

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%	

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

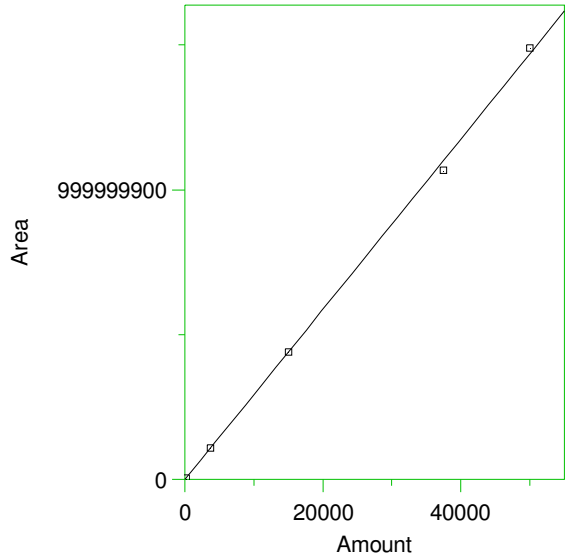
No default component

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

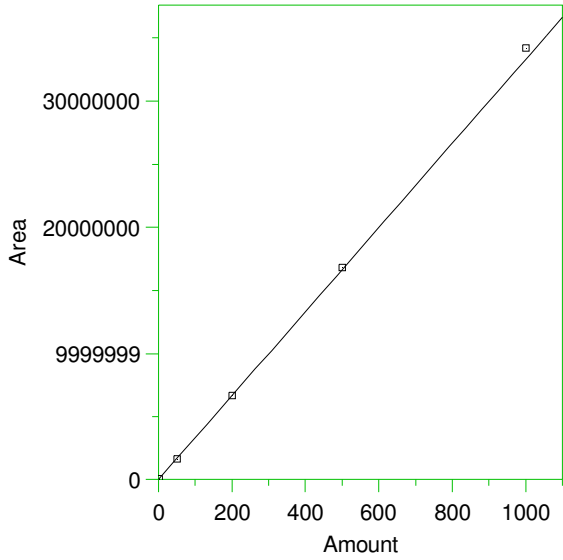
Single peak quantification by area

$Y = 29373.28 X + 0$

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

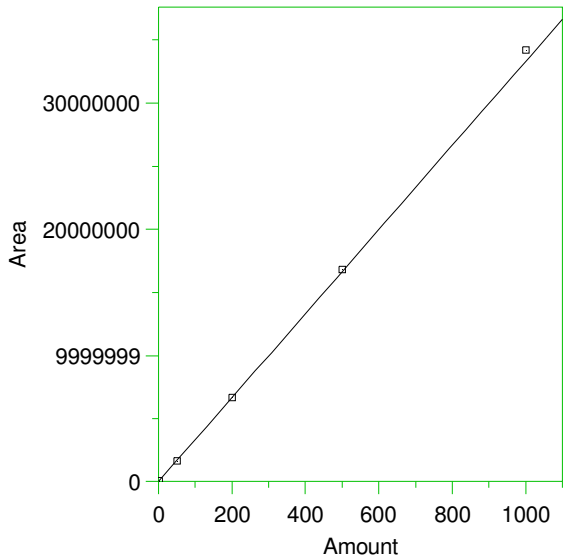
2 *o-Terphenyl



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

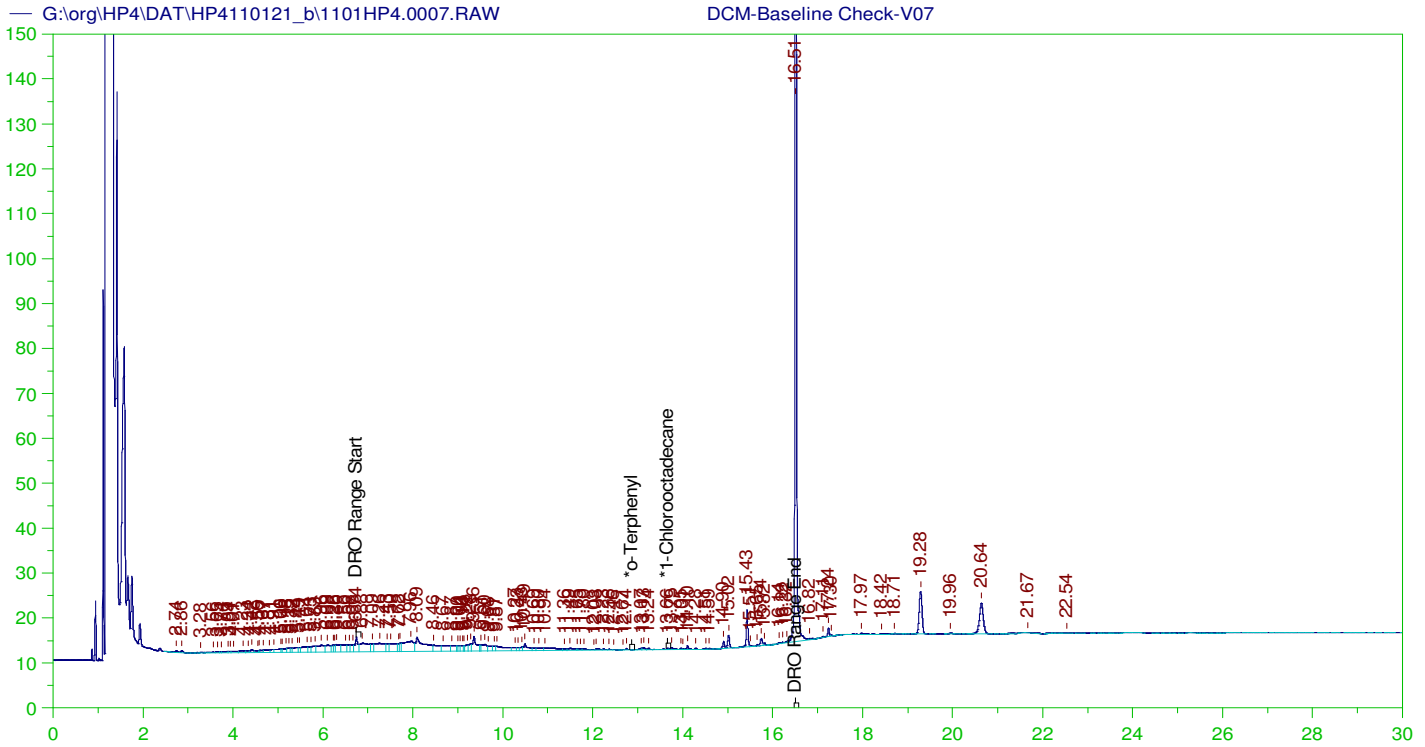
3 *1-Chlorooctadecane



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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

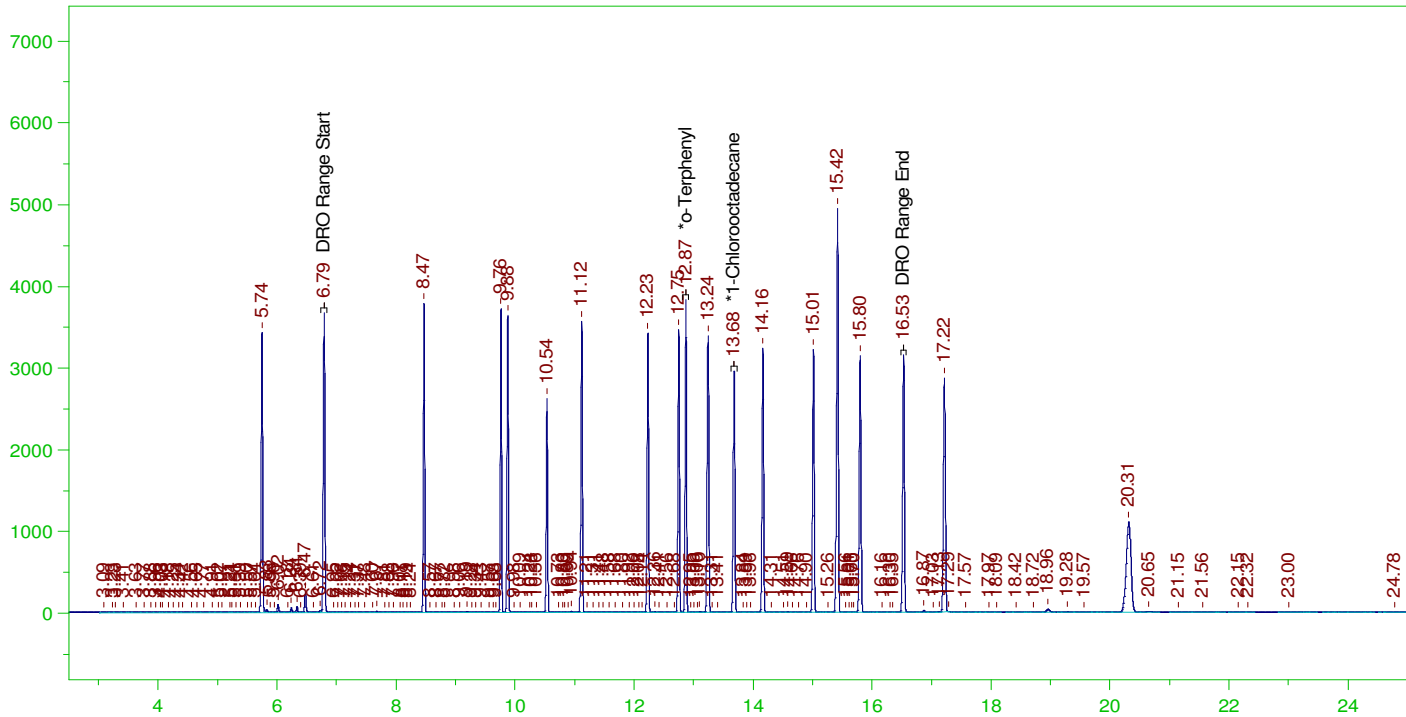
Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.74 to 16.58

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

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

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

CCV_1101HP408r, DRO ;1101HP4 , DRO211025A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP408r, DRO ;1101HP4 , DRO211025A
 Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0008.RAW
 Date & Time Acquired: 11/1/2021 6:29:58 PM
 Method File: G:\Org\HP4\methods\DC_8015-OA-L0.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

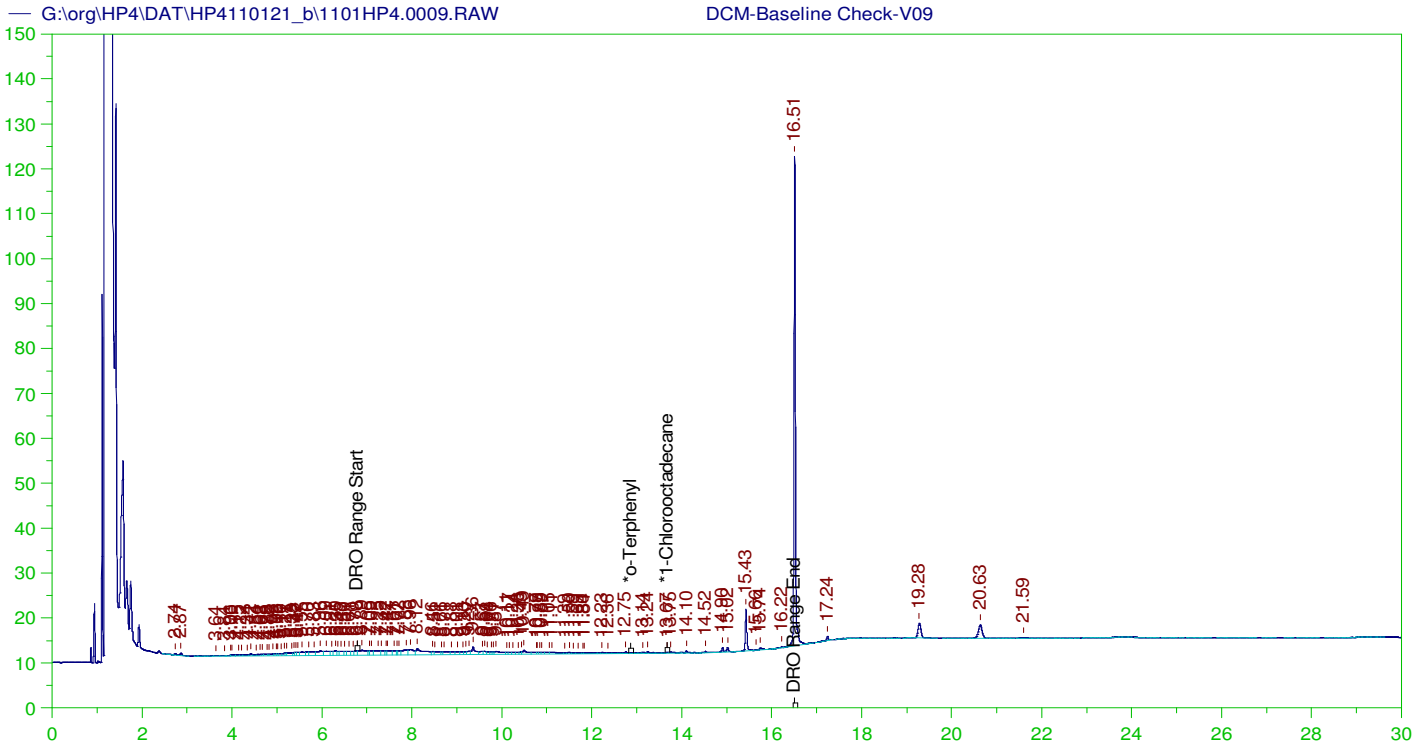
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.871	200.	197.197	98.6
*1-Chlorooctadecane	13.68	200.	162.692	81.35

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

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

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

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



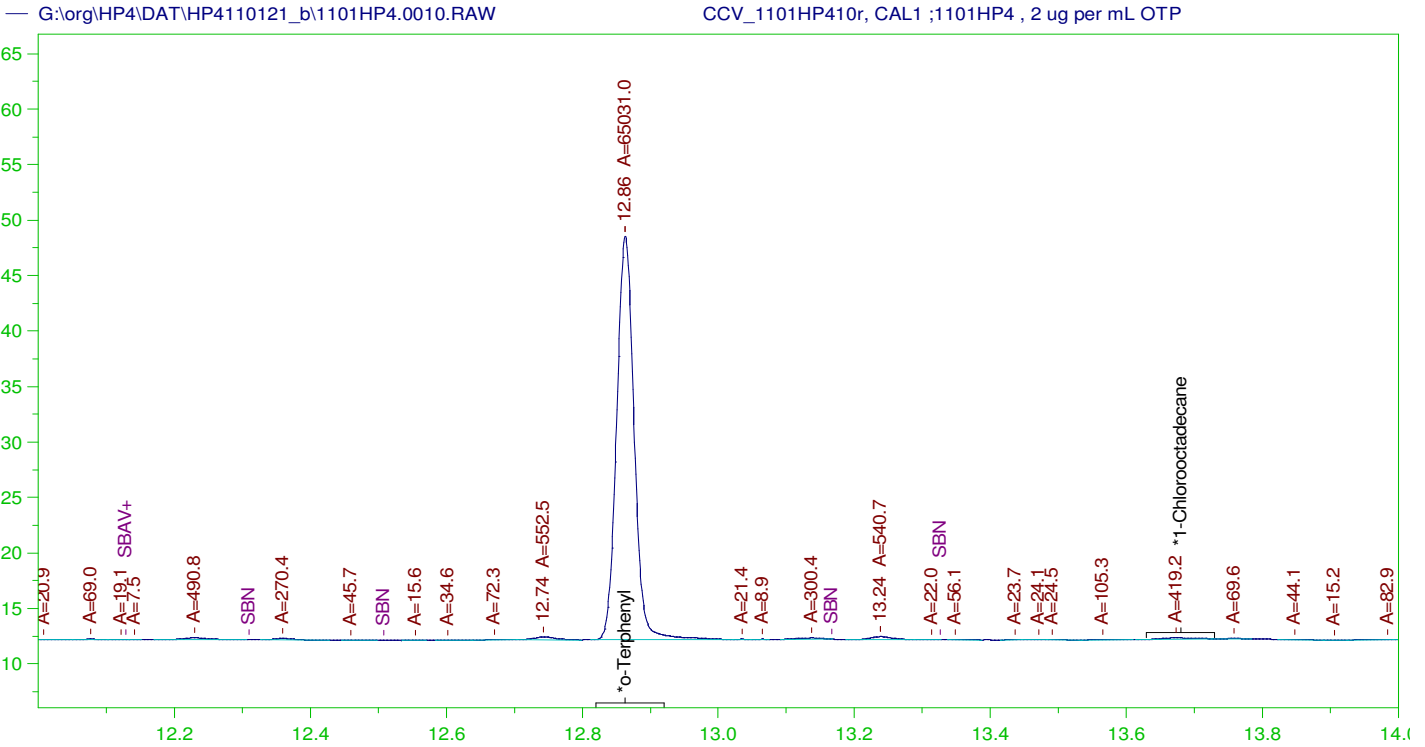
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

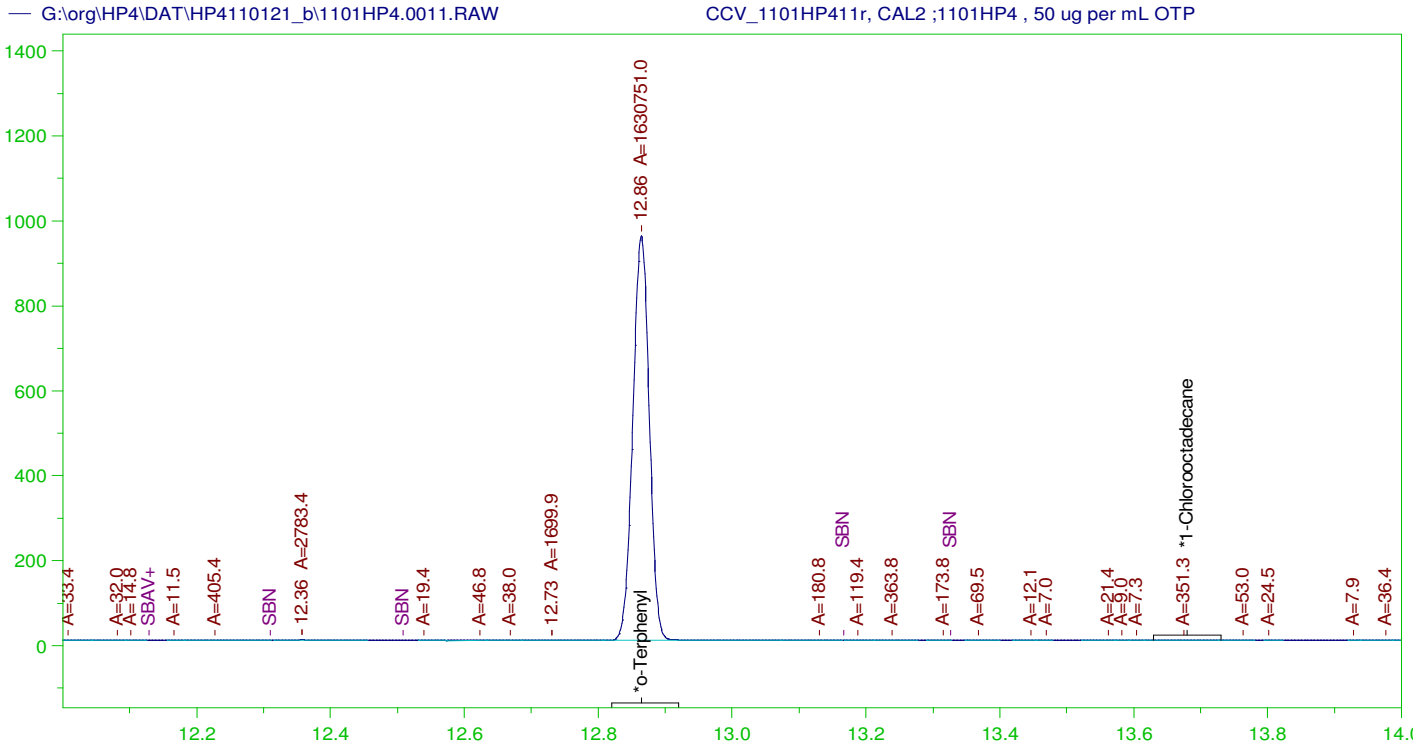
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.863	200.	1.952	.98
*1-Chlorooctadecane	29.971	200.	.	.

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

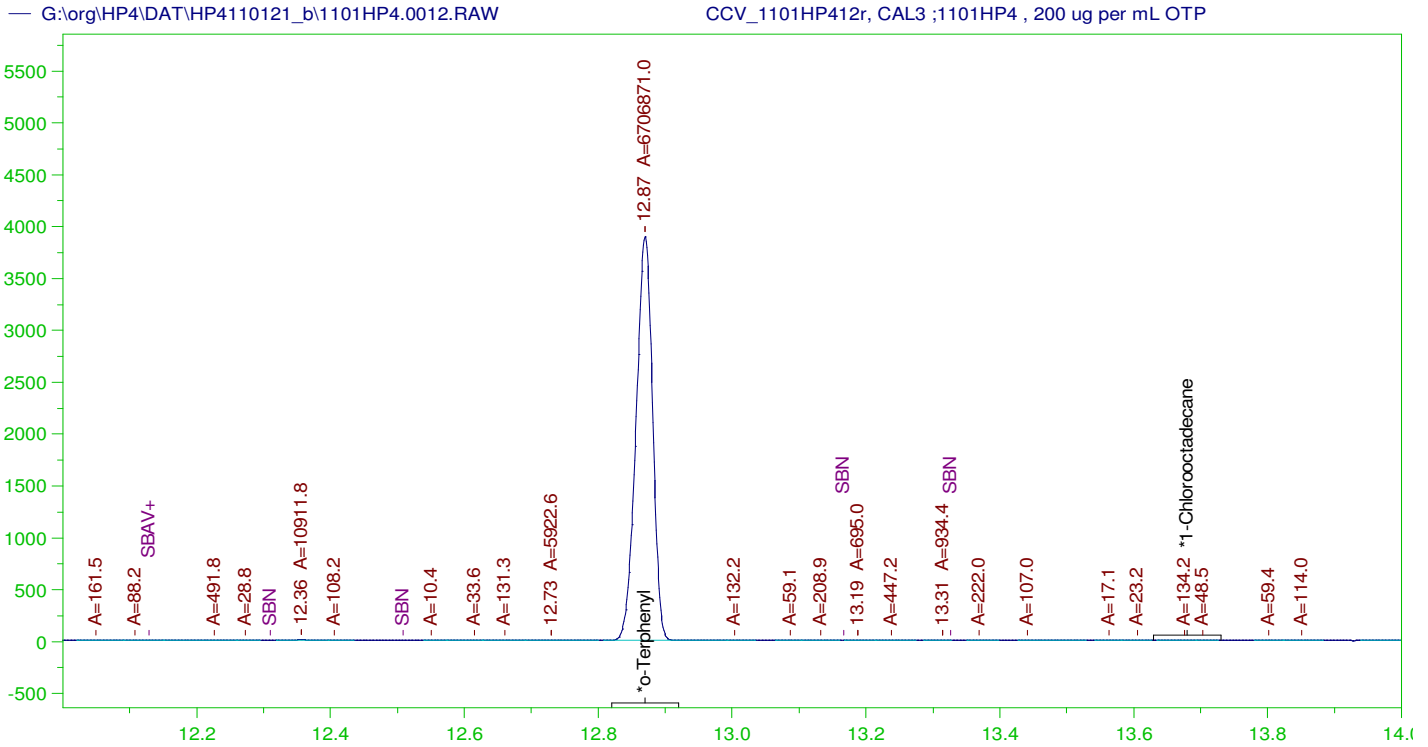
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.864	200.	48.943	24.47
*1-Chlorooctadecane	29.962	200.	.	.

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

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0011.RAW

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

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

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

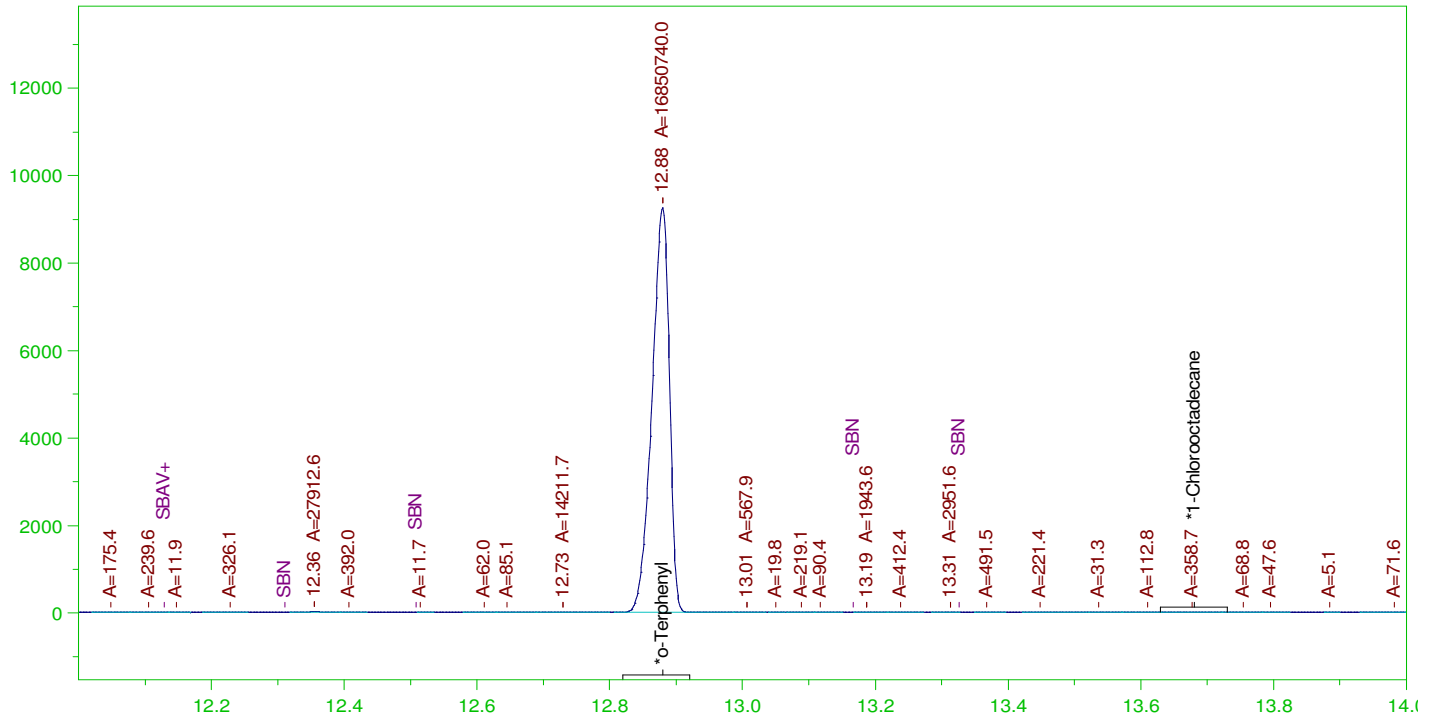
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0012.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

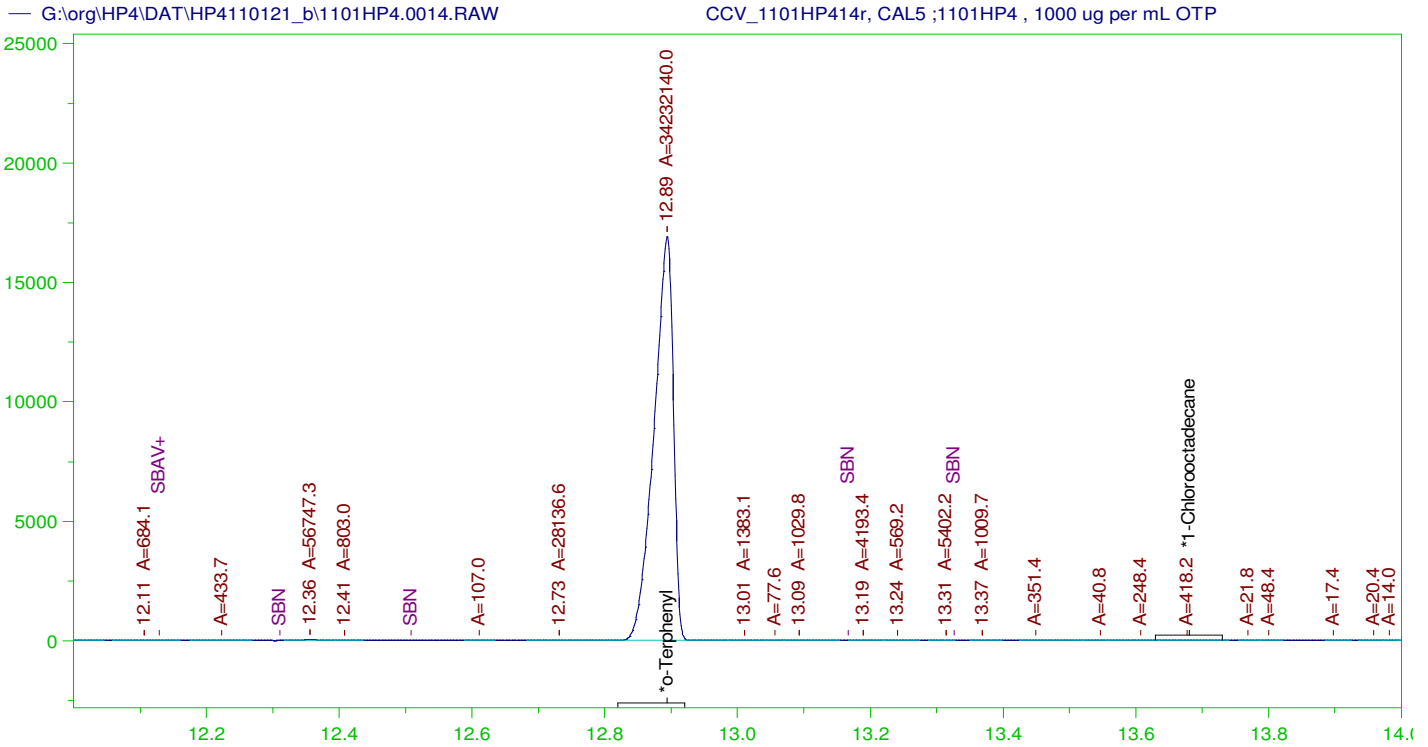
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.879	200.	505.729	252.86
*1-Chlorooctadecane	29.986	200.	.	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

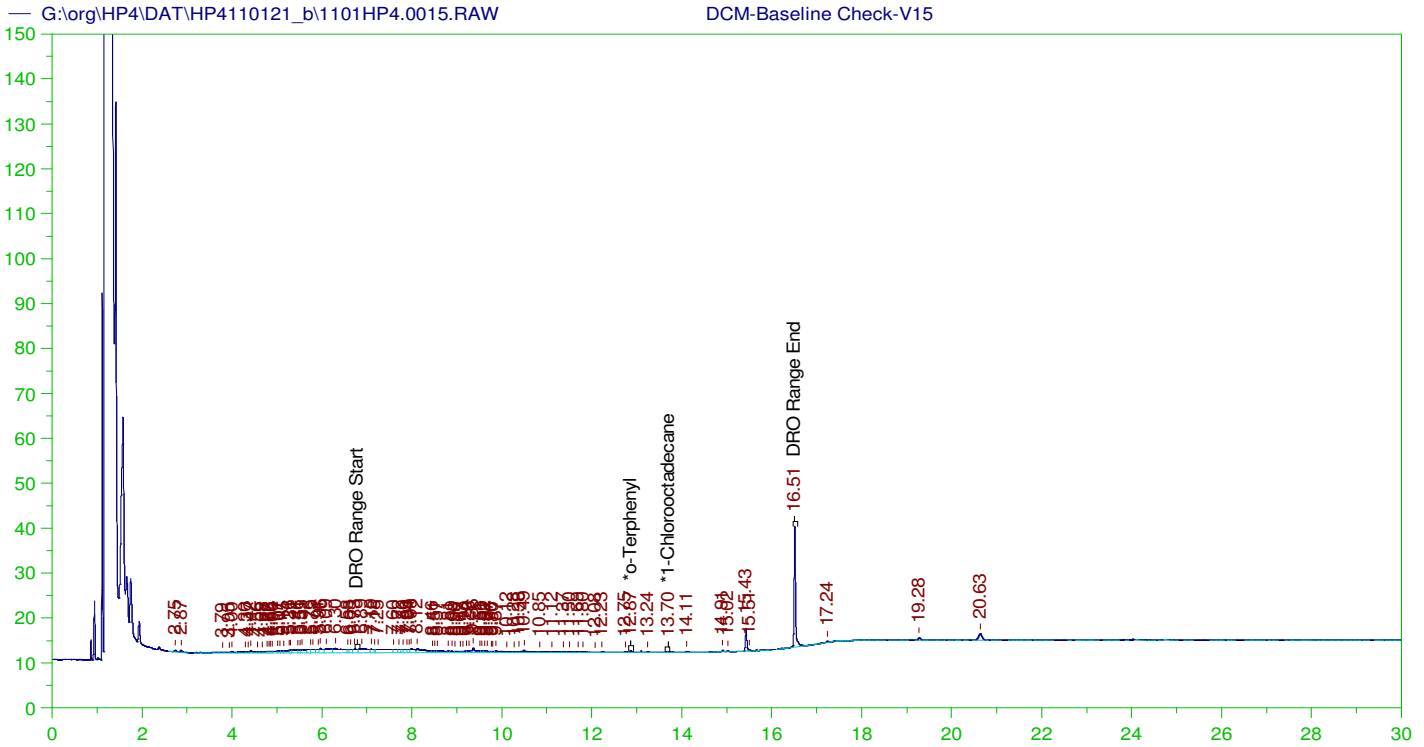
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.894	200.	1027.384	513.69
*1-Chlorooctadecane	29.945	200.	.	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

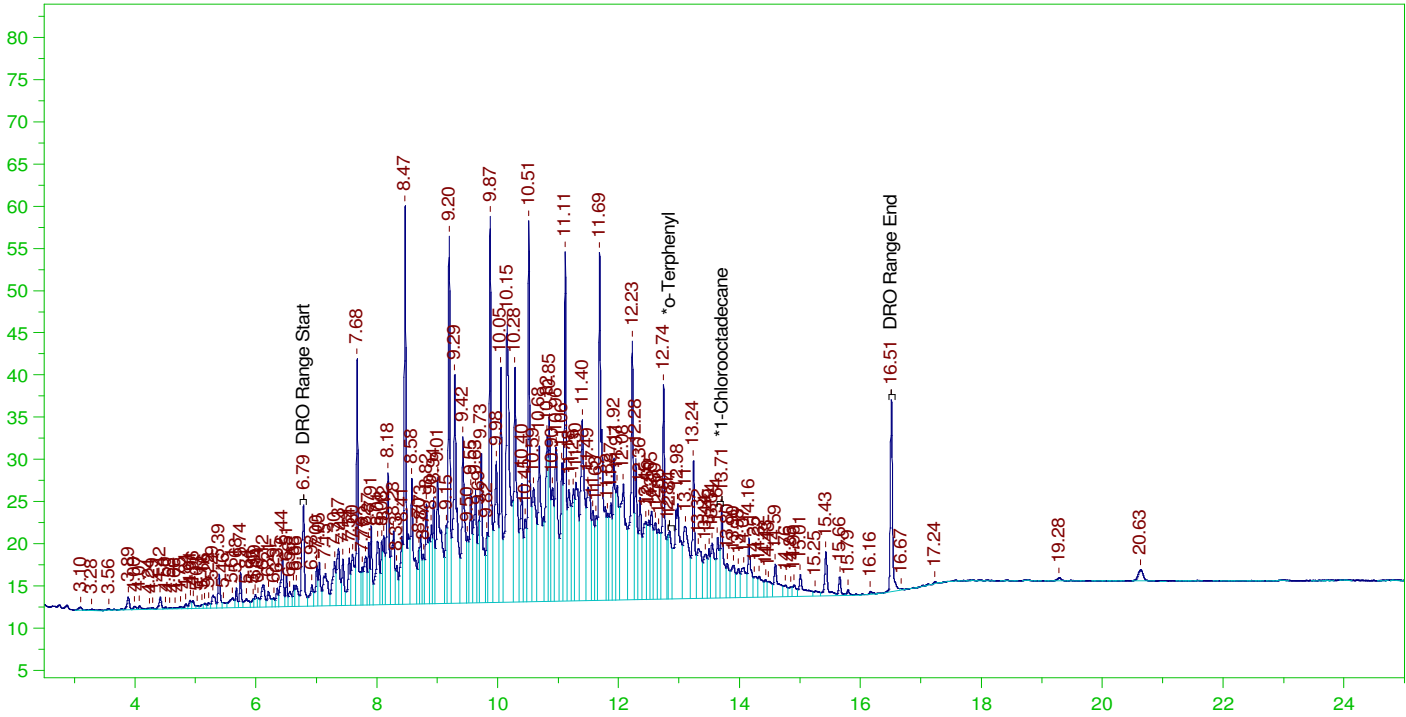
Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.74 to 16.58

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

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

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

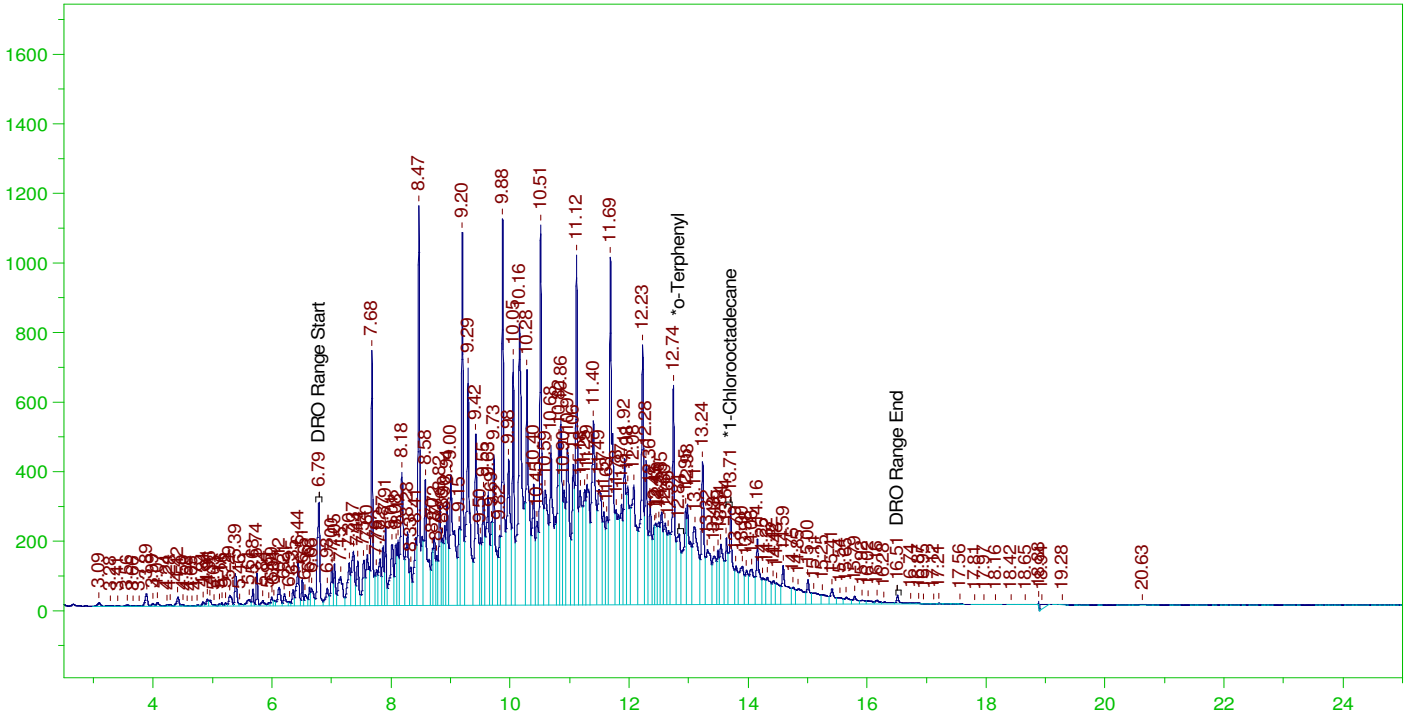
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0016.RAW

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

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

G:\org\HP4\DAT\HP4110121_b\1101HP4.0017.RAW

CCV_1101HP417r, CAL2 ;1101HP4 , 3750 ug per mL Diesel



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_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.837	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

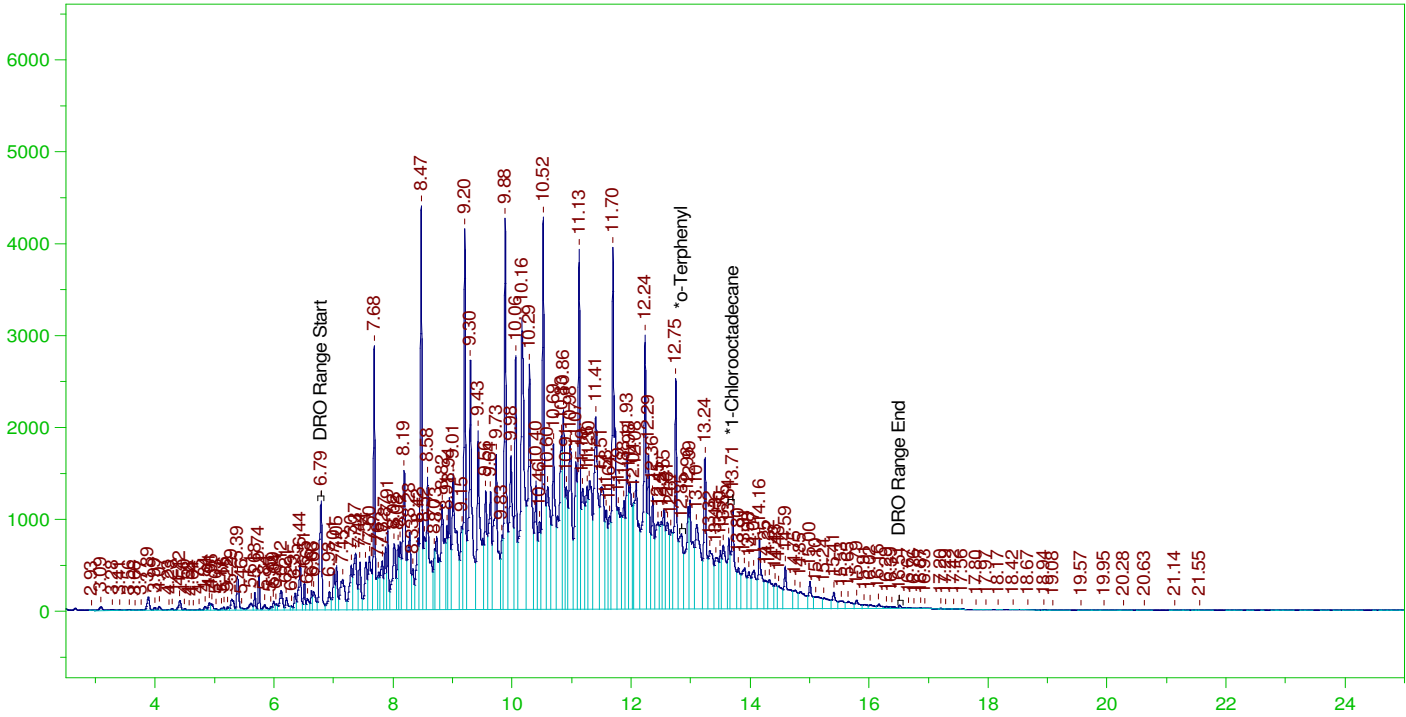
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0017.RAW

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

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

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

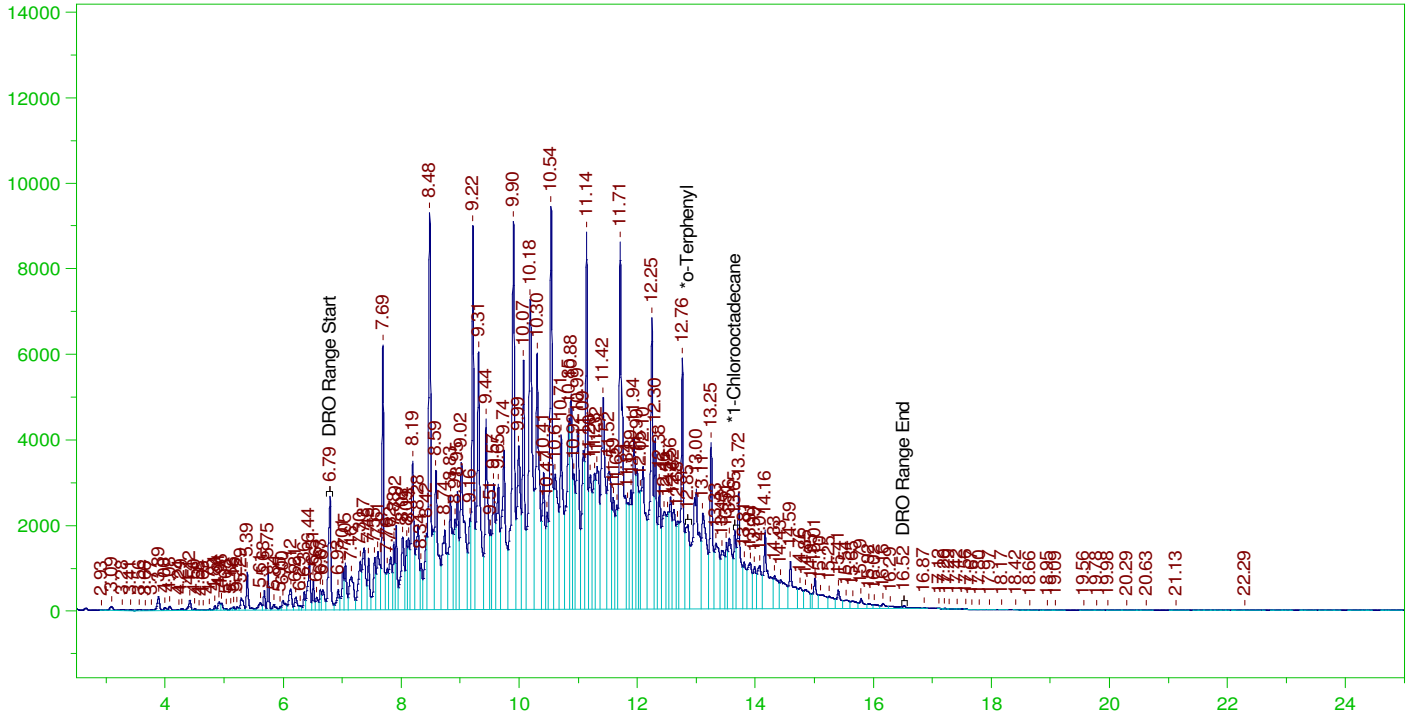
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4110121_b\1101HP4.0018.RAW

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

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

G:\org\HP4\DAT\HP4110121_b\1101HP4.0019.RAW

CCV_1101HP419r, CAL4 ;1101HP4 , 37500ug per mL Diesel



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_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

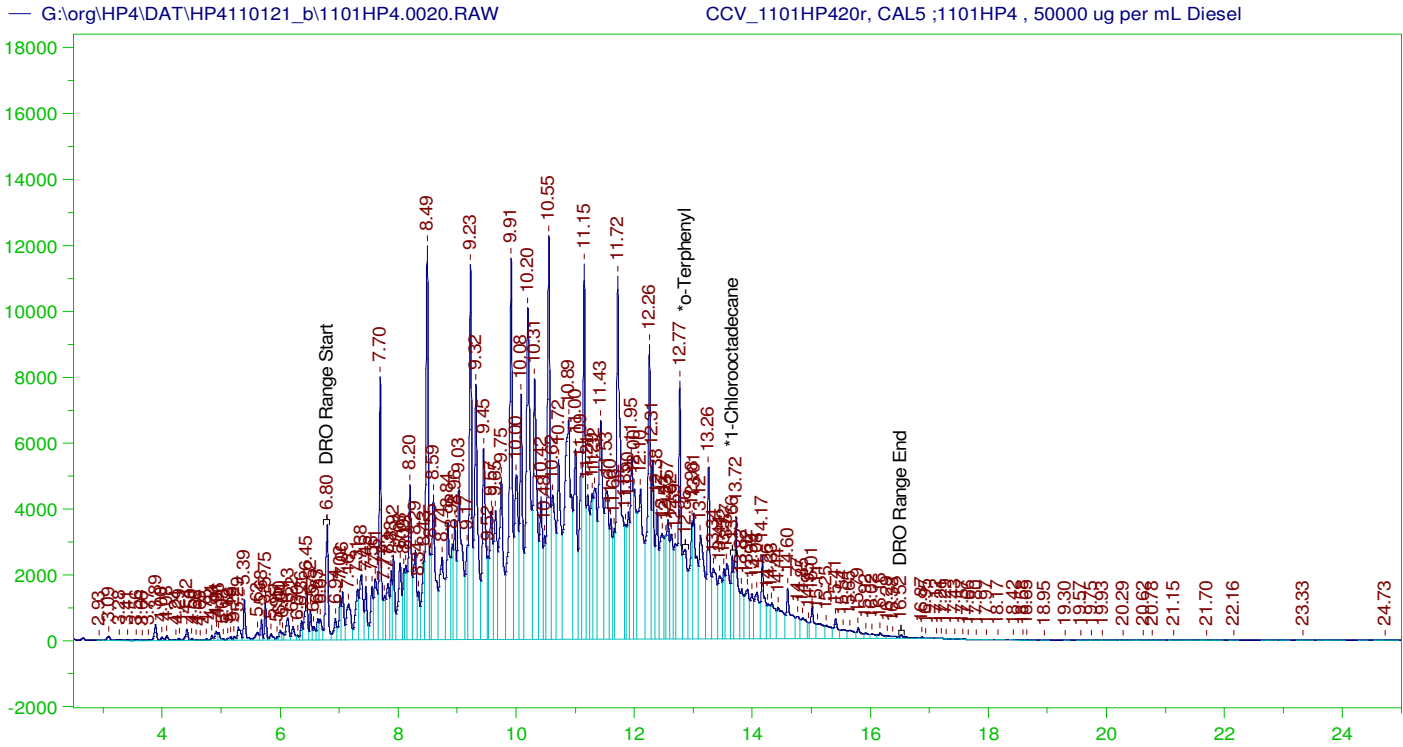
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.855	200.	279.085	139.54
*1-Chlorooctadecane	13.653	200.	147.666	73.83

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_DRO2111020A.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

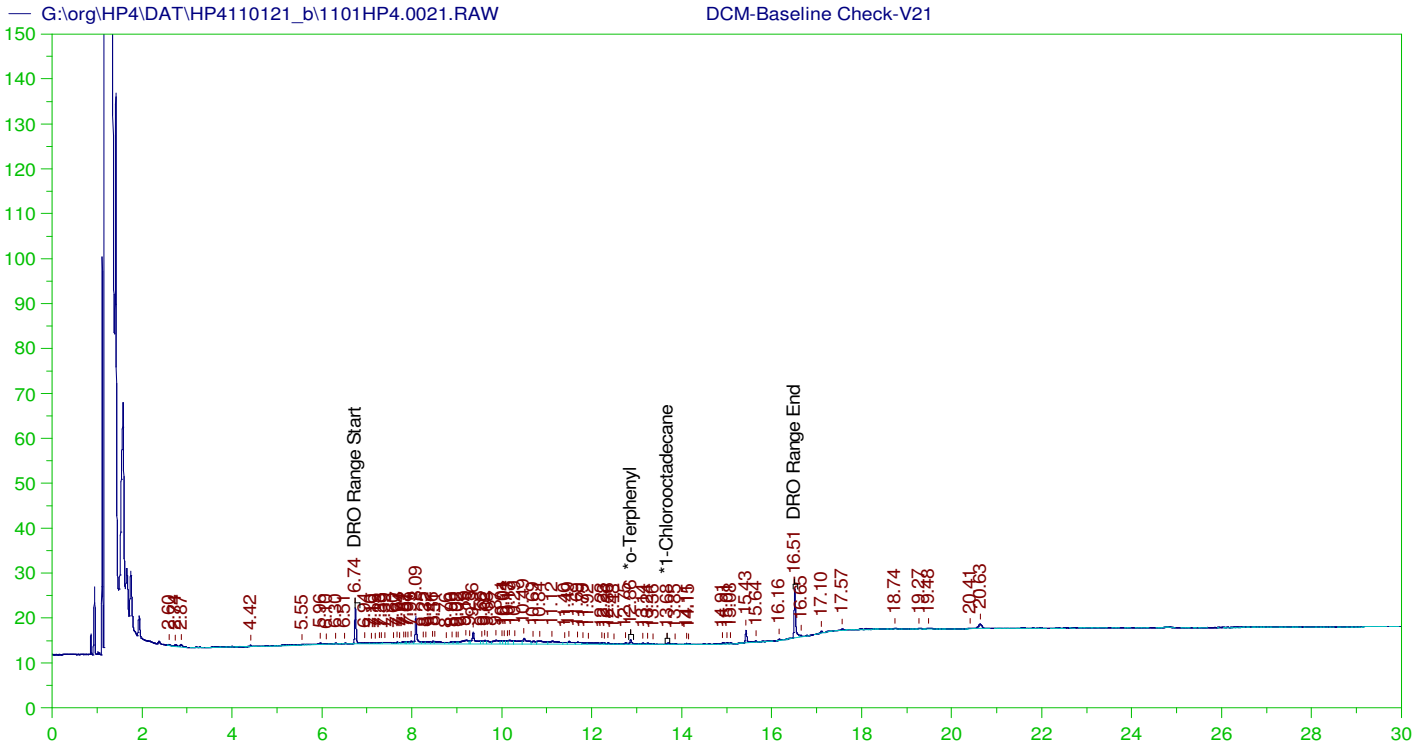
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.862	200.	408.713	204.36
*1-Chlorooctadecane	13.661	200.	204.074	102.04

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.74 to 16.58

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

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

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

Ann Nebel

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

03-Nov-21

Run ID GCFID-HP5-B_211102A

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

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

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

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

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

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

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

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

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

Version: 14

Creator: AMN 11/02/2021

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

Reason for change:

External standard calibration

Standard injection volume: 1

Standard sample weight: 1

Area reject threshold: 500

Reference peak area reject threshold: 500

Amount units: nanograms

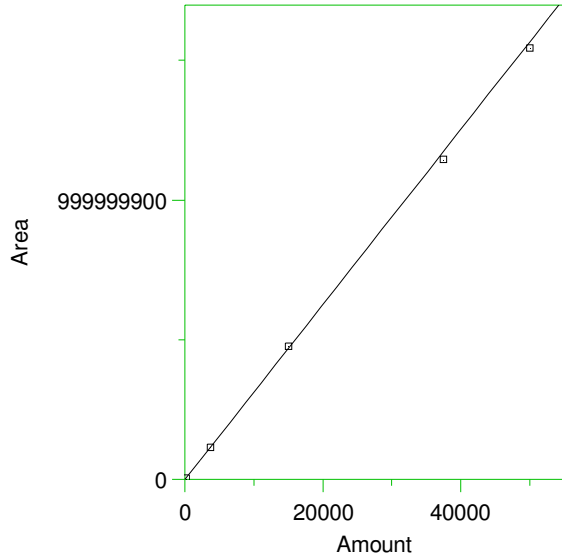
No default component

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

No calibration update report

All levels are normal data points.

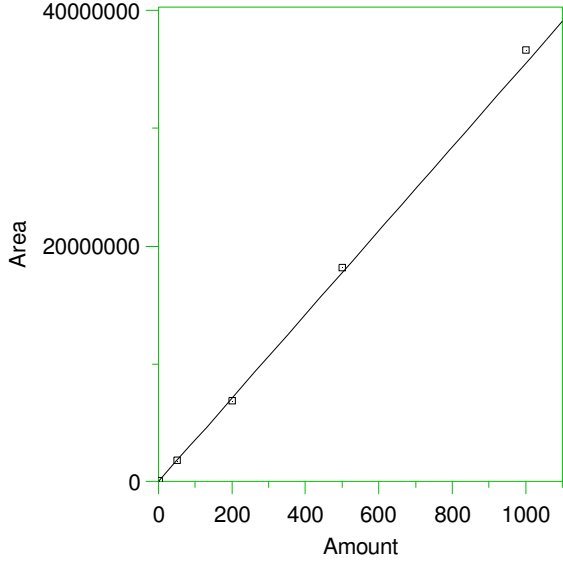
1 DRO Range Start



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

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

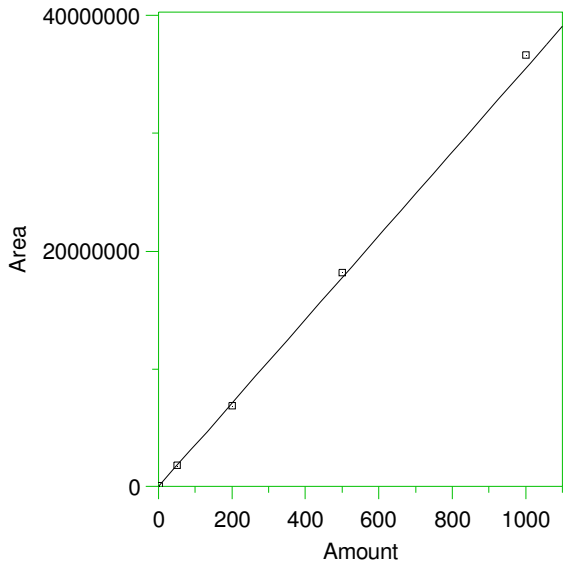
2 *o-Terphenyl



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

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

3 *1-Chlorooctadecane

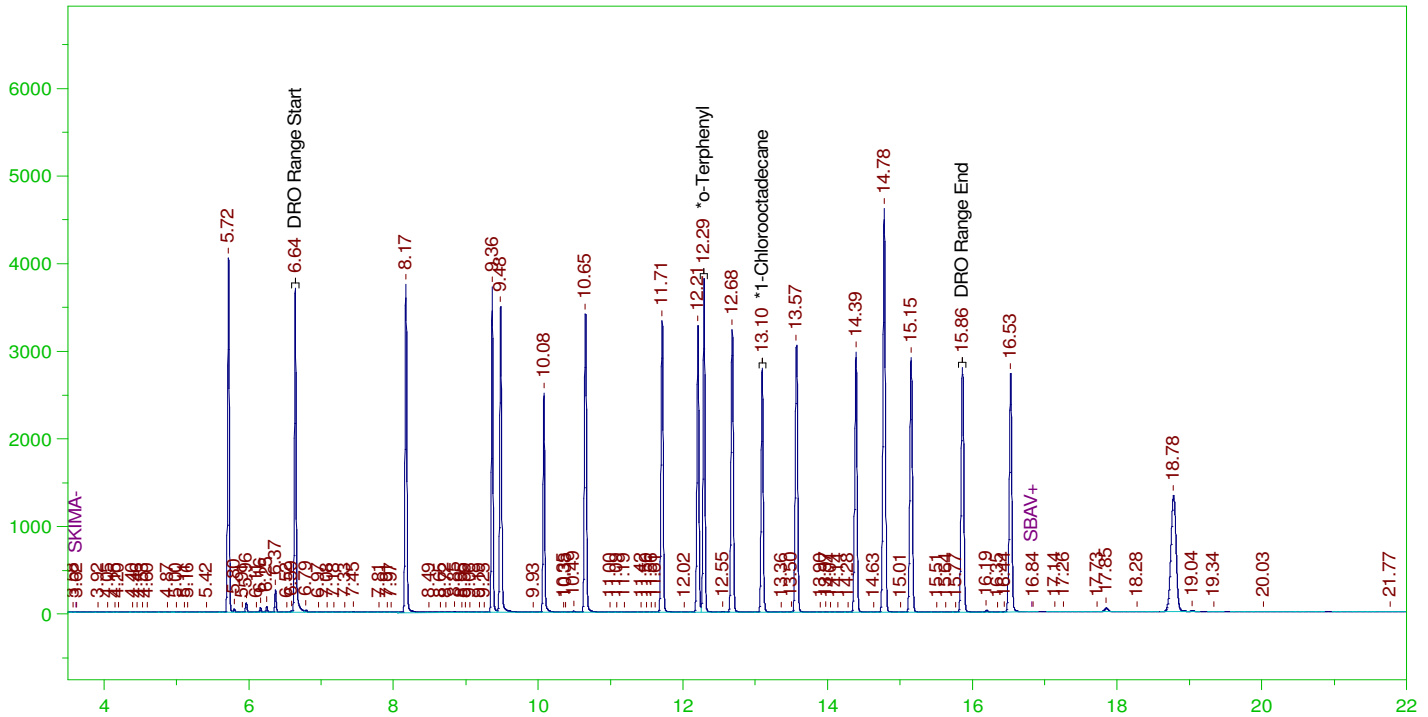


Expected retention time: 13.1 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 35509.21 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient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

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

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

CCV_1102HP508r, DRO ;1102HP5 , DRO211025A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

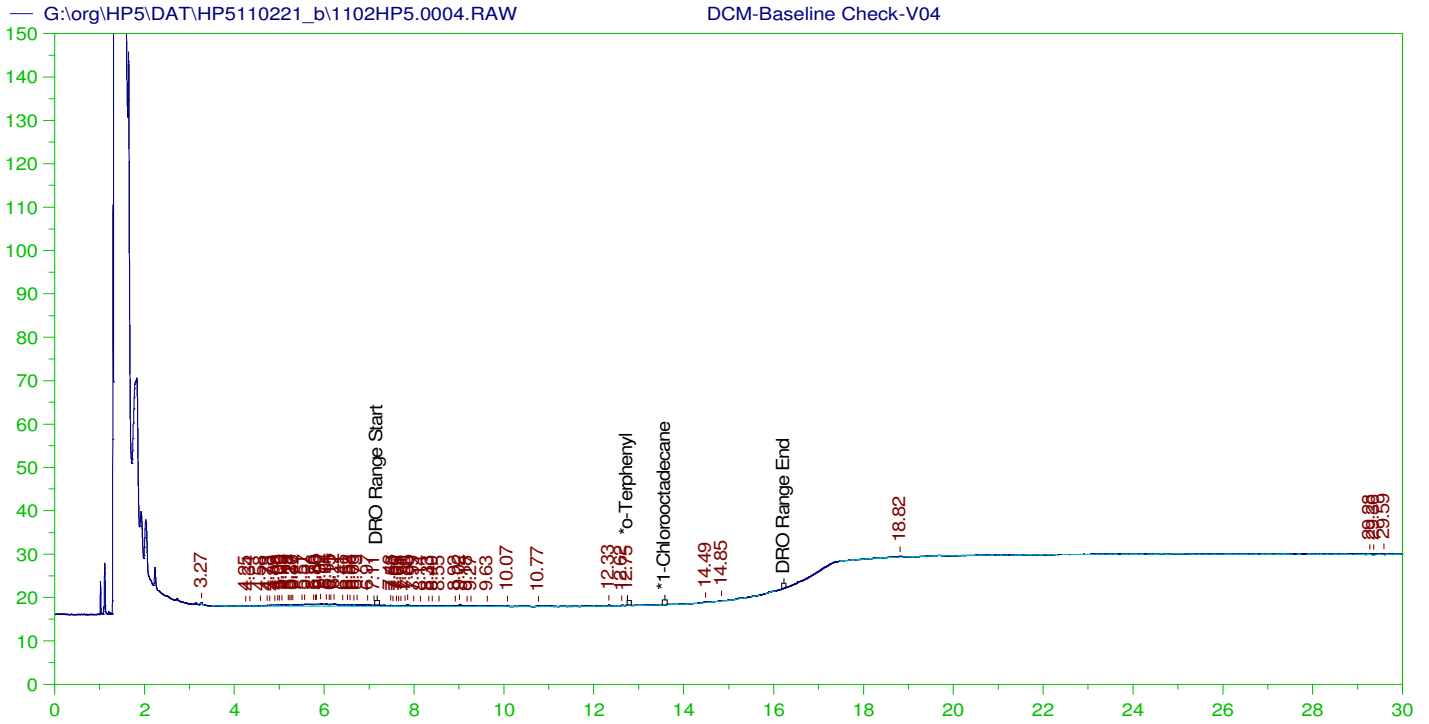
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.292	200.	201.539	100.77
*1-Chlorooctadecane	13.095	200.	163.573	81.79

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

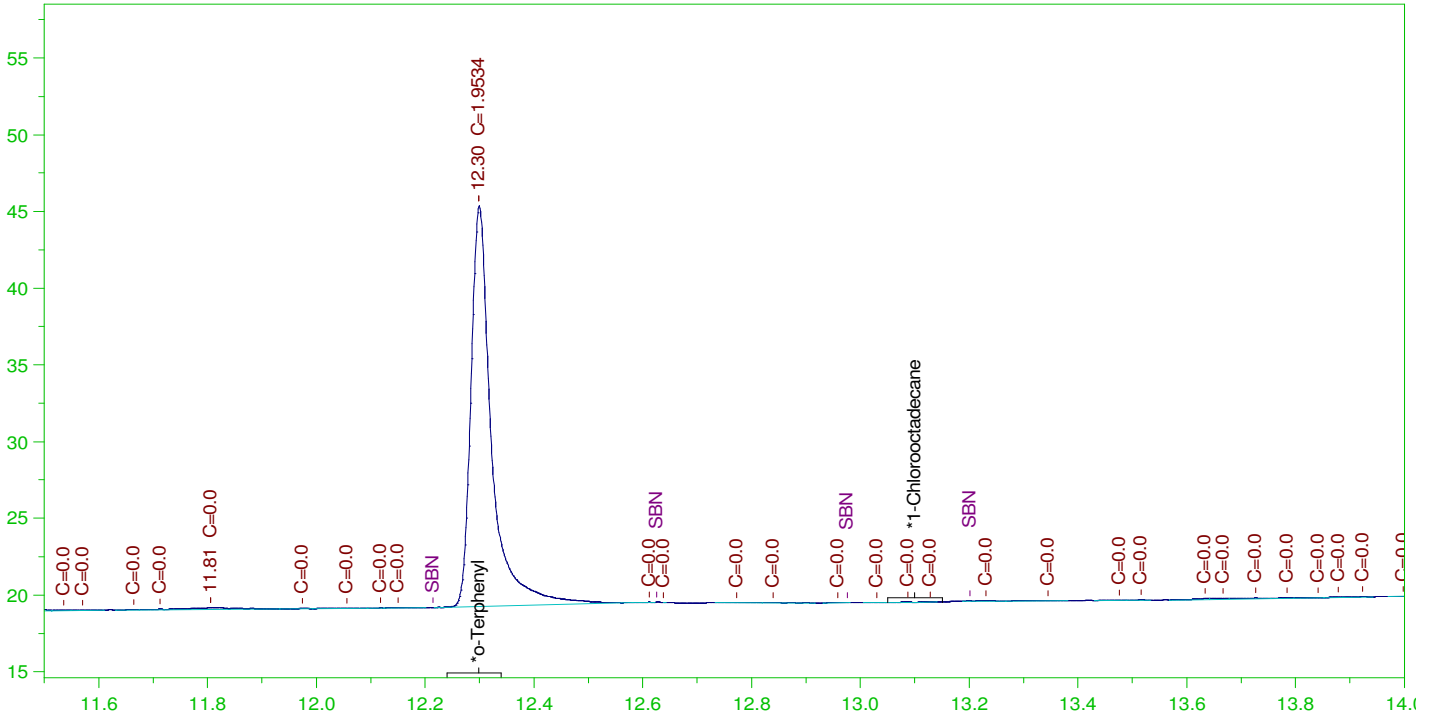
Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 7.125 to 16.28

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

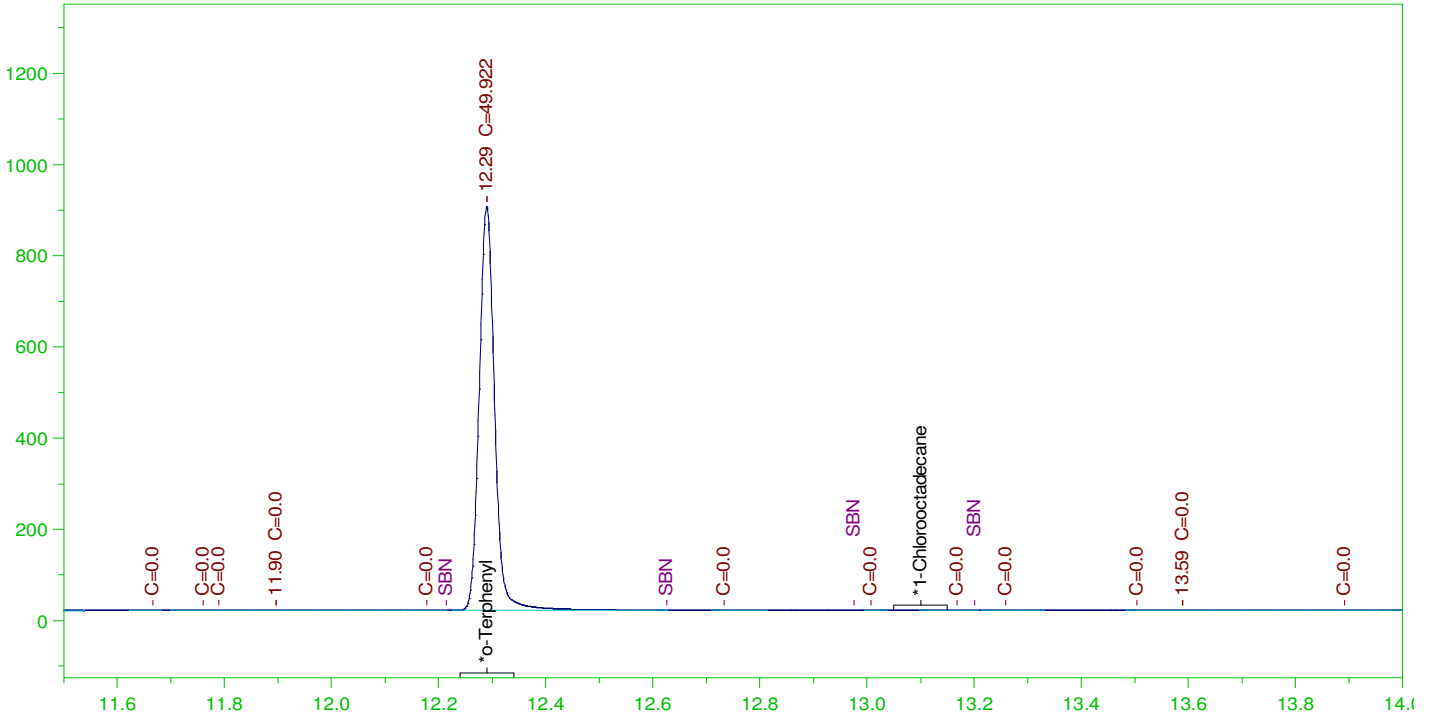
DRO Area:37026.36 DRO Amount: 1.180944
 TEH Area:88429.33 TEH Amount: 2.820425

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

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

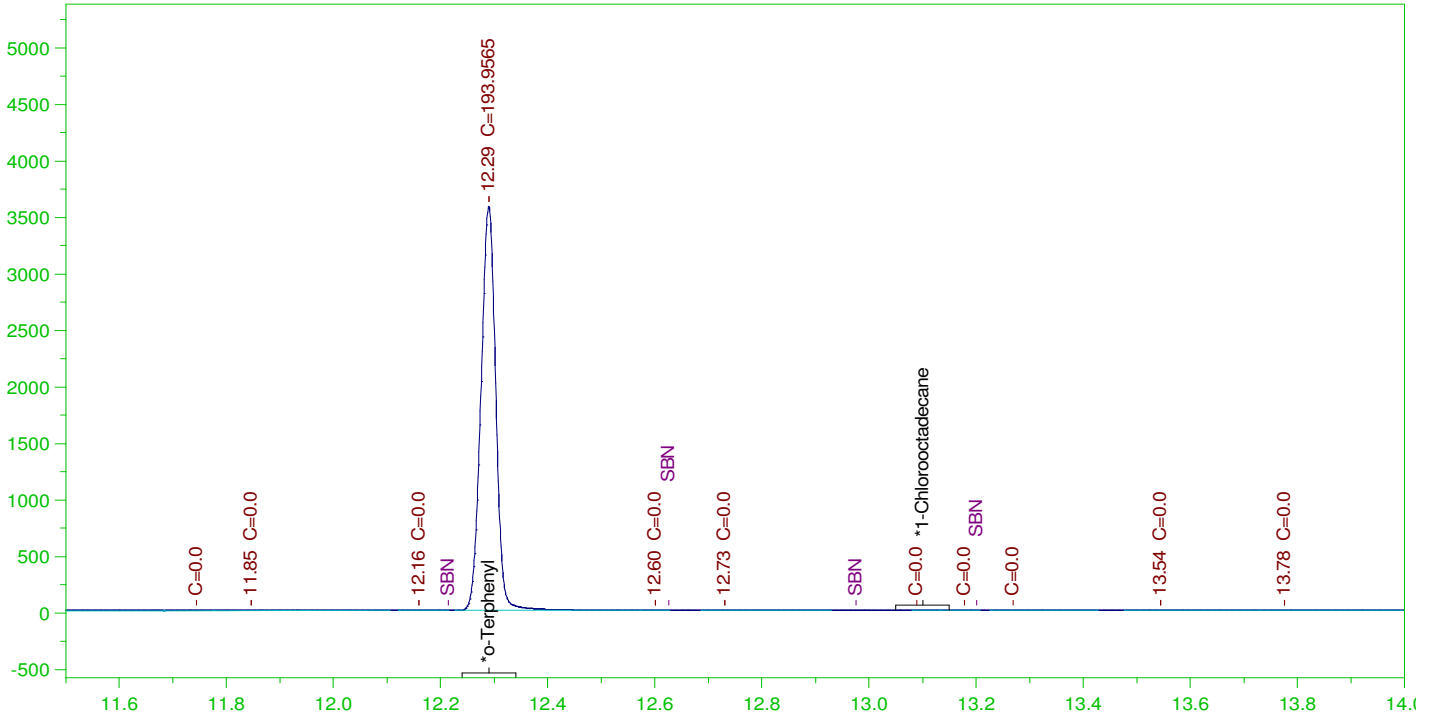
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0006.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

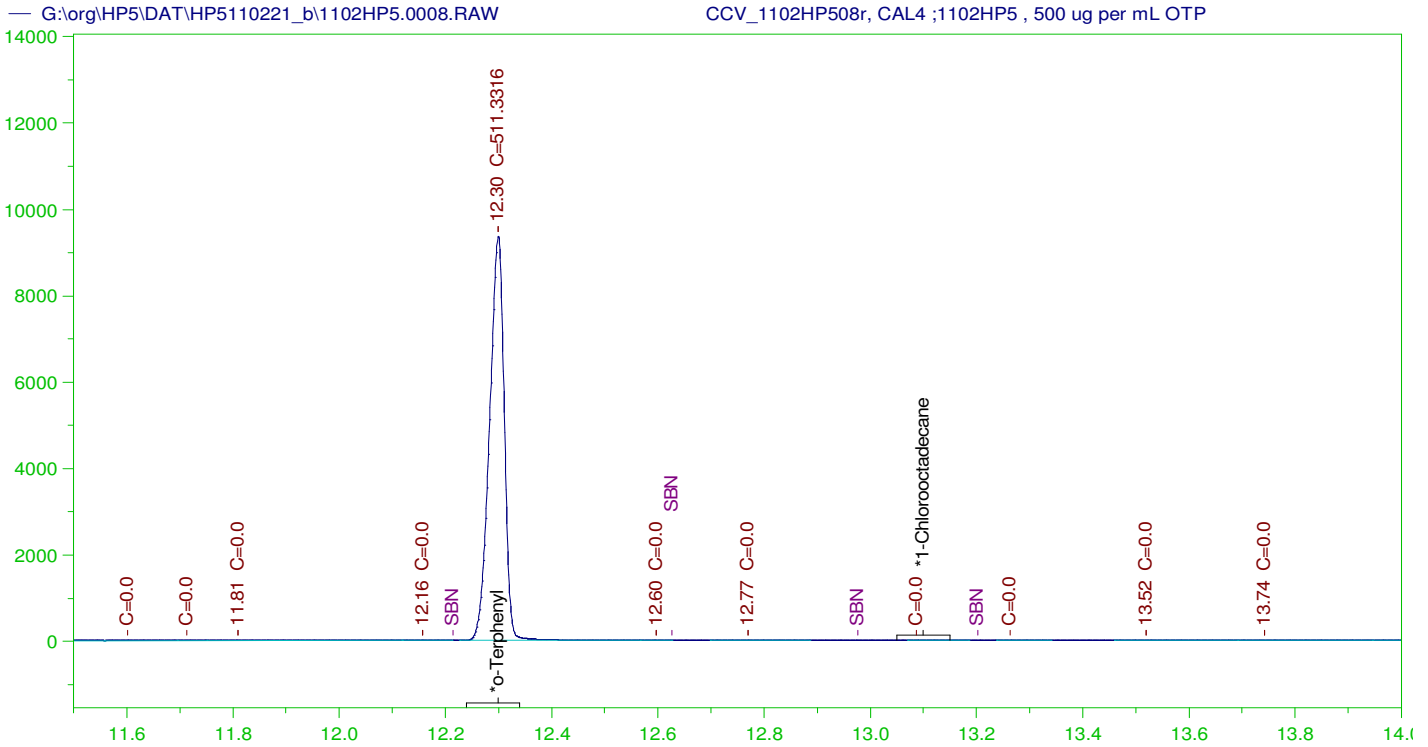
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.29	200.	193.957	96.98
*1-Chlorooctadecane	15.779	200.	.	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

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

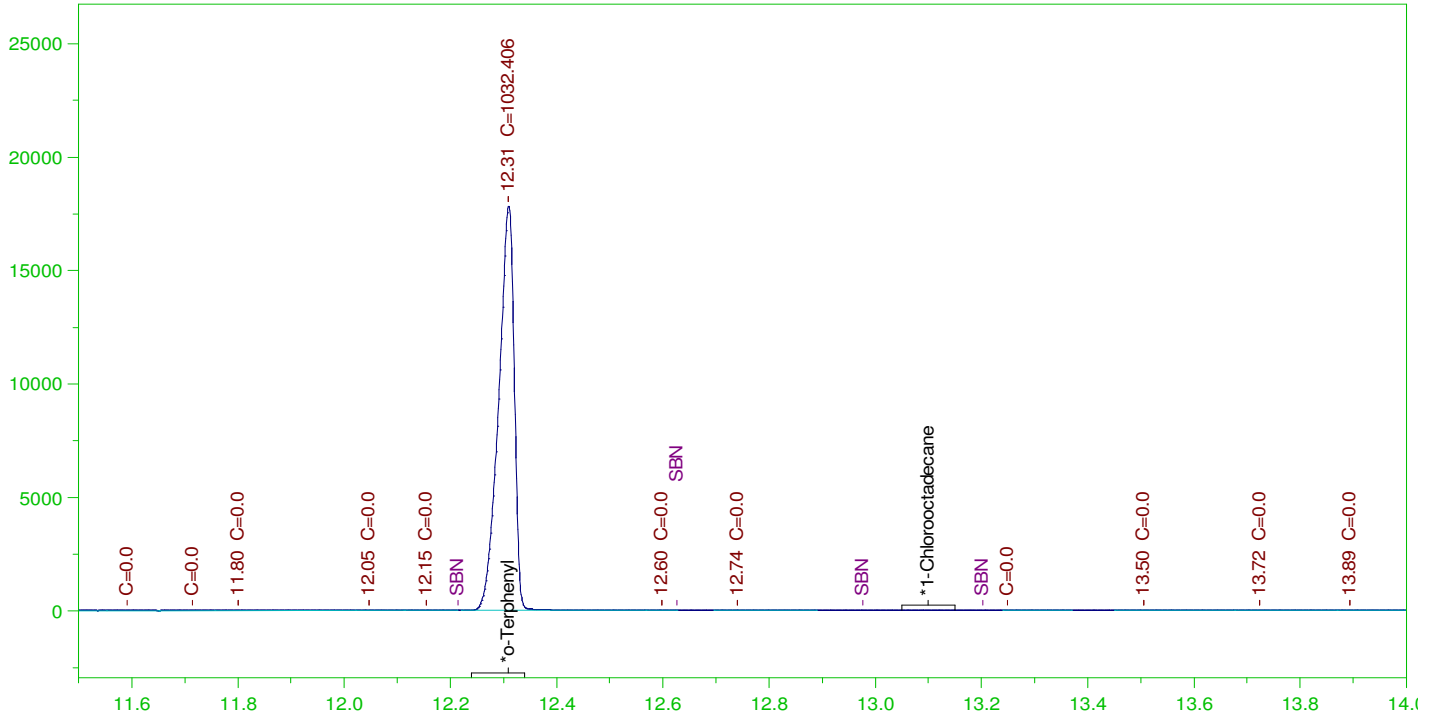
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0008.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

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

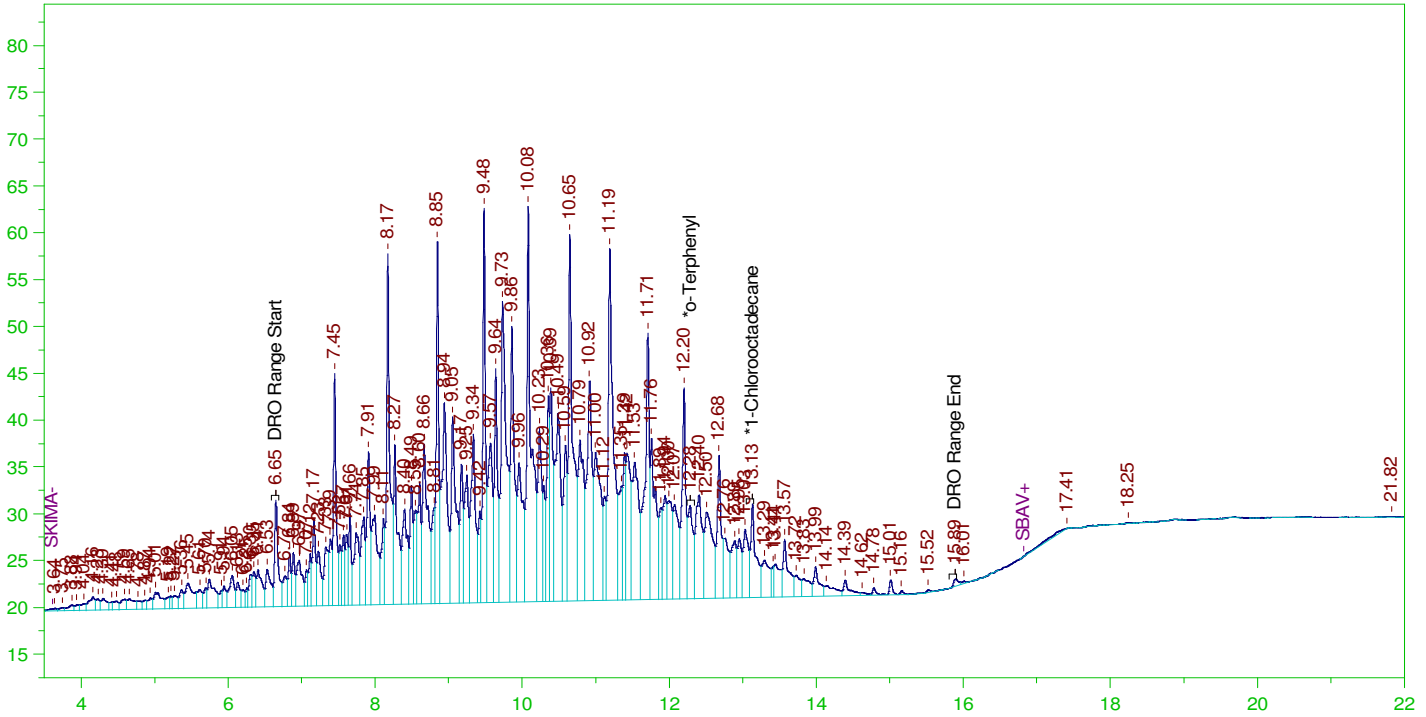
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0009.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

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

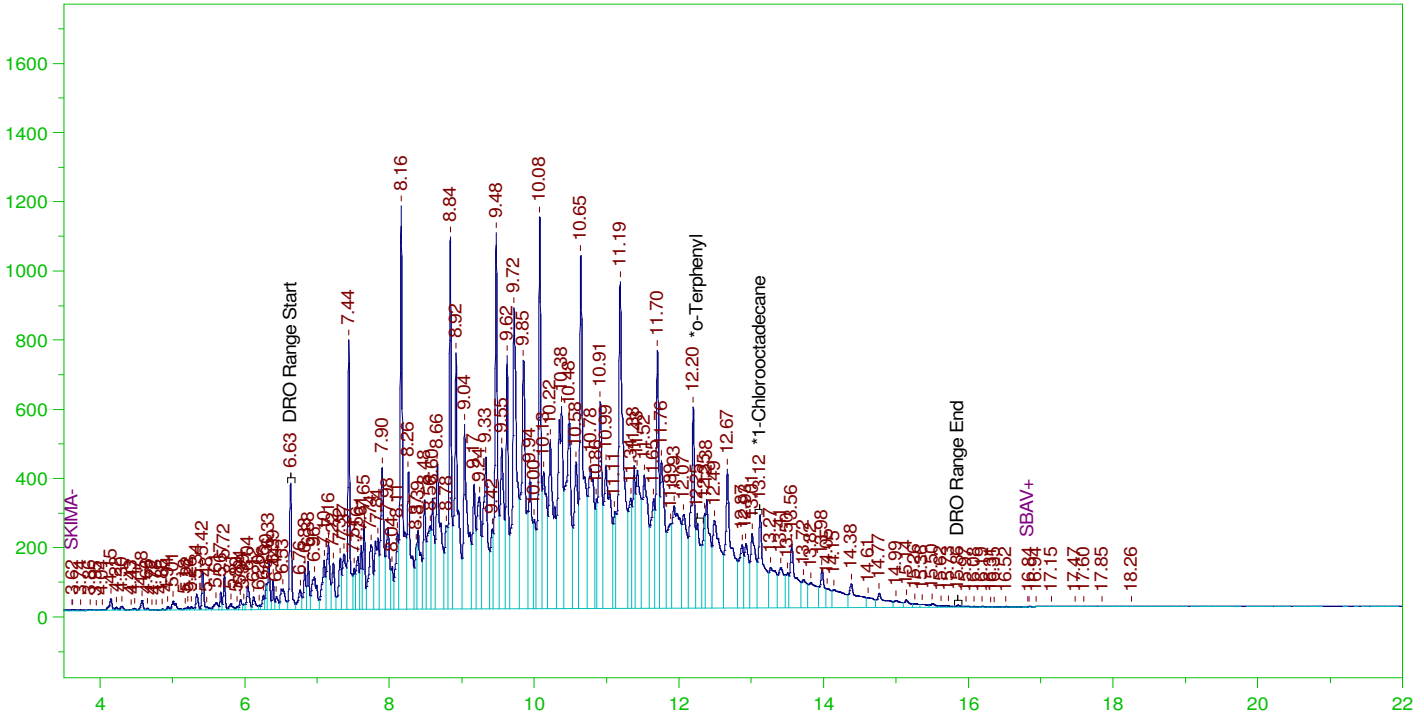
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0010.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

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

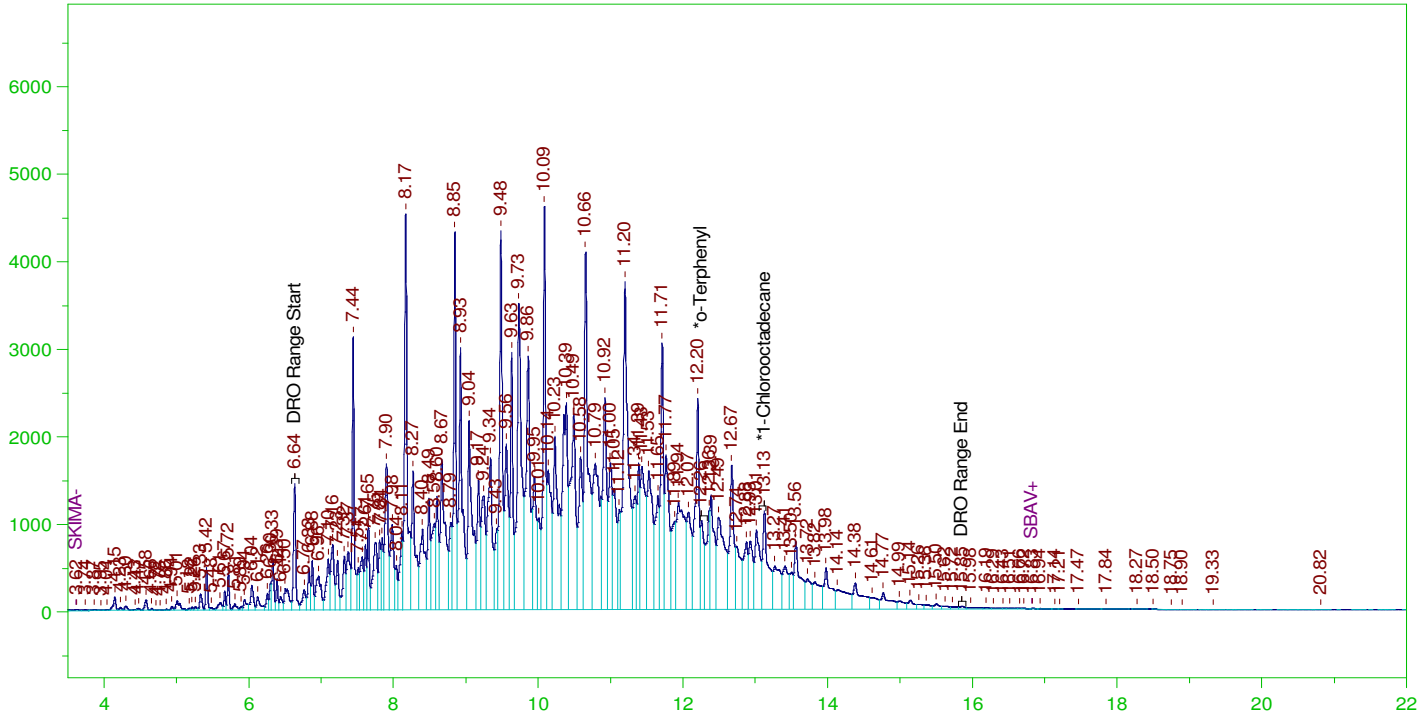
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0011.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

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

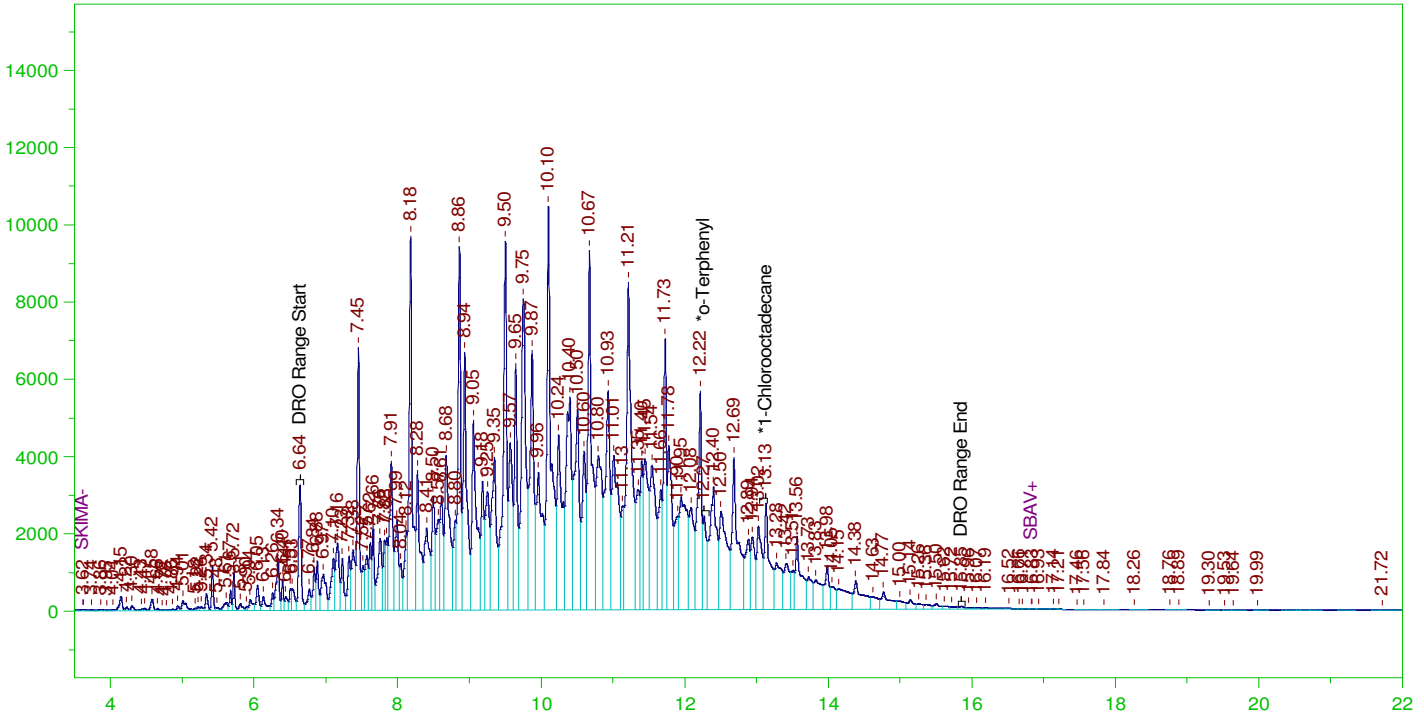
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0012.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

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

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

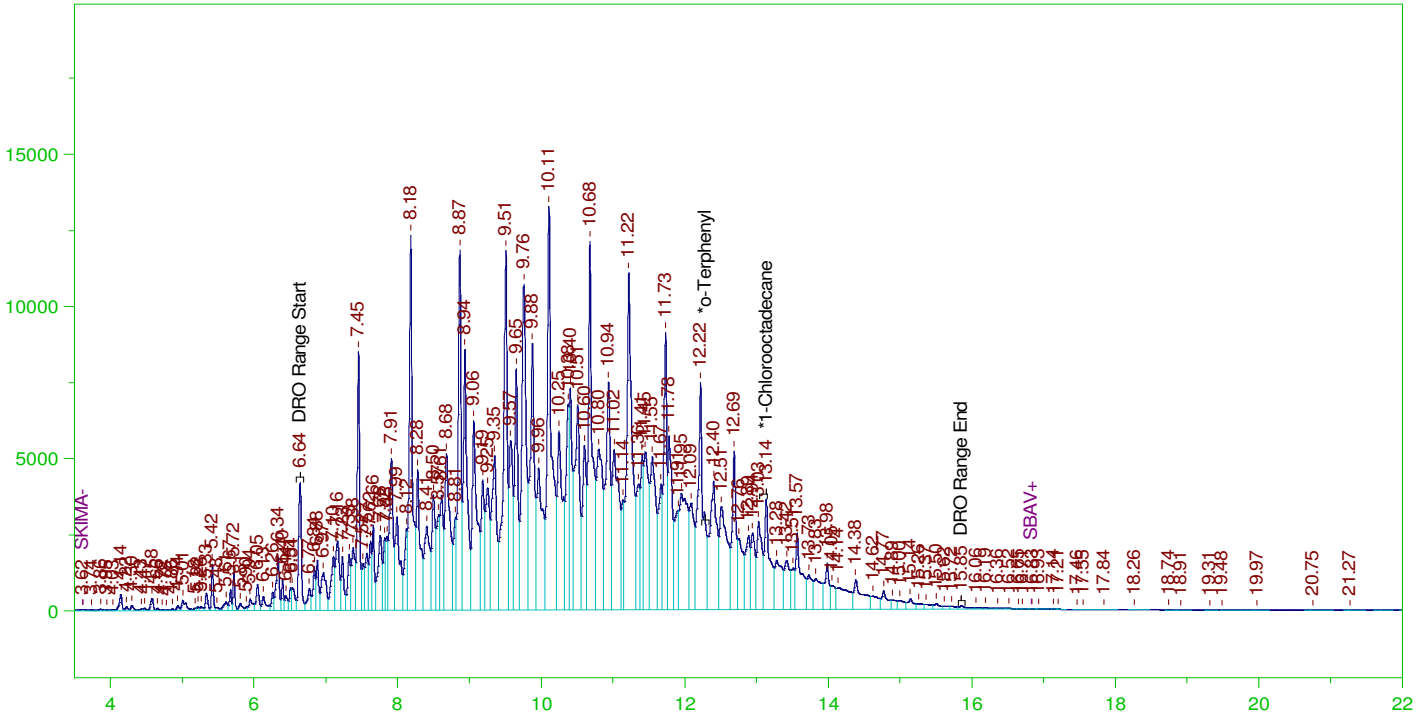
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5110221_b\1102HP5.0013.RAW

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 15.91

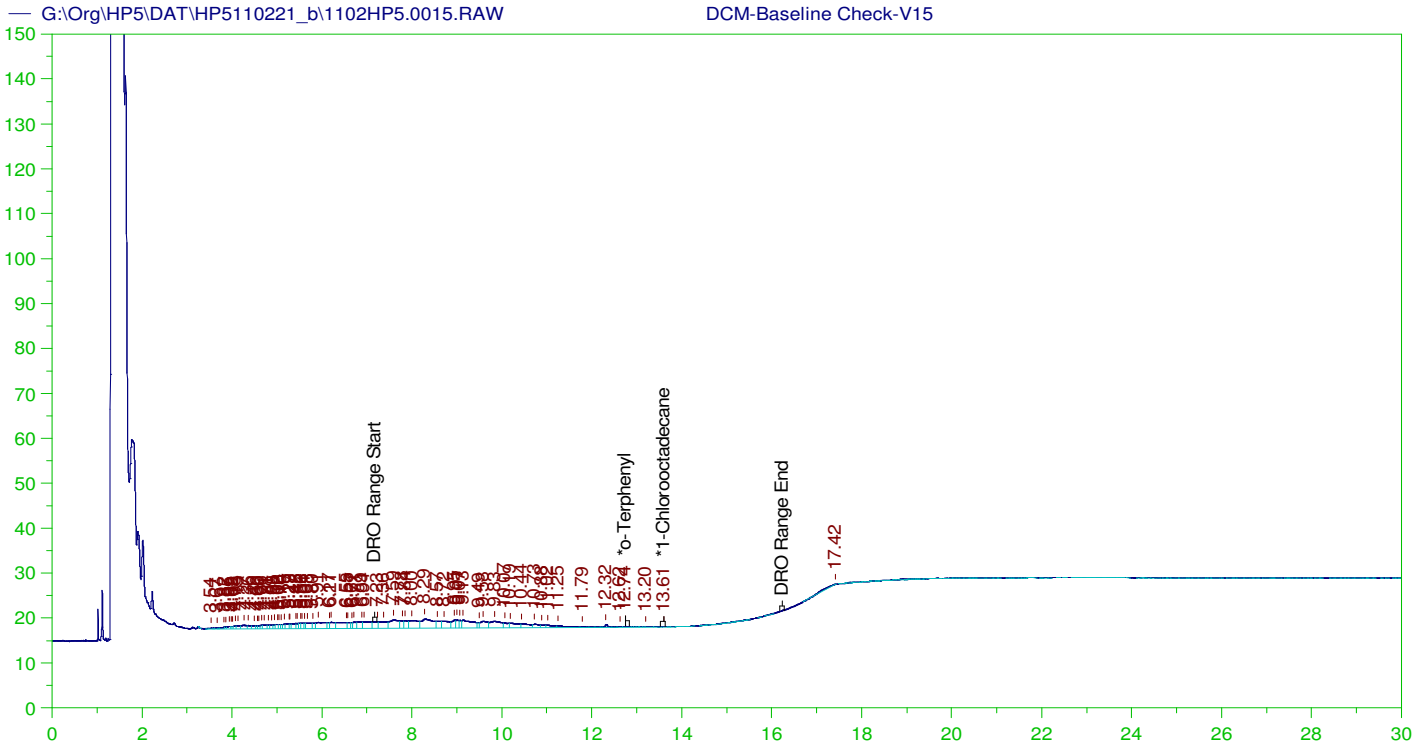
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.921	200.	.	-
*1-Chlorooctadecane	13.135	200.	512.63	256.31 -

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

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

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

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



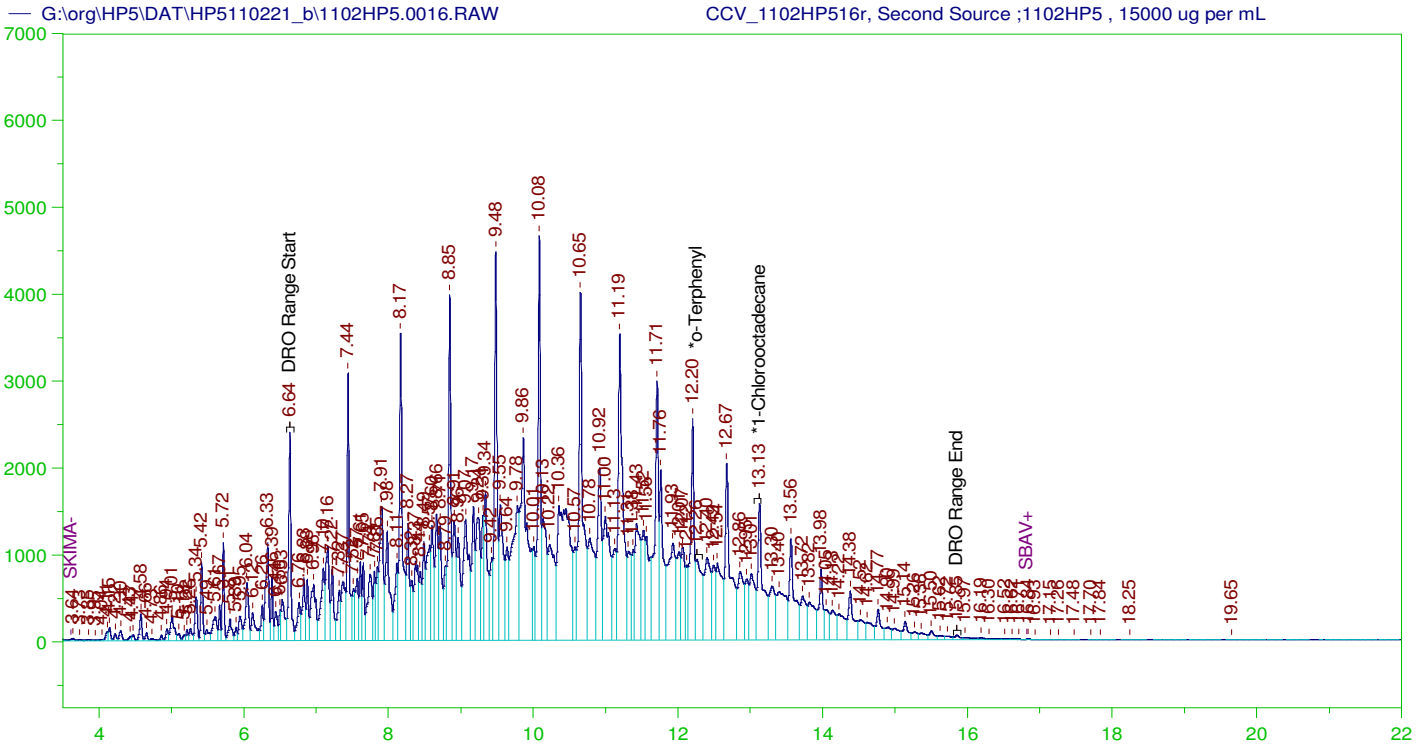
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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

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

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

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

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manul Integrations
		CCV_1102HP508r, DRO ;1102HP5 , DRO211025A	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	No integrations
		DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0	No integrations
		CCV_1102HP505r, CAL1 ;1102HP5 , 2 ug per mL OTP (10 uL of Cal3 + 990 uL DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		CCV_1102HP506r, CAL2 ;1102HP5 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		CCV_1102HP507r, CAL3 ;1102HP5 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		CCV_1102HP508r, CAL4 ;1102HP5 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		CCV_1102HP509r, CAL5 ;1102HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211011A + 750 DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.21 and slightly after the surrogate peak at 12.63 and scaling showing surrogate peak from 11.5-14.
		CCV_1102HP510r, CAL1 ;1102HP5 , 150 ug per mL Diesel (10 uL of Cal3 + 990 uL DCM(14408),	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.83
		CCV_1102HP511r, CAL2 ;1102HP5 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		CCV_1102HP512r, CAL3 ;1102HP5 , 15000 ug per mL Diesel (300 uL of DRO211012A + 700 uL DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		CCV_1102HP513r, CAL4 ;1102HP5 , 37500ug per mL Diesel (750 uL of DRO211012A + 250 uL DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		CCV_1102HP514r, CAL5 ;1102HP5 , 50000 ug per mL Diesel (200 uL of DRO211012A)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5
		DCM-Baseline Check-V15	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0	No integrations
		CCV_1102HP516r, Second Source ;1102HP5 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14408)	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.5

Ann Nebel

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

31-Mar-21

Run ID GCFID-HP5-B_210218B

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

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

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

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

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

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

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
		Marker_0218HP501r, DRO C40 ;0218HP5 , DRO210204A	G:\Org\HP5\Methods\CSC210212.met	1	1	1	1	0
		DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP503r, CAL1 ;0218HP5 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM(13510)	G:\Org\HP5\Methods\DR_OIL-021803-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP505r, CAL2 ;0218HP5 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(13510)	G:\Org\HP5\Methods\DR_OIL-021805-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP507r, CAL3 ;0218HP5 , 5000 ug per mL Oil (100 uL of DRO180918C + 900 uL DCM(13510)	G:\Org\HP5\Methods\DR_OIL-021807-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V08	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP509r, CAL4 ;0218HP5 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(13510)	G:\Org\HP5\Methods\DR_OIL-021807-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V10	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP511r, CAL5 ;0218HP5 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)	G:\Org\HP5\Methods\DR_OIL-021811-AA-L0.MET	1	1	1	1	0
		DCM-Baseline Check-V12	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		DCM-Baseline Check-V13	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		DCM-Baseline Check-V14	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
		CCV_0218HP515r, Second Source ;0218HP5 , 5000 ug per mL (100uL of DRO210217A + 300uL DCM(13510)	G:\Org\HP5\Methods\DR_OIL-021811-AA-L0.MET	1	1	1	1	0

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

Version: 4

Creator: AMN 3/31/2021

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

Reason for change:

External standard calibration

Standard injection volume: 1

Standard sample weight: 1

Area reject threshold: 500

Reference peak area reject threshold: 500

Amount units: nanograms

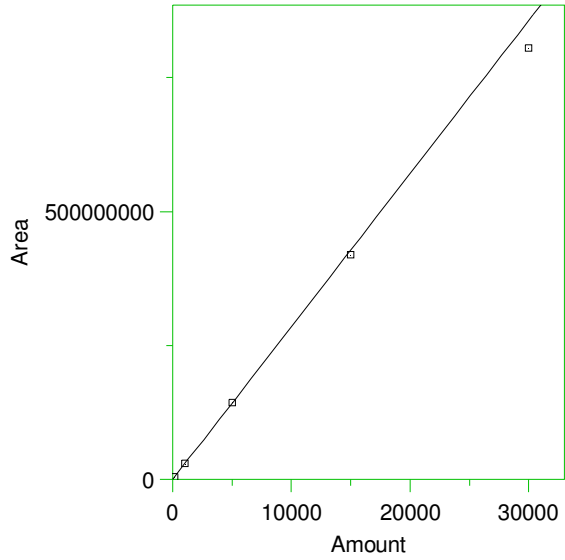
No default component

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

No calibration update report

All levels are normal data points.

1 DRO Range Start



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

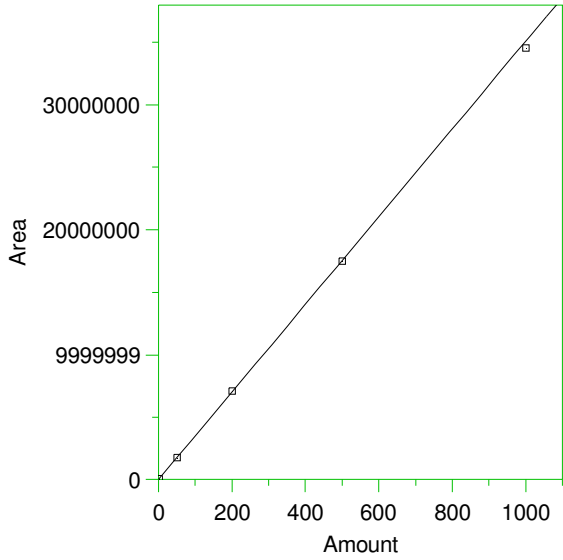
Single peak quantification by area

$Y = 28542.41 X + 0$

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

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

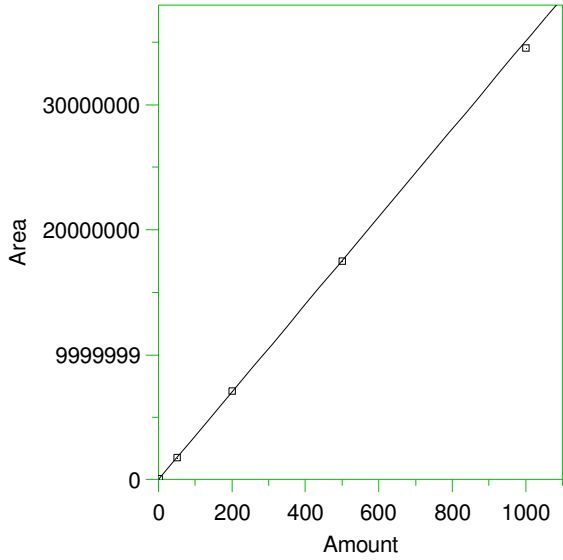
2 *o-Terphenyl



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

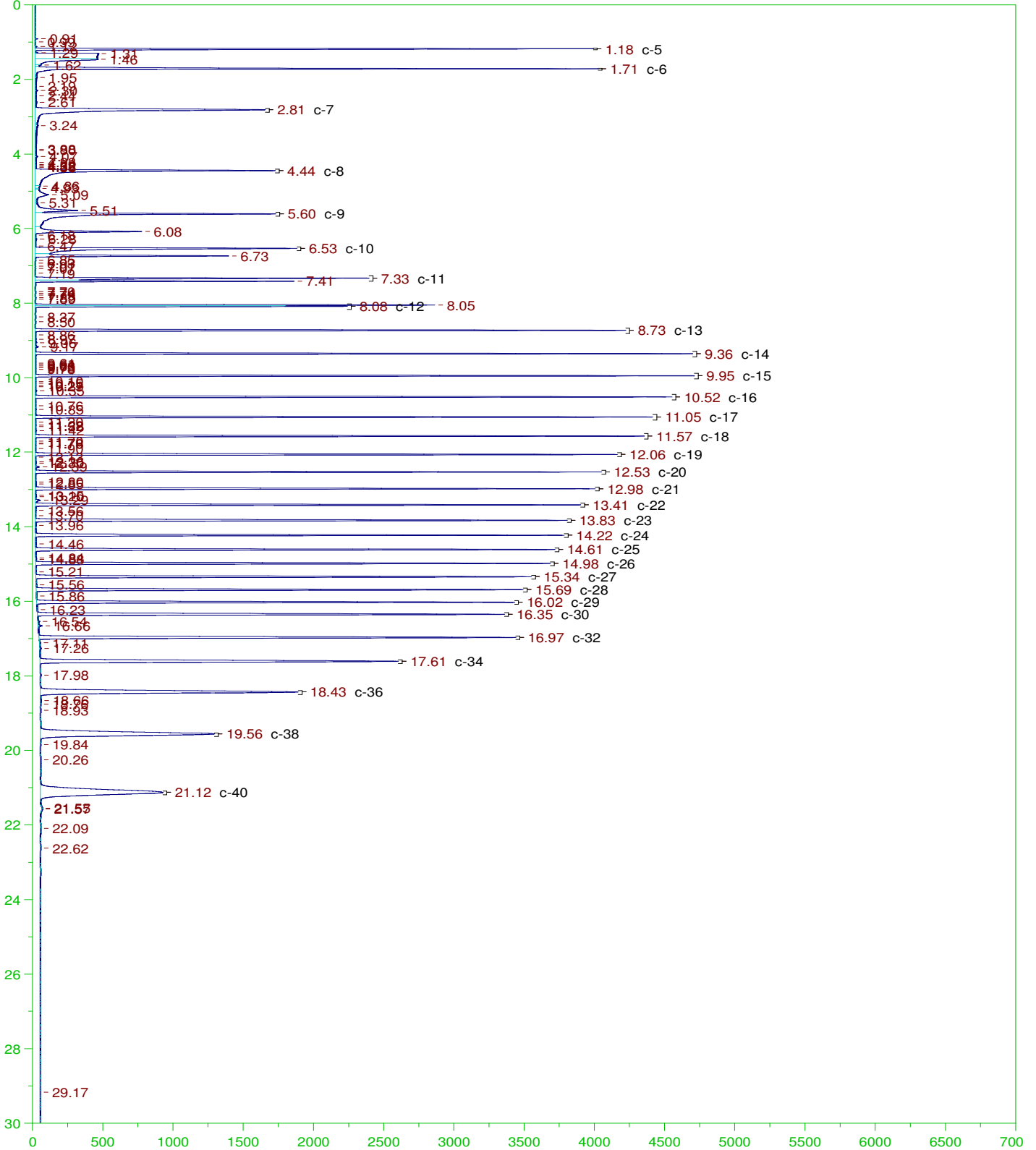
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	70648.41	35324.2	0.721	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0011.BND	1/11/2021 9:44:43 AM
2	50	1746406	34928.12	-0.408	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0012.BND	1/11/2021 9:44:50 AM
3	200	7110604	35553.02	1.374	G:\Org\HP5\DAT\HP5010821_b\0108HP5.0013.BND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

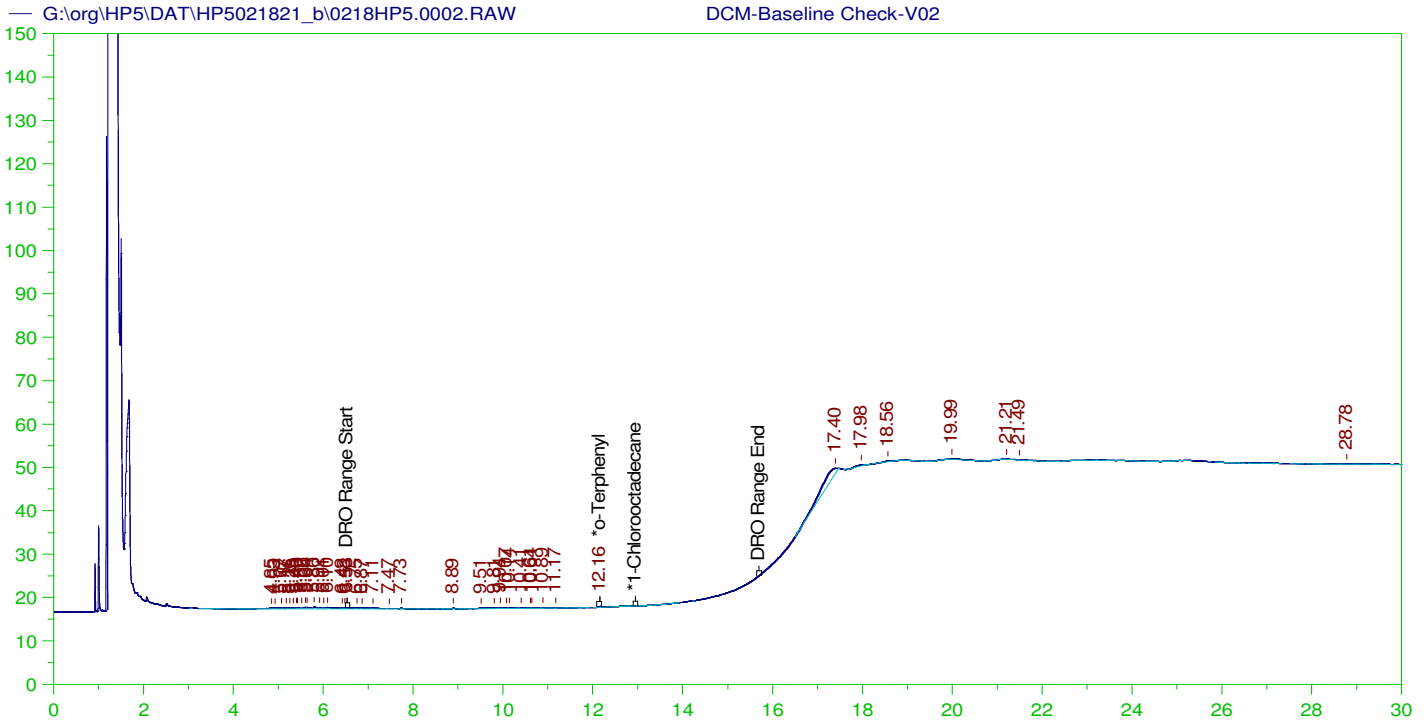
3 *1-Chlorooctadecane



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

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





DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

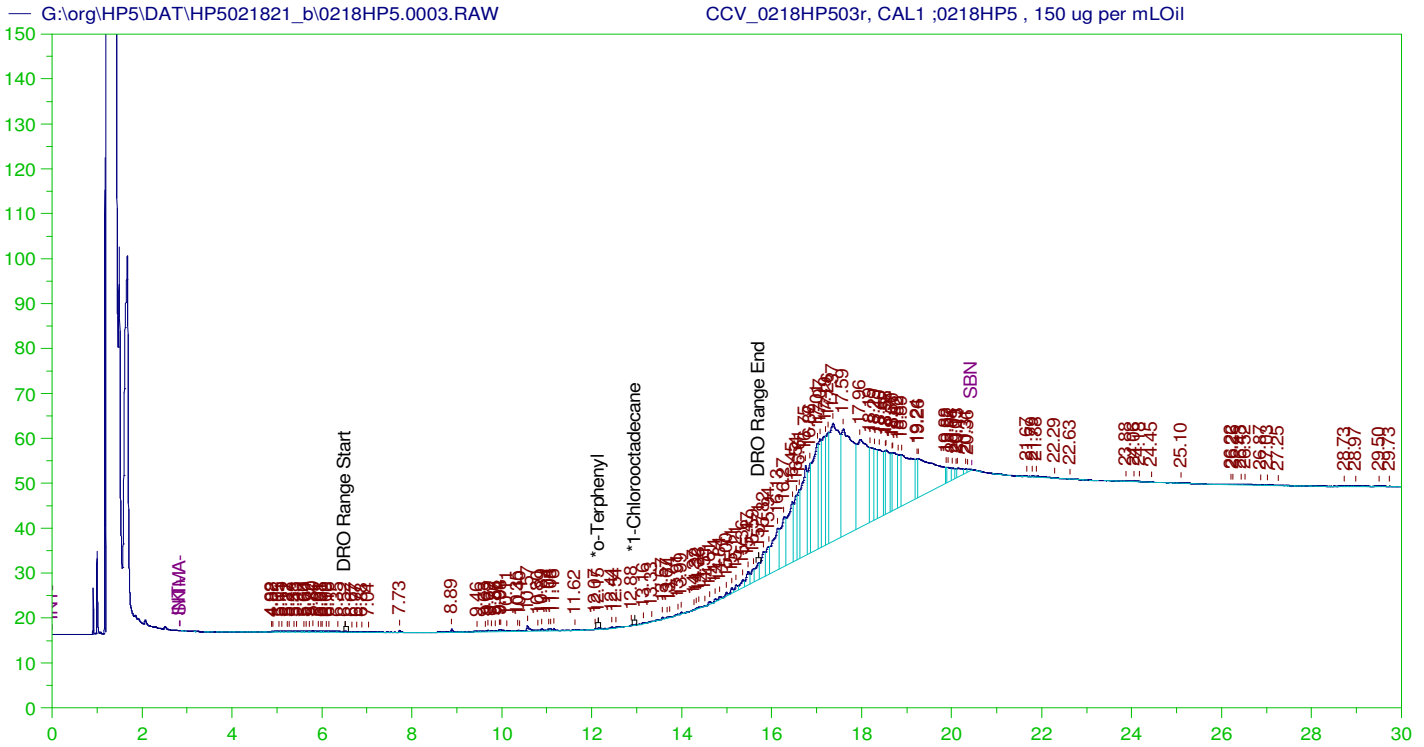
Sample Name: DCM-Baseline Check-V02
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0002.RAW
 Date & Time Acquired: 2/18/2021 11:21:40 AM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33

Rt range for Diesel Range Organics: 6.49 to 15.75

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

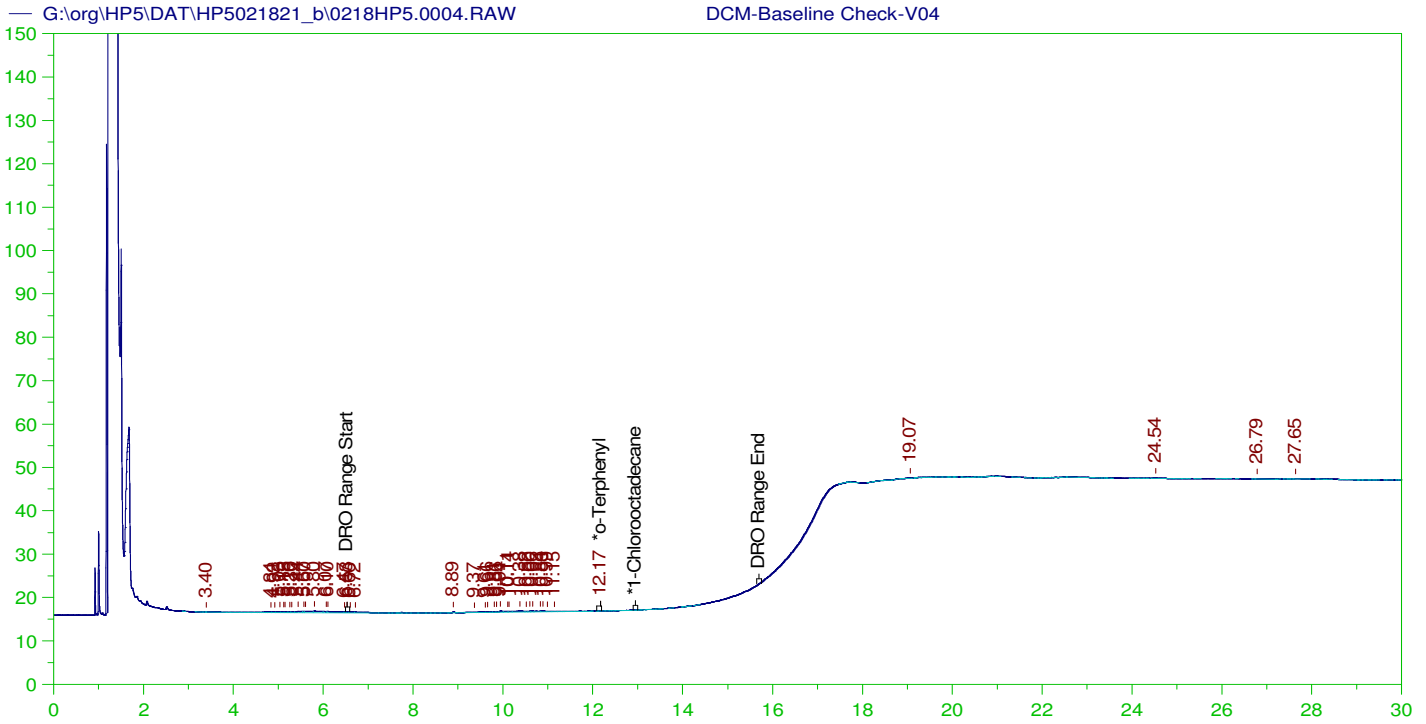
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.146	200.	.02	.01	-
*1-Chlorooctadecane	29.979	200.	.	.	-

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

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

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

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



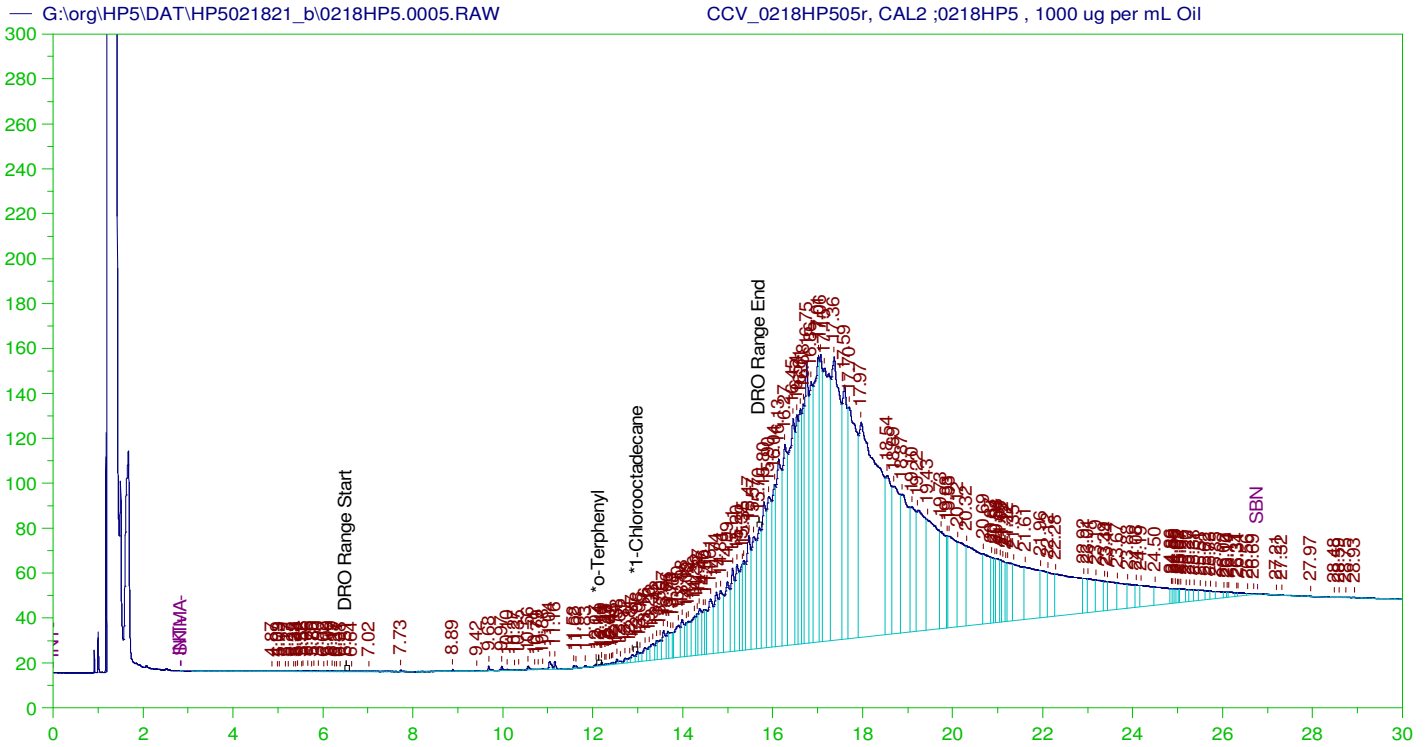
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

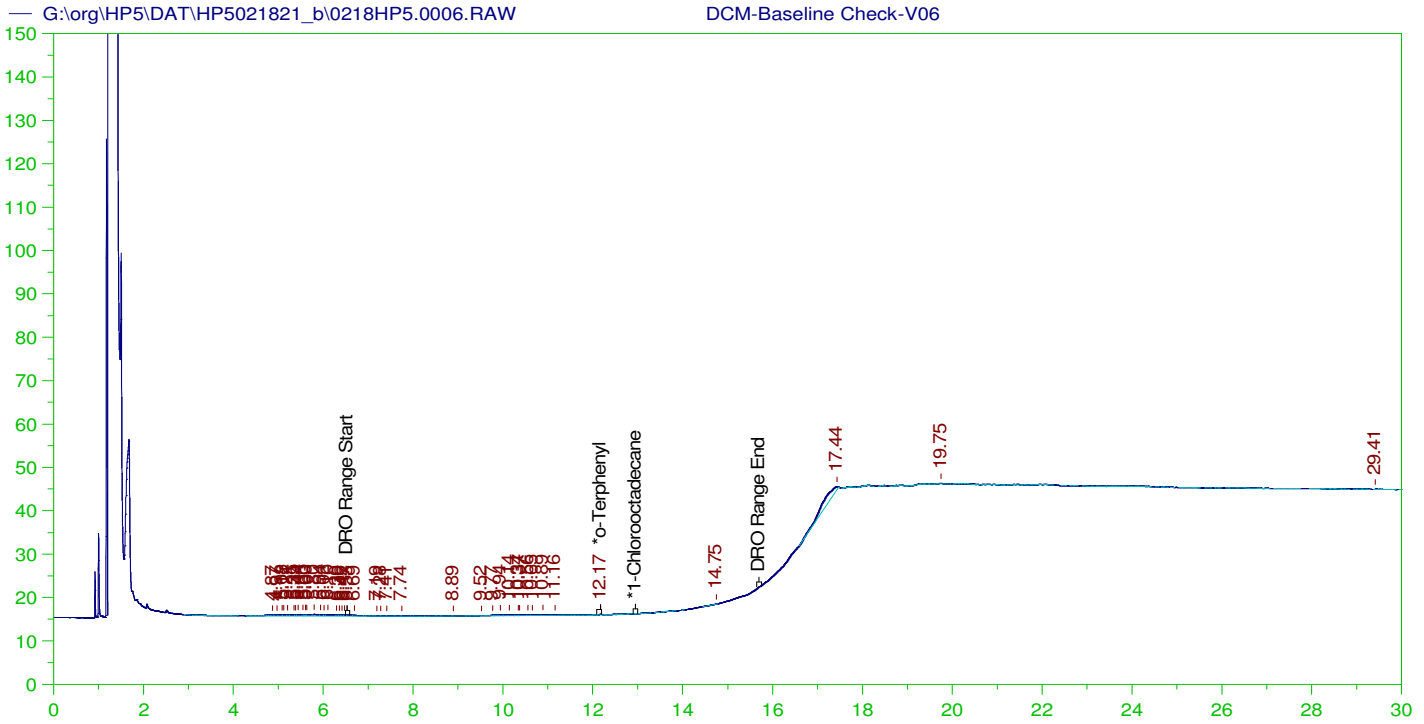
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.136	200.	.034	.02
*1-Chlorooctadecane	12.983	200.	.496	.25

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

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

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

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



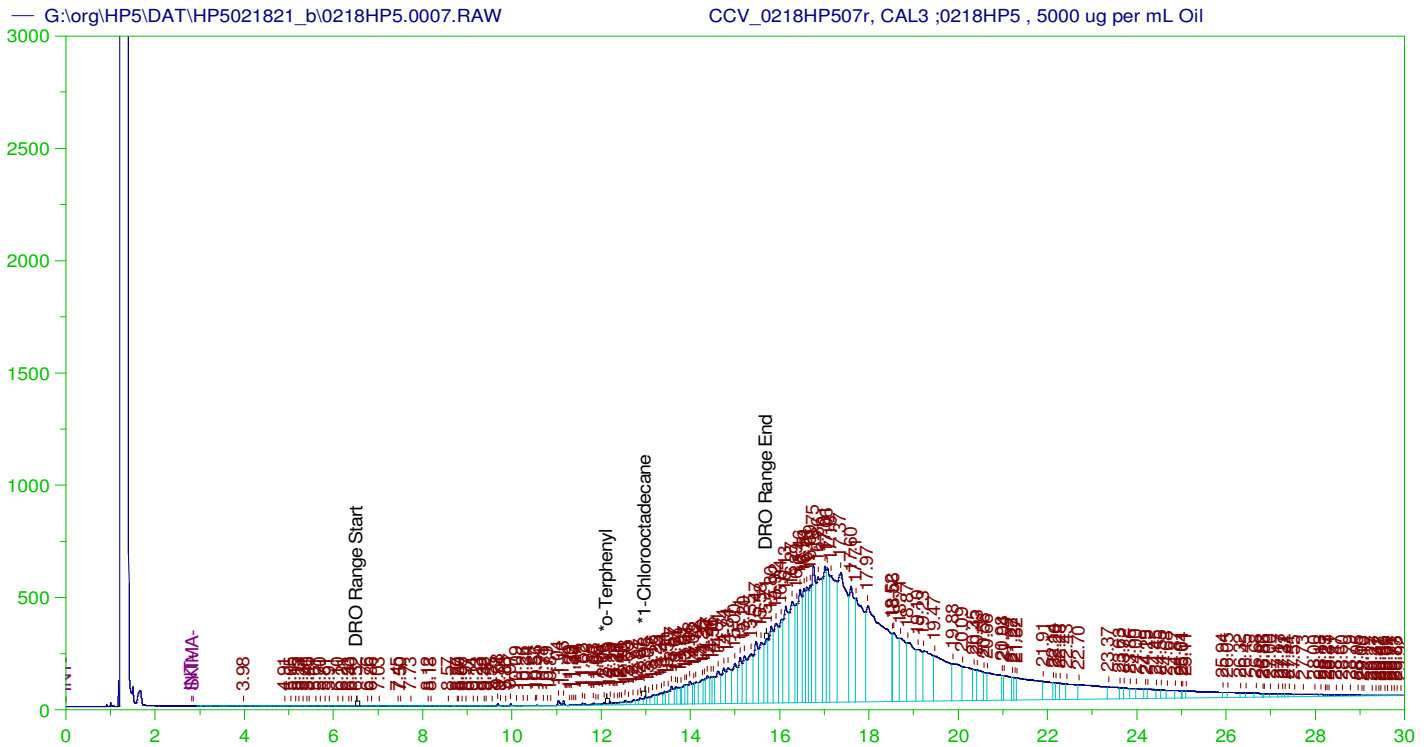
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

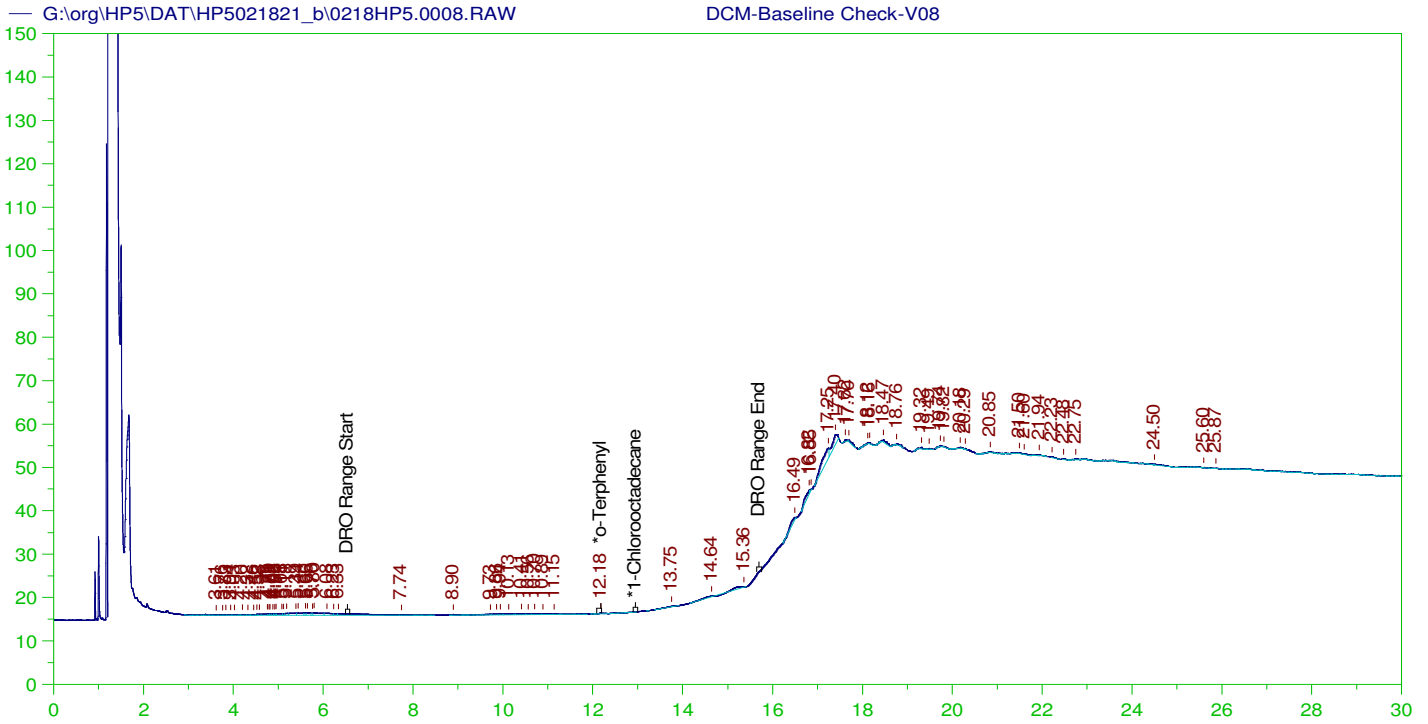
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.129	200.	.538	.27	-
*1-Chlorooctadecane	12.981	200.	4.244	2.12	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

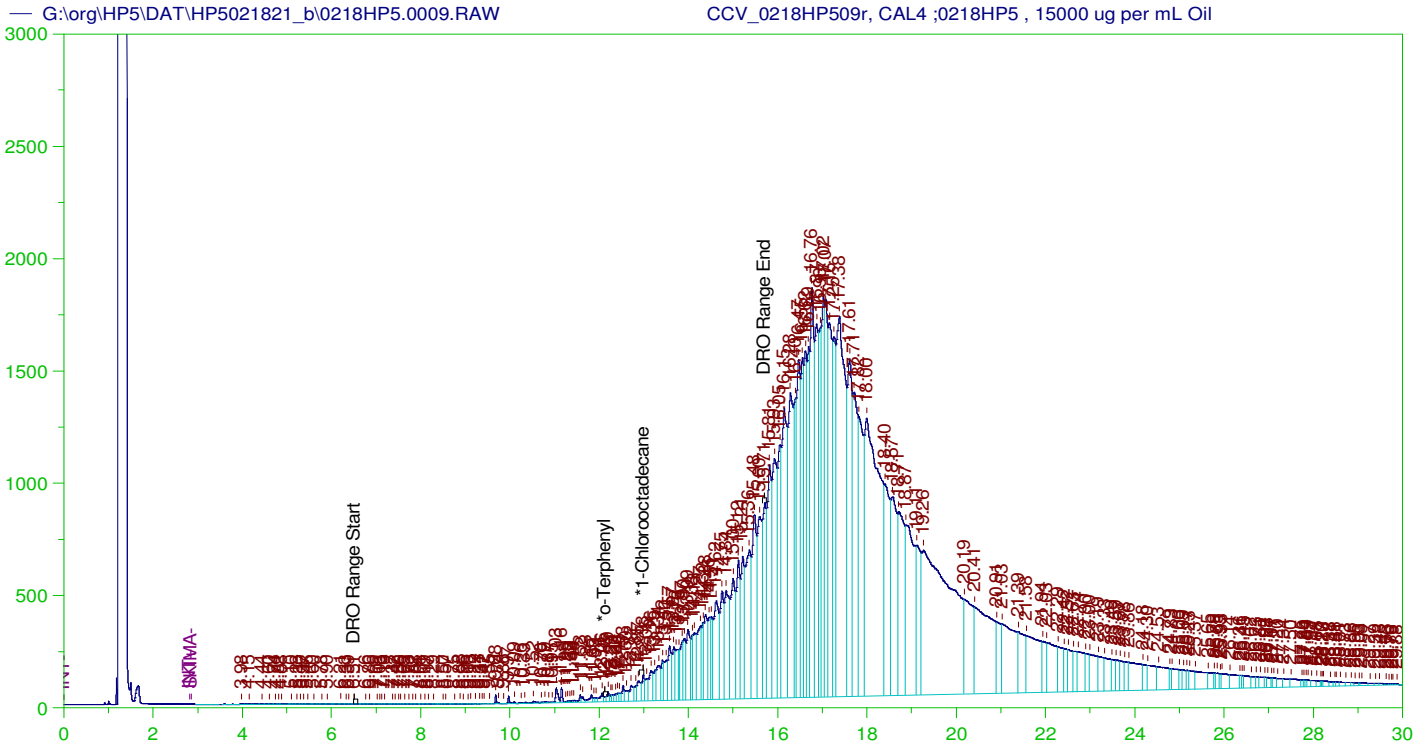
Sample Name: DCM-Baseline Check-V08
 Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0008.RAW
 Date & Time Acquired: 2/18/2021 3:32:46 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33

Rt range for Diesel Range Organics: 6.49 to 15.75

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

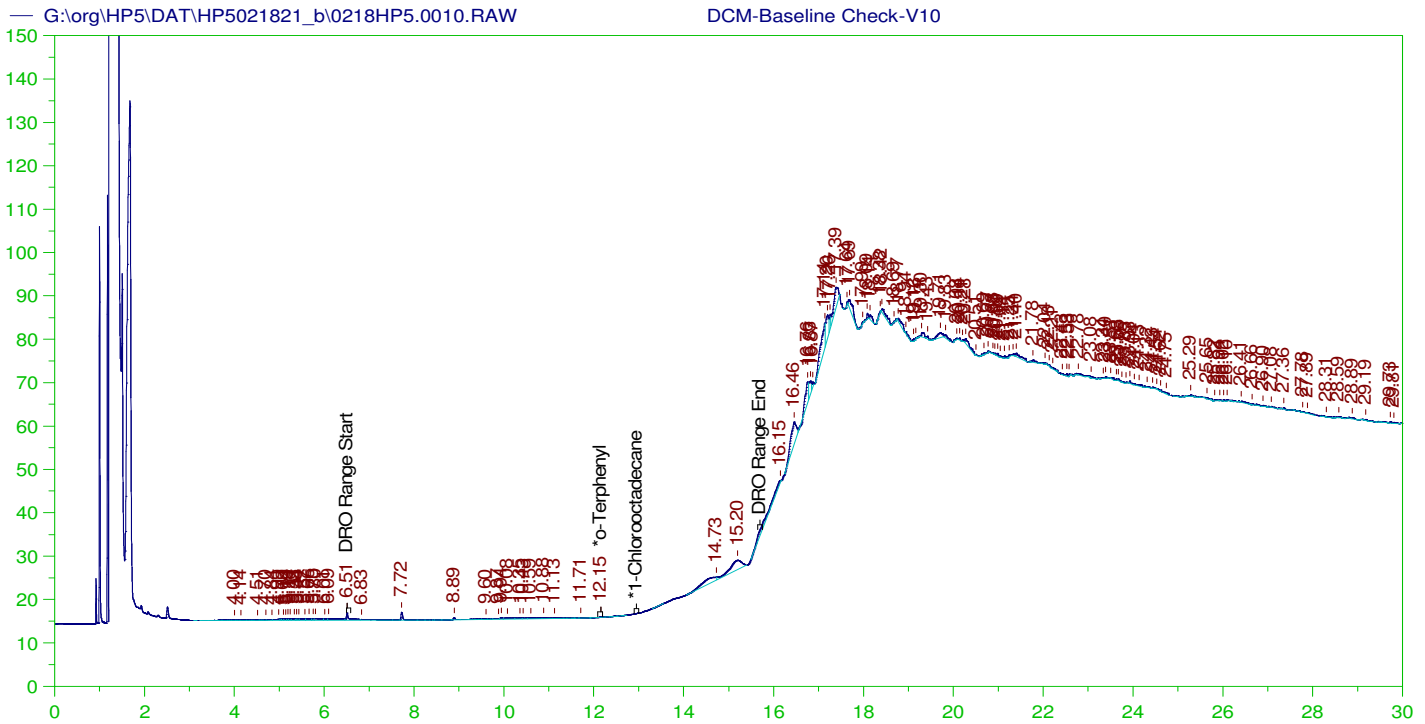
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.124	200.	1.888	.94	-
*1-Chlorooctadecane	12.984	200.	13.129	6.56	-

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

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

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

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



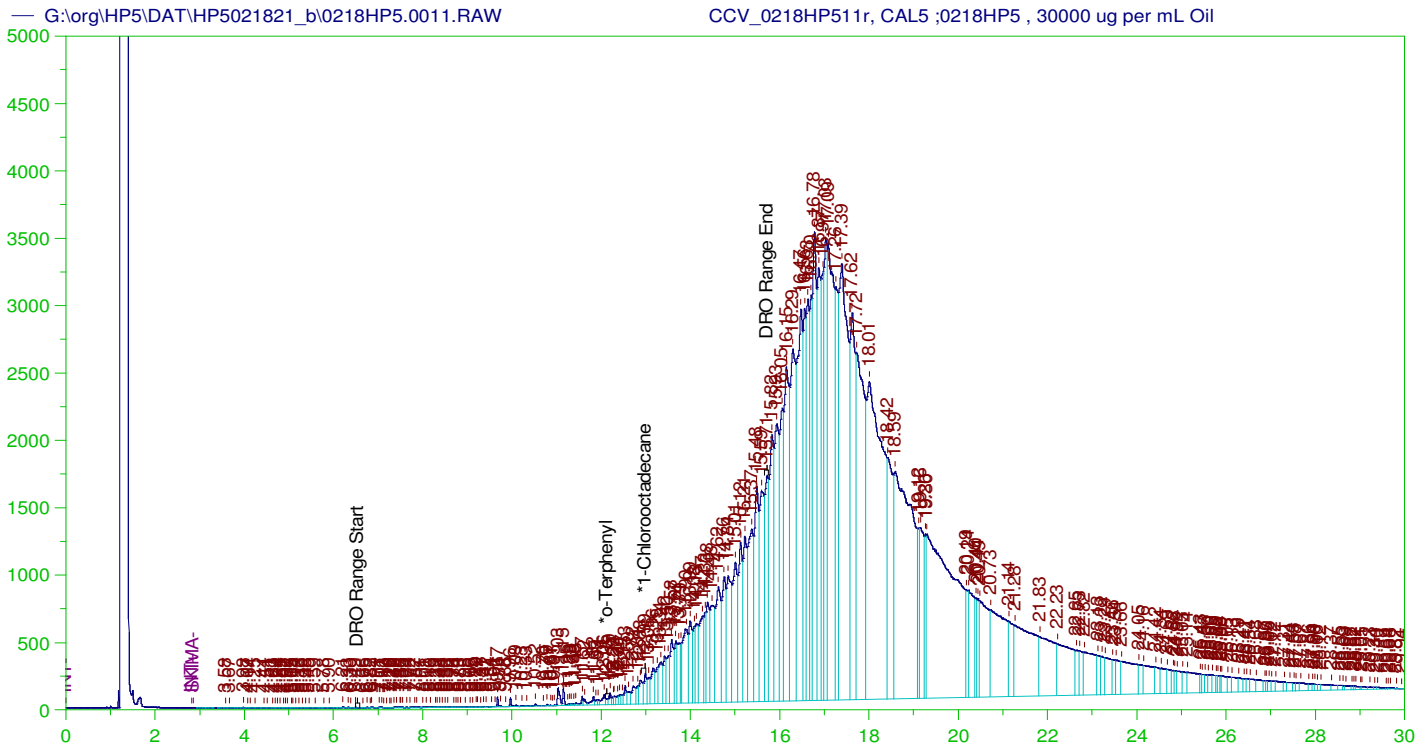
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

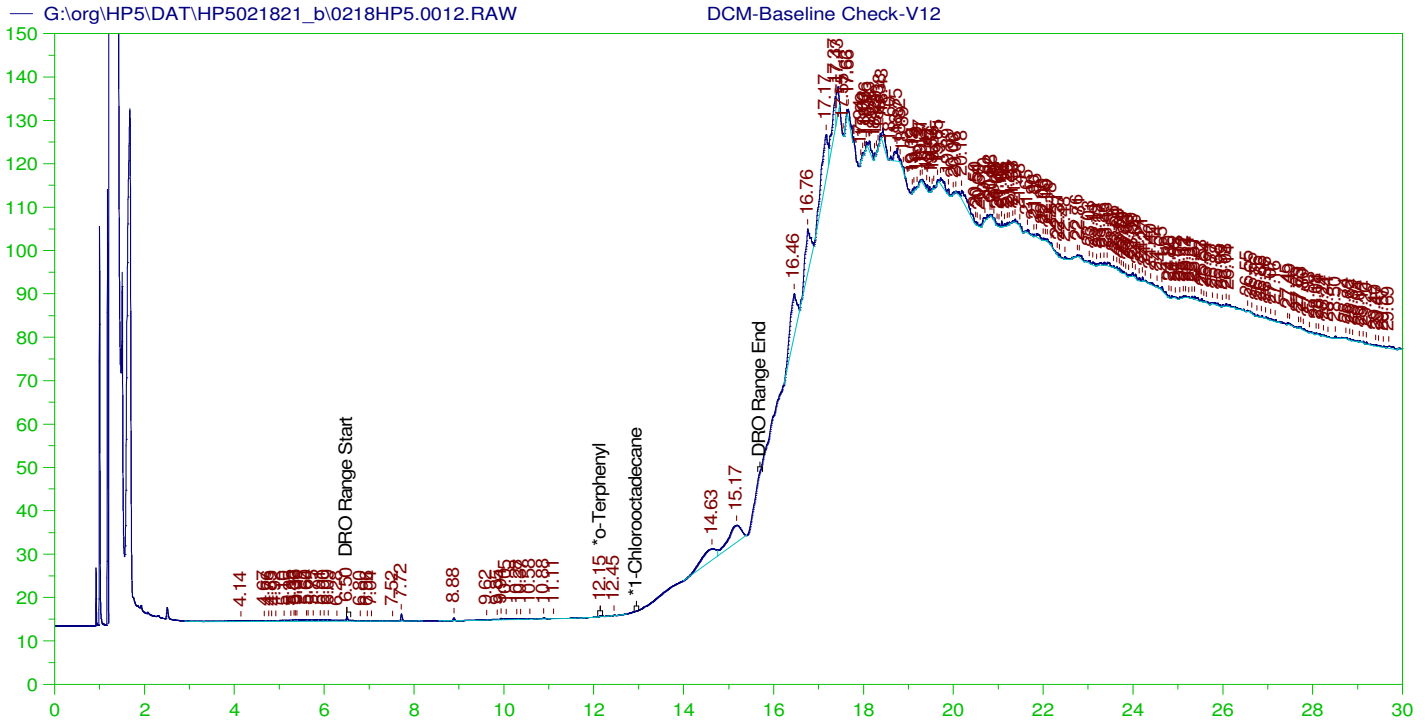
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.128	200.	3.828	1.91	-
*1-Chlorooctadecane	12.985	200.	28.22	14.11	-

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

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

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

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



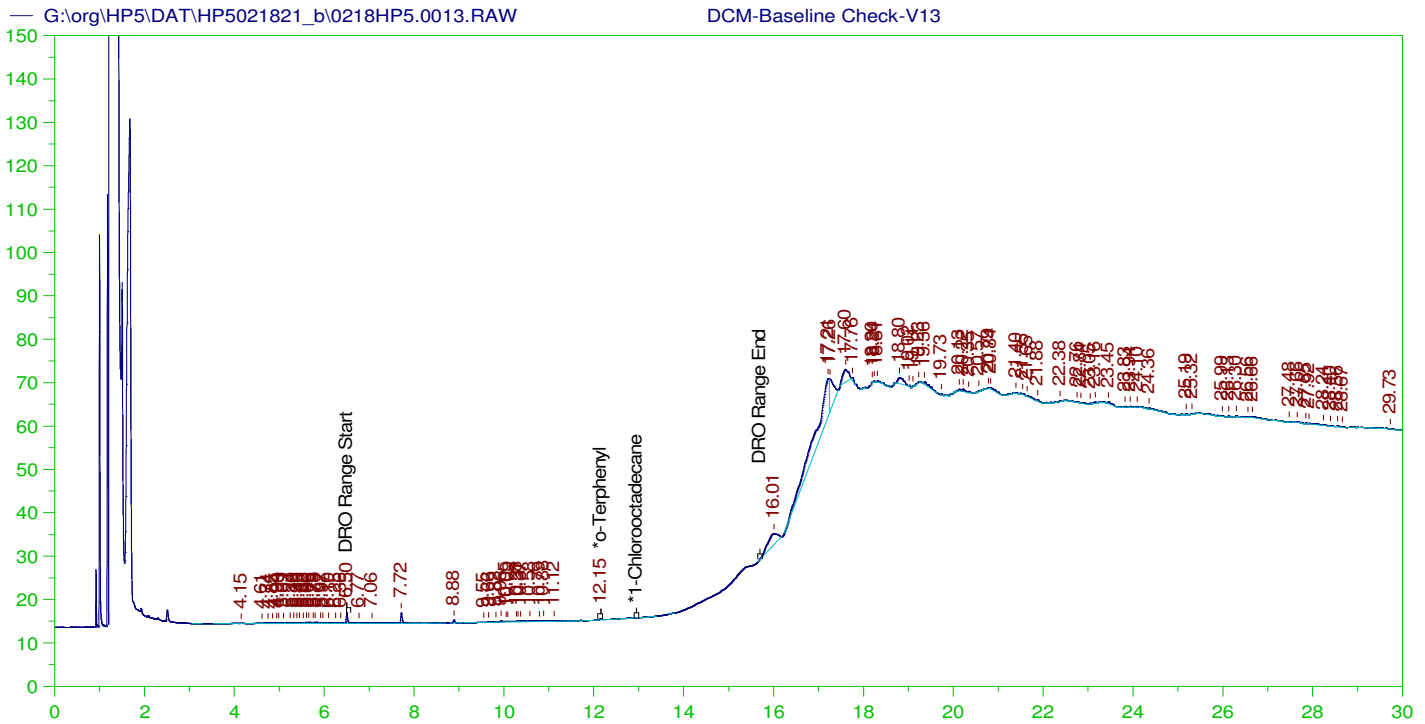
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



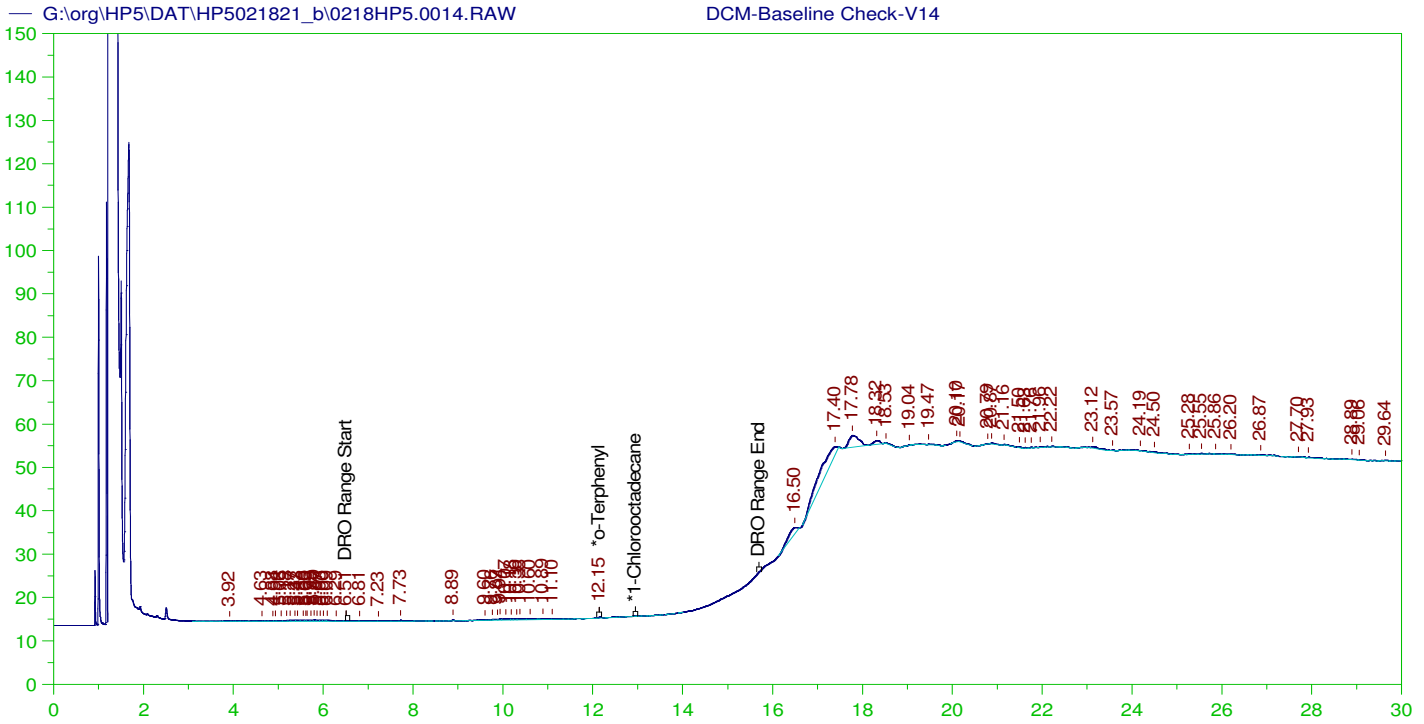
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



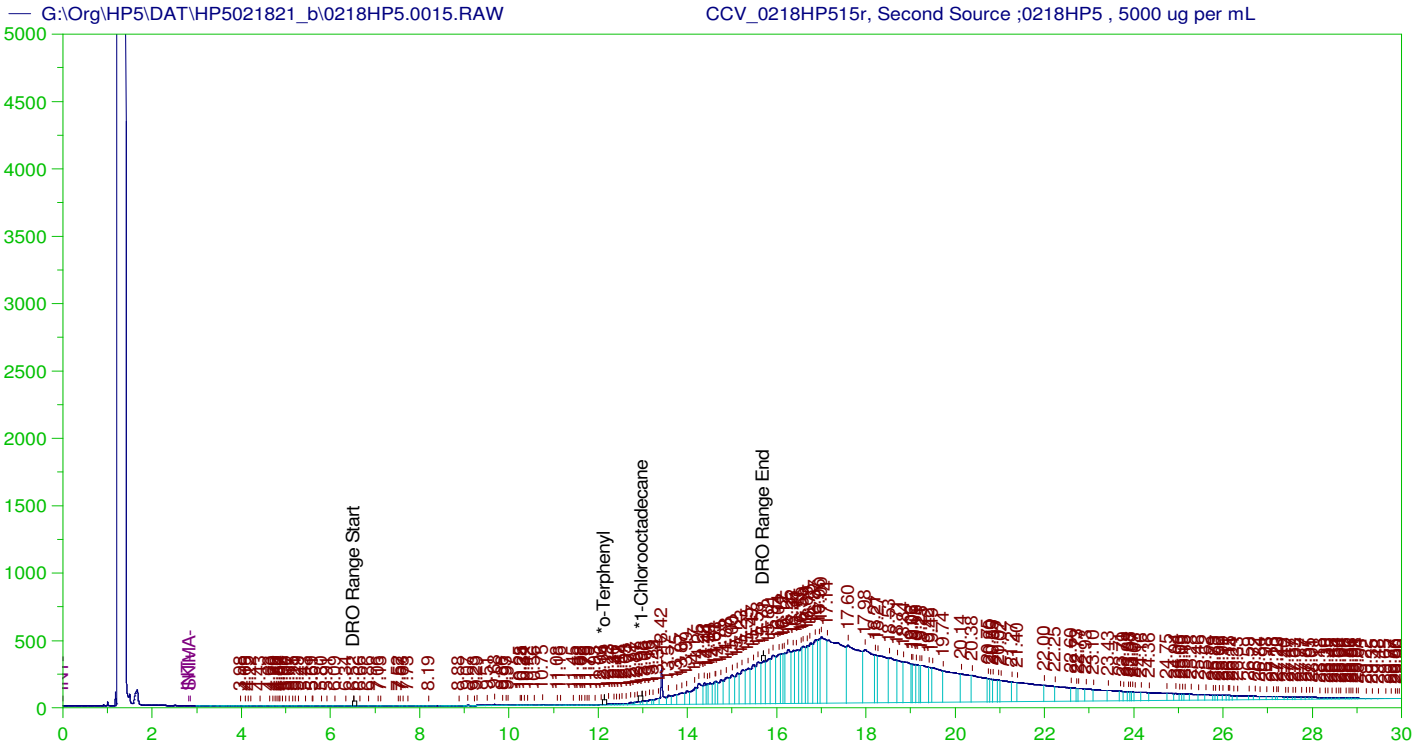
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 28542.41

Rt range for Diesel Range Organics: 6.49 to 15.75

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

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

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

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

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

13-Oct-21

Run ID GCFID-HP4-B_211006B

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

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO180918C	50,000 ug/mL Oil Std For AK103 RRO-In DCM					CAL-OIL	8/31/2025
DRO210902A	50,000 ug/mL Oil Std for RRO-In DCM					Second Sou	9/1/2026

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

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14764072	CCV_1006HP41	HC-8015-DRO-	CAL4		10/7/2021 4:50:1	1	R368535		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		14.79833		15	0	0	0	0.3	0	99%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14764073	CCV_1006HP42	HC-8015-DRO-	CAL5		10/7/2021 6:21:2	1	R368535		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		29.29968		30	0	0	0	0.3	0	98%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14764074	CCV_1006HP42	HC-8015-DRO-	ICV		10/7/2021 9:21:4	1	R368535		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.390338		5	0	0	0	0.3	0	108%	80	120	0%	

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

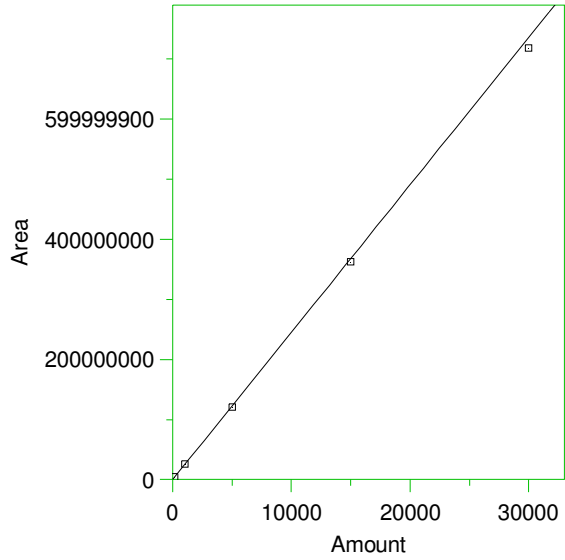
No default component

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

No calibration update report

All levels are normal data points.

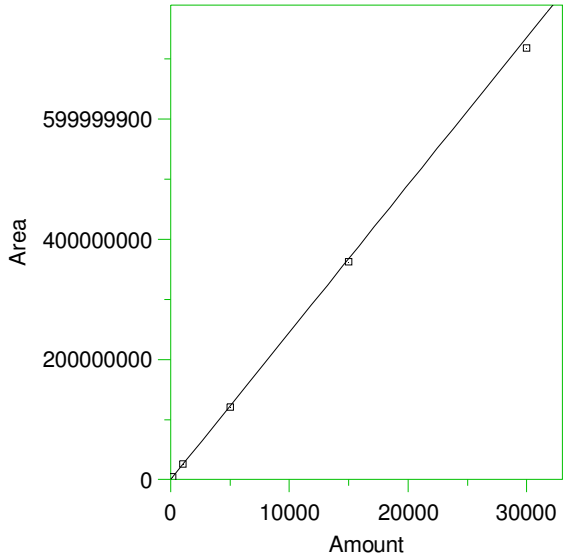
1 *30-40 Motor Oil



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

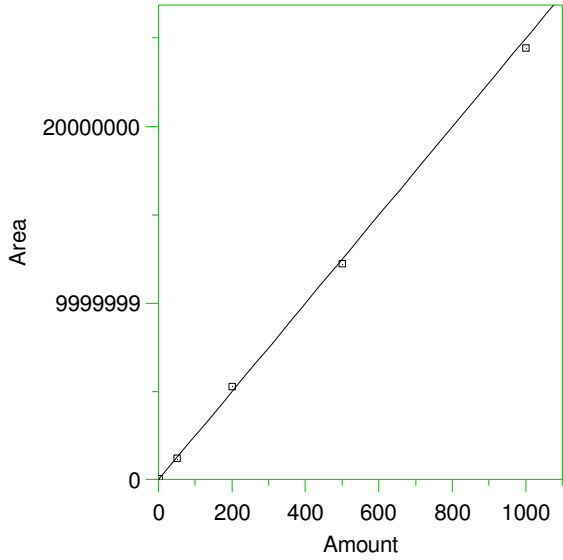
Single peak quantification by area

$Y = 24529.56 X + 0$

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

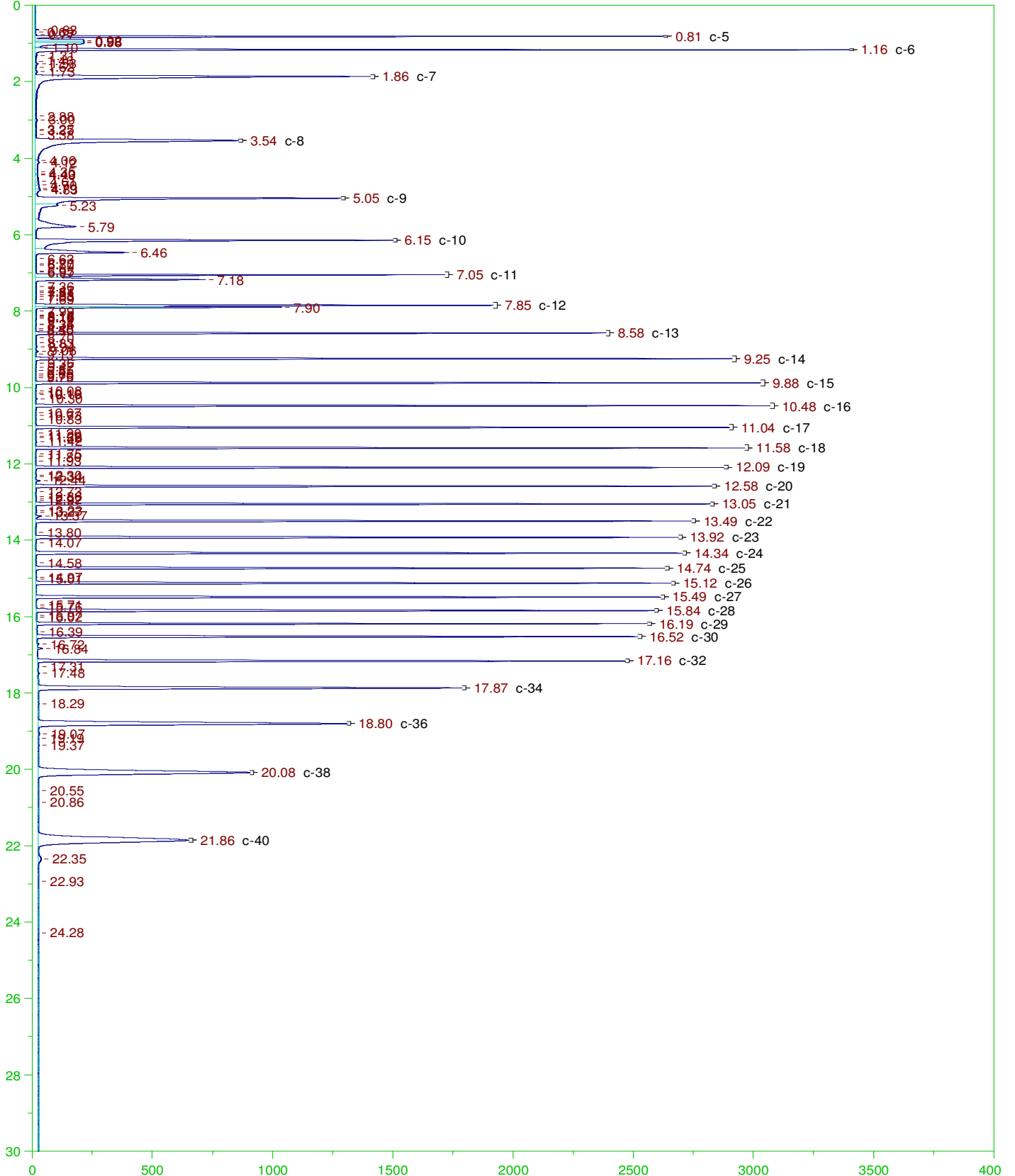
3 *#Triacontane

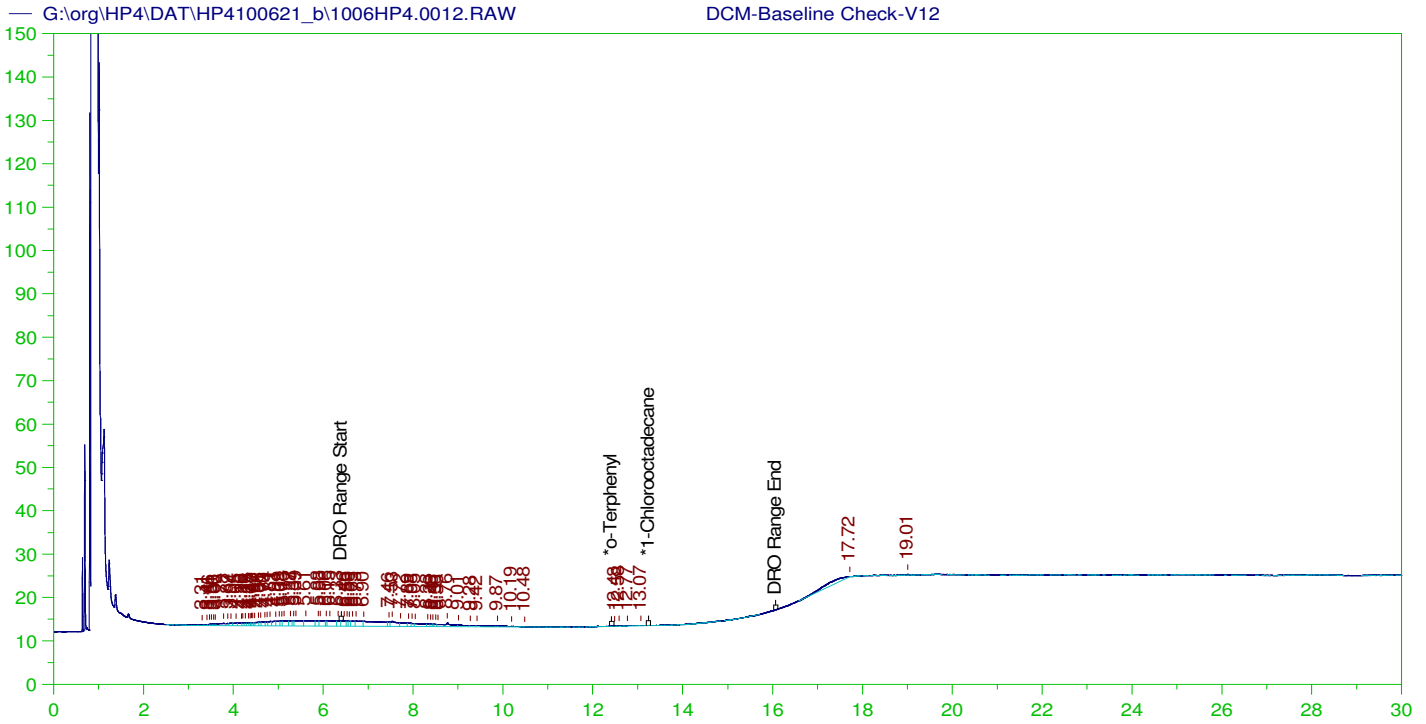


Expected retention time: 16.34 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 24973.81 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient 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	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
		Insert Entries(Have the first cell for entries select)						
	G:\org\HP4\DAT\HP4100621_b\1006HP4.11r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	G:\org\HP4\Methods\CSC211006.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.12r	DCM-Baseline Check-V12	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.13r	CCV_1006HP413r, CAL1 ;1006HP4 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-13-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.14r	DCM-Baseline Check-V14	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.15r	CCV_1006HP415r, CAL2 ;1006HP4 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-15-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.16r	DCM-Baseline Check-V16	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.17r	CCV_1006HP417r, CAL3 ;1006HP4 , 5000 ug per mL Oil (200 uL of Cal 4 + 400 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.18r	DCM-Baseline Check-V18	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.19r	CCV_1006HP419r, CAL4 ;1006HP4 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM)(14354)	G:\Org\HP4\methods\DR_8015-19-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.20r	DCM-Baseline Check-V20	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.21r	CCV_1006HP423r, CAL5 ;1006HP4 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)(14354)	G:\Org\HP4\methods\DR_8015-21-OIL-AA-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.22r	DCM-Baseline Check-V22	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.24r	DCM-Baseline Check-V24	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4100621_b\1006HP4.25r	CCV_1006HP425r, Second Source ;1006HP4 , 5000 ug per mL Oil (100 uL of DRO210902A + 900 uL of DCM)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0





DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

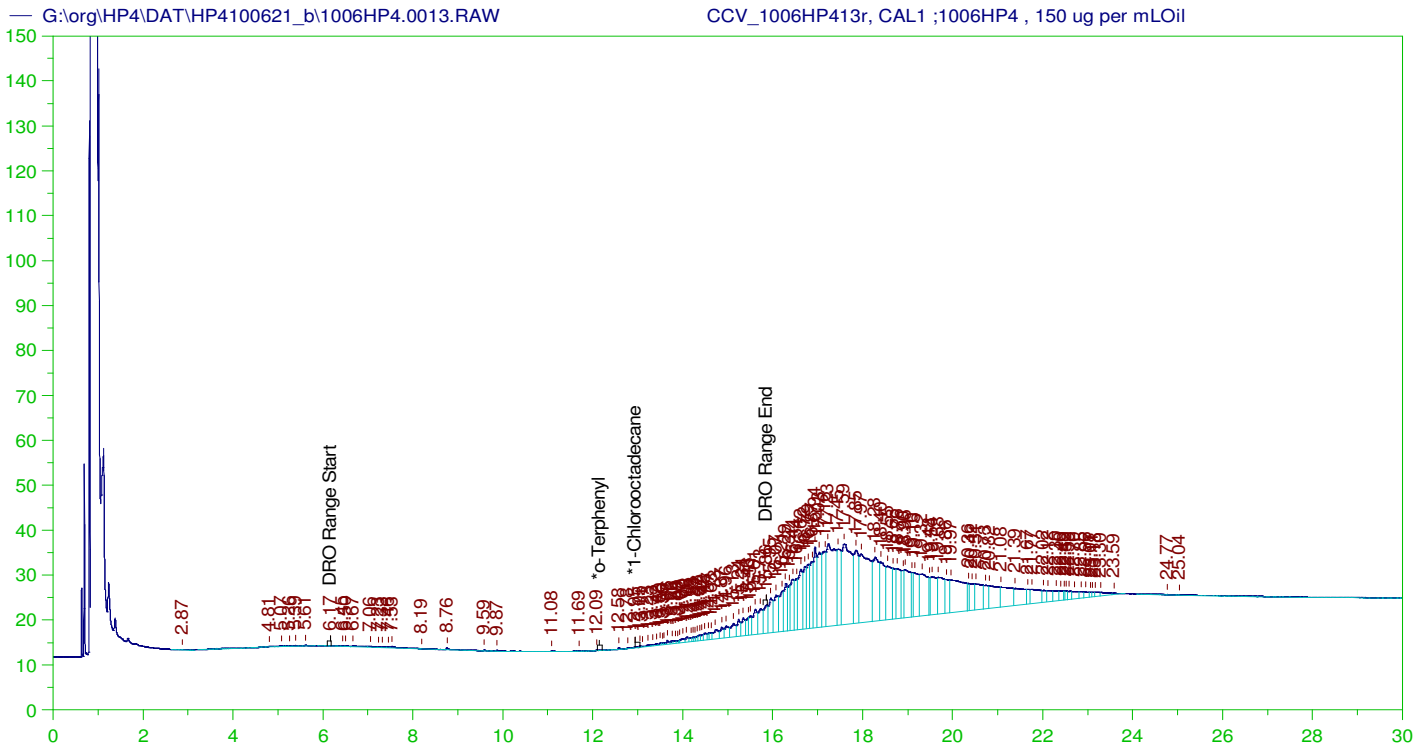
Sample Name: DCM-Baseline Check-V12
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55

Rt range for Diesel Range Organics: 6.35 to 16.12

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

Mean RF for TEH: 24529.56

Rt range for Diesel Range Organics: 6.09 to 15.88

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

DRO Area: 350454.1

DRO Amount: 14.28701

TEH (Oil Range) Area: 4052512

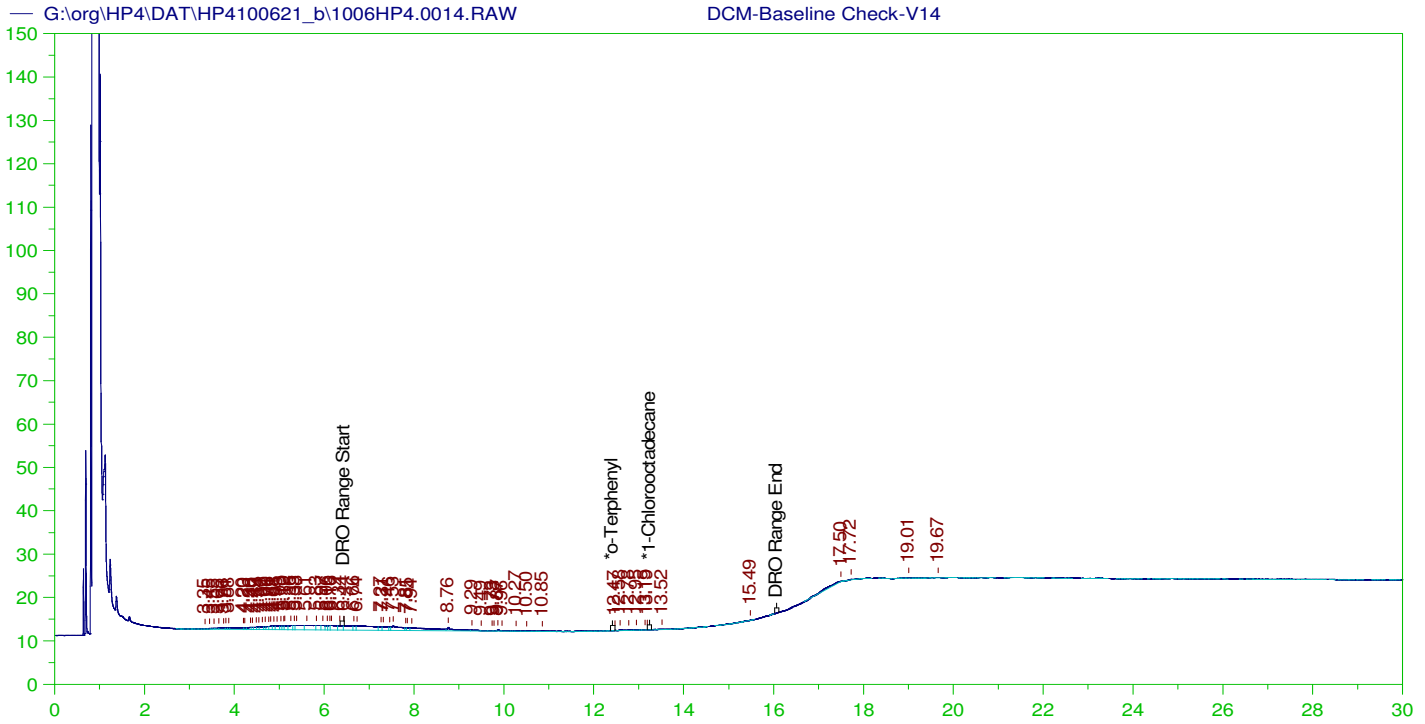
TEH (Oil Range) Amount: 165.2093

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

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

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

AMN 10/13/2021



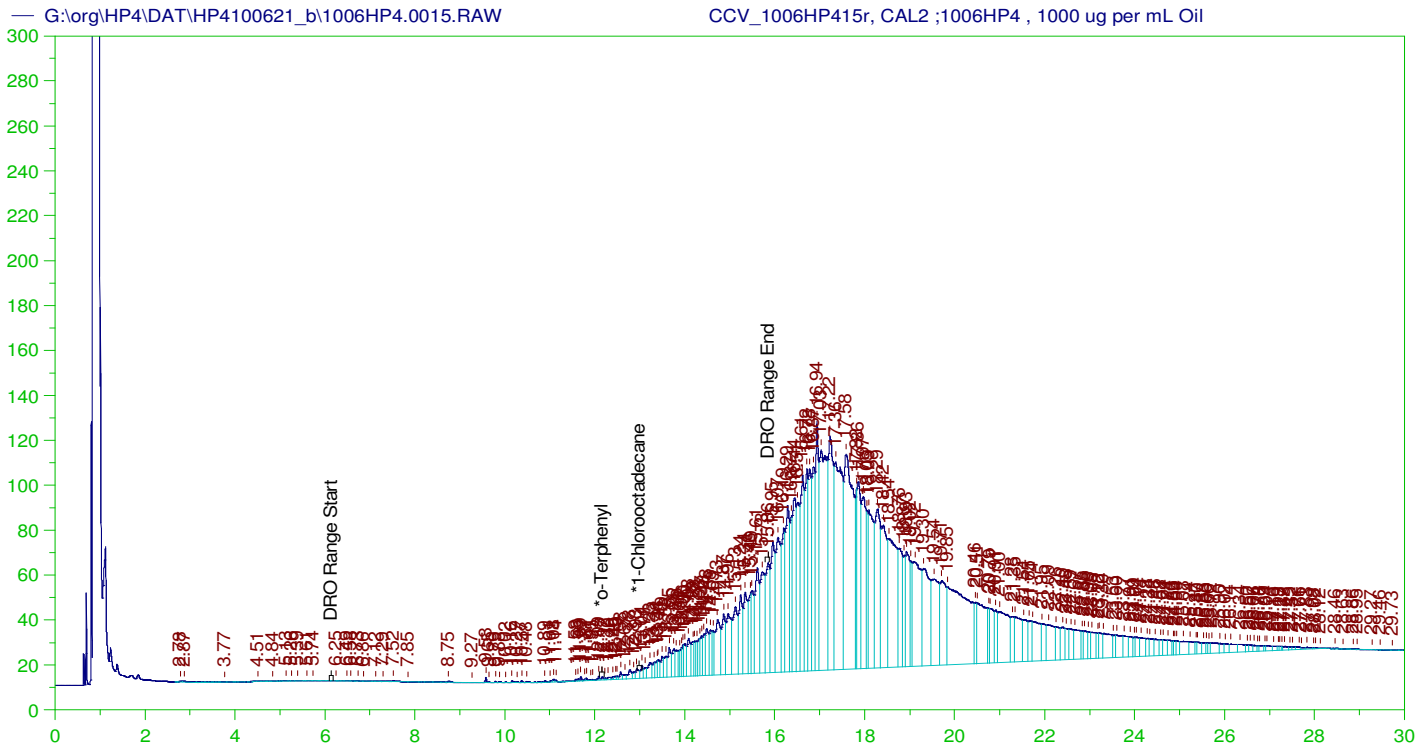
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
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 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: 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.	.	.

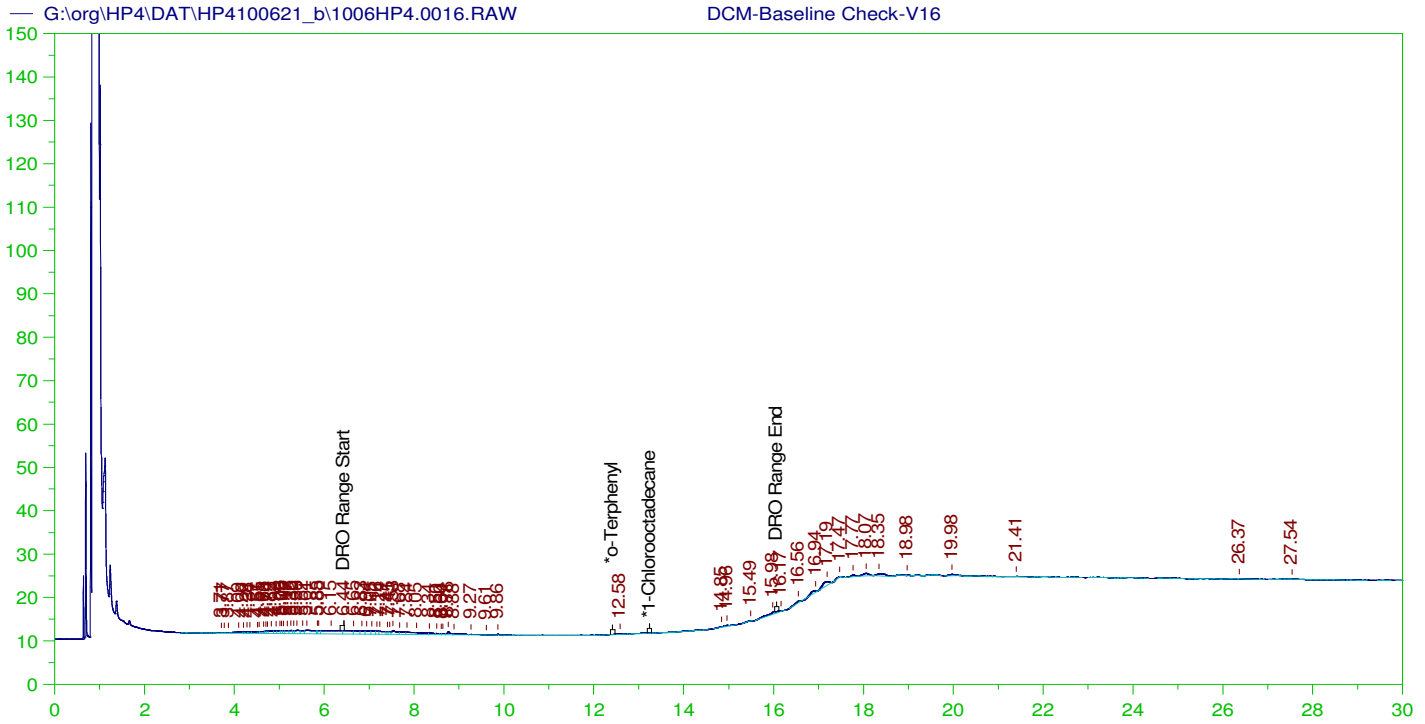
DRO Area:3765940 DRO Amount: 153.5266
 TEH (Oil Range) Area:2.507288E+07 TEH (Oil Range)Amount: 1022.149

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

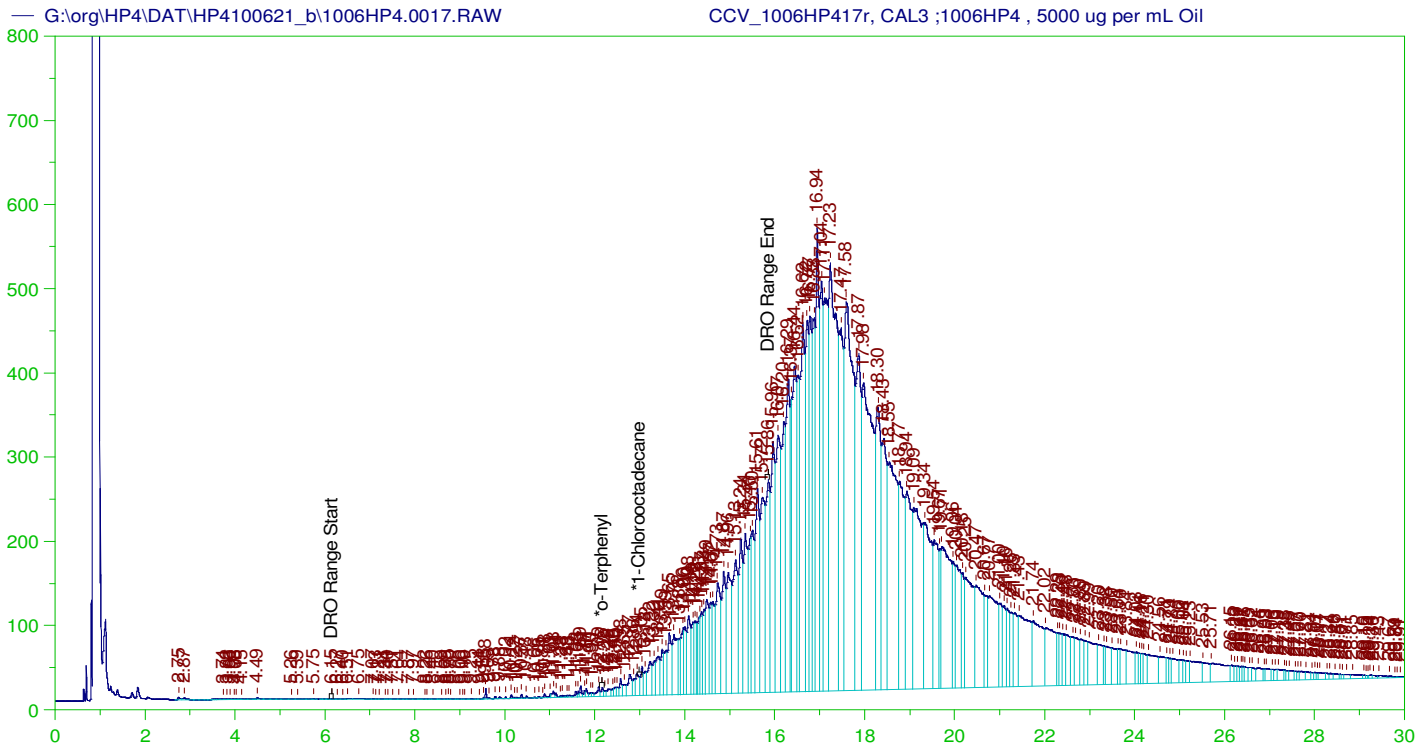
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 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 26029.55

Rt range for Diesel Range Organics: 6.35 to 16.12

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.907	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

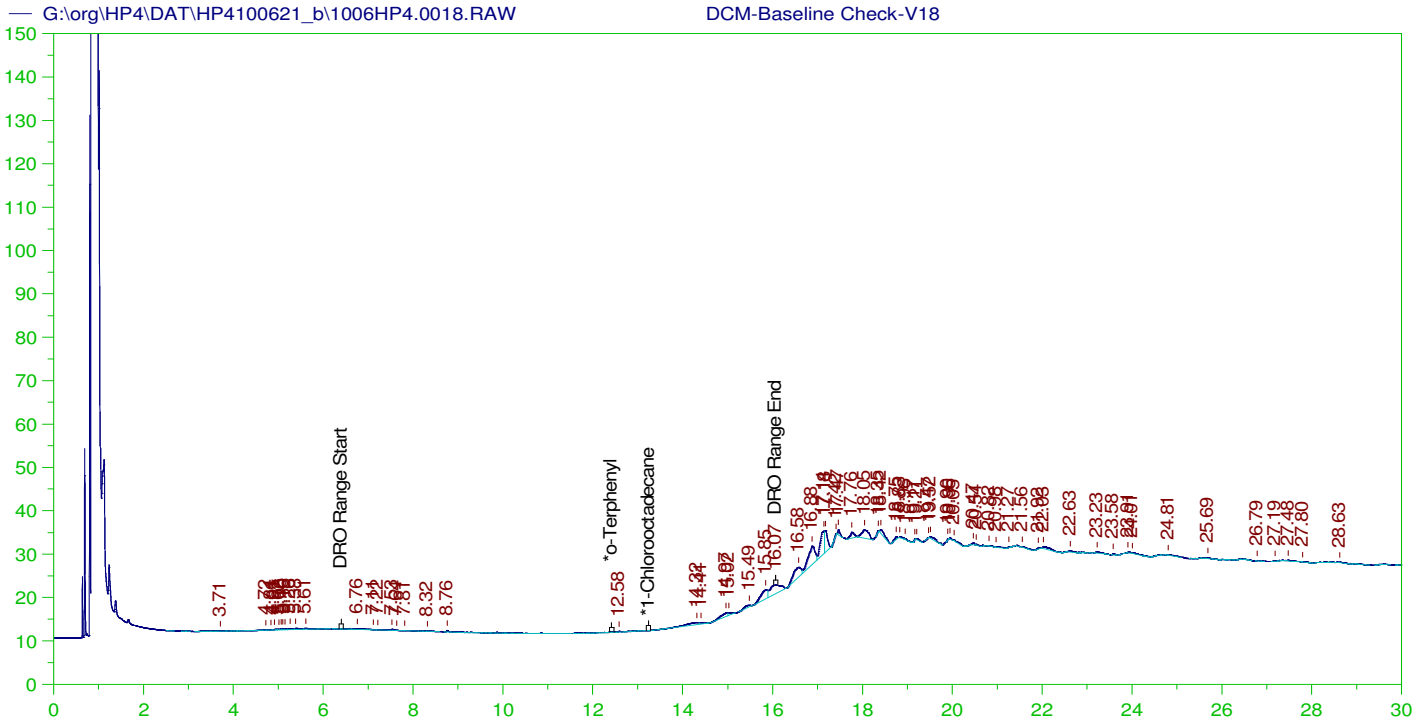
TEH (Oil Range) Amount: 4956.371

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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



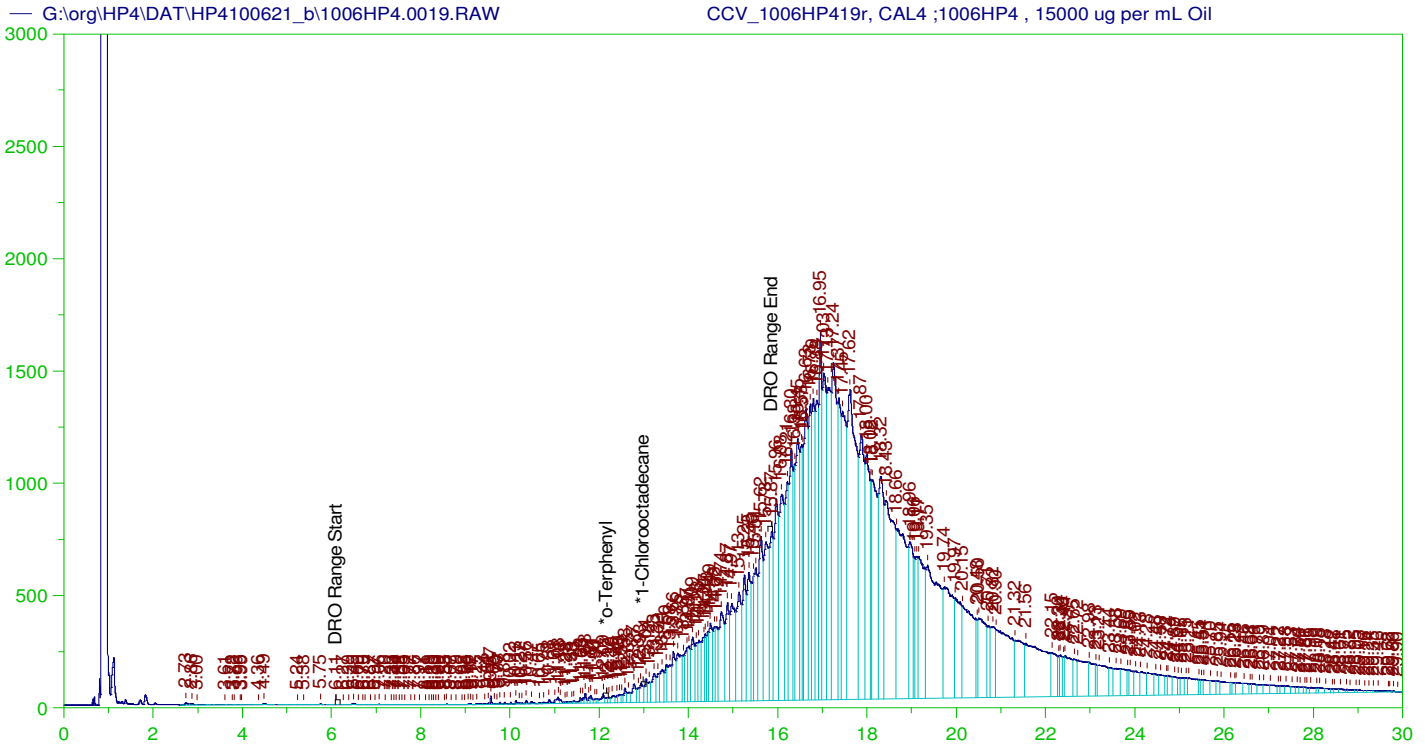
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V18
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 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

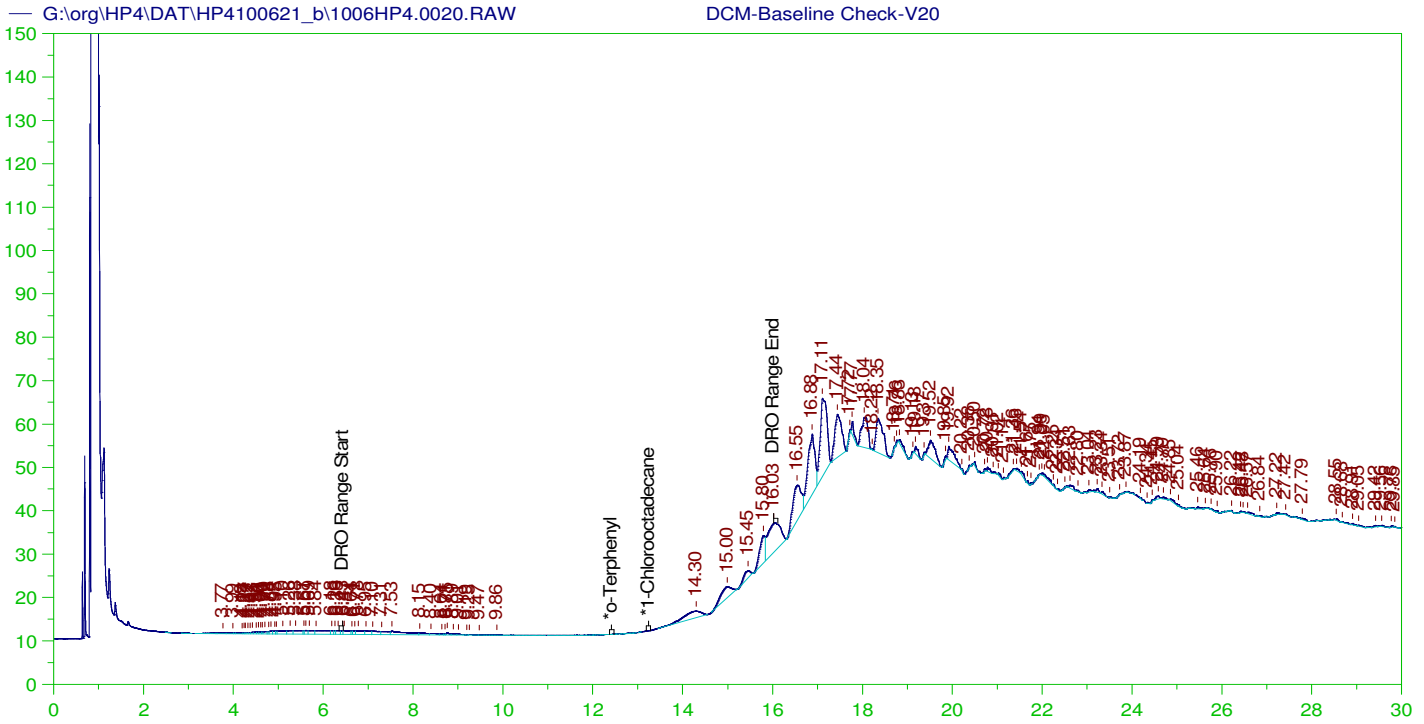
DRO Area: 6.321696E+07 DRO Amount: 2577.175
 TEH (Oil Range) Area: 3.629964E+08 TEH (Oil Range) Amount: 14798.33

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



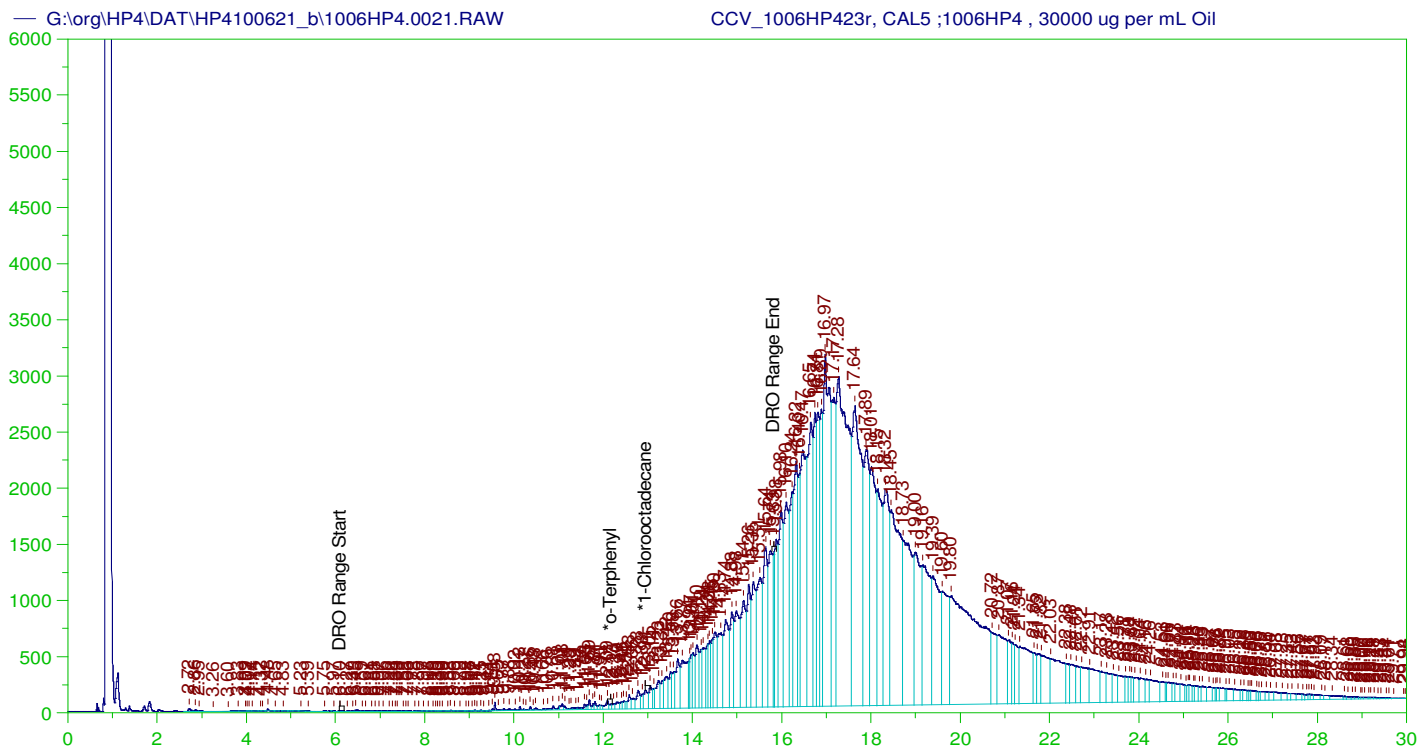
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V20
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.983	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

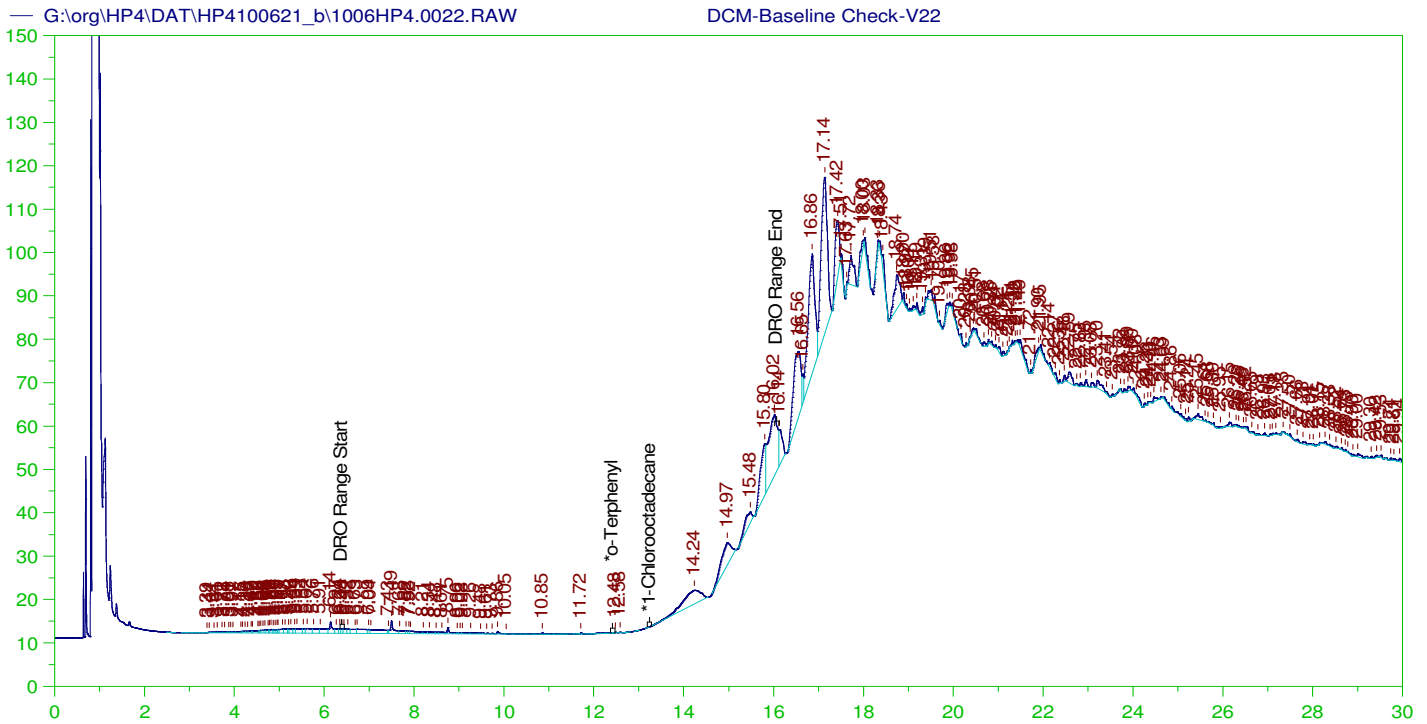
DRO Area: 1.18208E+08 DRO Amount: 4819.003
 TEH (Oil Range) Area: 7.187084E+08 TEH (Oil Range) Amount: 29299.68

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



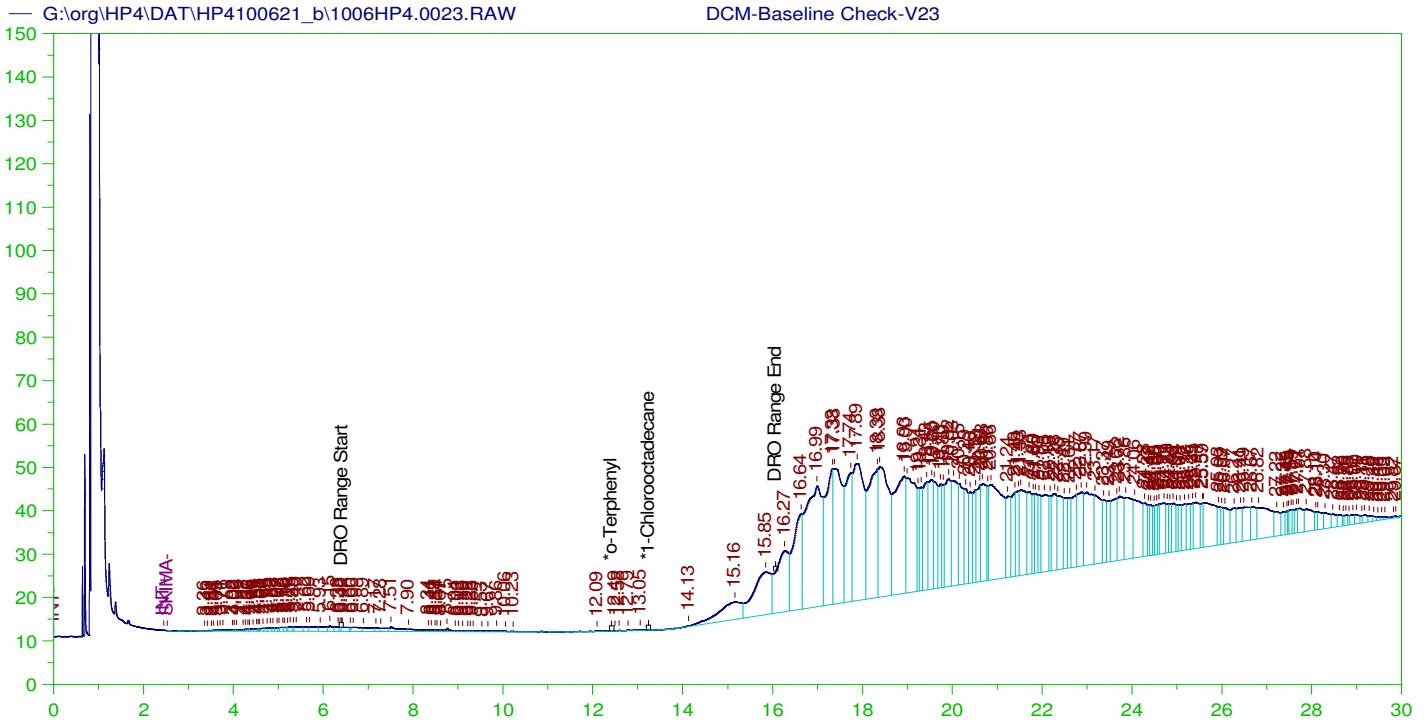
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V22
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 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

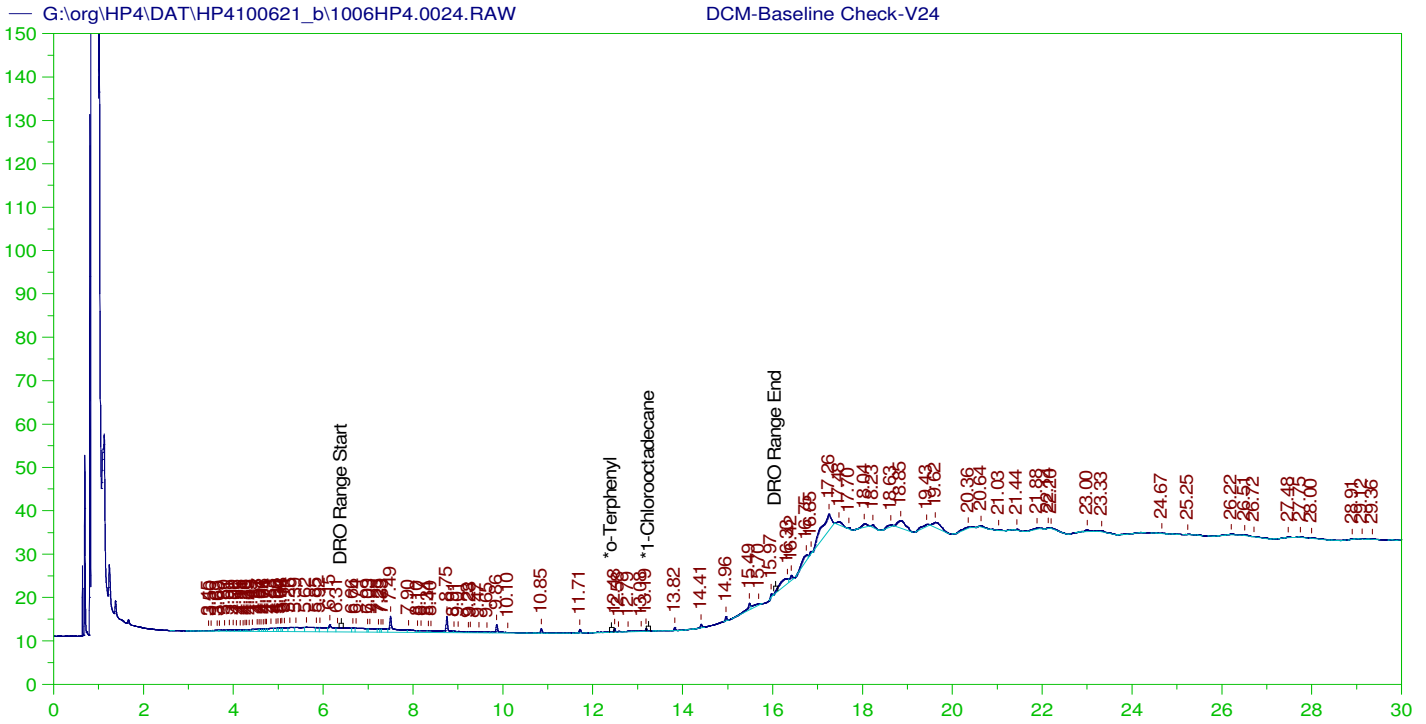
Sample Name: DCM-Baseline Check-V23
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0023.RAW
 Date & Time Acquired: 10/7/2021 7:51:25 AM
 Method File: G:\Org\HP4\methods\D3_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

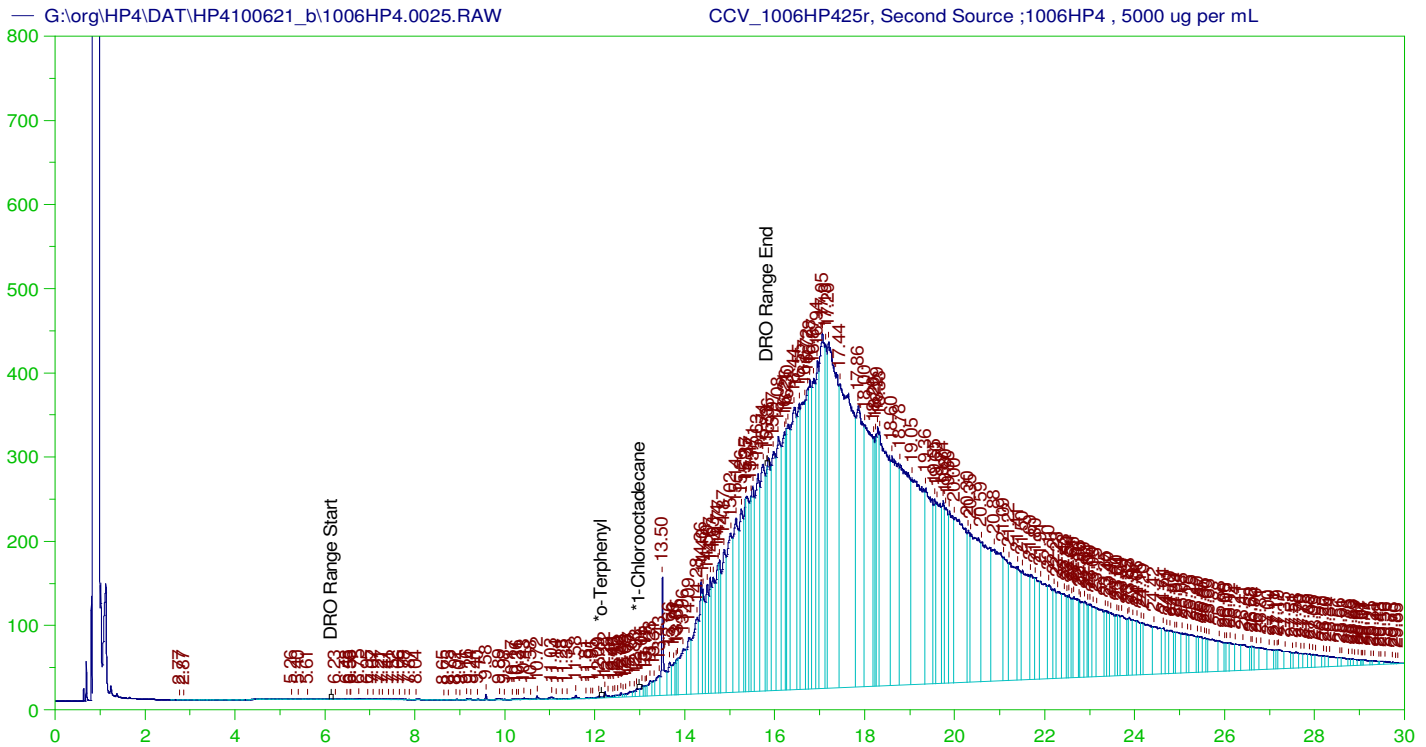
Sample Name: DCM-Baseline Check-V24
 Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0024.RAW
 Date & Time Acquired: 10/7/2021 8:36:35 AM
 Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

18-Oct-21

Run ID GCFID-HP4-B_211006C

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

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

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14764037	CCV_1006HP43	HC-8015-DRO-	CAL1		10/7/2021 1:07:4	1	R368536		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.0019847		0.002	0	0	0	0.002	0	99%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14764038	CCV_1006HP43	HC-8015-DRO-	CAL2		10/7/2021 1:53:0	1	R368536		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.04853713		0.05	0	0	0.002	0.002	0	97%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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14764039	CCV_1006HP43	HC-8015-DRO-	CAL3		10/7/2021 2:38:3	1	R368536		0	0	
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Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.2121789		0.2	0	0	0.002	0.002	0	106%	80	120	0%	

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

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

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

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

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

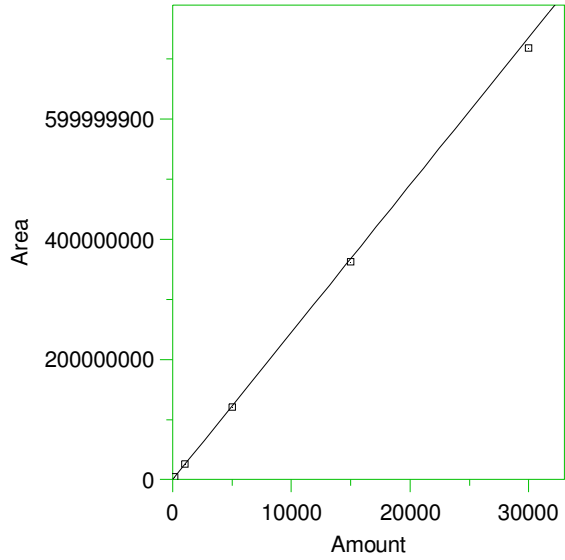
External standard calibration

Standard injection volume: 1
Standard sample weight: 1
Area reject threshold: 500
Reference peak area reject threshold: 500
Amount units: nanograms
No default component

Method of calculating data point averages: Equal weight for all updates
No calibration update report

All levels are normal data points.

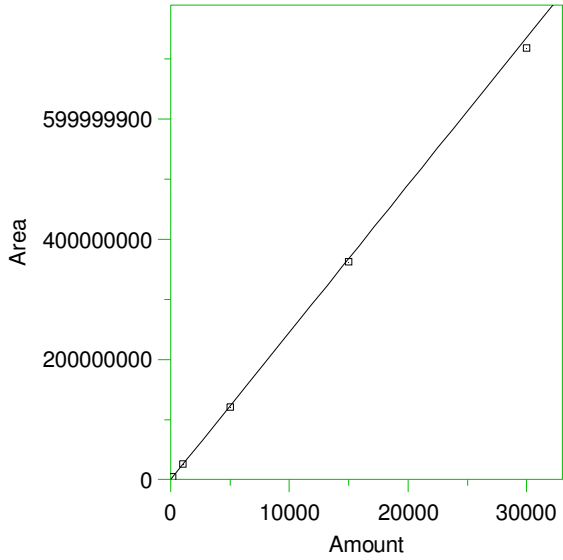
1 *30-40 Motor Oil



Expected retention time: 6.4 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 24529.56 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9990484
 Average error: 1.972%
 Average CF: 24529.56
 RSD: 2.304%

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

2 #C20



Expected retention time: 12.58 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0

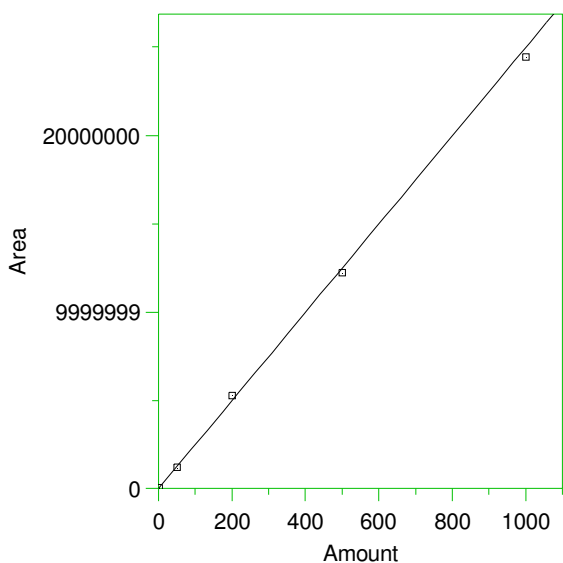
Single peak quantification by area

$Y = 24529.56 X + 0$

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

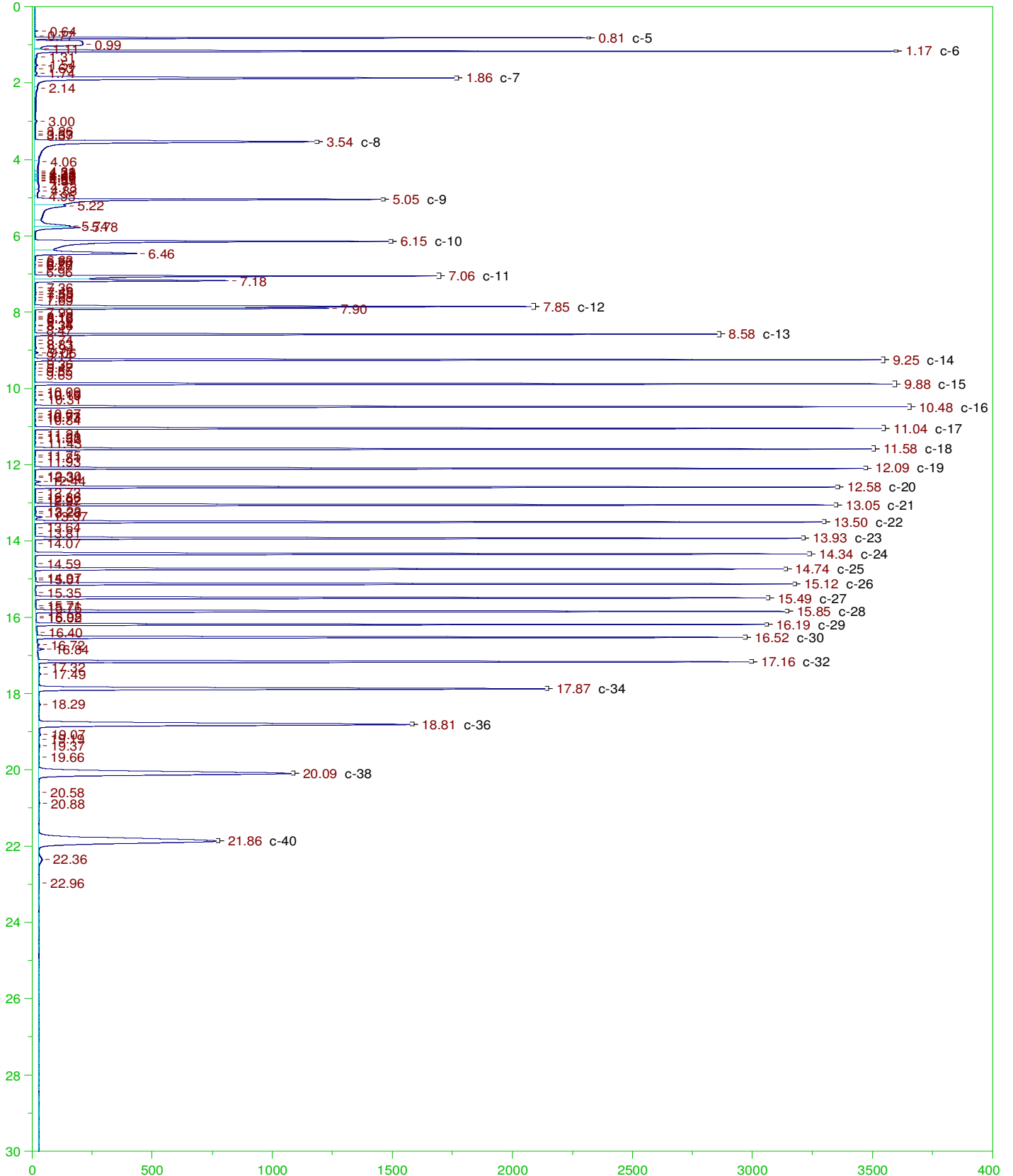
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	3765836	25105.57	2.348	Manual	1/1/2022 10:32:46 AM
2	1000	2.516261E+07	25162.61	2.581	Manual	1/1/2022 10:32:43 AM
3	5000	1.213971E+08	24279.42	-1.020	Manual	1/1/2022 10:32:41 AM
4	15000	3.623479E+08	24156.53	-1.521	Manual	1/1/2022 10:32:39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

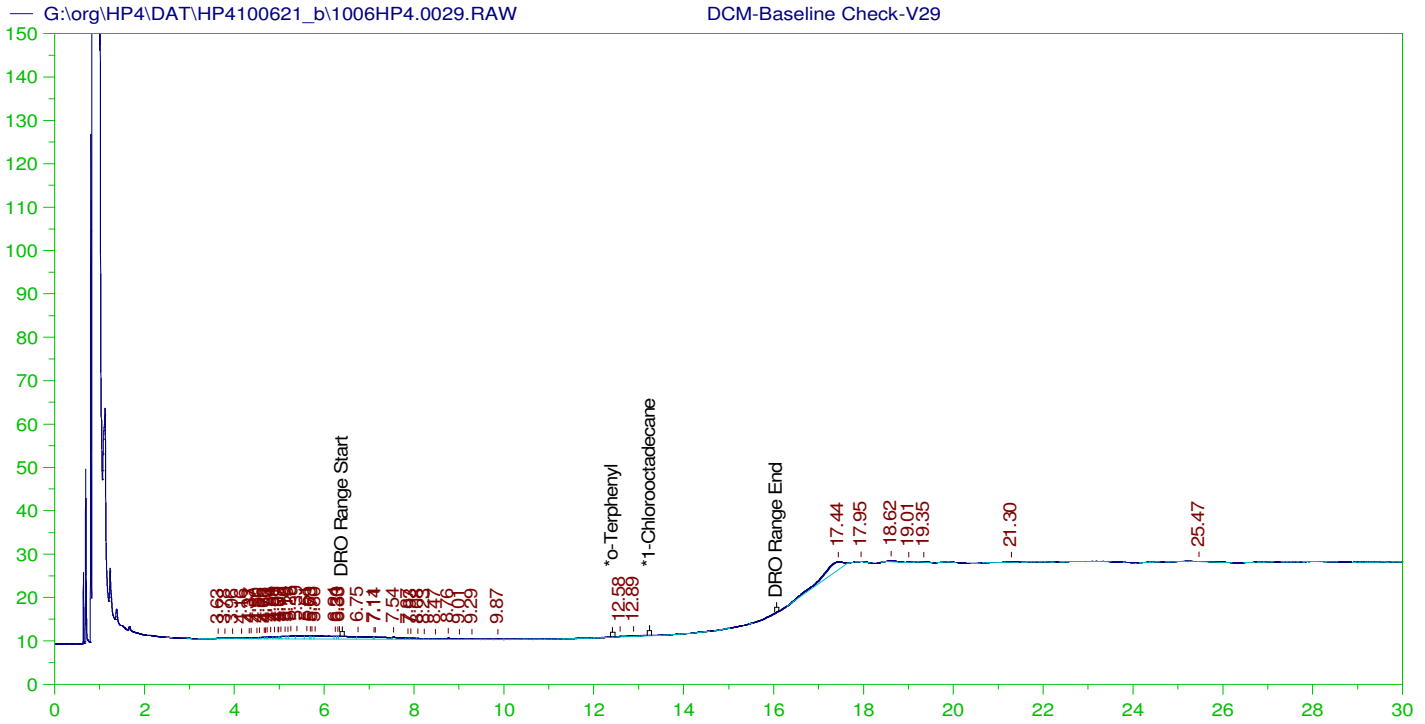
3 *#Triacontane



Expected retention time: 16.34 minutes
 Search window: 0.05 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 24973.81 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9989417
 Average error: 2.783%
 Average CF: 24973.81
 RSD: 3.701%

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





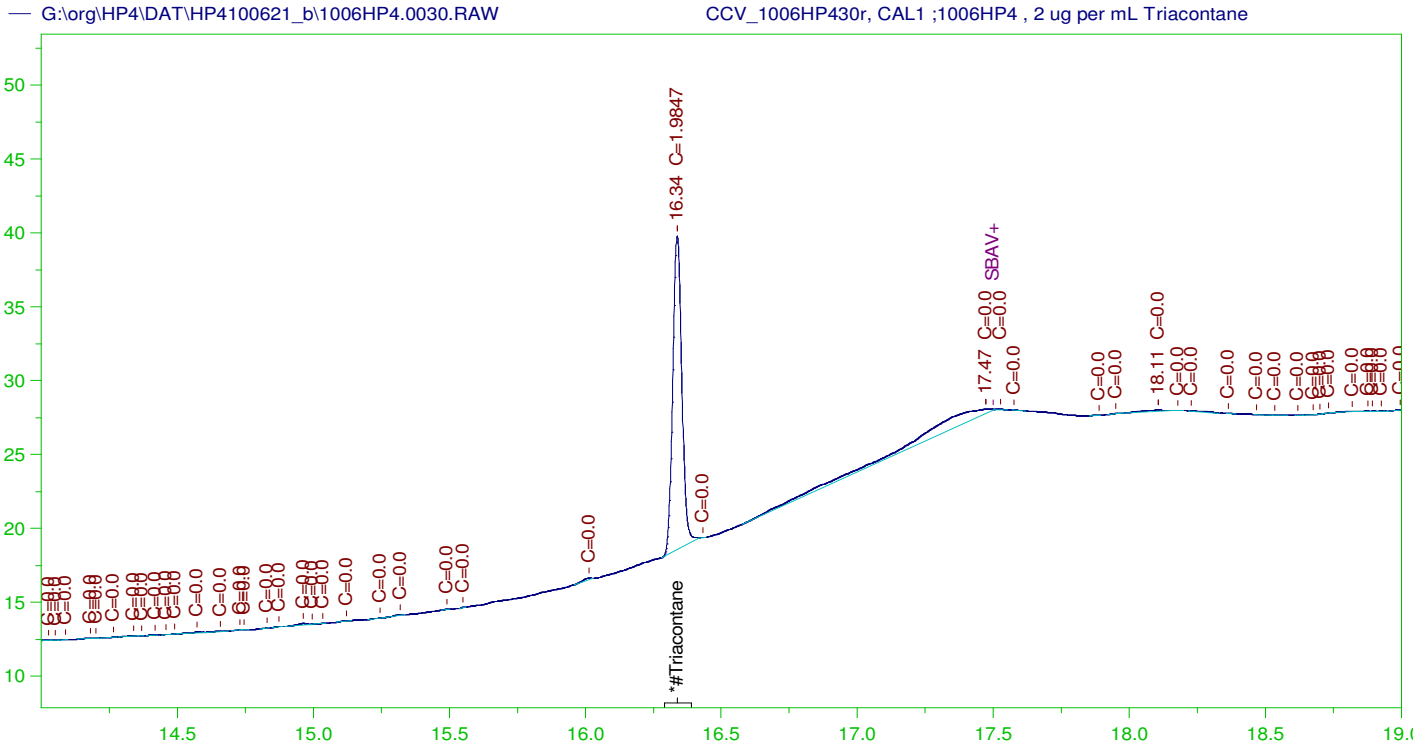
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

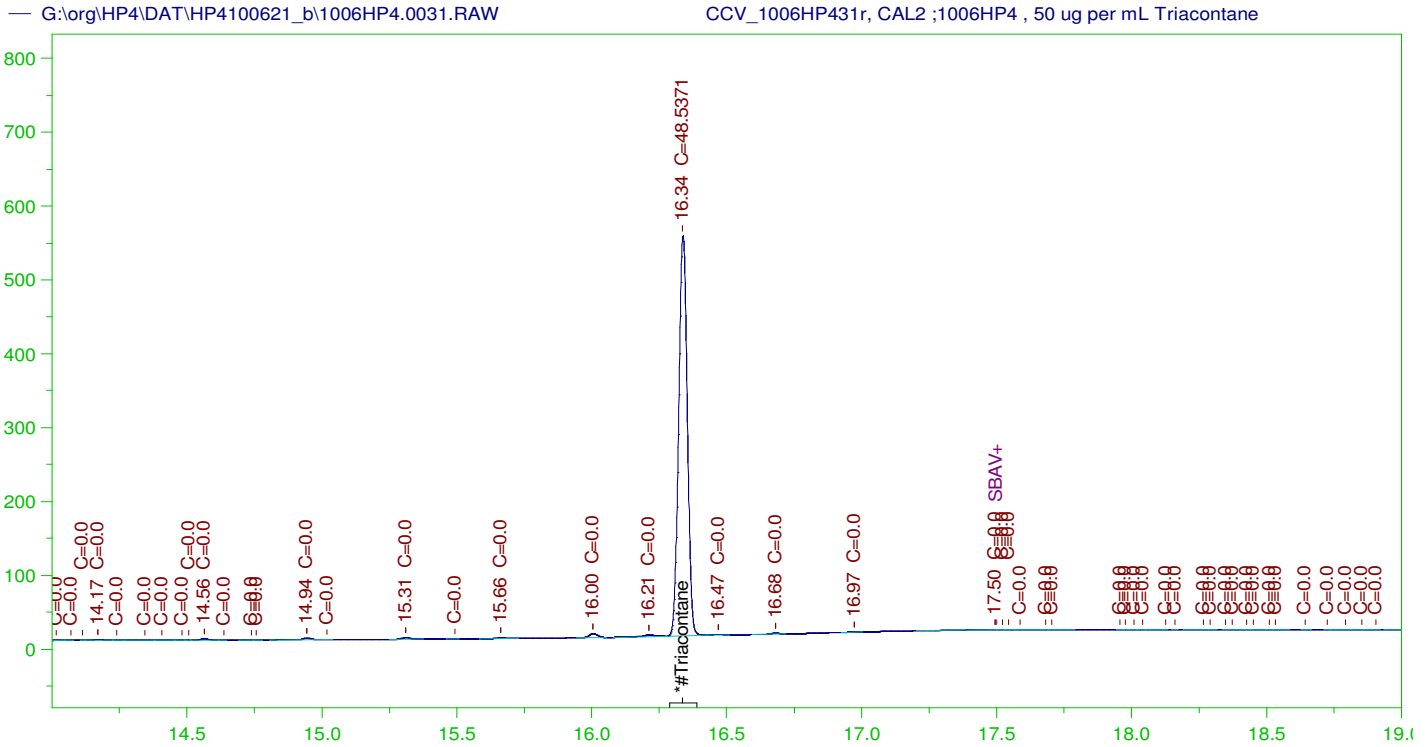
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.337	500.	1.985	.4

RRO Area:16216.42 RRO AMOUNT: 0.6610969

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

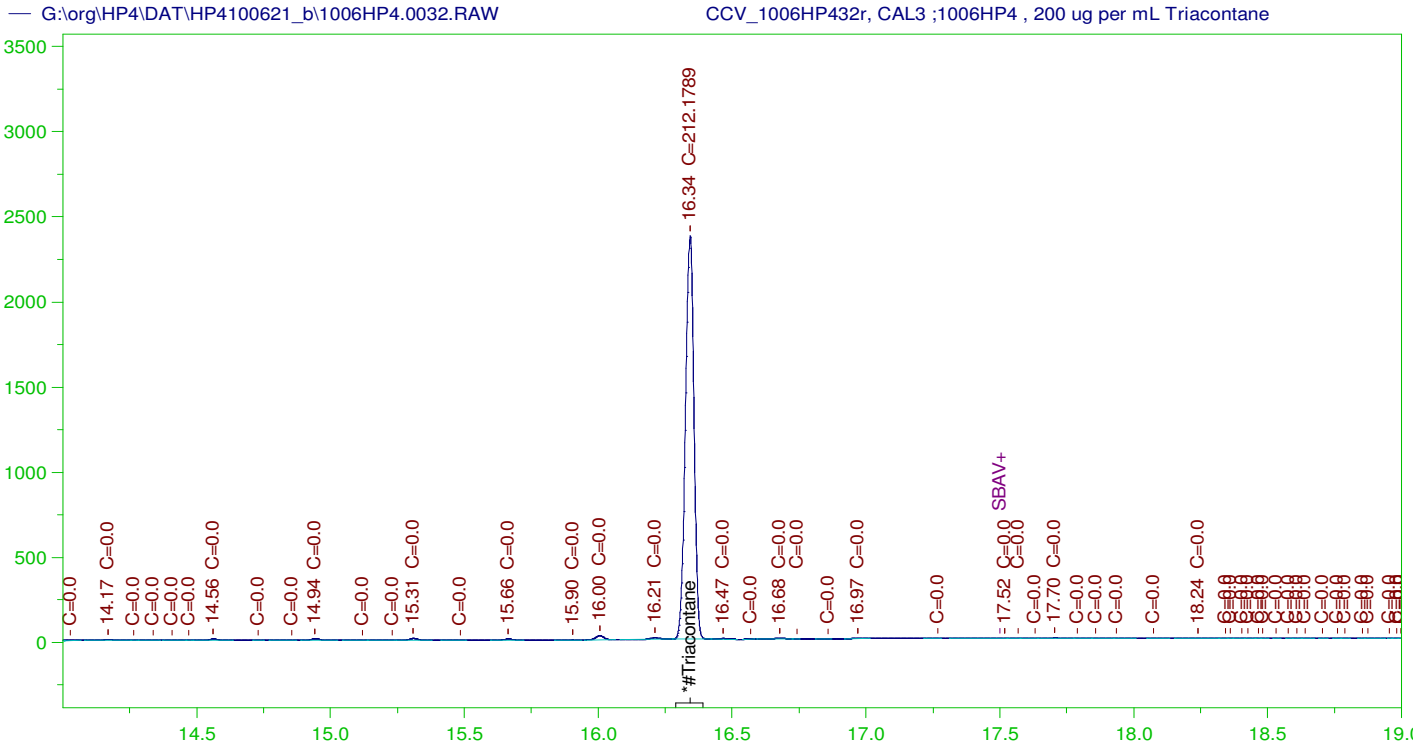
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.337	500.	48.537	9.71	-

RRO Area:50498.79 RRO AMOUNT: 2.058691

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

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

RRO Area:223185.5 RRO AMOUNT: 9.098632

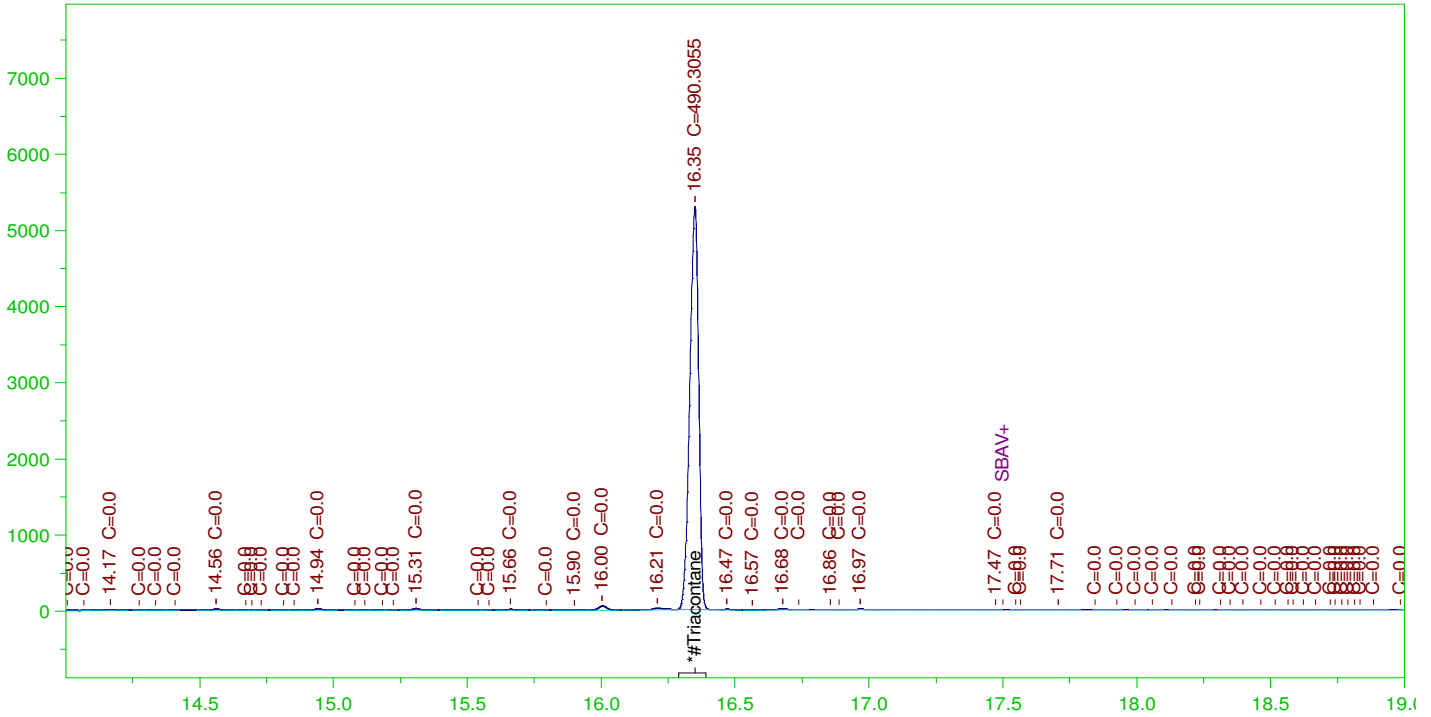
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0032.RAW

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

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

G:\org\HP4\DAT\HP4100621_b\1006HP4.0033.RAW

CCV_1006HP433r, CAL4 ;1006HP4 , 500 ug per mL Triacontane



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

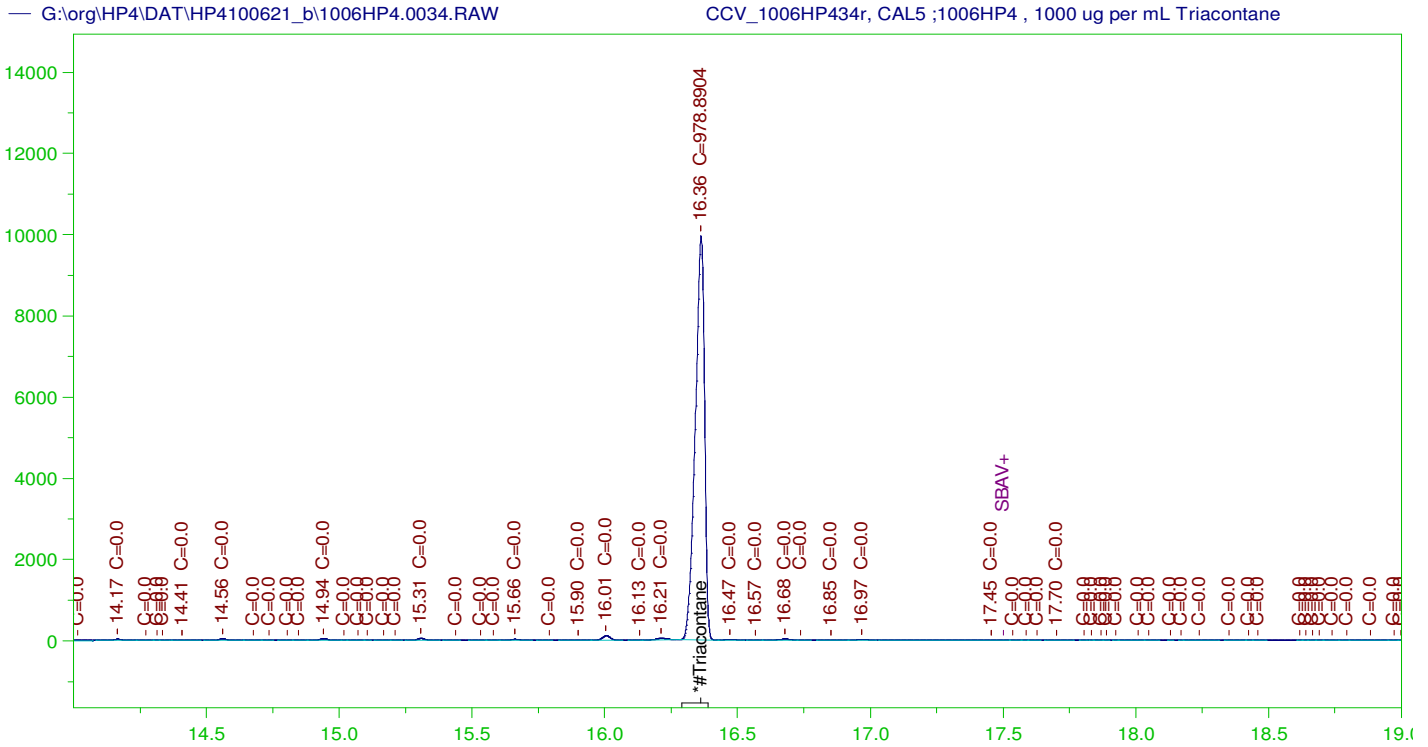
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.35	500.	490.306	98.06	-

RRO Area:522651.3 RRO AMOUNT: 21.307

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

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

RRO Area:1029665 RRO AMOUNT: 41.9765

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

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

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

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



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

Energy Laboratories Inc

ANALYTICAL RUN Summary

25-Oct-21

Run ID GCFID-HP5-B_211017A

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

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

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

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

14777568	CCV_1017HP50	HC-8015-DRO-	CAL2		10/17/2021 4:12:	1	R368813		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.04817772		0.05	0	0	0.002	0.002	0	96%	80	120	0%	

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

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

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

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

Version: 11

Creator: AMN

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

Reason for change:

External standard calibration

Standard injection volume: 1

Standard sample weight: 1

Area reject threshold: 500

Reference peak area reject threshold: 500

Amount units: nanograms

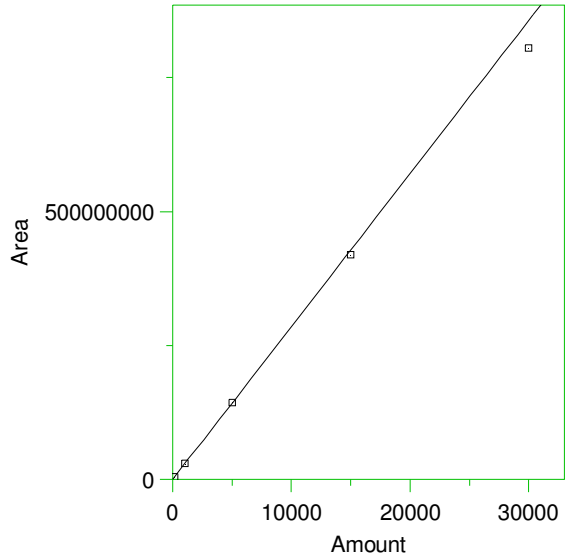
No default component

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

No calibration update report

All levels are normal data points.

1 *30-40 Motor Oil



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

Single peak quantification by area

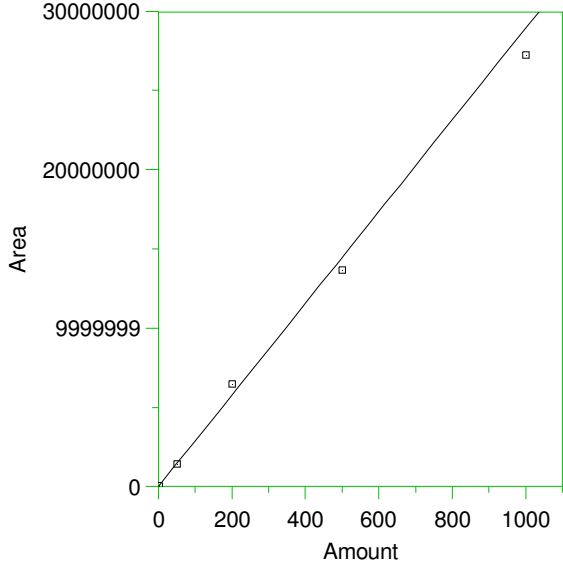
$Y = 28542.41 X + 0$

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

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

3

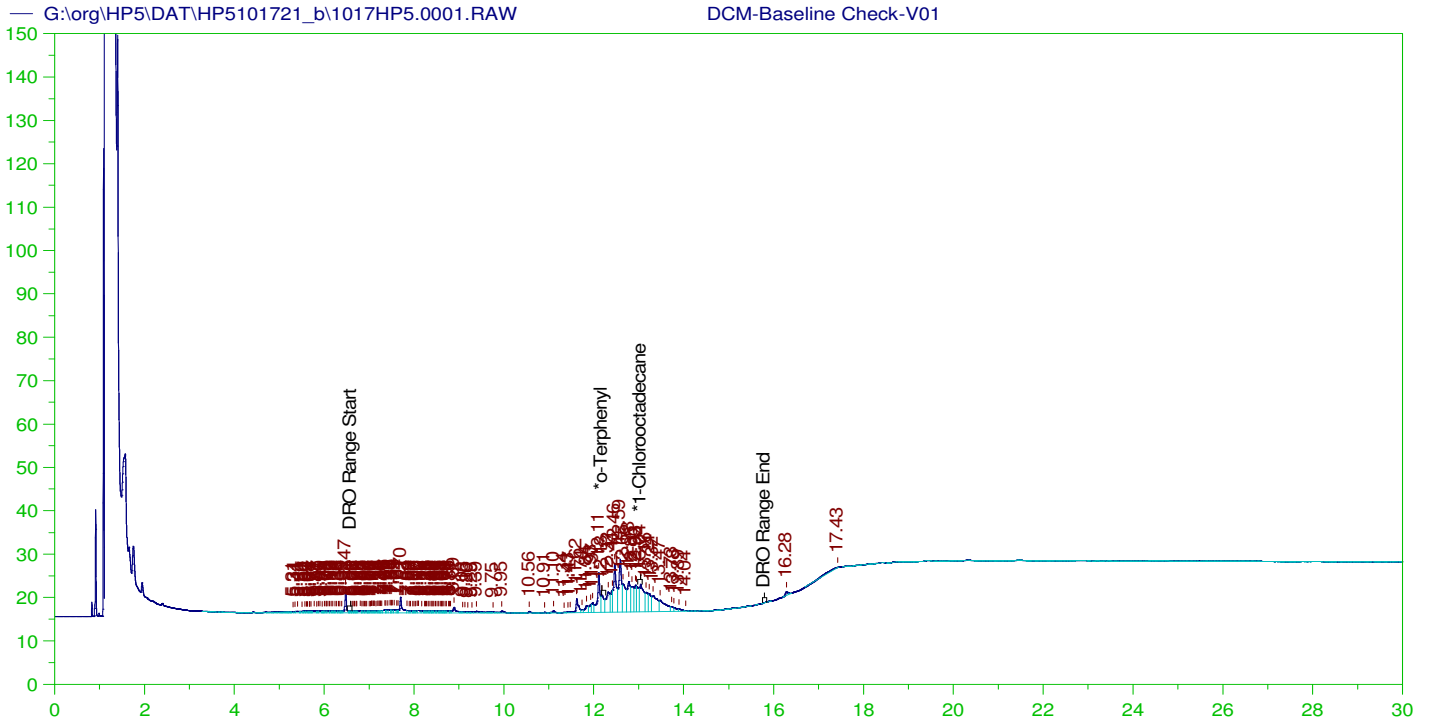
*#Triacontane



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

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

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



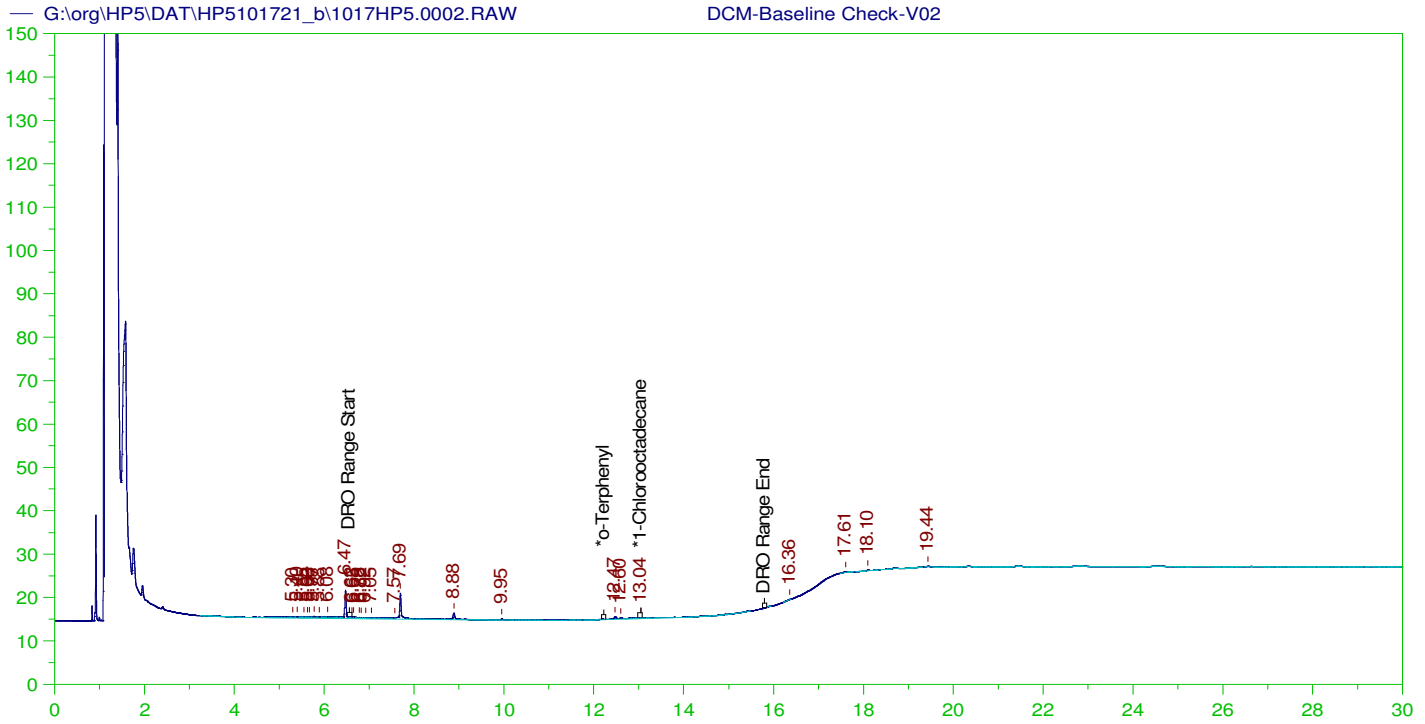
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

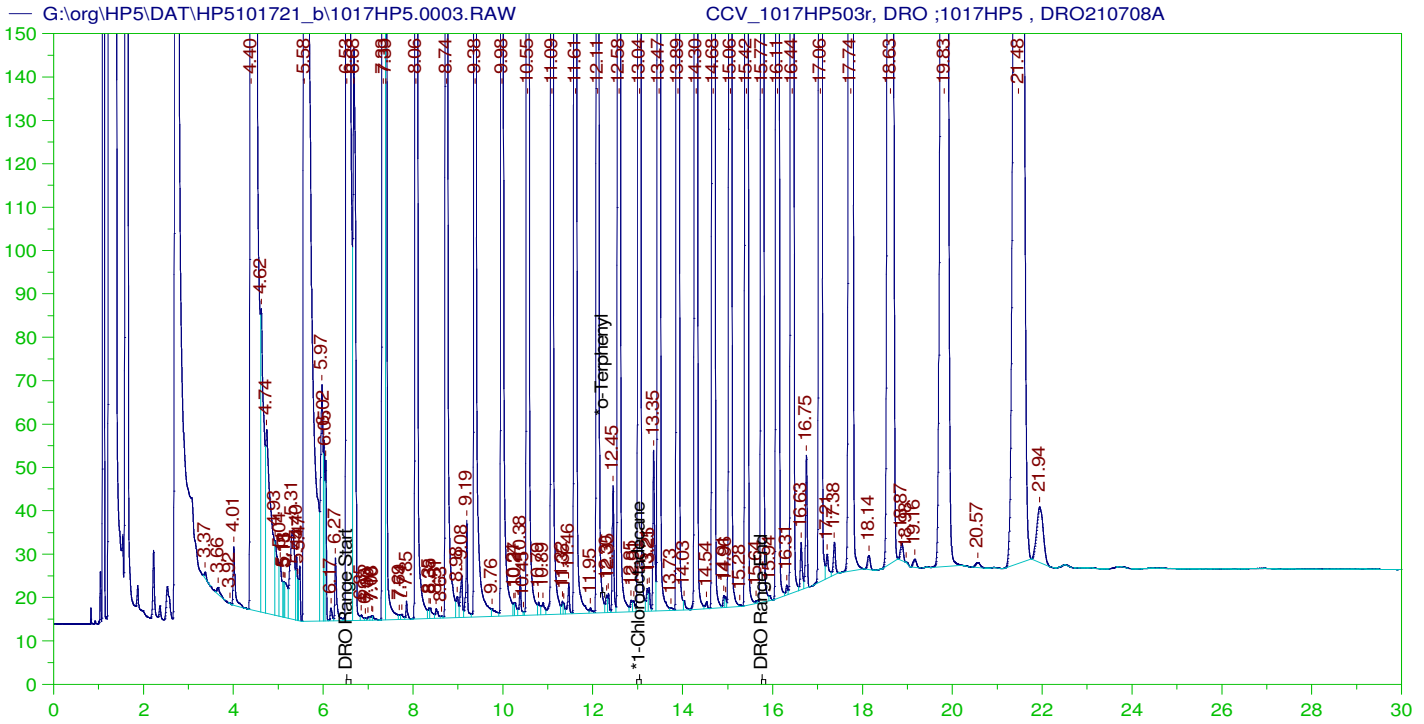
Sample Name: DCM-Baseline Check-V02
 Raw File: G:\org\HP5\DAT\HP5101721_b\1017HP5.0002.RAW
 Date & Time Acquired: 10/17/2021 1:22:21 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HS-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108Hs.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29457.33

Rt range for Diesel Range Organics: 6.51 to 15.85

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

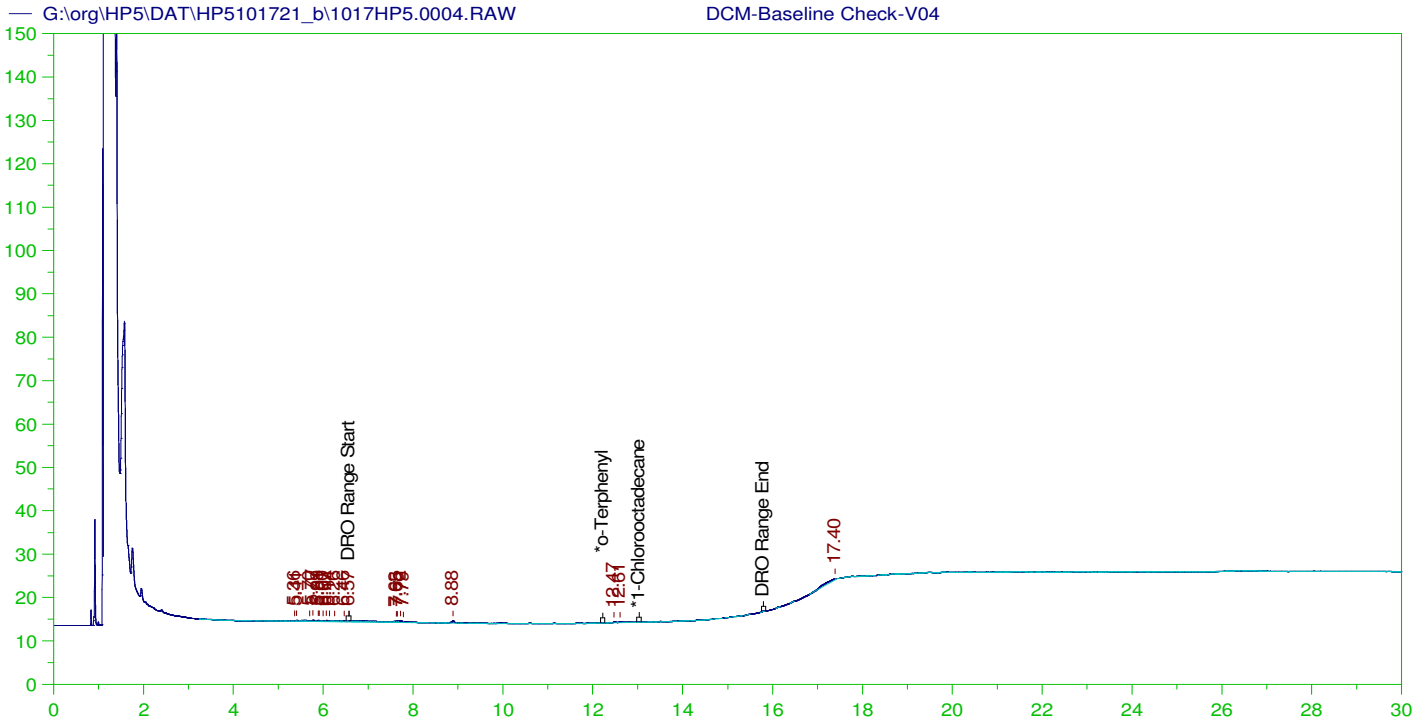
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.982	200.	.	-
*1-Chlorooctadecane	13.037	200.	255.634	127.82 -

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

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

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

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



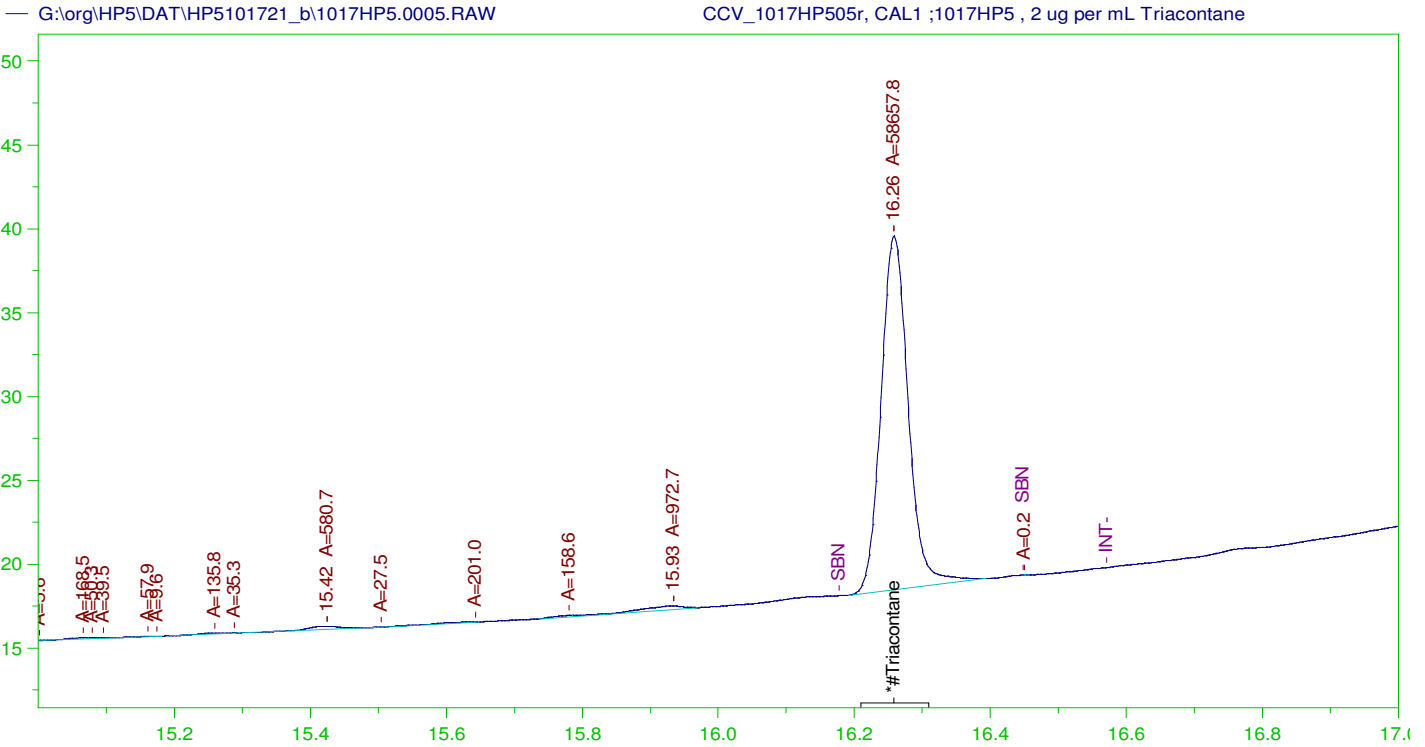
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

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

RRO Area:2747.039 RRO AMOUNT: 9.624412E-02

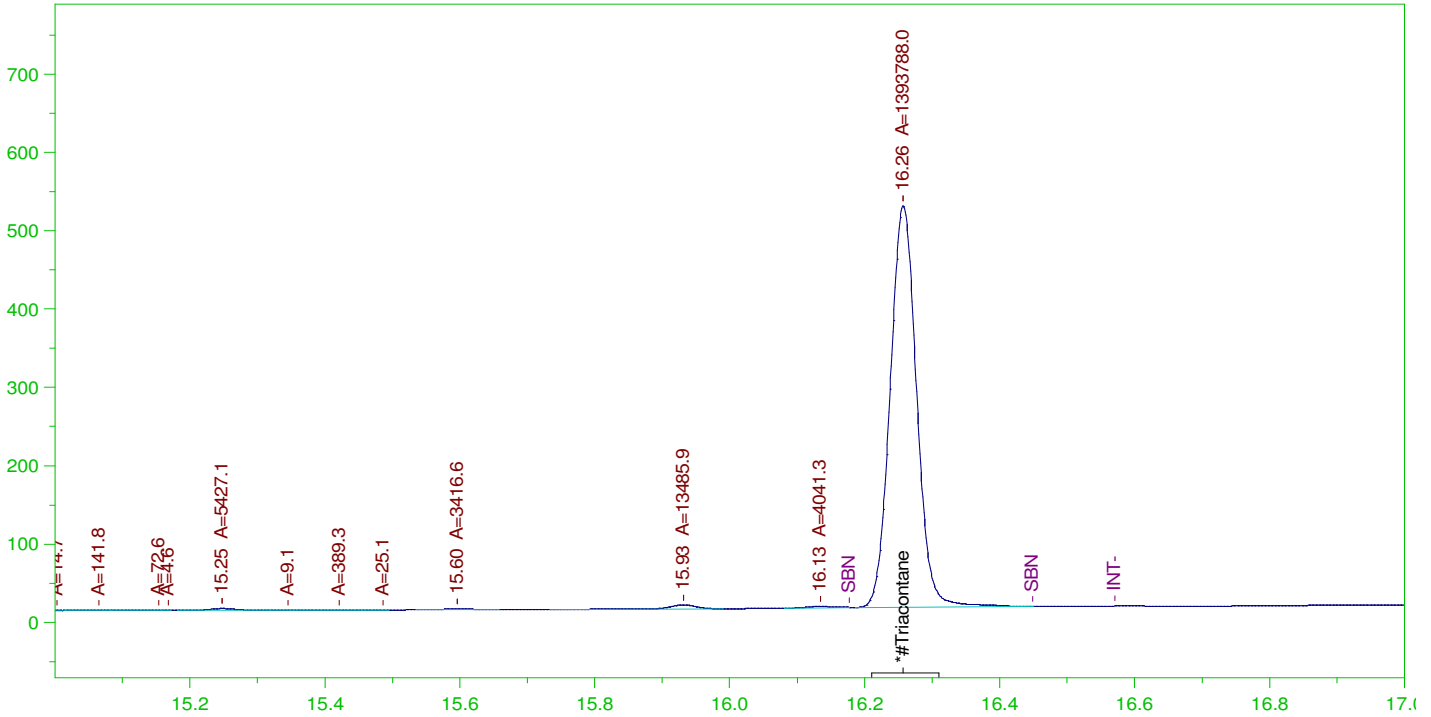
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0005.RAW

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

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

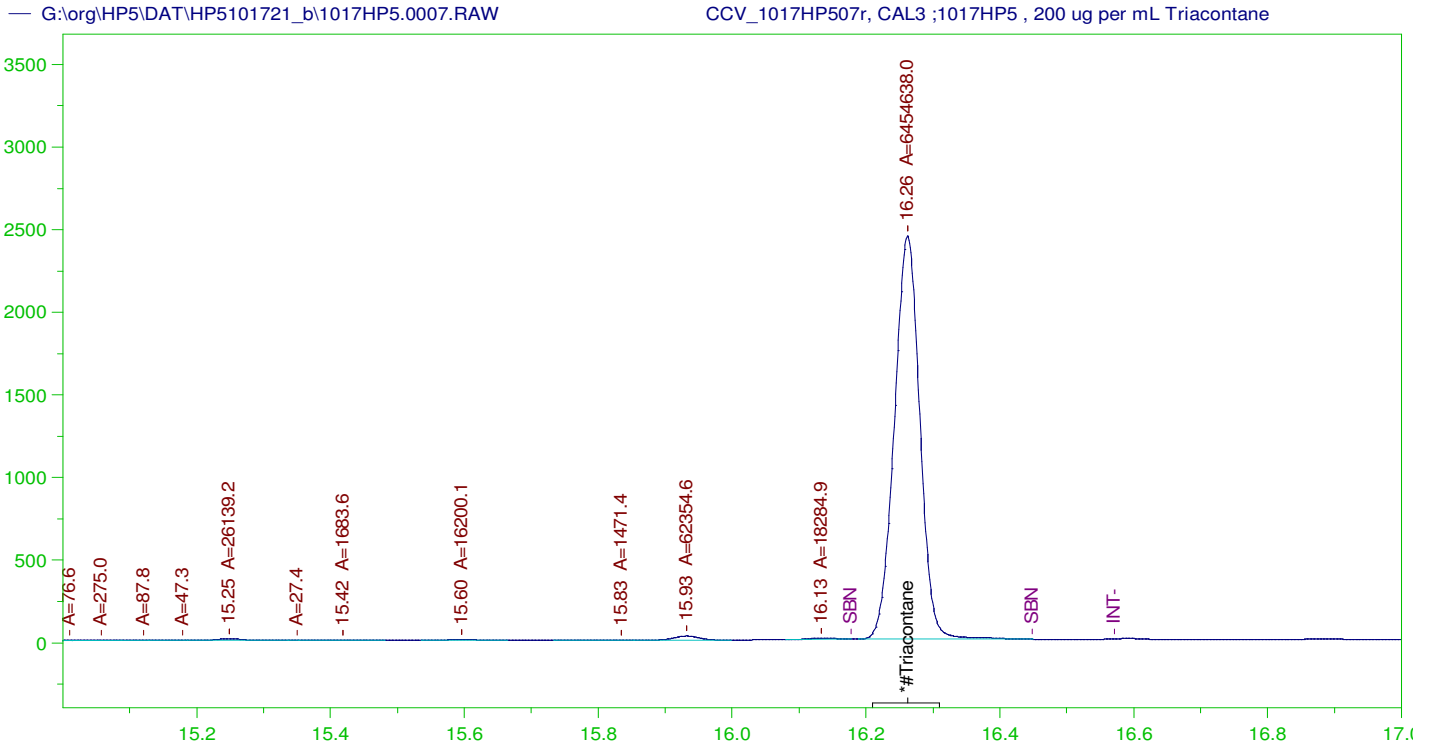
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.257	500.	48.178	9.64	-

RRO Area:45902.25 RRO AMOUNT: 1.608212

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

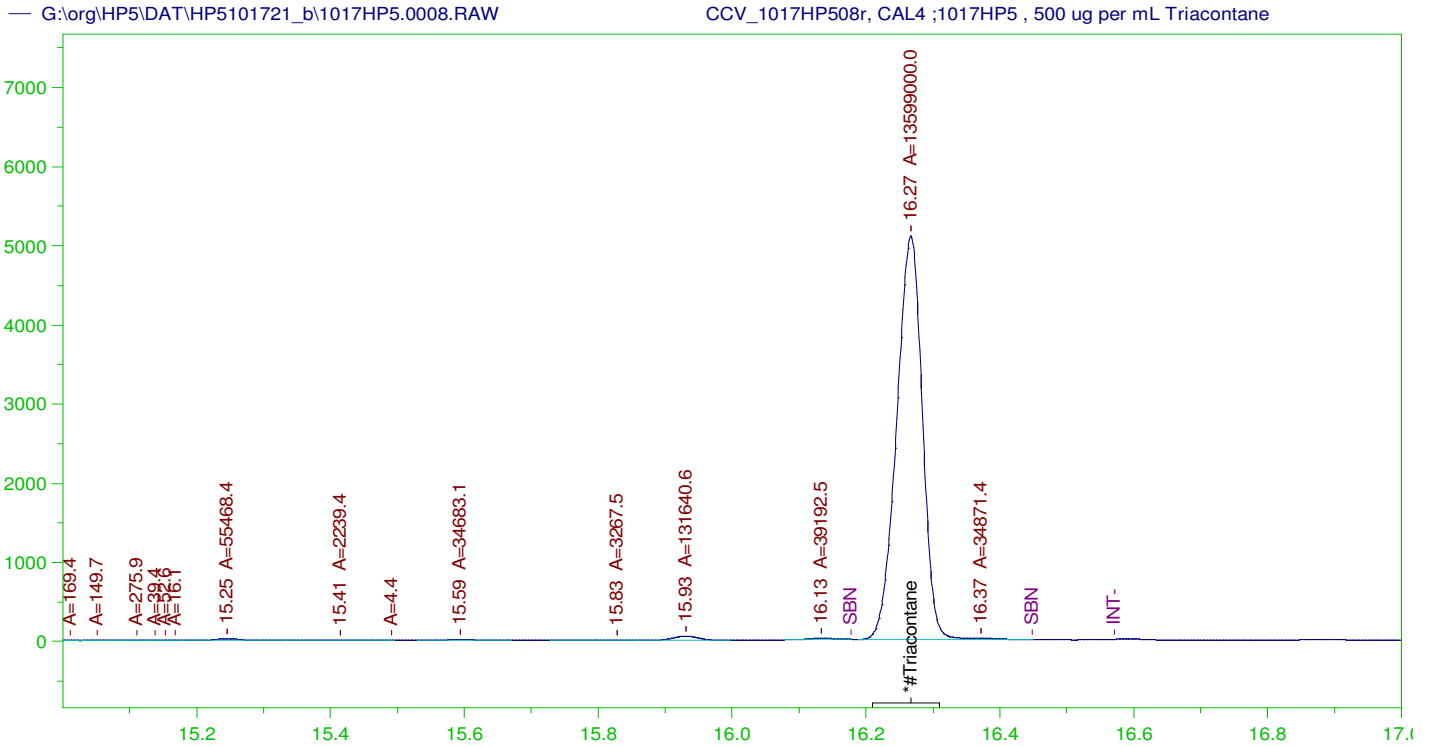
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.262	500.	223.111	44.62	-

RRO Area:219754.5 RRO AMOUNT: 7.699227

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

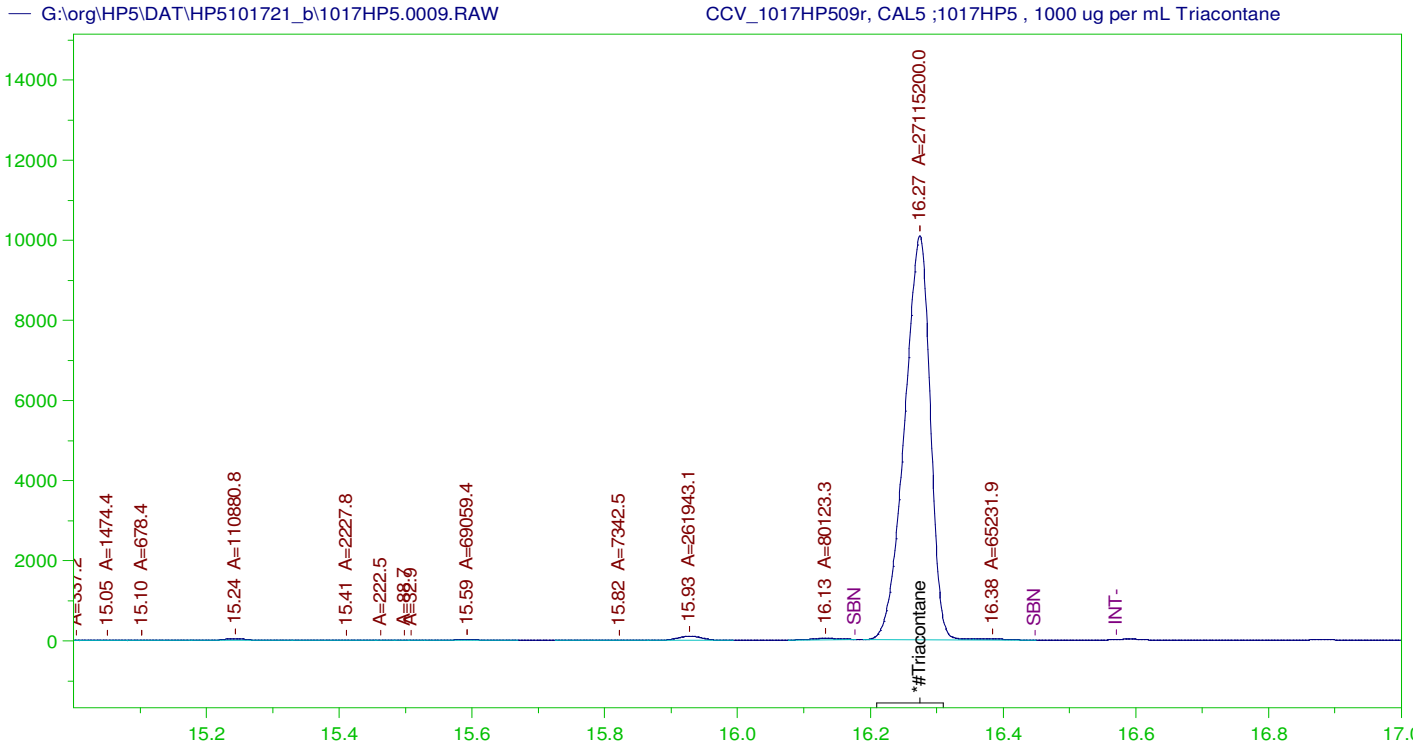
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.267	500.	470.063	94.01

RRO Area:496538.4 RRO AMOUNT: 17.39651

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

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

RRO Area:979213.9 RRO AMOUNT: 34.30733

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5101721_b\1017HP5.0009.RAW

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

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

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **162502** Prep Temp **NA °C**

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

Prep Start Date: **12/27/2021 2:11:05 P**
 Prep End Date: **12/28/2021 3:01:00 P**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-162502			1000	0	0	1.00	0.001		12/27/2021	12/28/2021
Start time: 12/27/2021 at 2:00 PM. End time: 12/28/2021 at 8:00 AM Sample was SGT on 12/30/2021 by amn using remainder of sample.										
LCS-162502			1000	0	0	1.00	0.001		12/27/2021	12/28/2021
All bottles were completely used, defaced and disposed of on 12/27/2021. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
LCS-162502-RRO			1000	0	0	1.00	0.001		12/27/2021	12/28/2021
Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121841-004B	Ground Water	2	1000	0	0	1.00	0.001		12/27/2021	12/28/2021
Bottle 2/2 Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121957-001B	Ground Water	2	1050	0	0	1.00	0.000952		12/27/2021	12/28/2021
Bottle 1/2 Clear										
B21121959-001D	Ground Water	2	1000	0	0	1.00	0.001		12/27/2021	12/28/2021
Bottle 1/2 Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121961-001D	Ground Water	2	1010	0	0	1.00	0.00099		12/27/2021	12/28/2021
Bottle 1/2 Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121965-001D	Ground Water	2	1000	0	0	1.00	0.001		12/27/2021	12/28/2021
Bottle 1/2 Light sediment.										
B21121967-001D	Ground Water	2	1020	0	0	1.00	0.00098		12/27/2021	12/28/2021
Bottle 1/2 Light sediment. Lines 9-10 Start time: 12/27/2021 at 3:45 PM. End time: 12/28/2021 at 9:50 AM										
B21121968-001D	Ground Water	2	1020	0	0	1.00	0.00098		12/27/2021	12/28/2021
Bottle 1/2 Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121977-001D	Ground Water	2	1030	0	0	1.00	0.000971		12/27/2021	12/28/2021
Bottle 1/2 Clear Lines 11-12 Start time: 12/27/2021 at 5:20 PM. End time: 12/28/2021 at 12:30 PM Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121977-002D	Ground Water	2	1030	0	0	1.00	0.000971		12/27/2021	12/28/2021
Bottle 1/2 Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121979-001D	Ground Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Bottle 1/2 Clear Lines 13-23 Start time: 12/27/2021 at 6:15 PM. End time: 12/28/2021 at 12:30 PM Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121979-002B	Ground Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Bottle 1/2 Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										

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

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP211210 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 12/26/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO211220D	Triacotane SURR 1000 ug/mL	all except LCS/D,	100 uL	4/6/2026
DRO211112C	OTP/COD SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026
SG211217(13376)	Baked Silica Gel	SGT	5 g	2/28/2030

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **162502** Prep Temp **NA °C**

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

Prep Start Date: **12/27/2021 2:11:05 P**
 Prep End Date: **12/28/2021 3:01:00 P**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B21121979-003D Bottle 1/2 Clear	Ground Water	2	1050	0	0	1.00	0.000952		12/27/2021	12/28/2021
B21121981-001D Bottle 1/6 Clear	Drinking Water	2	1030	0	0	1.00	0.000971		12/27/2021	12/28/2021
Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMS Bottle 2/6	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMSD Bottle 3/6	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMSD-RRO Bottle 4/6	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMS-RRO Bottle 5/6	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-002B Bottle 1/2	Ground Water	2	1050	0	0	1.00	0.000952		12/27/2021	12/28/2021
Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-003D Bottle 1/2	Ground Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-004D Bottle 1/2	Ground Water	2	1010	0	0	1.00	0.00099		12/27/2021	12/28/2021
Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										

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

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP211210 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 12/26/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO211220D	Triacontane SURR 1000 ug/mL	all except LCS/D,	100 uL	4/6/2026
DRO211112C	OTP/COD SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026
SG211217(13376)	Baked Silica Gel	SGT	5 g	2/28/2030

Energy Laboratories Inc

ANALYTICAL RUN Summary

03-Jan-22

Run ID GCFID-HP5-B_211228B

Run Start Date:	12/28/2021
Analyst:	Ann Nebel
Ical:	
Column ID:	
Comments:	DRO-8015-ICAL information is in Index GCFID-HP5-B_211102A 8015C OIL range calibration GCFID-HP5-B_210218B

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO211201A	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV	4/6/2026
DRO211203B	ALASKA MARKER-200ug/mL					MARKER	5/31/2022
DRO211220A	8015 CCV-15,000ug/mL + 200 OTP					CCV	4/30/2023
DRO211220B	Carbon Scan STD-Marker					MARKER	3/5/2028
DRO211229A	8015 CCV-15,000ug/mL + 200 OTP/COD					CCV	4/30/2023

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957057	CCV_1228HP51	HC-8015-DRO-	CCV		12/29/2021 1:57:	1	R372550			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		4.61761133		5	0	0	0.0879	0.3	0	92%	80	120	0%	
n-Triacontane	S	mg/L		0.2036208		0.2	0	0	0.000336	0.002	0	102%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957058	CCV_1228HP52	HC-8015-DRO-	CCV		12/29/2021 2:40:	1	R372550			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		14.94098		15	0	0	0.0389	0.3	0	100%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.47486		15	0	0	0.0749	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.1985501		0.2	0	0	0.000429	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					
14957059	Marker_1228HP	HC-8015-DRO-	SAMP		12/29/2021 10:3	1	R372550		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (DRO)	A	mg/L		2906.771		0	0	0	0.0389	0.3	50	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		4739.249		0	0	0	0.0749	0.3	50	0%	0	0	0%	
o-Terphenyl	S	mg/L		0.2761772		0.2	0	0	0.000429	0.002	0	138%	50	150	0%	
Diesel Range Organics (C10 to C24)	X	mg/L		2906.771		0	0	0	0.0389	0.3	0	0%	0	0	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957060	LCS-162502	HC-8015-DRO-	LCS-DOD		12/29/2021 11:1	1	162502	12/27/2021	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		12.63665		15	0	0	0.0389	0.3	0	84%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		13.55417		15	0	0	0.0749	0.3	50	90%	60	132	0%	
o-Terphenyl	S	mg/L		0.1937823		0.2	0	0	0.000429	0.002	0	97%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957061	MB-162502	HC-8015-DRO-	MBLK		12/29/2021 11:5	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0389	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0879	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0749	0.15	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1049		0.1	0	0	0.000336	0.002	0	105%	50	150	0%	
o-Terphenyl	S	mg/L		0.2002727		0.2	0	0	0.000429	0.002	0	100%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957062	CCV_1228HP53	HC-8015-DRO-	CCV		12/29/2021 1:22:	1	R372550		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		4.34702539		5	0	0	0.0879	0.3	0	87%	80	120	0%	
n-Triacontane	S	mg/L		0.1967492		0.2	0	0	0.000336	0.002	0	98%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957063	CCV_1228HP53	HC-8015-DRO-	CCV		12/29/2021 2:04:	1	R372550		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					
14957063	CCV_1228HP53	HC-8015-DRO-	CCV		12/29/2021 2:04:	1	R372550		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		14.67341		15	0	0	0.0389	0.3	0	98%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.2255		15	0	0	0.0749	0.3	50	102%	80	120	0%	
o-Terphenyl	S	mg/L		0.1957773		0.2	0	0	0.000429	0.002	0	98%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957064	B21121968-001	HC-8015-DRO-	SAMP		12/29/2021 3:29:	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.038122	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.086142	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.073402	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1108		0.098	0	0	0.0003293	0.00196	0	113%	50	150	0%	
o-Terphenyl	S	mg/L		0.2090023		0.196	0	0	0.0004204	0.002	0	107%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957065	B21121957-001	HC-8015-DRO-	SAMP		12/29/2021 4:12:	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0370328	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0836808	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0713048	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.104		0.0952	0	0	0.0003199	0.001904	0	109%	50	150	0%	
o-Terphenyl	S	mg/L		0.1998482		0.1904	0	0	0.0004084	0.002	0	105%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957066	B21121977-001	HC-8015-DRO-	SAMP		12/29/2021 4:55:	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0377719	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.09909146		0	0	0	0.0853509	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.1695936		0	0	0	0.0727279	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.0941		0.0971	0	0	0.0003263	0.001942	0	97%	50	150	0%	
o-Terphenyl	S	mg/L		0.1808026		0.1942	0	0	0.0004166	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					
14957067	B21121977-002	HC-8015-DRO-	SAMP		12/29/2021 5:38:	1	162502	12/27/2021	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		0.0632839		0	0	0	0.0377719	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.13487095		0	0	0	0.0853509	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3079102		0	0	0	0.0727279	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1022		0.0971	0	0	0.0003263	0.001942	0	105%	50	150	0%	
o-Terphenyl	S	mg/L		0.1799419		0.1942	0	0	0.0004166	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					
14957068	B21121981-001	HC-8015-DRO-	SAMP		12/29/2021 7:04:	1	162502	12/27/2021	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		0.05982391		0	0	0	0.0377719	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.15118542		0	0	0	0.0853509	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2961927		0	0	0	0.0727279	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1065		0.0971	0	0	0.0003263	0.001942	0	110%	50	150	0%	
o-Terphenyl	S	mg/L		0.1953841		0.1942	0	0	0.0004166	0.002	0	101%	56	125	0%	
TEH(Oil Range)	X	mg/L		0.2222482		0	0	0	0.0853509	0.3	0	0%	0	0	0%	UJ
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957069	B21121981-001	HC-8015-DRO-	MS-DOD		12/29/2021 7:47:	1	162502	12/27/2021	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		12.12348		14.43	0.0598239	0	0.0374218	0.3	0	84%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		13.07365		14.43	0.2961927	0	0.0720538	0.3	50	89%	60	132	0%	
o-Terphenyl	S	mg/L		0.1826627		0.1924	0	0	0.0004127	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					
14957070	B21121981-001	HC-8015-DRO-	MSD-DOD		12/29/2021 8:30:	1	162502	12/27/2021	1E+07	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		12.18931		14.43	0.0598239	12.12348	0.0374218	0.3	0	84%	36	132	1%	
Total Extractable Hydrocarbons	A	mg/L		13.54218		14.43	0.2961927	13.07365	0.0720538	0.3	50	92%	60	132	4%	
o-Terphenyl	S	mg/L		0.1622596		0.1924	0	0	0.0004127	0.002	0	84%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957071	B21121979-003	HC-8015-DRO-	SAMP		12/29/2021 9:57:	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0370328	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0836808	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0713048	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1021		0.0952	0	0	0.0003199	0.001904	0	107%	50	150	0%	
o-Terphenyl	S	mg/L		0.1983972		0.1904	0	0	0.0004084	0.002	0	104%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957072	B21121979-001	HC-8015-DRO-	SAMP		12/29/2021 10:4	1	162502	12/27/2021	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		0.05428377		0	0	0	0.0374218	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.14408493		0	0	0	0.0845598	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2242076		0	0	0	0.0720538	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1007		0.0962	0	0	0.0003232	0.001924	0	105%	50	150	0%	
o-Terphenyl	S	mg/L		0.1893293		0.1924	0	0	0.0004127	0.002	0	98%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957073	CCV_1228HP55	HC-8015-DRO-	CCV		12/30/2021 12:4	1	R372550				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		4.68440234		5	0	0	0.0879	0.3	0	94%	80	120	0%	
n-Triacontane	S	mg/L		0.2129579		0.2	0	0	0.000336	0.002	0	106%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957074	CCV_1228HP53	HC-8015-DRO-	CCV		12/30/2021 1:32:	1	R372550				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		14.95864		15	0	0	0.0389	0.3	0	100%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.51194		15	0	0	0.0749	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.1997788		0.2	0	0	0.000429	0.002	0	100%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957075	B21121979-002	HC-8015-DRO-	SAMP		12/30/2021 2:58:	1	162502	12/27/2021	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		0.06945705		0	0	0	0.0374218	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.16162641		0	0	0	0.0845598	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3094539		0	0	0	0.0720538	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1087		0.0962	0	0	0.0003232	0.001924	0	113%	50	150	0%	
o-Terphenyl	S	mg/L		0.1952787		0.1924	0	0	0.0004127	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					
14957076	B21121965-001	HC-8015-DRO-	SAMP		12/30/2021 3:41:	1	162502	12/27/2021	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		0.09555712		0	0	0	0.0389	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.25317219		0	0	0	0.0879	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.4219448		0	0	0	0.0749	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1048		0.1	0	0	0.000336	0.002	0	105%	50	150	0%	
o-Terphenyl	S	mg/L		0.1041201		0.2	0	0	0.000429	0.002	0	52%	56	125	0%	S
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957077	B21121967-001	HC-8015-DRO-	SAMP		12/30/2021 5:08:	1	162502	12/27/2021	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		0.2121628		0	0	0	0.038122	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.10651778		0	0	0	0.086142	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3431815		0	0	0	0.073402	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1047		0.098	0	0	0.0003293	0.00196	0	107%	50	150	0%	
o-Terphenyl	S	mg/L		0.1618924		0.196	0	0	0.0004204	0.002	0	83%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957078	B21121959-001	HC-8015-DRO-	SAMP		12/30/2021 5:51:	1	162502	12/27/2021	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		3.779905		0	0	0	0.0389	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.47597641		0	0	0	0.0879	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		4.332578		0	0	0	0.0749	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1055		0.1	0	0	0.000336	0.002	0	105%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957078	B21121959-001	HC-8015-DRO-	SAMP		12/30/2021 5:51:	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.188643		0.2	0	0	0.000429	0.002	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					
14957079	B21121981-002	HC-8015-DRO-	SAMP		12/30/2021 7:17:	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		1.187837		0	0	0	0.0370328	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.17000027		0	0	0	0.0836808	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		1.415625		0	0	0	0.0713048	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1076		0.0952	0	0	0.0003199	0.001904	0	113%	50	150	0%	
o-Terphenyl	S	mg/L		0.1952107		0.1904	0	0	0.0004084	0.002	0	103%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957080	B21121981-003	HC-8015-DRO-	SAMP		12/30/2021 8:01:	1	162502	12/27/2021	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		0.2540348		0	0	0	0.0374218	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.16901743		0	0	0	0.0845598	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.4812434		0	0	0	0.0720538	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1055		0.0962	0	0	0.0003232	0.001924	0	110%	50	150	0%	
o-Terphenyl	S	mg/L		0.1919224		0.1924	0	0	0.0004127	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					
14957081	B21121841-004	HC-8015-DRO-	SAMP		12/30/2021 9:55:	1	162502	12/27/2021	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		0.04372463		0	0	0	0.0389	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.14092235		0	0	0	0.0879	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.237187		0	0	0	0.0749	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.102		0.1	0	0	0.000336	0.002	0	102%	50	150	0%	
o-Terphenyl	S	mg/L		0.1916438		0.2	0	0	0.000429	0.002	0	96%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957082	B21121981-004	HC-8015-DRO-	SAMP		12/30/2021 10:3	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		2.388642		0	0	0	0.038511	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.54239690		0	0	0	0.087021	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		3.087636		0	0	0	0.074151	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1149		0.099	0	0	0.0003326	0.00198	0	116%	50	150	0%	
o-Terphenyl	S	mg/L		0.2163918		0.198	0	0	0.0004247	0.002	0	109%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957083	B21121961-001	HC-8015-DRO-	SAMP		12/30/2021 11:2	1	162502	12/27/2021	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		5.601806		0	0	0	0.038511	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.39403924		0	0	0	0.087021	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		6.073369		0	0	0	0.074151	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.117		0.099	0	0	0.0003326	0.00198	0	118%	50	150	0%	
o-Terphenyl	S	mg/L		0.2012734		0.198	0	0	0.0004247	0.002	0	102%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957084	CCV_1228HP56	HC-8015-DRO-	CCV		12/30/2021 12:4	1	R372550				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		4.69755615		5	0	0	0.0879	0.3	0	94%	80	120	0%	
n-Triacontane	S	mg/L		0.2042484		0.2	0	0	0.000336	0.002	0	102%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957085	CCV_1228HP56	HC-8015-DRO-	CCV		12/30/2021 1:29:	1	R372550				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		14.59209		15	0	0	0.0389	0.3	0	97%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.11895		15	0	0	0.0749	0.3	50	101%	80	120	0%	
o-Terphenyl	S	mg/L		0.194206		0.2	0	0	0.000429	0.002	0	97%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957553	LCS-162502-RR	HC-8015-DRO-	LCS		12/30/2021 2:55:	1	162502	12/27/2021	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		4.96938801		5	0	0	0.0879	0.3	0	99%	60	140	0%	
n-Triacontane	S	mg/L		0.1076		0.1	0	0	0.000336	0.002	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					
14957554	B21121981-001	HC-8015-DRO-	MS-DOD		12/30/2021 3:37:	1	162502	12/27/2021	1E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.0296464		4.81	0.2222482	0	0.0845598	0.3	0	100%	41	113	0%	
n-Triacontane	S	mg/L		0.1025		0.0962	0	0	0.0003232	0.002	0	107%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957555	B21121981-001	HC-8015-DRO-	MSD-DOD		12/30/2021 4:20:	1	162502	12/27/2021	1E+07	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		4.90147591		4.81	0.2222482	5.0296464	0.0845598	0.3	0	97%	41	113	3%	
n-Triacontane	S	mg/L		0.1013		0.0962	0	0	0.0003232	0.002	0	105%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14957556	CCV_1228HP57	HC-8015-DRO-	CCV		12/30/2021 5:47:	1	R372550				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		4.68569238		5	0	0	0.0879	0.3	0	94%	80	120	0%	
n-Triacontane	S	mg/L		0.2124378		0.2	0	0	0.000336	0.002	0	106%	80	120	0%	

Energy Laboratories Inc

ANALYTICAL RUN Summary

05-Jan-22

Run ID GCFID-HP4-B_220102A

Run Start Date: 1/2/2022
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
DRO211220B	Carbon Scan STD-Marker					MARKER	3/5/2028
DRO211229A	8015 CCV-15,000ug/mL + 200 OTP/COD					CCV-DRO	4/30/2023
DRO220102A	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					
14963878	CCV_0102HP41	HC-8015-DRO-	CCV		1/2/2022 11:57:4	1	R372714		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		4.61988428		5	0	0	0.0513	0.3	0	92%	80	120	0%	
n-Triacontane	S	mg/L		0.2336823		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					
14963879	CCV_0102HP41	HC-8015-DRO-	CCV		1/3/2022 12:42:1	1	R372714		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		15.50513		15	0	0	0.0358	0.3	0	103%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.08892		15	0	0	0.0782	0.3	50	107%	80	120	0%	
o-Terphenyl	S	mg/L		0.2205511		0.2	0	0	0.000531	0.002	0	110%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963880	B21121979-001	HC-8015-DRO-	SAMP		1/3/2022 2:11:53	1	162502	12/27/2021	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					
14963880	B21121979-001	HC-8015-DRO-	SAMP		1/3/2022 2:11:53	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to A	mg/L			0		0	0	0	0.0344396	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0493506	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0		0	0	0	0.0752284	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.095		0.0962	0	0	0.0005195	0.001924	0	99%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1587994		0.1924	0	0	0.0005108	0.001924	0	83%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963881	B21121979-002	HC-8015-DRO-	SAMP		1/3/2022 2:56:39	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to A	mg/L			0		0	0	0	0.0344396	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0493506	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0		0	0	0	0.0752284	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.1121		0.0962	0	0	0.0005195	0.001924	0	117%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1847486		0.1924	0	0	0.0005108	0.001924	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					
14963882	B21121841-004	HC-8015-DRO-	SAMP		1/3/2022 3:41:24	1	162502	12/27/2021	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		0.0929		0.1	0	0	0.00054	0.002	0	93%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1576349		0.2	0	0	0.000531	0.002	0	79%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963883	B21121981-003	HC-8015-DRO-	SAMP		1/3/2022 5:11:00	1	162502	12/27/2021	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			0.08672411		0	0	0	0.0344396	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0493506	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0.09572098		0	0	0	0.0752284	0.3	0	0%	0	0	0%	J
n-Triacontane (SGT)	S	mg/L		0.0968		0.0962	0	0	0.0005195	0.001924	0	101%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963883	B21121981-003	HC-8015-DRO-	SAMP		1/3/2022 5:11:00	1	162502	12/27/2021	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		0.1618555		0.1924	0	0	0.0005108	0.001924	0	84%	56	125	0%	
14963884	B21121981-002	HC-8015-DRO-	SAMP		1/3/2022 5:55:48	1	162502	12/27/2021	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			0.7280775		0	0	0	0.0340816	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0.0983348		0	0	0	0.0488376	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT A	mg/L			0.8417841		0	0	0	0.0744464	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.1069		0.0952	0	0	0.0005141	0.001904	0	112%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1815597		0.1904	0	0	0.0005055	0.001904	0	95%	56	125	0%	
14963885	B21121981-004	HC-8015-DRO-	SAMP		1/3/2022 6:40:43	1	162502	12/27/2021	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			1.822611		0	0	0	0.035442	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0.22976923		0	0	0	0.050787	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT A	mg/L			2.059107		0	0	0	0.077418	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.1171		0.099	0	0	0.0005346	0.00198	0	118%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.2036669		0.198	0	0	0.0005257	0.00198	0	103%	56	125	0%	
14963886	B21121959-001	HC-8015-DRO-	SAMP		1/3/2022 7:25:36	1	162502	12/27/2021	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			0.2469835		0	0	0	0.0358	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0		0	0	0	0.0513	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT A	mg/L			0.2607079		0	0	0	0.0782	0.3	0	0%	0	0	0%	J
n-Triacontane (SGT)	S	mg/L		0.1092		0.1	0	0	0.00054	0.002	0	109%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1796768		0.2	0	0	0.000531	0.002	0	90%	56	125	0%	

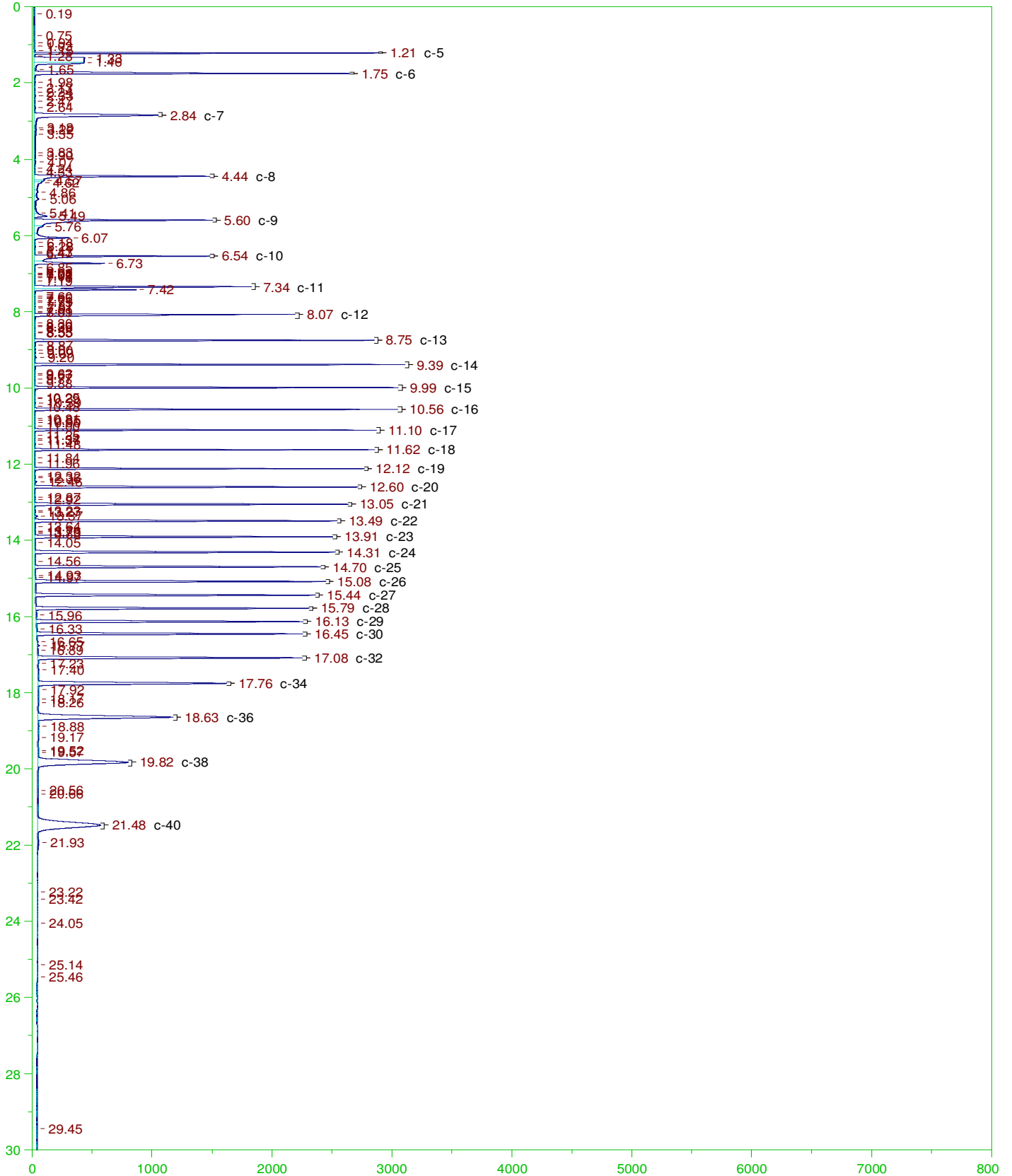
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963887	B21121961-001	HC-8015-DRO-	SAMP		1/3/2022 8:12:17	1	162502	12/27/2021	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to A	mg/L			4.201734		0	0	0	0.035442	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t A	mg/L			0.14880291		0	0	0	0.050787	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT A	mg/L			4.378759		0	0	0	0.077418	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.1165		0.099	0	0	0.0005346	0.00198	0	118%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1874438		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					
14963888	LCS-162502	HC-8015-DRO-	LCS-DOD		1/3/2022 8:57:29	1	162502	12/27/2021	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			11.27497		15	0	0	0.0358	0.3	0	75%	36	132	0%	
Total Extractable Hydrocarbons (SGT A	mg/L			12.032		15	0	0	0.0782	0.3	0	80%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1670543		0.2	0	0	0.000531	0.002	0	84%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963889	MB-162502	HC-8015-DRO-	MBLK		1/3/2022 9:42:30	1	162502	12/27/2021	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		0.1072		0.1	0	0	0.00054	0.002	0	107%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1814436		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					
14963890	CCV_0102HP43	HC-8015-DRO-	CCV		1/3/2022 11:41:2	1	R372714				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		4.41755566		5	0	0	0.0513	0.3	0	88%	80	120	0%	
n-Triacontane	S	mg/L		0.2295997		0.2	0	0	0.00054	0.002	0	115%	80	120	0%	

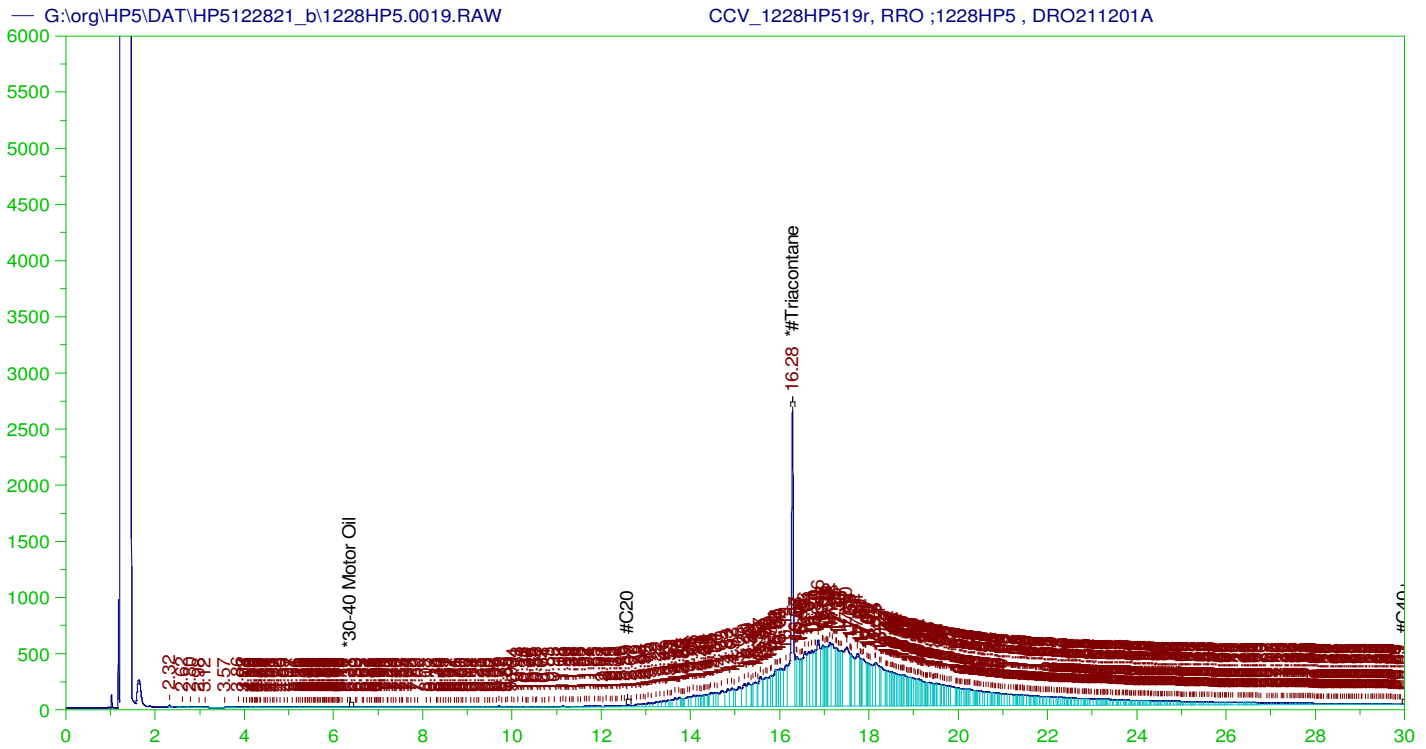
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963891	CCV_0102HP43	HC-8015-DRO-	CCV		1/3/2022 12:26:1	1	R372714			0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		14.8977		15	0	0	0.0358	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.46159		15	0	0	0.0782	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.2109998		0.2	0	0	0.000531	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					
14963892	B21121981-001	HC-8015-DRO-	SAMP		1/3/2022 1:55:50	1	162502	12/27/2021		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		0.1247		0.0971	0	0	0.0005243	0.001942	0	128%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.2035209		0.1942	0	0	0.0005156	0.001942	0	105%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963893	B21121981-001	HC-8015-DRO-	MS-DOD		1/3/2022 2:40:46	1	162502	12/27/2021	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		12.64684		14.43	0	0	0.0344396	0.3	0	88%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		13.48949		14.43	0	0	0.0752284	0.3	0	93%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1638461		0.1924	0	0	0.0005108	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					
14963894	B21121981-001	HC-8015-DRO-	MSD-DOD		1/3/2022 3:25:42	1	162502	12/27/2021	1E+07	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		13.47501		14.43	0	12.64684	0.0344396	0.3	0	93%	36	132	6%	
Total Extractable Hydrocarbons (SGT	A	mg/L		14.36041		14.43	0	13.48949	0.0752284	0.3	0	100%	60	132	6%	
o-Terphenyl (SGT)	S	mg/L		0.1982673		0.1924	0	0	0.0005108	0.002	0	103%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963895	B21121977-001	HC-8015-DRO-	SAMP		1/3/2022 4:55:25	1	162502	12/27/2021		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					
14963895	B21121977-001	HC-8015-DRO-	SAMP		1/3/2022 4:55:25	1	162502	12/27/2021	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		0.0931		0.0971	0	0	0.0005243	0.001942	0	96%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1548719		0.1942	0	0	0.0005156	0.001942	0	80%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963896	B21121977-002	HC-8015-DRO-	SAMP		1/3/2022 5:40:46	1	162502	12/27/2021	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		0.1069		0.0971	0	0	0.0005243	0.001942	0	110%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1677413		0.1942	0	0	0.0005156	0.001942	0	86%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963897	B21121967-001	HC-8015-DRO-	SAMP		1/3/2022 6:26:08	1	162502	12/27/2021	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		0.04247184		0	0	0	0.035084	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.050274	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.076636	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.1003		0.098	0	0	0.0005292	0.00196	0	102%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1398604		0.196	0	0	0.0005204	0.00196	0	71%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963898	LCS-162502-RR	HC-8015-DRO-	LCS-DOD		1/3/2022 7:11:15	1	162502	12/27/2021	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		4.63409185		5	0	0	0.0513	0.3	0	93%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.1106		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					
14963899	B21121981-001	HC-8015-DRO-	MS-DOD		1/3/2022 7:56:24	1	162502	12/27/2021	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		4.2839489		4.81	0	0	0.0493506	0.3	0	89%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.0941		0.0962	0	0	0.0005195	0.002	0	98%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14963900	B21121981-001	HC-8015-DRO-	MSD-DOD		1/3/2022 9:26:58	1	162502	12/27/2021	1E+07	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		4.47668171		4.81	0	4.2839489	0.0493506	0.3	0	93%	41	113	4%	
n-Triacontane (SGT)	S	mg/L		0.1059		0.0962	0	0	0.0005195	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					
14963901	CCV_0102HP44	HC-8015-DRO-	CCV		1/3/2022 10:57:3	1	R372714			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		4.46053516		5	0	0	0.0513	0.3	0	89%	80	120	0%	
n-Triacontane	S	mg/L		0.2288589		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					
14963902	CCV_0102HP44	HC-8015-DRO-	CCV		1/3/2022 11:42:5	1	R372714			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		15.26908		15	0	0	0.0358	0.3	0	102%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.84203		15	0	0	0.0782	0.3	50	106%	80	120	0%	
o-Terphenyl	S	mg/L		0.2076149		0.2	0	0	0.000531	0.002	0	104%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj	IS	Cal ID
	G:\org\HP4\DAT\HP4010222_b\0102HP4.16r	Marker_0102HP416r_DRO ;0102HP4 , DRO211220B	G:\org\HP4\Methods\CSC220102.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.17r	CCV_0102HP417r_RRO ;0102HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.18r	CCV_0102HP418r_DRO ;0102HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.19r	DCM-Baseline Check-V19	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.20r	B21121979-001D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1040	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.21r	B21121979-002B ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1040	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.22r	B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1000	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.24r	B21121981-003D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1040	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.25r	B21121981-002B ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24-OH-L%.met G:\Org\HP4\Methods\D3_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1050	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.26r	B21121981-004D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24-OH-L%.met G:\Org\HP4\Methods\D3_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1010	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.27r	B21121959-001D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1000	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.28r	B21121961-001D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24-OH-L%.met G:\Org\HP4\Methods\D3_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1010	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.29r	LCS-162502 ;0102HP4 , SGT	G:\Org\HP4\methods\D3_8015-24-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L%.met	1000	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.30r	MB-162502 ;0102HP4 , SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1000	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.31r	Marker_0102HP431r_DRO ;0102HP4 , DRO211220B	G:\org\HP4\Methods\CSC220102.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.32r	CCV_0102HP432r_RRO ;0102HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1	1	1	1	0
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	G:\org\HP4\DAT\HP4010222_b\0102HP4.36r	B21121981-001DMS ;0102HP4 , SGT	G:\Org\HP4\methods\D3_8015-24-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L%.met	1040	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.37r	B21121981-001DMSD ;0102HP4 , SGT	G:\Org\HP4\methods\D3_8015-010237-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L%.met	1040	1	1	1	0
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	G:\org\HP4\DAT\HP4010222_b\0102HP4.39r	B21121977-001D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1030	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.40r	B21121977-002D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1030	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.41r	B21121967-001D ;0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L%.met	1020	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.42r	LCS-162502-RRO ;0102HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1000	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.43r	B21121981-001DMS-RRO ;0102HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1040	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.44r	DCM-Baseline Check-V44	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.45r	B21121981-001DMSD-RRO ;0102HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1040	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.46r	Marker_0102HP446r_DRO ;0102HP4 , DRO211220B	G:\org\HP4\Methods\CSC220102.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.47r	CCV_0102HP447r_RRO ;0102HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1	1	1	1	0
	G:\org\HP4\DAT\HP4010222_b\0102HP4.48r	CCV_0102HP448r_DRO ;0102HP4 , DRO220102A	G:\Org\HP4\methods\DC_8015-C24-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L%.met	1	1	1	1	0





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP519r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0019.RAW
 Date & Time Acquired: 12/29/2021 1:57:43 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.284	500.	335.855	67.17	-

RRO TEH (Oil Range) Area:1.317978E+08 RRO TEH (Oil Range) AMOUNT: 4617.611

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0019.RAW

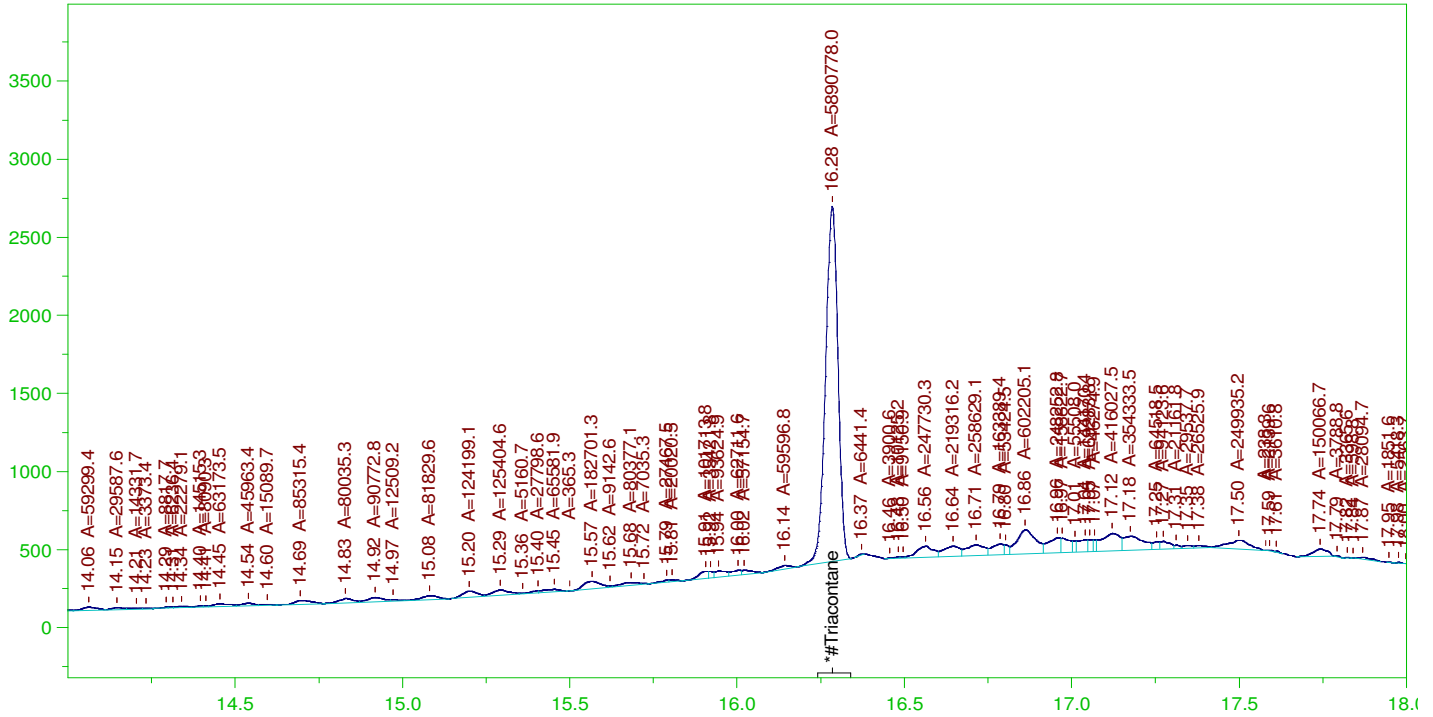
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.059	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.284	200.	335.855	167.93	75-125

AMN 01/24/2022

G:\org\HP5\DAT\HP5122821_b\1228HP5.0019.RAW

CCV_1228HP519r, RRO ;1228HP5 , DRO211201A



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP519r, RRO ;1228HP5 , DRO211201A
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 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.284	500.	203.621	40.72	-

RRO Area:6179074 RRO AMOUNT: 216.4875

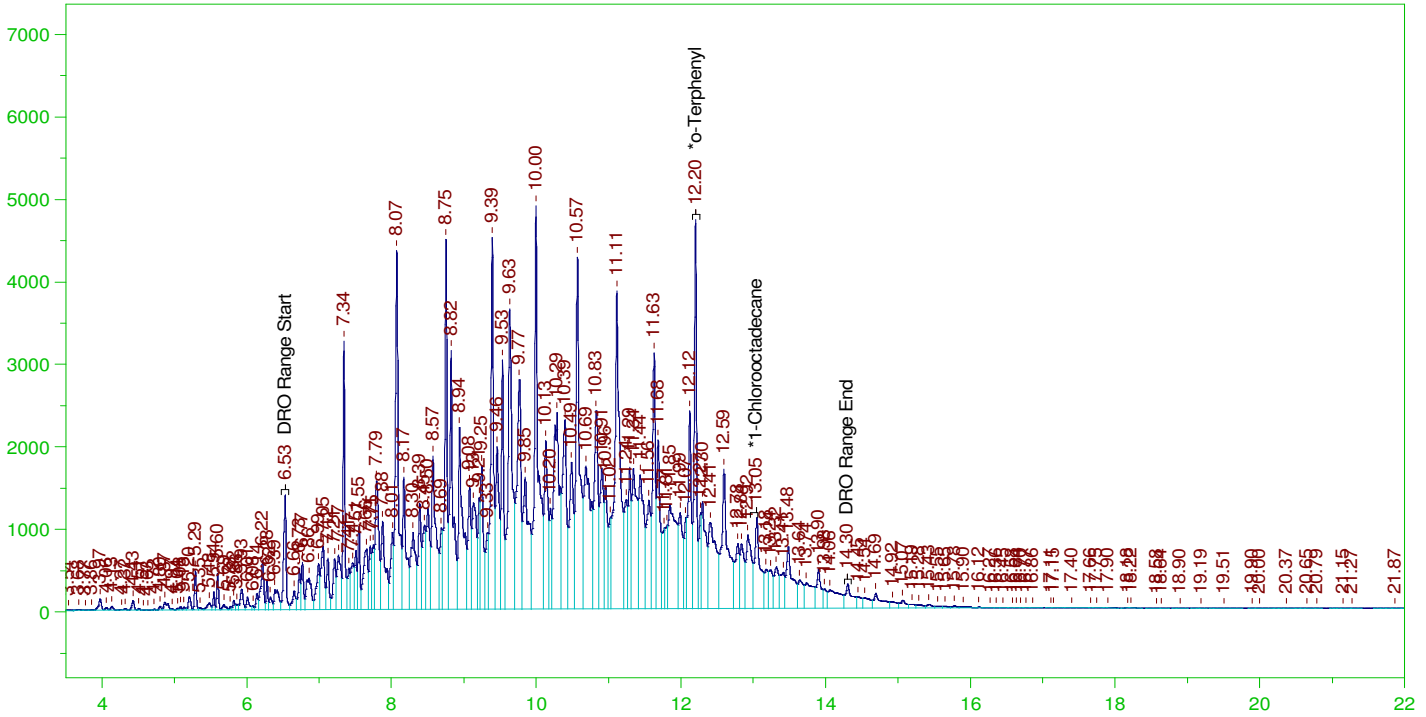
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COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.059	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.284	200.	203.621	101.81	75-125

G:\org\HP5\DAT\HP5122821_b\1228HP5.0020.RAW

CCV_1228HP520r, DRO ;1228HP5 , DRO211220A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP520r, DRO ;1228HP5 , DRO211220A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0020.RAW
 Date & Time Acquired: 12/29/2021 2:40:51 AM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

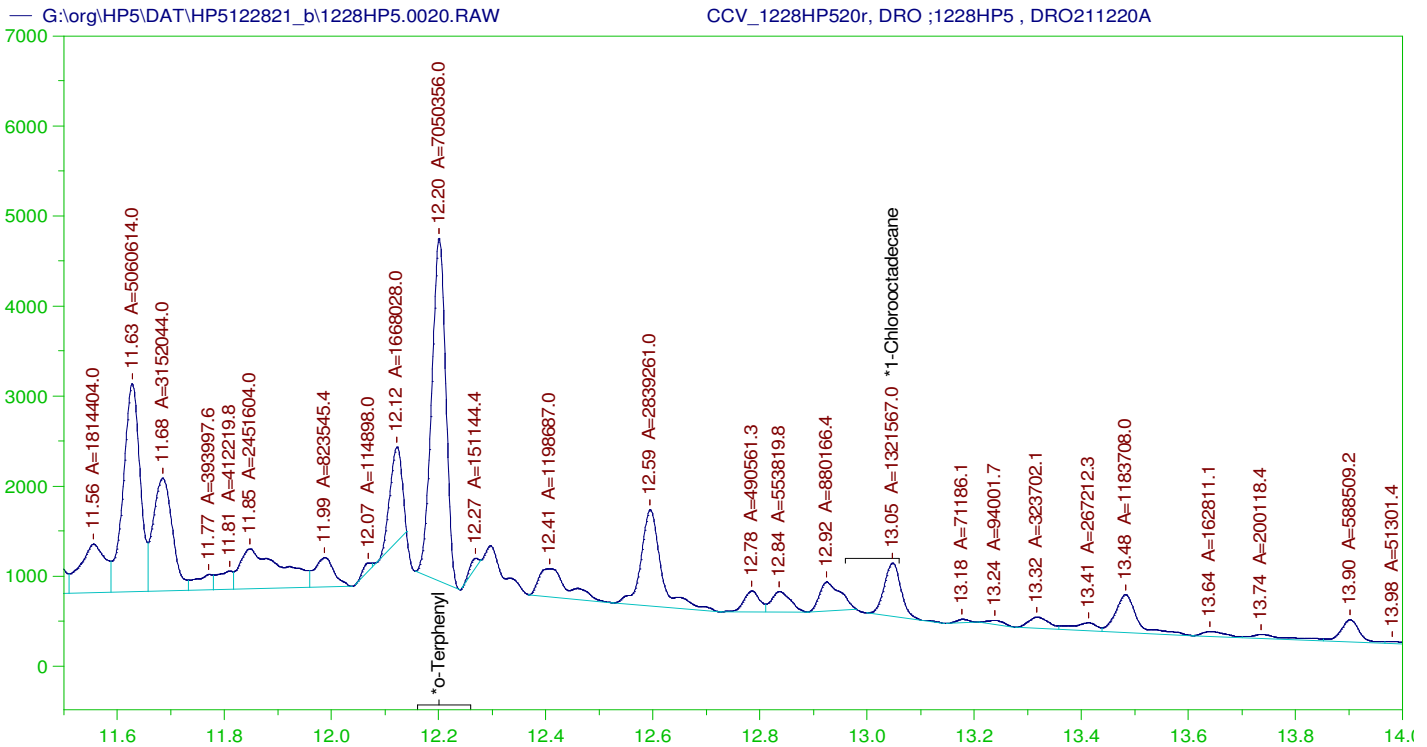
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.201	200.	325.622	162.81
*1-Chlorooctadecane	13.048	200.	158.09	79.04

DRO Area: 4.684474E+08 DRO Amount: 14940.98
 TEH Area: 4.851862E+08 TEH Amount: 15474.86

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15474.86	103.17	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.201	200.	325.622	162.81	85-115
*1-Chlorooctadecane	13.048	200.	158.09	79.04	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP520r, DRO ;1228HP5 , DRO211220A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0020.RAW
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 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

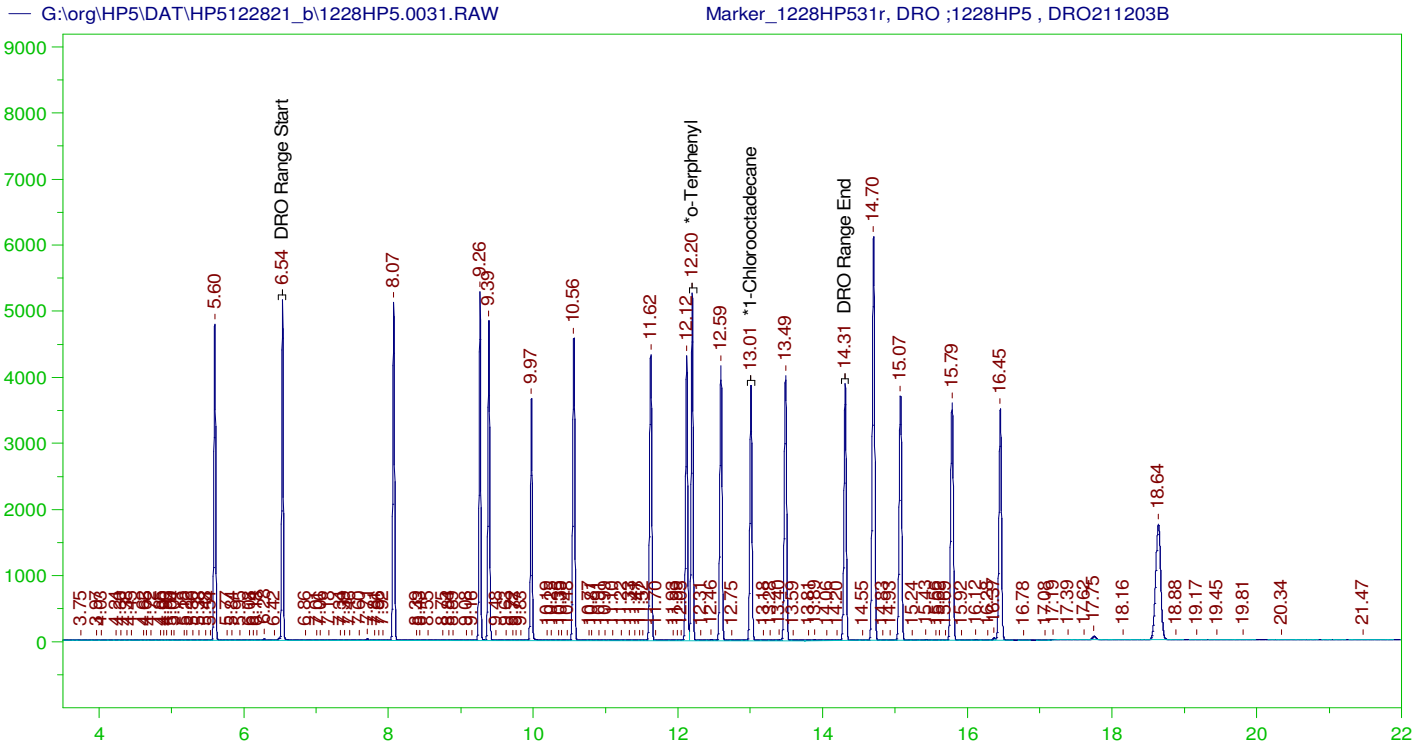
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.201	200.	198.55	99.28
*1-Chlorooctadecane	13.048	200.	37.218	18.61

DRO Area: 2.615284E+08 DRO Amount: 8341.363
 TEH Area: 2.721808E+08 TEH Amount: 8681.12

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8681.12	57.87	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.201	200.	198.55	99.28	85-115
*1-Chlorooctadecane	13.048	200.	37.218	18.61	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: Marker_1228HP531r, DRO ;1228HP5 , DRO211203B
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 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

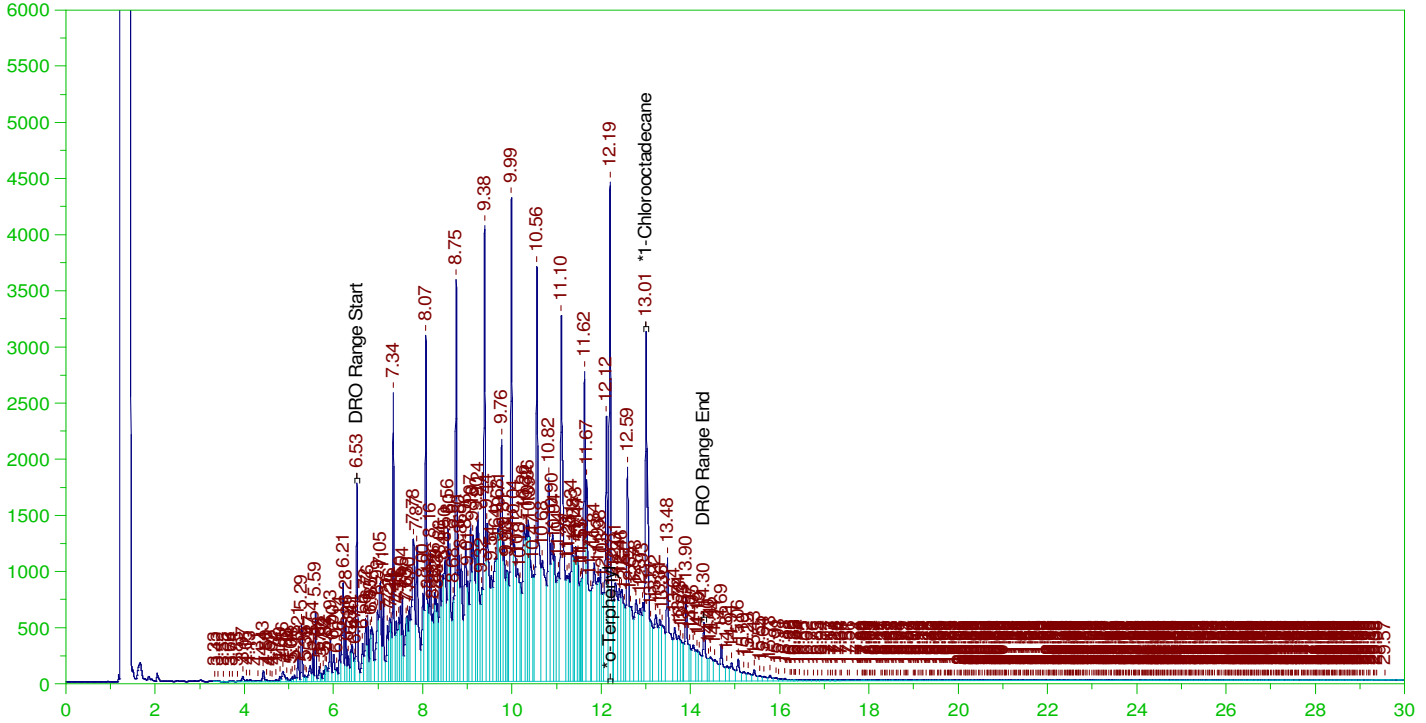
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.197	200.	276.177	138.09
*1-Chlorooctadecane	13.009	200.	224.655	112.33

DRO Area: 9.113654E+07 DRO Amount: 2906.771
 TEH Area: 1.485906E+08 TEH Amount: 4739.249

Batch ID: 162502

LCS-162502 ;1228HP5 ,

G:\org\HP5\DAT\HP5122821_b\1228HP5.0032.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

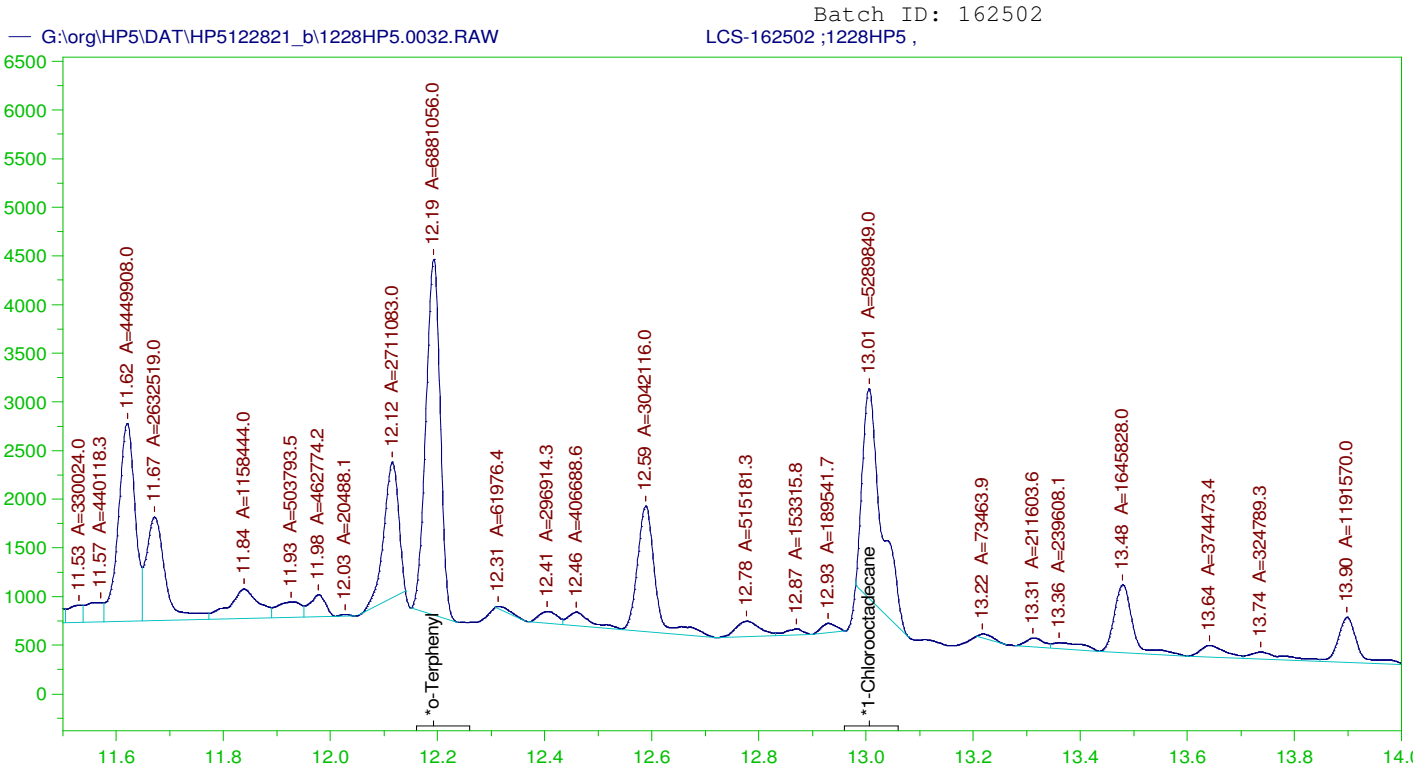
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Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.193	.2	.331	165.57 -
*1-Chlorooctadecane	13.006	.2	.328	163.89 -

DRO Area: 3.961992E+08 DRO Amount: 12.63665
TEH Area: 4.249664E+08 TEH Amount: 13.55417



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

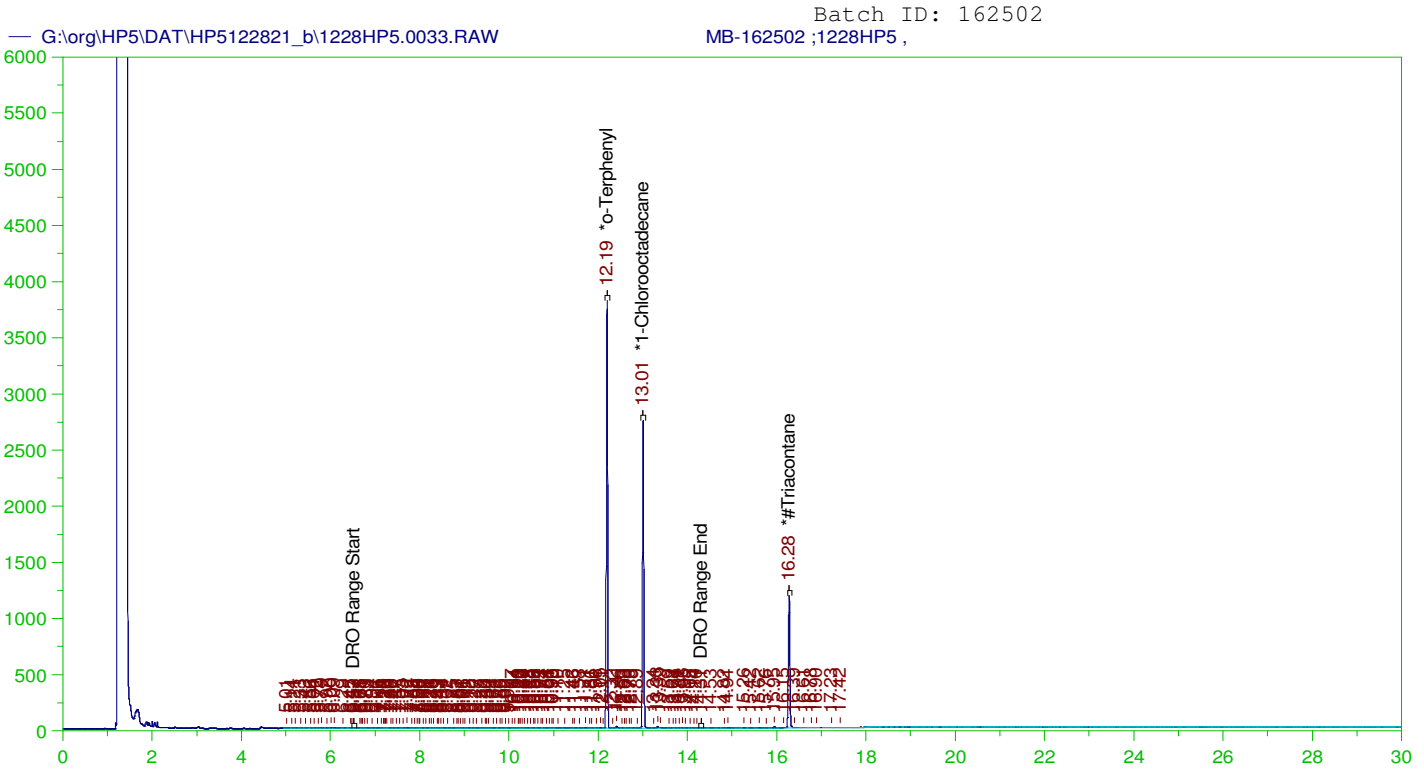
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 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.193	.2	.194	96.89
*1-Chlorooctadecane	13.006	.2	.149	74.49

DRO Area: 1.967913E+08 DRO Amount: 6.276595
 TEH Area: 2.114059E+08 TEH Amount: 6.742724



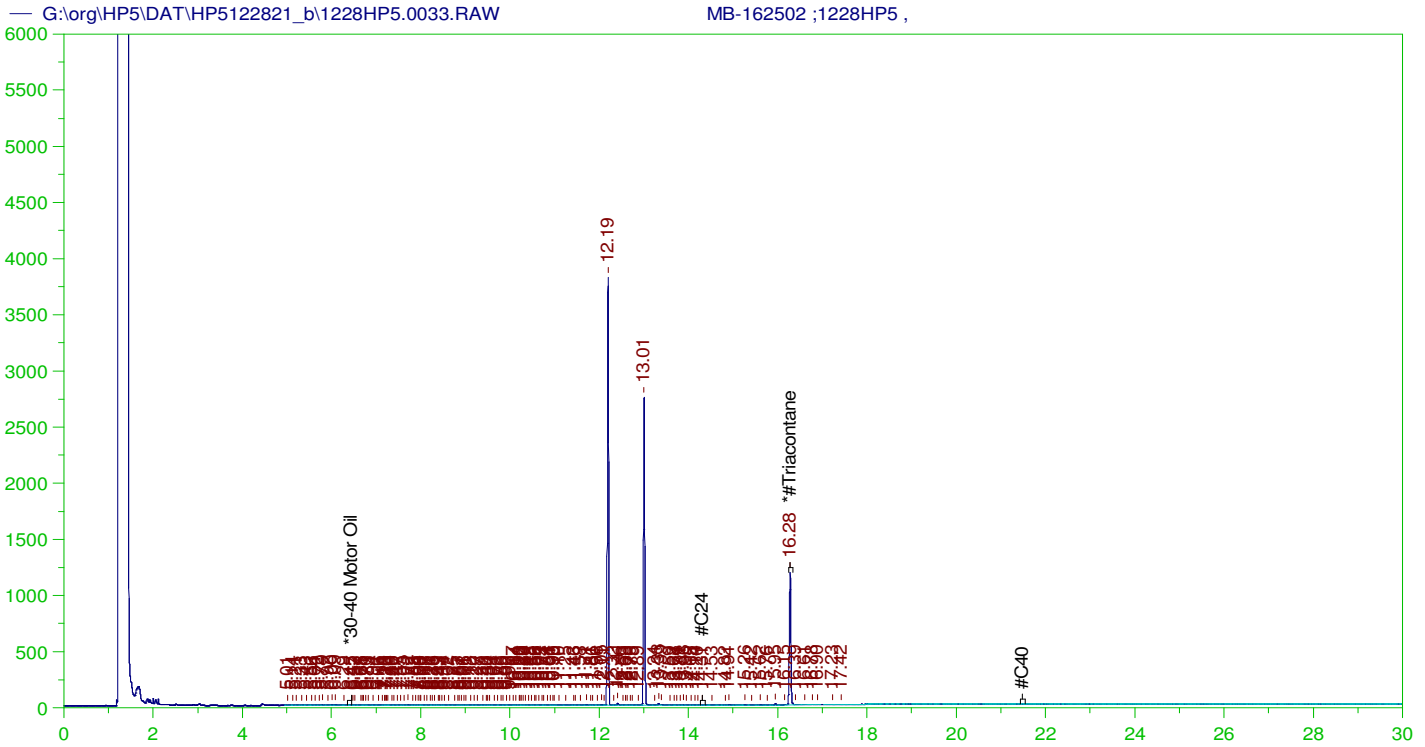
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162502 ;1228HP5 ,
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 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.2	.2	100.25	-
*1-Chlorooctadecane	13.006	.2	.16	80.01	-
*#Triacontane	16.275	.2	.106	53.01	-

DRO Area:703177 DRO Amount: 2.242761E-02
 TEH Area:975493.1 TEH Amount: 3.111304E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-162502 ;1228HP5 ,
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0033.RAW
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 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.27 to 21.54

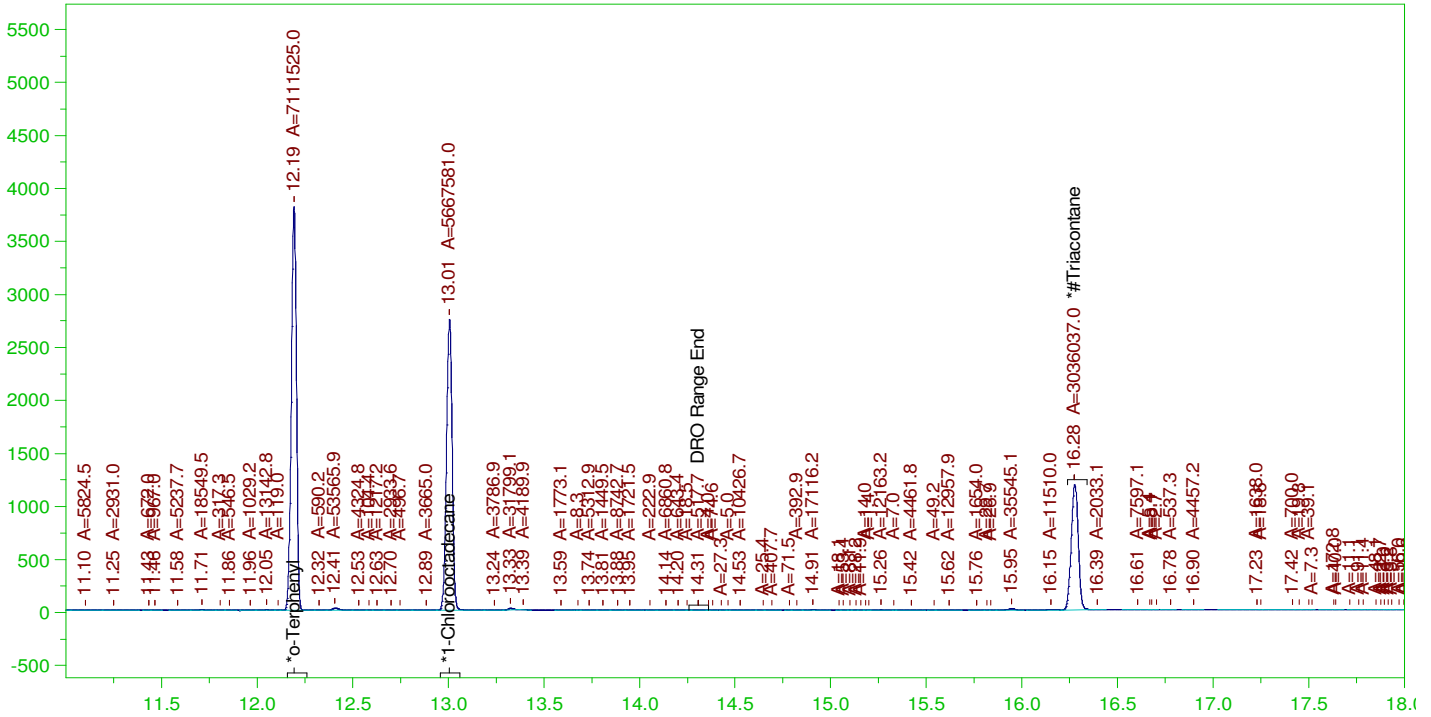
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.275	.5	.106	21.21

RRO Area:160168.8 RRO AMOUNT: 5.611606E-03

Batch ID: 162502

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MB-162502 ;1228HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

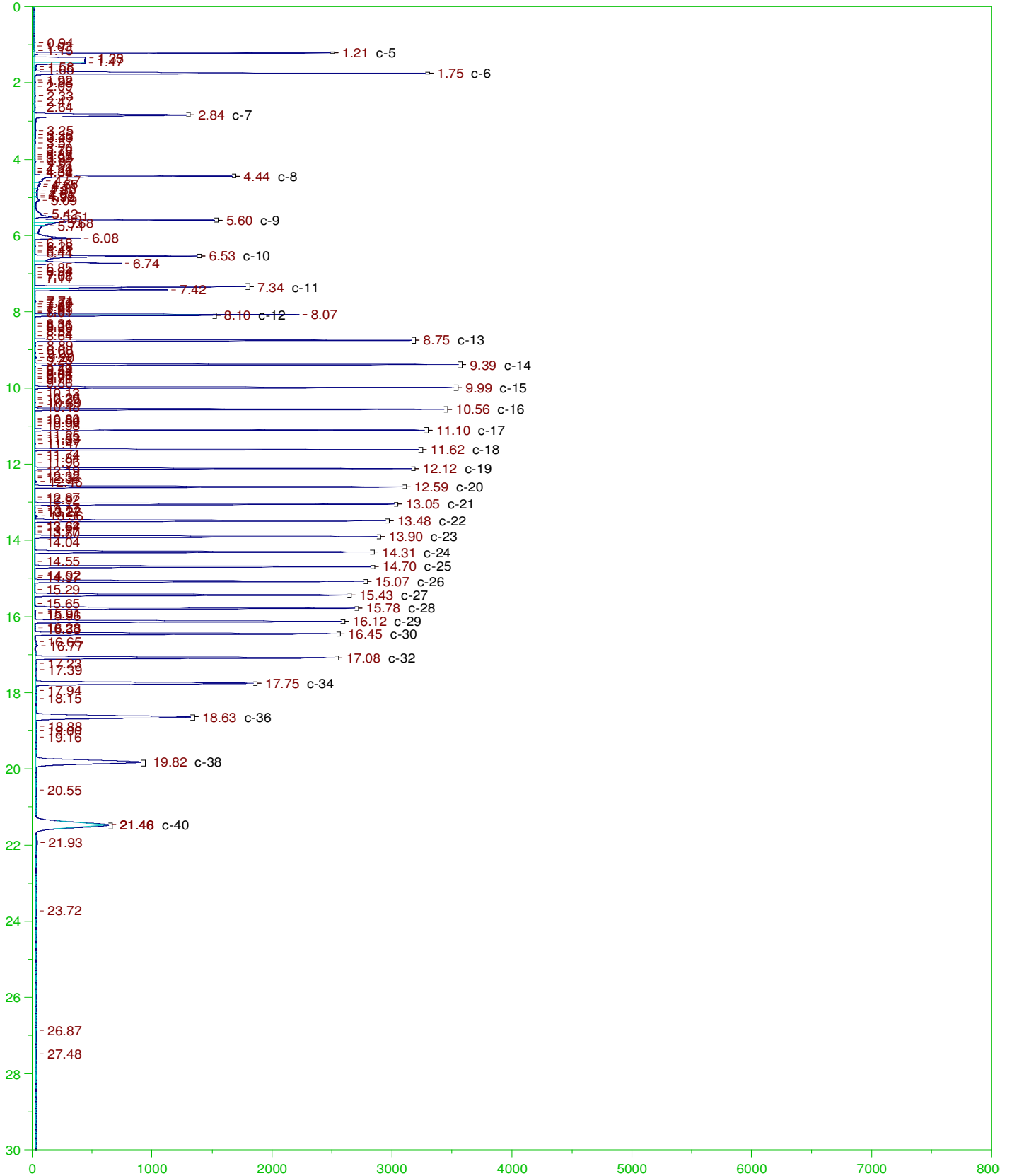
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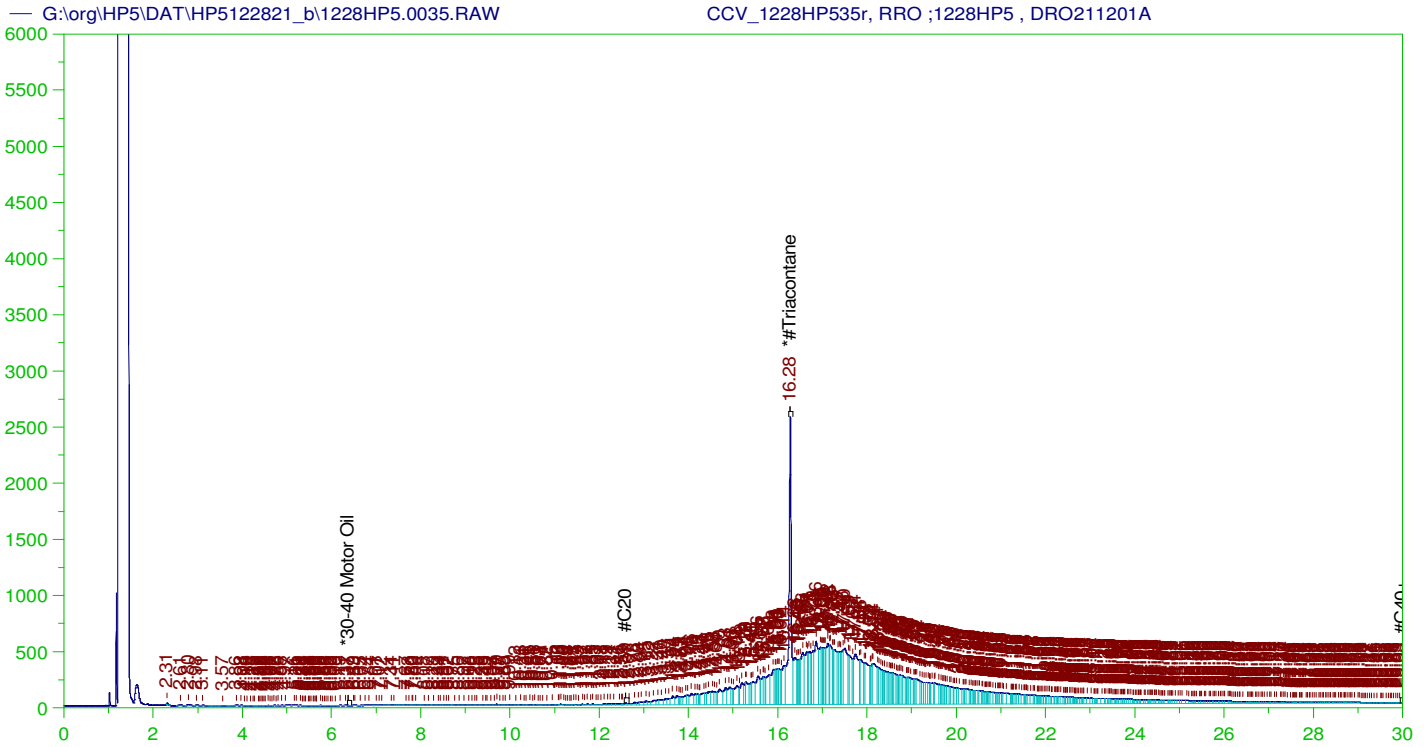
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.193	.2	.2	100.14
*1-Chlorooctadecane	13.006	.2	.16	79.8
*Triacontane	16.275	.2	.105	52.47

DRO Area:504260.3 DRO Amount: 1.608322E-02
TEH Area:947534.9 TEH Amount: 3.022132E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP535r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0035.RAW
 Date & Time Acquired: 12/29/2021 1:22:09 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	325.781	65.16	-

RRO TEH (Oil Range) Area:1.240746E+08 RRO TEH (Oil Range) AMOUNT: 4347.025

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0035.RAW

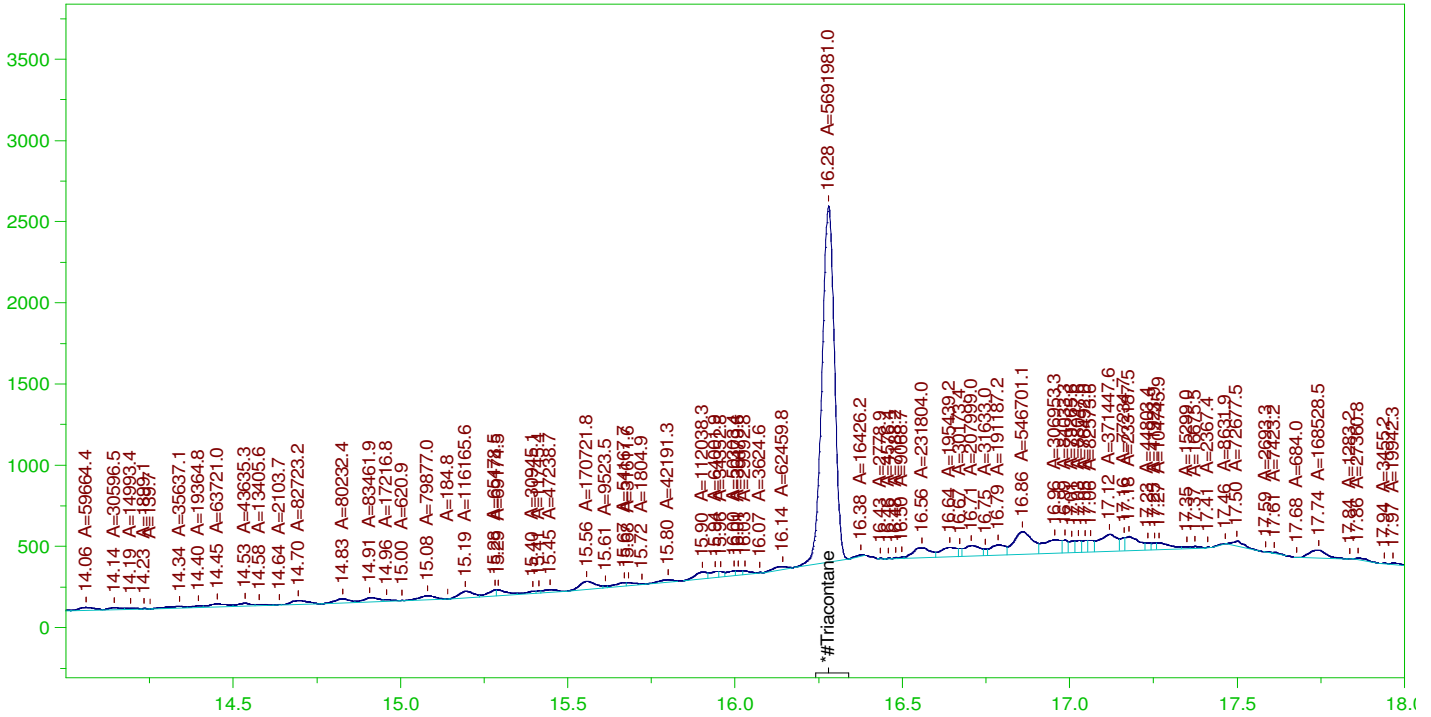
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.032	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.279	200.	325.781	162.89	75-125

AMN 01/24/2022

G:\org\HP5\DAT\HP5122821_b\1228HP5.0035.RAW

CCV_1228HP535r, RRO ;1228HP5 , DRO211201A



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP535r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0035.RAW
 Date & Time Acquired: 12/29/2021 1:22:09 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.56 to 30.05

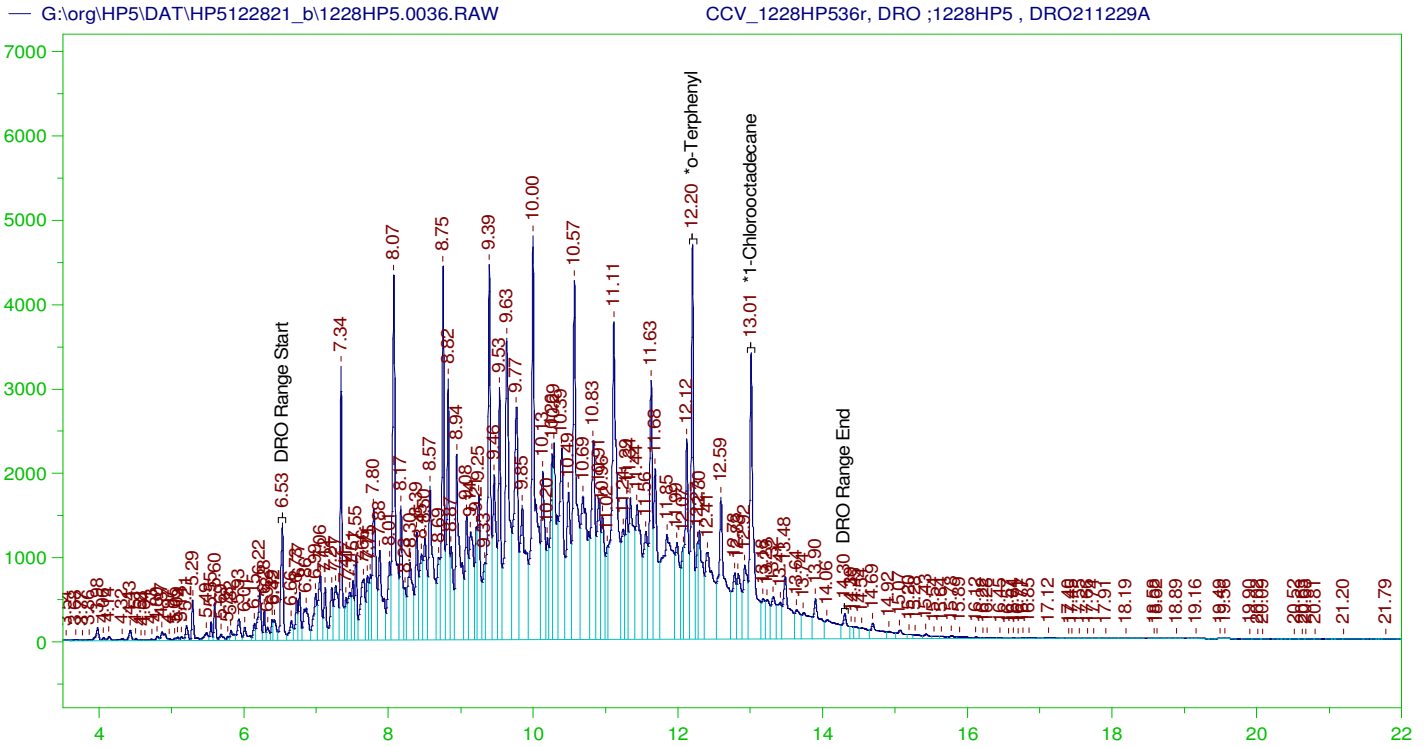
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	196.749	39.35	-

RRO Area:5751847 RRO AMOUNT: 201.5193

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.032	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.279	200.	196.749	98.37	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP536r, DRO ;1228HP5 , DRO211229A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0036.RAW
 Date & Time Acquired: 12/29/2021 2:04:42 PM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.201	200.	320.99	160.49
*1-Chlorooctadecane	13.011	200.	352.221	176.11

DRO Area: 4.600582E+08 DRO Amount: 14673.41
 TEH Area: 4.773679E+08 TEH Amount: 15225.5

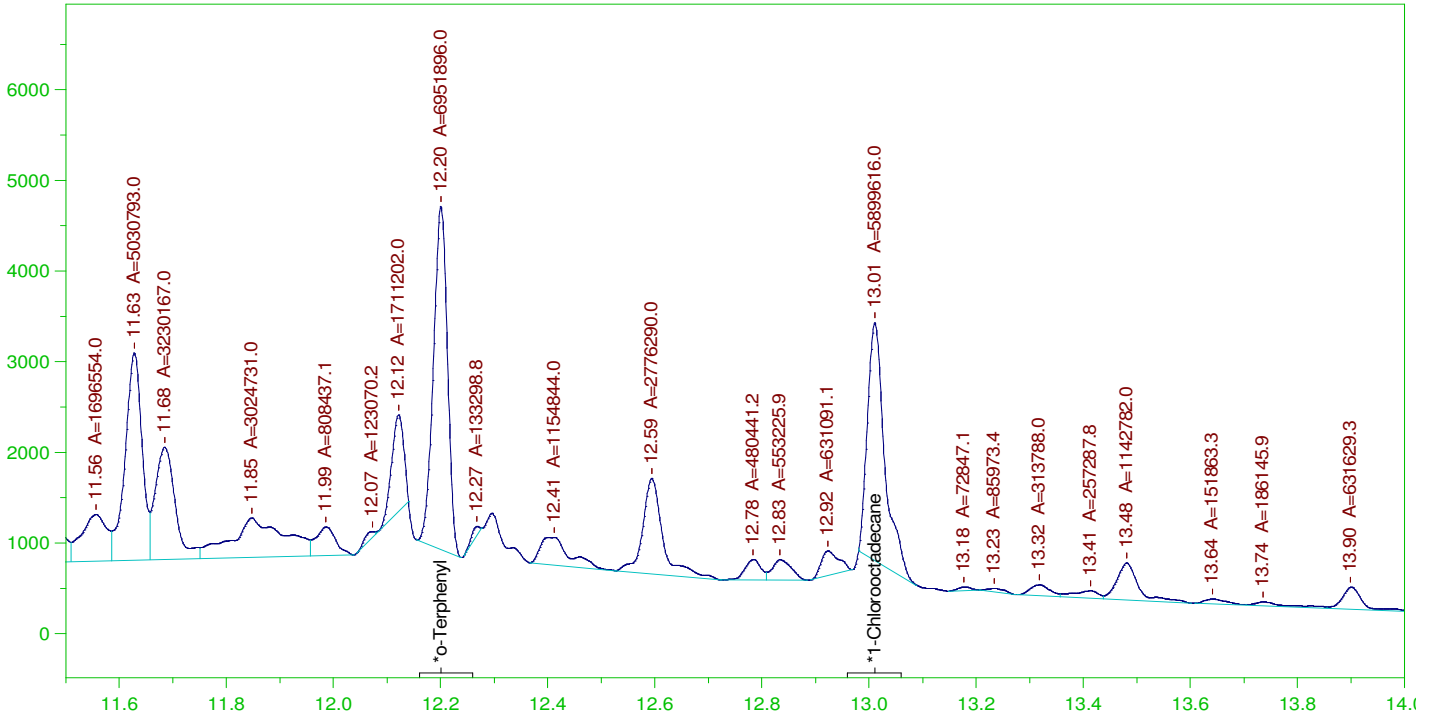
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0036.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15225.5	101.5	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.201	200.	320.99	160.49	85-115
*1-Chlorooctadecane	13.011	200.	352.221	176.11	85-115

G:\org\HP5\DAT\HP5122821_b\1228HP5.0036.RAW

CCV_1228HP536r, DRO ;1228HP5 , DRO211229A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP536r, DRO ;1228HP5 , DRO211229A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0036.RAW
 Date & Time Acquired: 12/29/2021 2:04:42 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

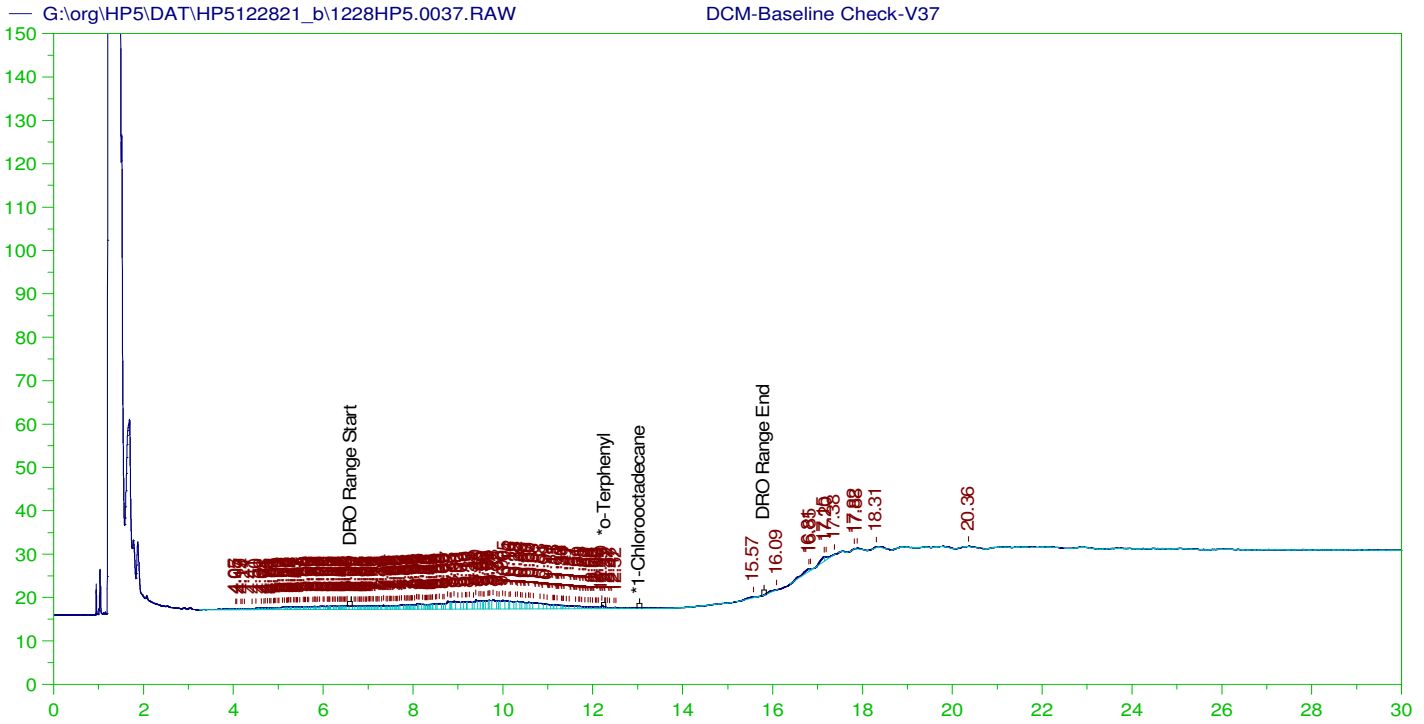
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.201	200.	195.777	97.89
*1-Chlorooctadecane	13.011	200.	166.143	83.07

DRO Area: 2.574778E+08 DRO Amount: 8212.172
 TEH Area: 2.683066E+08 TEH Amount: 8557.554

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0036.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8557.55	57.05	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.201	200.	195.777	97.89	85-115
*1-Chlorooctadecane	13.011	200.	166.143	83.07	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V37
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0037.RAW
 Date & Time Acquired: 12/29/2021 2:47:21 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.271	200.	.019	.01	-
*1-Chlorooctadecane	29.975	200.	.	.	-

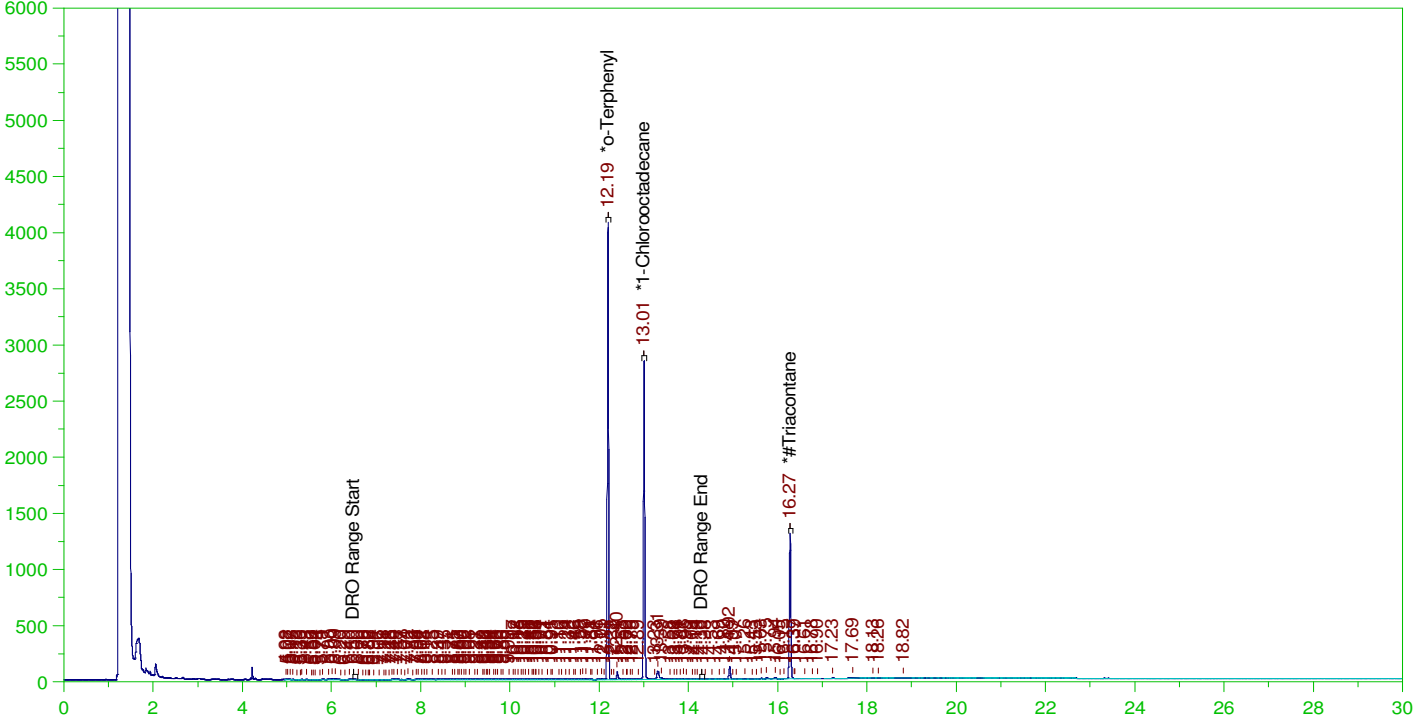
DRO Area:396485.8 DRO Amount: 12.64579
 TEH Area:522385.7 TEH Amount: 16.66132

ERH2261 (RHMW15-05)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0038.RAW

Batch ID: 162502

B21121968-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121968-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0038.RAW
Date & Time Acquired: 12/29/2021 3:29:53 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.196	.209	106.74	-
*1-Chlorooctadecane	13.006	.196	.164	83.74	-
*#Triacontane	16.274	.196	.112	57.18	-

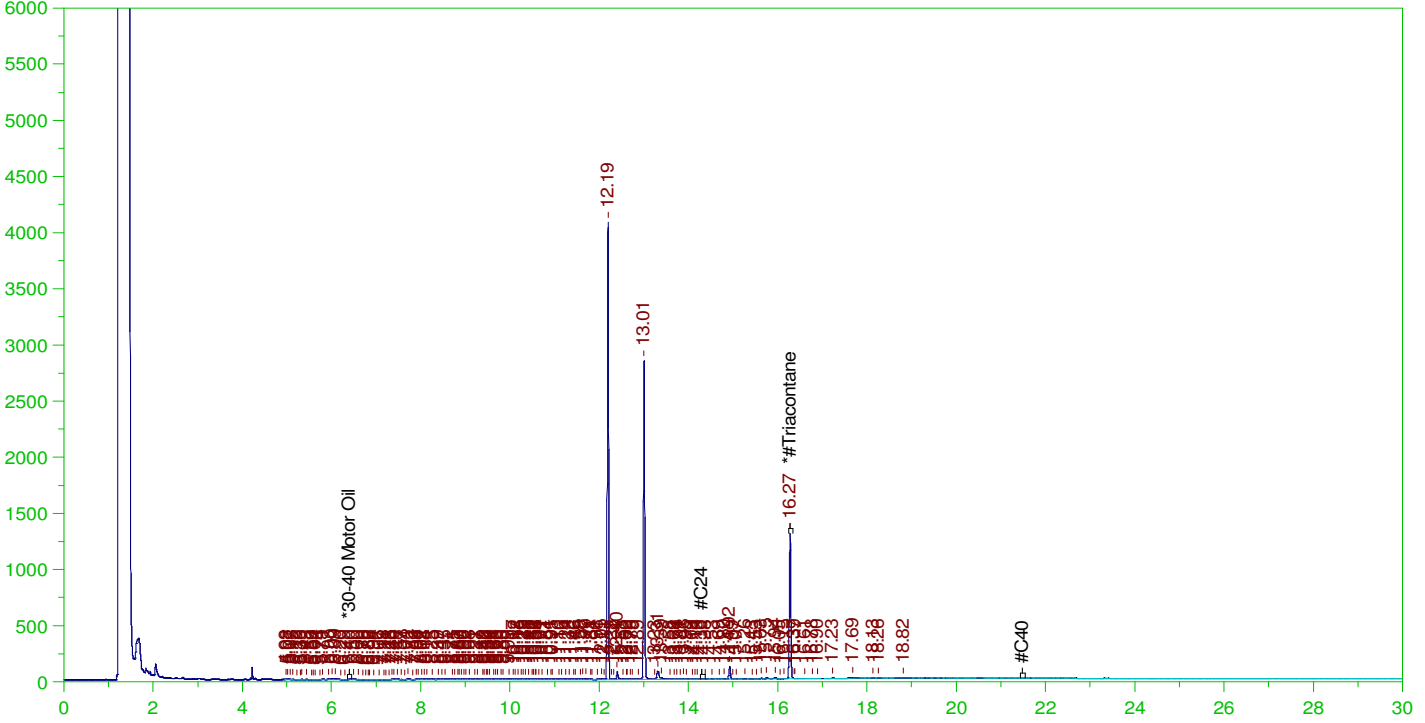
DRO Area: 1139163 DRO Amount: 3.562082E-02
TEH Area: 1847500 TEH Amount: 5.777002E-02

ERH2261 (RHMW15-05)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0038.RAW

Batch ID: 162502

B21121968-001D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121968-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0038.RAW
Date & Time Acquired: 12/29/2021 3:29:53 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.274	.49	.112	22.87	-

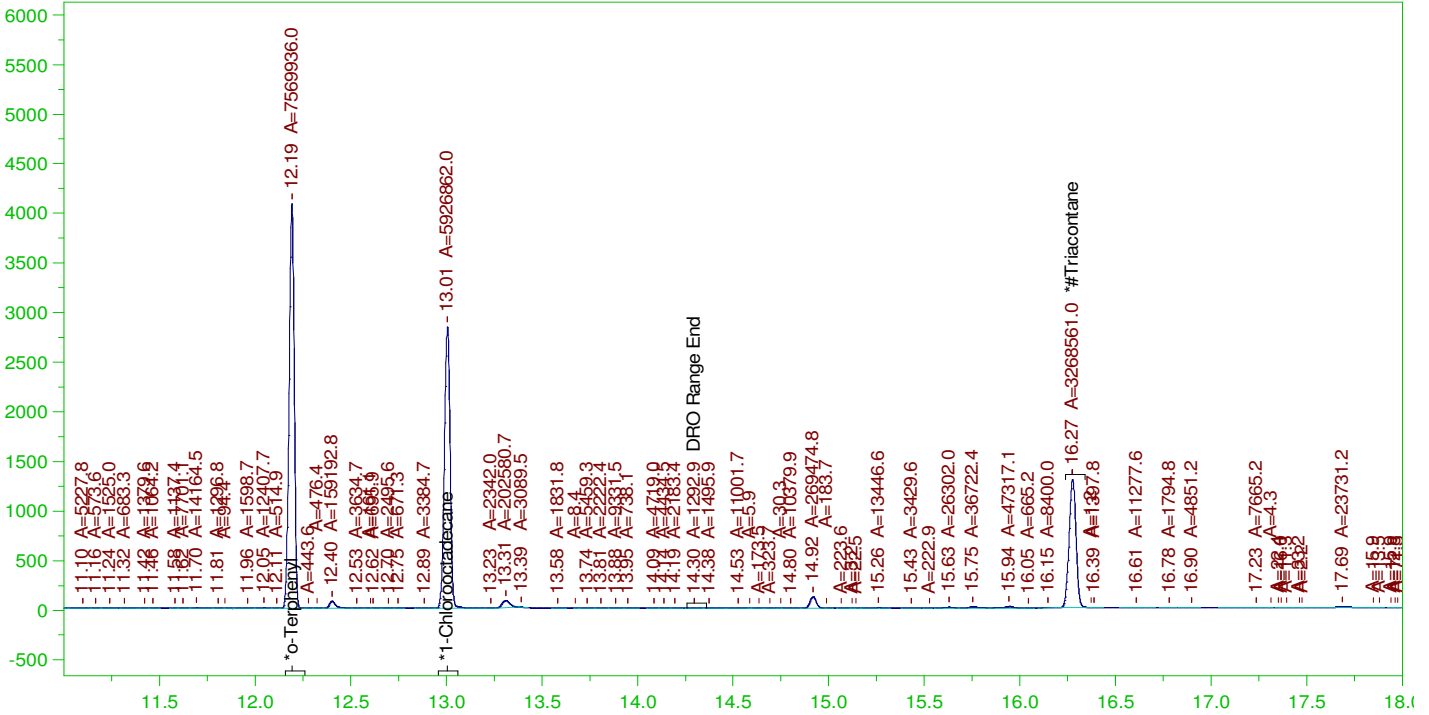
RRO Area:582334 RRO AMOUNT: 2.000237E-02

ERH2261 (RHMW15-05)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0038.RAW

B21121968-001D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121968-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0038.RAW
Date & Time Acquired: 12/29/2021 3:29:53 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.196	.209	106.59	-
*1-Chlorooctadecane	13.006	.196	.164	83.46	-
*#Triacontane	16.274	.196	.111	56.49	-

DRO Area:715017.6

DRO Amount: 0.0223581

TEH Area:1671005

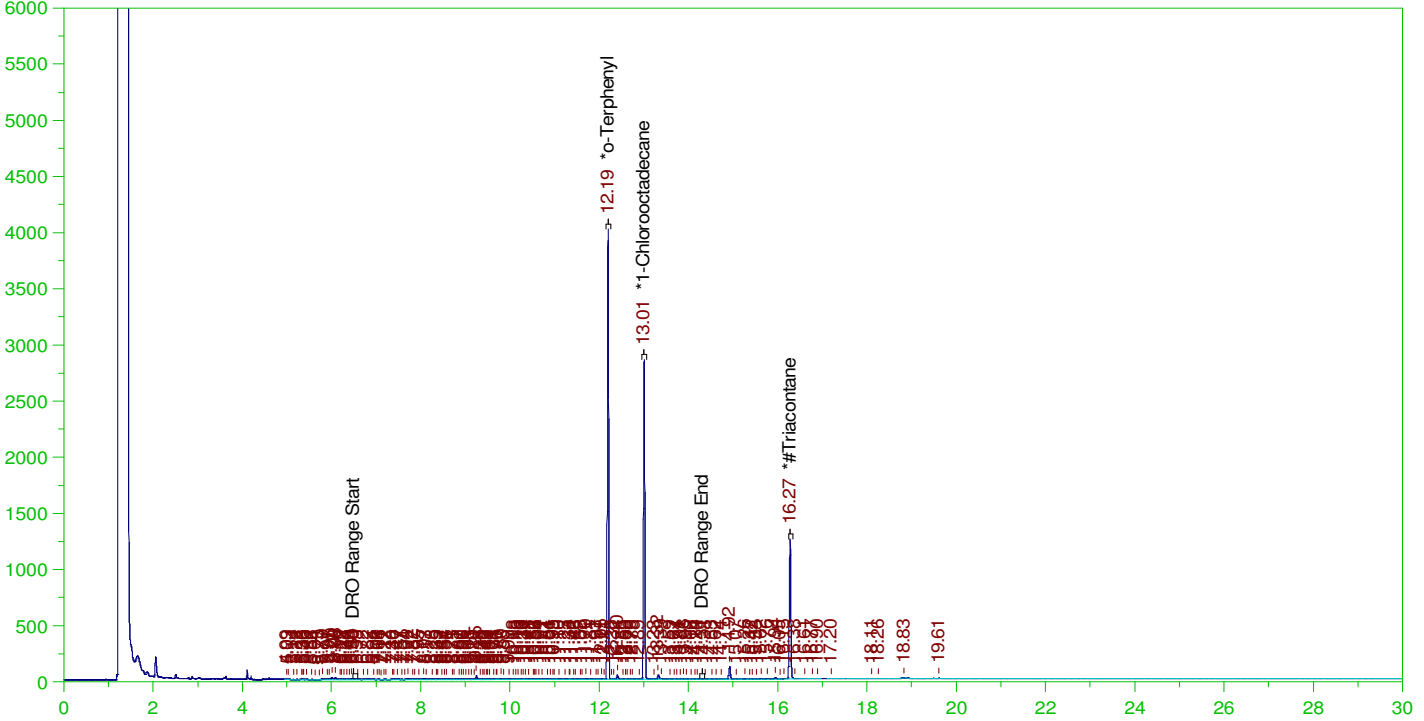
TEH Amount: 5.225115E-02

ERH2259 (RHMW14-03)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0039.RAW

Batch ID: 162502

B21121957-001B ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121957-001B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0039.RAW
Date & Time Acquired: 12/29/2021 4:12:17 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.194	.19	.2	105.04	-
*1-Chlorooctadecane	13.007	.19	.16	84.22	-
*#Triacontane	16.274	.19	.105	55.12	-

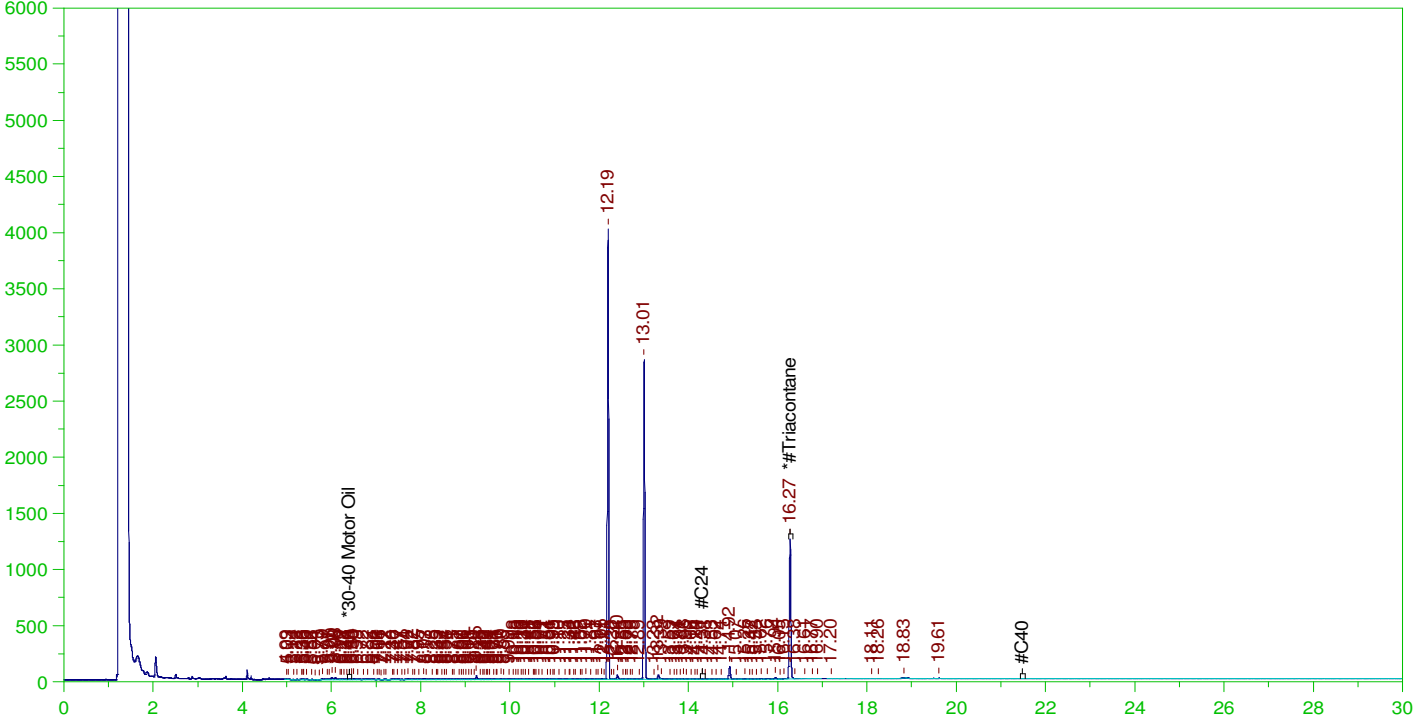
DRO Area:992427.9 DRO Amount: 3.014588E-02
TEH Area:1672059 TEH Amount: 5.079027E-02

ERH2259 (RHMW14-03)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0039.RAW

B21121957-001B ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121957-001B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0039.RAW
Date & Time Acquired: 12/29/2021 4:12:17 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.274	.476	.105	22.05

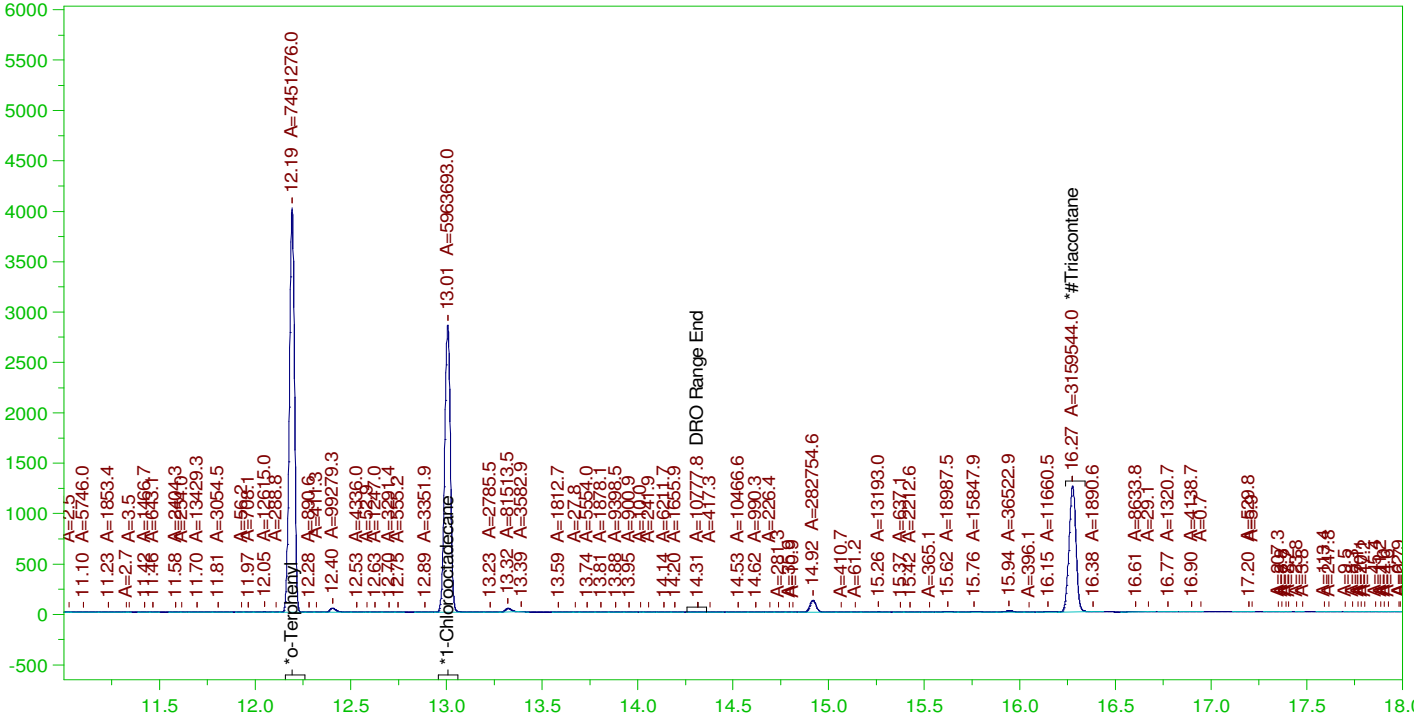
RRO Area:489432.2 RRO AMOUNT: 1.633099E-02

ERH2259 (RHMW14-03)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0039.RAW

B21121957-001B ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121957-001B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0039.RAW
Date & Time Acquired: 12/29/2021 4:12:17 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.194	.19	.2	104.92
*1-Chlorooctadecane	13.007	.19	.16	83.97
*#Triacontane	16.274	.19	.104	54.61

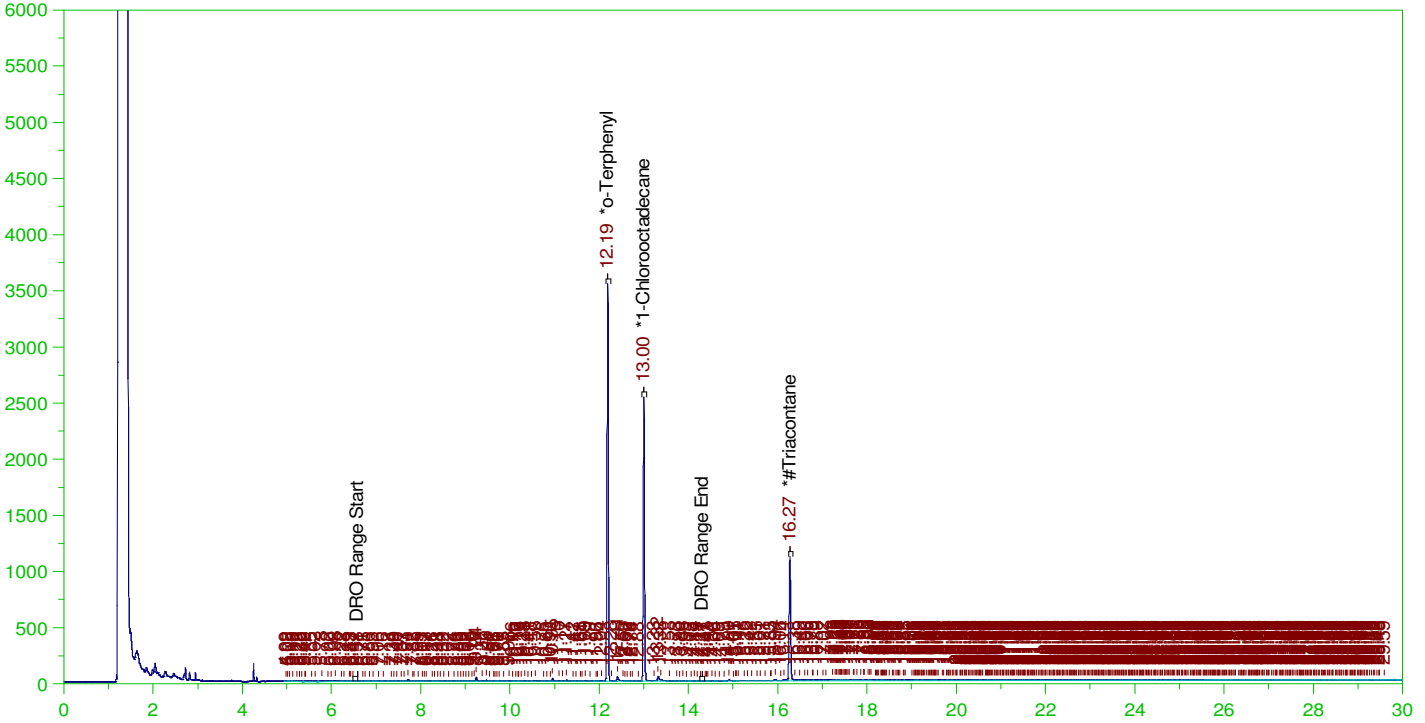
DRO Area:618835.3 DRO Amount: 1.879767E-02
TEH Area:1710215 TEH Amount: 5.194929E-02

ERH2253 (OWDFMW01)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0040.RAW

Batch ID: 162502

B21121977-001D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121977-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0040.RAW
Date & Time Acquired: 12/29/2021 4:55:14 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.187	.194	.181	93.27	-
*1-Chlorooctadecane	13.001	.194	.144	74.07	-
*#Triacontane	16.27	.194	.097	49.91	-

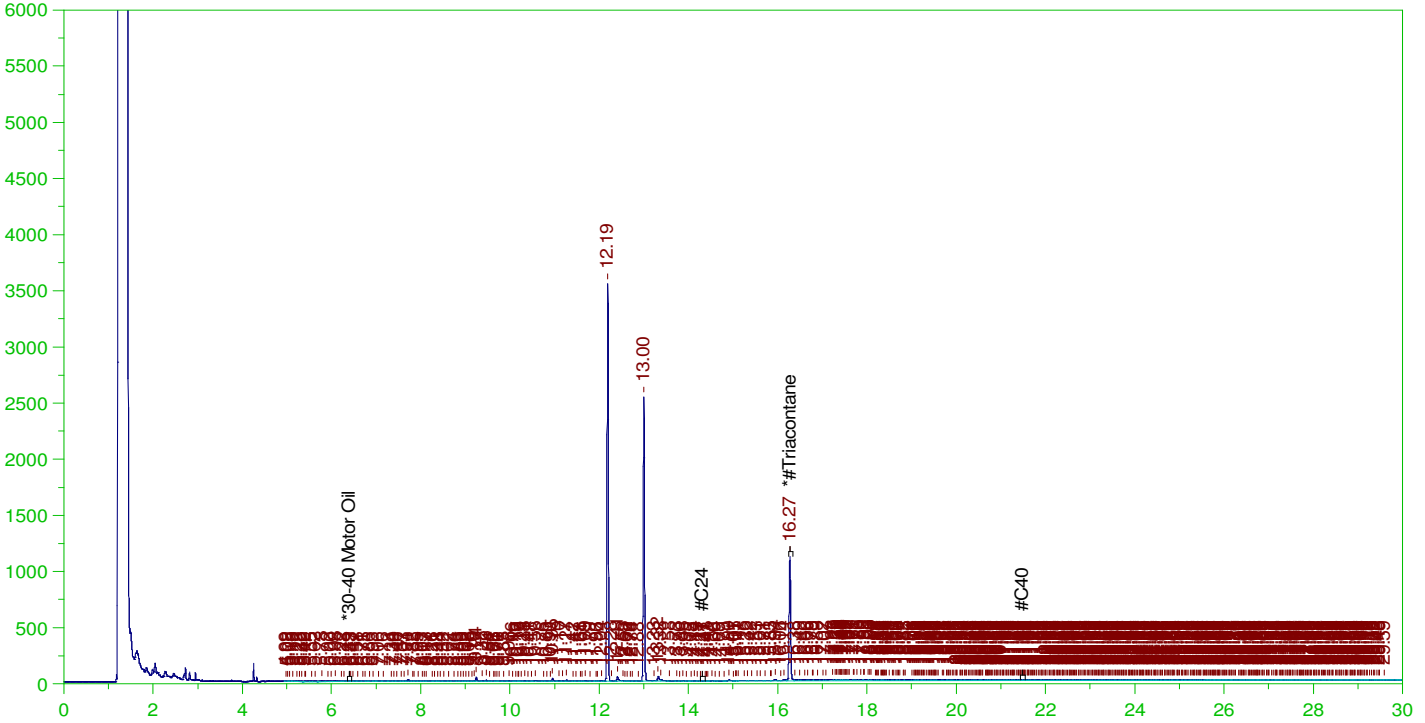
DRO Area:1000002 DRO Amount: 3.096578E-02
TEH Area:5476820 TEH Amount: 0.1695936

ERH2253 (OWDFMW01)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0040.RAW

Batch ID: 162502

B21121977-001D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121977-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0040.RAW
Date & Time Acquired: 12/29/2021 4:55:14 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.27	.485	.097	19.96

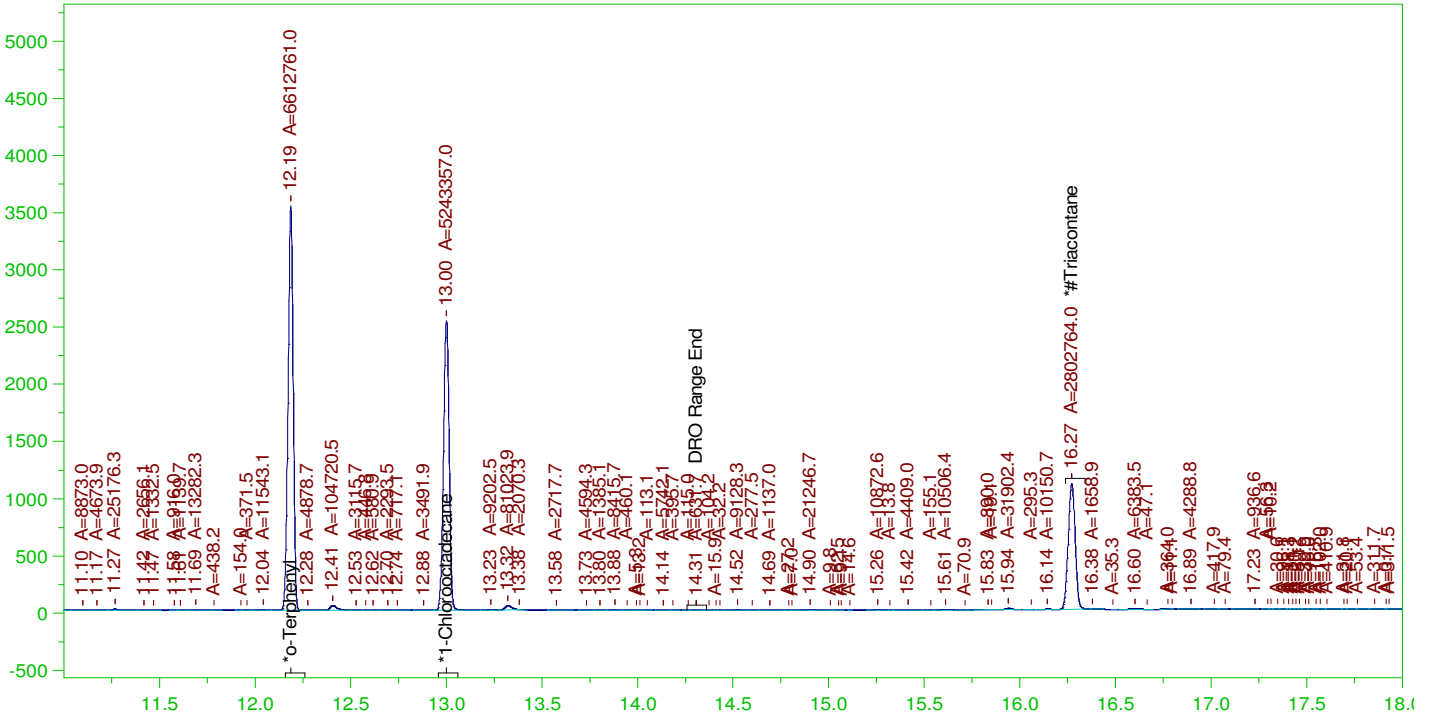
RRO Area:2913158 RRO AMOUNT: 9.909146E-02

ERH2253 (OWDFMW01)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0040.RAW

B21121977-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121977-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0040.RAW
Date & Time Acquired: 12/29/2021 4:55:14 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.187	.194	.181	93.11
*1-Chlorooctadecane	13.001	.194	.143	73.83
*#Triacontane	16.27	.194	.094	48.44

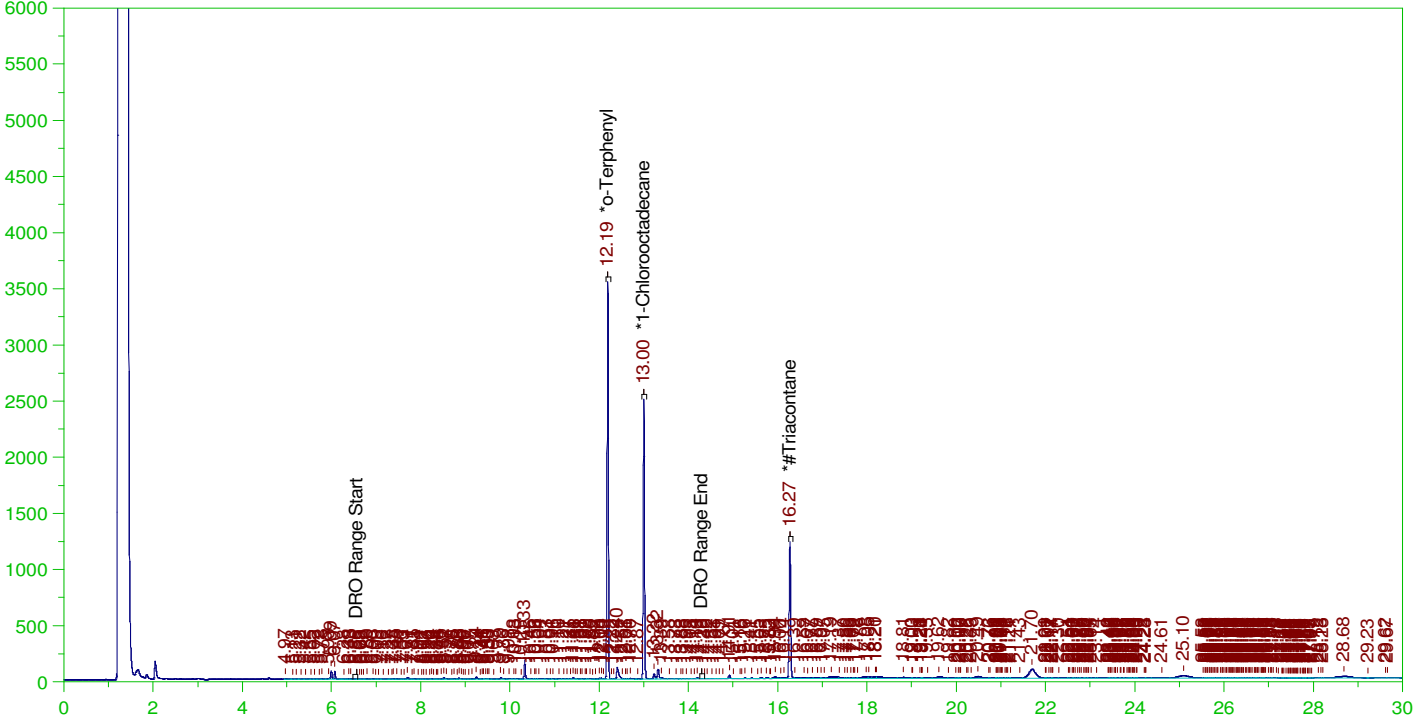
DRO Area: 731440.8 DRO Amount: 2.264958E-02
TEH Area: 1334874 TEH Amount: 4.133533E-02

ERH2242 (RHMW06)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0041.RAW

B21121977-002D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121977-002D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0041.RAW
Date & Time Acquired: 12/29/2021 5:38:39 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.188	.194	.18	92.89	-
*1-Chlorooctadecane	13.	.194	.142	73.	-
*#Triacontane	16.27	.194	.105	54.17	-

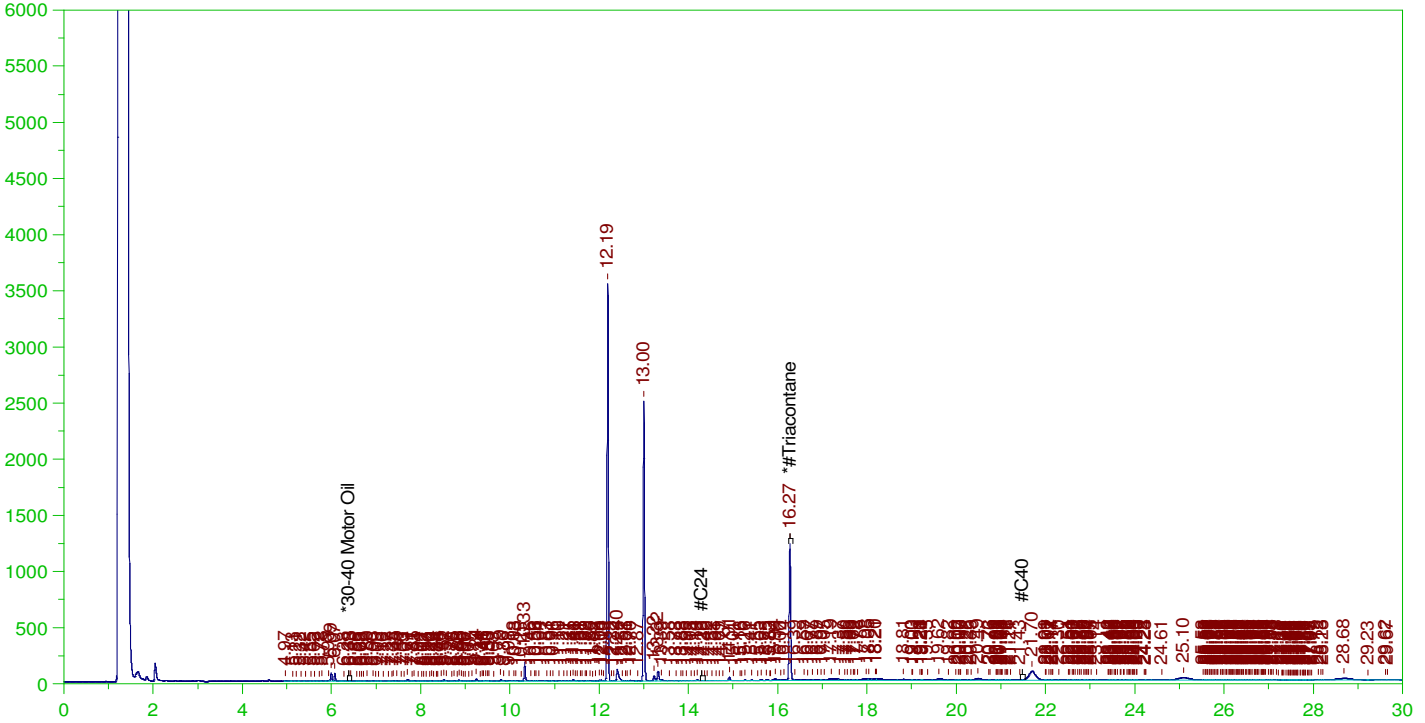
DRO Area:2043677 DRO Amount: 0.0632839
TEH Area:9943586 TEH Amount: 0.3079102

ERH2242 (RHMW06)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0041.RAW

Batch ID: 162502

B21121977-002D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121977-002D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0041.RAW
Date & Time Acquired: 12/29/2021 5:38:39 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.27	.485	.105	21.67

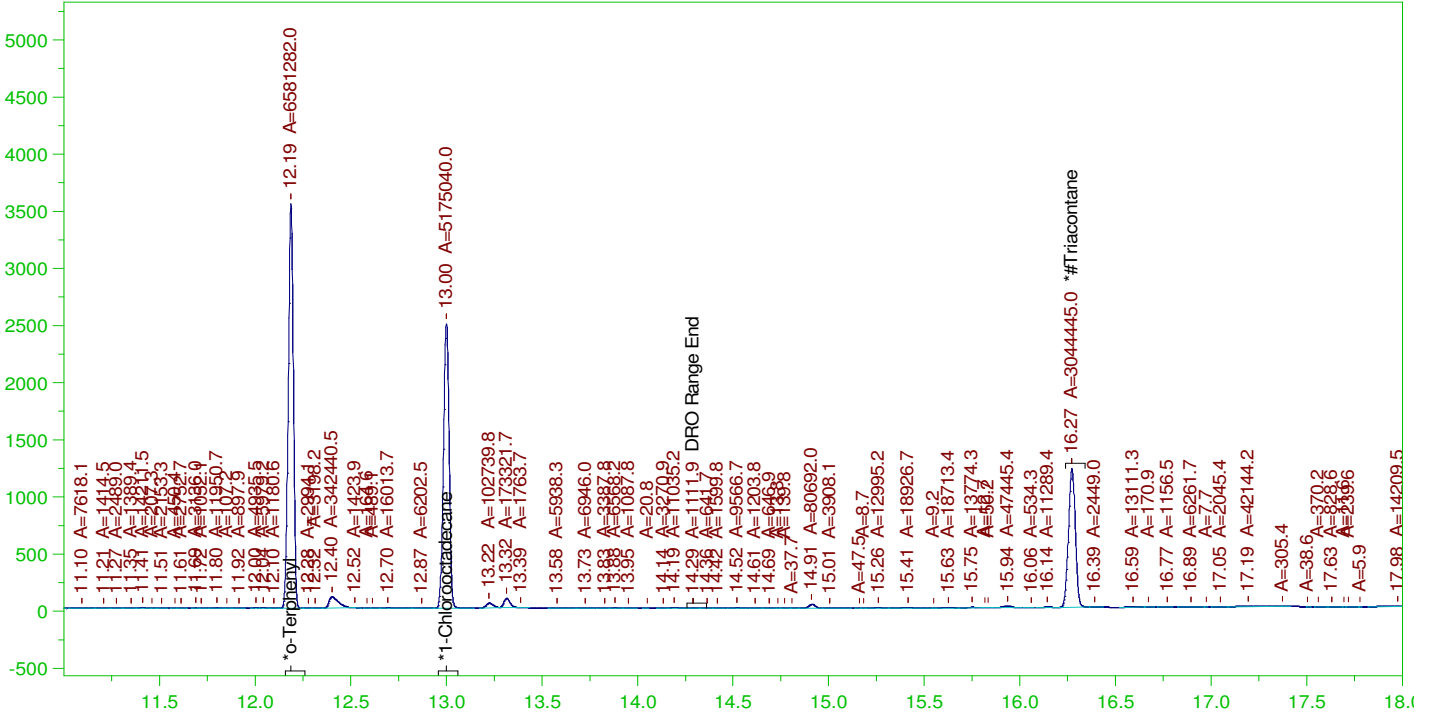
RRO Area:3965028 RRO AMOUNT: 0.1348709

ERH2242 (RHMW06)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0041.RAW

B21121977-002D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

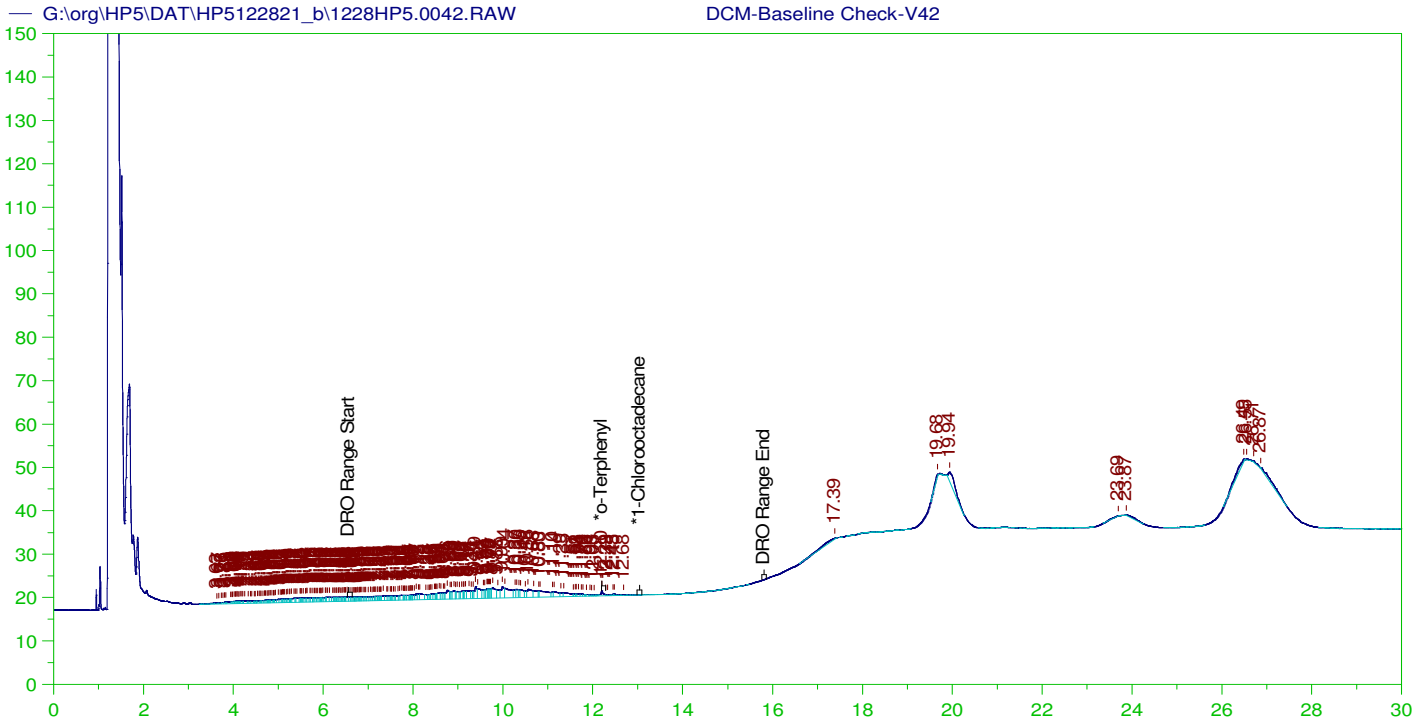
Sample Name: B21121977-002D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0041.RAW
Date & Time Acquired: 12/29/2021 5:38:39 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.188	.194	.18	92.67	-
*1-Chlorooctadecane	13.	.194	.141	72.87	-
*#Triacontane	16.27	.194	.102	52.62	-

DRO Area:1496878 DRO Amount: 0.0463519
TEH Area:3916138 TEH Amount: 0.121266



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V42
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0042.RAW
 Date & Time Acquired: 12/29/2021 6:21:47 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.197	200.	.127	.06
*1-Chlorooctadecane	29.984	200.	.	.

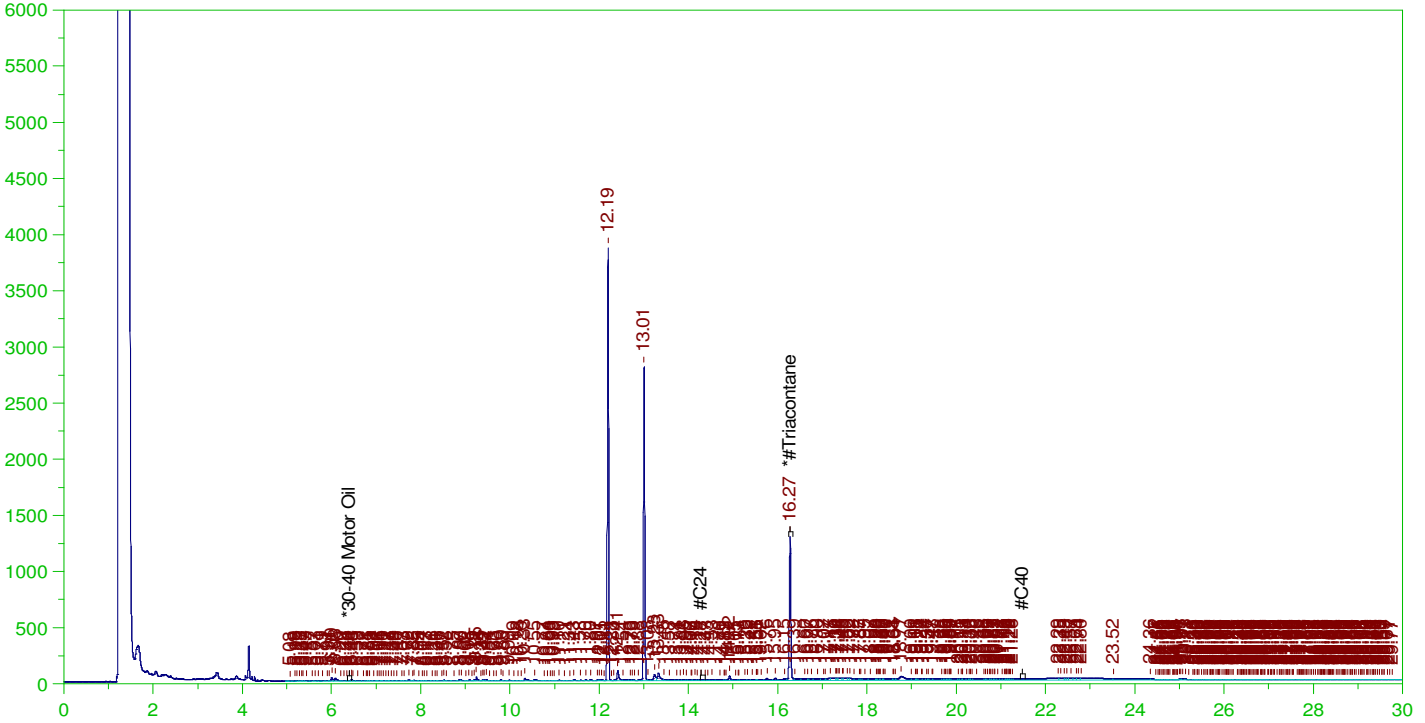
DRO Area: 427366.8 DRO Amount: 13.63073
 TEH Area: 655029.3 TEH Amount: 20.89195

ERH2240 (RHMW05)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0043.RAW

Batch ID: 162502

B21121981-001D ; 1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0043.RAW
Date & Time Acquired: 12/29/2021 7:04:49 PM
Method File: G:\Org\HP5\Methods\D3_OROS-122843-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.274	.485	.111	22.82

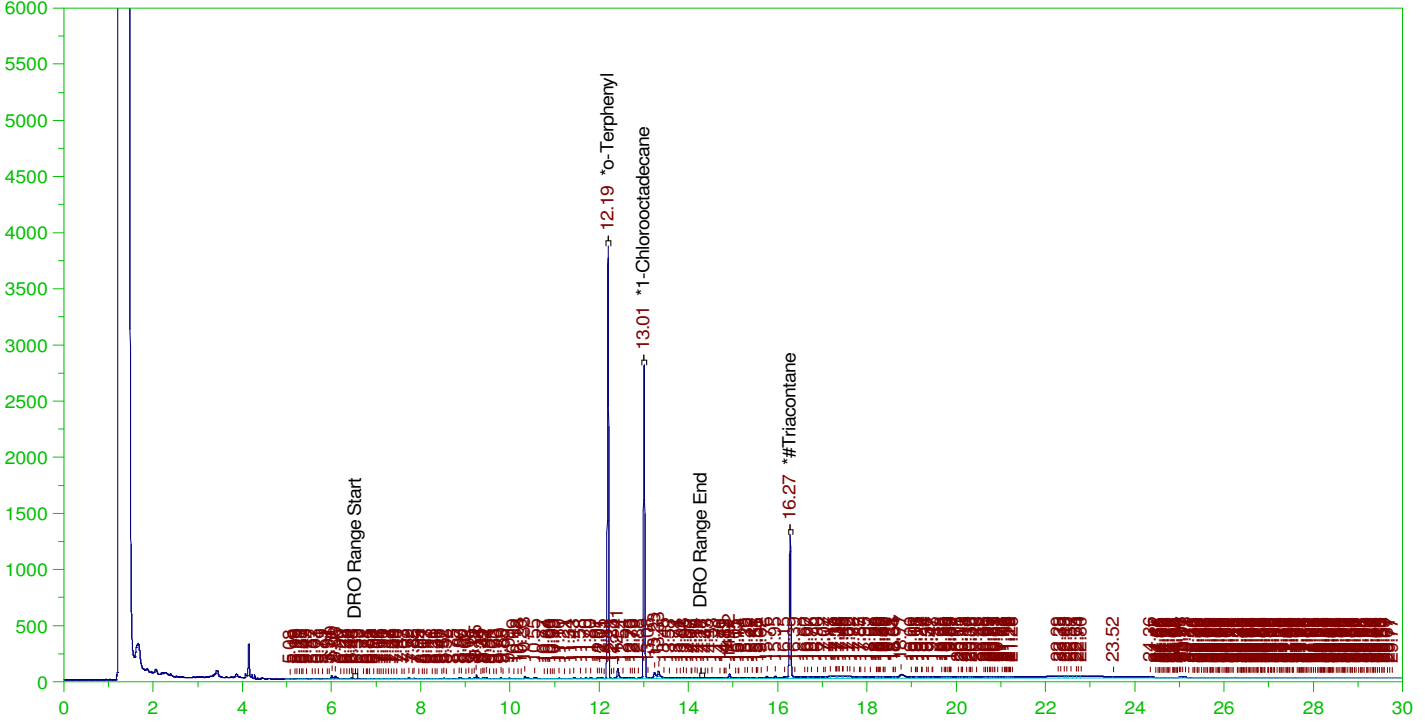
RRO Area:4444653 RRO AMOUNT: 0.1511854

ERH2240 (RHMW05)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0043.RAW

B21121981-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0043.RAW
Date & Time Acquired: 12/29/2021 7:04:49 PM
Method File: G:\Org\HP5\Methods\DR_8015-122843-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.194	.194	.196	100.8	-
*1-Chlorooctadecane	13.006	.194	.158	81.19	-
*#Triacontane	16.274	.194	.111	57.04	-

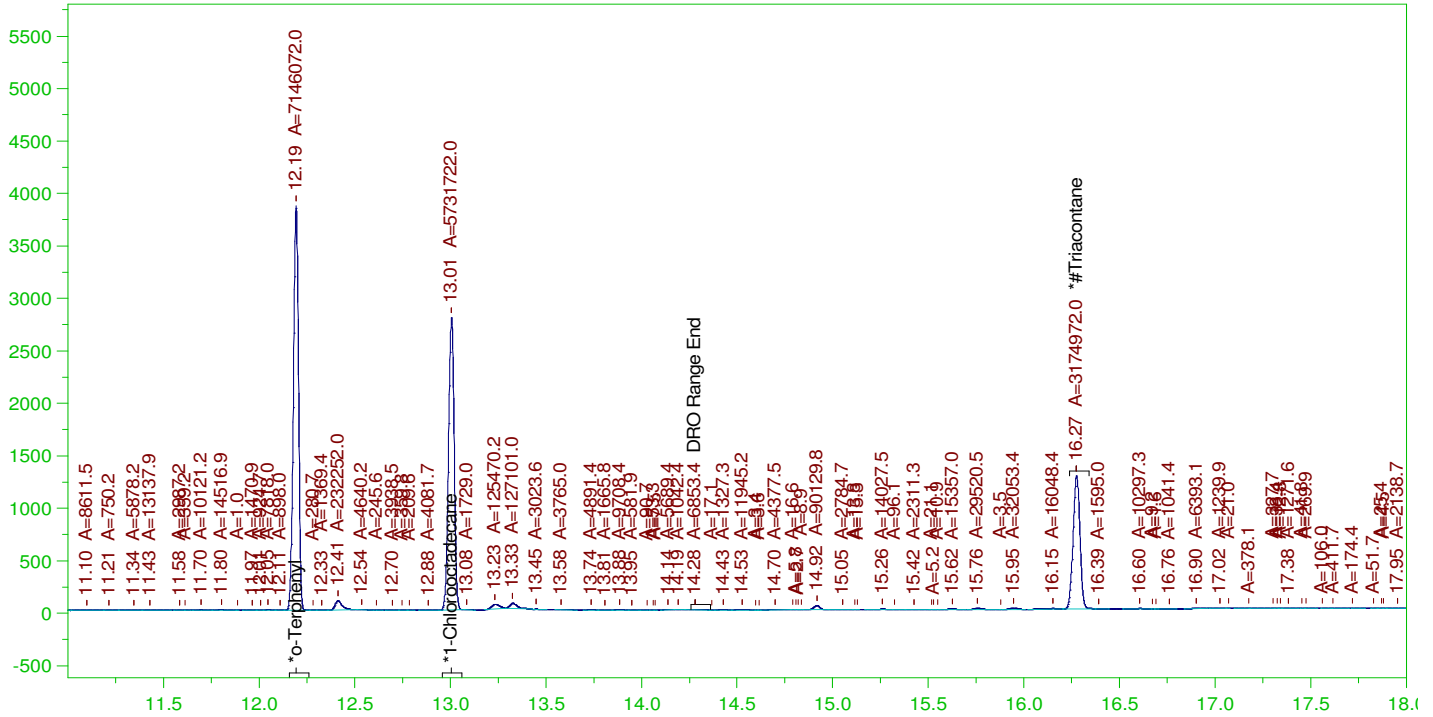
DRO Area: 1931941 DRO Amount: 5.982391E-02
TEH Area: 9565184 TEH Amount: 0.2961927

ERH2240 (RHMW05)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0043.RAW

B21121981-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0043.RAW
Date & Time Acquired: 12/29/2021 7:04:49 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

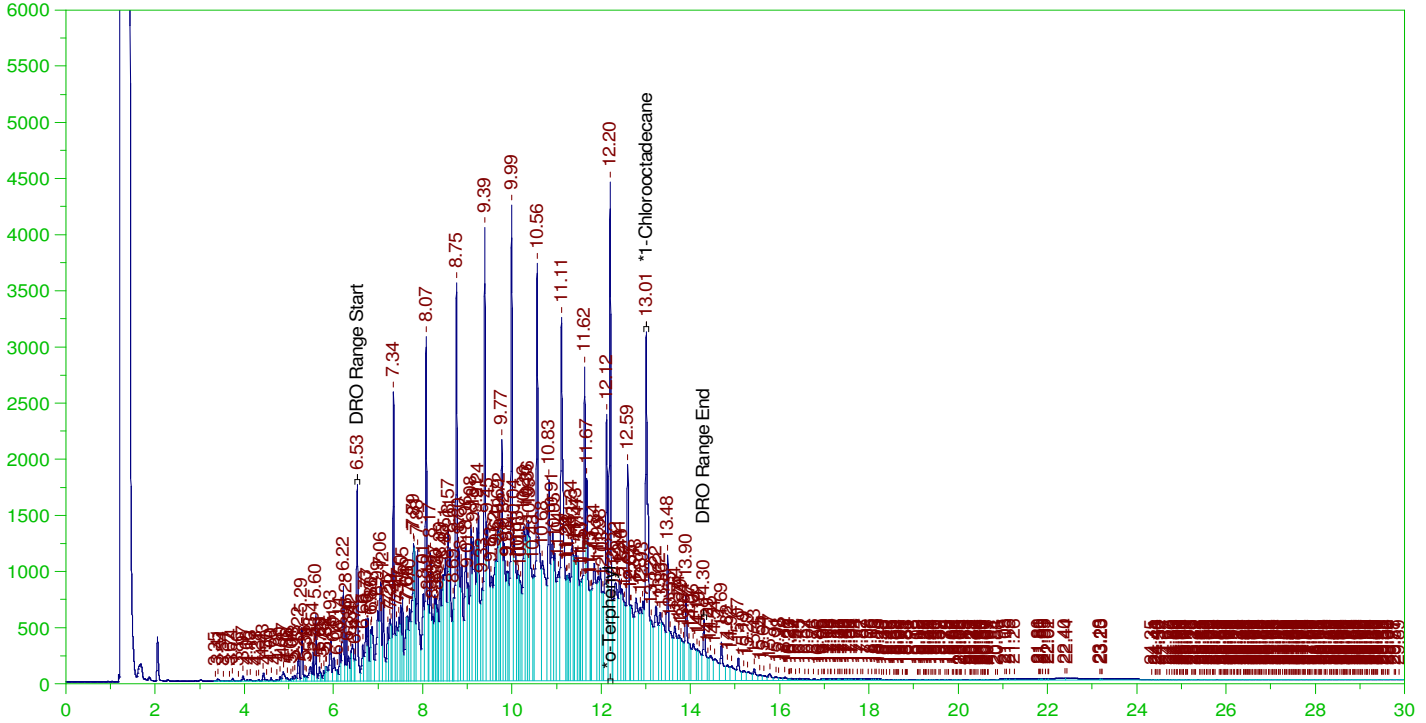
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.194	.194	.195	100.62	-
*1-Chlorooctadecane	13.006	.194	.157	80.71	-
*#Triacontane	16.274	.194	.107	54.87	-

DRO Area:1285117 DRO Amount: 3.979456E-02
TEH Area:3486827 TEH Amount: 0.1079721

Batch ID: 162502

B21121981-001DMS ;1228HP5 ,

G:\org\HP5\DAT\HP5122821_b\1228HP5.0044.RAW



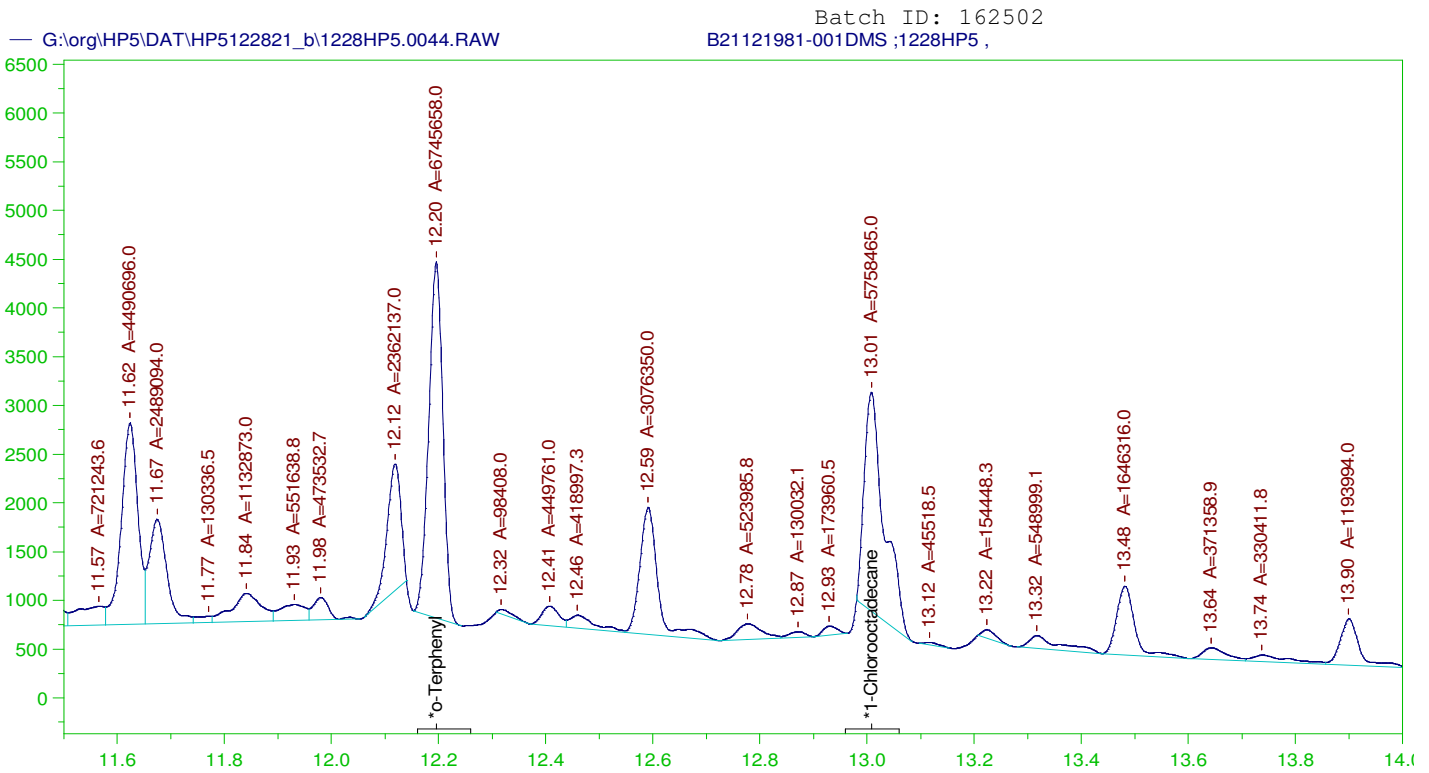
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-001DMS ;1228HP5 ,
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0044.RAW
 Date & Time Acquired: 12/29/2021 7:47:47 PM
 Method File: G:\Org\HP5\Methods\D3_8015-24-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.195	.192	.3	155.87	-
*1-Chlorooctadecane	13.008	.192	.32	166.16	-

DRO Area: 3.953142E+08 DRO Amount: 12.12348
 TEH Area: 4.262968E+08 TEH Amount: 13.07365



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-001DMS ;1228HP5 ,
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0044.RAW
 Date & Time Acquired: 12/29/2021 7:47:47 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

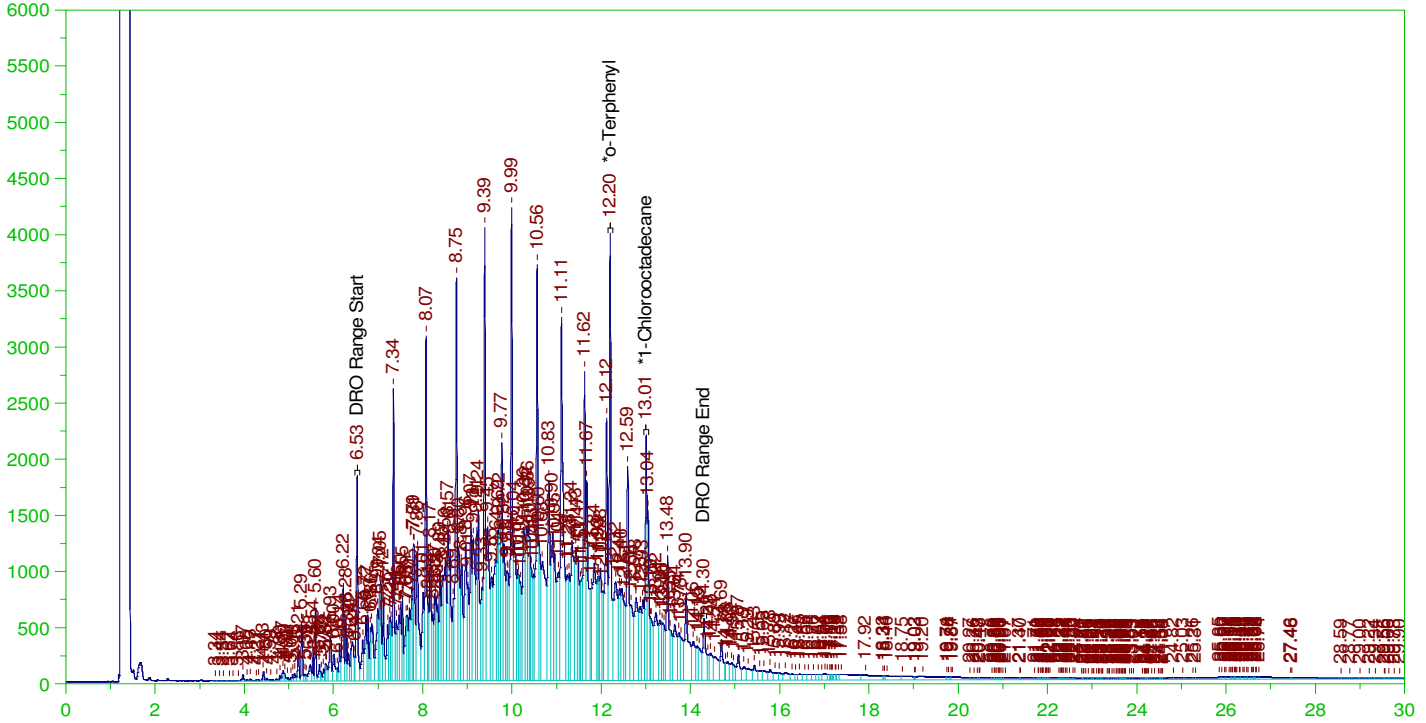
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.195	.192	.183	94.98
*1-Chlorooctadecane	13.008	.192	.156	81.08

DRO Area: 1.941556E+08 DRO Amount: 5.954356
 TEH Area: 2.080642E+08 TEH Amount: 6.380905

Batch ID: 162502

B21121981-001DMSD ;1228HP5 ,

G:\org\HP5\DAT\HP5122821_b\1228HP5.0045.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-001DMSD ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0045.RAW
Date & Time Acquired: 12/29/2021 8:30:48 PM
Method File: G:\Org\HP5\Methods\D3_8015-24-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

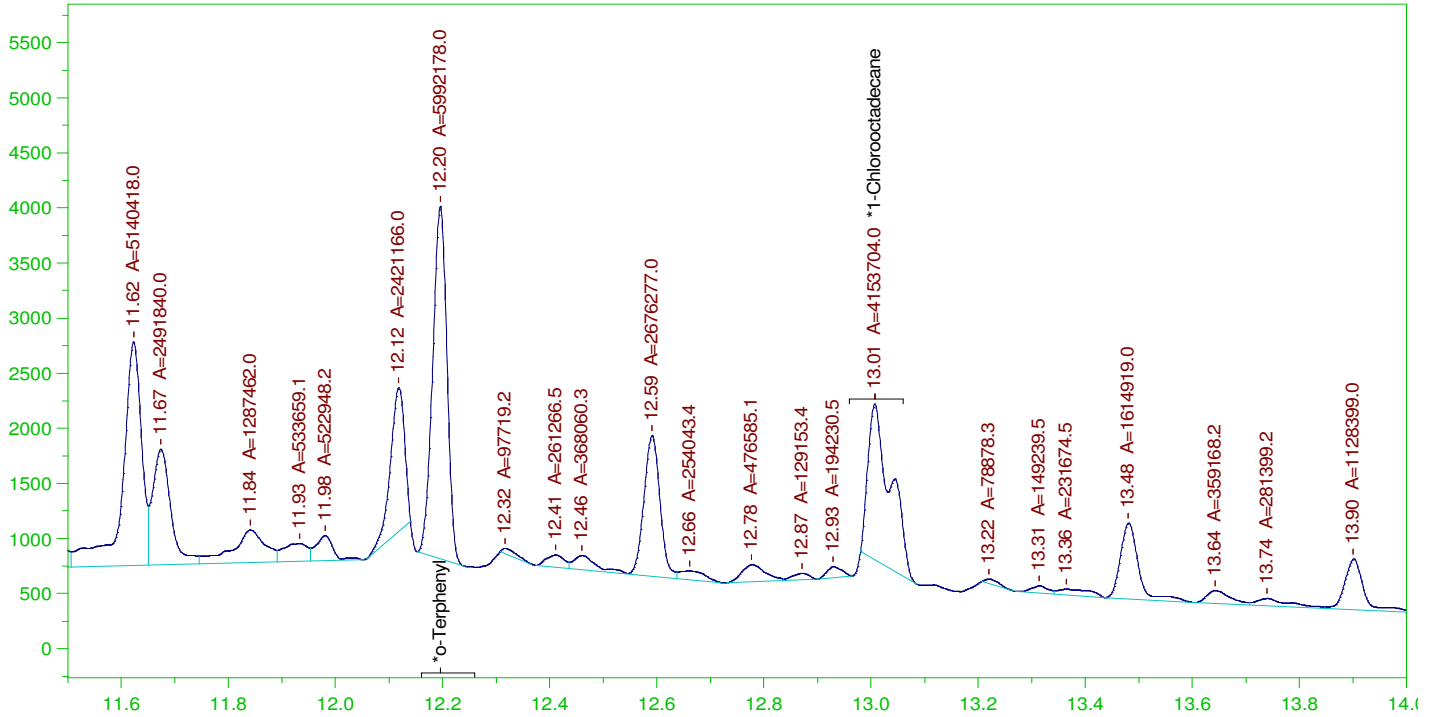
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.195	.192	.302	157.21	-
*1-Chlorooctadecane	13.007	.192	.158	82.24	-

DRO Area: 3.974609E+08 DRO Amount: 12.18931
TEH Area: 4.415743E+08 TEH Amount: 13.54218

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0045.RAW

B21121981-001DMSD ;1228HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

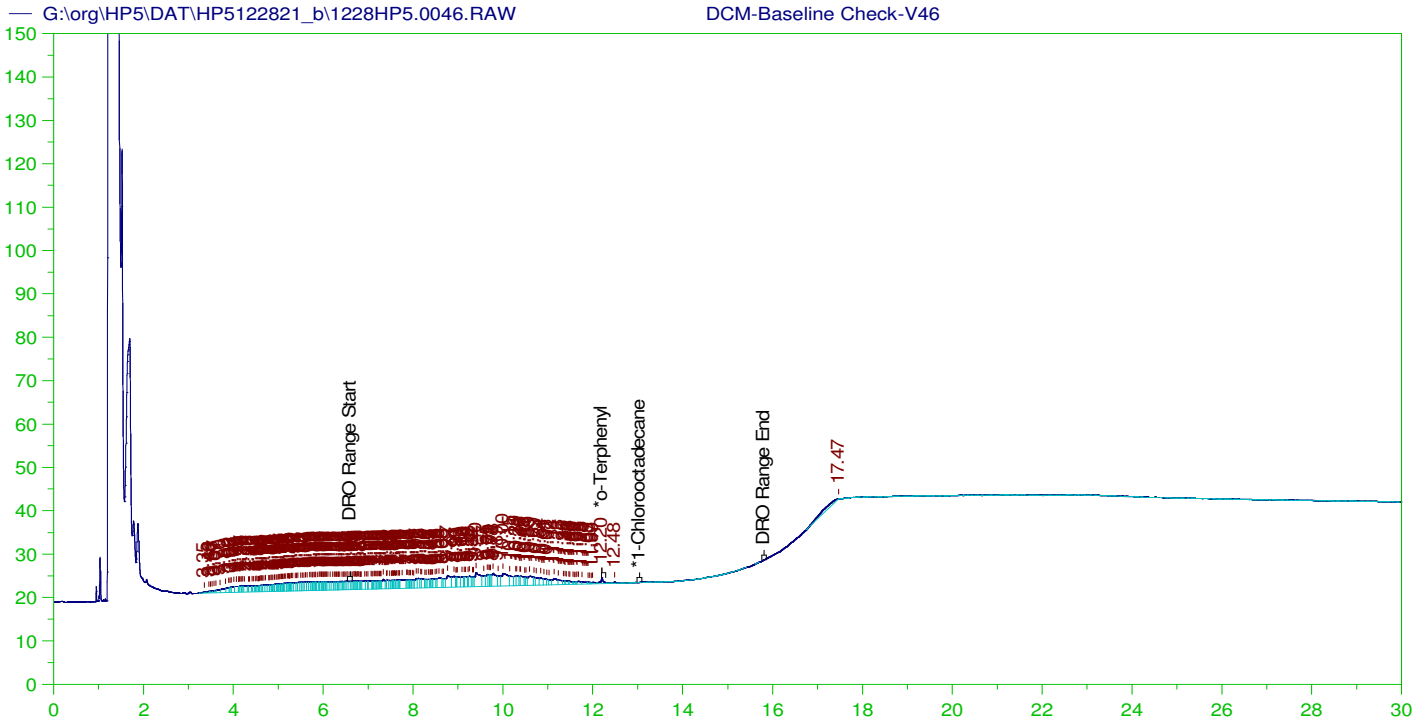
Sample Name: B21121981-001DMSD ;1228HP5 ,
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 Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.195	.192	.162	84.37
*1-Chlorooctadecane	13.007	.192	.112	58.49

DRO Area:1.875446E+08 DRO Amount: 5.751611
 TEH Area:2.012494E+08 TEH Amount: 6.171908



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V46
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0046.RAW
 Date & Time Acquired: 12/29/2021 9:13:55 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.2	200.	.162	.08	-
*1-Chlorooctadecane	29.938	200.	.	.	-

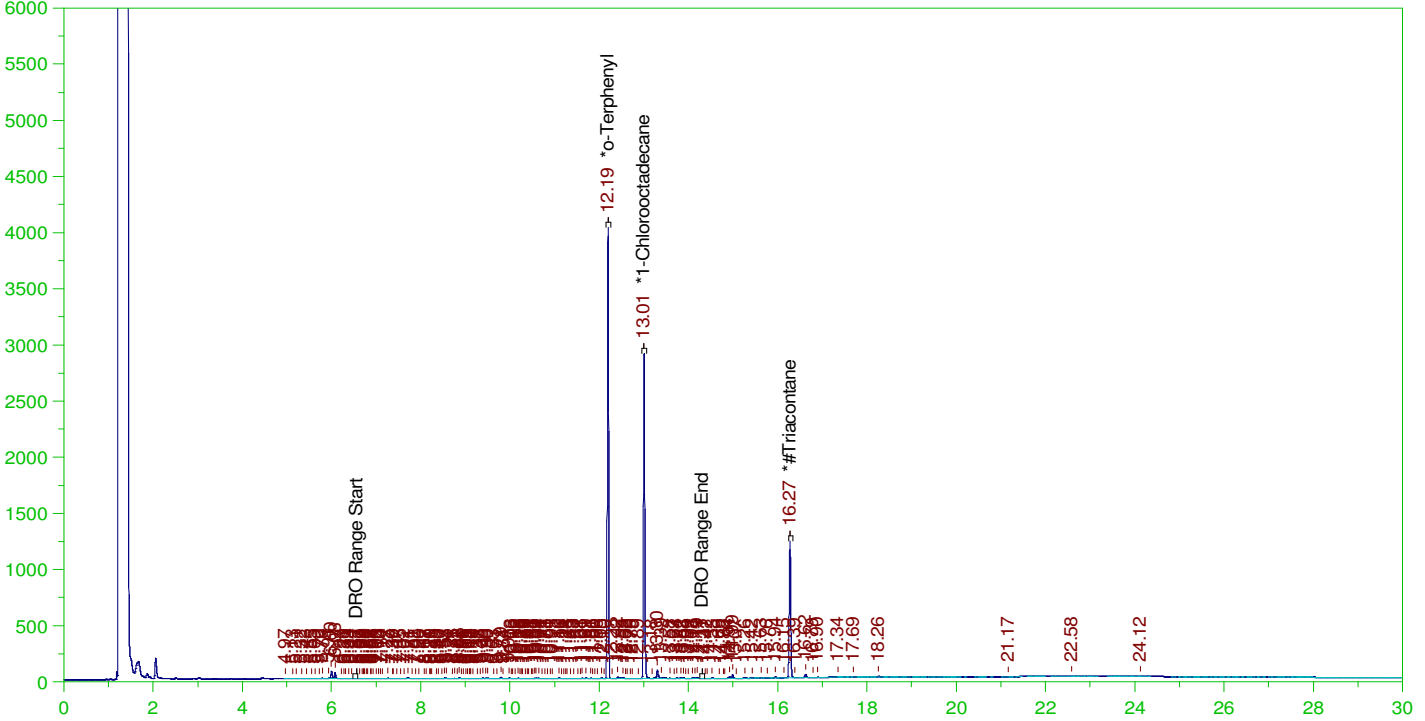
DRO Area:610902.4 DRO Amount: 19.48454
 TEH Area:933927.2 TEH Amount: 29.78731

ERH2255 (RHMW11 Zone5)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0047.RAW

B21121979-003D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-003D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0047.RAW
Date & Time Acquired: 12/29/2021 9:57:00 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.19	.199	104.28	-
*1-Chlorooctadecane	13.006	.19	.161	84.78	-
*#Triacontane	16.272	.19	.103	54.08	-

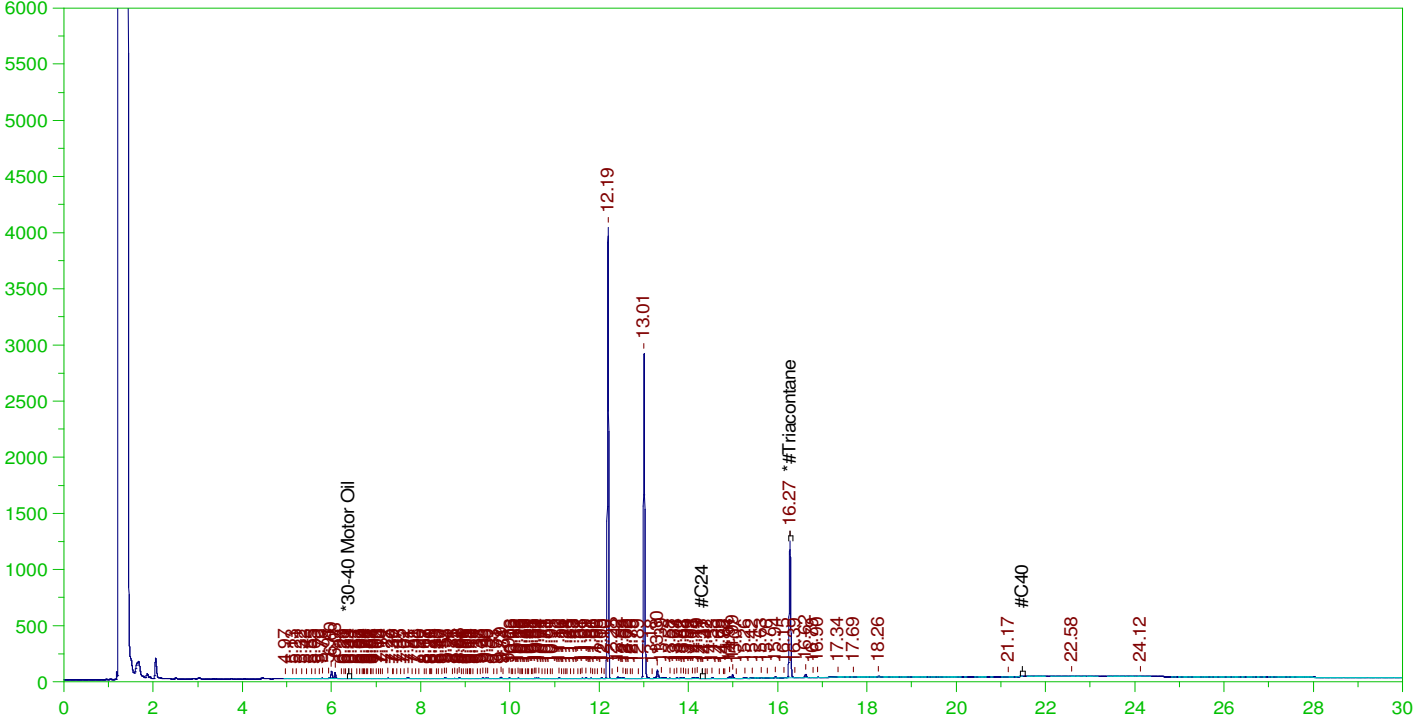
DRO Area:1085897 DRO Amount: 3.298507E-02
TEH Area:1830544 TEH Amount: 5.560441E-02

ERH2255 (RHMW11 Zone5)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0047.RAW

B21121979-003D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121979-003D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0047.RAW
Date & Time Acquired: 12/29/2021 9:57:00 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.272	.476	.103	21.63

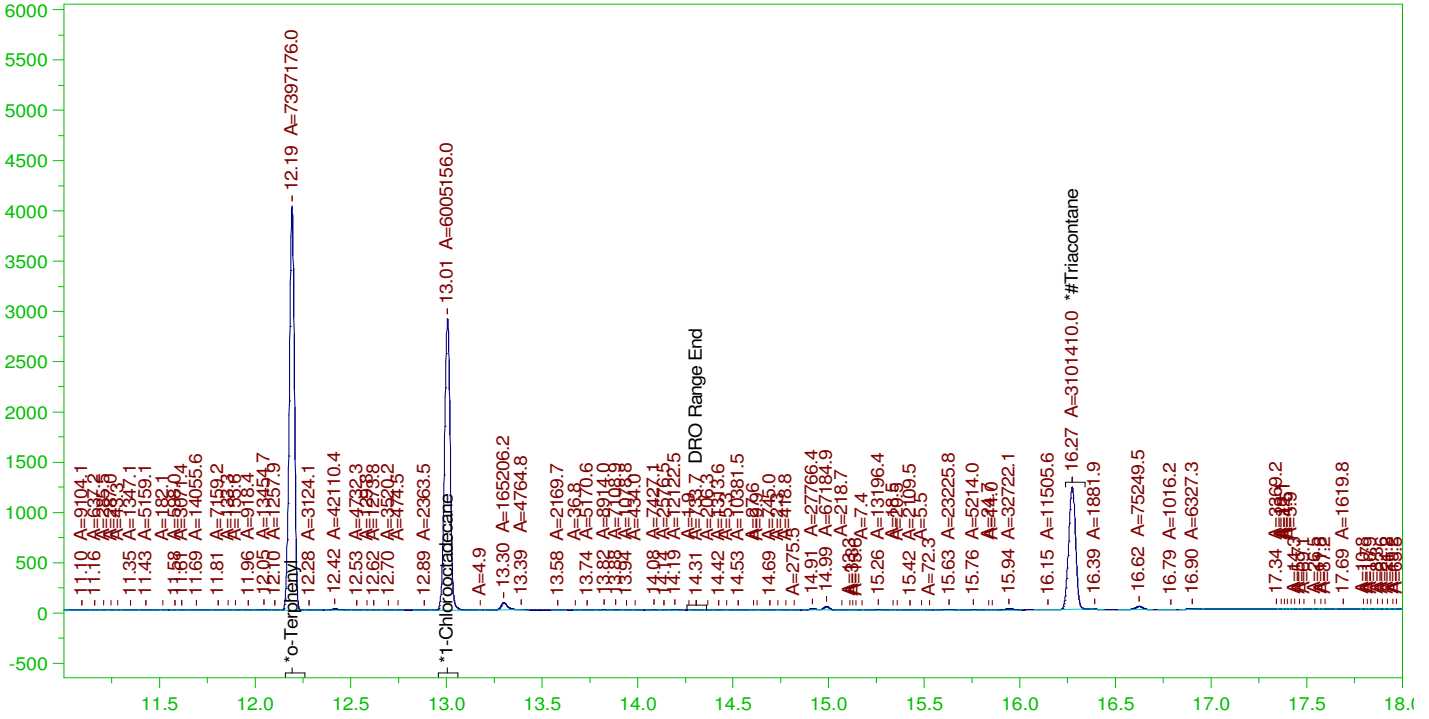
RRO Area:371030.2 RRO AMOUNT: 1.238025E-02

ERH2255 (RHMW11 Zone5)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0047.RAW

B21121979-003D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-003D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0047.RAW
Date & Time Acquired: 12/29/2021 9:57:00 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.19	.198	104.16	-
*1-Chlorooctadecane	13.006	.19	.161	84.56	-
*#Triacontane	16.272	.19	.102	53.6	-

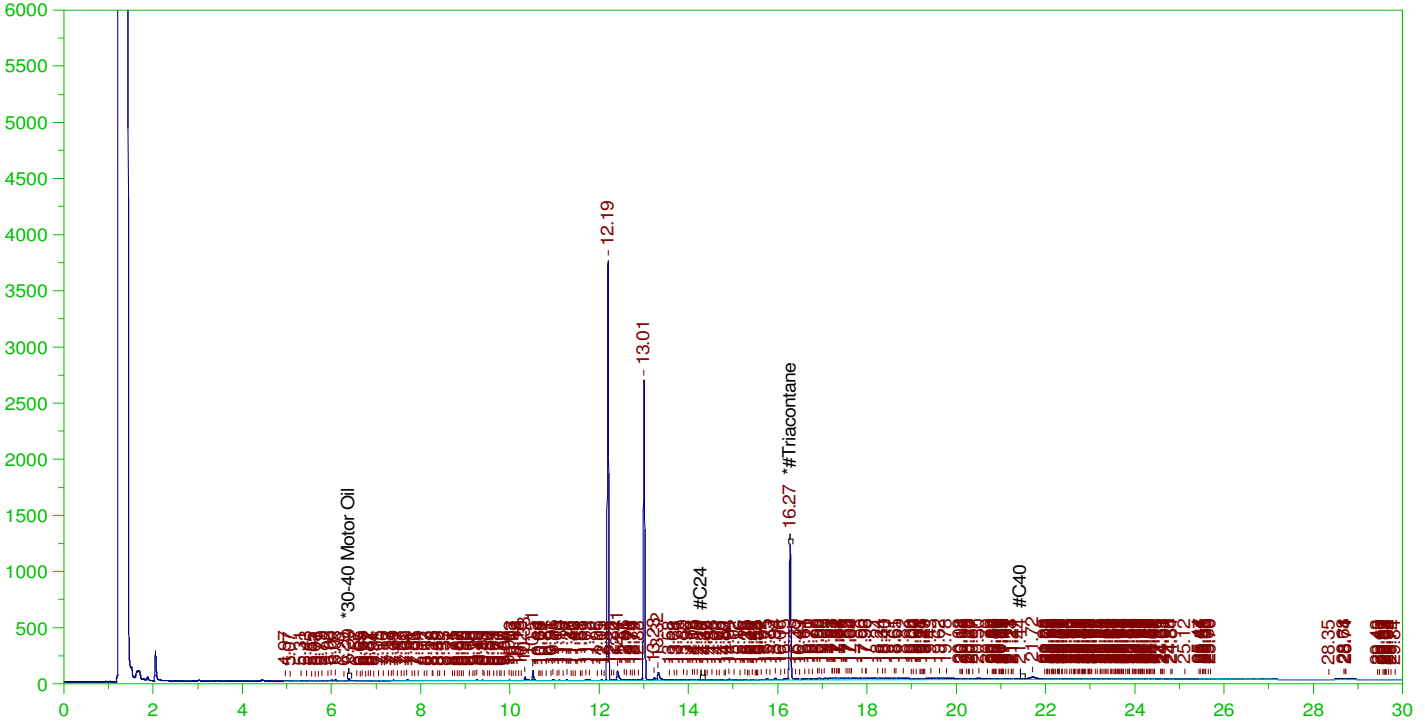
DRO Area:787361.3 DRO Amount: 2.391679E-02
TEH Area:1790403 TEH Amount: 5.438509E-02

ERH2244 (RHMW08)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0048.RAW

B21121979-001D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121979-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0048.RAW
Date & Time Acquired: 12/29/2021 10:40:00 PM
Method File: G:\Org\HP5\Methods\D3_OROS-122848-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.274	.481	.104	21.54

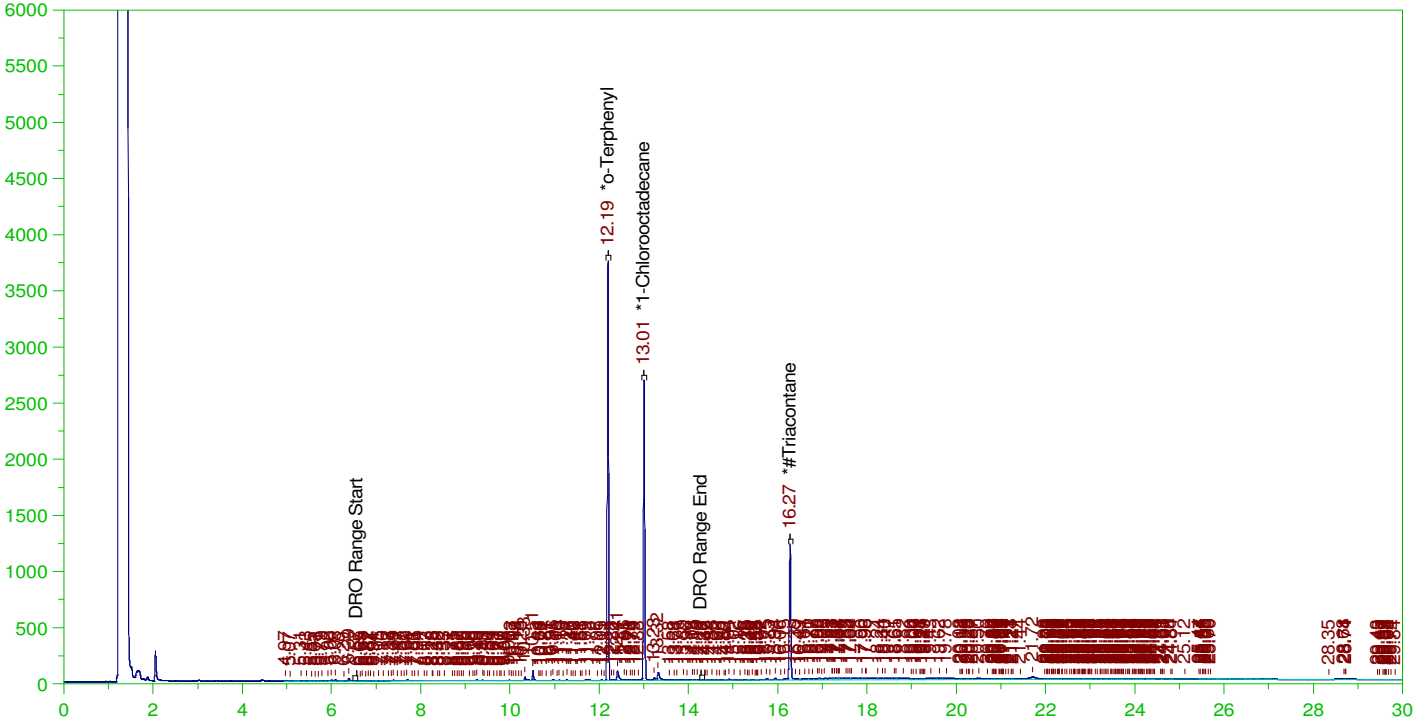
RRO Area:4277033 RRO AMOUNT: 0.1440849

ERH2244 (RHMW08)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0048.RAW

Batch ID: 162502

B21121979-001D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0048.RAW
Date & Time Acquired: 12/29/2021 10:40:00 PM
Method File: G:\Org\HP5\Methods\DR_8015-122848-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.192	.192	.19	98.59	-
*1-Chlorooctadecane	13.005	.192	.152	78.95	-
*#Triacontane	16.274	.192	.104	53.84	-

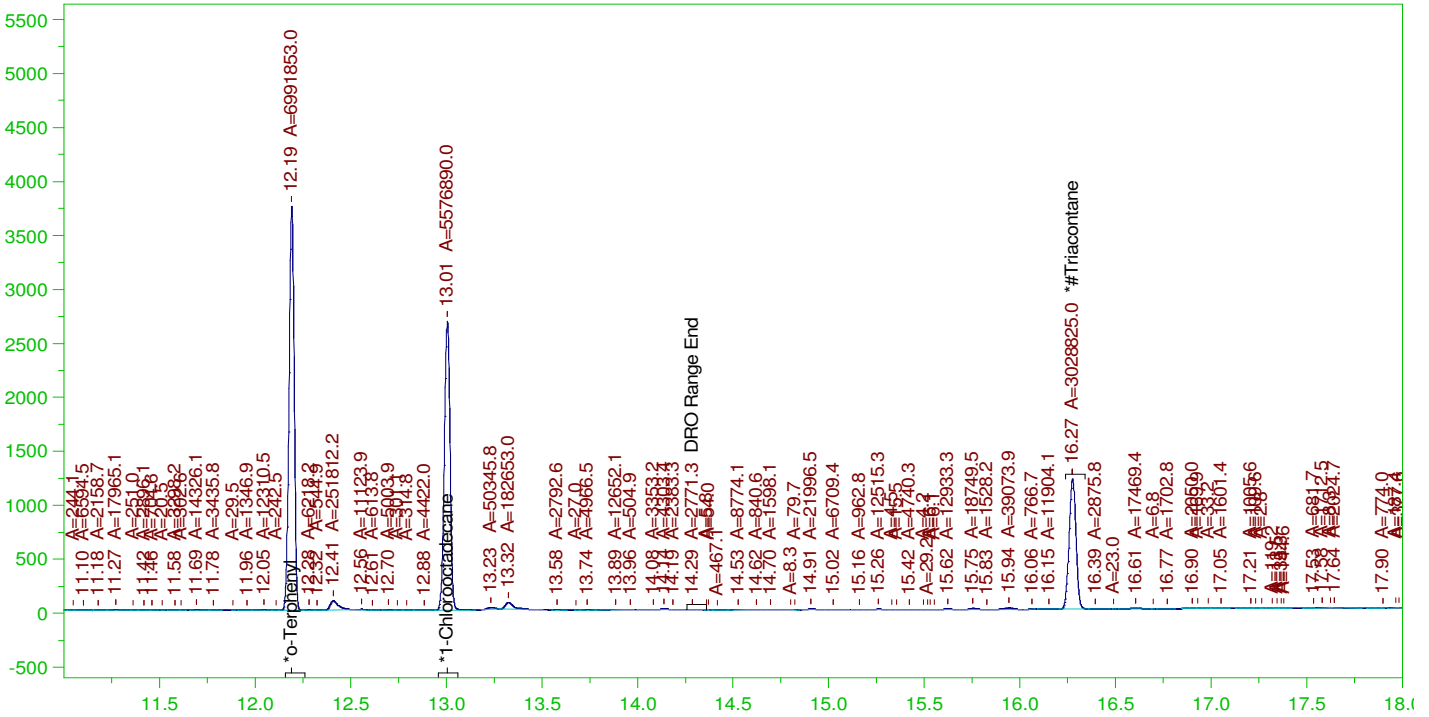
DRO Area:1770048 DRO Amount: 5.428377E-02
TEH Area:7310808 TEH Amount: 0.2242076

ERH2244 (RHMW08)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0048.RAW

B21121979-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

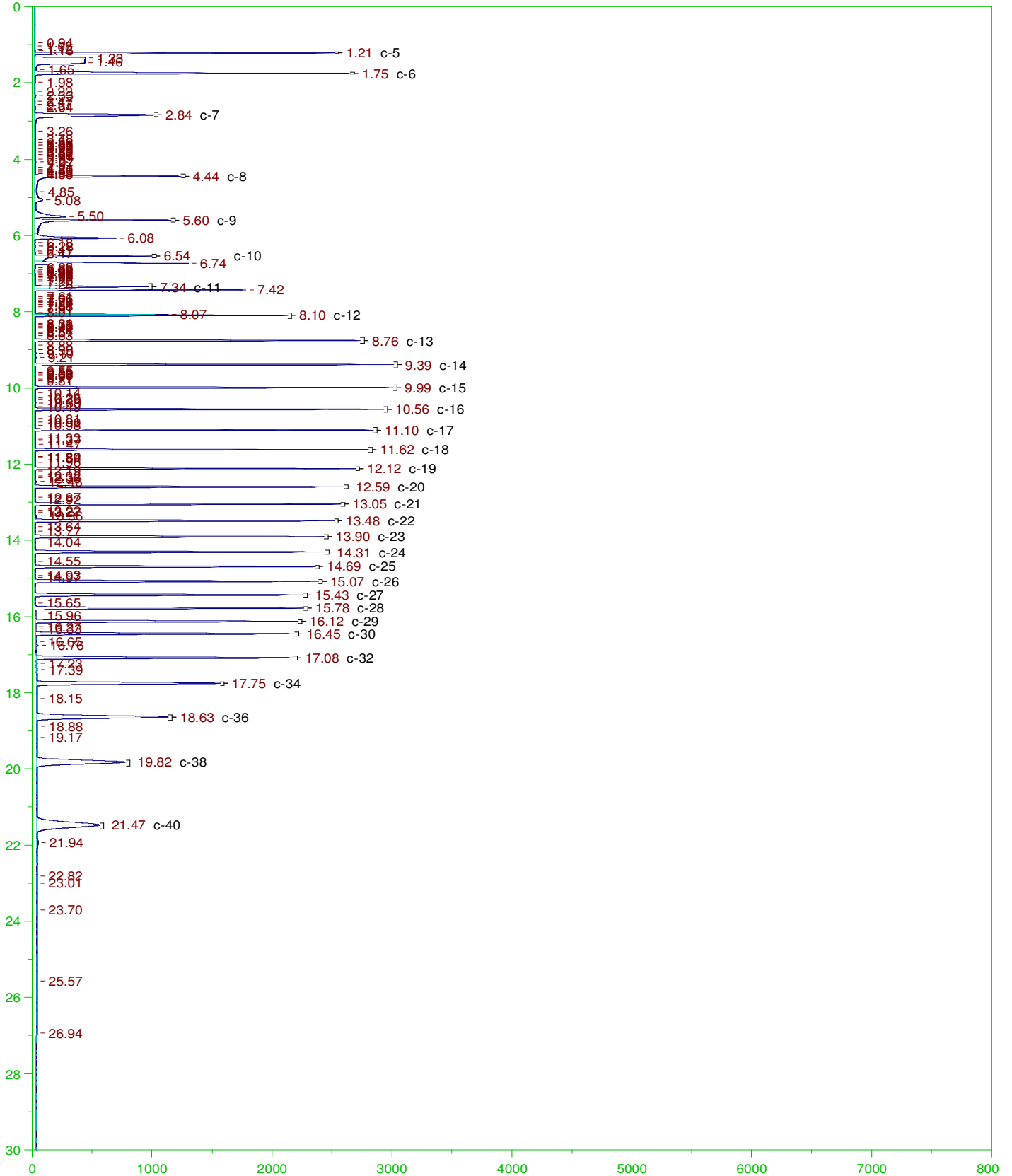
Sample Name: B21121979-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0048.RAW
Date & Time Acquired: 12/29/2021 10:40:00 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

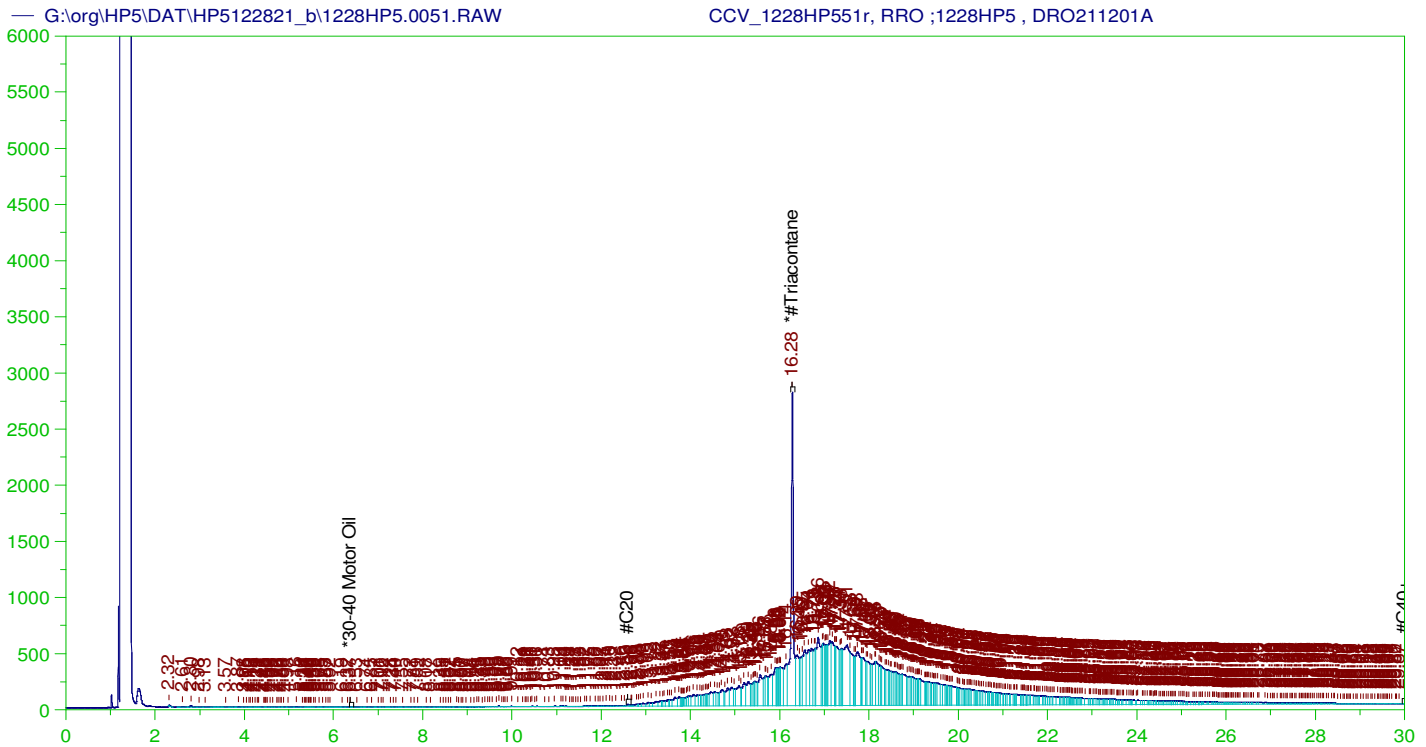
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.192	.192	.189	98.45	-
*1-Chlorooctadecane	13.005	.192	.151	78.53	-
*#Triacontane	16.274	.192	.101	52.35	-

DRO Area: 1216365 DRO Amount: 3.730342E-02
TEH Area: 2143718 TEH Amount: 6.574346E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP551r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0051.RAW
 Date & Time Acquired: 12/30/2021 12:49:23 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.282	500.	358.27	71.65	-

~~RRO~~ TEH (Oil Range) Area:1.337041E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4684.402

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0051.RAW

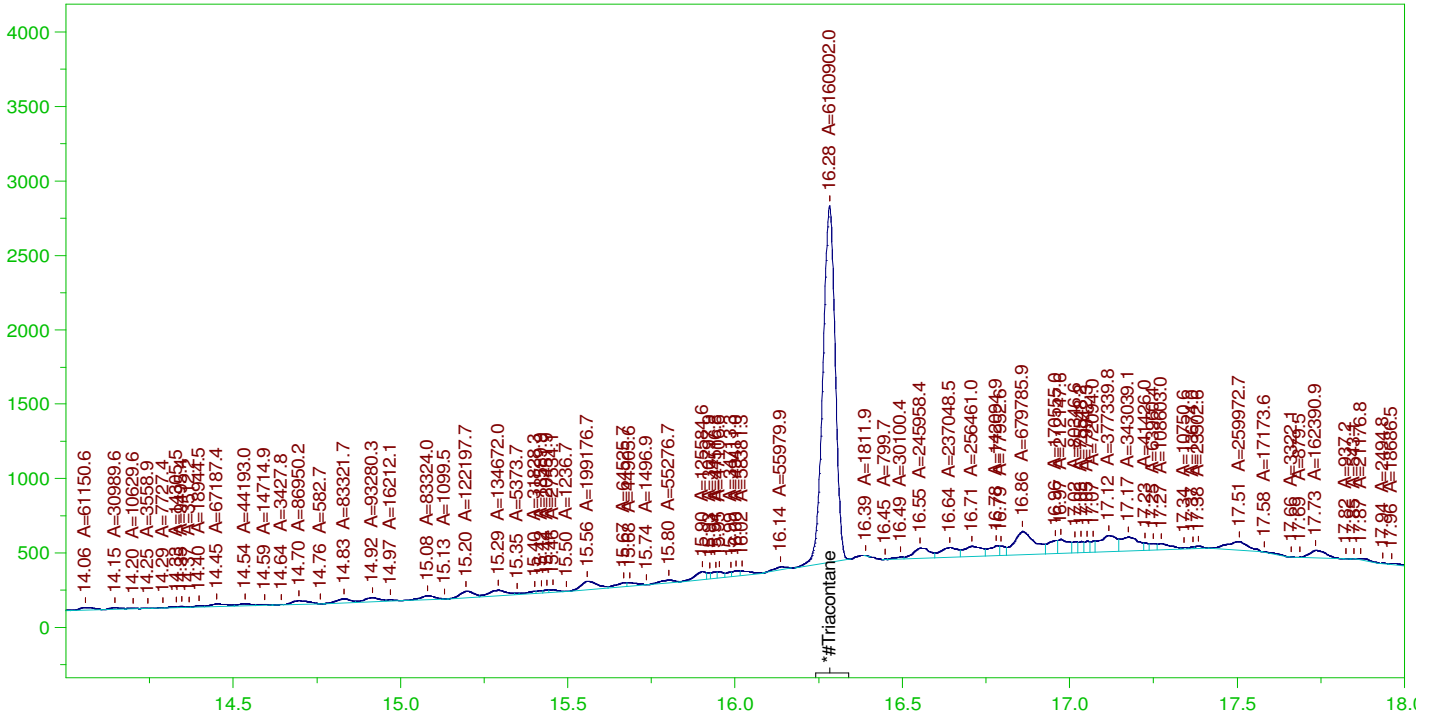
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.021	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.282	200.	358.27	179.13	75-125

AMN 01/24/2022

G:\org\HP5\DAT\HP5122821_b\1228HP5.0051.RAW

CCV_1228HP551r, RRO ;1228HP5 , DRO211201A



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP551r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0051.RAW
 Date & Time Acquired: 12/30/2021 12:49:23 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.282	500.	212.958	42.59

RRO Area:6379990 RRO AMOUNT: 223.5267

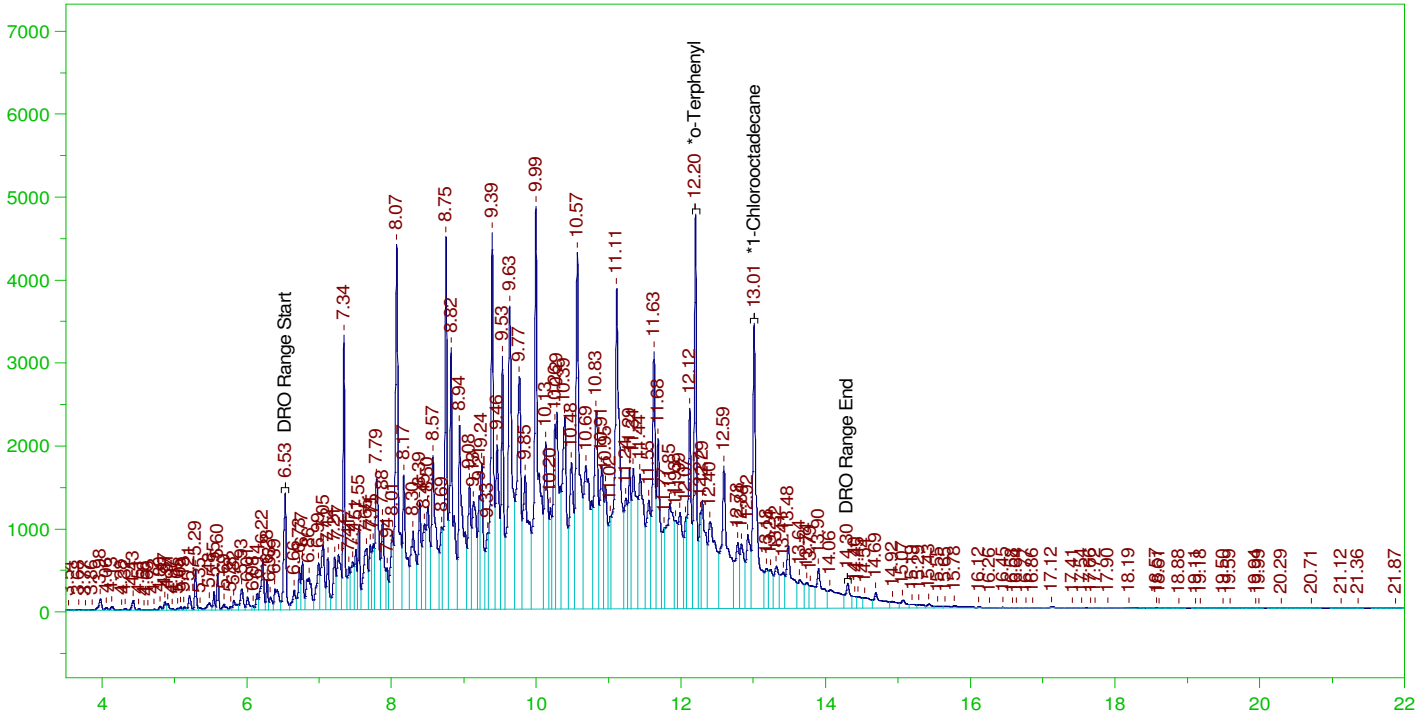
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0051.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.021	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.282	200.	212.958	106.48	75-125

G:\org\HP5\DAT\HP5122821_b\1228HP5.0052.RAW

CCV_1228HP536r, DRO ;1228HP5 , DRO211229A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP536r, DRO ;1228HP5 , DRO211229A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0052.RAW
 Date & Time Acquired: 12/30/2021 1:32:34 AM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

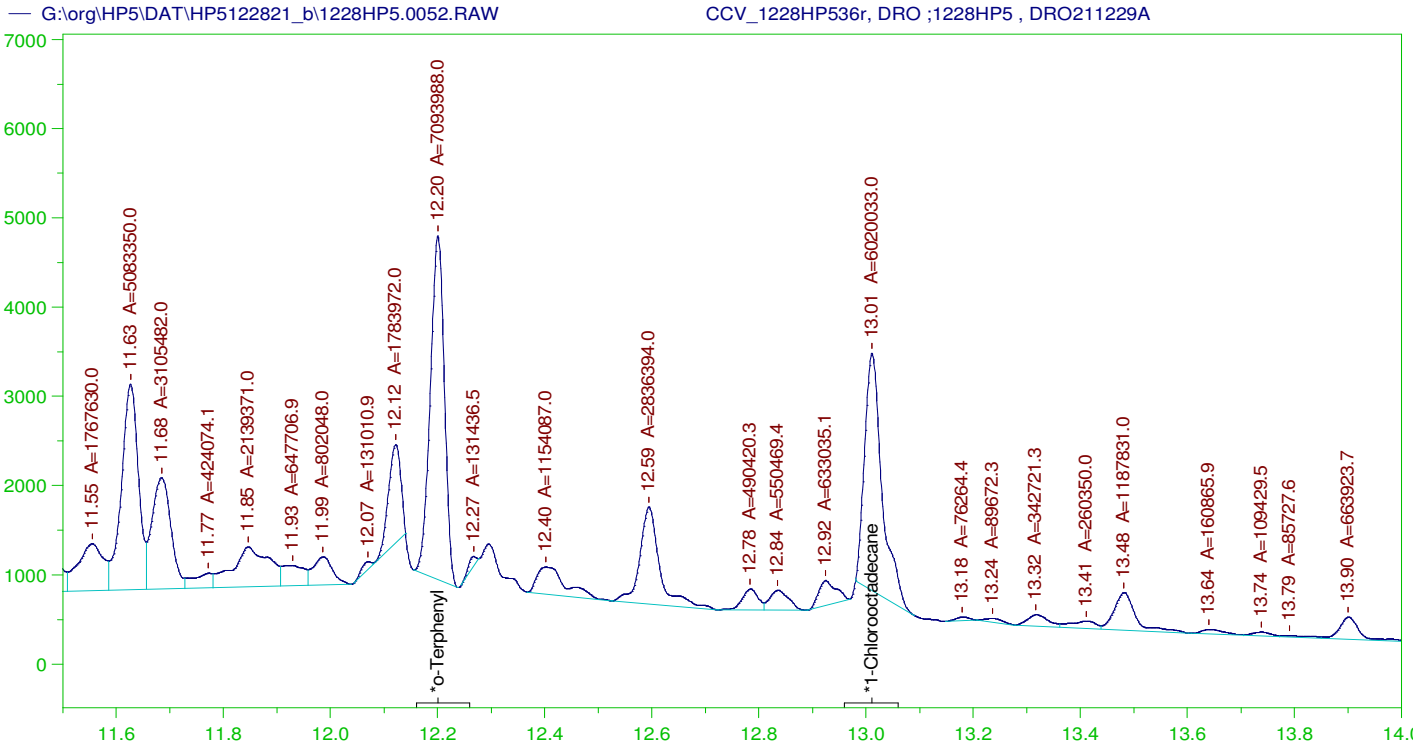
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.2	200.	326.875	163.44
*1-Chlorooctadecane	13.011	200.	356.634	178.32

DRO Area: 4.690012E+08 DRO Amount: 14958.64
 TEH Area: 4.86349E+08 TEH Amount: 15511.94

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0052.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15511.94	103.41	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.2	200.	326.875	163.44	85-115
*1-Chlorooctadecane	13.011	200.	356.634	178.32	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP536r, DRO ;1228HP5 , DRO211229A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0052.RAW
 Date & Time Acquired: 12/30/2021 1:32:34 AM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

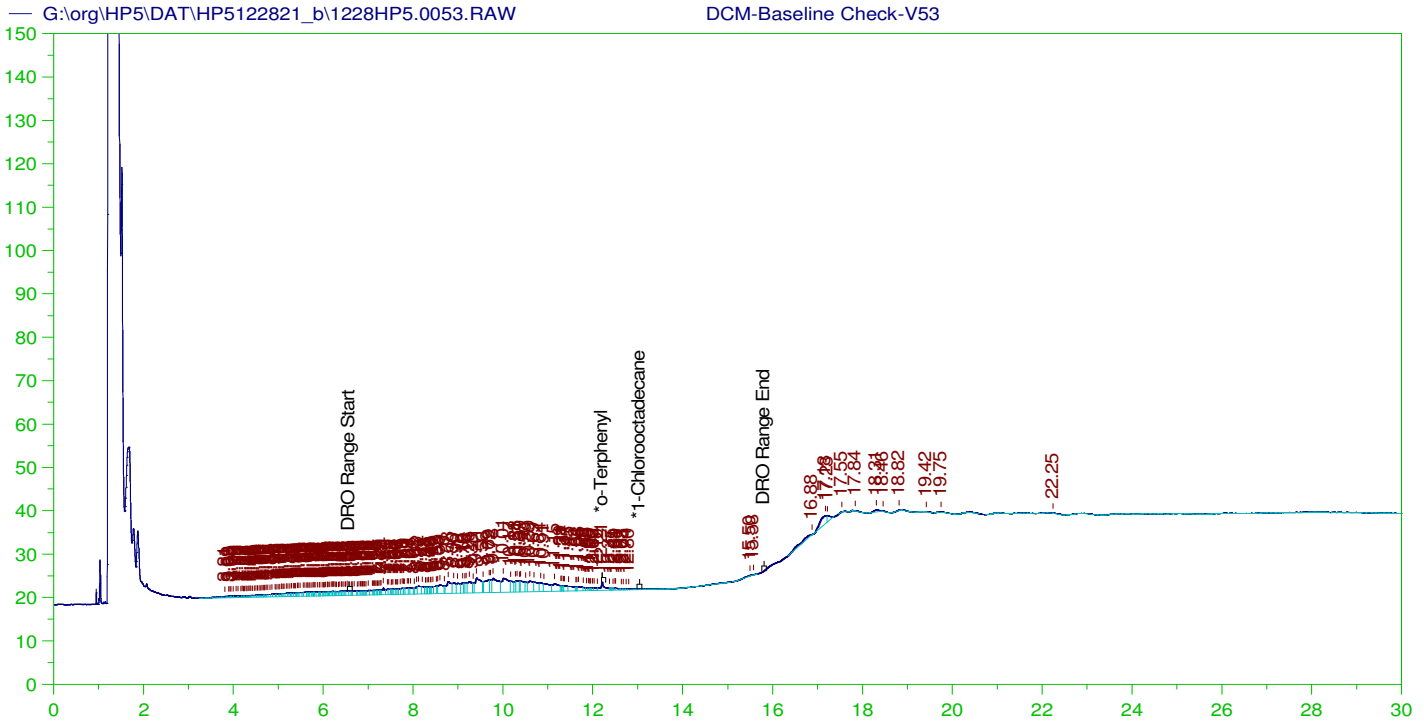
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.2	200.	199.779	99.89
*1-Chlorooctadecane	13.011	200.	169.534	84.77

DRO Area: 2.624867E+08 DRO Amount: 8371.931
 TEH Area: 2.733825E+08 TEH Amount: 8719.448

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0052.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8719.45	58.13	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.2	200.	199.779	99.89	85-115
*1-Chlorooctadecane	13.011	200.	169.534	84.77	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V53
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0053.RAW
 Date & Time Acquired: 12/30/2021 2:15:42 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.205	200.	.314	.16	-
*1-Chlorooctadecane	29.982	200.	.	.	-

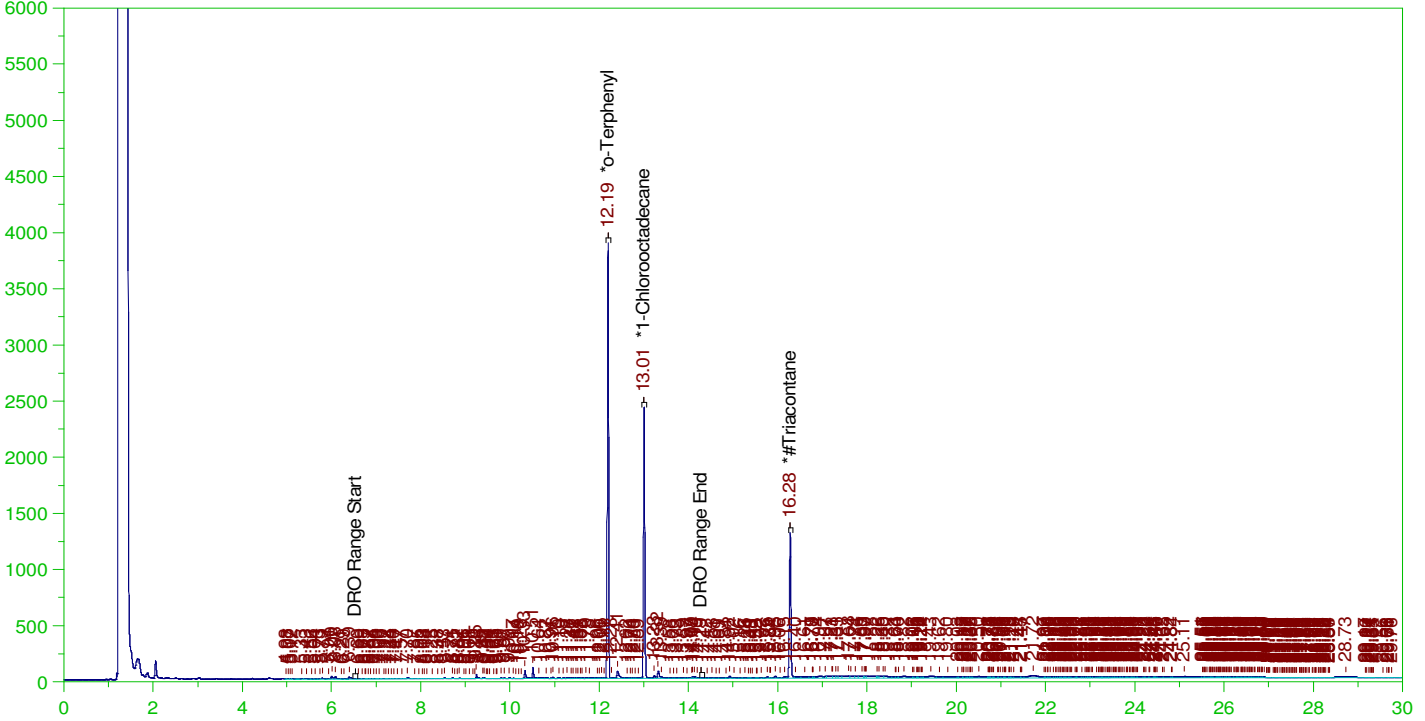
DRO Area:586890.2 DRO Amount: 18.71867
 TEH Area:764135.8 TEH Amount: 24.37187

ERH2245 (RHMW08)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0054.RAW

B21121979-002B ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-002B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0054.RAW
Date & Time Acquired: 12/30/2021 2:58:46 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.192	.196	101.93	-
*1-Chlorooctadecane	13.006	.192	.137	71.19	-
*Triacontane	16.276	.192	.113	58.52	-

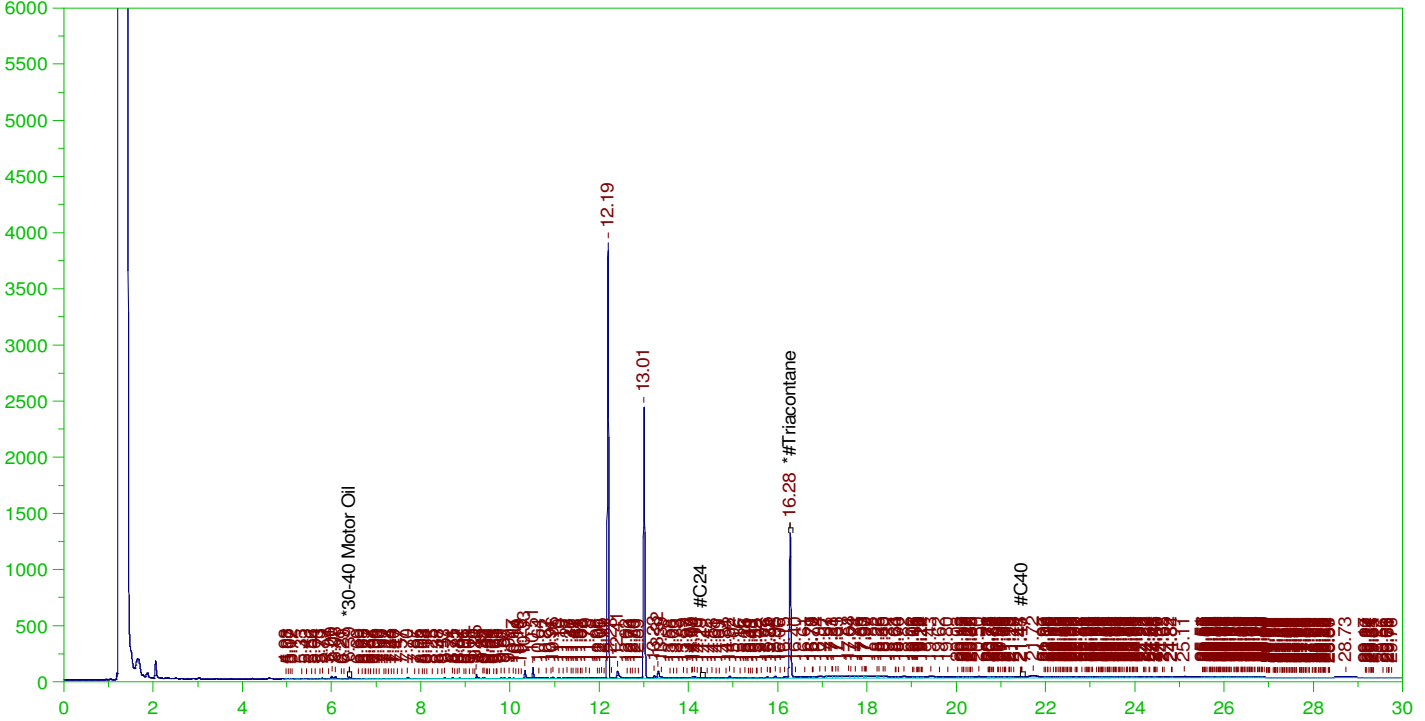
DRO Area:2264808 DRO Amount: 6.945705E-02
TEH Area:1.009046E+07 TEH Amount: 0.3094539

ERH2245 (RHMW08)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0054.RAW

B21121979-002B ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121979-002B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0054.RAW
Date & Time Acquired: 12/30/2021 2:58:46 AM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.276	.481	.113	23.41

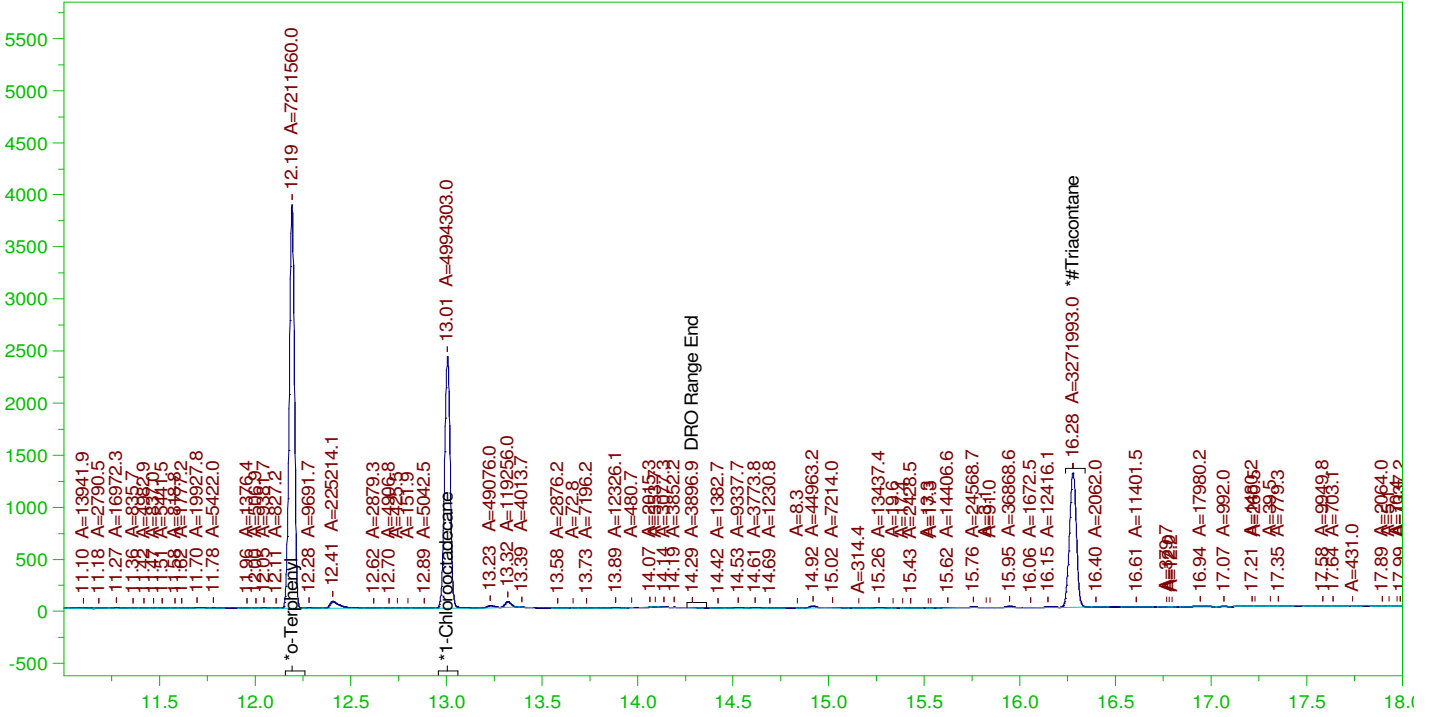
RRO Area:4797736 RRO AMOUNT: 0.1616264

ERH2245 (RHMW08)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0054.RAW

B21121979-002B ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-002B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0054.RAW
Date & Time Acquired: 12/30/2021 2:58:46 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.192	.195	101.54	-
*1-Chlorooctadecane	13.006	.192	.135	70.32	-
*#Triacontane	16.276	.192	.109	56.55	-

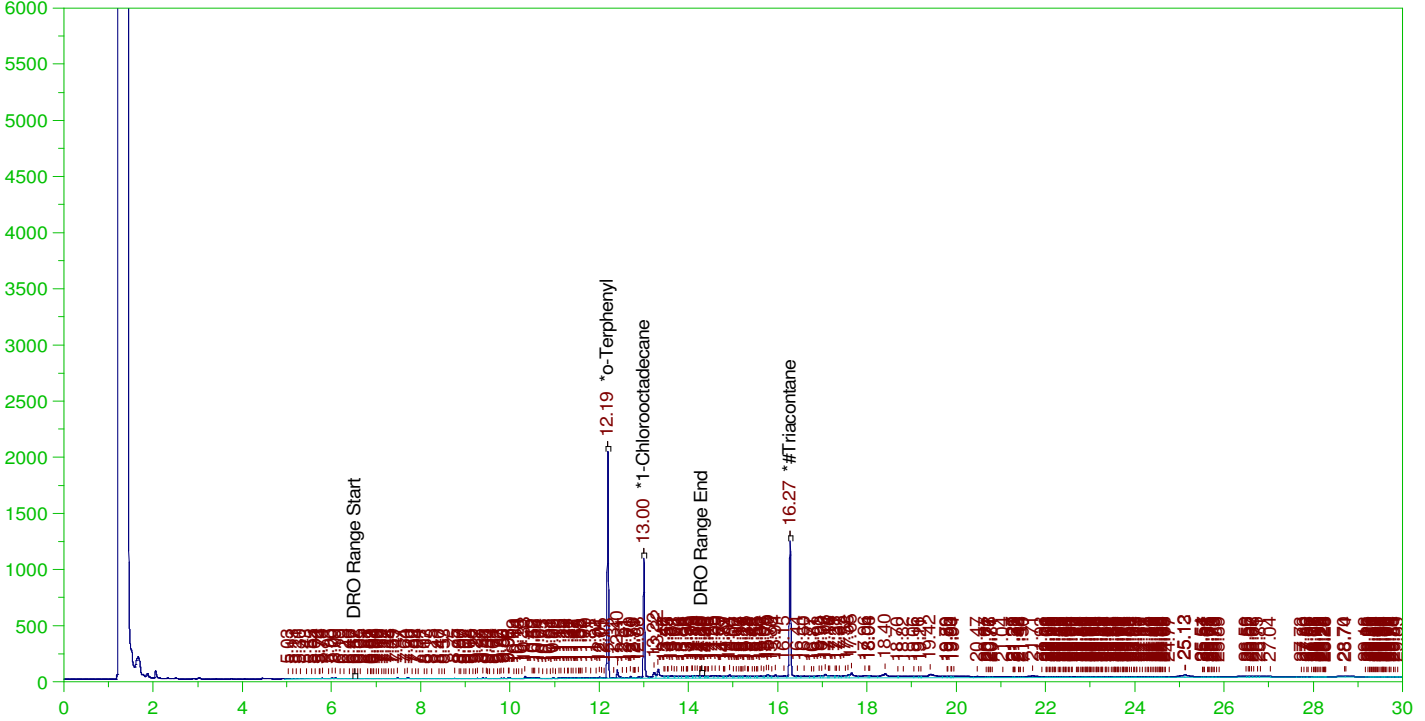
DRO Area:1316481 DRO Amount: 4.037379E-02
TEH Area:2406055 TEH Amount: 7.378879E-02

ERH2238 (RHMW03)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0055.RAW

Batch ID: 162502

B21121965-001D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121965-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0055.RAW
Date & Time Acquired: 12/30/2021 3:41:56 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.19	.2	.105	52.73	-
*1-Chlorooctadecane	13.002	.2	.066	32.89	-
*#Triacontane	16.274	.2	.113	56.29	-

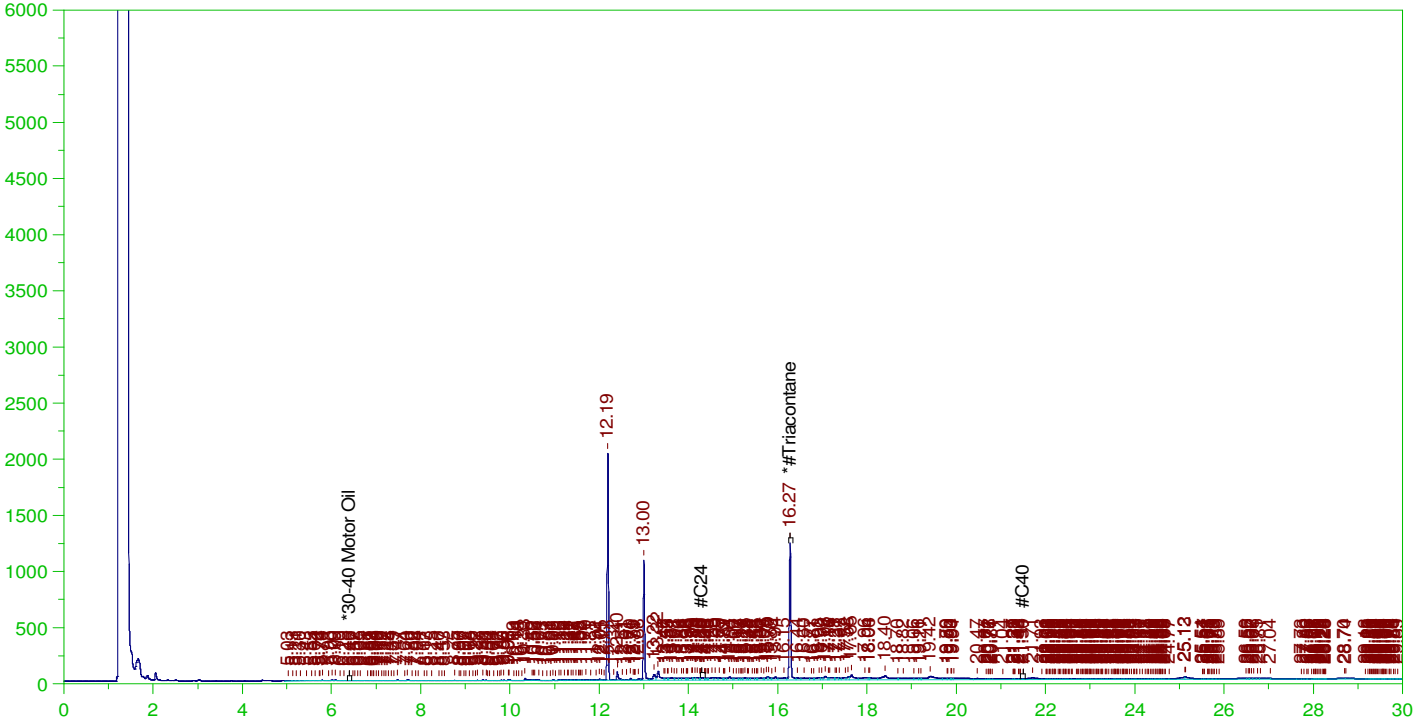
DRO Area:2996021 DRO Amount: 9.555712E-02
TEH Area:1.322932E+07 TEH Amount: 0.4219448

ERH2238 (RHMW03)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0055.RAW

B21121965-001D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121965-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0055.RAW
Date & Time Acquired: 12/30/2021 3:41:56 AM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.274	.5	.113	22.52

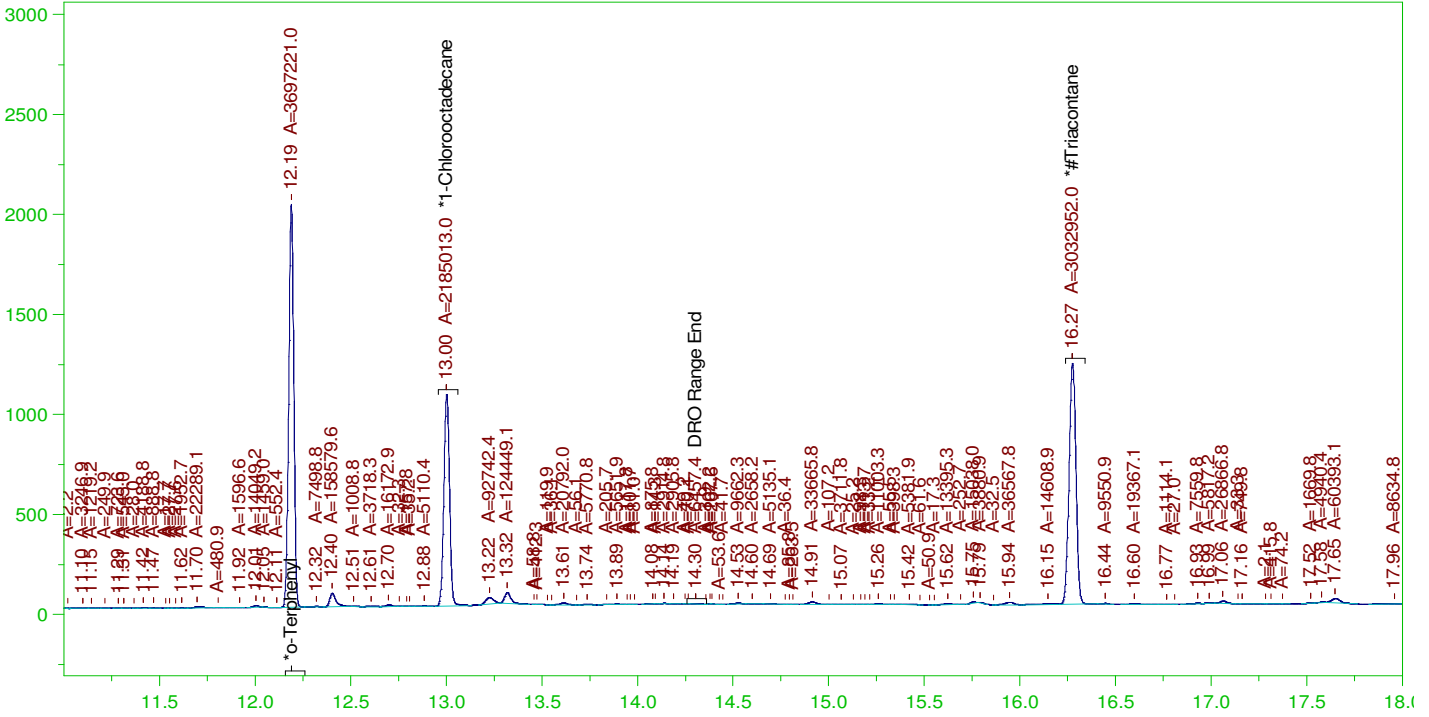
RRO Area:7226144 RRO AMOUNT: 0.2531722

ERH2238 (RHMW03)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0055.RAW

B21121965-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

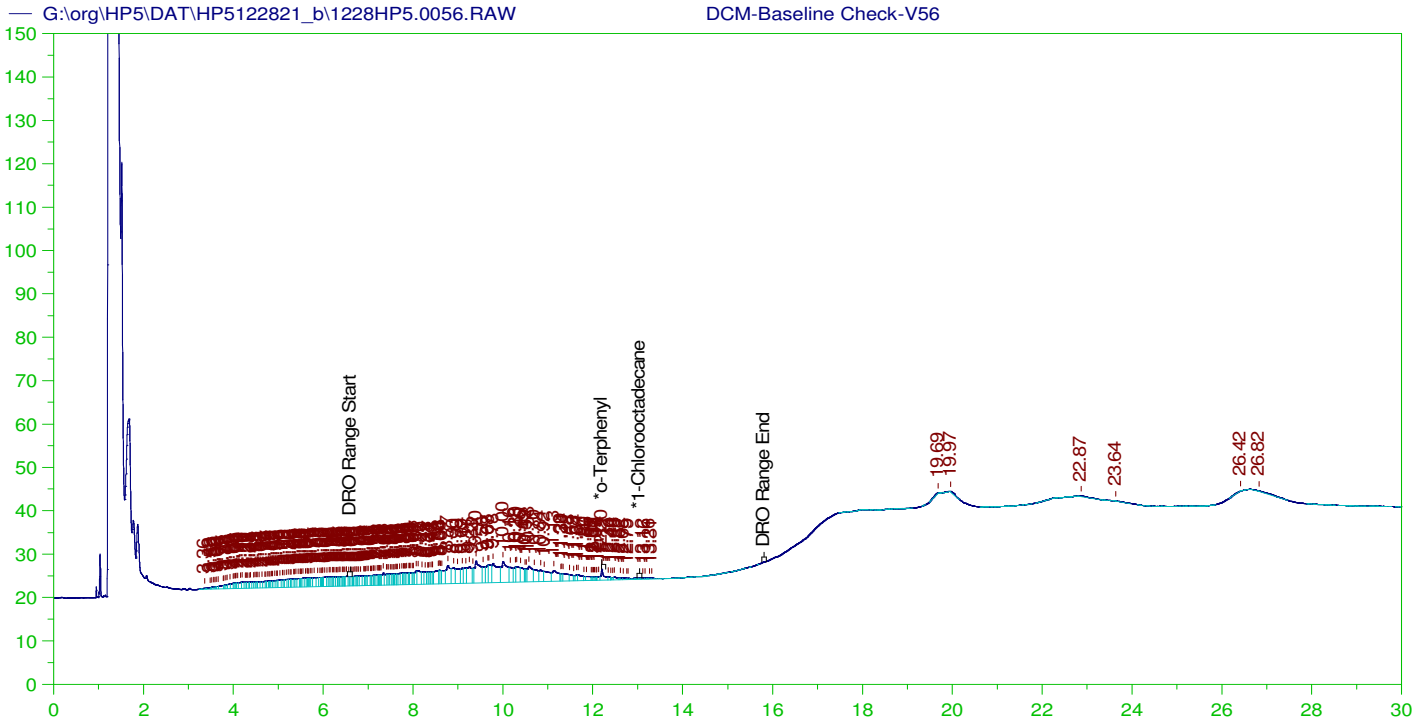
Sample Name: B21121965-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0055.RAW
Date & Time Acquired: 12/30/2021 3:41:56 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.19	.2	.104	52.06	-
*1-Chlorooctadecane	13.002	.2	.062	30.77	-
*#Triacontane	16.274	.2	.105	52.42	-

DRO Area: 899444 DRO Amount: 2.868748E-02
TEH Area: 1965420 TEH Amount: 6.268644E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V56
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0056.RAW
 Date & Time Acquired: 12/30/2021 4:25:10 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.2	200.	.343	.17
*1-Chlorooctadecane	29.983	200.	.	.

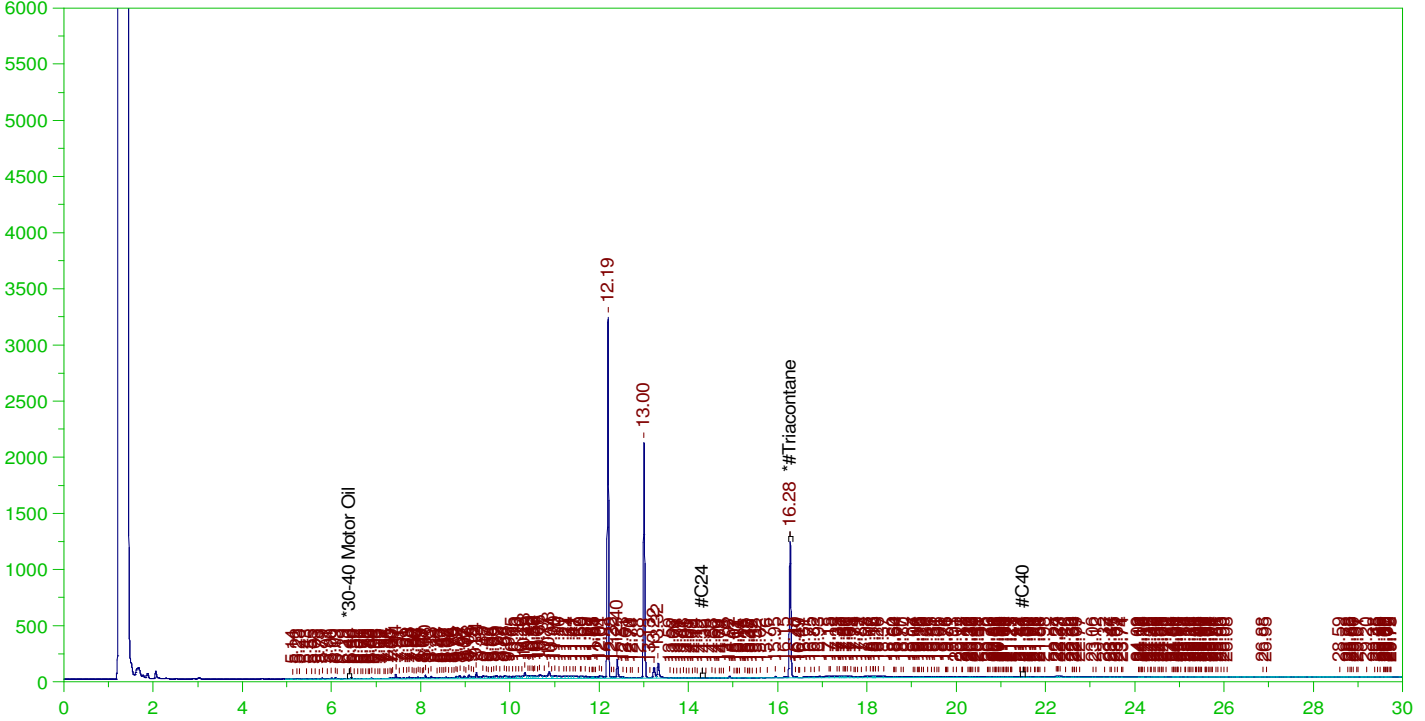
DRO Area: 910868.4 DRO Amount: 29.05186
 TEH Area: 1225214 TEH Amount: 39.0778

ERH2269 (Sump Adit3 Loc-1)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0057.RAW

B21121967-001D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121967-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0057.RAW
Date & Time Acquired: 12/30/2021 5:08:25 AM
Method File: G:\Org\HP5\Methods\D3_OROS-122843-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.276	.49	.107	21.88

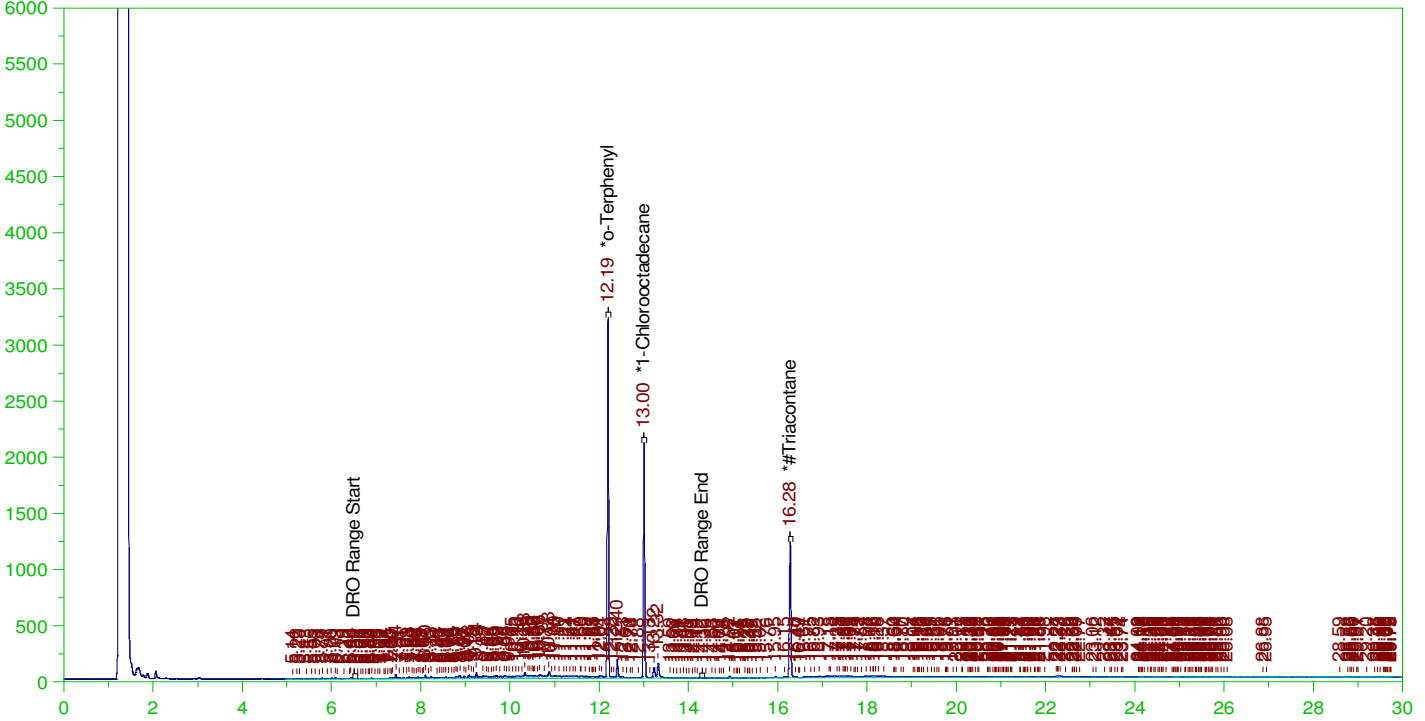
RRO Area:3101080 RRO AMOUNT: 0.1065178

ERH2269 (Sump Adit3 Loc-1)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0057.RAW

B21121967-001D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121967-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0057.RAW
Date & Time Acquired: 12/30/2021 5:08:25 AM
Method File: G:\Org\HP5\Methods\DR_8015-122843-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.192	.196	.165	84.21	-
*1-Chlorooctadecane	13.005	.196	.121	61.96	-
*#Triacontane	16.276	.196	.107	54.69	-

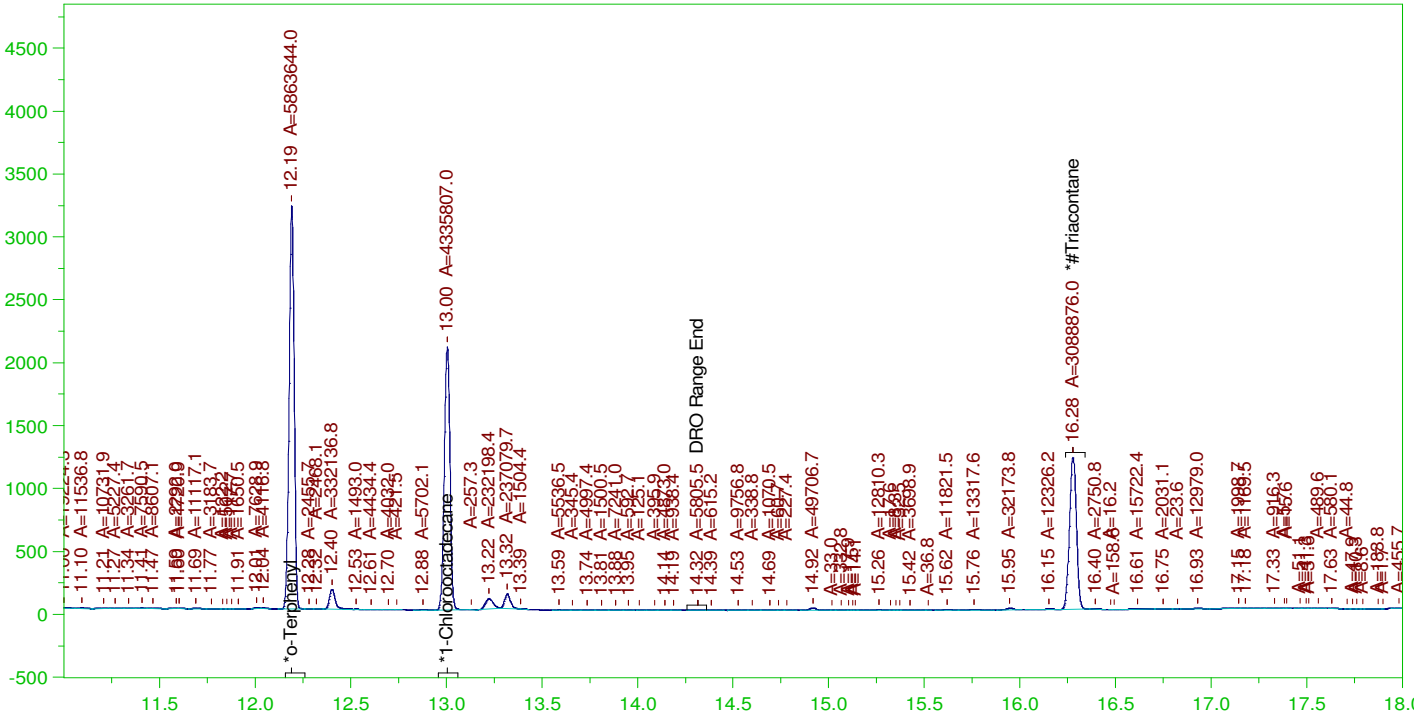
DRO Area:6785022 DRO Amount: 0.2121628
TEH Area:1.097503E+07 TEH Amount: 0.3431815

ERH2269 (Sump Adit3 Loc-1)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0057.RAW

B21121967-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121967-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0057.RAW
Date & Time Acquired: 12/30/2021 5:08:25 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.192	.196	.162	82.57
*1-Chlorooctadecane	13.005	.196	.12	61.05
*#Triacontane	16.276	.196	.105	53.39

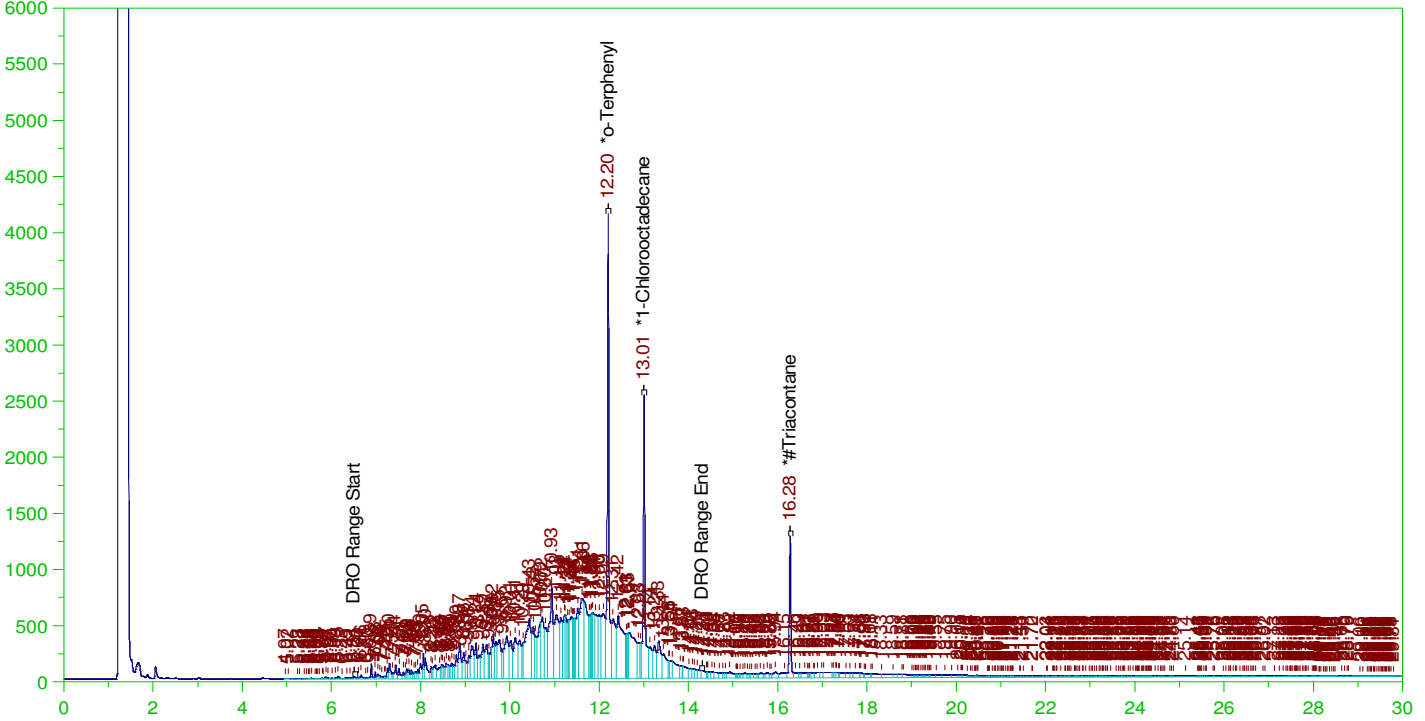
DRO Area: 2431816 DRO Amount: 7.604118E-02
TEH Area: 2866143 TEH Amount: 8.962226E-02

ERH2236 (RHMW02)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0058.RAW

Batch ID: 162502

B21121959-001D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121959-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0058.RAW
Date & Time Acquired: 12/30/2021 5:51:36 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.197	.2	.297	148.32	-
*1-Chlorooctadecane	13.006	.2	.212	105.78	-
*Triacontane	16.275	.2	.118	59.16	-

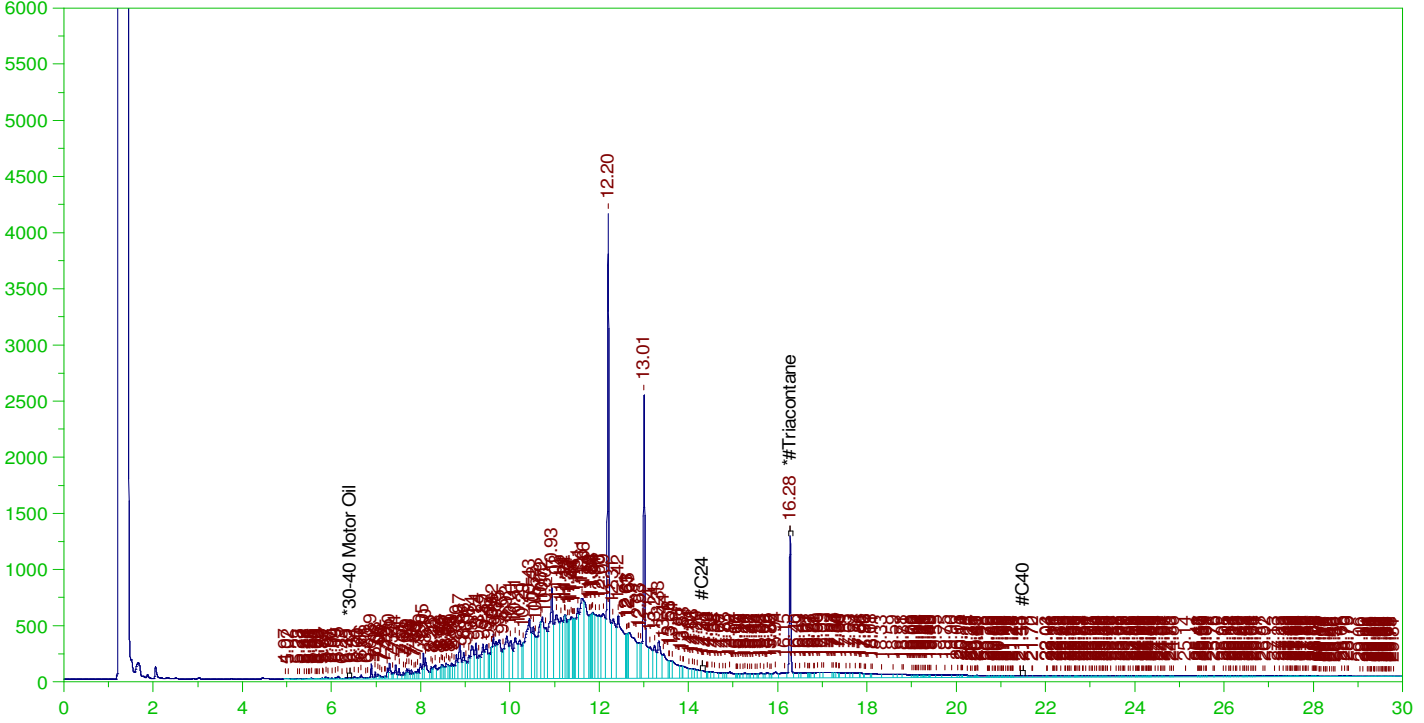
DRO Area:1.185121E+08 DRO Amount: 3.779905
TEH Area:1.358401E+08 TEH Amount: 4.332578

ERH2236 (RHMW02)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0058.RAW

Batch ID: 162502

B21121959-001D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121959-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0058.RAW
Date & Time Acquired: 12/30/2021 5:51:36 AM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.275	.5	.118	23.66	-

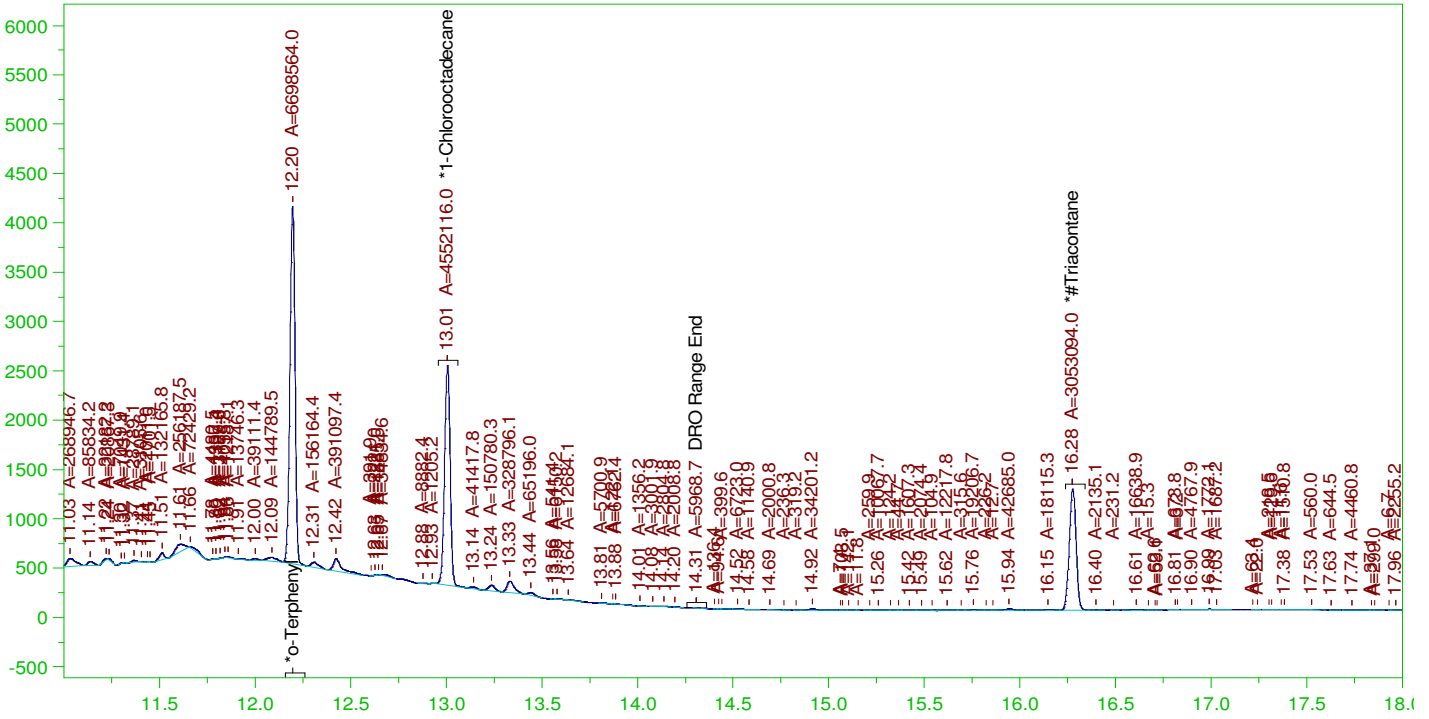
RRO Area:1.358551E+07 RRO AMOUNT: 0.4759764

ERH2236 (RHMW02)

Batch ID: 162502

G:\Org\HP5\DAT\HP5122821_b\1228HP5.0058.RAW

B21121959-001D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

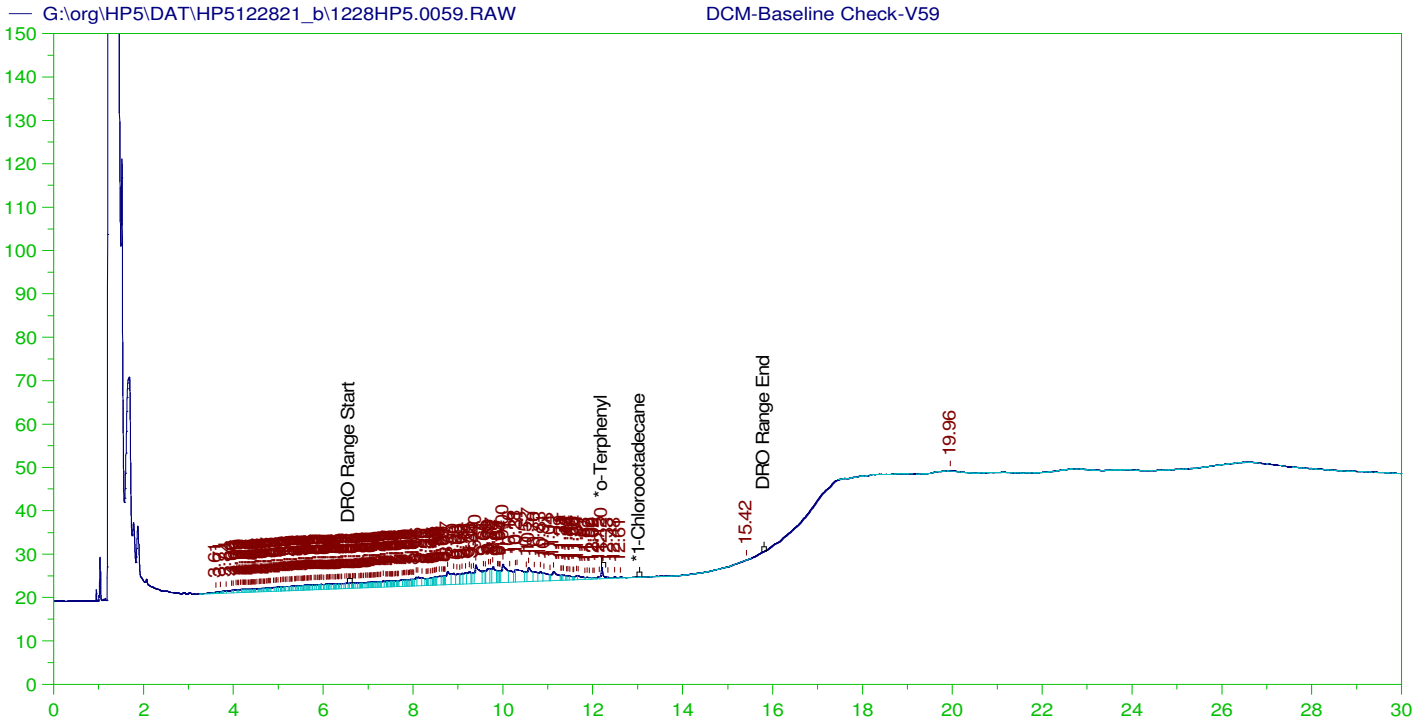
Sample Name: B21121959-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0058.RAW
Date & Time Acquired: 12/30/2021 5:51:36 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.197	.2	.189	94.32	-
*1-Chlorooctadecane	13.006	.2	.128	64.1	-
*#Triacontane	16.275	.2	.106	52.77	-

DRO Area:1.579166E+07 DRO Amount: 0.50367
TEH Area:1.639919E+07 TEH Amount: 0.5230469



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V59
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0059.RAW
 Date & Time Acquired: 12/30/2021 6:34:46 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

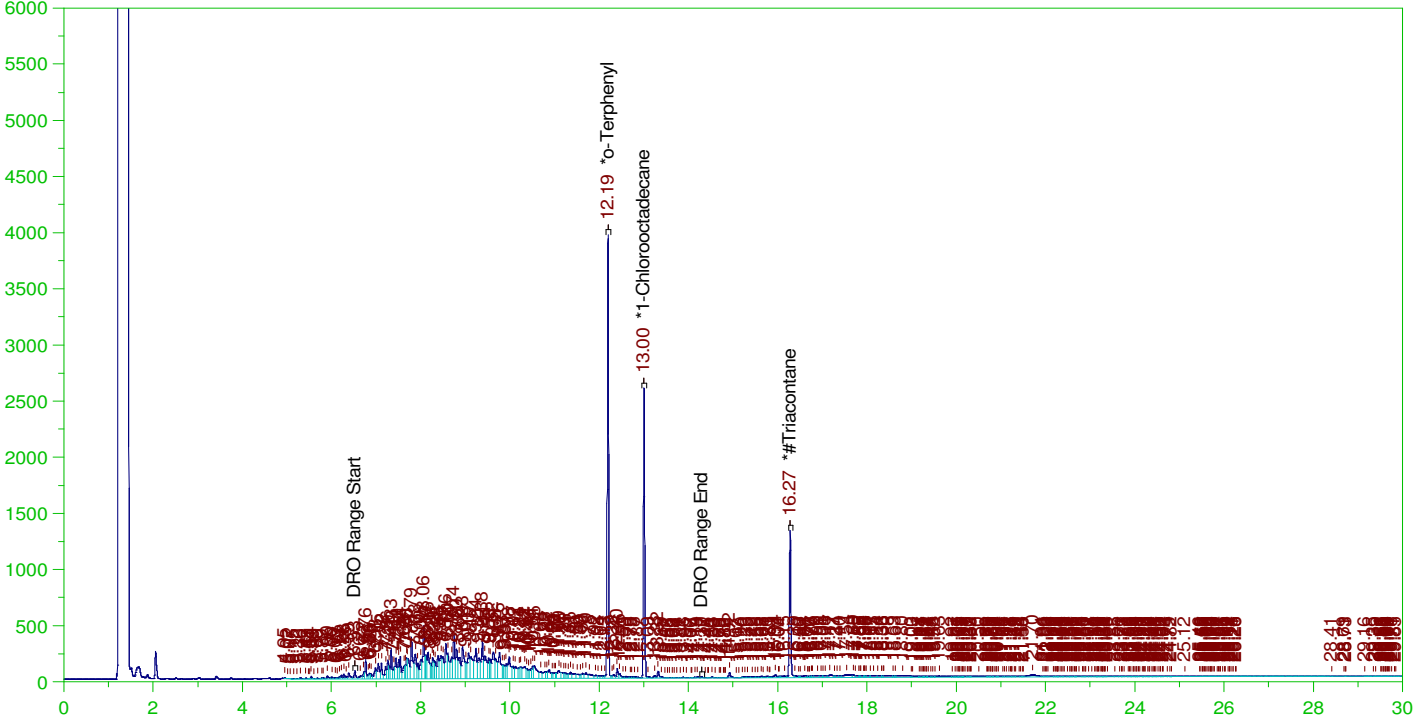
Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.199	200.	.254	.13	-
*1-Chlorooctadecane	29.953	200.	.	.	-

DRO Area: 621684.8 DRO Amount: 19.82844
 TEH Area: 792436.5 TEH Amount: 25.27451

ERH2266 (RHMW2254-01 Bailer) FD
G:\org\HP5\DAT\HP5122821_b\1228HP5.0060.RAW

Batch ID: 162502
B21121981-002B ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-002B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0060.RAW
Date & Time Acquired: 12/30/2021 7:17:55 AM
Method File: G:\Org\HP5\Methods\D3_8015-122860-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

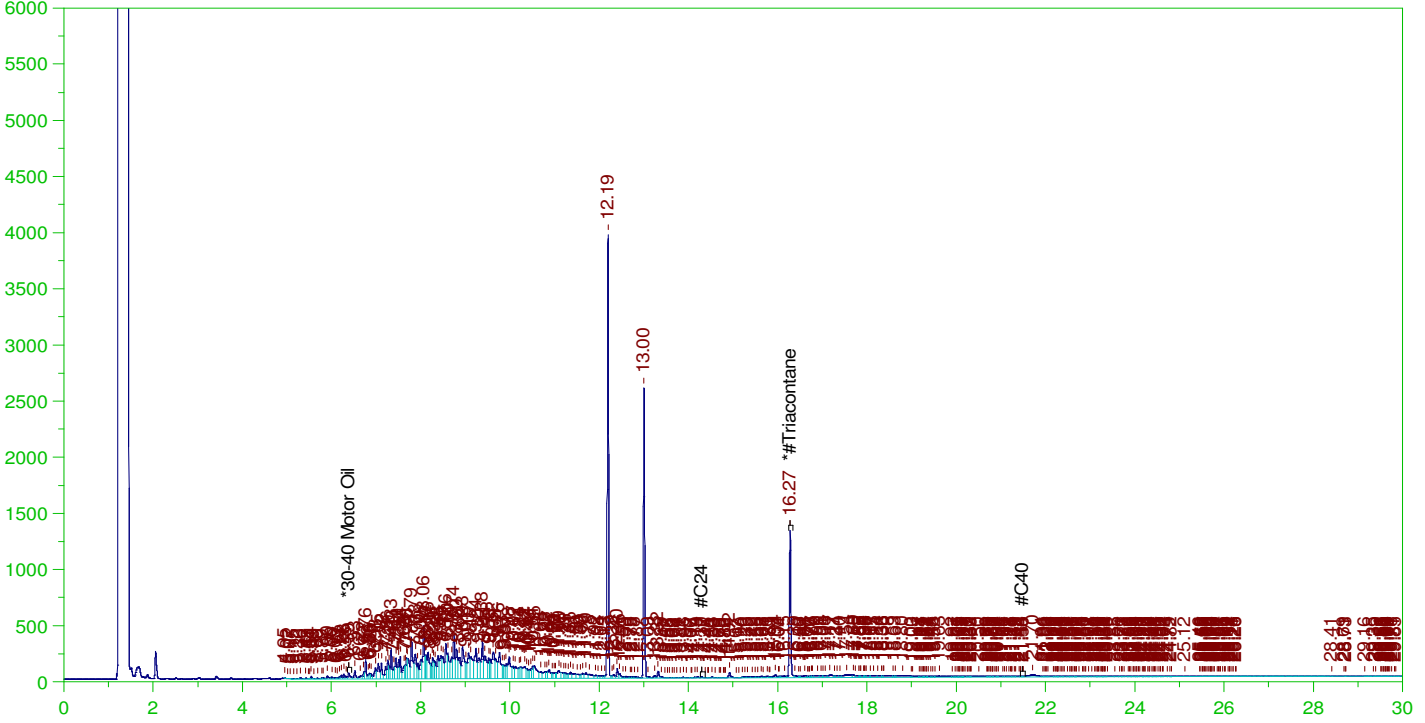
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.192	.19	.2	104.94	-
*1-Chlorooctadecane	13.005	.19	.143	75.2	-
*#Triacontane	16.274	.19	.112	58.92	-

DRO Area:3.910459E+07 DRO Amount: 1.187837
TEH Area:4.660357E+07 TEH Amount: 1.415625

ERH2266 (RHMW2254-01 Bailer) FD
G:\org\HP5\DAT\HP5122821_b\1228HP5.0060.RAW

Batch ID: 162502
B21121981-002B ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-002B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0060.RAW
Date & Time Acquired: 12/30/2021 7:17:55 AM
Method File: G:\Org\HP5\Methods\D3_OROS-122860-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.274	.476	.112	23.57

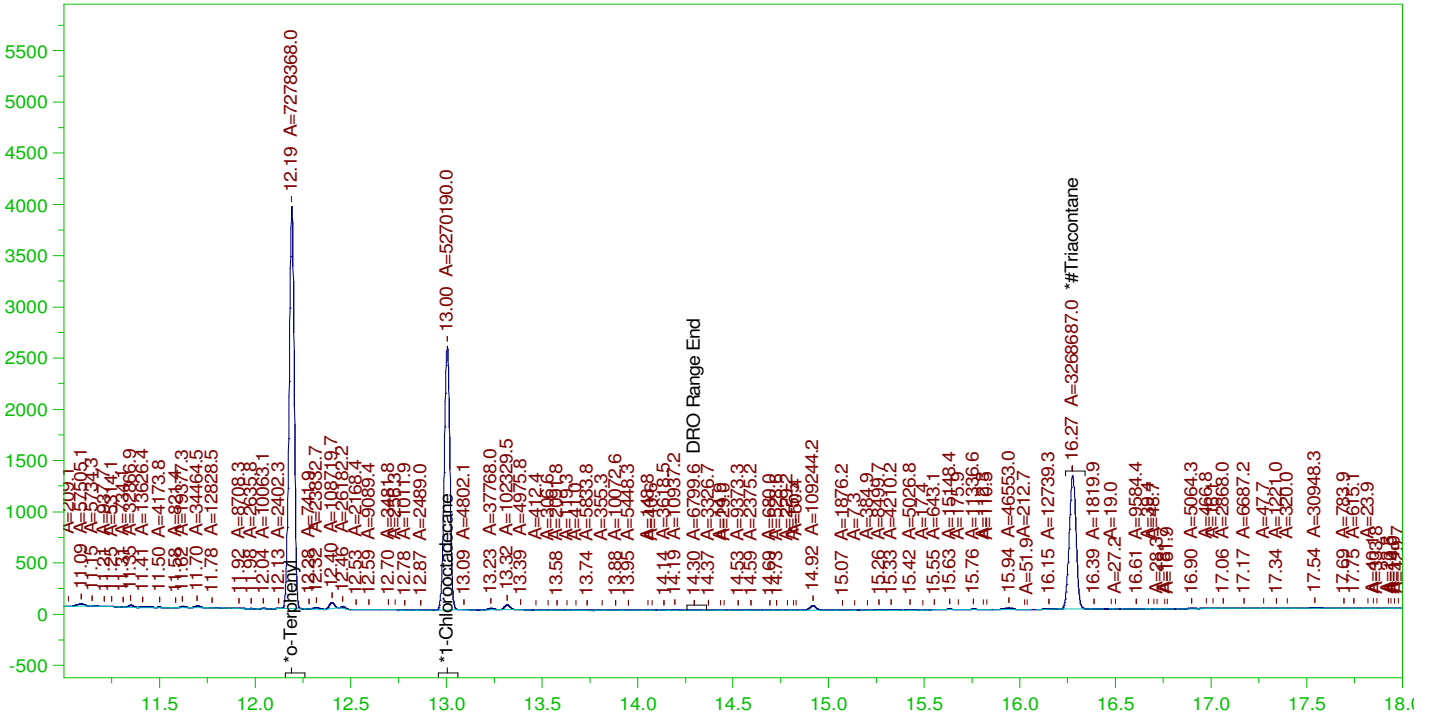
RRO Area:5094829 RRO AMOUNT: 0.1700003

ERH2266 (RHMW2254-01 Bailer) FD

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0060.RAW

B21121981-002B ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-002B ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0060.RAW
Date & Time Acquired: 12/30/2021 7:17:55 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.192	.19	.195	102.49	-
*1-Chlorooctadecane	13.005	.19	.141	74.21	-
*#Triacontane	16.274	.19	.108	56.49	-

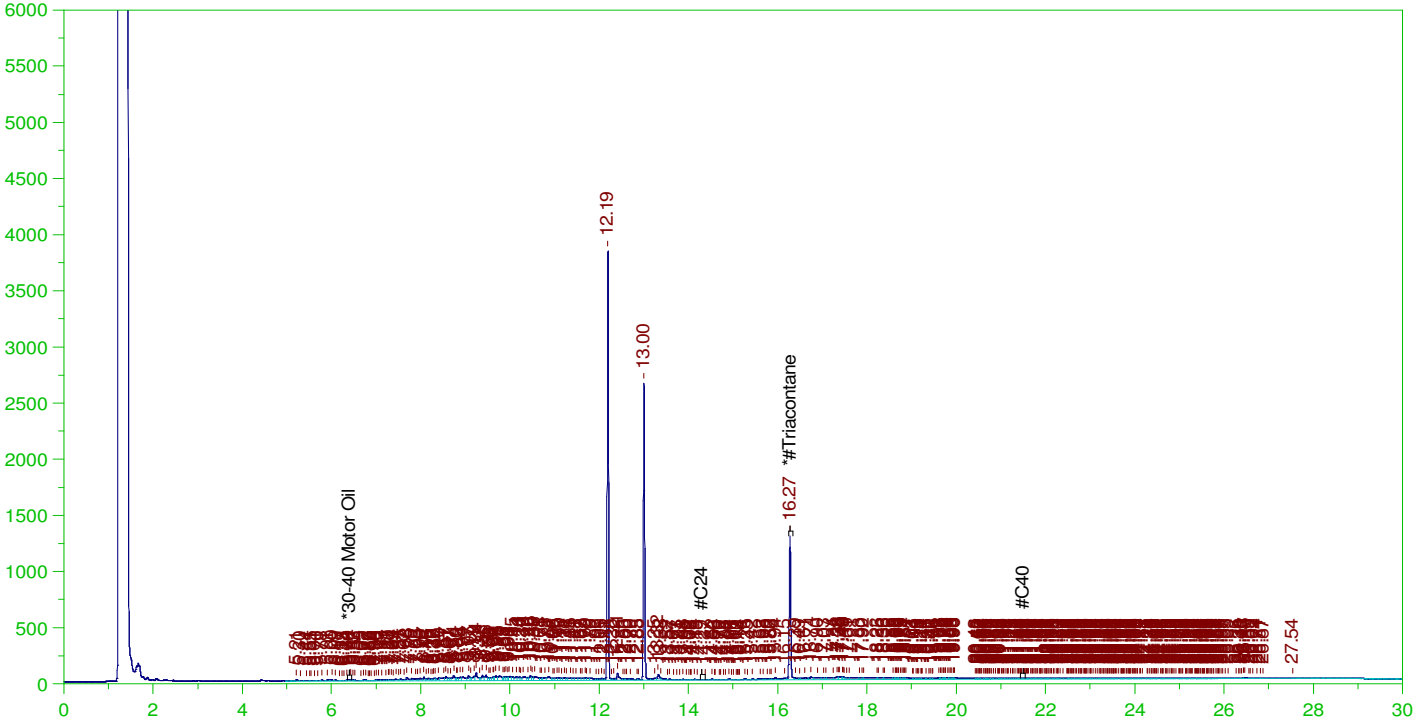
DRO Area: 2.798564E+07 DRO Amount: 0.8500885
TEH Area: 2.928954E+07 TEH Amount: 0.8896956

ERH2267 (RHMW2254-01 LF)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0061.RAW

B21121981-003D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-003D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0061.RAW
Date & Time Acquired: 12/30/2021 8:01:14 AM
Method File: G:\Org\HP5\Methods\D3_OROS-122861-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.273	.481	.11	22.91	-

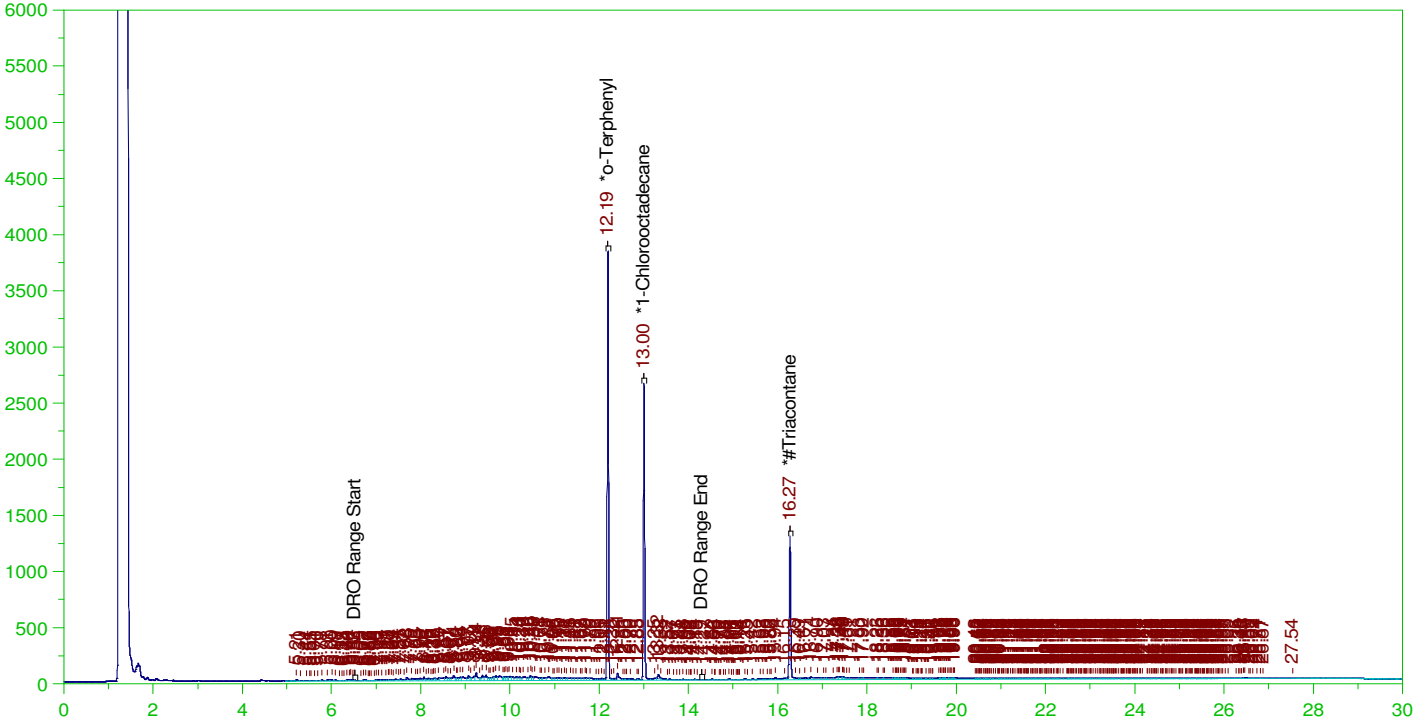
RRO Area:5017132 RRO AMOUNT: 0.1690174

ERH2267 (RHMW2254-01 LF)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0061.RAW

B21121981-003D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-003D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0061.RAW
Date & Time Acquired: 12/30/2021 8:01:14 AM
Method File: G:\Org\HP5\Methods\DR_8015-122861-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.191	.192	.195	101.4	-
*1-Chlorooctadecane	13.004	.192	.15	77.85	-
*#Triacontane	16.273	.192	.11	57.27	-

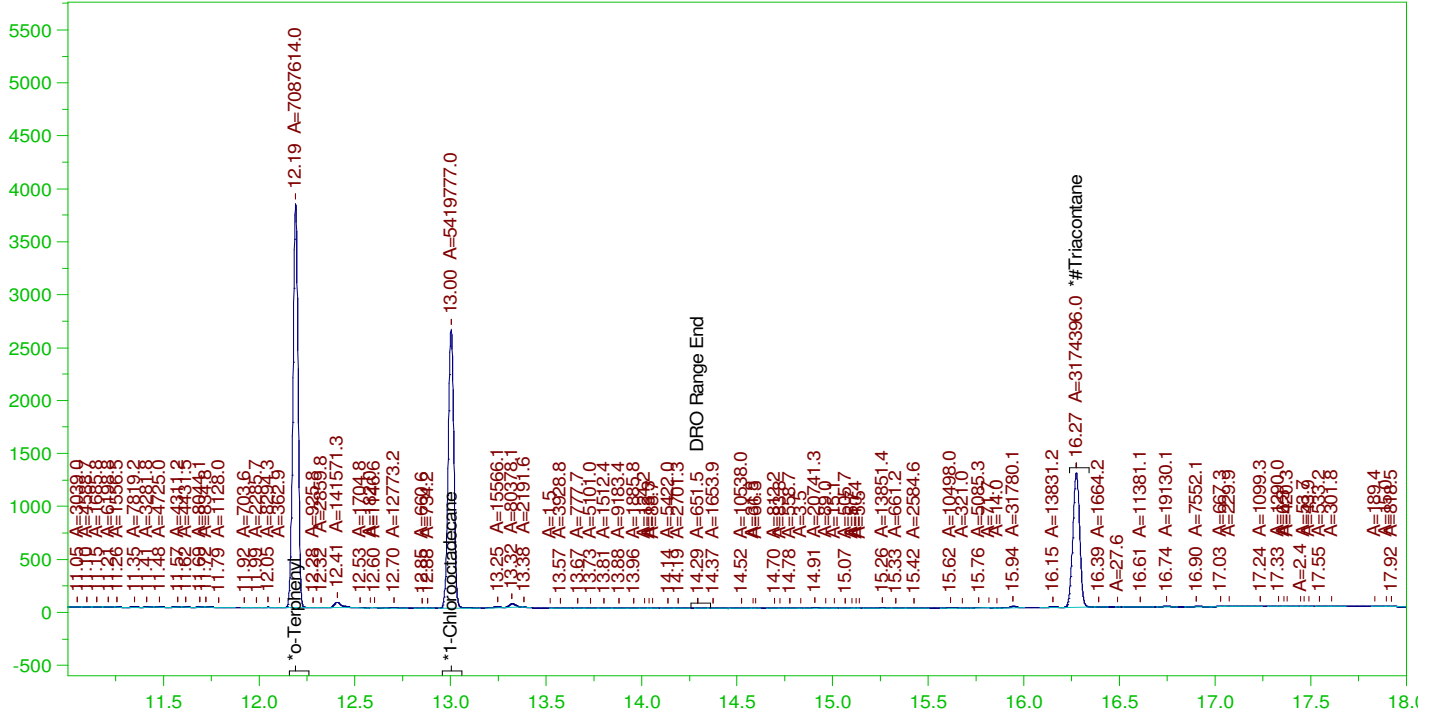
DRO Area: 8283394 DRO Amount: 0.2540348
TEH Area: 1.569206E+07 TEH Amount: 0.4812434

ERH2267 (RHMW2254-01 LF)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0061.RAW

B21121981-003D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

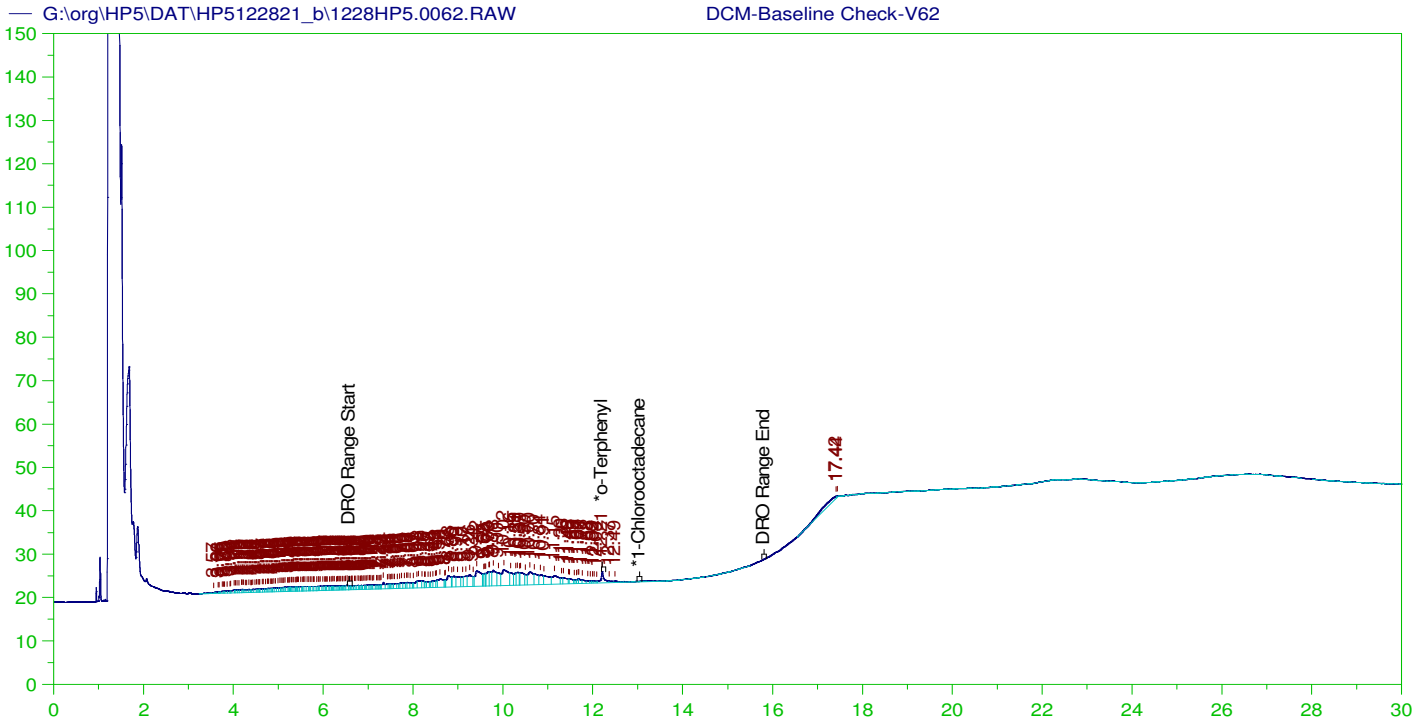
Sample Name: B21121981-003D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0061.RAW
Date & Time Acquired: 12/30/2021 8:01:14 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.191	.192	.192	99.8	-
*1-Chlorooctadecane	13.004	.192	.147	76.32	-
*#Triacotane	16.273	.192	.106	54.86	-

DRO Area:3145335 DRO Amount: 9.646101E-02
TEH Area:3632292 TEH Amount: 0.111395



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V62
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0062.RAW
 Date & Time Acquired: 12/30/2021 8:44:34 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.205	200.	.374	.19	-
*1-Chlorooctadecane	29.961	200.	.	.	-

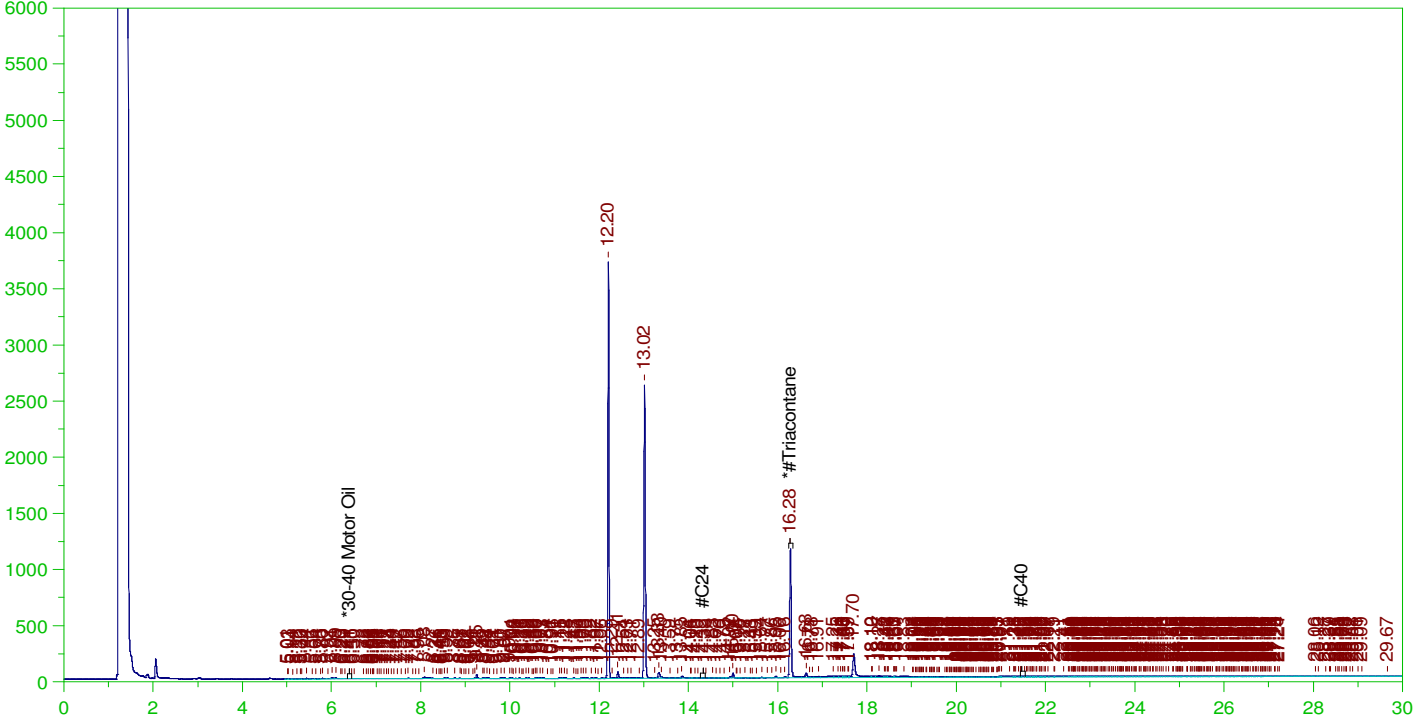
DRO Area: 598183.3 DRO Amount: 19.07886
 TEH Area: 788475.8 TEH Amount: 25.14818

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW

B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW
 Date & Time Acquired: 12/30/2021 9:55:45 AM
 Method File: G:\Org\HP5\Methods\D3_OROS-122861-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.283	.5	.106	21.29

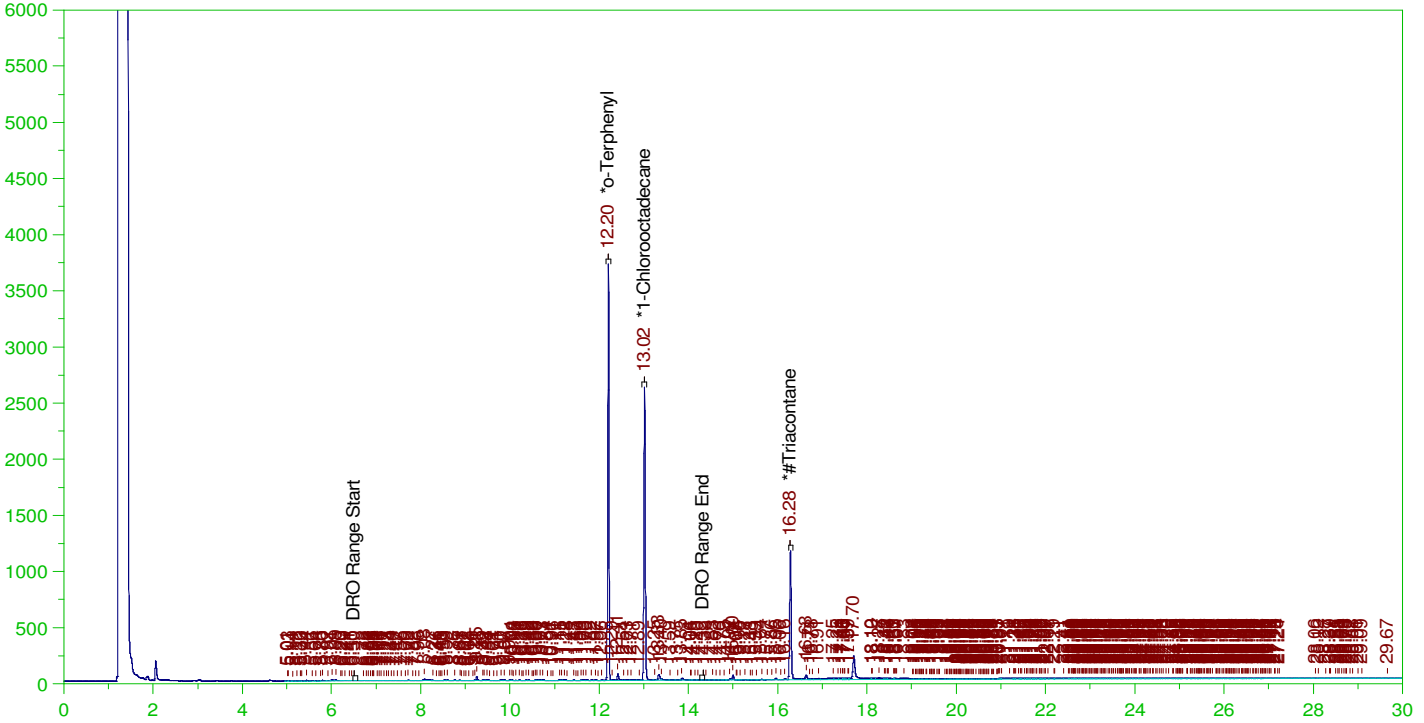
RRO Area:4022263 RRO AMOUNT: 0.1409224

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW

B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW
 Date & Time Acquired: 12/30/2021 9:55:45 AM
 Method File: G:\Org\HP5\Methods\DR_8015-122861-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	.2	.192	96.16	-
*1-Chlorooctadecane	13.015	.2	.156	77.75	-
*#Triacontane	16.283	.2	.106	53.22	-

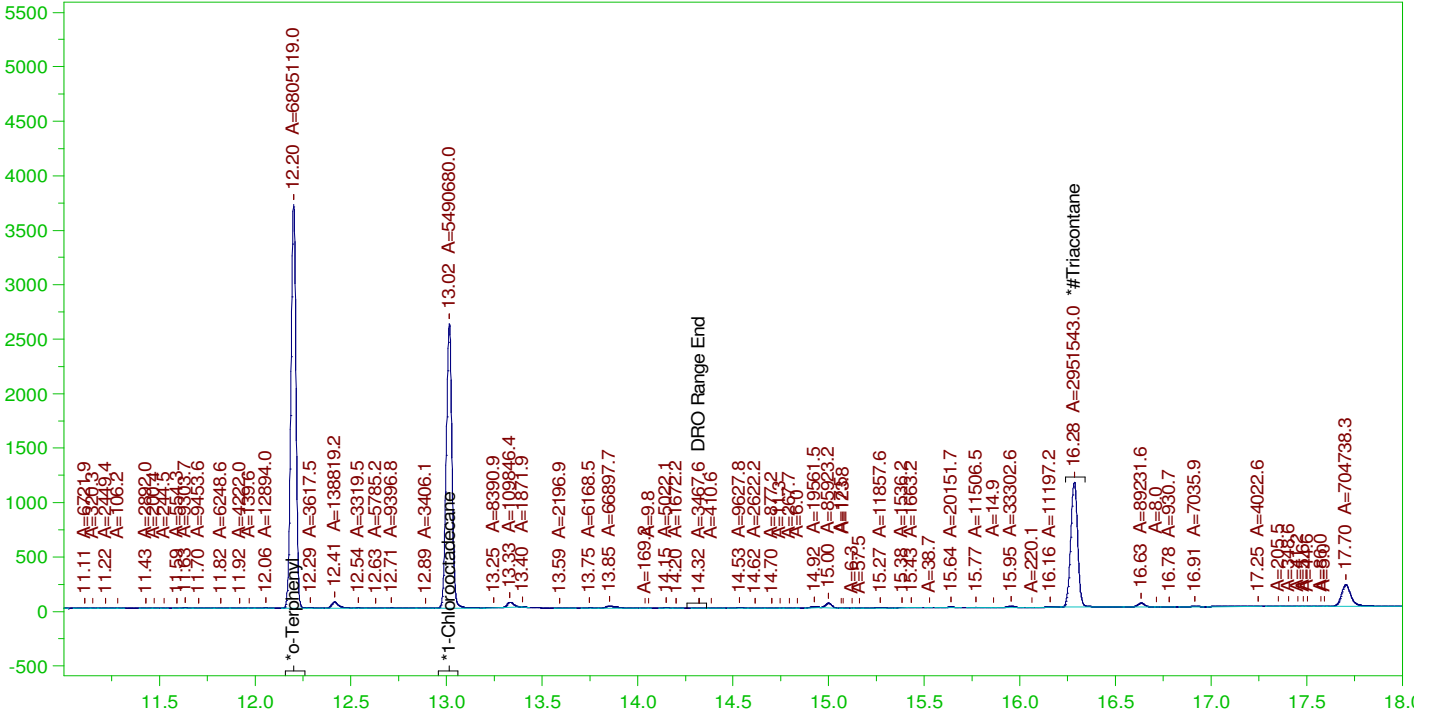
DRO Area:1370907 DRO Amount: 4.372463E-02
 TEH Area:7436570 TEH Amount: 0.237187

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW

B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW
 Date & Time Acquired: 12/30/2021 9:55:45 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	.2	.192	95.82	-
*1-Chlorooctadecane	13.015	.2	.155	77.31	-
*#Triacontane	16.283	.2	.102	51.01	-

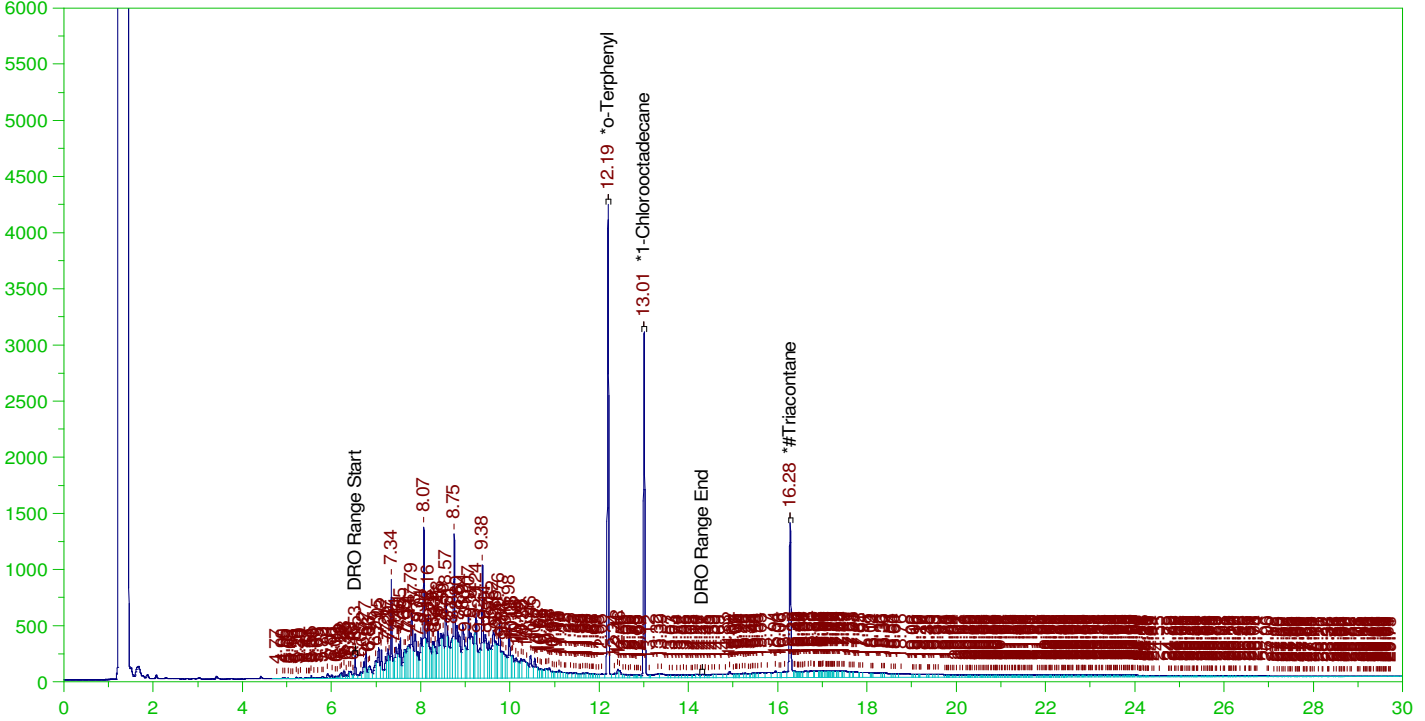
DRO Area:953111.1 DRO Amount: 3.039917E-02
 TEH Area:2296284 TEH Amount: 7.323924E-02

ERH2265 (RHMW2254-01 Bailer)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0064.RAW

B21121981-004D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-004D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0064.RAW
Date & Time Acquired: 12/30/2021 10:38:37 AM
Method File: G:\Org\HP5\Methods\D3_8015-122864-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.194	.198	.225	113.44	-
*1-Chlorooctadecane	13.007	.198	.182	91.96	-
*#Triacontane	16.275	.198	.131	66.12	-

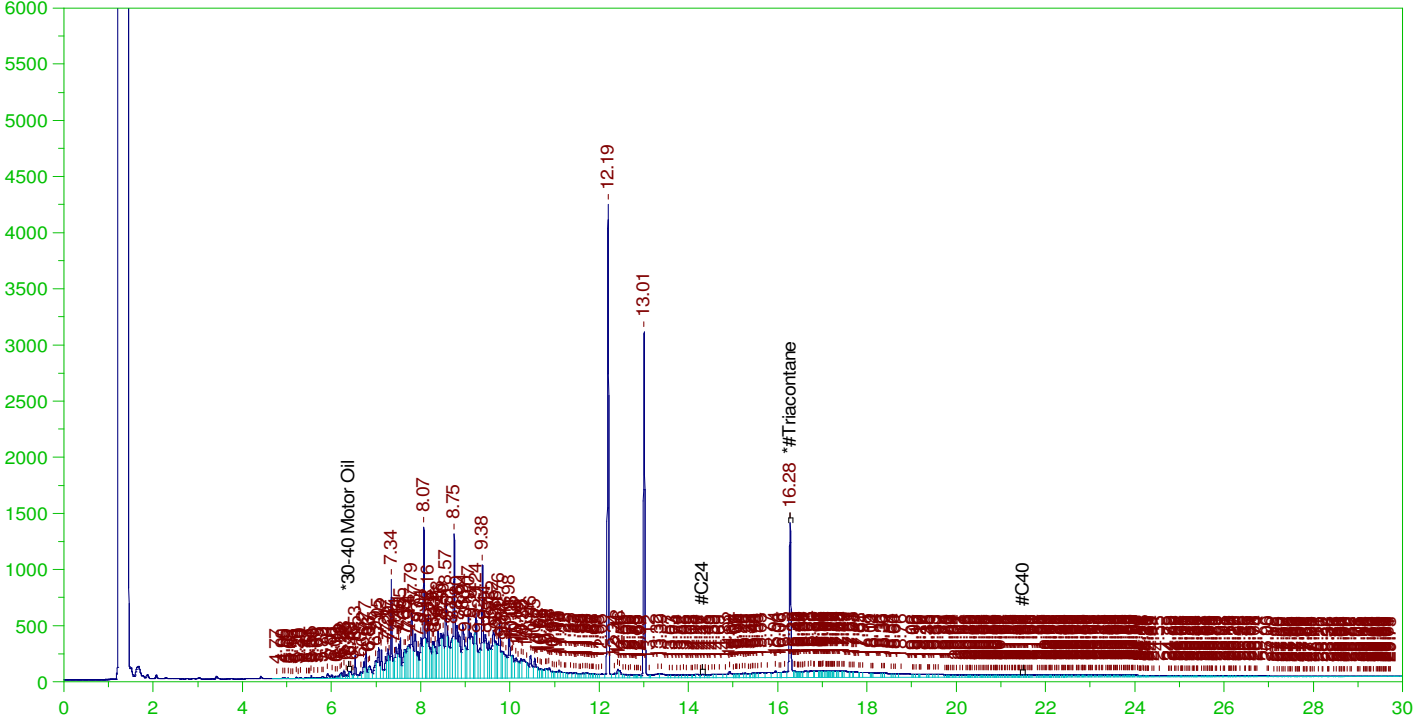
DRO Area: 7.564046E+07 DRO Amount: 2.388642
TEH Area: 9.777533E+07 TEH Amount: 3.087636

ERH2265 (RHMW2254-01 Bailer)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0064.RAW

B21121981-004D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-004D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0064.RAW
Date & Time Acquired: 12/30/2021 10:38:37 AM
Method File: G:\Org\HP5\Methods\D3_OROS-122864-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.275	.495	.131	26.45

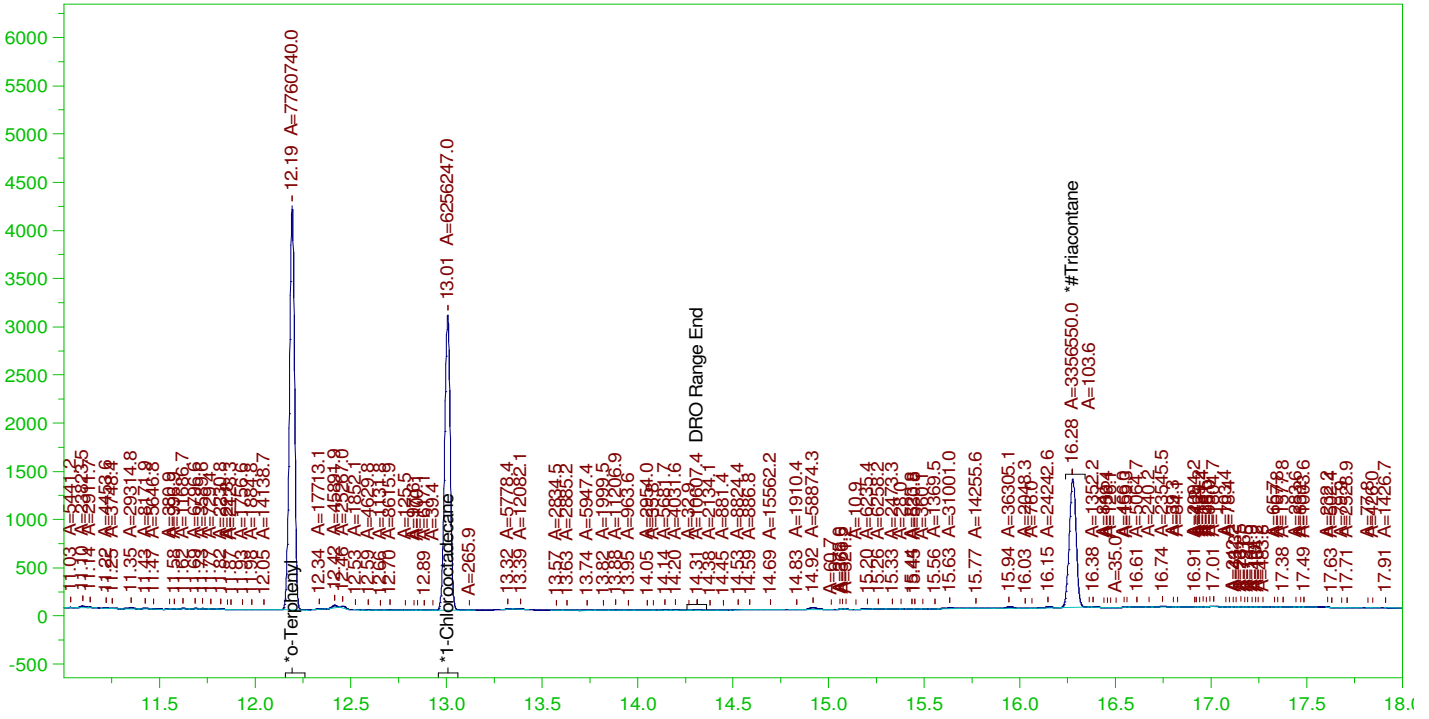
RRO Area:1.563613E+07 RRO AMOUNT: 0.5423969

ERH2265 (RHMW2254-01 Bailer)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0064.RAW

B21121981-004D ;1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-004D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0064.RAW
Date & Time Acquired: 12/30/2021 10:38:37 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.194	.198	.216	109.28
*1-Chlorooctadecane	13.007	.198	.174	88.09
*#Triacontane	16.275	.198	.115	58.01

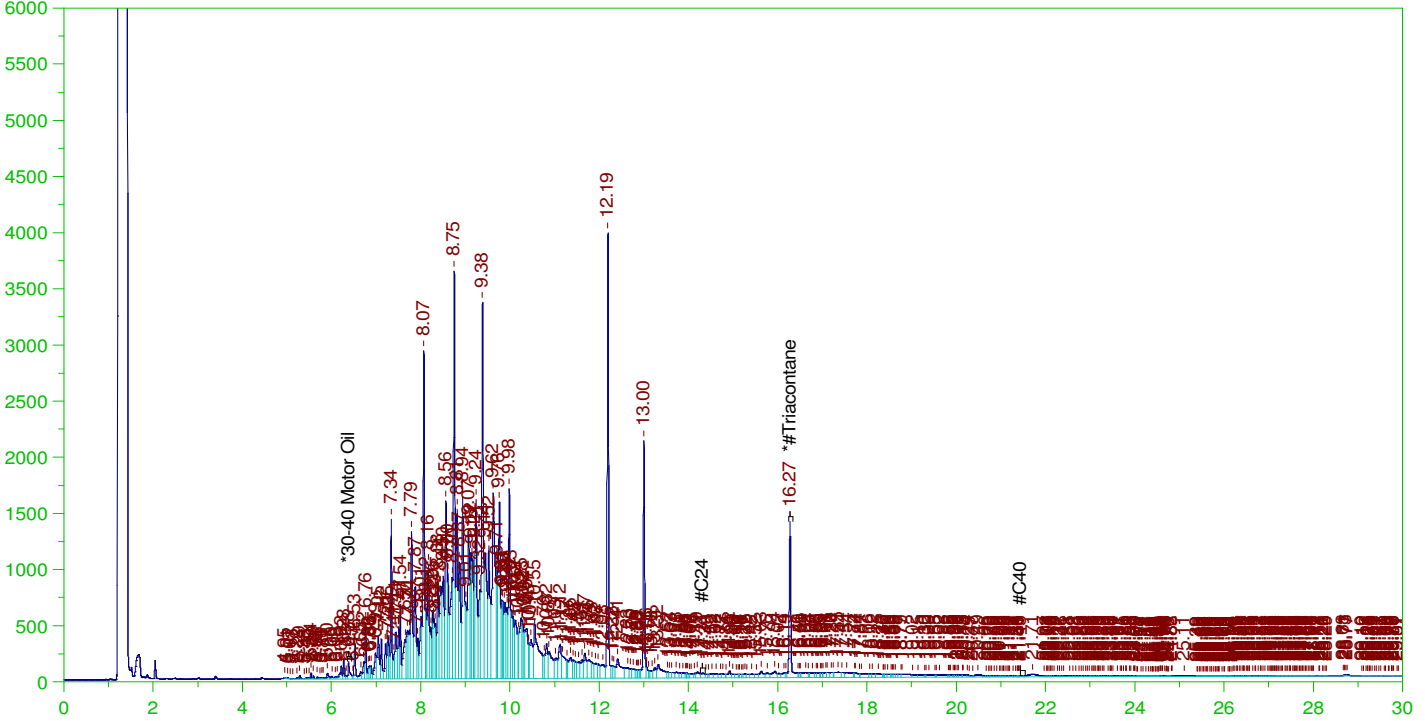
DRO Area:5.741664E+07 DRO Amount: 1.813154
TEH Area:5.897665E+07 TEH Amount: 1.862417

ERH2234 (RHMW01R)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0065.RAW

B21121961-001D ;1228HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121961-001D ;1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0065.RAW
Date & Time Acquired: 12/30/2021 11:21:17 AM
Method File: G:\Org\HP5\Methods\D3_OROS-122843-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.273	.495	.137	27.59

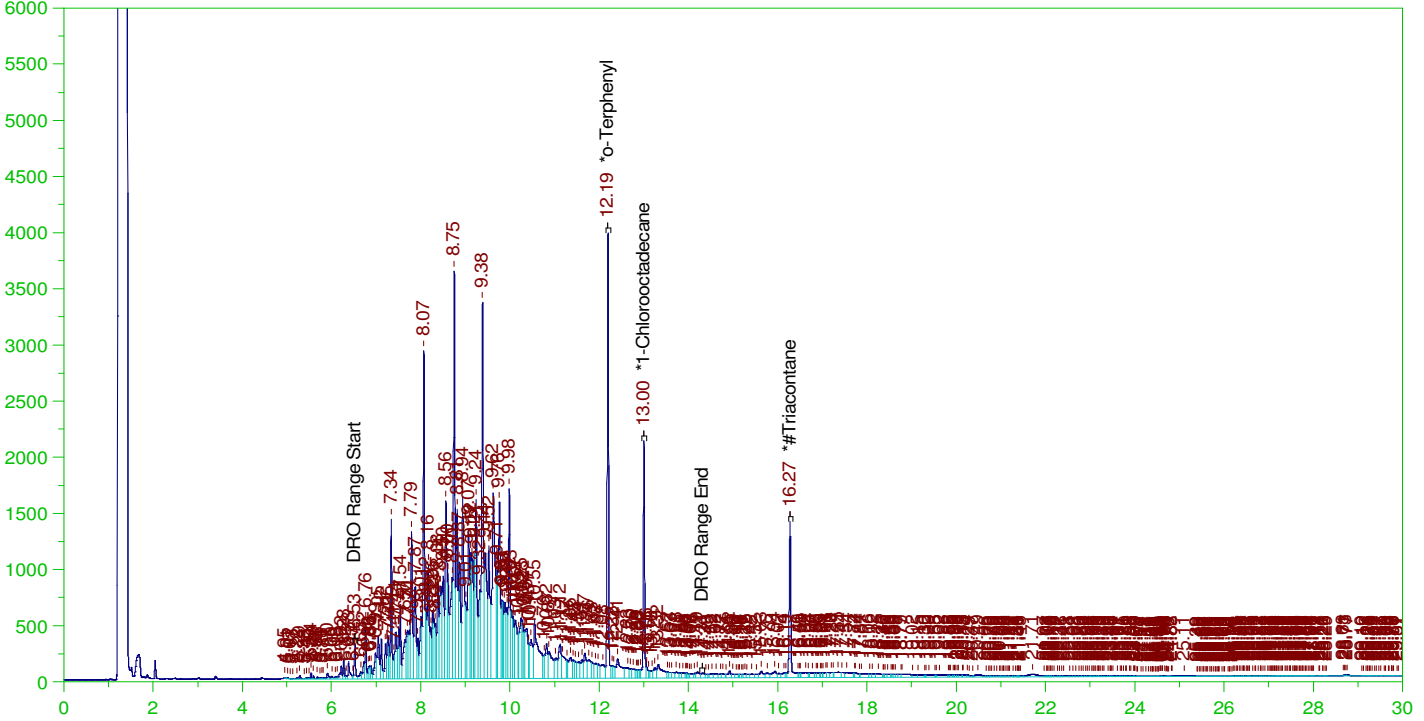
RRO Area:1.13593E+07 RRO AMOUNT: 0.3940392

ERH2234 (RHMW01R)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0065.RAW

B21121961-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121961-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0065.RAW
Date & Time Acquired: 12/30/2021 11:21:17 AM
Method File: G:\Org\HP5\Methods\DR_8015-122843-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.191	.198	.223	112.58	-
*1-Chlorooctadecane	13.002	.198	.132	66.66	-
*#Triacontane	16.273	.198	.137	68.97	-

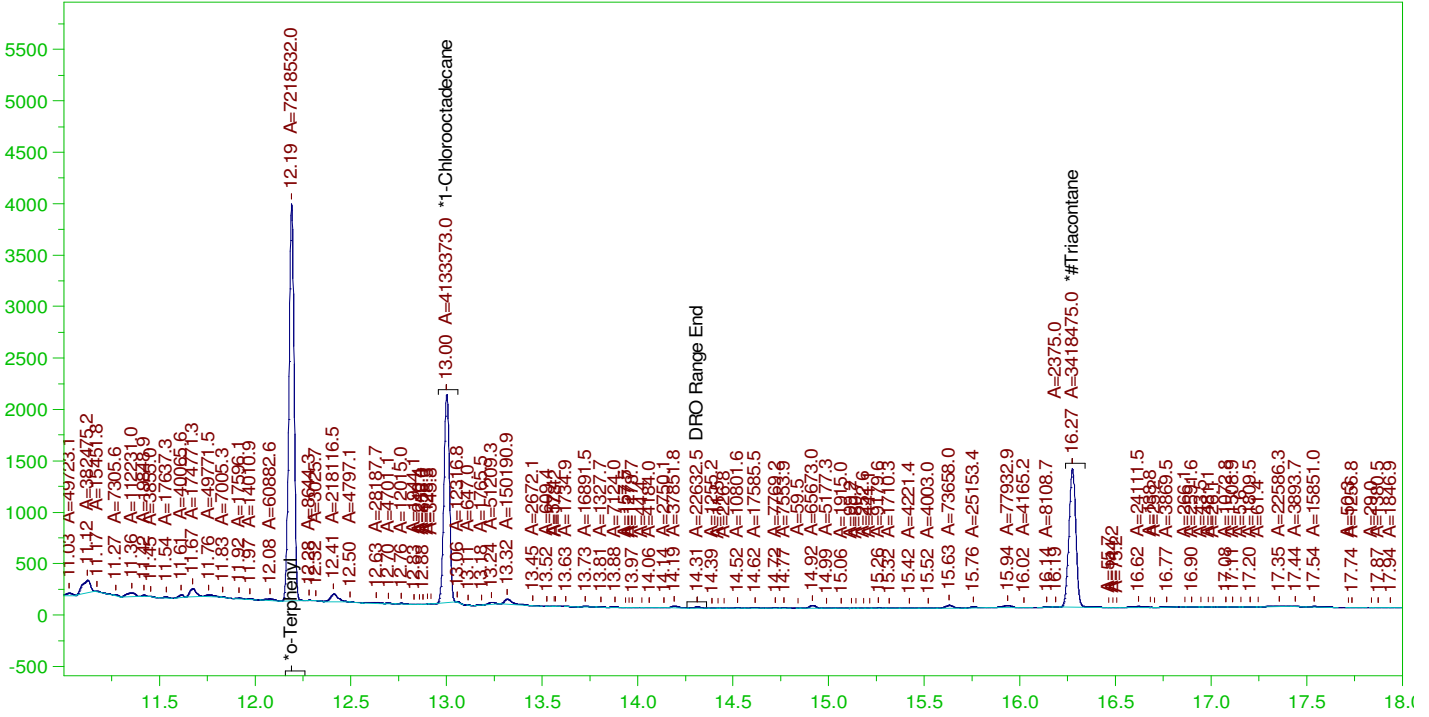
DRO Area: 1.773908E+08 DRO Amount: 5.601806
TEH Area: 1.923237E+08 TEH Amount: 6.073369

ERH2234 (RHMW01R)

Batch ID: 162502

G:\org\HP5\DAT\HP5122821_b\1228HP5.0065.RAW

B21121961-001D ; 1228HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

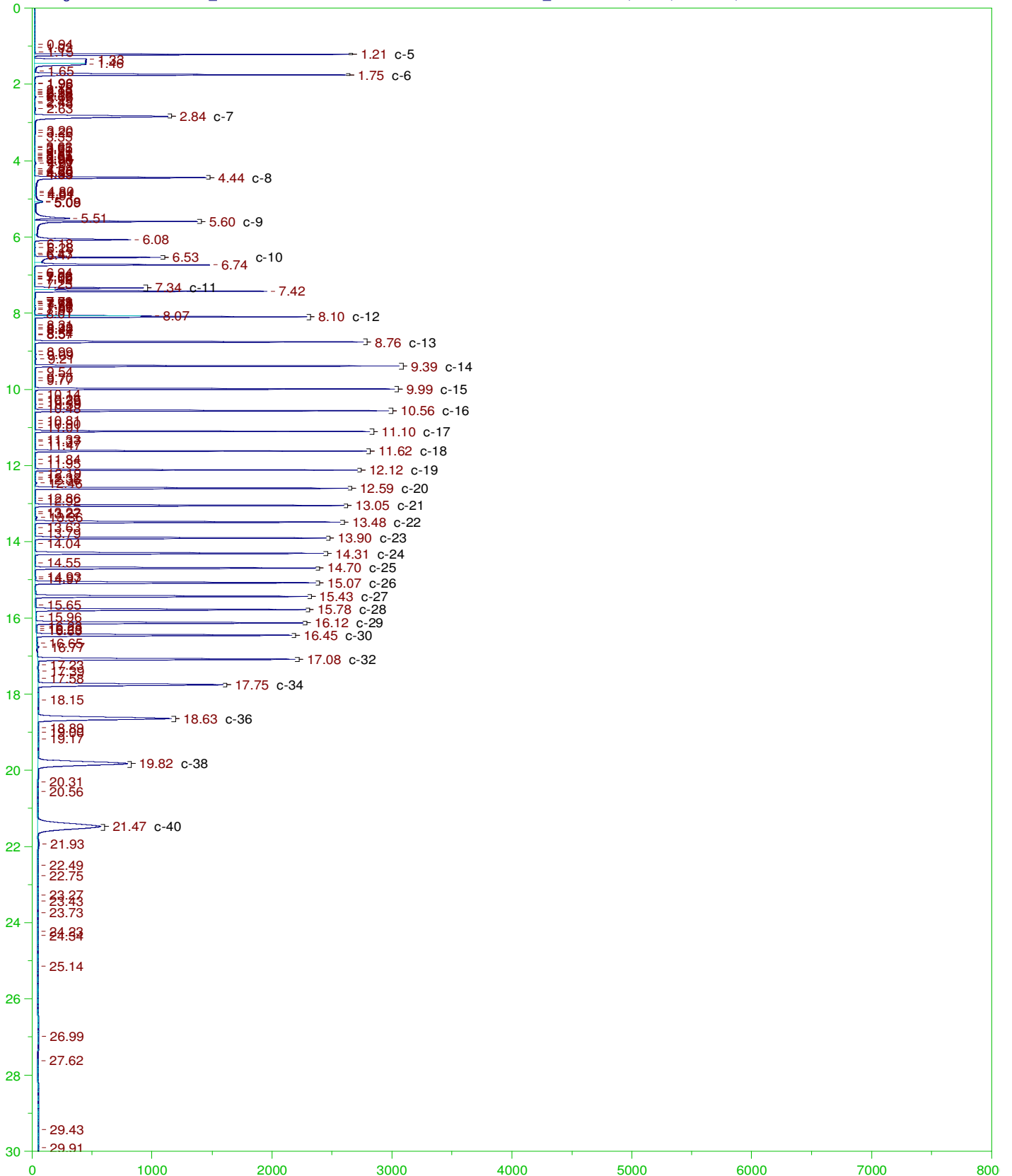
Sample Name: B21121961-001D ; 1228HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0065.RAW
Date & Time Acquired: 12/30/2021 11:21:17 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

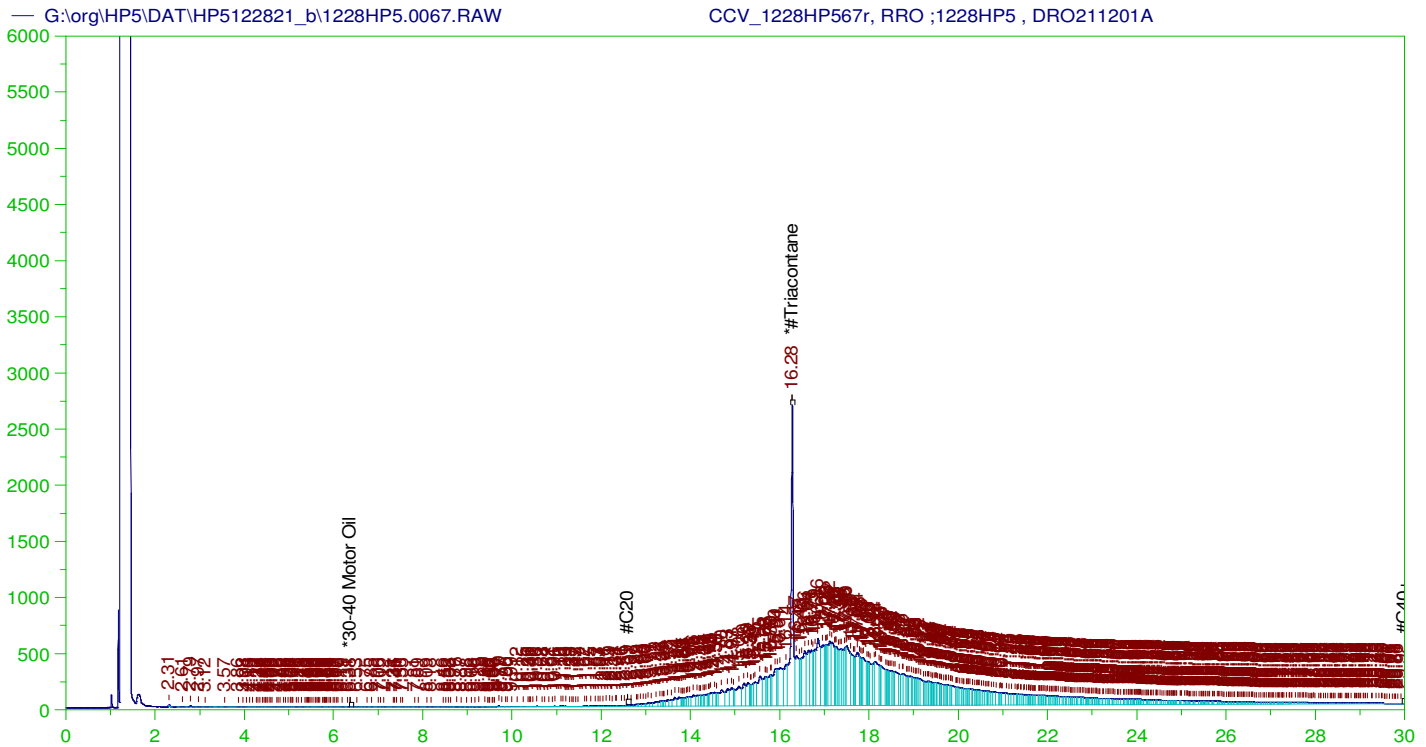
Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.191	.198	.201	101.64	-
*1-Chlorooctadecane	13.002	.198	.115	58.2	-
*#Triacontane	16.273	.198	.117	59.08	-

DRO Area: 1.303793E+08 DRO Amount: 4.117234
TEH Area: 1.326186E+08 TEH Amount: 4.187948





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP567r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0067.RAW
 Date & Time Acquired: 12/30/2021 12:46:49 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	345.161	69.03	-

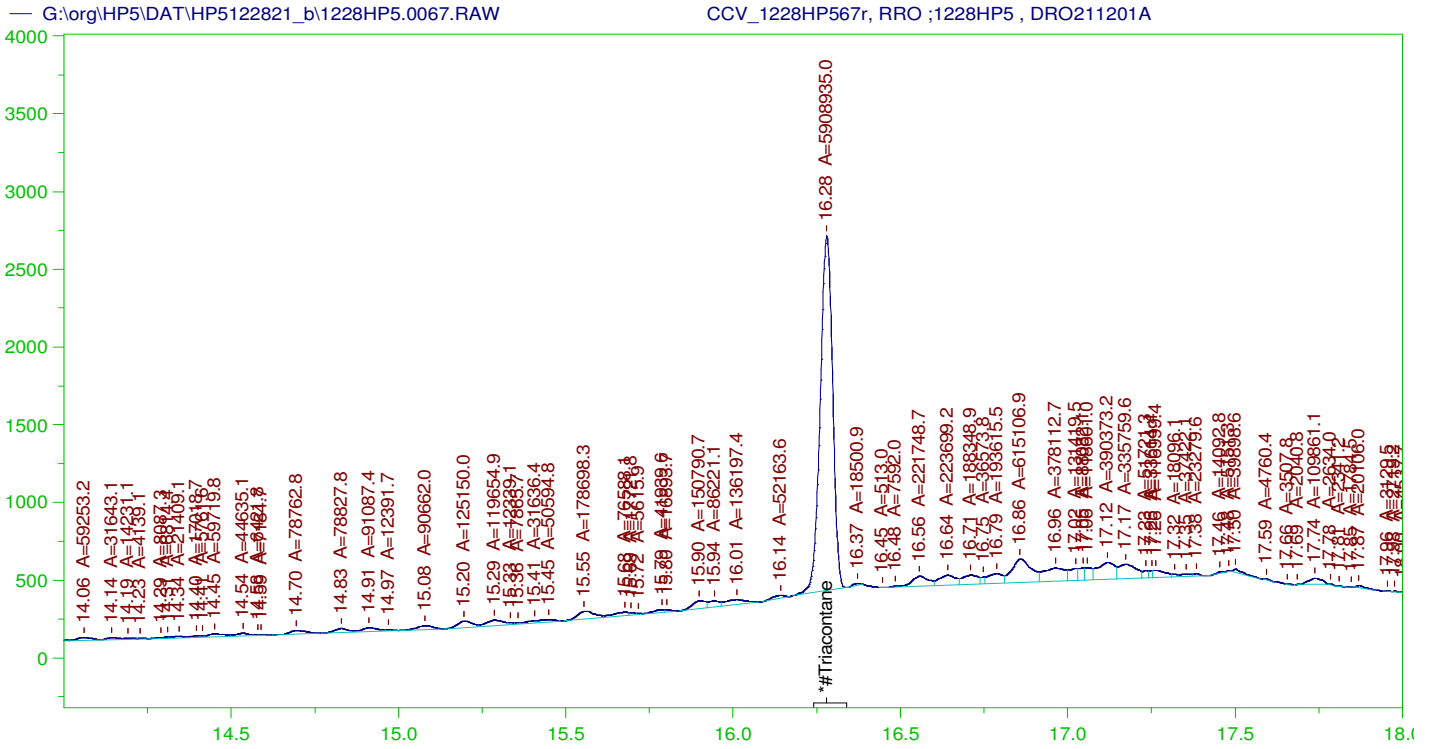
RRO TEH (Oil Range) Area:1.340796E+08 RRO TEH (Oil Range) AMOUNT: 4697.556

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0067.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.021	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.279	200.	345.161	172.58	75-125

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RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP567r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0067.RAW
 Date & Time Acquired: 12/30/2021 12:46:49 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.56 to 30.05

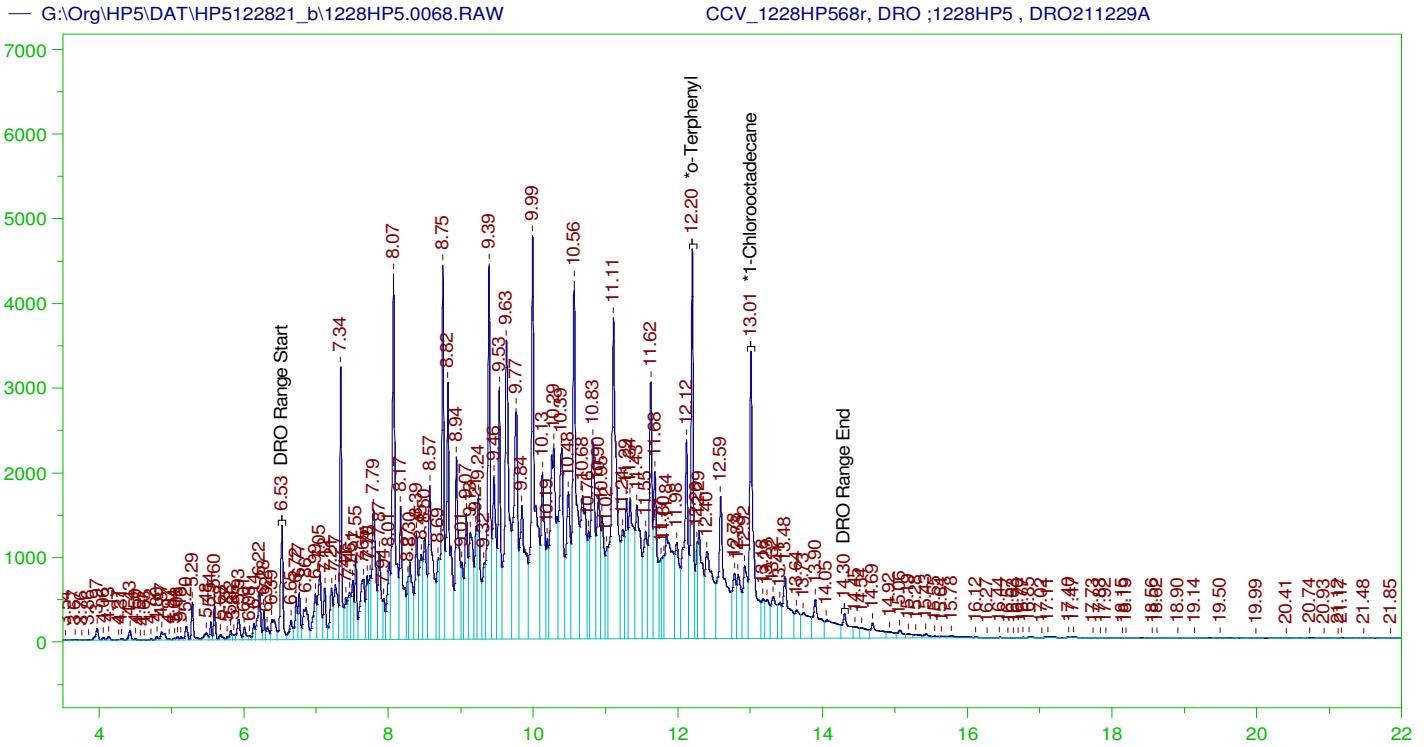
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.279	500.	204.248	40.85

RRO Area:5917183 RRO AMOUNT: 207.3119

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0067.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.021	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.279	200.	204.248	102.12	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP568r, DRO ;1228HP5 , DRO211229A
 Raw File: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0068.RAW
 Date & Time Acquired: 12/30/2021 1:29:28 PM
 Method File: G:\Org\HP5\Methods\DC_8015-24-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.197	200.	319.461	159.73
*1-Chlorooctadecane	13.009	200.	347.08	173.54

DRO Area: 4.575085E+08 DRO Amount: 14592.09
 TEH Area: 4.740273E+08 TEH Amount: 15118.95

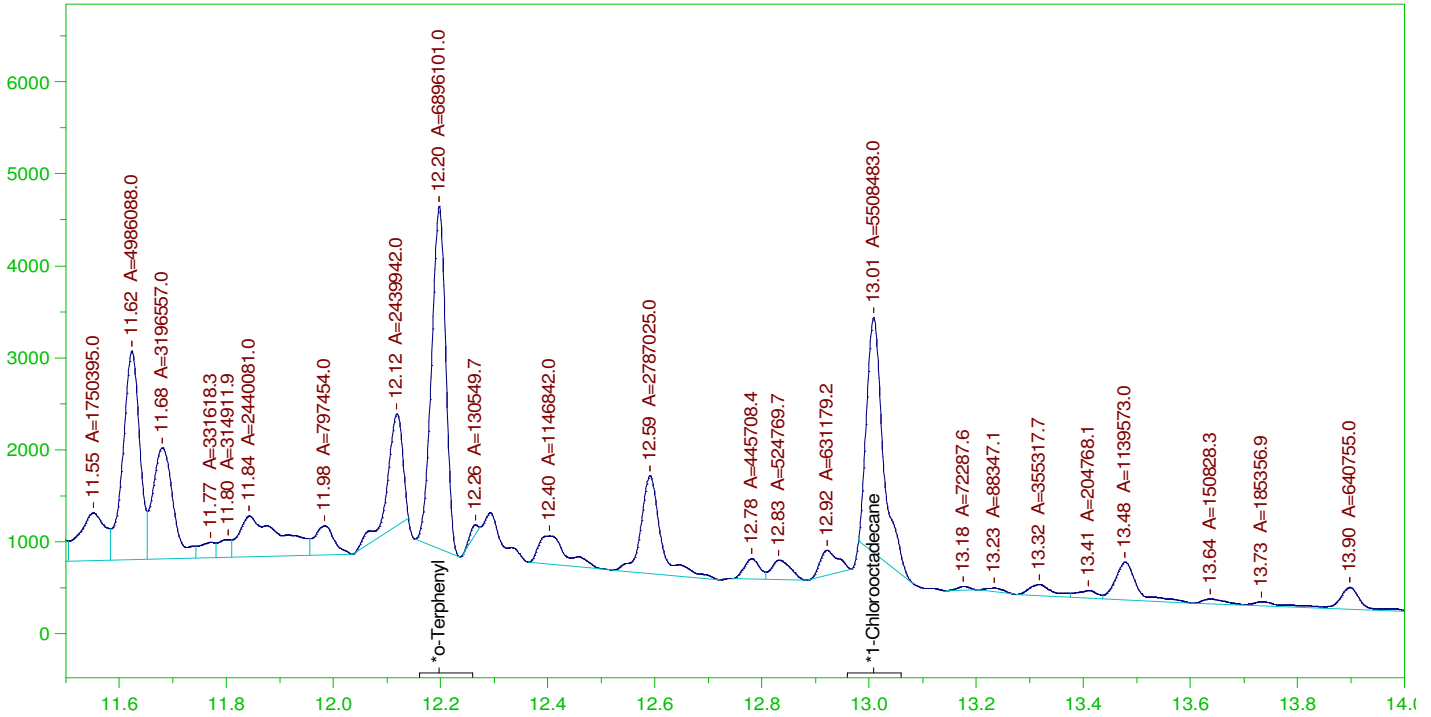
CONTINUING CALIBRATION REPORT: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0068.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15118.95	100.79	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.197	200.	319.461	159.73	85-115
*1-Chlorooctadecane	13.009	200.	347.08	173.54	85-115

G:\Org\HP5\DAT\HP5122821_b\1228HP5.0068.RAW

CCV_1228HP568r, DRO ;1228HP5 , DRO211229A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1228HP568r, DRO ;1228HP5 , DRO211229A
 Raw File: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0068.RAW
 Date & Time Acquired: 12/30/2021 1:29:28 PM
 Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

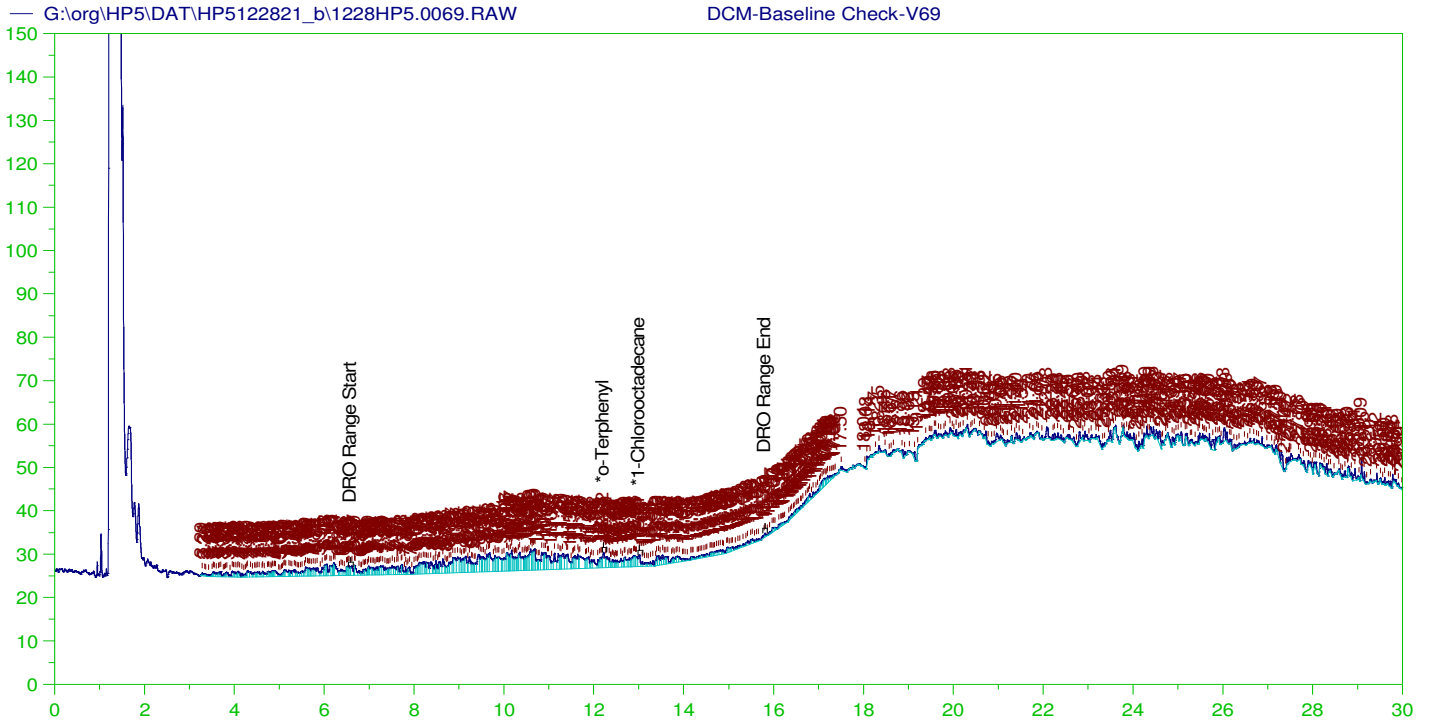
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.197	200.	194.206	97.1	-
*1-Chlorooctadecane	13.009	200.	155.128	77.56	-

DRO Area: 2.570587E+08 DRO Amount: 8198.804
 TEH Area: 2.675668E+08 TEH Amount: 8533.956

CONTINUING CALIBRATION REPORT: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0068.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8533.96	56.89	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.197	200.	194.206	97.1	85-115
*1-Chlorooctadecane	13.009	200.	155.128	77.56	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

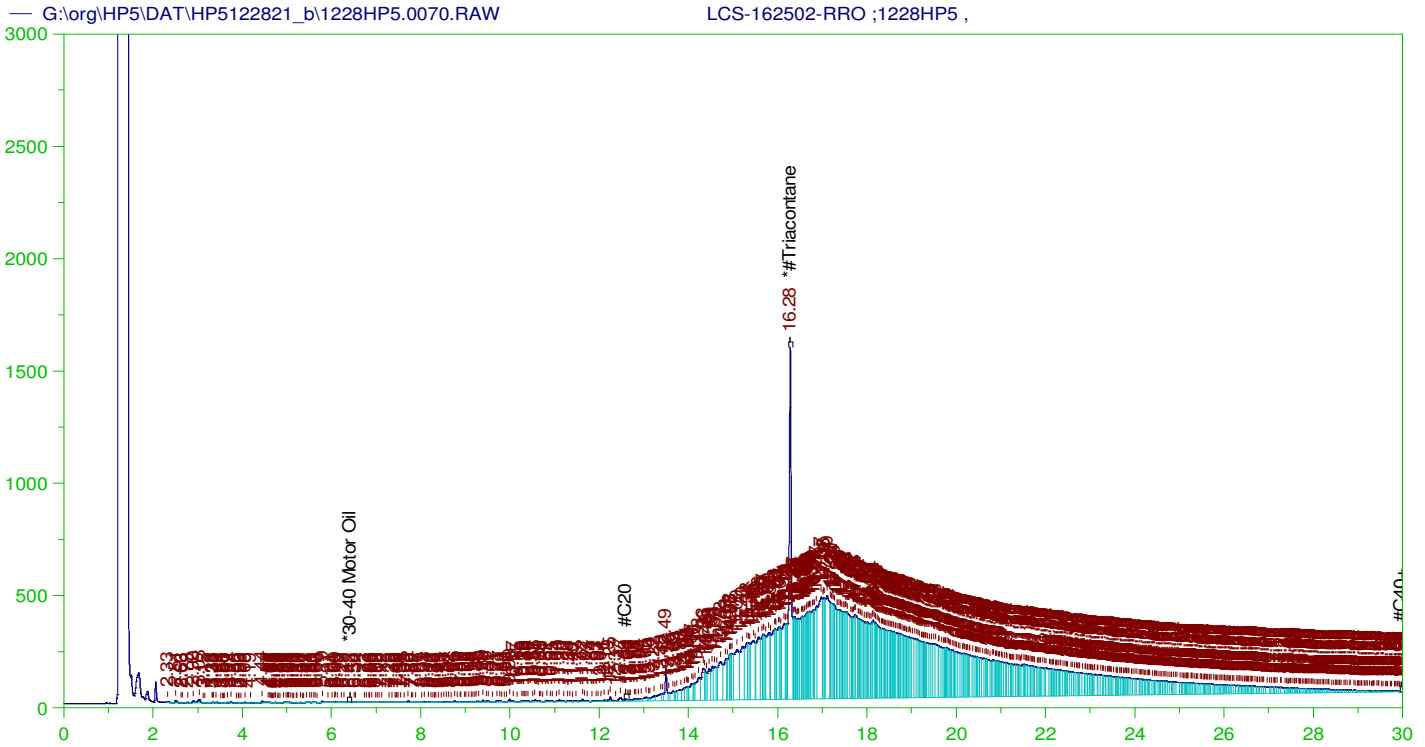
Sample Name: DCM-Baseline Check-V69
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 Date & Time Acquired: 12/30/2021 2:12:13 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.54 to 15.86

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.217	200.	.324	.16	-
*1-Chlorooctadecane	13.011	200.	.221	.11	-

DRO Area: 990720.6 DRO Amount: 31.59872
 TEH Area: 1669524 TEH Amount: 53.24892



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162502-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0070.RAW
Date & Time Acquired: 12/30/2021 2:55:00 PM
Method File: G:\Org\HP5\Methods\D3_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

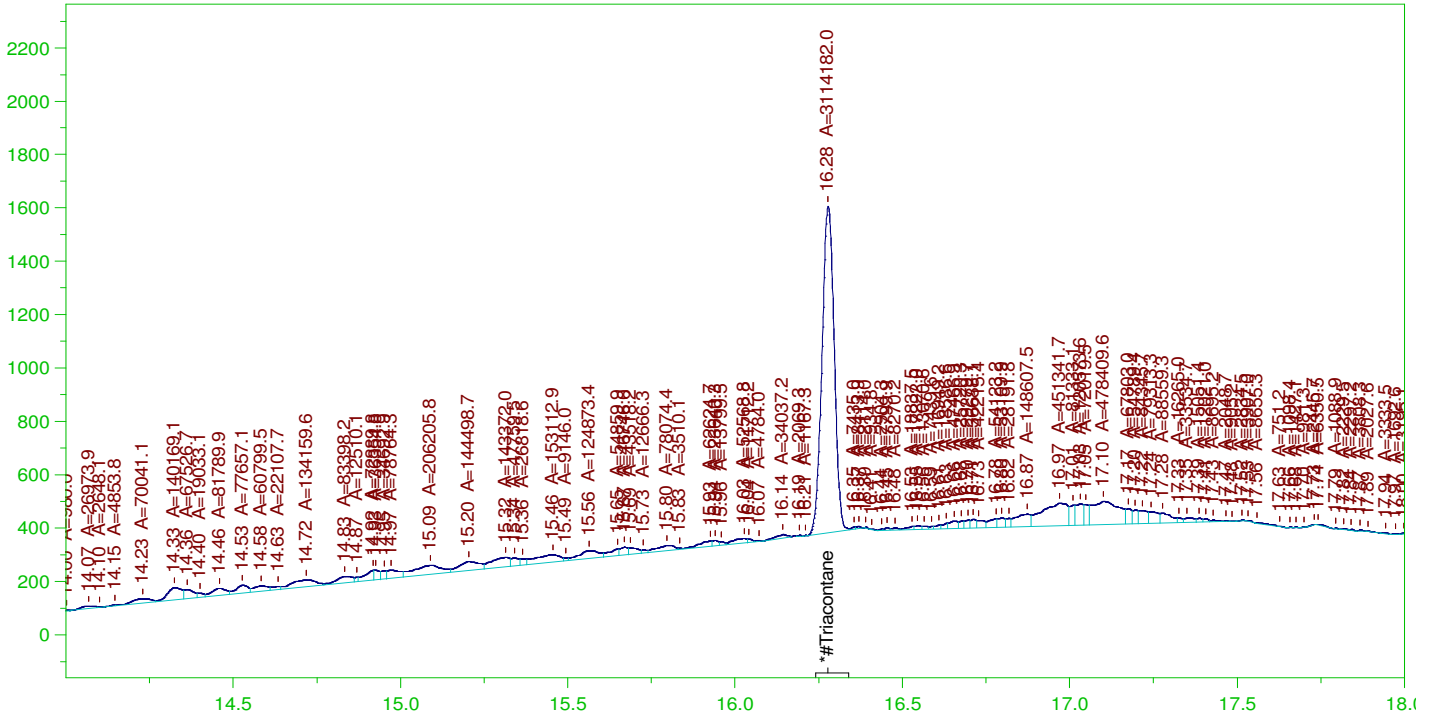
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.278	.5	.197	39.43	-

RRO TEH (Oil Range) Area:1.418383E+08 RRO TEH (Oil Range) AMOUNT: 4.969388

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G:\org\HP5\DAT\HP5122821_b\1228HP5.0070.RAW

LCS-162502-RRO ;1228HP5 ,



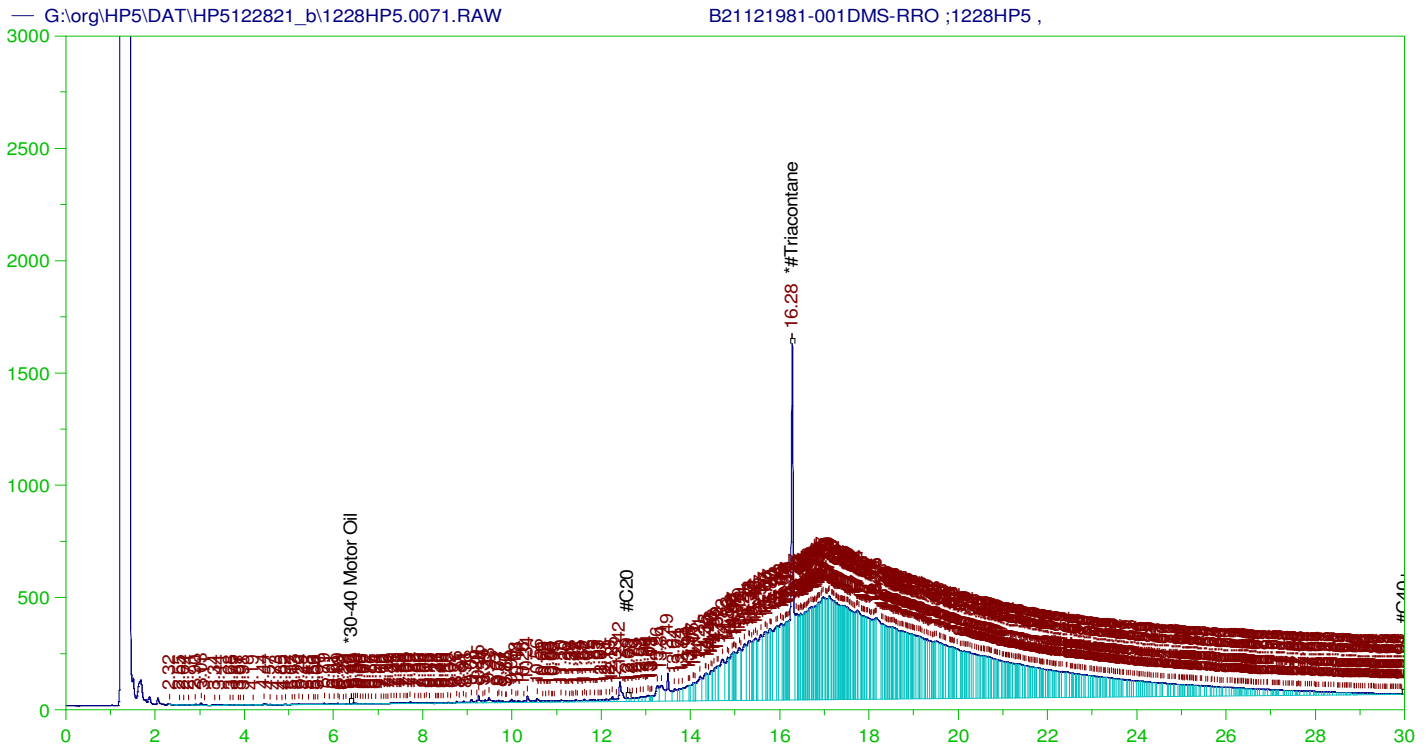
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162502-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0070.RAW
Date & Time Acquired: 12/30/2021 2:55:00 PM
Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.278	.5	.108	21.53

RRO Area:5234014 RRO AMOUNT: 0.1833767



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-001DMS-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0071.RAW
Date & Time Acquired: 12/30/2021 3:37:54 PM
Method File: G:\Org\HP5\Methods\D3_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

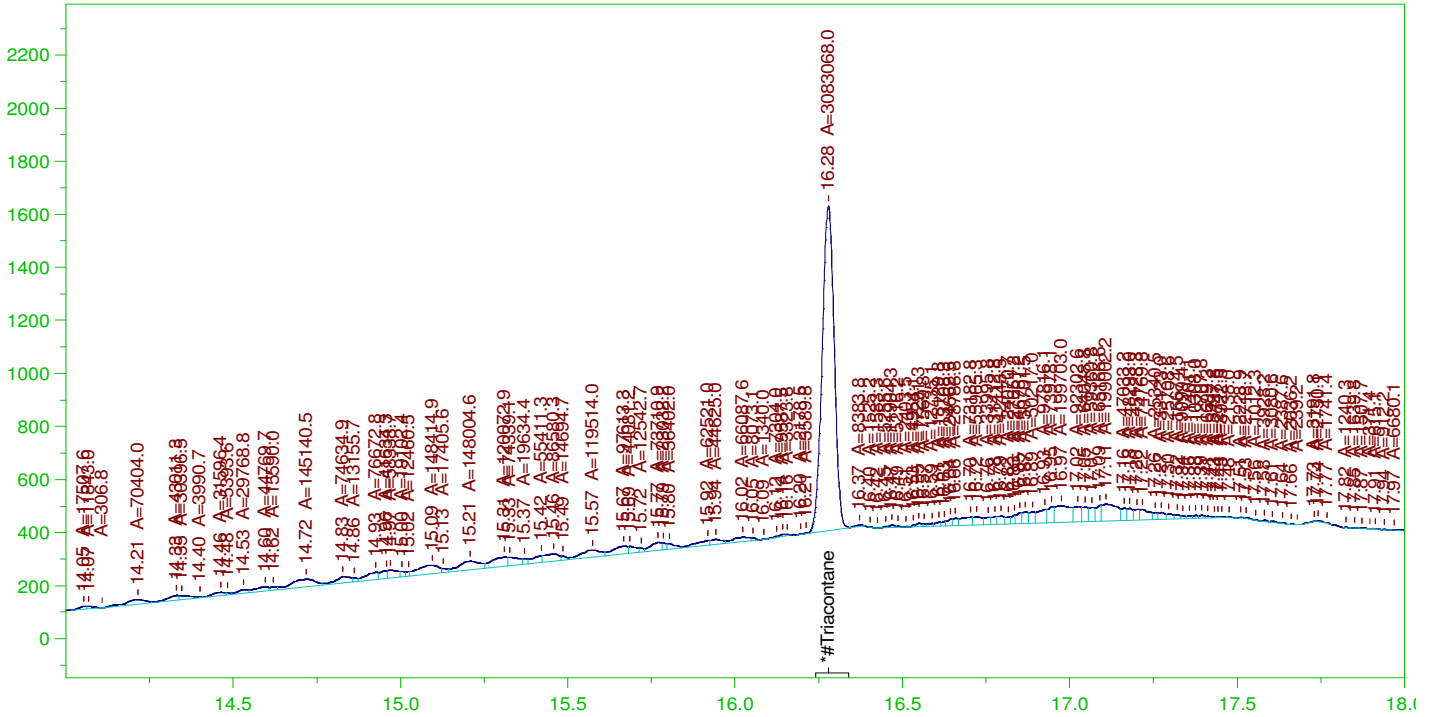
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.278	.481	.192	39.92	-

RRO TEH (Oil Range) Area:1.493006E+08 RRO TEH (Oil Range) AMOUNT: 5.029646

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G:\org\HP5\DAT\HP5122821_b\1228HP5.0071.RAW

B21121981-001DMS-RRO ;1228HP5 ,



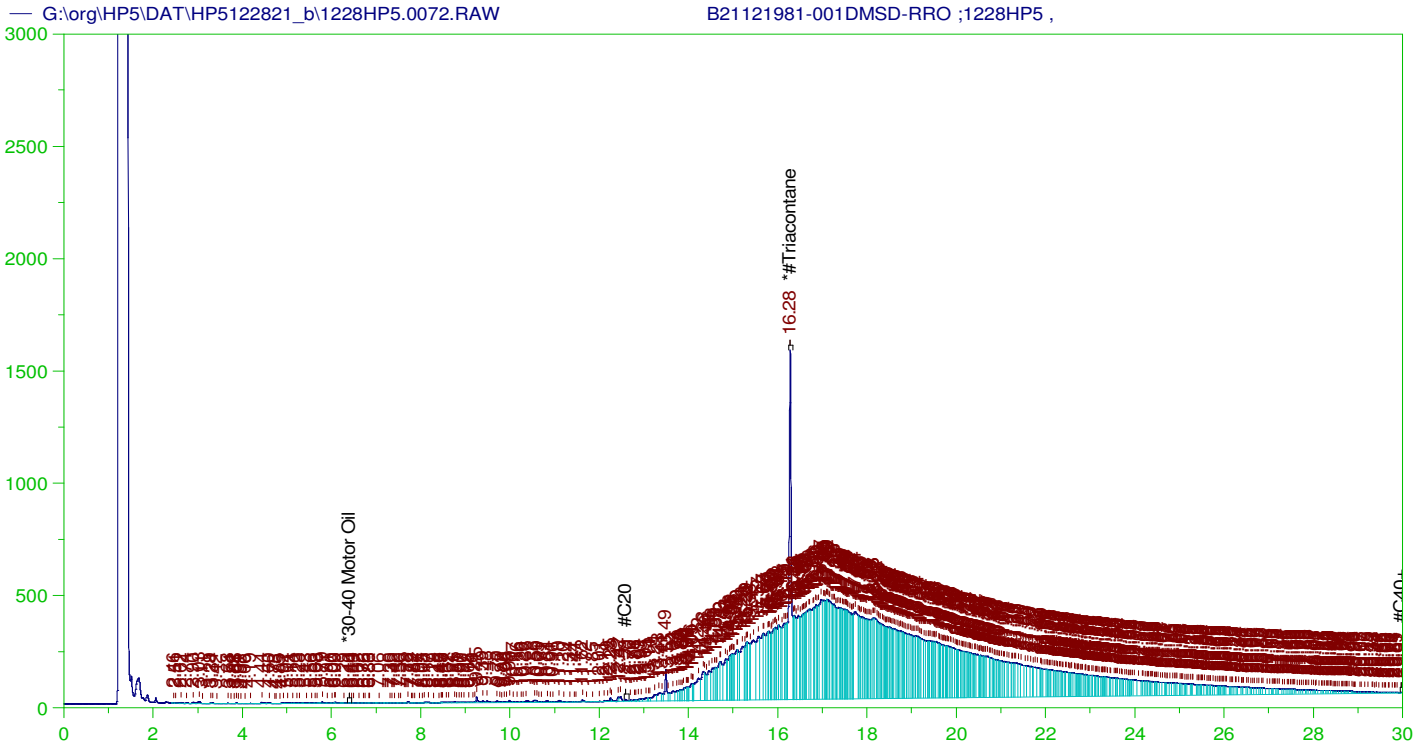
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-001DMS-RRO ;1228HP5 ,
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0071.RAW
 Date & Time Acquired: 12/30/2021 3:37:54 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.278	.481	.102	21.31

RRO Area:4765949 RRO AMOUNT: 0.1605556



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-001DMSD-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0072.RAW
Date & Time Acquired: 12/30/2021 4:20:50 PM
Method File: G:\Org\HP5\Methods\D3_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

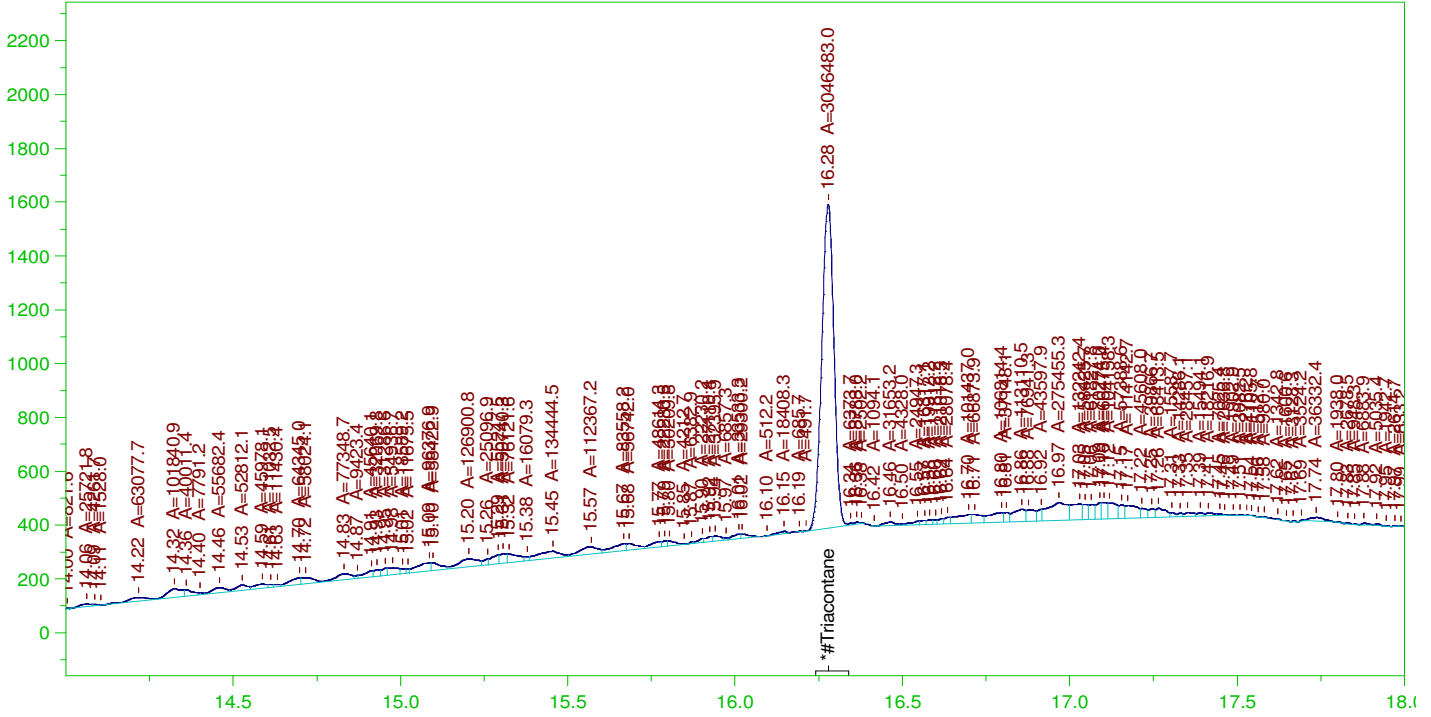
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.278	.481	.185	38.57	-

RRO TEH (Oil Range) Area:1.454959E+08 RRO TEH (Oil Range) AMOUNT: 4.901476

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G:\org\HP5\DAT\HP5122821_b\1228HP5.0072.RAW

B21121981-001DMSD-RRO ;1228HP5 ,



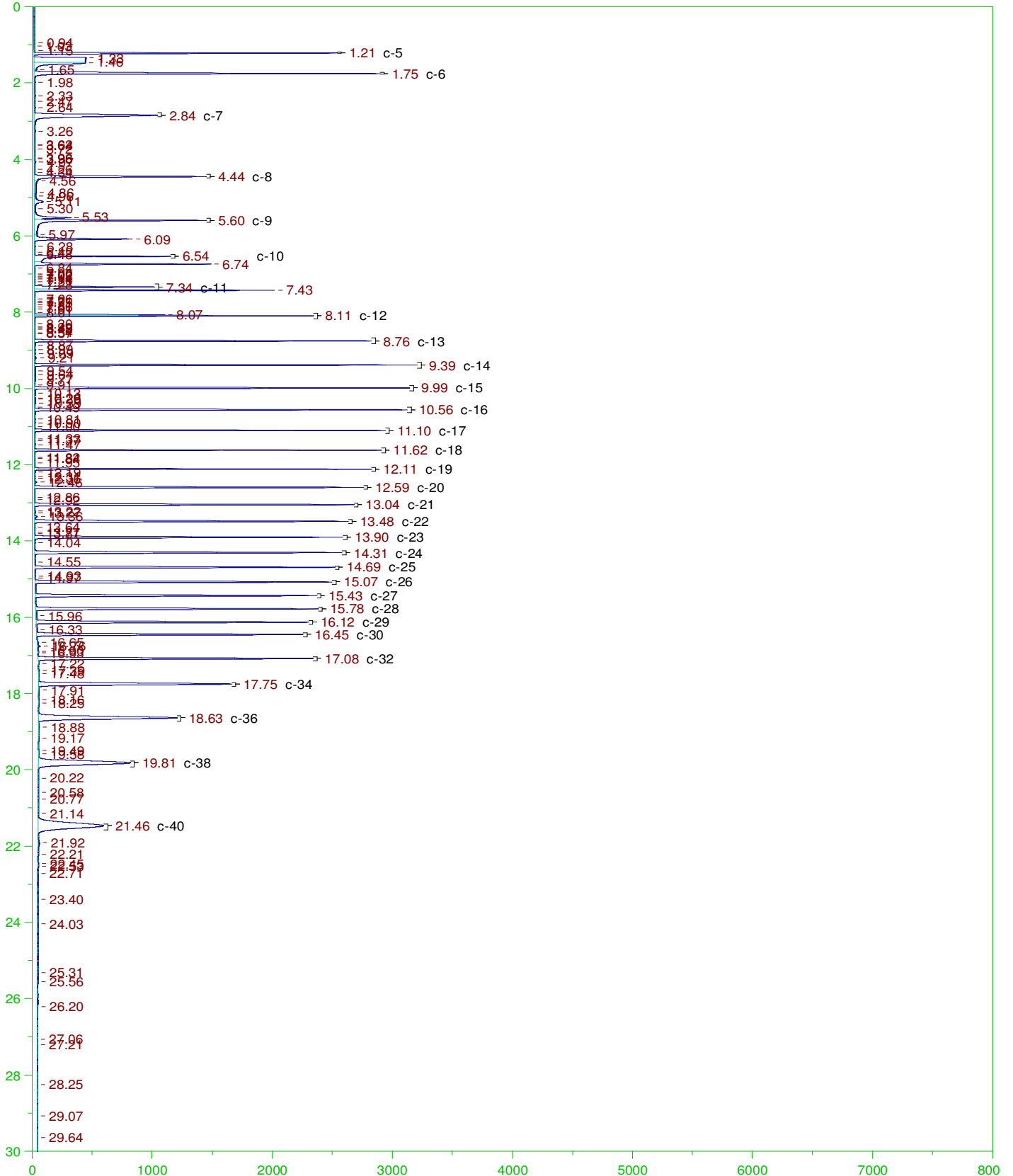
RESIDUAL RANGE ORGANICS CHROMATOGRAM

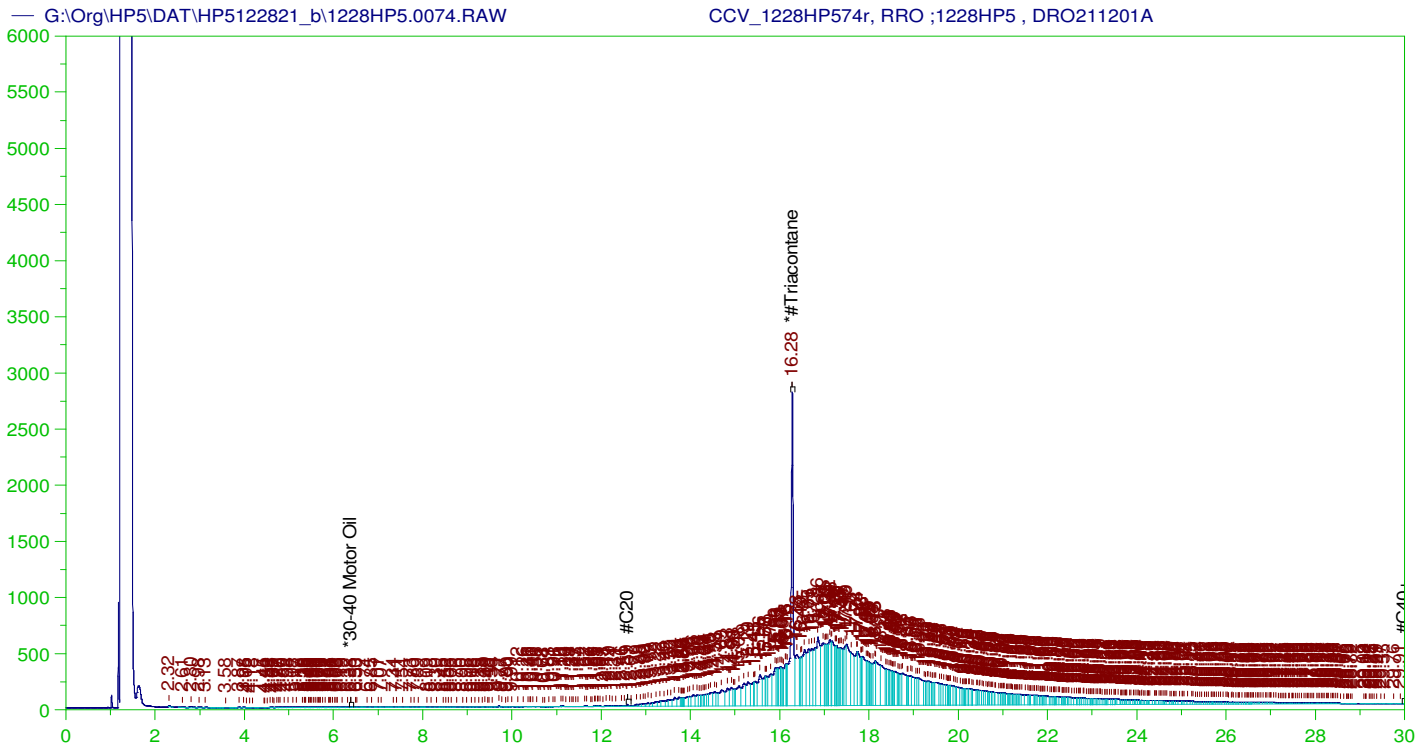
Sample Name: B21121981-001DMSD-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0072.RAW
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Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.278	.481	.101	21.06

RRO Area:4613222 RRO AMOUNT: 0.1554105





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP574r, RRO ;1228HP5 , DRO211201A
 Raw File: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0074.RAW
 Date & Time Acquired: 12/30/2021 5:47:21 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 28542.41
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.56 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	348.774	69.75	-

RRO TEH (Oil Range) Area:1.33741E+08 RRO TEH (Oil Range) AMOUNT: 4685.692

CONTINUING CALIBRATION REPORT: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0074.RAW

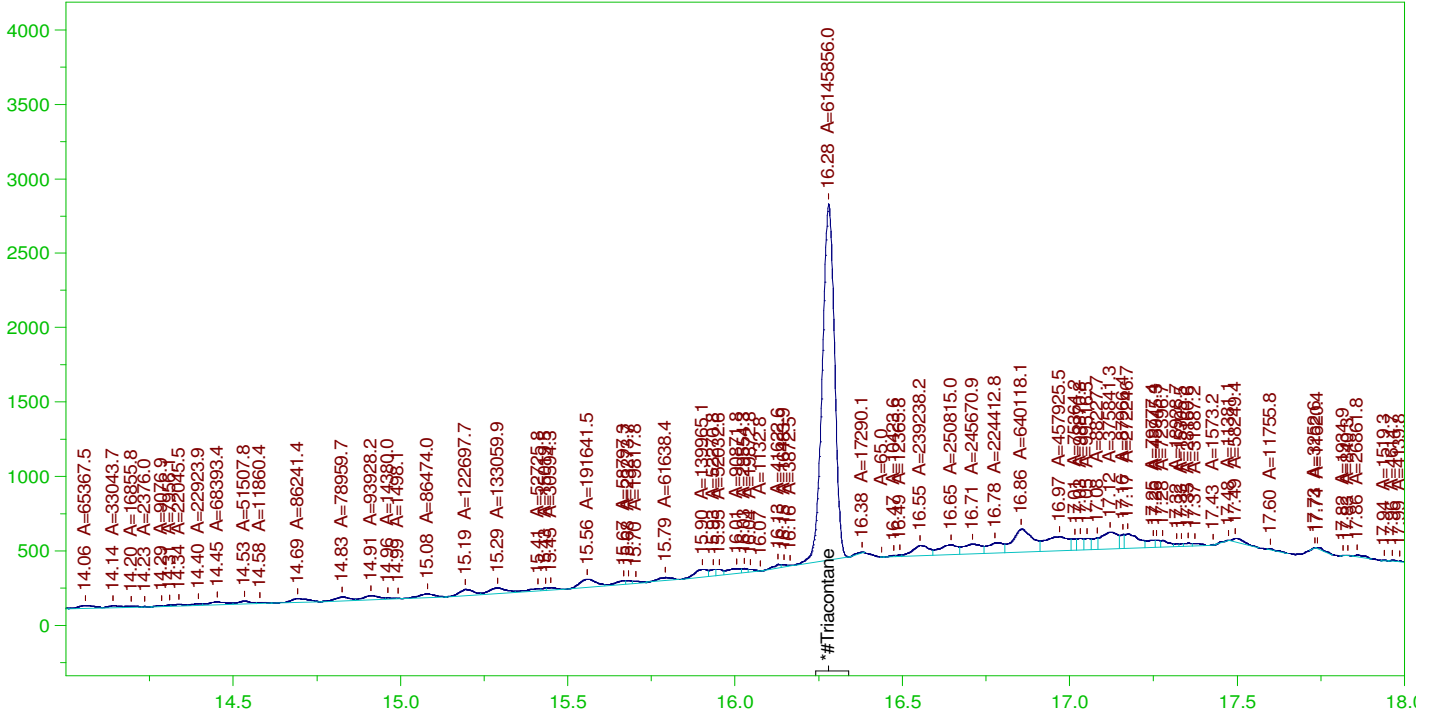
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.026	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.279	200.	348.774	174.39	75-125

AMN 01/24/2022

G:\Org\HP5\DAT\HP5122821_b\1228HP5.0074.RAW

CCV_1228HP574r, RRO ;1228HP5 , DRO211201A



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_1228HP574r, RRO ;1228HP5 , DRO211201A
Raw File: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0074.RAW
Date & Time Acquired: 12/30/2021 5:47:21 PM
Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 12.56 to 30.05

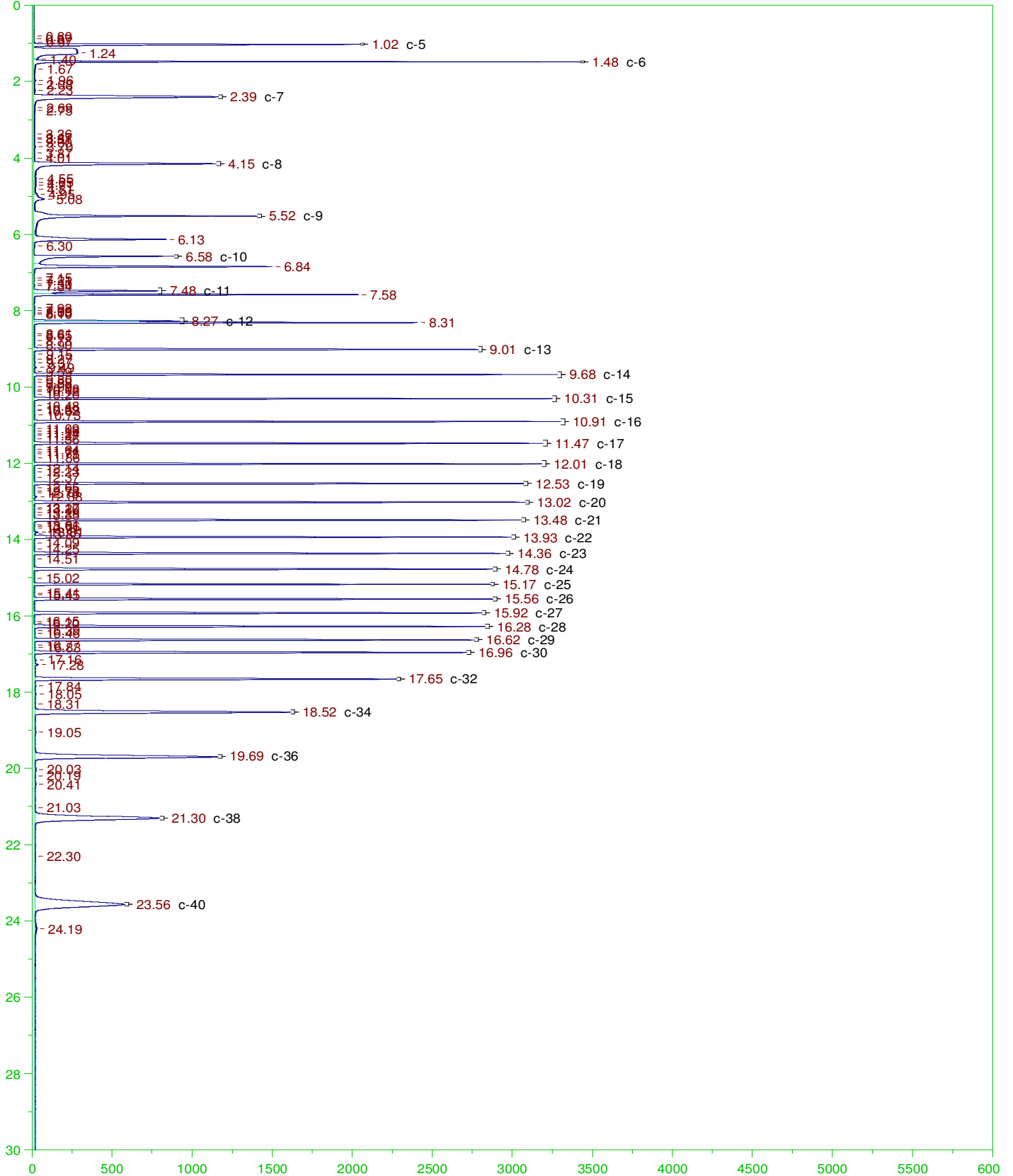
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	212.438	42.49	-

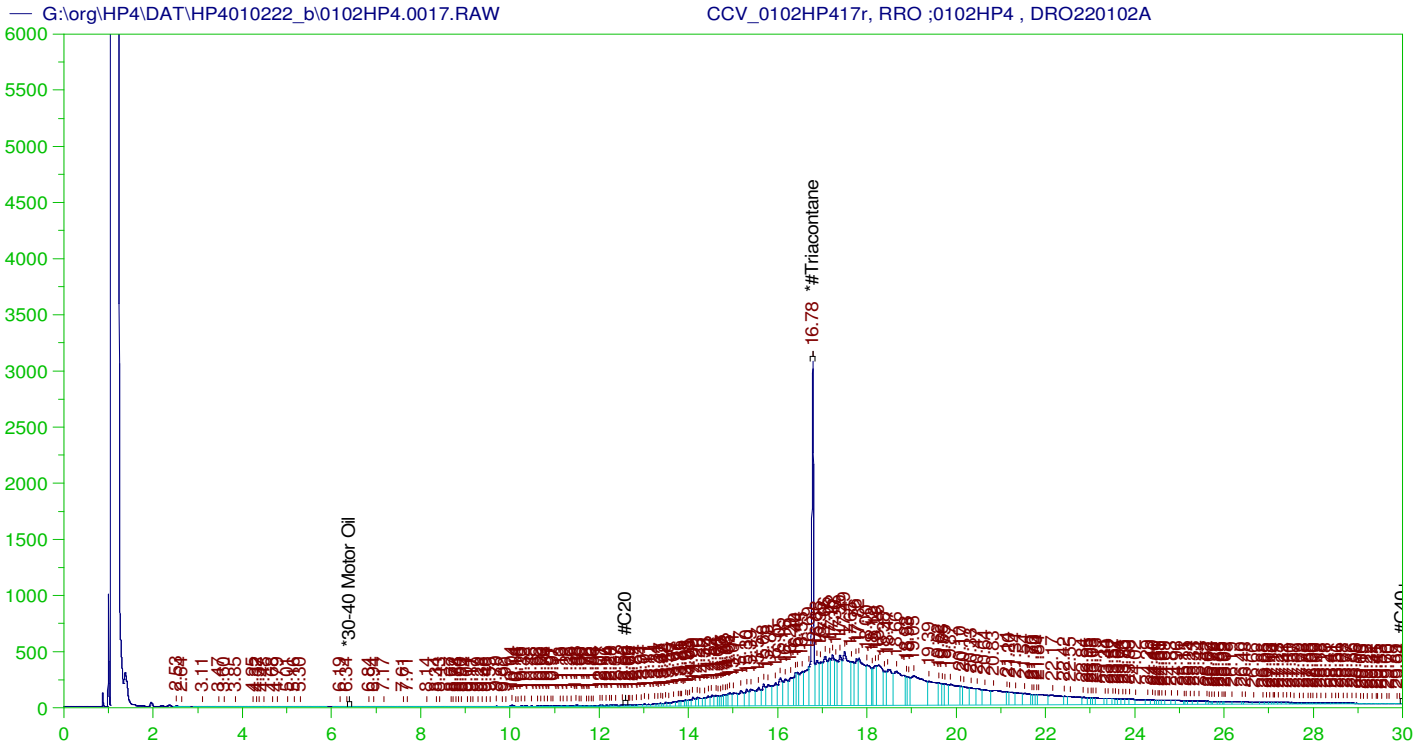
RRO Area:6226063 RRO AMOUNT: 218.1338

CONTINUING CALIBRATION REPORT: G:\Org\HP5\DAT\HP5122821_b\1228HP5.0074.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.026	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.279	200.	212.438	106.22	75-125





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0102HP417r, RRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0017.RAW
 Date & Time Acquired: 1/2/2022 11:57:42 PM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.782	500.	343.526	68.71	-

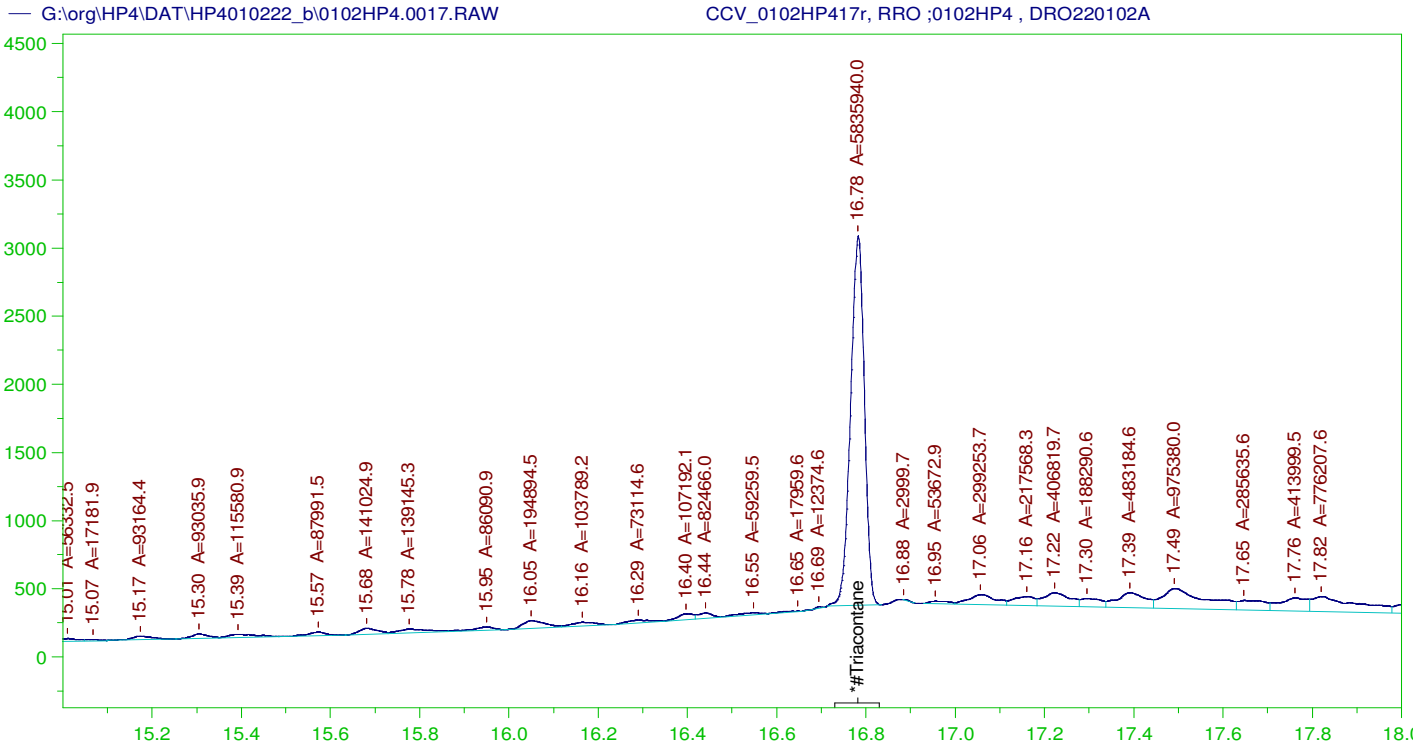
RRO TEH (Oil Range) Area:1.133237E+08 RRO TEH (Oil Range) AMOUNT: 4619.884

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0017.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.782	200.	343.526	171.76	75-125

AMN 01/24/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0102HP417r, RRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0017.RAW
 Date & Time Acquired: 1/2/2022 11:57:42 PM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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

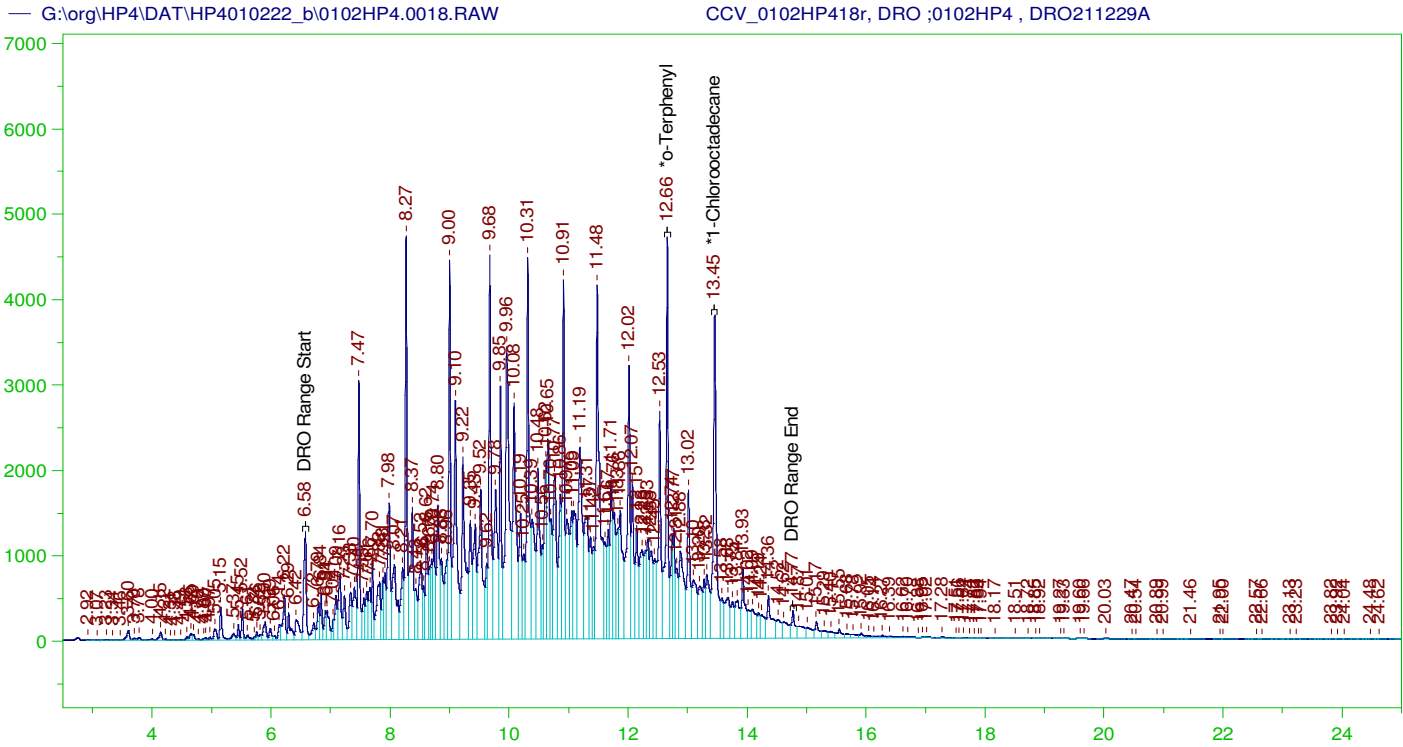
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.782	500.	233.682	46.74

RRO Area:1.008505E+07 RRO AMOUNT: 411.1384

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0017.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.782	200.	233.682	116.84	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0102HP418r, DRO ;0102HP4 , DRO211229A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0018.RAW
 Date & Time Acquired: 1/3/2022 12:42:14 AM
 Method File: G:\Org\HP4\methods\DC_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.659	200.	382.715	191.36
*1-Chlorooctadecane	13.455	200.	378.815	189.41

DRO Area: 4.554364E+08 DRO Amount: 15505.13
 TEH Area: 4.725844E+08 TEH Amount: 16088.92

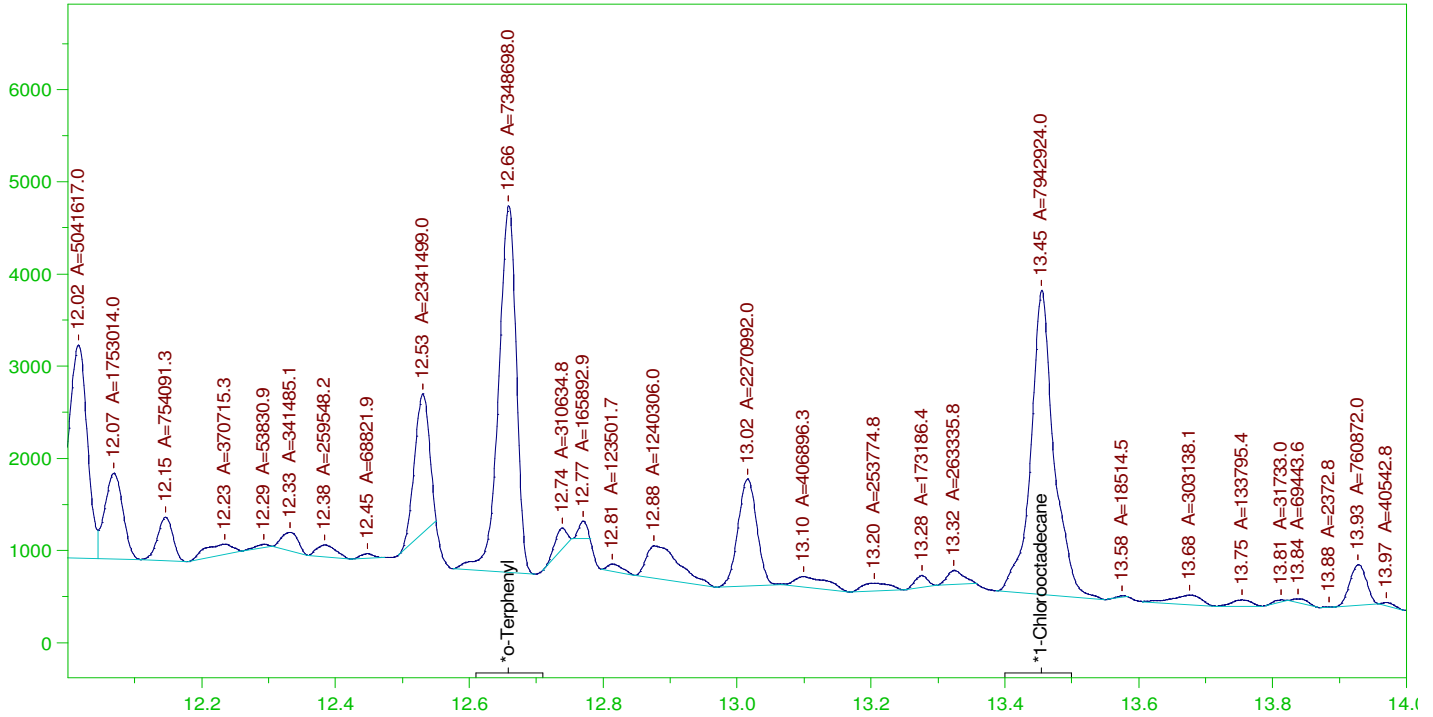
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16088.92	107.26	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.659	200.	382.715	191.36	85-115
*1-Chlorooctadecane	13.455	200.	378.815	189.41	85-115

G:\org\HP4\DAT\HP4010222_b\0102HP4.0018.RAW

CCV_0102HP418r, DRO ;0102HP4 , DRO211229A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0102HP418r, DRO ;0102HP4 , DRO211229A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0018.RAW
 Date & Time Acquired: 1/3/2022 12:42:14 AM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

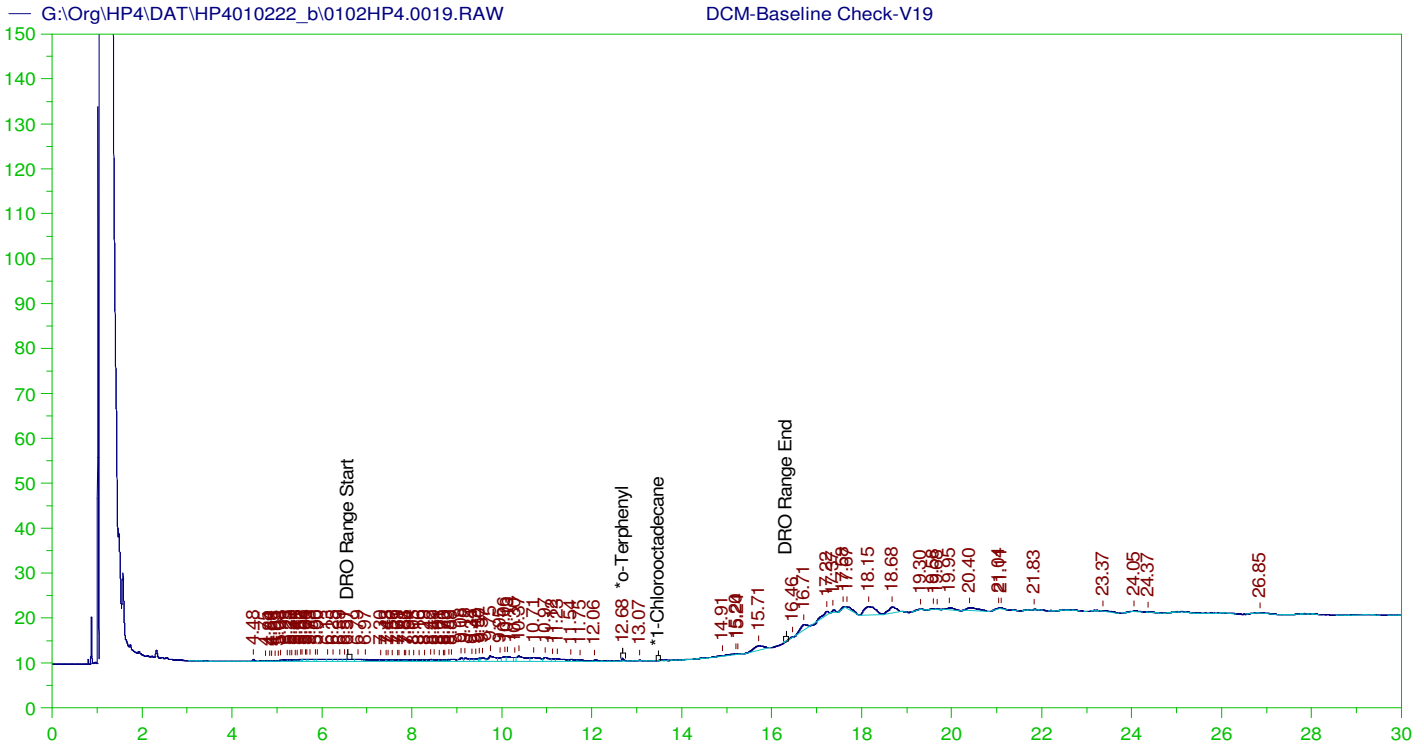
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.659	200.	220.551	110.28
*1-Chlorooctadecane	13.455	200.	238.385	119.19

DRO Area: 2.000501E+08 DRO Amount: 6810.617
 TEH Area: 2.107489E+08 TEH Amount: 7174.853

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0018.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7174.85	47.83	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.659	200.	220.551	110.28	85-115
*1-Chlorooctadecane	13.455	200.	238.385	119.19	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V19
 Raw File: G:\Org\HP4\DAT\HP4010222_b\0102HP4.0019.RAW
 Date & Time Acquired: 1/3/2022 1:27:04 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.	.056	.03
*1-Chlorooctadecane	29.965	200.	.	.

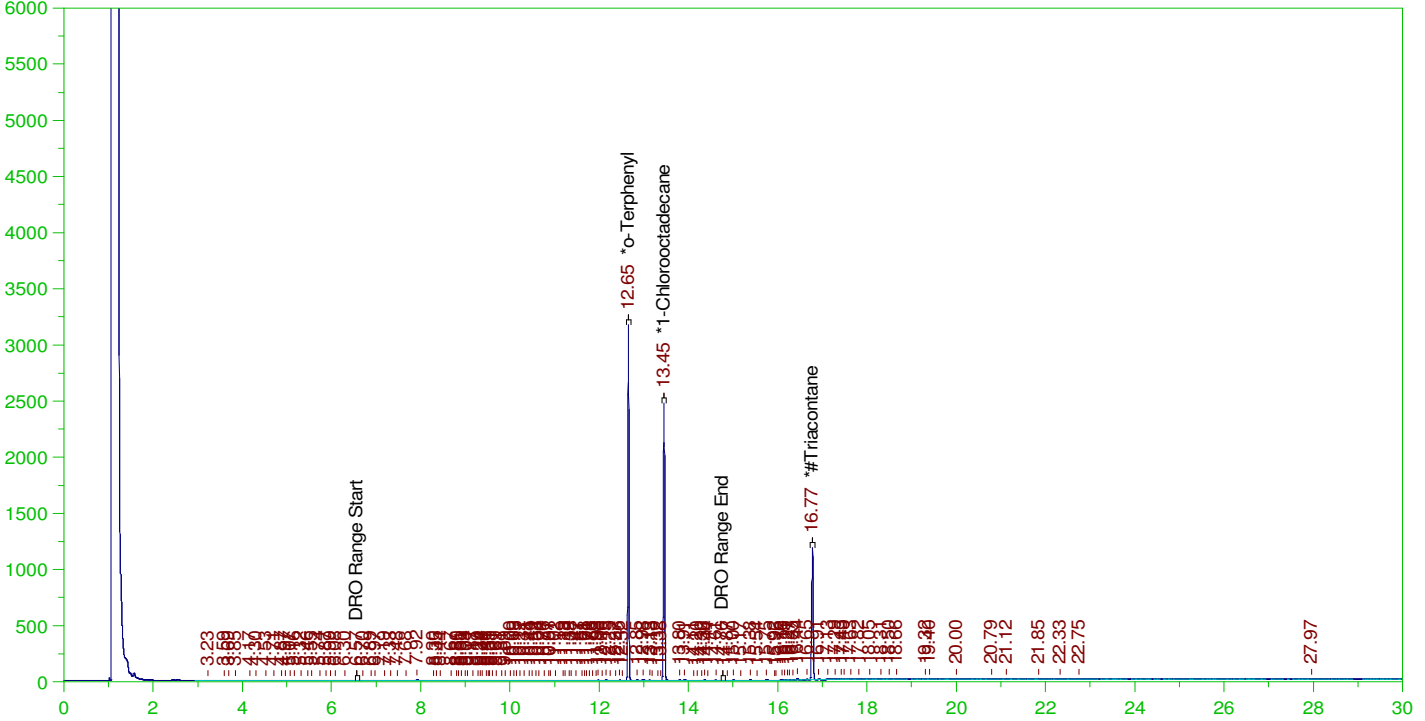
DRO Area:175638.2 DRO Amount: 5.979525
 TEH Area:340092.4 TEH Amount: 11.57829

ERH2244 (RHMW08)

Batch ID: 162502

G:\Org\HP4\DAT\HP4010222_b\0102HP4.0020.RAW

B21121979-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\Org\HP4\DAT\HP4010222_b\0102HP4.0020.RAW
 Date & Time Acquired: 1/3/2022 2:11:53 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	.192	.159	82.67	-
*1-Chlorooctadecane	13.45	.192	.134	69.58	-
*#Triacontane	16.774	.192	.095	49.61	-

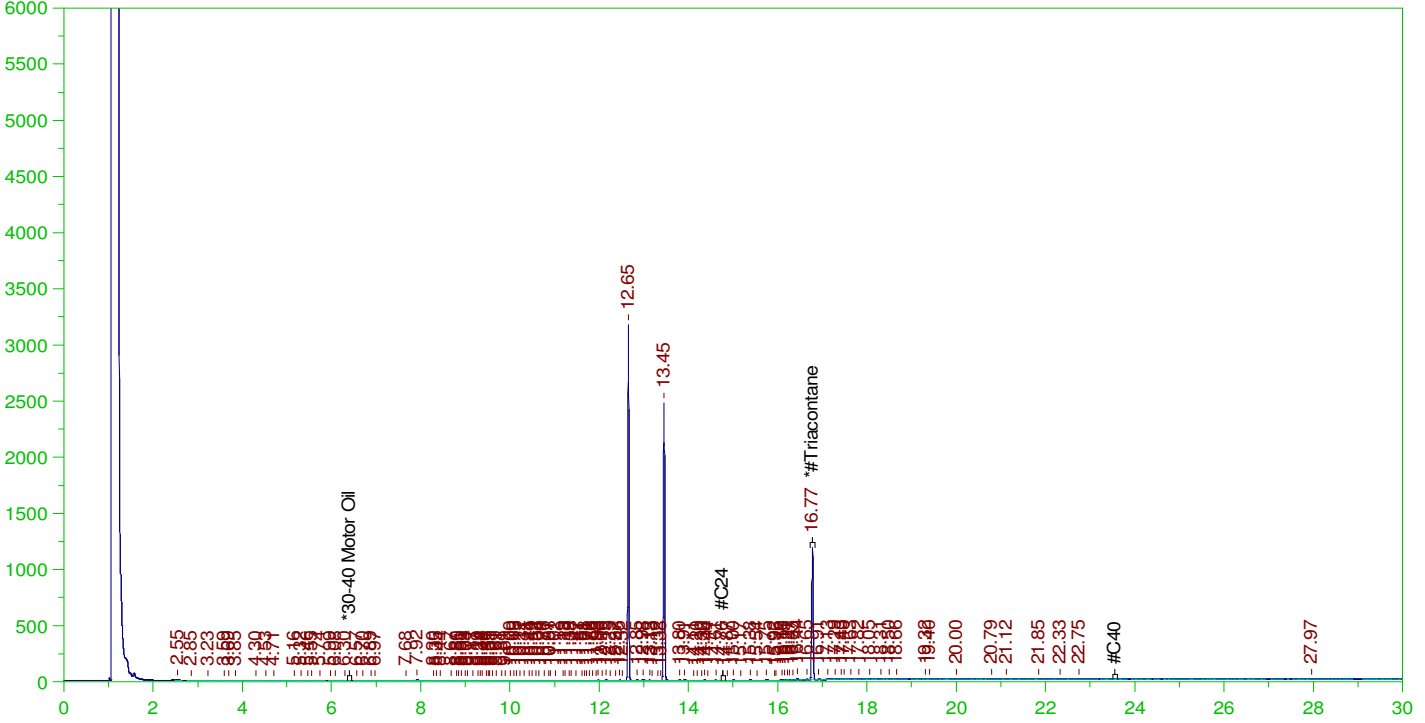
DRO Area:362778.1 DRO Amount: 1.187559E-02
 TEH Area:682781.3 TEH Amount: 2.235094E-02

ERH2244 (RHMW08)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0020.RAW

B21121979-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121979-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0020.RAW
 Date & Time Acquired: 1/3/2022 2:11:53 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.774	.481	.095	19.75

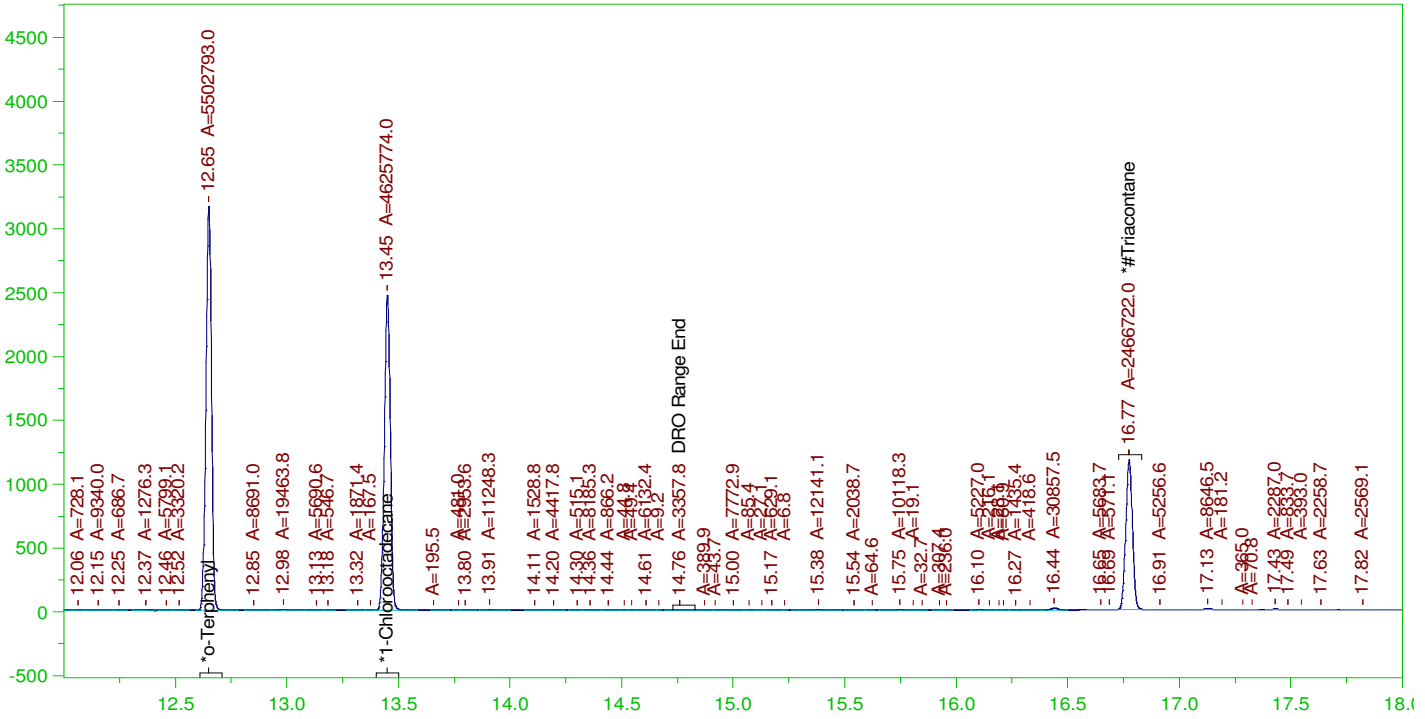
RRO Area:202986.7 RRO AMOUNT: 7.95691E-03

ERH2244 (RHMW08)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0020.RAW

B21121979-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0020.RAW
 Date & Time Acquired: 1/3/2022 2:11:53 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	.192	.159	82.58	-
*1-Chlorooctadecane	13.45	.192	.133	69.41	-
*#Triacontane	16.774	.192	.095	49.39	-

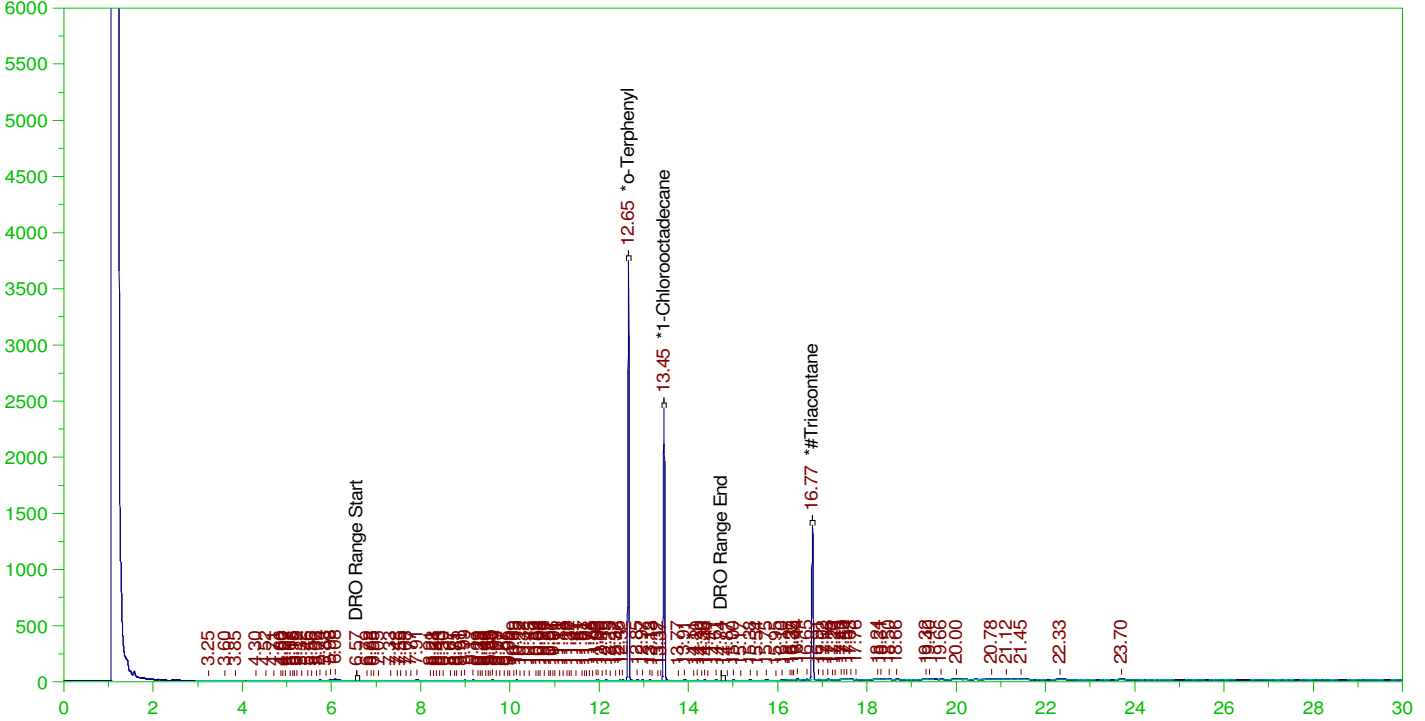
DRO Area:257570.5 DRO Amount: 8.431608E-03
 TEH Area:506790.9 TEH Amount: 1.658987E-02

ERH2245 (RHMW08)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0021.RAW

B21121979-002B ;0102HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-002B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0021.RAW
 Date & Time Acquired: 1/3/2022 2:56:39 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.192	.185	96.23	-
*1-Chlorooctadecane	13.45	.192	.132	68.65	-
*#Triacontane	16.774	.192	.113	58.55	-

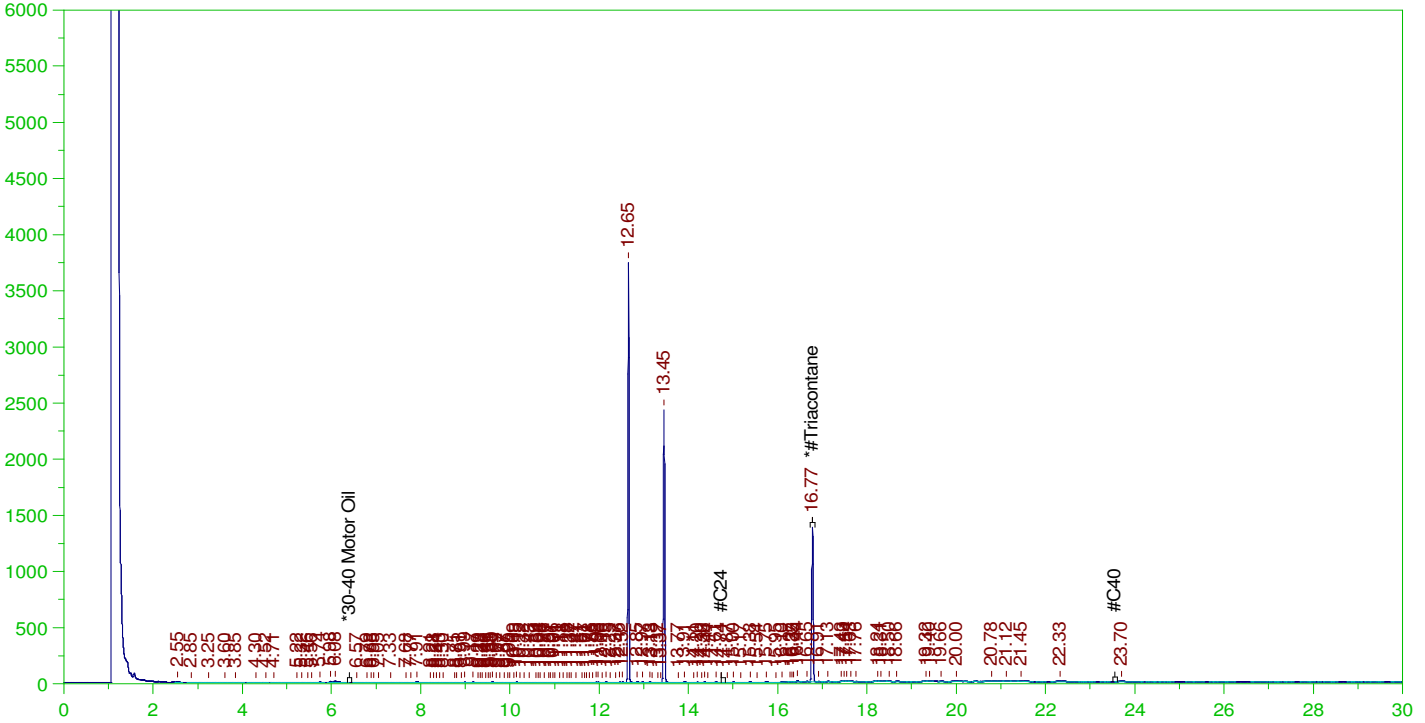
DRO Area:446438.2 DRO Amount: 1.461422E-02
 TEH Area:865634.1 TEH Amount: 2.833666E-02

ERH2245 (RHMW08)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0021.RAW

B21121979-002B ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121979-002B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0021.RAW
 Date & Time Acquired: 1/3/2022 2:56:39 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.774	.481	.112	23.33

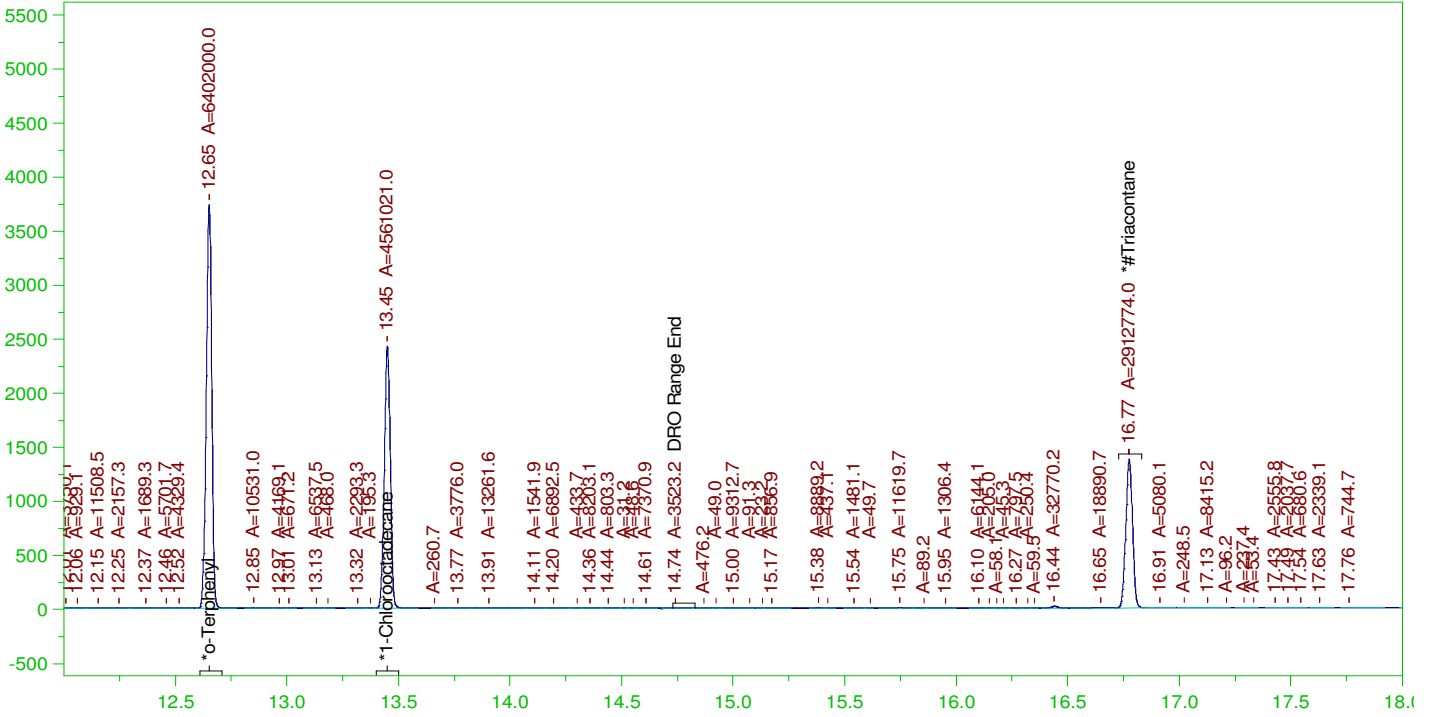
RRO Area:213427.7 RRO AMOUNT: 8.36619E-03

ERH2245 (RHMW08)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0021.RAW

B21121979-002B ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121979-002B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0021.RAW
 Date & Time Acquired: 1/3/2022 2:56:39 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.192	.185	96.07	-
*1-Chlorooctadecane	13.45	.192	.132	68.44	-
*#Triacontane	16.774	.192	.112	58.32	-

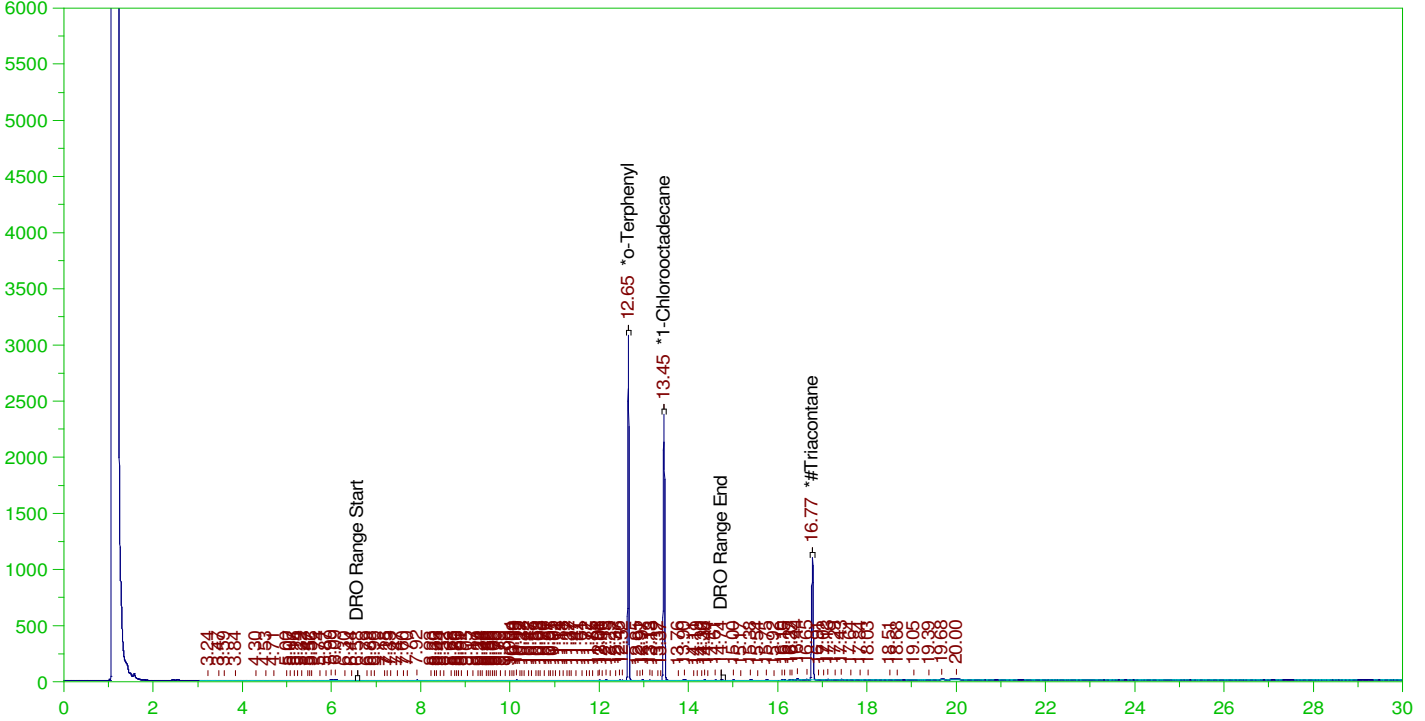
DRO Area:297780.6 DRO Amount: 9.747892E-03
 TEH Area:670472.5 TEH Amount: 2.194801E-02

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW

B21121841-004B ;0102HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW
 Date & Time Acquired: 1/3/2022 3:41:24 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	.2	.158	78.91	-
*1-Chlorooctadecane	13.449	.2	.133	66.51	-
*#Triacontane	16.774	.2	.093	46.68	-

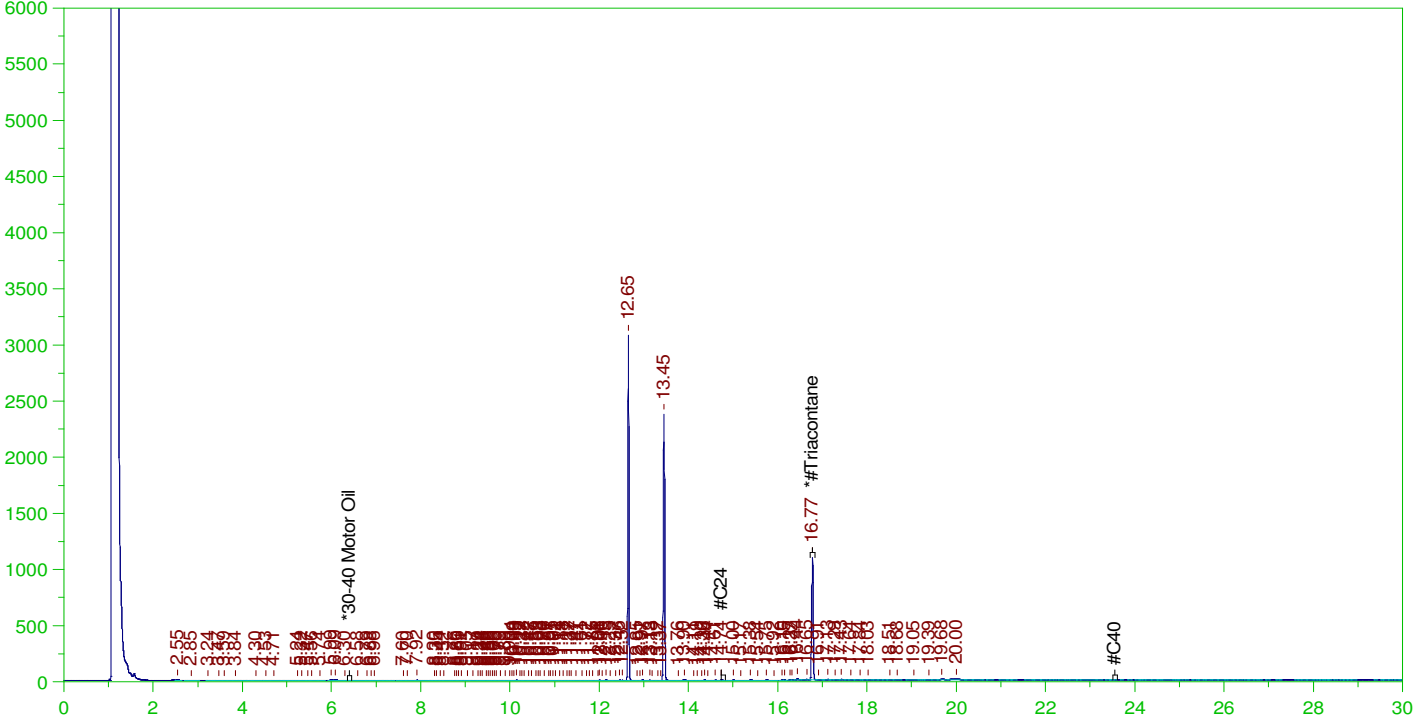
DRO Area:329475.7 DRO Amount: 1.121685E-02
 TEH Area:602664.3 TEH Amount: 2.051743E-02

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW

B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW
 Date & Time Acquired: 1/3/2022 3:41:24 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.774	.5	.093	18.6	-

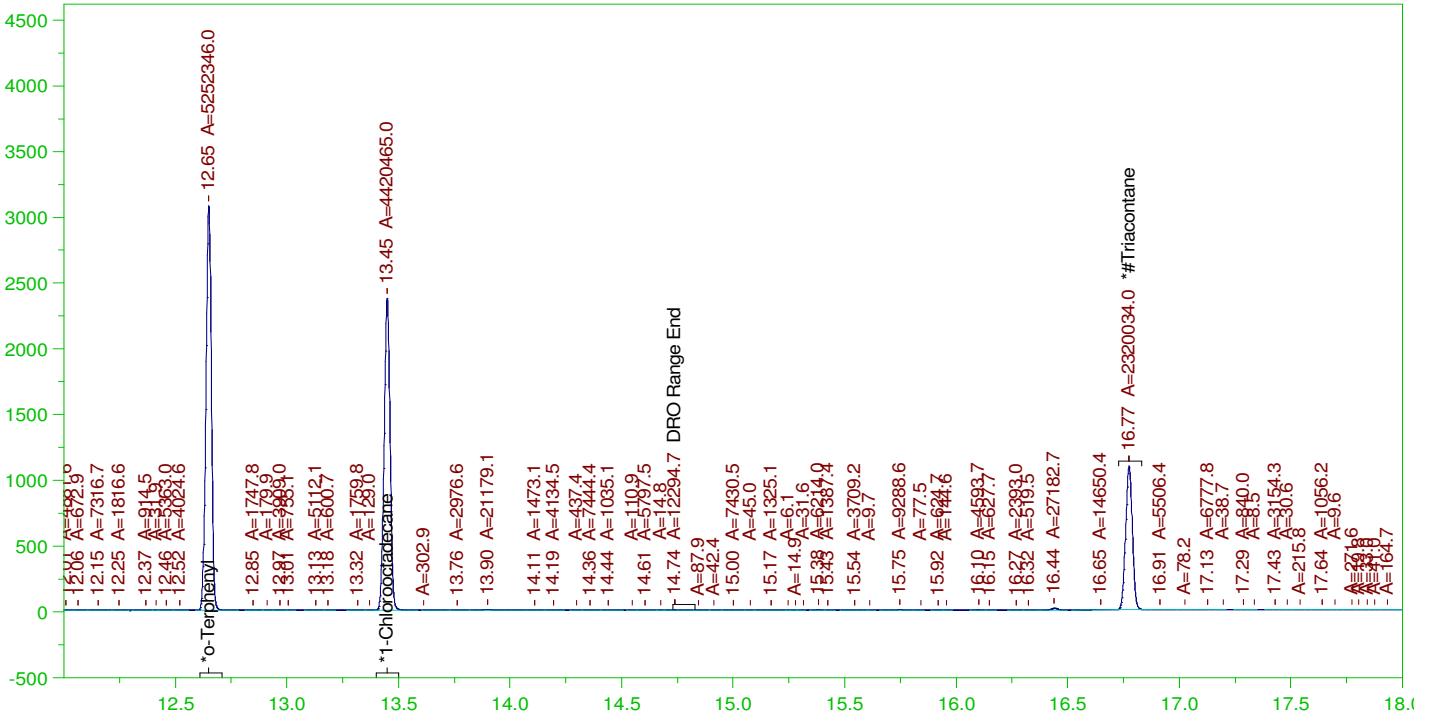
RRO Area:152759.5 RRO AMOUNT: 6.227565E-03

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW

B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

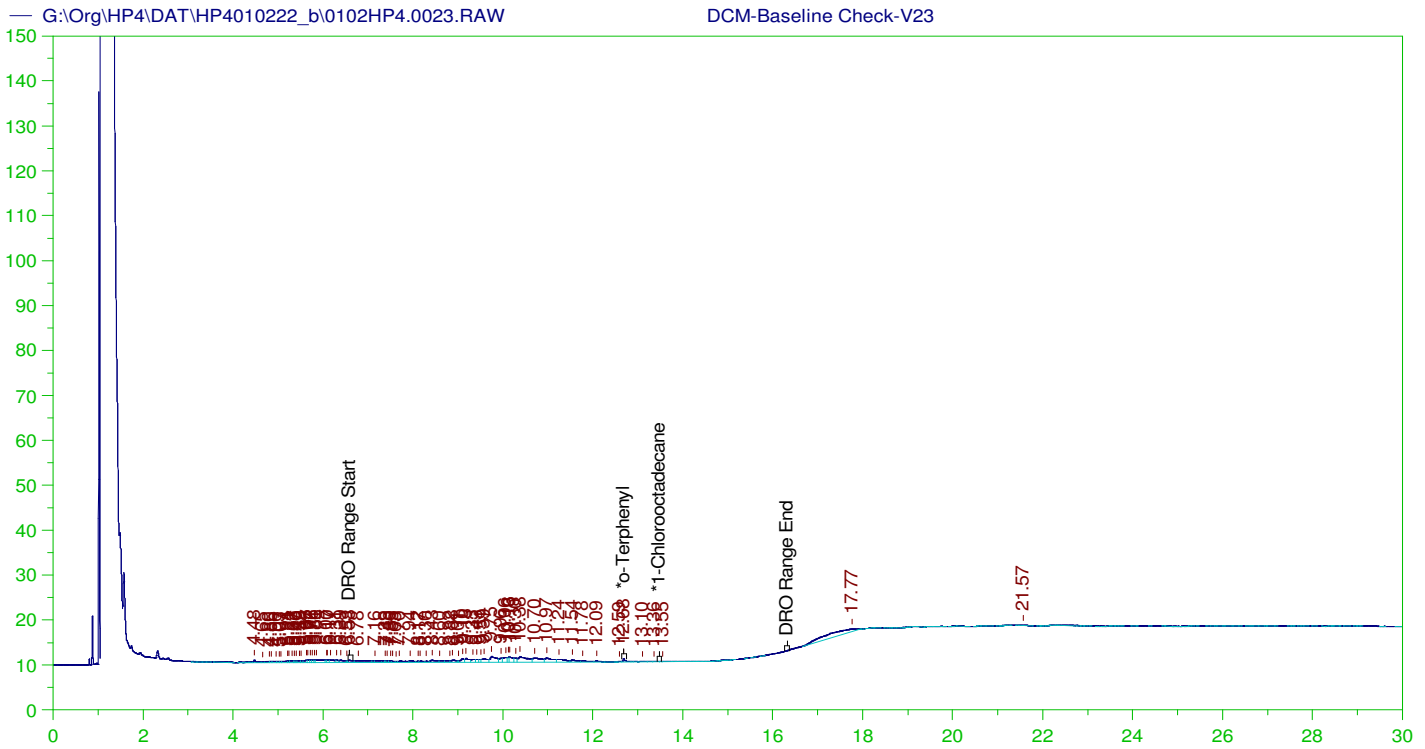
Sample Name: B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW
 Date & Time Acquired: 1/3/2022 3:41:24 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	.2	.158	78.82	-
*1-Chlorooctadecane	13.449	.2	.133	66.33	-
*#Triacontane	16.774	.2	.093	46.45	-

DRO Area:273928.9 DRO Amount: 9.325787E-03
 TEH Area:511147.7 TEH Amount: 1.740179E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V23
 Raw File: G:\Org\HP4\DAT\HP4010222_b\0102HP4.0023.RAW
 Date & Time Acquired: 1/3/2022 4:26:07 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	12.684	200.	.084	.04
*1-Chlorooctadecane	29.861	200.	.	.

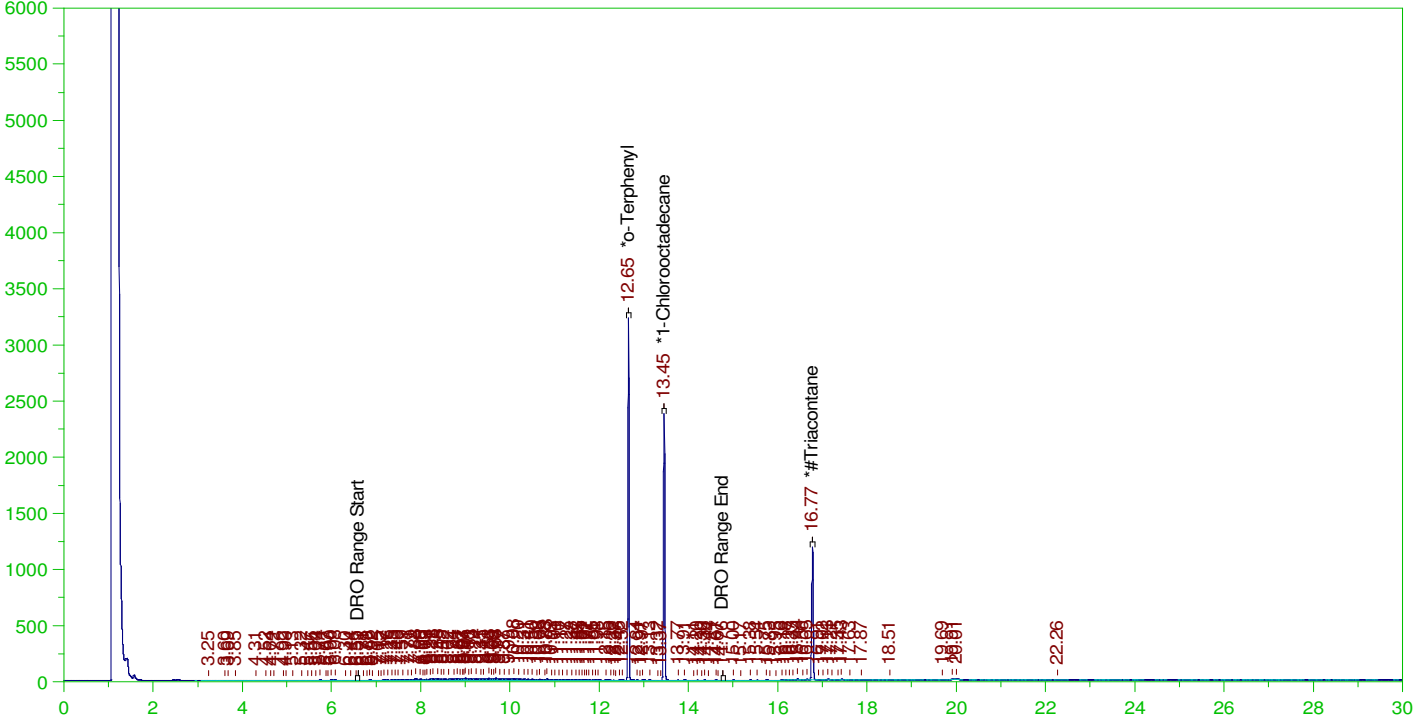
DRO Area:163803.8 DRO Amount: 5.576628
 TEH Area:263388.3 TEH Amount: 8.966934

ERH2267 (RHMW2254-01 LF)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0024.RAW

B21121981-003D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-003D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0024.RAW
 Date & Time Acquired: 1/3/2022 5:11:00 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.192	.163	84.54	-
*1-Chlorooctadecane	13.452	.192	.128	66.76	-
*#Triacontane	16.775	.192	.097	50.56	-

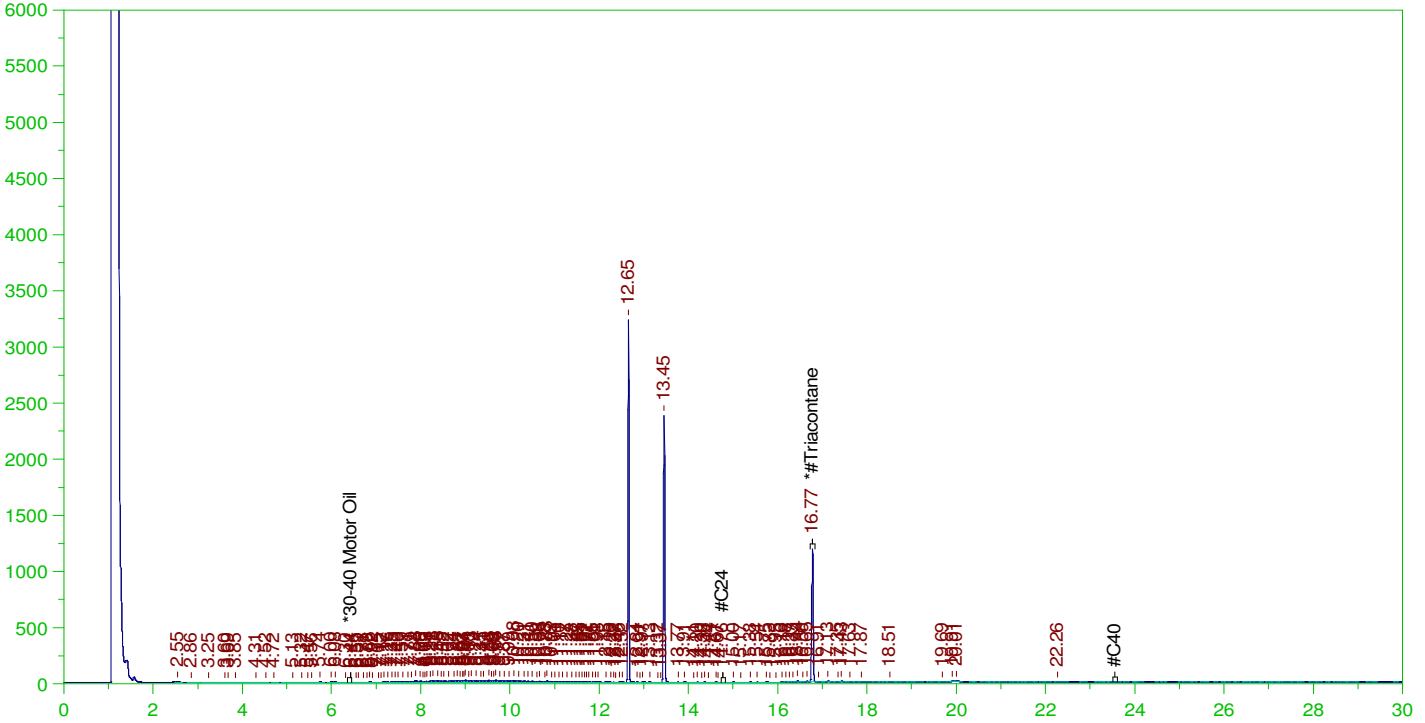
DRO Area:2649266 DRO Amount: 8.672411E-02
 TEH Area:2924105 TEH Amount: 9.572098E-02

ERH2267 (RHMW2254-01 LF)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0024.RAW

B21121981-003D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-003D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0024.RAW
 Date & Time Acquired: 1/3/2022 5:11:00 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.775	.481	.097	20.14

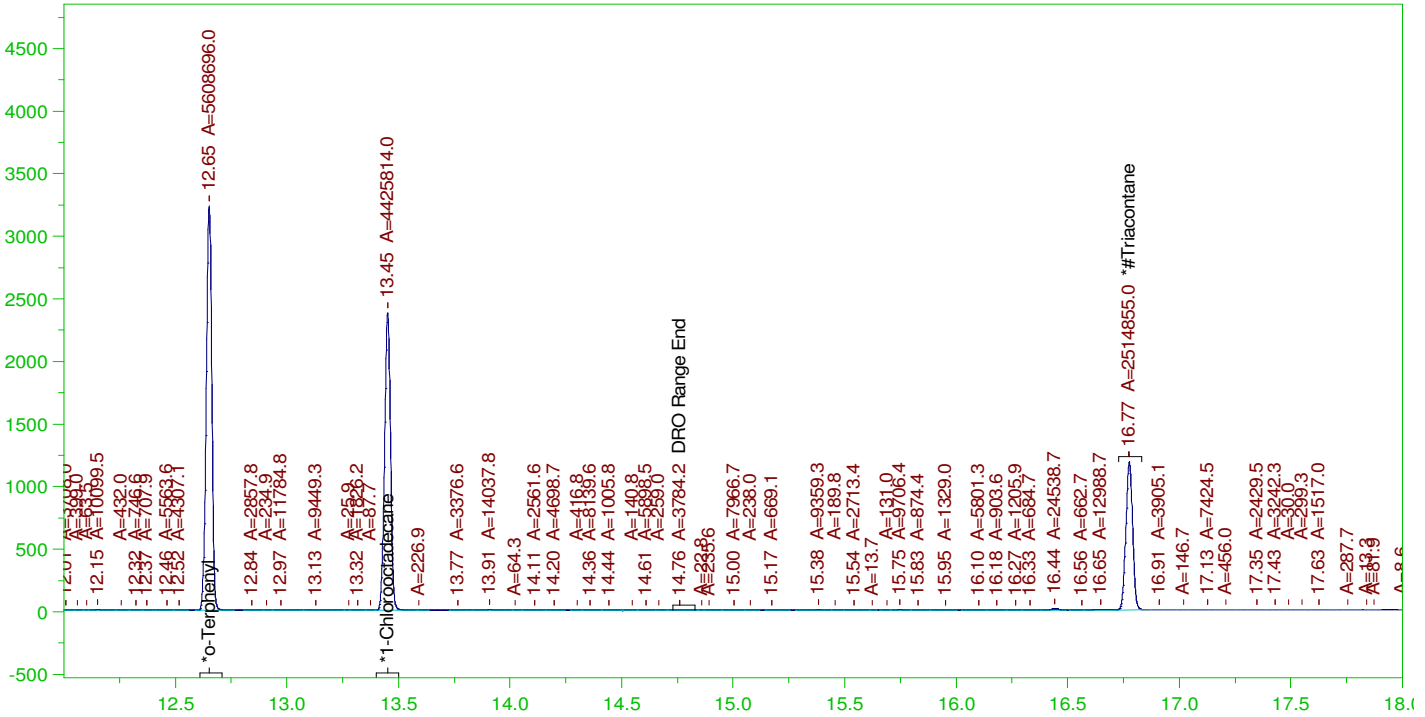
RRO Area:118402.8 RRO AMOUNT: 4.64129E-03

ERH2267 (RHMW2254-01 LF)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0024.RAW

B21121981-003D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-003D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0024.RAW
 Date & Time Acquired: 1/3/2022 5:11:00 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

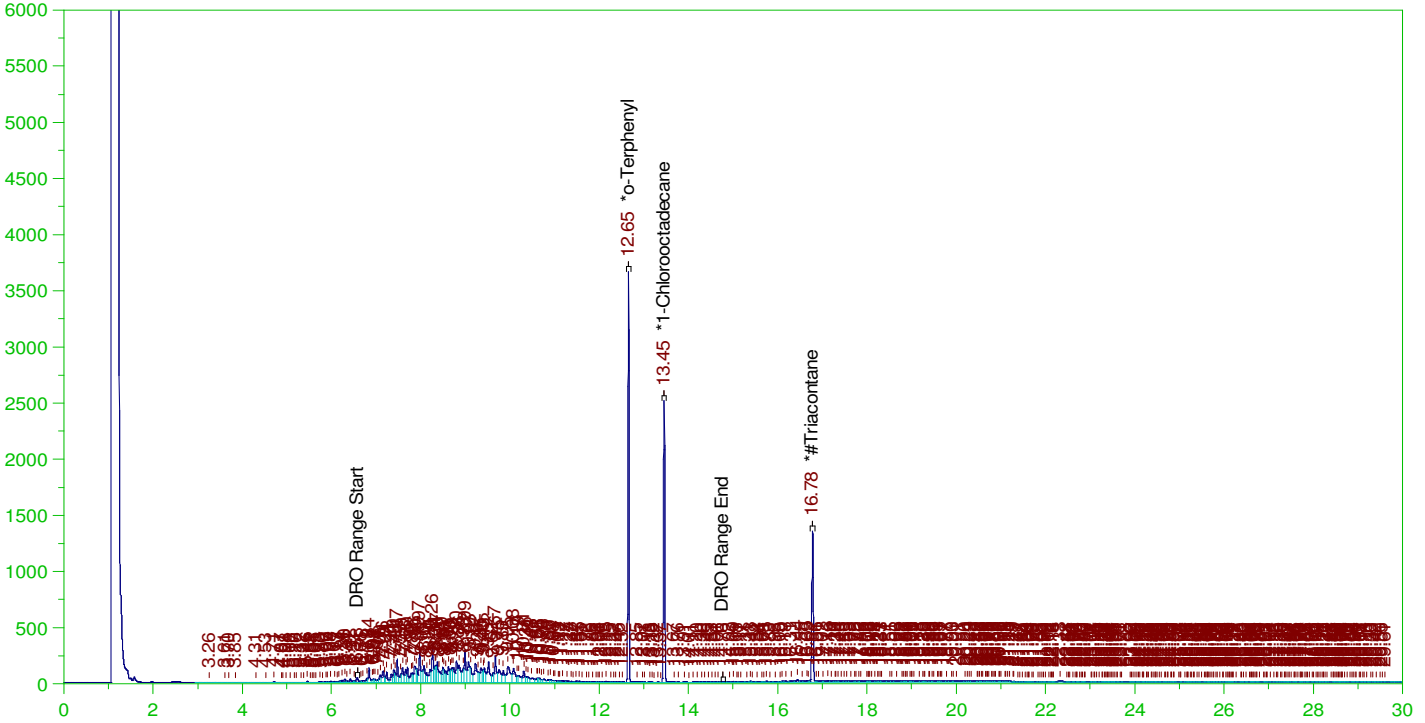
Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.192	.162	84.16	-
*1-Chlorooctadecane	13.452	.192	.128	66.41	-
*#Triacontane	16.775	.192	.097	50.35	-

DRO Area:2029921 DRO Amount: 6.644977E-02
 TEH Area:2234607 TEH Amount: 7.315017E-02

ERH2266 (RHMW2254-01 Bailer) FD
G:\org\HP4\DAT\HP4010222_b\0102HP4.0025.RAW

Batch ID: 162502
B21121981-002B ;0102HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-002B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0025.RAW
 Date & Time Acquired: 1/3/2022 5:55:48 AM
 Method File: G:\Org\HP4\methods\D3_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

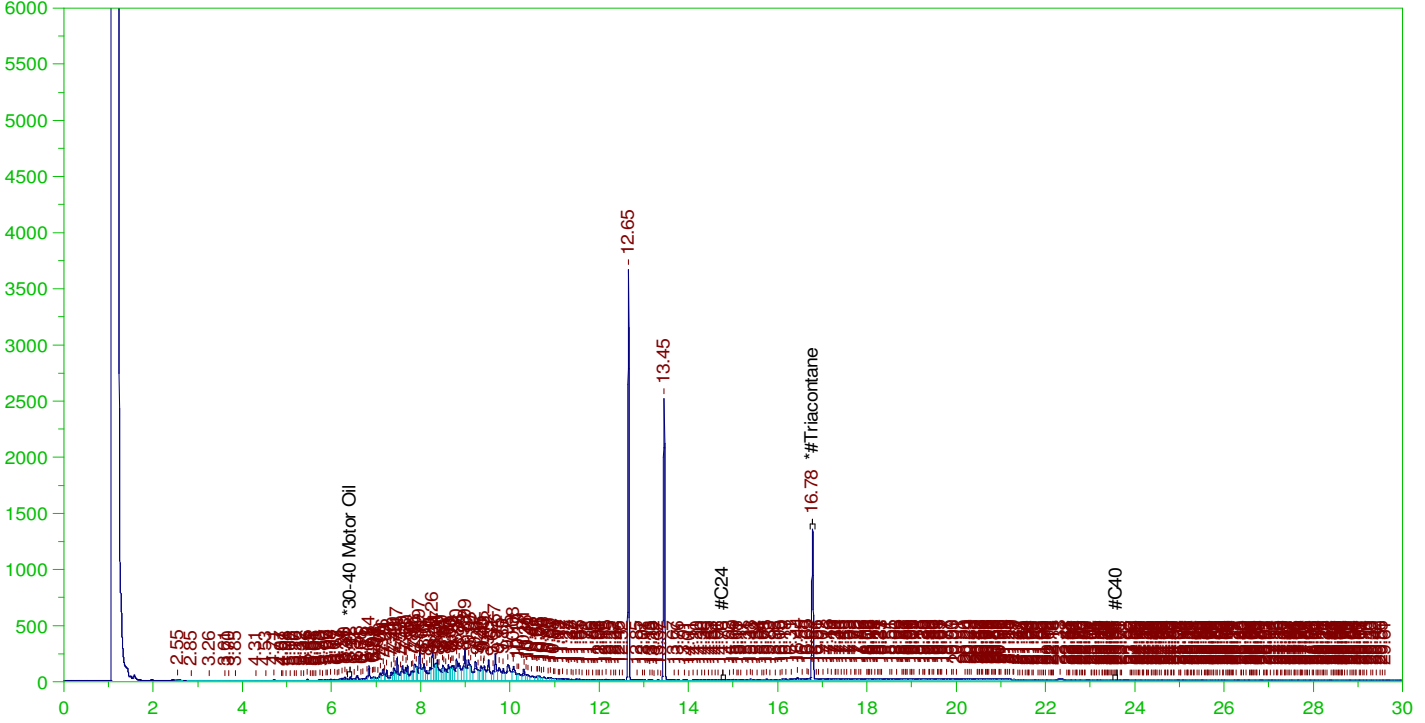
Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.19	.182	95.49	-
*1-Chlorooctadecane	13.451	.19	.134	70.47	-
*#Triacontane	16.776	.19	.109	57.47	-

DRO Area: 2.245532E+07 DRO Amount: 0.7280775
 TEH Area: 2.596226E+07 TEH Amount: 0.8417841

ERH2266 (RHMW2254-01 Bailer) FD
G:\org\HP4\DAT\HP4010222_b\0102HP4.0025.RAW

Batch ID: 162502
B21121981-002B ;0102HP4, \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-002B ;0102HP4 , \$HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0025.RAW
Date & Time Acquired: 1/3/2022 5:55:48 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AB-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.776	.476	.109	22.99	-

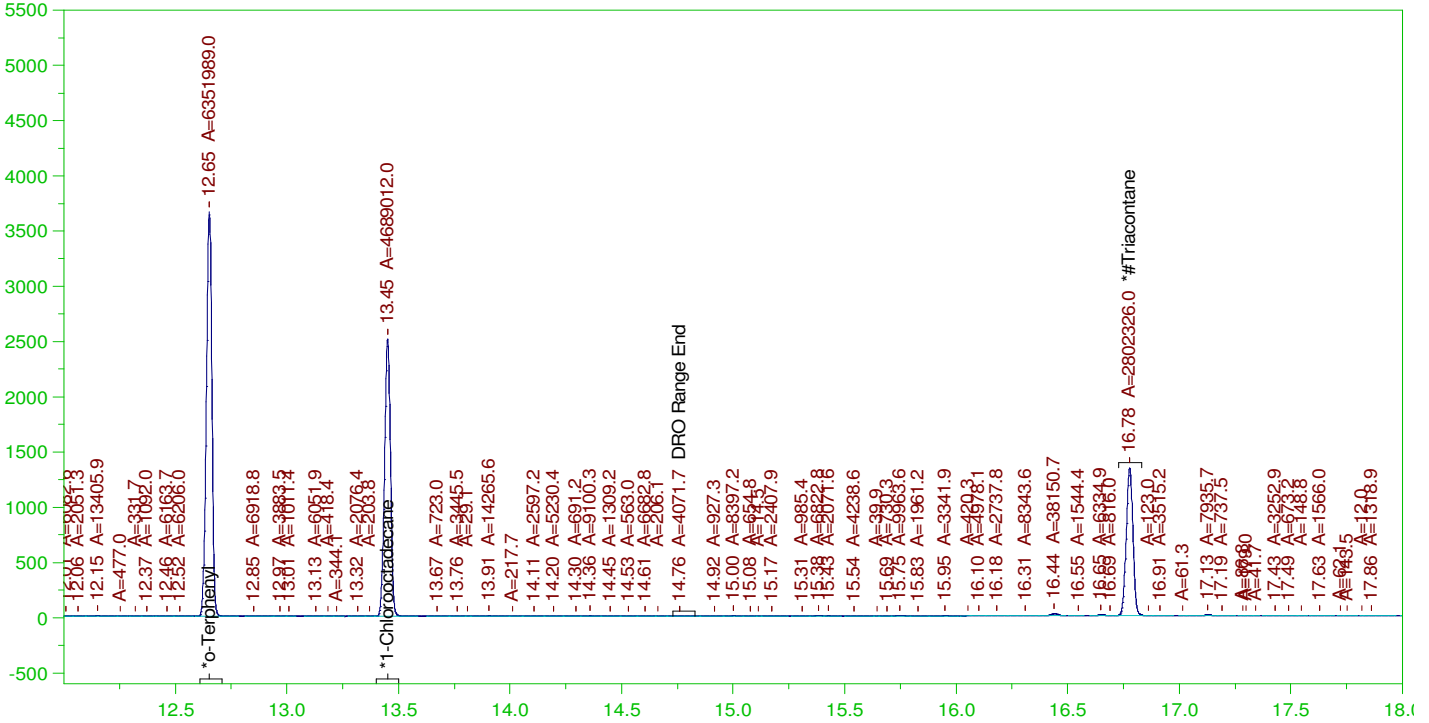
RRO Area:2532715 RRO AMOUNT: 0.0983348

ERH2266 (RHMW2254-01 Bailer) FD

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0025.RAW

B21121981-002B ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-002B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0025.RAW
 Date & Time Acquired: 1/3/2022 5:55:48 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.19	.182	95.32	-
*1-Chlorooctadecane	13.451	.19	.134	70.36	-
*#Triacontane	16.776	.19	.107	56.11	-

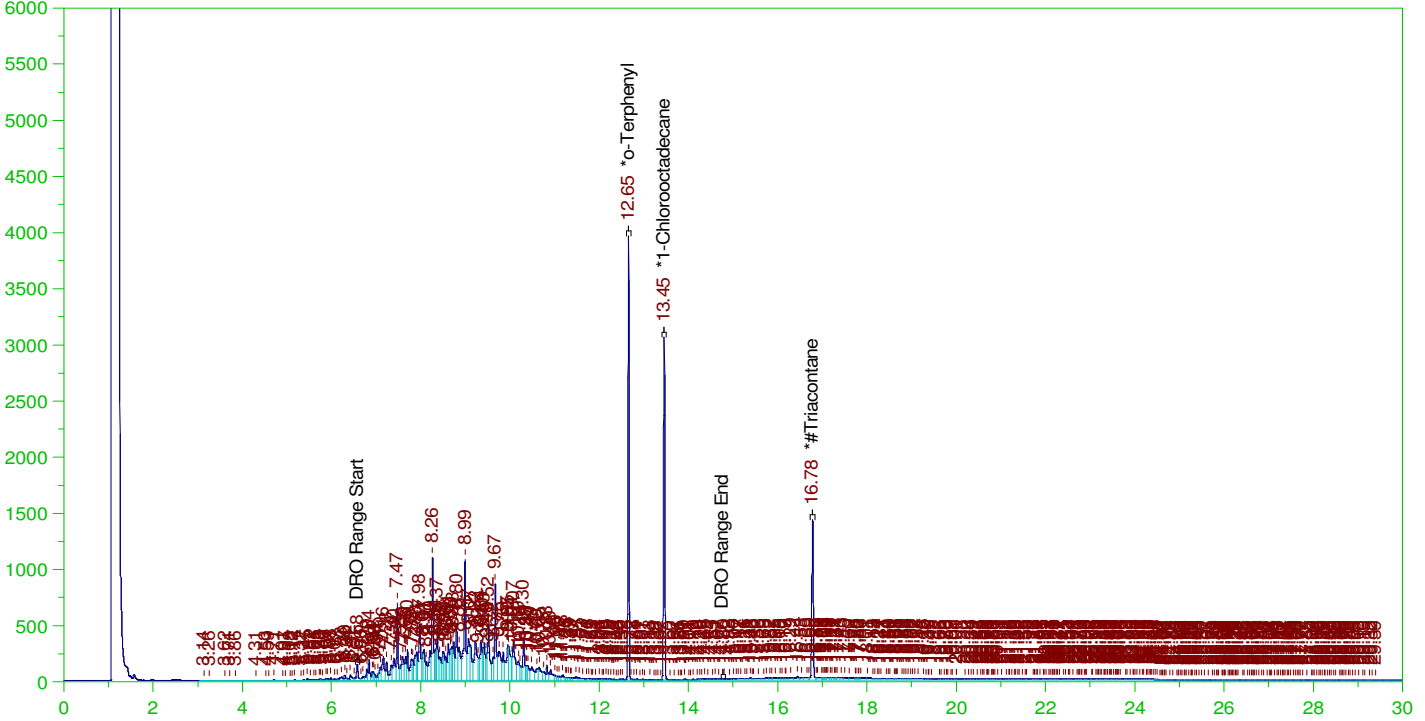
DRO Area: 2.181123E+07 DRO Amount: 0.7071937
 TEH Area: 2.245082E+07 TEH Amount: 0.7279314

ERH2265 (RHMW2254-01 Bailer)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0026.RAW

B21121981-004D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-004D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0026.RAW
 Date & Time Acquired: 1/3/2022 6:40:43 AM
 Method File: G:\Org\HP4\methods\D3_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.653	.198	.205	103.64	-
*1-Chlorooctadecane	13.453	.198	.169	85.43	-
*#Triacontane	16.777	.198	.125	62.87	-

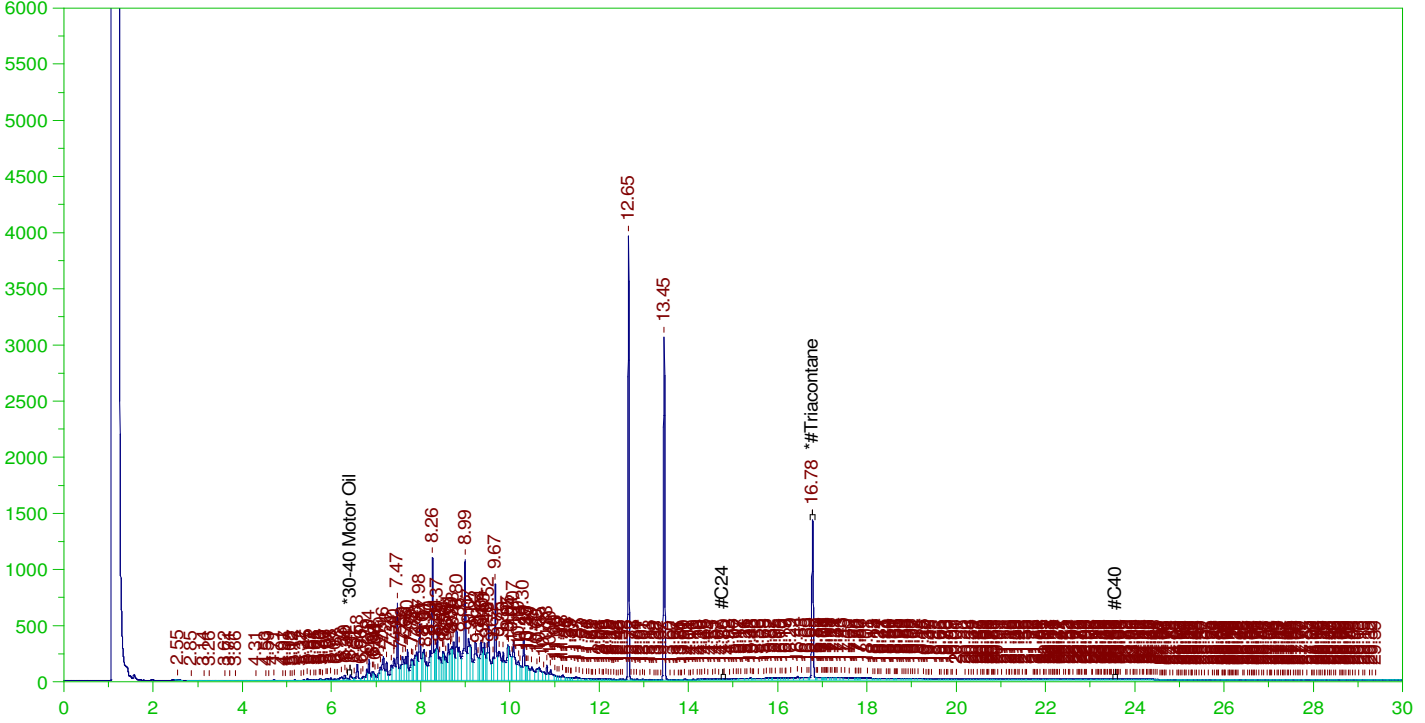
DRO Area: 5.407142E+07 DRO Amount: 1.822611
 TEH Area: 6.108756E+07 TEH Amount: 2.059107

ERH2265 (RHMW2254-01 Bailer)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0026.RAW

B21121981-004D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-004D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0026.RAW
 Date & Time Acquired: 1/3/2022 6:40:43 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.777	.495	.125	25.15	-

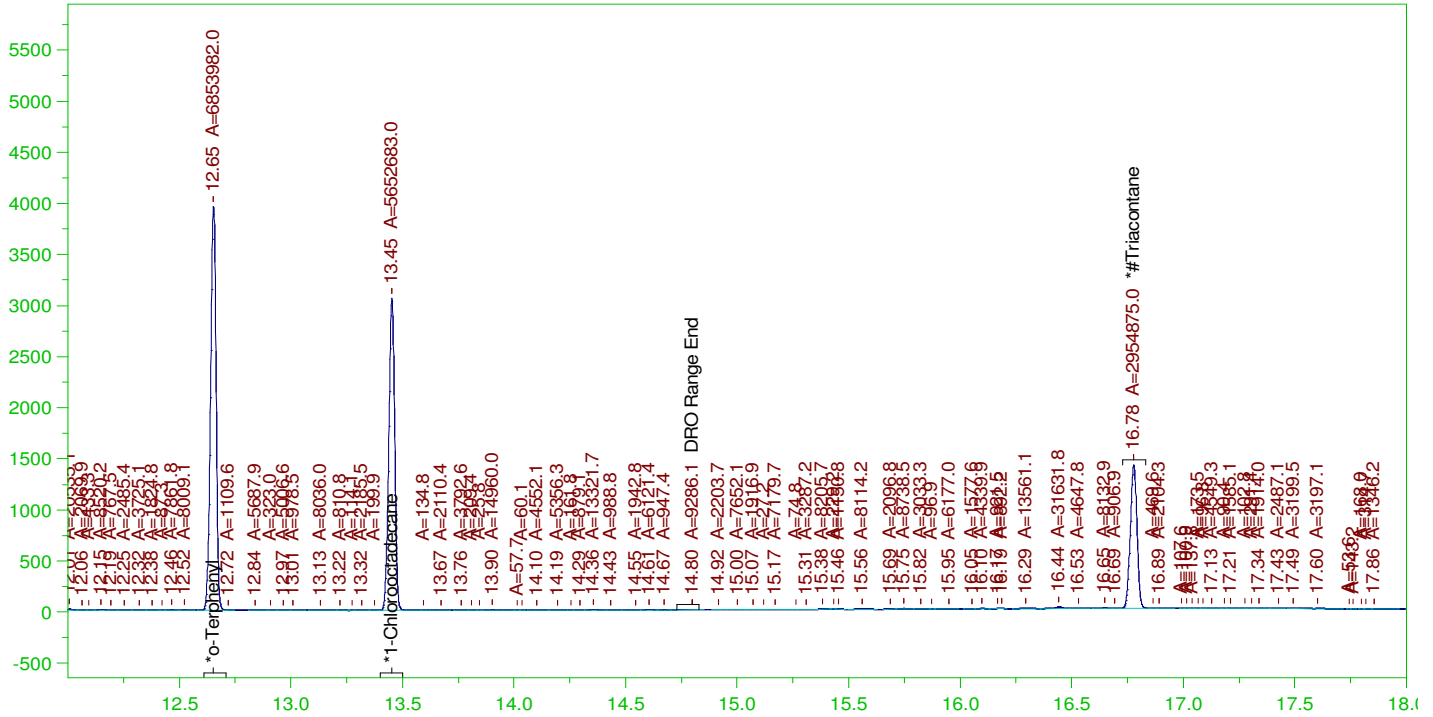
RRO Area:5692500 RRO AMOUNT: 0.2297692

ERH2265 (RHMW2254-01 Bailer)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0026.RAW

B21121981-004D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-004D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0026.RAW
 Date & Time Acquired: 1/3/2022 6:40:43 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.653	.198	.204	102.85	-
*1-Chlorooctadecane	13.453	.198	.168	84.82	-
*#Triacontane	16.777	.198	.117	59.16	-

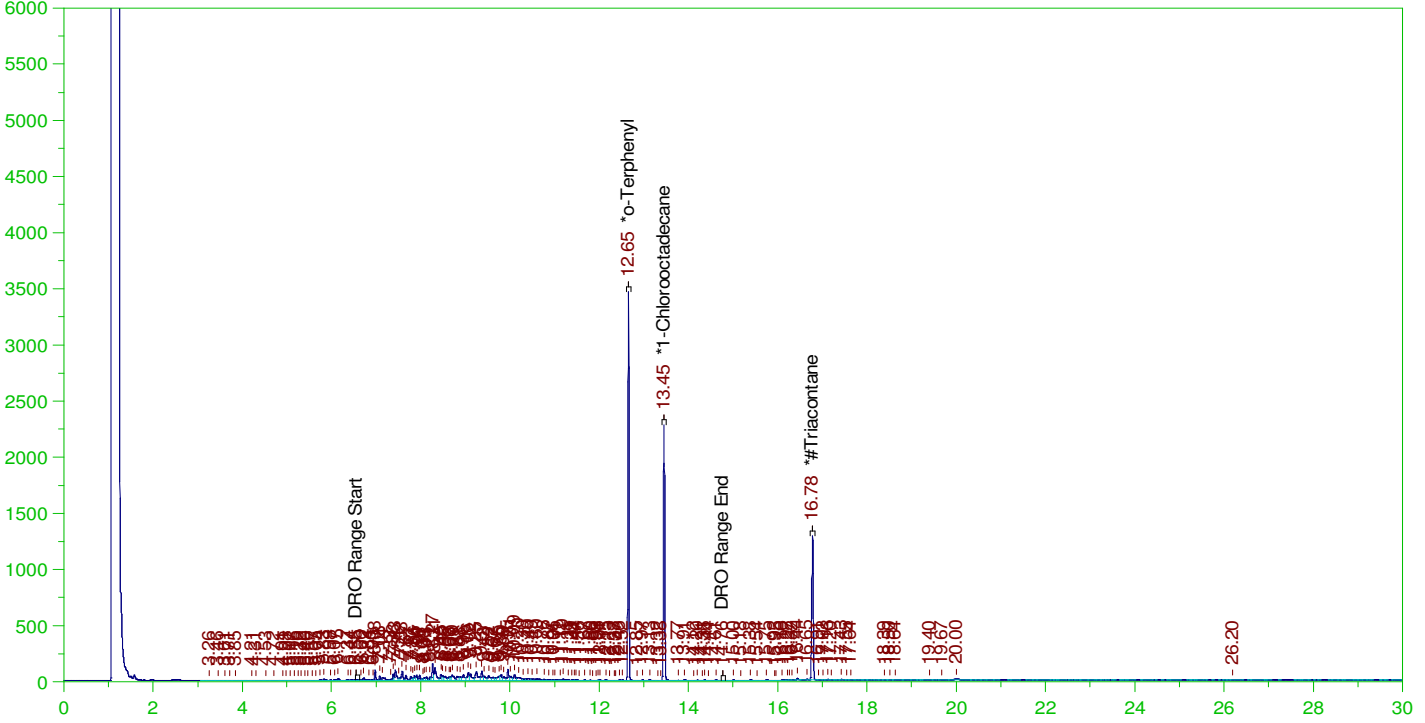
DRO Area: 5.124158E+07 DRO Amount: 1.727224
 TEH Area: 5.22154E+07 TEH Amount: 1.760049

ERH2236 (RHMW02)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0027.RAW

B21121959-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121959-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0027.RAW
 Date & Time Acquired: 1/3/2022 7:25:36 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.651	.2	.18	90.	-
*1-Chlorooctadecane	13.45	.2	.127	63.75	-
*#Triacontane	16.776	.2	.11	54.85	-

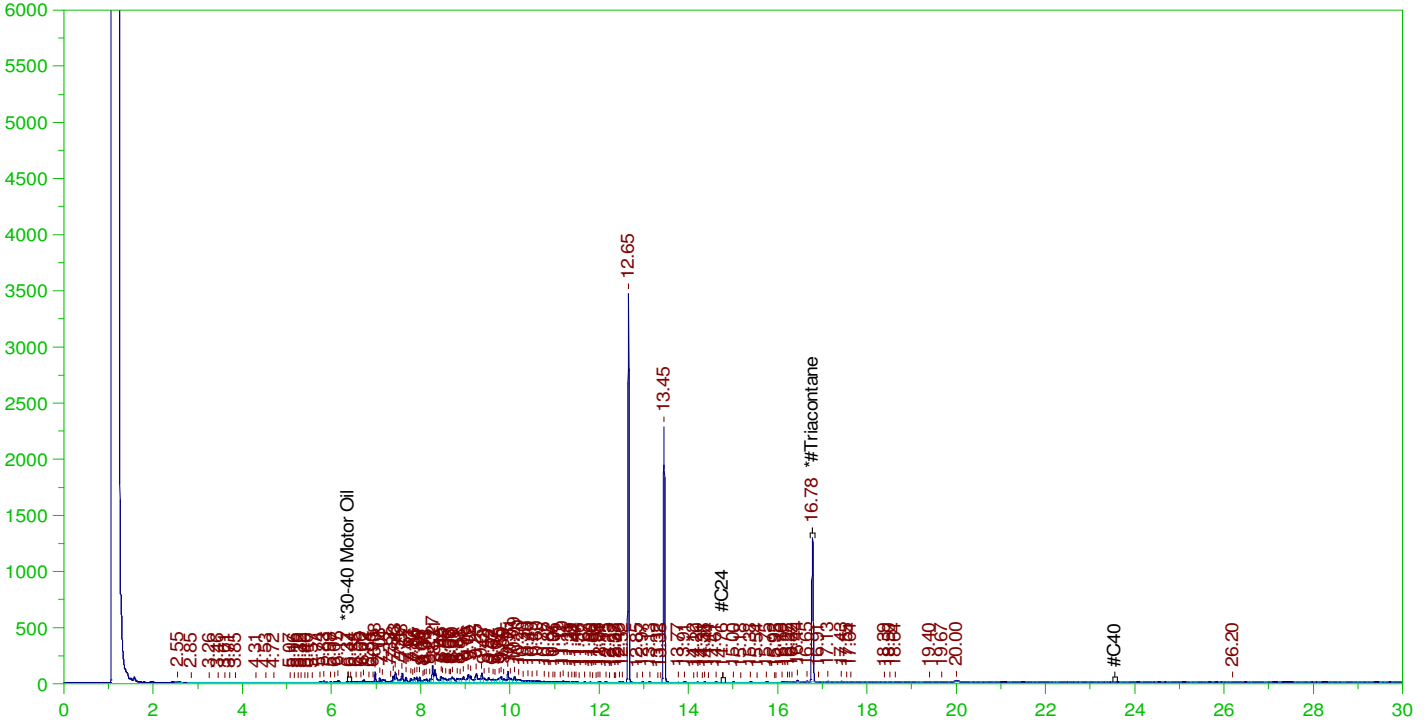
DRO Area: 7254716 DRO Amount: 0.2469835
 TEH Area: 7657845 TEH Amount: 0.2607079

ERH2236 (RHMW02)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0027.RAW

B21121959-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121959-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0027.RAW
 Date & Time Acquired: 1/3/2022 7:25:36 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.776	.5	.109	21.85

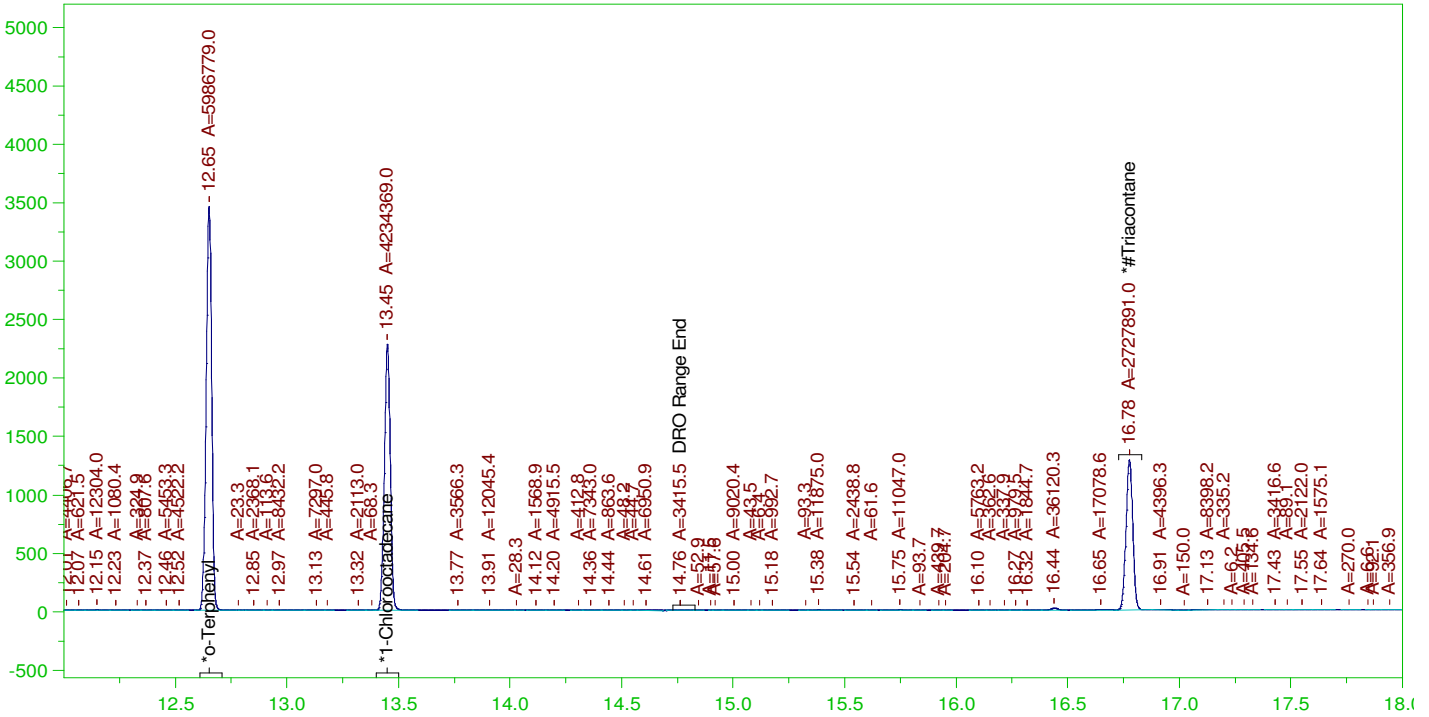
RRO Area:154532.3 RRO AMOUNT: 6.299837E-03

ERH2236 (RHMW02)

Batch ID: 162502

G:\Org\HP4\DAT\HP4010222_b\0102HP4.0027.RAW

B21121959-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121959-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\Org\HP4\DAT\HP4010222_b\0102HP4.0027.RAW
 Date & Time Acquired: 1/3/2022 7:25:36 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.651	.2	.18	89.84	-
*1-Chlorooctadecane	13.45	.2	.127	63.54	-
*#Triacontane	16.776	.2	.109	54.62	-

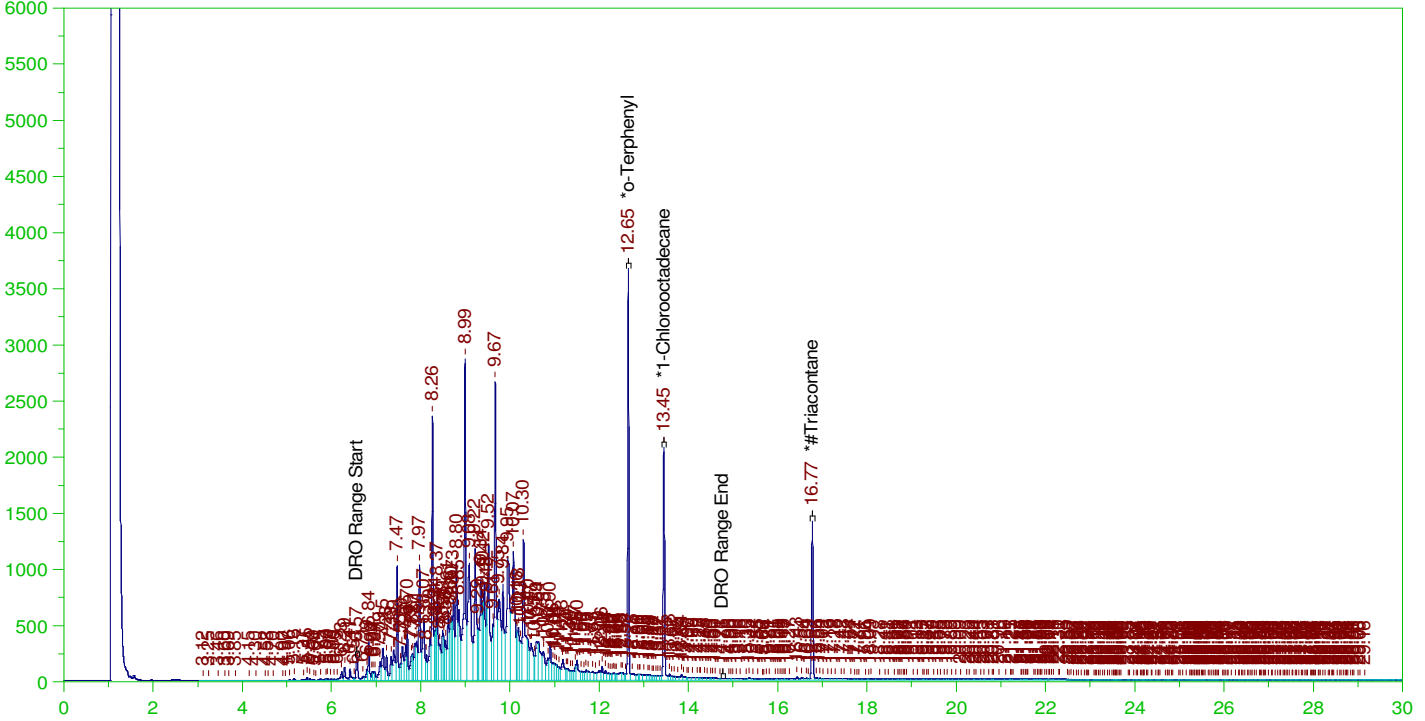
DRO Area:6987206 DRO Amount: 0.2378763
 TEH Area:7338416 TEH Amount: 0.2498331

ERH2234 (RHMW01R)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0028.RAW

B21121961-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121961-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0028.RAW
 Date & Time Acquired: 1/3/2022 8:12:17 AM
 Method File: G:\Org\HP4\methods\D3_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.648	.198	.198	100.02	-
*1-Chlorooctadecane	13.446	.198	.123	62.34	-
*#Triacontane	16.771	.198	.121	60.91	-

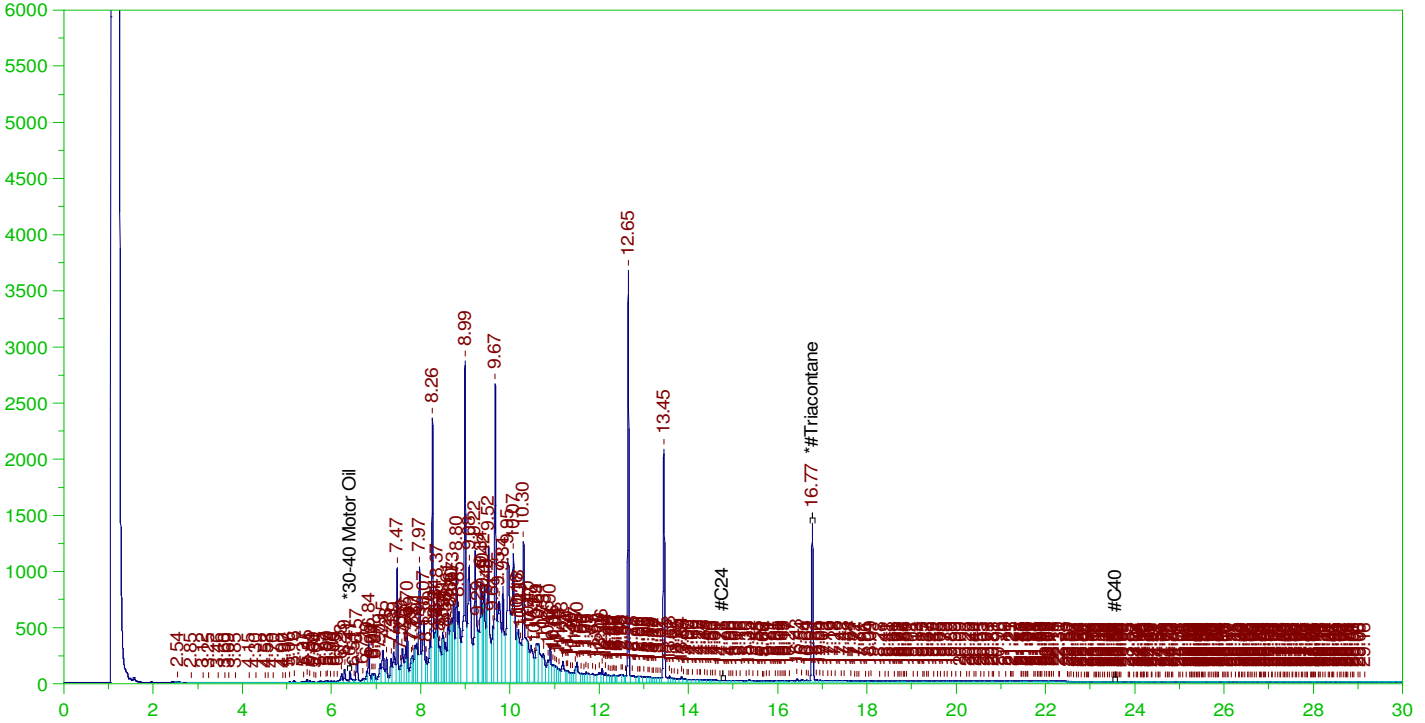
DRO Area:1.246529E+08 DRO Amount: 4.201734
 TEH Area:1.299047E+08 TEH Amount: 4.378759

ERH2234 (RHMW01R)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0028.RAW

B21121961-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121961-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0028.RAW
 Date & Time Acquired: 1/3/2022 8:12:17 AM
 Method File: G:\Org\HP4\Methods\D3_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.771	.495	.121	24.36

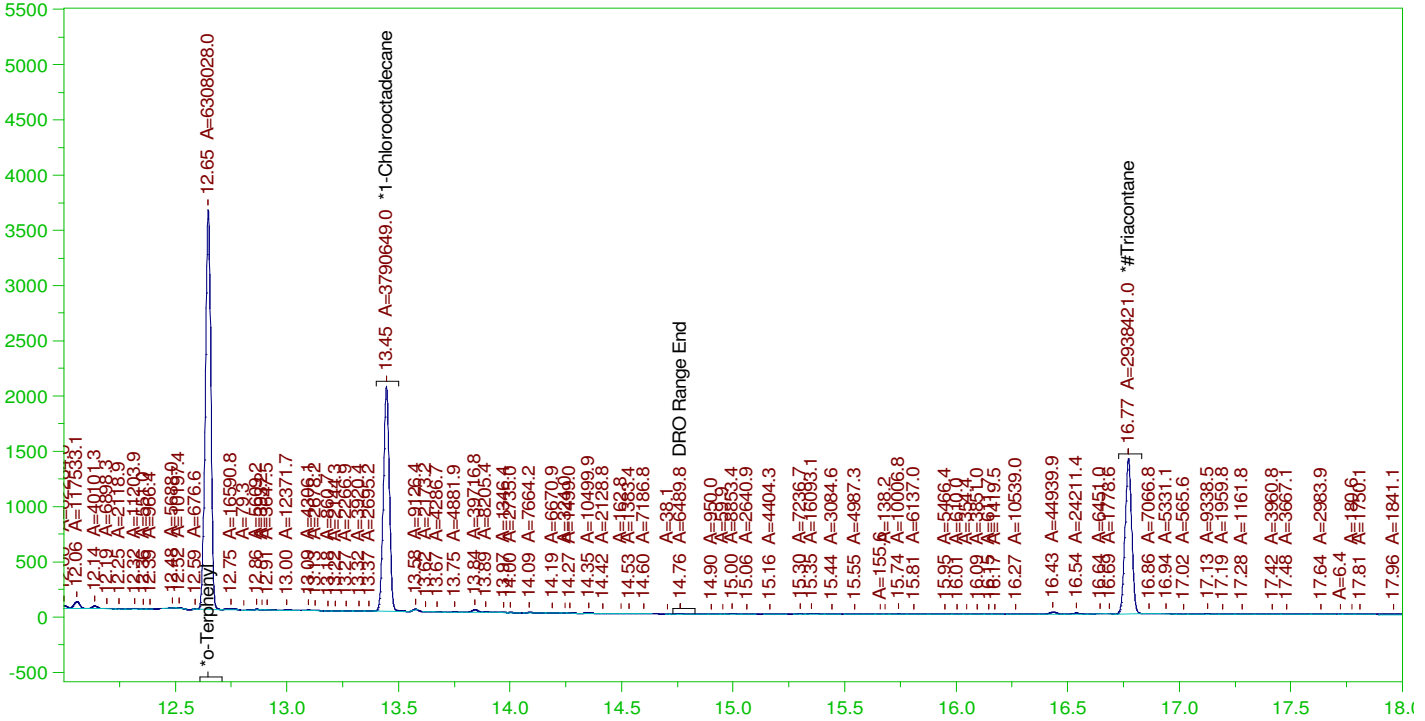
RRO Area:3686571 RRO AMOUNT: 0.1488029

ERH2234 (RHMW01R)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0028.RAW

B21121961-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

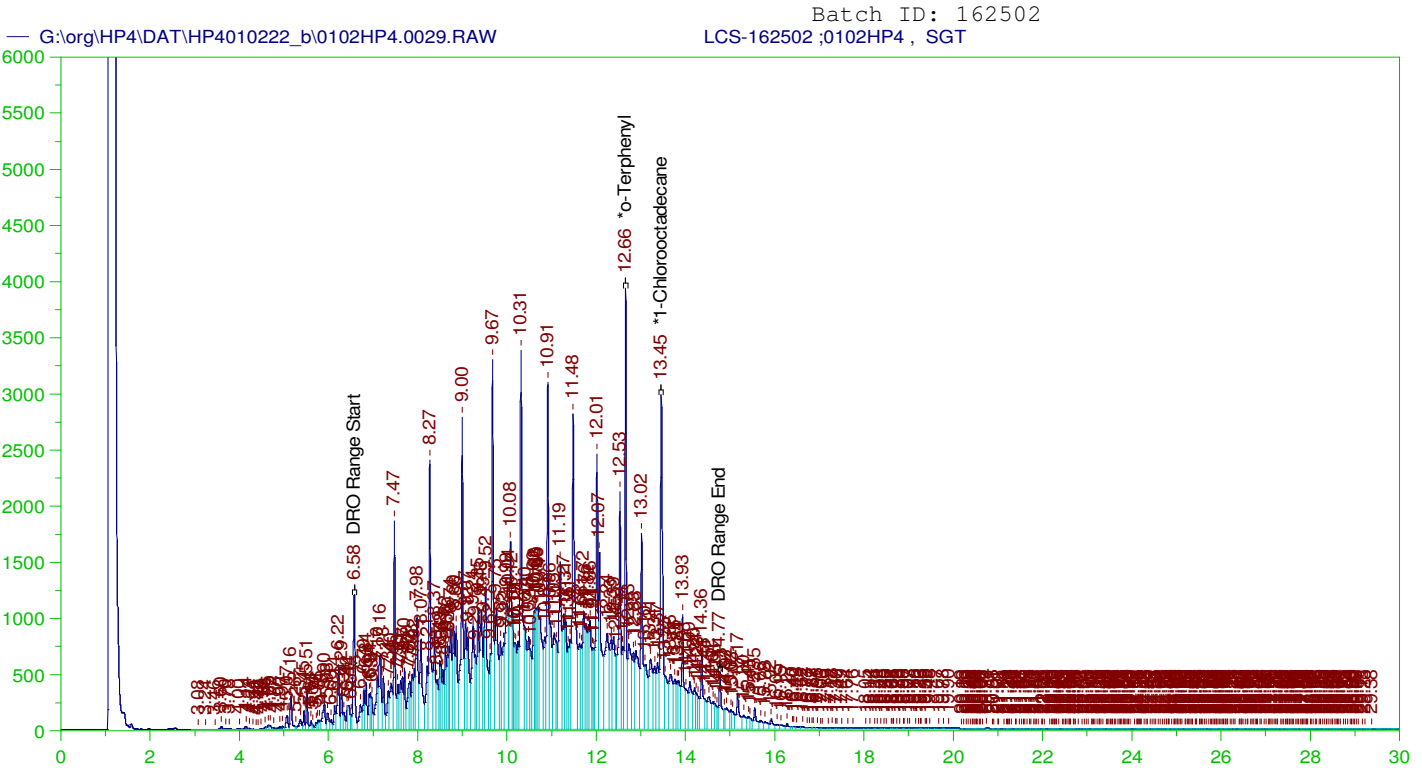
Sample Name: B21121961-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0028.RAW
 Date & Time Acquired: 1/3/2022 8:12:17 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.648	.198	.187	94.66	-
*1-Chlorooctadecane	13.446	.198	.113	56.88	-
*Triacontane	16.771	.198	.116	58.83	-

DRO Area: 1.055538E+08 DRO Amount: 3.557953
 TEH Area: 1.068187E+08 TEH Amount: 3.600588



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-162502 ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0029.RAW
 Date & Time Acquired: 1/3/2022 8:57:29 AM
 Method File: G:\Org\HP4\methods\D3_8015-24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

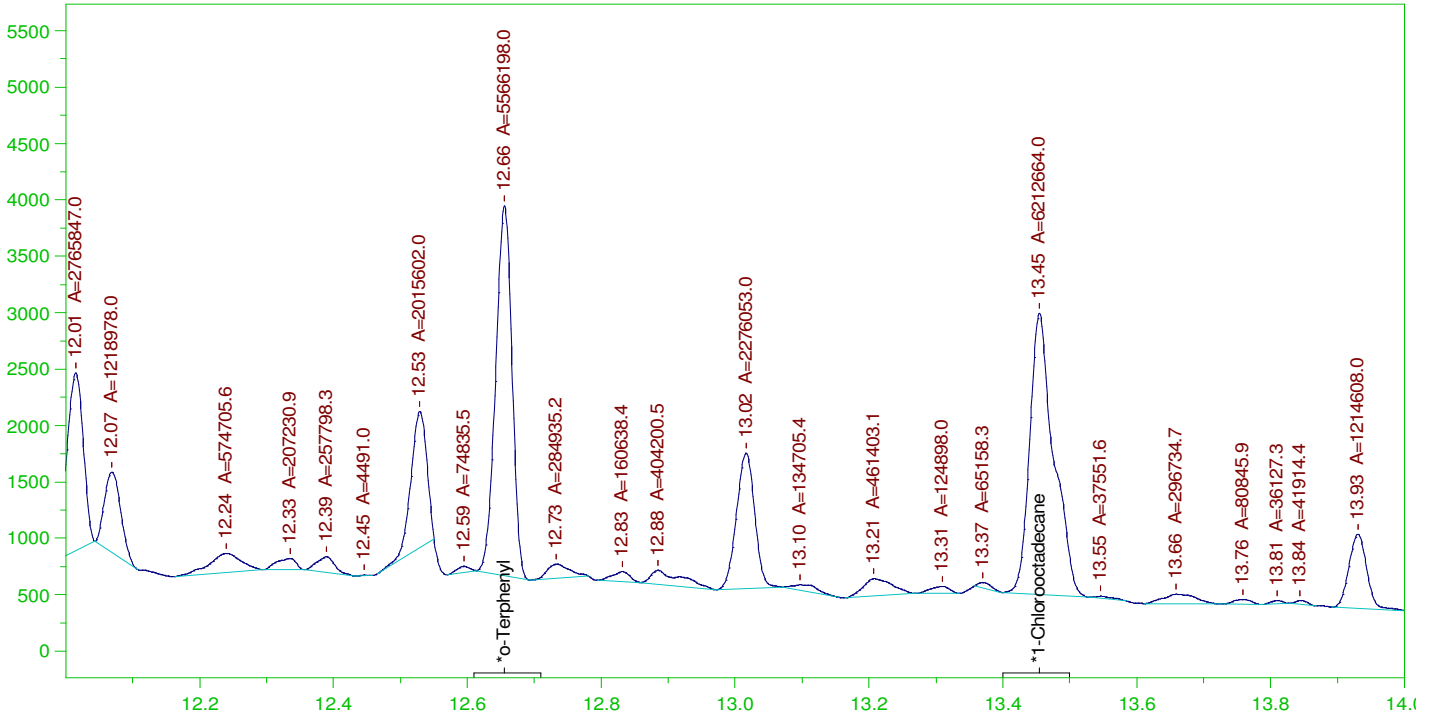
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.655	.2	.262	130.91 -
*1-Chlorooctadecane	13.454	.2	.3	149.94 -

DRO Area: 3.311828E+08 DRO Amount: 11.27497
 TEH Area: 3.534193E+08 TEH Amount: 12.032

Batch ID: 162502
G:\org\HP4\DAT\HP4010222_b\0102HP4.0029.RAW LCS-162502 ;0102HP4 , SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

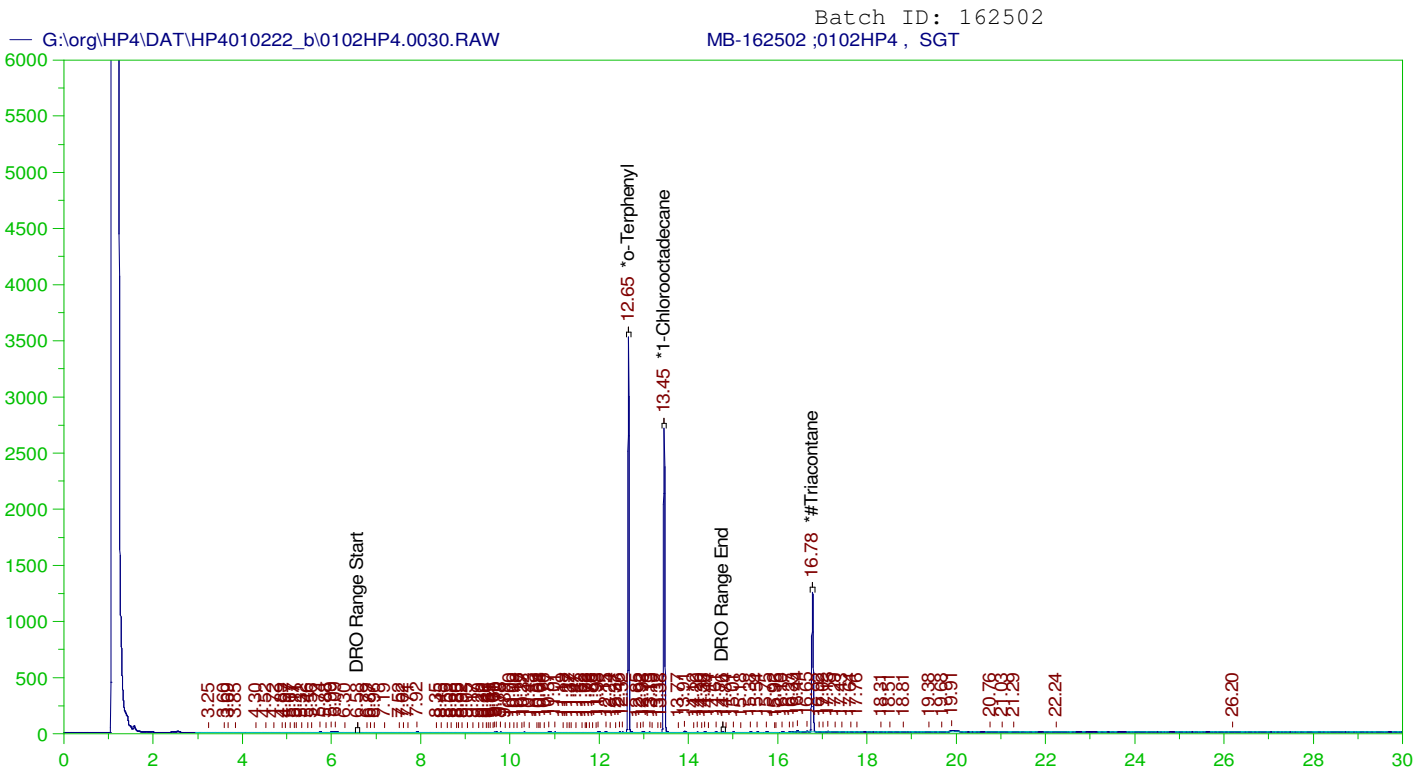
Sample Name: LCS-162502 ;0102HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0029.RAW
Date & Time Acquired: 1/3/2022 8:57:29 AM
Method File: G:\Org\HP4\methods\DS_8015-C24-OH-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.655	.2	.167	83.53	-
*1-Chlorooctadecane	13.454	.2	.186	93.23	-

DRO Area:1.303577E+08 DRO Amount: 4.437969
TEH Area:1.408019E+08 TEH Amount: 4.793538



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162502 ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0030.RAW
 Date & Time Acquired: 1/3/2022 9:42:30 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.2	.182	90.86	-
*1-Chlorooctadecane	13.452	.2	.152	75.94	-
*#Triacontane	16.777	.2	.108	53.8	-

DRO Area:437630.4 DRO Amount: 1.489893E-02
 TEH Area:788710.3 TEH Amount: 2.685129E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-162502 ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0030.RAW
 Date & Time Acquired: 1/3/2022 9:42:30 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

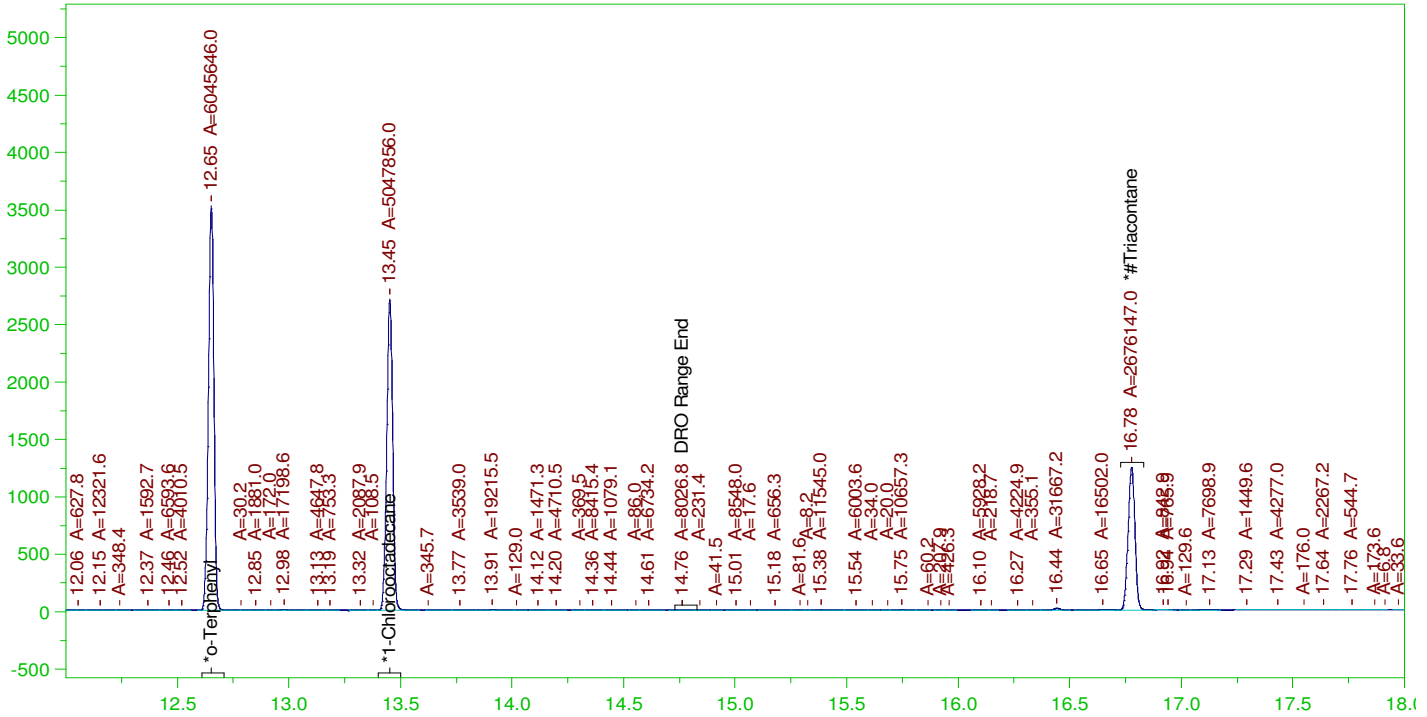
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.777	.5	.107	21.44

RRO Area:220105.5 RRO AMOUNT: 8.973073E-03

Batch ID: 162502

MB-162502 ;0102HP4 , SGT

G:\org\HP4\DAT\HP4010222_b\0102HP4.0030.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

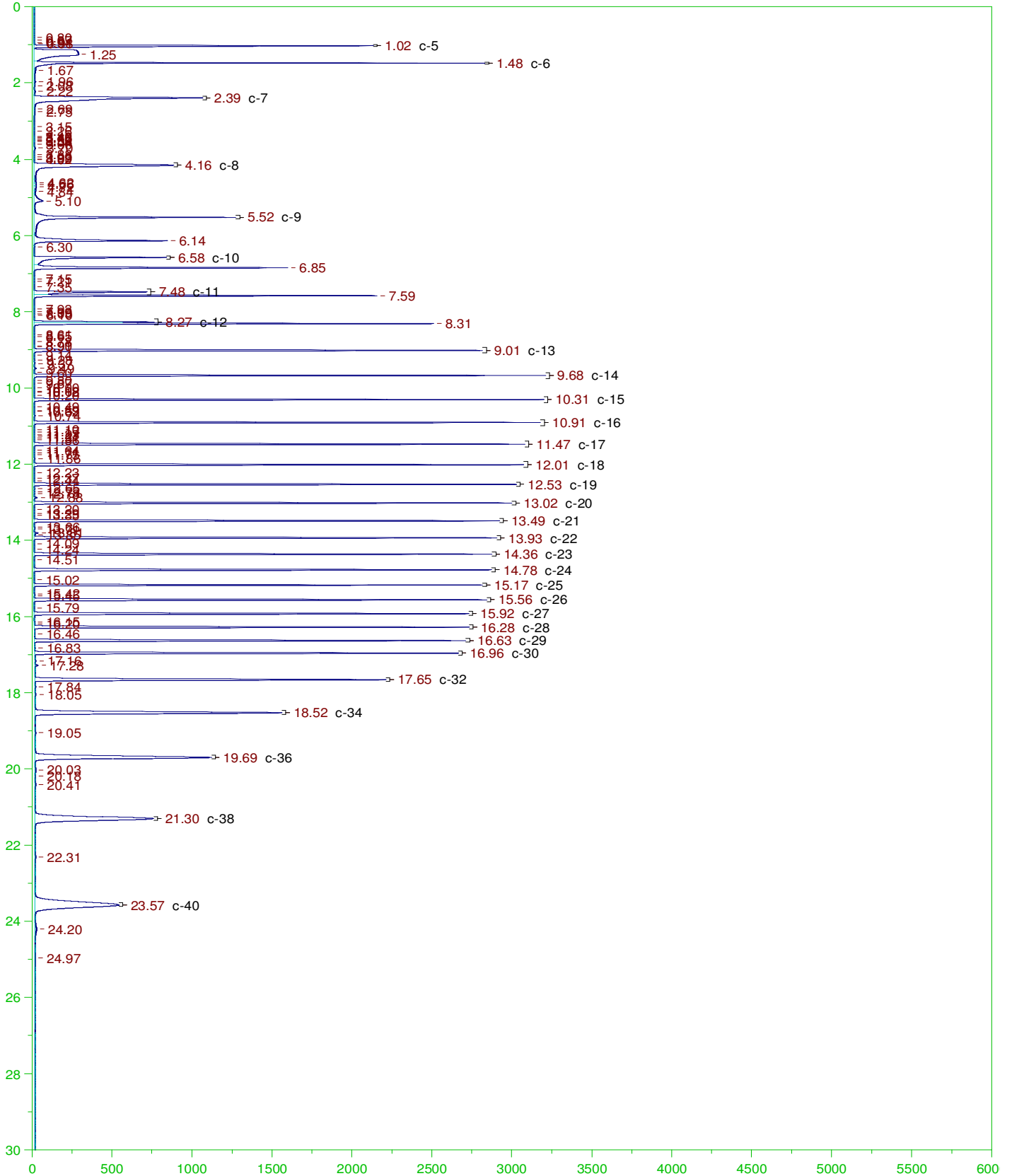
Sample Name: MB-162502 ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0030.RAW
 Date & Time Acquired: 1/3/2022 9:42:30 AM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

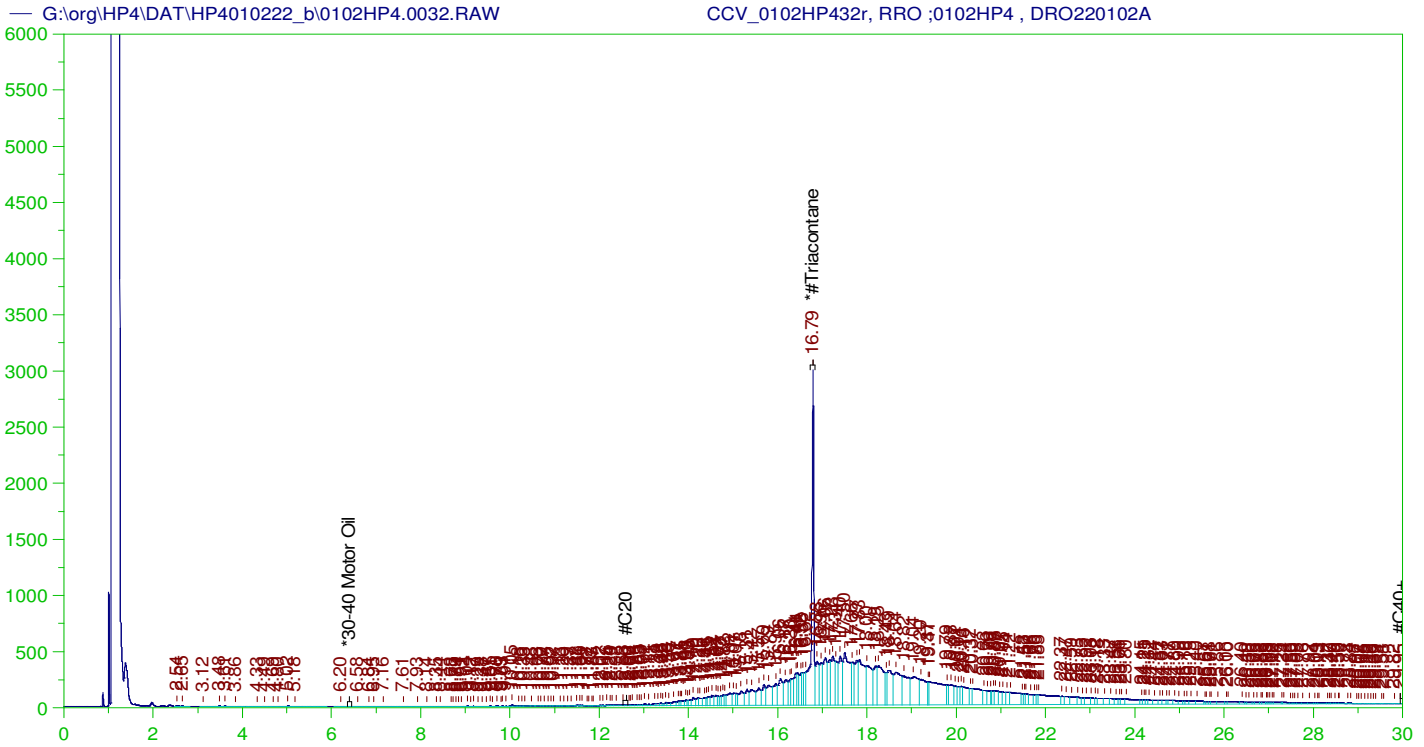
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.652	.2	.181	90.72	-
*1-Chlorooctadecane	13.452	.2	.151	75.75	-
*#Triacontane	16.777	.2	.107	53.58	-

DRO Area:323666.5 DRO Amount: 1.101908E-02
 TEH Area:636652.4 TEH Amount: 2.167455E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0102HP432r, RRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0032.RAW
 Date & Time Acquired: 1/3/2022 11:41:24 AM
 Method File: G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.787	500.	397.502	79.5	-

RRO TEH (Oil Range) Area:1.083607E+08 RRO TEH (Oil Range) AMOUNT: 4417.556

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0032.RAW

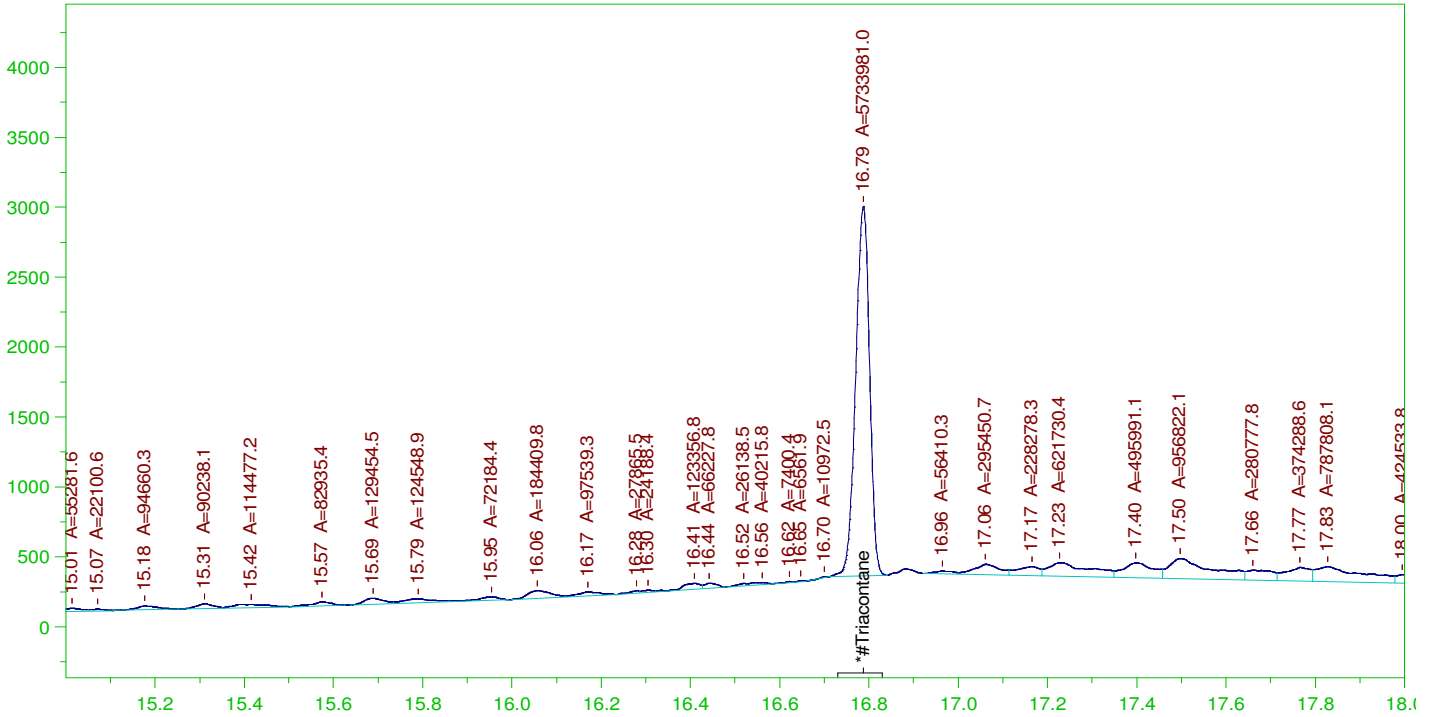
COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.	75-125	

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.787	200.	397.502	198.75	75-125

AMN 01/24/2022

G:\org\HP4\DAT\HP4010222_b\0102HP4.0032.RAW

CCV_0102HP432r, RRO ;0102HP4 , DRO220102A



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0102HP432r, RRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0032.RAW
 Date & Time Acquired: 1/3/2022 11:41:24 AM
 Method File: G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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	16.787	500.	229.6	45.92

RRO Area:1.000463E+07 RRO AMOUNT: 407.8601

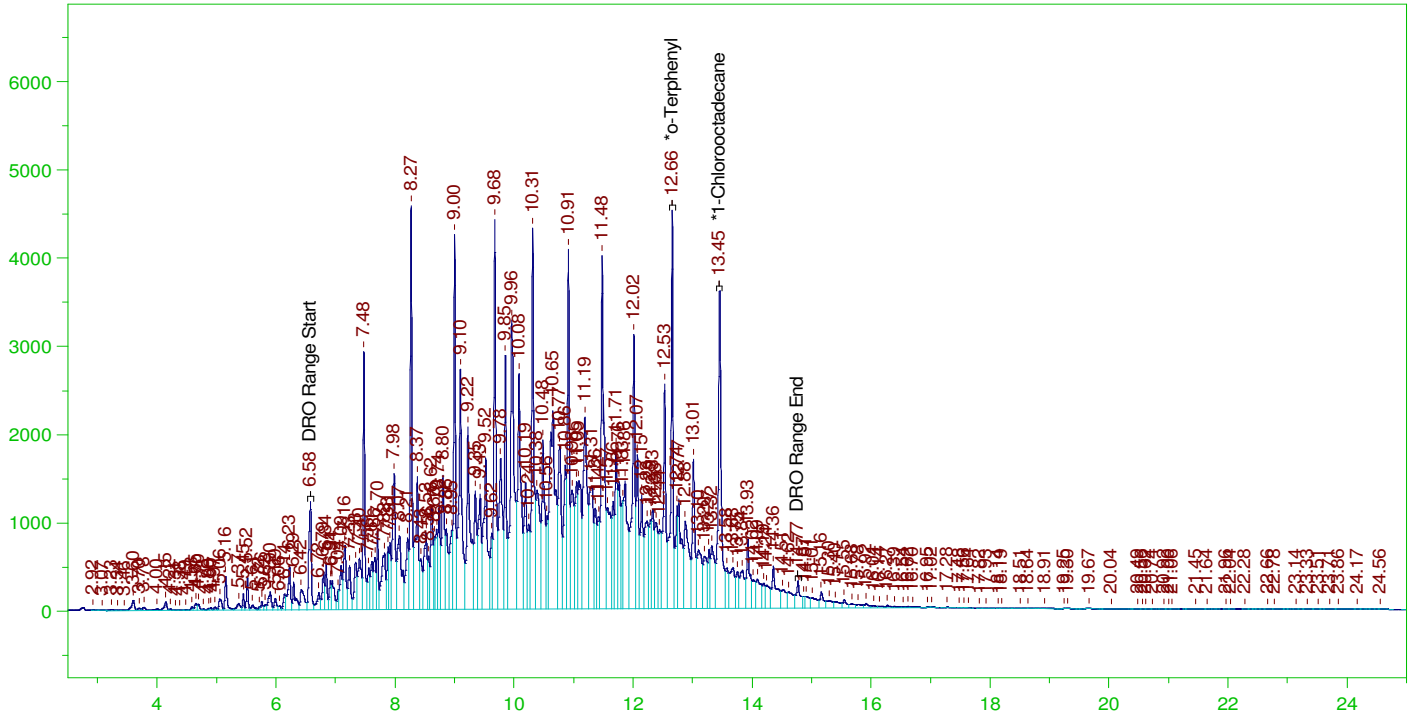
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0032.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.787	200.	229.6	114.8	75-125

G:\org\HP4\DAT\HP4010222_b\0102HP4.0033.RAW

CCV_0102HP433r, DRO ;0102HP4 , DRO211229A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0102HP433r, DRO ;0102HP4 , DRO211229A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0033.RAW
 Date & Time Acquired: 1/3/2022 12:26:15 PM
 Method File: G:\Org\HP4\methods\DC_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.658	200.	365.864	182.93
*1-Chlorooctadecane	13.454	200.	368.095	184.05

DRO Area: 4.375942E+08 DRO Amount: 14897.7
 TEH Area: 4.541577E+08 TEH Amount: 15461.59

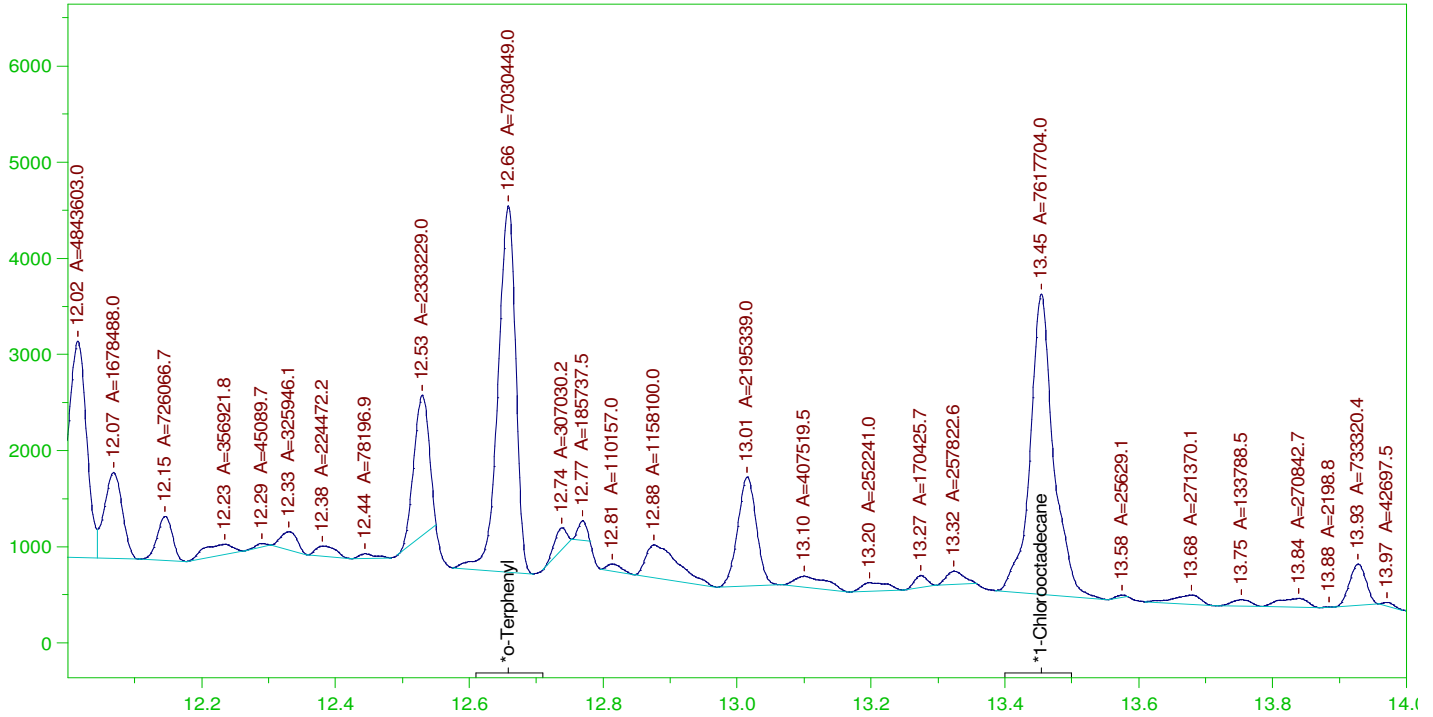
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15461.59	103.08	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.658	200.	365.864	182.93	85-115
*1-Chlorooctadecane	13.454	200.	368.095	184.05	85-115

G:\org\HP4\DAT\HP4010222_b\0102HP4.0033.RAW

CCV_0102HP433r, DRO ;0102HP4 , DRO211229A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0102HP433r, DRO ;0102HP4 , DRO211229A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0033.RAW
 Date & Time Acquired: 1/3/2022 12:26:15 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

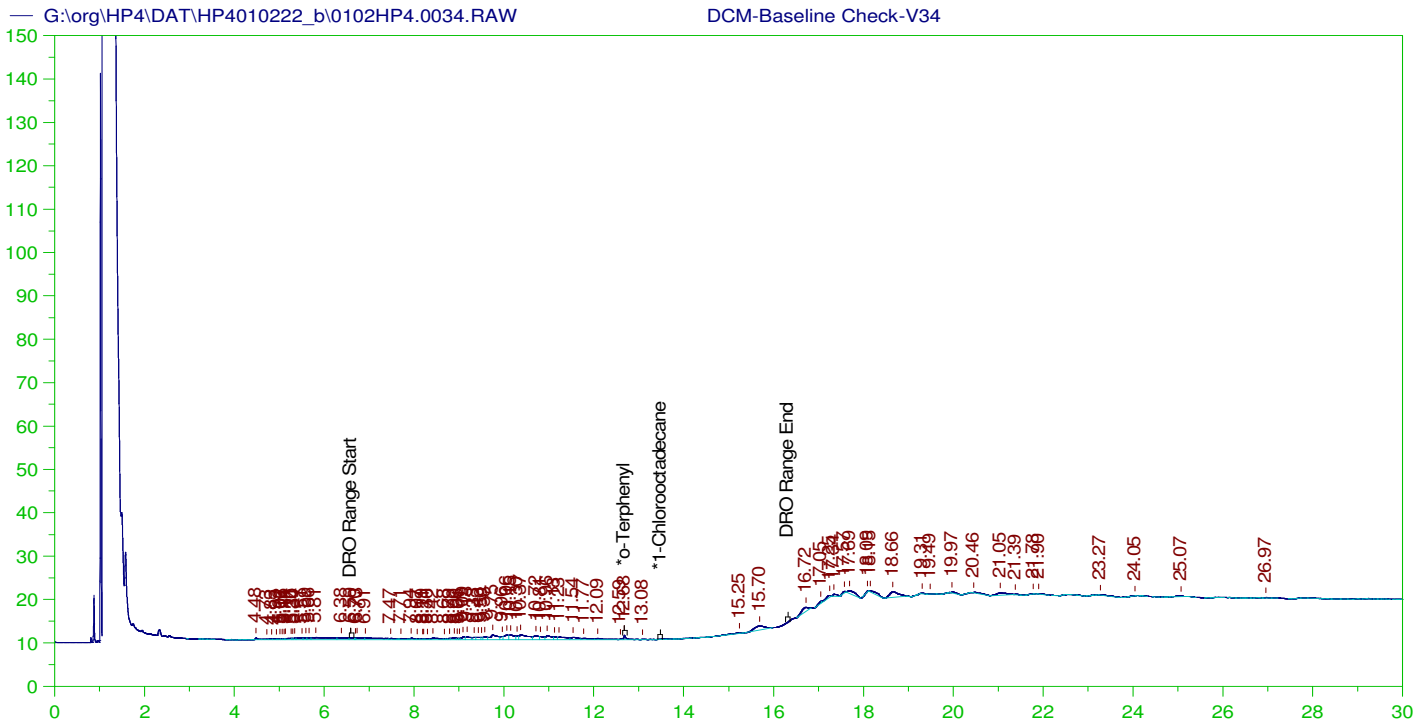
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.658	200.	211.	105.5
*1-Chlorooctadecane	13.454	200.	228.625	114.31

DRO Area: 1.92188E+08 DRO Amount: 6542.954
 TEH Area: 2.02532E+08 TEH Amount: 6895.11

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0033.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6895.11	45.97	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.658	200.	211.	105.5	85-115
*1-Chlorooctadecane	13.454	200.	228.625	114.31	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V34
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0034.RAW
 Date & Time Acquired: 1/3/2022 1:10:59 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	12.682	200.	.118	.06
*1-Chlorooctadecane	29.975	200.	.	.

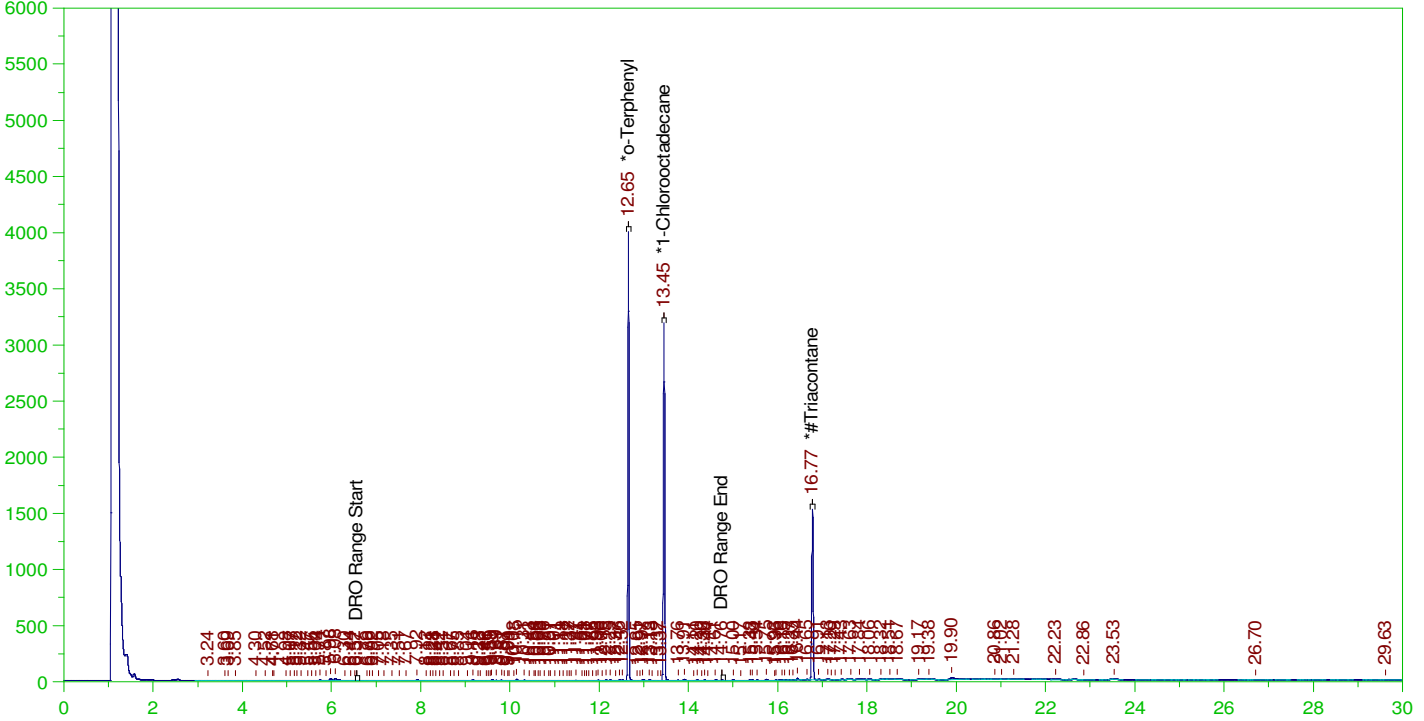
DRO Area:180547 DRO Amount: 6.146641
 TEH Area:309571.4 TEH Amount: 10.53922

ERH2240 (RHMW05)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0035.RAW

B21121981-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0035.RAW
 Date & Time Acquired: 1/3/2022 1:55:50 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.651	.194	.204	104.99	-
*1-Chlorooctadecane	13.451	.194	.172	88.32	-
*#Triacontane	16.775	.194	.125	64.45	-

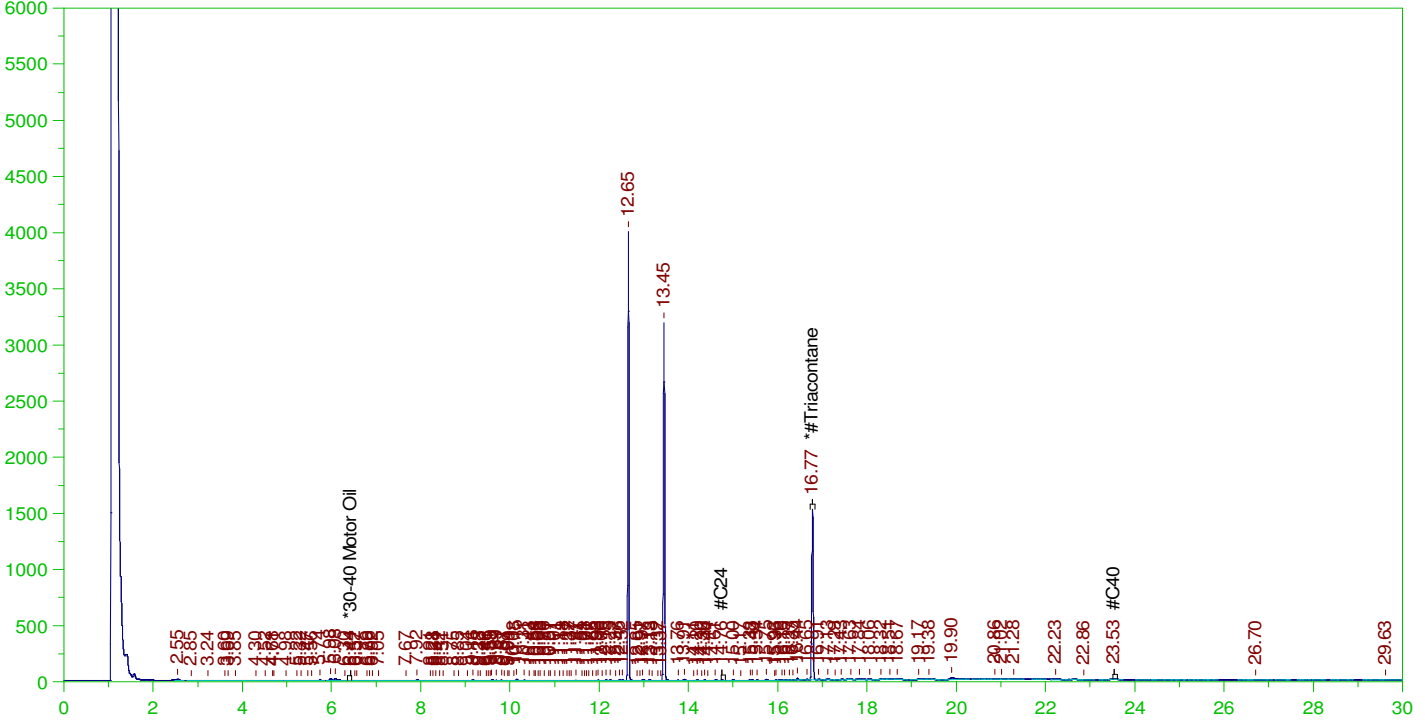
DRO Area:430474.2 DRO Amount: 1.422845E-02
 TEH Area:1021682 TEH Amount: 3.376961E-02

ERH2240 (RHMW05)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0035.RAW

B21121981-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0035.RAW
 Date & Time Acquired: 1/3/2022 1:55:50 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.775	.485	.125	25.69

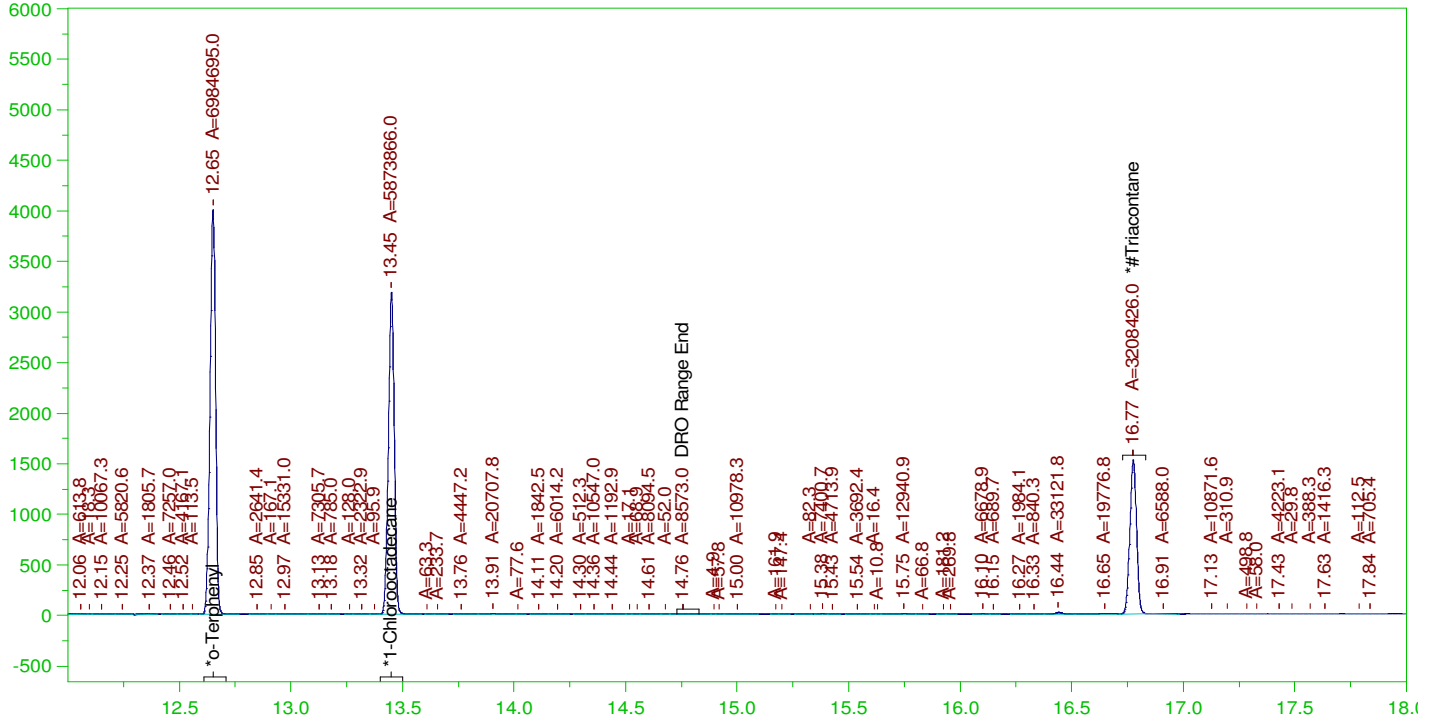
RRO Area:318827.7 RRO AMOUNT: 1.261912E-02

ERH2240 (RHMW05)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0035.RAW

B21121981-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

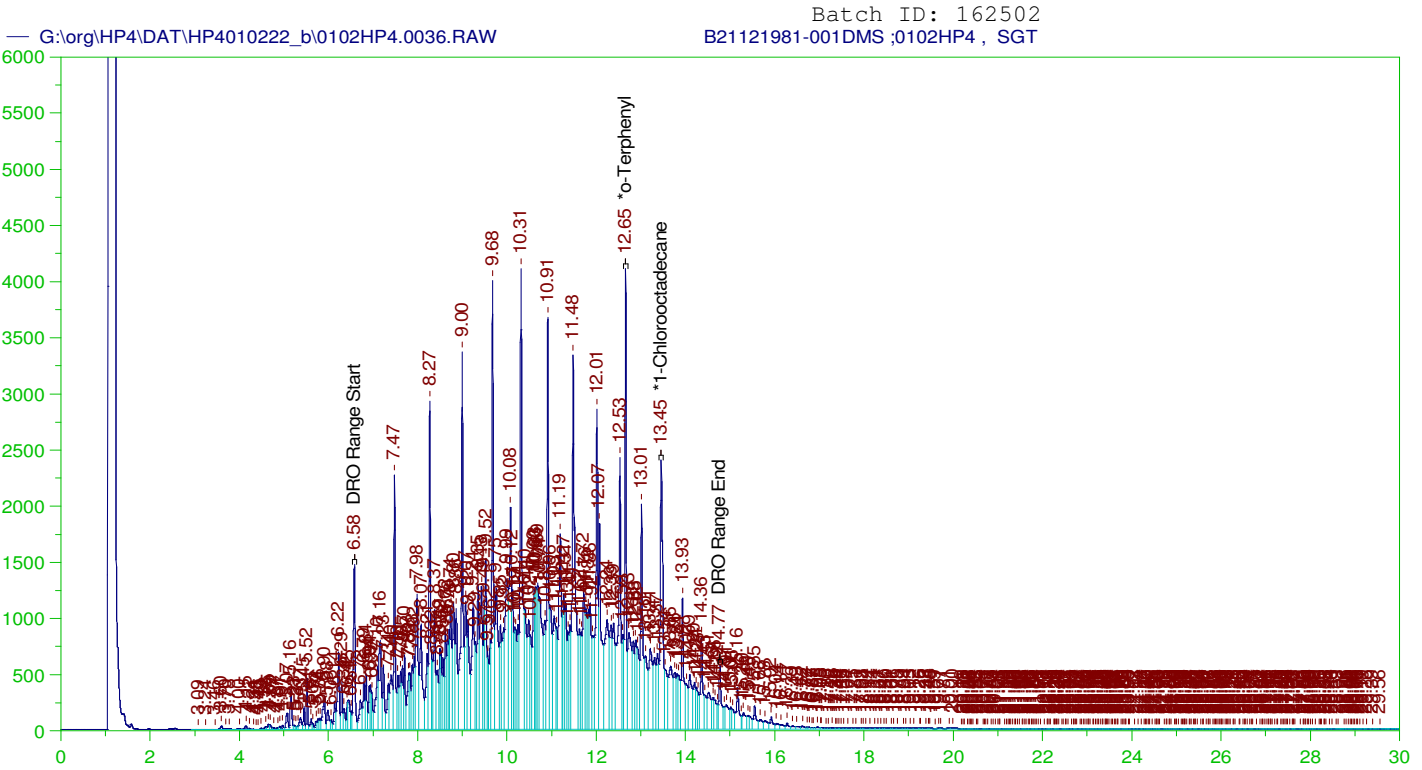
Sample Name: B21121981-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
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 Date & Time Acquired: 1/3/2022 1:55:50 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.651	.194	.204	104.81	-
*1-Chlorooctadecane	13.451	.194	.171	88.14	-
*#Triacontane	16.775	.194	.125	64.24	-

DRO Area:354619.6 DRO Amount: 1.172123E-02
 TEH Area:892669.9 TEH Amount: 2.950538E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121981-001DMS ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0036.RAW
 Date & Time Acquired: 1/3/2022 2:40:46 PM
 Method File: G:\Org\HP4\methods\D3_8015-24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

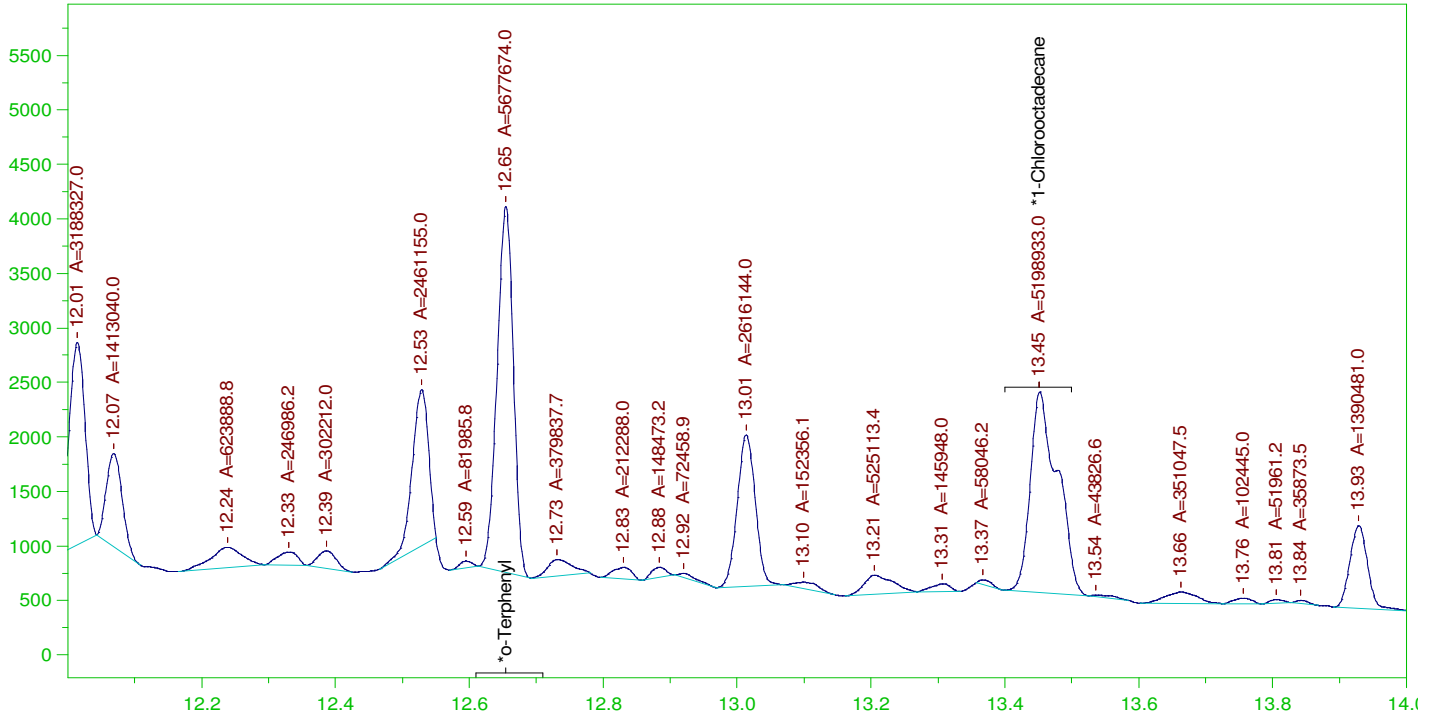
Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.654	.192	.265	137.8	-
*1-Chlorooctadecane	13.452	.192	.272	141.23	-

DRO Area: 3.863383E+08 DRO Amount: 12.64684
 TEH Area: 4.120797E+08 TEH Amount: 13.48949

Batch ID: 162502
G:\org\HP4\DAT\HP4010222_b\0102HP4.0036.RAW B21121981-001DMS ;0102HP4 , SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

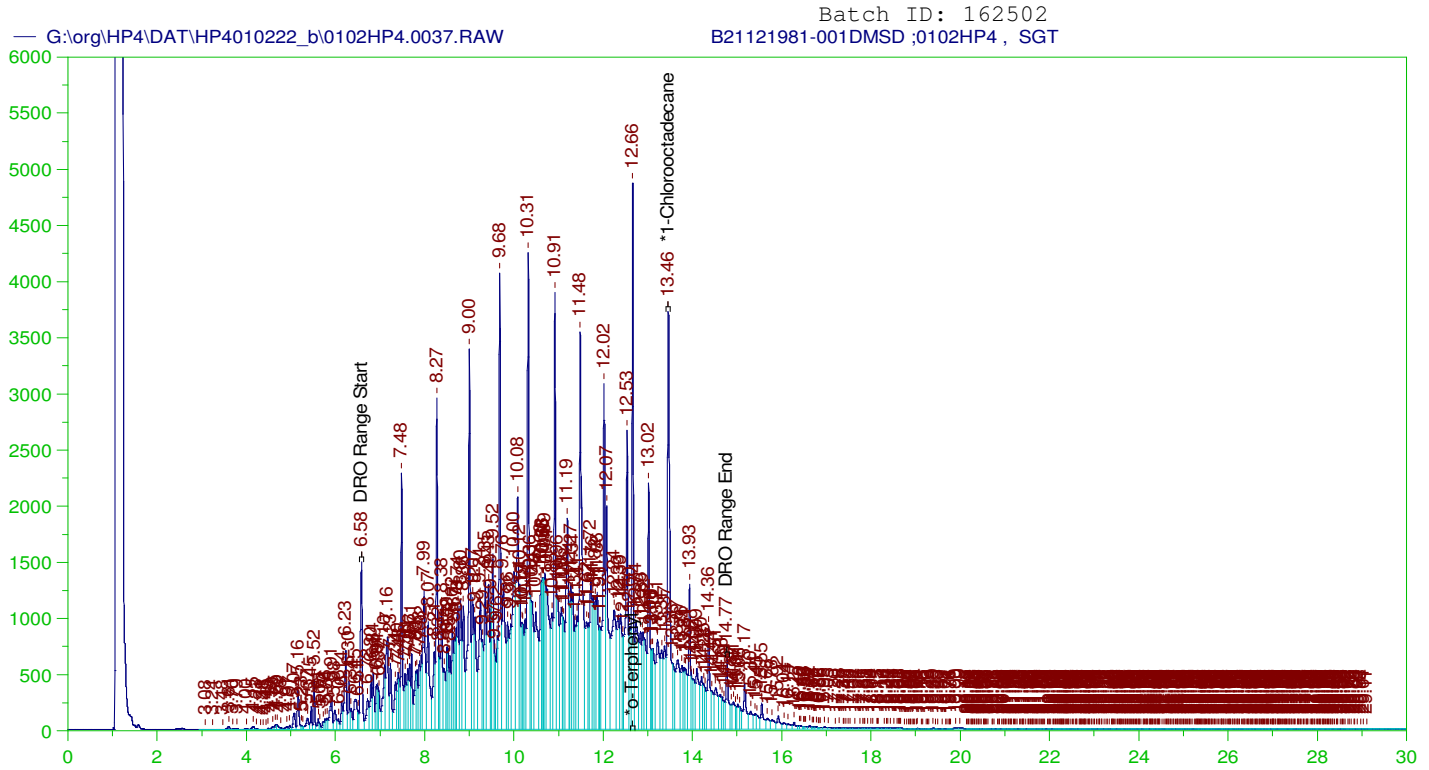
Sample Name: B21121981-001DMS ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0036.RAW
 Date & Time Acquired: 1/3/2022 2:40:46 PM
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.654	.192	.164	85.2	-
*1-Chlorooctadecane	13.452	.192	.15	78.02	-

DRO Area:1.548953E+08 DRO Amount: 5.070521
 TEH Area:1.672252E+08 TEH Amount: 5.47414



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

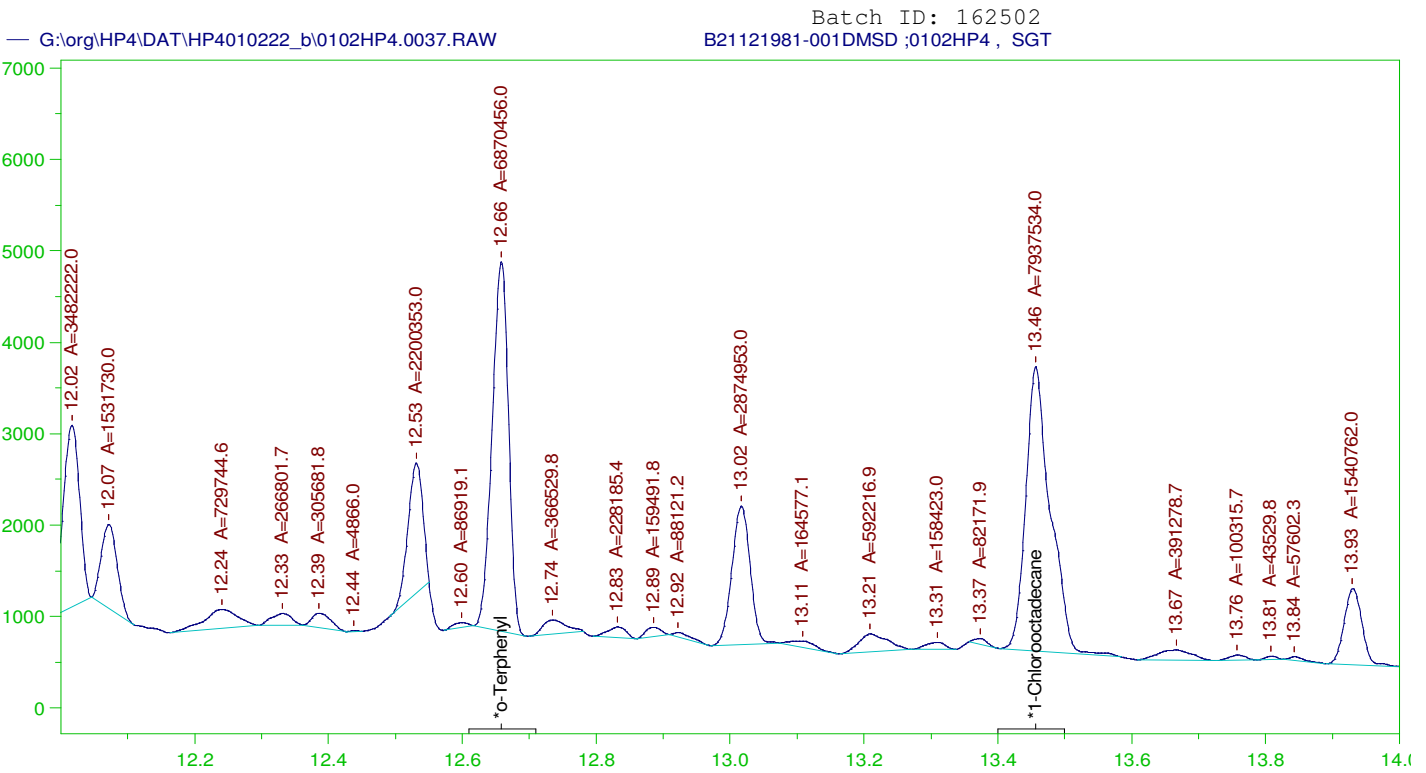
Sample Name: B21121981-001DMSD ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0037.RAW
 Date & Time Acquired: 1/3/2022 3:25:42 PM
 Method File: G:\Org\HP4\methods\D3_8015-010237-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.658	.192	.316	164.56	-
*1-Chlorooctadecane	13.456	.192	.383	198.9	-

DRO Area: 4.116373E+08 DRO Amount: 13.47501
 TEH Area: 4.386847E+08 TEH Amount: 14.36041



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

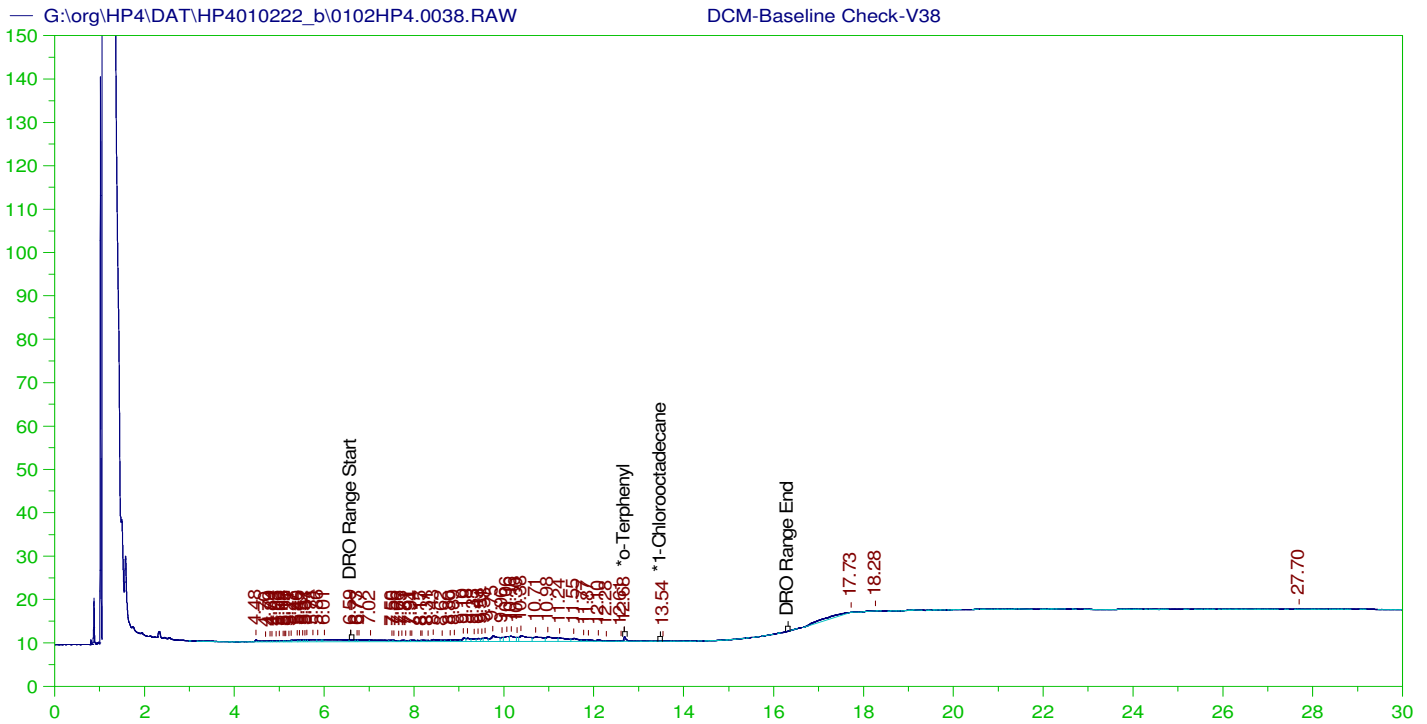
Sample Name: B21121981-001DMSD ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0037.RAW
 Date & Time Acquired: 1/3/2022 3:25:42 PM
 Method File: G:\Org\HP4\methods\DS_8015-C24-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.658	.192	.198	103.1
*1-Chlorooctadecane	13.456	.192	.229	119.11

DRO Area: 1.597221E+08 DRO Amount: 5.228527
 TEH Area: 1.722797E+08 TEH Amount: 5.639602



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V38
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0038.RAW
 Date & Time Acquired: 1/3/2022 4:10:35 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	12.683	200.	.142	.07
*1-Chlorooctadecane	29.983	200.	.	.

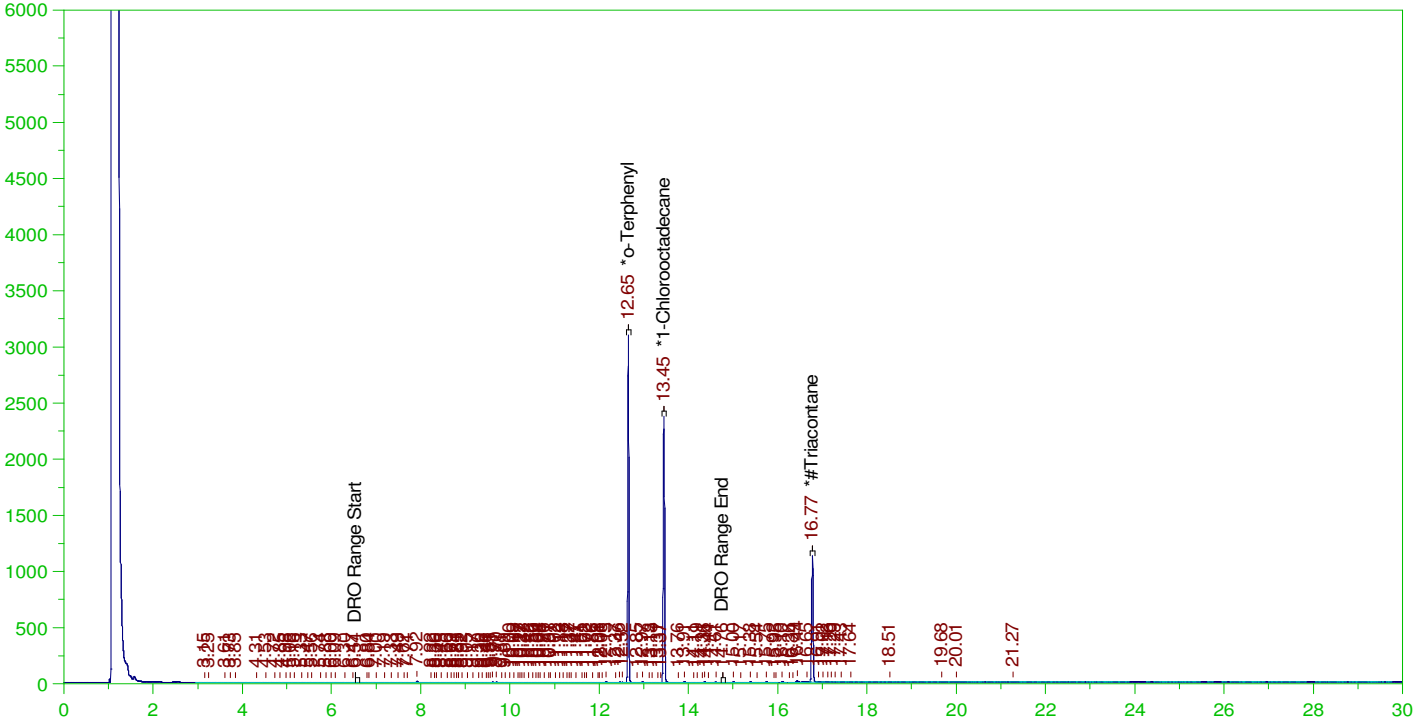
DRO Area:186416.8 DRO Amount: 6.346475
 TEH Area:258007.5 TEH Amount: 8.78375

ERH2253 (OWDFMW01)

G:\org\HP4\DAT\HP4010222_b\0102HP4.0039.RAW

Batch ID: 162502

B21121977-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121977-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0039.RAW
 Date & Time Acquired: 1/3/2022 4:55:25 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.648	.194	.155	79.92	-
*1-Chlorooctadecane	13.447	.194	.131	67.6	-
*#Triacontane	16.773	.194	.093	48.13	-

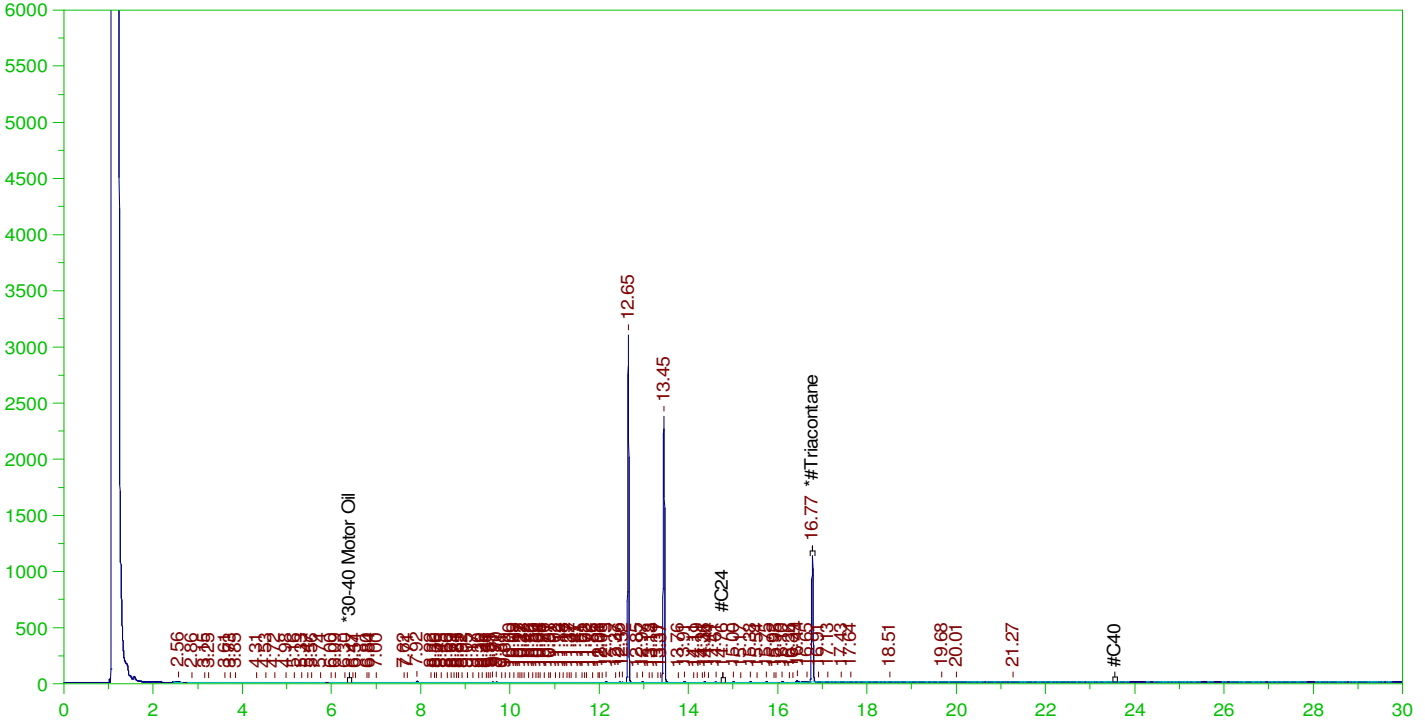
DRO Area:419758 DRO Amount: 1.387424E-02
 TEH Area:649797.2 TEH Amount: 2.147772E-02

ERH2253 (OWDFMW01)

G:\org\HP4\DAT\HP4010222_b\0102HP4.0039.RAW

Batch ID: 162502

B21121977-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121977-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0039.RAW
 Date & Time Acquired: 1/3/2022 4:55:25 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.773	.485	.093	19.19

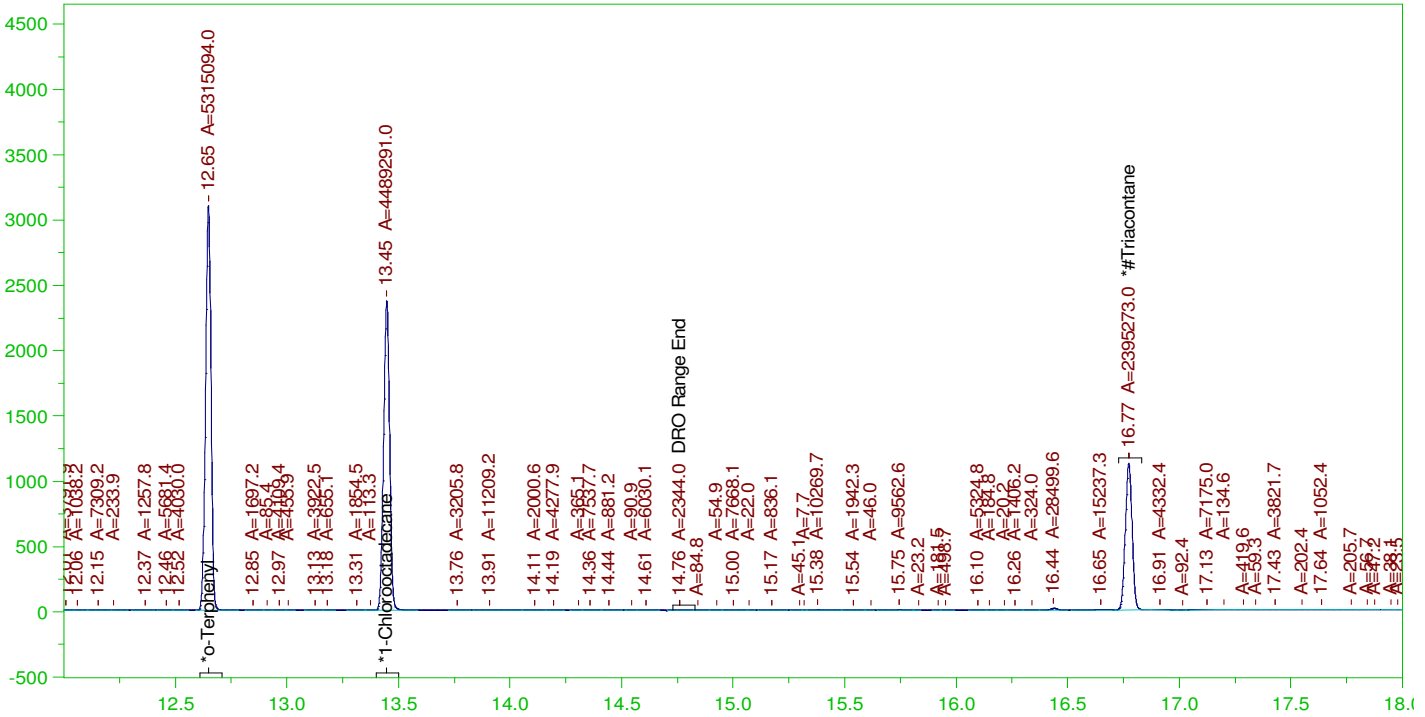
RRO Area:115252.2 RRO AMOUNT: 4.561654E-03

ERH2253 (OWDFMW01)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0039.RAW

B21121977-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121977-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0039.RAW
 Date & Time Acquired: 1/3/2022 4:55:25 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.648	.194	.155	79.76	-
*1-Chlorooctadecane	13.447	.194	.131	67.37	-
*#Triacontane	16.773	.194	.093	47.96	-

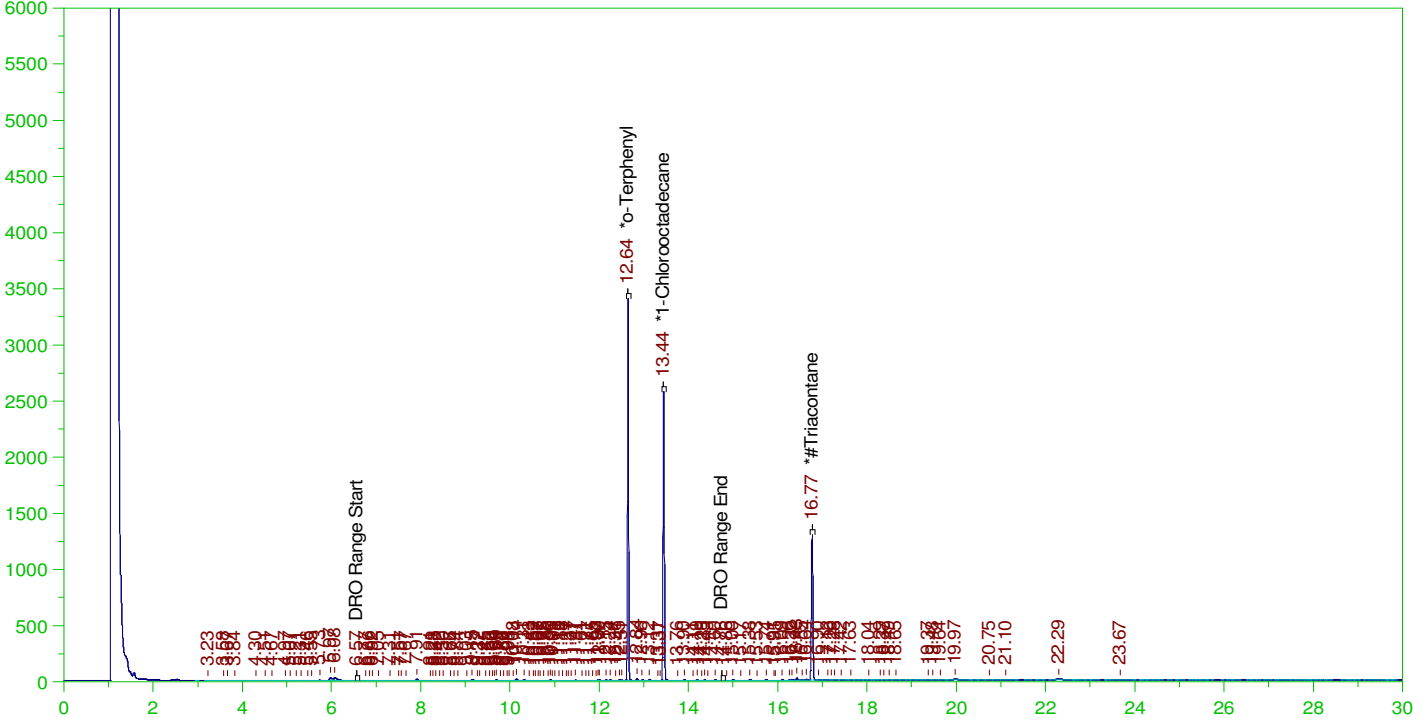
DRO Area:268993.1 DRO Amount: 8.891017E-03
 TEH Area:467779.9 TEH Amount: 1.546151E-02

ERH2242 (RHMW06)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0040.RAW

B21121977-002D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121977-002D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0040.RAW
 Date & Time Acquired: 1/3/2022 5:40:46 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.643	.194	.168	86.59	-
*1-Chlorooctadecane	13.443	.194	.139	71.77	-
*#Triacontane	16.768	.194	.107	55.26	-

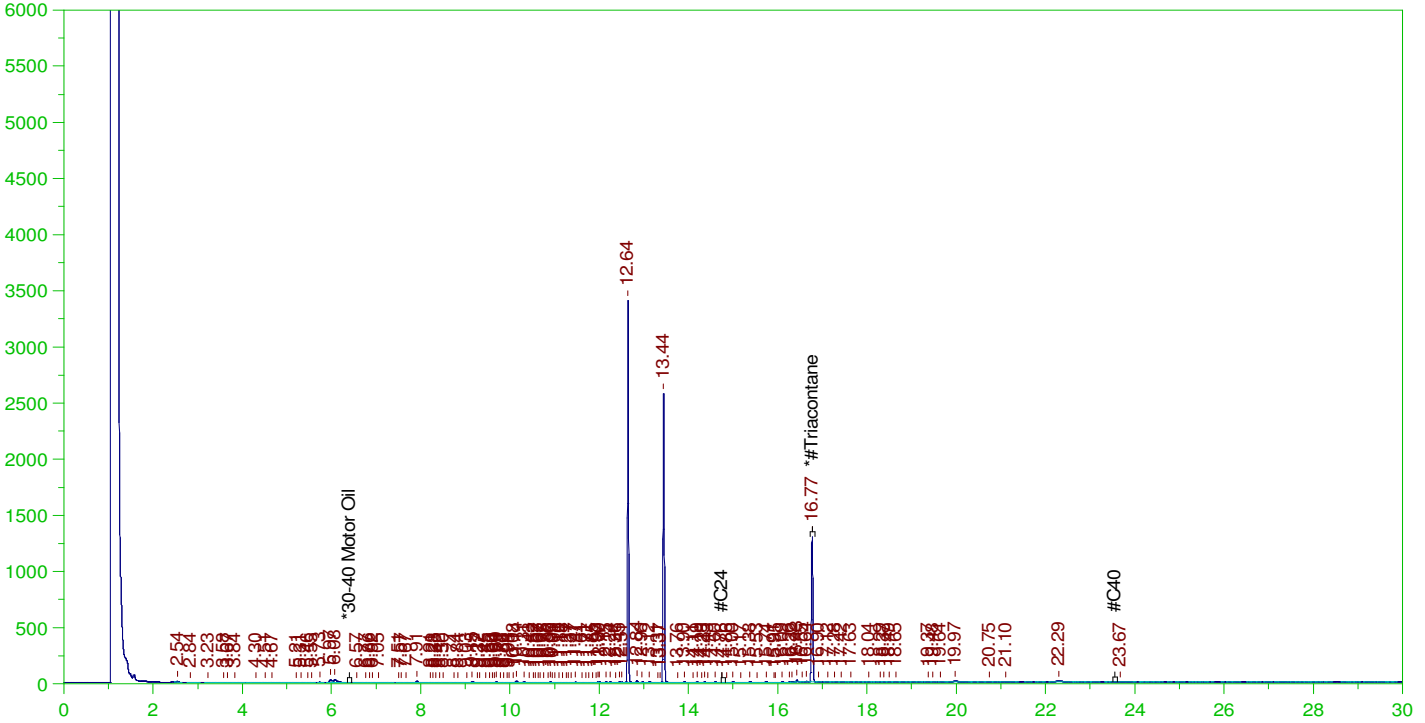
DRO Area: 587708.5 DRO Amount: 1.942551E-02
 TEH Area: 1160155 TEH Amount: 3.834657E-02

ERH2242 (RHMW06)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0040.RAW

B21121977-002D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121977-002D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0040.RAW
 Date & Time Acquired: 1/3/2022 5:40:46 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.768	.485	.107	22.03

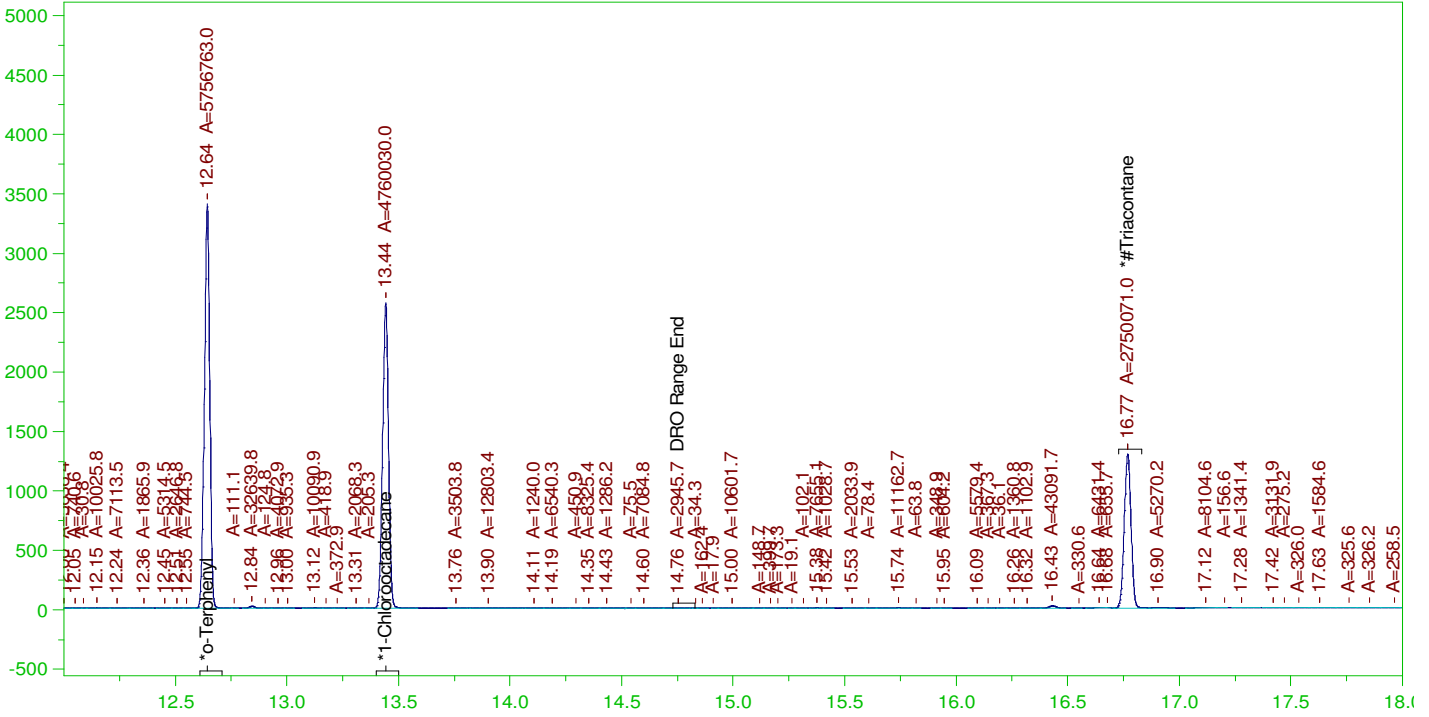
RRO Area:224329 RRO AMOUNT: 8.878882E-03

ERH2242 (RHMW06)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0040.RAW

B21121977-002D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121977-002D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0040.RAW
 Date & Time Acquired: 1/3/2022 5:40:46 PM
 Method File: G:\Org\HP4\methods\DS_8015-T-OH-L#.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.643	.194	.168	86.39	-
*1-Chlorooctadecane	13.443	.194	.139	71.43	-
*#Triacontane	16.768	.194	.107	55.06	-

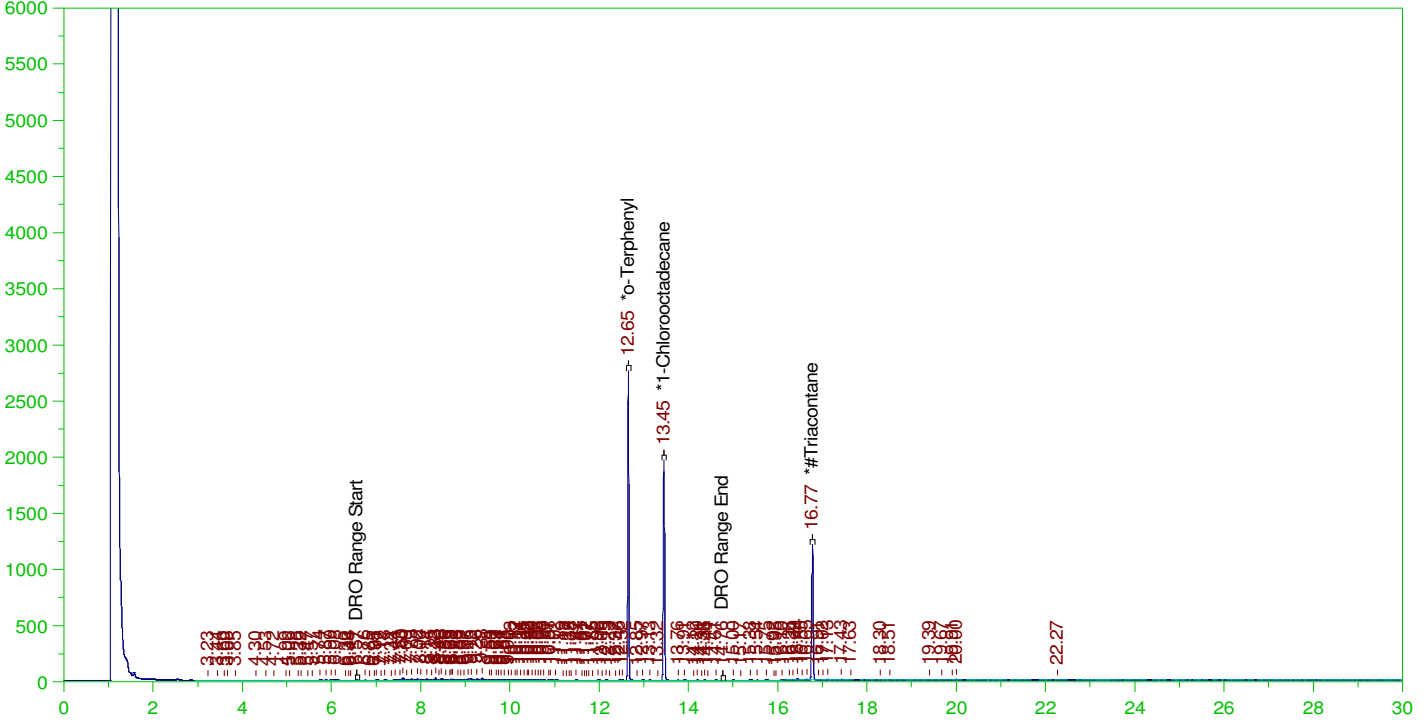
DRO Area:415361.8 DRO Amount: 1.372894E-02
 TEH Area:930161.9 TEH Amount: 0.0307446

ERH2269 (Sump Adit3 Loc-1)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0041.RAW

B21121967-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121967-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0041.RAW
 Date & Time Acquired: 1/3/2022 6:26:08 PM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
 Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.648	.196	.14	71.44	-
*1-Chlorooctadecane	13.447	.196	.109	55.49	-
*#Triacontane	16.773	.196	.101	51.32	-

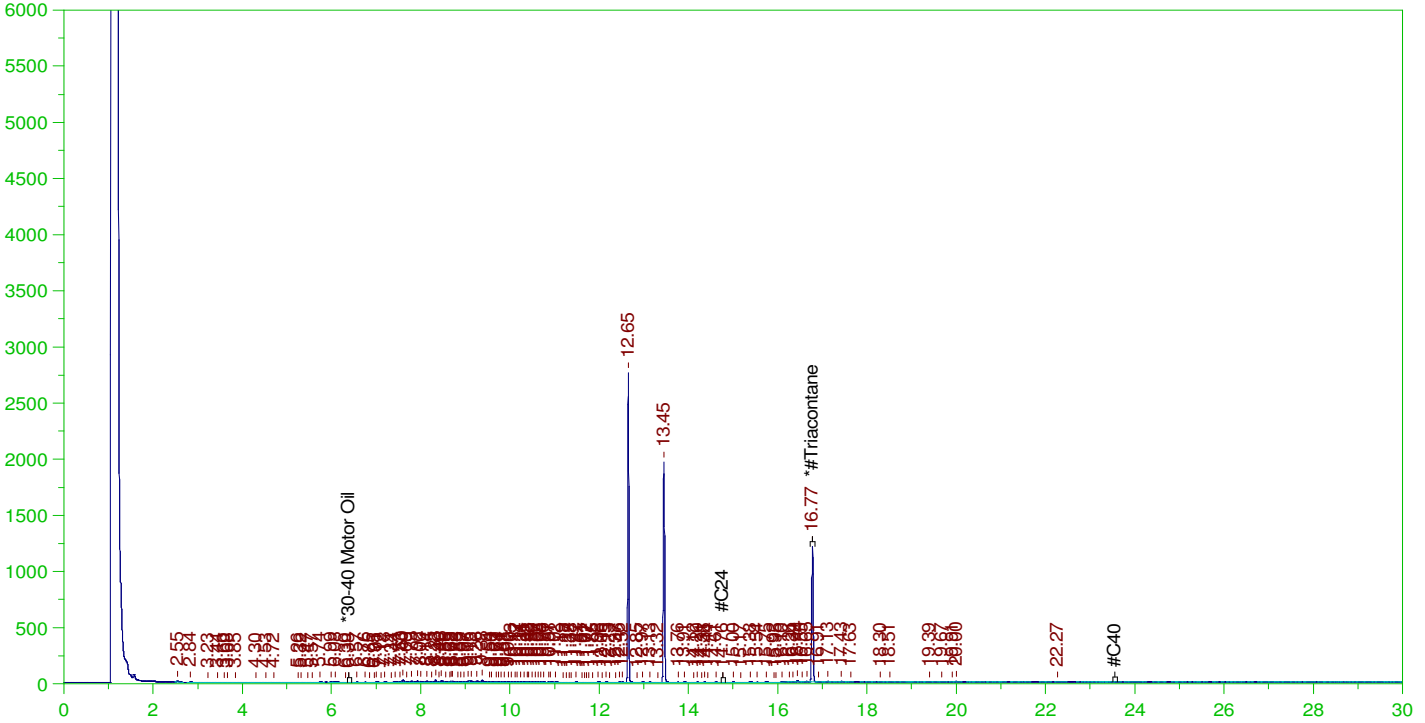
DRO Area:1272488 DRO Amount: 4.247184E-02
 TEH Area:1493360 TEH Amount: 4.984389E-02

ERH2269 (Sump Adit3 Loc-1)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0041.RAW

B21121967-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121967-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0041.RAW
 Date & Time Acquired: 1/3/2022 6:26:08 PM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-SAMPLE.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.773	.49	.1	20.46	-

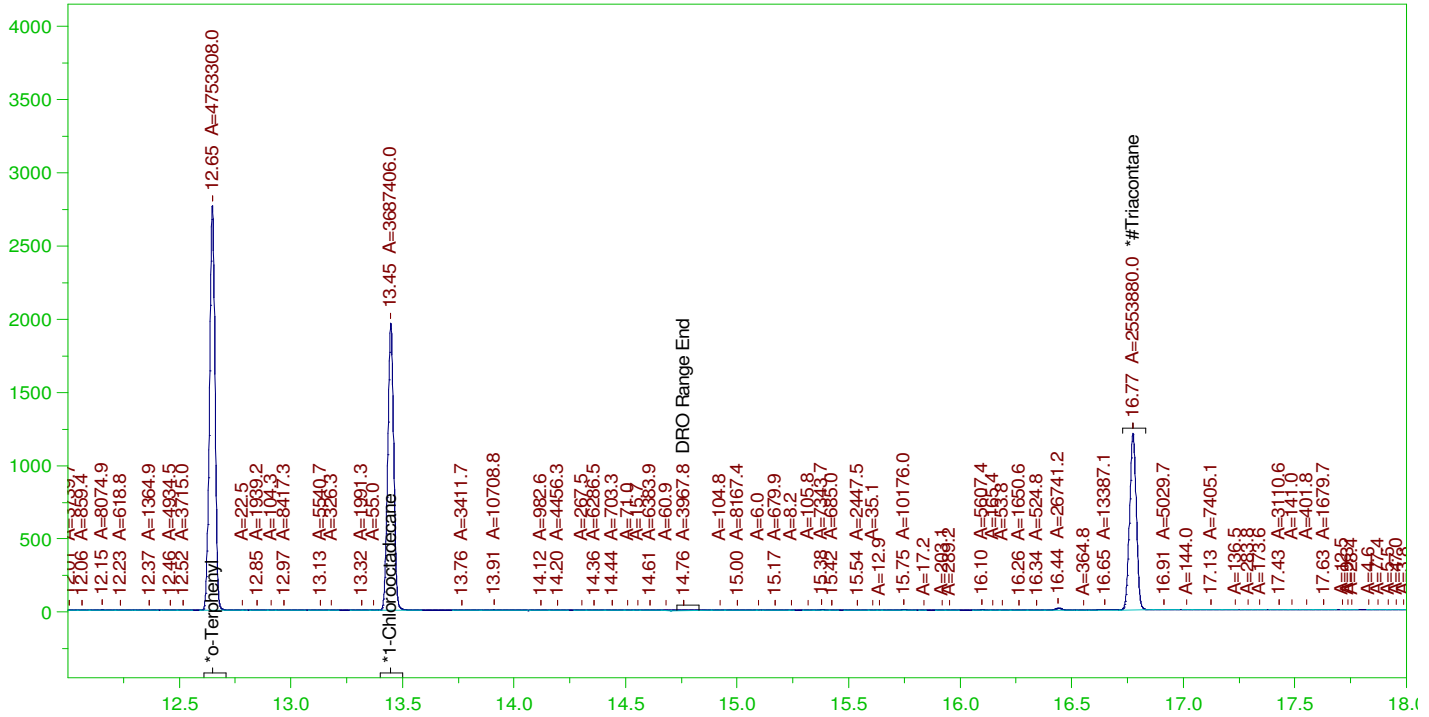
RRO Area:119770.6 RRO AMOUNT: 4.786965E-03

ERH2269 (Sump Adit3 Loc-1)

Batch ID: 162502

G:\org\HP4\DAT\HP4010222_b\0102HP4.0041.RAW

B21121967-001D ;0102HP4 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

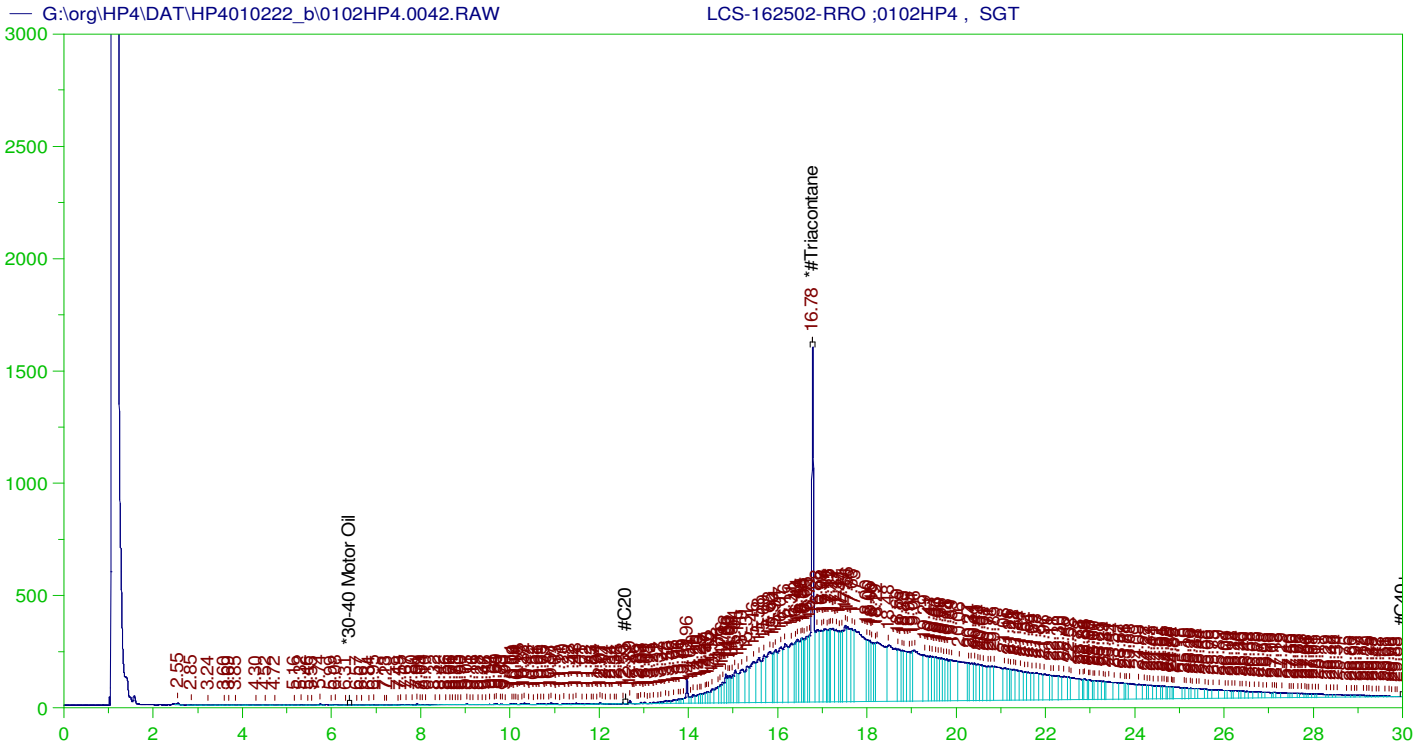
Sample Name: B21121967-001D ;0102HP4 , \$HC-8015-DRO-W, SGT
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.648	.196	.14	71.33	-
*1-Chlorooctadecane	13.447	.196	.108	55.33	-
*#Triacontane	16.773	.196	.1	51.13	-

DRO Area:1144783 DRO Amount: 3.820942E-02
 TEH Area:1328104 TEH Amount: 4.432813E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162502-RRO ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0042.RAW
 Date & Time Acquired: 1/3/2022 7:11:15 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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: 12.53 to 30.05

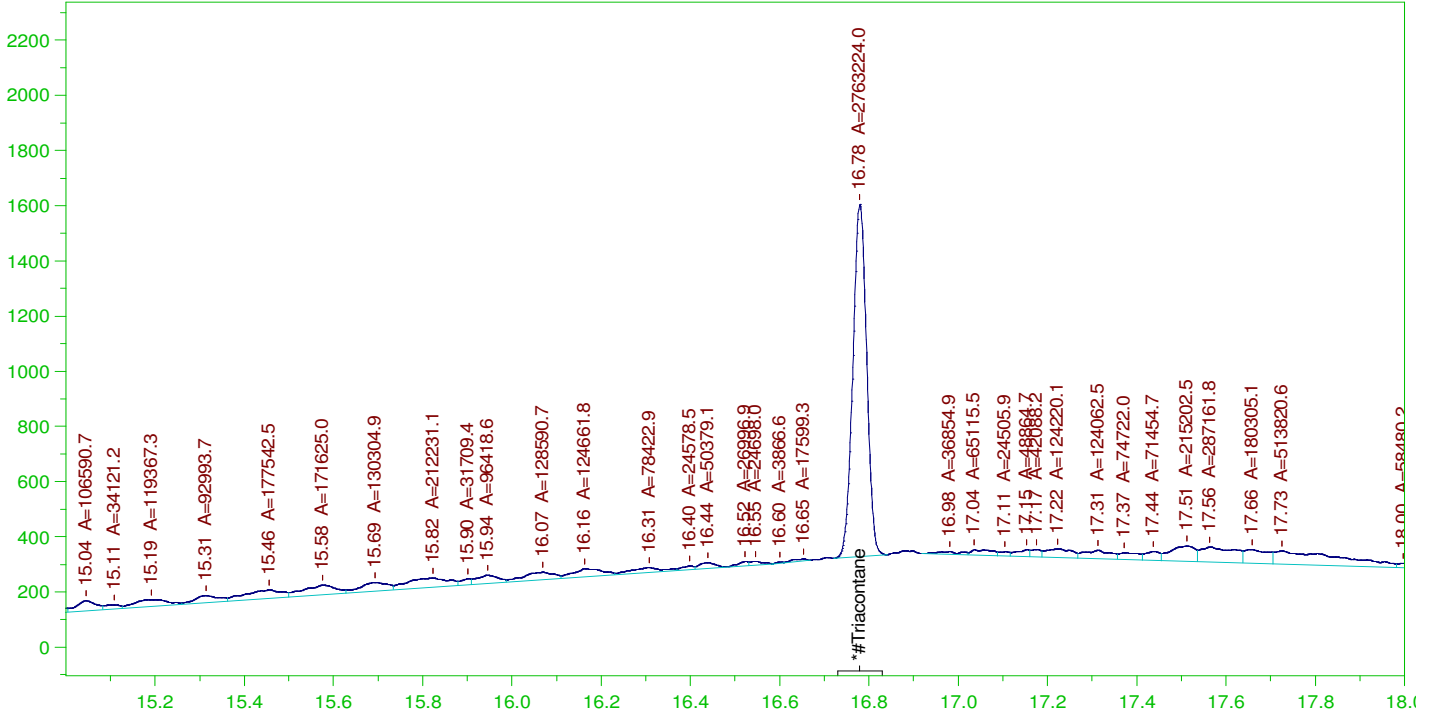
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.779	.5	.196	39.26

RRO TEH (Oil Range) Area:1.136722E+08 RRO TEH (Oil Range) AMOUNT: 4.634092

AMN 01/24/2022

G:\org\HP4\DAT\HP4010222_b\0102HP4.0042.RAW

LCS-162502-RRO ;0102HP4 , SGT



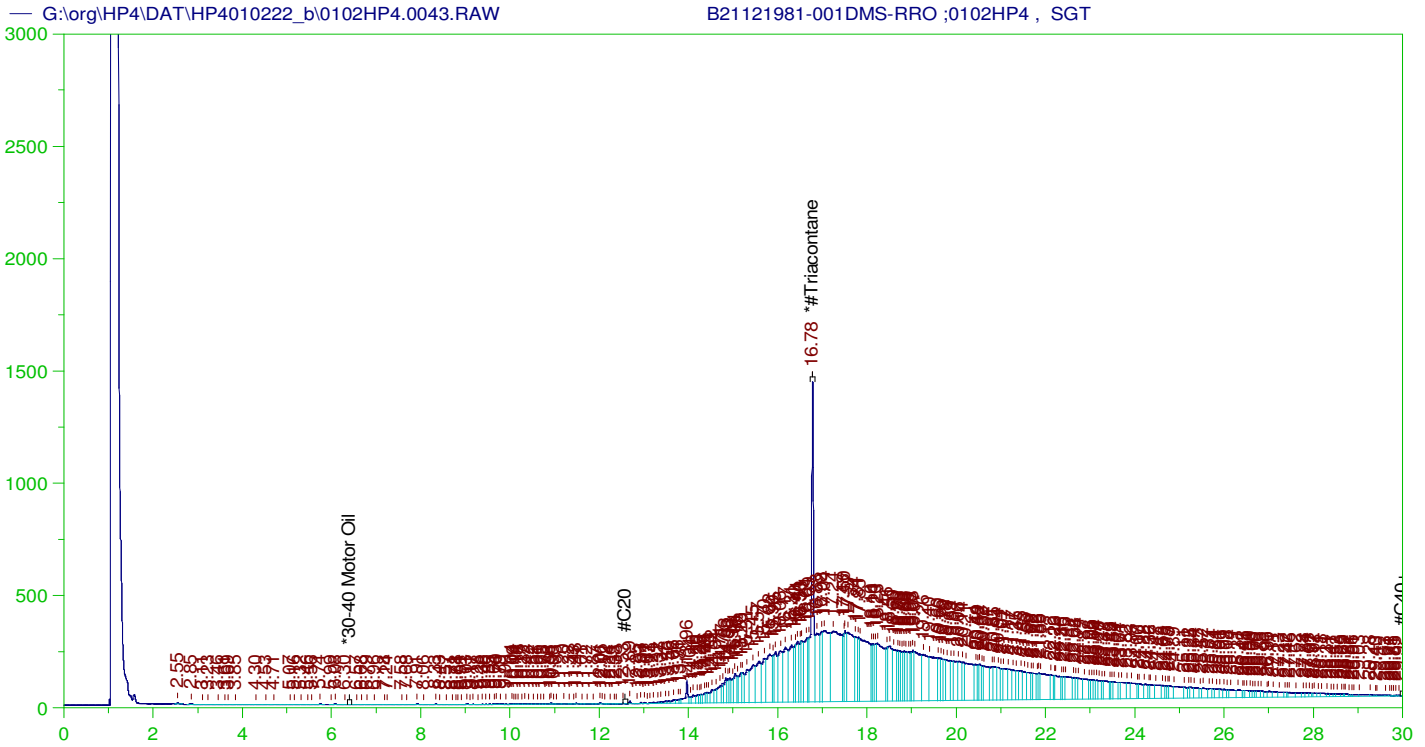
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162502-RRO ;0102HP4 , SGT
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 Sample Weight: 1000 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.779	.5	.111	22.13

RRO Area:6396895 RRO AMOUNT: 0.260783



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-001DMS-RRO ;0102HP4 , SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0043.RAW
 Date & Time Acquired: 1/3/2022 7:56:24 PM
 Method File: G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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: 12.53 to 30.05

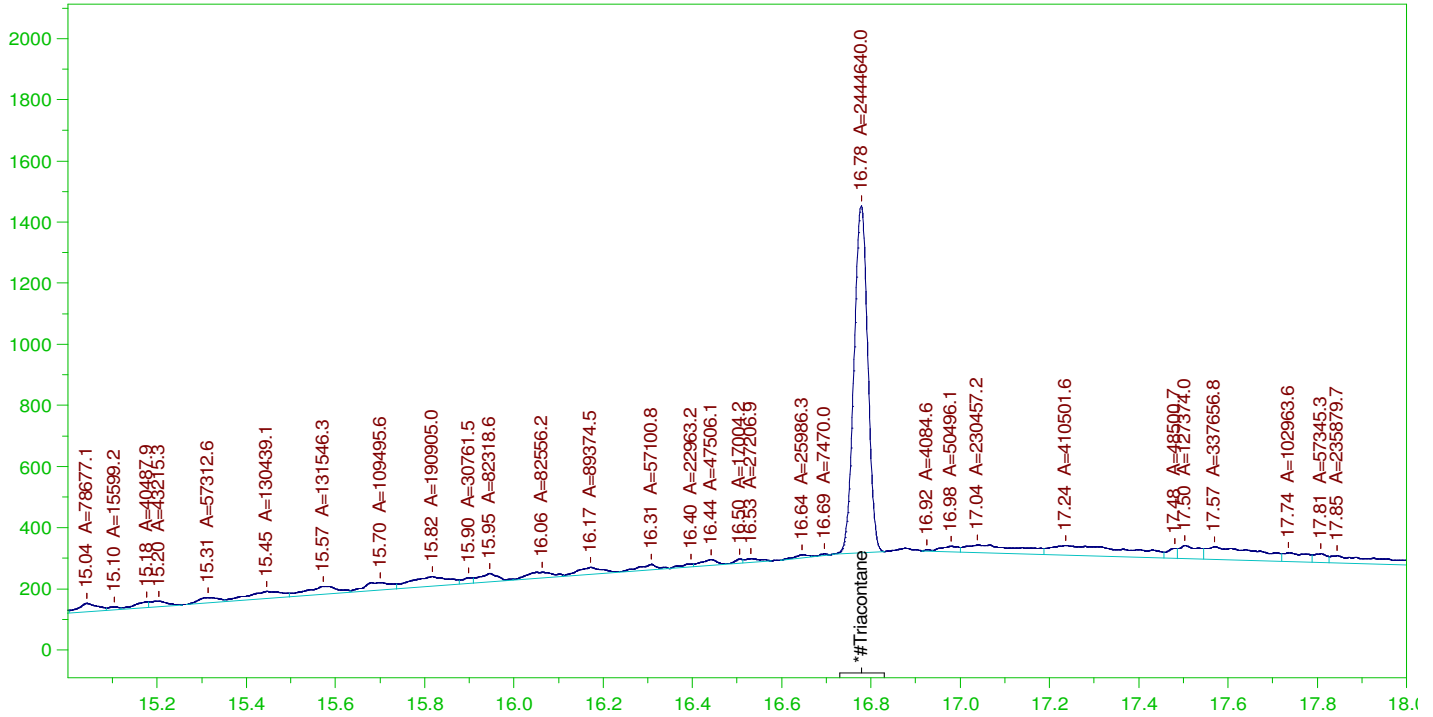
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.778	.481	.177	36.72	-

RRO TEH (Oil Range) Area:1.092867E+08 RRO TEH (Oil Range) AMOUNT: 4.283949

AMN 01/24/2022

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B21121981-001DMS-RRO ;0102HP4 , SGT



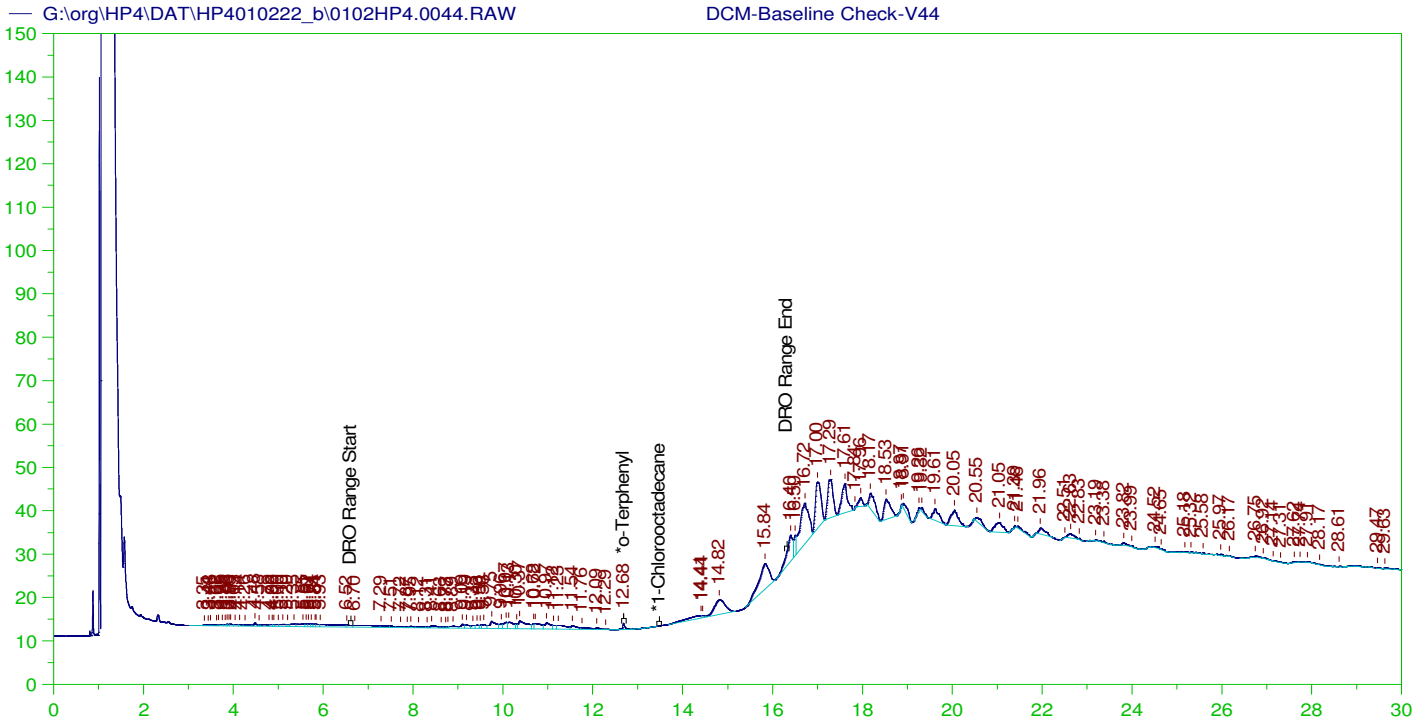
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121981-001DMS-RRO ;0102HP4 , SGT
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 Date & Time Acquired: 1/3/2022 7:56:24 PM
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 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.778	.481	.094	19.58

RRO Area:5412113 RRO AMOUNT: 0.2121503



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

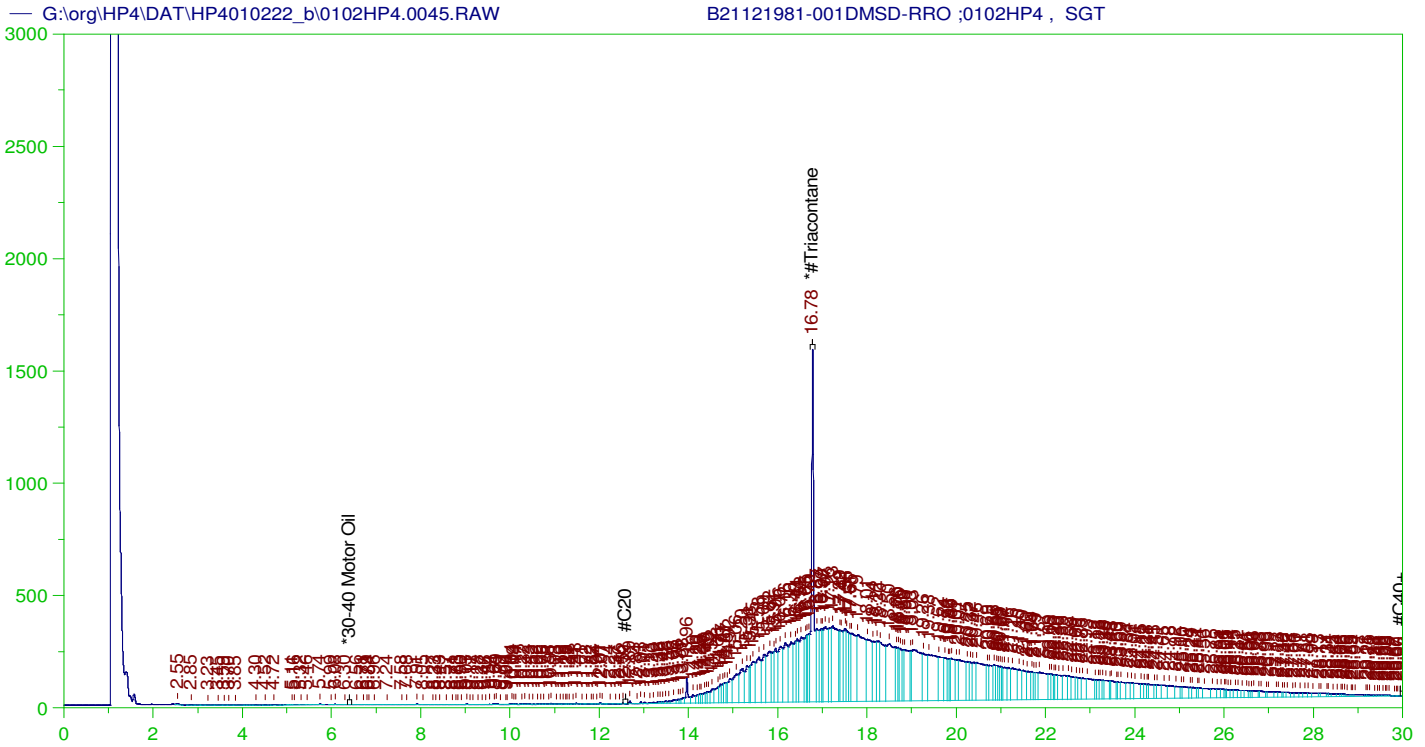
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	12.683	200.	.146	.07
*1-Chlorooctadecane	29.979	200.	.	.

DRO Area:383933.2 DRO Amount: 13.07083
 TEH Area:1201379 TEH Amount: 40.9004



RESIDUAL RANGE ORGANICS CHROMATOGRAM

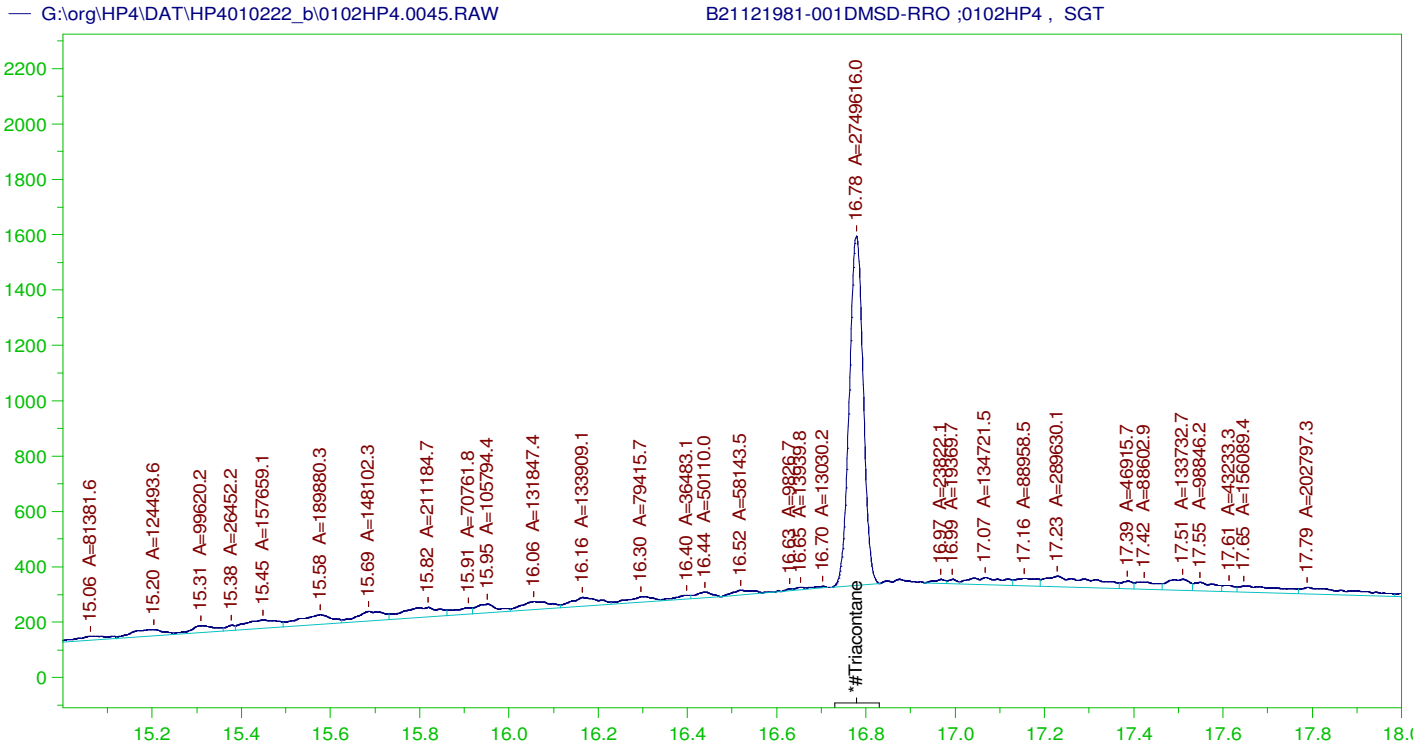
Sample Name: B21121981-001DMSD-RRO ;0102HP4 , SGT
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 Method File: G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 24529.56
 Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.778	.481	.204	42.47	-

RRO TEH (Oil Range) Area:1.142035E+08 RRO TEH (Oil Range) AMOUNT: 4.476682

AMN 01/24/2022



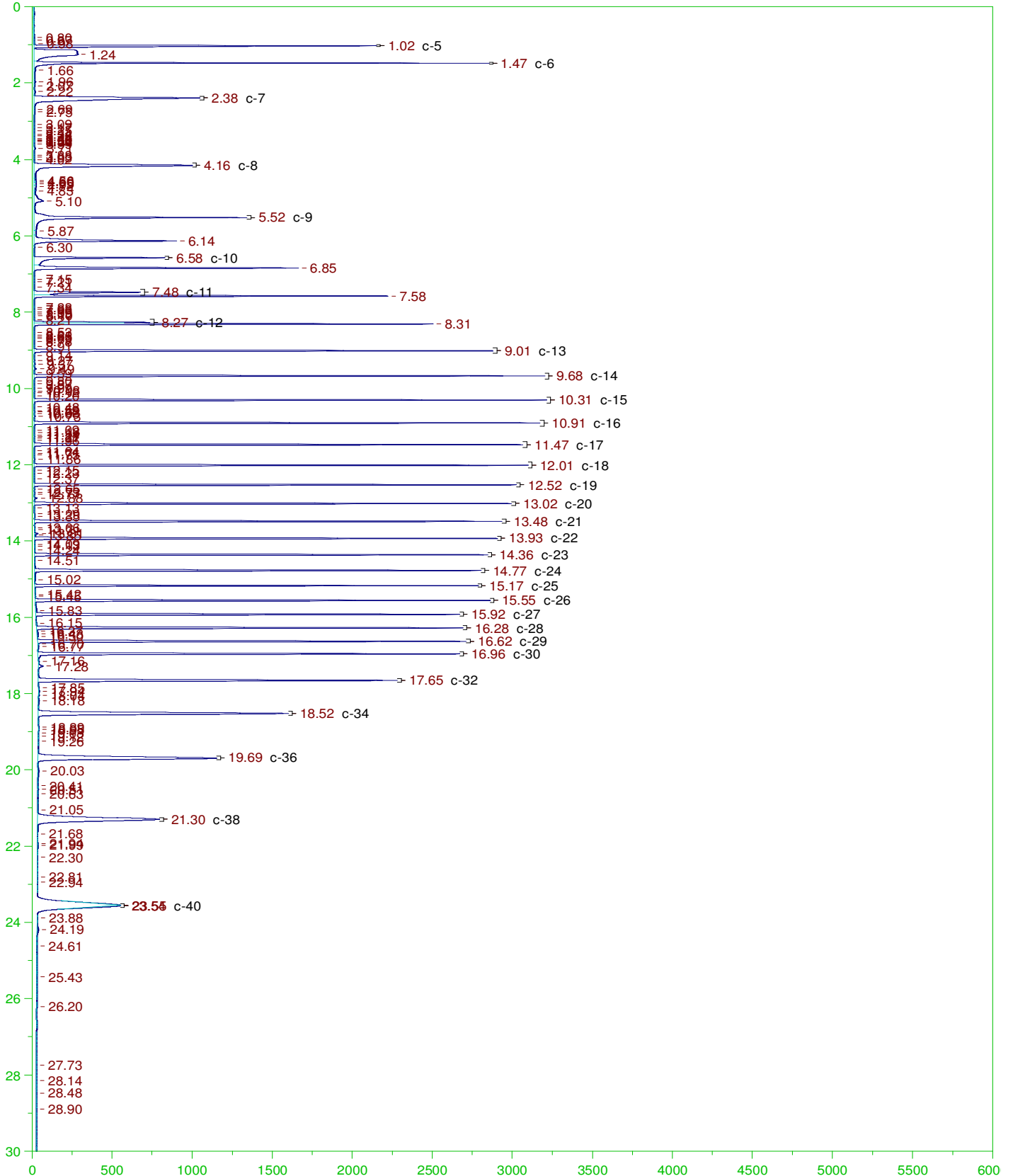
RESIDUAL RANGE ORGANICS CHROMATOGRAM

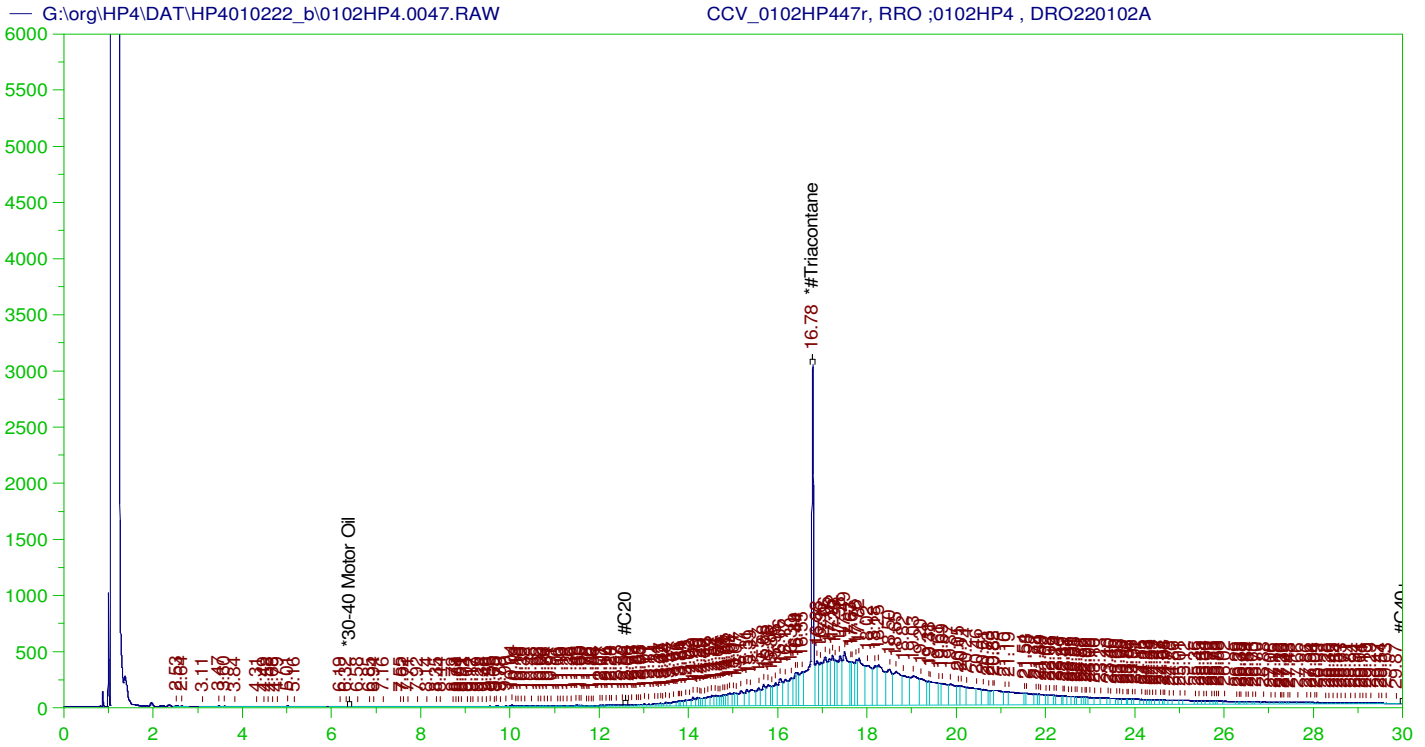
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 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.778	.481	.106	22.02

RRO Area:5490686 RRO AMOUNT: 0.2152303





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0102HP447r, RRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0047.RAW
 Date & Time Acquired: 1/3/2022 10:57:39 PM
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 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB.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: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.781	500.	432.592	86.52	-

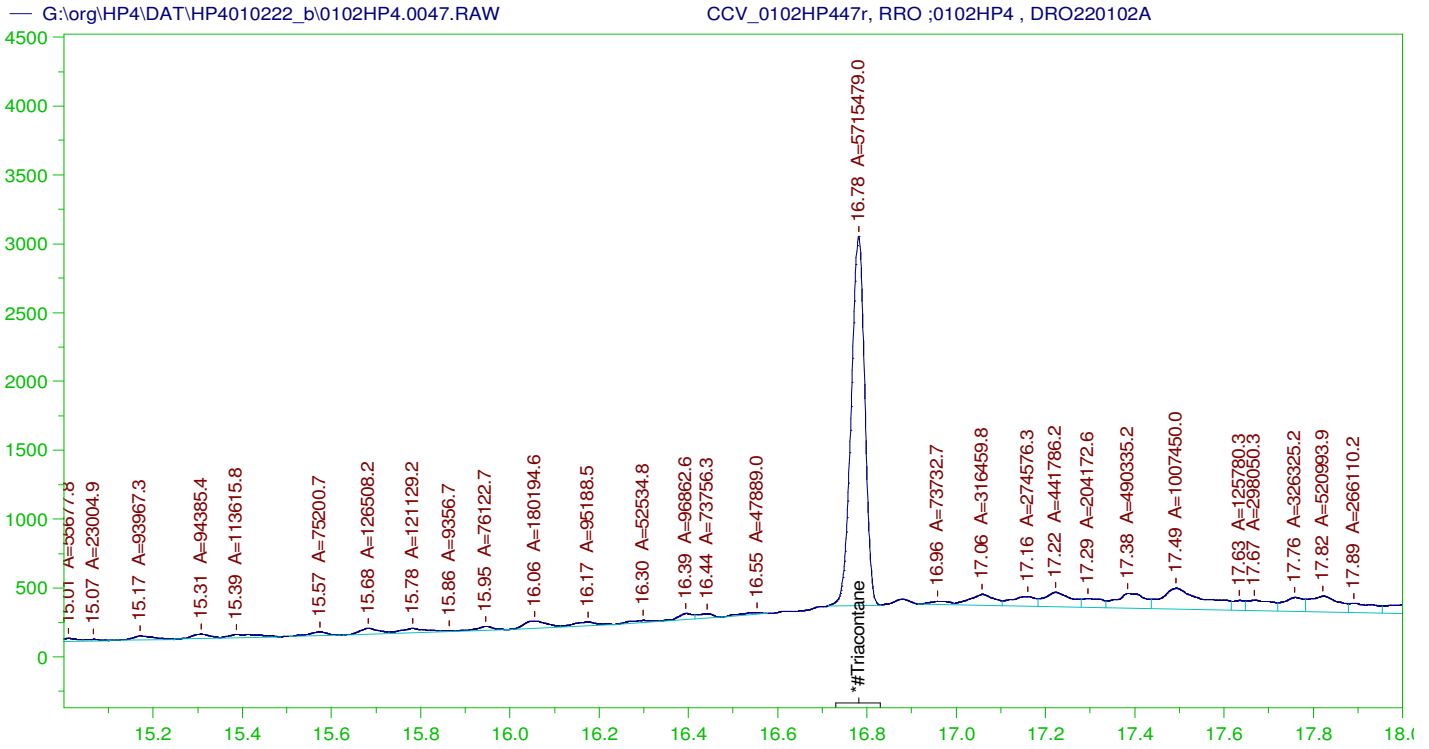
RRO TEH (Oil Range) Area:1.09415E+08 RRO TEH (Oil Range) AMOUNT: 4460.535

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0047.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.781	200.	432.592	216.3	75-125

AMN 01/24/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0102HP447r, RRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0047.RAW
 Date & Time Acquired: 1/3/2022 10:57:39 PM
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 Sample Weight: 1 Dilution: 1 S.A.: 1

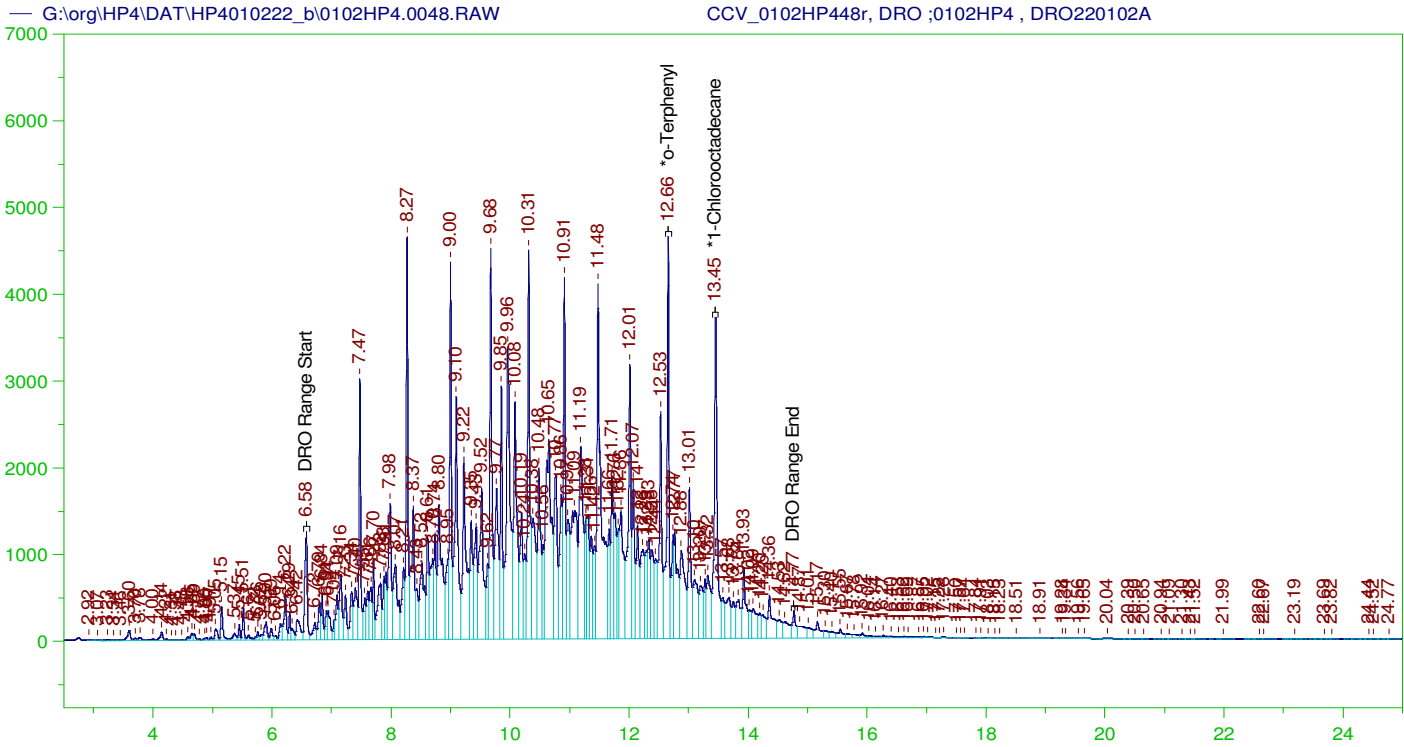
Mean RF for for Residual Range Organics Calculations: 24529.56
 Rt range for Residual Range Organics: 12.53 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.781	500.	228.859	45.77

RRO Area:1.047904E+07 RRO AMOUNT: 427.2006

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0047.RAW
 COMPOUND ACTUAL (NG) MEASURED (NG) %RECOVERY LIMITS
 *30-40 Motor Oil 5000. . . 75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.781	200.	228.859	114.43	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0102HP448r, DRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0048.RAW
 Date & Time Acquired: 1/3/2022 11:42:57 PM
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.657	200.	377.246	188.62
*1-Chlorooctadecane	13.453	200.	375.017	187.51

DRO Area: 4.48503E+08 DRO Amount: 15269.08
 TEH Area: 4.653323E+08 TEH Amount: 15842.03

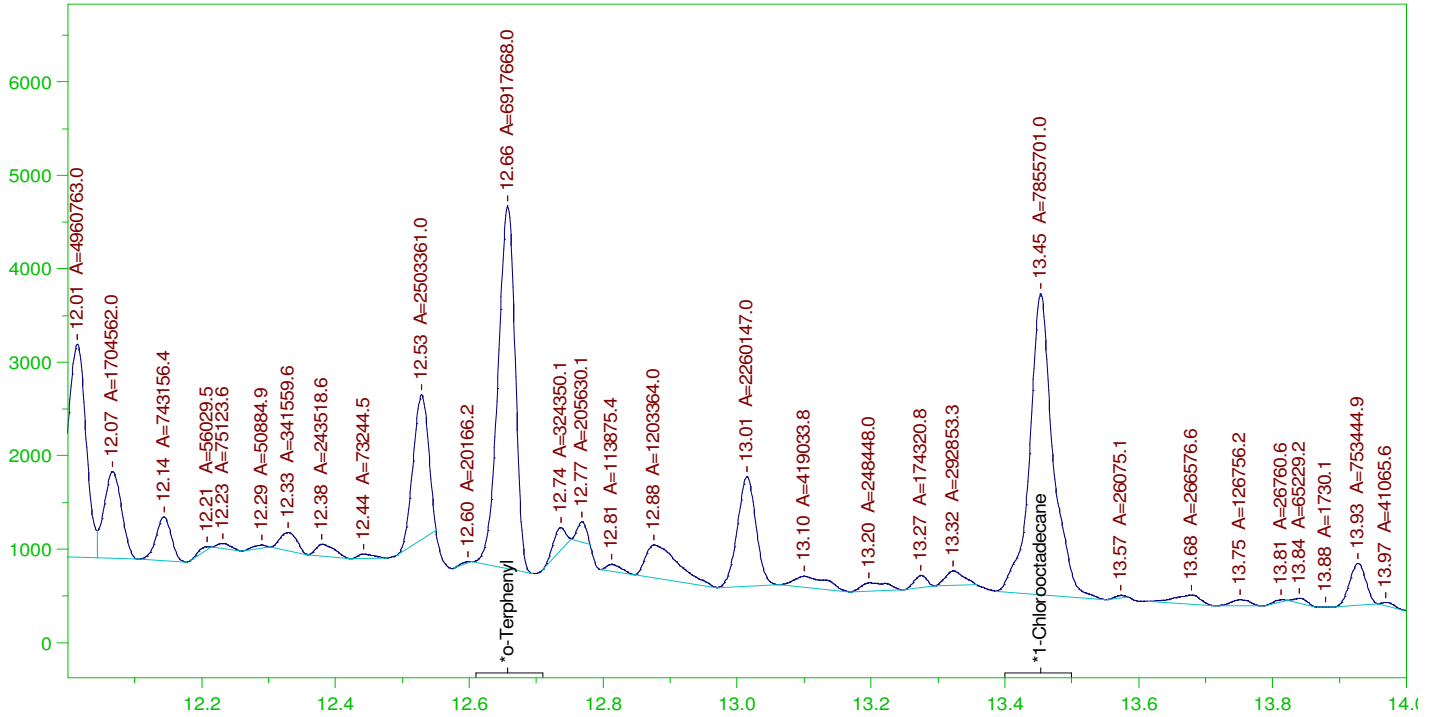
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0048.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15842.03	105.61	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.657	200.	377.246	188.62	85-115
*1-Chlorooctadecane	13.453	200.	375.017	187.51	85-115

G:\org\HP4\DAT\HP4010222_b\0102HP4.0048.RAW

CCV_0102HP448r, DRO ;0102HP4 , DRO220102A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0102HP448r, DRO ;0102HP4 , DRO220102A
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0048.RAW
 Date & Time Acquired: 1/3/2022 11:42:57 PM
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 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.657	200.	207.615	103.81
*1-Chlorooctadecane	13.453	200.	235.768	117.88

DRO Area: 1.978598E+08 DRO Amount: 6736.049
 TEH Area: 2.083648E+08 TEH Amount: 7093.685

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010222_b\0102HP4.0048.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7093.69	47.29	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.657	200.	207.615	103.81	85-115
*1-Chlorooctadecane	13.453	200.	235.768	117.88	85-115

G:\org\HP5\DAT\HP5122821_b11228HP5.58	B21121959-001D ;1228HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-C24T-IM-L%.met G:\Org\HP5\Methods\D3_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-LF.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.59	DCM-Baseline Check-V59	G:\Org\HP5\Methods\DR_8015-IB-L-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5122821_b11228HP5.60	B21121981-002B ;1228HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-122860-IM-L%.met G:\Org\HP5\Methods\D3_OROS-122860-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-LF.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with Set Baseline Now set at 26.4 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.61	B21121981-003D ;1228HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-122861-IM-L%.met G:\Org\HP5\Methods\D3_OROS-122861-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-LF.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with Set Baseline Now set at 27.62 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.62	DCM-Baseline Check-V62	G:\Org\HP5\Methods\DR_8015-IB-L-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5122821_b11228HP5.63	B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR-SGT	G:\Org\HP5\Methods\DR_8015-122861-IM-L%.met G:\Org\HP5\Methods\D3_OROS-122861-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-LF.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline Now at 27.62 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.14 minutes and slightly after the surrogate peak at 12.31 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.64	B21121981-004D ;1228HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-122864-IM-L%.met G:\Org\HP5\Methods\D3_OROS-122864-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-LF.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 baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.65	B21121961-001D ;1228HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-122843-IM-L%.met G:\Org\HP5\Methods\D3_OROS-122843-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-LF.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 baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.66	Marker_1228HP566r, DRO ;1228HP5 , DRO211220B	G:\org\HP5\Methods\CSC211228.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5122821_b11228HP5.67	CCV_1228HP567r, RRO ;1228HP5 , DRO211201A	G:\Org\HP5\Methods\DC_ORO-AL-L%.MET G:\Org\HP5\Methods\DS_ORO-AL-L%.MET	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.68	CCV_1228HP568r, DRO ;1228HP5 , DRO211228A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-LF.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.14 minutes and slightly after the surrogate peak at 12.31 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.69	DCM-Baseline Check-V69	G:\Org\HP5\Methods\DR_8015-IB-L-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5122821_b11228HP5.70	LCS-162502-RRO ;1228HP5 ,	G:\Org\HP5\Methods\D3_ORO-AL-L%.MET G:\Org\HP5\Methods\DS_ORO-AL-L%.MET	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 minutes slightly after the surrogate peak at 16.4 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.71	B21121981-001DMS-RRO ;1228HP5 ,	G:\Org\HP5\Methods\D3_ORO-AL-L%.MET G:\Org\HP5\Methods\DS_ORO-AL-L%.MET	1040	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 minutes slightly after the surrogate peak at 16.4 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.72	B21121981-001DMS-RRO ;1228HP5 ,	G:\Org\HP5\Methods\D3_ORO-AL-L%.MET G:\Org\HP5\Methods\DS_ORO-AL-L%.MET	1040	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 minutes slightly after the surrogate peak at 16.4 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5122821_b11228HP5.73	Marker_1228HP573r, DRO ;1228HP5 , DRO211220B	G:\org\HP5\Methods\CSC211228.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5122821_b11228HP5.74	CCV_1228HP574r, RRO ;1228HP5 , DRO211201A	G:\Org\HP5\Methods\DC_ORO-AL-L%.MET G:\Org\HP5\Methods\DS_ORO-AL-L%.MET	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.18 minutes slightly after the surrogate peak at 16.4 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.01.24 14:26:06 -07:00

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amnt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.16	Marker_0102HP416r, DRO_0102HP4 , DRO211220B	CCV_0102HP417r, RRO_0102HP4 , DRO220102A	G:\Org\HP4\Methods\CSC220102.met G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1	1	1	1	1	0 No Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.18	CCV_0102HP418r, DRO_0102HP4 , DRO211229A		G:\Org\HP4\Methods\DC_8015-C24-OH-L%.met G:\Org\HP4\Methods\DS_8015-C24-OH-L%.met	1	1	1	1	1	0 The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.71 minutes slightly after the surrogate peak at 16.88 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.19	DCM-Baseline Check-V19	B21121979-001D_0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\Methods\DR_8015-OH-LEXP.met G:\Org\HP4\Methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_ORO-S-AB-L%.met	1040	1	1	1	1	0 No Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.21	B21121979-002B_0102HP4 , \$HC-8015-DRO-W, SGT		G:\Org\HP4\Methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L%.met	1040	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.22	B21121841-004B_0102HP4 , \$HC-8015-DRO-W, SGT		G:\Org\HP4\Methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L%.met	1000	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.23	DCM-Baseline Check-V23	B21121981-003D_0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\Methods\DR_8015-OH-LEXP.met G:\Org\HP4\Methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L%.met	1040	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.25	B21121981-002B_0102HP4 , \$HC-8015-DRO-W, SGT		G:\Org\HP4\Methods\DS_8015-C24-OH-L%.met G:\Org\HP4\Methods\DS_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L%.met	1050	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.26	B21121981-004D_0102HP4 , \$HC-8015-DRO-W, SGT		G:\Org\HP4\Methods\DS_8015-C24-OH-L%.met G:\Org\HP4\Methods\DS_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L%.met	1010	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.27	B21121959-001D_0102HP4 , \$HC-8015-DRO-W, SGT		G:\Org\HP4\Methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L%.met	1000	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.

G:\org\HP4\DAT\HP4010222_b\0102HP4.28r	B21121961-001D_0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24-OH-L%.met G:\Org\HP4\Methods\D3_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-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 baseline. Assigned Set Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.29r	LCS-162502_0102HP4 , SGT	G:\Org\HP4\methods\D3_8015-24-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.55 minutes and slightly after the surrogate peak at 12.78minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.30r	MB-162502_0102HP4 , SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.31r	Marker_0102HP431r, DRO_0102HP4 , DRO211220B	G:\Org\HP4\Methods\CSC220102.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.32r	CCV_0102HP432r, RRO_0102HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met G:\Org\HP4\Methods\DC_ORO-T-AB-L#.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.71 minutes slightly after the surrogate peak at 16.88 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.33r	CCV_0102HP433r, DRO_0102HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-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 17.11 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.55 minutes and slightly after the surrogate peak at 12.78minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.34r	DCM-Baseline Check-V34	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.35r	B21121981-001D_0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.36r	B21121981-001DMS_0102HP4 , SGT	G:\Org\HP4\methods\D3_8015-24-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L#.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.55 minutes and slightly after the surrogate peak at 12.78minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.37r	B21121981-001DMSD_0102HP4 , SGT	G:\Org\HP4\methods\D3_8015-010237-OH-L%.met G:\Org\HP4\methods\DS_8015-C24-OH-L#.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.55 minutes and slightly after the surrogate peak at 12.78minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.38r	DCM-Baseline Check-V38	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.39r	B21121977-001D_0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.40r	B21121977-002D_0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\methods\DS_8015-T-OH-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.

G:\org\HP4\DAT\HP4010222_b\0102HP4.41	B21121967-001D_0102HP4 , \$HC-8015-DRO-W, SGT	G:\Org\HP4\Methods\DR_8015-C24-OH-L%.met G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L#.met	1020	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for the C24-C40. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.57 minutes and slightly after the surrogate peak at 12.78 minutes and an Assigned Set Baseline All Valley on at 14.07 minutes with the X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.42	LCS-162502-RRO_0102HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1000	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.71 minutes slightly after the surrogate peak at 16.88 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.43	B21121981-001DMS-RRO_0102HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1040	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.71 minutes slightly after the surrogate peak at 16.88 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.44	DCM-Baseline Check-V44	G:\Org\HP4\Methods\DR_8015-OH-LEXP.met	1	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.45	B21121981-001DMSD-RRO_0102HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1040	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.71 minutes slightly after the surrogate peak at 16.88 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.46	Marker_0102HP446, DRO_0102HP4 , DRO211220B	G:\org\HP4\Methods\CSC220102.met	1	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010222_b\0102HP4.47	CCV_0102HP447r, RRO_0102HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AB-L%.met G:\Org\HP4\Methods\DS_ORO-T-AB-L%.met	1	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 16.71 minutes slightly after the surrogate peak at 16.88 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010222_b\0102HP4.48	CCV_0102HP448r, DRO_0102HP4 , DRO220102A	G:\Org\HP4\Methods\DC_8015-C24-OH-L%.met G:\Org\HP4\Methods\DS_8015-T-OH-L#.met	1	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.11 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline Now placed slight before at 12.55 minutes and slightly after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.01.24 12:41:15 -07:00

Energy Laboratories Inc

Spike LOG

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

Type: Secondary
BY: Ann Nebel
Status: Open

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

Final Volume: 25 mL

Stock Source

DRO200430B O-Terphenyl

Base Units

ug/mL

Amount Added

0.1012 g

Analtes

A O-Terphenyl

CAS

84-15-1

Conc:

ug/mL

4000

Energy Laboratories Inc

Standard LOG

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

Type: Neat
BY: Ann Nebel
Status: New

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

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

Anna

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

Energyl Laboratories Inc 1120 So. 27th Street

Billings MT 59107

COA Form
Revision 3 (3/2015)

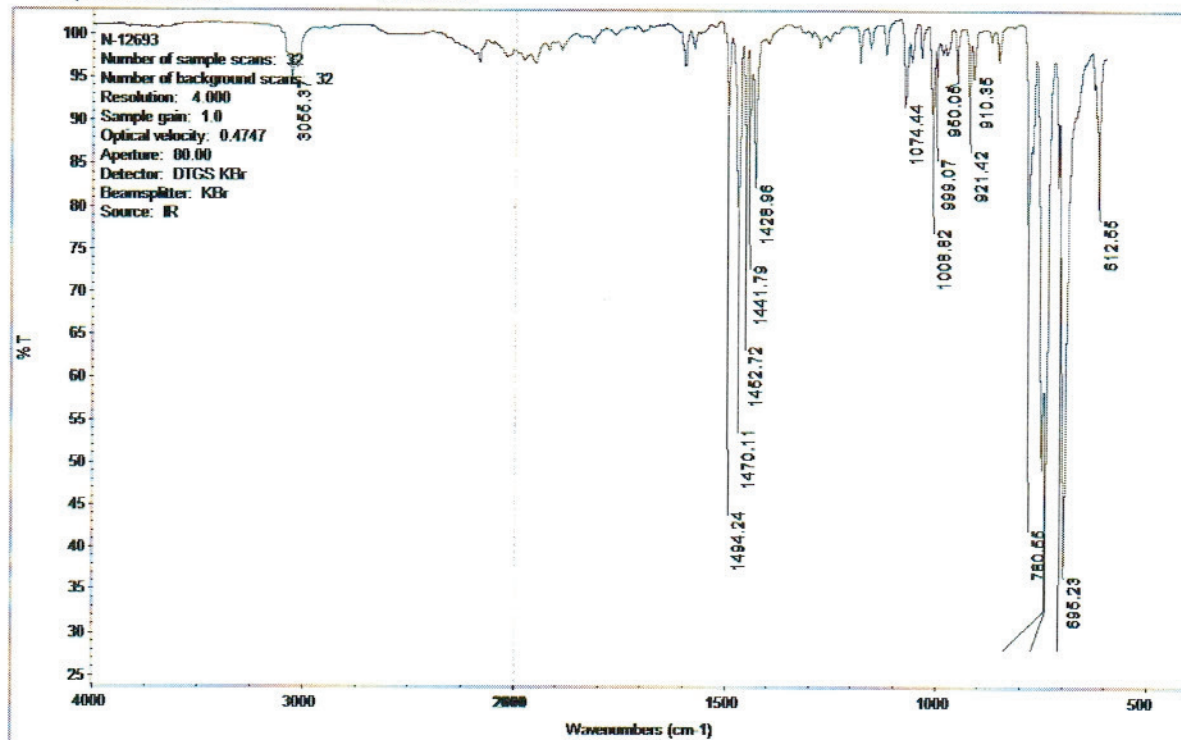
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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



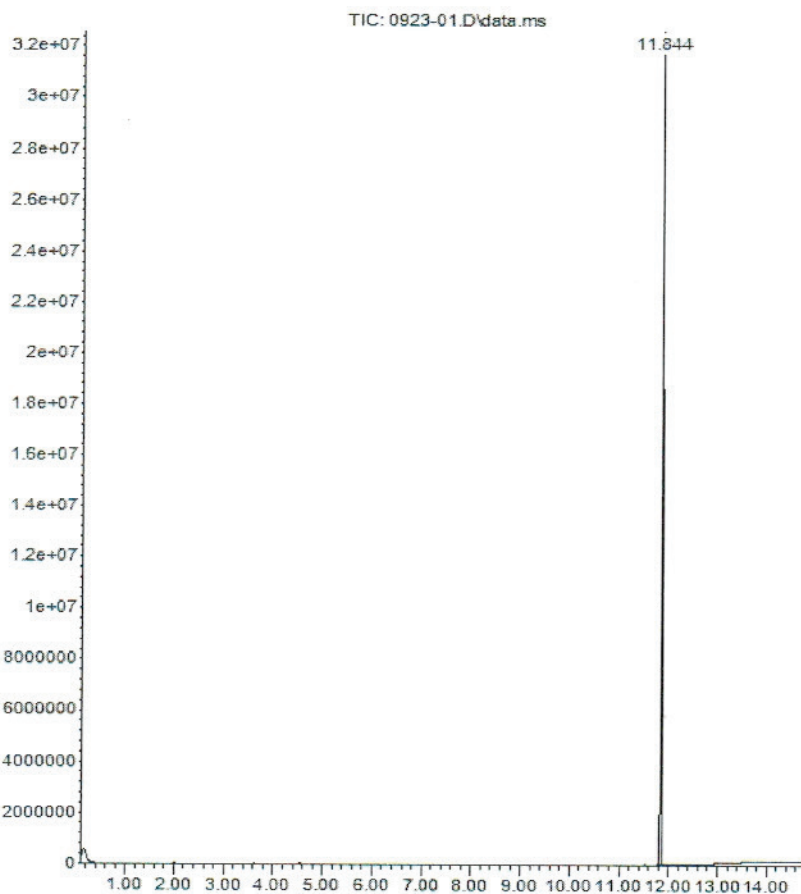
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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

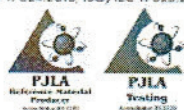
Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24

Abundance



Time-->

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

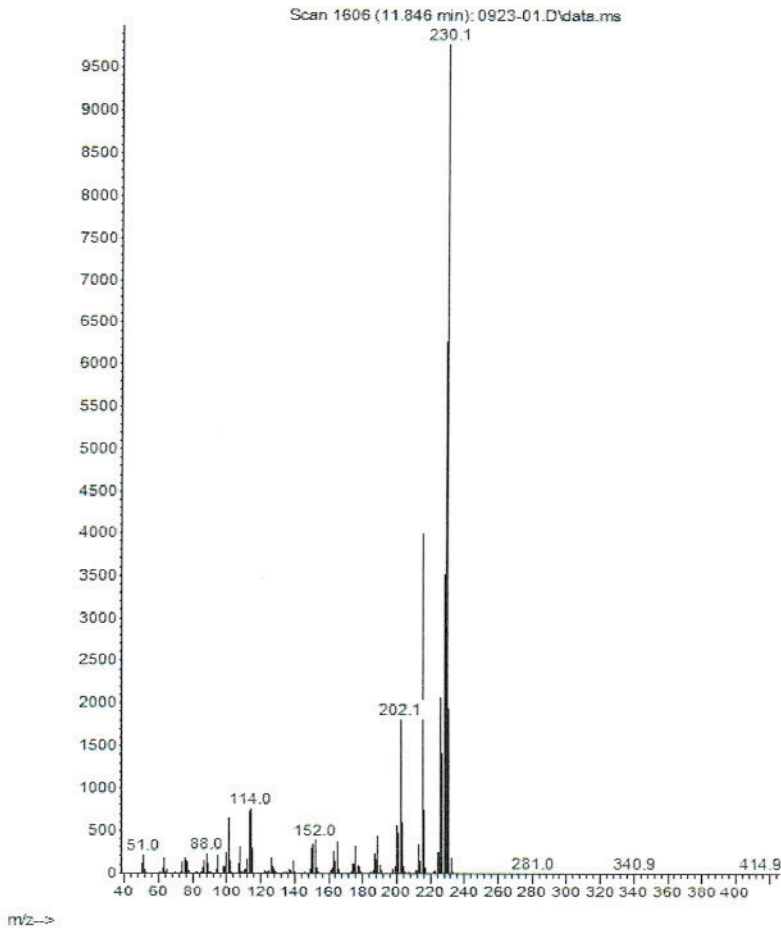


CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



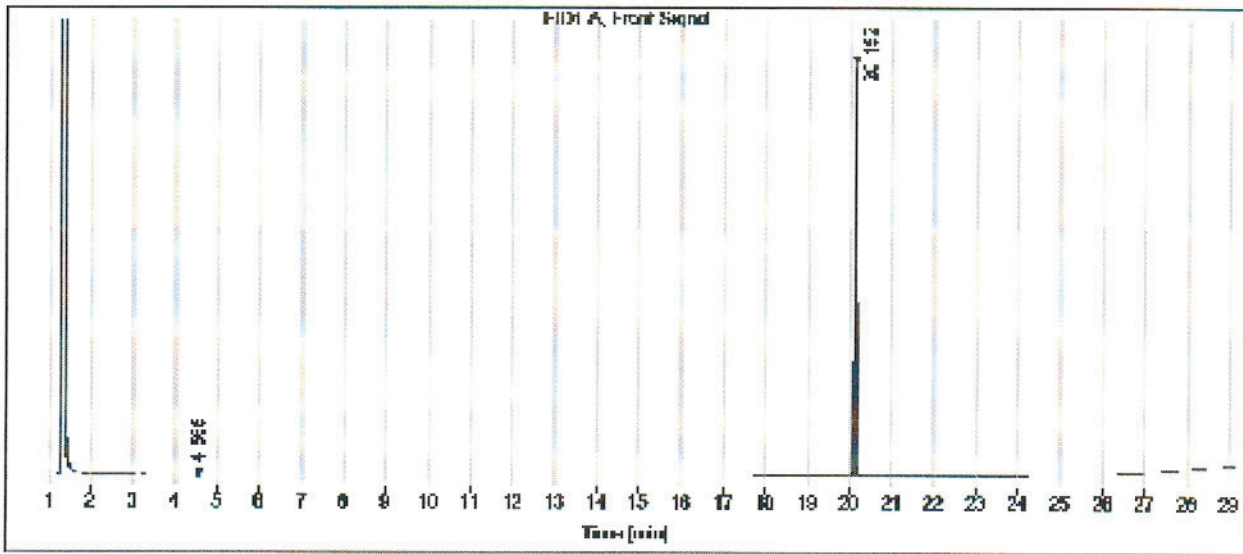
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 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

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

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



Energy Laboratories Inc

Standard LOG

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

Type: Primary
BY: Ann Nebel
Status: New

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

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

Diesel Fuel #2

0

Certificate of Analysis

Certified
Reference
Material

Diesel Fuel No. 2

Description

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

ID #: 14376

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

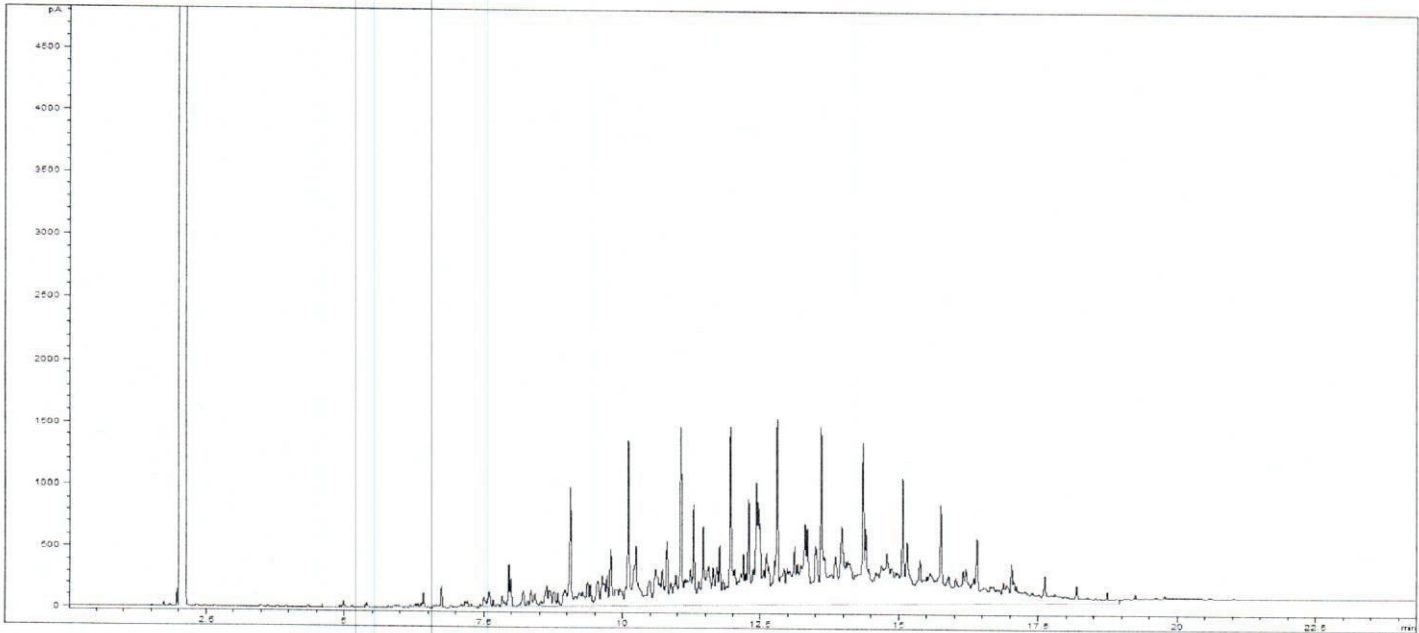
Rec'd: 10/12/2021

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

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:

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

Carrier Gas: H₂, Flow: 4.0 mL/min

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

Injection Mode: Split, Split Ratio: 10:1

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

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA

800-325-5832

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

Description

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

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

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

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

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

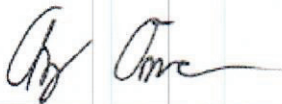
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

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

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

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

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



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020



Energy Laboratories Inc

Standard LOG

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

Type: Primary
BY: Ann Nebel
Status: Open

Comments:

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

Final Volume: 1 mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: **ug/mL**



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 Lot No.: A0140080

Description : Residual Range Calibration Standard (RCS)

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

Container Size : 2 mL Pkg Amt: > 1 mL

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

CERTIFIED VALUES

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

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

ID #: 10787

Opened: _____

Residual Range Calibration Standard

Expires: **8/31/2025**

Rec'd: 9/18/2018

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

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

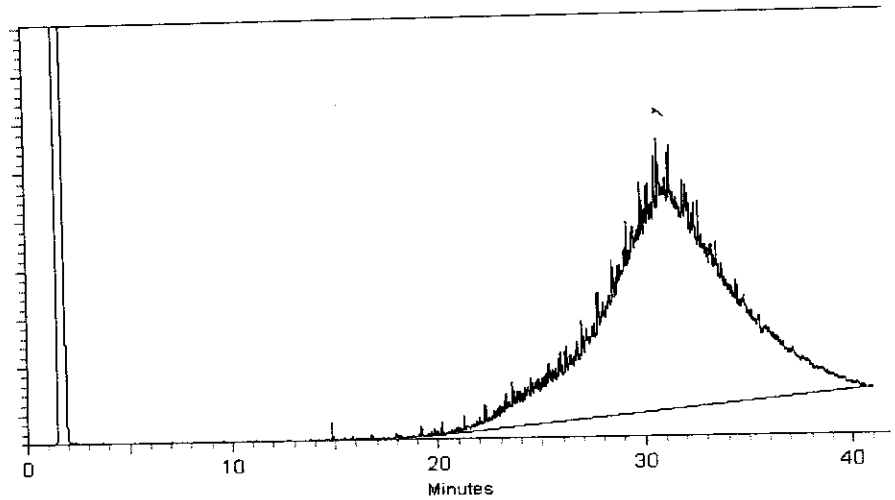
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Brandon Reish
Brandon Reish - Mix Technician

Date Mixed: 28-Jul-2018

Balance: B345965662

Diane Shaffer
Diane Shaffer - Operations Tech-ARM QC

Date Passed: 30-Jul-2018

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

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: **ug/mL**
2000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Date Prepared: 4/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A Triacontane-d62

1

3050 Spruce Street, Saint Louis, MO 63103, USA
 Website: www.sigmaaldrich.com
 Email USA: techserv@sial.com
 Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
 Triacontane-d62 - 98 atom % D

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



ID #: 13736

Opened: _____

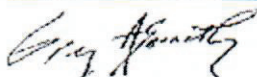
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

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

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



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211012B
Standard Name #2 Diesel in Acetone 150,000 ug/mL Type: Secondary
Date Prepared 10/12/2021 BY: Ann Nebel
Date Expires: 11/5/2023
Department dropr Status: New
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: #2 Diesel in Acetone 150,000 ug/mL.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone EA662	14050	25	mL	1/7/2

Final Volume: 25 mL

Stock Source

DRO181105A #2 Diesel (NEAT)

Base Units

ug/mL

Amount Added

3.7507 g

Analtes

A #2 Diesel

CAS

68476-34-6

Conc:

ug/mL

150000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO181105A
Standard Name #2 Diesel (NEAT) Type: Neat
Date Prepared 11/5/2018 BY: Ann Nebel
Date Expires: 11/5/2023
Department dropr Status: New
Vendor: conoco
Lot Number:
Balance ID:
Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

<u>Stock Source</u>	<u>Base Units</u>	<u>Final Volume:</u>	<u>Amount Added</u>
<u>Analvtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A #2 Diesel	68476-34-6	250 mL	1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210217A
 Standard Name: 20,000 ug/mL Oil Std For AK103 RRO-In DC
 Date Prepared: 2/17/2021
 Date Expires: 8/23/2021
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID: Sartorius 4 place balance
 Type: Secondary
 BY: Ann Nebel
 Status: Expired
 Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EA342	13510	25	mL	11/17

Final Volume: 25 mL

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

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A 30W Motor Oil			10000
A 30W-Motor oil			0
A 40W Motor Oil			10000
A 40W-Motor oil			0

Energy Laboratories Inc

Standard LOG

Standard ID: DRO160823C
Standard Name: 30W Motor Oil-Valvoline
Date Prepared: 8/23/2016
Date Expires: 8/23/2021
Department: dropr
Vendor:
Lot Number:
Balance ID:
Type: Primary
BY: Todd C Cooper
Status: Expired
Comments: Used to make 2nd Source Standard for AK103 method.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 30 Motor Oil	8637		mL	8/23/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 30W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO160823D
Standard Name: 40W Motor Oil-Valvoline
Date Prepared: 8/23/2016
Date Expires: 8/23/2021
Department: dropr
Vendor:
Lot Number:
Balance ID:

Type: Primary
BY: Todd C Cooper
Status: Expired

Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 40 Motor Oil	8638		mL	8/23/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 40W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210902A
 Standard Name: 50,000 ug/mL Oil Std for RRO-In DCM
 Date Prepared: 9/2/2021
 Date Expires: 9/1/2026
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID: BAL-DRO
 Comments: .625 g of 30W and 40 W each LCS for Oil range

Type: Secondary
 BY: Jillian L Bostwick
 Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EB867	14196	25	mL	6/18/

Final Volume: 25 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO210901B 40W Motor Oil-Valvoline	ug/mL	0.6261 g
DRO210901A 30W Motor Oil-Valvoline	ug/mL	0.6254 g

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A 30W Motor Oil			10000
A 30W-Motor oil			0
A 40W Motor Oil			10000
A 40W-Motor oil			0

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210901A
Standard Name: 30W Motor Oil-Valvoline
Date Prepared: 9/1/2021
Date Expires: 9/1/2026
Department: dropr
Vendor:
Lot Number: F1620C1
Balance ID:
Comments: Used to make 2nd Source Standard for AK103 method.

Type: Primary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 30W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210901B
Standard Name: 40W Motor Oil-Valvoline
Date Prepared: 9/1/2021
Date Expires: 9/1/2026
Department: dropr
Vendor:
Lot Number: L0717H2
Balance ID:
Type: Primary
BY: Jillian L Bostwick
Status: New
Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 40 Motor Oil	14231		mL	9/1/26

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 40W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211229A
 Standard Name: 8015 CCV-15,000ug/mL + 200 OTP/COD
 Date Prepared: 12/29/2021
 Date Expires: 4/30/2023
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID:
 Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP/COD #2 Diesel

Type: Secondary
 BY: Ann Nebel
 Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	2.4	mL	10/28

Final Volume: 4 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO211112C OTP/COD SURR 2000 ug/mL	ug/mL	0.4 mL
DRO211102B Diesel Fuel #2 50,000 ug/mL in DCM	ug/mL	1.2 mL

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A #2 Diesel			15000
A 1-Chlorooctadecane	3386-33-2		200
Diesel Fuel #2			0
A O-Terphenyl	84-15-1		200

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211102B
Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM
Date Prepared: 11/2/2021
Date Expires: 4/30/2023
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: LRAC6316
Balance ID:
Comments: Diesel Fuel #2 For CCVs.

Type: Primary
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Diesel Fuel No. 2	14478	1	mL	4/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

Diesel Fuel #2

0

Certificate of Analysis

Diesel Fuel No. 2

Certified
Reference
Material

Description

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

ID #: 14478

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

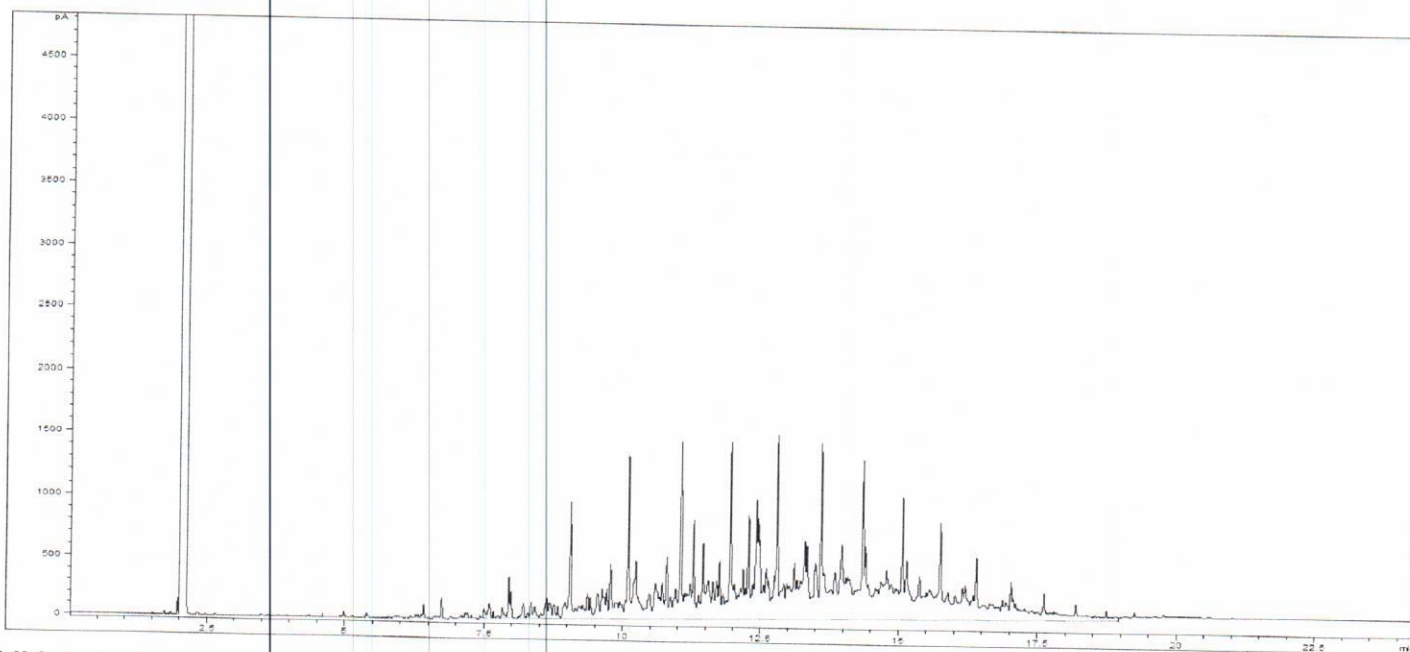
Rec'd: 11/2/2021

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

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:

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

Carrier Gas: H₂, Flow: 4.0 mL/min

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

Injection Mode: Split, Split Ratio: 10: 1

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

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

1 Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

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

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

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

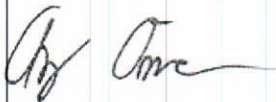
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

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

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

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

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



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020



Energy Laboratories Inc

Standard LOG

Standard ID: DRO211112C
Standard Name: OTP/COD SURR 2000 ug/mL
Date Prepared: 11/12/2021
Date Expires: 9/30/2024
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: OTP/COD SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	100	mL	7/22/

Final Volume: 100 mL

<u>Stock Source</u>		Base Units	Amount Added
DRO201014C	1-Chlorooctadecane	ug/mL	0.2 g
DRO201014B	O-Terphenyl	ug/mL	0.061 g
DRO200430B	O-Terphenyl	ug/mL	0.1392 g

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

Energy Laboratories Inc

Standard LOG

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

Type: Neat
BY: Ann Nebel
Status: New

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

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

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

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

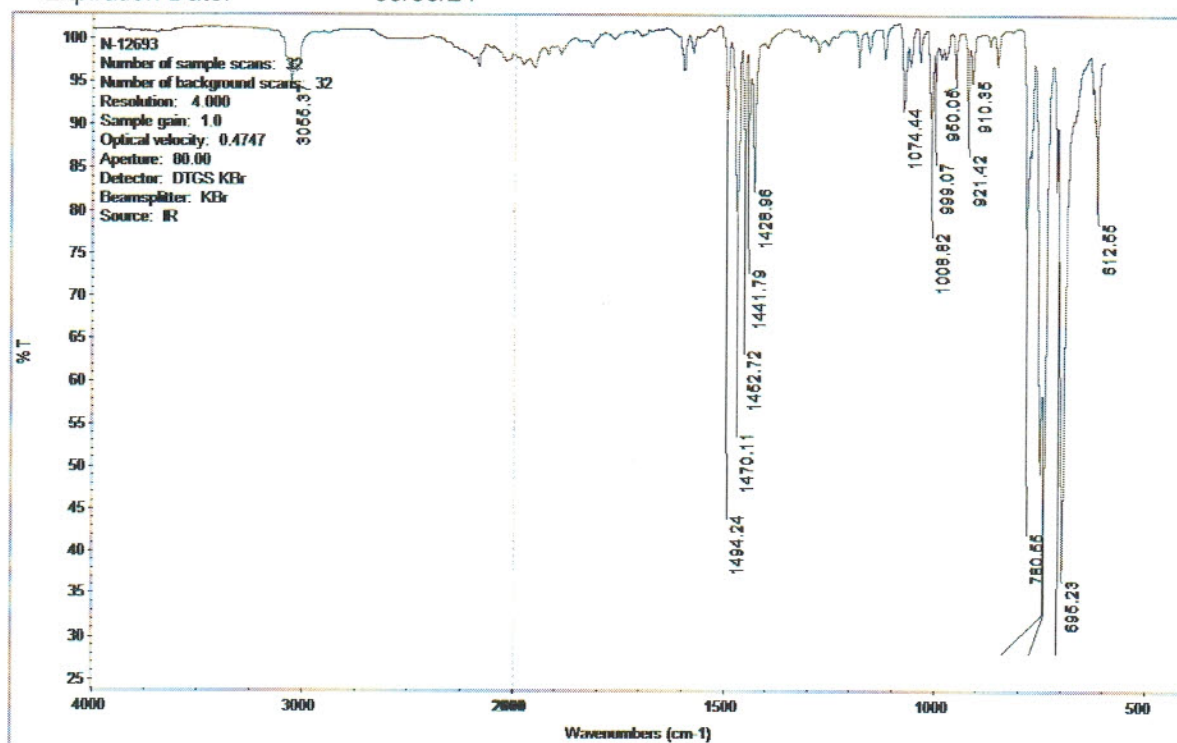
Rec'd: 4/30/2020

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



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

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24
Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

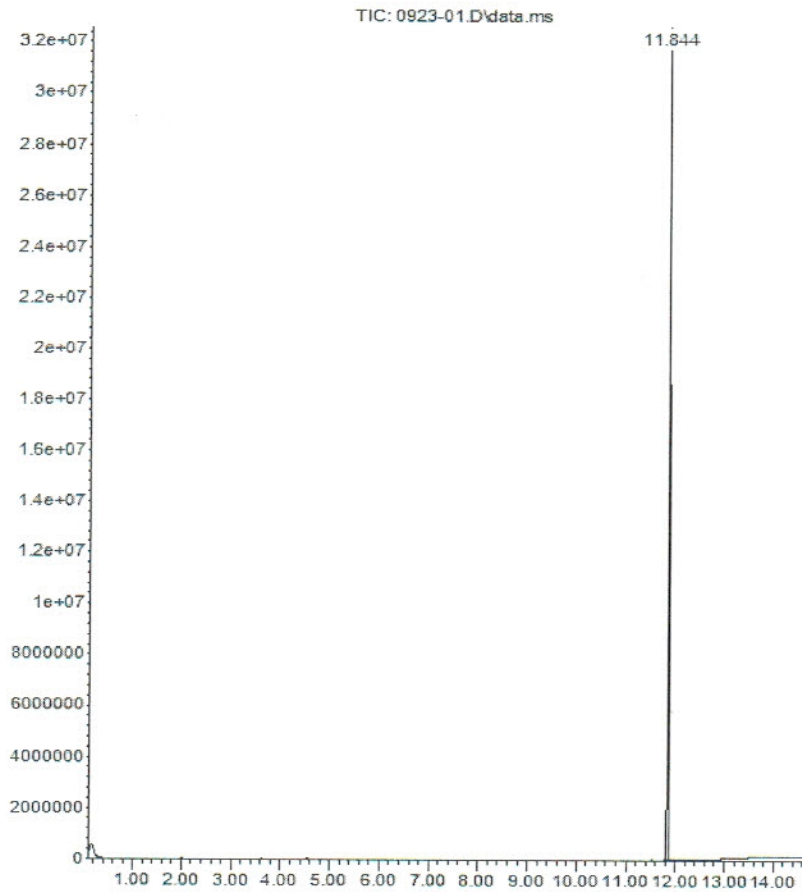
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



Time-->

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



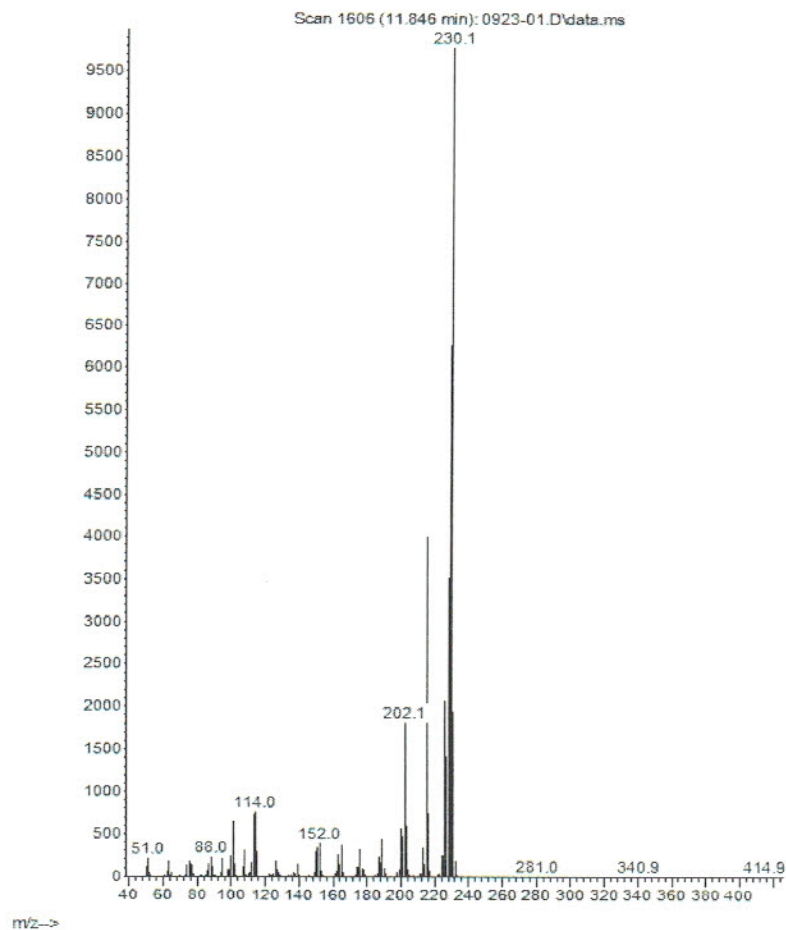
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



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

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



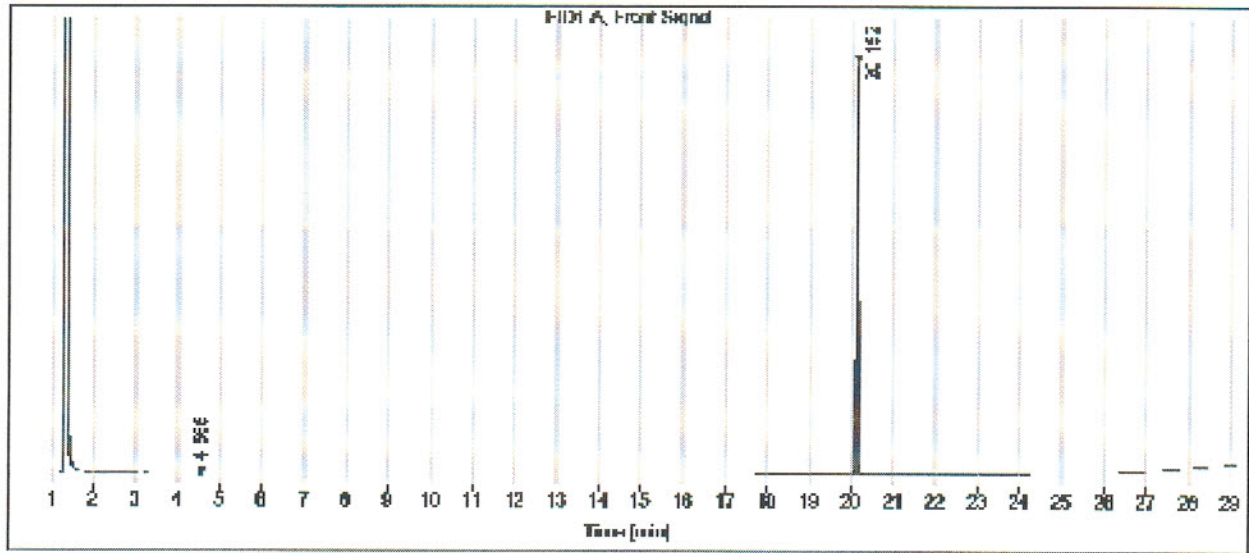
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\
 Sample name: N-12683
 Instrument: GC 2
 Injection date: 9/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Sample type:
 Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



Energy Laboratories Inc

Standard LOG

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

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	13191	500	mg	9/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

Am

CHEM SERVICE INC.

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 13191
 Opened: _____
 o-Terphenyl
Expires: 9/30/2024
 Rec'd: 10/14/2020
 Energv Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

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

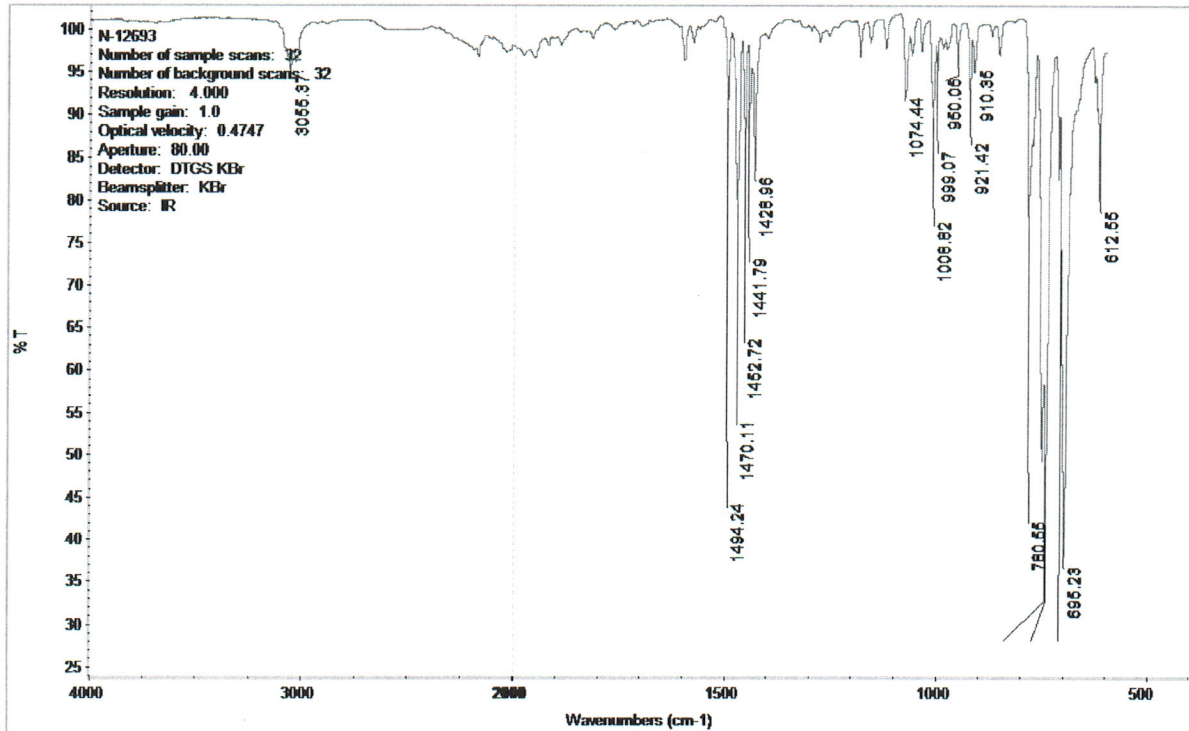
COA Form
Revision 3 (3/2015)



CERTIFICATE OF ANALYSIS

Analysis Method:

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



CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 10029300
Expiration Date: 09/30/24
Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

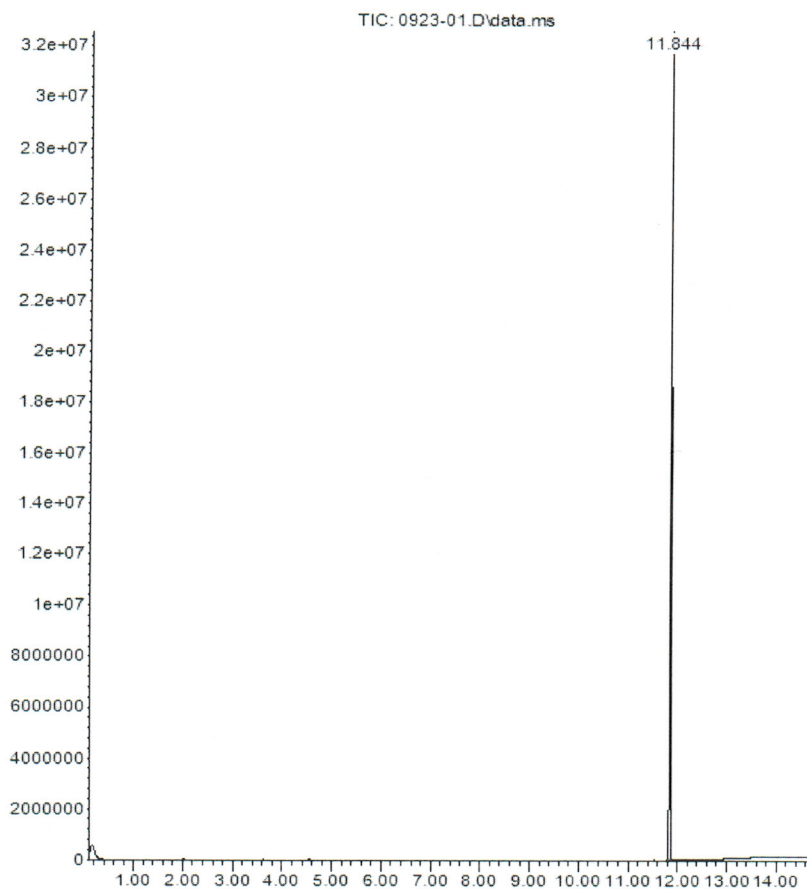
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



Time-->

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

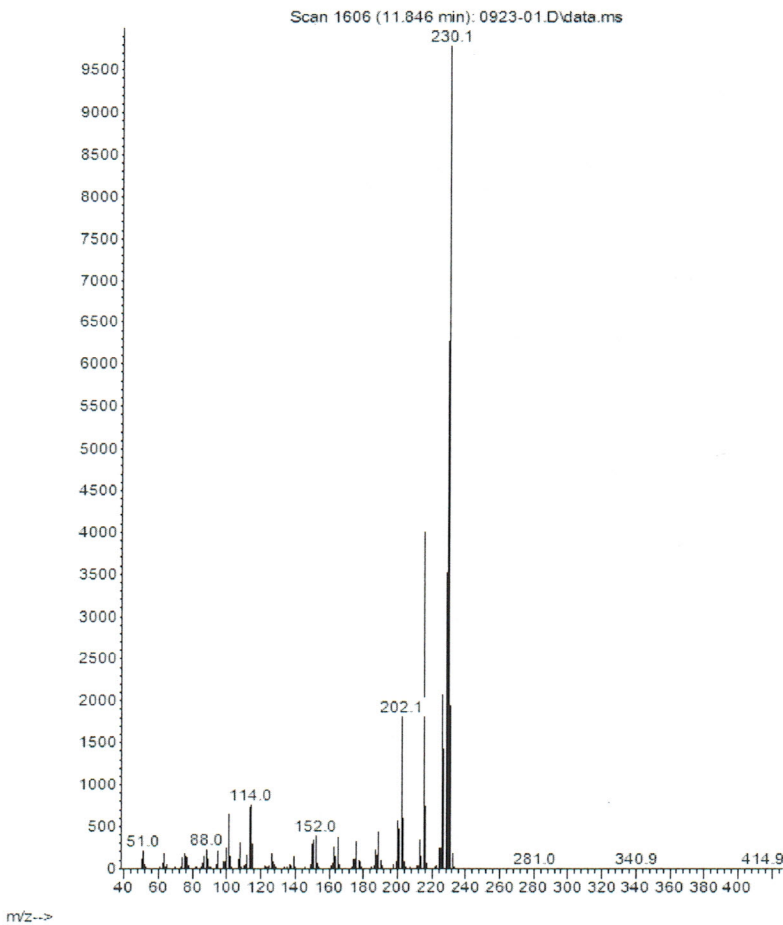


CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



CERTIFICATE OF ANALYSIS

Analysis Method:

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

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info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\

Sample name: N-12893

Instrument: GC 2

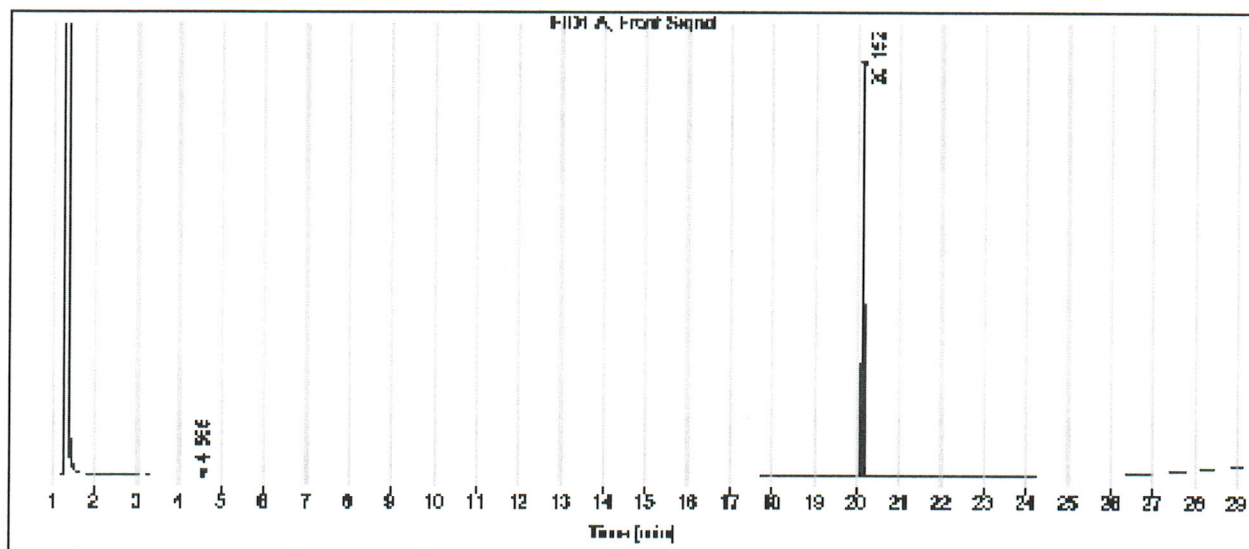
Injection date: 9/23/2019 9:58:34 AM

Acq. method: SCREEN.M

Column name: HP-5

CERTIFICATE OF ANALYSIS

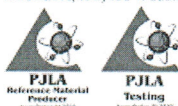
Sample type: Sample
 Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



Energy Laboratories Inc

Standard LOG

Standard ID: DRO211220A
 Standard Name: 8015 CCV-15,000ug/mL + 200 OTP
 Date Prepared: 12/20/2021
 Date Expires: 4/30/2023
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID:
 Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel

Type: Secondary
 BY: Ann Nebel
 Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC757	14596	2.6	mL	10/20

Final Volume: 4 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO211101A OTP-4000 ug/mL DCM	ug/mL	0.2 mL
DRO211102B Diesel Fuel #2 50,000 ug/mL in DCM	ug/mL	1.2 mL

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A #2 Diesel			15000
Diesel Fuel #2			0
A O-Terphenyl	84-15-1		200

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211102B
Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM
Date Prepared: 11/2/2021
Date Expires: 4/30/2023
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: LRAC6316
Balance ID:
Comments: Diesel Fuel #2 For CCVs.

Type: Primary
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Diesel Fuel No. 2	14478	1	mL	4/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

Diesel Fuel #2

0

Certificate of Analysis

Diesel Fuel No. 2

Certified
Reference
Material

Description

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

ID #: 14478

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

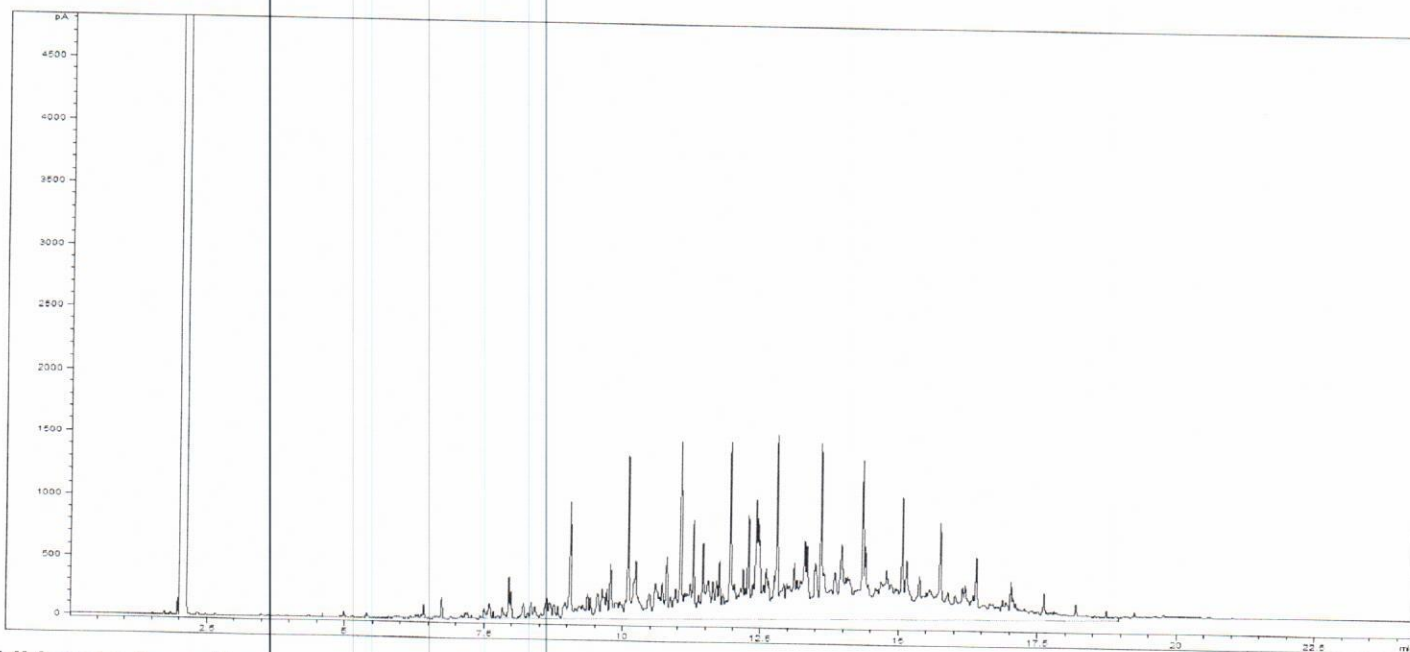
Rec'd: 11/2/2021

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

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:

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

Carrier Gas: H₂, Flow: 4.0 mL/min

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

Injection Mode: Split, Split Ratio: 10: 1

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

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

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

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

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

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

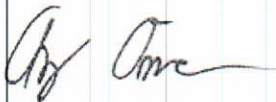
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

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

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

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

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



Andy Ommen - QC Manager



Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020



Energy Laboratories Inc

Spike LOG

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

Type: Secondary
BY: Ann Nebel
Status: Open

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

Final Volume: 25 mL

Stock Source

DRO200430B O-Terphenyl

Base Units

ug/mL

Amount Added

0.1012 g

Analtes

A O-Terphenyl

CAS

84-15-1

Conc:

ug/mL

4000

Energy Laboratories Inc

Standard LOG

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

Type: Neat
BY: Ann Nebel
Status: New

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

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

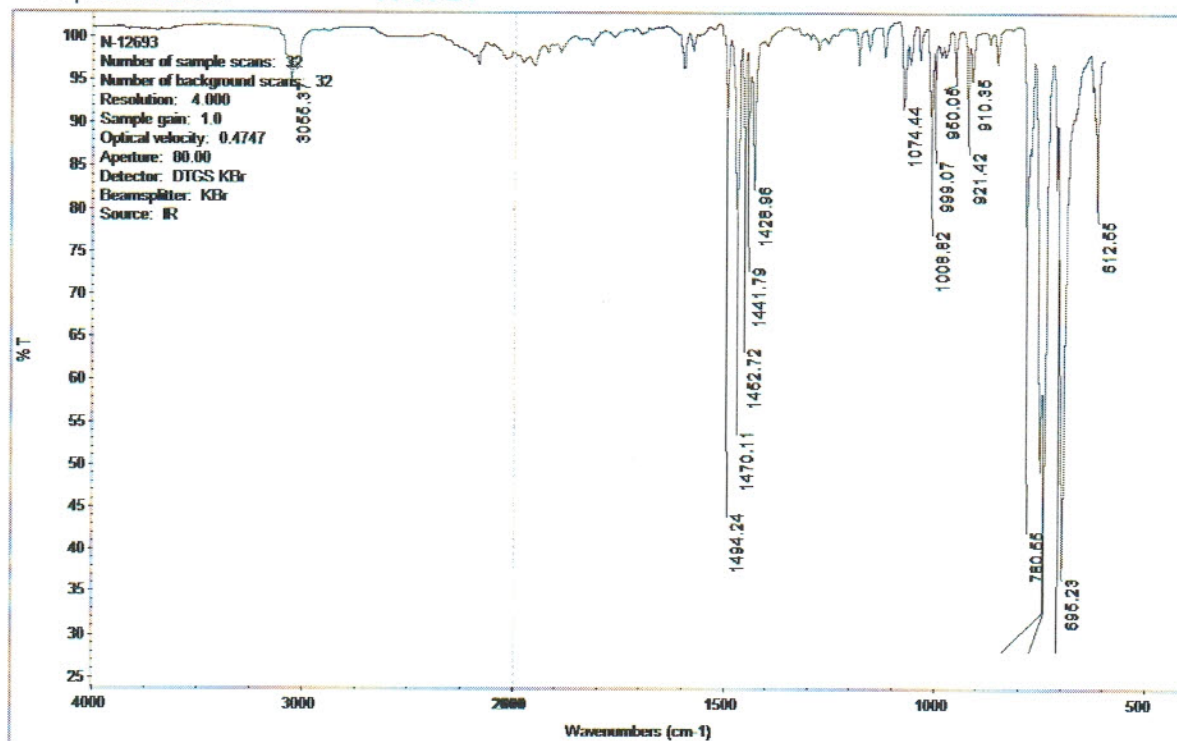
Rec'd: 4/30/2020

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



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

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24
Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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



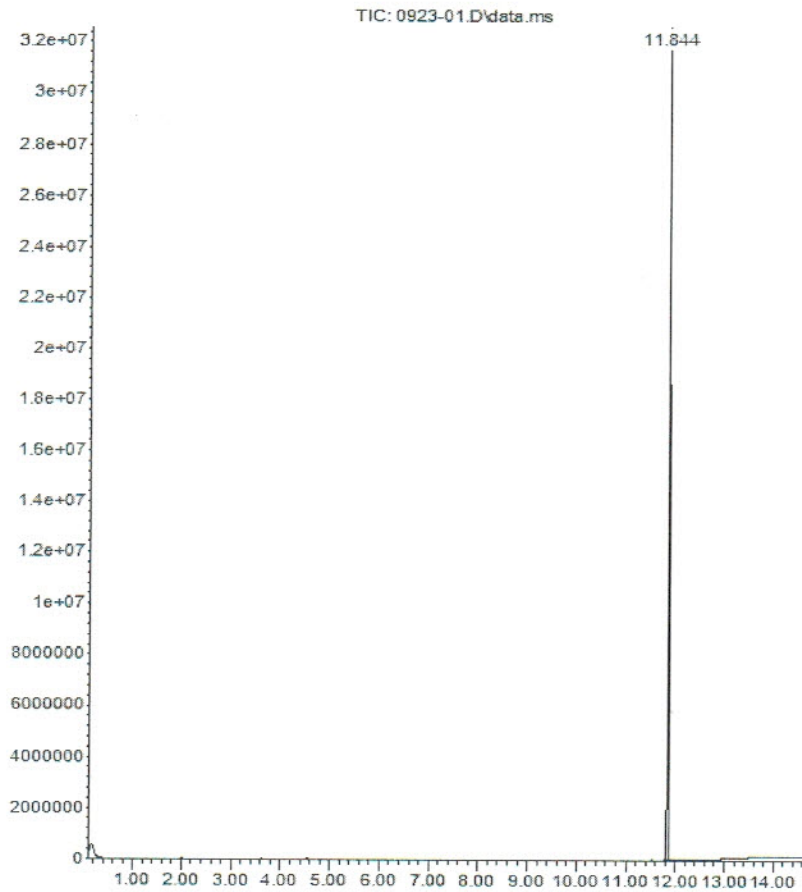
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



Time-->

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



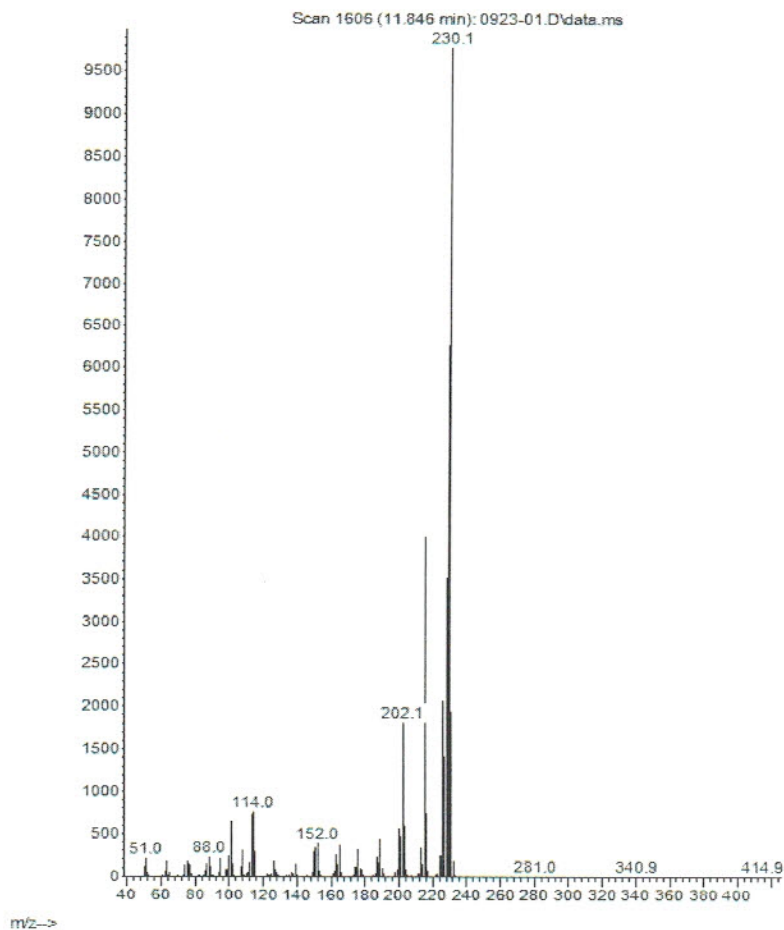
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



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

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



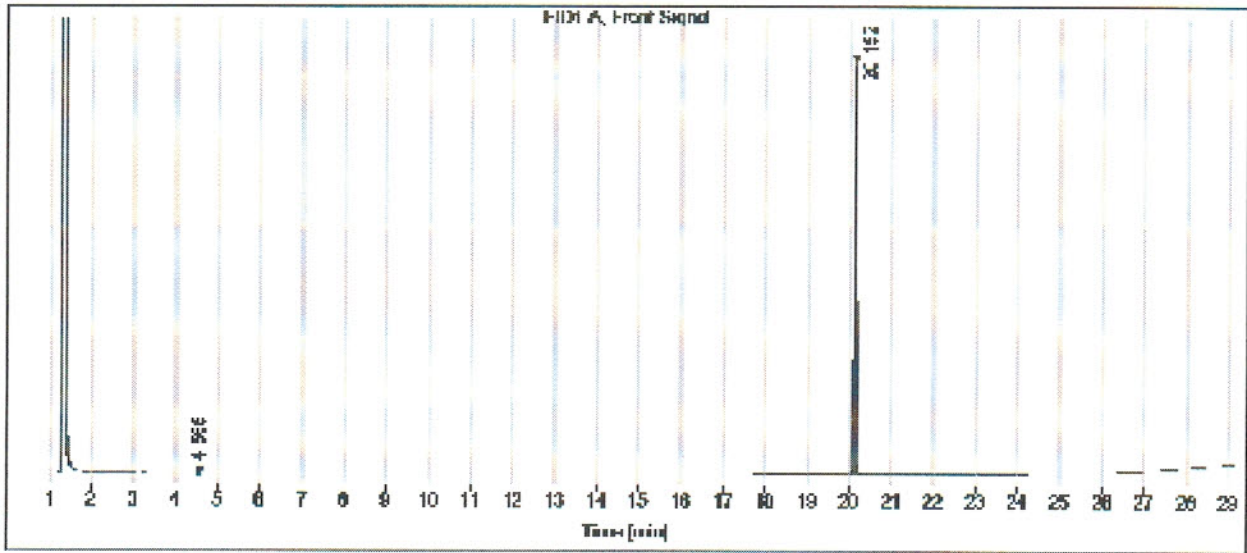
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 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\
 Sample name: N-12683
 Instrument: GC 2
 Injection date: 9/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Sample type:
 Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



Energy Laboratories Inc

Standard LOG

Standard ID: DRO220102A
Standard Name 5,000 ug/mL RRO CCV 200 ug/mL Triaconta Type: Secondary
Date Prepared 1/2/2022 BY: Ann Nebel
Date Expires: 4/6/2026
Department dropr Status: New
Vendor:
Lot Number:
Balance ID: Sartorius 4 place balance
Comments: CCV for AK102 and 8015C RRO.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC757	14596	2.8	mL	10/20

Final Volume: 4 mL

Stock Source

DRO210401B 50,000 ug/mL Oil Std For AK103 RRO-I
DRO211129A Triacontane SURR 1000 ug/mL

Base Units

ug/mL
ug/mL

Amount Added

400 µL
800 µL

Analtes

A 30/40W Motor Oil
A Triacontane-d62

CAS

Conc: **ug/mL**
5000
200

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210401B
Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DC
Date Prepared: 4/1/2021
Date Expires: 1/31/2028
Department: dropr
Vendor: Restek
Lot Number: A0166827
Balance ID: Sartorius 4 place balance

Type: Primary
BY: Ann Nebel
Status: Open

Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Residual Range Calibration Standard (	13714	1	mL	1/31/

Final Volume: 1 mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: **ug/mL**



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0166827

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

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

Expiration Date : January 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil) CAS # 64742-65-0.F (Lot A0126386) Purity ----%	50,056.0 µg/mL	+/- 293.0889 µg/mL	+/- 1,490.7309 µg/mL	+/- 1,589.8634 µg/mL
			Gravimetric	Unstressed	Stressed

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

ID #: 13714
Opened: _____
Residual Range Calibration Standard (RCS)
Expires: 1/31/2028
Rec'd: 4/1/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

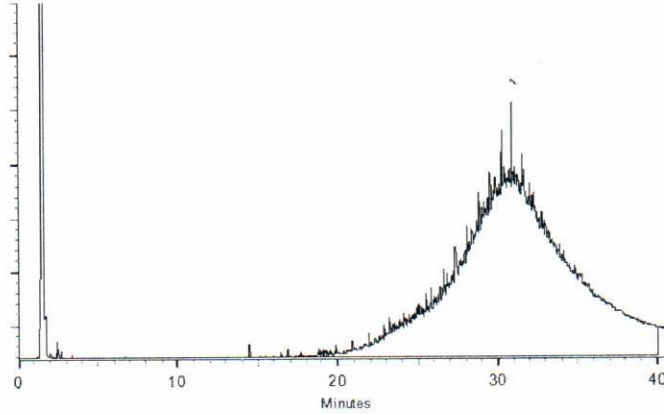
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Kylie Struble
Kylie Struble - Operations Technician I

Date Mixed: 02-Dec-2020

Balance: 1128353505

Justin Albertson
Justin Albertson - Operations Tech-ARM QC

Date Passed: 07-Dec-2020

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211129A
Standard Name: Triacotane SURR 1000 ug/mL
Date Prepared: 11/29/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacotane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC735	14518	5	mL	10/14

Final Volume: 10 mL

Stock Source
DRO211006A Triacotane SURR 2000 ug/mL

Base Units
ug/mL

Amount Added
5 mL

Analtes
A Triacotane-d62

CAS

Conc: ug/mL
1000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: ug/mL
2000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Date Prepared: 4/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A Triacontane-d62

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

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



ID #: 13736

Opened: _____

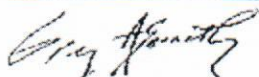
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

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

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



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211201A
Standard Name 5,000 ug/mL RRO CCV 200 ug/mL Triaconta Type: Secondary
Date Prepared 12/1/2021 BY: Ann Nebel
Date Expires: 4/6/2026
Department dropr Status: New
Vendor:
Lot Number:
Balance ID: Sartorius 4 place balance
Comments: CCV for AK102 and 8015C RRO.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC735	14518	2.8	mL	10/14

Final Volume: 4 mL

Stock Source

DRO210401B 50,000 ug/mL Oil Std For AK103 RRO-I
DRO211129A Triacontane SURR 1000 ug/mL

Base Units

ug/mL
ug/mL

Amount Added

400 µL
800 µL

Analtes

A 30/40W Motor Oil
A Triacontane-d62

CAS

Conc: **ug/mL**
5000
200

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210401B
Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DC
Date Prepared: 4/1/2021
Date Expires: 1/31/2028
Department: dropr
Vendor: Restek
Lot Number: A0166827
Balance ID: Sartorius 4 place balance

Type: Primary
BY: Ann Nebel
Status: Open

Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Residual Range Calibration Standard (	13714	1	mL	1/31/

Final Volume: 1 mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0166827

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

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

Expiration Date : January 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil) CAS # 64742-65-0.F (Lot A0126386) Purity ----%	50,056.0 µg/mL	+/- 293.0889 µg/mL	Gravimetric	
			+/- 1,490.7309 µg/mL	Unstressed	
			+/- 1,589.8634 µg/mL	Stressed	

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

ID #: 13714
Opened: _____
Residual Range Calibration Standard (RCS)
Expires: 1/31/2028
Rec'd: 4/1/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

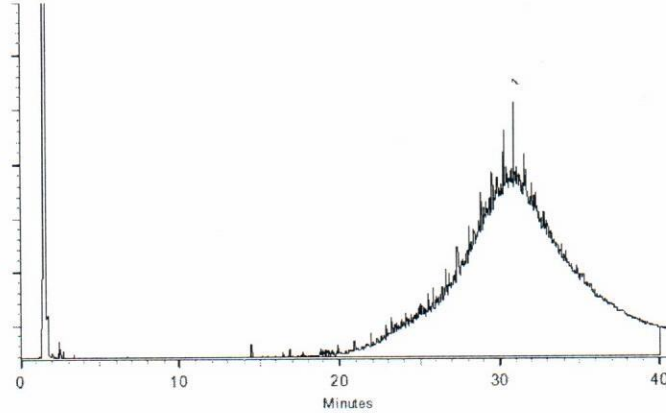
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Kylie Struble
Kylie Struble - Operations Technician I

Date Mixed: 02-Dec-2020

Balance: 1128353505

Justin Albertson
Justin Albertson - Operations Tech-ARM QC

Date Passed: 07-Dec-2020

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211129A
Standard Name: Triacotane SURR 1000 ug/mL
Date Prepared: 11/29/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacotane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC735	14518	5	mL	10/14

Final Volume: 10 mL

Stock Source
DRO211006A Triacotane SURR 2000 ug/mL

Base Units
ug/mL

Amount Added
5 mL

Analtes
A Triacotane-d62

CAS

Conc: ug/mL
1000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: **ug/mL**
2000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Date Prepared: 4/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A Triacontane-d62

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

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



ID #: 13736

Opened: _____

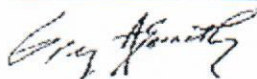
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

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

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



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210902A
 Standard Name: 50,000 ug/mL Oil Std for RRO-In DCM
 Date Prepared: 9/2/2021
 Date Expires: 9/1/2026
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID: BAL-DRO
 Comments: .625 g of 30W and 40 W each LCS for Oil range

Type: Secondary
 BY: Jillian L Bostwick
 Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EB867	14196	25	mL	6/18/

Final Volume: 25 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO210901B 40W Motor Oil-Valvoline	ug/mL	0.6261 g
DRO210901A 30W Motor Oil-Valvoline	ug/mL	0.6254 g

<u>Analtes</u>	<u>CAS</u>	<u>Conc:</u>	<u>ug/mL</u>
A 30W Motor Oil			10000
A 30W-Motor oil			0
A 40W Motor Oil			10000
A 40W-Motor oil			0

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210901B
Standard Name: 40W Motor Oil-Valvoline
Date Prepared: 9/1/2021
Date Expires: 9/1/2026
Department: dropr
Vendor:
Lot Number:
Balance ID:
Type: Primary
BY: Jillian L Bostwick
Status: New
Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 40 Motor Oil	14231		mL	9/1/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 40W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210901A
Standard Name: 30W Motor Oil-Valvoline
Date Prepared: 9/1/2021
Date Expires: 9/1/2026
Department: dropr
Vendor:
Lot Number:
Balance ID:

Type: Primary
BY: Jillian L Bostwick
Status: New

Comments: Used to make 2nd Source Standard for AK103 method.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A 30W-Motor oil

1

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211112C
 Standard Name: OTP/COD SURR 2000 ug/mL
 Date Prepared: 11/12/2021
 Date Expires: 9/30/2024
 Department: dropr
 Vendor:
 Lot Number:
 Balance ID: BAL-DRO
 Comments: OTP/COD SURR 2000 ug/mL

Type: Secondary
 BY: Jillian L Bostwick
 Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	100	mL	7/22/

Final Volume: 100 mL

<u>Stock Source</u>	<u>Base Units</u>	<u>Amount Added</u>
DRO201014C 1-Chlorooctadecane	ug/mL	0.2 g
DRO201014B O-Terphenyl	ug/mL	0.061 g
DRO200430B O-Terphenyl	ug/mL	0.1392 g

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

Energy Laboratories Inc

Standard LOG

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

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	13191	500	mg	9/30/

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

Am

CHEM SERVICE INC.

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

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 13191
 Opened: _____
 o-Terphenyl
Expires: 9/30/2024
 Rec'd: 10/14/2020
 Enerav Laboratories Inc 1120 So. 27th Street
 Billings MT 59107

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

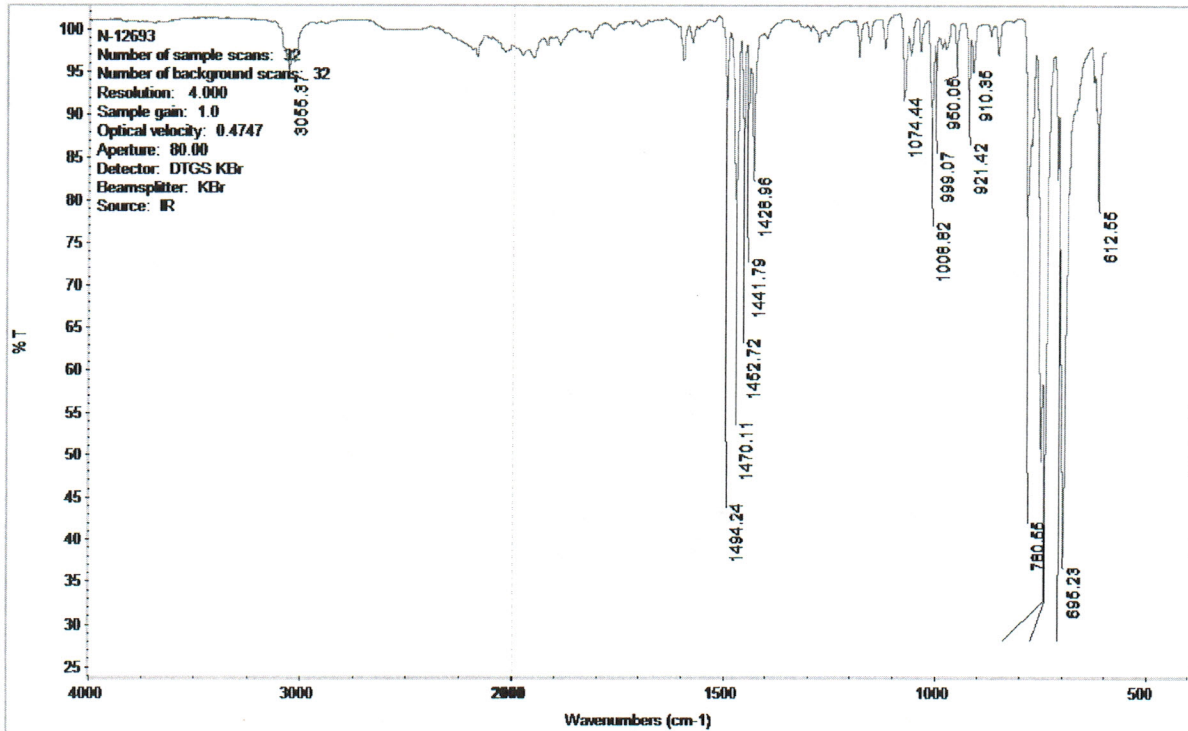
COA Form
Revision 3 (3/2015)



CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 10029300
Expiration Date: 09/30/24
Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

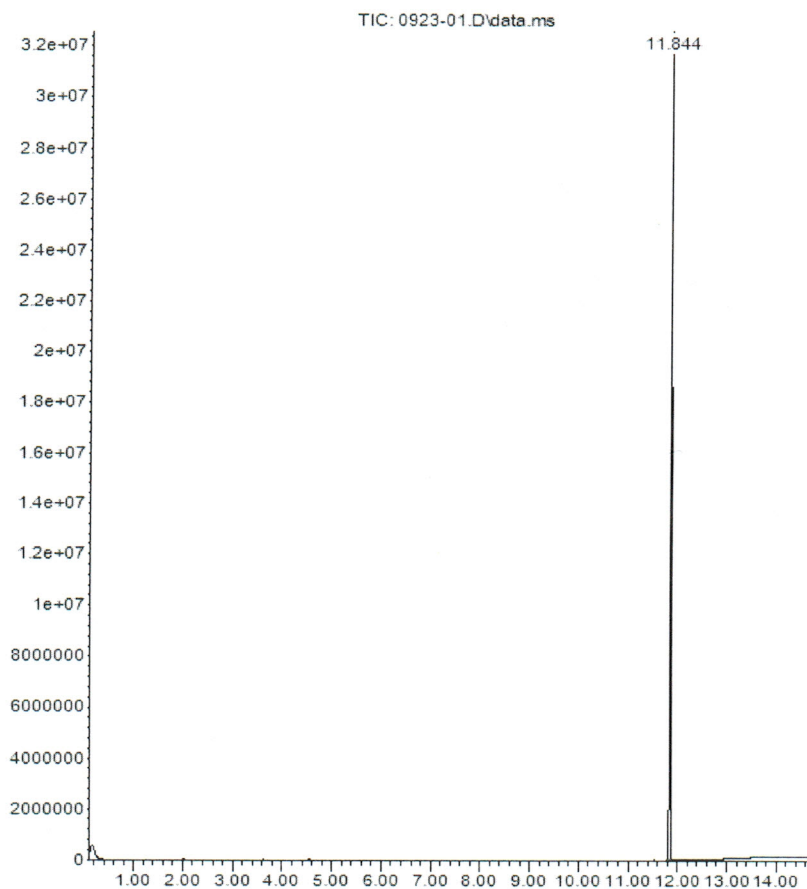
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



Time-->

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

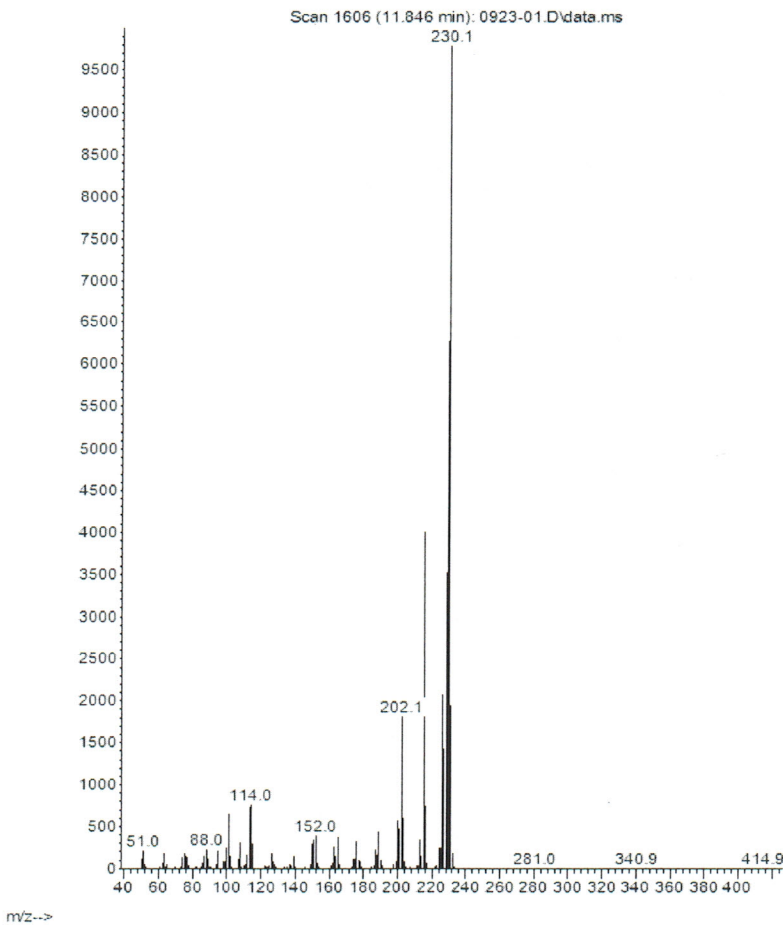


CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



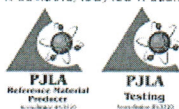
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



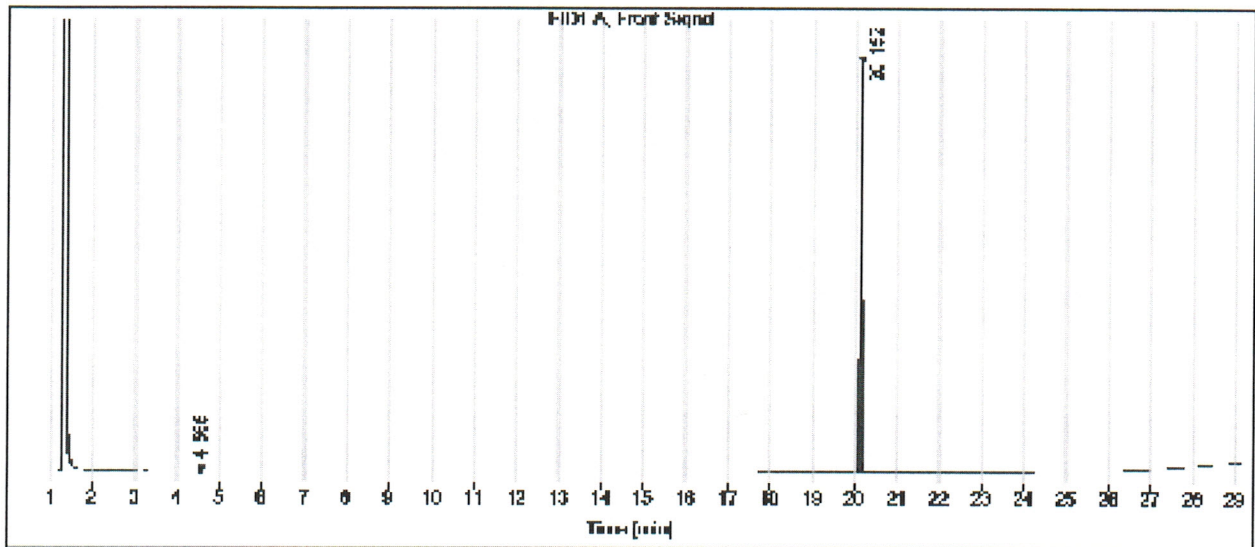
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 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

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

CERTIFICATE OF ANALYSIS

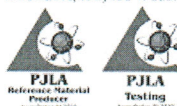
Sample type: Sample
 Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



Energy Laboratories Inc

Standard LOG

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

Type: Neat
BY: Ann Nebel
Status: New

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

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

A O-Terphenyl

84-15-1

1

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

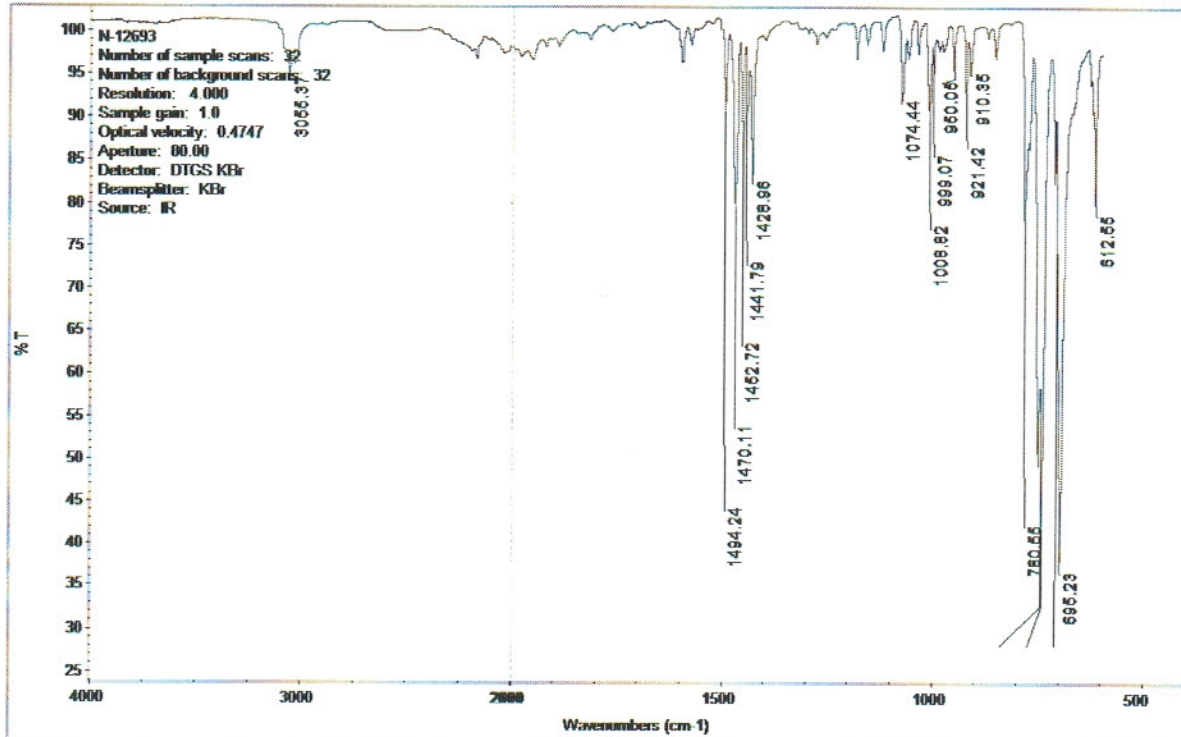
Rec'd: 4/30/2020

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number: N-12693-500MG
Description: o-Terphenyl
Lot Number: 9972100
Expiration Date: 09/30/24
Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

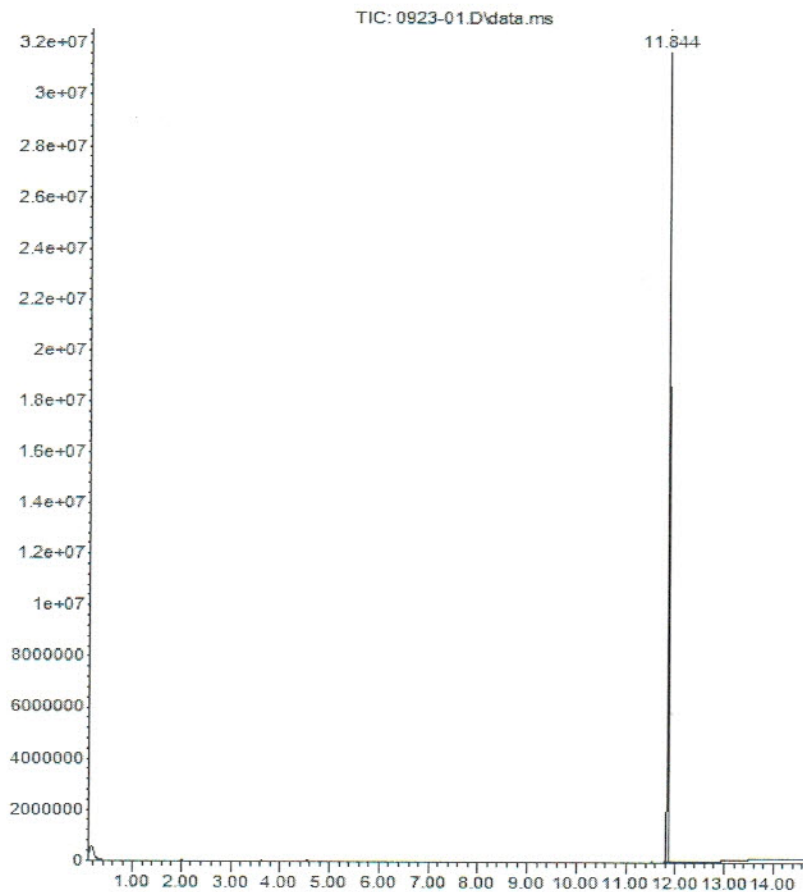
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



Time-->

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



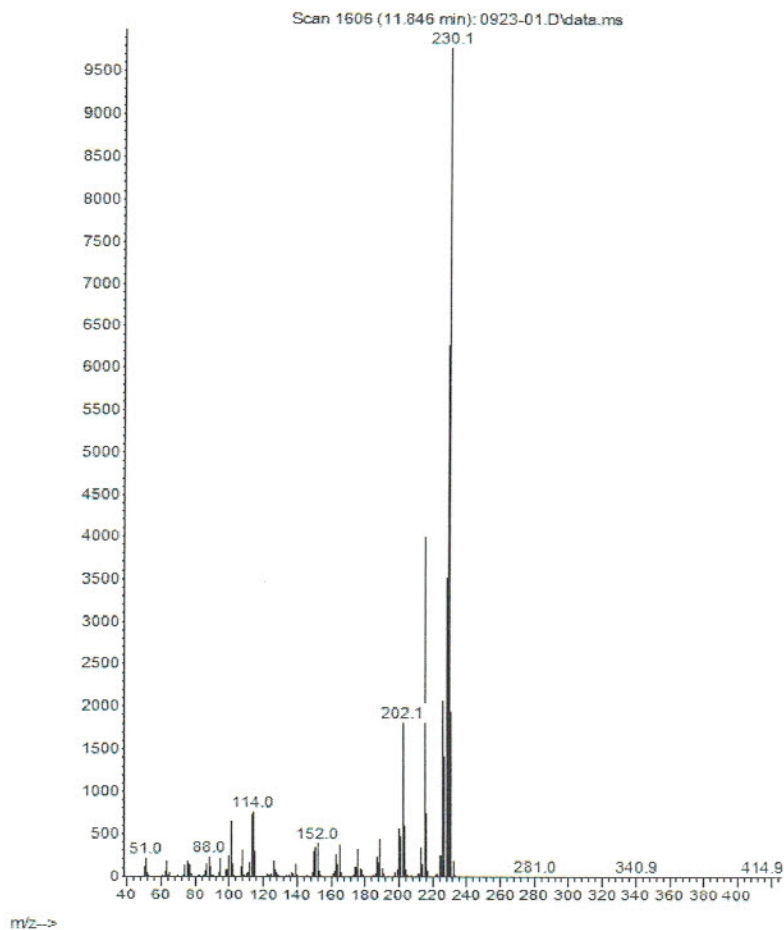
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



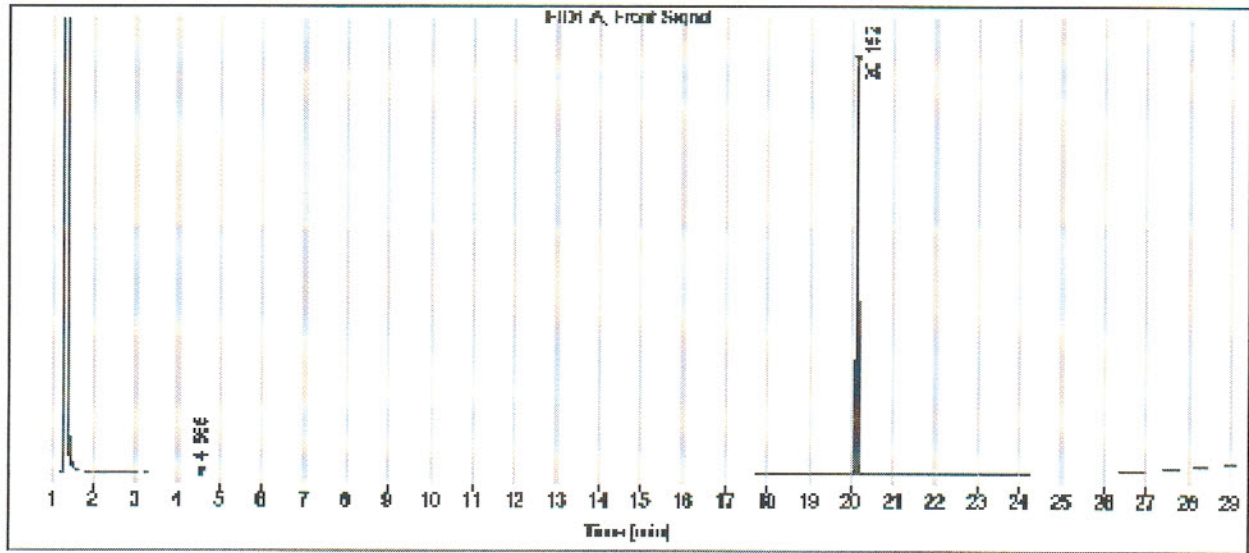
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\
 Sample name: N-12683
 Instrument: GC 2
 Injection date: 9/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Sample type:
 Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



Energy Laboratories Inc

Standard LOG

Standard ID: DRO211220D
Standard Name: Triacotane SURR 1000 ug/mL
Date Prepared: 12/20/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacotane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC757	14596	5	mL	10/20

Final Volume: 10 mL

Stock Source
DRO211006A Triacotane SURR 2000 ug/mL

Base Units
ug/mL

Amount Added
5 mL

Analtes
A Triacotane-d62

CAS

Conc: **ug/mL**
1000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO211006A
Standard Name: Triacontane SURR 2000 ug/mL
Date Prepared: 10/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Triacontane SURR 2000 ug/mL

Type: Secondary
BY: Jillian L Bostwick
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source
DRO210406A Triacontane-d62 Surr For AK103 RRO

Base Units
ug/mL

Amount Added
0.1001 g

Analtes
A Triacontane-d62

CAS

Conc: **ug/mL**
2000

Energy Laboratories Inc

Standard LOG

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Date Prepared: 4/6/2021
Date Expires: 4/6/2026
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

Type: Neat
BY: Ann Nebel
Status: New

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2026

Final Volume: mL

Stock Source

Base Units

Amount Added

Analtes

CAS

Conc: ug/mL

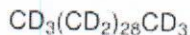
A Triacontane-d62

3050 Spruce Street, Saint Louis, MO 63103, USA
 Website: www.sigmaaldrich.com
 Email USA: techserv@sial.com
 Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
 Triacontane-d62 - 98 atom % D

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



ID #: 13736

Opened: _____

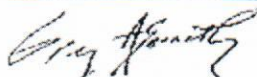
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

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

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



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.