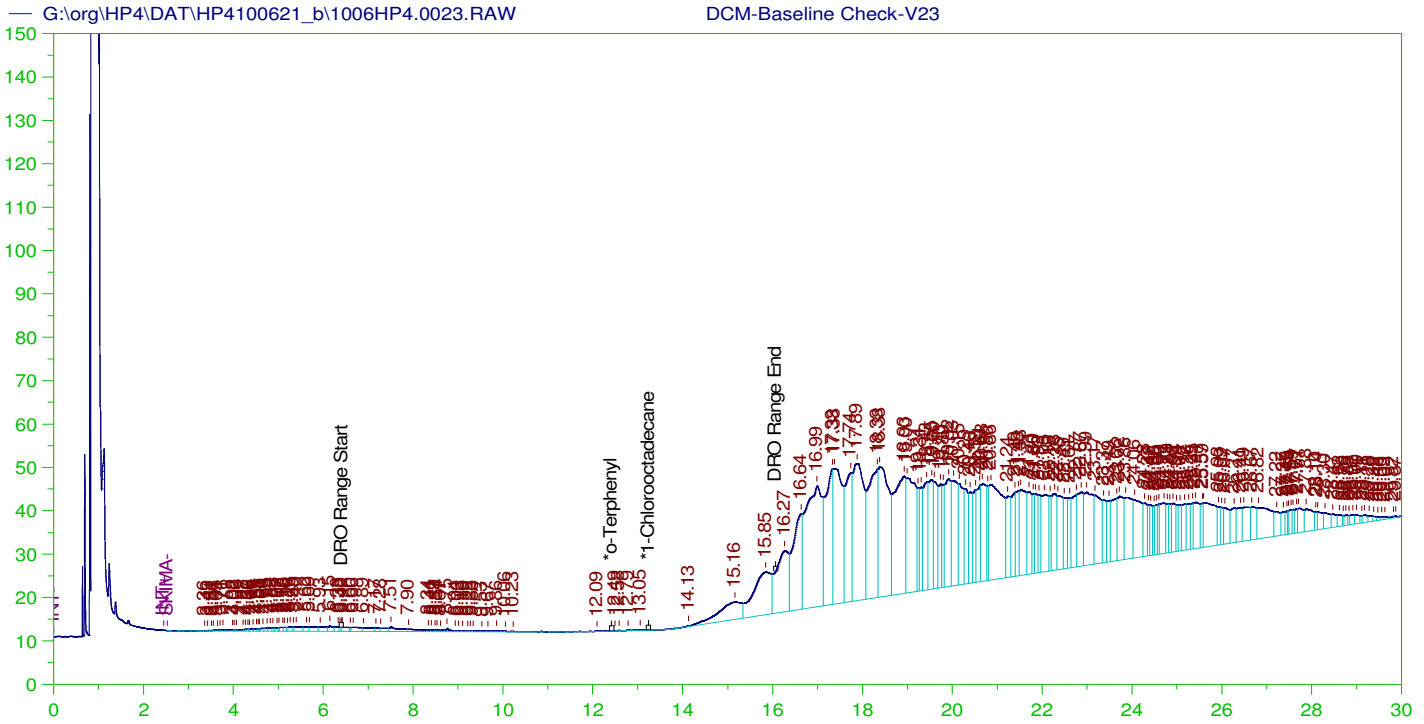
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V22
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0022.RAW
 Date & Time Acquired: 10/7/2021 7:06:39 AM
 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55
 Rt range for Diesel Range Organics: 6.35 to 16.12

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.94	200.	.	-
*1-Chlorooctadecane	29.94	200.	.	-

DRO Area: 659389.9 DRO Amount: 25.33236
 TEH Area: 2246216 TEH Amount: 86.29485



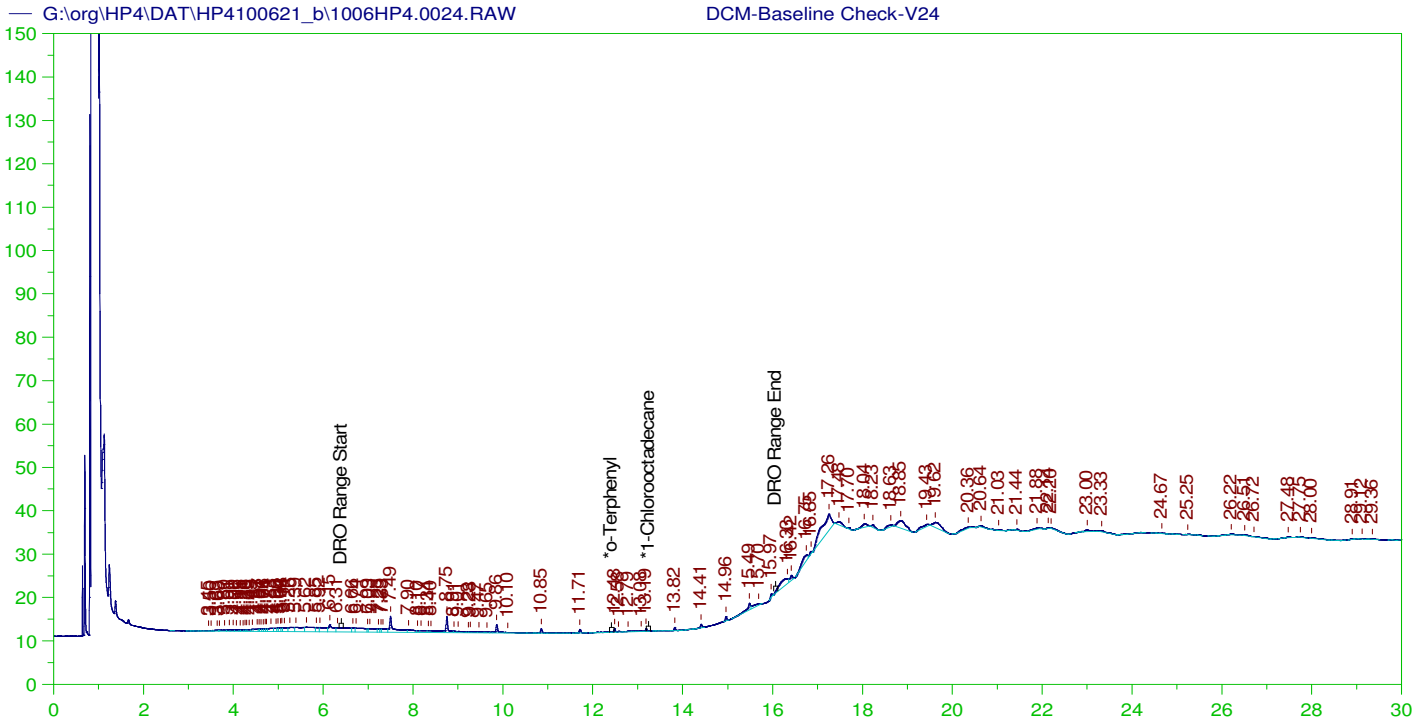
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V23
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0023.RAW
 Date & Time Acquired: 10/7/2021 7:51:25 AM
 Method File: G:\Org\HP4\methods\D3_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55
 Rt range for Diesel Range Organics: 6.35 to 16.12

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

DRO Area: 556661.1 DRO Amount: 21.38574
 TEH Area: 1.320998E+07 TEH Amount: 507.4994



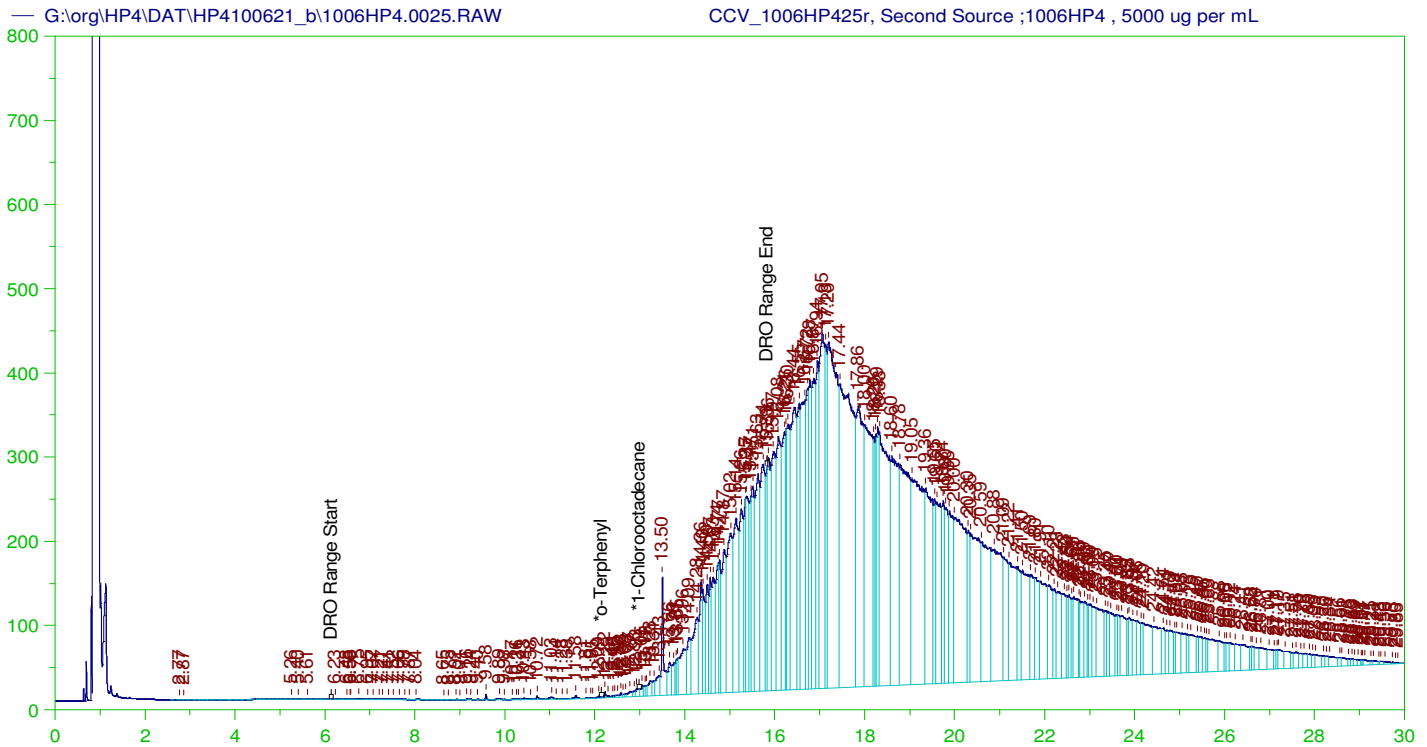
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V24
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0024.RAW
 Date & Time Acquired: 10/7/2021 8:36:35 AM
 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55
 Rt range for Diesel Range Organics: 6.35 to 16.12

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.993	200.	.	-
*1-Chlorooctadecane	29.993	200.	.	-

DRO Area:143991.1 DRO Amount: 5.531833
 TEH Area:496648.4 TEH Amount: 19.08018



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1006HP425r, Second Source ;1006HP4 , 5000 ug per mL
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0025.RAW
 Date & Time Acquired: 10/7/2021 9:21:40 AM
 Method File: G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_Oil_210106AA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 24529.56
 Rt range for Diesel Range Organics: 6.09 to 15.88

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.852	200.	.	-
*1-Chlorooctadecane	29.852	200.	.	-

DRO Area: 2.19787E+07 DRO Amount: 896.0085
 TEH (Oil Range) Area: 1.322226E+08 TEH (Oil Range) Amount: 5390.338

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0025.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	5390.34	107.81	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	29.852	200.	.	.	85-115
*1-Chlorooctadecane	29.852	200.	.	.	85-115

AMN 10/13/2021

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.11r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	G:\org\HP4\Methods\CSC211006.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.12r	DCM-Baseline Check-V12	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.13r	CCV_1006HP413r, CAL1 ;1006HP4 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-13-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Set Baseline Now at 23.18
	G:\org\HP4\DAT\HP4100621_b1006HP4.14r	DCM-Baseline Check-V14	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.15r	CCV_1006HP415r, CAL2 ;1006HP4 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-15-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Set Baseline Now at 28.22
	G:\org\HP4\DAT\HP4100621_b1006HP4.16r	DCM-Baseline Check-V16	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.17r	CCV_1006HP417r, CAL3 ;1006HP4 , 5000 ug per mL Oil (200 uL of Cal 4 + 400 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline.
	G:\org\HP4\DAT\HP4100621_b1006HP4.18r	DCM-Baseline Check-V18	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.19r	CCV_1006HP419r, CAL4 ;1006HP4 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-19-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline.
	G:\org\HP4\DAT\HP4100621_b1006HP4.20r	DCM-Baseline Check-V20	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.21r	CCV_1006HP423r, CAL5 ;1006HP4 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)(14354)	G:\Org\HP4\methods\DR_8015-21-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline.
	G:\org\HP4\DAT\HP4100621_b1006HP4.22r	DCM-Baseline Check-V22	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\D3_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.24r	DCM-Baseline Check-V24	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
	G:\org\HP4\DAT\HP4100621_b1006HP4.25r	CCV_1006HP425r, Second Source ;1006HP4 , 5000 ug per mL Oil (100 uL of DRO210902A + 900 uL of DCM)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.01.17 15:08:07 -07:00

Energy Laboratories Inc

ANALYTICAL RUN Summary

02-Nov-21

Run ID GCFID-HP4-B_211101A

Run Start Date: 11/1/2021
Analyst: Ann Nebel
Ical:
Column ID:
Comments: ICAL for SW8015C_DRO211102OA

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					DIESEL-CA	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					SURR-CAL	9/30/2024

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist				
14818927	CCV_1101HP41	HC-8015-DRO-	CAL1		11/1/2021 8:13:4	1	R369598		0	0					
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
o-Terphenyl		S mg/L		0.00195173		0.002	0	0	0.000531	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				
14818928	CCV_1101HP41	HC-8015-DRO-	CAL2		11/1/2021 9:04:4	1	R369598		0	0					
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
o-Terphenyl		S mg/L		0.04894254		0.05	0	0	0.000531	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				
14818929	CCV_1101HP41	HC-8015-DRO-	CAL3		11/1/2021 9:55:1	1	R369598		0	0					
Analyte		T Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD Q
o-Terphenyl		S mg/L		0.2012884		0.2	0	0	0.000531	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					
14818930	CCV_1101HP41	HC-8015-DRO-	CAL4		11/1/2021 10:45:	1	R369598		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.5057291		0.5	0	0	0.000531	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					
14818931	CCV_1101HP41	HC-8015-DRO-	CAL5		11/1/2021 11:36:	1	R369598		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		1.027384		1	0	0	0.000531	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					
14818932	CCV_1101HP41	HC-8015-DRO-	CAL1		11/2/2021 1:16:4	1	R369598		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		0.1539031		0.15	0	0	0.0782	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					
14818933	CCV_1101HP41	HC-8015-DRO-	CAL2		11/2/2021 2:07:1	1	R369598		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		3.723079		3.75	0	0	0.0782	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					
14818934	CCV_1101HP41	HC-8015-DRO-	CAL3		11/2/2021 2:57:2	1	R369598		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		14.98193		15	0	0	0.0782	0.3	50	100%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14818935	CCV_1101HP41	HC-8015-DRO-	CAL4		11/2/2021 3:47:4	1	R369598		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		36.3038		37.5	0	0	0.0782	0.3	50	97%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14818936	CCV_1101HP42	HC-8015-DRO-	CAL5		11/2/2021 4:38:0	1	R369598		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		50.71311		50	0	0	0.0782	0.3	50	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14818937	CCV_1101HP42	HC-8015-DRO-	ICV		11/2/2021 6:18:3	1	R369598		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		14.96337		15	0	0	0.0782	0.3	50	100%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
	\\org\HP4\DAT\HP4110121_b\1101HP4.07r	DCM-Baseline Check-V07	G:\Org\HP4\methods\DR_8015-OA-LEXP.met					
	\\org\HP4\DAT\HP4110121_b\1101HP4.08r	CCV_1101HP408r, DRO ;1101HP4 , DRO211025A	G:\Org\HP4\methods\DC_8015-OA-L0.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.09r	DCM-Baseline Check-V09	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.10r	CCV_1101HP410r, CAL1 ;1101HP4 , 2 ug per mL OTP (10 uL of Cal3 + 990 uL DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.11r	CCV_1101HP411r, CAL2 ;1101HP4 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.12r	CCV_1101HP412r, CAL3 ;1101HP4 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.13r	CCV_1101HP413r, CAL4 ;1101HP4 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.14r	CCV_1101HP414r, CAL5 ;1101HP4 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211101A + 750 DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.15r	DCM-Baseline Check-V15	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.16r	CCV_1101HP416r, CAL1 ;1101HP4 , 150 ug per mL Diesel (10 uL of Cal3 + 990 uL DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.17r	CCV_1101HP417r, CAL2 ;1101HP4 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.18r	CCV_1101HP418r, CAL3 ;1101HP4 , 15000 ug per mL Diesel (300 uL of DRO211012A + 700 uL DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.19r	CCV_1101HP419r, CAL4 ;1101HP4 , 37500ug per mL Diesel (750 uL of DRO211012A + 250 uL DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.20r	CCV_1101HP420r, CAL5 ;1101HP4 , 50000 ug per mL Diesel (200 uL of DRO211012A)	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0
	\\org\HP4\DAT\HP4110121_b\1101HP4.22r	CCV_1101HP422r, Second Source ;1101HP4 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0

File Name: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL

Version: 1

Creator: AMN

Description: 8015C-DRO. New ICal Per 1102HP4 (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

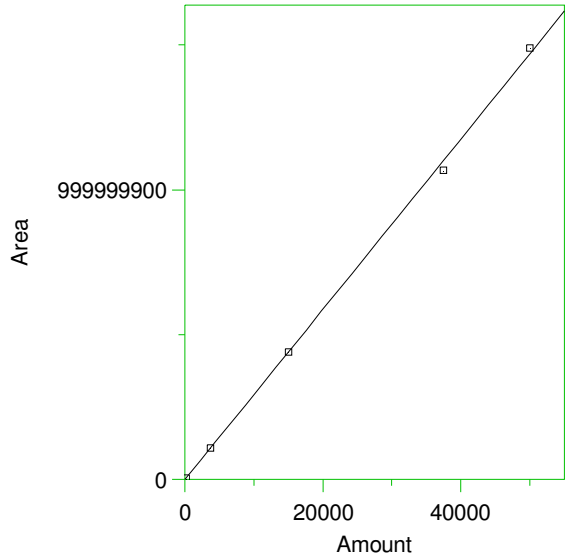
No default component

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: 6.79 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

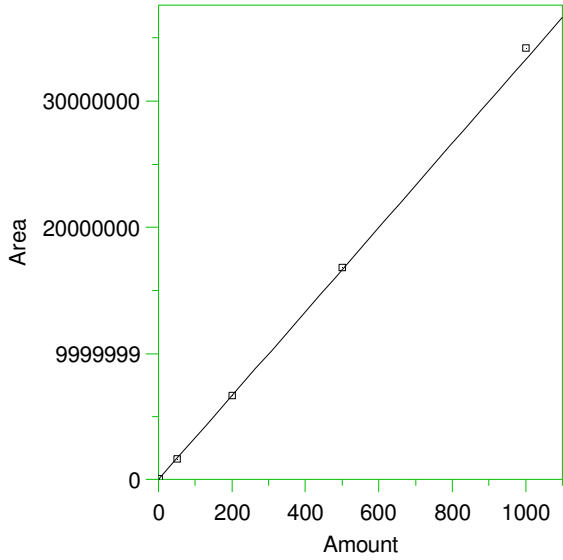
Single peak quantification by area

$Y = 29373.28 X + 0$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9989712
 Average error: 1.611%
 Average CF: 29373.28
 RSD: 2.208%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	4520637	30137.58	2.602	Manual	11/2/2021 7:52:13 AM
2	3750	1.09359E+08	29162.4	-0.718	Manual	11/2/2021 7:52:33 AM
3	15000	4.400683E+08	29337.89	-0.120	Manual	11/2/2021 7:52:42 AM
4	37500	1.066362E+09	28436.32	-3.190	Manual	11/2/2021 7:52:54 AM
5	50000	1.48961E+09	29792.2	1.426	Manual	11/2/2021 7:53:06 AM

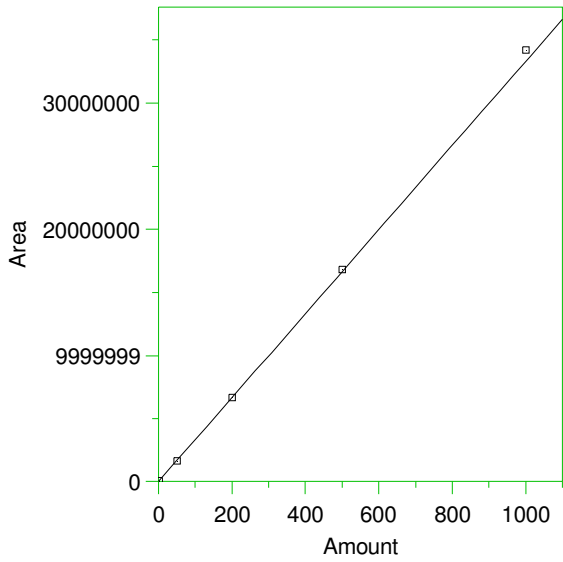
2 *o-Terphenyl



Expected retention time: 12.87 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 = 33319.7 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.998904
 Average error: 1.811%
 Average CF: 33319.7
 RSD: 2.209%

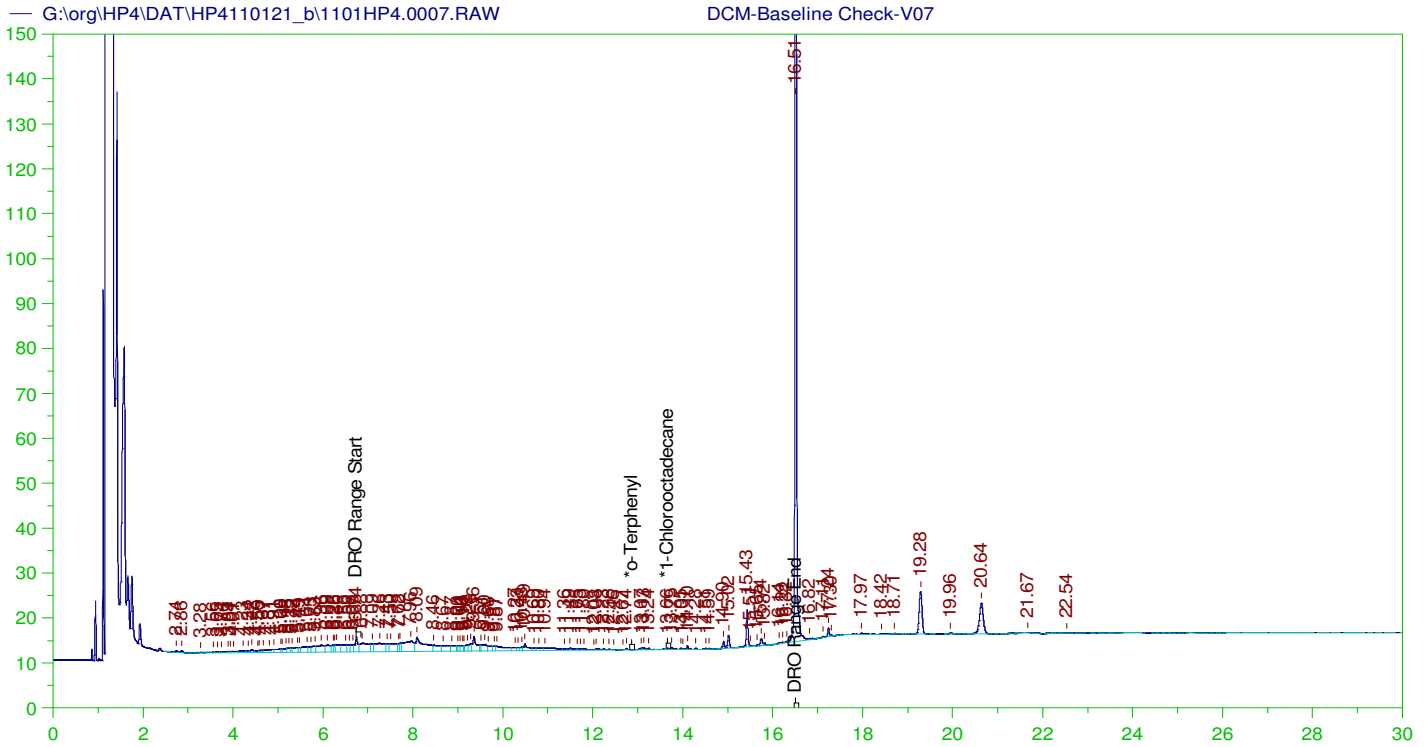
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	65030.99	32515.49	-2.414	G:\Org\HP4\DAT\HP4110121_b\1101HP4.0010.BND	11/2/2021 7:51:41 AM
2	50	163075.1	32615.02	-2.115	G:\Org\HP4\DAT\HP4110121_b\1101HP4.0011.BND	11/2/2021 7:51:35 AM
3	200	670687.1	33534.36	0.644	G:\Org\HP4\DAT\HP4110121_b\1101HP4.0012.BND	11/2/2021 7:51:30 AM
4	500	1.685074E+07	33701.48	1.146	G:\Org\HP4\DAT\HP4110121_b\1101HP4.0013.BND	11/2/2021 7:50:16 AM
5	1000	3.423214E+07	34232.14	2.738	G:\Org\HP4\DAT\HP4110121_b\1101HP4.0014.BND	11/2/2021 7:50:10 AM

3 *1-Chlorooctadecane



Expected retention time: 13.68 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
 $Y = 33319.7 X + 0$
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.998904
 Average error: 1.811%
 Average CF: 33319.7
 RSD: 2.209%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	65030.99	32515.49	-2.414	Manual	11/2/2021 7:51:46 AM
2	50	1630751	32615.02	-2.115	Manual	11/2/2021 7:51:47 AM
3	200	6706871	33534.36	0.644	Manual	11/2/2021 7:51:49 AM
4	500	1.685074E+07	33701.48	1.146	Manual	11/2/2021 7:51:51 AM
5	1000	3.423214E+07	34232.14	2.738	Manual	11/2/2021 7:51:53 AM



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V07
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0007.RAW
 Date & Time Acquired: 11/1/2021 5:37:56 PM
 Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

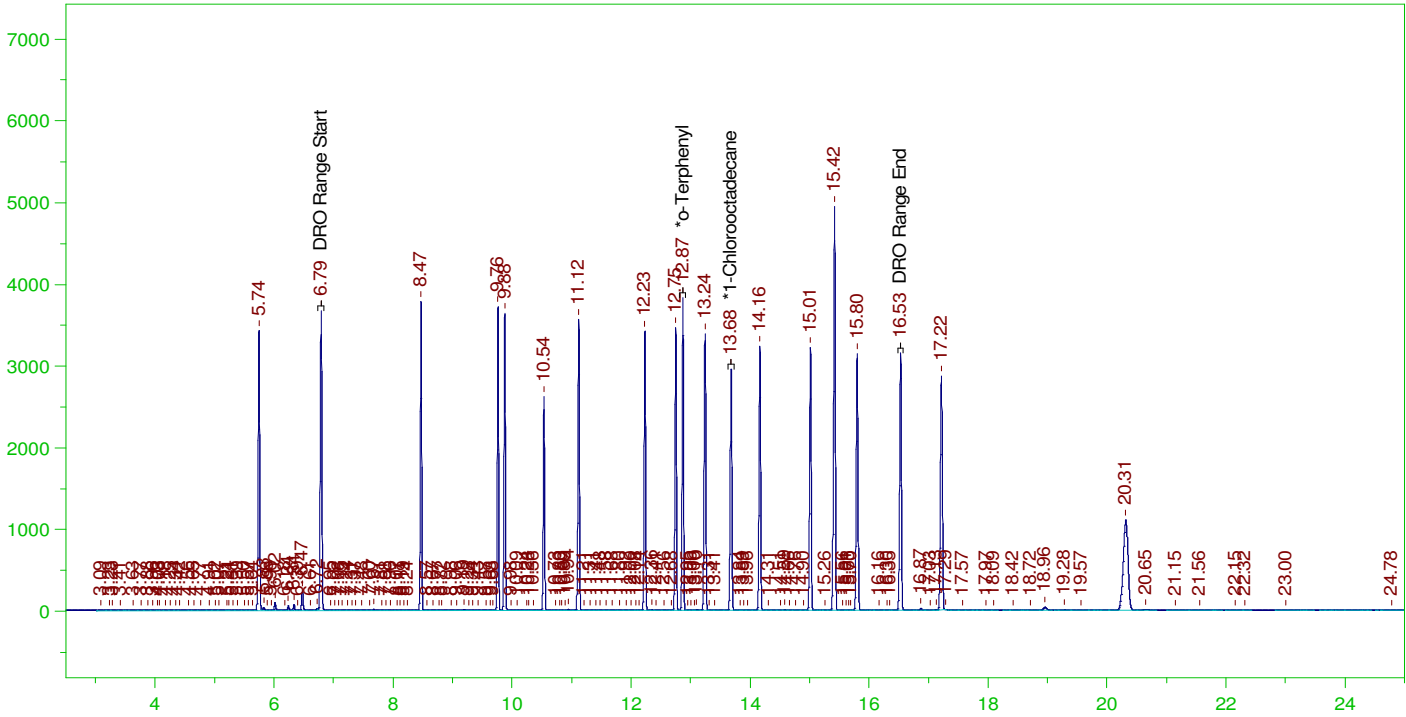
Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.966	200.	.	-
*1-Chlorooctadecane	13.659	200.	.028	.01

DRO Area:1037666 DRO Amount: 35.32688
 TEH Area:1315488 TEH Amount: 44.78518

G:\org\HP4\DAT\HP4110121_b\1101HP4.0008.RAW

CCV_1101HP408r, DRO ;1101HP4 , DRO211025A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP408r, DRO ;1101HP4 , DRO211025A
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0008.RAW
 Date & Time Acquired: 11/1/2021 6:29:58 PM
 Method File: G:\Org\HP4\methods\DC_8015-OA-L0.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

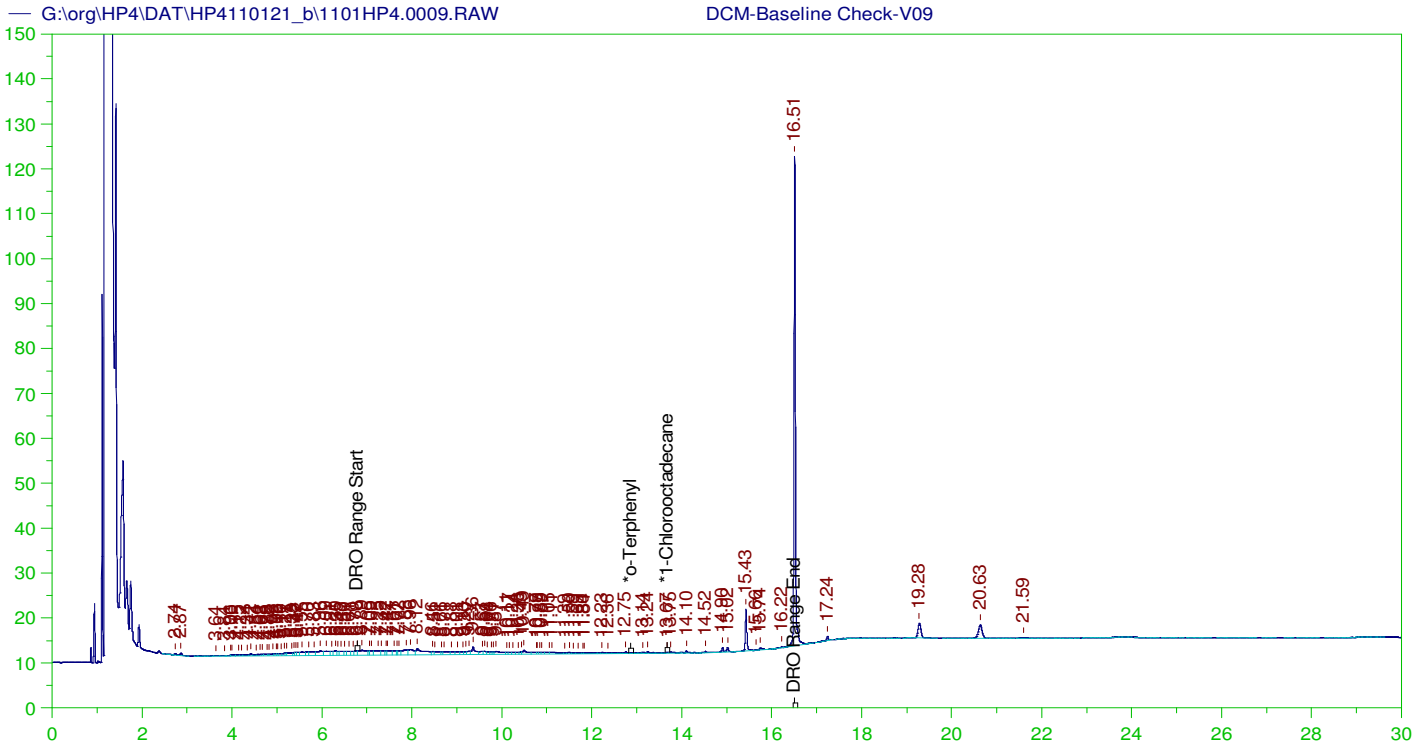
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.871	200.	197.197	98.6
*1-Chlorooctadecane	13.68	200.	162.692	81.35

DRO Area: 8.91221E+07 DRO Amount: 3034.122
 TEH Area: 1.09099E+08 TEH Amount: 3714.228

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0008.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	3714.23	24.76	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.871	200.	197.197	98.6	85-115
*1-Chlorooctadecane	13.68	200.	162.692	81.35	85-115



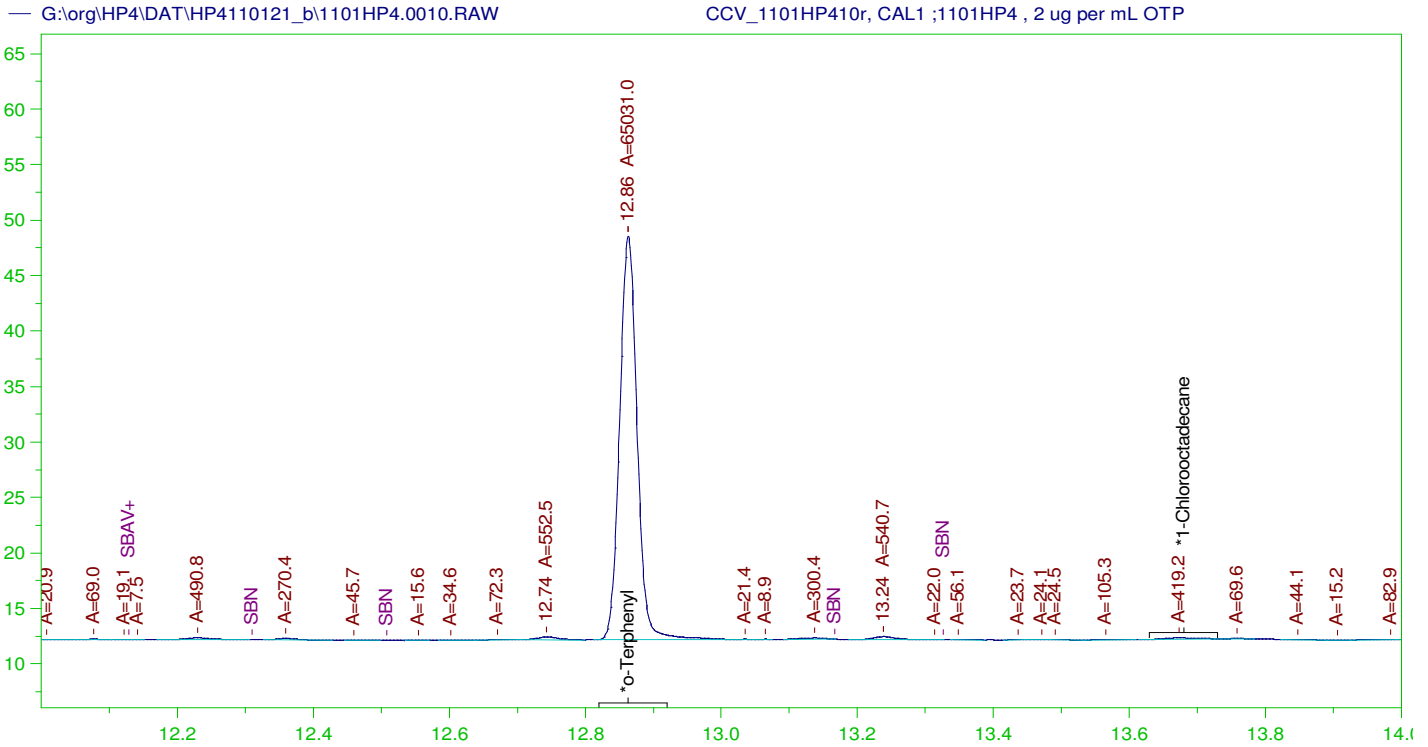
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V09
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0009.RAW
 Date & Time Acquired: 11/1/2021 7:21:52 PM
 Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.549	200.	.	-
*1-Chlorooctadecane	13.667	200.	.027	.01 -

DRO Area: 494658.3 DRO Amount: 16.84042
 TEH Area: 640048.8 TEH Amount: 21.79017



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP410r, CAL1 ;1101HP4 , 2 ug per mL OTP
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0010.RAW
 Date & Time Acquired: 11/1/2021 8:13:42 PM
 Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

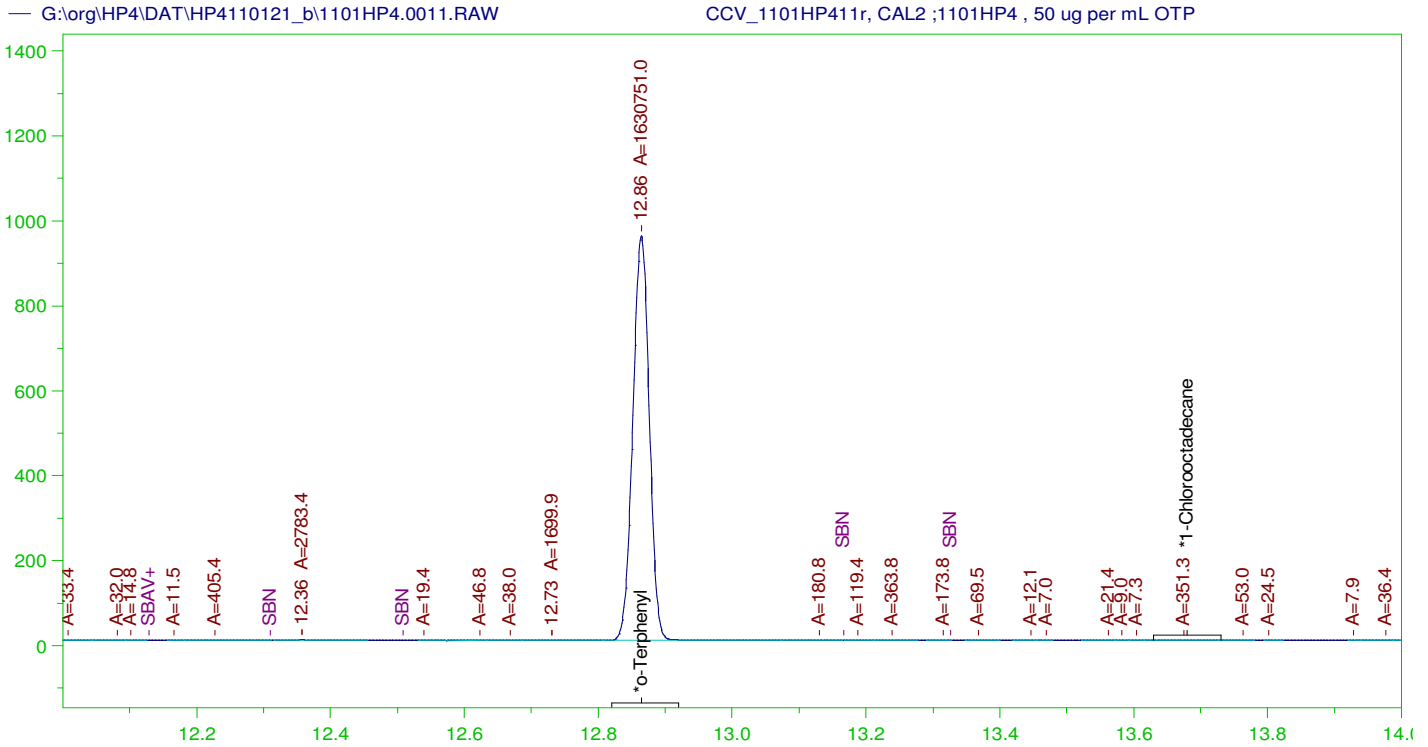
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.863	200.	1.952	.98
*1-Chlorooctadecane	29.971	200.	.	.

DRO Area:246716.6 DRO Amount: 8.399357
 TEH Area:346478.1 TEH Amount: 11.79569

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0010.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.863	200.	1.952	.98	85-115
*1-Chlorooctadecane	29.971	200.	.	.	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP411r, CAL2 ;1101HP4 , 50 ug per mL OTP
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0011.RAW
 Date & Time Acquired: 11/1/2021 9:04:46 PM
 Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

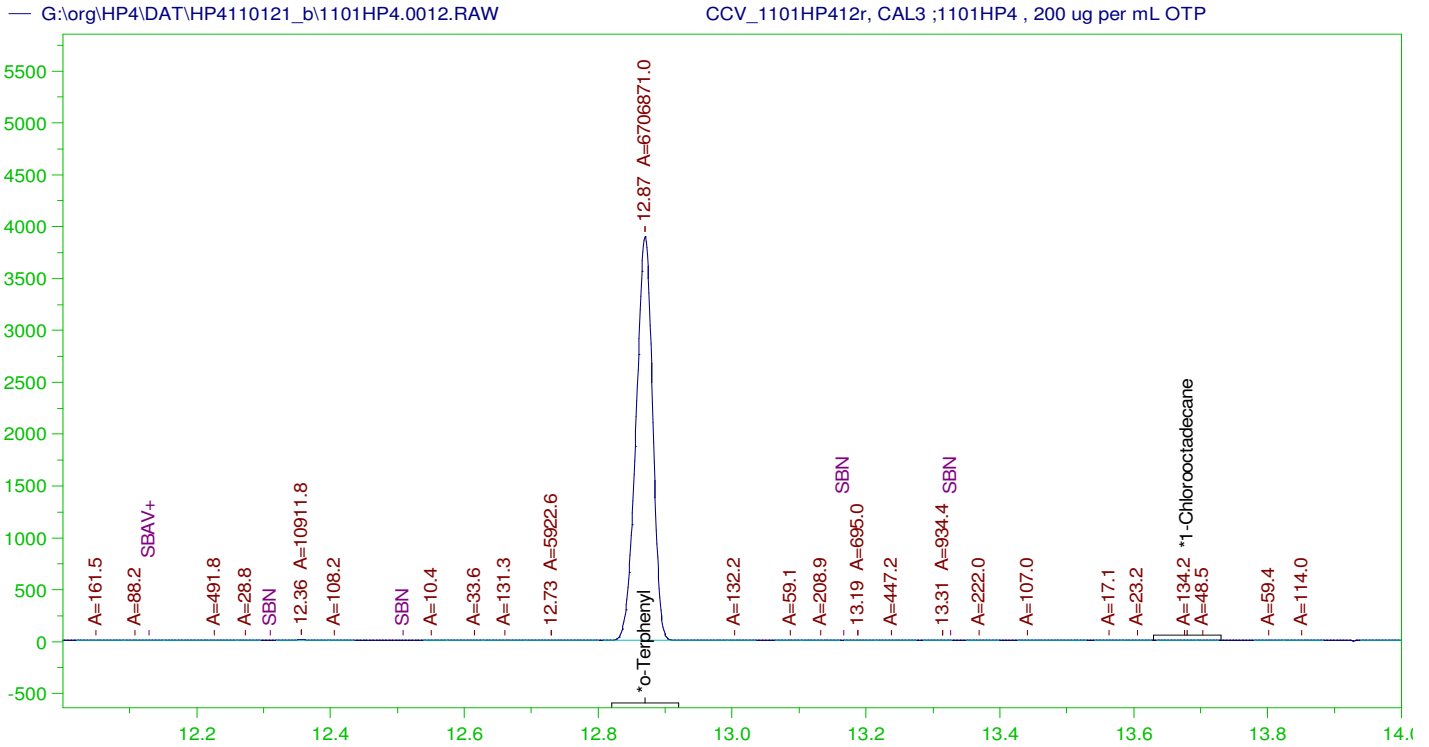
Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.864	200.	48.943	24.47
*1-Chlorooctadecane	29.962	200.	.	-

DRO Area:198520.5 DRO Amount: 6.75854
 TEH Area:236761.3 TEH Amount: 8.060432

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0011.RAW
 COMPOUND ACTUAL (NG) MEASURED (NG) %RECOVERY LIMITS
 TOTAL DRO 15000. . . 85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.864	200.	48.943	24.47	85-115
*1-Chlorooctadecane	29.962	200.	.	.	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP412r, CAL3 ;1101HP4 , 200 ug per mL OTP
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0012.RAW
 Date & Time Acquired: 11/1/2021 9:55:15 PM
 Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.87	200.	201.289	100.64	-
*1-Chlorooctadecane	29.944	200.	.	.	-

DRO Area:204842.1 DRO Amount: 6.973756
 TEH Area:260037.3 TEH Amount: 8.852851

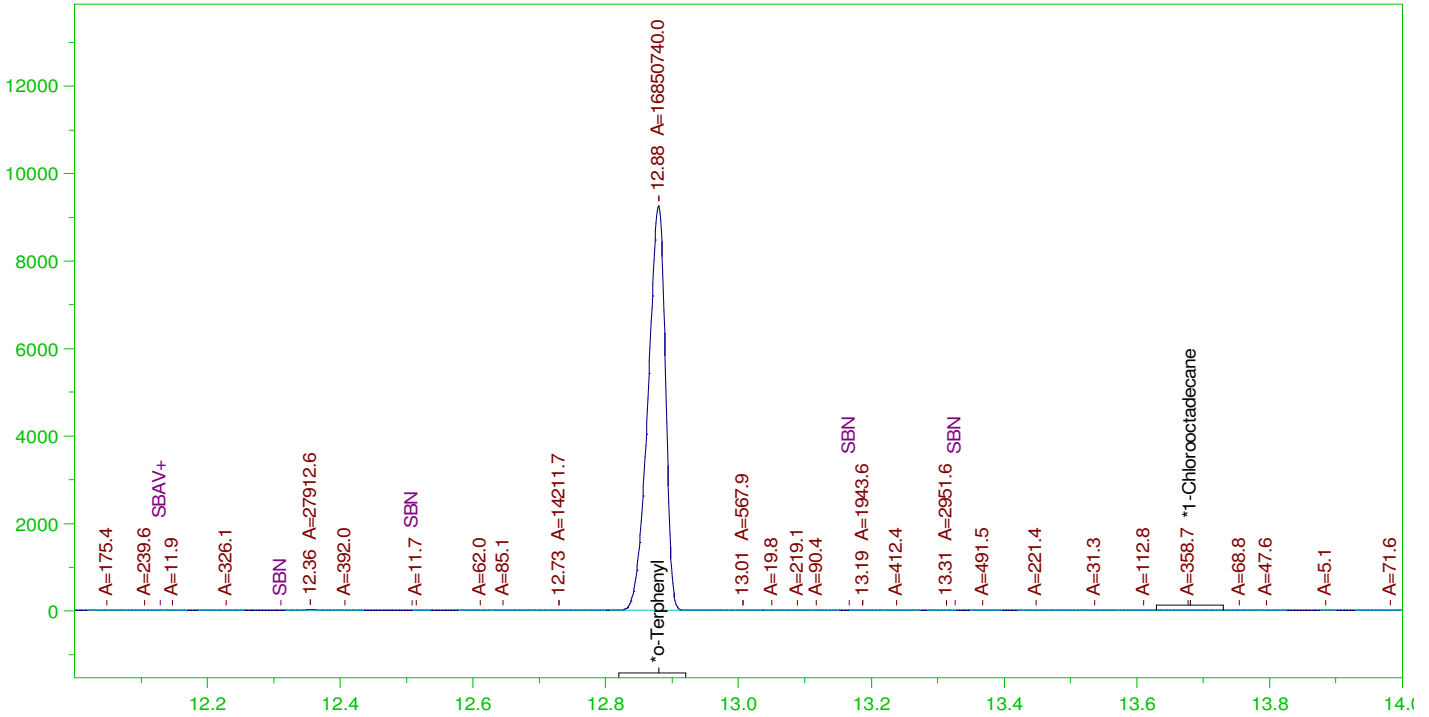
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0012.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.87	200.	201.289	100.64	85-115
*1-Chlorooctadecane	29.944	200.	.	.	85-115

G:\org\HP4\DAT\HP4110121_b\1101HP4.0013.RAW

CCV_1101HP413r, CAL4 ;1101HP4 , 500 ug per mL OTP



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP413r, CAL4 ;1101HP4 , 500 ug per mL OTP
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0013.RAW
 Date & Time Acquired: 11/1/2021 10:45:33 PM
 Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

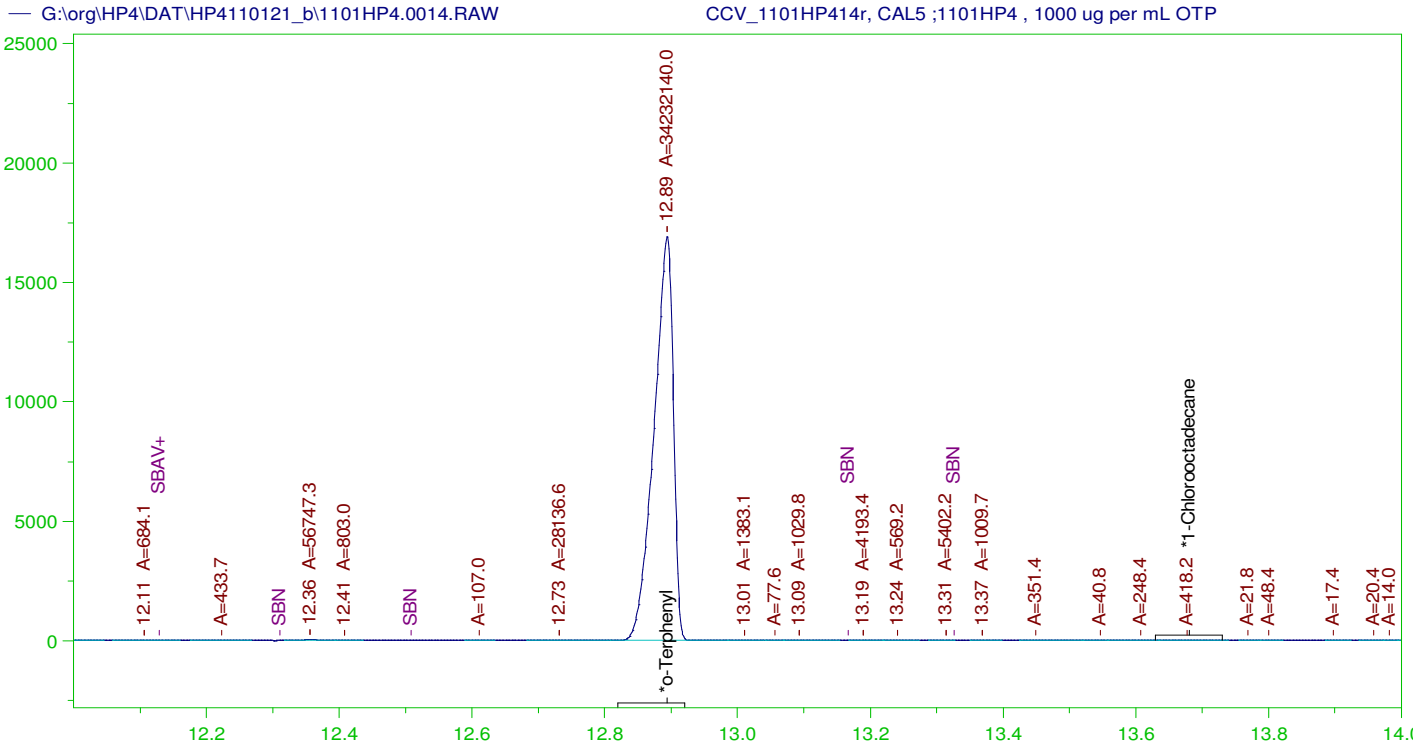
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.879	200.	505.729	252.86
*1-Chlorooctadecane	29.986	200.	.	-

DRO Area:248934.2 DRO Amount: 8.474853
 TEH Area:316561.3 TEH Amount: 10.77719

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0013.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.879	200.	505.729	252.86	85-115
*1-Chlorooctadecane	29.986	200.	.	.	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP414r, CAL5 ;1101HP4 , 1000 ug per mL OTP
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0014.RAW
 Date & Time Acquired: 11/1/2021 11:36:02 PM
 Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

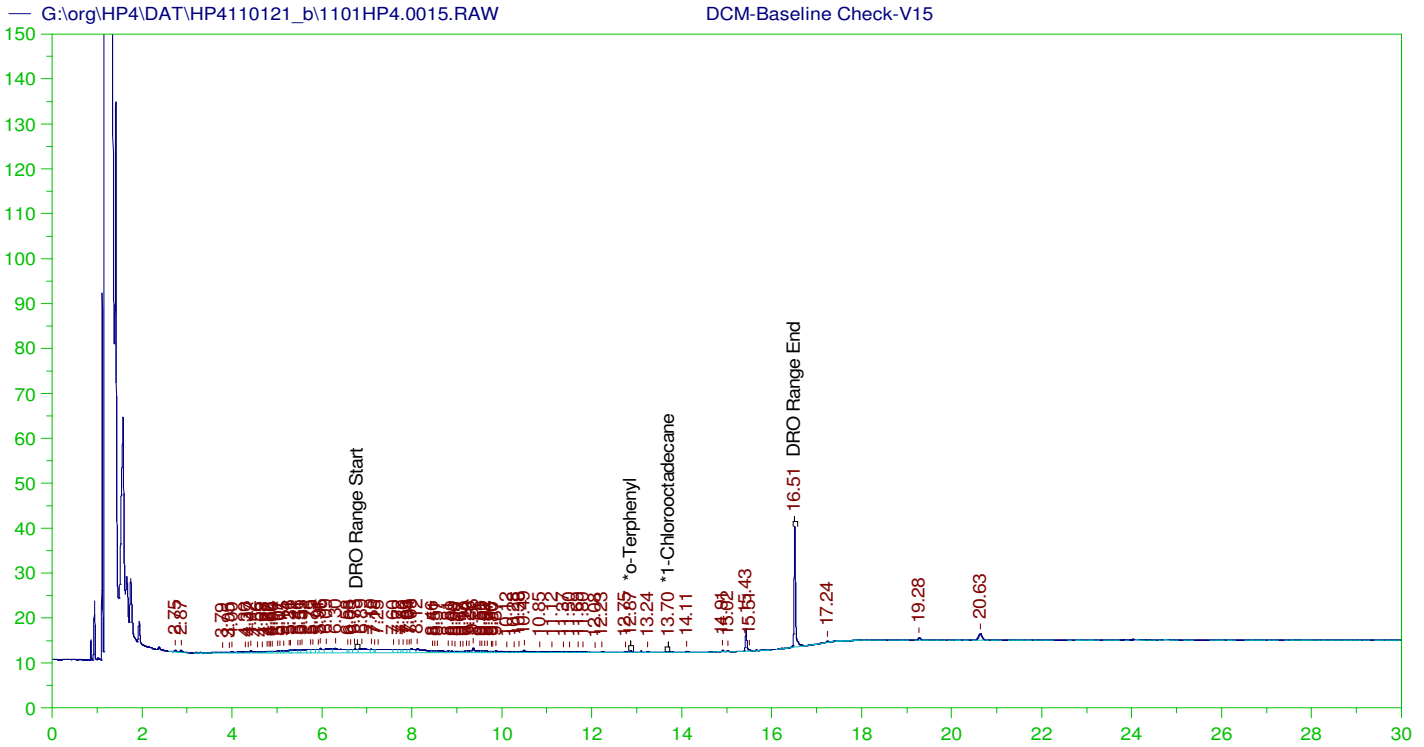
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.894	200.	1027.384	513.69
*1-Chlorooctadecane	29.945	200.	.	-

DRO Area:283897.7 DRO Amount: 9.66517
 TEH Area:329575.5 TEH Amount: 11.22025

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0014.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.894	200.	1027.384	513.69	85-115
*1-Chlorooctadecane	29.945	200.	.	.	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V15
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0015.RAW
 Date & Time Acquired: 11/2/2021 12:26:19 AM
 Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

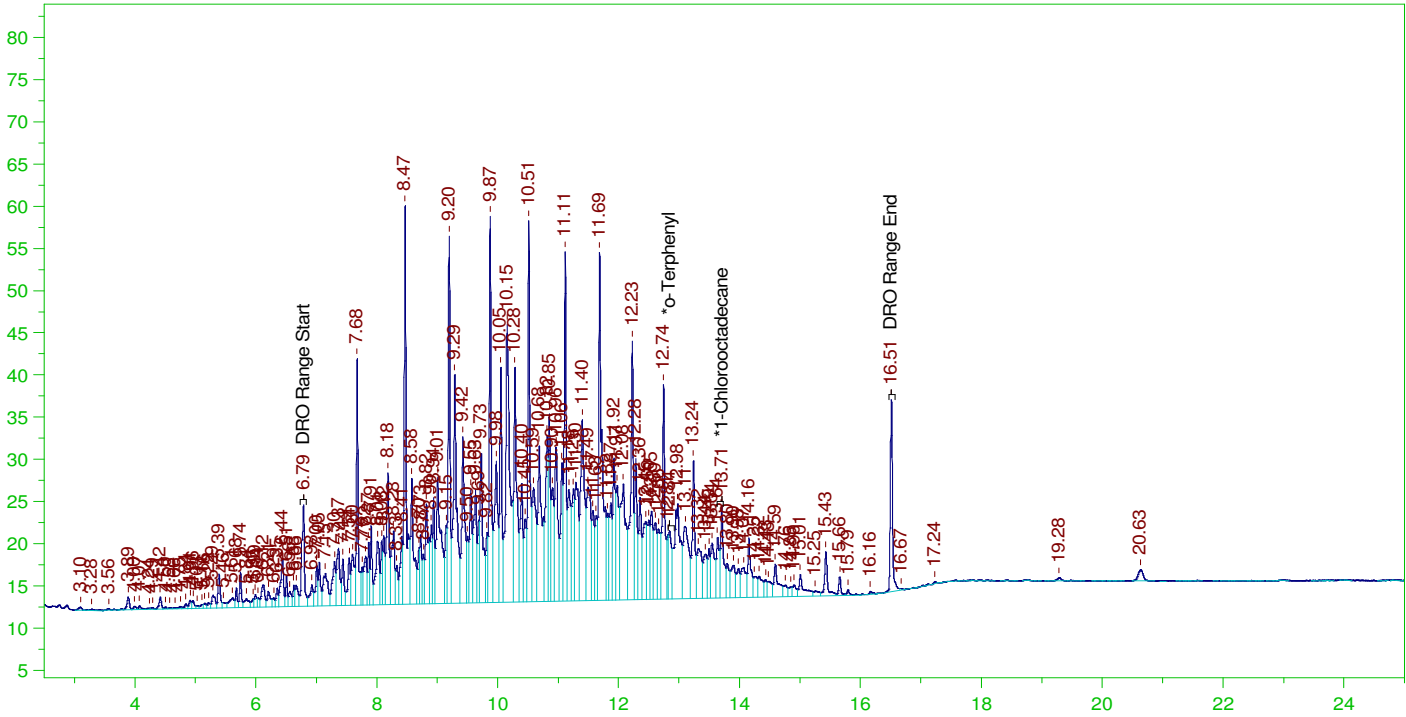
Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.866	200.	.046	.02	-
*1-Chlorooctadecane	13.702	200.	.016	.01	-

DRO Area:216198.9 DRO Amount: 7.360394
 TEH Area:333132.8 TEH Amount: 11.34136

G:\org\HP4\DAT\HP4110121_b\1101HP4.0016.RAW

CCV_1101HP416r, CAL1 ;1101HP4 , 150 ug per mL Diesel



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP416r, CAL1 ;1101HP4 , 150 ug per mL Diesel
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0016.RAW
 Date & Time Acquired: 11/2/2021 1:16:49 AM
 Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.841	200.	.842	.42	-
*1-Chlorooctadecane	13.706	200.	1.092	.55	-

DRO Area:4341542 DRO Amount: 147.8058
 TEH Area:4520637 TEH Amount: 153.903

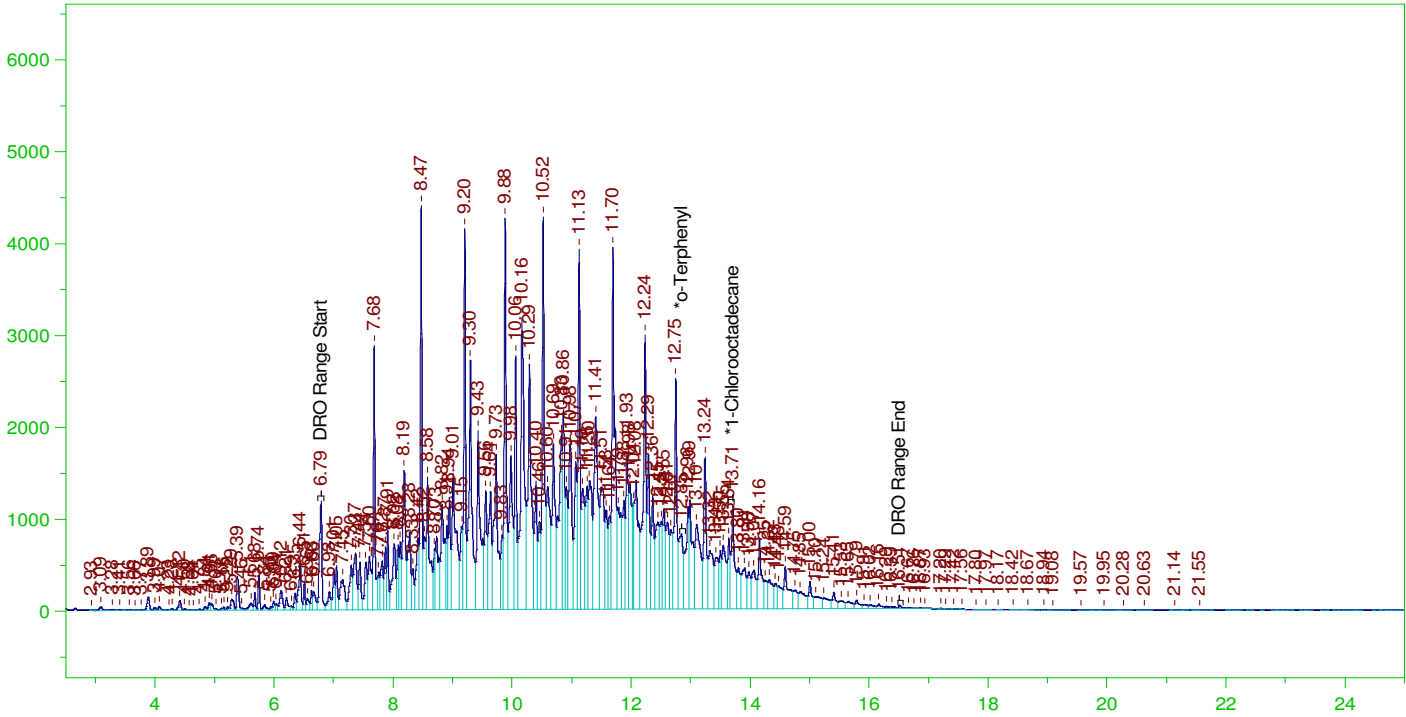
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0016.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	153.9	1.03	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.841	200.	.842	.42	85-115
*1-Chlorooctadecane	13.706	200.	1.092	.55	85-115

G:\org\HP4\DAT\HP4110121_b\1101HP4.0018.RAW

CCV_1101HP418r, CAL3 ;1101HP4 , 15000 ug per mL Diesel



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP418r, CAL3 ;1101HP4 , 15000 ug per mL Diesel
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0018.RAW
 Date & Time Acquired: 11/2/2021 2:57:28 AM
 Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

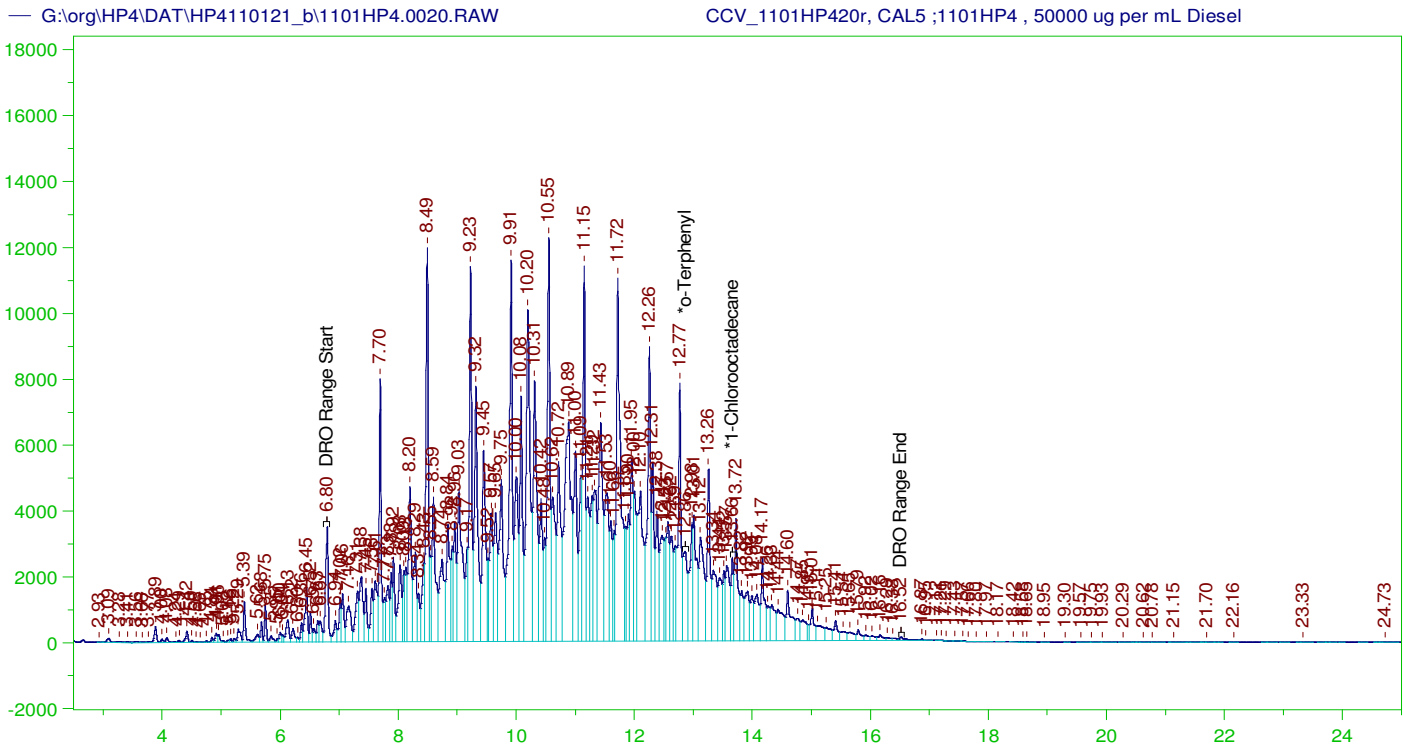
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.846	200.	119.117	59.56	-
*1-Chlorooctadecane	13.709	200.	132.401	66.2	-

DRO Area: 4.291878E+08 DRO Amount: 14611.51
 TEH Area: 4.400683E+08 TEH Amount: 14981.93

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14981.93	99.88	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.846	200.	119.117	59.56	85-115
*1-Chlorooctadecane	13.709	200.	132.401	66.2	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP420r, CAL5 ;1101HP4 , 50000 ug per mL Diesel
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0020.RAW
 Date & Time Acquired: 11/2/2021 4:38:01 AM
 Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

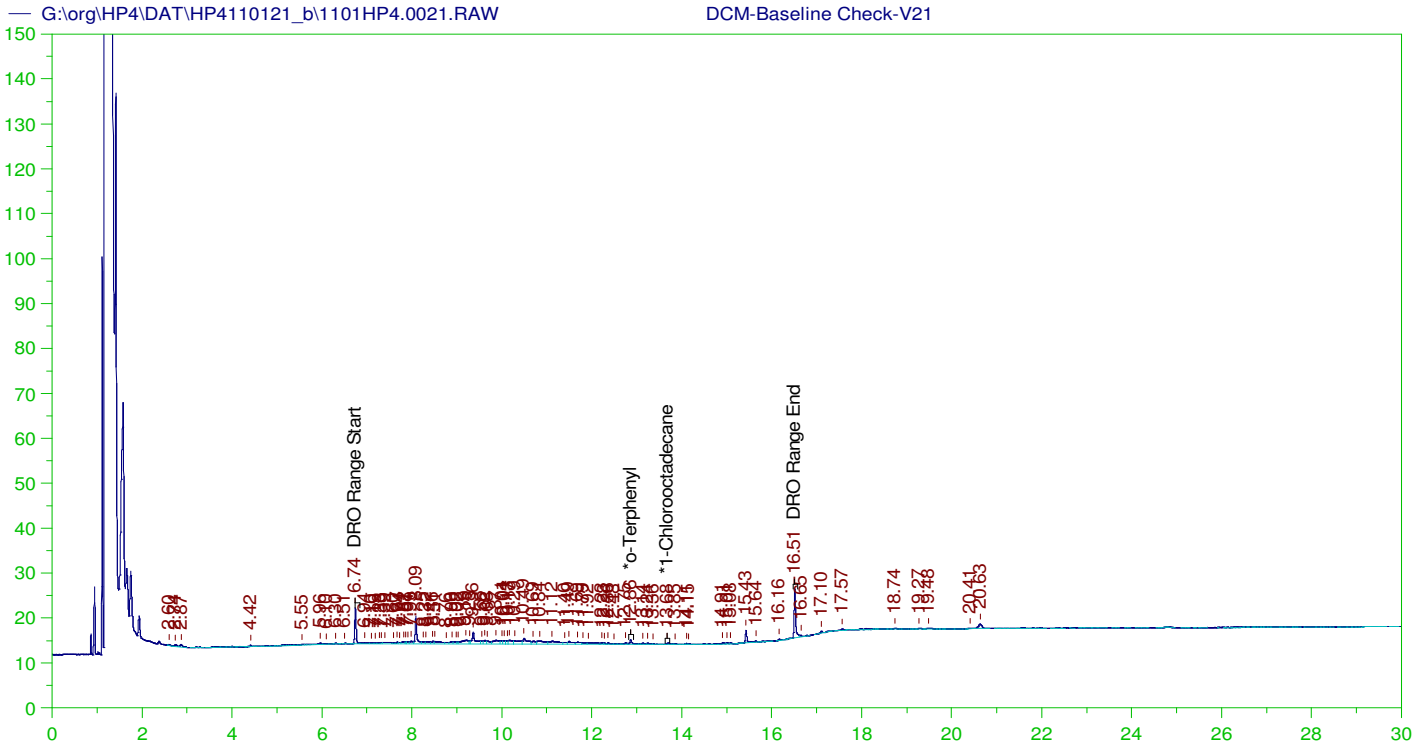
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.862	200.	408.713	204.36
*1-Chlorooctadecane	13.661	200.	204.074	102.04

DRO Area: 1.453258E+09 DRO Amount: 49475.51
 TEH Area: 1.48961E+09 TEH Amount: 50713.11

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	50713.11	338.09	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.862	200.	408.713	204.36	85-115
*1-Chlorooctadecane	13.661	200.	204.074	102.04	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V21
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0021.RAW
 Date & Time Acquired: 11/2/2021 5:28:21 AM
 Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

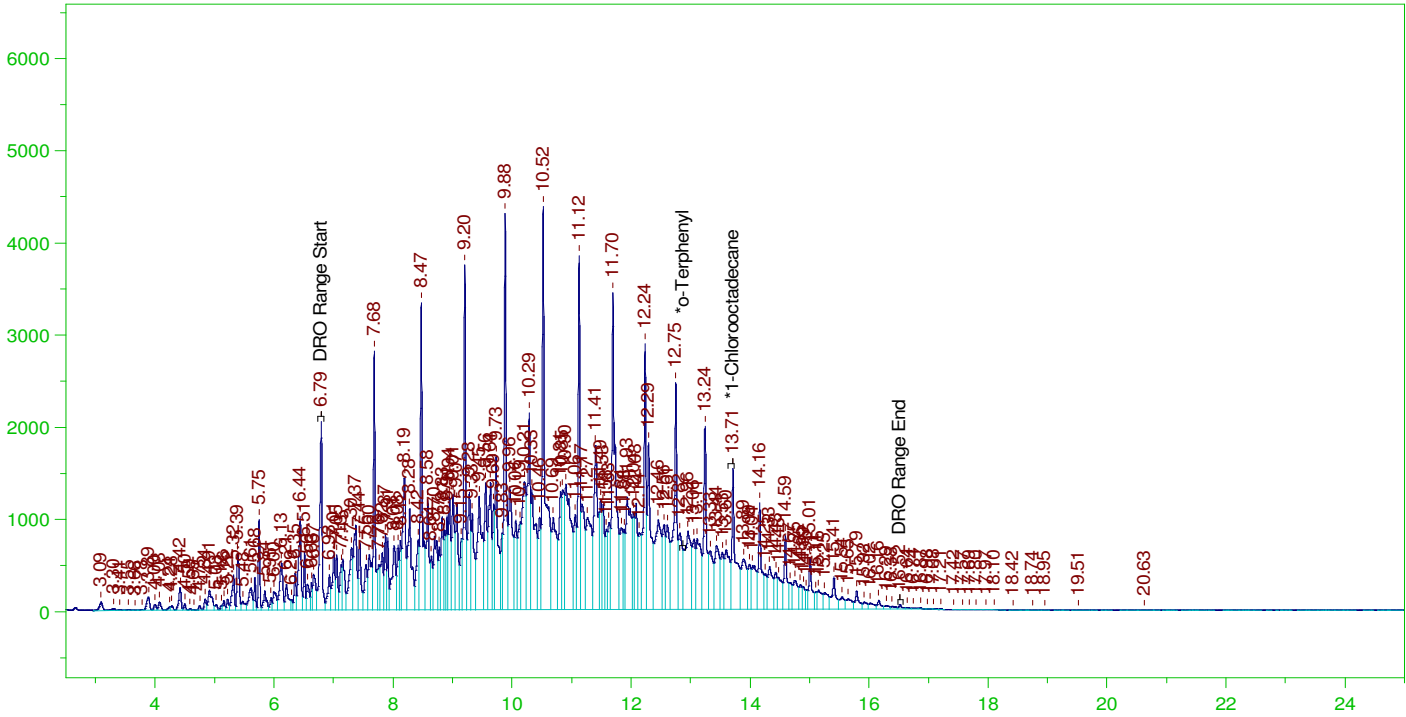
Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.865	200.	.126	.06	-
*1-Chlorooctadecane	13.677	200.	.038	.02	-

DRO Area:238253.6 DRO Amount: 8.111236
 TEH Area:273352.9 TEH Amount: 9.306175

G:\org\HP4\DAT\HP4110121_b\1101HP4.0022.RAW

CCV_1101HP422r, Second Source ;1101HP4 , 15000 ug per mL



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP422r, Second Source ;1101HP4 , 15000 ug per mL
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0022.RAW
 Date & Time Acquired: 11/2/2021 6:18:32 AM
 Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.896	200.	.	-
*1-Chlorooctadecane	13.712	200.	201.891	100.95 -

DRO Area: 4.14403E+08 DRO Amount: 14108.16
 TEH Area: 4.395233E+08 TEH Amount: 14963.37

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0022.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14963.37	99.76	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	29.896	200.	.	.	85-115
*1-Chlorooctadecane	13.712	200.	201.891	100.95	85-115

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
		DCM-Baseline Check-V07	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
		CCV_1101HP408r, DRO ;1101HP4 , DRO211025A	G:\Org\HP4\methods\DC_8015-OA-L0.met	1	1	1	1	0	No Integration
		DCM-Baseline Check-V09	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
		CCV_1101HP410r, CAL1 ;1101HP4 , 2 ug per mL OTP (10 uL of Cal3 + 990 uL DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
		CCV_1101HP411r, CAL2 ;1101HP4 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
		CCV_1101HP412r, CAL3 ;1101HP4 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
		CCV_1101HP413r, CAL4 ;1101HP4 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
		CCV_1101HP414r, CAL5 ;1101HP4 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO21101A + 750 DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
		DCM-Baseline Check-V15	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
		CCV_1101HP416r, CAL1 ;1101HP4 , 150 ug per mL Diesel (10 uL of Cal3 + 990 uL DCM(14408),	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.1
		CCV_1101HP417r, CAL2 ;1101HP4 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.1
		CCV_1101HP418r, CAL3 ;1101HP4 , 15000 ug per mL Diesel (300 uL of DRO211012A + 700 uL DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.1
		CCV_1101HP419r, CAL4 ;1101HP4 , 37500 ug per mL Diesel (750 uL of DRO211012A + 250 uL DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.1
		CCV_1101HP420r, CAL5 ;1101HP4 , 50000 ug per mL Diesel (200 uL of DRO211012A)	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.1
		DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
		CCV_1101HP422r, Second Source ;1101HP4 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14408))	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.1

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.01.17 15:04:47 -07:00

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **164312** Prep Temp **NA °C**

Technician: **Ann Nebel**
 Batch Units: **ML**

Prep Start Date: **3/8/2022 11:08:51 AM**
 Prep End Date: **3/10/2022 9:14:00 AM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-164312			1000	0	0	1.00	0.001		3/8/2022	3/9/2022
Start time 11:00 AM, 3/08/2022. End time: 7:00 AM, 3/9/2022. JLB transferred, blew down and bottled samples. SGT on remaining sample by ALN on 3/11/2022.										
LCS-164312			1000	0	0	1.00	0.001		3/8/2022	3/9/2022
All bottles were completely used, defaced and disposed of on 3/08/2022 and 03/09/2022. SGT on remaining sample by ALN on 3/11/2022.										
LCS-164312-RRO			1000	0	0	1.00	0.001		3/8/2022	3/9/2022
SGT on remaining sample by ALN on 3/11/2022.										
B22030433-053C	Ground Water	2	1040	0	0	1.00	0.000962		3/8/2022	3/9/2022
Bottle 1/6 Light sediment. SGT on remaining sample by ALN on 3/11/2022.										
B22030433-053CMS	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 3/6 Light sediment. SGT on remaining sample by ALN on 3/11/2022.										
B22030433-053CMSD	Ground Water	2	1030	0	0	1.00	0.000971		3/8/2022	3/9/2022
Bottle 4/6 Light sediment. SGT on remaining sample by ALN on 3/11/2022.										
B22030433-053CMS-RRO	Ground Water	2	1040	0	0	1.00	0.000962		3/8/2022	3/9/2022
Bottle 5/6 Light sediment. SGT on remaining sample by ALN on 3/11/2022.										
B22030433-053CMSD-RRO	Ground Water	2	1030	0	0	1.00	0.000971		3/8/2022	3/9/2022
Bottle 6/6 Light sediment. SGT on remaining sample by ALN on 3/11/2022.										
B22030433-001C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear										
B22030433-002A	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear										
B22030433-007C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Light sediment. SGT on remaining sample by ALN on 3/11/2022.										
B22030433-012C	Ground Water	2	1040	0	0	1.00	0.000962		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030433-017C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030433-018A	Ground Water	2	1000	0	0	1.00	0.001		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14776	4ML, Amber Vial, 20220118	1/18/2023
14920	Dichloromethane ED241	1/3/2024

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220303 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 03/03/22 (Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220222B	Triacotane SURR 1000 ug/mL	All except LCS/D,	100 uL	11/23/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO220308C	Triacotane SURR 1000 ug/mL	B22030521-021,	100 uL	11/23/2026
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS, MS/D	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, MS/D-	100 uL	9/1/2026
SG220310(13376)	Baked Silica Gel	SGT	5g	2/28/2030

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **164312** Prep Temp **NA °C**

Technician: **Ann Nebel**
 Batch Units: **ML**

Prep Start Date: **3/8/2022 11:08:51 AM**
 Prep End Date: **3/10/2022 9:14:00 AM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B22030433-023C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030433-038C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear										
B22030433-043C	Ground Water	2	1040	0	0	1.00	0.000962		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030433-058C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030433-059A	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030433-064C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear										
B22030502-001C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030502-006C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030502-011C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030502-016C	Ground Water	2	1050	0	0	1.00	0.000952		3/8/2022	3/9/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030502-021C	Ground Water	2	1040	0	0	1.00	0.000962		3/9/2022	3/10/2022
Bottle 1/2 Clear Start time 9:10 AM, 3/09/2022. End time: 6:50 AM, 3/10/2022. JLB transferred, blew down and bottled samples. SGT on remaining sample by ALN on 3/11/2022.										
B22030502-026C	Ground Water	2	1050	0	0	1.00	0.000952		3/9/2022	3/10/2022
Bottle 1/2 Clear SGT on remaining sample by ALN on 3/11/2022.										
B22030502-031C	Ground Water	2	1050	0	0	1.00	0.000952		3/9/2022	3/10/2022
Bottle 1/2 Clear										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14776	4ML, Amber Vial, 20220118	1/18/2023
14920	Dichloromethane ED241	1/3/2024

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220303 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 03/03/22 (Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220222B	Triacotane SURR 1000 ug/mL	All except LCS/D,	100 uL	11/23/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO220308C	Triacotane SURR 1000 ug/mL	B22030521-021,	100 uL	11/23/2026
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS, MS/D	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, MS/D-	100 uL	9/1/2026
SG220310(13376)	Baked Silica Gel	SGT	5g	2/28/2030

Energy Laboratories Inc

ANALYTICAL RUN Summary

11-Mar-22

Run ID GCFID-HP4-B_220309A

Run Start Date: 3/9/2022
Analyst: Jillian L Bostwick
Ical:
Column ID:
Comments: DRO-8015 CAL information is in Index GCFID-HP4-B_211101A; DRO-8015-OIL CAL information is in Index GCFID-HP4-B_211006B

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO220218B	Carbon Scan STD-Marker					MARKER	7/13/2026
DRO220301A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023
DRO220302C	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-RRO	11/23/2026
DRO220309D	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					
15080229	CCV_0309HP40	HC-8015-DRO-	CCV		3/9/2022 10:04:2	1	R375884			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		4.99129883		5	0	0	0.0513	0.3	0	100%	80	120	0%	
n-Triacontane	S	mg/L		0.2064456		0.2	0	0	0.00054	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					
15080230	CCV_0309HP40	HC-8015-DRO-	CCV		3/9/2022 10:49:3	1	R375884			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		14.89586		15	0	0	0.0358	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.40937		15	0	0	0.0782	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.2266189		0.2	0	0	0.000531	0.002	0	113%	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
15080231	LCS-164312	HC-8015-DRO-	LCS-DOD		3/9/2022 12:20:1	1	164312	3/8/2022 11:	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		12.49959		15	0	0	0.0358	0.3	0	83%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		13.38394		15	0	0	0.0782	0.3	50	89%	60	132	0%	
o-Terphenyl	S	mg/L		0.1712668		0.2	0	0	0.000531	0.002	0	86%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
15080232	MB-164312	HC-8015-DRO-	MBLK		3/9/2022 1:05:31	1	164312	3/8/2022 11:	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0358	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0513	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0782	0.15	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.094		0.1	0	0	0.00054	0.002	0	94%	50	150	0%	
o-Terphenyl	S	mg/L		0.1783193		0.2	0	0	0.000531	0.002	0	89%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
15080233	B22030433-053	HC-8015-DRO-	SAMP		3/9/2022 1:50:53	1	164312	3/8/2022 11:	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0.04930916		0	0	0	0.0344396	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.17623858		0	0	0	0.0493506	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2329137		0	0	0	0.0752284	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.087		0.0962	0	0	0.0005195	0.001924	0	90%	50	150	0%	
o-Terphenyl	S	mg/L		0.1620267		0.1924	0	0	0.0005108	0.002	0	84%	56	125	0%	
TEH(Oil Range)	X	mg/L		0.2344057		0	0	0	0.0493506	0.3	0	0%	0	0	0%	J

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
15080234	B22030433-053	HC-8015-DRO-	MS-DOD		3/9/2022 2:36:08	1	164312	3/8/2022 11:	2E+07	0						
Diesel Range Organics (C10 to C24)	A	mg/L		11.98595		14.28	0.0493092	0	0.0340816	0.3	0	84%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		12.8681		14.28	0.2329137	0	0.0744464	0.3	50	88%	60	132	0%	
o-Terphenyl	S	mg/L		0.1595634		0.1904	0	0	0.0005055	0.002	0	84%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080235	B22030433-053	HC-8015-DRO-	MSD-DOD		3/9/2022 3:21:15	1	164312	3/8/2022 11:	2E+07	2E+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		11.71828		14.565	0.0493092	11.98595	0.0347618	0.3	0	80%	36	132	2%	
Total Extractable Hydrocarbons	A	mg/L		12.67327		14.565	0.2329137	12.8681	0.0759322	0.3	50	85%	60	132	2%	
o-Terphenyl	S	mg/L		0.1608075		0.1942	0	0	0.0005156	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					
15080236	B22030433-001	HC-8015-DRO-	SAMP		3/9/2022 4:51:35	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0744464	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.095		0.0952	0	0	0.0005141	0.001904	0	100%	50	150	0%	
o-Terphenyl	S	mg/L		0.1818517		0.1904	0	0	0.0005055	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					
15080237	B22030433-002	HC-8015-DRO-	SAMP		3/9/2022 5:36:50	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0744464	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.089		0.0952	0	0	0.0005141	0.001904	0	93%	50	150	0%	
o-Terphenyl	S	mg/L		0.1710799		0.1904	0	0	0.0005055	0.002	0	90%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080238	B22030433-038	HC-8015-DRO-	SAMP		3/9/2022 6:22:15	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0744464	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.087		0.0952	0	0	0.0005141	0.001904	0	91%	50	150	0%	
o-Terphenyl	S	mg/L		0.1650907		0.1904	0	0	0.0005055	0.002	0	87%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080239	B22030433-058	HC-8015-DRO-	SAMP		3/9/2022 7:07:30	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.10172587		0	0	0	0.0488376	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.1245807		0	0	0	0.0744464	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.086		0.0952	0	0	0.0005141	0.001904	0	90%	50	150	0%	
o-Terphenyl	S	mg/L		0.1621985		0.1904	0	0	0.0005055	0.002	0	85%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080240	B22030433-059	HC-8015-DRO-	SAMP		3/9/2022 7:52:44	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.10898943		0	0	0	0.0488376	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.1182799		0	0	0	0.0744464	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.092		0.0952	0	0	0.0005141	0.001904	0	97%	50	150	0%	
o-Terphenyl	S	mg/L		0.171333		0.1904	0	0	0.0005055	0.002	0	90%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080241	CCV_0309HP41	HC-8015-DRO-	CCV		3/9/2022 9:23:03	1	R375884				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		5.05128174		5	0	0	0.0513	0.3	0	101%	80	120	0%	
n-Triacontane	S	mg/L		0.2093696		0.2	0	0	0.00054	0.002	0	105%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080242	CCV_0309HP41	HC-8015-DRO-	CCV		3/9/2022 10:08:2	1	R375884				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		14.52735		15	0	0	0.0358	0.3	0	97%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.05965		15	0	0	0.0782	0.3	50	100%	80	120	0%	
o-Terphenyl	S	mg/L		0.2215968		0.2	0	0	0.000531	0.002	0	111%	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
15080243	B22030502-001	HC-8015-DRO-	SAMP		3/9/2022 11:38:4	1	164312	3/8/2022 11:	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0.0340816	0.3	0	0%	0	0	0%	U	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.13768603		0	0	0.0488376	0.3	0	0%	0	0	0%	J	
Total Extractable Hydrocarbons	A	mg/L		0.1625516		0	0	0.0744464	0.3	50	0%	0	0	0%	J	
n-Triacontane	S	mg/L		0.088		0.0952	0	0.0005141	0.001904	0	92%	50	150	0%		
o-Terphenyl	S	mg/L		0.1662723		0.1904	0	0.0005055	0.002	0	87%	56	125	0%		
15080244	B22030502-011	HC-8015-DRO-	SAMP		3/10/2022 12:23:	1	164312	3/8/2022 11:	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0.0340816	0.3	0	0%	0	0	0%	U	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.13801788		0	0	0.0488376	0.3	0	0%	0	0	0%	J	
Total Extractable Hydrocarbons	A	mg/L		0.1521997		0	0	0.0744464	0.3	50	0%	0	0	0%	J	
n-Triacontane	S	mg/L		0.091		0.0952	0	0.0005141	0.001904	0	96%	50	150	0%		
o-Terphenyl	S	mg/L		0.1727234		0.1904	0	0.0005055	0.002	0	91%	56	125	0%		
15080245	B22030502-006	HC-8015-DRO-	SAMP		3/10/2022 1:08:4	1	164312	3/8/2022 11:	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0.04089326		0	0	0.0340816	0.3	0	0%	0	0	0%	J	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.2118897		0	0	0.0488376	0.3	0	0%	0	0	0%	J	
Total Extractable Hydrocarbons	A	mg/L		0.258719		0	0	0.0744464	0.3	50	0%	0	0	0%	J	
n-Triacontane	S	mg/L		0.085		0.0952	0	0.0005141	0.001904	0	89%	50	150	0%		
o-Terphenyl	S	mg/L		0.159608		0.1904	0	0.0005055	0.002	0	84%	56	125	0%		
15080246	B22030502-016	HC-8015-DRO-	SAMP		3/10/2022 1:53:4	1	164312	3/8/2022 11:	0	0						
Diesel Range Organics (C10 to C24)	A	mg/L		0.4285693		0	0	0.0340816	0.3	0	0%	0	0	0%		
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.48429805		0	0	0.0488376	0.3	0	0%	0	0	0%		
Total Extractable Hydrocarbons	A	mg/L		0.8678209		0	0	0.0744464	0.3	50	0%	0	0	0%		
n-Triacontane	S	mg/L		0.088		0.0952	0	0.0005141	0.001904	0	92%	50	150	0%		

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080246	B22030502-016	HC-8015-DRO-	SAMP		3/10/2022 1:53:4	1	164312	3/8/2022 11:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.1646849		0.1904	0	0	0.0005055	0.002	0	86%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080247	B22030433-064	HC-8015-DRO-	SAMP		3/10/2022 3:24:2	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0744464	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.088		0.0952	0	0	0.0005141	0.001904	0	92%	50	150	0%	
o-Terphenyl	S	mg/L		0.1653682		0.1904	0	0	0.0005055	0.002	0	87%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080248	B22030433-043	HC-8015-DRO-	SAMP		3/10/2022 4:09:2	1	164312	3/8/2022 11:	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		0.4163024		0	0	0	0.0344396	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.57723284		0	0	0	0.0493506	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.9913661		0	0	0	0.0752284	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.094		0.0962	0	0	0.0005195	0.001924	0	98%	50	150	0%	
o-Terphenyl	S	mg/L		0.1749754		0.1924	0	0	0.0005108	0.002	0	91%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080249	B22030433-012	HC-8015-DRO-	SAMP		3/10/2022 4:54:3	1	164312	3/8/2022 11:	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		2.973455		0	0	0	0.0344396	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.58487523		0	0	0	0.0493506	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.538508		0	0	0	0.0752284	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.091		0.0962	0	0	0.0005195	0.001924	0	95%	50	150	0%	
o-Terphenyl	S	mg/L		0.1715219		0.1924	0	0	0.0005108	0.002	0	89%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080250	B22030433-007	HC-8015-DRO-	SAMP		3/10/2022 7:10:1	1	164312	3/8/2022 11:	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		0.1564549		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.26537809		0	0	0	0.0488376	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3997724		0	0	0	0.0744464	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.089		0.0952	0	0	0.0005141	0.001904	0	93%	50	150	0%	
o-Terphenyl	S	mg/L		0.1668517		0.1904	0	0	0.0005055	0.002	0	88%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080251	CCV_0309HP43	HC-8015-DRO-	CCV		3/10/2022 9:21:5	1	R375884			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		5.13066064		5	0	0	0.0513	0.3	0	103%	80	120	0%	
n-Triacontane	S	mg/L		0.209935		0.2	0	0	0.00054	0.002	0	105%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15080252	CCV_0309HP43	HC-8015-DRO-	CCV		3/10/2022 10:07:	1	R375884			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		15.38541		15	0	0	0.0358	0.3	0	103%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.94444		15	0	0	0.0782	0.3	50	106%	80	120	0%	
o-Terphenyl	S	mg/L		0.2340751		0.2	0	0	0.000531	0.002	0	117%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083636	B22030502-021	HC-8015-DRO-	SAMP		3/10/2022 11:38:	1	164312	3/9/2022 9:2	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		0.3956296		0	0	0	0.0344396	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.59325832		0	0	0	0.0493506	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		1.094831		0	0	0	0.0752284	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.096		0.0962	0	0	0.0005195	0.001924	0	100%	50	150	0%	
o-Terphenyl	S	mg/L		0.1834196		0.1924	0	0	0.0005108	0.002	0	95%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083637	B22030433-023	HC-8015-DRO-	SAMP		3/10/2022 6:28:0	1	164312	3/8/2022 11:	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		0.1372292		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0.1457846		0	0	0	0.0744464	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.085		0.0952	0	0	0.0005141	0.001904	0	89%	50	150	0%	
o-Terphenyl	S	mg/L		0.1621711		0.1904	0	0	0.0005055	0.002	0	85%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083638	B22030502-026	HC-8015-DRO-	SAMP		3/10/2022 7:13:3	1	164312	3/9/2022 9:2	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		0.356575		0	0	0	0.0340816	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.45800546		0	0	0	0.0488376	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.791824		0	0	0	0.0744464	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.096		0.0952	0	0	0.0005141	0.001904	0	101%	50	150	0%	
o-Terphenyl	S	mg/L		0.1901169		0.1904	0	0	0.0005055	0.002	0	100%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083639	CCV_0309HP44	HC-8015-DRO-	CCV		3/10/2022 8:44:2	1	R375884				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		5.06513232		5	0	0	0.0513	0.3	0	101%	80	120	0%	
n-Triacontane	S	mg/L		0.2041984		0.2	0	0	0.00054	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					
15083640	CCV_0309HP44	HC-8015-DRO-	CCV		3/10/2022 9:29:4	1	R375884				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		14.68124		15	0	0	0.0358	0.3	0	98%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.216		15	0	0	0.0782	0.3	50	101%	80	120	0%	
o-Terphenyl	S	mg/L		0.2187093		0.2	0	0	0.000531	0.002	0	109%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083641	B22030433-017	HC-8015-DRO-	SAMP		3/10/2022 11:00:	1	164312	3/8/2022 11:	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		0.2706277		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.19727105		0	0	0	0.0488376	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.5133306		0	0	0	0.0744464	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.088		0.0952	0	0	0.0005141	0.001904	0	92%	50	150	0%	
o-Terphenyl	S	mg/L		0.1686396		0.1904	0	0	0.0005055	0.002	0	89%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083642	B22030433-018	HC-8015-DRO-	SAMP		3/11/2022 1:15:5	1	164312	3/8/2022 11:	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		0.2663316		0	0	0	0.0358	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.19448483		0	0	0	0.0513	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.4901552		0	0	0	0.0782	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.094		0.1	0	0	0.00054	0.002	0	94%	50	150	0%	
o-Terphenyl	S	mg/L		0.1798179		0.2	0	0	0.000531	0.002	0	90%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083643	LCS-164312-RR	HC-8015-DRO-	LCS-DOD		3/11/2022 3:31:4	1	164312	3/8/2022 11:	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		4.46776915		5	0	0	0.0513	0.3	0	89%	41	113	0%	
n-Triacontane	S	mg/L		0.091		0.1	0	0	0.00054	0.002	0	91%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083644	B22030433-053	HC-8015-DRO-	MS-DOD		3/11/2022 5:02:0	1	164312	3/8/2022 11:	2E+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		4.44497299		4.81	0.2344057	0	0.0493506	0.3	0	88%	41	113	0%	
n-Triacontane	S	mg/L		0.087		0.0962	0	0	0.0005195	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					
15083645	B22030433-053	HC-8015-DRO-	MSD-DOD		3/11/2022 6:32:4	1	164312	3/8/2022 11:	2E+07	2E+07						
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					
15083645	B22030433-053	HC-8015-DRO-	MSD-DOD		3/11/2022 6:32:4	1	164312	3/8/2022 11:	2E+07	2E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.66952515		4.855	0.2344057	4.444973	0.0498123	0.3	0	91%	41	113	5%	
n-Triacontane	S	mg/L		0.092		0.0971	0	0	0.0005243	0.002	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					
15083646	CCV_0309HP46	HC-8015-DRO-	CCV		3/11/2022 8:03:3	1	R375884			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		5.00062061		5	0	0	0.0513	0.3	0	100%	80	120	0%	
n-Triacontane	S	mg/L		0.2077763		0.2	0	0	0.00054	0.002	0	104%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083647	CCV_0309HP46	HC-8015-DRO-	CCV		3/11/2022 8:48:4	1	R375884			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		14.68645		15	0	0	0.0358	0.3	0	98%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.22075		15	0	0	0.0782	0.3	50	101%	80	120	0%	
o-Terphenyl	S	mg/L		0.2193792		0.2	0	0	0.000531	0.002	0	110%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083648	B22030502-031	HC-8015-DRO-	SAMP		3/11/2022 10:19:	1	164312	3/9/2022 9:2		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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0744464	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.084		0.0952	0	0	0.0005141	0.001904	0	88%	50	150	0%	
o-Terphenyl	S	mg/L		0.1668326		0.1904	0	0	0.0005055	0.002	0	88%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15083649	CCV_0309HP46	HC-8015-DRO-	CCV		3/11/2022 11:50:	1	R375884			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		4.95759961		5	0	0	0.0513	0.3	0	99%	80	120	0%	
n-Triacontane	S	mg/L		0.2021693		0.2	0	0	0.00054	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					
15083650	CCV_0309HP46	HC-8015-DRO-	CCV		3/11/2022 12:36:	1	R375884		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		14.35564		15	0	0	0.0358	0.3	0	96%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.88094		15	0	0	0.0782	0.3	50	99%	80	120	0%	
o-Terphenyl	S	mg/L		0.2153103		0.2	0	0	0.000531	0.002	0	108%	80	120	0%	

Energy Laboratories Inc

ANALYTICAL RUN Summary

14-Mar-22

Run ID GCFID-HP4-B_220311A

Run Start Date: 3/11/2022
Analyst: Jillian L Bostwick
Ical:
Column ID:
Comments: DRO-8015 CAL information is in Index GCFID-HP4-B_211101A; DRO-8015-OIL CAL information is in Index GCFID-HP4-B_211006B

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO220302C	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-RRO	11/23/2026
DRO220309C	Carbon Scan STD-Marker					MARKER	7/13/2026
DRO220309D	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
15087189	CCV_0311HP40	HC-8015-DRO-	CCV		3/11/2022 3:39:5	1	R376066		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		5.14298926		5	0	0	0.0513	0.3	0	103%	80	120	0%	
n-Triacontane	S	mg/L		0.213753		0.2	0	0	0.00054	0.002	0	107%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15087190	CCV_0311HP40	HC-8015-DRO-	CCV		3/11/2022 4:24:5	1	R376066		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		15.15422		15	0	0	0.0358	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.71544		15	0	0	0.0782	0.3	50	105%	80	120	0%	
o-Terphenyl	S	mg/L		0.2268573		0.2	0	0	0.000531	0.002	0	113%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15087191	LCS-164312	HC-8015-DRO-	LCS-DOD		3/11/2022 5:56:1	1	164312	3/8/2022 11:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
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Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087191	LCS-164312	HC-8015-DRO-	LCS-DOD		3/11/2022 5:56:1	1	164312	3/8/2022 11:	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		11.46541		15	0	0	0.0358	0.3	0	76%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.16907		15	0	0	0.0782	0.3	0	81%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1689057		0.2	0	0	0.000531	0.002	0	84%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087192	MB-164312	HC-8015-DRO-	MBLK		3/11/2022 6:41:3	1	164312	3/8/2022 11:	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	0.0358	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0513	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0782	0.15	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.075		0.1	0	0	0.00054	0.002	0	75%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1528418		0.2	0	0	0.000531	0.002	0	76%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087193	B22030433-053	HC-8015-DRO-	SAMP		3/11/2022 7:27:0	1	164312	3/8/2022 11:	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	0.0344396	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0493506	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0752284	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.079		0.0962	0	0	0.0005195	0.001924	0	82%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1623485		0.1924	0	0	0.0005108	0.001924	0	84%	56	125	0%	
TEH (SGT-Oil Range)	X	mg/L		0		0	0	0	0.0493506	0.2886	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					
15087194	B22030433-053	HC-8015-DRO-	MS-DOD		3/11/2022 8:12:2	1	164312	3/8/2022 11:	2E+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		11.68788		14.28	0	0	0.0340816	0.3	0	82%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.44886		14.28	0	0	0.0744464	0.3	0	87%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1588895		0.1904	0	0	0.0005055	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					
15087195	B22030433-053	HC-8015-DRO-	MSD-DOD		3/11/2022 8:57:3	1	164312	3/8/2022 11:	2E+07	2E+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		11.99983		14.565	0	11.68788	0.0347618	0.3	0	82%	36	132	3%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.78426		14.565	0	12.44886	0.0759322	0.3	0	88%	60	132	3%	
o-Terphenyl (SGT)	S	mg/L		0.1689231		0.1942	0	0	0.0005156	0.002	0	87%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087196	B22030433-058	HC-8015-DRO-	SAMP		3/11/2022 10:27:	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.075		0.0952	0	0	0.0005141	0.001904	0	79%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1599841		0.1904	0	0	0.0005055	0.001904	0	84%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087197	B22030433-059	HC-8015-DRO-	SAMP		3/11/2022 11:12:	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.078		0.0952	0	0	0.0005141	0.001904	0	82%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1575823		0.1904	0	0	0.0005055	0.001904	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					
15087198	B22030502-001	HC-8015-DRO-	SAMP		3/11/2022 11:57:	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.079		0.0952	0	0	0.0005141	0.001904	0	83%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1627769		0.1904	0	0	0.0005055	0.001904	0	85%	56	125	0%	

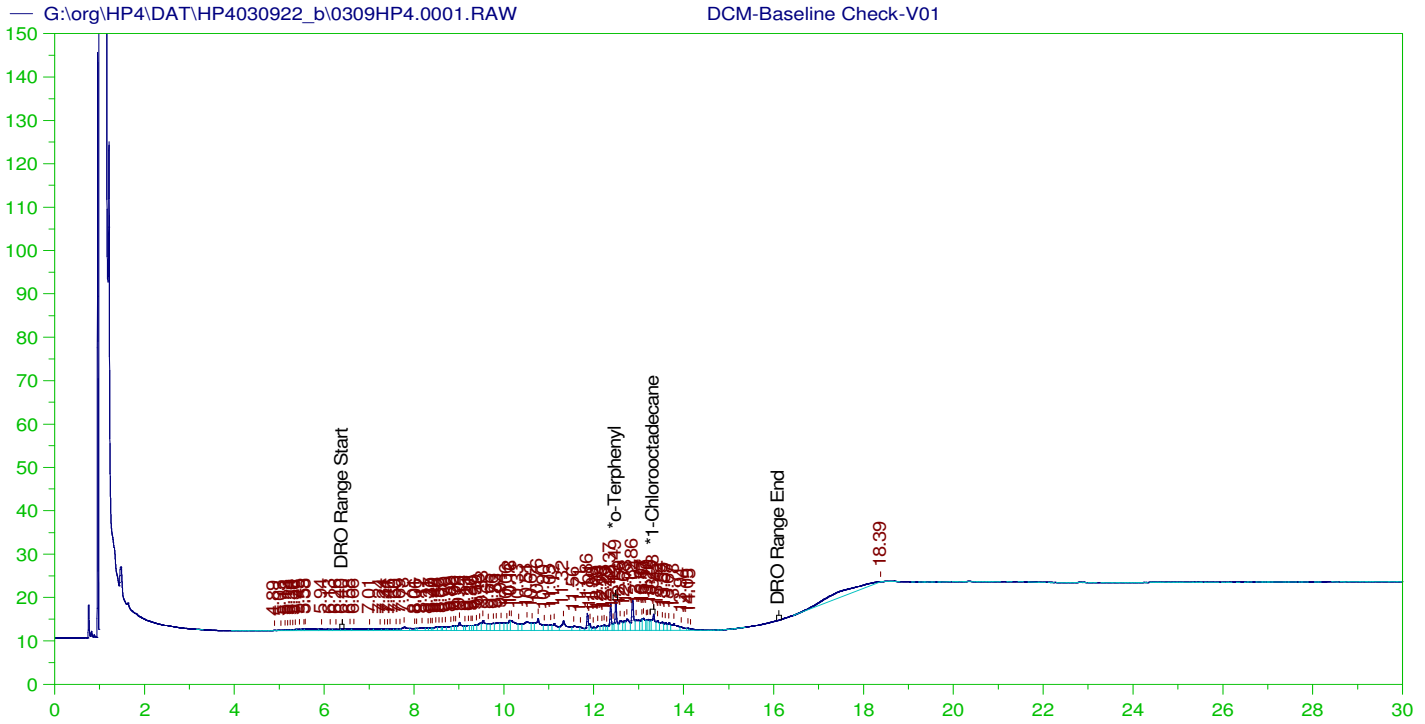
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087199	B22030502-011	HC-8015-DRO-	SAMP		3/12/2022 12:42:	1	164312	3/8/2022 11:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0		0	0	0	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.082		0.0952	0	0	0.0005141	0.001904	0	86%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1710339		0.1904	0	0	0.0005055	0.001904	0	90%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087200	B22030502-006	HC-8015-DRO-	SAMP		3/12/2022 1:27:5	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.081		0.0952	0	0	0.0005141	0.001904	0	85%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1659755		0.1904	0	0	0.0005055	0.001904	0	87%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087201	CCV_0311HP41	HC-8015-DRO-	CCV		3/12/2022 2:58:2	1	R376066				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		5.07833545		5	0	0	0.0513	0.3	0	102%	80	120	0%	
n-Triacontane	S	mg/L		0.2136674		0.2	0	0	0.00054	0.002	0	107%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087202	CCV_0311HP42	HC-8015-DRO-	CCV		3/12/2022 3:43:4	1	R376066				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		14.73967		15	0	0	0.0358	0.3	0	98%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.24974		15	0	0	0.0782	0.3	50	102%	80	120	0%	
o-Terphenyl	S	mg/L		0.219906		0.2	0	0	0.000531	0.002	0	110%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087203	B22030502-016	HC-8015-DRO-	SAMP		3/12/2022 5:14:0	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.08		0.0952	0	0	0.0005141	0.001904	0	84%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L	0.1647849			0.1904	0	0	0.0005055	0.001904	0	87%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087204	B22030433-043	HC-8015-DRO-	SAMP		3/12/2022 5:59:1	1	164312	3/8/2022 11:	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	0.0344396	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0493506	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0		0	0	0	0.0752284	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.078		0.0962	0	0	0.0005195	0.001924	0	81%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L	0.1627658			0.1924	0	0	0.0005108	0.001924	0	85%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087205	B22030433-012	HC-8015-DRO-	SAMP		3/12/2022 6:44:2	1	164312	3/8/2022 11:	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		0.4644662			0	0	0	0.0344396	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t A	mg/L		0			0	0	0	0.0493506	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L		0.4768604			0	0	0	0.0752284	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.077		0.0962	0	0	0.0005195	0.001924	0	80%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L	0.1590489			0.1924	0	0	0.0005108	0.001924	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					
15087206	B22030433-007	HC-8015-DRO-	SAMP		3/12/2022 7:29:2	1	164312	3/8/2022 11:	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.079		0.0952	0	0	0.0005141	0.001904	0	83%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087206	B22030433-007	HC-8015-DRO-	SAMP		3/12/2022 7:29:2	1	164312	3/8/2022 11:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl (SGT)	S	mg/L		0.1634582		0.1904	0	0	0.0005055	0.001904	0	86%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087207	B22030502-021	HC-8015-DRO-	SAMP		3/12/2022 8:59:2	1	164312	3/9/2022 9:2	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	0.0344396	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0.07175094		0	0	0	0.0493506	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT A	mg/L			0.07532304		0	0	0	0.0752284	0.3	0	0%	0	0	0%	J
n-Triacontane (SGT)	S	mg/L		0.084		0.0962	0	0	0.0005195	0.001924	0	87%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1837178		0.1924	0	0	0.0005108	0.001924	0	95%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087208	B22030433-023	HC-8015-DRO-	SAMP		3/12/2022 9:44:3	1	164312	3/8/2022 11:	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			0.06517097		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.07		0.0952	0	0	0.0005141	0.001904	0	74%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1489968		0.1904	0	0	0.0005055	0.001904	0	78%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087209	B22030502-026	HC-8015-DRO-	SAMP		3/12/2022 10:29:	1	164312	3/9/2022 9:2	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	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.086		0.0952	0	0	0.0005141	0.001904	0	90%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1867502		0.1904	0	0	0.0005055	0.001904	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					
15087210	B22030433-017	HC-8015-DRO-	SAMP		3/12/2022 11:15:	1	164312	3/8/2022 11:	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		0.03868674		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.079		0.0952	0	0	0.0005141	0.001904	0	83%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1667713		0.1904	0	0	0.0005055	0.001904	0	88%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087211	B22030433-018	HC-8015-DRO-	SAMP		3/12/2022 12:45:	1	164312	3/8/2022 11:	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		0.03985291		0	0	0	0.0358	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0513	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0782	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.092		0.1	0	0	0.00054	0.002	0	92%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.189937		0.2	0	0	0.000531	0.002	0	95%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087212	CCV_0311HP43	HC-8015-DRO-	CCV		3/12/2022 2:14:4	1	R376066				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		4.97183545		5	0	0	0.0513	0.3	0	99%	80	120	0%	
n-Triacontane	S	mg/L		0.2102301		0.2	0	0	0.00054	0.002	0	105%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087213	CCV_0311HP43	HC-8015-DRO-	CCV		3/12/2022 2:59:3	1	R376066				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		14.90122		15	0	0	0.0358	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.46183		15	0	0	0.0782	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.2233728		0.2	0	0	0.000531	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					
15087214	LCS-164312-RR	HC-8015-DRO-	LCS-DOD		3/12/2022 4:29:0	1	164312	3/8/2022 11:	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		3.99778795		5	0	0	0.0513	0.3	0	80%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.076		0.1	0	0	0.00054	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					
15087215	B22030433-053	HC-8015-DRO-	MS-DOD		3/12/2022 6:00:0	1	164312	3/8/2022 11:	2E+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		4.15656567		4.81	0	0	0.0493506	0.3	0	86%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.079		0.0962	0	0	0.0005195	0.002	0	82%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087216	B22030433-053	HC-8015-DRO-	MSD-DOD		3/12/2022 7:31:3	1	164312	3/8/2022 11:	2E+07	2E+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		4.35901976		4.855	0	4.1565657	0.0498123	0.3	0	90%	41	113	5%	
n-Triacontane (SGT)	S	mg/L		0.084		0.0971	0	0	0.0005243	0.002	0	87%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087217	CCV_0311HP44	HC-8015-DRO-	CCV		3/12/2022 9:02:5	1	R376066				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		4.96908594		5	0	0	0.0513	0.3	0	99%	80	120	0%	
n-Triacontane	S	mg/L		0.2078229		0.2	0	0	0.00054	0.002	0	104%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15087218	CCV_0311HP44	HC-8015-DRO-	CCV		3/12/2022 9:48:3	1	R376066				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		15.14421		15	0	0	0.0358	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.70898		15	0	0	0.0782	0.3	50	105%	80	120	0%	
o-Terphenyl	S	mg/L		0.2269576		0.2	0	0	0.000531	0.002	0	113%	80	120	0%	



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

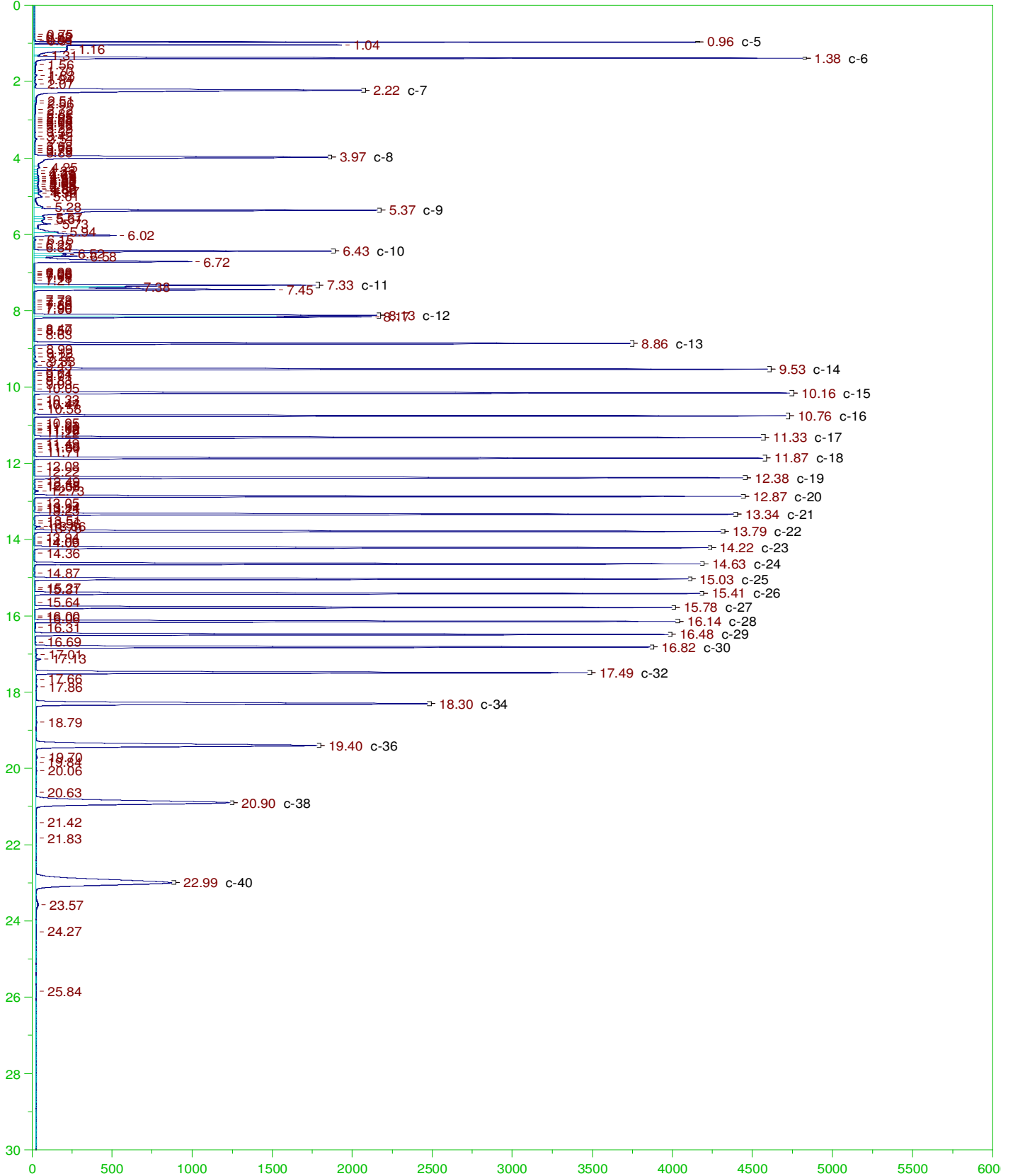
Sample Name: DCM-Baseline Check-V01
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0001.RAW
 Date & Time Acquired: 3/9/2022 8:30:20 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
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 Sample Weight: 1 Dilution: 1 S.A.: 1

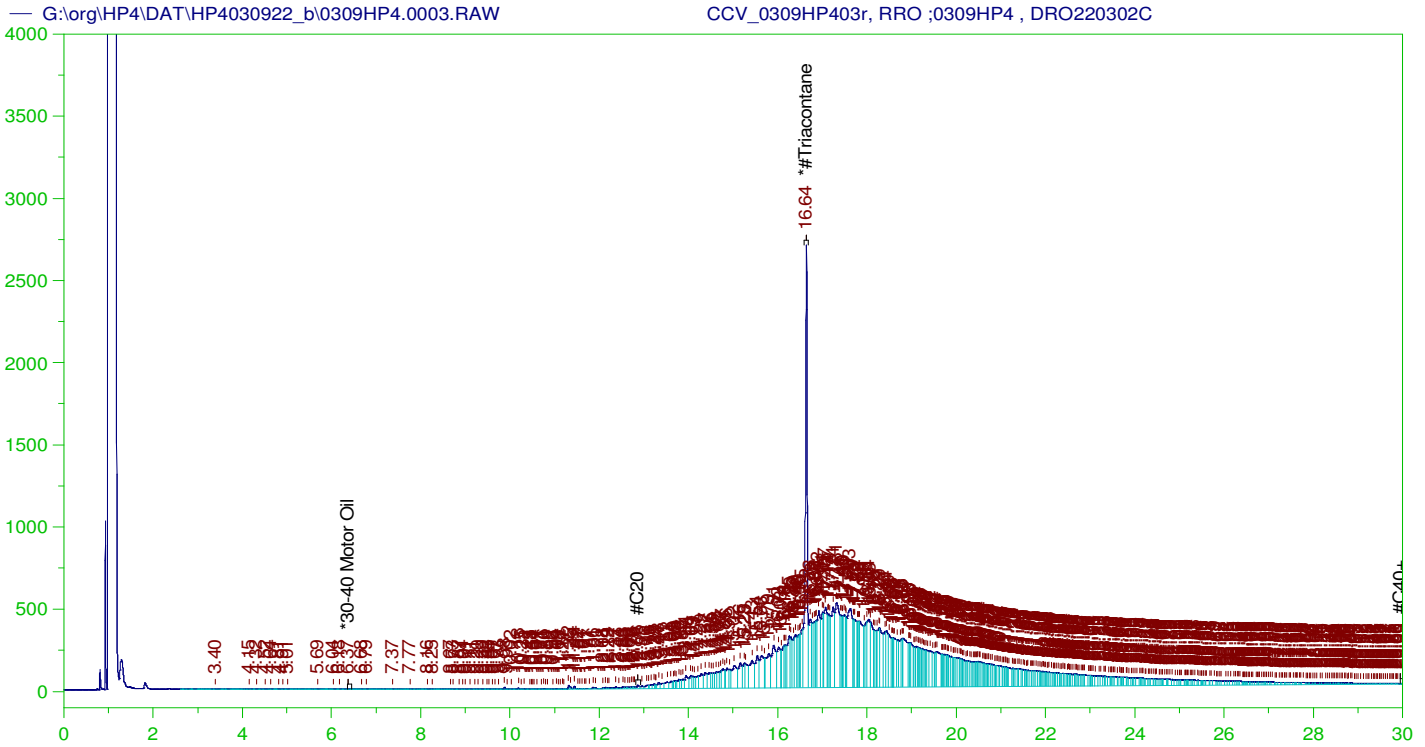
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.486	200.	.588	.29	-
*1-Chlorooctadecane	13.329	200.	.493	.25	-

DRO Area:547837.9 DRO Amount: 18.6509
 TEH Area:671639.1 TEH Amount: 22.86565





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP403r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0003.RAW
 Date & Time Acquired: 3/9/2022 10:04:25 AM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.638	500.	319.852	63.97	-

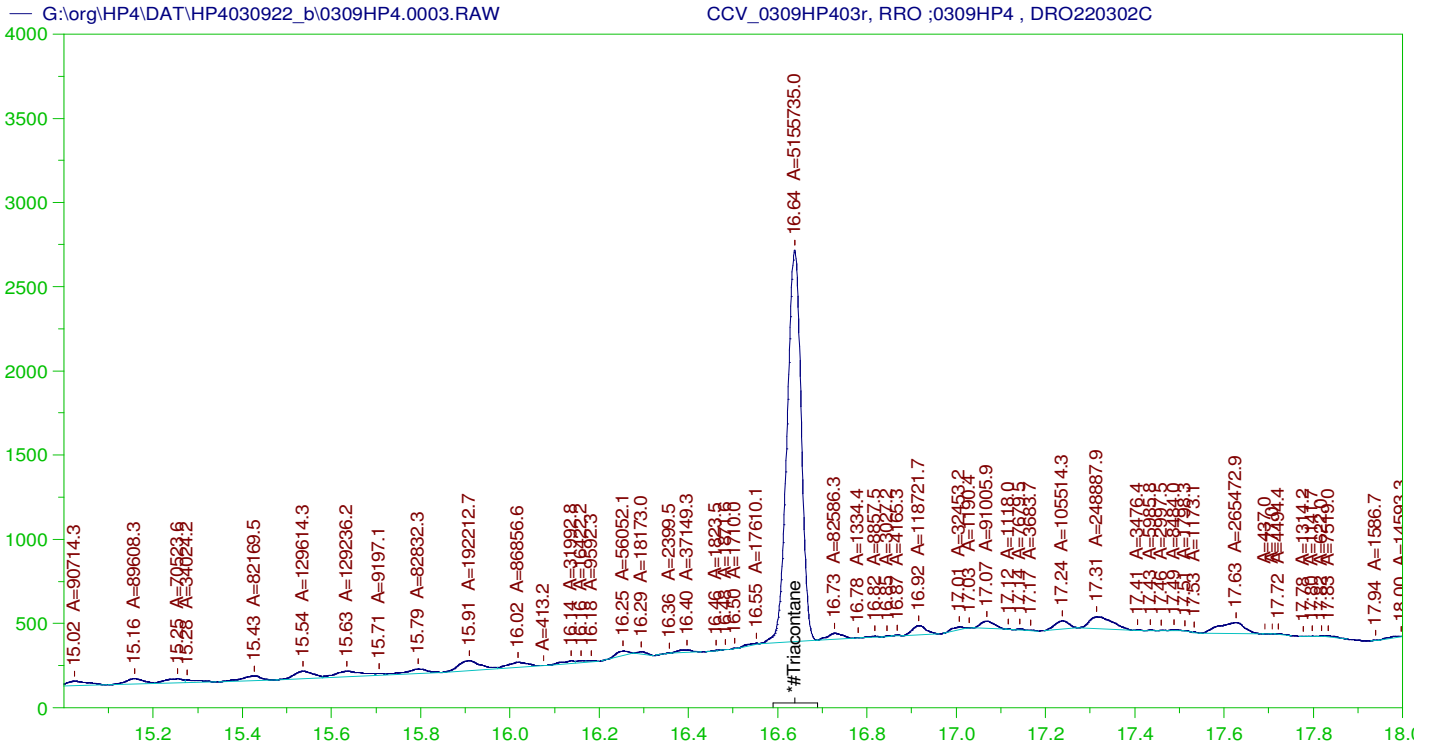
~~RRO~~ TEH(Oil Range) Area:1.224344E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4991.299

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0003.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.022	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.638	200.	319.852	159.93	75-125

JLB 03/11/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP403r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0003.RAW
 Date & Time Acquired: 3/9/2022 10:04:25 AM
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 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

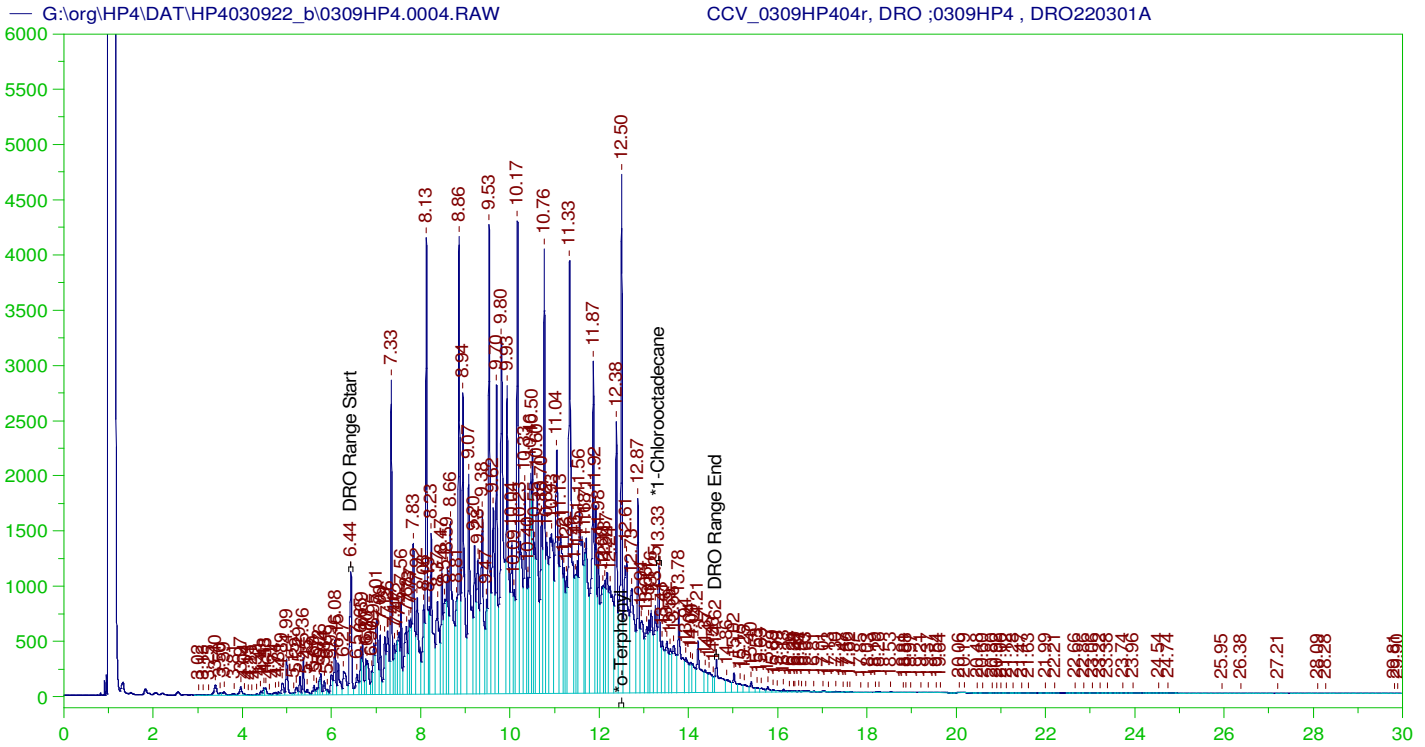
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.638	500.	206.446	41.29	-

RRO Area:3490791 RRO AMOUNT: 142.3096

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0003.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.022	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.638	200.	206.446	103.22	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP404r, DRO ;0309HP4 , DRO220301A
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0004.RAW
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.499	200.	375.727	187.86
*1-Chlorooctadecane	13.332	200.	112.219	56.11

DRO Area: 4.375402E+08 DRO Amount: 14895.86
 TEH Area: 4.526238E+08 TEH Amount: 15409.37

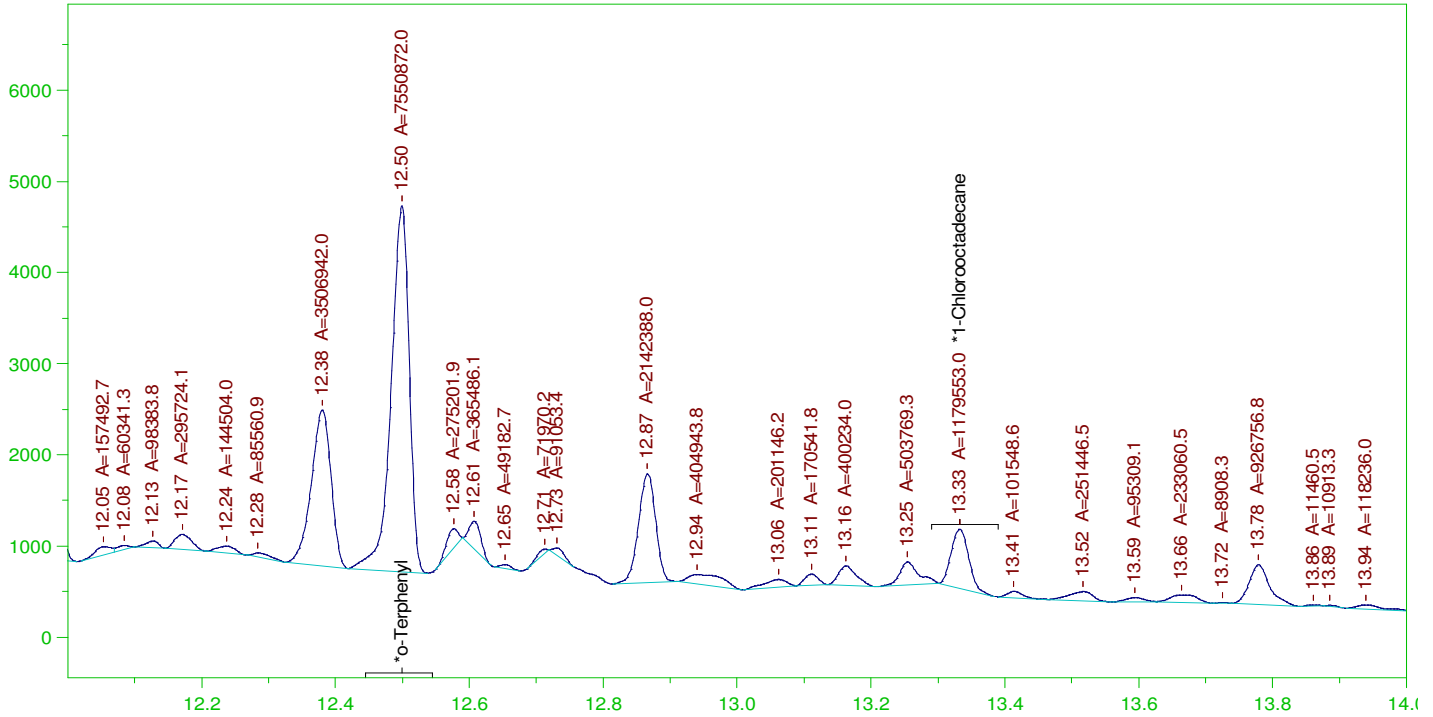
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COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15409.37	102.73	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.499	200.	375.727	187.86	85-115
*1-Chlorooctadecane	13.332	200.	112.219	56.11	85-115

G:\org\HP4\DAT\HP4030922_b\0309HP4.0004.RAW

CCV_0309HP404r, DRO ;0309HP4 , DRO220301A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP404r, DRO ;0309HP4 , DRO220301A
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0004.RAW
 Date & Time Acquired: 3/9/2022 10:49:31 AM
 Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

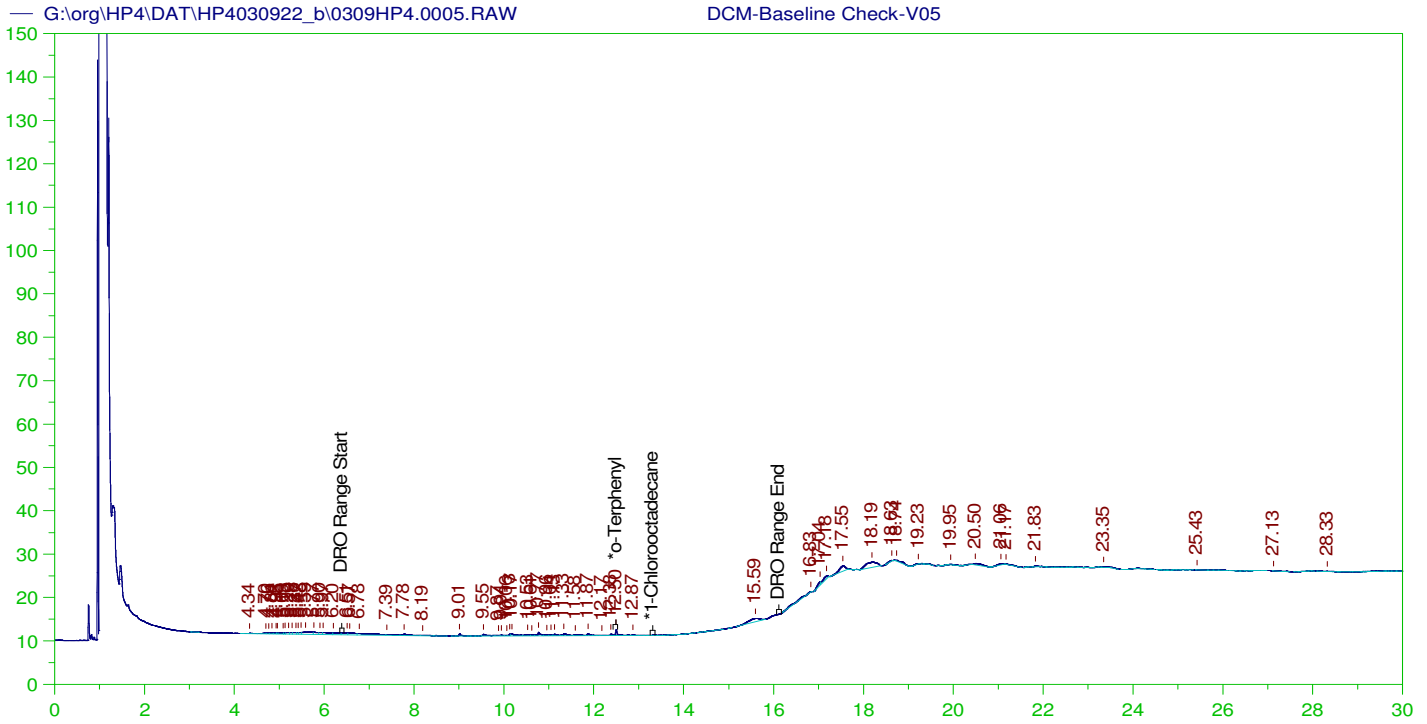
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.499	200.	226.619	113.31
*1-Chlorooctadecane	13.332	200.	35.401	17.7

DRO Area: 2.133022E+08 DRO Amount: 7261.776
 TEH Area: 2.232416E+08 TEH Amount: 7600.158

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0004.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7600.16	50.67	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.499	200.	226.619	113.31	85-115
*1-Chlorooctadecane	13.332	200.	35.401	17.7	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

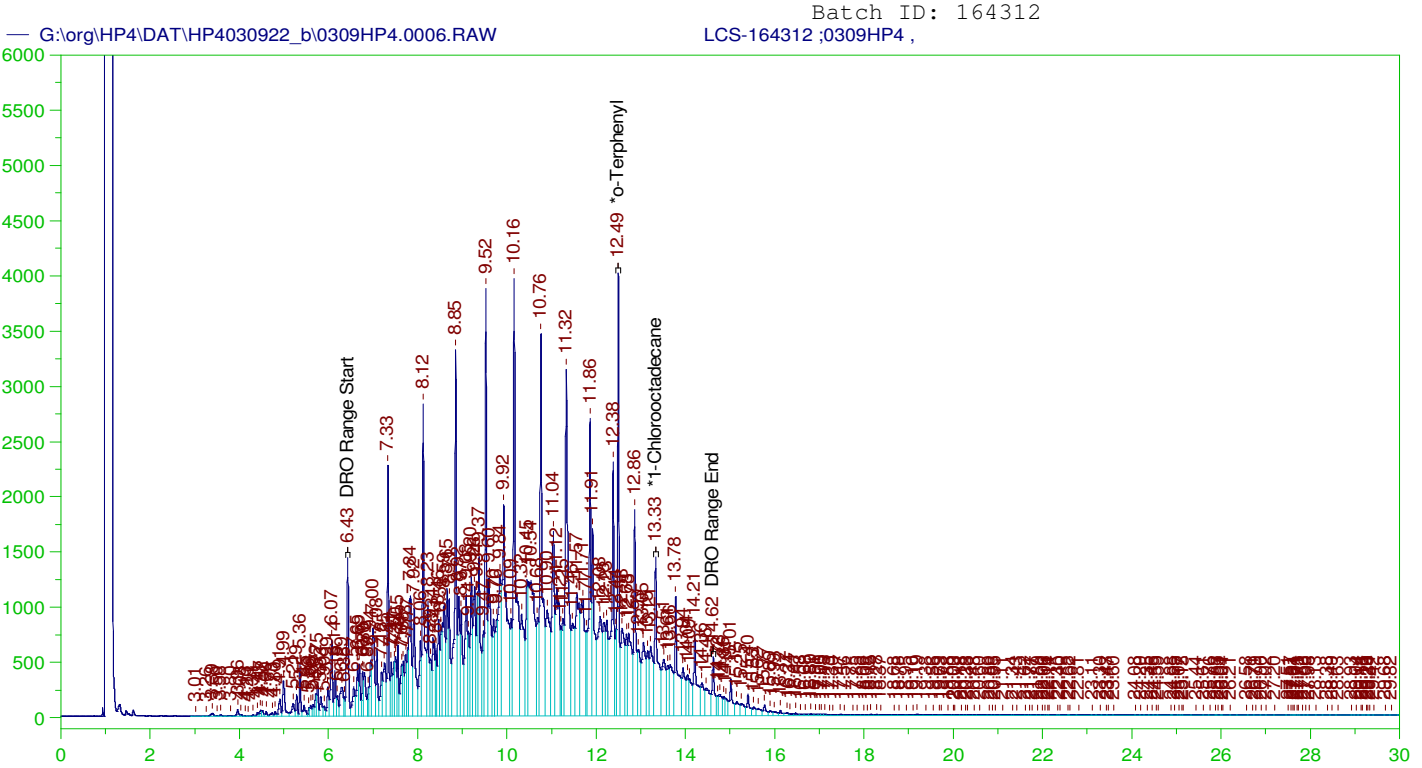
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 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.496	200.	.129	.06
*1-Chlorooctadecane	29.943	200.	.	.

DRO Area:80433.8 DRO Amount: 2.738333
 TEH Area:203555.2 TEH Amount: 6.929946



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-164312 ;0309HP4 ,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0006.RAW
Date & Time Acquired: 3/9/2022 12:20:14 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-ON-L%.met
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Sample Weight: 1000 Dilution: 1 S.A.: 1

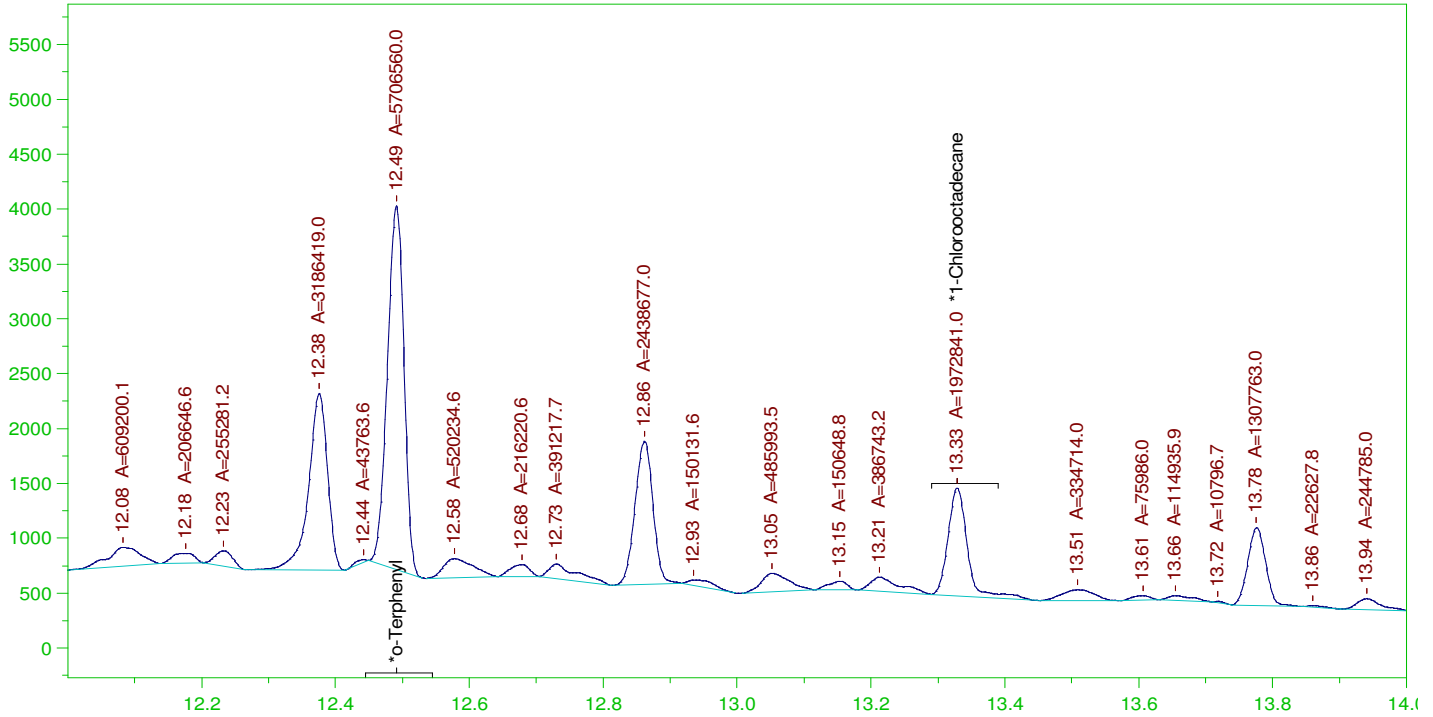
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.491	.2	.279	139.46	-
*1-Chlorooctadecane	13.329	.2	.189	94.56	-

DRO Area: 3.671538E+08 DRO Amount: 12.49959
TEH Area: 3.931302E+08 TEH Amount: 13.38394

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LCS-164312 ;0309HP4 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

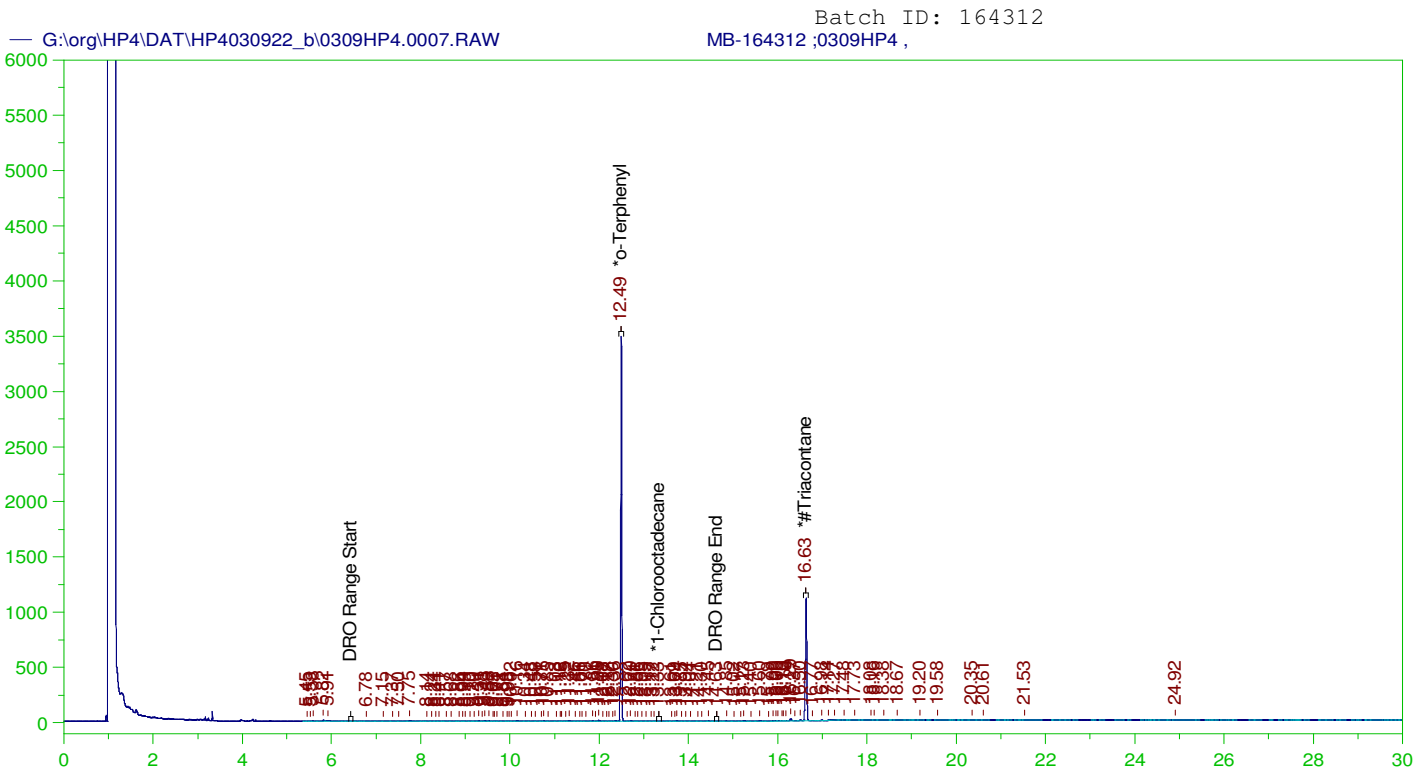
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Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.491	.2	.171	85.63	-
*1-Chlorooctadecane	13.329	.2	.059	29.6	-

DRO Area: 1.618357E+08 DRO Amount: 5.509624
TEH Area: 1.74655E+08 TEH Amount: 5.946052



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-164312 ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0007.RAW
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 Sample Weight: 1000 Dilution: 1 S.A.: 1

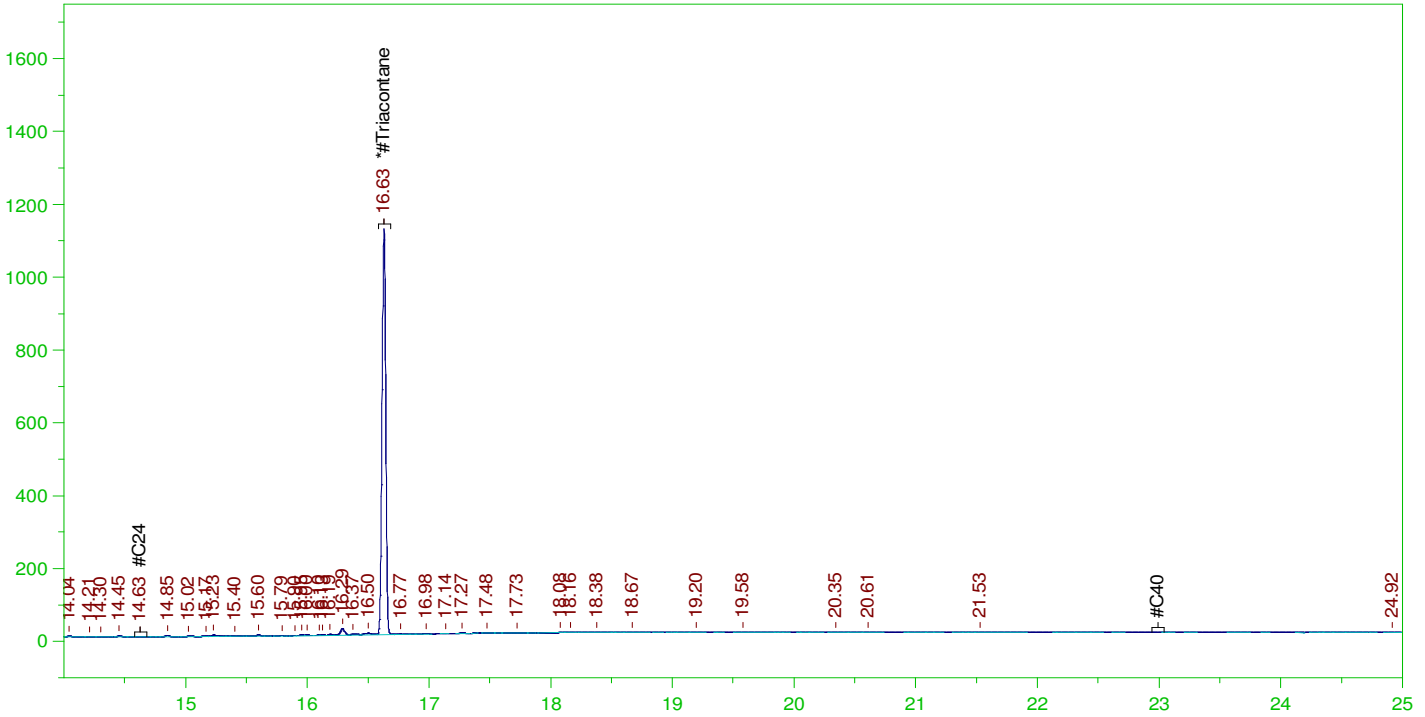
Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.2	.179	89.36	-
*1-Chlorooctadecane	13.326	.2	.18		-
*#Triacontane	16.63	.2	.095	47.33	-

DRO Area:395392.1 DRO Amount: 1.346095E-02
 TEH Area:667875.4 TEH Amount: 2.273752E-02

G:\org\HP4\DAT\HP4030922_b\0309HP4.0007.RAW

MB-164312 ;0309HP4 ,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-164312 ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0007.RAW
 Date & Time Acquired: 3/9/2022 1:05:31 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

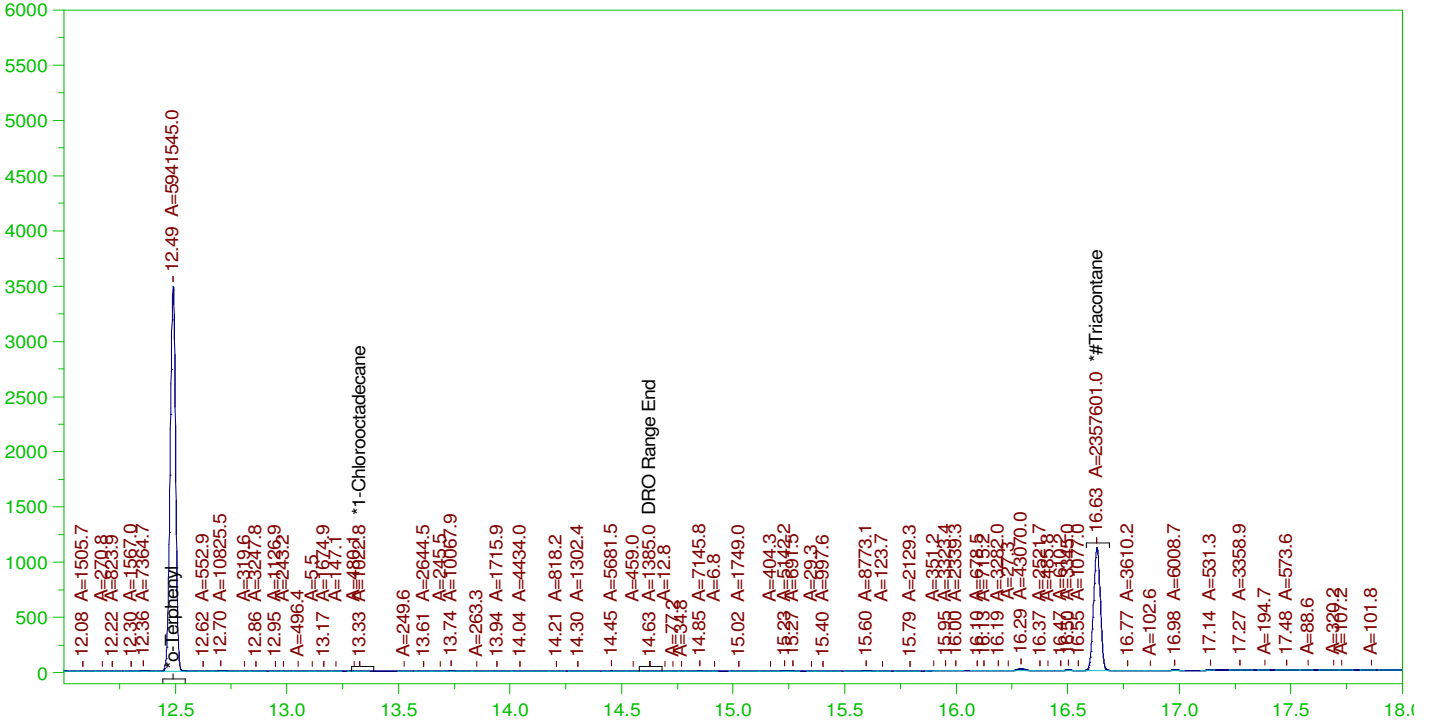
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.63	.5	.095	18.93

RRO Area:173968.1 RRO AMOUNT: 7.092182E-03

Batch ID: 164312

MB-164312 ;0309HP4 ,

G:\org\HP4\DAT\HP4030922_b\0309HP4.0007.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-164312 ;0309HP4 ,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0007.RAW
Date & Time Acquired: 3/9/2022 1:05:31 PM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

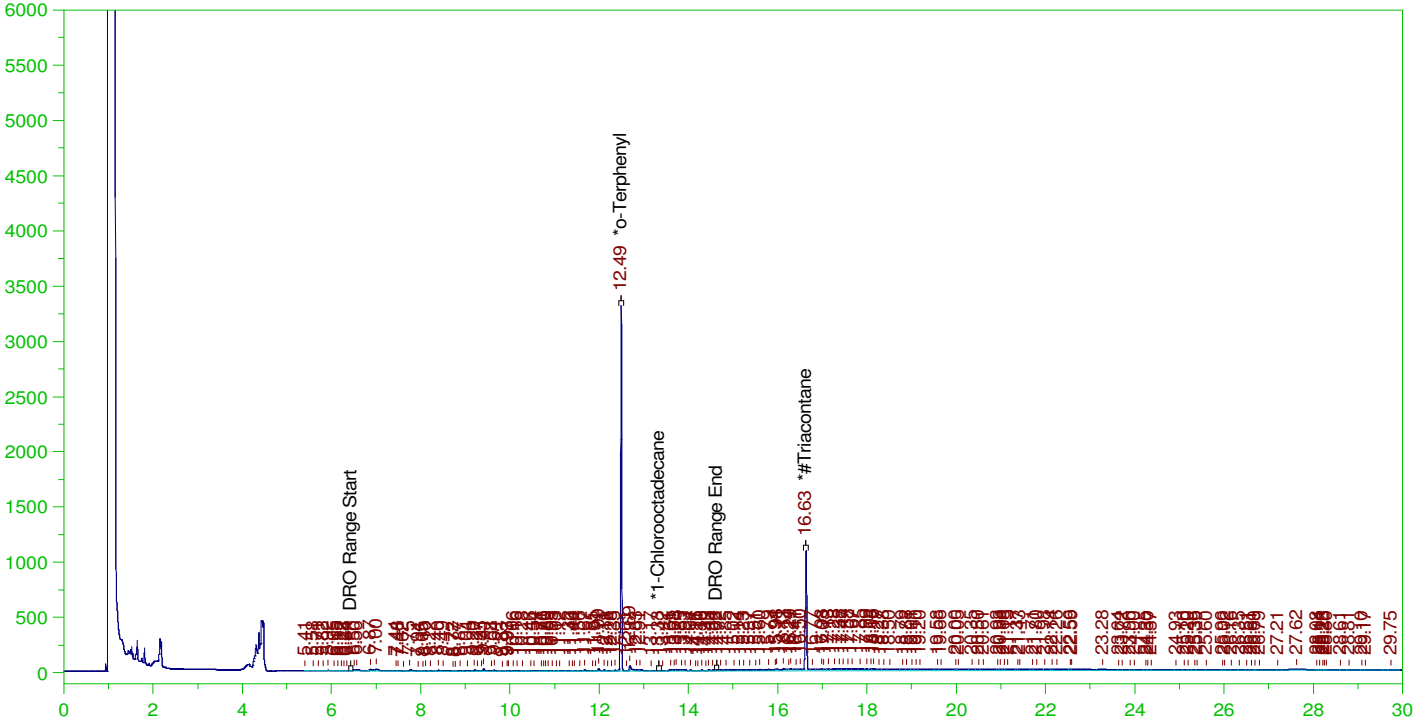
Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.49	.2	.178	89.16
*1-Chlorooctadecane	13.326	.2	.02	-
*#Triacontane	16.63	.2	.094	47.2

DRO Area:287428.6 DRO Amount: 9.785378E-03
TEH Area:869276.4 TEH Amount: 2.959412E-02

ERH2580 (RHMW05 m/MS/MSD volumes)
G:\org\HP4\DAT\HP4030922_b\0309HP4.0008.RAW

Batch ID: 164312
B22030433-053C ;0309HP4, \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0008.RAW
Date & Time Acquired: 3/9/2022 1:50:53 PM
Method File: G:\Org\HP4\methods\D3_8015-030908-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

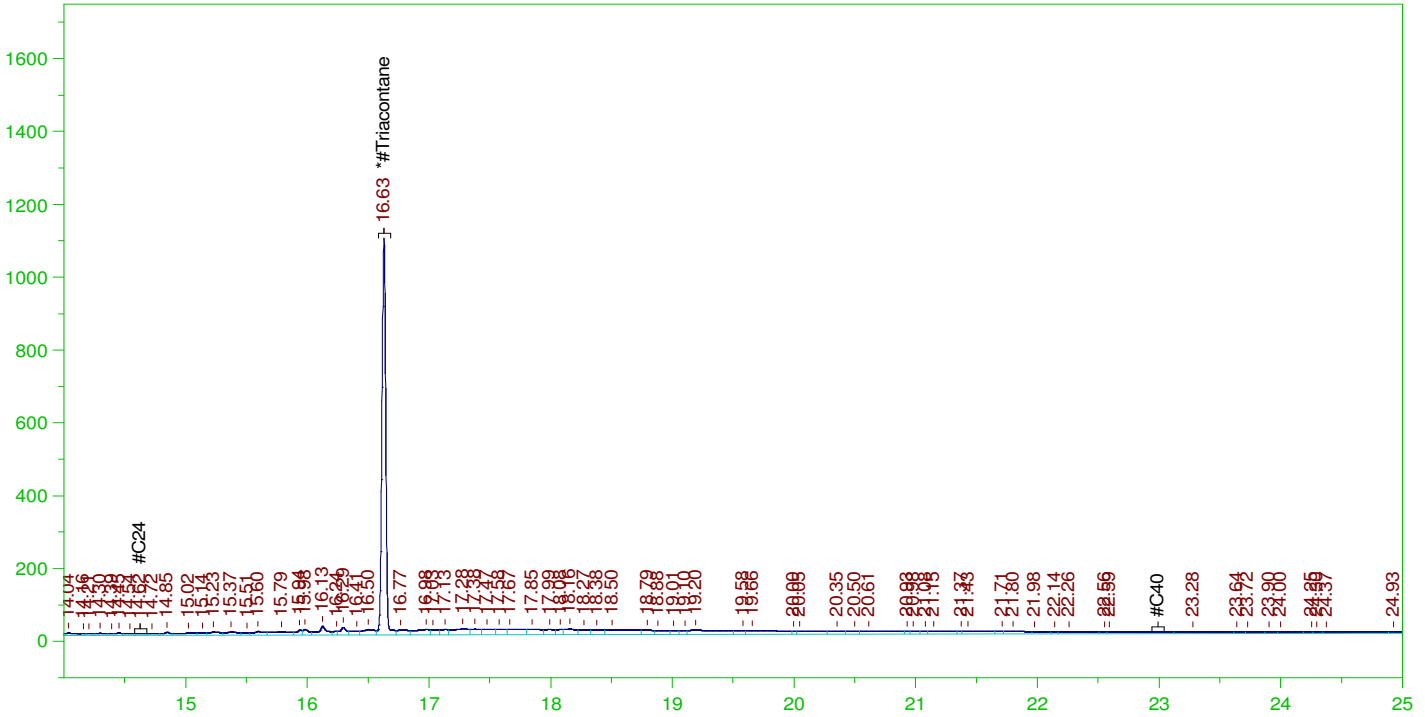
Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.192	.163	84.72	-
*1-Chlorooctadecane	13.328	.192	.	.24	-
*#Triacontane	16.63	.192	.092	47.64	-

DRO Area:1506307 DRO Amount: 4.930916E-02
TEH Area:7115098 TEH Amount: 0.2329137

ERH2580 (RHMW05 m/MS/MSD volumes)
G:\org\HP4\DAT\HP4030922_b\0309HP4.0008.RAW

Batch ID: 164312
B22030433-053C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-053C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0008.RAW
Date & Time Acquired: 3/9/2022 1:50:53 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S030908-AH-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

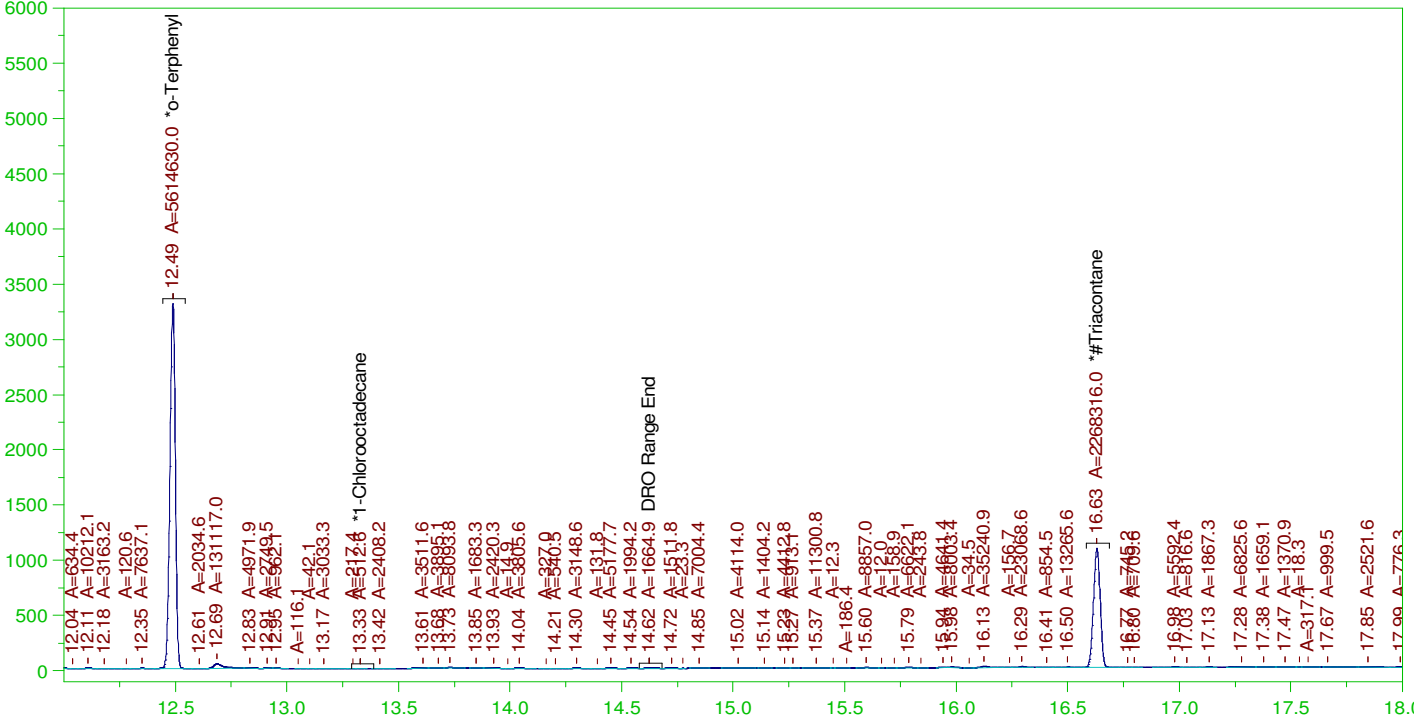
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.63	.481	.092	19.06

RRO Area:4495978 RRO AMOUNT: 0.1762386

ERH2580 (RHMW05 m/MS/MSD volumes)
G:\org\HP4\DAT\HP4030922_b\0309HP4.0008.RAW

Batch ID: 164312
B22030433-053C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0008.RAW
Date & Time Acquired: 3/9/2022 1:50:53 PM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

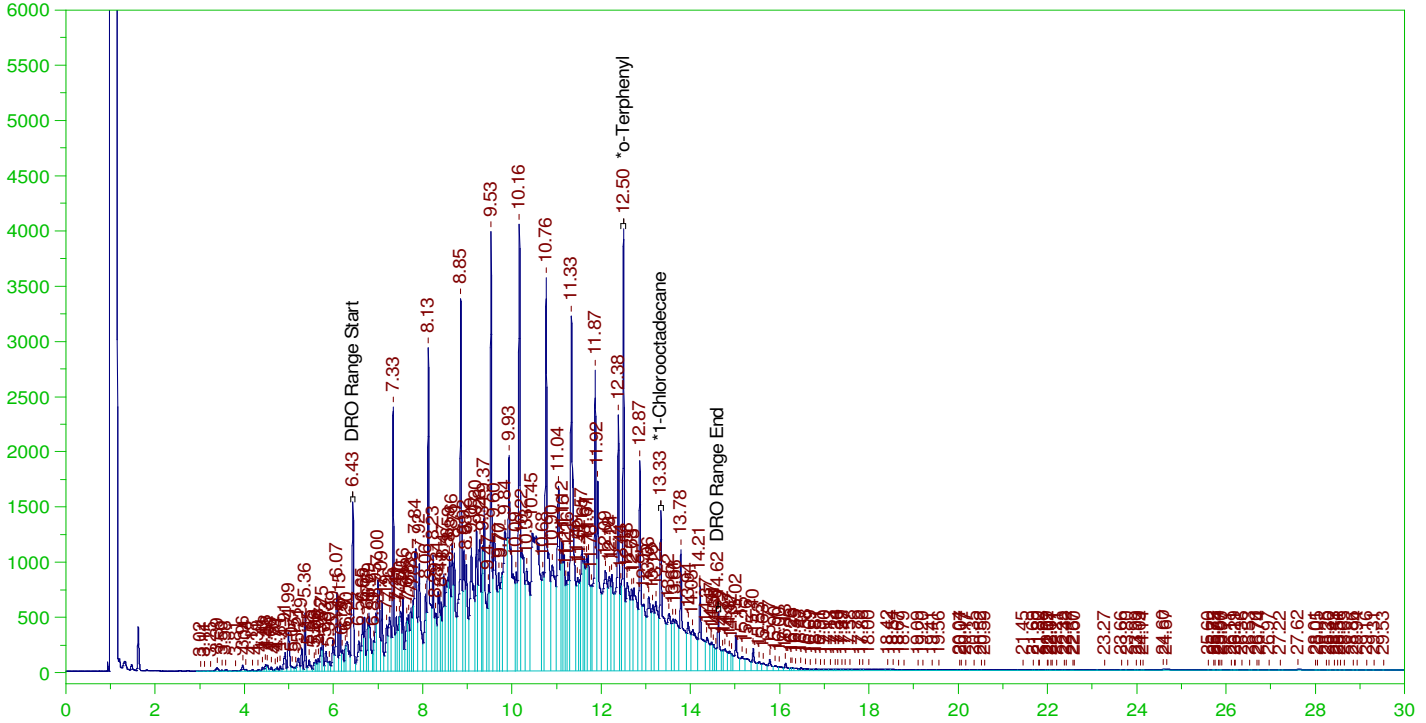
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.192	.162	84.25	-
*1-Chlorooctadecane	13.328	.192	.	.01	-
*#Triacontane	16.63	.192	.087	45.41	-

DRO Area: 959519.5 DRO Amount: 3.141001E-02
TEH Area: 5996911 TEH Amount: 0.1963097

Batch ID: 164312

B22030433-053CMS ;0309HP4 ,

G:\org\HP4\DAT\HP4030922_b\0309HP4.0009.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053CMS ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0009.RAW
 Date & Time Acquired: 3/9/2022 2:36:08 PM
 Method File: G:\Org\HP4\methods\D3_8015-C24-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

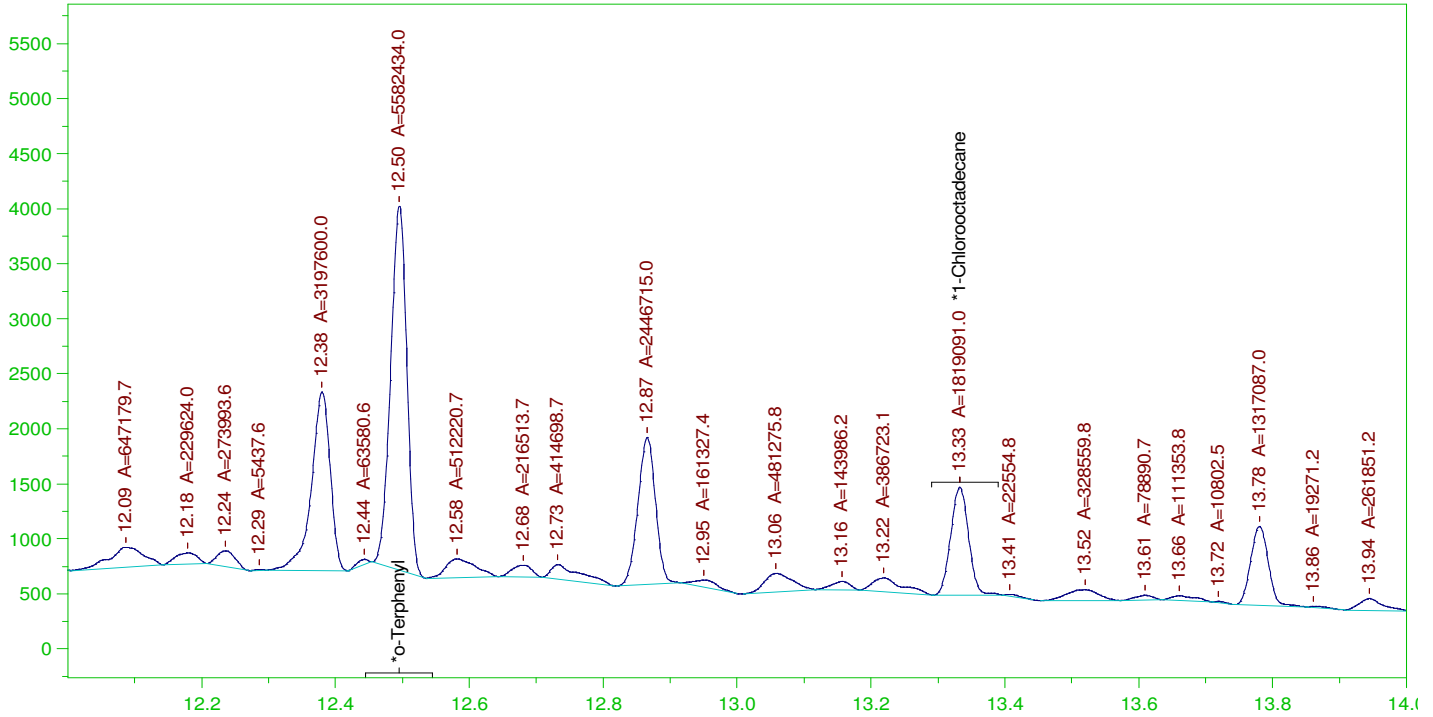
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.495	.19	.256	134.65	-
*1-Chlorooctadecane	13.332	.19	.18	94.73	-

DRO Area: 3.696701E+08 DRO Amount: 11.98595
 TEH Area: 3.968772E+08 TEH Amount: 12.8681

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0009.RAW

B22030433-053CMS ;0309HP4 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053CMS ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0009.RAW
 Date & Time Acquired: 3/9/2022 2:36:08 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

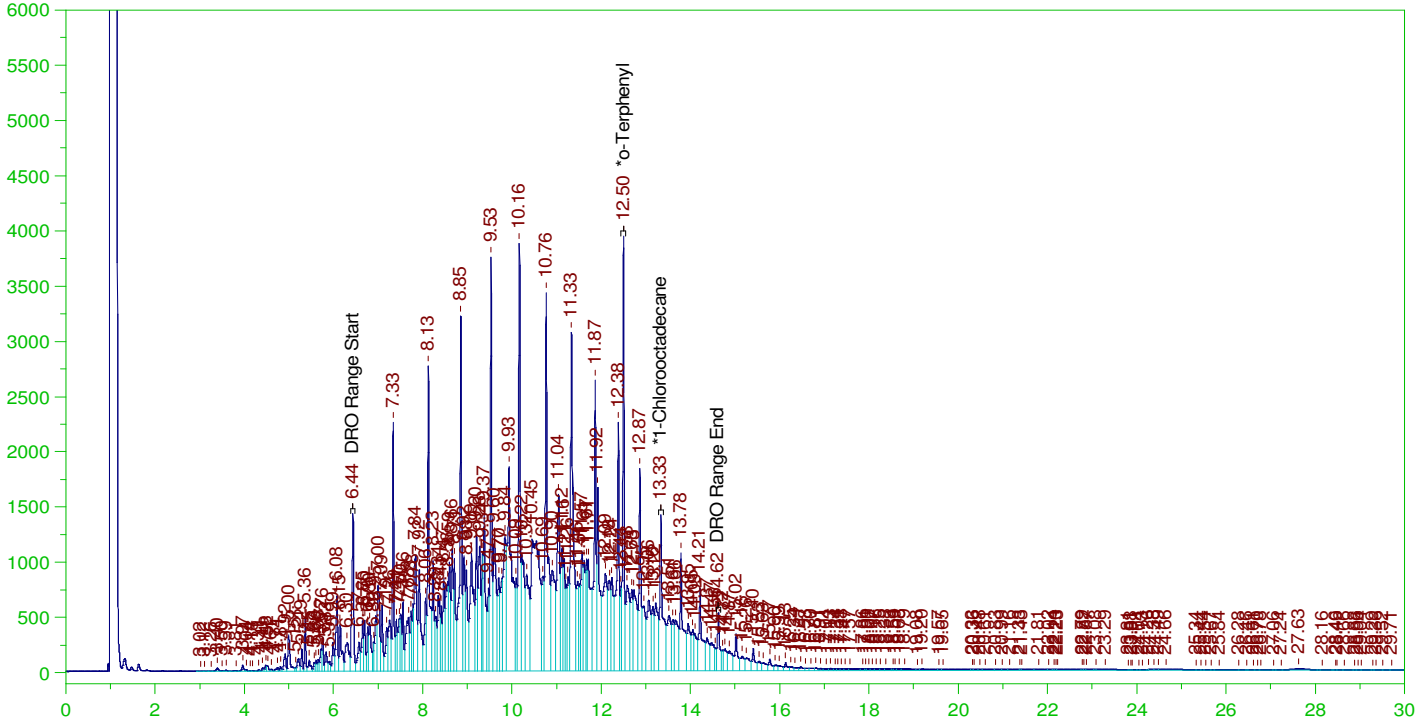
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.495	.19	.16	83.77
*1-Chlorooctadecane	13.332	.19	.052	27.3

DRO Area: 1.63798E+08 DRO Amount: 5.310886
 TEH Area: 1.772555E+08 TEH Amount: 5.747222

Batch ID: 164312

B22030433-053CMSD ;0309HP4 ,

G:\org\HP4\DAT\HP4030922_b\0309HP4.0010.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053CMSD ;0309HP4 ,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0010.RAW
Date & Time Acquired: 3/9/2022 3:21:15 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

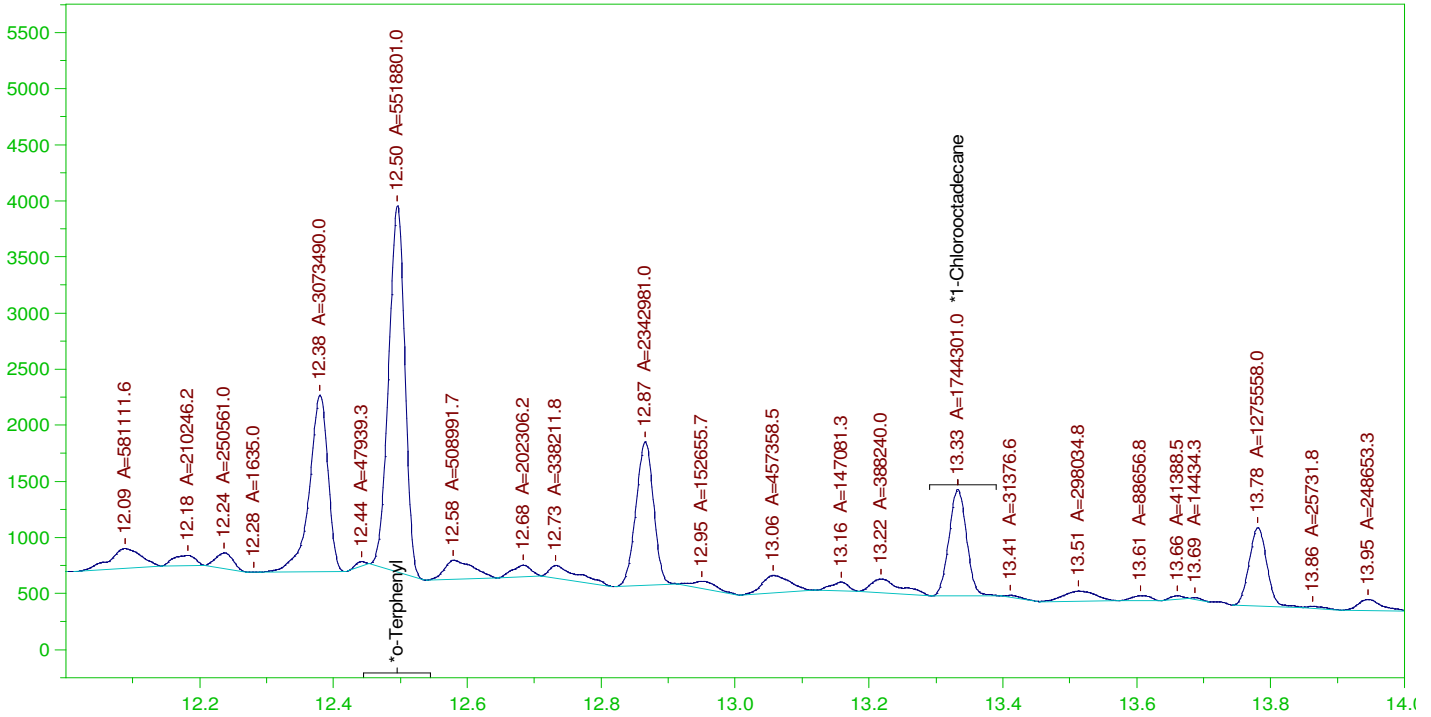
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.495	.194	.261	134.33	-
*1-Chlorooctadecane	13.332	.194	.179	91.95	-

DRO Area: 3.545305E+08 DRO Amount: 11.71828
TEH Area: 3.834233E+08 TEH Amount: 12.67327

G:\org\HP4\DAT\HP4030922_b\0309HP4.0010.RAW Batch ID: 164312
B22030433-053CMSD ;0309HP4 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

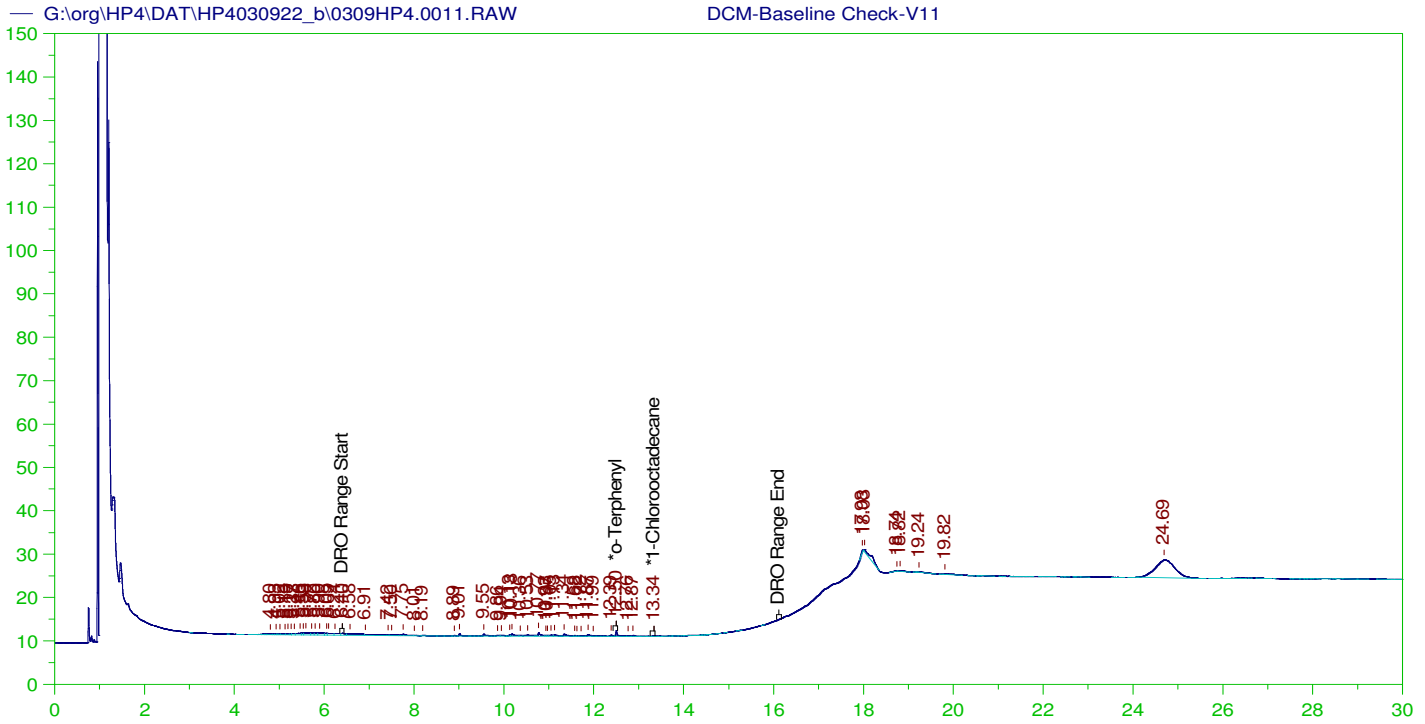
Sample Name: B22030433-053CMSD ;0309HP4 ,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0010.RAW
Date & Time Acquired: 3/9/2022 3:21:15 PM
Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.495	.194	.161	82.82
*1-Chlorooctadecane	13.332	.194	.051	26.18

DRO Area: 1.543368E+08 DRO Amount: 5.101289
TEH Area: 1.671516E+08 TEH Amount: 5.524855



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V11
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0011.RAW
 Date & Time Acquired: 3/9/2022 4:06:36 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.498	200.	.133	.07	-
*1-Chlorooctadecane	13.338	200.	.016	.01	-

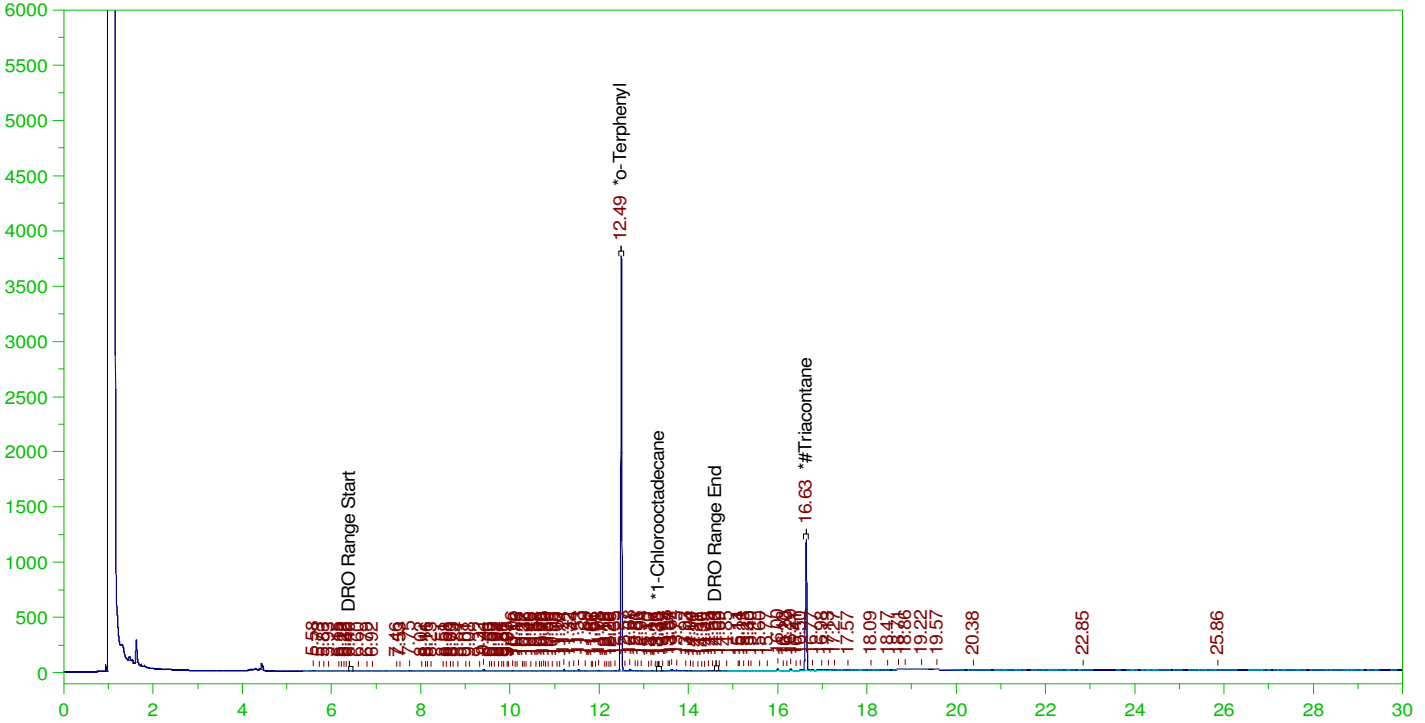
DRO Area:69977.27 DRO Amount: 2.382344
 TEH Area:255475.2 TEH Amount: 8.697537

ERH2618 (OWDFMW05A)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0012.RAW

B22030433-001C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-001C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0012.RAW
Date & Time Acquired: 3/9/2022 4:51:35 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.491	.19	.182	95.68	-
*1-Chlorooctadecane	13.332	.19	.	.03	-
*#Triacontane	16.631	.19	.095	50.03	-

DRO Area:486528.6
TEH Area:738963.8

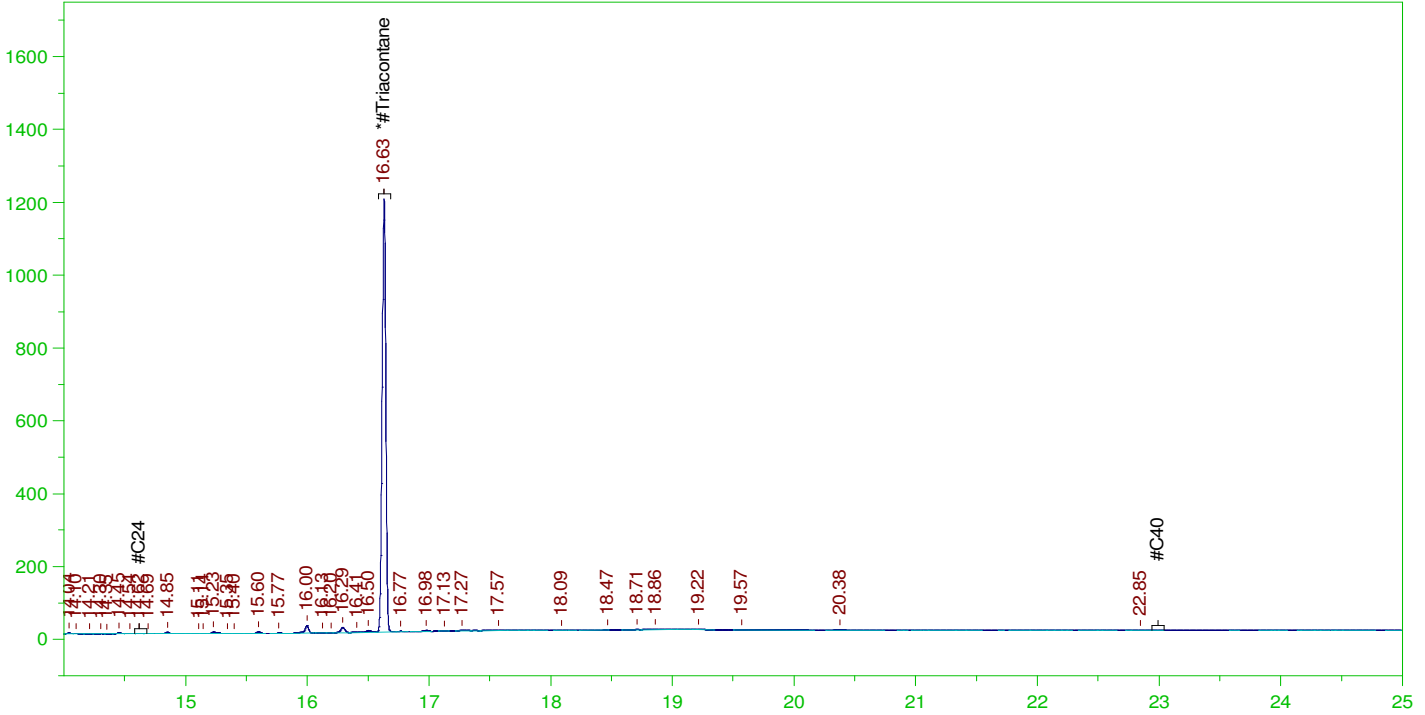
DRO Amount: 0.0157749
TEH Amount: 2.395971E-02

ERH2618 (OWDFMW05A)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0012.RAW

B22030433-001C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-001C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0012.RAW
Date & Time Acquired: 3/9/2022 4:51:35 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.631	.476	.095	20.01

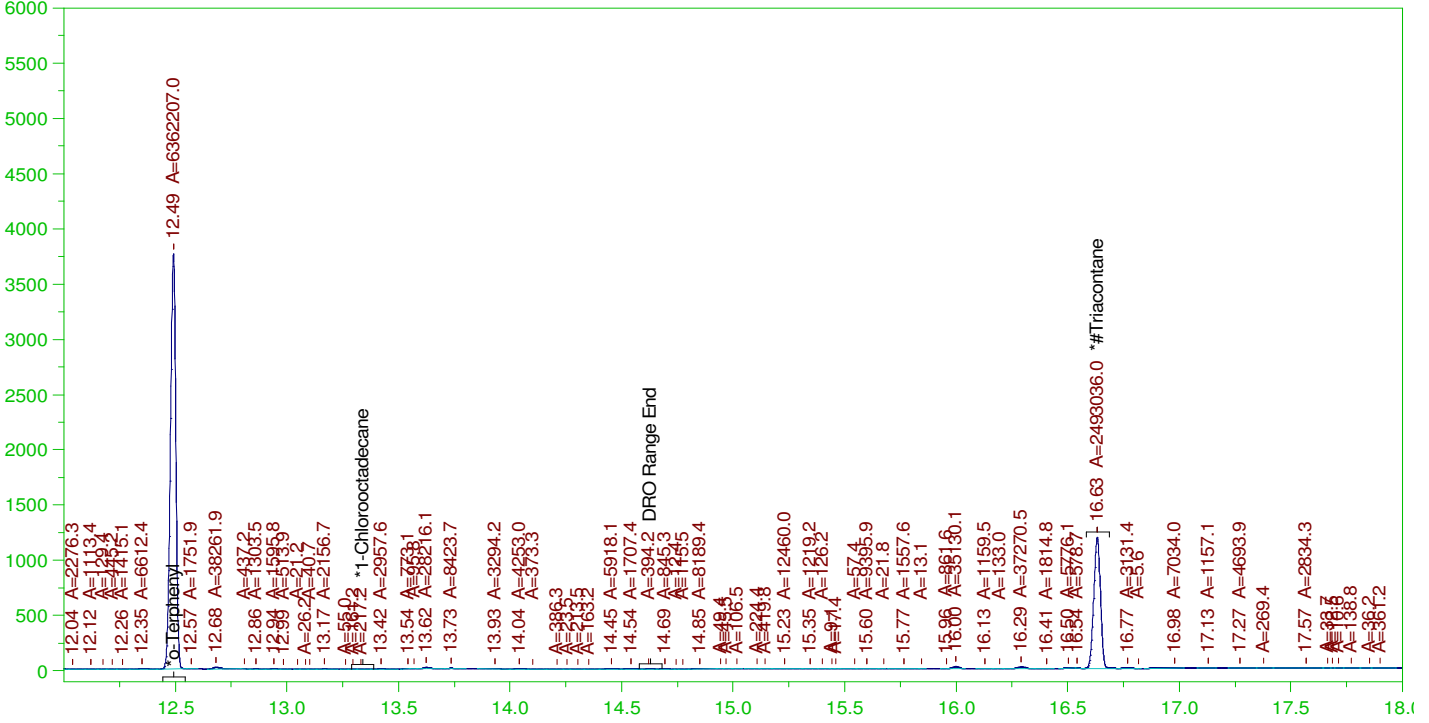
RRO Area:189387.2 RRO AMOUNT: 7.353116E-03

ERH2618 (OWDFMW05A)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0012.RAW

B22030433-001C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-001C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0012.RAW
Date & Time Acquired: 3/9/2022 4:51:35 PM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.491	.19	.182	95.47
*1-Chlorooctadecane	29.994	.19	.	-
*#Triacontane	16.631	.19	.095	49.91

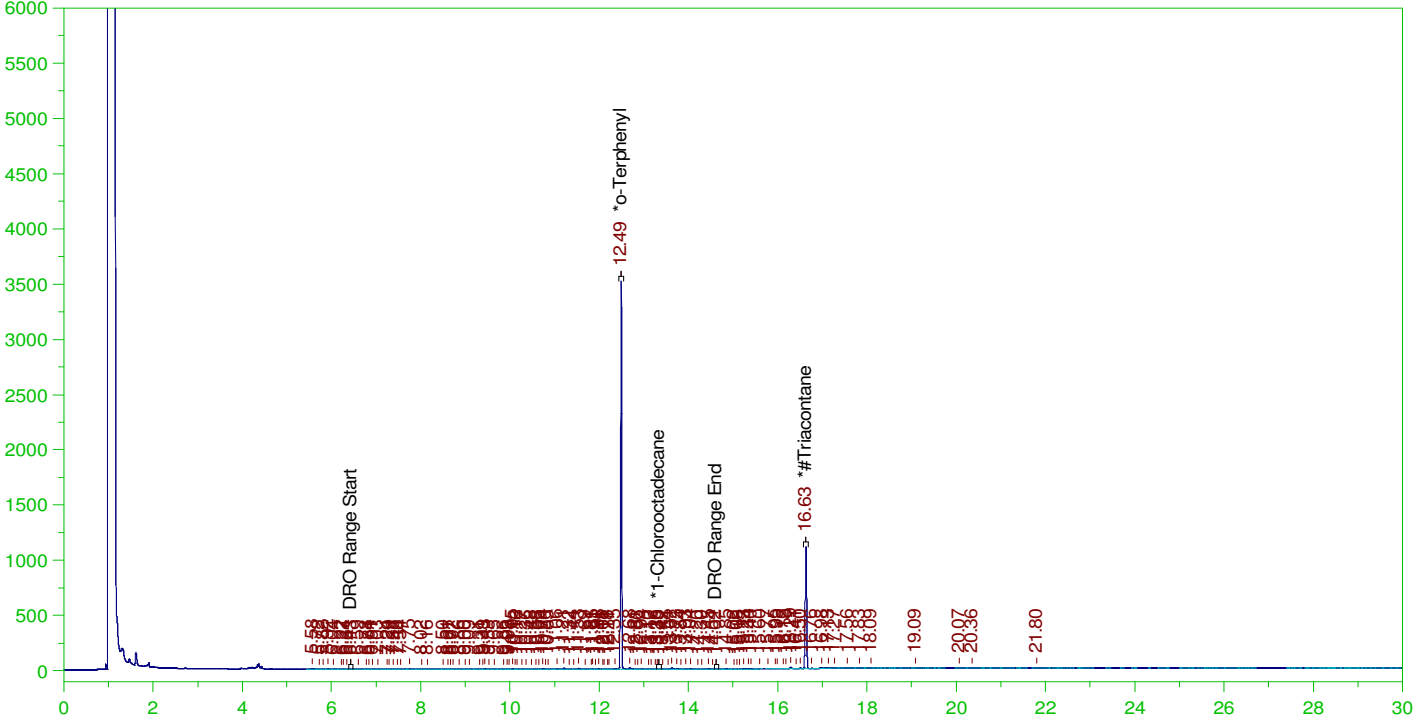
DRO Area:376131.8 DRO Amount: 1.219546E-02
TEH Area:1076408 TEH Amount: 0.0349008

ERH2674 (OWDFMW05A) FD

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0013.RAW

B22030433-002A ;0309HP4, \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-002A ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0013.RAW
Date & Time Acquired: 3/9/2022 5:36:50 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.488	.19	.171	89.99	-
*1-Chlorooctadecane	13.33	.19	.	.03	-
*#Triacontane	16.628	.19	.089	46.83	-

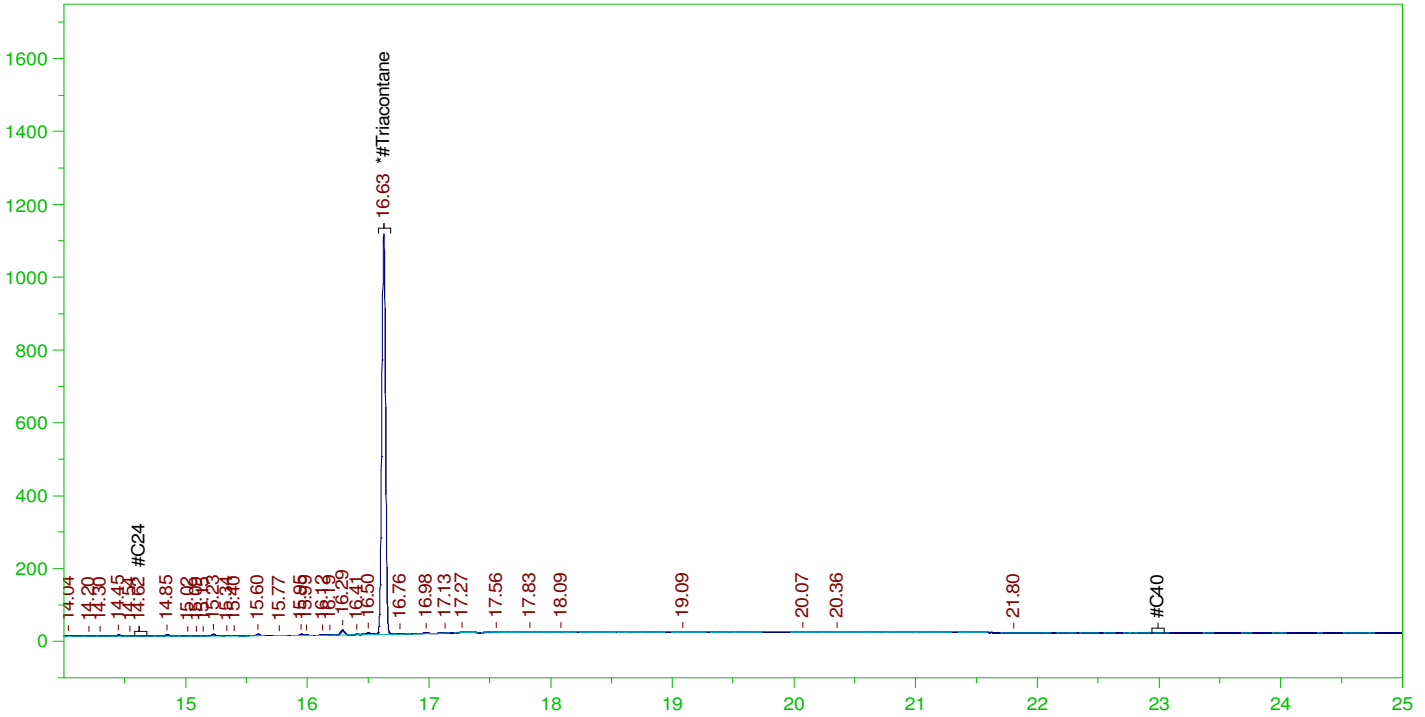
DRO Area:399114.9 DRO Amount: 1.294065E-02
TEH Area:599096.9 TEH Amount: 1.942475E-02

ERH2674 (OWDFMW05A) FD

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0013.RAW

B22030433-002A ;0309HP4, \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-002A ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0013.RAW
 Date & Time Acquired: 3/9/2022 5:36:50 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.628	.476	.089	18.73

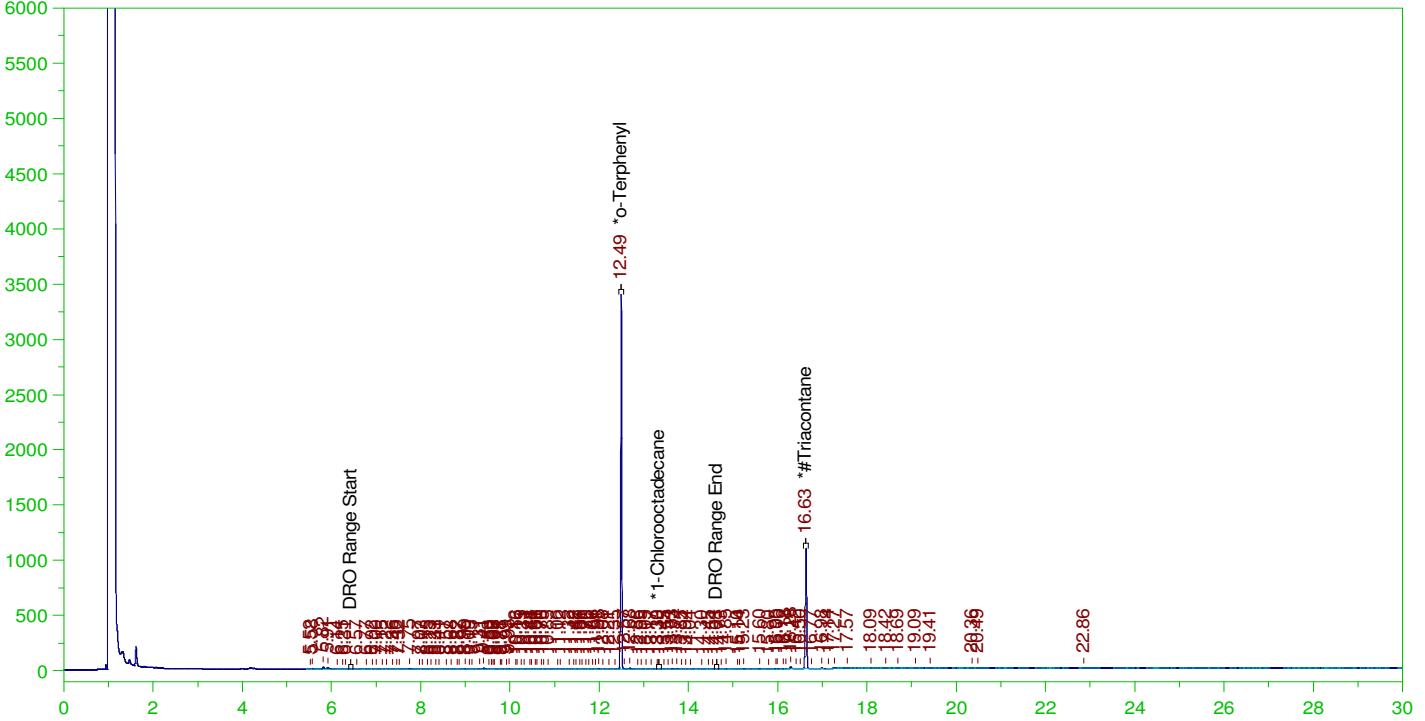
RRO Area:127733.6 RRO AMOUNT: 4.959366E-03

ERH2612 (RHMW2254-01 LF)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0014.RAW

B22030433-038C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-038C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0014.RAW
Date & Time Acquired: 3/9/2022 6:22:15 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.166	86.92	-
*1-Chlorooctadecane	13.33	.19	.	.02	-
*#Triacontane	16.629	.19	.088	45.98	-

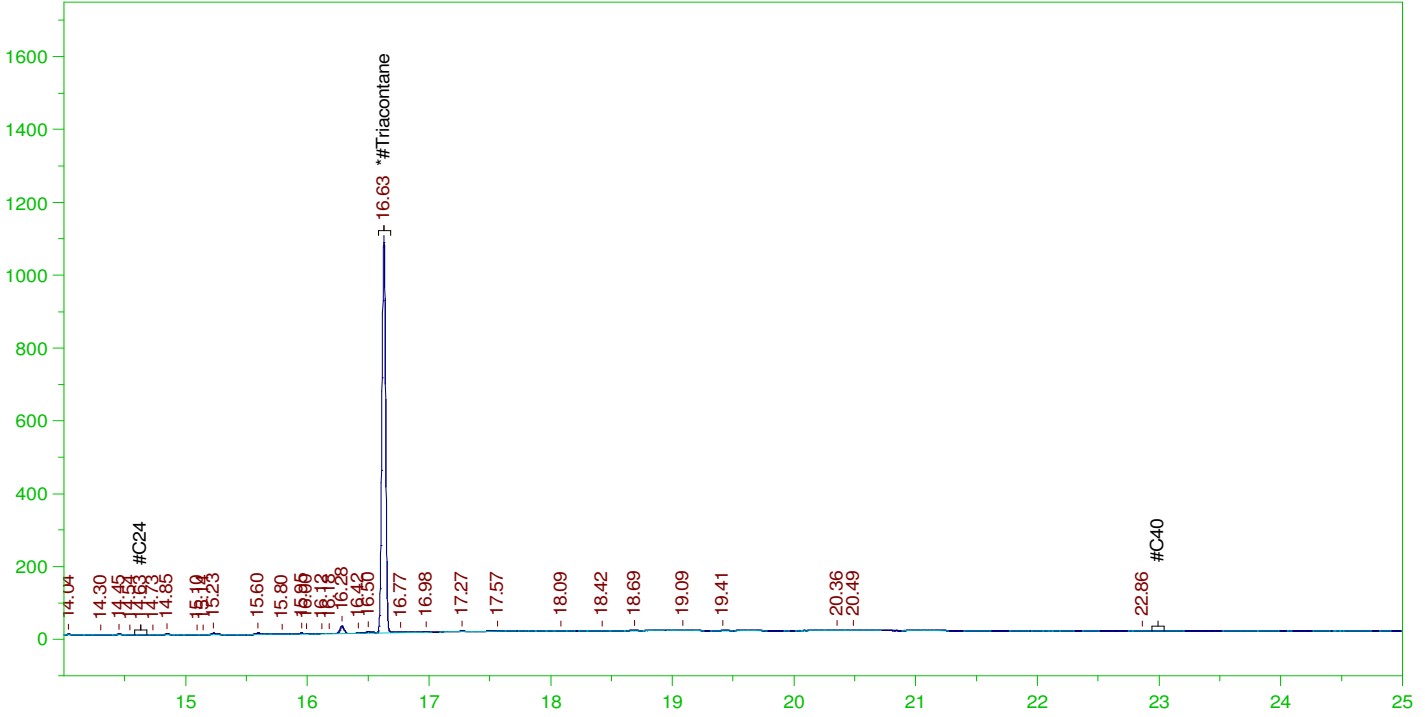
DRO Area:392933.6 DRO Amount: 1.274023E-02
TEH Area:704734.6 TEH Amount: 2.284988E-02

ERH2612 (RHMW2254-01 LF)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0014.RAW

B22030433-038C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-038C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0014.RAW
 Date & Time Acquired: 3/9/2022 6:22:15 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.629	.476	.088	18.39

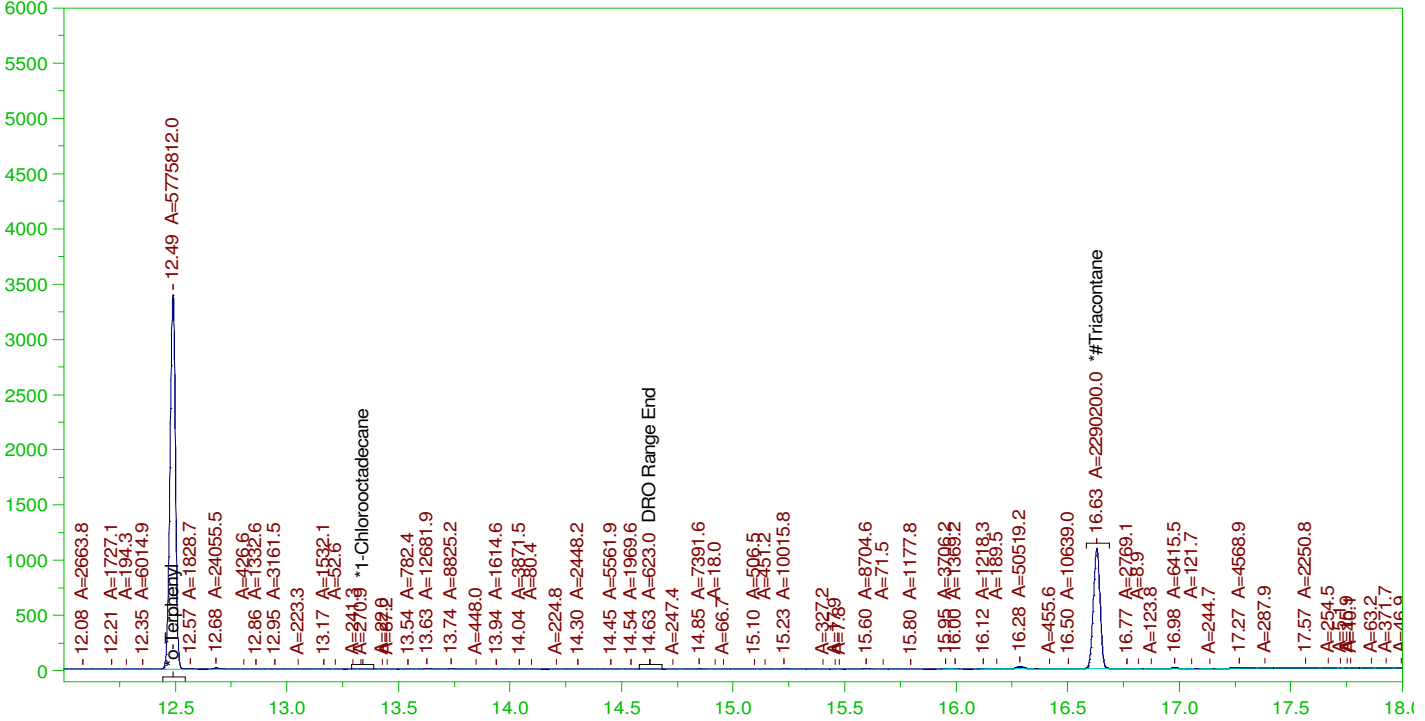
RRO Area:141452 RRO AMOUNT: 5.491992E-03

ERH2612 (RHMW2254-01 LF)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0014.RAW

B22030433-038C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-038C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0014.RAW
 Date & Time Acquired: 3/9/2022 6:22:15 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.165	86.67	-
*1-Chlorooctadecane	29.98	.19	.	-	-
*#Triacontane	16.629	.19	.087	45.85	-

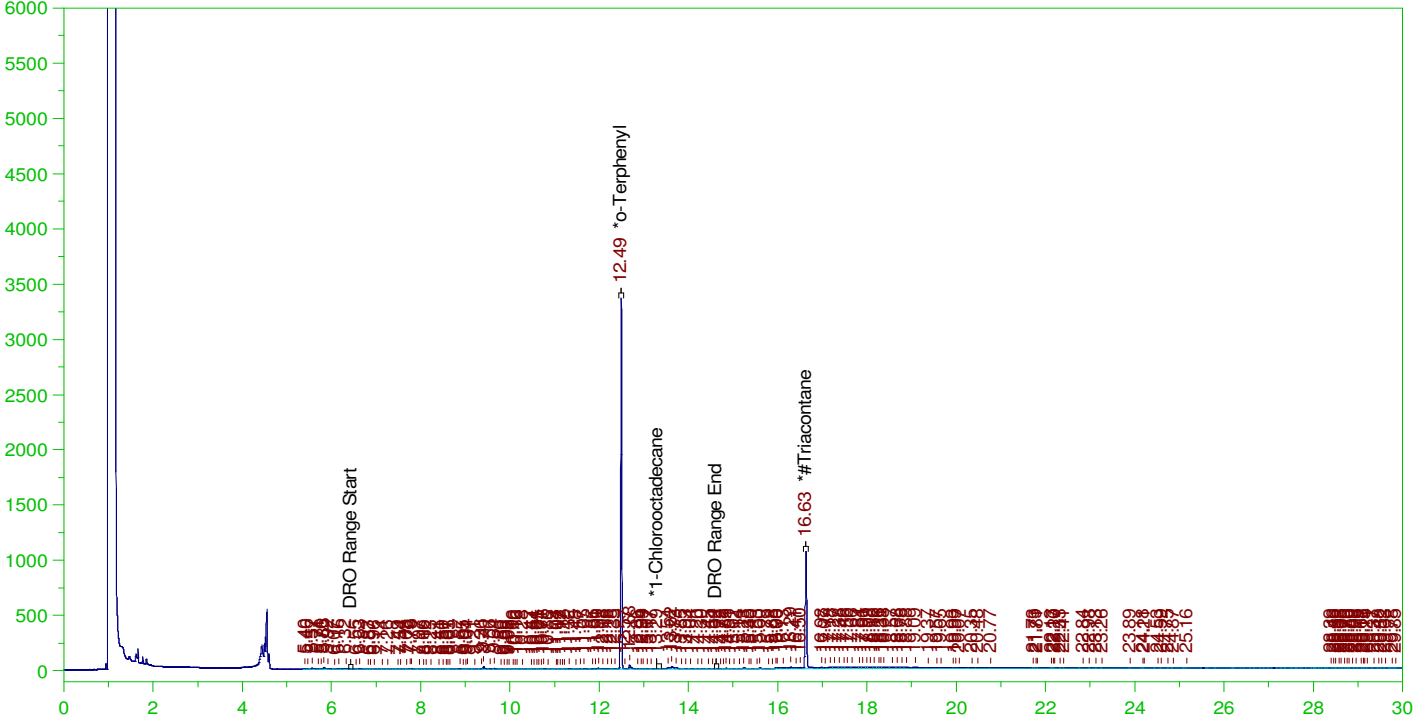
DRO Area:334761.3 DRO Amount: 1.085409E-02
 TEH Area:786011.4 TEH Amount: 2.548515E-02

ERH2620 (OWDFMW04A)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0015.RAW

B22030433-058C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-058C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0015.RAW
Date & Time Acquired: 3/9/2022 7:07:30 PM
Method File: G:\Org\HP4\methods\D3_8015-030915-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.163	85.54	-
*1-Chlorooctadecane	13.293	.19	.	.14	-
*#Triacontane	16.629	.19	.092	48.46	-

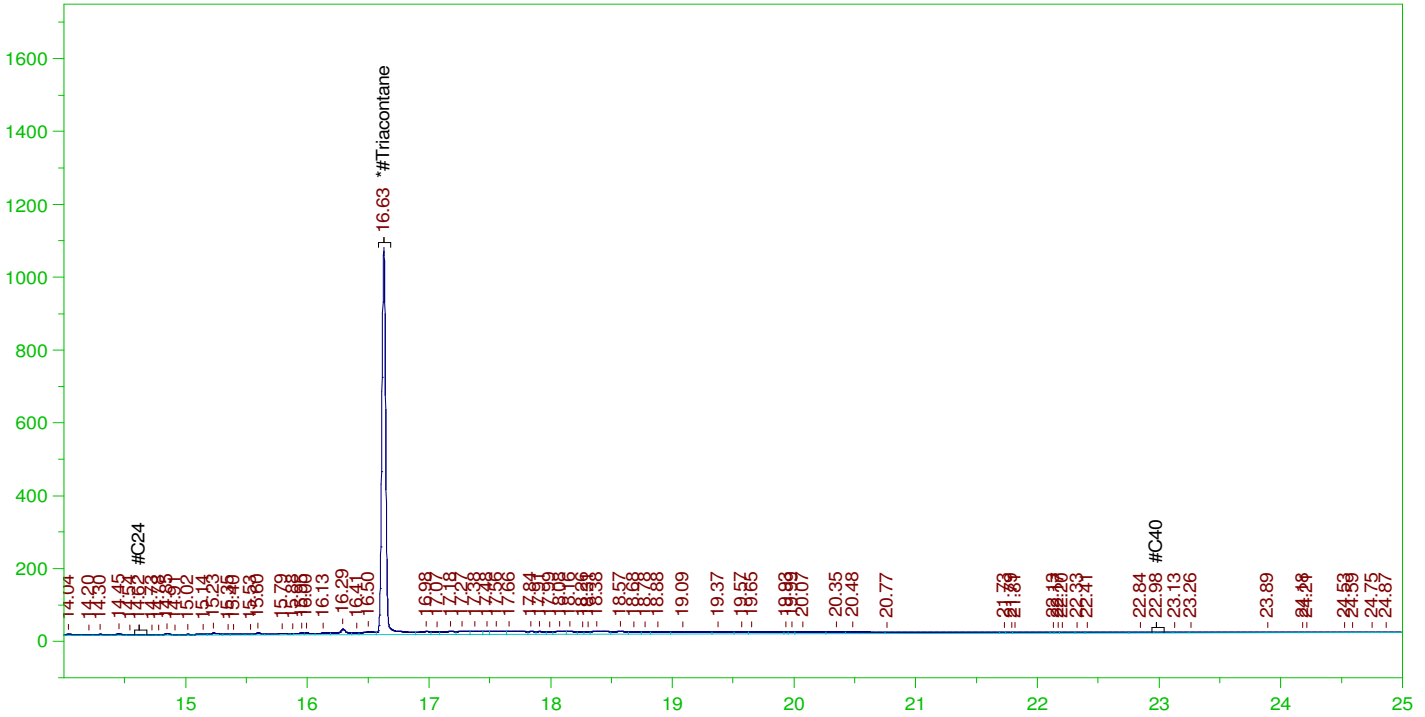
DRO Area:852527.9 DRO Amount: 2.764184E-02
TEH Area:3842311 TEH Amount: 0.1245807

ERH2620 (OWDFMW04A)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0015.RAW

B22030433-058C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-058C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0015.RAW
 Date & Time Acquired: 3/9/2022 7:07:30 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-030915-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*Triacontane_____	16.629	.476	.092	19.38

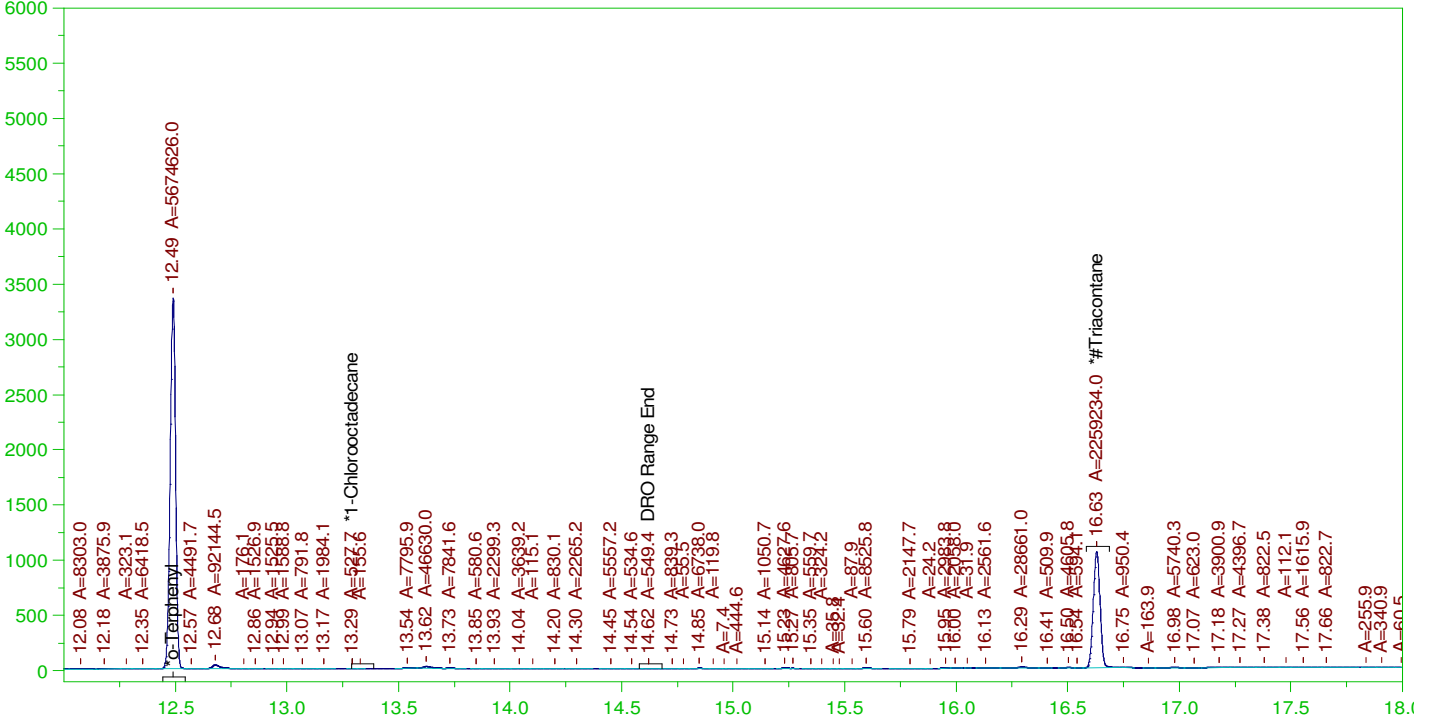
RRO Area:2620056 RRO AMOUNT: 0.1017259

ERH2620 (OWDFMW04A)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0015.RAW

B22030433-058C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-058C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0015.RAW
Date & Time Acquired: 3/9/2022 7:07:30 PM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.162	85.15	-
*1-Chlorooctadecane	13.293	.19	.	.01	-
*Triacontane	16.629	.19	.086	45.23	-

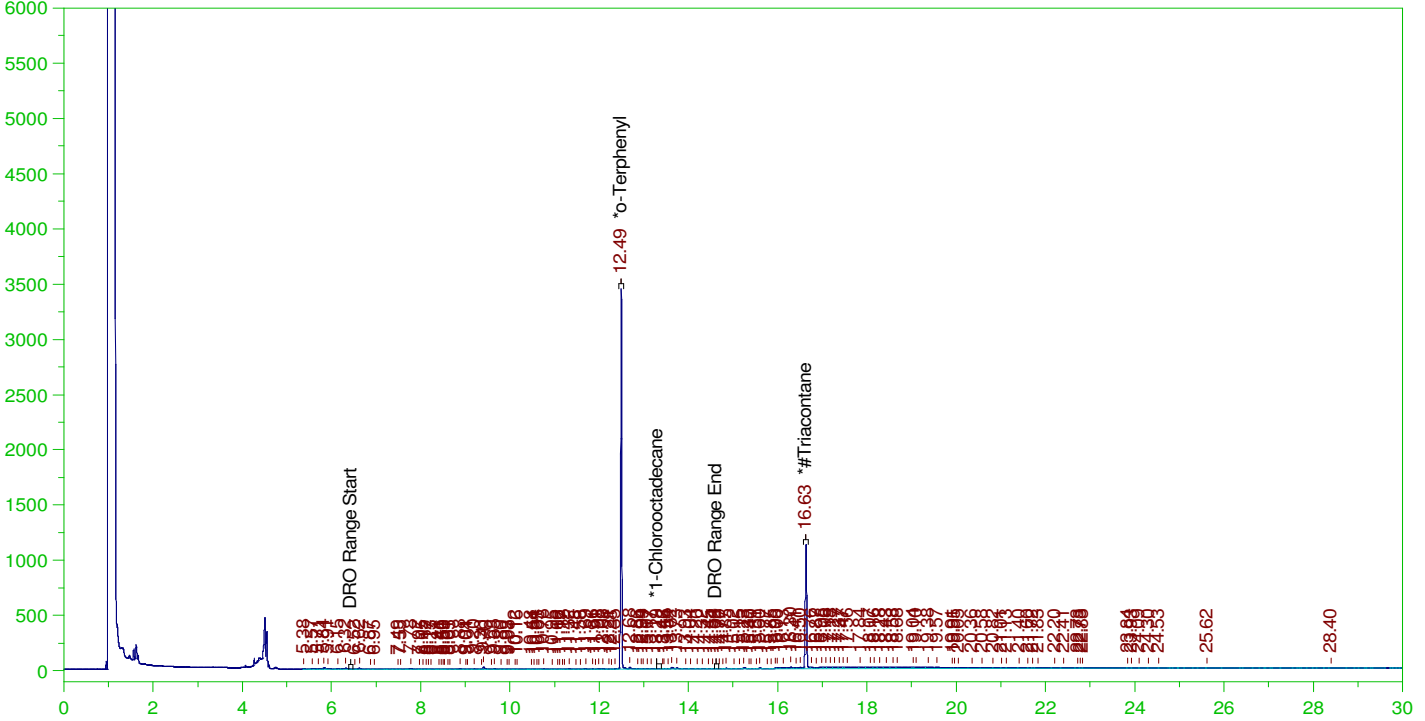
DRO Area:516671 DRO Amount: 1.675222E-02
TEH Area:4115207 TEH Amount: 0.1334289

ERH2676 (OWDFMW04A) FD

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0016.RAW

B22030433-059A ;0309HP4, \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-059A ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0016.RAW
Date & Time Acquired: 3/9/2022 7:52:44 PM
Method File: G:\Org\HP4\methods\D3_8015-030916-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.172	90.35	-
*1-Chlorooctadecane	13.293	.19	.	.16	-
*#Triacontane	16.629	.19	.095	49.97	-

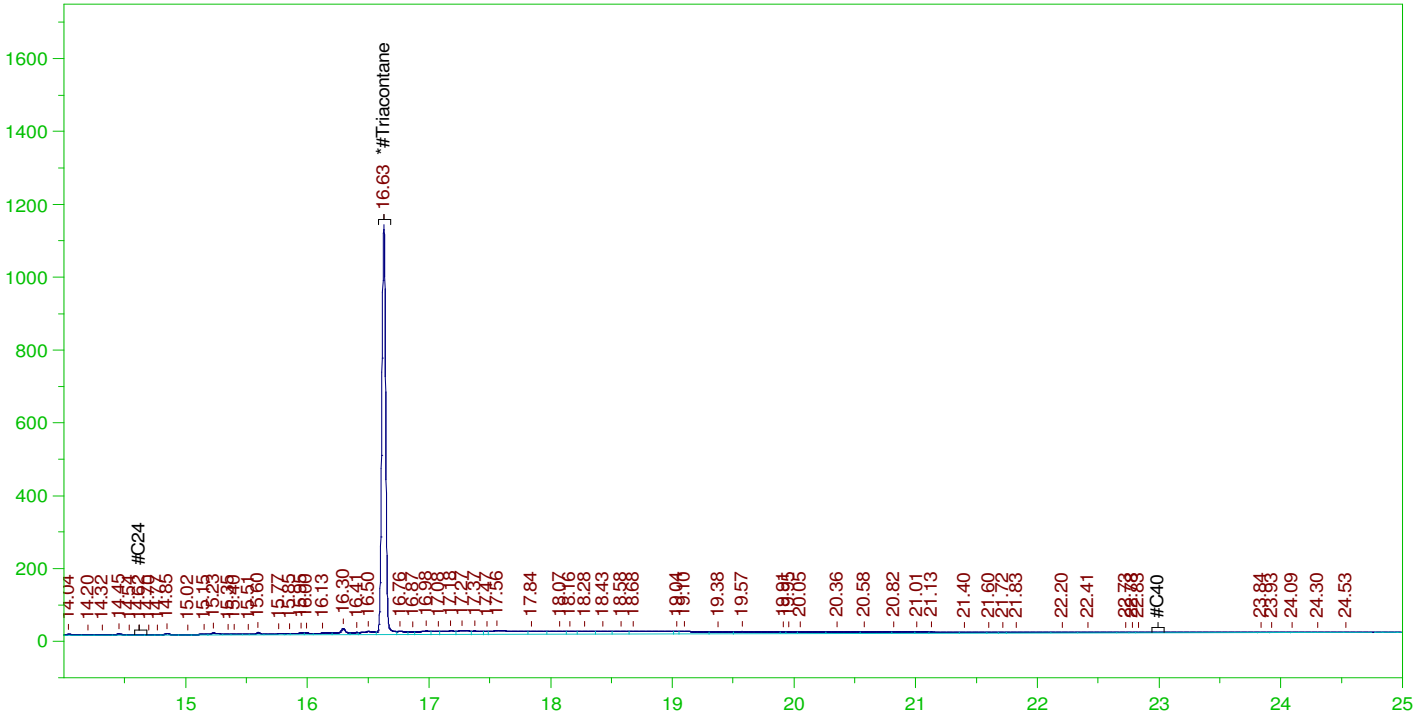
DRO Area:620257.2 DRO Amount: 2.011083E-02
TEH Area:3647981 TEH Amount: 0.1182799

ERH2676 (OWDFMW04A) FD

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0016.RAW

B22030433-059A ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-059A ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0016.RAW
 Date & Time Acquired: 3/9/2022 7:52:44 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-030916-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.629	.476	.095	19.99

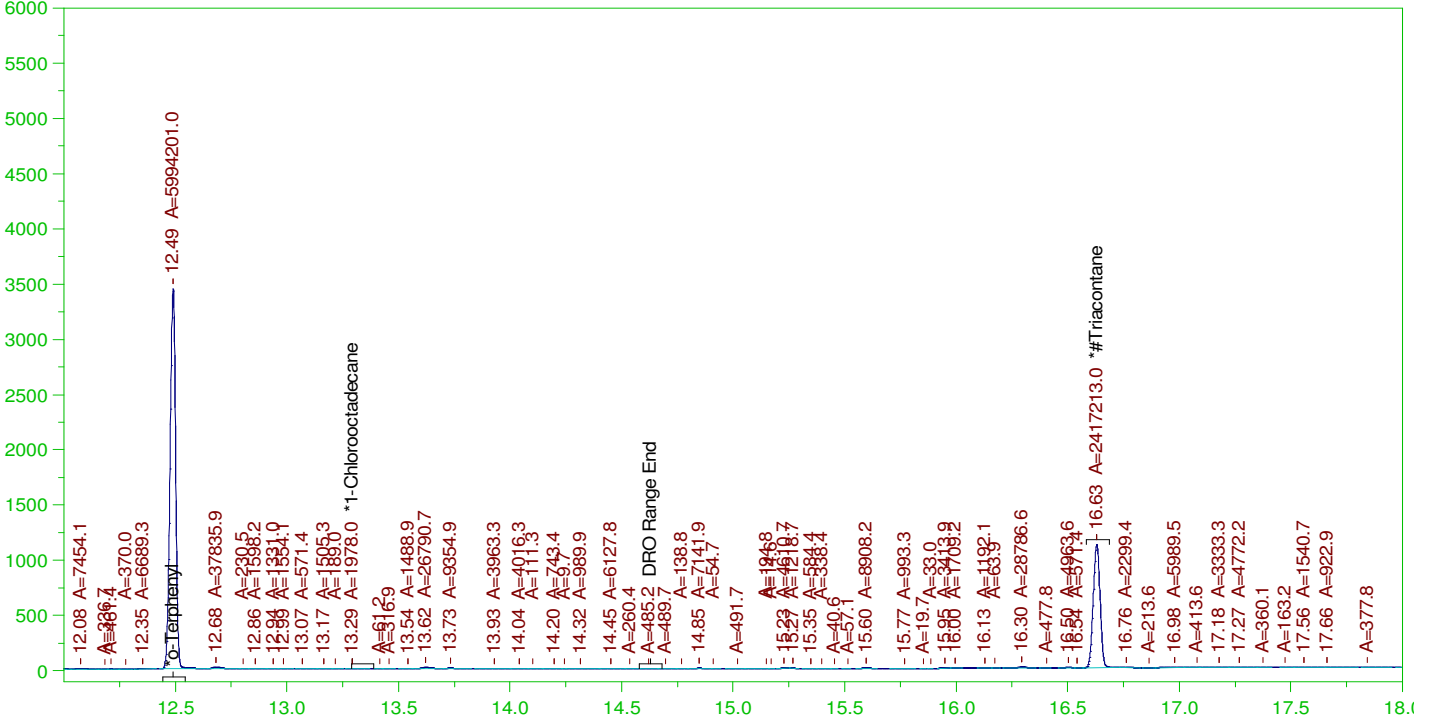
RRO Area:2807136 RRO AMOUNT: 0.1089894

ERH2676 (OWDFMW04A) FD

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0016.RAW

B22030433-059A ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

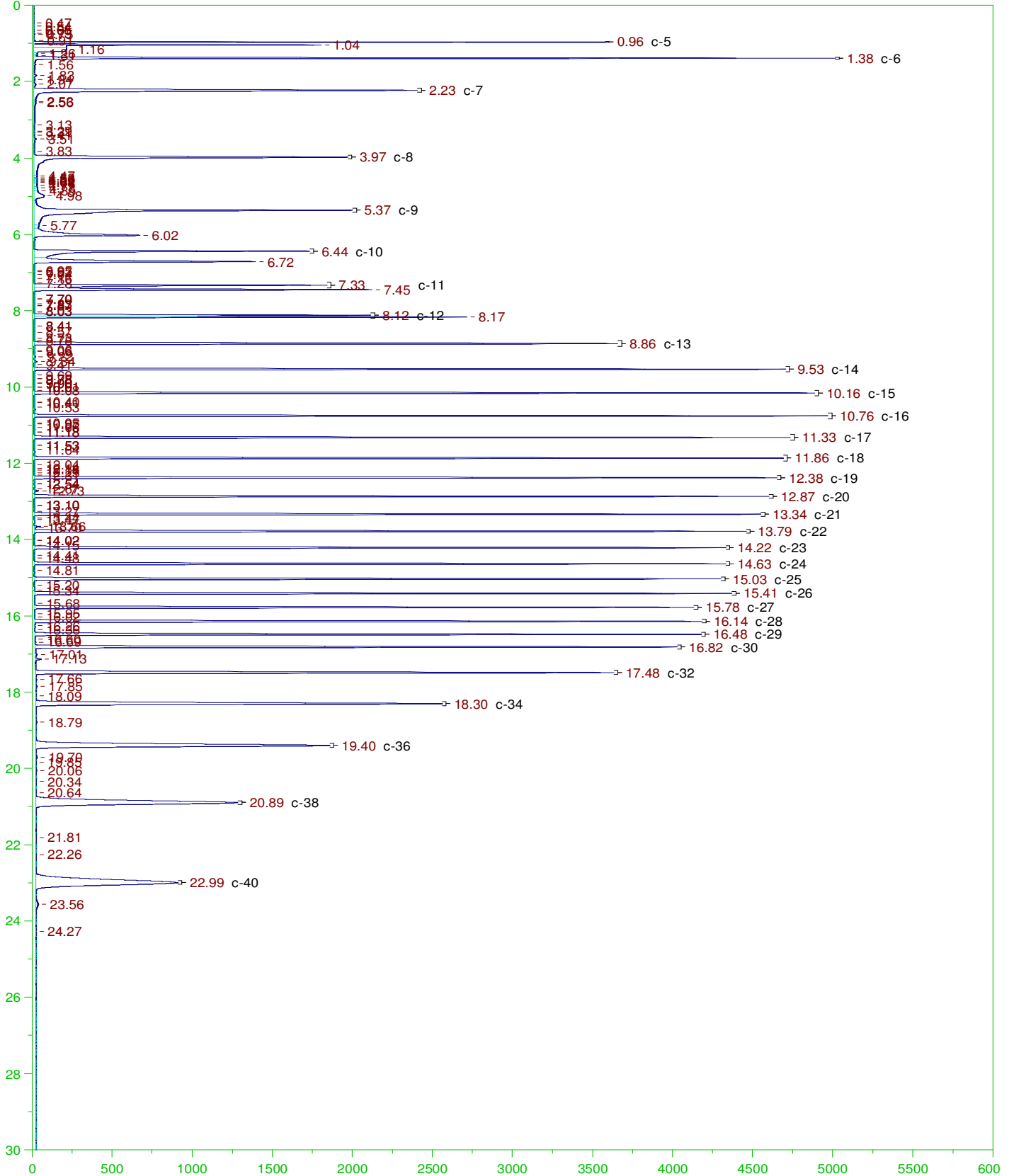
Sample Name: B22030433-059A ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0016.RAW
 Date & Time Acquired: 3/9/2022 7:52:44 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

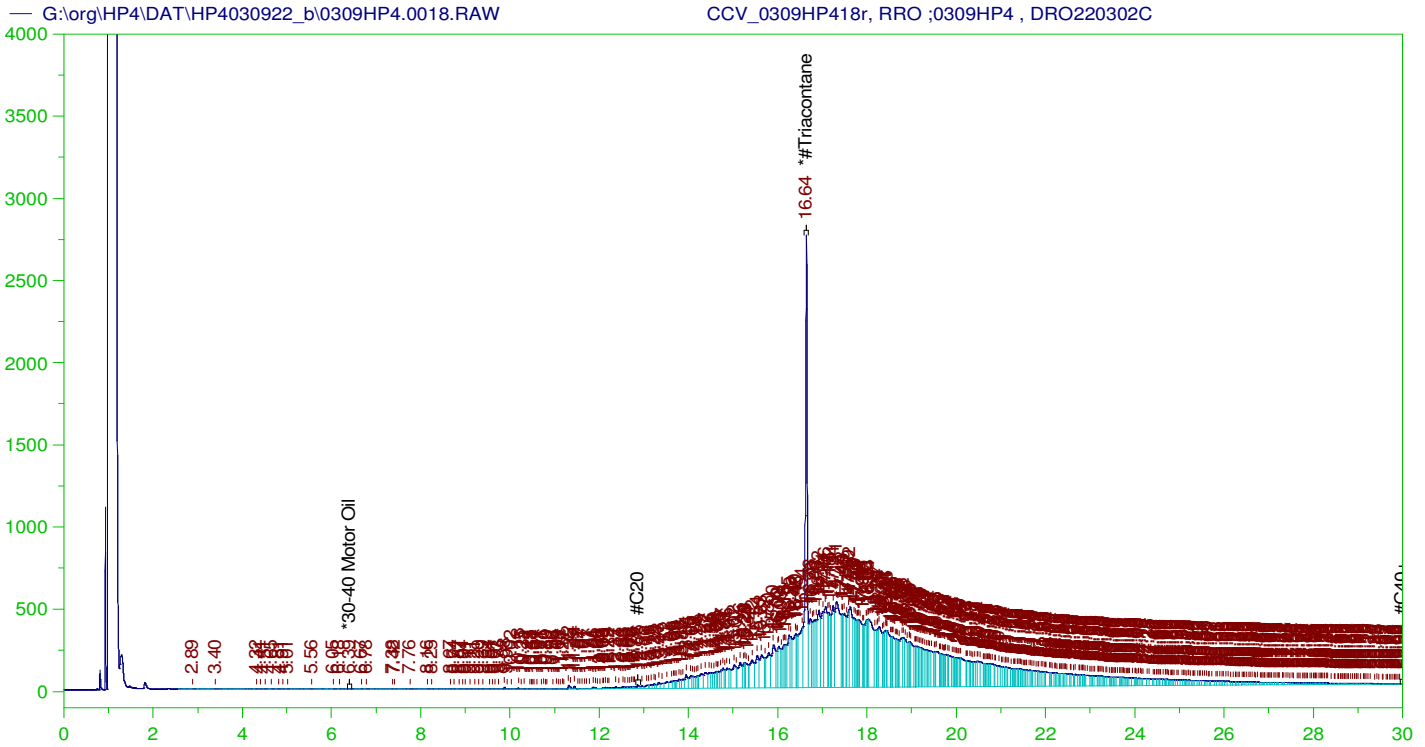
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.171	89.95	-
*1-Chlorooctadecane	13.293	.19	.	.03	-
*#Triacontane	16.629	.19	.092	48.39	-

DRO Area:400138.2 DRO Amount: 1.297383E-02
 TEH Area:3862161 TEH Amount: 0.1252243





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP418r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0018.RAW
 Date & Time Acquired: 3/9/2022 9:23:03 PM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.638	500.	329.675	65.93	-

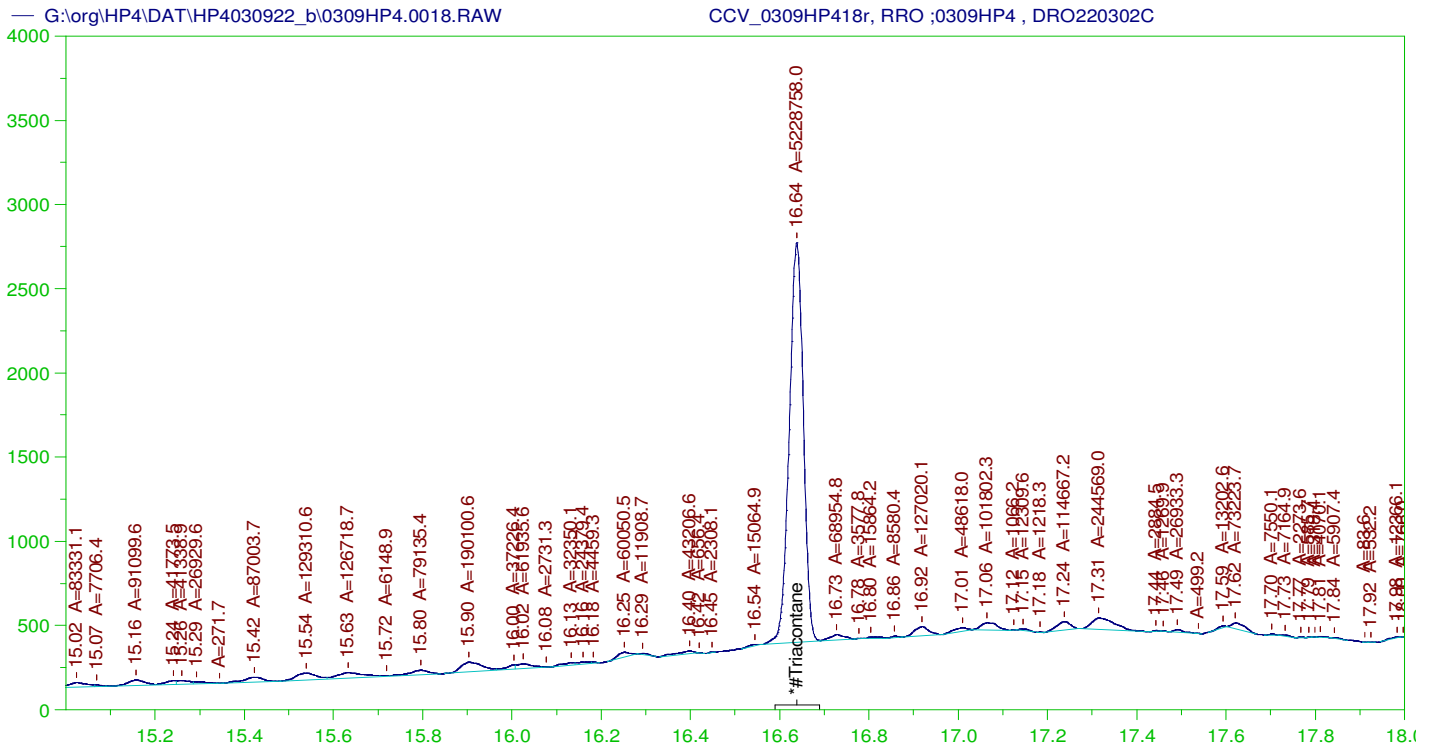
RRO TEH(Oil Range) Area:1.239057E+08 RRO TEH(Oil Range) AMOUNT: 5051.282

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.036	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.638	200.	329.675	164.84	75-125

JLB 03/11/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP418r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0018.RAW
 Date & Time Acquired: 3/9/2022 9:23:03 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

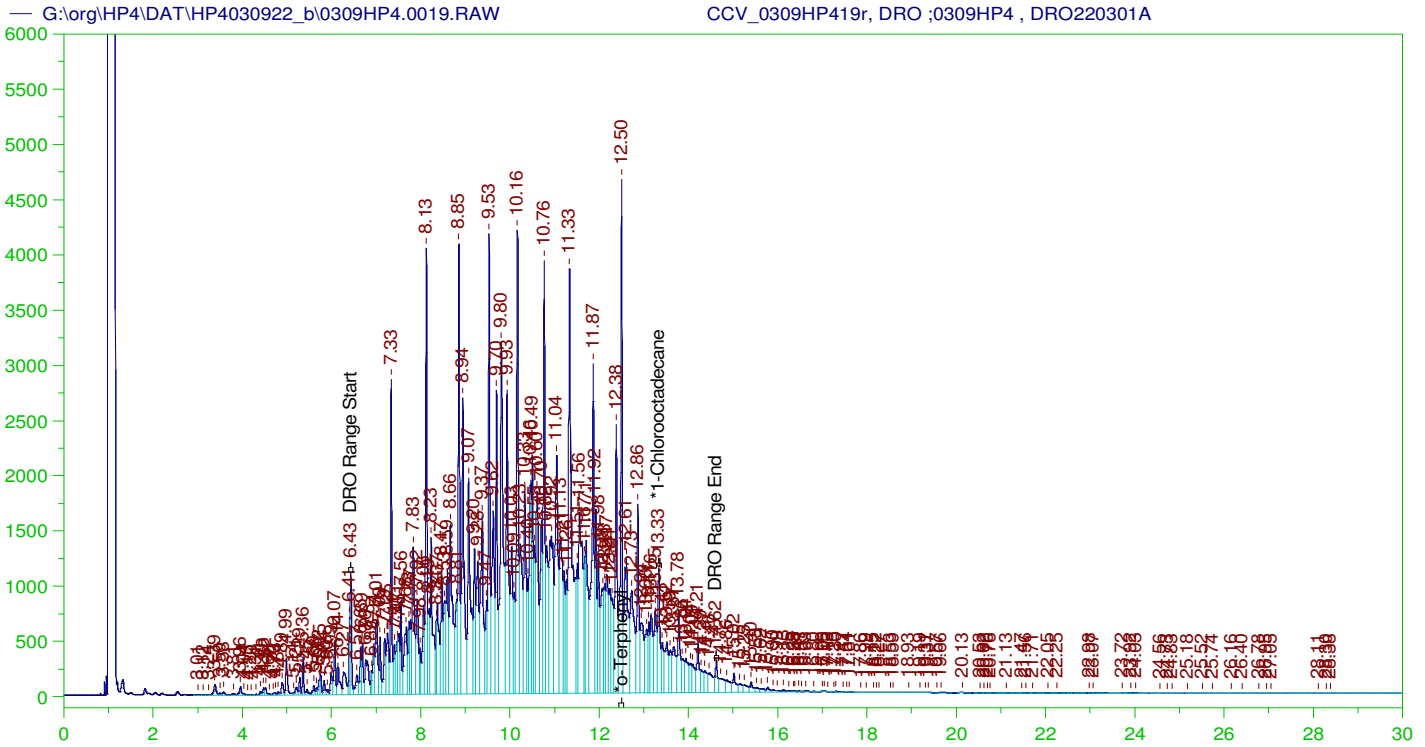
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.638	500.	209.37	41.87

RRO Area:3411263 RRO AMOUNT: 139.0674

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.036	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.638	200.	209.37	104.68	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP419r, DRO ;0309HP4 , DRO220301A
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0019.RAW
 Date & Time Acquired: 3/9/2022 10:08:22 PM
 Method File: G:\Org\HP4\methods\DC_8015-C24-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.497	200.	366.125	183.06
*1-Chlorooctadecane	13.331	200.	106.221	53.11

DRO Area: 4.267157E+08 DRO Amount: 14527.35
 TEH Area: 4.423513E+08 TEH Amount: 15059.65

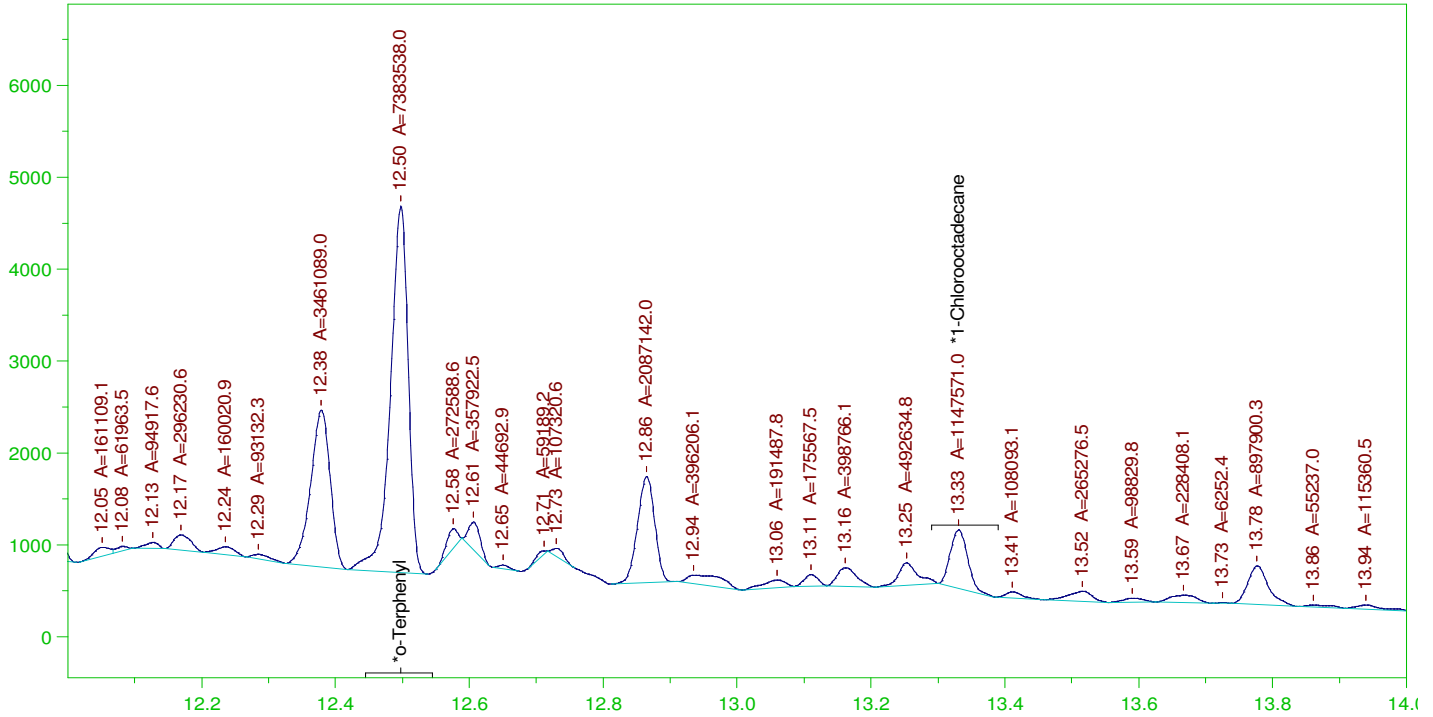
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15059.65	100.4	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.497	200.	366.125	183.06	85-115
*1-Chlorooctadecane	13.331	200.	106.221	53.11	85-115

G:\org\HP4\DAT\HP4030922_b\0309HP4.0019.RAW

CCV_0309HP419r, DRO ;0309HP4 , DRO220301A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP419r, DRO ;0309HP4 , DRO220301A
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0019.RAW
 Date & Time Acquired: 3/9/2022 10:08:22 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

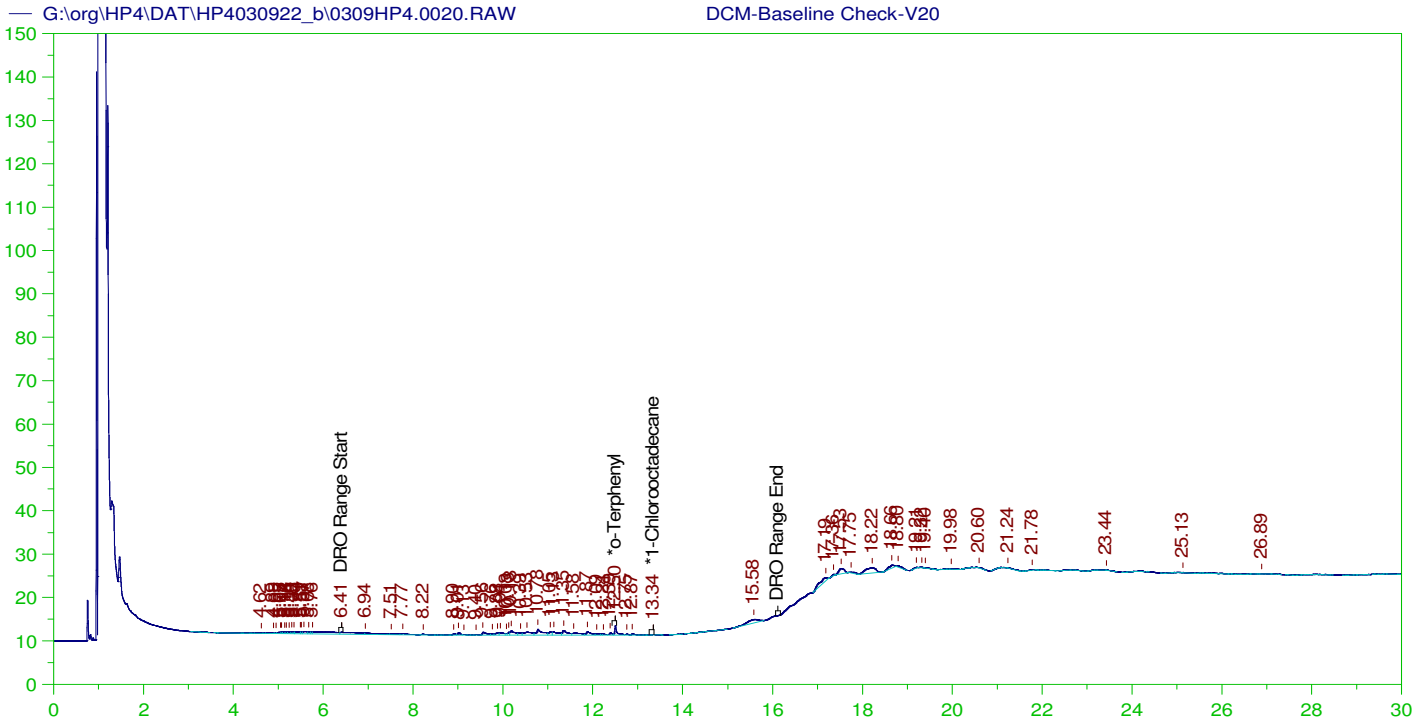
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.497	200.	221.597	110.8
*1-Chlorooctadecane	13.331	200.	34.441	17.22

DRO Area: 2.087479E+08 DRO Amount: 7106.728
 TEH Area: 2.184441E+08 TEH Amount: 7436.832

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7436.83	49.58	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.497	200.	221.597	110.8	85-115
*1-Chlorooctadecane	13.331	200.	34.441	17.22	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V20
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0020.RAW
 Date & Time Acquired: 3/9/2022 10:53:31 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.499	200.	.228	.11	-
*1-Chlorooctadecane	13.345	200.	.021	.01	-

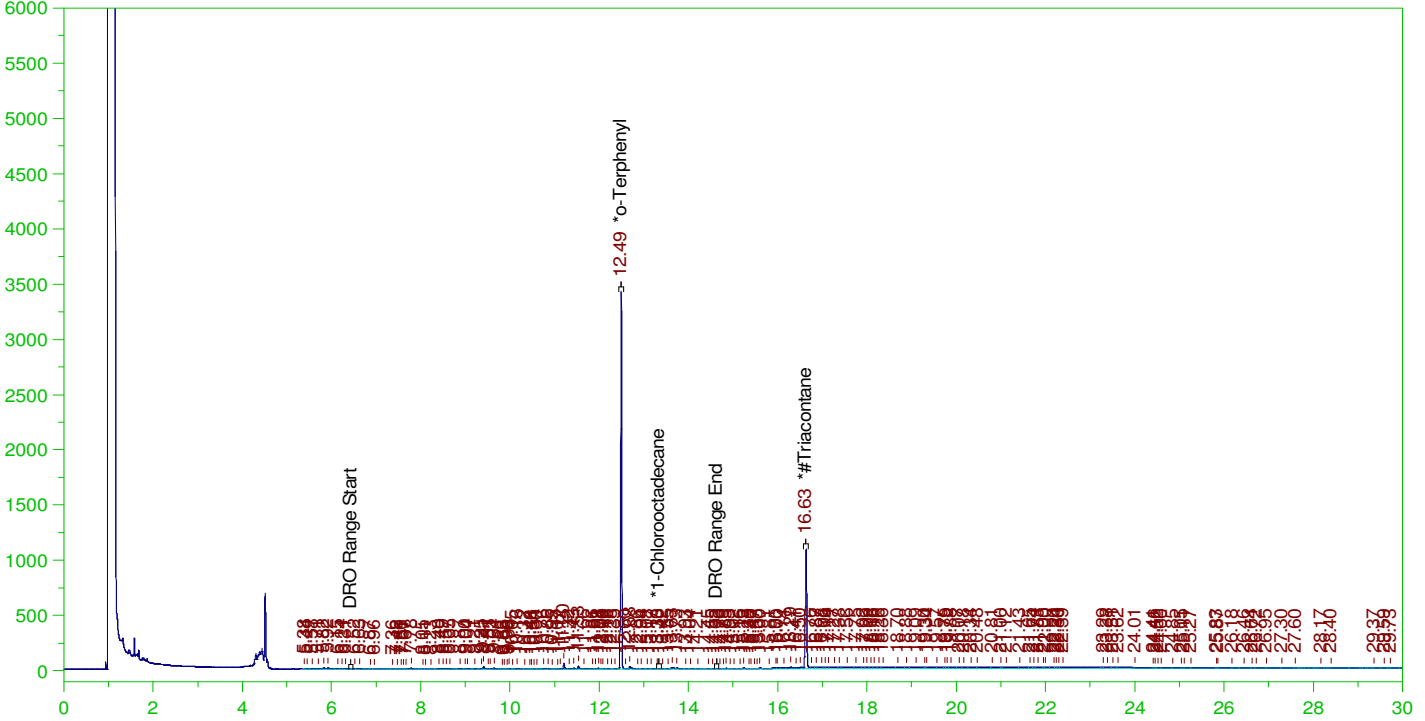
DRO Area:120196.8 DRO Amount: 4.092047
 TEH Area:235998.9 TEH Amount: 8.034475

ERH2616 (OWDFMW01)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0021.RAW

B22030502-001C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-001C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0021.RAW
Date & Time Acquired: 3/9/2022 11:38:41 PM
Method File: G:\Org\HP4\methods\D3_8015-030921-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.167	87.56	-
*1-Chlorooctadecane	13.326	.19	.	.02	-
*#Triacontane	16.63	.19	.091	47.63	-

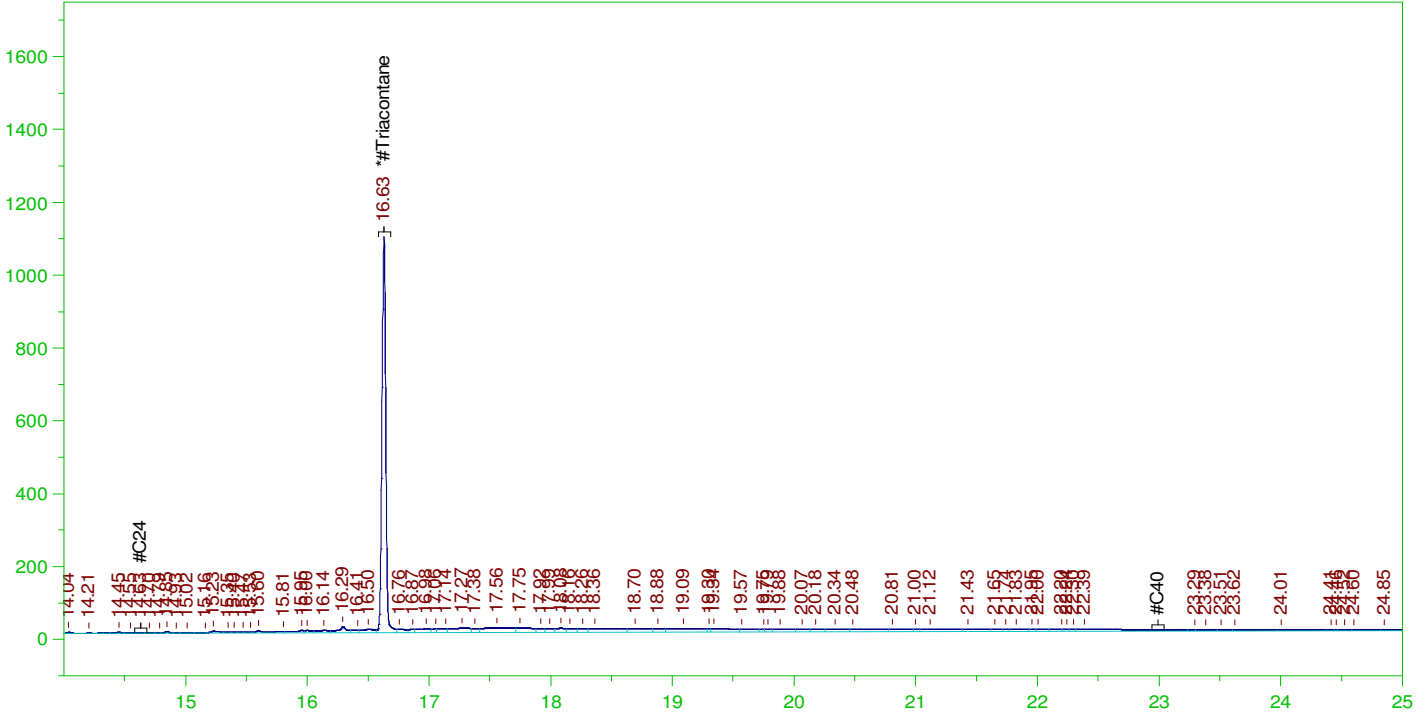
DRO Area:759862.8 DRO Amount: 2.463732E-02
TEH Area:5013407 TEH Amount: 0.1625516

ERH2616 (OWDFMW01)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0021.RAW

B22030502-001C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-001C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0021.RAW
 Date & Time Acquired: 3/9/2022 11:38:41 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-030921-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.63	.476	.091	19.05

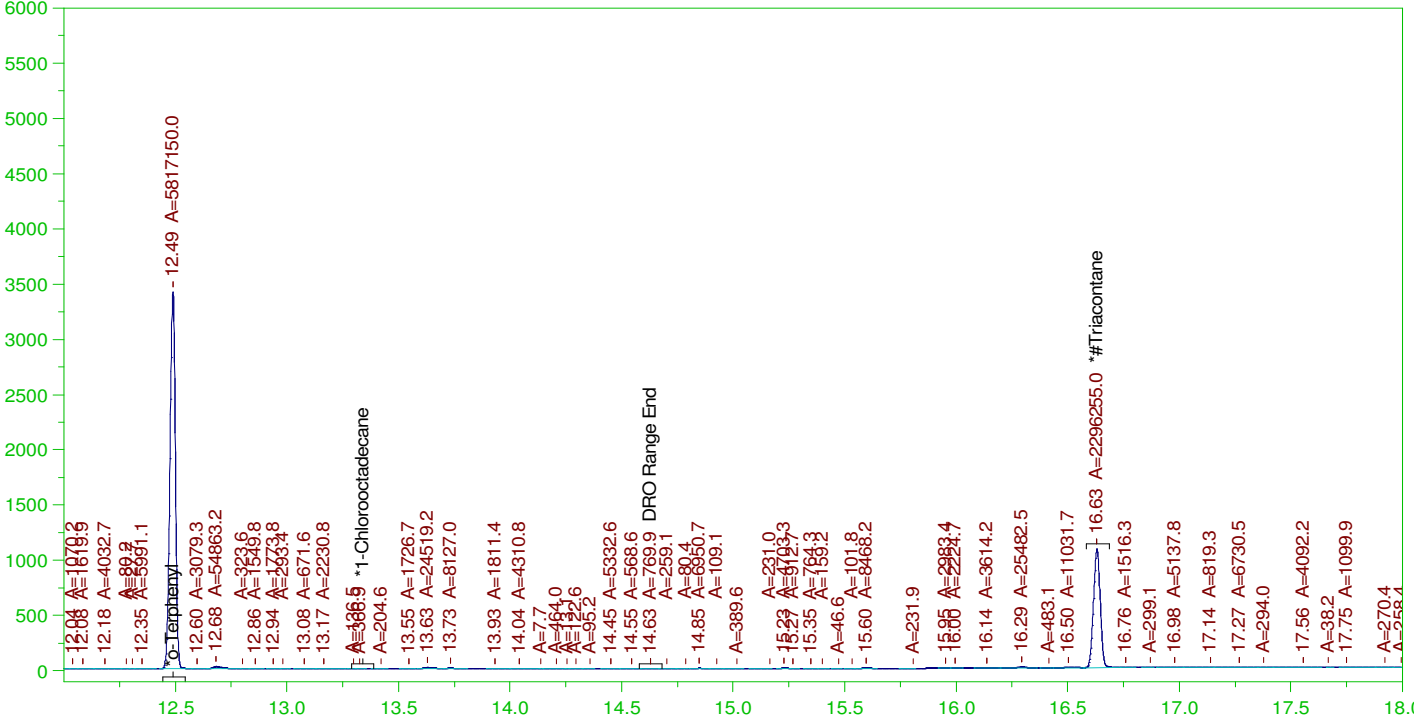
RRO Area:3546247 RRO AMOUNT: 0.137686

ERH2616 (OWDFMW01)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0021.RAW

B22030502-001C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-001C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0021.RAW
 Date & Time Acquired: 3/9/2022 11:38:41 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.166	87.29	-
*1-Chlorooctadecane	29.948	.19	.		-
*#Triacontane	16.63	.19	.088	45.97	-

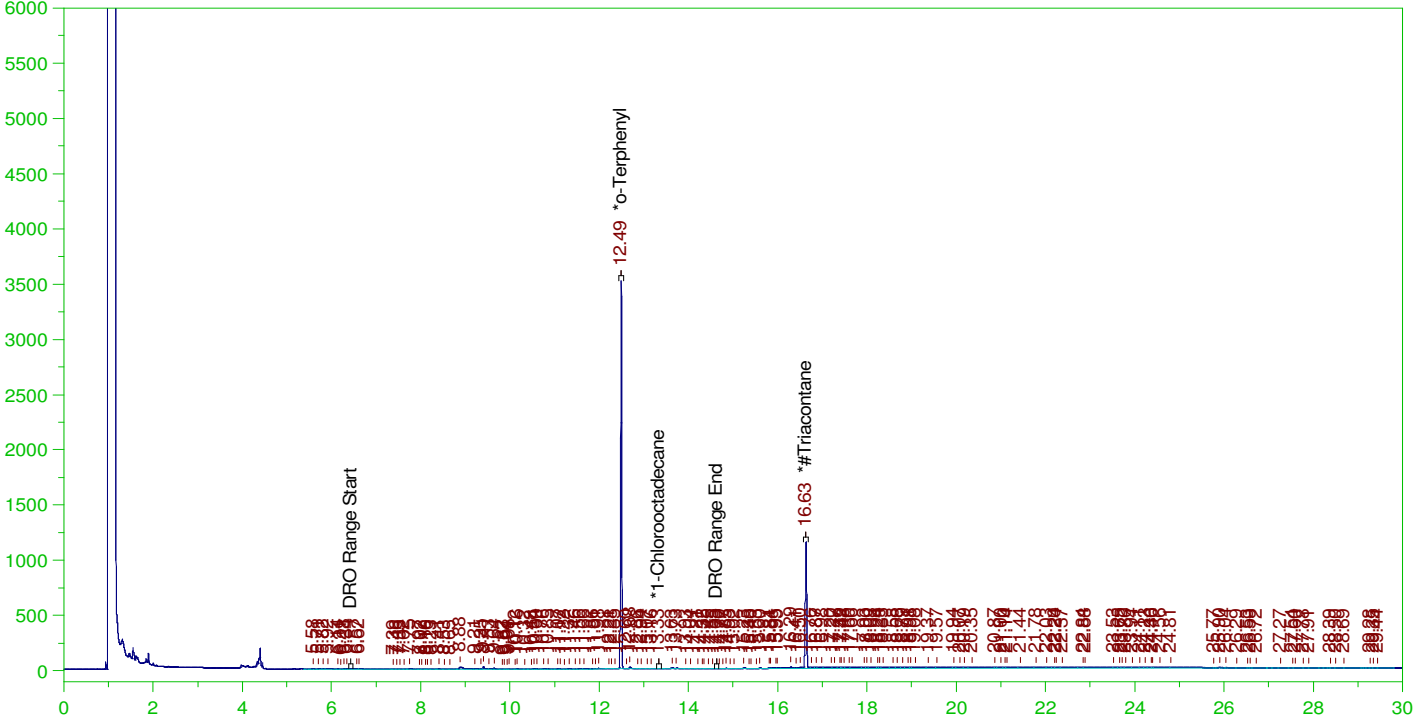
DRO Area:651923.3 DRO Amount: 2.113756E-02
 TEH Area:4374952 TEH Amount: 0.1418507

ERH2630 (HDMW2253-03)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0022.RAW

B22030502-011C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-011C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0022.RAW
Date & Time Acquired: 3/10/2022 12:23:46 AM
Method File: G:\Org\HP4\methods\D3_8015-030922-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.173	90.86	-
*1-Chlorooctadecane	13.325	.19	.	.01	-
*#Triacontane	16.629	.19	.094	49.37	-

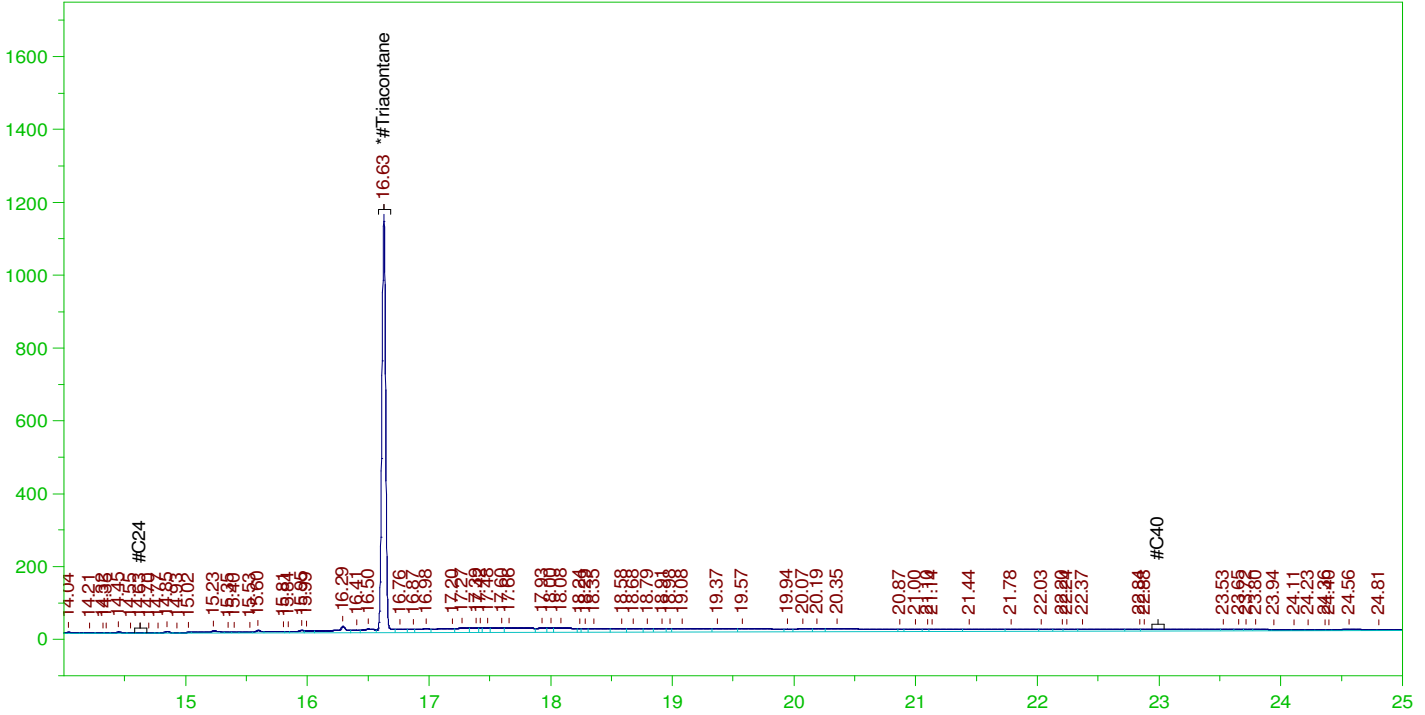
DRO Area:668875.6 DRO Amount: 2.168721E-02
TEH Area:4694134 TEH Amount: 0.1521997

ERH2630 (HDMW2253-03)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0022.RAW

B22030502-011C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-011C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0022.RAW
Date & Time Acquired: 3/10/2022 12:23:46 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-030922-AH-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.629	.476	.094	19.75

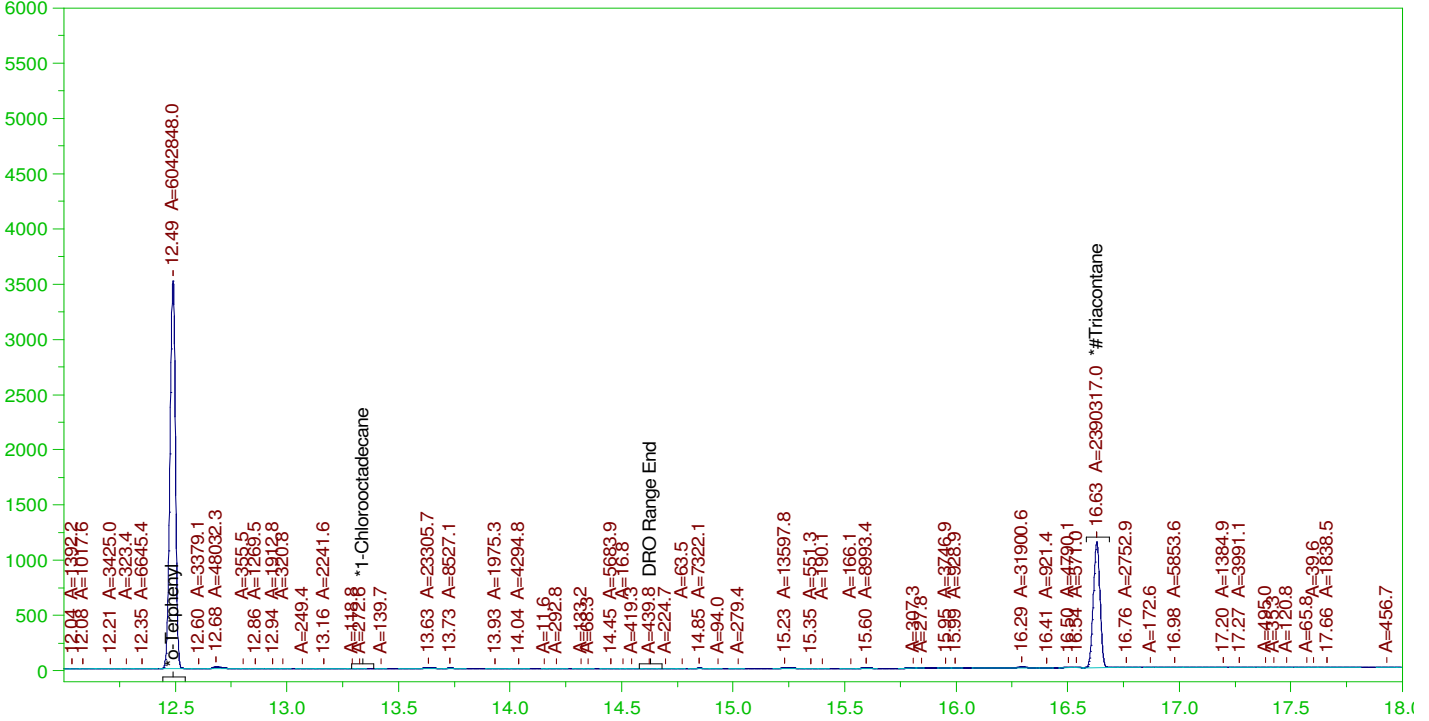
RRO Area:3554794 RRO AMOUNT: 0.1380179

ERH2630 (HDMW2253-03)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0022.RAW

B22030502-011C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-011C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0022.RAW
Date & Time Acquired: 3/10/2022 12:23:46 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.173	90.68	-
*1-Chlorooctadecane	29.977	.19	.		-
*#Triacontane	16.629	.19	.091	47.86	-

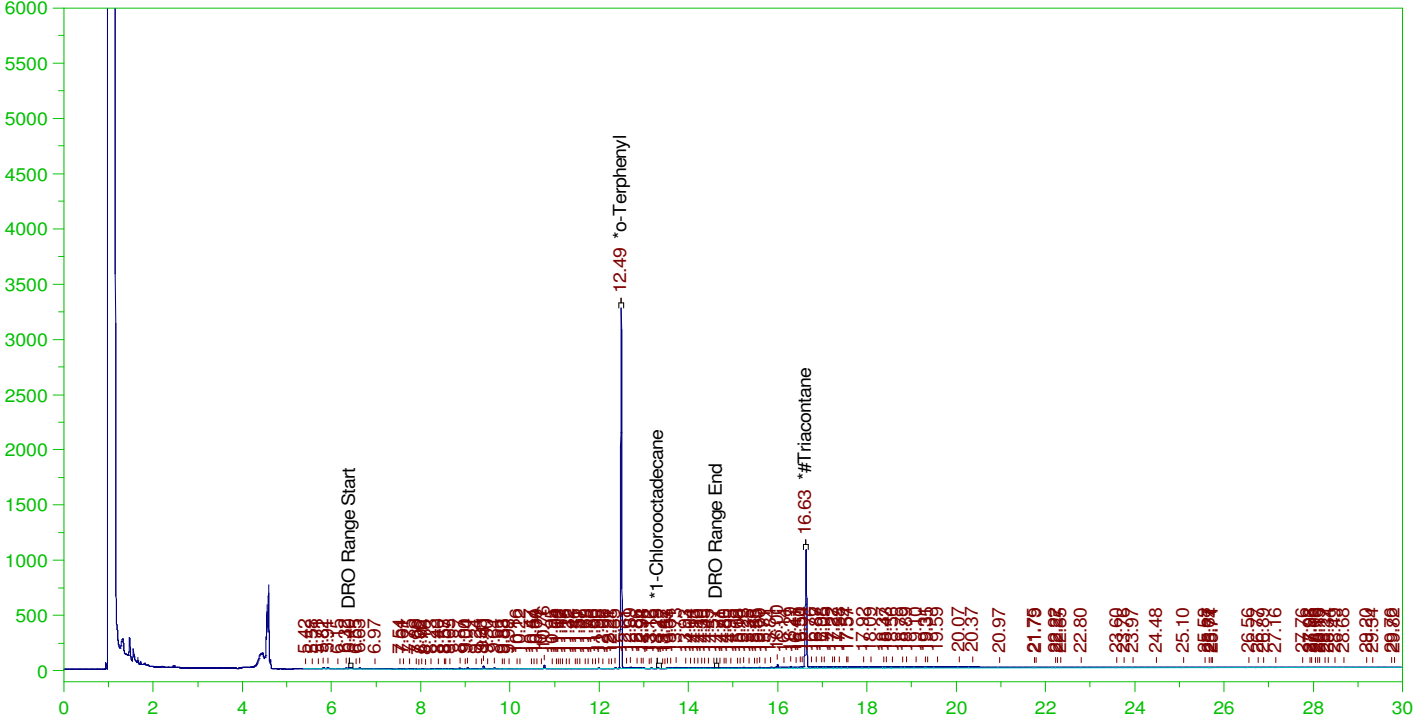
DRO Area:585465.6 DRO Amount: 1.898277E-02
TEH Area:2030850 TEH Amount: 6.584702E-02

ERH2594 (RHMW15-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0023.RAW

B22030502-006C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-006C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0023.RAW
Date & Time Acquired: 3/10/2022 1:08:48 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.161	84.31	-
*1-Chlorooctadecane	13.294	.19	.001	.35	-
*#Triacontane	16.629	.19	.09	47.1	-

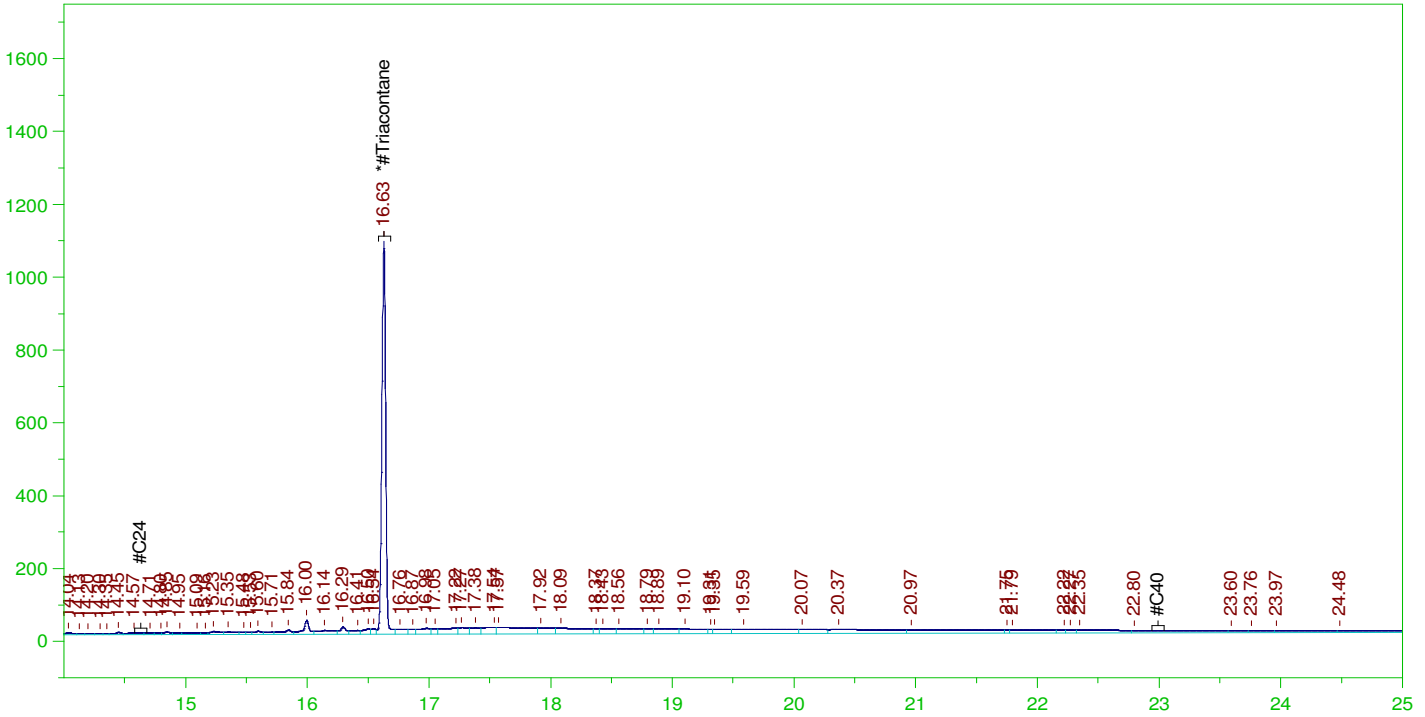
DRO Area:1261228 DRO Amount: 4.089326E-02
TEH Area:7979396 TEH Amount: 0.258719

ERH2594 (RHMW15-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0023.RAW

B22030502-006C ;0309HP4 , \$HC-8015-DRO-W,

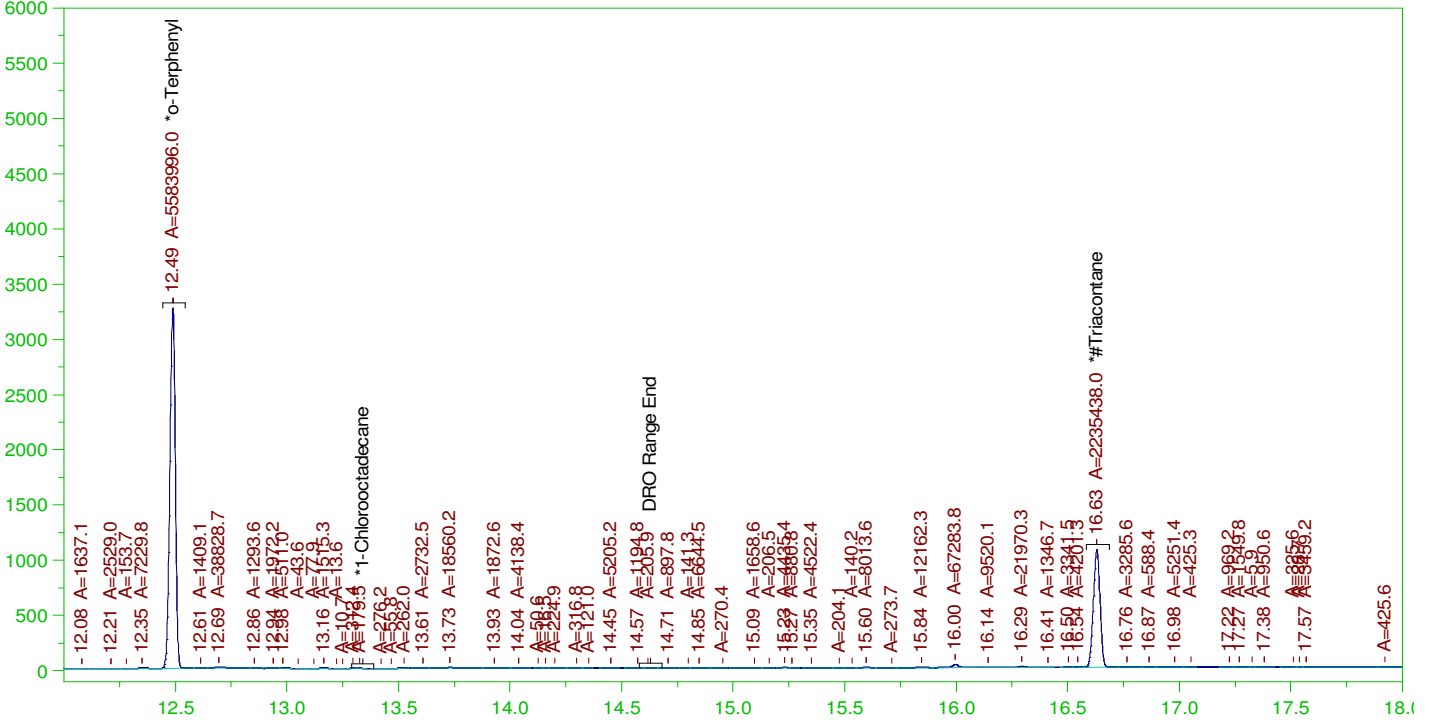


ERH2594 (RHMW15-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0023.RAW

B22030502-006C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-006C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0023.RAW
Date & Time Acquired: 3/10/2022 1:08:48 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.489	.19	.16	83.79
*1-Chlorooctadecane	29.961	.19	.	-
*#Triacontane	16.629	.19	.085	44.76

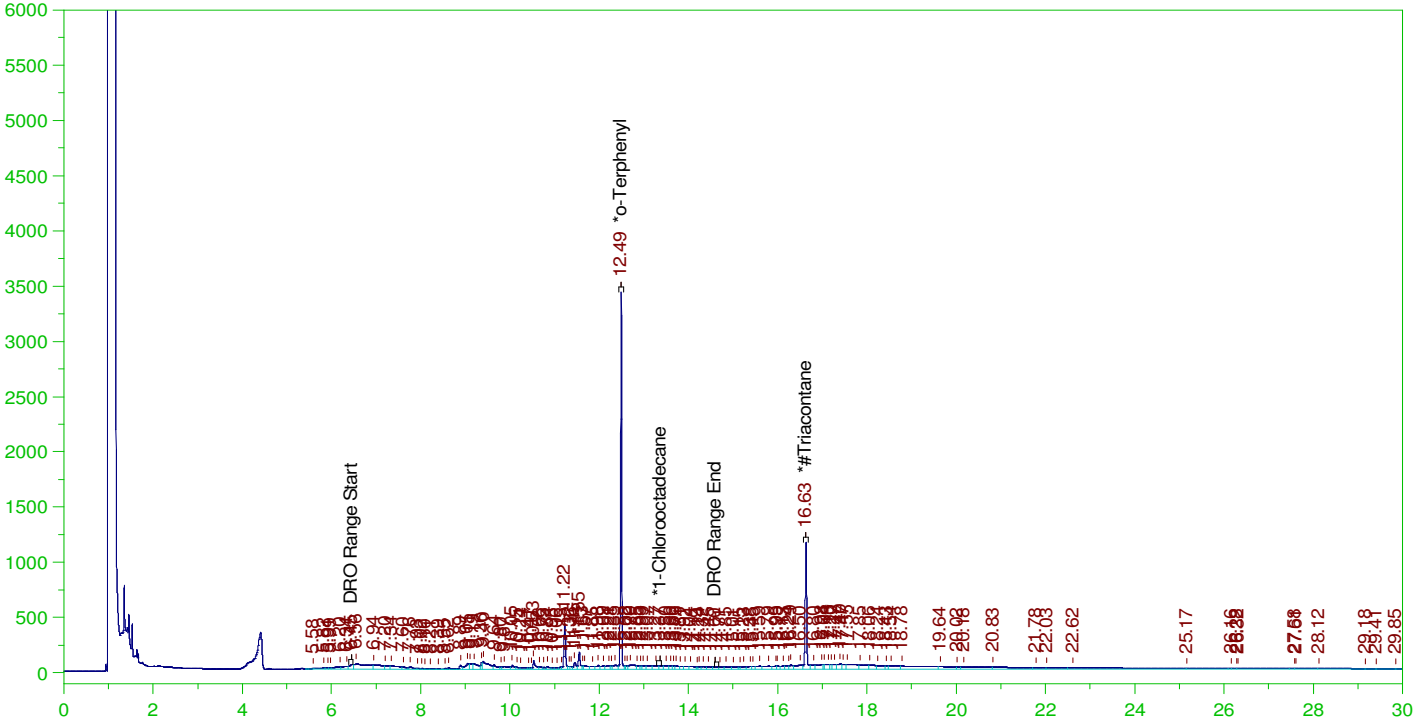
DRO Area:709679 DRO Amount: 2.301019E-02
TEH Area:4944724 TEH Amount: 0.1603246

ERH2586 (RHMW-09)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0024.RAW

B22030502-016C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-016C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0024.RAW
Date & Time Acquired: 3/10/2022 1:53:49 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.489	.19	.171	89.93
*1-Chlorooctadecane	13.366	.19	.006	3.04
*#Triacontane	16.628	.19	.1	52.59

DRO Area:1.321791E+07 DRO Amount: 0.4285693

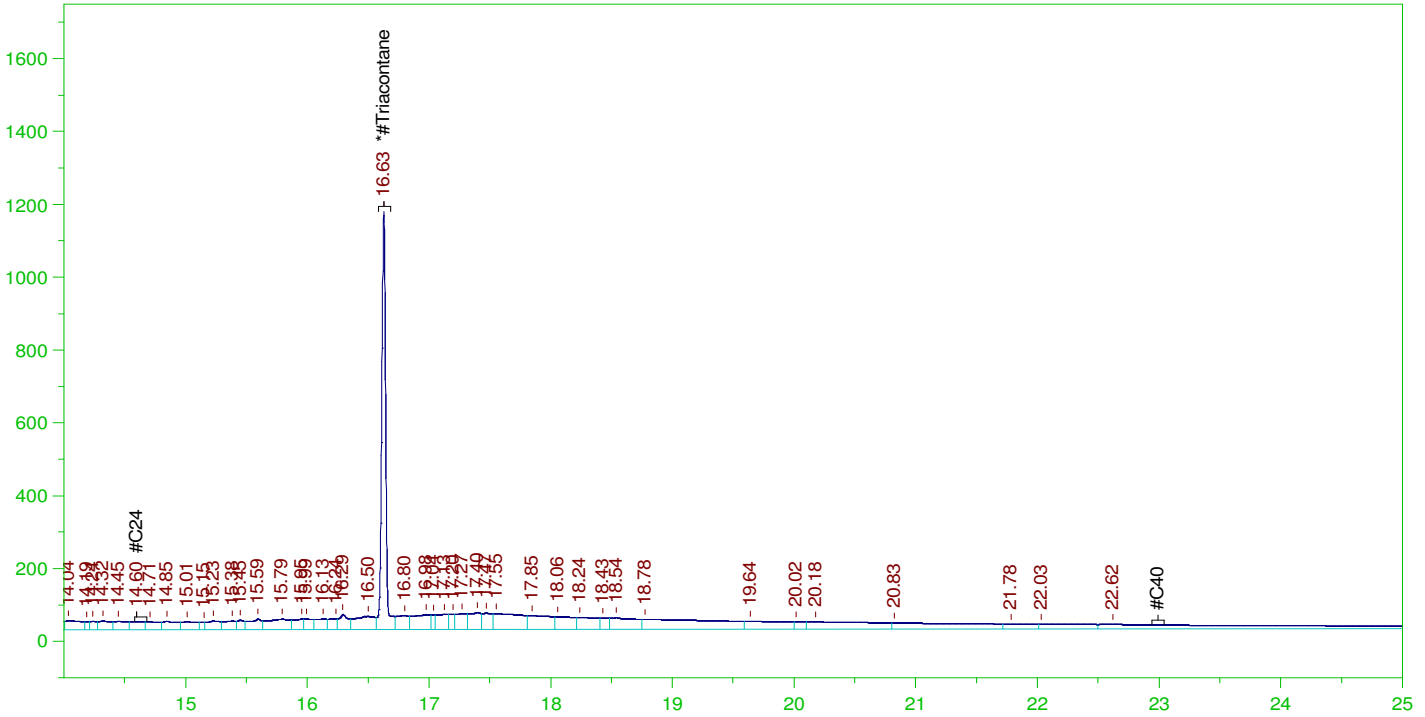
TEH Area:2.676528E+07 TEH Amount: 0.8678209

ERH2586 (RHMW-09)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0024.RAW

B22030502-016C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-016C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0024.RAW
Date & Time Acquired: 3/10/2022 1:53:49 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.628	.476	.1	21.06 -

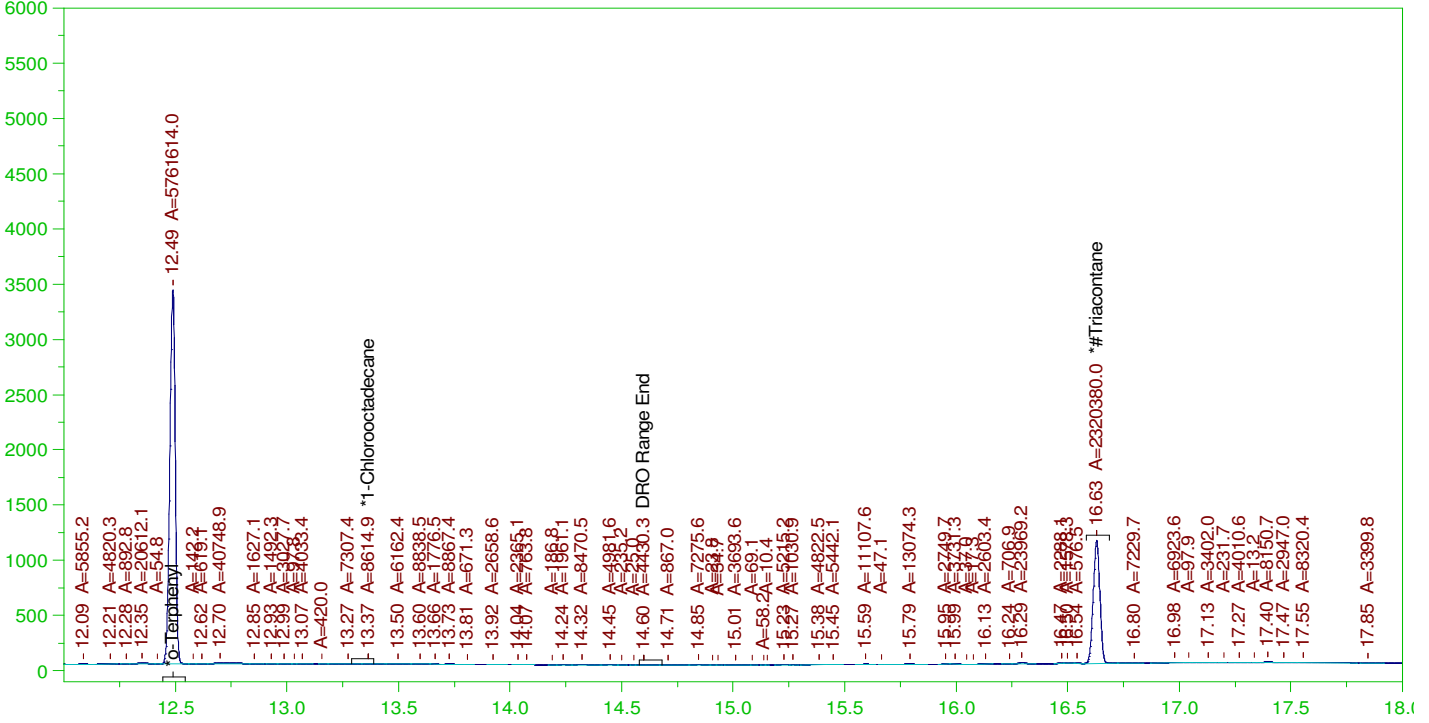
RRO Area:1.24736E+07 RRO AMOUNT: 0.4842981

ERH2586 (RHMW-09)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0024.RAW

B22030502-016C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

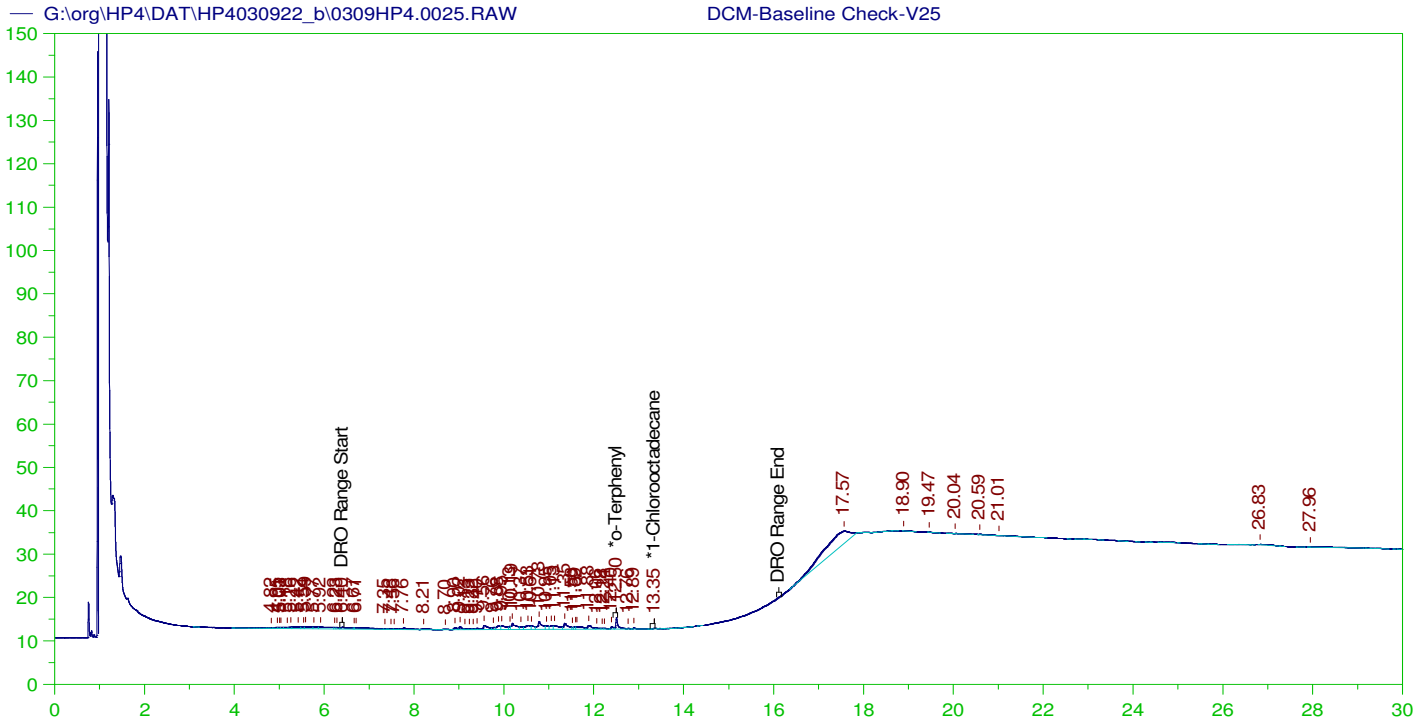
Sample Name: B22030502-016C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0024.RAW
Date & Time Acquired: 3/10/2022 1:53:49 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.165	86.46	-
*1-Chlorooctadecane	13.366	.19	.	.13	-
*#Triacontane	16.628	.19	.088	46.46	-

DRO Area:7337609 DRO Amount: 0.2379101
TEH Area:1.182921E+07 TEH Amount: 0.3835431



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V25
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0025.RAW
 Date & Time Acquired: 3/10/2022 2:39:02 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.501	200.	.294	.15	-
*1-Chlorooctadecane	13.35	200.	.018	.01	-

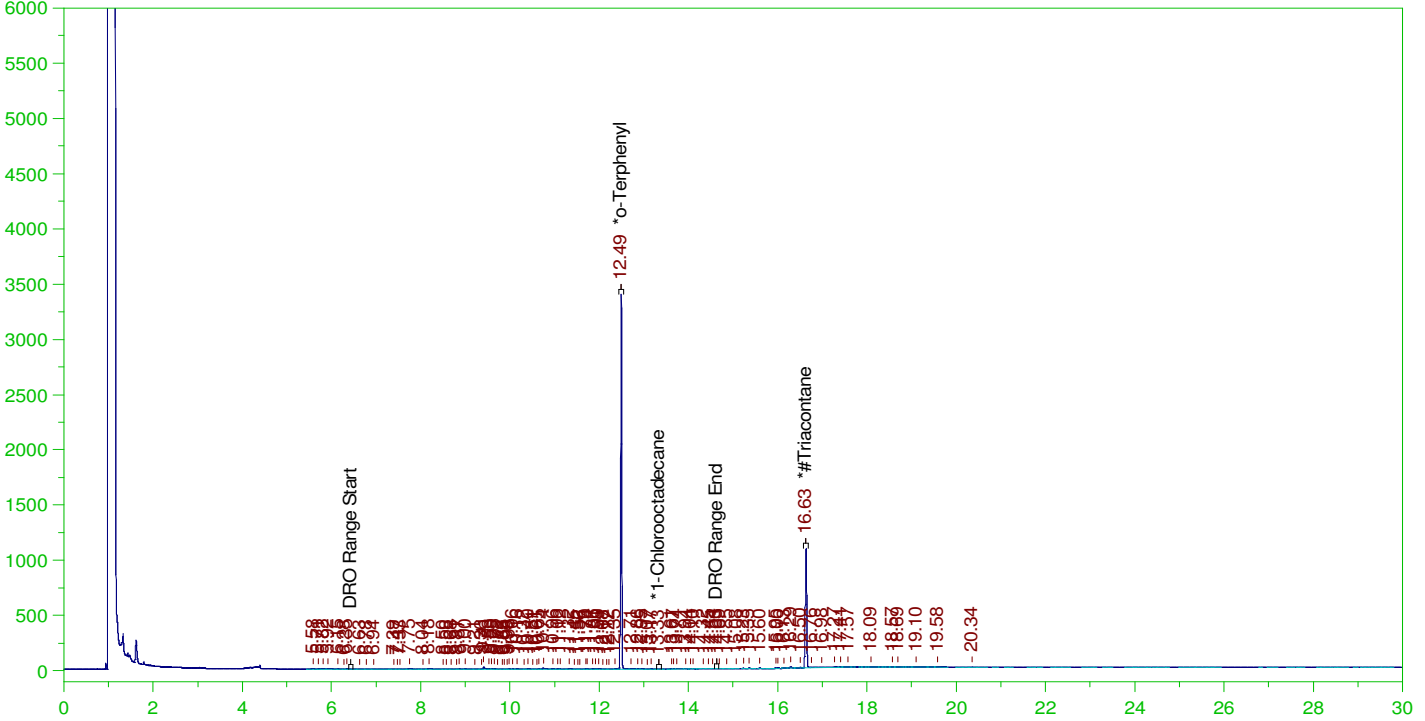
DRO Area:136513.2 DRO Amount: 4.64753
 TEH Area:326087.9 TEH Amount: 11.10152

ERH2590 (RHMW013.5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0026.RAW

B22030433-064C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-064C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0026.RAW
Date & Time Acquired: 3/10/2022 3:24:20 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.166	87.05	-
*1-Chlorooctadecane	13.33	.19	.	.02	-
*#Triacontane	16.629	.19	.088	46.29	-

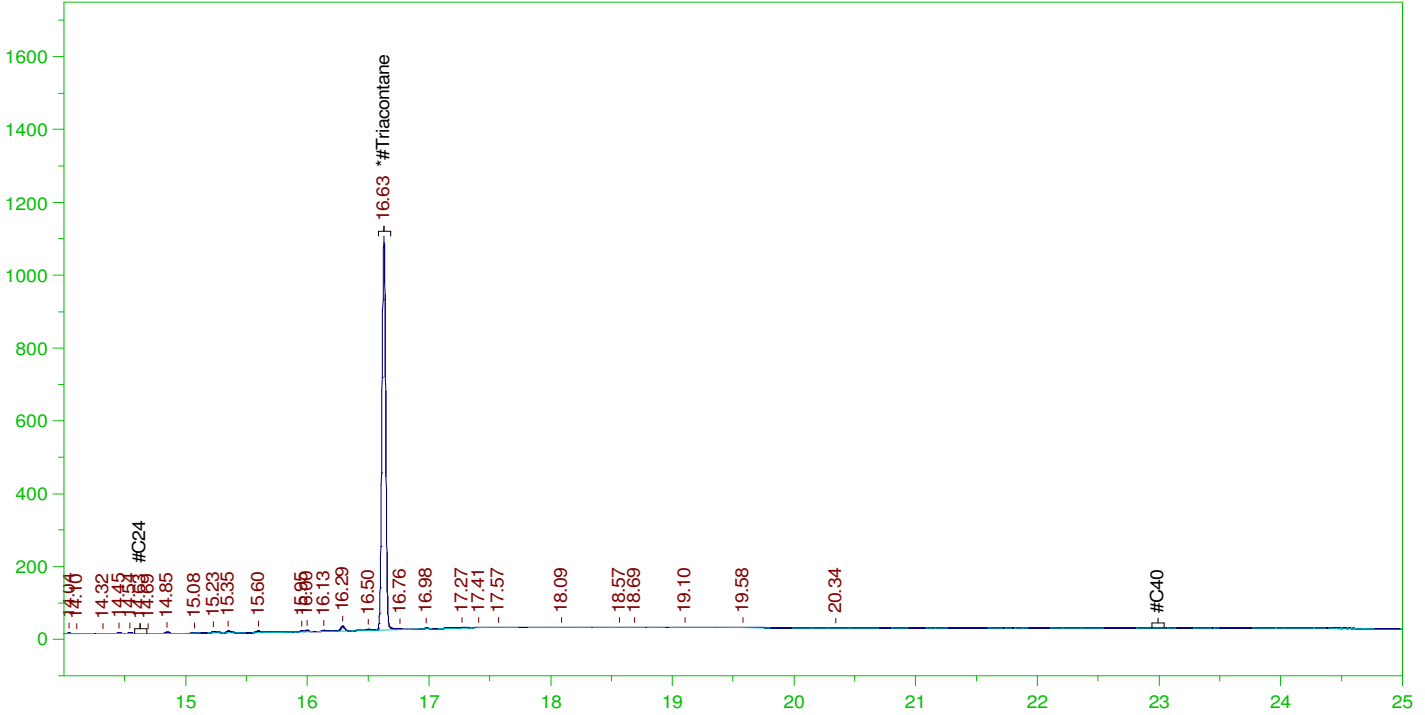
DRO Area:399508.1 DRO Amount: 0.0129534
TEH Area:663139.9 TEH Amount: 2.150124E-02

ERH2590 (RHMW013.5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0026.RAW

B22030433-064C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-064C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0026.RAW
 Date & Time Acquired: 3/10/2022 3:24:20 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.629	.476	.088	18.51

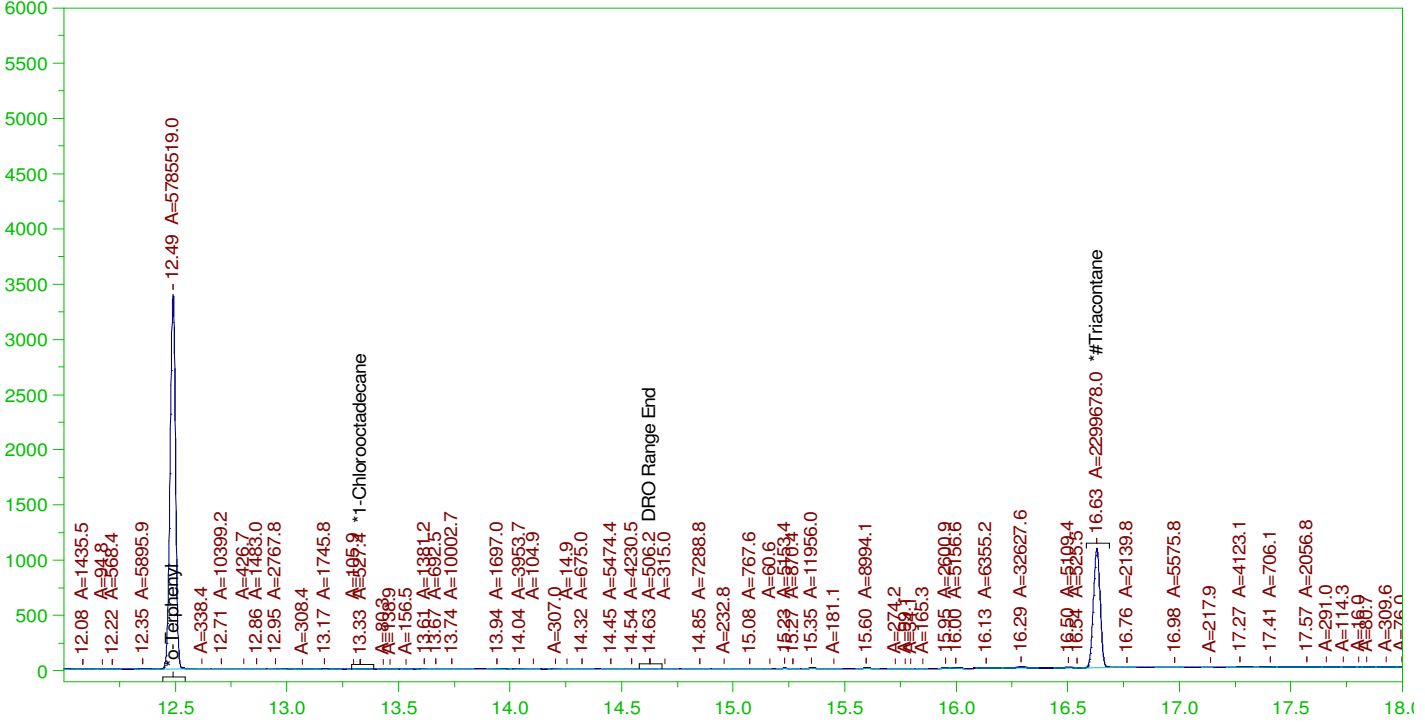
RRO Area:146233.5 RRO AMOUNT: 5.677638E-03

ERH2590 (RHMW013.5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0026.RAW

B22030433-064C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-064C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0026.RAW
Date & Time Acquired: 3/10/2022 3:24:20 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.165	86.82	-
*1-Chlorooctadecane	13.33	.19	.	.01	-
*#Triacontane	16.629	.19	.088	46.04	-

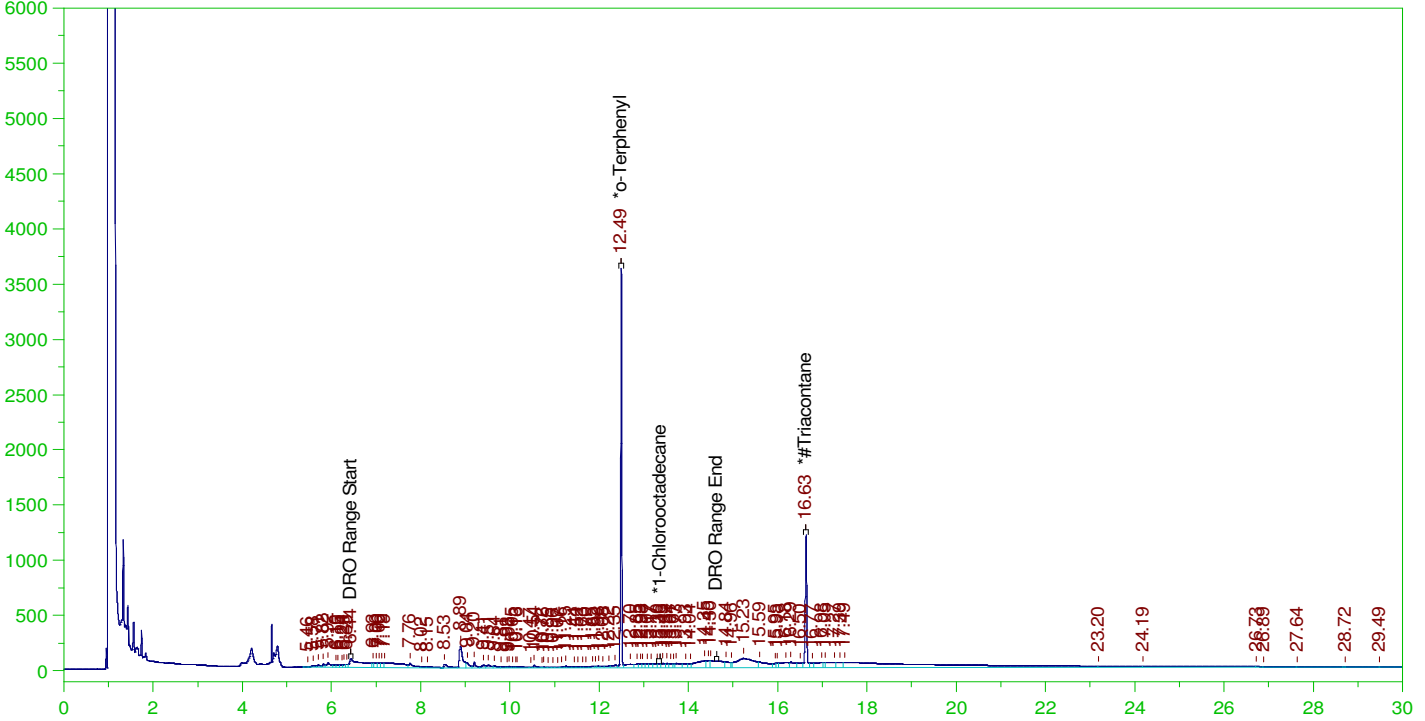
DRO Area:336253.5 DRO Amount: 1.090248E-02
TEH Area:907122.7 TEH Amount: 2.941198E-02

ERH2610 (RHMW2254-01 Bailer)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0027.RAW

B22030433-043C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-043C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0027.RAW
Date & Time Acquired: 3/10/2022 4:09:26 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.491	.192	.181	93.86	-
*1-Chlorooctadecane	13.365	.192	.004	2.07	-
*#Triacontane	16.63	.192	.106	55.18	-

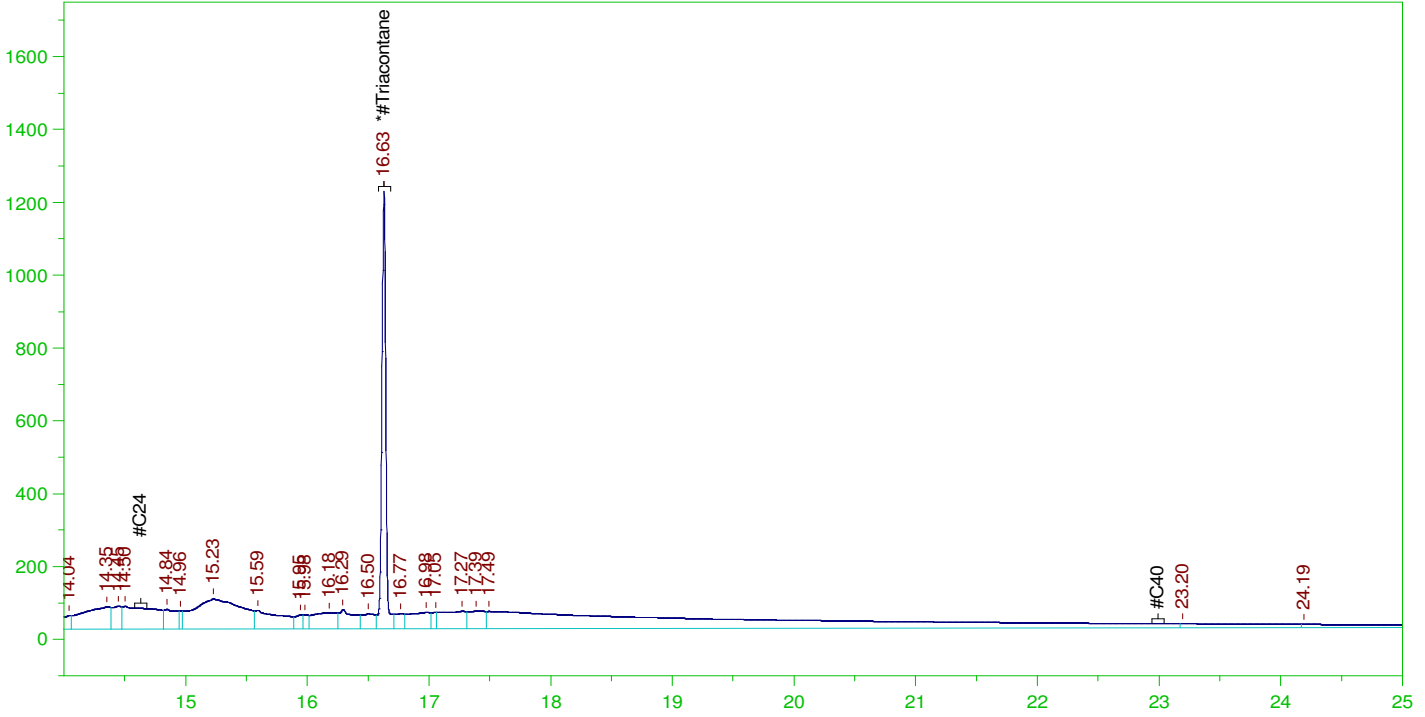
DRO Area:1.271729E+07 DRO Amount: 0.4163024
TEH Area:3.028446E+07 TEH Amount: 0.9913661

ERH2610 (RHMW2254-01 Bailer)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0027.RAW

B22030433-043C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-043C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0027.RAW
 Date & Time Acquired: 3/10/2022 4:09:26 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.63	.481	.106	22.07

RRO Area:1.472564E+07 RRO AMOUNT: 0.5772328

ERH2610 (RHMW2254-01 Bailer)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0027.RAW

B22030433-043C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-043C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0027.RAW
Date & Time Acquired: 3/10/2022 4:09:26 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.491	.192	.175	90.99
*1-Chlorooctadecane	29.861	.192	.	-
*#Triacontane	16.63	.192	.094	48.69

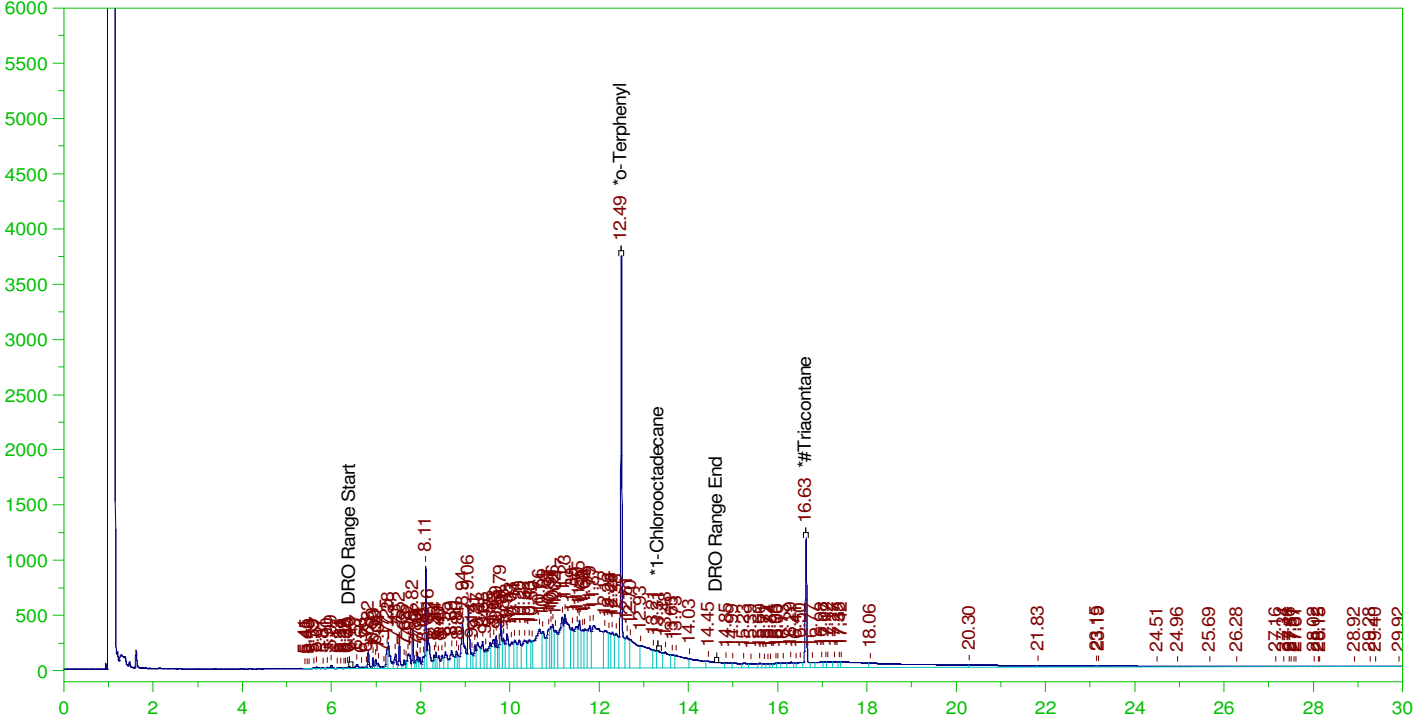
DRO Area:6543798 DRO Amount: 0.2142122
TEH Area:1.169704E+07 TEH Amount: 0.3829041

ERH2622 (RHMW02)

Batch ID: 164312

G:\Org\HP4\DAT\HP4030922_b\0309HP4.0028.RAW

B22030433-012C ;0309HP4, \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-012C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP4\DAT\HP4030922_b\0309HP4.0028.RAW
Date & Time Acquired: 3/10/2022 4:54:38 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.492	.192	.239	124.46	-
*1-Chlorooctadecane	13.314	.192	.037	19.26	-
*#Triacontane	16.63	.192	.109	56.62	-

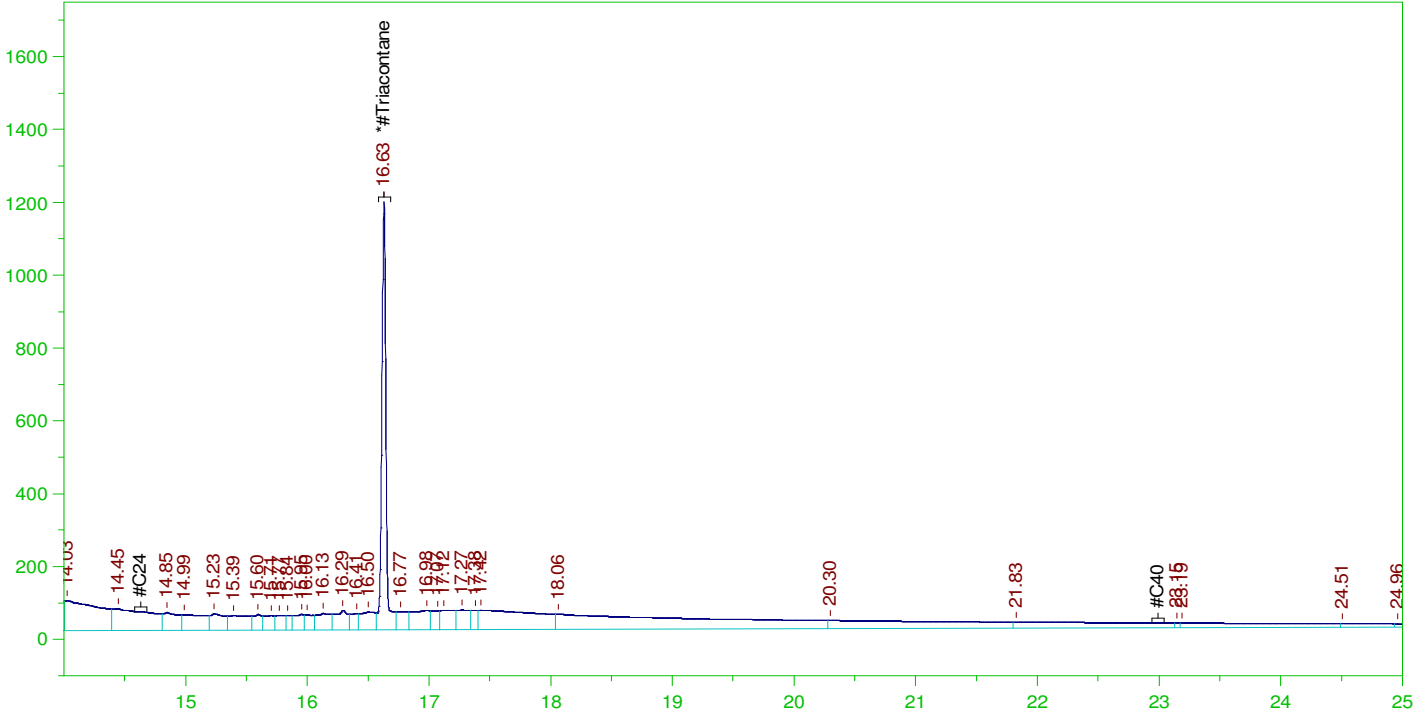
DRO Area: 9.083371E+07 DRO Amount: 2.973455
TEH Area: 1.080951E+08 TEH Amount: 3.538508

ERH2622 (RHMW02)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0028.RAW

B22030433-012C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-012C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0028.RAW
 Date & Time Acquired: 3/10/2022 4:54:38 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.63	.481	.109	22.7

RRO Area:1.49206E+07 RRO AMOUNT: 0.5848752

ERH2622 (RHMW02)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0028.RAW

B22030433-012C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-012C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0028.RAW
Date & Time Acquired: 3/10/2022 4:54:38 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.492	.192	.172	89.19	-
*1-Chlorooctadecane	13.314	.192	.001	.32	-
*#Triacontane	16.63	.192	.091	47.55	-

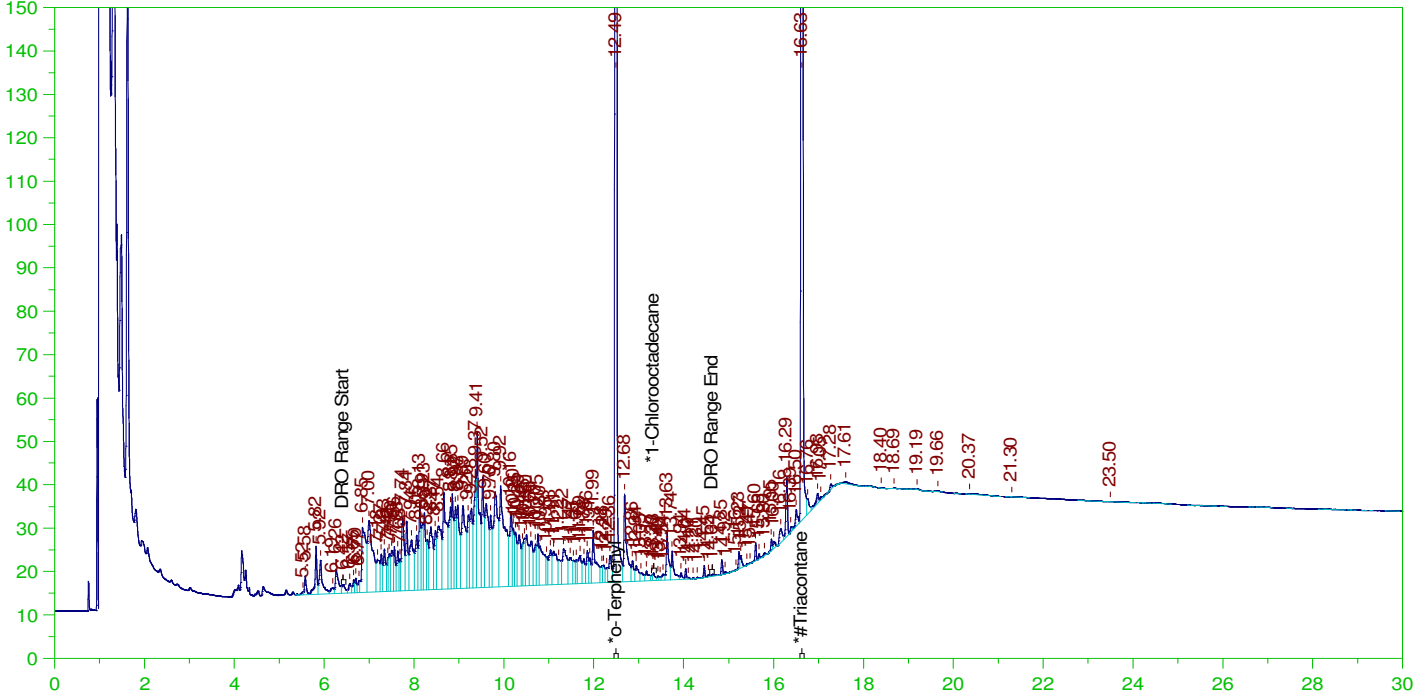
DRO Area: 2.087515E+07 DRO Amount: 0.6833511
TEH Area: 2.138716E+07 TEH Amount: 0.7001116

ERH2614 (Sump Audit 3)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0029.RAW

B22030433-023C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

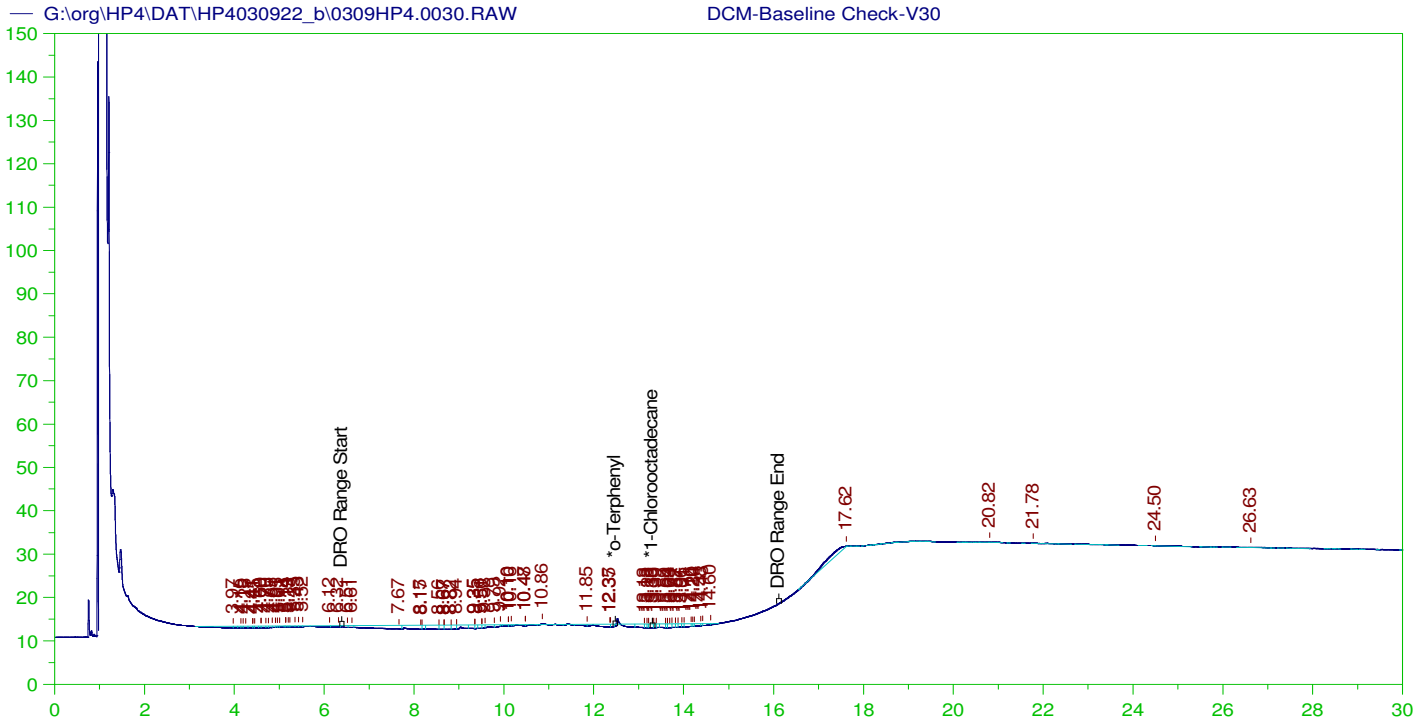
Sample Name: B22030433-023C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0029.RAW
Date & Time Acquired: 3/10/2022 5:39:43 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L0.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.168	88.28	-
*1-Chlorooctadecane	13.328	.19	.	.09	-
*#Triacontane	16.631	.19	.088	46.18	-

DRO Area:3958987 DRO Amount: 0.1283637
TEH Area:4248008 TEH Amount: 0.1377348



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V30
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0030.RAW
 Date & Time Acquired: 3/10/2022 6:25:05 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.958	200.	.	-
*1-Chlorooctadecane	13.302	200.	.159	.08

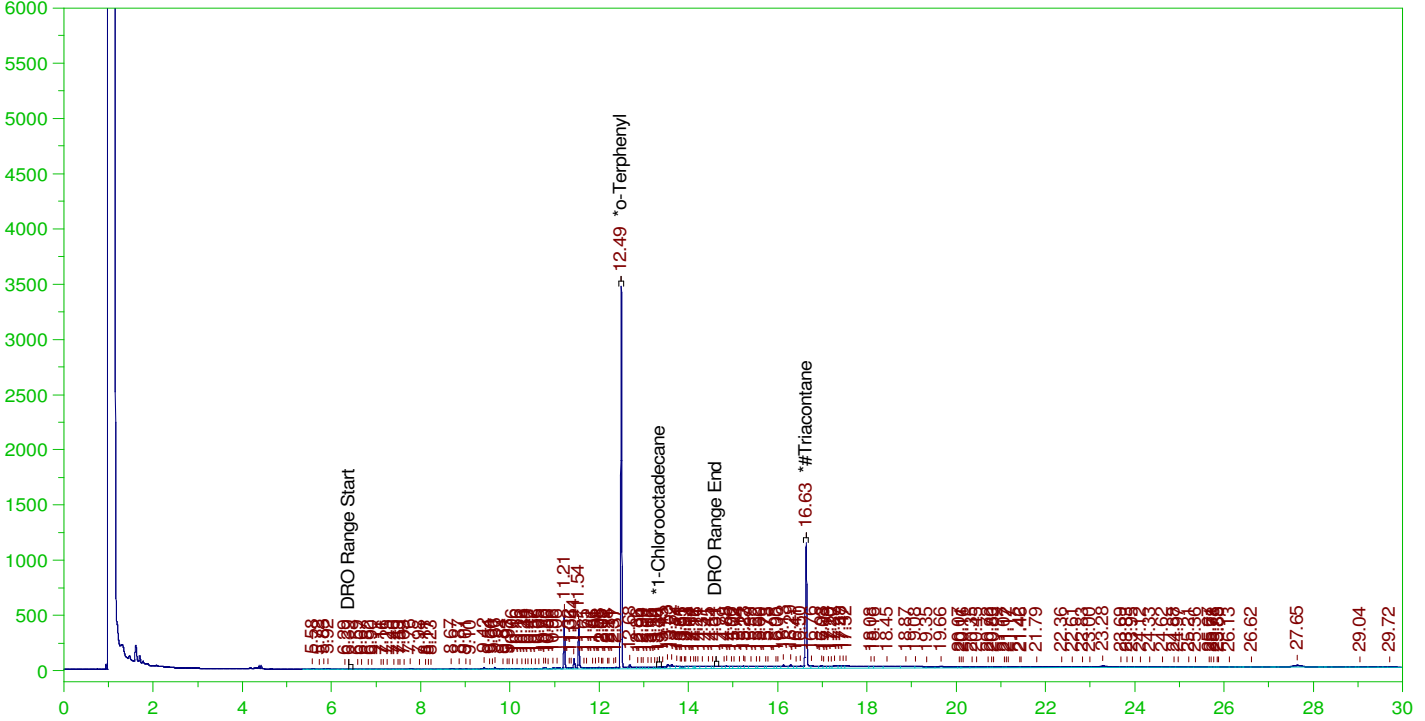
DRO Area:240378 DRO Amount: 8.18356
 TEH Area:319996.6 TEH Amount: 10.89414

ERH2576 (RHMW03)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0031.RAW

B22030433-007C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-007C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0031.RAW
Date & Time Acquired: 3/10/2022 7:10:19 AM
Method File: G:\Org\HP4\methods\D3_8015-030931-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.171	89.85	-
*1-Chlorooctadecane	13.34	.19	.001	.62	-
*#Triacontane	16.631	.19	.097	50.77	-

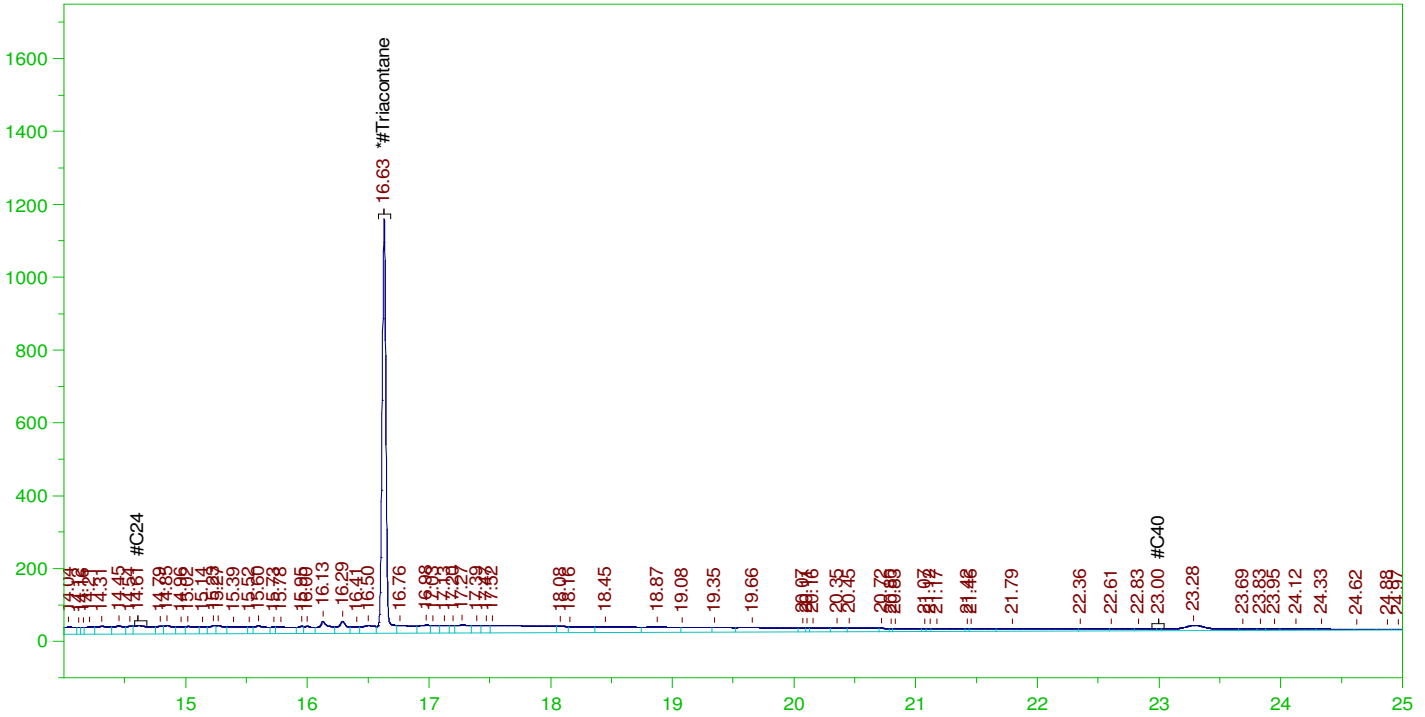
DRO Area:4825373 DRO Amount: 0.1564549
TEH Area:1.232976E+07 TEH Amount: 0.3997724

ERH2576 (RHMW03)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0031.RAW

B22030433-007C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-007C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0031.RAW
Date & Time Acquired: 3/10/2022 7:10:19 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-030931-AH-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.631	.476	.097	20.31

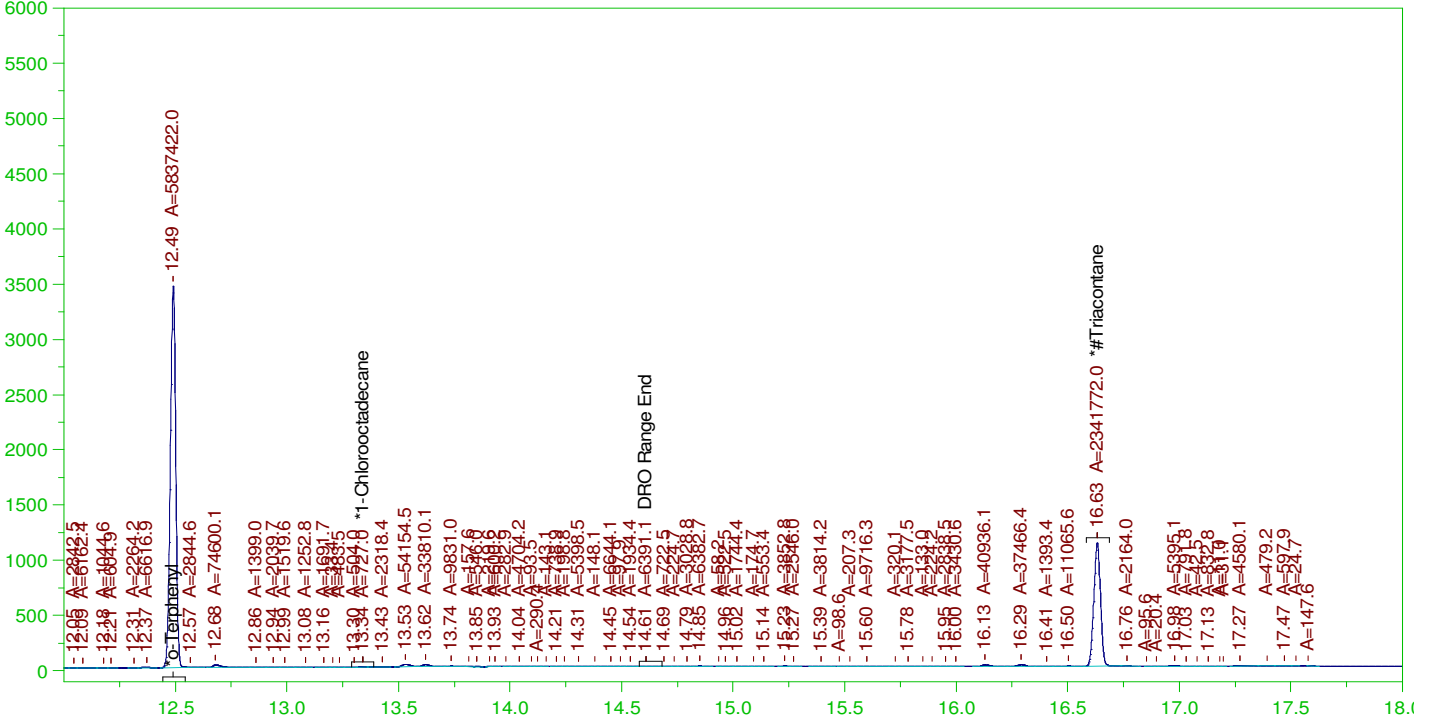
RRO Area:6835089 RRO AMOUNT: 0.2653781

ERH2576 (RHMW03)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0031.RAW

B22030433-007C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

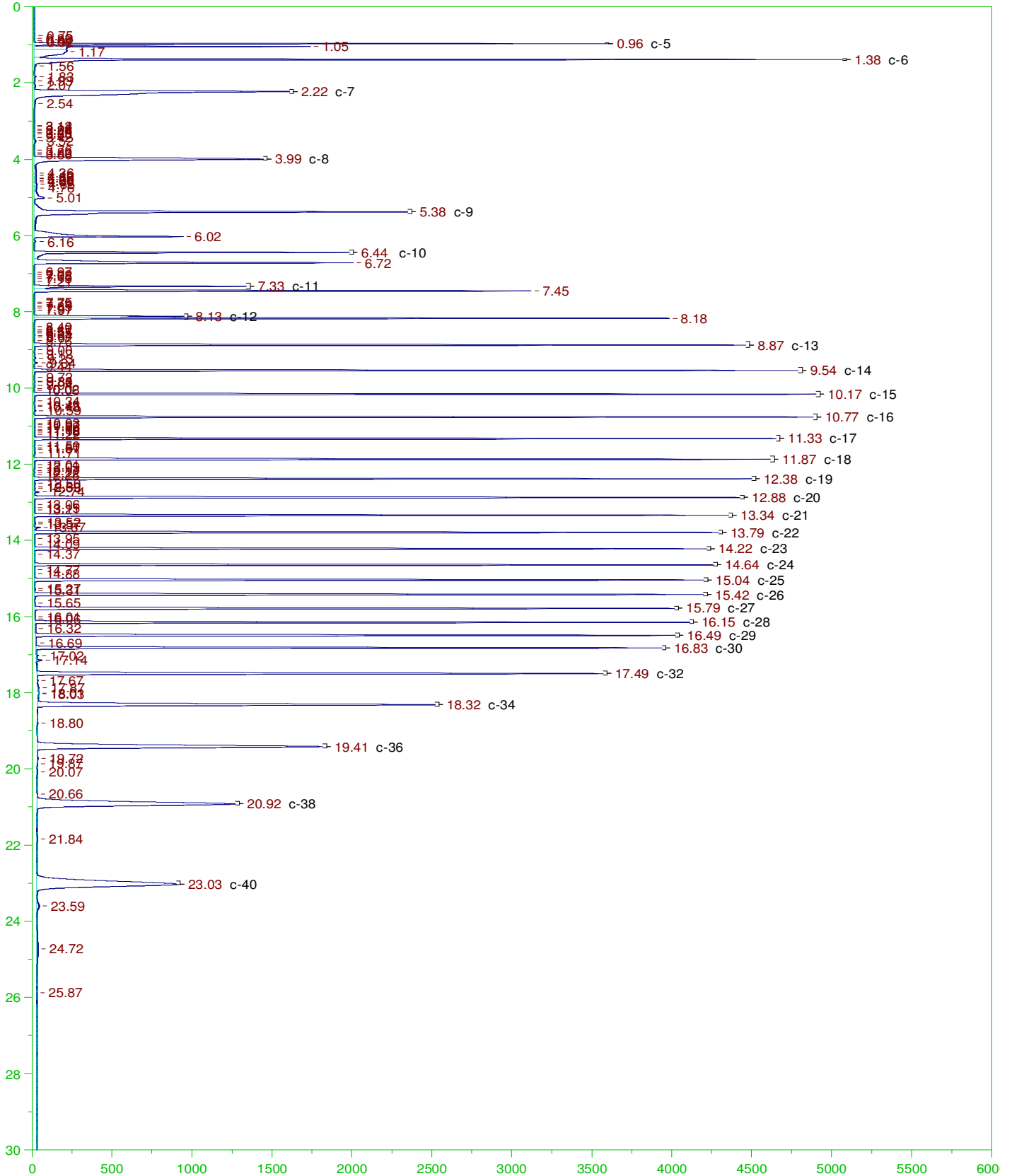
Sample Name: B22030433-007C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0031.RAW
Date & Time Acquired: 3/10/2022 7:10:19 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

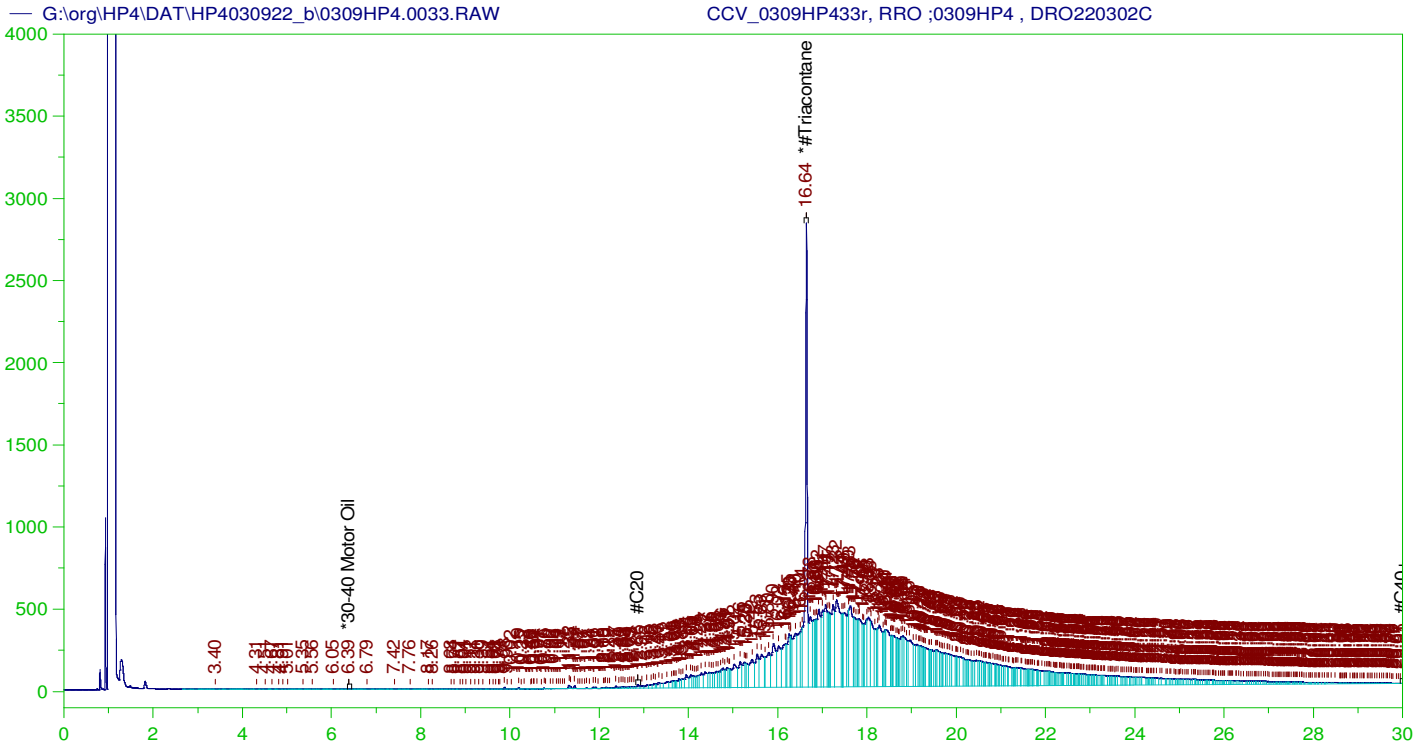
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.167	87.6	-
*1-Chlorooctadecane	13.34	.19	.	.01	-
*#Triacontane	16.631	.19	.089	46.88	-

DRO Area:2363779 DRO Amount: 7.664172E-02
TEH Area:3212237 TEH Amount: 0.1041516





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP433r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0033.RAW
 Date & Time Acquired: 3/10/2022 9:21:52 AM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.638	500.	332.156	66.43	-

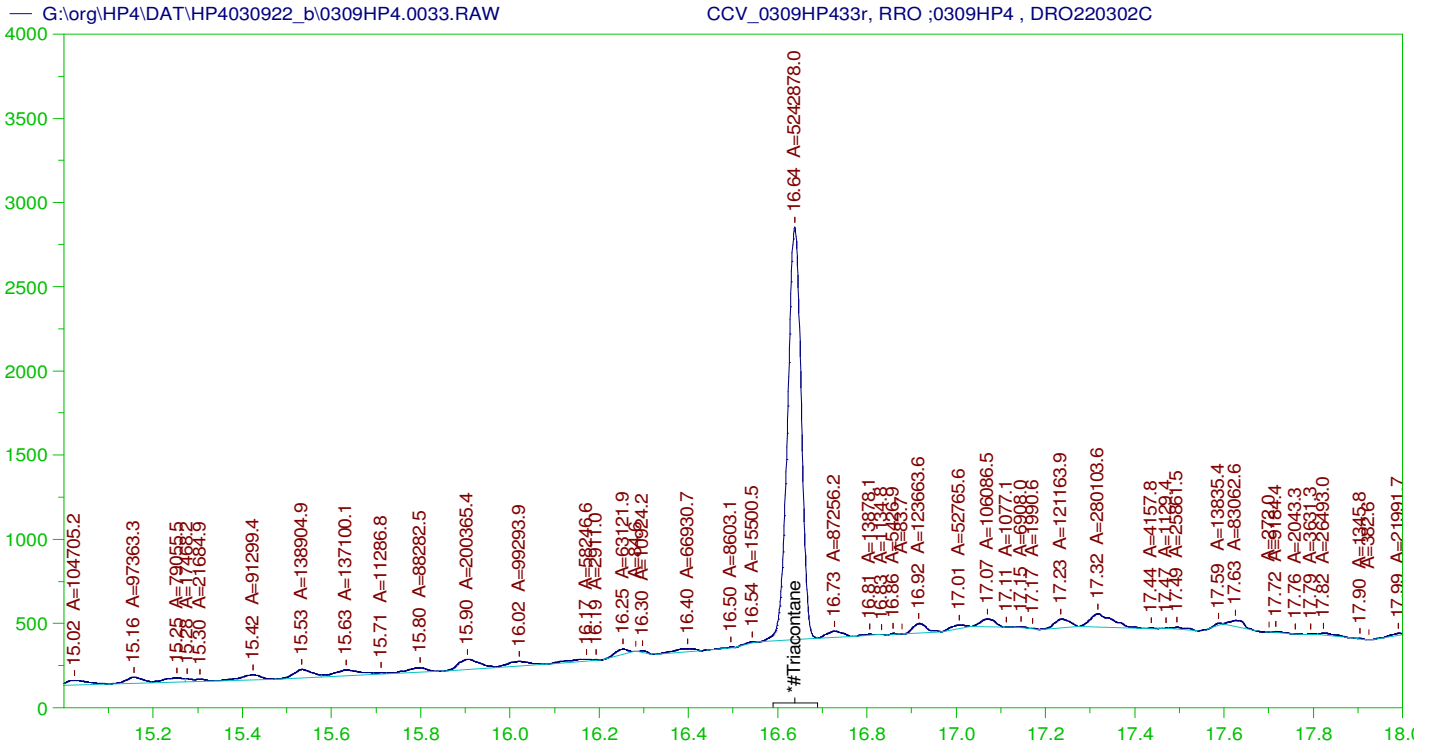
~~RRO~~ TEH(Oil Range) Area:1.258529E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5130.661

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.047	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.638	200.	332.156	166.08	75-125

JLB 03/11/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP433r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0033.RAW
 Date & Time Acquired: 3/10/2022 9:21:52 AM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

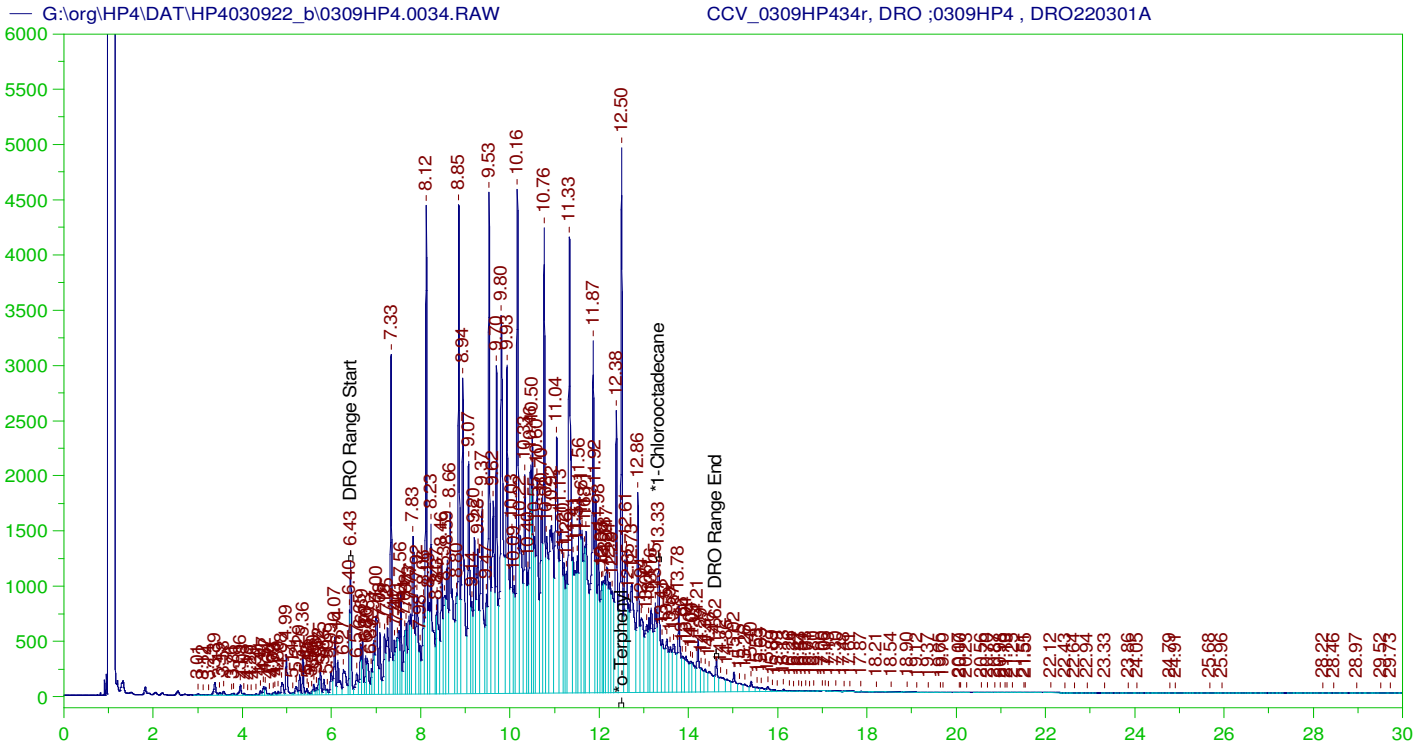
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.638	500.	209.935	41.99	-

RRO Area:3764882 RRO AMOUNT: 153.4835

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.047	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.638	200.	209.935	104.97	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP434r, DRO ;0309HP4 , DRO220301A
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0034.RAW
 Date & Time Acquired: 3/10/2022 10:07:35 AM
 Method File: G:\Org\HP4\methods\DC_8015-C24-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.498	200.	389.591	194.8
*1-Chlorooctadecane	13.33	200.	115.762	57.88

DRO Area: 4.5192E+08 DRO Amount: 15385.41
 TEH Area: 4.683406E+08 TEH Amount: 15944.44

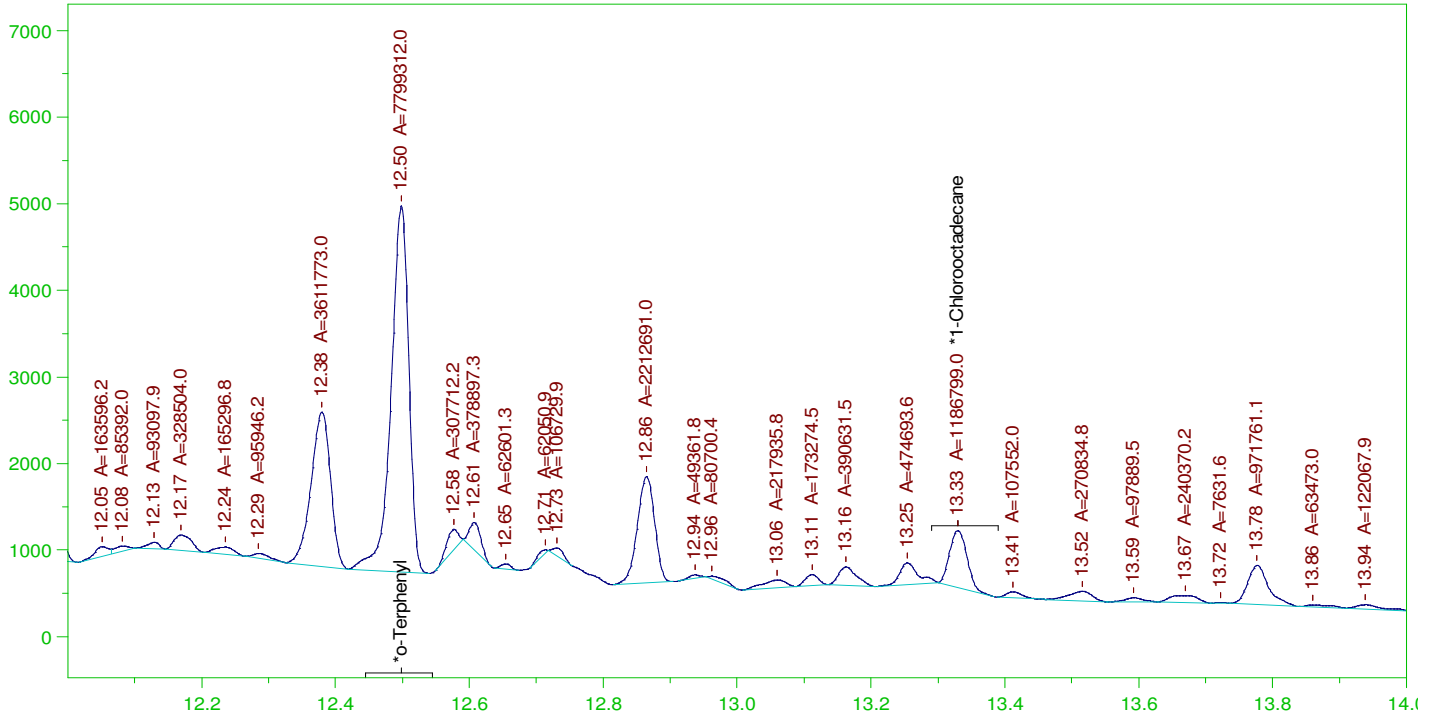
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0034.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15944.44	106.3	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.498	200.	389.591	194.8	85-115
*1-Chlorooctadecane	13.33	200.	115.762	57.88	85-115

G:\org\HP4\DAT\HP4030922_b\0309HP4.0034.RAW

CCV_0309HP434r, DRO ;0309HP4 , DRO220301A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP434r, DRO ;0309HP4 , DRO220301A
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0034.RAW
 Date & Time Acquired: 3/10/2022 10:07:35 AM
 Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

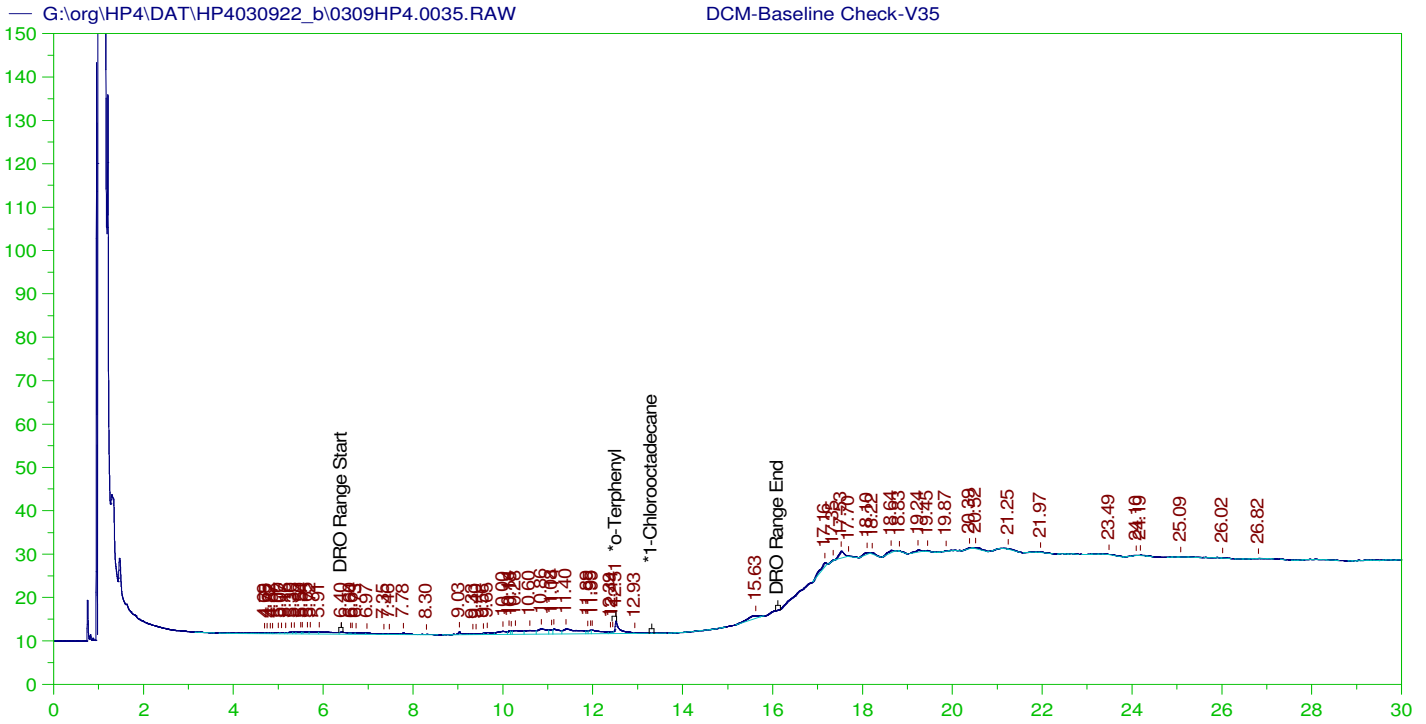
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.498	200.	234.075	117.04
*1-Chlorooctadecane	13.33	200.	35.619	17.81

DRO Area: 2.2225E+08 DRO Amount: 7566.399
 TEH Area: 2.326793E+08 TEH Amount: 7921.461

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0034.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7921.46	52.81	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.498	200.	234.075	117.04	85-115
*1-Chlorooctadecane	13.33	200.	35.619	17.81	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V35
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0035.RAW
 Date & Time Acquired: 3/10/2022 10:53:06 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.515	200.	.641	.32
*1-Chlorooctadecane	29.947	200.	.	.

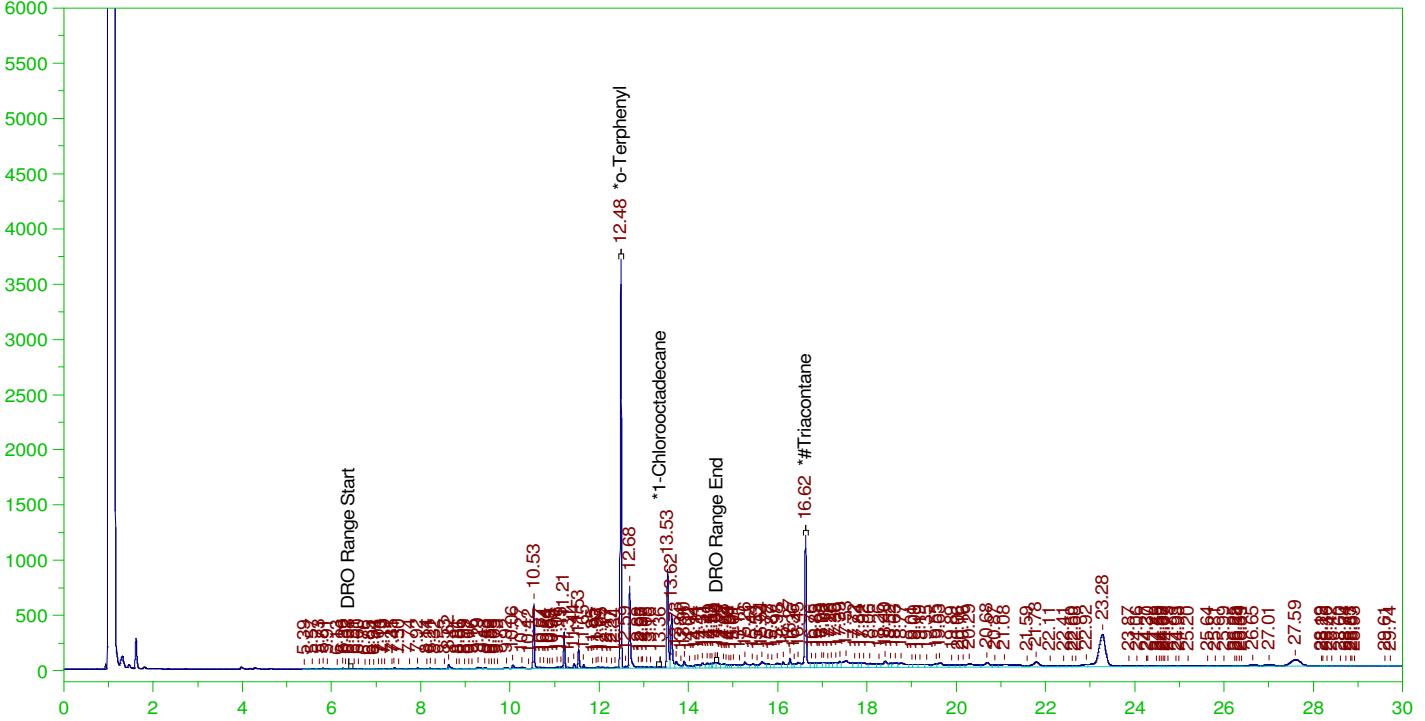
DRO Area:169910.6 DRO Amount: 5.784529
 TEH Area:271794.7 TEH Amount: 9.253128

ERH2627 (RHMW10)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0036.RAW

B22030502-021C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-021C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0036.RAW
Date & Time Acquired: 3/10/2022 11:38:45 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.482	.192	.185	96.07	-
*1-Chlorooctadecane	13.363	.192	.003	1.8	-
*#Triacontane	16.62	.192	.116	60.26	-

DRO Area:1.208578E+07 DRO Amount: 0.3956296

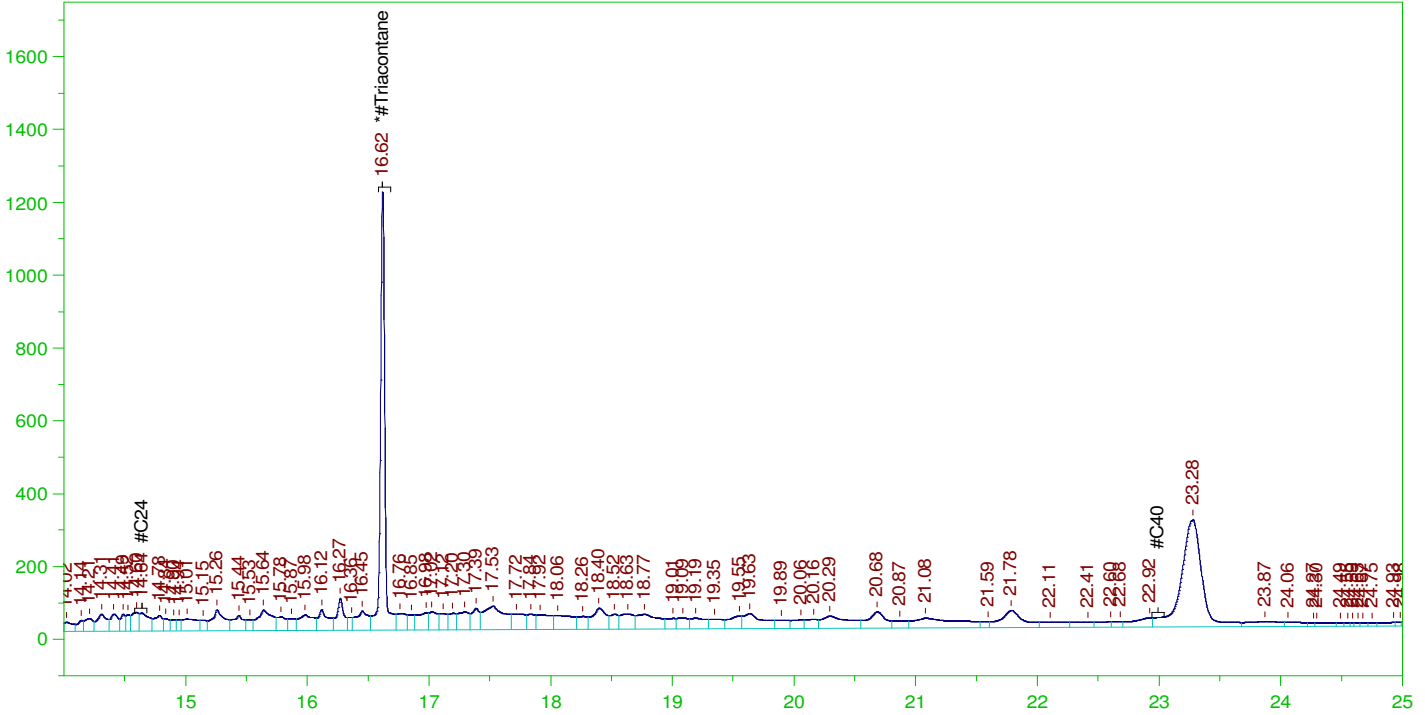
TEH Area:3.344513E+07 TEH Amount: 1.094831

ERH2627 (RHMW10)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0036.RAW

B22030502-021C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-021C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0036.RAW
 Date & Time Acquired: 3/10/2022 11:38:45 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.62	.481	.116	24.1

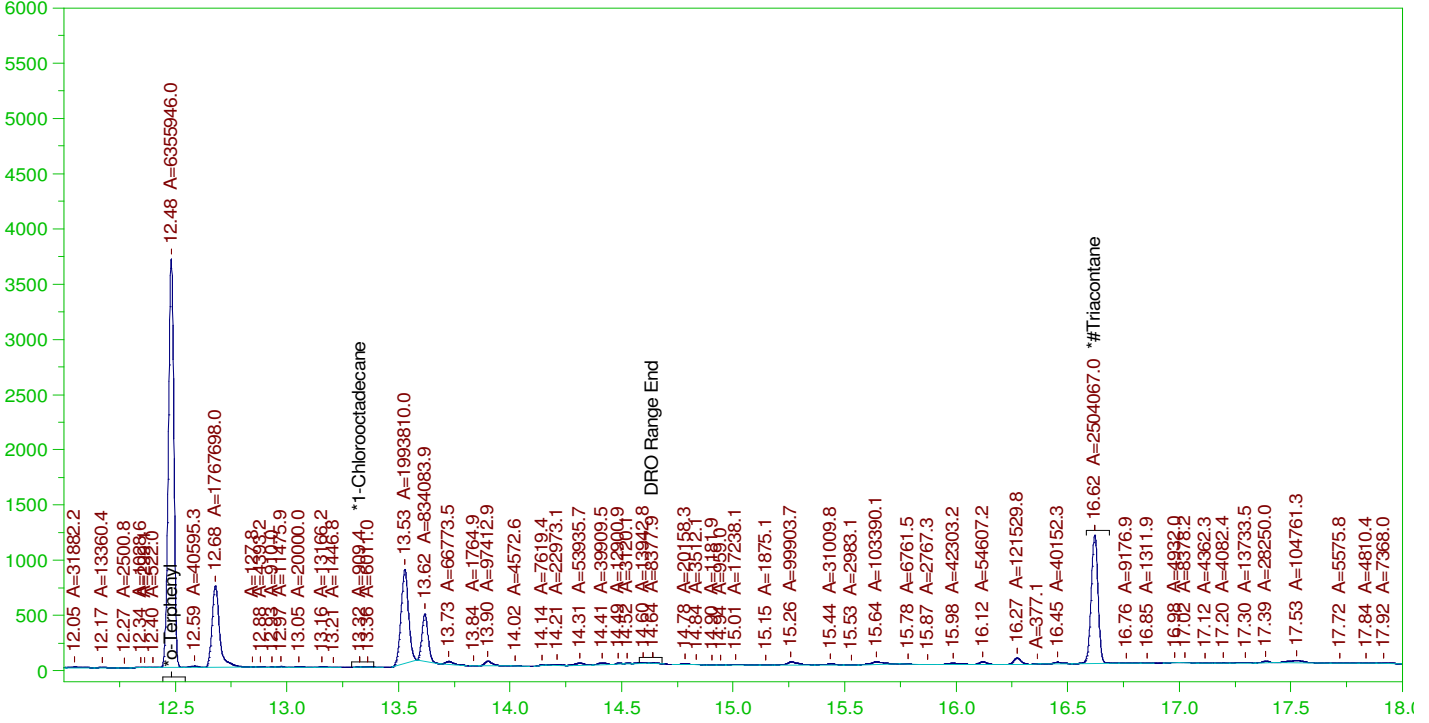
RRO Area:1.513446E+07 RRO AMOUNT: 0.5932583

ERH2627 (RHMW10)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0036.RAW

B22030502-021C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

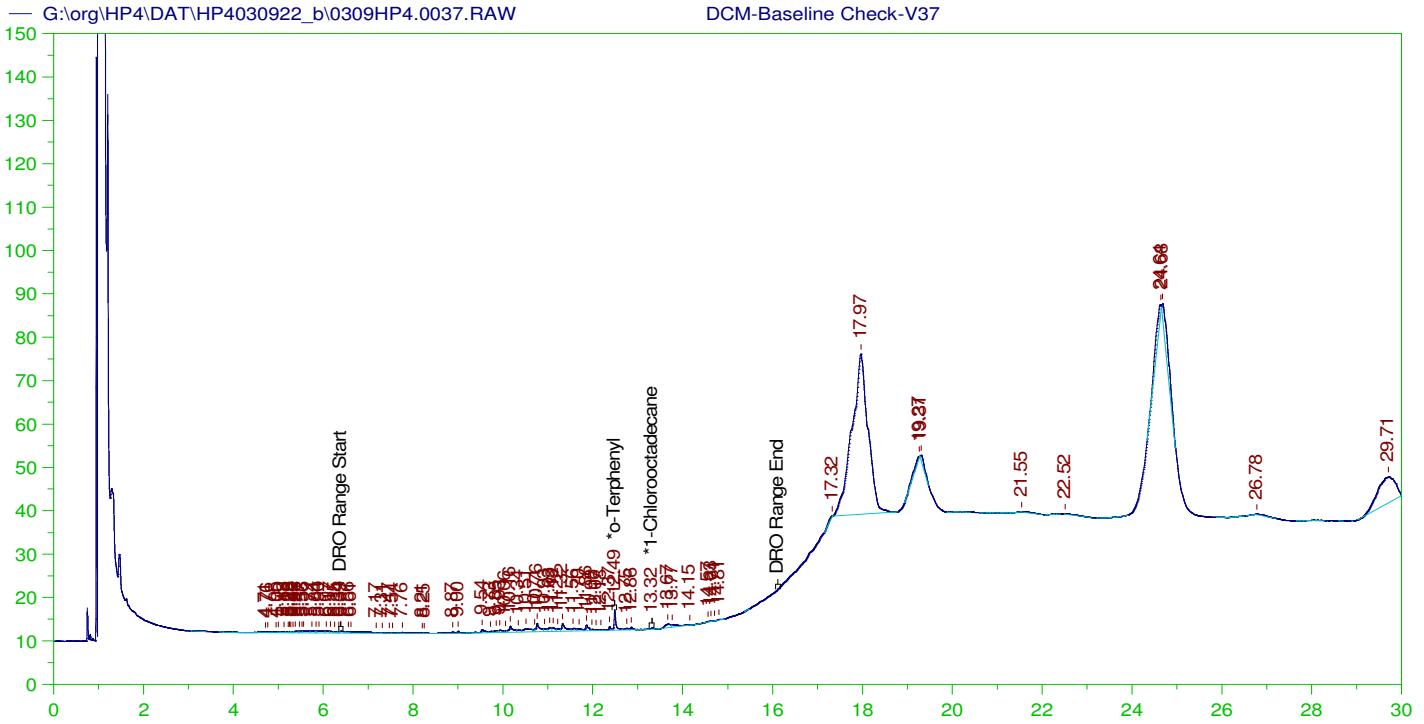
Sample Name: B22030502-021C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0036.RAW
 Date & Time Acquired: 3/10/2022 11:38:45 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.482	.192	.183	95.38	-
*1-Chlorooctadecane	13.325	.192	.	.01	-
*#Triacontane	16.62	.192	.096	50.13	-

DRO Area:8743028 DRO Amount: 0.2862043
 TEH Area:1.457752E+07 TEH Amount: 0.4771971



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

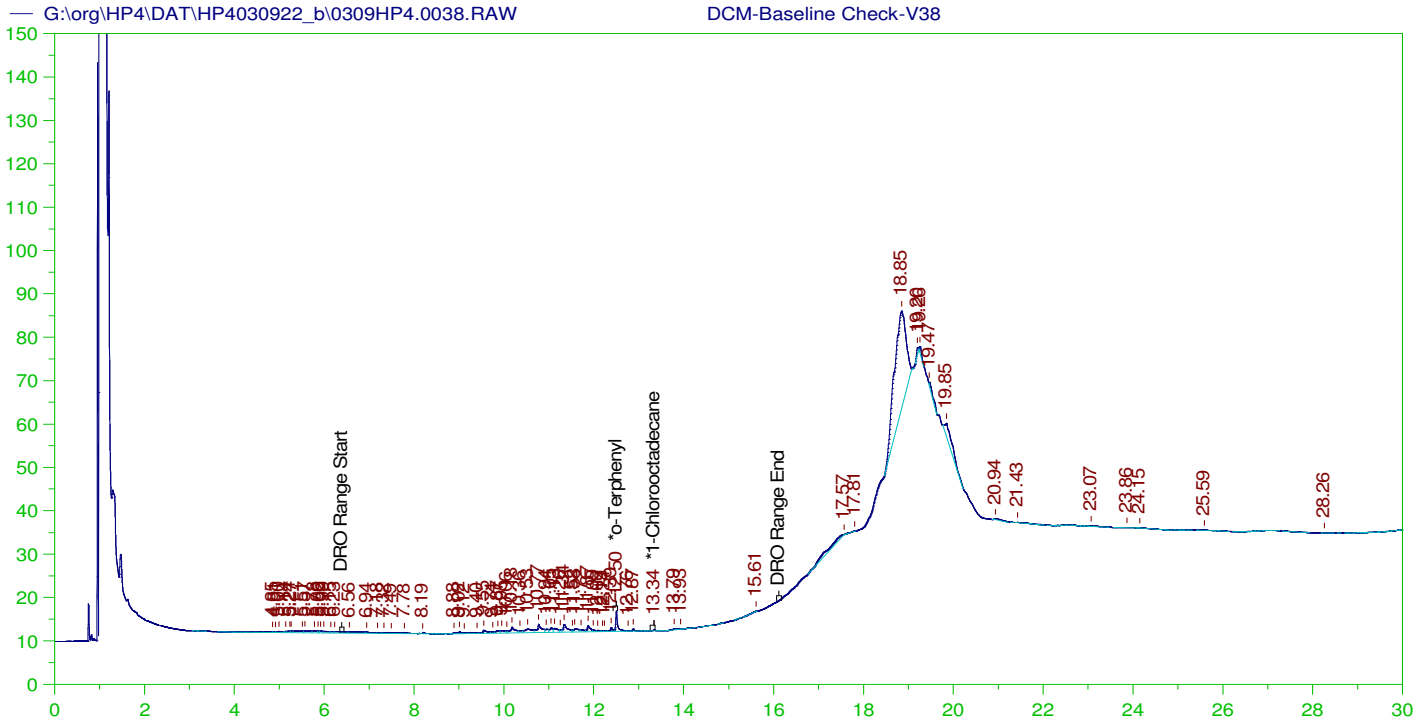
Sample Name: DCM-Baseline Check-V37
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0037.RAW
 Date & Time Acquired: 3/10/2022 12:24:29 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.486	200.	.417	.21	-
*1-Chlorooctadecane	13.319	200.	.032	.02	-

DRO Area:136584.8 DRO Amount: 4.64997
 TEH Area:1426973 TEH Amount: 48.58064



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V38
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0038.RAW
 Date & Time Acquired: 3/10/2022 1:09:52 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.499	200.	.482	.24	-
*1-Chlorooctadecane	13.337	200.	.035	.02	-

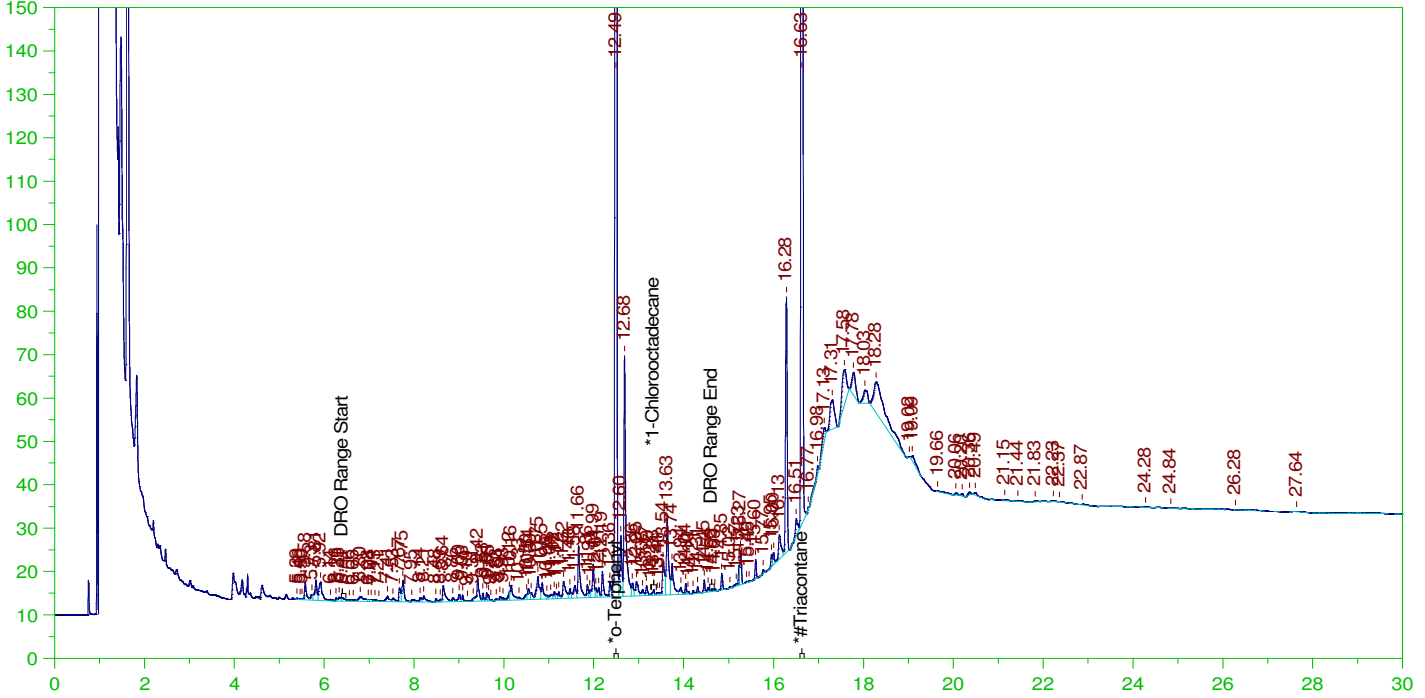
DRO Area:139758.7 DRO Amount: 4.758021
 TEH Area:694921.8 TEH Amount: 23.6583

ERH2598 (RHMW19)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0039.RAW

B22030502-031C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

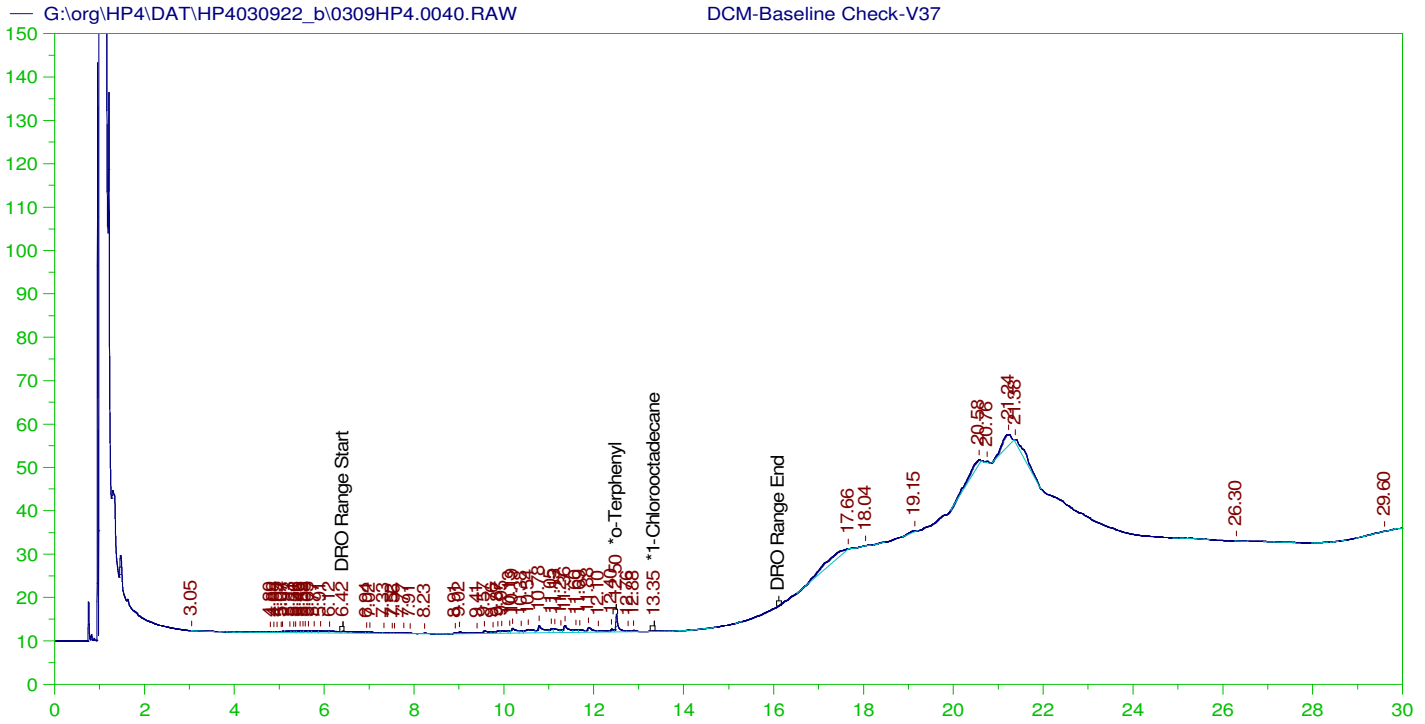
Sample Name: B22030502-031C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0039.RAW
Date & Time Acquired: 3/10/2022 1:55:18 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L0.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.491	.19	.173	90.91	-
*1-Chlorooctadecane	13.328	.19	.	.06	-
*#Triacontane	16.631	.19	.089	46.62	-

DRO Area: 779024.9 DRO Amount: 2.525862E-02
TEH Area: 1429018 TEH Amount: 4.633361E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

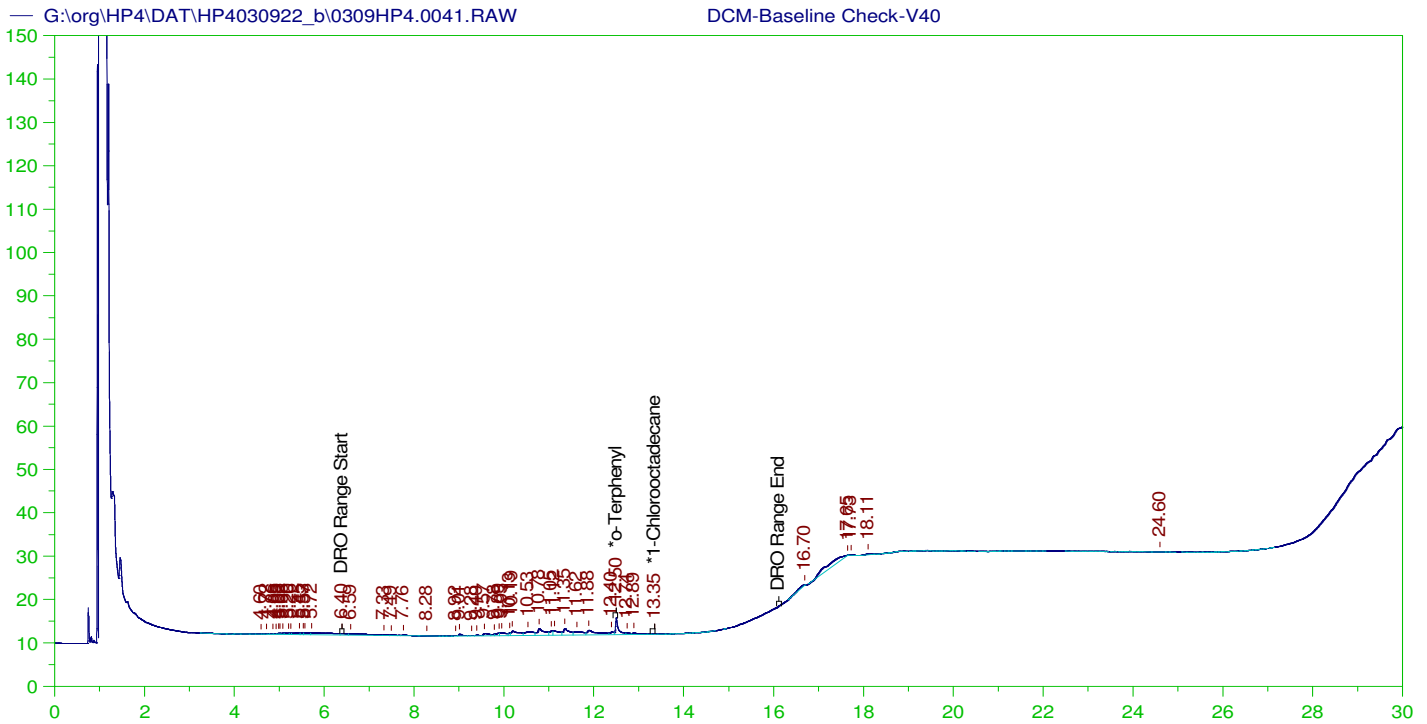
Sample Name: DCM-Baseline Check-V37
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0040.RAW
 Date & Time Acquired: 3/10/2022 2:40:45 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.503	200.	.506	.25	-
*1-Chlorooctadecane	13.345	200.	.034	.02	-

DRO Area:144257.4 DRO Amount: 4.91118
 TEH Area:357868.5 TEH Amount: 12.18347



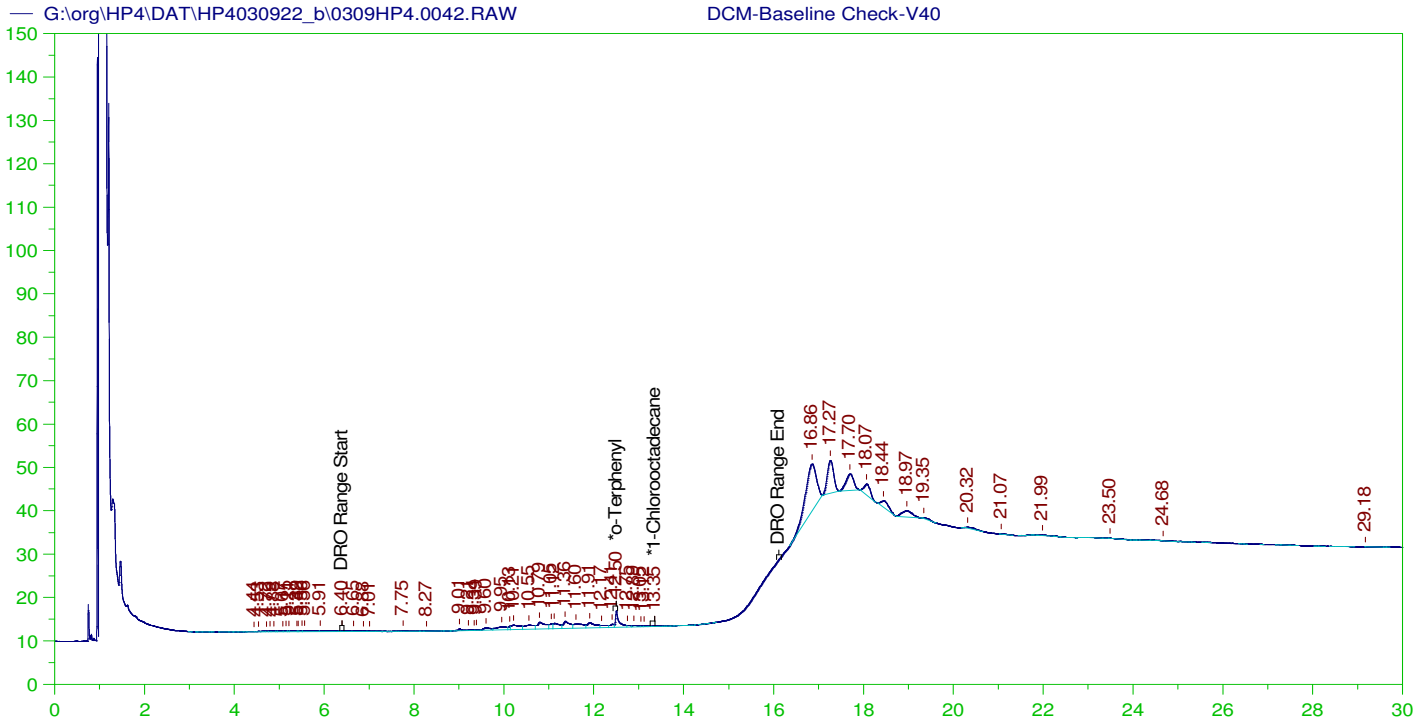
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V40
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0041.RAW
 Date & Time Acquired: 3/10/2022 3:26:35 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.498	200.	.537	.27	-
*1-Chlorooctadecane	13.354	200.	.029	.01	-

DRO Area:151470.5 DRO Amount: 5.156745
 TEH Area:243692.8 TEH Amount: 8.296412



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

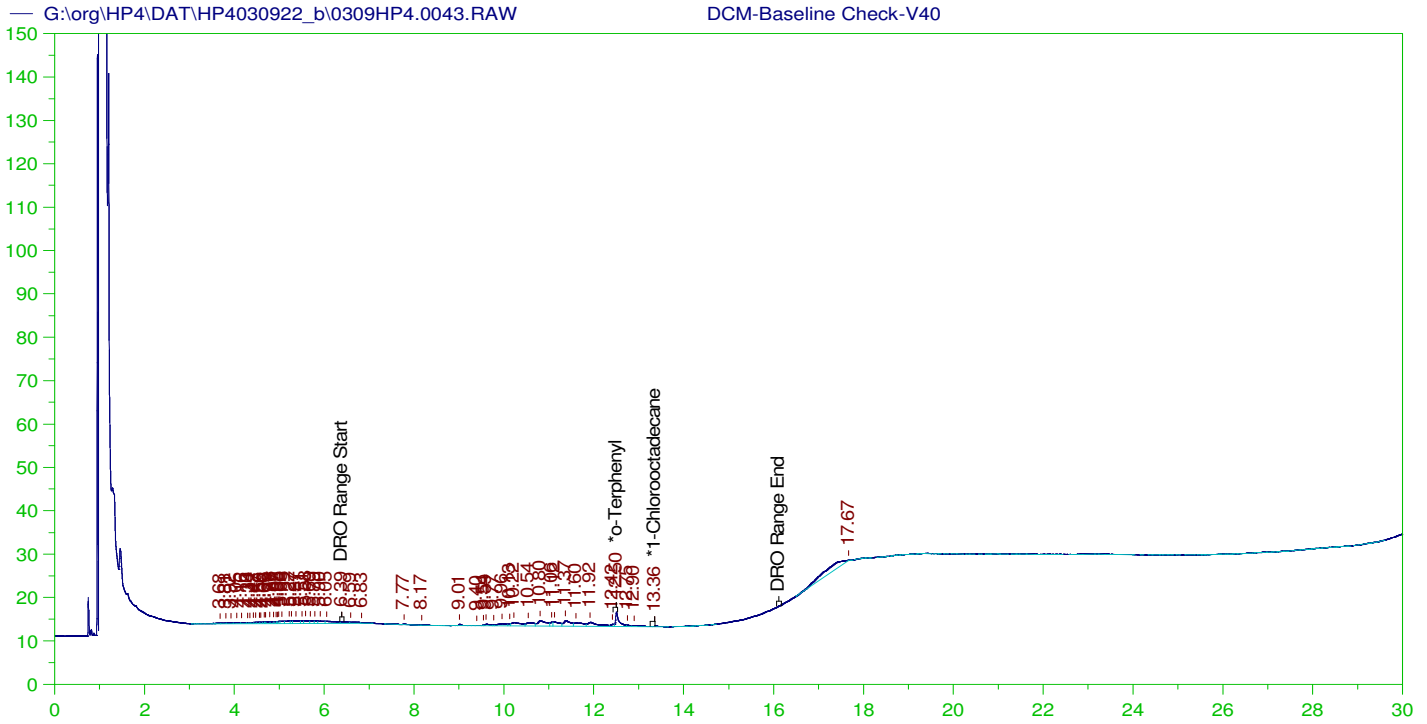
Sample Name: DCM-Baseline Check-V40
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0042.RAW
 Date & Time Acquired: 3/10/2022 4:11:50 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.5	200.	.631	.32	-
*1-Chlorooctadecane	13.355	200.	.043	.02	-

DRO Area:174193.4 DRO Amount: 5.930336
 TEH Area:594672.7 TEH Amount: 20.24536



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V40
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0043.RAW
 Date & Time Acquired: 3/10/2022 4:57:18 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.502	200.	.552	.28	-
*1-Chlorooctadecane	13.356	200.	.033	.02	-

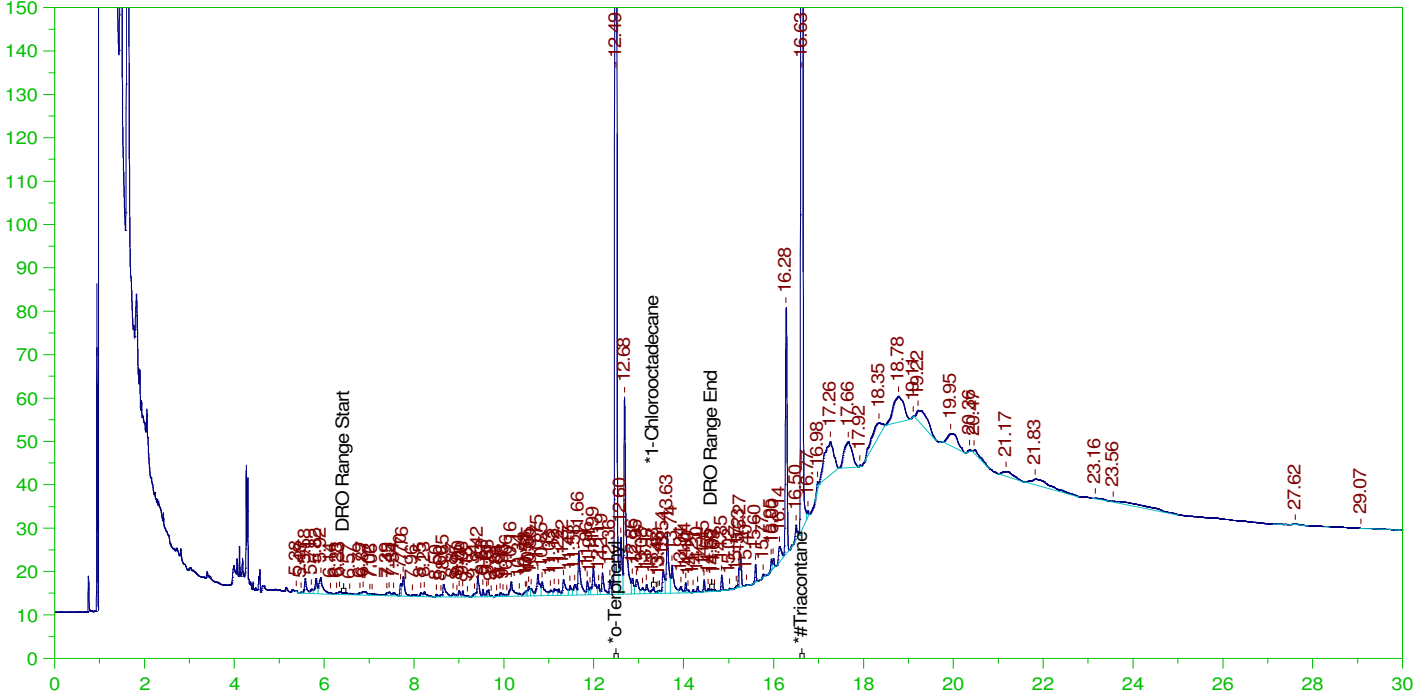
DRO Area:134696.4 DRO Amount: 4.585679
 TEH Area:263396.3 TEH Amount: 8.967209

ERH2598 (RHMW19)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0044.RAW

B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0044.RAW
 Date & Time Acquired: 3/10/2022 5:42:44 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L0.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.19	.168	88.2	-
*1-Chlorooctadecane	13.326	.19	.	.1	-
*#Triacontane	16.628	.19	.086	45.01	-

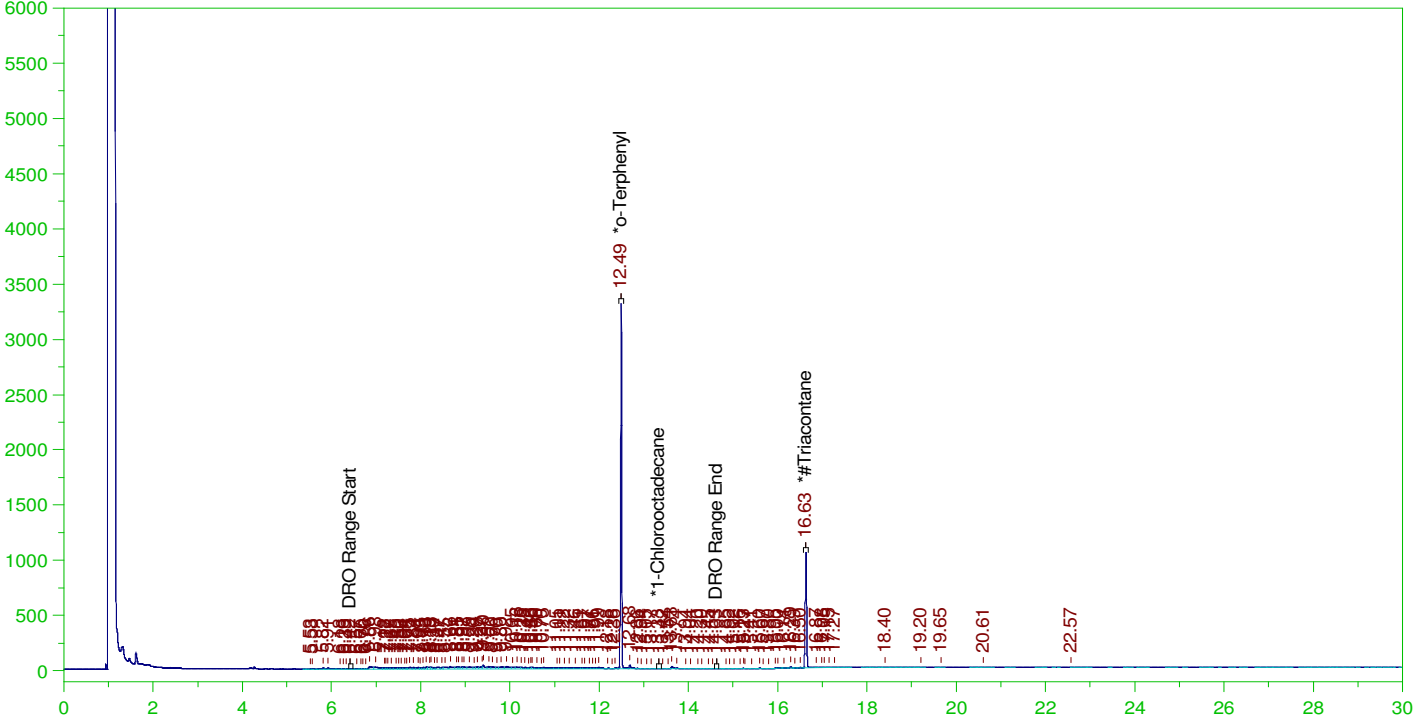
DRO Area: 734268.3 DRO Amount: 2.380746E-02
 TEH Area: 1574039 TEH Amount: 5.103566E-02

ERH2614 (Sump Audit 3)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0045.RAW

B22030433-023C ;0309HP4 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-023C ;0309HP4 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0045.RAW
 Date & Time Acquired: 3/10/2022 6:28:06 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.488	.19	.164	86.07	-
*1-Chlorooctadecane	13.327	.19	.	.19	-
*#Triacontane	16.628	.19	.086	45.03	-

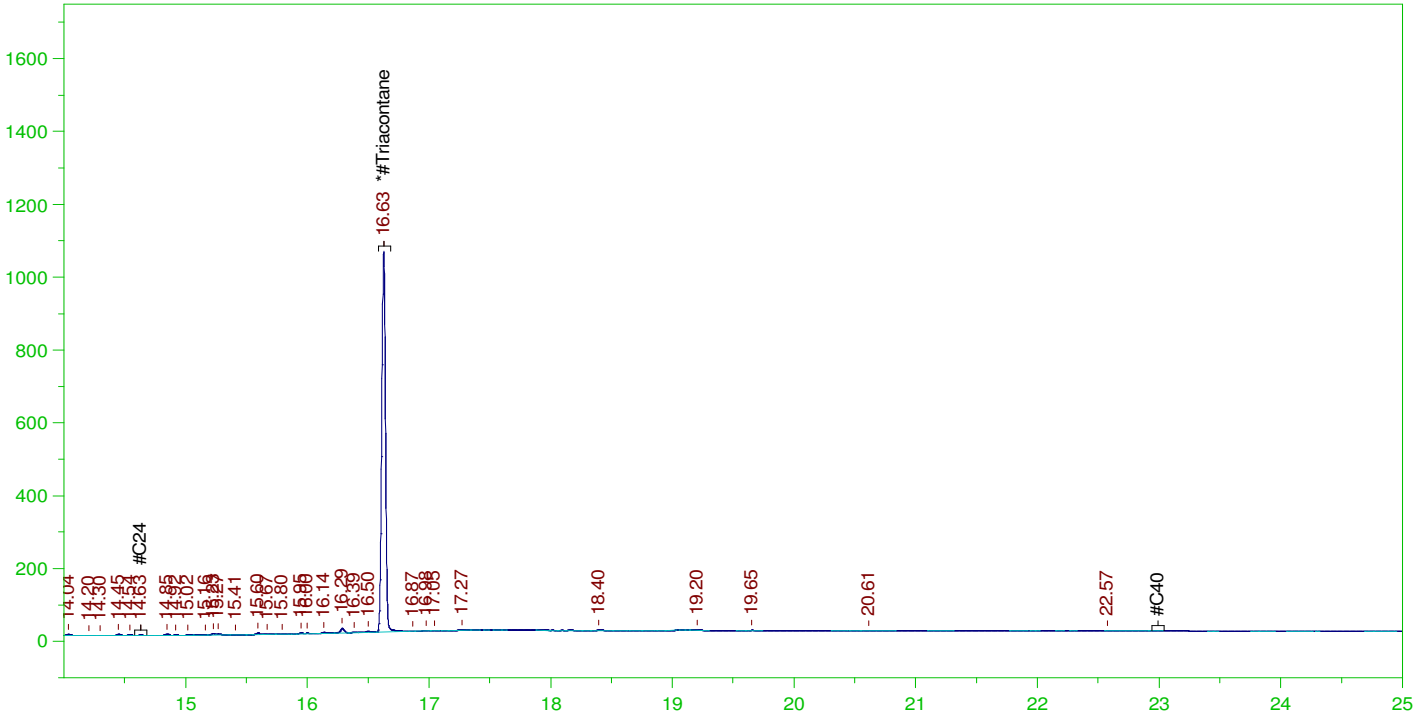
DRO Area:4232415 DRO Amount: 0.1372292
 TEH Area:4496282 TEH Amount: 0.1457846

ERH2614 (Sump Audit 3)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0045.RAW

B22030433-023C ;0309HP4 , \$HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-023C ;0309HP4 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0045.RAW
 Date & Time Acquired: 3/10/2022 6:28:06 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.628	.476	.086	17.98

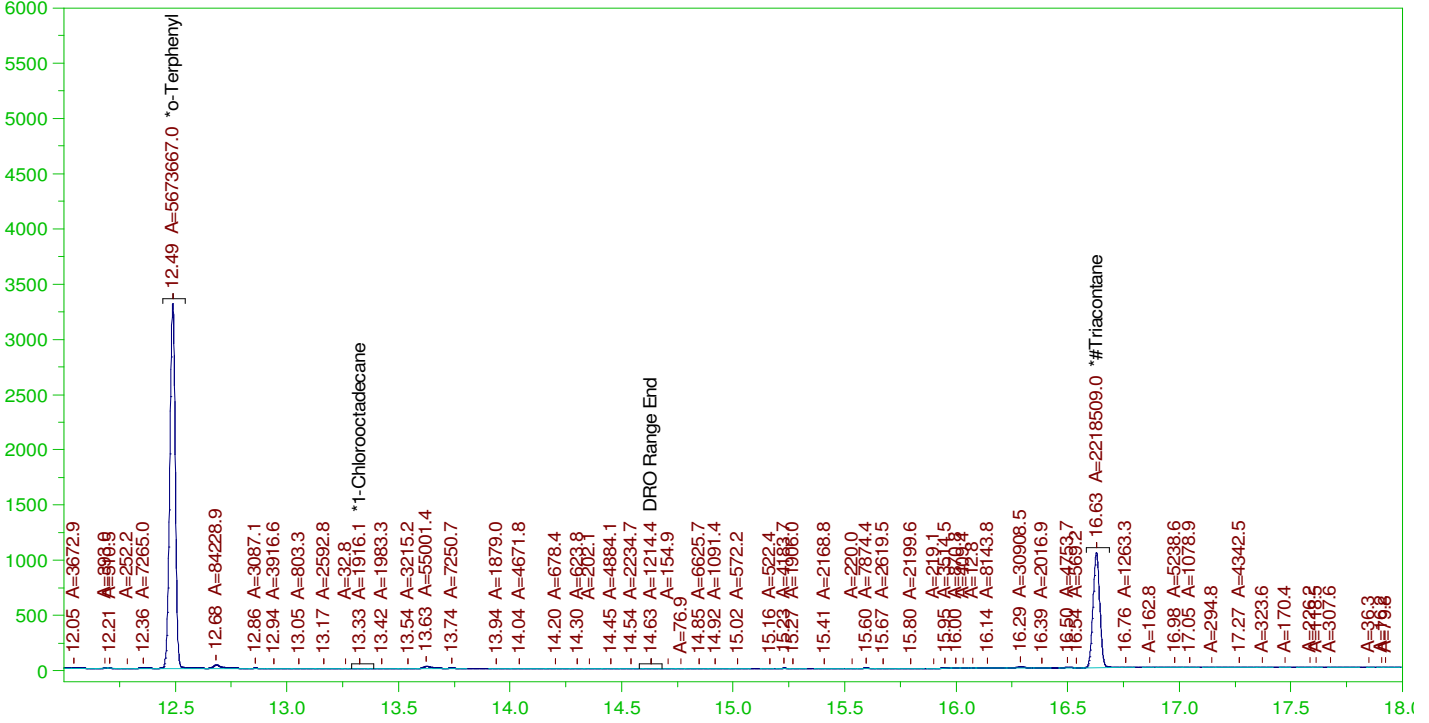
RRO Area:126600 RRO AMOUNT: 4.915352E-03

ERH2614 (Sump Audit 3)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0045.RAW

B22030433-023C ;0309HP4 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-023C ;0309HP4 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0045.RAW
 Date & Time Acquired: 3/10/2022 6:28:06 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.488	.19	.162	85.14	-
*1-Chlorooctadecane	13.327	.19	.	.03	-
*#Triacontane	16.628	.19	.085	44.42	-

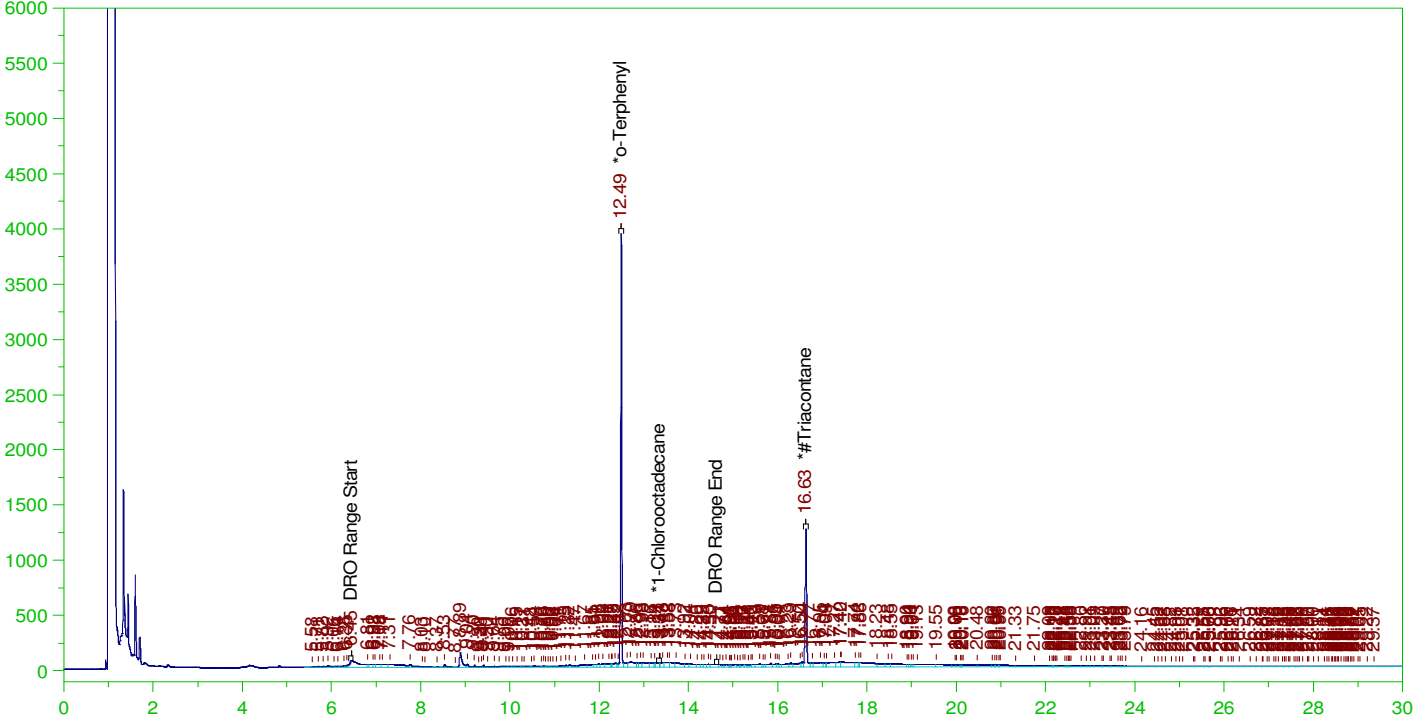
DRO Area:2874418 DRO Amount: 9.319835E-02
 TEH Area:3231393 TEH Amount: 0.1047727

ERH2600 (RHMW11-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0046.RAW

B22030502-026C ;0309HP4, \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-026C ;0309HP4, \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0046.RAW
Date & Time Acquired: 3/10/2022 7:13:33 PM
Method File: G:\Org\HP4\methods\D3_8015-030946-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.49	.19	.197	103.6	-
*1-Chlorooctadecane	13.342	.19	.006	3.22	-
*#Triacontane	16.627	.19	.108	56.96	-

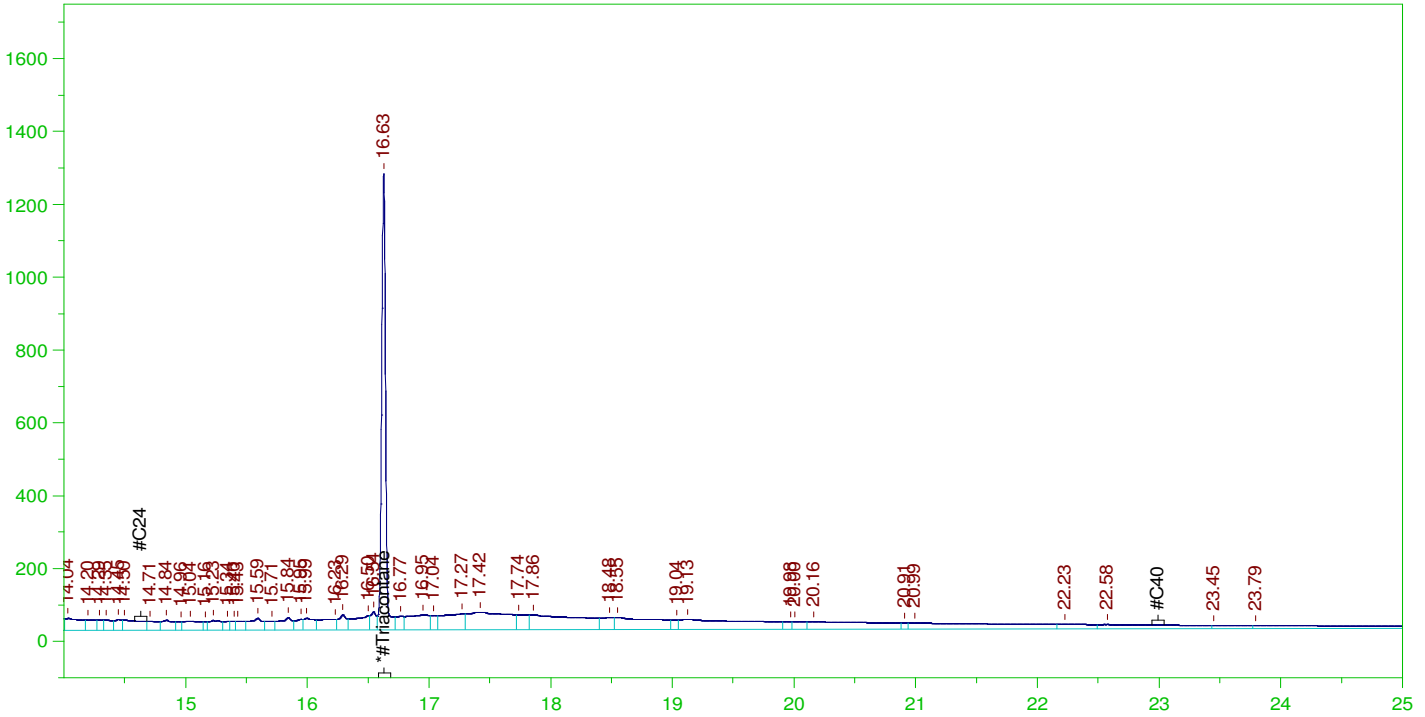
DRO Area:1.099746E+07 DRO Amount: 0.356575
TEH Area:2.442139E+07 TEH Amount: 0.791824

ERH2600 (RHMW11-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0046.RAW

B22030502-026C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-026C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0046.RAW
Date & Time Acquired: 3/10/2022 7:13:33 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.627	.476	.108	22.78

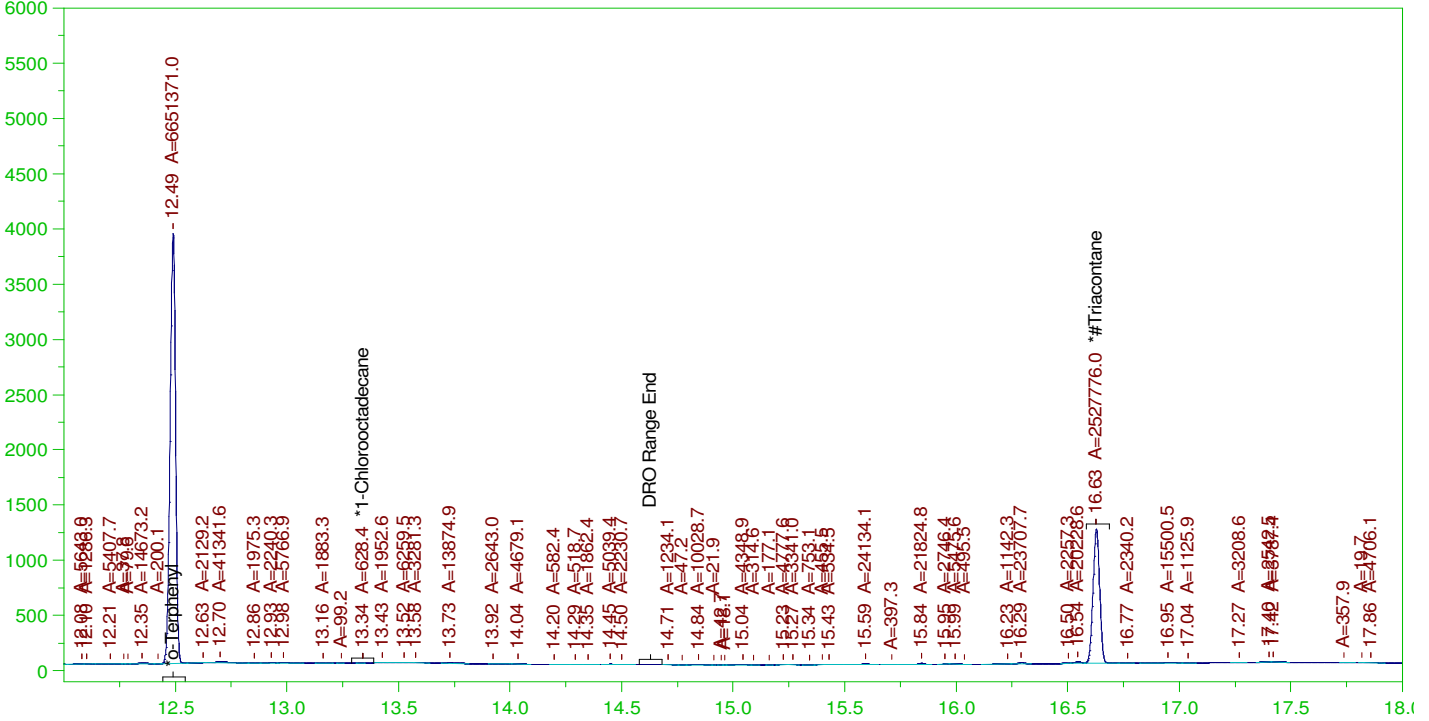
RRO Area:1.179641E+07 RRO AMOUNT: 0.4580055

ERH2600 (RHMW11-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0046.RAW

B22030502-026C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

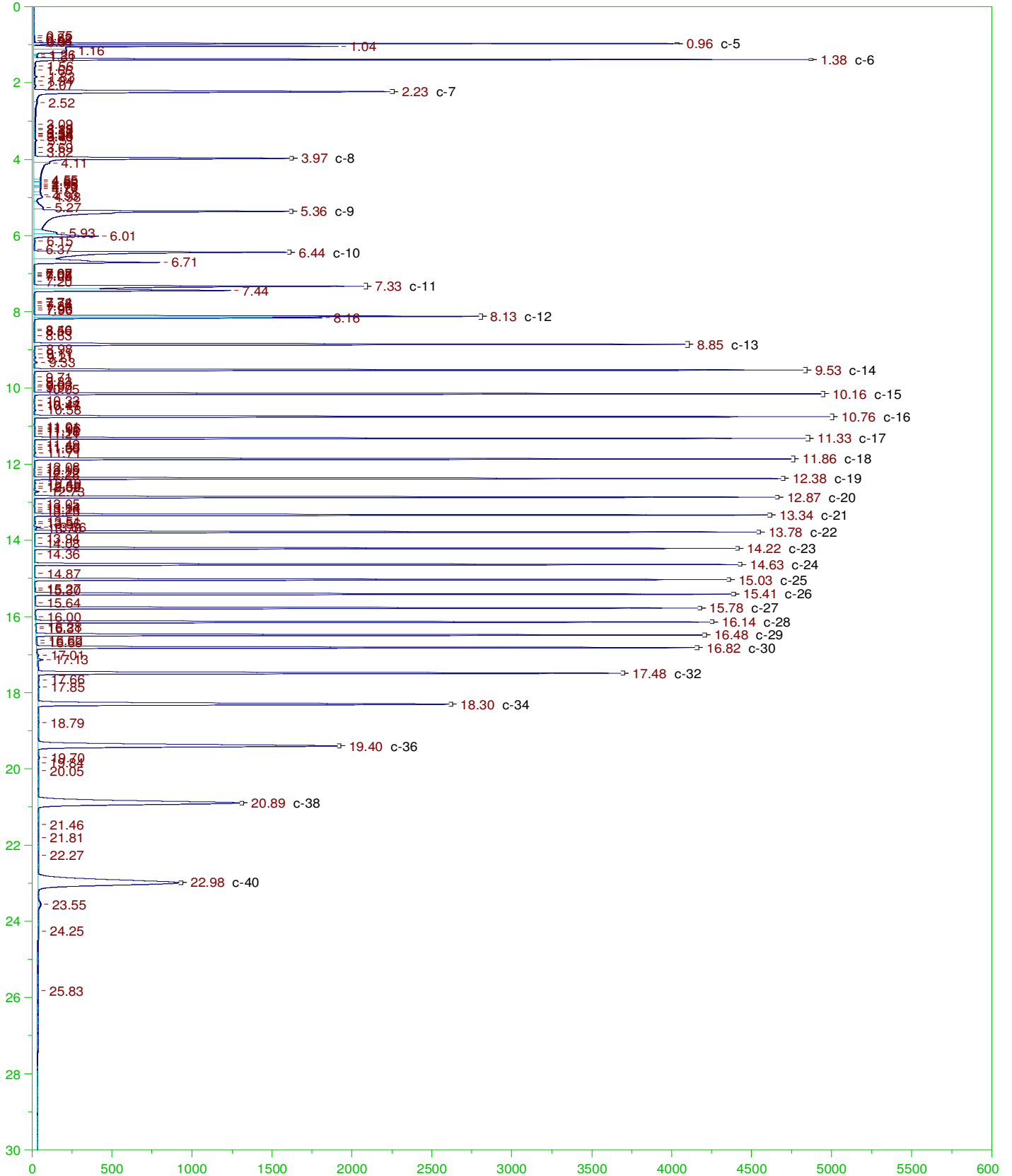
Sample Name: B22030502-026C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0046.RAW
 Date & Time Acquired: 3/10/2022 7:13:33 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

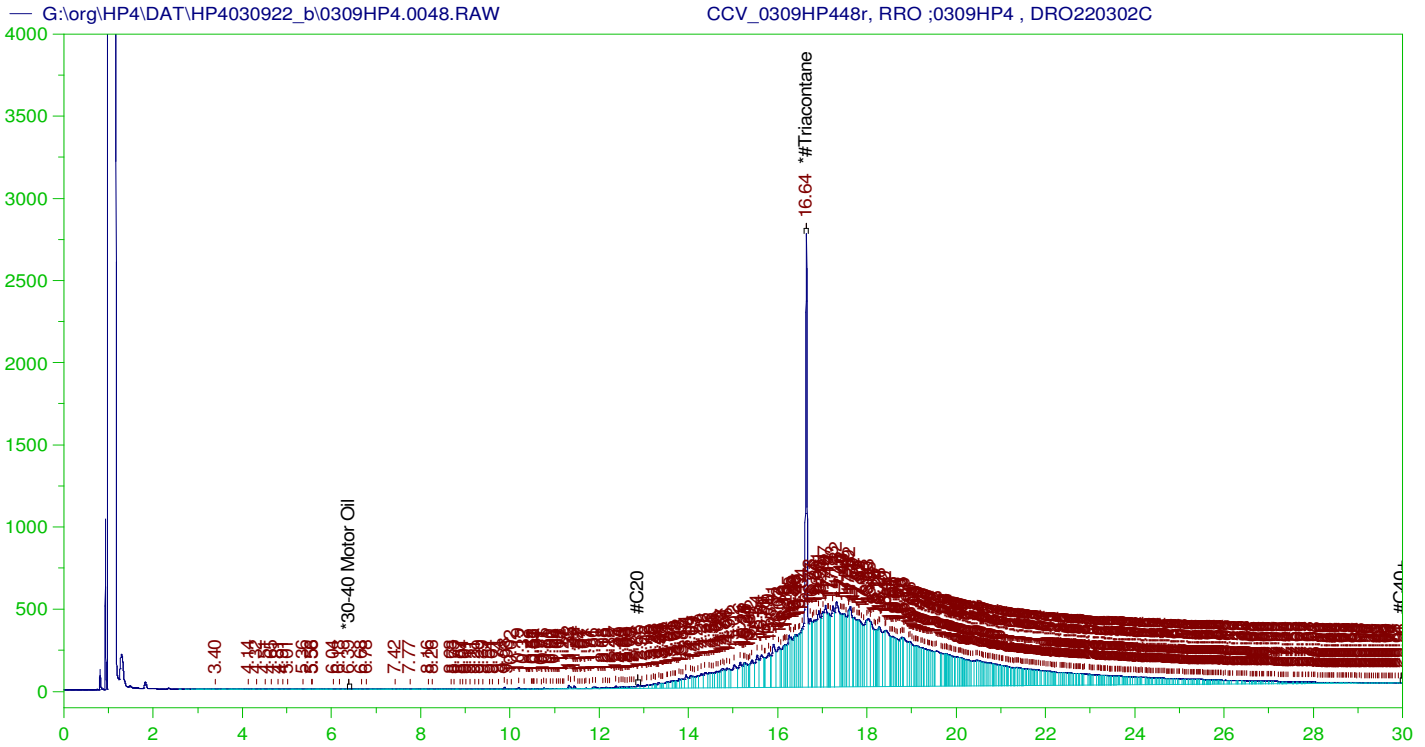
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.49	.19	.19	99.81
*1-Chlorooctadecane	13.342	.19	.	.01
*#Triacontane	16.627	.19	.096	50.61

DRO Area:4263552 DRO Amount: 0.1382388
 TEH Area:5836197 TEH Amount: 0.1892292





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP448r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0048.RAW
 Date & Time Acquired: 3/10/2022 8:44:28 PM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range)Range Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.637	500.	321.196	64.24	-

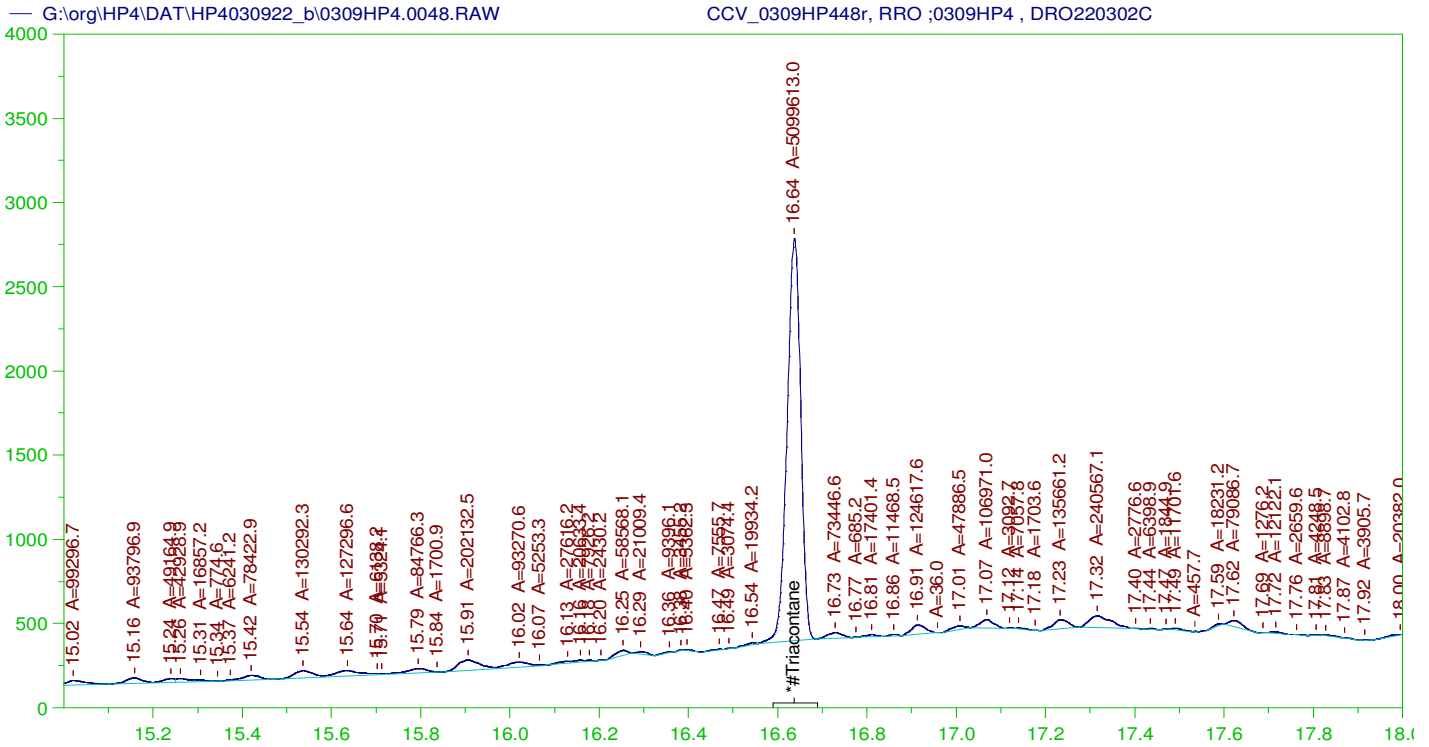
RRO TEH(Oil Range) Area:1.242455E+08 RRO TEH(Oil Range) AMOUNT: 5065.132

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0048.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.052	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.637	200.	321.196	160.6	75-125

JLB 03/11/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP448r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0048.RAW
 Date & Time Acquired: 3/10/2022 8:44:28 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

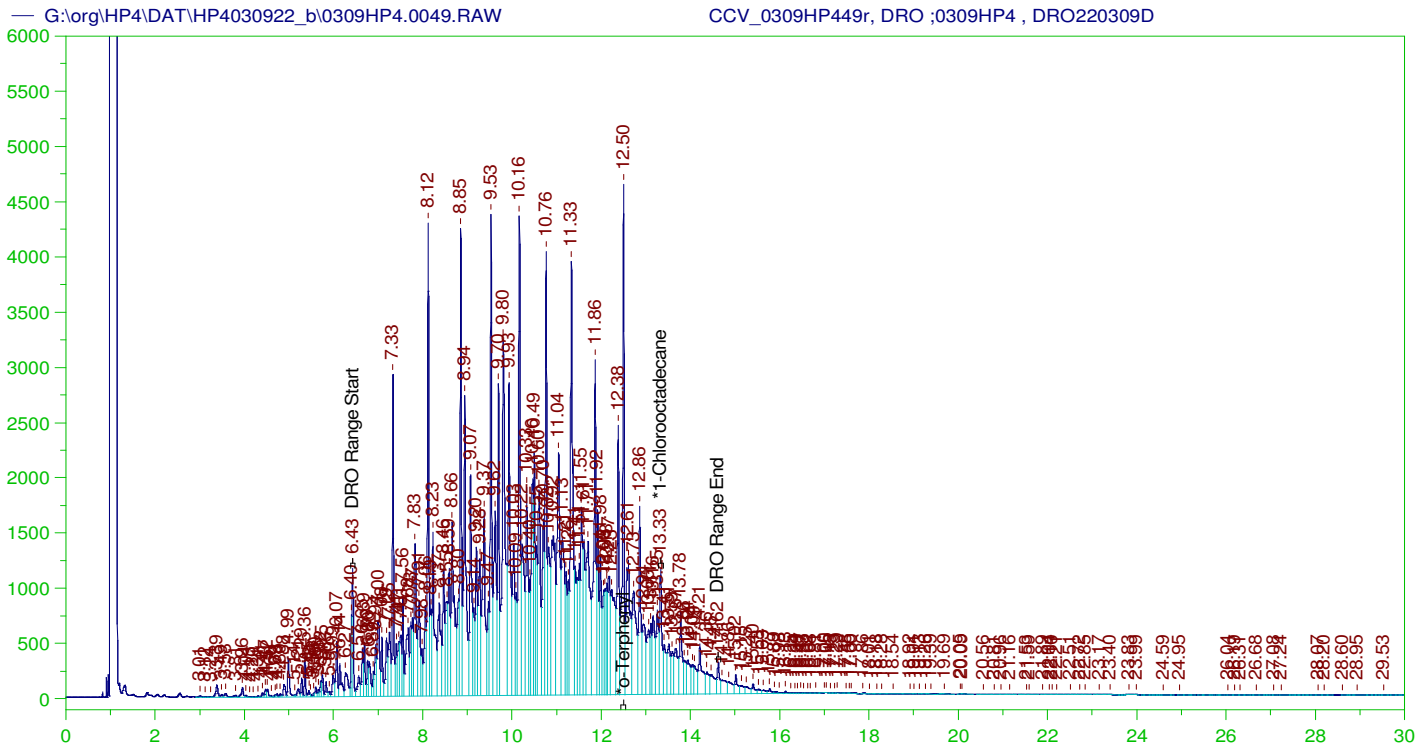
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.637	500.	204.198	40.84

RRO Area:3455488 RRO AMOUNT: 140.8703

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0048.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.052	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.637	200.	204.198	102.1	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP449r, DRO ;0309HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0049.RAW
 Date & Time Acquired: 3/10/2022 9:29:43 PM
 Method File: G:\Org\HP4\methods\DC_8015-C24-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.497	200.	367.031	183.52
*1-Chlorooctadecane	13.328	200.	110.118	55.06

DRO Area: 4.312361E+08 DRO Amount: 14681.24
 TEH Area: 4.469438E+08 TEH Amount: 15216

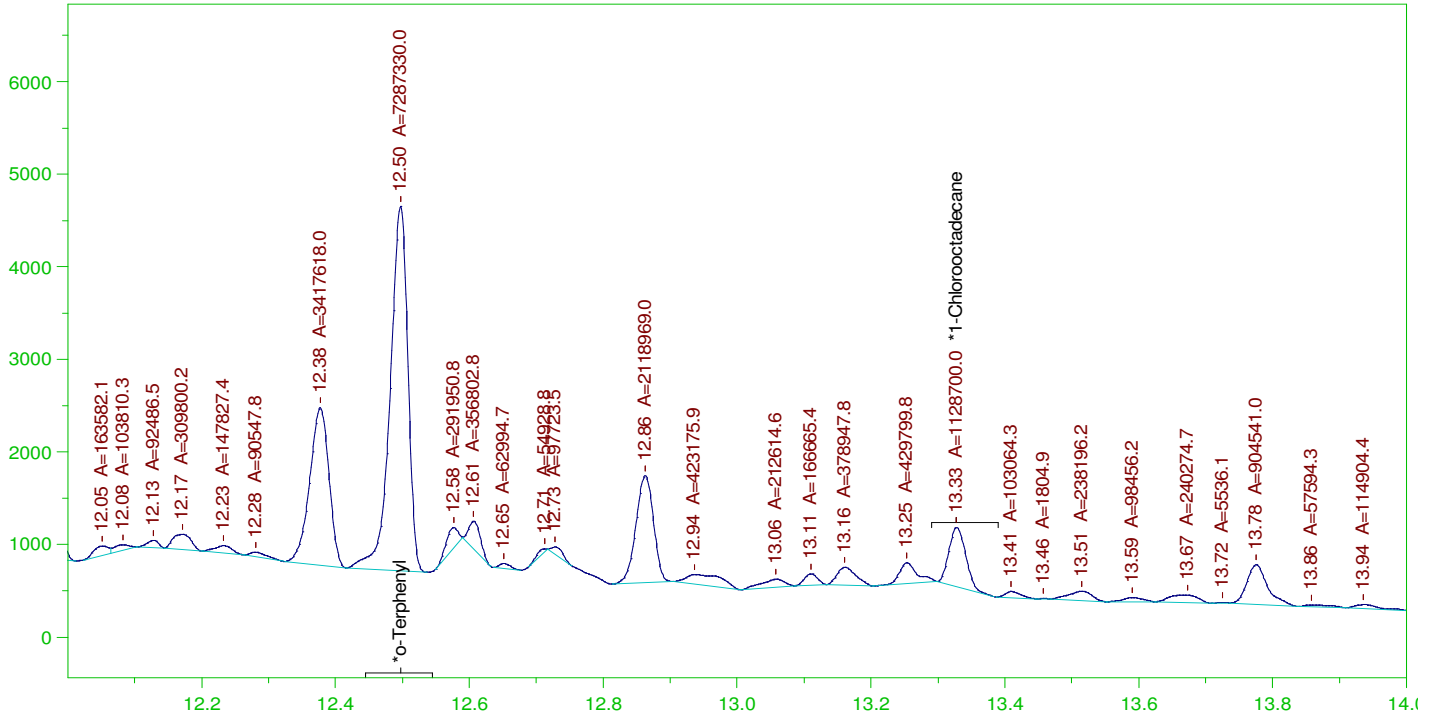
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0049.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15216.	101.44	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.497	200.	367.031	183.52	85-115
*1-Chlorooctadecane	13.328	200.	110.118	55.06	85-115

G:\org\HP4\DAT\HP4030922_b\0309HP4.0049.RAW

CCV_0309HP449r, DRO ;0309HP4 , DRO220309D



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP449r, DRO ;0309HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0049.RAW
 Date & Time Acquired: 3/10/2022 9:29:43 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

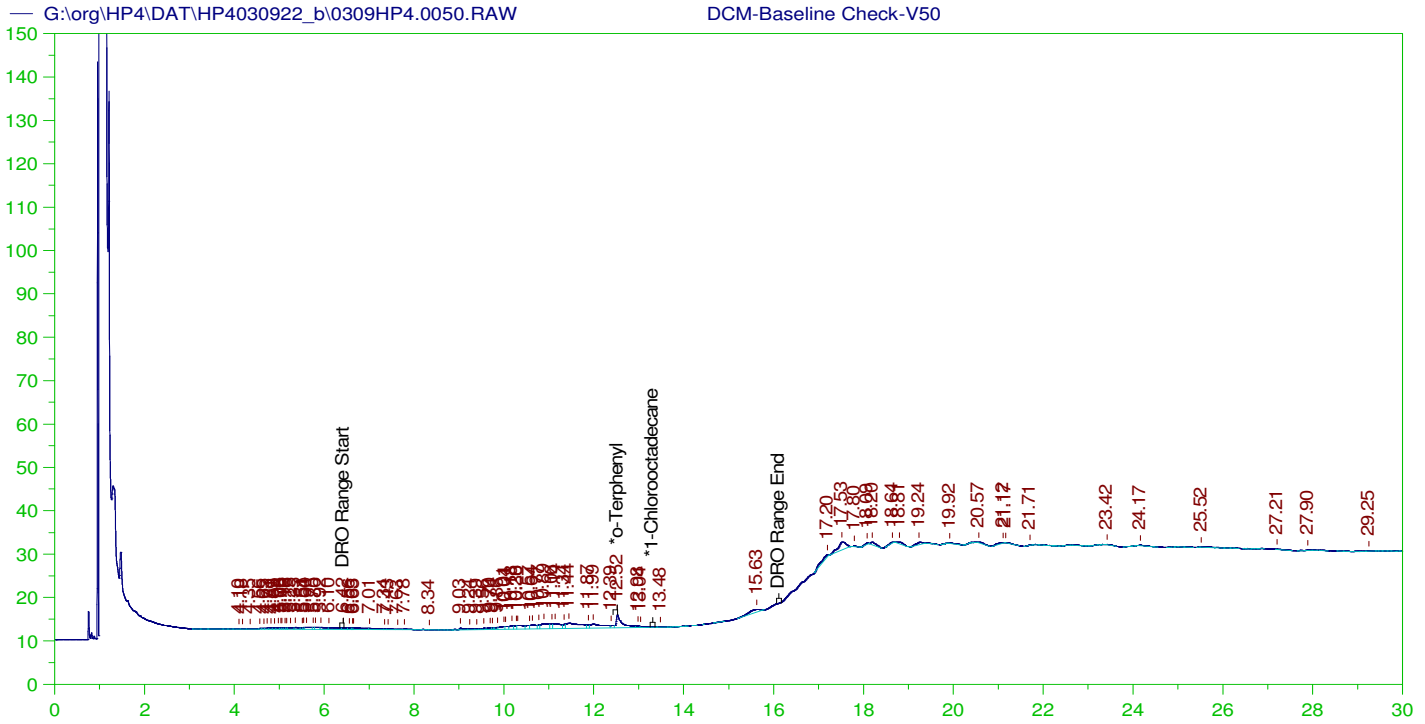
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.497	200.	218.709	109.35
*1-Chlorooctadecane	13.328	200.	33.875	16.94

DRO Area: 2.114806E+08 DRO Amount: 7199.763
 TEH Area: 2.214644E+08 TEH Amount: 7539.654

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0049.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7539.65	50.26	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.497	200.	218.709	109.35	85-115
*1-Chlorooctadecane	13.328	200.	33.875	16.94	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V50
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0050.RAW
 Date & Time Acquired: 3/10/2022 10:14:59 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.525	200.	.779	.39
*1-Chlorooctadecane	29.962	200.	.	.

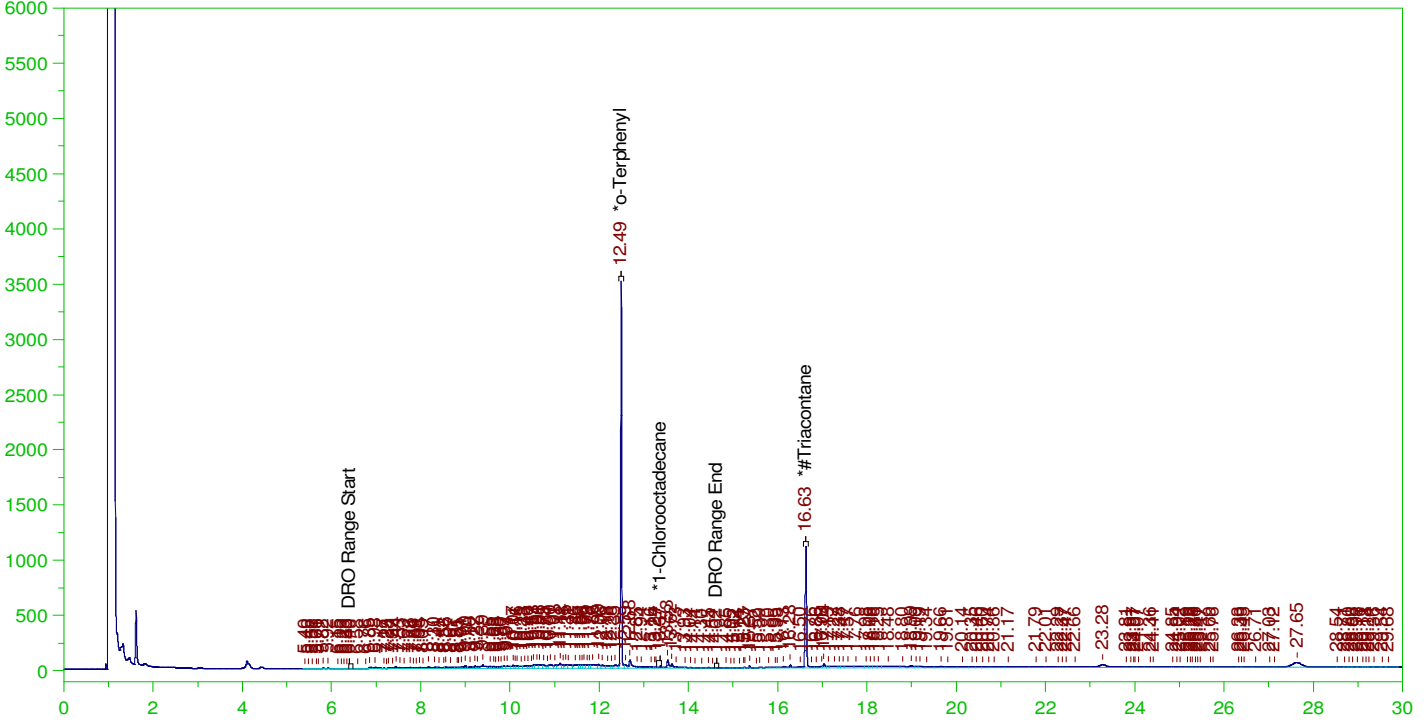
DRO Area:172278.3 DRO Amount: 5.865136
 TEH Area:288891.3 TEH Amount: 9.835176

ERH2602 (RHMW01R)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0051.RAW

B22030433-017C ;0309HP4, \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-017C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0051.RAW
Date & Time Acquired: 3/10/2022 11:00:16 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.488	.19	.175	92.12	-
*1-Chlorooctadecane	13.368	.19	.003	1.46	-
*#Triacontane	16.628	.19	.092	48.53	-

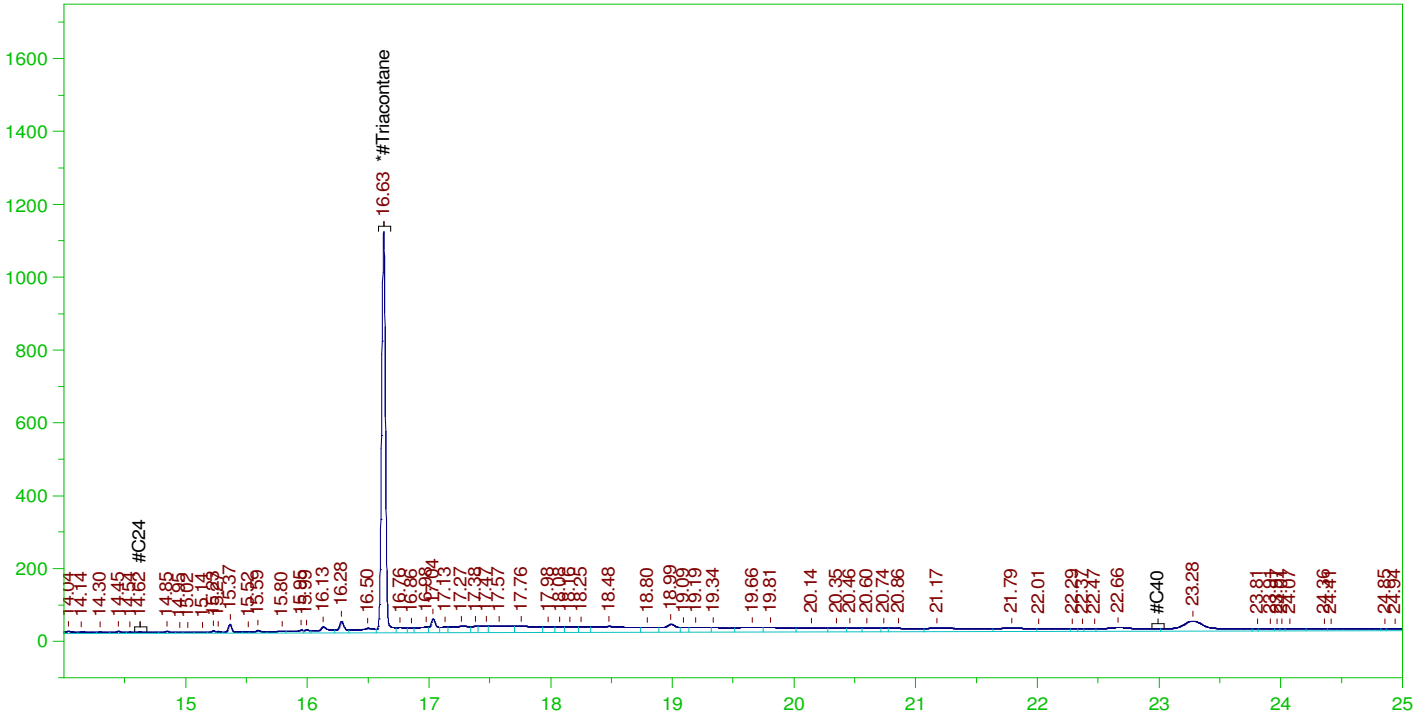
DRO Area:8346683 DRO Amount: 0.2706277
TEH Area:1.583211E+07 TEH Amount: 0.5133306

ERH2602 (RHMW01R)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0051.RAW

B22030433-017C ;0309HP4 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-017C ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0051.RAW
 Date & Time Acquired: 3/10/2022 11:00:16 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.628	.476	.092	19.41

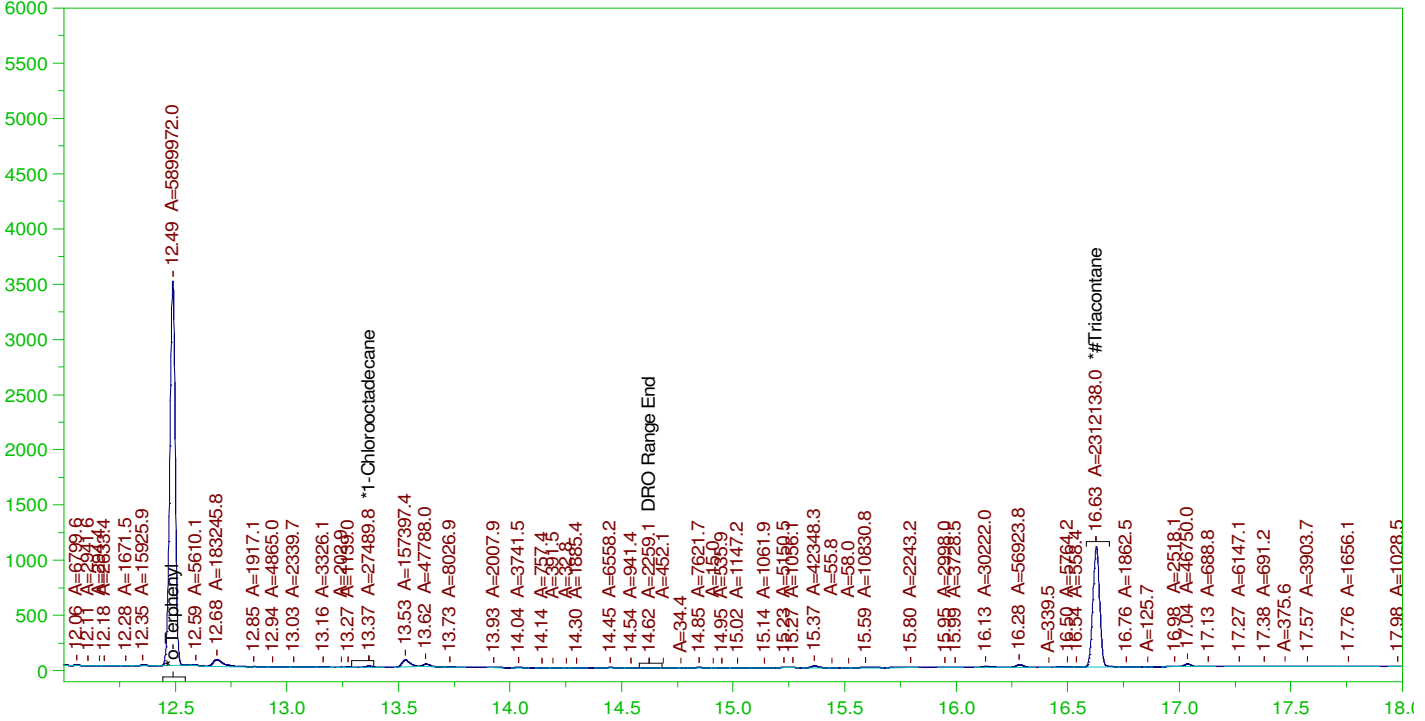
RRO Area:5080921 RRO AMOUNT: 0.197271

ERH2602 (RHMW01R)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0051.RAW

B22030433-017C ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

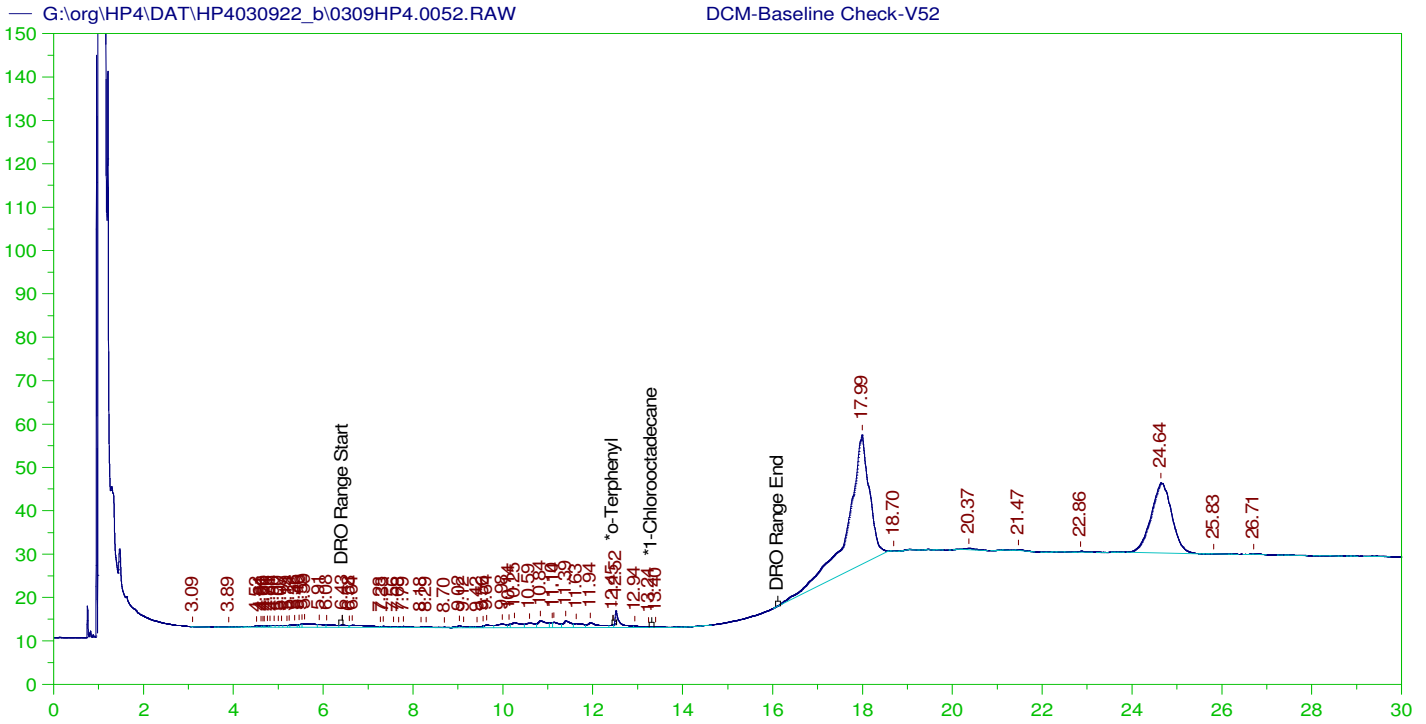
Sample Name: B22030433-017C ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0051.RAW
Date & Time Acquired: 3/10/2022 11:00:16 PM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.488	.19	.169	88.54
*1-Chlorooctadecane	13.368	.19	.001	.41
*#Triacontane	16.628	.19	.088	46.29

DRO Area:2245592 DRO Amount: 7.280967E-02
TEH Area:4072242 TEH Amount: 0.1320359



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

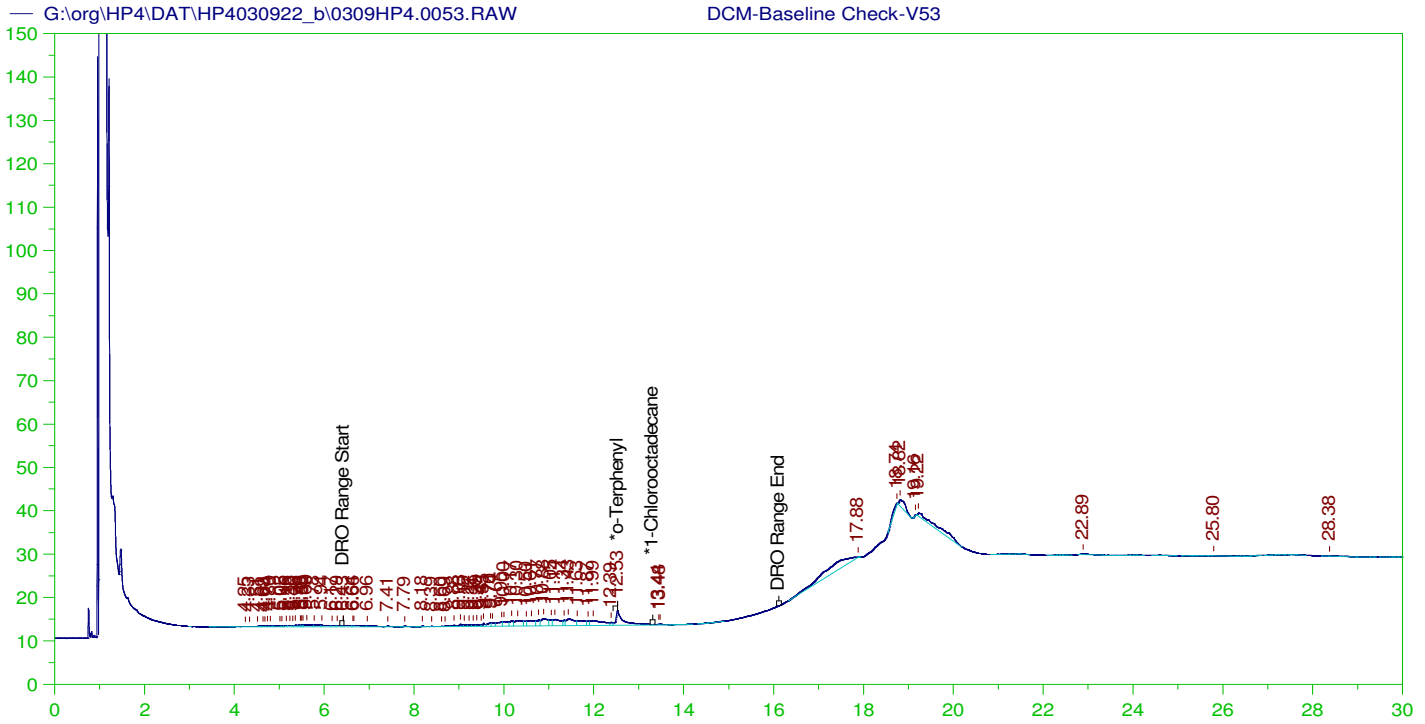
Sample Name: DCM-Baseline Check-V52
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0052.RAW
 Date & Time Acquired: 3/10/2022 11:45:31 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.451	200.	.097	.05
*1-Chlorooctadecane	29.452	200.	.	.

DRO Area: 217931.1 DRO Amount: 7.419367
 TEH Area: 1797340 TEH Amount: 61.18962



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V53
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0053.RAW
 Date & Time Acquired: 3/11/2022 12:30:47 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.528	200.	1.096	.55	-
*1-Chlorooctadecane	29.949	200.	.	.	-

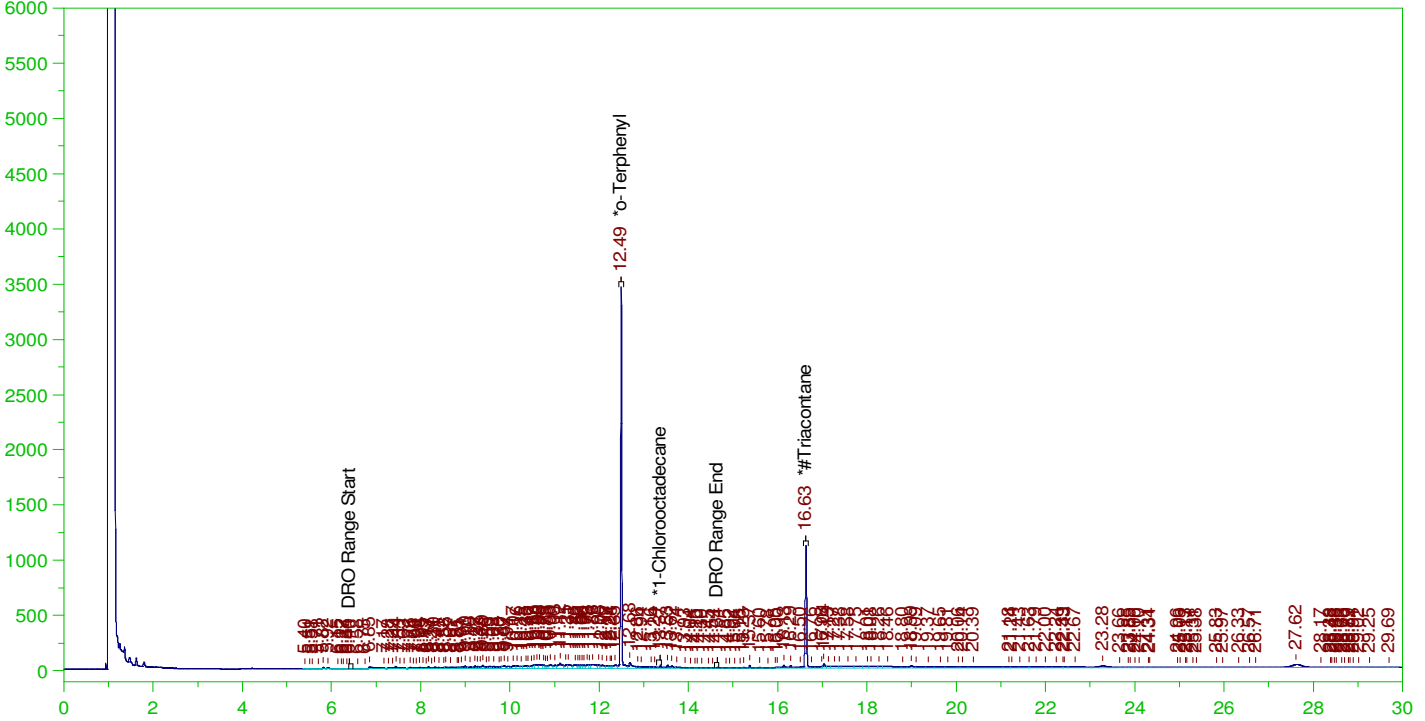
DRO Area:218223.2 DRO Amount: 7.42931
 TEH Area:424497.8 TEH Amount: 14.45184

ERH2603 (RHMW01R FD)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0054.RAW

B22030433-018A ;0309HP4, \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-018A ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0054.RAW
Date & Time Acquired: 3/11/2022 1:15:54 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.489	.2	.189	94.59	-
*1-Chlorooctadecane	13.369	.2	.004	1.78	-
*#Triacontane	16.628	.2	.099	49.31	-

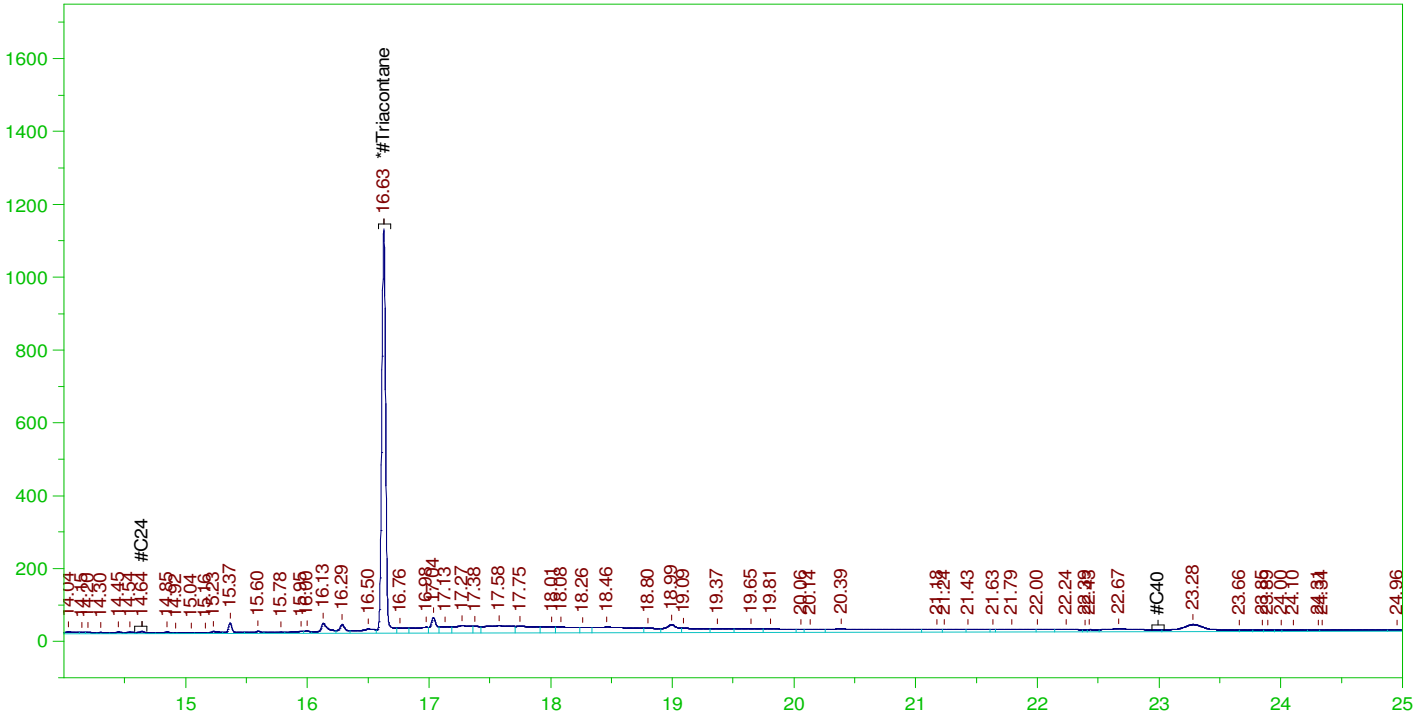
DRO Area:7823030 DRO Amount: 0.2663316
TEH Area:1.439747E+07 TEH Amount: 0.4901552

ERH2603 (RHMW01R FD)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0054.RAW

B22030433-018A ;0309HP4, \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-018A ;0309HP4 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0054.RAW
 Date & Time Acquired: 3/11/2022 1:15:54 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.628	.5	.099	19.72

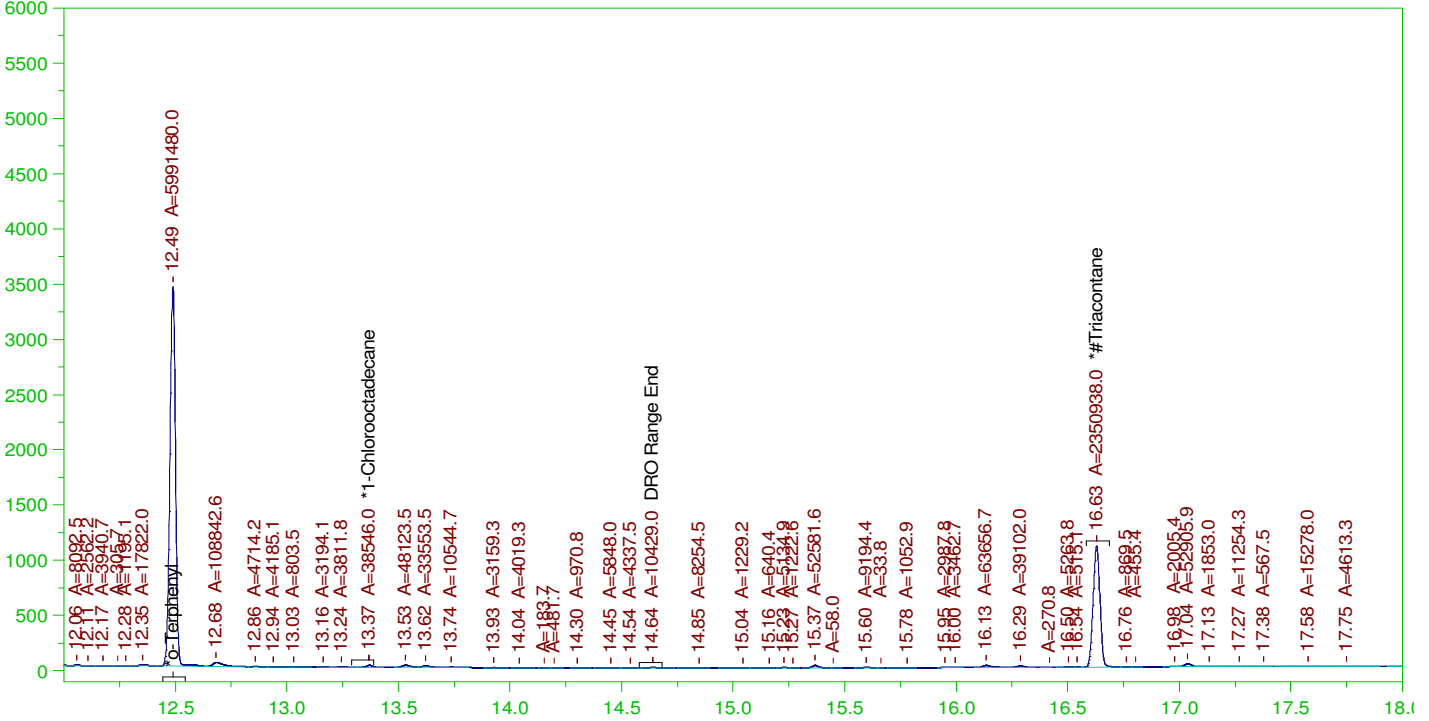
RRO Area:4770628 RRO AMOUNT: 0.1944848

ERH2603 (RHMW01R FD)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0054.RAW

B22030433-018A ;0309HP4 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

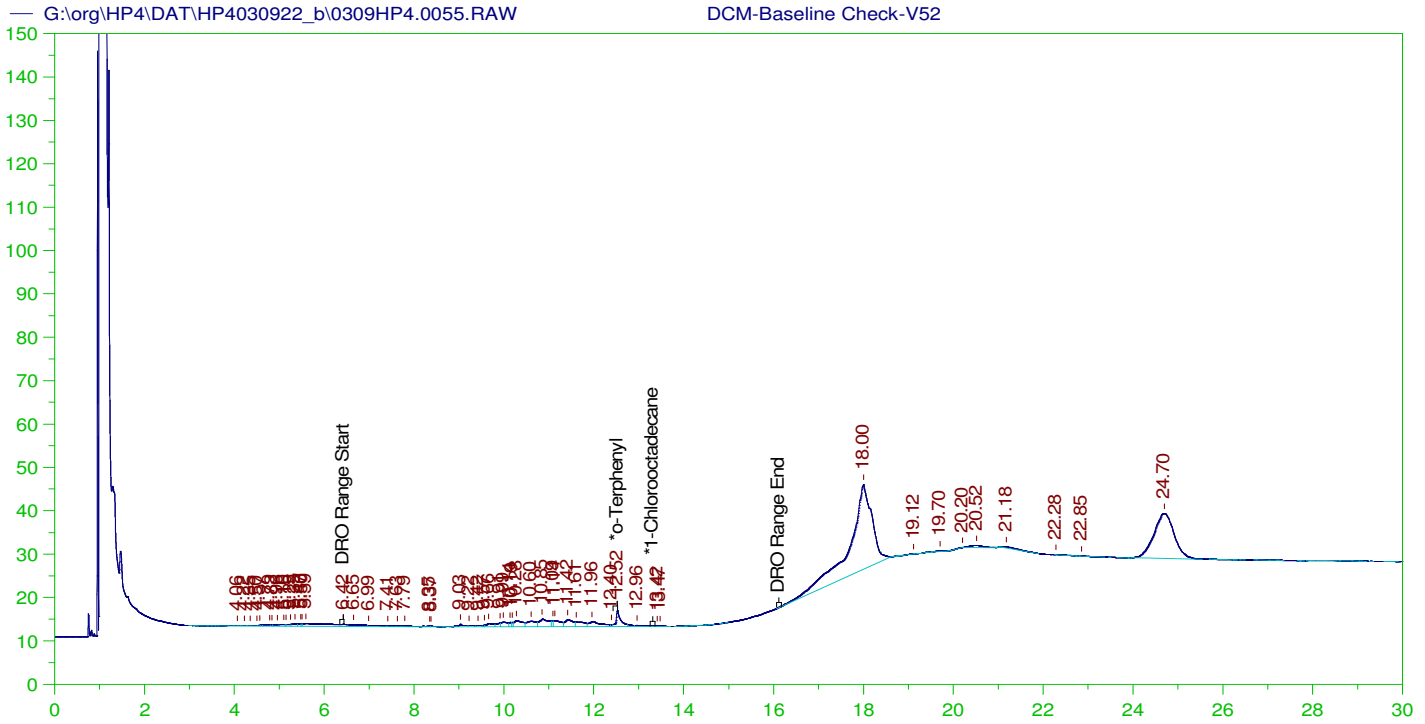
Sample Name: B22030433-018A ;0309HP4 , \$HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0054.RAW
Date & Time Acquired: 3/11/2022 1:15:54 AM
Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

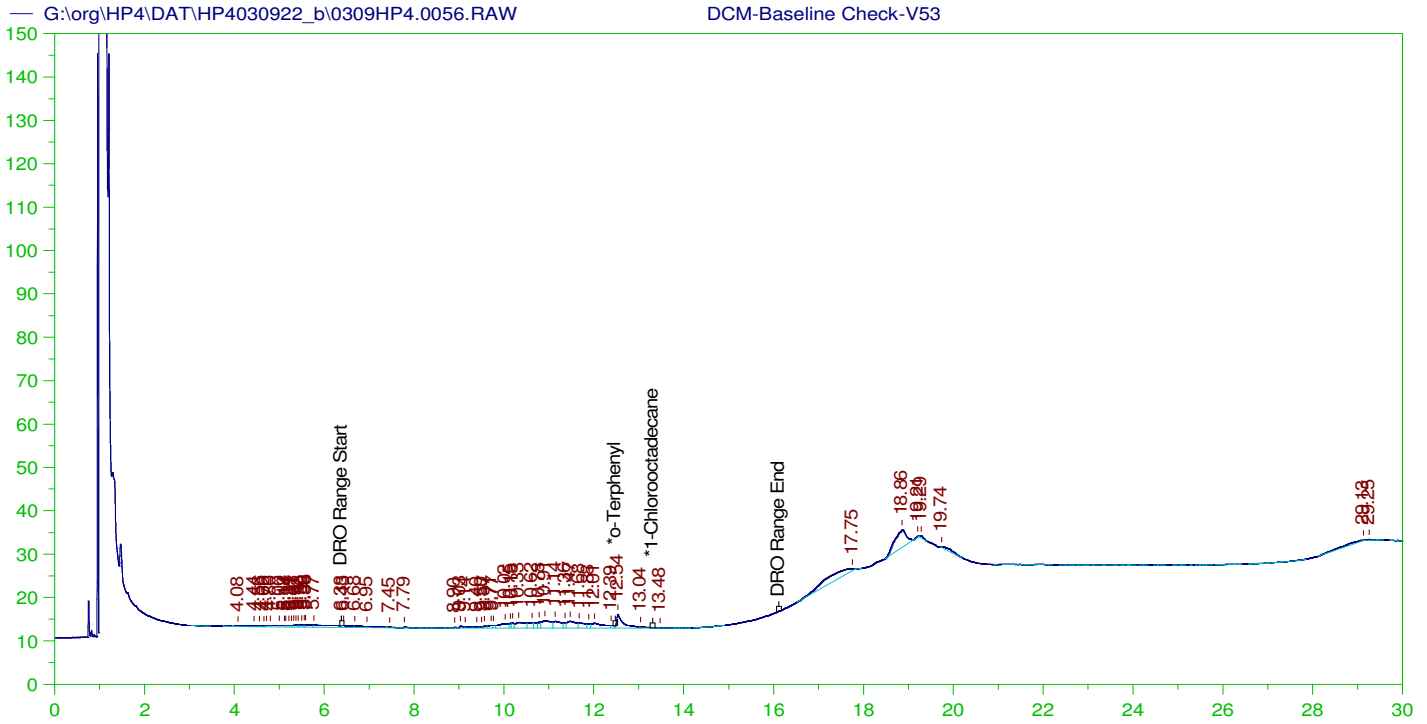
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.489	.2	.18	89.91
*1-Chlorooctadecane	13.369	.2	.001	.58
*#Triacontane	16.628	.2	.094	47.07

DRO Area:1949189 DRO Amount: 6.635927E-02
TEH Area:3164515 TEH Amount: 0.1077345





DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

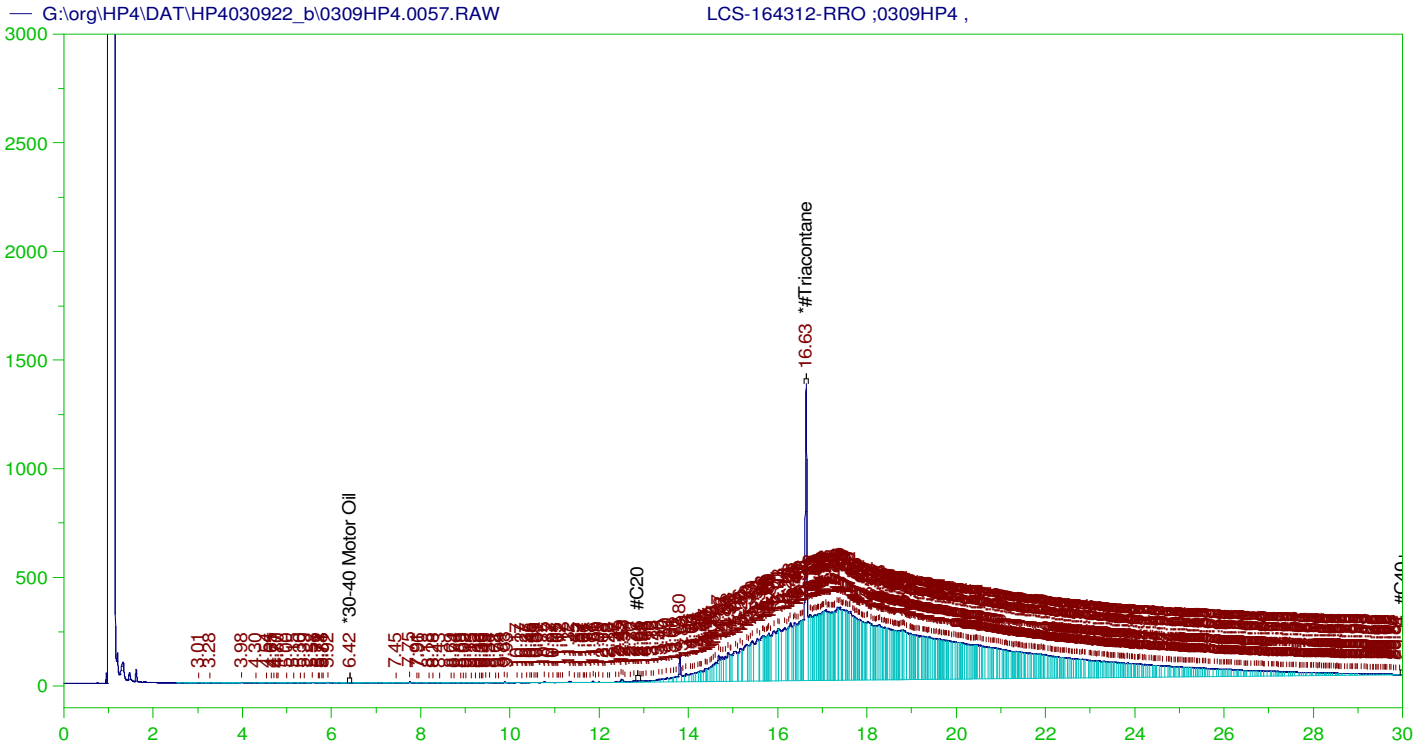
Sample Name: DCM-Baseline Check-V53
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0056.RAW
 Date & Time Acquired: 3/11/2022 2:46:29 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.899	200.	.	-
*1-Chlorooctadecane	29.899	200.	.	-

DRO Area: 250105.6 DRO Amount: 8.514731
 TEH Area: 479276.3 TEH Amount: 16.31675



RESIDUAL RANGE ORGANICS CHROMATOGRAM

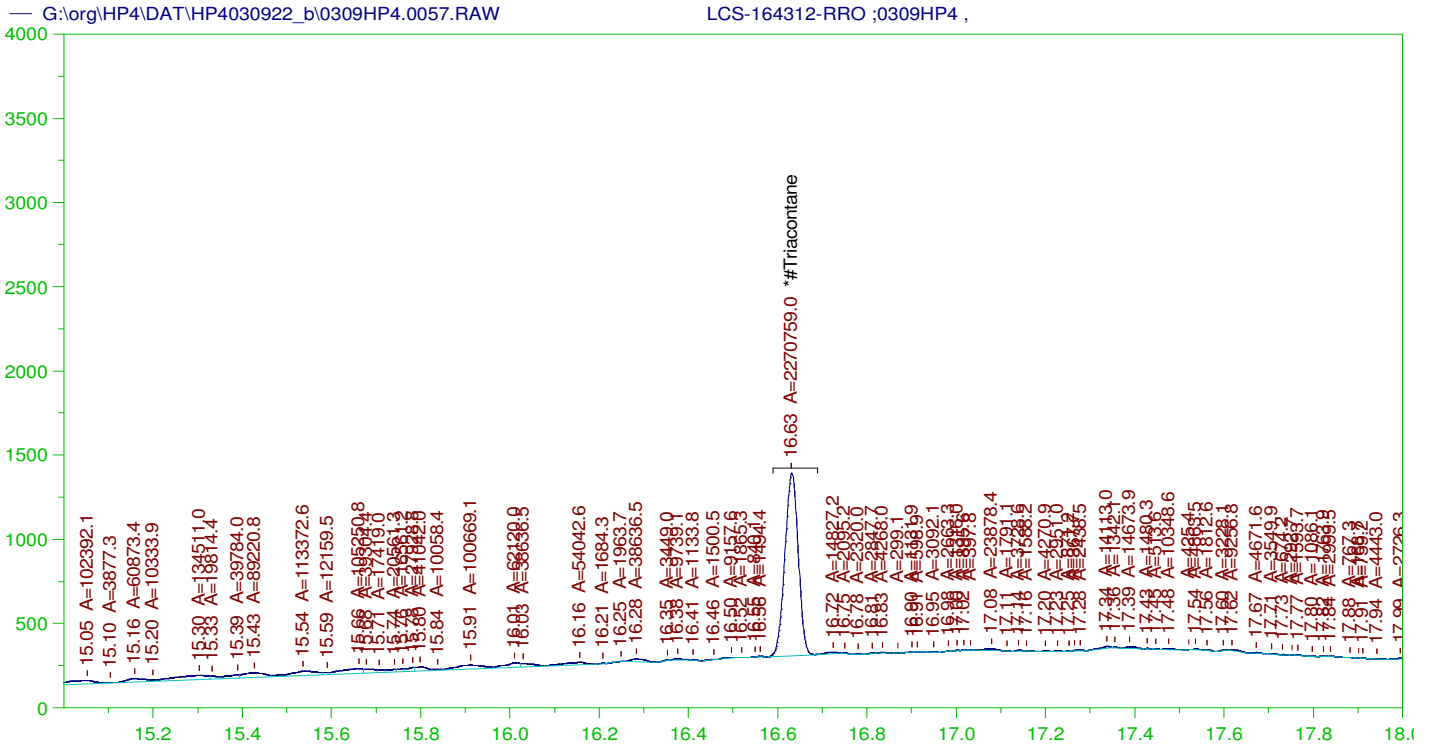
Sample Name: LCS-164312-RRO ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0057.RAW
 Date & Time Acquired: 3/11/2022 3:31:43 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.631	.5	.162	32.47 -

RRO TEH(Oil Range) Area:1.095924E+08 RRO TEH(Oil Range) AMOUNT: 4.467769

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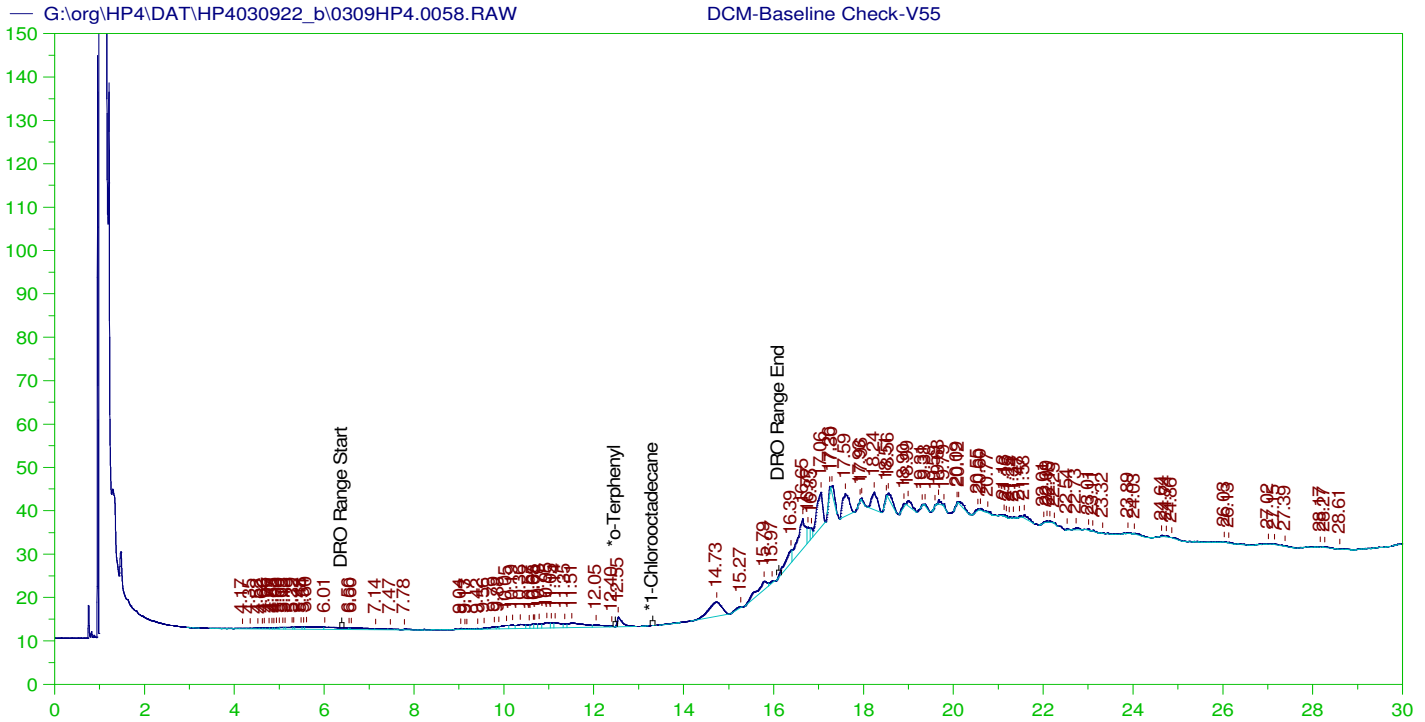
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-164312-RRO ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0057.RAW
 Date & Time Acquired: 3/11/2022 3:31:43 AM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.631	.5	.091	18.19 -

RRO Area:2631441 RRO AMOUNT: 0.1072763



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

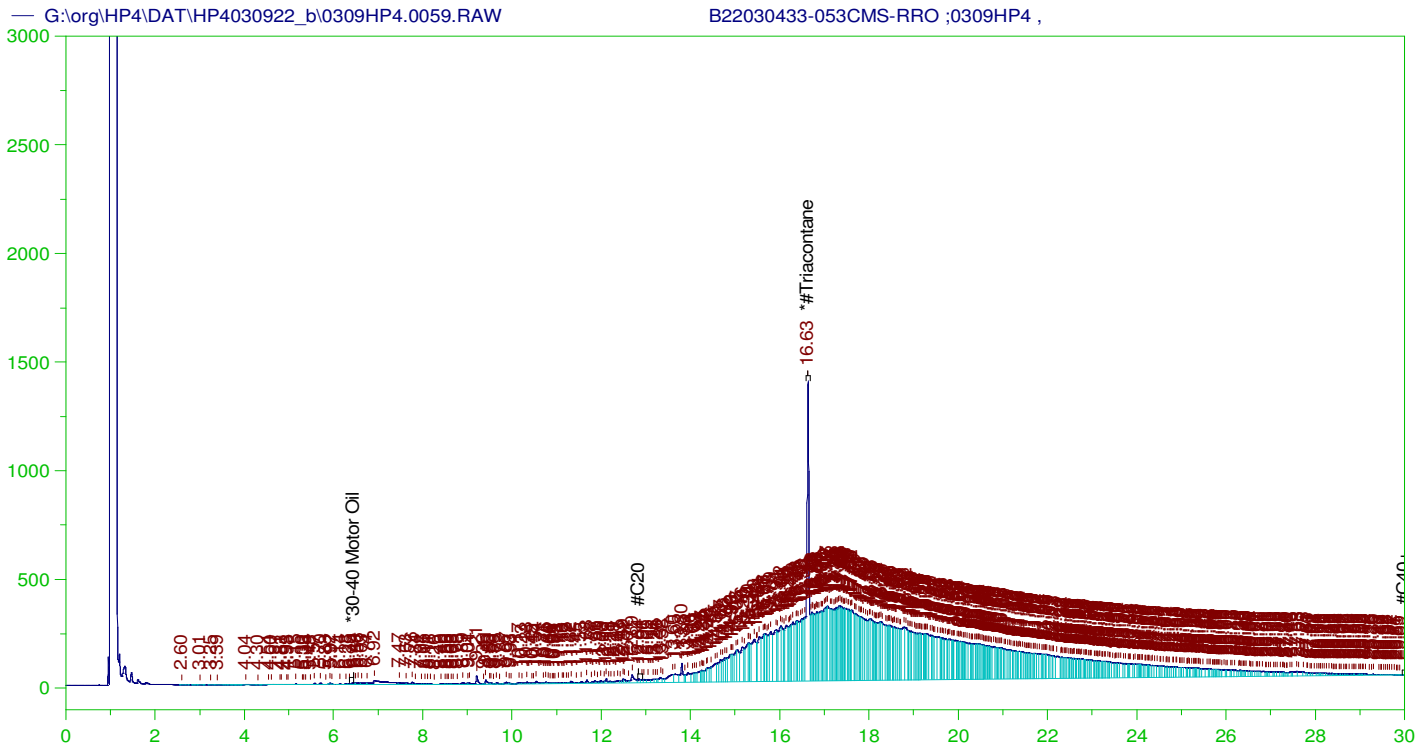
Sample Name: DCM-Baseline Check-V55
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 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.922	200.	.	-
*1-Chlorooctadecane	29.922	200.	.	-

DRO Area: 277674.4 DRO Amount: 9.4533
 TEH Area: 758810.6 TEH Amount: 25.83336



RESIDUAL RANGE ORGANICS CHROMATOGRAM

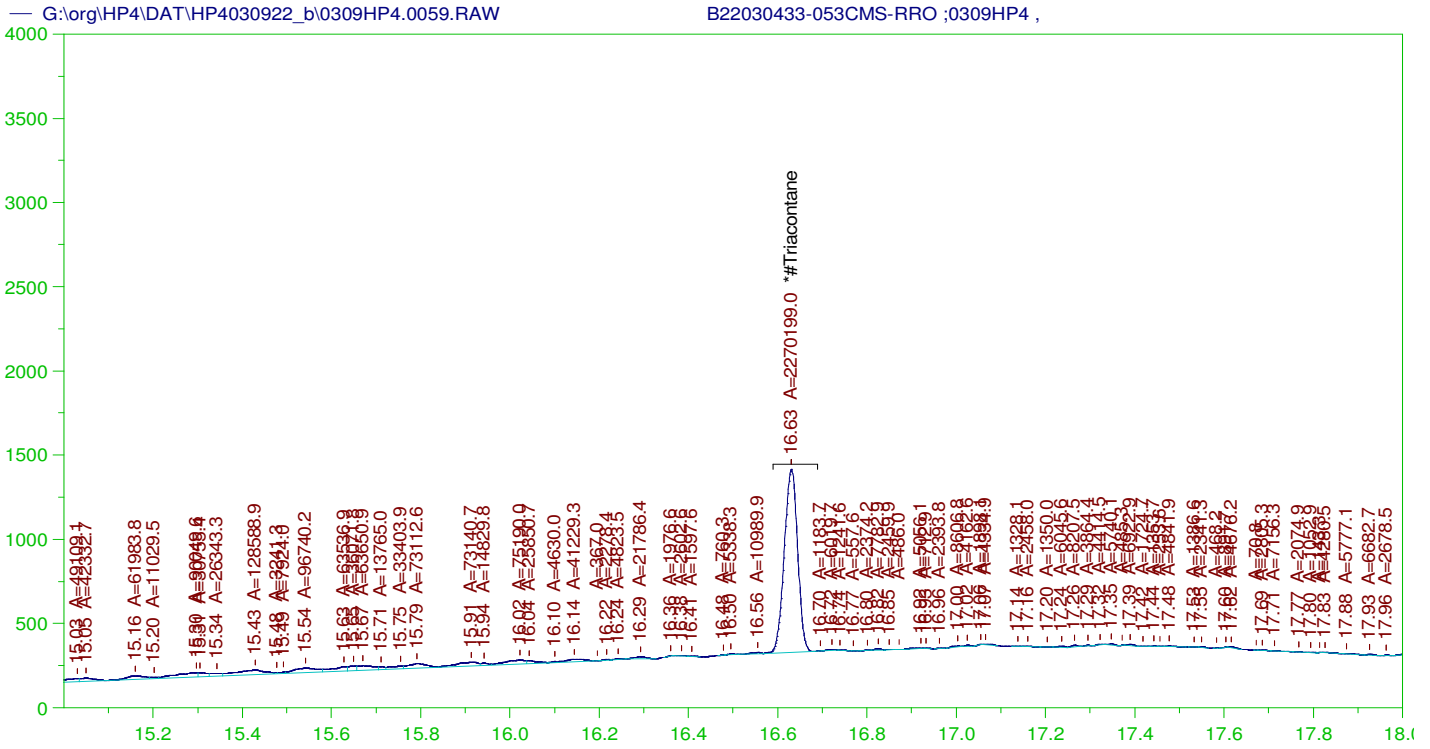
Sample Name: B22030433-053CMS-RRO ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0059.RAW
 Date & Time Acquired: 3/11/2022 5:02:08 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.63	.481	.164	34.11	-

~~RRO~~ TEH(Oil Range) Area:1.133946E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.444973

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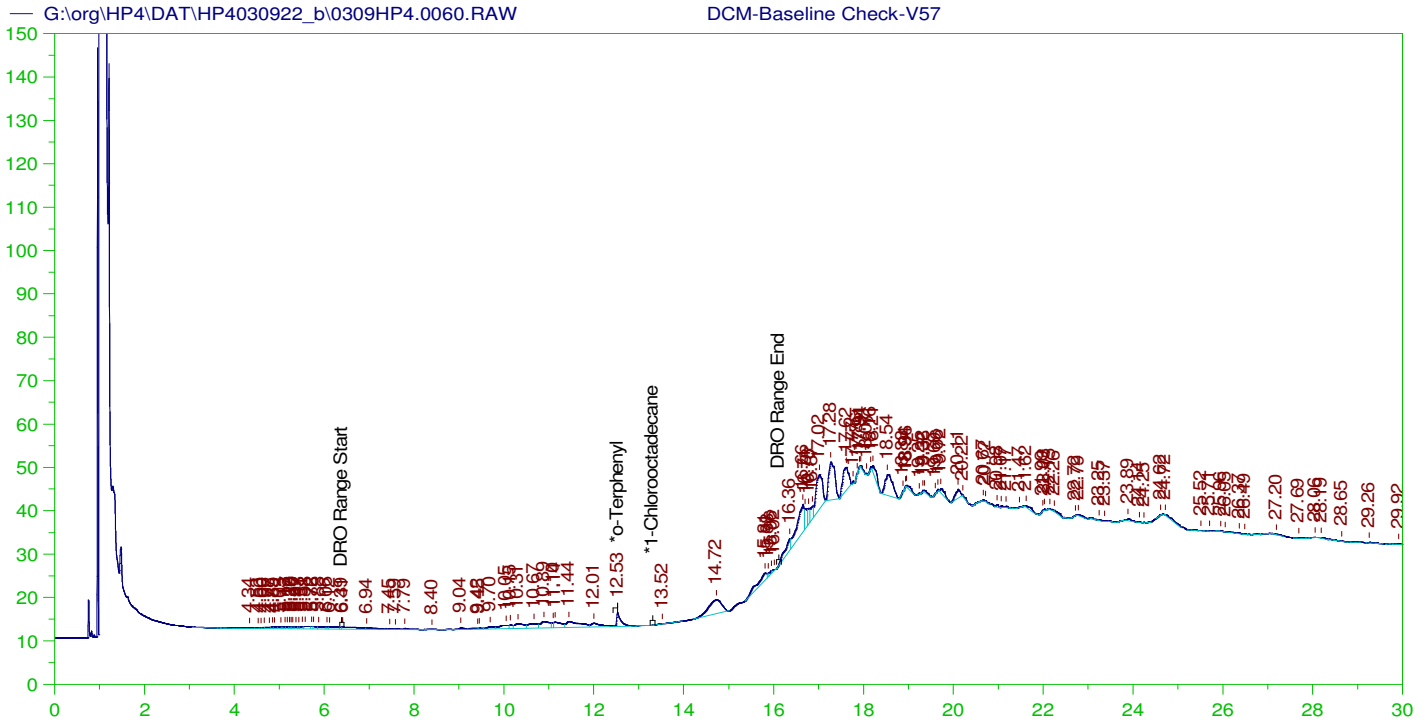
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-053CMS-RRO ;0309HP4 ,
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0059.RAW
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 Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.63	.481	.087	18.18

RRO Area:2452185 RRO AMOUNT: 9.612362E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

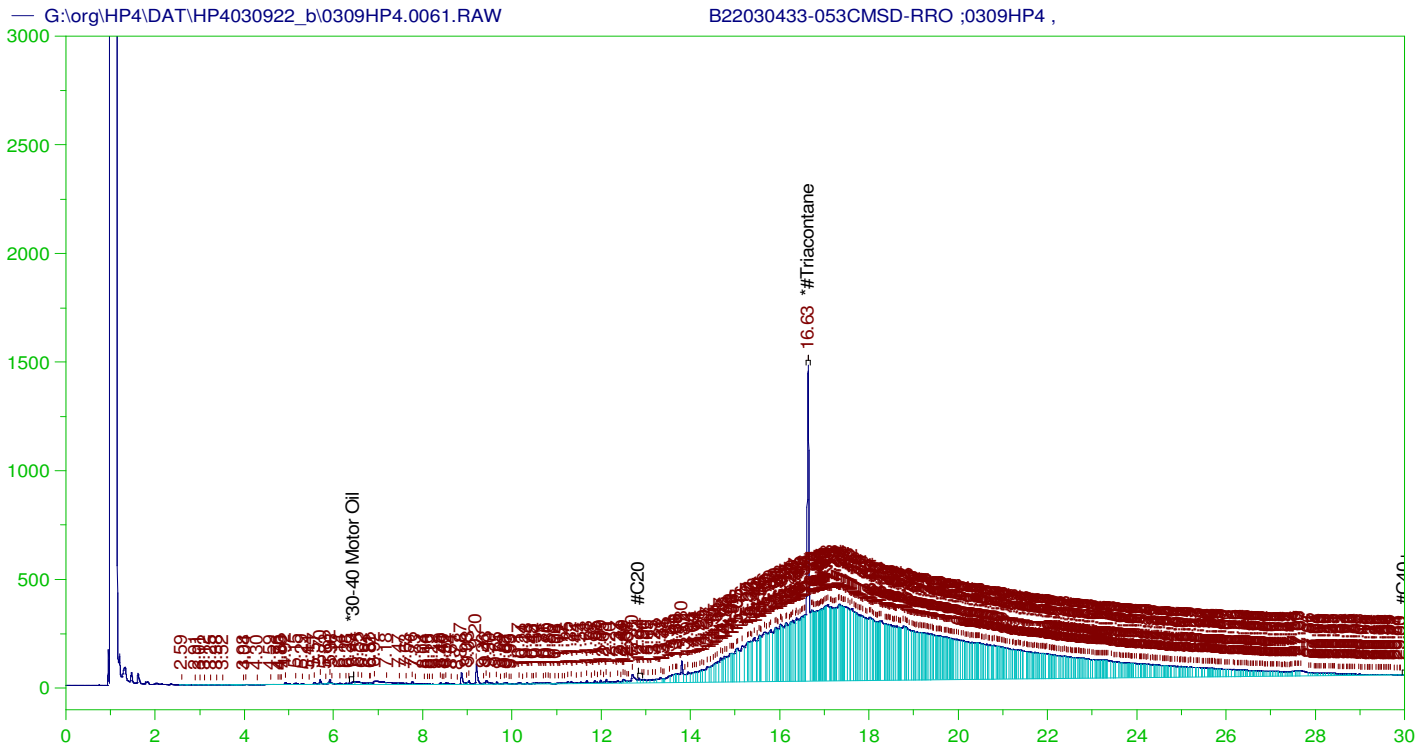
Sample Name: DCM-Baseline Check-V57
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0060.RAW
 Date & Time Acquired: 3/11/2022 5:47:19 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.529	200.	.629	.31
*1-Chlorooctadecane	29.918	200.	.	.

DRO Area:266621.8 DRO Amount: 9.077019
 TEH Area:844194.1 TEH Amount: 28.74021



RESIDUAL RANGE ORGANICS CHROMATOGRAM

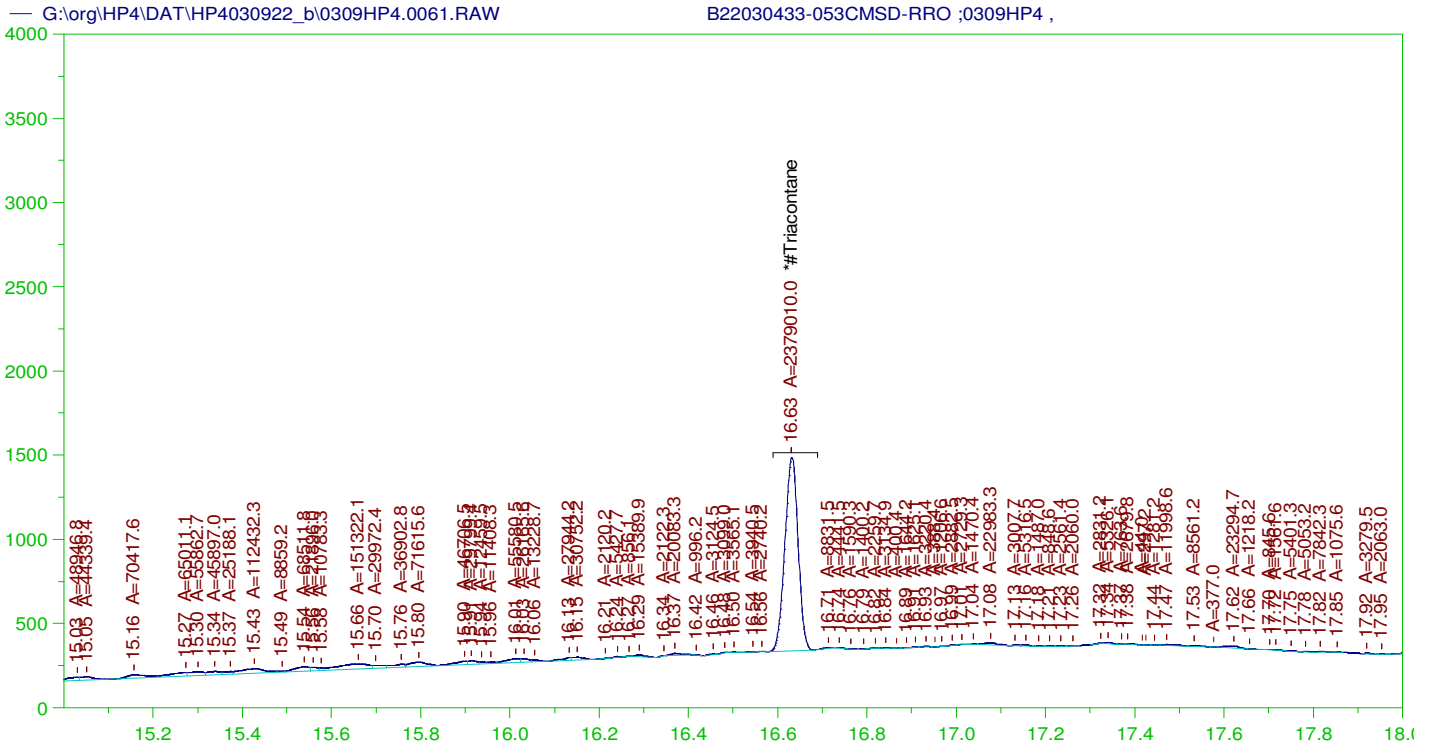
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 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0061.RAW
 Date & Time Acquired: 3/11/2022 6:32:46 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.631	.485	.166	34.1	-

~~RRO~~ TEH(Oil Range) Area:1.179776E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.669525

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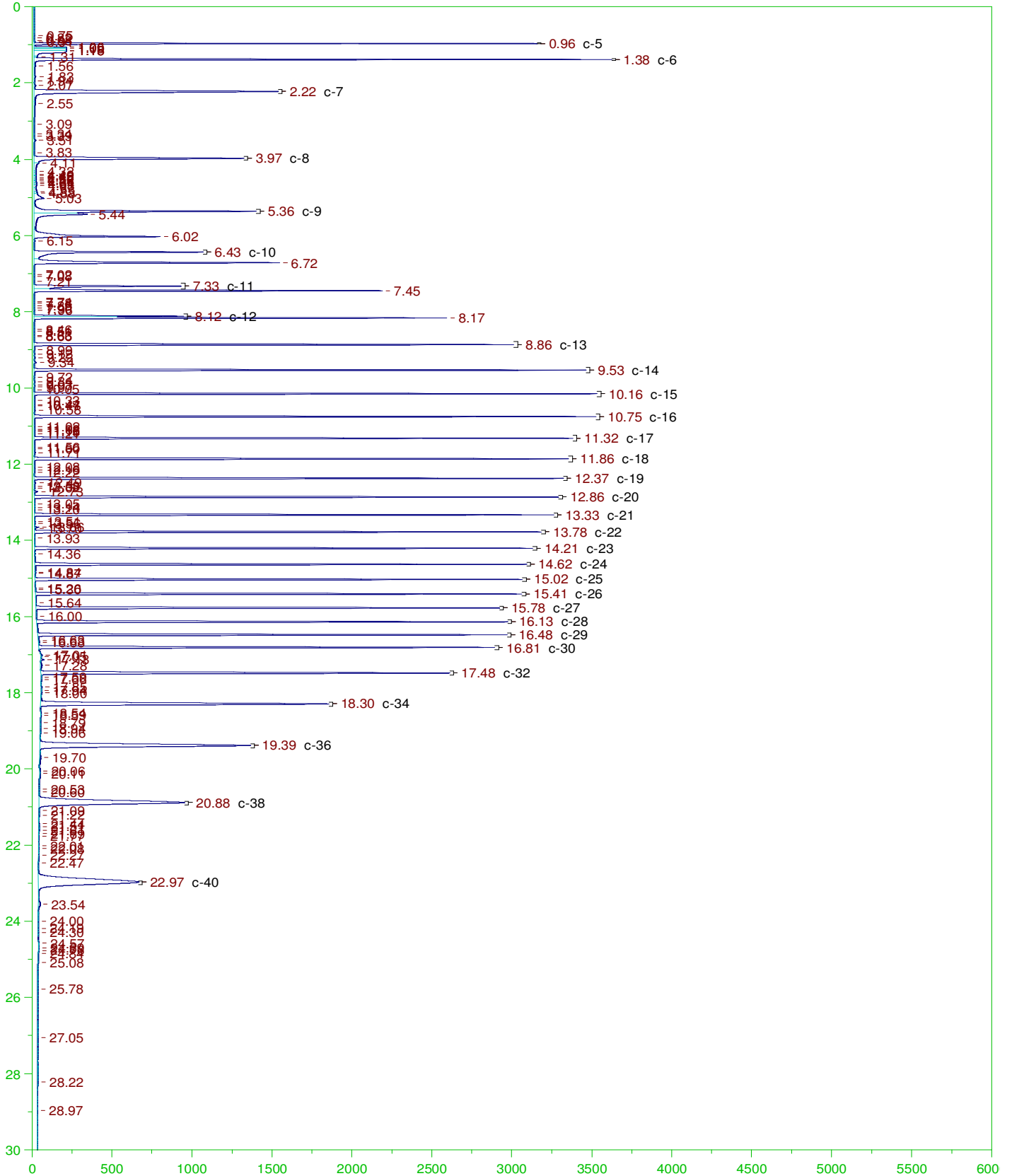
RESIDUAL RANGE ORGANICS CHROMATOGRAM

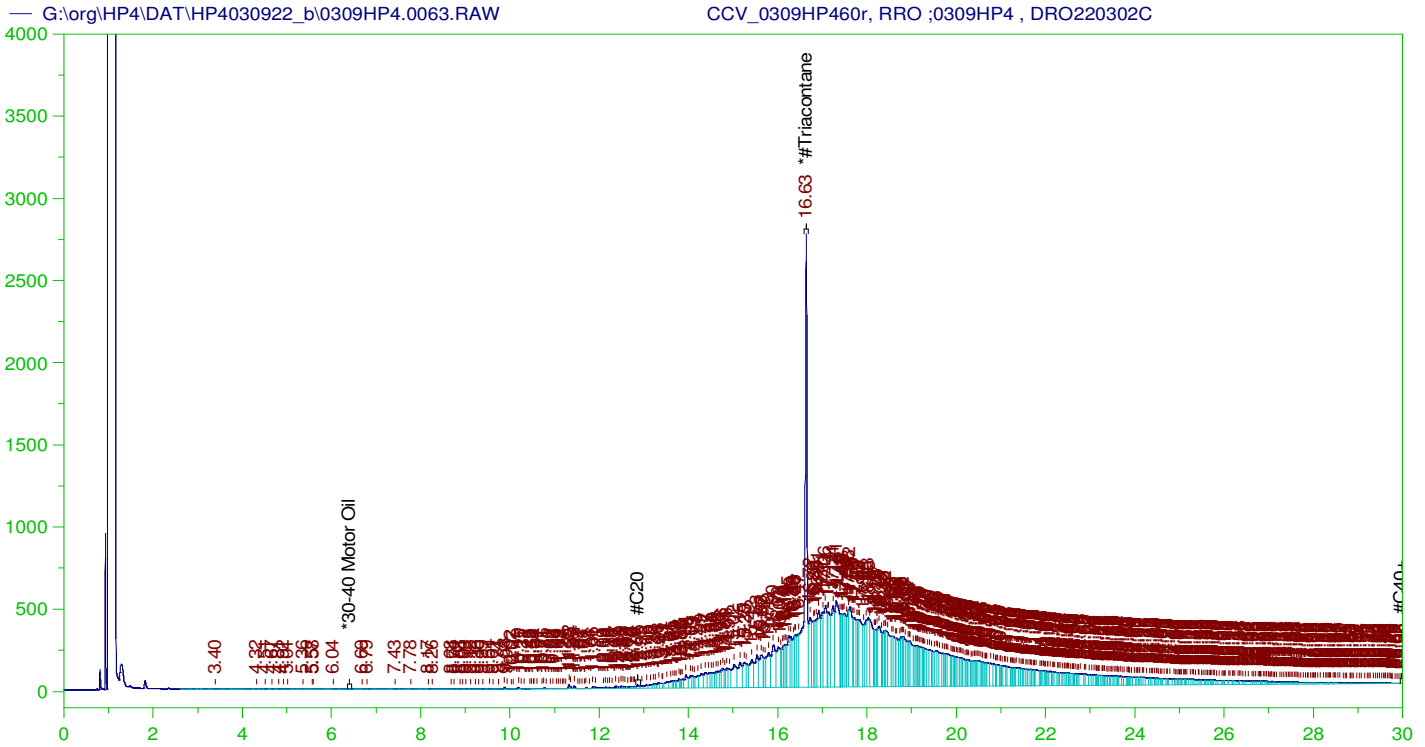
Sample Name: B22030433-053CMSD-RRO ;0309HP4 ,
Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0061.RAW
Date & Time Acquired: 3/11/2022 6:32:46 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.631	.485	.092	19.05

RRO Area:2509797 RRO AMOUNT: 0.0993371





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP460r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0063.RAW
 Date & Time Acquired: 3/11/2022 8:03:37 AM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.634	500.	391.035	78.21	-

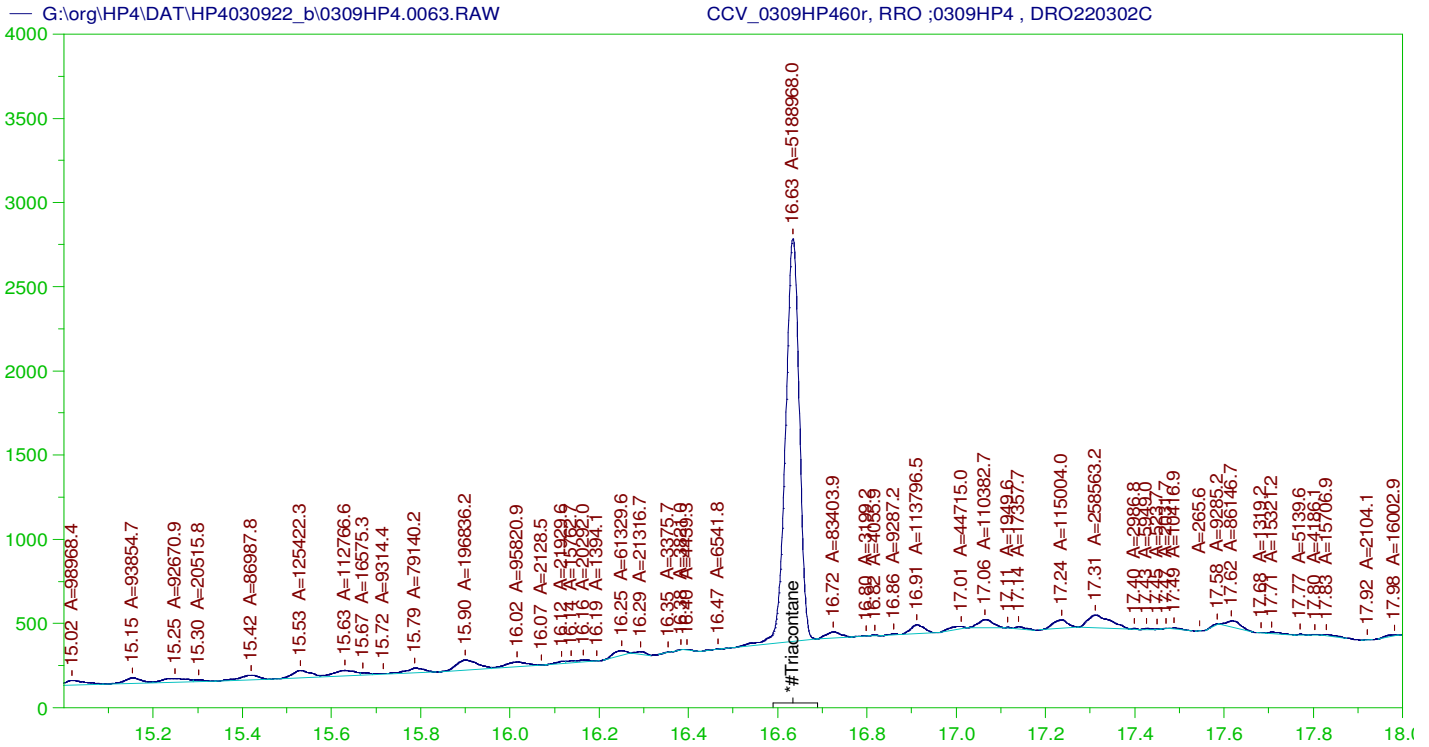
~~RRO~~ TEH(Oil Range) Area:1.22663E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5000.621

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0063.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.634	200.	391.035	195.52	75-125

JLB 03/11/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP460r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0063.RAW
 Date & Time Acquired: 3/11/2022 8:03:37 AM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

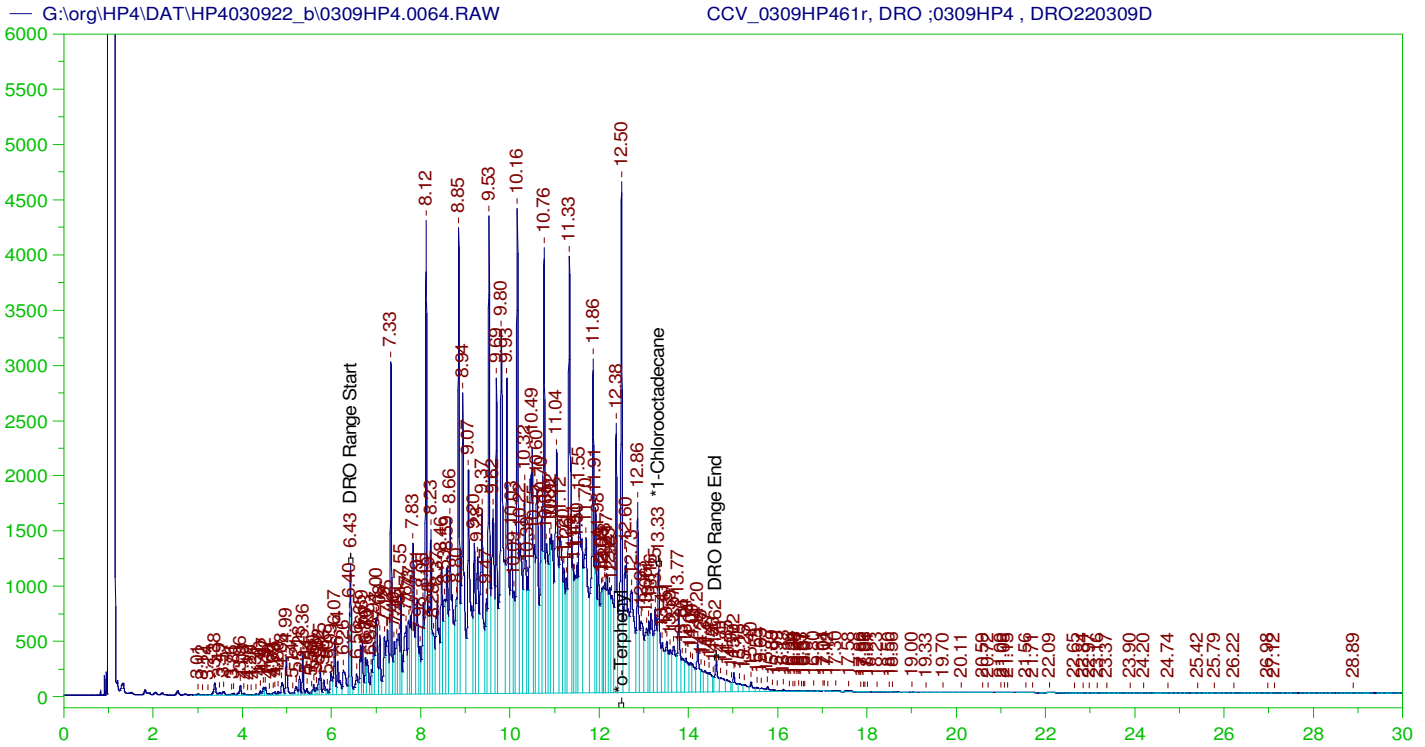
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.634	500.	207.776	41.56

RRO Area:3469516 RRO AMOUNT: 141.4422

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0063.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.634	200.	207.776	103.89	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP461r, DRO ;0309HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0064.RAW
 Date & Time Acquired: 3/11/2022 8:48:48 AM
 Method File: G:\Org\HP4\methods\DC_8015-C24-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.495	200.	367.371	183.69
*1-Chlorooctadecane	13.327	200.	111.493	55.75

DRO Area: 4.313891E+08 DRO Amount: 14686.45
 TEH Area: 4.470835E+08 TEH Amount: 15220.75

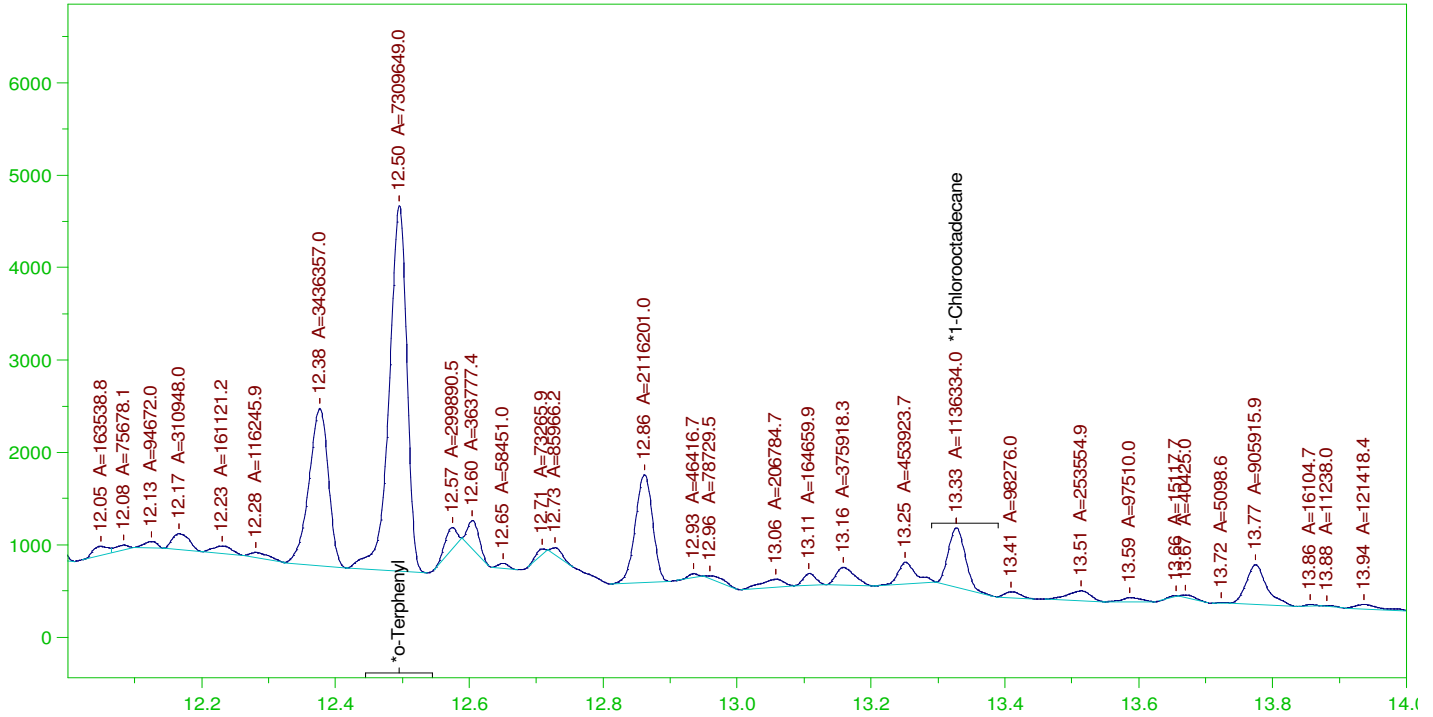
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0064.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15220.75	101.47	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.495	200.	367.371	183.69	85-115
*1-Chlorooctadecane	13.327	200.	111.493	55.75	85-115

G:\org\HP4\DAT\HP4030922_b\0309HP4.0064.RAW

CCV_0309HP461r, DRO ;0309HP4 , DRO220309D



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP461r, DRO ;0309HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0064.RAW
 Date & Time Acquired: 3/11/2022 8:48:48 AM
 Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

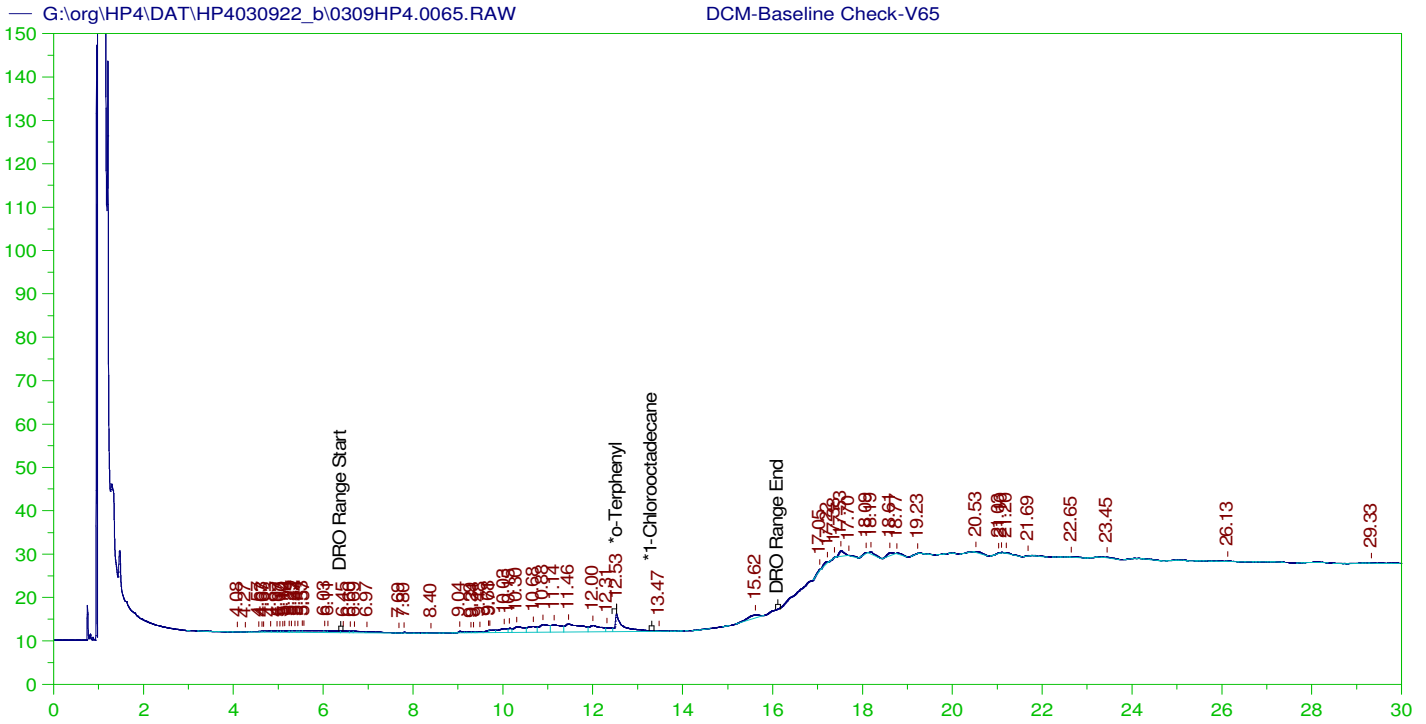
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.495	200.	219.379	109.69
*1-Chlorooctadecane	13.327	200.	34.104	17.05

DRO Area: 2.114624E+08 DRO Amount: 7199.141
 TEH Area: 2.214572E+08 TEH Amount: 7539.412

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0064.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7539.41	50.26	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.495	200.	219.379	109.69	85-115
*1-Chlorooctadecane	13.327	200.	34.104	17.05	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V65
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0065.RAW
 Date & Time Acquired: 3/11/2022 9:33:56 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.526	200.	1.486	.74
*1-Chlorooctadecane	29.886	200.	.	.

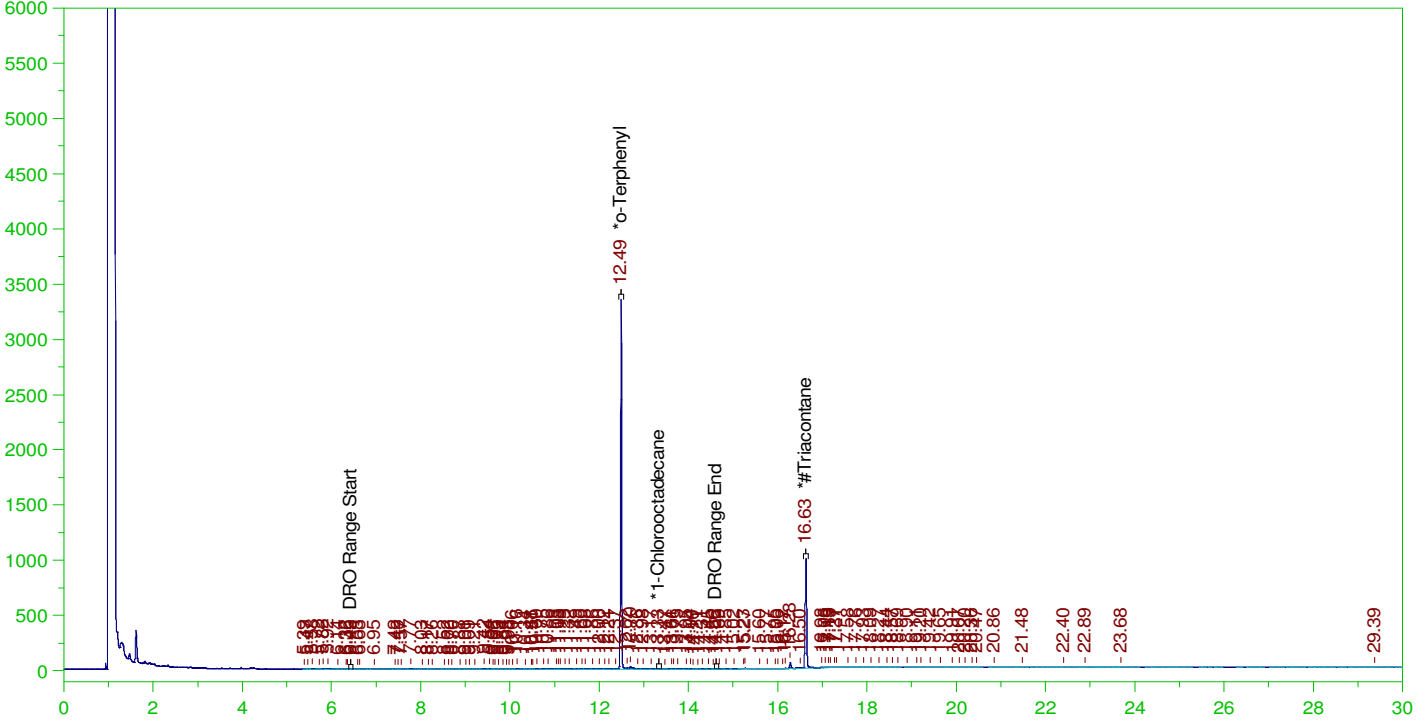
DRO Area:247149.3 DRO Amount: 8.414085
 TEH Area:346101.3 TEH Amount: 11.78286

ERH2598 (RHMW19)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0066.RAW

B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0066.RAW
 Date & Time Acquired: 3/11/2022 10:19:06 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.19	.168	88.14	-
*1-Chlorooctadecane	13.328	.19	.	.13	-
*#Triacontane	16.628	.19	.085	44.56	-

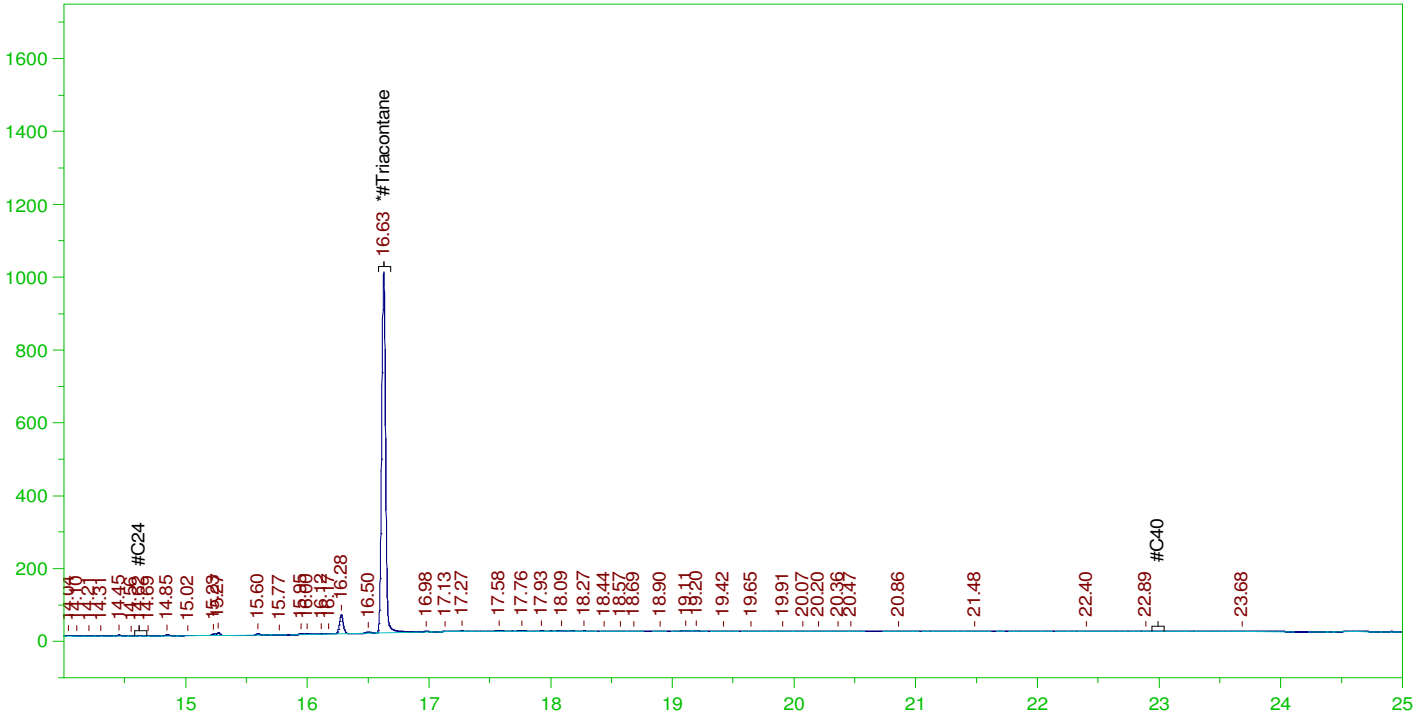
DRO Area:658245.9 DRO Amount: 2.134256E-02
 TEH Area:968635.3 TEH Amount: 3.140643E-02

ERH2598 (RHMW19)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0066.RAW

B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0066.RAW
 Date & Time Acquired: 3/11/2022 10:19:06 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.58 to 23.04

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.628	.476	.085	17.75

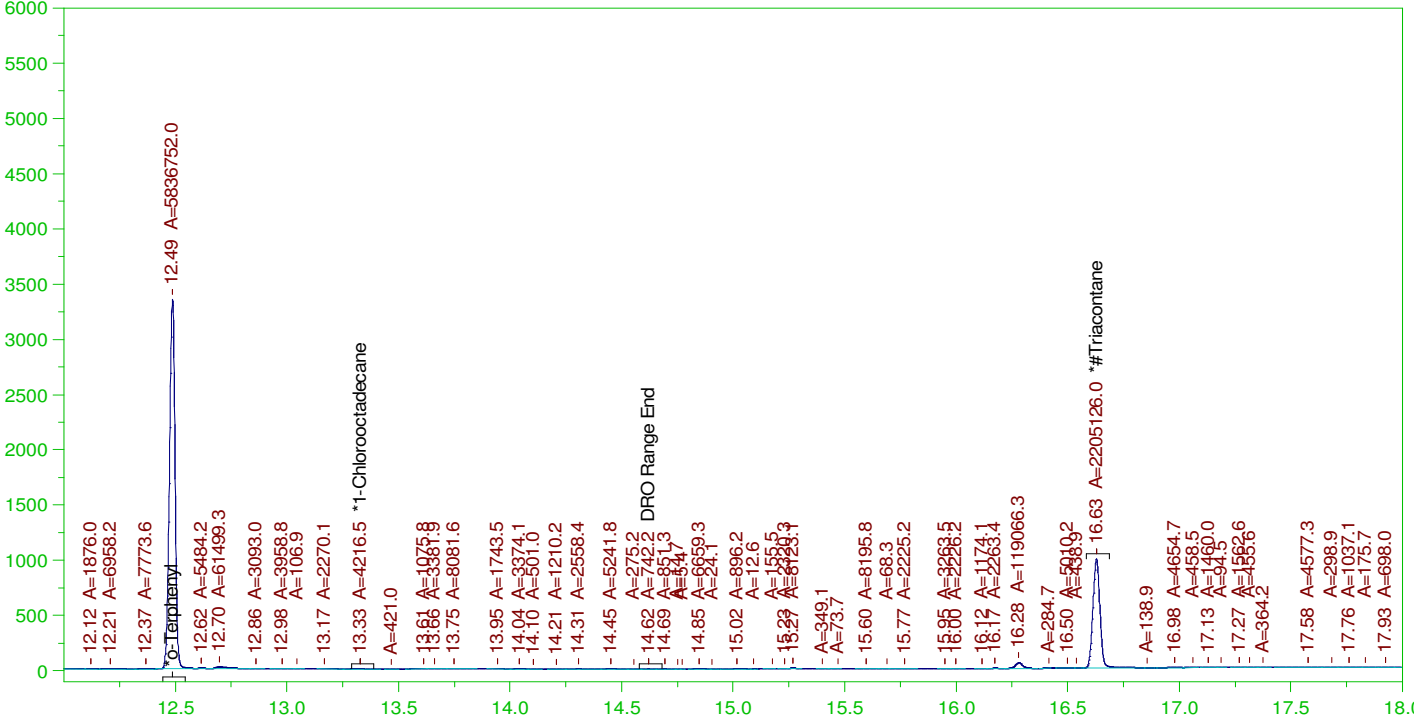
RRO Area:231543.2 RRO AMOUNT: 8.989859E-03

ERH2598 (RHMW19)

Batch ID: 164312

G:\org\HP4\DAT\HP4030922_b\0309HP4.0066.RAW

B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

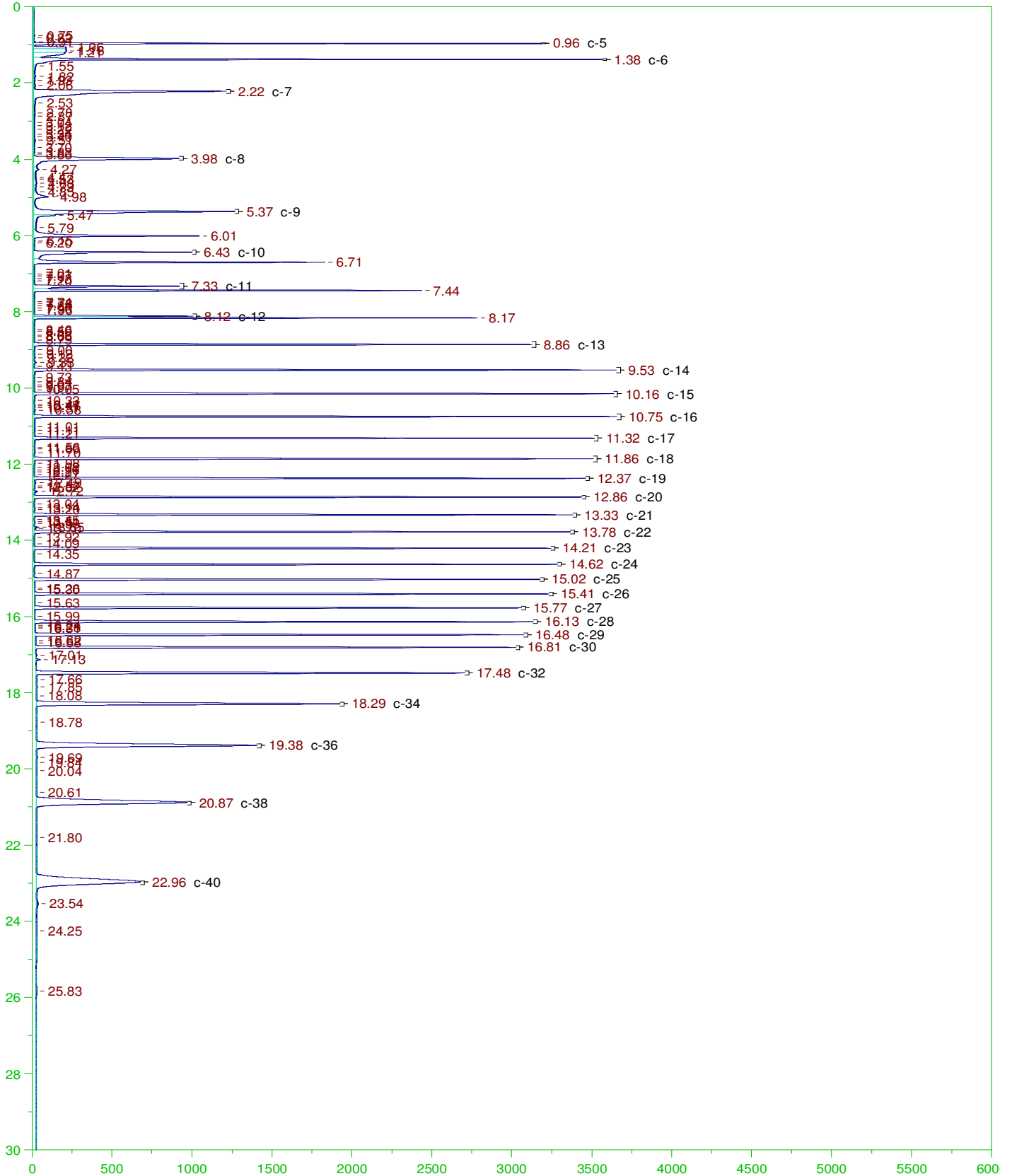
Sample Name: B22030502-031C ;0309HP4 , \$HC-8015-DRO-W, RR
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 Date & Time Acquired: 3/11/2022 10:19:06 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

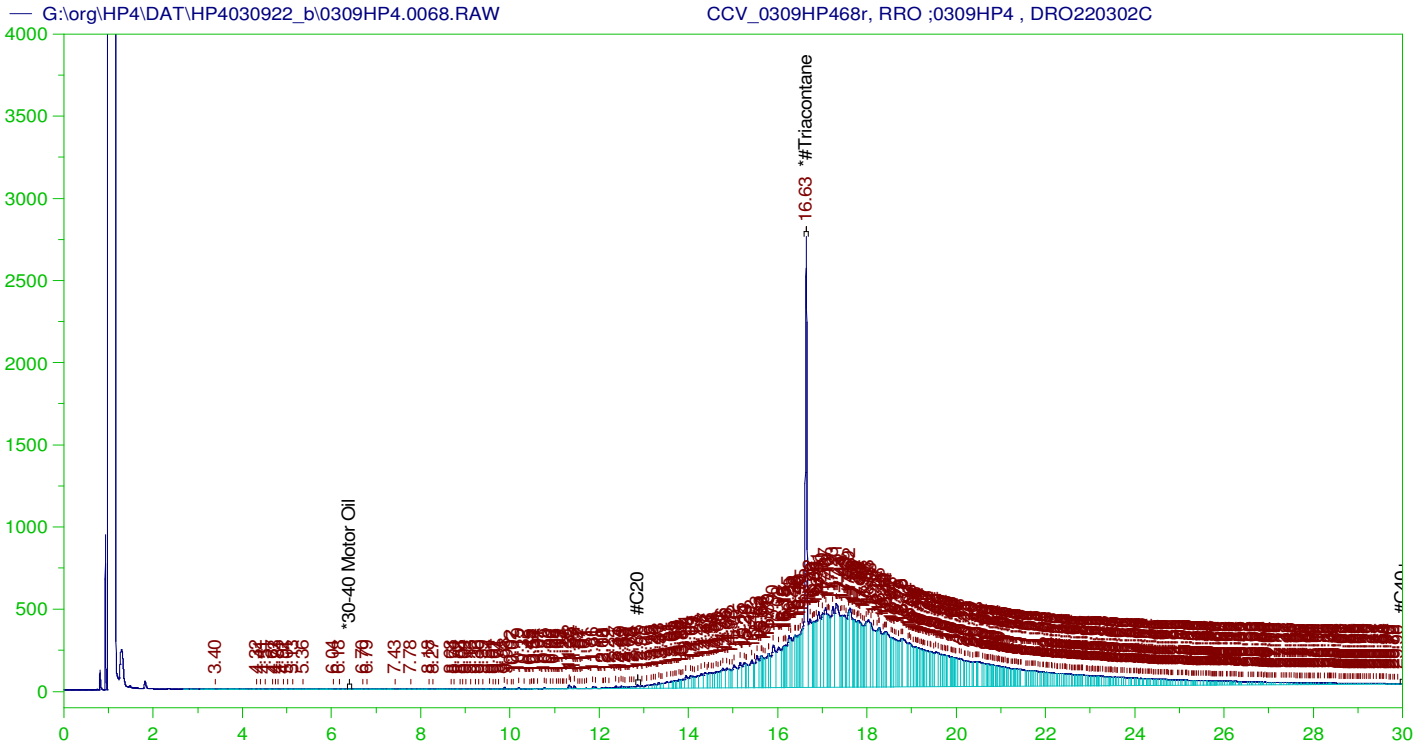
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.19	.167	87.59	-
*1-Chlorooctadecane	13.328	.19	.	.06	-
*#Triacontane	16.628	.19	.084	44.15	-

DRO Area:362062.4 DRO Amount: 1.173929E-02
 TEH Area:819457.6 TEH Amount: 2.656958E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP468r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0068.RAW
 Date & Time Acquired: 3/11/2022 11:50:18 AM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.634	500.	314.707	62.94	-

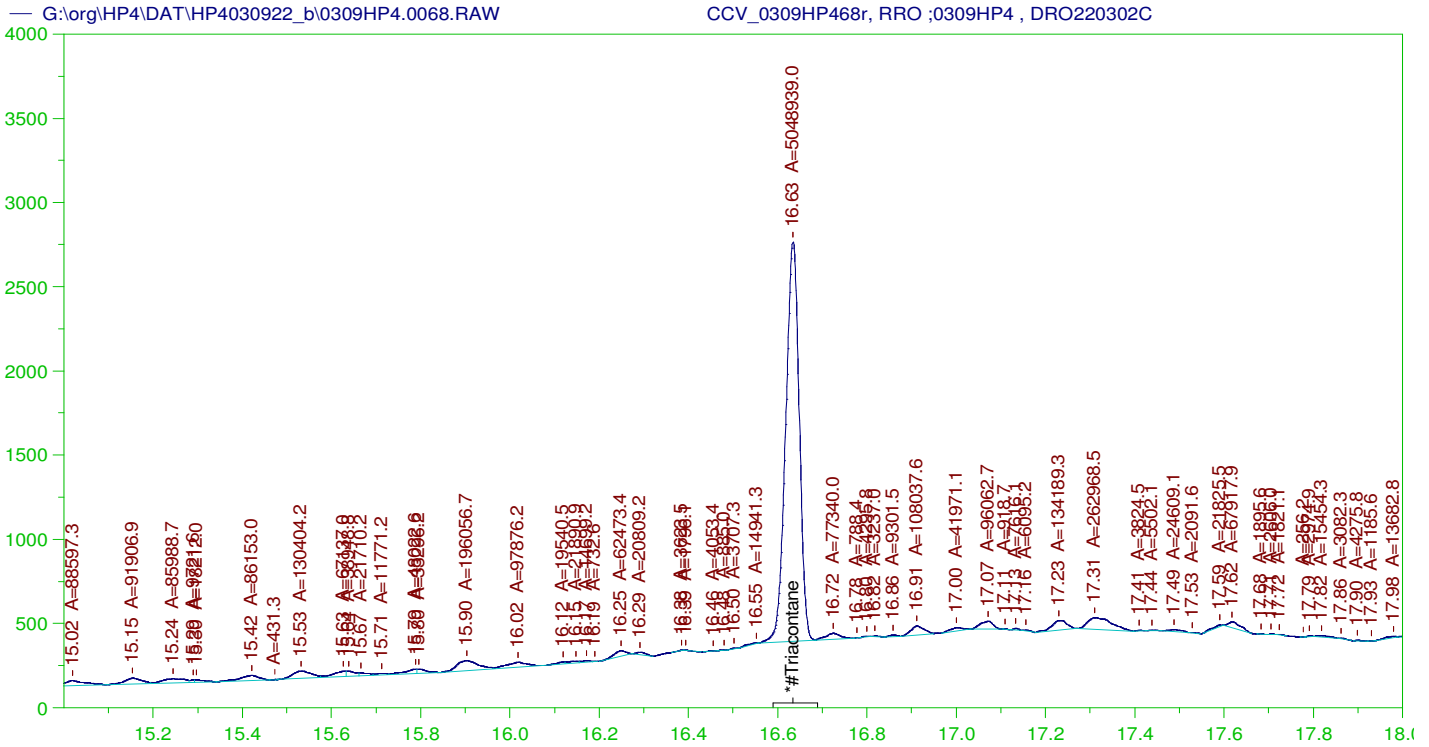
RRO TEH(Oil Range) Area:1.216078E+08 RRO TEH(Oil Range) AMOUNT: 4957.6

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0068.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.634	200.	314.707	157.35	75-125

JLB 03/11/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0309HP468r, RRO ;0309HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0068.RAW
 Date & Time Acquired: 3/11/2022 11:50:18 AM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

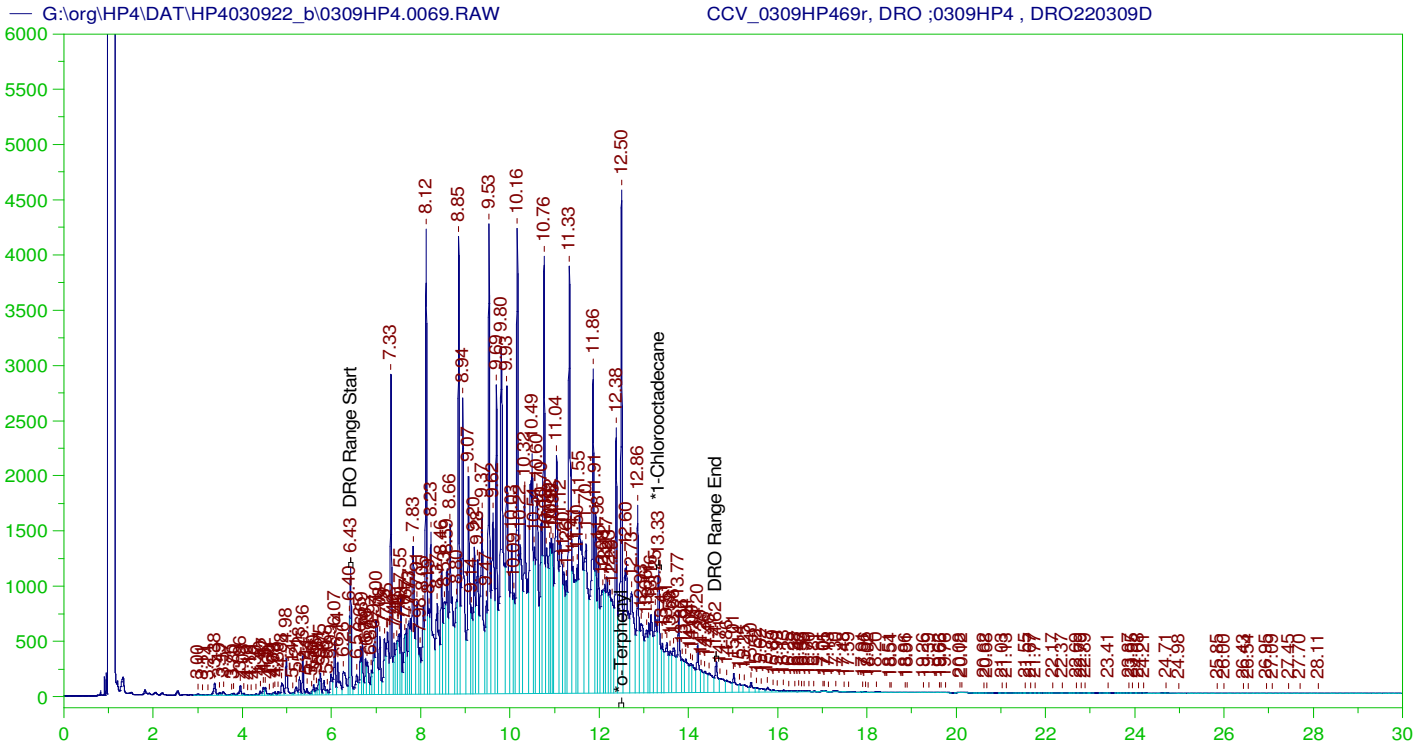
Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.82 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.634	500.	202.169	40.43

RRO Area:3444399 RRO AMOUNT: 140.4183

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0068.RAW
 COMPOUND ACTUAL (NG) MEASURED (NG) %RECOVERY LIMITS
 *30-40 Motor Oil 5000. . . 75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.634	200.	202.169	101.08	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP469r, DRO ;0309HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0069.RAW
 Date & Time Acquired: 3/11/2022 12:36:08 PM
 Method File: G:\Org\HP4\methods\DC_8015-C24-ON-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.495	200.	357.51	178.75
*1-Chlorooctadecane	13.327	200.	108.534	54.27

DRO Area: 4.216723E+08 DRO Amount: 14355.64
 TEH Area: 4.371019E+08 TEH Amount: 14880.94

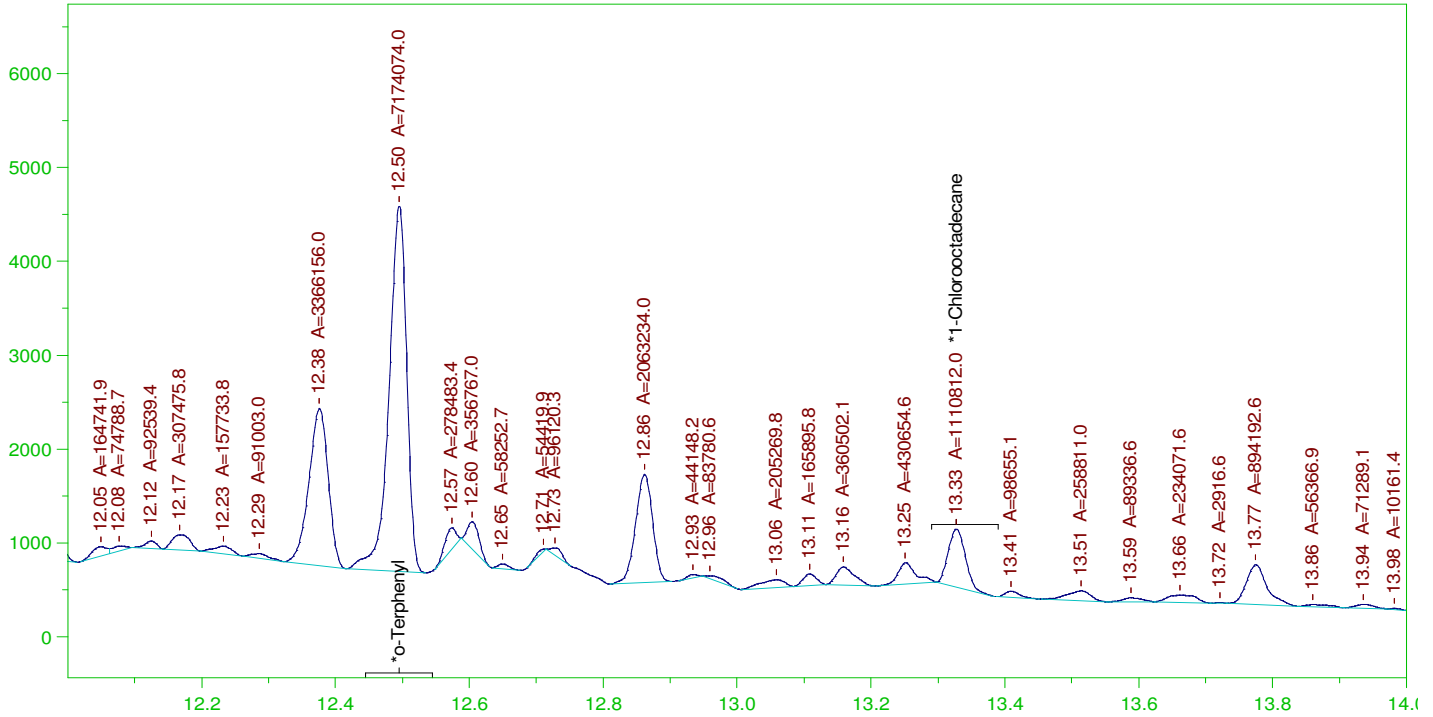
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0069.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14880.94	99.21	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.495	200.	357.51	178.75	85-115
*1-Chlorooctadecane	13.327	200.	108.534	54.27	85-115

G:\org\HP4\DAT\HP4030922_b\0309HP4.0069.RAW

CCV_0309HP469r, DRO ;0309HP4 , DRO220309D



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0309HP469r, DRO ;0309HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4030922_b\0309HP4.0069.RAW
 Date & Time Acquired: 3/11/2022 12:36:08 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-ON-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102ON-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.68

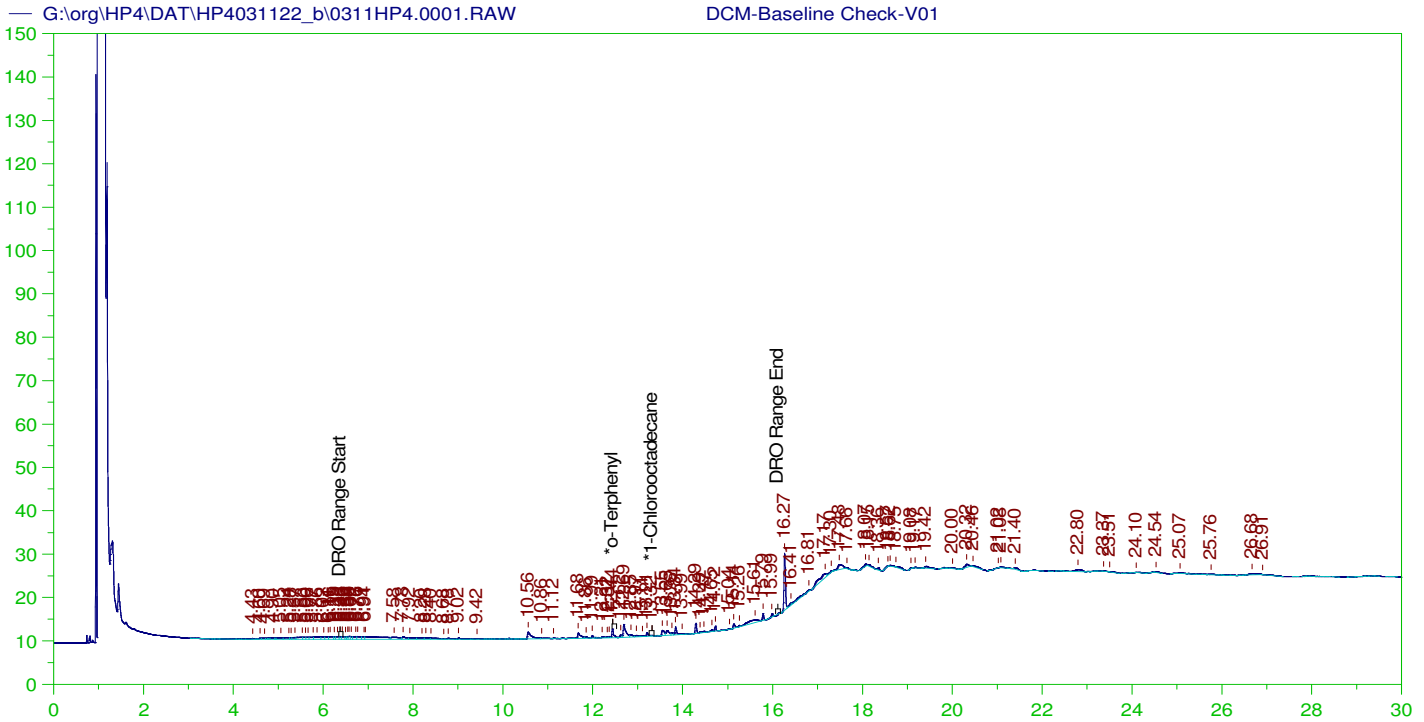
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.495	200.	215.31	107.66
*1-Chlorooctadecane	13.327	200.	33.338	16.67

DRO Area: 2.056206E+08 DRO Amount: 7000.262
 TEH Area: 2.153528E+08 TEH Amount: 7331.59

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4030922_b\0309HP4.0069.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7331.59	48.88	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.495	200.	215.31	107.66	85-115
*1-Chlorooctadecane	13.327	200.	33.338	16.67	85-115



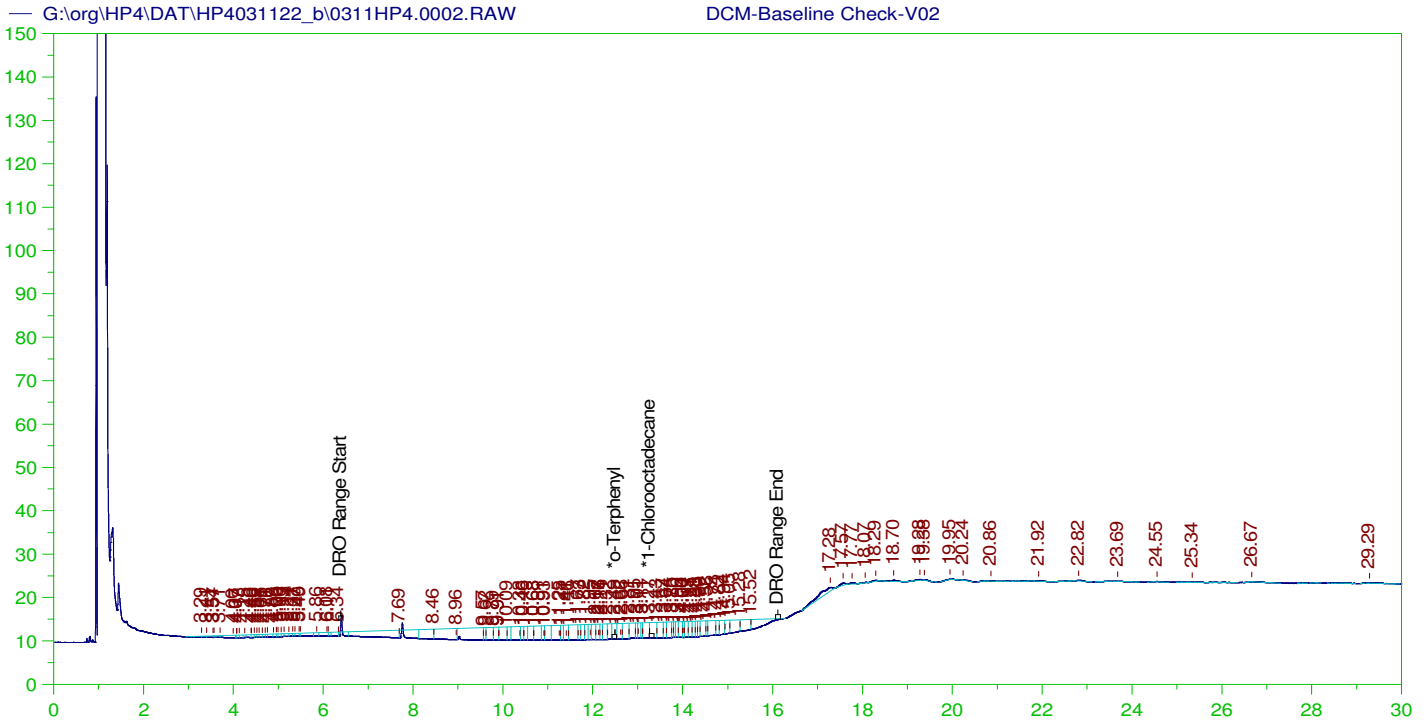
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0001.RAW
 Date & Time Acquired: 3/11/2022 1:24:25 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.438	200.	.155	.08	-
*1-Chlorooctadecane	13.32	200.	.022	.01	-

DRO Area:155345.1 DRO Amount: 5.288653
 TEH Area:306930.9 TEH Amount: 10.44932



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

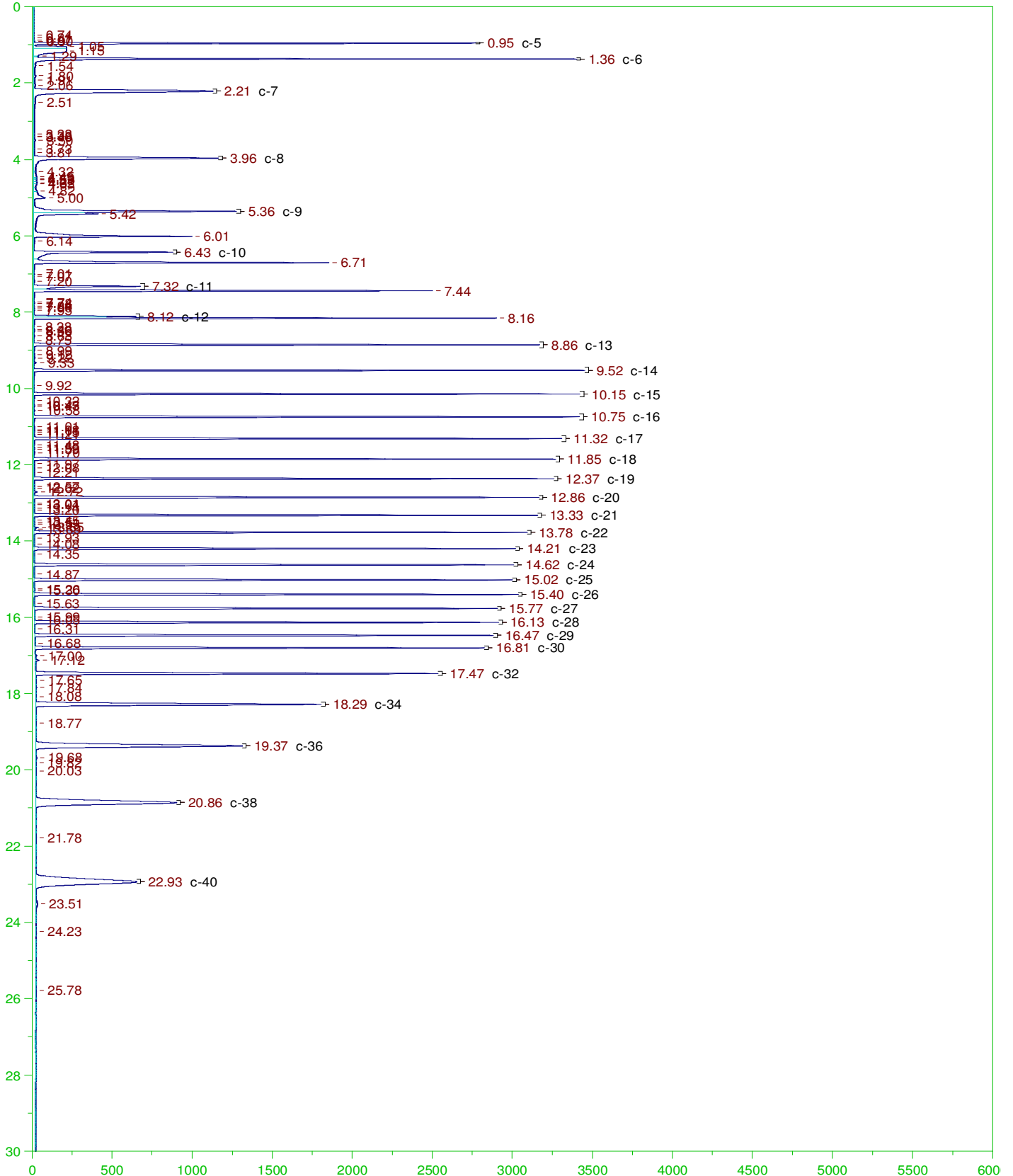
Sample Name: DCM-Baseline Check-V02
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 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

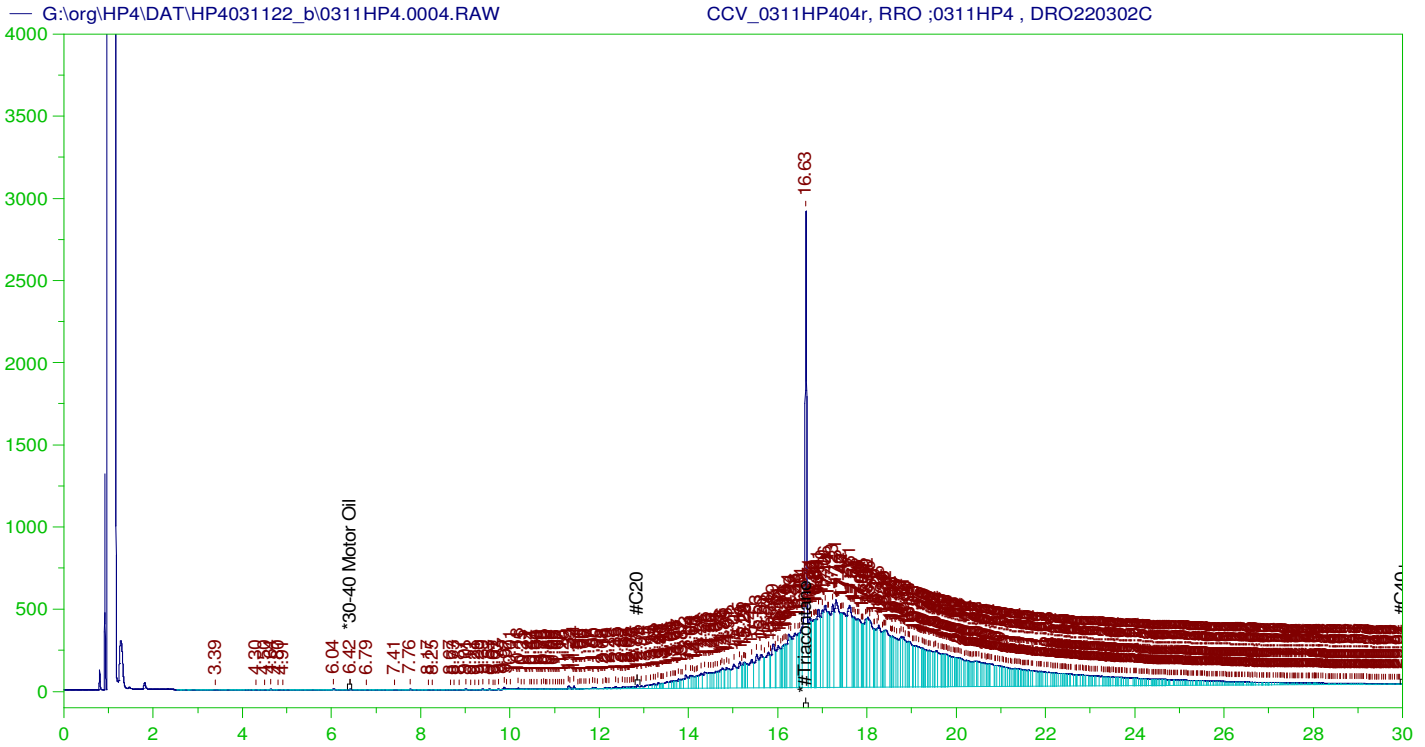
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.491	200.	.723	.36	-
*1-Chlorooctadecane	13.267	200.	1.043	.52	-

DRO Area:1436808 DRO Amount: 48.91549
 TEH Area:1608967 TEH Amount: 54.77656





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP404r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0004.RAW
 Date & Time Acquired: 3/11/2022 3:39:52 PM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.629	500.	331.919	66.38	-

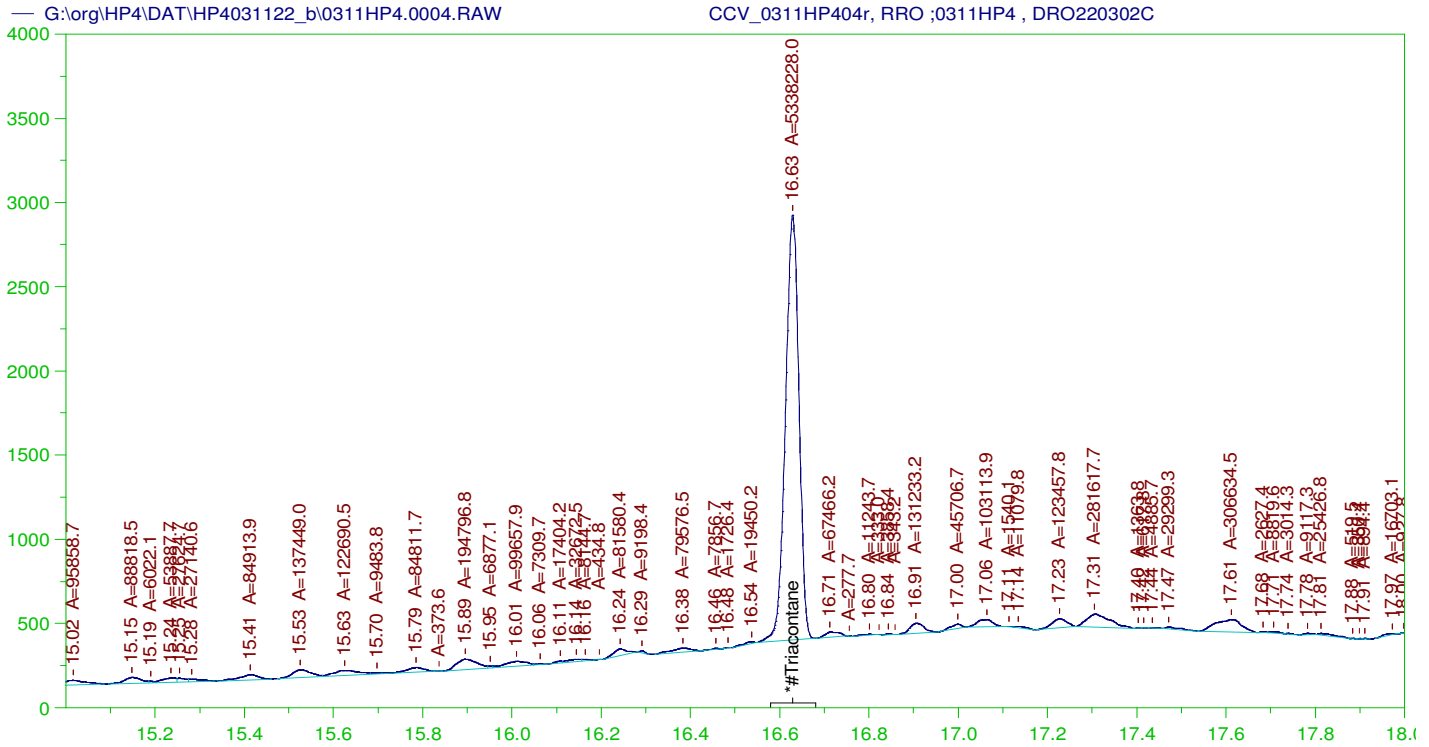
RRO TEH(Oil Range) Area:1.261553E+08 RRO TEH(Oil Range) AMOUNT: 5142.989

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0004.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.072	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.629	200.	331.919	165.96	75-125

JLB 03/14/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP404r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0004.RAW
 Date & Time Acquired: 3/11/2022 3:39:52 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.81 to 30.05

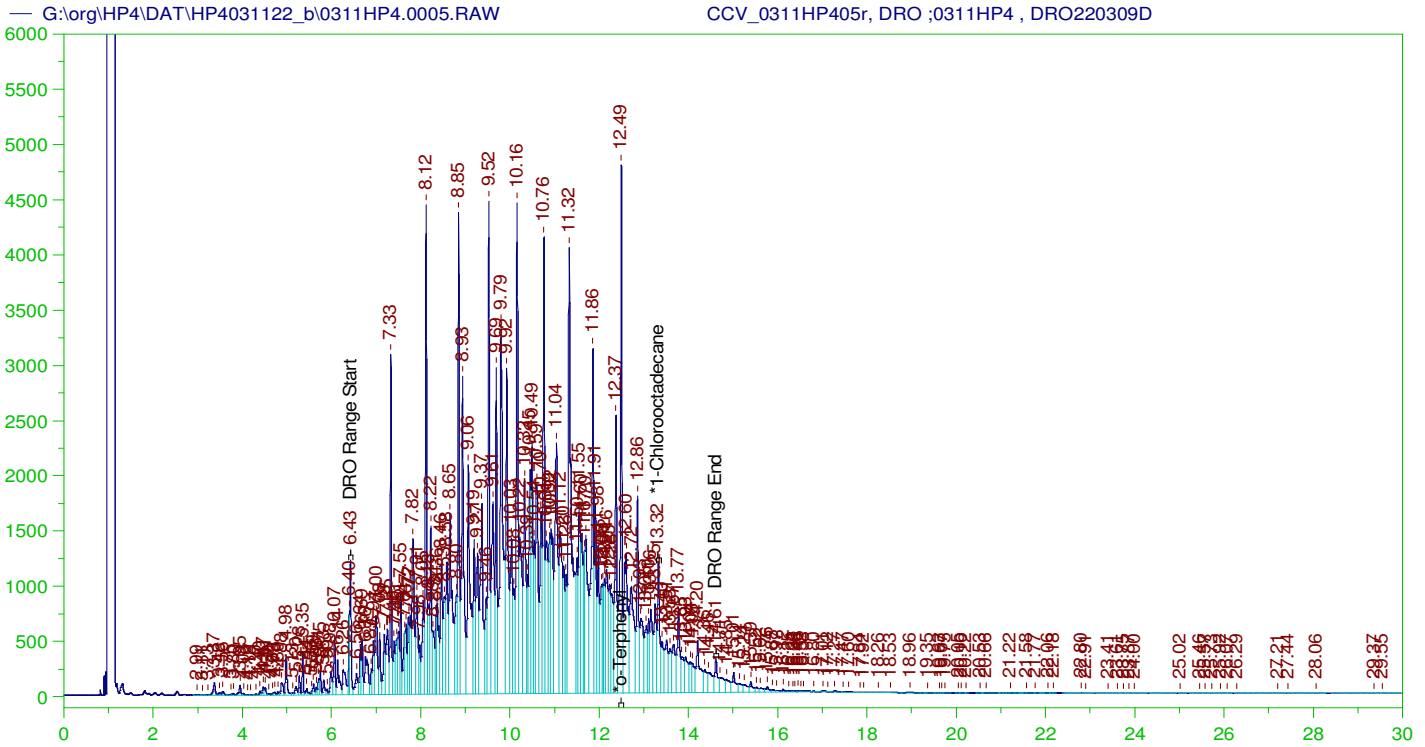
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.629	500.	213.753	42.75

RRO Area:3877699 RRO AMOUNT: 158.0827

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0004.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.072	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.629	200.	213.753	106.88	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0311HP405r, DRO ;0311HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0005.RAW
 Date & Time Acquired: 3/11/2022 4:24:57 PM
 Method File: G:\Org\HP4\methods\DC_8015-C24-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

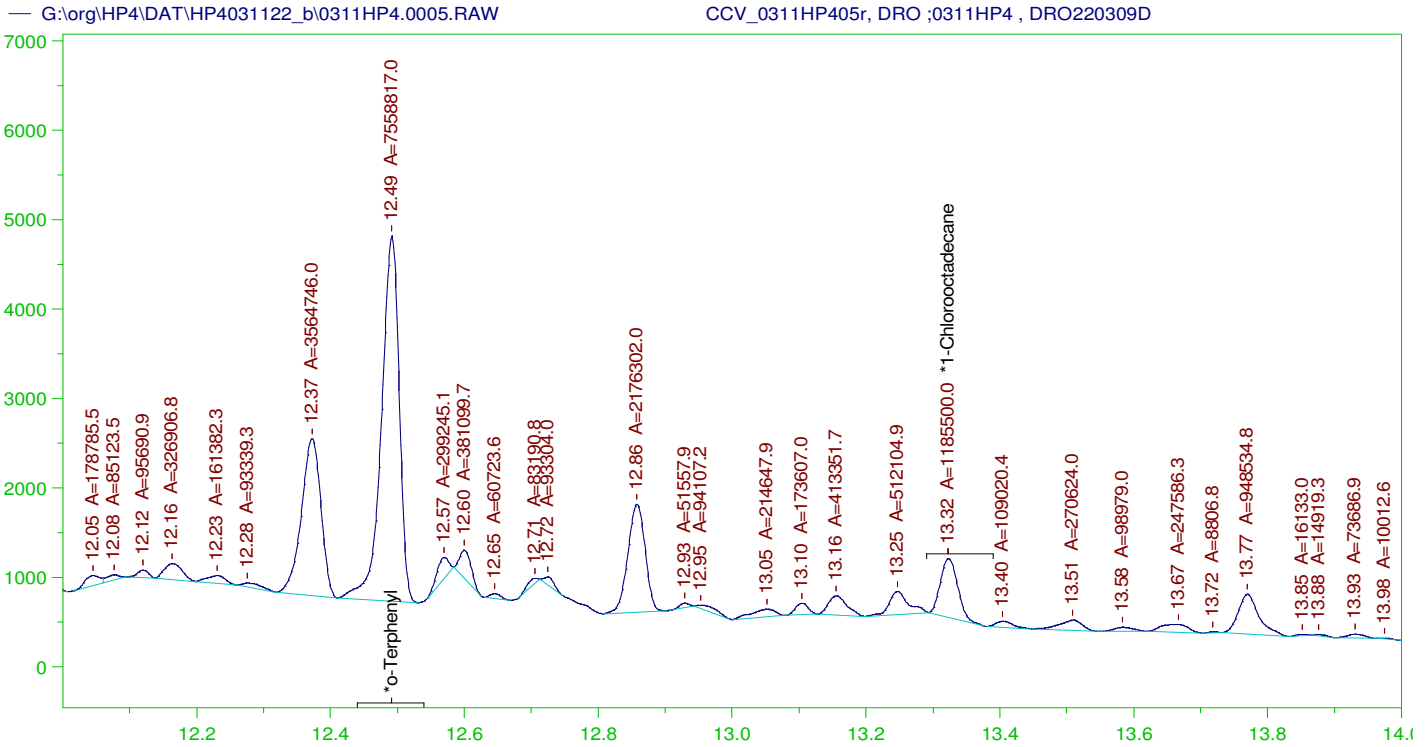
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.492	200.	379.583	189.79
*1-Chlorooctadecane	13.323	200.	112.461	56.23

DRO Area: 4.451292E+08 DRO Amount: 15154.22
 TEH Area: 4.61614E+08 TEH Amount: 15715.44

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15715.44	104.77	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.492	200.	379.583	189.79	85-115
*1-Chlorooctadecane	13.323	200.	112.461	56.23	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0311HP405r, DRO ;0311HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0005.RAW
 Date & Time Acquired: 3/11/2022 4:24:57 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

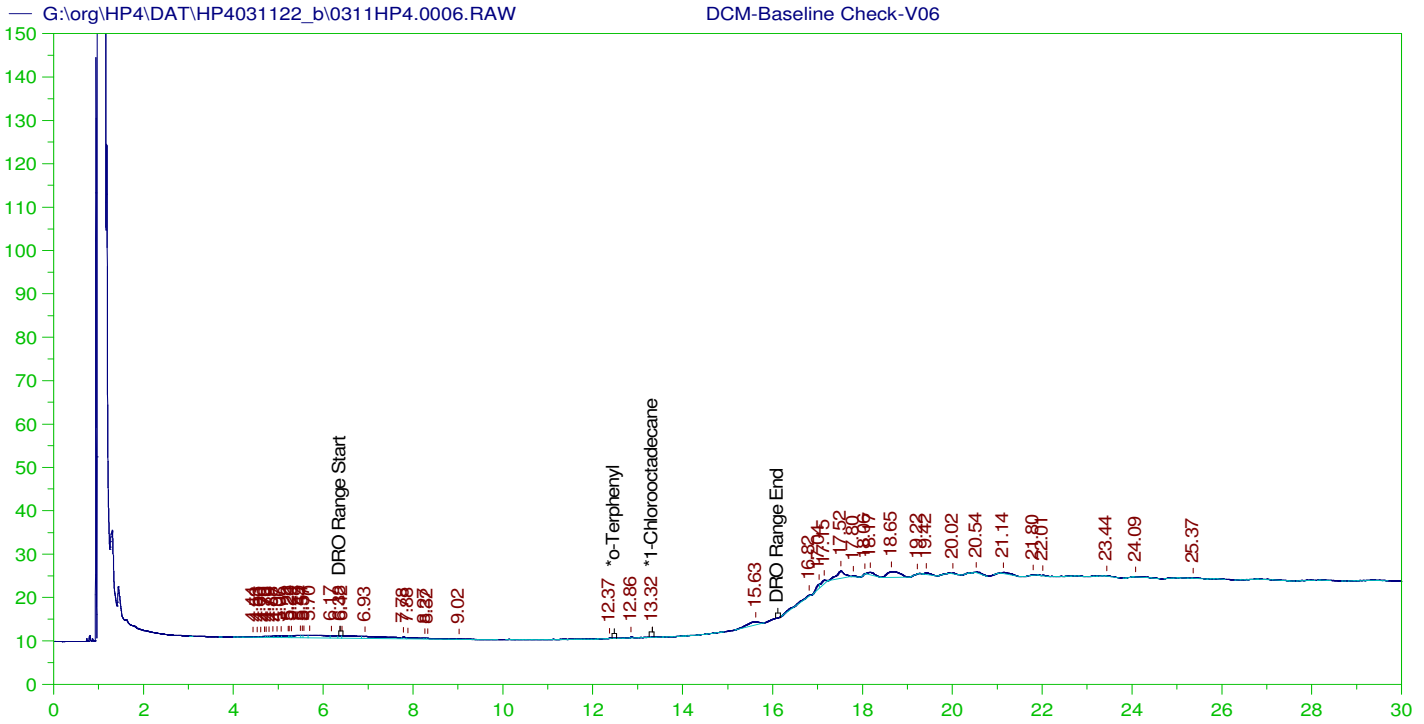
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.492	200.	226.857	113.43
*1-Chlorooctadecane	13.323	200.	35.58	17.79

DRO Area: 2.191987E+08 DRO Amount: 7462.52
 TEH Area: 2.296106E+08 TEH Amount: 7816.991

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7816.99	52.11	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.492	200.	226.857	113.43	85-115
*1-Chlorooctadecane	13.323	200.	35.58	17.79	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

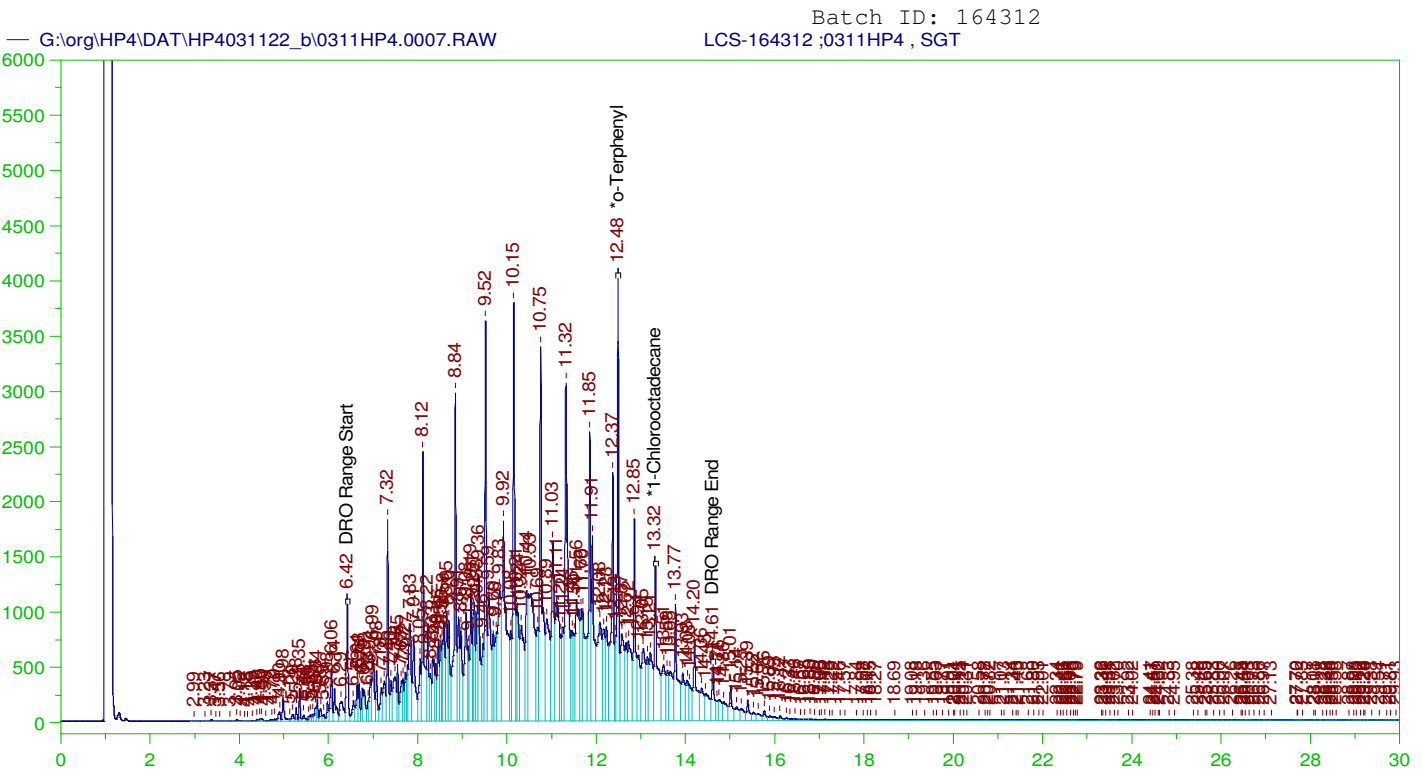
Sample Name: DCM-Baseline Check-V06
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.613	200.	.	-
*1-Chlorooctadecane	13.325	200.	.016	.01 -

DRO Area:66210.7 DRO Amount: 2.254113
 TEH Area:218526.2 TEH Amount: 7.439627



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-164312 ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0007.RAW
 Date & Time Acquired: 3/11/2022 5:56:12 PM
 Method File: G:\Org\HP4\methods\D3_8015-C24-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

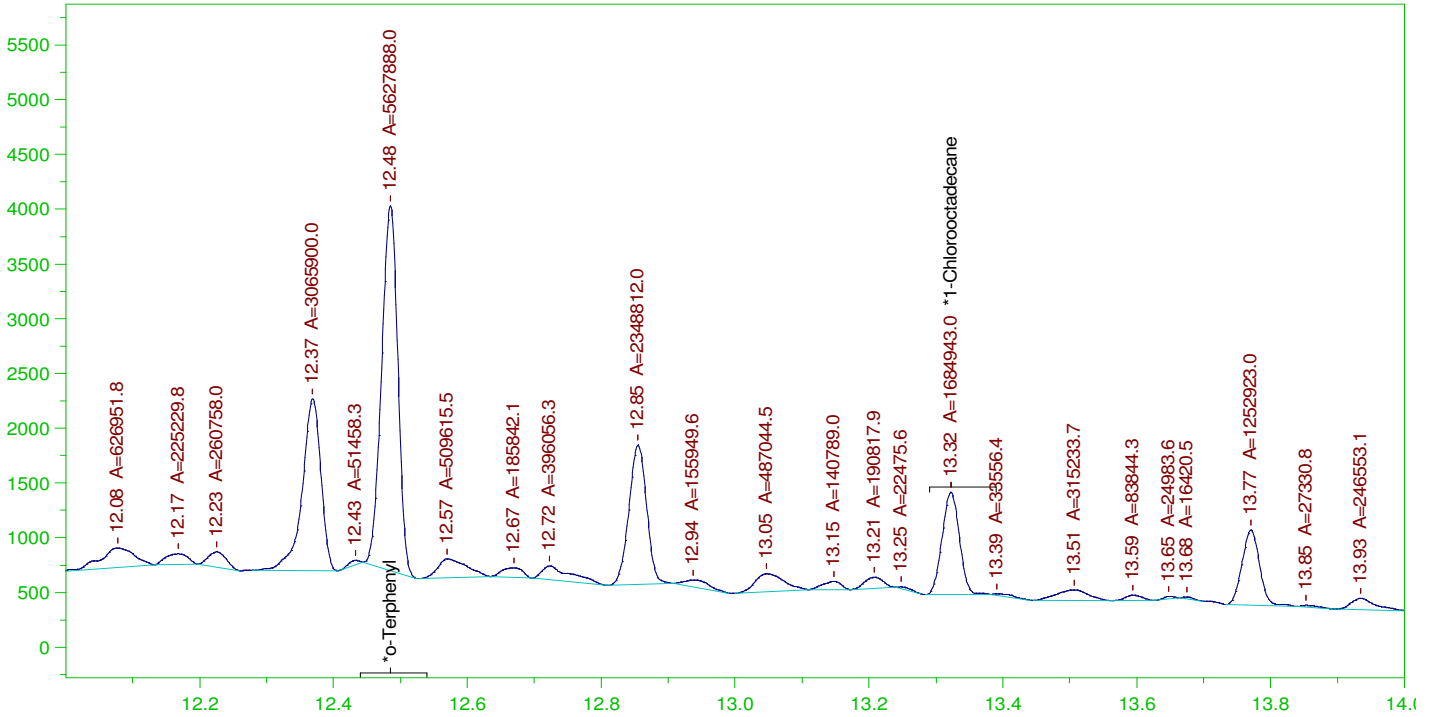
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.485	.2	.272	135.8
*1-Chlorooctadecane	13.322	.2	.184	92.04

DRO Area: 3.367766E+08 DRO Amount: 11.46541
 TEH Area: 3.574454E+08 TEH Amount: 12.16907

G:\org\HP4\DAT\HP4031122_b\0311HP4.0007.RAW Batch ID: 164312
LCS-164312 ;0311HP4 , SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

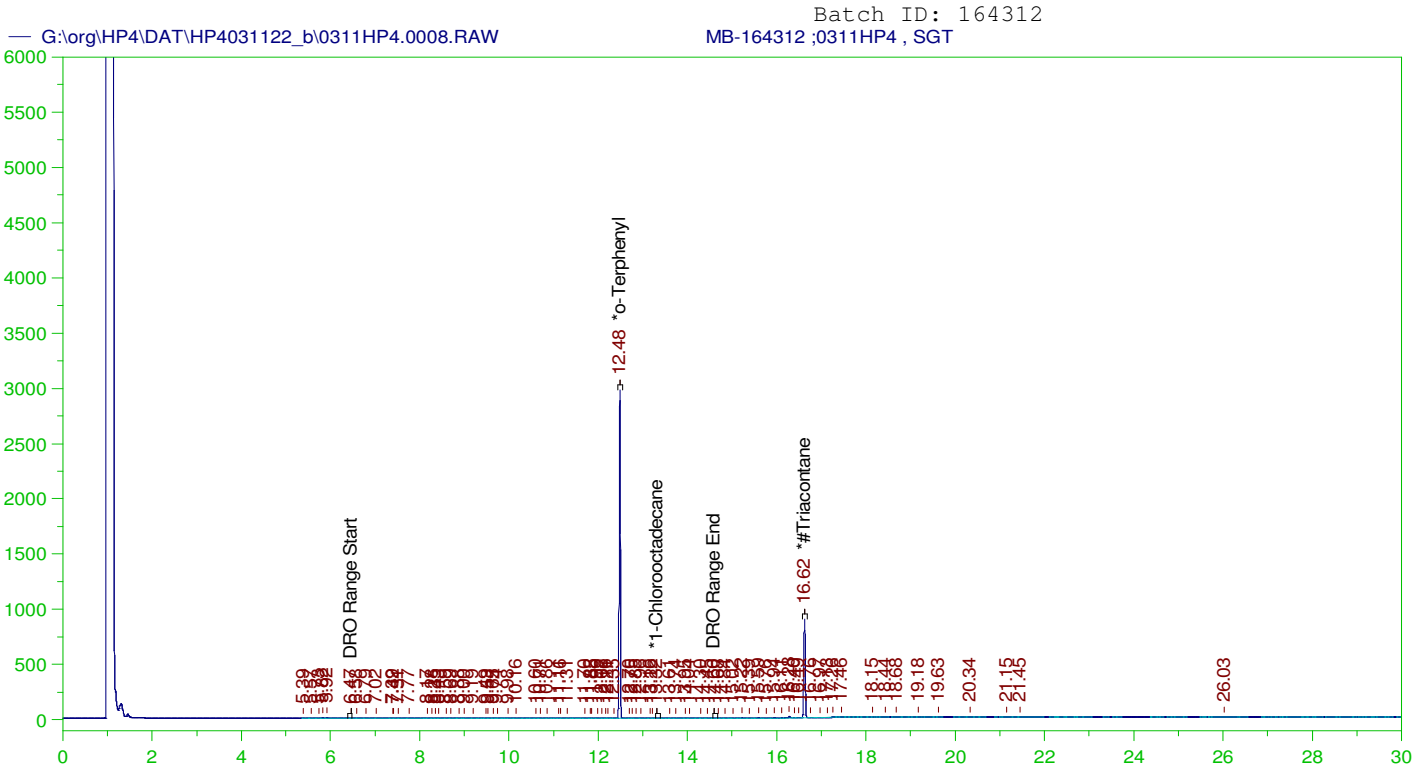
Sample Name: LCS-164312 ;0311HP4 , SGT
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.485	.2	.169	84.45
*1-Chlorooctadecane	13.322	.2	.051	25.28

DRO Area: 1.421707E+08 DRO Amount: 4.840137
 TEH Area: 1.506288E+08 TEH Amount: 5.128089



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-164312 ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0008.RAW
 Date & Time Acquired: 3/11/2022 6:41:36 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

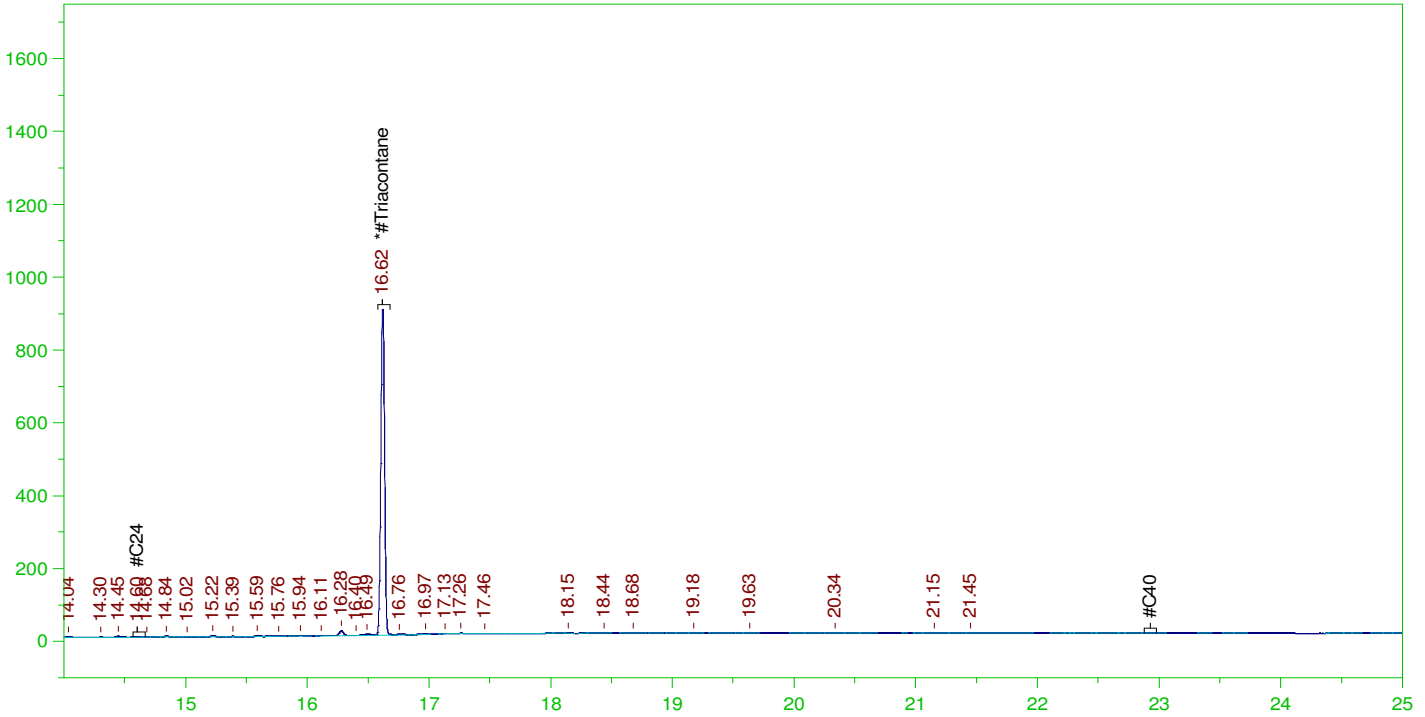
Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.48	.2	.153	76.58	-
*1-Chlorooctadecane	13.322	.2	.02		-
*#Triacontane	16.62	.2	.075	37.67	-

DRO Area:138850.9 DRO Amount: 4.727116E-03
 TEH Area:330249.4 TEH Amount: 1.124319E-02

G:\org\HP4\DAT\HP4031122_b\0311HP4.0008.RAW

MB-164312 ;0311HP4 , SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-164312 ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0008.RAW
 Date & Time Acquired: 3/11/2022 6:41:36 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

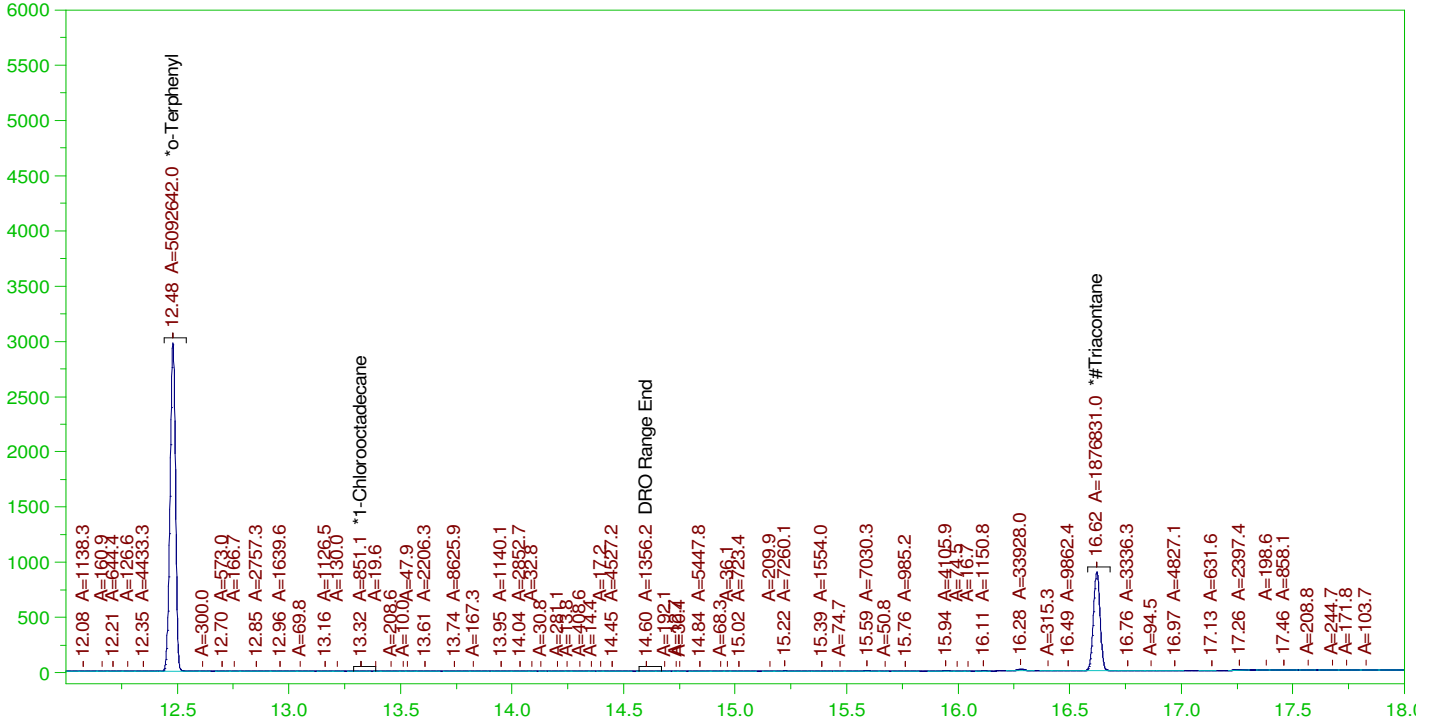
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.62	.5	.075	15.07	-

RRO Area:107517.7 RRO AMOUNT: 4.38319E-03

Batch ID: 164312

MB-164312 ;0311HP4 , SGT

G:\org\HP4\DAT\HP4031122_b\0311HP4.0008.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-164312 ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0008.RAW
 Date & Time Acquired: 3/11/2022 6:41:36 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

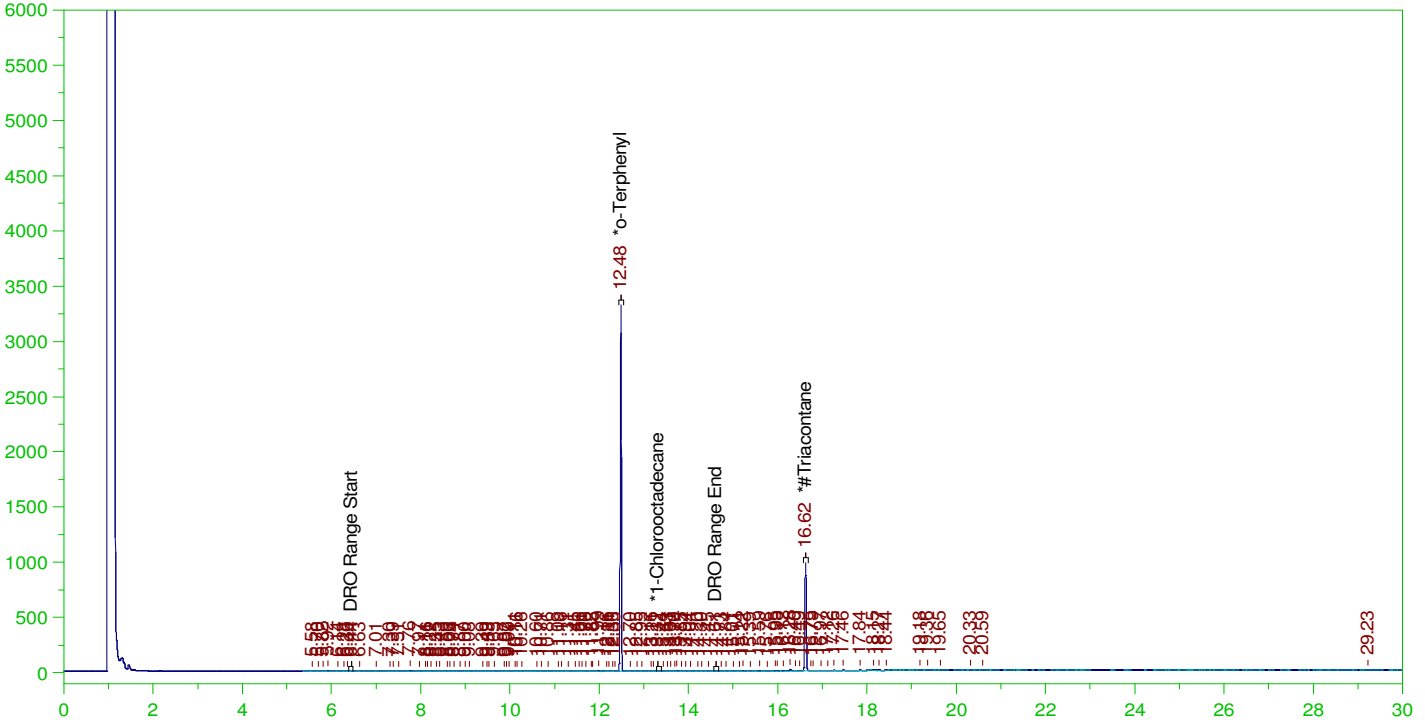
Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.48	.2	.153	76.42
*1-Chlorooctadecane	13.322	.2	.01	-
*#Triacontane	16.62	.2	.075	37.58

DRO Area:107410.1 DRO Amount: 3.65673E-03
 TEH Area:304818 TEH Amount: 1.037739E-02

ERH2580 (RHMW05 m/MS/MSD volumes)
G:\org\HP4\DAT\HP4031122_b\0311HP4.0009.RAW

Batch ID: 164312
B22030433-053C ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0009.RAW
 Date & Time Acquired: 3/11/2022 7:27:01 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

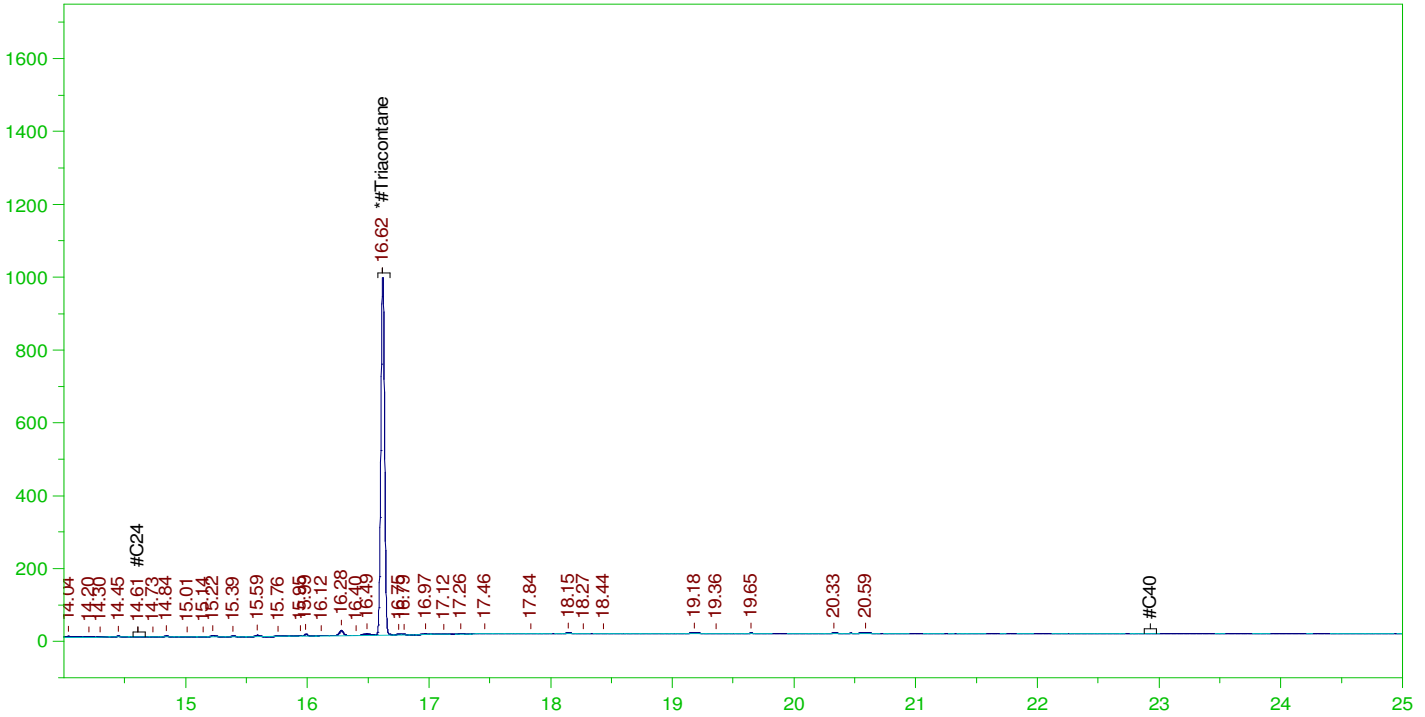
Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.482	.192	.163	84.64	-
*1-Chlorooctadecane	13.321	.192	.	.03	-
*#Triacontane	16.62	.192	.079	41.21	-

DRO Area:213524.3 DRO Amount: 6.989747E-03
 TEH Area:462647 TEH Amount: 1.514482E-02

ERH2580 (RHMW05 m/MS/MSD volumes)
G:\org\HP4\DAT\HP4031122_b\0311HP4.0009.RAW

Batch ID: 164312
B22030433-053C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-053C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0009.RAW
 Date & Time Acquired: 3/11/2022 7:27:01 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.62	.481	.079	16.48

RRO Area:164760 RRO AMOUNT: 6.458456E-03

ERH2580 (RHMW05 m/MS/MSD volumes)
G:\org\HP4\DAT\HP4031122_b\0311HP4.0009.RAW

Batch ID: 164312
B22030433-053C ;0311HP4 , \$HC-8015-DRO-W, SGT



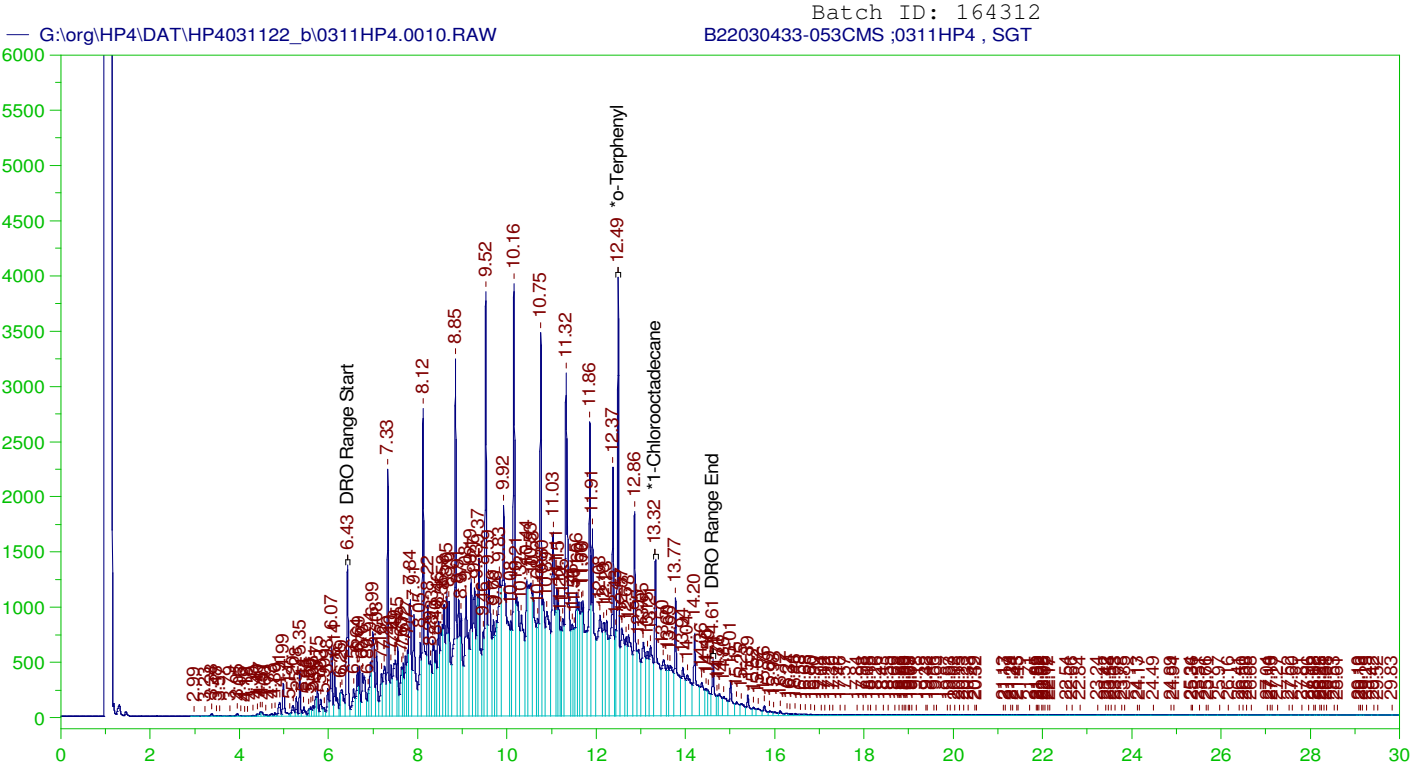
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053C ;0311HP4 , \$HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0009.RAW
Date & Time Acquired: 3/11/2022 7:27:01 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.482	.192	.162	84.42
*1-Chlorooctadecane	13.321	.192	.02	-
*#Triacontane	16.62	.192	.079	41.05

DRO Area:157813 DRO Amount: 5.166032E-03
TEH Area:401232.7 TEH Amount: 1.313441E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-053CMS ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0010.RAW
 Date & Time Acquired: 3/11/2022 8:12:21 PM
 Method File: G:\Org\HP4\methods\D3_8015-C24-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

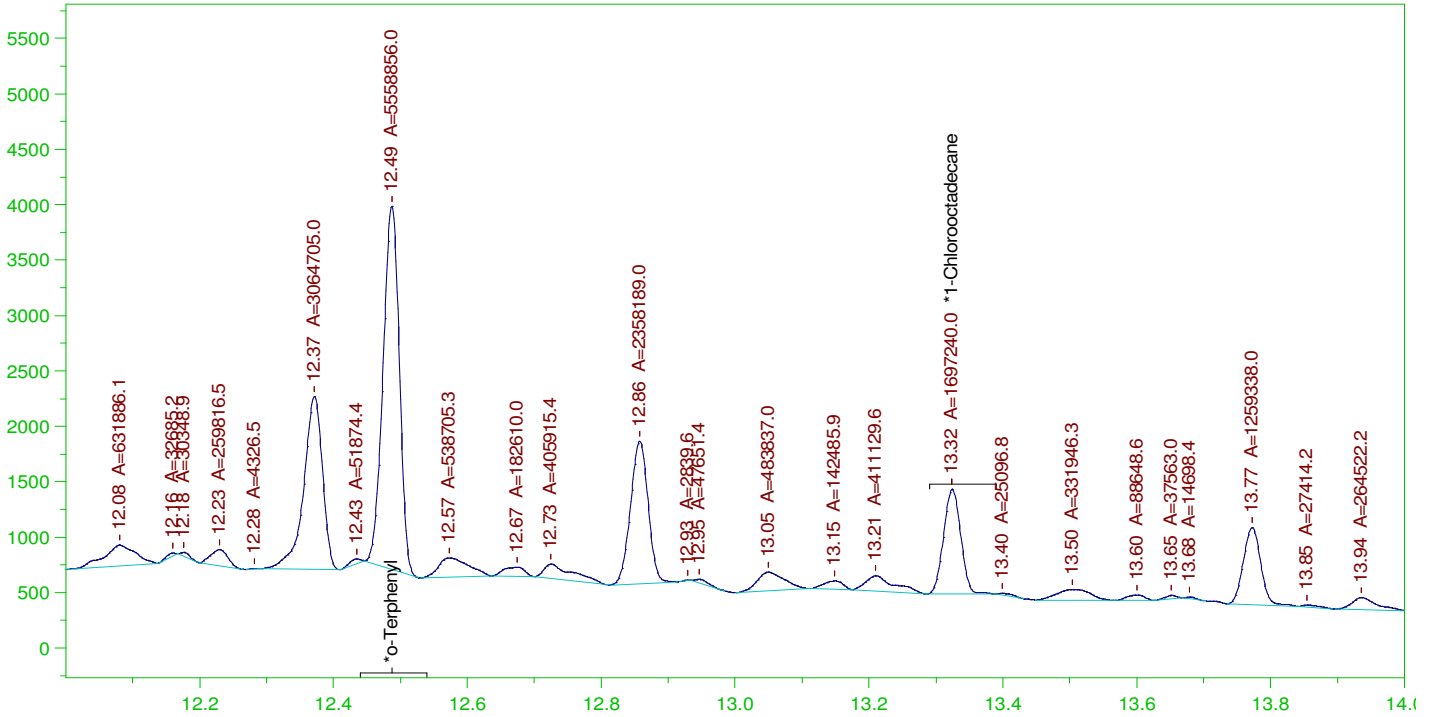
Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.19	.259	135.89	-
*1-Chlorooctadecane	13.324	.19	.178	93.32	-

DRO Area: 3.604768E+08 DRO Amount: 11.68788
 TEH Area: 3.839469E+08 TEH Amount: 12.44886

G:\org\HP4\DAT\HP4031122_b\0311HP4.0010.RAW

Batch ID: 164312
B22030433-053CMS ;0311HP4 , SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

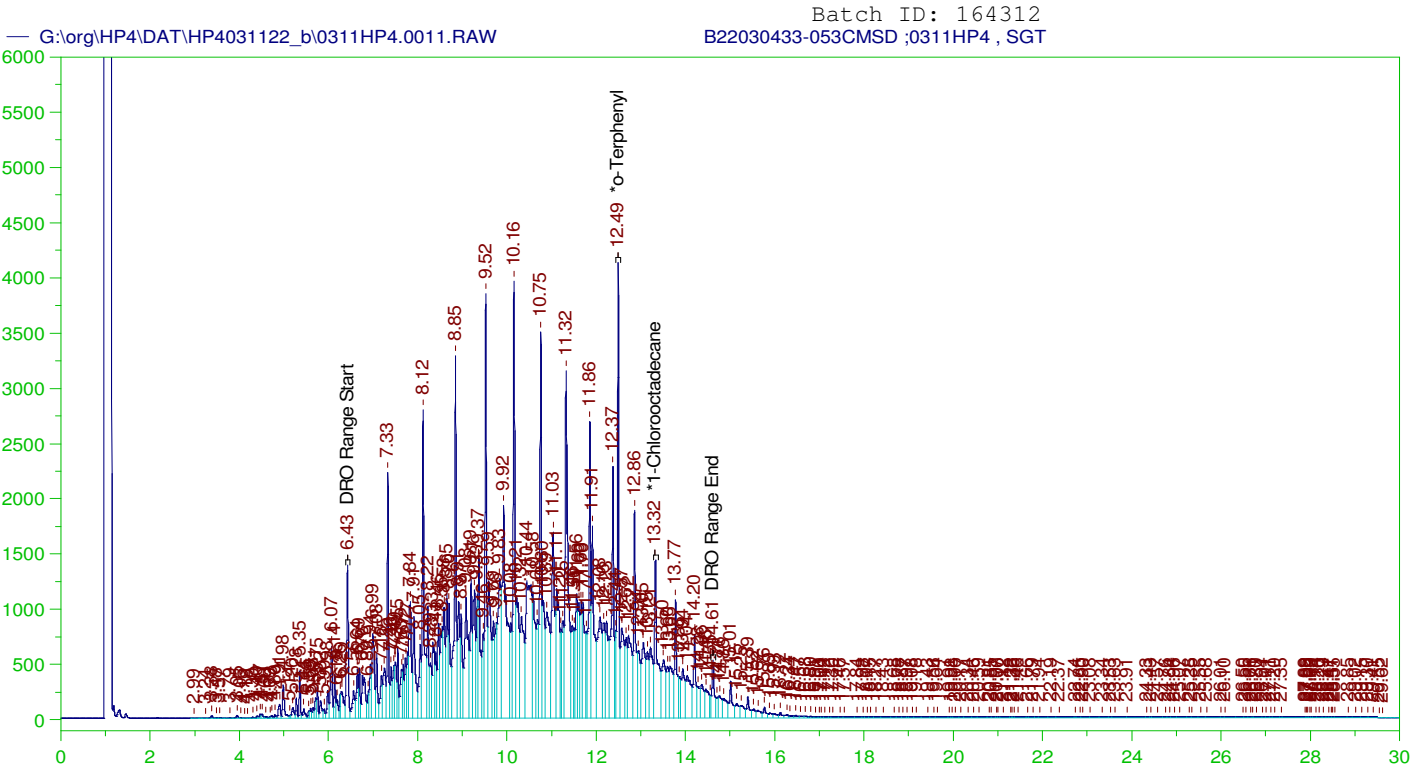
Sample Name: B22030433-053CMS ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0010.RAW
 Date & Time Acquired: 3/11/2022 8:12:21 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.19	.159	83.42	-
*1-Chlorooctadecane	13.324	.19	.049	25.47	-

DRO Area: 1.570801E+08 DRO Amount: 5.093069
 TEH Area: 1.684057E+08 TEH Amount: 5.460281



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

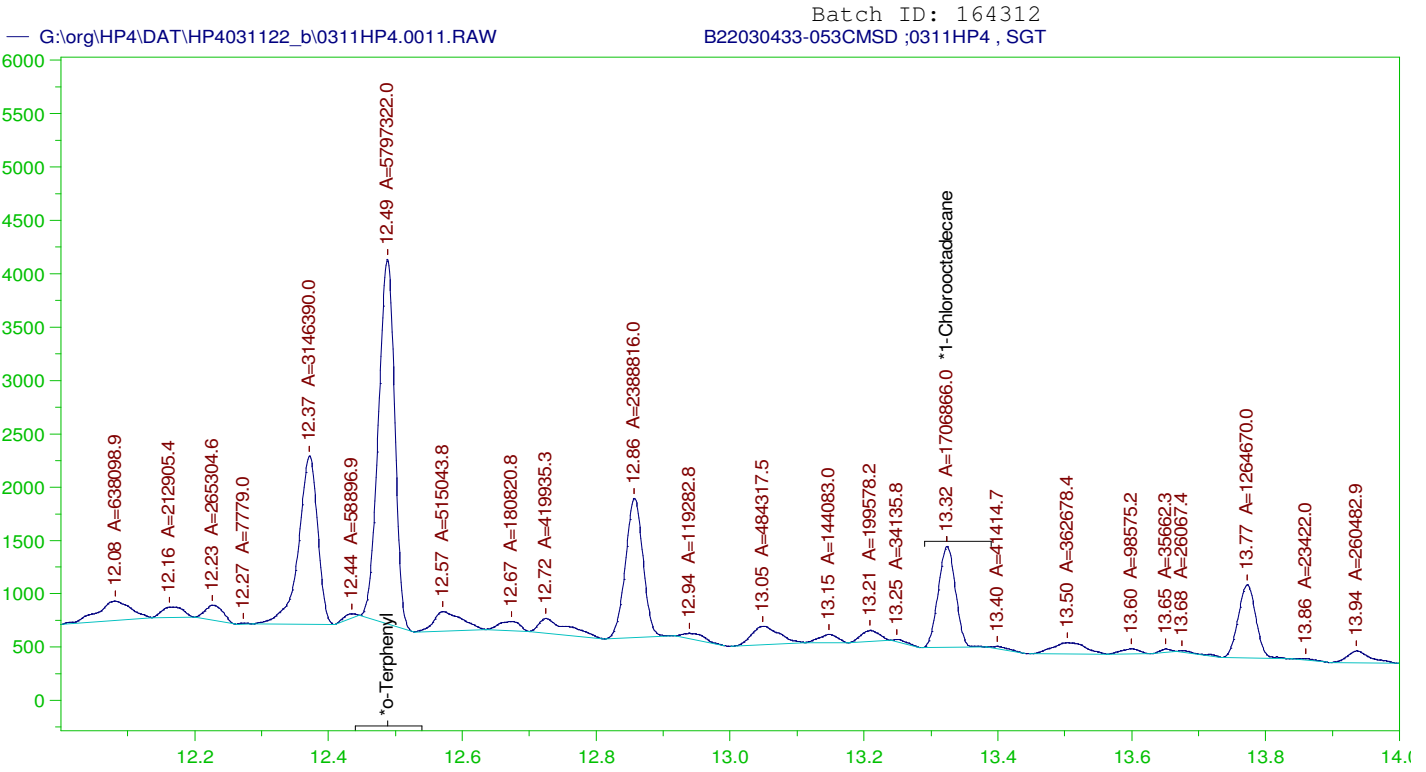
Sample Name: B22030433-053CMSD ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0011.RAW
 Date & Time Acquired: 3/11/2022 8:57:30 PM
 Method File: G:\Org\HP4\methods\D3_8015-C24-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.488	.194	.271	139.36	-
*1-Chlorooctadecane	13.324	.194	.184	94.65	-

DRO Area: 3.630485E+08 DRO Amount: 11.99983
 TEH Area: 3.867811E+08 TEH Amount: 12.78426



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

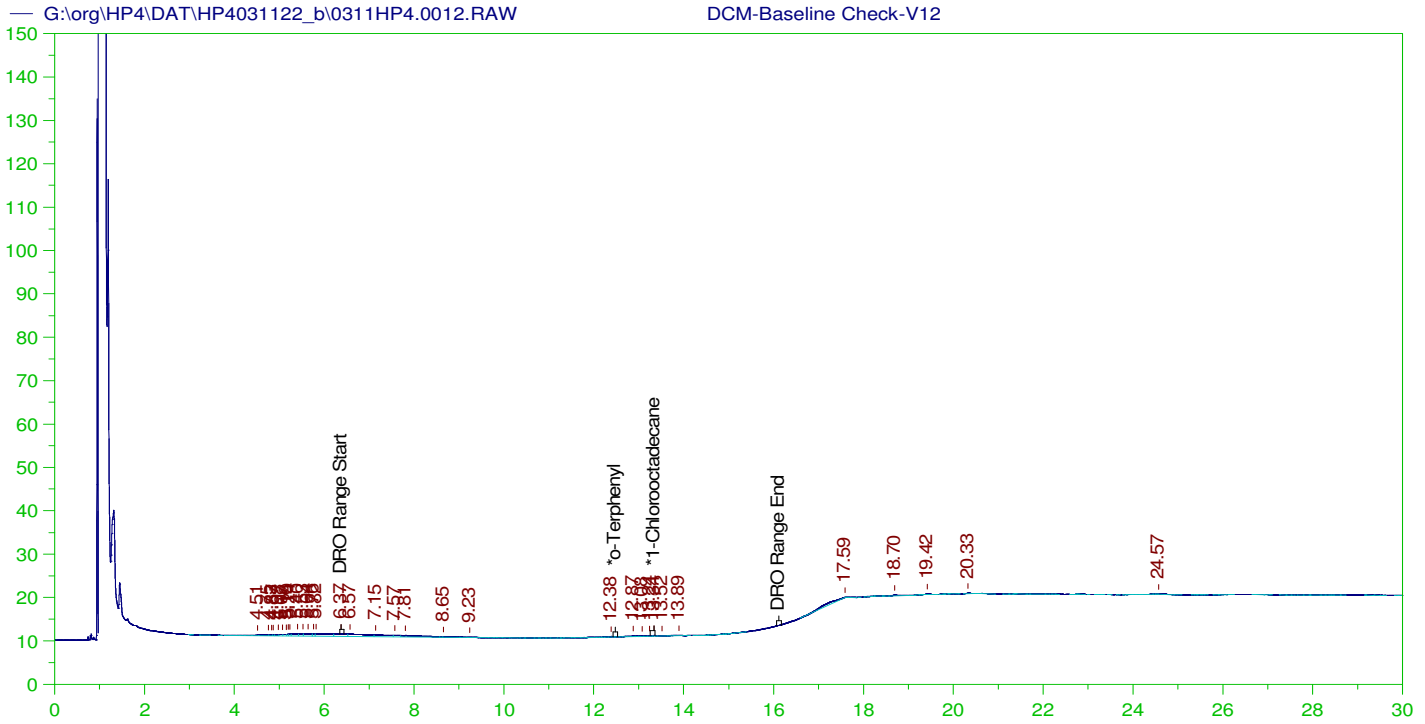
Sample Name: B22030433-053CMSD ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0011.RAW
 Date & Time Acquired: 3/11/2022 8:57:30 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.488	.194	.169	87.
*1-Chlorooctadecane	13.324	.194	.05	25.61

DRO Area: 1.577213E+08 DRO Amount: 5.213157
 TEH Area: 1.691124E+08 TEH Amount: 5.589664



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V12
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0012.RAW
 Date & Time Acquired: 3/11/2022 9:42:38 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.943	200.	.	-
*1-Chlorooctadecane	13.343	200.	.026	.01

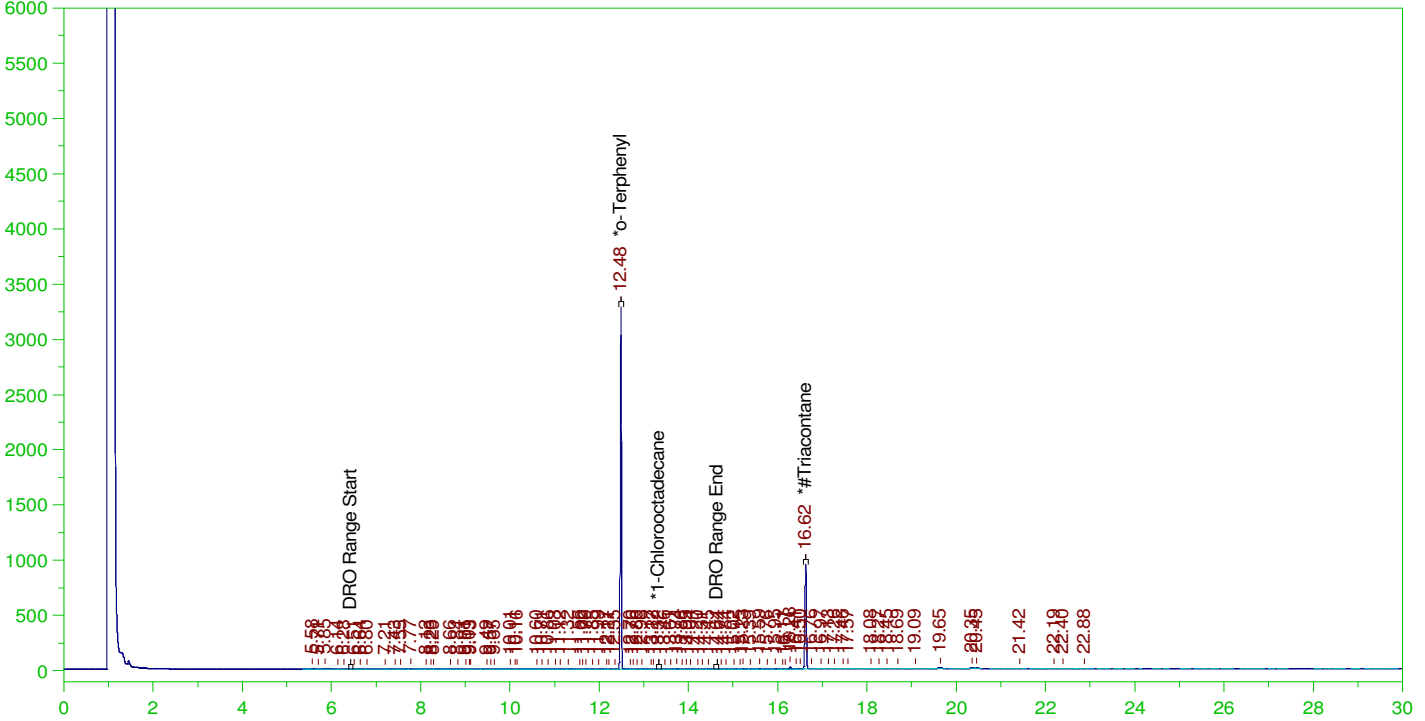
DRO Area:62304.59 DRO Amount: 2.121132
 TEH Area:130719.7 TEH Amount: 4.450292

ERH2620 (OWDFMW04A)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0013.RAW

B22030433-058C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-058C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0013.RAW
 Date & Time Acquired: 3/11/2022 10:27:49 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.482	.19	.16	84.2	-
*1-Chlorooctadecane	13.324	.19	.	.04	-
*#Triacontane	16.622	.19	.075	39.51	-

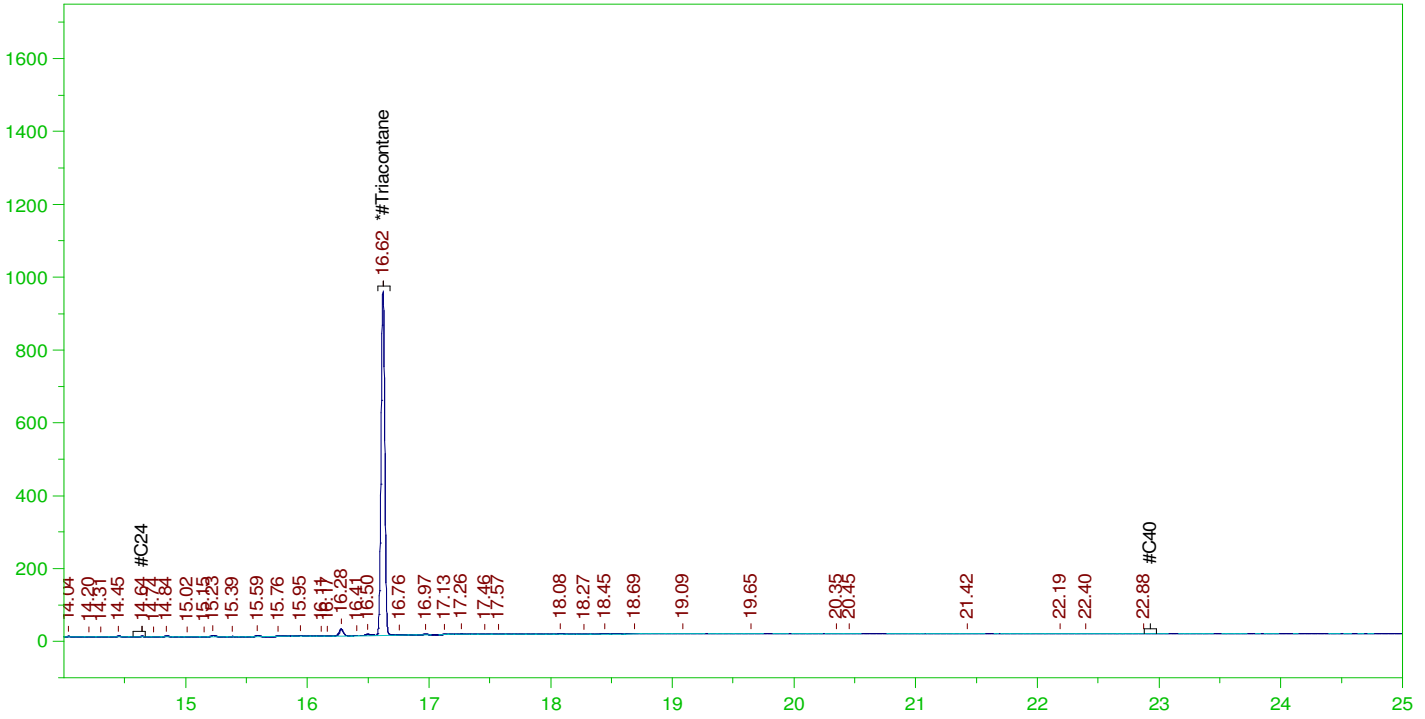
DRO Area:173405.4 DRO Amount: 5.622388E-03
 TEH Area:452699.6 TEH Amount: 1.467805E-02

ERH2620 (OWDFMW04A)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0013.RAW

B22030433-058C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-058C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0013.RAW
 Date & Time Acquired: 3/11/2022 10:27:49 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.622	.476	.075	15.8

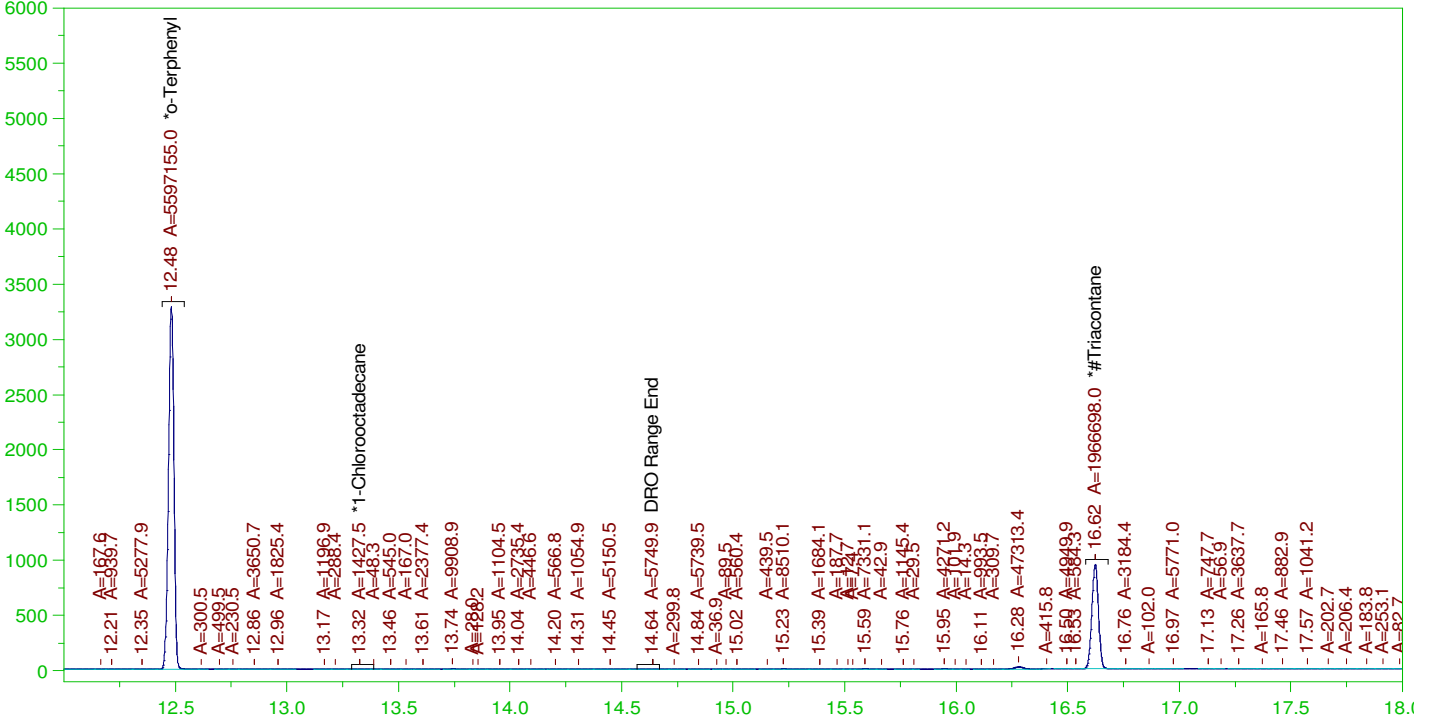
RRO Area:137829.7 RRO AMOUNT: 5.351355E-03

ERH2620 (OWDFMW04A)

Batch ID: 164312

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B22030433-058C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-058C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0013.RAW
 Date & Time Acquired: 3/11/2022 10:27:49 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.482	.19	.16	83.99
*1-Chlorooctadecane	13.324	.19	.	.02
*#Triacontane	16.622	.19	.075	39.38

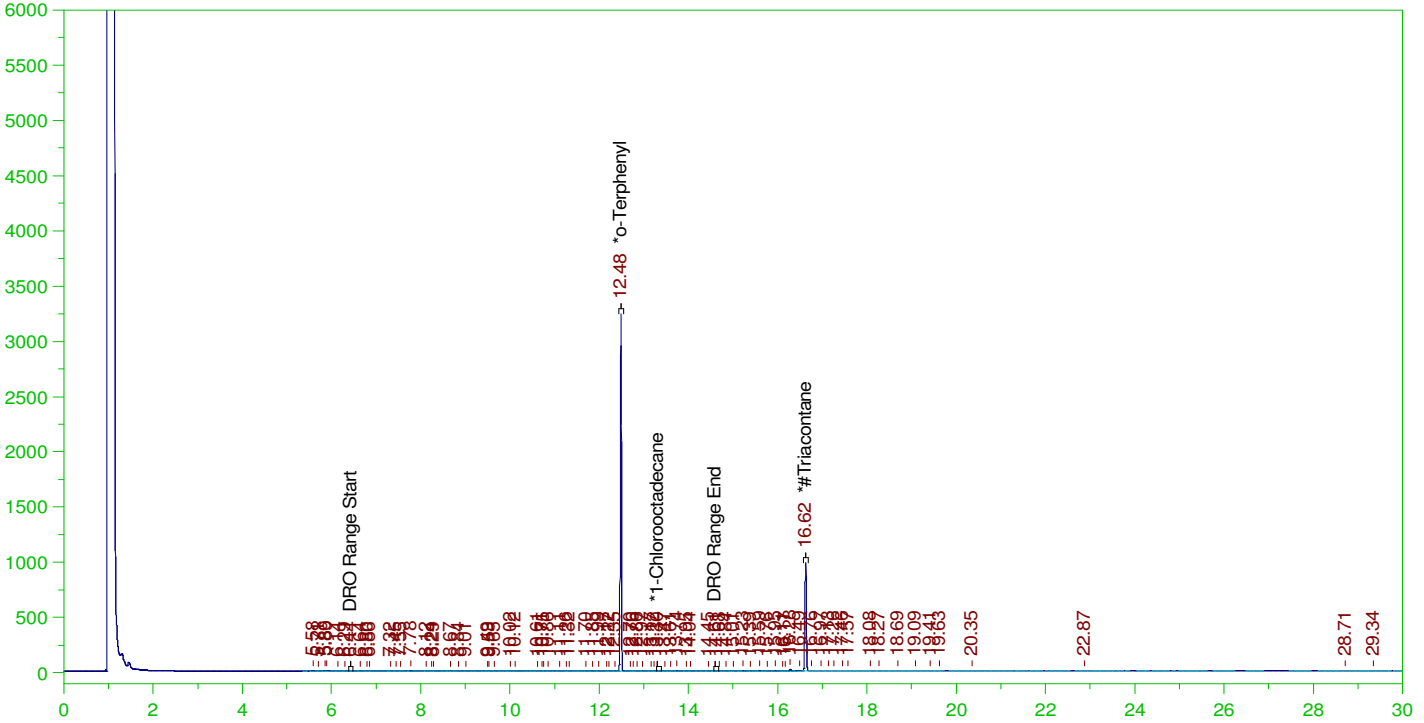
DRO Area:160381.8 DRO Amount: 5.20012E-03
 TEH Area:482450 TEH Amount: 1.564266E-02

ERH2676 (OWDFMW04A) FD

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0014.RAW

B22030433-059A ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-059A ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0014.RAW
 Date & Time Acquired: 3/11/2022 11:12:49 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.483	.19	.158	82.92	-
*1-Chlorooctadecane	13.297	.19	.	.05	-
*#Triacontane	16.621	.19	.078	41.19	-

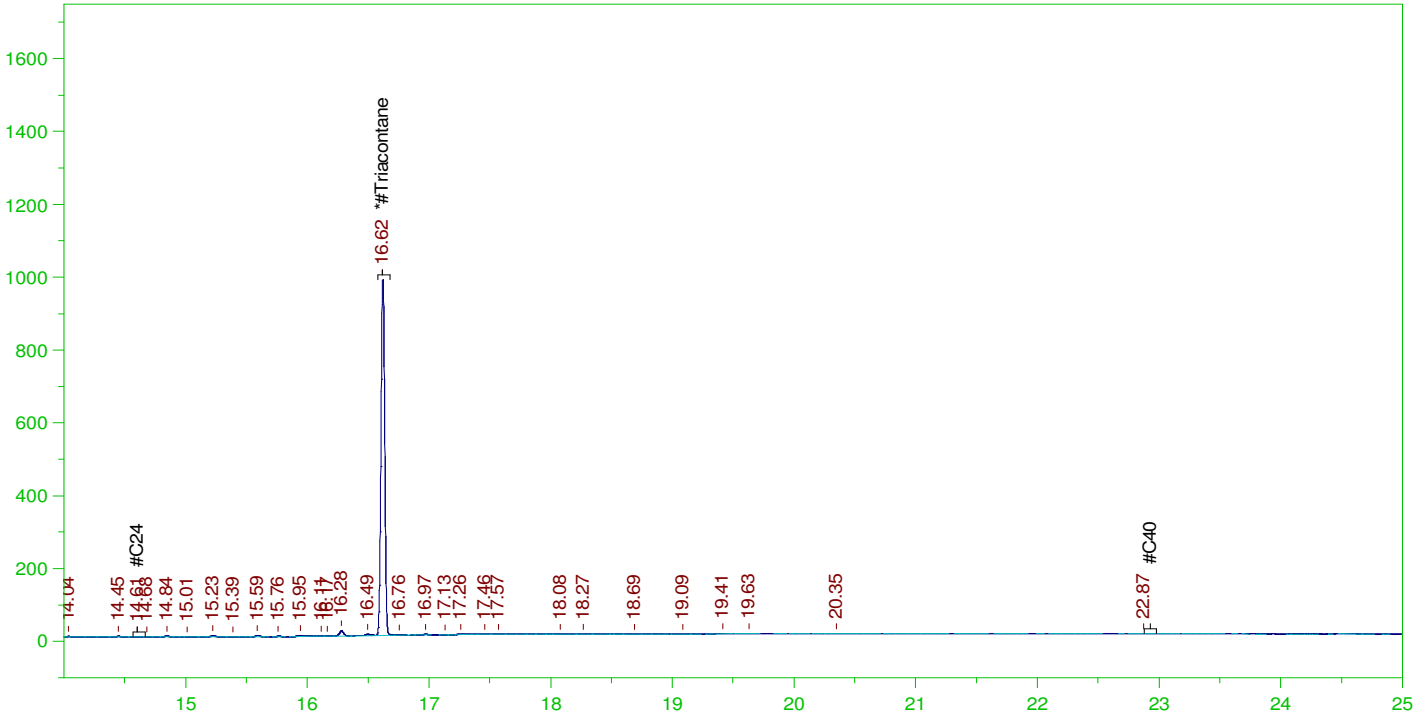
DRO Area:152719 DRO Amount: 4.951665E-03
 TEH Area:397547.1 TEH Amount: 1.288982E-02

ERH2676 (OWDFMW04A) FD

Batch ID: 164312

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B22030433-059A ;0311HP4, \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-059A ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0014.RAW
 Date & Time Acquired: 3/11/2022 11:12:49 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.621	.476	.078	16.48

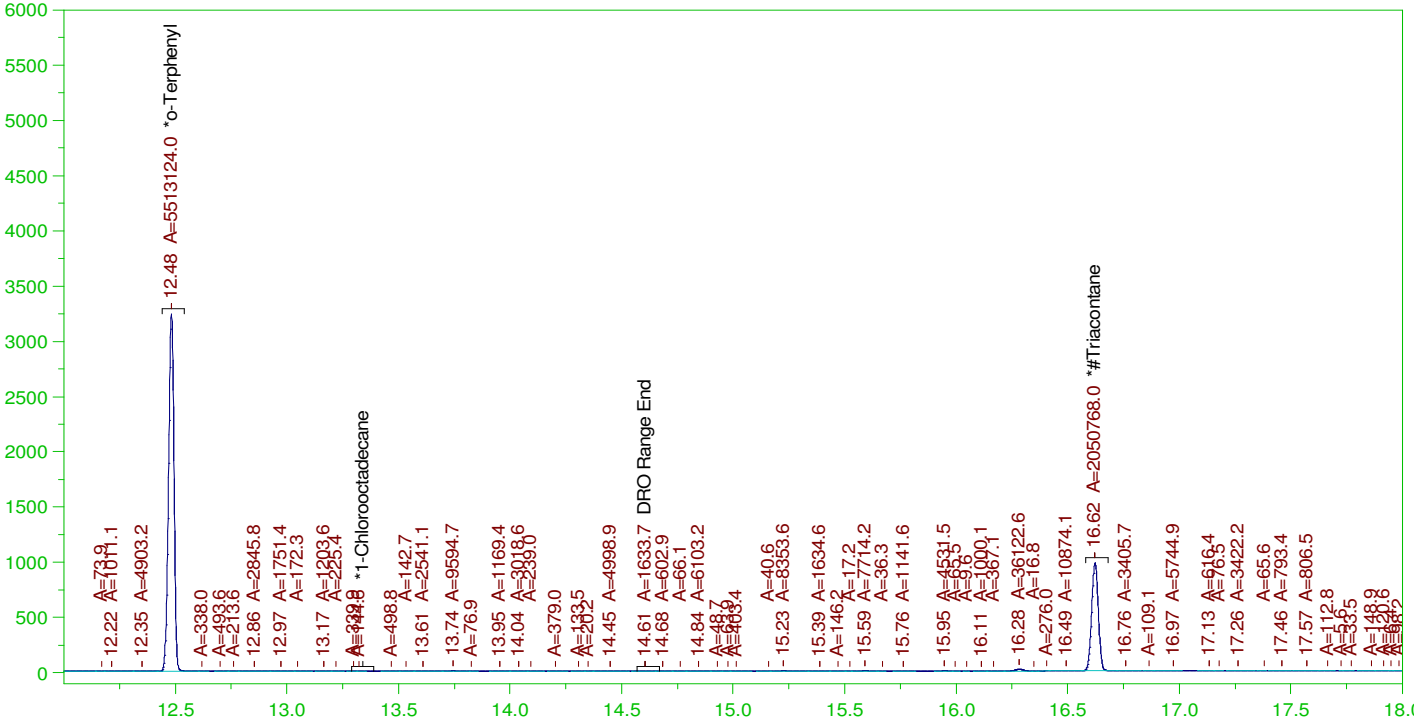
RRO Area:118045.5 RRO AMOUNT: 4.583218E-03

ERH2676 (OWDFMW04A) FD

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0014.RAW

B22030433-059A ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-059A ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0014.RAW
 Date & Time Acquired: 3/11/2022 11:12:49 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.483	.19	.158	82.73
*1-Chlorooctadecane	29.966	.19	.	-
*#Triacontane	16.621	.19	.078	41.06

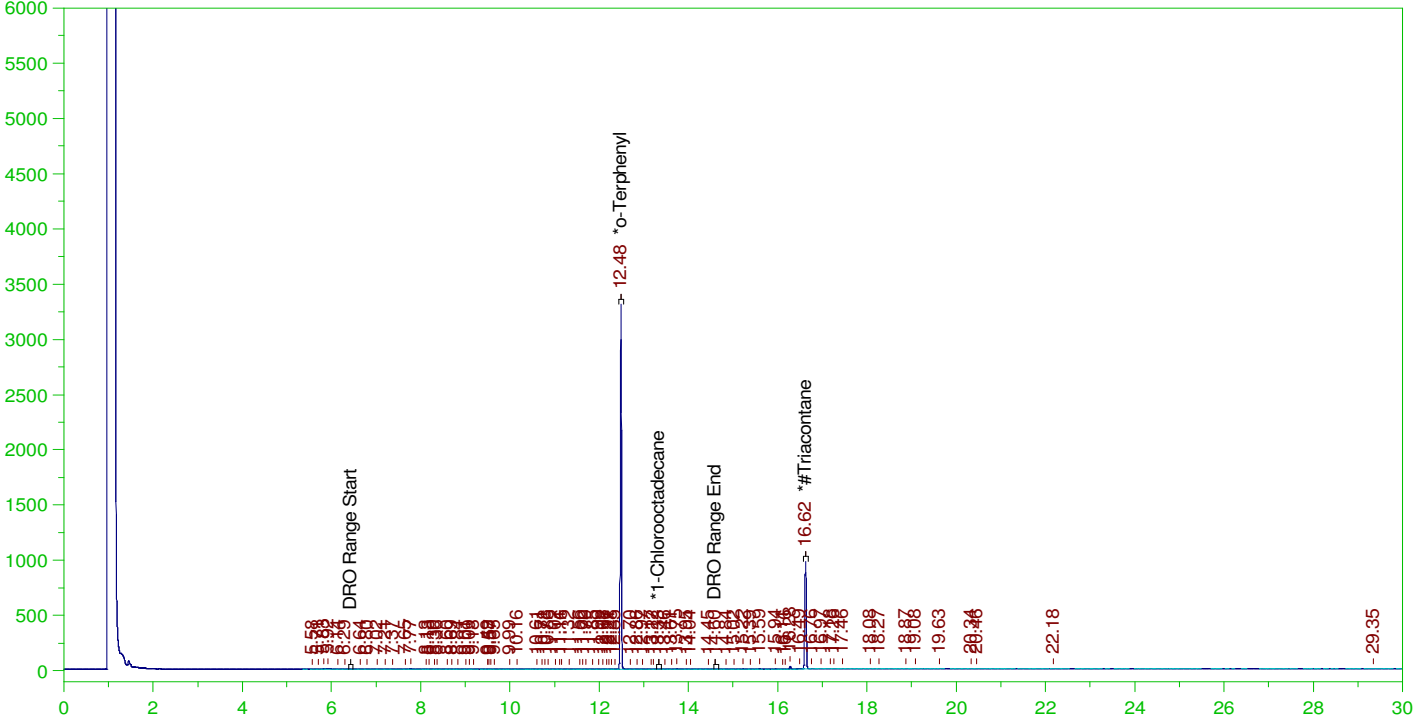
DRO Area:130693.3 DRO Amount: 4.237518E-03
 TEH Area:390613.8 TEH Amount: 1.266502E-02

ERH2616 (OWDFMW01)

Batch ID: 164312

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B22030502-001C ;0311HP4 , \$HC-8015-DRO-W, SGT

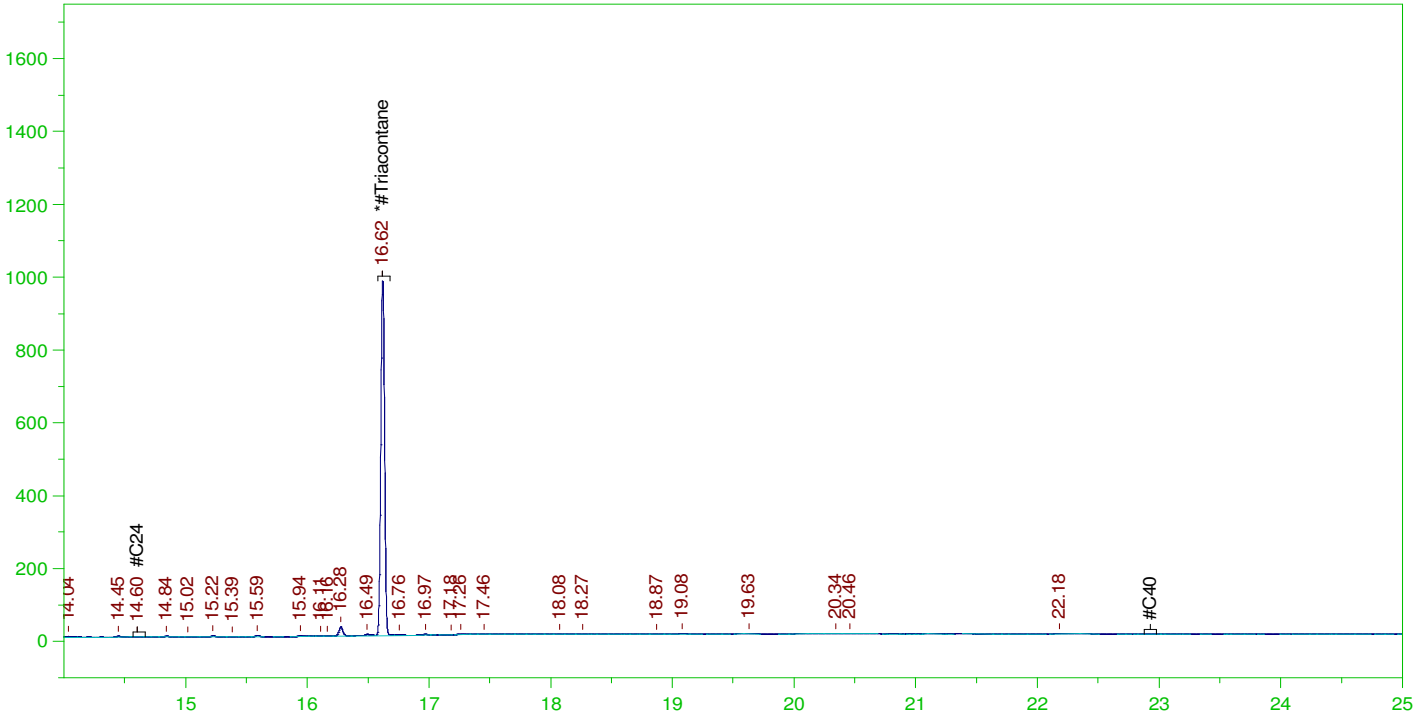


ERH2616 (OWDFMW01)

Batch ID: 164312

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B22030502-001C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-001C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0015.RAW
 Date & Time Acquired: 3/11/2022 11:57:46 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.62	.476	.079	16.59

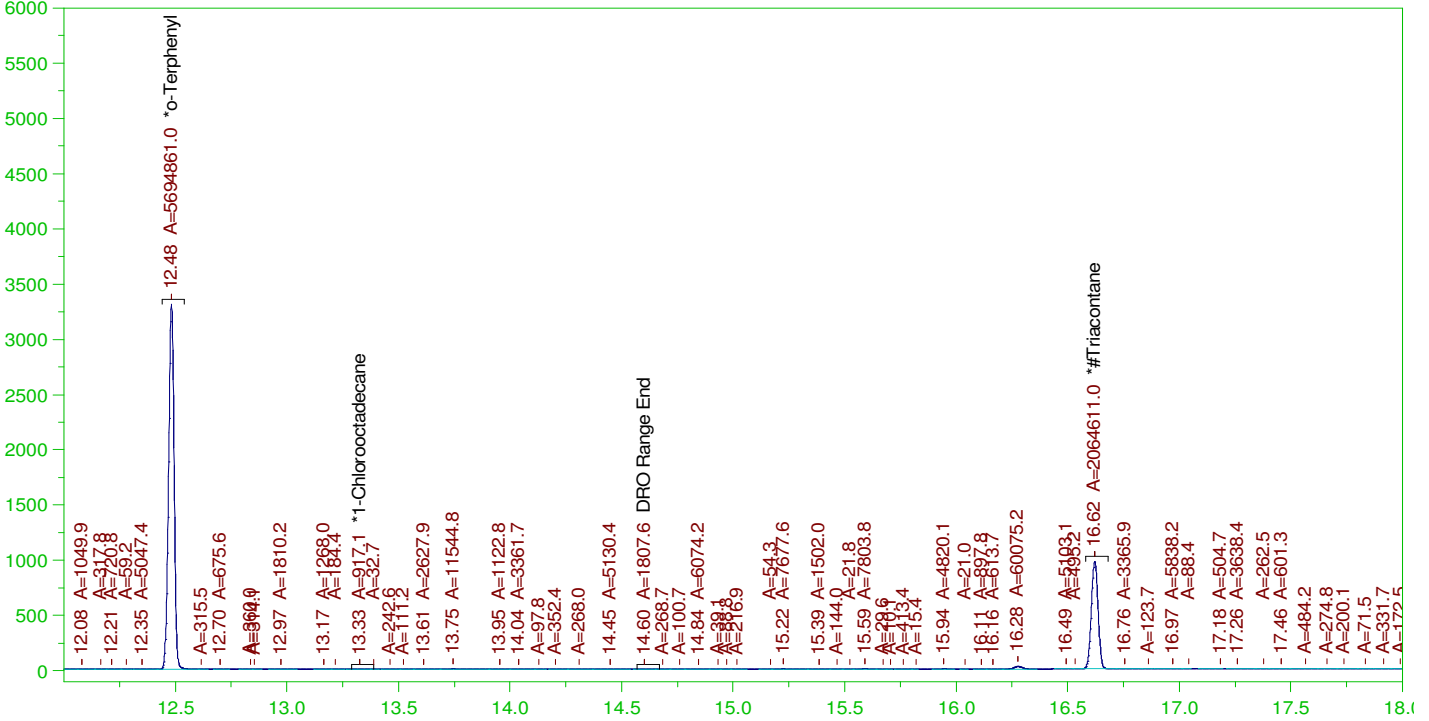
RRO Area:135465.4 RRO AMOUNT: 5.259558E-03

ERH2616 (OWDFMW01)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0015.RAW

B22030502-001C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-001C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0015.RAW
 Date & Time Acquired: 3/11/2022 11:57:46 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.483	.19	.163	85.46	-
*1-Chlorooctadecane	13.326	.19	.	.01	-
*#Triacontane	16.62	.19	.079	41.34	-

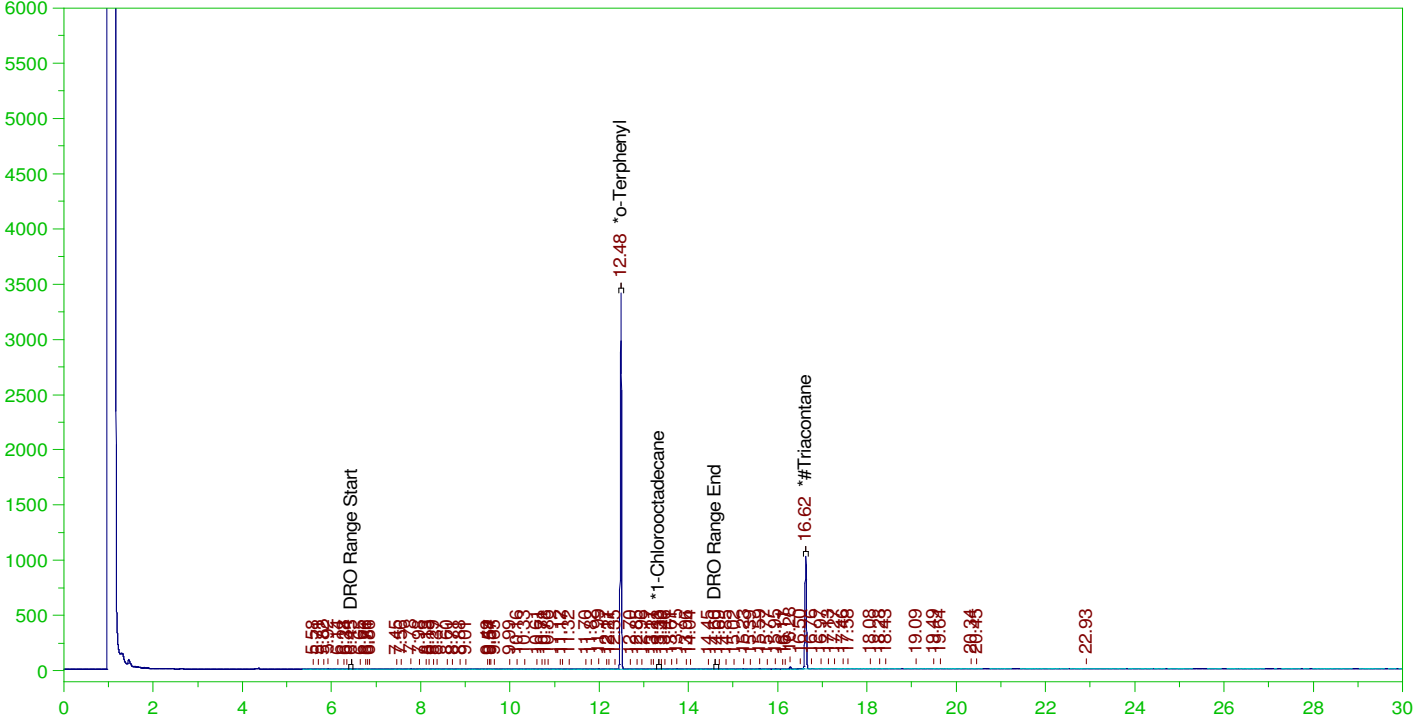
DRO Area:136707.2 DRO Amount: 4.432511E-03
 TEH Area:409831.2 TEH Amount: 1.328811E-02

ERH2630 (HDMW2253-03)

Batch ID: 164312

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B22030502-011C ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-011C ;0311HP4, \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0016.RAW
 Date & Time Acquired: 3/12/2022 12:42:50 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.484	.19	.171	89.99	-
*1-Chlorooctadecane	13.326	.19	.	.02	-
*#Triacontane	16.623	.19	.082	43.05	-

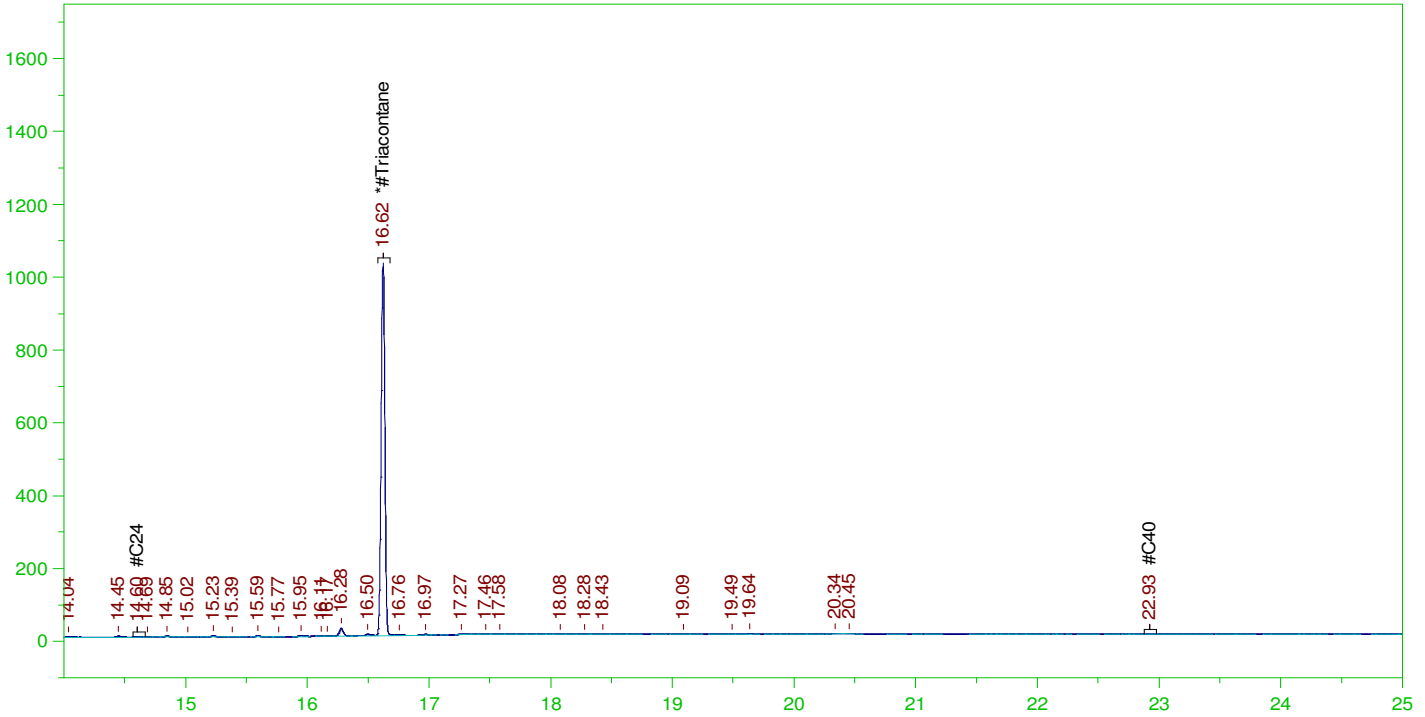
DRO Area:152508.3 DRO Amount: 4.944835E-03
 TEH Area:367373.1 TEH Amount: 1.191148E-02

ERH2630 (HDMW2253-03)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0016.RAW

B22030502-011C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-011C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0016.RAW
 Date & Time Acquired: 3/12/2022 12:42:50 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.623	.476	.082	17.22

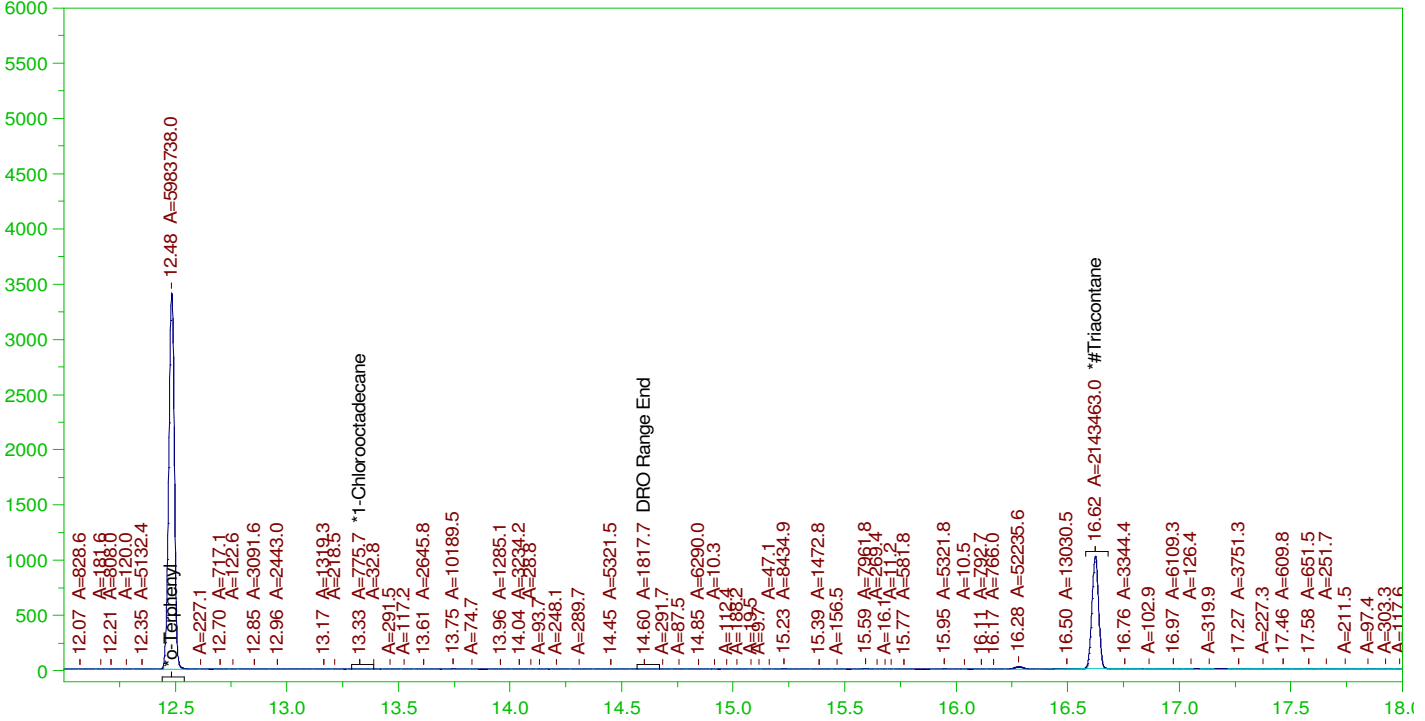
RRO Area:132814.8 RRO AMOUNT: 5.156645E-03

ERH2630 (HDMW2253-03)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0016.RAW

B22030502-011C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-011C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0016.RAW
 Date & Time Acquired: 3/12/2022 12:42:50 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.484	.19	.171	89.79	-
*1-Chlorooctadecane	13.326	.19	.	.01	-
*#Triacontane	16.623	.19	.082	42.91	-

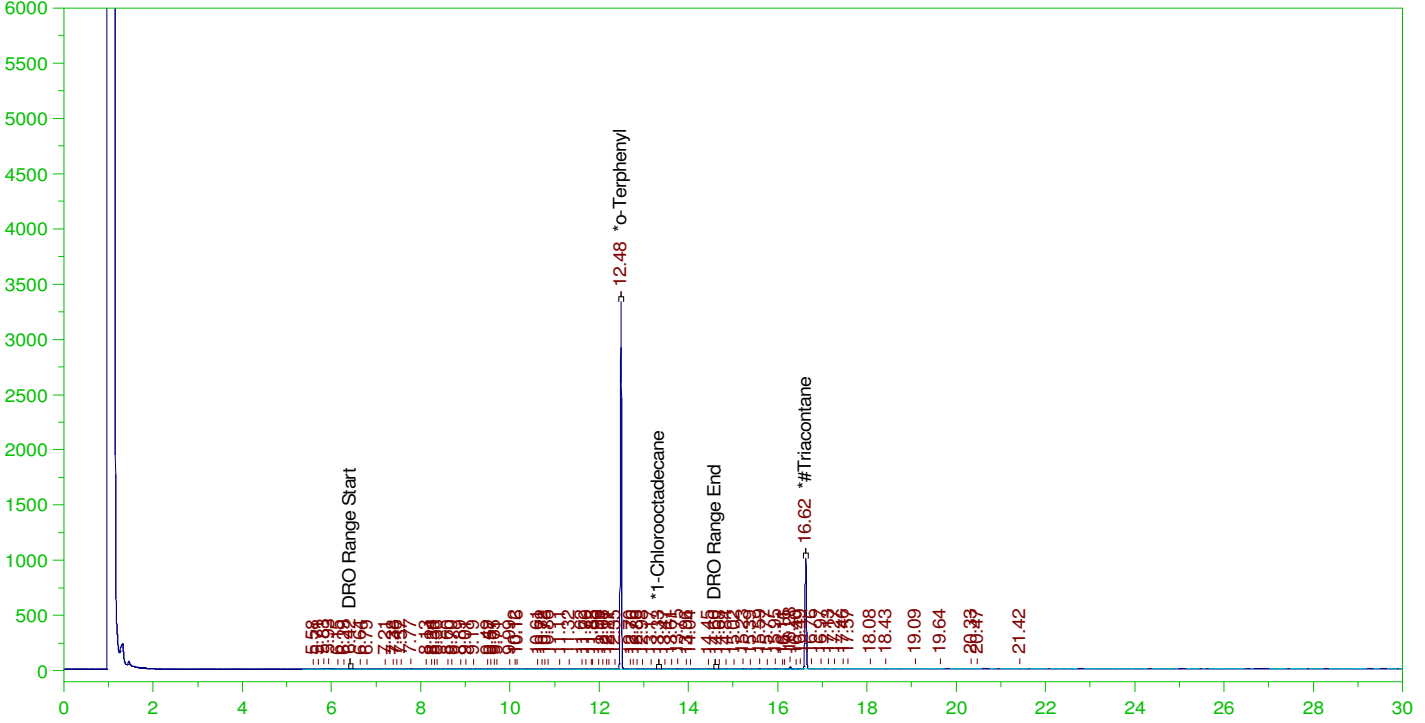
DRO Area:124706.2 DRO Amount: 4.043397E-03
 TEH Area:431655.3 TEH Amount: 1.399572E-02

ERH2594 (RHMW15-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0017.RAW

B22030502-006C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-006C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0017.RAW
 Date & Time Acquired: 3/12/2022 1:27:53 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.484	.19	.166	87.36	-
*1-Chlorooctadecane	13.328	.19	.	.03	-
*#Triacontane	16.623	.19	.081	42.43	-

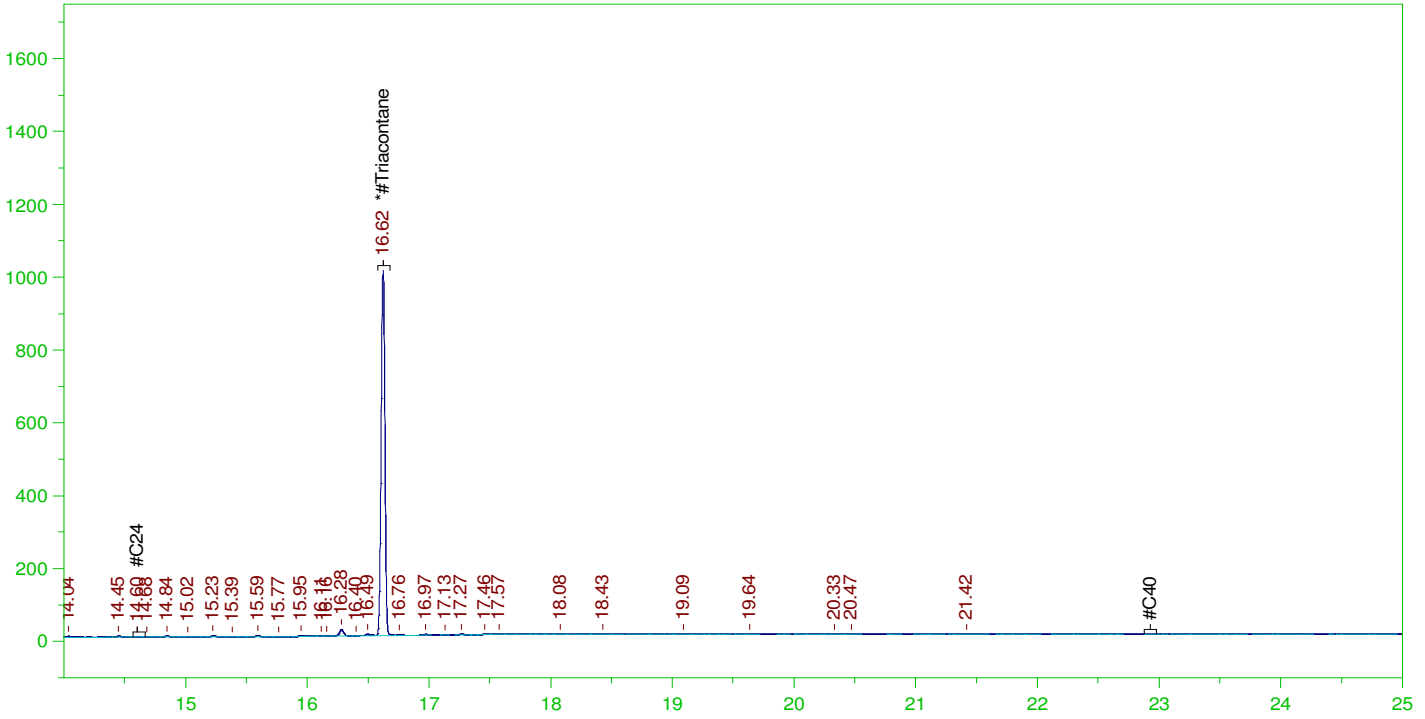
DRO Area:194152.6 DRO Amount: 6.295084E-03
 TEH Area:443049.4 TEH Amount: 1.436516E-02

ERH2594 (RHMW15-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0017.RAW

B22030502-006C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-006C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0017.RAW
 Date & Time Acquired: 3/12/2022 1:27:53 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.623	.476	.081	16.97

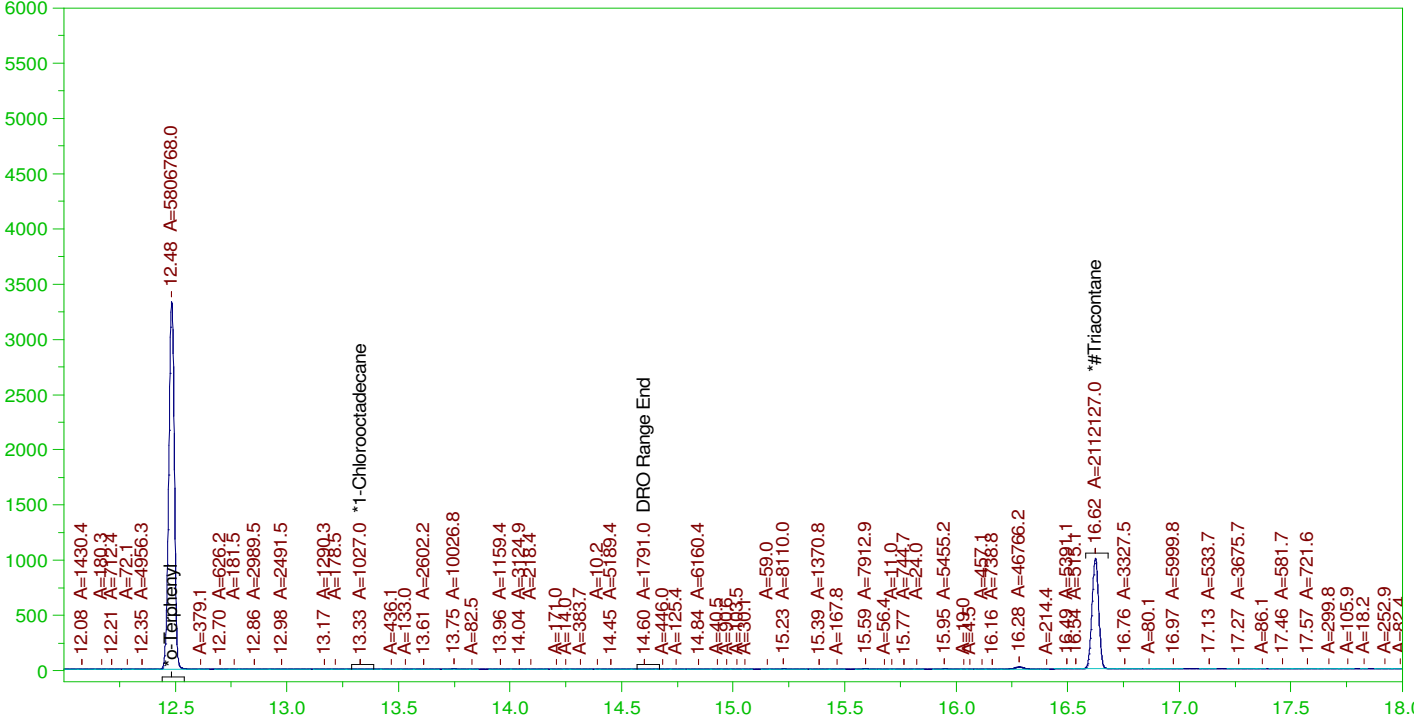
RRO Area:129408 RRO AMOUNT: 5.024374E-03

ERH2594 (RHMW15-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0017.RAW

B22030502-006C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

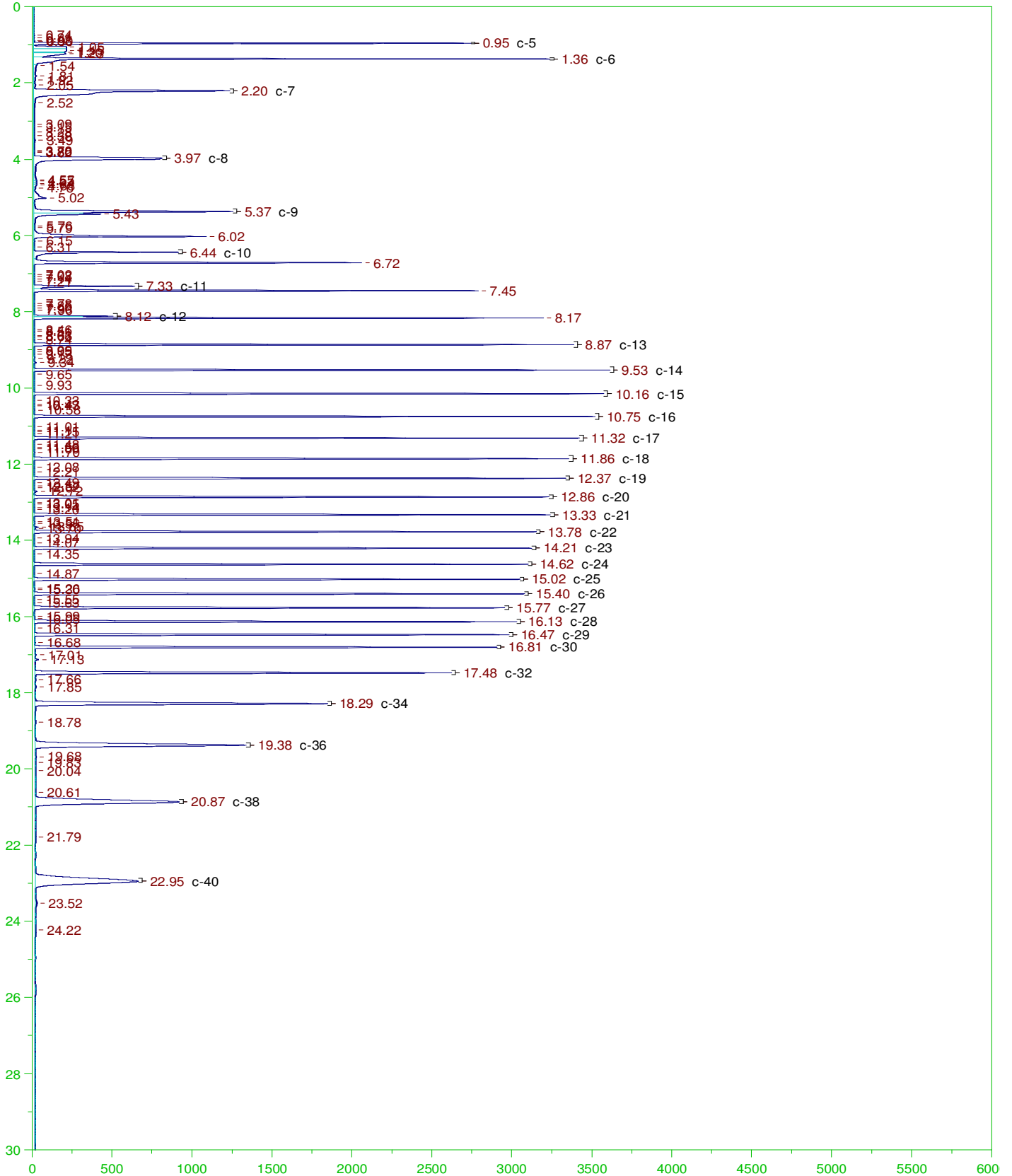
Sample Name: B22030502-006C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0017.RAW
 Date & Time Acquired: 3/12/2022 1:27:53 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

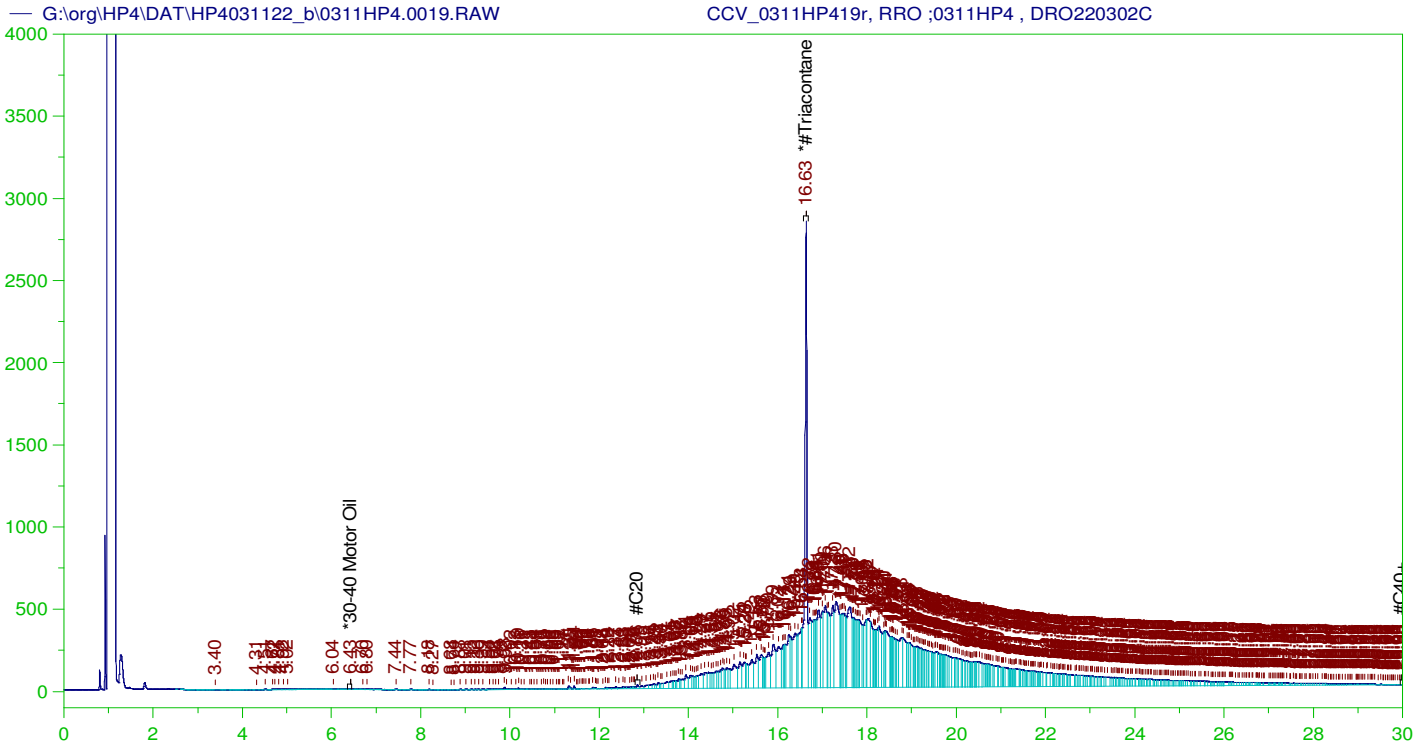
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.484	.19	.166	87.14	-
*1-Chlorooctadecane	13.328	.19	.	.02	-
*#Triacontane	16.623	.19	.081	42.29	-

DRO Area:194456.1 DRO Amount: 6.304923E-03
 TEH Area:470624 TEH Amount: 1.525922E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP419r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0019.RAW
 Date & Time Acquired: 3/12/2022 2:58:22 AM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.632	500.	333.792	66.76	-

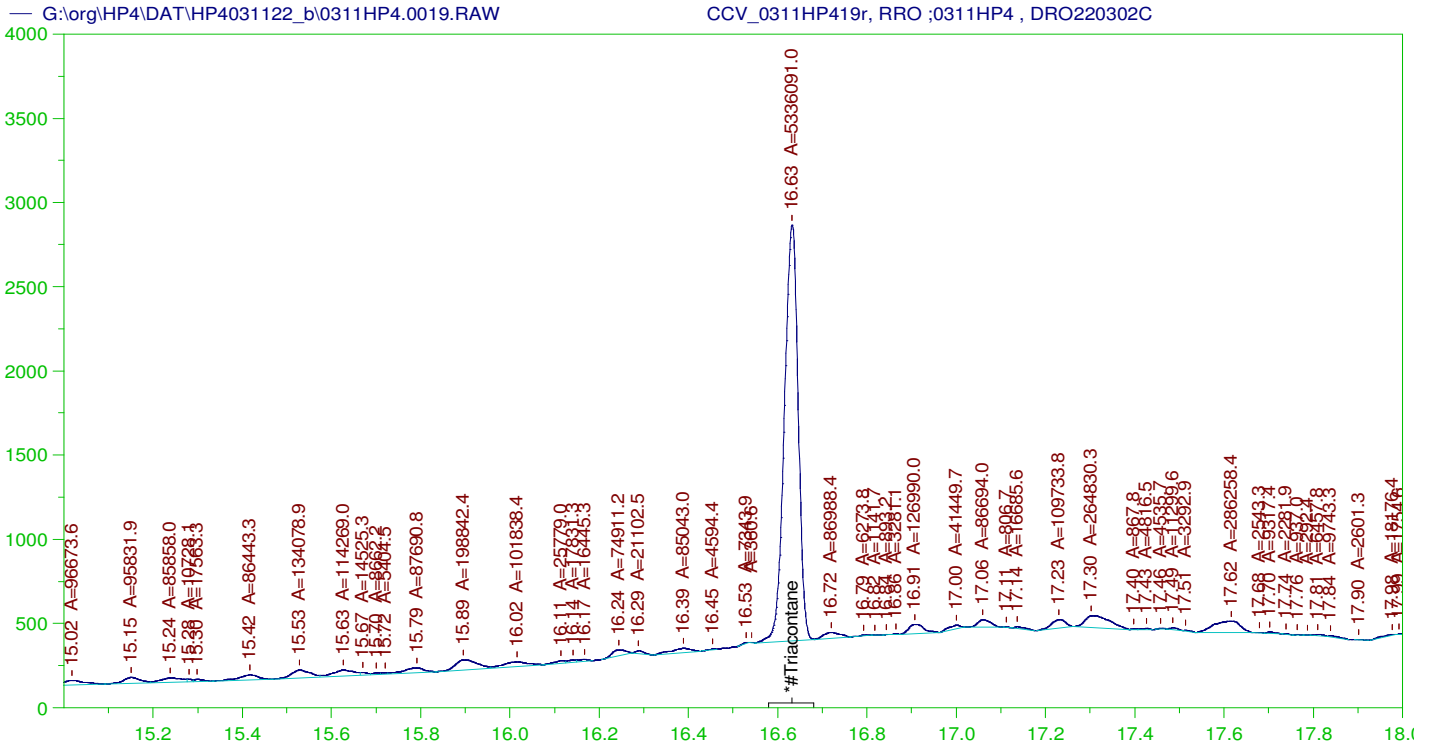
~~RRO~~ TEH(Oil Range) Area:1.245694E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5078.335

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.052	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.632	200.	333.792	166.9	75-125

JLB 03/14/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP419r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0019.RAW
 Date & Time Acquired: 3/12/2022 2:58:22 AM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.81 to 30.05

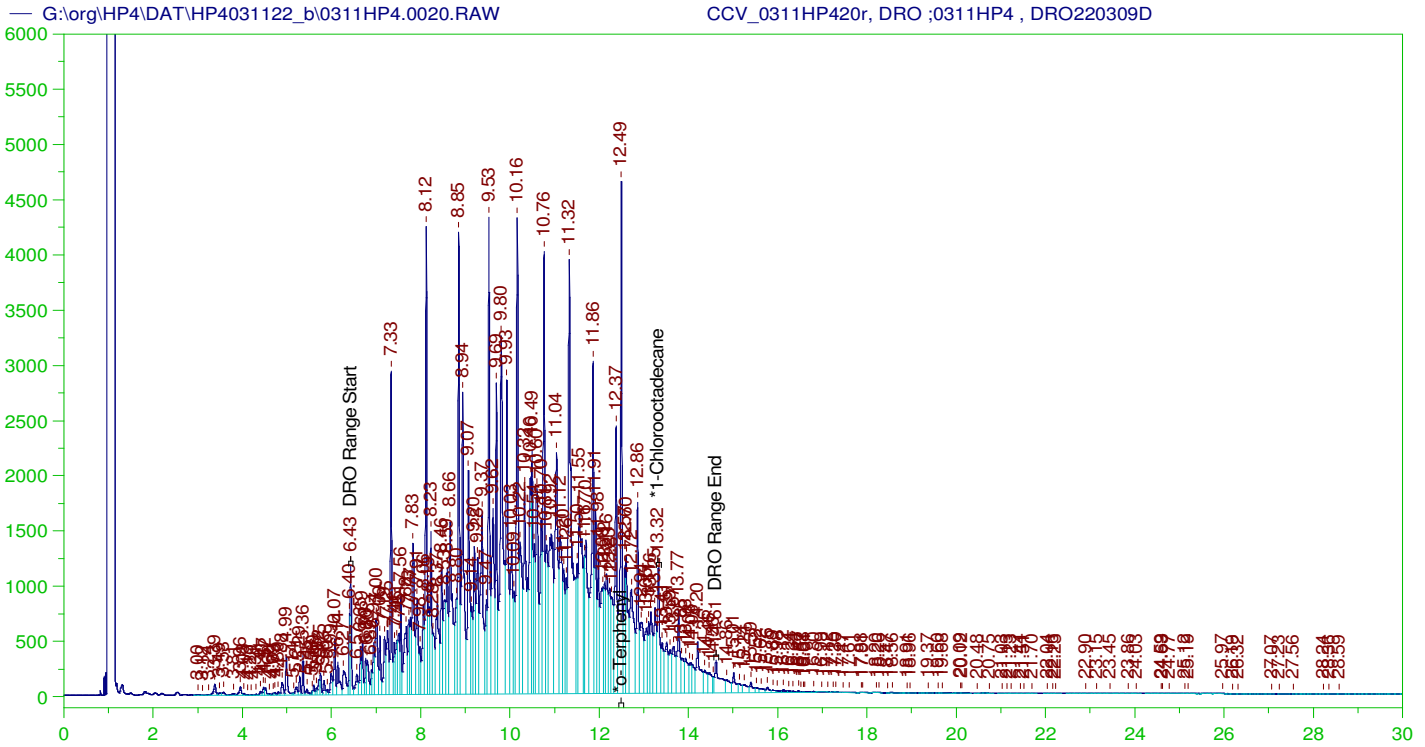
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.632	500.	213.667	42.73

RRO Area:3747262 RRO AMOUNT: 152.7652

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.052	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.632	200.	213.667	106.83	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0311HP420r, DRO ;0311HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0020.RAW
 Date & Time Acquired: 3/12/2022 3:43:41 AM
 Method File: G:\Org\HP4\methods\DC_8015-C24-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.492	200.	365.88	182.94
*1-Chlorooctadecane	13.324	200.	108.983	54.49

DRO Area: 4.329524E+08 DRO Amount: 14739.67
 TEH Area: 4.479349E+08 TEH Amount: 15249.74

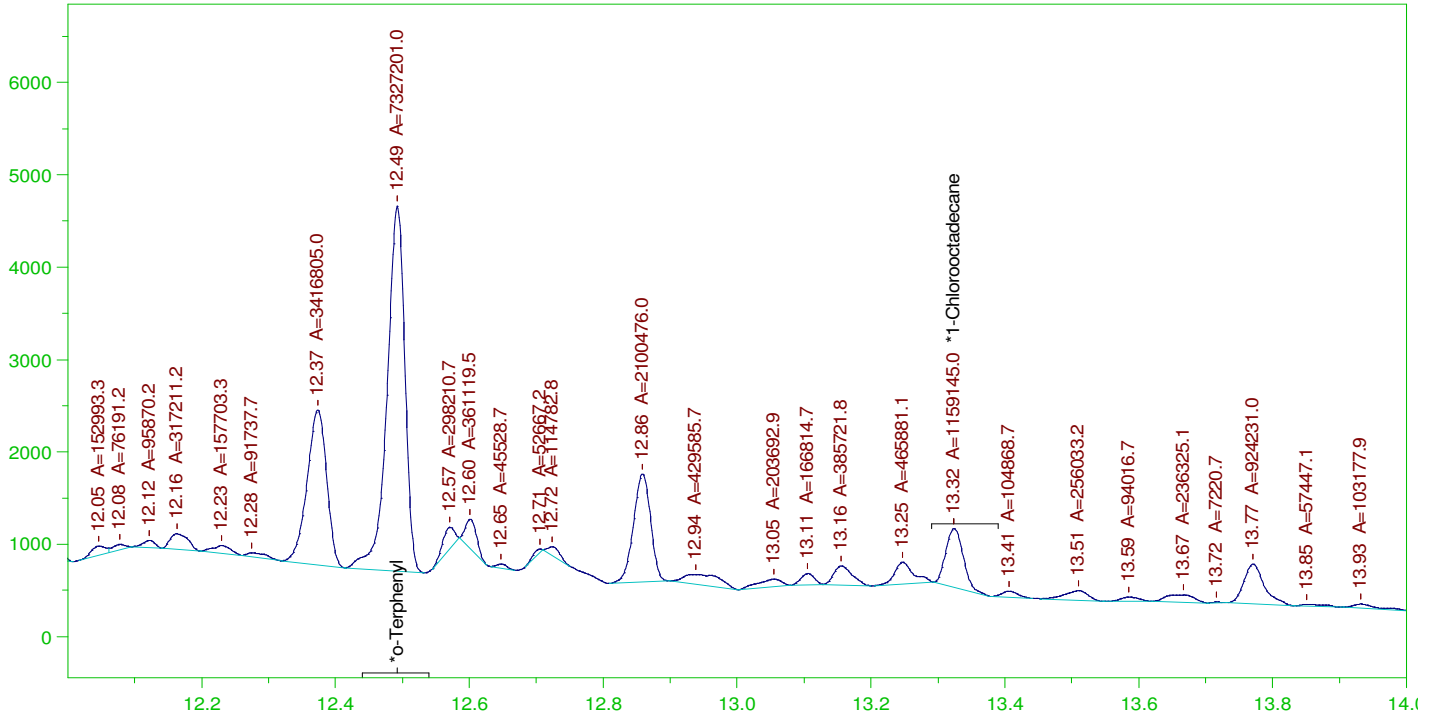
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15249.74	101.66	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.492	200.	365.88	182.94	85-115
*1-Chlorooctadecane	13.324	200.	108.983	54.49	85-115

G:\org\HP4\DAT\HP4031122_b\0311HP4.0020.RAW

CCV_0311HP420r, DRO ;0311HP4 , DRO220309D



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0311HP420r, DRO ;0311HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0020.RAW
 Date & Time Acquired: 3/12/2022 3:43:41 AM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

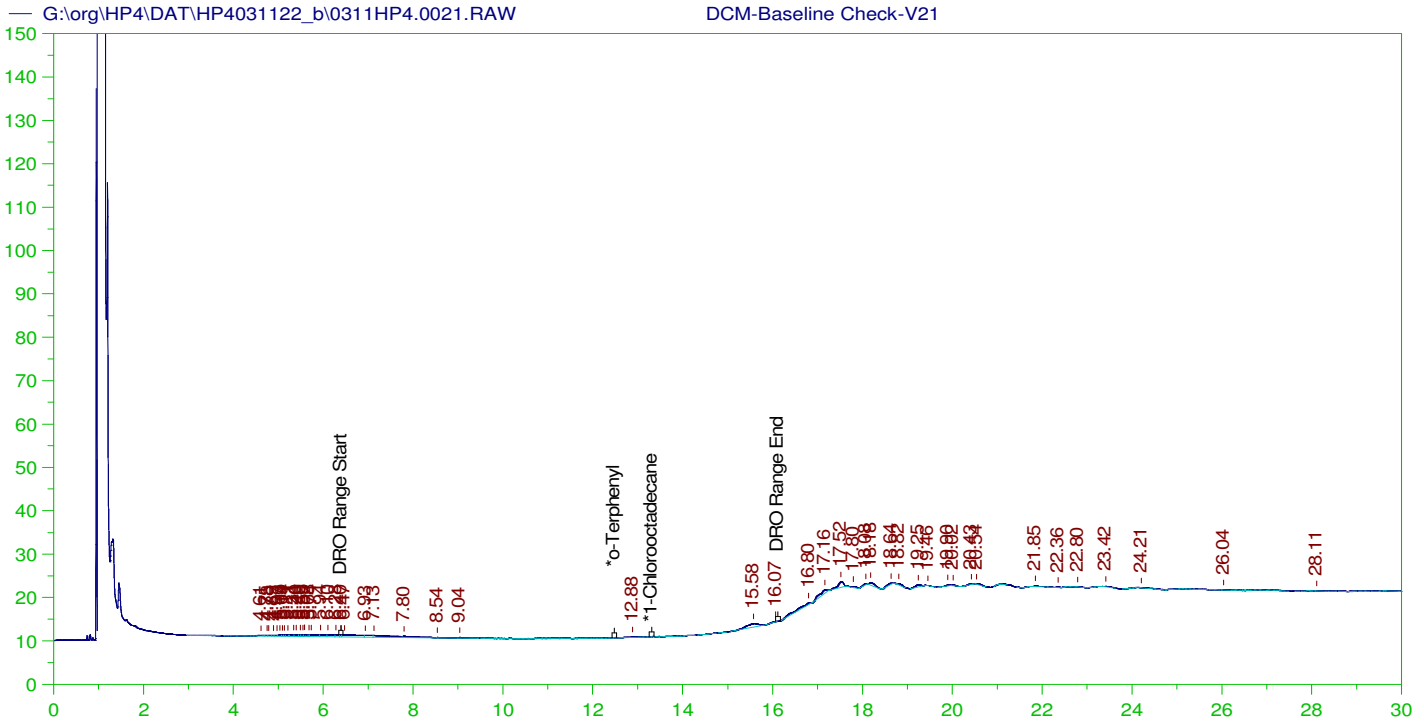
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.492	200.	219.906	109.95
*1-Chlorooctadecane	13.324	200.	34.789	17.39

DRO Area: 2.115417E+08 DRO Amount: 7201.841
 TEH Area: 2.214511E+08 TEH Amount: 7539.204

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7539.2	50.26	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.492	200.	219.906	109.95	85-115
*1-Chlorooctadecane	13.324	200.	34.789	17.39	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V21
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0021.RAW
 Date & Time Acquired: 3/12/2022 4:28:50 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.34 to 16.17

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

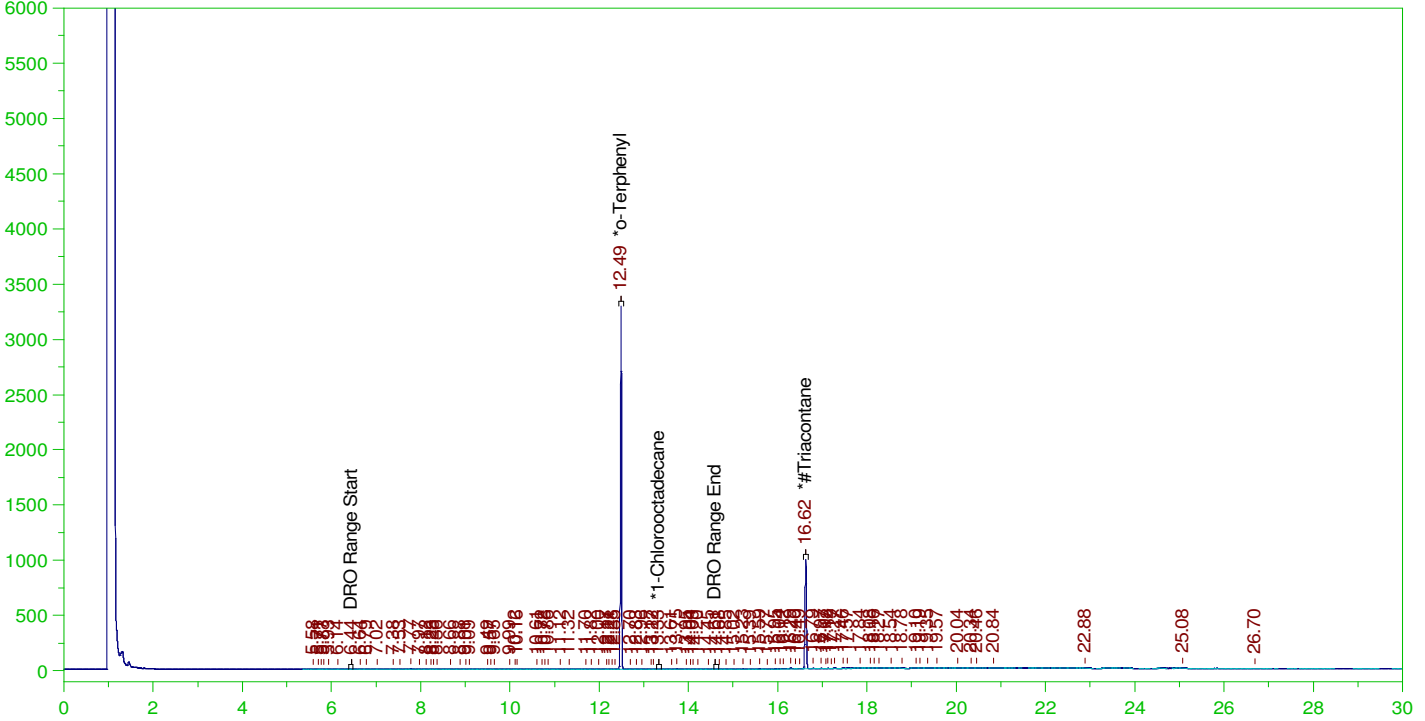
DRO Area:66094.41 DRO Amount: 2.250154
 TEH Area:192291.6 TEH Amount: 6.546482

ERH2586 (RHMW-09)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0022.RAW

B22030502-016C ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-016C ;0311HP4, \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0022.RAW
 Date & Time Acquired: 3/12/2022 5:14:08 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.19	.165	86.7	-
*1-Chlorooctadecane	13.327	.19	.	.02	-
*#Triacontane	16.623	.19	.08	41.93	-

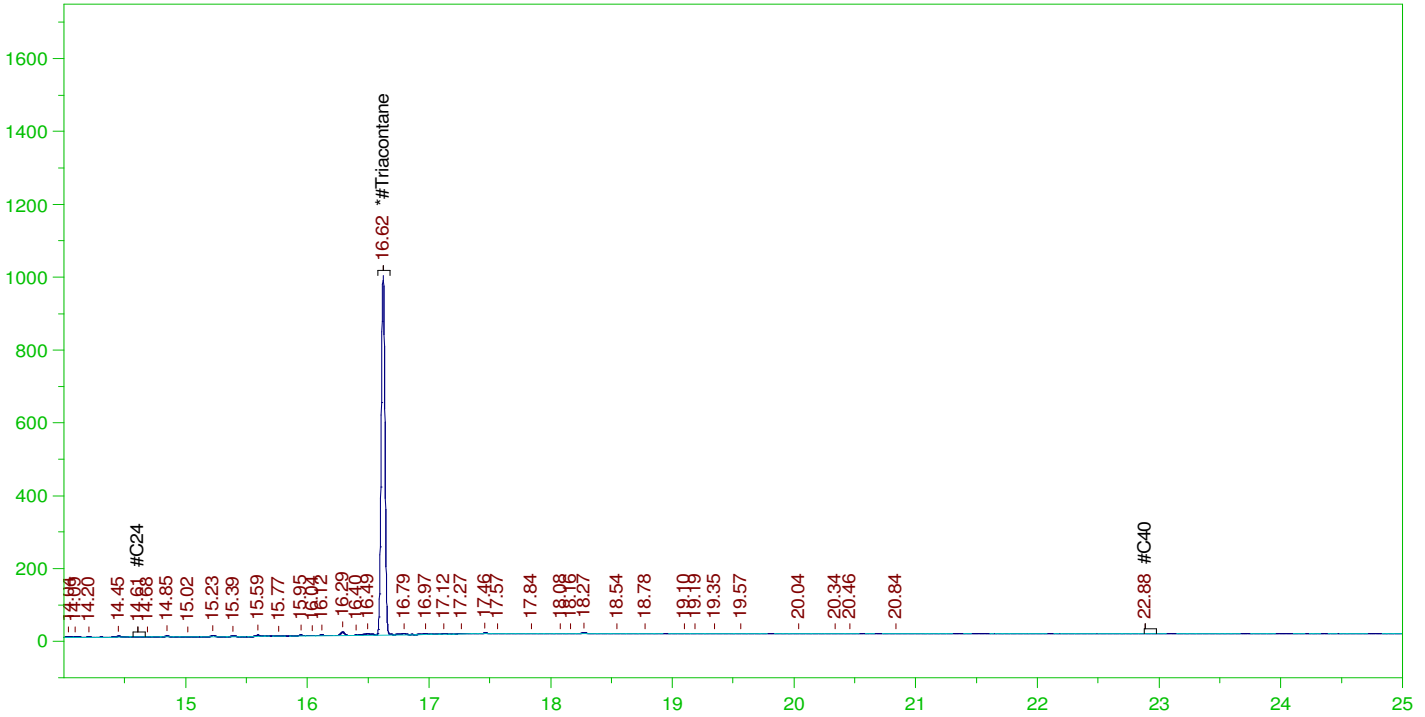
DRO Area:159649.8 DRO Amount: 5.176388E-03
 TEH Area:370244.4 TEH Amount: 1.200458E-02

ERH2586 (RHMW-09)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0022.RAW

B22030502-016C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-016C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0022.RAW
 Date & Time Acquired: 3/12/2022 5:14:08 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.623	.476	.08	16.77	-

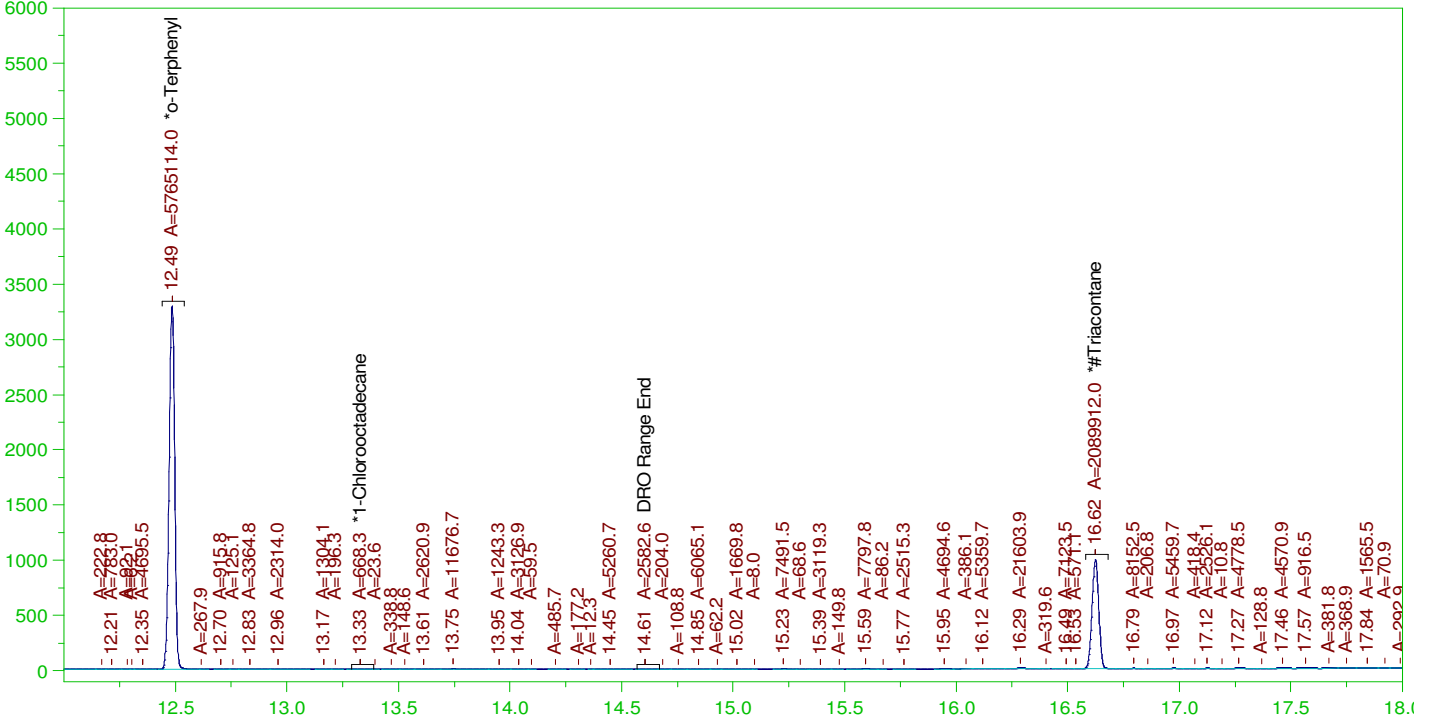
RRO Area:142662.3 RRO AMOUNT: 5.538986E-03

ERH2586 (RHMW-09)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0022.RAW

B22030502-016C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-016C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0022.RAW
 Date & Time Acquired: 3/12/2022 5:14:08 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.19	.165	86.51	-
*1-Chlorooctadecane	13.327	.19	.	.01	-
*#Triacontane	16.623	.19	.08	41.84	-

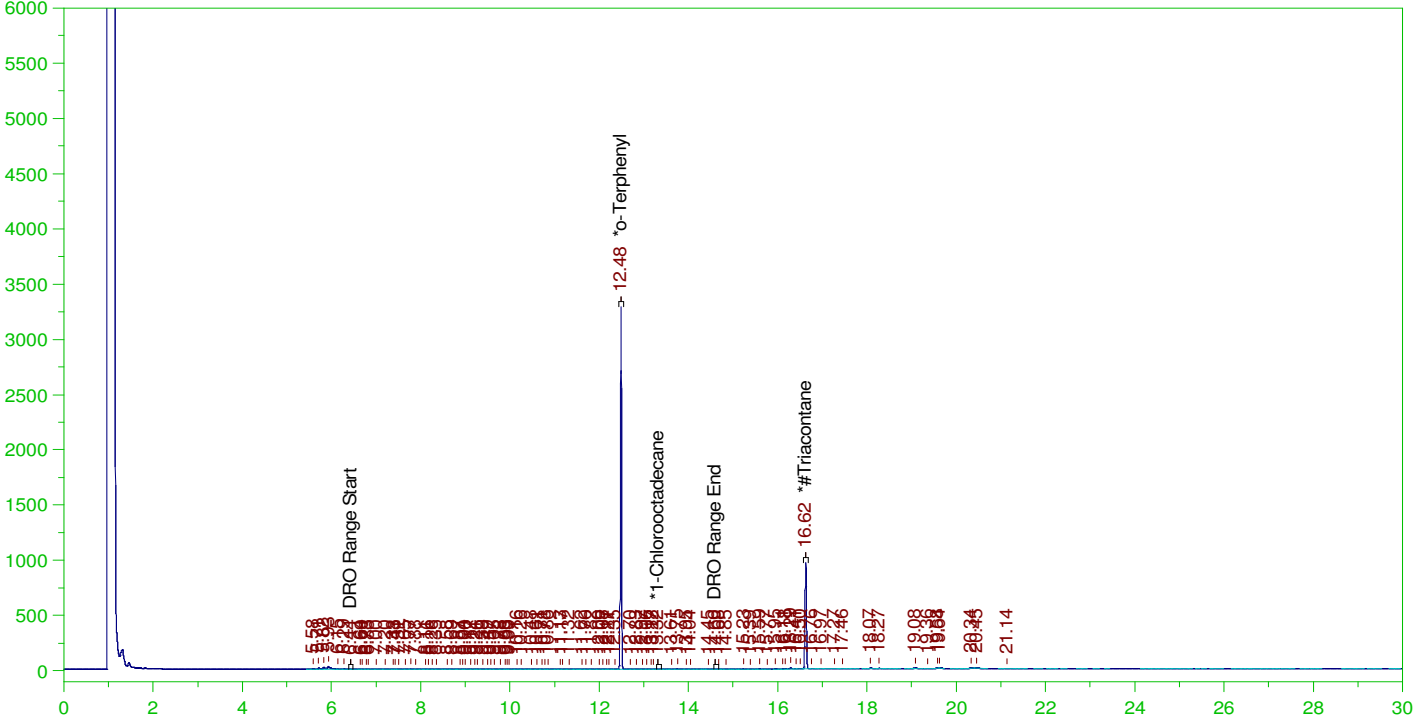
DRO Area:131312.1 DRO Amount: 4.257581E-03
 TEH Area:336036.7 TEH Amount: 1.089544E-02

ERH2610 (RHMW2254-01 Bailer)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0023.RAW

B22030433-043C ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-043C ;0311HP4, \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0023.RAW
 Date & Time Acquired: 3/12/2022 5:59:15 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.192	.163	84.86	-
*1-Chlorooctadecane	13.322	.192	.	.03	-
*#Triacontane	16.624	.192	.078	40.64	-

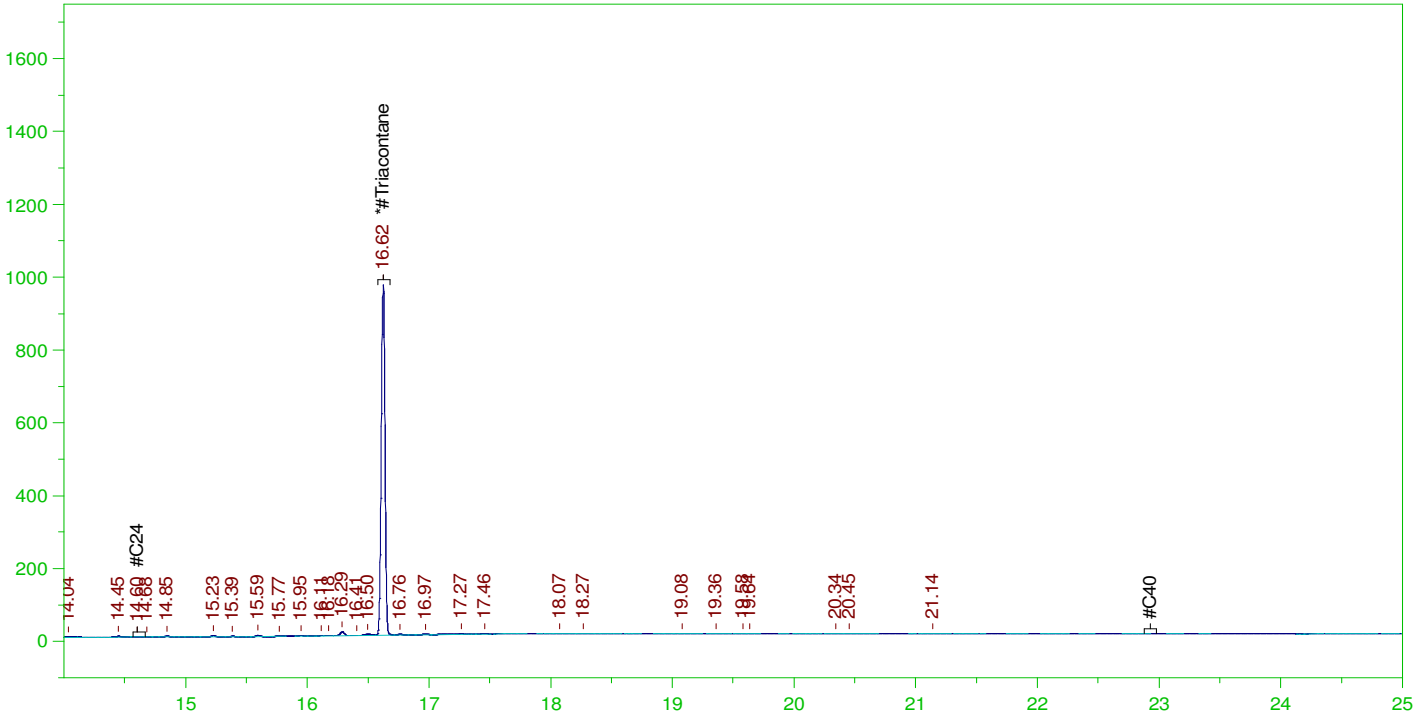
DRO Area:207935.1 DRO Amount: 6.806787E-03
 TEH Area:630277.4 TEH Amount: 2.063222E-02

ERH2610 (RHMW2254-01 Bailer)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0023.RAW

B22030433-043C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-043C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0023.RAW
 Date & Time Acquired: 3/12/2022 5:59:15 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.624	.481	.078	16.26

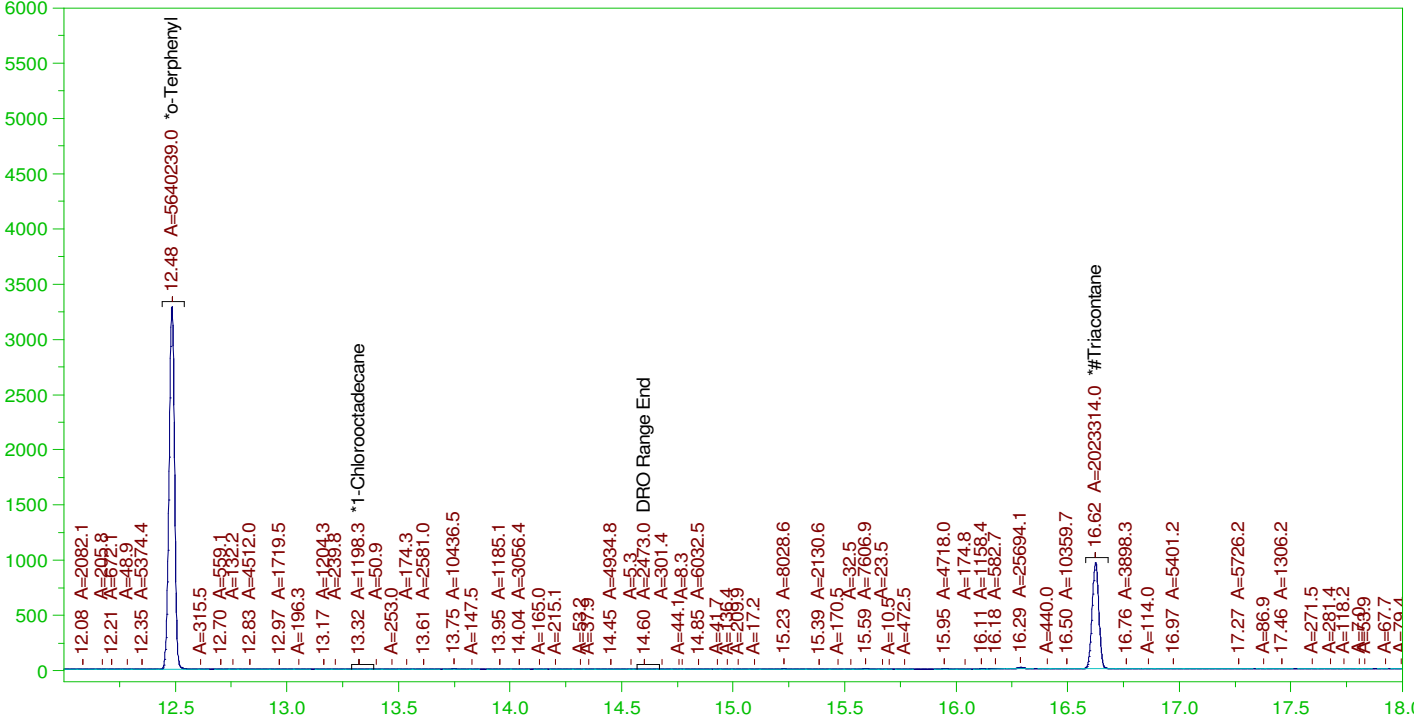
RRO Area:114165.4 RRO AMOUNT: 4.475189E-03

ERH2610 (RHMW2254-01 Bailer)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0023.RAW

B22030433-043C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-043C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0023.RAW
 Date & Time Acquired: 3/12/2022 5:59:15 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.192	.163	84.64	-
*1-Chlorooctadecane	13.322	.192	.	.02	-
*#Triacontane	16.624	.192	.078	40.51	-

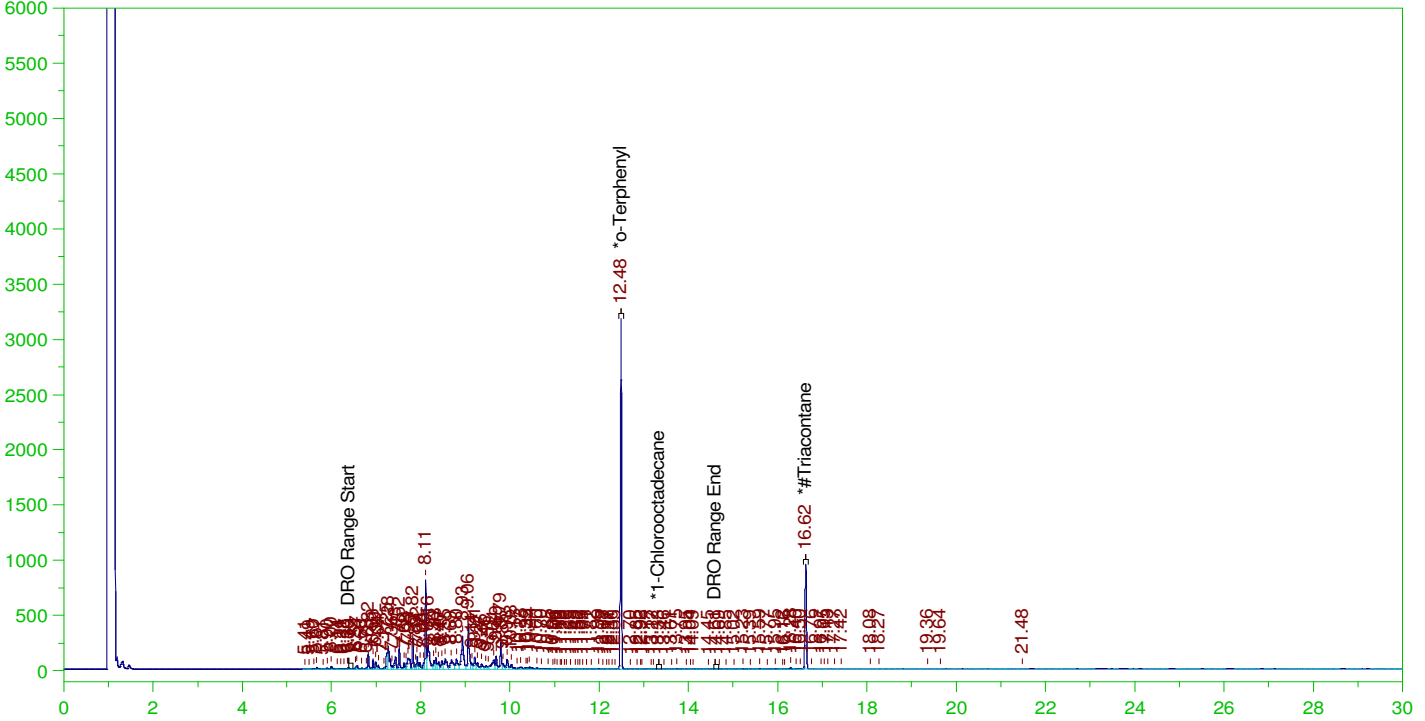
DRO Area:192018.9 DRO Amount: 6.285766E-03
 TEH Area:685587.4 TEH Amount: 0.0224428

ERH2622 (RHMW02)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0024.RAW

B22030433-012C ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-012C ;0311HP4, \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0024.RAW
 Date & Time Acquired: 3/12/2022 6:44:20 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.192	.159	82.89	-
*1-Chlorooctadecane	13.326	.192	.	.03	-
*#Triacontane	16.623	.192	.078	40.49	-

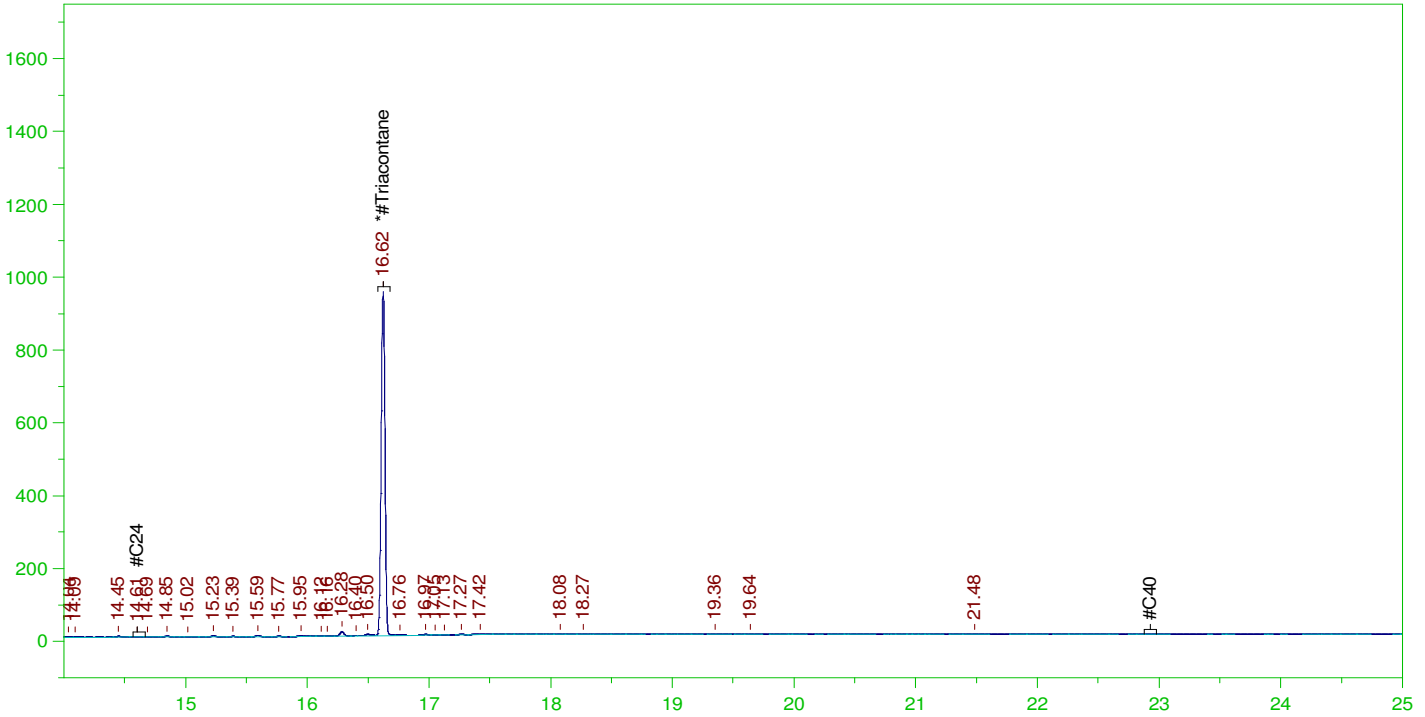
DRO Area: 1.418861E+07 DRO Amount: 0.4644662
 TEH Area: 1.456723E+07 TEH Amount: 0.4768604

ERH2622 (RHMW02)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0024.RAW

B22030433-012C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-012C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0024.RAW
 Date & Time Acquired: 3/12/2022 6:44:20 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.623	.481	.078	16.2

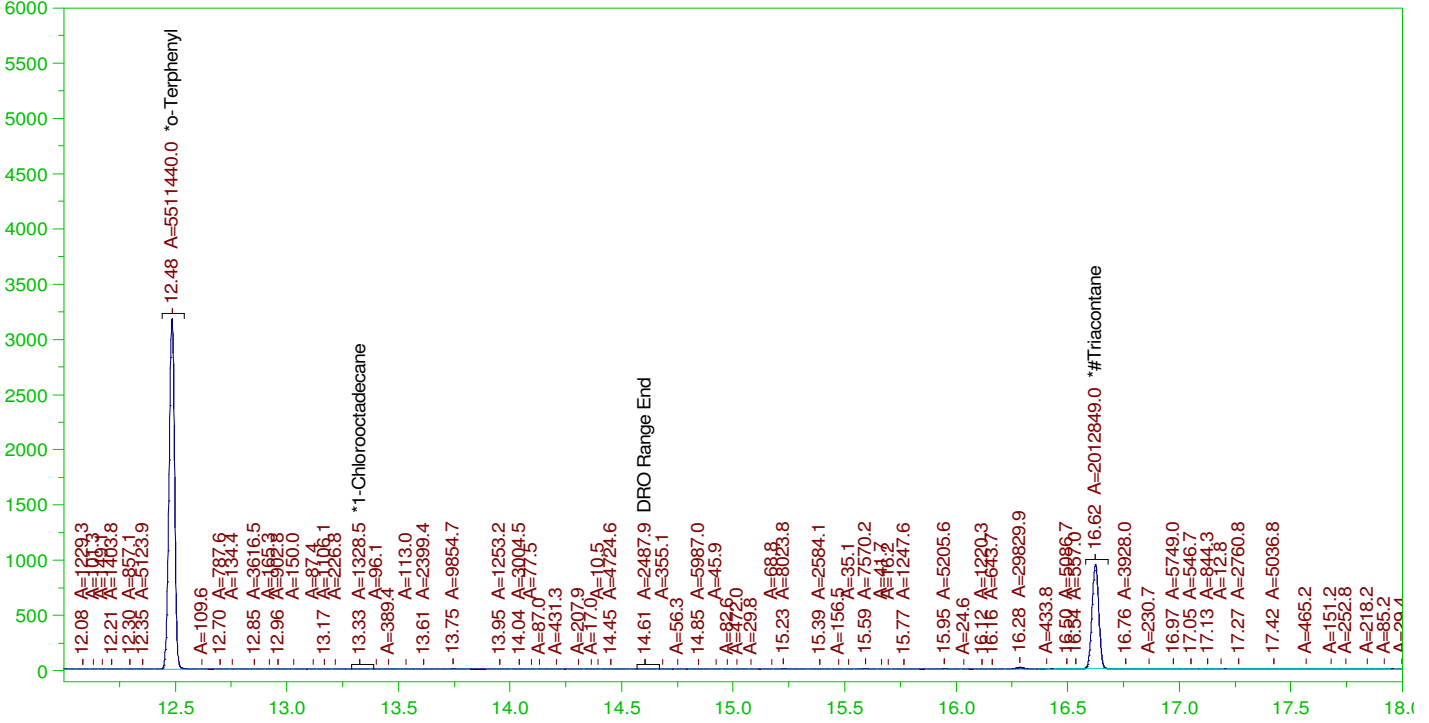
RRO Area:116680.3 RRO AMOUNT: 4.573769E-03

ERH2622 (RHMW02)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0024.RAW

B22030433-012C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-012C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0024.RAW
 Date & Time Acquired: 3/12/2022 6:44:20 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.192	.159	82.71	-
*1-Chlorooctadecane	13.326	.192	.	.02	-
*#Triacontane	16.623	.192	.077	40.3	-

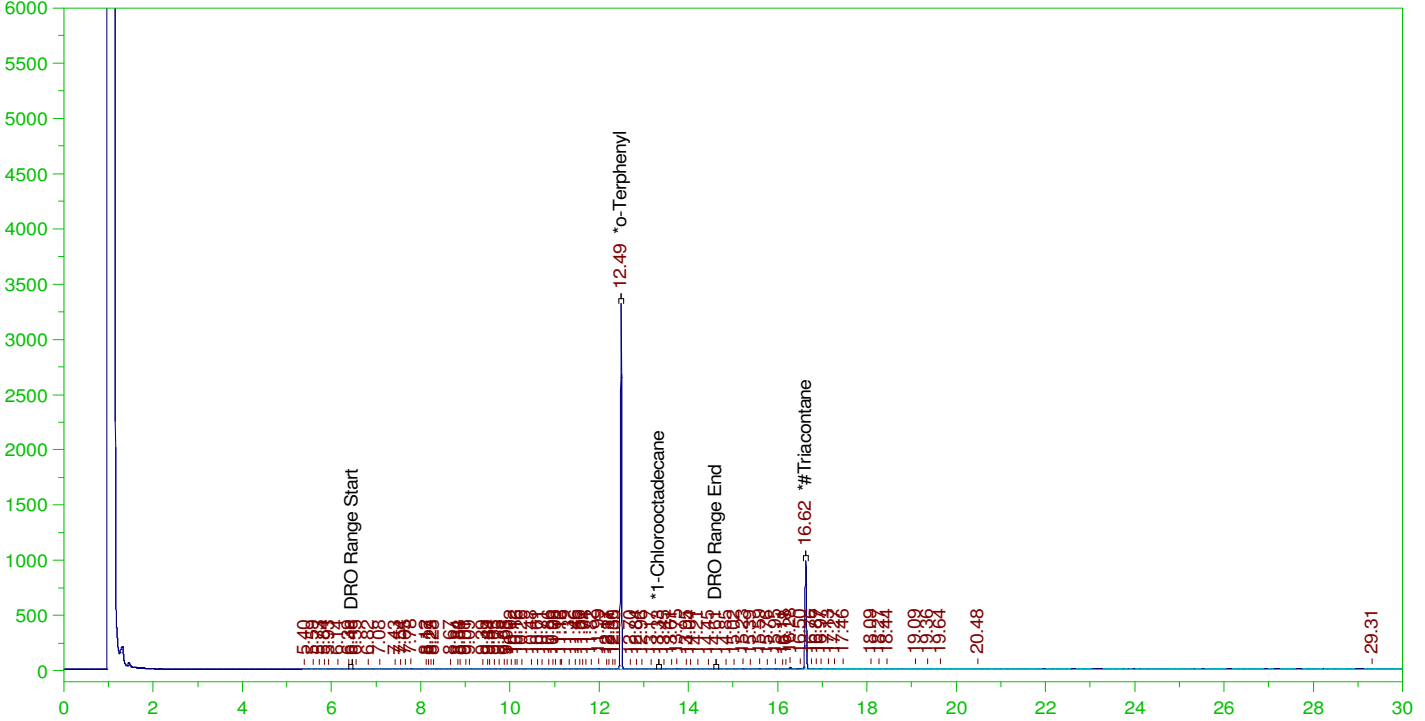
DRO Area: 1.418285E+07 DRO Amount: 0.4642775
 TEH Area: 1.46417E+07 TEH Amount: 0.4792981

ERH2576 (RHMW03)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0025.RAW

B22030433-007C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-007C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0025.RAW
 Date & Time Acquired: 3/12/2022 7:29:28 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.19	.164	86.01	-
*1-Chlorooctadecane	13.328	.19	.	.04	-
*#Triacontane	16.623	.19	.079	41.68	-

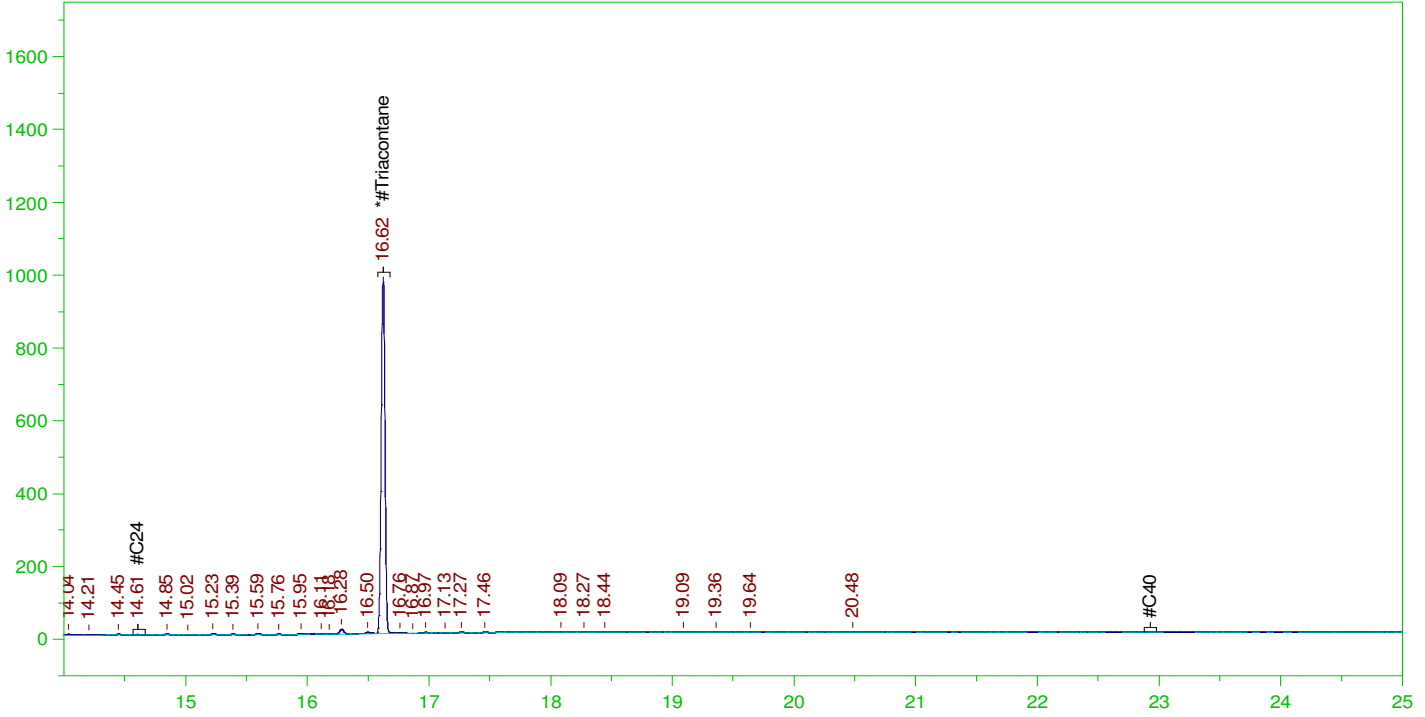
DRO Area:192612.5 DRO Amount: 6.245147E-03
 TEH Area:363125.8 TEH Amount: 1.177377E-02

ERH2576 (RHMW03)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0025.RAW

B22030433-007C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-007C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0025.RAW
 Date & Time Acquired: 3/12/2022 7:29:28 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.623	.476	.079	16.67

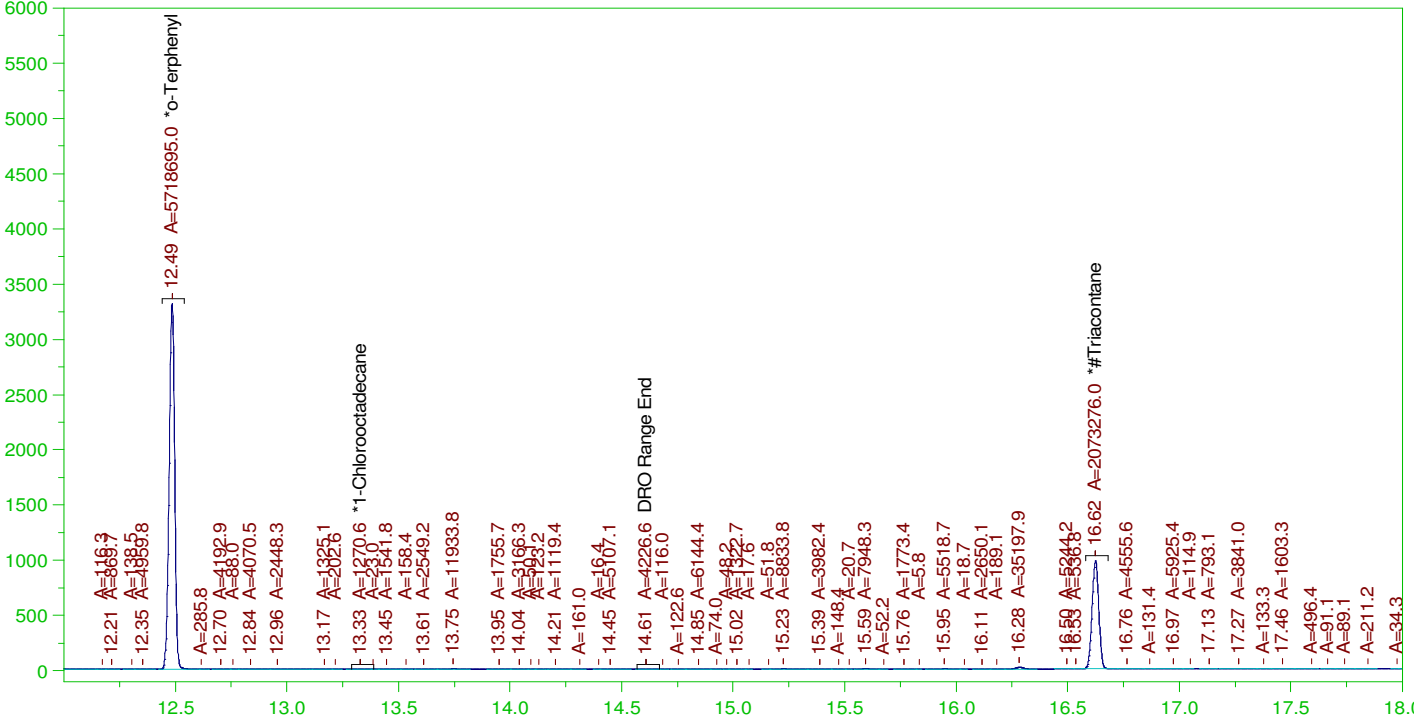
RRO Area:130709.3 RRO AMOUNT: 0.0050749

ERH2576 (RHMW03)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0025.RAW

B22030433-007C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

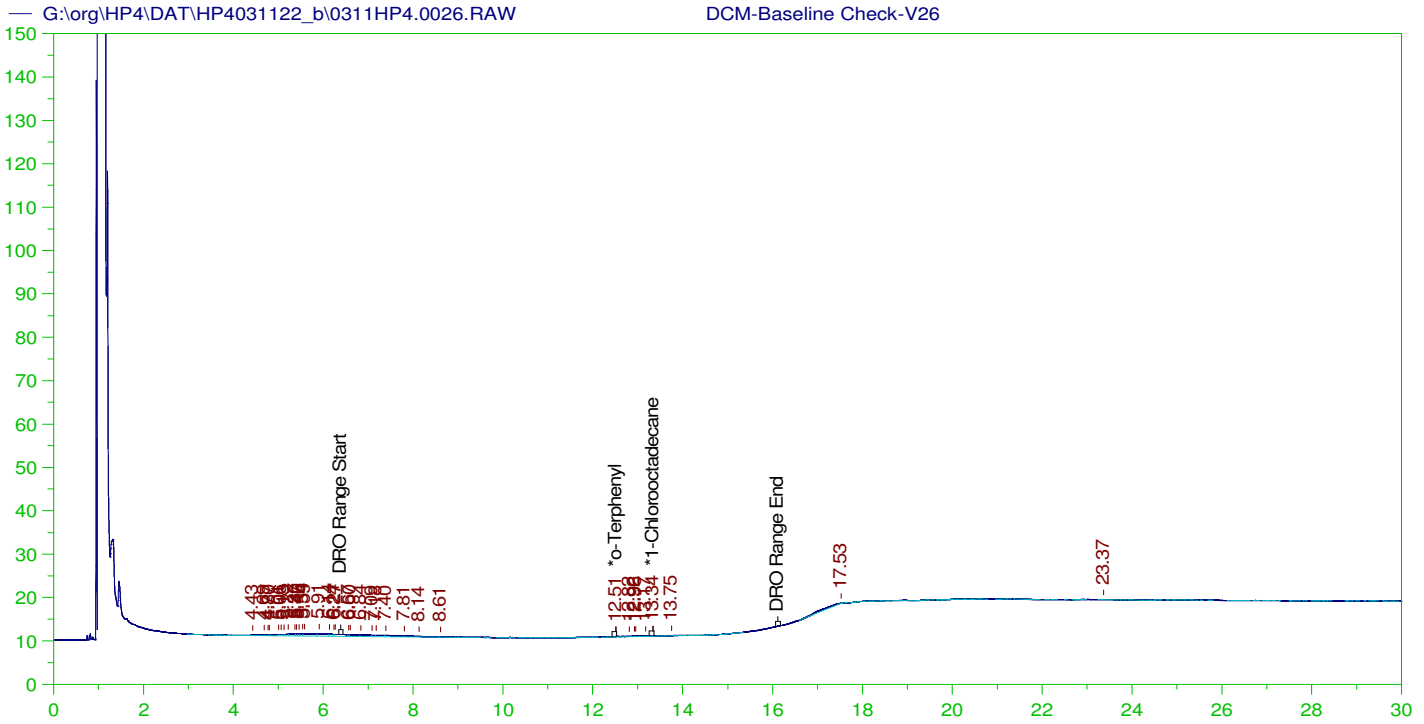
Sample Name: B22030433-007C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0025.RAW
 Date & Time Acquired: 3/12/2022 7:29:28 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.485	.19	.163	85.82	-
*1-Chlorooctadecane	13.328	.19	.	.02	-
*#Triacontane	16.623	.19	.079	41.51	-

DRO Area:169938.3 DRO Amount: 5.509973E-03
 TEH Area:351388.4 TEH Amount: 0.0113932



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V26
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0026.RAW
 Date & Time Acquired: 3/12/2022 8:14:25 AM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.515	200.	.022	.01	-
*1-Chlorooctadecane	13.34	200.	.019	.01	-

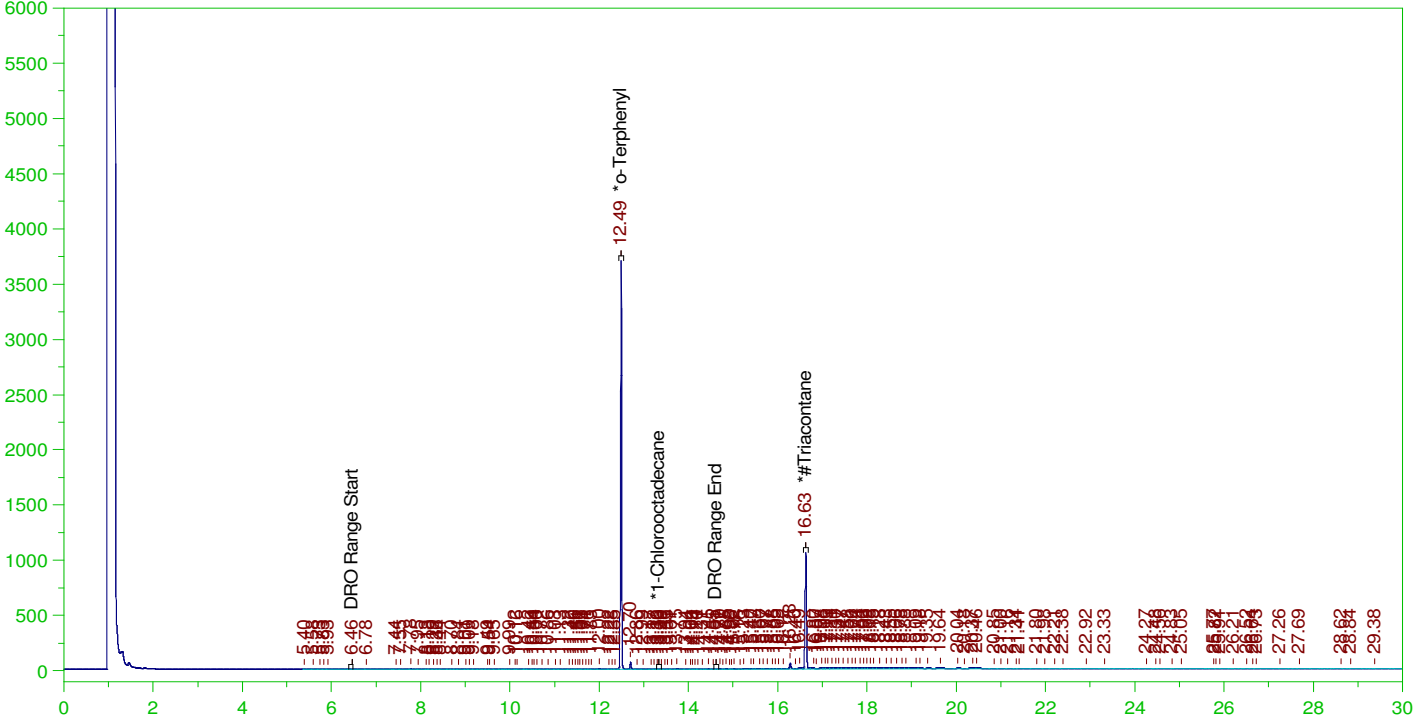
DRO Area:36764.66 DRO Amount: 1.251636
 TEH Area:105102.4 TEH Amount: 3.578162

ERH2627 (RHMW10)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0027.RAW

B22030502-021C ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-021C ;0311HP4, \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0027.RAW
 Date & Time Acquired: 3/12/2022 8:59:27 AM
 Method File: G:\Org\HP4\methods\D3_8015-031127-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.192	.184	95.72	-
*1-Chlorooctadecane	13.326	.192	.	.04	-
*#Triacontane	16.625	.192	.086	44.92	-

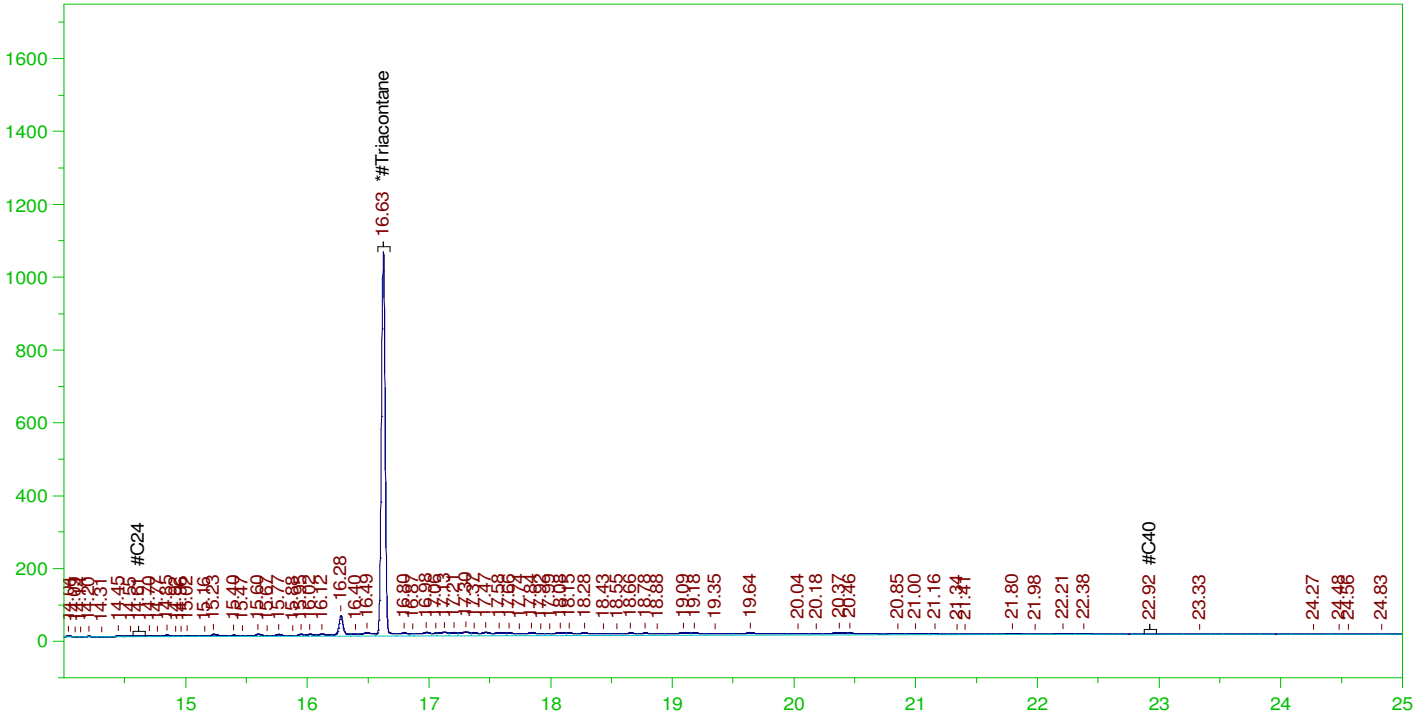
DRO Area:380739 DRO Amount: 1.246355E-02
 TEH Area:2300984 TEH Amount: 7.532304E-02

ERH2627 (RHMW10)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0027.RAW

B22030502-021C ;0311HP4 , \$HC-8015-DRO-W, SGT

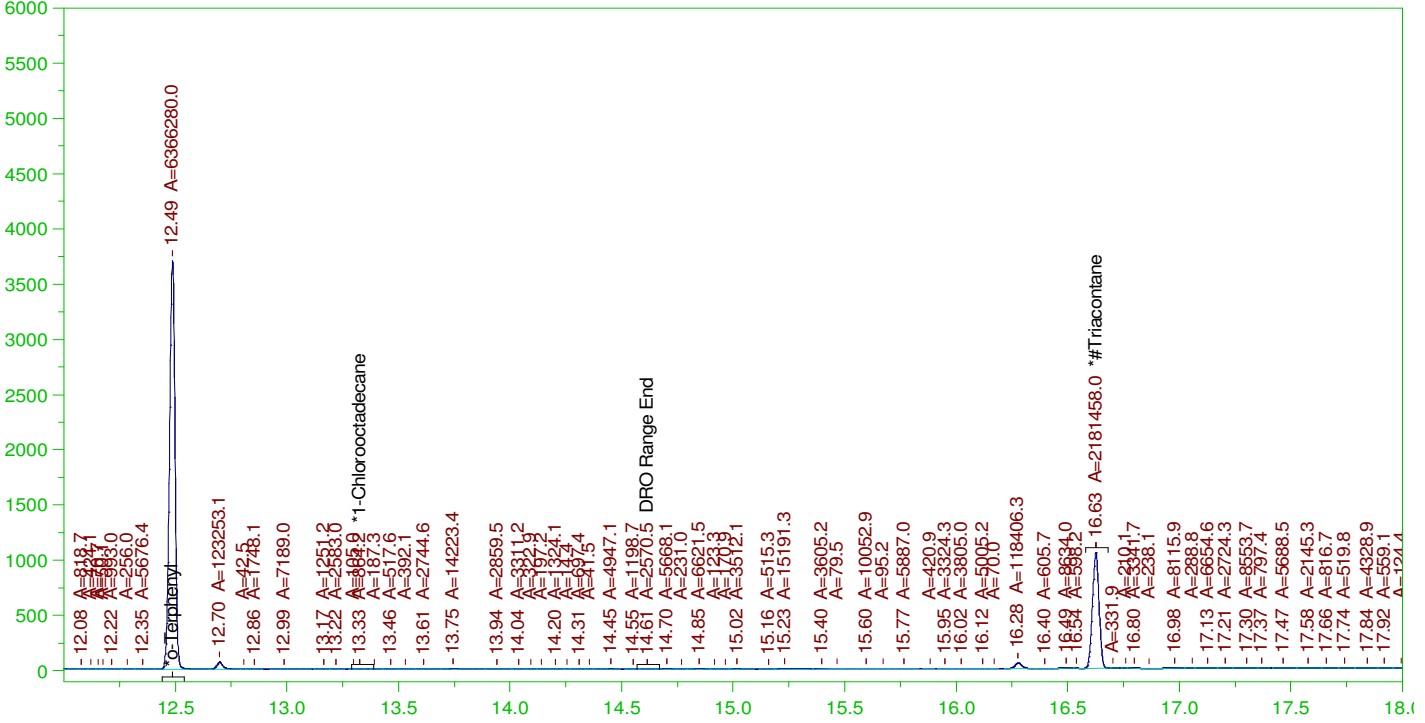


ERH2627 (RHMW10)

Batch ID: 164312

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B22030502-021C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-021C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0027.RAW
 Date & Time Acquired: 3/12/2022 8:59:27 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.192	.184	95.53	-
*1-Chlorooctadecane	13.326	.192	.	.01	-
*#Triacontane	16.625	.192	.084	43.67	-

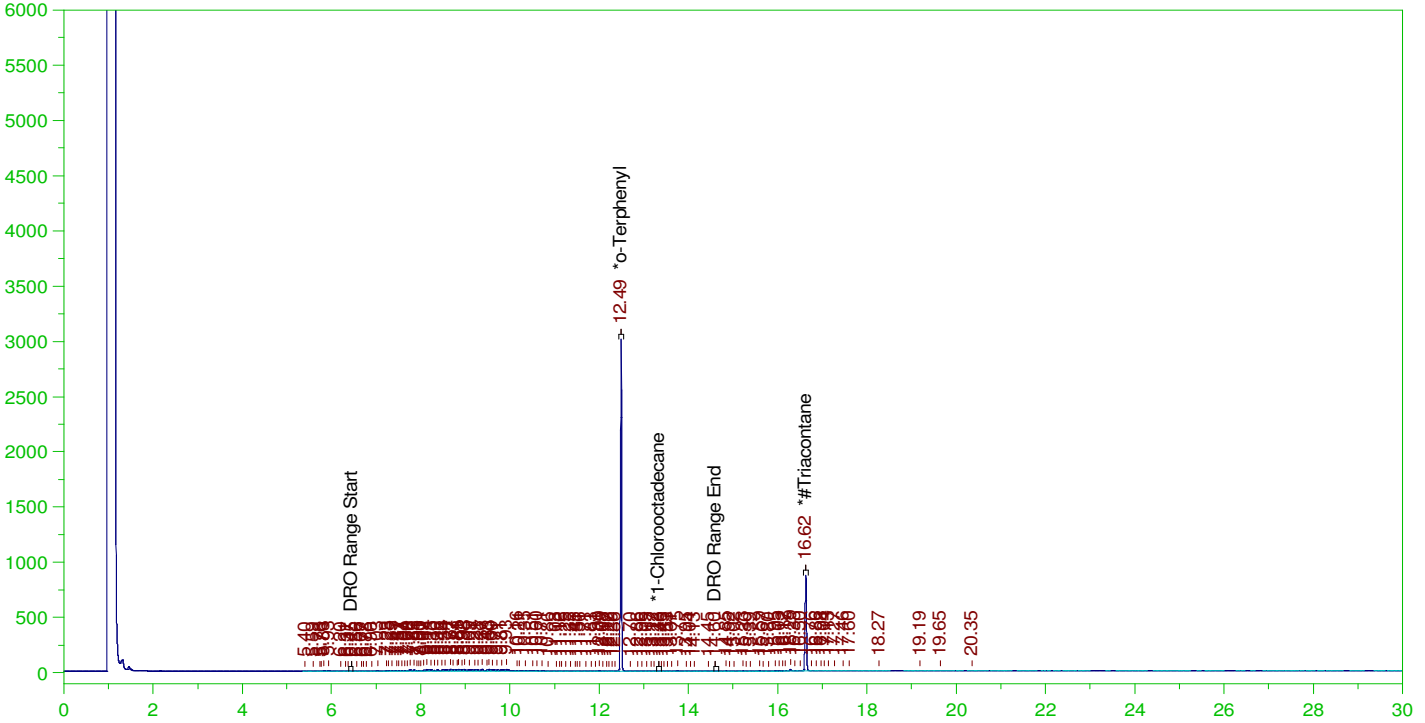
DRO Area:316469.2 DRO Amount: 1.035966E-02
 TEH Area:729141.4 TEH Amount: 2.386855E-02

ERH2614 (Sump Audit 3)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0028.RAW

B22030433-023C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-023C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0028.RAW
 Date & Time Acquired: 3/12/2022 9:44:32 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.486	.19	.149	78.4	-
*1-Chlorooctadecane	13.328	.19	.	.06	-
*#Triacontane	16.625	.19	.07	36.85	-

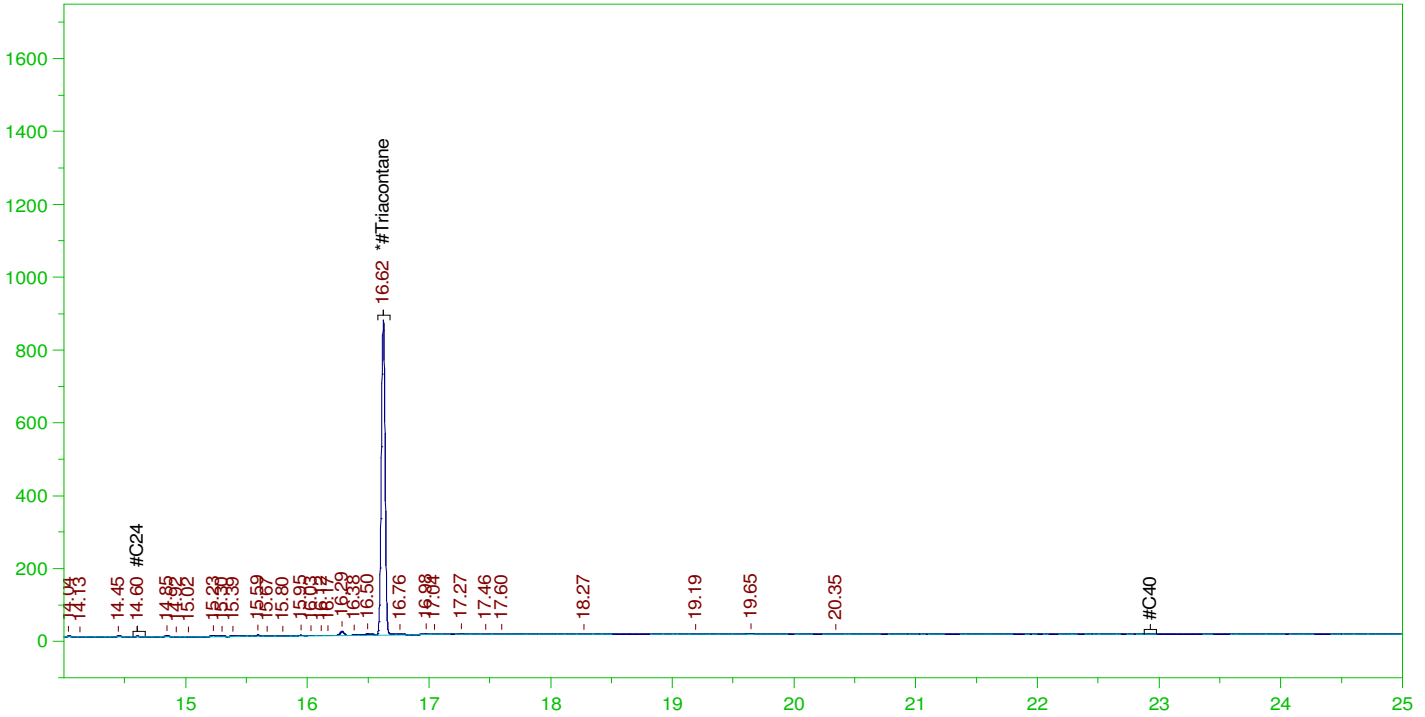
DRO Area:2009999 DRO Amount: 6.517097E-02
 TEH Area:2215919 TEH Amount: 7.184758E-02

ERH2614 (Sump Audit 3)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0028.RAW

B22030433-023C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-023C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0028.RAW
 Date & Time Acquired: 3/12/2022 9:44:32 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.625	.476	.07	14.74	-

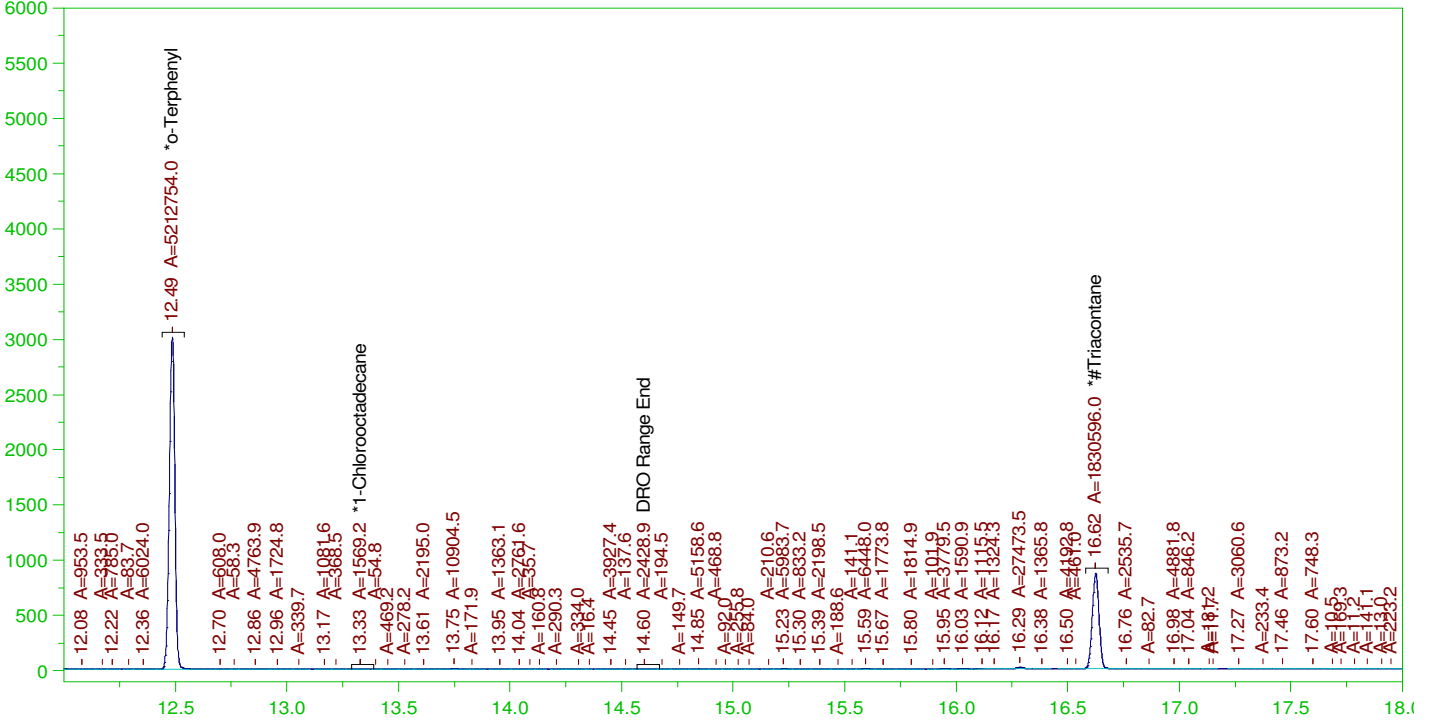
RRO Area:114832.9 RRO AMOUNT: 4.458484E-03

ERH2614 (Sump Audit 3)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0028.RAW

B22030433-023C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-023C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0028.RAW
 Date & Time Acquired: 3/12/2022 9:44:32 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.486	.19	.149	78.22	-
*1-Chlorooctadecane	13.328	.19	.	.02	-
*#Triacontane	16.625	.19	.07	36.65	-

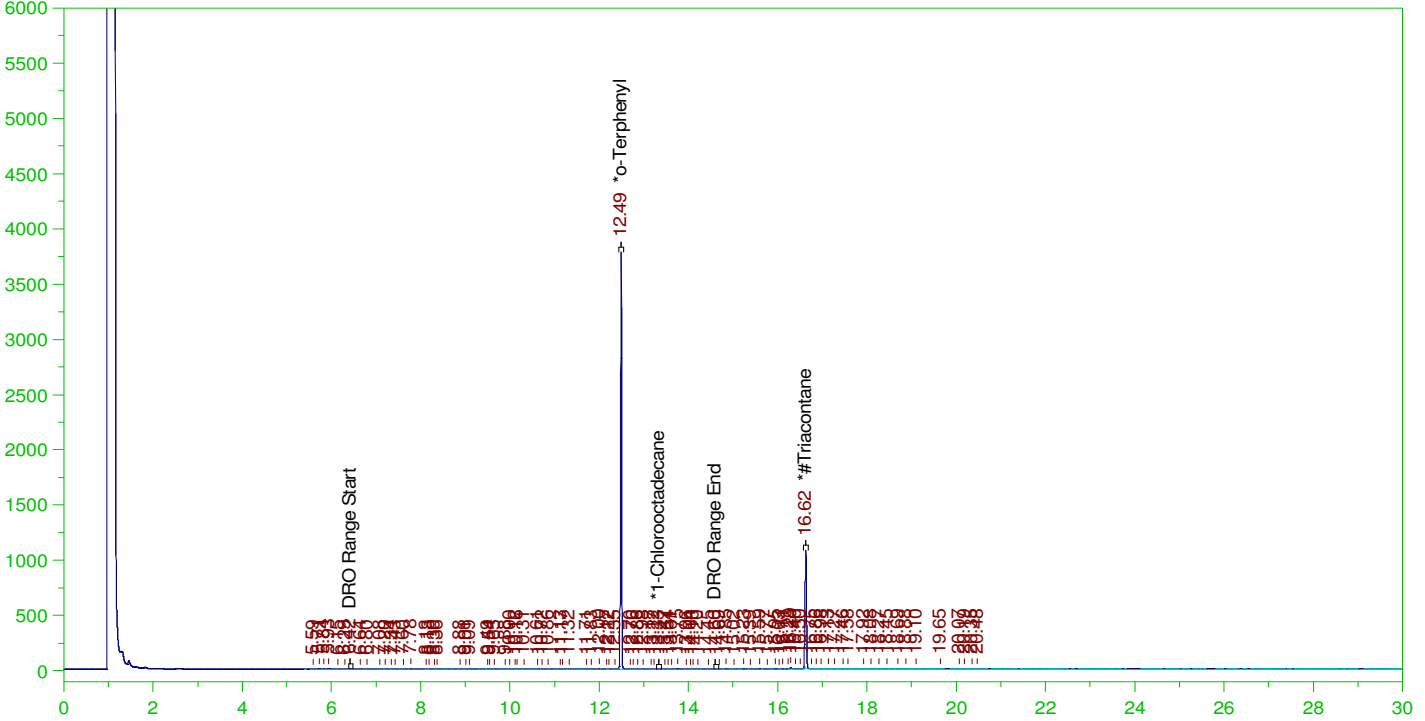
DRO Area:1930885 DRO Amount: 6.260581E-02
 TEH Area:2136872 TEH Amount: 0.0692846

ERH2600 (RHMW11-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0029.RAW

B22030502-026C ;0311HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-026C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0029.RAW
 Date & Time Acquired: 3/12/2022 10:29:47 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.19	.187	98.27	-
*1-Chlorooctadecane	13.327	.19	.	.05	-
*#Triacontane	16.624	.19	.086	45.4	-

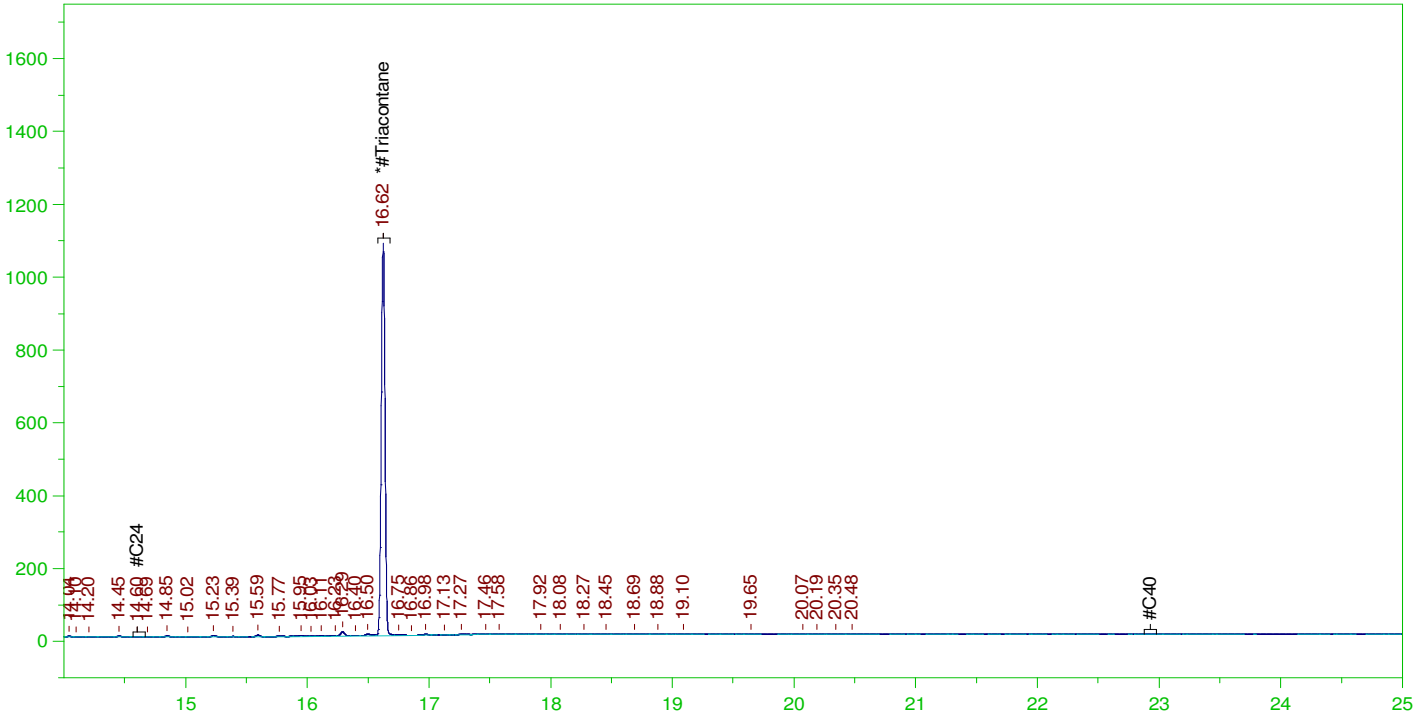
DRO Area:201393.4 DRO Amount: 6.529854E-03
 TEH Area:447643.3 TEH Amount: 1.451411E-02

ERH2600 (RHMW11-5)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0029.RAW

B22030502-026C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030502-026C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0029.RAW
 Date & Time Acquired: 3/12/2022 10:29:47 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.624	.476	.086	18.16

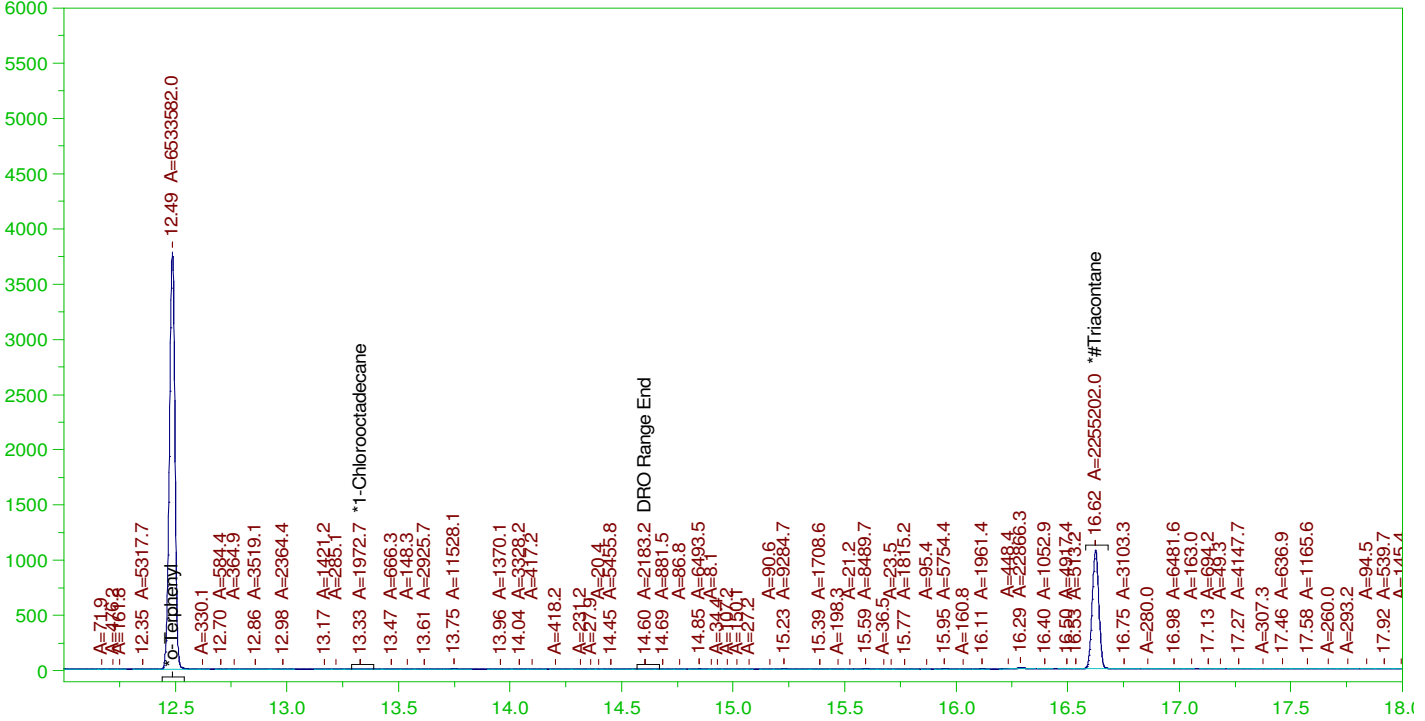
RRO Area:132872.3 RRO AMOUNT: 5.158879E-03

ERH2600 (RHMW11-5)

Batch ID: 164312

G:\Org\HP4\DAT\HP4031122_b\0311HP4.0029.RAW

B22030502-026C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030502-026C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\Org\HP4\DAT\HP4031122_b\0311HP4.0029.RAW
 Date & Time Acquired: 3/12/2022 10:29:47 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.487	.19	.187	98.04	-
*1-Chlorooctadecane	13.327	.19	.	.03	-
*#Triacontane	16.624	.19	.086	45.15	-

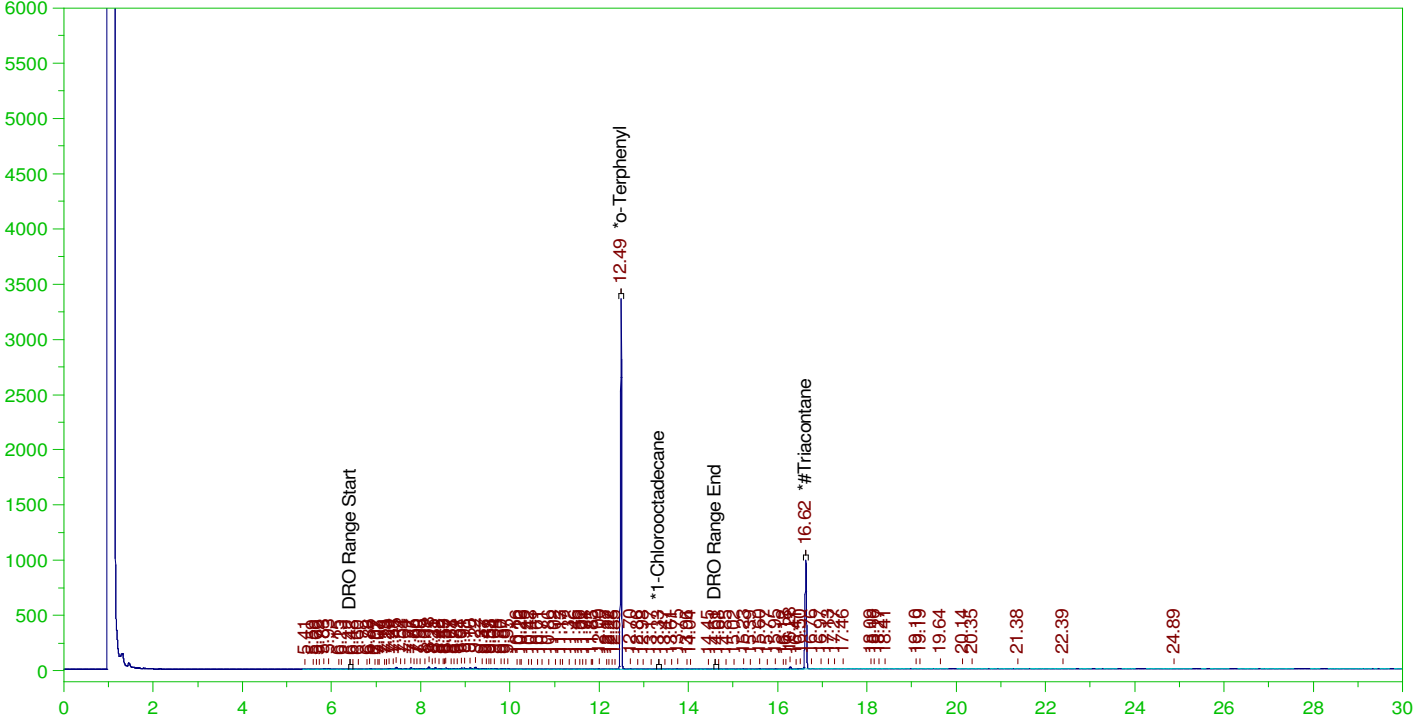
DRO Area:203009.6 DRO Amount: 6.582258E-03
 TEH Area:459148.9 TEH Amount: 1.488716E-02

ERH2602 (RHMW01R)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0030.RAW

B22030433-017C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22030433-017C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0030.RAW
 Date & Time Acquired: 3/12/2022 11:15:00 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24T-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.486	.19	.167	87.67	-
*1-Chlorooctadecane	13.327	.19	.	.04	-
*#Triacontane	16.625	.19	.079	41.62	-

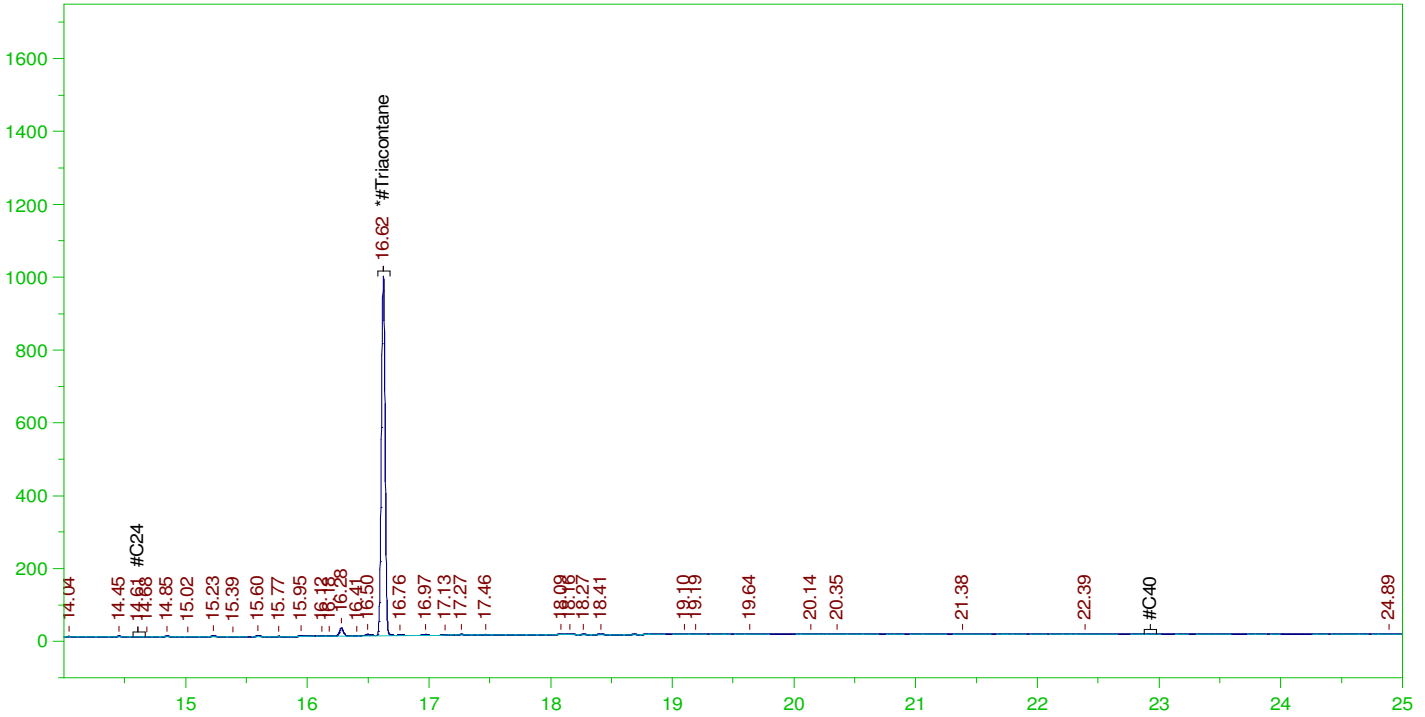
DRO Area:1193174 DRO Amount: 3.868674E-02
 TEH Area:1417044 TEH Amount: 4.594535E-02

ERH2602 (RHMW01R)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0030.RAW

B22030433-017C ;0311HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-017C ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0030.RAW
 Date & Time Acquired: 3/12/2022 11:15:00 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.625	.476	.079	16.65

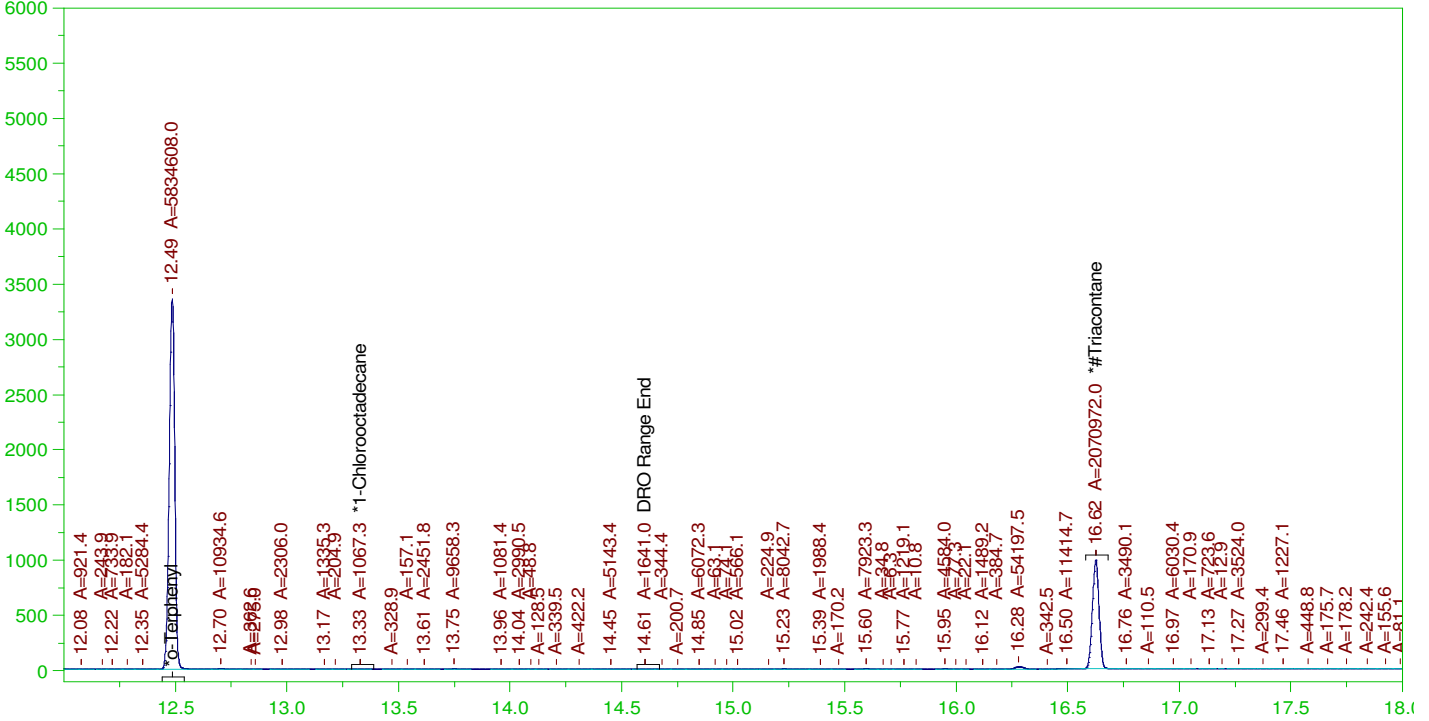
RRO Area:139943.4 RRO AMOUNT: 5.43342E-03

ERH2602 (RHMW01R)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0030.RAW

B22030433-017C ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

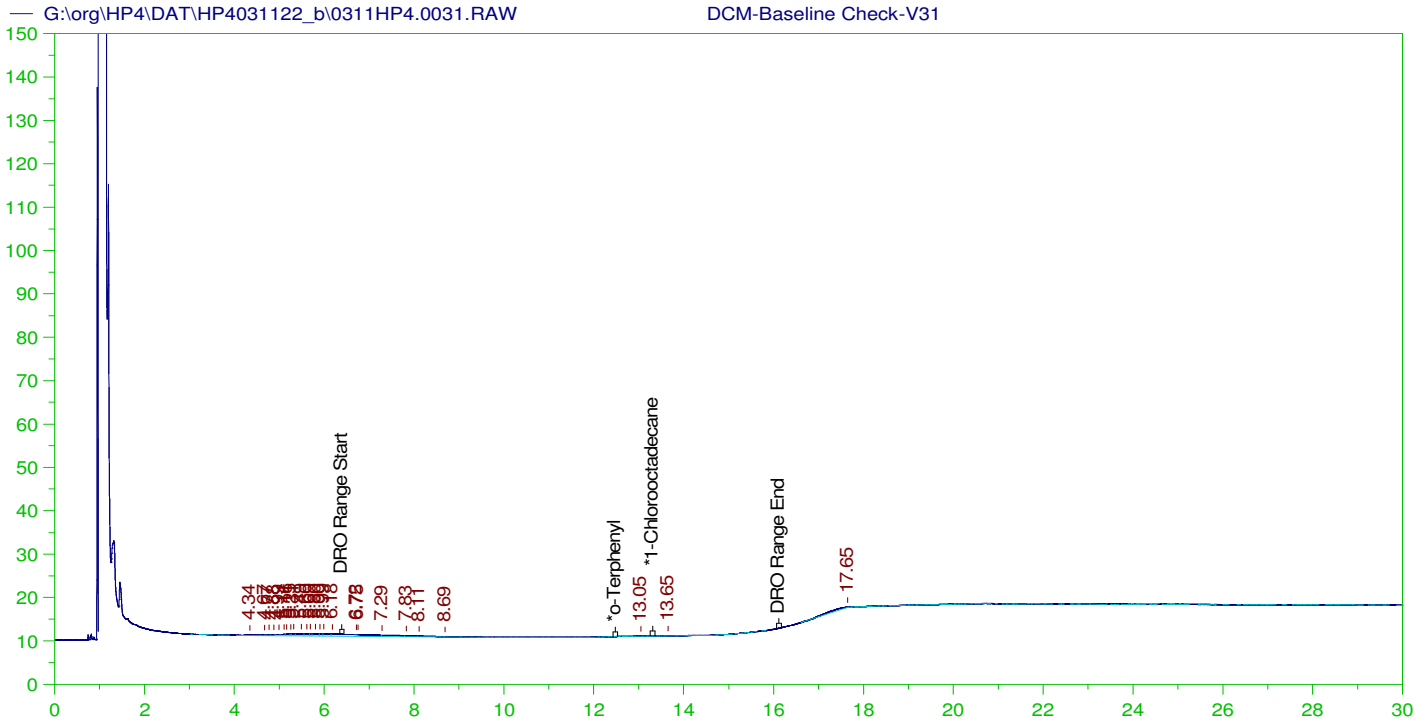
Sample Name: B22030433-017C ;0311HP4 , \$HC-8015-DRO-W, SGT
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 Date & Time Acquired: 3/12/2022 11:15:00 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.486	.19	.167	87.55	-
*1-Chlorooctadecane	13.327	.19	.	.02	-
*#Triacontane	16.625	.19	.079	41.46	-

DRO Area:1217300 DRO Amount: 3.946898E-02
 TEH Area:1470303 TEH Amount: 0.0476722



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V31
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0031.RAW
 Date & Time Acquired: 3/12/2022 12:00:17 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.34 to 16.17

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

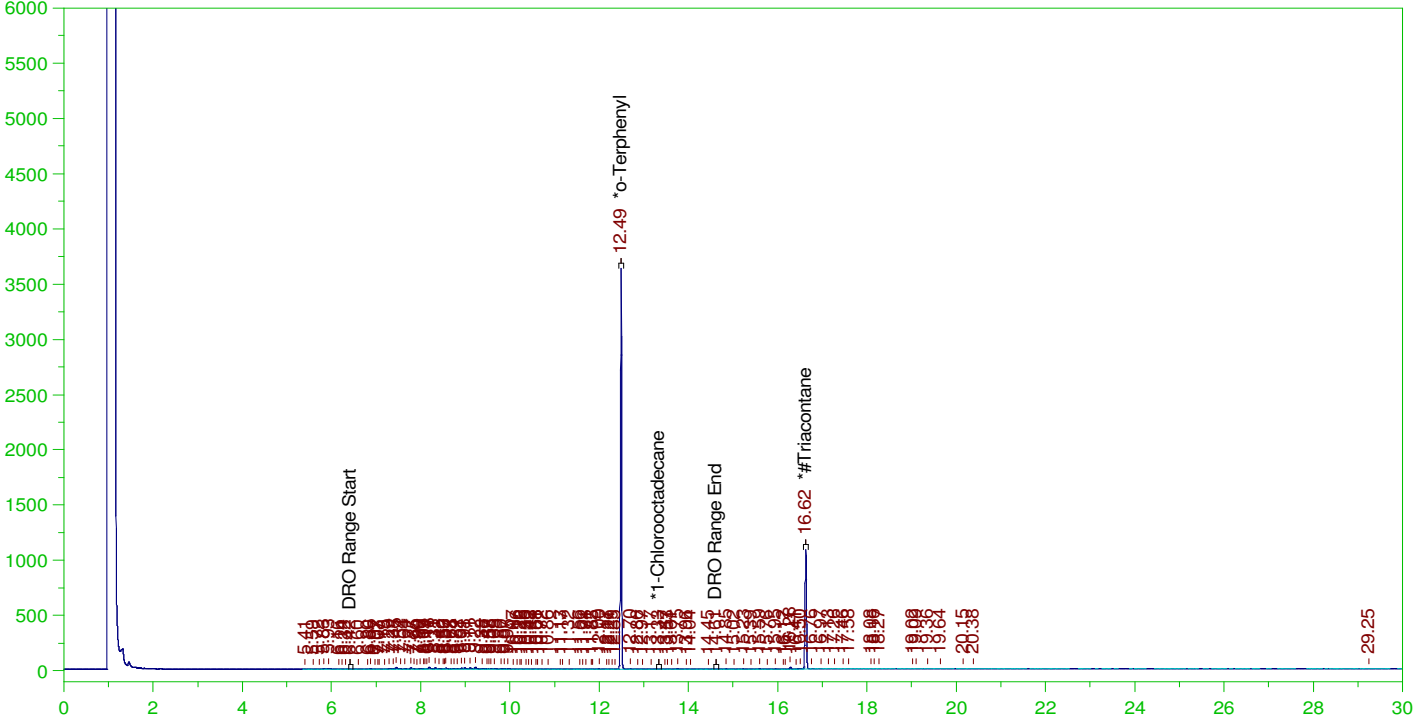
DRO Area:33278.38 DRO Amount: 1.132948
 TEH Area:104144.5 TEH Amount: 3.545551

ERH2603 (RHMW01R FD)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0032.RAW

B22030433-018A ;0311HP4, \$HC-8015-DRO-W, SGT

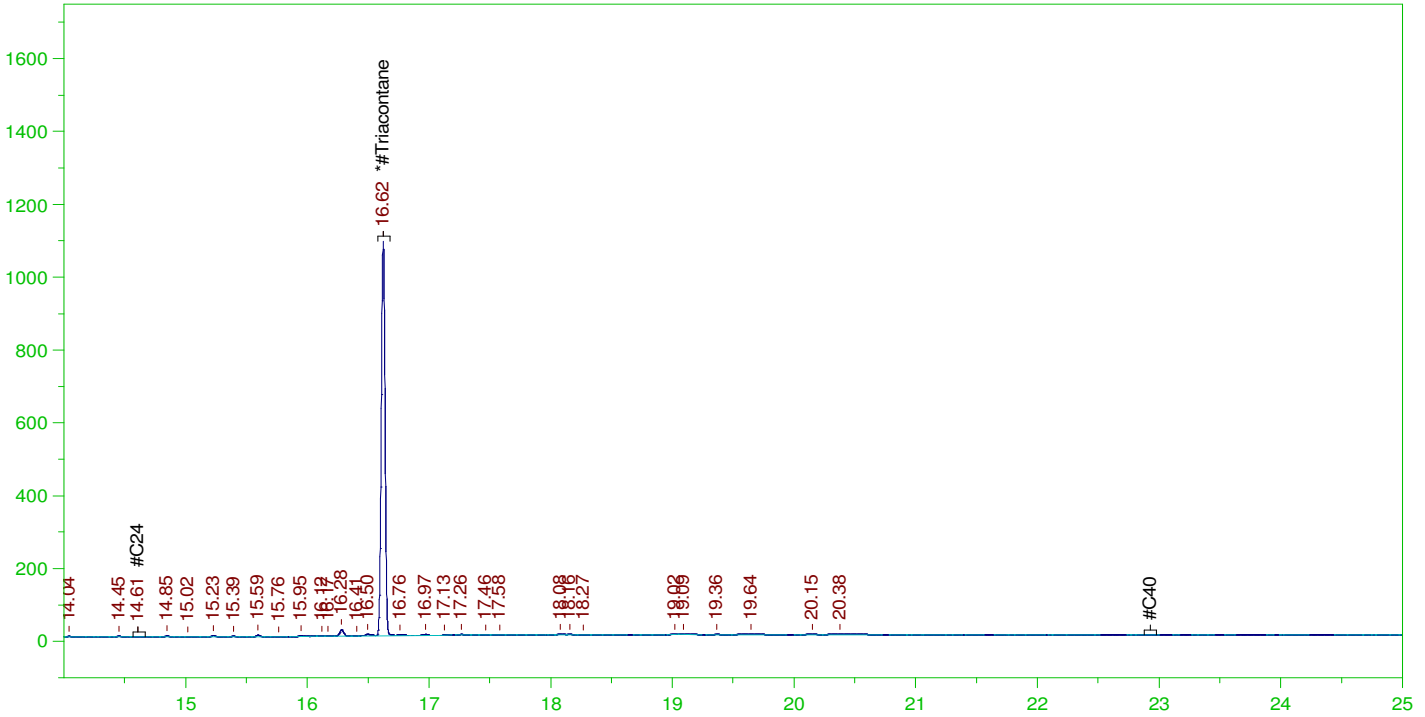


ERH2603 (RHMW01R FD)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0032.RAW

B22030433-018A ;0311HP4, \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22030433-018A ;0311HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0032.RAW
 Date & Time Acquired: 3/12/2022 12:45:09 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI-SAMPLE.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.57 to 22.98

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.624	.5	.092	18.43

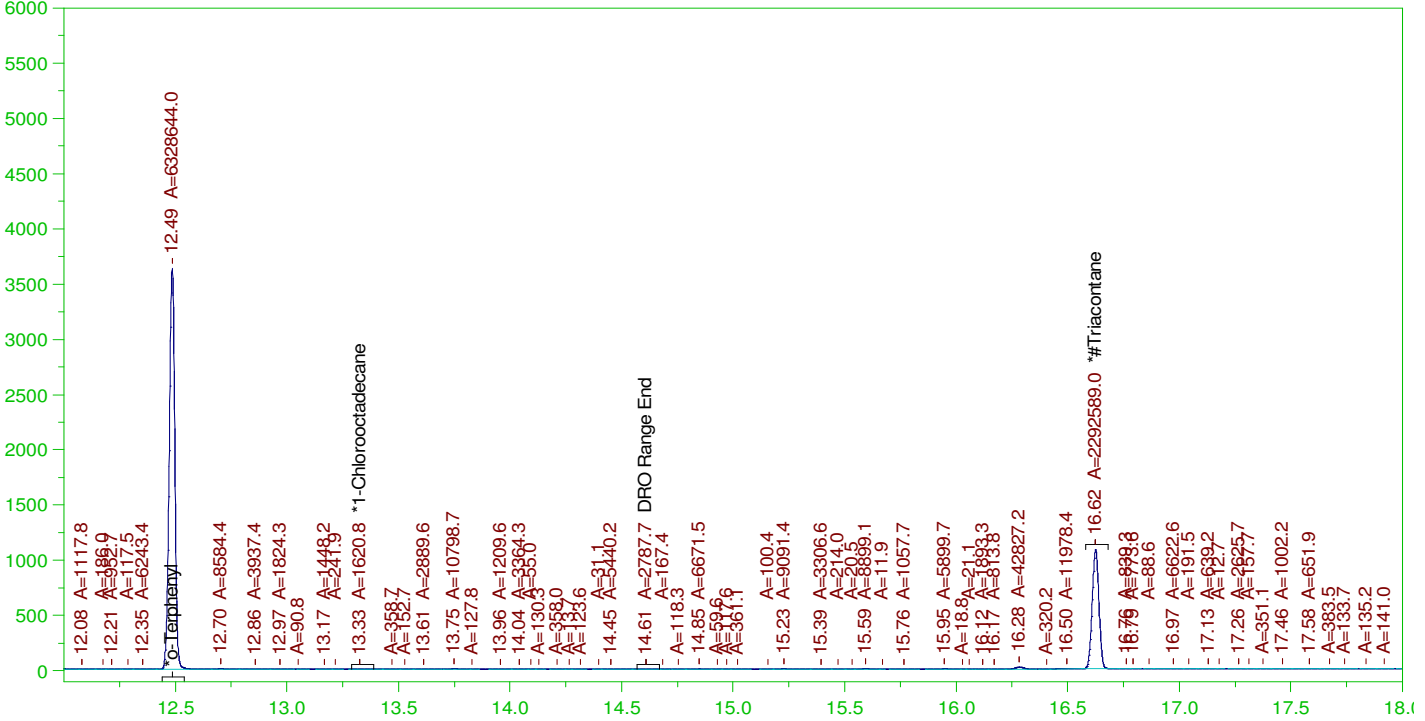
RRO Area:157615.6 RRO AMOUNT: 6.425536E-03

ERH2603 (RHMW01R FD)

Batch ID: 164312

G:\org\HP4\DAT\HP4031122_b\0311HP4.0032.RAW

B22030433-018A ;0311HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

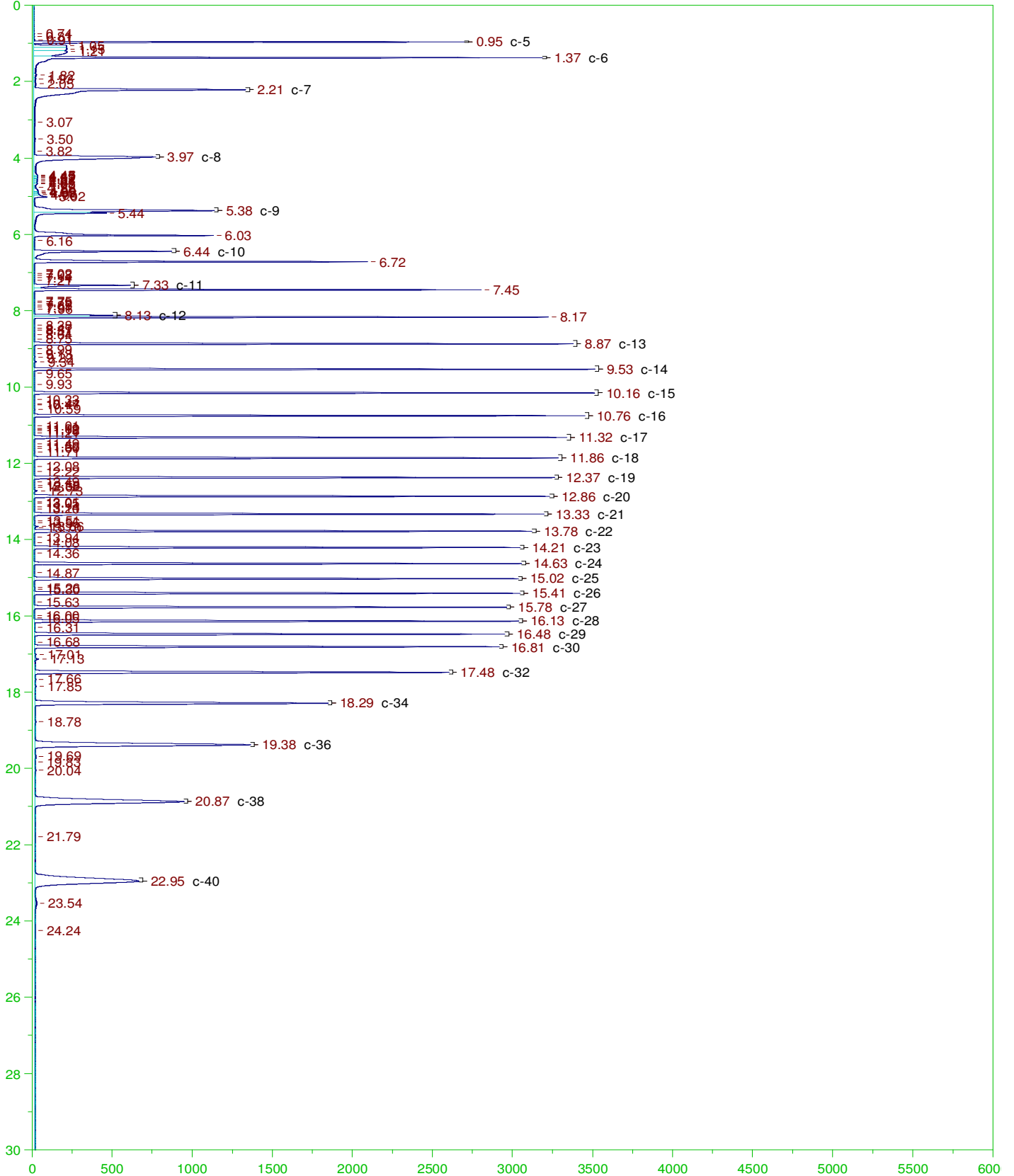
Sample Name: B22030433-018A ;0311HP4 , \$HC-8015-DRO-W, SGT
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 Date & Time Acquired: 3/12/2022 12:45:09 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

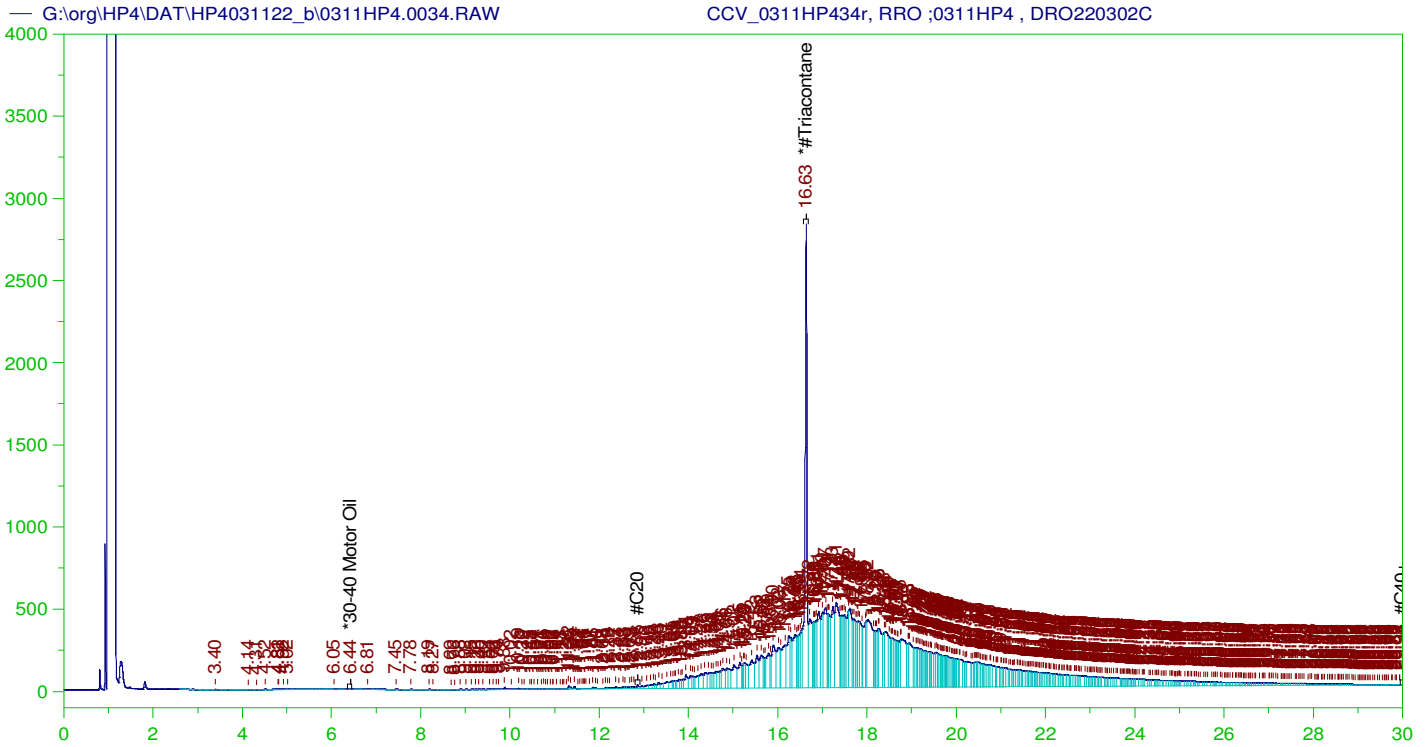
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.486	.2	.19	94.97
*1-Chlorooctadecane	13.327	.2	.02	-
*#Triacontane	16.624	.2	.092	45.9

DRO Area:1169707 DRO Amount: 3.982214E-02
 TEH Area:1462182 TEH Amount: 4.977934E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP434r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0034.RAW
 Date & Time Acquired: 3/12/2022 2:14:49 PM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.632	500.	329.357	65.87	-

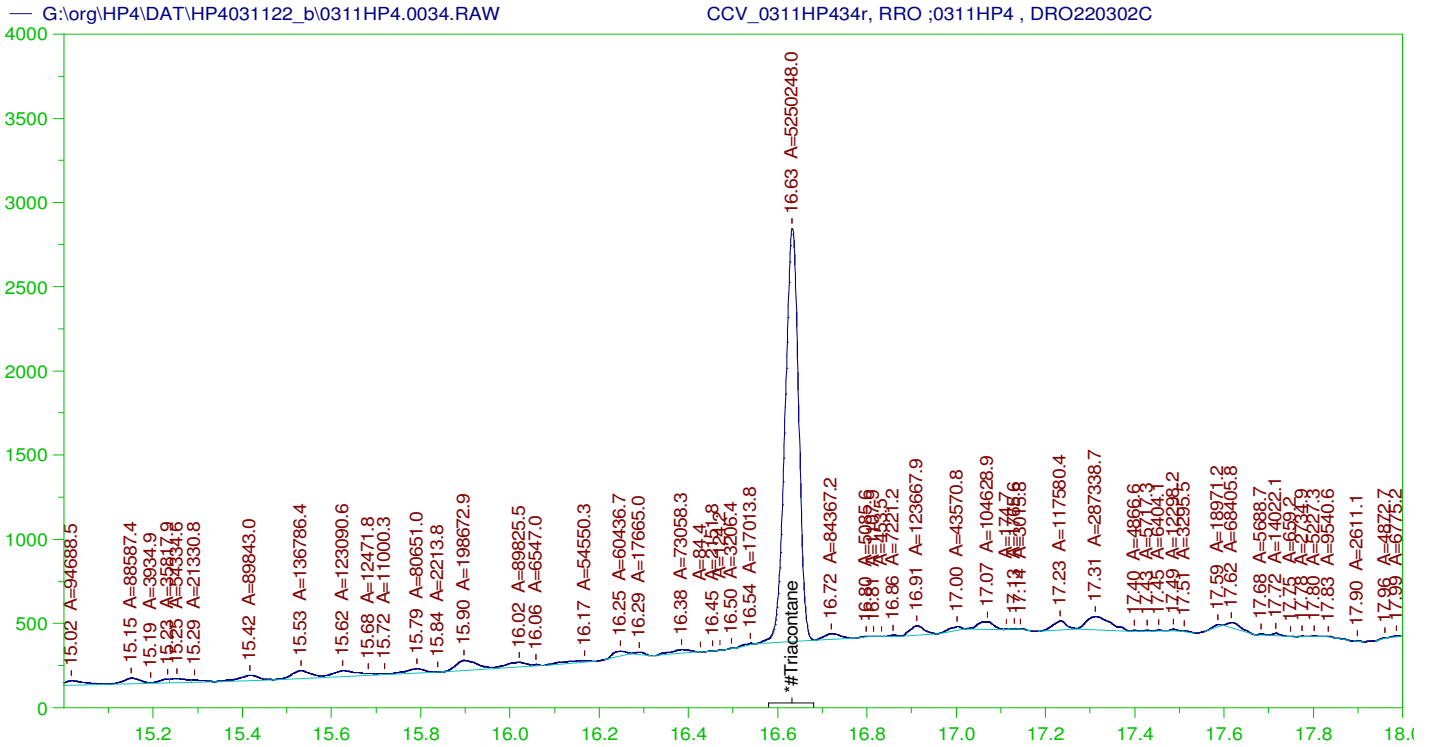
~~RRO~~ TEH(Oil Range) Area:1.21957E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4971.835

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0034.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.031	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.632	200.	329.357	164.68	75-125

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RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP434r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0034.RAW
 Date & Time Acquired: 3/12/2022 2:14:49 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.632	500.	210.23	42.05	-

RRO Area:3662442 RRO AMOUNT: 149.3073

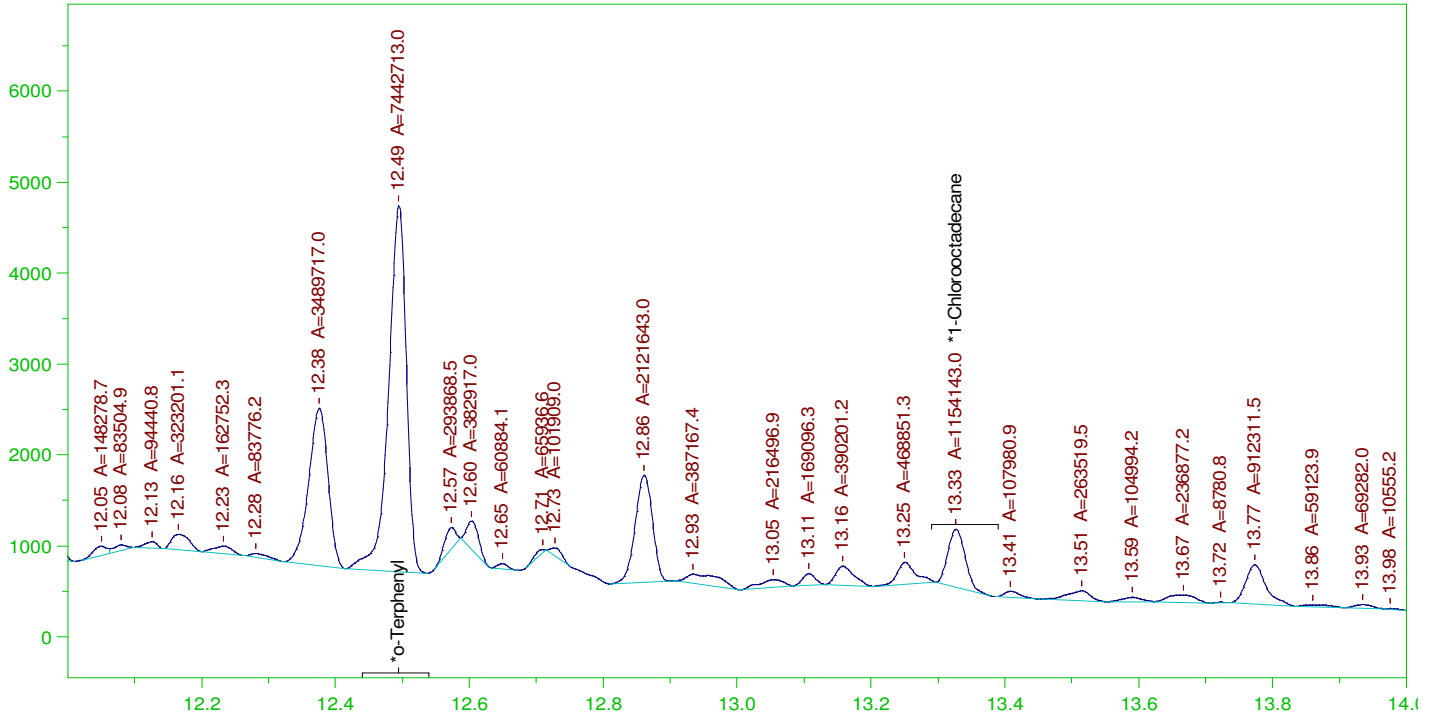
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0034.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.031	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.632	200.	210.23	105.12	75-125

G:\org\HP4\DAT\HP4031122_b\0311HP4.0035.RAW

CCV_0311HP435r, DRO ;0311HP4 , DRO220309D



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0311HP435r, DRO ;0311HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0035.RAW
 Date & Time Acquired: 3/12/2022 2:59:36 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

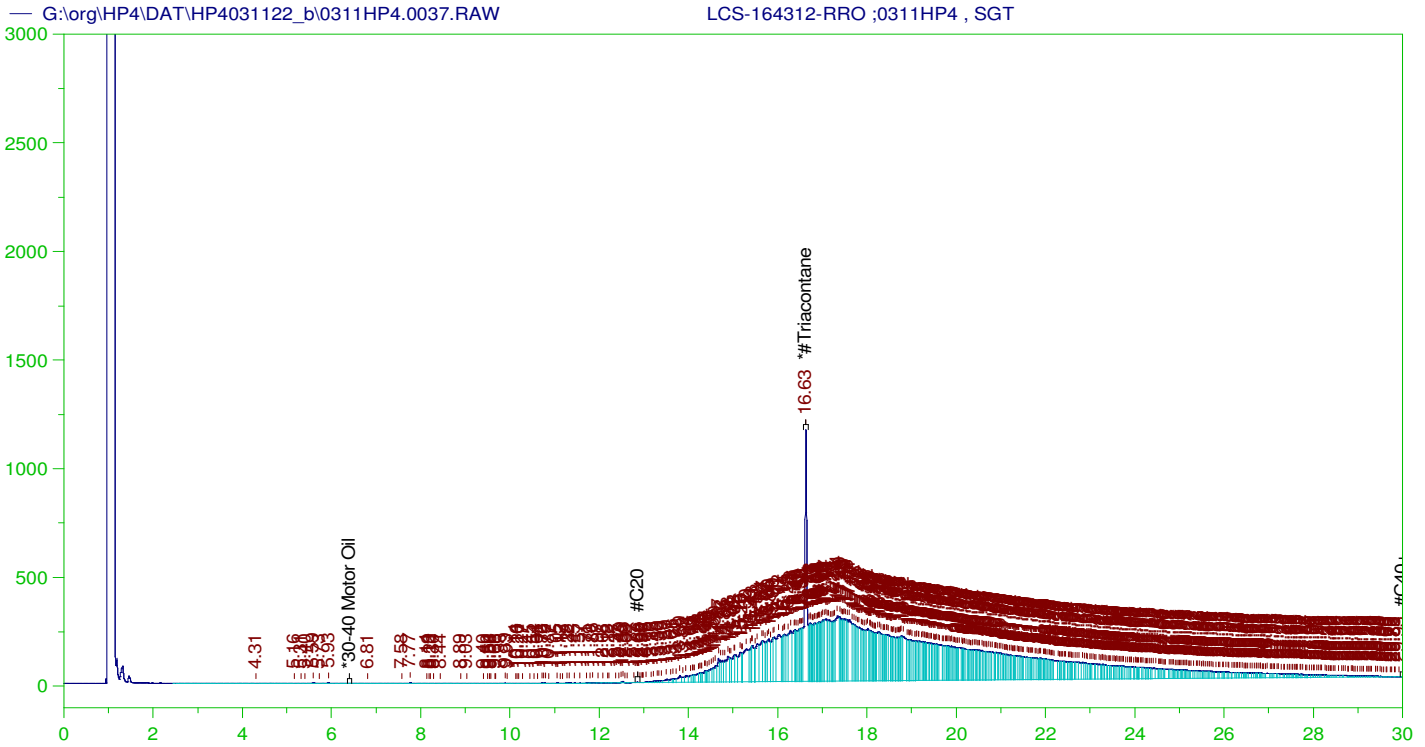
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.495	200.	223.373	111.69
*1-Chlorooctadecane	13.327	200.	34.638	17.32

DRO Area: 2.149432E+08 DRO Amount: 7317.646
 TEH Area: 2.250702E+08 TEH Amount: 7662.415

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7662.42	51.08	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.495	200.	223.373	111.69	85-115
*1-Chlorooctadecane	13.327	200.	34.638	17.32	85-115



RESIDUAL RANGE ORGANICS CHROMATOGRAM

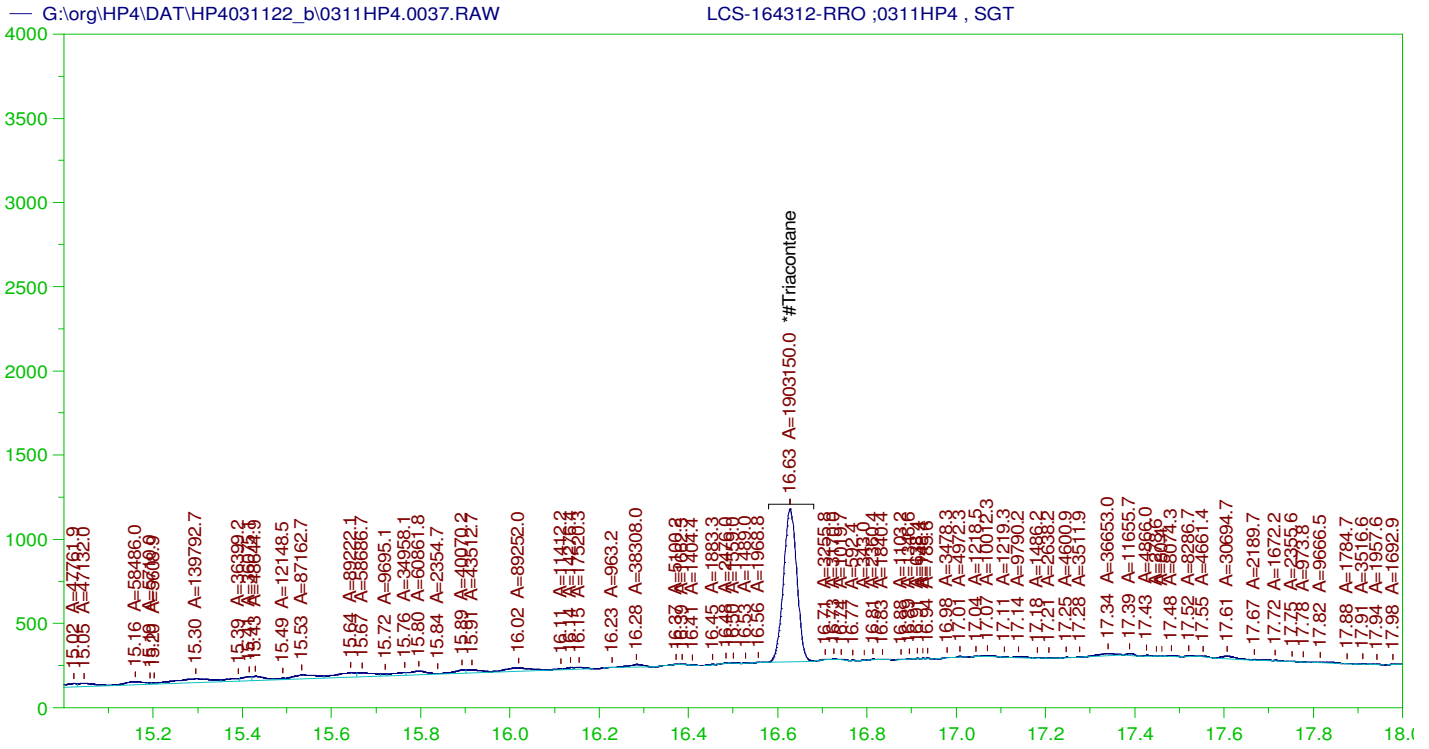
Sample Name: LCS-164312-RRO ;0311HP4 , SGT
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 Date & Time Acquired: 3/12/2022 4:29:06 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.627	.5	.145	28.91 -

~~RRO~~ TEH(Oil Range) Area:9.806398E+07 ~~RRO~~ TEH(Oil Range) AMOUNT: 3.997788

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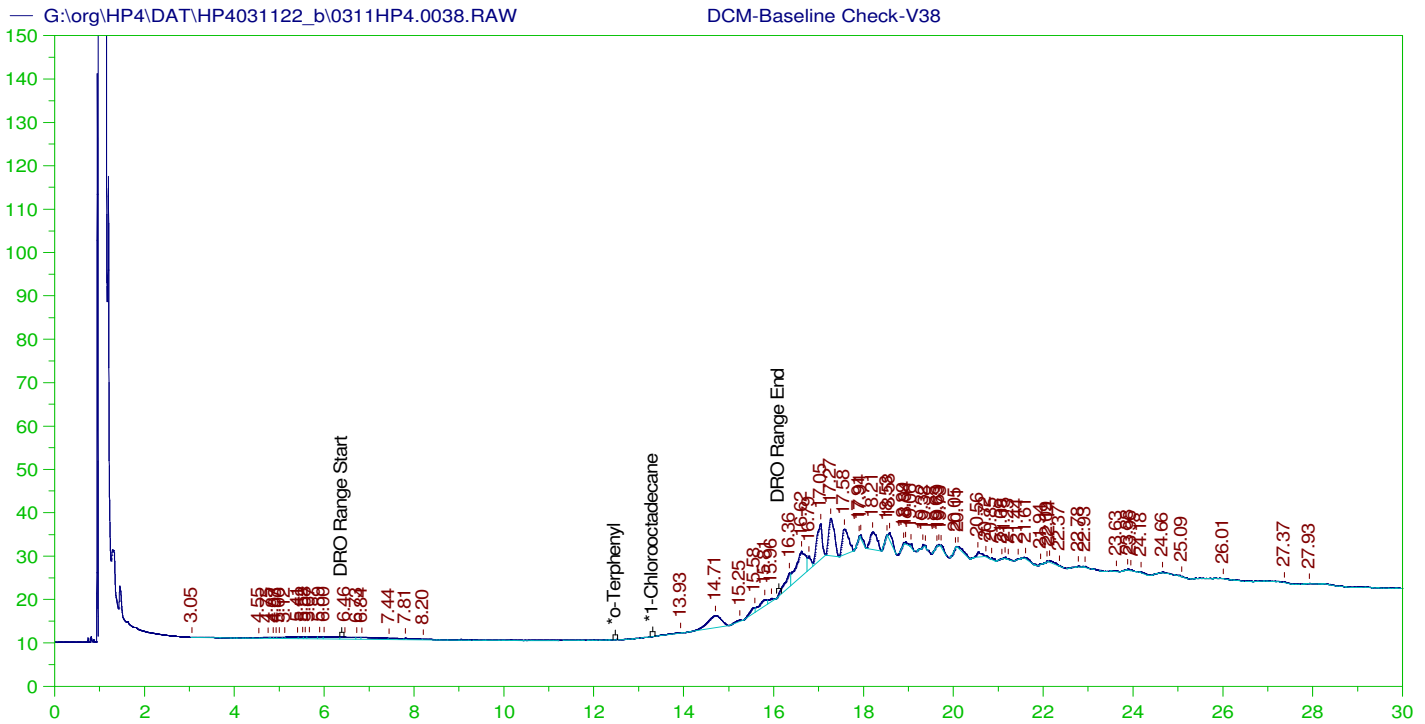
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-164312-RRO ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0037.RAW
 Date & Time Acquired: 3/12/2022 4:29:06 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.627	.5	.076	15.24

RRO Area:2161030 RRO AMOUNT: 8.809898E-02



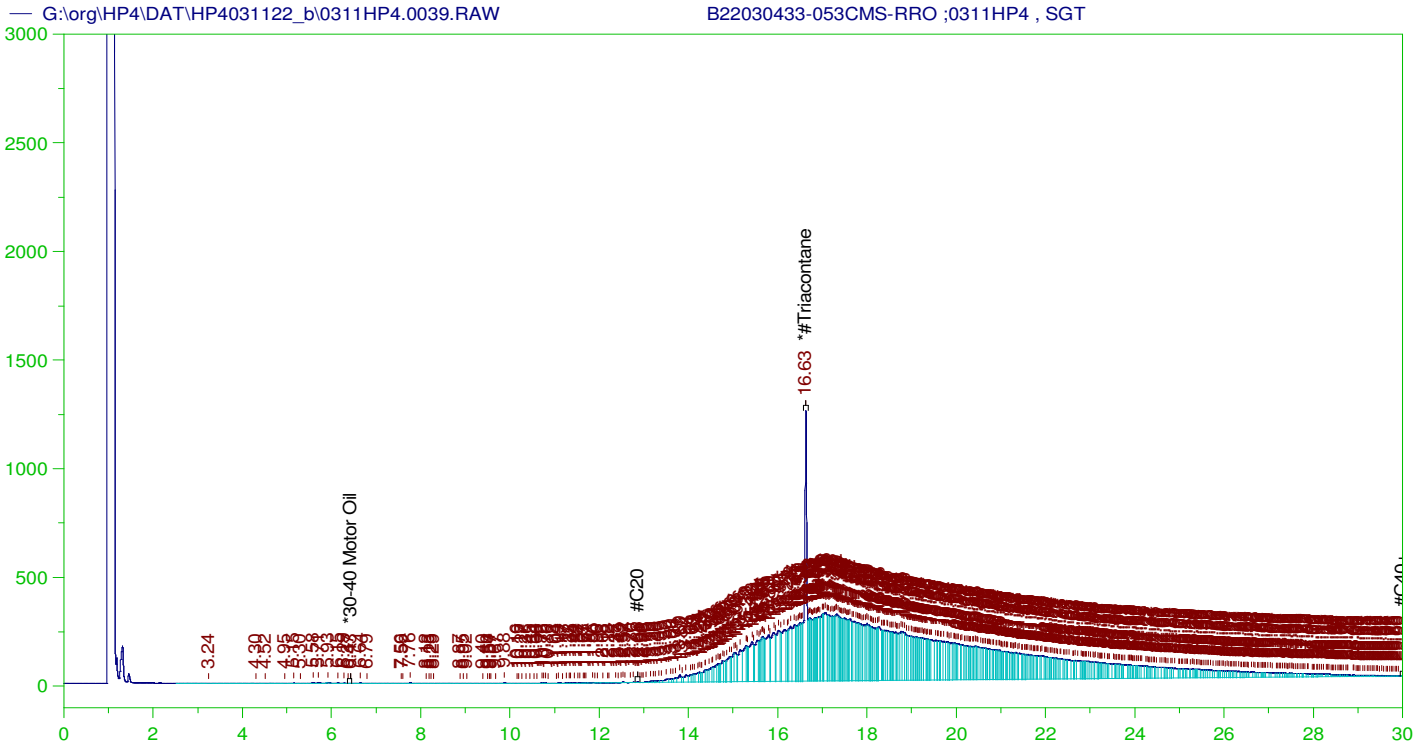
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V38
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0038.RAW
 Date & Time Acquired: 3/12/2022 5:14:30 PM
 Method File: G:\Org\HP4\methods\DR_8015-OJ-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.34 to 16.17

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.896	200.	.	-
*1-Chlorooctadecane	29.896	200.	.	-

DRO Area:141379 DRO Amount: 4.813186
 TEH Area:663363.4 TEH Amount: 22.58391



RESIDUAL RANGE ORGANICS CHROMATOGRAM

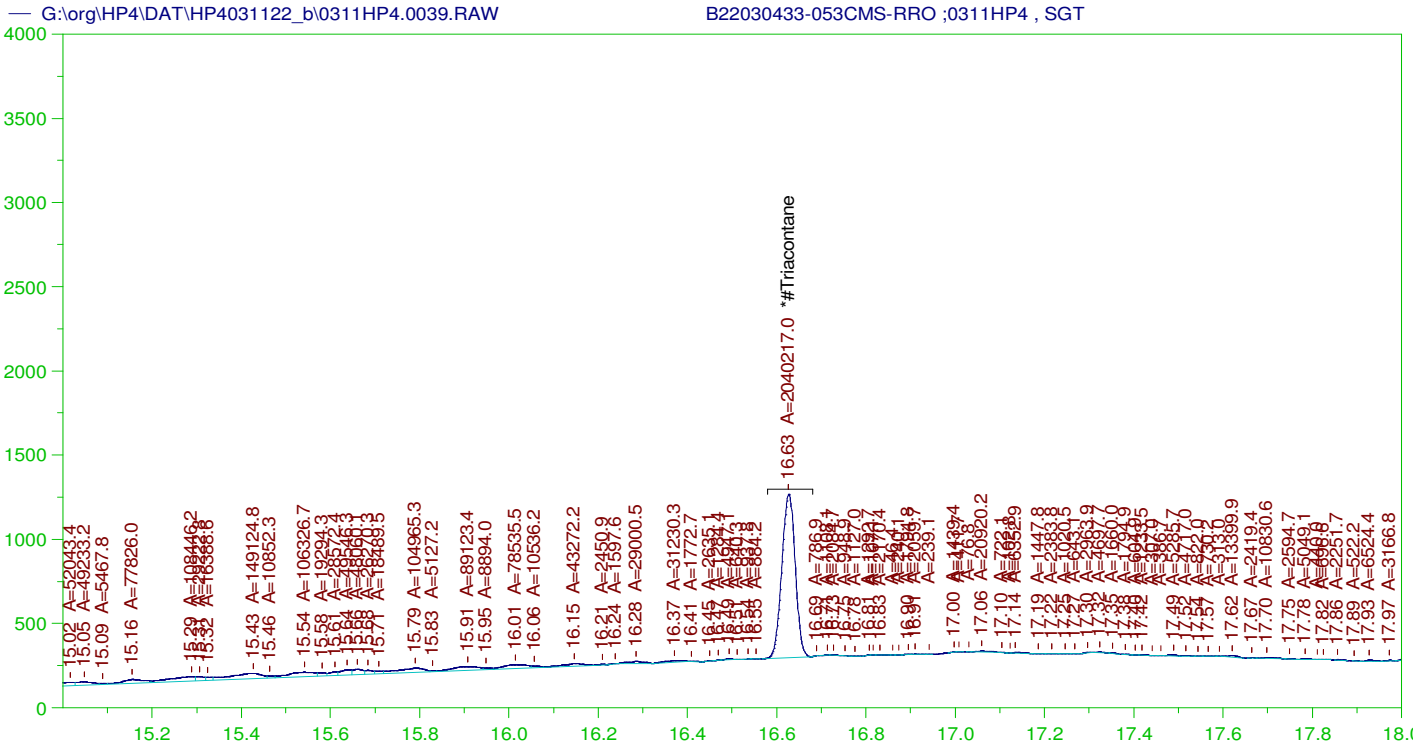
Sample Name: B22030433-053CMS-RRO ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0039.RAW
 Date & Time Acquired: 3/12/2022 6:00:07 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.627	.481	.151	31.44	-

RRO TEH(Oil Range) Area:1.060371E+08 RRO TEH(Oil Range) AMOUNT: 4.156566

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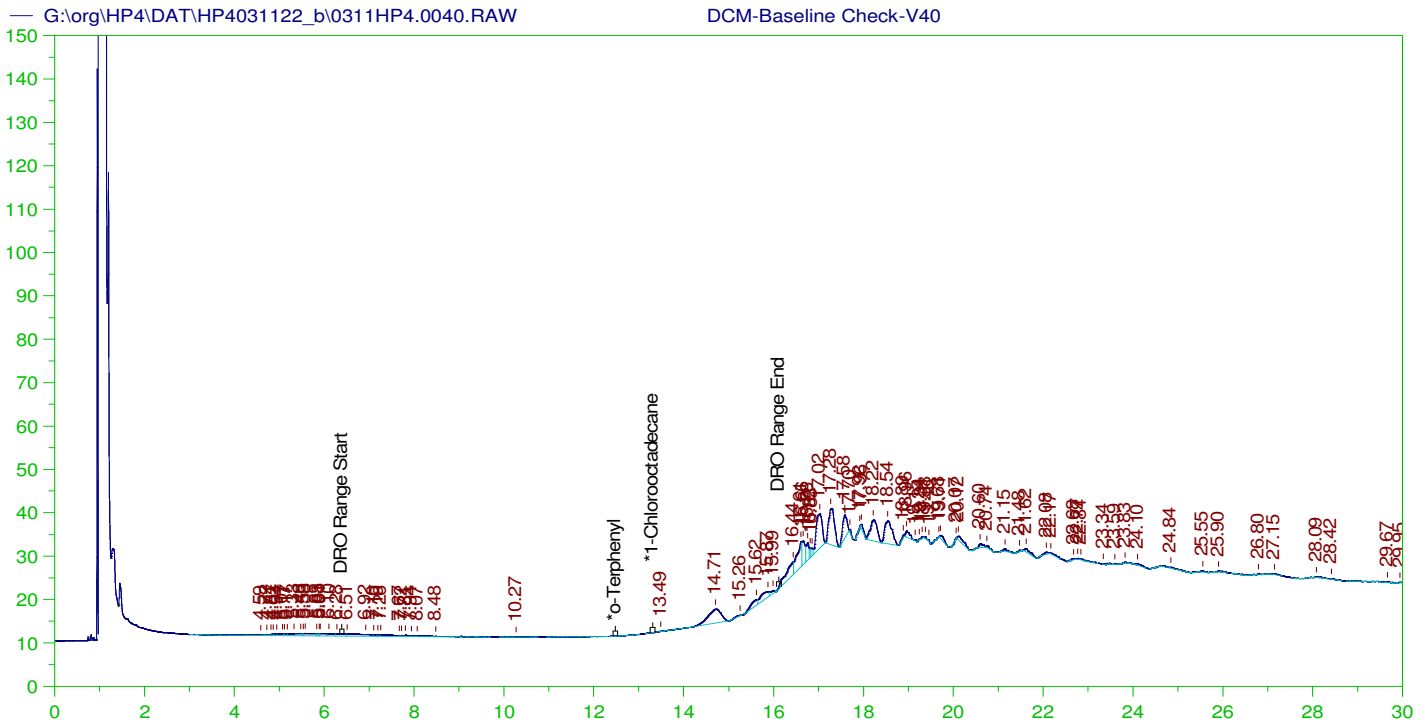
RESIDUAL RANGE ORGANICS CHROMATOGRAM

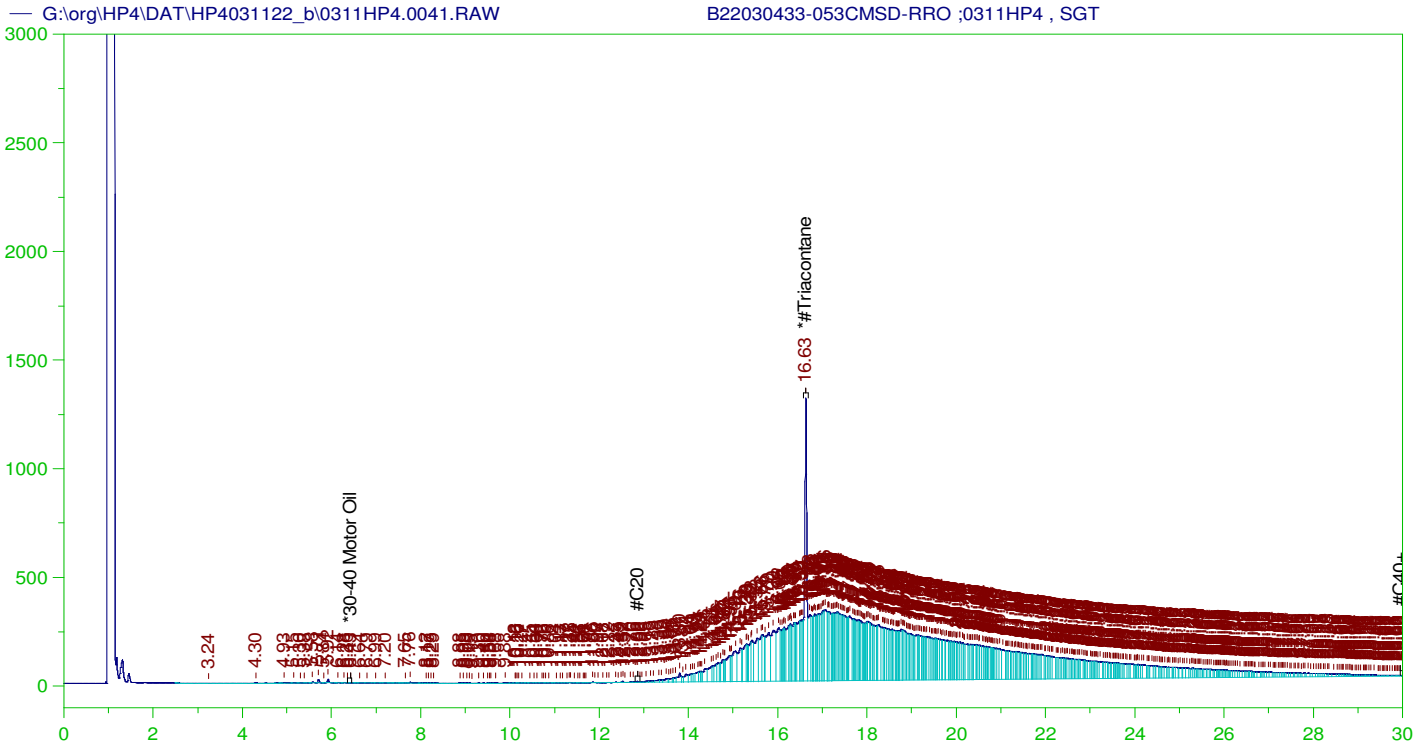
Sample Name: B22030433-053CMS-RRO ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0039.RAW
 Date & Time Acquired: 3/12/2022 6:00:07 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.627	.481	.079	16.34

RRO Area:2168343 RRO AMOUNT: 8.499725E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

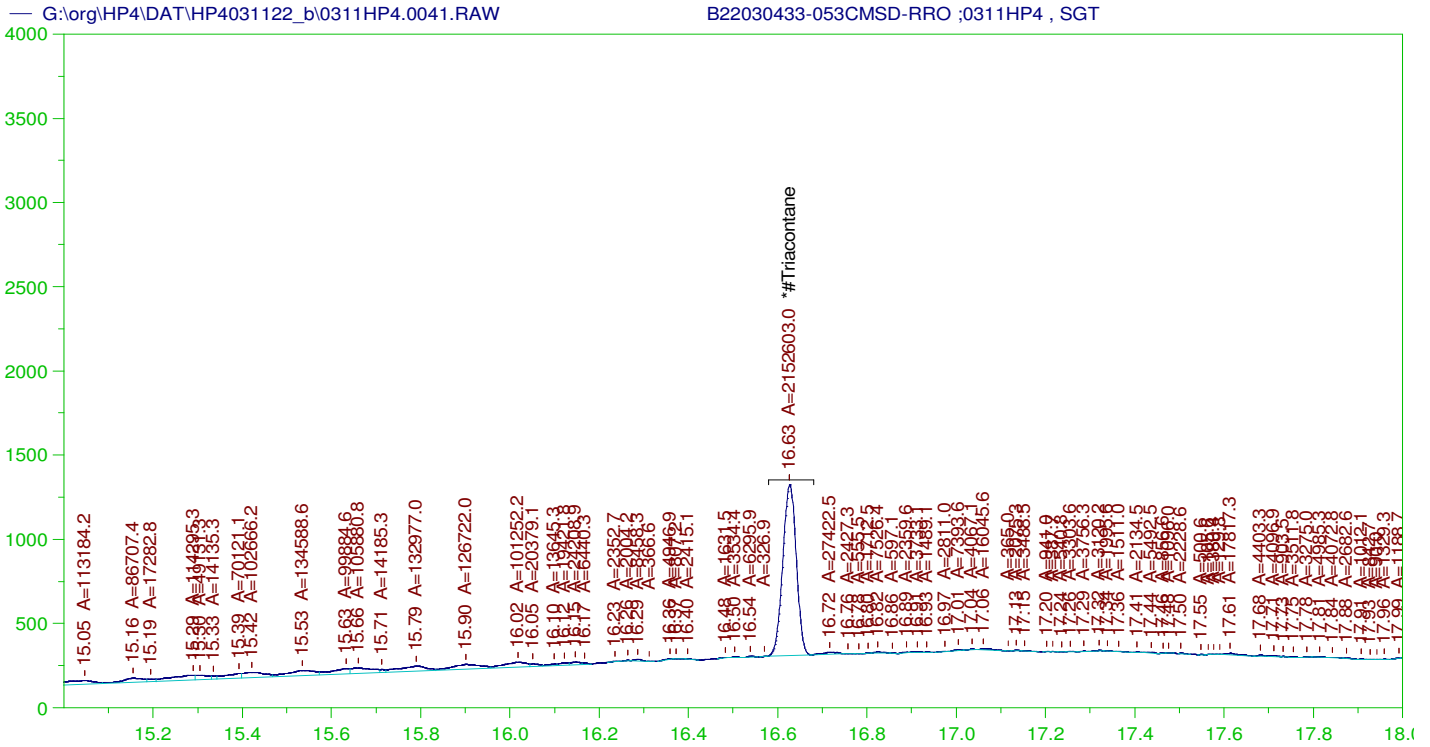
Sample Name: B22030433-053CMSD-RRO ;0311HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0041.RAW
 Date & Time Acquired: 3/12/2022 7:31:30 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.627	.485	.152	31.3	-

~~RRO~~ TEH(Oil Range) Area:1.101326E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.35902

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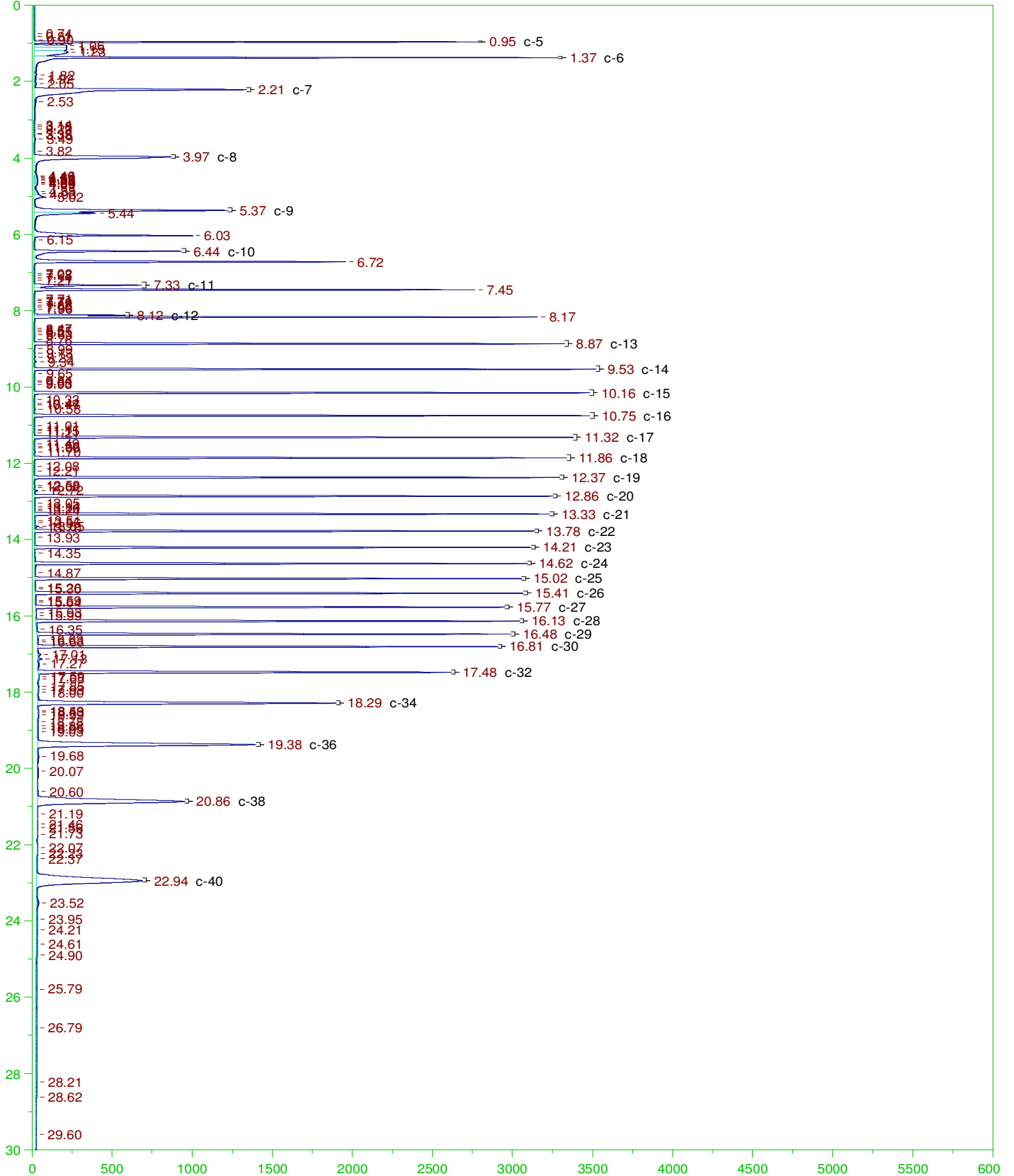
RESIDUAL RANGE ORGANICS CHROMATOGRAM

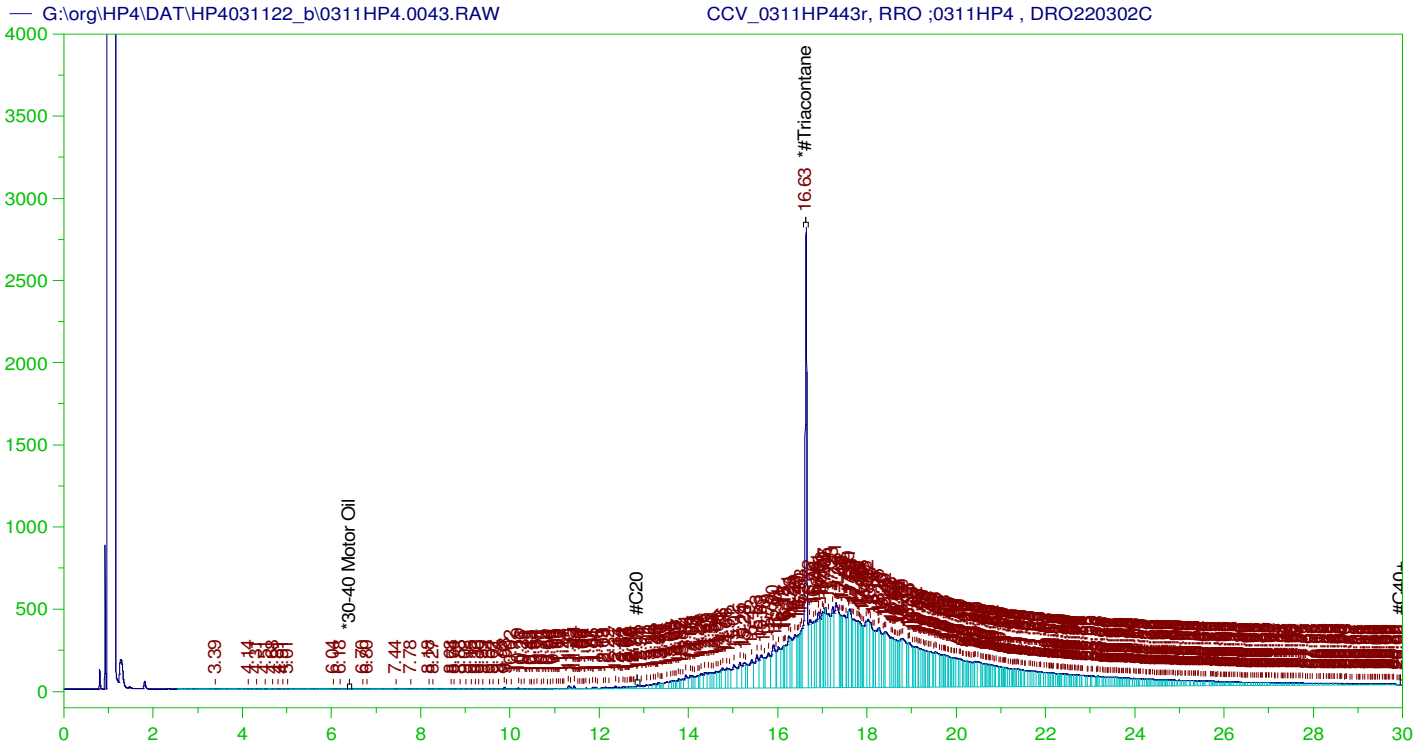
Sample Name: B22030433-053CMSD-RRO ;0311HP4 , SGT
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 Date & Time Acquired: 3/12/2022 7:31:30 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.627	.485	.084	17.24

RRO Area:2432204 RRO AMOUNT: 9.626601E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP443r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0043.RAW
 Date & Time Acquired: 3/12/2022 9:02:56 PM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.631	500.	330.504	66.1	-

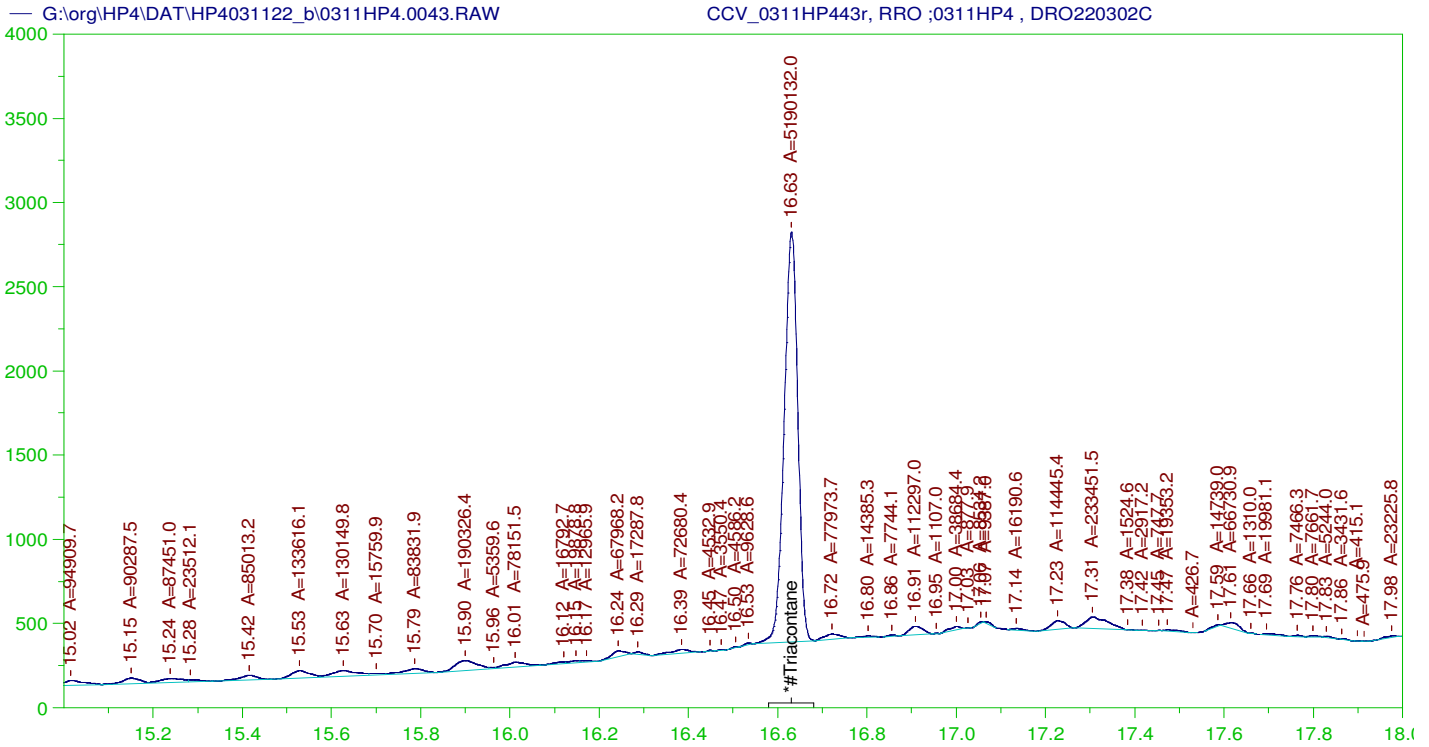
~~RRO~~ TEH(Oil Range) Area:1.218895E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4969.086

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0043.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.631	200.	330.504	165.25	75-125

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RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0311HP443r, RRO ;0311HP4 , DRO220302C
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0043.RAW
 Date & Time Acquired: 3/12/2022 9:02:56 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AI-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AI.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

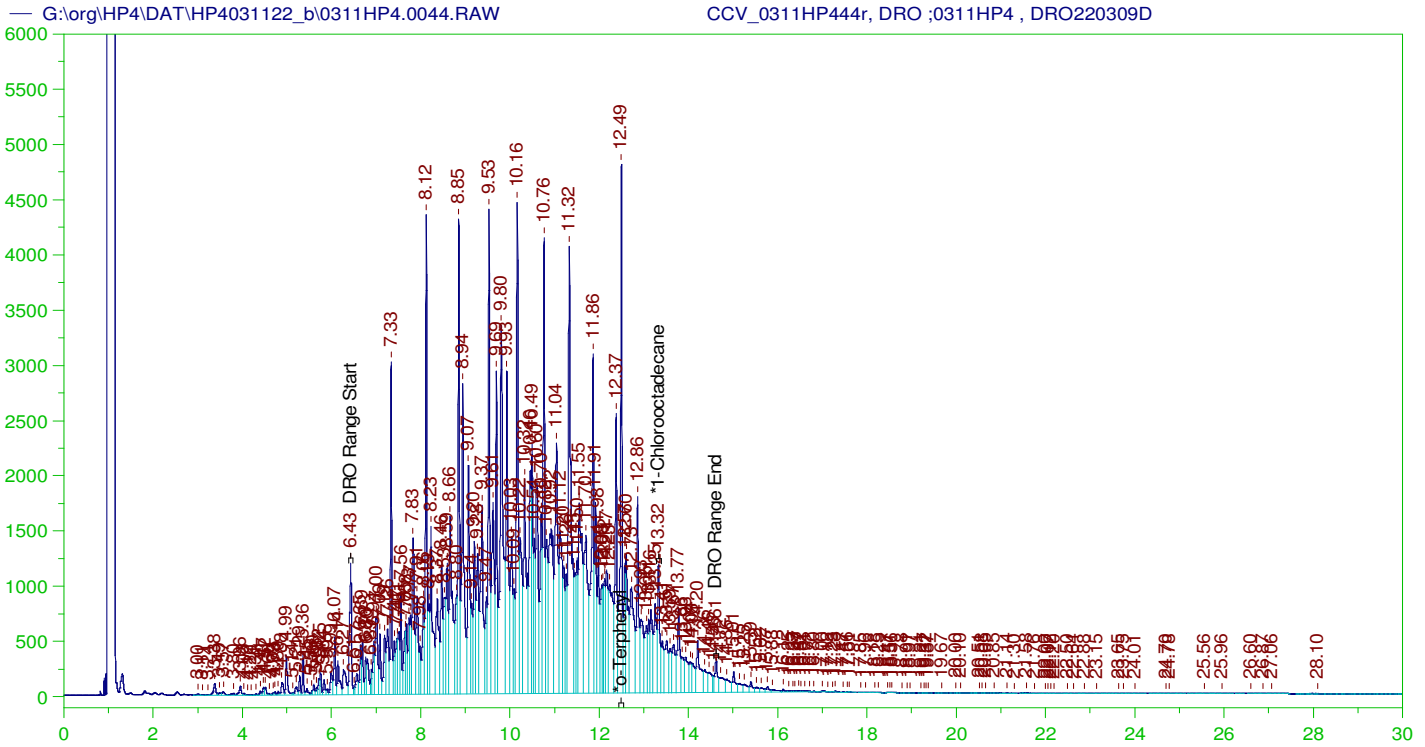
Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.81 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.631	500.	207.823	41.56

RRO Area:3406737 RRO AMOUNT: 138.8829

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0043.RAW
 COMPOUND ACTUAL (NG) MEASURED (NG) %RECOVERY LIMITS
 *30-40 Motor Oil 5000. . 75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.631	200.	207.823	103.91	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0311HP444r, DRO ;0311HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0044.RAW
 Date & Time Acquired: 3/12/2022 9:48:30 PM
 Method File: G:\Org\HP4\methods\DC_8015-C24-OO-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.38 to 14.67

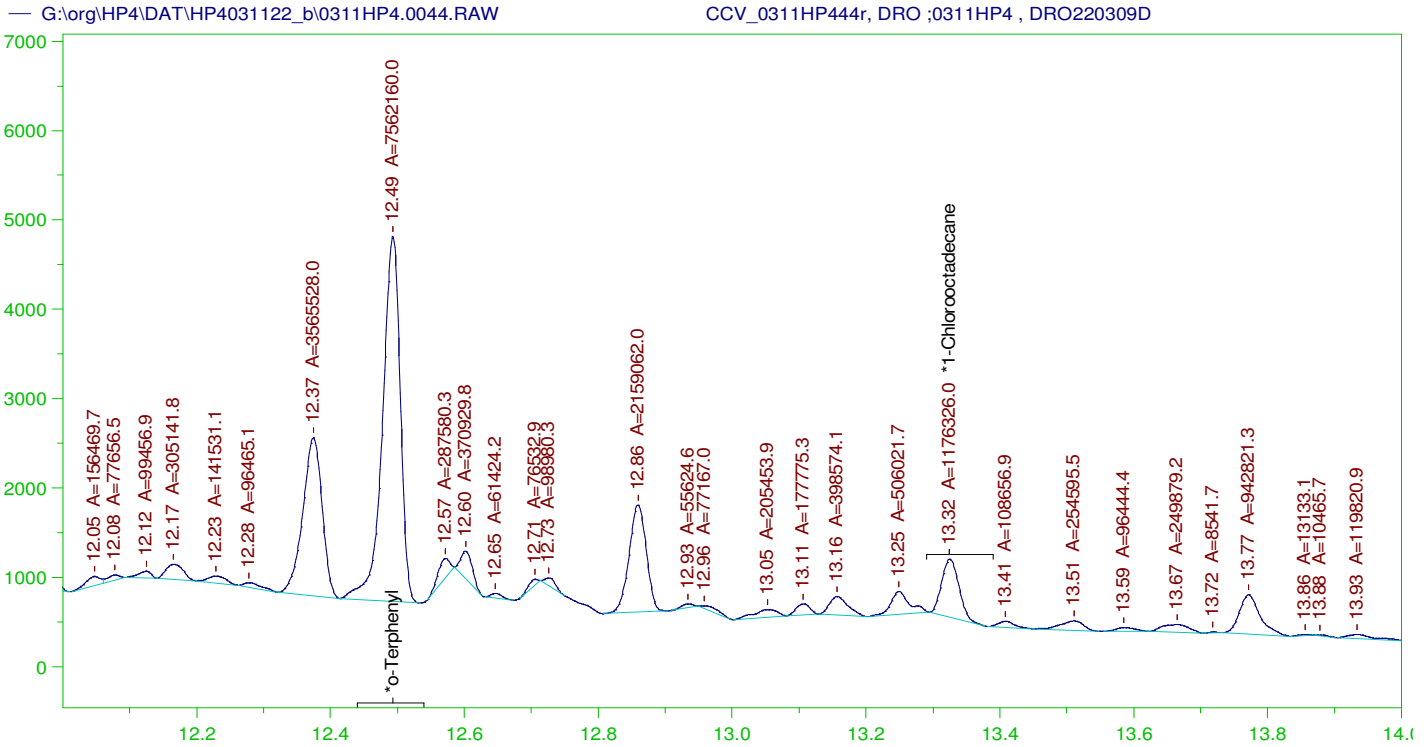
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.493	200.	379.227	189.61
*1-Chlorooctadecane	13.325	200.	112.714	56.36

DRO Area: 4.44835E+08 DRO Amount: 15144.21
 TEH Area: 4.614244E+08 TEH Amount: 15708.98

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0044.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15708.98	104.73	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.493	200.	379.227	189.61	85-115
*1-Chlorooctadecane	13.325	200.	112.714	56.36	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0311HP444r, DRO ;0311HP4 , DRO220309D
 Raw File: G:\org\HP4\DAT\HP4031122_b\0311HP4.0044.RAW
 Date & Time Acquired: 3/12/2022 9:48:30 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OO-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO21110200-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.38 to 14.67

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.493	200.	226.958	113.48
*1-Chlorooctadecane	13.325	200.	35.304	17.65

DRO Area: 2.176523E+08 DRO Amount: 7409.876
 TEH Area: 2.279267E+08 TEH Amount: 7759.66

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4031122_b\0311HP4.0044.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7759.66	51.73	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.493	200.	226.958	113.48	85-115
*1-Chlorooctadecane	13.325	200.	35.304	17.65	85-115

Write Sequence	Data File	Insert Entries/Have the first cell for entries selected	Sample Name	Method	Weight	Dil Factor	Amnt Inj.	IS	Cal ID	Manual Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.01r	DCM-Baseline Check-V01			G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.02r	MARKER_0309HP402r_DRO_0309HP4_DRO220218B			G:\org\HP4\Methods\CSC220309.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.03r	CCV_0309HP403r_RRO_0309HP4_DRO220302C			G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.04r	CCV_0309HP404r_DRO_0309HP4_DRO220301A			G:\Org\HP4\methods\DC_8015-C24-ON-L%.met G:\Org\HP4\methods\DS_8015-C24-ON-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 17.1 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.05r	DCM-Baseline Check-V05			G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.06r	LCS-164312_0309HP4			G:\Org\HP4\methods\DR_8015-C24-ON-L%.met G:\Org\HP4\methods\DS_8015-C24-ON-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. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.07r	MB-164312_0309HP4			G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-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 17.39 minutes and 17.07 minutes for C24-C40. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.08r	B22030433-053C_0309HP4_SHC-8015-DRO-W			G:\Org\HP4\methods\DR_8015-030908-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-030908-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L%.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Adjusted Peak Width. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.09r	B22030433-053CMS_0309HP4			G:\Org\HP4\methods\DR_8015-C24-ON-L%.met G:\Org\HP4\methods\DS_8015-C24-ON-L%.met	1050	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. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.10r	B22030433-053CMSD_0309HP4			G:\Org\HP4\methods\DR_8015-C24-ON-L%.met G:\Org\HP4\methods\DS_8015-C24-ON-L%.met	1030	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. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.11r	DCM-Baseline Check-V11			G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.12r	B22030433-001C_0309HP4_SHC-8015-DRO-W			G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L%.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 17.07 minutes for C24-C40. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.13r	B22030433-002A_0309HP4_SHC-8015-DRO-W			G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L%.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 17.07 minutes for C24-C40. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.14r	B22030433-038C_0309HP4_SHC-8015-DRO-W			G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L%.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 17.07 minutes for C24-C40. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.15r	B22030433-058C_0309HP4_SHC-8015-DRO-W			G:\Org\HP4\methods\DR_8015-030915-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-030915-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L%.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Set Baseline Now assigned at 25.48 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.16r	B22030433-059A_0309HP4_SHC-8015-DRO-W			G:\Org\HP4\methods\DR_8015-030916-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-030916-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L%.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Set Baseline Now assigned at 24.74 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.17r	MARKER_0309HP417r_DRO_0309HP4_DRO220218B			G:\org\HP4\Methods\CSC220309.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.18r	CCV_0309HP418r_RRO_0309HP4_DRO220302C			G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.

G:\org\HP4\DAT\HP4030922_b\0309HP4.46r	B22030502-026C_0309HP4 , \$HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-030946-ON-L%.met G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L#.met	1050	1	1	1	0	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. Have Peak Width assigned at 12.1 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.47r	MARKER_0309HP447r, DRO_0309HP4 , DRO220218B	g:\org\HP4\Methods\CSC220309.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.48r	CCV_0309HP448r, RRO_0309HP4 , DRO220302C	G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1	1	1	1	0	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.49r	CCV_0309HP449r, DRO_0309HP4 , DRO220309D	G:\Org\HP4\methods\DC_8015-C24-ON-L%.met G:\Org\HP4\methods\DS_8015-C24-ON-L#.met	1	1	1	1	0	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 17.1 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.50r	DCM-Baseline Check-V50	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.51r	B22030433-017C_0309HP4 , \$HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L#.met	1050	1	1	1	0	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.52r	DCM-Baseline Check-V52	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.53r	DCM-Baseline Check-V53	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.54r	B22030433-018A_0309HP4 , \$HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-ON-L%.met G:\Org\HP4\Methods\D3_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L#.met	1000	1	1	1	0	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.55r	DCM-Baseline Check-V52	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.56r	DCM-Baseline Check-V53	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.57r	LCS-164312-RRO_0309HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1000	1	1	1	0	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.58r	DCM-Baseline Check-V55	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.59r	B22030433-053CMS-RRO_0309HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1040	1	1	1	0	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.60r	DCM-Baseline Check-V57	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.61r	B22030433-053CMSD-RRO_0309HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1030	1	1	1	0	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.62r	MARKER_0309HP459r, DRO_0309HP4 , DRO220218B	g:\org\HP4\Methods\CSC220309.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.63r	CCV_0309HP460r, RRO_0309HP4 , DRO220302C	G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1	1	1	1	0	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.64r	CCV_0309HP461r, DRO_0309HP4 , DRO220309D	G:\Org\HP4\methods\DC_8015-C24-ON-L%.met G:\Org\HP4\methods\DS_8015-C24-ON-L#.met	1	1	1	1	0	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 17.1 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.65r	DCM-Baseline Check-V65	G:\Org\HP4\methods\DR_8015-OJ-LEXP.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.66r	B22030502-031C_0309HP4 , \$HC-8015-DRO-W, RR	G:\Org\HP4\methods\DR_8015-C24T-ON-L%.met G:\Org\HP4\Methods\DR_ORO-S-AH-L%.met G:\Org\HP4\methods\DS_8015-T-ON-L#.met	1050	1	1	1	0	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 17.39 minutes and 17.07 minutes for C24-C40. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley assigned at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.67r	MARKER_0309HP467r, DRO_0309HP4 , DRO220218B	g:\org\HP4\Methods\CSC220309.met	1	1	1	1	0	1	0	No Integration
G:\org\HP4\DAT\HP4030922_b\0309HP4.68r	CCV_0309HP468r, RRO_0309HP4 , DRO220302C	G:\Org\HP4\Methods\DC_ORO-T-AH-L%.met G:\Org\HP4\Methods\DS_ORO-T-AH-L%.met	1	1	1	1	0	1	0	The integration of Oil Range hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4030922_b\0309HP4.69r	CCV_0309HP469r, DRO_0309HP4 , DRO220309D	G:\Org\HP4\methods\DC_8015-C24-ON-L%.met G:\Org\HP4\methods\DS_8015-C24-ON-L#.met	1	1	1	1	0	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 17.1 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.

Jillian Bostwick
Analyst

Digitally signed by
Jillian L. Bostwick
Date: 2022.03.11 14:54:46 -07:00

G:\org\HP4\DAT\HP4031122_b\0311HP4.44r	CCV_0311HP444r, DRO .0311HP4 . DRO220309D	G:\Org\HP4\methods\DC_8015-C24-OO-L%.met G:\Org\HP4\methods\DS_8015-C24-OO-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 17.1 minutes. Surrogates are integrated using a valley to valley integration. Set Baseline All Valley on assigned at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
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Jillian Bostwick
Analyst

Digitally signed by
Jillian L. Bostwick
Date: 2022.03.14 13:38:59 -06:00



Analytical RunID GCFID-HP4-B_211006C Standards Traceability Report

Standard ID: DRO210406A

Standard Name: Triacontane-d62 Surr For AK103 RRO

Prep Date: 4/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: MBBC4347

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	13736	500	mg	4/6/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211006C Standards Traceability Report

Standard ID: DRO211006A

Standard Name: Triacontane SURR 2000 ug/mL

Prep Date: 10/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	50	mL	4/6/2026
Stock Source	Base Units	Amount Added		
DRO210406A	ug/mL	0.1001 g		

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: _____

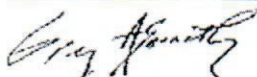
Triacontane-d62-98 atom % D

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.



Analytical RunID GCFID-HP4-B_211006A Standards Traceability Report

Standard ID: DRO180918C

Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DCM

Prep Date: 9/18/2018

Exp Date: 8/31/2025

Department: dropr

Vendor: Restek

Lot Number: A0140080

Balance ID: Sartorius 4 place balance

Comments:

Type: Primary

Prep By: Ann Nebel

Status: Open

Final Volume: 1 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Residual Range Cailbration Standard	10787	1	mL	8/31/2025
Stock Source	Base Units	Amount Added		
DRO180918C	ug/mL			



Analytical RunID GCFID-HP4-B_211006A Standards Traceability Report

Standard ID: DRO210901A

Standard Name: 30W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: F1620C1

Balance ID:

Comments: Used to make 2nd Source Standard for AK103 method.

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211006A Standards Traceability Report

Standard ID: DRO210901B

Standard Name: 40W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: L0717H2

Balance ID:

Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 40 Motor Oil	14231		mL	9/1/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211006A Standards Traceability Report

Standard ID: DRO210902A

Standard Name: 50,000 ug/mL Oil Std for RRO-In DCM

Prep Date: 9/2/2021

Exp Date: 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

Prep By: Jillian L Bostwick

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EB867	14196	25	mL	9/1/2026

Stock Source	Base Units	Amount Added
DRO210901A	ug/mL	0.6254 g
DRO210901B	ug/mL	0.6261 g

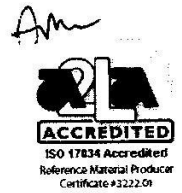


110 Benner Circle
 Bellefonte, PA 16823-8812
 Tel: (800)356-1688
 Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

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)		
J	Motor Oil SAE30 & SAE40 Blend (Pennzoil)	50,113.0 µg/mL	+/- 293.4226	µg/mL	Gravimetric
	CAS # 64742-65-0.F (Lot A0126386)		+/- 1,492.4284	µg/mL	Unstressed
	Purity ----%		+/- 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



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO180126C

Standard Name: 2-Fluorobiphenyl

Prep Date: 1/26/2018

Exp Date: 10/31/2024

Department: dropr

Vendor: Chemservice

Lot Number: 5599700

Balance ID:

Comments:

Type: Neat

Prep By: Todd C Cooper

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
2-Fluorobiphenyl	10069		mL	10/31/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO180823A

Standard Name: 2-Bromonaphthalene

Prep Date: 8/22/2016

Exp Date: 5/31/2022

Department: dropr

Vendor: Chemservice

Lot Number: 3150700

Balance ID:

Comments:

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
2-Bromonaphthalene	10701		mL	5/31/2022
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO181105A

Standard Name: #2 Diesel (NEAT)

Prep Date: 11/5/2018

Exp Date: 11/5/2023

Department: dropr

Vendor: conoco

Lot Number:

Balance ID:

Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: 250 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
				11/5/2023
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

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

Type: Neat
Prep By: Ann Nebel
Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	12650	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

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

Type: Neat
Prep By: Ann Nebel
Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	13191	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO201014C

Standard Name: 1-Chlorooctadecane

Prep Date: 10/14/2019

Exp Date: 12/31/2024

Department: dropr

Vendor: CSI1

Lot Number: 10809500

Balance ID:

Comments: Date Certified: 12/9/16 ; N-10042-1G; 99.5% purity

Type: Neat

Prep By: Ann Nebel

Status: Open

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
1-Chlorooctadecane	13192	1	g	12/31/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO210708E

Standard Name: Ali Hydro Std 1000ug/mL

Prep Date: 7/8/2021

Exp Date: 9/30/2022

Department: dropr

Vendor: Agilent

Lot Number: 0006562506

Balance ID:

Comments: Ali Hydro Std 1000ug/mL For CCVs.

Type: Primary

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Aliphatic Hydrocarbon Standard	14037	1	mL	9/30/2022
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO211001A

Standard Name: EPH (4) SURR-1000 ug/mL ea. in Hexane

Prep Date: 10/1/2021

Exp Date: 5/31/2022

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: EPH (4) SURR-1000 ug/mL ea. in Hexane

Type: Secondary

Prep By: Jillian L Bostwick

Status: Open

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Hexane EB230	13812	50	mL	5/31/2022

Stock Source	Base Units	Amount Added
DRO180823A	ug/mL	0.051 g
DRO201014B	ug/mL	0.0498 g
DRO180126C	ug/mL	0.0492 g
DRO201014C	ug/mL	0.0505 g



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO211012A

Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM

Prep Date: 10/12/2021

Exp Date: 4/30/2023

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: LRAC6316

Balance ID:

Comments: Diesel Fuel #2 For CCVs.

Type: Primary

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Diesel Fuel No. 2	14376	1	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211012A	ug/mL	



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO211012B

Standard Name: #2 Diesel in Acetone 150,000 ug/mL

Prep Date: 10/12/2021

Exp Date: 11/5/2023

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: #2 Diesel in Acetone 150,000 ug/mL.

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA662	14050	25	mL	11/5/2023

Stock Source	Base Units	Amount Added
DRO181105A	ug/mL	3.7507 g



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Standard ID: DRO211025A

Standard Name: ALI CCV Mix-200ug/mL

Prep Date: 10/25/2021

Exp Date: 5/31/2022

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: ALI CCV Mix-200ug/mL

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 6 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Hexane EB352	14249	3.6	mL	5/31/2022

Stock Source	Base Units	Amount Added
DRO211001A	ug/mL	1.2 mL
DRO210708E	ug/mL	1.2 mL



Analytical RunID GCFID-HP4-B_211101A Standards Traceability Report

Spike ID: DRO211101A

Spike Name: OTP-4000 ug/mL DCM

Prep Date: 11/1/2021

Exp Date: 9/30/2024

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Used to Prep DRO-8015 ICAL and CCV Solutions

Type: Secondary

Prep By: Ann Nebel

Status: Open

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC328	14408	25	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO200430B	ug/mL	0.1012 g

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

Rec'd: 4/30/2020

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

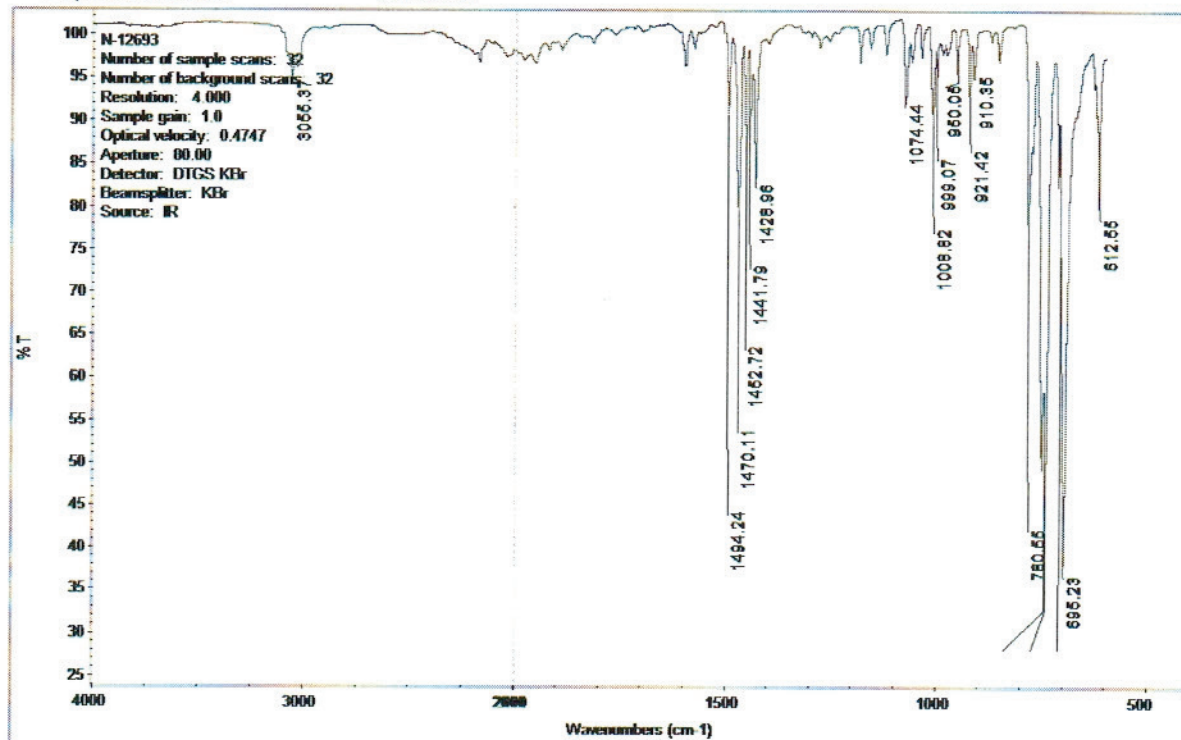
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



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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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



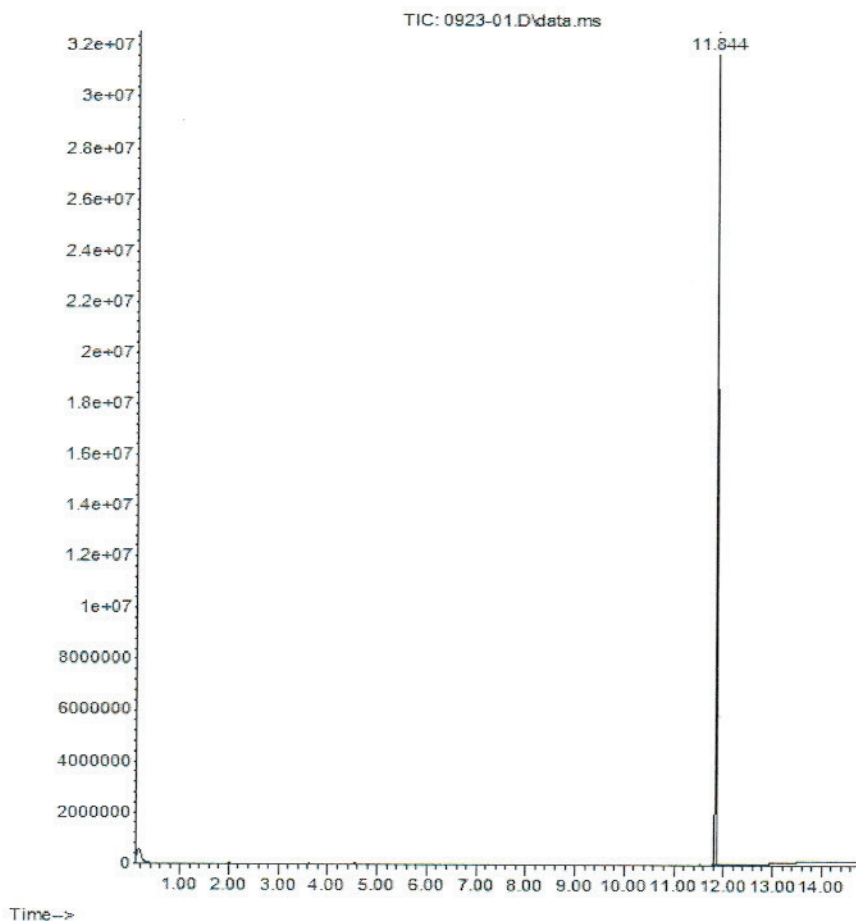
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CERTIFICATE OF ANALYSIS

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



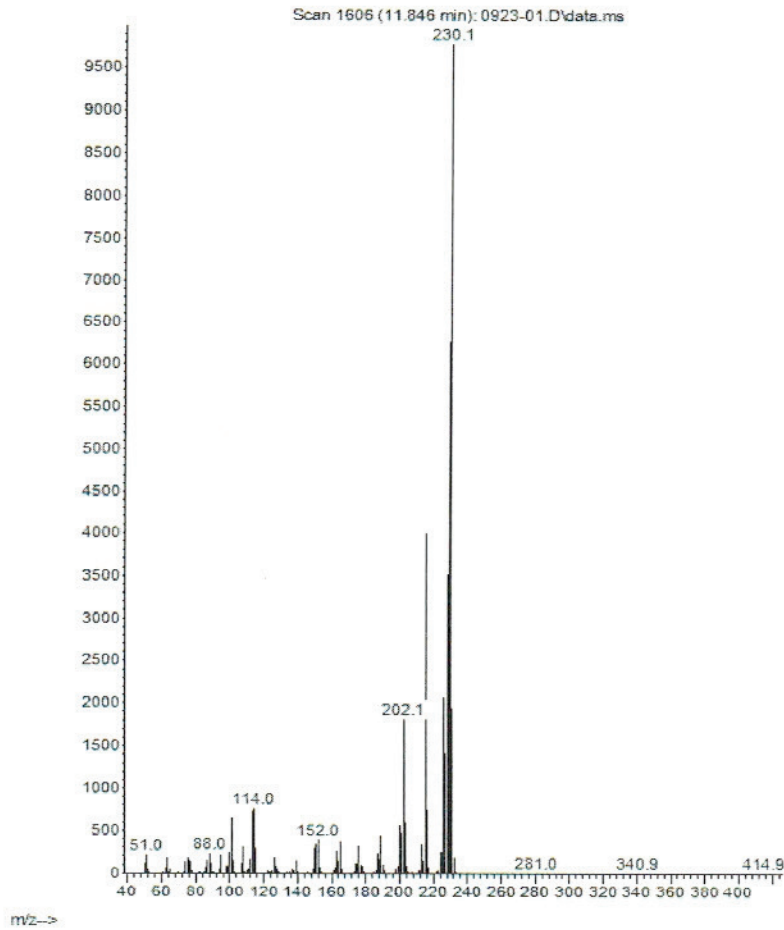
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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

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 • 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



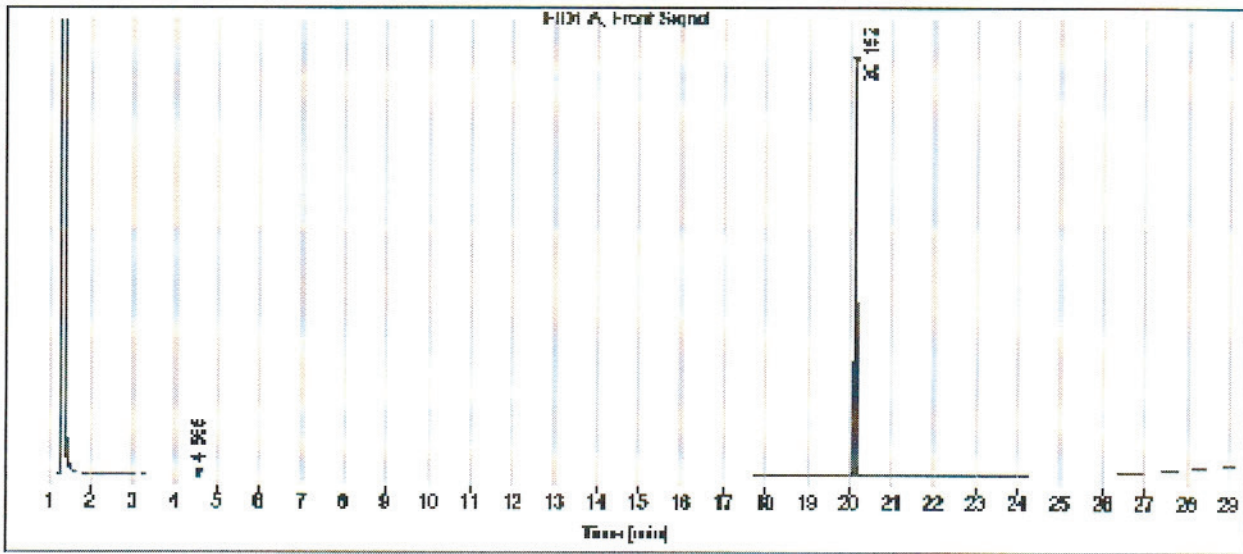
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info@chemservice.com • www.chemservice.com

Gas

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

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



Certificate of Analysis

Certified
Reference
Material

Diesel Fuel No. 2

Description

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

ID #: 14376

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

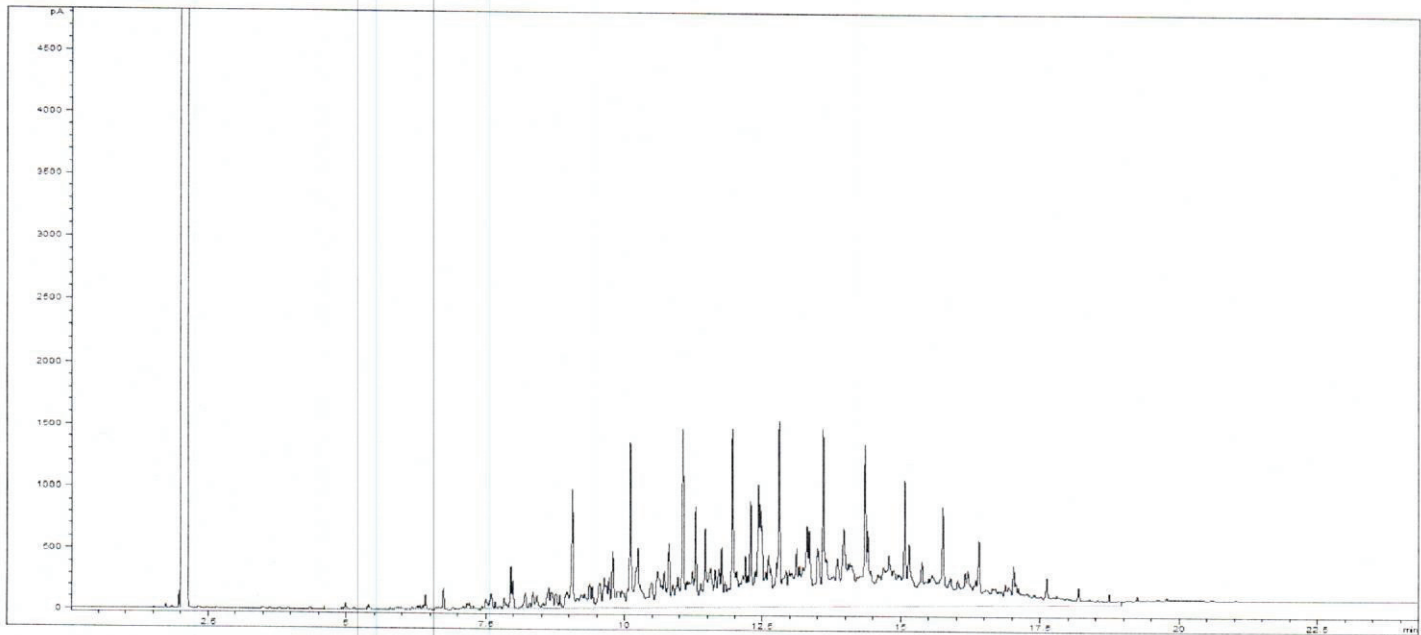
Rec'd: 10/12/2021

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

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:

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

Carrier Gas: H₂, Flow: 4.0 mL/min

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

Injection Mode: Split, Split Ratio: 10:1

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

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832

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

Description

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

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

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

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

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

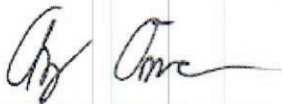
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

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

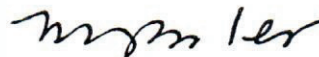
Expiration is at end of month given on certificate and label.

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

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



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020





Prep Batch 164312 Standards Traceability Report

Spike ID: DRO181105A

Spike Name: #2 Diesel (NEAT)

Prep Date: 11/5/2018

Exp Date: 11/5/2023

Department: dropr

Vendor: conoco

Lot Number:

Balance ID:

Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: 250 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
				11/5/2023
Stock Source	Base Units	Amount Added		



Prep Batch 164312 Standards Traceability Report

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

Type: Neat
Prep By: Ann Nebel
Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	12650	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO210901A

Spike Name: 30W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: F1620C1

Balance ID:

Comments: Used to make 2nd Source Standard for AK103 method.

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2026
Stock Source	Base Units	Amount Added		



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO210901B

Spike Name: 40W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: L0717H2

Balance ID:

Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 40 Motor Oil	14231		mL	9/1/2026
Stock Source	Base Units	Amount Added		



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO211123B

Spike Name: Triacontane-d62 Surr For AK103 RRO

Type: Neat

Prep Date: 11/23/2021

Prep By: Ann Nebel

Exp Date: 11/23/2026

Status: New

Department: dropr

Vendor: Sigma-Aldrich

Final Volume: mL

Lot Number: MBBD2031

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	14545		mL	11/23/2026

Stock Source	Base Units	Amount Added
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Prep Batch 164312 Standards Traceability Report

Spike ID: DRO211213A

Spike Name: OTP only SURR 2000 ug/mL

Prep Date: 12/13/2021

Exp Date: 9/30/2024

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: OTP SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 100 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	100	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO200430B	ug/mL	0.2015 g



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO220106C

Spike Name: #2 Diesel in Acetone 150,000 ug/mL

Prep Date: 1/6/2022

Exp Date: 11/5/2023

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments:

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	25	mL	11/5/2023

Stock Source	Base Units	Amount Added
DRO181105A	ug/mL	3.7506 g



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO220112A

Spike Name: 50,000 ug/mL Oil Std for RRO-In DCM

Prep Date: 1/12/2022

Exp Date: 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

Prep By: Jillian L Bostwick

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC832	14647	25	mL	9/1/2026

Stock Source	Base Units	Amount Added
DRO210901A	ug/mL	0.6225 g
DRO210901B	ug/mL	0.6273 g



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO220222A

Spike Name: Triacontane SURR 2000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED092	14828	50	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO211123B	ug/mL	0.1003 g



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO220222B

Spike Name: Triacontane SURR 1000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 2X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 10 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA776	13927	5	mL	11/23/2026
Stock Source	Base Units	Amount Added		
DRO220222A	ug/mL	5 mL		



Prep Batch 164312 Standards Traceability Report

Spike ID: DRO220308C

Spike Name: Triacontane SURR 1000 ug/mL

Prep Date: 3/8/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: 2X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 16 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA776	13927	8	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO220222A	ug/mL	8 mL

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

Rec'd: 4/30/2020

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

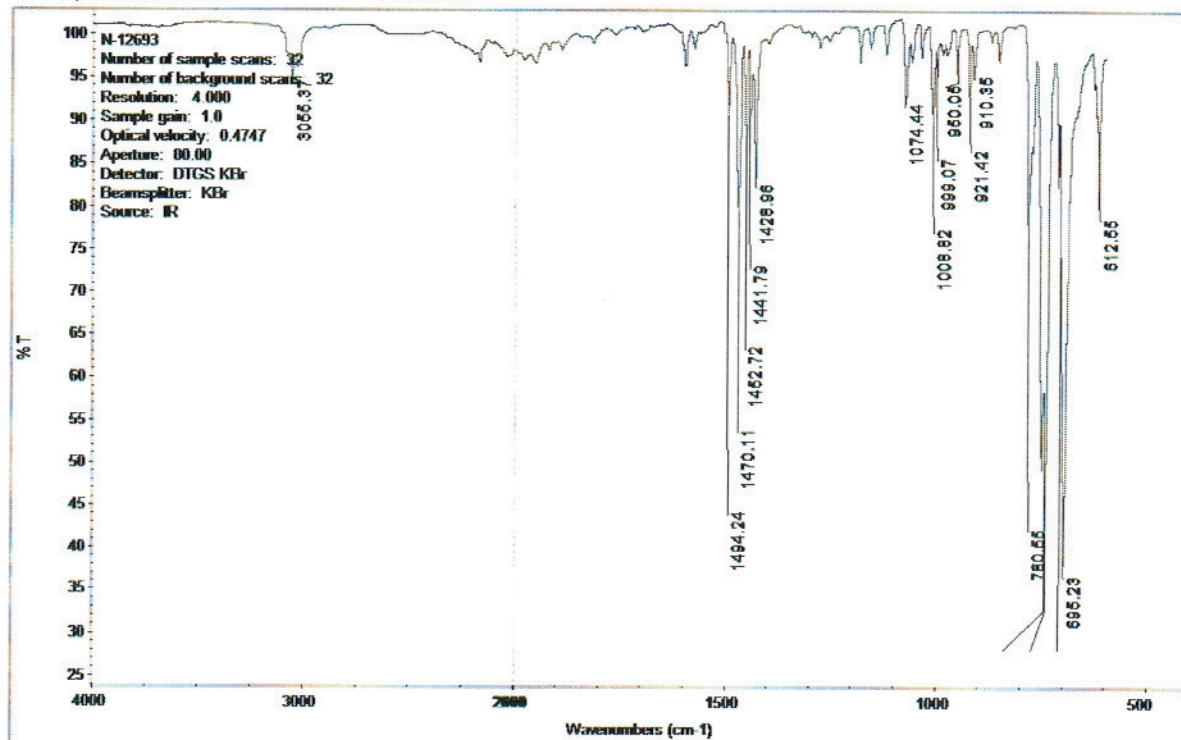
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



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



CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

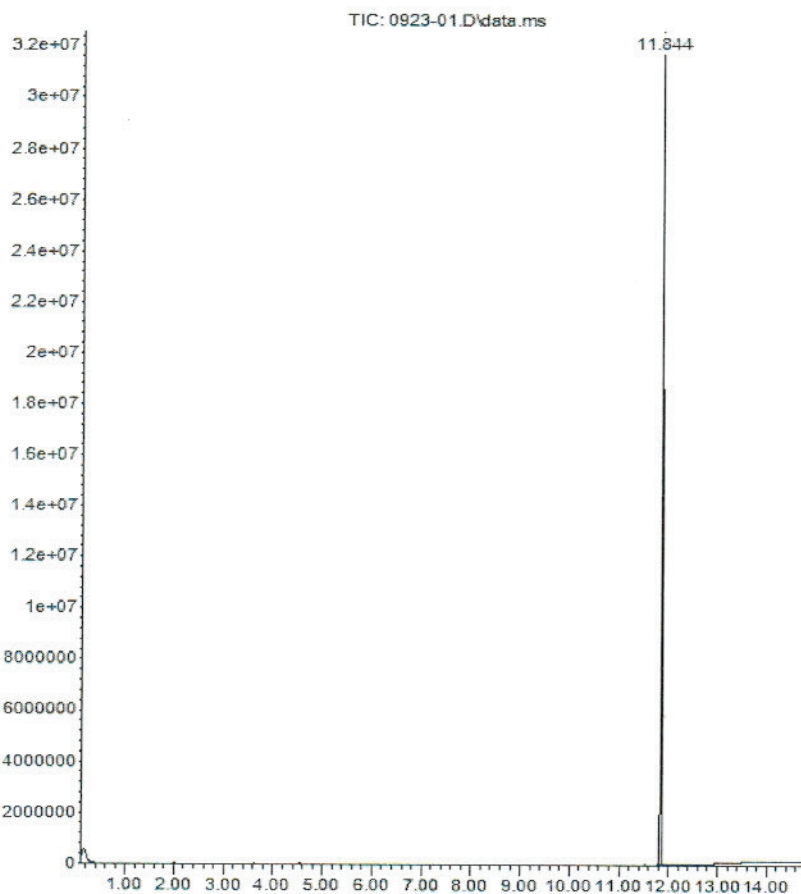
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CERTIFICATE OF ANALYSIS

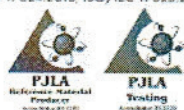
Analysis Method:

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

Abundance



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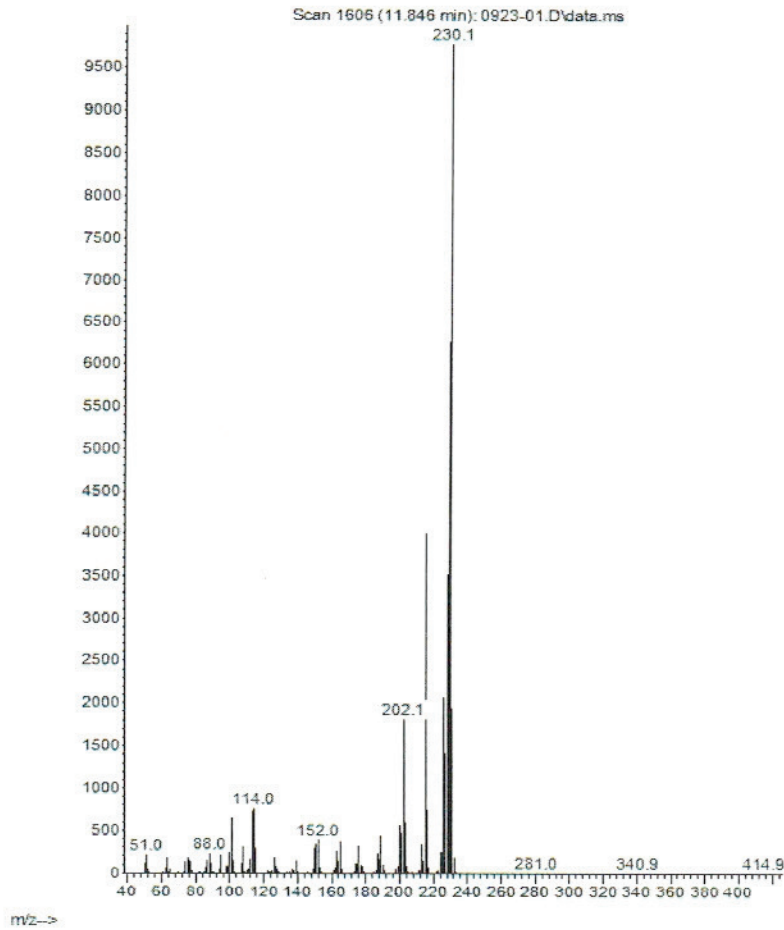
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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



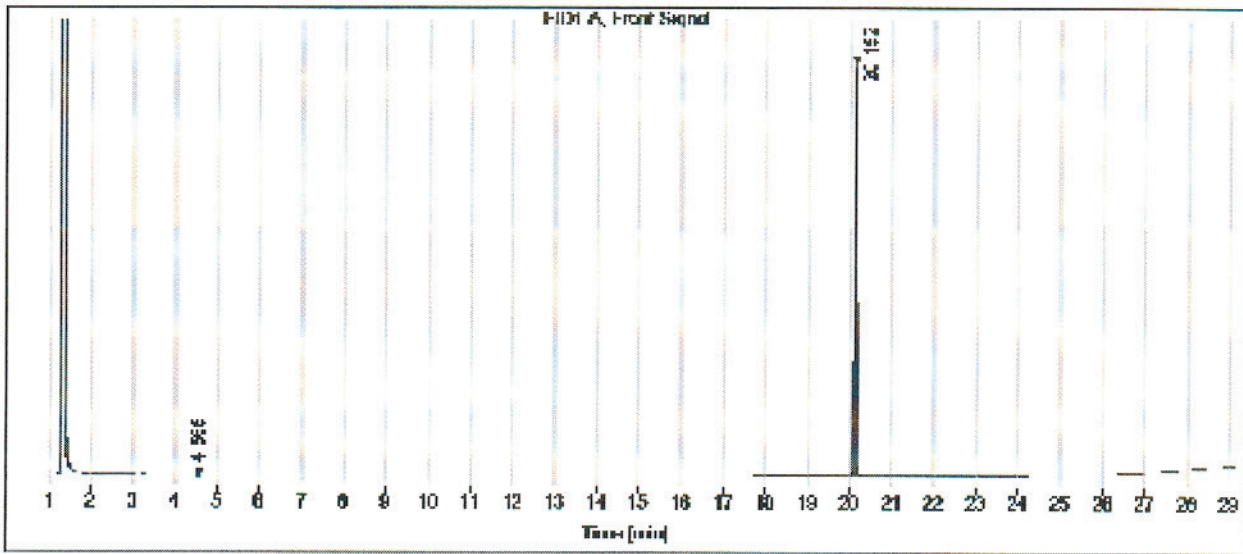
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Gas

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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3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

TRIACONTANE-D62, 98 ATOM % D

Product Number:

451789

Batch Number:

MBBD2031

Brand:

ALDRICH

CAS Number:

93952-07-9

MDL Number:

MFCD00209794

Formula:

C30D62

Formula Weight:

485.20 g/mol

Quality Release Date:

18 JUN 2021



ID #: 14545

Opened: _____

Triacontane-d62-98 atom % D

Expires: 11/23/2026

Rec'd: 11/23/2021

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

Test	Specification	Result
Purity (HPLC)	≥ 99 %	99 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	98.9 %
Initial Melting Point		60 °C
Final Melting Point		62 °C



Laura E. Baird, Manager
Quality Assurance & 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.





Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO200430B

Standard Name: O-Terphenyl

Prep Date: 4/30/2020

Exp Date: 9/30/2024

Department: dropr

Vendor: Chemservice

Lot Number: 9972100

Balance ID:

Comments: ID#: 6271

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	12650	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

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

Type: Secondary
Prep By: Ann Nebel
Status: Open
Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC328	14408	25	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO200430B	ug/mL	0.1012 g



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO211118A

Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DCM

Prep Date: 11/18/2021

Exp Date: 10/31/2028

Department: dropr

Vendor: Restek

Lot Number: A0176667

Balance ID: Sartorius 4 place balance

Comments:

Type: Primary

Prep By: Ann Nebel

Status: Open

Final Volume: 1 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Residual Range Calibration Standard	14531	1	mL	10/31/2028

Stock Source	Base Units	Amount Added
DRO211118A	ug/mL	



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO211123B

Standard Name: Triacontane-d62 Surr For AK103 RRO

Prep Date: 11/23/2021

Exp Date: 11/23/2026

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: MBBD2031

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	14545		mL	11/23/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO211214C

Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM

Prep Date: 12/14/2021

Exp Date: 4/30/2023

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: LRAC6316

Balance ID:

Comments: Diesel Fuel #2 For CCVs.

Type: Primary

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Diesel Fuel No. 2	14623	1	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO220110A

Standard Name: Carbon Scan STD-Marker

Prep Date: 1/11/2022

Exp Date: 7/13/2026

Department: dropr

Vendor: ASI2

Lot Number: 55064

Balance ID:

Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Type: Neat

Prep By: Ann Nebel

Status: Open

Final Volume: 1.2 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
n-Hydrocarbons- C5 to C30, C32, C34, C36, C38, C40	14737	1.2	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO220218B

Standard Name: Carbon Scan STD-Marker

Prep Date: 2/18/2022

Exp Date: 7/13/2026

Department: dropr

Vendor: ASI2

Lot Number: 071306

Balance ID:

Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Type: Primary

Prep By: Jillian L Bostwick

Status: Open

Final Volume: 2.3 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Carbon Disulfide 55064	7477	1.15	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	1.15 mL



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO220222A

Standard Name: Triacontane SURR 2000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED092	14828	50	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO211123B	ug/mL	0.1003 g



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO220222B

Standard Name: Triacontane SURR 1000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 2X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 10 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA776	13927	5	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO220222A	ug/mL	5 mL



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO220301A

Standard Name: 8015 CCV-15,000ug/mL + 200 OTP

Prep Date: 3/1/2022

Exp Date: 4/30/2023

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED092	14828	2.6	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	1.2 mL
DRO211101A	ug/mL	0.2 mL



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO220302C

Standard Name: 5,000 ug/mL RRO CCV 200 ug/mL Triacontane

Prep Date: 3/2/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: CCV for AK102 and 8015C RRO.

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED241	14920	2.8	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO220222B	ug/mL	800 µL
DRO211118A	ug/mL	400 µL



Analytical RunID GCFID-HP4-B_220309A Standards Traceability Report

Standard ID: DRO220309D

Standard Name: 8015 CCV-15,000ug/mL + 200 OTP

Prep Date: 3/9/2022

Exp Date: 4/30/2023

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED241	14920	2.6	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	1.2 mL
DRO211101A	ug/mL	0.2 mL

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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

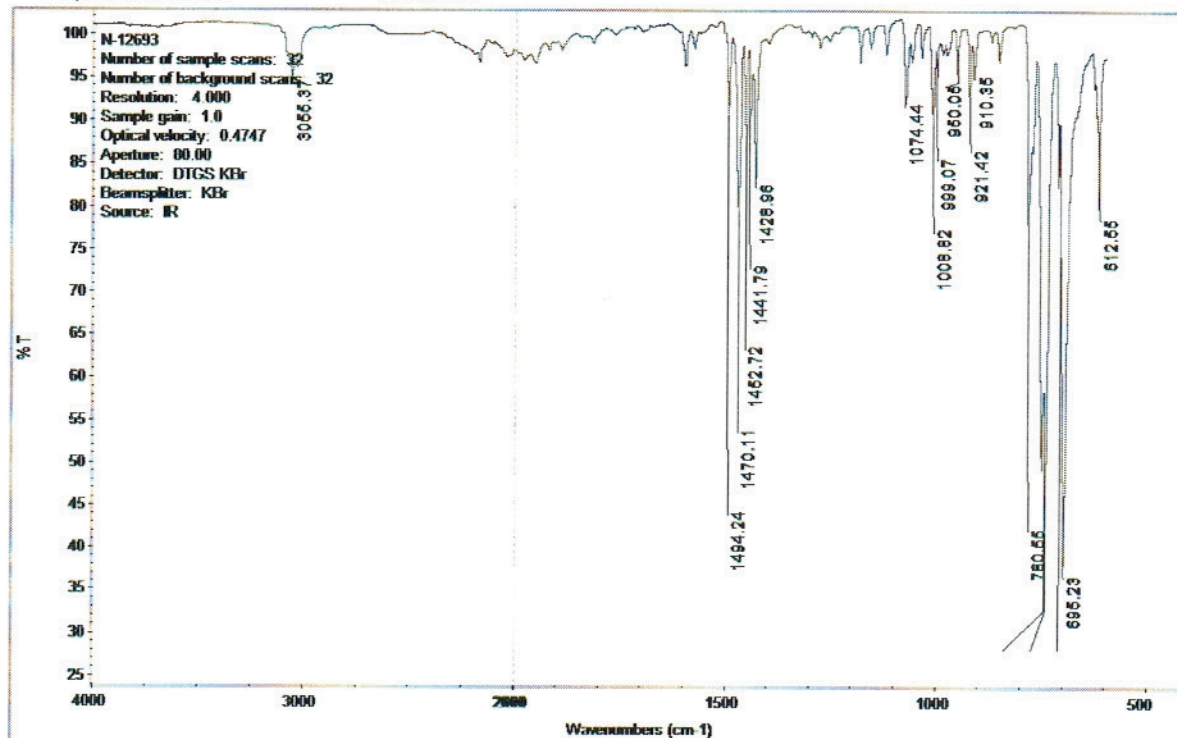
Energyl Laboratories Inc 1120 So. 27th Street

Billings MT 59107

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



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

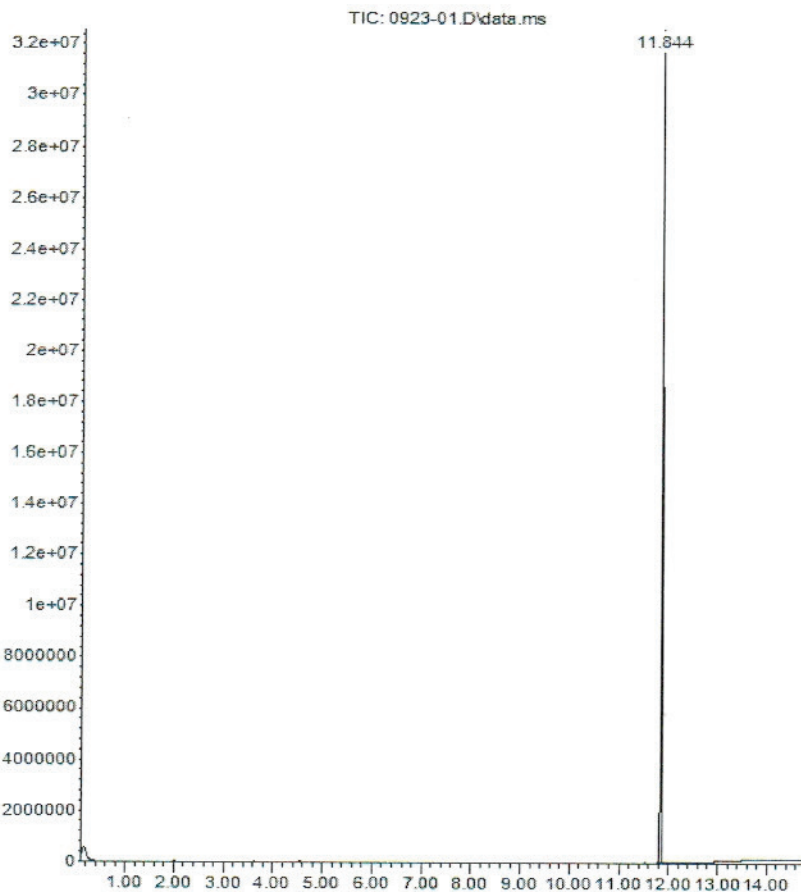
ERIN.M Mon Sep 23 10:55:51 2019

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



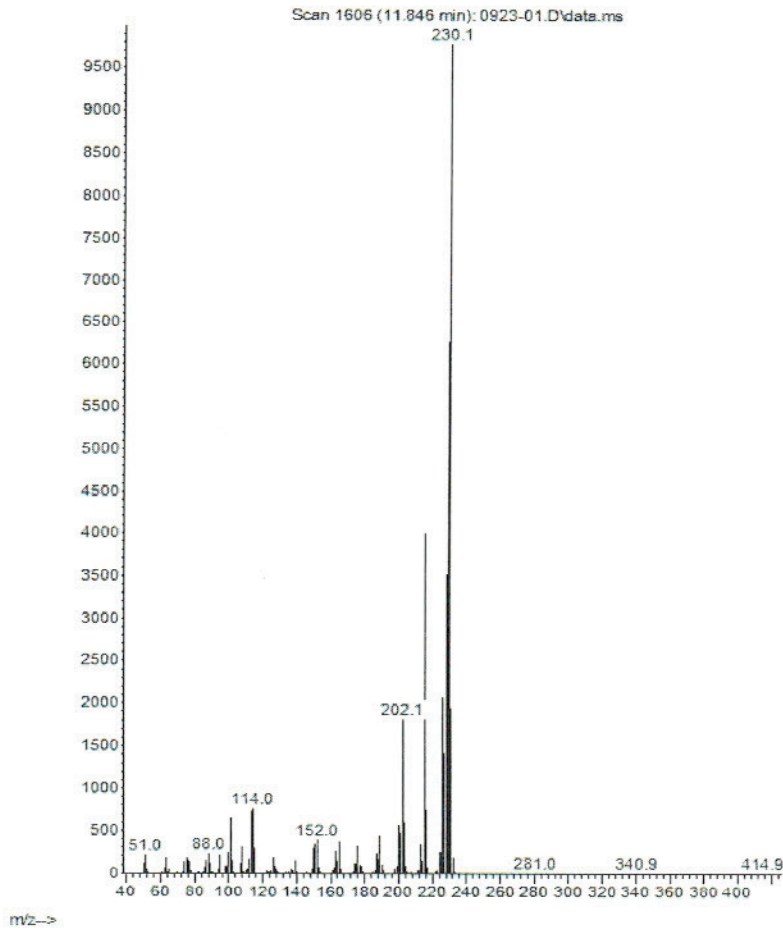
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info@chemservice.com • www.chemservice.com

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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

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



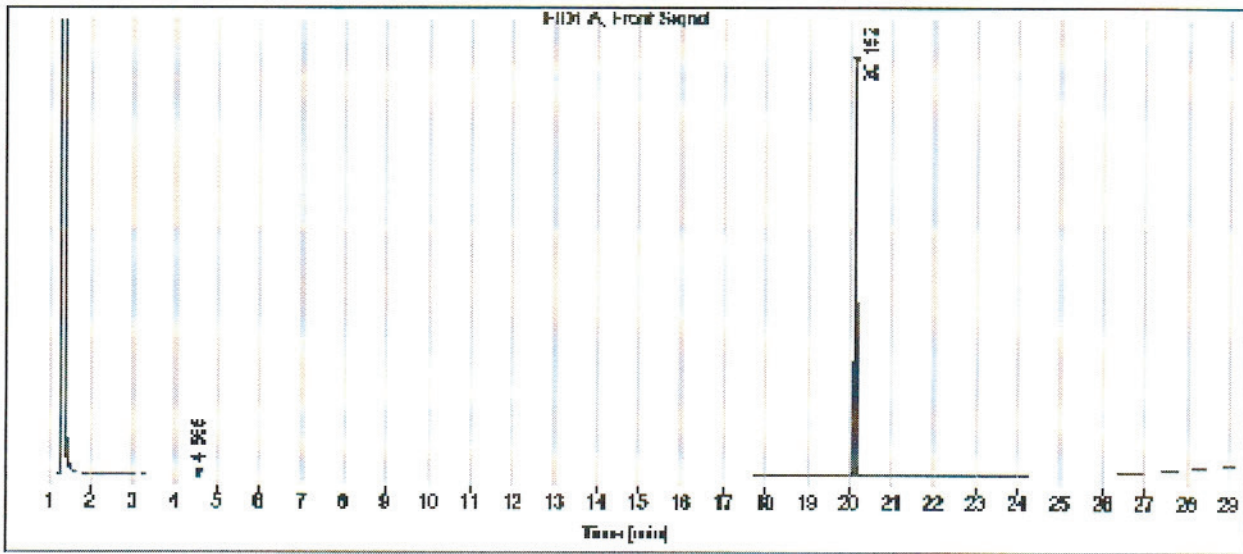
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 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

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





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.: A0176667

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 : October 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 Purity ----%	50,102.0 µg/mL	+/- 293.3582 µg/mL +/- 1,492.1008 µg/mL +/- 1,591.3244 µg/mL	Gravimetric Unstressed Stressed

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

ID #: 14531

Opened: _____

Residual Range Calibration Standard

Expires: 10/31/2028

Rec'd: 11/18/2021

Energ 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:

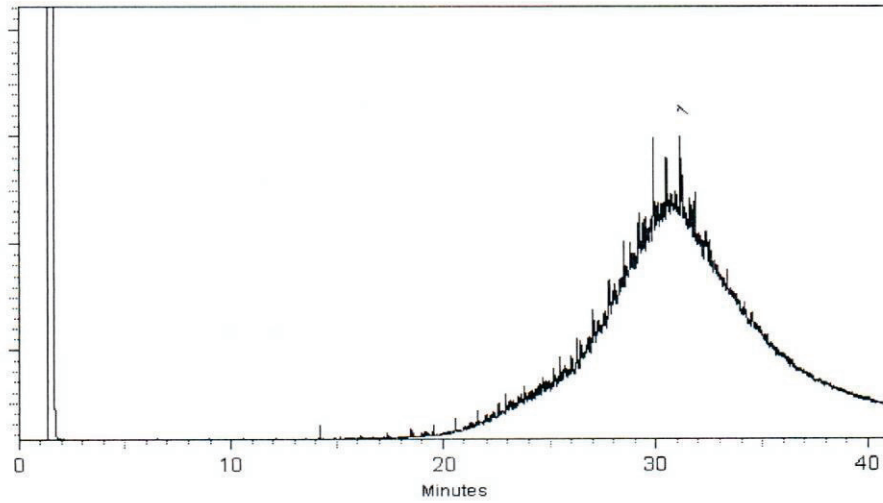
250°C

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.

Sam Moodler

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021

Balance: 1128360905

Alexis Shelow

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

TRIACONTANE-D62, 98 ATOM % D

Product Number:

451789

Batch Number:

MBBD2031

Brand:

ALDRICH

CAS Number:

93952-07-9

MDL Number:

MFCD00209794

Formula:

C30D62

Formula Weight:

485.20 g/mol

Quality Release Date:

18 JUN 2021



ID #: 14545

Opened: _____

Triacontane-d62-98 atom % D

Expires: 11/23/2026

Rec'd: 11/23/2021

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

Test	Specification	Result
Purity (HPLC)	≥ 99 %	99 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	98.9 %
Initial Melting Point		60 °C
Final Melting Point		62 °C



Laura E. Baird, Manager
Quality Assurance & 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.



Certificate of Analysis

Diesel Fuel No. 2

*Certified
Reference
Material*

Description

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

ID #: 14623

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

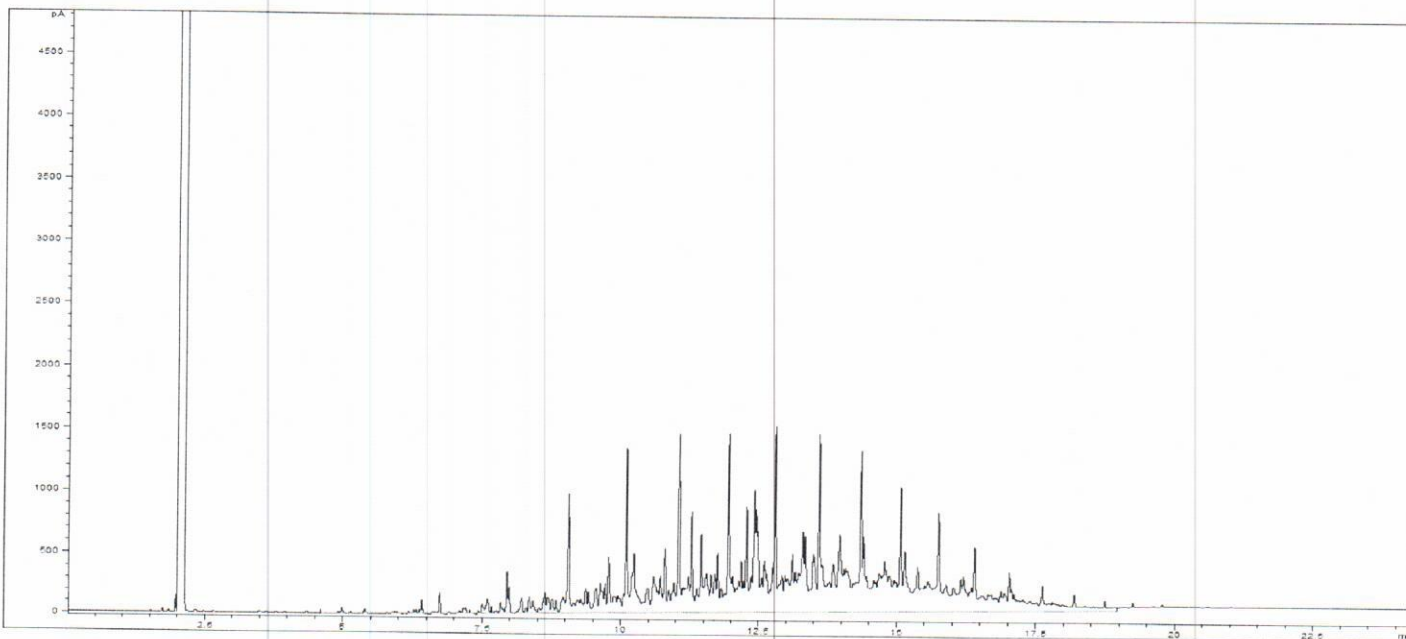
Rec'd: 12/14/2021

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

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:

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

Carrier Gas: H₂, Flow: 4.0 mL/min

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

Injection Mode: Split, Split Ratio: 10: 1

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

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

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

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

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

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

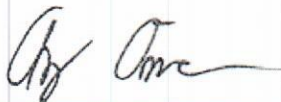
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

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

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

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

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



Andy Ommen - QC Manager

Certification Date April 30, 2020
Version 0-4302020



Mark Pooler - QA Supervisor





Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO200430B

Standard Name: O-Terphenyl

Prep Date: 4/30/2020

Exp Date: 9/30/2024

Department: dropr

Vendor: Chemservice

Lot Number: 9972100

Balance ID:

Comments: ID#: 6271

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	12650	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

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

Type: Secondary
Prep By: Ann Nebel
Status: Open
Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC328	14408	25	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO200430B	ug/mL	0.1012 g



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO211118A

Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DCM

Prep Date: 11/18/2021

Exp Date: 10/31/2028

Department: dropr

Vendor: Restek

Lot Number: A0176667

Balance ID: Sartorius 4 place balance

Comments:

Type: Primary

Prep By: Ann Nebel

Status: Open

Final Volume: 1 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Residual Range Calibration Standard	14531	1	mL	10/31/2028
Stock Source	Base Units	Amount Added		
DRO211118A	ug/mL			



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO211123B

Standard Name: Triacontane-d62 Surr For AK103 RRO

Prep Date: 11/23/2021

Exp Date: 11/23/2026

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: MBBD2031

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	14545		mL	11/23/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO211214C

Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM

Prep Date: 12/14/2021

Exp Date: 4/30/2023

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: LRAC6316

Balance ID:

Comments: Diesel Fuel #2 For CCVs.

Type: Primary

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Diesel Fuel No. 2	14623	1	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO220110A

Standard Name: Carbon Scan STD-Marker

Prep Date: 1/11/2022

Exp Date: 7/13/2026

Department: dropr

Vendor: ASI2

Lot Number: 55064

Balance ID:

Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Type: Neat

Prep By: Ann Nebel

Status: Open

Final Volume: 1.2 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
n-Hydrocarbons- C5 to C30, C32, C34, C36, C38, C40	14737	1.2	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO220222A

Standard Name: Triacontane SURR 2000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED092	14828	50	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO211123B	ug/mL	0.1003 g



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO220222B

Standard Name: Triacontane SURR 1000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 2X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 10 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA776	13927	5	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO220222A	ug/mL	5 mL



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO220302C

Standard Name: 5,000 ug/mL RRO CCV 200 ug/mL Triacontane

Type: Secondary

Prep Date: 3/2/2022

Prep By: Ann Nebel

Exp Date: 11/23/2026

Status: New

Department: dropr

Vendor:

Final Volume: 4 mL

Lot Number:

Balance ID:

Comments: CCV for AK102 and 8015C RRO.

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED241	14920	2.8	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO220222B	ug/mL	800 µL
DRO211118A	ug/mL	400 µL



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO220309C

Standard Name: Carbon Scan STD-Marker

Prep Date: 3/9/2022

Exp Date: 7/13/2026

Department: dropr

Vendor: ASI2

Lot Number: 071306

Balance ID:

Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Type: Primary

Prep By: Ann Nebel

Status: Open

Final Volume: 2.3 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Carbon Disulfide 55064	7477	1.15	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	1.15 mL



Analytical RunID GCFID-HP4-B_220311A Standards Traceability Report

Standard ID: DRO220309D

Standard Name: 8015 CCV-15,000ug/mL + 200 OTP

Prep Date: 3/9/2022

Exp Date: 4/30/2023

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED241	14920	2.6	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	1.2 mL
DRO211101A	ug/mL	0.2 mL

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

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

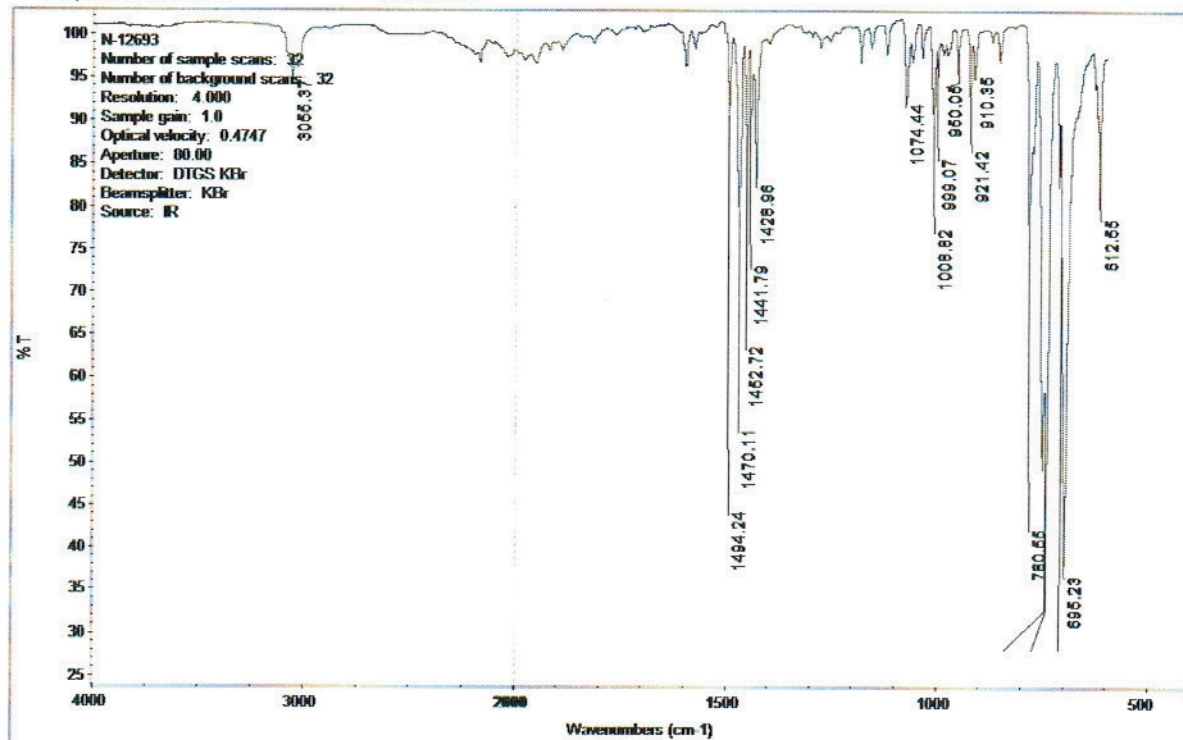
Rec'd: 4/30/2020

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



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

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

Data File: D:\msdchem\2019 DATA\0919\0923-01.D

Acq On : 23 Sep 2019 10:40

Operator :

Sample : n-12693

Misc :

ALS Vial : 95

Integration Parameters: autoint1.e

Integrator: ChemStation

DataAcq Meth: SCREEN.M

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

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

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

Sum of corrected areas: 432253484

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

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

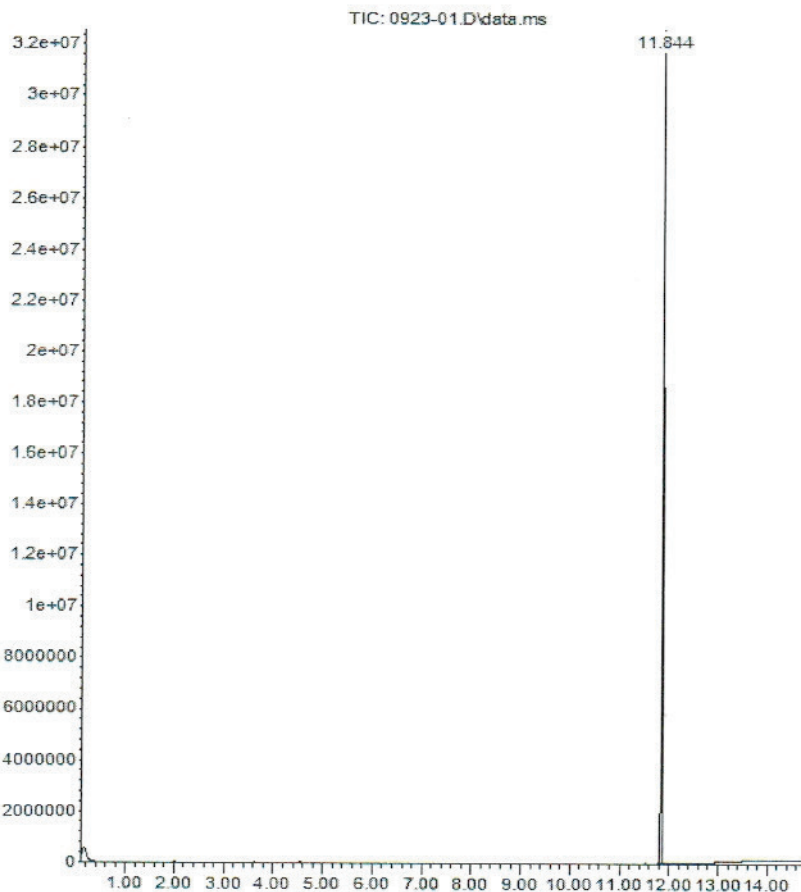


CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



Time-->

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

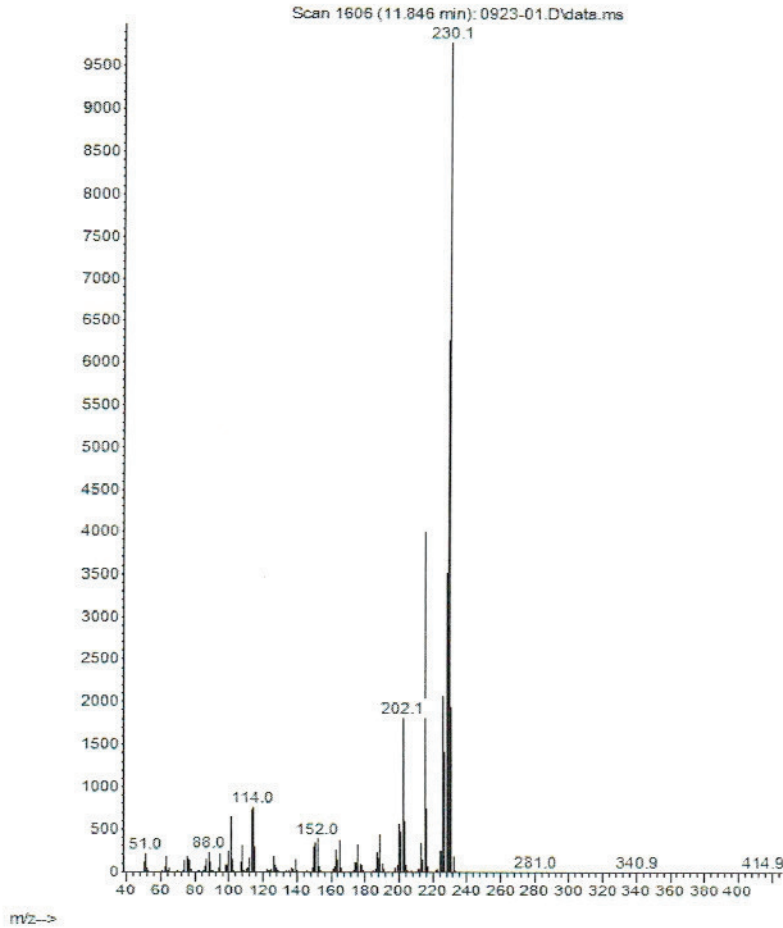


CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



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

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



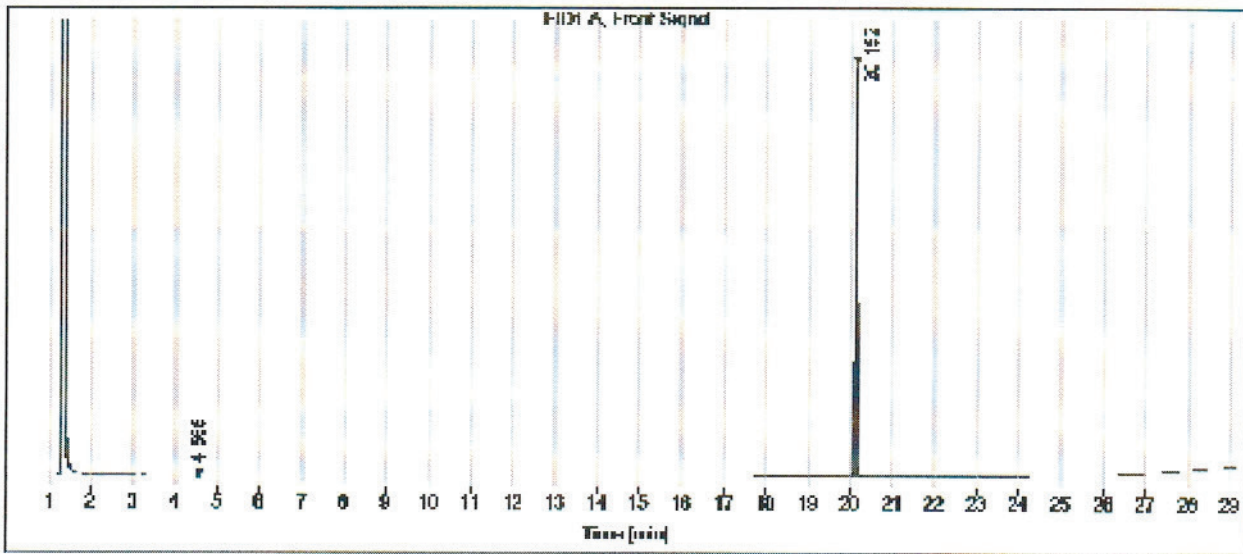
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 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

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

CERTIFICATE OF ANALYSIS

Location: Vial 141
Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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





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.: A0176667

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 : October 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 Purity ----%	50,102.0 µg/mL	+/- 293.3582	µg/mL	Gravimetric
	(Lot A0126386)		+/- 1,492.1008	µg/mL	Unstressed
			+/- 1,591.3244	µg/mL	Stressed

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

ID #: 14531

Opened: _____

Residual Range Calibration Standard

Expires: 10/31/2028

Rec'd: 11/18/2021

Energ 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:

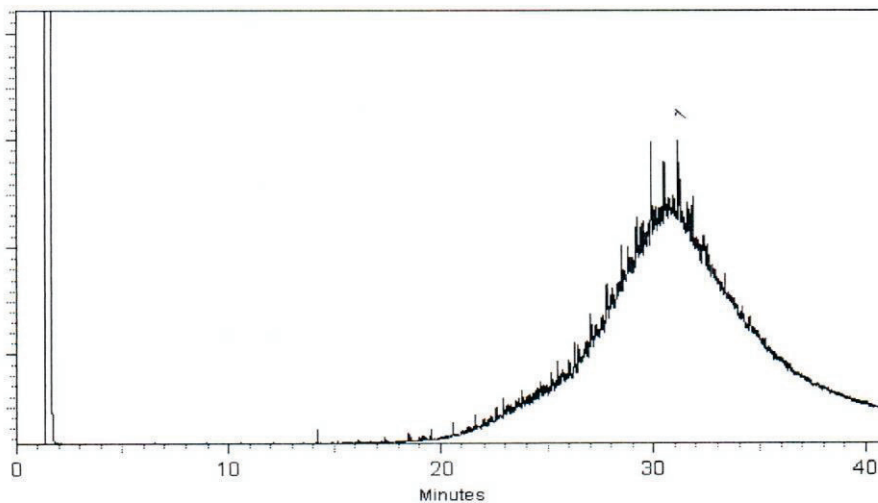
250°C

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.

Sam Moodler

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021

Balance: 1128360905

Alexis Shelow

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

TRIACONTANE-D62, 98 ATOM % D

Product Number:

451789

Batch Number:

MBBD2031

Brand:

ALDRICH

CAS Number:

93952-07-9

MDL Number:

MFCD00209794

Formula:

C30D62

Formula Weight:

485.20 g/mol

Quality Release Date:

18 JUN 2021



ID #: 14545

Opened: _____

Triacontane-d62-98 atom % D

Expires: 11/23/2026

Rec'd: 11/23/2021

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

Test	Specification	Result
Purity (HPLC)	≥ 99 %	99 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	98.9 %
Initial Melting Point		60 °C
Final Melting Point		62 °C



Laura E. Baird, Manager
Quality Assurance & 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.



Certificate of Analysis

Diesel Fuel No. 2

*Certified
Reference
Material*

Description

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

ID #: 14623

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

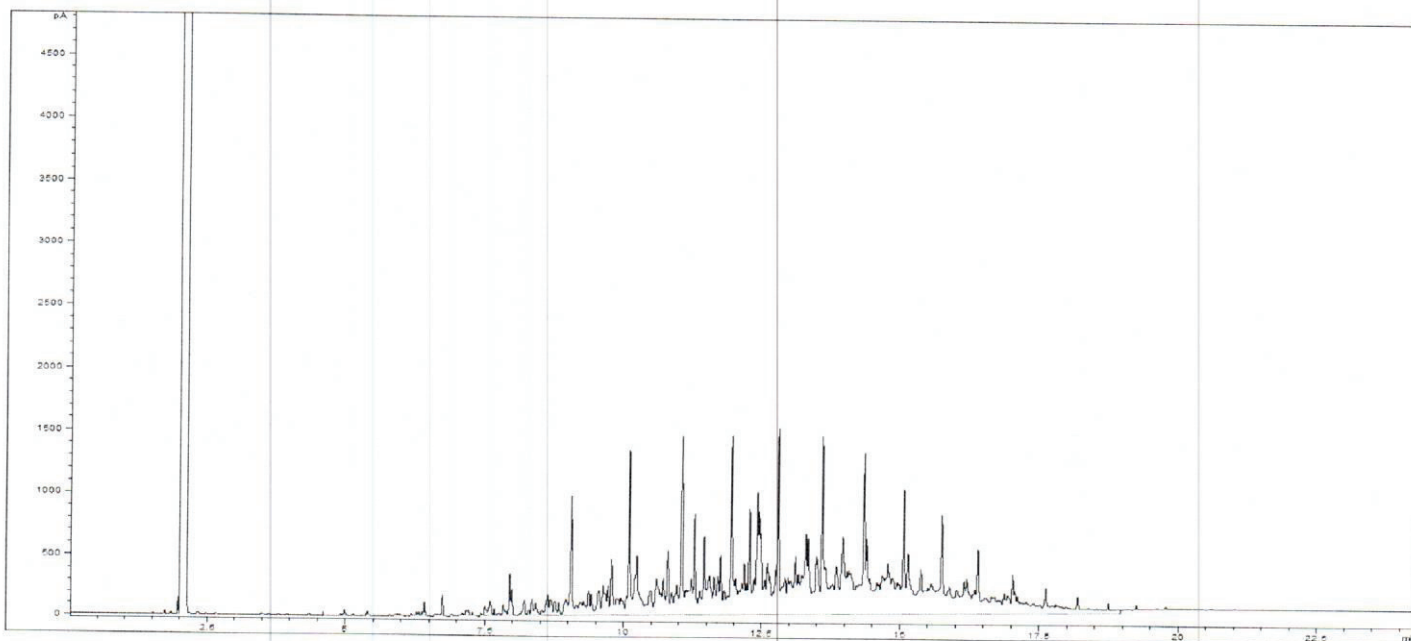
Rec'd: 12/14/2021

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

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:

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

Carrier Gas: H₂, Flow: 4.0 mL/min

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

Injection Mode: Split, Split Ratio: 10: 1

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

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

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

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

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

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

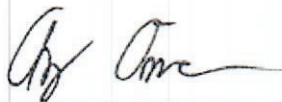
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

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

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

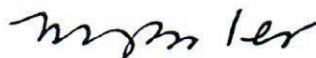
MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

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



Andy Ommen - QC Manager

Certification Date April 30, 2020
Version 0-4302020



Mark Pooler - QA Supervisor

