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
14764037	CCV_1006HP43	HC-8015-DRO-	CAL1		10/7/2021 1:07:4	1	R368536		0	0	

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
14764038	CCV_1006HP43	HC-8015-DRO-	CAL2		10/7/2021 1:53:0	1	R368536		0	0	

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
14764039	CCV_1006HP43	HC-8015-DRO-	CAL3		10/7/2021 2:38:3	1	R368536		0	0	

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
14764040	CCV_1006HP43	HC-8015-DRO-	CAL4		10/7/2021 3:23:5	1	R368536		0	0	

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
14764041	CCV_1006HP43	HC-8015-DRO-	CAL5		10/7/2021 4:09:3	1	R368536		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.9788904		1	0	0	0.002	0.002	0	98%	80	120	0%	

Write Sequence / Data File	Insert Entries(Have the first cell for entries selected) / 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 Triacontane (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 Triacontane (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 Triacontane (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 Triacontane (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 Triacontane (500 uL 2000 ug/mL Triacontane 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

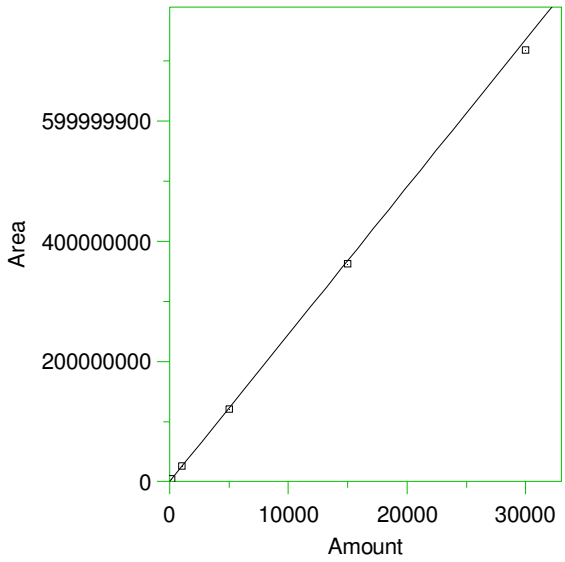
Creator: AMN
Description: 8015C-Oil Range w/Triacontane. New ICal Per 1006HP4 (2021)-2 uL Inj.;
Reason for change:

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

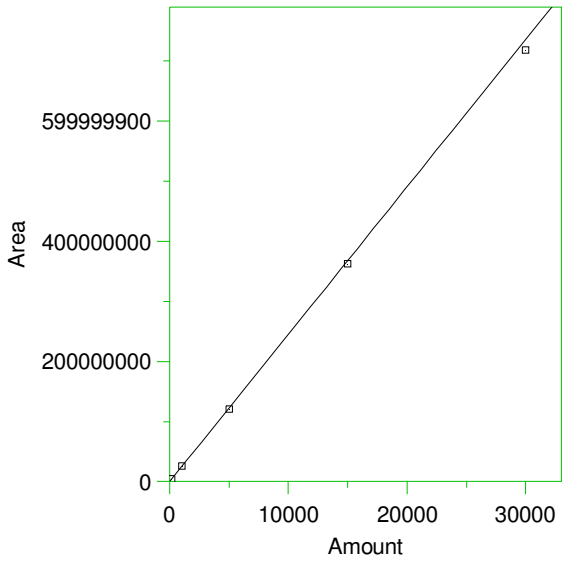
Y = 24529.56 X + 0

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

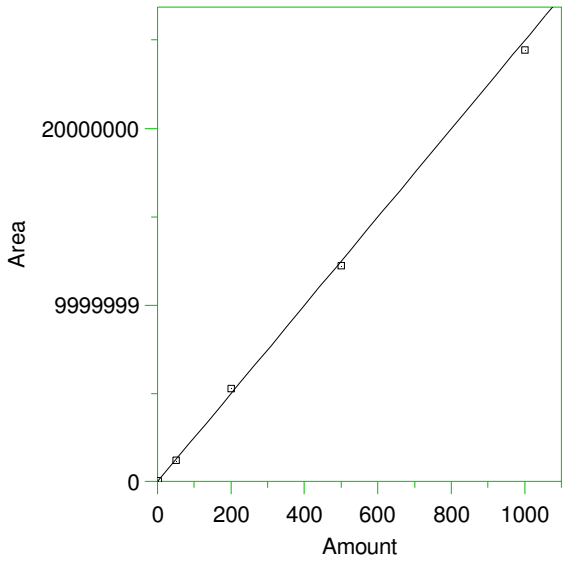
Y = 24529.56 X + 0

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

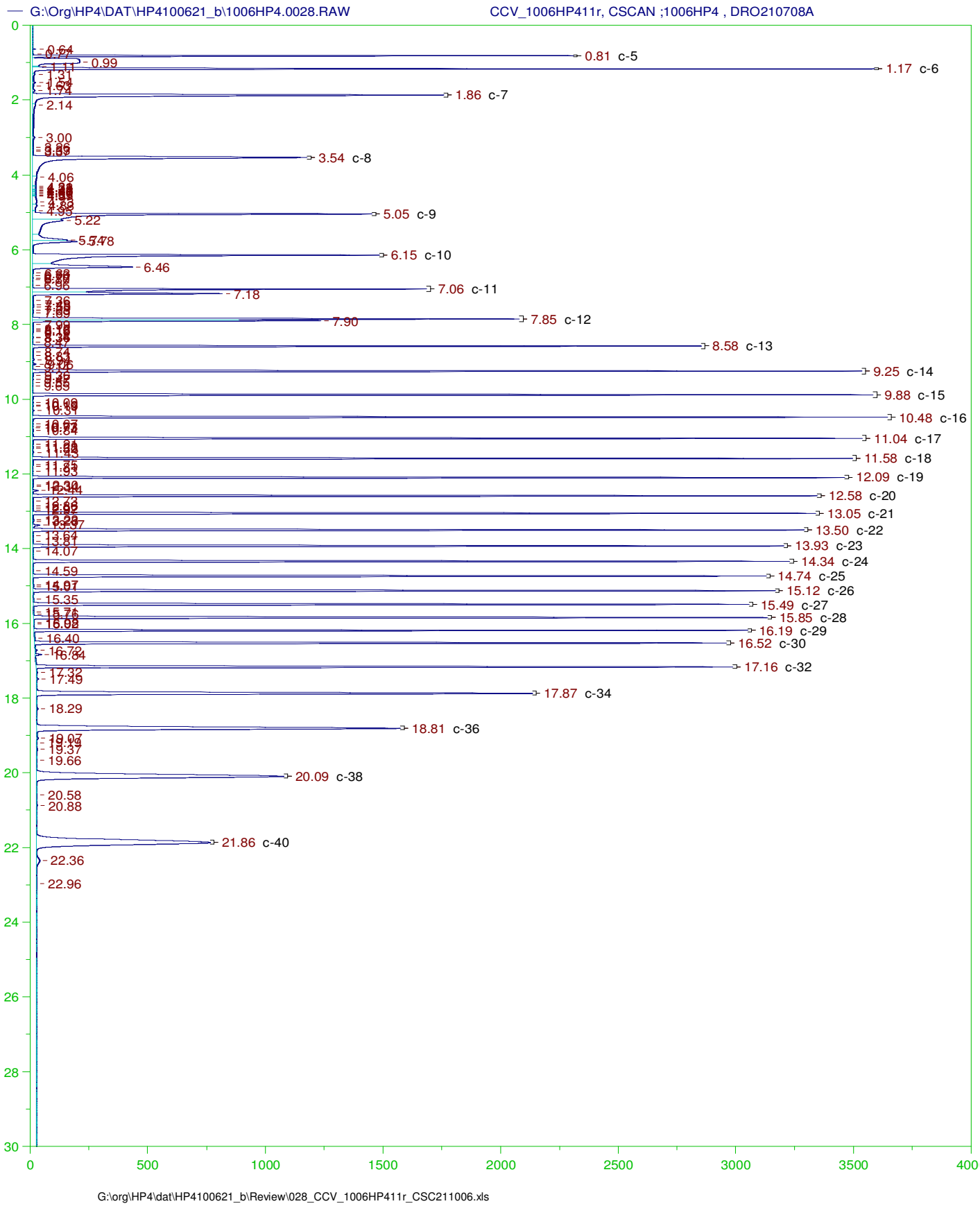
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

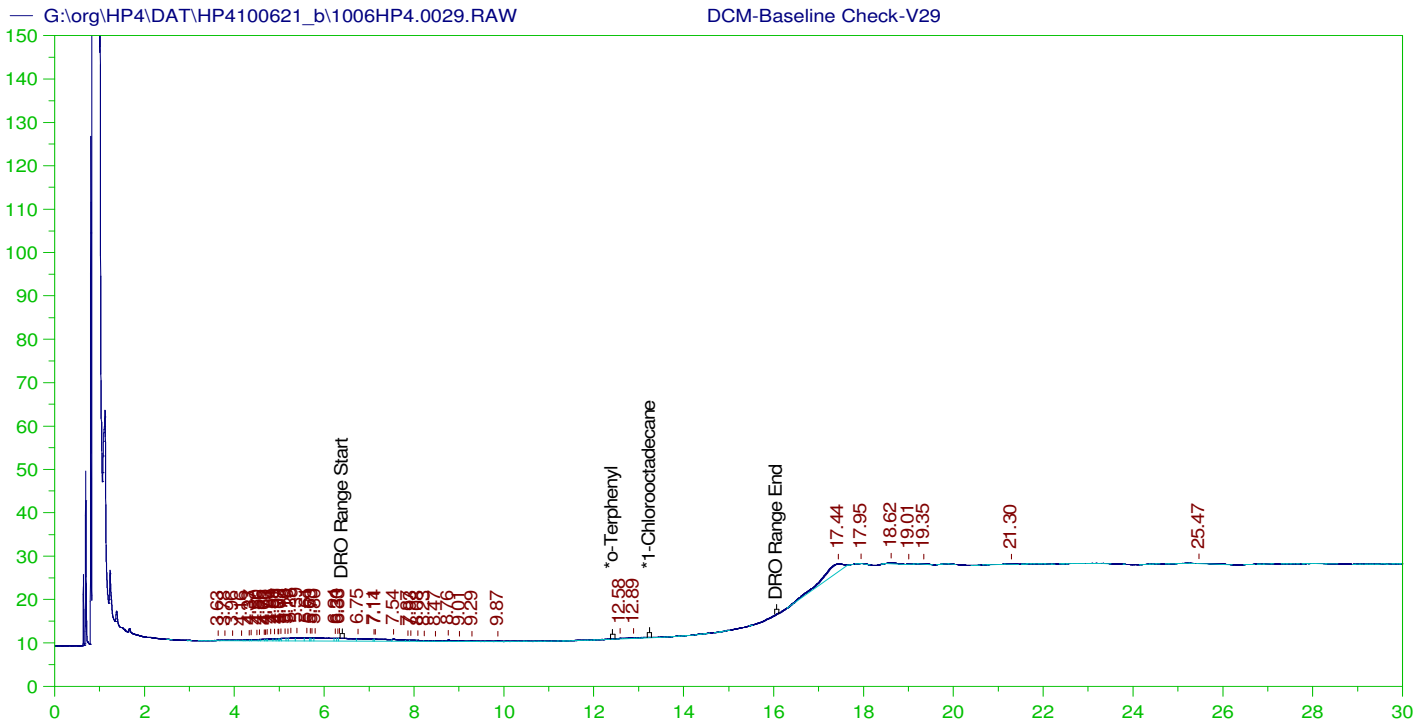
Single peak quantification by area

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


G:\Org\HP4\DAT\HP4100621_b\1006HP4.0028.RAW
CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A
0.81 c-5
0.99
1.17 c-6
1.86 c-7
2.14
3.00
3.54 c-8
4.06
5.05 c-9
5.22
6.15 c-10
6.46
7.06 c-11
7.18
7.85 c-12
7.90
8.58 c-13
9.25 c-14
9.88 c-15
10.48 c-16
11.04 c-17
11.58 c-18
12.09 c-19
12.58 c-20
13.05 c-21
13.50 c-22
13.93 c-23
14.07
14.34 c-24
14.59
14.74 c-25
15.12 c-26
15.35
15.49 c-27
15.85 c-28
16.19 c-29
16.40
16.52 c-30
17.16 c-32
17.87 c-34
18.29
18.81 c-36
19.66
20.09 c-38
20.58
20.88
21.86 c-40
22.36
22.96
0
500
1000
1500
2000
2500
3000
3500
G:\org\HP4\dat\HP4100621_b\Review\028_CCV_1006HP411r_CSC211006.xls



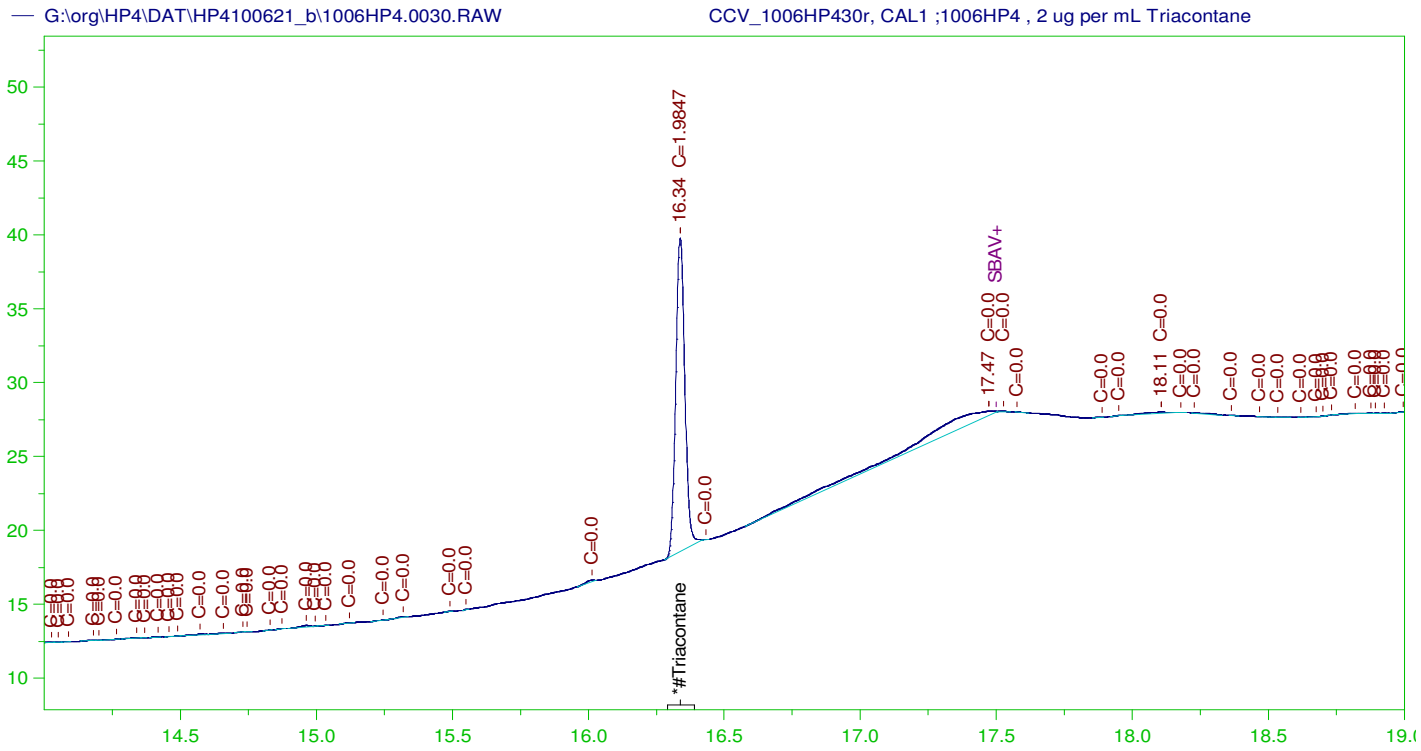
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

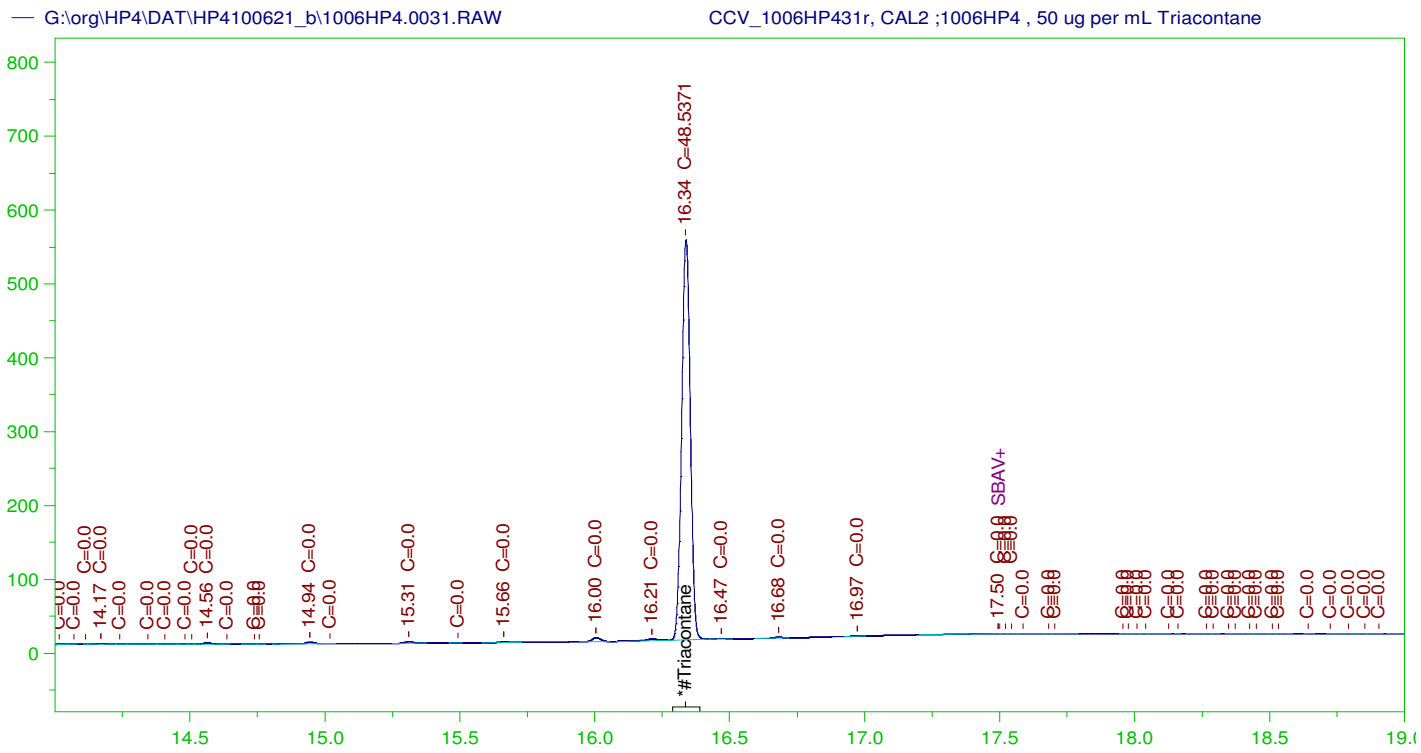
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.337	500.	1.985	.4	-

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

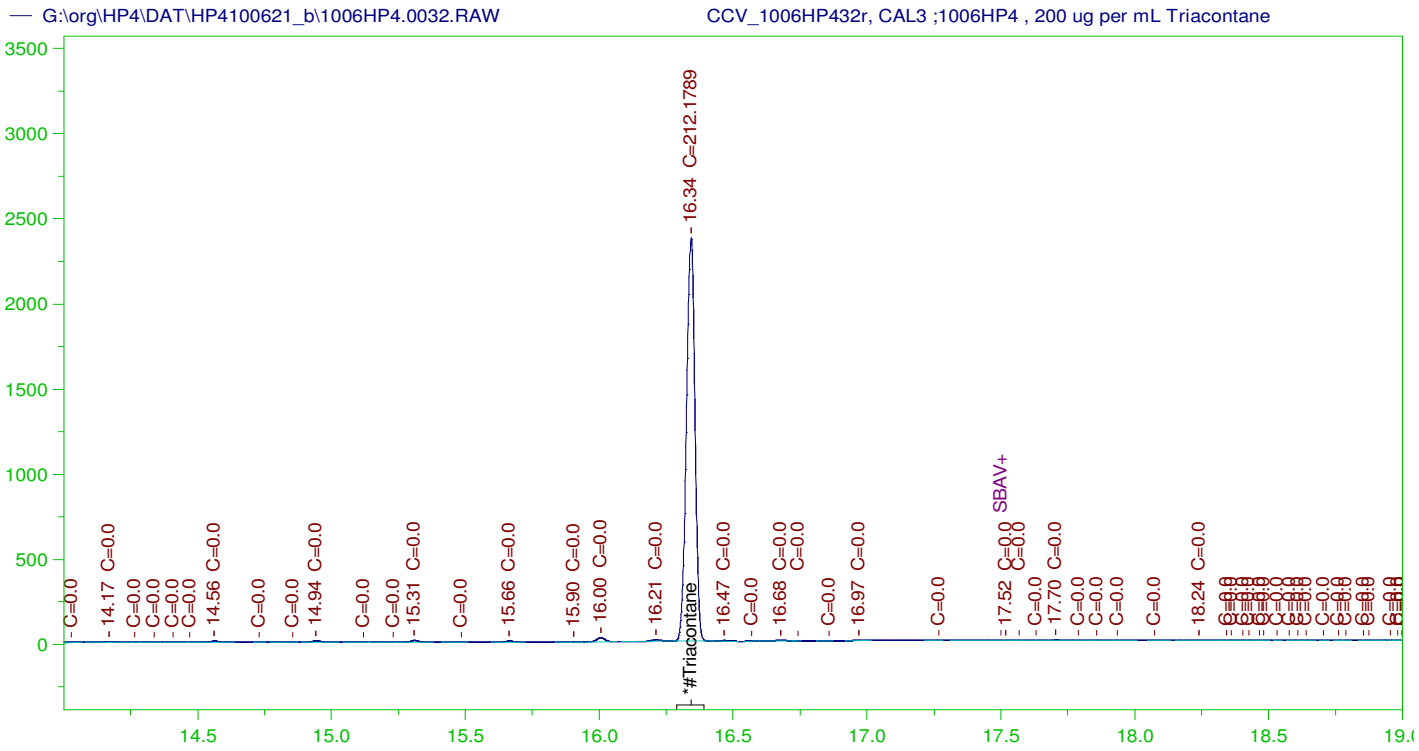
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.337	500.	48.537	9.71	-

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

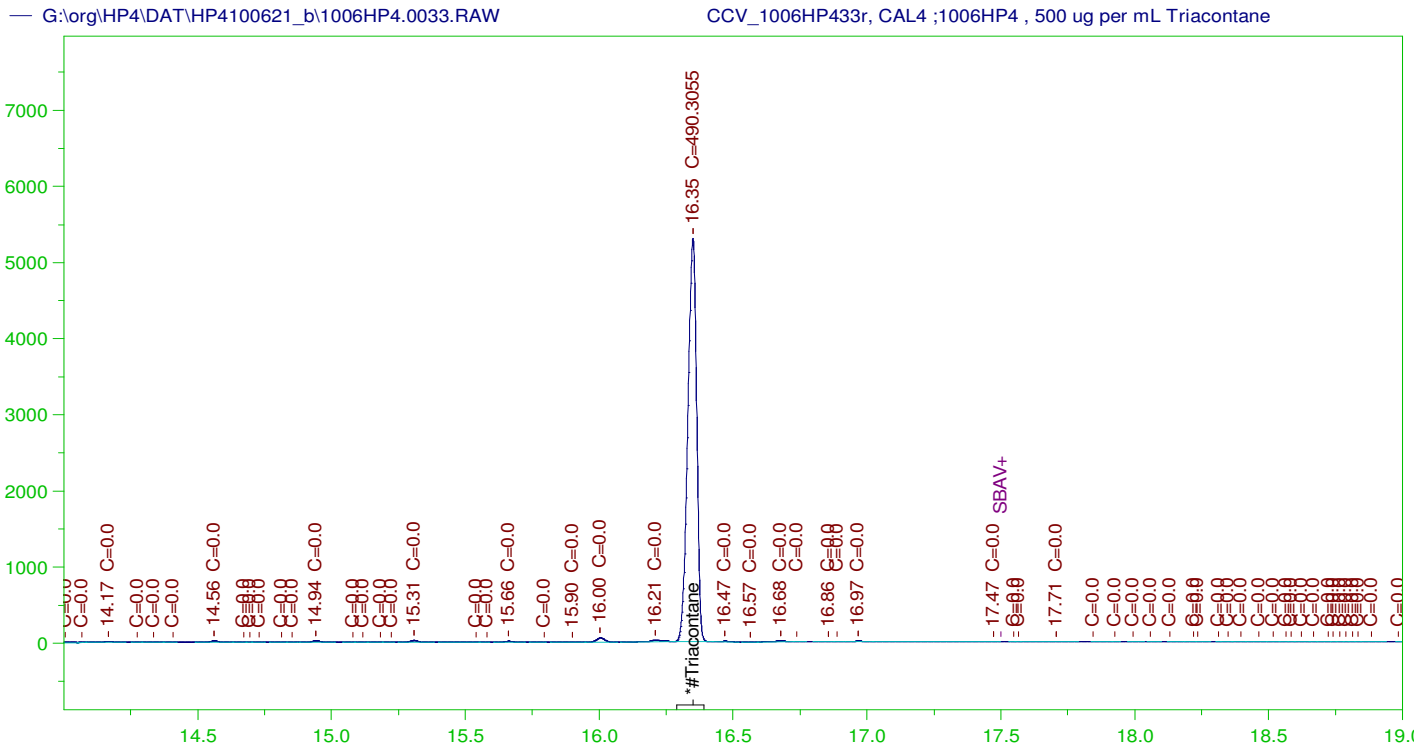
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.343	500.	212.179	42.44	-

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

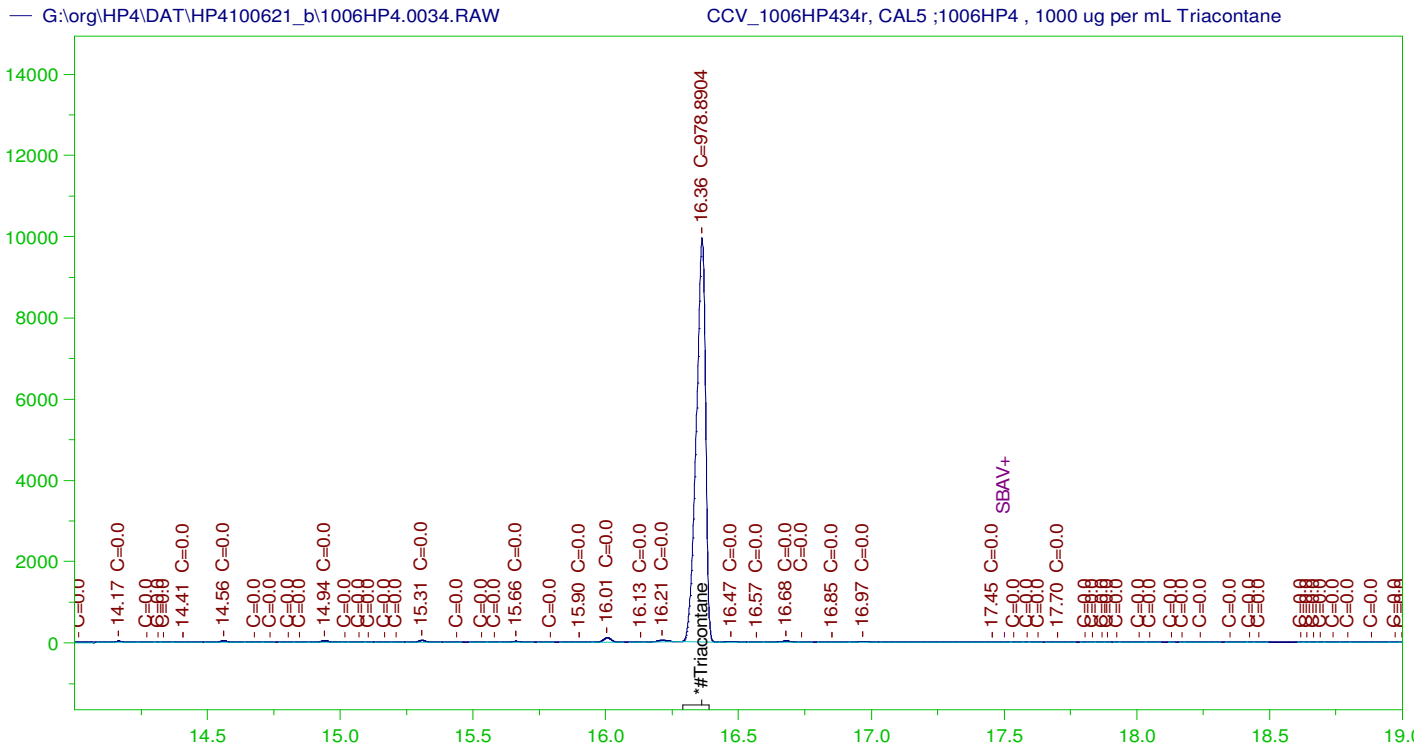
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.35	500.	490.306	98.06	-

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	Insert Entries(Have the first cell for entries selected) / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.28r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	g:\org\HP4\Methods\CSC211006.met	1	1	1	1	0	No Integration
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	No Integration
G:\org\HP4\DAT\HP4100621_b\1006HP4.30r	CCV_1006HP407r, CAL1 ;1006HP4 , 2 ug per mL Triacontane (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 Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.31r	CCV_1006HP408r, CAL2 ;1006HP4 , 50 ug per mL Triacontane (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 Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.32r	CCV_1006HP409r, CAL3 ;1006HP4 , 200 ug per mL Triacontane (100uL of Cal5 + 400 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.33r	CCV_1006HP404r, CAL4 ;1006HP4 , 500 ug per mL Triacontane (250uL of Cal5 + 250 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.34r	CCV_1006HP405r, CAL5 ;1006HP4 , 1000 ug per mL Triacontane (500 uL 2000 ug/mL Triacontane DRO211006A + 500 DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.

Ann Nebel

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%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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%	

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

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%	

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

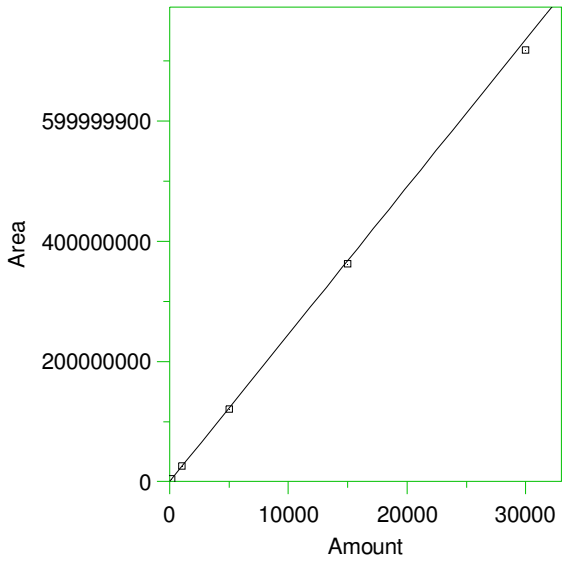
Creator: AMN
Description: 8015C-Oil Range w/Triacontane. New ICal Per 1006HP4 (2021)-2 uL Inj.;
Reason for change:

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

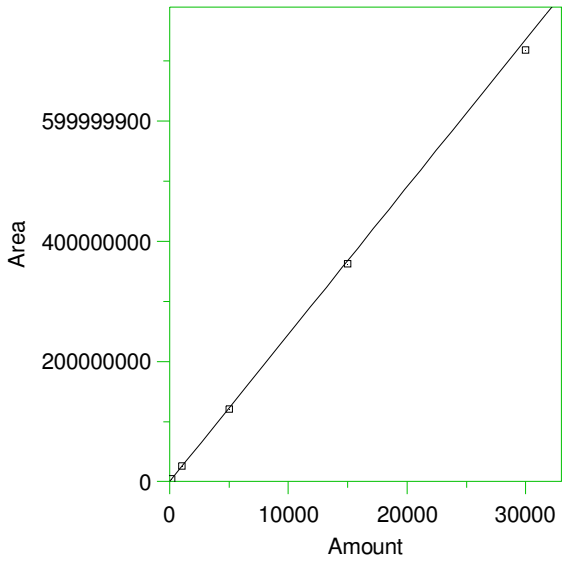
Y = 24529.56 X + 0

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

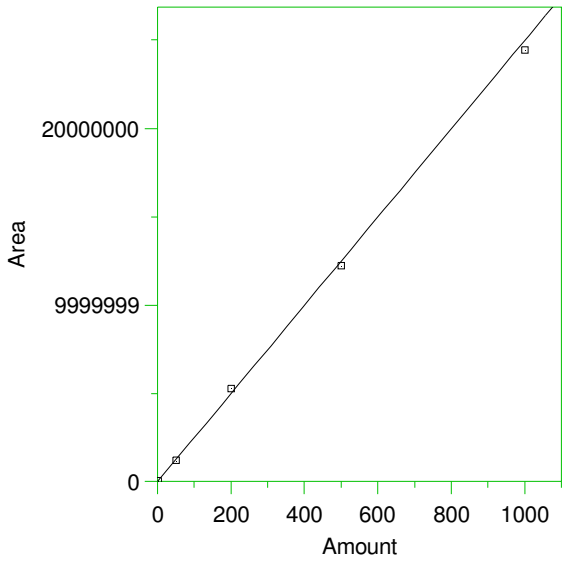
Y = 24529.56 X + 0

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

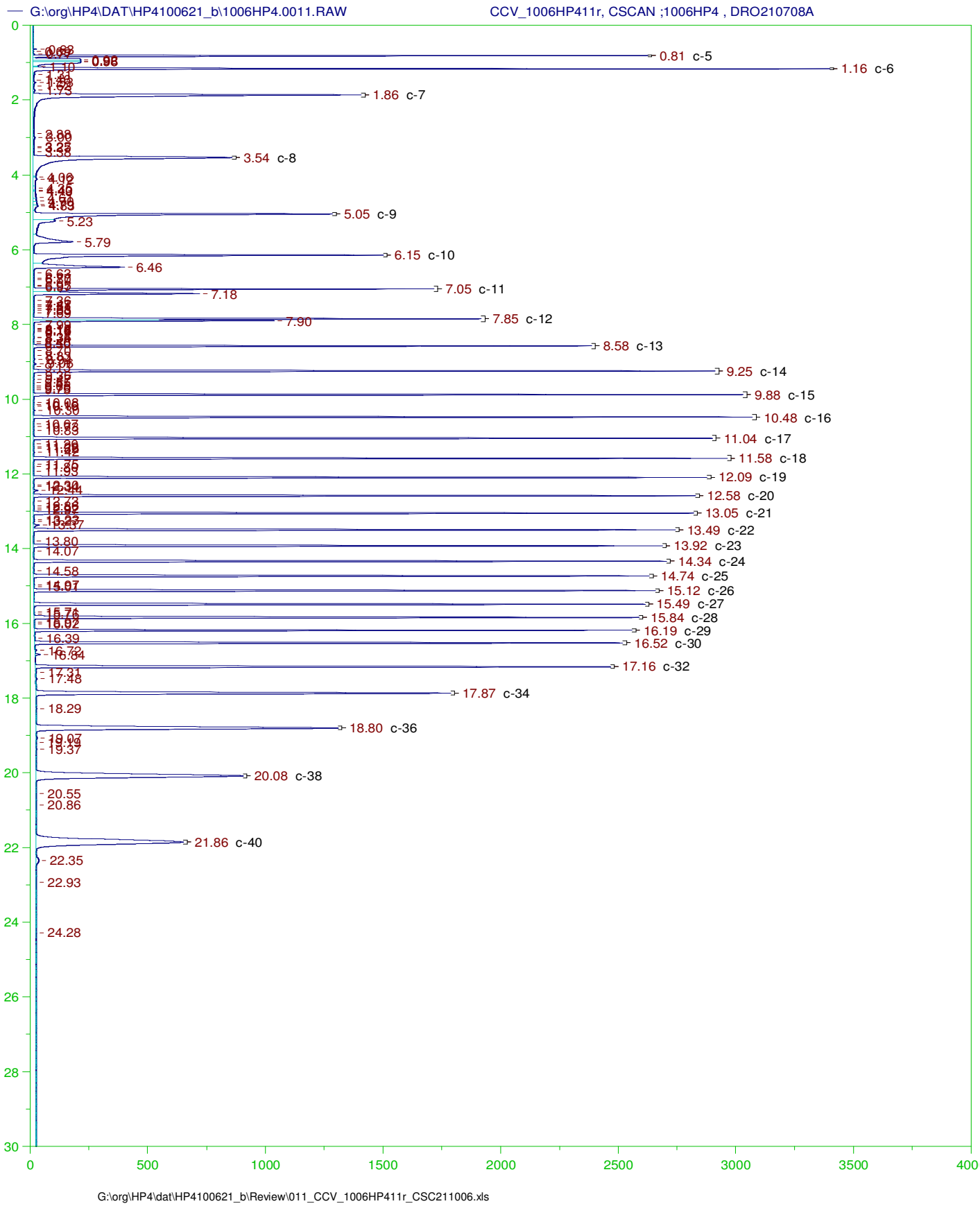
Single peak quantification by area

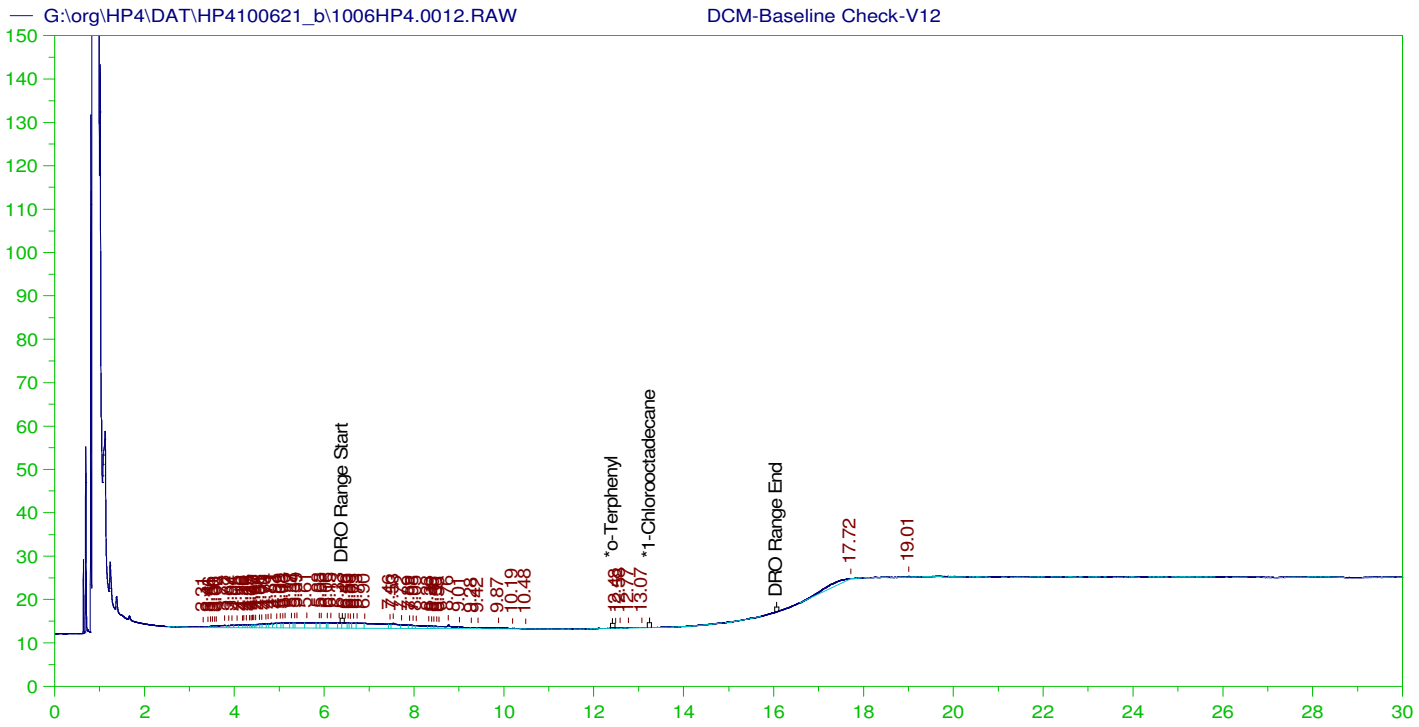
Y = 24973.81 X + 0

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

Write Sequence / Data File	Insert Entries(Have the first cell for entries selecte / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
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 mLOil (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\D3_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


G:\org\HP4\DAT\HP4100621_b\1006HP4.0011.RAW
CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A
0.81 c-5
1.16 c-6
1.86 c-7
3.54 c-8
5.05 c-9
5.23
5.79
6.15 c-10
6.46
7.05 c-11
7.18
7.85 c-12
7.90
8.58 c-13
9.25 c-14
9.88 c-15
10.48 c-16
11.04 c-17
11.58 c-18
12.09 c-19
12.58 c-20
13.05 c-21
13.49 c-22
13.80
13.92 c-23
14.07
14.34 c-24
14.58
14.74 c-25
15.12 c-26
15.49 c-27
15.84 c-28
16.19 c-29
16.39
16.52 c-30
16.72
16.84
17.16 c-32
17.31
17.48
17.87 c-34
18.29
18.80 c-36
19.07
19.37
20.08 c-38
20.55
20.86
21.86 c-40
22.35
22.93
24.28
0
500
1000
1500
2000
2500
3000
3500
400
G:\org\HP4\dat\HP4100621_b\Review\011_CCV_1006HP411r_CSC211006.xls



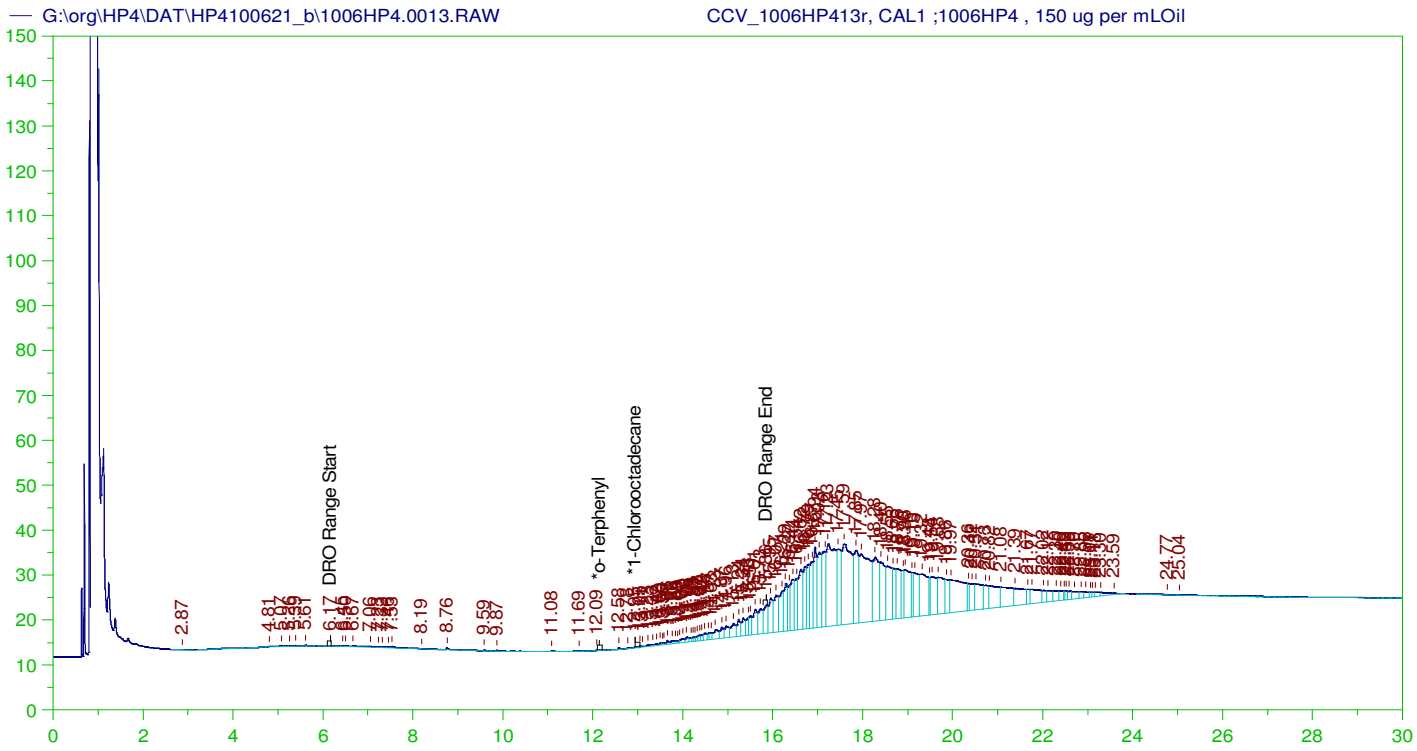
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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 mLOil
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

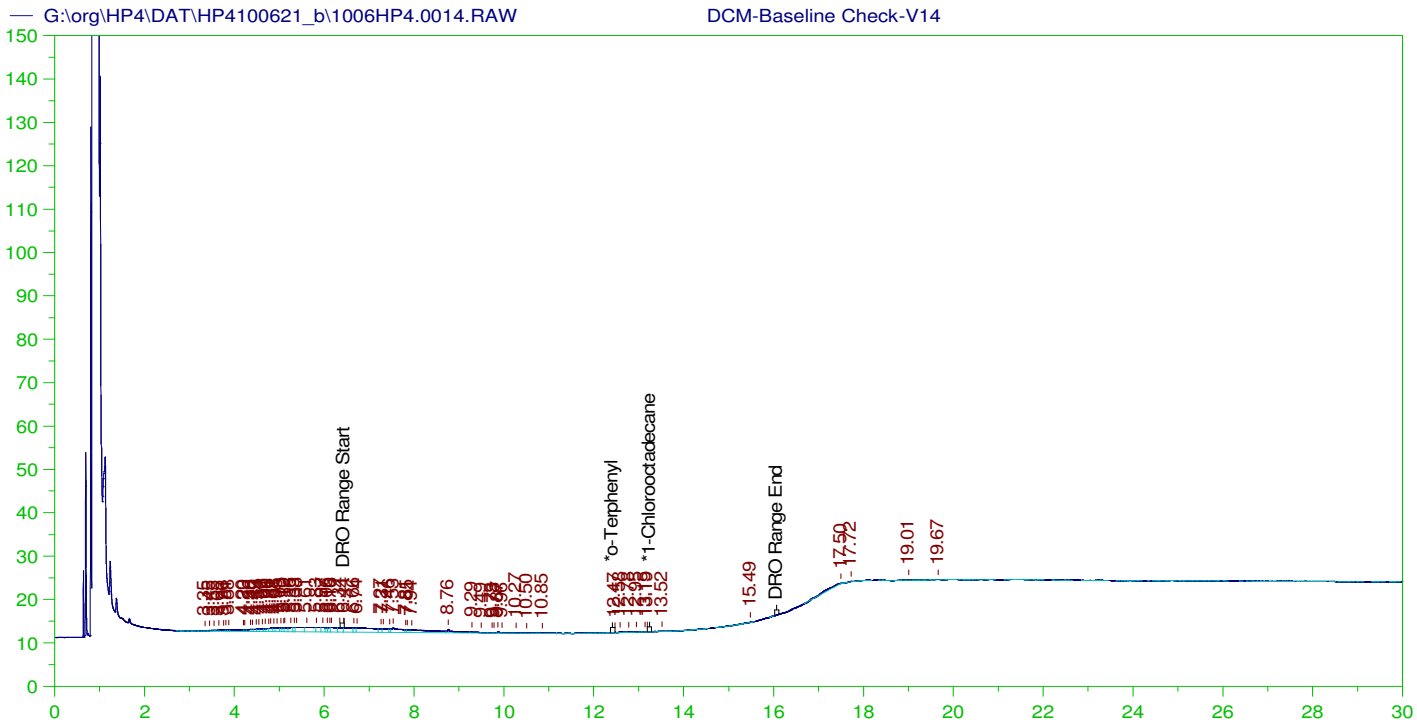
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0013.RAW

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

AMN 10/13/2021

G:\org\HP4\dat\HP4100621_b\Review\013_CCV_1006HP413r_DR_8015-13-OIL-AA-L%.xls



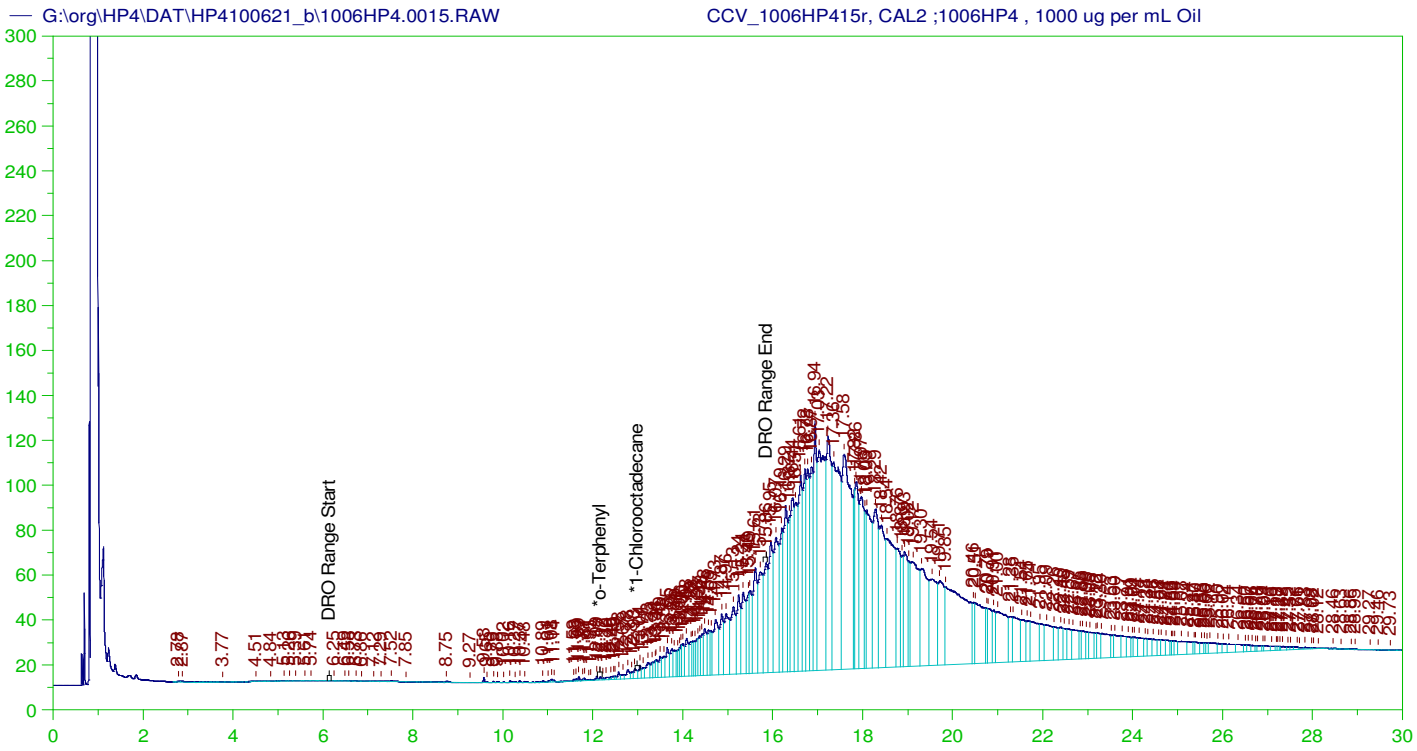
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0014.RAW
Date & Time Acquired: 10/7/2021 1:01:51 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	29.884	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: CCV_1006HP415r, CAL2 ;1006HP4 , 1000 ug per mL Oil
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0015.RAW
Date & Time Acquired: 10/7/2021 1:47:37 AM
Method File: G:\Org\HP4\methods\DR_8015-15-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.	.147	.07	-
*1-Chlorooctadecane	29.932	200.	.	.	-

DRO Area:3765940 DRO Amount: 153.5266
TEH (Oil Range) Area:2.507288E+07 TEH (Oil Range)Amount: 1022.149

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0015.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	5000.	1022.15	20.44	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.166	200.	.147	.07	85-115
*1-Chlorooctadecane	29.932	200.	.	.	85-115

AMN 10/13/2021

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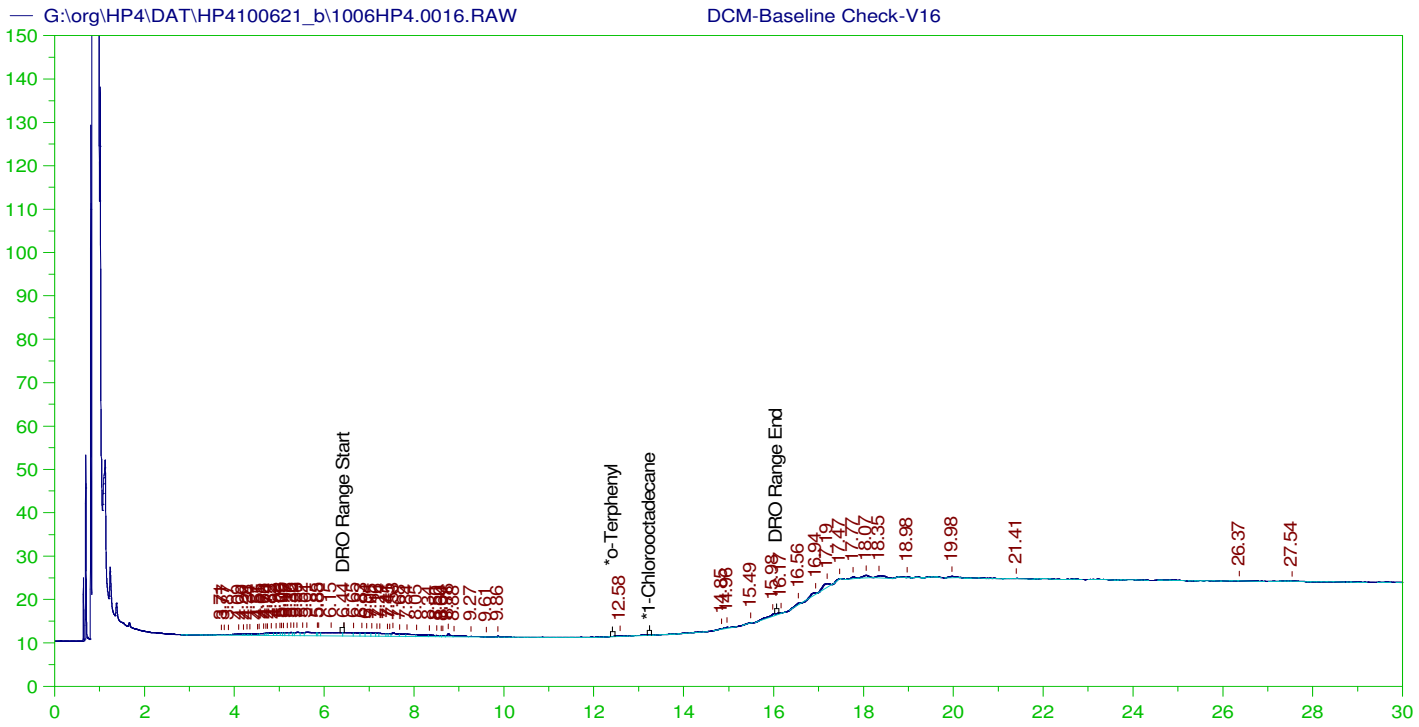


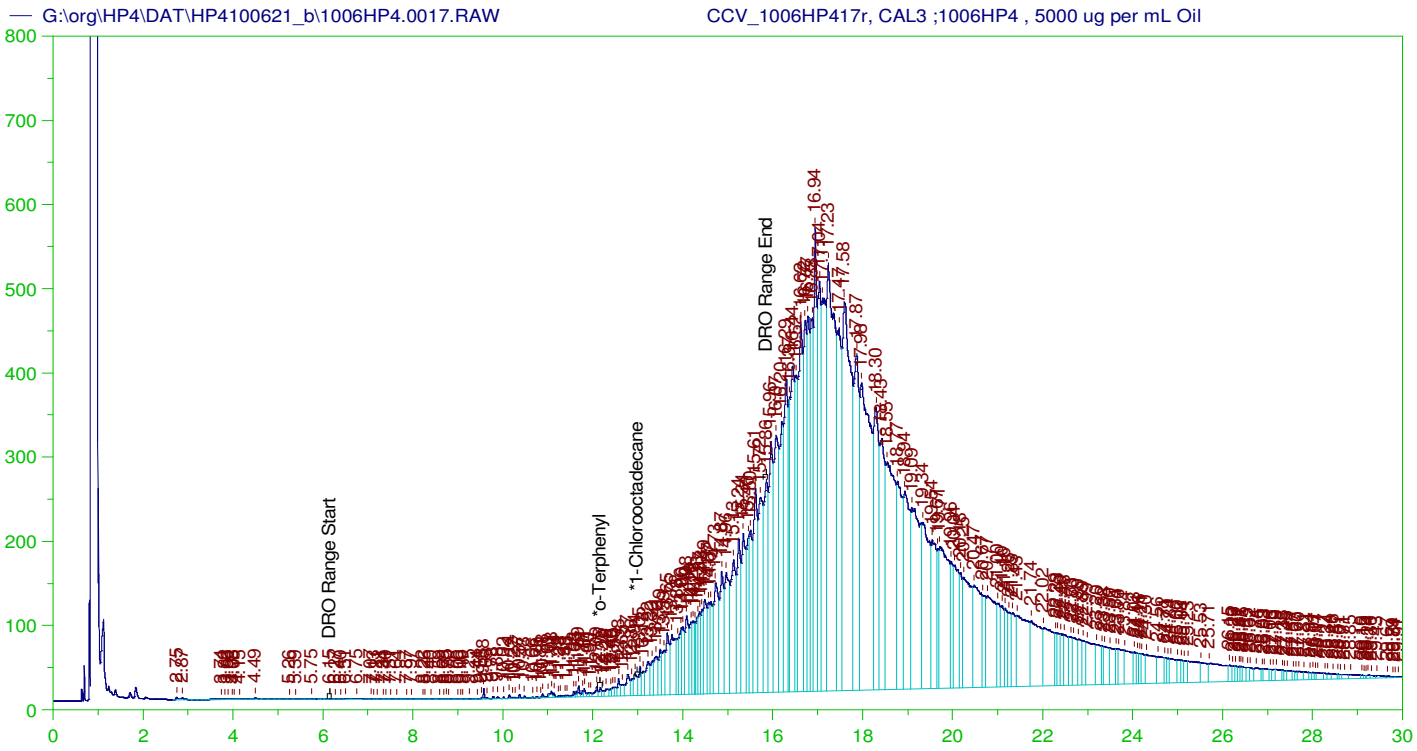
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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.	.	.	-

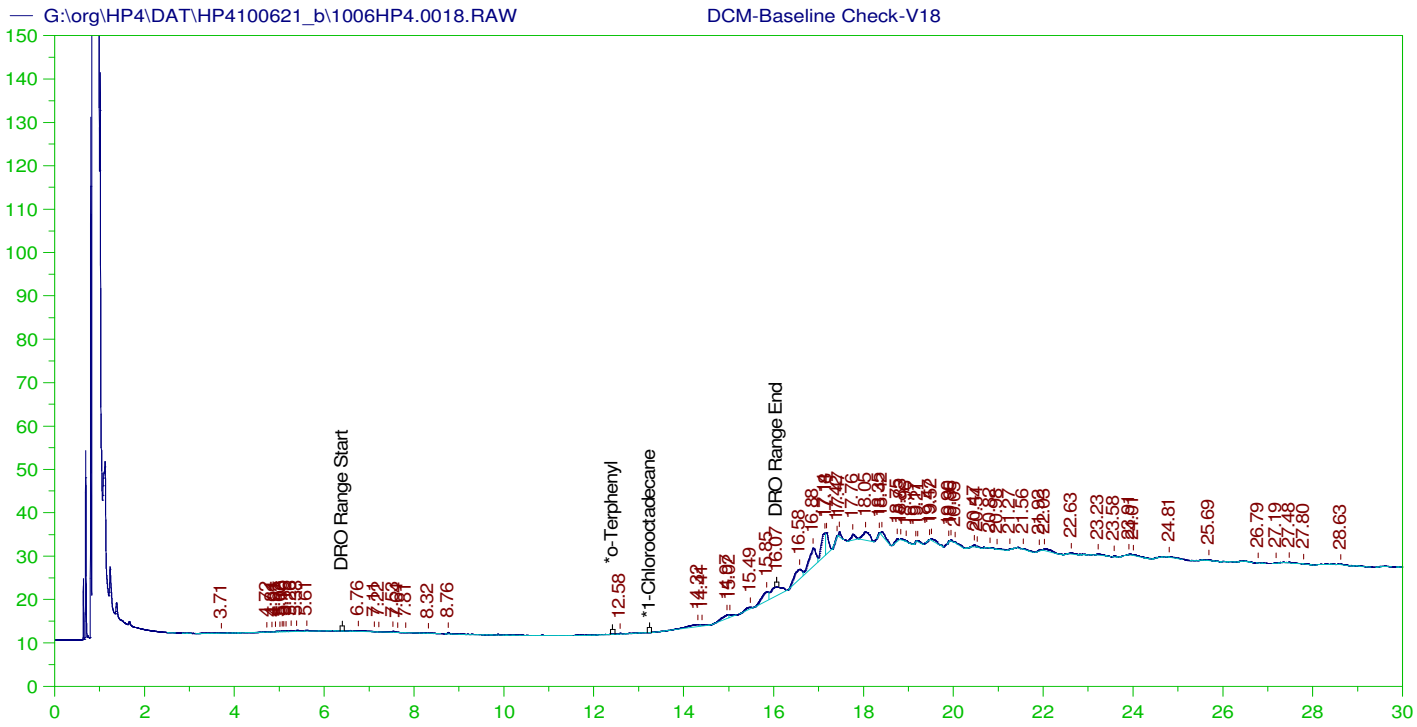
DRO Area:2.051403E+07 DRO Amount: 836.2982
TEH (Oil Range) Area:1.215776E+08 TEH (Oil Range) Amount: 4956.371

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

AMN 10/13/2021

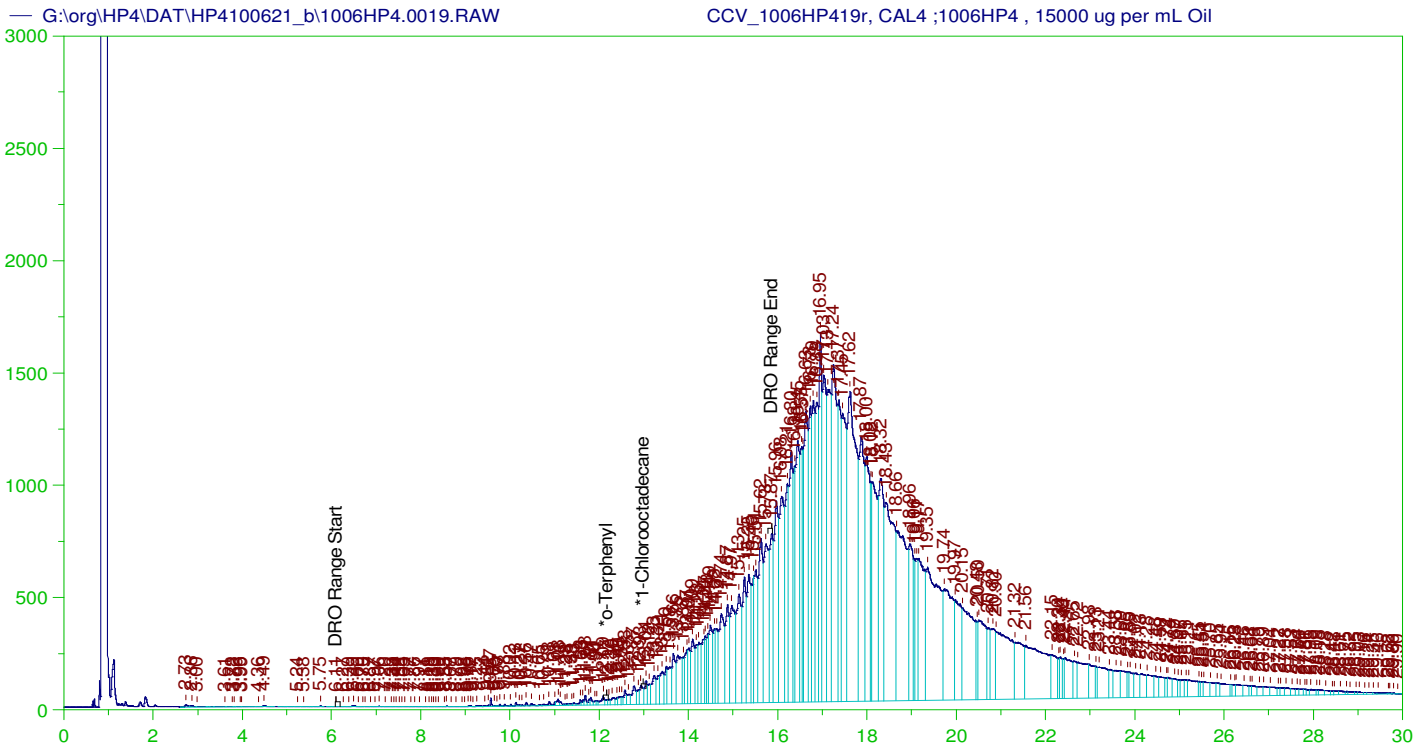


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V18
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0018.RAW
Date & Time Acquired: 10/7/2021 4:04:45 AM
Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
Sample Weight: 1 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	29.931	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.	.	.	-

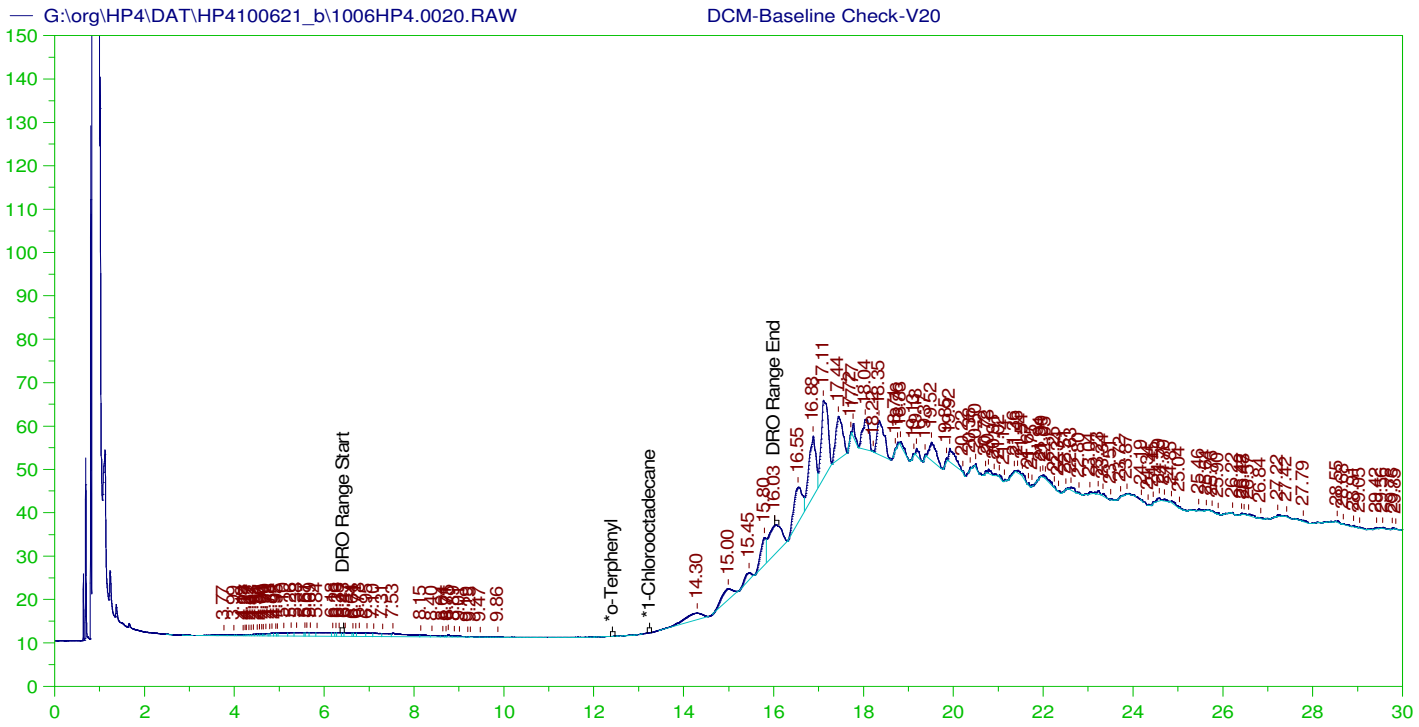
DRO Area:6.321696E+07 DRO Amount: 2577.175
TEH (Oil Range) Area:3.629964E+08 TEH (Oil Range) Amount: 14798.33

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

AMN 10/13/2021



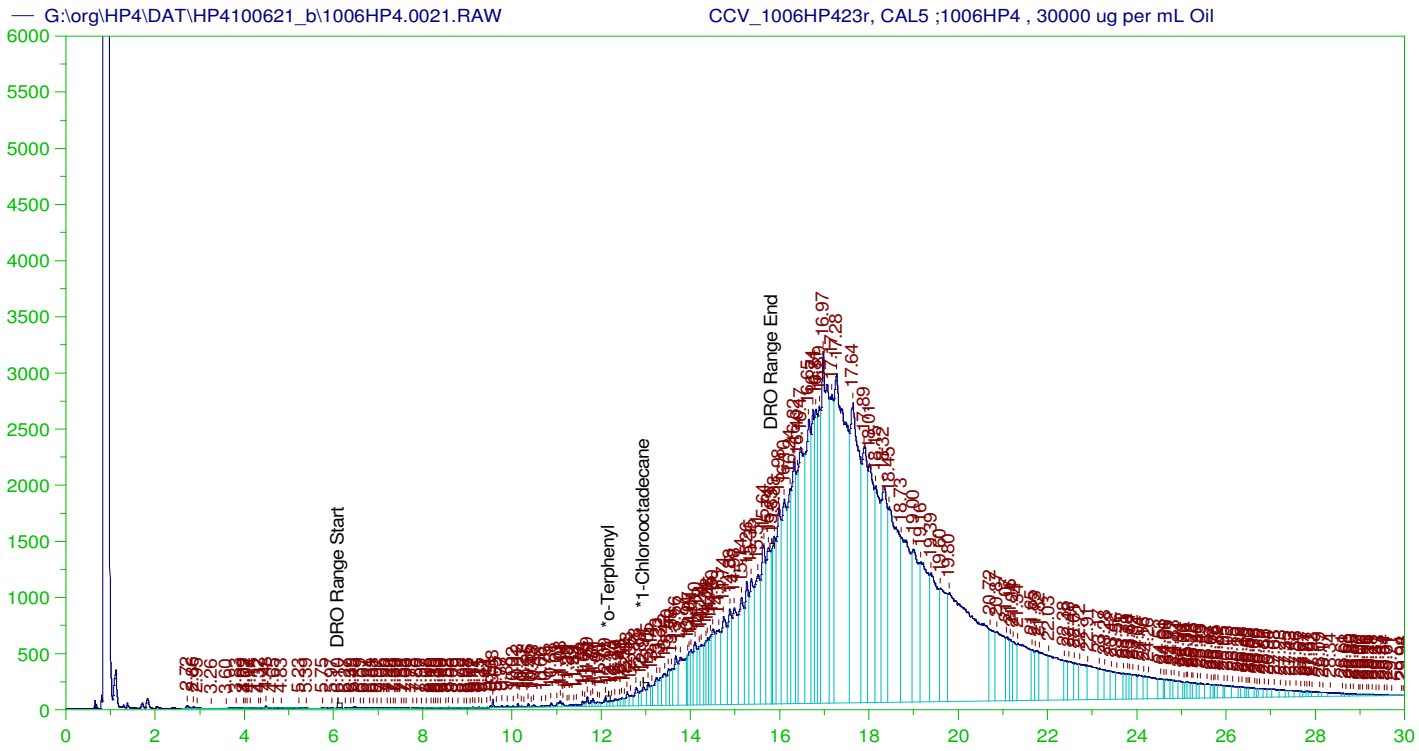
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V20
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0020.RAW
Date & Time Acquired: 10/7/2021 5:35:48 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	29.983	200.	.	.	-
*1-Chlorooctadecane	29.983	200.	.	.	-

DRO Area:396511 DRO Amount: 15.23311
TEH Area:1438866 TEH Amount: 55.27819



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

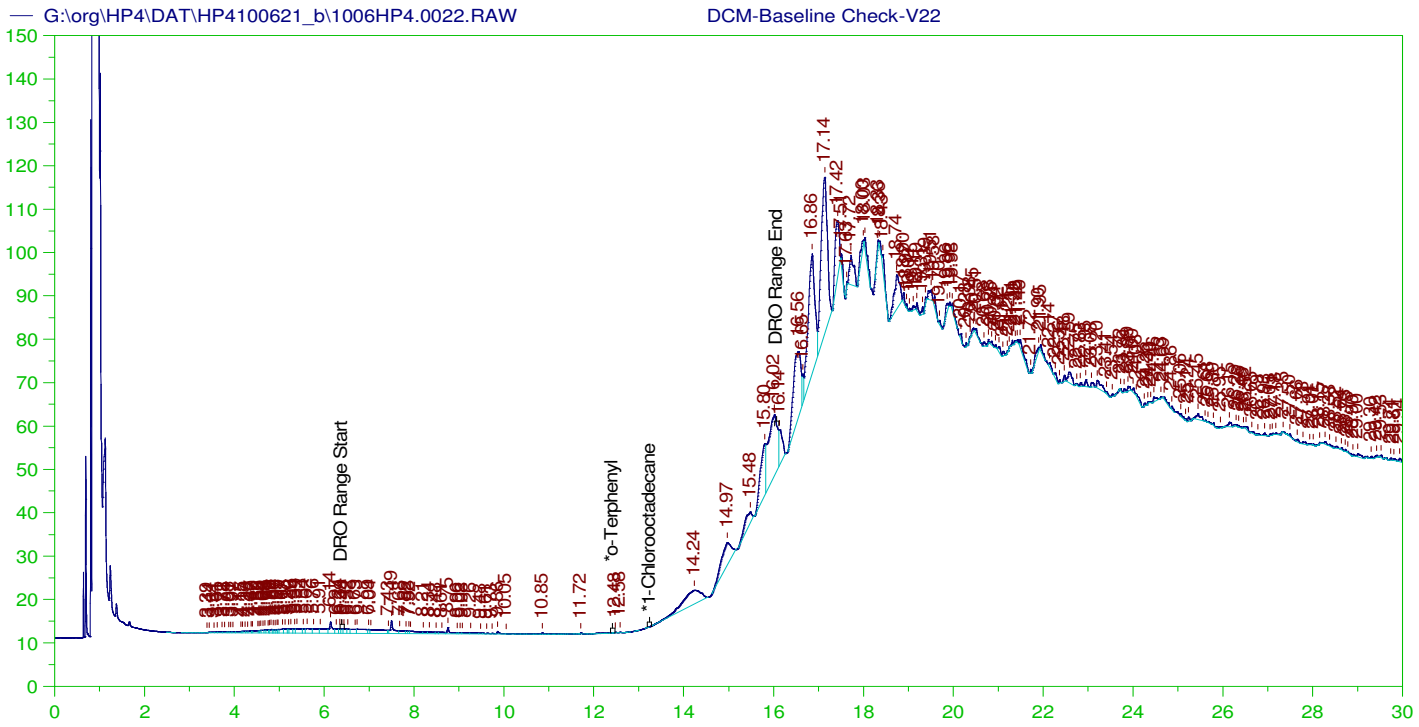
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0021.RAW

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

G:\org\HP4\dat\HP4100621_b\Review\021_CCV_1006HP423r_DR_8015-21-OIL-AA-L%.xls

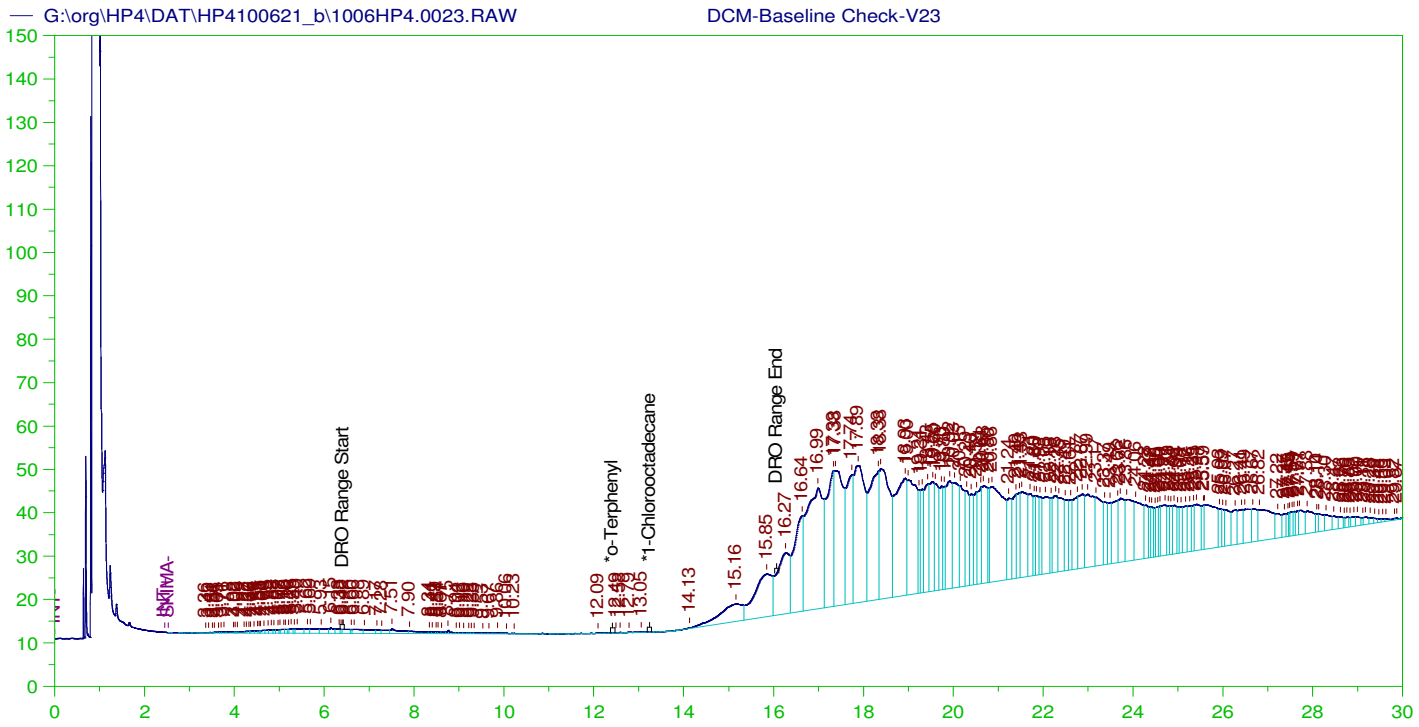


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V22
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0022.RAW
Date & Time Acquired: 10/7/2021 7:06:39 AM
Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
Sample Weight: 1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



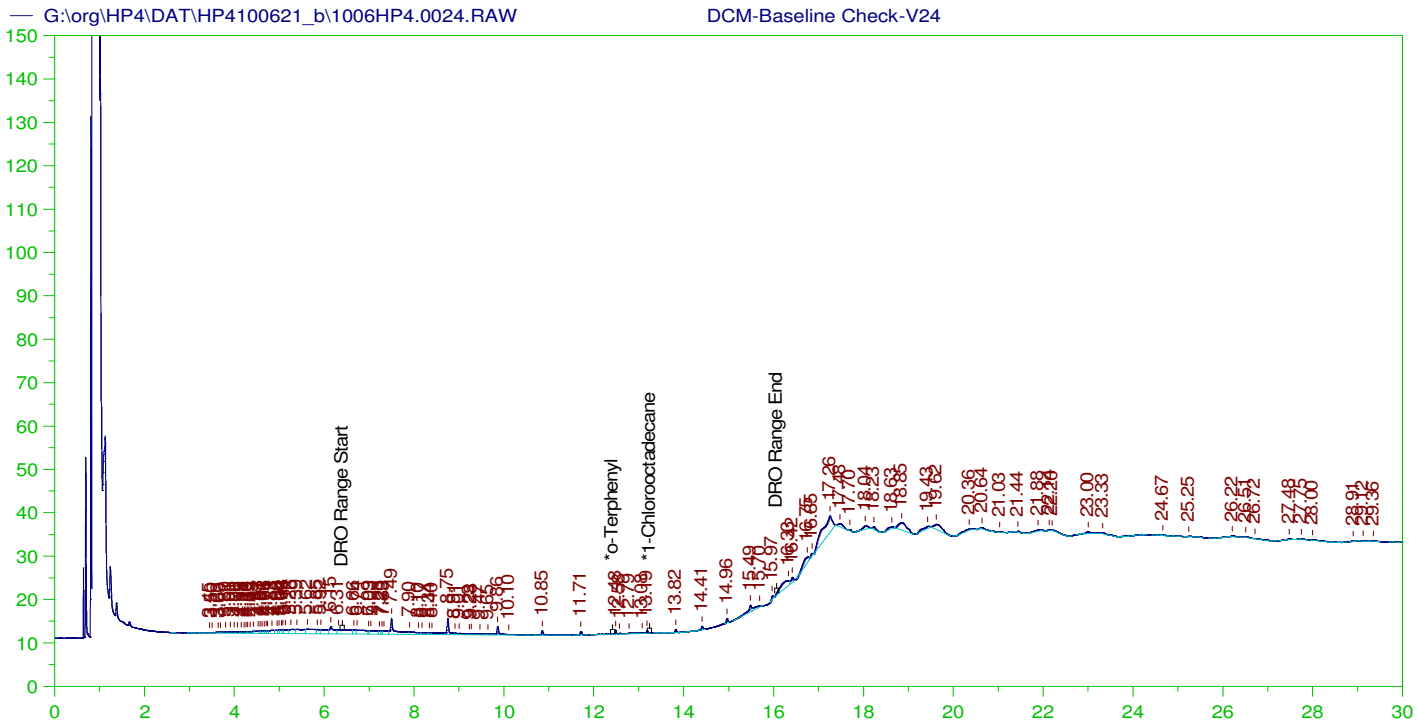
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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



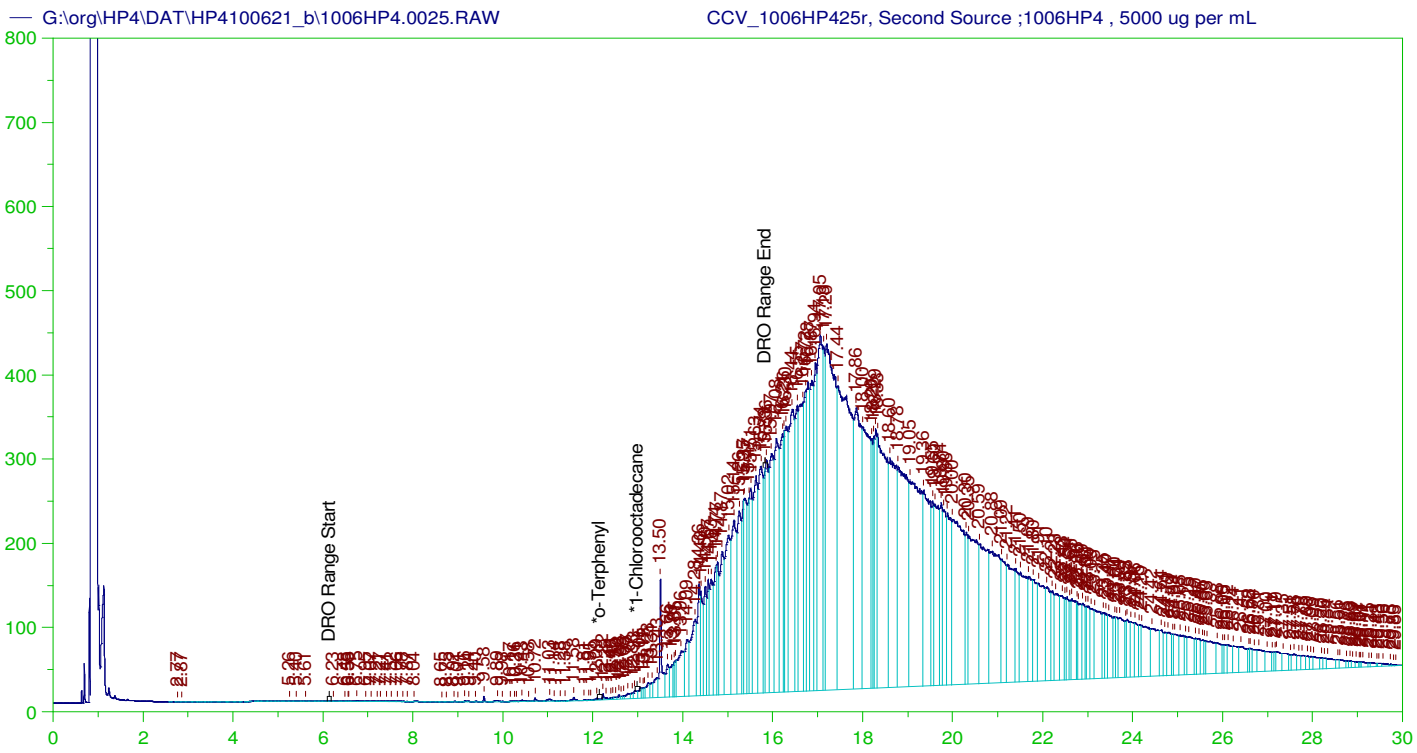
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

G:\org\HP4\dat\HP4100621_b\Review\025_CCV_1006HP425r_DR_8015-17-OIL-AA-L%.xls

Write Sequence Data File	Insert Entries(Have the first cell for entries selecte Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	**Manual Integrations**
G:\org\HP4\DAT\HP4100621_b\1006HP4.11r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	g:\org\HP4\Methods\CSC211006.met	1	1	1	1	0	No integrations
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	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.13r	CCV_1006HP413r, CAL1 ;1006HP4 , 150 ug per mLOil (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 basline. Set Baseline Now at 23.18
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	No integrations
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	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Set Baseline Now at 28 .22
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	No integrations
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	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.
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	No integrations
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	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.
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	No integrations
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	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.
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	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.23r	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_b\1006HP4.24r	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_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	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.

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	Insert Entries(Have the first cell for entries selecte							
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	1	1	1	1	0
:\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

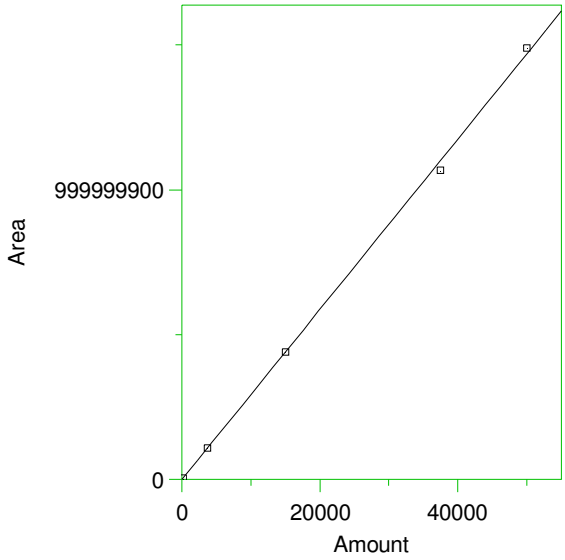
Creator: AMN
Description: 8015C-DRO. New ICal Per 1102HP4 (2021)-2 uL Inj.; COD added using OTP RFs
Reason for change:

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

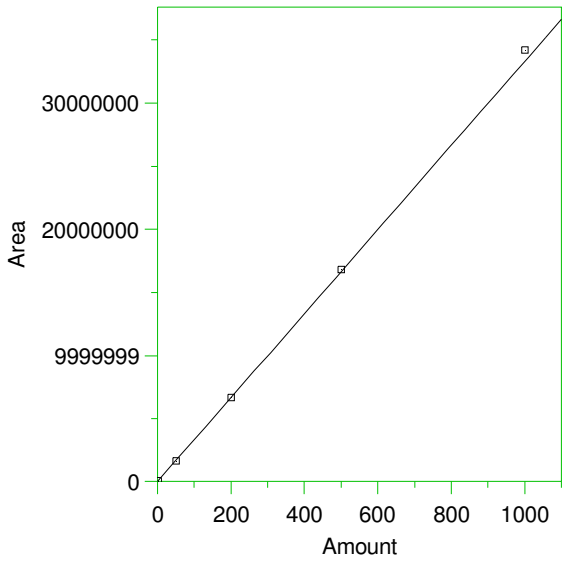
Y = 29373.28 X + 0

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

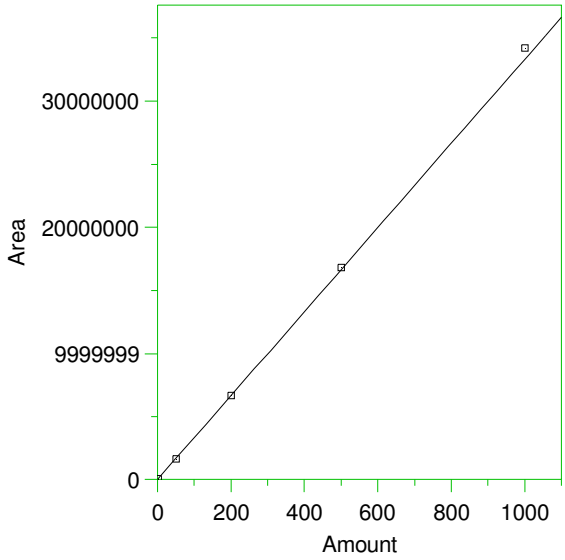
Y = 33319.7 X + 0

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	1630751	32615.02	-2.115	G:\Org\HP4\DAT\HP4110121_b\1101HP4.0011.BND	11/2/2021 7:51:35 AM
3	200	6706871	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

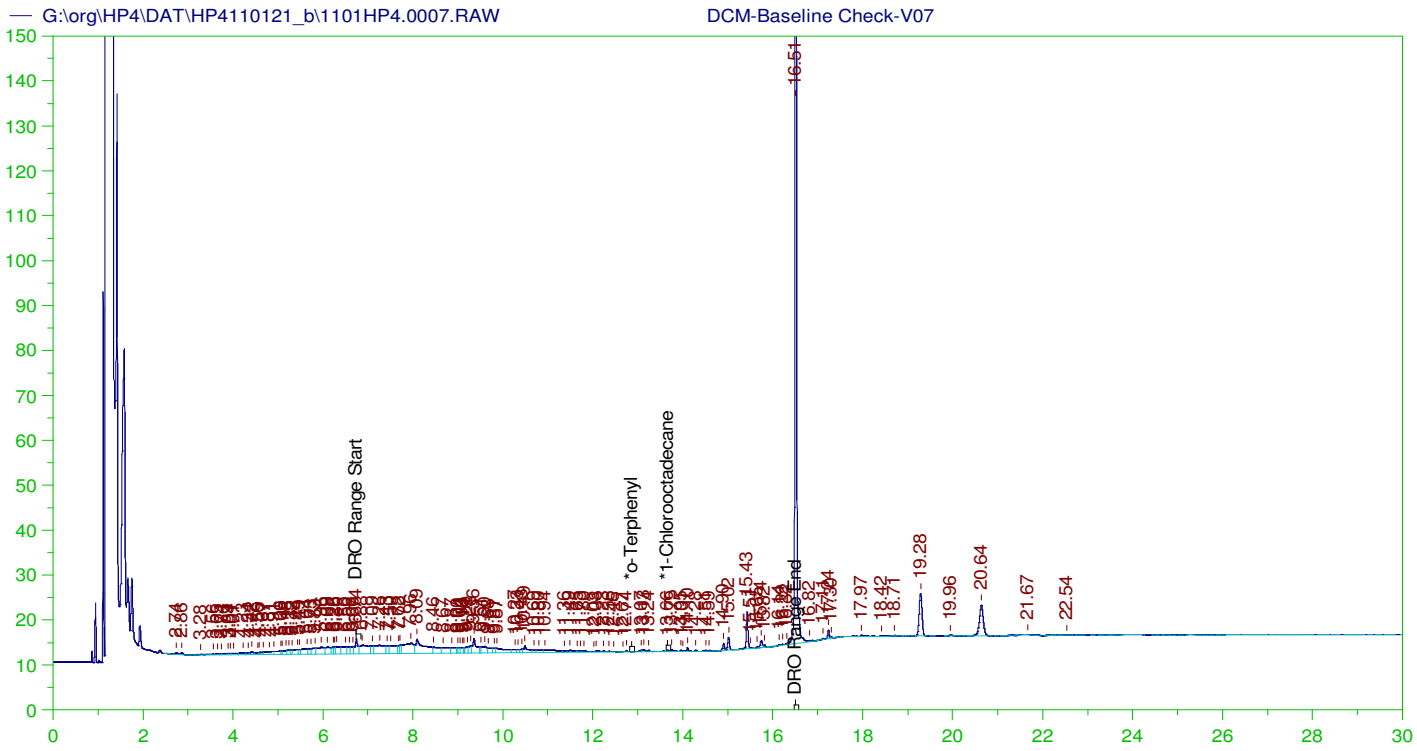
Single peak quantification by area

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



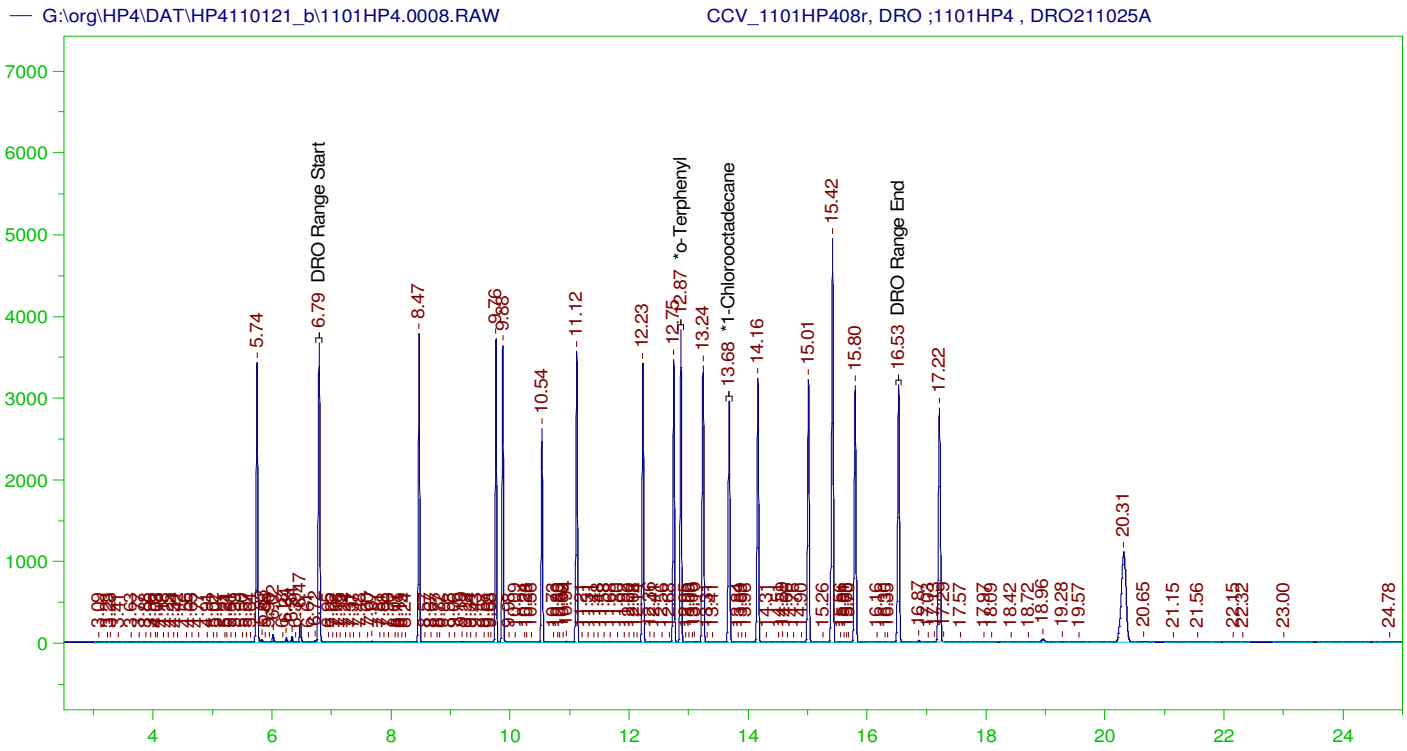
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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_DRO211102OA.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



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_DRO211102OA.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

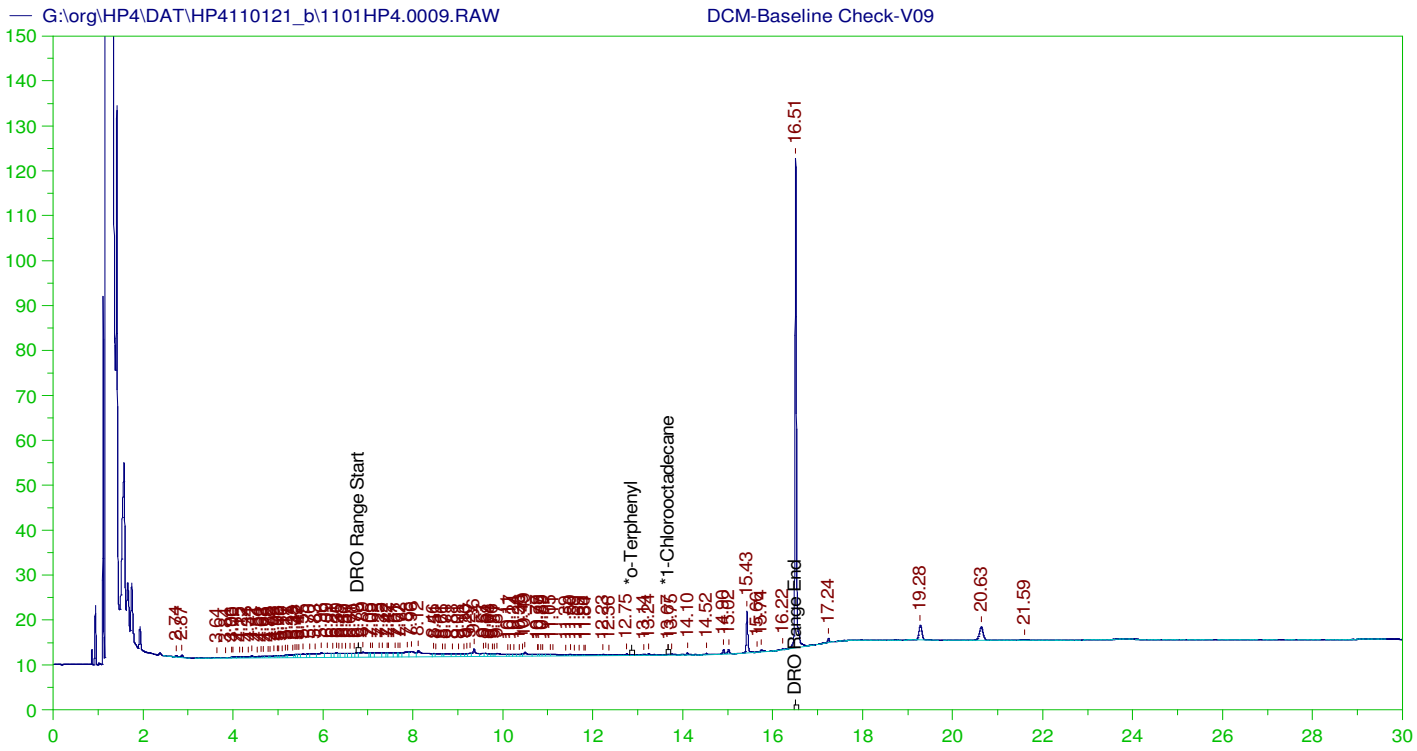
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.871	200.	197.197	98.6	-
*1-Chlorooctadecane	13.68	200.	162.692	81.35	-

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



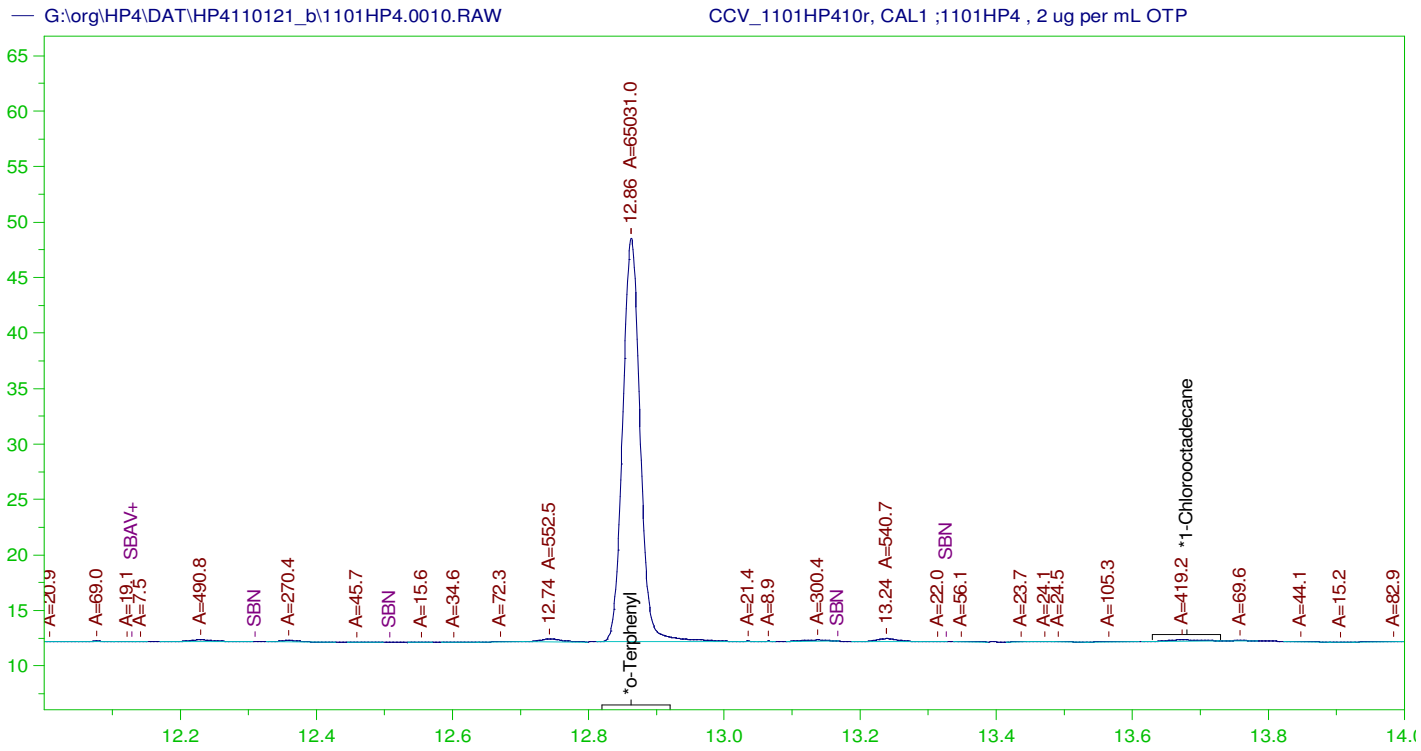
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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_DRO211102OA.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_DRO211102OA.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

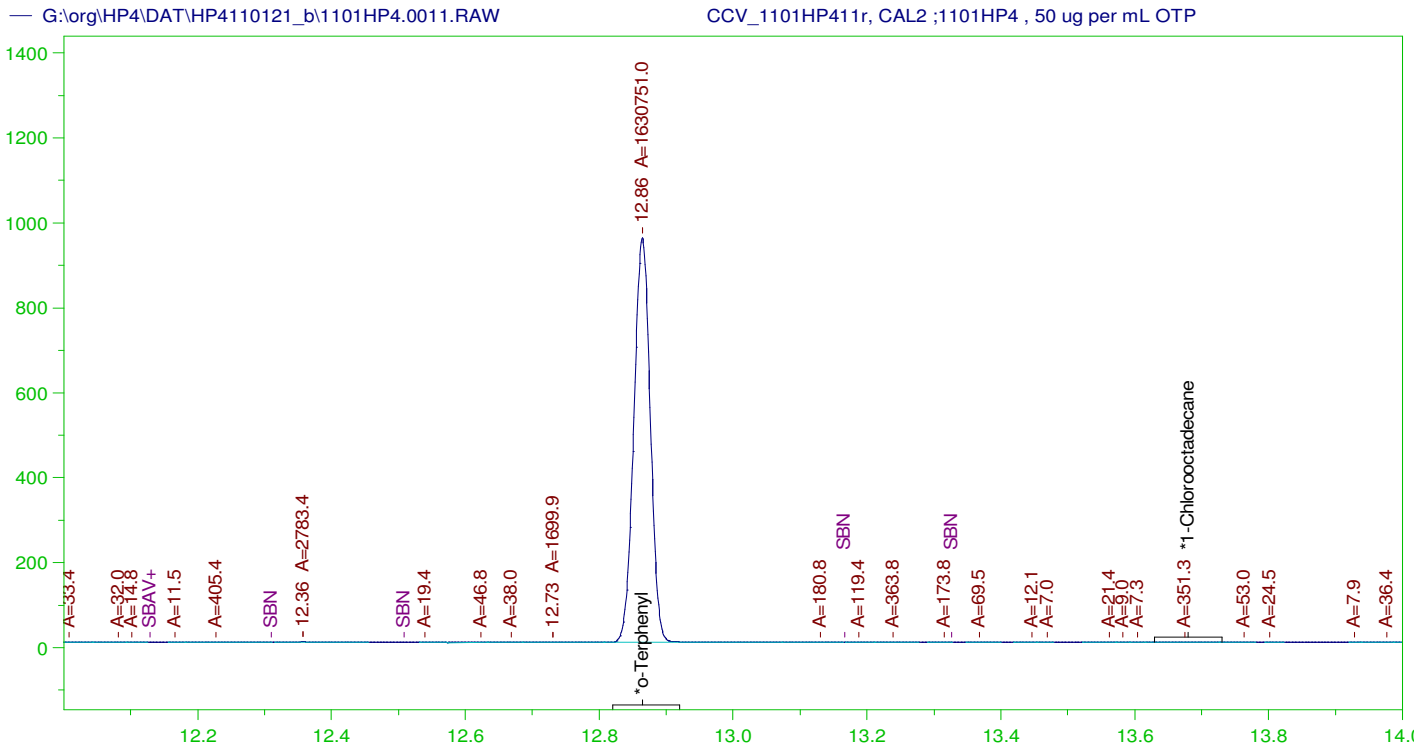
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.863	200.	1.952	.98	-
*1-Chlorooctadecane	29.971	200.	.	.	-

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_DRO211102OA.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

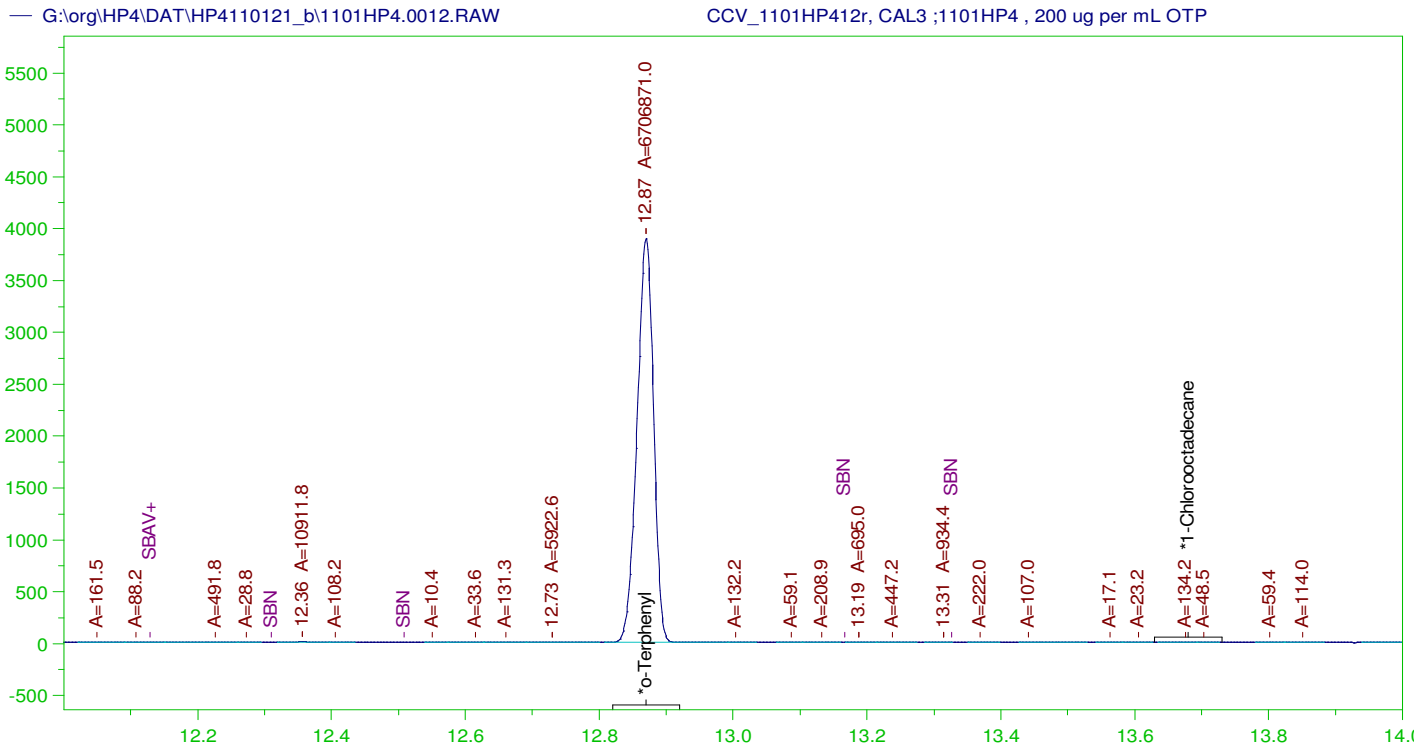
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.864	200.	48.943	24.47	-
*1-Chlorooctadecane	29.962	200.	.	.	-

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_DRO211102OA.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

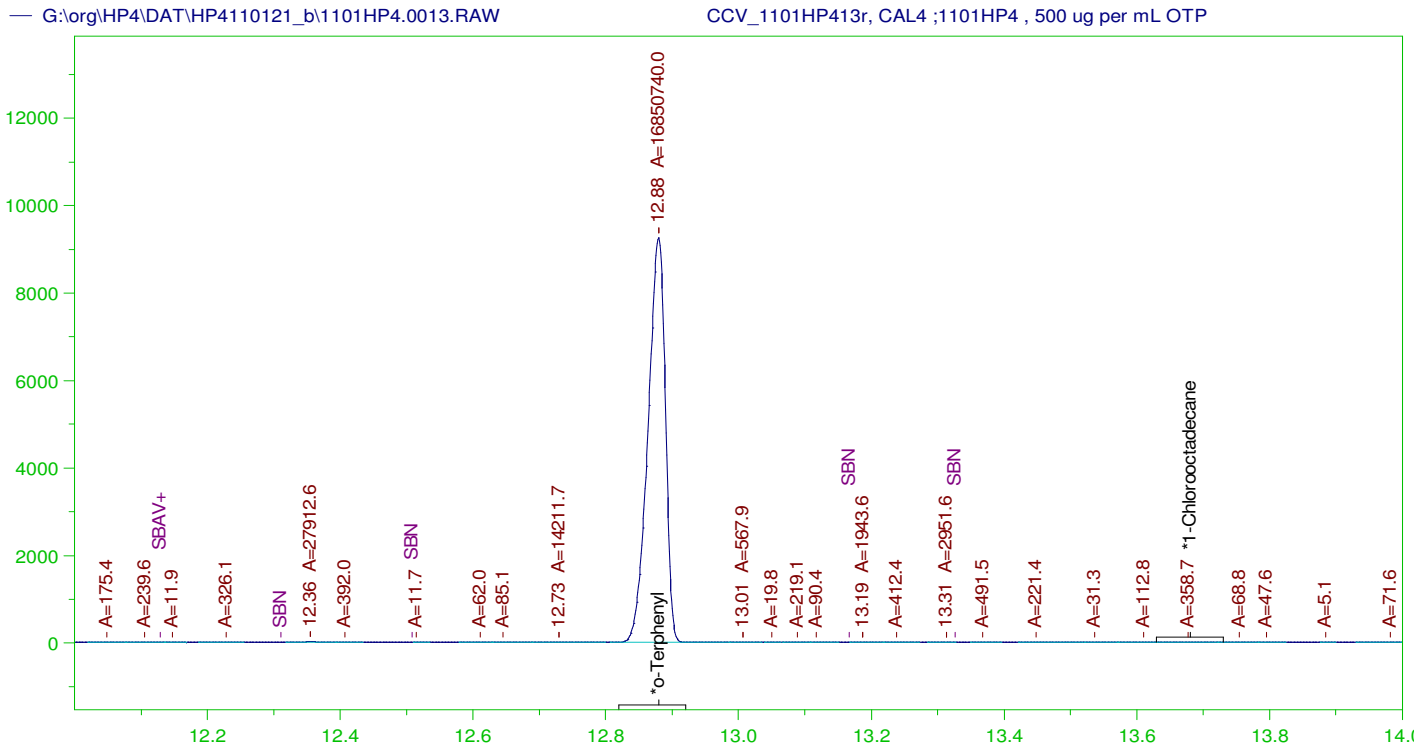
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.87	200.	201.289	100.64	-
*1-Chlorooctadecane	29.944	200.	.	.	-

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



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_DRO211102OA.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

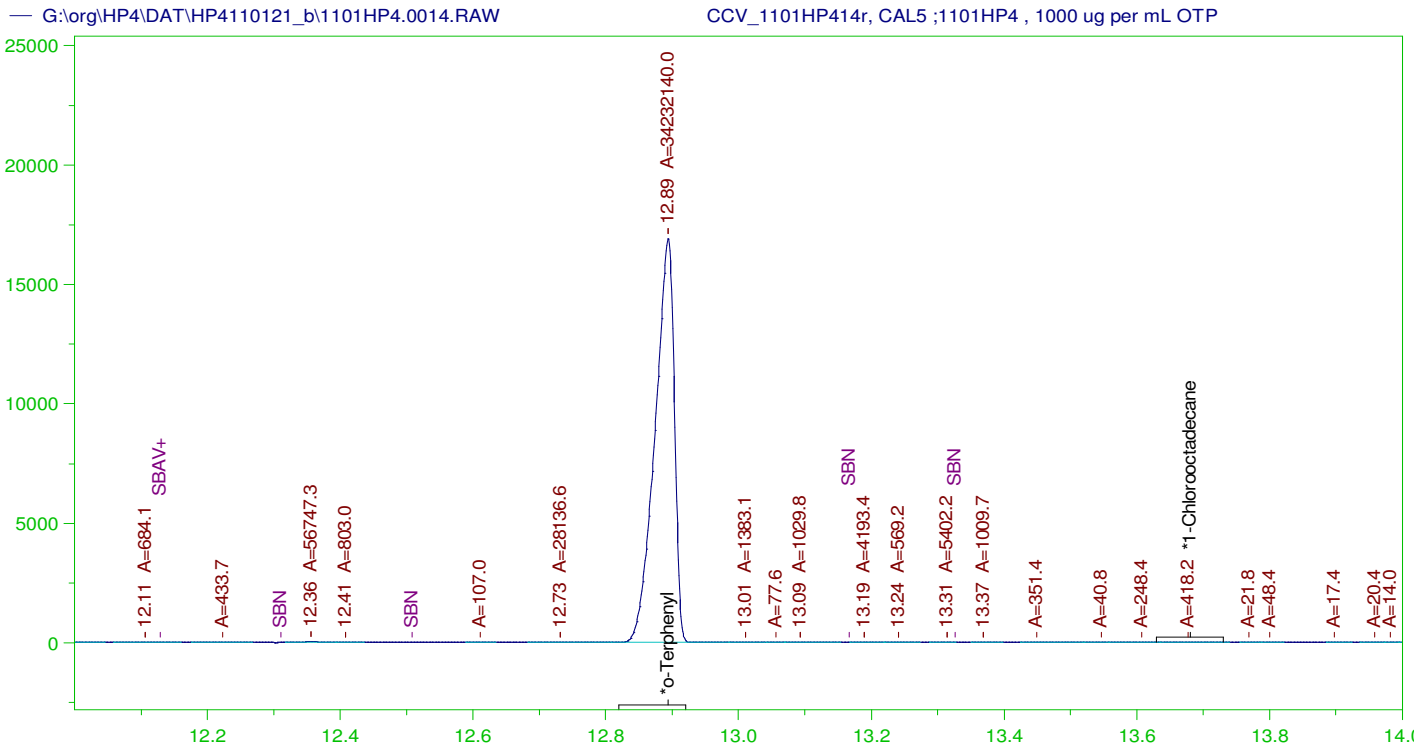
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.879	200.	505.729	252.86	-
*1-Chlorooctadecane	29.986	200.	.	.	-

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_DRO211102OA.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

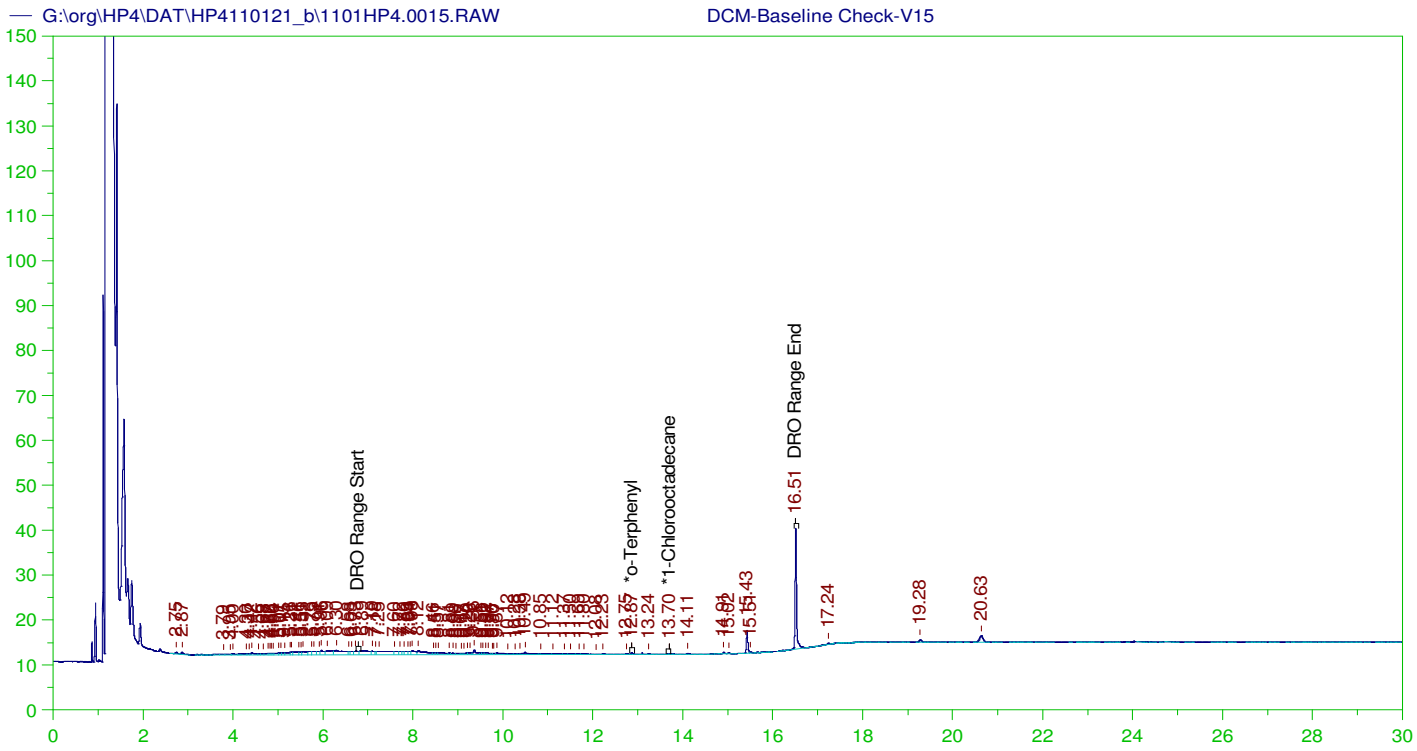
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.894	200.	1027.384	513.69	-
*1-Chlorooctadecane	29.945	200.	.	.	-

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



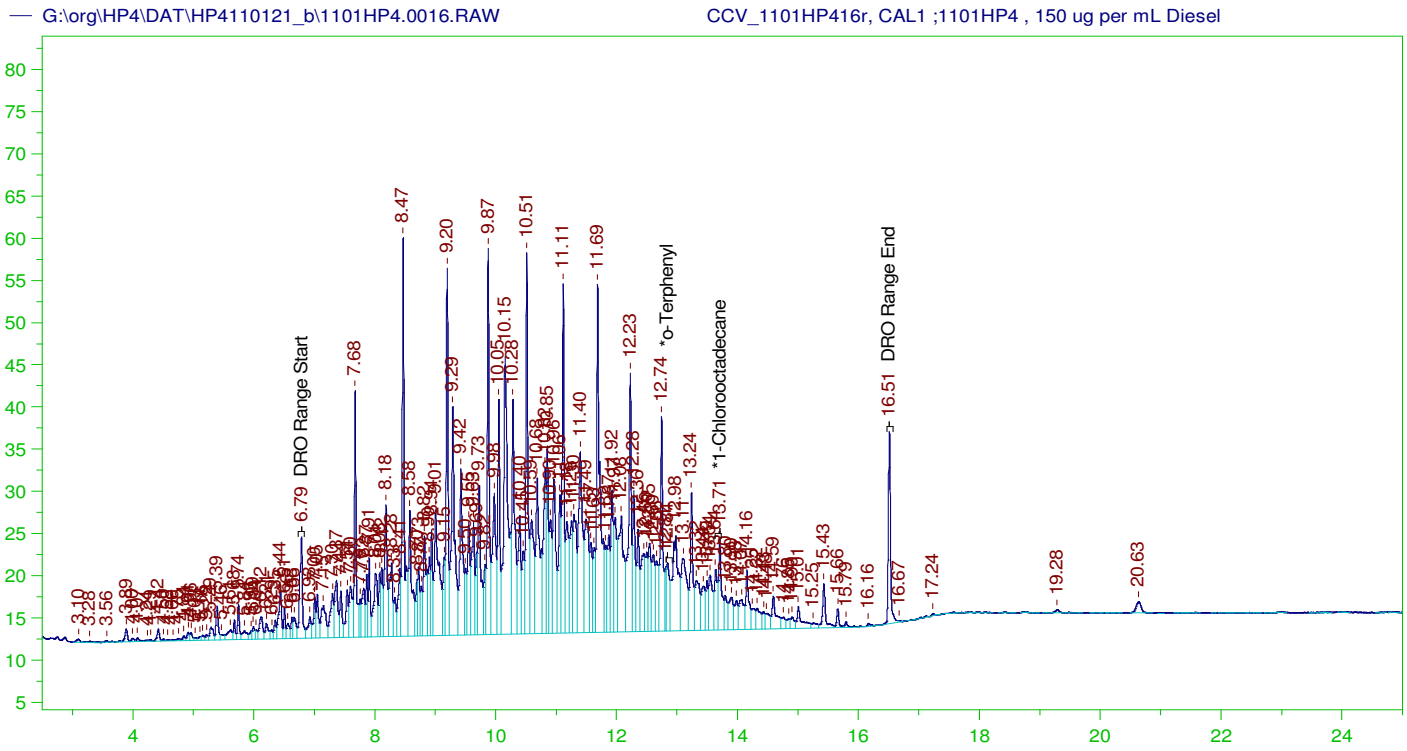
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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_DRO211102OA.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



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_DRO211102OA.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

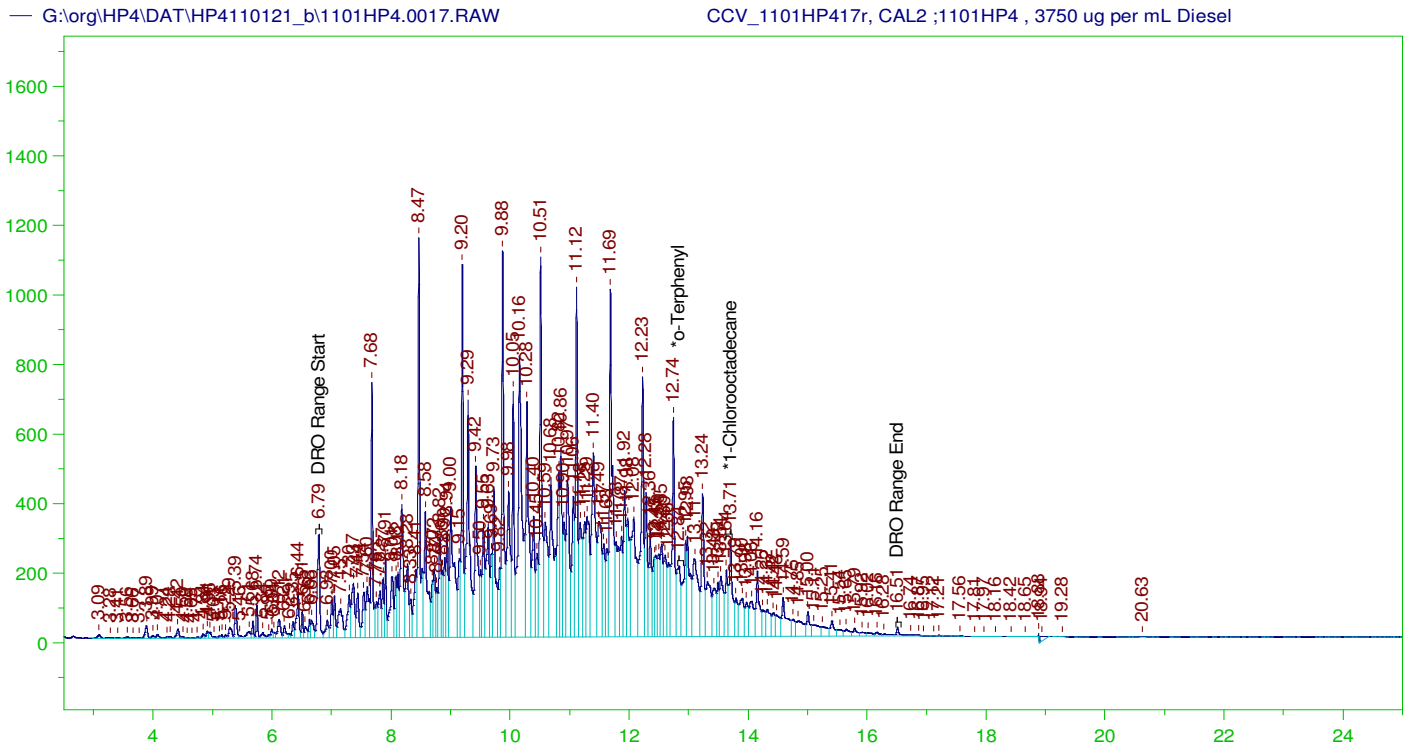
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.841	200.	.842	.42	-
*1-Chlorooctadecane	13.706	200.	1.092	.55	-

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP417r, CAL2 ;1101HP4 , 3750 ug per mL Diesel
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0017.RAW
Date & Time Acquired: 11/2/2021 2:07:13 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.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

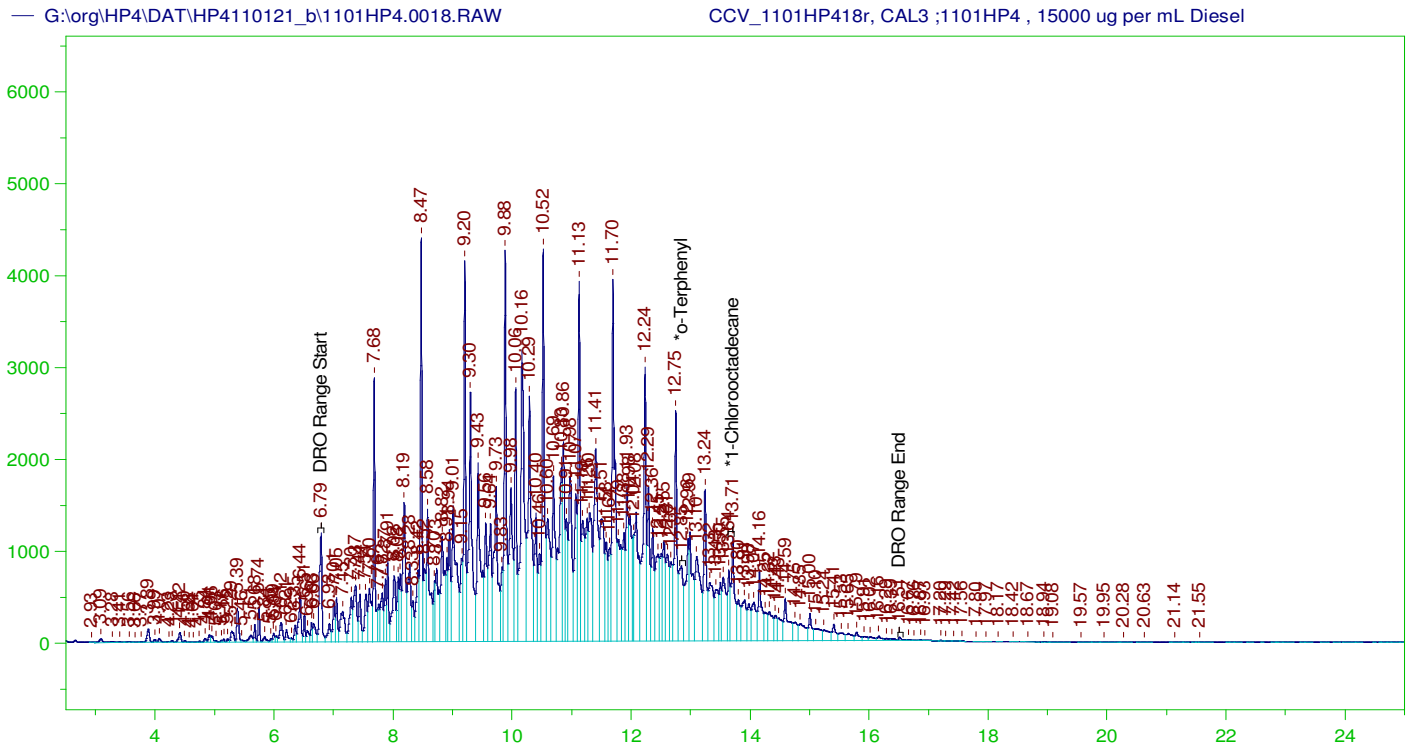
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.837	200.	28.641	14.32	-
*1-Chlorooctadecane	13.705	200.	33.114	16.56	-

DRO Area:1.065299E+08 DRO Amount: 3626.763
TEH Area:1.09359E+08 TEH Amount: 3723.079

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0017.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	3723.08	24.82	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.837	200.	28.641	14.32	85-115
*1-Chlorooctadecane	13.705	200.	33.114	16.56	85-115



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_DRO211102OA.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

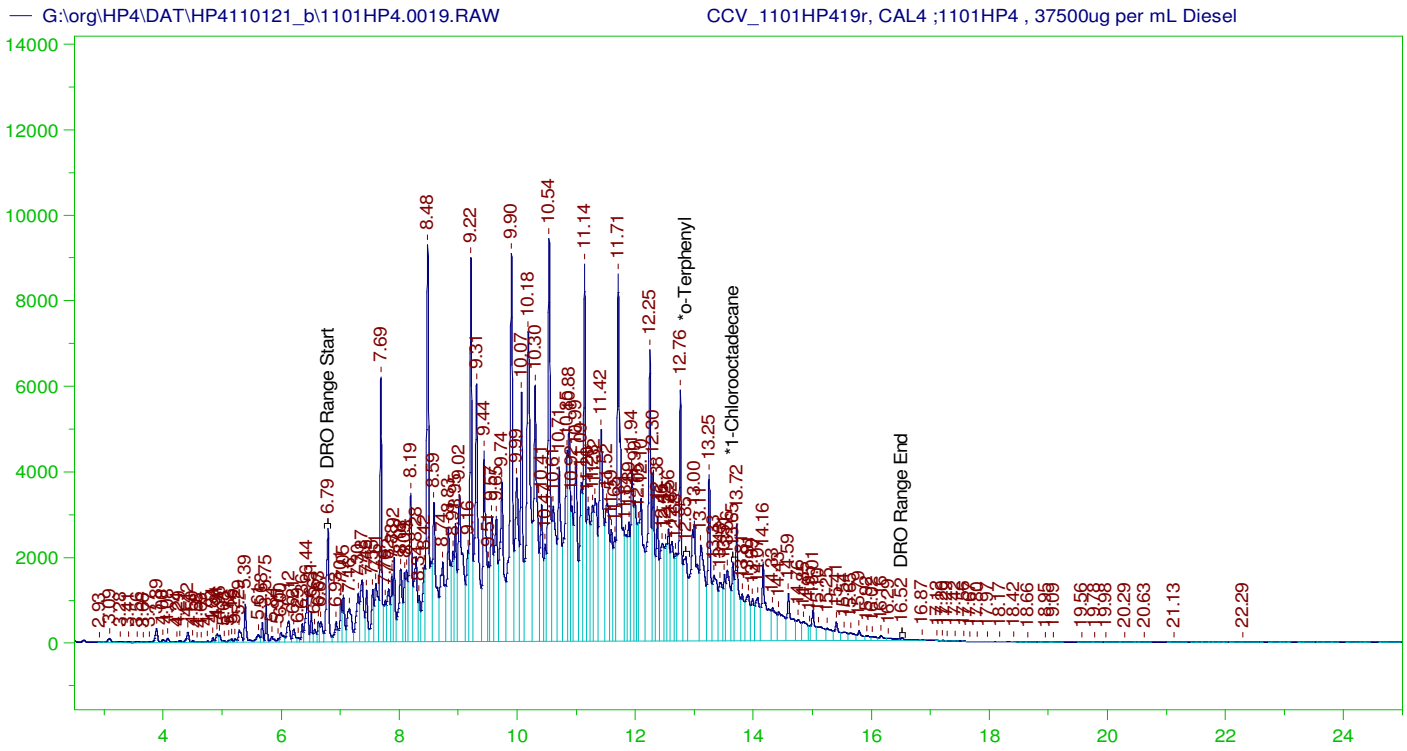
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.846	200.	119.117	59.56	-
*1-Chlorooctadecane	13.709	200.	132.401	66.2	-

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_1101HP419r, CAL4 ;1101HP4 , 37500ug per mL Diesel
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0019.RAW
Date & Time Acquired: 11/2/2021 3:47:46 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.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

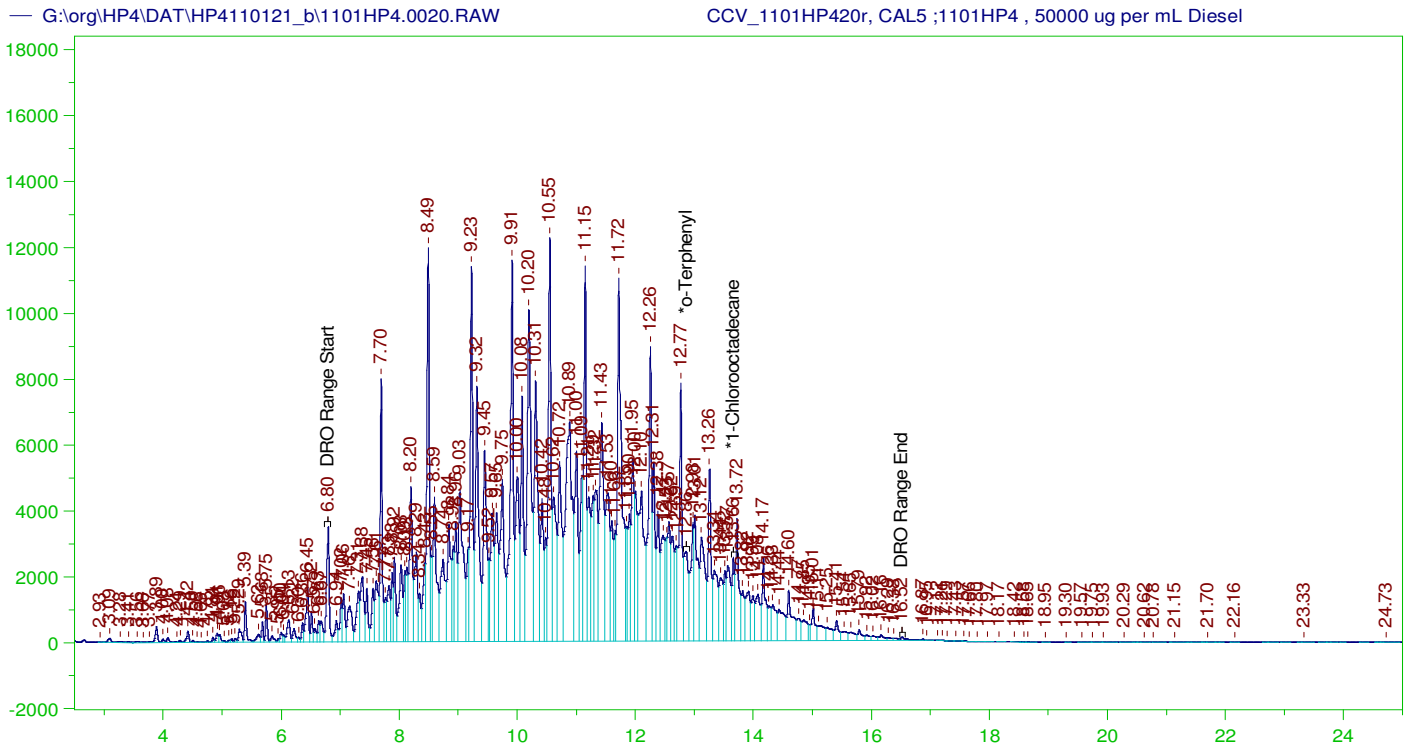
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.855	200.	279.085	139.54	-
*1-Chlorooctadecane	13.653	200.	147.666	73.83	-

DRO Area:1.040405E+09 DRO Amount: 35420.13
TEH Area:1.066362E+09 TEH Amount: 36303.8

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0019.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	36303.8	242.03	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.855	200.	279.085	139.54	85-115
*1-Chlorooctadecane	13.653	200.	147.666	73.83	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_DRO211102OA.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

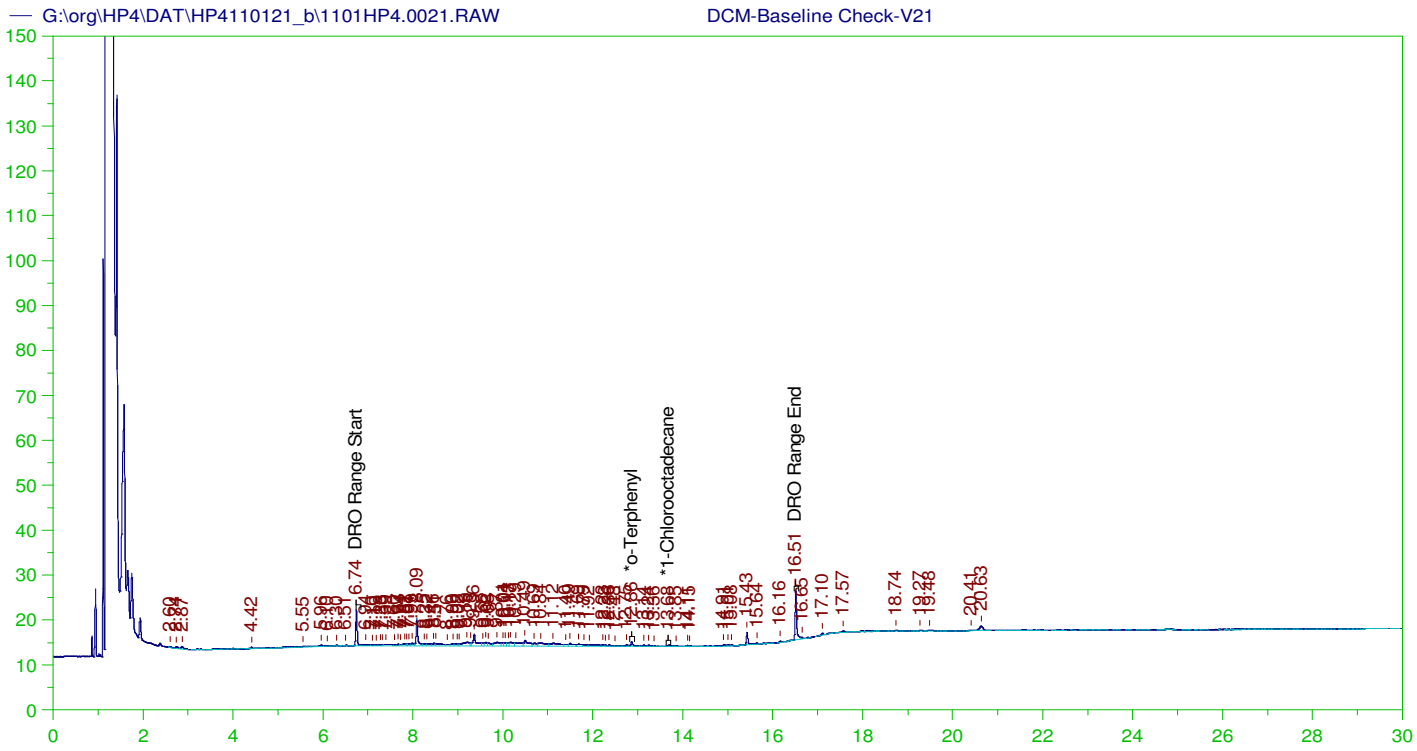
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.862	200.	408.713	204.36	-
*1-Chlorooctadecane	13.661	200.	204.074	102.04	-

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



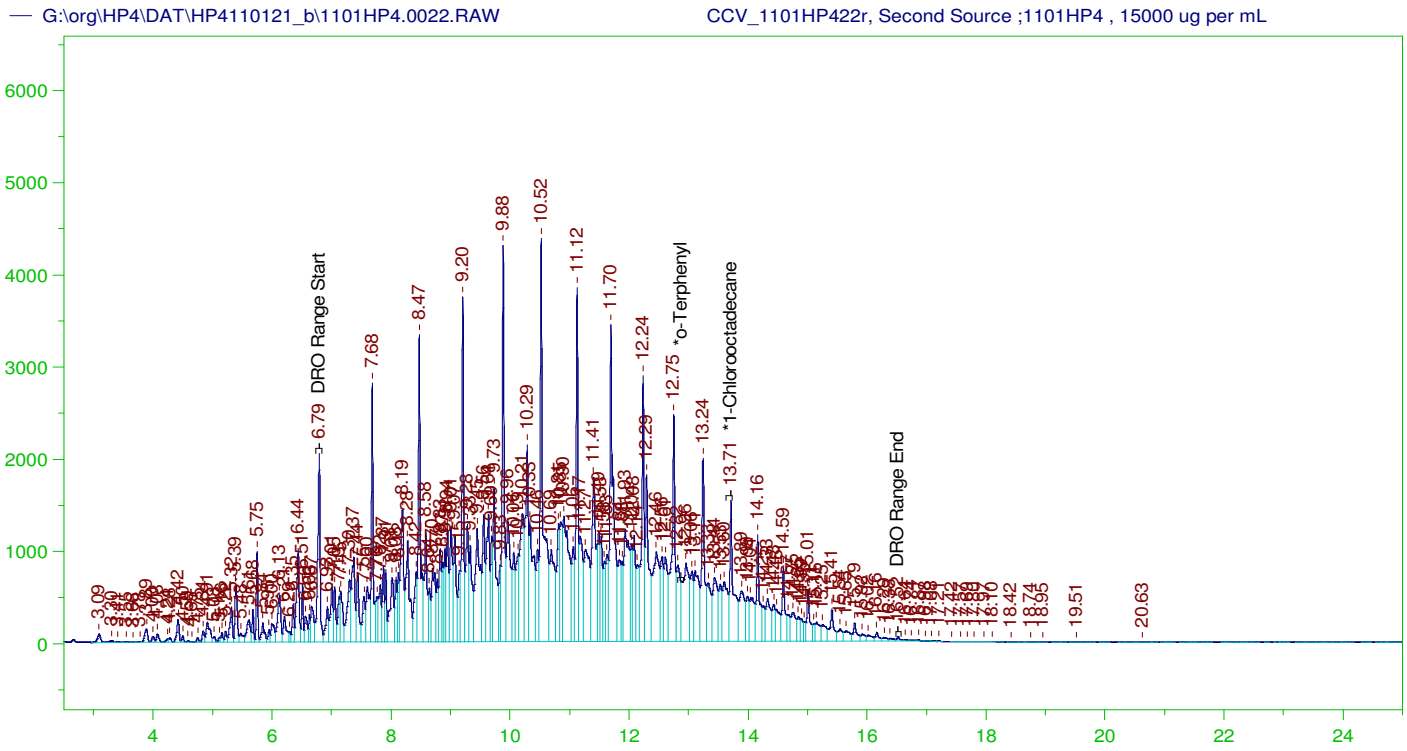
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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_DRO211102OA.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



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_DRO211102OA.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	Insert Entries(Have the first cell for entries selecte								
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP4\DAT\HP4110121_b\1101HP4.07r	DCM-Baseline Check-V07	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
G:\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	No Integration
G:\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	No Integration
G:\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	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\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	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\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	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\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	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\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	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\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	No Integration
G:\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	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\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	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\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	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\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	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\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	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\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	No Integration
G:\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	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. 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** Technician: **Jillian L Bostwick** Prep Start Date: **1/17/2022 1:44:50 PM**

Prep Batch **162993** Prep Temp **NA °C** Batch Units: **ML** Prep End Date: **1/18/2022 10:41:00 A**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-162993			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
Start time: 1:35 PM, 1/17/2022. End time: 01/18/2022 at 7:35 AM. SGT by ALN on 1/20/2022.										
LCS-162993			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
All bottles were completely used, defaced and disposed of on 1/13/2022. SGT by ALN on 1/20/2022.										
LCSD-162993			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
SGT by ALN on 1/20/2022.										
LCS-162993-RRO			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
SGT by ALN on 1/20/2022.										
LCSD-162993-RRO			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
SGT by ALN on 1/20/2022.										
LOD-162993-SURR			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
SGT by ALN on 1/18/2022.										
MBN1-162993			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
SGT by ALN on 1/18/2022.										
MDL1-162993			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
SGT by ALN on 1/18/2022.										
LOQ-162993			1000	0	0	1.00	0.001		1/17/2022	1/18/2022
SGT by ALN on 1/18/2022.										
B22010978-001D	Ground Water	2	1010	0	0	1.00	0.00099		1/17/2022	1/18/2022
Bottle 1/2. Clear. SGT by ALN on 1/20/2022.										
B22010978-001DMS	Ground Water	2	1030	0	0	1.00	0.000971		1/17/2022	1/18/2022
Bottle 2/2. Clear. SGT by ALN on 1/20/2022.										
B22010980-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/17/2022	1/18/2022
Bottle 1/2. Clear, light sediment. SGT by ALN on 1/20/2022.										
B22010980-001DMS-RRO	Ground Water	2	1040	0	0	1.00	0.000962		1/17/2022	1/18/2022
Bottle 2/2. Clear, light sediment. SGT by ALN on 1/20/2022.										
B22010971-001D	Ground Water	2	1000	0	0	1.00	0.001		1/17/2022	1/18/2022
Bottle 1/2. Clear. SGT by ALN on 1/20/2022.										

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	
14719	4ML, Amber Vial, 20220104	1/4/2027	
14747	Dichloromethane EC849	11/1/2023	

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220113 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 01/14/22 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220106B	Triacontane SURR 1000 ug/mL	All except LCS, L	100 uL	4/6/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
SG220101(13376)	Baked Silica Gel	all-SGT samples	5g	2/28/2030
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS,	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, LCSD	100 uL	9/1/2026
DRO211006B	Triacontane SURR 20 ug/mL	LOD	50 uL	4/6/2026

PREP BATCH REPORT

Prep Code: **HC-3520-DRO** Technician: **Jillian L Bostwick** Prep Start Date: **1/17/2022 1:44:50 PM**

Prep Batch **162993** Prep Temp **NA °C** Batch Units: **ML** Prep End Date: **1/18/2022 10:41:00 A**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B22010972-001D	Ground Water	2	1050	0	0	1.00	0.000952		1/17/2022	1/18/2022
Bottle 1/2. Clear.										
B22010973-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/17/2022	1/18/2022
Bottle 1/2. Clear.										
B22010974-001D	Ground Water	2	990	0	0	1.00	0.00101		1/17/2022	1/18/2022
Bottle 1/2. Clear. SGT by ALN on 1/20/2022.										
B22010975-001D	Ground Water	2	970	0	0	1.00	0.00103		1/17/2022	1/18/2022
Bottle 1/2. Clear. SGT by ALN on 1/20/2022.										
B22010976-001D	Ground Water	2	1000	0	0	1.00	0.001		1/17/2022	1/18/2022
Bottle 1/2. Clear. SGT by ALN on 1/20/2022.										
B22010977-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/17/2022	1/18/2022
Bottle 1/2. Clear. SGT by ALN on 1/20/2022.										
B22010979-001D	Ground Water	2	1040	0	0	1.00	0.000962		1/17/2022	1/18/2022
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	
14719	4ML, Amber Vial, 20220104	1/4/2027	
14747	Dichloromethane EC849	11/1/2023	

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220113 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 01/14/22 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220106B	Triacontane SURR 1000 ug/mL	All except LCS, L	100 uL	4/6/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
SG220101(13376)	Baked Silica Gel	all-SGT samples	5g	2/28/2030
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS,	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, LCSD	100 uL	9/1/2026
DRO211006B	Triacontane SURR 20 ug/mL	LOD	50 uL	4/6/2026

Energy Laboratories Inc

ANALYTICAL RUN Summary

24-Jan-22

Run ID GCFID-HP4-B_220118A

Run Start Date: 1/18/2022
Analyst: Ann Nebel
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
DRO220106A	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-RRO	4/6/2026
DRO220111A	Carbon Scan STD-Marker					MARKER	7/13/2026
DRO220114A	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
14988408	CCV_0118HP40	HC-8015-DRO-	CCV		1/18/2022 4:02:2	1	R373422		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		4.841823242		5	0	0	0.0513	0.3	0	97%	80	120	0%	
n-Triacontane	S	mg/L		0.2105389		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
14988409	CCV_0118HP40	HC-8015-DRO-	CCV		1/18/2022 4:47:3	1	R373422		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		13.46018		15	0	0	0.0358	0.3	0	90%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		13.9634		15	0	0	0.0782	0.3	50	93%	80	120	0%	
o-Terphenyl	S	mg/L		0.2064226		0.2	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
14988410	LCS-162993	HC-8015-DRO-	LCS-DOD		1/18/2022 8:32:3	1	162993	1/17/2022 1:	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
14988410	LCS-162993	HC-8015-DRO-	LCS-DOD		1/18/2022 8:32:3	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		12.2747		15	0	0	0.0358	0.3	0	82%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		13.12438		15	0	0	0.0782	0.3	50	87%	60	132	0%	
o-Terphenyl	S	mg/L		0.1782248		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
14988411	LCSD-162993	HC-8015-DRO-	LCSD-DOD		1/18/2022 9:17:2	1	162993	1/17/2022 1:	0	1E+07	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		13.09048		15	0	12.2747	0.0358	0.3	0	87%	36	132	6%	
Total Extractable Hydrocarbons	A	mg/L		13.99274		15	0	13.12438	0.0782	0.3	50	93%	60	132	6%	
o-Terphenyl	S	mg/L		0.1863899		0.2	0	0	0.000531	0.002	0	93%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988412	MB-162993	HC-8015-DRO-	MBLK		1/18/2022 10:02:	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		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		0.1156		0.1	0	0	0.00054	0.002	0	116%	50	150	0%	
o-Terphenyl	S	mg/L		0.1946728		0.2	0	0	0.000531	0.002	0	97%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988413	B22010978-001	HC-8015-DRO-	SAMP		1/18/2022 10:46:	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.1022923		0	0	0	0.035442	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.271594524		0	0	0	0.050787	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3728313		0	0	0	0.077418	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1197		0.099	0	0	0.0005346	0.00198	0	121%	50	150	0%	
o-Terphenyl	S	mg/L		0.1989242		0.198	0	0	0.0005257	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
14988414	B22010978-001	HC-8015-DRO-	MS-DOD		1/18/2022 11:31:	1	162993	1/17/2022 1:	1E+07	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		12.83901		14.565	0.1022923	0	0.0347618	0.3	0	87%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		13.81674		14.565	0.3728313	0	0.0759322	0.3	50	92%	60	132	0%	
o-Terphenyl	S	mg/L		0.1802217		0.1942	0	0	0.0005156	0.002	0	93%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988415	B22010980-001	HC-8015-DRO-	SAMP		1/19/2022 1:00:5	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0347618	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0		0	0	0	0.0498123	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0759322	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1001		0.0971	0	0	0.0005243	0.001942	0	103%	50	150	0%	
o-Terphenyl	S	mg/L		0.1676535		0.1942	0	0	0.0005156	0.002	0	86%	56	125	0%	
TEH(Oil Range)	X	mg/L		0		0	0	0	0.0498123	0.3	0	0%	0	0	0%	U

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988416	B22010980-001	HC-8015-DRO-	MS-DOD		1/19/2022 1:45:4	1	162993	1/17/2022 1:	1E+07	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.517313480		4.81	0	0	0.0493506	0.3	0	94%	41	113	0%	
n-Triacontane	S	mg/L		0.1112		0.0962	0	0	0.0005195	0.002	0	116%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988417	CCV_0118HP41	HC-8015-DRO-	CCV		1/19/2022 3:14:5	1	R373422		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		4.879039063		5	0	0	0.0513	0.3	0	98%	80	120	0%	
n-Triacontane	S	mg/L		0.2104802		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
14988418	CCV_0118HP42	HC-8015-DRO-	CCV		1/19/2022 3:59:4	1	R373422		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
14988418	CCV_0118HP42	HC-8015-DRO-	CCV		1/19/2022 3:59:4	1	R373422		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		13.86105		15	0	0	0.0358	0.3	0	92%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.37493		15	0	0	0.0782	0.3	50	96%	80	120	0%	
o-Terphenyl	S	mg/L		0.2121092		0.2	0	0	0.000531	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
14988419	B22010971-001	HC-8015-DRO-	SAMP		1/19/2022 6:14:2	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.5115255		0	0	0	0.0358	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.618708014		0	0	0	0.0513	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		1.139919		0	0	0	0.0782	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1139		0.1	0	0	0.00054	0.002	0	114%	50	150	0%	
o-Terphenyl	S	mg/L		0.190061		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
14988420	B22010977-001	HC-8015-DRO-	SAMP		1/19/2022 9:13:5	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0347618	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.092809886		0	0	0	0.0498123	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.09702748		0	0	0	0.0759322	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1132		0.0971	0	0	0.0005243	0.001942	0	117%	50	150	0%	
o-Terphenyl	S	mg/L		0.1888063		0.1942	0	0	0.0005156	0.002	0	97%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988421	B22010979-001	HC-8015-DRO-	SAMP		1/19/2022 9:58:4	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0344396	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0		0	0	0	0.0493506	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0752284	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1156		0.0962	0	0	0.0005195	0.001924	0	120%	50	150	0%	
o-Terphenyl	S	mg/L		0.1942535		0.1924	0	0	0.0005108	0.002	0	101%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988422	B22010975-001	HC-8015-DRO-	SAMP		1/19/2022 11:28:	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.036874	0.309	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.163587272		0	0	0	0.052839	0.309	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2080202		0	0	0	0.080546	0.309	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1167		0.103	0	0	0.0005562	0.00206	0	113%	50	150	0%	
o-Terphenyl	S	mg/L		0.1937299		0.206	0	0	0.0005469	0.00206	0	94%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988423	B22010976-001	HC-8015-DRO-	SAMP		1/19/2022 12:12:	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0358	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.134058923		0	0	0	0.0513	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.1483787		0	0	0	0.0782	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1172		0.1	0	0	0.00054	0.002	0	117%	50	150	0%	
o-Terphenyl	S	mg/L		0.1921908		0.2	0	0	0.000531	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
14988424	CCV_0118HP43	HC-8015-DRO-	CCV		1/19/2022 1:41:5	1	R373422		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		4.530638184		5	0	0	0.0513	0.3	0	91%	80	120	0%	
n-Triacontane	S	mg/L		0.2283753		0.2	0	0	0.00054	0.002	0	114%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988425	CCV_0118HP43	HC-8015-DRO-	CCV		1/19/2022 2:26:4	1	R373422		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		14.69105		15	0	0	0.0358	0.3	0	98%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.23783		15	0	0	0.0782	0.3	50	102%	80	120	0%	
o-Terphenyl	S	mg/L		0.2247897		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
14988426	B22010972-001	HC-8015-DRO-	SAMP		1/19/2022 4:40:5	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		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		0.1078		0.0952	0	0	0.0005141	0.001904	0	113%	50	150	0%	
o-Terphenyl	S	mg/L		0.1826938		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
14988427	B22010973-001	HC-8015-DRO-	SAMP		1/19/2022 5:25:5	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0347618	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0		0	0	0	0.0498123	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0759322	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.118		0.0971	0	0	0.0005243	0.001942	0	122%	50	150	0%	
o-Terphenyl	S	mg/L		0.1947447		0.1942	0	0	0.0005156	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
14988428	B22010974-001	HC-8015-DRO-	SAMP		1/19/2022 6:10:4	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.2568205		0	0	0	0.036158	0.303	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.543218195		0	0	0	0.051813	0.303	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.8011904		0	0	0	0.078982	0.303	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1212		0.101	0	0	0.0005454	0.00202	0	120%	50	150	0%	
o-Terphenyl	S	mg/L		0.1994921		0.202	0	0	0.0005363	0.00202	0	99%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988429	LCS-162993-RR	HC-8015-DRO-	LCS-DOD		1/19/2022 7:40:2	1	162993	1/17/2022 1:	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		4.816105843		5	0	0	0.0513	0.3	0	96%	41	113	0%	
n-Triacontane	S	mg/L		0.119		0.1	0	0	0.00054	0.002	0	119%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988430	LCSD-162993-R	HC-8015-DRO-	LCSD-DOD		1/19/2022 9:09:5	1	162993	1/17/2022 1:	0	1E+07	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.541541576		5	0	4.8161058	0.0513	0.3	0	91%	41	113	6%	
n-Triacontane	S	mg/L		0.1101		0.1	0	0	0.00054	0.002	0	110%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988431	CCV_0118HP44	HC-8015-DRO-	CCV		1/19/2022 10:39:	1	R373422		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		4.599492188		5	0	0	0.0513	0.3	0	92%	80	120	0%	
n-Triacontane	S	mg/L		0.2289169		0.2	0	0	0.00054	0.002	0	114%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14988432	CCV_0118HP44	HC-8015-DRO-	CCV		1/19/2022 11:24:	1	R373422		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		15.43893		15	0	0	0.0358	0.3	0	103%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.01539		15	0	0	0.0782	0.3	50	107%	80	120	0%	
o-Terphenyl	S	mg/L		0.2358119		0.2	0	0	0.000531	0.002	0	118%	80	120	0%	

Energy Laboratories Inc

ANALYTICAL RUN Summary

24-Jan-22

Run ID GCFID-HP4-B_220120A

Run Start Date: 1/20/2022
Analyst: Ann Nebel
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
DRO220111A	Carbon Scan STD-Marker					MARKER	7/13/2026
DRO220114A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023
DRO220118A	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-RRO	4/6/2026

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14992987	CCV_0120HP40	HC-8015-DRO-	CCV		1/20/2022 11:43:	1	R373573		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		4.546255859		5	0	0	0.0513	0.3	0	91%	80	120	0%	
n-Triacontane	S	mg/L		0.2297908		0.2	0	0	0.00054	0.002	0	115%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14992988	CCV_0120HP40	HC-8015-DRO-	CCV		1/20/2022 12:27:	1	R373573		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		14.7939		15	0	0	0.0358	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.34388		15	0	0	0.0782	0.3	50	102%	80	120	0%	
o-Terphenyl	S	mg/L		0.2276868		0.2	0	0	0.000531	0.002	0	114%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14992989	LCS-162993	HC-8015-DRO-	LCS-DOD		1/20/2022 1:57:5	1	162993	1/17/2022 1:	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
14992989	LCS-162993	HC-8015-DRO-	LCS-DOD		1/20/2022 1:57:5	1	162993	1/17/2022 1:	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		11.81223		15	0	0	0.0358	0.3	0	79%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.54198		15	0	0	0.0782	0.3	0	84%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1803747		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
14992991	LCSD-162993	HC-8015-DRO-	LCSD-DOD		1/20/2022 2:42:5	1	162993	1/17/2022 1:	0	1E+07	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		11.6665		15	0	11.81223	0.0358	0.3	0	78%	36	132	1%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.36477		15	0	12.54198	0.0782	0.3	0	82%	60	132	1%	
o-Terphenyl (SGT)	S	mg/L		0.1757366		0.2	0	0	0.000531	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
14992992	MB-162993	HC-8015-DRO-	MBLK		1/20/2022 3:27:5	1	162993	1/17/2022 1:	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		0.112		0.1	0	0	0.00054	0.002	0	112%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1939321		0.2	0	0	0.000531	0.002	0	97%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14992993	B22010980-001	HC-8015-DRO-	SAMP		1/20/2022 4:12:4	1	162993	1/17/2022 1:	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	0.0347618	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0498123	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0759322	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.0981		0.0971	0	0	0.0005243	0.001942	0	101%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1724133		0.1942	0	0	0.0005156	0.001942	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
14992994	B22010977-001	HC-8015-DRO-	SAMP		1/20/2022 4:57:5	1	162993	1/17/2022 1:	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	0.0347618	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0498123	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0759322	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.0967		0.0971	0	0	0.0005243	0.001942	0	100%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1725744		0.1942	0	0	0.0005156	0.001942	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
14992995	B22010976-001	HC-8015-DRO-	SAMP		1/20/2022 5:43:1	1	162993	1/17/2022 1:	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	0.3	0	0%	0	0	0%	U
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		0.1023		0.1	0	0	0.00054	0.002	0	102%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1698992		0.2	0	0	0.000531	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
14992996	B22010975-001	HC-8015-DRO-	SAMP		1/20/2022 7:13:3	1	162993	1/17/2022 1:	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	0.036874	0.309	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.052839	0.309	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.080546	0.309	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.105		0.103	0	0	0.0005562	0.00206	0	102%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1848161		0.206	0	0	0.0005469	0.00206	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
14992997	B22010978-001	HC-8015-DRO-	SAMP		1/20/2022 7:58:4	1	162993	1/17/2022 1:	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	0.035442	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.050787	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.077418	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.107		0.099	0	0	0.0005346	0.00198	0	108%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14992997	B22010978-001	HC-8015-DRO-	SAMP		1/20/2022 7:58:4	1	162993	1/17/2022 1:	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		0.1890322		0.198	0	0	0.0005257	0.00198	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
14992998	B22010974-001	HC-8015-DRO-	SAMP		1/20/2022 8:43:4	1	162993	1/17/2022 1:	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	0.036158	0.303	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0.089169852		0	0	0	0.051813	0.303	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT	A	mg/L		0.09896259		0	0	0	0.078982	0.303	0	0%	0	0	0%	J
n-Triacontane (SGT)	S	mg/L		0.105		0.101	0	0	0.0005454	0.00202	0	104%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1875203		0.202	0	0	0.0005363	0.00202	0	93%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14992999	B22010971-001	HC-8015-DRO-	SAMP		1/20/2022 9:28:3	1	162993	1/17/2022 1:	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	0.3	0	0%	0	0	0%	U
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		0.103		0.1	0	0	0.00054	0.002	0	103%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1819461		0.2	0	0	0.000531	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
14993000	CCV_0120HP41	HC-8015-DRO-	CCV		1/20/2022 10:58:	1	R373573		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		4.631416016		5	0	0	0.0513	0.3	0	93%	80	120	0%	
n-Triacontane	S	mg/L		0.2358819		0.2	0	0	0.00054	0.002	0	118%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993001	CCV_0120HP42	HC-8015-DRO-	CCV		1/20/2022 11:43:	1	R373573		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
14993001	CCV_0120HP42	HC-8015-DRO-	CCV		1/20/2022 11:43:	1	R373573		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		15.13025		15	0	0	0.0358	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.69108		15	0	0	0.0782	0.3	50	105%	80	120	0%	
o-Terphenyl	S	mg/L		0.2325179		0.2	0	0	0.000531	0.002	0	116%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993002	CCV_0120HP42	HC-8015-DRO-	CCV		1/21/2022 9:49:1	1	R373573		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		4.614054688		5	0	0	0.0513	0.3	0	92%	80	120	0%	
n-Triacontane	S	mg/L		0.2331485		0.2	0	0	0.00054	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
14993003	CCV_0120HP42	HC-8015-DRO-	CCV		1/21/2022 10:34:	1	R373573		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		15.18185		15	0	0	0.0358	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.71172		15	0	0	0.0782	0.3	50	105%	80	120	0%	
o-Terphenyl	S	mg/L		0.2317946		0.2	0	0	0.000531	0.002	0	116%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993004	B22010978-001	HC-8015-DRO-	MS-DOD		1/21/2022 12:04:	1	162993	1/17/2022 1:	1E+07	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		12.23142		14.565	0	0	0.0347618	0.3	0	84%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.9542		14.565	0	0	0.0759322	0.3	0	89%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1802168		0.1942	0	0	0.0005156	0.002	0	93%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993005	B22010980-001	HC-8015-DRO-	MS-DOD		1/21/2022 12:49:	1	162993	1/17/2022 1:	1E+07	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		4.389088154		4.81	0	0	0.0493506	0.3	0	91%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.099		0.0962	0	0	0.0005195	0.002	0	103%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993006	LCS-162993-RR	HC-8015-DRO-	LCS-DOD		1/21/2022 2:19:0	1	162993	1/17/2022 1:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		4.783511639		5	0	0	0.0513	0.3	0	96%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.111		0.1	0	0	0.00054	0.002	0	111%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993007	LCSD-162993-R	HC-8015-DRO-	LCSD-DOD		1/21/2022 3:49:1	1	162993	1/17/2022 1:	0	1E+07	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		4.522302151		5	0	4.7835116	0.0513	0.3	0	90%	41	113	6%	
n-Triacontane (SGT)	S	mg/L		0.103		0.1	0	0	0.00054	0.002	0	103%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993008	CCV_0120HP43	HC-8015-DRO-	CCV		1/21/2022 5:18:5	1	R373573		0	0	

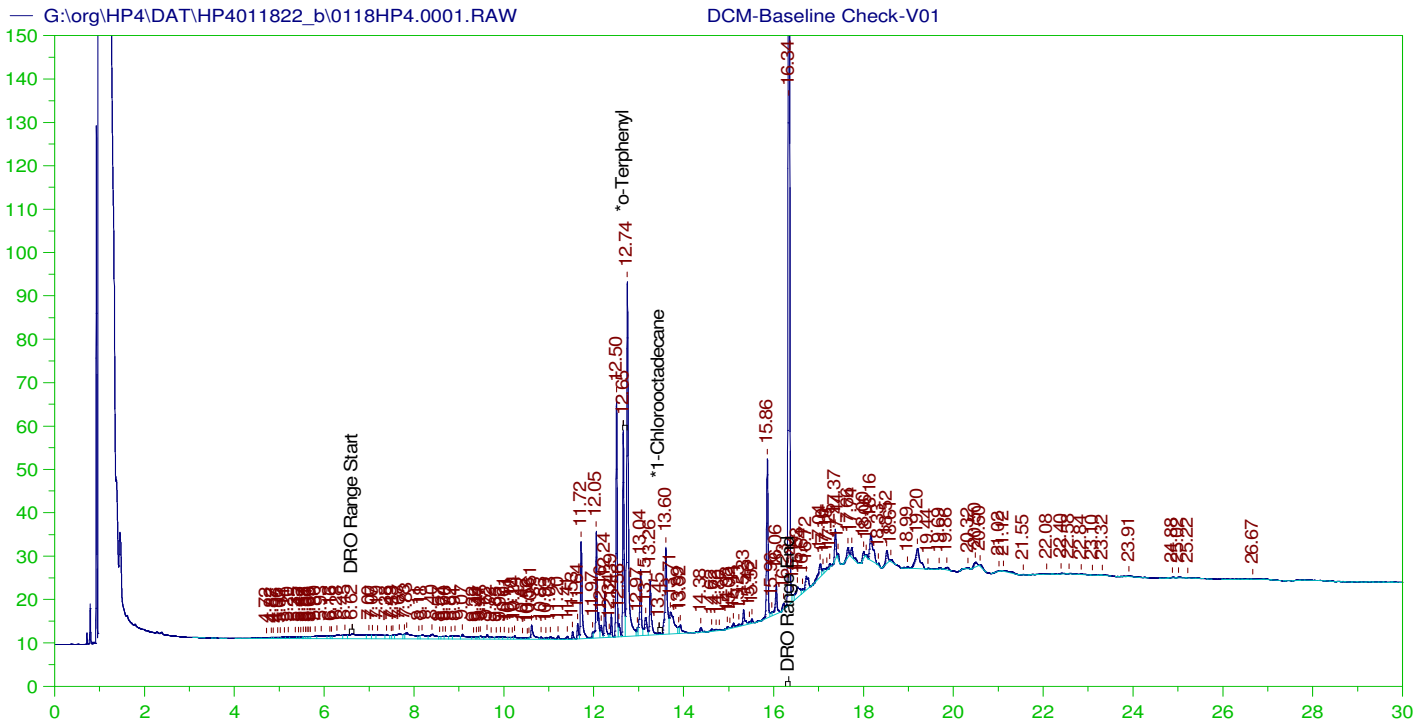
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.666958496		5	0	0	0.0513	0.3	0	93%	80	120	0%	
n-Triacontane	S	mg/L		0.2341581		0.2	0	0	0.00054	0.002	0	117%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993009	CCV_0120HP43	HC-8015-DRO-	CCV		1/21/2022 6:04:0	1	R373573		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		15.61071		15	0	0	0.0358	0.3	0	104%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.19018		15	0	0	0.0782	0.3	50	108%	80	120	0%	
o-Terphenyl	S	mg/L		0.2390496		0.2	0	0	0.000531	0.002	0	120%	80	120	0%	

Write Sequence	Insert Entries(Have the first cell for entries selected						
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP4\DAT\HP4011822_b\0118HP4.01r	DCM-Baseline Check-V01	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.02r	DCM-Baseline Check-V02	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.03r	MARKER_0118HP403r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.04r	CCV_0118HP404r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.05r	CCV_0118HP405r, DRO ;0118HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.06r	DCM-Baseline Check-V06	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.10r	LCS-162993 ;0118HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.11r	LCSD-162993 ;0118HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.12r	MB-162993 ;0118HP4 ,	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.13r	B22010978-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1010	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.14r	B22010978-001DMS ;0118HP4 ,	G:\Org\HP4\methods\D3_8015-011814-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.15r	DCM-Baseline Check-V15	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.16r	B22010980-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.17r	B22010980-001DMS-RRO ;0118HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1040	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.18r	MARKER_0118HP418r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.19r	CCV_0118HP419r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.20r	CCV_0118HP420r, DRO ;0118HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.22r	DCM-Baseline Check-V22	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.23r	B22010971-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-011823-OM-L%.met G:\Org\HP4\Methods\D3_ORO-011823-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.24r	B22010972-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun possible carry over.	G:\Org\HP4\methods\DR_8015-C24T-OM-L0.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.25r	B22010973-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun possible carry over.	G:\Org\HP4\methods\DR_8015-C24T-OM-L0.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.26r	DCM-Baseline Check-V26	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.27r	B22010977-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-11827-OM-L%.met G:\Org\HP4\Methods\D3_ORO-011827-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.28r	B22010979-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1040	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.29r	DCM-Baseline Check-V29	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.30r	B22010975-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	970	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.31r	B22010976-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-011831-OM-L%.met G:\Org\HP4\Methods\D3_ORO-011831-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.32r	MARKER_0118HP432r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.33r	CCV_0118HP433r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-011833-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.34r	CCV_0118HP434r, DRO ;0118HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.35r	DCM-Baseline Check-V35	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.36r	DCM-Baseline Check-V36	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.37r	B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.38r	B22010973-001D ;0118HP4 , $HC-8015-DRO-W, RR	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.39r	B22010974-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	990	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.40r	DCM-Baseline Check-V40	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.41r	LCS-162993-RRO ;0118HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.42r	DCM-Baseline Check-V43	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.43r	LCSD-162993-RRO ;0118HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.44r	MARKER_0118HP445r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.45r	CCV_0118HP446r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-011833-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4011822_b\0118HP4.46r	CCV_0118HP447r, DRO ;0118HP4 , DRO220114A-	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0

Write Sequence	Insert Entries(Have the first cell for entries selecte							
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	
G:\org\HP4\DAT\HP4012022_b\0120HP4.01r	DCM-Baseline Check-V01	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.02r	DCM-Baseline Check-V02	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.03r	MARKER_0120HP403r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.04r	CCV_0120HP404r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.05r	CCV_0120HP405r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.06r	DCM-Baseline Check-V06	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.07r	LCS-162993 ;0120HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1000	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.08r	LCSD-162993 ;0120HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1000	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.09r	MB-162993 ;0120HP4 , SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1000	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.10r	B22010980-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.11r	B22010977-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.12r	B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1000	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.13r	DCM-Baseline Check-V13	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.14r	B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	970	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.15r	B22010978-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1010	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.16r	B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-012016-OM-L%.met G:\Org\HP4\Methods\DR_ORO-012016-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	990	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.17r	B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1000	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.18r	MARKER_0120HP418r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.19r	CCV_0120HP419r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.20r	CCV_0120HP420r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.22r	MARKER_0120HP422r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.23r	CCV_0120HP423r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.24r	CCV_0120HP424r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.25r	DCM-Baseline Check-V25	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.26r	B22010978-001DMS ;0120HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1030	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.27r	B22010980-001DMS-RRO ;0120HP4 , SGT	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1040	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.28r	DCM-Baseline Check-V28	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.29r	LCS-162993-RRO ;0120HP4 , SGT	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.30r	DCM-Baseline Check-V30	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.31r	LCSD-162993-RRO ;0120HP4 , SGT	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.32r	MARKER_0120HP432r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.33r	CCV_0120HP433r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	
G:\org\HP4\DAT\HP4012022_b\0120HP4.34r	CCV_0120HP434r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met	1	1	1	1	0	



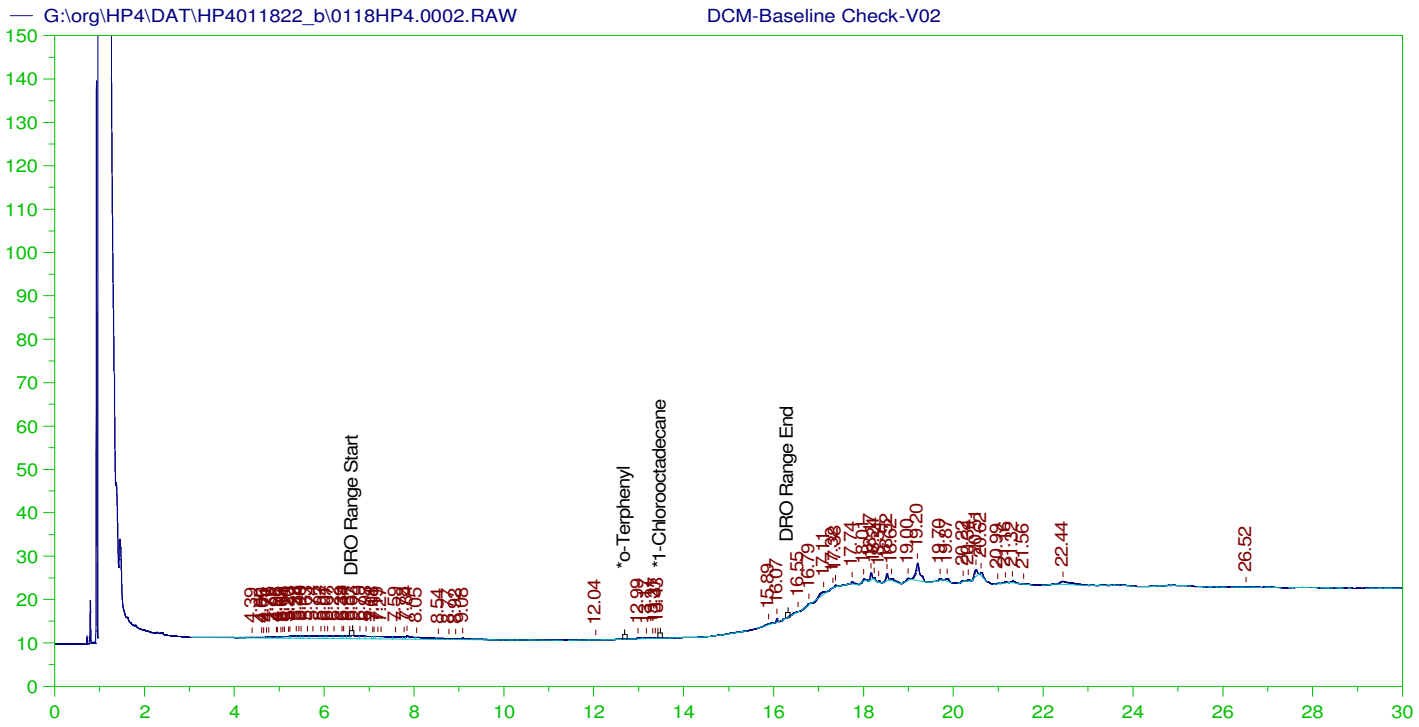
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0001.RAW
Date & Time Acquired: 1/18/2022 1:47:25 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.654	200.	3.072	1.54	-
*1-Chlorooctadecane	13.449	200.	.051	.03	-

DRO Area:1878548 DRO Amount: 63.95432
TEH Area:2158619 TEH Amount: 73.4892



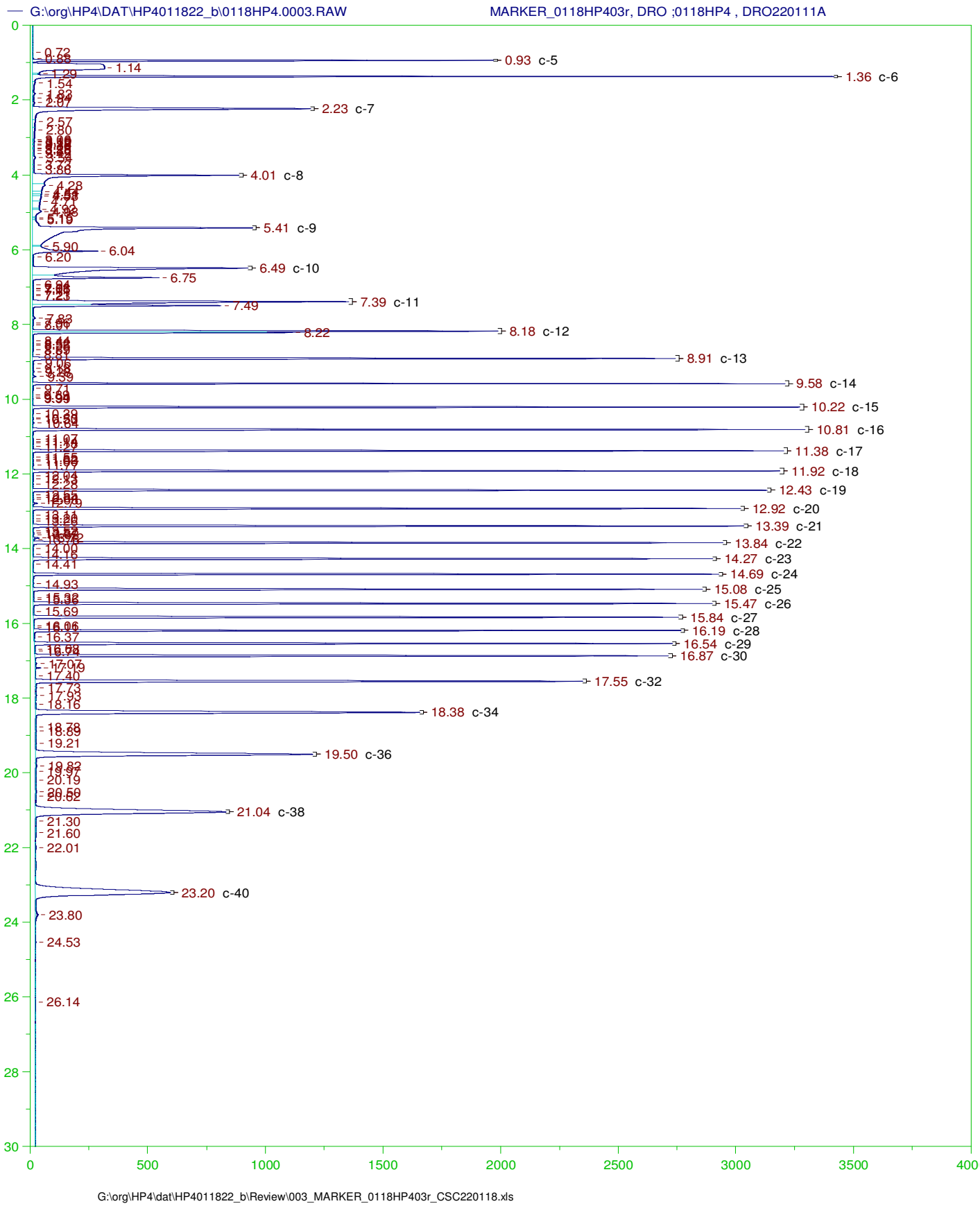
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V02
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0002.RAW
Date & Time Acquired: 1/18/2022 2:32:45 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.785	200.	.	.	-
*1-Chlorooctadecane	29.785	200.	.	.	-

DRO Area:90609.7 DRO Amount: 3.084766
TEH Area:259447.2 TEH Amount: 8.832764


G:\org\HP4\DAT\HP4011822_b\0118HP4.0003.RAW
MARKER_0118HP403r, DRO ;0118HP4 , DRO220111A
0.93 c-5
1.14
1.36 c-6
2.23 c-7
4.01 c-8
5.41 c-9
6.04
6.49 c-10
6.75
7.39 c-11
7.49
8.18 c-12
8.22
8.91 c-13
9.58 c-14
10.22 c-15
10.81 c-16
11.38 c-17
11.92 c-18
12.43 c-19
12.92 c-20
13.39 c-21
13.84 c-22
14.27 c-23
14.69 c-24
15.08 c-25
15.47 c-26
15.84 c-27
16.19 c-28
16.54 c-29
16.87 c-30
17.55 c-32
18.38 c-34
19.50 c-36
21.04 c-38
23.20 c-40
0
500
1000
1500
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2500
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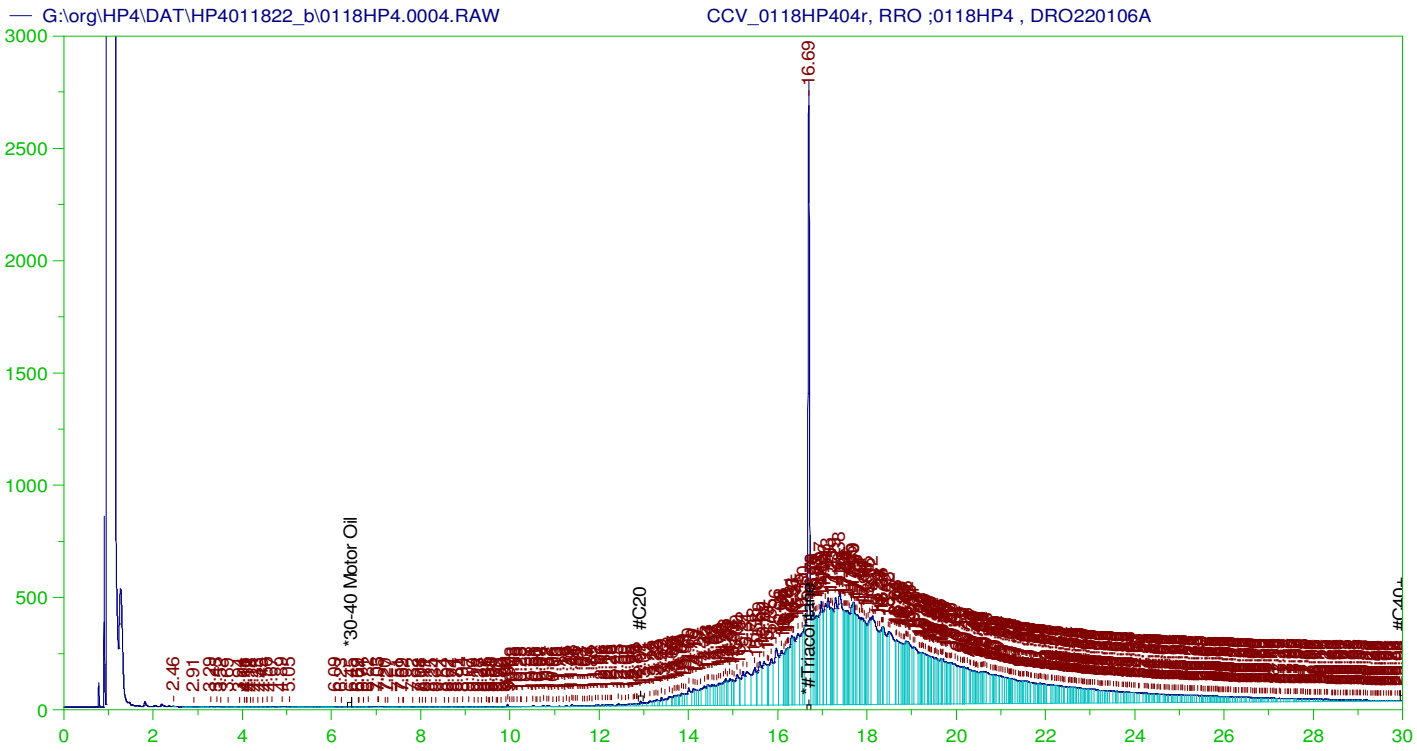


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP404r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0004.RAW
Date & Time Acquired: 1/18/2022 4:02:27 PM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.694	500.	330.047	66.01	-

~~RRO~~ TEH(Oil Range) Area:1.187678E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4841.823

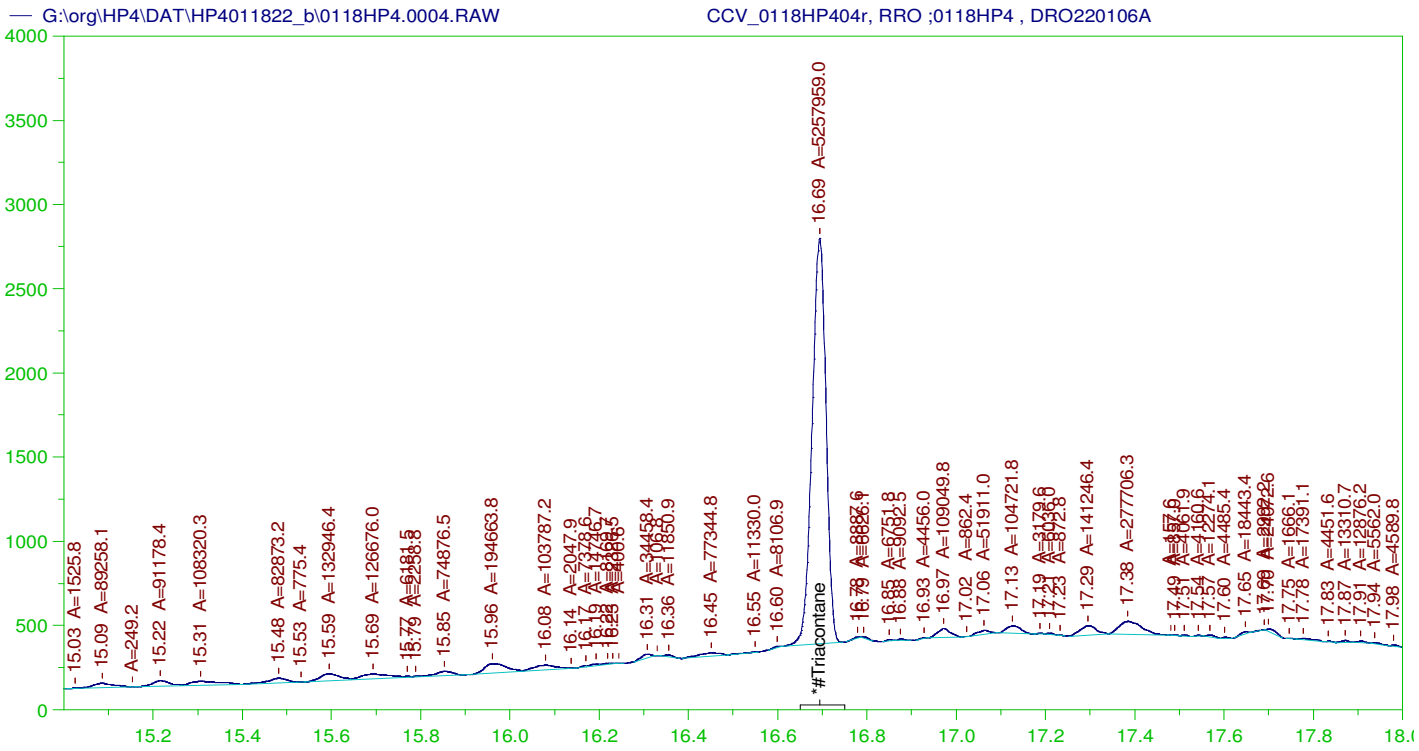
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.694	200.	330.047	165.02	75-125

AMN 02/14/2022

G:\org\HP4\dat\HP4011822_b\Review\004_CCV_0118HP404r_DC_ORO-T-AF-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP404r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0004.RAW
Date & Time Acquired: 1/18/2022 4:02:27 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

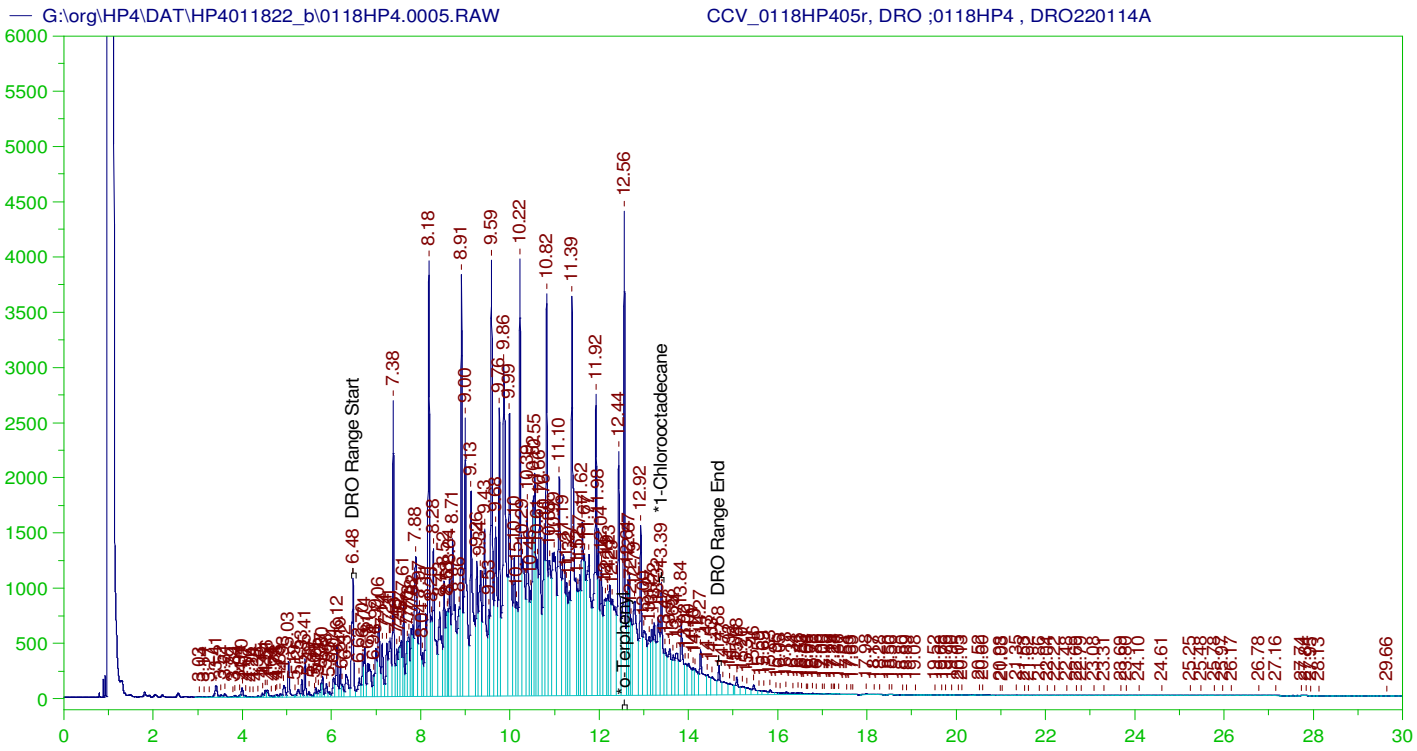
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.694	500.	210.539	42.11	-

RRO Area:3495687 RRO AMOUNT: 142.5091

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.694	200.	210.539	105.27	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0118HP405r, DRO ;0118HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0005.RAW
Date & Time Acquired: 1/18/2022 4:47:30 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

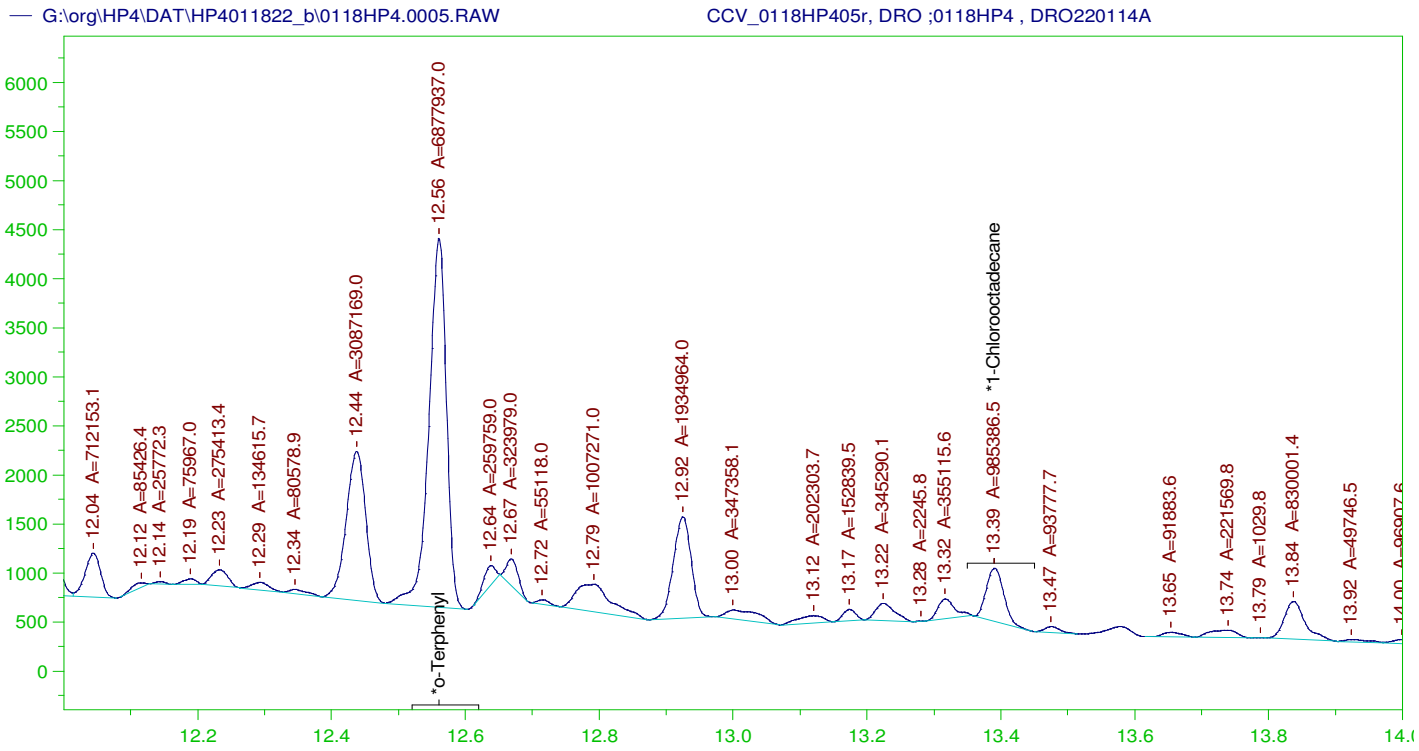
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.561	200.	344.682	172.34	-
*1-Chlorooctadecane	13.39	200.	102.121	51.06	-

DRO Area:3.953696E+08 DRO Amount: 13460.18
TEH Area:4.101509E+08 TEH Amount: 13963.4

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	13963.4	93.09	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.561	200.	344.682	172.34	85-115
*1-Chlorooctadecane	13.39	200.	102.121	51.06	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0118HP405r, DRO ;0118HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0005.RAW
Date & Time Acquired: 1/18/2022 4:47:30 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

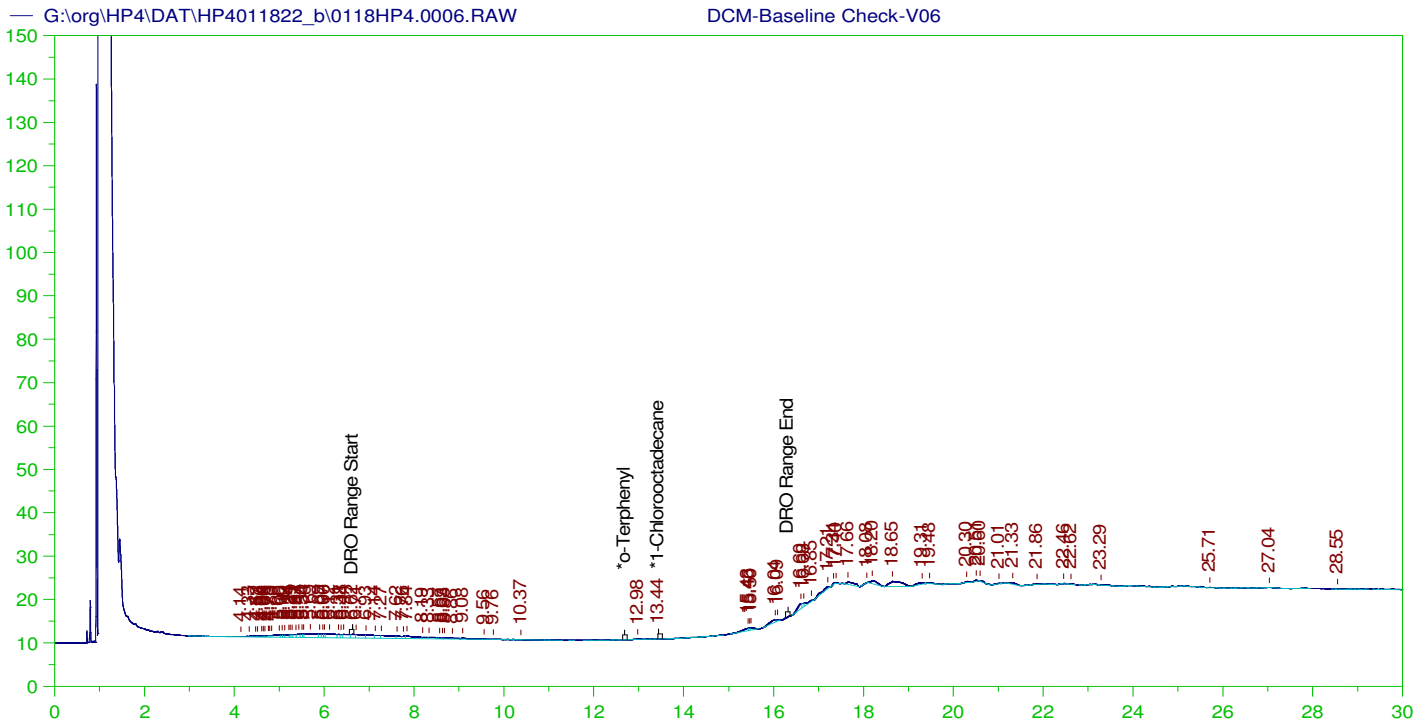
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.561	200.	206.423	103.21	-
*1-Chlorooctadecane	13.39	200.	29.574	14.79	-

DRO Area:1.767923E+08 DRO Amount: 6018.815
TEH Area:1.861455E+08 TEH Amount: 6337.241

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6337.24	42.25	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.561	200.	206.423	103.21	85-115
*1-Chlorooctadecane	13.39	200.	29.574	14.79	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

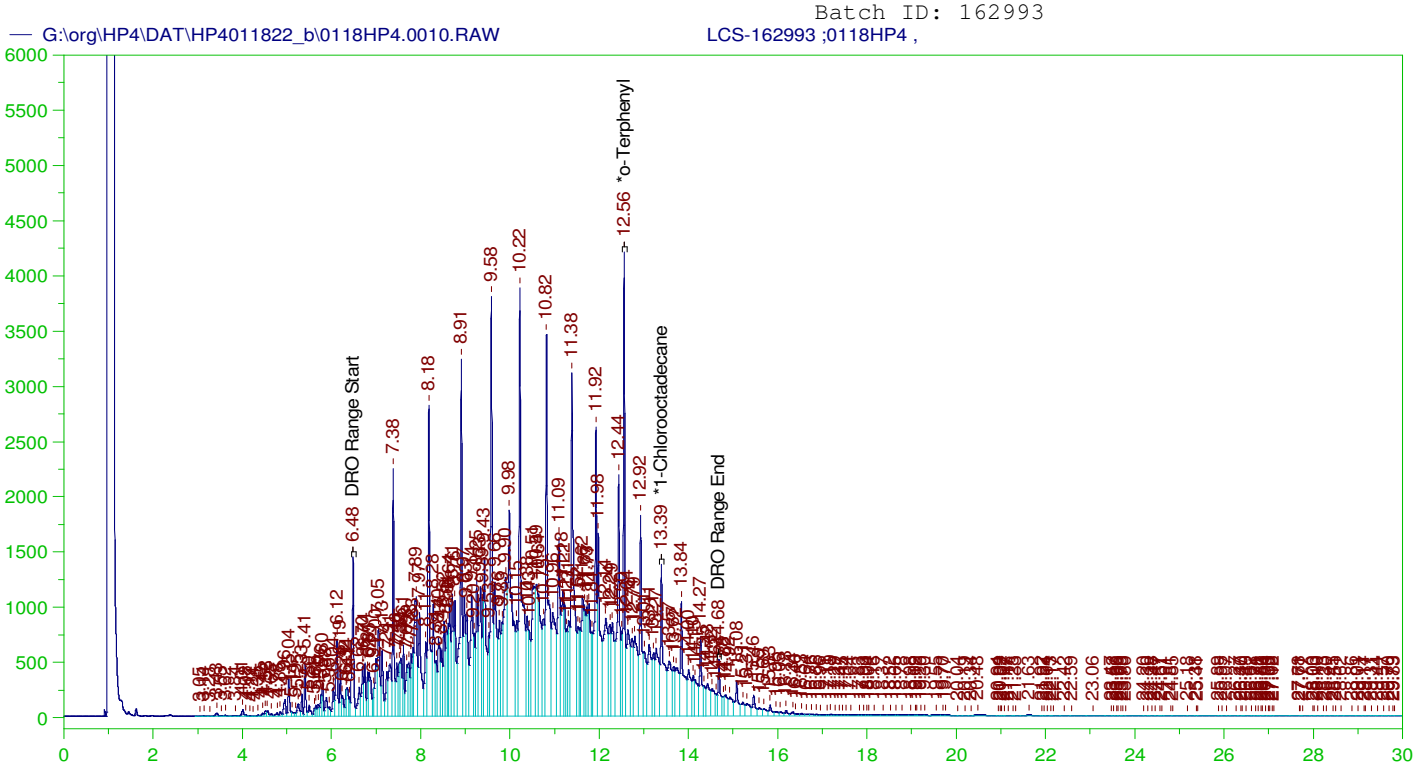
Sample Name: DCM-Baseline Check-V06
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0006.RAW
Date & Time Acquired: 1/18/2022 5:32:38 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.782	200.	.	. -
*1-Chlorooctadecane	13.439	200.	.018	.01 -

DRO Area:98439.9 DRO Amount: 3.351342
TEH Area:276563.1 TEH Amount: 9.415466

Batch ID: 162993



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

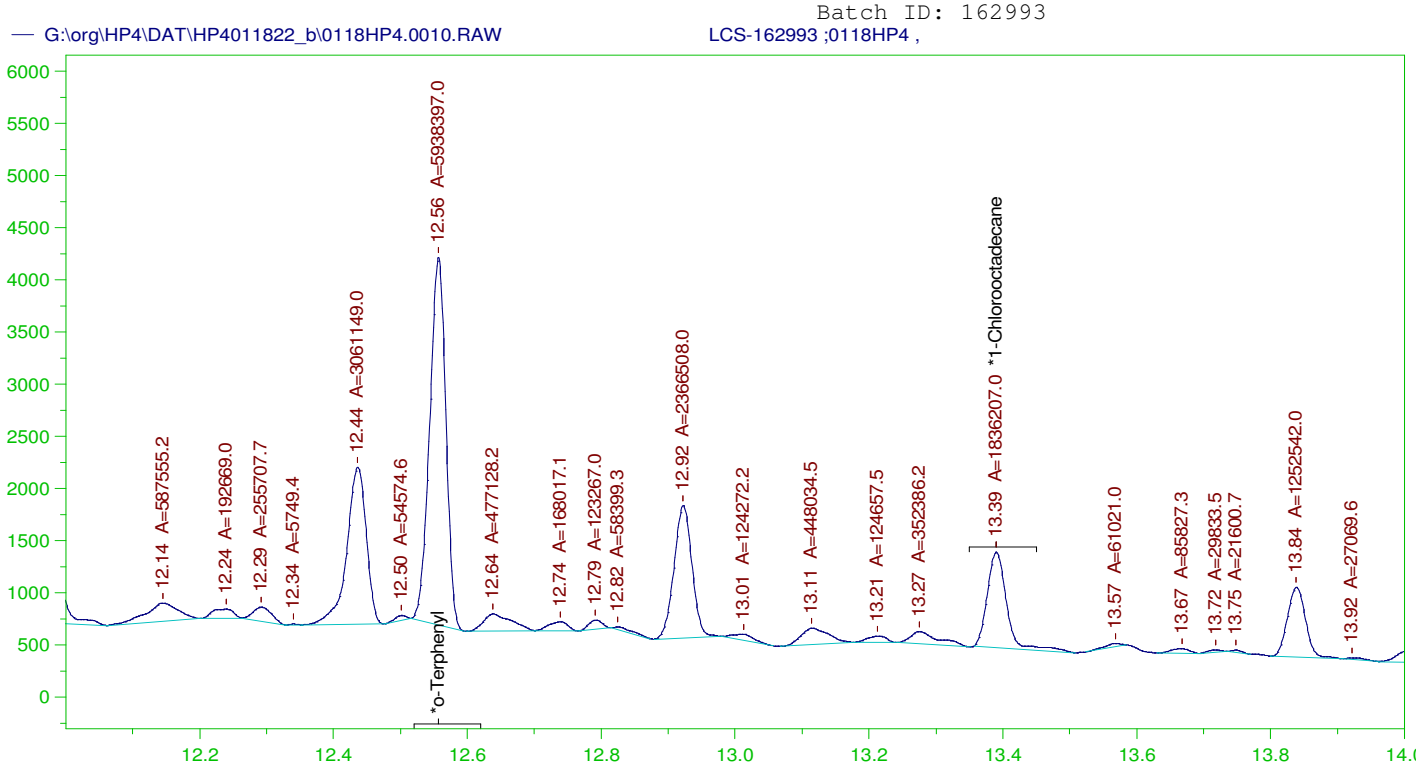
Sample Name: LCS-162993 ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0010.RAW
Date & Time Acquired: 1/18/2022 8:32:37 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	.2	.28	139.89	-
*1-Chlorooctadecane	13.39	.2	.18	90.07	-

DRO Area:3.605483E+08 DRO Amount: 12.2747
TEH Area:3.855059E+08 TEH Amount: 13.12438

Batch ID: 162993



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

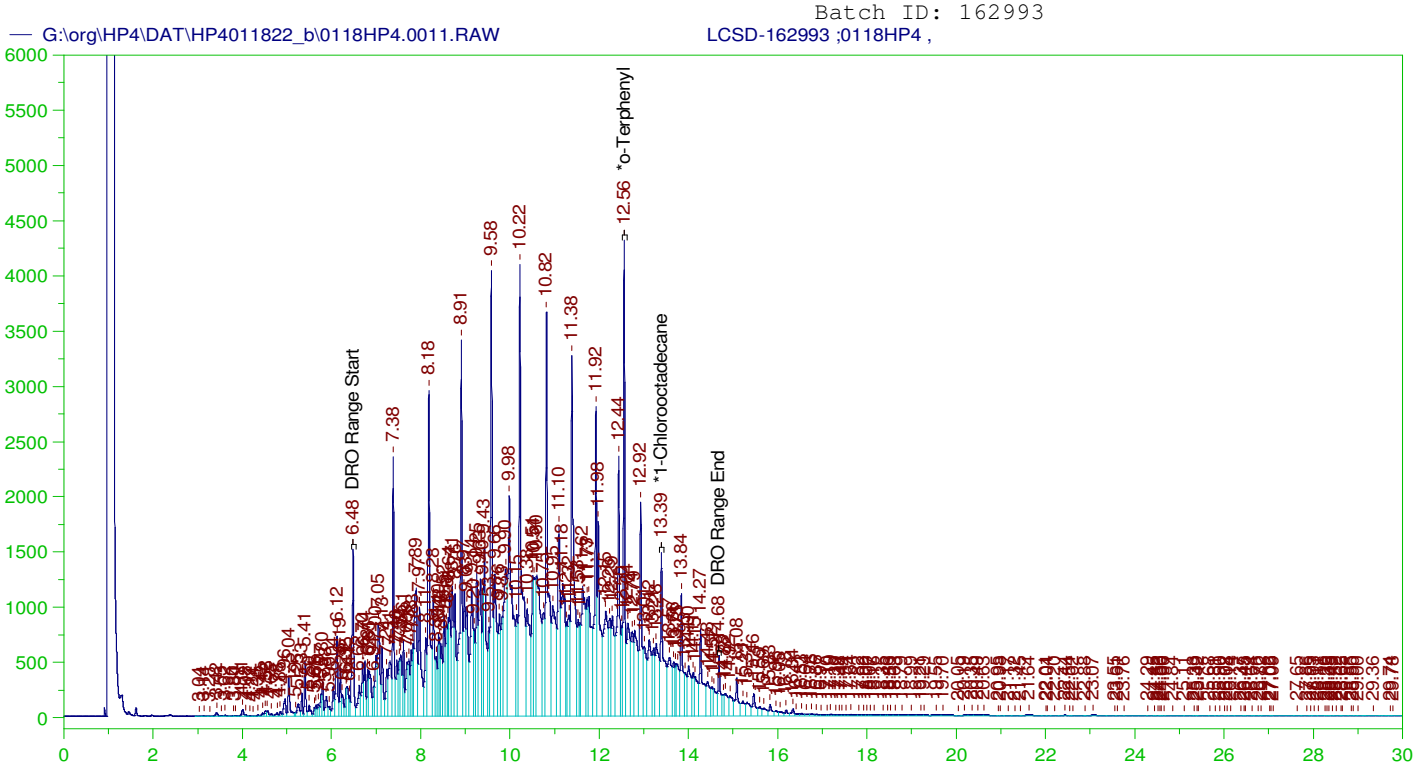
Sample Name: LCS-162993 ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0010.RAW
Date & Time Acquired: 1/18/2022 8:32:37 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	.2	.178	89.11	-
*1-Chlorooctadecane	13.39	.2	.055	27.55	-

DRO Area:1.543614E+08 DRO Amount: 5.255163
TEH Area:1.670117E+08 TEH Amount: 5.685837

Batch ID: 162993



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

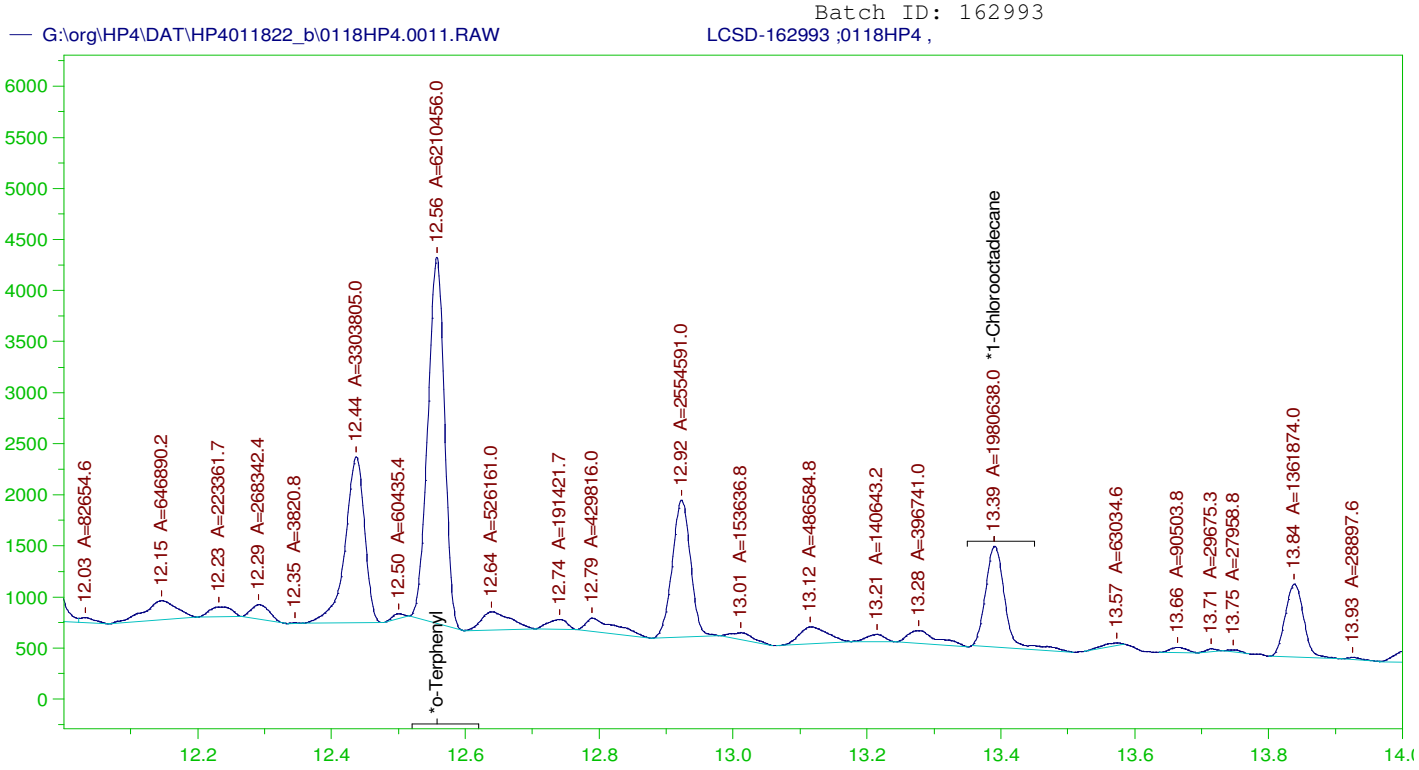
Sample Name: LCSD-162993 ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0011.RAW
Date & Time Acquired: 1/18/2022 9:17:26 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	.2	.294	147.15	-
*1-Chlorooctadecane	13.39	.2	.196	97.87	-

DRO Area:3.845102E+08 DRO Amount: 13.09048
TEH Area:4.110127E+08 TEH Amount: 13.99274

Batch ID: 162993



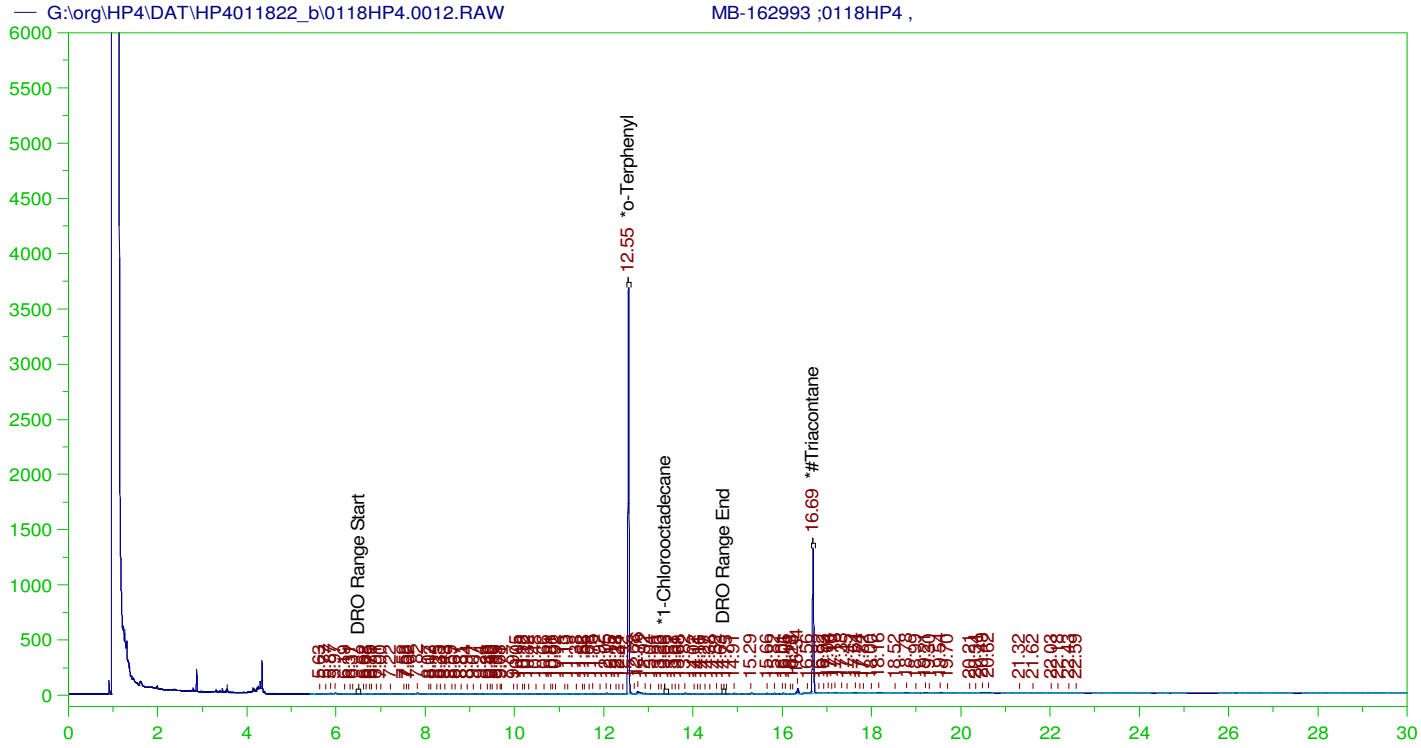
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: LCSD-162993 ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0011.RAW
Date & Time Acquired: 1/18/2022 9:17:26 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	.2	.186	93.19	-
*1-Chlorooctadecane	13.39	.2	.059	29.72	-

DRO Area:1.63346E+08 DRO Amount: 5.561041
TEH Area:1.765965E+08 TEH Amount: 6.012147

Batch ID: 162993



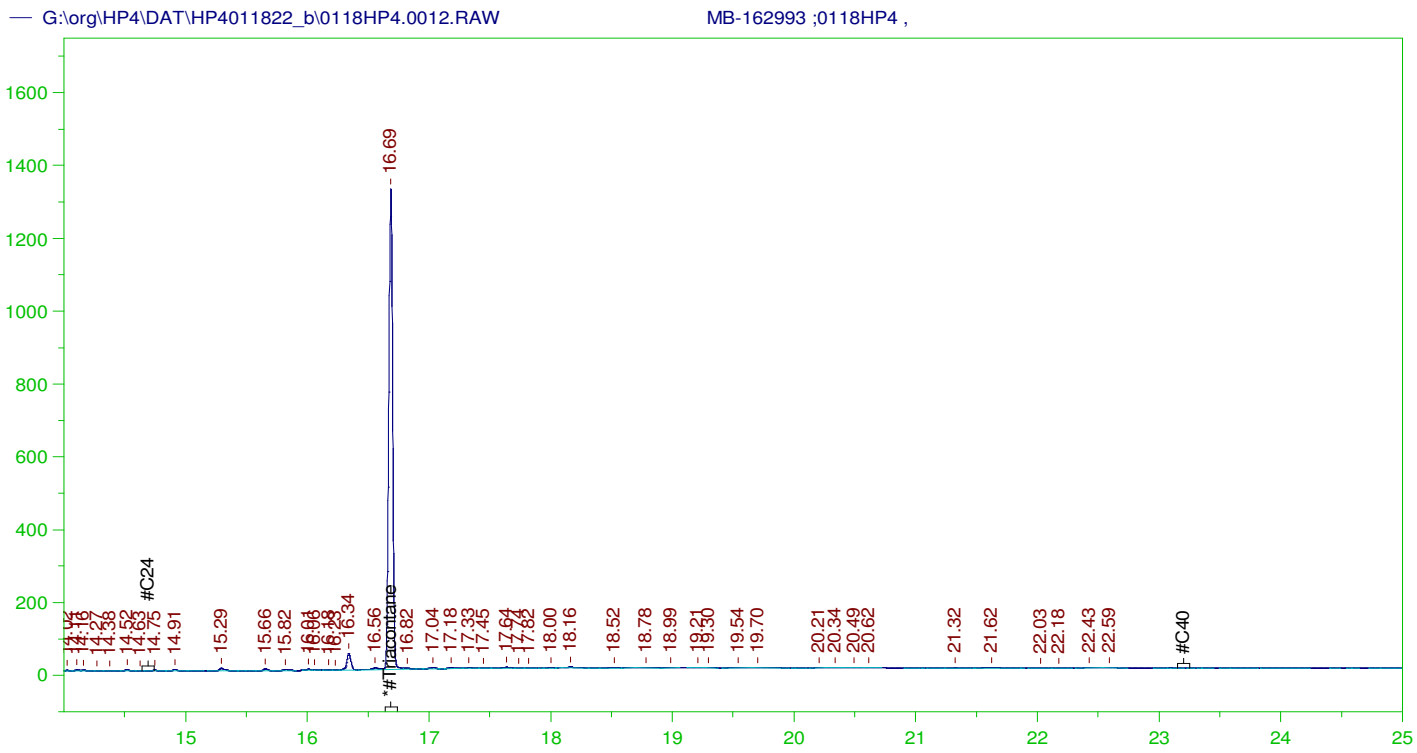
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162993 ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0012.RAW
Date & Time Acquired: 1/18/2022 10:02:15 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.553	.2	.195	97.49	-
*1-Chlorooctadecane	13.361	.2	.08		-
*#Triacontane	16.687	.2	.116	58.07	-

DRO Area:441992.6 DRO Amount: 1.504744E-02
TEH Area:822979.2 TEH Amount: 2.801796E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

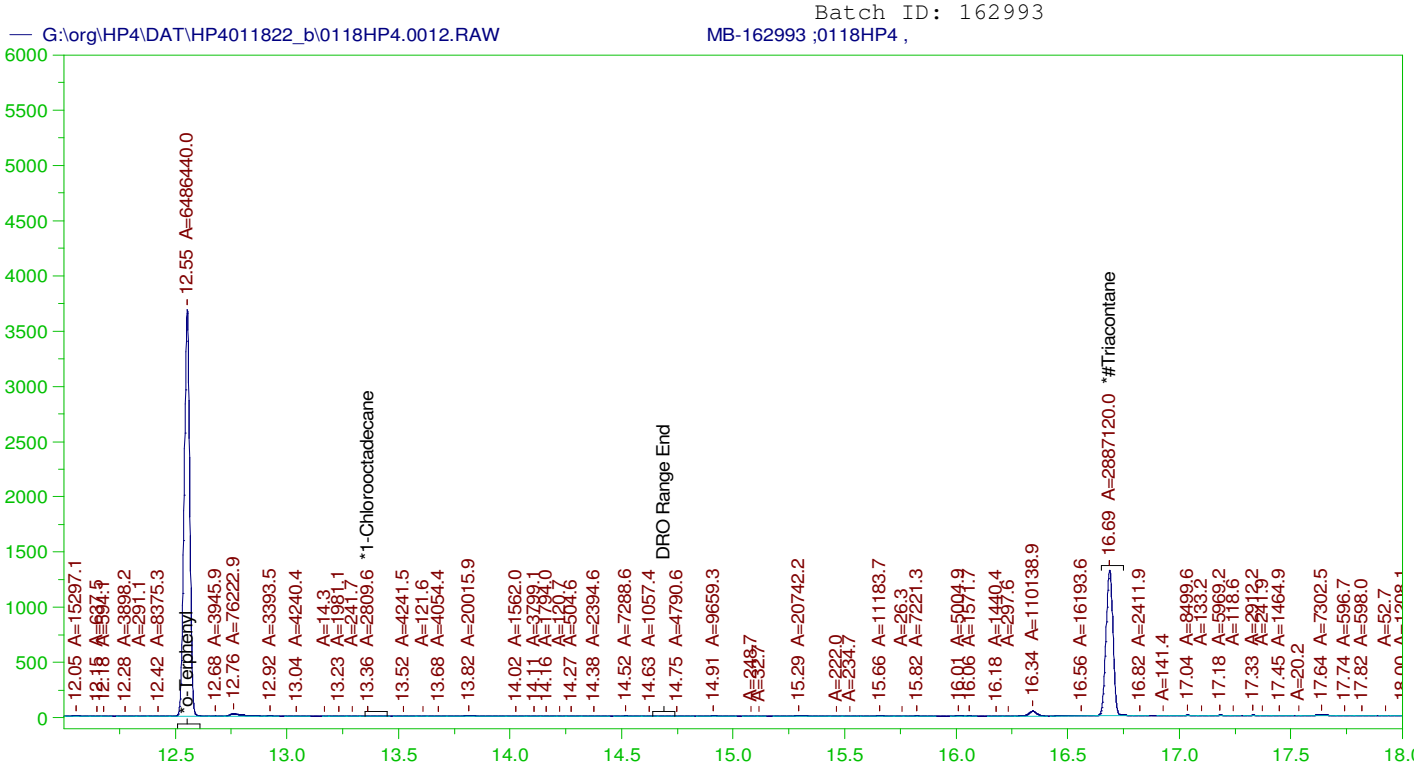
Sample Name: MB-162993 ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0012.RAW
Date & Time Acquired: 1/18/2022 10:02:15 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.687	.5	.116	23.21	-

RRO Area:287092.1 RRO AMOUNT: 1.170392E-02

Batch ID: 162993



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162993 ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0012.RAW
Date & Time Acquired: 1/18/2022 10:02:15 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.553	.2	.195	97.34	-
*1-Chlorooctadecane	13.361	.2	.	.04	-
*#Triacontane	16.687	.2	.116	57.8	-

DRO Area:306367.8 DRO Amount: 1.043015E-02
TEH Area:2137279 TEH Amount: 0.0727627

ERH2398 (OWDFMW04A) Batch ID: 162993

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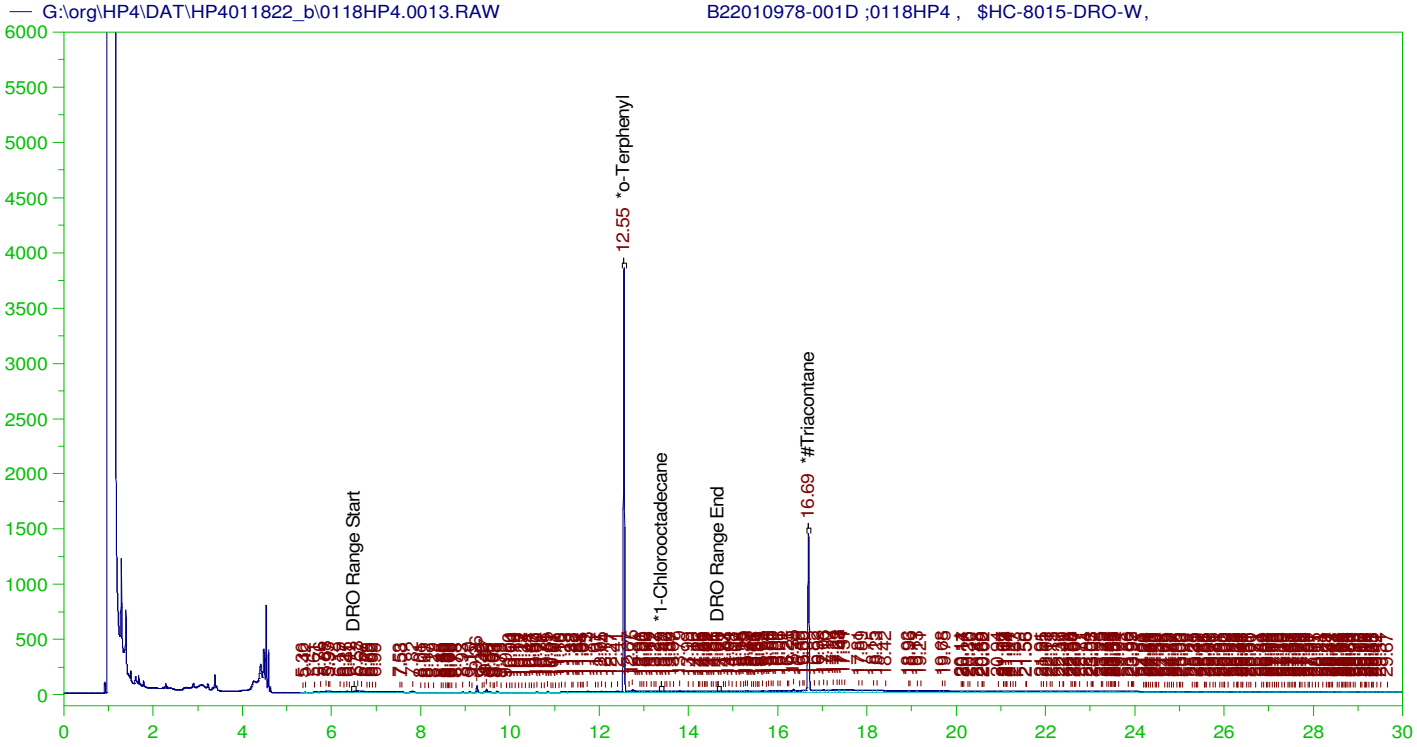


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010978-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0013.RAW
Date & Time Acquired: 1/18/2022 10:46:56 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

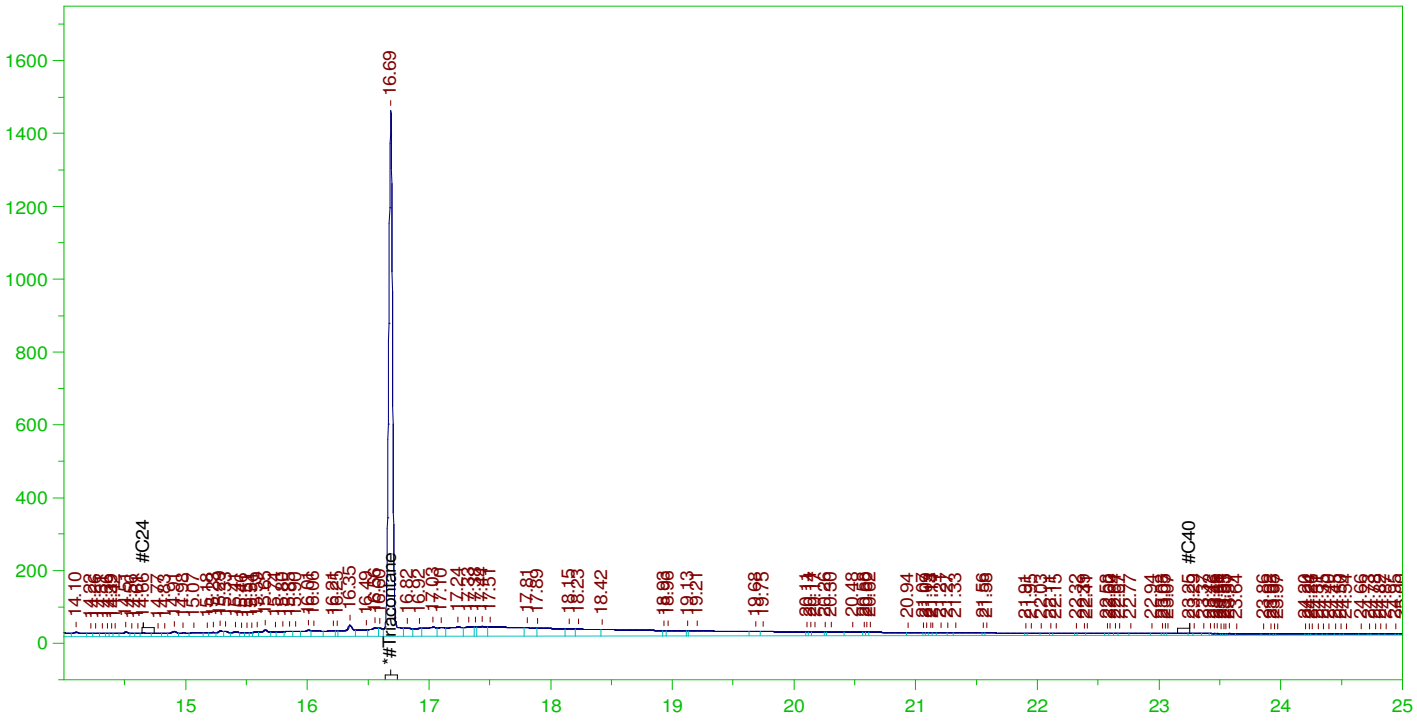
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.553	.198	.201	101.64	-
*1-Chlorooctadecane	13.388	.198	.002	.82	-
*#Triacontane	16.686	.198	.128	64.61	-

DRO Area:3034708 DRO Amount: 0.1022923
TEH Area:1.106079E+07 TEH Amount: 0.3728313

ERH2398 (OWDFMW04A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0013.RAW B22010978-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010978-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0013.RAW
Date & Time Acquired: 1/18/2022 10:46:56 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

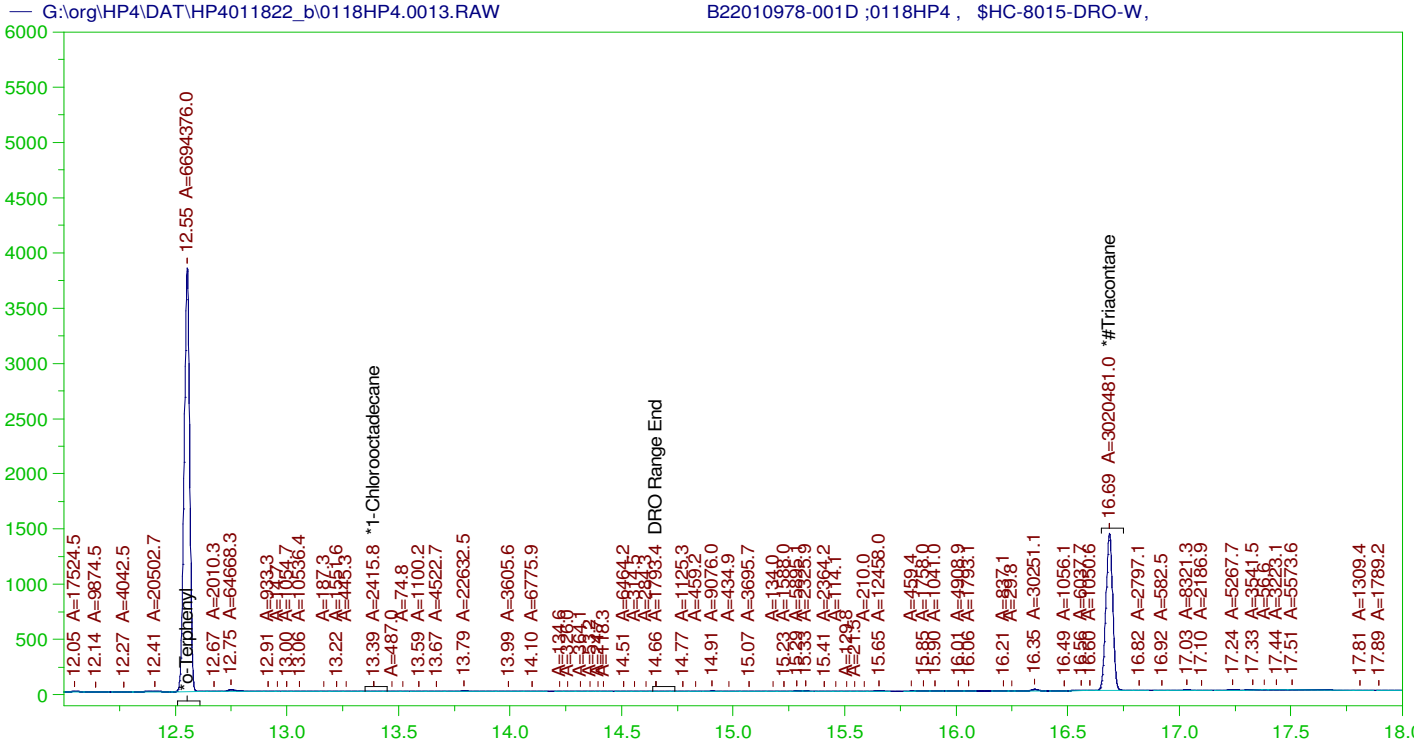
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.686	.495	.128	25.85	-

RRO Area:6728716 RRO AMOUNT: 0.2715945

ERH2398 (OWDFMW04A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0013.RAW B22010978-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

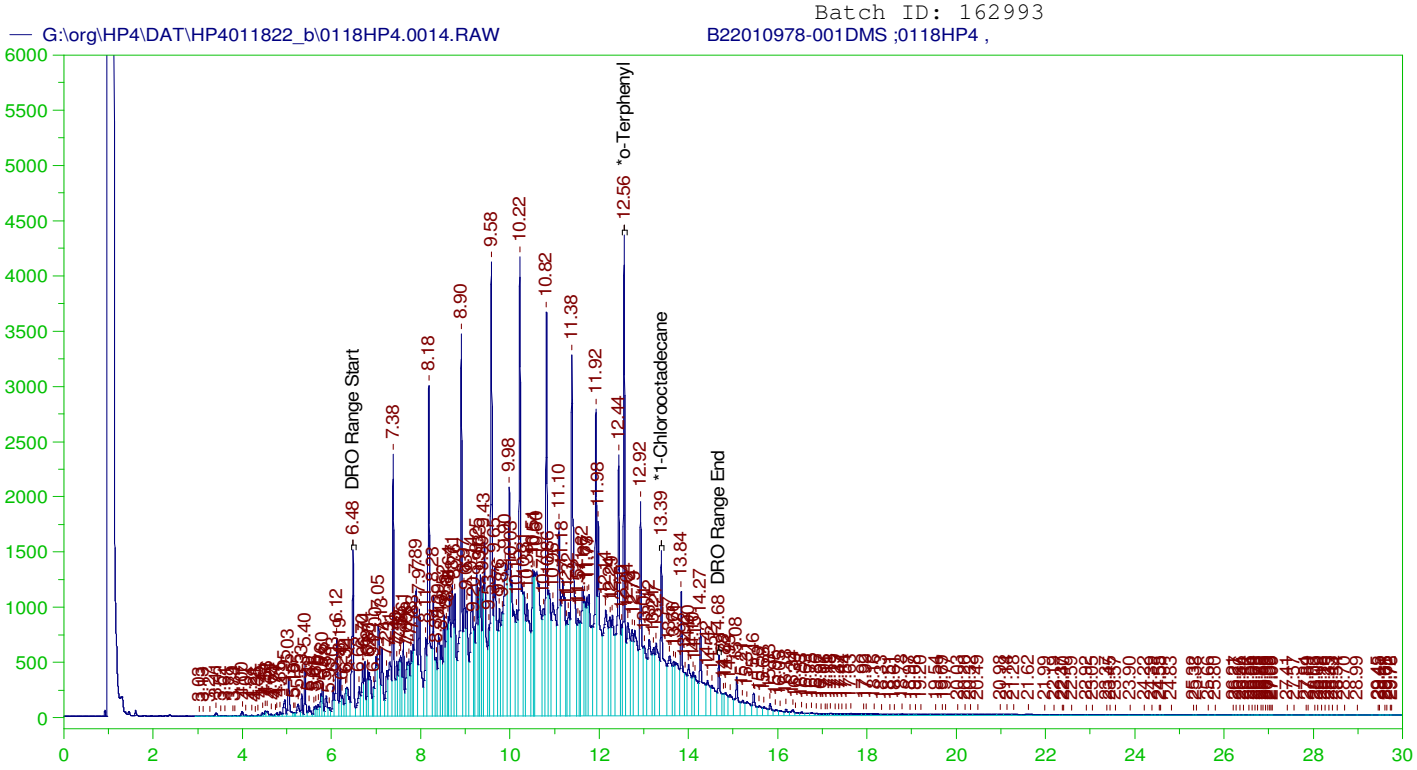
Sample Name: B22010978-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0013.RAW
Date & Time Acquired: 1/18/2022 10:46:56 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.553	.198	.199	100.46	-
*1-Chlorooctadecane	13.388	.198	.	.04	-
*#Triacontane	16.686	.198	.12	60.47	-

DRO Area:1428620 DRO Amount: 4.815516E-02
TEH Area:7485313 TEH Amount: 0.252311

Batch ID: 162993



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

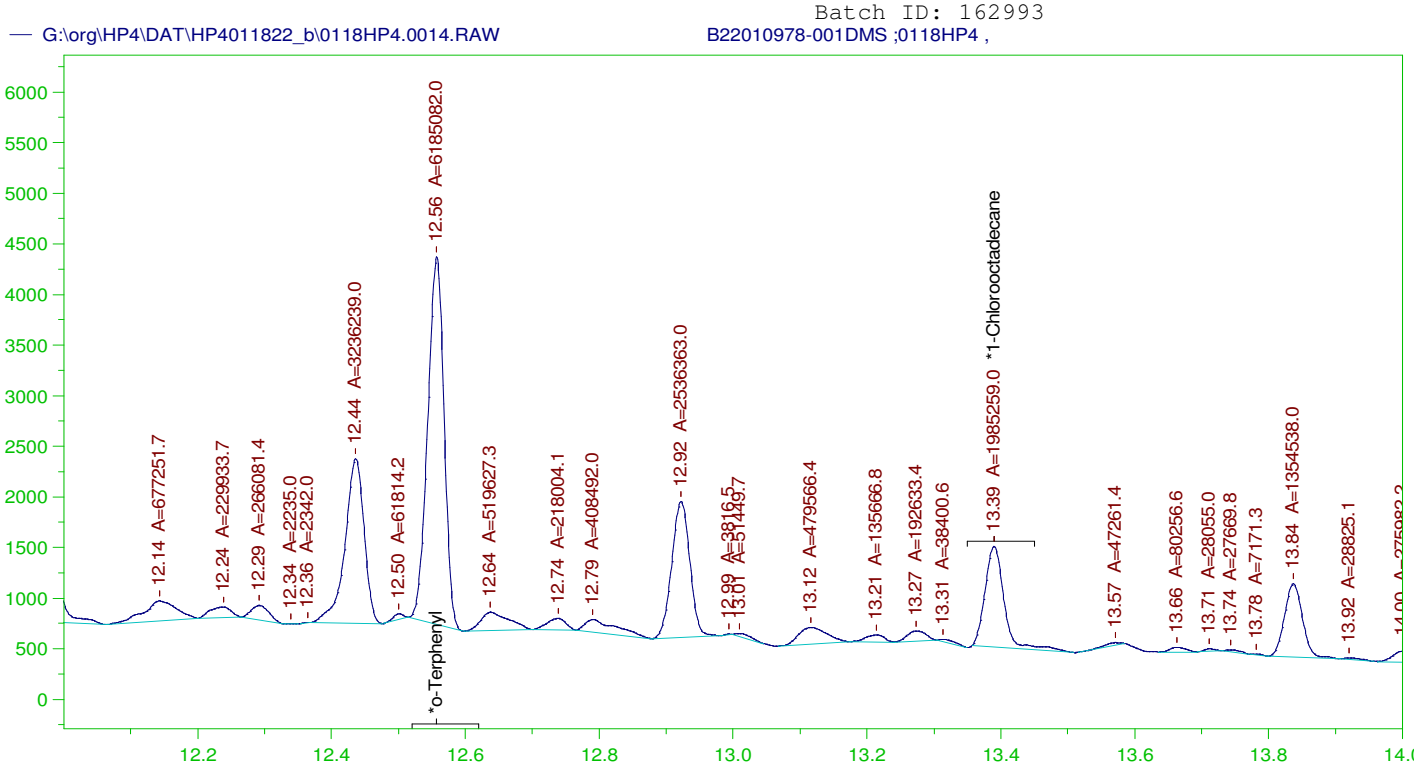
Sample Name: B22010978-001DMS ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0014.RAW
Date & Time Acquired: 1/18/2022 11:31:34 PM
Method File: G:\Org\HP4\methods\D3_8015-011814-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	.194	.286	147.33	-
*1-Chlorooctadecane	13.39	.194	.192	99.08	-

DRO Area:3.884374E+08 DRO Amount: 12.83901
TEH Area:4.180181E+08 TEH Amount: 13.81674

Batch ID: 162993



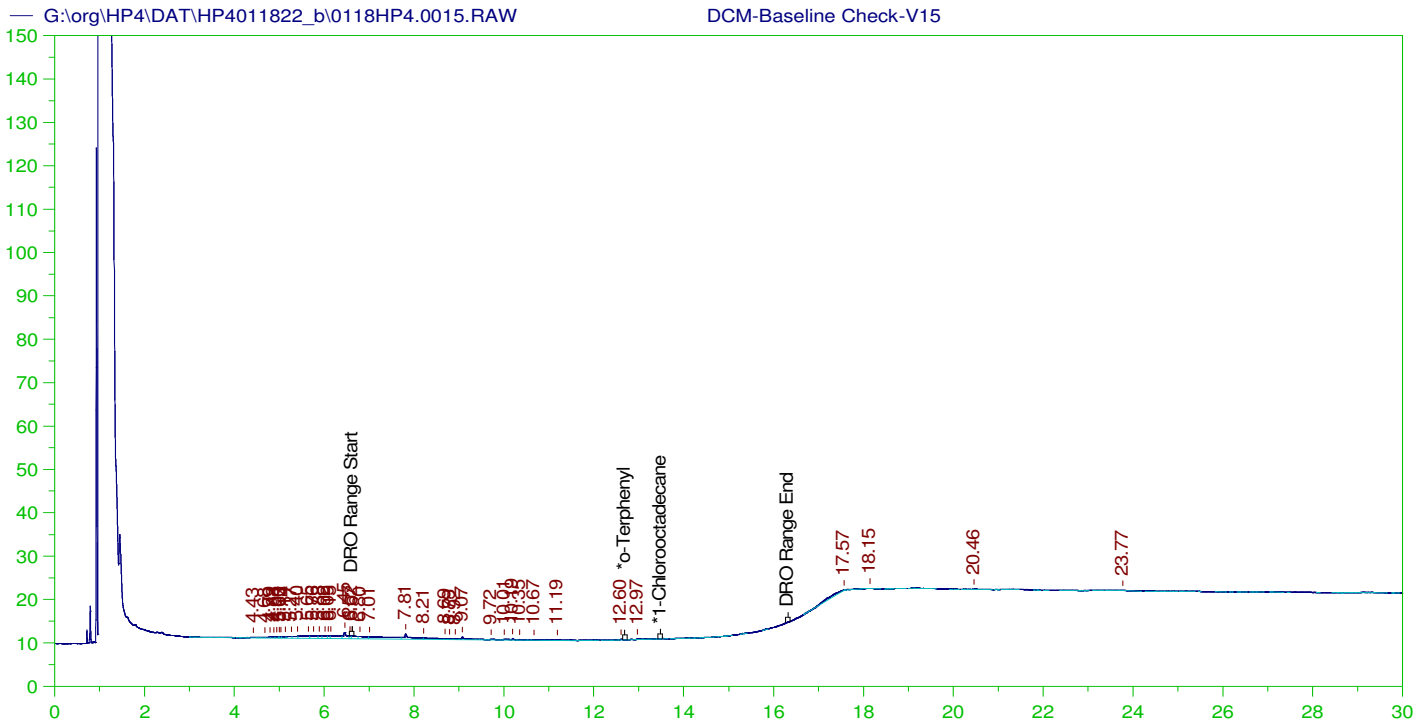
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010978-001DMS ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0014.RAW
Date & Time Acquired: 1/18/2022 11:31:34 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	.194	.18	92.81	-
*1-Chlorooctadecane	13.39	.194	.058	29.79	-

DRO Area:1.672662E+08 DRO Amount: 5.528644
TEH Area:1.801514E+08 TEH Amount: 5.954537



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V15
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0015.RAW
Date & Time Acquired: 1/19/2022 12:16:20 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

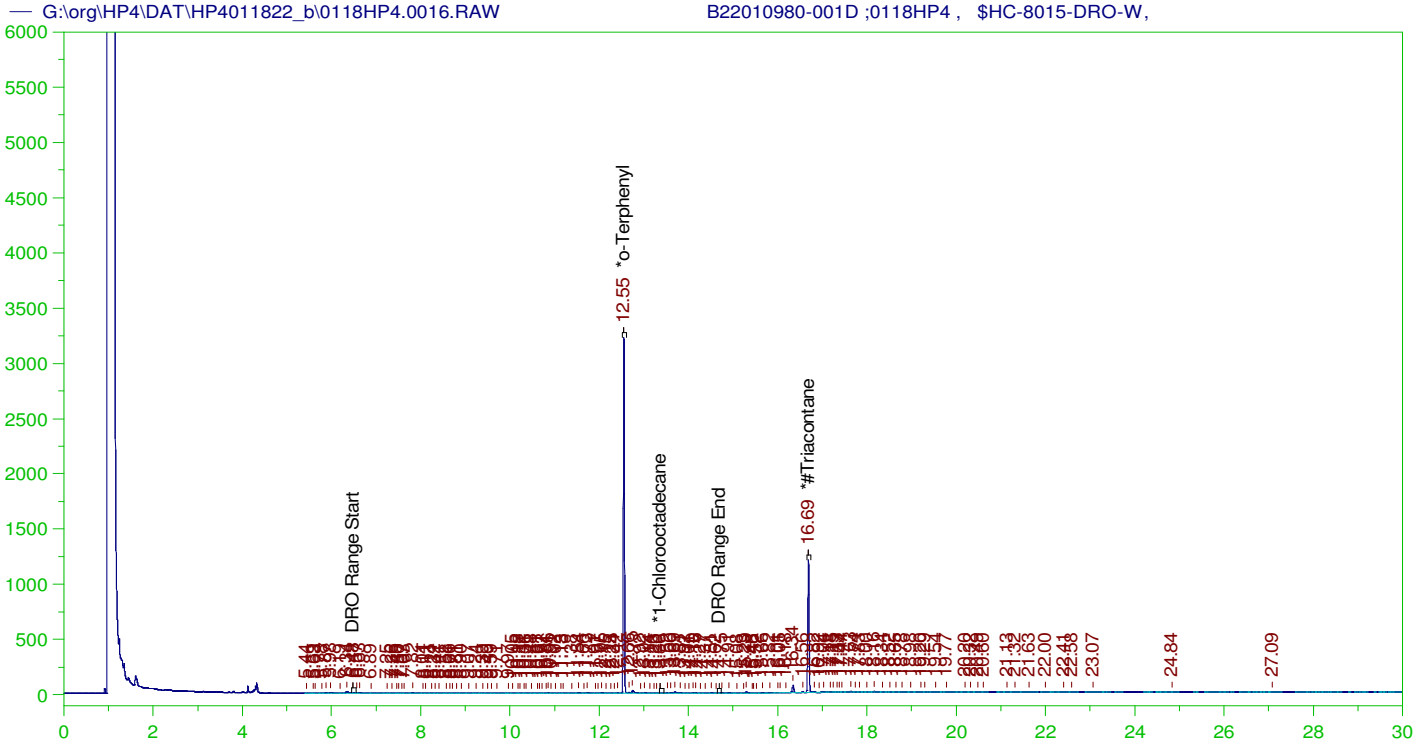
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.837	200.	.	.	-
*1-Chlorooctadecane	29.837	200.	.	.	-

DRO Area:70501.48 DRO Amount: 2.400191
TEH Area:153893 TEH Amount: 5.239217

ERH2404 (OWDFMW08A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0016.RAW B22010980-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010980-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0016.RAW
Date & Time Acquired: 1/19/2022 1:00:54 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

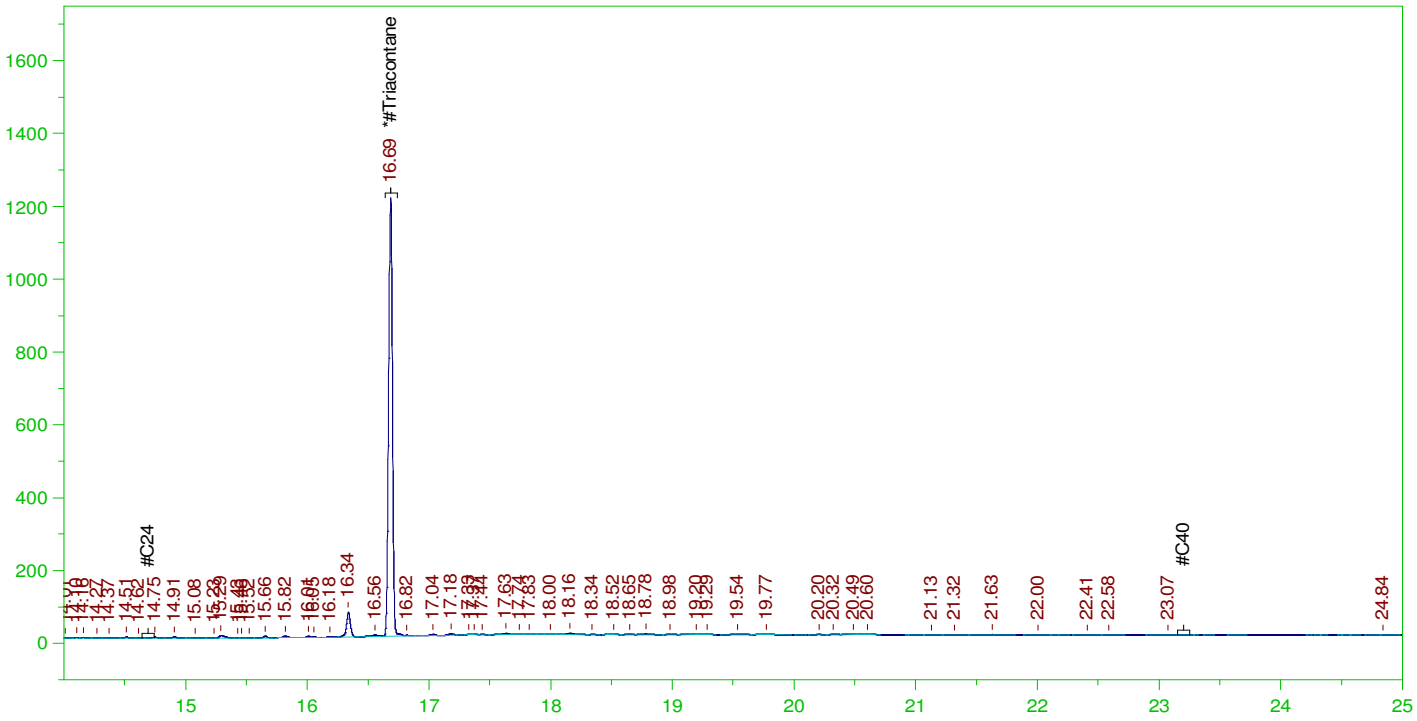
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.194	.168	86.68	-
*1-Chlorooctadecane	13.362	.194	.	.07	-
*#Triacontane	16.685	.194	.102	52.31	-

DRO Area:647856.4 DRO Amount: 2.141357E-02
TEH Area:1179505 TEH Amount: 3.898612E-02

ERH2404 (OWDFMW08A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0016.RAW B22010980-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010980-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0016.RAW
Date & Time Acquired: 1/19/2022 1:00:54 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

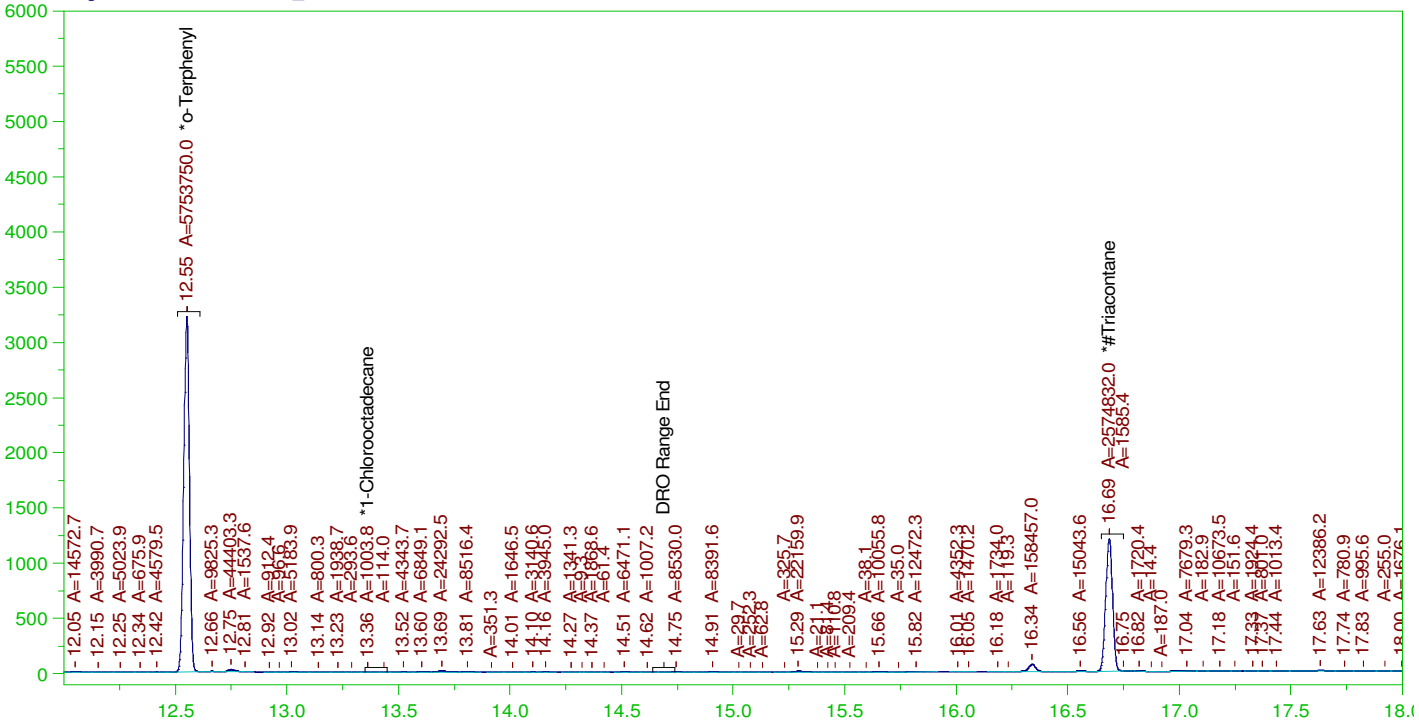
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.685	.485	.102	20.92	-

RRO Area:386642.2 RRO AMOUNT: 0.0153032

ERH2404 (OWDFMW08A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0016.RAW B22010980-001D ;0118HP4 , $HC-8015-DRO-W,



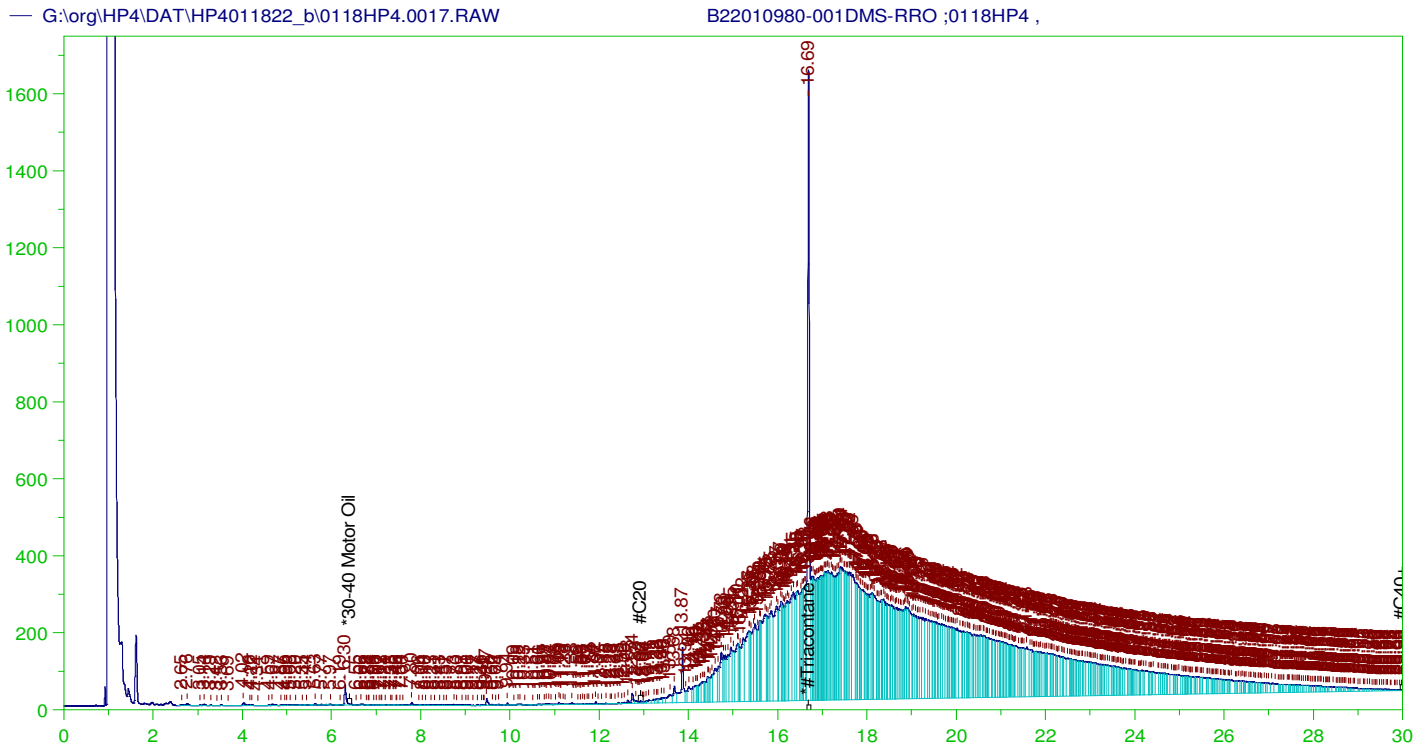
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010980-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0016.RAW
Date & Time Acquired: 1/19/2022 1:00:54 AM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.194	.168	86.34	-
*1-Chlorooctadecane	13.362	.194	.	.02	-
*#Triacontane	16.685	.194	.1	51.55	-

DRO Area:480195.5 DRO Amount: 1.587188E-02
TEH Area:1597671 TEH Amount: 5.280777E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

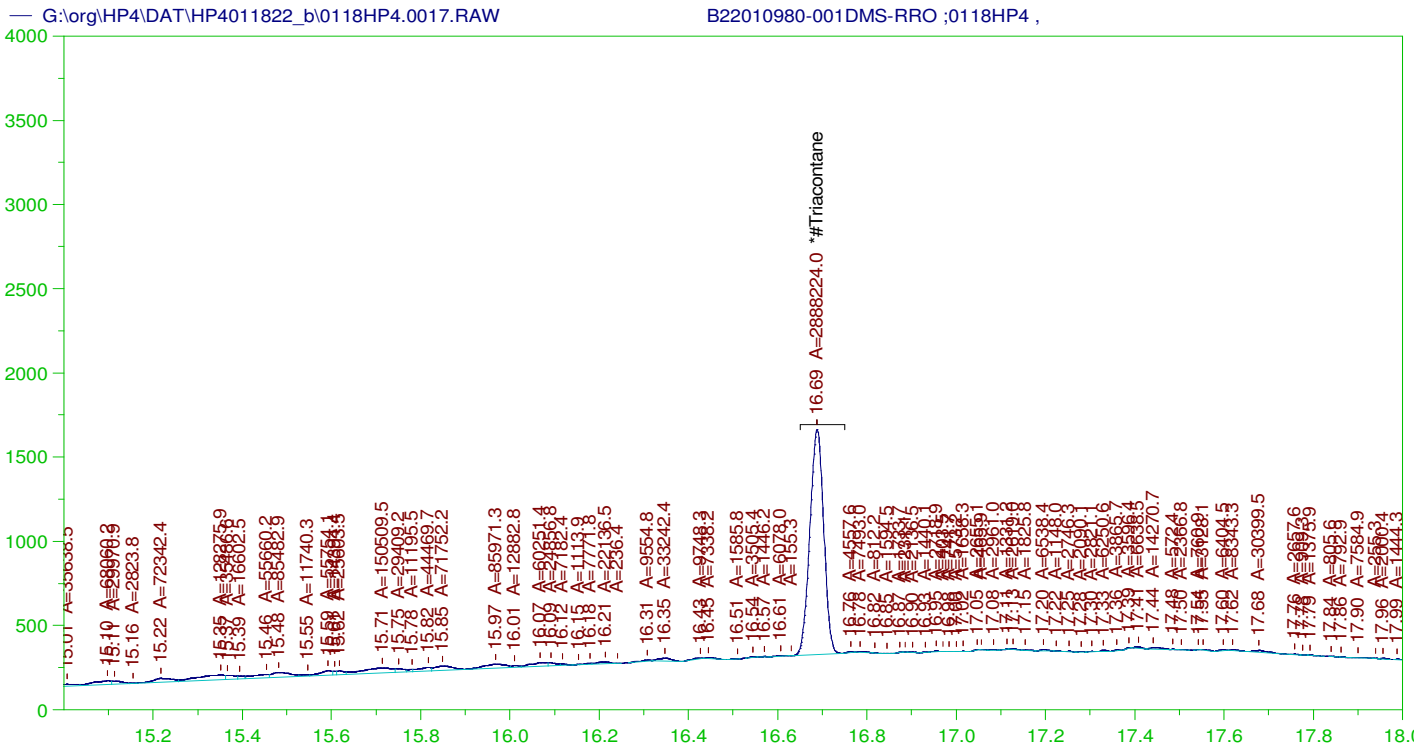
Sample Name: B22010980-001DMS-RRO ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0017.RAW
Date & Time Acquired: 1/19/2022 1:45:43 AM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	.481	.189	39.35	-

~~RRO~~ TEH(Oil Range) Area:1.1524E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.517313

AMN 02/14/2022



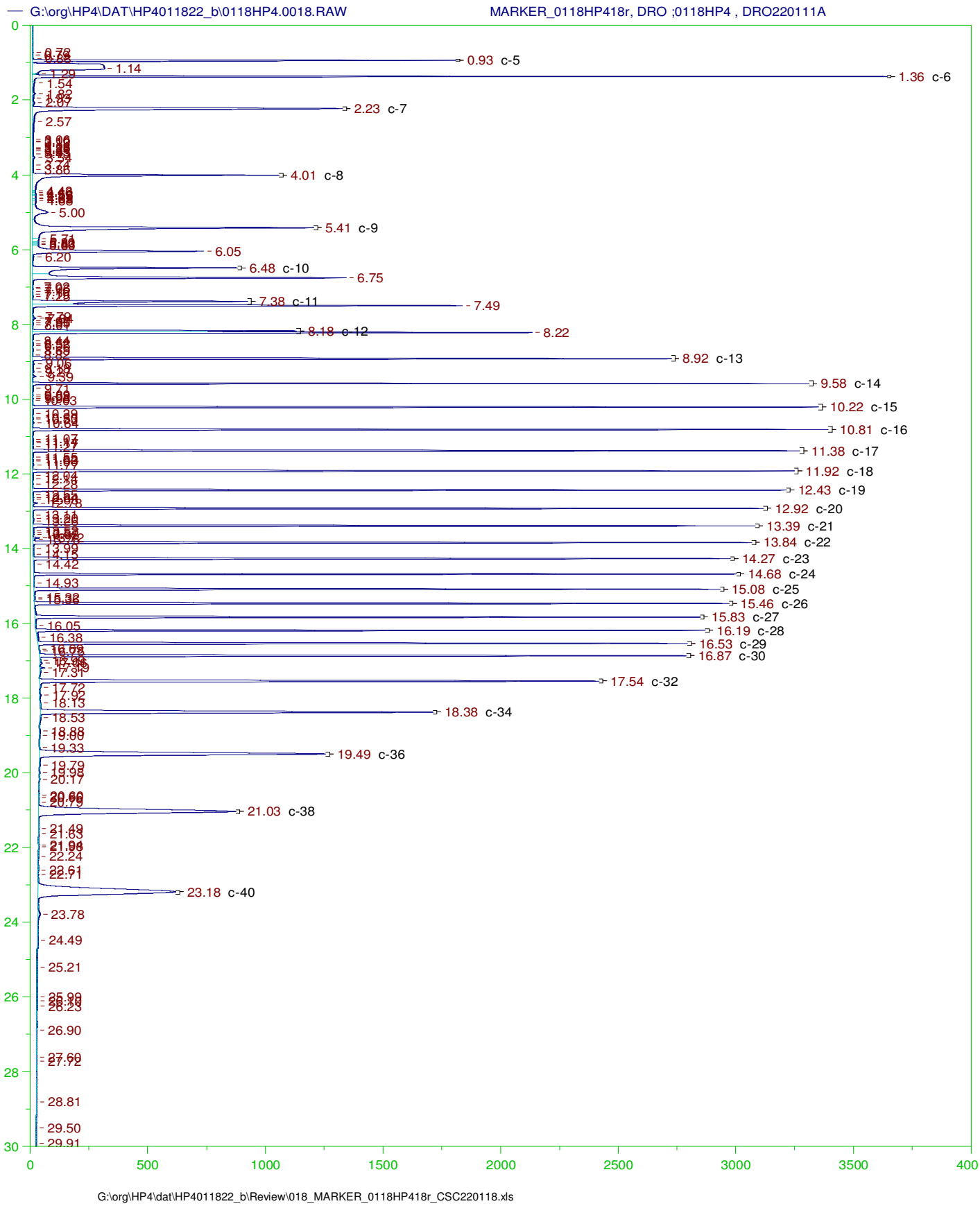
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010980-001DMS-RRO ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0017.RAW
Date & Time Acquired: 1/19/2022 1:45:43 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	.481	.111	23.13	-

RRO Area:2807550 RRO AMOUNT: 0.1100536


G:\org\HP4\DAT\HP4011822_b\0118HP4.0018.RAW
MARKER_0118HP418r, DRO ;0118HP4 , DRO220111A
0.93 c-5
1.14
1.36 c-6
1.54
2.23 c-7
2.57
4.01 c-8
5.00
5.41 c-9
6.05
6.20
6.48 c-10
6.75
7.38 c-11
7.49
8.18 c-12
8.22
8.92 c-13
9.58 c-14
10.22 c-15
10.81 c-16
11.38 c-17
11.92 c-18
12.43 c-19
12.92 c-20
13.39 c-21
13.84 c-22
14.27 c-23
14.42
14.68 c-24
14.93
15.08 c-25
15.46 c-26
15.83 c-27
16.05
16.19 c-28
16.38
16.53 c-29
16.87 c-30
17.31
17.54 c-32
17.72
17.92
18.13
18.38 c-34
18.53
18.88
19.33
19.49 c-36
19.79
20.17
21.03 c-38
21.49
22.24
22.61
22.71
23.18 c-40
23.78
24.49
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27.72
28.81
29.50
29.91
0
500
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1500
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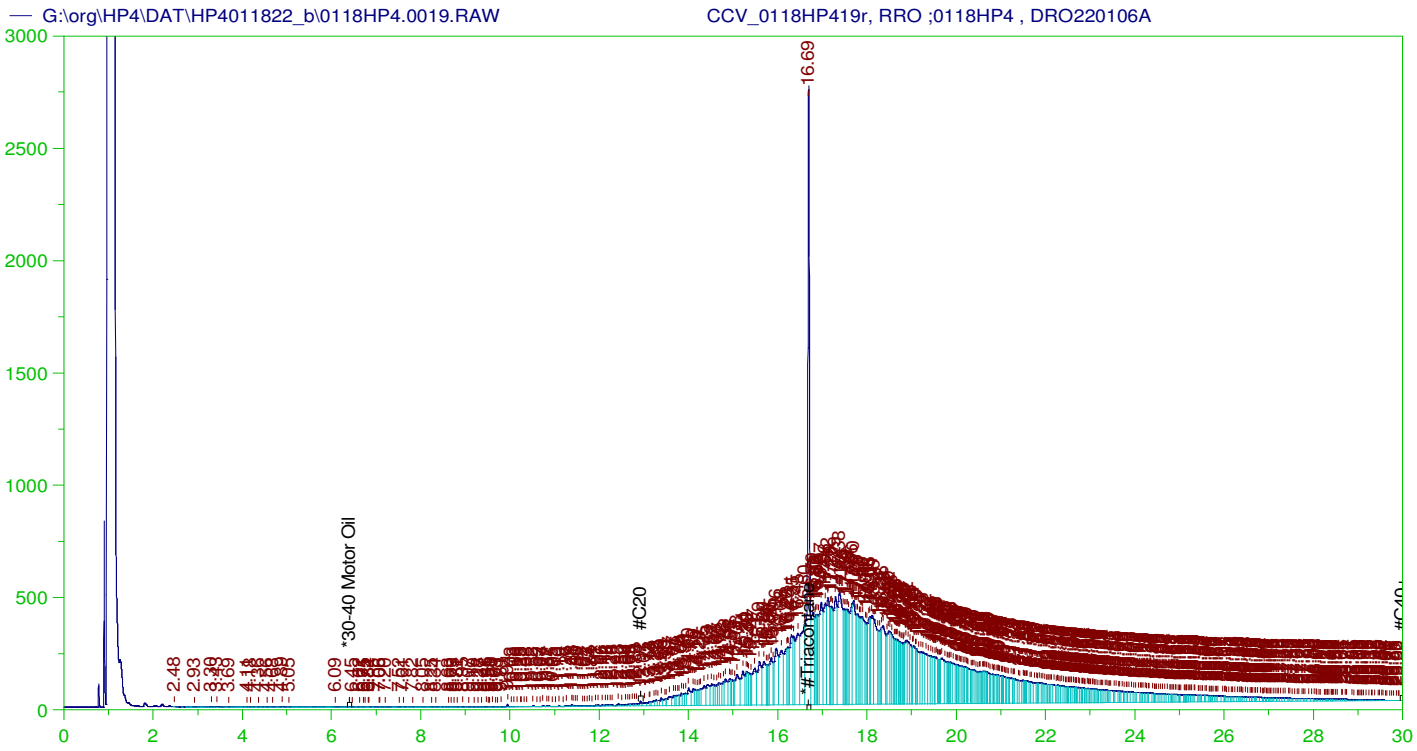


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP419r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0019.RAW
Date & Time Acquired: 1/19/2022 3:14:53 AM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.691	500.	330.999	66.2	-

~~RRO~~ TEH(Oil Range) Area:1.196807E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4879.039

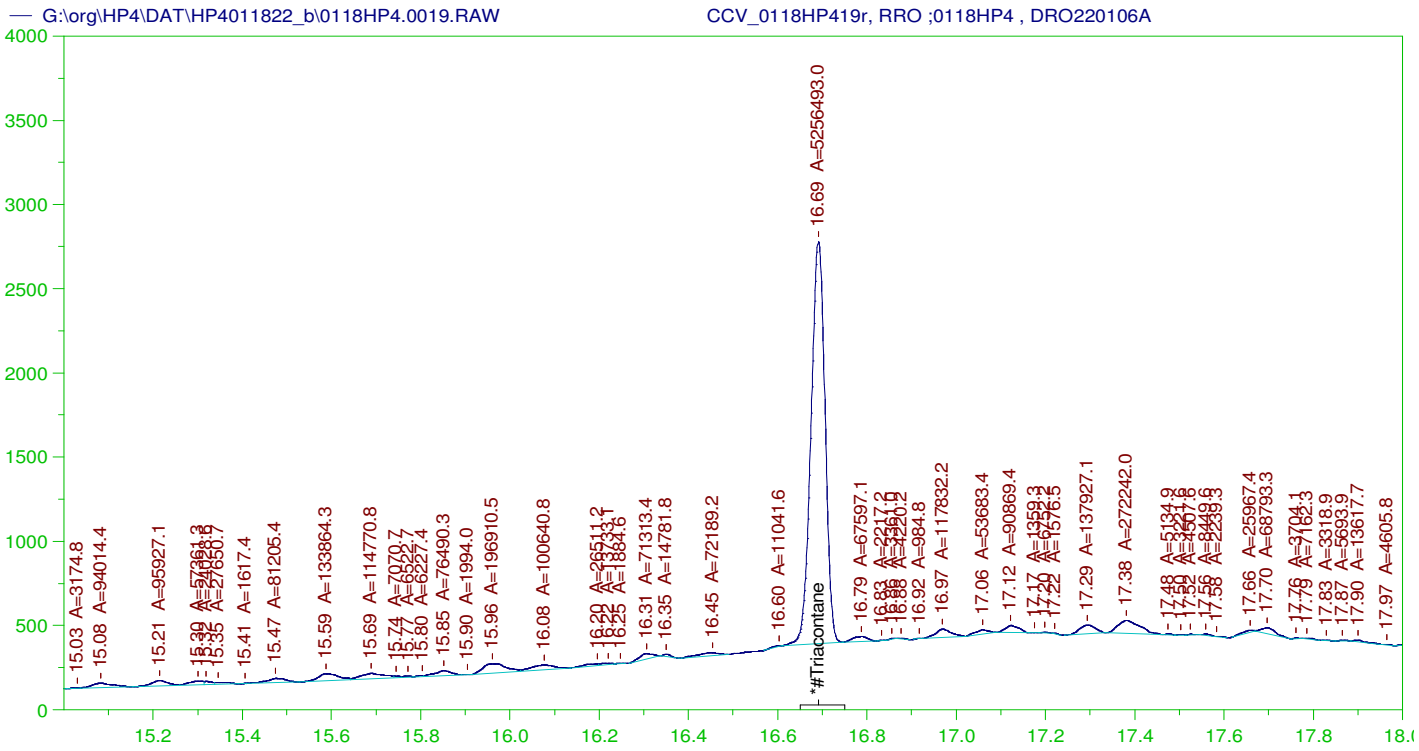
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0019.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.691	200.	330.999	165.5	75-125

AMN 02/15/2022

G:\org\HP4\dat\HP4011822_b\Review\019_CCV_0118HP419r_DC_ORO-T-AF-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP419r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0019.RAW
Date & Time Acquired: 1/19/2022 3:14:53 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

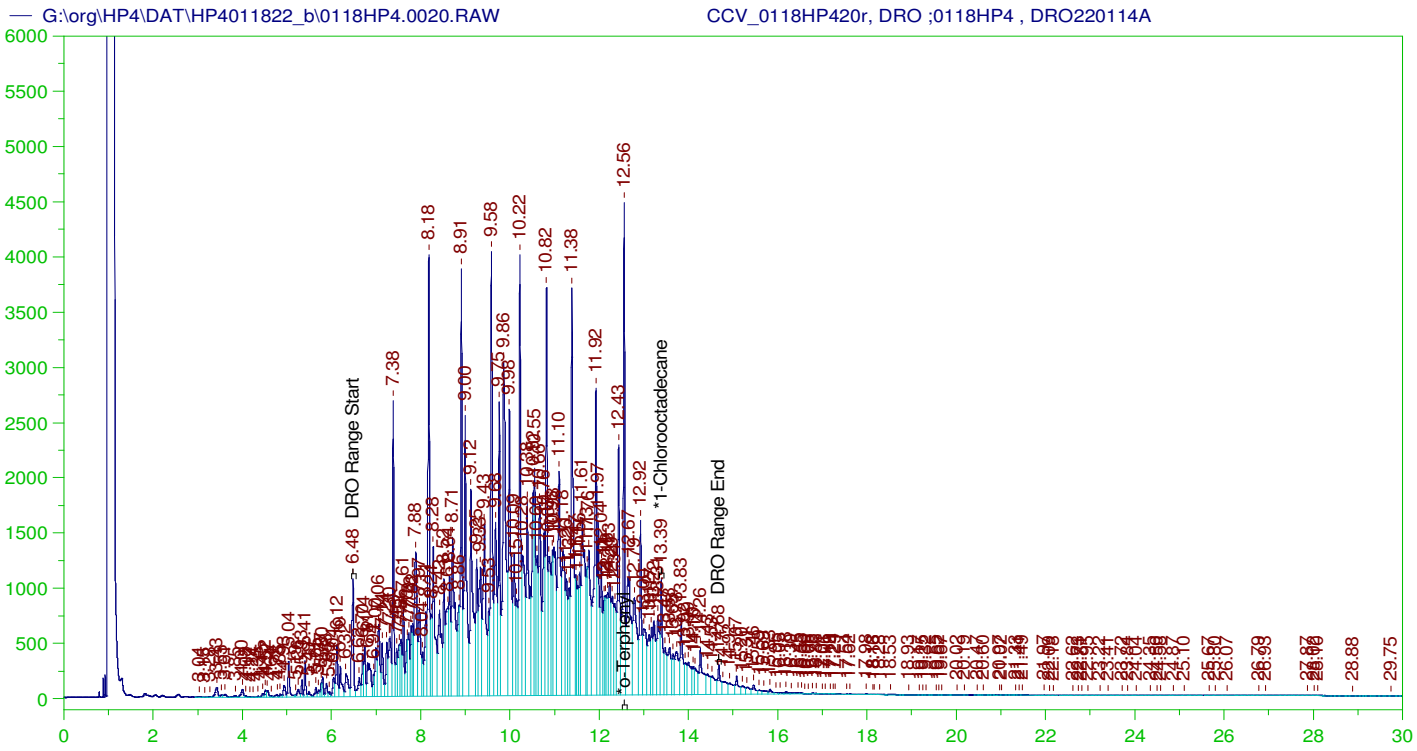
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.691	500.	210.48	42.1	-

RRO Area:3521410 RRO AMOUNT: 143.5578

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0019.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.691	200.	210.48	105.24	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0118HP420r, DRO ;0118HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0020.RAW
Date & Time Acquired: 1/19/2022 3:59:42 AM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

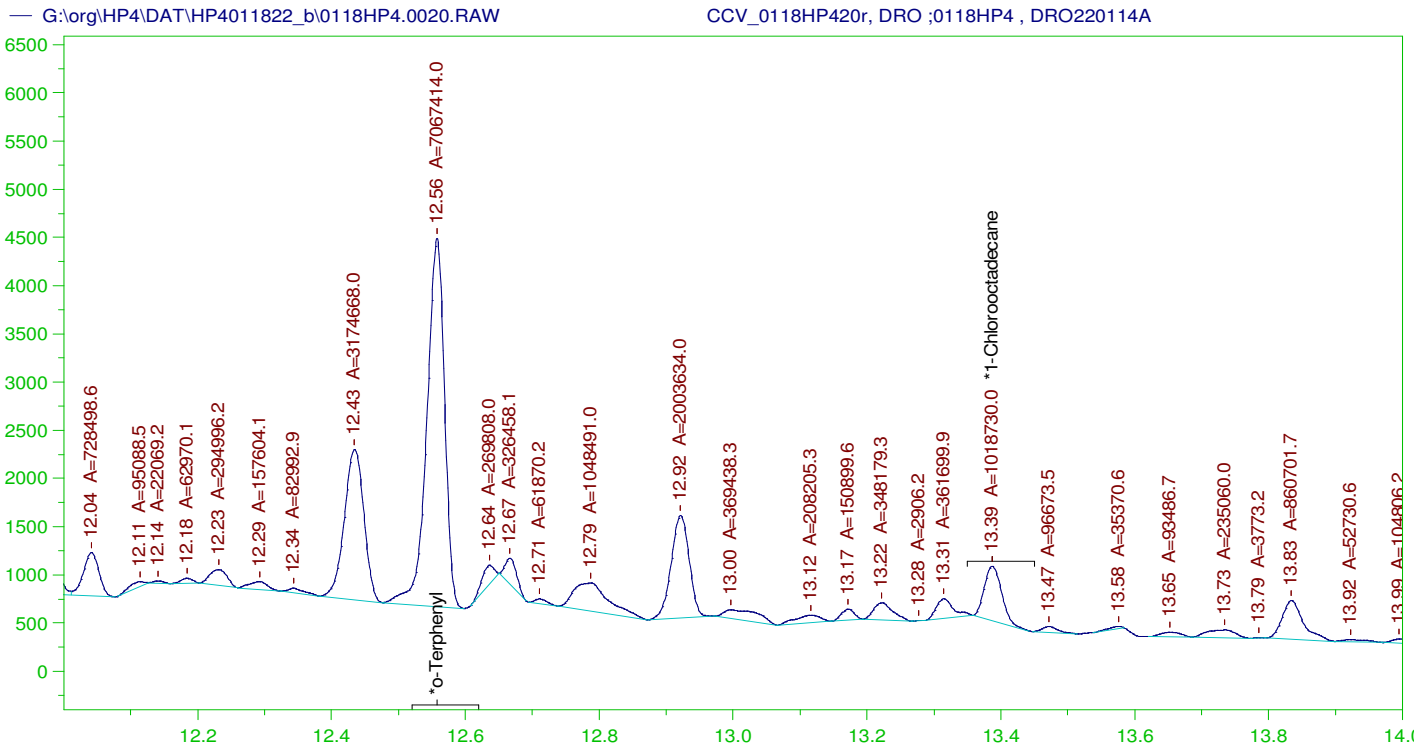
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.558	200.	353.102	176.55	-
*1-Chlorooctadecane	13.387	200.	104.033	52.02	-

DRO Area:4.071445E+08 DRO Amount: 13861.05
TEH Area:4.222389E+08 TEH Amount: 14374.93

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14374.93	95.83	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.558	200.	353.102	176.55	85-115
*1-Chlorooctadecane	13.387	200.	104.033	52.02	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0118HP420r, DRO ;0118HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0020.RAW
Date & Time Acquired: 1/19/2022 3:59:42 AM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

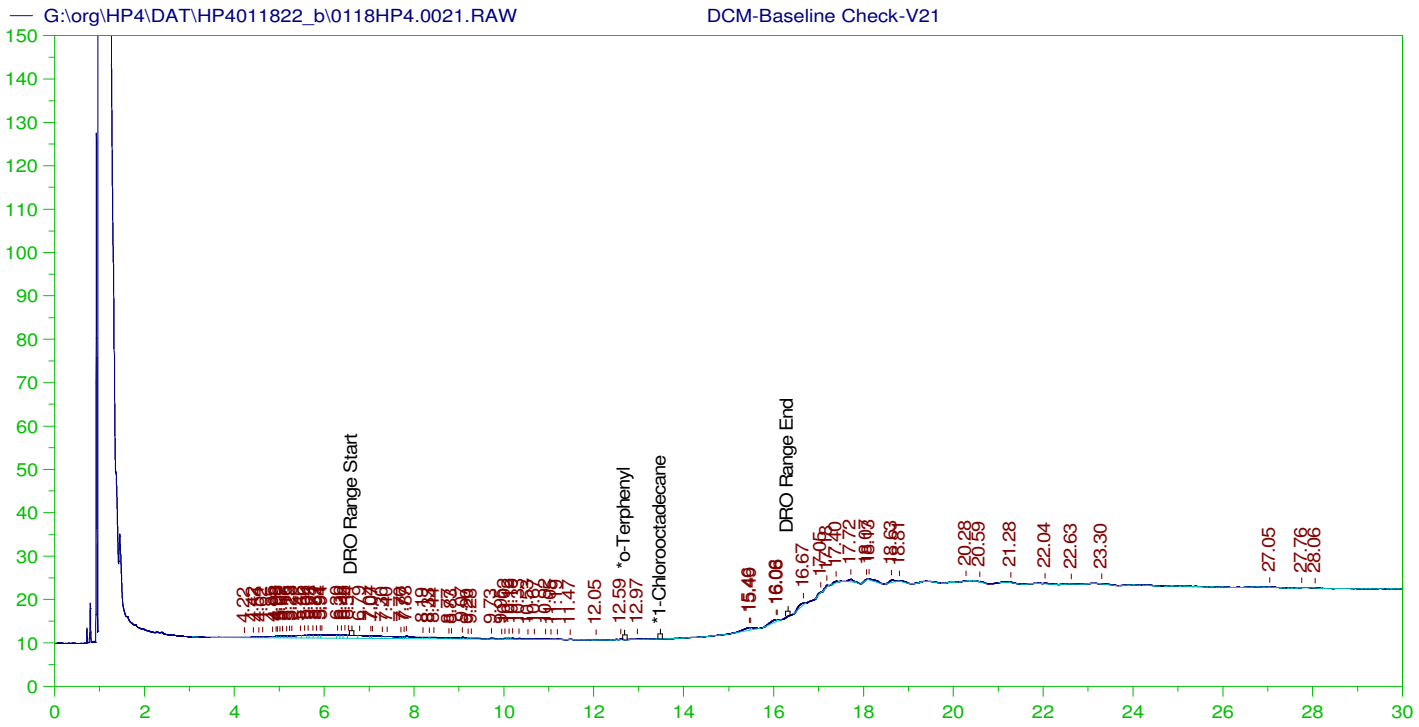
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.558	200.	212.109	106.05	-
*1-Chlorooctadecane	13.387	200.	30.574	15.29	-

DRO Area:1.84955E+08 DRO Amount: 6296.71
TEH Area:1.943973E+08 TEH Amount: 6618.169

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6618.17	44.12	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.558	200.	212.109	106.05	85-115
*1-Chlorooctadecane	13.387	200.	30.574	15.29	85-115



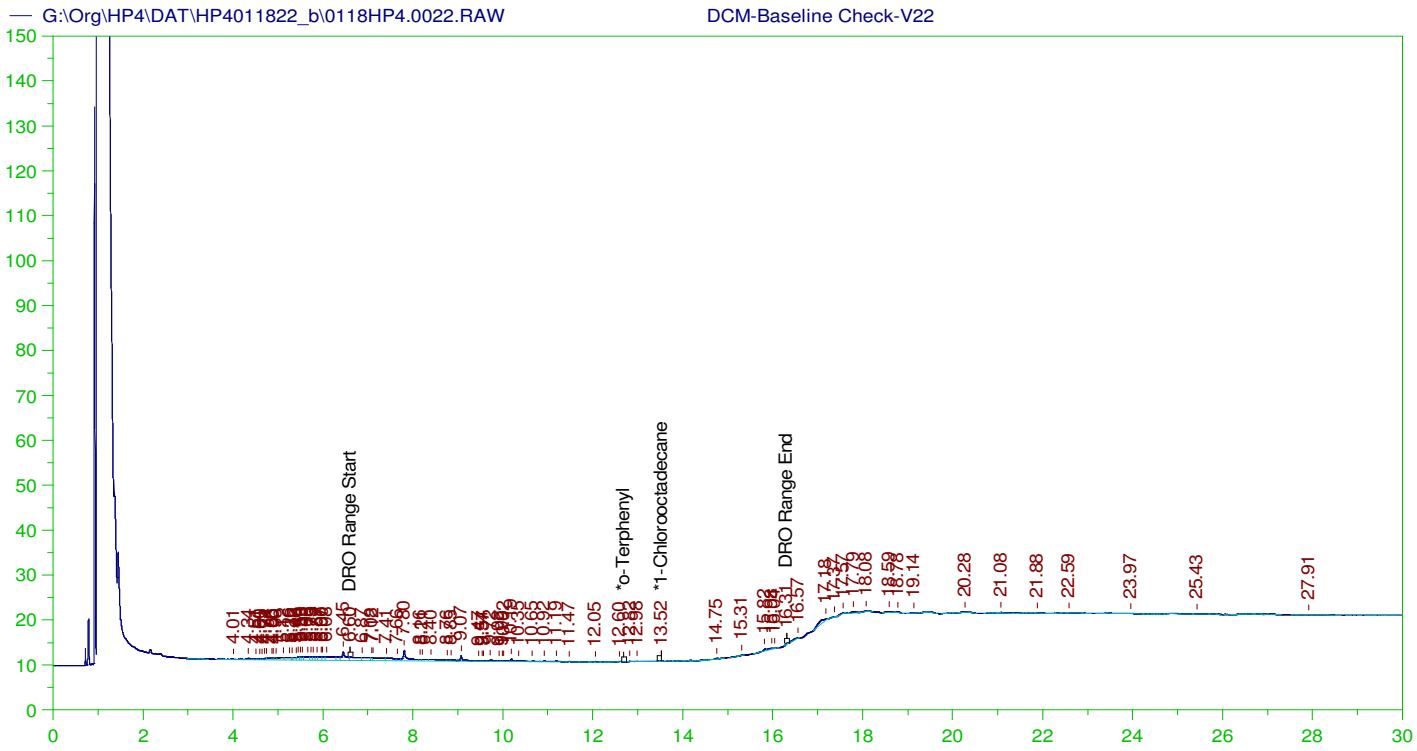
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V21
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0021.RAW
Date & Time Acquired: 1/19/2022 4:44:33 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.923	200.	.	.	-
*1-Chlorooctadecane	29.923	200.	.	.	-

DRO Area:96099.43 DRO Amount: 3.271662
TEH Area:220992.2 TEH Amount: 7.523581



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V22
Raw File: G:\Org\HP4\DAT\HP4011822_b\0118HP4.0022.RAW
Date & Time Acquired: 1/19/2022 5:29:36 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

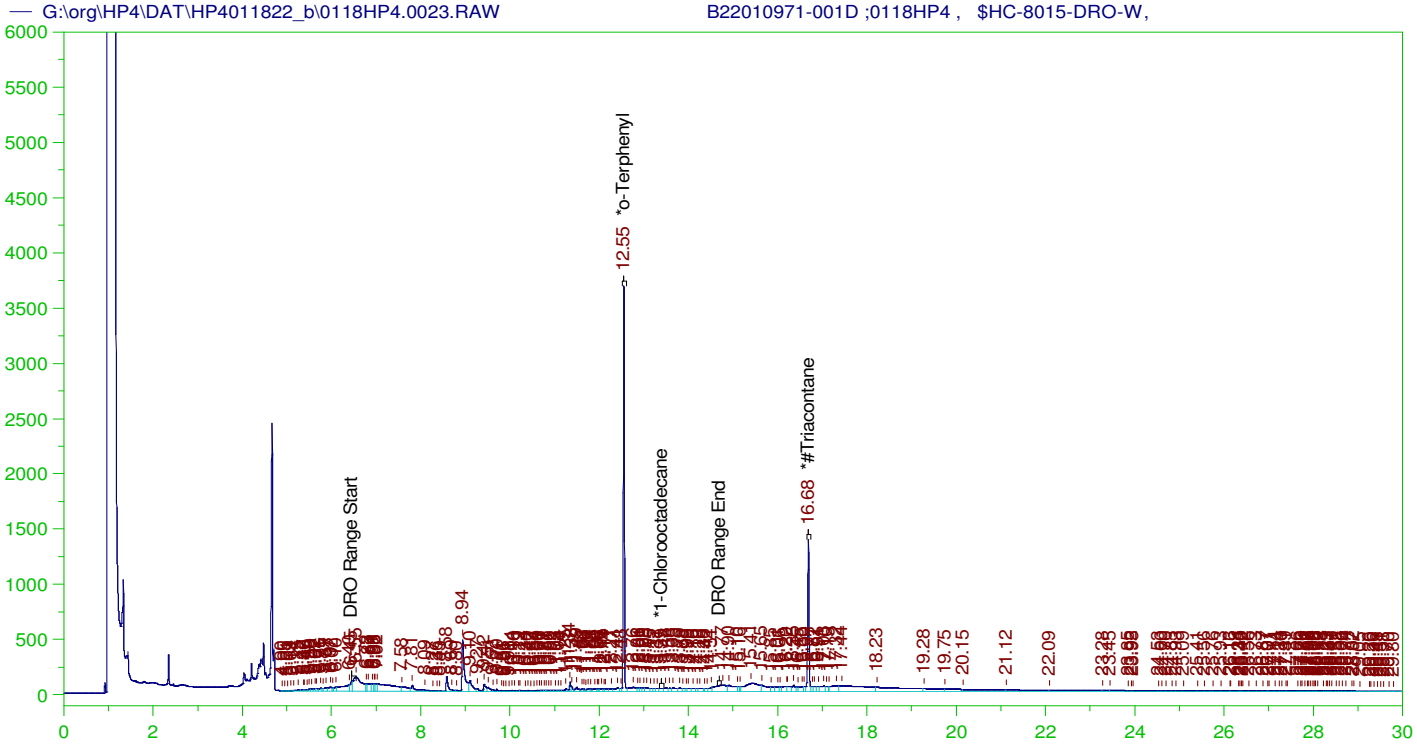
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	29.813	200.	.	.	-
*1-Chlorooctadecane	13.524	200.	.033	.02	-

DRO Area:102858.9 DRO Amount: 3.501784
TEH Area:206542.1 TEH Amount: 7.031632

ERH2410 (RHMW12A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0023.RAW B22010971-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0023.RAW
Date & Time Acquired: 1/19/2022 6:14:26 AM
Method File: G:\Org\HP4\methods\D3_8015-011823-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

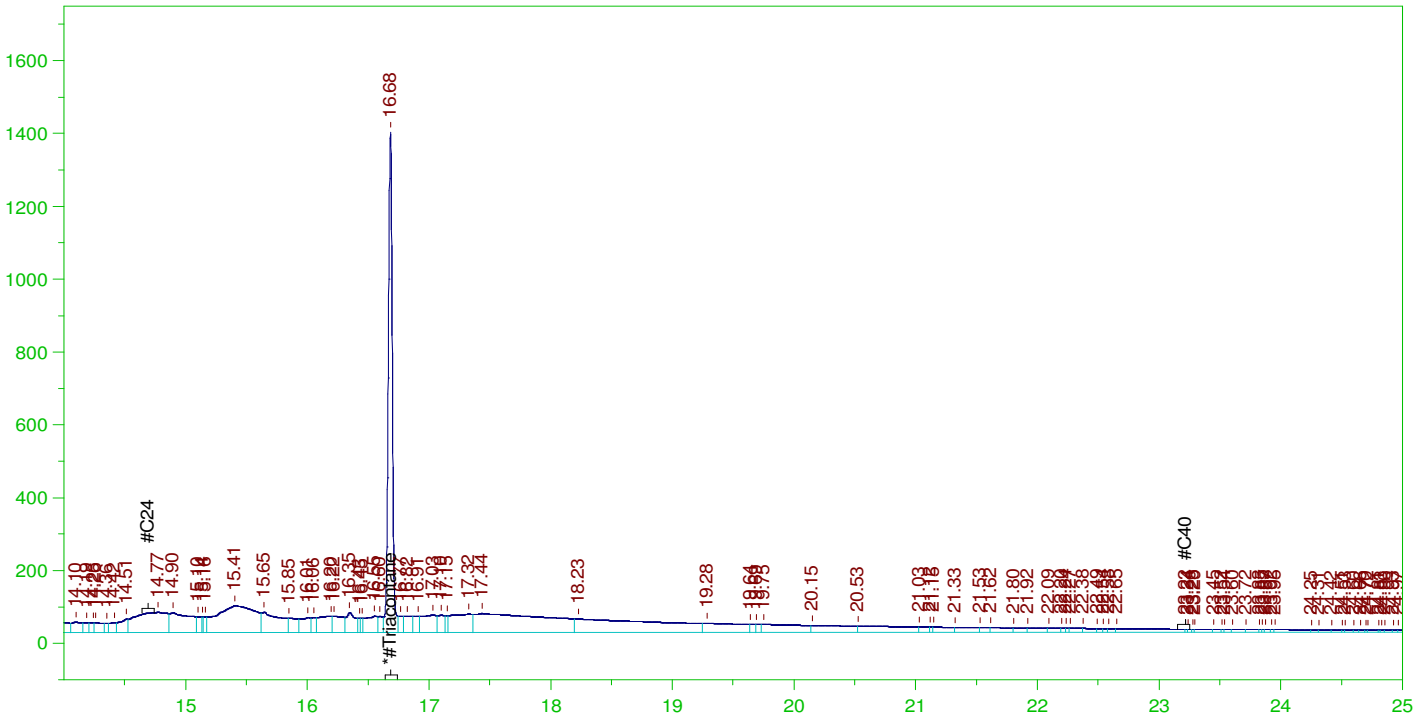
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.2	.197	98.32	-
*1-Chlorooctadecane	13.388	.2	.006	2.84	-
*#Triacontane	16.683	.2	.126	63.24	-

DRO Area:1.502518E+07 DRO Amount: 0.5115255
TEH Area:3.348316E+07 TEH Amount: 1.139919

ERH2410 (RHMW12A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0023.RAW B22010971-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010971-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0023.RAW
Date & Time Acquired: 1/19/2022 6:14:26 AM
Method File: G:\Org\HP4\Methods\D3_ORO-011823-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

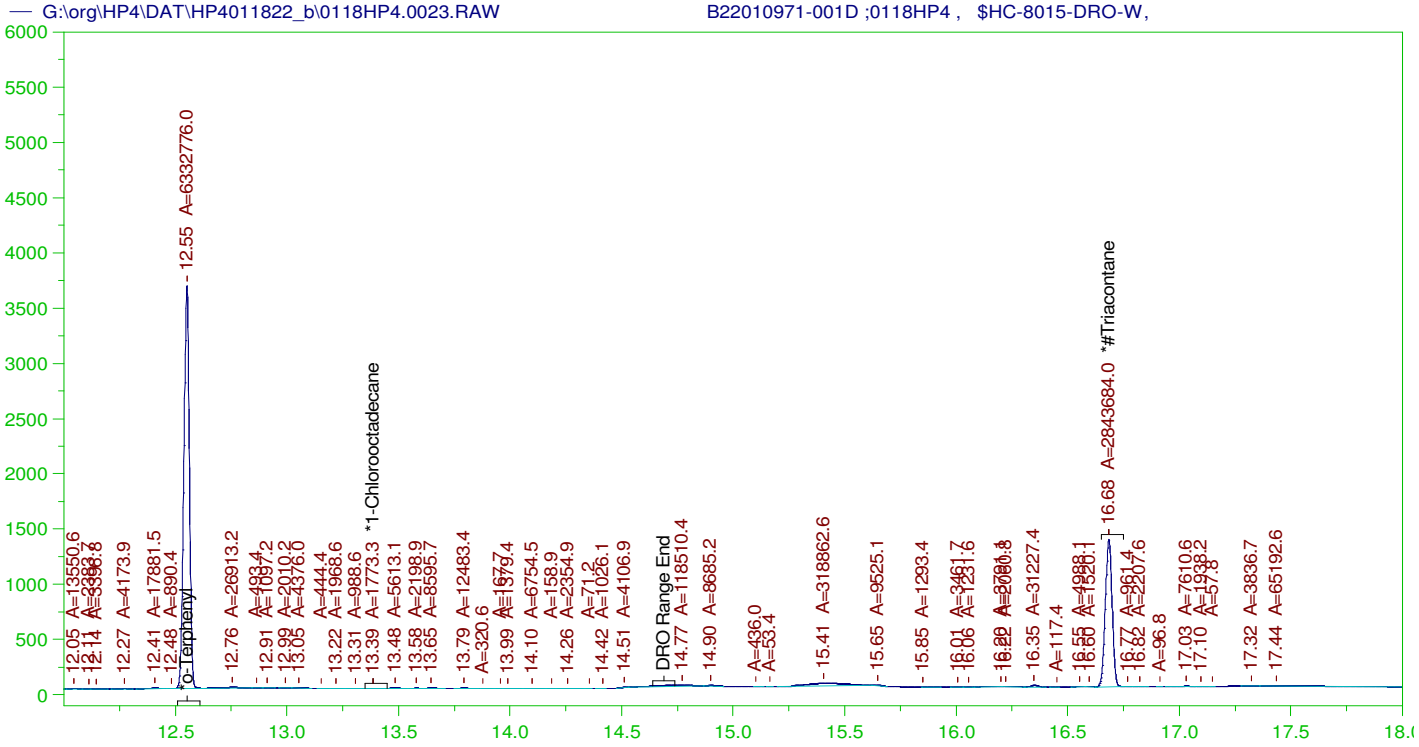
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.683	.5	.126	25.3	-

RRO Area:1.517664E+07 RRO AMOUNT: 0.618708

ERH2410 (RHMW12A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0023.RAW B22010971-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0023.RAW
Date & Time Acquired: 1/19/2022 6:14:26 AM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

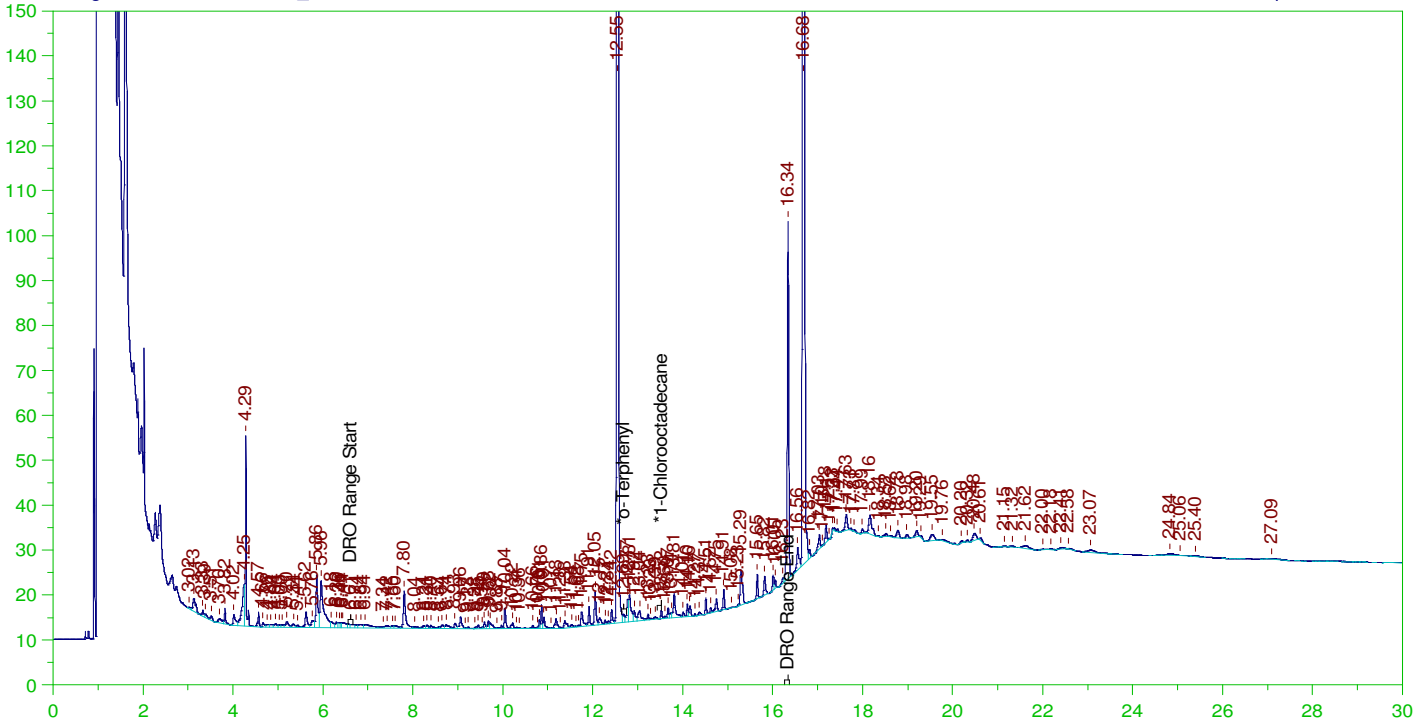
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.2	.19	95.03	-
*1-Chlorooctadecane	13.388	.2	.	.03	-
*#Triacontane	16.683	.2	.114	56.93	-

DRO Area:9641300 DRO Amount: 0.3282337
TEH Area:2.413728E+07 TEH Amount: 0.821743

ERH2408 (RHMW16) Batch ID: 162993

G:\Org\HP4\DAT\HP4011822_b\0118HP4.0024.RAW B22010972-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun poss



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010972-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun poss
Raw File: G:\Org\HP4\DAT\HP4011822_b\0118HP4.0024.RAW
Date & Time Acquired: 1/19/2022 6:59:07 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

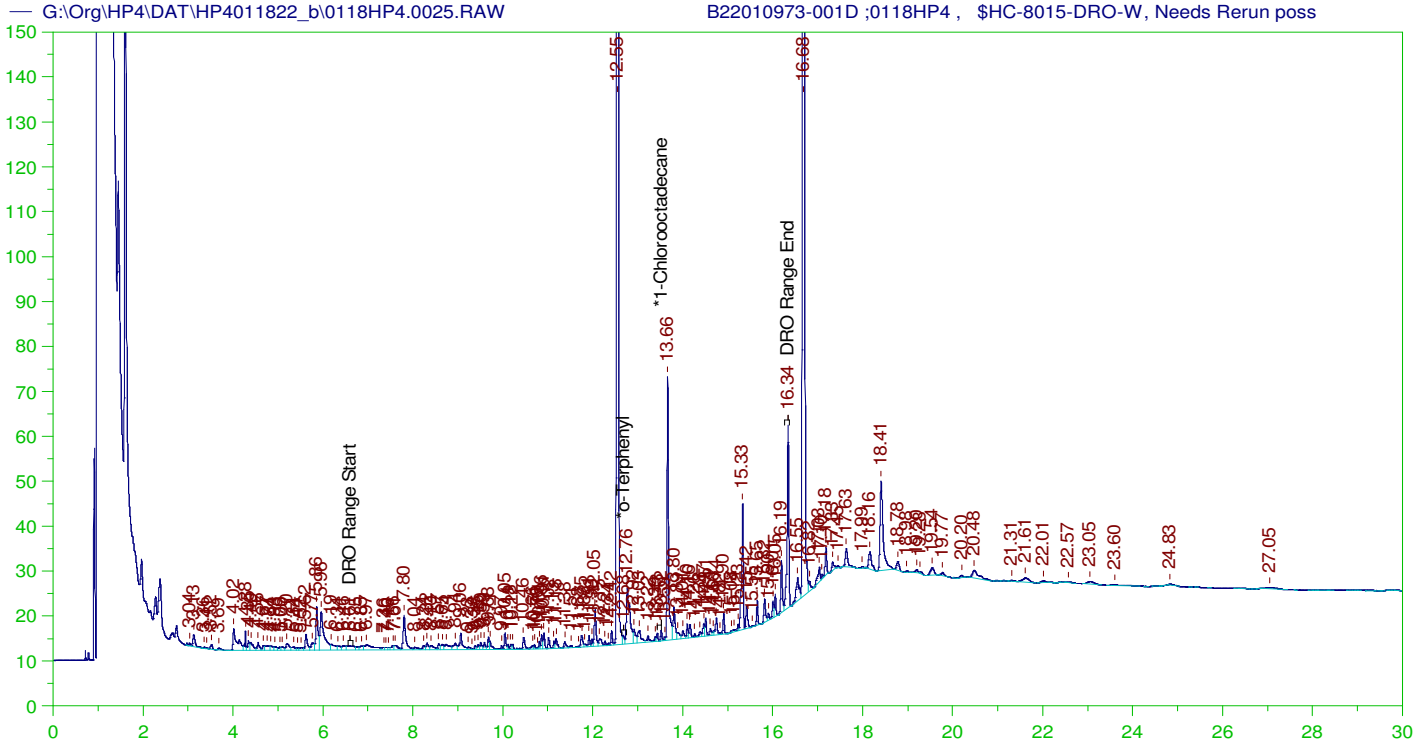
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.687	.19	.09	-
*1-Chlorooctadecane	13.522	.19	.07	-

DRO Area:7175558 DRO Amount: 0.2326558
TEH Area:1.058833E+07 TEH Amount: 0.3433096

ERH2406 (RHMW13 zone 5) Batch ID: 162993

G:\Org\HP4\DAT\HP4011822_b\0118HP4.0025.RAW B22010973-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun poss



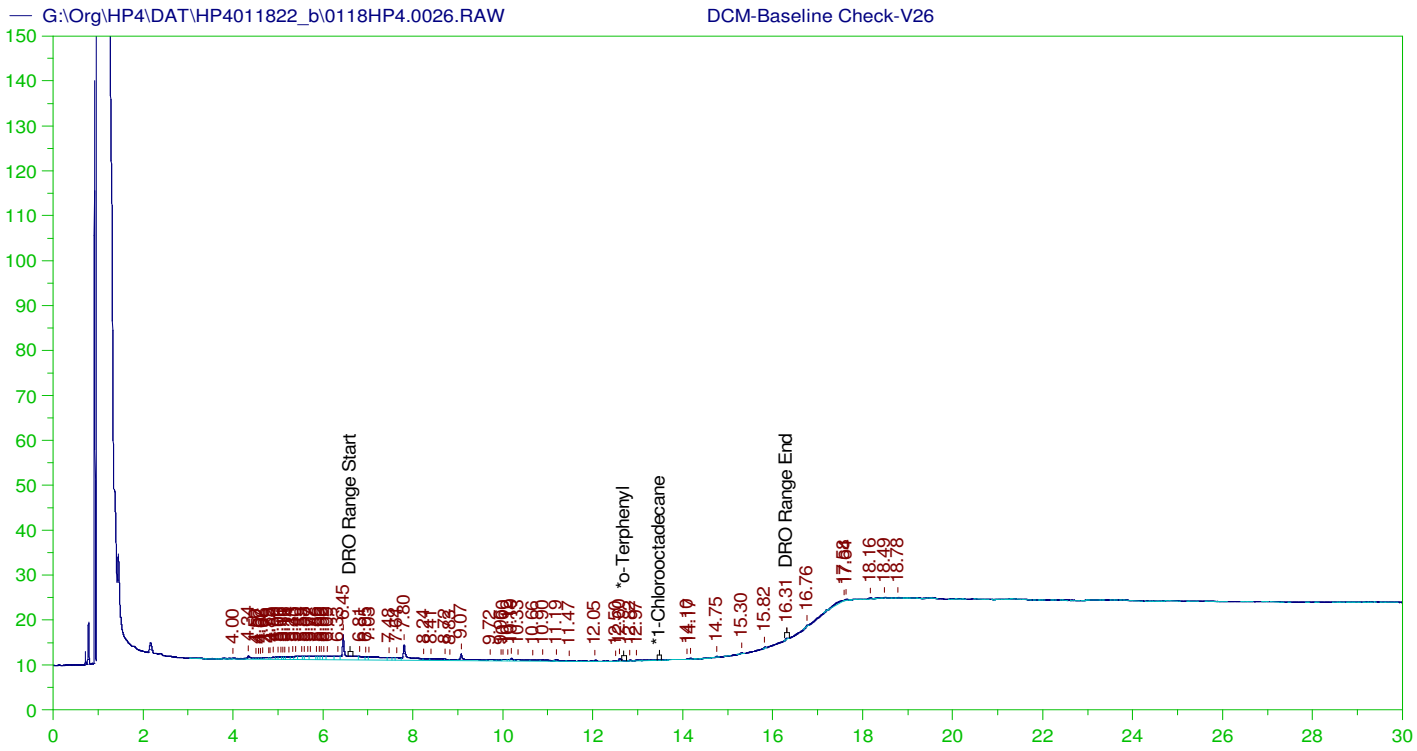
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010973-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun poss
Raw File: G:\Org\HP4\DAT\HP4011822_b\0118HP4.0025.RAW
Date & Time Acquired: 1/19/2022 7:44:07 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.681	.194	.	.08	-
*1-Chlorooctadecane	13.52	.194	.	.08	-

DRO Area:7577888 DRO Amount: 0.2504716
TEH Area:1.111627E+07 TEH Amount: 0.3674257



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V26
Raw File: G:\Org\HP4\DAT\HP4011822_b\0118HP4.0026.RAW
Date & Time Acquired: 1/19/2022 8:28:56 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

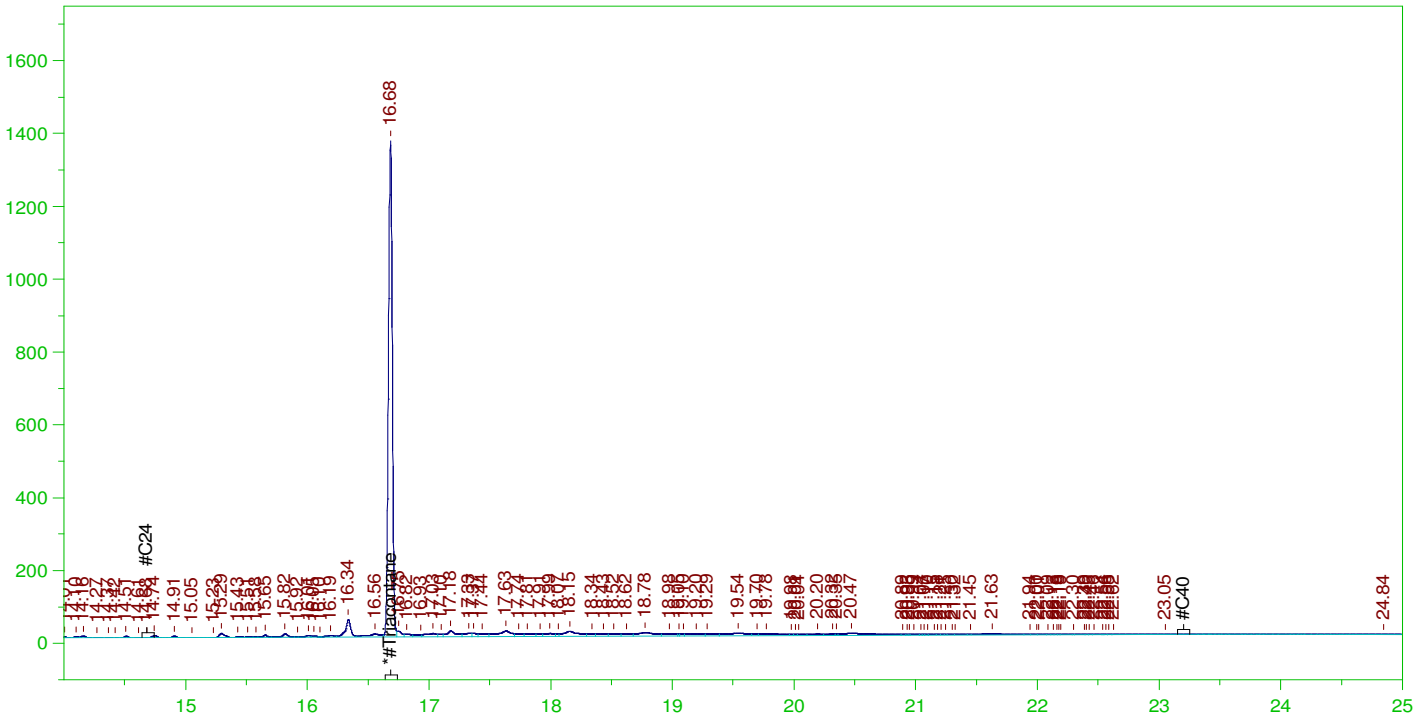
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.635	200.	.	.	-
*1-Chlorooctadecane	29.635	200.	.	.	-

DRO Area:101993.4 DRO Amount: 3.472319
TEH Area:213594.4 TEH Amount: 7.271724

ERH2400 (OWDFMW05A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0027.RAW B22010977-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010977-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0027.RAW
Date & Time Acquired: 1/19/2022 9:13:57 AM
Method File: G:\Org\HP4\Methods\D3_ORO-011827-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

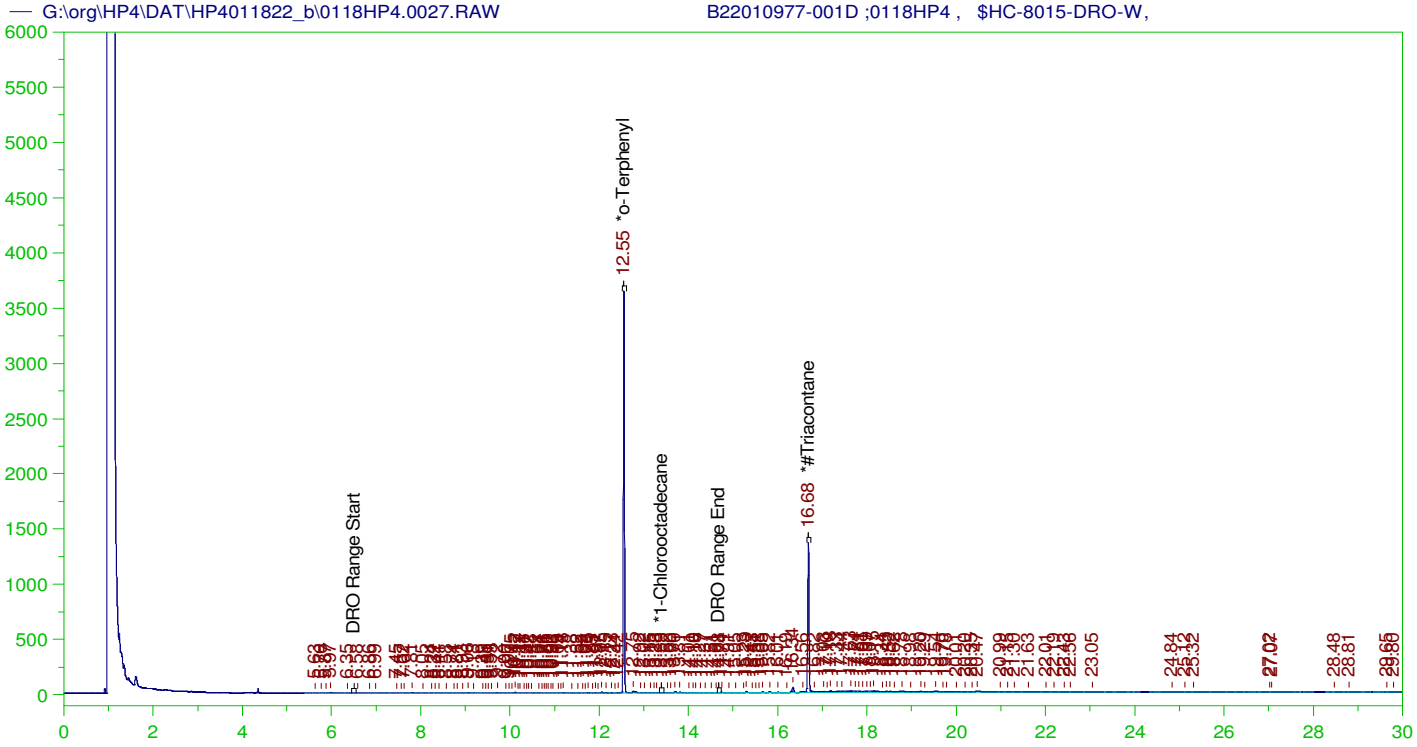
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.684	.485	.116	23.87	-

RRO Area:2344884 RRO AMOUNT: 9.280989E-02

ERH2400 (OWDFMW05A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0027.RAW B22010977-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010977-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0027.RAW
Date & Time Acquired: 1/19/2022 9:13:57 AM
Method File: G:\Org\HP4\methods\DR_8015-11827-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

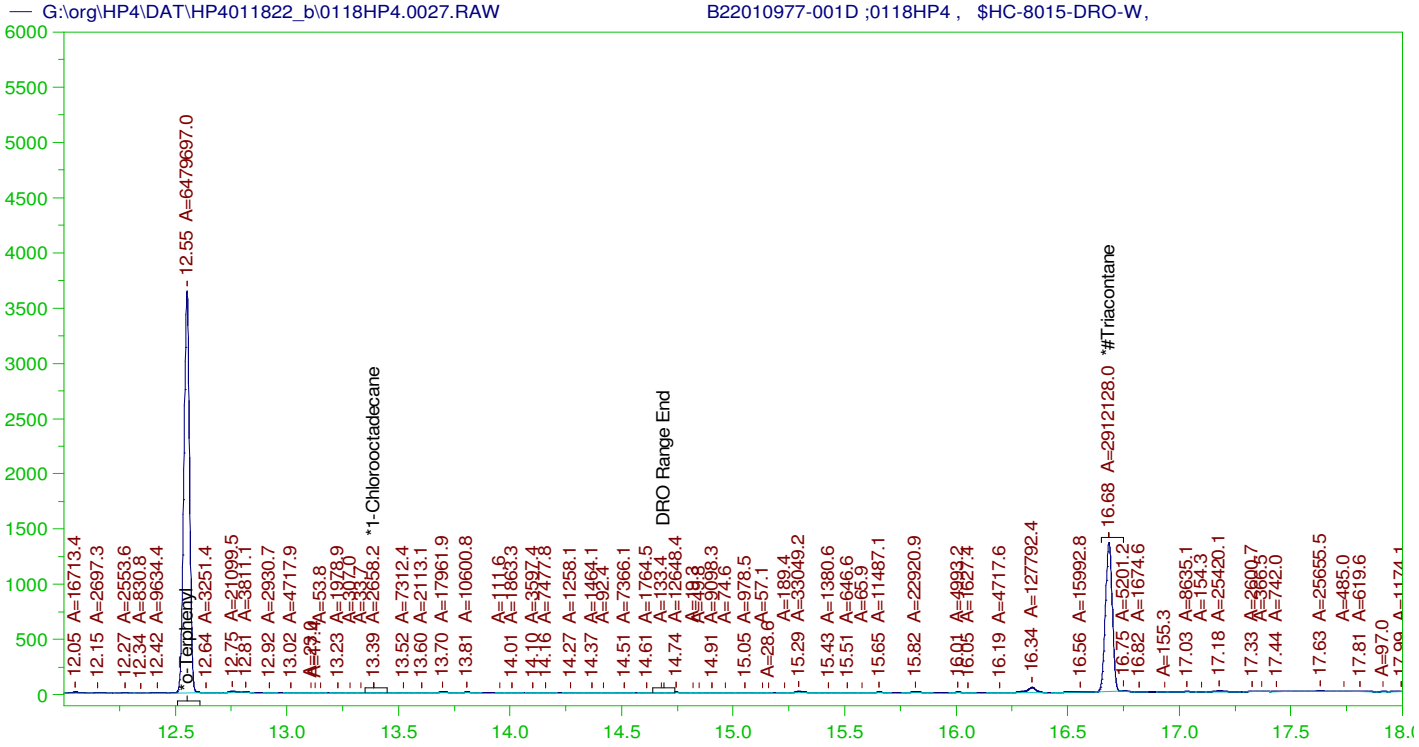
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.194	.19	97.94	-
*1-Chlorooctadecane	13.388	.194	.	.15	-
*#Triacontane	16.684	.194	.118	60.54	-

DRO Area:520521 DRO Amount: 1.720476E-02
TEH Area:2935516 TEH Amount: 9.702748E-02

ERH2400 (OWDFMW05A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0027.RAW B22010977-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010977-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0027.RAW
Date & Time Acquired: 1/19/2022 9:13:57 AM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

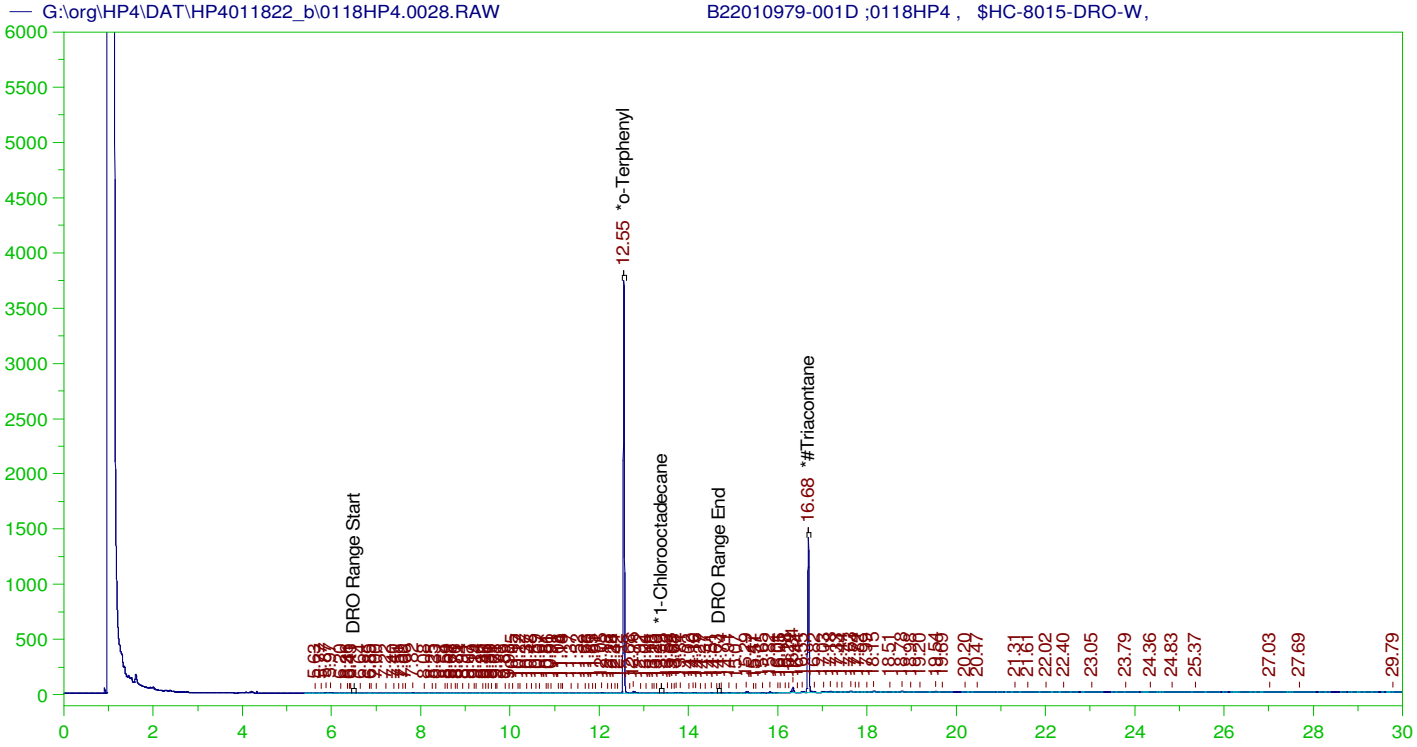
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.194	.189	97.24	-
*1-Chlorooctadecane	13.388	.194	.	.04	-
*#Triacontane	16.684	.194	.113	58.3	-

DRO Area:333031.8 DRO Amount: 1.100769E-02
TEH Area:1096749 TEH Amount: 3.625081E-02

ERH2402 (OWDFMW07A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0028.RAW B22010979-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010979-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0028.RAW
Date & Time Acquired: 1/19/2022 9:58:47 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

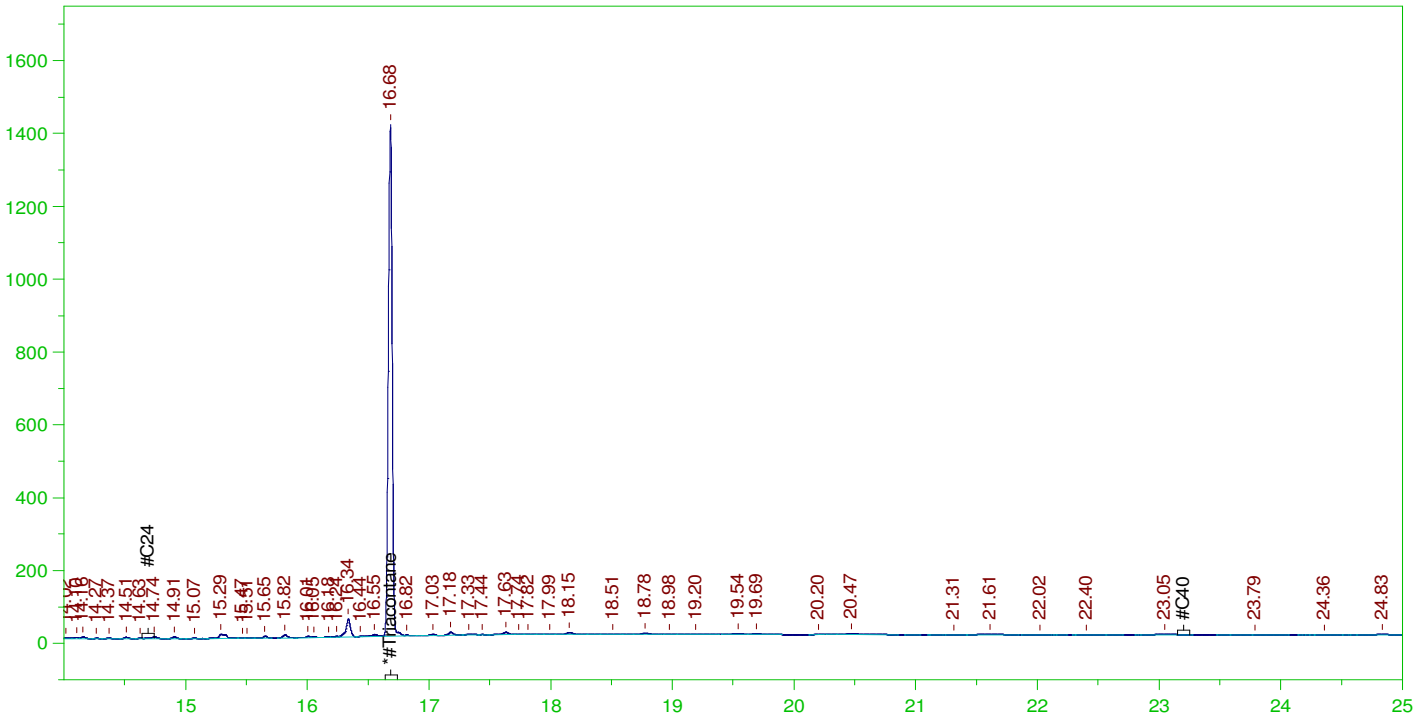
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.192	.195	101.22	-
*1-Chlorooctadecane	13.39	.192	.	.04	-
*#Triacontane	16.683	.192	.118	61.35	-

DRO Area:448872.3 DRO Amount: 0.0146939
TEH Area:1080261 TEH Amount: 3.536249E-02

ERH2402 (OWDFMW07A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0028.RAW B22010979-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010979-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0028.RAW
Date & Time Acquired: 1/19/2022 9:58:47 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

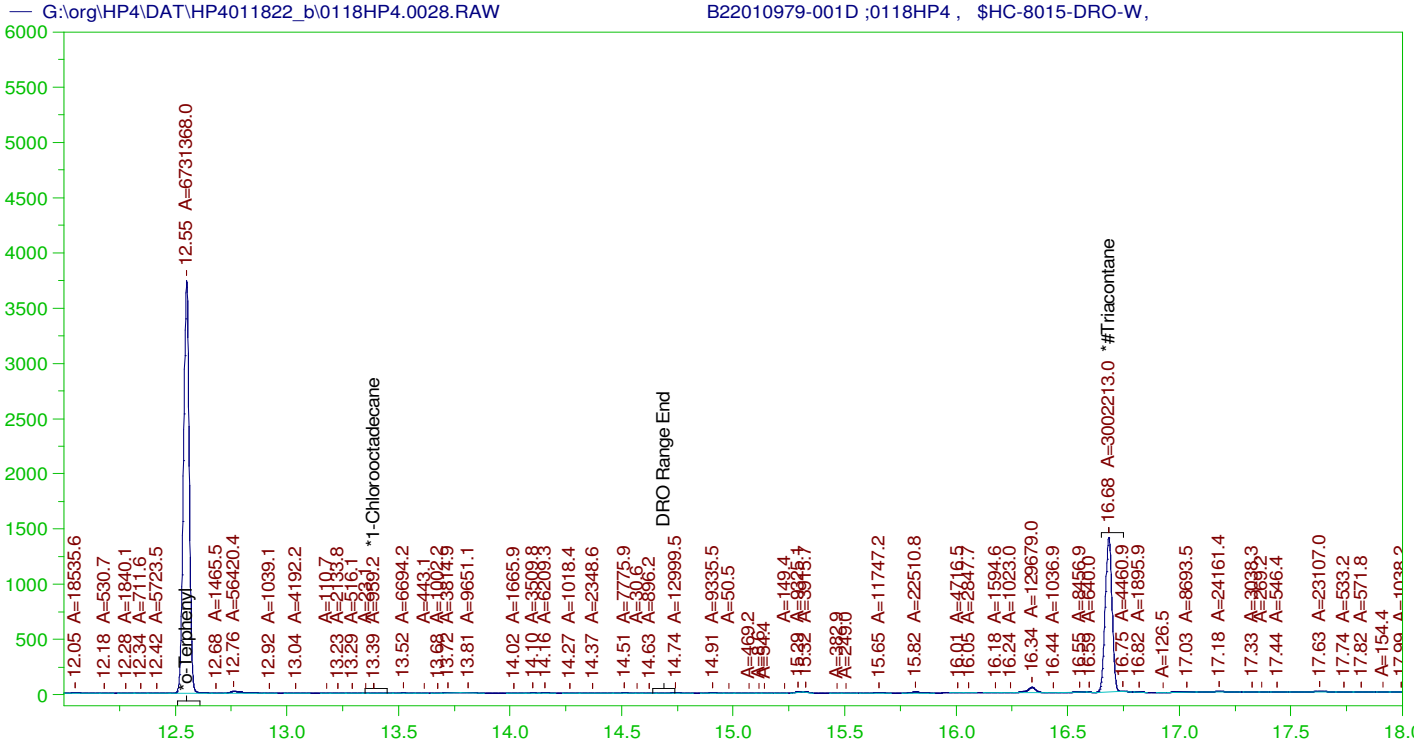
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.683	.481	.118	24.54	-

RRO Area:500938.8 RRO AMOUNT: 1.963639E-02

ERH2402 (OWDFMW07A) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0028.RAW B22010979-001D ;0118HP4 , $HC-8015-DRO-W,



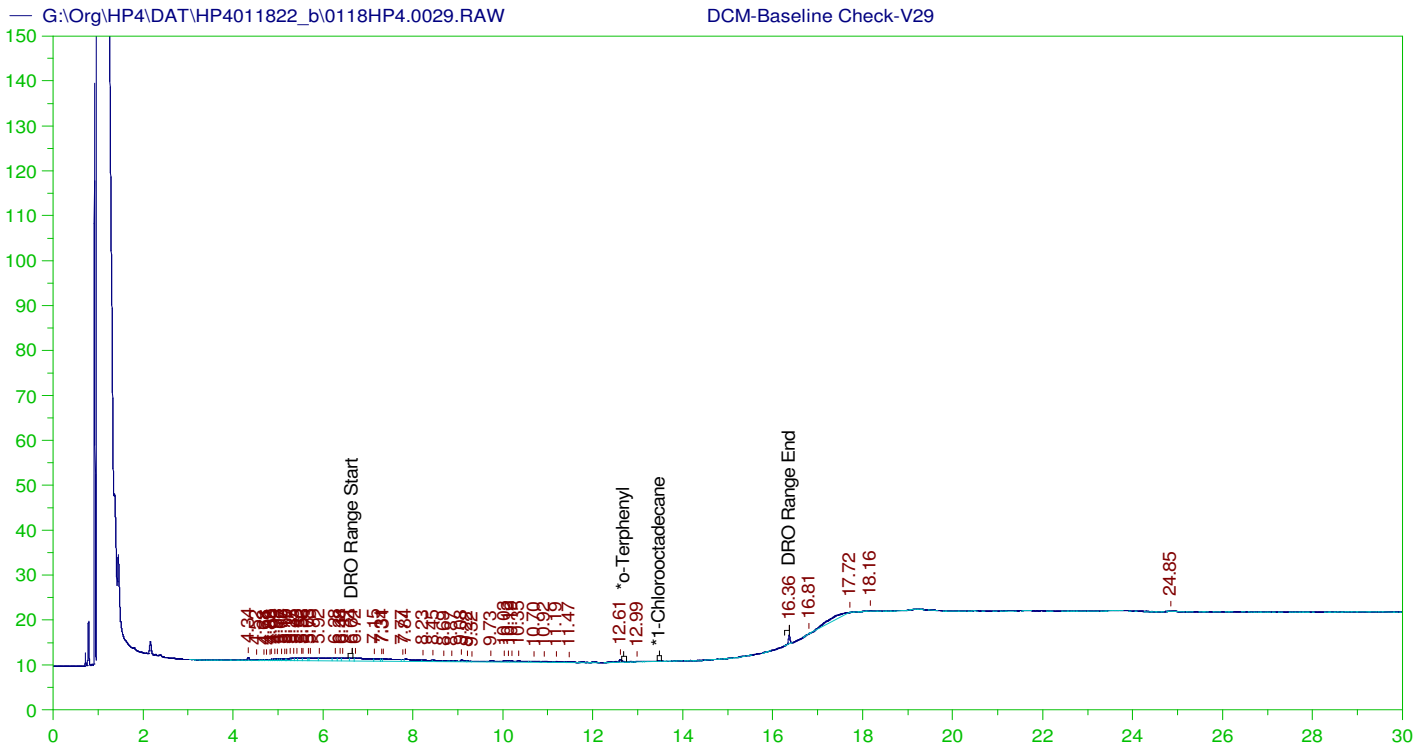
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010979-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0028.RAW
Date & Time Acquired: 1/19/2022 9:58:47 AM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.192	.194	101.01	-
*1-Chlorooctadecane	13.39	.192	. .01		-
*#Triacontane	16.683	.192	.116	60.11	-

DRO Area:327585.8 DRO Amount: 1.072357E-02
TEH Area:1018365 TEH Amount: 3.333634E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V29
Raw File: G:\Org\HP4\DAT\HP4011822_b\0118HP4.0029.RAW
Date & Time Acquired: 1/19/2022 10:43:25 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

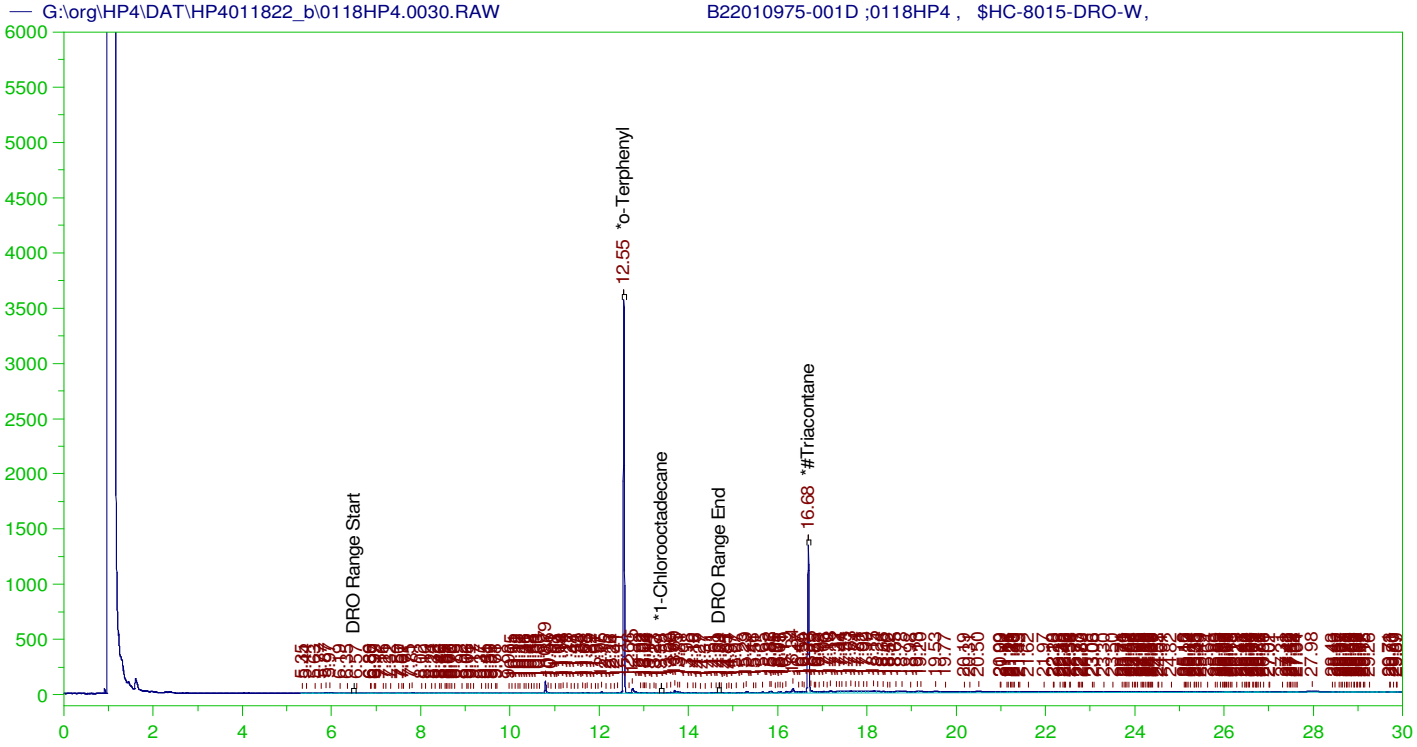
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.956	200.	.	.	-
*1-Chlorooctadecane	29.956	200.	.	.	-

DRO Area:92050.39 DRO Amount: 3.133814
TEH Area:196445.1 TEH Amount: 6.687884

ERH2416 (RHMW09) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0030.RAW B22010975-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010975-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0030.RAW
Date & Time Acquired: 1/19/2022 11:28:08 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

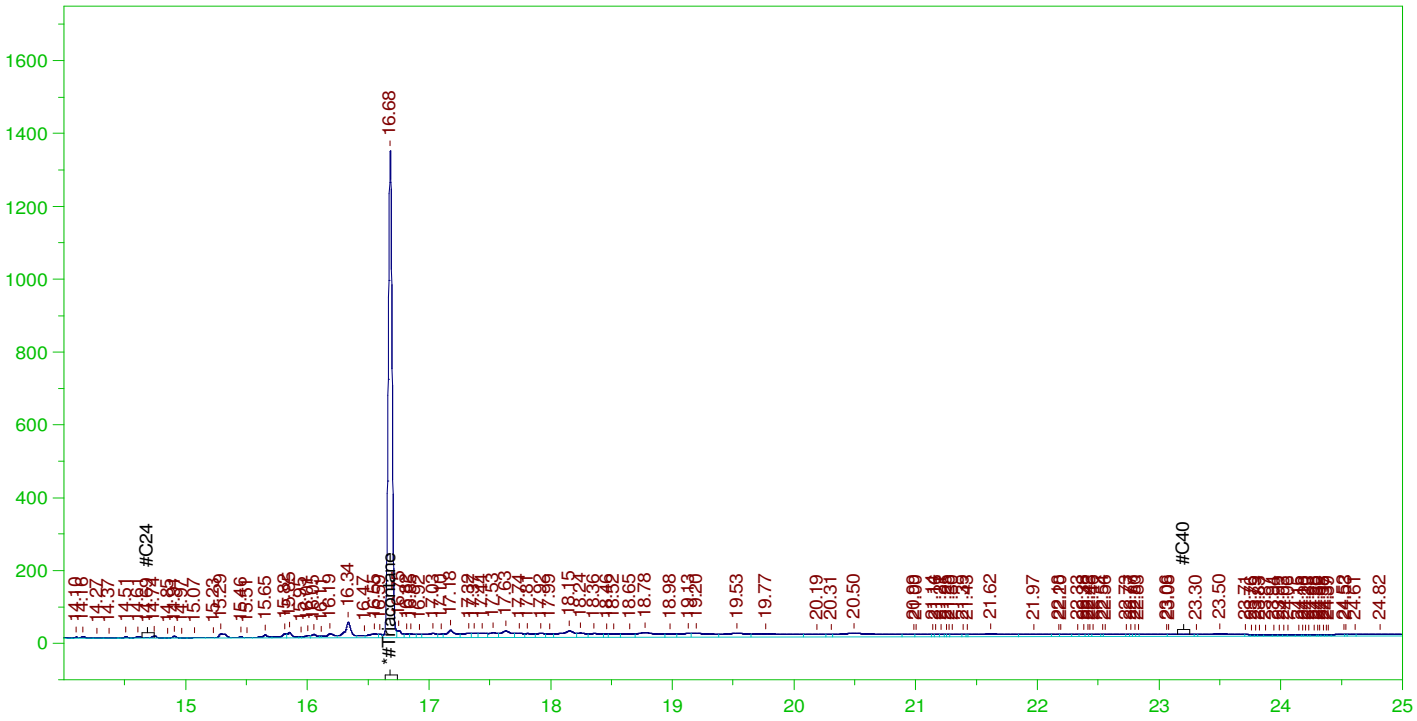
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.55	.206	.194	94.22	-
*1-Chlorooctadecane	13.387	.206	.	.04	-
*#Triacontane	16.682	.206	.12	58.36	-

DRO Area:937313.5 DRO Amount: 3.289733E-02
TEH Area:5926928 TEH Amount: 0.2080202

ERH2416 (RHMW09) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0030.RAW B22010975-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010975-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0030.RAW
Date & Time Acquired: 1/19/2022 11:28:08 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

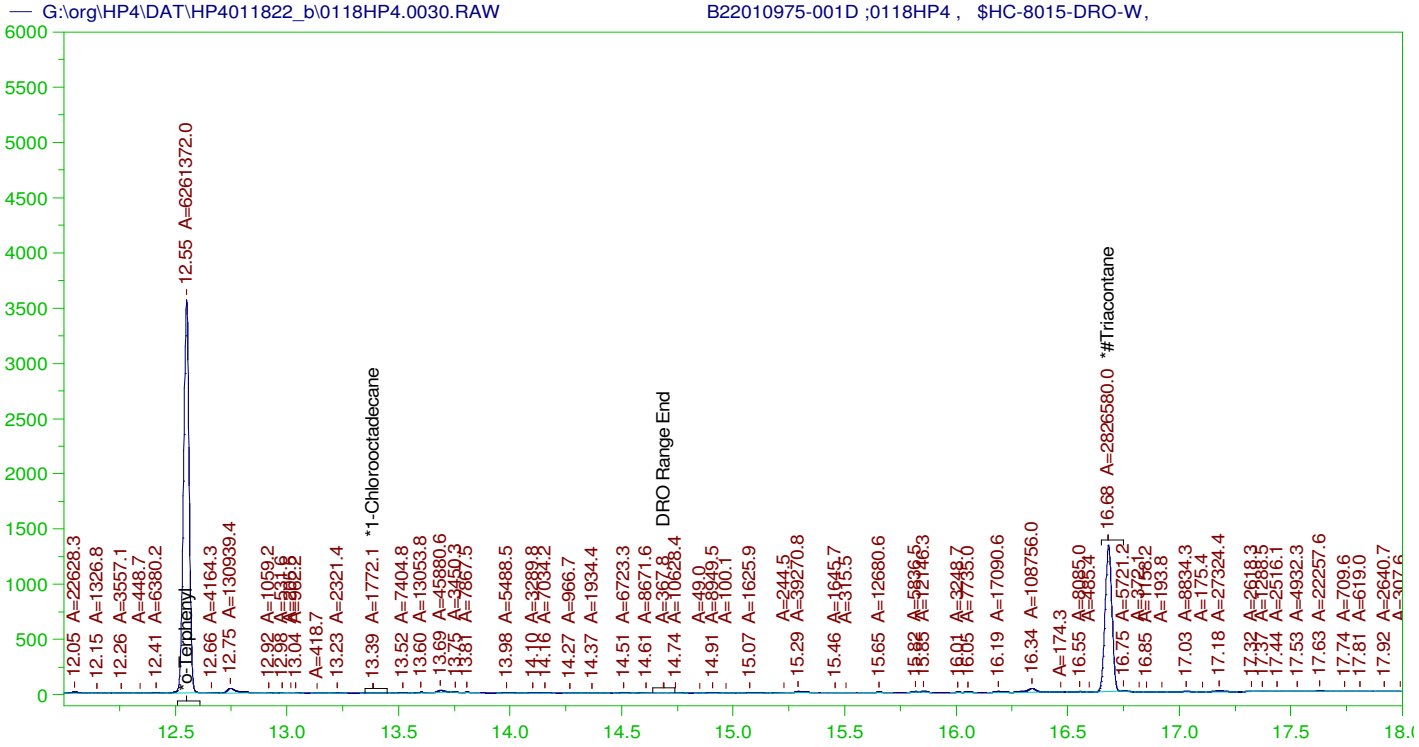
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.682	.515	.12	23.35	-

RRO Area:3892343 RRO AMOUNT: 0.1635873

ERH2416 (RHMW09) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0030.RAW B22010975-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010975-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0030.RAW
Date & Time Acquired: 1/19/2022 11:28:08 AM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

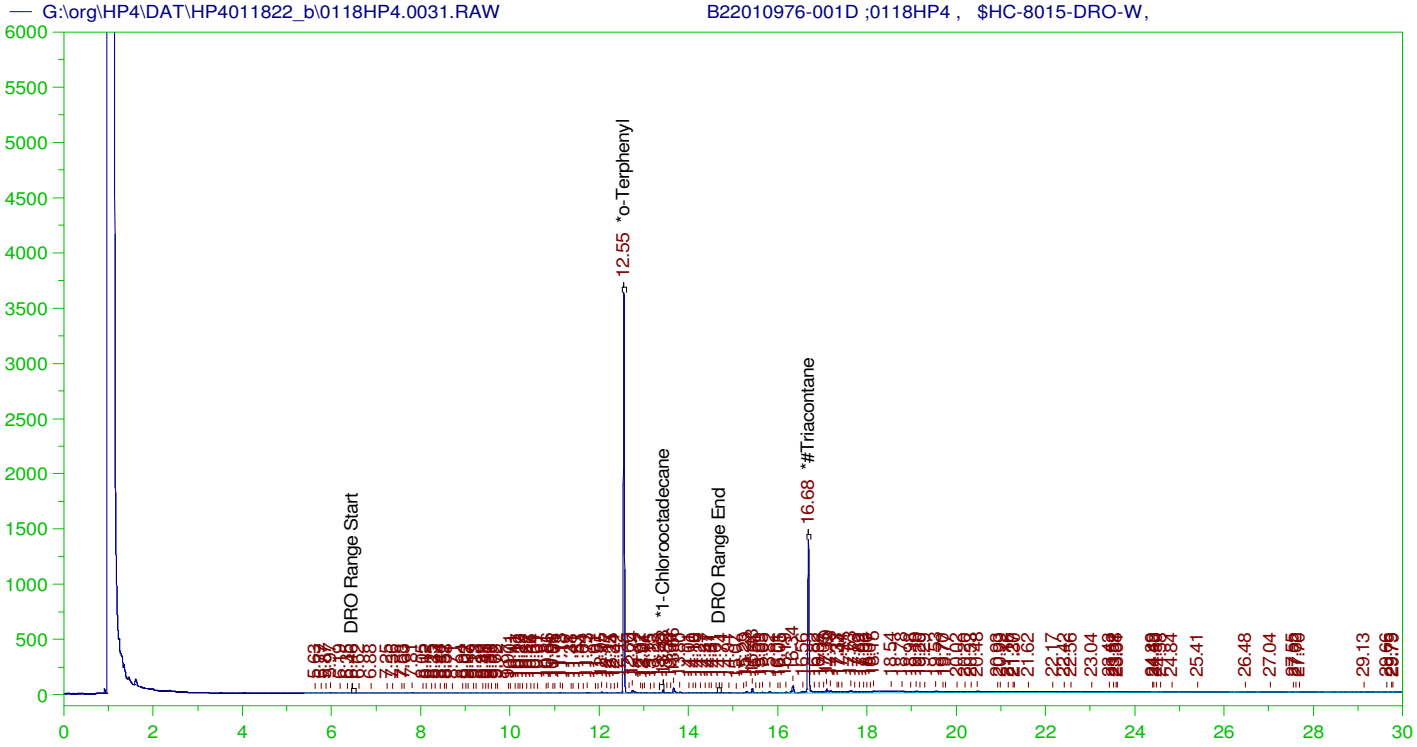
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.55	.206	.194	93.96	-
*1-Chlorooctadecane	13.387	.206	. .03		-
*#Triacontane	16.682	.206	.117	56.59	-

DRO Area:762340.5 DRO Amount: 2.675623E-02
TEH Area:1660456 TEH Amount: 5.827779E-02

ERH2412 (RHMW11 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0031.RAW B22010976-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010976-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0031.RAW
Date & Time Acquired: 1/19/2022 12:12:57 PM
Method File: G:\Org\HP4\methods\D3_8015-011831-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

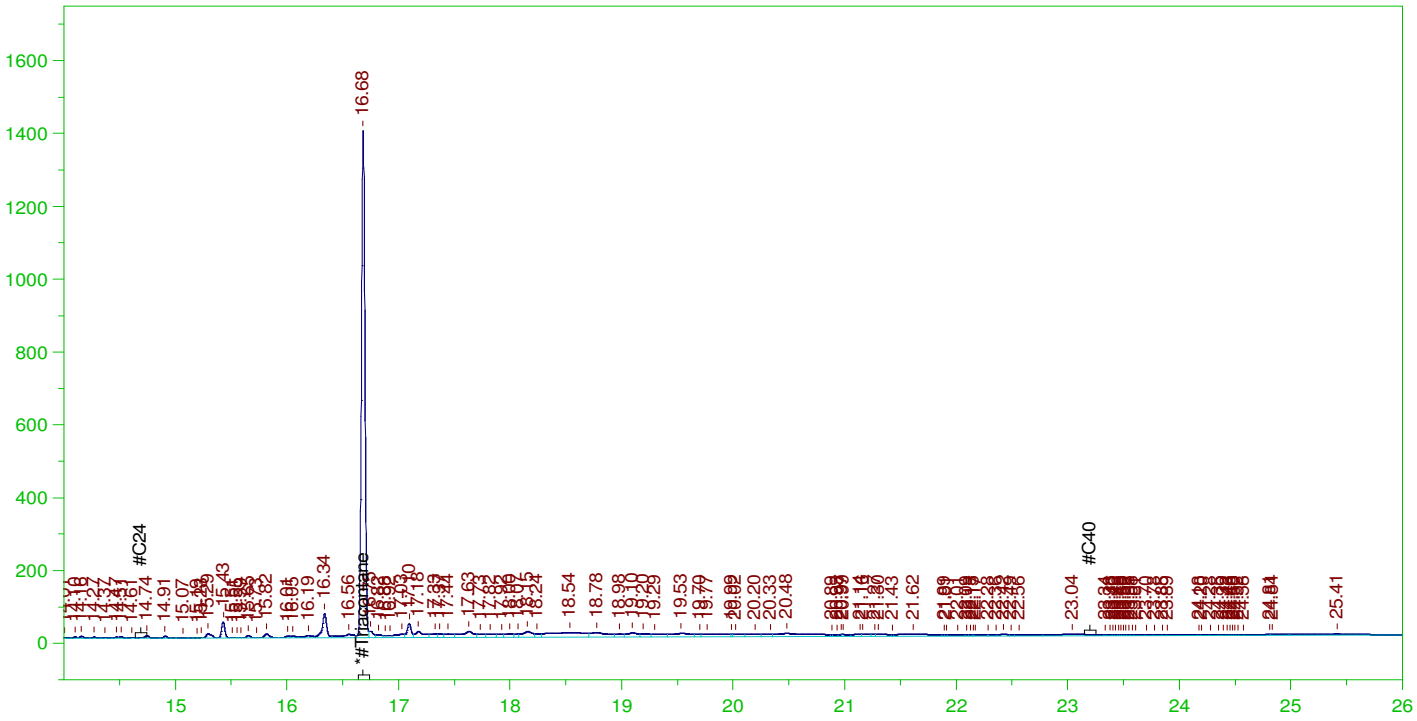
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.2	.193	96.38	-
*1-Chlorooctadecane	13.433	.2	.002	.93	-
*#Triacontane	16.684	.2	.122	60.96	-

DRO Area:689187 DRO Amount: 2.346306E-02
TEH Area:4358370 TEH Amount: 0.1483787

ERH2412 (RHMW11 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0031.RAW B22010976-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010976-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0031.RAW
Date & Time Acquired: 1/19/2022 12:12:57 PM
Method File: G:\Org\HP4\Methods\D3_ORO-011831-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

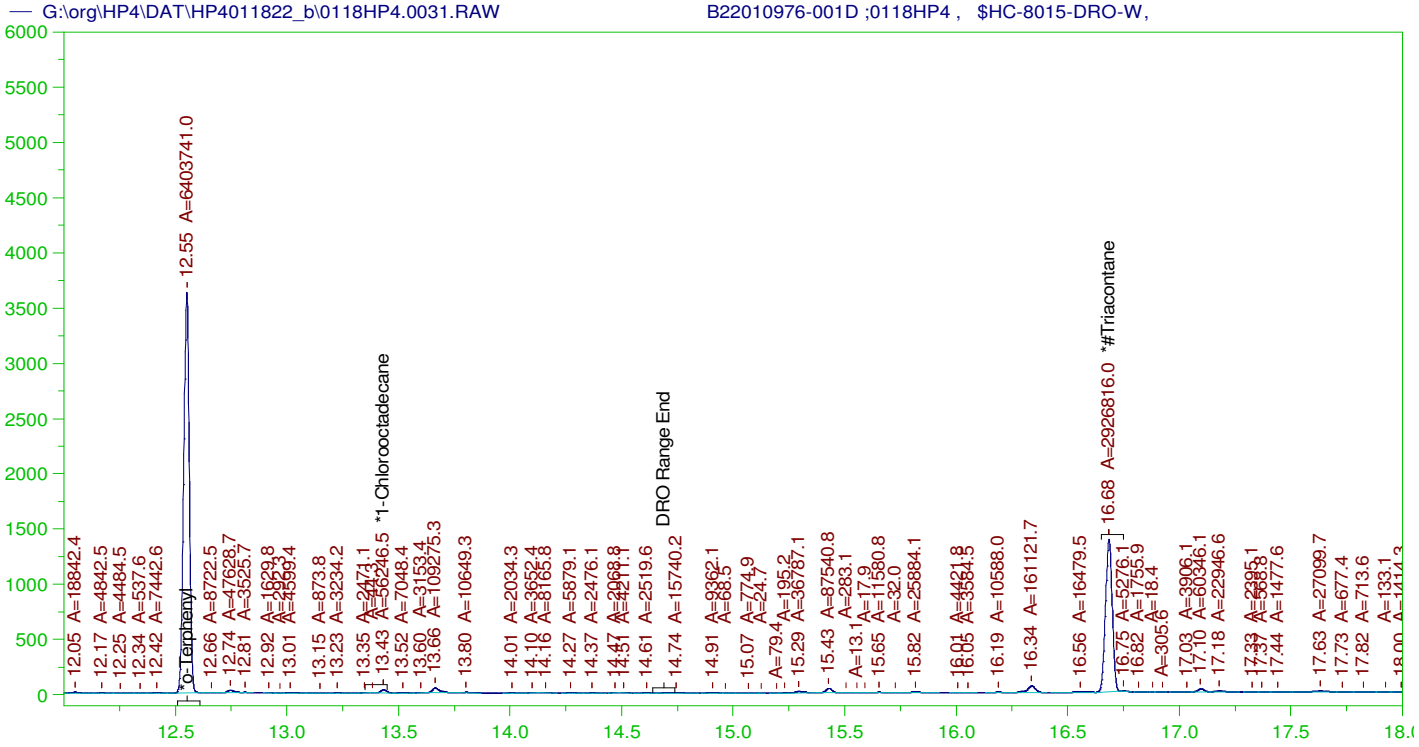
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.684	.5	.12	24.03	-

RRO Area:3288407 RRO AMOUNT: 0.1340589

ERH2412 (RHMW11 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0031.RAW B22010976-001D ;0118HP4 , $HC-8015-DRO-W,



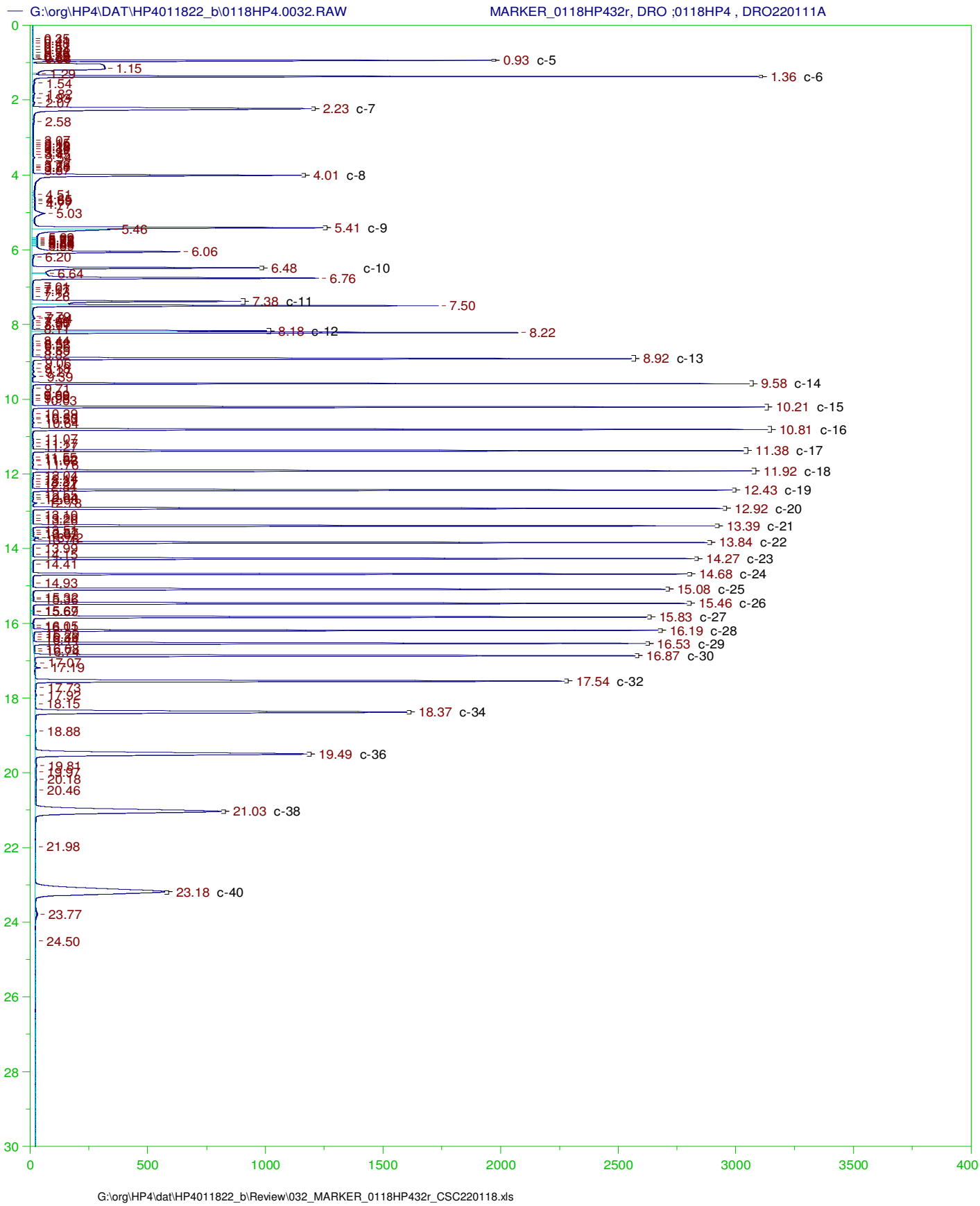
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

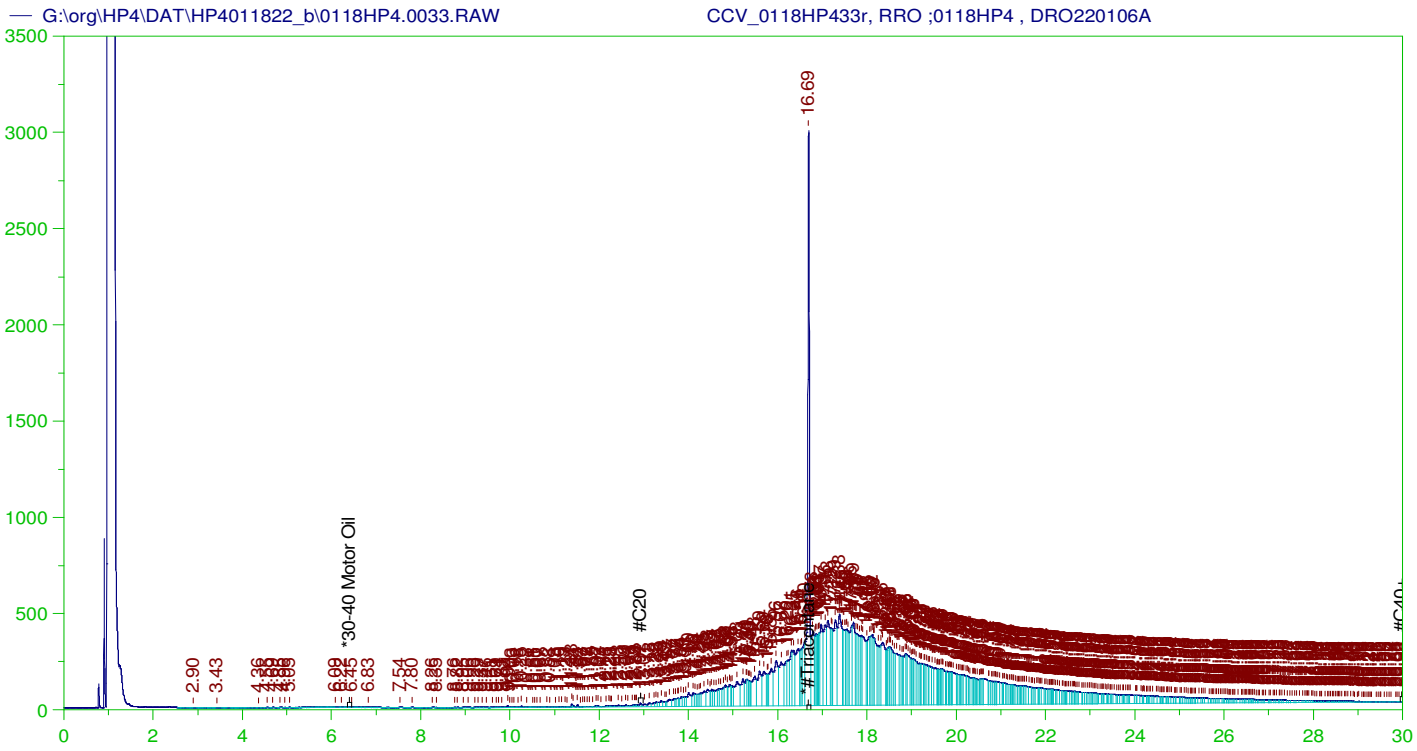
Sample Name: B22010976-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0031.RAW
Date & Time Acquired: 1/19/2022 12:12:57 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.2	.192	96.1	-
*1-Chlorooctadecane	13.433	.2	.002	.84	-
*#Triacontane	16.684	.2	.117	58.6	-

DRO Area:471538 DRO Amount: 0.0160533
TEH Area:1398038 TEH Amount: 4.759558E-02


G:\org\HP4\DAT\HP4011822_b\0118HP4.0032.RAW
MARKER_0118HP432r, DRO ;0118HP4 , DRO220111A
0.93 c-5
1.15
1.36 c-6
1.54
2.23 c-7
2.58
4.01 c-8
5.03
5.41 c-9
5.46
6.06
6.20
6.48 c-10
6.64
6.76
7.38 c-11
7.50
8.18 c-12
8.22
8.92 c-13
9.58 c-14
10.21 c-15
10.81 c-16
11.38 c-17
11.92 c-18
12.43 c-19
12.92 c-20
13.39 c-21
13.84 c-22
14.27 c-23
14.68 c-24
14.93
15.08 c-25
15.46 c-26
15.83 c-27
16.19 c-28
16.53 c-29
16.87 c-30
17.54 c-32
18.15
18.37 c-34
18.88
19.49 c-36
20.18
20.46
21.03 c-38
21.98
23.18 c-40
23.77
24.50
0
500
1000
1500
2000
2500
3000
3500
400
G:\org\HP4\dat\HP4011822_b\Review\032_MARKER_0118HP432r_CSC220118.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP433r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0033.RAW
Date & Time Acquired: 1/19/2022 1:41:55 PM
Method File: G:\Org\HP4\Methods\DC_ORO-011833-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

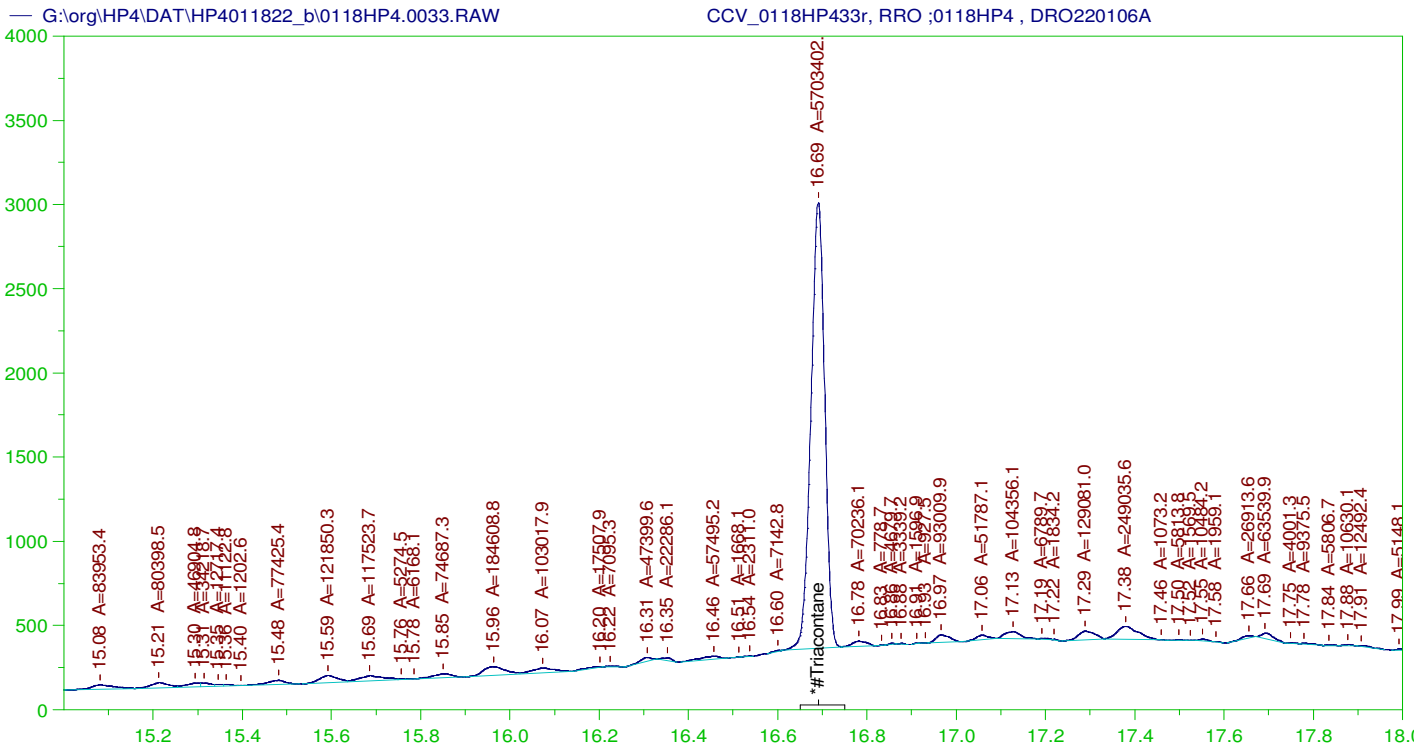
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.691	500.	339.816	67.96	-

~~RRO~~ TEH(Oil Range) Area:1.111346E+08 ~~RRO~~ TEH(Oil Range)AMOUNT: 4530.638

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0033.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.691	200.	339.816	169.91	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP433r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0033.RAW
Date & Time Acquired: 1/19/2022 1:41:55 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

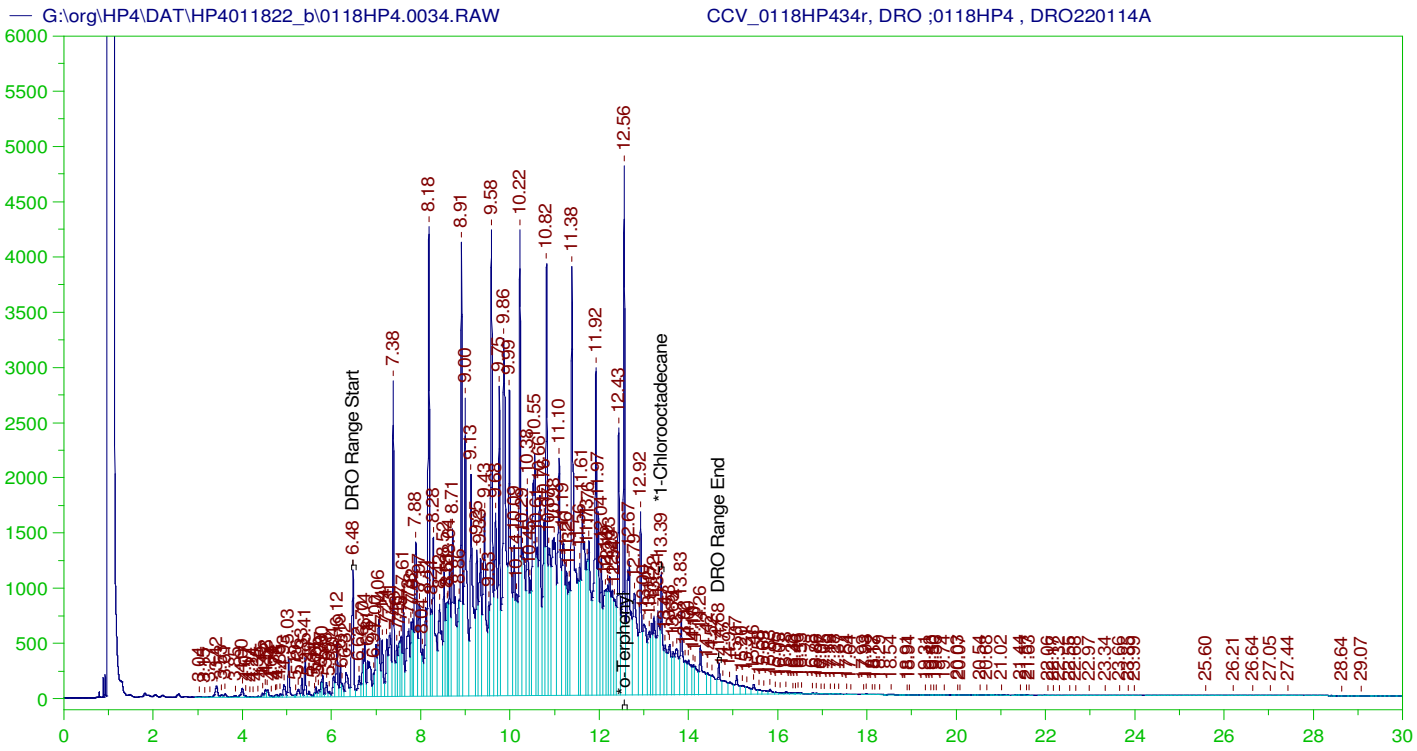
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.691	500.	228.375	45.68	-

RRO Area:3215321 RRO AMOUNT: 131.0794

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0033.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.691	200.	228.375	114.19	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0118HP434r, DRO ;0118HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0034.RAW
Date & Time Acquired: 1/19/2022 2:26:47 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

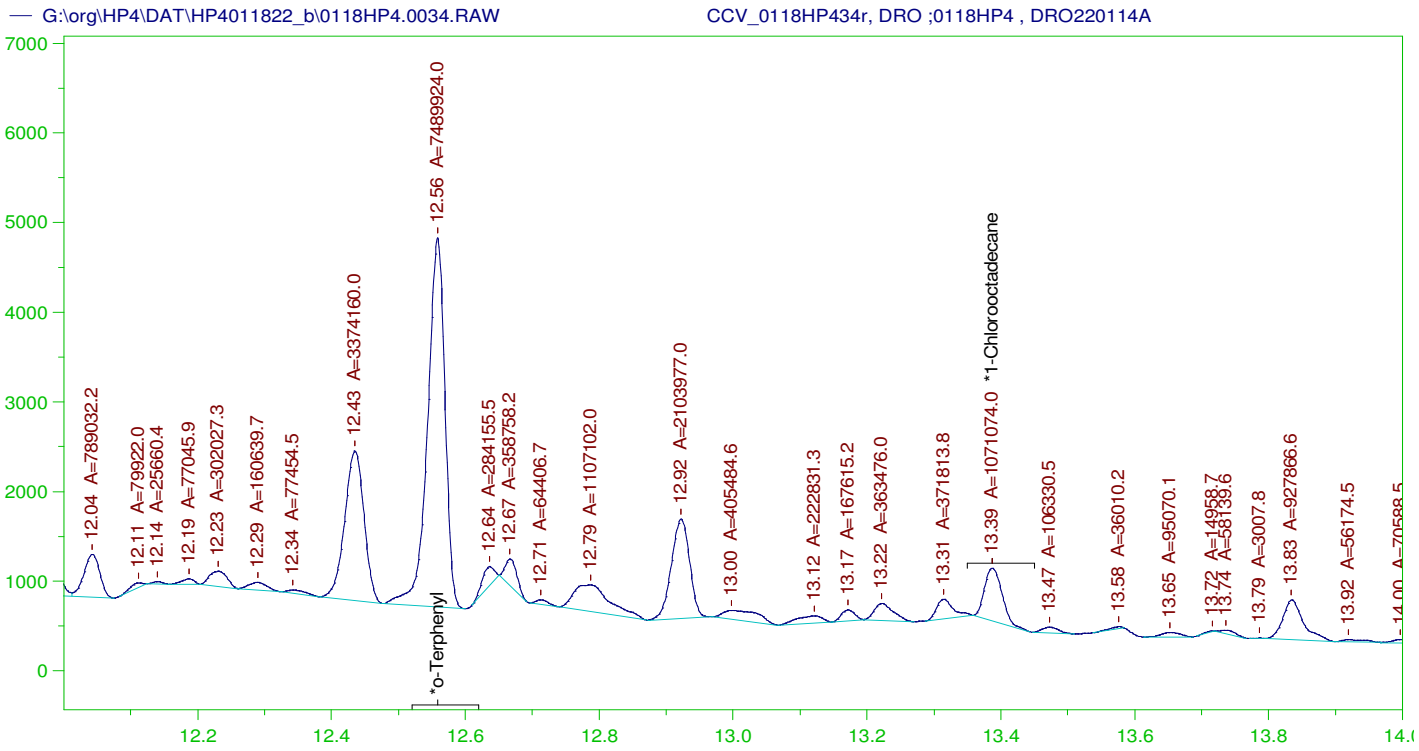
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.558	200.	376.147	188.07	-
*1-Chlorooctadecane	13.387	200.	110.41	55.21	-

DRO Area:4.315242E+08 DRO Amount: 14691.05
TEH Area:4.475849E+08 TEH Amount: 15237.83

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0034.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15237.83	101.59	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.558	200.	376.147	188.07	85-115
*1-Chlorooctadecane	13.387	200.	110.41	55.21	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0118HP434r, DRO ;0118HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0034.RAW
Date & Time Acquired: 1/19/2022 2:26:47 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

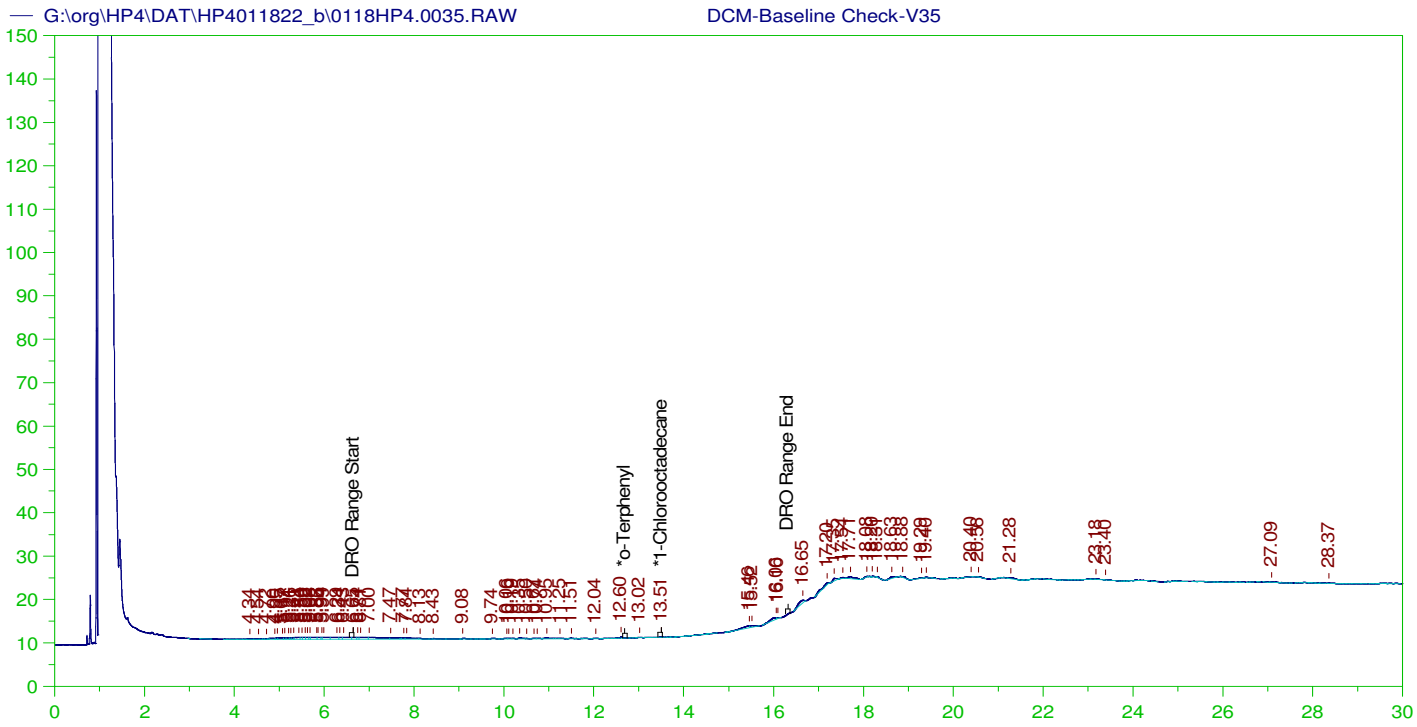
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.558	200.	224.79	112.39	-
*1-Chlorooctadecane	13.387	200.	32.145	16.07	-

DRO Area:1.944364E+08 DRO Amount: 6619.501
TEH Area:2.044413E+08 TEH Amount: 6960.112

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0034.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6960.11	46.4	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.558	200.	224.79	112.39	85-115
*1-Chlorooctadecane	13.387	200.	32.145	16.07	85-115



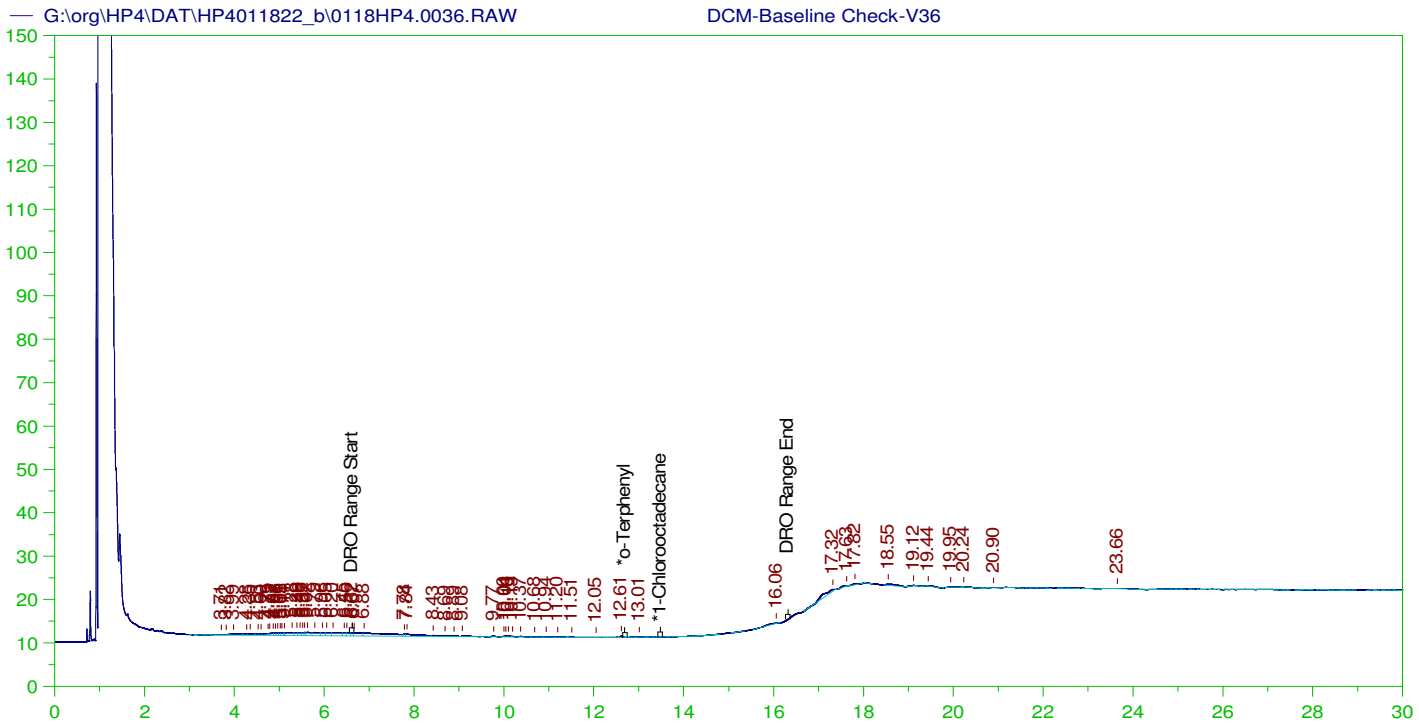
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V35
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0035.RAW
Date & Time Acquired: 1/19/2022 3:11:41 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.831	200.	.	-
*1-Chlorooctadecane	13.507	200.	.016	.01 -

DRO Area:65824.58 DRO Amount: 2.240968
TEH Area:163938.3 TEH Amount: 5.581206



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V36
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0036.RAW
Date & Time Acquired: 1/19/2022 3:56:16 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

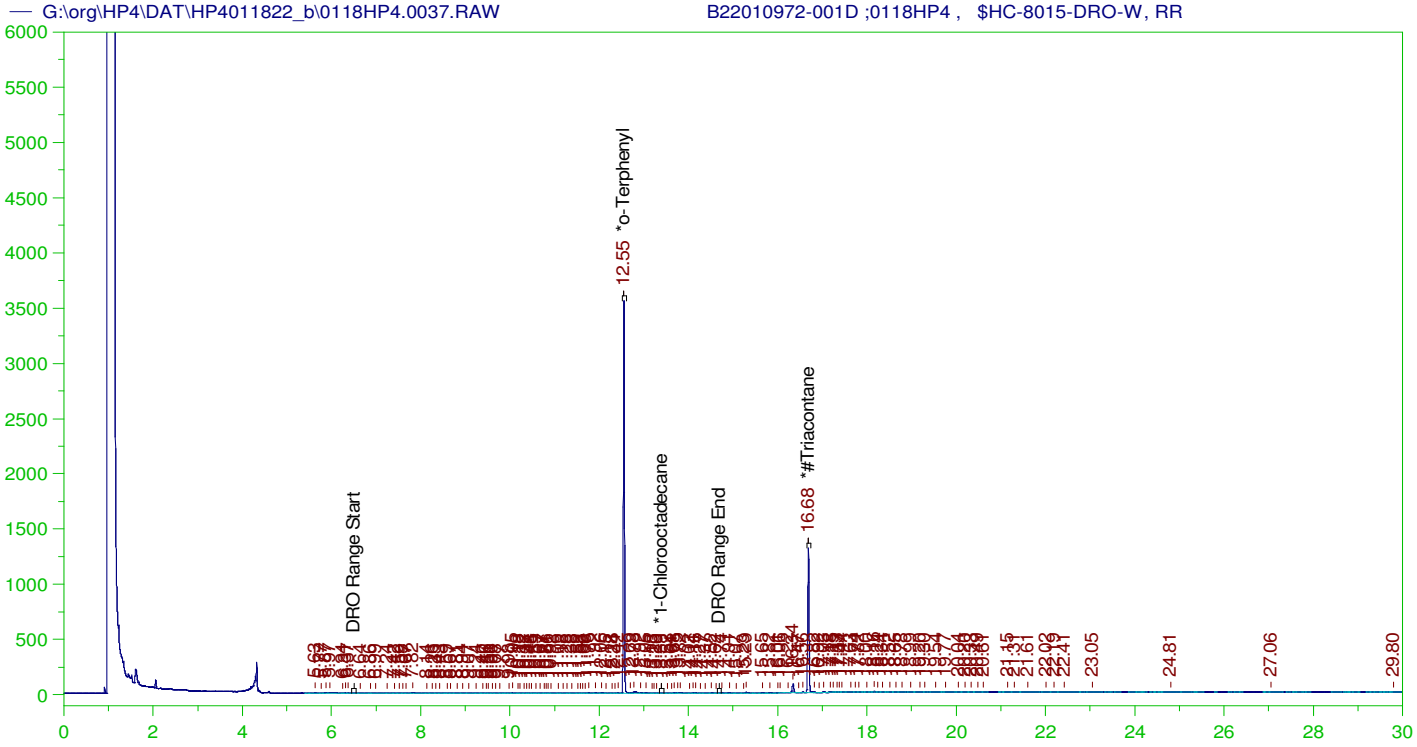
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

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

DRO Area:81488.82 DRO Amount: 2.77425
TEH Area:208375.6 TEH Amount: 7.094053

ERH2408 (RHMW16) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0037.RAW B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0037.RAW
Date & Time Acquired: 1/19/2022 4:40:56 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

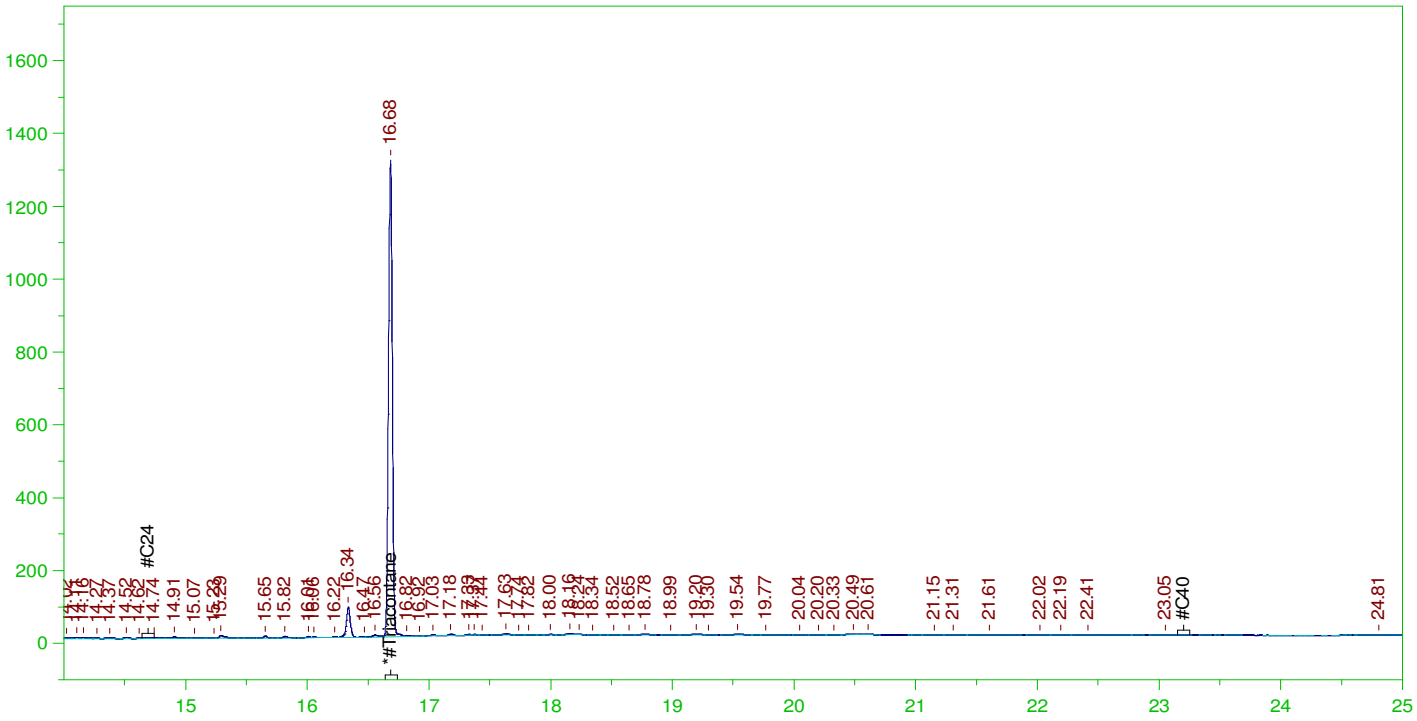
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.19	.183	96.12	-
*1-Chlorooctadecane	13.393	.19	.	.09	-
*#Triacontane	16.684	.19	.108	56.86	-

DRO Area:456416.4 DRO Amount: 1.479856E-02
TEH Area:1015271 TEH Amount: 3.291852E-02

ERH2408 (RHMW16) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0037.RAW B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0037.RAW
Date & Time Acquired: 1/19/2022 4:40:56 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

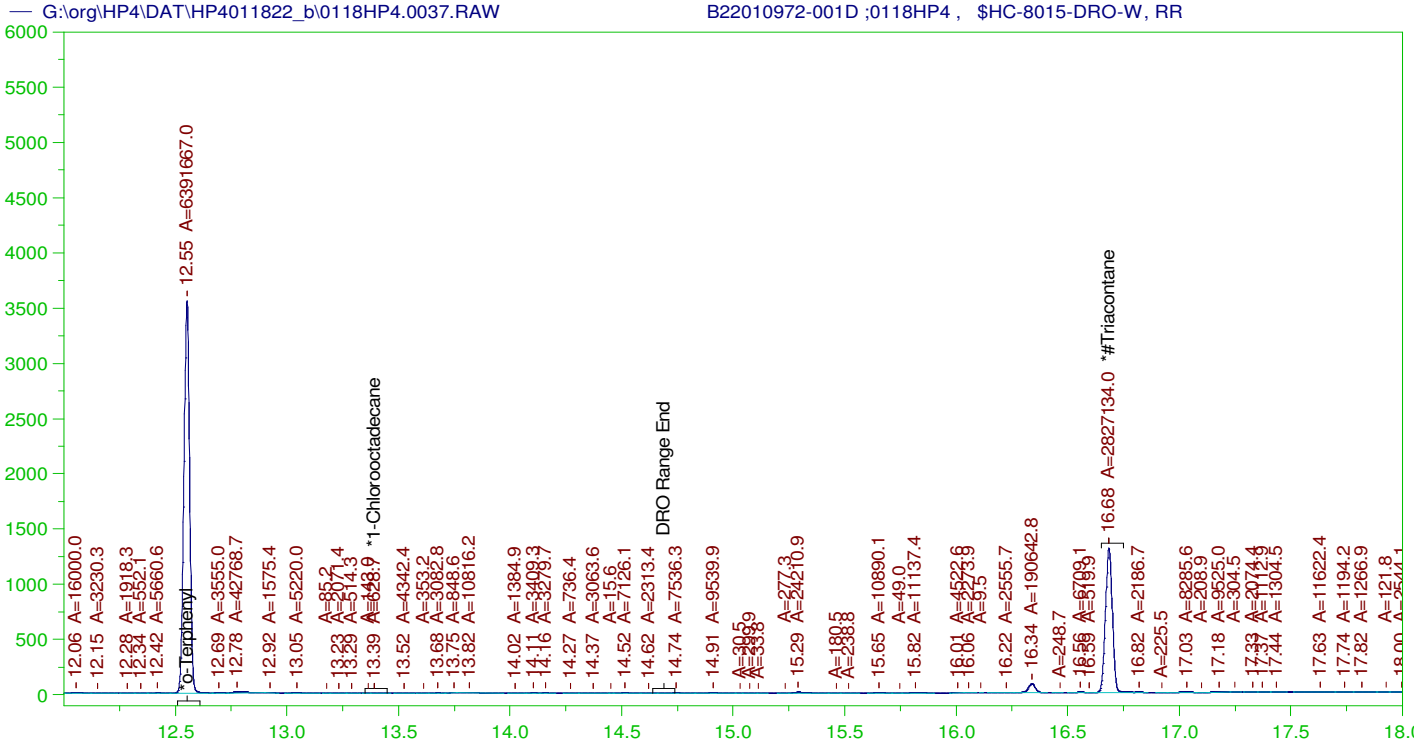
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.684	.476	.108	22.75	-

RRO Area:430637.8 RRO AMOUNT: 1.671987E-02

ERH2408 (RHMW16) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0037.RAW B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0037.RAW
Date & Time Acquired: 1/19/2022 4:40:56 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.19	.183	95.91	-
*1-Chlorooctadecane	13.393	.19	.	.01	-
*#Triacontane	16.684	.19	.108	56.6	-

DRO Area:281806.1 DRO Amount: 9.137105E-03
TEH Area:2372654 TEH Amount: 7.692945E-02

ERH2406 (RHMW13 zone 5) Batch ID: 162993

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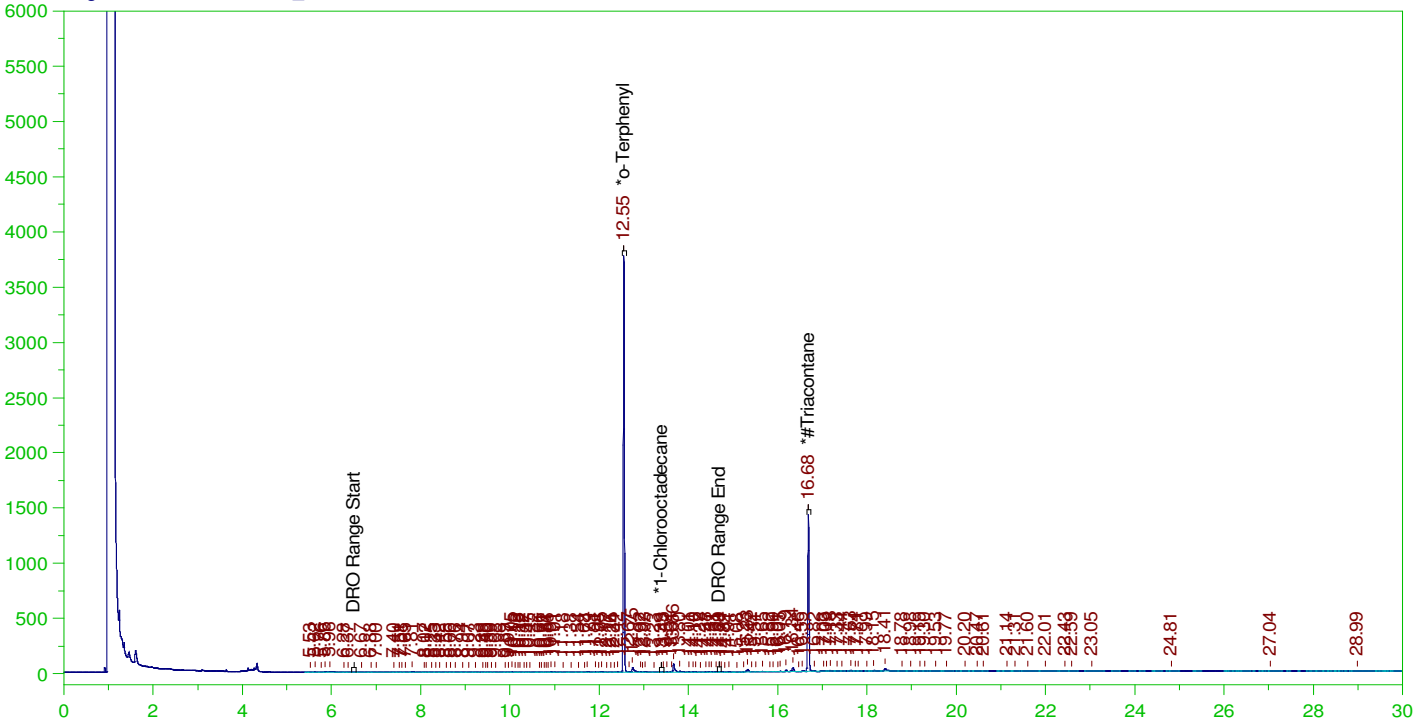


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010973-001D ;0118HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0038.RAW
Date & Time Acquired: 1/19/2022 5:25:53 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

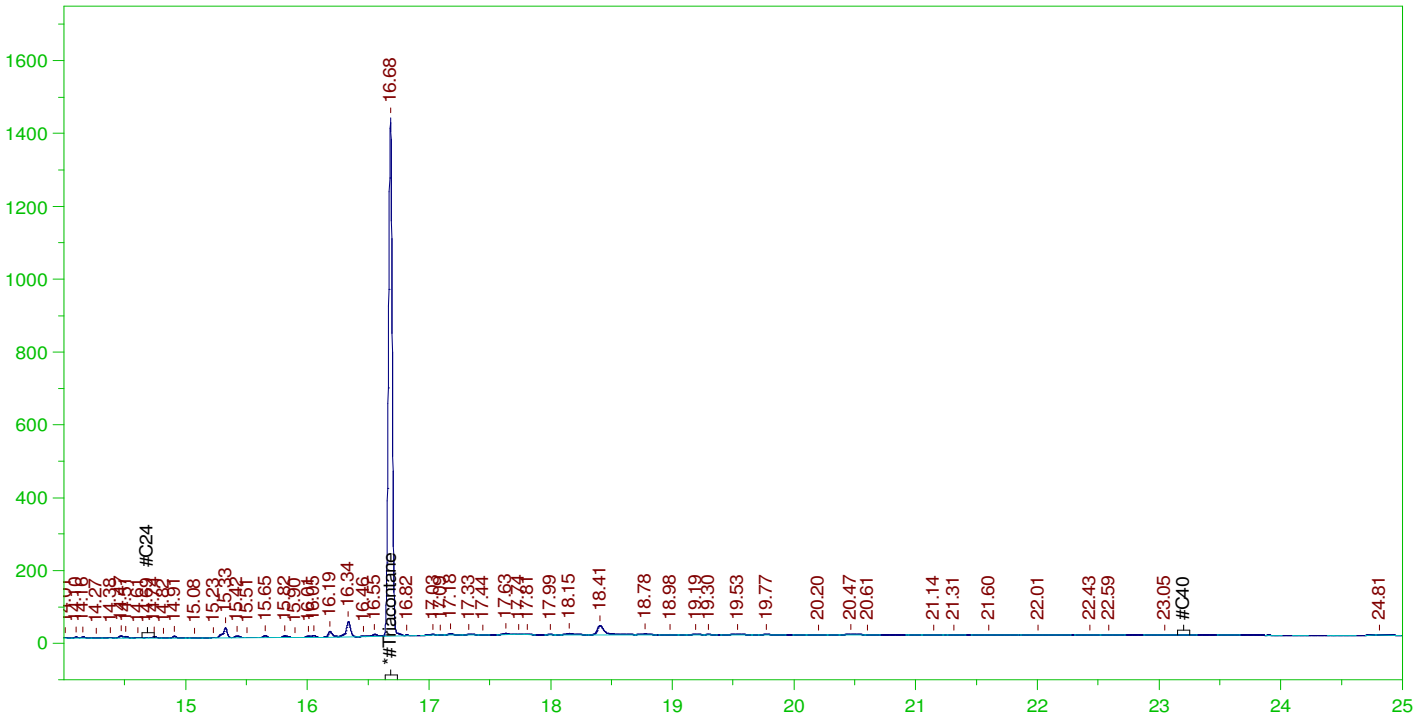
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.55	.194	.195	100.52	-
*1-Chlorooctadecane	13.388	.194	. .03		-
*#Triacontane	16.684	.194	.118	61.03	-

DRO Area:829711.3 DRO Amount: 2.742441E-02
TEH Area:1530688 TEH Amount: 5.059377E-02

ERH2406 (RHMW13 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0038.RAW B22010973-001D ;0118HP4 , $HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010973-001D ;0118HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0038.RAW
Date & Time Acquired: 1/19/2022 5:25:53 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

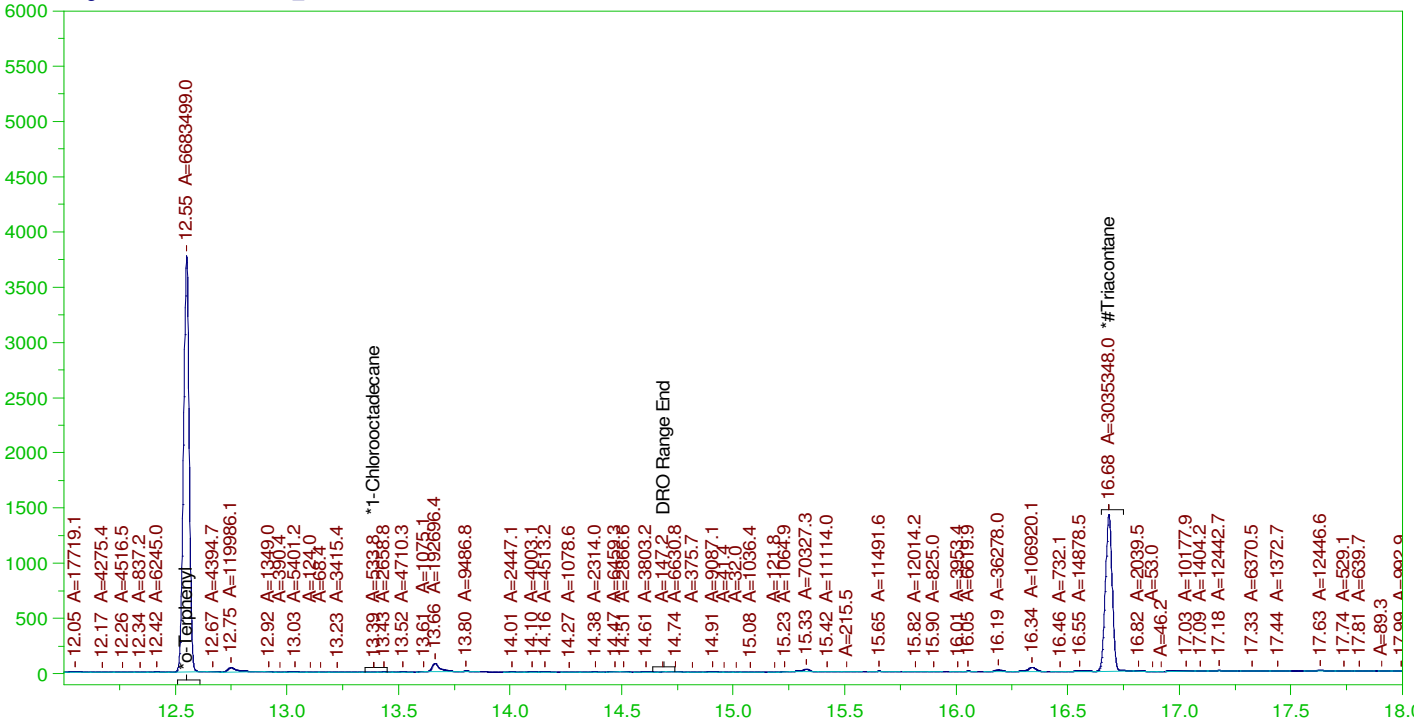
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.684	.485	.118	24.4	-

RRO Area:588060 RRO AMOUNT: 2.327526E-02

ERH2406 (RHMW13 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0038.RAW B22010973-001D ;0118HP4 , $HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010973-001D ;0118HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0038.RAW
Date & Time Acquired: 1/19/2022 5:25:53 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

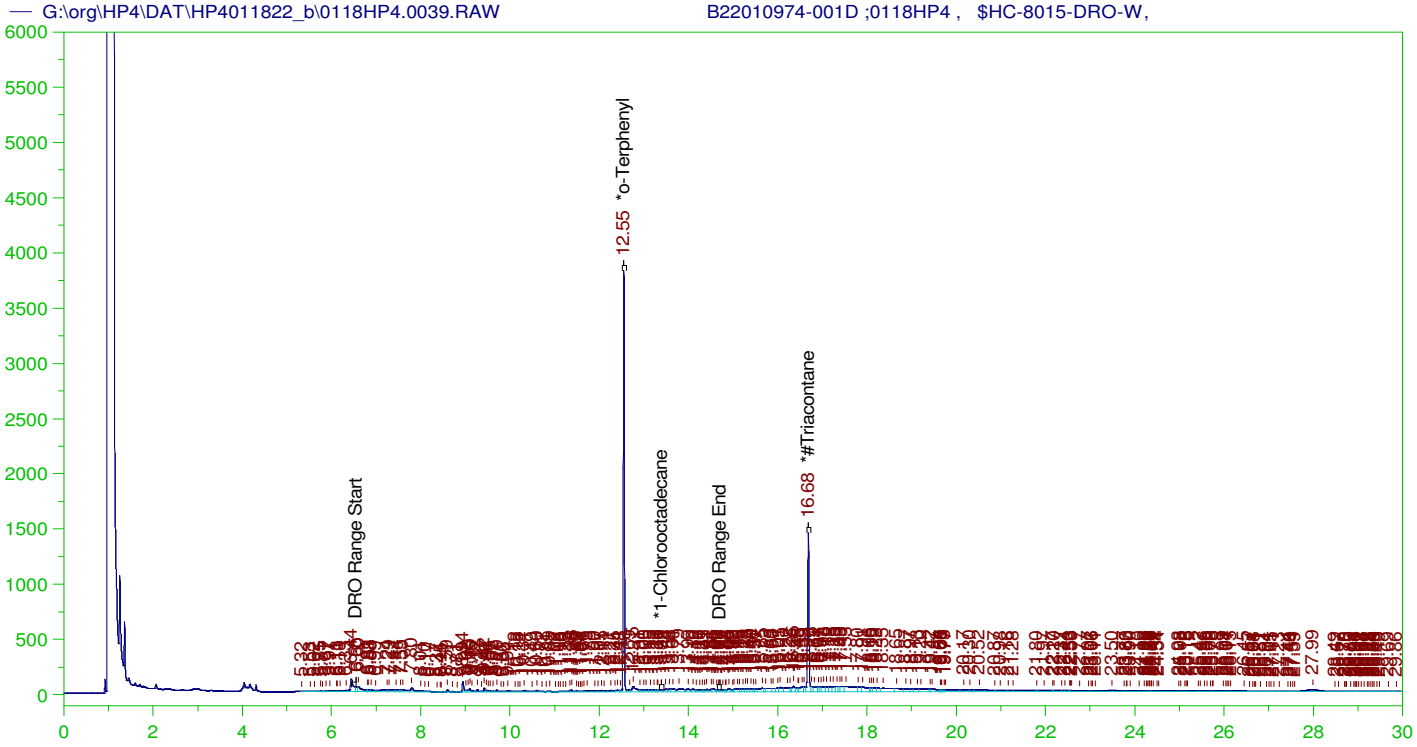
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.55	.194	.195	100.29	-
*1-Chlorooctadecane	13.388	.194	. .01		-
*#Triacontane	16.684	.194	.118	60.77	-

DRO Area:655089.9 DRO Amount: 2.165266E-02
TEH Area:1882273 TEH Amount: 6.221469E-02

ERH2420 (RHMW19) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0039.RAW B22010974-001D ;0118HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0039.RAW
Date & Time Acquired: 1/19/2022 6:10:41 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

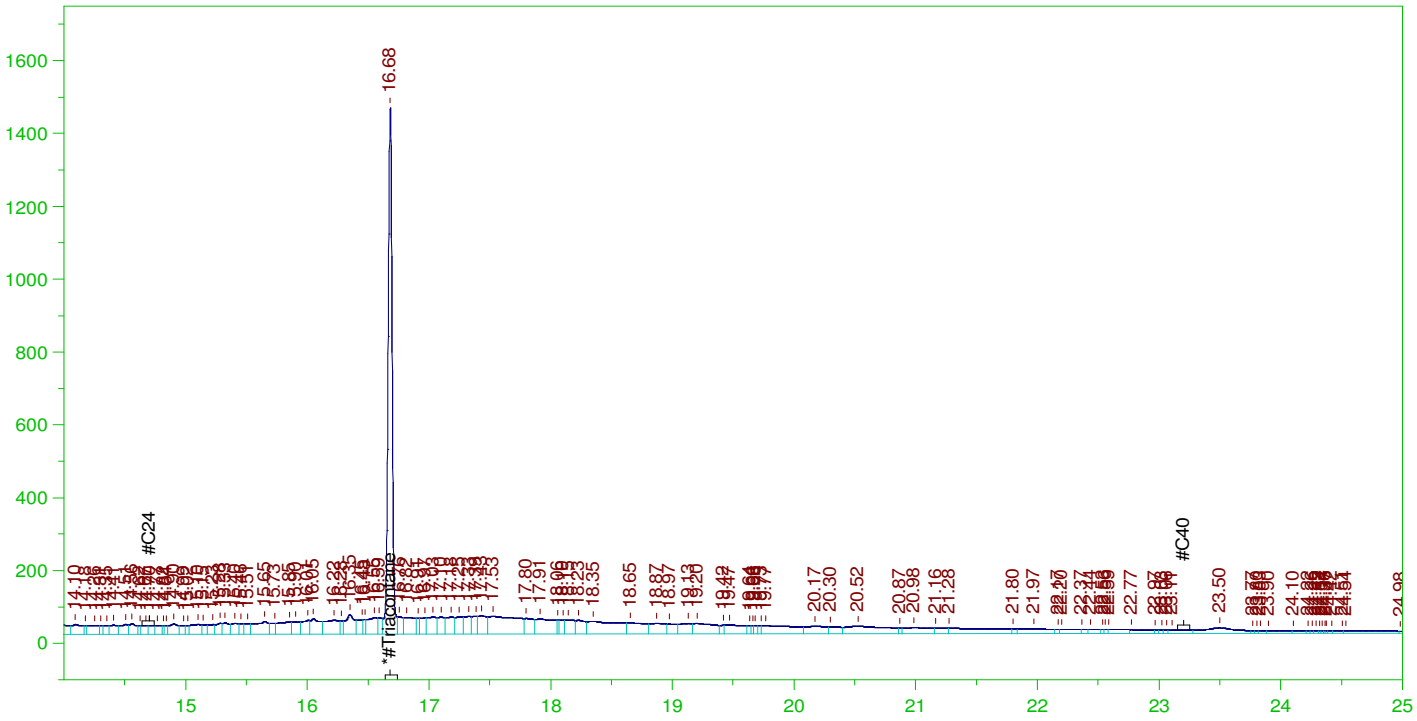
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.202	.204	100.76	-
*1-Chlorooctadecane	13.39	.202	.004	2.07	-
*#Triacontane	16.682	.202	.134	66.48	-

DRO Area:7468223 DRO Amount: 0.2568205
TEH Area:2.329825E+07 TEH Amount: 0.8011904

ERH2420 (RHMW19) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0039.RAW B22010974-001D ;0118HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010974-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0039.RAW
Date & Time Acquired: 1/19/2022 6:10:41 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

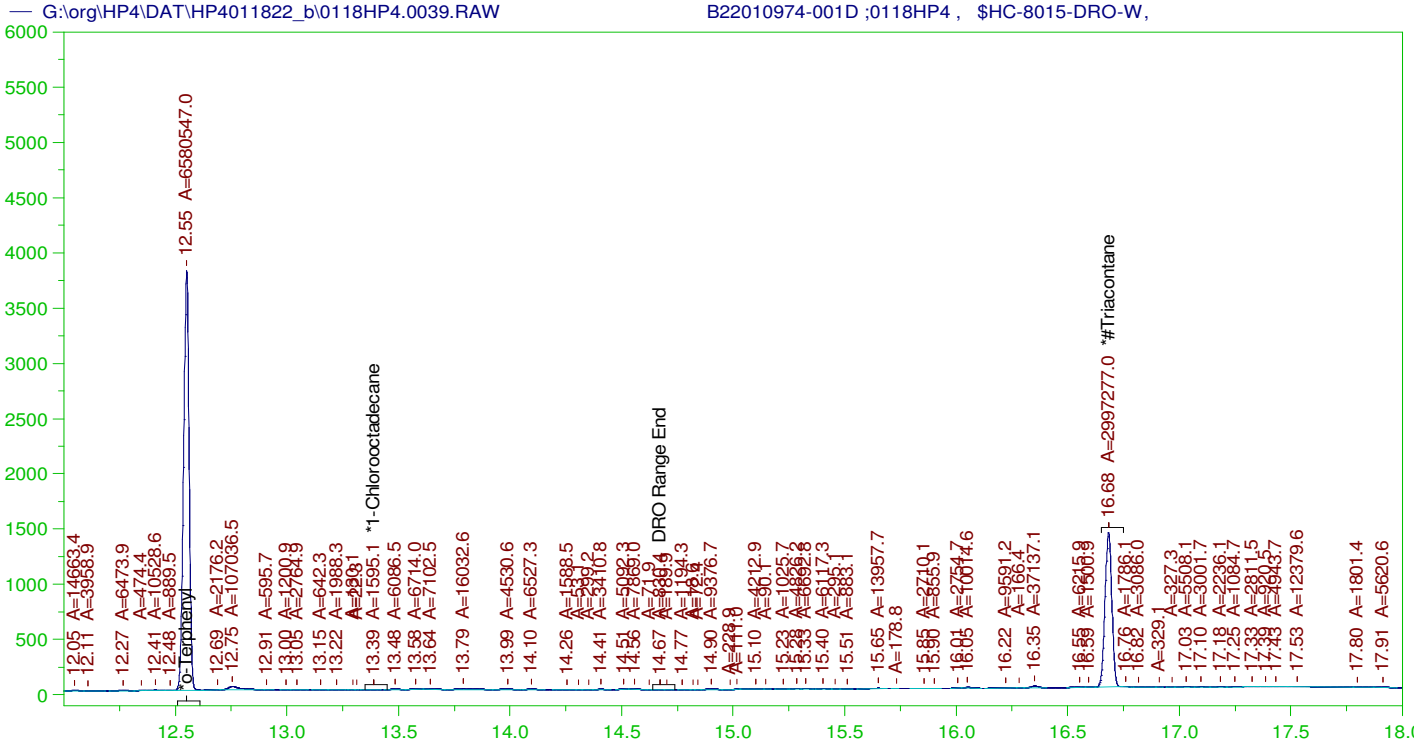
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.682	.505	.134	26.59	-

RRO Area:1.319166E+07 RRO AMOUNT: 0.5432182

ERH2420 (RHMW19) Batch ID: 162993

G:\org\HP4\DAT\HP4011822_b\0118HP4.0039.RAW B22010974-001D ;0118HP4 , $HC-8015-DRO-W,



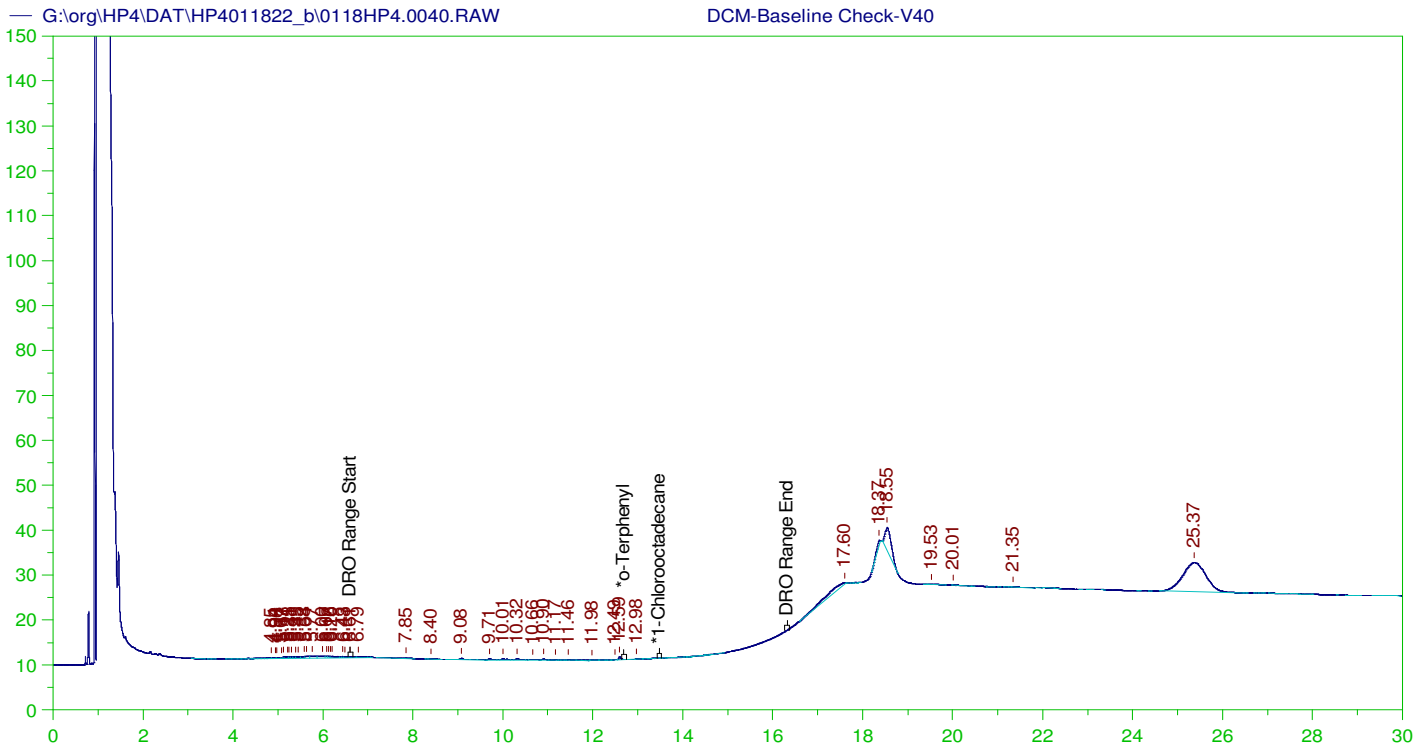
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001D ;0118HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0039.RAW
Date & Time Acquired: 1/19/2022 6:10:41 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.202	.199	98.75	-
*1-Chlorooctadecane	13.39	.202	. .02		-
*#Triacontane	16.682	.202	.121	60.01	-

DRO Area:3741733 DRO Amount: 0.1286723
TEH Area:6558594 TEH Amount: 0.2255398



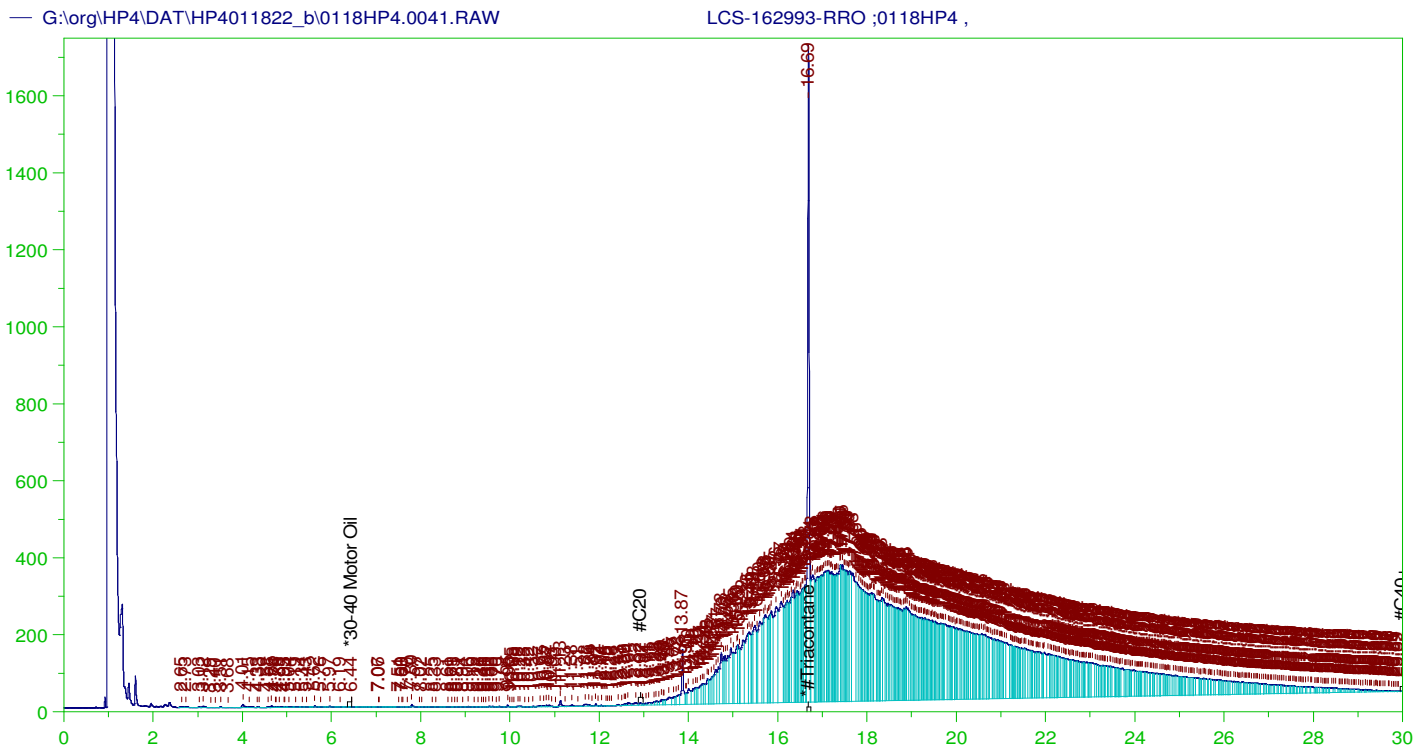
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V40
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0040.RAW
Date & Time Acquired: 1/19/2022 6:55:29 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.889	200.	.	.	-
*1-Chlorooctadecane	29.889	200.	.	.	-

DRO Area:26113.03 DRO Amount: 0.8890063
TEH Area:397102.5 TEH Amount: 13.51918



RESIDUAL RANGE ORGANICS CHROMATOGRAM

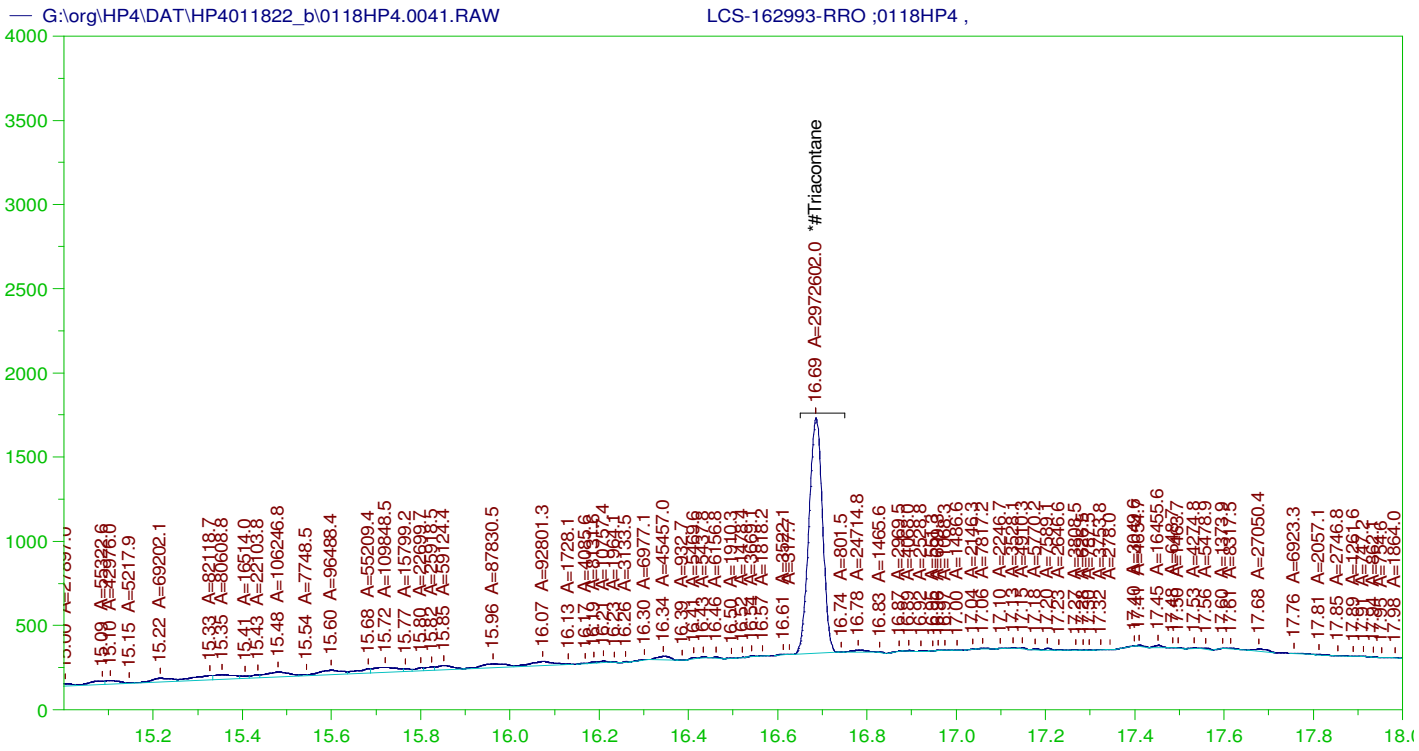
Sample Name: LCS-162993-RRO ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0041.RAW
Date & Time Acquired: 1/19/2022 7:40:21 PM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.686	.5	.194	38.81	-

~~RRO~~ TEH(Oil Range) Area:1.18137E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.816106

AMN 02/15/2022



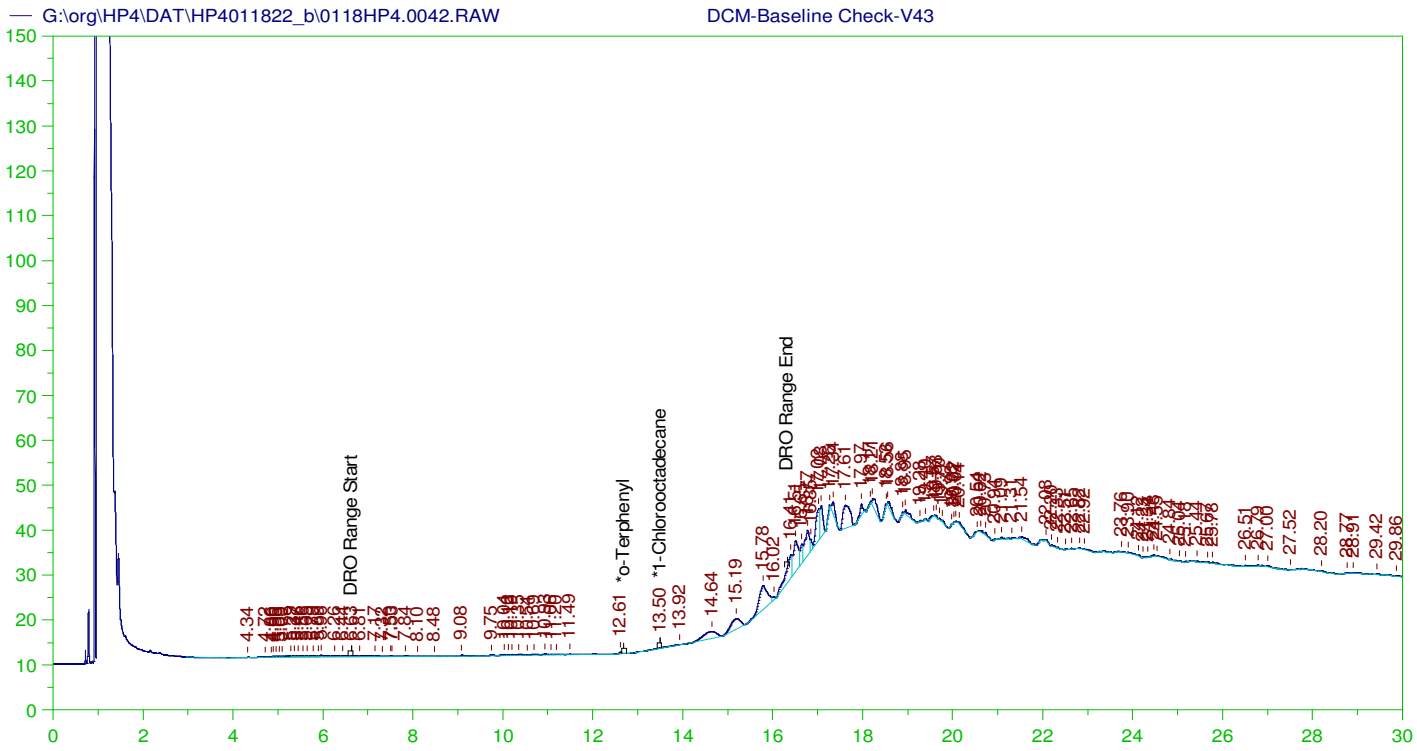
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162993-RRO ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0041.RAW
Date & Time Acquired: 1/19/2022 7:40:21 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.686	.5	.119	23.81	-

RRO Area:2649277 RRO AMOUNT: 0.1080034



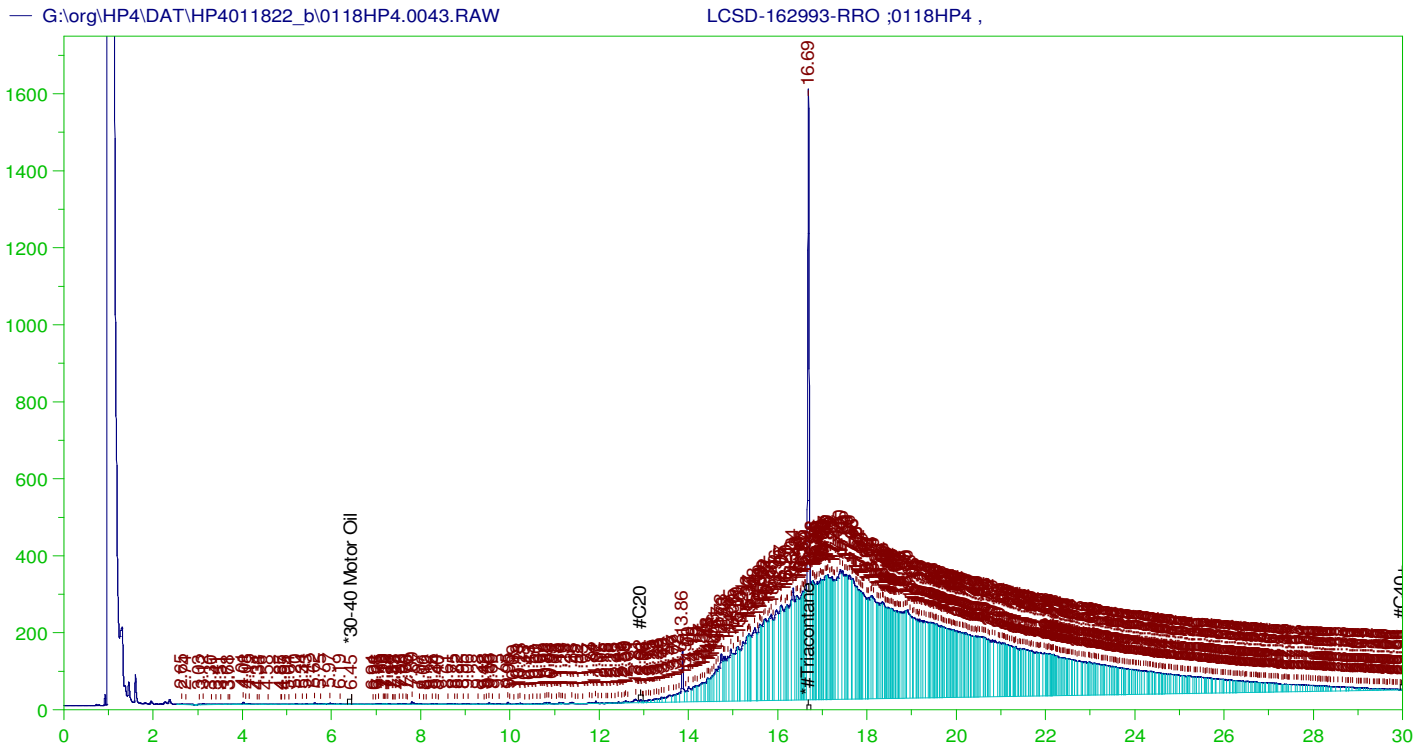
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V43
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0042.RAW
Date & Time Acquired: 1/19/2022 8:25:07 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.859	200.	.	. -
*1-Chlorooctadecane	13.499	200.	.044	.02 -

DRO Area:188669.2 DRO Amount: 6.423158
TEH Area:678541.5 TEH Amount: 23.10064



RESIDUAL RANGE ORGANICS CHROMATOGRAM

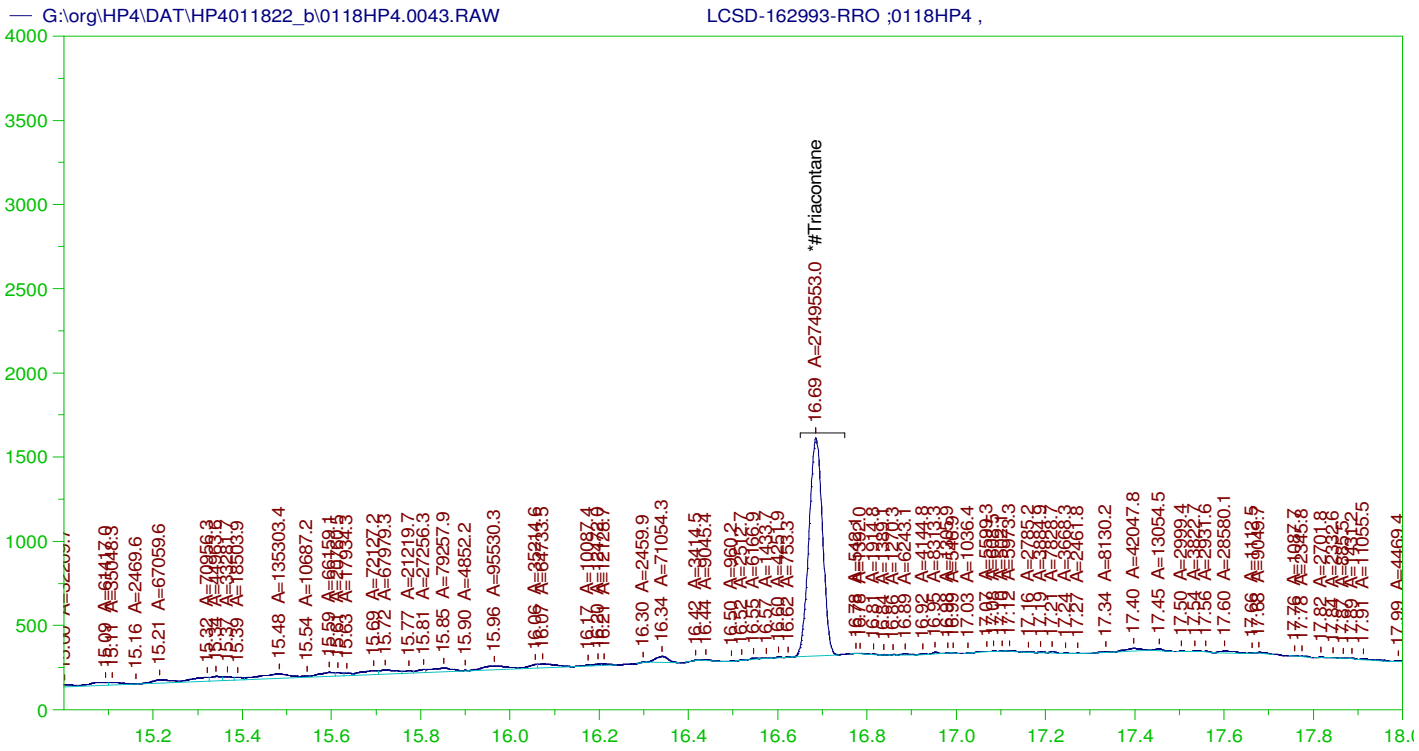
Sample Name: LCSD-162993-RRO ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0043.RAW
Date & Time Acquired: 1/19/2022 9:09:51 PM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.685	.5	.183	36.69	-

~~RRO~~ TEH(Oil Range) Area:1.11402E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.541542

AMN 02/15/2022



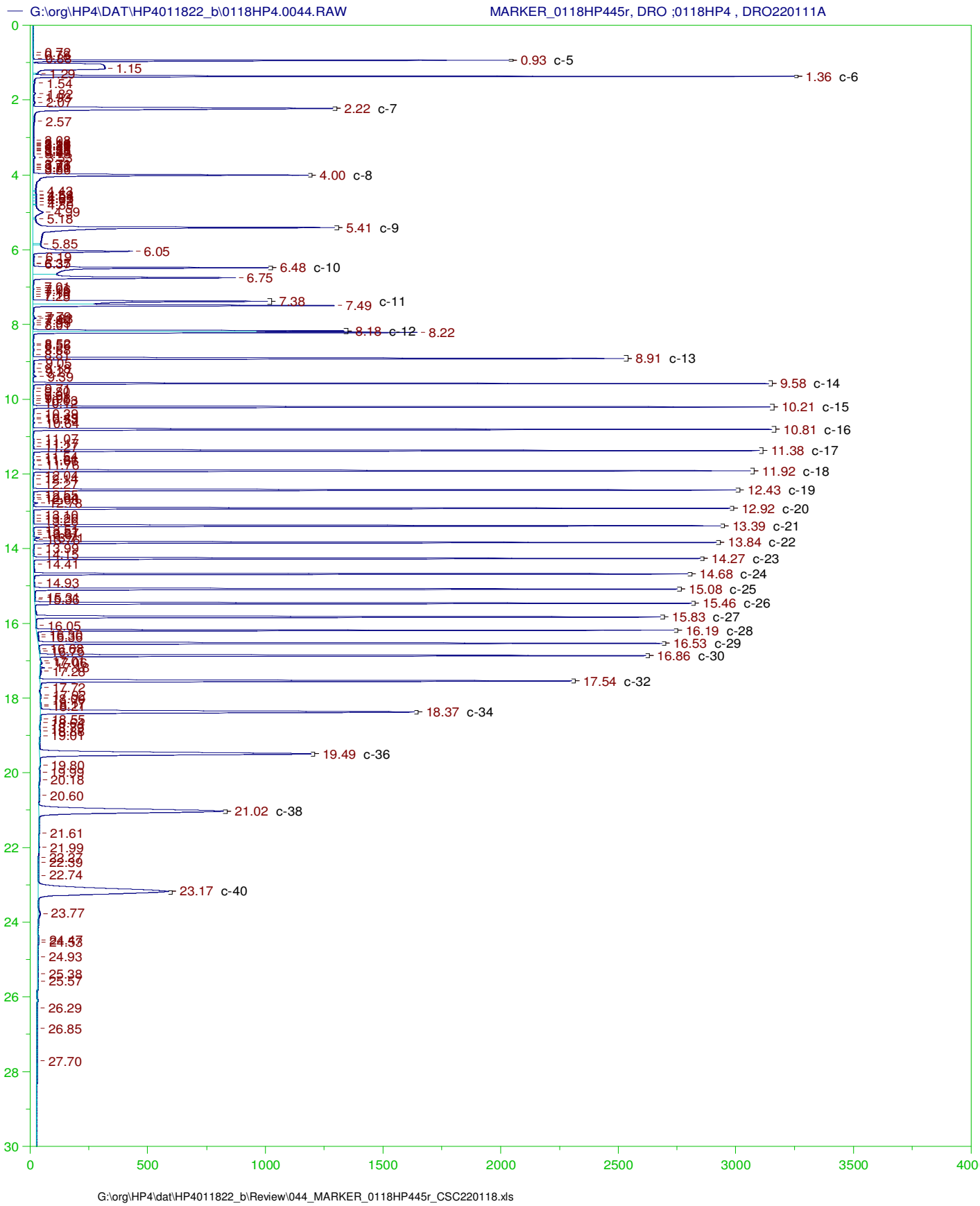
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCSD-162993-RRO ;0118HP4 ,
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0043.RAW
Date & Time Acquired: 1/19/2022 9:09:51 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.685	.5	.11	22.02	-

RRO Area:2723791 RRO AMOUNT: 0.1110411


G:\org\HP4\DAT\HP4011822_b\0118HP4.0044.RAW
MARKER_0118HP445r, DRO ;0118HP4 , DRO220111A
0.93 c-5
1.15
1.36 c-6
2.22 c-7
4.00 c-8
5.41 c-9
6.05
6.48 c-10
6.75
7.38
7.49 c-11
8.18 c-12
8.22
8.91 c-13
9.58 c-14
10.21 c-15
10.81 c-16
11.38 c-17
11.92 c-18
12.43 c-19
12.92 c-20
13.39 c-21
13.84 c-22
14.27 c-23
14.68 c-24
15.08 c-25
15.46 c-26
15.83 c-27
16.19 c-28
16.53 c-29
16.86 c-30
17.54 c-32
18.37 c-34
19.49 c-36
21.02 c-38
23.17 c-40
0
500
1000
1500
2000
2500
3000
3500
400
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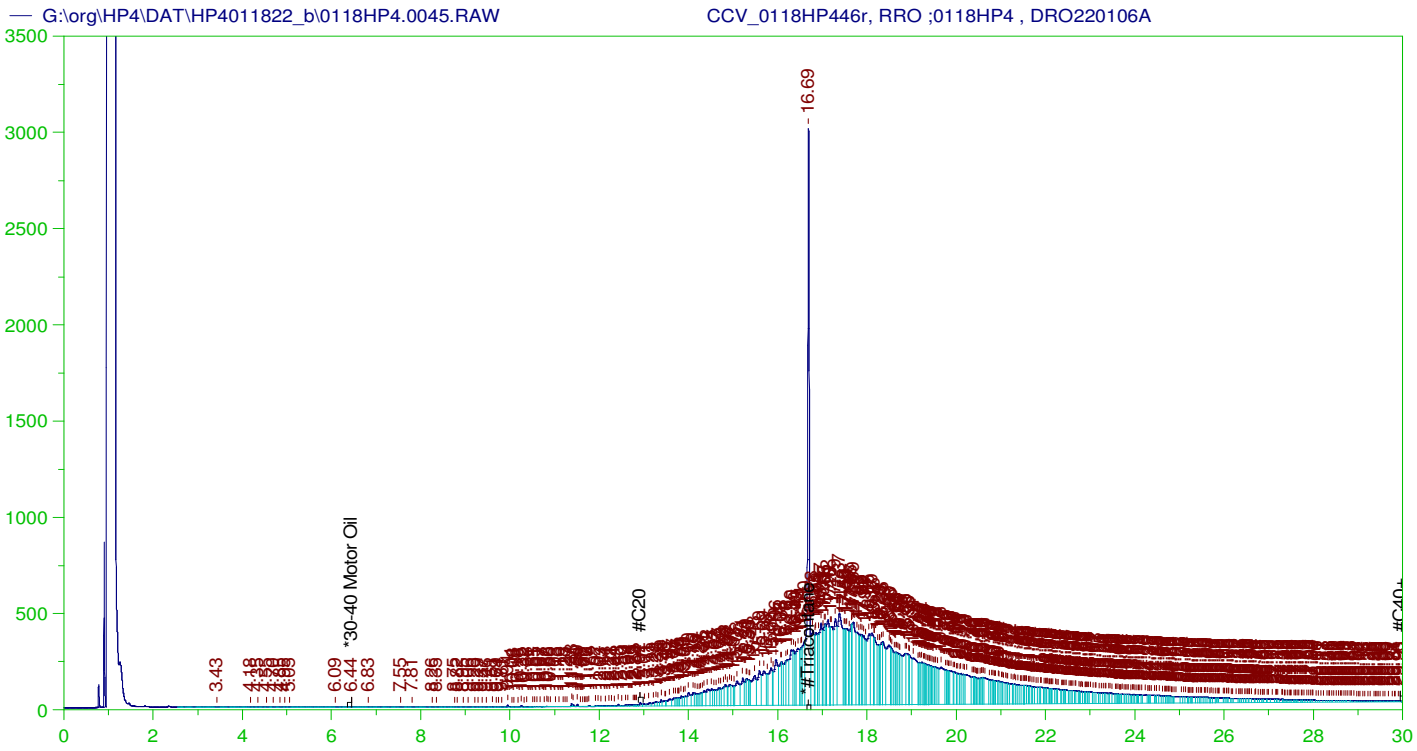


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP446r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0045.RAW
Date & Time Acquired: 1/19/2022 10:39:31 PM
Method File: G:\Org\HP4\Methods\DC_ORO-011833-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	500.	334.298	66.86	-

~~RRO~~ TEH(Oil Range) Area:1.128235E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4599.492

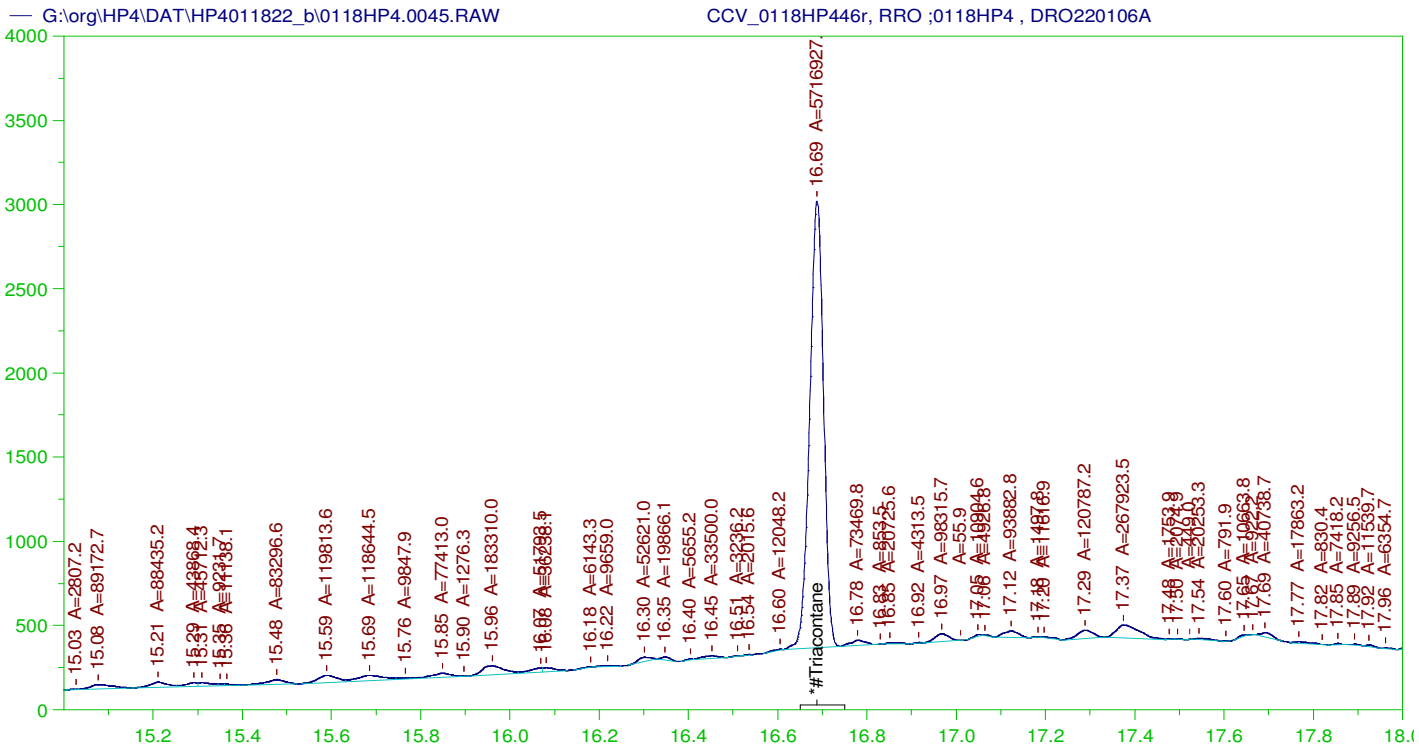
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0045.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.033	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.688	200.	334.298	167.15	75-125

AMN 02/15/2022

G:\org\HP4\dat\HP4011822_b\Review\045_CCV_0118HP446r_DC_ORO-011833-AF-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0118HP446r, RRO ;0118HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0045.RAW
Date & Time Acquired: 1/19/2022 10:39:31 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

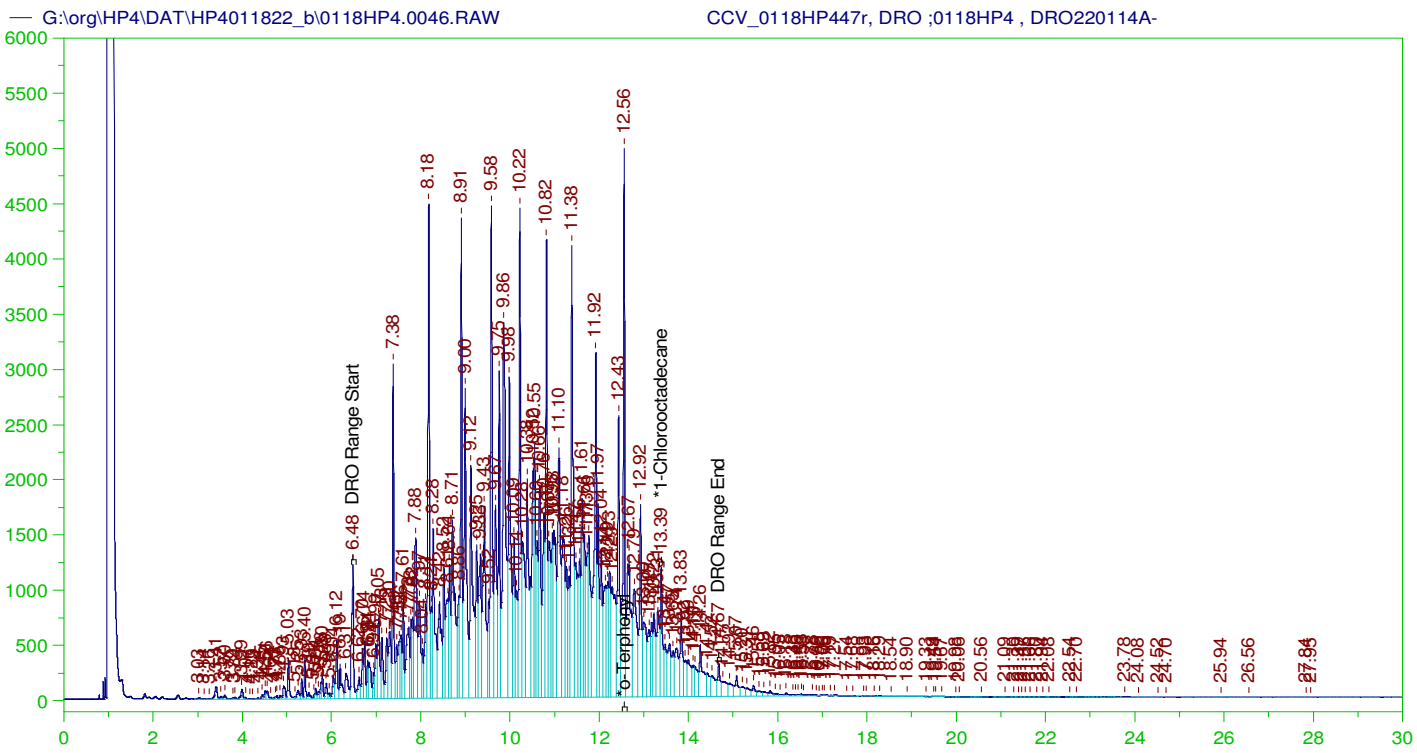
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	500.	228.917	45.78	-

RRO Area:3263790 RRO AMOUNT: 133.0554

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0045.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.033	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.688	200.	228.917	114.46	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0118HP447r, DRO ;0118HP4 , DRO220114A-
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0046.RAW
Date & Time Acquired: 1/19/2022 11:24:24 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

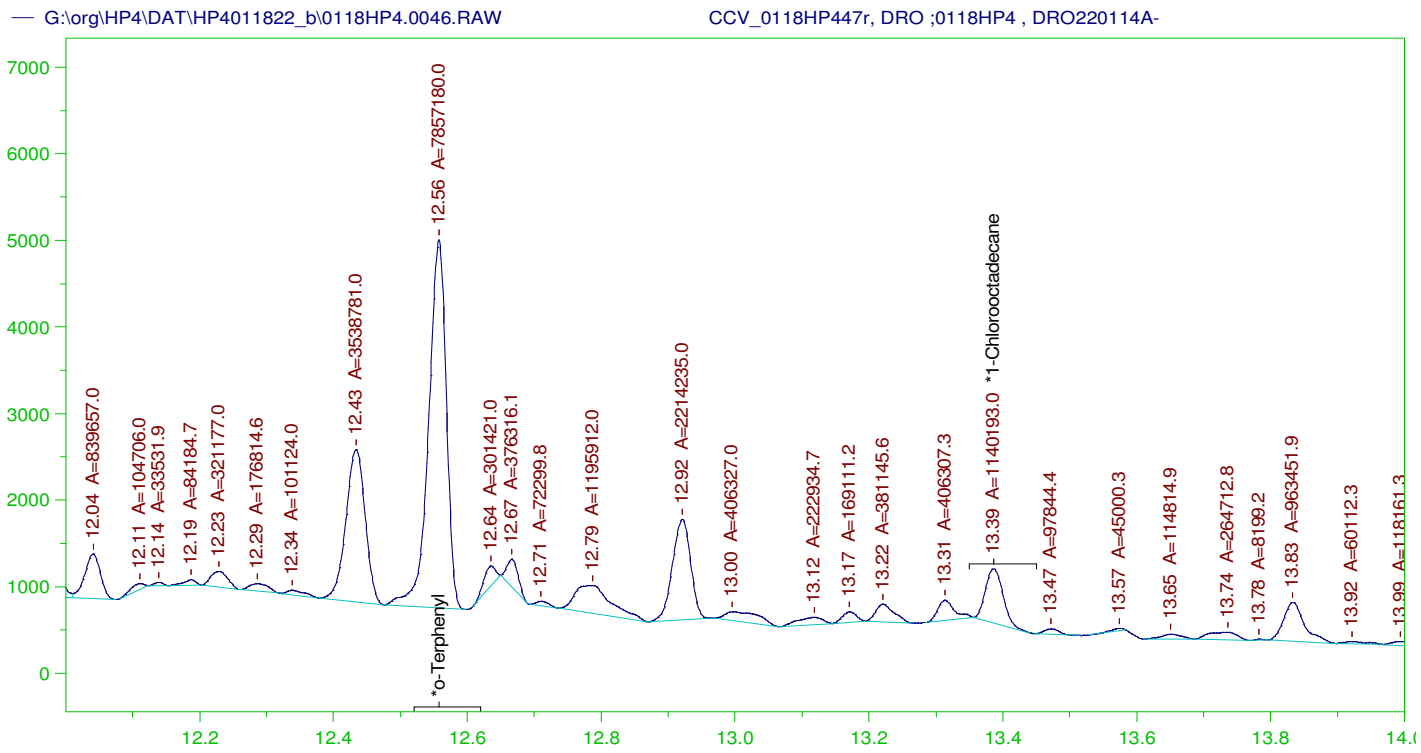
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	200.	395.031	197.52	-
*1-Chlorooctadecane	13.386	200.	118.625	59.31	-

DRO Area:4.534921E+08 DRO Amount: 15438.93
TEH Area:4.704244E+08 TEH Amount: 16015.39

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0046.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16015.39	106.77	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.557	200.	395.031	197.52	85-115
*1-Chlorooctadecane	13.386	200.	118.625	59.31	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0118HP447r, DRO ;0118HP4 , DRO220114A-
Raw File: G:\org\HP4\DAT\HP4011822_b\0118HP4.0046.RAW
Date & Time Acquired: 1/19/2022 11:24:24 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

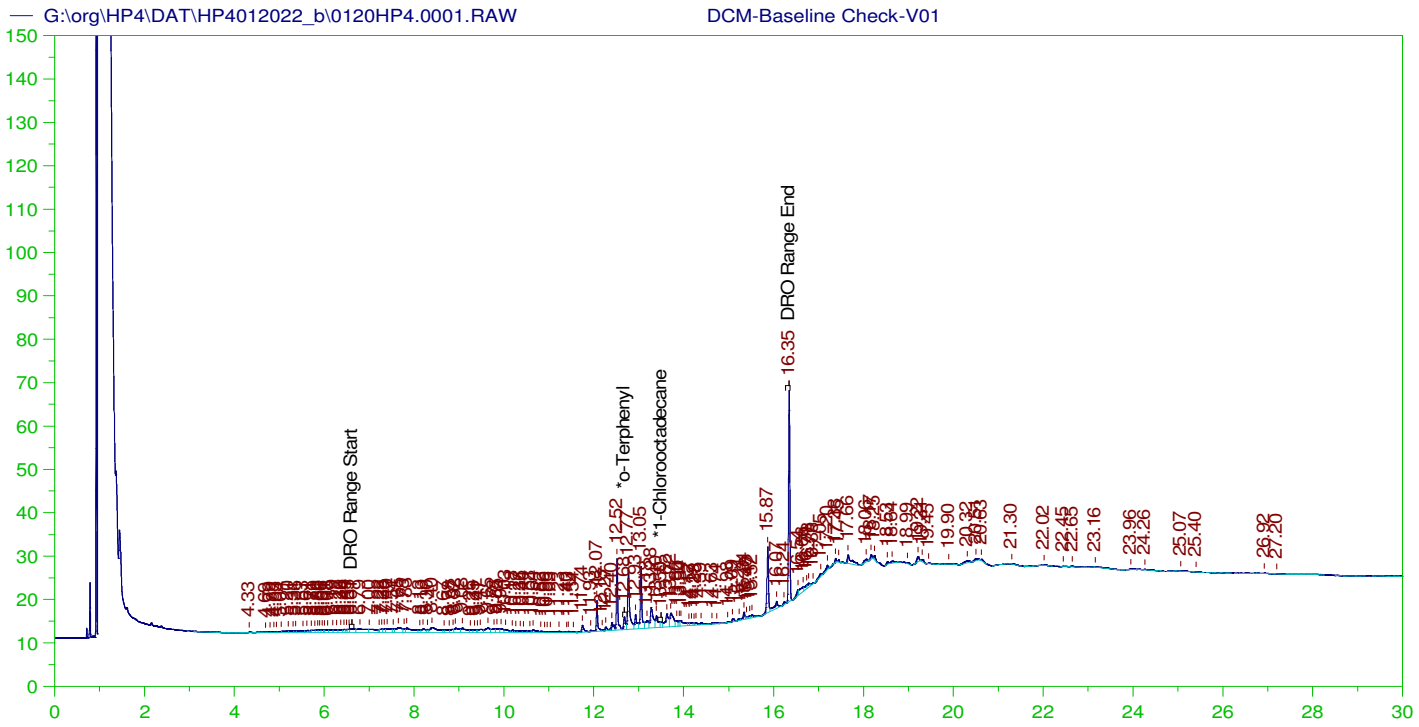
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.557	200.	235.812	117.91	-
*1-Chlorooctadecane	13.386	200.	34.22	17.11	-

DRO Area:2.053784E+08 DRO Amount: 6992.016
TEH Area:2.159022E+08 TEH Amount: 7350.292

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4011822_b\0118HP4.0046.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7350.29	49.	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.557	200.	235.812	117.91	85-115
*1-Chlorooctadecane	13.386	200.	34.22	17.11	85-115



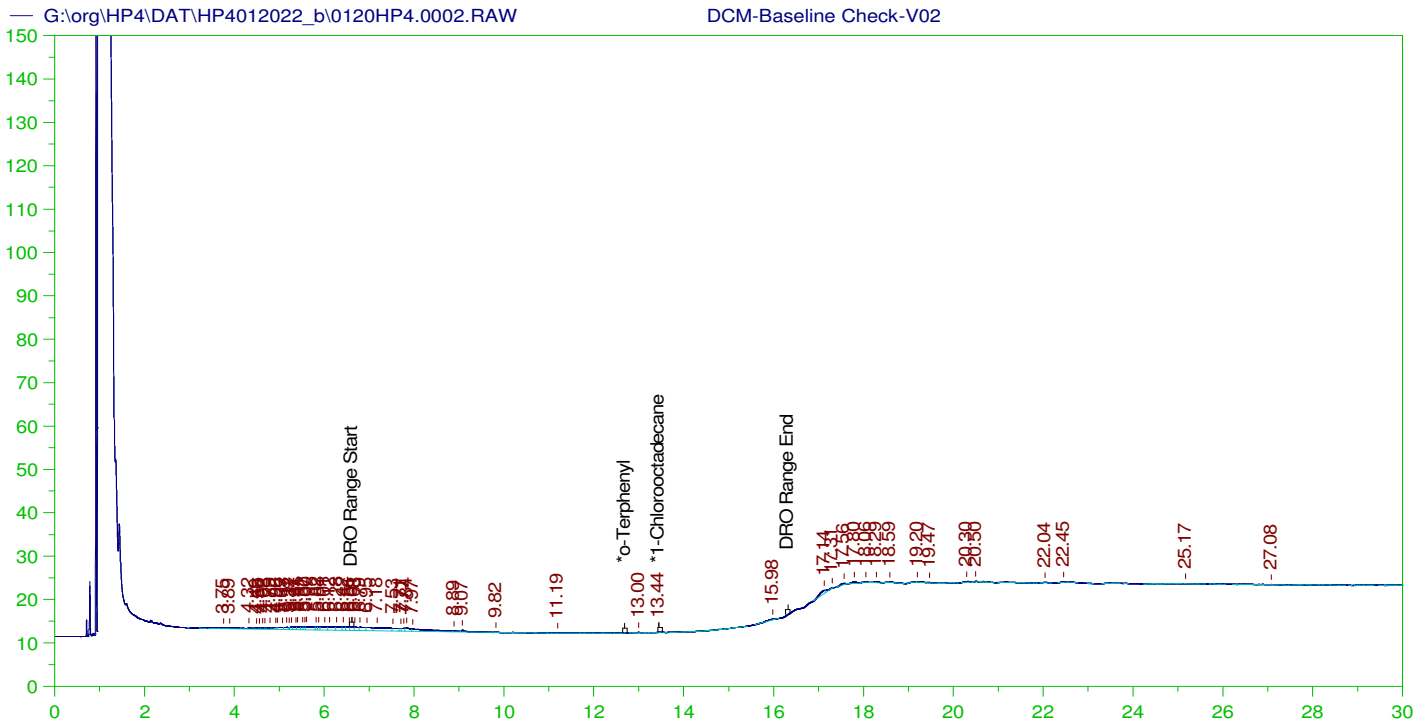
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0001.RAW
Date & Time Acquired: 1/20/2022 9:27:33 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.679	200.	.262	.13	-
*1-Chlorooctadecane	13.499	200.	.114	.06	-

DRO Area:601313.6 DRO Amount: 20.47145
TEH Area:751701.6 TEH Amount: 25.59134



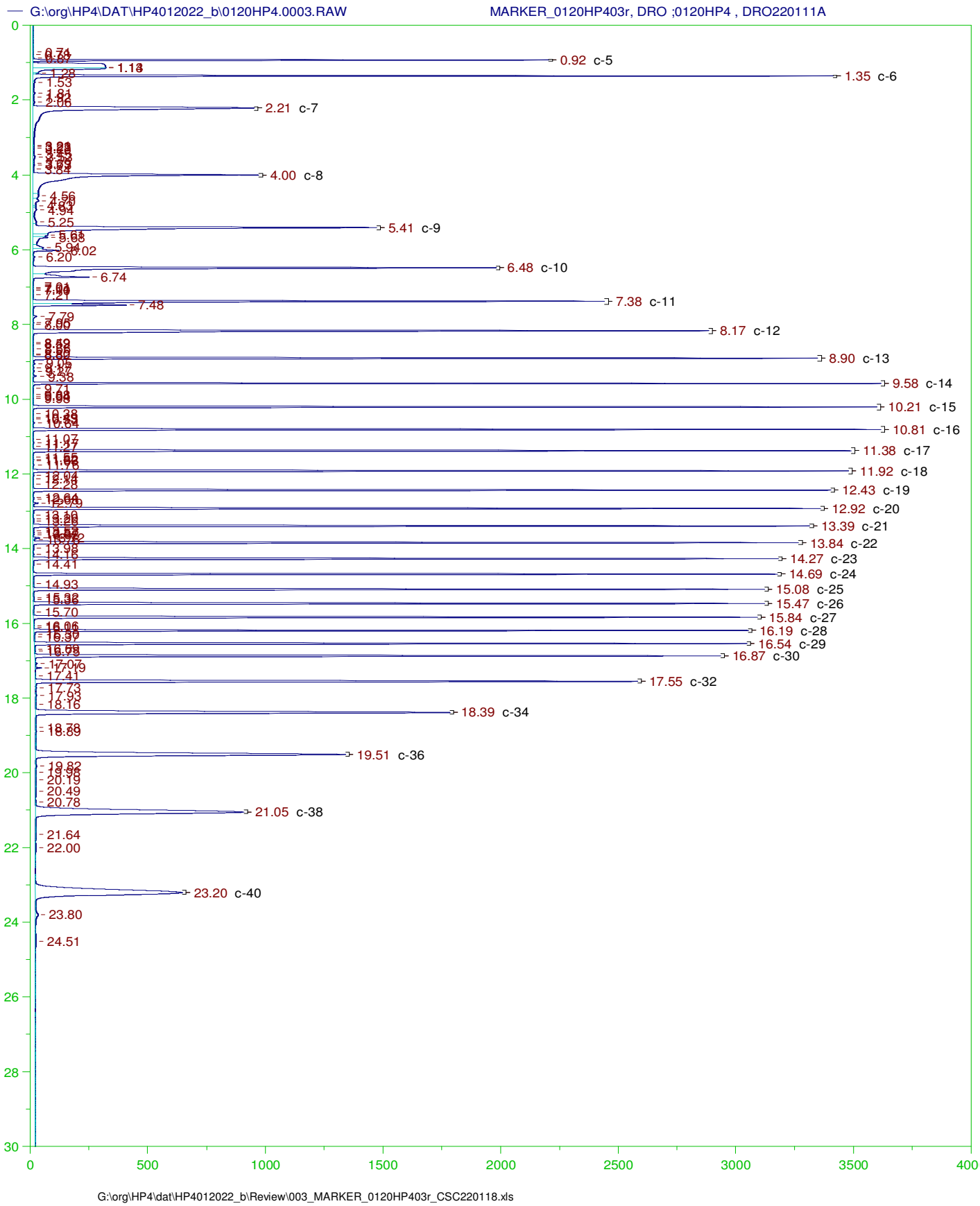
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V02
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0002.RAW
Date & Time Acquired: 1/20/2022 10:12:46 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.966	200.	.	-
*1-Chlorooctadecane	13.444	200.	.02	.01 -

DRO Area:92682.38 DRO Amount: 3.15533
TEH Area:206142.9 TEH Amount: 7.018042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MARKER_0120HP403r, DRO ;0120HP4 , DRO220111A
0.92 c-5
1.35 c-6
2.21 c-7
4.00 c-8
5.41 c-9
6.48 c-10
6.74
7.38 c-11
7.48
8.17 c-12
8.90 c-13
9.58 c-14
10.21 c-15
10.81 c-16
11.38 c-17
11.92 c-18
12.43 c-19
12.92 c-20
13.39 c-21
13.84 c-22
14.27 c-23
14.69 c-24
15.08 c-25
15.47 c-26
15.84 c-27
16.19 c-28
16.54 c-29
16.87 c-30
17.55 c-32
18.39 c-34
19.51 c-36
21.05 c-38
23.20 c-40
23.80
24.51
0
500
1000
1500
2000
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3000
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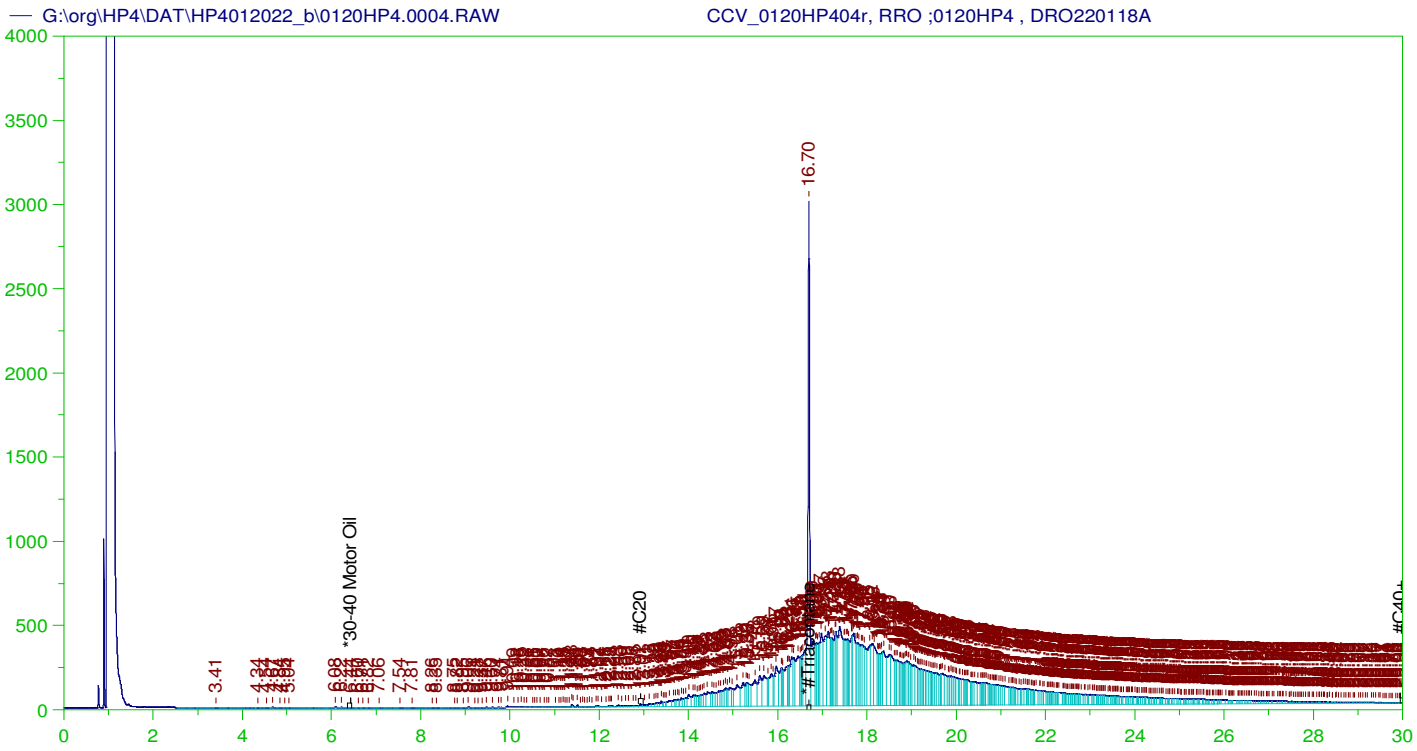


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP404r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0004.RAW
Date & Time Acquired: 1/20/2022 11:43:07 AM
Method File: G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.697	500.	338.933	67.79	-

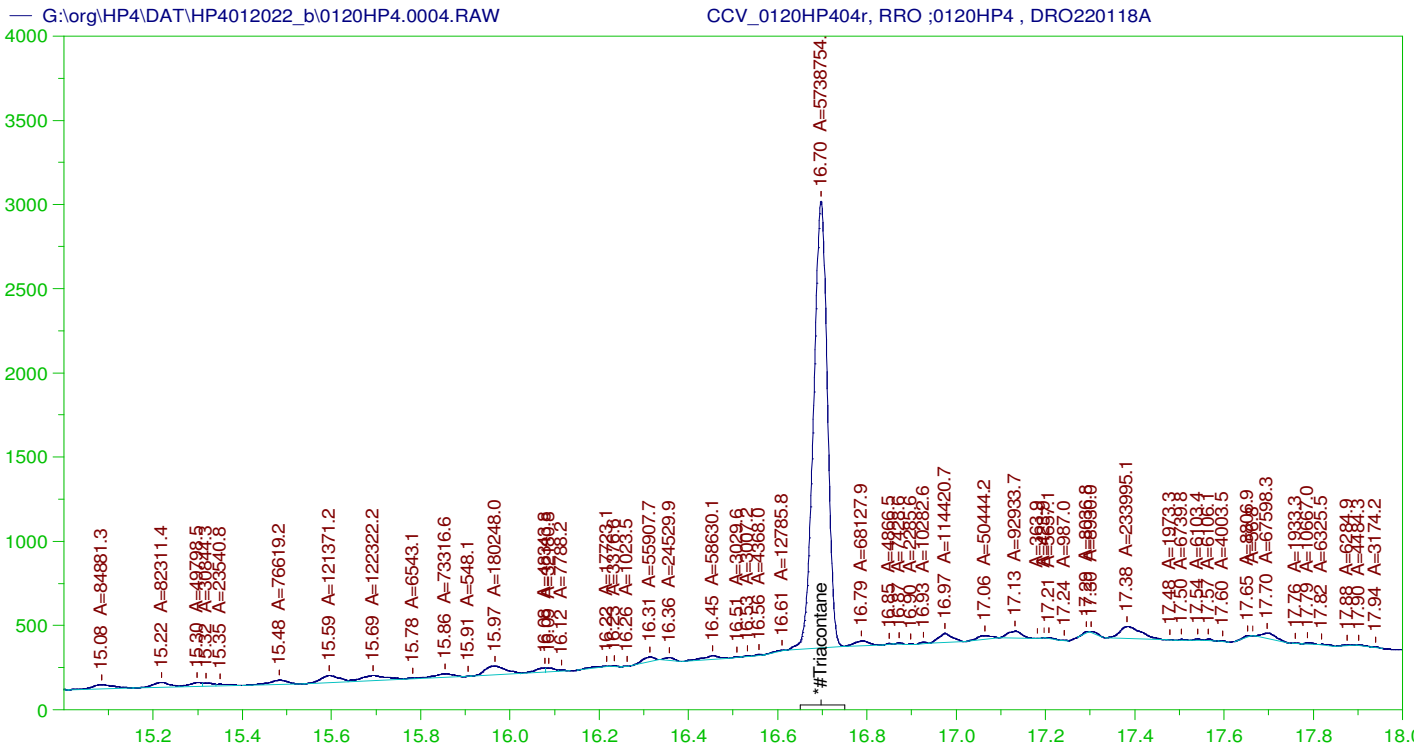
~~RRO~~ TEH(Oil Range) Area:1.115177E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4546.256

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0004.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.027	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.697	200.	338.933	169.47	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP404r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0004.RAW
Date & Time Acquired: 1/20/2022 11:43:07 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

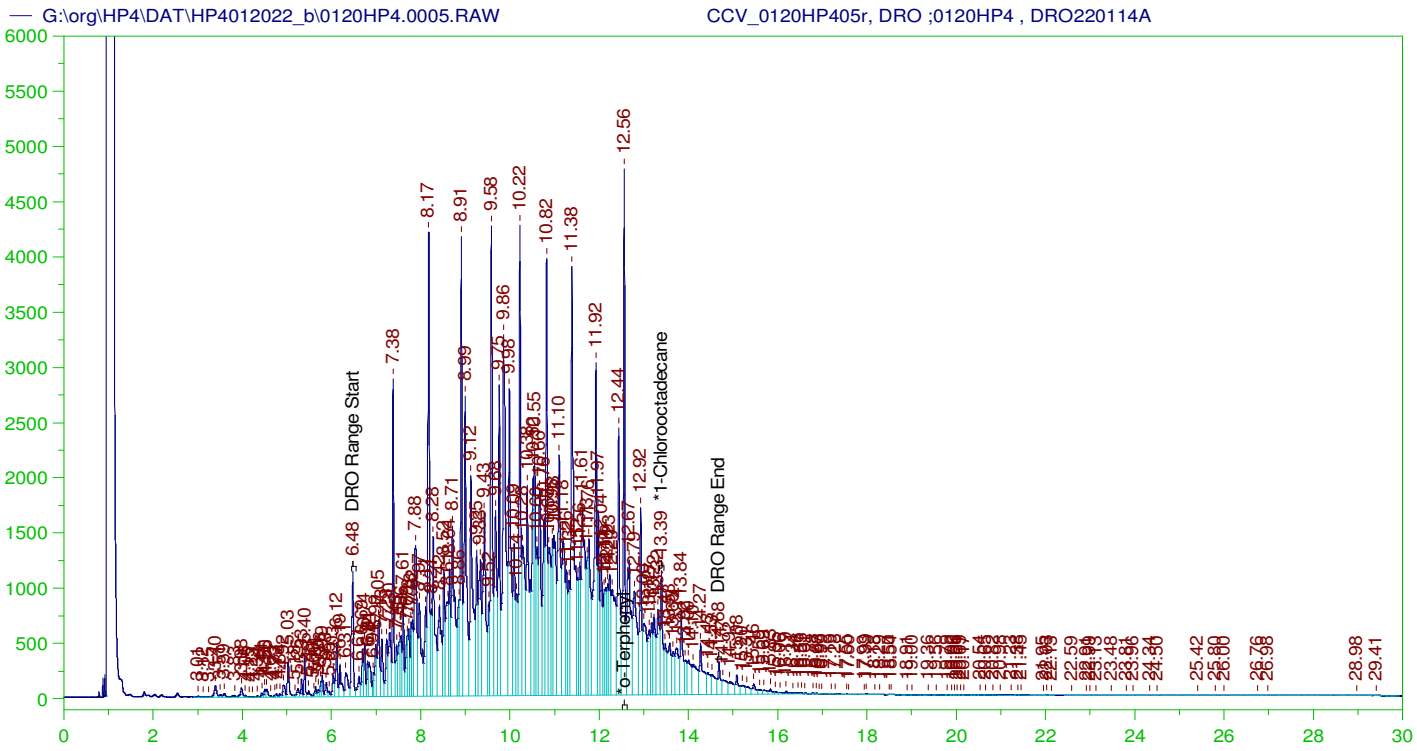
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.697	500.	229.791	45.96	-

RRO Area:3114070 RRO AMOUNT: 126.9517

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0004.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.027	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.697	200.	229.791	114.9	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0120HP405r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0005.RAW
Date & Time Acquired: 1/20/2022 12:27:58 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.559	200.	379.824	189.91	-
*1-Chlorooctadecane	13.39	200.	112.426	56.21	-

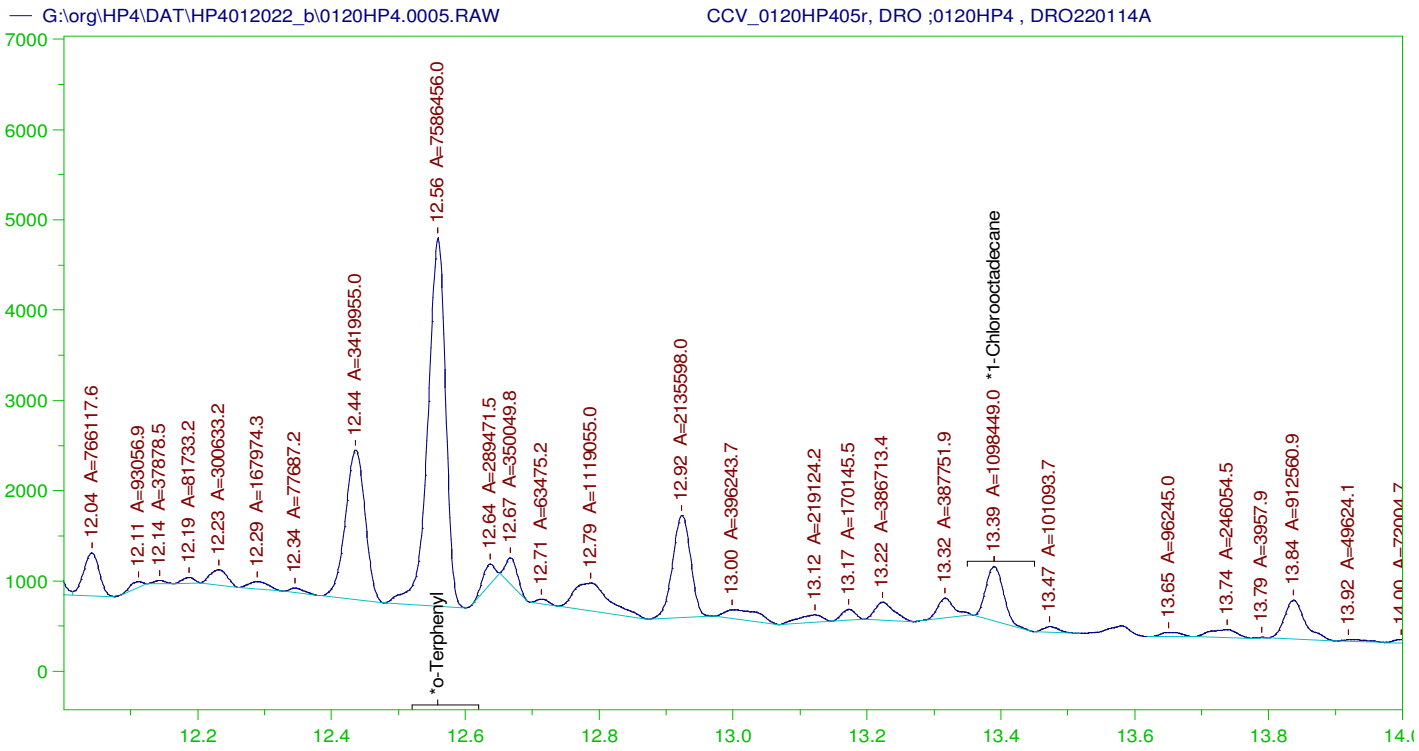
DRO Area:4.345453E+08 DRO Amount: 14793.9
TEH Area:4.507001E+08 TEH Amount: 15343.88

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15343.88	102.29	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.559	200.	379.824	189.91	85-115
*1-Chlorooctadecane	13.39	200.	112.426	56.21	85-115

G:\org\HP4\dat\HP4012022_b\Review\005_CCV_0120HP405r_DC_8015-C24-OM-L%.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0120HP405r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0005.RAW
Date & Time Acquired: 1/20/2022 12:27:58 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

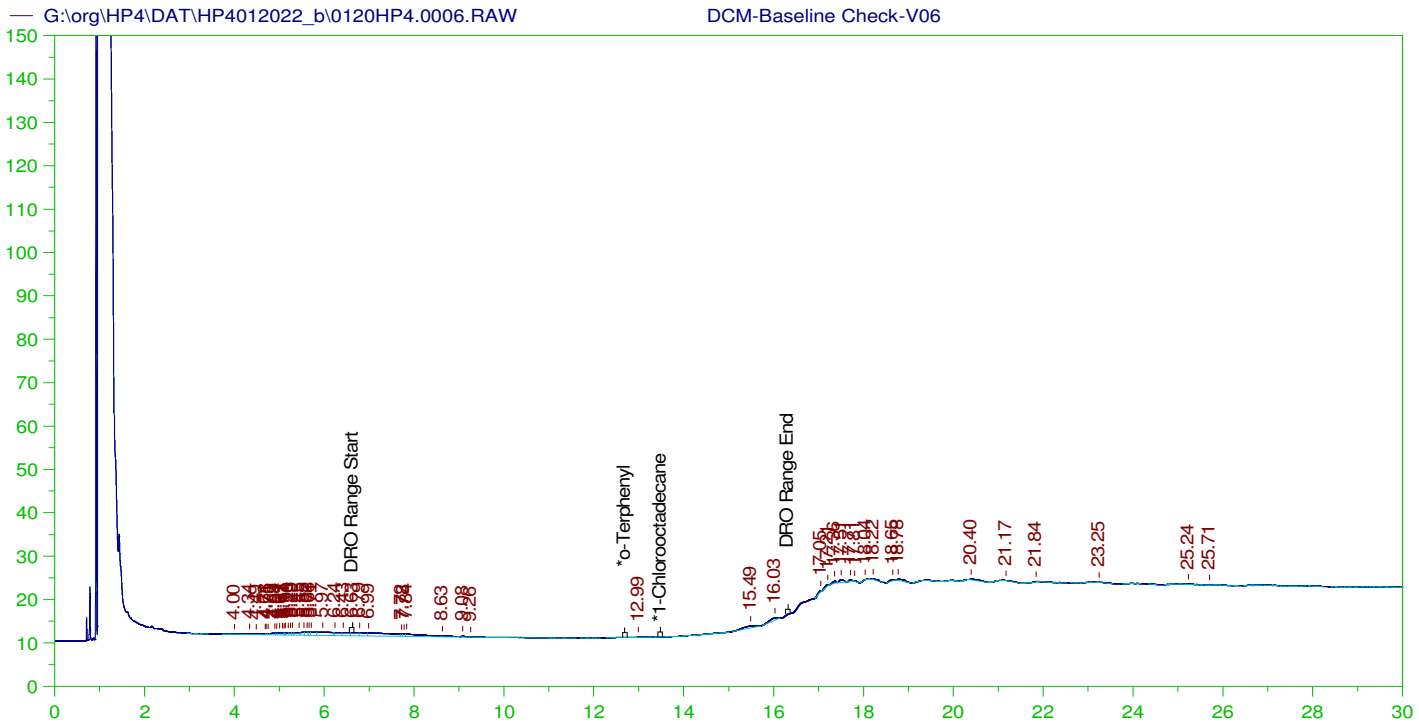
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.559	200.	227.687	113.84	-
*1-Chlorooctadecane	13.39	200.	32.967	16.48	-

DRO Area:1.928518E+08 DRO Amount: 6565.554
TEH Area:2.037983E+08 TEH Amount: 6938.223

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6938.22	46.25	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.559	200.	227.687	113.84	85-115
*1-Chlorooctadecane	13.39	200.	32.967	16.48	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

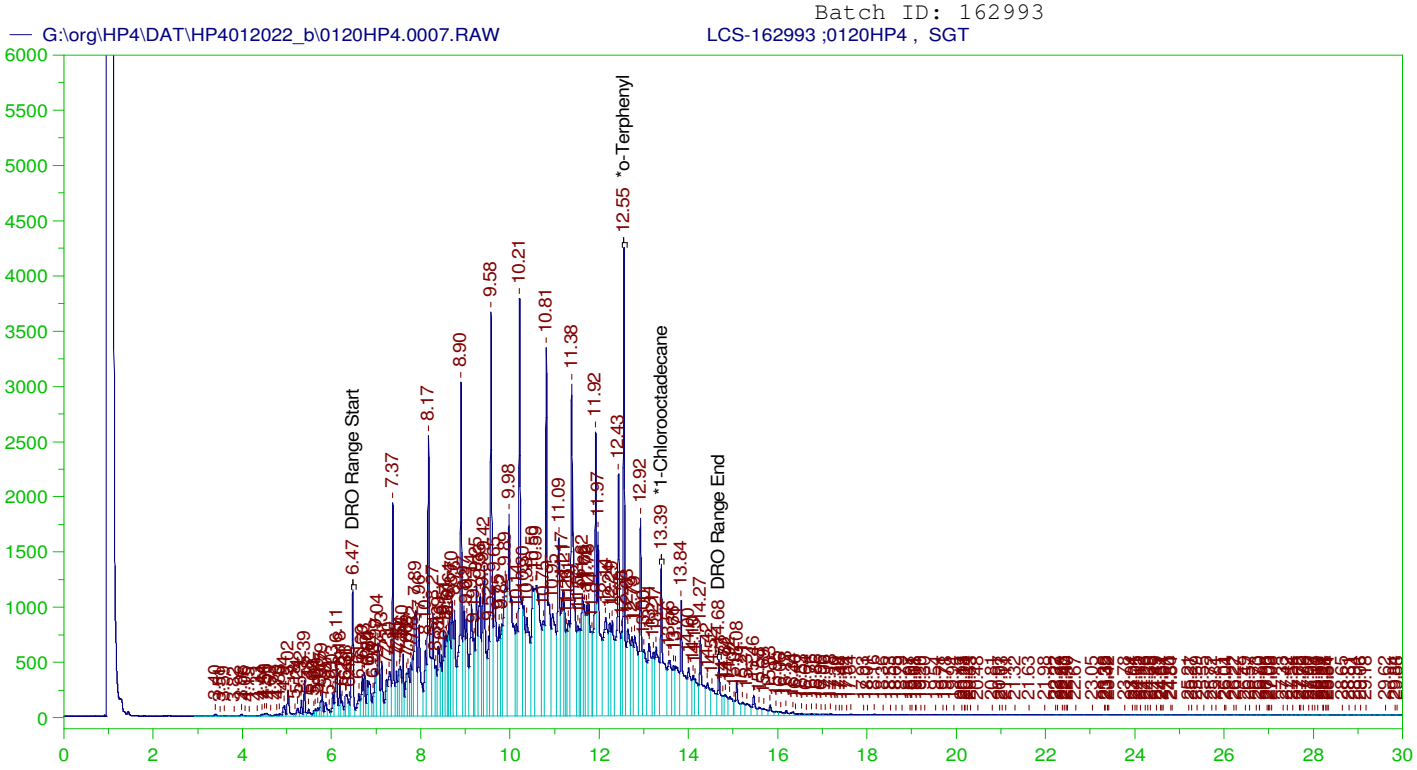
Sample Name: DCM-Baseline Check-V06
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0006.RAW
Date & Time Acquired: 1/20/2022 1:12:53 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

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

DRO Area:90638.89 DRO Amount: 3.08576
TEH Area:205075.4 TEH Amount: 6.981699

Batch ID: 162993



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

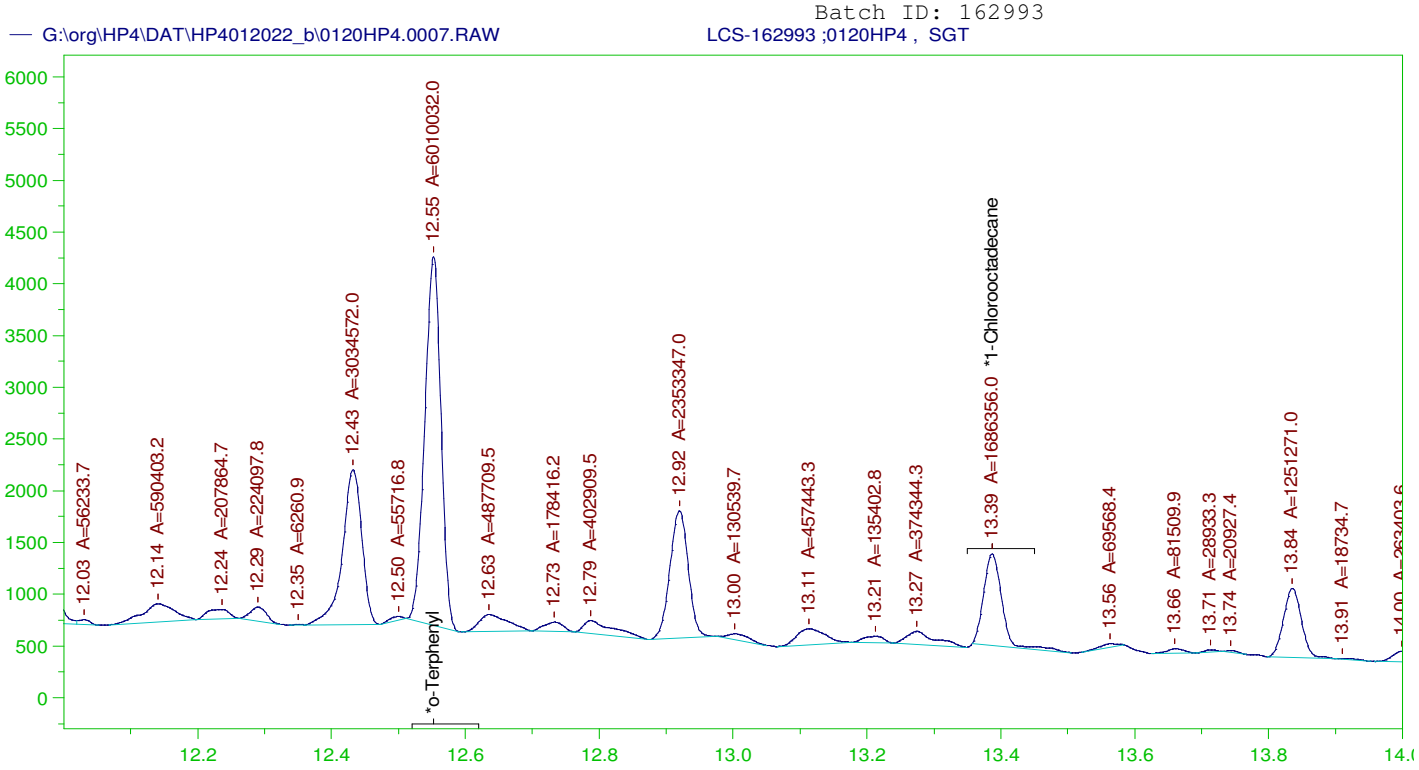
Sample Name: LCS-162993 ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0007.RAW
Date & Time Acquired: 1/20/2022 1:57:52 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.2	.281	140.49	-
*1-Chlorooctadecane	13.387	.2	.185	92.5	-

DRO Area:3.46964E+08 DRO Amount: 11.81223
TEH Area:3.68399E+08 TEH Amount: 12.54198

Batch ID: 162993



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

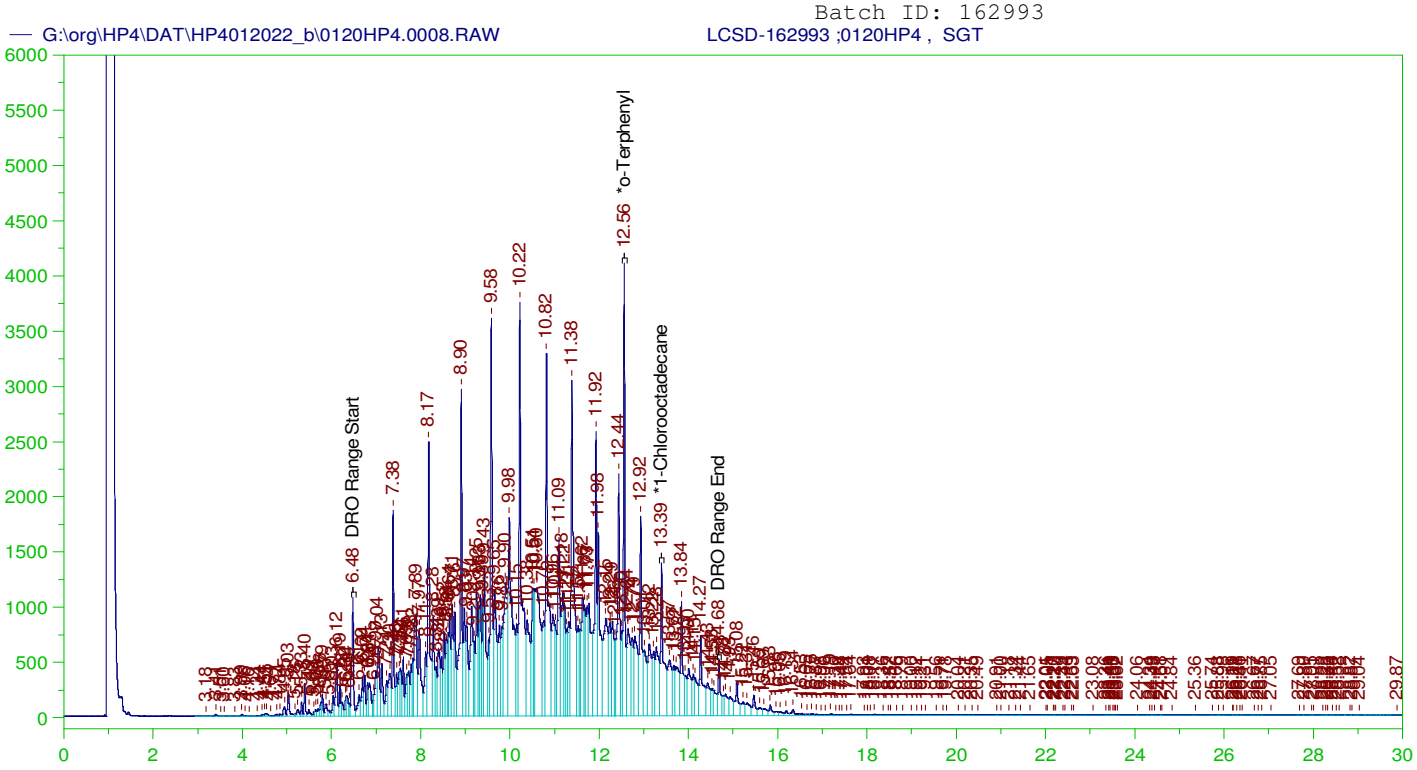
Sample Name: LCS-162993 ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0007.RAW
Date & Time Acquired: 1/20/2022 1:57:52 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.2	.18	90.19	-
*1-Chlorooctadecane	13.387	.2	.051	25.31	-

DRO Area:1.452058E+08 DRO Amount: 4.943466
TEH Area:1.545374E+08 TEH Amount: 5.261157

Batch ID: 162993



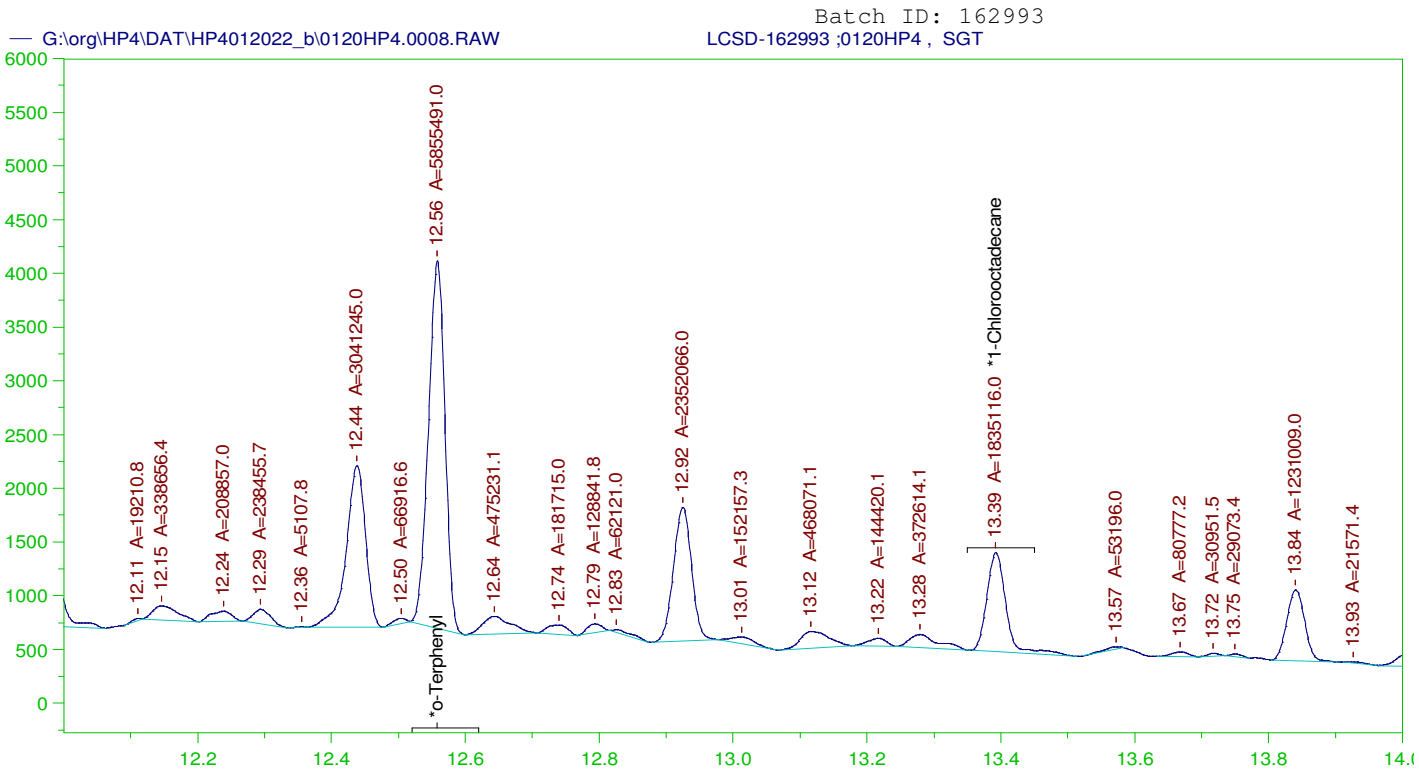
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCSD-162993 ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0008.RAW
Date & Time Acquired: 1/20/2022 2:42:54 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.558	.2	.277	138.63	-
*1-Chlorooctadecane	13.392	.2	.184	92.13	-

DRO Area:3.426833E+08 DRO Amount: 11.6665
TEH Area:3.631939E+08 TEH Amount: 12.36477



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

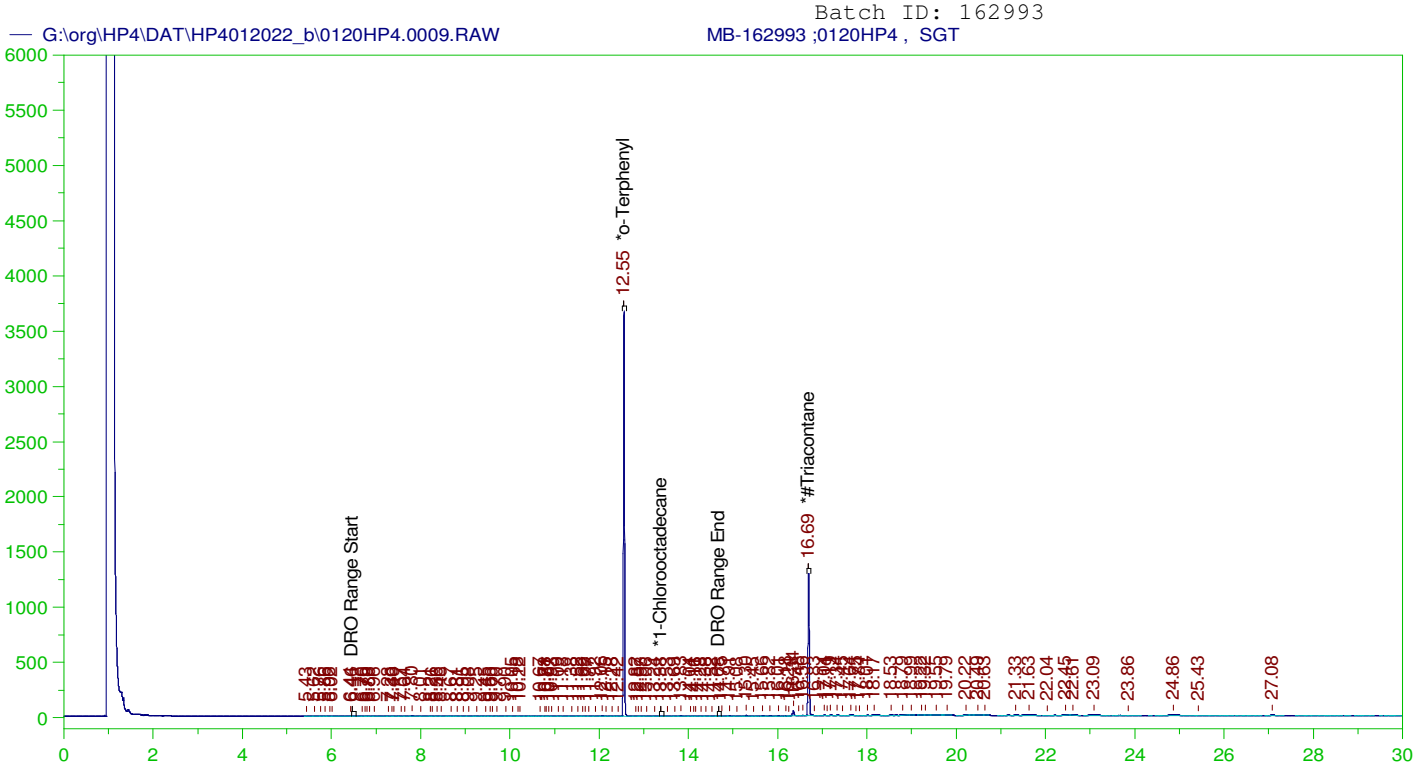
Sample Name: LCSD-162993 ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0008.RAW
Date & Time Acquired: 1/20/2022 2:42:54 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.558	.2	.176	87.87	-
*1-Chlorooctadecane	13.392	.2	.055	27.54	-

DRO Area:1.40047E+08 DRO Amount: 4.767837
TEH Area:1.488182E+08 TEH Amount: 5.066448

Batch ID: 162993



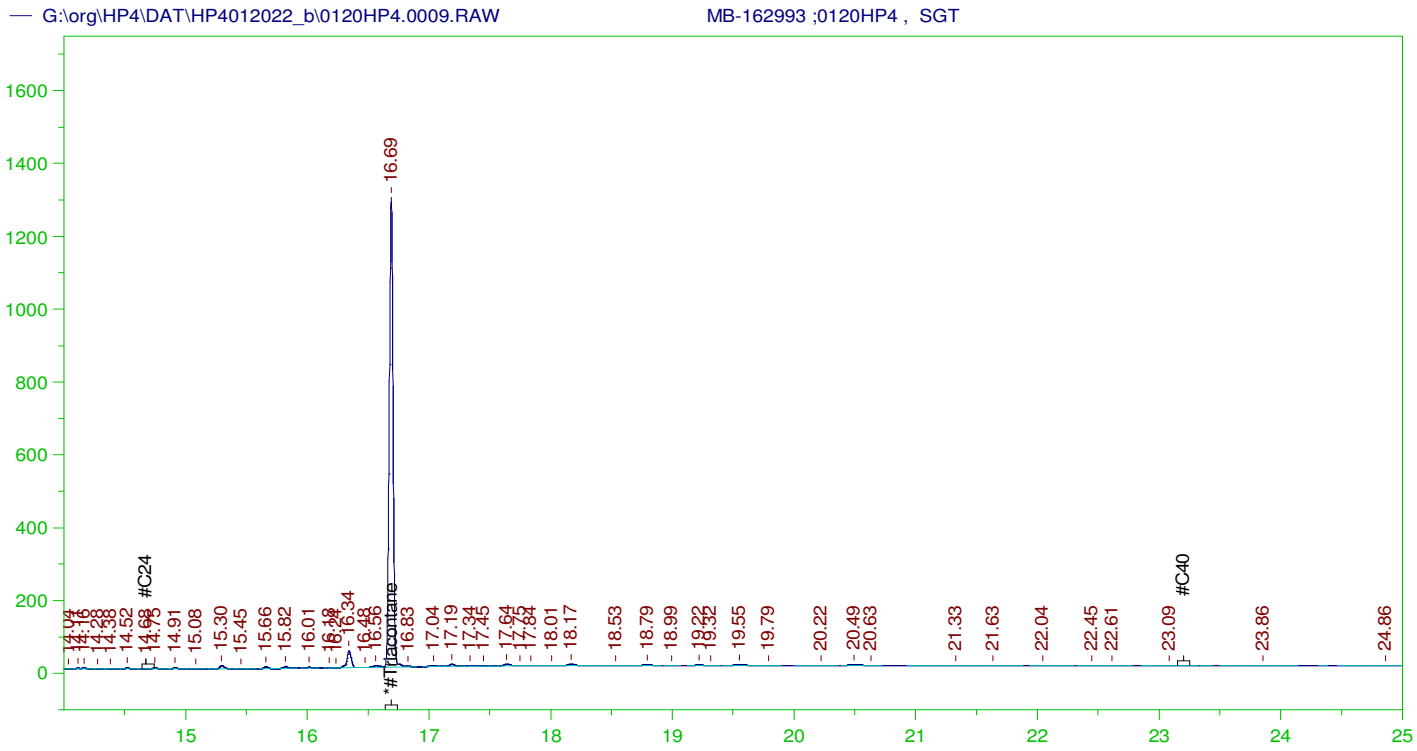
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162993 ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0009.RAW
Date & Time Acquired: 1/20/2022 3:27:50 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.554	.2	.194	97.08	-
*1-Chlorooctadecane	13.378	.2	.08		-
*#Triacontane	16.69	.2	.112	55.78	-

DRO Area:242160.9 DRO Amount: 8.244259E-03
TEH Area:685967.4 TEH Amount: 2.335345E-02



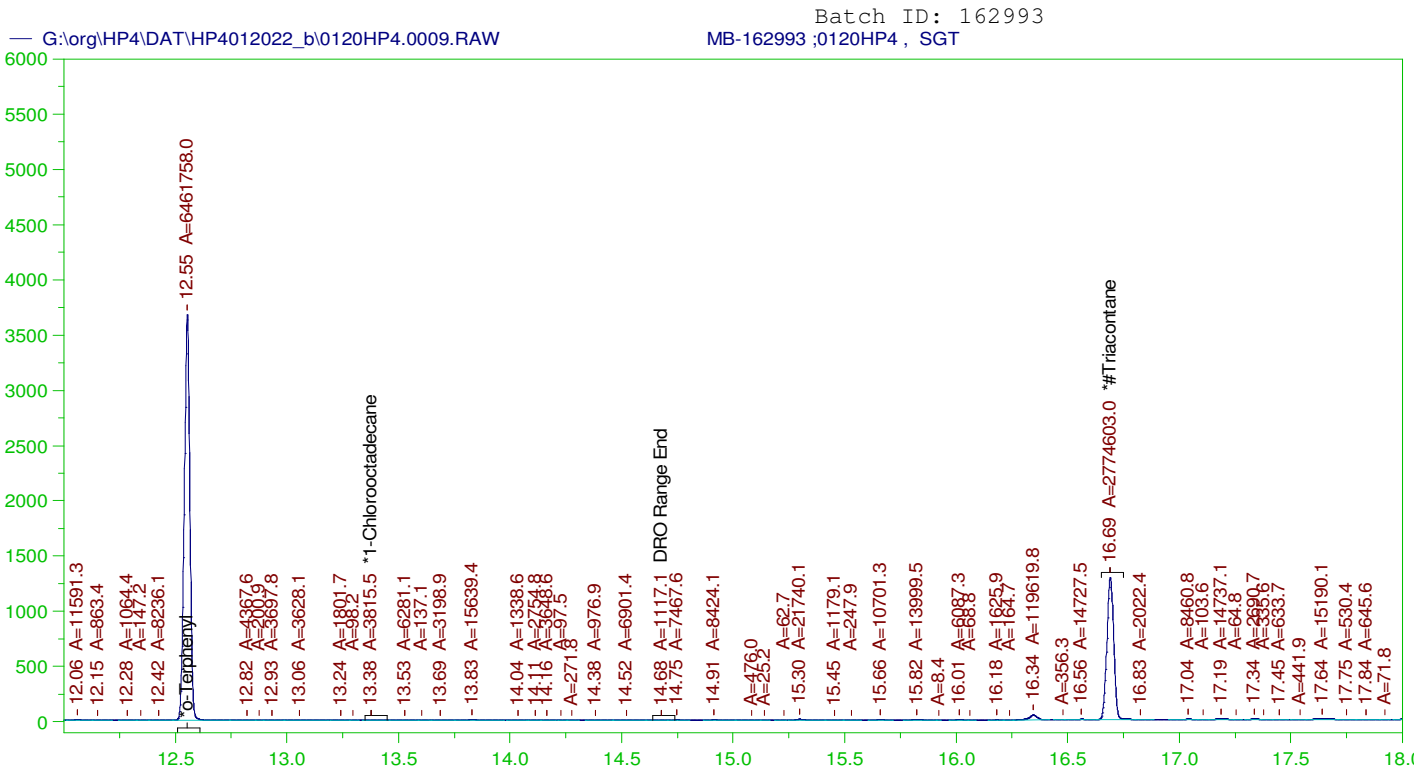
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-162993 ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0009.RAW
Date & Time Acquired: 1/20/2022 3:27:50 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-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: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.69	.5	.112	22.31	-

RRO Area:362264.3 RRO AMOUNT: 1.476848E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162993 ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0009.RAW
Date & Time Acquired: 1/20/2022 3:27:50 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.554	.2	.194	96.97	-
*1-Chlorooctadecane	13.378	.2	.06		-
*#Triacontane	16.69	.2	.111	55.55	-

DRO Area:158251.4 DRO Amount: 5.387599E-03
TEH Area:572096.3 TEH Amount: 1.947676E-02

ERH2404 (OWDFMW08A) Batch ID: 162993

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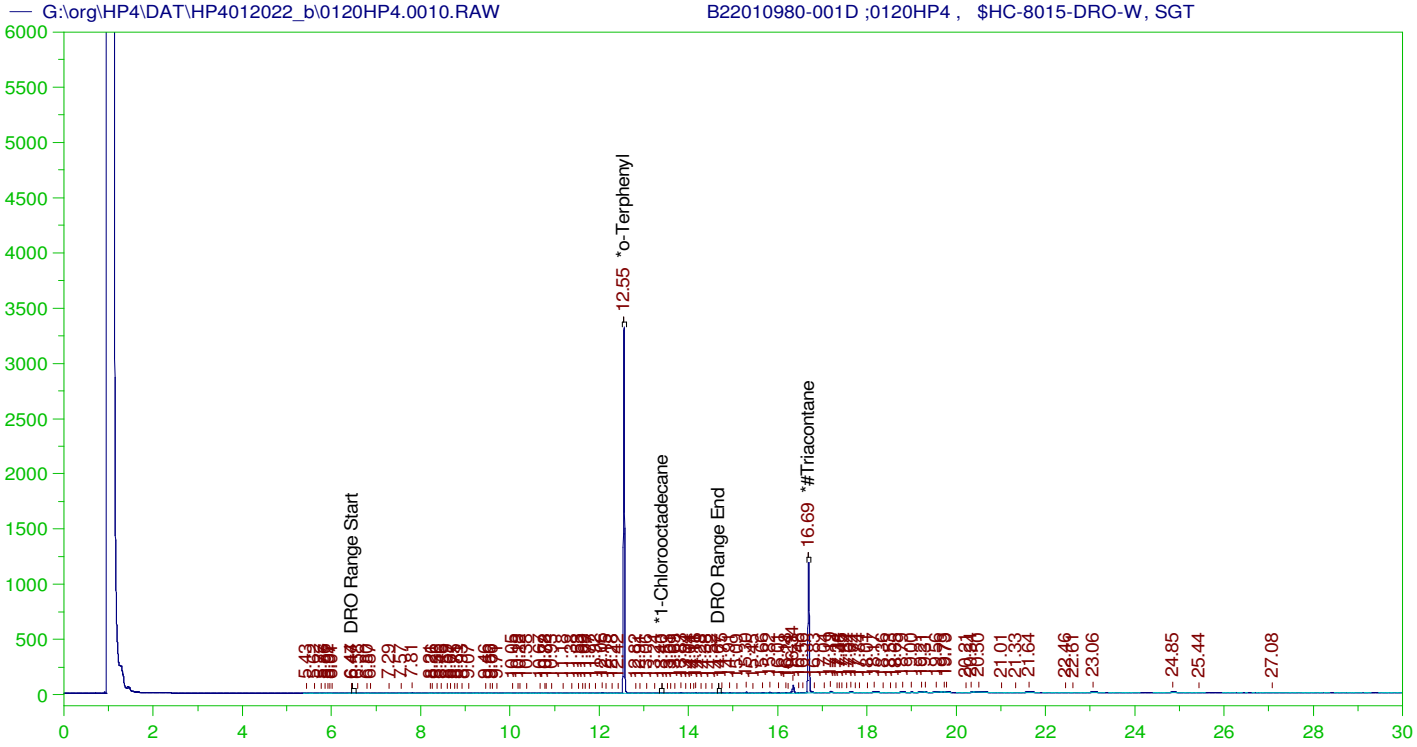


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010980-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0010.RAW
Date & Time Acquired: 1/20/2022 4:12:41 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

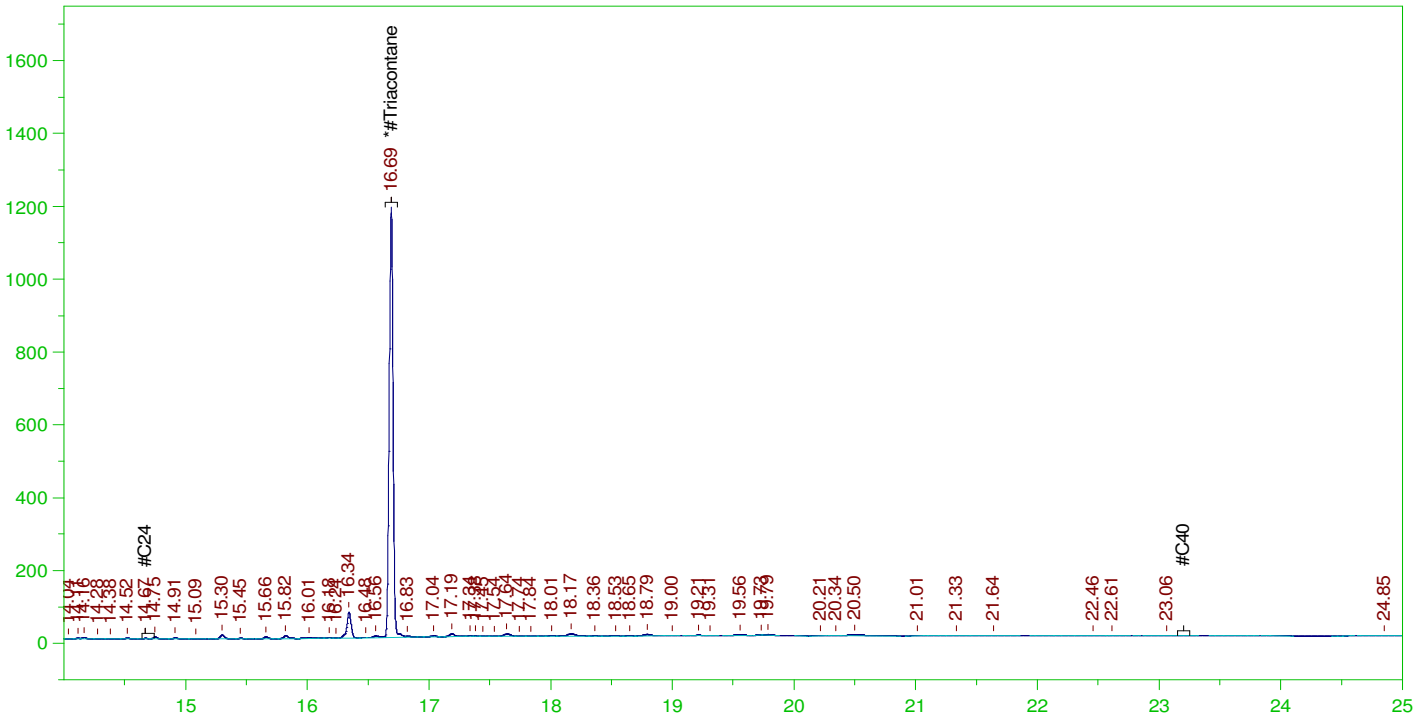
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.553	.194	.173	88.89	-
*1-Chlorooctadecane	13.401	.194	.	.04	-
*#Triacontane	16.69	.194	.1	51.71	-

DRO Area:256236.6 DRO Amount: 8.46938E-03
TEH Area:841978.3 TEH Amount: 2.782988E-02

ERH2404 (OWDFMW08A) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0010.RAW B22010980-001D ;0120HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010980-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0010.RAW
Date & Time Acquired: 1/20/2022 4:12:41 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.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: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.69	.485	.1	20.68	-

RRO Area:502482.4 RRO AMOUNT: 1.988813E-02

ERH2404 (OWDFMW08A) Batch ID: 162993

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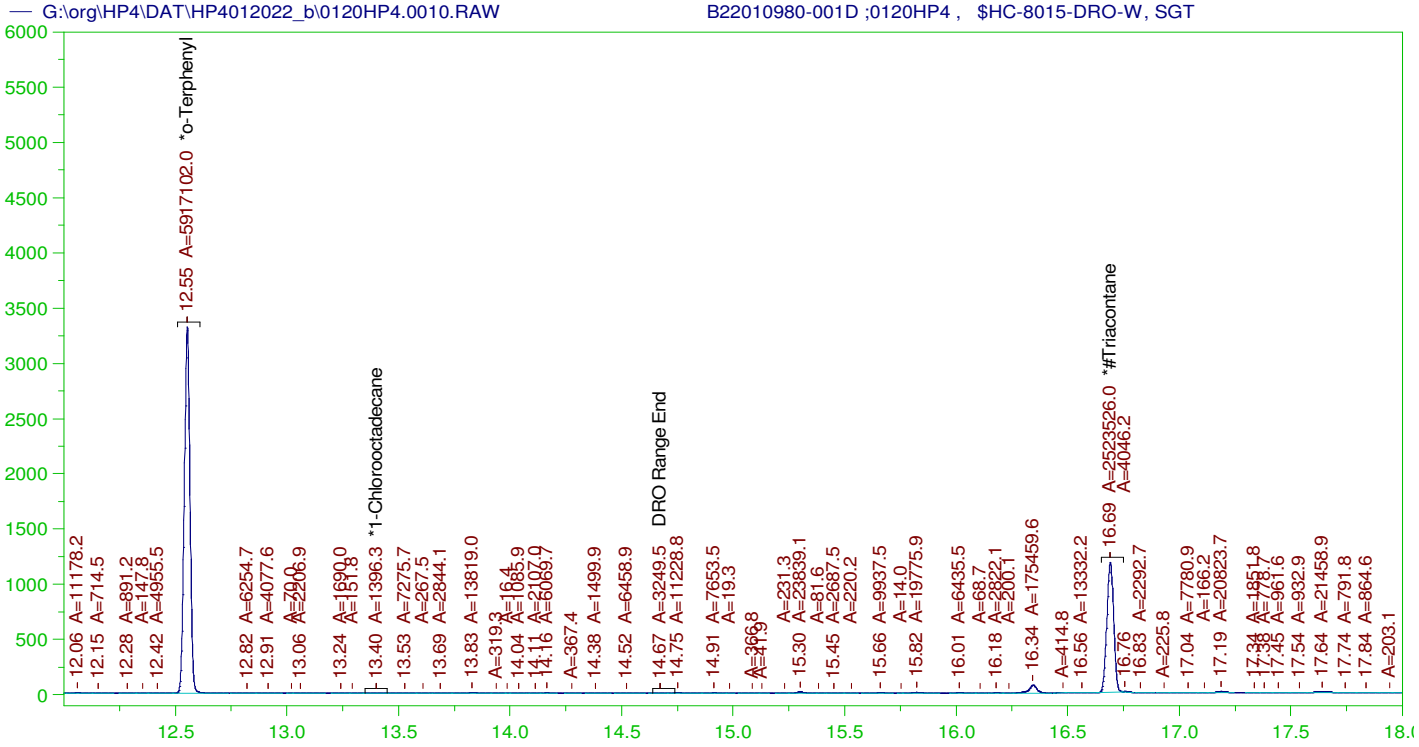


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010980-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0010.RAW
Date & Time Acquired: 1/20/2022 4:12:41 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

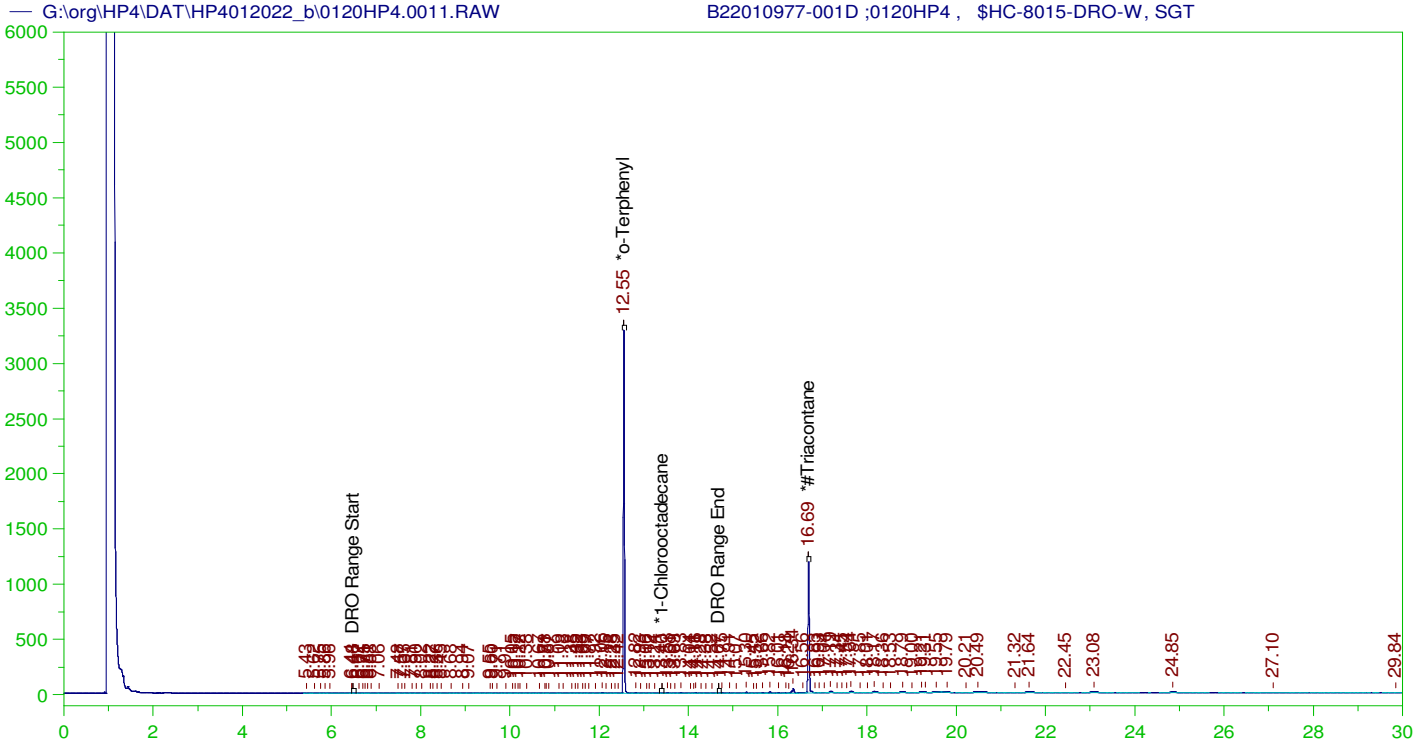
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.553	.194	.172	88.79	-
*1-Chlorooctadecane	13.401	.194	. .02		-
*#Triacontane	16.69	.194	.098	50.52	-

DRO Area:169495 DRO Amount: 5.602312E-03
TEH Area:745371.1 TEH Amount: 2.463672E-02

ERH2400 (OWDFMW05A) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0011.RAW B22010977-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010977-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0011.RAW
Date & Time Acquired: 1/20/2022 4:57:54 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.194	.173	89.03	-
*1-Chlorooctadecane	13.401	.194	.	.07	-
*#Triacontane	16.69	.194	.1	51.29	-

DRO Area:259544.2 DRO Amount: 8.578705E-03
TEH Area:852297.1 TEH Amount: 2.817094E-02

ERH2400 (OWDFMW05A) Batch ID: 162993

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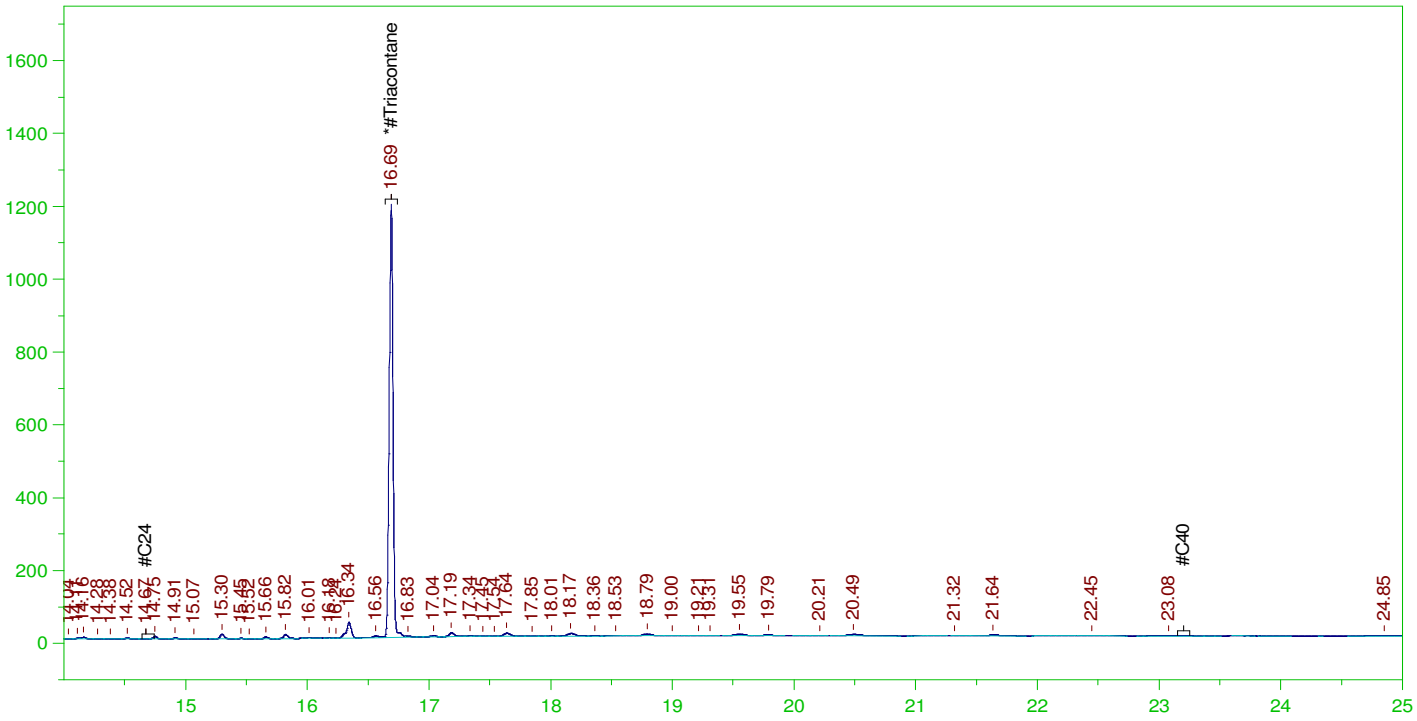


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010977-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0011.RAW
Date & Time Acquired: 1/20/2022 4:57:54 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

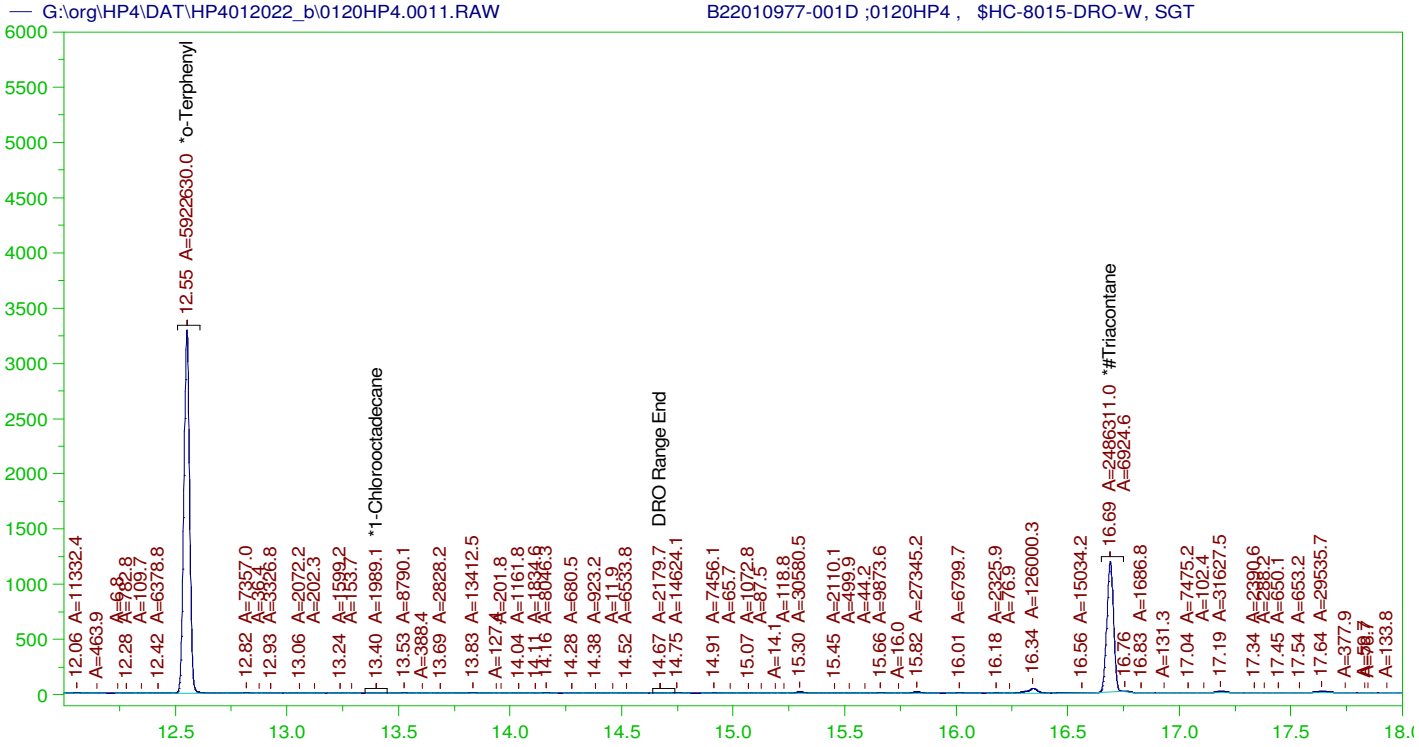
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.69	.485	.1	20.51	-

RRO Area:505273.8 RRO AMOUNT: 1.999861E-02

ERH2400 (OWDFMW05A) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0011.RAW B22010977-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010977-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0011.RAW
Date & Time Acquired: 1/20/2022 4:57:54 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

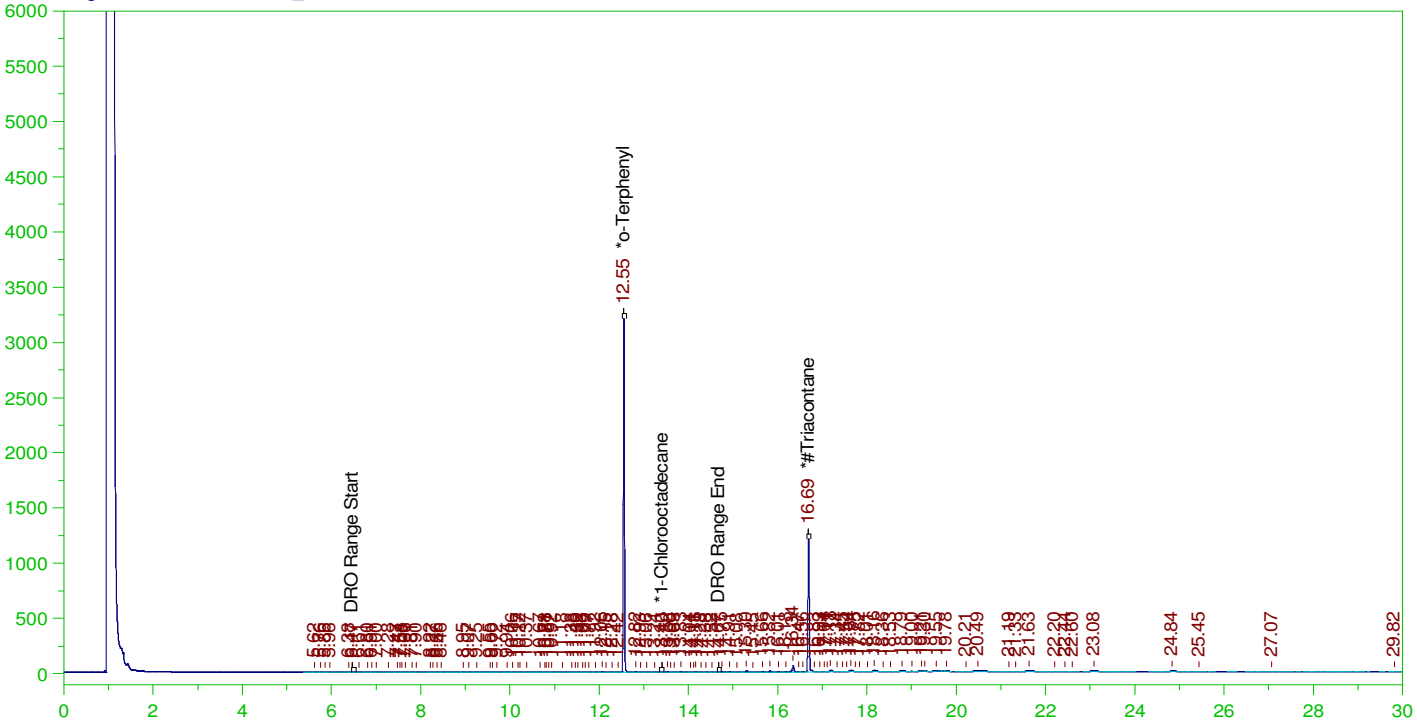
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.194	.173	88.88	-
*1-Chlorooctadecane	13.401	.194	.	.03	-
*#Triacontane	16.69	.194	.097	49.78	-

DRO Area:148842.8 DRO Amount: 4.919694E-03
TEH Area:681770.9 TEH Amount: 2.253455E-02

ERH2412 (RHMW11 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0012.RAW B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0012.RAW
Date & Time Acquired: 1/20/2022 5:43:13 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

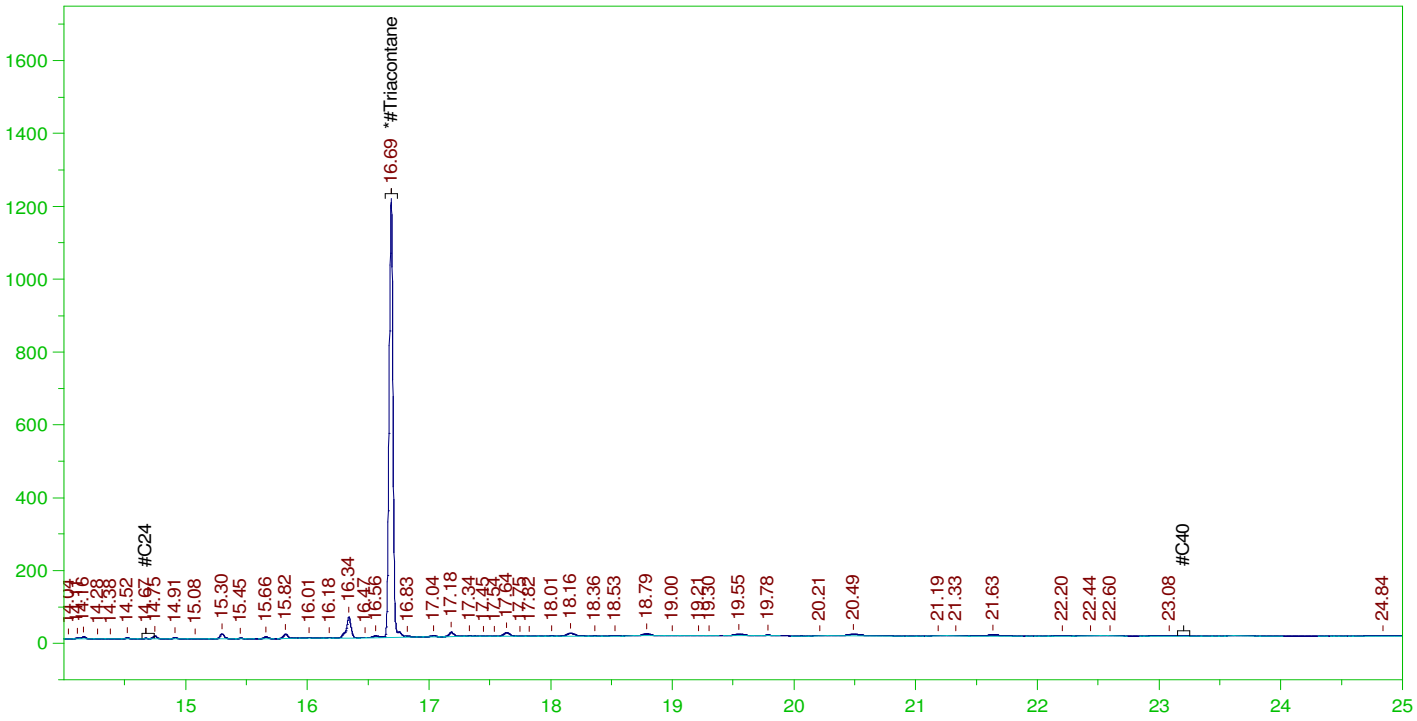
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.2	.17	85.07	-
*1-Chlorooctadecane	13.4	.2	.	.07	-
*#Triacontane	16.689	.2	.106	52.79	-

DRO Area:247951.9 DRO Amount: 8.44141E-03
TEH Area:915778.7 TEH Amount: 3.117727E-02

ERH2412 (RHMW11 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0012.RAW B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0012.RAW
Date & Time Acquired: 1/20/2022 5:43:13 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

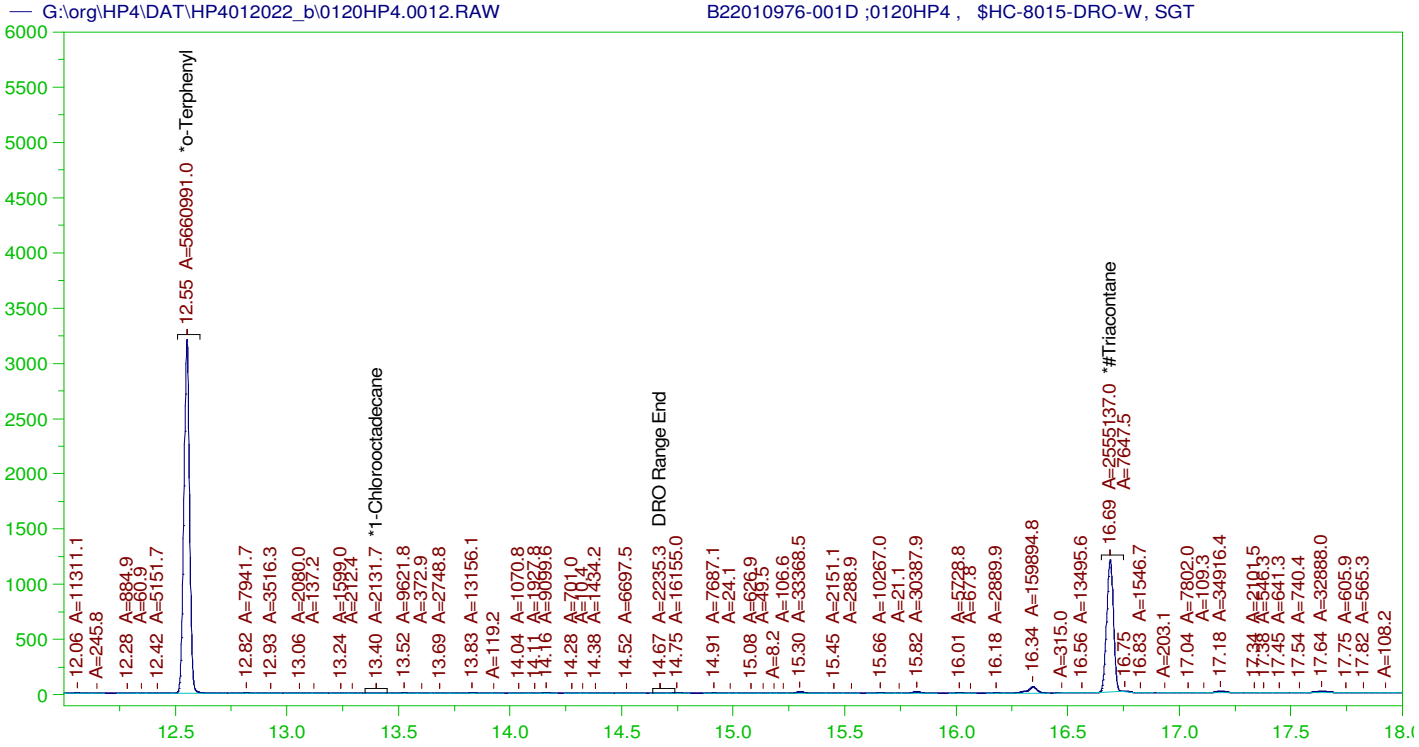
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.689	.5	.106	21.11	-

RRO Area:580349.2 RRO AMOUNT: 2.365917E-02

ERH2412 (RHMW11 zone 5) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0012.RAW B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT



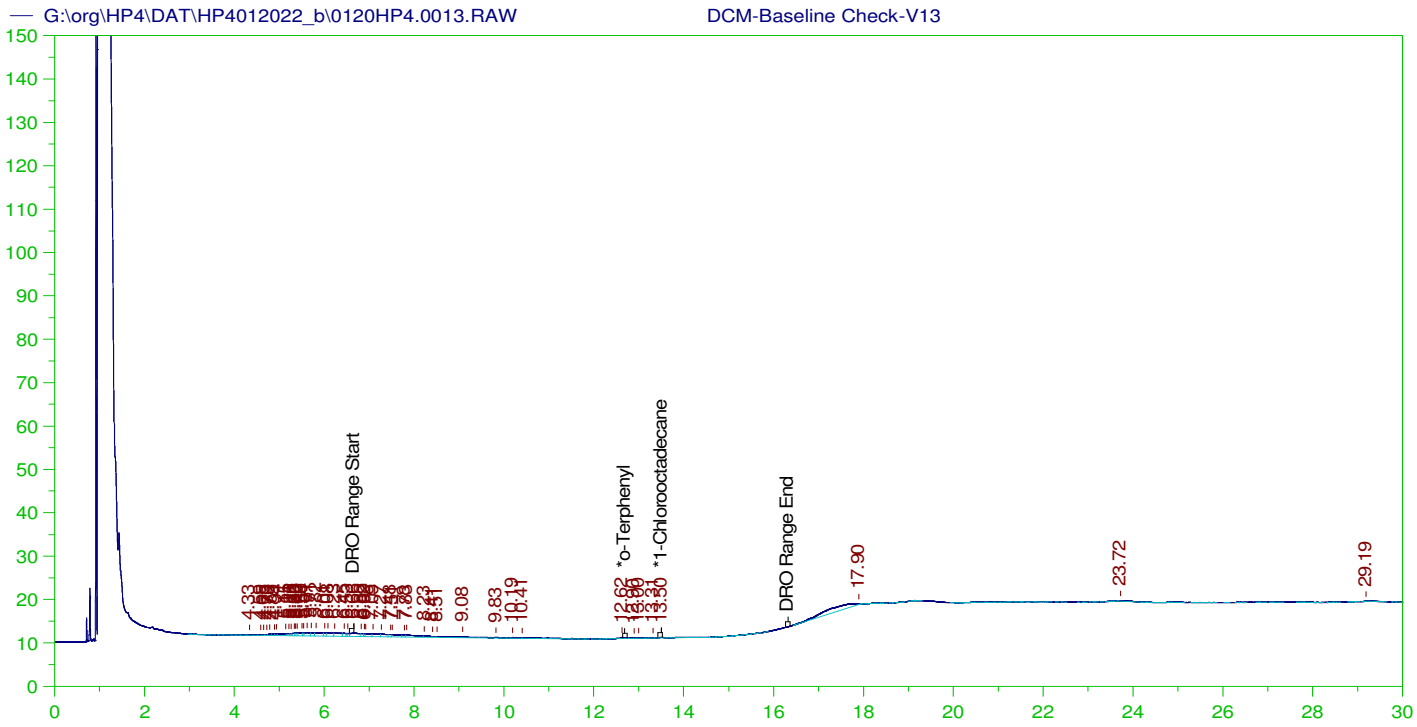
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0012.RAW
Date & Time Acquired: 1/20/2022 5:43:13 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.2	.17	84.95	-
*1-Chlorooctadecane	13.4	.2	.	.03	-
*#Triacontane	16.689	.2	.102	51.16	-

DRO Area:150939.8 DRO Amount: 5.138676E-03
TEH Area:766021.7 TEH Amount: 2.607886E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V13
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0013.RAW
Date & Time Acquired: 1/20/2022 6:28:24 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

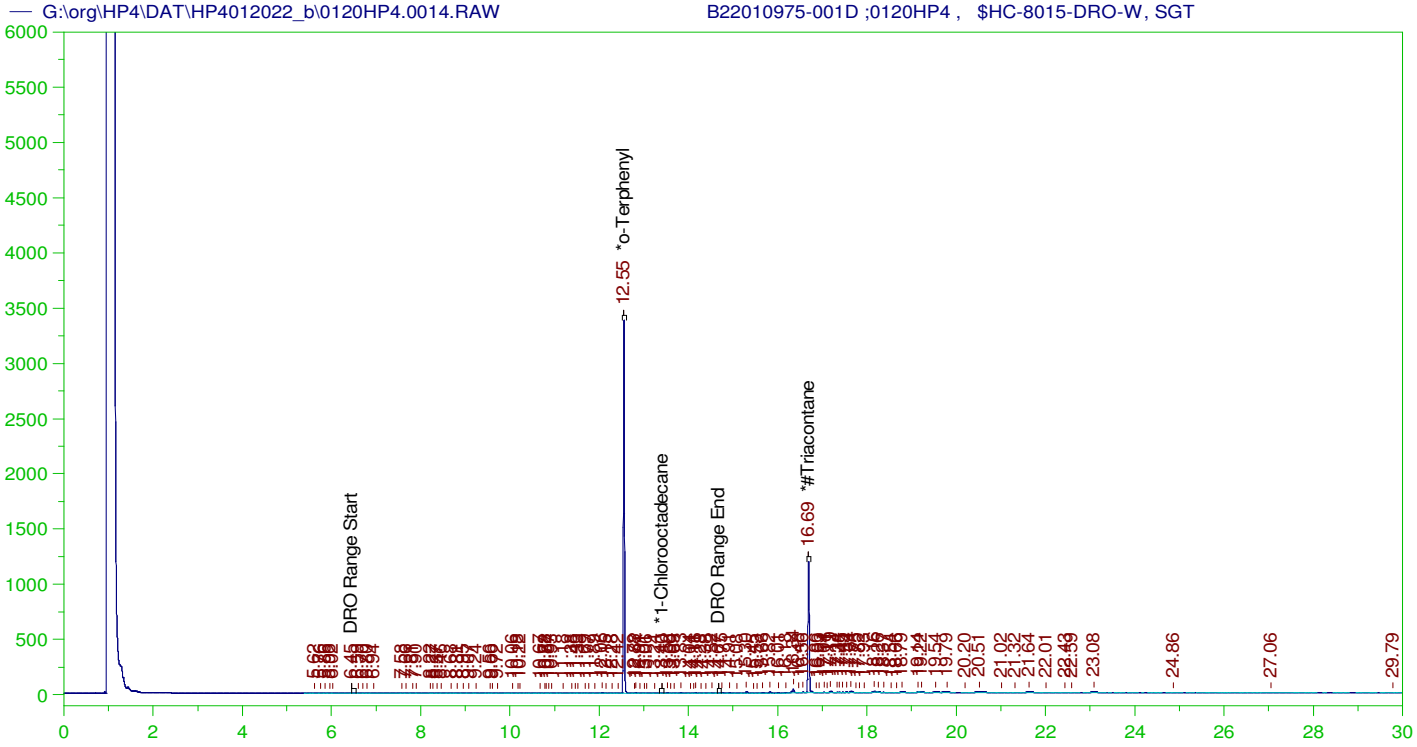
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.854	200.	.	-
*1-Chlorooctadecane	13.504	200.	.031	.02 -

DRO Area:80410.08 DRO Amount: 2.737525
TEH Area:209397.2 TEH Amount: 7.128833

ERH2416 (RHMW09) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0014.RAW B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0014.RAW
Date & Time Acquired: 1/20/2022 7:13:38 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

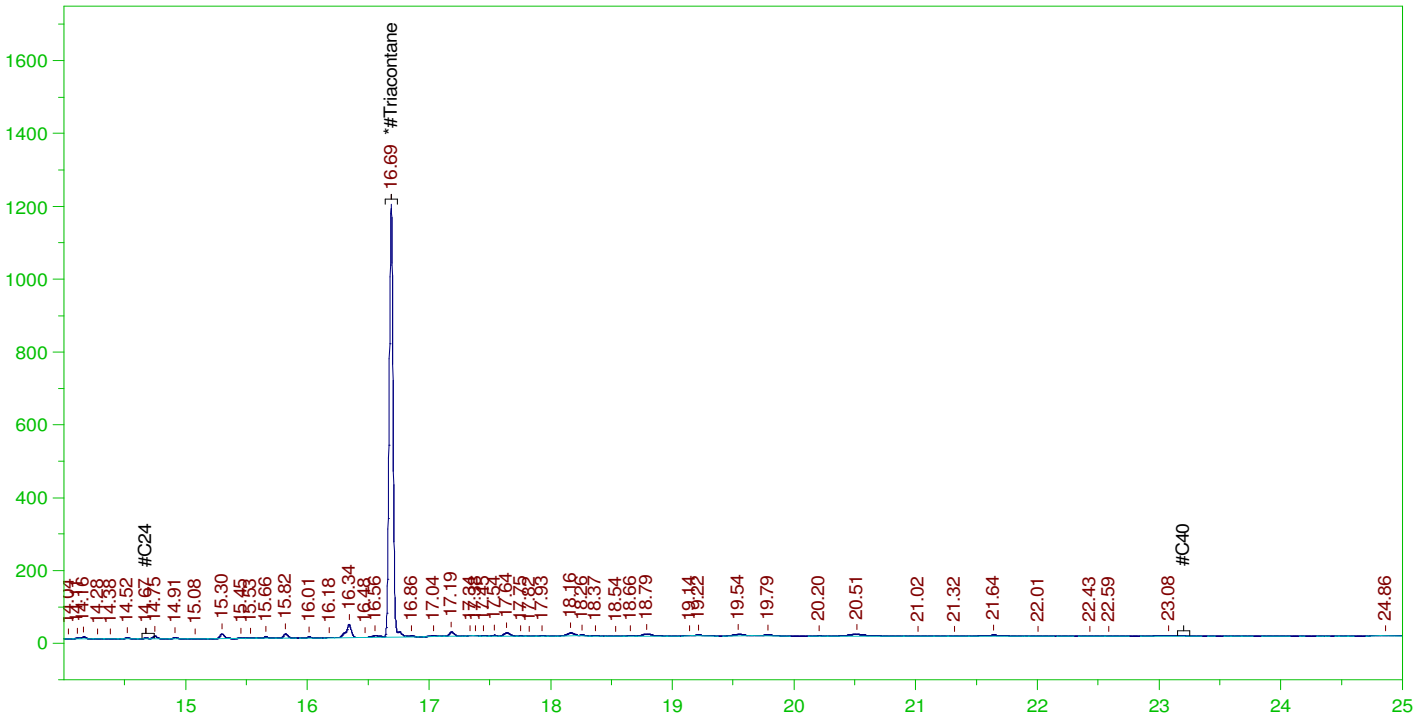
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.206	.185	89.72	-
*1-Chlorooctadecane	13.402	.206	.	.03	-
*#Triacontane	16.69	.206	.109	52.68	-

DRO Area:249695.2 DRO Amount: 8.763669E-03
TEH Area:897067.7 TEH Amount: 3.148481E-02

ERH2416 (RHMW09) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0014.RAW B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0014.RAW
Date & Time Acquired: 1/20/2022 7:13:38 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

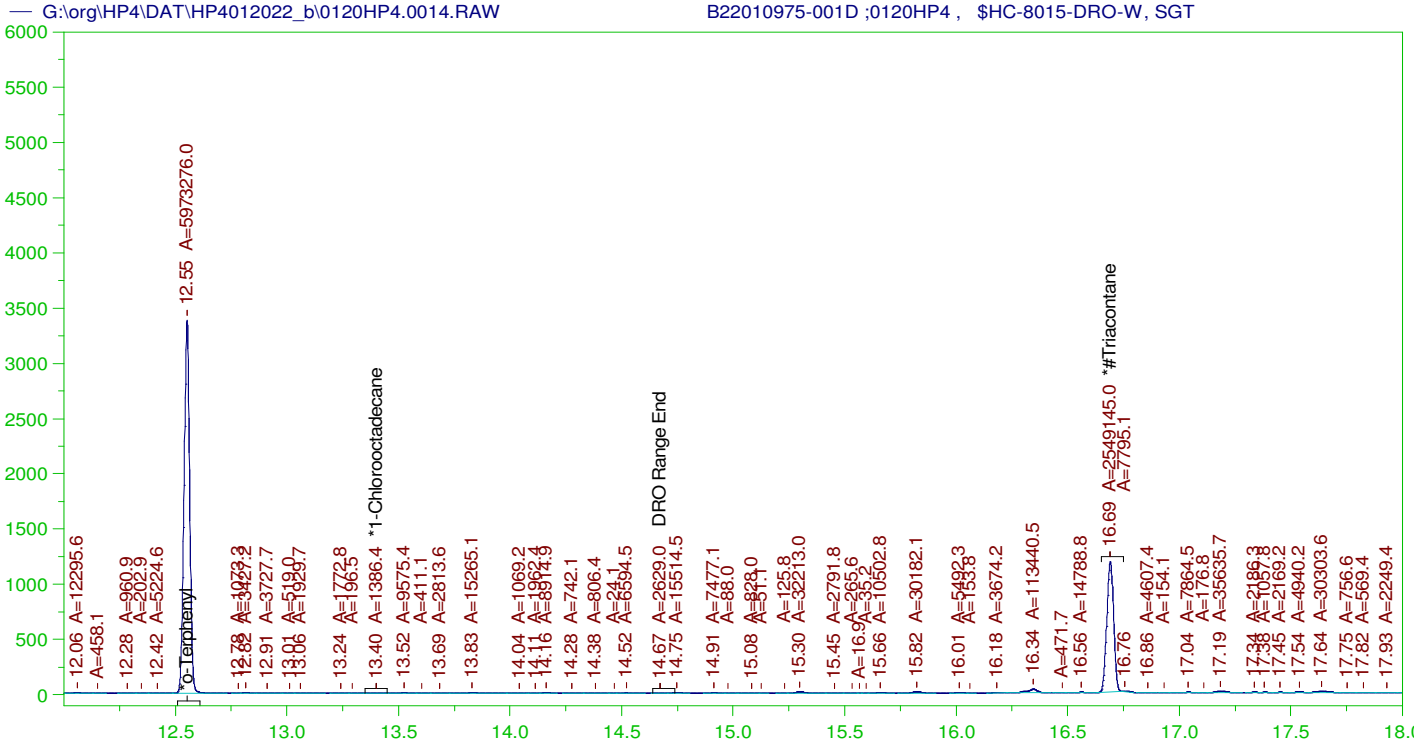
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.69	.515	.109	21.07	-

RRO Area:572304.1 RRO AMOUNT: 2.405278E-02

ERH2416 (RHMW09) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0014.RAW B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0014.RAW
Date & Time Acquired: 1/20/2022 7:13:38 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

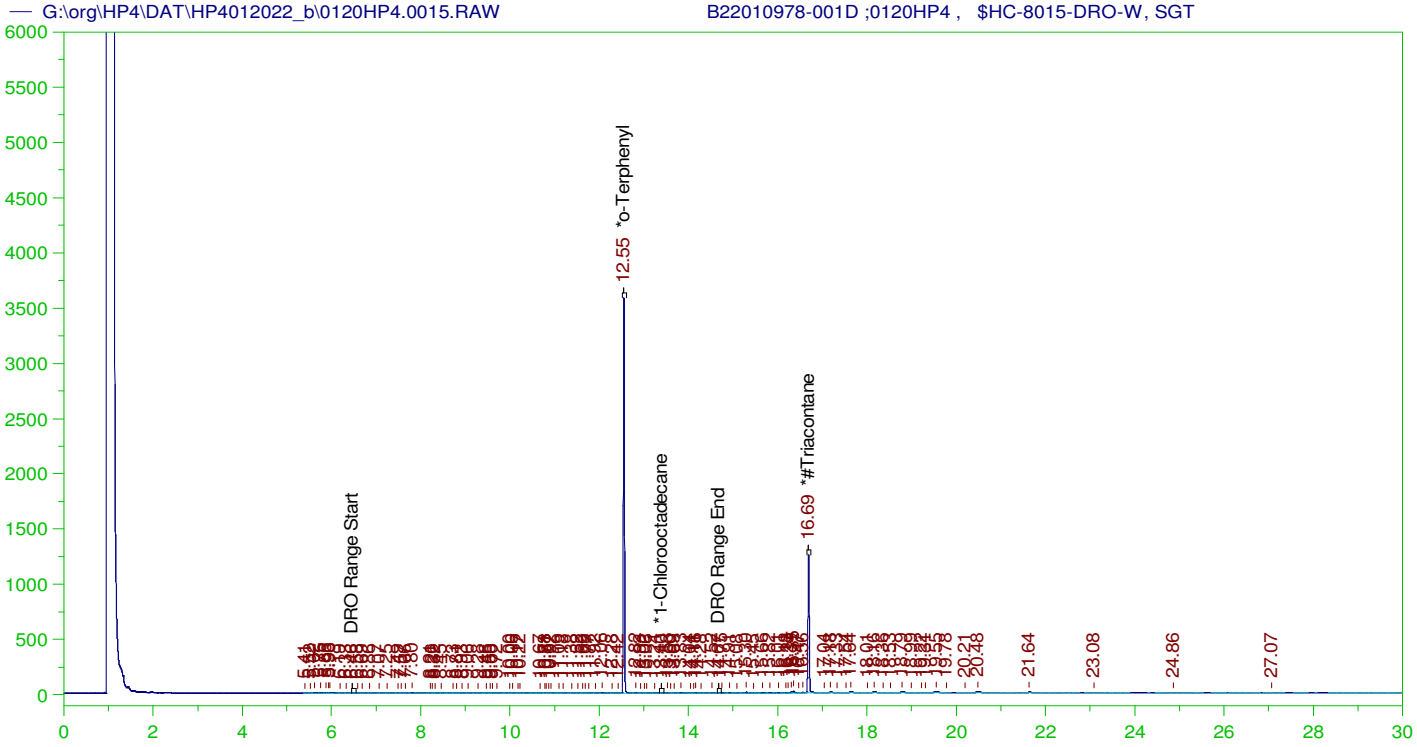
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.206	.185	89.64	-
*1-Chlorooctadecane	13.402	.206	.	.02	-
*#Triacontane	16.69	.206	.105	51.04	-

DRO Area:226967.3 DRO Amount: 7.965977E-03
TEH Area:884115.9 TEH Amount: 3.103023E-02

ERH2398 (OWDFMW04A) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0015.RAW B22010978-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010978-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0015.RAW
Date & Time Acquired: 1/20/2022 7:58:42 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.198	.189	95.61	-
*1-Chlorooctadecane	13.398	.198	.	.03	-
*#Triacontane	16.689	.198	.108	54.48	-

DRO Area:299674.1 DRO Amount: 1.010126E-02
TEH Area:814337 TEH Amount: 2.744924E-02

ERH2398 (OWDFMW04A) Batch ID: 162993

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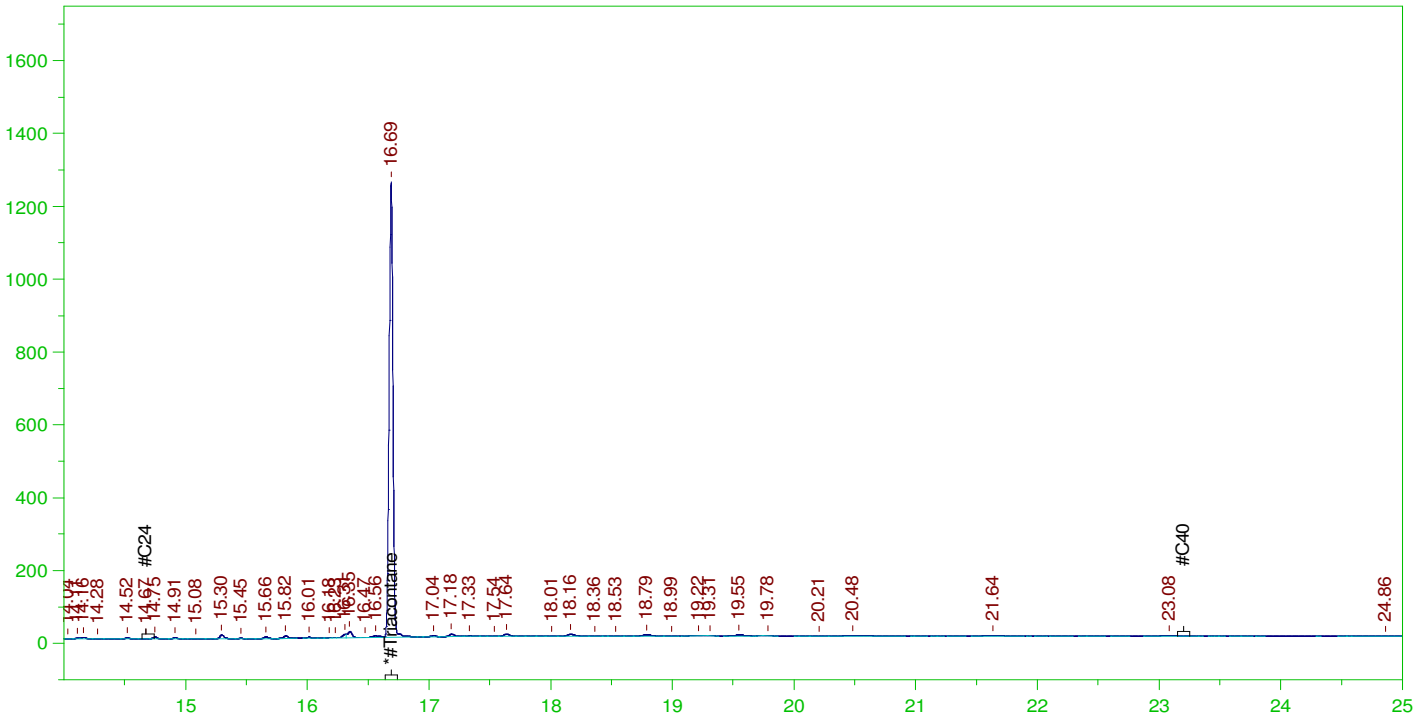

RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010978-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0015.RAW
Date & Time Acquired: 1/20/2022 7:58:42 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.689	.495	.108	21.79	-

RRO Area:339560 RRO AMOUNT: 1.370583E-02

ERH2398 (OWDFMW04A) Batch ID: 162993

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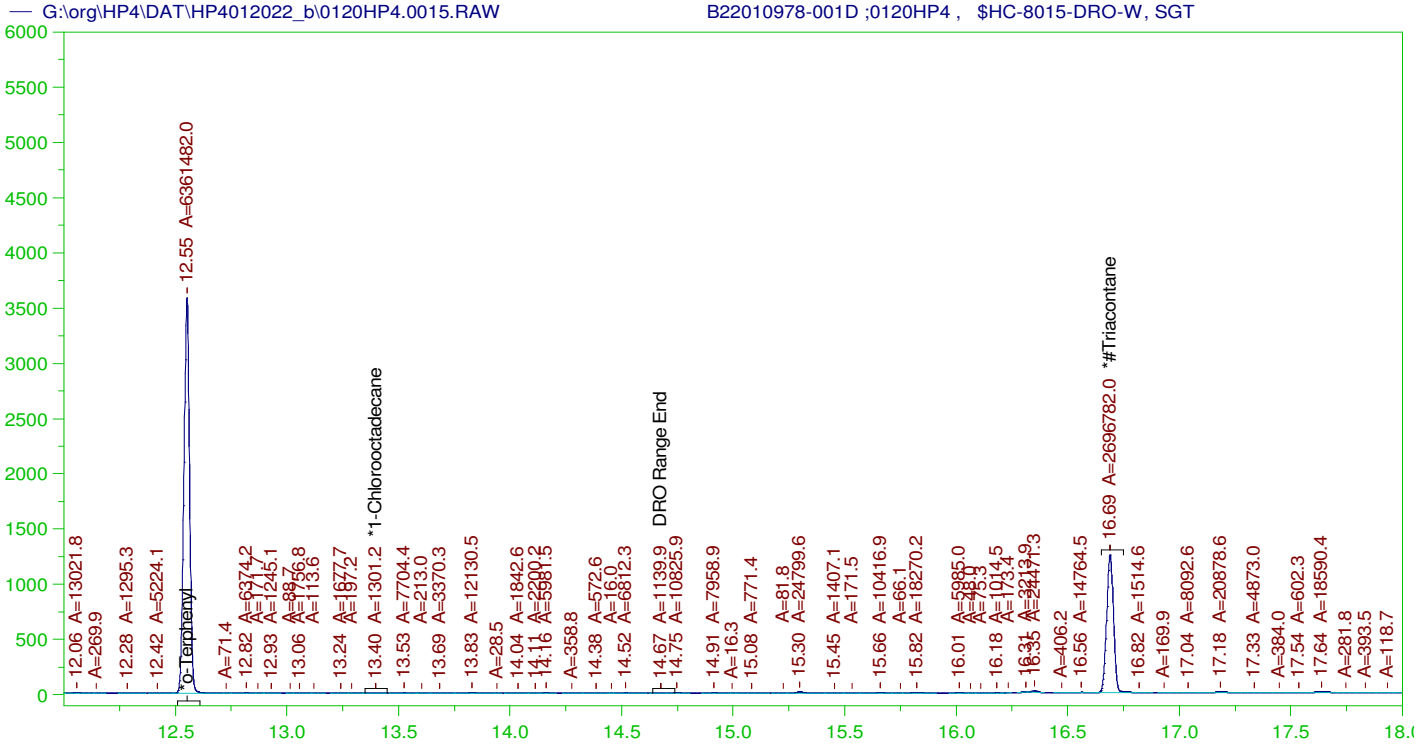


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010978-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0015.RAW
Date & Time Acquired: 1/20/2022 7:58:42 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

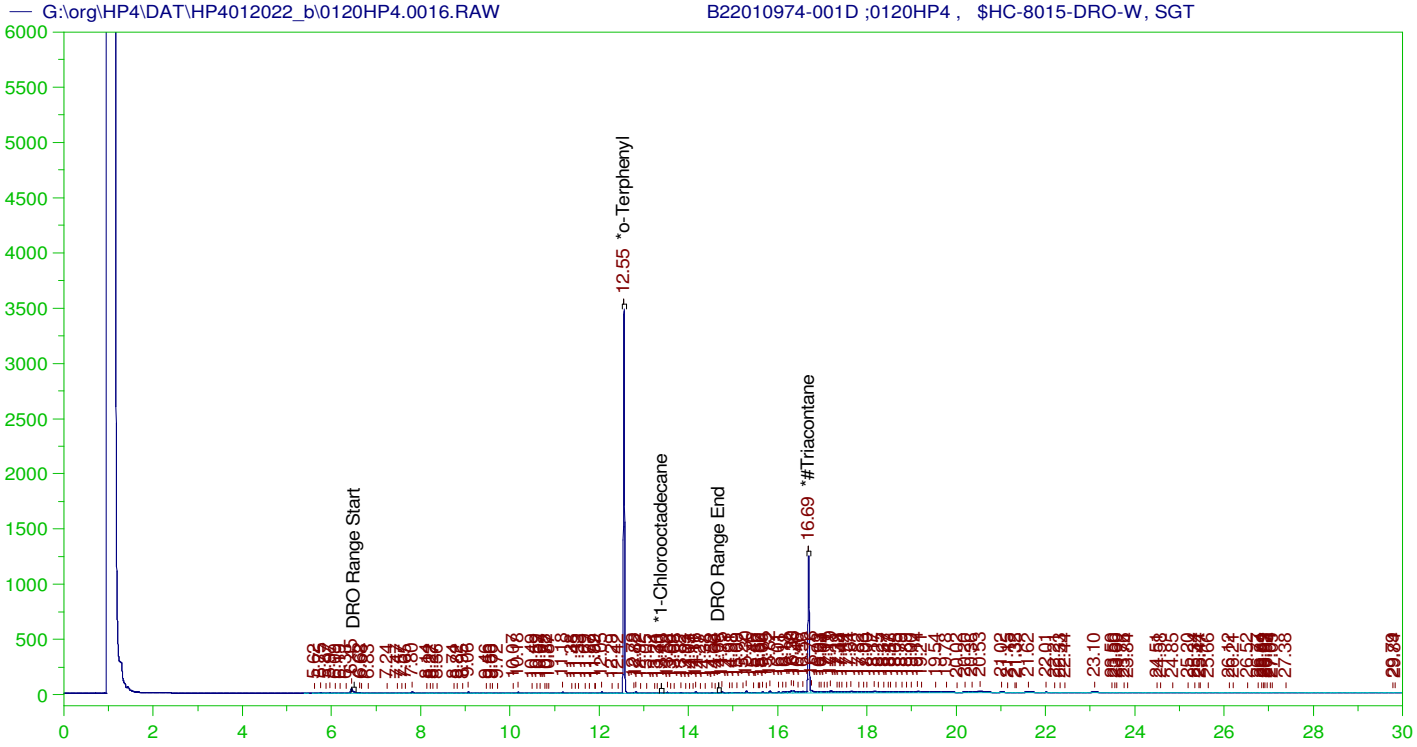
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.552	.198	.189	95.46	-
*1-Chlorooctadecane	13.398	.198	.	.02	-
*#Triacontane	16.689	.198	.107	53.99	-

DRO Area:220197.2 DRO Amount: 7.42229E-03
TEH Area:720557.4 TEH Amount: 2.428817E-02

ERH2420 (RHMW19) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0016.RAW B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0016.RAW
Date & Time Acquired: 1/20/2022 8:43:44 PM
Method File: G:\Org\HP4\methods\DR_8015-012016-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

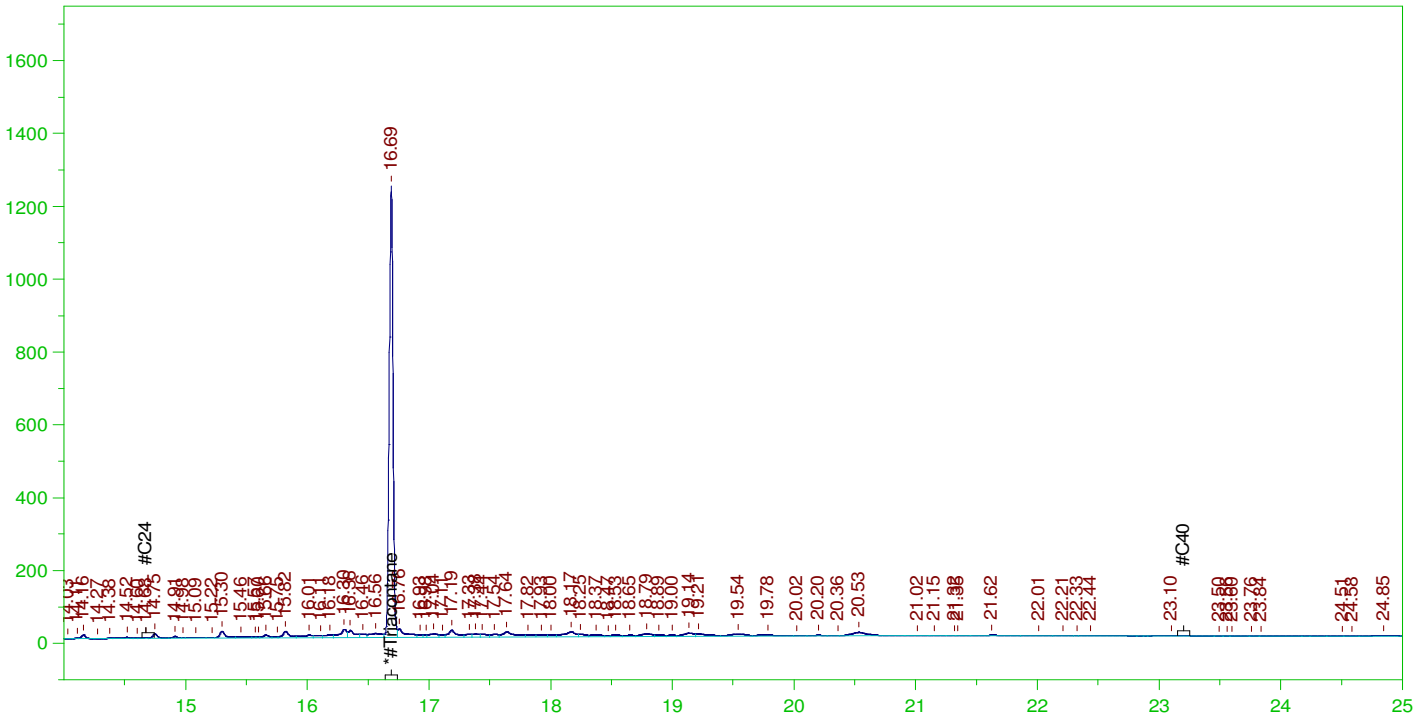
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.554	.202	.188	92.91	-
*1-Chlorooctadecane	13.397	.202	.	.02	-
*#Triacontane	16.69	.202	.109	53.89	-

DRO Area:421348.3 DRO Amount: 1.448951E-02
TEH Area:2877787 TEH Amount: 9.896259E-02

ERH2420 (RHMW19) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0016.RAW B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0016.RAW
Date & Time Acquired: 1/20/2022 8:43:44 PM
Method File: G:\Org\HP4\Methods\DR_ORO-012016-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

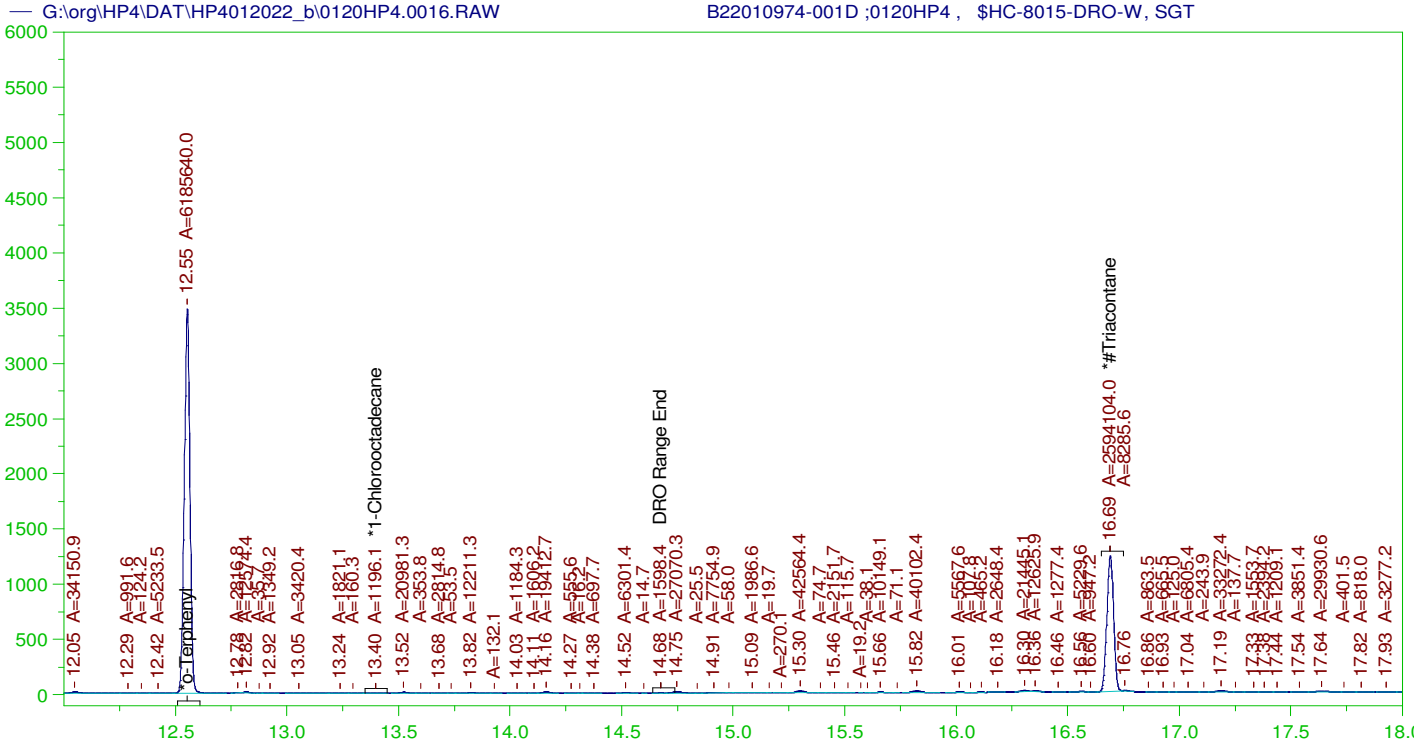
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.69	.505	.109	21.56	-

RRO Area:2165425 RRO AMOUNT: 8.916985E-02

G:\org\HP4\dat\HP4012022_b\Review\016_B22010974-001D_DR_ORO-012016-AFa-L%.xls

ERH2420 (RHMW19) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0016.RAW B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0016.RAW
Date & Time Acquired: 1/20/2022 8:43:44 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

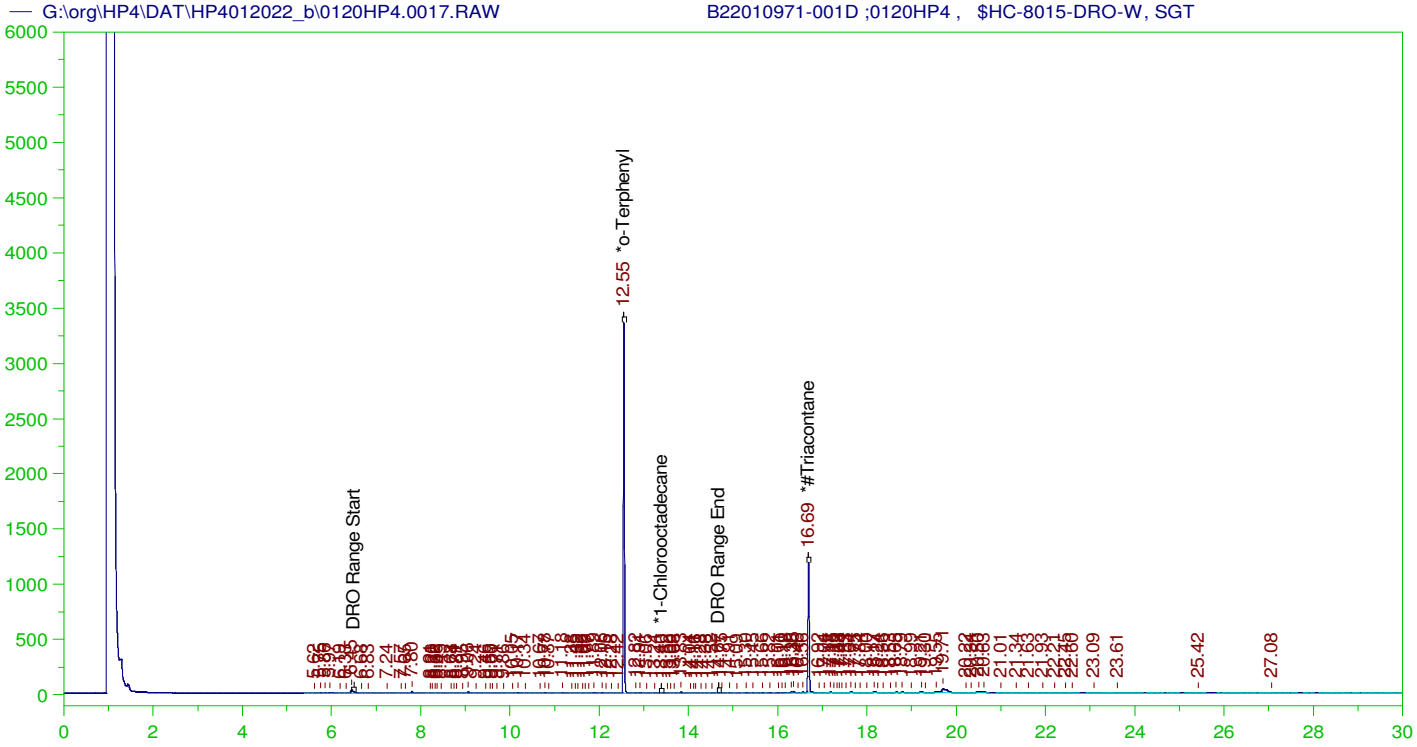
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.554	.202	.188	92.82	-
*1-Chlorooctadecane	13.397	.202	. .02		-
*#Triacontane	16.69	.202	.105	51.94	-

DRO Area:385236.2 DRO Amount: 1.324767E-02
TEH Area:1206761 TEH Amount: 4.149862E-02

ERH2410 (RHMW12A) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0017.RAW B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0017.RAW
Date & Time Acquired: 1/20/2022 9:28:34 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

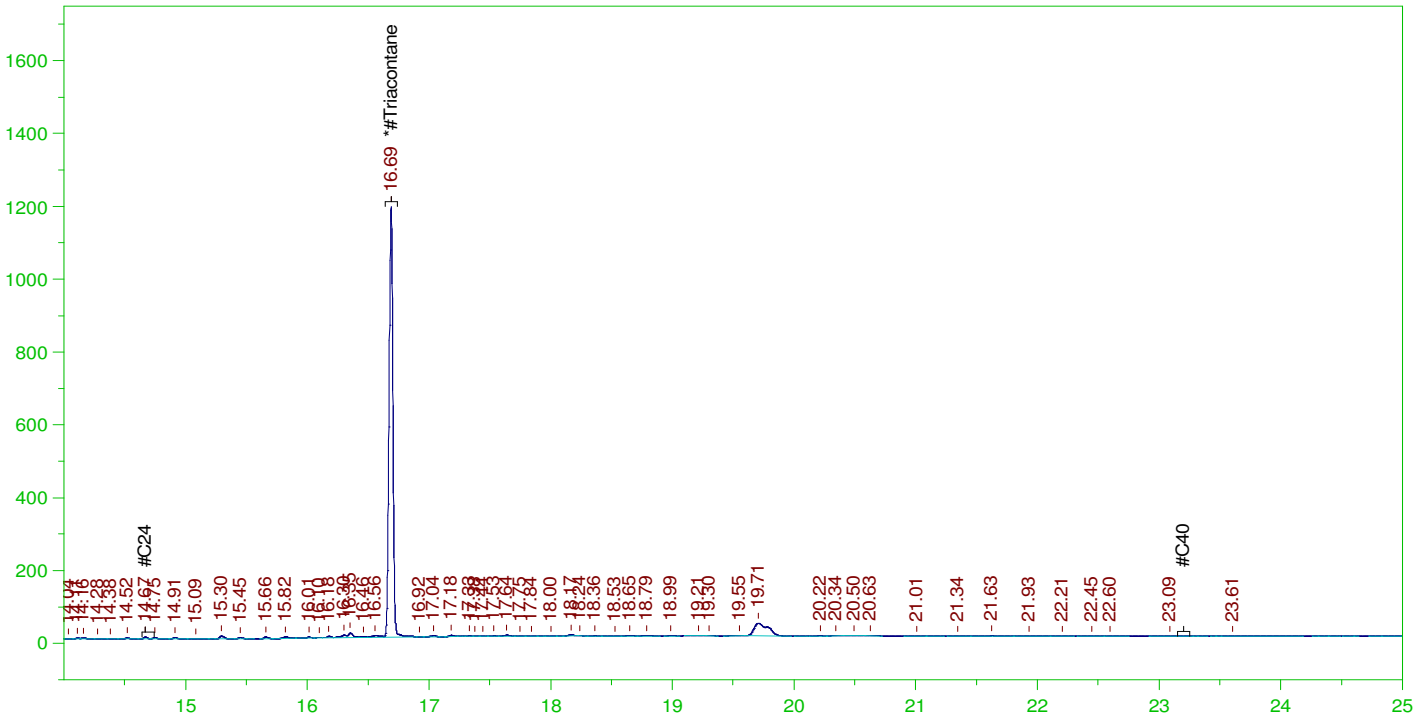
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.2	.182	91.09	-
*1-Chlorooctadecane	13.399	.2	.03		-
*#Triacontane	16.689	.2	.104	52.16	-

DRO Area:390043.5 DRO Amount: 1.327885E-02
TEH Area:1235592 TEH Amount: 4.206517E-02

ERH2410 (RHMW12A) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0017.RAW B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0017.RAW
Date & Time Acquired: 1/20/2022 9:28:34 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AFa-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

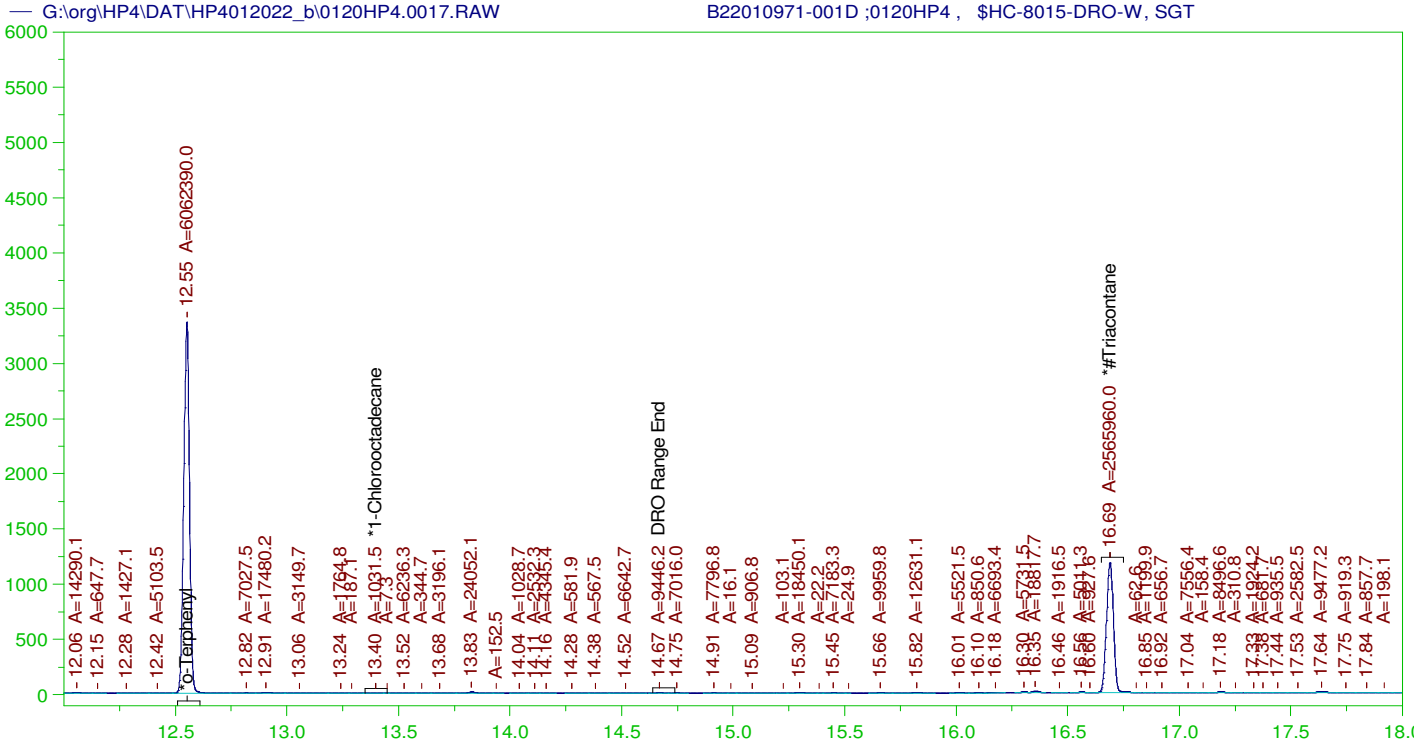
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.64 to 23.25

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.689	.5	.104	20.84	-

RRO Area:587857.9 RRO AMOUNT: 2.396528E-02

ERH2410 (RHMW12A) Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0017.RAW B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT



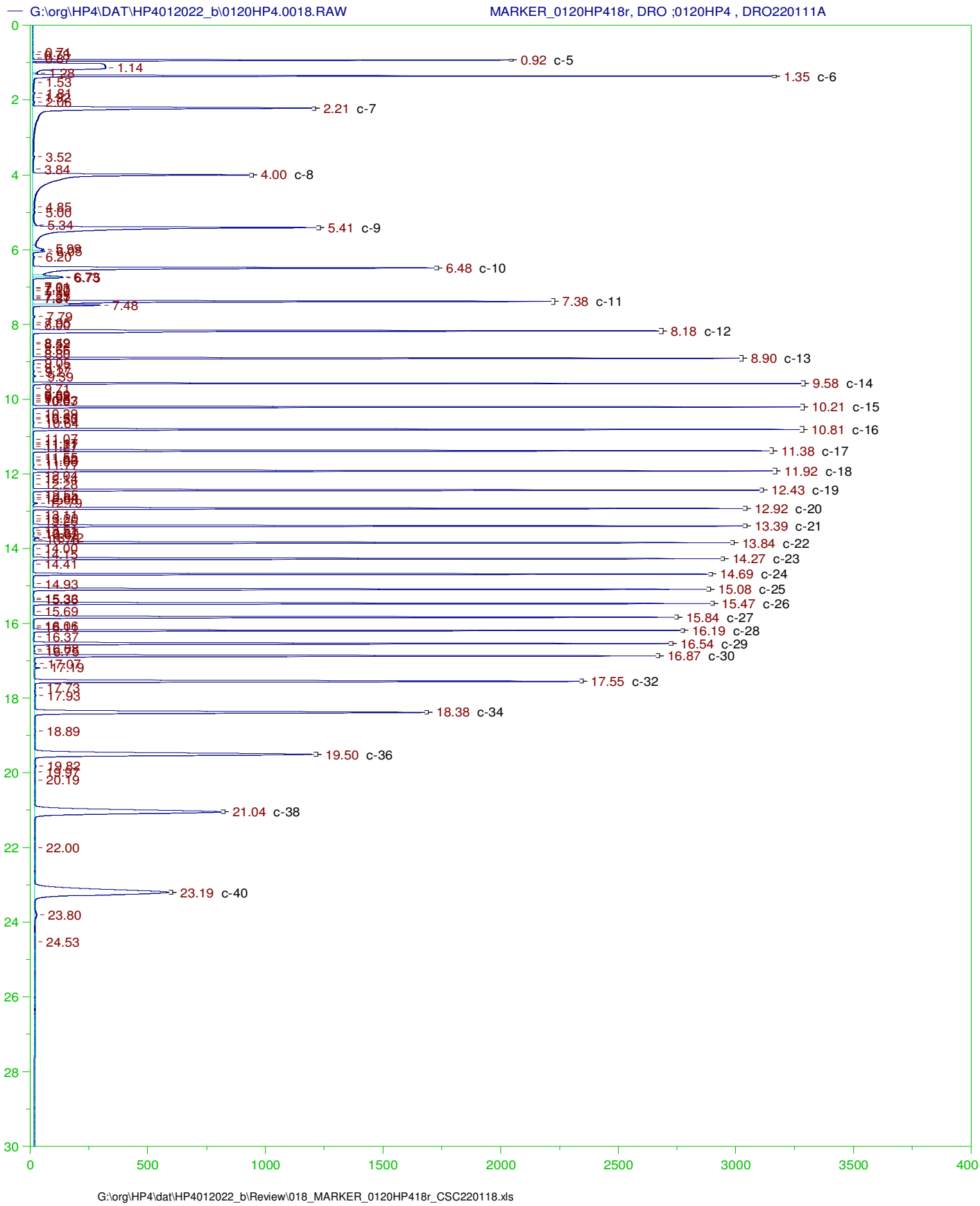
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0017.RAW
Date & Time Acquired: 1/20/2022 9:28:34 PM
Method File: G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.551	.2	.182	90.97	-
*1-Chlorooctadecane	13.399	.2	.	.02	-
*#Triacontane	16.689	.2	.103	51.37	-

DRO Area:376306.9 DRO Amount: 0.0128112
TEH Area:1010340 TEH Amount: 3.439658E-02


G:\org\HP4\DAT\HP4012022_b\0120HP4.0018.RAW
MARKER_0120HP418r, DRO ;0120HP4 , DRO220111A
0.92 c-5
1.14
1.35 c-6
2.21 c-7
3.52
4.00 c-8
5.41 c-9
6.48 c-10
6.75
7.38 c-11
7.48
8.18 c-12
8.90 c-13
9.58 c-14
10.21 c-15
10.81 c-16
11.38 c-17
11.92 c-18
12.43 c-19
12.92 c-20
13.39 c-21
13.84 c-22
14.27 c-23
14.69 c-24
15.08 c-25
15.47 c-26
15.69
15.84 c-27
16.19 c-28
16.37
16.54 c-29
16.87 c-30
17.55 c-32
17.73
17.93
18.38 c-34
18.89
19.50 c-36
19.82
20.19
21.04 c-38
22.00
23.19 c-40
23.80
24.53
0
500
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1500
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3000
3500
400
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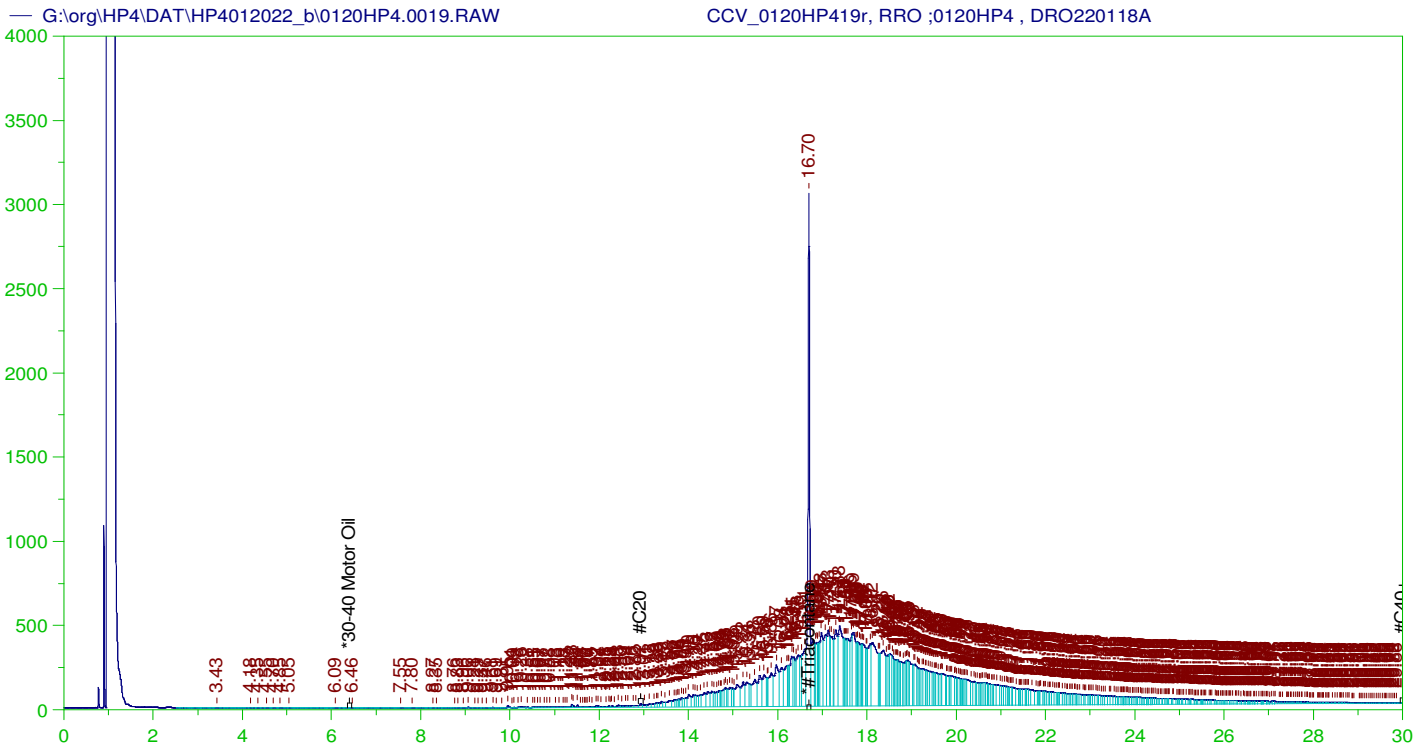


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP419r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0019.RAW
Date & Time Acquired: 1/20/2022 10:58:17 PM
Method File: G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.697	500.	343.924	68.78	-

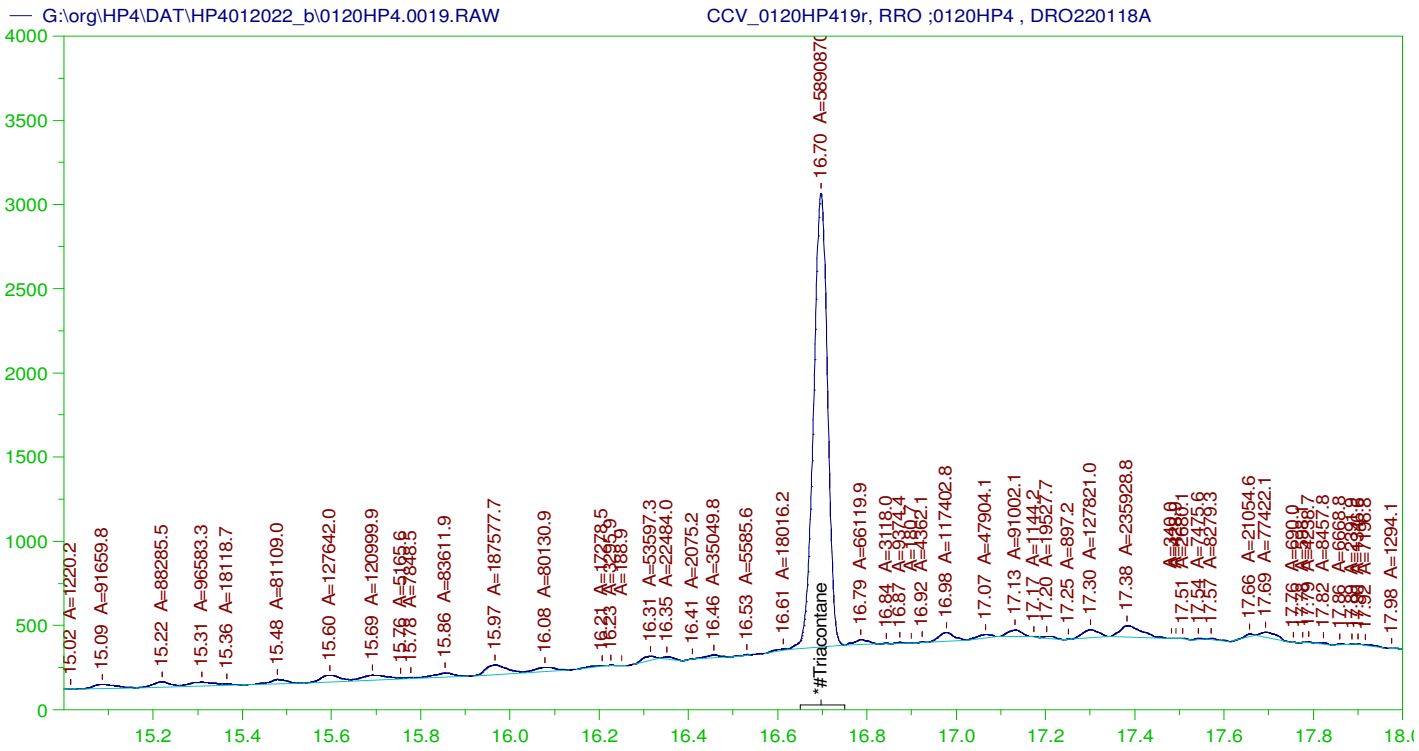
~~RRO~~ TEH(Oil Range) Area:1.136066E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4631.416

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0019.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.697	200.	343.924	171.96	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP419r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0019.RAW
Date & Time Acquired: 1/20/2022 10:58:17 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

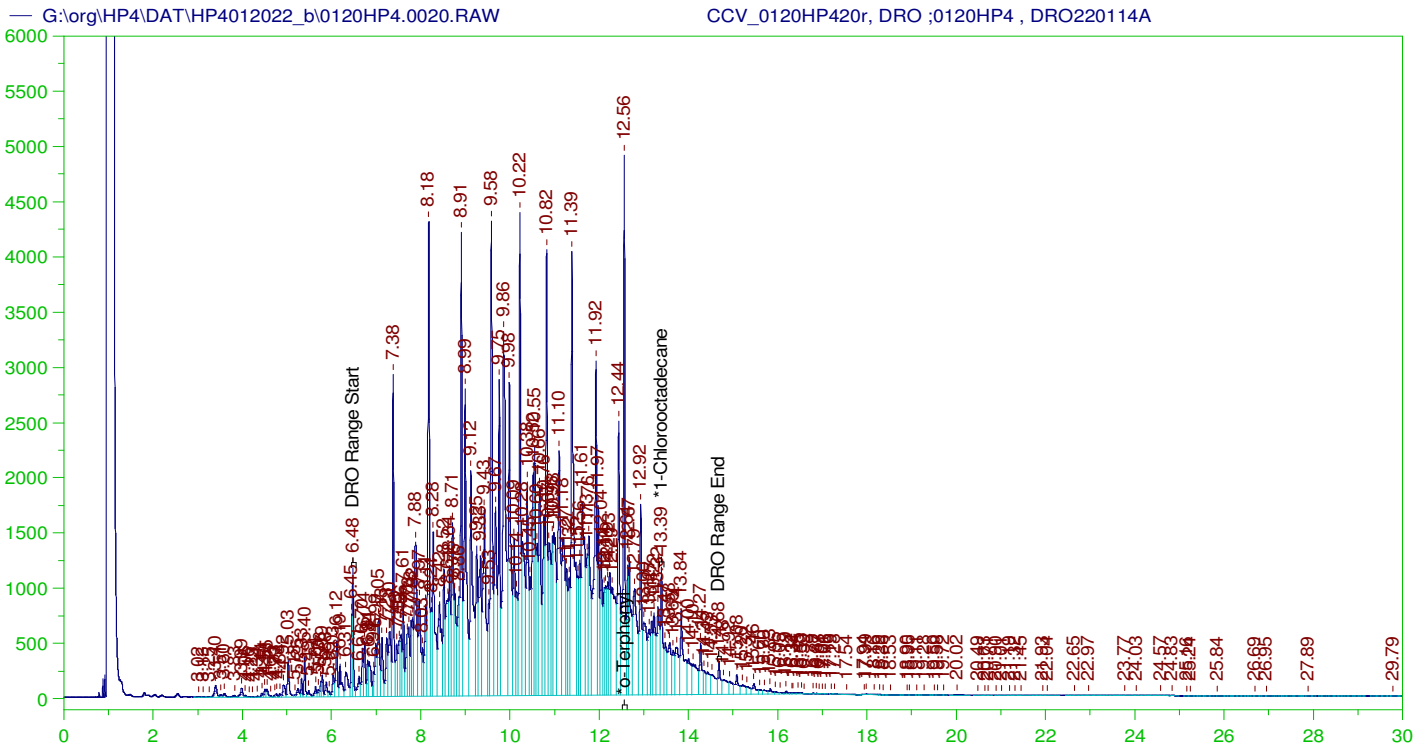
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.697	500.	235.882	47.18	-

RRO Area:3422719 RRO AMOUNT: 139.5345

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0019.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.697	200.	235.882	117.94	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0120HP420r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0020.RAW
Date & Time Acquired: 1/20/2022 11:43:06 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

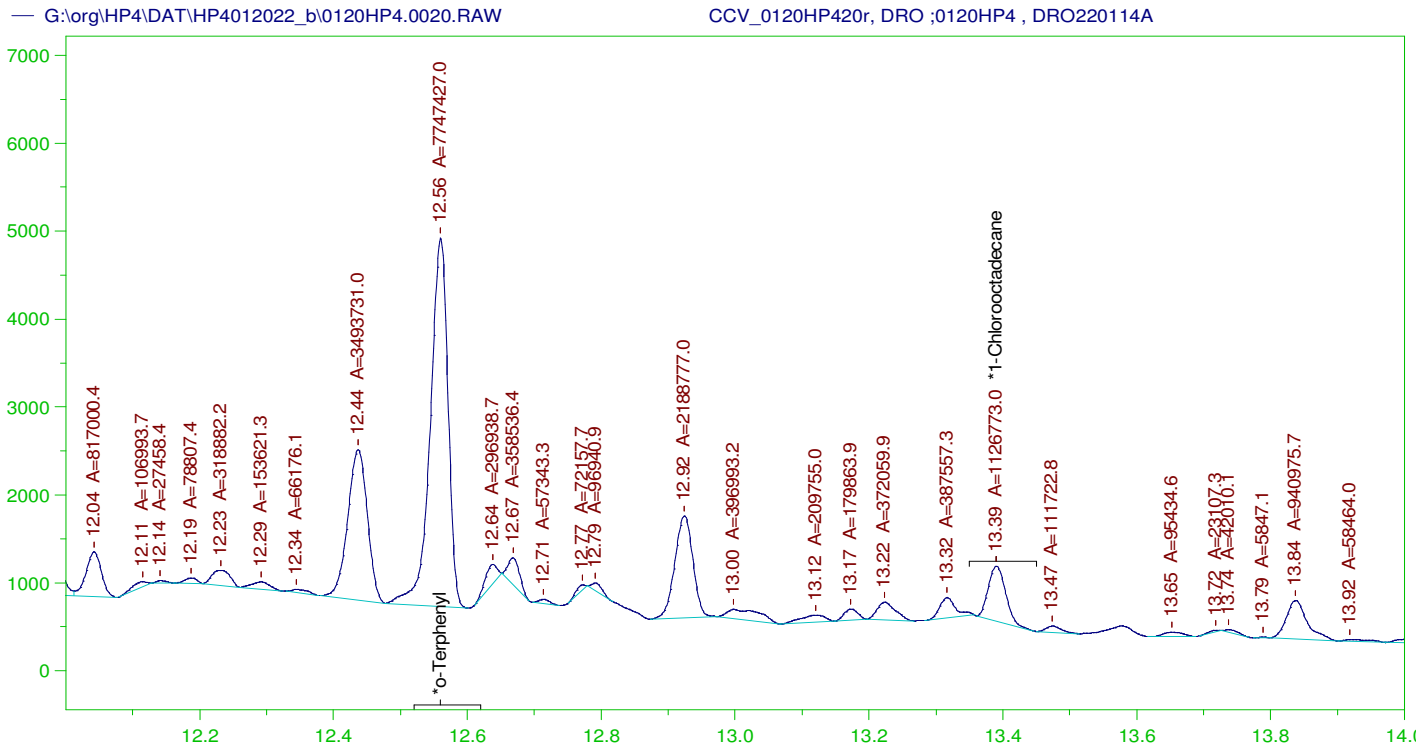
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.56	200.	388.247	194.12	-
*1-Chlorooctadecane	13.39	200.	114.355	57.18	-

DRO Area:4.444251E+08 DRO Amount: 15130.25
TEH Area:4.608984E+08 TEH Amount: 15691.08

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15691.08	104.61	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.56	200.	388.247	194.12	85-115
*1-Chlorooctadecane	13.39	200.	114.355	57.18	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0120HP420r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0020.RAW
Date & Time Acquired: 1/20/2022 11:43:06 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.56	200.	232.518	116.26	-
*1-Chlorooctadecane	13.39	200.	33.817	16.91	-

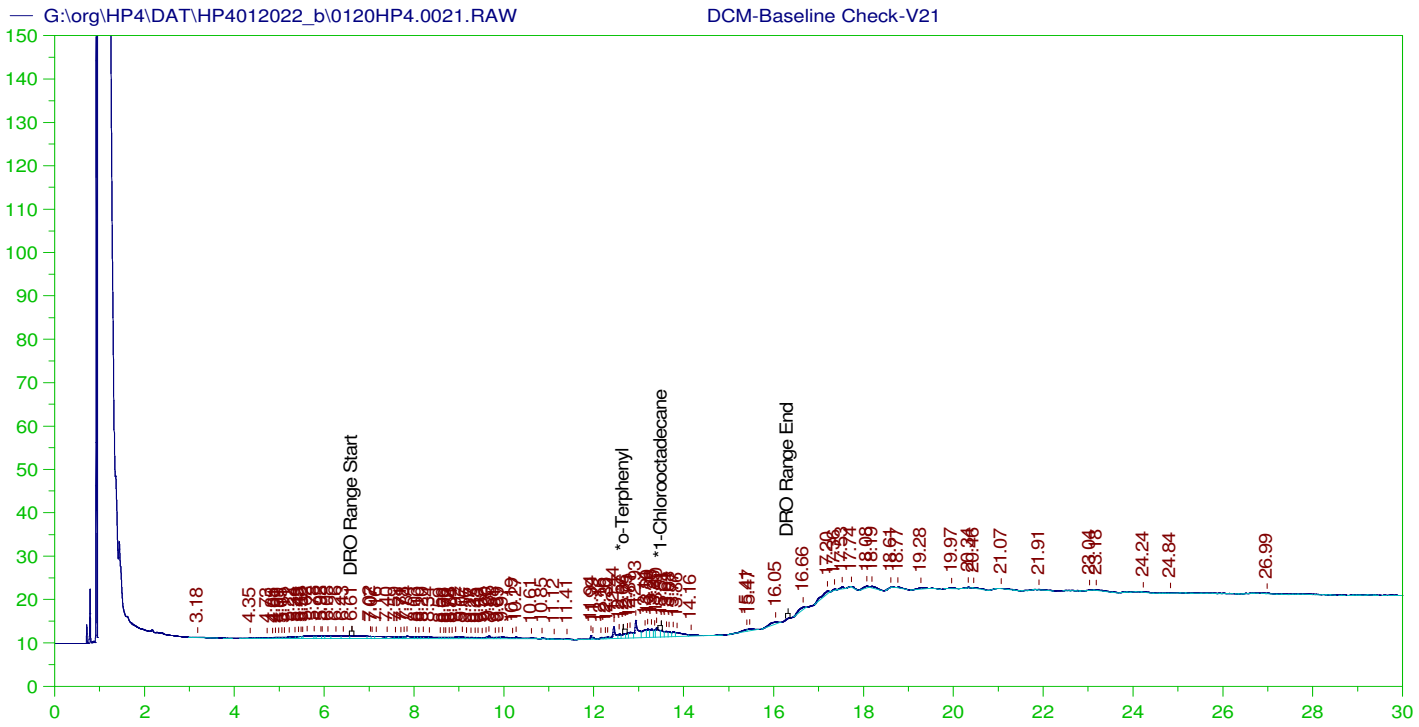
DRO Area:1.978833E+08 DRO Amount: 6736.848
TEH Area:2.080709E+08 TEH Amount: 7083.682

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7083.68	47.22	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.56	200.	232.518	116.26	85-115
*1-Chlorooctadecane	13.39	200.	33.817	16.91	85-115

G:\org\HP4\dat\HP4012022_b\Review\020_CCV_0120HP420r_DS_8015-C24b-OM-L#.xls



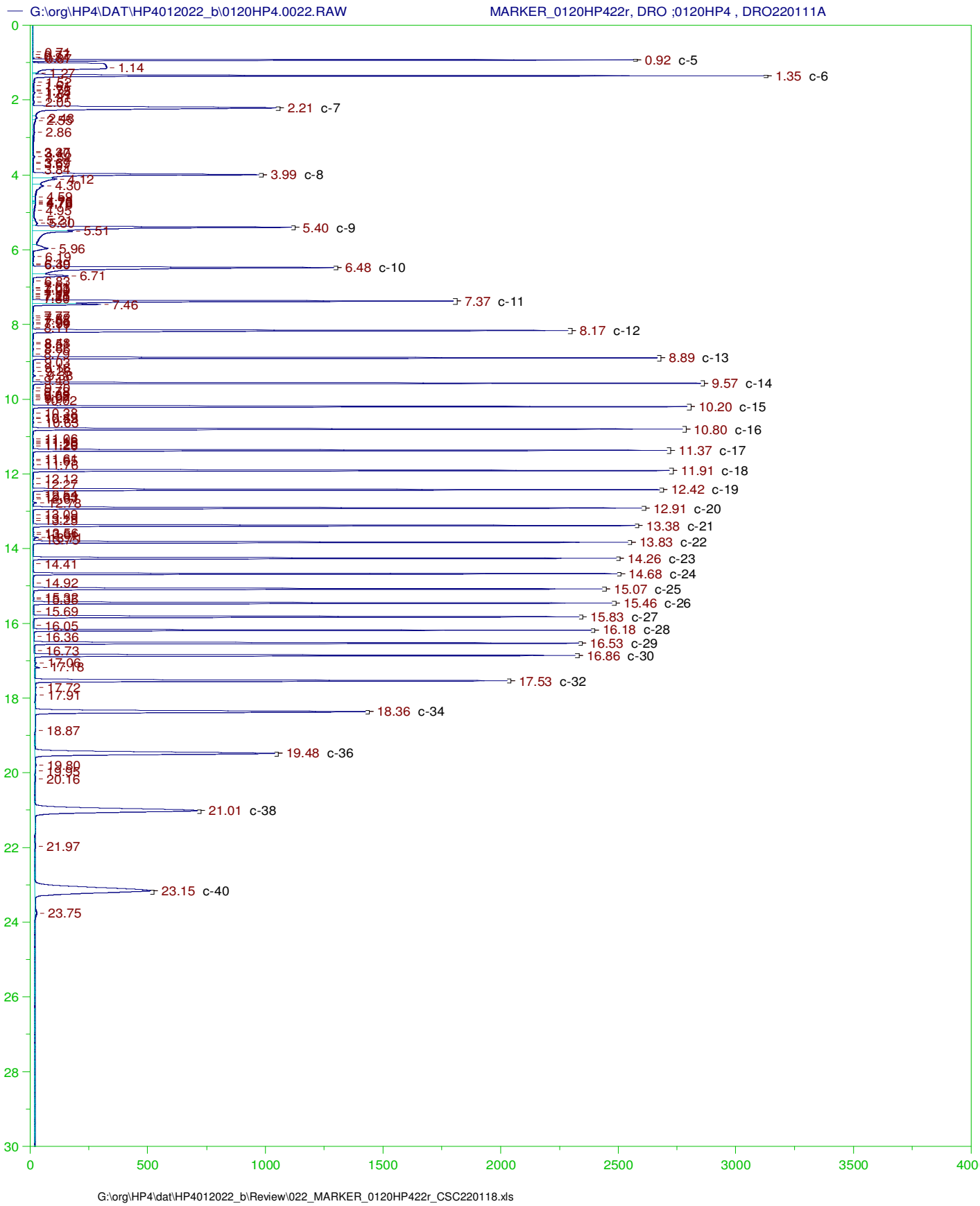
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V21
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0021.RAW
Date & Time Acquired: 1/21/2022 8:19:58 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.66	200.	.166	.08	-
*1-Chlorooctadecane	13.508	200.	.23	.11	-

DRO Area:247474.9 DRO Amount: 8.425171
TEH Area:366578.3 TEH Amount: 12.47999


G:\org\HP4\DAT\HP4012022_b\0120HP4.0022.RAW
MARKER_0120HP422r, DRO ;0120HP4 , DRO220111A
0.92 c-5
1.14
1.35 c-6
2.21 c-7
2.86
3.99 c-8
4.30
5.40 c-9
5.51
5.96
6.48 c-10
6.71
7.37 c-11
7.46
8.17 c-12
8.89 c-13
9.57 c-14
10.20 c-15
10.80 c-16
11.37 c-17
11.91 c-18
12.42 c-19
12.91 c-20
13.38 c-21
13.83 c-22
14.26 c-23
14.41
14.68 c-24
14.92
15.07 c-25
15.46 c-26
15.69
15.83 c-27
16.05
16.18 c-28
16.36
16.53 c-29
16.73
16.86 c-30
17.53 c-32
17.72
17.91
18.36 c-34
18.87
19.48 c-36
19.80
20.16
21.01 c-38
21.97
23.15 c-40
23.75
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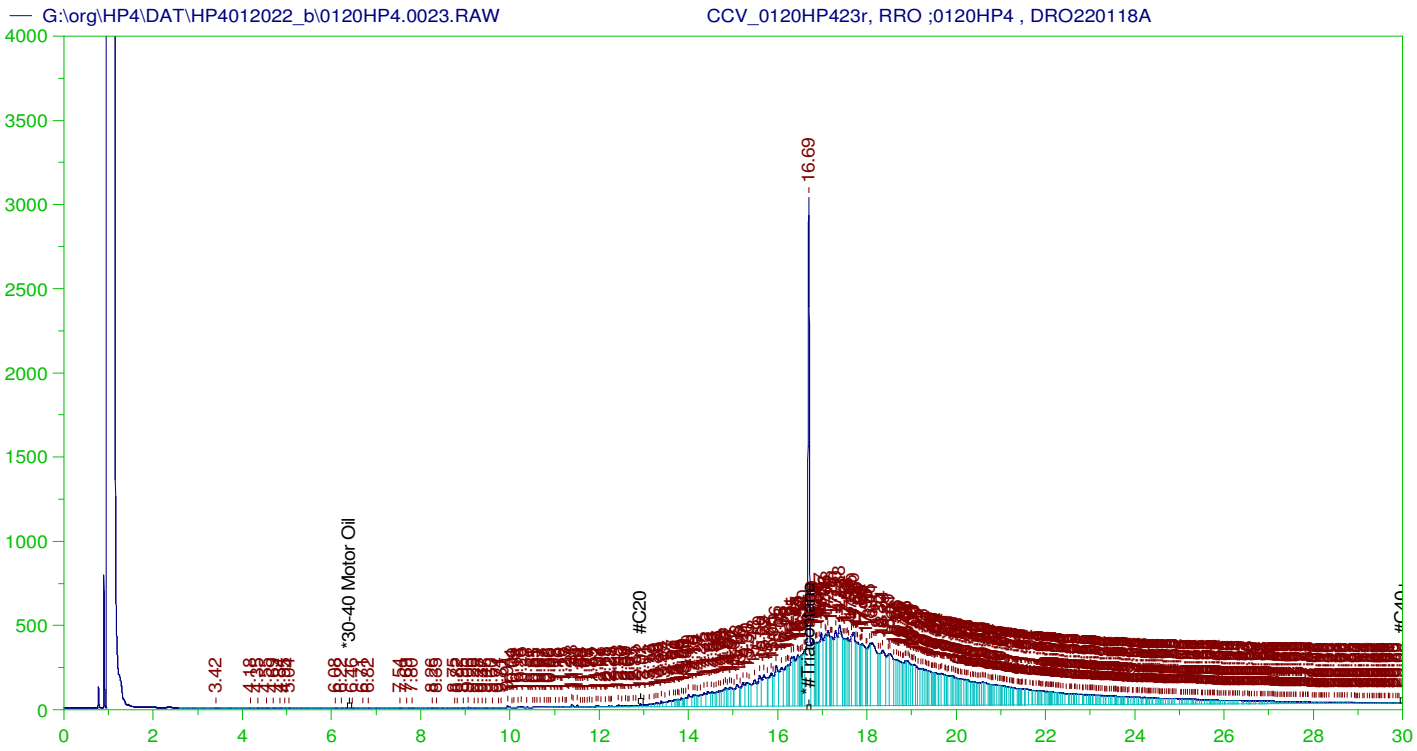


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP423r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0023.RAW
Date & Time Acquired: 1/21/2022 9:49:14 AM
Method File: G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.693	500.	344.592	68.92	-

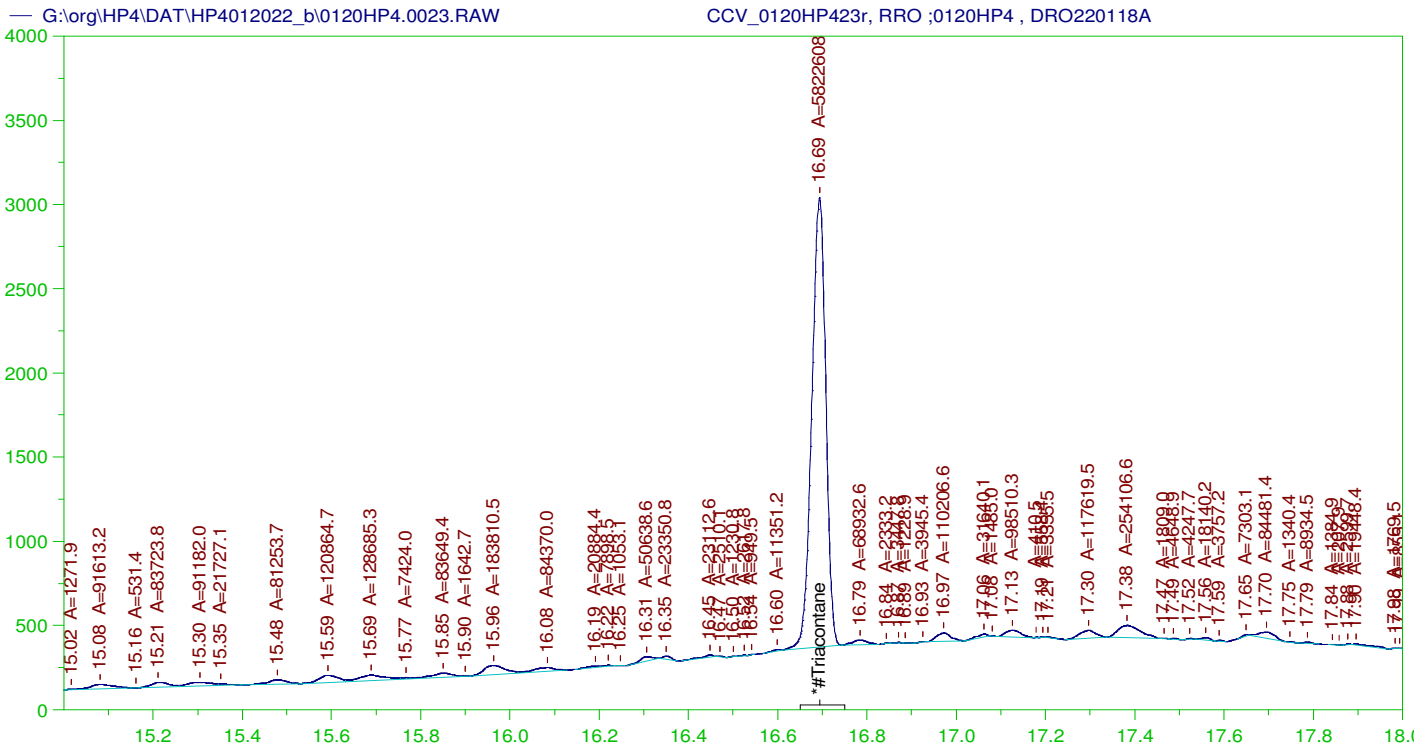
~~RRO~~ TEH(Oil Range) Area:1.131807E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4614.055

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0023.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.693	200.	344.592	172.3	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP423r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0023.RAW
Date & Time Acquired: 1/21/2022 9:49:14 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

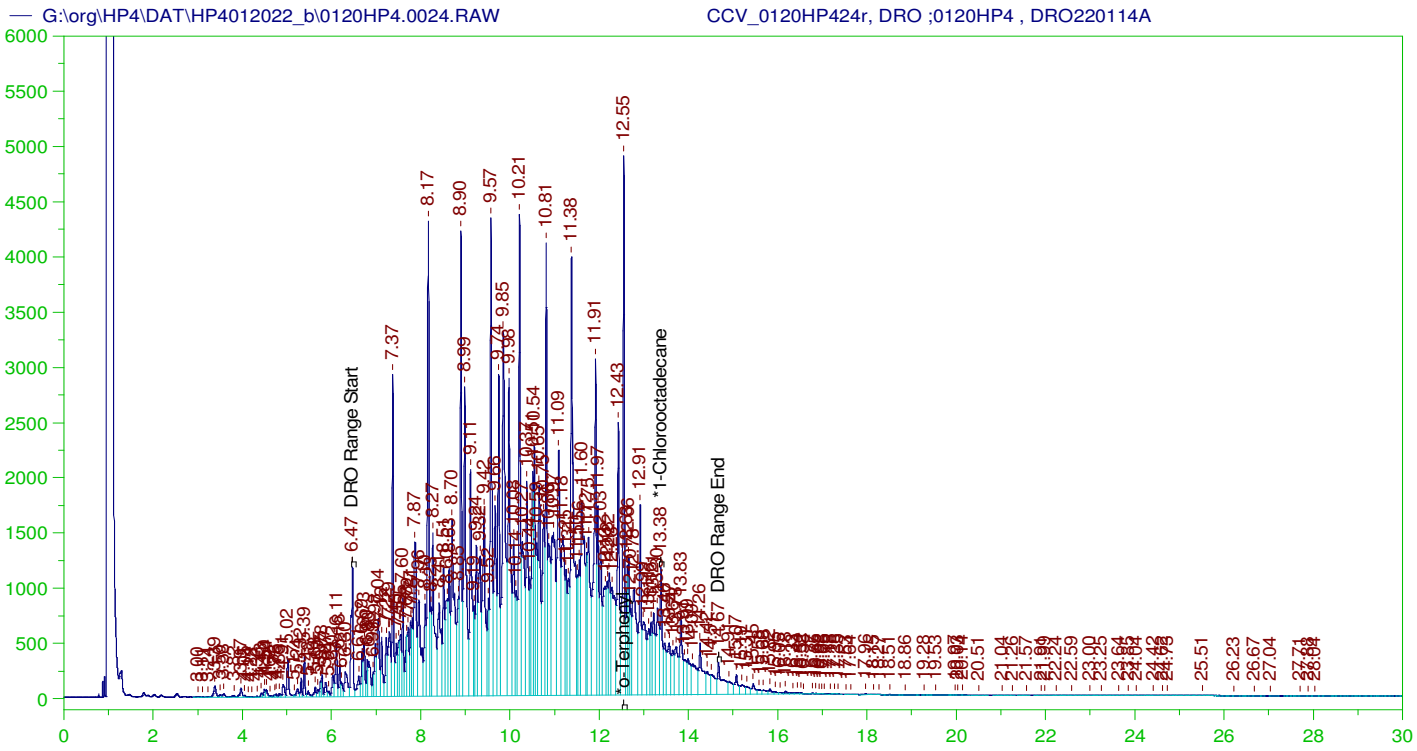
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.693	500.	233.149	46.63	-

RRO Area:3419198 RRO AMOUNT: 139.3909

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0023.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.693	200.	233.149	116.57	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0120HP424r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0024.RAW
Date & Time Acquired: 1/21/2022 10:34:21 AM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

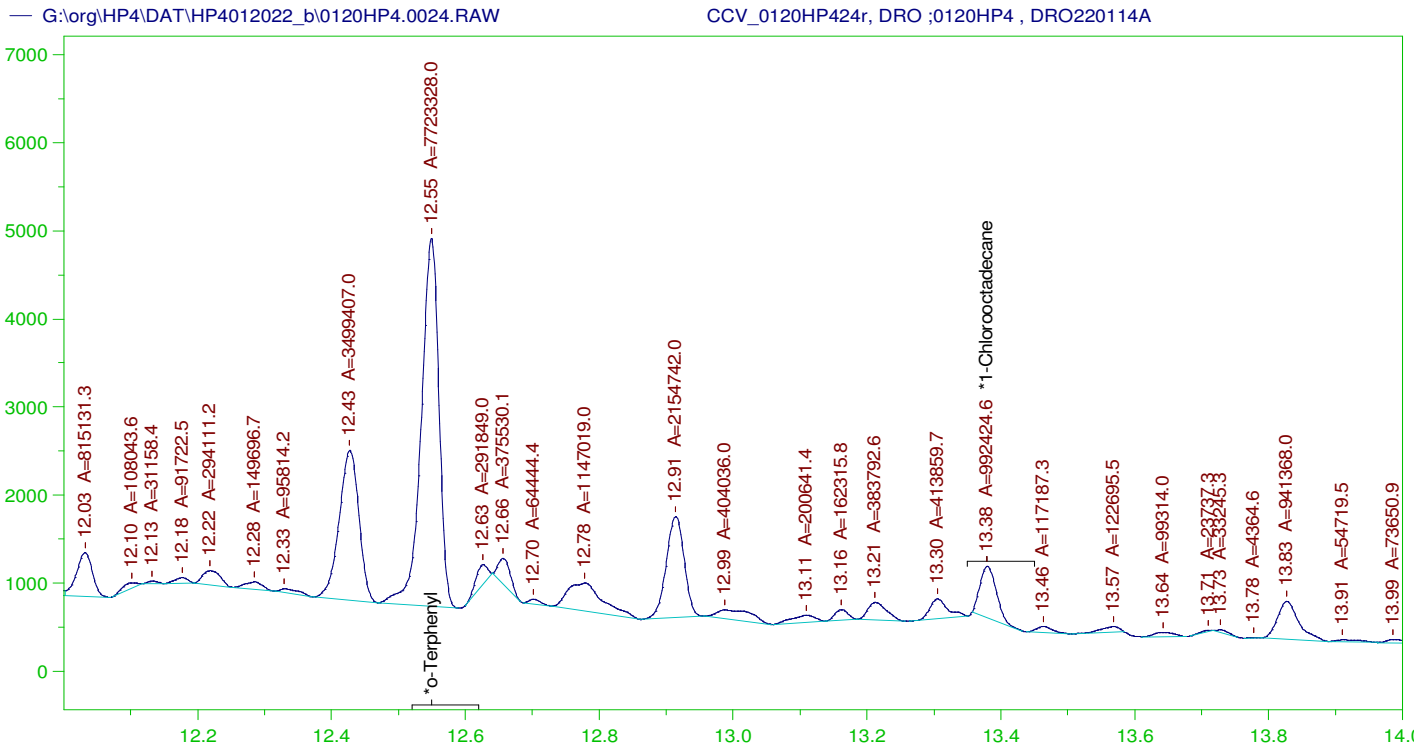
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.549	200.	385.646	192.82	-
*1-Chlorooctadecane	13.379	200.	113.492	56.75	-

DRO Area:4.459407E+08 DRO Amount: 15181.85
TEH Area:4.615047E+08 TEH Amount: 15711.72

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0024.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15711.72	104.74	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.549	200.	385.646	192.82	85-115
*1-Chlorooctadecane	13.379	200.	113.492	56.75	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0120HP424r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0024.RAW
Date & Time Acquired: 1/21/2022 10:34:21 AM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

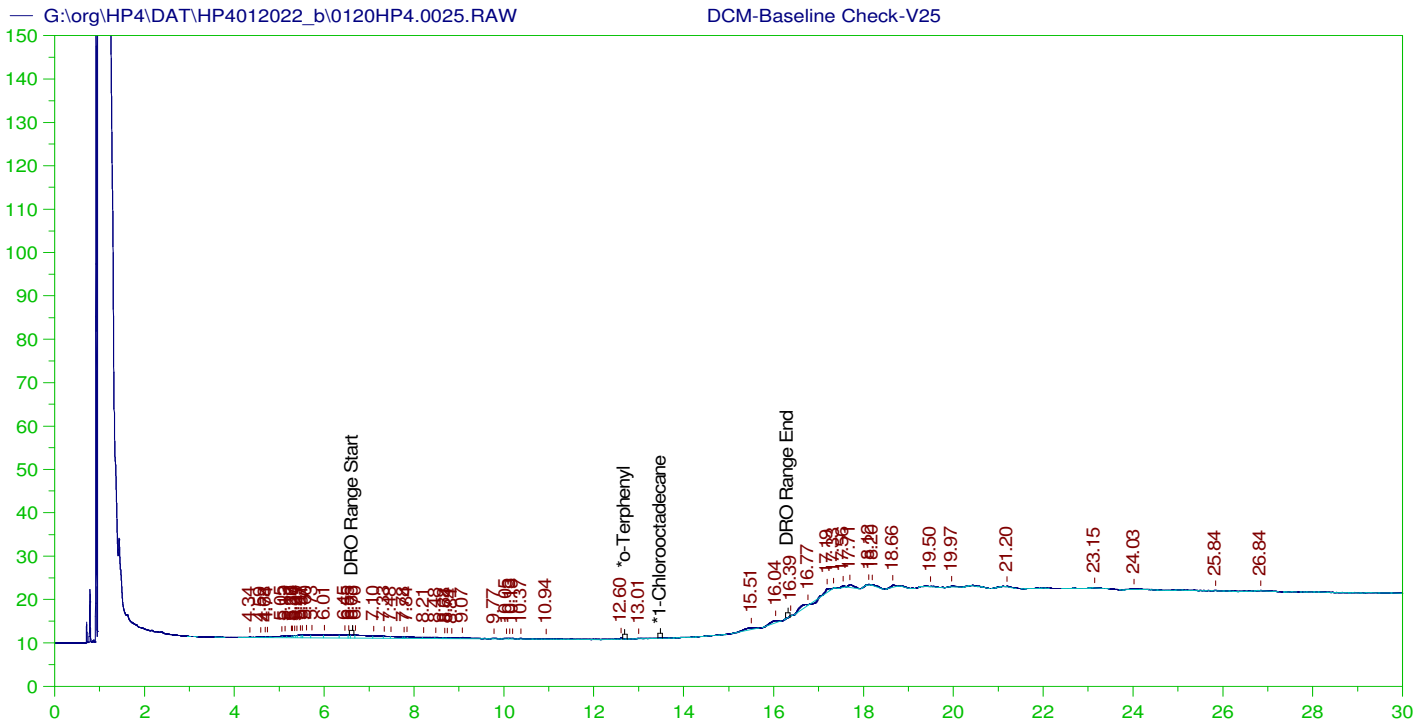
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.549	200.	231.795	115.9	-
*1-Chlorooctadecane	13.379	200.	29.785	14.89	-

DRO Area:2.032463E+08 DRO Amount: 6919.427
TEH Area:2.14413E+08 TEH Amount: 7299.594

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0024.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7299.59	48.66	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.549	200.	231.795	115.9	85-115
*1-Chlorooctadecane	13.379	200.	29.785	14.89	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V25
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0025.RAW
Date & Time Acquired: 1/21/2022 11:19:51 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

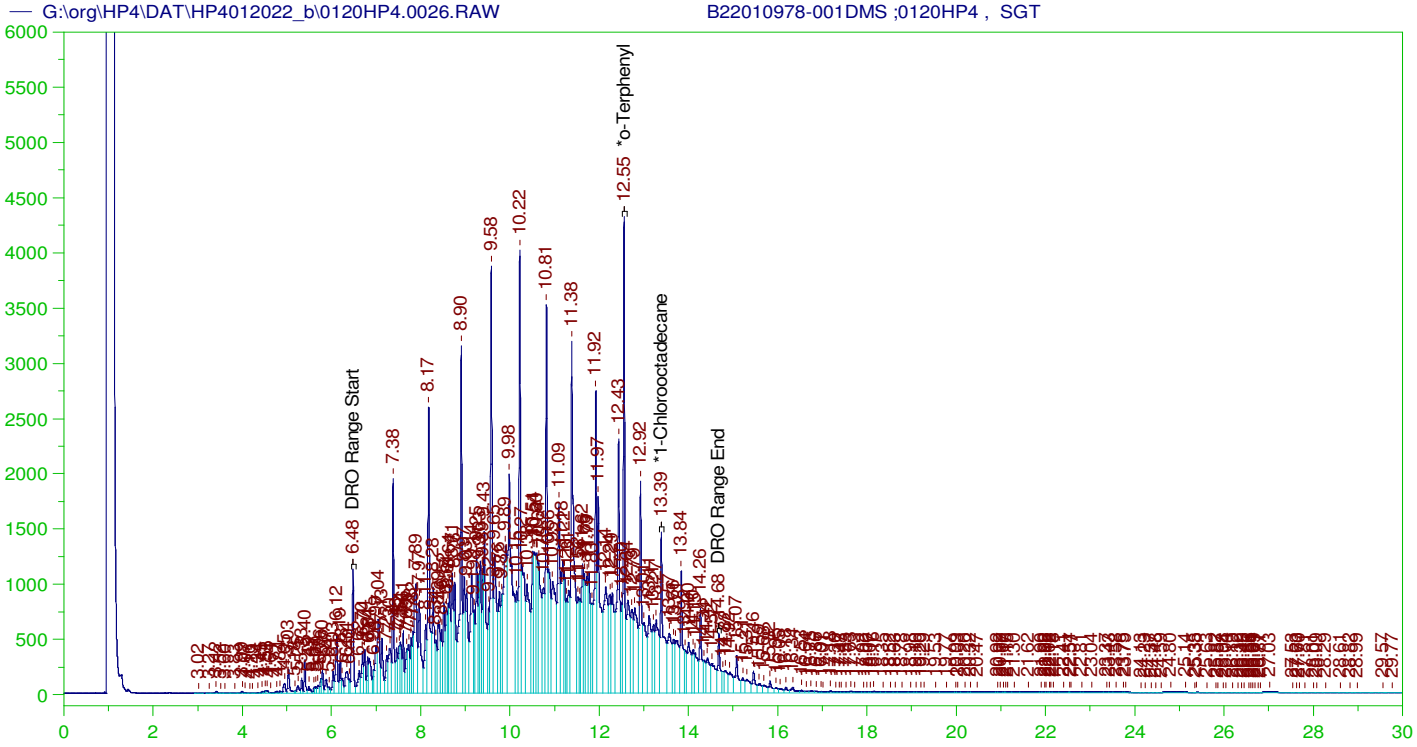
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.779	200.	.	.	-
*1-Chlorooctadecane	29.779	200.	.	.	-

DRO Area:90132.22 DRO Amount: 3.068511
TEH Area:202254.7 TEH Amount: 6.88567

Batch ID: 162993

G:\org\HP4\DAT\HP4012022_b\0120HP4.0026.RAW B22010978-001DMS ;0120HP4 , SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

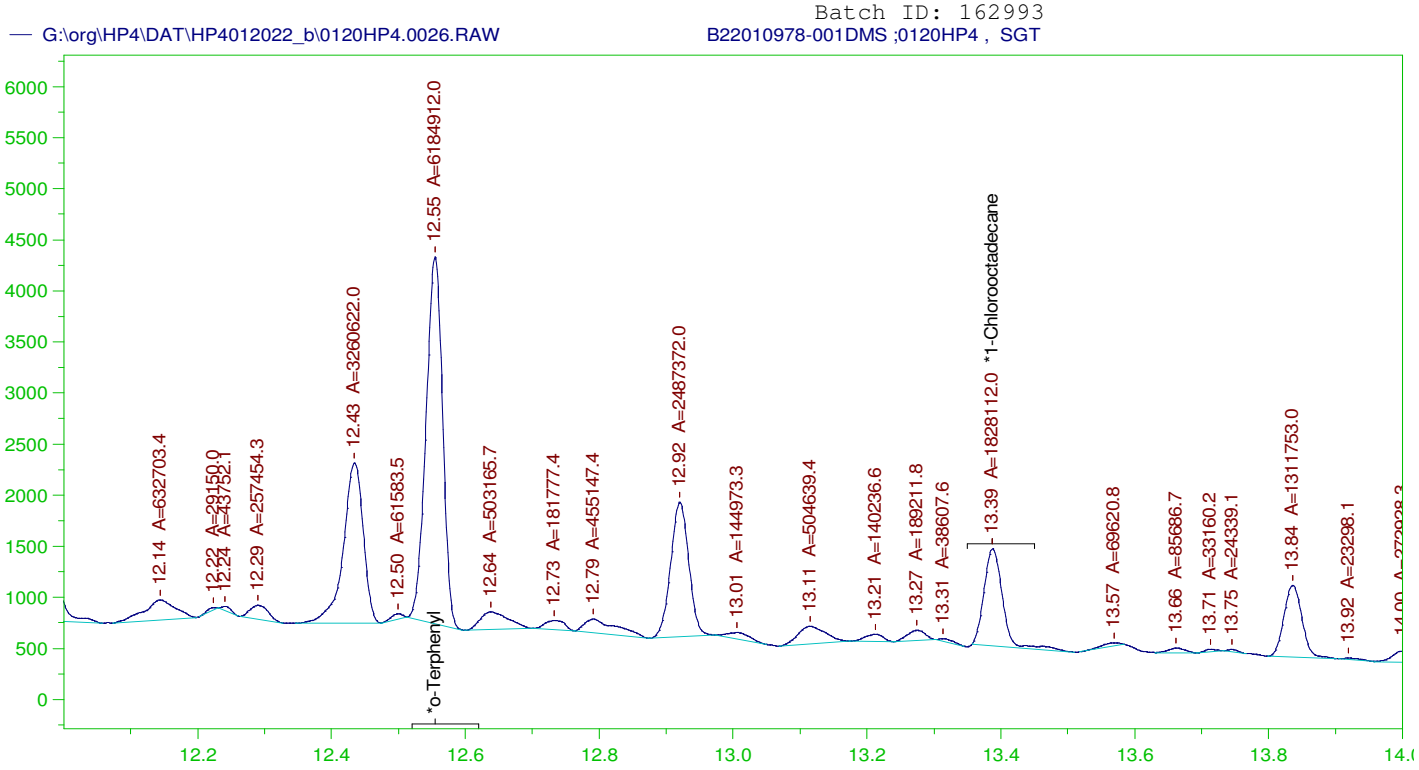
Sample Name: B22010978-001DMS ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0026.RAW
Date & Time Acquired: 1/21/2022 12:04:36 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.555	.194	.291	149.64	-
*1-Chlorooctadecane	13.388	.194	.192	98.95	-

DRO Area:3.700551E+08 DRO Amount: 12.23142
TEH Area:3.919224E+08 TEH Amount: 12.9542

Batch ID: 162993



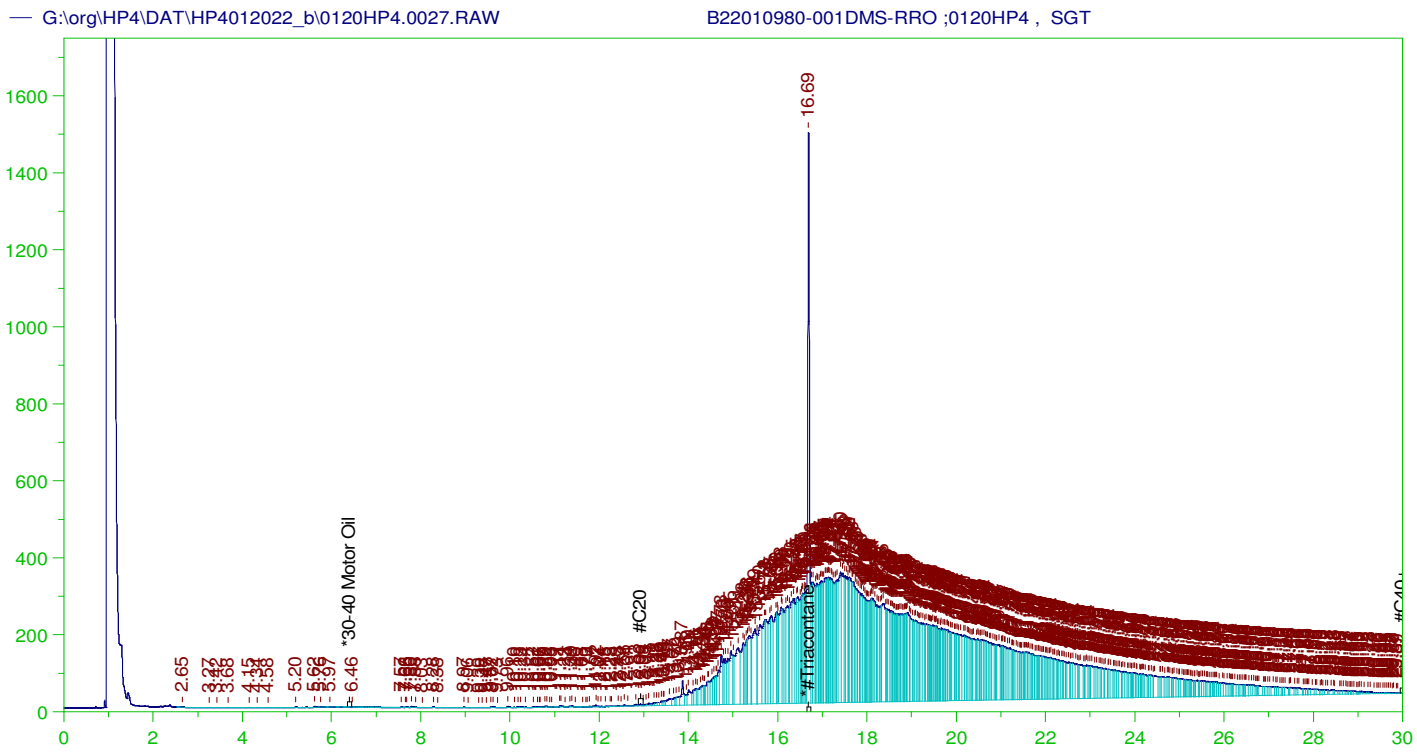
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010978-001DMS ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0026.RAW
Date & Time Acquired: 1/21/2022 12:04:36 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.555	.194	.18	92.81	-
*1-Chlorooctadecane	13.388	.194	.053	27.43	-

DRO Area:1.548768E+08 DRO Amount: 5.119138
TEH Area:1.640955E+08 TEH Amount: 5.423843



RESIDUAL RANGE ORGANICS CHROMATOGRAM

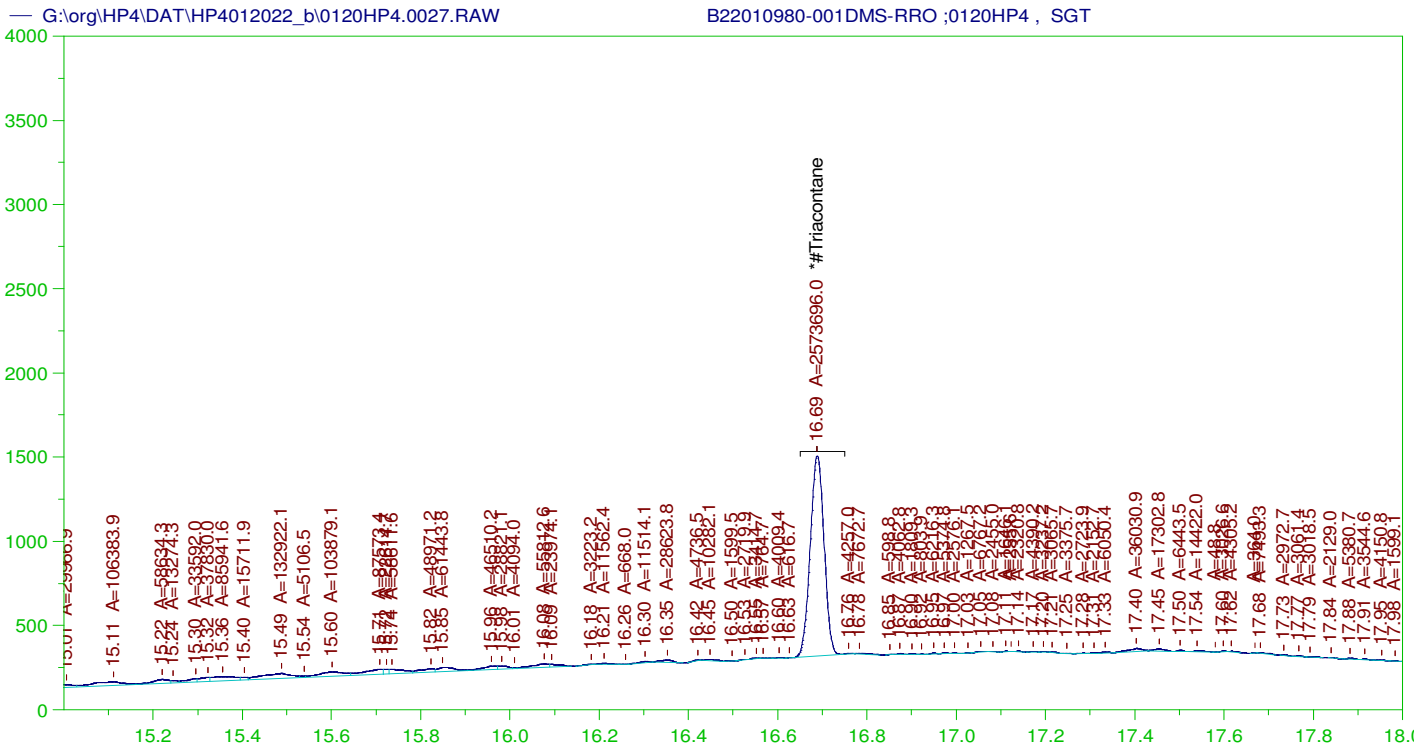
Sample Name: B22010980-001DMS-RRO ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0027.RAW
Date & Time Acquired: 1/21/2022 12:49:38 PM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	.481	.174	36.27	-

~~RRO~~ TEH(Oil Range) Area:1.119689E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.389088

AMN 02/15/2022



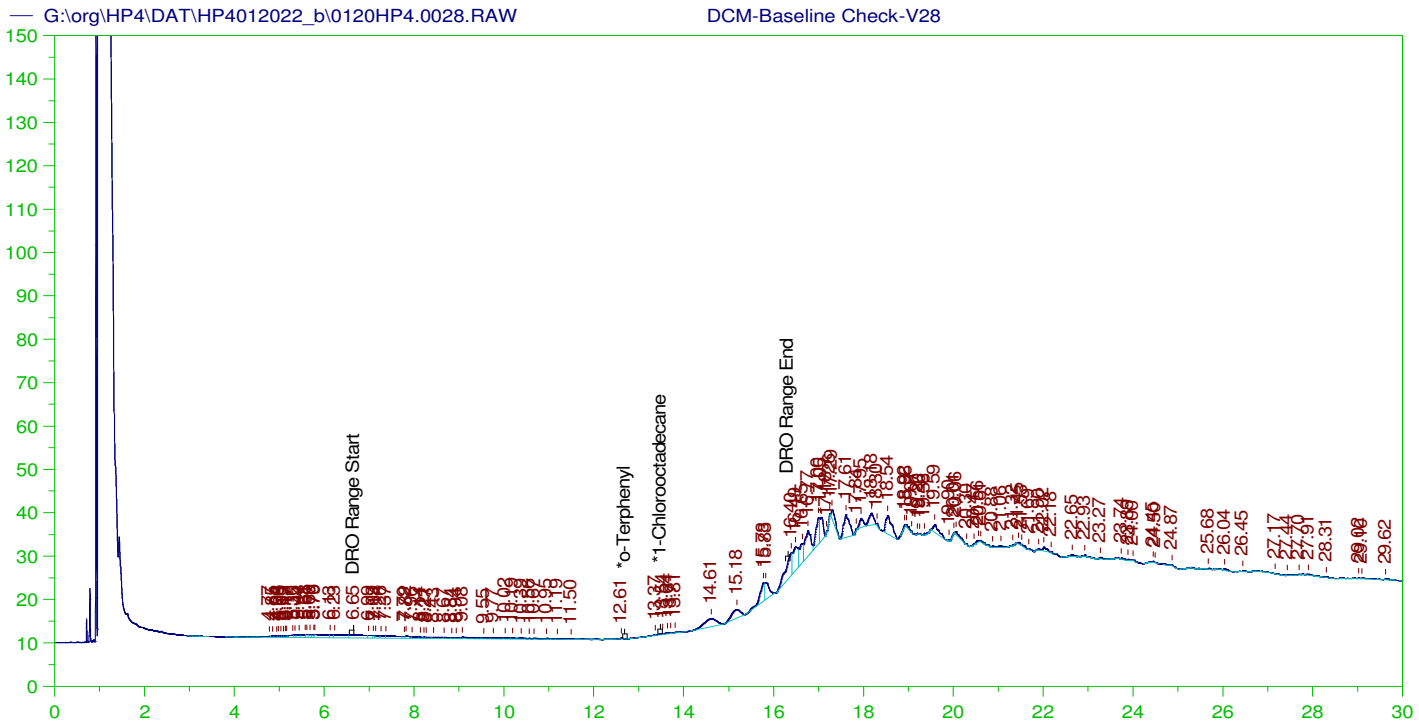
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010980-001DMS-RRO ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0027.RAW
Date & Time Acquired: 1/21/2022 12:49:38 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	.481	.099	20.61	-

RRO Area:2452051 RRO AMOUNT: 9.611837E-02



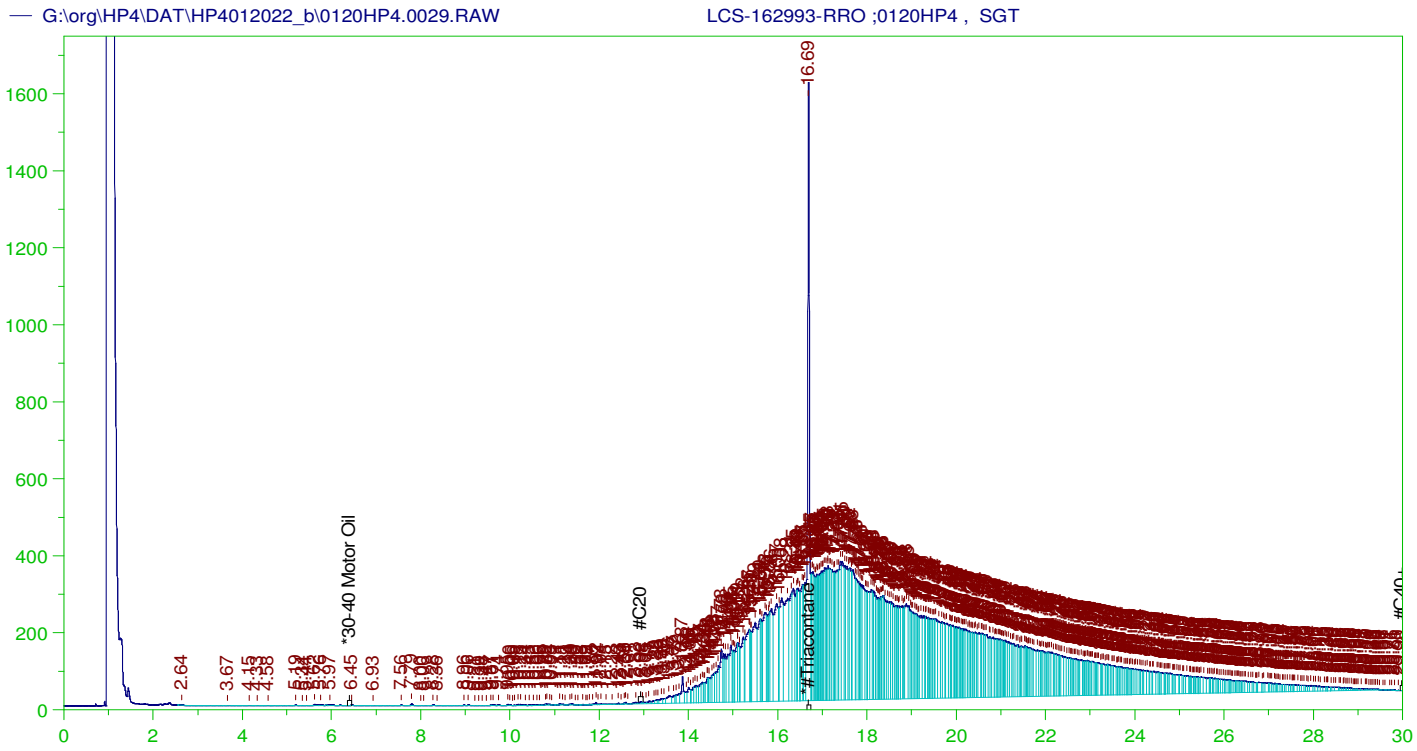
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V28
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0028.RAW
Date & Time Acquired: 1/21/2022 1:34:22 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

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

DRO Area:206940.3 DRO Amount: 7.045191
TEH Area:741614.6 TEH Amount: 25.24793



RESIDUAL RANGE ORGANICS CHROMATOGRAM

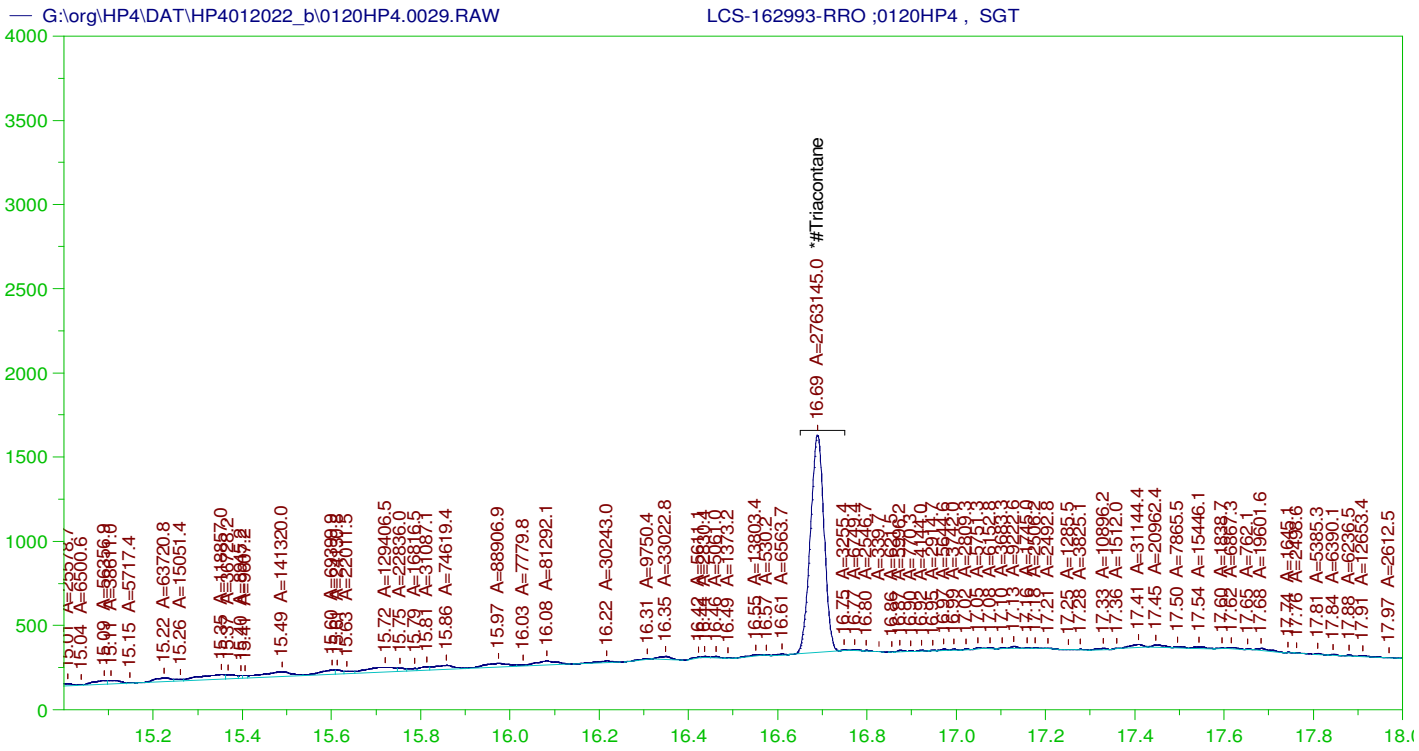
Sample Name: LCS-162993-RRO ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0029.RAW
Date & Time Acquired: 1/21/2022 2:19:05 PM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.689	.5	.197	39.39	-

~~RRO~~ TEH(Oil Range) Area:1.173374E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.783512

AMN 02/15/2022



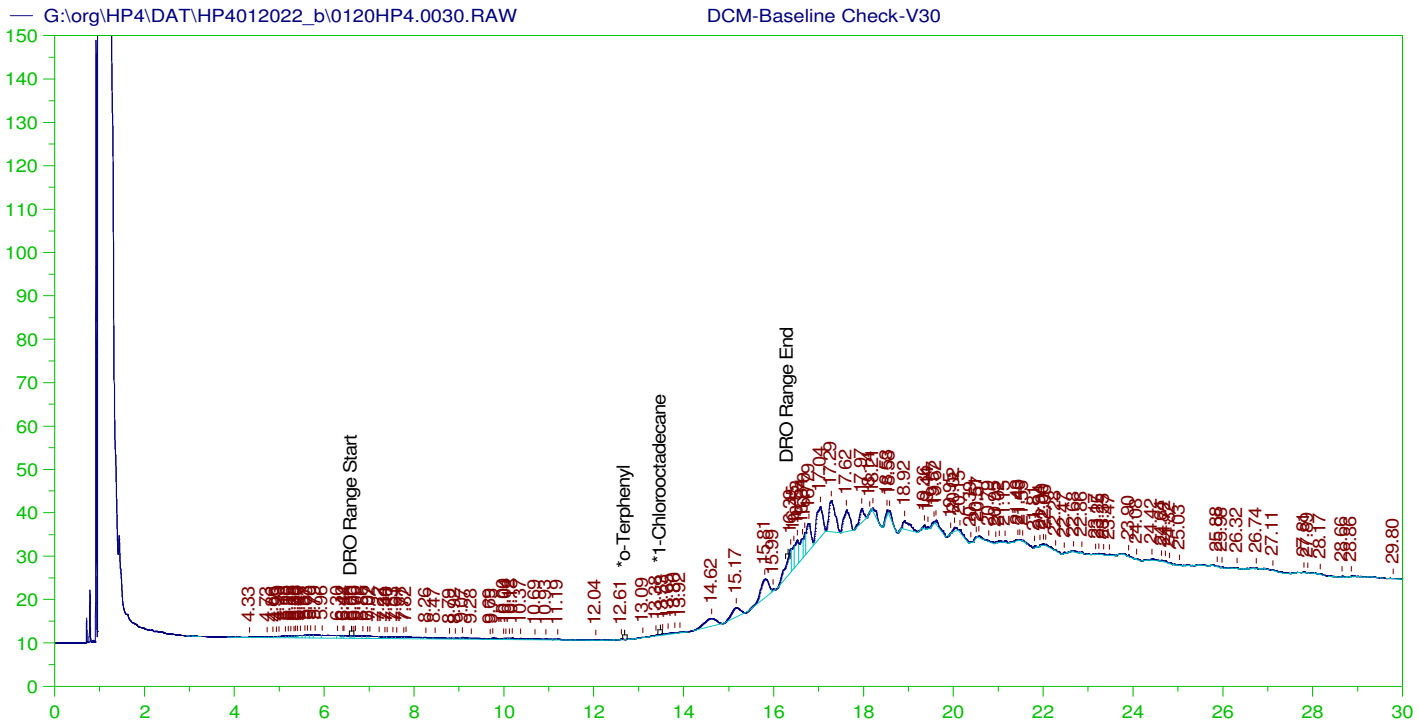
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162993-RRO ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0029.RAW
Date & Time Acquired: 1/21/2022 2:19:05 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.689	.5	.111	22.13	-

RRO Area:2664527 RRO AMOUNT: 0.1086251

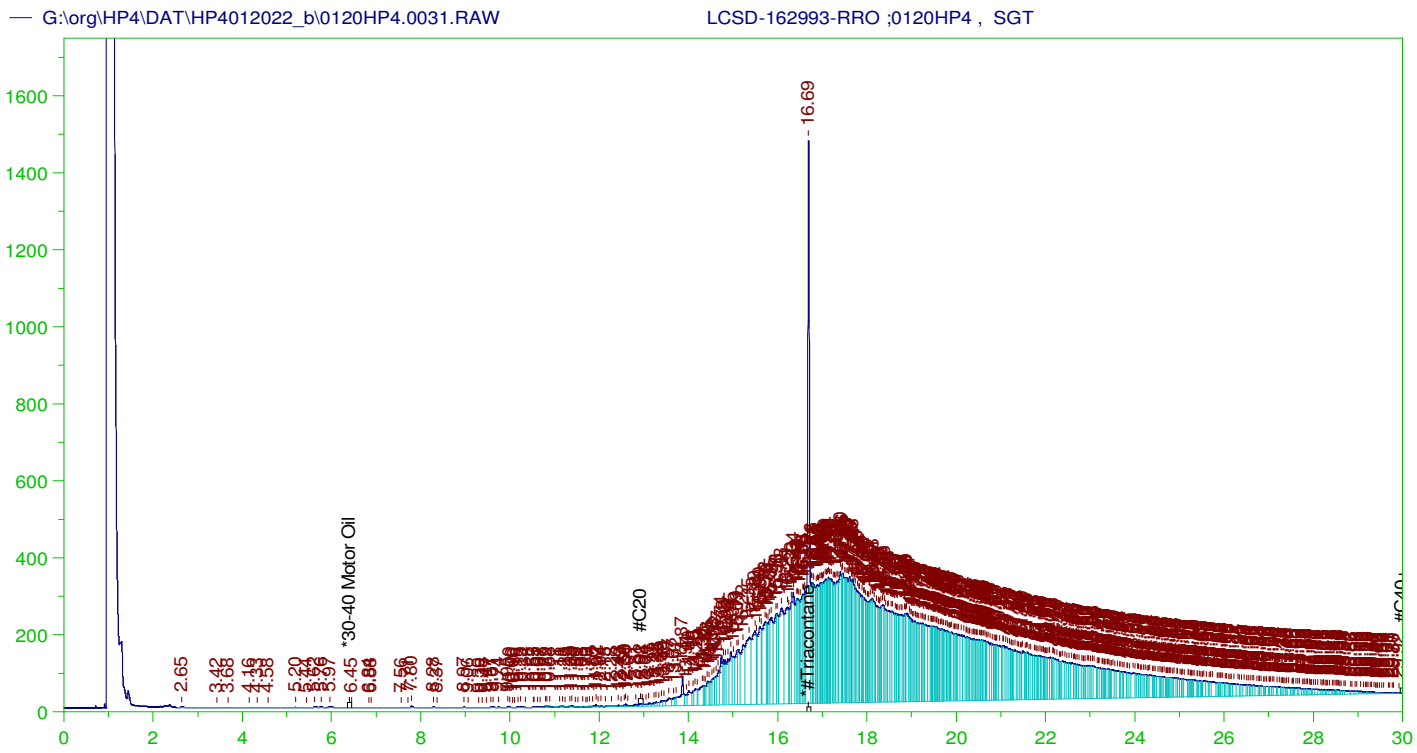


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V30
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0030.RAW
Date & Time Acquired: 1/21/2022 3:04:16 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

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

DRO Area:210392.1 DRO Amount: 7.162704
TEH Area:790933.9 TEH Amount: 26.92699



RESIDUAL RANGE ORGANICS CHROMATOGRAM

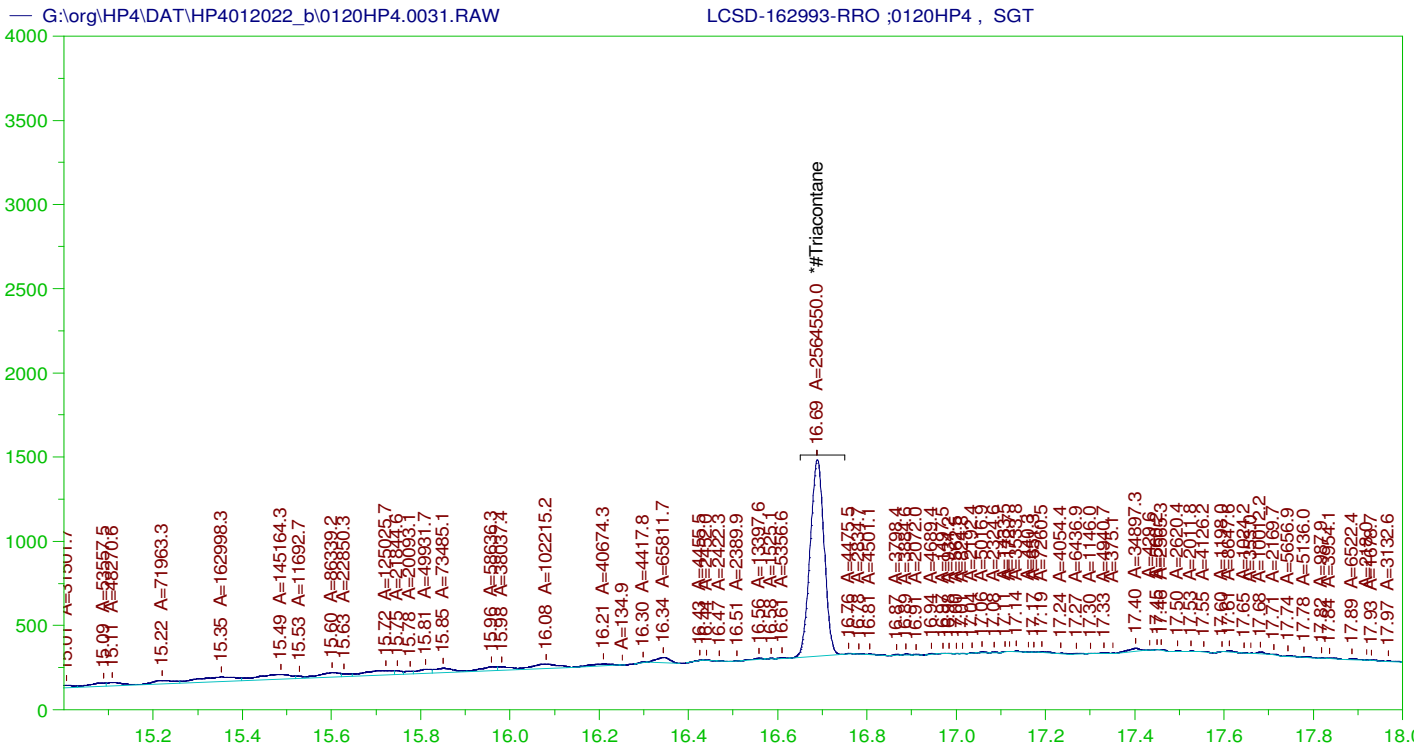
Sample Name: LCSD-162993-RRO ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0031.RAW
Date & Time Acquired: 1/21/2022 3:49:12 PM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	.5	.186	37.23	-

~~RRO~~ TEH(Oil Range) Area:1.109301E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.522302

AMN 02/15/2022



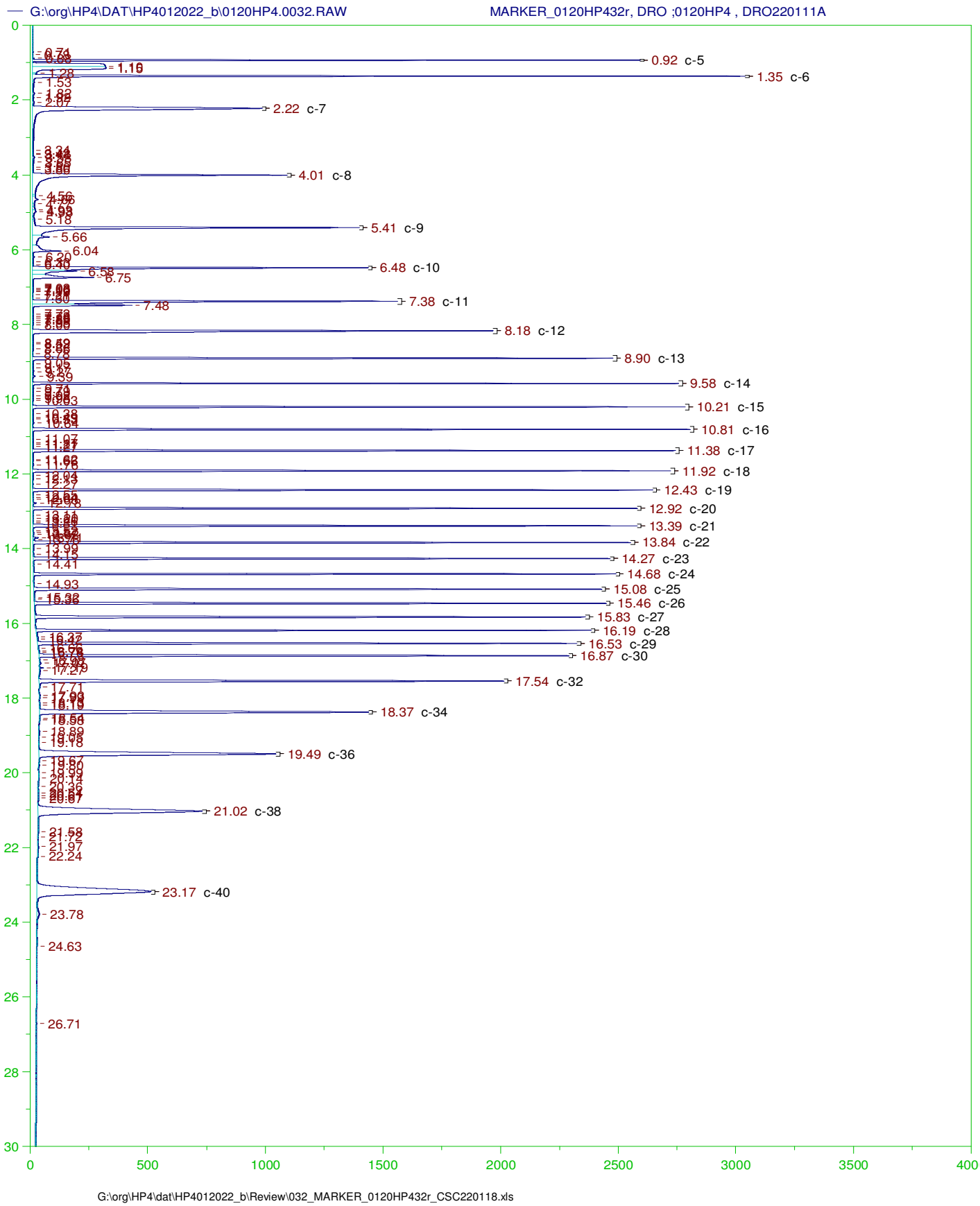
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCSD-162993-RRO ;0120HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0031.RAW
Date & Time Acquired: 1/21/2022 3:49:12 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.688	.5	.103	20.54	-

RRO Area:2599911 RRO AMOUNT: 0.1059909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MARKER_0120HP432r, DRO ;0120HP4 , DRO220111A
0.92 c-5
1.35 c-6
2.22 c-7
4.01 c-8
5.41 c-9
6.48 c-10
7.38 c-11
8.18 c-12
8.90 c-13
9.58 c-14
10.21 c-15
10.81 c-16
11.38 c-17
11.92 c-18
12.43 c-19
12.92 c-20
13.39 c-21
13.84 c-22
14.27 c-23
14.68 c-24
15.08 c-25
15.46 c-26
15.83 c-27
16.19 c-28
16.53 c-29
16.87 c-30
17.54 c-32
18.37 c-34
19.49 c-36
21.02 c-38
23.17 c-40
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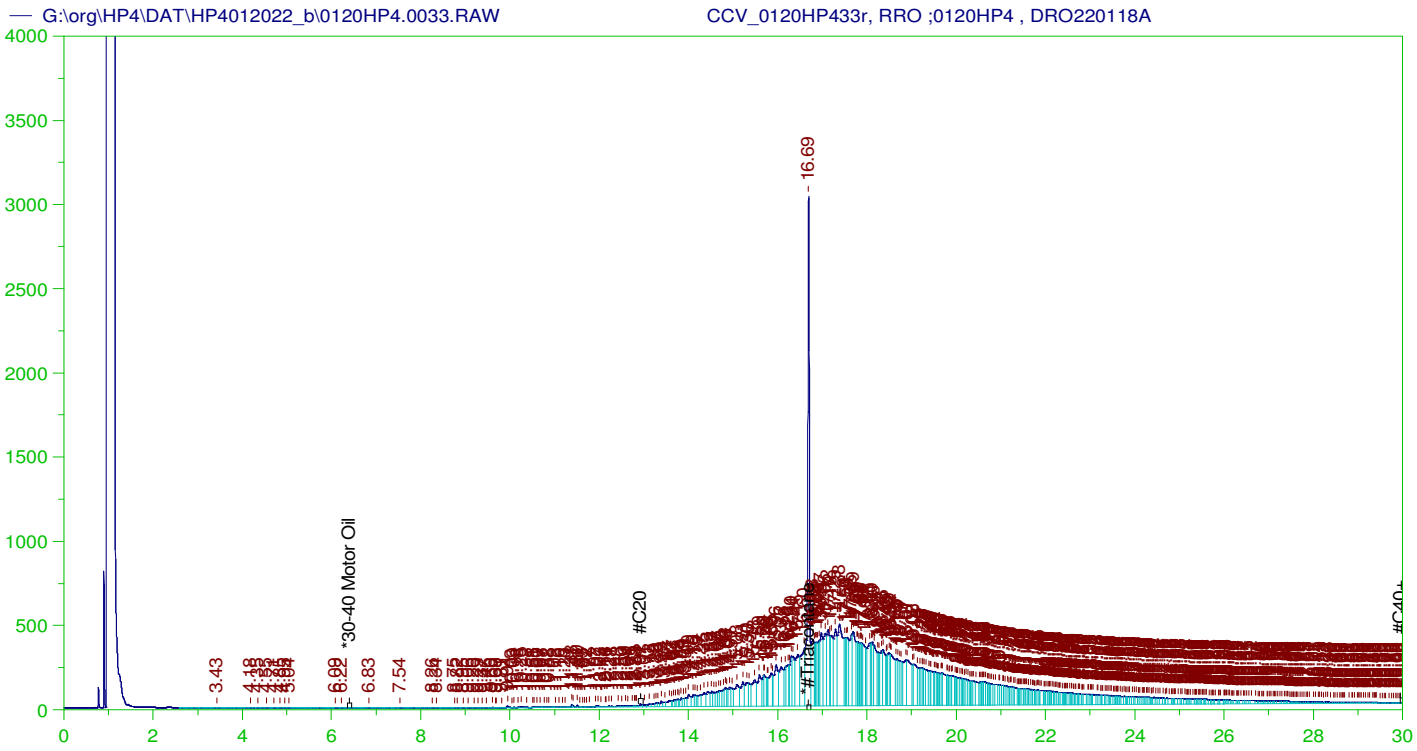


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP433r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0033.RAW
Date & Time Acquired: 1/21/2022 5:18:55 PM
Method File: G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.691	500.	346.597	69.32	-

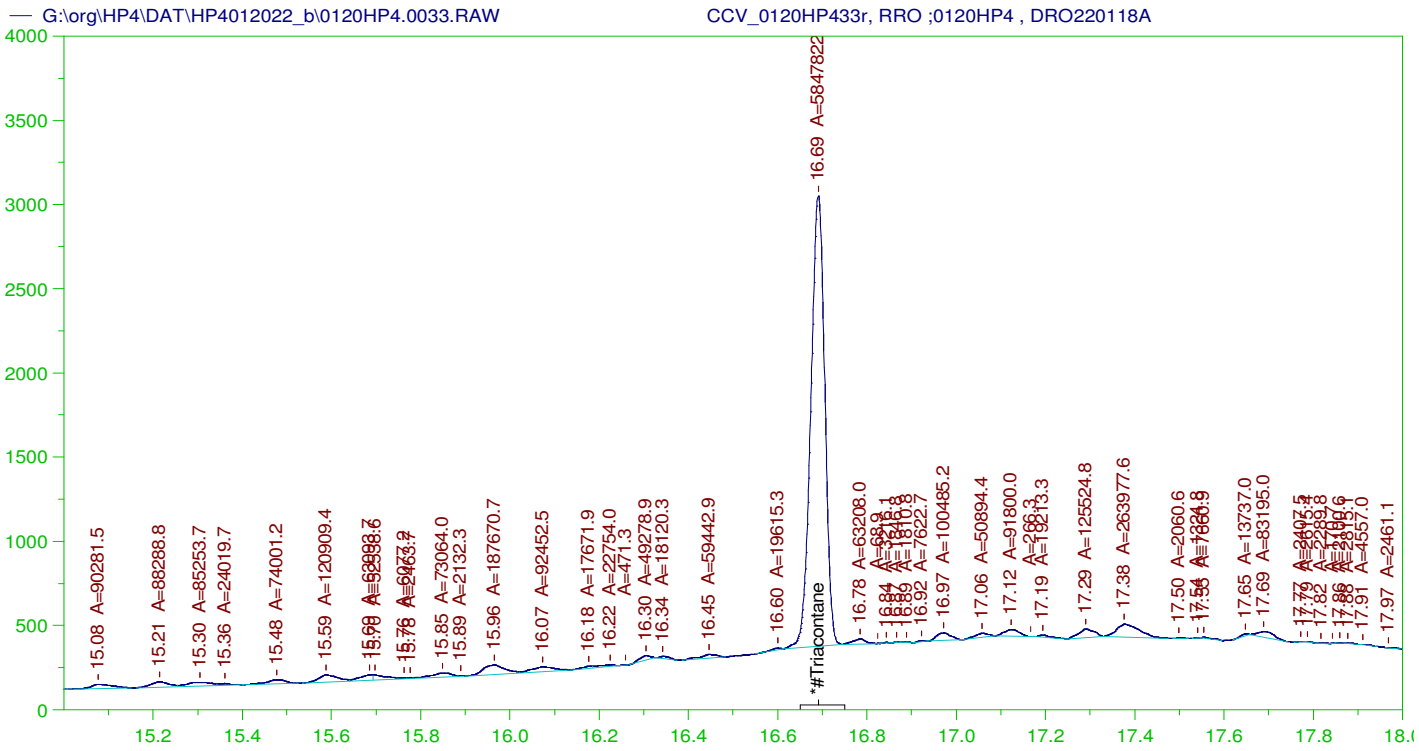
~~RRO~~ TEH(Oil Range) Area:1.144784E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4666.958

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0033.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.691	200.	346.597	173.3	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0120HP433r, RRO ;0120HP4 , DRO220118A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0033.RAW
Date & Time Acquired: 1/21/2022 5:18:55 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AF.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: 12.88 to 30.05

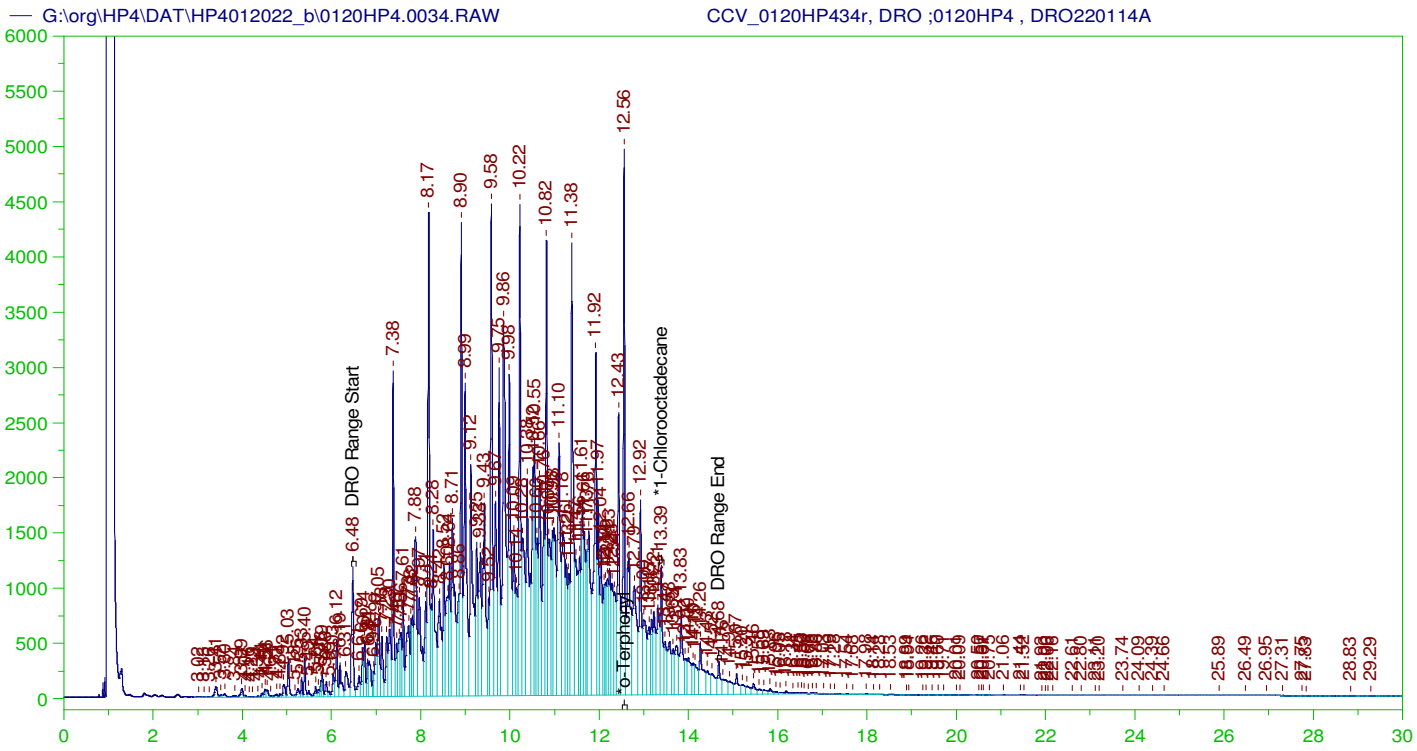
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.691	500.	234.158	46.83	-

RRO Area:3252821 RRO AMOUNT: 132.6082

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0033.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.691	200.	234.158	117.08	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0120HP434r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0034.RAW
Date & Time Acquired: 1/21/2022 6:04:04 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.556	200.	394.855	197.43	-
*1-Chlorooctadecane	13.386	200.	117.976	58.99	-

DRO Area:4.585377E+08 DRO Amount: 15610.71
TEH Area:4.755586E+08 TEH Amount: 16190.18

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0034.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16190.18	107.93	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.556	200.	394.855	197.43	85-115
*1-Chlorooctadecane	13.386	200.	117.976	58.99	85-115

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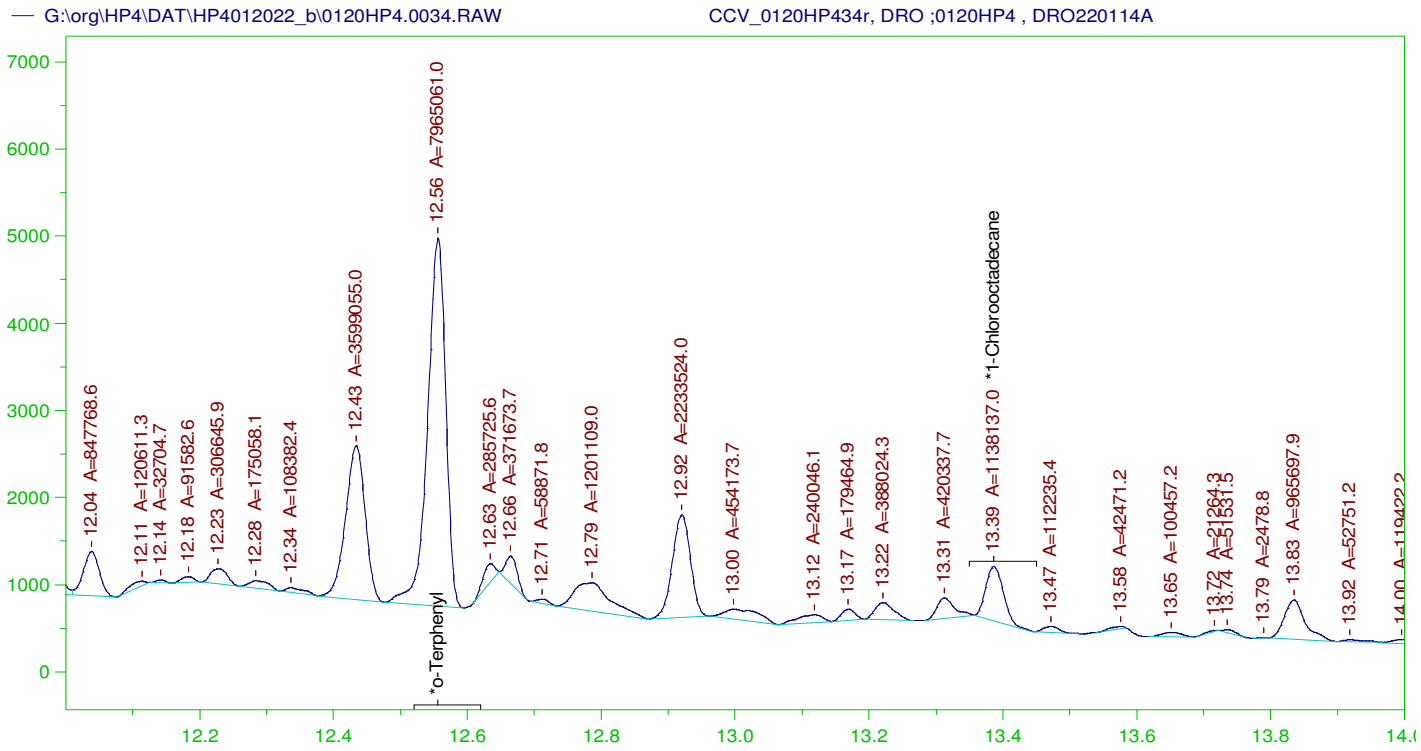

DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0120HP434r, DRO ;0120HP4 , DRO220114A
Raw File: G:\org\HP4\DAT\HP4012022_b\0120HP4.0034.RAW
Date & Time Acquired: 1/21/2022 6:04:04 PM
Method File: G:\Org\HP4\methods\DS_8015-C24b-OM-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OM-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.45 to 14.74

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.556	200.	239.05	119.52	-
*1-Chlorooctadecane	13.386	200.	34.158	17.08	-

DRO Area:2.079573E+08 DRO Amount: 7079.814
TEH Area:2.183851E+08 TEH Amount: 7434.823

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4012022_b\0120HP4.0034.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7434.82	49.57	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.556	200.	239.05	119.52	85-115
*1-Chlorooctadecane	13.386	200.	34.158	17.08	85-115

Write Sequence	Insert Entries(Have the first cell for entries selected							
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	**Manual Integrations**
G:\org\HP4\DAT\HP4011822_b\0118HP4.01r	DCM-Baseline Check-V01	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.02r	DCM-Baseline Check-V02	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.03r	MARKER_0118HP403r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.04r	CCV_0118HP404r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.05r	CCV_0118HP405r, DRO ;0118HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.06r	DCM-Baseline Check-V06	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.10r	LCS-162993 ;0118HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.11r	LCSD-162993 ;0118HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.12r	MB-162993 ;0118HP4 ,	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.13r	B22010978-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1010	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 basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.14r	B22010978-001DMS ;0118HP4 ,	G:\Org\HP4\methods\D3_8015-011814-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.15r	DCM-Baseline Check-V15	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.16r	B22010980-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.17r	B22010980-001DMS-RRO ;0118HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1040	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.18r	MARKER_0118HP418r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.19r	CCV_0118HP419r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.20r	CCV_0118HP420r, DRO ;0118HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.22r	DCM-Baseline Check-V22	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.23r	B22010971-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-011823-OM-L%.met G:\Org\HP4\Methods\D3_ORO-011823-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline with turn on integration moved to 4.87 minutes and peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.24r	B22010972-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun possible carry over.	G:\Org\HP4\methods\DR_8015-C24T-OM-L0.met	1050	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.25r	B22010973-001D ;0118HP4 , $HC-8015-DRO-W, Needs Rerun possible carry over.	G:\Org\HP4\methods\DR_8015-C24T-OM-L0.met	1030	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.26r	DCM-Baseline Check-V26	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations

G:\org\HP4\DAT\HP4011822_b\0118HP4.27r	B22010977-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-11827-OM-L%.met G:\Org\HP4\Methods\D3_ORO-011827-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline Now at 23.34 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.28r	B22010979-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.29r	DCM-Baseline Check-V29	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.30r	B22010975-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	970	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.31r	B22010976-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-011831-OM-L%.met G:\Org\HP4\Methods\D3_ORO-011831-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline. Assigned Set Baseline Now at 26.14 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.32r	MARKER_0118HP432r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.33r	CCV_0118HP433r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-011833-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.34r	CCV_0118HP434r, DRO ;0118HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.35r	DCM-Baseline Check-V35	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.36r	DCM-Baseline Check-V36	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.37r	B22010972-001D ;0118HP4 , $HC-8015-DRO-W, RR	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.38r	B22010973-001D ;0118HP4 , $HC-8015-DRO-W, RR	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.39r	B22010974-001D ;0118HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OM-L%.met G:\Org\HP4\Methods\D3_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	990	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 basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.40r	DCM-Baseline Check-V40	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.41r	LCS-162993-RRO ;0118HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.42r	DCM-Baseline Check-V43	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.43r	LCSD-162993-RRO ;0118HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.44r	MARKER_0118HP445r, DRO ;0118HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4011822_b\0118HP4.45r	CCV_0118HP446r, RRO ;0118HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-011833-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4011822_b\0118HP4.46r	CCV_0118HP447r, DRO ;0118HP4 , DRO220114A-	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.02.15 10:22:45 -07:00

Write Sequence / Data File	Insert Entries(Have the first cell for entries selected) / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.01r	DCM-Baseline Check-V01	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.02r	DCM-Baseline Check-V02	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.03r	MARKER_0120HP403r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.04r	CCV_0120HP404r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.05r	CCV_0120HP405r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.06r	DCM-Baseline Check-V06	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.07r	LCS-162993 ;0120HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.08r	LCSD-162993 ;0120HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.09r	MB-162993 ;0120HP4 , SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.10r	B22010980-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.11r	B22010977-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.12r	B22010976-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.13r	DCM-Baseline Check-V13	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.14r	B22010975-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	970	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.15r	B22010978-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	1010	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 basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.

G:\org\HP4\DAT\HP4012022_b\0120HP4.16r	B22010974-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-012016-OM-L%.met G:\Org\HP4\Methods\DR_ORO-012016-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-L#.met	990	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 basline. Assigned Set Baseline Now at 20.91 minutes and peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.17r	B22010971-001D ;0120HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OM-L%.met G:\Org\HP4\Methods\DR_ORO-S-AFa-L%.met G:\Org\HP4\methods\DS_8015-Tb-OM-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 basline. 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 using Set Basline All Valley placed at 12.22 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.18r	MARKER_0120HP418r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.19r	CCV_0120HP419r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.20r	CCV_0120HP420r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.22r	MARKER_0120HP422r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.23r	CCV_0120HP423r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.24r	CCV_0120HP424r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.25r	DCM-Baseline Check-V25	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.26r	B22010978-001DMS ;0120HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.27r	B22010980-001DMS-RRO ;0120HP4 , SGT	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1040	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.28r	DCM-Baseline Check-V28	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.29r	LCS-162993-RRO ;0120HP4 , SGT	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.30r	DCM-Baseline Check-V30	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.31r	LCSD-162993-RRO ;0120HP4 , SGT	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.32r	MARKER_0120HP432r, DRO ;0120HP4 , DRO220111A	g:\org\HP4\Methods\CSC220118.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4012022_b\0120HP4.33r	CCV_0120HP433r, RRO ;0120HP4 , DRO220118A	G:\Org\HP4\Methods\DC_ORO-Tb-AF-L%.met G:\Org\HP4\Methods\DS_ORO-T-AF-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4012022_b\0120HP4.34r	CCV_0120HP434r, DRO ;0120HP4 , DRO220114A	G:\Org\HP4\methods\DC_8015-C24-OM-L%.met G:\Org\HP4\methods\DS_8015-C24b-OM-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 basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 12.13 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.02.15 10:23:02 -07:00

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

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Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d_{62} - 98 atom % D

$CD_3(CD_2)_{28}CD_3$

Product Number:	**451789**
Batch Number:	**MBBC4347**
Brand:	ALDRICH
CAS Number:	93952-07-9
MDL Number:	MFCD00209794
Formula:	C30D62
Formula Weight:	485.20 g/mol
Quality Release Date:	27 APR 2018

ID #: 13736
Opened:
Triacontane-d62-98 atom % D
Expires: 4/6/2026
Rec'd: 4/6/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

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
Type: Primary
Prep Date: 9/1/2021
Prep By: Jillian L Bostwick
Exp Date: 9/1/2026
Status: New
Department: dropr
Vendor:
Final Volume: mL
Lot Number: L0717H2
Balance ID:
Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

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

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ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0140080

Description : Residual Range Calibration Standard (RCS)

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

Container Size : 2 mL **Pkg Amt:** > 1 mL

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil)	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
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

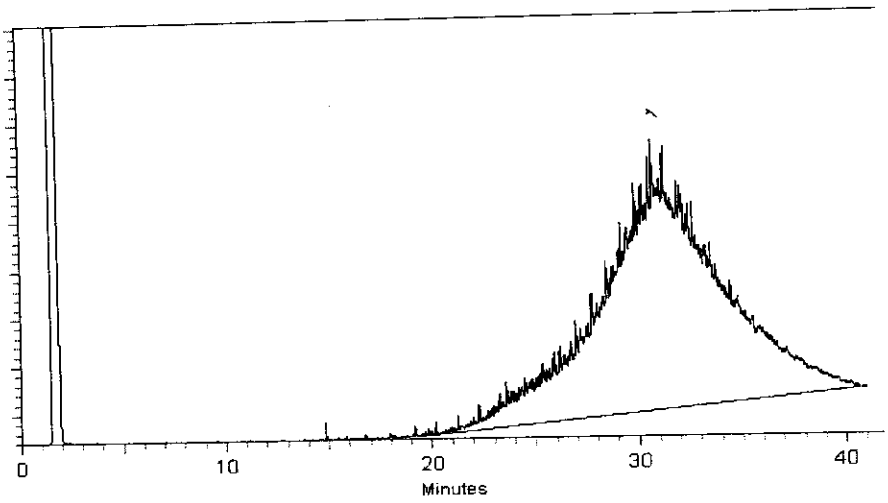
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Brandon Reish - Mix Technician

Date Mixed: 28-Jul-2018 **Balance:** B345965662

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 30-Jul-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

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)
Type: Neat
Prep Date: 11/5/2018
Prep By: Ann Nebel
Exp Date: 11/5/2023
Status: New
Department: dropr
Vendor: conoco
Final Volume: 250 mL
Lot Number:
Balance ID:
Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

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

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

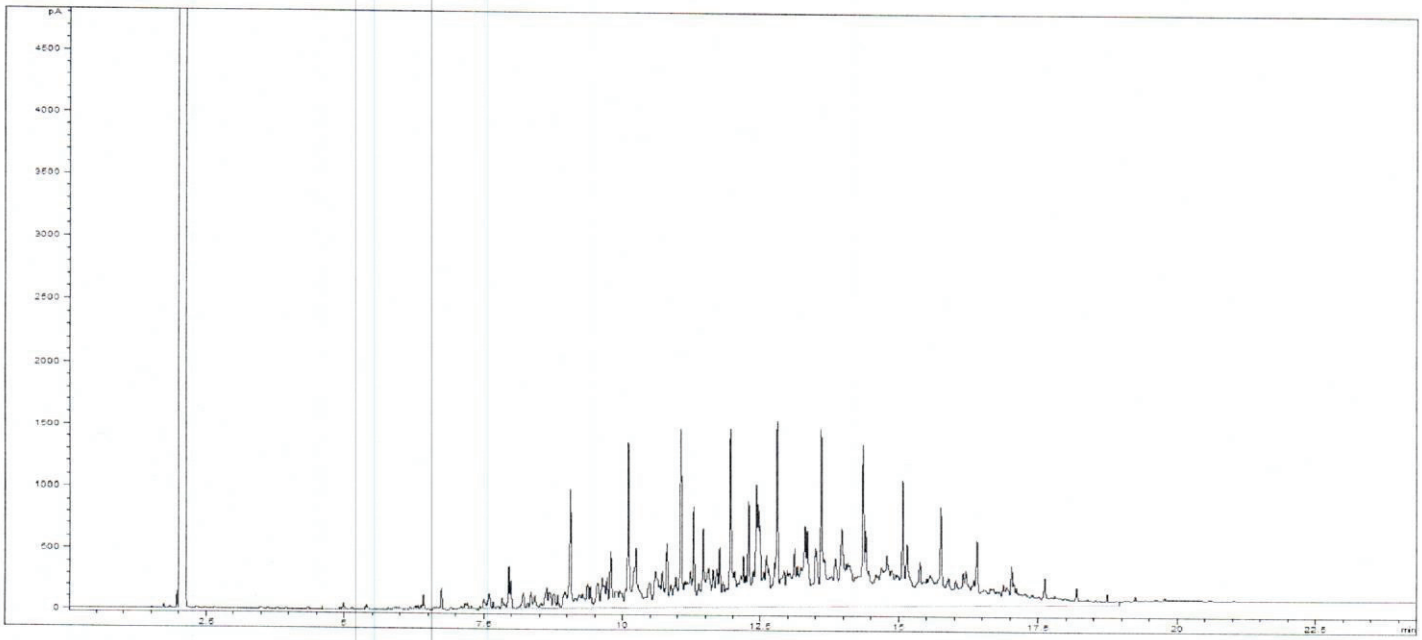
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14376
Opened:
Diesel Fuel No. 2
Expires: 4/30/2023
Rec'd: 10/12/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

Analyte	*Certified Value* [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

ANAB ACCREDITED 5017/2014 REFERENCE MATERIAL PRODUCER

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:

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

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 preformed 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

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650
Opened:
o-Terphenyl
Expires: 9/30/2024
Rec'd: 4/30/2020
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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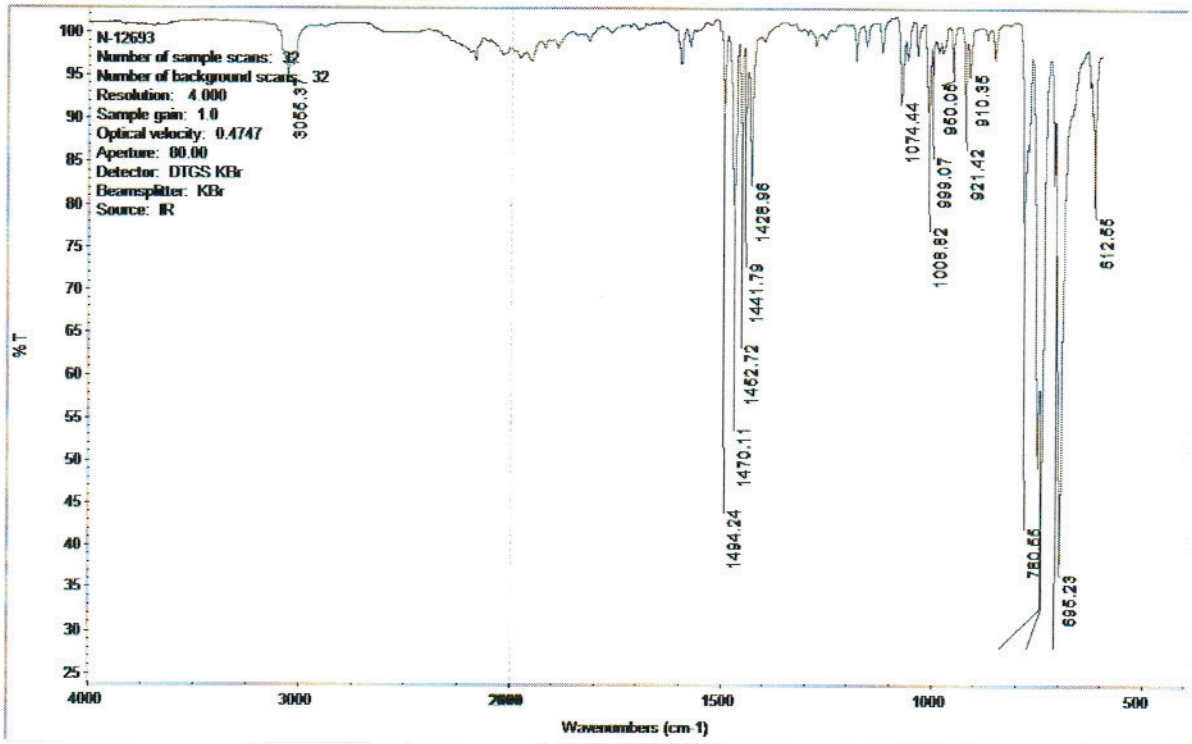
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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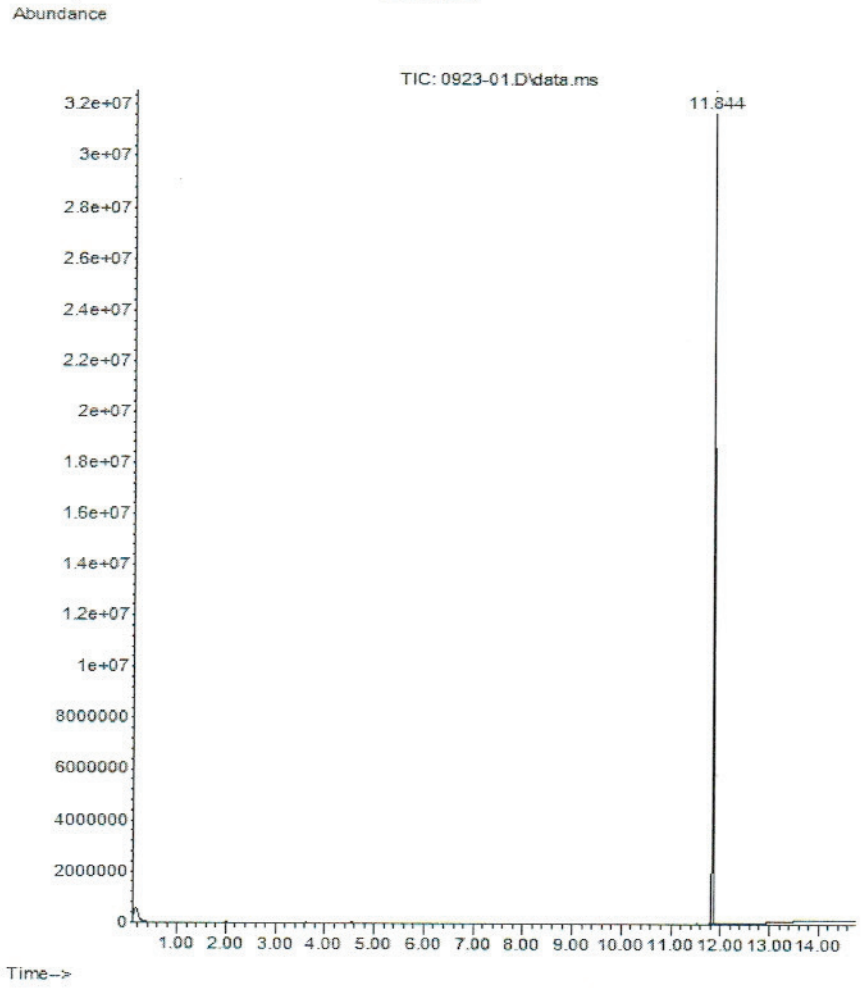
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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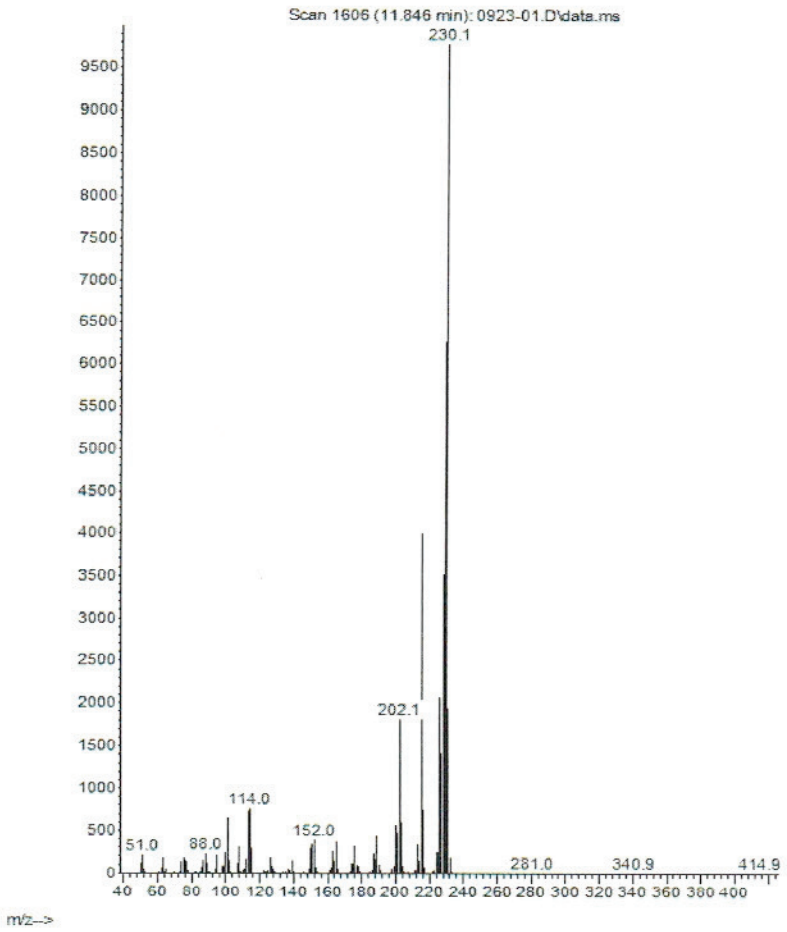
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

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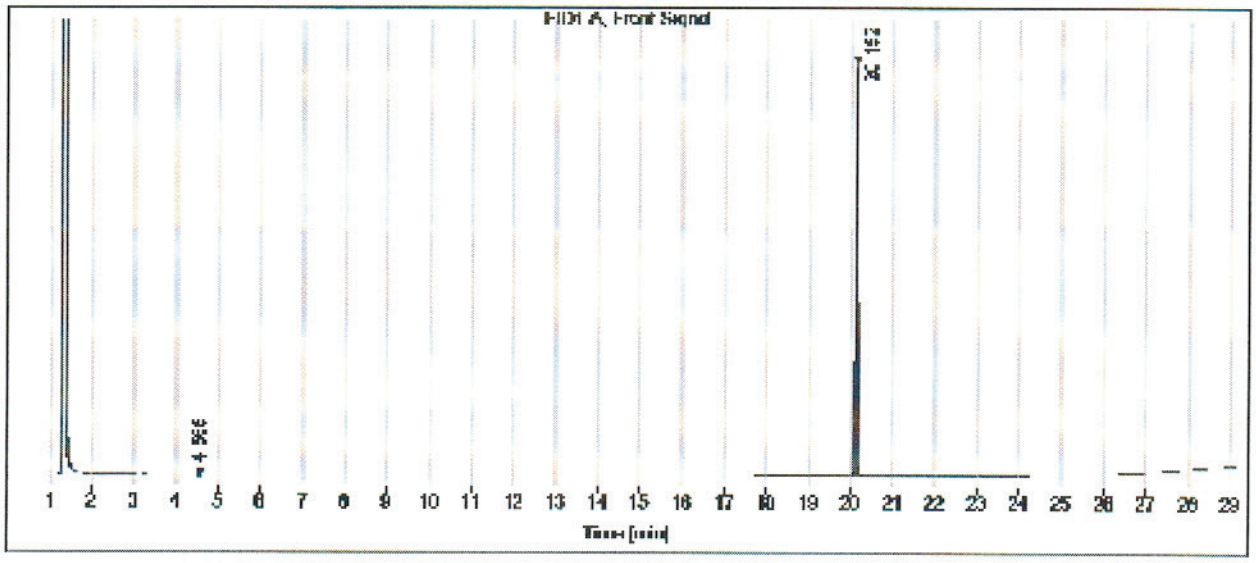
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



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		

Prep Batch 162993 Standards Traceability Report

Spike ID: DRO181105A
Spike Name: #2 Diesel (NEAT)
Type: Neat
Prep Date: 11/5/2018
Prep By: Ann Nebel
Exp Date: 11/5/2023
Status: New
Department: dropr
Vendor: conoco
Final Volume: 250 mL
Lot Number:
Balance ID:
Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
				11/5/2023

Stock Source	Base Units	Amount Added

Prep Batch 162993 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 162993 Standards Traceability Report

Spike ID: DRO210406A
Spike 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

Prep Batch 162993 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 162993 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 162993 Standards Traceability Report

Spike ID: DRO211006A
Spike 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

Prep Batch 162993 Standards Traceability Report

Spike ID: DRO211006B
Spike Name: Triacontane SURR 20 ug/mL
Prep Date: 10/6/2021
Exp Date: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 100X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary
Prep By: Jillian L Bostwick
Status: New
Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	3.96	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO211006A	ug/mL	40 uL

Prep Batch 162993 Standards Traceability Report

Spike ID: DRO211012B
Spike 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

Prep Batch 162993 Standards Traceability Report

Spike ID: DRO211121C
Spike Name: MDL Diesel SPK 3000 ug/mL in Acetone
Prep Date: 11/21/2021
Exp Date: 11/5/2023
Department: dropr
Vendor:
Lot Number:
Balance ID:
Comments: use 100 uL DRO MDLs-mdw)

Type: Secondary
Prep By: Ann Nebel
Status: New
Final Volume: 5 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DY299	13297	4.9	mL	11/5/2023

Stock Source	Base Units	Amount Added
DRO211012B	ug/mL	0.1 mL

Prep Batch 162993 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 162993 Standards Traceability Report

Spike ID: DRO220106B
Spike Name: Triacontane SURR 1000 ug/mL
Prep Date: 1/6/2022
Exp Date: 4/6/2026
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
Dichloromethane EC832	14647	5	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO211006A	ug/mL	5 mL

Prep Batch 162993 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 162993 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 162993 Standards Traceability Report

Spike ID: DRO220117A
Spike Name: OTPonly SURR 20 ug/mL
Prep Date: 1/17/2022
Exp Date: 9/30/2024
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 100X dilution of OTPonly SURR 2000 ug/mL

Type: Secondary
Prep By: Jillian L Bostwick
Status: New
Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA776	13927	3.96	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO211213A	ug/mL	40 uL

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

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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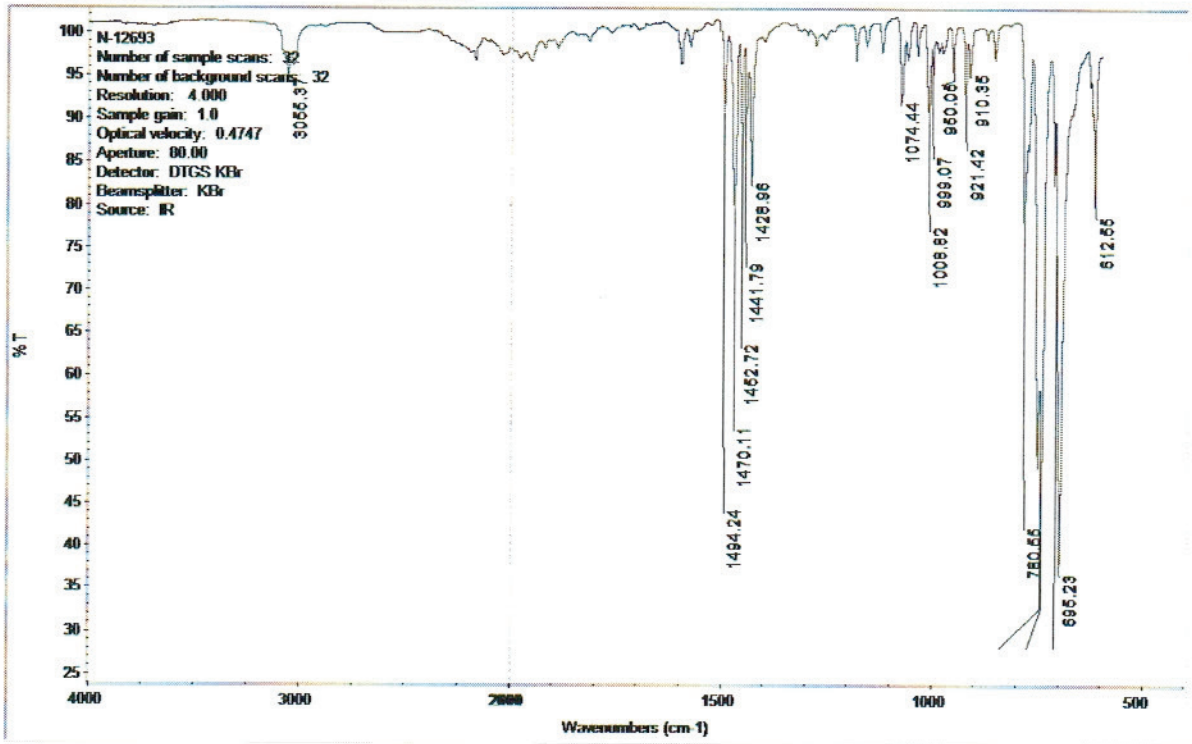
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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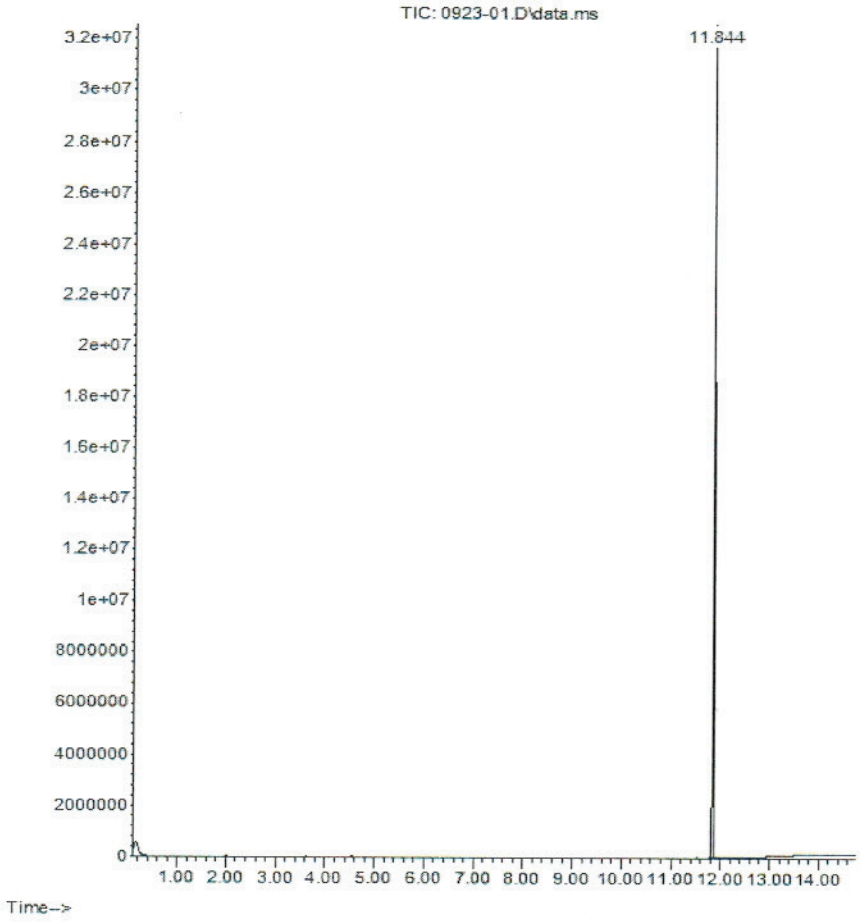
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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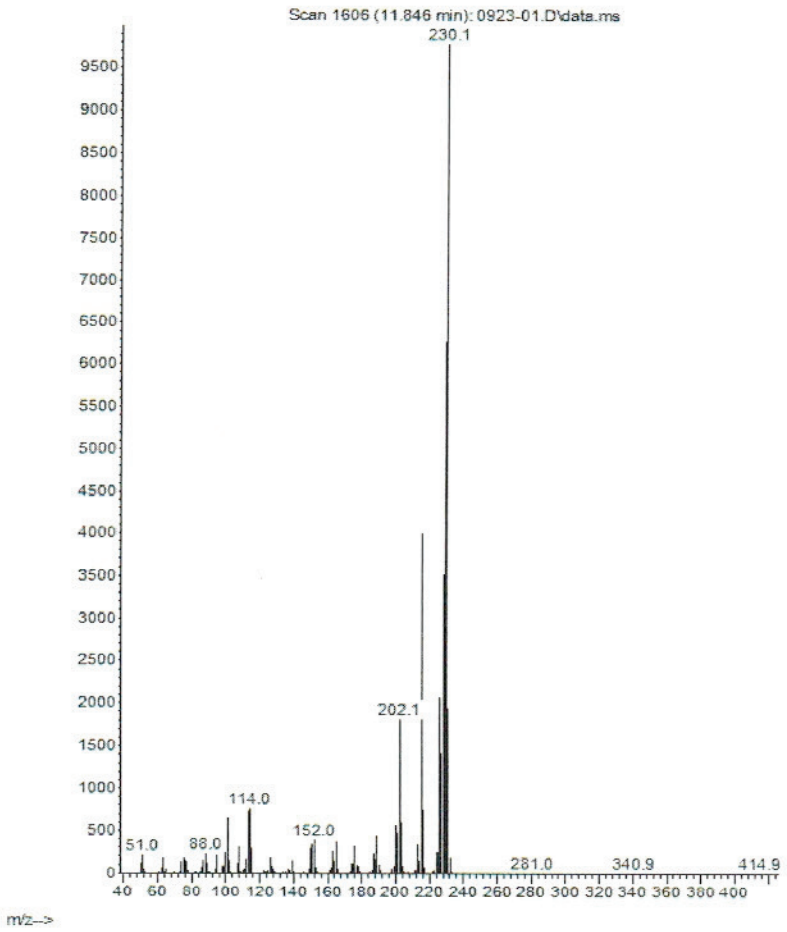
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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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

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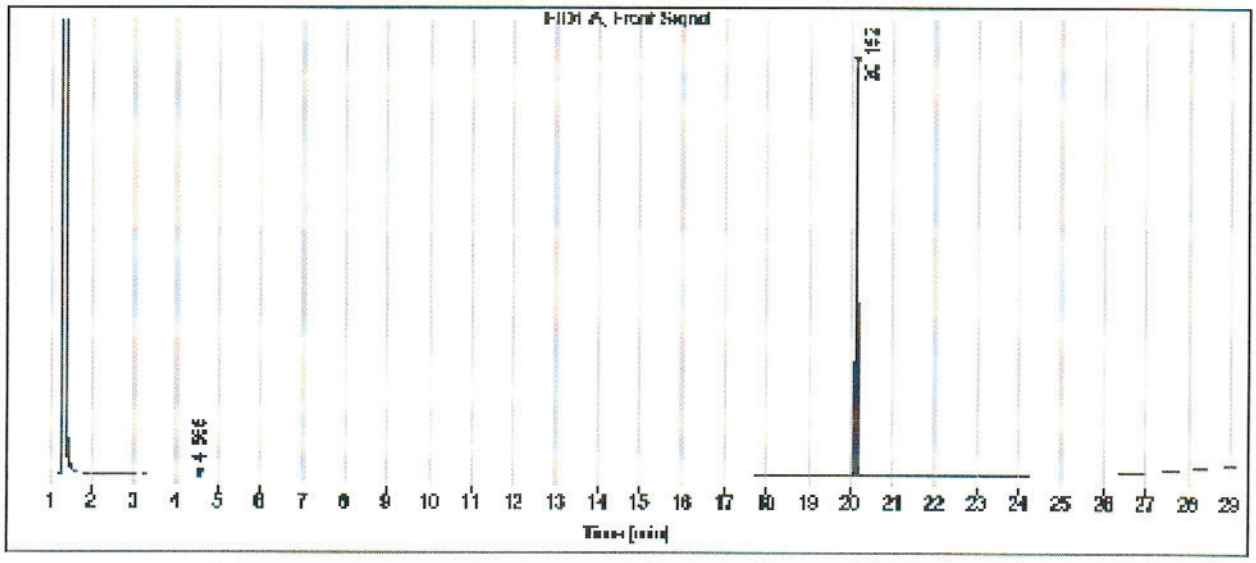
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



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		

SIGMA-ALDRICH®

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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

$CD_3(CD_2)_{28}CD_3$

Product Number:	**451789**
Batch Number:	**MBBC4347**
Brand:	ALDRICH
CAS Number:	93952-07-9
MDL Number:	MFCD00209794
Formula:	C30D62
Formula Weight:	485.20 g/mol
Quality Release Date:	27 APR 2018

ID #: 13736
Opened:
Triacontane-d62-98 atom % D
Expires: 4/6/2026
Rec'd: 4/6/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Analytical RunID GCFID-HP4-B_220118A 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_220118A Standards Traceability Report

Standard ID: DRO210401B
Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DCM
Prep Date: 4/1/2021
Exp Date: 1/31/2028
Department: dropr
Vendor: Restek
Lot Number: A0166827
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 (RCS)	13714	1	mL	1/31/2028

Stock Source	Base Units	Amount Added

Analytical RunID GCFID-HP4-B_220118A Standards Traceability Report

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Type: Neat
Prep Date: 4/6/2021
Prep By: Ann Nebel
Exp Date: 4/6/2026
Status: New
Department: dropr
Vendor: Sigma-Aldrich
Final Volume: mL
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

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_220118A Standards Traceability Report

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Type: Primary
Prep Date: 10/6/2021
Prep By: Jillian L Bostwick
Exp Date: 4/6/2026
Status: New
Department: dropr
Vendor:
Final Volume: 50 mL
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/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

Analytical RunID GCFID-HP4-B_220118A 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_220118A 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_220118A Standards Traceability Report

Standard ID: DRO220105A
Standard Name: Triacontane SURR 1000 ug/mL
Prep Date: 1/5/2022
Exp Date: 4/6/2026
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
Dichloromethane EC832	14647	5	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO211006A	ug/mL	5 mL

Analytical RunID GCFID-HP4-B_220118A Standards Traceability Report

Standard ID: DRO220106A
Standard Name: 5,000 ug/mL RRO CCV 200 ug/mL Triacontane
Prep Date: 1/6/2022
Exp Date: 4/6/2026
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 EC832	14647	2.8	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO220105A	ug/mL	800 µL
DRO210401B	ug/mL	400 µL

Analytical RunID GCFID-HP4-B_220118A Standards Traceability Report

Standard ID: DRO220110A
Standard Name: Carbon Scan STD-Marker
Type: Neat
Prep Date: 1/11/2022
Prep By: Ann Nebel
Exp Date: 7/13/2026
Status: Open
Department: dropr
Vendor: ASI2
Final Volume: 1.2 mL
Lot Number: 55064
Balance ID:
Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

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_220118A Standards Traceability Report

Standard ID: DRO220111A
Standard Name: Carbon Scan STD-Marker
Type: Primary
Prep Date: 1/11/2022
Prep By: Ann Nebel
Exp Date: 7/13/2026
Status: Open
Department: dropr
Vendor: ASI2
Final Volume: 2.4 mL
Lot Number: 071306
Balance ID:
Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Carbon Disulfide 55064	7477	1.2	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	1.2 mL

Analytical RunID GCFID-HP4-B_220118A Standards Traceability Report

Standard ID: DRO220114A
Standard Name: 8015 CCV-15,000ug/mL + 200 OTP
Prep Date: 1/14/2022
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 EC832	14647	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
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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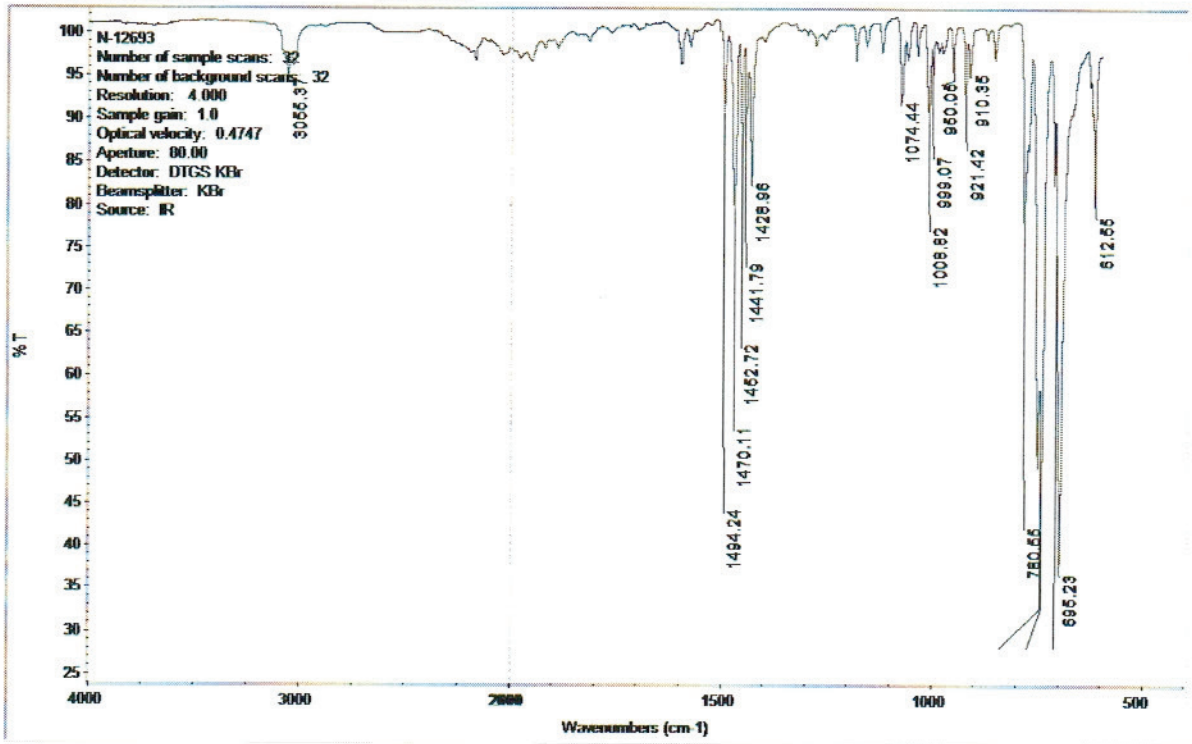
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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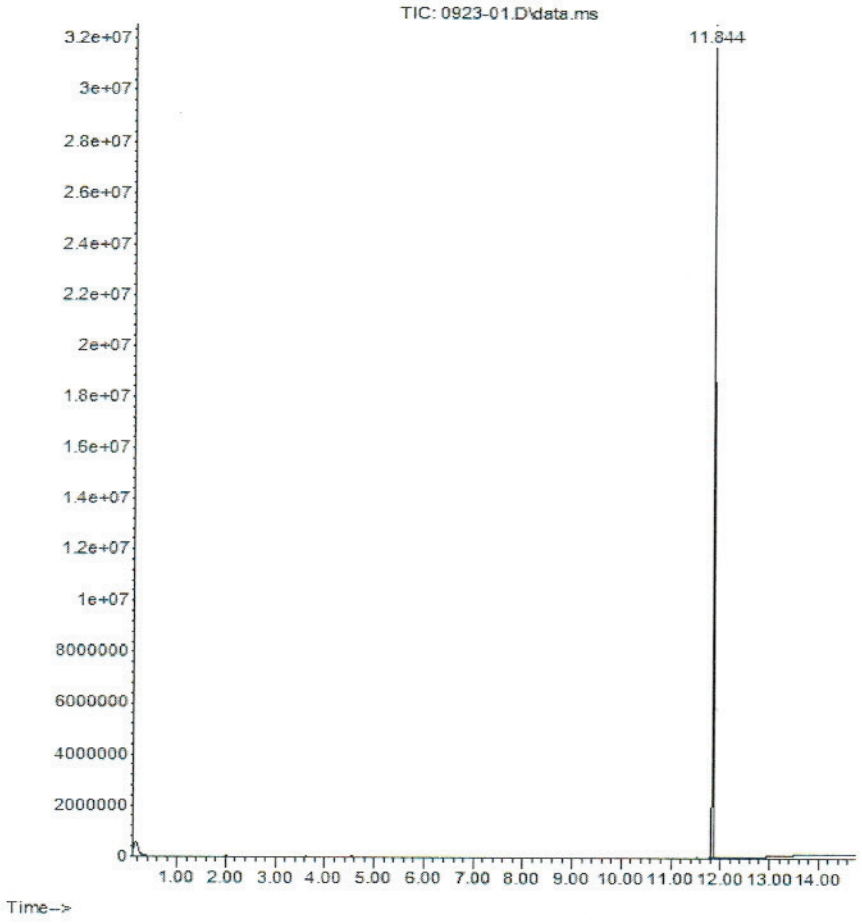
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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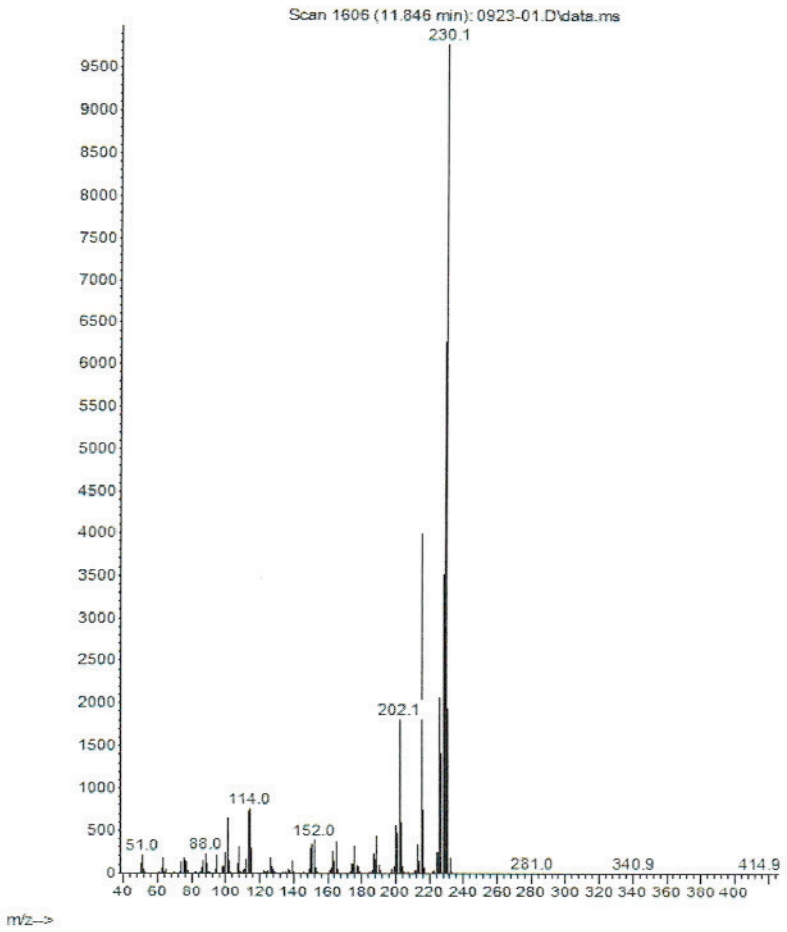
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

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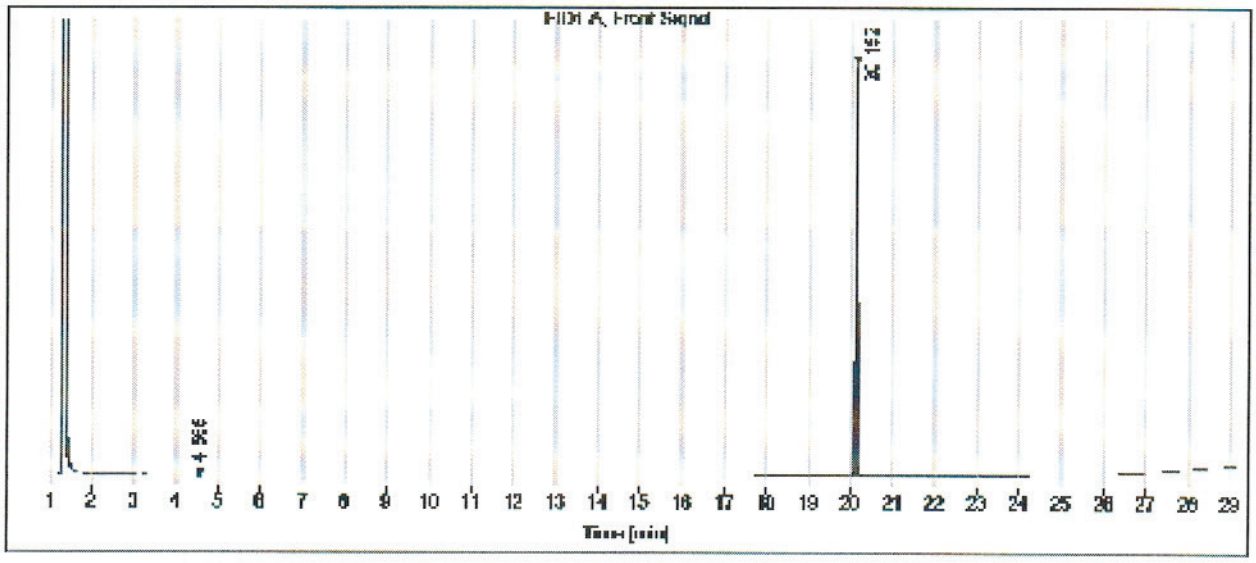
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0166827

Description : Residual Range Calibration Standard (RCS)

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

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil)	50,056.0 µg/mL	+/- 293.0889	µg/mL	Gravimetric
	CAS # 64742-65-0.F (Lot A0126386)		+/- 1,490.7309	µg/mL	Unstressed
	Purity ----%		+/- 1,589.8634	µg/mL	Stressed

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

ID #: 13714
Opened:
Residual Range Calibration Standard (RCS)
Expires: 1/31/2028
Rec'd: 4/1/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

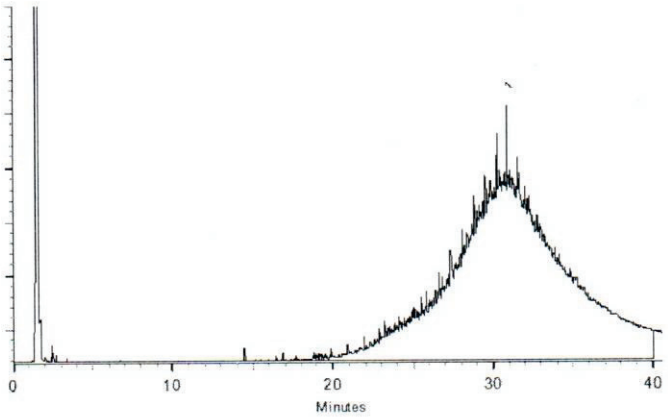
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Kylie Struble - Operations Technician I

Date Mixed: 02-Dec-2020 **Balance:** 1128353505

Justine Albertson - Operations Tech-ARM QC

Date Passed: 07-Dec-2020

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, 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:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

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.

SIGMA-ALDRICH®

sigma-aldrich.com

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

$CD_3(CD_2)_{28}CD_3$

Product Number:	**451789**
Batch Number:	**MBBC4347**
Brand:	ALDRICH
CAS Number:	93952-07-9
MDL Number:	MFCD00209794
Formula:	C30D62
Formula Weight:	485.20 g/mol
Quality Release Date:	27 APR 2018

ID #: 13736
Opened:
Triacontane-d62-98 atom % D
Expires: 4/6/2026
Rec'd: 4/6/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Version Number: 1

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

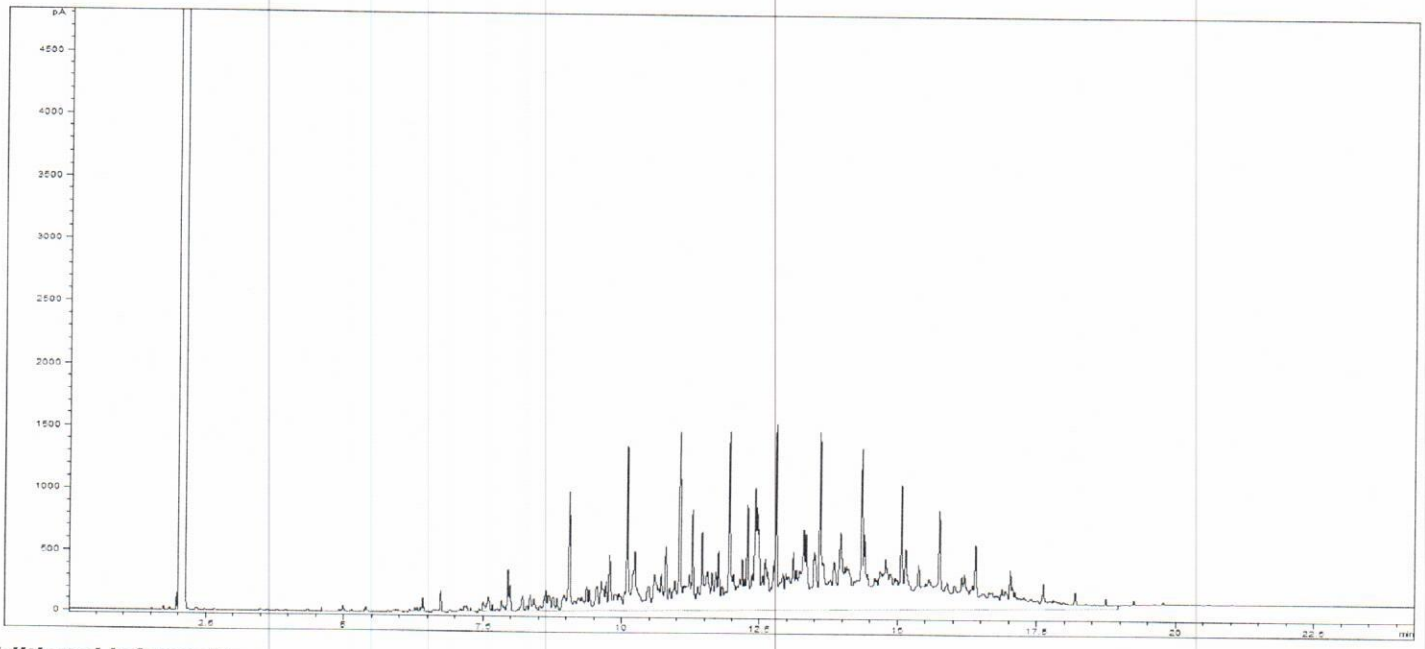
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

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

ANAB ACCREDITED ANSI-ASQ National Accreditation Board REFERENCE MATERIAL PRODUCER

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:

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

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 preformed 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

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Analytical RunID GCFID-HP4-B_220120A 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_220120A 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_220120A Standards Traceability Report

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Type: Primary
Prep Date: 10/6/2021
Prep By: Jillian L Bostwick
Exp Date: 4/6/2026
Status: New
Department: dropr
Vendor:
Final Volume: 50 mL
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/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

Analytical RunID GCFID-HP4-B_220120A 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_220120A 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_220120A 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_220120A Standards Traceability Report

Standard ID: DRO220106B
Standard Name: Triacontane SURR 1000 ug/mL
Prep Date: 1/6/2022
Exp Date: 4/6/2026
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
Dichloromethane EC832	14647	5	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO211006A	ug/mL	5 mL

Analytical RunID GCFID-HP4-B_220120A 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_220120A Standards Traceability Report

Standard ID: DRO220111A
Standard Name: Carbon Scan STD-Marker
Type: Primary
Prep Date: 1/11/2022
Prep By: Ann Nebel
Exp Date: 7/13/2026
Status: Open
Department: dropr
Vendor: ASI2
Final Volume: 2.4 mL
Lot Number: 071306
Balance ID:
Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Carbon Disulfide 55064	7477	1.2	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	1.2 mL

Analytical RunID GCFID-HP4-B_220120A Standards Traceability Report

Standard ID: DRO220114A
Standard Name: 8015 CCV-15,000ug/mL + 200 OTP
Prep Date: 1/14/2022
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 EC832	14647	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_220120A Standards Traceability Report

Standard ID: DRO220118A
Standard Name: 5,000 ug/mL RRO CCV 200 ug/mL Triacontane
Prep Date: 1/18/2022
Exp Date: 4/6/2026
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 EC849	14747	2.8	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO220106B	ug/mL	800 µL
DRO211118A	ug/mL	400 µL

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

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650
Opened:
o-Terphenyl
Expires: 9/30/2024
Rec'd: 4/30/2020
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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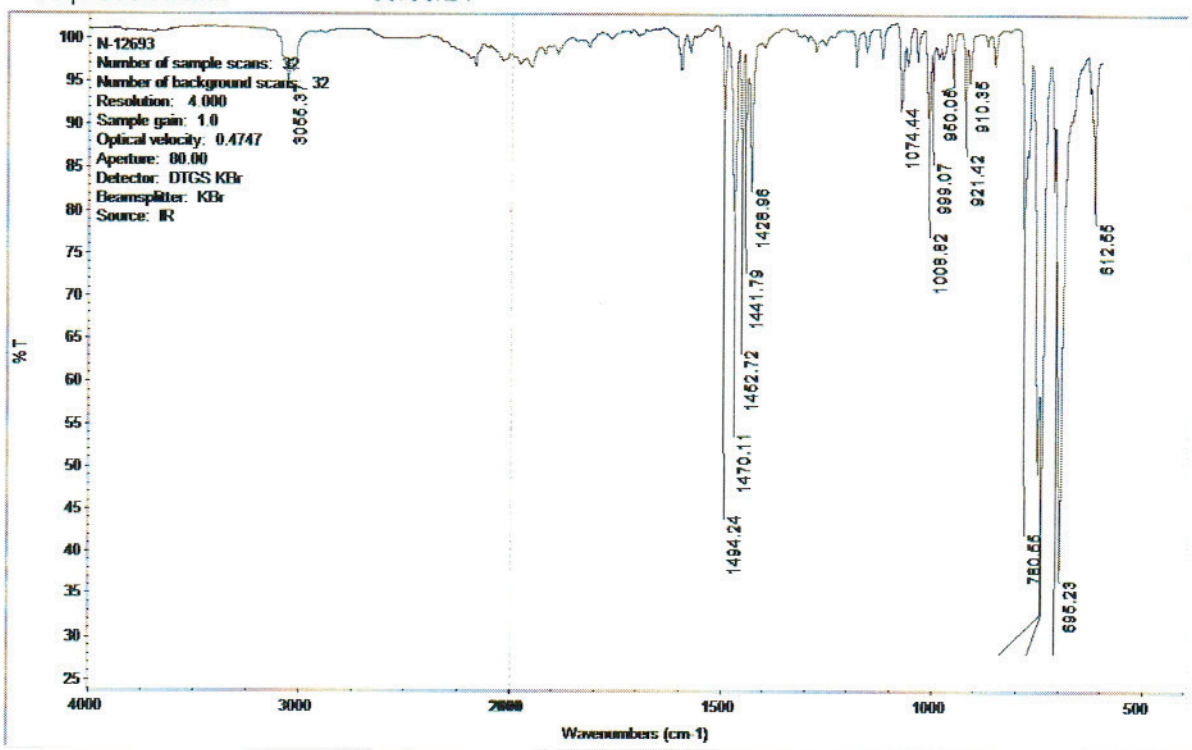
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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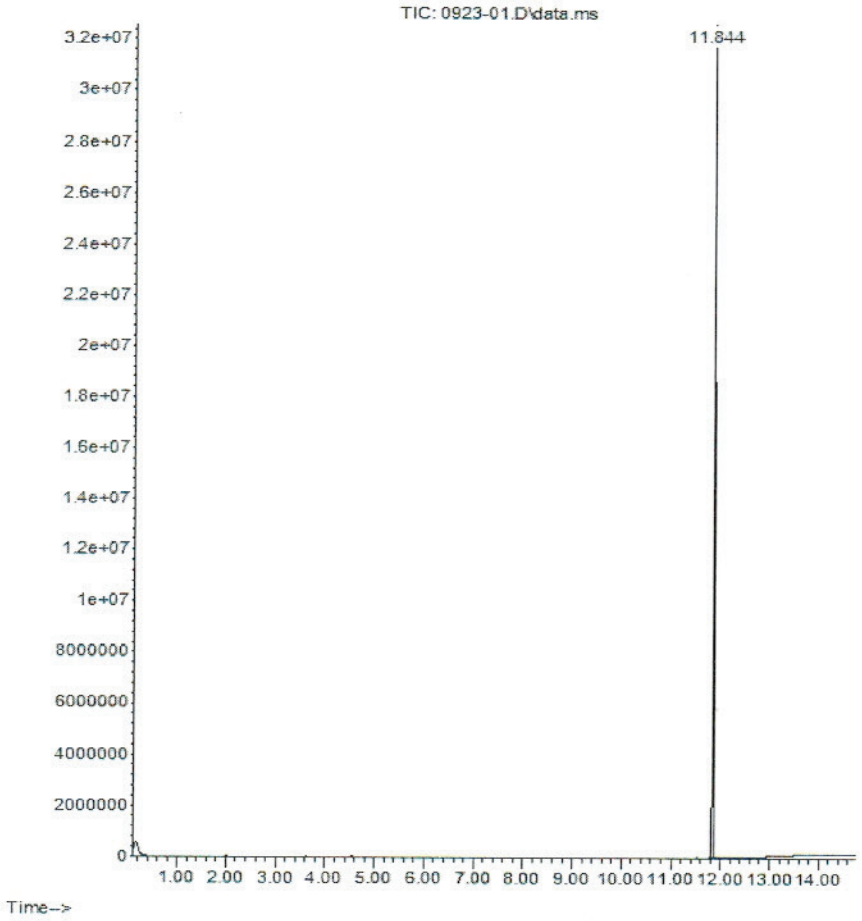
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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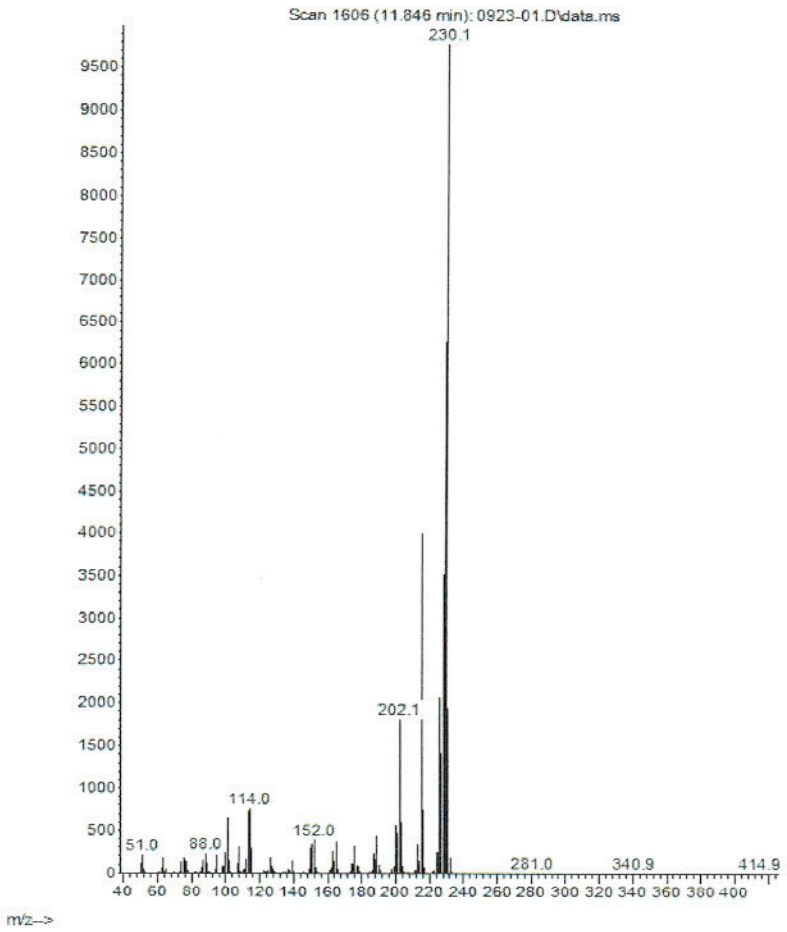
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

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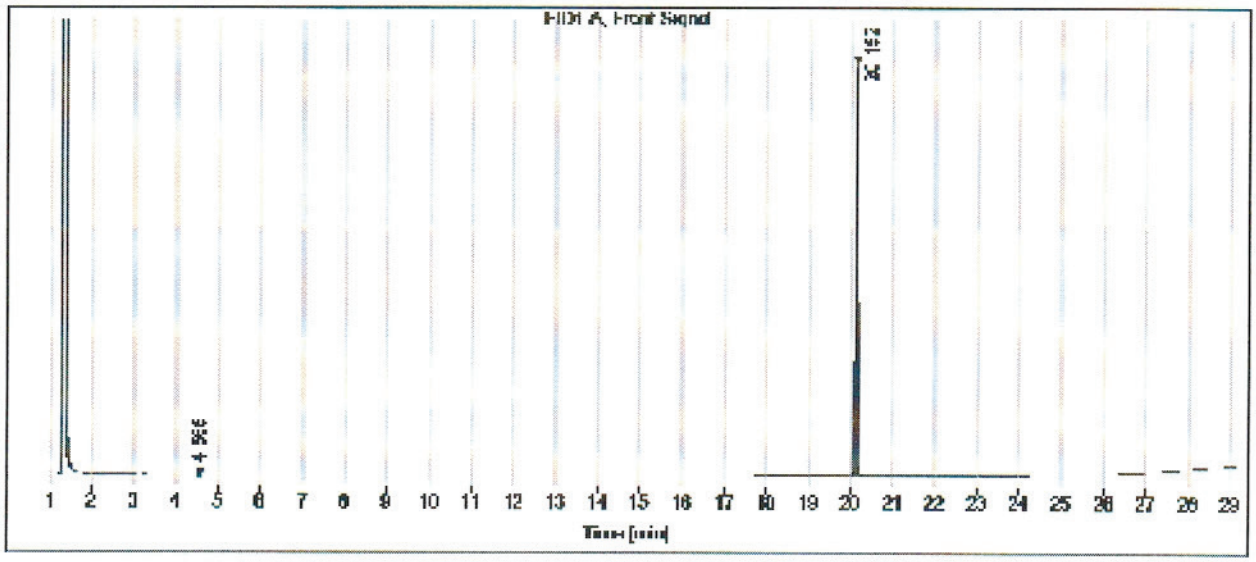
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	[illegible]	[illegible]
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



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		

SIGMA-ALDRICH®

sigma-aldrich.com

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

$CD_3(CD_2)_{28}CD_3$

Product Number:	**451789**
Batch Number:	**MBBC4347**
Brand:	ALDRICH
CAS Number:	93952-07-9
MDL Number:	MFCD00209794
Formula:	C30D62
Formula Weight:	485.20 g/mol
Quality Release Date:	27 APR 2018

ID #: 13736
Opened:
Triacontane-d62-98 atom % D
Expires: 4/6/2026
Rec'd: 4/6/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Test	Specification	Result
Purity (HPLC)	≥ 99.0 %	99.0 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	99.0 %
Initial Melting Point		60.0 °C
Final Melting Point		62.0 °C

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Ana

RESTEK® CERTIFIED REFERENCE MATERIAL

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

www.restek.com

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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 (Lot A0126386) 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
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

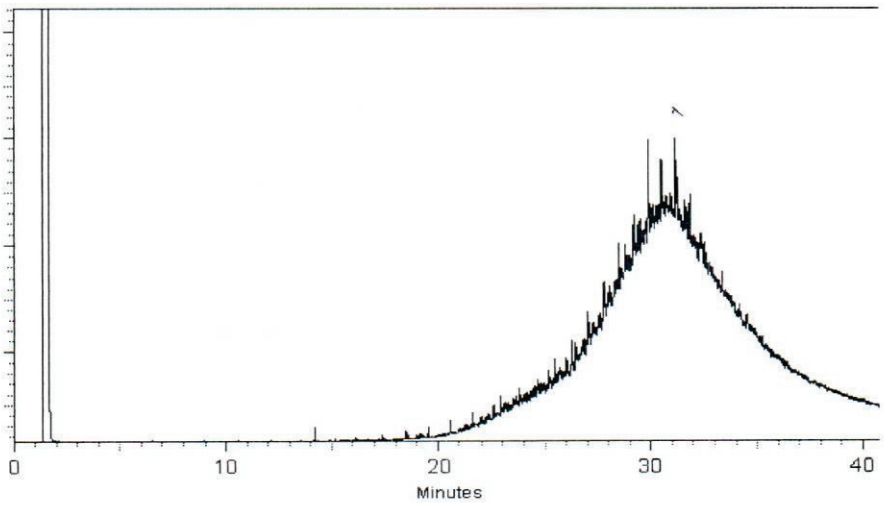
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021 **Balance:** 1128360905

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/μECD, 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:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

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.

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

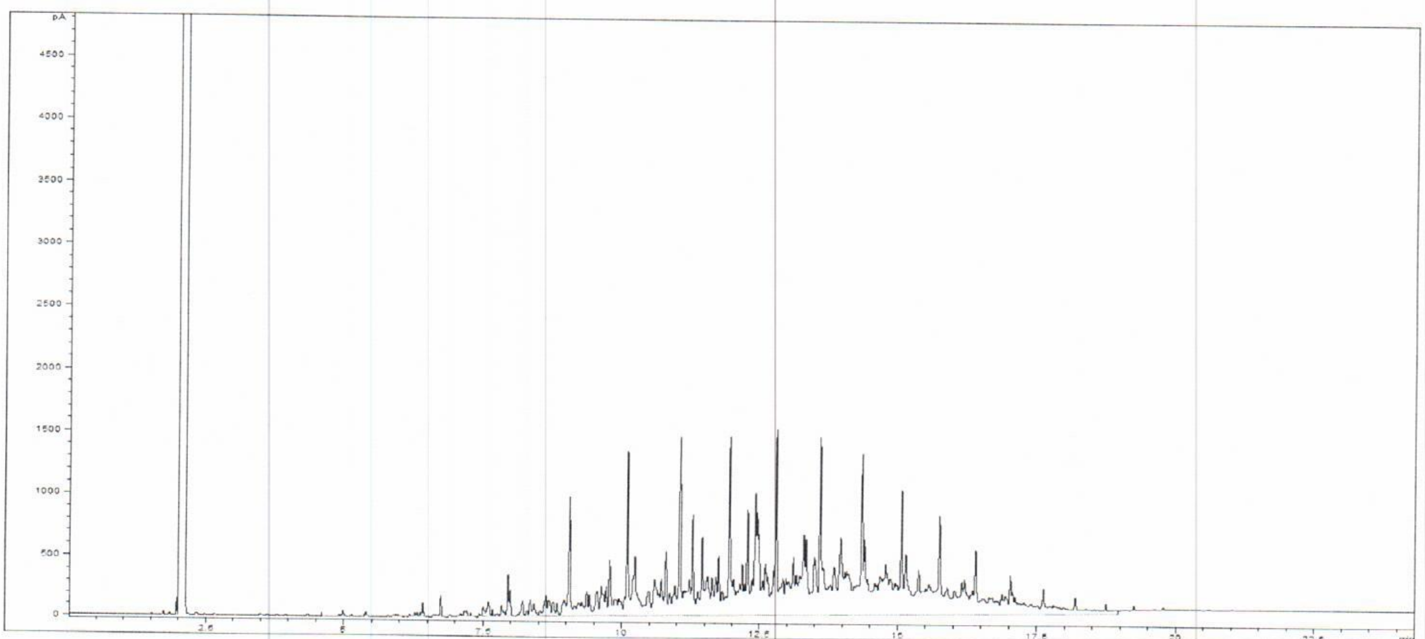
Product ID	UST148
Lot	**LRAC6316**
Expiration Date	April 2023
Manufacturing Date	April 2020
Storage Conditions	Room Temperature
Solvent/Matrix	DICHLOROMETHANE

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

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

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:

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

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 preformed 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
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ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER