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

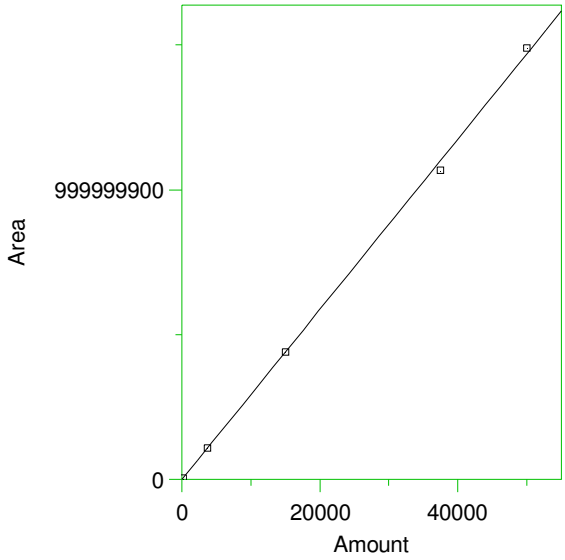
Creator: AMN
Description: 8015C-DRO. New ICal Per 1102HP4 (2021)-2 uL Inj.; COD added using OTP RFs
Reason for change:

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

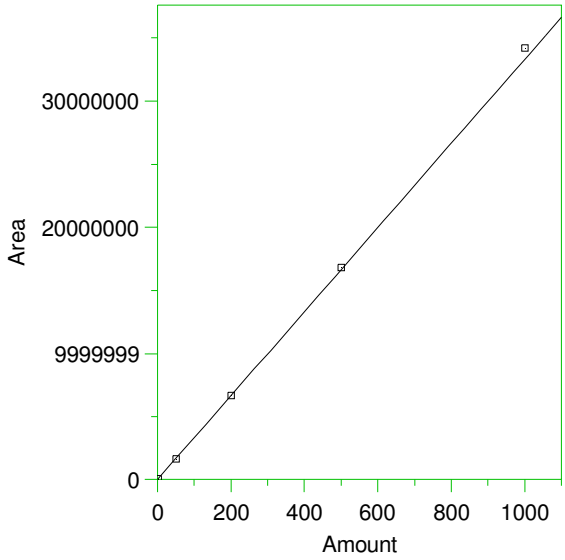
Y = 29373.28 X + 0

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

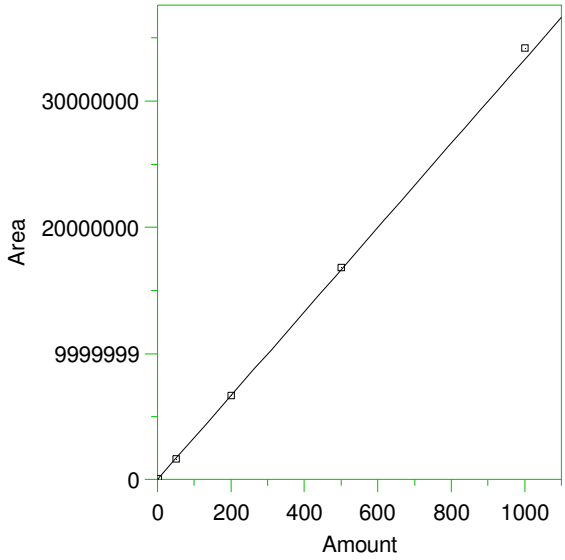
Single peak quantification by area

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

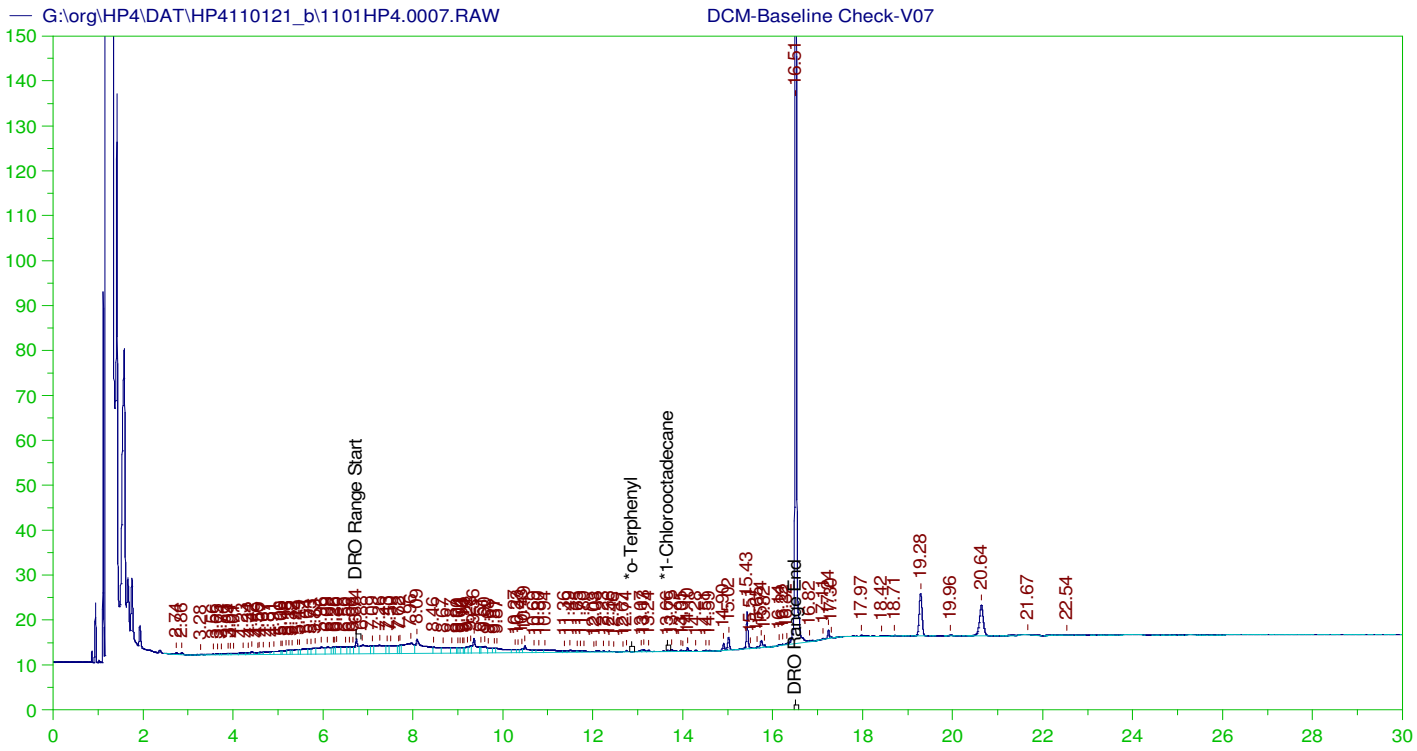
Y = 33319.7 X + 0

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



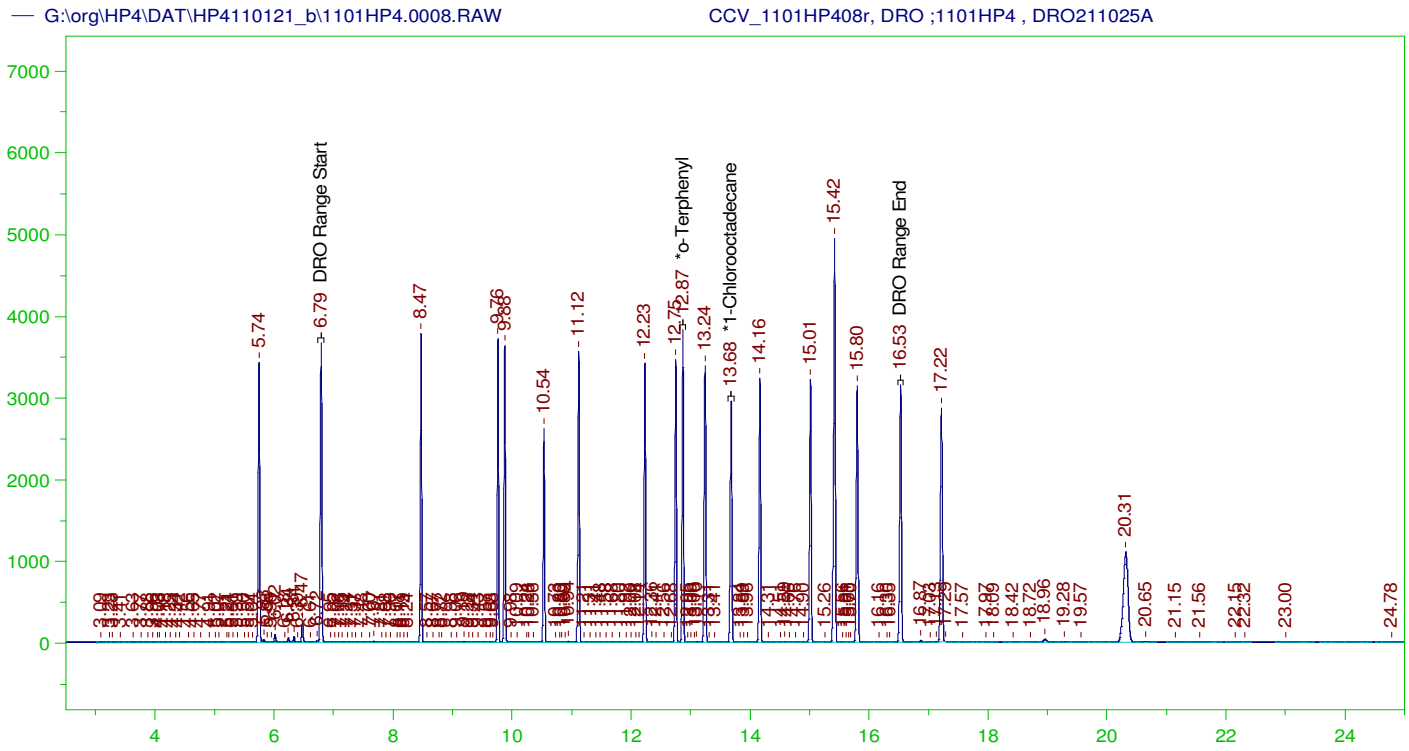
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V07
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0007.RAW
Date & Time Acquired: 11/1/2021 5:37:56 PM
Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP408r, DRO ;1101HP4 , DRO211025A
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0008.RAW
Date & Time Acquired: 11/1/2021 6:29:58 PM
Method File: G:\Org\HP4\methods\DC_8015-OA-L0.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

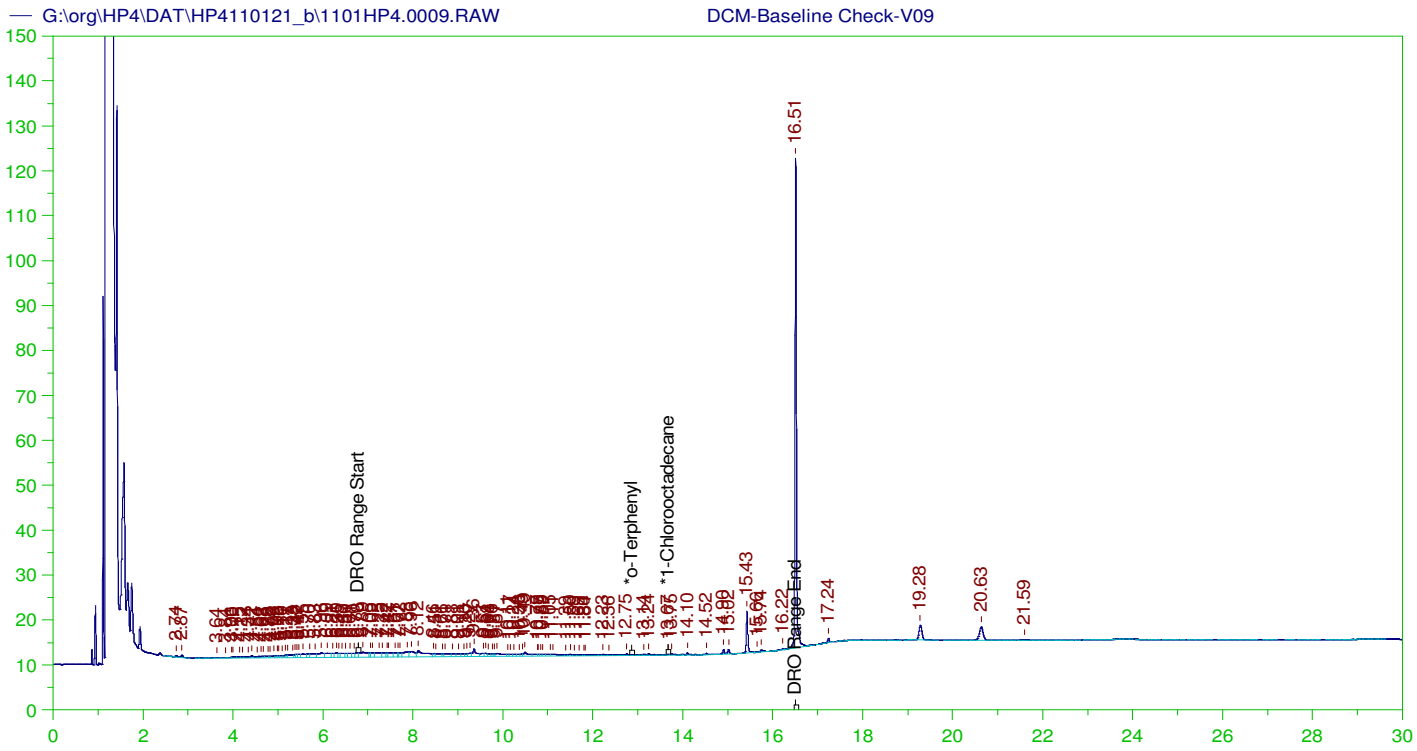
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.871	200.	197.197	98.6	-
*1-Chlorooctadecane	13.68	200.	162.692	81.35	-

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

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

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

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



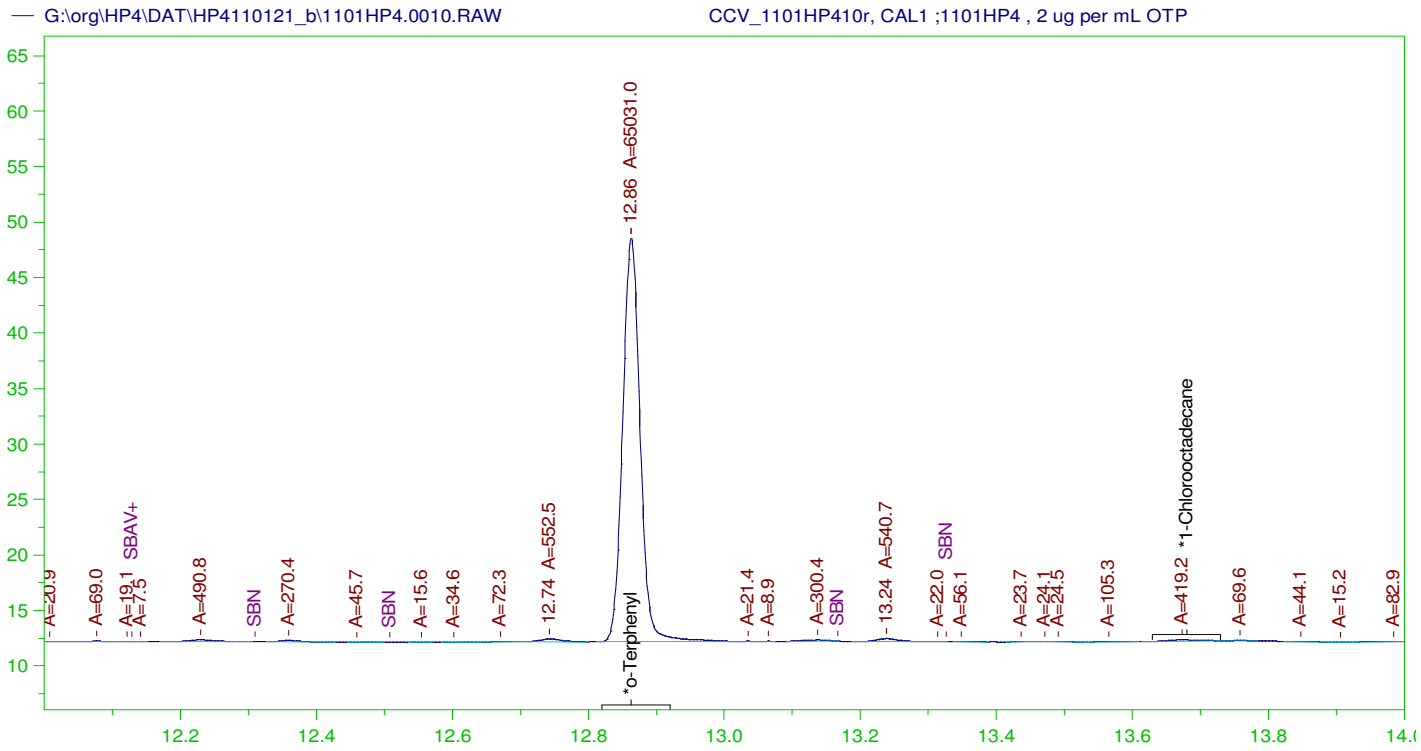
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V09
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0009.RAW
Date & Time Acquired: 11/1/2021 7:21:52 PM
Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_1101HP410r, CAL1 ;1101HP4 , 2 ug per mL OTP
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0010.RAW
Date & Time Acquired: 11/1/2021 8:13:42 PM
Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

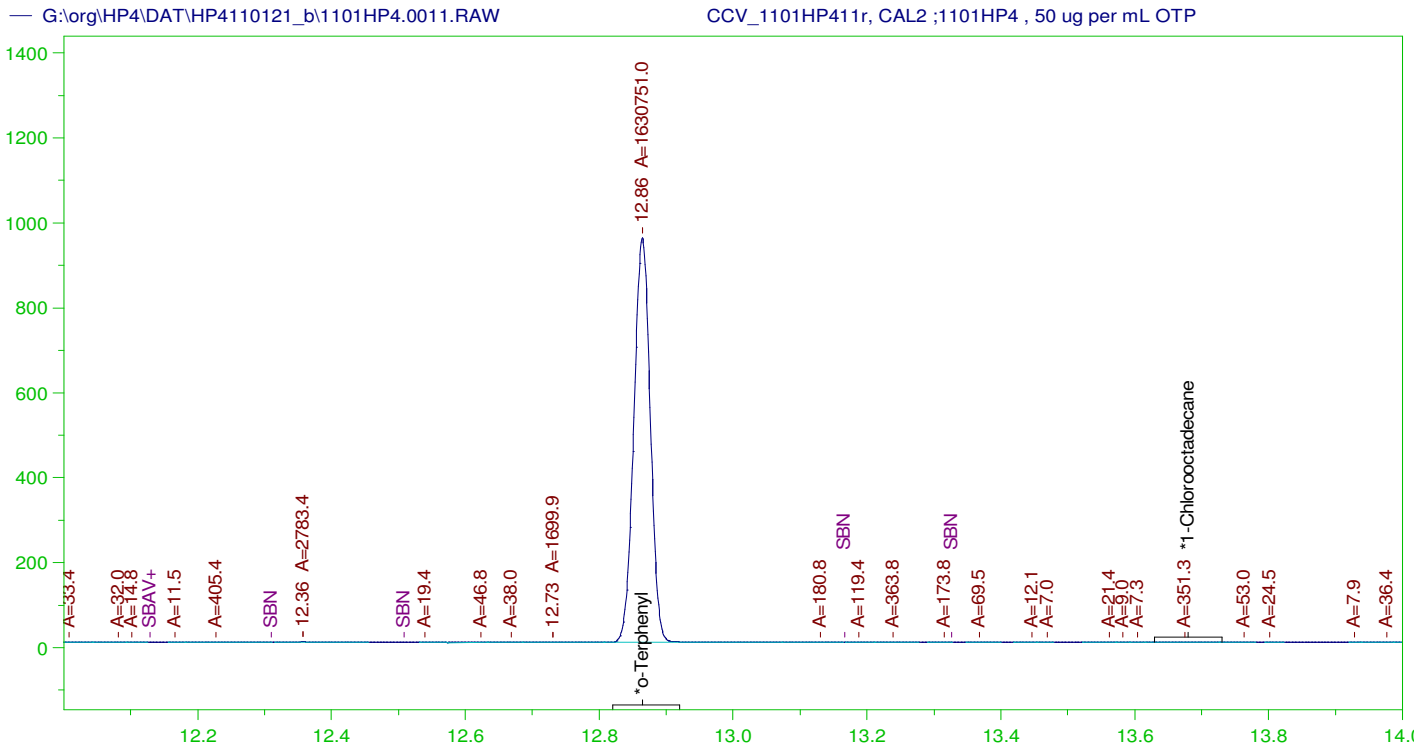
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.863	200.	1.952	.98	-
*1-Chlorooctadecane	29.971	200.	.	.	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP411r, CAL2 ;1101HP4 , 50 ug per mL OTP
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0011.RAW
Date & Time Acquired: 11/1/2021 9:04:46 PM
Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

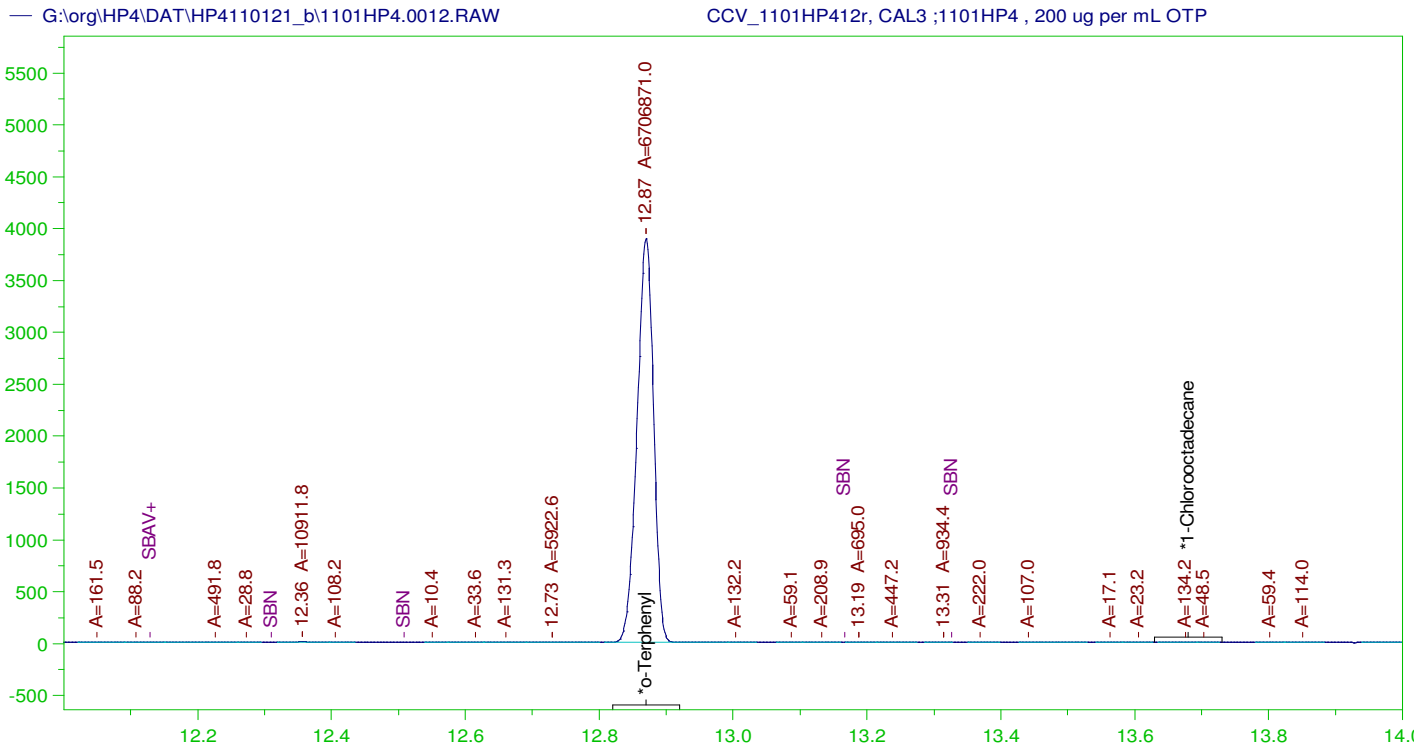
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.864	200.	48.943	24.47	-
*1-Chlorooctadecane	29.962	200.	.	.	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP412r, CAL3 ;1101HP4 , 200 ug per mL OTP
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0012.RAW
Date & Time Acquired: 11/1/2021 9:55:15 PM
Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

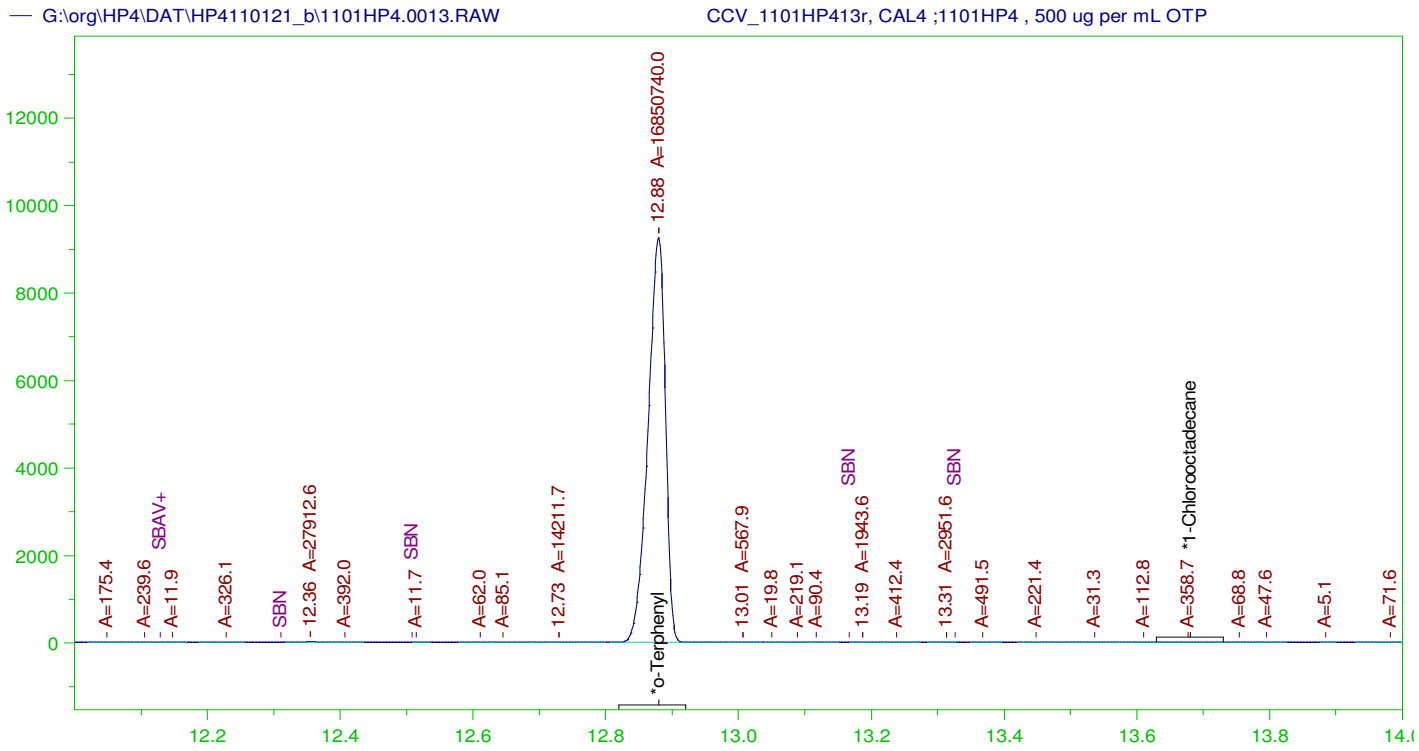
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.87	200.	201.289	100.64	-
*1-Chlorooctadecane	29.944	200.	.	.	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_1101HP413r, CAL4 ;1101HP4 , 500 ug per mL OTP
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0013.RAW
Date & Time Acquired: 11/1/2021 10:45:33 PM
Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

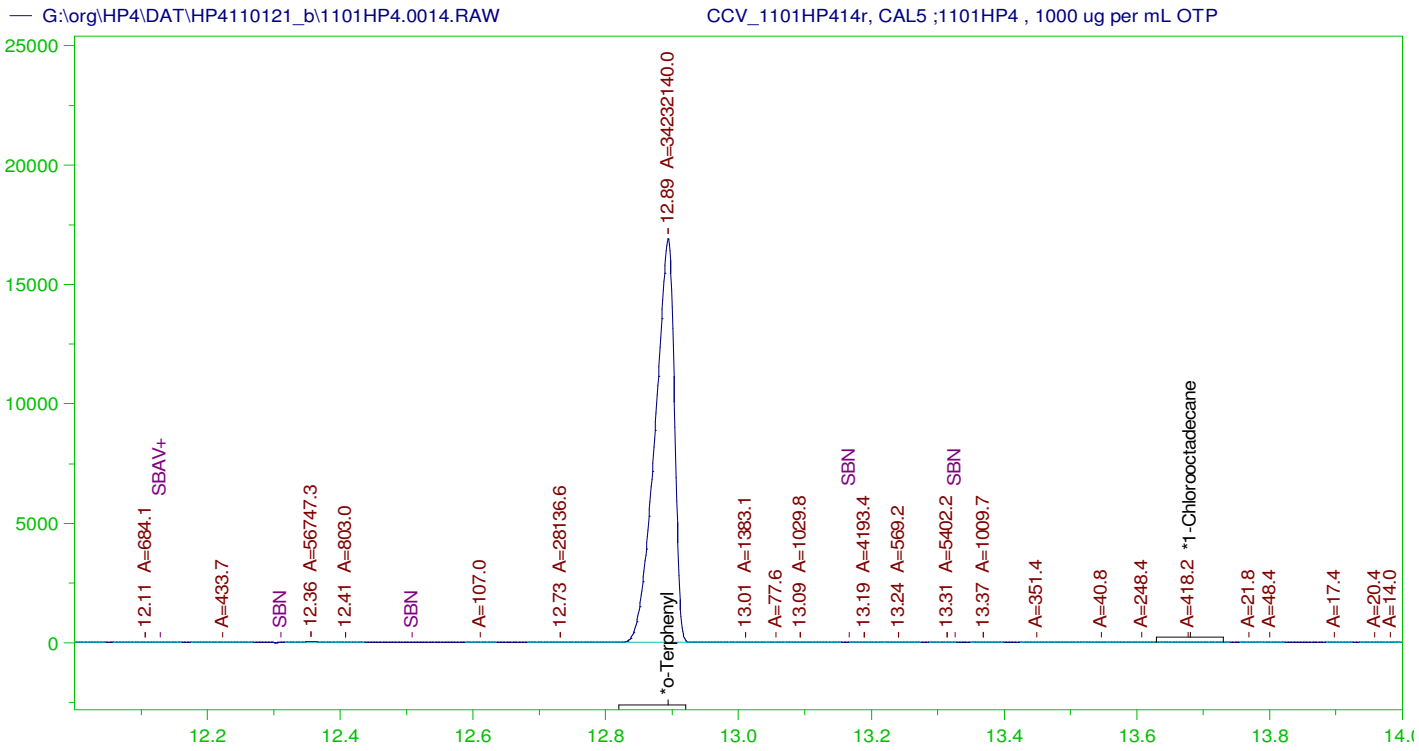
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.879	200.	505.729	252.86	-
*1-Chlorooctadecane	29.986	200.	.	.	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP414r, CAL5 ;1101HP4 , 1000 ug per mL OTP
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0014.RAW
Date & Time Acquired: 11/1/2021 11:36:02 PM
Method File: G:\Org\HP4\methods\DS_8015-OA-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

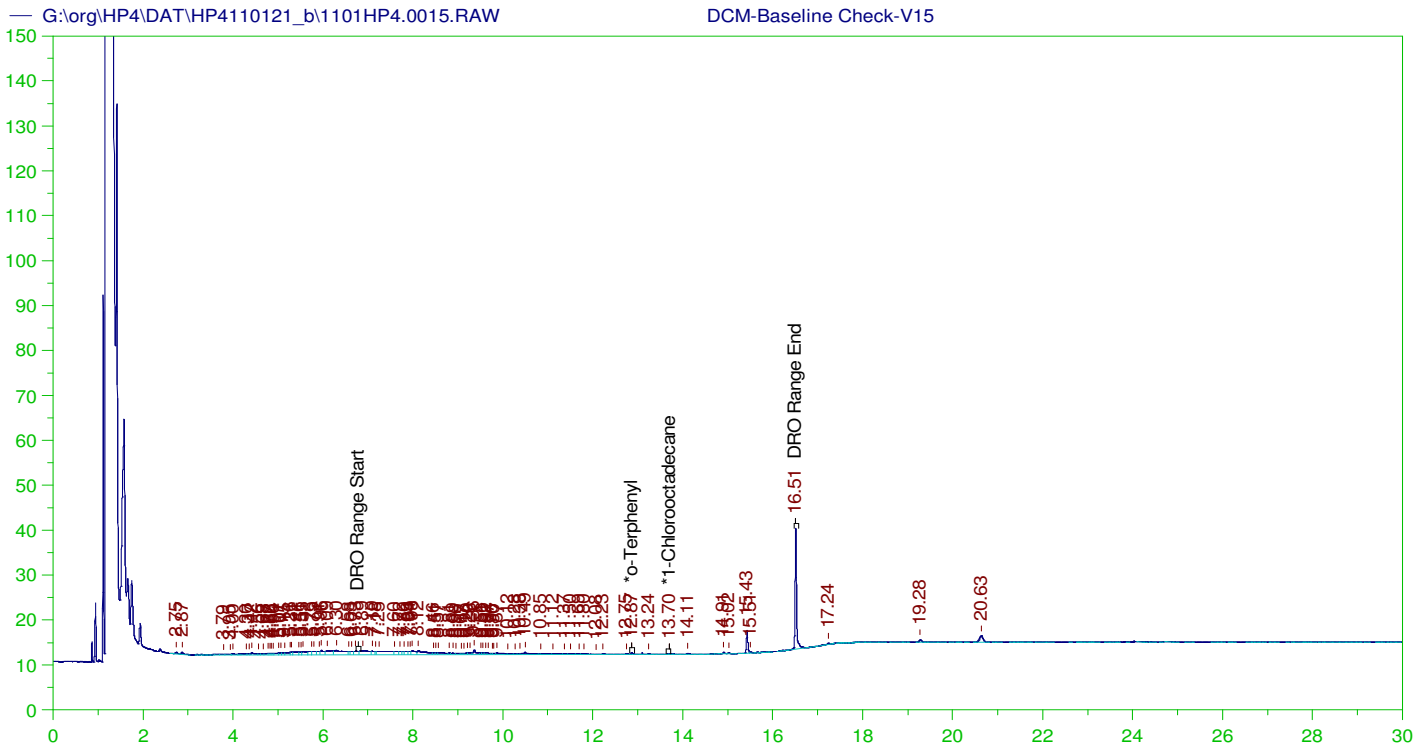
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.894	200.	1027.384	513.69	-
*1-Chlorooctadecane	29.945	200.	.	.	-

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

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

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

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



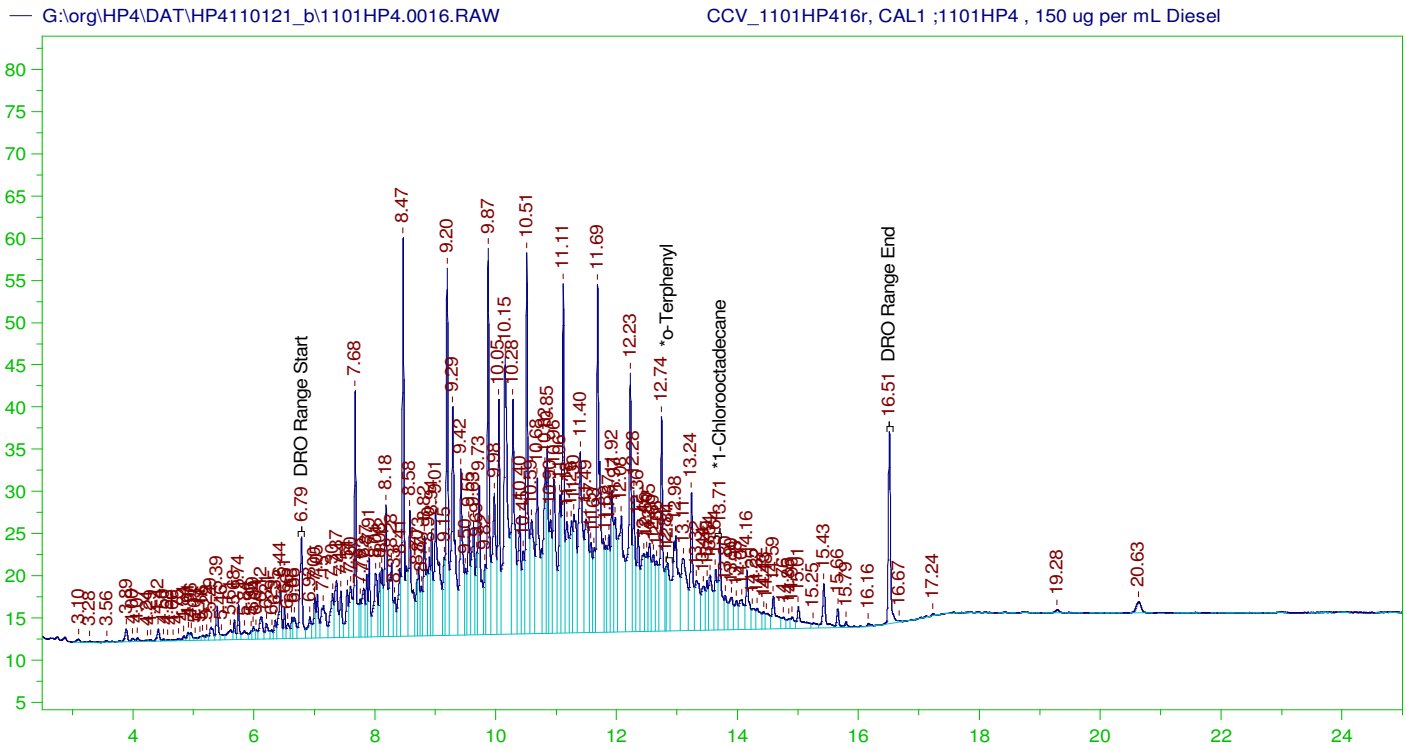
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V15
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0015.RAW
Date & Time Acquired: 11/2/2021 12:26:19 AM
Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP416r, CAL1 ;1101HP4 , 150 ug per mL Diesel
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0016.RAW
Date & Time Acquired: 11/2/2021 1:16:49 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

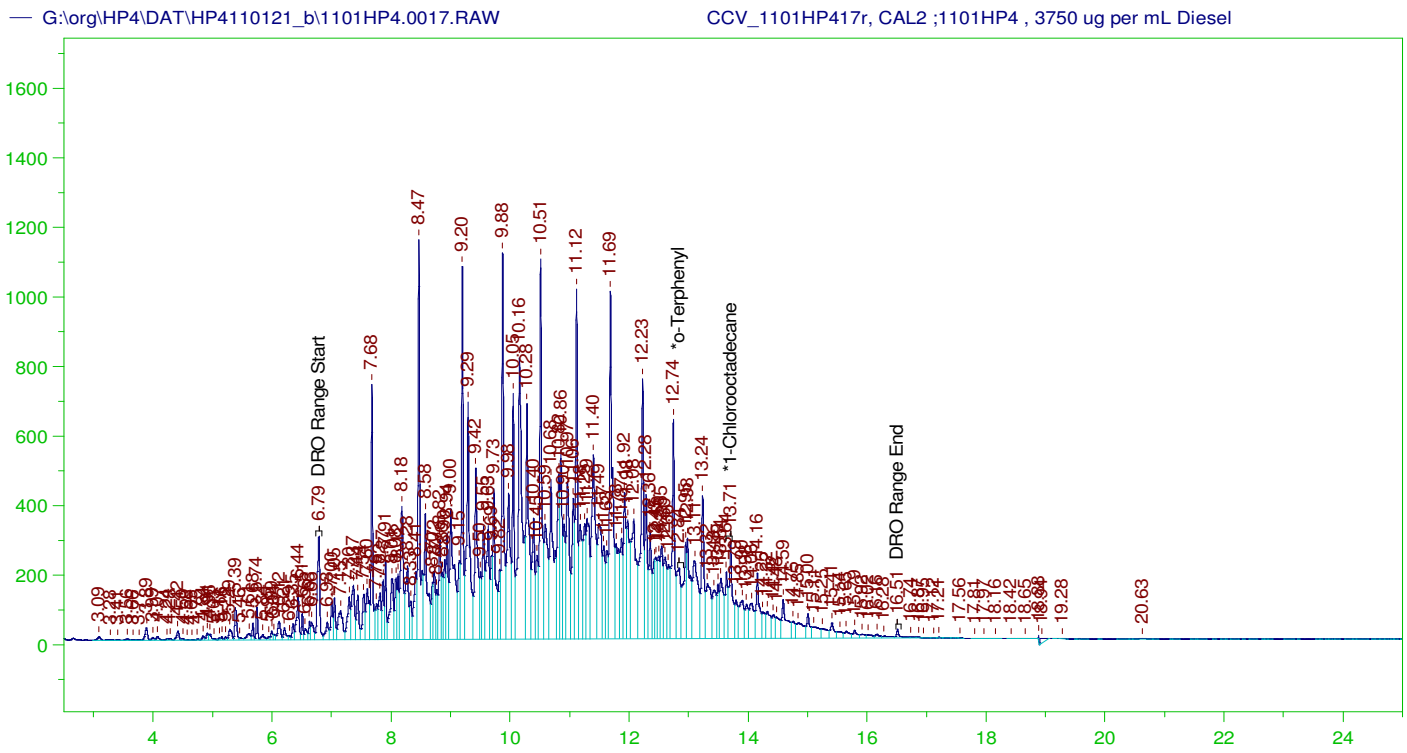
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.841	200.	.842	.42	-
*1-Chlorooctadecane	13.706	200.	1.092	.55	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_1101HP417r, CAL2 ;1101HP4 , 3750 ug per mL Diesel
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0017.RAW
Date & Time Acquired: 11/2/2021 2:07:13 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

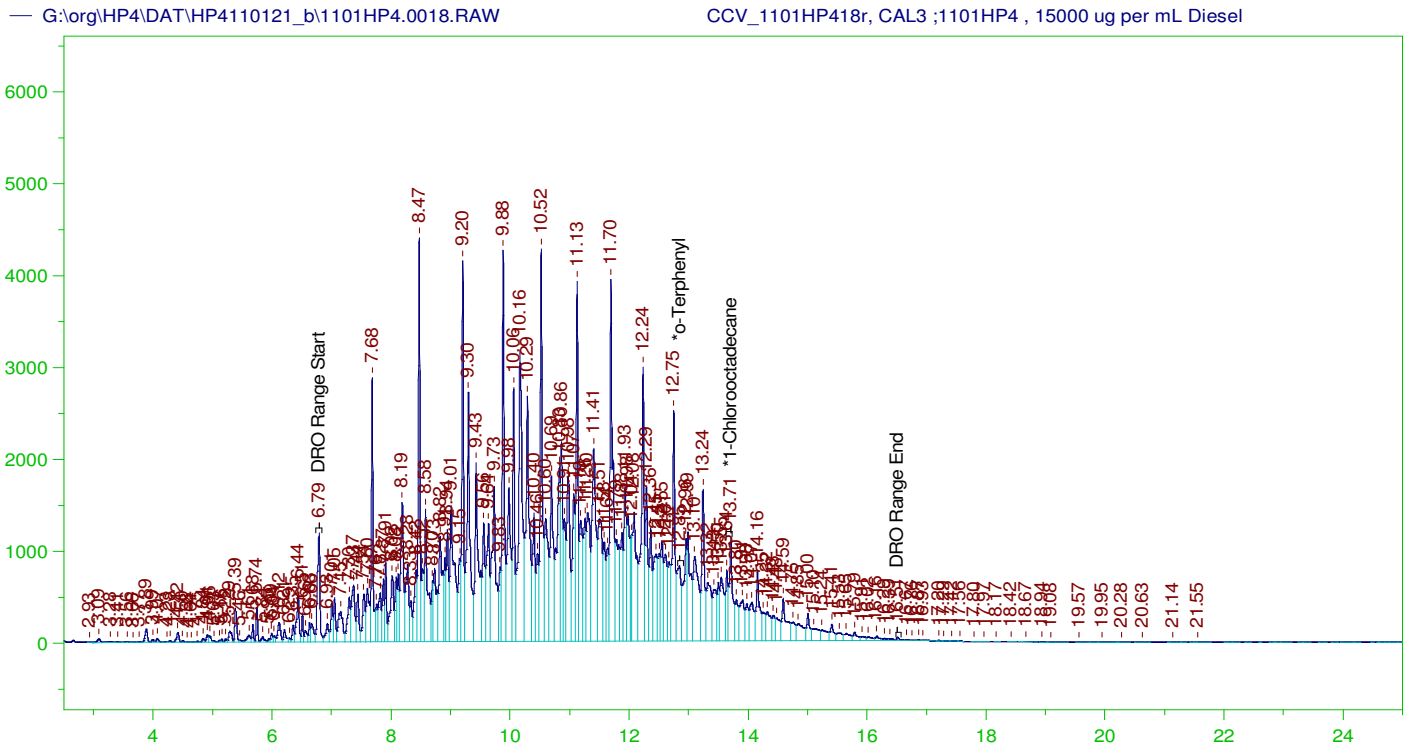
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.837	200.	28.641	14.32	-
*1-Chlorooctadecane	13.705	200.	33.114	16.56	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_1101HP418r, CAL3 ;1101HP4 , 15000 ug per mL Diesel
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0018.RAW
Date & Time Acquired: 11/2/2021 2:57:28 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

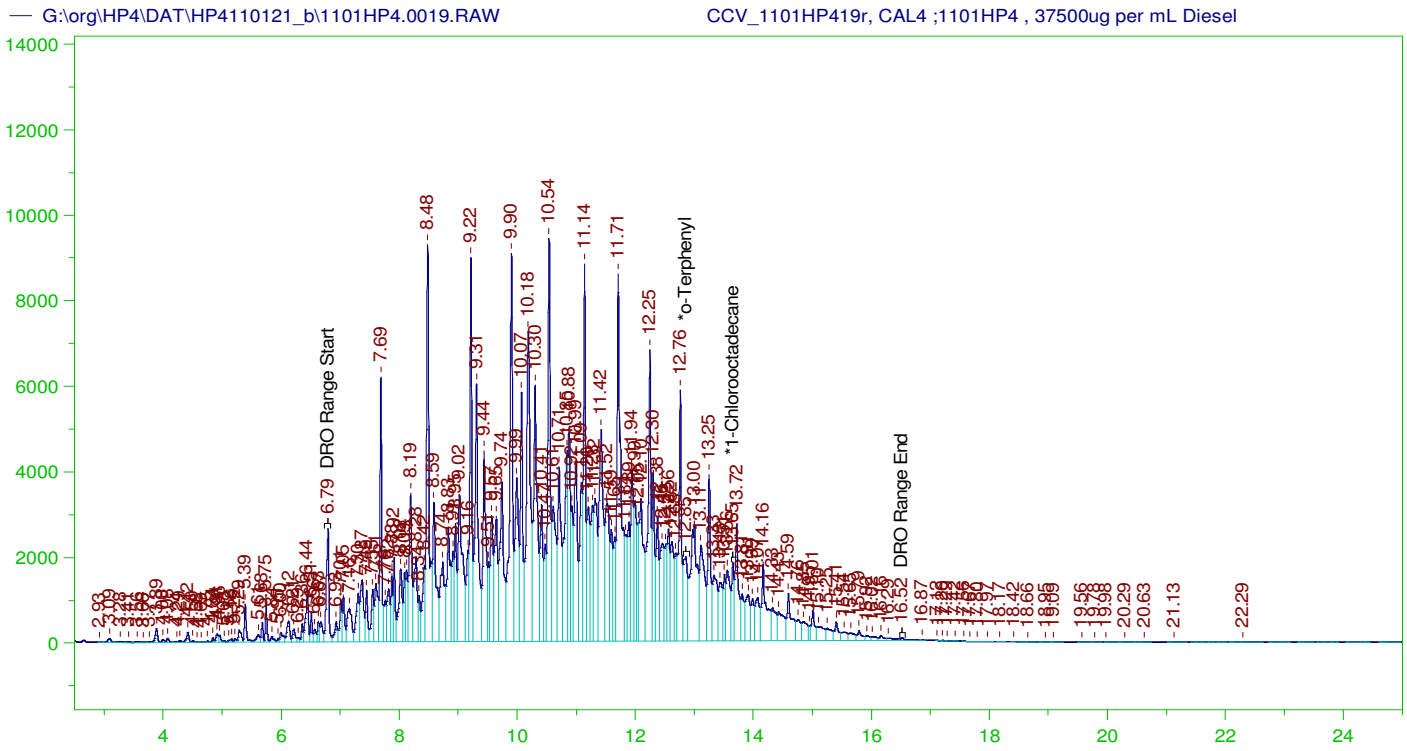
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.846	200.	119.117	59.56	-
*1-Chlorooctadecane	13.709	200.	132.401	66.2	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP419r, CAL4 ;1101HP4 , 37500ug per mL Diesel
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0019.RAW
Date & Time Acquired: 11/2/2021 3:47:46 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

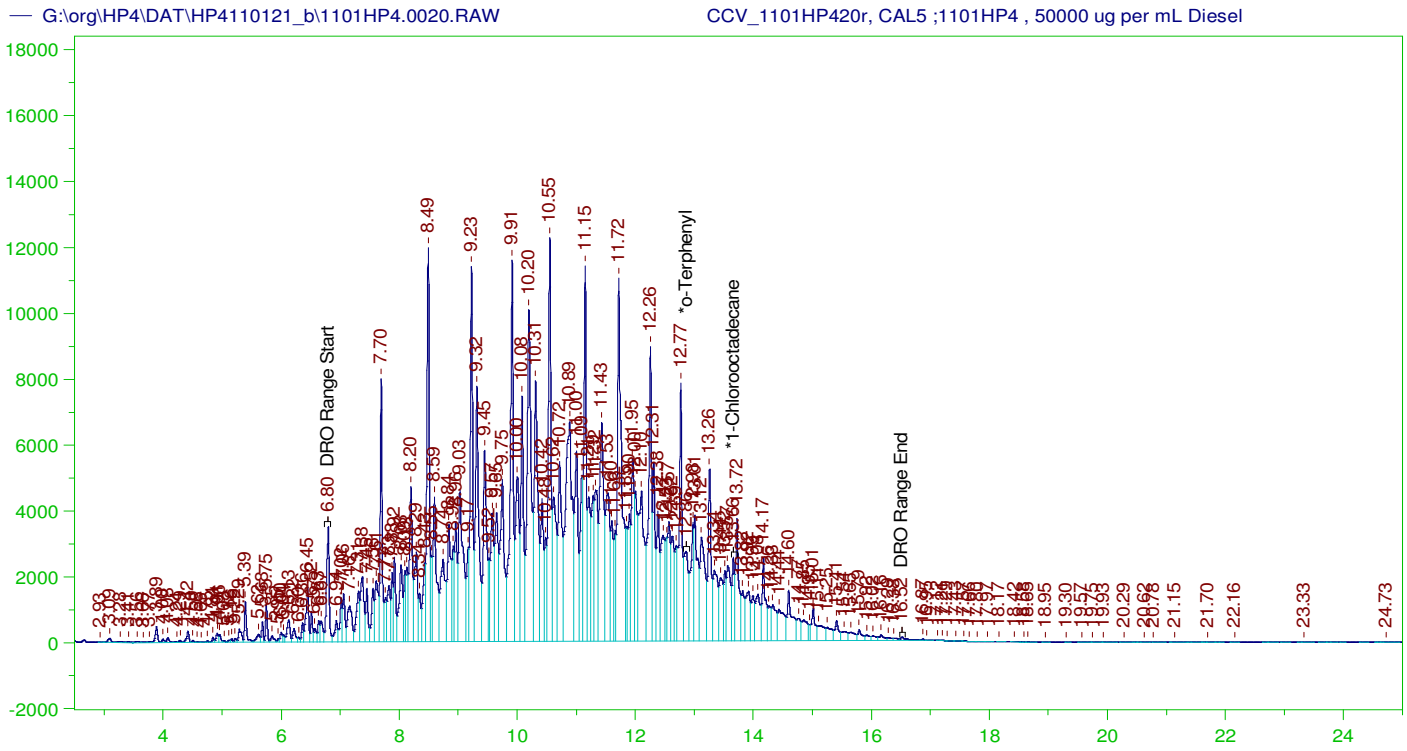
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.855	200.	279.085	139.54	-
*1-Chlorooctadecane	13.653	200.	147.666	73.83	-

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP420r, CAL5 ;1101HP4 , 50000 ug per mL Diesel
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0020.RAW
Date & Time Acquired: 11/2/2021 4:38:01 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

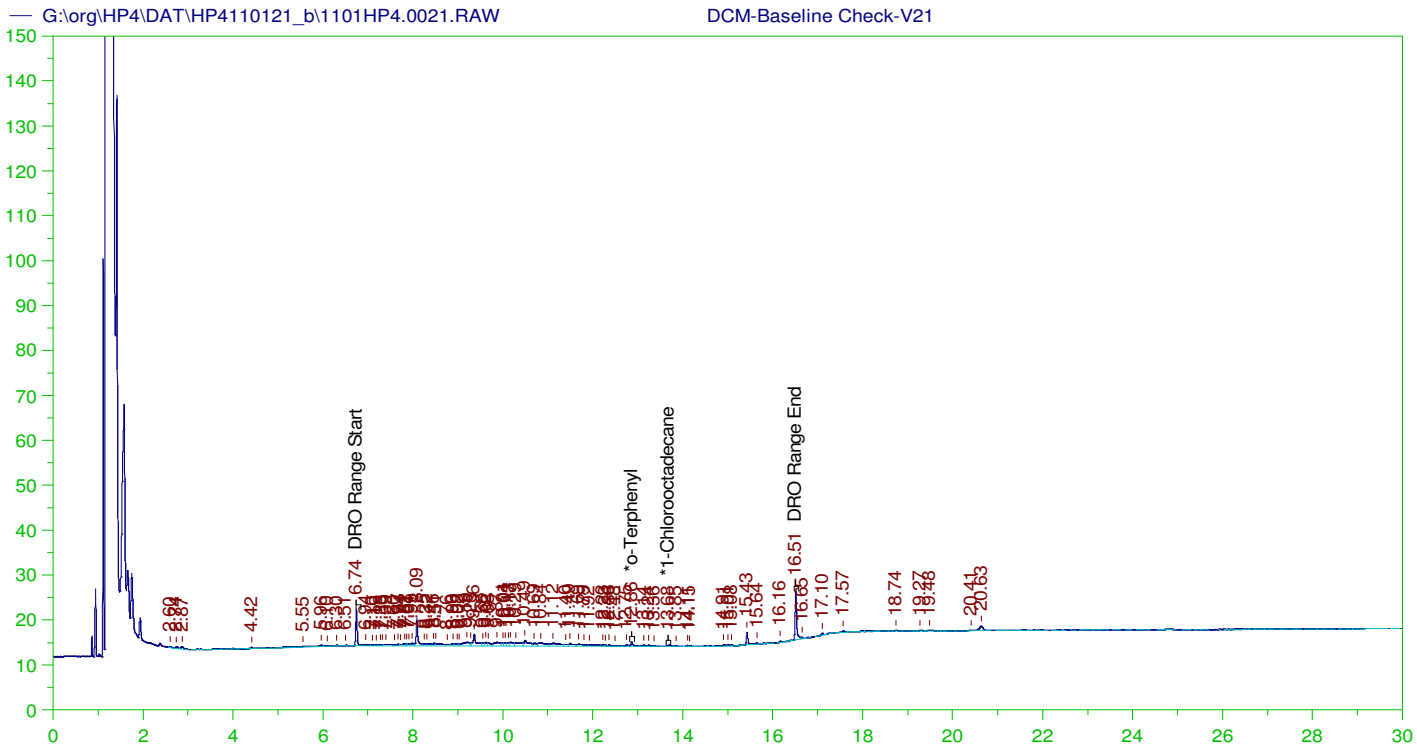
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.862	200.	408.713	204.36	-
*1-Chlorooctadecane	13.661	200.	204.074	102.04	-

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

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

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

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

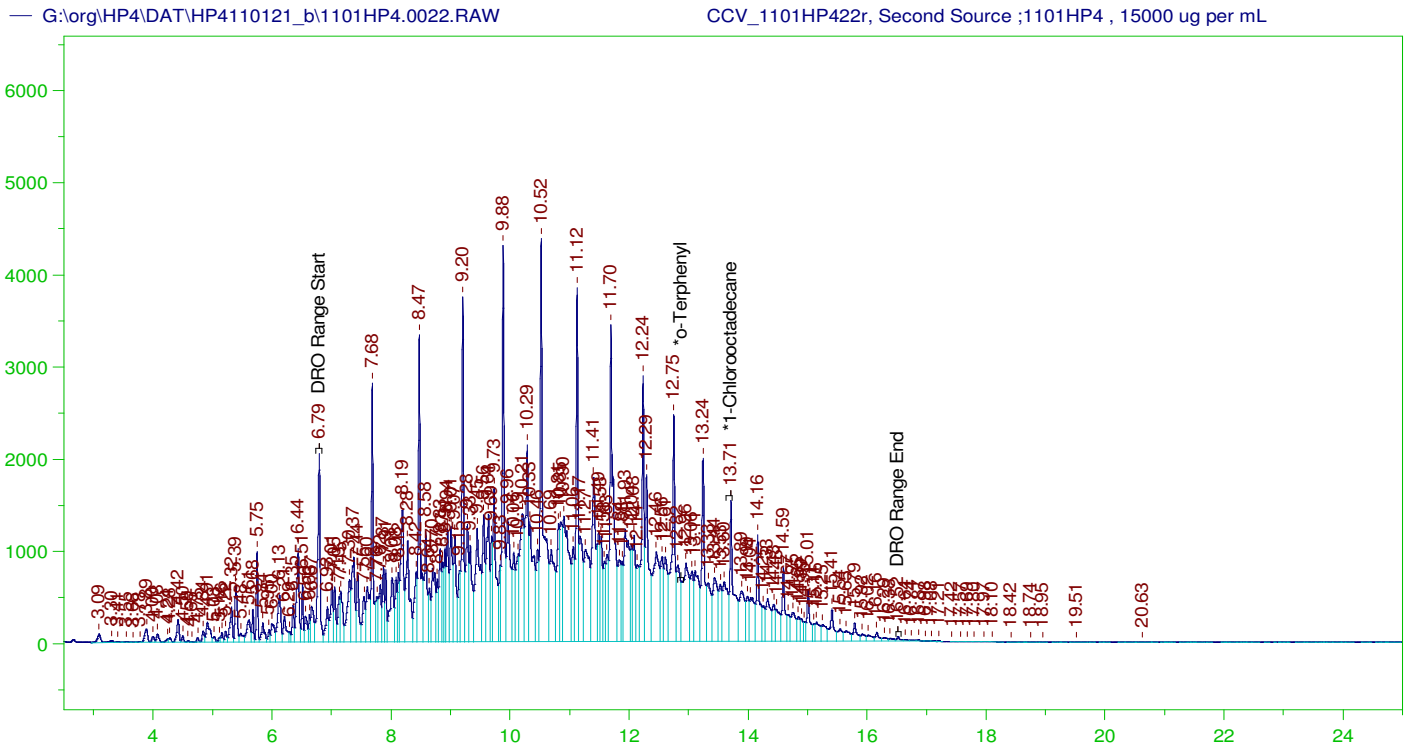


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V21
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0021.RAW
Date & Time Acquired: 11/2/2021 5:28:21 AM
Method File: G:\Org\HP4\methods\DR_8015-OA-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1101HP422r, Second Source ;1101HP4 , 15000 ug per mL
Raw File: G:\org\HP4\DAT\HP4110121_b\1101HP4.0022.RAW
Date & Time Acquired: 11/2/2021 6:18:32 AM
Method File: G:\Org\HP4\Methods\DC_8015-OA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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

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

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

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

Write Sequence | Insert Entries(Have the first cell for entries selecte

Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP4\DAT\HP4110121_b\1101HP4.07r	DCM-Baseline Check-V07	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4110121_b\1101HP4.08r	CCV_1101HP408r, DRO ;1101HP4 , DRO211025A	G:\Org\HP4\methods\DC_8015-OA-L0.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4110121_b\1101HP4.09r	DCM-Baseline Check-V09	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4110121_b\1101HP4.10r	CCV_1101HP410r, CAL1 ;1101HP4 , 2 ug per mL OTP (10 uL of Cal3 + 990 uL DCM(14408))	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\org\HP4\DAT\HP4110121_b\1101HP4.11r	CCV_1101HP411r, CAL2 ;1101HP4 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14408)	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\org\HP4\DAT\HP4110121_b\1101HP4.12r	CCV_1101HP412r, CAL3 ;1101HP4 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14408)	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\org\HP4\DAT\HP4110121_b\1101HP4.13r	CCV_1101HP413r, CAL4 ;1101HP4 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14408)	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\org\HP4\DAT\HP4110121_b\1101HP4.14r	CCV_1101HP414r, CAL5 ;1101HP4 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211101A + 750 DCM(14408)	G:\Org\HP4\methods\DS_8015-OA-L#.met	1	1	1	1	0	Surrogates are integrated using valley to valley integration using a Set Baseline Now before at 12.51 and after at 13.17.
G:\org\HP4\DAT\HP4110121_b\1101HP4.15r	DCM-Baseline Check-V15	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4110121_b\1101HP4.16r	CCV_1101HP416r, CAL1 ;1101HP4 , 150 ug per mL Diesel (10 uL of Cal3 + 990 uL DCM(14408),	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\org\HP4\DAT\HP4110121_b\1101HP4.17r	CCV_1101HP417r, CAL2 ;1101HP4 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14408)	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\org\HP4\DAT\HP4110121_b\1101HP4.18r	CCV_1101HP418r, CAL3 ;1101HP4 , 15000 ug per mL Diesel (300 uL of DRO211012A + 700 uL DCM(14408)	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\org\HP4\DAT\HP4110121_b\1101HP4.19r	CCV_1101HP419r, CAL4 ;1101HP4 , 37500ug per mL Diesel (750 uL of DRO211012A + 250 uL DCM(14408)	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\org\HP4\DAT\HP4110121_b\1101HP4.20r	CCV_1101HP420r, CAL5 ;1101HP4 , 50000 ug per mL Diesel (200 uL of DRO211012A)	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1
G:\org\HP4\DAT\HP4110121_b\1101HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OA-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4110121_b\1101HP4.22r	CCV_1101HP422r, Second Source ;1101HP4 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14408)	G:\Org\HP4\Methods\DC_8015-OA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1

Ann Nebel

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

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	Insert Entries(Have the first cell for entries selecte Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
:\org\HP5\DAT\HP5110221_b\1102HP5.03r	CCV_1102HP508r, DRO ;1102HP5 , DRO211025A	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0
:\org\HP5\DAT\HP5110221_b\1102HP5.04r	DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0
:\org\HP5\DAT\HP5110221_b\1102HP5.05r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.06r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.07r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.08r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.09r	CCV_1102HP509r, CAL5 ;1102HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211101A + 750 DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0
:\org\HP5\DAT\HP5110221_b\1102HP5.10r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.11r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.12r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.13r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.14r	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
:\org\HP5\DAT\HP5110221_b\1102HP5.15r	DCM-Baseline Check-V15	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0
:\org\HP5\DAT\HP5110221_b\1102HP5.16r	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

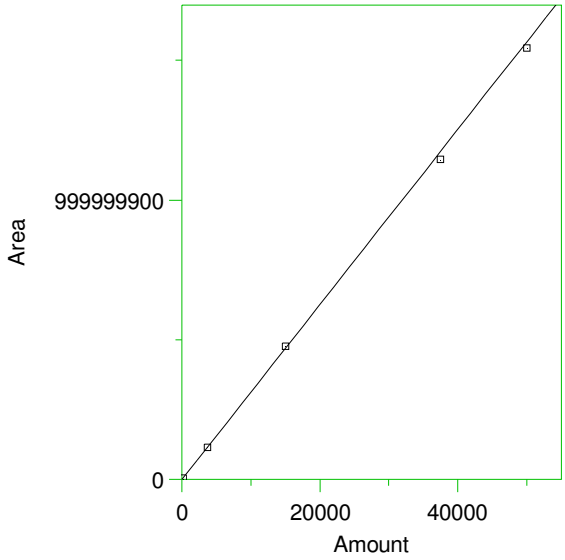
Creator: AMN 11/02/2021
Description: 8015C-DRO. New ICal Per 1102HP5 (2021)-2 uL Inj.; COD added using OTP RFs
Reason for change:

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

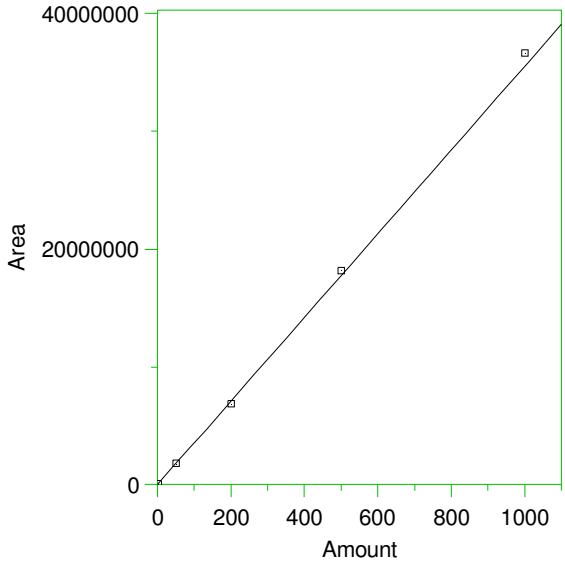
Y = 31353.19 X + 0

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

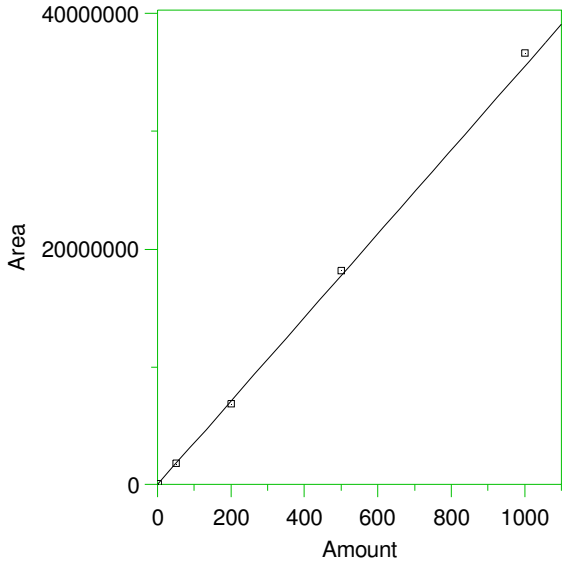
Y = 35509.21 X + 0

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

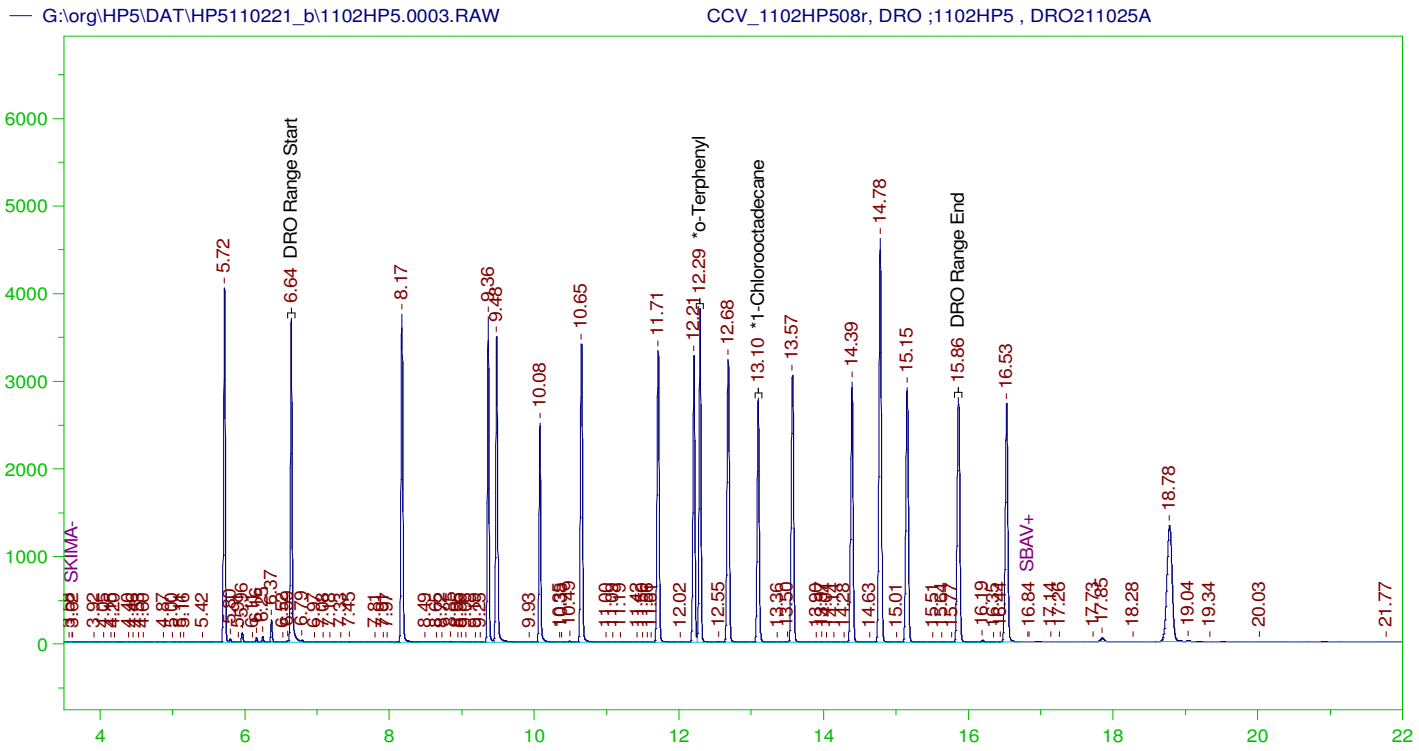
Single peak quantification by area

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1102HP508r, DRO ;1102HP5 , DRO211025A
Raw File: G:\org\HP5\DAT\HP5110221_b\1102HP5.0003.RAW
Date & Time Acquired: 11/2/2021 8:31:35 AM
Method File: G:\Org\HP5\Methods\DC_8015-IA-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

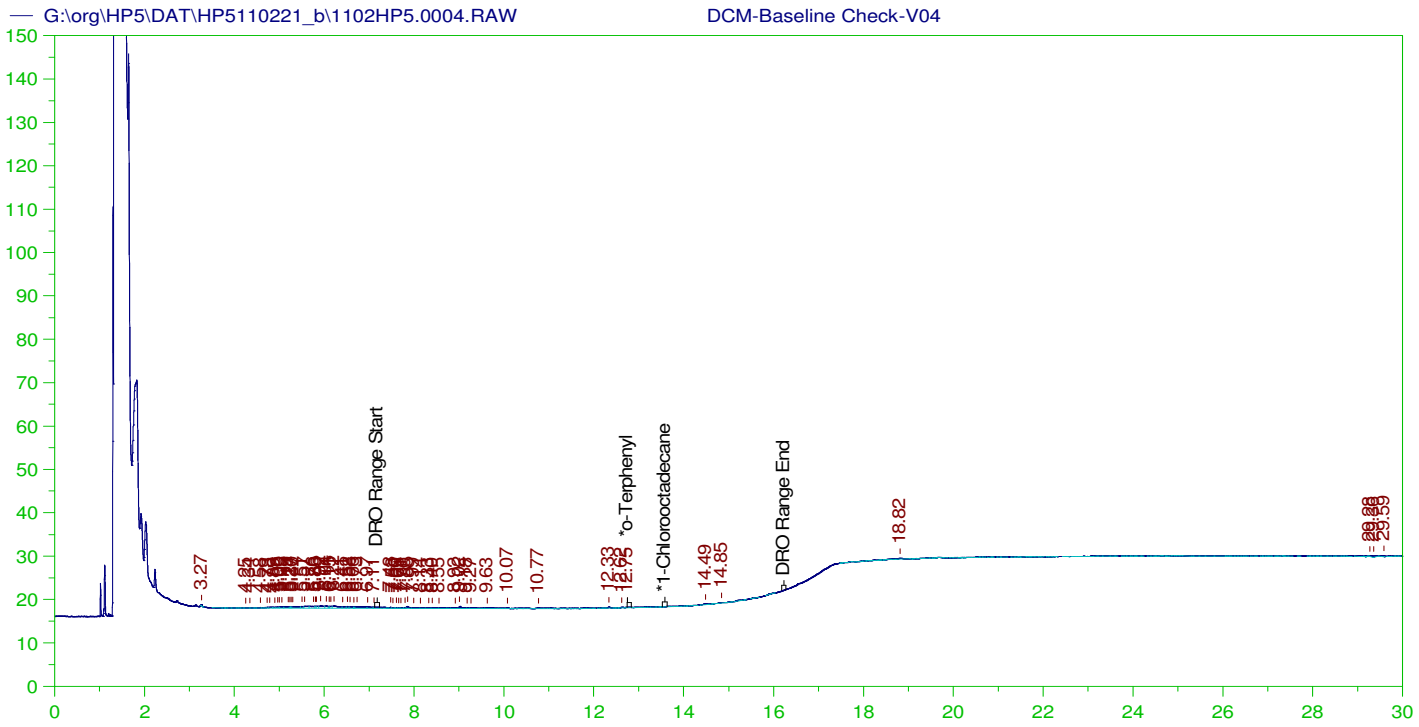
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.292	200.	201.539	100.77	-
*1-Chlorooctadecane	13.095	200.	163.573	81.79	-

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

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

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

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



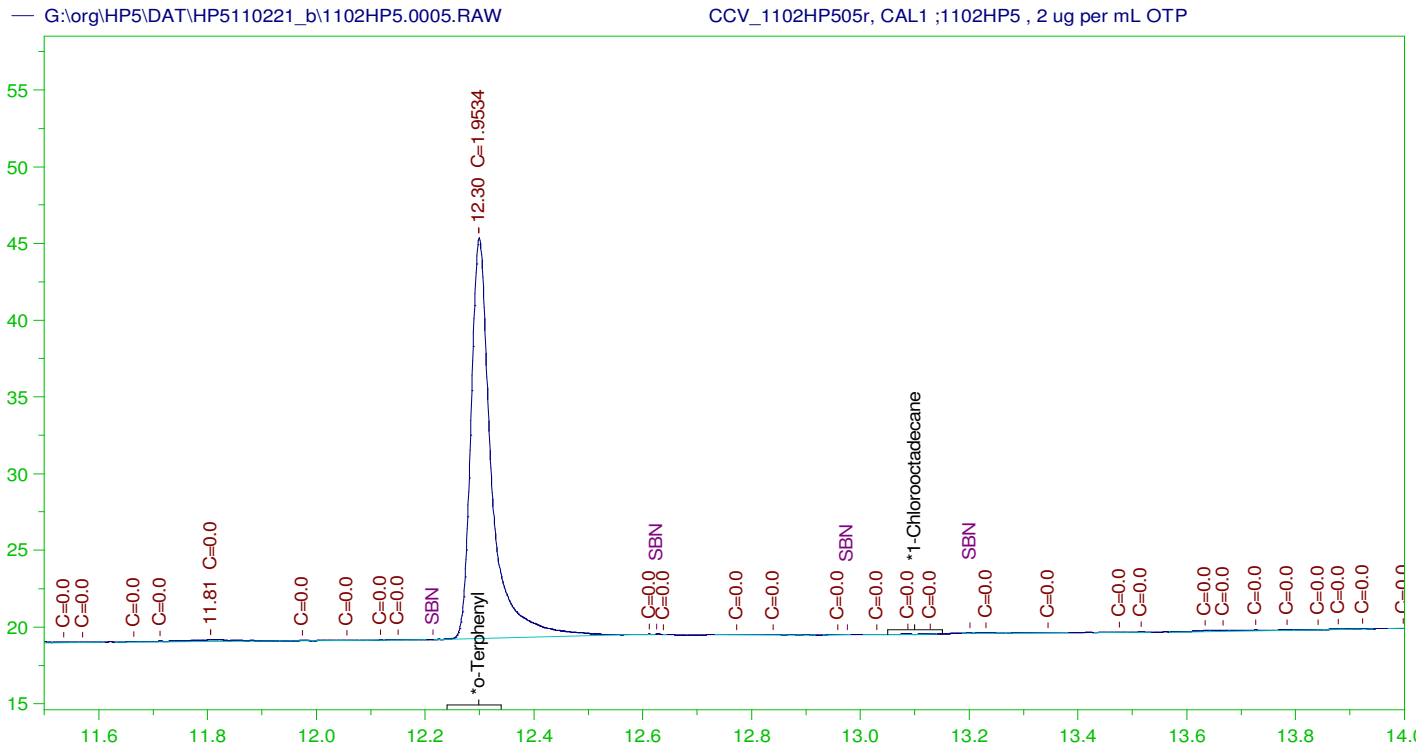
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



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

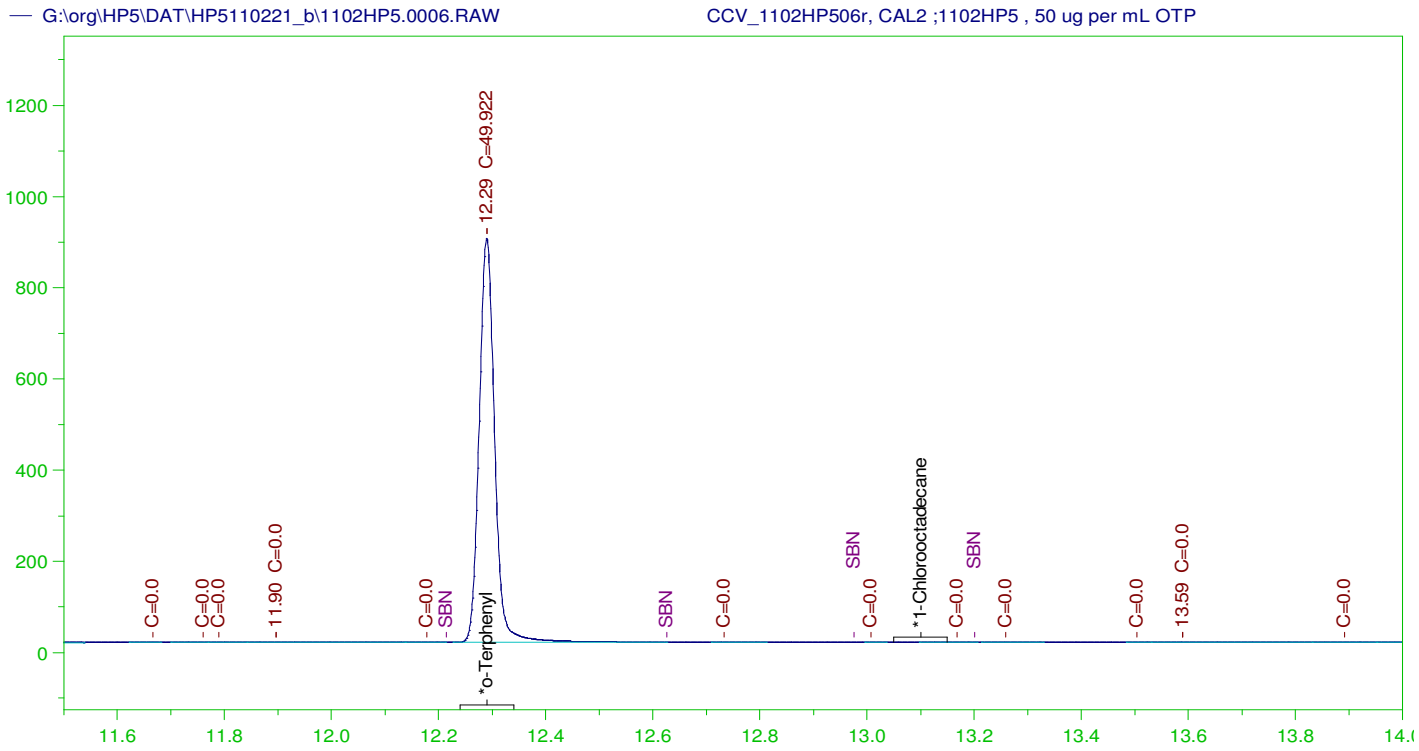
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.299	200.	1.953	.98	-
*1-Chlorooctadecane	15.561	200.	.	.	-

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



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

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

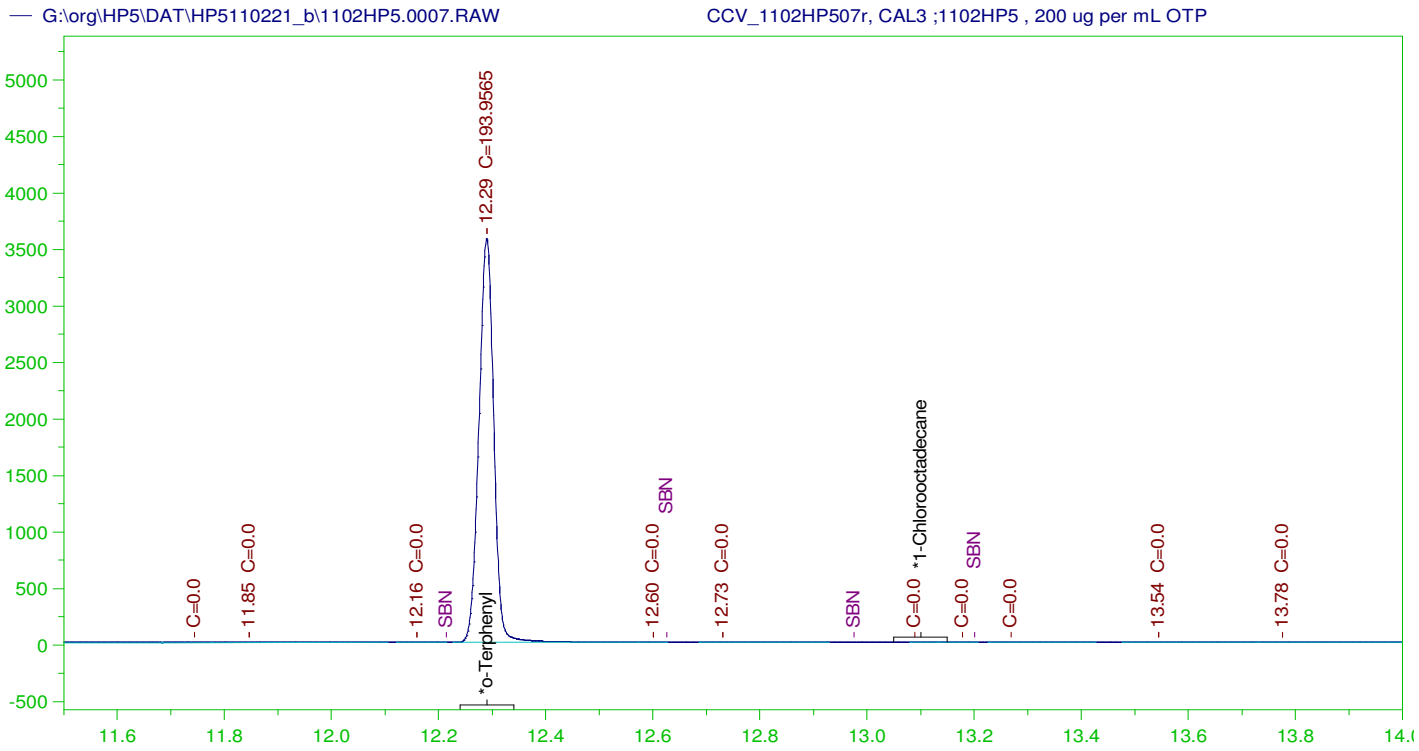
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.29	200.	49.922	24.96	-
*1-Chlorooctadecane	15.697	200.	.	.	-

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

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

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

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



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

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

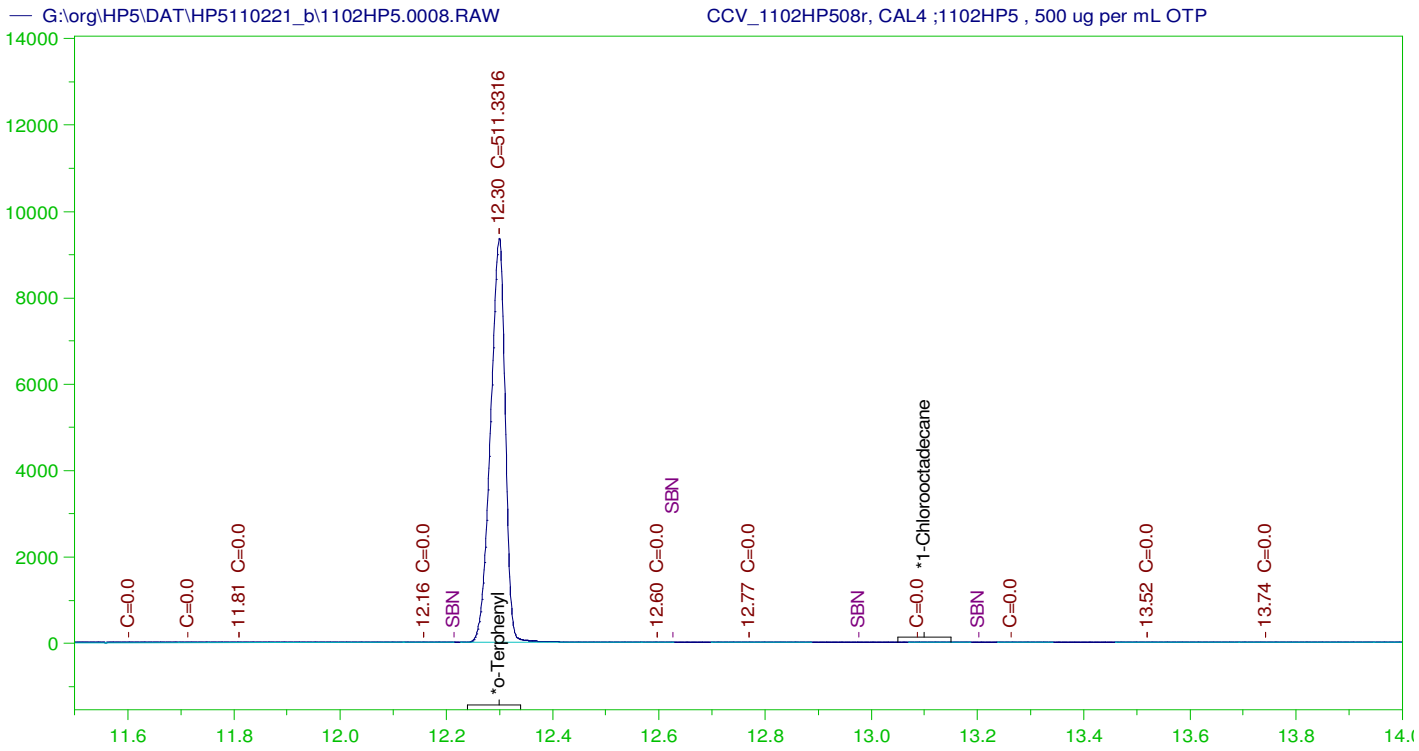
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.29	200.	193.957	96.98	-
*1-Chlorooctadecane	15.779	200.	.	.	-

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

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

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

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



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

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

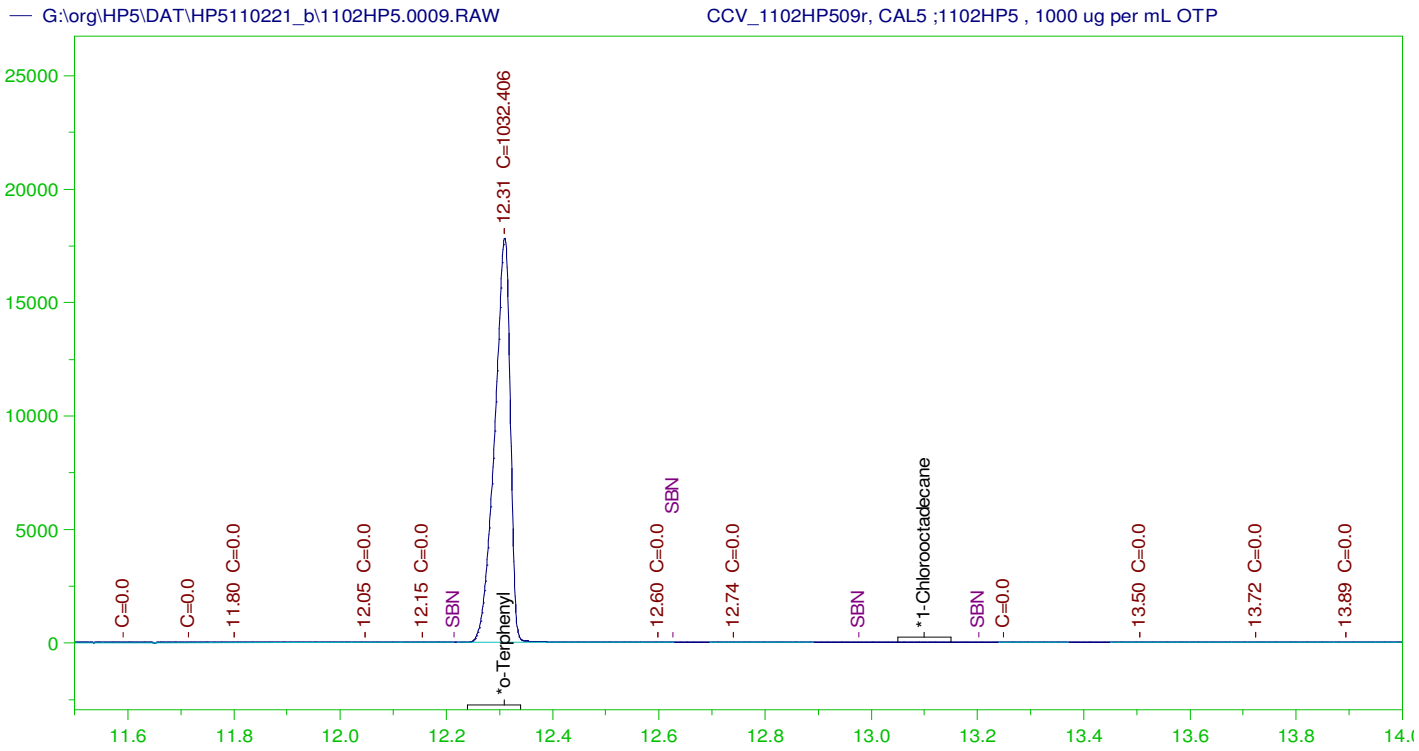
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.3	200.	511.332	255.67	-
*1-Chlorooctadecane	15.798	200.	.	.	-

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

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

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

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



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

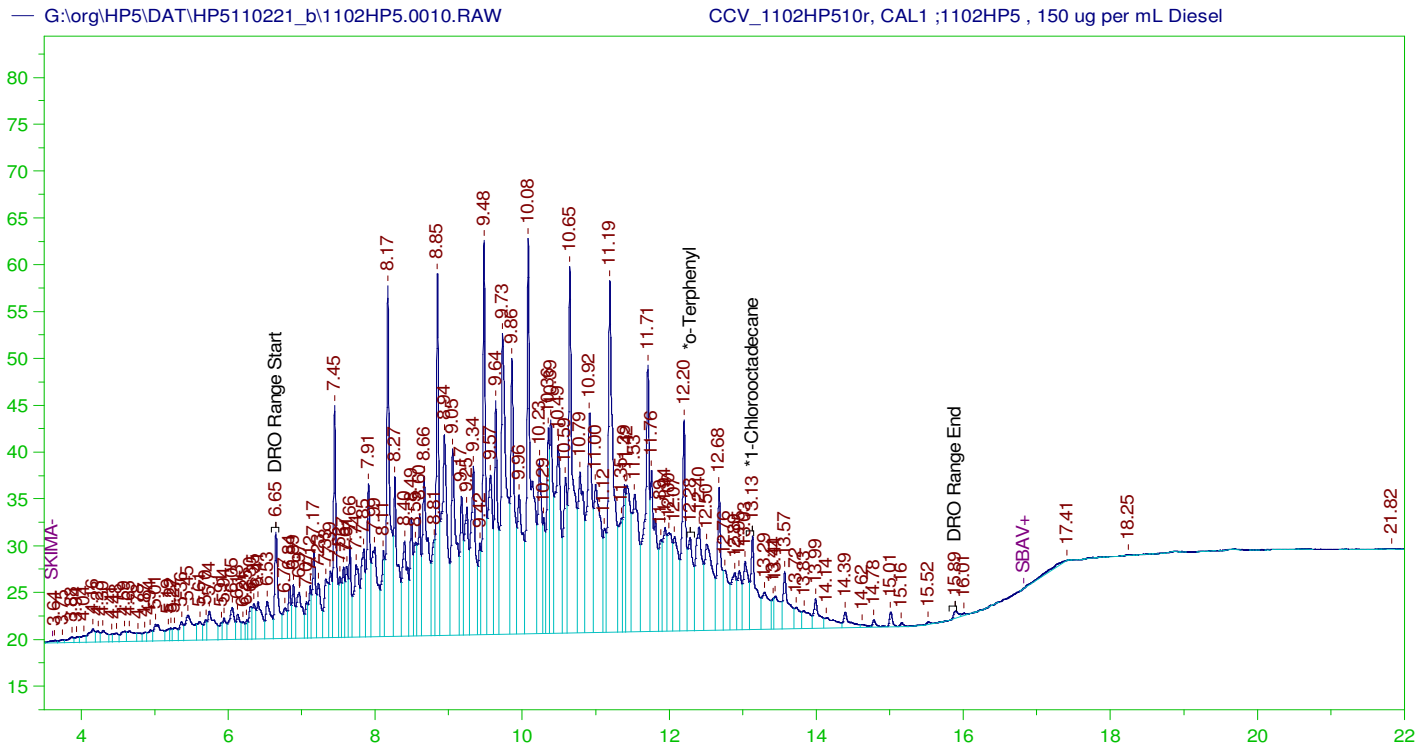
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.31	200.	1032.406	516.2	-
*1-Chlorooctadecane	15.803	200.	.	.	-

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



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

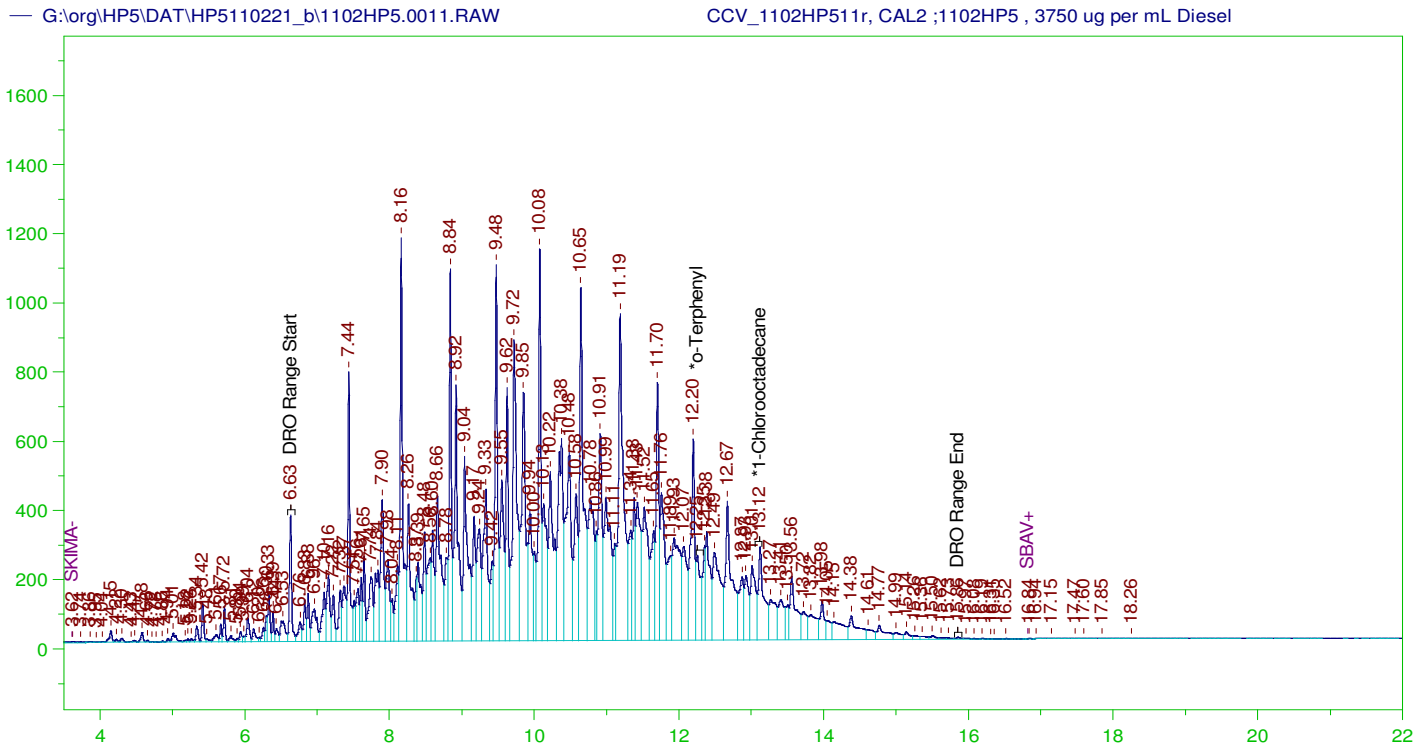
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.285	200.	1.416	.71	-
*1-Chlorooctadecane	13.13	200.	1.44	.72	-

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



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

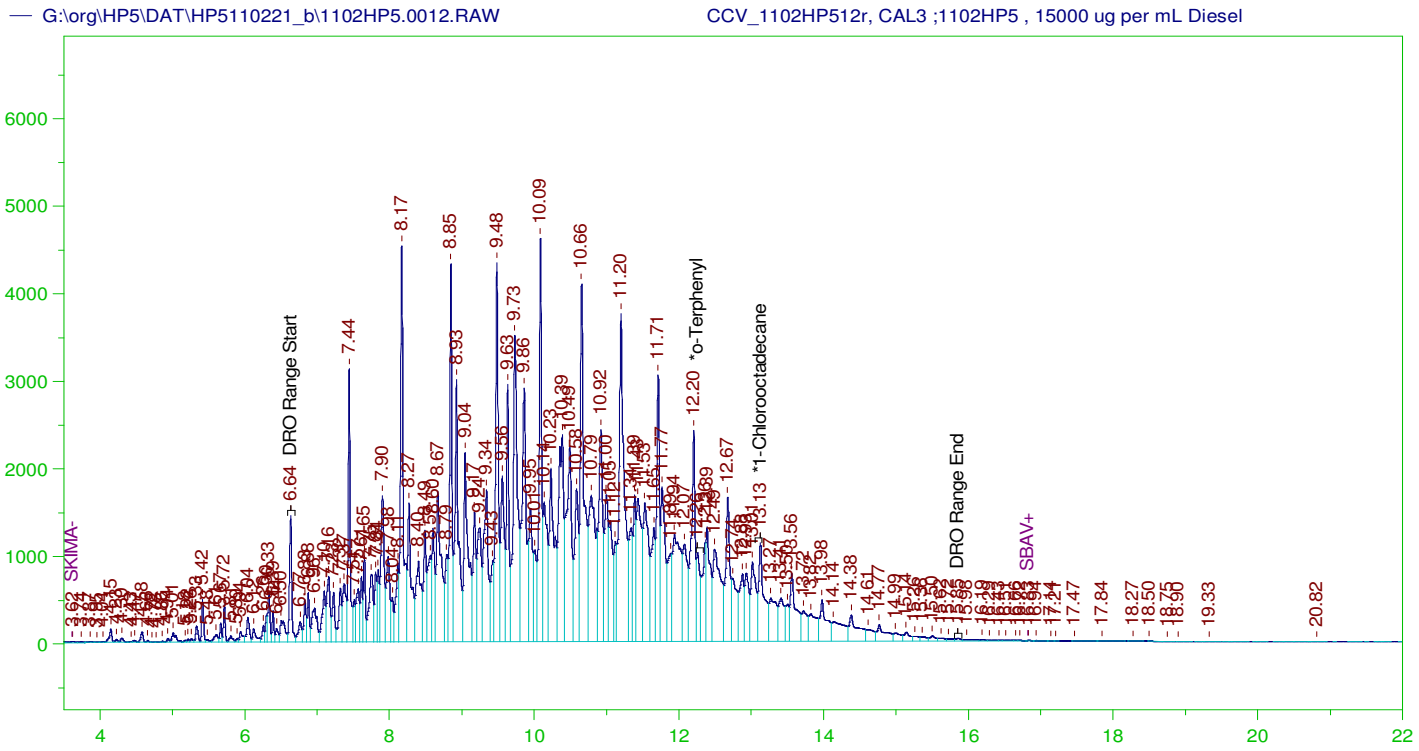
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.252	200.	28.988	14.49	-
*1-Chlorooctadecane	13.122	200.	39.19	19.59	-

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



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

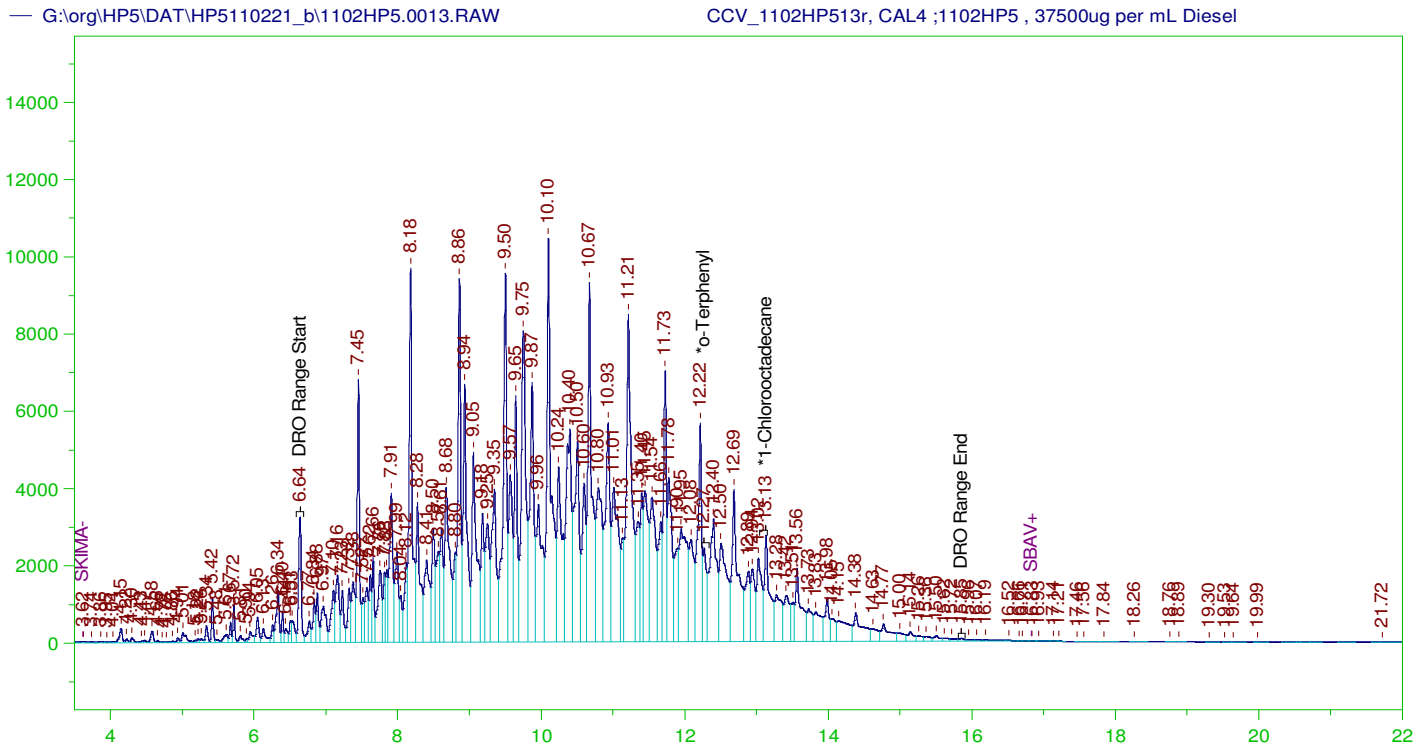
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.257	200.	92.35	46.18	-
*1-Chlorooctadecane	13.125	200.	158.994	79.5	-

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



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

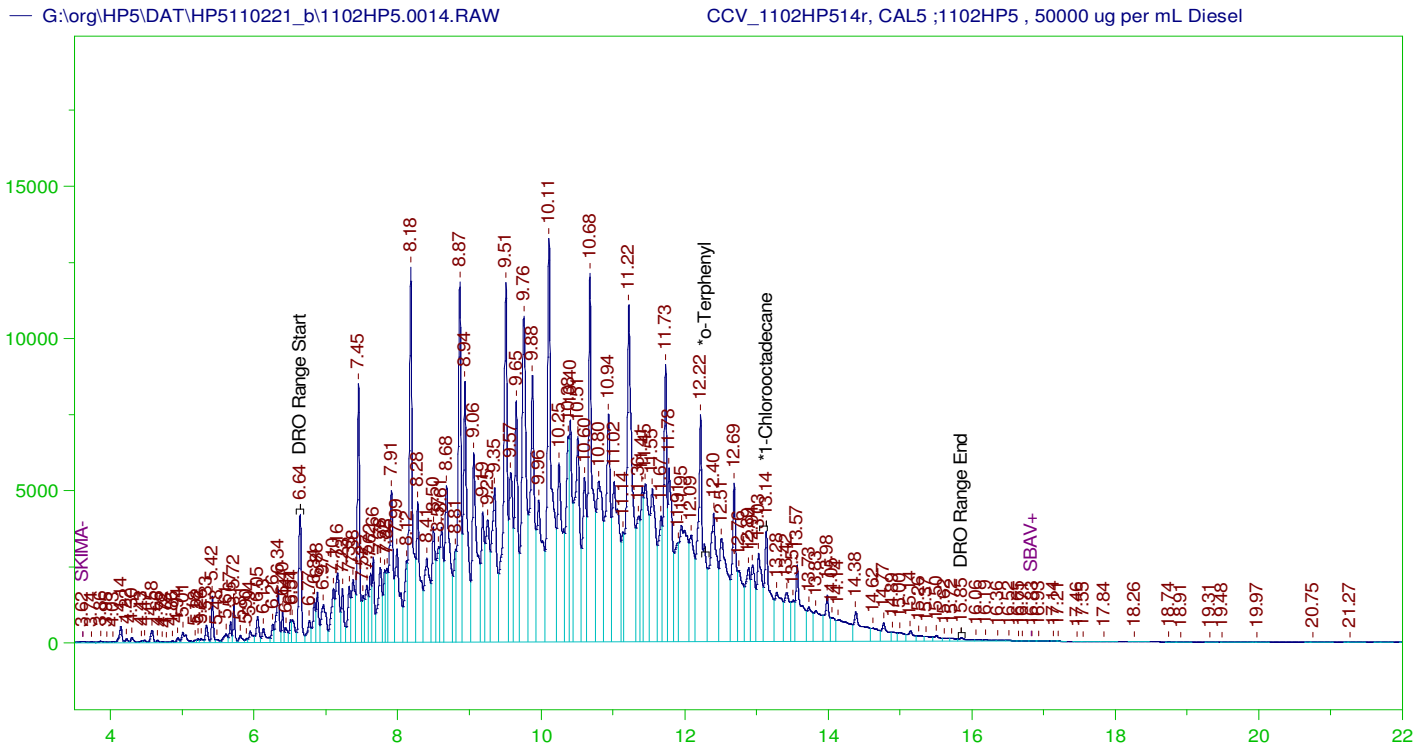
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.268	200.	238.956	119.48	-
*1-Chlorooctadecane	13.133	200.	386.008	193.	-

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



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

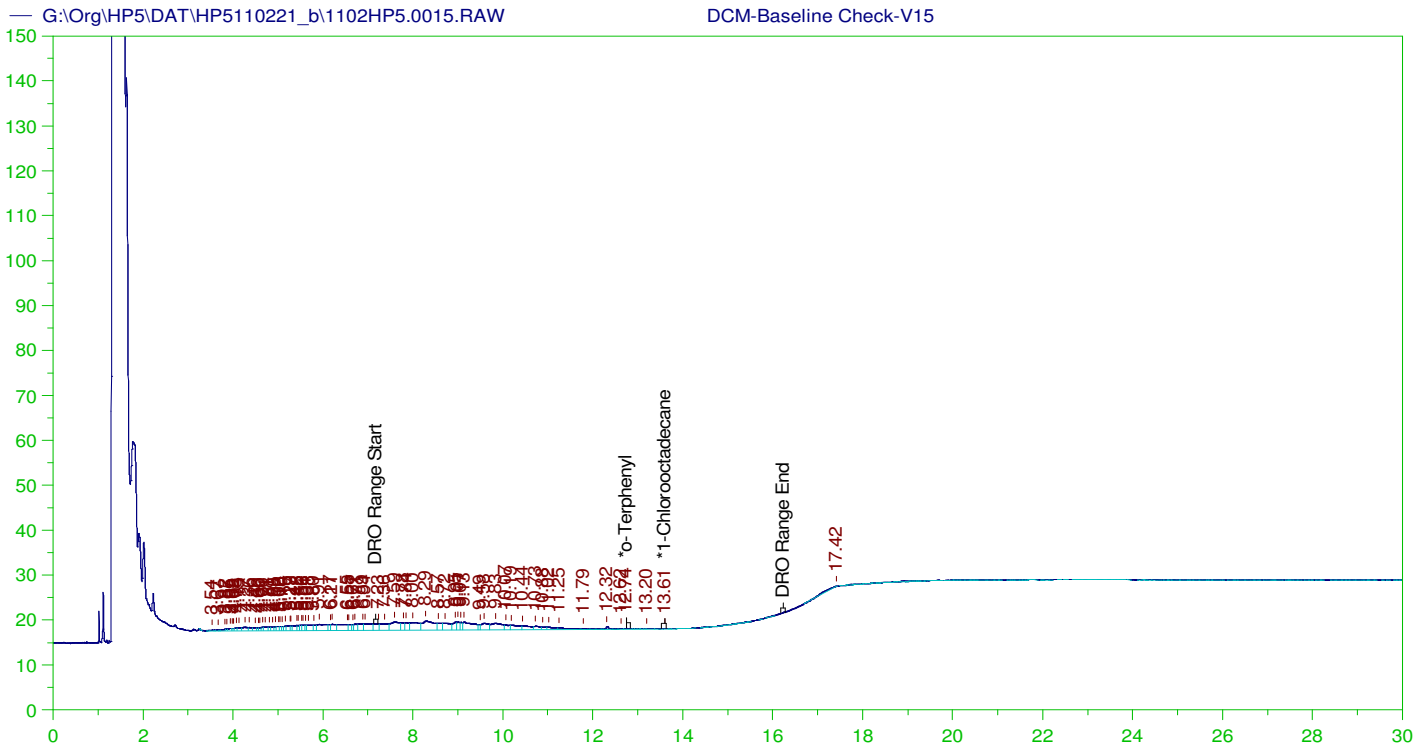
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	29.921	200.	.	.	-
*1-Chlorooctadecane	13.135	200.	512.63	256.31	-

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



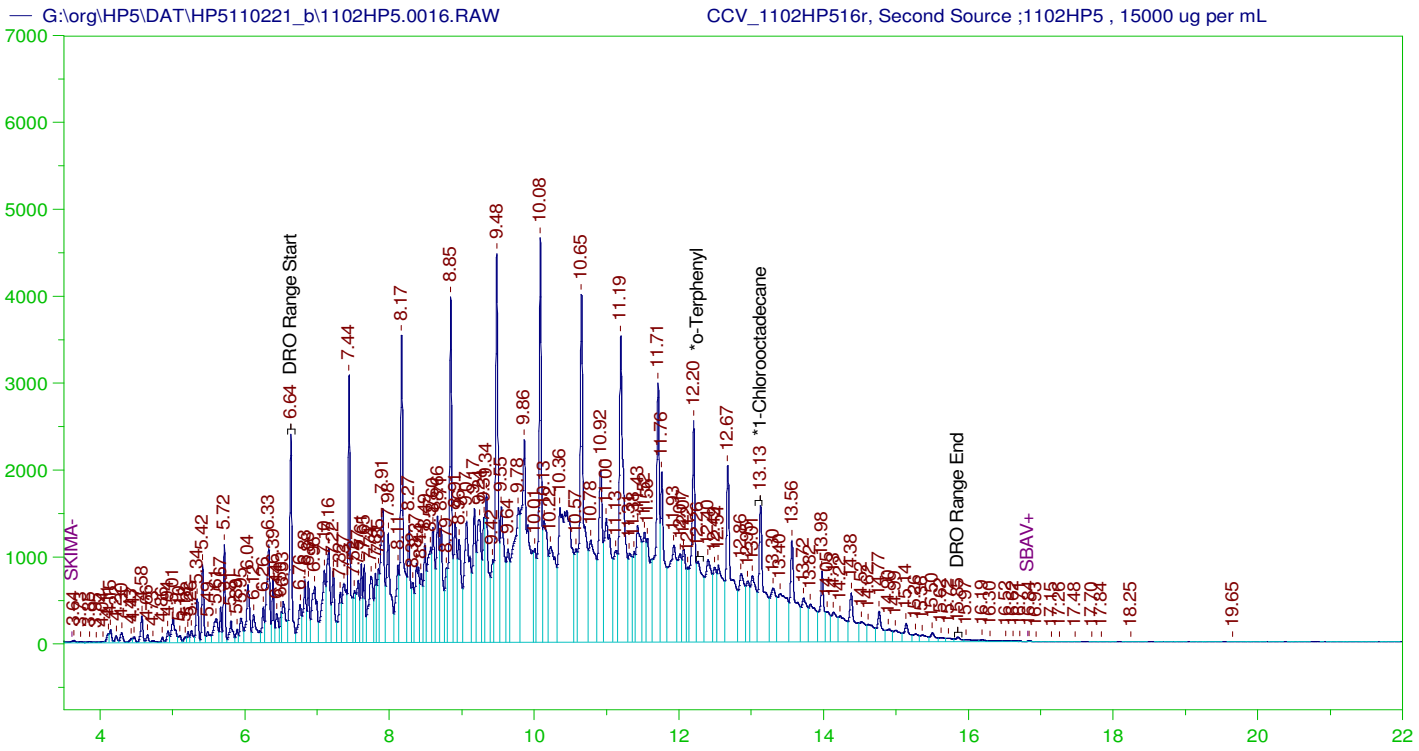
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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	Insert Entries(Have the first cell for entries selecte / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manul Integrations
G:\org\HP5\DAT\HP5110221_b\1102HP5.03r	CCV_1102HP508r, DRO ;1102HP5 , DRO211025A	G:\Org\HP5\Methods\DC_8015-IA-L%.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5110221_b\1102HP5.04r	DCM-Baseline Check-V04	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5110221_b\1102HP5.05r	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 Basline 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.
G:\org\HP5\DAT\HP5110221_b\1102HP5.06r	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 Basline 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.
G:\org\HP5\DAT\HP5110221_b\1102HP5.07r	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 Basline 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.
G:\org\HP5\DAT\HP5110221_b\1102HP5.08r	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 Basline 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.
G:\org\HP5\DAT\HP5110221_b\1102HP5.09r	CCV_1102HP509r, CAL5 ;1102HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211101A + 750 DCM(14408)	G:\Org\HP5\Methods\DS_8015-IA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration using Set Basline 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.
G:\org\HP5\DAT\HP5110221_b\1102HP5.10r	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 basline. Assigned Set Baseline All Valley on at 16.83
G:\org\HP5\DAT\HP5110221_b\1102HP5.11r	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 basline. Assigned Set Baseline All Valley on at 17.5
G:\org\HP5\DAT\HP5110221_b\1102HP5.12r	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 basline. Assigned Set Baseline All Valley on at 17.5
G:\org\HP5\DAT\HP5110221_b\1102HP5.13r	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 basline. Assigned Set Baseline All Valley on at 17.5
G:\org\HP5\DAT\HP5110221_b\1102HP5.14r	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 basline. Assigned Set Baseline All Valley on at 17.5
G:\org\HP5\DAT\HP5110221_b\1102HP5.15r	DCM-Baseline Check-V15	G:\Org\HP5\Methods\DR_8015-HP-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5110221_b\1102HP5.16r	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 basline. 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 Nam	Insert Entries(Have the first cell for entries selected	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
g:\org\HP5\DAT\HP5021821_b\0218HP5.01r	Marker_0218HP501r, DRO C40 ;0218HP5 , DRO210204A			g:\org\HP5\Methods\\CSC210212.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.02r	DCM-Baseline Check-V02			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.03r	CCV_0218HP503r, CAL1 ;0218HP5 , 150 ug per mLOil (10 uL of Cal4 + 990 uL DCM(13510)			G:\Org\HP5\Methods\DR_OIL-021803-AA-L0.MET	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.04r	DCM-Baseline Check-V04			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.05r	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
g:\org\HP5\DAT\HP5021821_b\0218HP5.06r	DCM-Baseline Check-V06			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.07r	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
g:\org\HP5\DAT\HP5021821_b\0218HP5.08r	DCM-Baseline Check-V08			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.09r	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
g:\org\HP5\DAT\HP5021821_b\0218HP5.10r	DCM-Baseline Check-V10			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.11r	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
g:\org\HP5\DAT\HP5021821_b\0218HP5.12r	DCM-Baseline Check-V12			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.13r	DCM-Baseline Check-V13			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.14r	DCM-Baseline Check-V14			G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
g:\org\HP5\DAT\HP5021821_b\0218HP5.15r	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

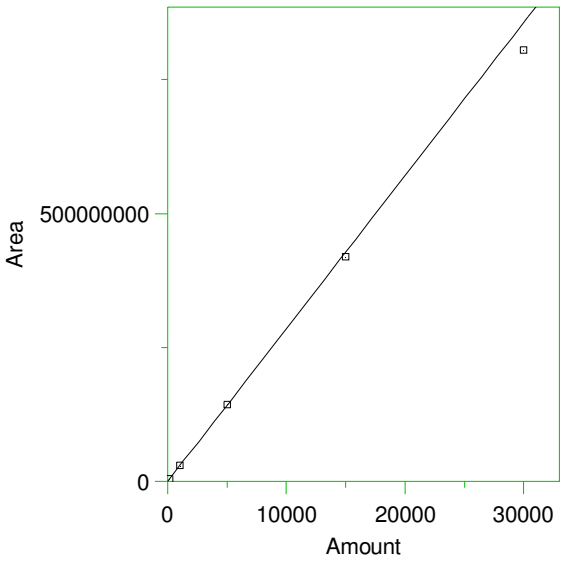
Creator: AMN 3/31/2021
Description: DRO-8015-Oil range. New ICal Per 0218HP5 (2021)-2 uL Inj.; COD added using OTP RFs
Reason for change:

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

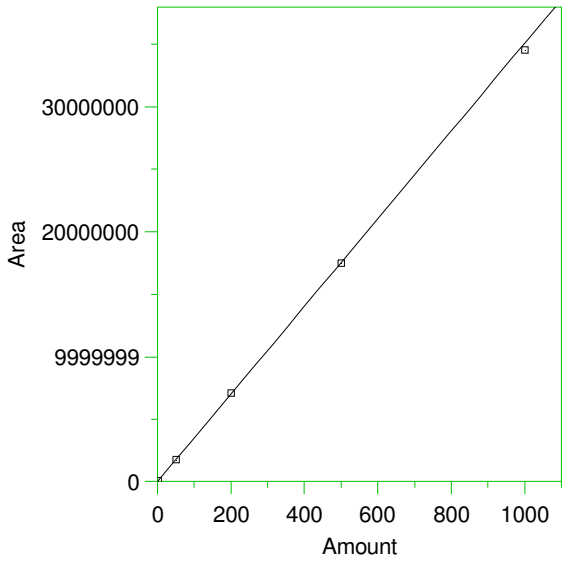
Y = 28542.41 X + 0

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

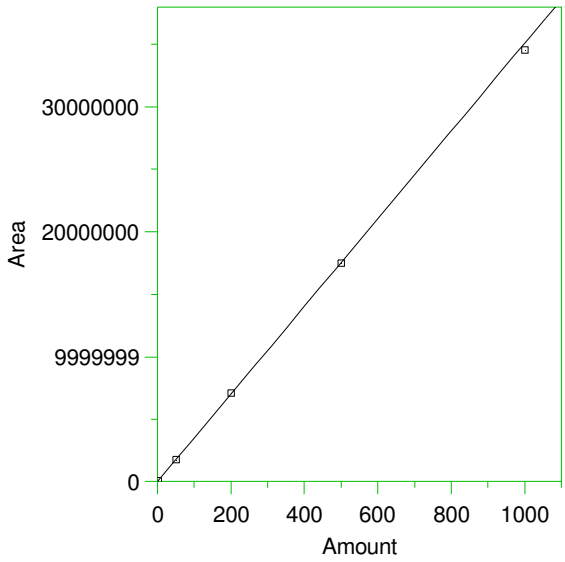
Y = 35071.26 X + 0

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

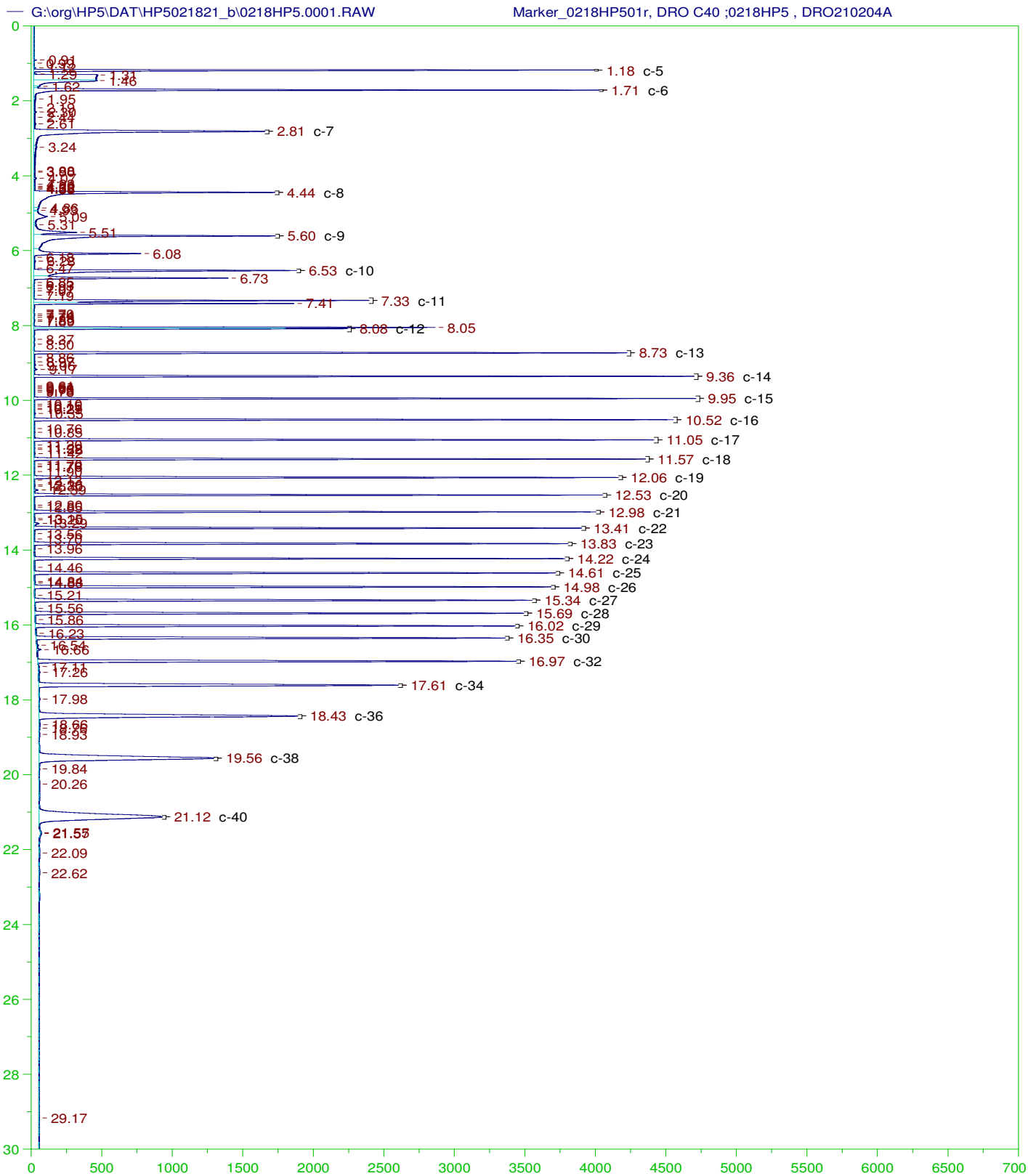
Single peak quantification by area

Y = 35071.26 X + 0

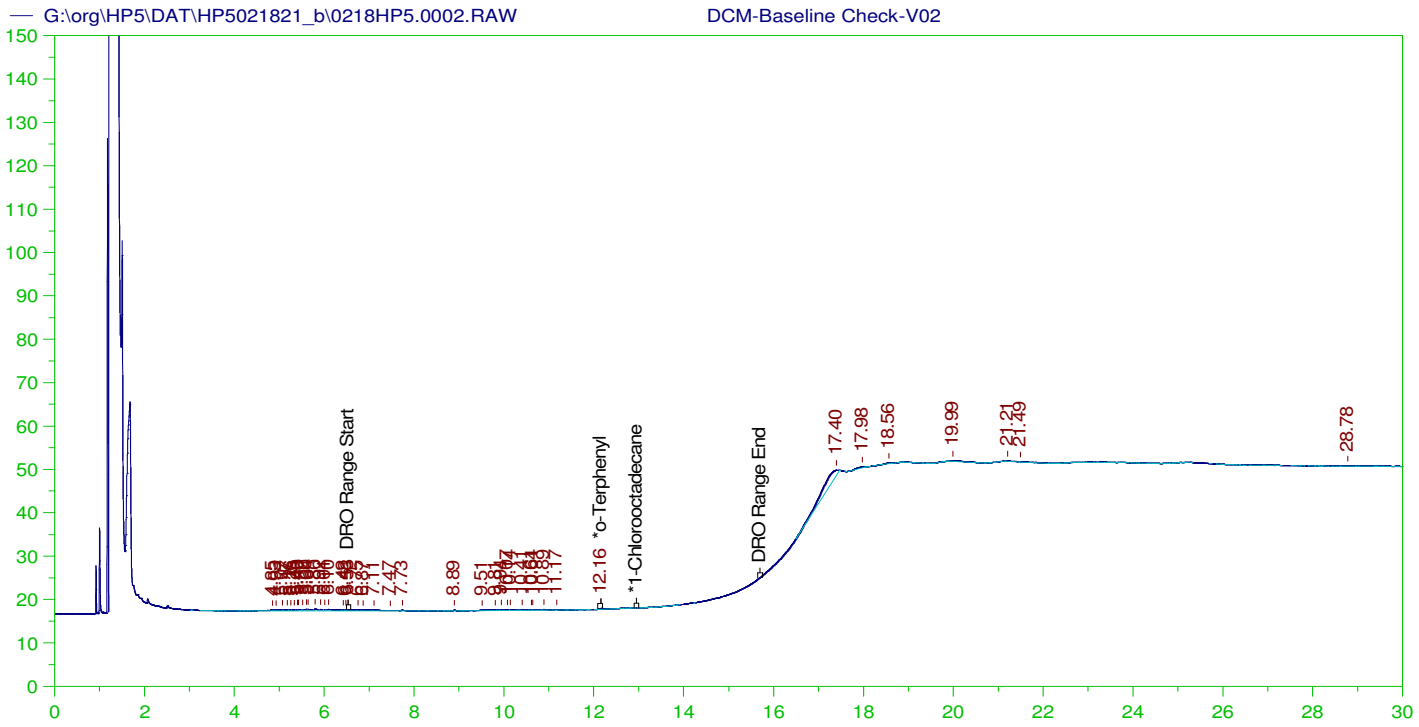
Average CF fit with equal weighting, forced to origin

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



G:\org\HP5\dat\HP5021821_b\Review\001_Marker_0218HP501r_CSC210212.xls



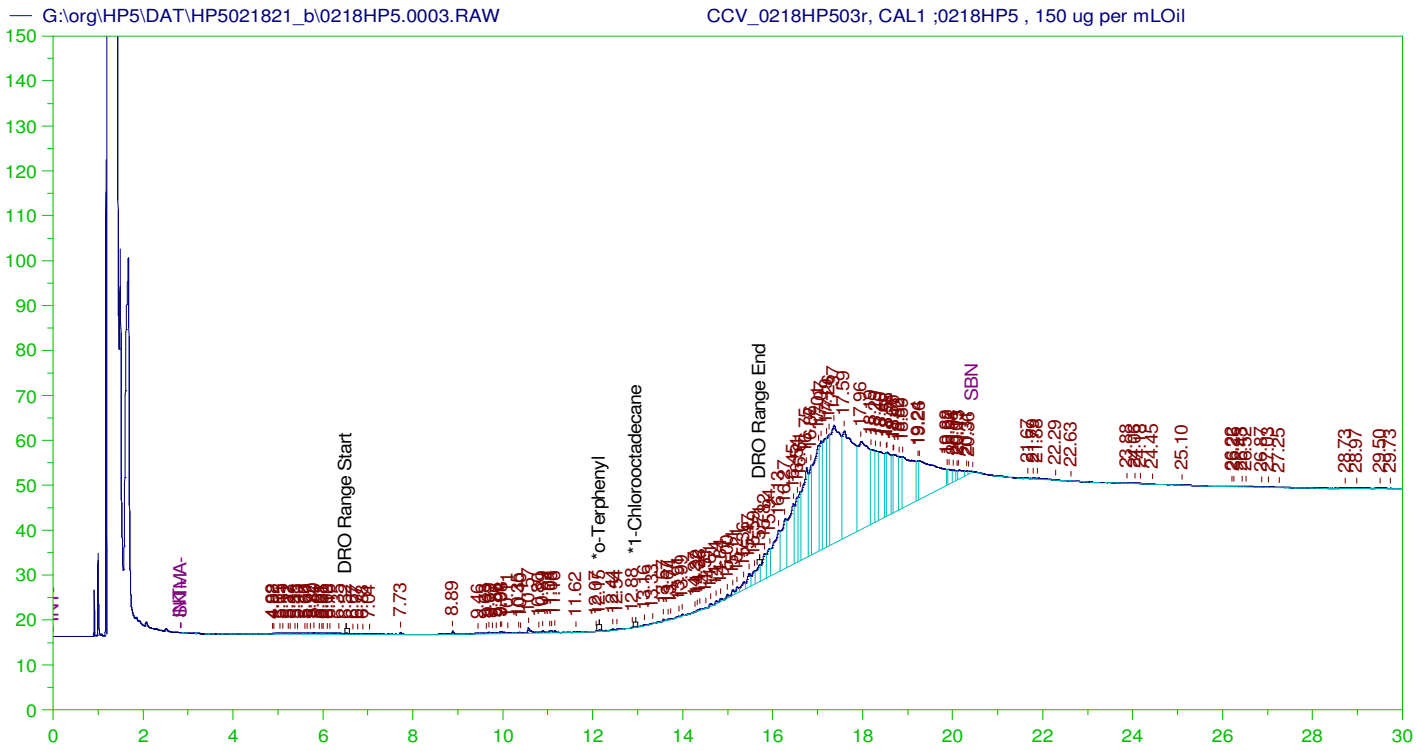
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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 mLOil
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

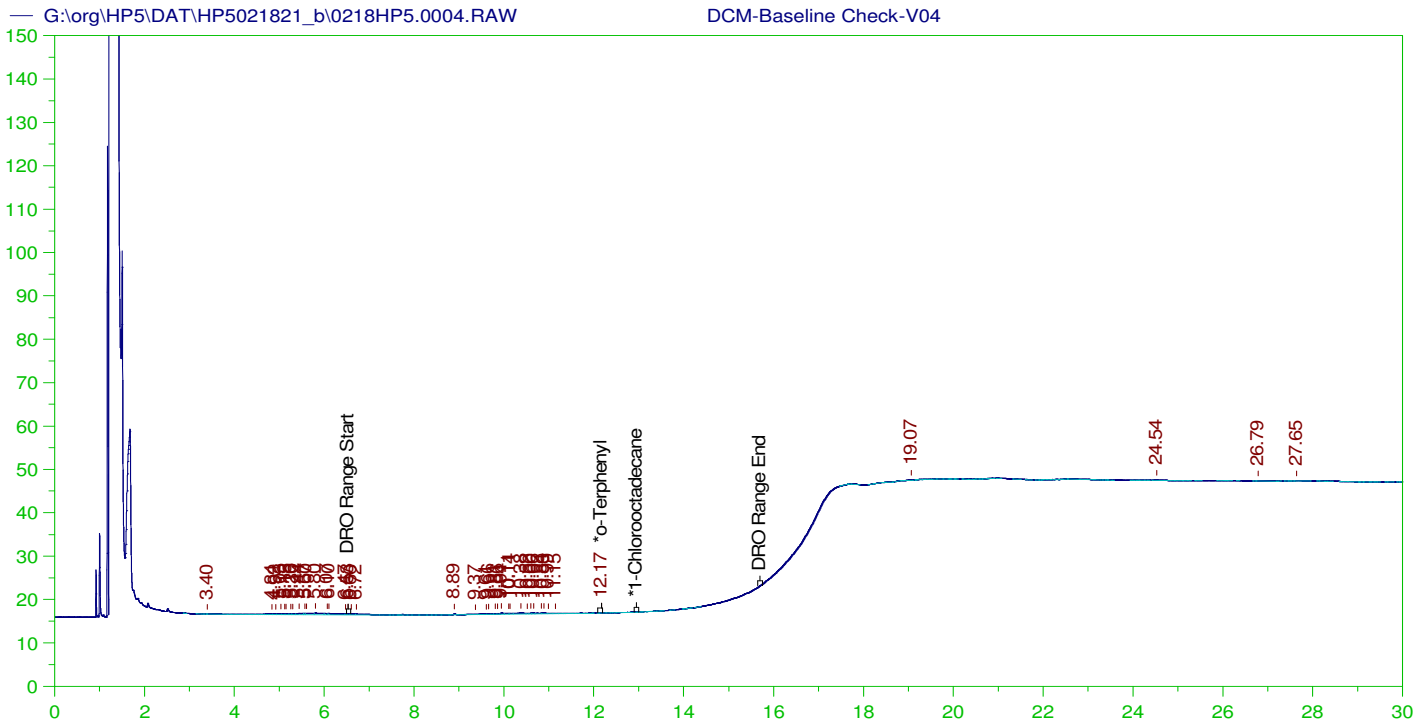
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.146	200.	.02	.01	-
*1-Chlorooctadecane	29.979	200.	.	.	-

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



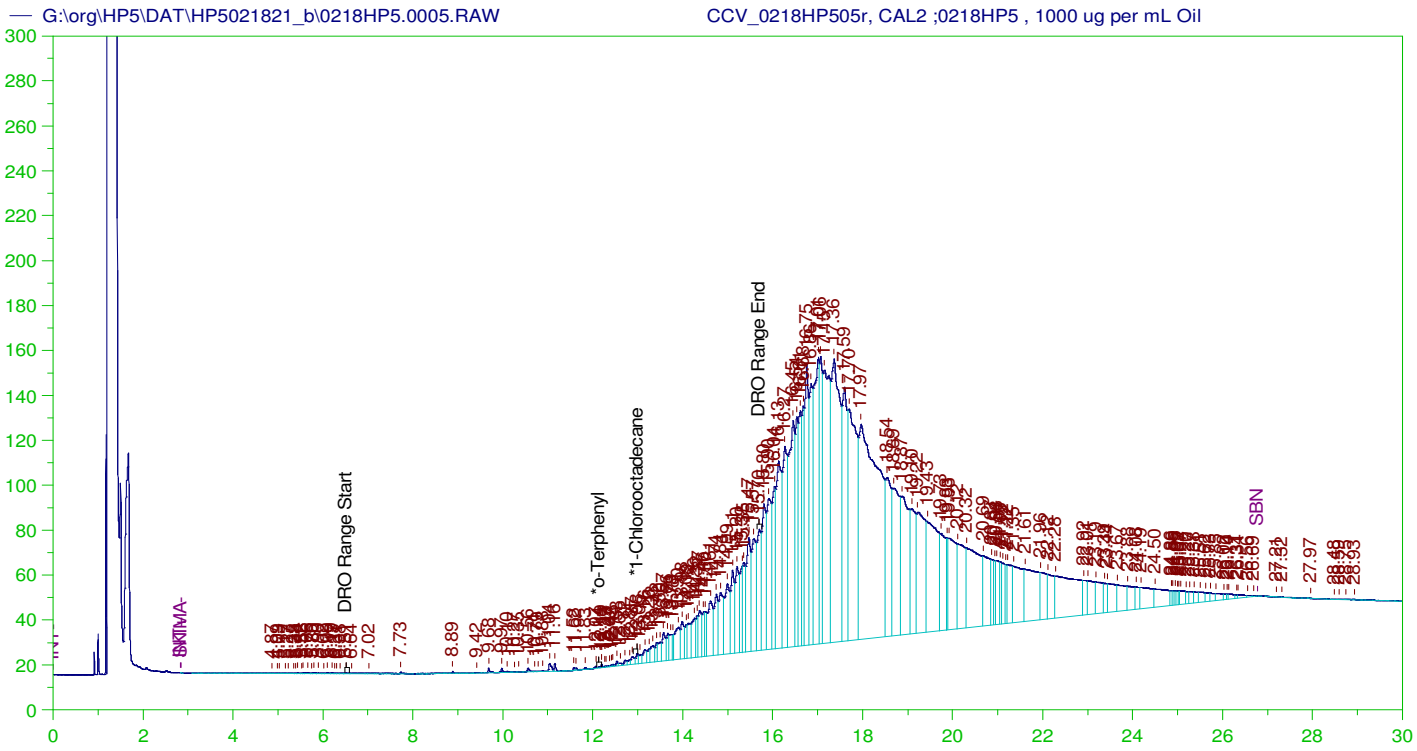
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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	-

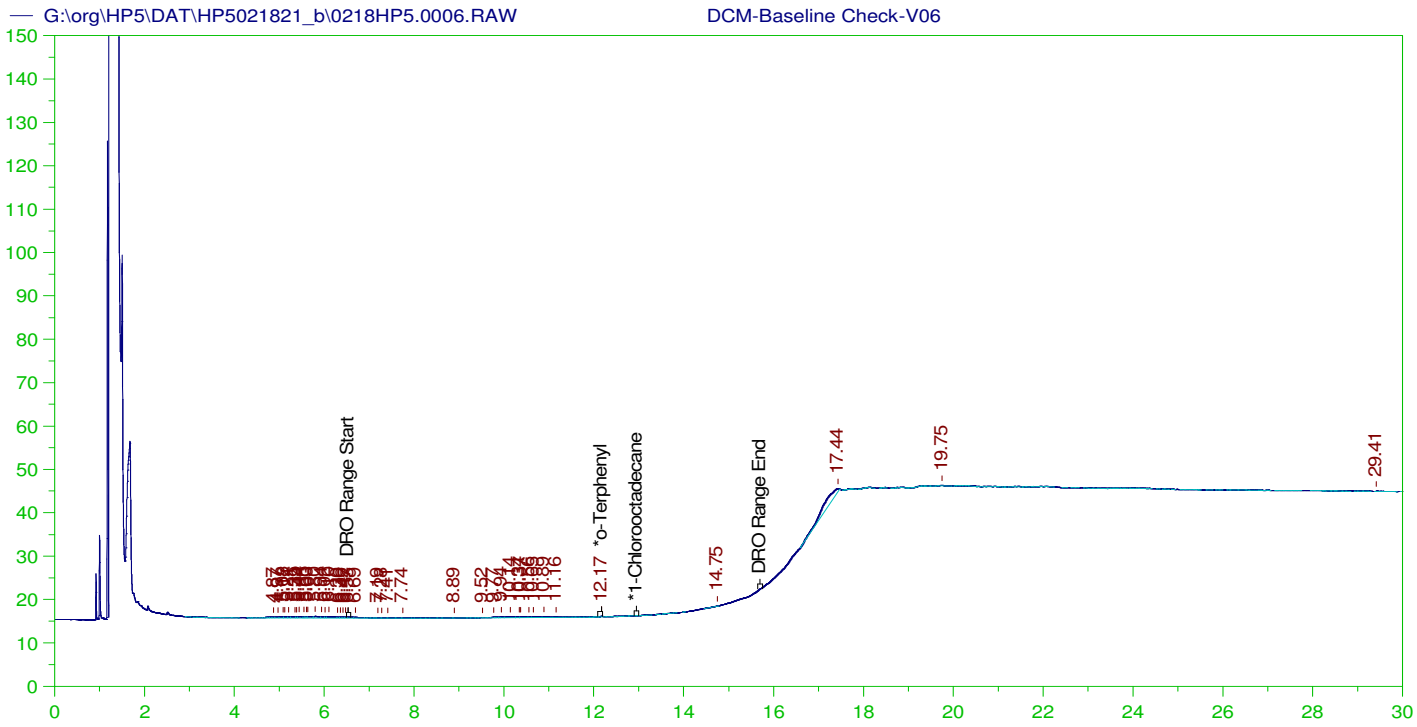
DRO Area:3721460 DRO Amount: 130.3835
TEH Area:3.03352E+07 TEH Amount: 1062.811

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

G:\org\HP5\dat\HP5021821_b\Review\005_CCV_0218HP505r_DR_OIL-021805-AA-L0.xls



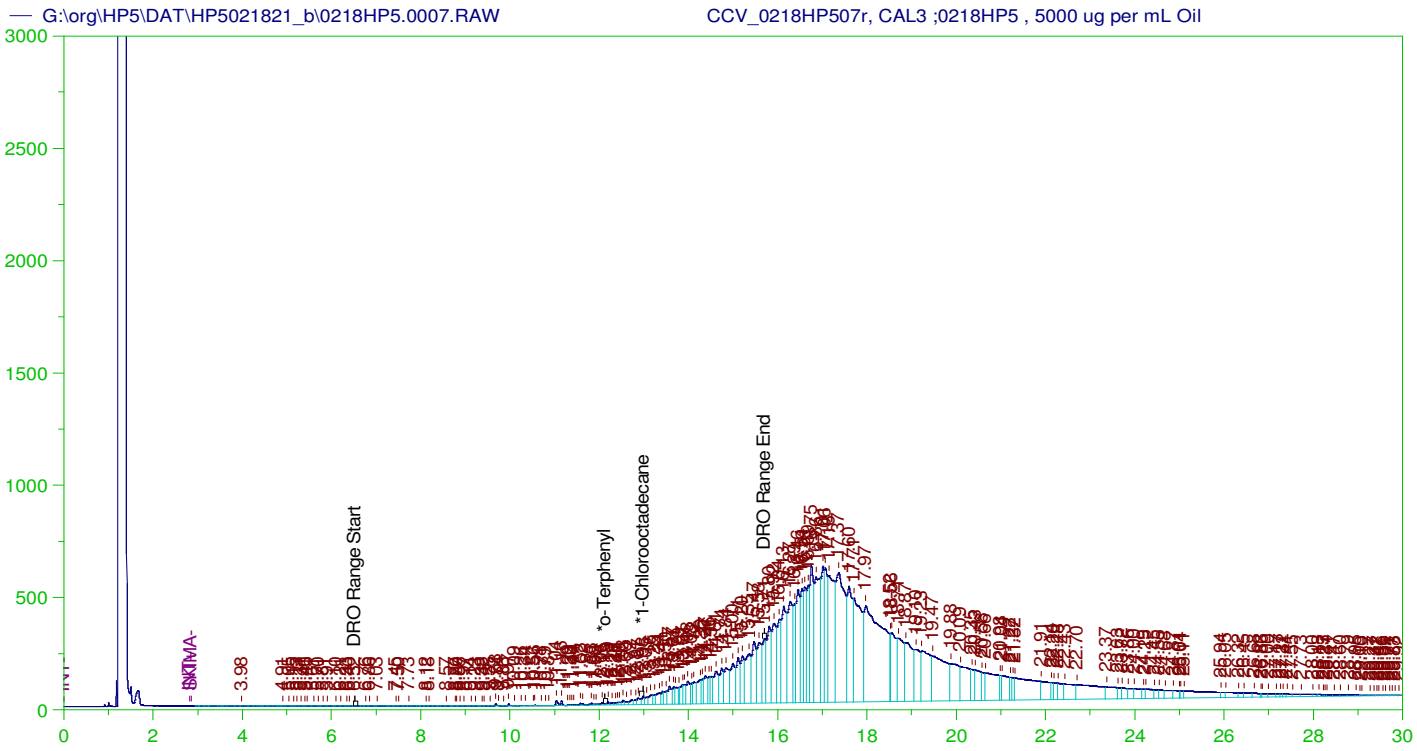
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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	-

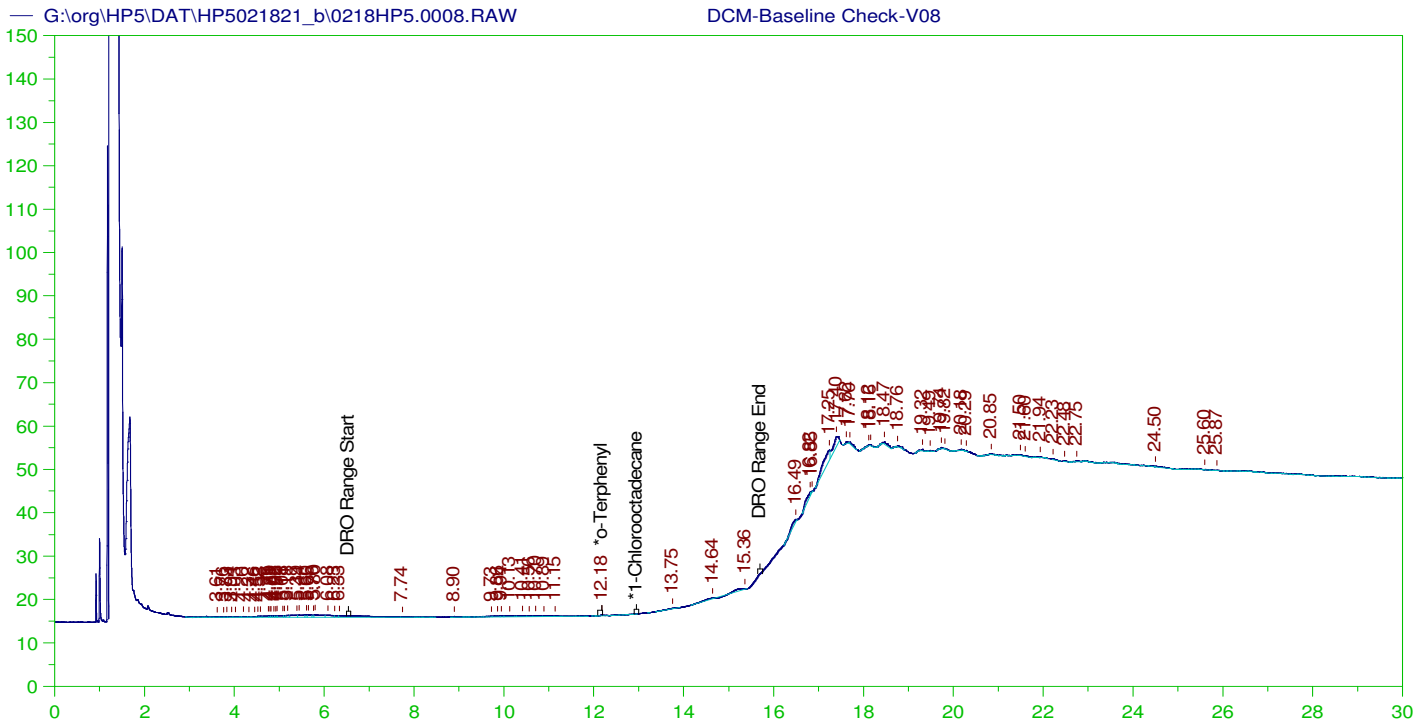
DRO Area:2.19239E+07 DRO Amount: 768.1166
TEH Area:1.437314E+08 TEH Amount: 5035.713

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

G:\org\HP5\dat\HP5021821_b\Review\007_CCV_0218HP507r_DR_OIL-021807-AA-L0.xls



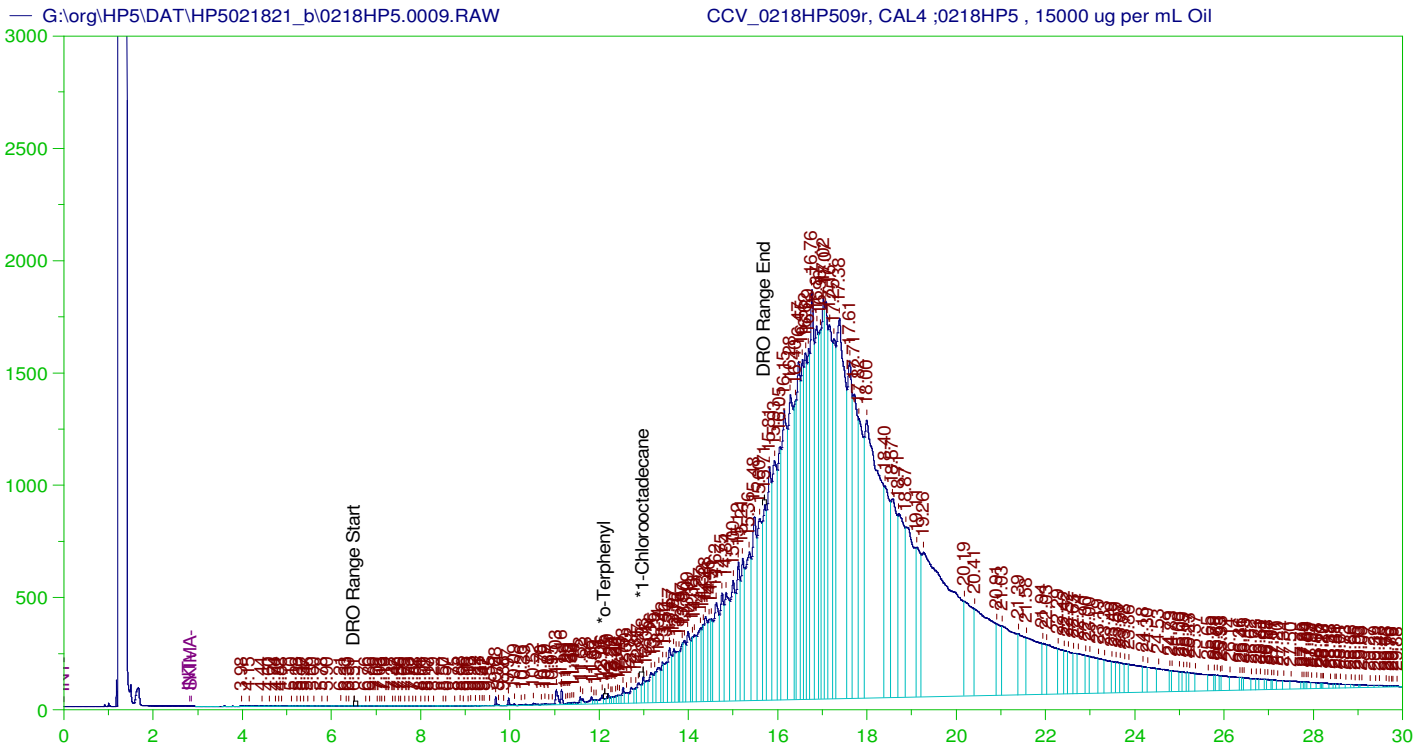
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



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

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

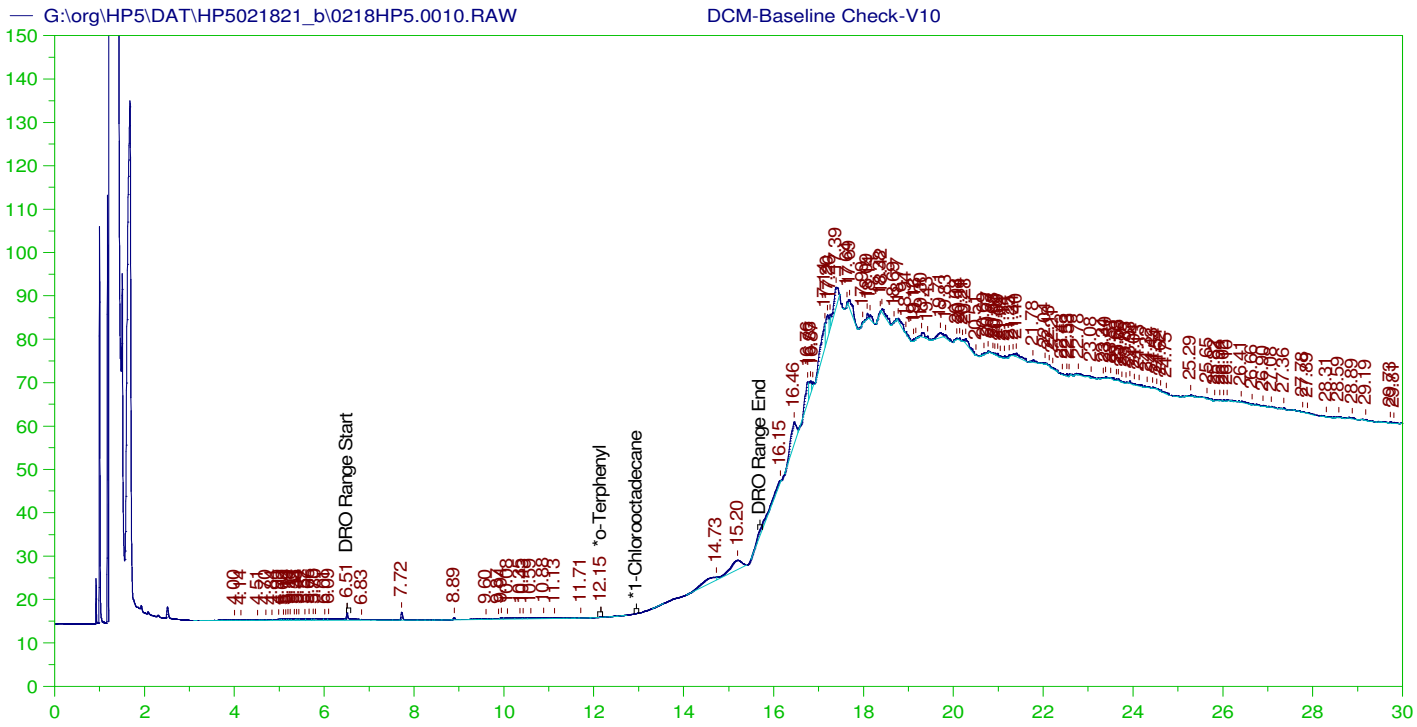
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.124	200.	1.888	.94	-
*1-Chlorooctadecane	12.984	200.	13.129	6.56	-

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

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

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

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

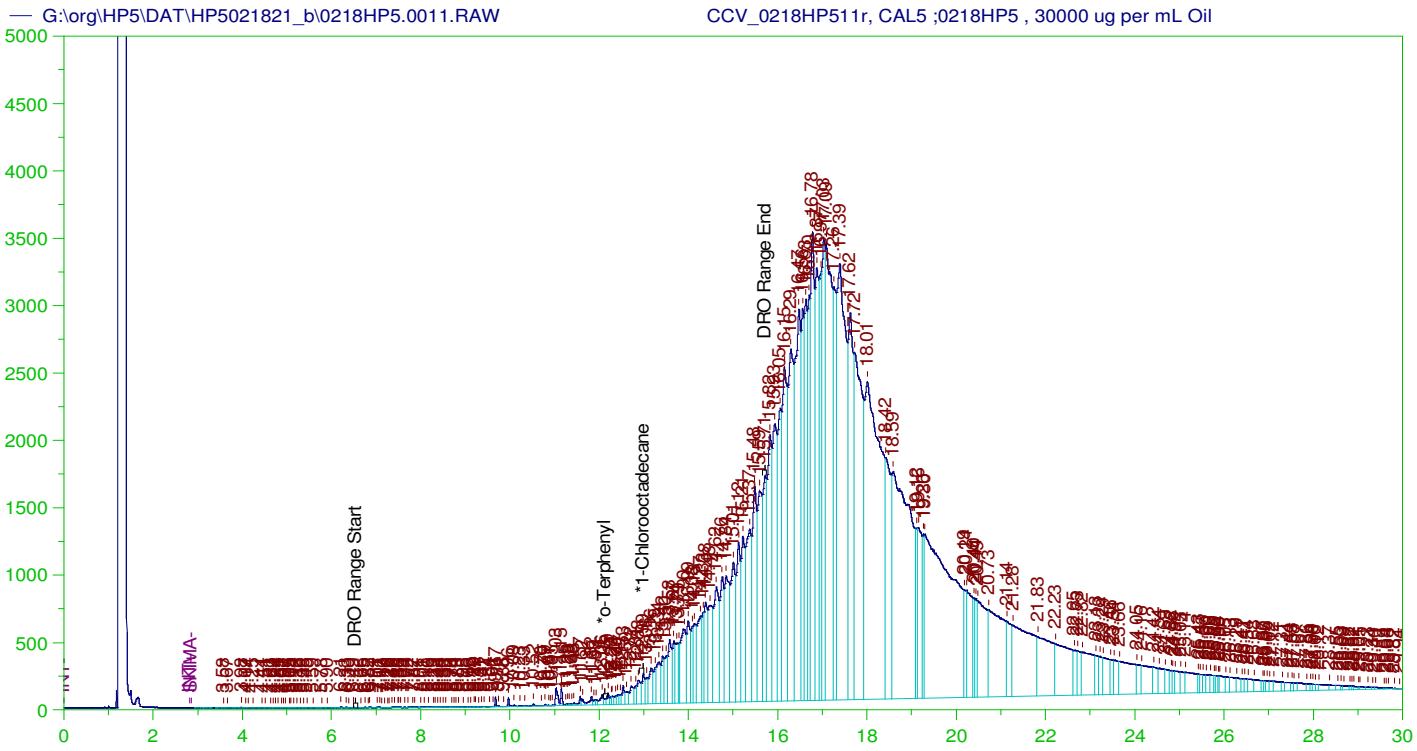


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V10
Raw File: G:\org\HP5\DAT\HP5021821_b\0218HP5.0010.RAW
Date & Time Acquired: 2/18/2021 4:56:16 PM
Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
Sample Weight: 1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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

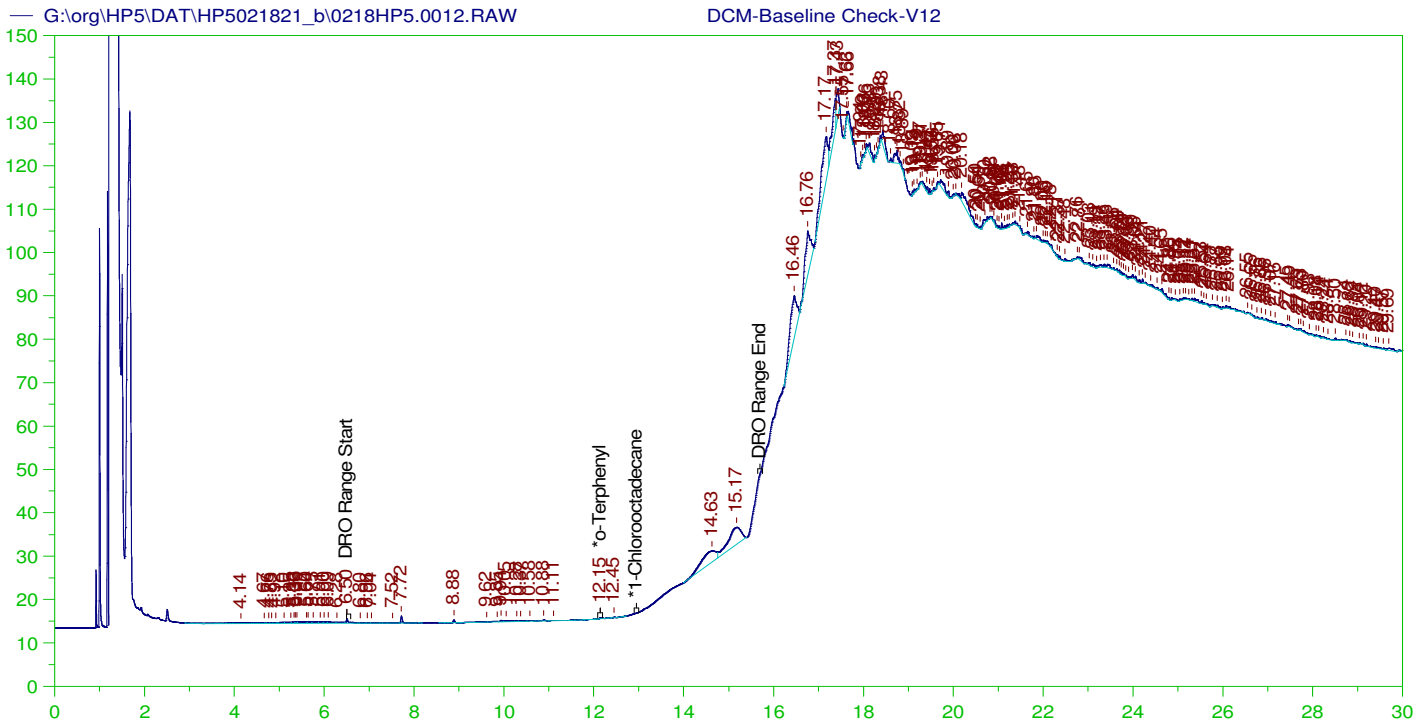
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.128	200.	3.828	1.91	-
*1-Chlorooctadecane	12.985	200.	28.22	14.11	-

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

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

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

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



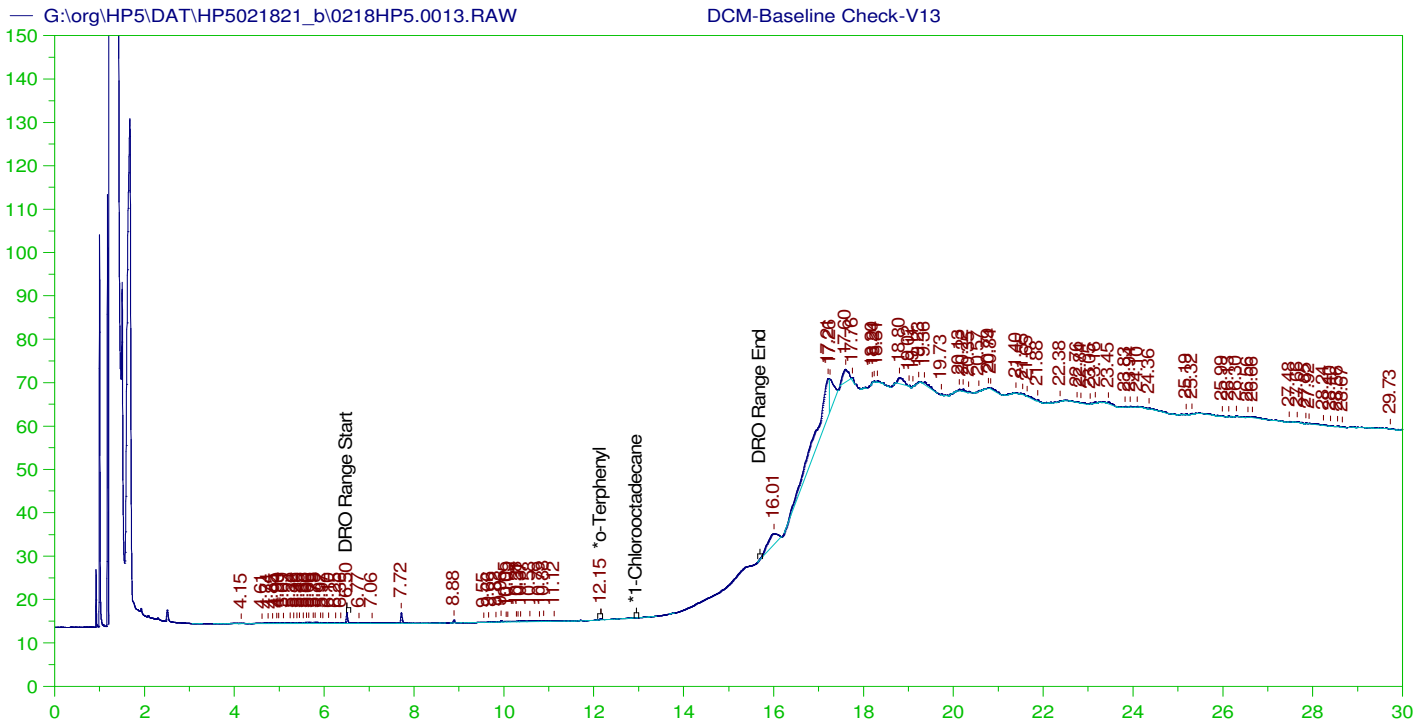
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



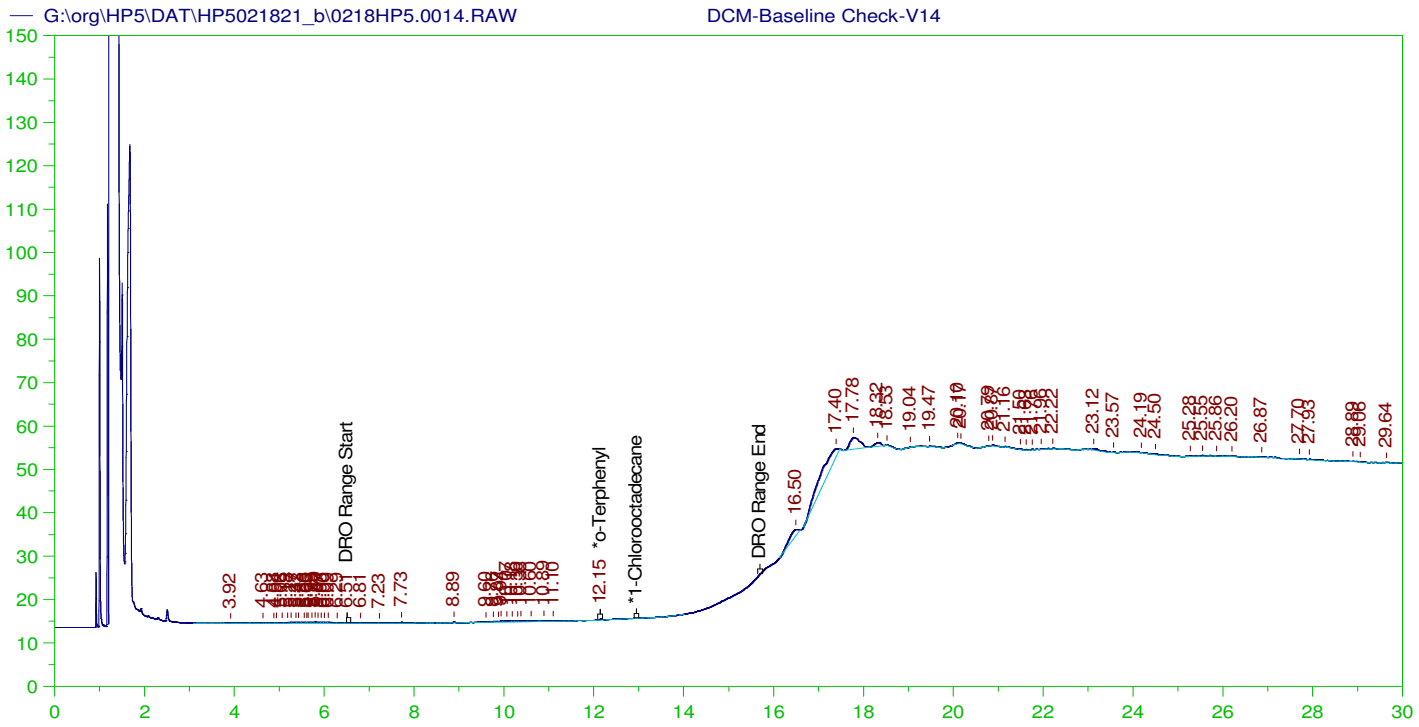
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



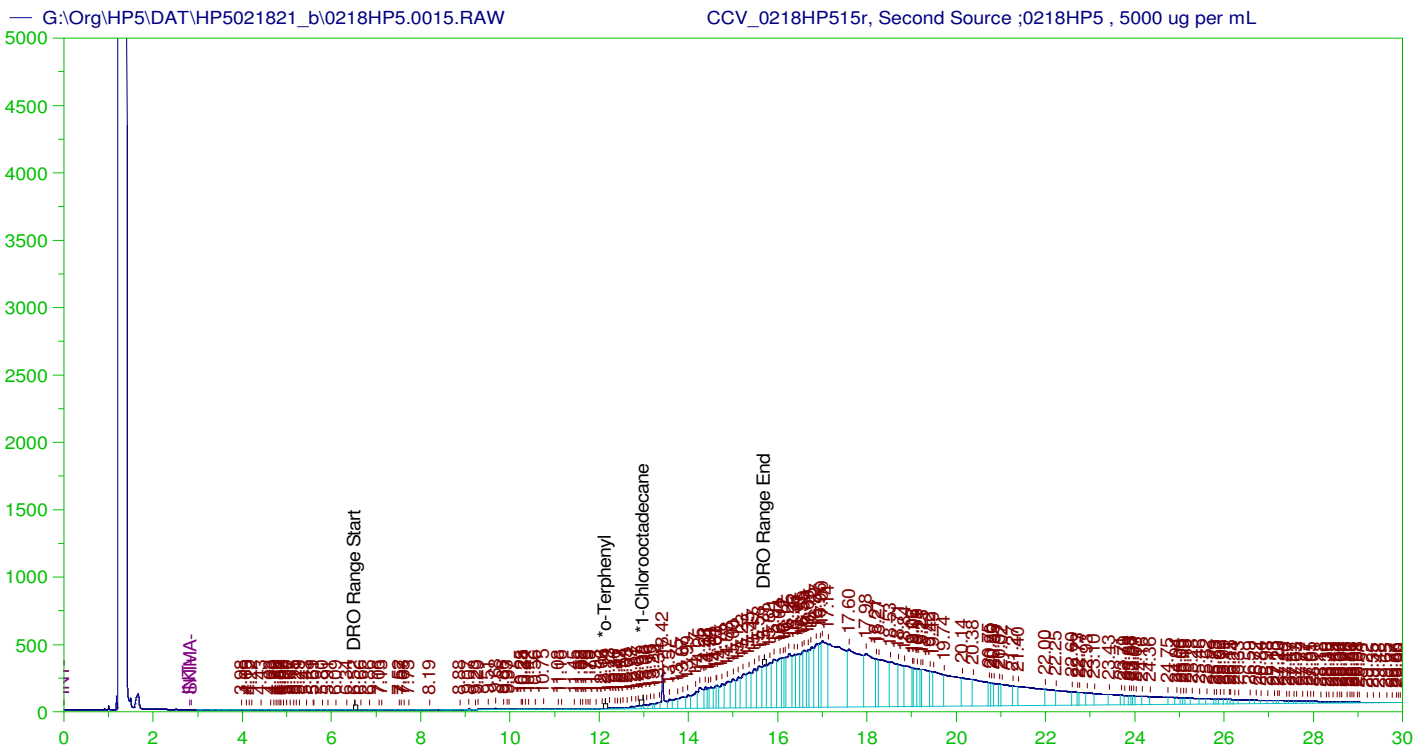
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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

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

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

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

Write Sequence	Data File	Sample Nan	Insert Entries(Have the first cell for entries selecte	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.01r	Marker_0218HP501r, DRO C40 ;0218HP5 , DRO210204A		g:\org\HP5\Methods\\CSC210212.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.02r	DCM-Baseline Check-V02		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.03r	CCV_0218HP503r, CAL1 ;0218HP5 , 150 ug per mLOil (10 uL of Cal4 + 990 uL DCM(13510)		G:\Org\HP5\Methods\DR_OIL-021803-AA-L0.MET	1	1	1	1	0	The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 20.91 changed peak width and scale was set at 150 for the Yaxis.
	:\org\HP5\DAT\HP5021821_b\0218HP5.04r	DCM-Baseline Check-V04		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.05r	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	The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 26.79 changed peak width and scale was set at 300 for the Yaxis.
	:\org\HP5\DAT\HP5021821_b\0218HP5.06r	DCM-Baseline Check-V06		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.07r	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	The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the basline. Scale was set at 3000 for the Yaxis.
	:\org\HP5\DAT\HP5021821_b\0218HP5.08r	DCM-Baseline Check-V08		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.09r	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	The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the basline. Scale was set at 3000 for the Yaxis.
	:\org\HP5\DAT\HP5021821_b\0218HP5.10r	DCM-Baseline Check-V10		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.11r	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	The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the basline. Scale was set at 5000 for the Yaxis.
	:\org\HP5\DAT\HP5021821_b\0218HP5.12r	DCM-Baseline Check-V12		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.13r	DCM-Baseline Check-V13		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.14r	DCM-Baseline Check-V14		G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integration
	:\org\HP5\DAT\HP5021821_b\0218HP5.15r	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	The integration of Total Extractable Hydrocarbons (OIL) is the hydrocarbon response with reference to the basline. Scale was set at 5000 for the Yaxis.

Ann Nebel

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

13-Oct-21

Run ID GCFID-HP4-B_211006B

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

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

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764069	CCV_1006HP41	HC-8015-DRO-	CAL1		10/7/2021 12:16:	1	R368535		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		0.1652093		0.15	0	0	0	0.3	0	110%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764070	CCV_1006HP41	HC-8015-DRO-	CAL2		10/7/2021 1:47:3	1	R368535		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		1.022149		1	0	0	0	0.3	0	102%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764071	CCV_1006HP41	HC-8015-DRO-	CAL3		10/7/2021 3:19:0	1	R368535		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.956371		5	0	0	0	0.3	0	99%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764072	CCV_1006HP41	HC-8015-DRO-	CAL4		10/7/2021 4:50:1	1	R368535		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764072	CCV_1006HP41	HC-8015-DRO-	CAL4		10/7/2021 4:50:1	1	R368535		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		14.79833		15	0	0	0	0.3	0	99%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764073	CCV_1006HP42	HC-8015-DRO-	CAL5		10/7/2021 6:21:2	1	R368535		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		29.29968		30	0	0	0	0.3	0	98%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764074	CCV_1006HP42	HC-8015-DRO-	ICV		10/7/2021 9:21:4	1	R368535		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.390338		5	0	0	0	0.3	0	108%	80	120	0%	

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

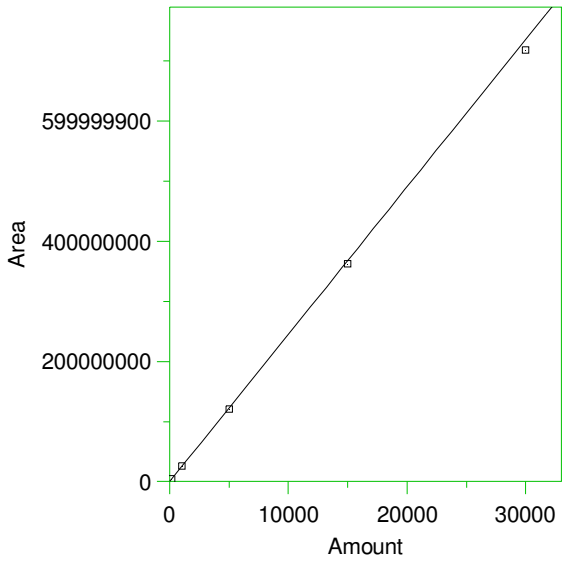
Creator: AMN
Description: 8015C-Oil Range w/Triacontane. New ICal Per 1006HP4 (2021)-2 uL Inj.;
Reason for change:

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

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

All levels are normal data points.

1 *30-40 Motor Oil



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

Single peak quantification by area

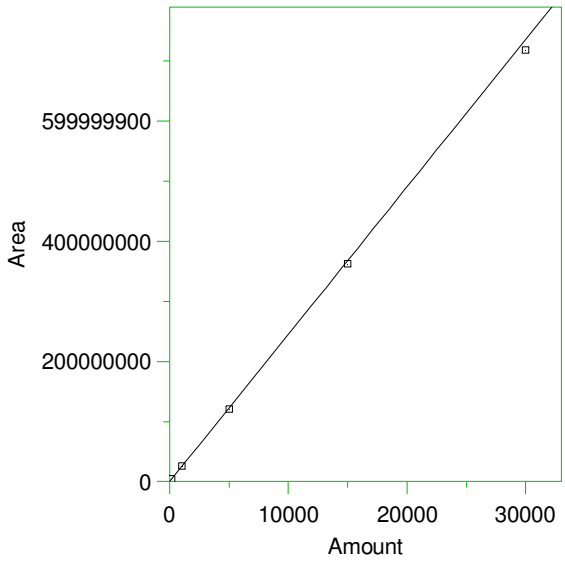
Y = 24529.56 X + 0

Average CF fit with equal weighting, forced to origin

Coefficient of determination:	0.9990484
Average error:	1.972%
Average CF:	24529.56
RSD:	2.304%

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

2 #C20



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

Single peak quantification by area

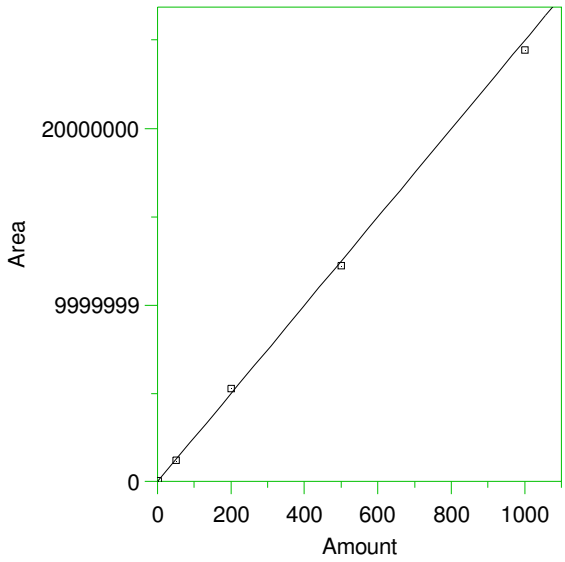
Y = 24529.56 X + 0

Average CF fit with equal weighting, forced to origin

Coefficient of determination:	0.9990484
Average error:	1.972%
Average CF:	24529.56
RSD:	2.304%

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

3 *#Triacontane



Expected retention time: 16.34 minutes
Search window: 0.05 minutes
No retention time reference component
Group number: 0

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

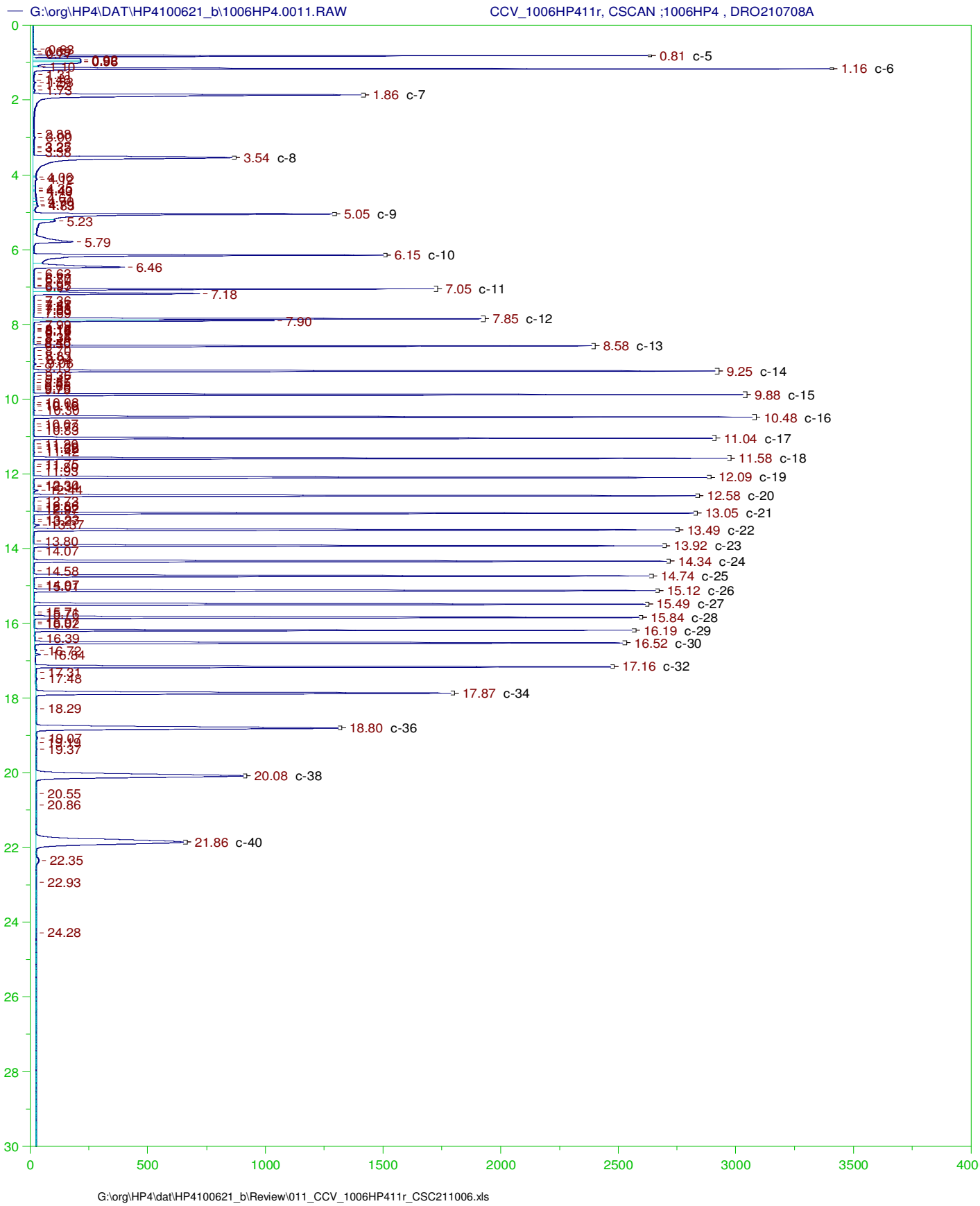
Single peak quantification by area

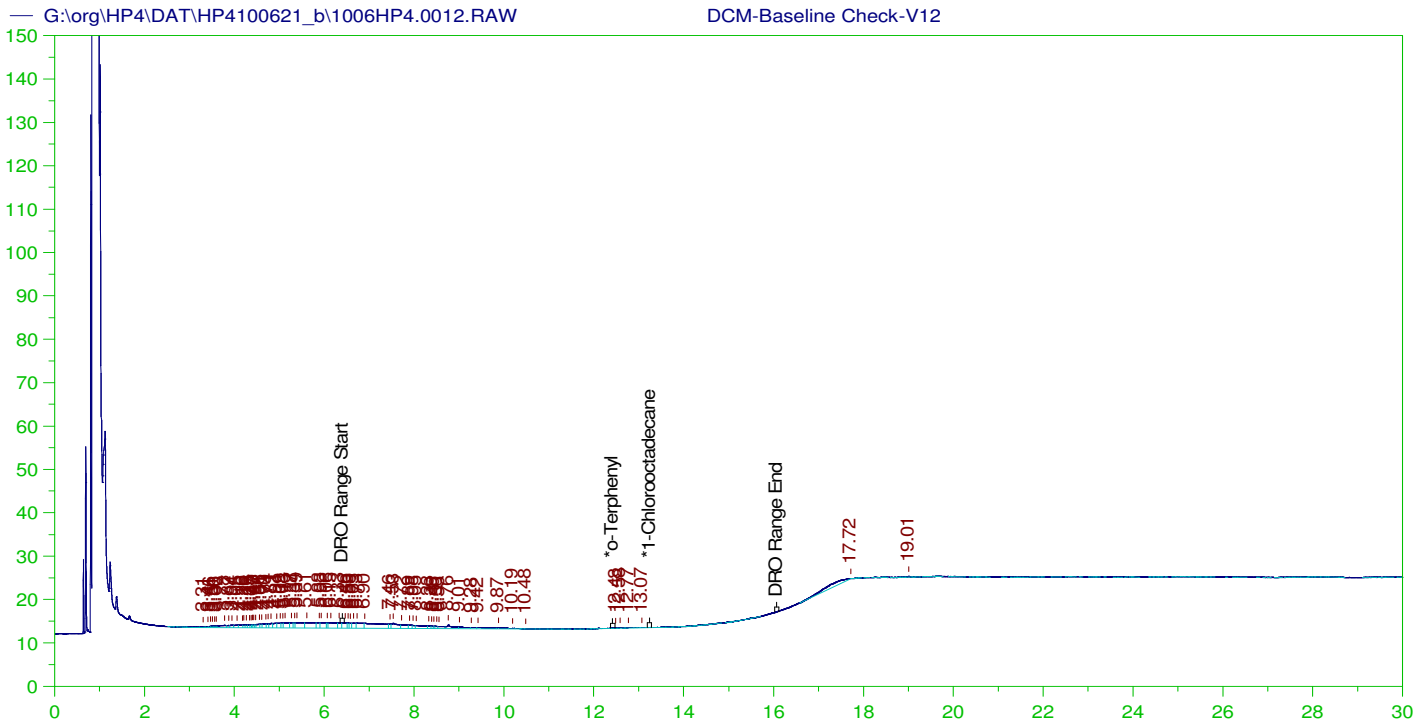
Y = 24973.81 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9989417
Average error: 2.783%
Average CF: 24973.81
RSD: 3.701%

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

Write Sequence / Data File	Insert Entries(Have the first cell for entries selecte / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP4\DAT\HP4100621_b\1006HP4.11r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	g:\org\HP4\Methods\CSC211006.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.12r	DCM-Baseline Check-V12	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.13r	CCV_1006HP413r, CAL1 ;1006HP4 , 150 ug per mLOil (10 uL of Cal4 + 990 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-13-OIL-AA-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.14r	DCM-Baseline Check-V14	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.15r	CCV_1006HP415r, CAL2 ;1006HP4 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-15-OIL-AA-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.16r	DCM-Baseline Check-V16	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.17r	CCV_1006HP417r, CAL3 ;1006HP4 , 5000 ug per mL Oil (200 uL of Cal 4 + 400 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.18r	DCM-Baseline Check-V18	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.19r	CCV_1006HP419r, CAL4 ;1006HP4 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-19-OIL-AA-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.20r	DCM-Baseline Check-V20	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.21r	CCV_1006HP423r, CAL5 ;1006HP4 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)(14354)	G:\Org\HP4\methods\DR_8015-21-OIL-AA-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.22r	DCM-Baseline Check-V22	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\D3_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.24r	DCM-Baseline Check-V24	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4100621_b\1006HP4.25r	CCV_1006HP425r, Second Source ;1006HP4 , 5000 ug per mL Oil (100 uL of DRO210902A + 900 uL of DCM)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0


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



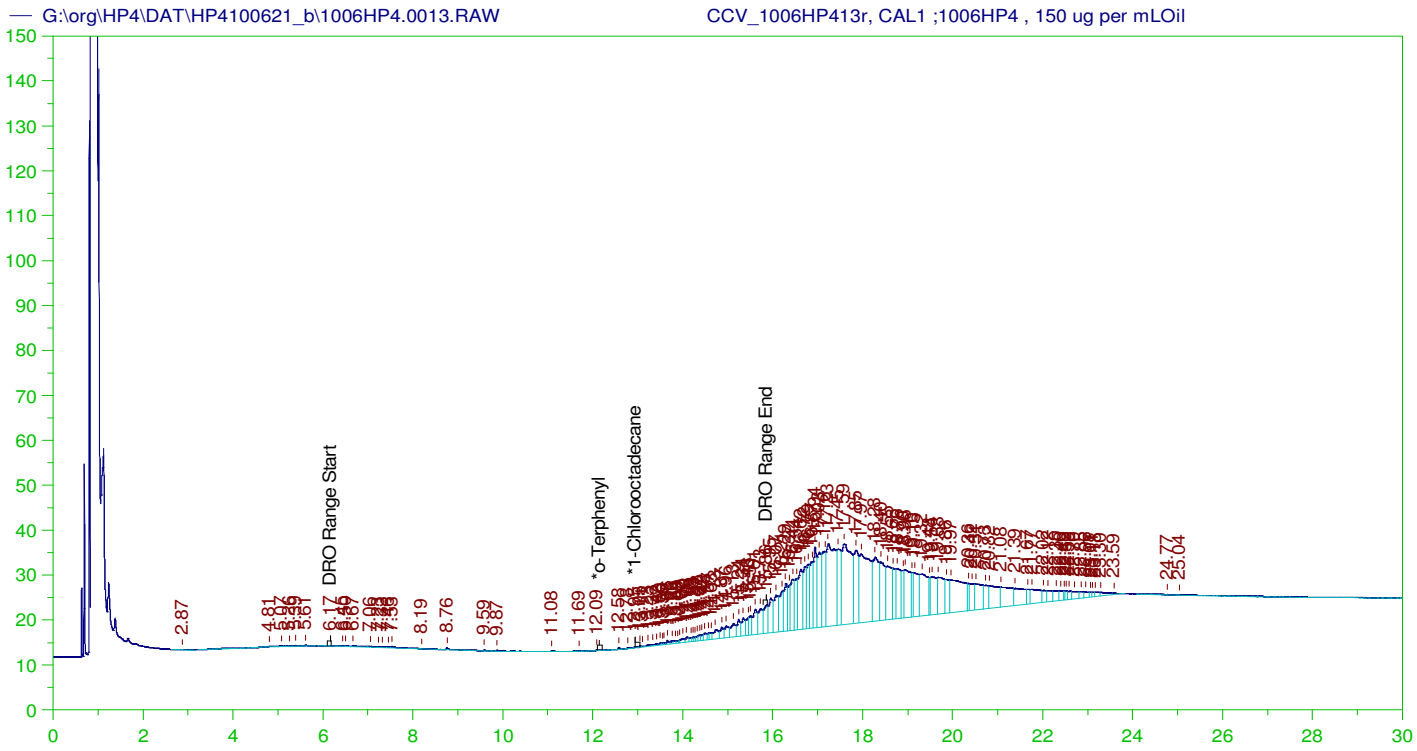
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

DRO Area:350454.1 DRO Amount: 14.28701
TEH (OiL Range) Area:4052512 TEH (Oil Range)Amount: 165.2093

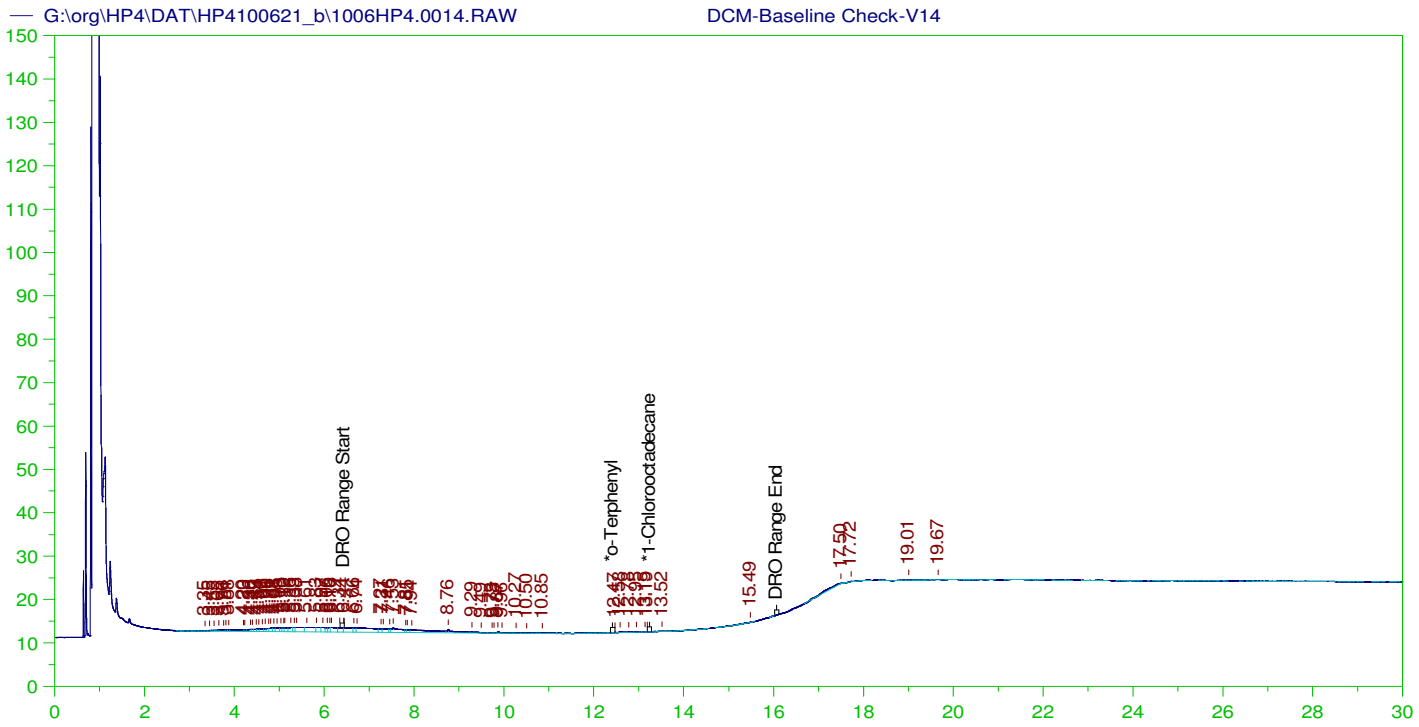
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0013.RAW

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

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

AMN 10/13/2021

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



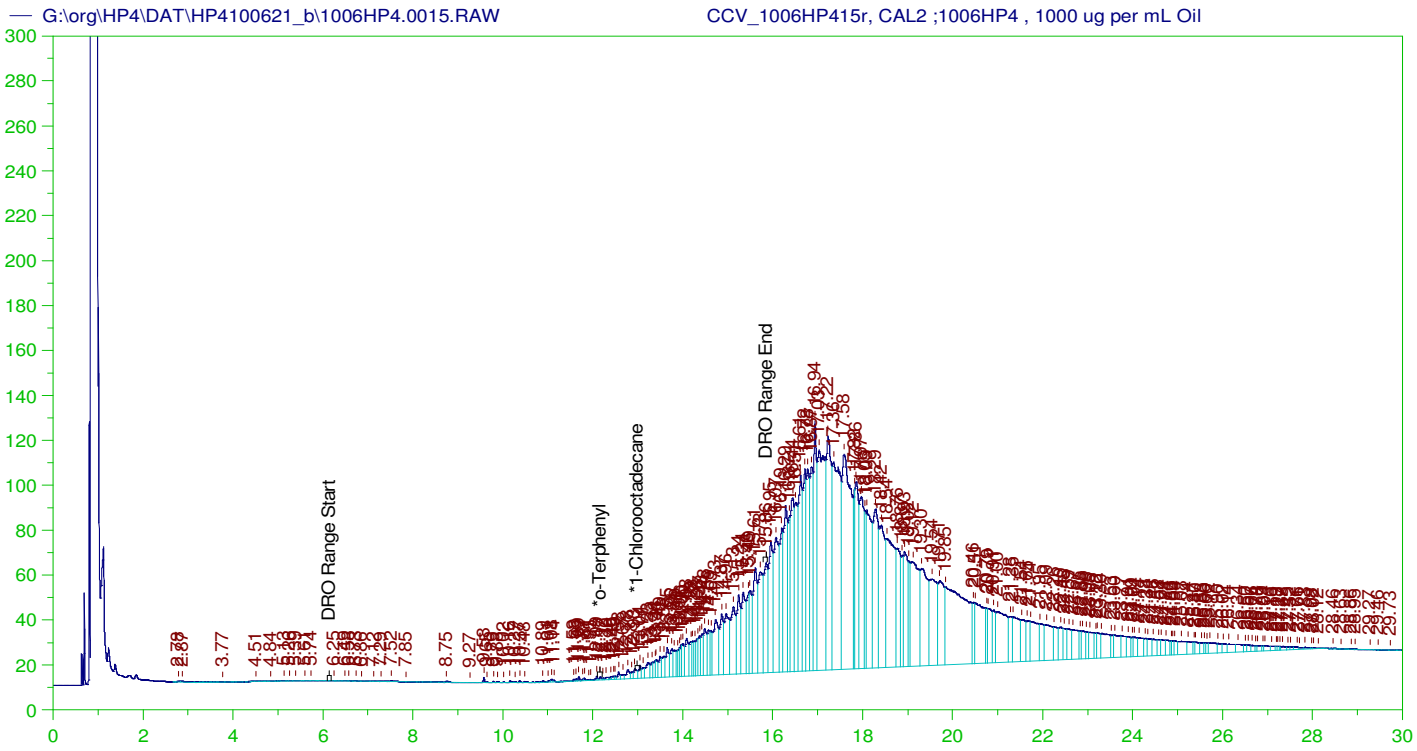
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0014.RAW
Date & Time Acquired: 10/7/2021 1:01:51 AM
Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_1006HP415r, CAL2 ;1006HP4 , 1000 ug per mL Oil
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0015.RAW
Date & Time Acquired: 10/7/2021 1:47:37 AM
Method File: G:\Org\HP4\methods\DR_8015-15-OIL-AA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_Oil_210106AA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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

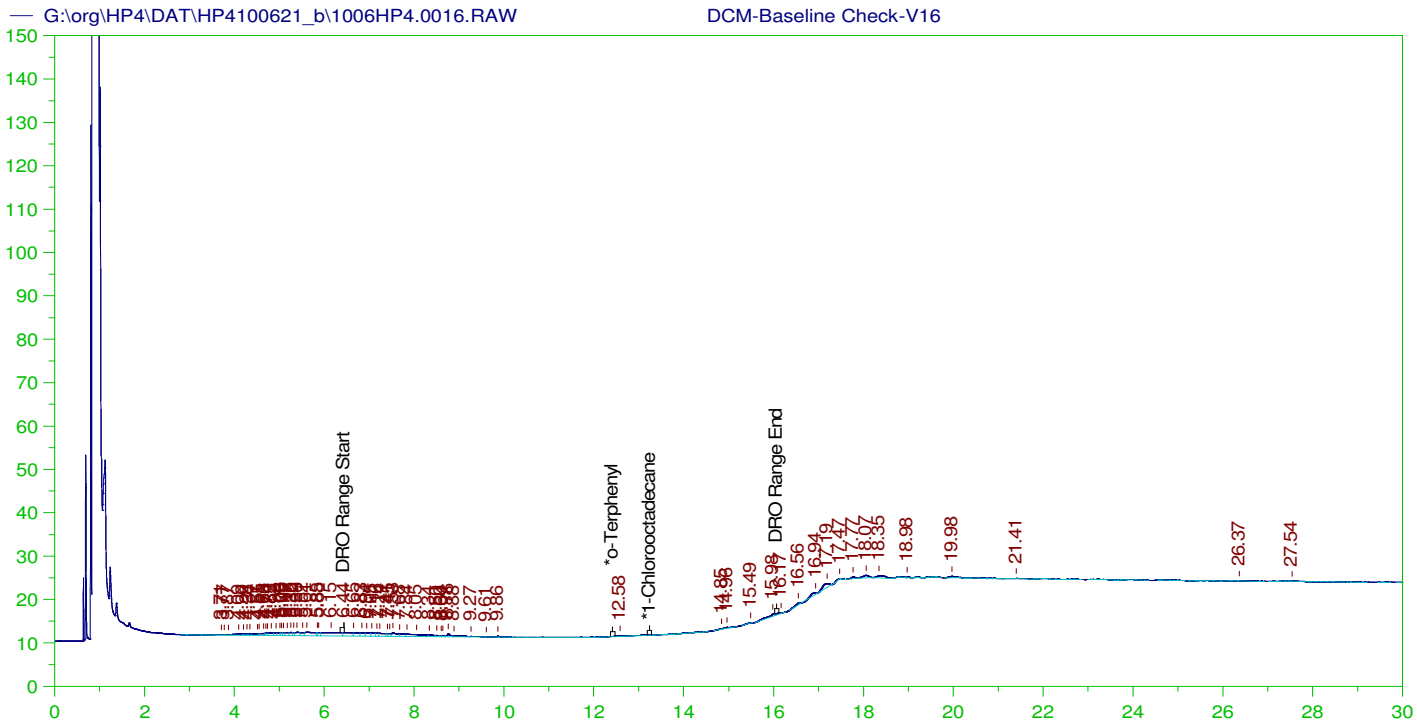
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0015.RAW

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

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

AMN 10/13/2021

G:\org\HP4\dat\HP4100621_b\Review\015_CCV_1006HP415r_DR_8015-15-OIL-AA-L%.xls



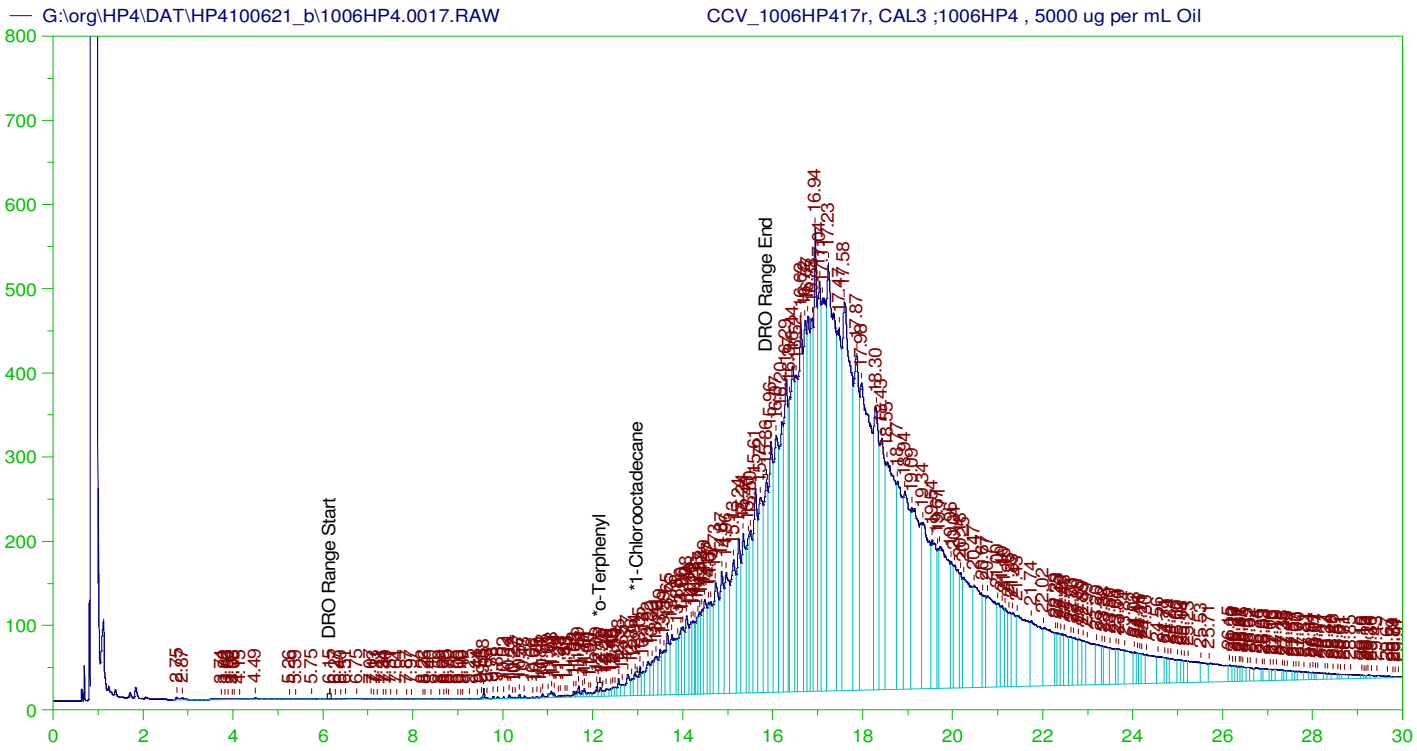
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



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

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

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

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

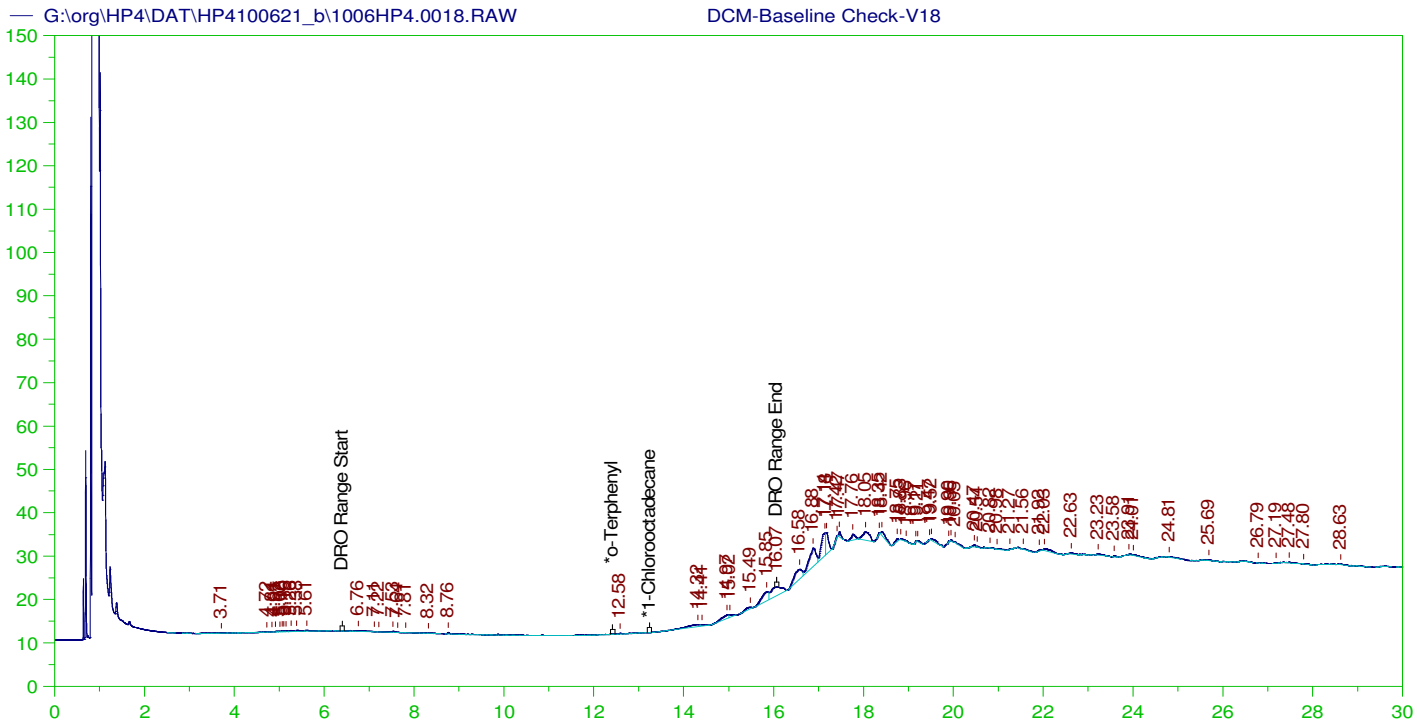
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0017.RAW

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

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

AMN 10/13/2021

G:\org\HP4\dat\HP4100621_b\Review\017_CCV_1006HP417r_DR_8015-17-OIL-AA-L%.xls



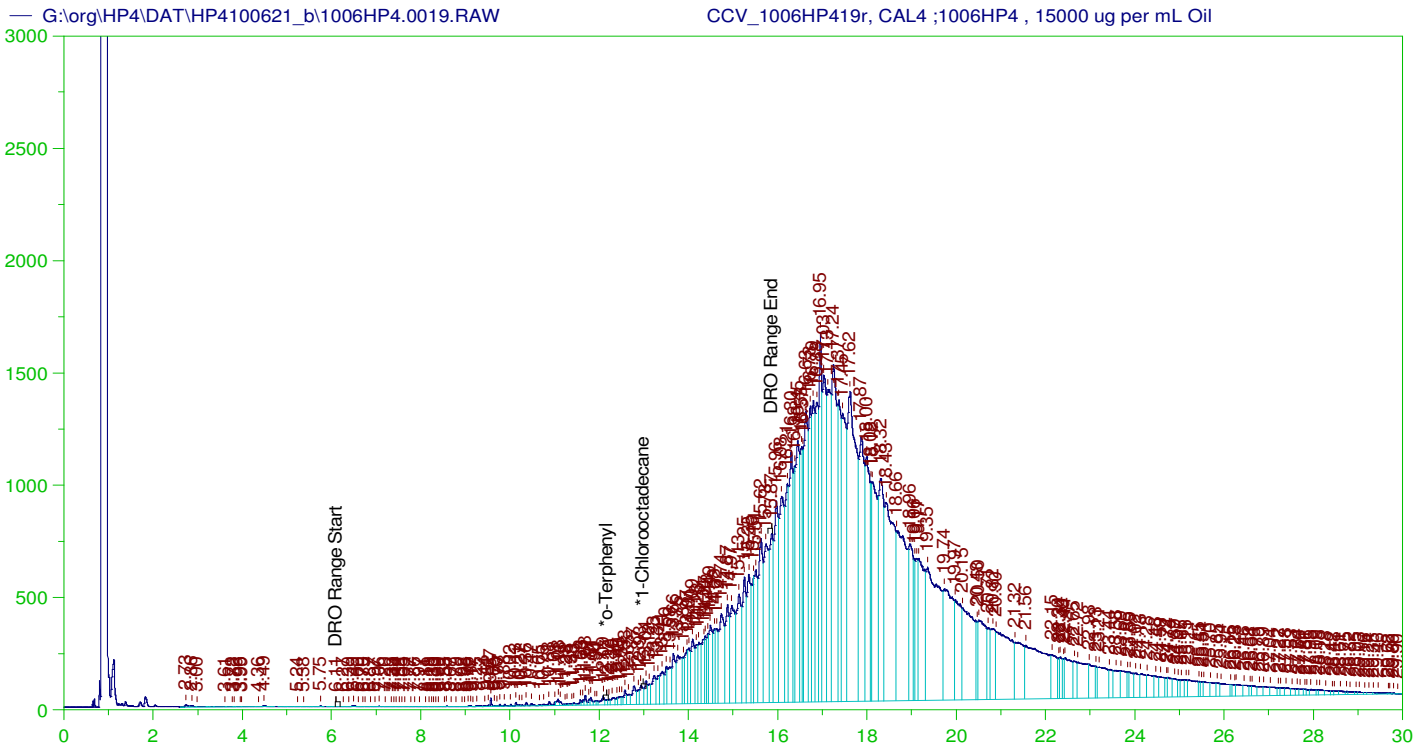
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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

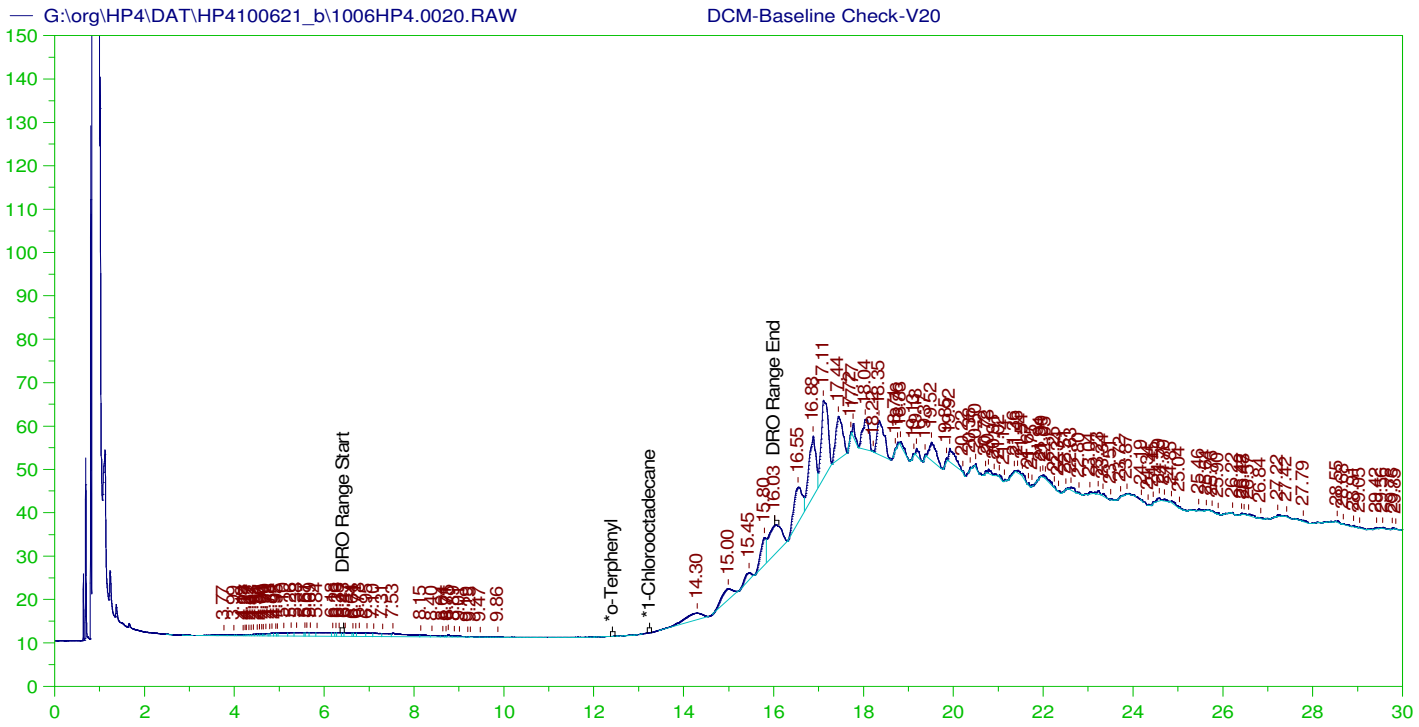
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0019.RAW

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

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

AMN 10/13/2021

G:\org\HP4\dat\HP4100621_b\Review\019_CCV_1006HP419r_DR_8015-19-OIL-AA-L%.xls



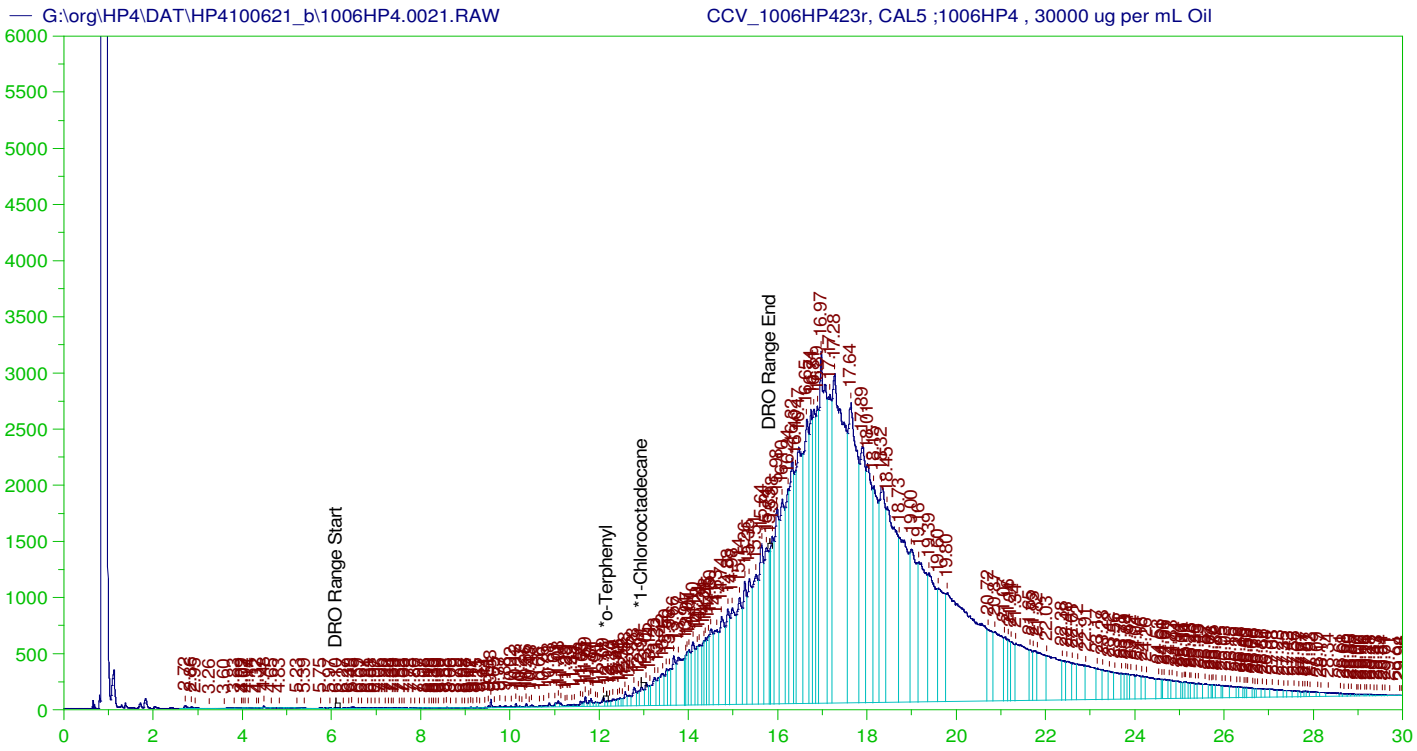
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V20
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0020.RAW
Date & Time Acquired: 10/7/2021 5:35:48 AM
Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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

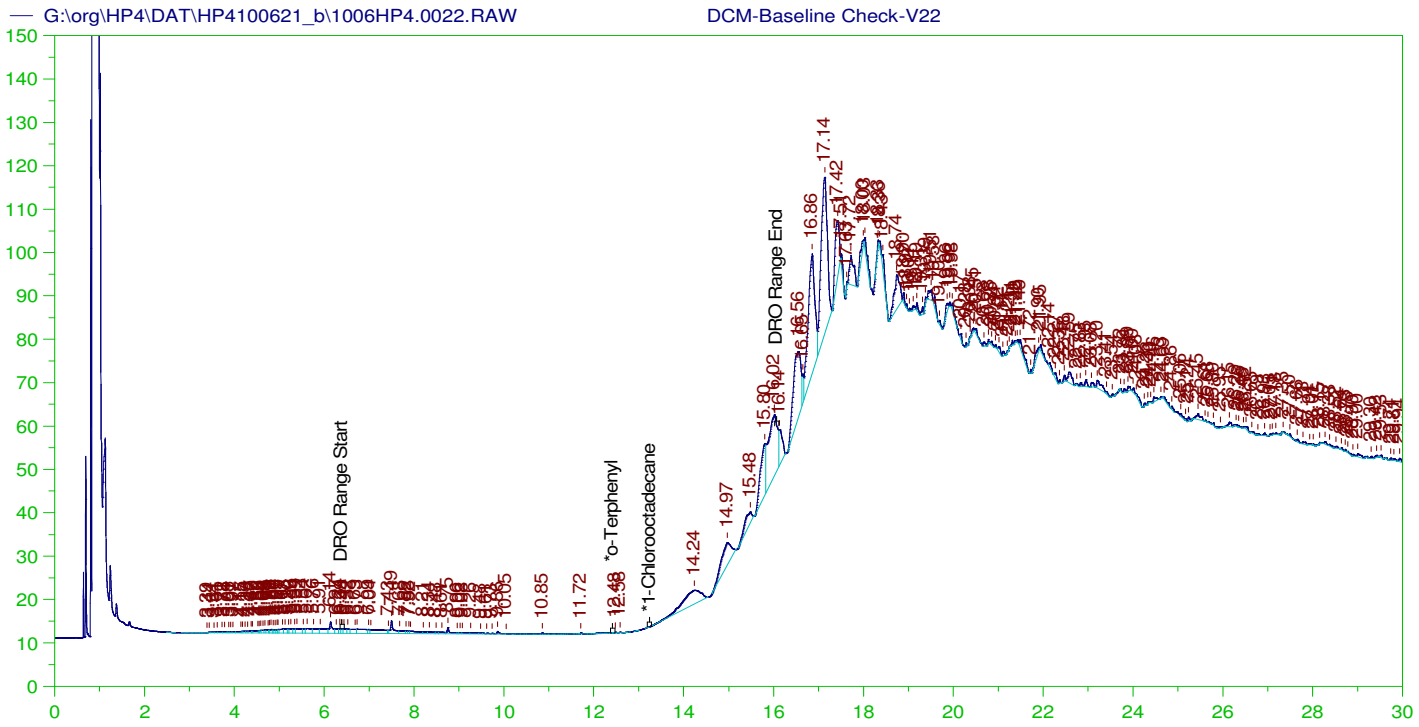
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4100621_b\1006HP4.0021.RAW

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

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

AMN 10/13/2021

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

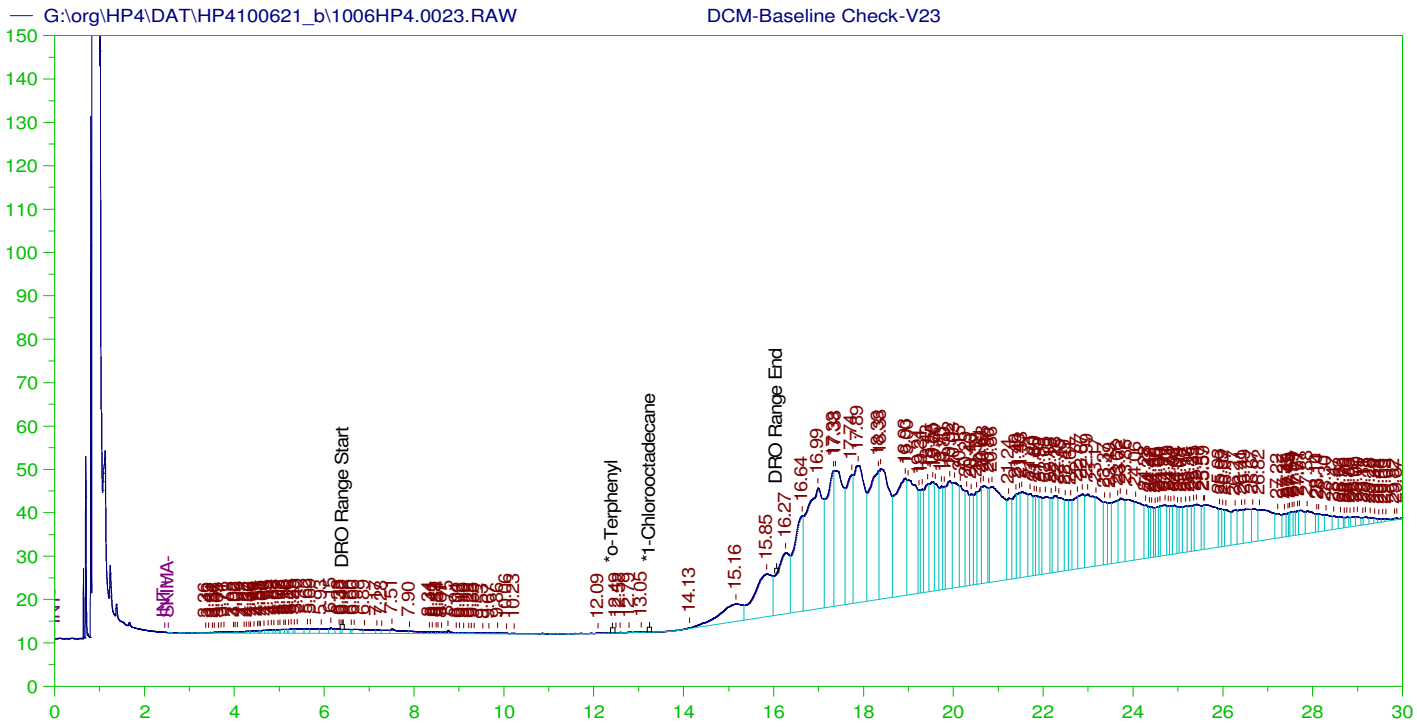


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V22
Raw File: G:\org\HP4\DAT\HP4100621_b\1006HP4.0022.RAW
Date & Time Acquired: 10/7/2021 7:06:39 AM
Method File: G:\Org\HP4\methods\DR_8015-MX-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO201204MX.CAL
Sample Weight: 1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

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

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

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



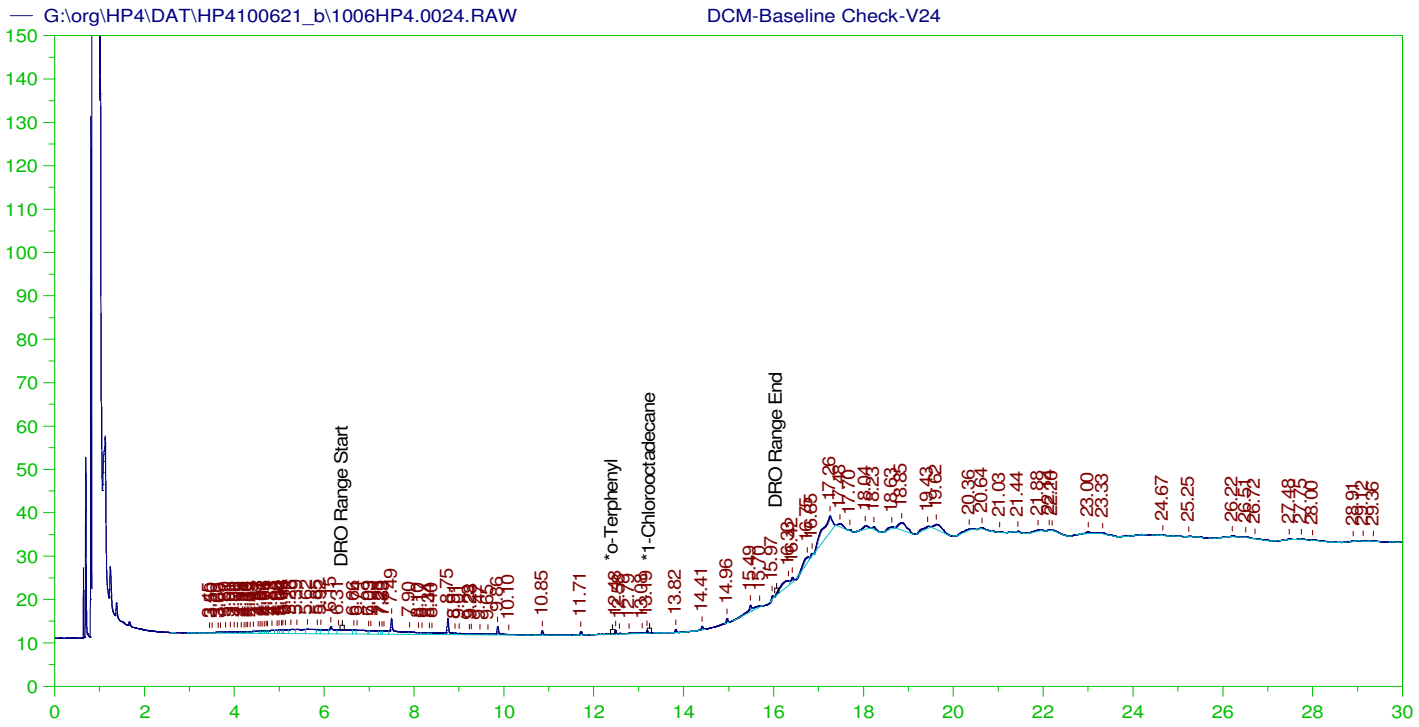
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



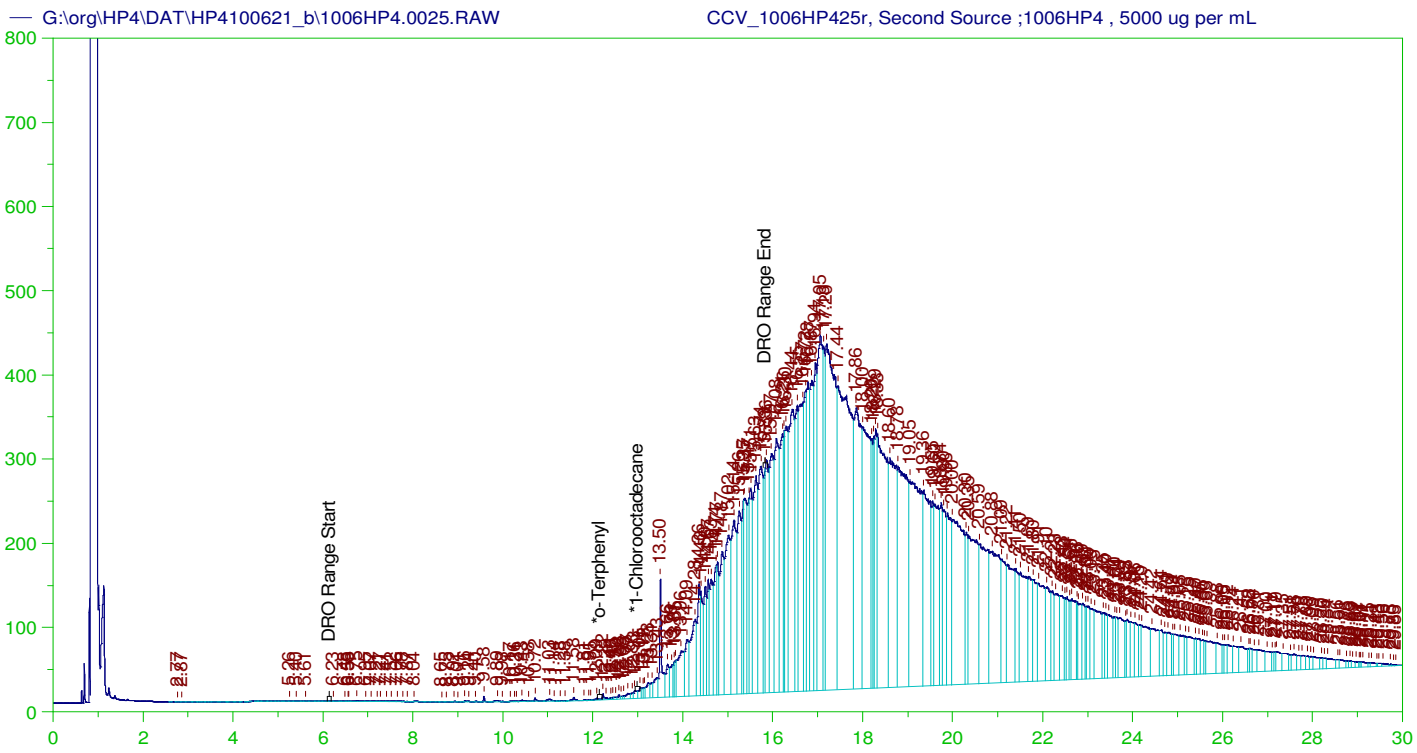
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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

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

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

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

AMN 10/13/2021

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

Write Sequence Data File	Insert Entries(Have the first cell for entries selecte Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	**Manual Integrations**
G:\org\HP4\DAT\HP4100621_b\1006HP4.11r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	g:\org\HP4\Methods\CSC211006.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.12r	DCM-Baseline Check-V12	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.13r	CCV_1006HP413r, CAL1 ;1006HP4 , 150 ug per mLOil (10 uL of Cal4 + 990 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-13-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Set Baseline Now at 23.18
G:\org\HP4\DAT\HP4100621_b\1006HP4.14r	DCM-Baseline Check-V14	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.15r	CCV_1006HP415r, CAL2 ;1006HP4 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-15-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Set Baseline Now at 28 .22
G:\org\HP4\DAT\HP4100621_b\1006HP4.16r	DCM-Baseline Check-V16	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.17r	CCV_1006HP417r, CAL3 ;1006HP4 , 5000 ug per mL Oil (200 uL of Cal 4 + 400 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.
G:\org\HP4\DAT\HP4100621_b\1006HP4.18r	DCM-Baseline Check-V18	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.19r	CCV_1006HP419r, CAL4 ;1006HP4 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(14354)	G:\Org\HP4\methods\DR_8015-19-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.
G:\org\HP4\DAT\HP4100621_b\1006HP4.20r	DCM-Baseline Check-V20	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.21r	CCV_1006HP423r, CAL5 ;1006HP4 , 30000 ug per mL Oil (600 uL of DRO180918C + 400 uL of DCM)(14354)	G:\Org\HP4\methods\DR_8015-21-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.
G:\org\HP4\DAT\HP4100621_b\1006HP4.22r	DCM-Baseline Check-V22	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\D3_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.24r	DCM-Baseline Check-V24	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.25r	CCV_1006HP425r, Second Source ;1006HP4 , 5000 ug per mL Oil (100 uL of DRO210902A + 900 uL of DCM)	G:\Org\HP4\methods\DR_8015-17-OIL-AA-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline.

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

18-Oct-21

Run ID GCFID-HP4-B_211006C

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

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

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764037	CCV_1006HP43	HC-8015-DRO-	CAL1		10/7/2021 1:07:4	1	R368536		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.0019847		0.002	0	0	0	0.002	0	99%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764038	CCV_1006HP43	HC-8015-DRO-	CAL2		10/7/2021 1:53:0	1	R368536		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.04853713		0.05	0	0	0.002	0.002	0	97%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764039	CCV_1006HP43	HC-8015-DRO-	CAL3		10/7/2021 2:38:3	1	R368536		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.2121789		0.2	0	0	0.002	0.002	0	106%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764040	CCV_1006HP43	HC-8015-DRO-	CAL4		10/7/2021 3:23:5	1	R368536		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.4903055		0.5	0	0	0.002	0.002	0	98%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14764041	CCV_1006HP43	HC-8015-DRO-	CAL5		10/7/2021 4:09:3	1	R368536		0	0	

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

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

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

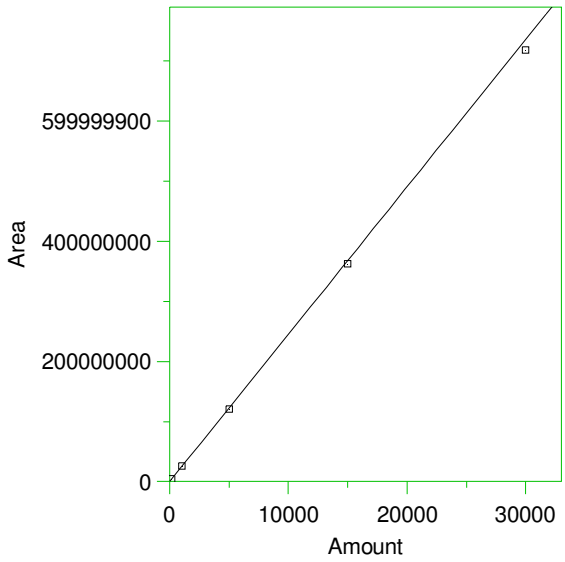
Creator: AMN
Description: 8015C-Oil Range w/Triacontane. New ICal Per 1006HP4 (2021)-2 uL Inj.;
Reason for change:

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

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

All levels are normal data points.

1 *30-40 Motor Oil



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

Single peak quantification by area

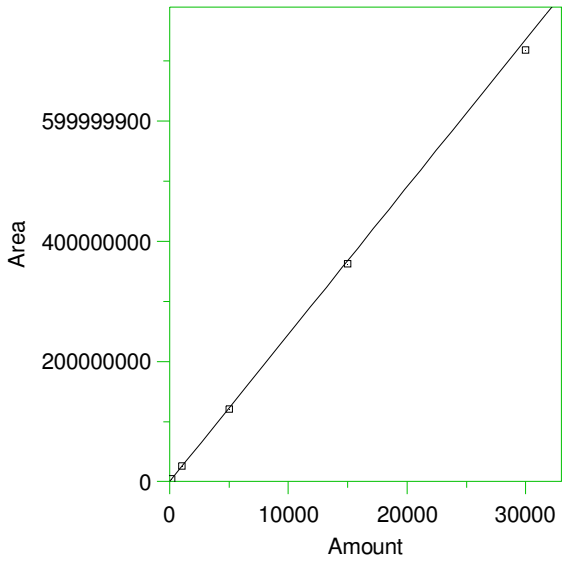
Y = 24529.56 X + 0

Average CF fit with equal weighting, forced to origin

Coefficient of determination:	0.9990484
Average error:	1.972%
Average CF:	24529.56
RSD:	2.304%

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

2 #C20



Expected retention time: 12.58 minutes
Search window: 0.05 minutes
No retention time reference component
Group number: 0

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

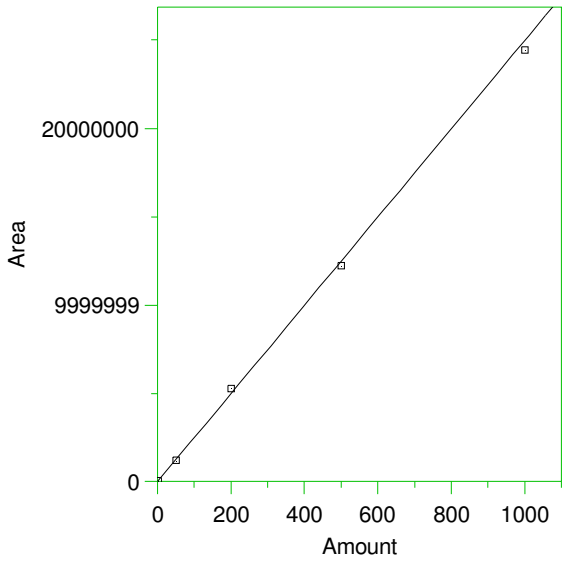
Single peak quantification by area

Y = 24529.56 X + 0

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

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

3 *#Triacontane



Expected retention time: 16.34 minutes
Search window: 0.05 minutes
No retention time reference component
Group number: 0

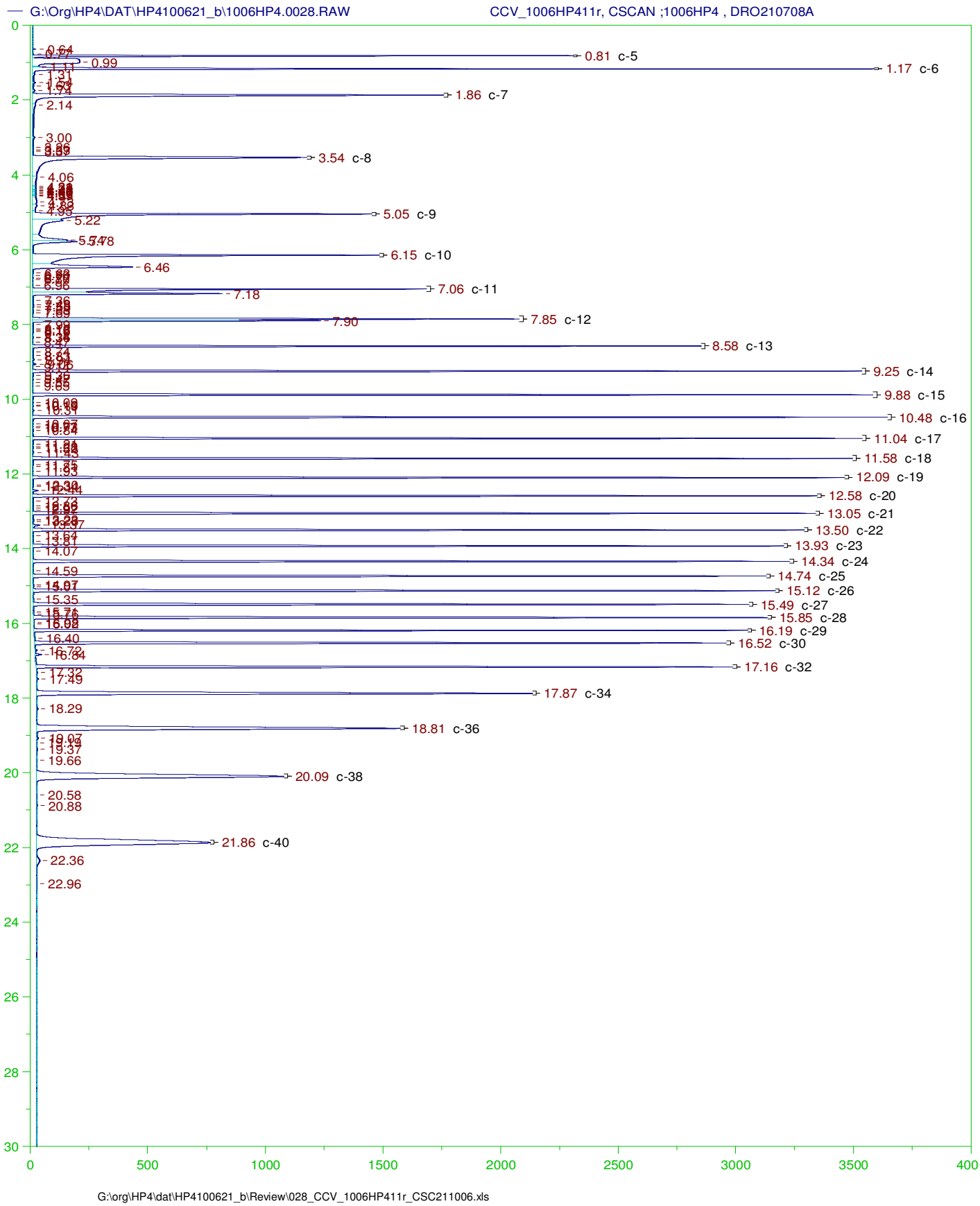
High alarm limit: 0
Low alarm limit: 0
Component constant: 0

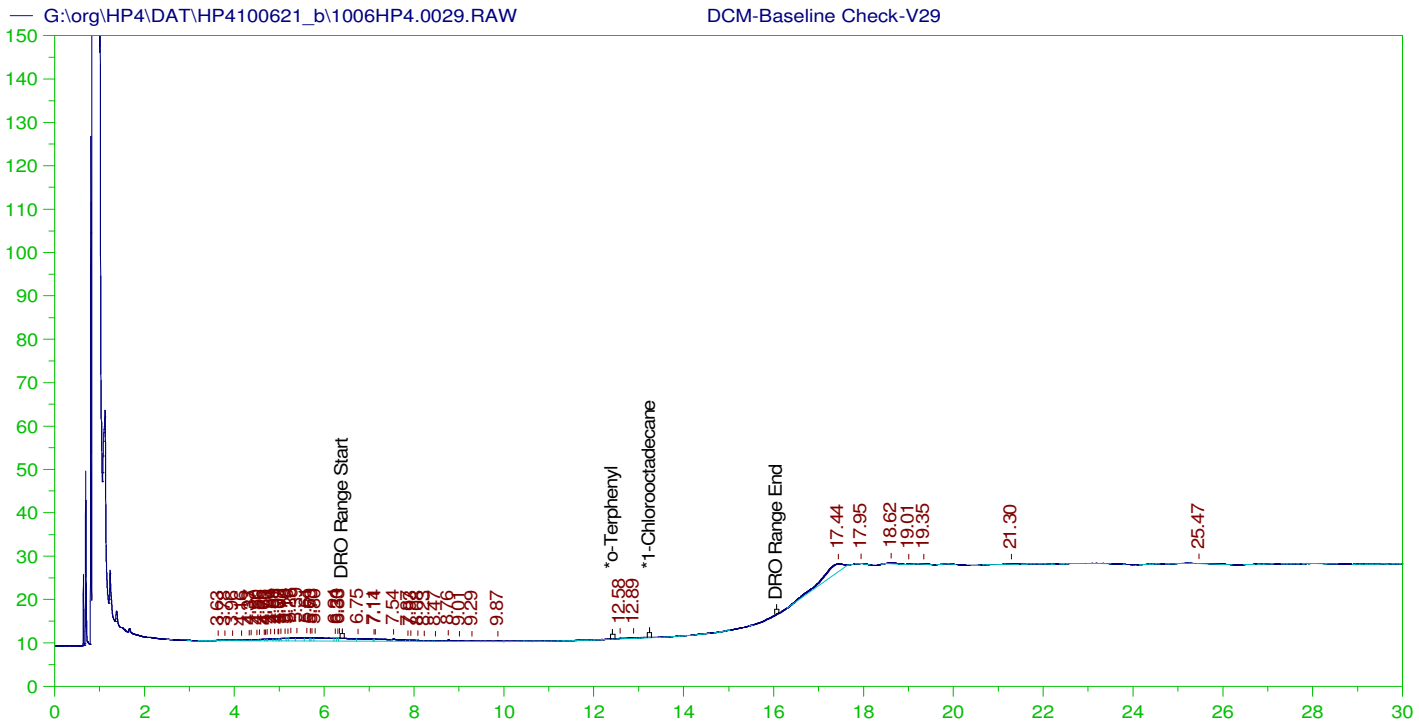
Single peak quantification by area

Y = 24973.81 X + 0

Average CF fit with equal weighting, forced to origin
Coefficient of determination: 0.9989417
Average error: 2.783%
Average CF: 24973.81
RSD: 3.701%

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


G:\Org\HP4\DAT\HP4100621_b\1006HP4.0028.RAW
CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A
0.81 c-5
1.17 c-6
1.86 c-7
3.54 c-8
5.05 c-9
6.15 c-10
7.06 c-11
7.85 c-12
8.58 c-13
9.25 c-14
9.88 c-15
10.48 c-16
11.04 c-17
11.58 c-18
12.09 c-19
12.58 c-20
13.05 c-21
13.50 c-22
13.93 c-23
14.34 c-24
14.74 c-25
15.12 c-26
15.49 c-27
15.85 c-28
16.19 c-29
16.52 c-30
17.16 c-32
17.87 c-34
18.81 c-36
20.09 c-38
21.86 c-40
G:\org\HP4\dat\HP4100621_b\Review\028_CCV_1006HP411r_CSC211006.xls



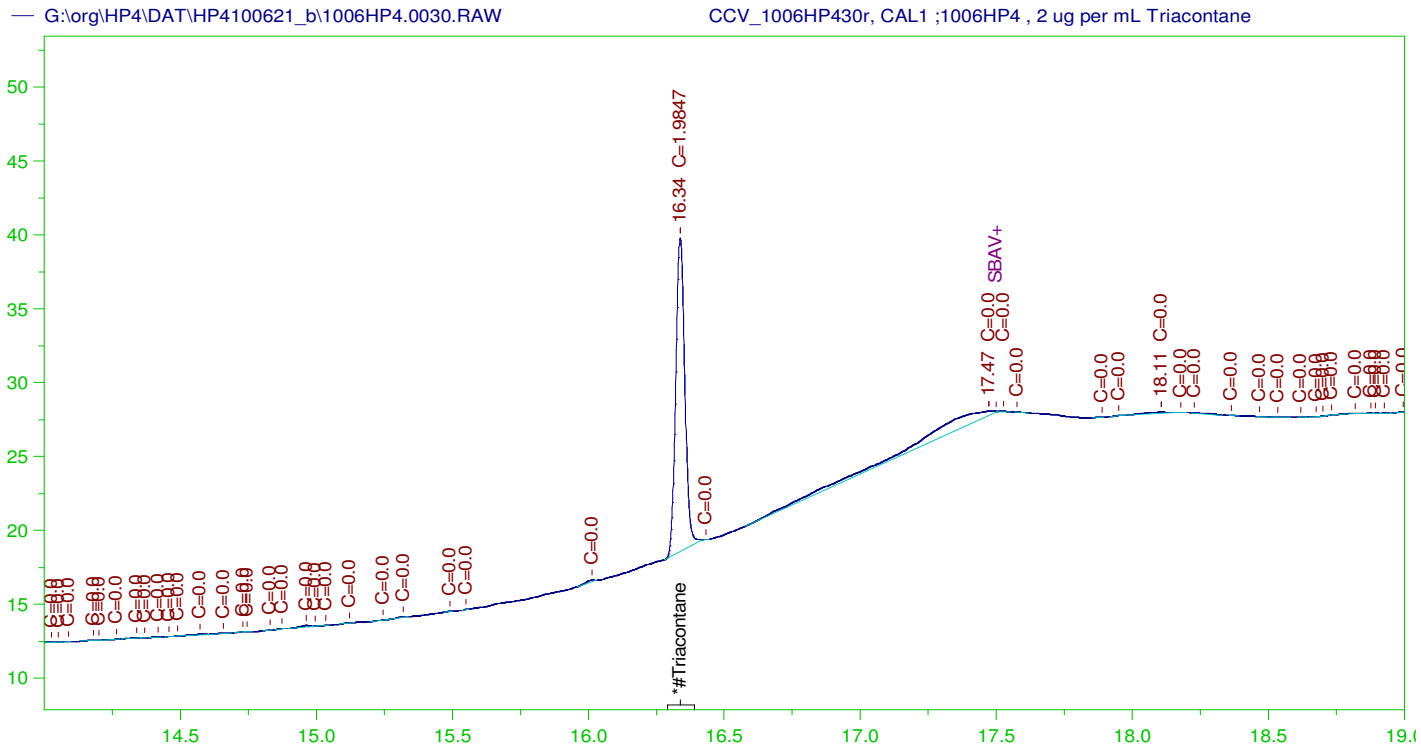
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

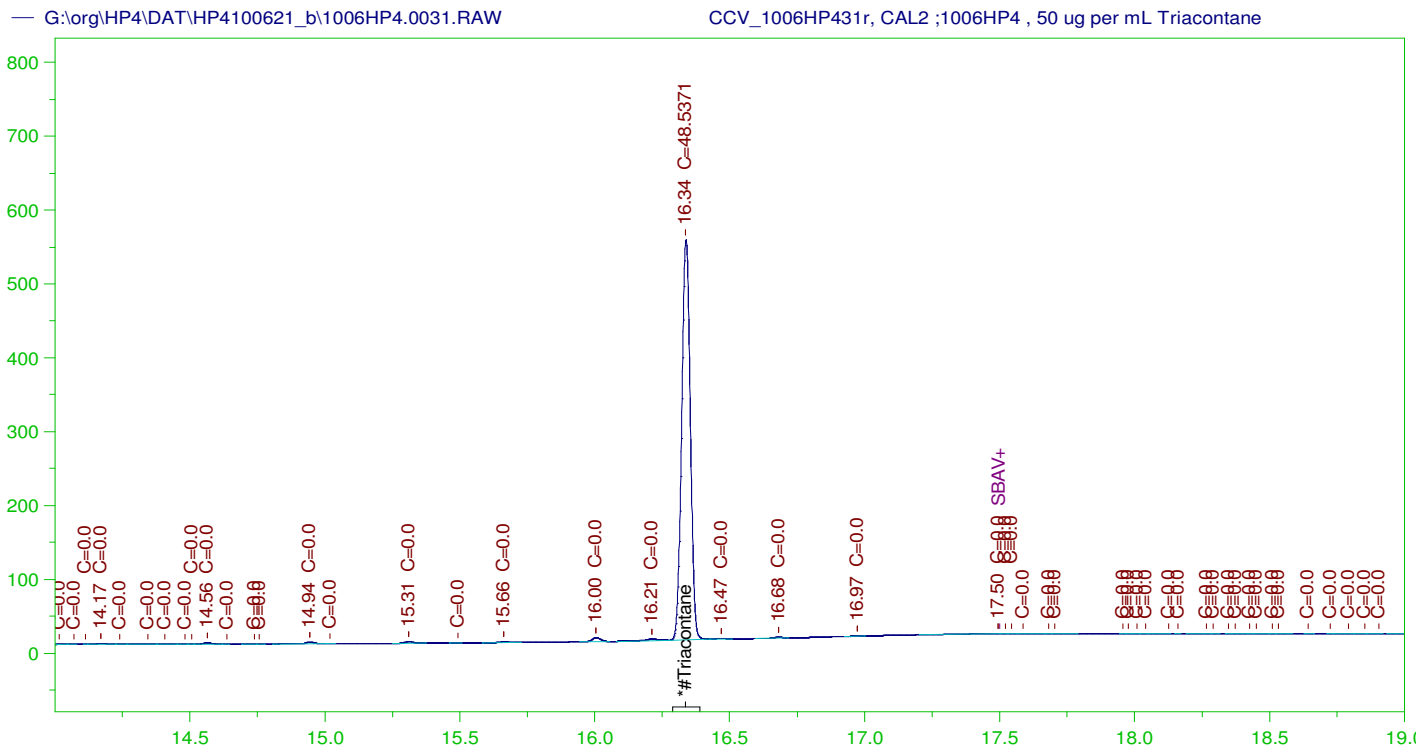
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.337	500.	1.985	.4	-

RRO Area:16216.42 RRO AMOUNT: 0.6610969

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

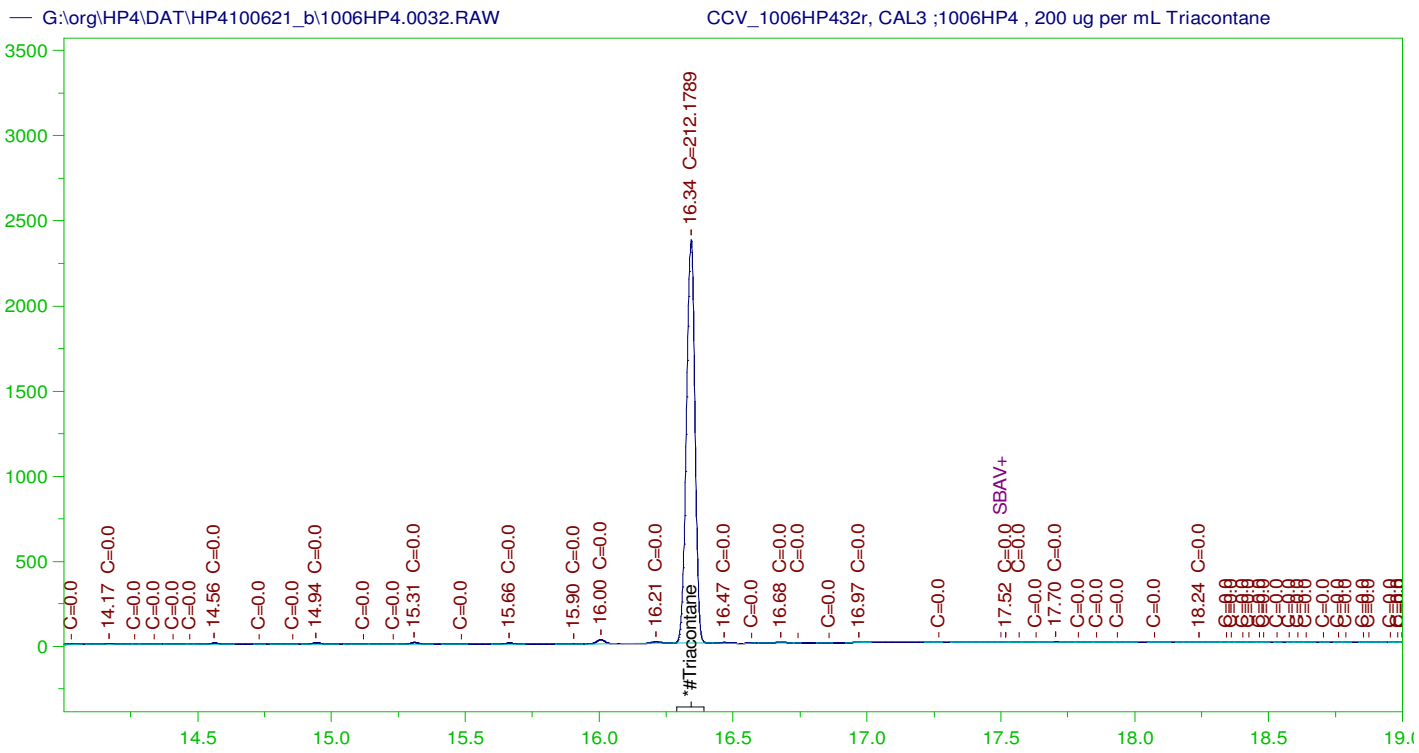
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.337	500.	48.537	9.71	-

RRO Area:50498.79 RRO AMOUNT: 2.058691

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

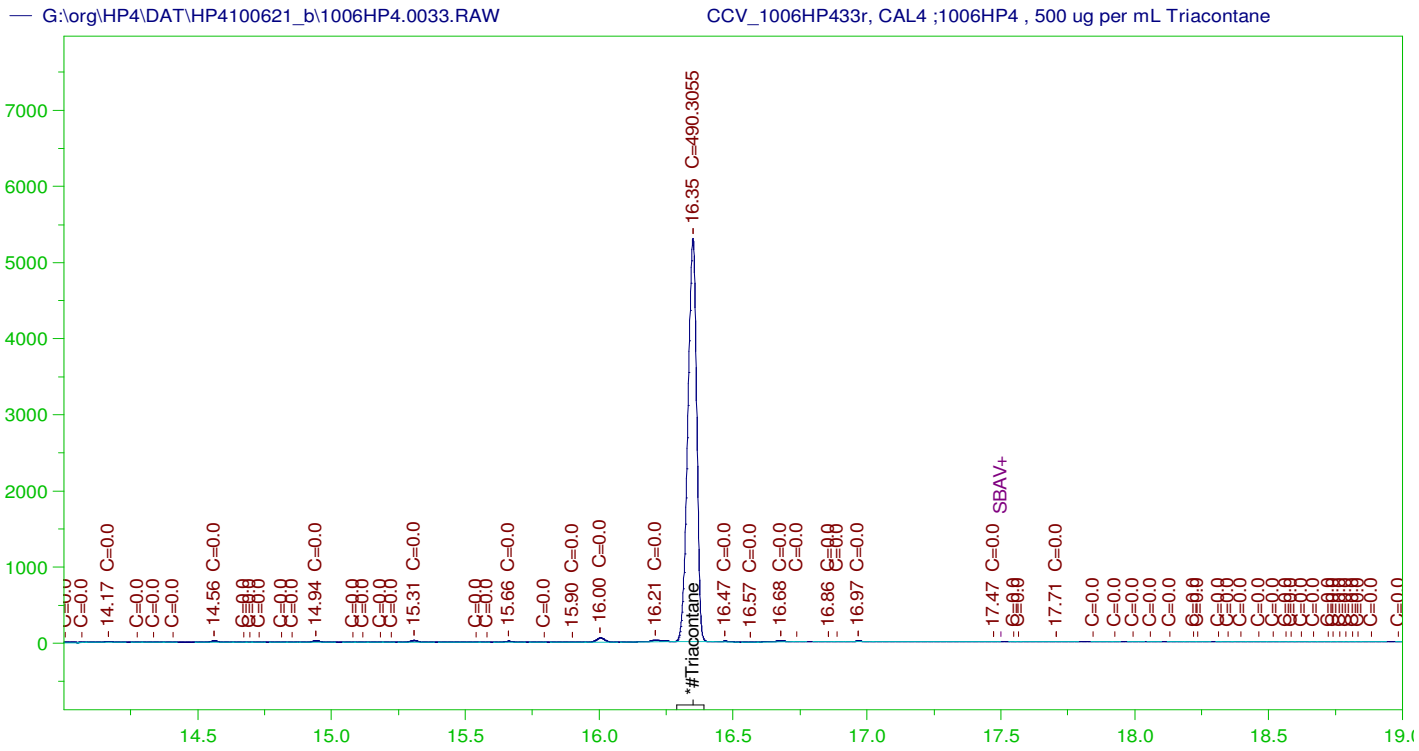
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.343	500.	212.179	42.44	-

RRO Area:223185.5 RRO AMOUNT: 9.098632

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

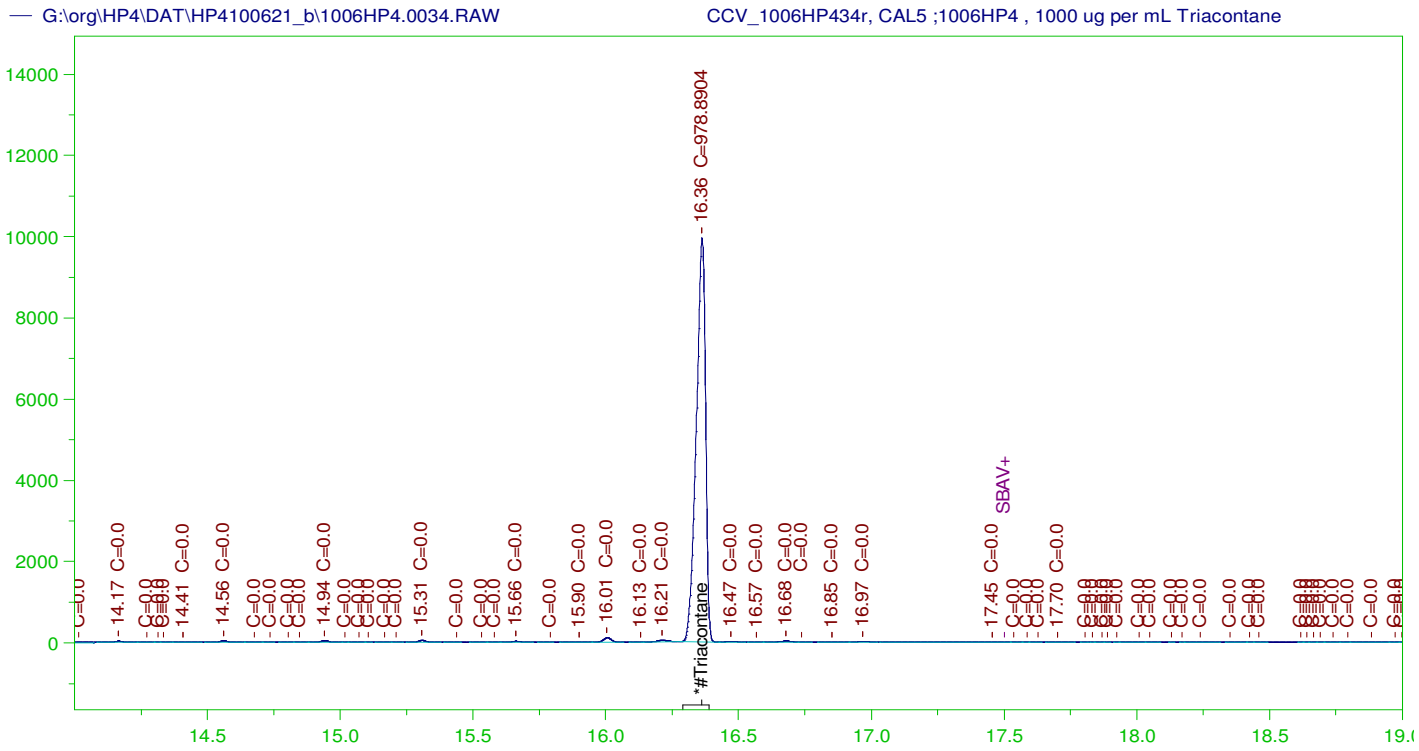
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.35	500.	490.306	98.06	-

RRO Area:522651.3 RRO AMOUNT: 21.307

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

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

RRO Area:1029665 RRO AMOUNT: 41.9765

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

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

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

Write Sequence / Data File	Insert Entries(Have the first cell for entries selected) / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP4\DAT\HP4100621_b\1006HP4.28r	CCV_1006HP411r, CSCAN ;1006HP4 , DRO210708A	g:\org\HP4\Methods\CSC211006.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4100621_b\1006HP4.29r	DCM-Baseline Check-V29	G:\Org\HP4\methods\DR_8015-MX-LEXP.met	1	1	1	1	0	No Integration
G:\org\HP4\DAT\HP4100621_b\1006HP4.30r	CCV_1006HP407r, CAL1 ;1006HP4 , 2 ug per mL Triacontane (10 uL of Cal3 + 990 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.31r	CCV_1006HP408r, CAL2 ;1006HP4 , 50 ug per mL Triacontane (100 uL Cal4 + 900 uL of DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.32r	CCV_1006HP409r, CAL3 ;1006HP4 , 200 ug per mL Triacontane (100uL of Cal5 + 400 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.33r	CCV_1006HP404r, CAL4 ;1006HP4 , 500 ug per mL Triacontane (250uL of Cal5 + 250 uL DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.
G:\org\HP4\DAT\HP4100621_b\1006HP4.34r	CCV_1006HP405r, CAL5 ;1006HP4 , 1000 ug per mL Triacontane (500 uL 2000 ug/mL Triacontane DRO211006A + 500 DCM(14354)	G:\Org\HP4\Methods\DS_ORO-AA-L%.met	1	1	1	1	0	The integration of Triacontane is integrated using a valley to valley integration.

Ann Nebel

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

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
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
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
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
14777571	CCV_1017HP50	HC-8015-DRO-	CAL5		10/17/2021 6:20:	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		0.9372648		1	0	0	0.002	0.002	0	94%	80	120	0%	

File Name: G:\Org\HP5\Cals\SW8015C_ORO211017AA.CAL
Version: 11

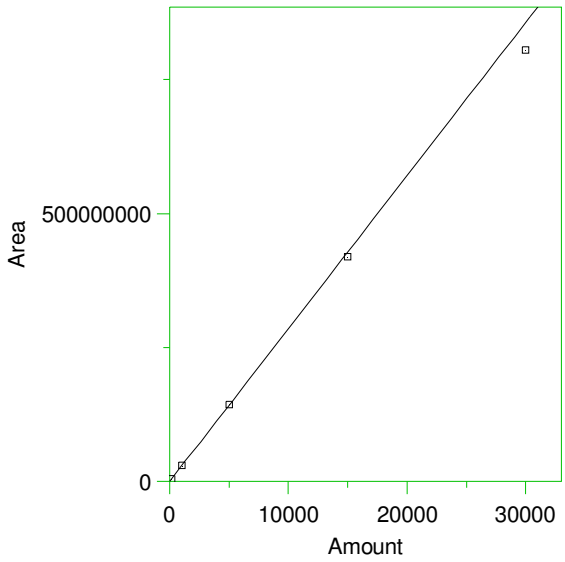
Creator: AMN
Description: 8015C-Oil Range. New ICal Per 1017HP5 (2021)-2 uL Inj.; RRO copied from 8015 cal for Oil
Reason for change:

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

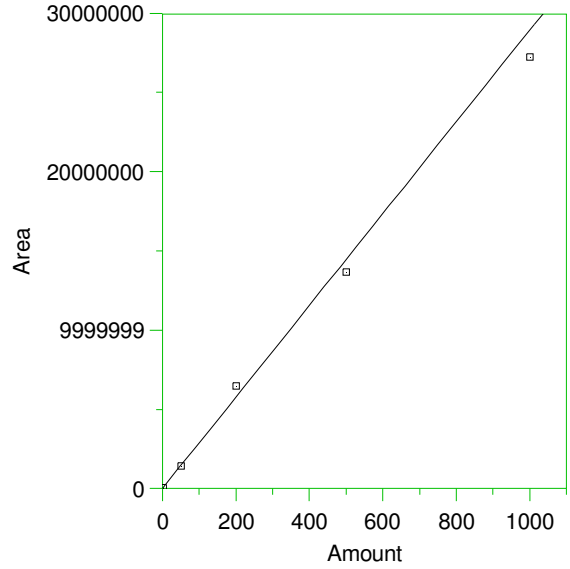
Y = 28542.41 X + 0

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

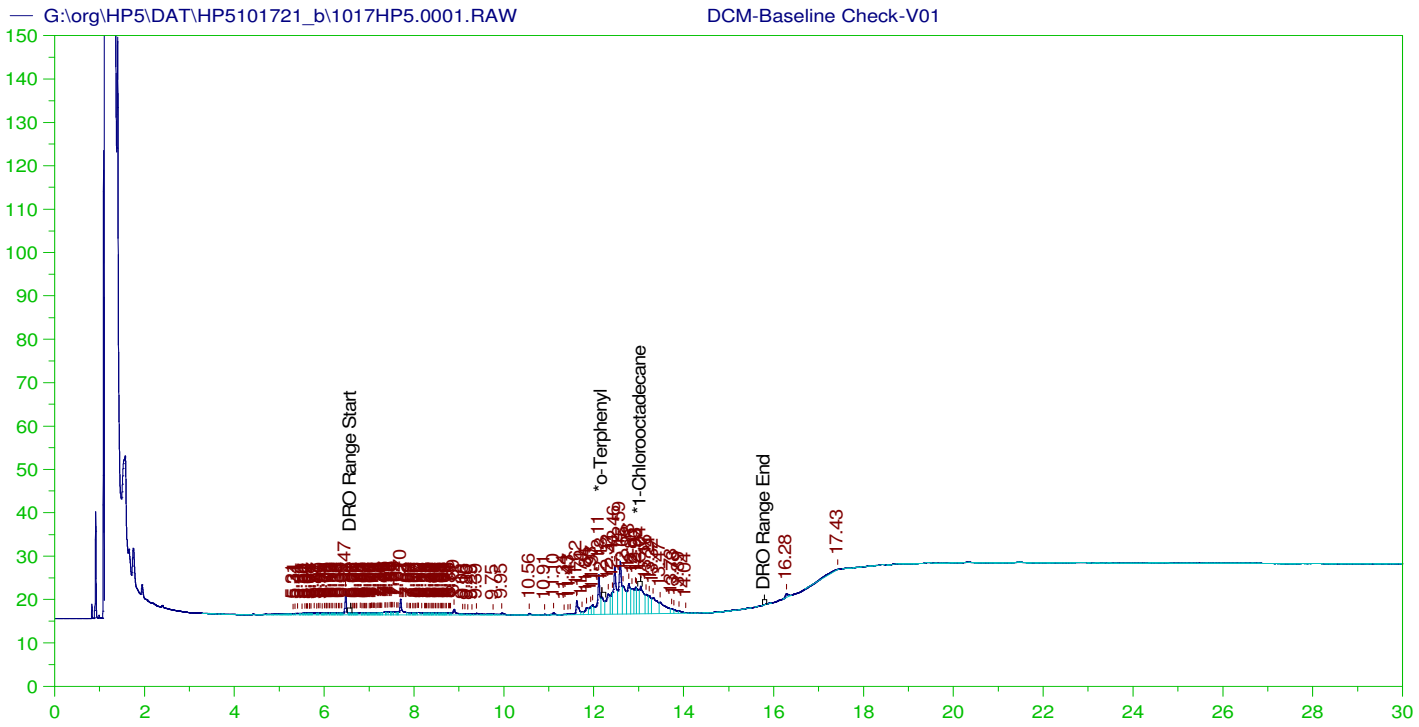
Y = 28930.14 X + 0

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	Insert Entries(Have the first cell for entries selecte						
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 Triacontane (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 Triacontane (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 Triacontane (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 Triacontane (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 Triacontane (500 uL 2000 ug/mL Triacontane DRO211006A + 500 DCM(14354)	G:\Org\HP5\Methods\DS_ORO-AA-L0.met	1	1	1	1	0



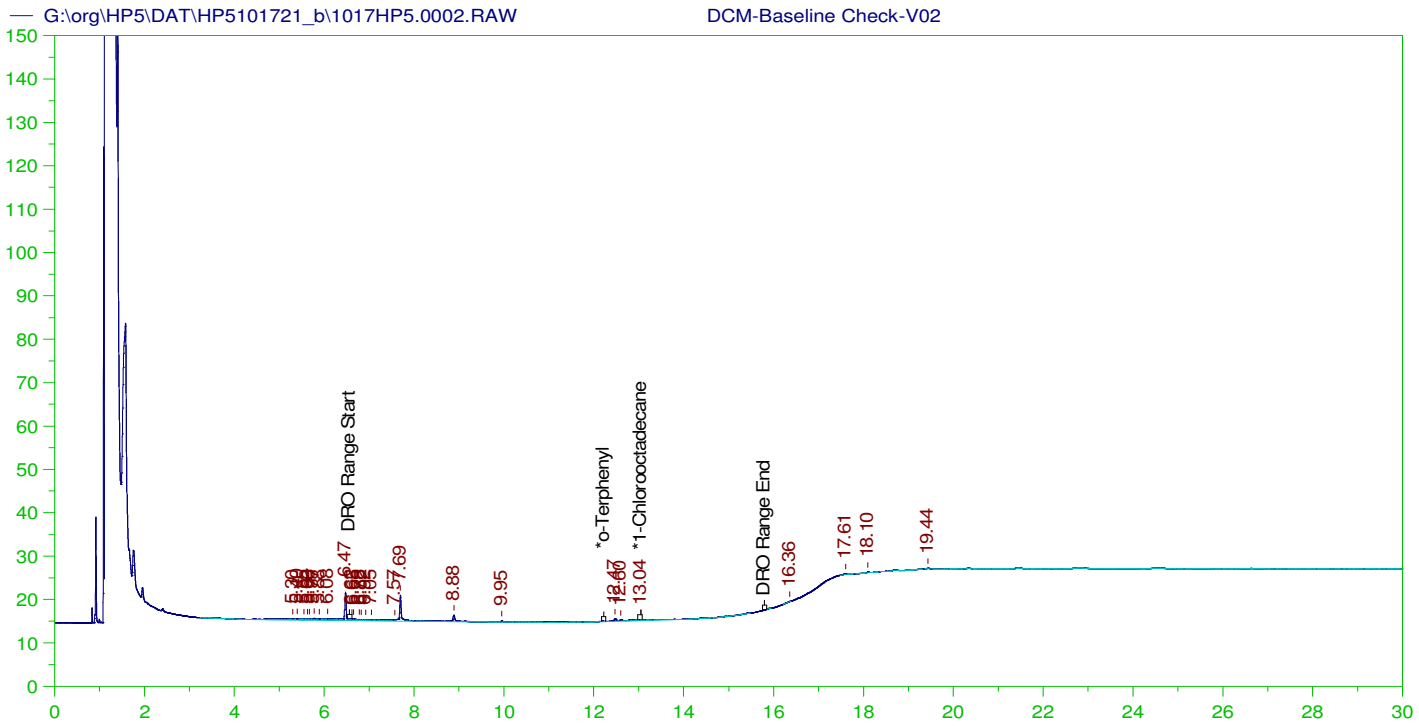
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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



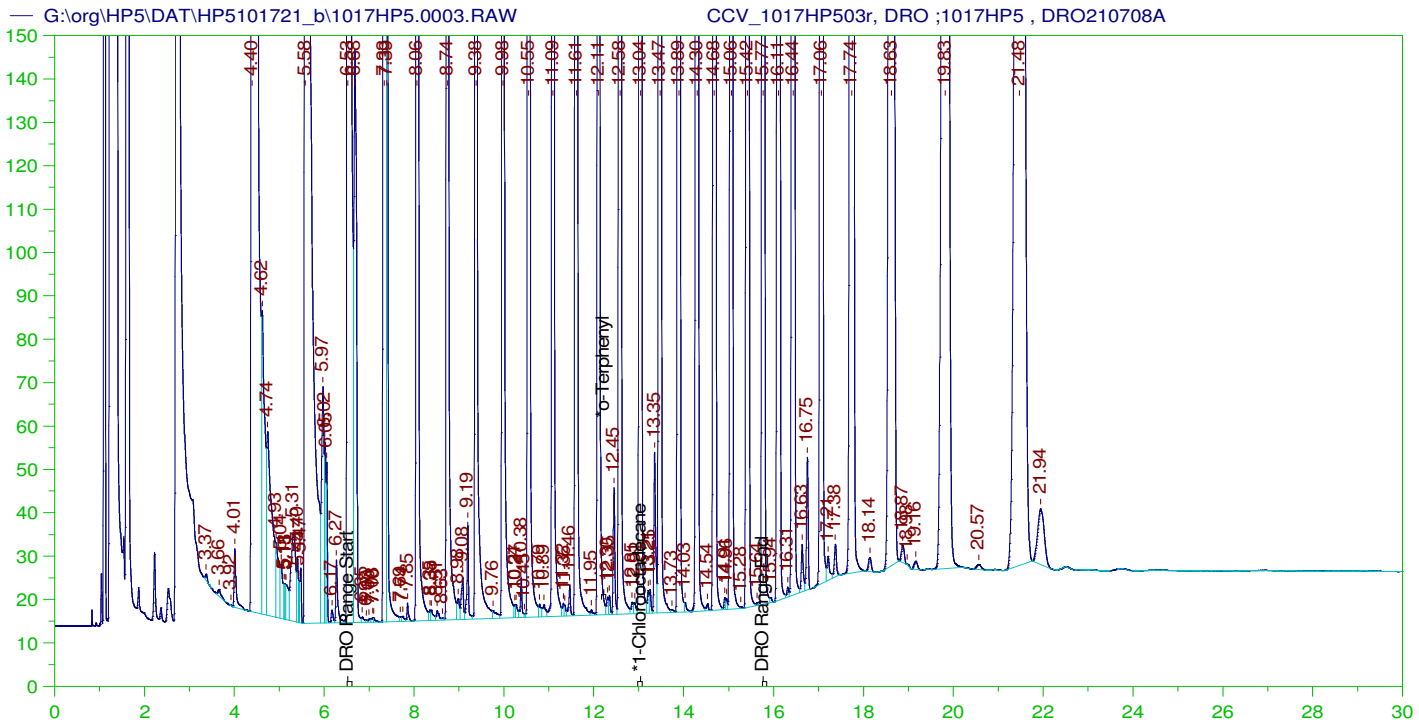
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

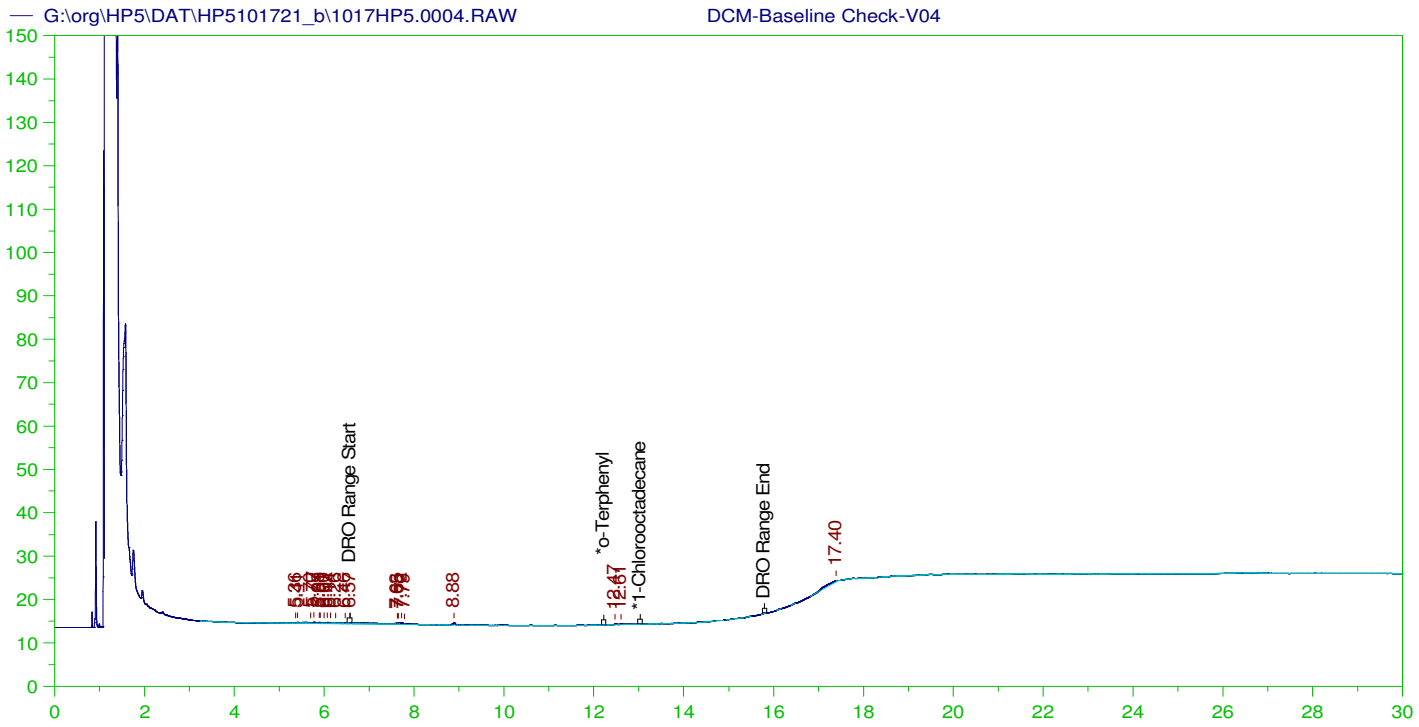
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	29.982	200.	.	.	-
*1-Chlorooctadecane	13.037	200.	255.634	127.82	-

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



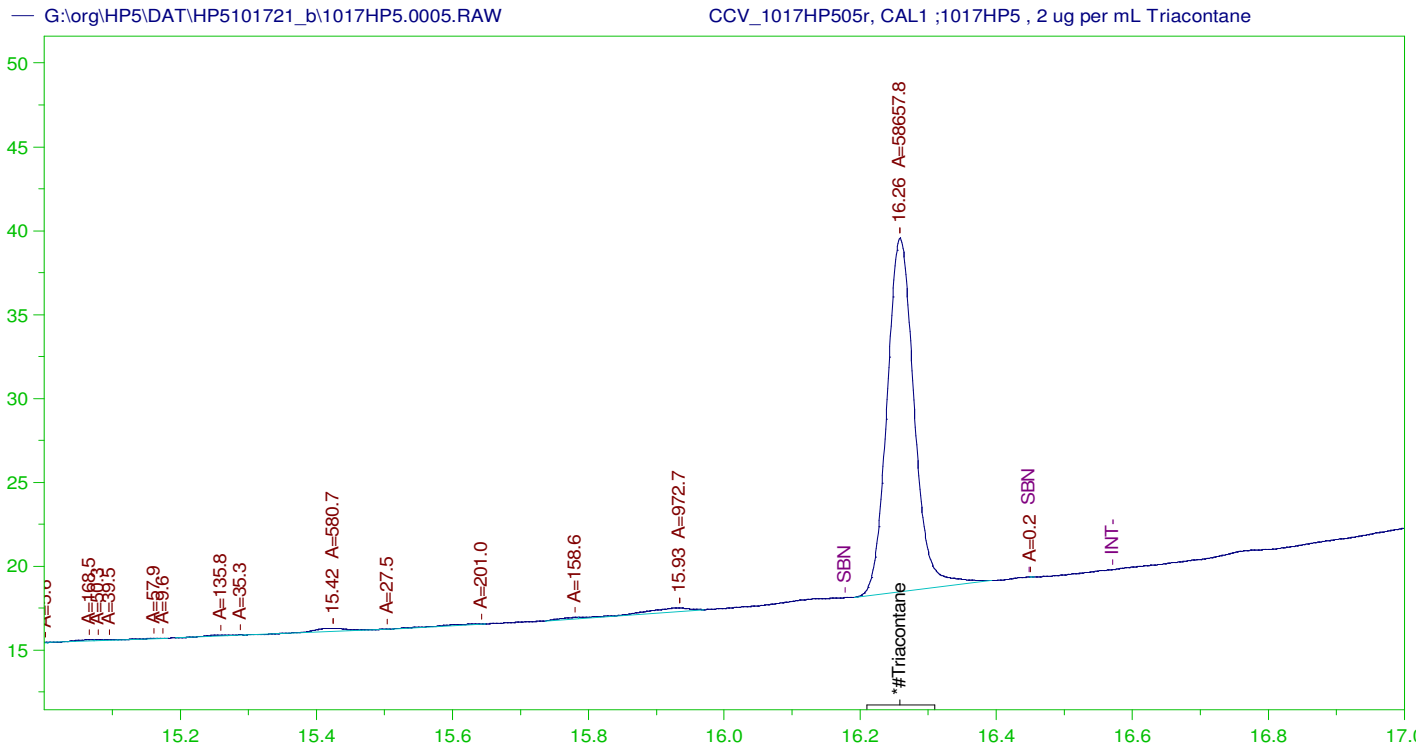
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

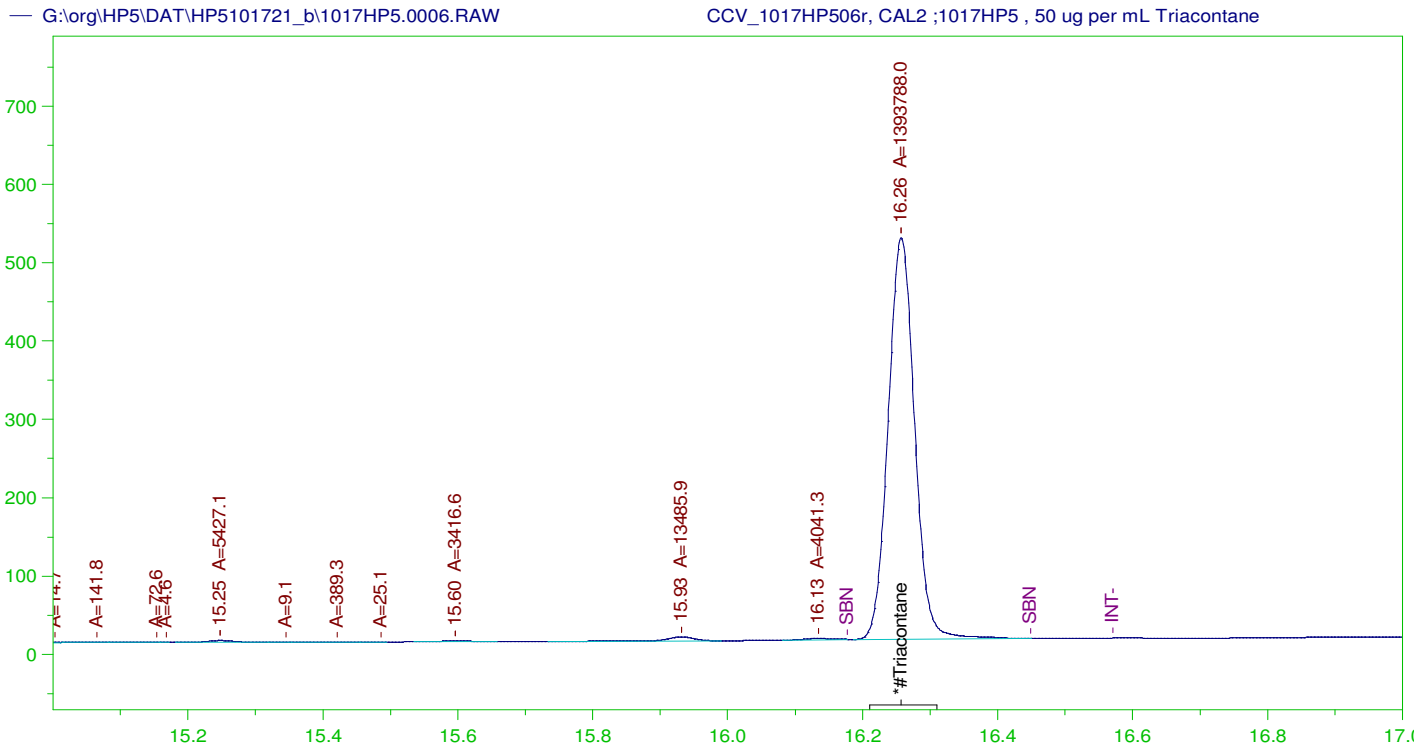
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.258	500.	2.028	.41	-

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

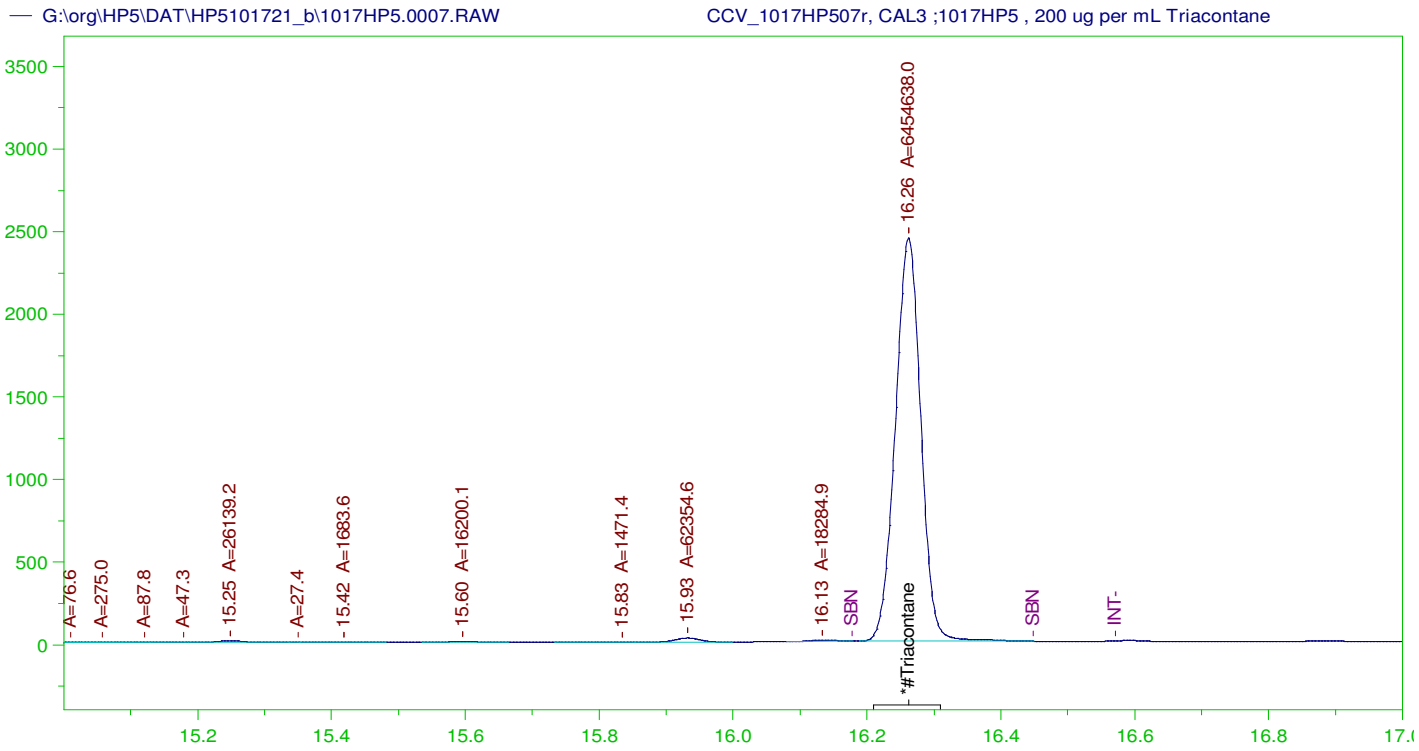
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.257	500.	48.178	9.64	-

RRO Area:45902.25 RRO AMOUNT: 1.608212

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

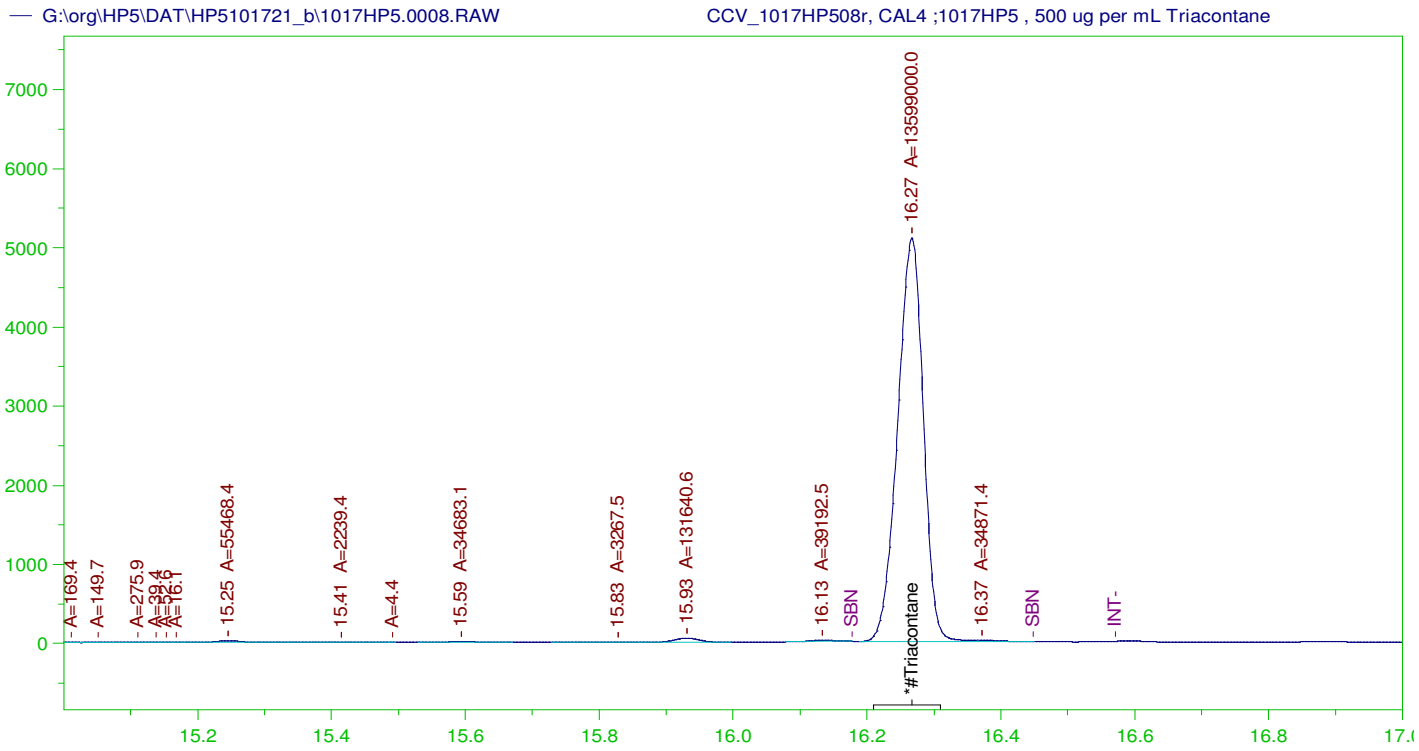
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.262	500.	223.111	44.62	-

RRO Area:219754.5 RRO AMOUNT: 7.699227

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

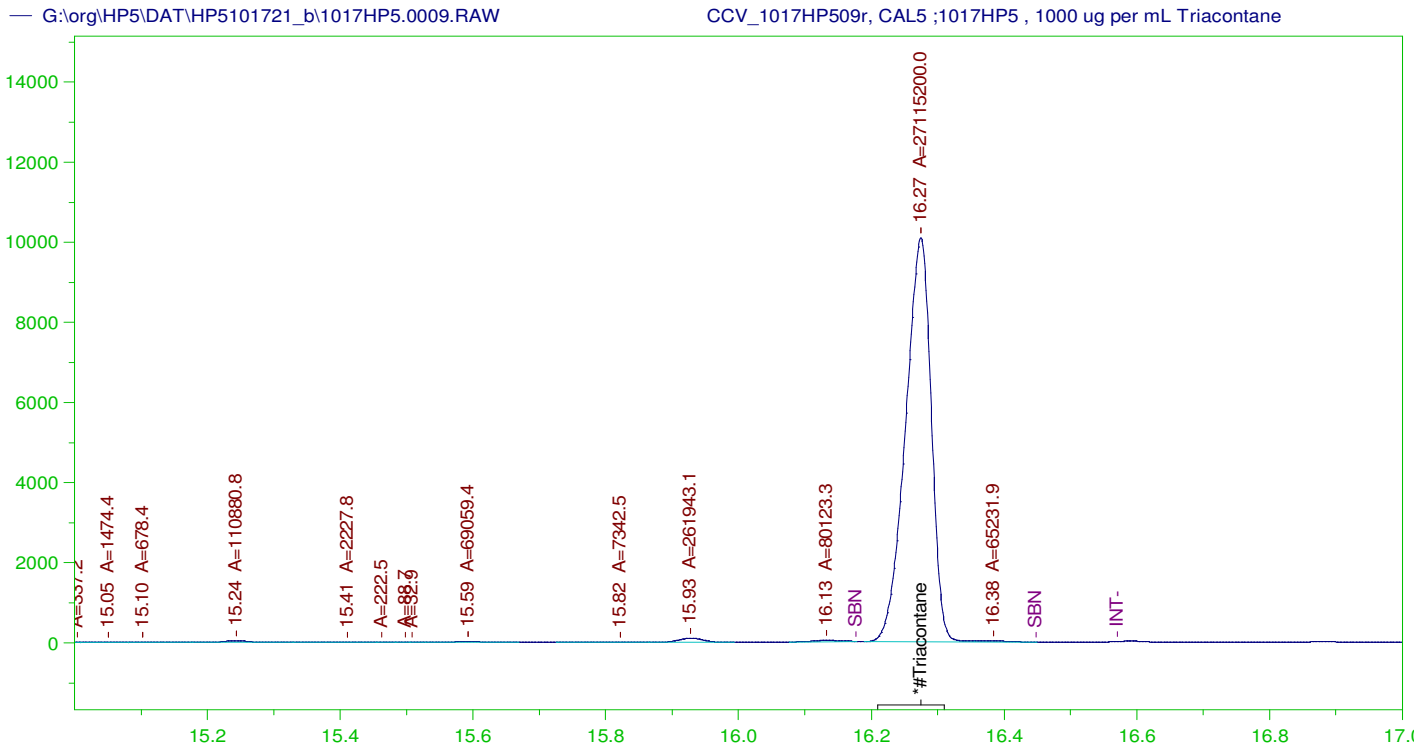
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.267	500.	470.063	94.01	-

RRO Area:496538.4 RRO AMOUNT: 17.39651

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

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

RRO Area:979213.9 RRO AMOUNT: 34.30733

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

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

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

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

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

PREP BATCH REPORT

Prep Code: **HC-3520-DRO** Technician: **Ann Nebel** Prep Start Date: **12/27/2021 2:11:05 P**

Prep Batch **162502** Prep Temp **NA °C** Batch Units: **ML** 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 ClearLines 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	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

PREP BATCH REPORT

Prep Code: **HC-3520-DRO** Technician: **Ann Nebel** Prep Start Date: **12/27/2021 2:11:05 P**

Prep Batch **162502** Prep Temp **NA °C** Batch Units: **ML** 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	Ground Water	2	1050	0	0	1.00	0.000952		12/27/2021	12/28/2021
Bottle 1/2 Clear										
B21121981-001D	Drinking Water	2	1030	0	0	1.00	0.000971		12/27/2021	12/28/2021
Bottle 1/6 Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMS	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Bottle 2/6 Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMSD	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Bottle 3/6 Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMSD-RRO	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Bottle 4/6 Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-001DMS-RRO	Drinking Water	2	1040	0	0	1.00	0.000962		12/27/2021	12/28/2021
Bottle 5/6 Light sediment. Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-002B	Ground Water	2	1050	0	0	1.00	0.000952		12/27/2021	12/28/2021
Bottle 1/2 Clear Sample was SGT on 12/30/2021 by amn using remainder of sample.										
B21121981-003D	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.										
B21121981-004D	Ground Water	2	1010	0	0	1.00	0.00099		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	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

PREP BATCH REPORT

Prep Code: **HC-3520-DRO** Technician: **Jillian L Bostwick** Prep Start Date: **1/3/2022 12:05:48 PM**

Prep Batch **162648** Prep Temp **NA °C** Batch Units: **ML** Prep End Date: **1/4/2022 11:32:00 AM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-162648			1000	0	0	1.00	0.001		1/3/2022	1/4/2022
Start time: 01/03/2022 at 12:00 PM. End time: 01/04/2022 at 6:50 AM SGT by ALN was performed on all sample using the remainder of sample on 1/6/2022.										
LCS-162648			1000	0	0	1.00	0.001		1/3/2022	1/4/2022
All bottles were completely used, defaced and disposed of on 01/03/2022										
LCS-162648-RRO			1000	0	0	1.00	0.001		1/3/2022	1/4/2022
B21122168-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/3/2022	1/4/2022
Bottle 1/6. Clear, orange sediment.										
B21122168-001DMS	Ground Water	2	1030	0	0	1.00	0.000971		1/3/2022	1/4/2022
Bottle 2/6. Clear, orange sediment.										
B21122168-001DMSD	Ground Water	2	1040	0	0	1.00	0.000962		1/3/2022	1/4/2022
Bottle 3/6. Clear, orange sediment.										
B21122168-001DMS-RRO	Ground Water	2	1020	0	0	1.00	0.00098		1/3/2022	1/4/2022
Bottle 4/6. Clear, orange sediment.										
B21122168-001DMSD-RRO	Ground Water	2	1050	0	0	1.00	0.000952		1/3/2022	1/4/2022
Bottle 5/6. Clear, orange sediment.										
B21122168-006D	Ground Water	2	1050	0	0	1.00	0.000952		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B21122168-007B	Ground Water	2	1050	0	0	1.00	0.000952		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B21122180-001D	Ground Water	2	980	0	0	1.00	0.00102		1/3/2022	1/4/2022
Bottle 1/2. Clear, light sediment.										
B21122188-001D	Ground Water	2	980	0	0	1.00	0.00102		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B21122190-001D	Ground Water	2	1020	0	0	1.00	0.00098		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B21122198-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/3/2022	1/4/2022
Bottle 1/2. Clear.										

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

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP211227 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
SG220101(13376)	Baked Silica Gel	all	5g	2/28/2030
Sulfate 12/26/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
Sulfate 12/27/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO211220D	Triacontane SURR 1000 ug/mL	all except LCS/D,	100 uL	4/6/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026

PREP BATCH REPORT

Prep Code: **HC-3520-DRO** Technician: **Jillian L Bostwick** Prep Start Date: **1/3/2022 12:05:48 PM**

Prep Batch **162648** Prep Temp **NA °C** Batch Units: **ML** Prep End Date: **1/4/2022 11:32:00 AM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B21122204-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/3/2022	1/4/2022
Bottle 1/2. Clear, light sediment.										
B21122211-001D	Ground Water	2	1020	0	0	1.00	0.00098		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B22010002-001D	Ground Water	2	980	0	0	1.00	0.00102		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B22010002-002D	Ground Water	2	1050	0	0	1.00	0.000952		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B22010002-003B	Ground Water	2	1040	0	0	1.00	0.000962		1/3/2022	1/4/2022
Bottle 1/2. Clear.										
B21121965-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/3/2022	1/4/2022
Bottle 2/2. Clear, light sediment.										

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
FP211227 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
SG220101(13376)	Baked Silica Gel	all	5g	2/28/2030
Sulfate 12/26/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
Sulfate 12/27/21 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO211220D	Triacontane SURR 1000 ug/mL	all except LCS/D,	100 uL	4/6/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS	100 uL	11/5/2023
DRO210902A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026

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

24-Jan-22

Run ID GCFID-HP4-B_220105A

Run Start Date: 1/5/2022
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
14967196	CCV_0105HP40	HC-8015-DRO-	CCV		1/5/2022 7:47:16	1	R372780		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		4.52170557		5	0	0	0.0513	0.3	0	90%	80	120	0%	
n-Triacontane	S	mg/L		0.2292746		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
14967197	CCV_0105HP40	HC-8015-DRO-	CCV		1/5/2022 8:32:25	1	R372780		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		14.89013		15	0	0	0.0358	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.44598		15	0	0	0.0782	0.3	50	103%	80	120	0%	
o-Terphenyl	S	mg/L		0.2136318		0.2	0	0	0.000531	0.002	0	107%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967198	LCS-162648	HC-8015-DRO-	LCS-DOD		1/5/2022 10:02:4	1	162648	1/3/2022 12:	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
14967198	LCS-162648	HC-8015-DRO-	LCS-DOD		1/5/2022 10:02:4	1	162648	1/3/2022 12:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		13.74699		15	0	0	0.0358	0.3	0	92%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		14.7815		15	0	0	0.0782	0.3	50	99%	60	132	0%	
o-Terphenyl	S	mg/L		0.178984		0.2	0	0	0.000531	0.002	0	89%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967199	MB-162648	HC-8015-DRO-	MBLK		1/5/2022 10:47:3	1	162648	1/3/2022 12:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0358	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0		0	0	0	0.0513	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0782	0.15	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1138		0.1	0	0	0.00054	0.002	0	114%	50	150	0%	
o-Terphenyl	S	mg/L		0.1810355		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
14967200	B21122211-001	HC-8015-DRO-	SAMP		1/5/2022 11:33:0	1	162648	1/3/2022 12:	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		0.03807775		0	0	0	0.035084	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0		0	0	0	0.050274	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.076636	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.1136		0.098	0	0	0.0005292	0.00196	0	116%	50	150	0%	
o-Terphenyl	S	mg/L		0.1788509		0.196	0	0	0.0005204	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
14967201	B21122190-001	HC-8015-DRO-	SAMP		1/5/2022 12:18:3	1	162648	1/3/2022 12:	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		3.623437		0	0	0	0.035084	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.47936064		0	0	0	0.050274	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		4.055141		0	0	0	0.076636	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1161		0.098	0	0	0.0005292	0.00196	0	118%	50	150	0%	
o-Terphenyl	S	mg/L		0.1494026		0.196	0	0	0.0005204	0.002	0	76%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967202	B21122198-001	HC-8015-DRO-	SAMP		1/5/2022 1:04:09	1	162648	1/3/2022 12:	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		0.1557866		0	0	0	0.0347618	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.33761507		0	0	0	0.0498123	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.4866137		0	0	0	0.0759322	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1194		0.0971	0	0	0.0005243	0.001942	0	123%	50	150	0%	
o-Terphenyl	S	mg/L		0.1754374		0.1942	0	0	0.0005156	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
14967203	B21122204-001	HC-8015-DRO-	SAMP		1/5/2022 2:34:32	1	162648	1/3/2022 12:	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		2.101262		0	0	0	0.0347618	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.47351003		0	0	0	0.0498123	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		2.563904		0	0	0	0.0759322	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1195		0.0971	0	0	0.0005243	0.001942	0	123%	50	150	0%	
o-Terphenyl	S	mg/L		0.1861172		0.1942	0	0	0.0005156	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
14967204	B21122180-001	HC-8015-DRO-	SAMP		1/5/2022 3:20:46	1	162648	1/3/2022 12:	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		0.2366515		0	0	0	0.036516	0.306	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.43372181		0	0	0	0.052326	0.306	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.6432119		0	0	0	0.079764	0.306	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1172		0.102	0	0	0.0005508	0.00204	0	115%	50	150	0%	
o-Terphenyl	S	mg/L		0.1828656		0.204	0	0	0.0005416	0.00204	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
14967205	B21122188-001	HC-8015-DRO-	SAMP		1/5/2022 4:06:13	1	162648	1/3/2022 12:	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		0.05047259		0	0	0	0.036516	0.306	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.20963196		0	0	0	0.052326	0.306	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2726293		0	0	0	0.079764	0.306	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1234		0.102	0	0	0.0005508	0.00204	0	121%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967205	B21122188-001	HC-8015-DRO-	SAMP		1/5/2022 4:06:13	1	162648	1/3/2022 12:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.1897967		0.204	0	0	0.0005416	0.00204	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
14967206	B21121965-001	HC-8015-DRO-	SAMP		1/5/2022 5:36:53	1	162648	1/3/2022 12:	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		0.1350194		0	0	0	0.0347618	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.3997511		0	0	0	0.0498123	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.520279		0	0	0	0.0759322	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1161		0.0971	0	0	0.0005243	0.001942	0	120%	50	150	0%	
o-Terphenyl	S	mg/L		0.145888		0.1942	0	0	0.0005156	0.002	0	75%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967207	CCV_0105HP41	HC-8015-DRO-	CCV		1/5/2022 7:07:04	1	R372780		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		4.67109424		5	0	0	0.0513	0.3	0	93%	80	120	0%	
n-Triacontane	S	mg/L		0.2325608		0.2	0	0	0.00054	0.002	0	116%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967208	CCV_0105HP41	HC-8015-DRO-	CCV		1/5/2022 7:51:49	1	R372780		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		14.48507		15	0	0	0.0358	0.3	0	97%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.02254		15	0	0	0.0782	0.3	50	100%	80	120	0%	
o-Terphenyl	S	mg/L		0.2067744		0.2	0	0	0.000531	0.002	0	103%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967209	B22010002-001	HC-8015-DRO-	SAMP		1/5/2022 9:21:48	1	162648	1/3/2022 12:	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		1.139412		0	0	0	0.036516	0.306	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.32413495		0	0	0	0.052326	0.306	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		1.445358		0	0	0	0.079764	0.306	50	0%	0	0	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967209	B22010002-001	HC-8015-DRO-	SAMP		1/5/2022 9:21:48	1	162648	1/3/2022 12:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.1192		0.102	0	0	0.0005508	0.00204	0	117%	50	150	0%	
o-Terphenyl	S	mg/L		0.186103		0.204	0	0	0.0005416	0.00204	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
14967210	B22010002-002	HC-8015-DRO-	SAMP		1/5/2022 10:06:5	1	162648	1/3/2022 12:	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		0.1496193		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0.1585491		0	0	0	0.0744464	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1169		0.0952	0	0	0.0005141	0.001904	0	123%	50	150	0%	
o-Terphenyl	S	mg/L		0.1839051		0.1904	0	0	0.0005055	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
14967211	B22010002-003	HC-8015-DRO-	SAMP		1/5/2022 10:51:4	1	162648	1/3/2022 12:	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		0.9290905		0	0	0	0.0344396	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.29899383		0	0	0	0.0493506	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		1.216881		0	0	0	0.0752284	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1229		0.0962	0	0	0.0005195	0.001924	0	128%	50	150	0%	
o-Terphenyl	S	mg/L		0.1917267		0.1924	0	0	0.0005108	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
14967212	B21122168-001	HC-8015-DRO-	SAMP		1/6/2022 12:21:1	1	162648	1/3/2022 12:	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		0.06263258		0	0	0	0.0347618	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.15421365		0	0	0	0.0498123	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2275338		0	0	0	0.0759322	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.1193		0.0971	0	0	0.0005243	0.001942	0	123%	50	150	0%	
o-Terphenyl	S	mg/L		0.132058		0.1942	0	0	0.0005156	0.002	0	68%	56	125	0%	
TEH(Oil Range)	X	mg/L		0.22462791		0	0	0	0.0498123	0.3	0	0%	0	0	0%	J

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967213	B21122168-001	HC-8015-DRO-	MS-DOD		1/6/2022 1:06:20	1	162648	1/3/2022 12:	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		14.49779		14.565	0.0626326	0	0.0347618	0.3	0	99%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		15.6575		14.565	0.2275338	0	0.0759322	0.3	50	106%	60	132	0%	
o-Terphenyl	S	mg/L		0.1517771		0.1942	0	0	0.0005156	0.002	0	78%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967214	B21122168-001	HC-8015-DRO-	MSD-DOD		1/6/2022 1:51:26	1	162648	1/3/2022 12:	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		14.95923		14.43	0.0626326	14.49779	0.0344396	0.3	0	103%	36	132	3%	
Total Extractable Hydrocarbons	A	mg/L		16.10783		14.43	0.2275338	15.6575	0.0752284	0.3	50	110%	60	132	3%	
o-Terphenyl	S	mg/L		0.1588895		0.1924	0	0	0.0005108	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
14967215	B21122168-006	HC-8015-DRO-	SAMP		1/6/2022 4:06:01	1	162648	1/3/2022 12:	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		0.2908688		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.37819862		0	0	0	0.0488376	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.6843358		0	0	0	0.0744464	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1129		0.0952	0	0	0.0005141	0.001904	0	119%	50	150	0%	
o-Terphenyl	S	mg/L		0.1480859		0.1904	0	0	0.0005055	0.002	0	78%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967216	B21122168-007	HC-8015-DRO-	SAMP		1/6/2022 4:50:51	1	162648	1/3/2022 12:	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		0.2836232		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.24363011		0	0	0	0.0488376	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.5941782		0	0	0	0.0744464	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.1166		0.0952	0	0	0.0005141	0.001904	0	122%	50	150	0%	
o-Terphenyl	S	mg/L		0.1823052		0.1904	0	0	0.0005055	0.002	0	96%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967217	CCV_0105HP43	HC-8015-DRO-	CCV		1/6/2022 6:20:47	1	R372780		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		4.7466626		5	0	0	0.0513	0.3	0	95%	80	120	0%	
n-Triacontane	S	mg/L		0.2302173		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
14967218	CCV_0105HP43	HC-8015-DRO-	CCV		1/6/2022 7:05:47	1	R372780		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		15.129		15	0	0	0.0358	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.68617		15	0	0	0.0782	0.3	50	105%	80	120	0%	
o-Terphenyl	S	mg/L		0.2048343		0.2	0	0	0.000531	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
14967219	LCS-162648-RR	HC-8015-DRO-	LCS-DOD		1/6/2022 8:36:11	1	162648	1/3/2022 12:	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		4.66724253		5	0	0	0.0513	0.3	0	93%	41	113	0%	
n-Triacontane	S	mg/L		0.1145		0.1	0	0	0.00054	0.002	0	115%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967220	B21122168-001	HC-8015-DRO-	MS-DOD		1/6/2022 10:06:5	1	162648	1/3/2022 12:	1E+07	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.72792244		4.9	0.2246279	0	0.050274	0.3	0	92%	41	113	0%	
n-Triacontane	S	mg/L		0.1135		0.098	0	0	0.0005292	0.002	0	116%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14967221	B21122168-001	HC-8015-DRO-	MSD-DOD		1/6/2022 11:37:4	1	162648	1/3/2022 12:	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		5.524624		4.76	0.2246279	4.7279224	0.0488376	0.3	0	111%	41	113	16%	
n-Triacontane	S	mg/L		0.1363		0.0952	0	0	0.0005141	0.002	0	143%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist				
14967222	CCV_0105HP44	HC-8015-DRO-	CCV		1/6/2022 1:08:43	1	R372780		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		4.809896		5	0	0	0.0513	0.3	0	96%	80	120	0%	
n-Triacontane	S	mg/L		0.2368726		0.2	0	0	0.00054	0.002	0	118%	80	120	0%	

Energy Laboratories Inc

ANALYTICAL RUN Summary

24-Jan-22

Run ID GCFID-HP4-B_220106A

Run Start Date: 1/6/2022
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
DRO220105B	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023
DRO220106A	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-RRO	4/6/2026

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968576	CCV_0106HP40	HC-8015-DRO-	CCV		1/6/2022 6:57:52	1	R372868		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		4.37662061		5	0	0	0.0513	0.3	0	88%	80	120	0%	
n-Triacontane	S	mg/L		0.2021588		0.2	0	0	0.00054	0.002	0	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968577	CCV_0106HP40	HC-8015-DRO-	CCV		1/6/2022 7:43:00	1	R372868		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		14.07434		15	0	0	0.0358	0.3	0	94%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.59479		15	0	0	0.0782	0.3	50	97%	80	120	0%	
o-Terphenyl	S	mg/L		0.1941141		0.2	0	0	0.000531	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
14968578	LCS-162648	HC-8015-DRO-	LCS-DOD		1/6/2022 9:13:27	1	162648	1/3/2022 12:	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
14968578	LCS-162648	HC-8015-DRO-	LCS-DOD		1/6/2022 9:13:27	1	162648	1/3/2022 12:	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		10.50824		15	0	0	0.0358	0.3	0	70%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		11.20314		15	0	0	0.0782	0.3	0	75%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1435069		0.2	0	0	0.000531	0.002	0	72%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968579	MB-162648	HC-8015-DRO-	MBLK		1/6/2022 9:58:42	1	162648	1/3/2022 12:	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		0.1267		0.1	0	0	0.00054	0.002	0	127%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.2194552		0.2	0	0	0.000531	0.002	0	110%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968580	B21122211-001	HC-8015-DRO-	SAMP		1/6/2022 10:43:3	1	162648	1/3/2022 12:	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	0.035084	0.3	0	0%	0	0	0%	U
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		0.0718		0.098	0	0	0.0005292	0.00196	0	73%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1268485		0.196	0	0	0.0005204	0.00196	0	65%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968581	B21122190-001	HC-8015-DRO-	SAMP		1/6/2022 11:28:5	1	162648	1/3/2022 12:	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		0.3226442		0	0	0	0.035084	0.3	0	0%	0	0	0%	
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		0.3388759		0	0	0	0.076636	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.1032		0.098	0	0	0.0005292	0.00196	0	105%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.142906		0.196	0	0	0.0005204	0.00196	0	73%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968582	B21122198-001	HC-8015-DRO-	SAMP		1/7/2022 12:14:1	1	162648	1/3/2022 12:	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		0.1073		0.0971	0	0	0.0005243	0.001942	0	111%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1689406		0.1942	0	0	0.0005156	0.001942	0	87%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968583	B21122204-001	HC-8015-DRO-	SAMP		1/7/2022 1:44:55	1	162648	1/3/2022 12:	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		1.476135		0	0	0	0.0347618	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0.15696336		0	0	0	0.0498123	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT	A	mg/L		1.628552		0	0	0	0.0759322	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.1087		0.0971	0	0	0.0005243	0.001942	0	112%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1812886		0.1942	0	0	0.0005156	0.001942	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
14968584	B21122180-001	HC-8015-DRO-	SAMP		1/7/2022 2:30:09	1	162648	1/3/2022 12:	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	0.036516	0.306	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.052326	0.306	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.079764	0.306	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.1168		0.102	0	0	0.0005508	0.00204	0	115%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1910563		0.204	0	0	0.0005416	0.00204	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
14968585	B21122188-001	HC-8015-DRO-	SAMP		1/7/2022 3:15:30	1	162648	1/3/2022 12:	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	0.036516	0.306	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.052326	0.306	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.079764	0.306	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.1112		0.102	0	0	0.0005508	0.00204	0	109%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968585	B21122188-001	HC-8015-DRO-	SAMP		1/7/2022 3:15:30	1	162648	1/3/2022 12:	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		0.1762693		0.204	0	0	0.0005416	0.00204	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
14968586	B21121965-001	HC-8015-DRO-	SAMP		1/7/2022 4:46:07	1	162648	1/3/2022 12:	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		0.1112		0.0971	0	0	0.0005243	0.001942	0	115%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1304802		0.1942	0	0	0.0005156	0.001942	0	67%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968587	CCV_0106HP41	HC-8015-DRO-	CCV		1/7/2022 6:16:24	1	R372868		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		4.4447627		5	0	0	0.0513	0.3	0	89%	80	120	0%	
n-Triacontane	S	mg/L		0.1987371		0.2	0	0	0.00054	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
14968588	CCV_0106HP42	HC-8015-DRO-	CCV		1/7/2022 7:01:36	1	R372868		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		14.46529		15	0	0	0.0358	0.3	0	96%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.00816		15	0	0	0.0782	0.3	50	100%	80	120	0%	
o-Terphenyl	S	mg/L		0.2007467		0.2	0	0	0.000531	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
14968589	B22010002-002	HC-8015-DRO-	SAMP		1/7/2022 8:31:12	1	162648	1/3/2022 12:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0		0	0	0	0.0340816	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968589	B22010002-002	HC-8015-DRO-	SAMP		1/7/2022 8:31:12	1	162648	1/3/2022 12:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane (SGT)	S	mg/L		0.1066		0.0952	0	0	0.0005141	0.001904	0	112%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1807757		0.1904	0	0	0.0005055	0.001904	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
14968590	B22010002-001	HC-8015-DRO-	SAMP		1/7/2022 9:16:25	1	162648	1/3/2022 12:	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		0.6793557		0	0	0	0.036516	0.306	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0.2154658		0	0	0	0.052326	0.306	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT	A	mg/L		0.8910708		0	0	0	0.079764	0.306	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.1063		0.102	0	0	0.0005508	0.00204	0	104%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1789617		0.204	0	0	0.0005416	0.00204	0	88%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968591	B22010002-003	HC-8015-DRO-	SAMP		1/7/2022 10:01:3	1	162648	1/3/2022 12:	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		0.4786824		0	0	0	0.0344396	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0.19685236		0	0	0	0.0493506	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT	A	mg/L		0.6677145		0	0	0	0.0752284	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.0978		0.0962	0	0	0.0005195	0.001924	0	102%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.167389		0.1924	0	0	0.0005108	0.001924	0	87%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968592	B21122168-001	HC-8015-DRO-	SAMP		1/7/2022 11:31:5	1	162648	1/3/2022 12:	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		0.0937		0.0971	0	0	0.0005243	0.001942	0	96%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.10878		0.1942	0	0	0.0005156	0.001942	0	56%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968593	B21122168-006	HC-8015-DRO-	SAMP		1/7/2022 12:16:5	1	162648	1/3/2022 12:	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		0.04466128		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0744464	0.3	0	0%	0	0	0%	U
n-Triacontane (SGT)	S	mg/L		0.0912		0.0952	0	0	0.0005141	0.001904	0	96%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1260865		0.1904	0	0	0.0005055	0.001904	0	66%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968594	B21122168-007	HC-8015-DRO-	SAMP		1/7/2022 1:01:52	1	162648	1/3/2022 12:	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		0.1127032		0	0	0	0.0340816	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0488376	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0.1259788		0	0	0	0.0744464	0.3	0	0%	0	0	0%	J
n-Triacontane (SGT)	S	mg/L		0.0939		0.0952	0	0	0.0005141	0.001904	0	99%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1536489		0.1904	0	0	0.0005055	0.001904	0	81%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968595	B21122168-001	HC-8015-DRO-	MS-DOD		1/7/2022 1:46:33	1	162648	1/3/2022 12:	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		12.00735		14.565	0	0	0.0347618	0.3	0	82%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.75319		14.565	0	0	0.0759322	0.3	0	88%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1337121		0.1942	0	0	0.0005156	0.002	0	69%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14968596	B21122168-001	HC-8015-DRO-	MSD-DOD		1/7/2022 2:31:18	1	162648	1/3/2022 12:	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		12.87747		14.43	0	12.00735	0.0344396	0.3	0	89%	36	132	7%	
Total Extractable Hydrocarbons (SGT	A	mg/L		13.6418		14.43	0	12.75319	0.0752284	0.3	0	95%	60	132	7%	
o-Terphenyl (SGT)	S	mg/L		0.1446358		0.1924	0	0	0.0005108	0.002	0	75%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14969703	CCV_0106HP43	HC-8015-DRO-	CCV		1/7/2022 4:01:11	1	R372868		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		4.52395215		5	0	0	0.0513	0.3	0	90%	80	120	0%	
n-Triacontane	S	mg/L		0.2073596		0.2	0	0	0.00054	0.002	0	104%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14969704	CCV_0106HP43	HC-8015-DRO-	CCV		1/7/2022 4:45:57	1	R372868		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		14.25502		15	0	0	0.0358	0.3	0	95%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.7904		15	0	0	0.0782	0.3	50	99%	80	120	0%	
o-Terphenyl	S	mg/L		0.1969217		0.2	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
14969705	LCS-162648-RR	HC-8015-DRO-	LCS-DOD		1/7/2022 6:16:12	1	162648	1/3/2022 12:	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		4.47460938		5	0	0	0.0513	0.3	0	89%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.1051		0.1	0	0	0.00054	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
14969706	B21122168-001	HC-8015-DRO-	MS-DOD		1/7/2022 7:46:27	1	162648	1/3/2022 12:	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		4.59939289		4.9	0	0	0.050274	0.3	0	94%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.1092		0.098	0	0	0.0005292	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
14969707	B21122168-001	HC-8015-DRO-	MSD-DOD		1/7/2022 9:16:27	1	162648	1/3/2022 12:	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		4.29931927		4.76	0	4.5993929	0.0488376	0.3	0	90%	41	113	7%	
n-Triacontane (SGT)	S	mg/L		0.0994		0.0952	0	0	0.0005141	0.002	0	104%	50	150	0%	

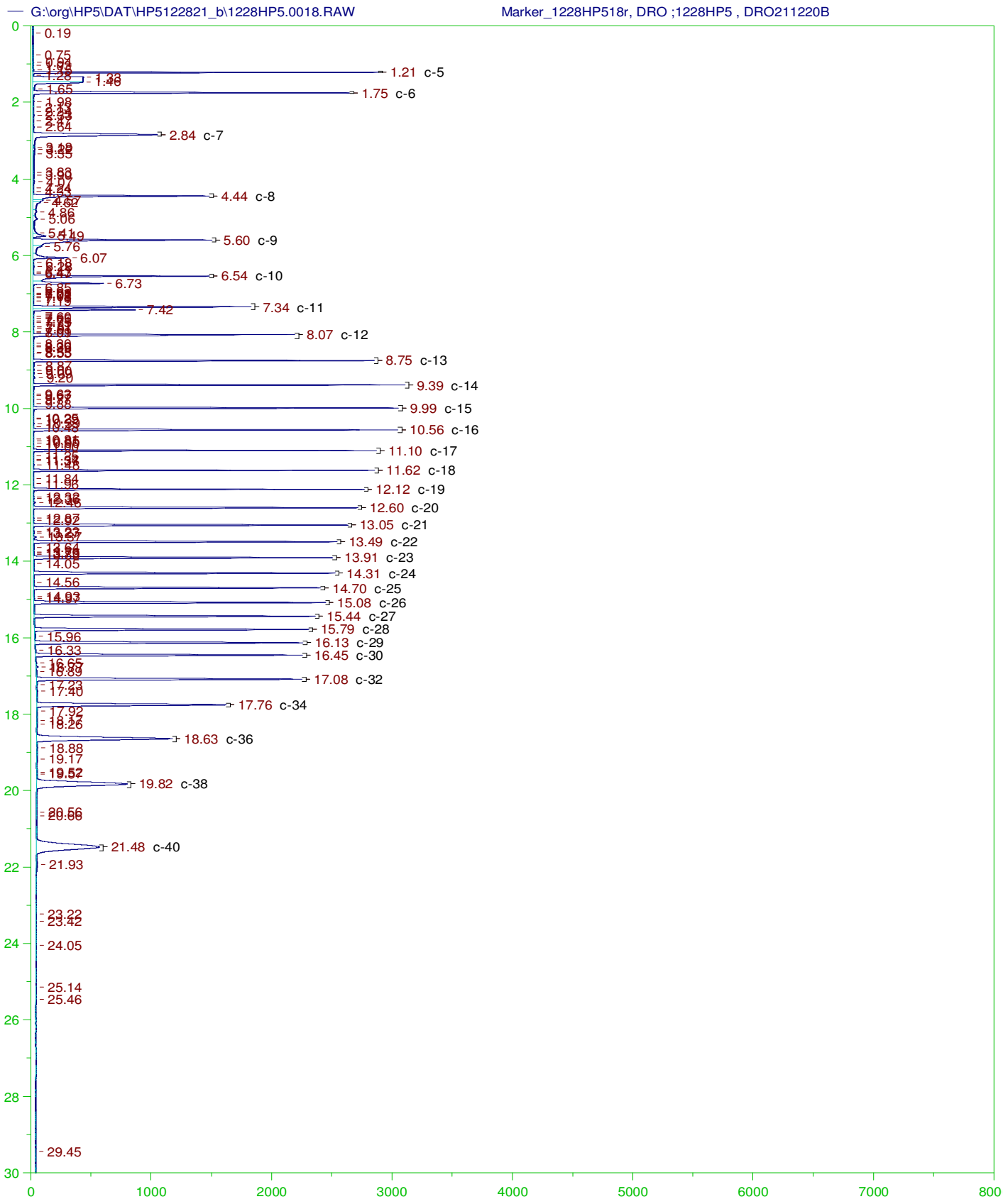
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist				
14969708	CCV_0106HP44	HC-8015-DRO-	CCV		1/7/2022 10:46:2	1	R372868		0	0					

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.54793066		5	0	0	0.0513	0.3	0	91%	80	120	0%	
n-Triacontane	S	mg/L		0.2026503		0.2	0	0	0.00054	0.002	0	101%	80	120	0%	

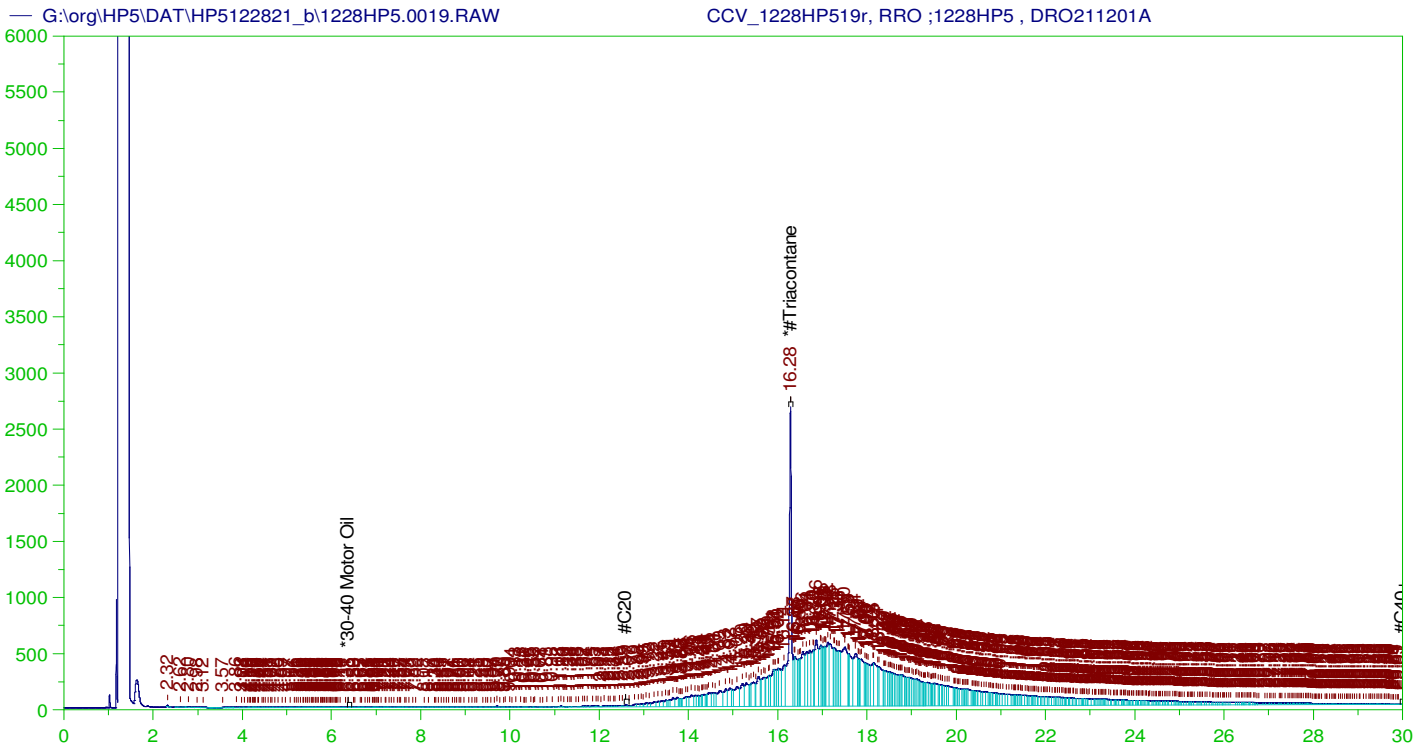
Write Sequence	Insert Entries(Have the first cell for entries selecte							
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	
G:\org\HP5\DAT\HP5122821_b\1228HP5.18r	Marker_1228HP518r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.19r	CCV_1228HP519r, 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	
G:\org\HP5\DAT\HP5122821_b\1228HP5.20r	CCV_1228HP520r, DRO ;1228HP5 , DRO211220A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.31r	Marker_1228HP531r, DRO ;1228HP5 , DRO211203B	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.32r	LCS-162502 ;1228HP5 ,	G:\Org\HP5\Methods\D3_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1000	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.33r	MB-162502 ;1228HP5 ,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1000	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.34r	Marker_1228HP534r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.35r	CCV_1228HP535r, 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	
G:\org\HP5\DAT\HP5122821_b\1228HP5.36r	CCV_1228HP536r, DRO ;1228HP5 , DRO211229A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.37r	DCM-Baseline Check-V37	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.38r	B21121968-001D ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1020	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.39r	B21121957-001B ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1050	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.40r	B21121977-001D ;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-L#.met	1030	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.41r	B21121977-002D ;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-L#.met	1030	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.42r	DCM-Baseline Check-V42	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.43r	B21121981-001D ;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-L#.met	1030	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.44r	B21121981-001DMS ;1228HP5 ,	G:\Org\HP5\Methods\D3_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1040	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.45r	B21121981-001DMSD ;1228HP5 ,	G:\Org\HP5\Methods\D3_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1040	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.46r	DCM-Baseline Check-V46	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.47r	B21121979-003D ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1050	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.48r	B21121979-001D ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-122848-IM-L%.met G:\Org\HP5\Methods\D3_OROS-122848-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1040	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.50r	Marker_1228HP550r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.51r	CCV_1228HP551r, 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	
G:\org\HP5\DAT\HP5122821_b\1228HP5.52r	CCV_1228HP536r, DRO ;1228HP5 , DRO211229A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.53r	DCM-Baseline Check-V53	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.54r	B21121979-002B ;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-L#.met	1040	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.55r	B21121965-001D ;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-L#.met	1000	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.56r	DCM-Baseline Check-V56	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.57r	B21121967-001D ;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-L#.met	1020	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.58r	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-L#.met	1000	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.59r	DCM-Baseline Check-V59	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.60r	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-L#.met	1050	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.61r	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-L#.met	1040	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.62r	DCM-Baseline Check-V62	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.64r	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-L#.met	1010	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.65r	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-L#.met	1010	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.66r	Marker_1228HP566r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.67r	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	
G:\org\HP5\DAT\HP5122821_b\1228HP5.68r	CCV_1228HP568r, DRO ;1228HP5 , DRO211229A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.69r	DCM-Baseline Check-V69	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.70r	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	
G:\org\HP5\DAT\HP5122821_b\1228HP5.71r	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	
G:\org\HP5\DAT\HP5122821_b\1228HP5.72r	B21121981-001DMSD-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	
G:\org\HP5\DAT\HP5122821_b\1228HP5.73r	Marker_1228HP573r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	
G:\org\HP5\DAT\HP5122821_b\1228HP5.74r	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	

Write Sequence	Insert Entries(Have the first cell for entries selecte							
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP4\DAT\HP4010522_b\0105HP4.01r	MARKER_0105HP401r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220105.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.02r	CCV_0105HP402r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.03r	CCV_0105HP403r, DRO ;0105HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.04r	DCM-Baseline Check-V04	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.05r	LCS-162648 ;0105HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.06r	MB-162648 ;0105HP4 ,	G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.07r	B21122211-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1020	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.08r	B21122190-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1020	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.09r	B21122198-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.10r	DCM-Baseline Check-V10	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.11r	B21122204-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.12r	B21122180-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	980	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.13r	B21122188-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-010513-OI-L%.met G:\Org\HP4\Methods\D3_ORO-010513-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	980	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.14r	DCM-Baseline Check-V14	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.15r	B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.16r	MARKER_0105HP416r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220105.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.17r	CCV_0105HP417r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.18r	CCV_0105HP418r, DRO ;0105HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.19r	DCM-Baseline Check-V19	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.20r	B22010002-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-010513-OI-L%.met G:\Org\HP4\Methods\D3_ORO-010513-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	980	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.21r	B22010002-002D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.22r	B22010002-003B ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1040	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.24r	B21122168-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-010524-OI-L%.met G:\Org\HP4\Methods\D3_ORO-010524-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.25r	B21122168-001DMS ;0105HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.26r	B21122168-001DMSD ;0105HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1040	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.27r	DCM-Baseline Check-V27	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.28r	DCM-Baseline Check-V28	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.29r	B21122168-006D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.30r	B21122168-007B ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.31r	MARKER_0105HP431r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220105.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.32r	CCV_0105HP432r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.33r	CCV_0105HP433r, DRO ;0105HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.34r	DCM-Baseline Check-V34	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.35r	LCS-162648-RRO ;0105HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.36r	DCM-Baseline Check-V36	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.37r	B21122168-001DMS-RRO ;0105HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1020	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.38r	DCM-Baseline Check-V38	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.39r	B21122168-001DMSD-RRO ;0105HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.40r	MARKER_0105HP440r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220102.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010522_b\0105HP4.41r	CCV_0105HP441r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0

Write Sequence	Insert Entries(Have the first cell for entries selecte							
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP4\DAT\HP4010622_b\0106HP4.01r	DCM-Baseline Check-V01	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.02r	DCM-Baseline Check-V02	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.03r	MARKER_0106HP403r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.04r	CCV_0106HP404r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.05r	CCV_0106HP405r, DRO ;0106HP4 , DRO220105B	G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.06r	DCM-Baseline Check-V06	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.07r	LCS-162648 ;0106HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.08r	MB-162648 ;0106HP4 , SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.09r	B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1020	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.10r	B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1020	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.11r	B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.12r	DCM-Baseline Check-V12	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.13r	B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.14r	B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	980	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.15r	B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	980	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.16r	DCM-Baseline Check-V16	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.17r	B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT	G:\Org\HP4\methods\DR_8015-010617-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-010617-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.18r	MARKER_0106HP418r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.19r	CCV_0106HP419r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.20r	CCV_0106HP420r, DRO ;0106HP4 , DRO220105B	G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.22r	B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.23r	B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	980	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.24r	B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1040	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.25r	DCM-Baseline Check-V25	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.26r	B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.27r	B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.28r	B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-010628-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.29r	B21122168-001DMS ;0106HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1030	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.30r	B21122168-001DMSD ;0106HP4 , SGT	G:\Org\HP4\methods\D3_8015-010630-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1040	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.31r	MARKER_0106HP433r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.32r	CCV_0106HP434r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.33r	CCV_0106HP435r, DRO ;0106HP4 , DRO220105B	G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.34r	DCM-Baseline Check-V34	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.35r	LCS-162648-RRO ;0106HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1000	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.36r	DCM-Baseline Check-V36	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.37r	B21122168-001DMS-RRO ;0106HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1020	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.38r	DCM-Baseline Check-V38	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.39r	B21122168-001DMSD-RRO ;0106HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-010639-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1050	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.40r	MARKER_0106HP440r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0
G:\org\HP4\DAT\HP4010622_b\0106HP4.41r	CCV_0106HP441r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0



G:\org\HP5\dat\HP5122821_b\Review\018_Marker_1228HP518r_CSC211228.xls



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	-

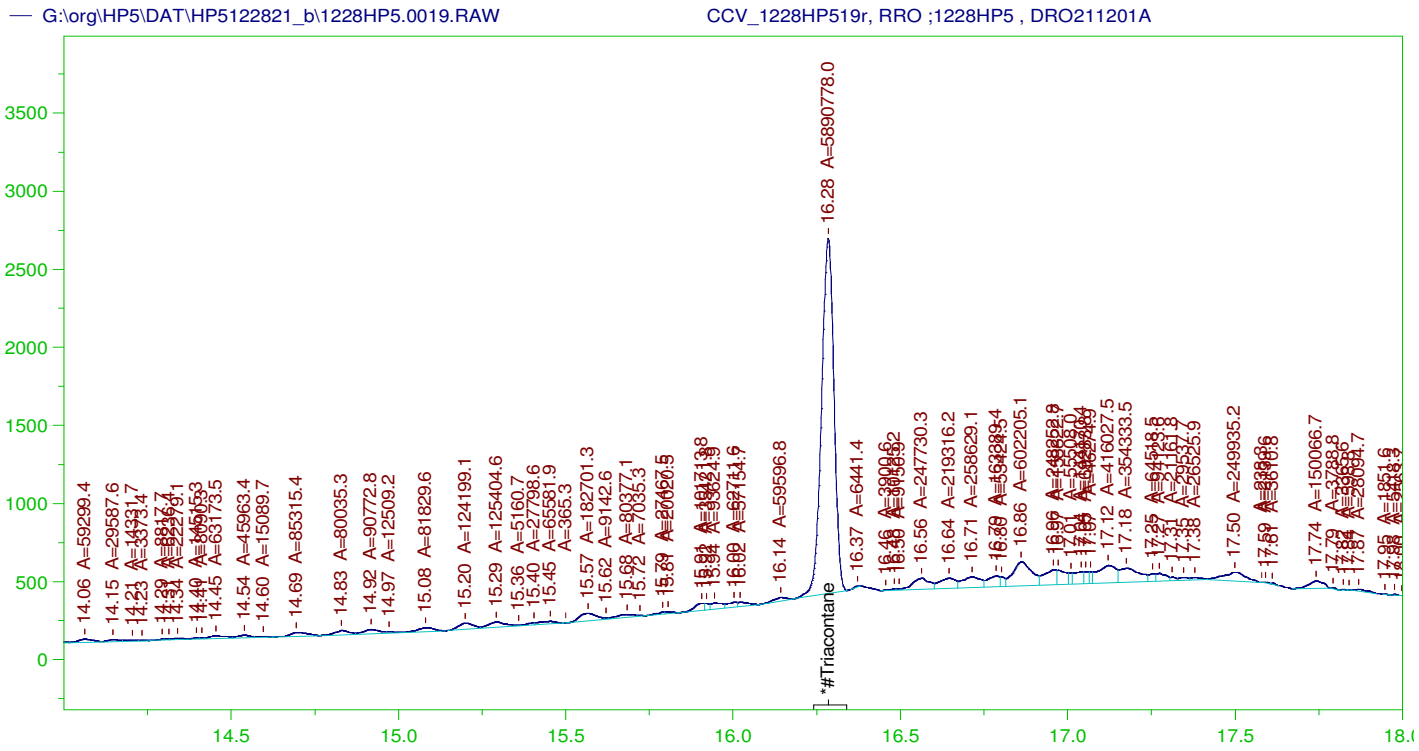
~~RRO~~ TEH (Oil Range) Area:1.317978E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4617.611

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



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\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

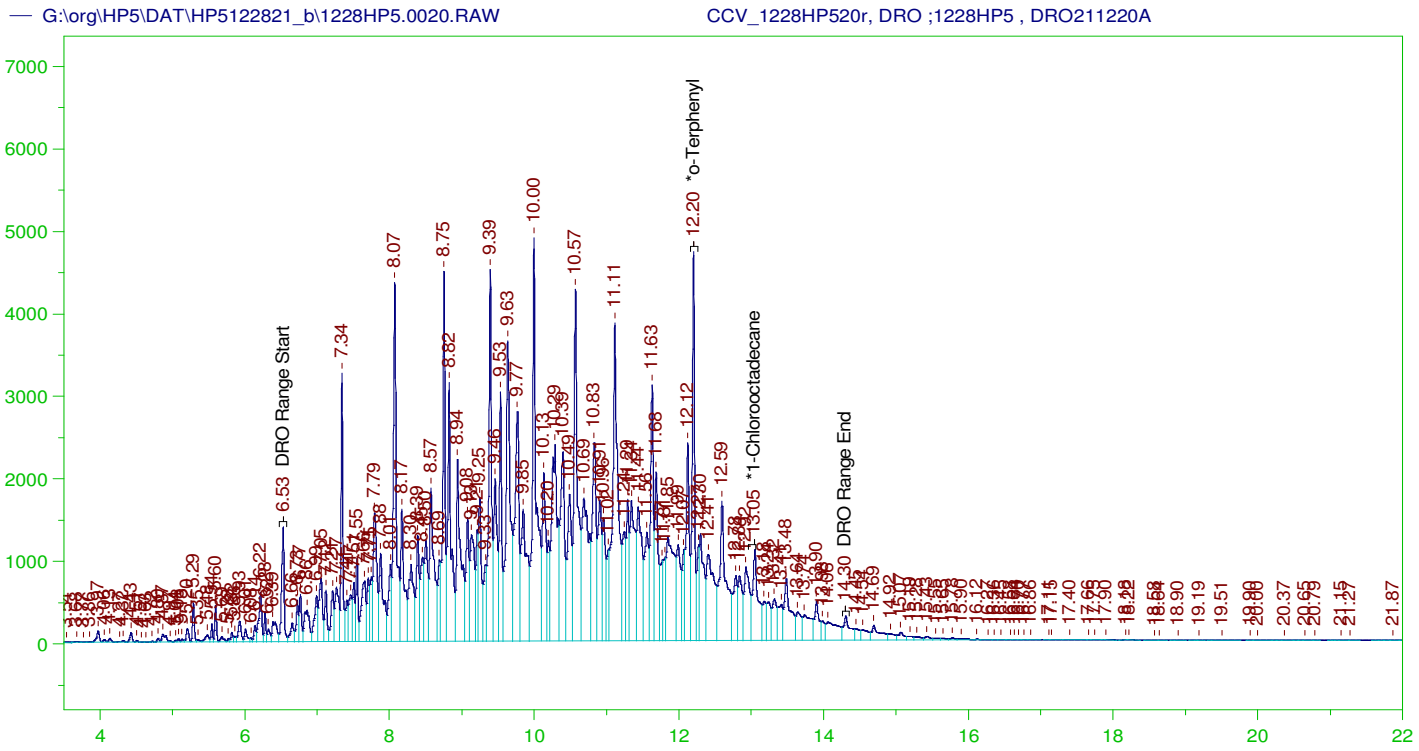
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.284	500.	203.621	40.72	-

RRO Area:6179074 RRO AMOUNT: 216.4875

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.	203.621	101.81	75-125



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

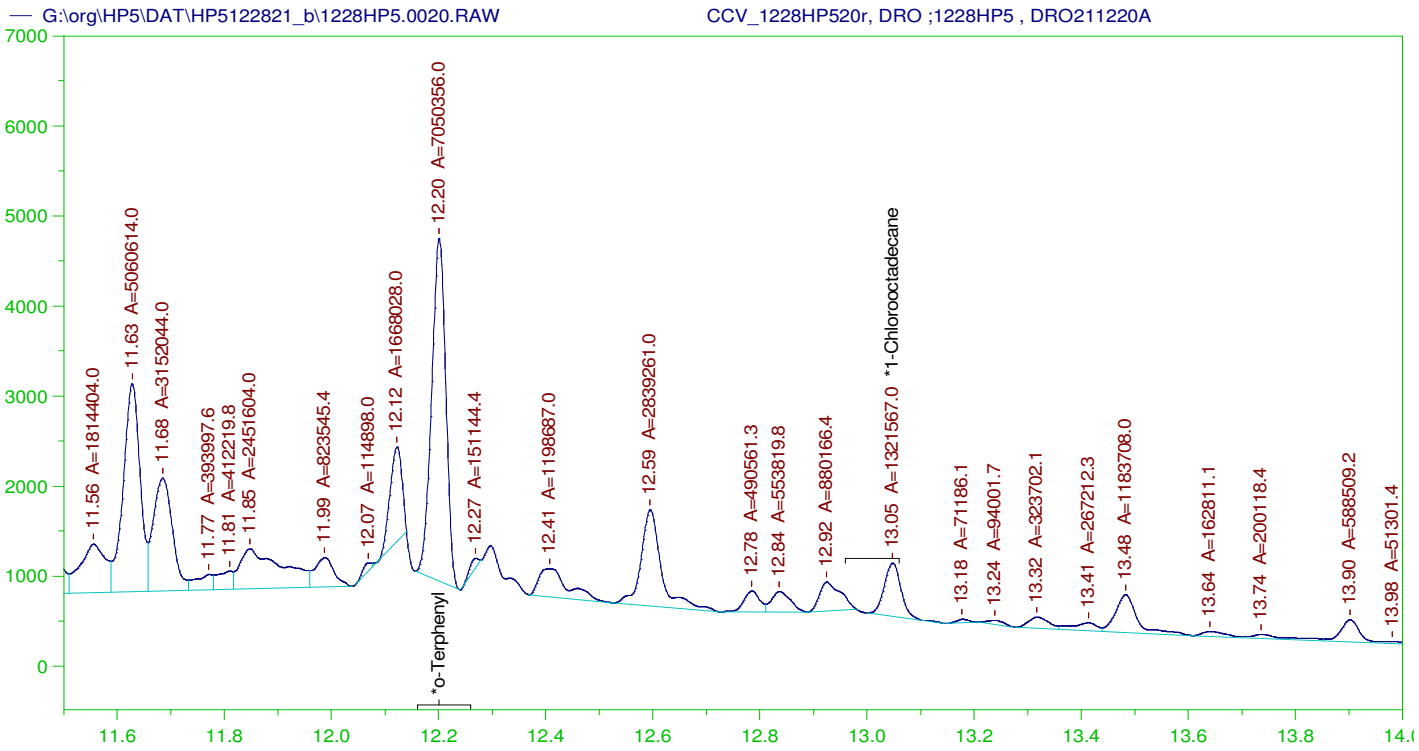
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	200.	325.622	162.81	-
*1-Chlorooctadecane	13.048	200.	158.09	79.04	-

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
Date & Time Acquired: 12/29/2021 2:40:51 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

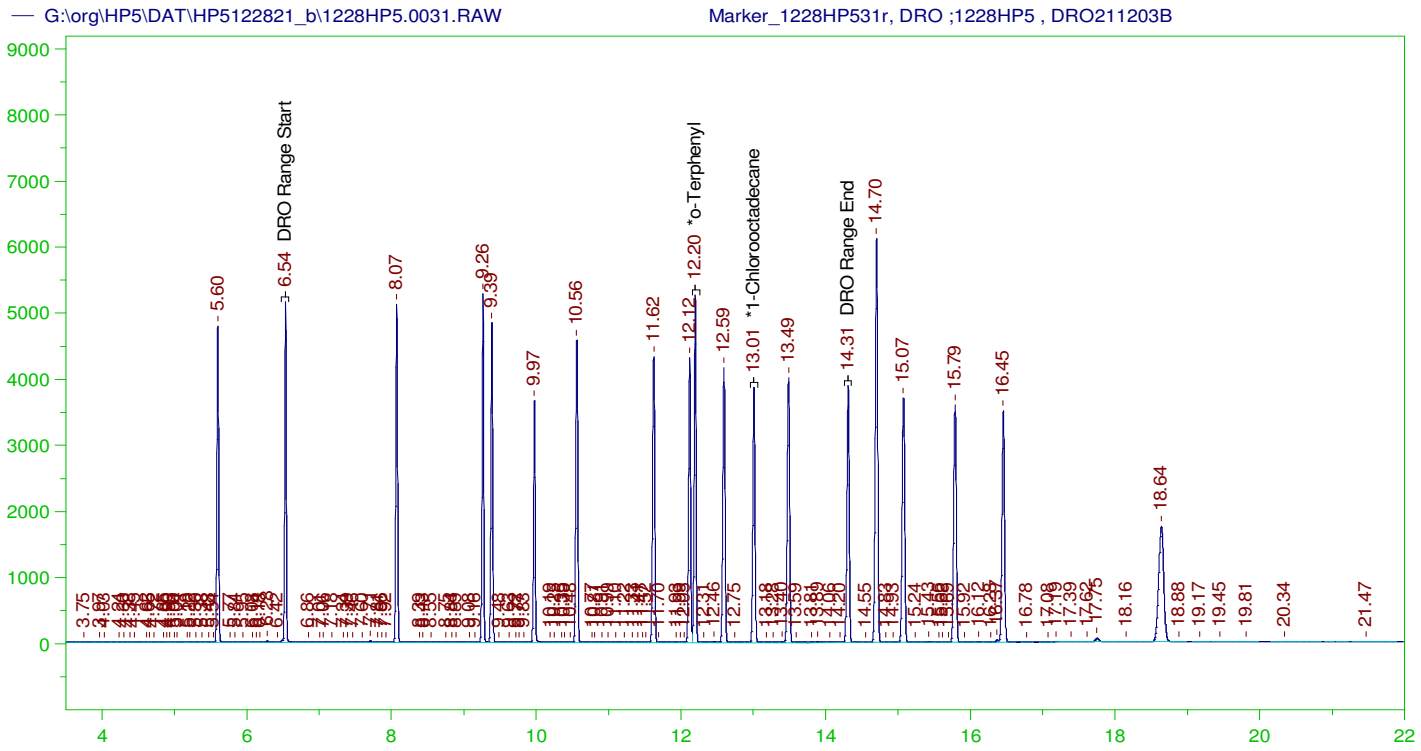
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	200.	198.55	99.28	-
*1-Chlorooctadecane	13.048	200.	37.218	18.61	-

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

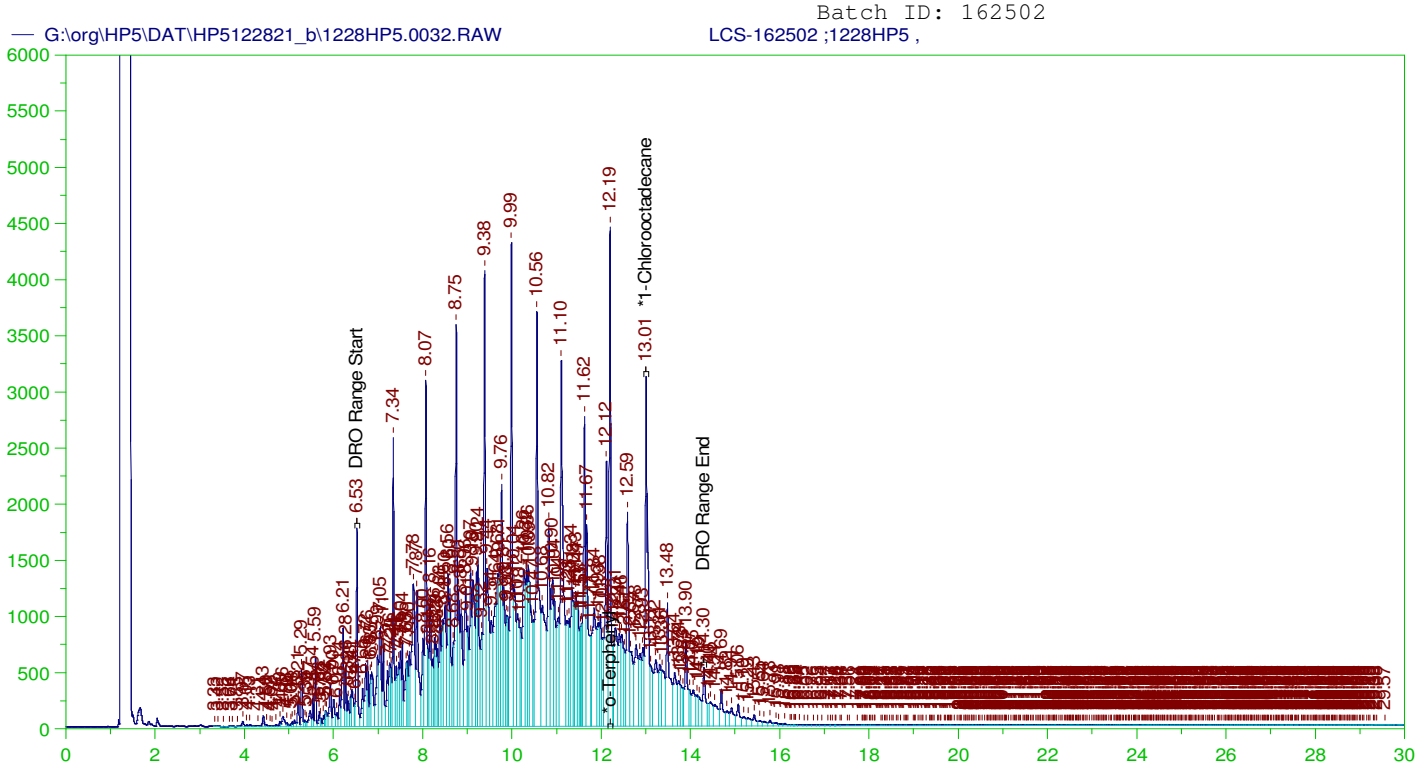
Sample Name: Marker_1228HP531r, DRO ;1228HP5 , DRO211203B
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0031.RAW
Date & Time Acquired: 12/29/2021 10:32:27 AM
Method File: G:\Org\HP5\Methods\DC_8015-24-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 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	12.197	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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

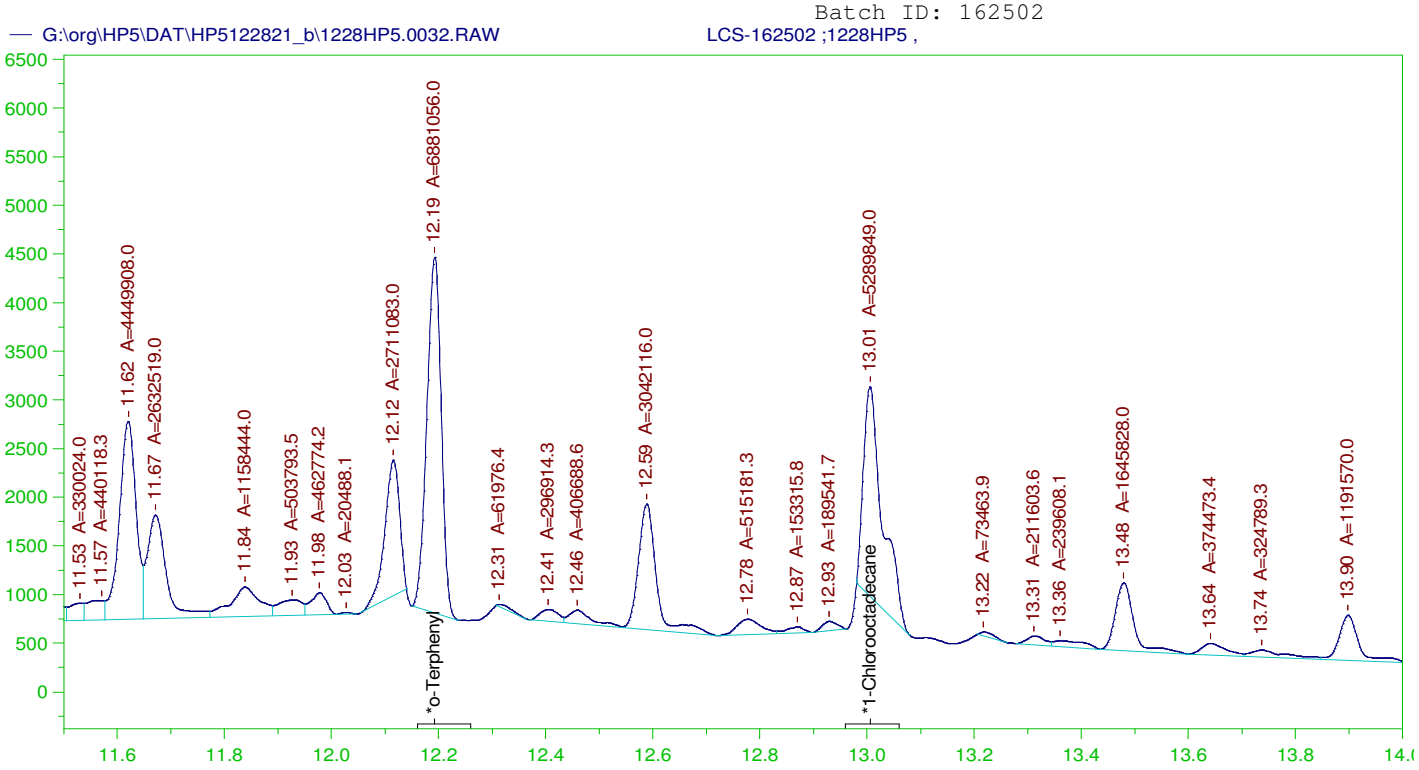
Sample Name: LCS-162502 ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0032.RAW
Date & Time Acquired: 12/29/2021 11:14:50 AM
Method File: G:\Org\HP5\Methods\D3_8015-24-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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

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

Batch ID: 162502



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

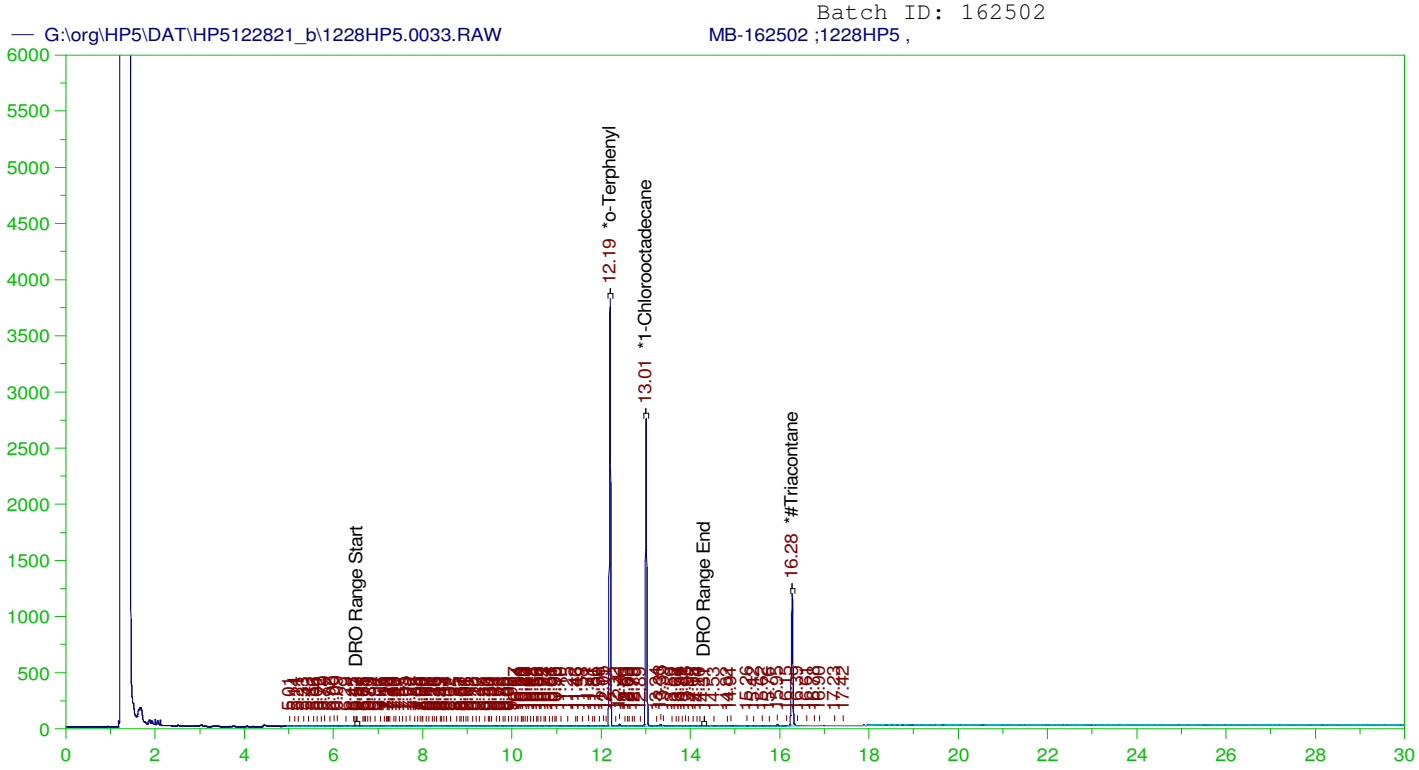
Sample Name: LCS-162502 ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0032.RAW
Date & Time Acquired: 12/29/2021 11:14:50 AM
Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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

Batch ID: 162502



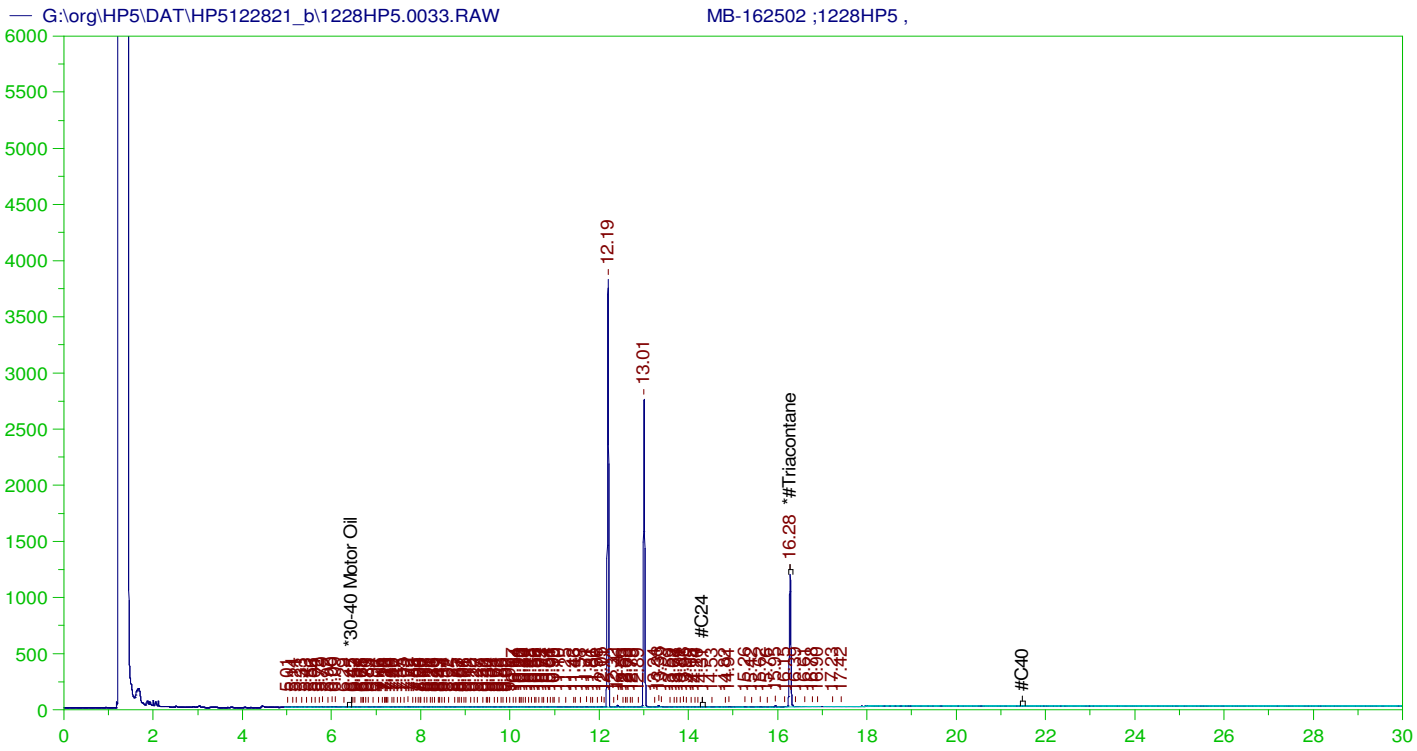
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162502 ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0033.RAW
Date & Time Acquired: 12/29/2021 11:57:20 AM
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: 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

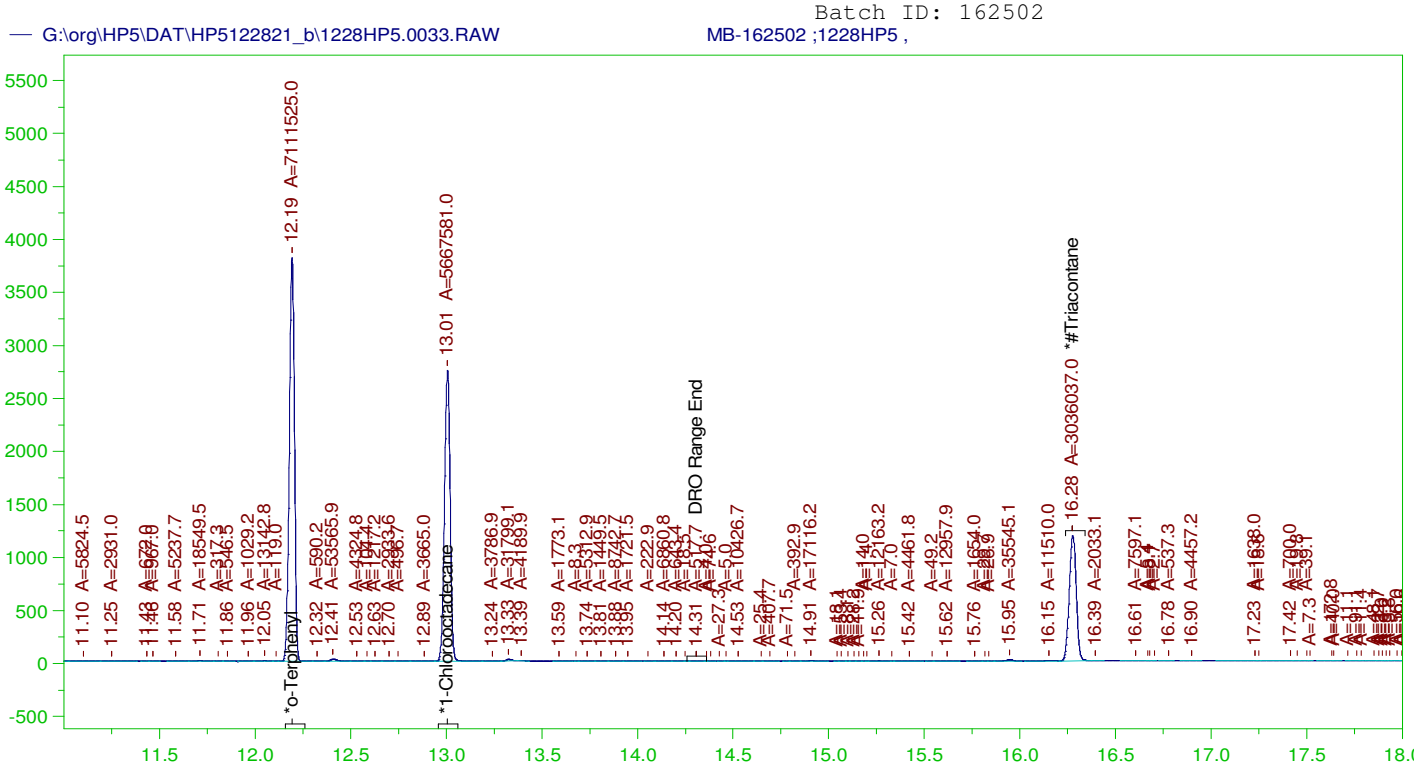
Sample Name: MB-162502 ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0033.RAW
Date & Time Acquired: 12/29/2021 11:57:20 AM
Method File: G:\Org\HP5\Methods\DR_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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	.106	21.21	-

RRO Area:160168.8 RRO AMOUNT: 5.611606E-03

Batch ID: 162502



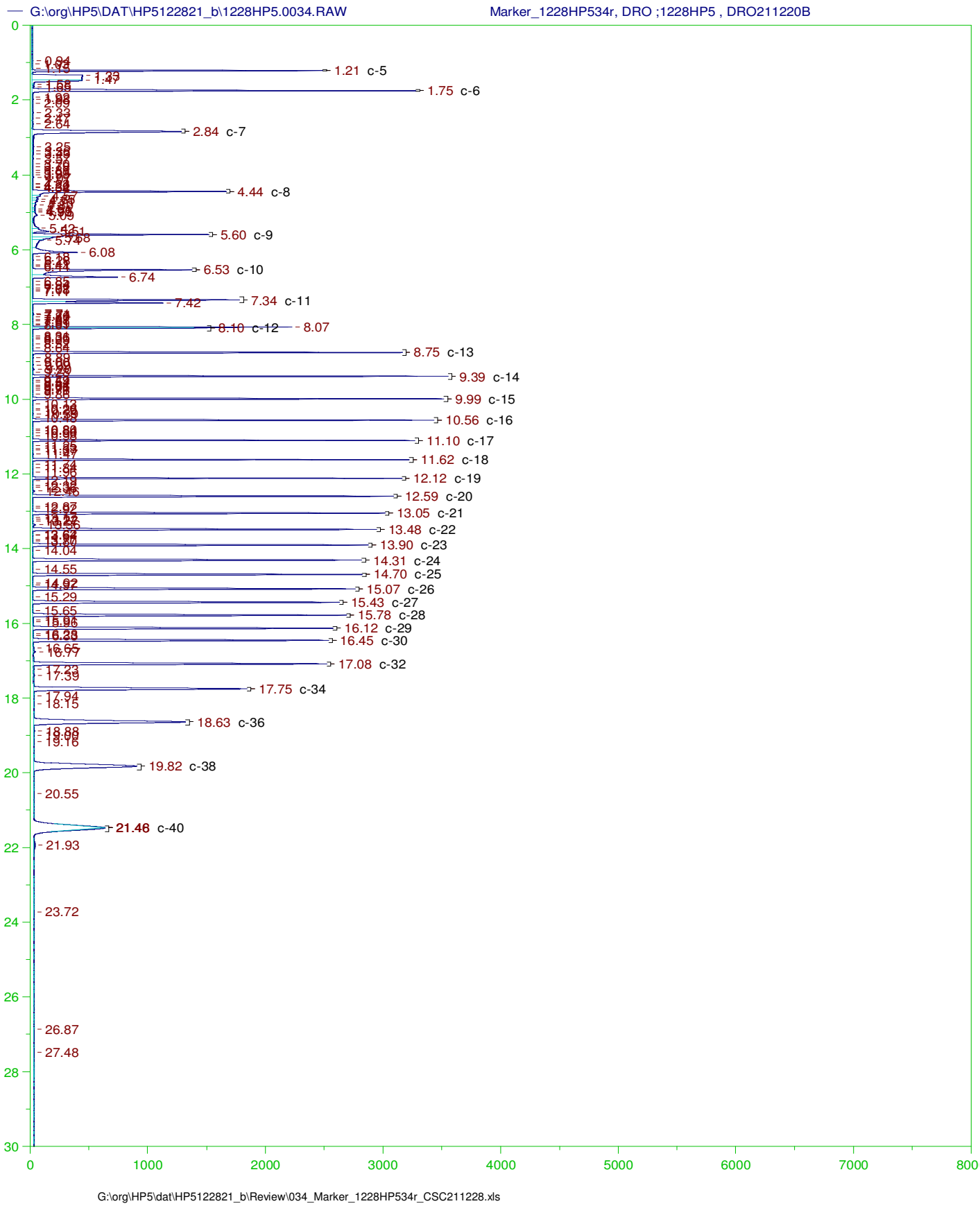
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

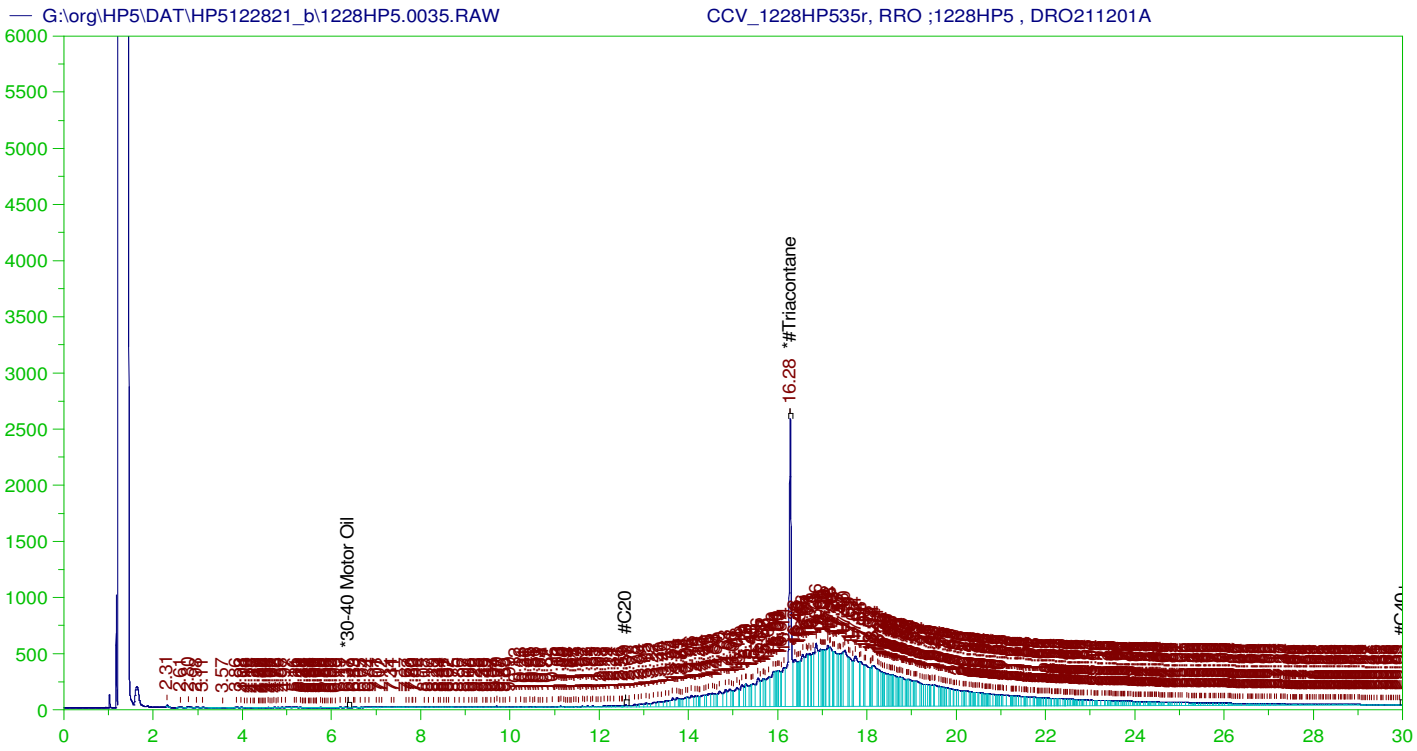
Sample Name: MB-162502 ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0033.RAW
Date & Time Acquired: 12/29/2021 11:57:20 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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	12.193	.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


G:\org\HP5\DAT\HP5122821_b\1228HP5.0034.RAW
Marker_1228HP534r, DRO ;1228HP5 , DRO211220B
1.21 c-5
1.75 c-6
2.84 c-7
4.44 c-8
5.60 c-9
6.08
6.53 c-10
6.74
7.34 c-11
7.42
8.10 c-12
8.07
8.75 c-13
9.39 c-14
9.99 c-15
10.56 c-16
11.10 c-17
11.62 c-18
12.12 c-19
12.59 c-20
13.05 c-21
13.48 c-22
13.90 c-23
14.31 c-24
14.55
14.70 c-25
15.07 c-26
15.29
15.43 c-27
15.65
15.78 c-28
16.12 c-29
16.45 c-30
16.77
17.08 c-32
17.39
17.75 c-34
17.94
18.15
18.63 c-36
19.16
19.82 c-38
20.55
21.46 c-40
21.93
23.72
26.87
27.48
0
1000
2000
3000
4000
5000
6000
7000
G:\org\HP5\dat\HP5122821_b\Review\034_Marker_1228HP534r_CSC211228.xls



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

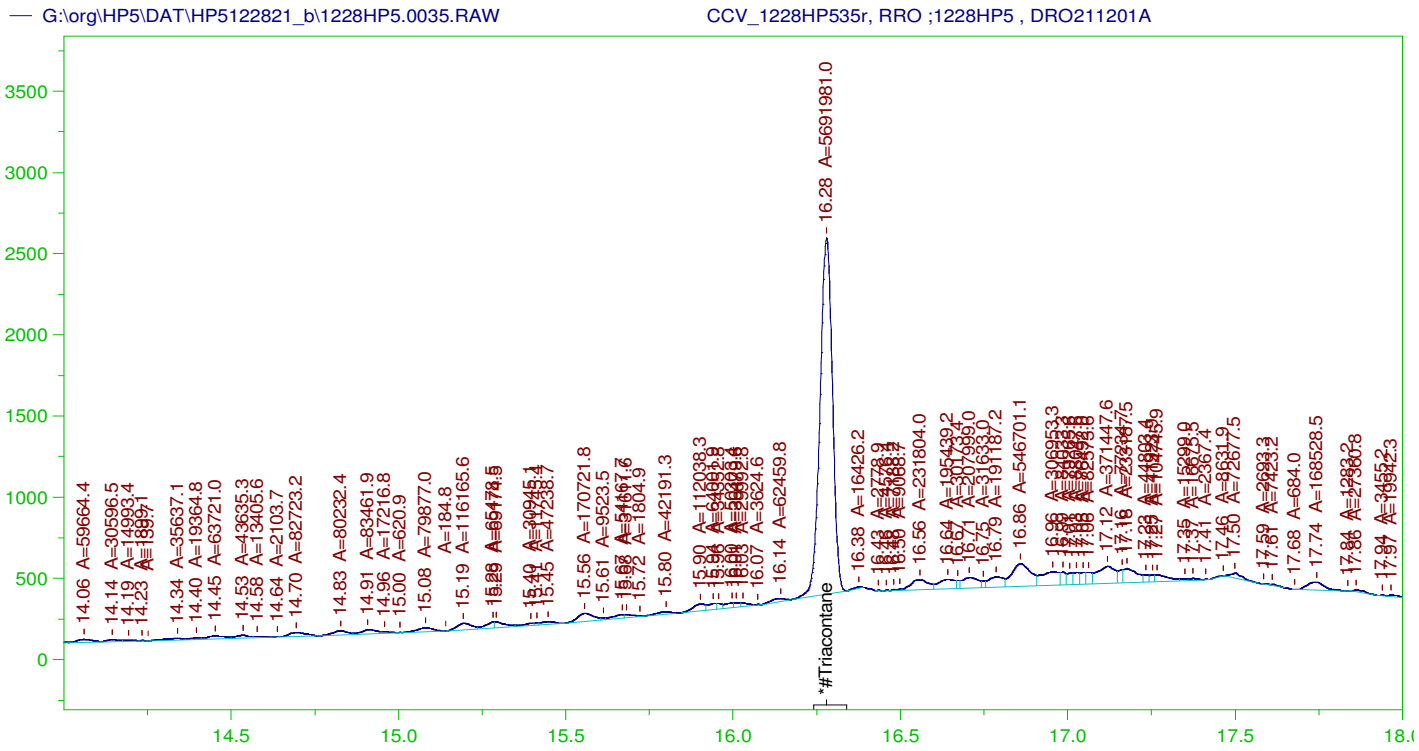
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5122821_b\1228HP5.0035.RAW

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\Review\035_CCV_1228HP535r_DC_ORO-AL-L%.xls



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

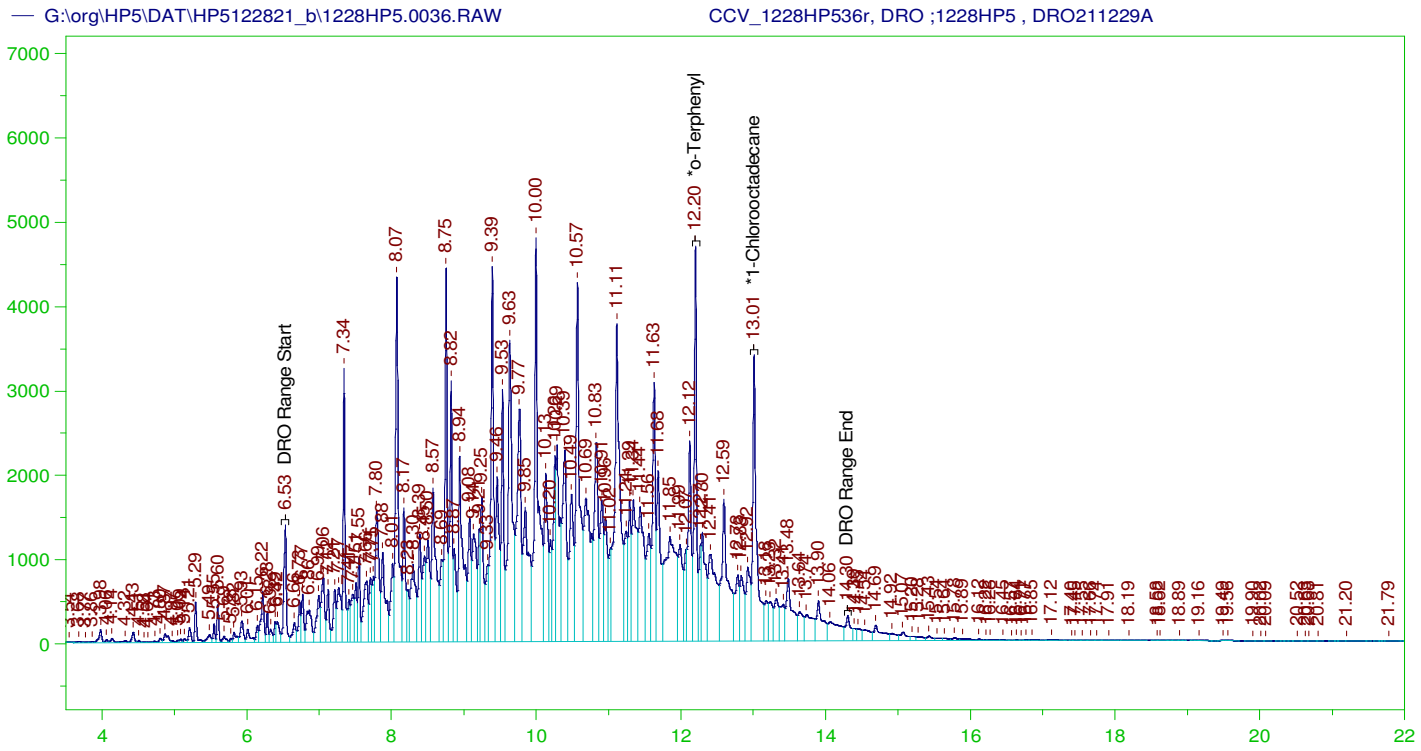
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	196.749	39.35	-

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	-

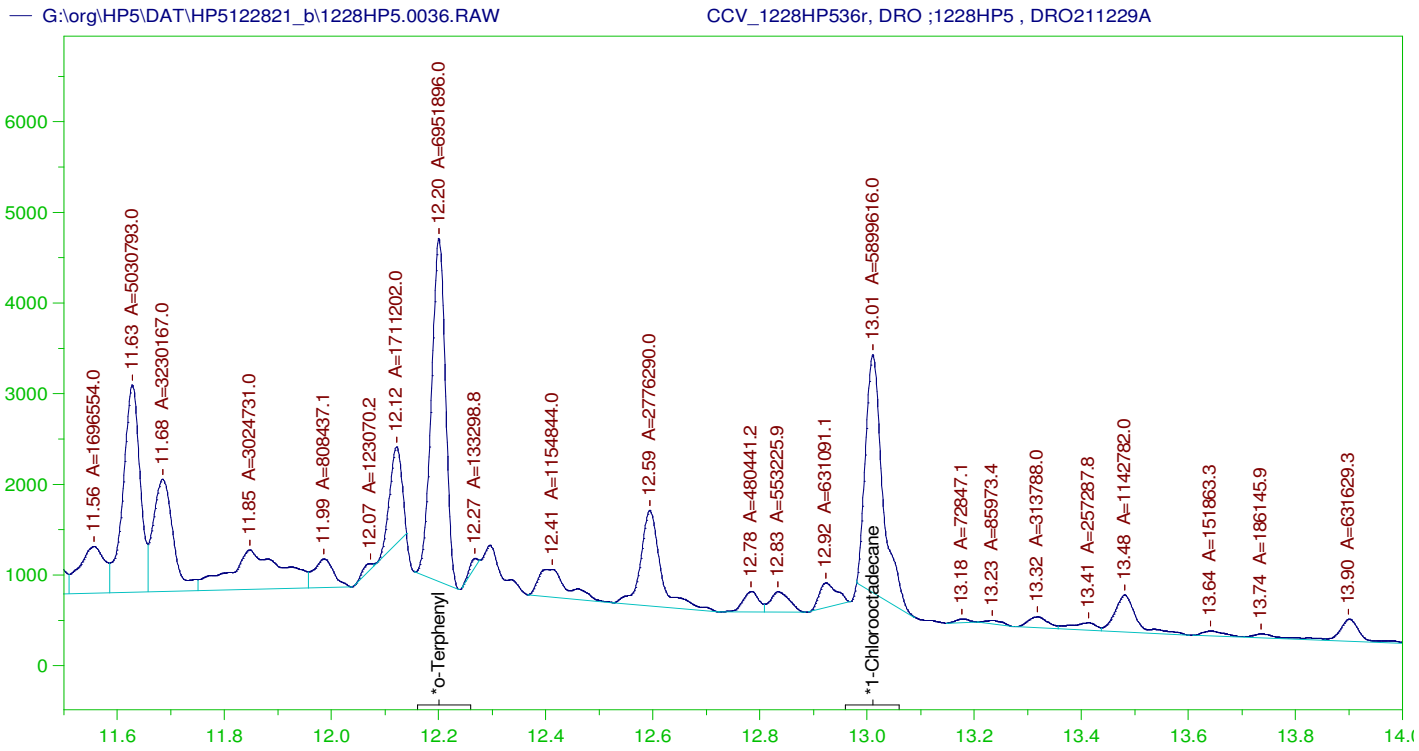
DRO Area:4.600582E+08 DRO Amount: 14673.41
TEH Area:4.773679E+08 TEH Amount: 15225.5

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\Review\036_CCV_1228HP536r_DC_8015-24-IM-L%.xls



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

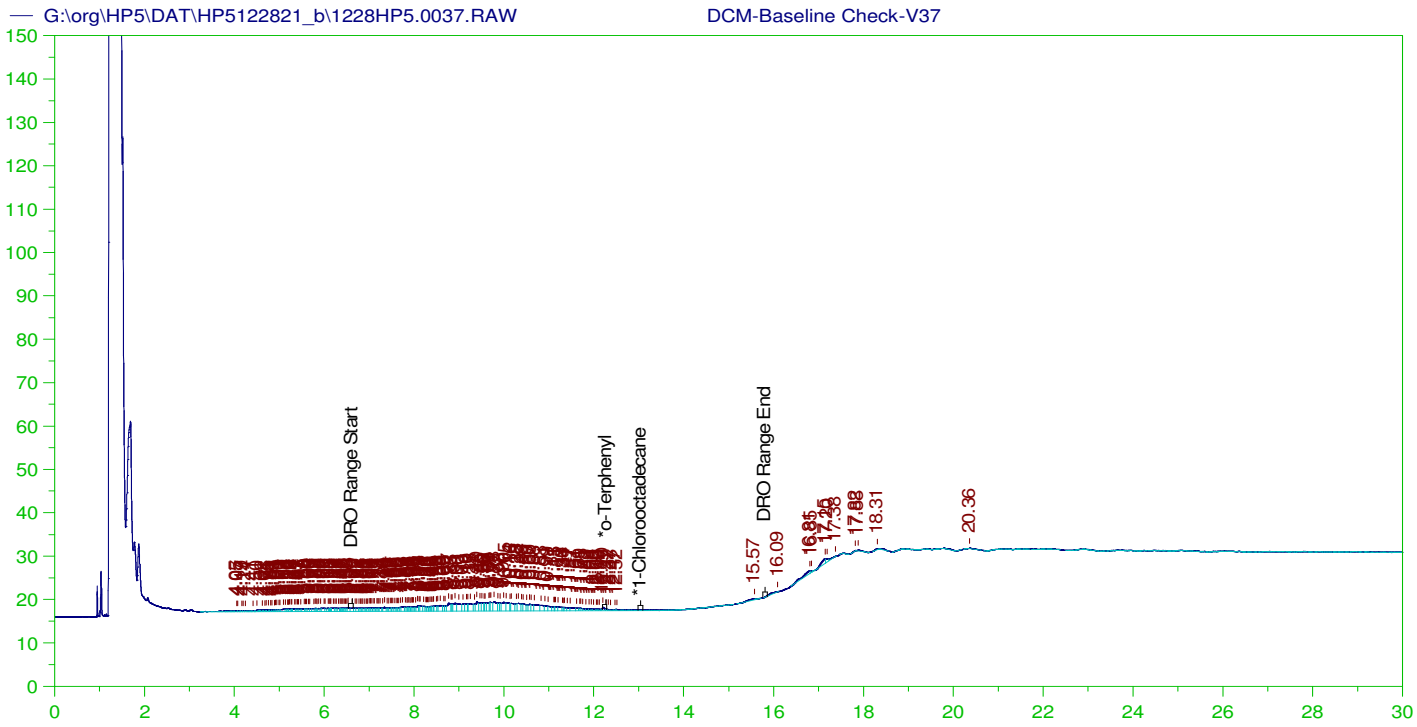
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	200.	195.777	97.89	-
*1-Chlorooctadecane	13.011	200.	166.143	83.07	-

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

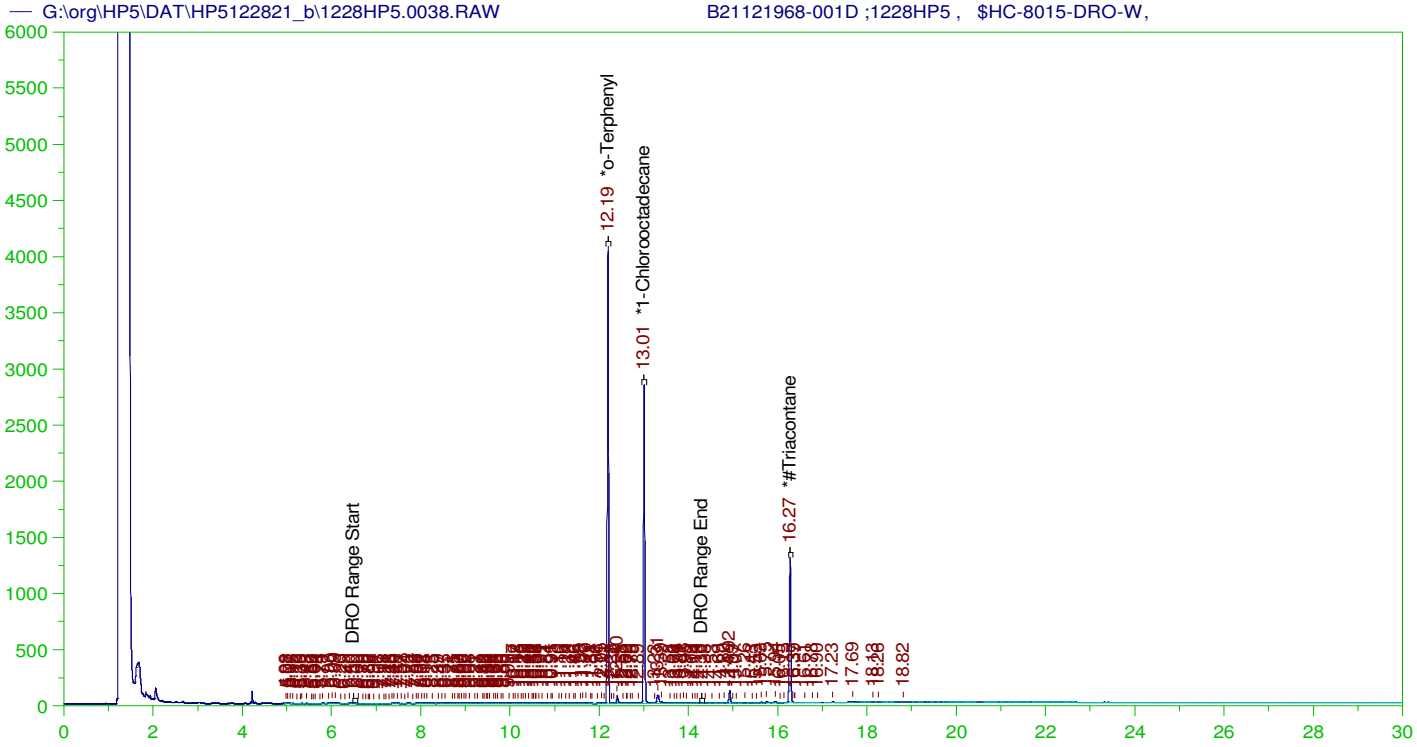
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.54 to 15.86

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) 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\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

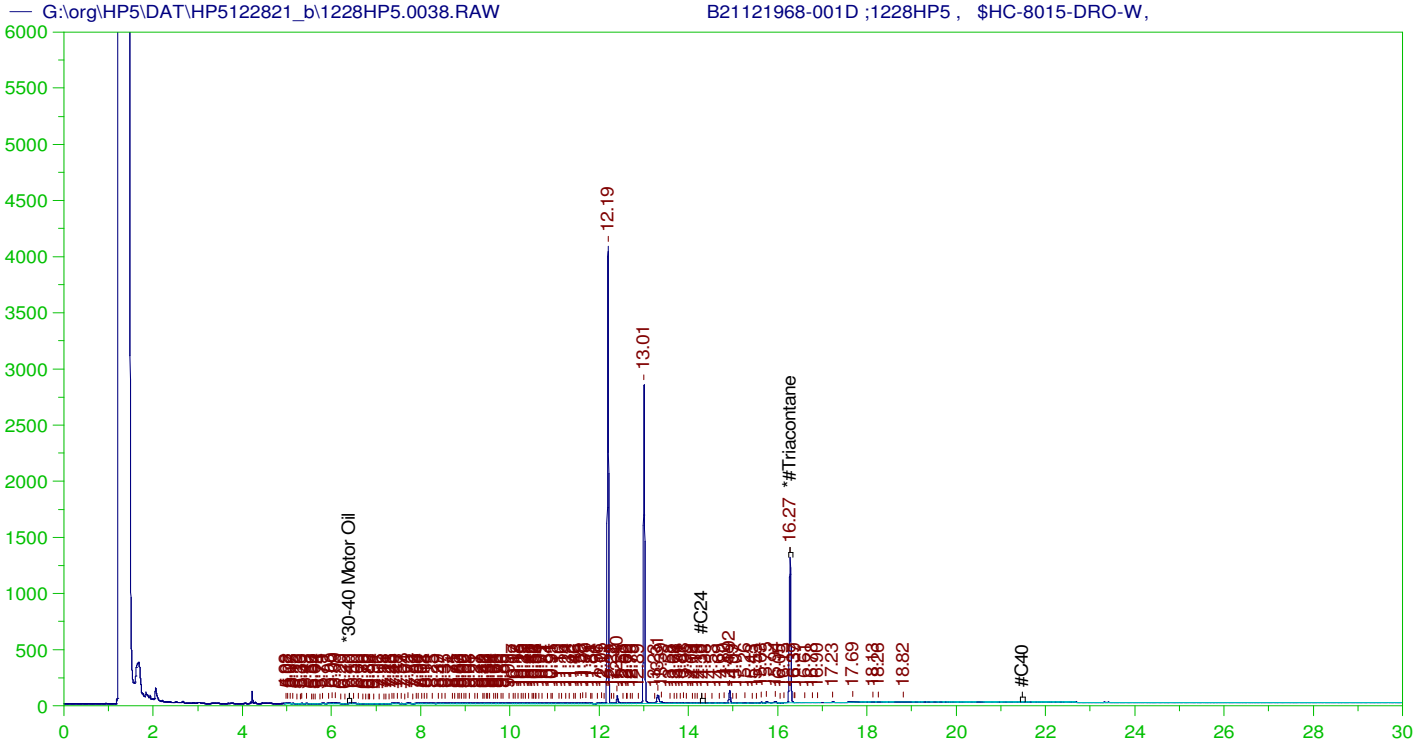
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) Batch ID: 162502

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

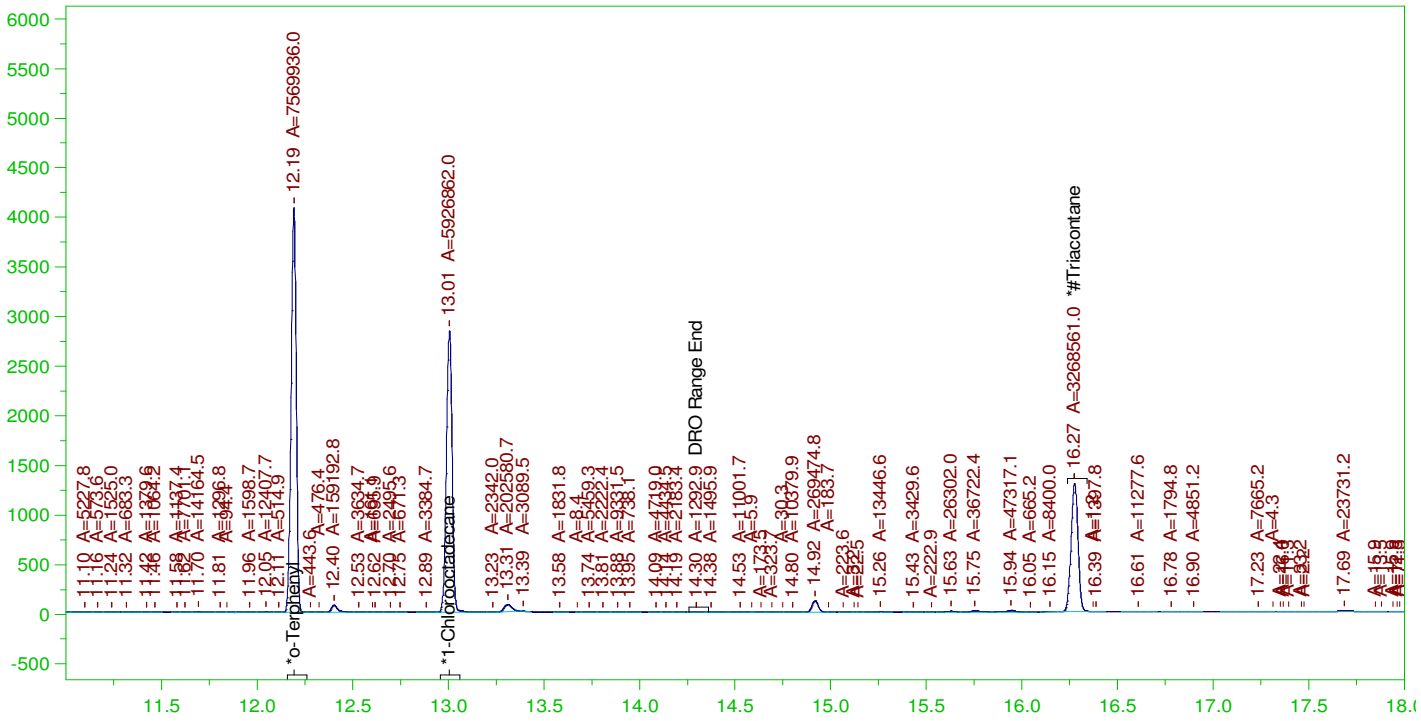
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

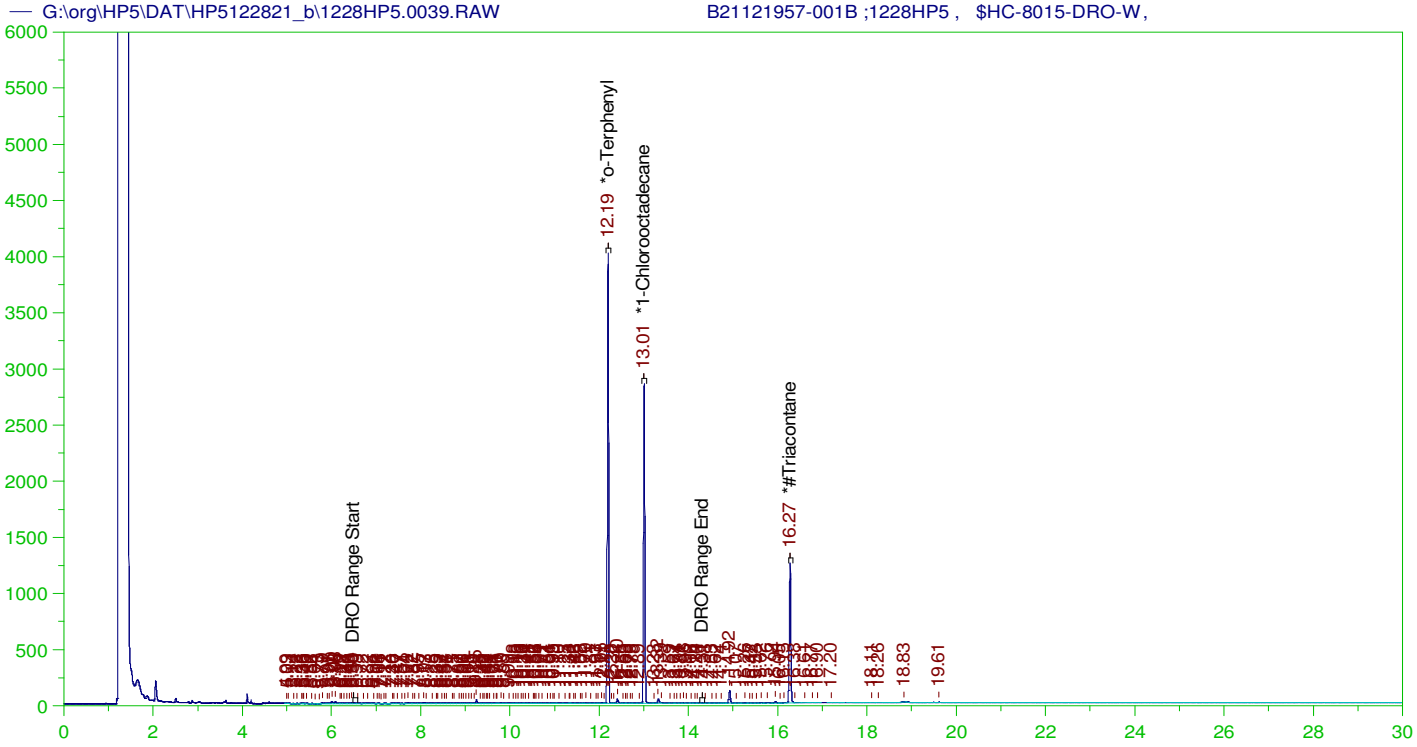
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) 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\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

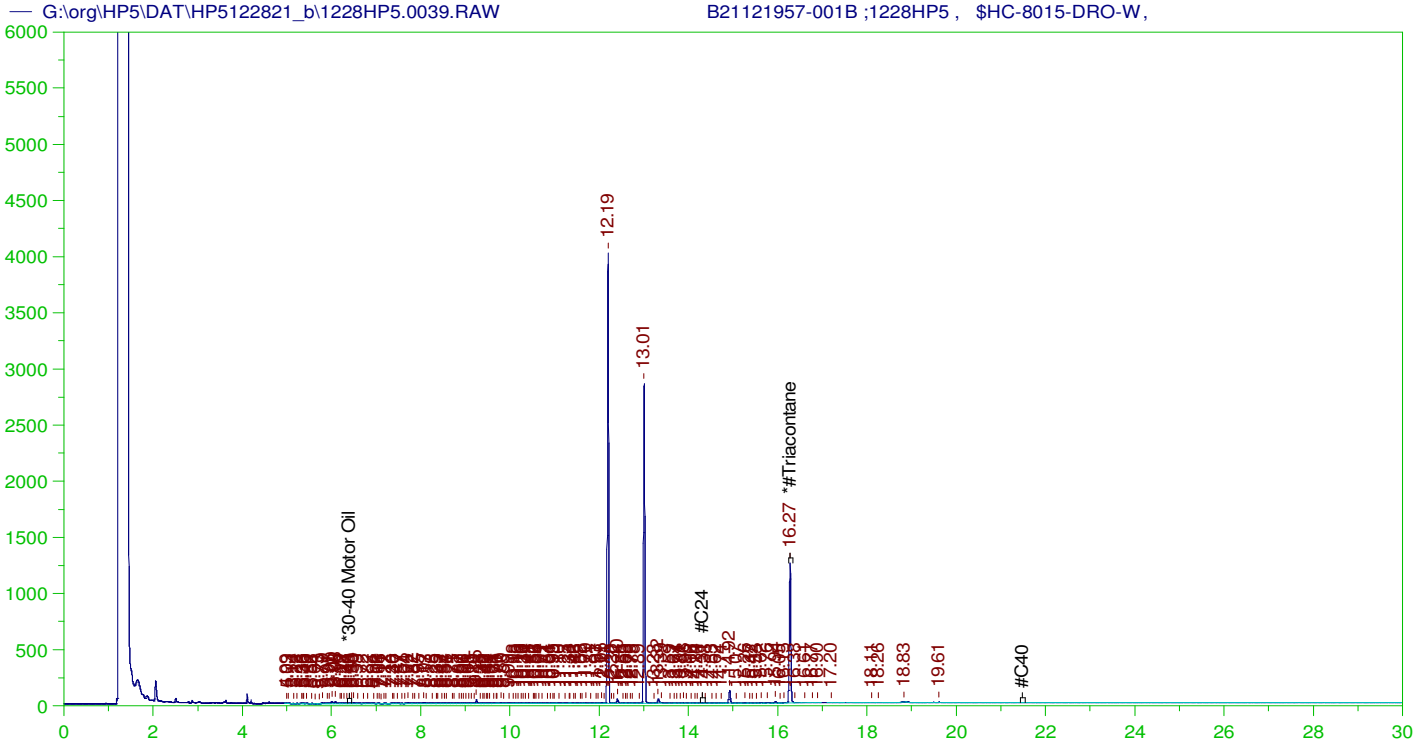
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

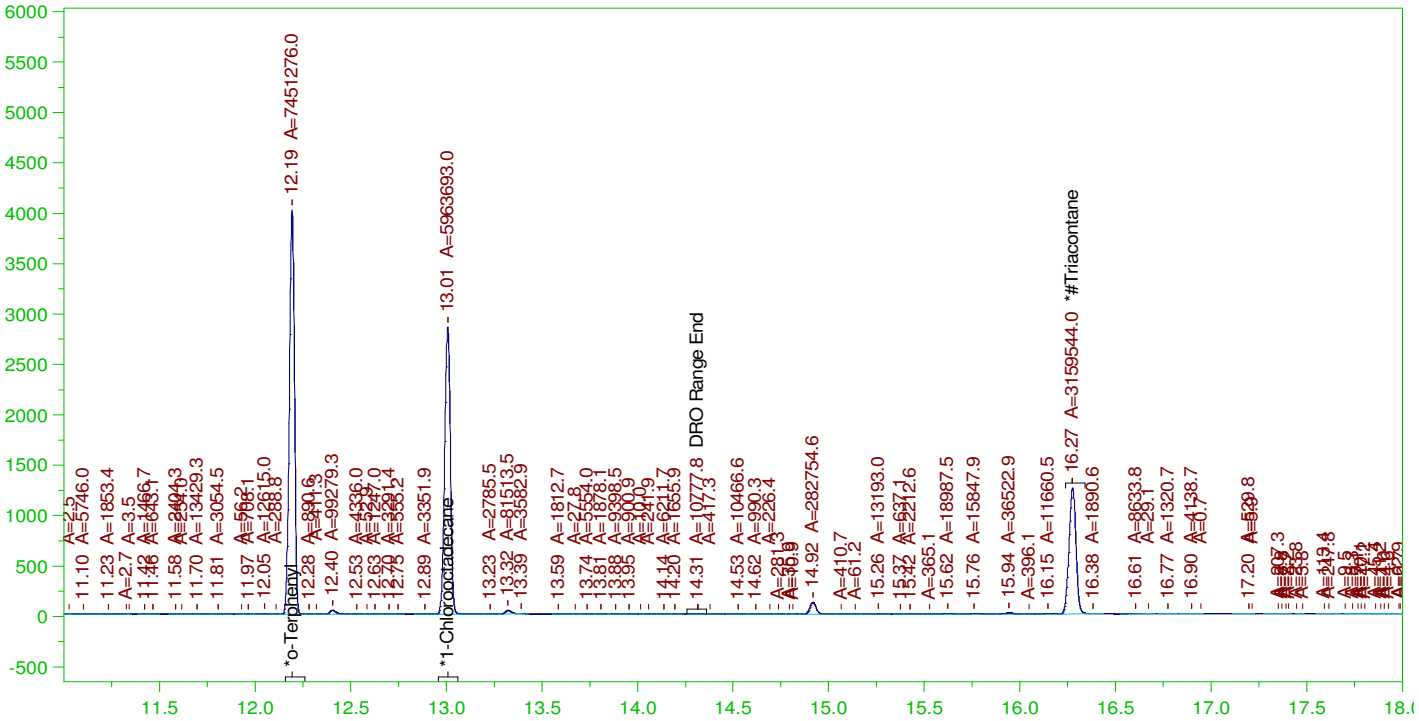
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

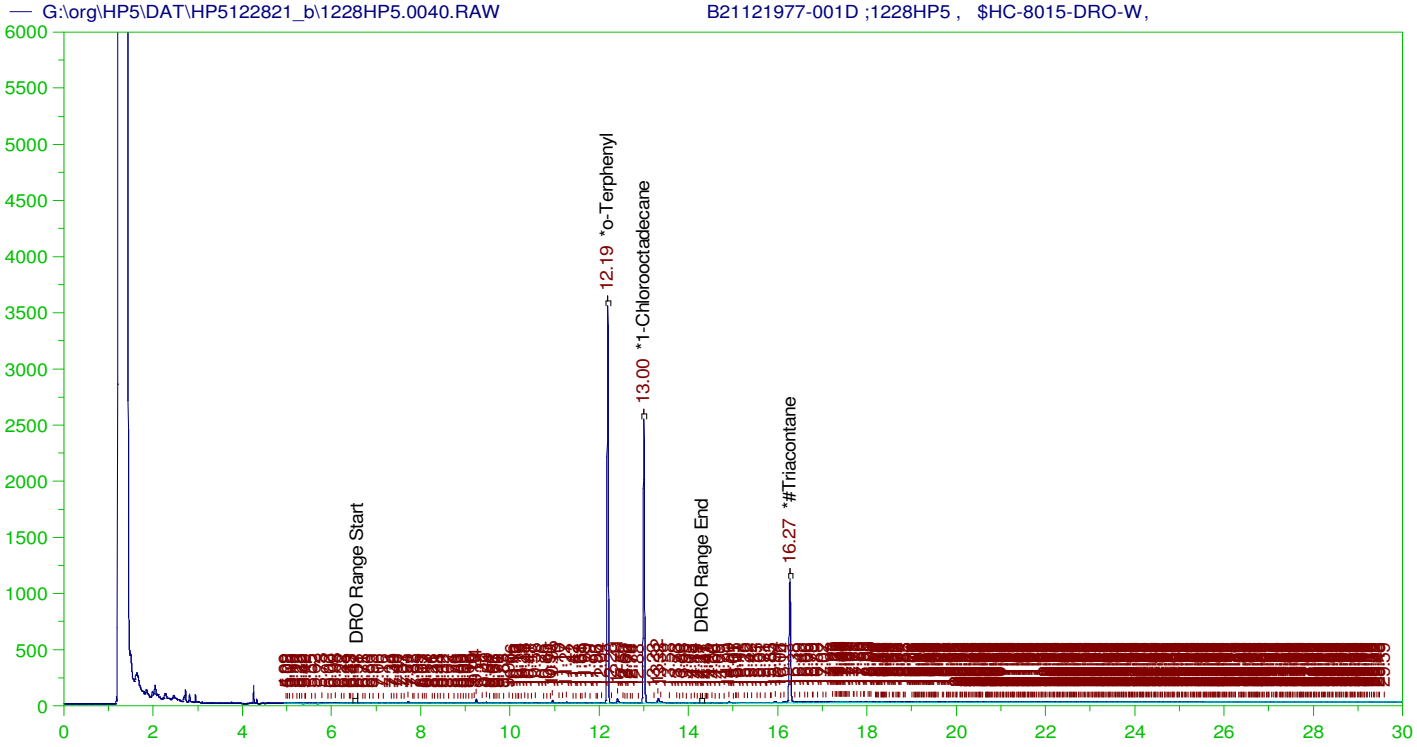
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) 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\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

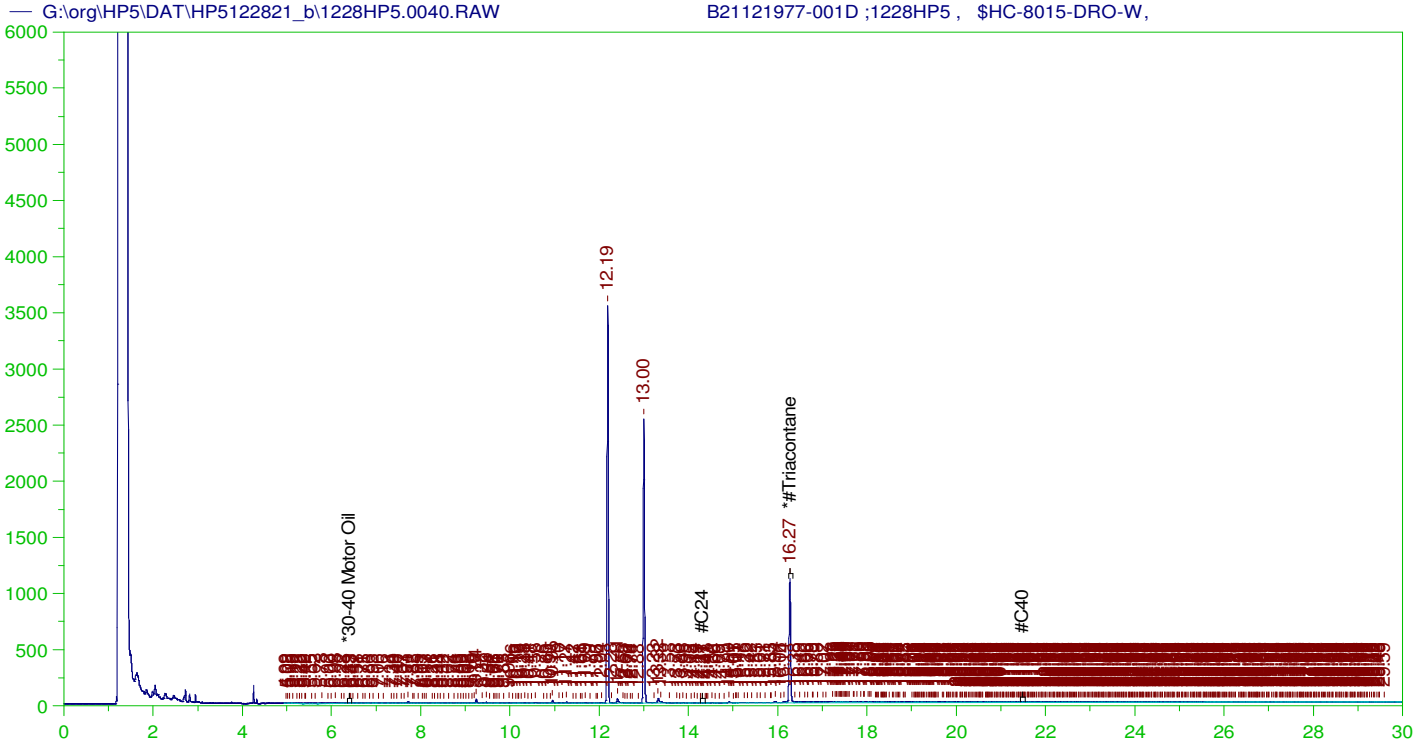
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) Batch ID: 162502

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

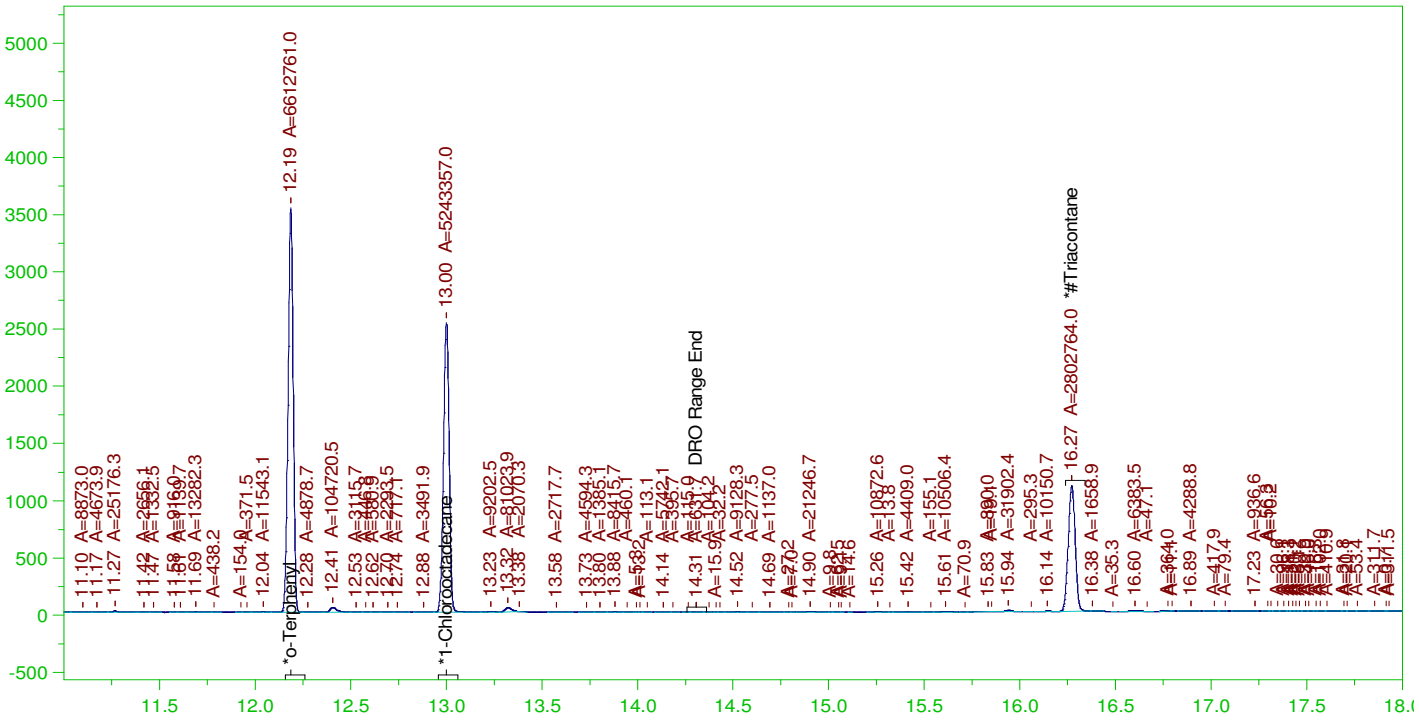
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

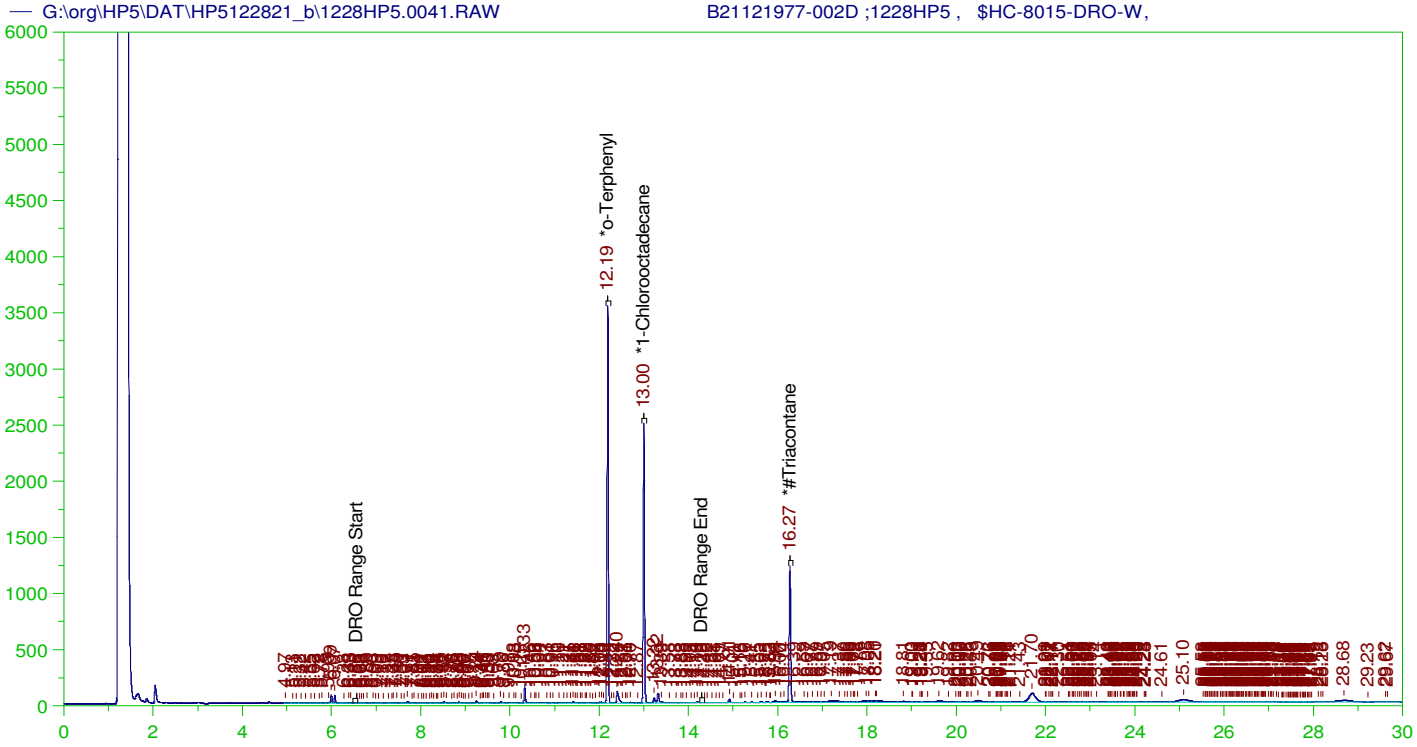
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

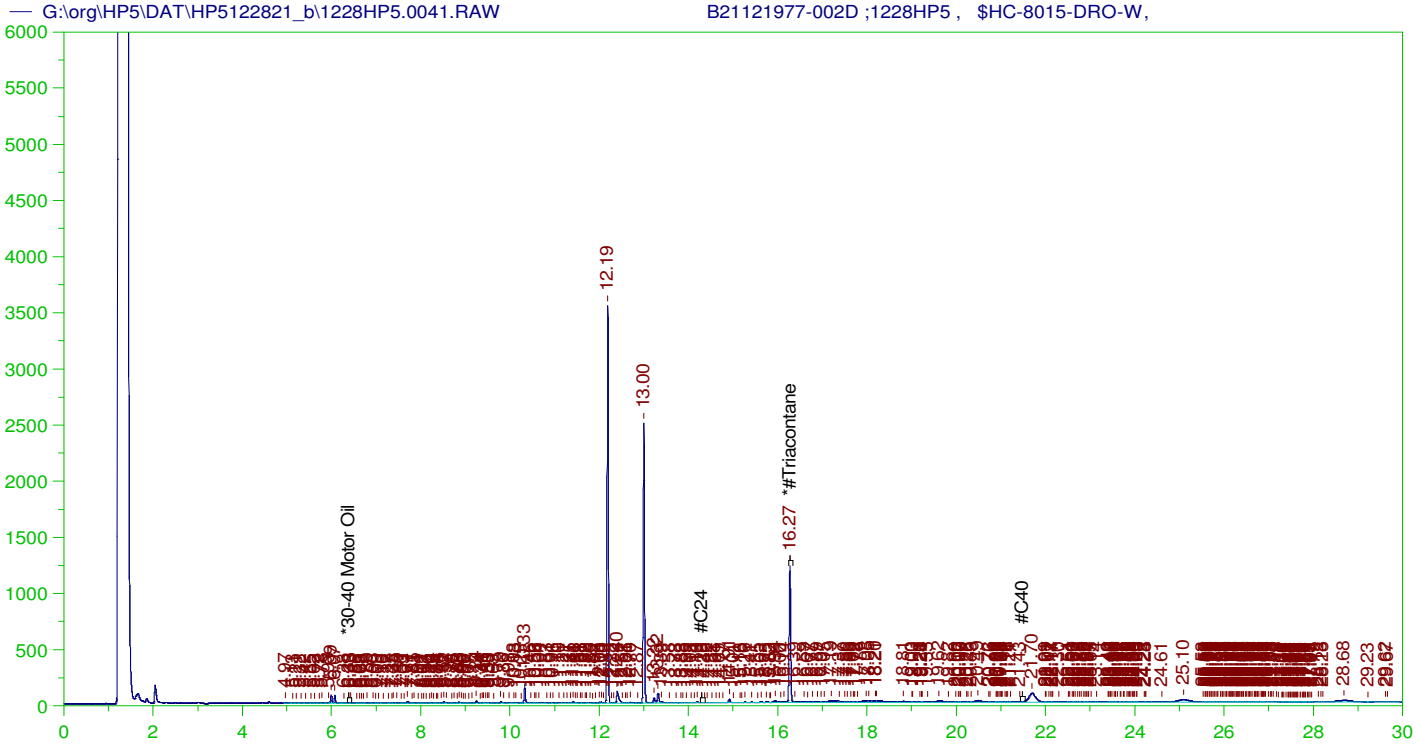
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) Batch ID: 162502

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

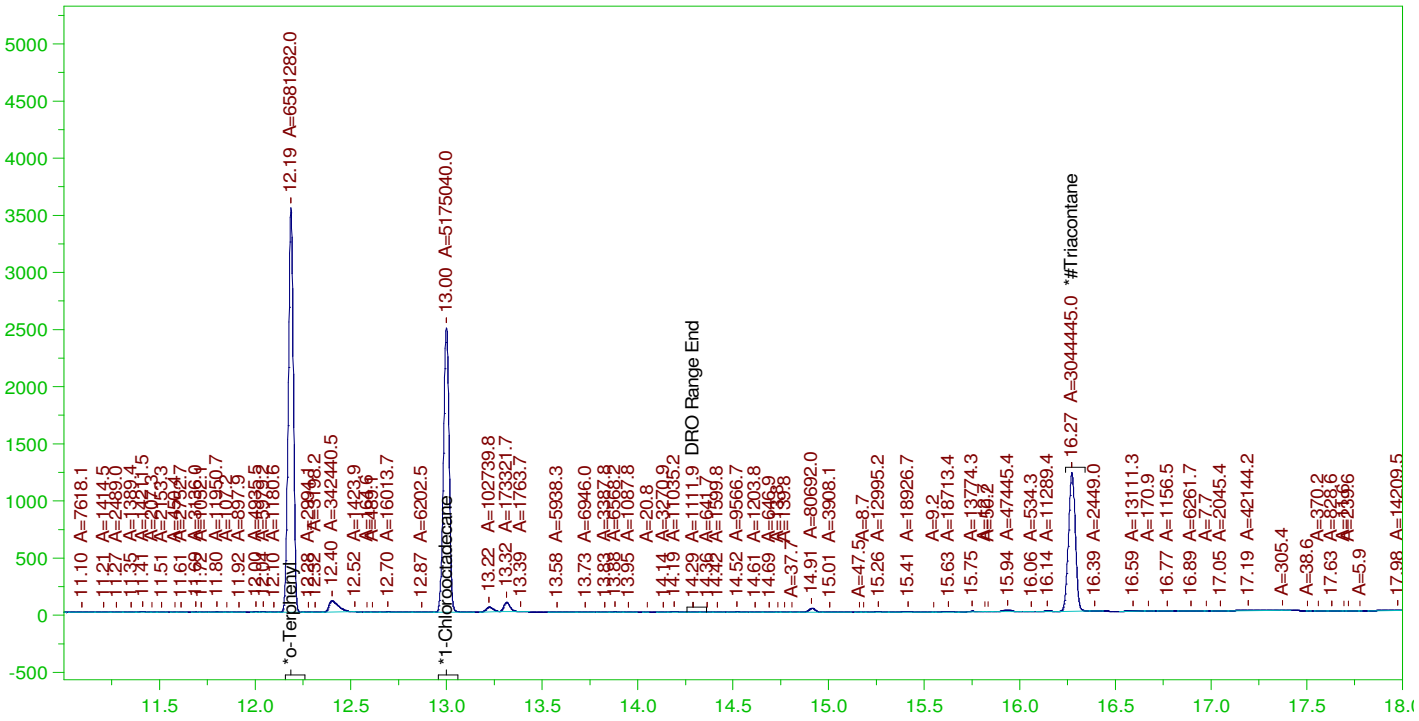
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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,



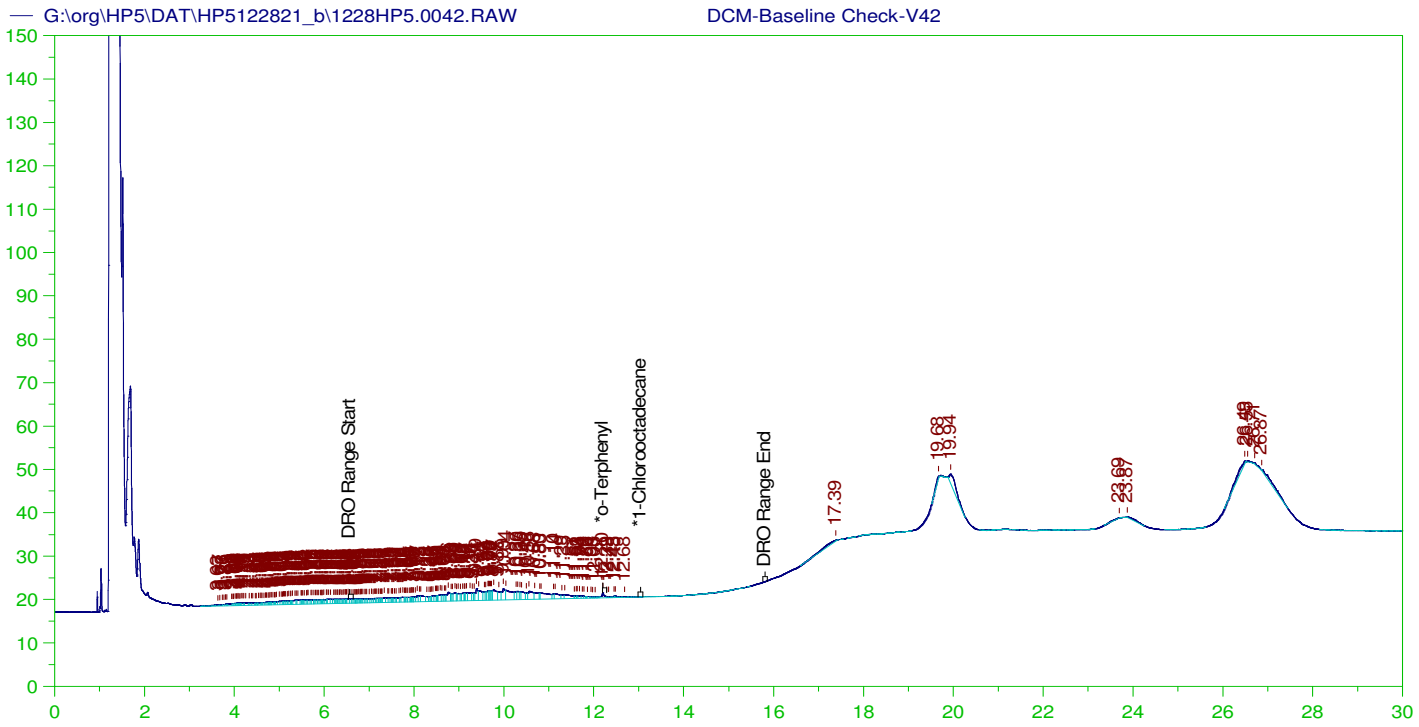
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

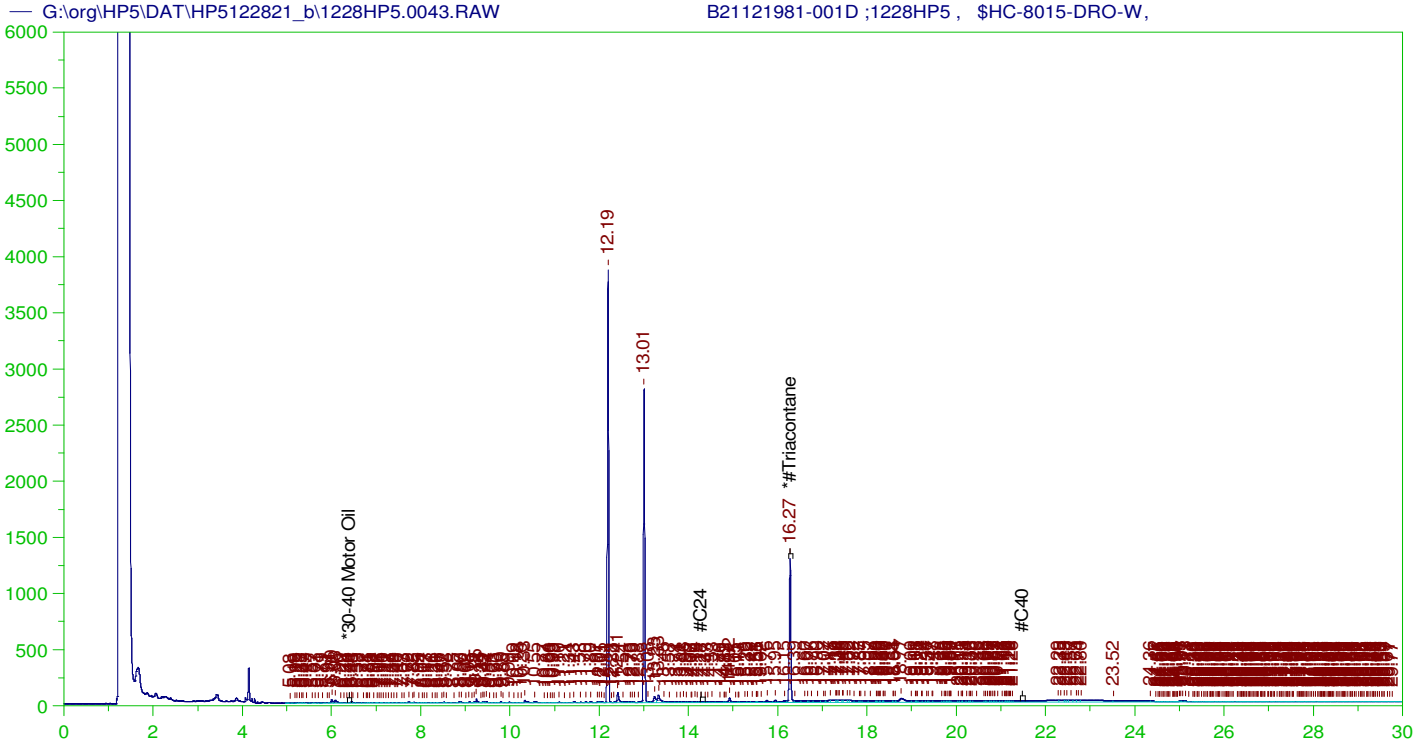
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.54 to 15.86

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) Batch ID: 162502

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

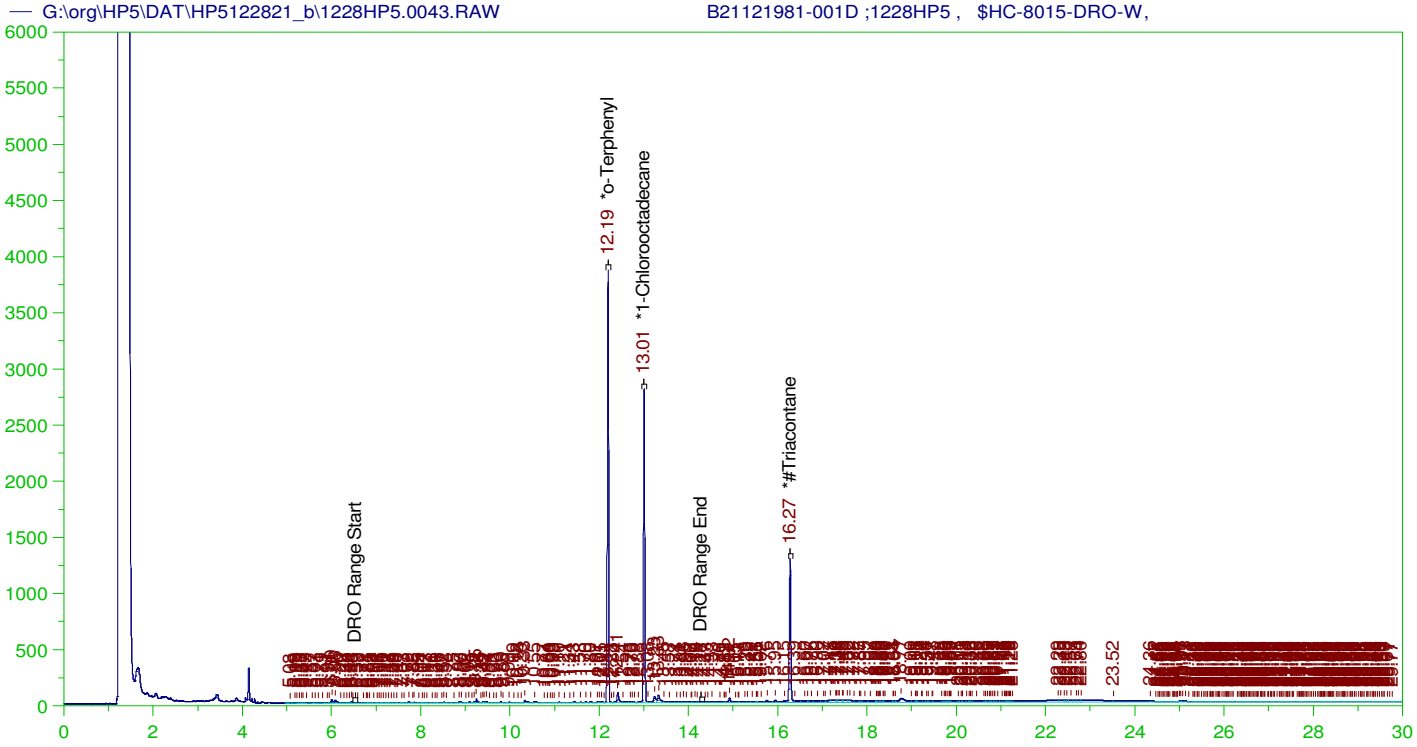
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

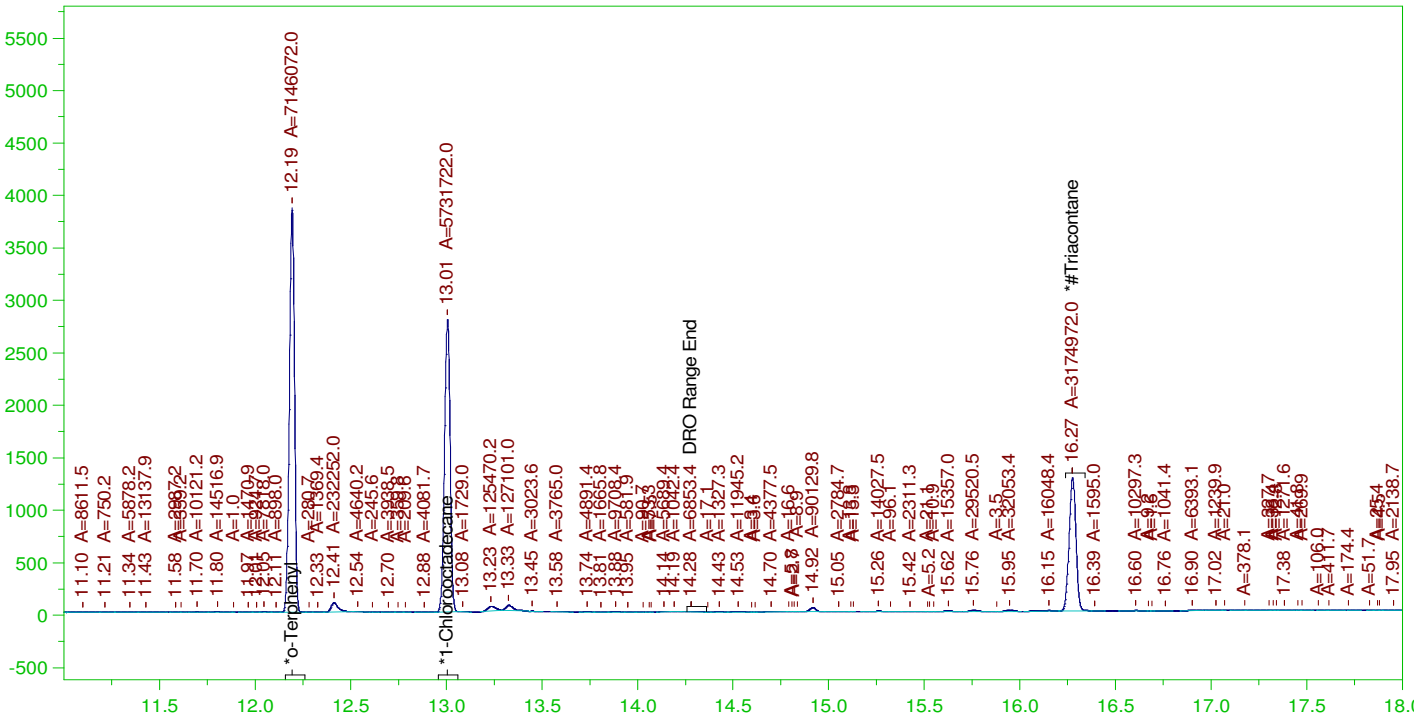
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

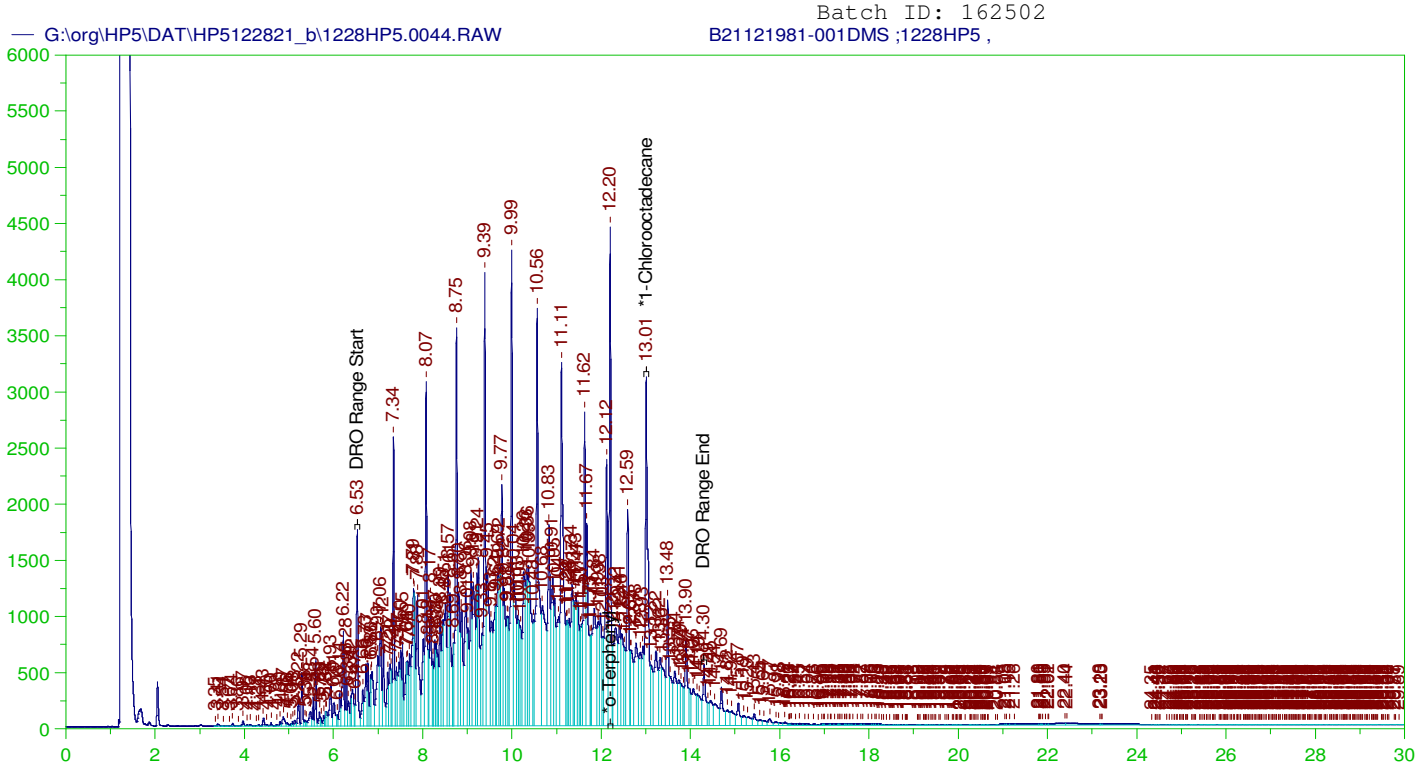
Sample Name: B21121981-001D ;1228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0043.RAW
Date & Time Acquired: 12/29/2021 7:04:49 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1030 Dilution: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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

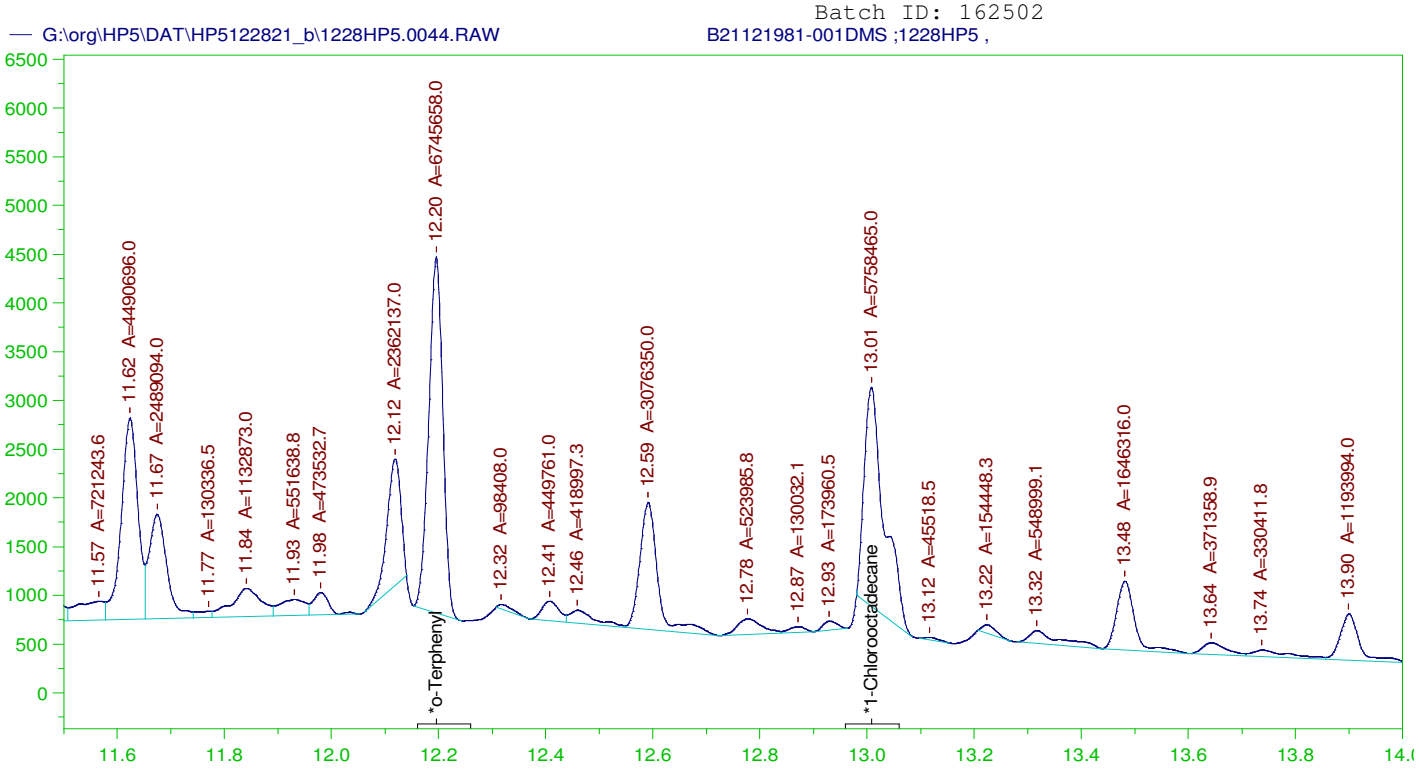
Sample Name: B21121981-001DMS ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0044.RAW
Date & Time Acquired: 12/29/2021 7:47:47 PM
Method File: G:\Org\HP5\Methods\D3_8015-24-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

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

Batch ID: 162502



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

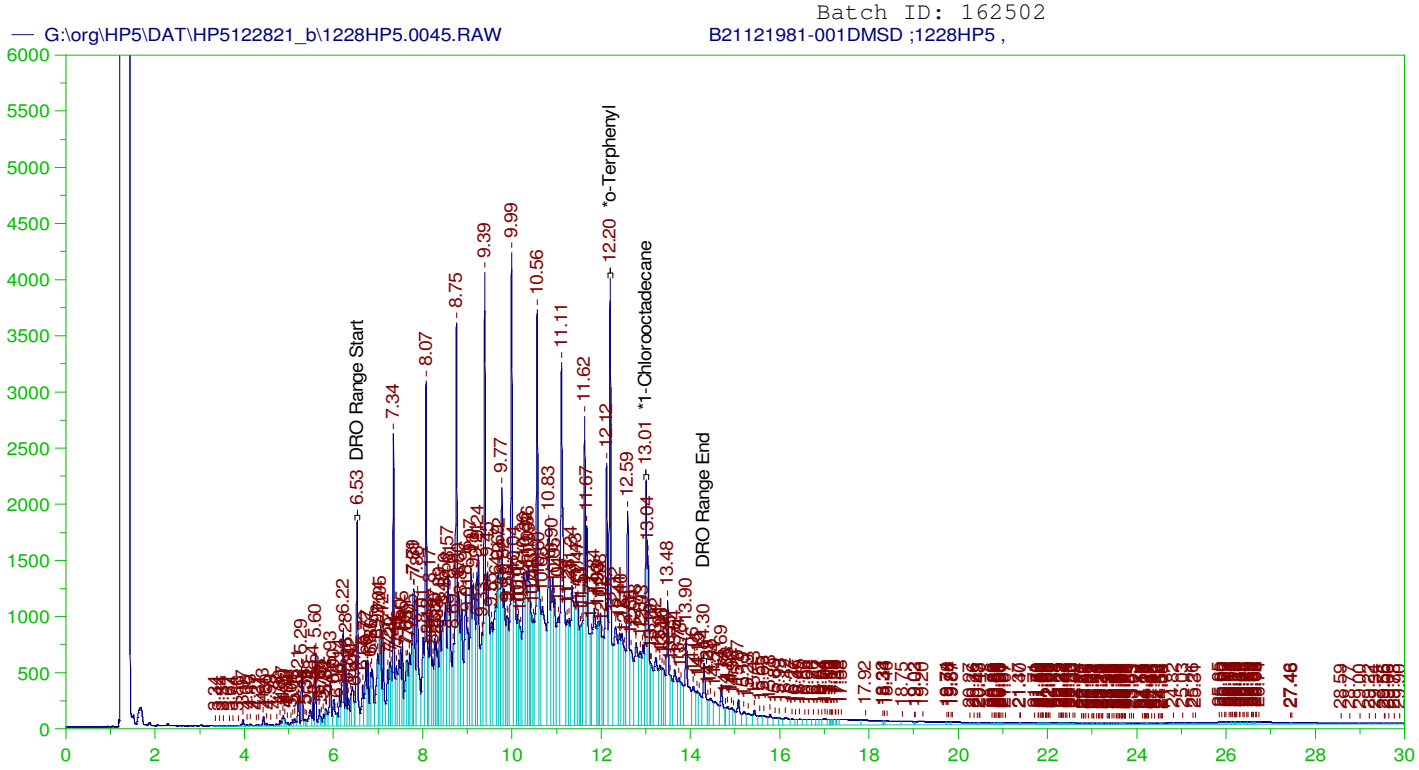
Sample Name: B21121981-001DMS ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0044.RAW
Date & Time Acquired: 12/29/2021 7:47:47 PM
Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

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



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

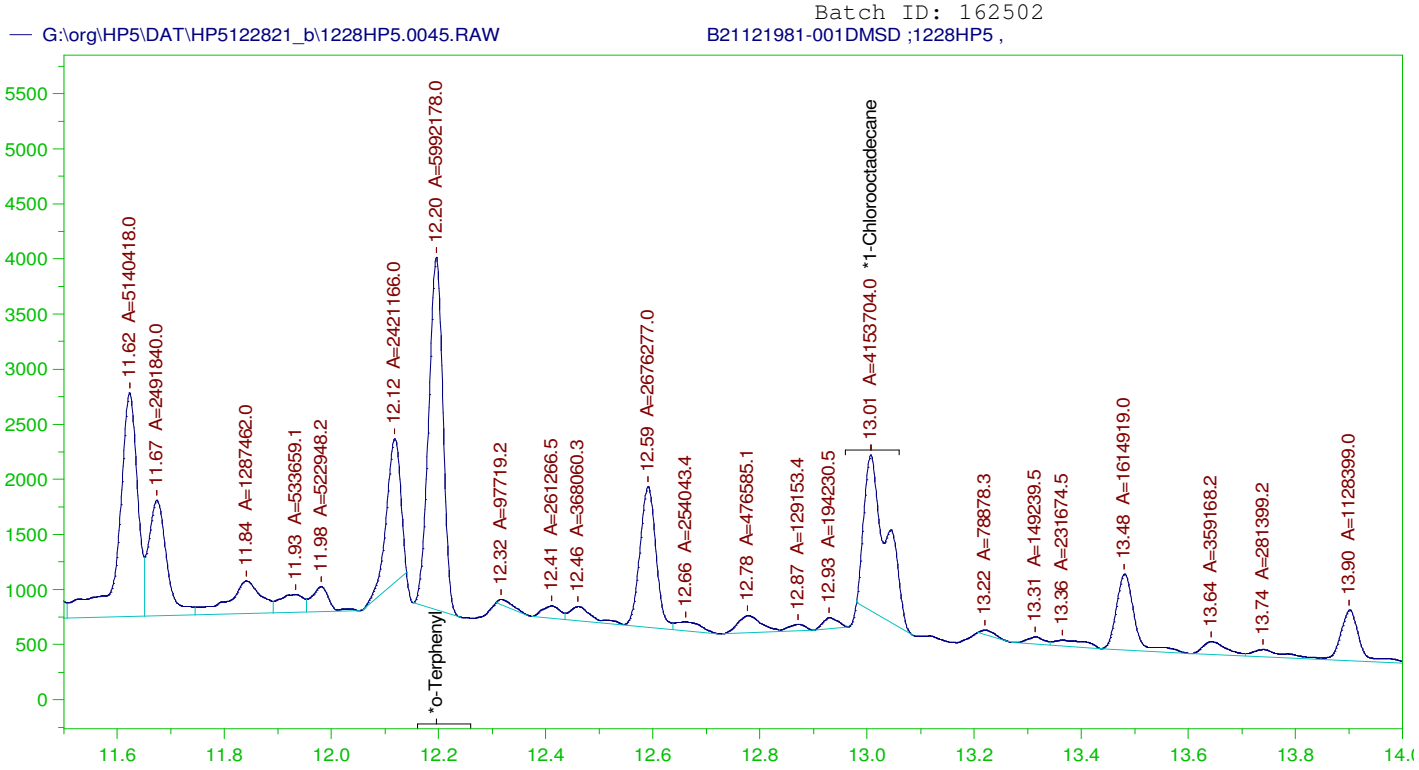
Sample Name: B21121981-001DMSD ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0045.RAW
Date & Time Acquired: 12/29/2021 8:30:48 PM
Method File: G:\Org\HP5\Methods\D3_8015-24-IM-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

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

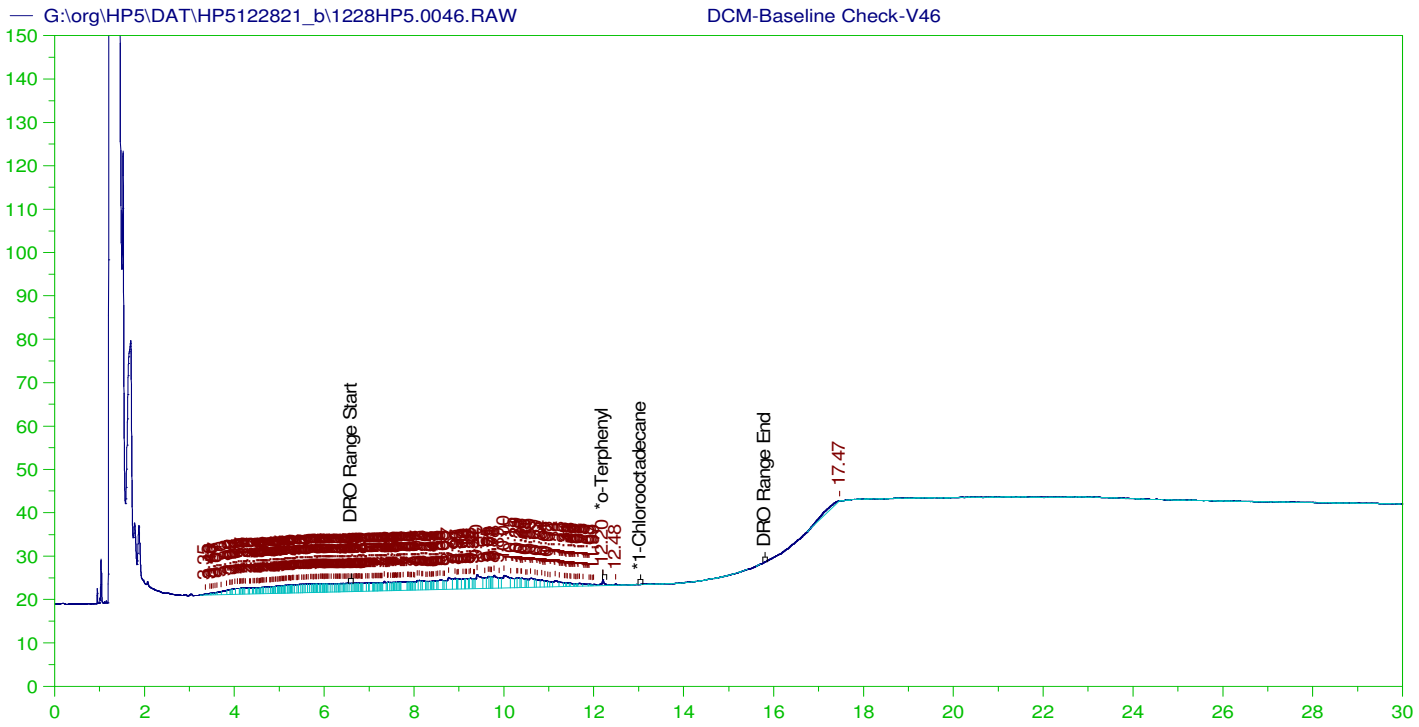


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: B21121981-001DMSD ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0045.RAW
Date & Time Acquired: 12/29/2021 8:30:48 PM
Method File: G:\Org\HP5\Methods\DS_8015-24-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24.CAL
Sample 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

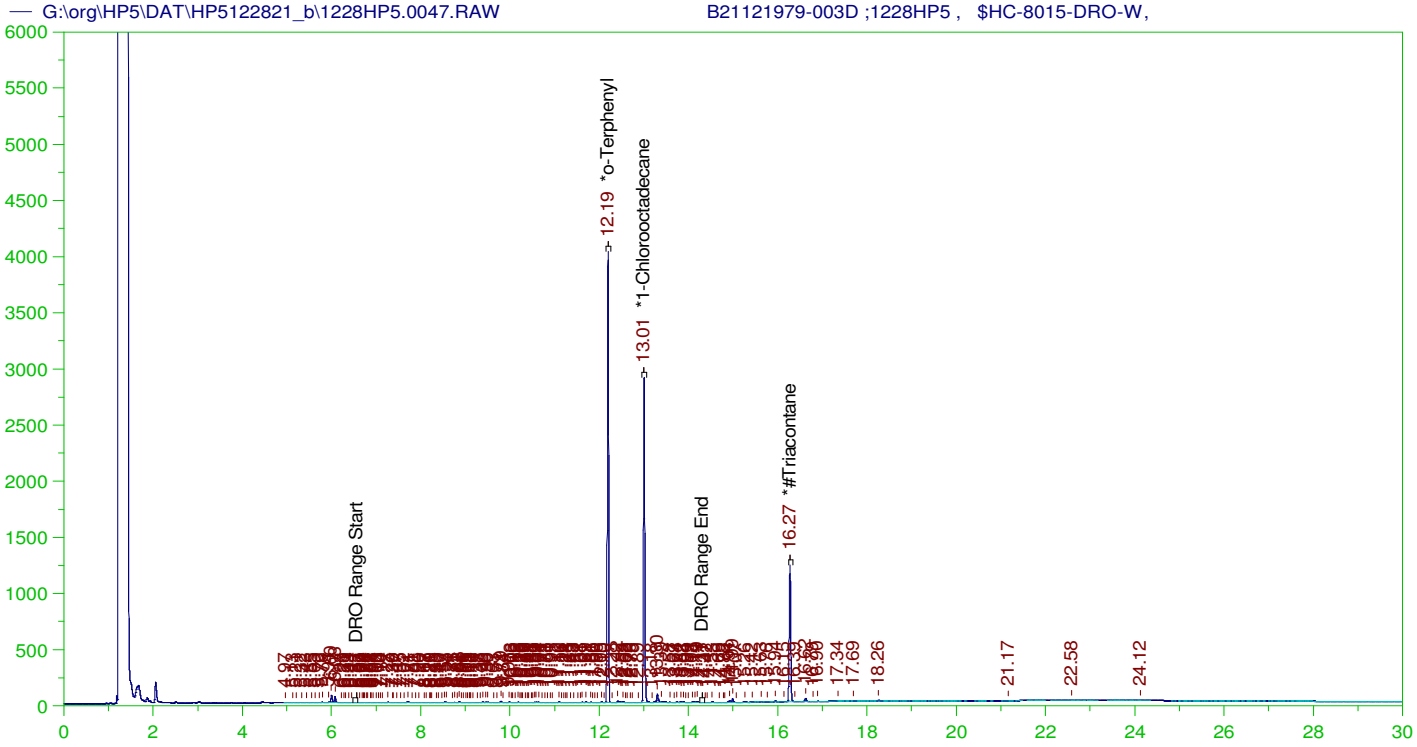
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.54 to 15.86

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

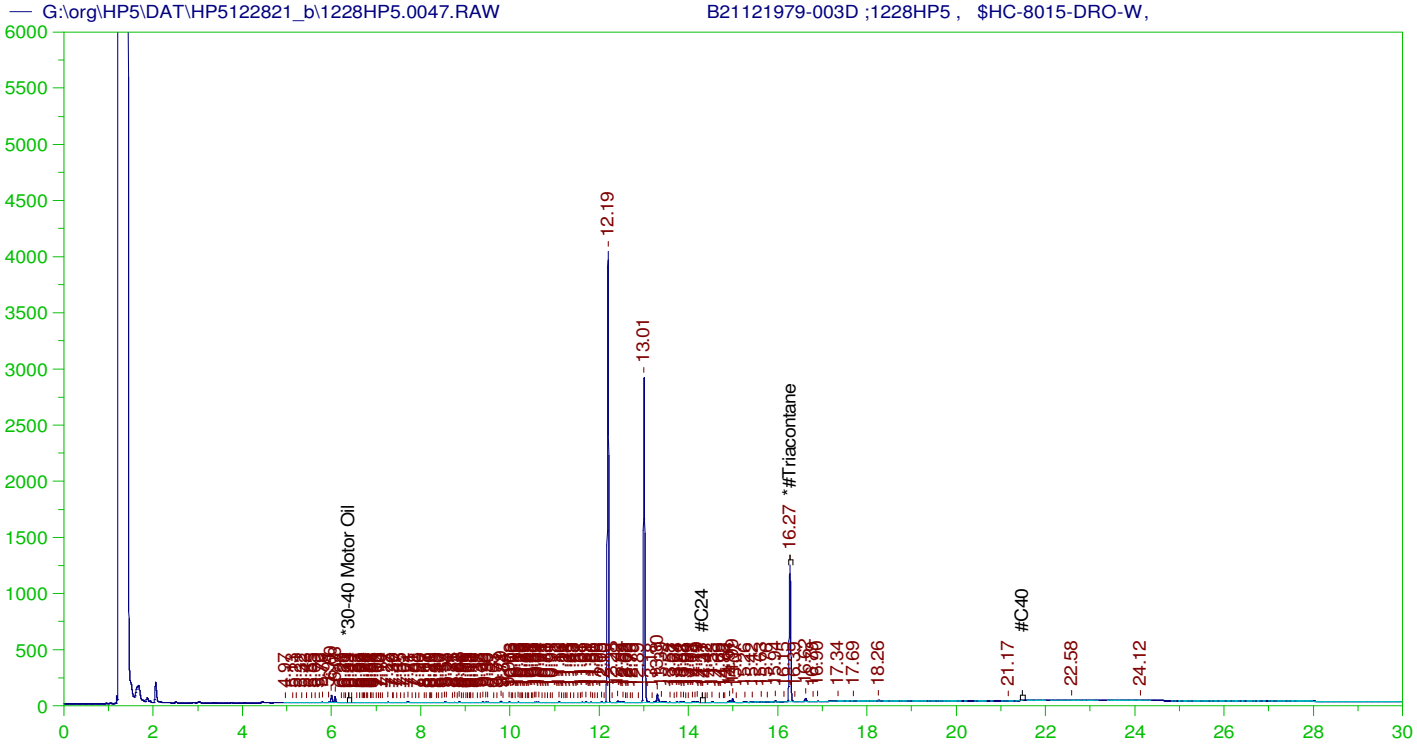
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

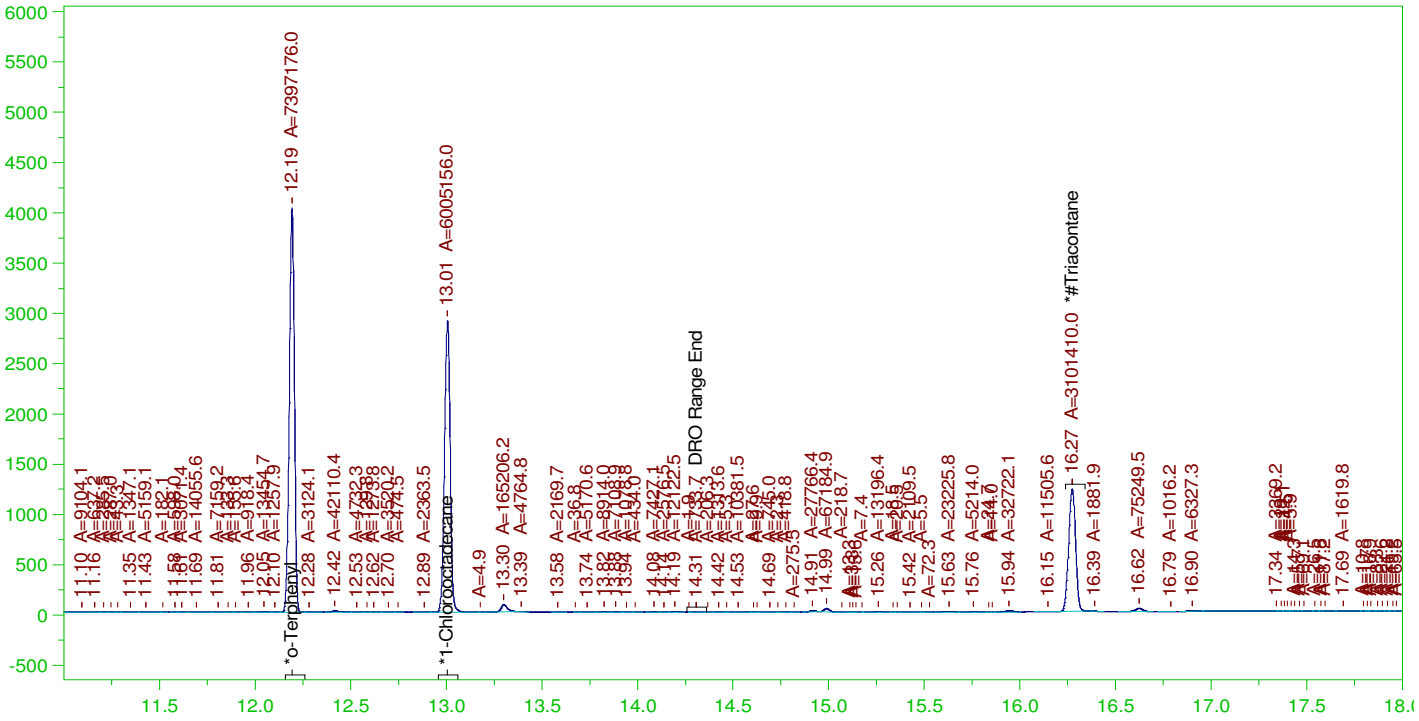
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

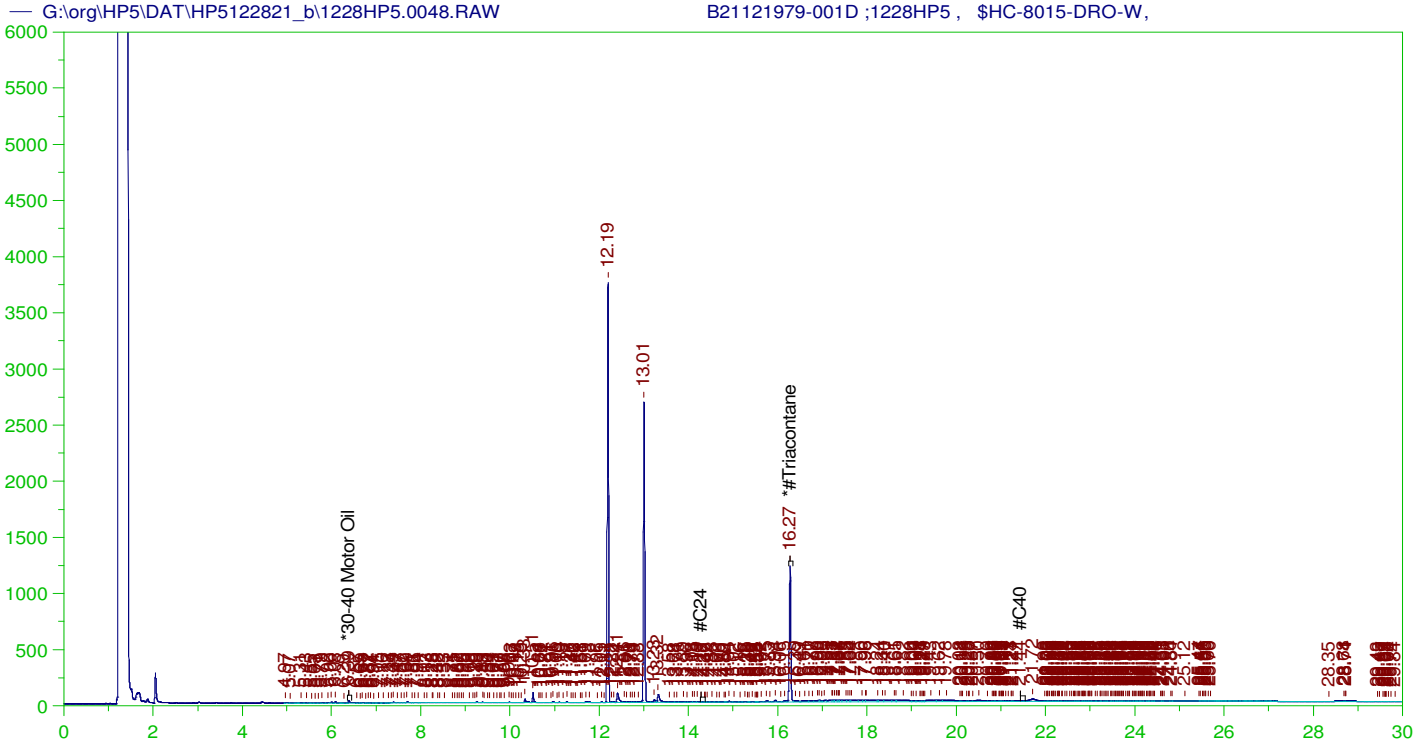
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

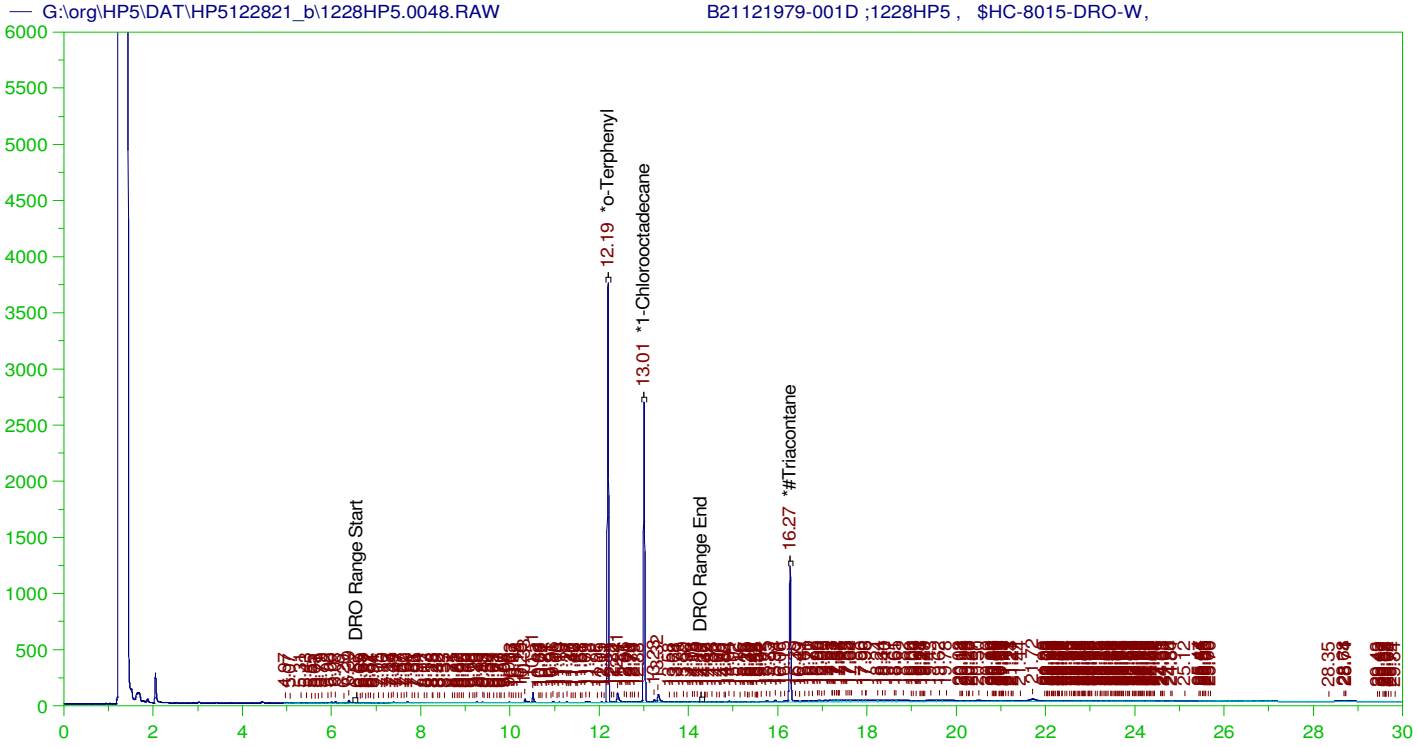
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

RRO Area:4277033 RRO AMOUNT: 0.1440849

ERH2244 (RHMW08) 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\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

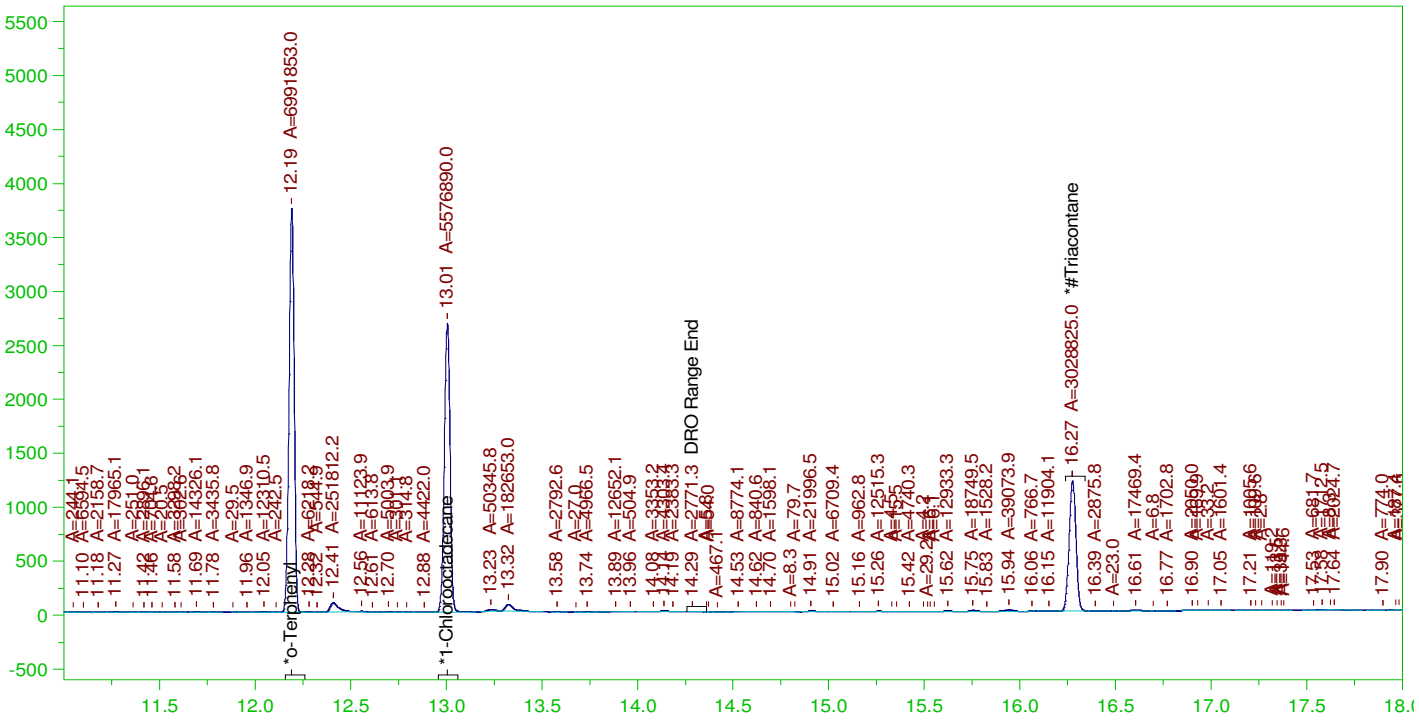
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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,



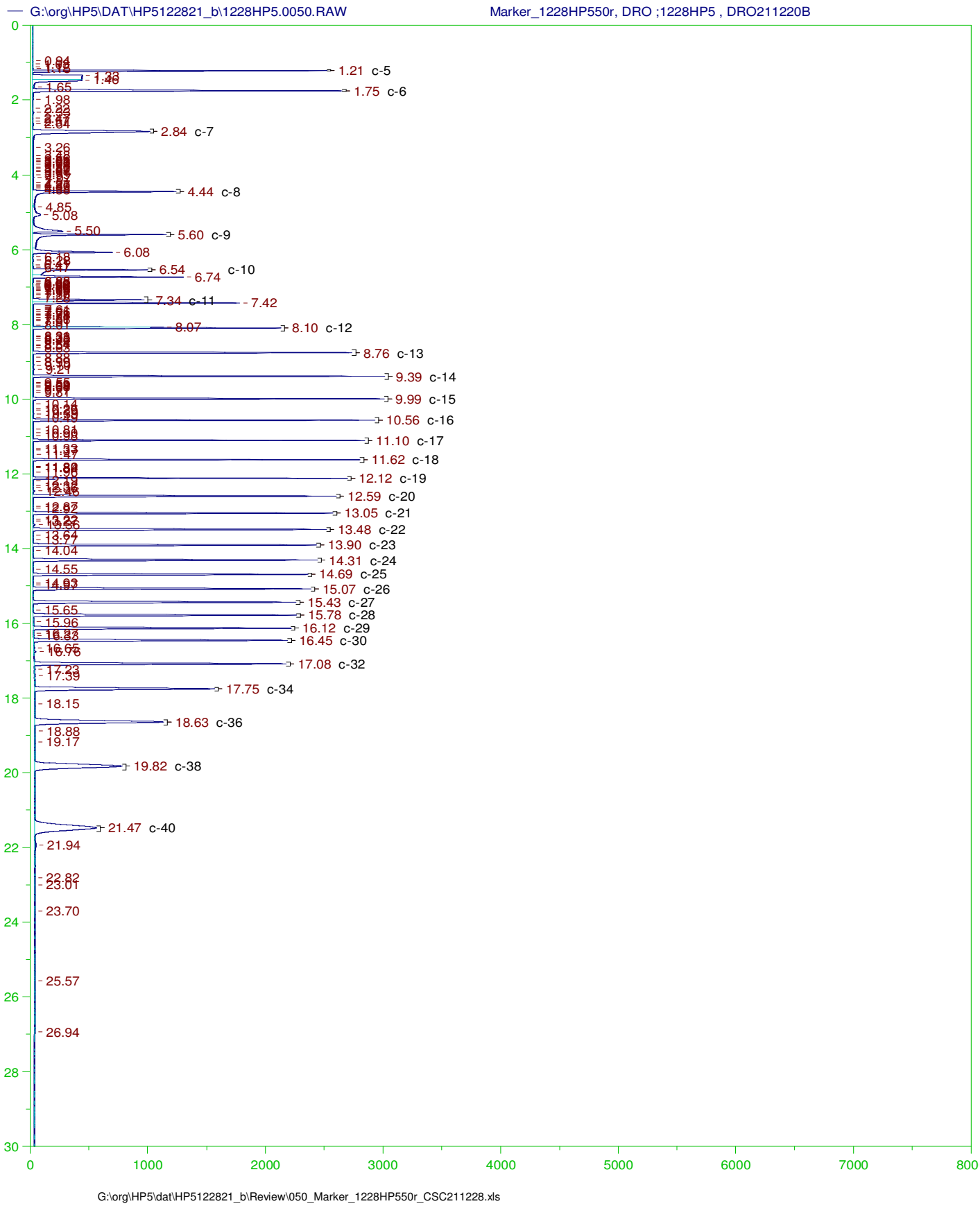
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

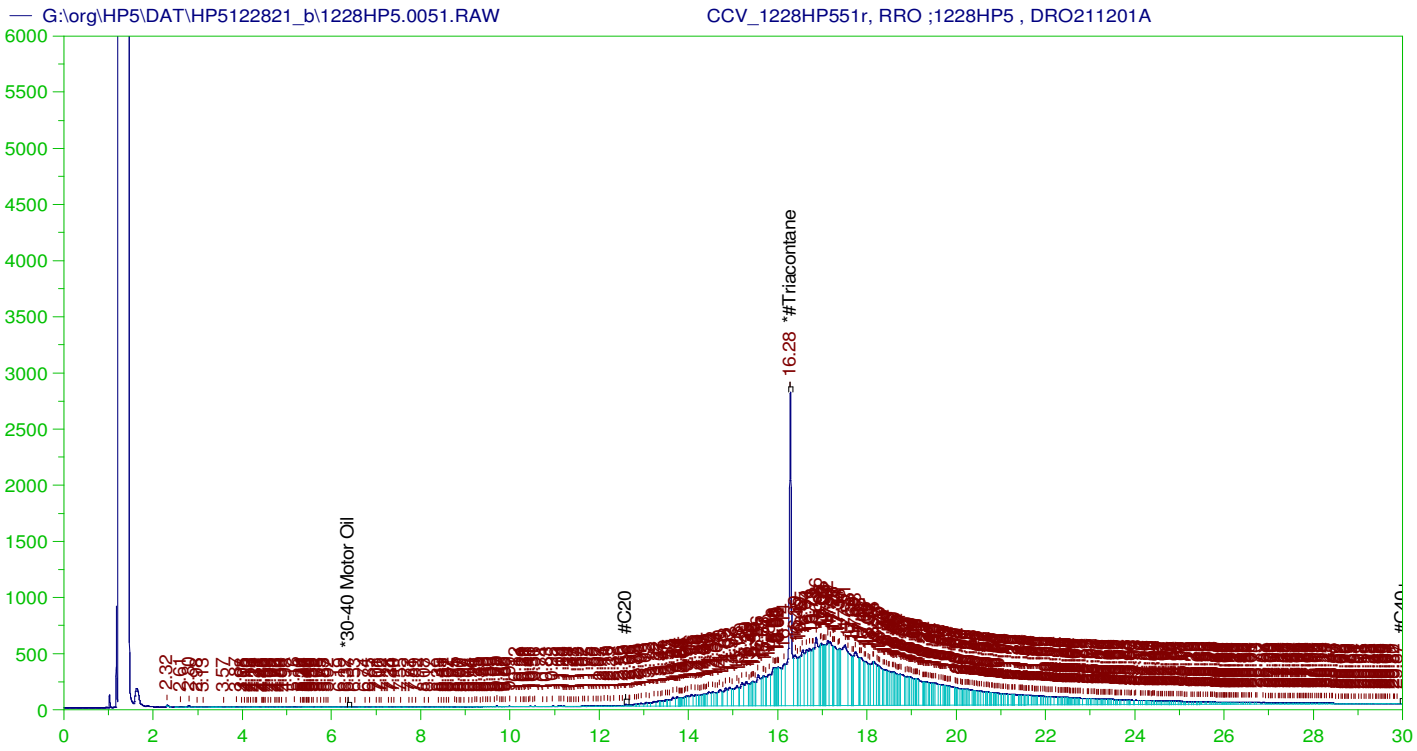
Sample Name: B21121979-001D ;1228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0048.RAW
Date & Time Acquired: 12/29/2021 10:40:00 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1040 Dilution: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


G:\org\HP5\DAT\HP5122821_b\1228HP5.0050.RAW
Marker_1228HP550r, DRO ;1228HP5 , DRO211220B
1.21 c-5
1.48
1.65
1.75 c-6
1.98
2.84 c-7
3.26
4.44 c-8
4.85
5.08
5.50
5.60 c-9
6.08
6.54
6.74
c-10
7.34 c-11
7.42
8.07
8.10 c-12
8.76 c-13
9.39 c-14
9.99 c-15
10.56 c-16
11.10 c-17
11.62 c-18
12.12 c-19
12.59 c-20
13.05 c-21
13.48 c-22
13.77
13.90 c-23
14.04
14.31 c-24
14.55
14.69 c-25
15.07 c-26
15.43 c-27
15.65
15.78 c-28
15.96
16.12 c-29
16.45 c-30
16.76
17.08 c-32
17.23
17.39
17.75 c-34
18.15
18.63 c-36
18.88
19.17
19.82 c-38
21.47 c-40
21.94
22.82
23.01
23.70
25.57
26.94
0
1000
2000
3000
4000
5000
6000
7000
800
G:\org\HP5\dat\HP5122821_b\Review\050_Marker_1228HP550r_CSC211228.xls



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	-

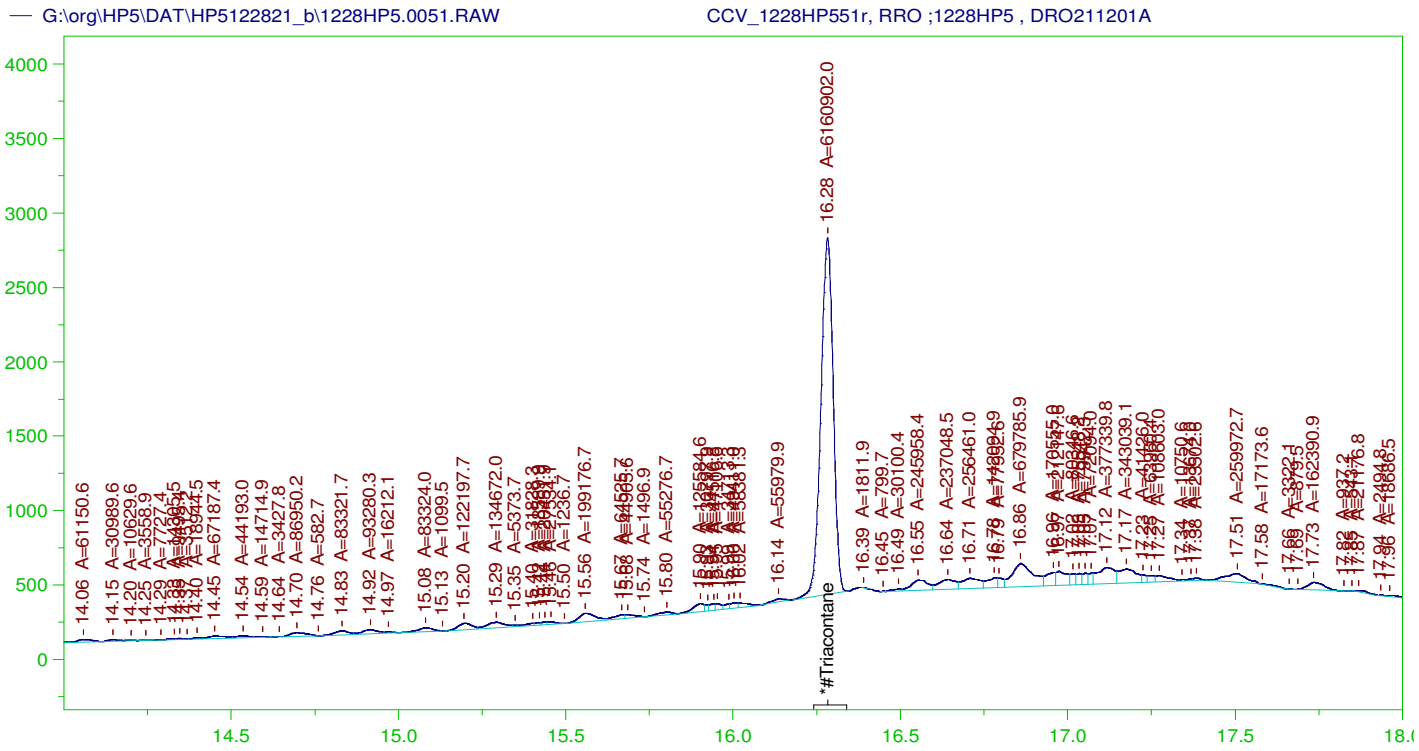
~~RRO~~ TEH (Oil Range) Area:1.337041E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4684.402

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



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

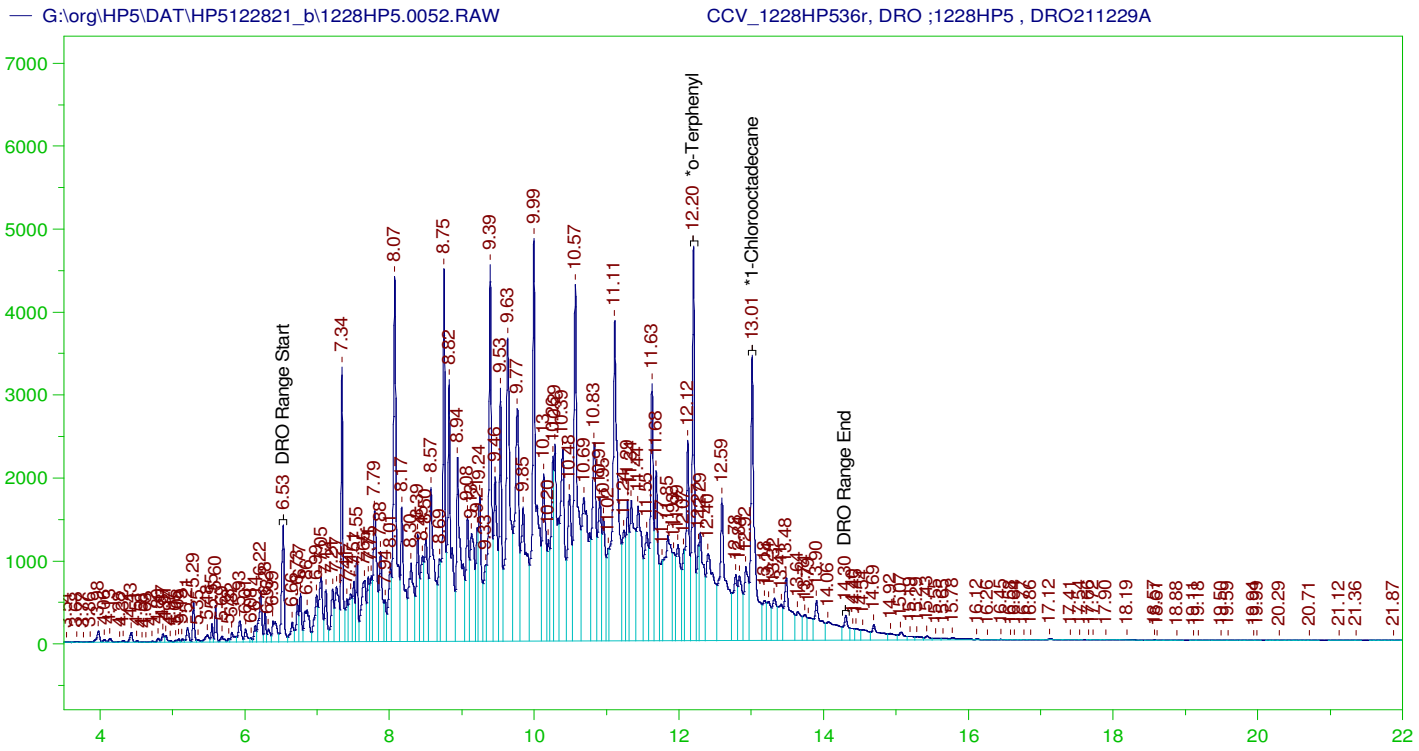
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.282	500.	212.958	42.59	-

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



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

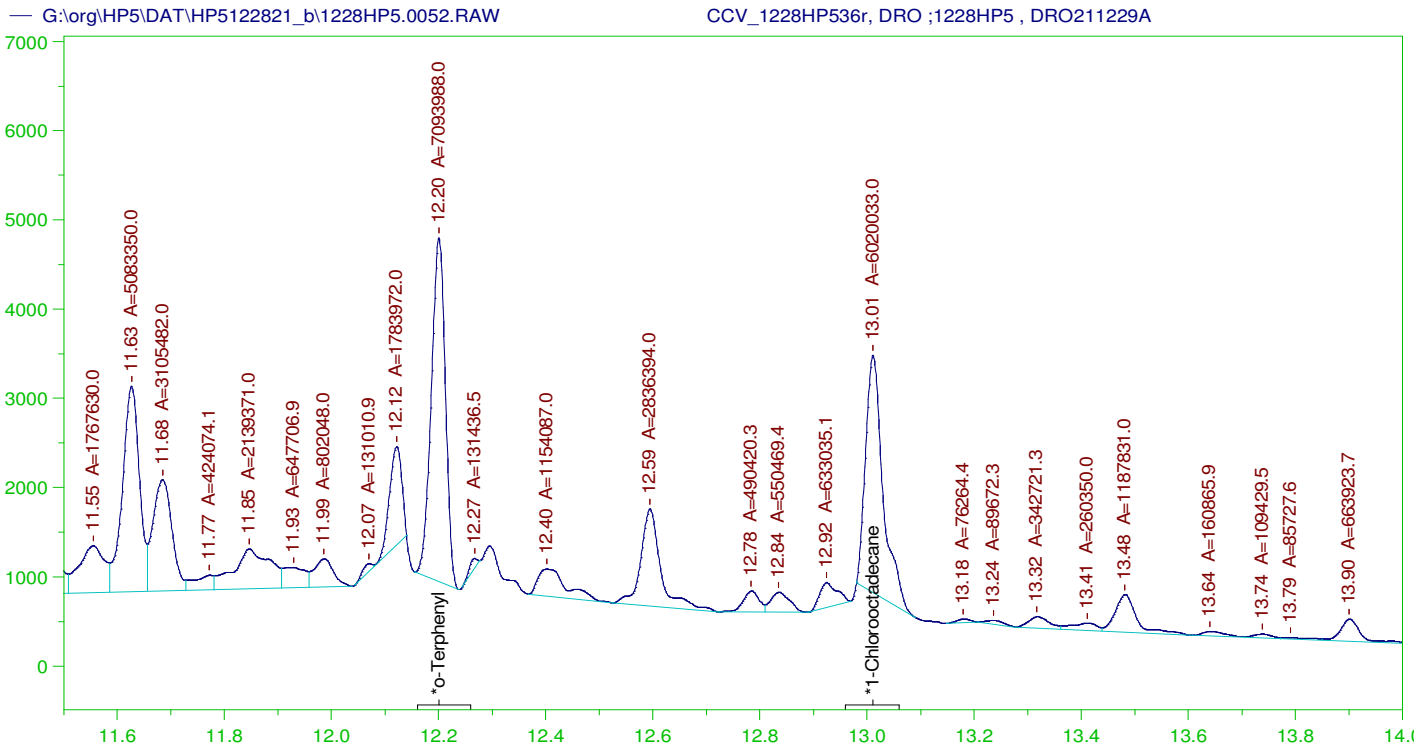
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.2	200.	326.875	163.44	-
*1-Chlorooctadecane	13.011	200.	356.634	178.32	-

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

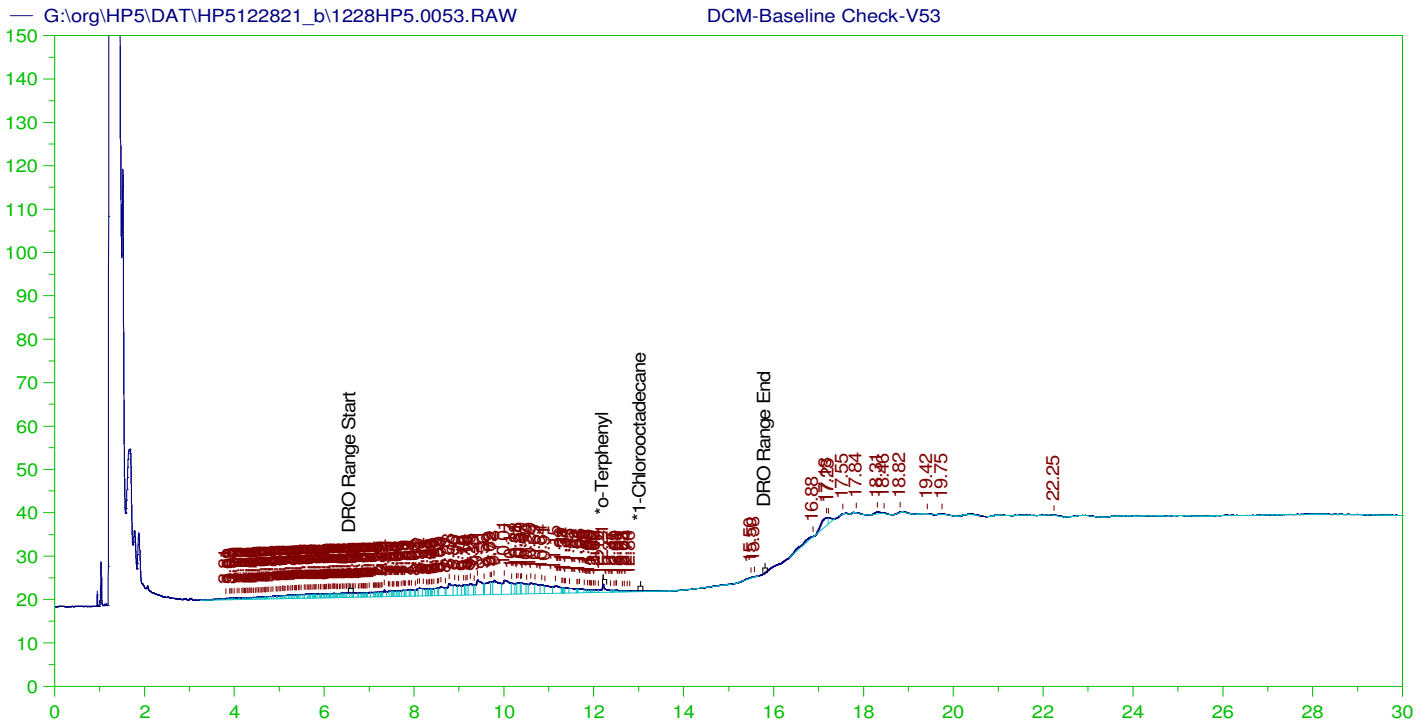
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.2	200.	199.779	99.89	-
*1-Chlorooctadecane	13.011	200.	169.534	84.77	-

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

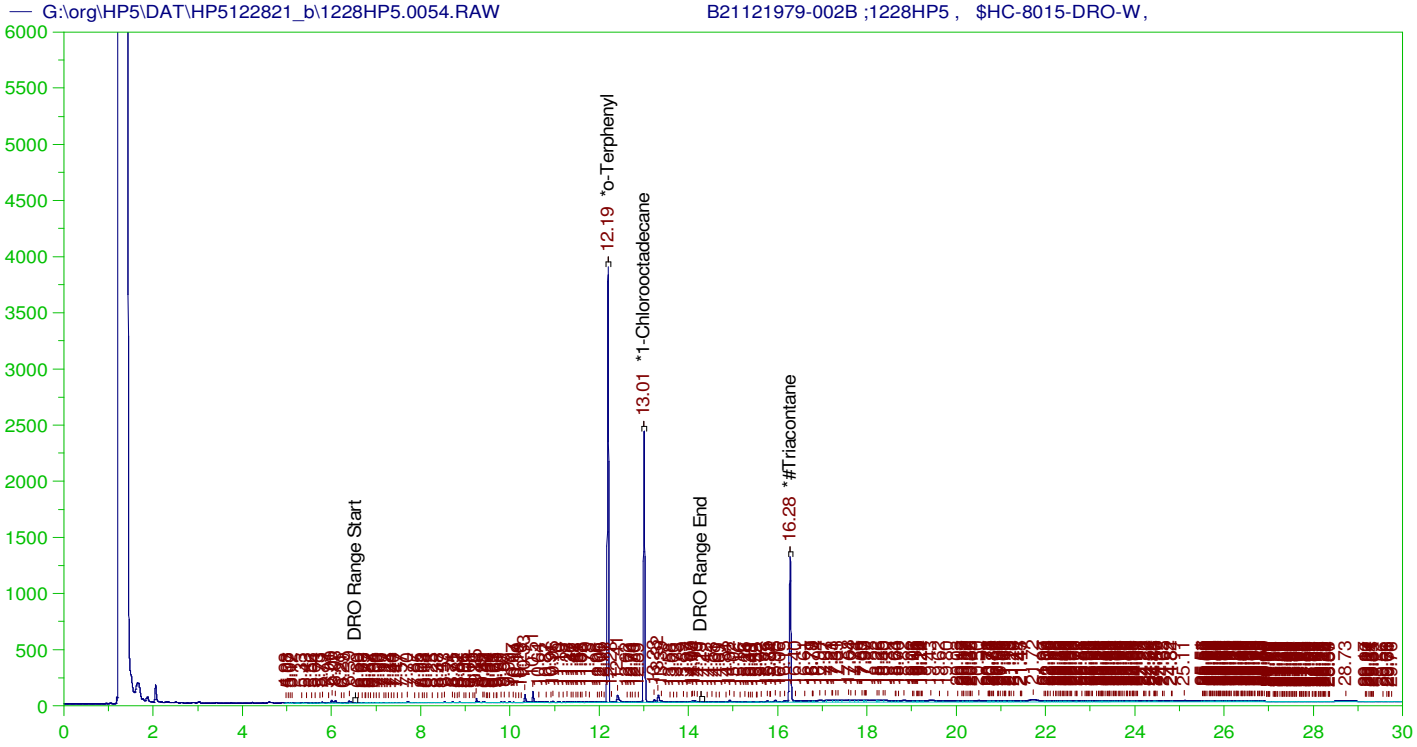
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.54 to 15.86

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

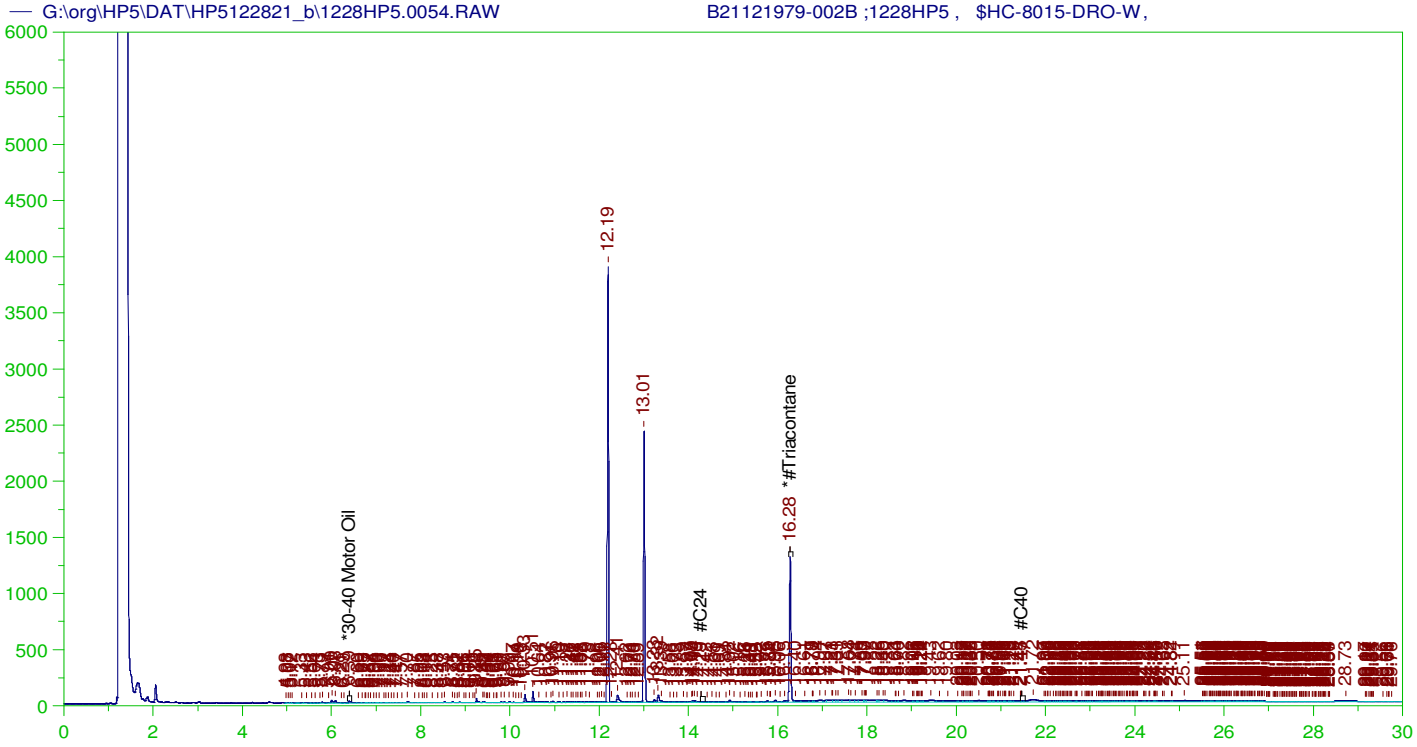
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

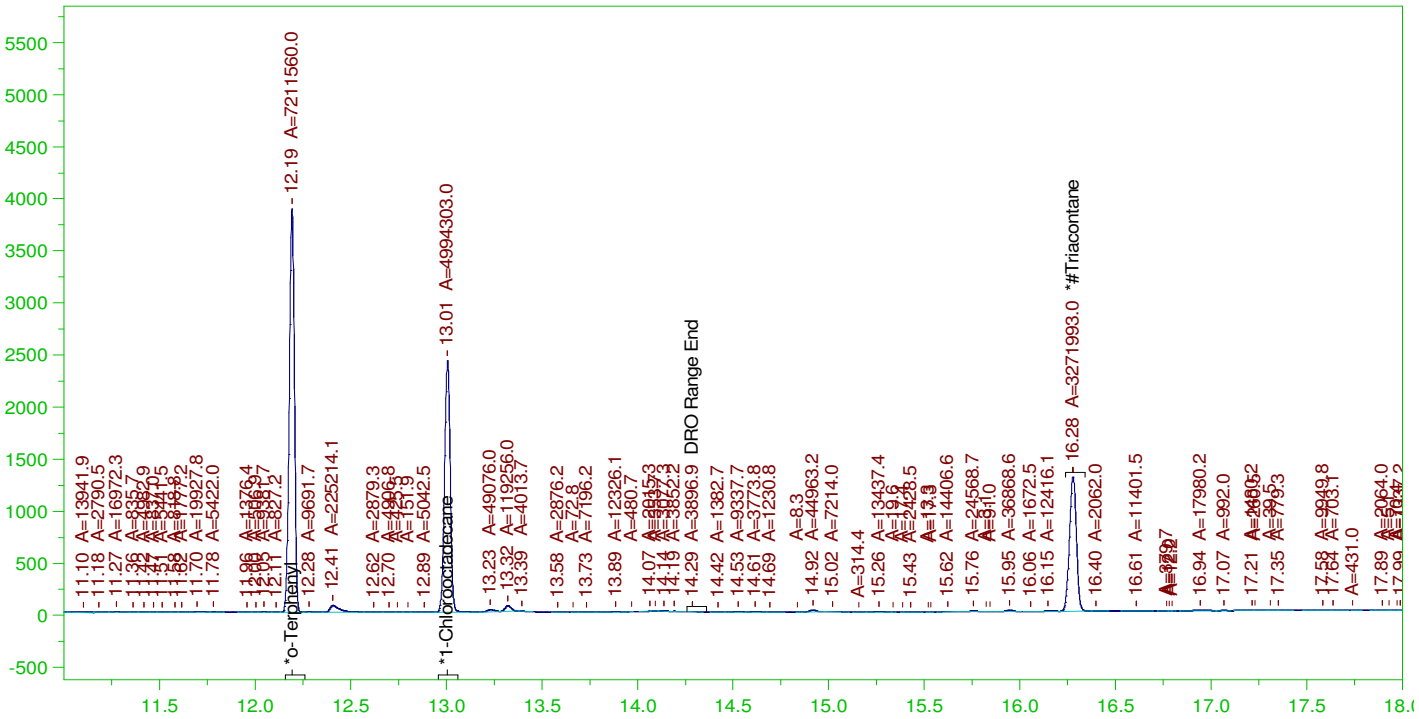
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

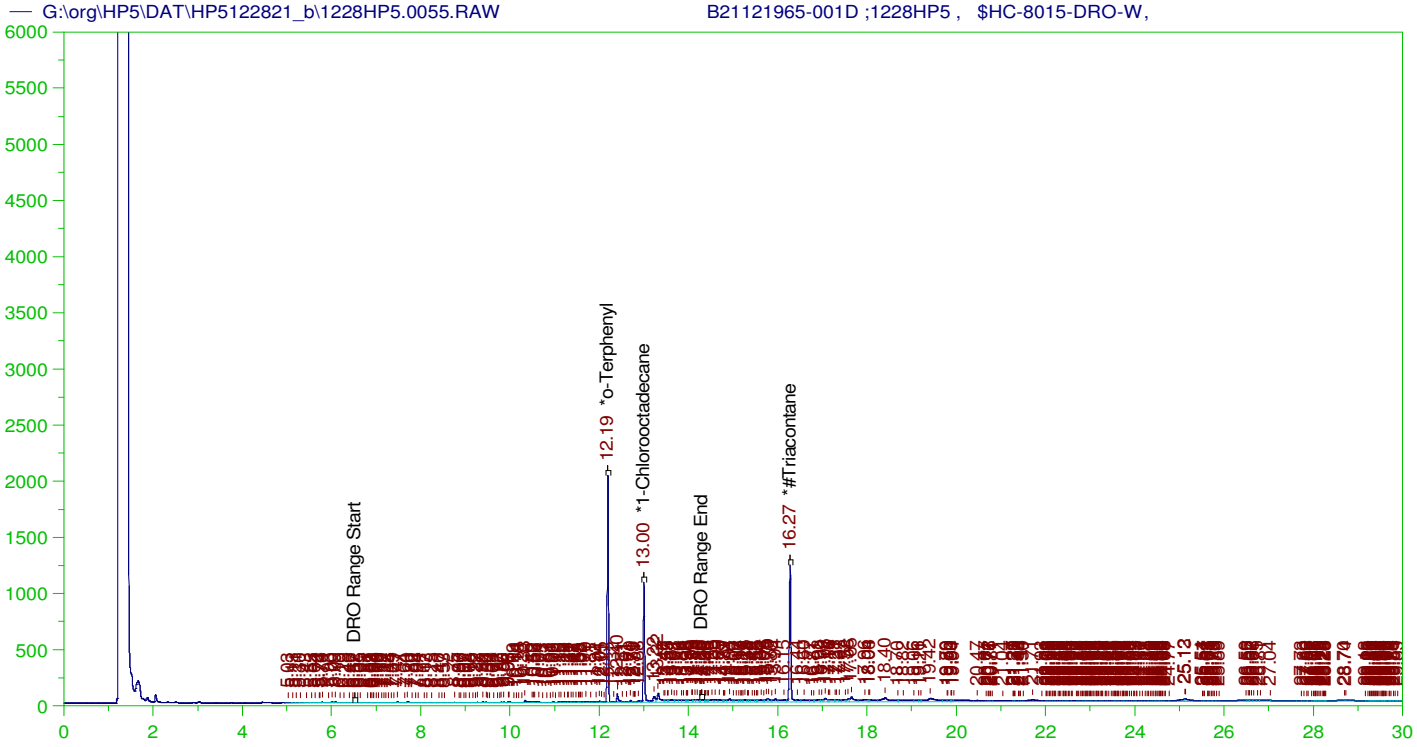
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) 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\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

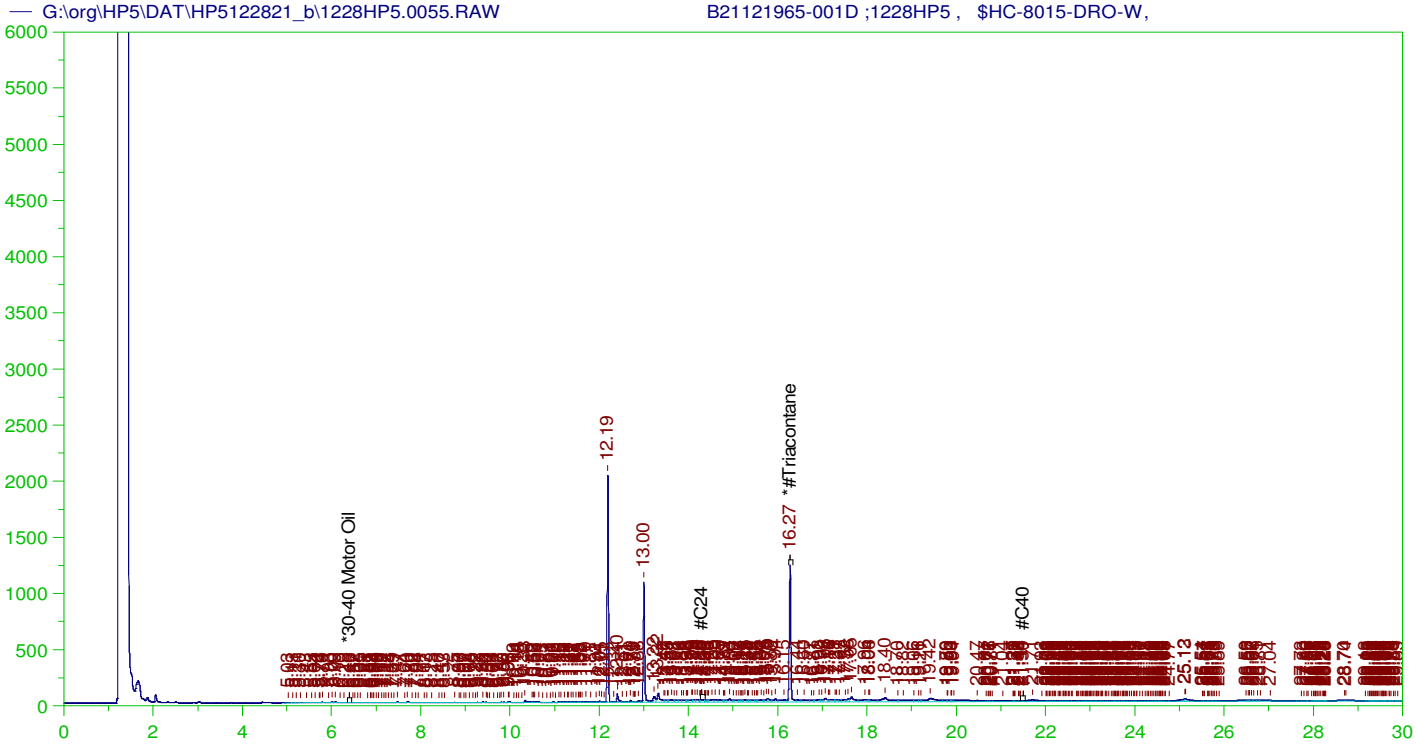
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

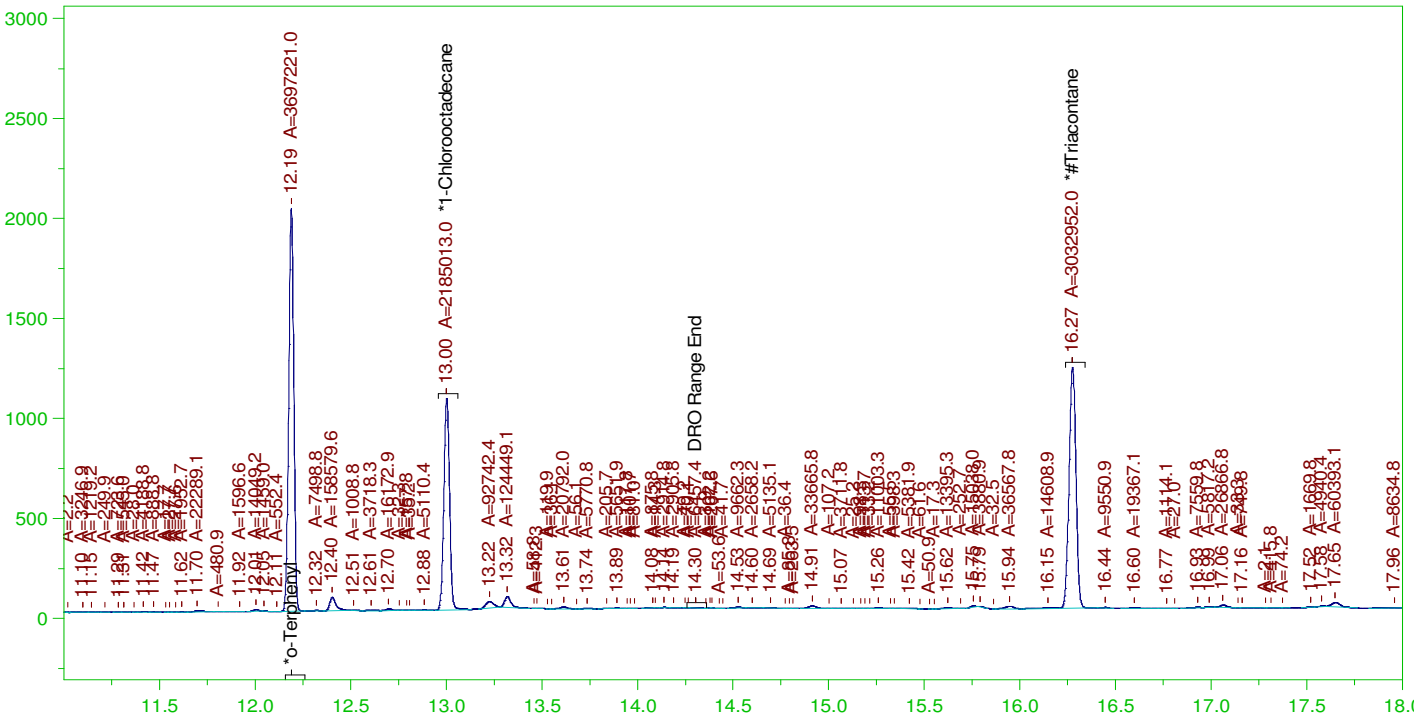
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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,



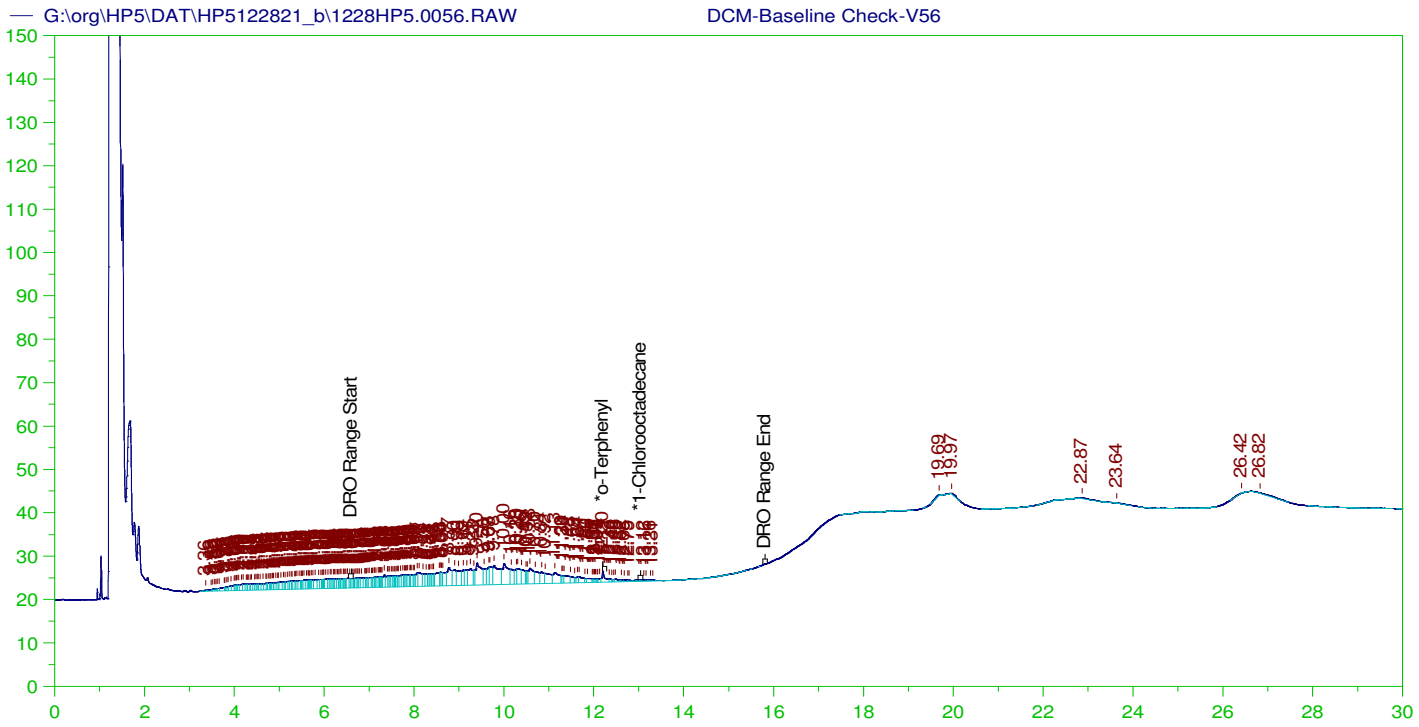
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

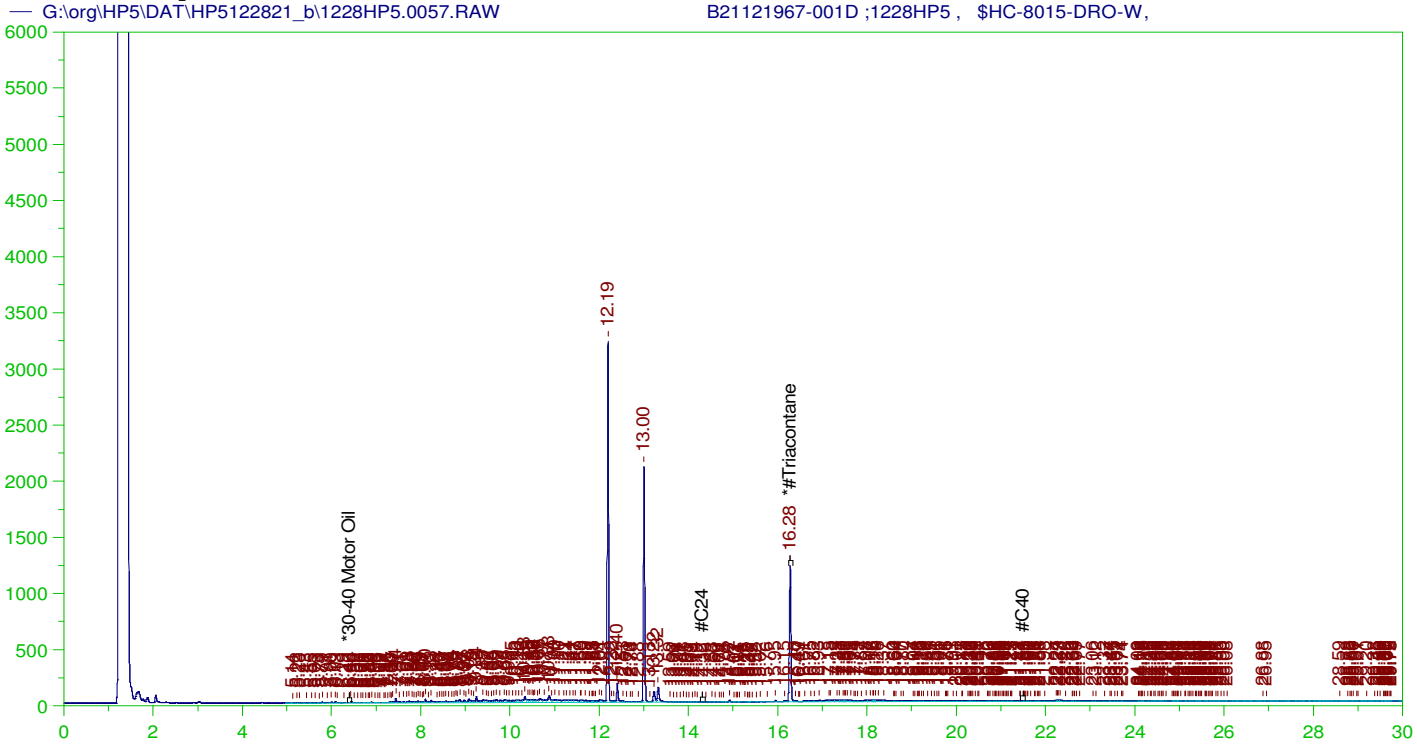
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.54 to 15.86

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

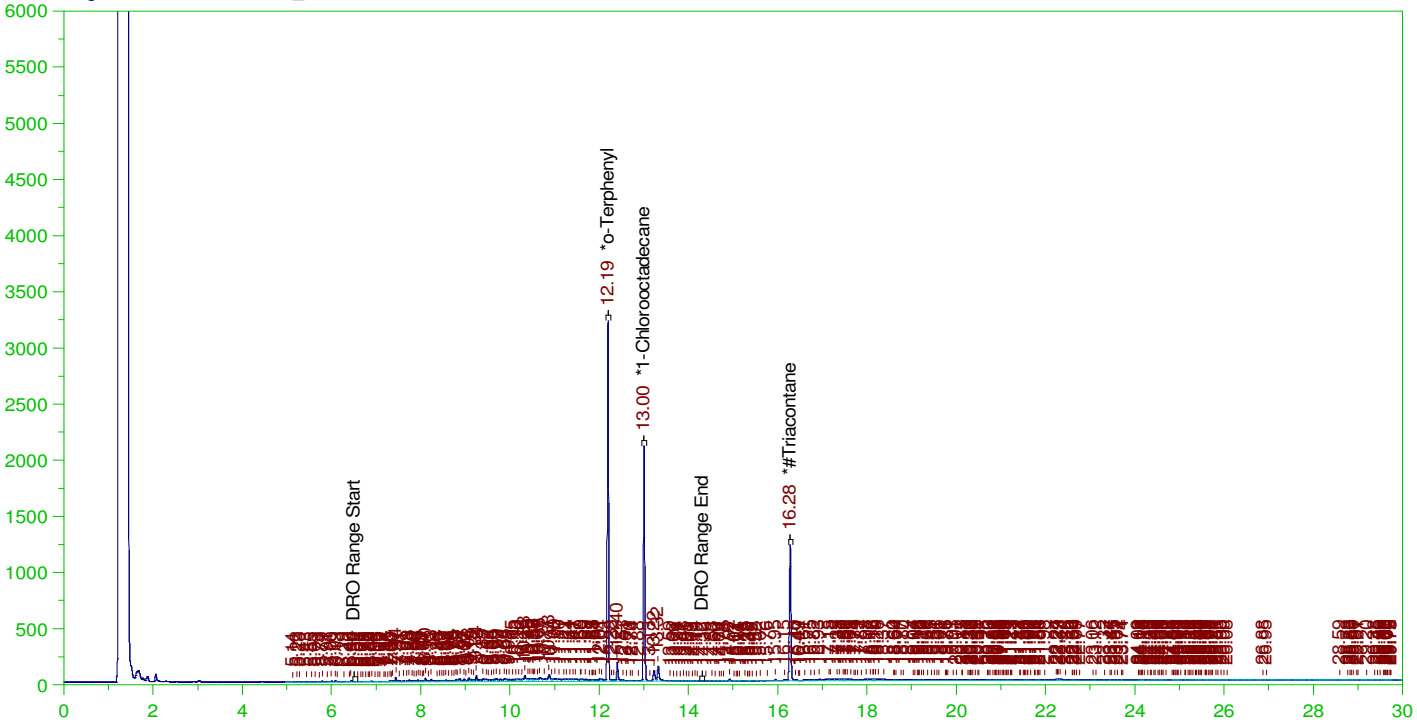
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

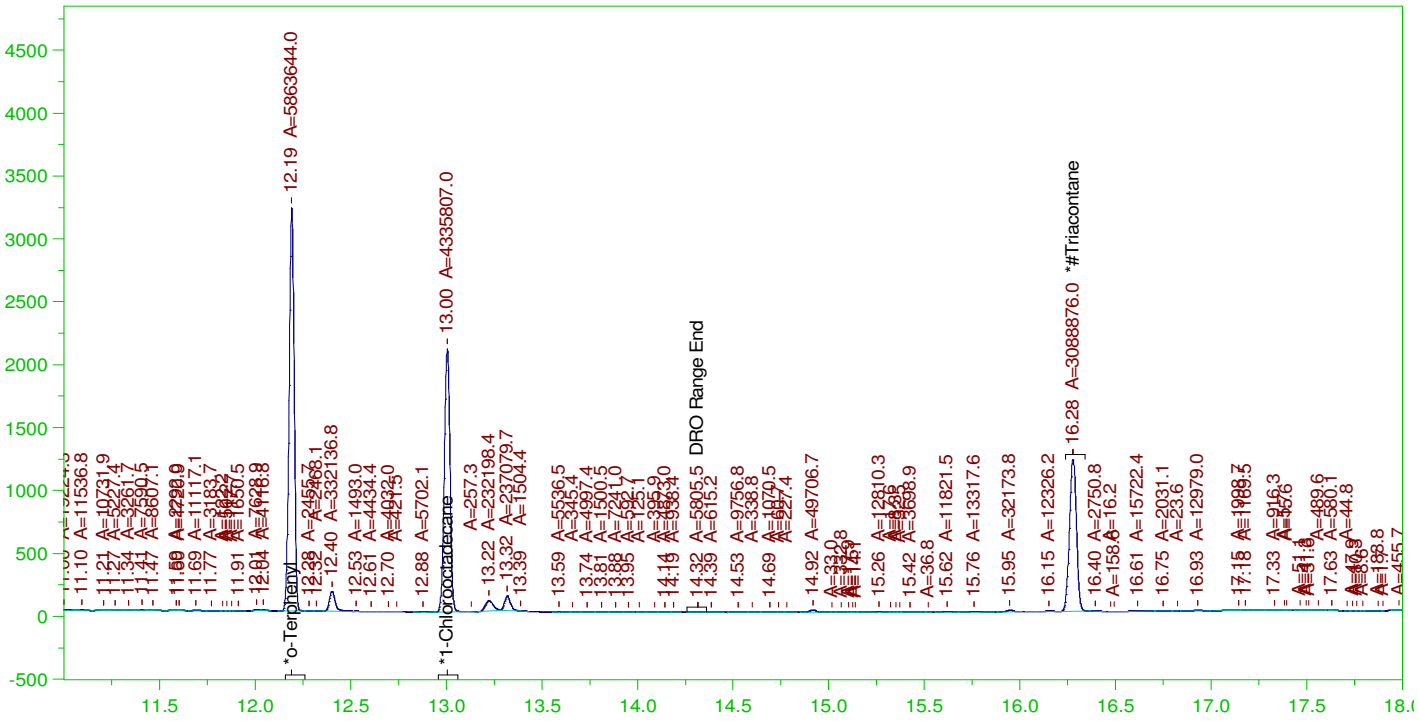
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

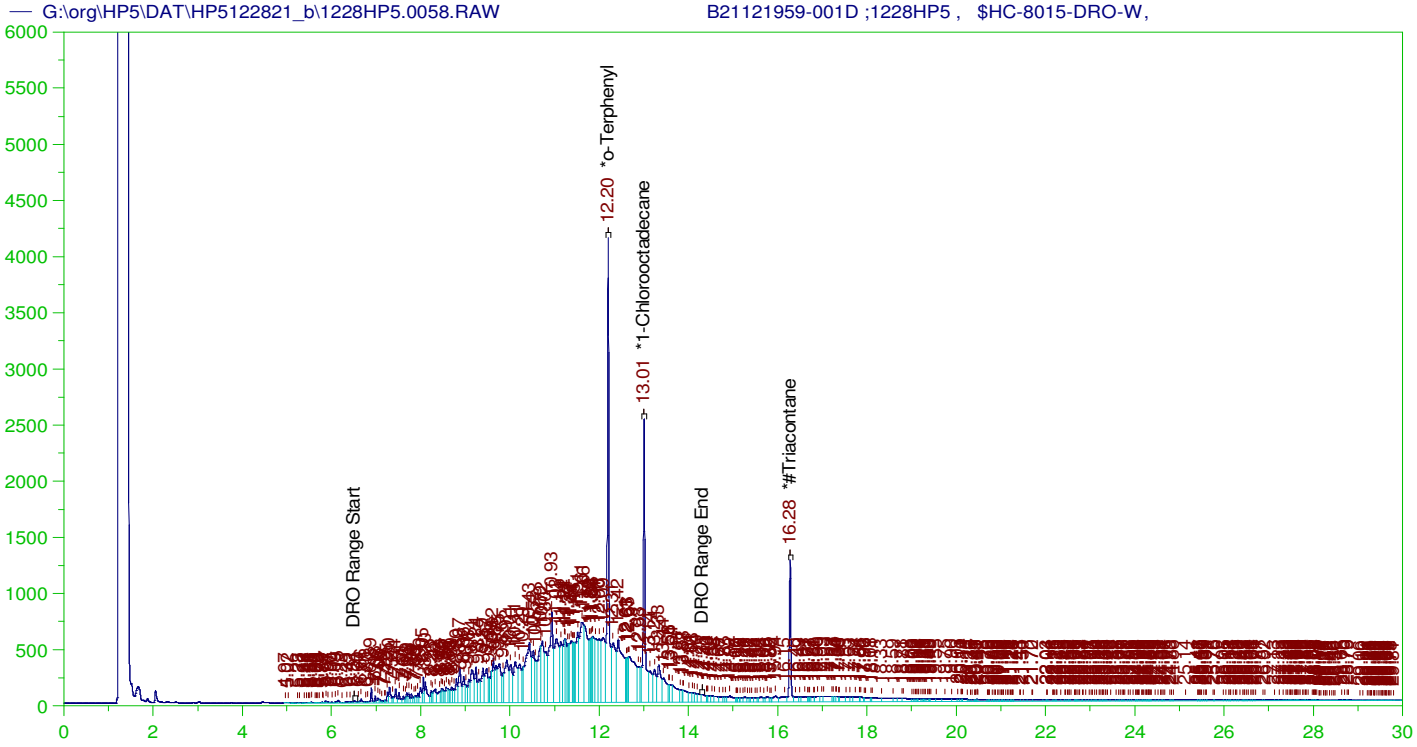
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) 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\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

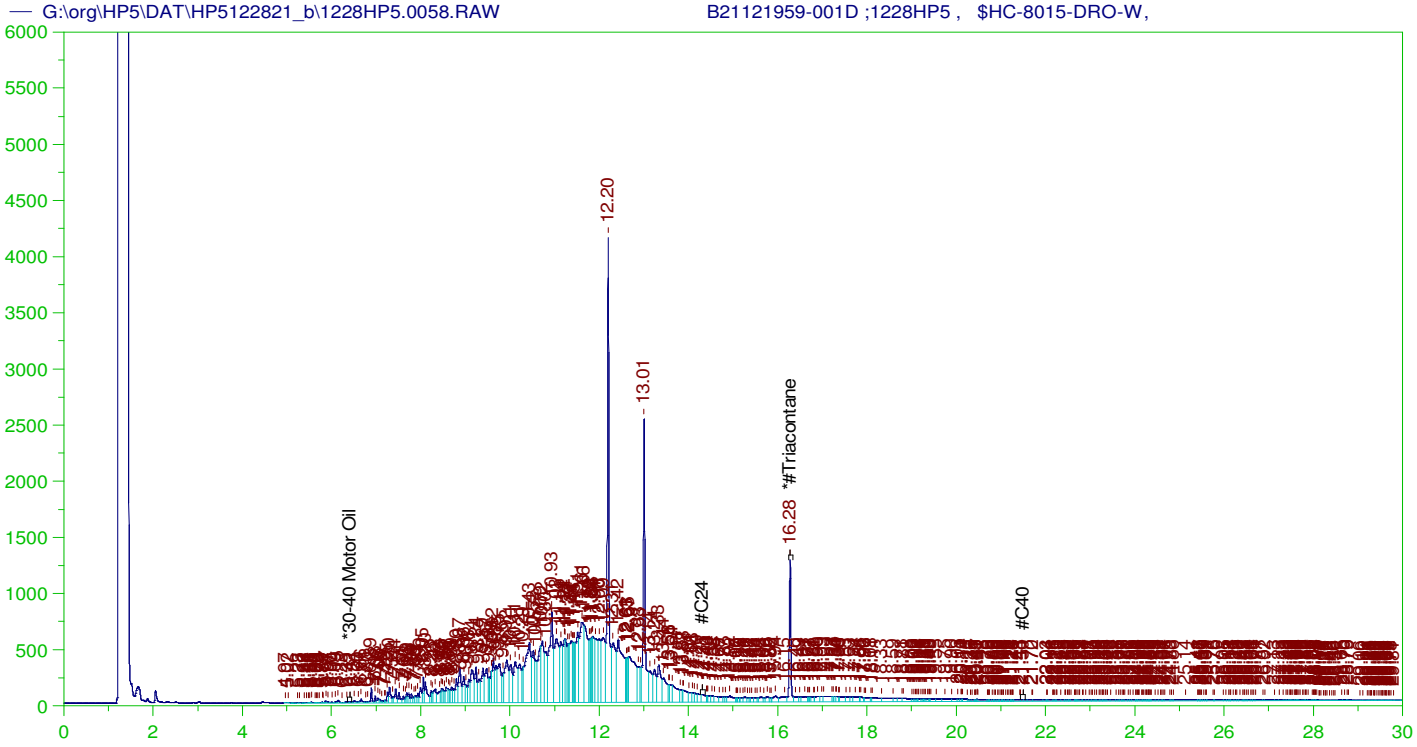
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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) Batch ID: 162502

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

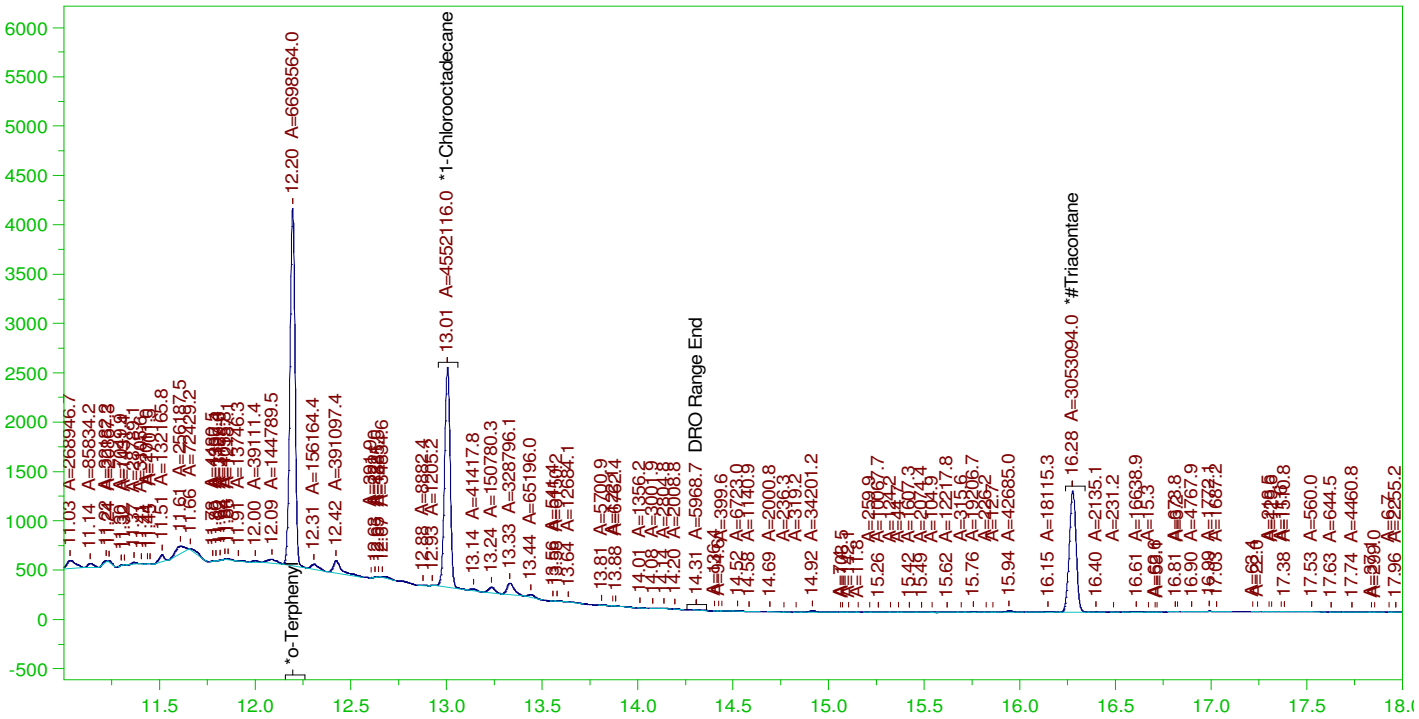
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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,



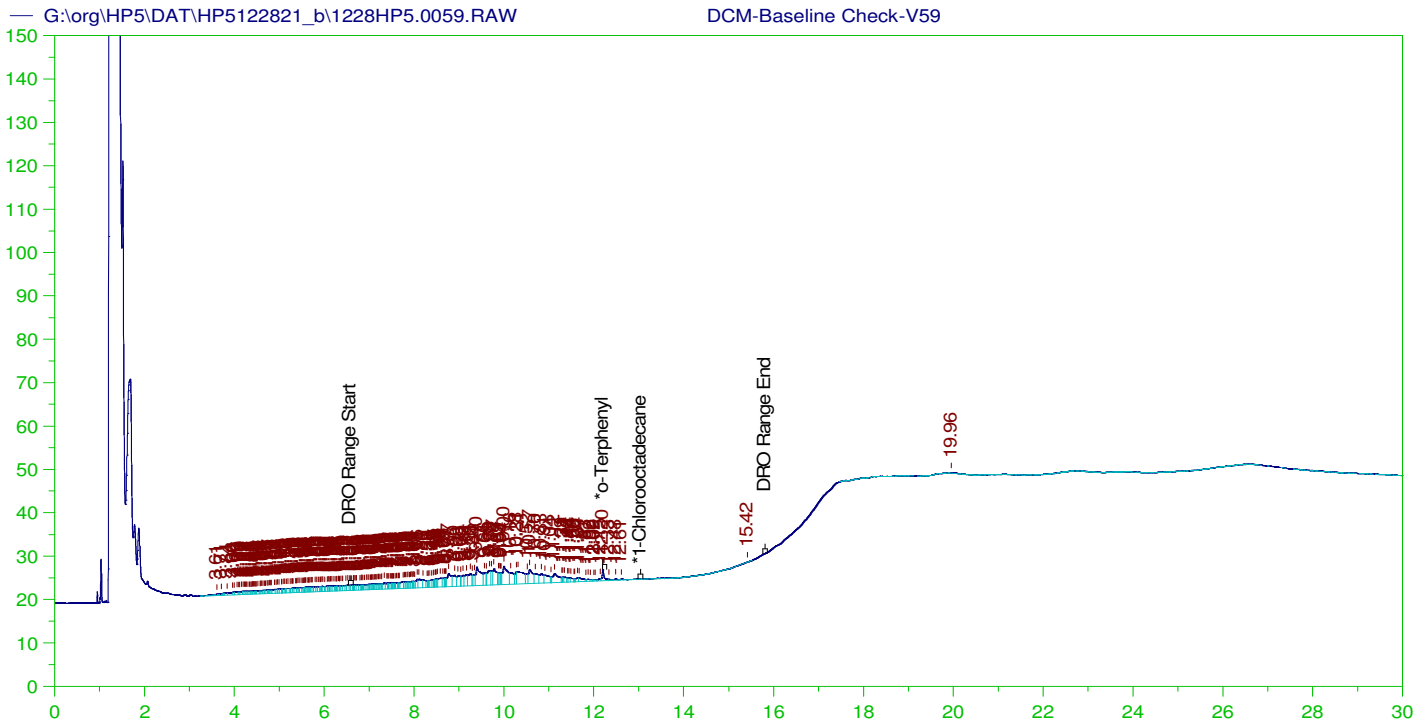
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

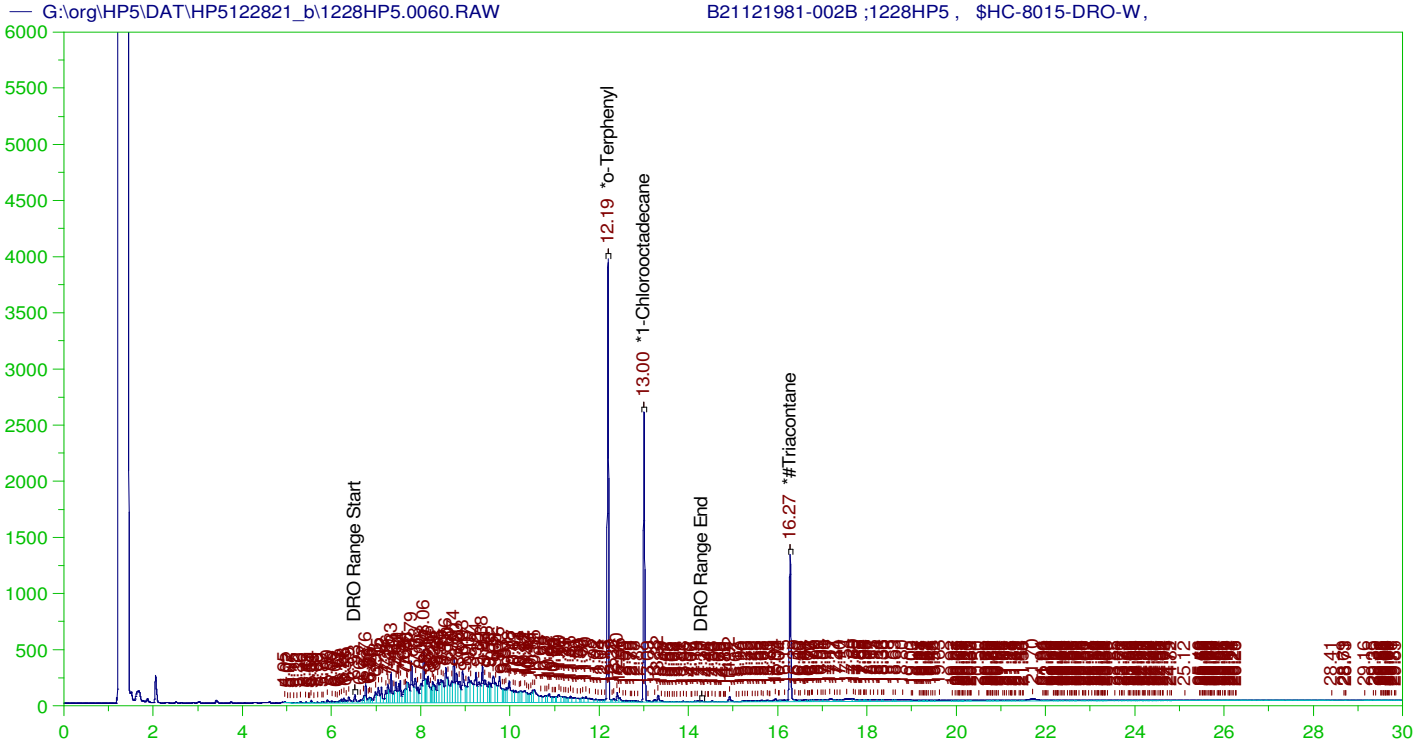
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.54 to 15.86

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 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\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

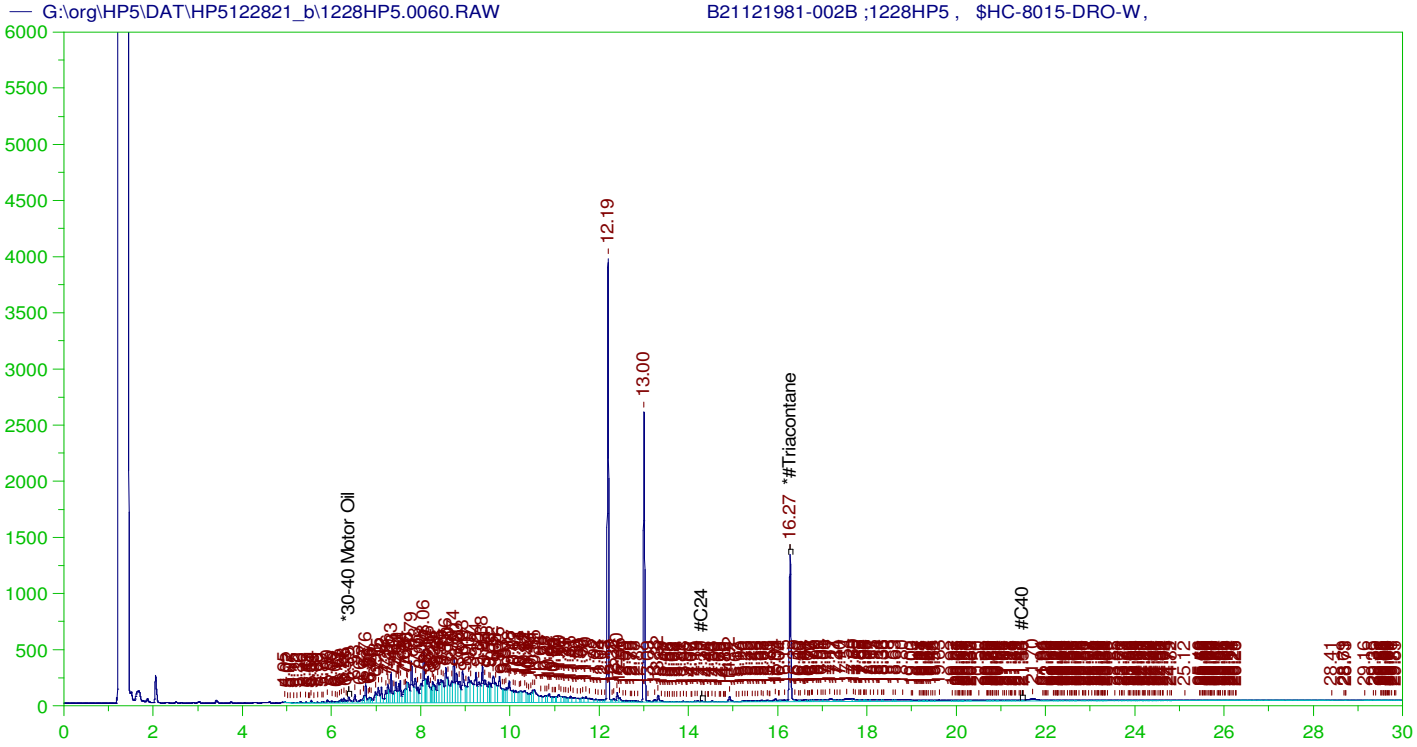
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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 Batch ID: 162502

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

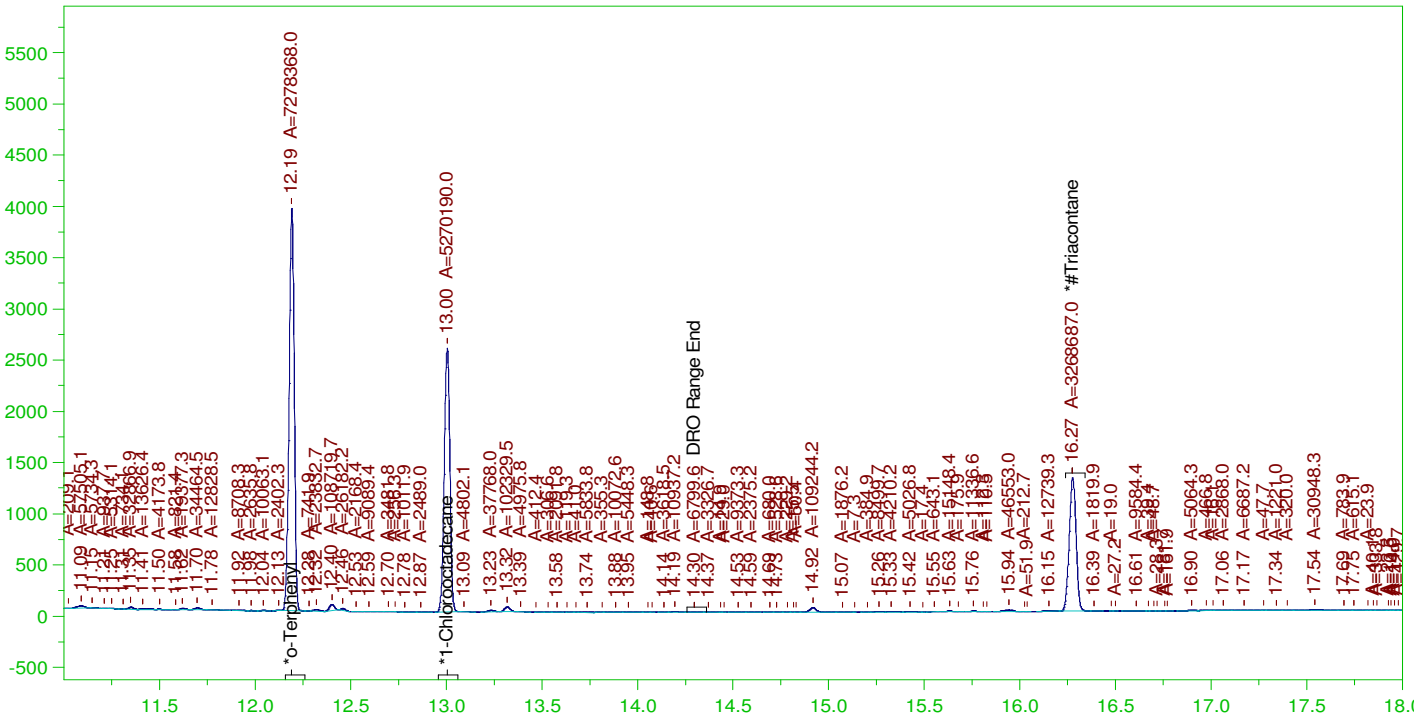
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

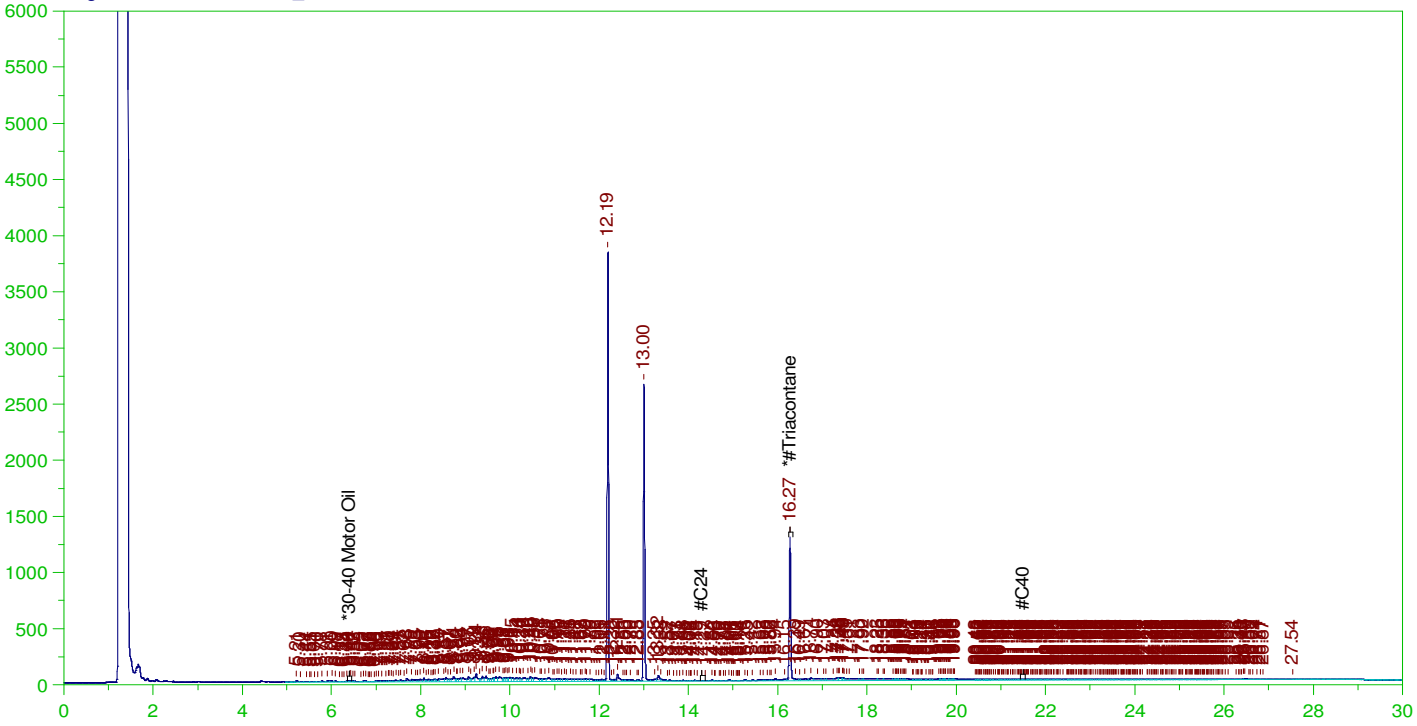
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

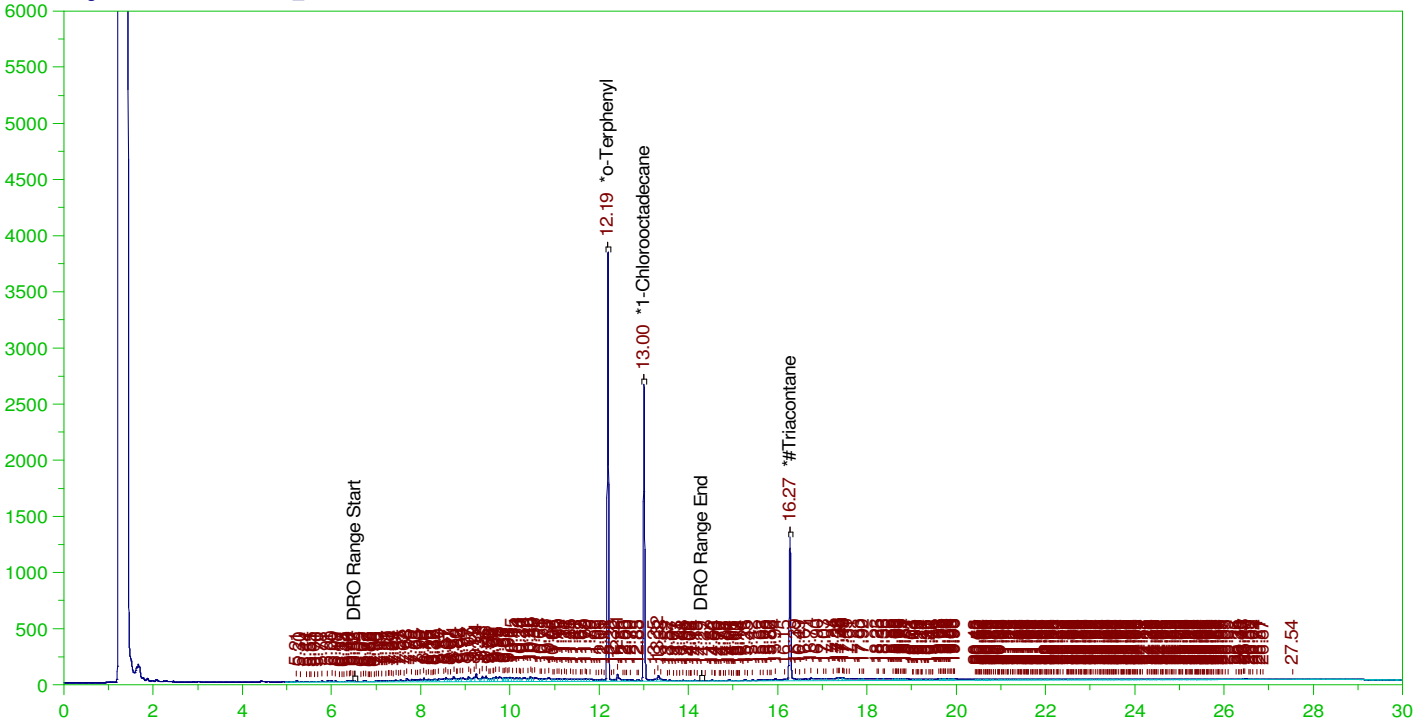
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

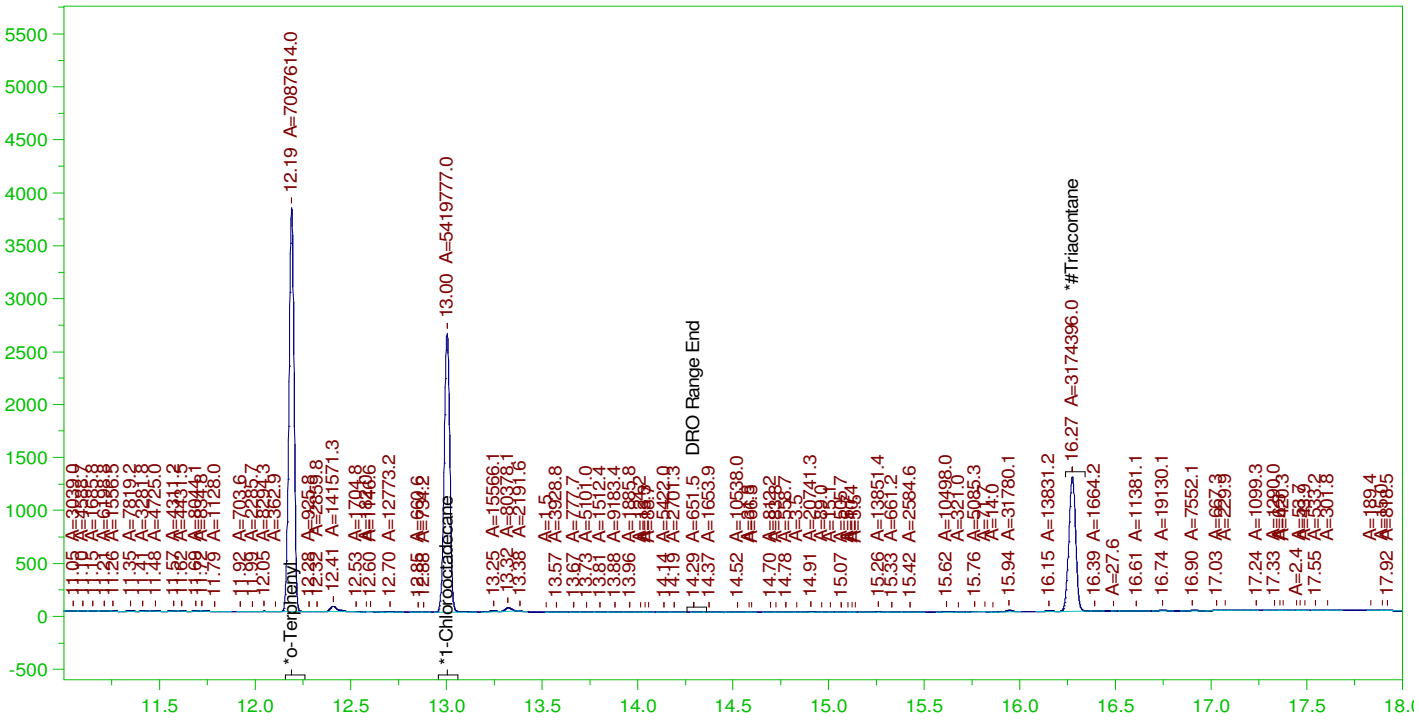
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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,



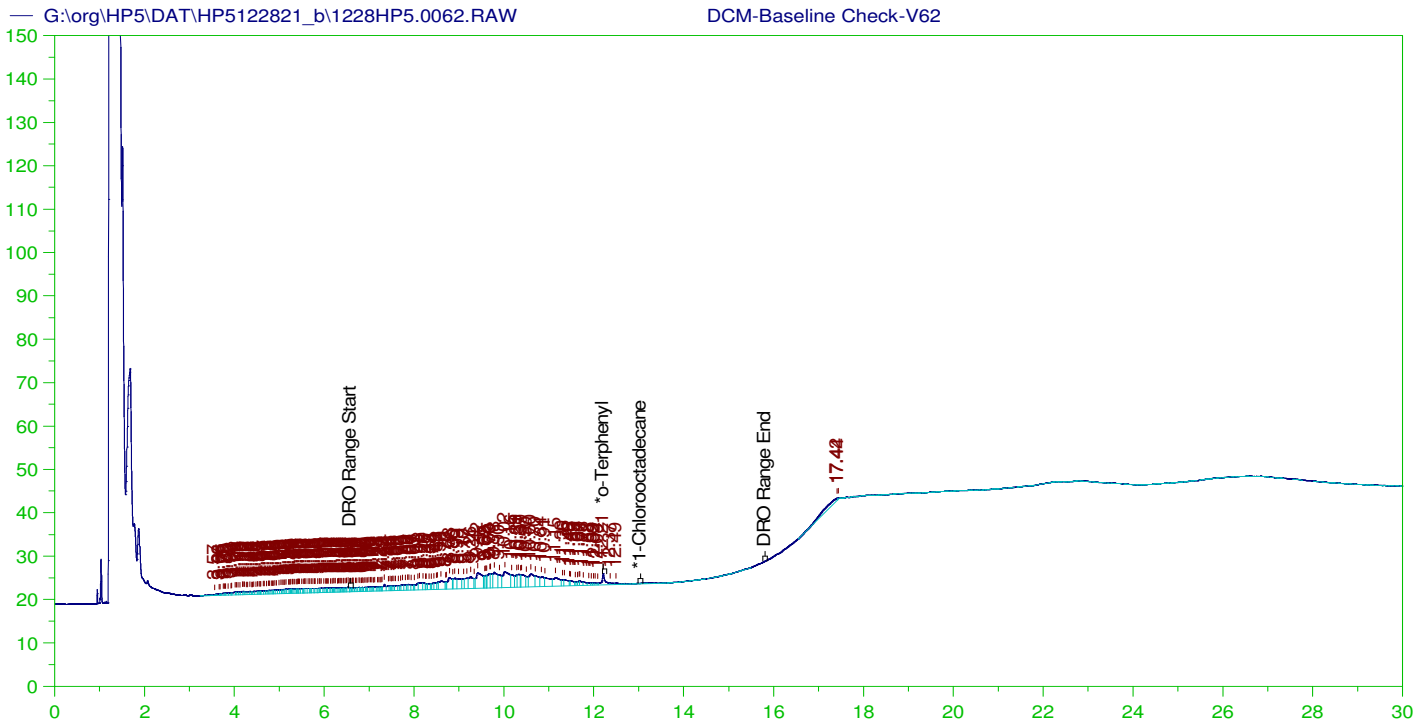
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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	-
*#Triacontane	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

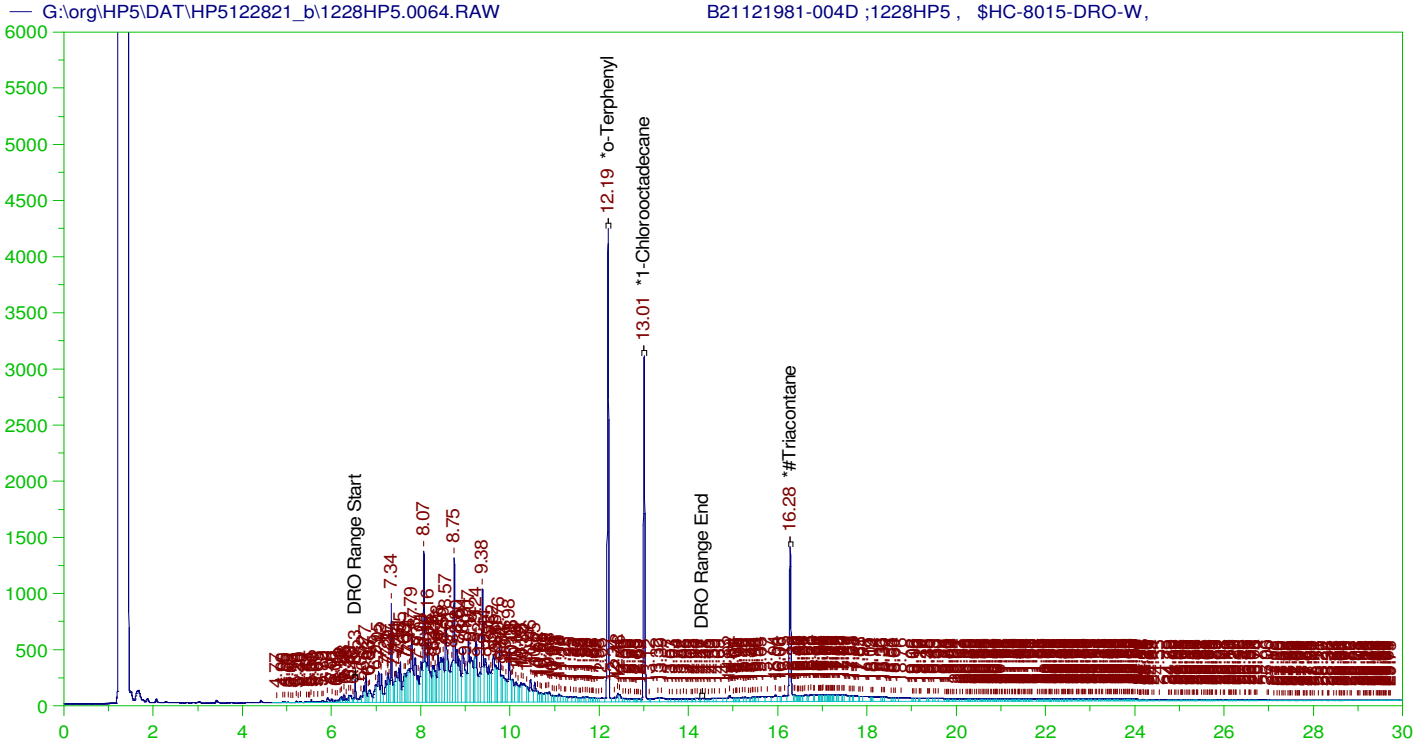
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.54 to 15.86

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

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

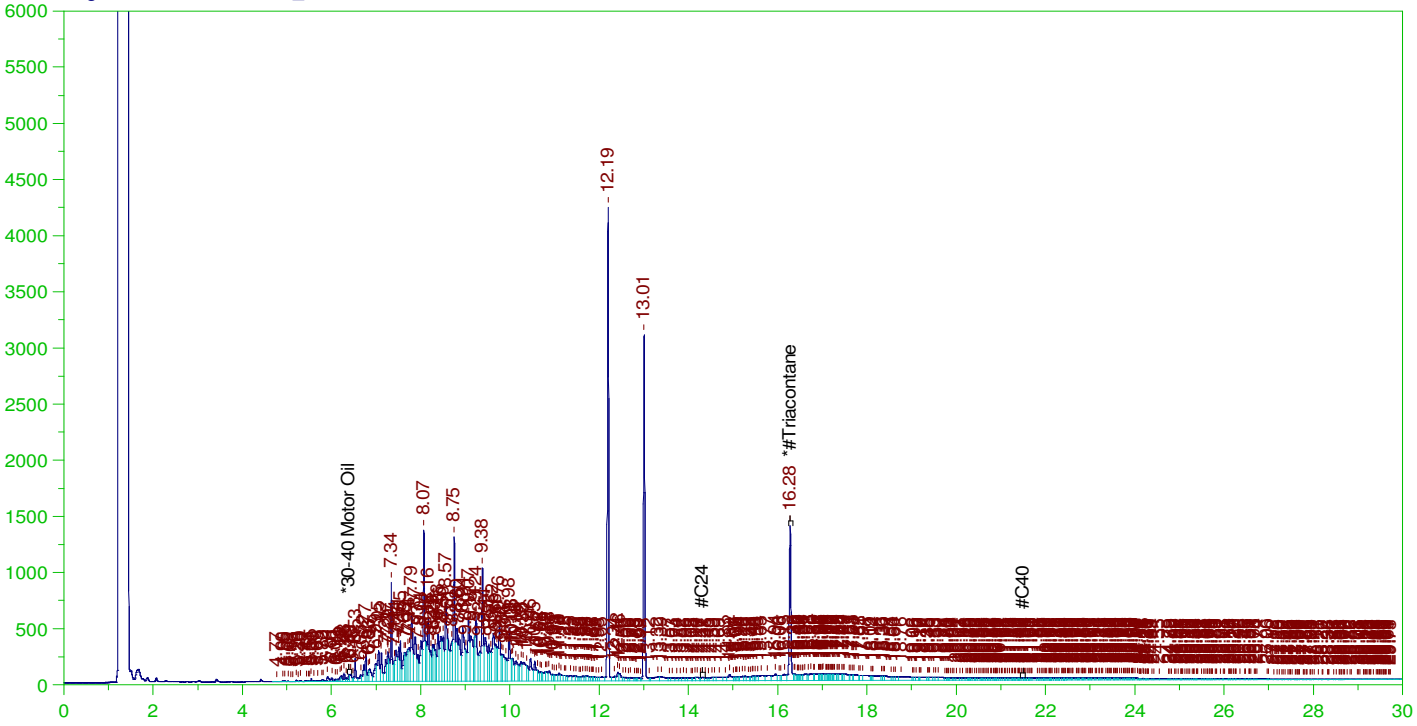
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

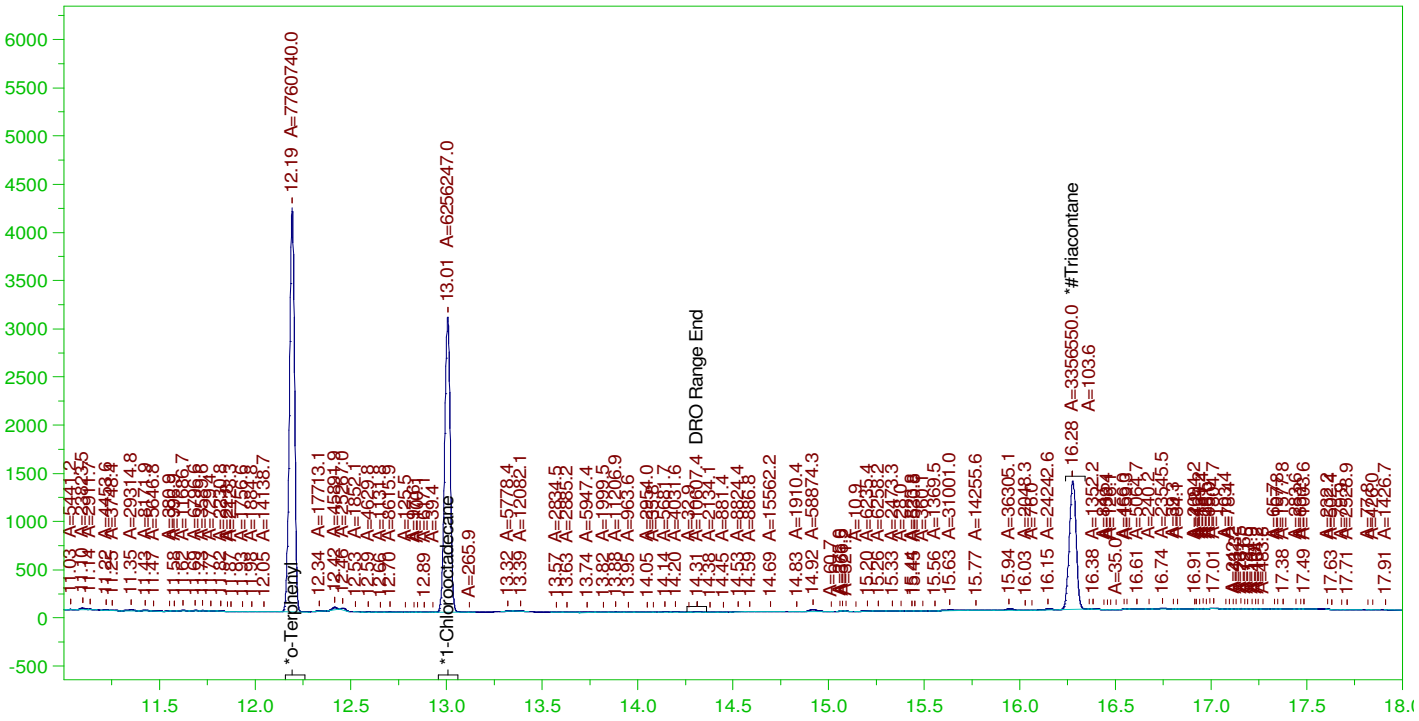
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

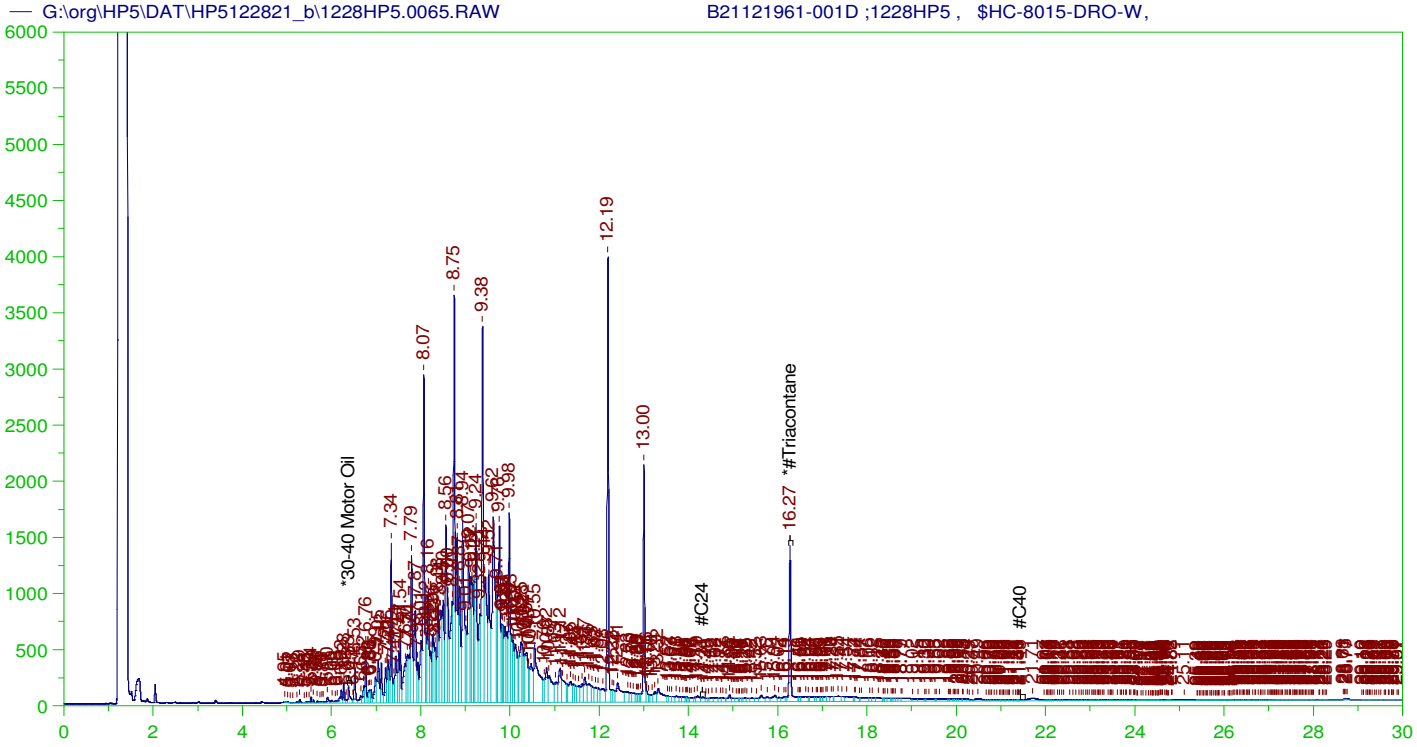
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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

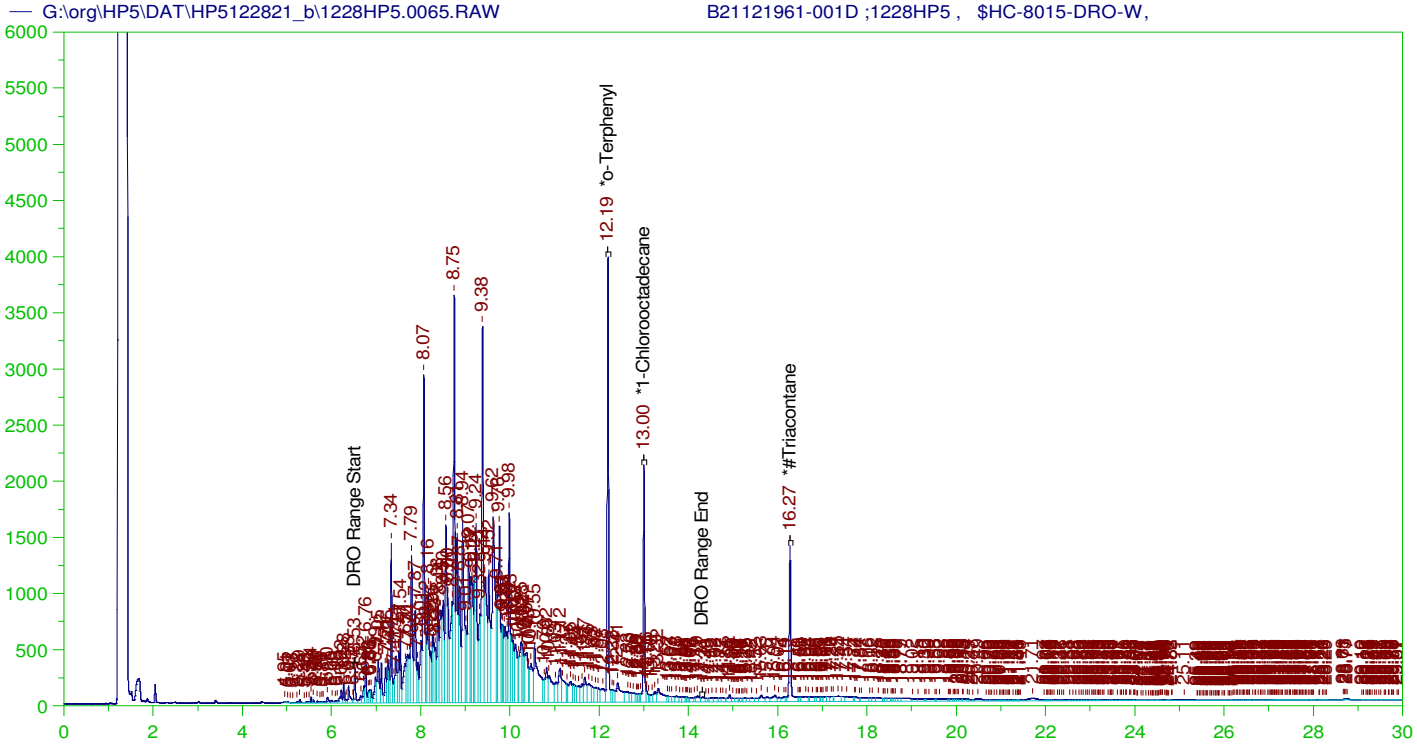
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

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

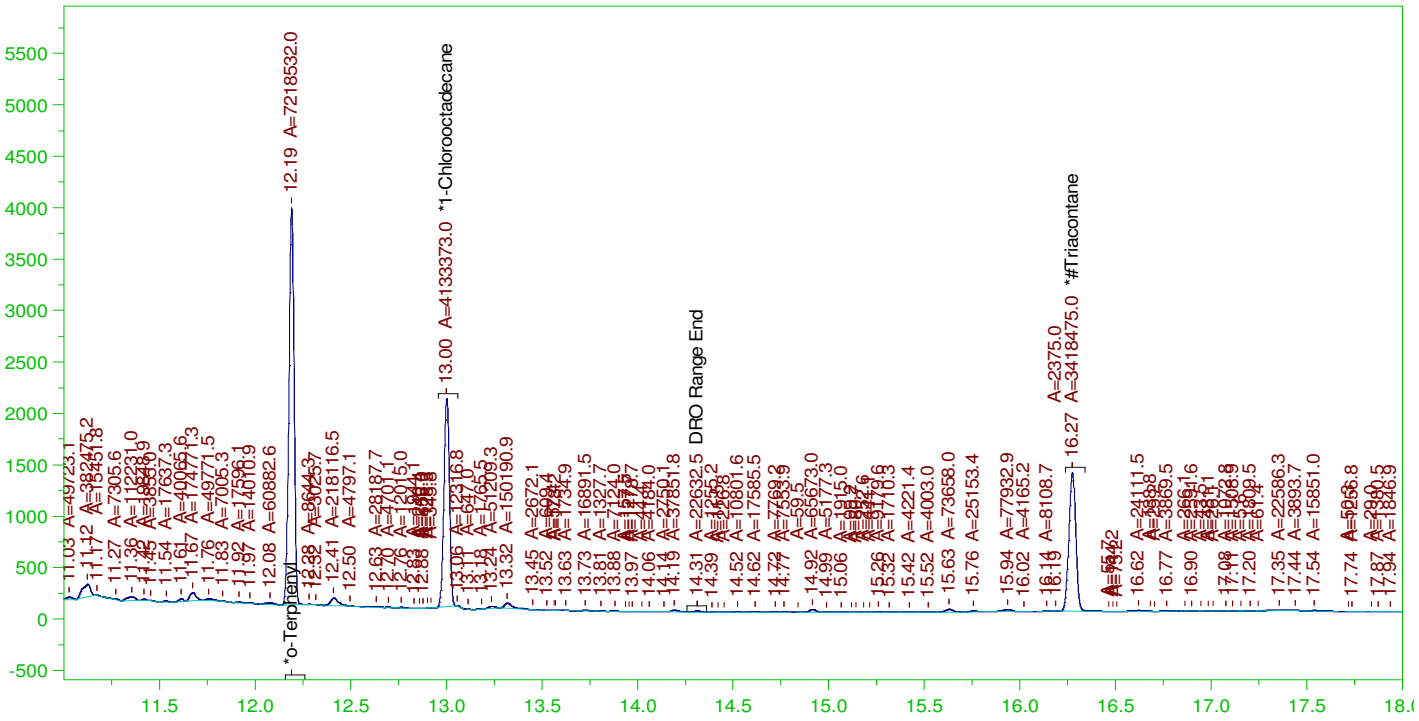
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.36

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,



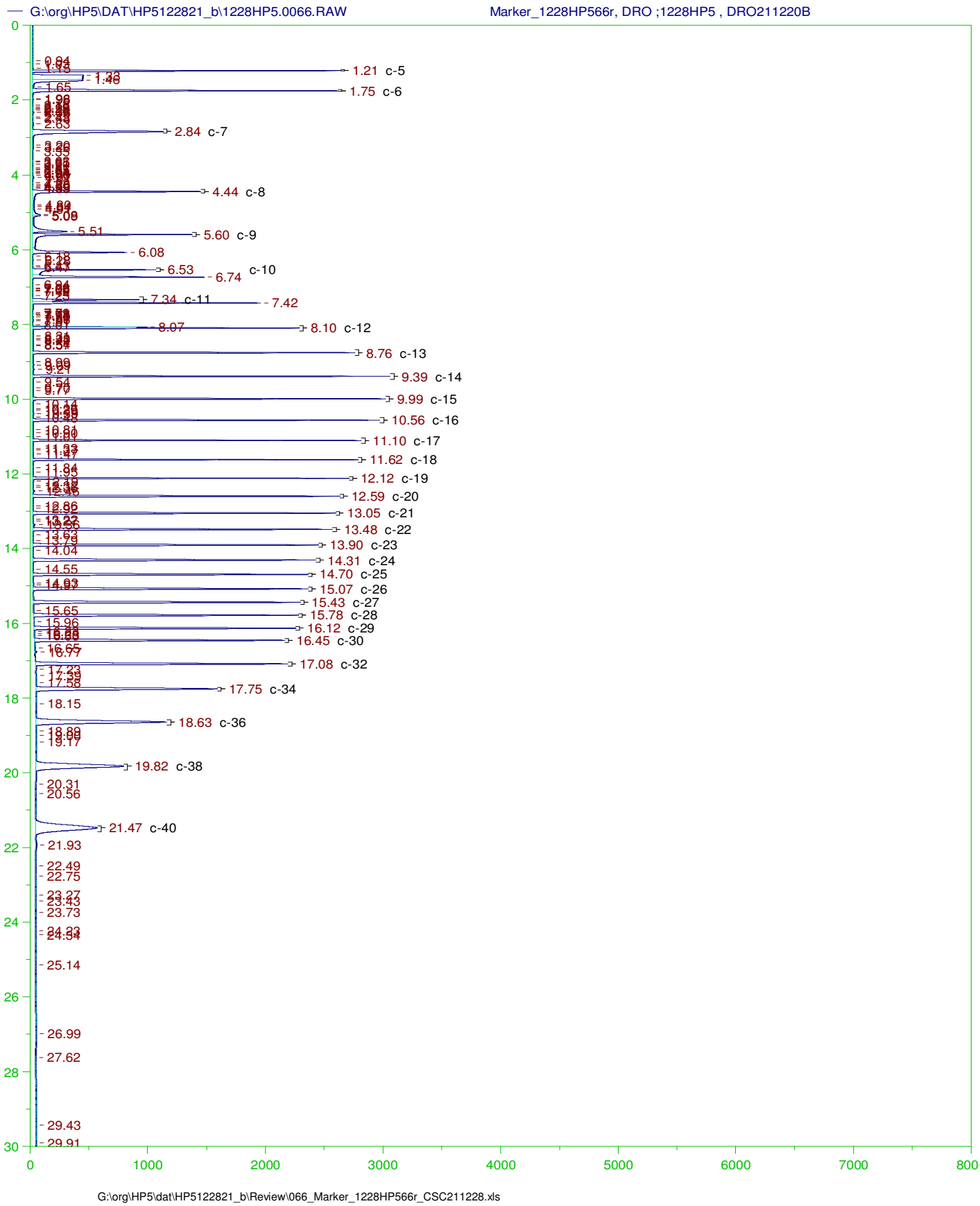
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

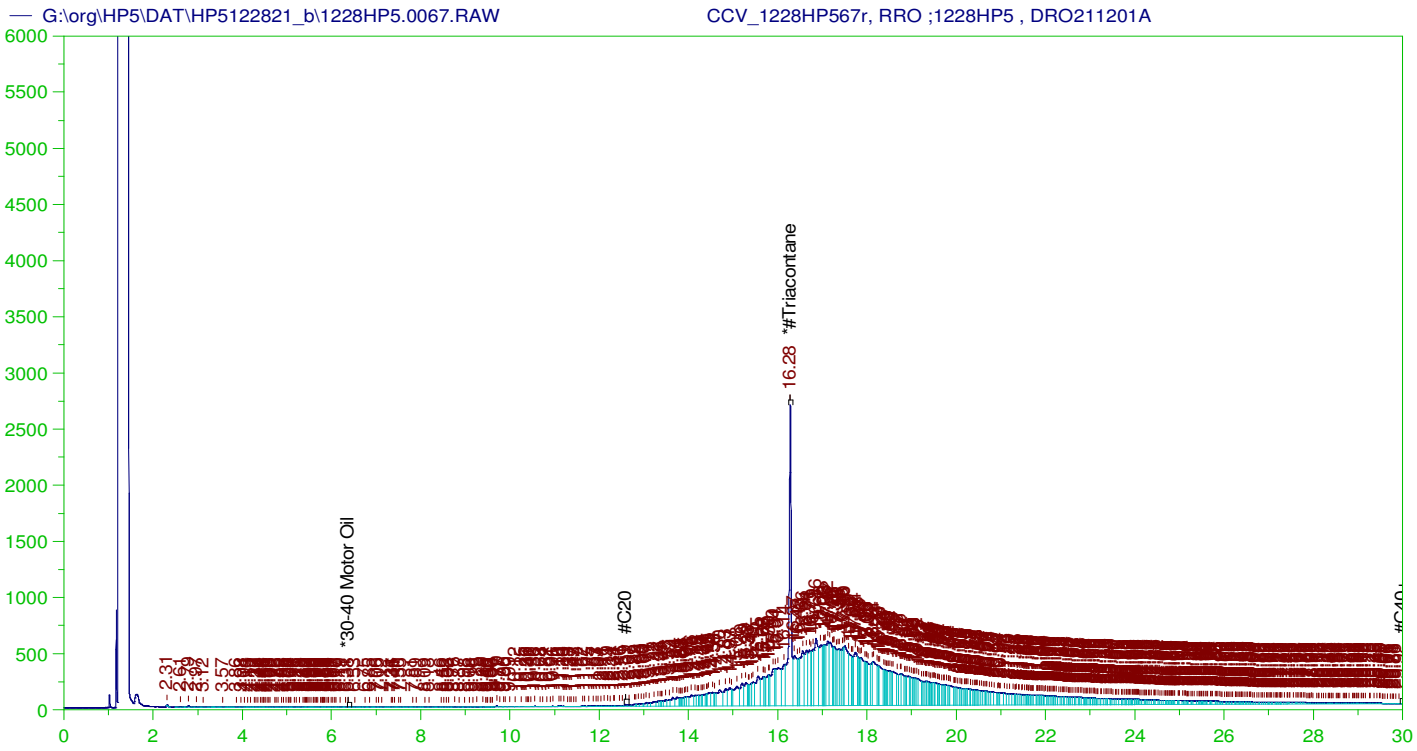
Sample Name: B21121961-001D ;1228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0065.RAW
Date & Time Acquired: 12/30/2021 11:21:17 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
Sample Weight: 1010 Dilution: 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


G:\org\HP5\DAT\HP5122821_b\1228HP5.0066.RAW
Marker_1228HP566r, DRO ;1228HP5 , DRO211220B
1.21 c-5
1.75 c-6
2.84 c-7
4.44 c-8
5.60 c-9
6.53
6.74 c-10
7.34 c-11
7.42
8.07
8.10 c-12
8.76 c-13
9.39 c-14
9.99 c-15
10.56 c-16
11.10 c-17
11.62 c-18
12.12 c-19
12.59 c-20
13.05 c-21
13.48 c-22
13.90 c-23
14.31 c-24
14.70 c-25
15.07 c-26
15.43 c-27
15.78 c-28
16.12 c-29
16.45 c-30
17.08 c-32
17.75 c-34
18.15
18.63 c-36
19.82 c-38
20.31
20.56
21.47 c-40
21.93
22.49
22.75
23.27
23.43
23.73
24.33
24.54
25.14
26.99
27.62
29.43
29.91
0
1000
2000
3000
4000
5000
6000
7000
800
G:\org\HP5\dat\HP5122821_b\Review\066_Marker_1228HP566r_CSC211228.xls



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	-

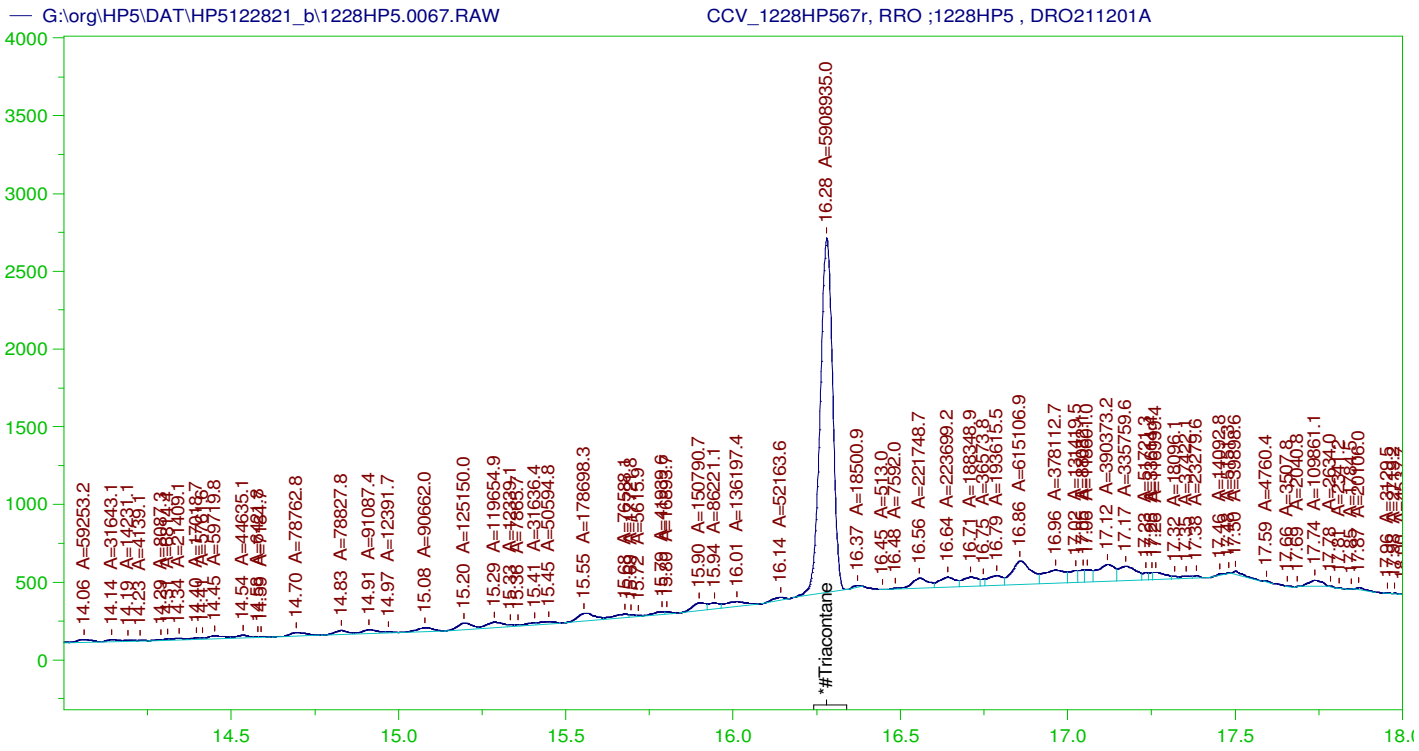
~~RRO~~ TEH (Oil Range) Area:1.340796E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4697.556

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

AMN 01/24/2022



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

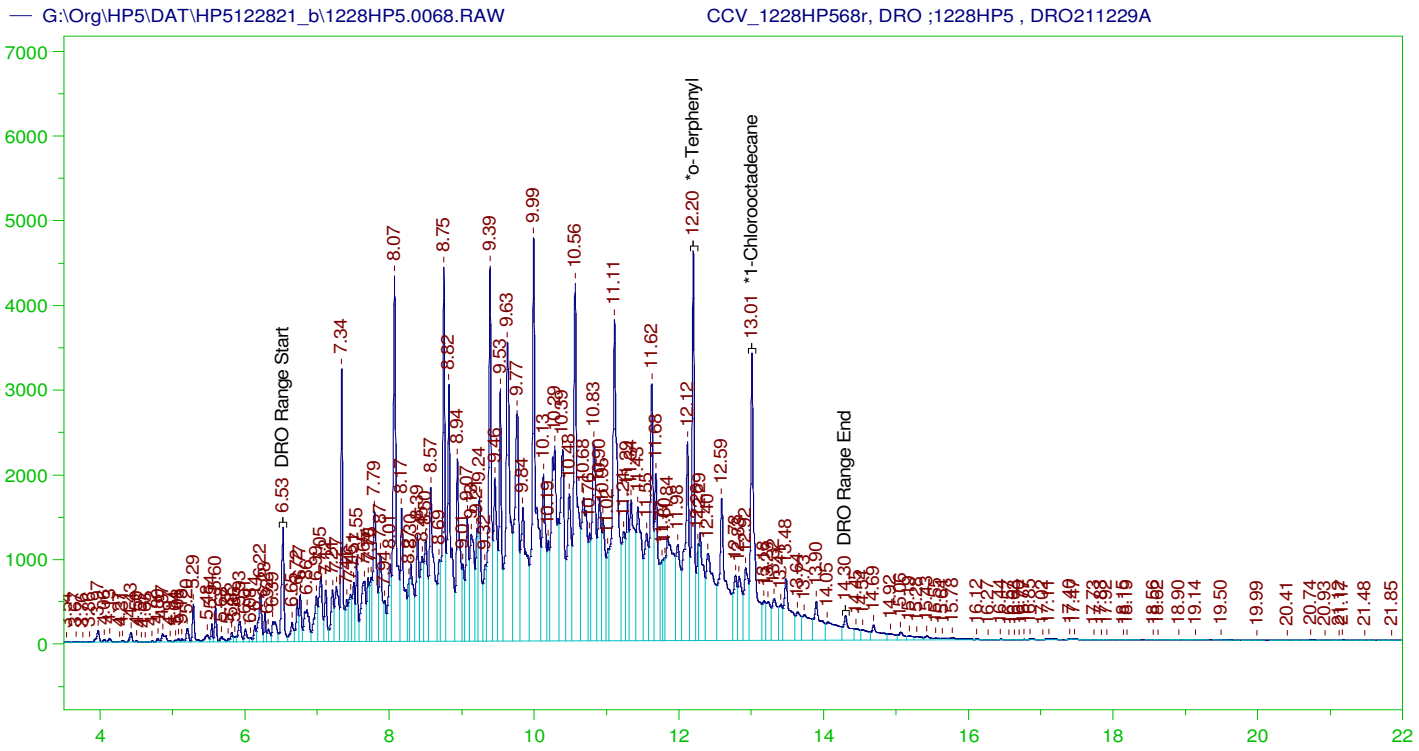
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	204.248	40.85	-

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

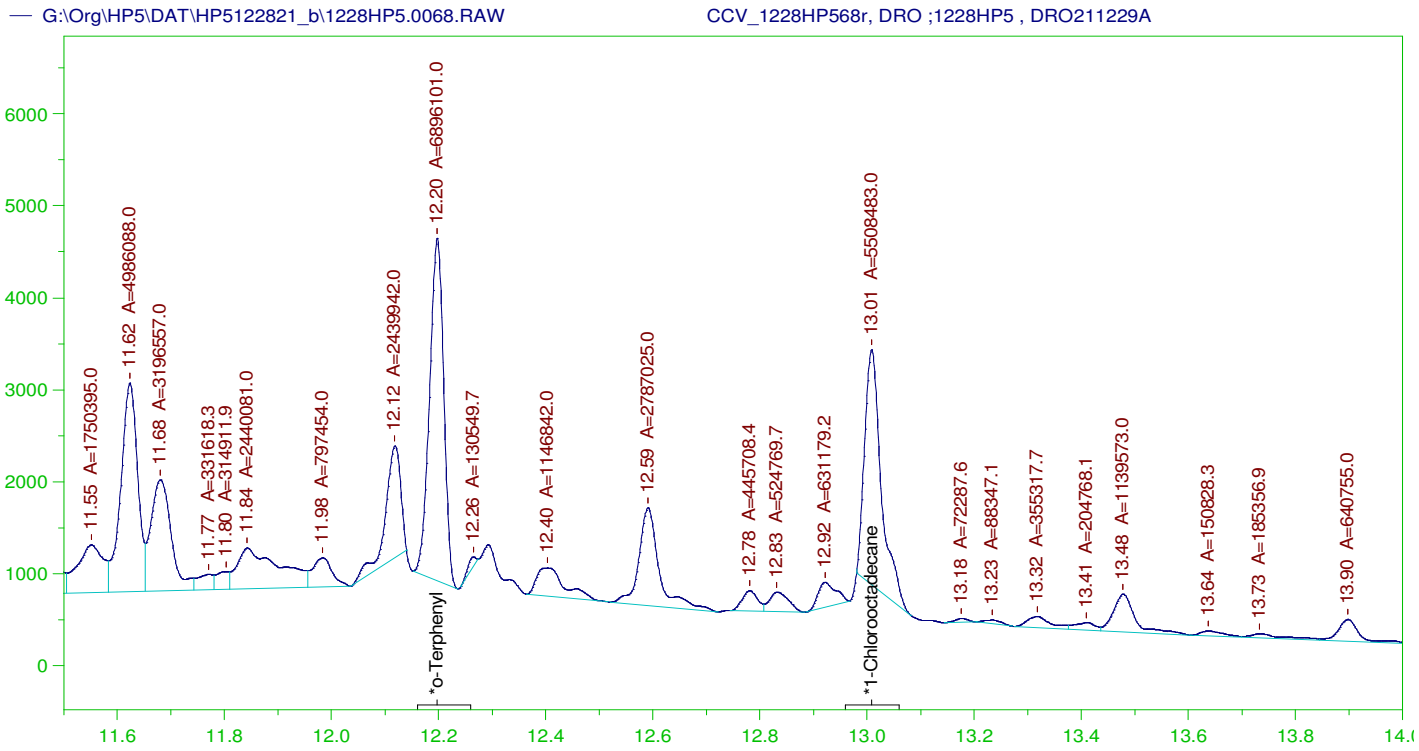
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.197	200.	319.461	159.73	-
*1-Chlorooctadecane	13.009	200.	347.08	173.54	-

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



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

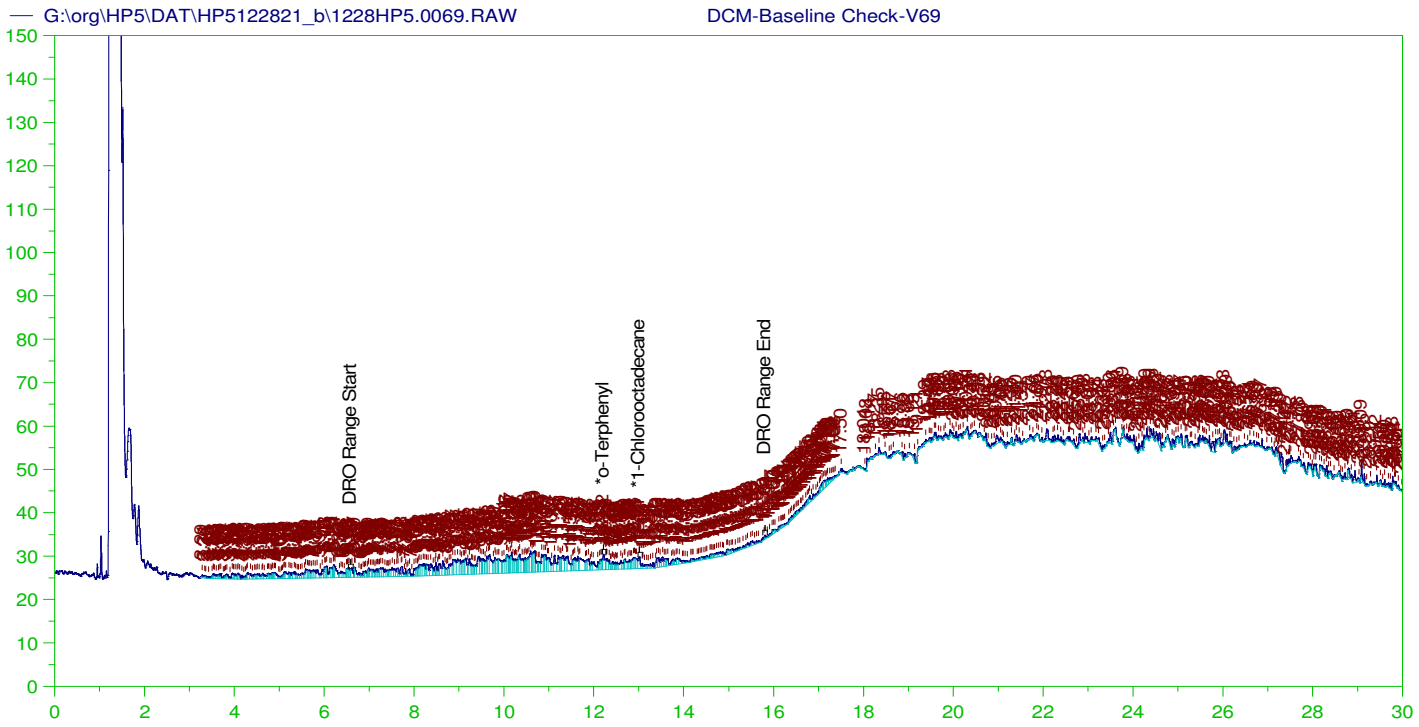
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.197	200.	194.206	97.1	-
*1-Chlorooctadecane	13.009	200.	155.128	77.56	-

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

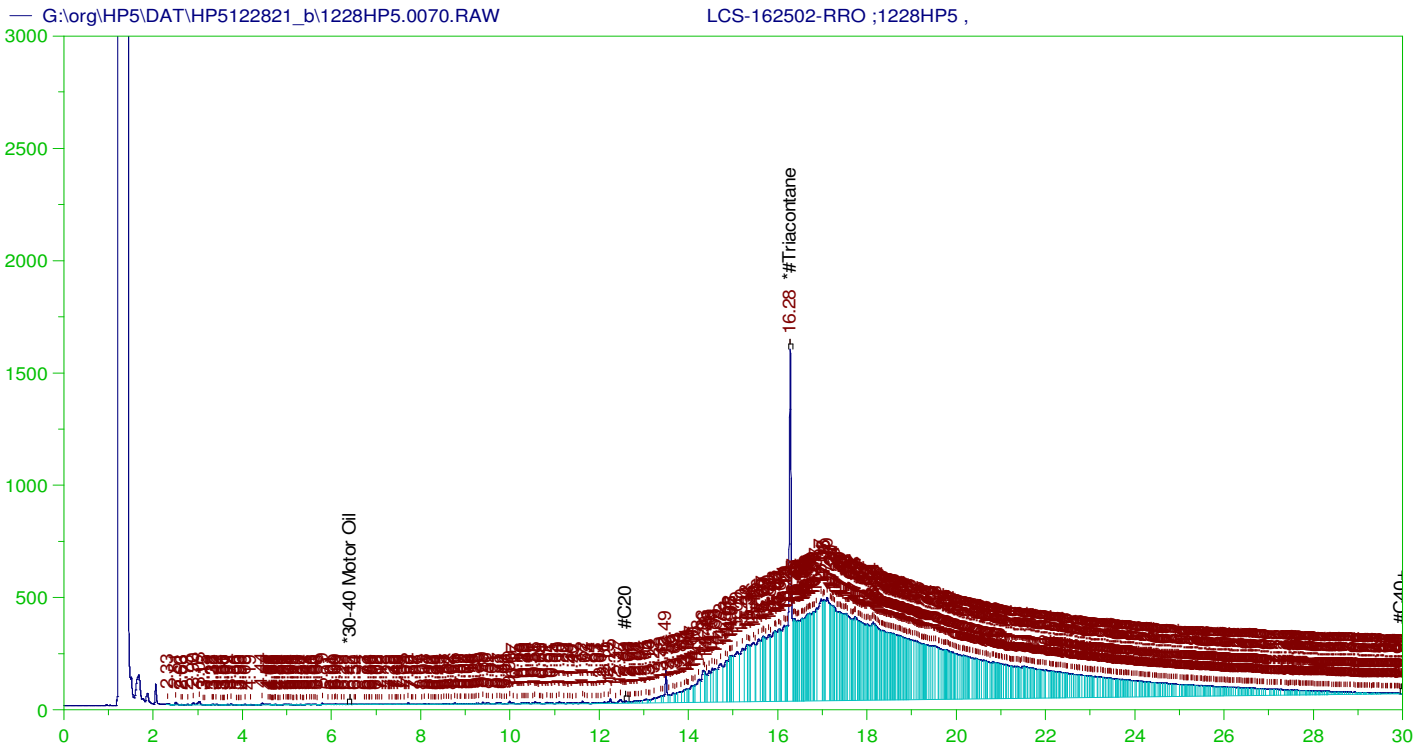


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V69
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0069.RAW
Date & Time Acquired: 12/30/2021 2:12:13 PM
Method File: G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IB.CAL
Sample Weight: 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

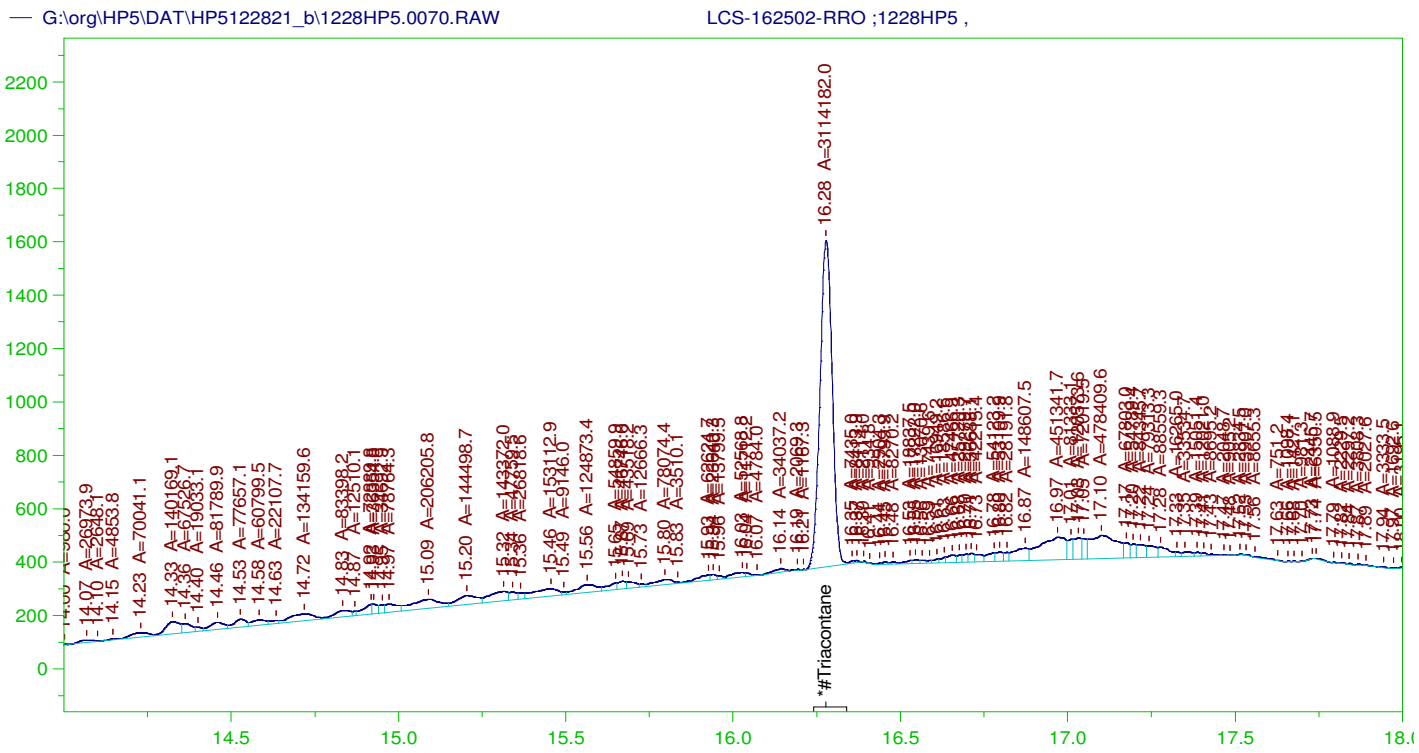
Sample Name: LCS-162502-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0070.RAW
Date & Time Acquired: 12/30/2021 2:55:00 PM
Method File: G:\Org\HP5\Methods\D3_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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

AMN 01/24/2022



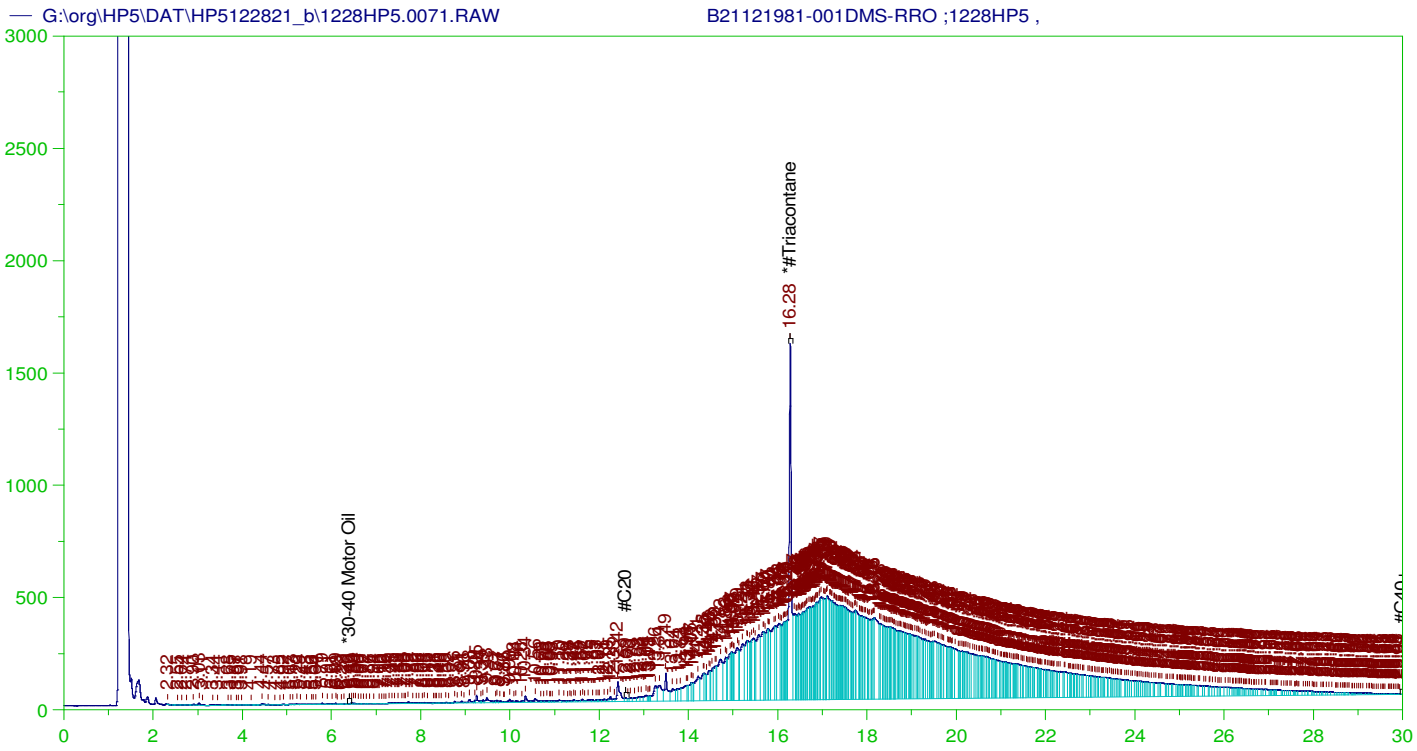
RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

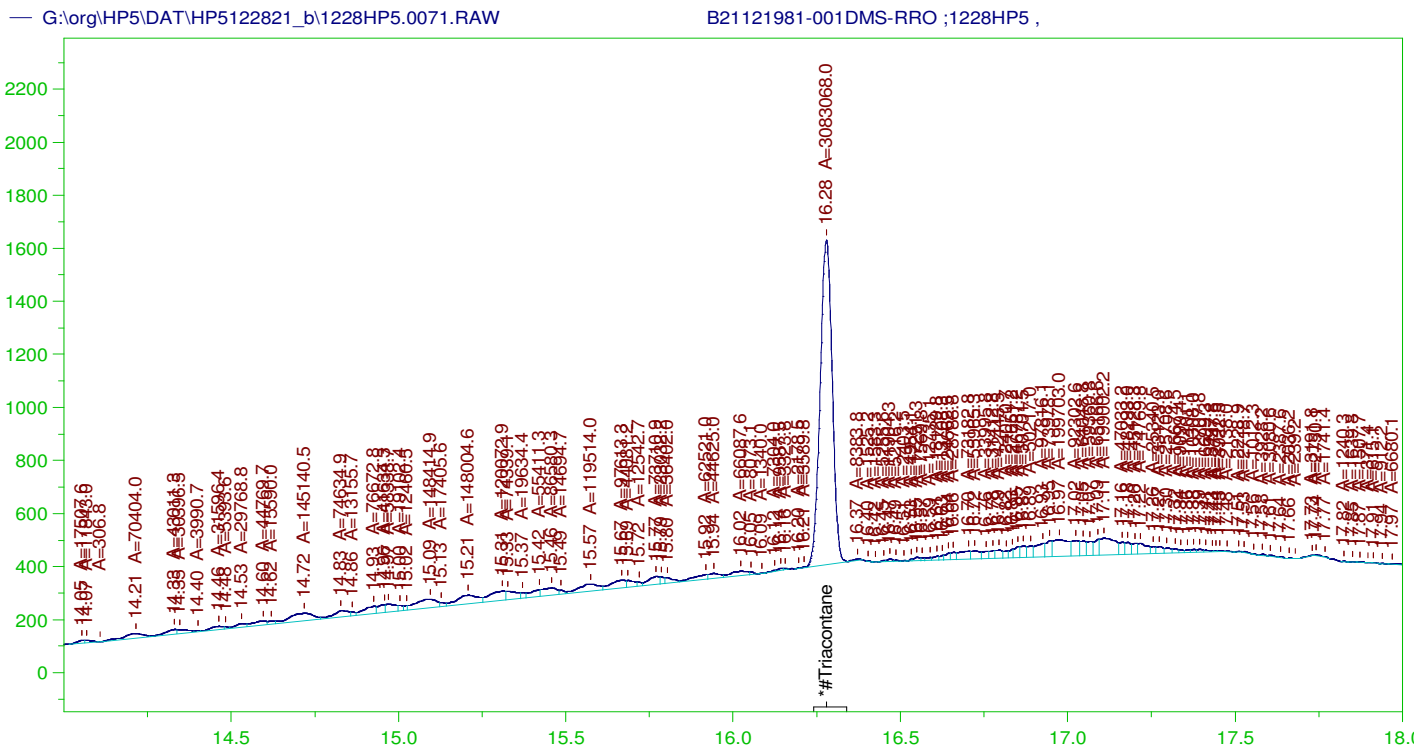
Sample Name: B21121981-001DMS-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0071.RAW
Date & Time Acquired: 12/30/2021 3:37:54 PM
Method File: G:\Org\HP5\Methods\D3_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

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

AMN 01/24/2022



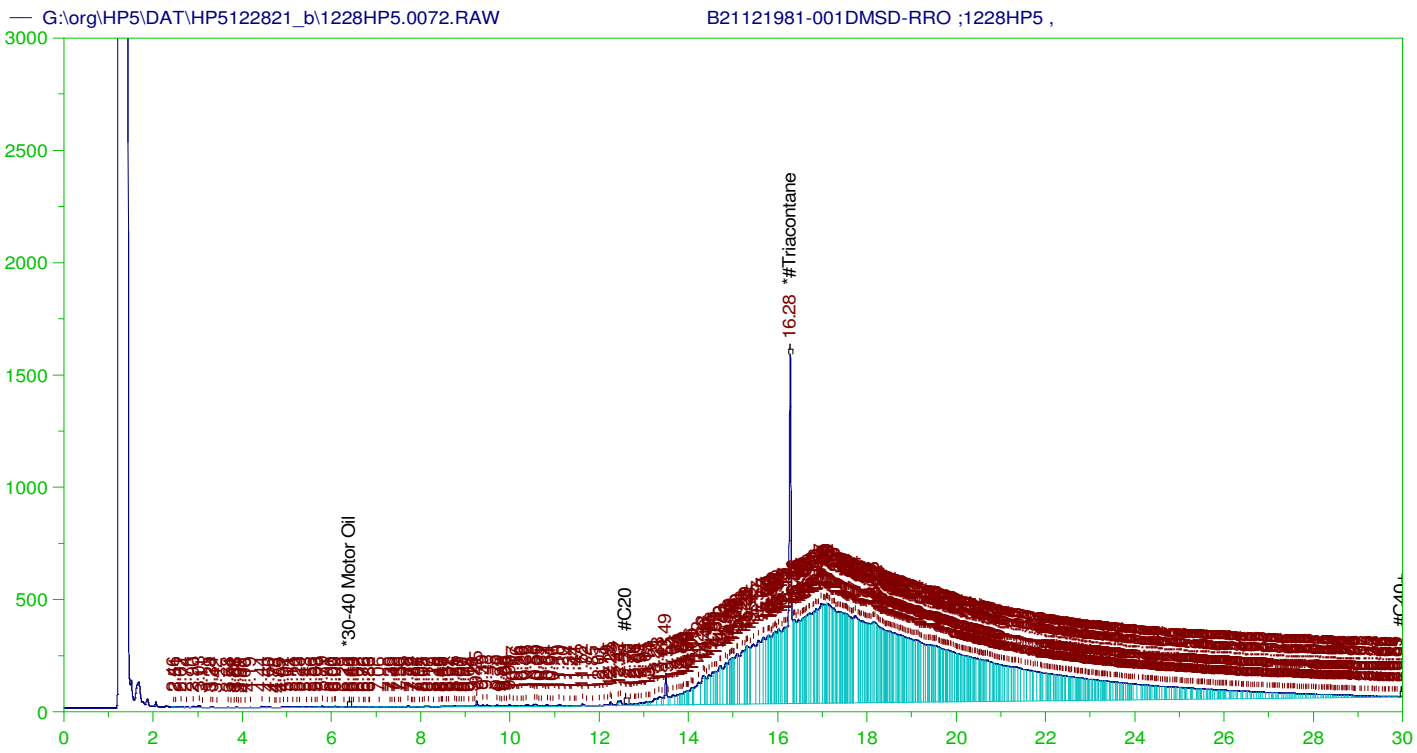
RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

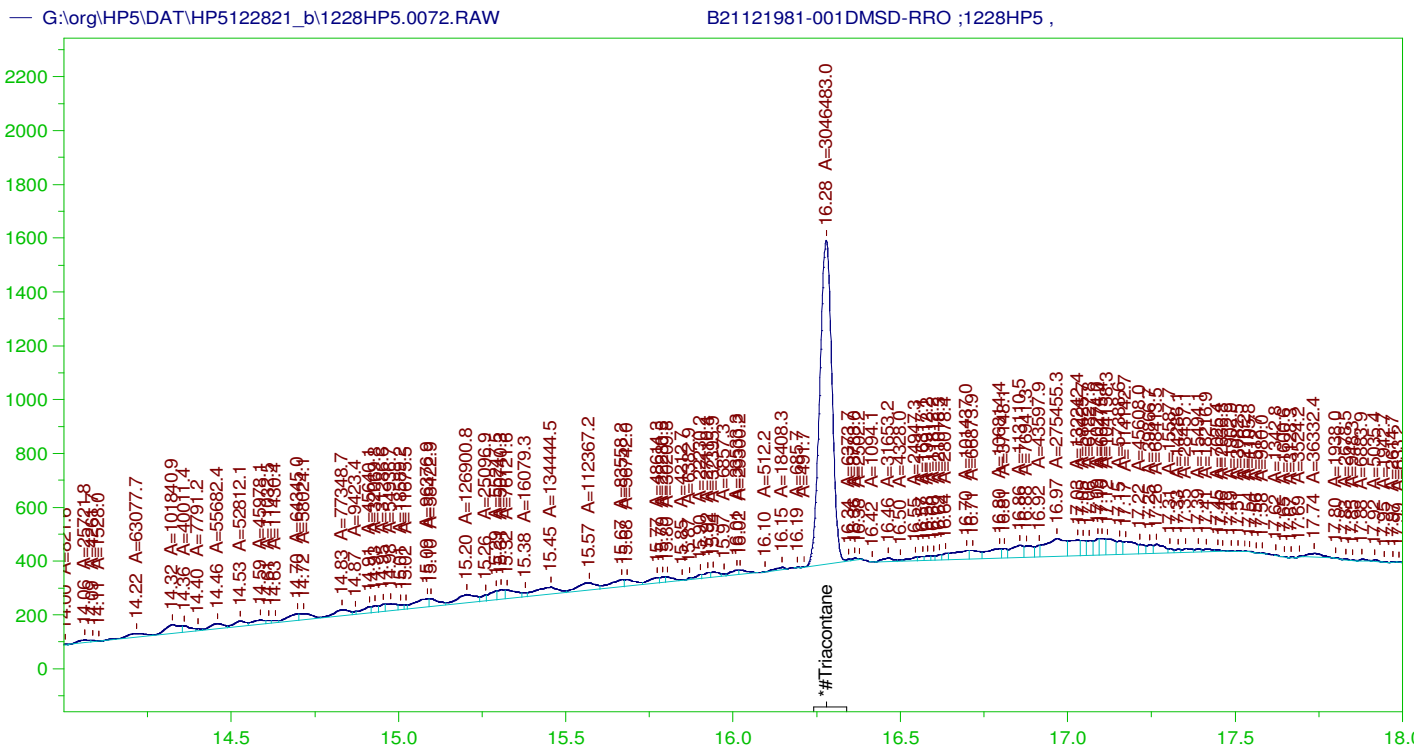
Sample Name: B21121981-001DMSD-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0072.RAW
Date & Time Acquired: 12/30/2021 4:20:50 PM
Method File: G:\Org\HP5\Methods\D3_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

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

AMN 01/24/2022



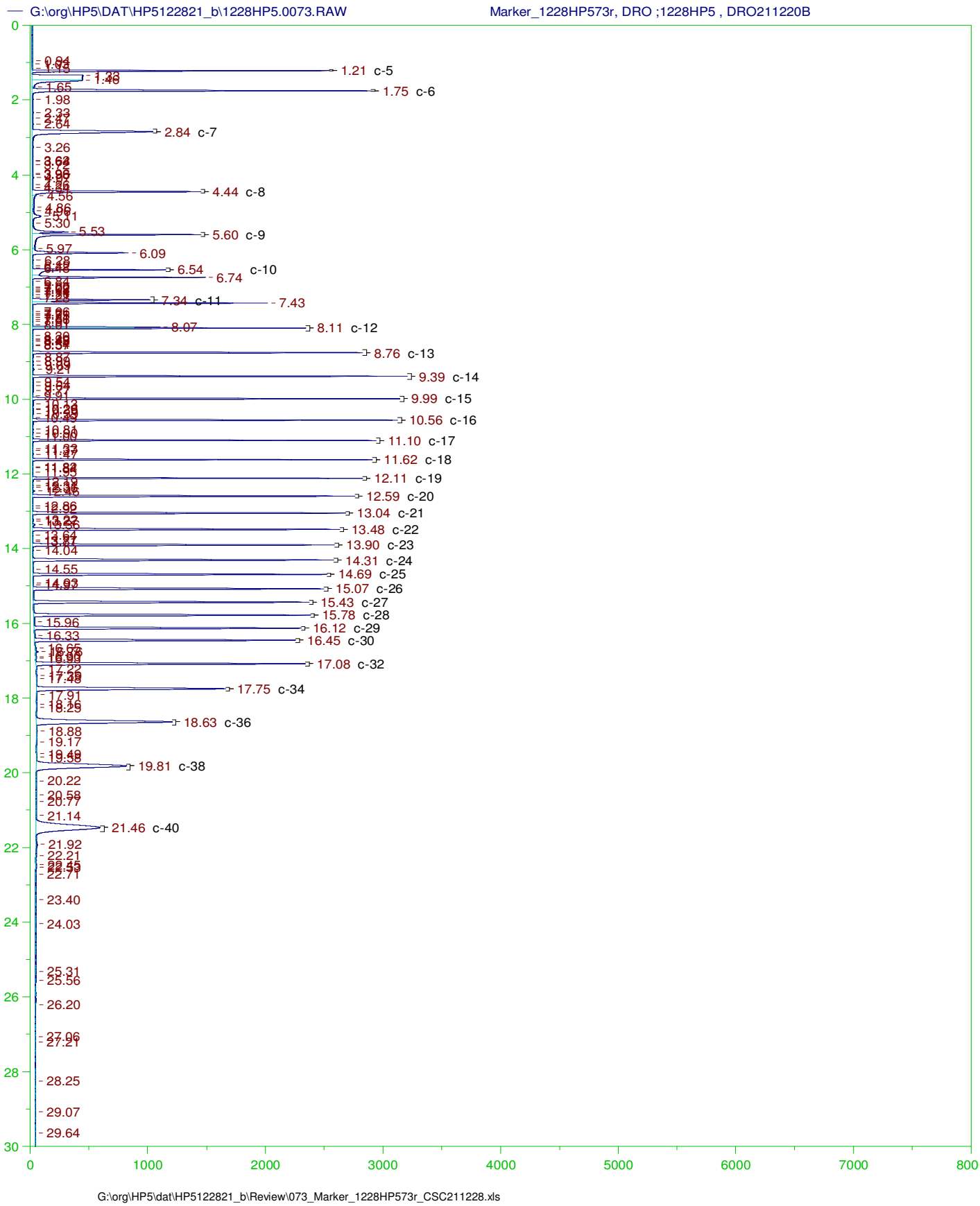
RESIDUAL RANGE ORGANICS CHROMATOGRAM

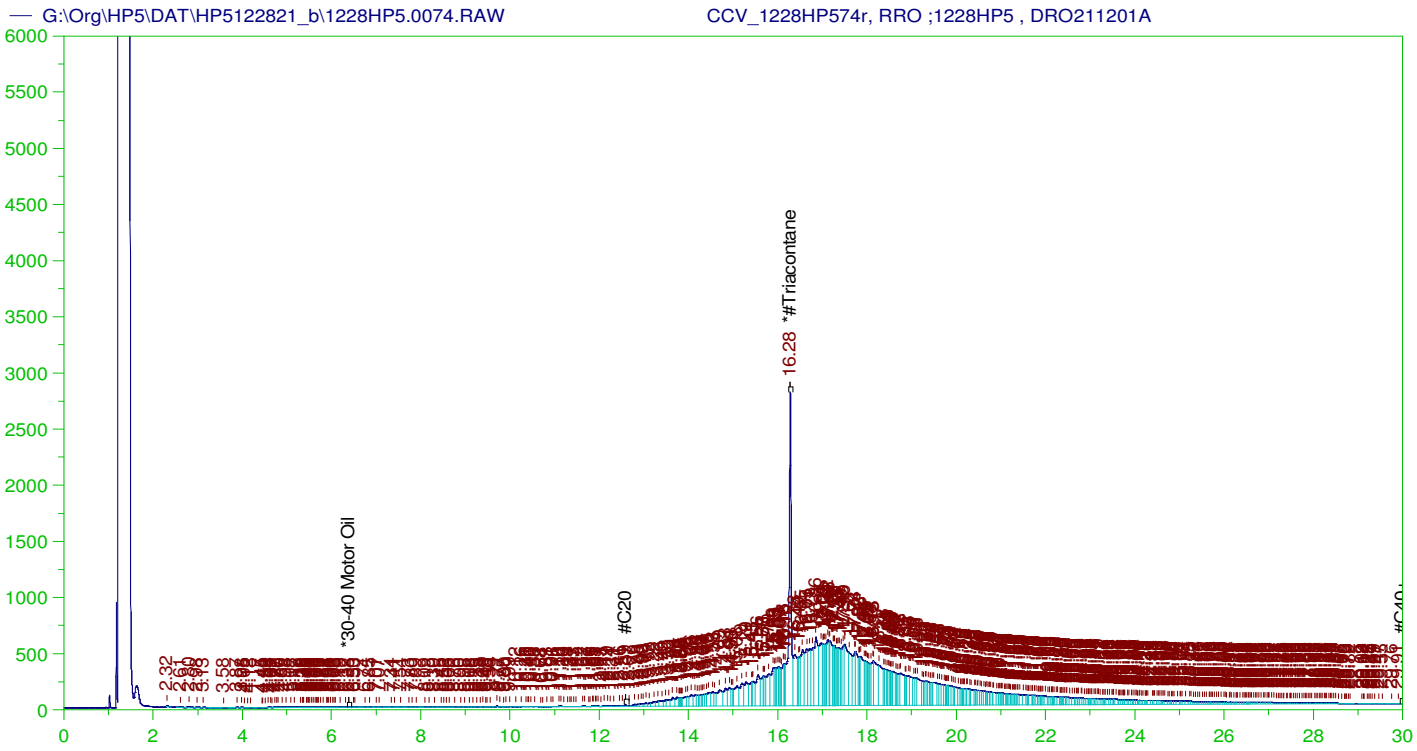
Sample Name: B21121981-001DMSD-RRO ;1228HP5 ,
Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0072.RAW
Date & Time Acquired: 12/30/2021 4:20:50 PM
Method File: G:\Org\HP5\Methods\DS_ORO-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

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


G:\org\HP5\DAT\HP5122821_b\1228HP5.0073.RAW
Marker_1228HP573r, DRO ;1228HP5 , DRO211220B
1.21 c-5
1.48
1.65
1.75 c-6
1.98
2.84 c-7
3.26
4.44 c-8
4.56
5.30
5.53
5.60 c-9
5.97
6.09
6.54
6.74
c-10
7.34 c-11
7.43
8.07
8.11 c-12
8.76 c-13
9.39 c-14
9.99 c-15
10.56 c-16
11.10 c-17
11.62 c-18
12.11 c-19
12.59 c-20
13.04 c-21
13.48 c-22
13.90 c-23
14.31 c-24
14.55
14.69 c-25
15.07 c-26
15.43 c-27
15.78 c-28
15.96
16.12 c-29
16.33
16.45 c-30
17.08 c-32
17.75 c-34
17.91
18.63 c-36
18.88
19.17
19.81 c-38
20.22
20.77
21.14
21.46 c-40
21.92
22.21
22.71
23.40
24.03
25.31
25.56
26.20
27.21
28.25
29.07
29.64
0
1000
2000
3000
4000
5000
6000
7000
800
G:\org\HP5\dat\HP5122821_b\Review\073_Marker_1228HP573r_CSC211228.xls



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	-

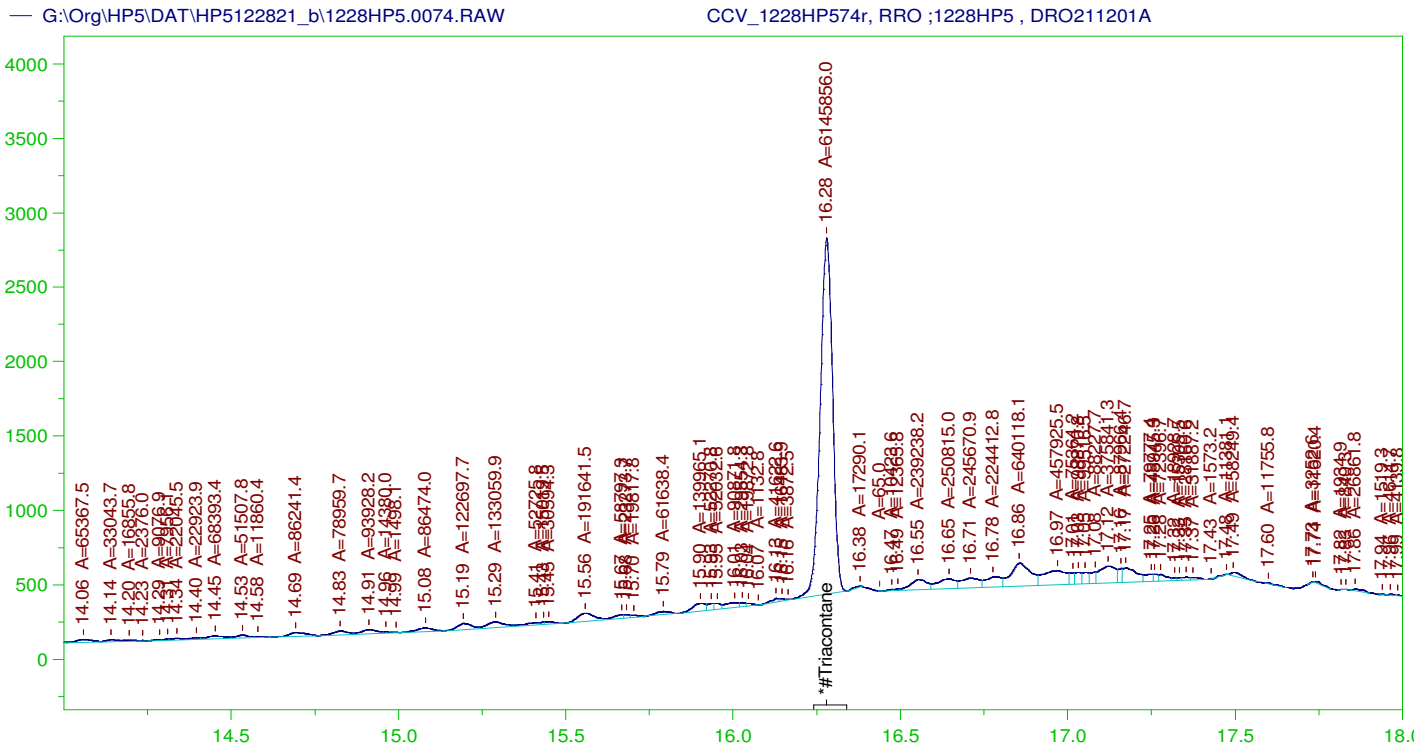
~~RRO~~ TEH (Oil Range) Area:1.33741E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4685.692

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



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

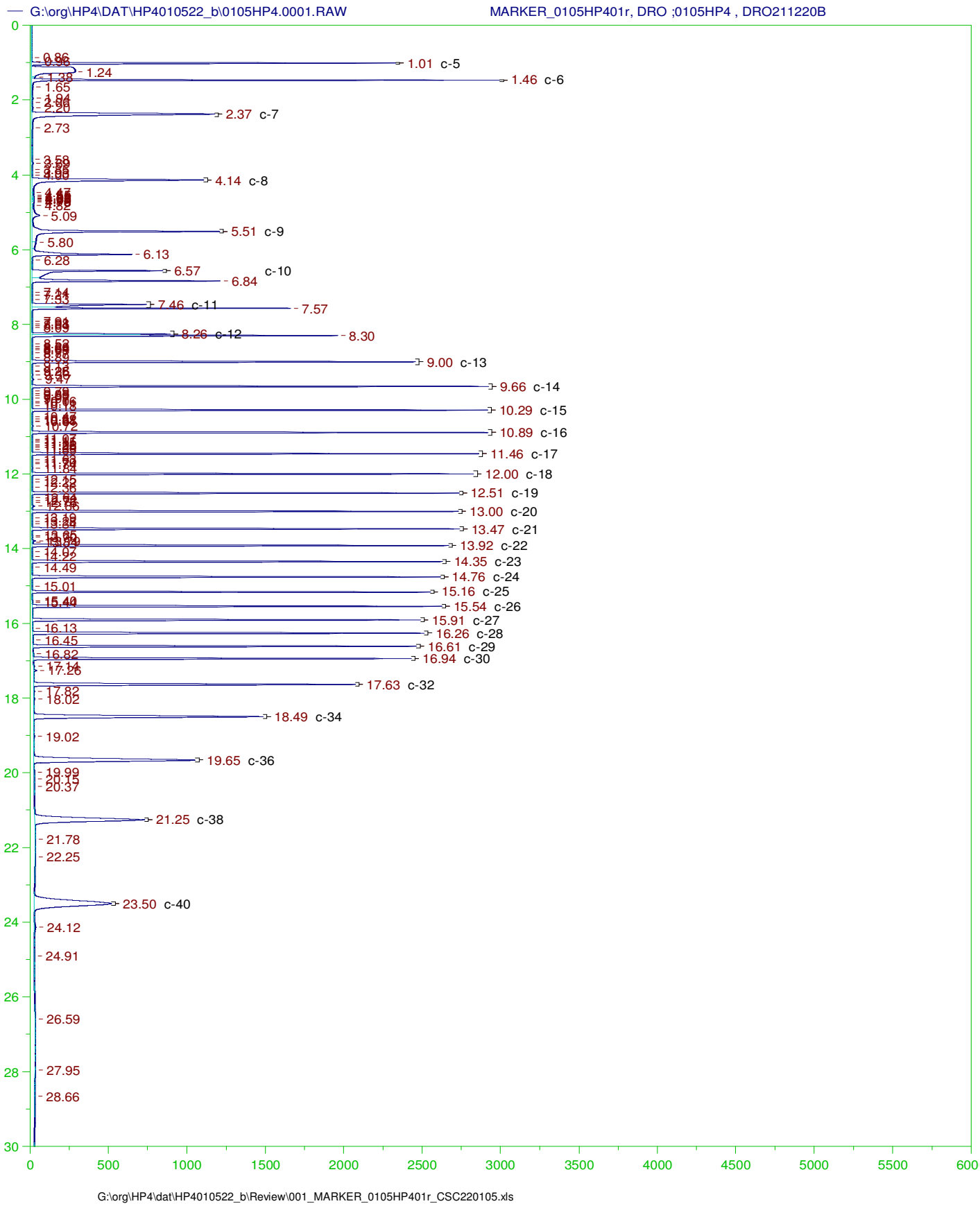
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.279	500.	212.438	42.49	-

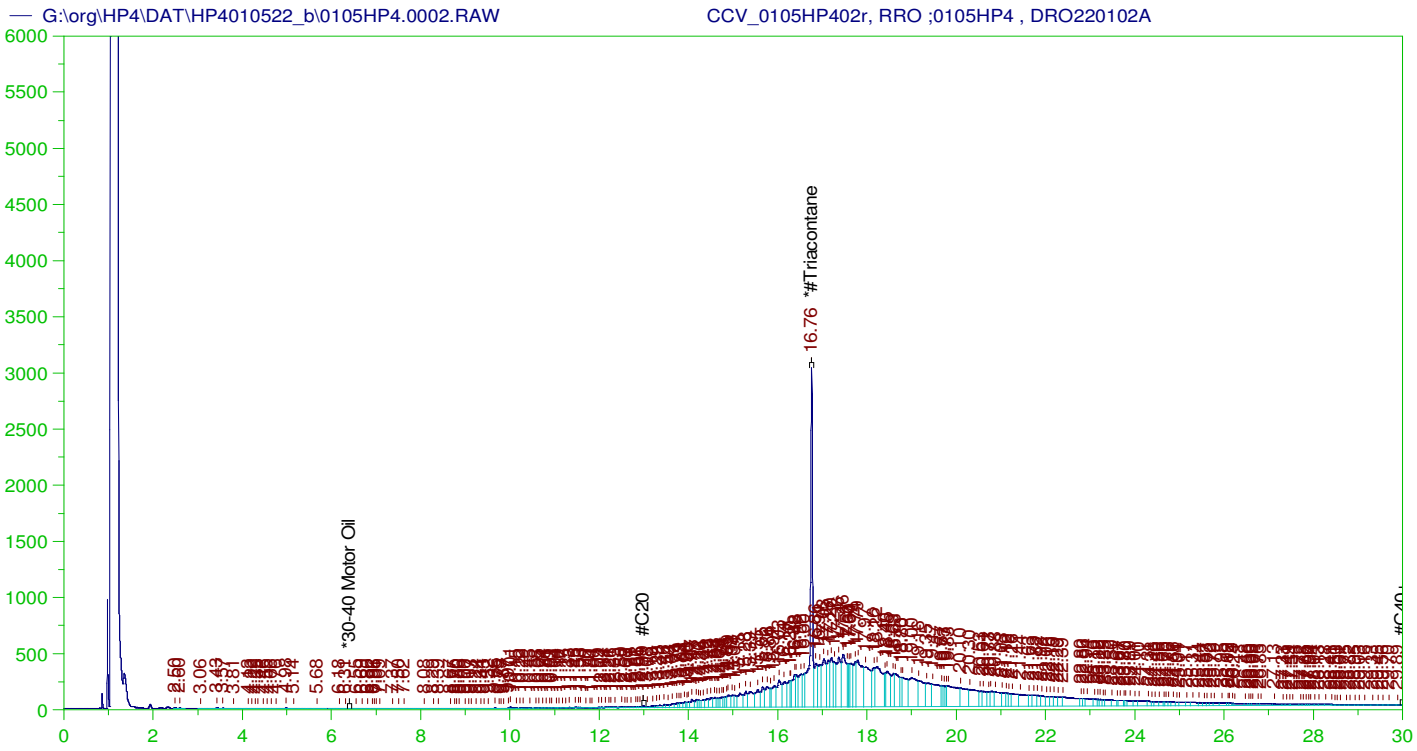
RRO Area:6226063 RRO AMOUNT: 218.1338

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


G:\org\HP4\DAT\HP4010522_b\0105HP4.0001.RAW
MARKER_0105HP401r, DRO ;0105HP4 , DRO211220B
1.01 c-5
1.24
1.46 c-6
2.37 c-7
4.14 c-8
5.09
5.51 c-9
5.80
6.13
6.28
6.57 c-10
6.84
7.46 c-11
7.57
8.26 c-12
8.30
9.00 c-13
9.66 c-14
10.29 c-15
10.89 c-16
11.46 c-17
12.00 c-18
12.51 c-19
13.00 c-20
13.47 c-21
13.92 c-22
14.35 c-23
14.76 c-24
15.16 c-25
15.54 c-26
15.91 c-27
16.26 c-28
16.61 c-29
16.94 c-30
17.63 c-32
18.49 c-34
19.65 c-36
21.25 c-38
23.50 c-40
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
600
G:\org\HP4\dat\HP4010522_b\Review\001_MARKER_0105HP401r_CSC220105.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP402r, RRO ;0105HP4 , DRO220102A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0002.RAW
Date & Time Acquired: 1/5/2022 7:47:16 AM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	500.	395.027	79.01	-

~~RRO~~ TEH (Oil Range) Area:1.109155E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4521.706

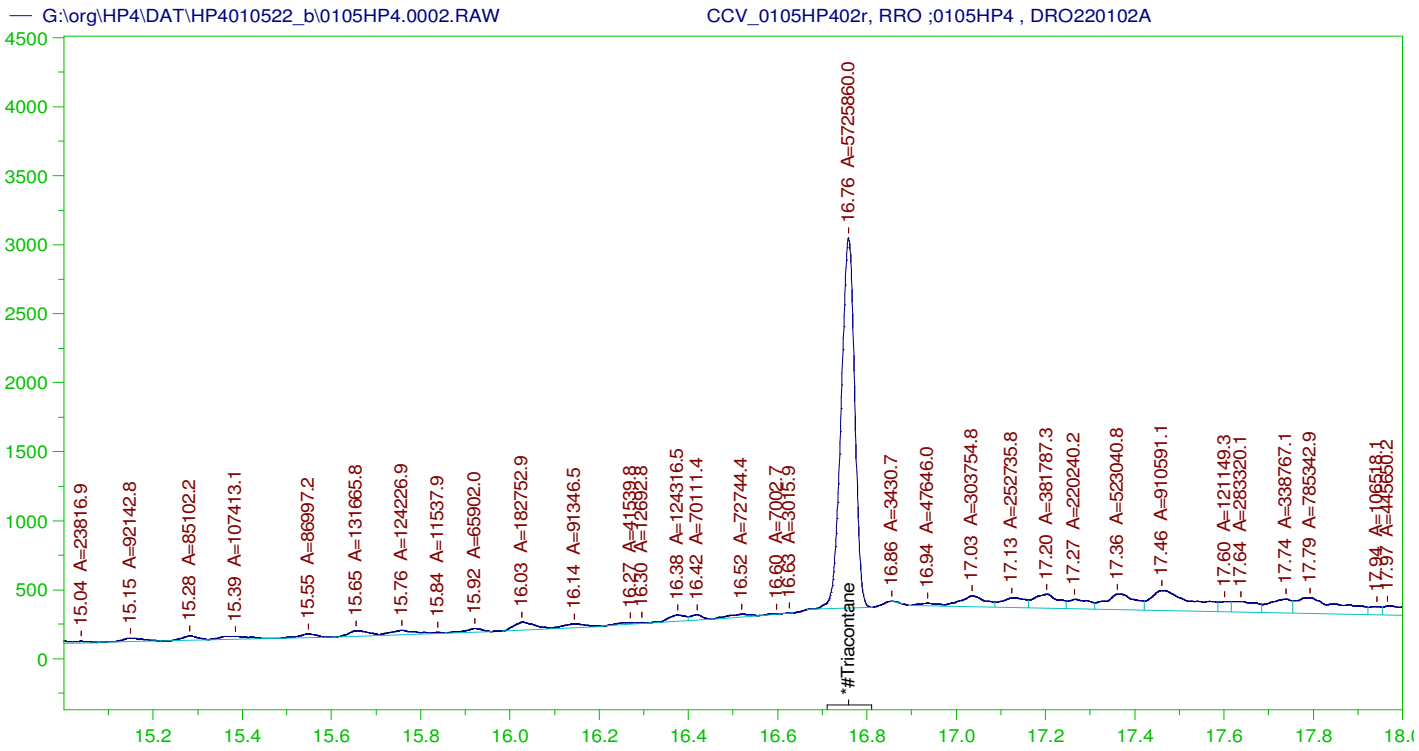
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0002.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.758	200.	395.027	197.51	75-125

AMN 01/25/2022

G:\org\HP4\dat\HP4010522_b\Review\002_CCV_0105HP402r_DC_ORO-T-AC-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP402r, RRO ;0105HP4 , DRO220102A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0002.RAW
Date & Time Acquired: 1/5/2022 7:47:16 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

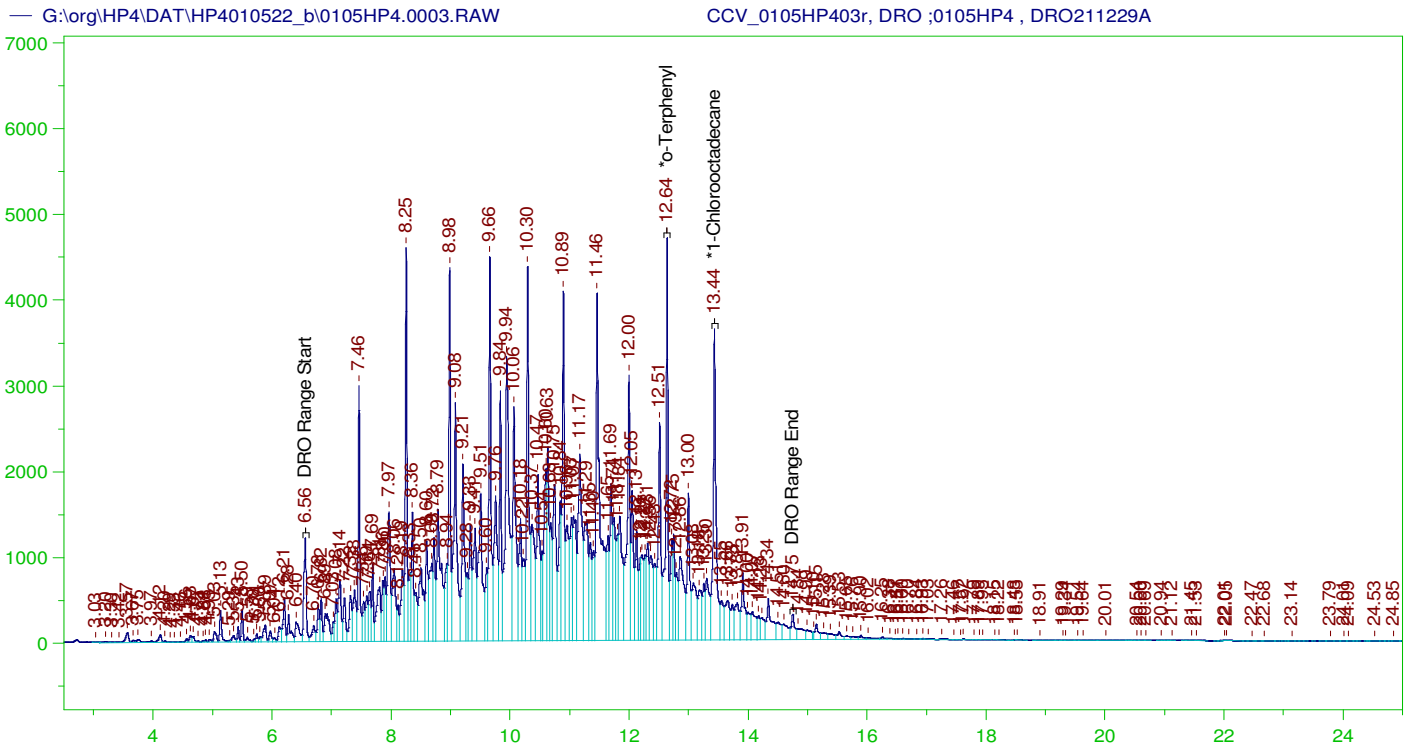
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	500.	229.275	45.85	-

RRO Area:1.055735E+07 RRO AMOUNT: 430.3931

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0002.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.758	200.	229.275	114.64	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0105HP403r, DRO ;0105HP4 , DRO211229A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0003.RAW
Date & Time Acquired: 1/5/2022 8:32:25 AM
Method File: G:\Org\HP4\methods\DC_8015-C24-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.639	200.	368.416	184.21	-
*1-Chlorooctadecane	13.435	200.	366.998	183.5	-

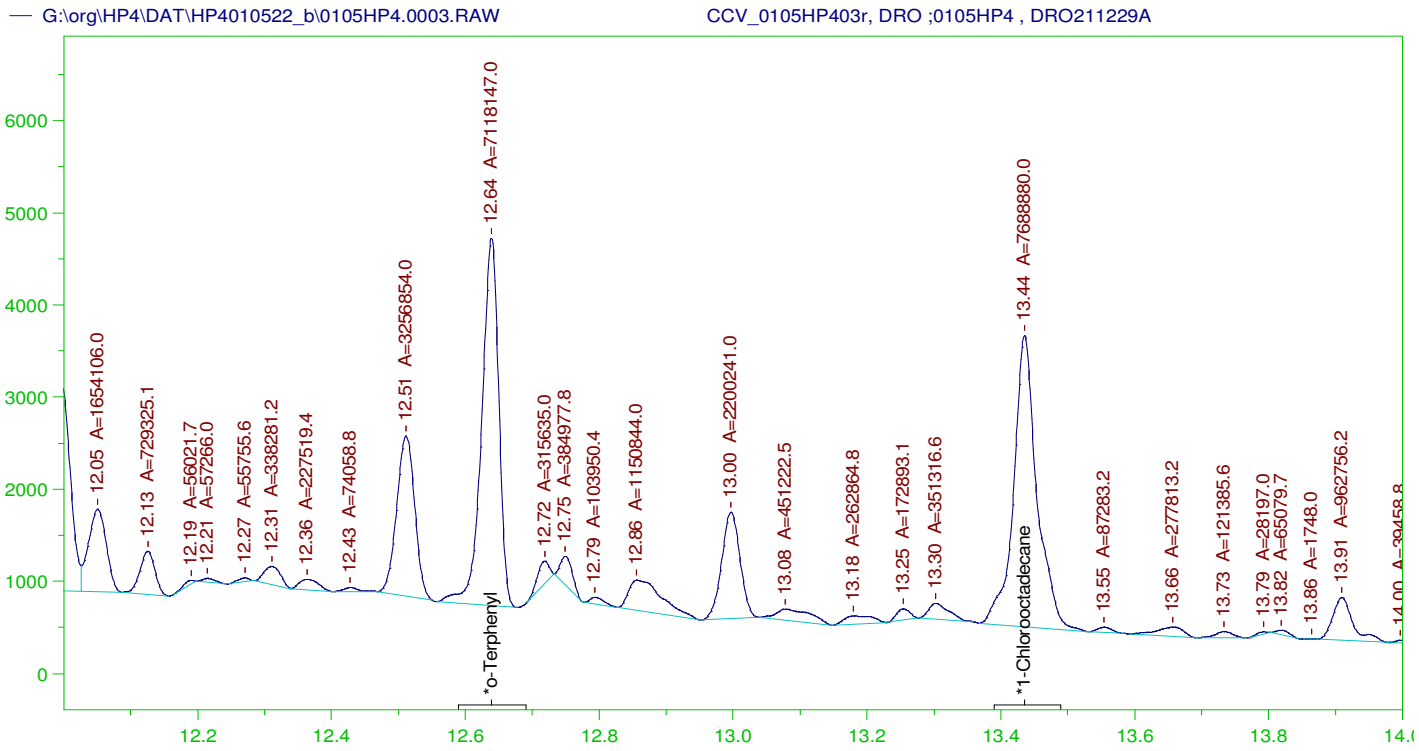
DRO Area:4.373718E+08 DRO Amount: 14890.13
TEH Area:4.53699E+08 TEH Amount: 15445.98

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0003.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15445.98	102.97	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.639	200.	368.416	184.21	85-115
*1-Chlorooctadecane	13.435	200.	366.998	183.5	85-115

G:\org\HP4\dat\HP4010522_b\Review\003_CCV_0105HP403r_DC_8015-C24-OI-L%.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0105HP403r, DRO ;0105HP4 , DRO211229A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0003.RAW
Date & Time Acquired: 1/5/2022 8:32:25 AM
Method File: G:\Org\HP4\methods\DS_8015-C24-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

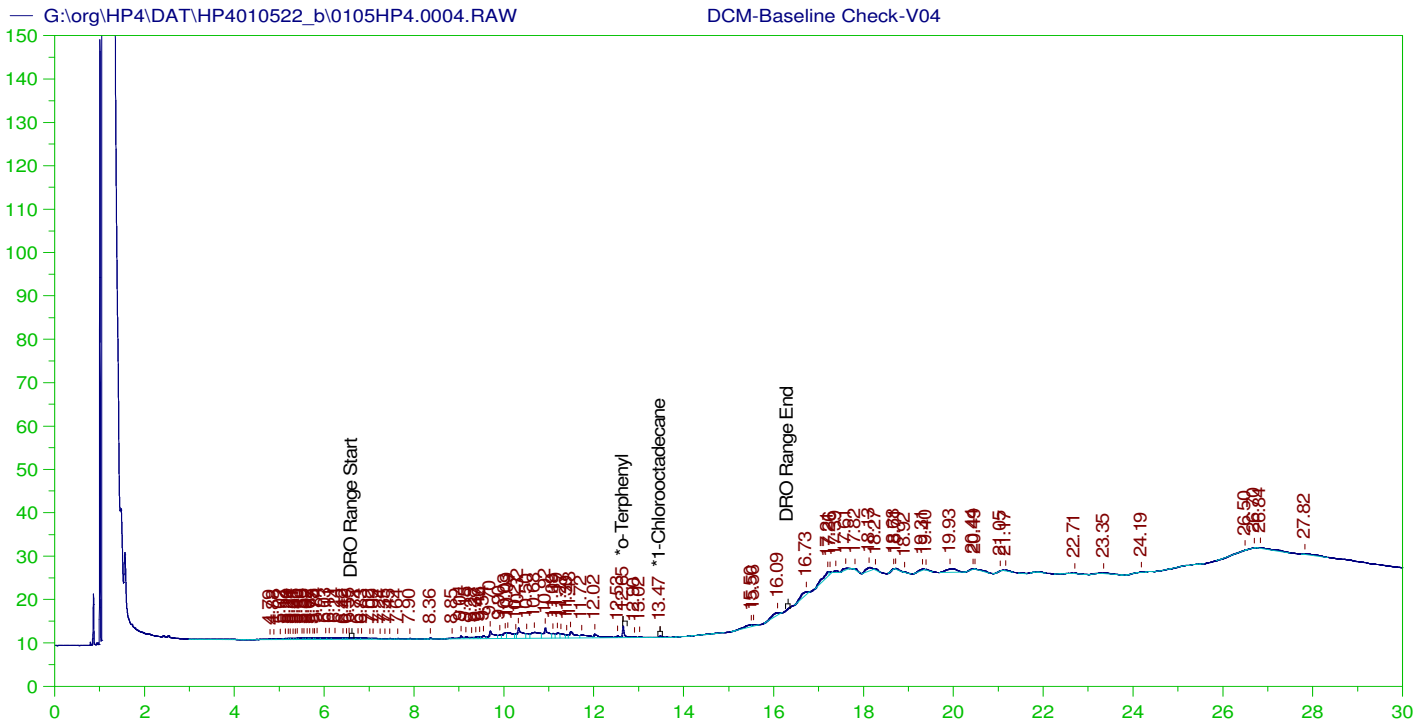
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.639	200.	213.632	106.82	-
*1-Chlorooctadecane	13.435	200.	230.761	115.38	-

DRO Area:1.933121E+08 DRO Amount: 6581.225
TEH Area:2.03597E+08 TEH Amount: 6931.368

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0003.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6931.37	46.21	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.639	200.	213.632	106.82	85-115
*1-Chlorooctadecane	13.435	200.	230.761	115.38	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

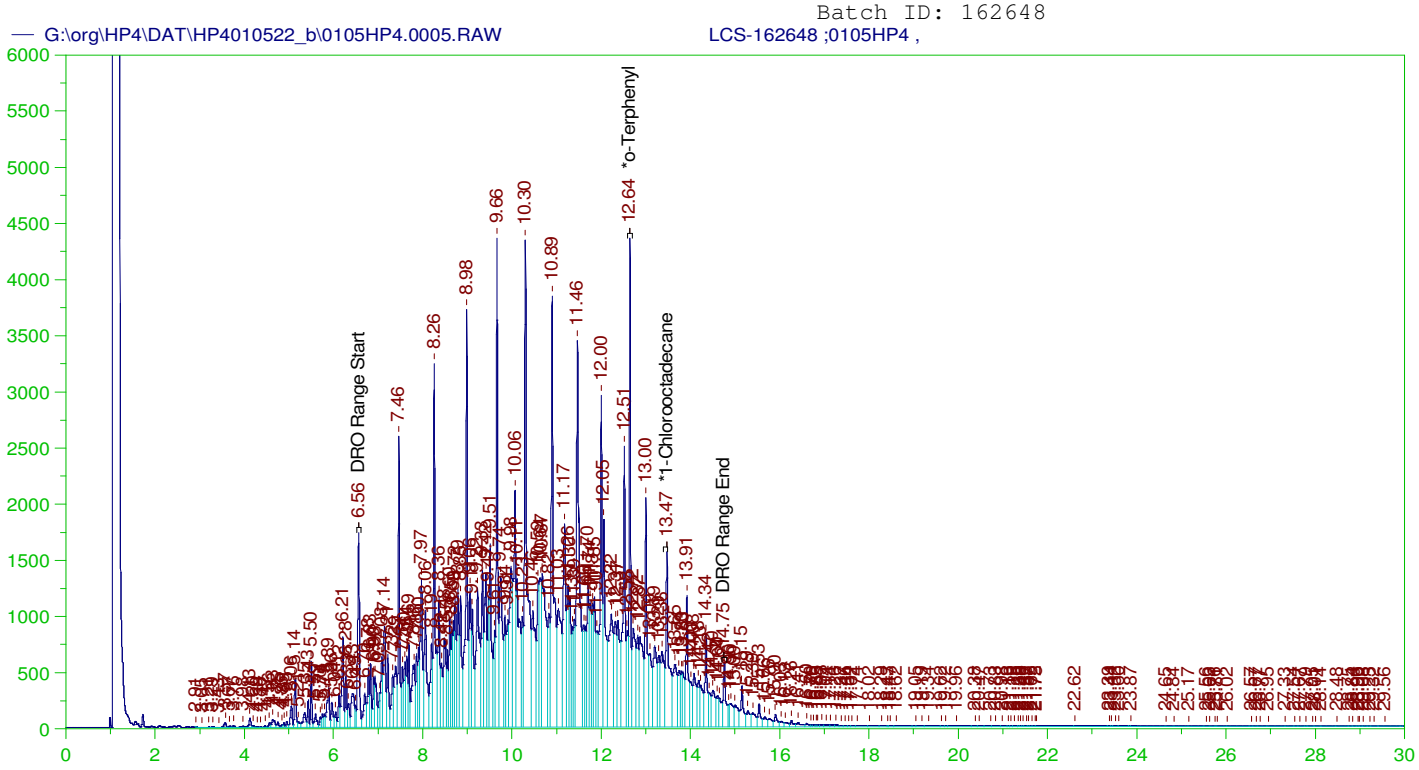
Sample Name: DCM-Baseline Check-V04
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0004.RAW
Date & Time Acquired: 1/5/2022 9:17:32 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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	12.65	200.	.272	.14	-
*1-Chlorooctadecane	13.473	200.	.042	.02	-

DRO Area:208650 DRO Amount: 7.103395
TEH Area:329387.8 TEH Amount: 11.21386

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

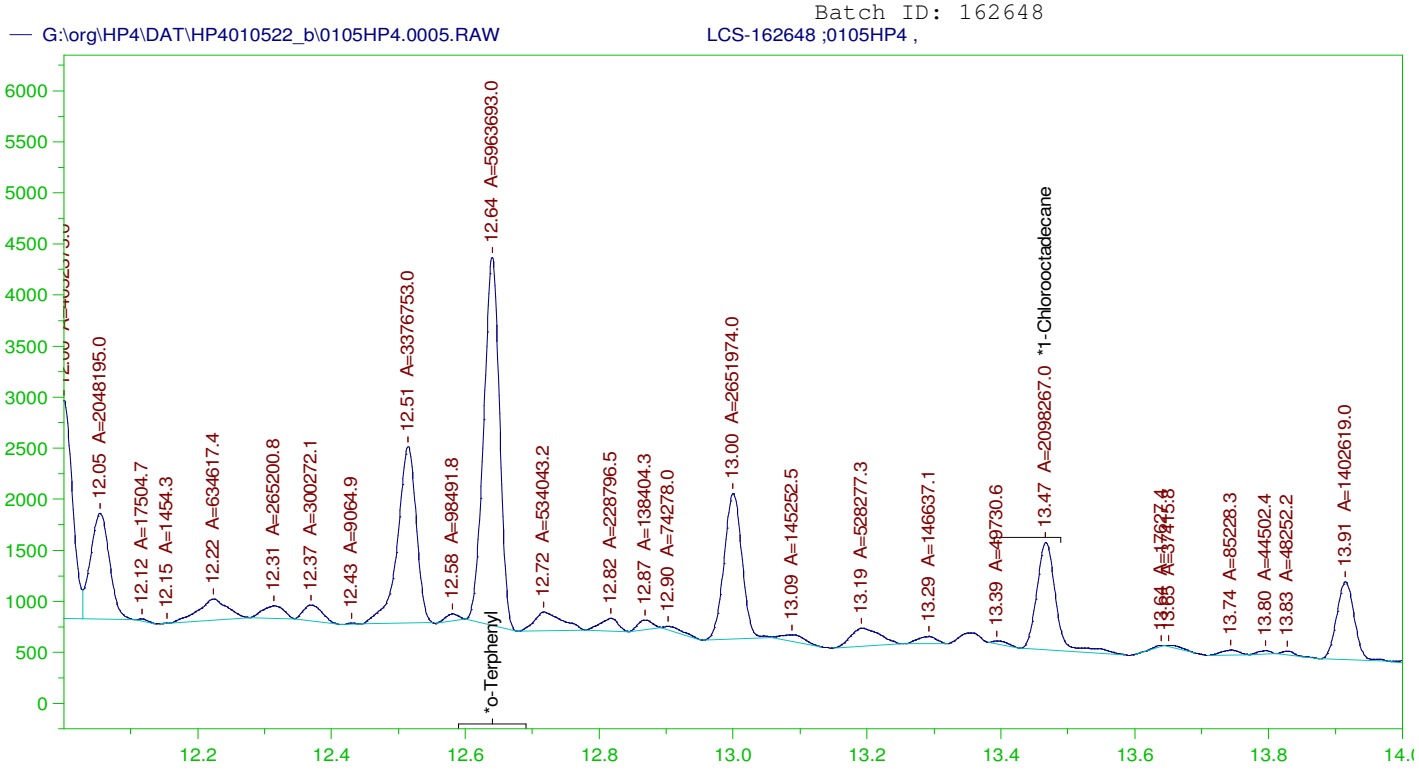
Sample Name: LCS-162648 ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0005.RAW
Date & Time Acquired: 1/5/2022 10:02:45 AM
Method File: G:\Org\HP4\methods\D3_8015-C24-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.64	.2	.285	142.25	-
*1-Chlorooctadecane	13.467	.2	.206	103.	-

DRO Area:4.037941E+08 DRO Amount: 13.74699
TEH Area:4.341812E+08 TEH Amount: 14.7815

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

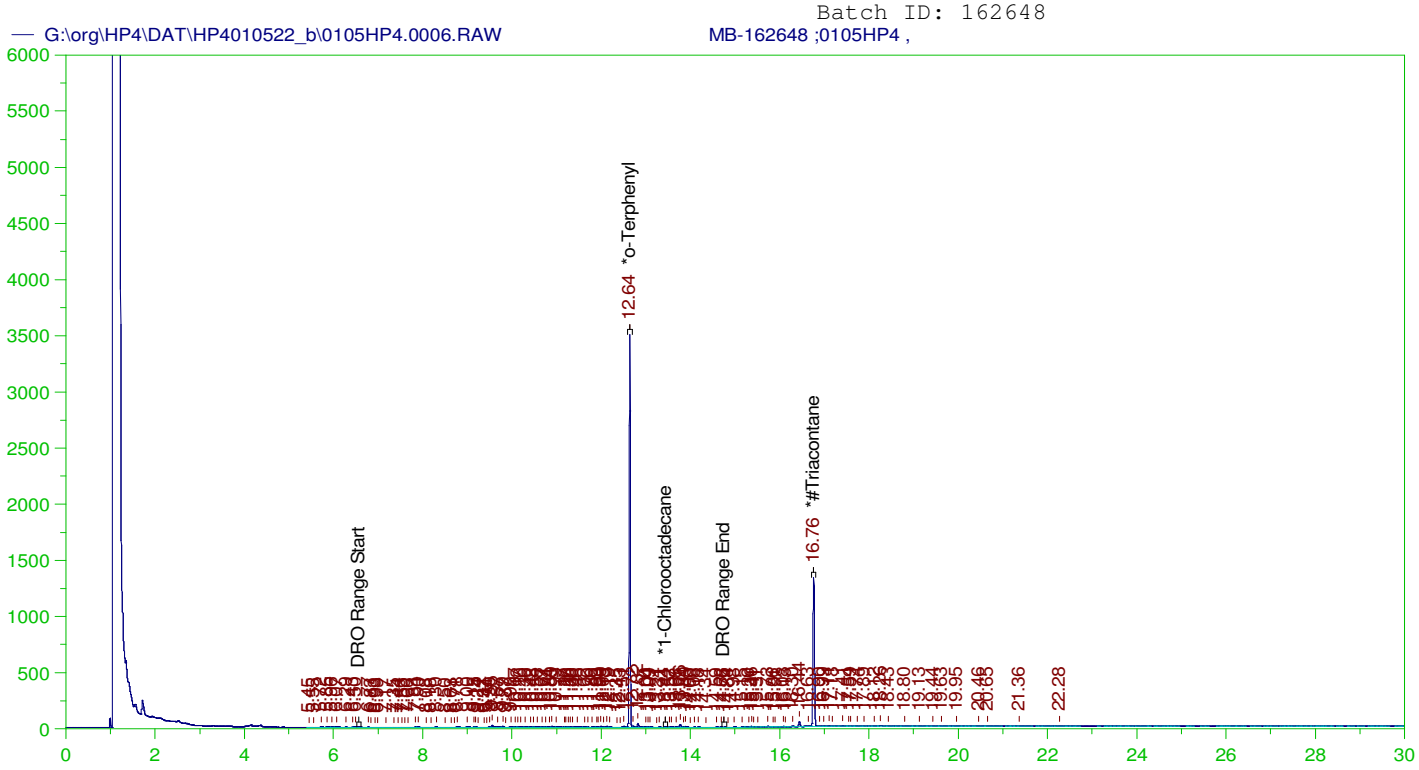
Sample Name: LCS-162648 ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0005.RAW
Date & Time Acquired: 1/5/2022 10:02:45 AM
Method File: G:\Org\HP4\methods\DS_8015-C24-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.64	.2	.179	89.49	-
*1-Chlorooctadecane	13.467	.2	.063	31.49	-

DRO Area:1.691462E+08 DRO Amount: 5.758508
TEH Area:1.841146E+08 TEH Amount: 6.268099

Batch ID: 162648

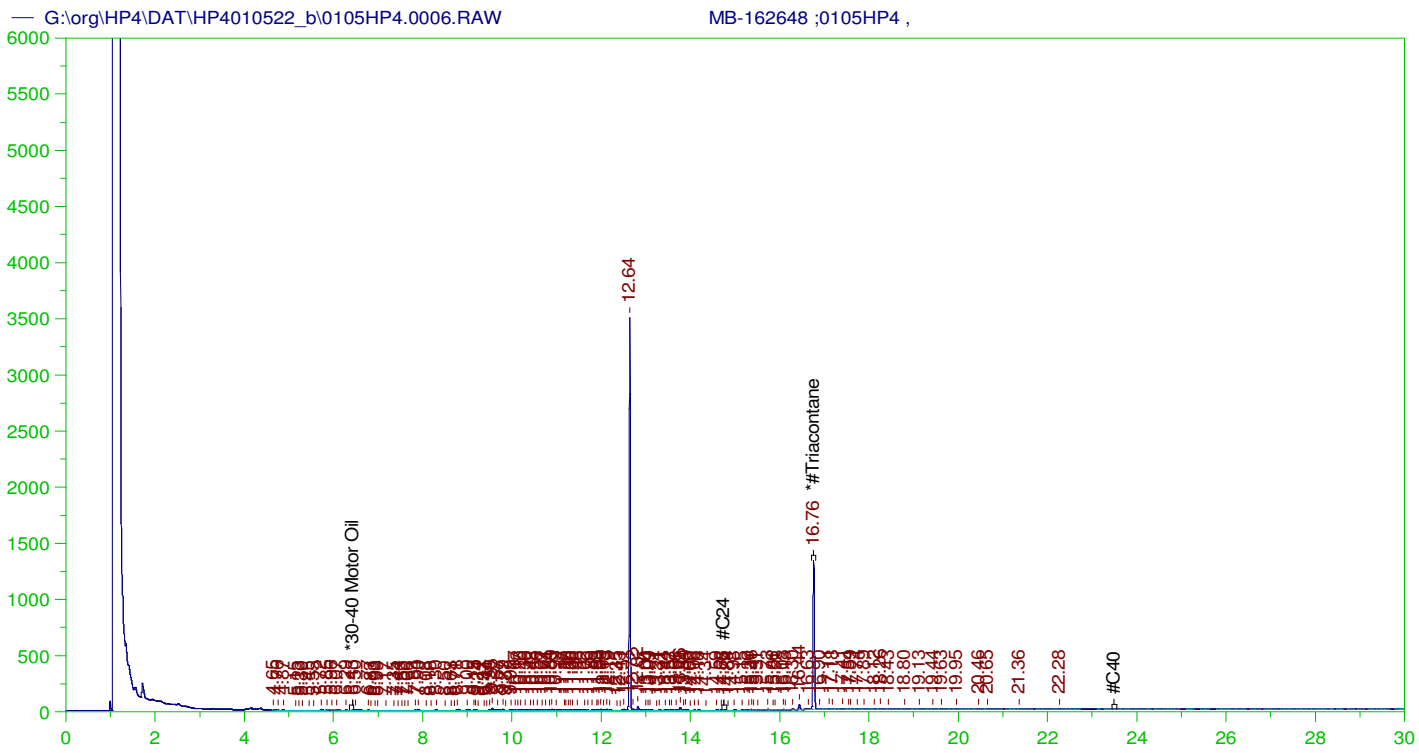


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: MB-162648 ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0006.RAW
Date & Time Acquired: 1/5/2022 10:47:39 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.2	.182	90.87	-
*1-Chlorooctadecane	13.436	.2	.14		-
*#Triacontane	16.759	.2	.115	57.27	-

DRO Area:879777.2 DRO Amount: 2.995162E-02
TEH Area:1269808 TEH Amount: 4.323005E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

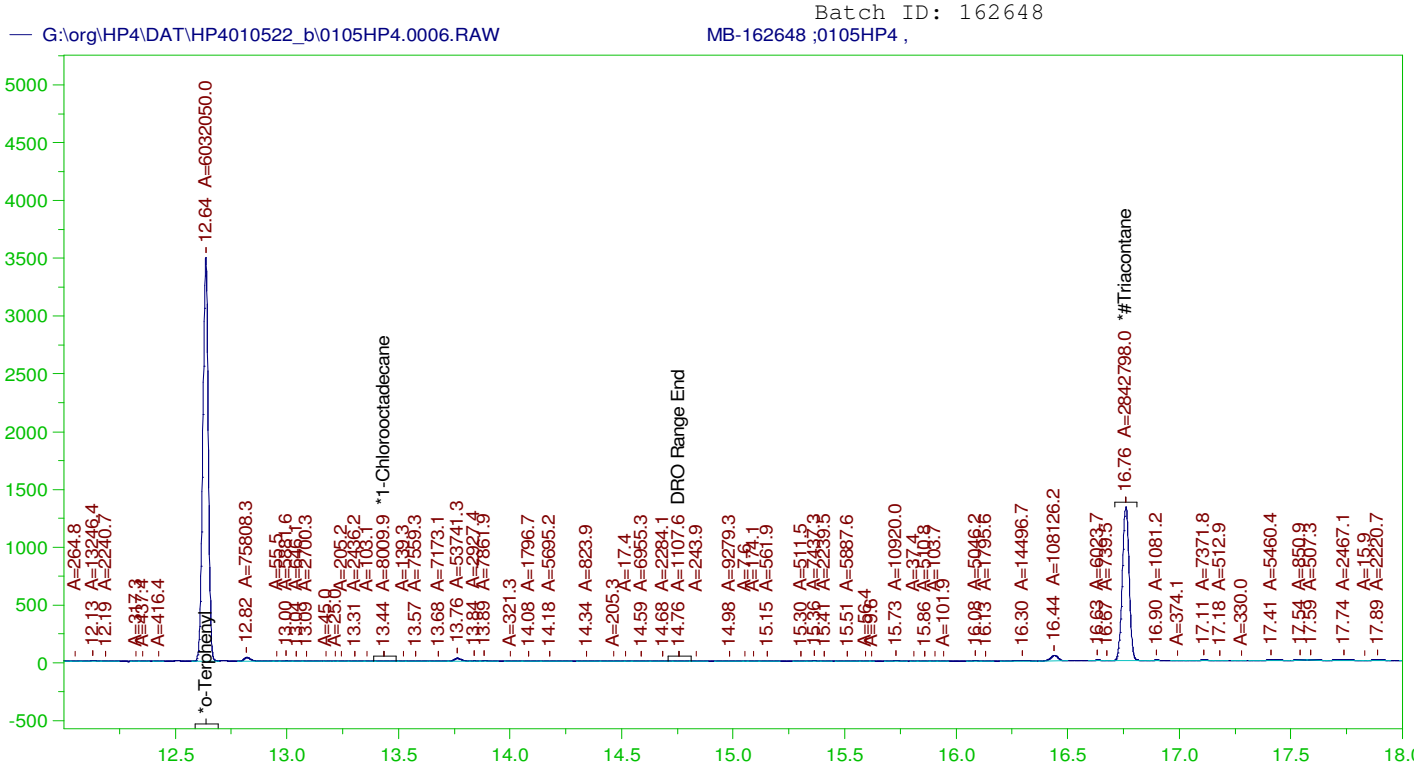
Sample Name: MB-162648 ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0006.RAW
Date & Time Acquired: 1/5/2022 10:47:39 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.759	.5	.114	22.8	-

RRO Area:257586.4 RRO AMOUNT: 1.050106E-02

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162648 ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0006.RAW
Date & Time Acquired: 1/5/2022 10:47:39 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

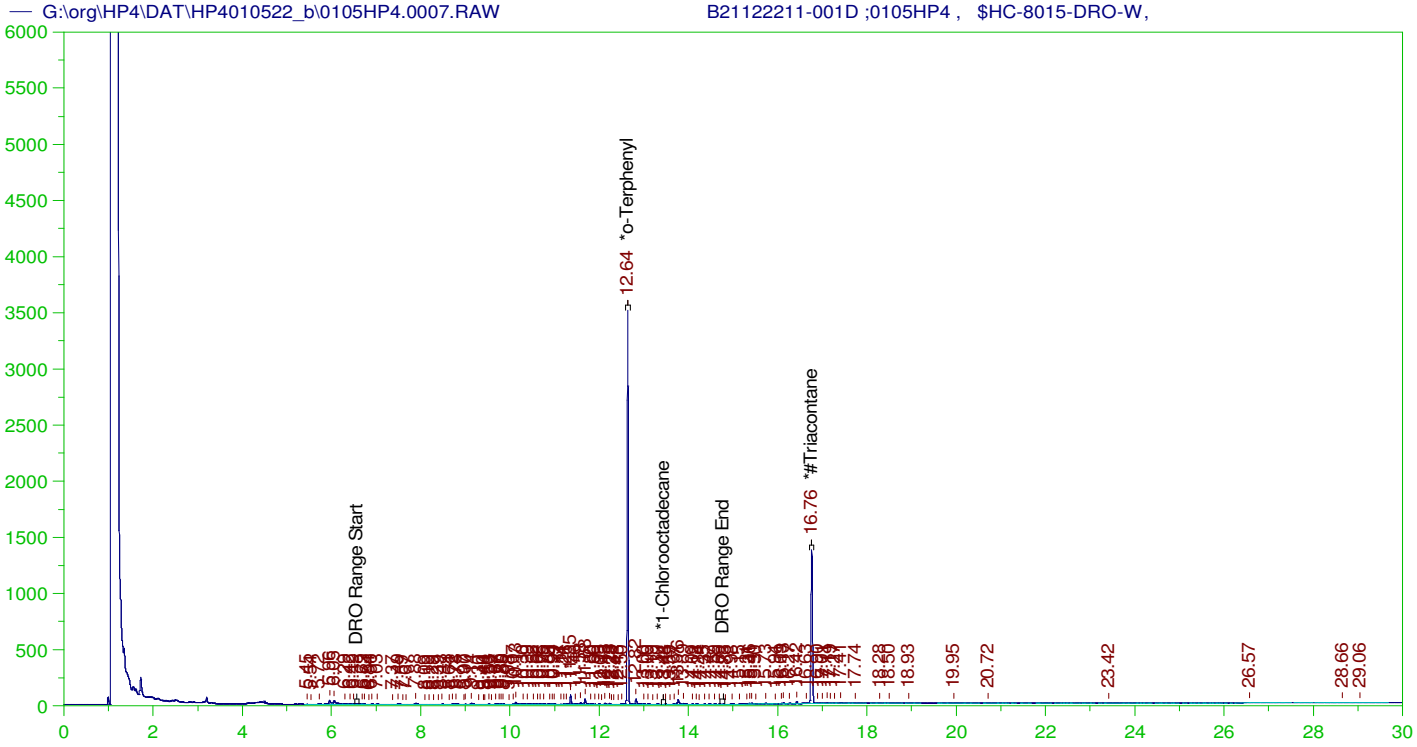
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.2	.181	90.52	-
*1-Chlorooctadecane	13.436	.2	.12		-
*#Triacontane	16.759	.2	.114	56.92	-

DRO Area:619908 DRO Amount: 2.110449E-02
TEH Area:1217911 TEH Amount: 4.146324E-02

ERH2293 (OWDFMW01) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0007.RAW B21122211-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122211-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0007.RAW
Date & Time Acquired: 1/5/2022 11:33:04 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

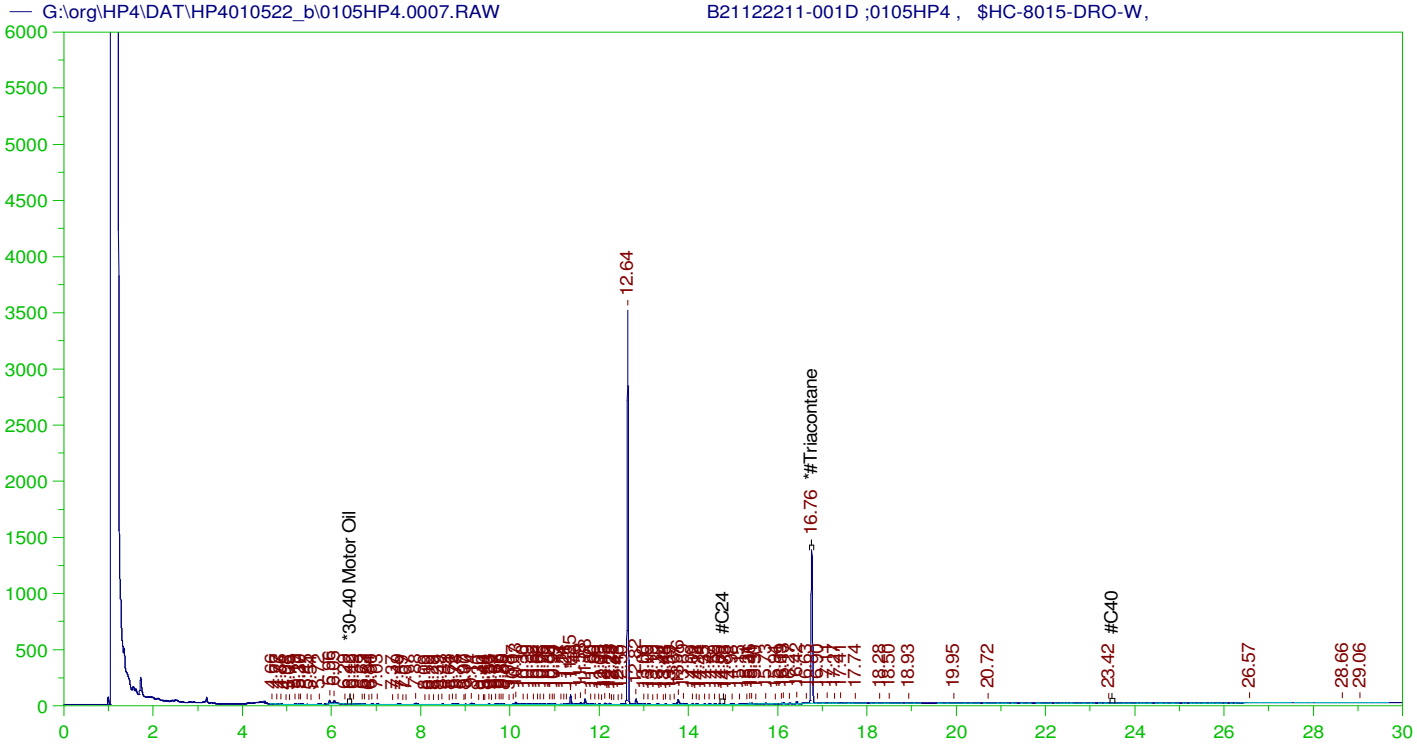
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.196	.18	91.66	-
*1-Chlorooctadecane	13.441	.196	.	.02	-
*#Triacontane	16.76	.196	.114	58.11	-

DRO Area:1140838 DRO Amount: 3.807775E-02
TEH Area:1732278 TEH Amount: 5.781826E-02

ERH2293 (OWDFMW01) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0007.RAW B21122211-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122211-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0007.RAW
Date & Time Acquired: 1/5/2022 11:33:04 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

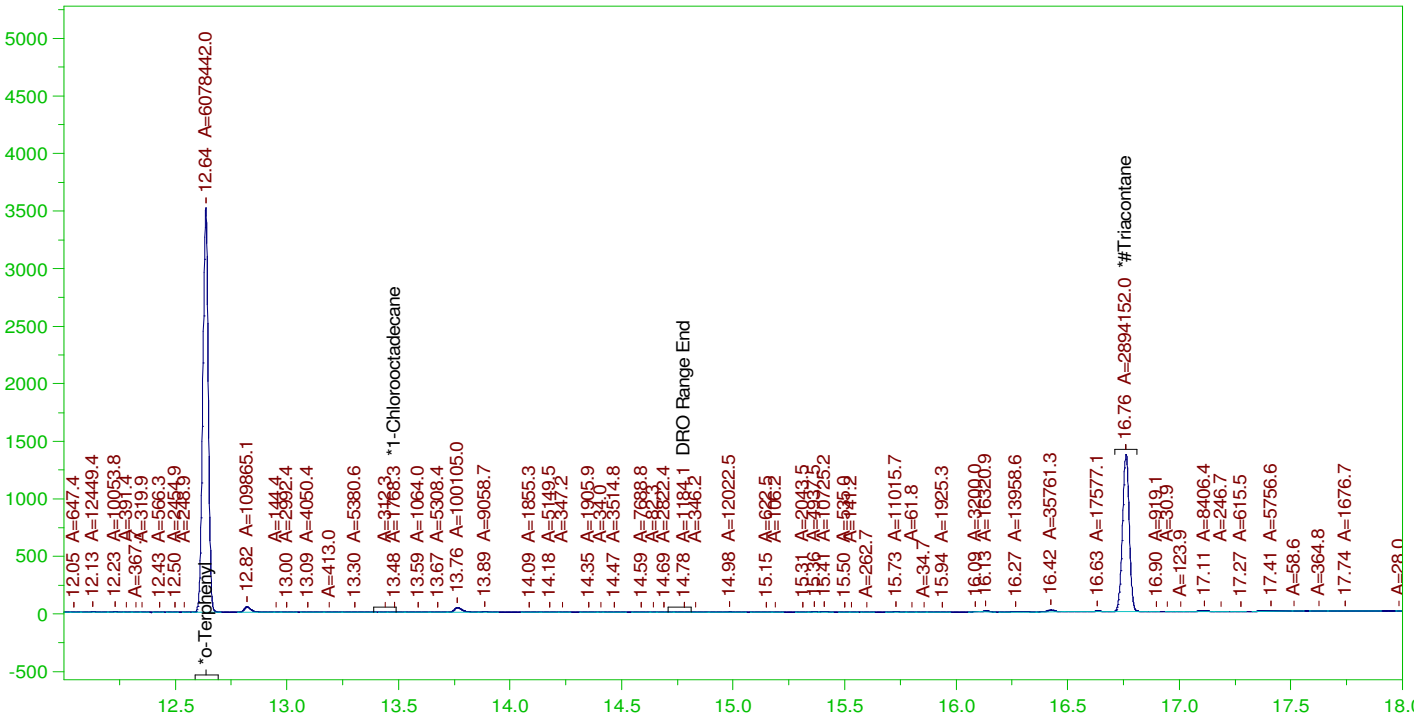
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.76	.49	.114	23.19	-

RRO Area:201904.5 RRO AMOUNT: 8.069673E-03

ERH2293 (OWDFMW01) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0007.RAW B21122211-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122211-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0007.RAW
Date & Time Acquired: 1/5/2022 11:33:04 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

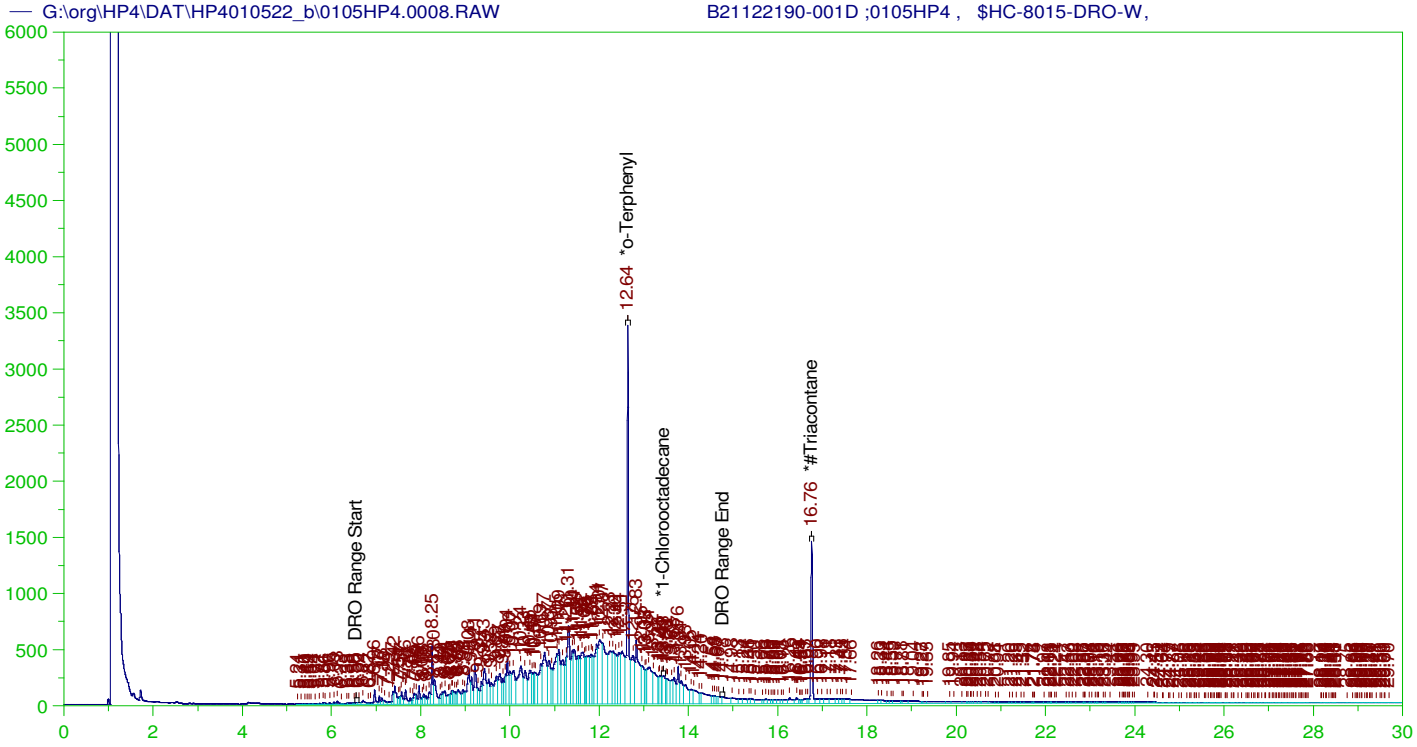
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.196	.179	91.21	-
*1-Chlorooctadecane	13.484	.196	.	.03	-
*#Triacontane	16.76	.196	.114	57.94	-

DRO Area:919422.5 DRO Amount: 3.068757E-02
TEH Area:2020014 TEH Amount: 6.742201E-02

ERH2281 (RHMW02) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0008.RAW B21122190-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122190-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0008.RAW
Date & Time Acquired: 1/5/2022 12:18:32 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

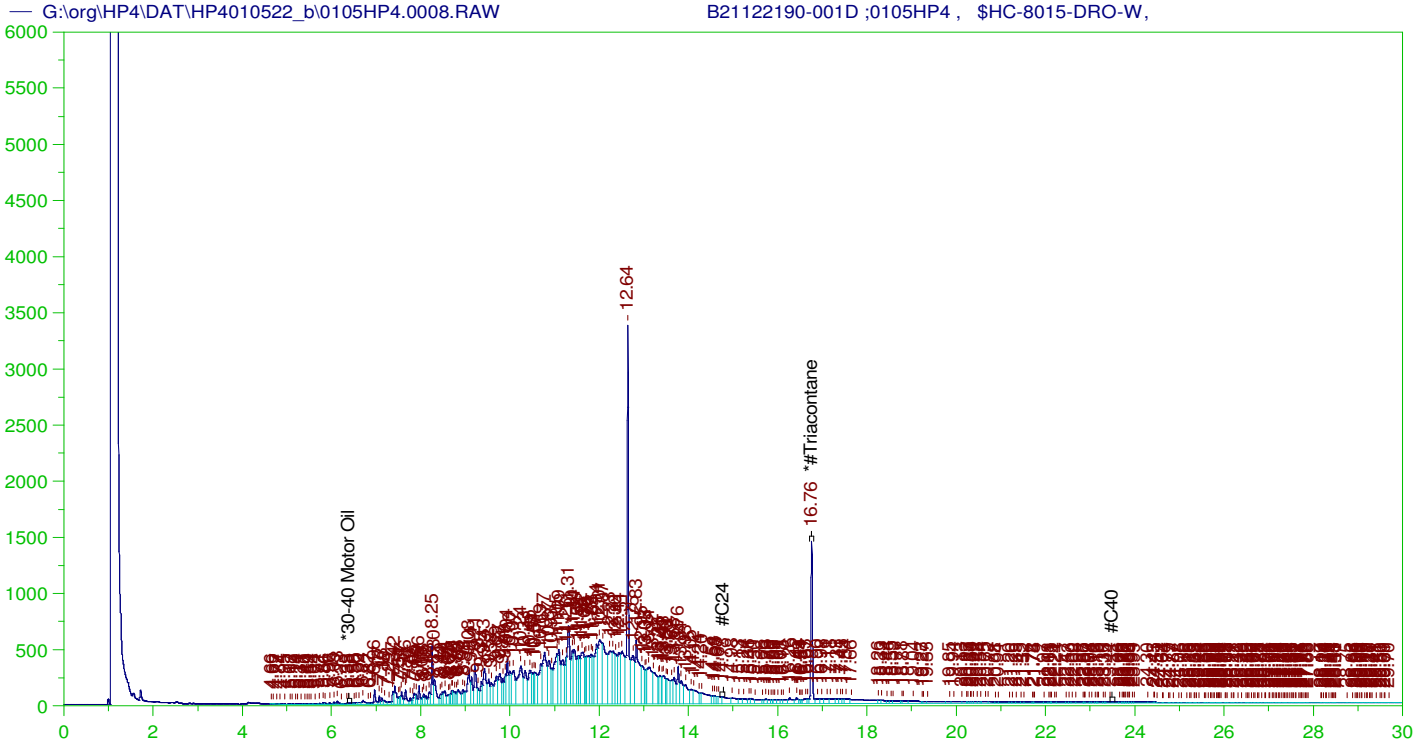
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.637	.196	.231	117.6	-
*1-Chlorooctadecane	13.433	.196	.03	15.37	-
*#Triacontane	16.758	.196	.128	65.08	-

DRO Area:1.085609E+08 DRO Amount: 3.623437
TEH Area:1.21495E+08 TEH Amount: 4.055141

G:\org\HP4\dat\HP4010522_b\Review\008_B21122190-001D_D3_8015-C24T-OI-L%.xls

ERH2281 (RHMW02) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0008.RAW B21122190-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122190-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0008.RAW
Date & Time Acquired: 1/5/2022 12:18:32 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

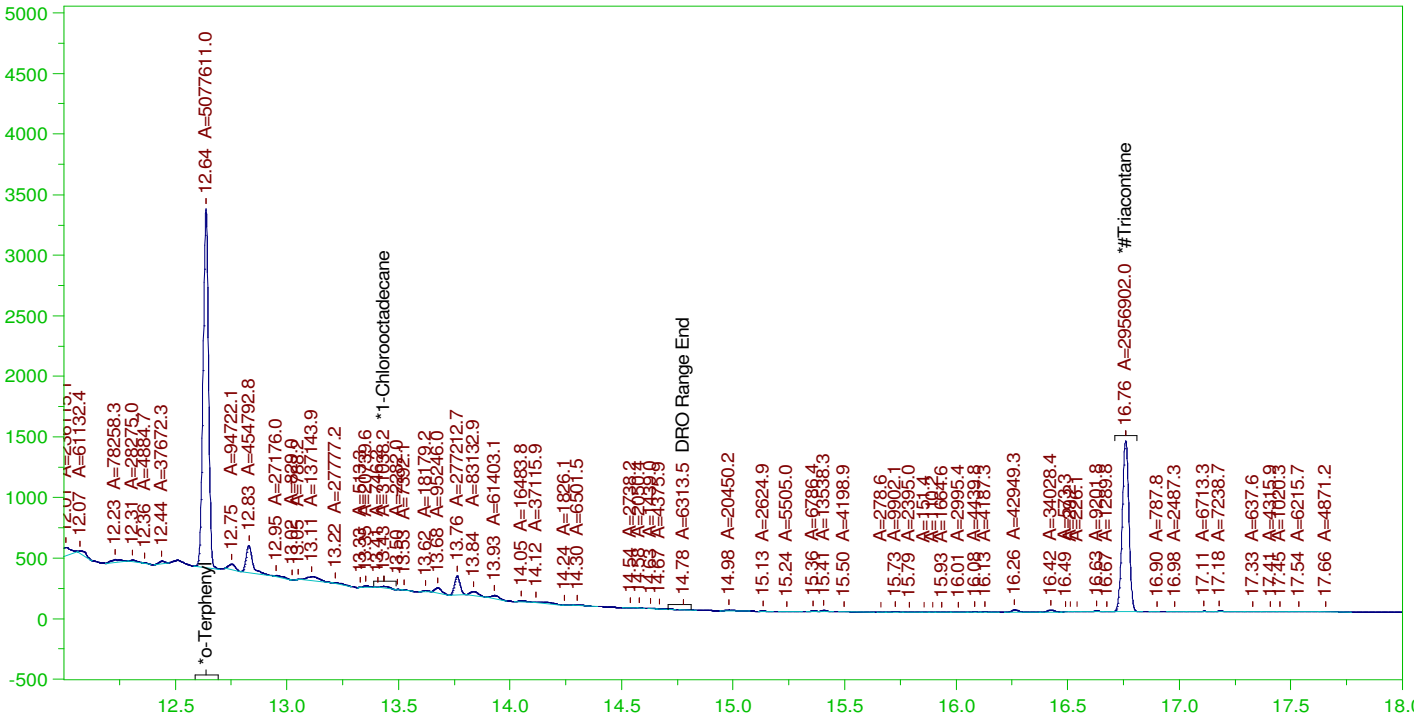
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	.49	.128	26.03	-

RRO Area:1.199368E+07 RRO AMOUNT: 0.4793606

ERH2281 (RHMW02) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0008.RAW B21122190-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122190-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0008.RAW
Date & Time Acquired: 1/5/2022 12:18:32 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

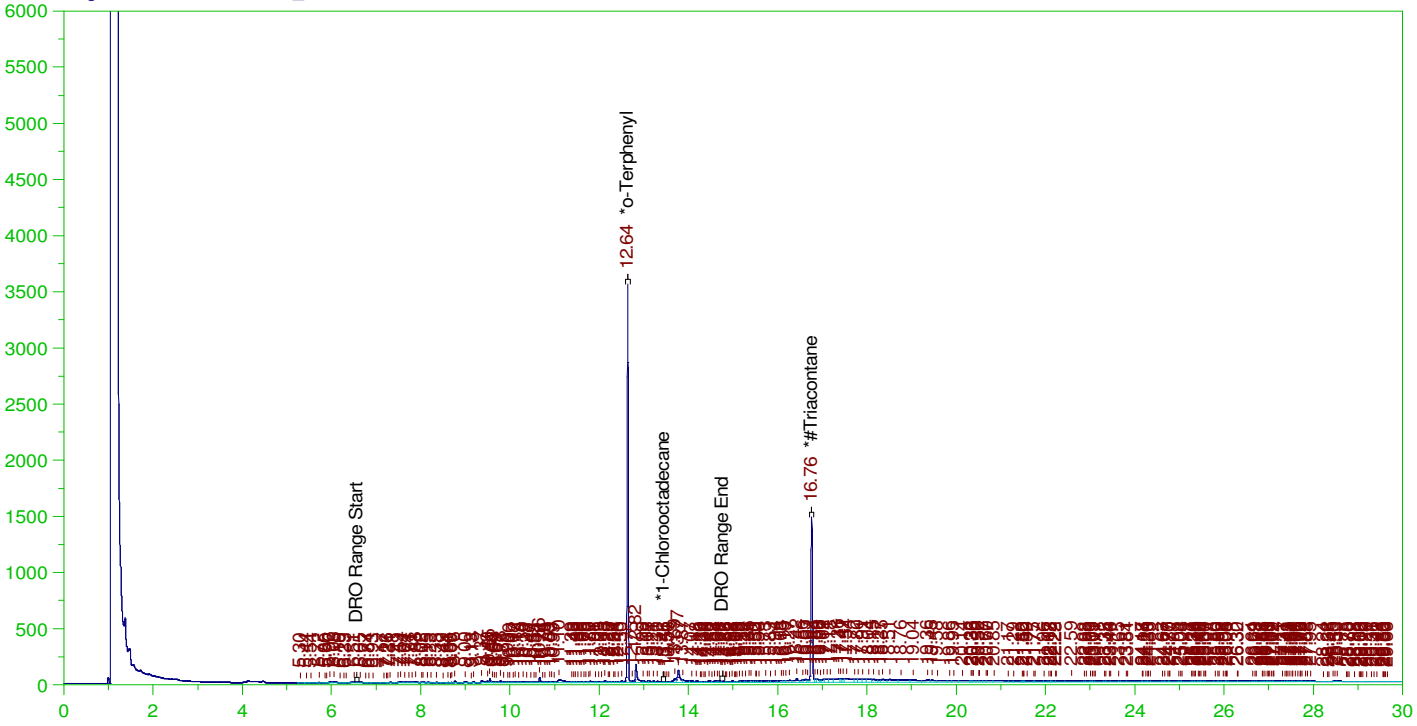
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.637	.196	.149	76.2	-
*1-Chlorooctadecane	13.433	.196	.001	.47	-
*#Triacontane	16.758	.196	.116	59.2	-

DRO Area:1.965417E+07 DRO Amount: 0.6559973
TEH Area:2.042781E+07 TEH Amount: 0.6818193

ERH2319 (RHMW06) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0009.RAW B21122198-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122198-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0009.RAW
Date & Time Acquired: 1/5/2022 1:04:09 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

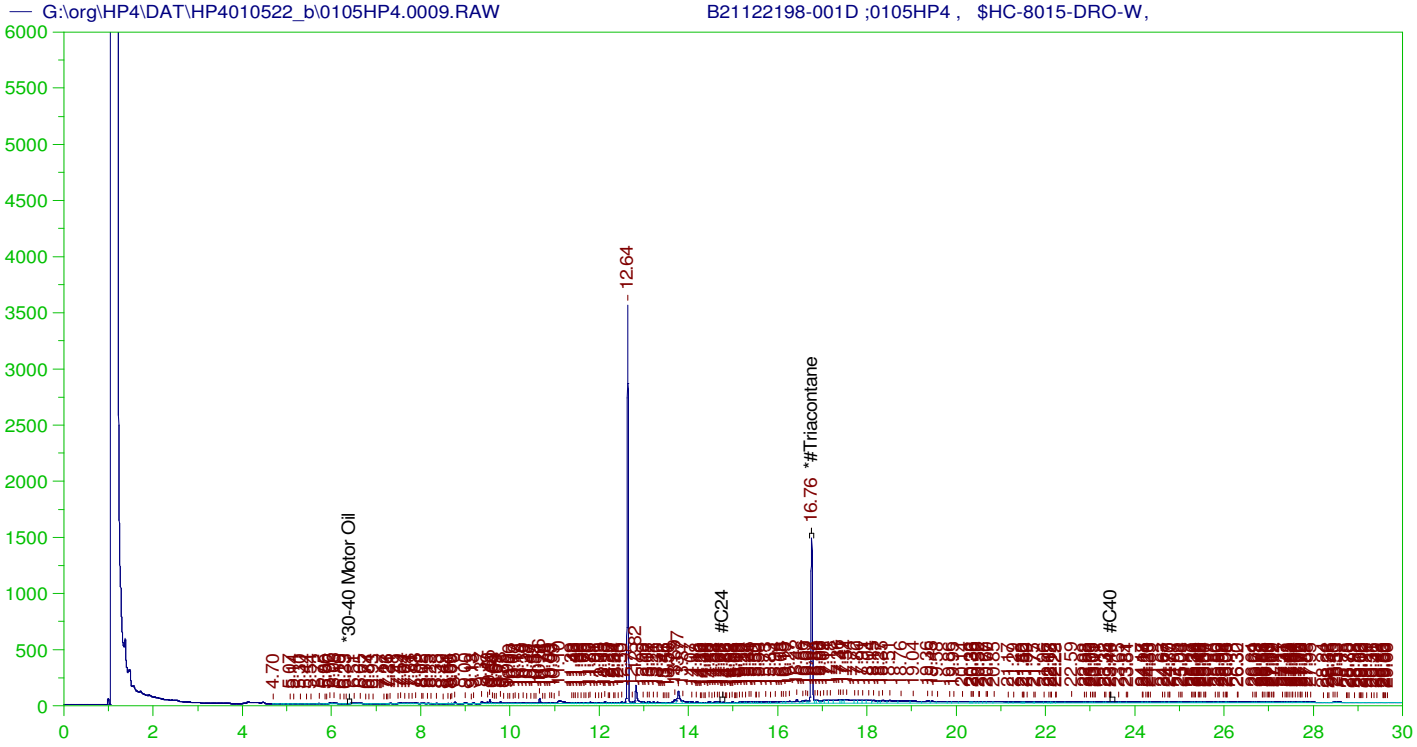
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.194	.179	91.96	-
*1-Chlorooctadecane	13.432	.194	.001	.3	-
*#Triacontane	16.758	.194	.126	64.96	-

DRO Area:4713242 DRO Amount: 0.1557866
TEH Area:1.472224E+07 TEH Amount: 0.4866137

ERH2319 (RHMW06) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0009.RAW B21122198-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122198-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0009.RAW
Date & Time Acquired: 1/5/2022 1:04:09 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

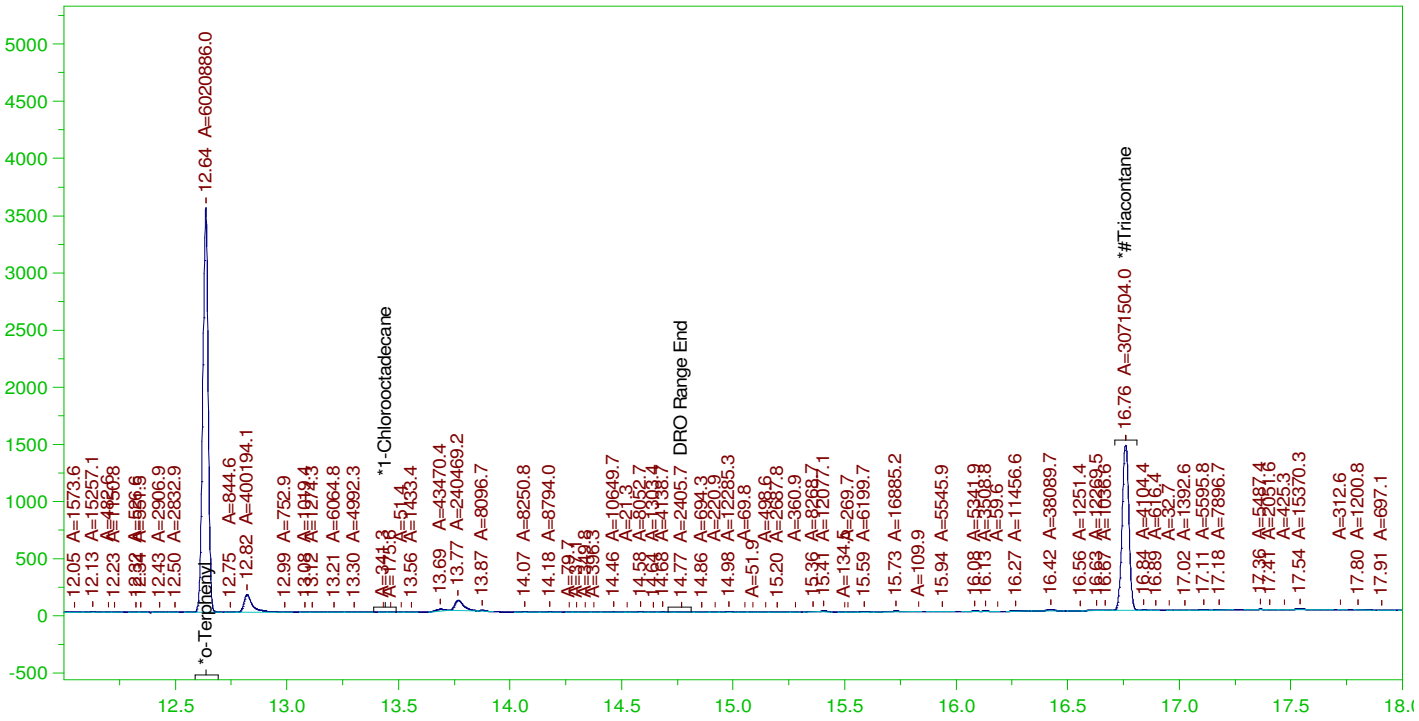
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	.485	.126	25.99	-

RRO Area:8529997 RRO AMOUNT: 0.3376151

ERH2319 (RHMW06) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0009.RAW B21122198-001D ;0105HP4 , $HC-8015-DRO-W,



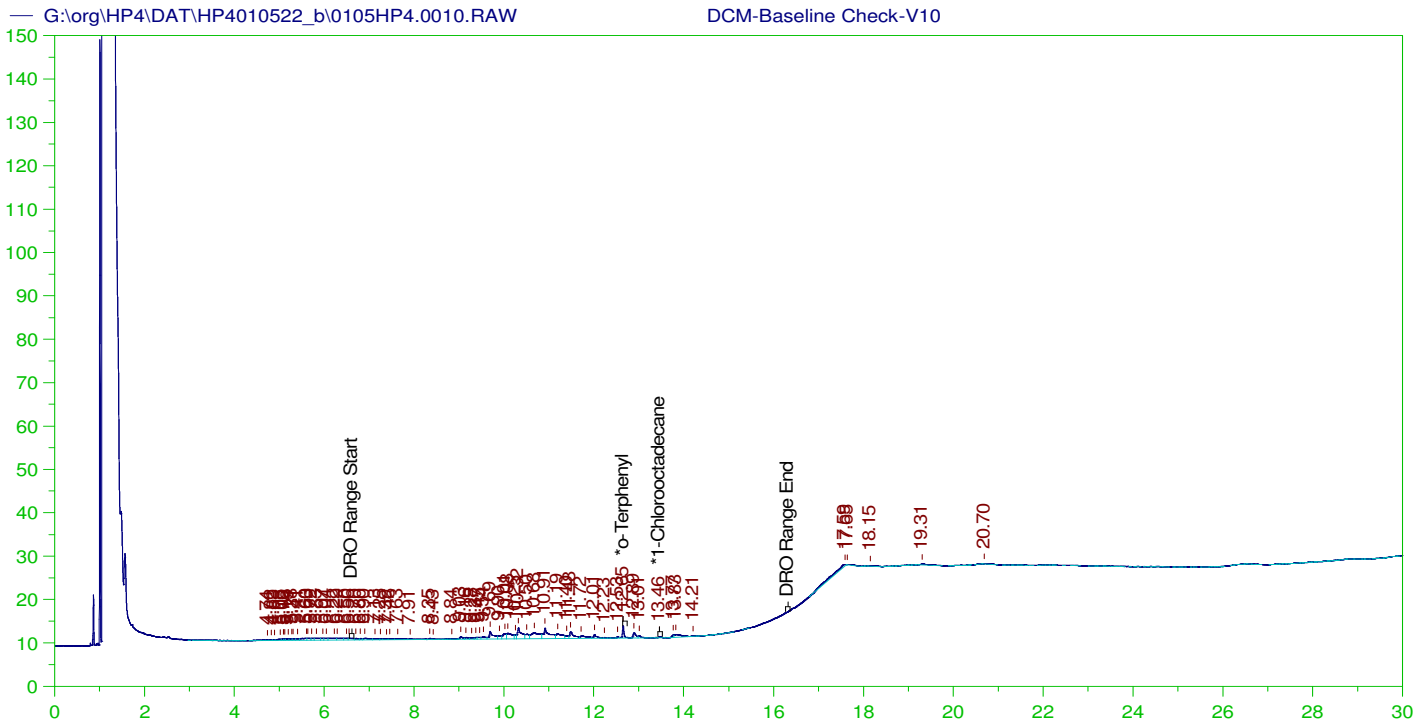
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122198-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0009.RAW
Date & Time Acquired: 1/5/2022 1:04:09 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.194	.175	90.35	-
*1-Chlorooctadecane	29.962	.194	.	.	-
*#Triacontane	16.758	.194	.119	61.49	-

DRO Area:2108275 DRO Amount: 6.968474E-02
TEH Area:3082743 TEH Amount: 0.1018938



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V10
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0010.RAW
Date & Time Acquired: 1/5/2022 1:49:30 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

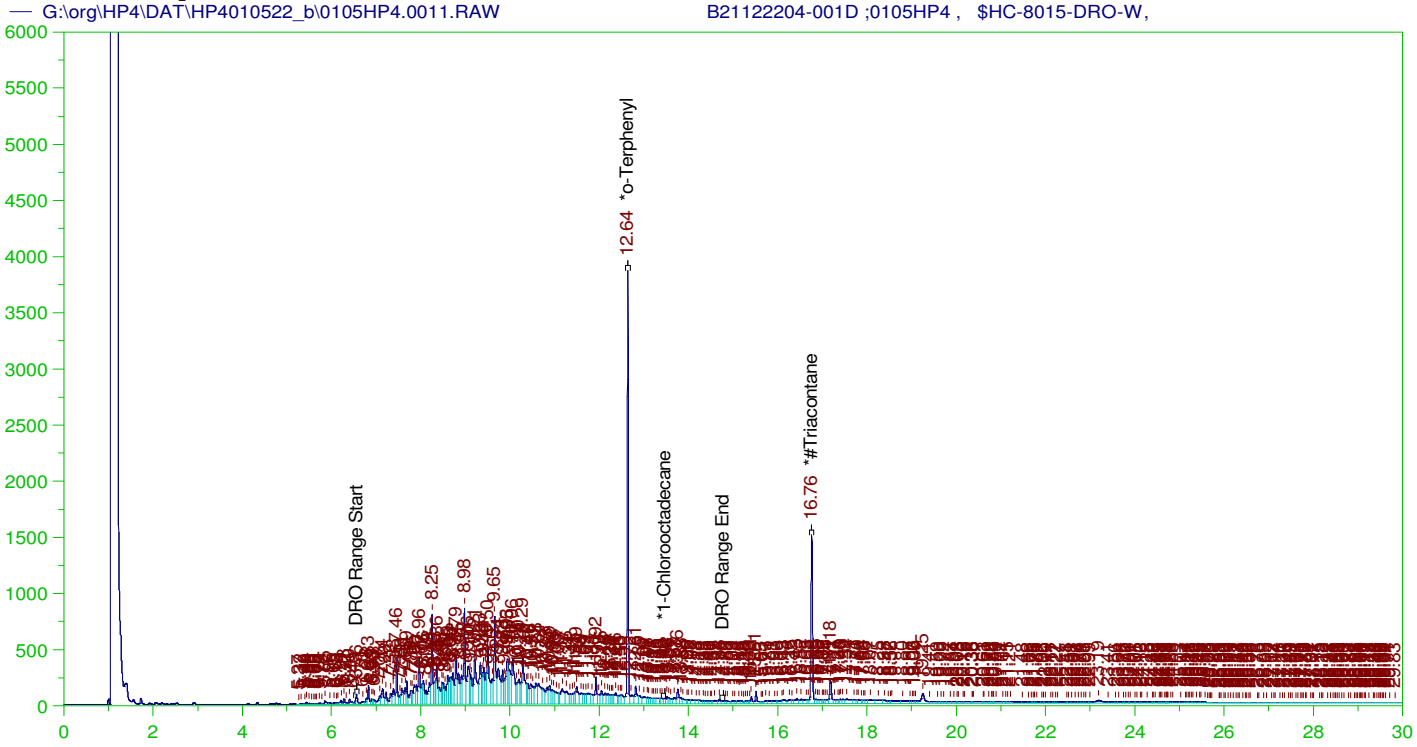
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	200.	.246	.12	-
*1-Chlorooctadecane	13.456	200.	.045	.02	-

DRO Area:196267.7 DRO Amount: 6.681846
TEH Area:268860.5 TEH Amount: 9.153234

ERH2291 (Sump Adit3) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0011.RAW B21122204-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122204-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0011.RAW
Date & Time Acquired: 1/5/2022 2:34:32 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

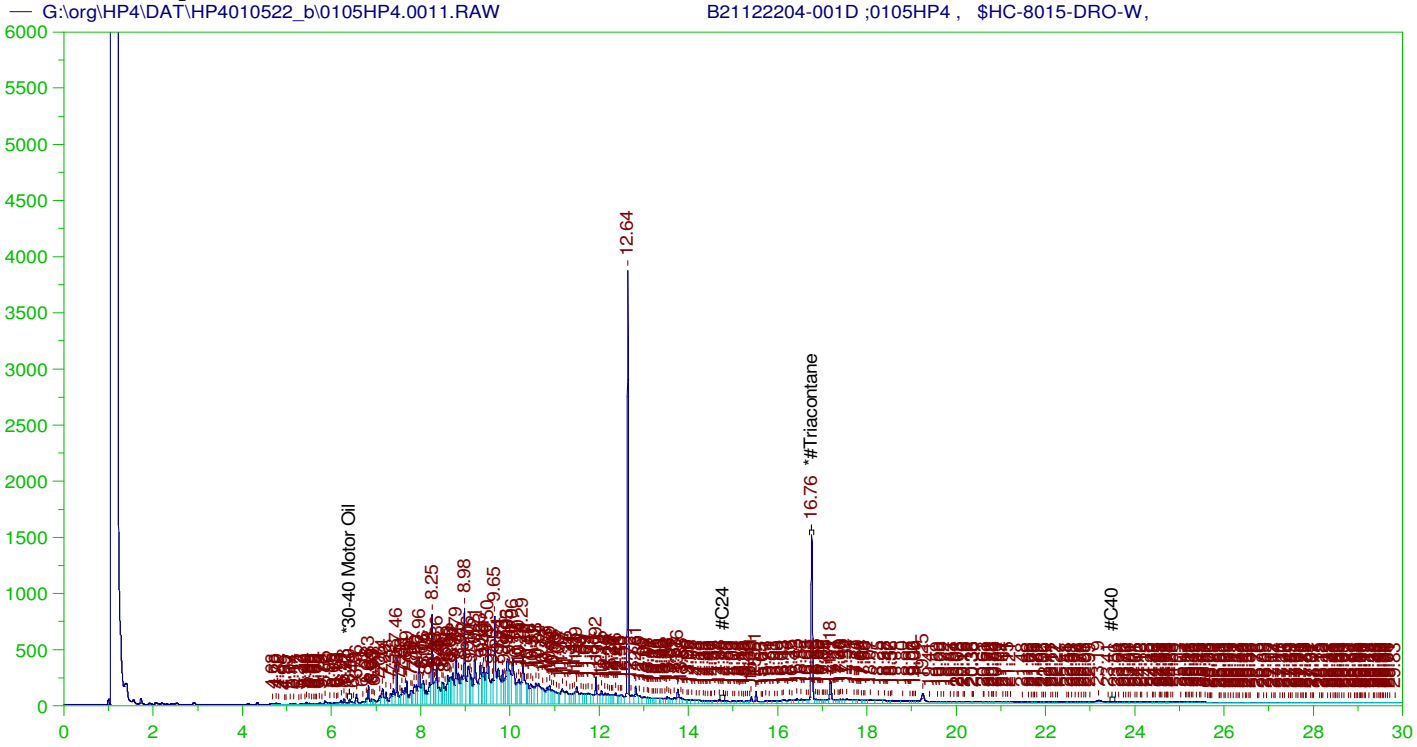
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.637	.194	.201	103.57	-
*1-Chlorooctadecane	13.463	.194	.004	1.9	-
*#Triacontane	16.76	.194	.129	66.57	-

DRO Area:6.357258E+07 DRO Amount: 2.101262
TEH Area:7.756957E+07 TEH Amount: 2.563904

G:\org\HP4\dat\HP4010522_b\Review\011_B21122204-001D_D3_8015-C24T-OI-L%.xls

ERH2291 (Sump Adit3) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0011.RAW B21122204-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122204-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0011.RAW
Date & Time Acquired: 1/5/2022 2:34:32 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

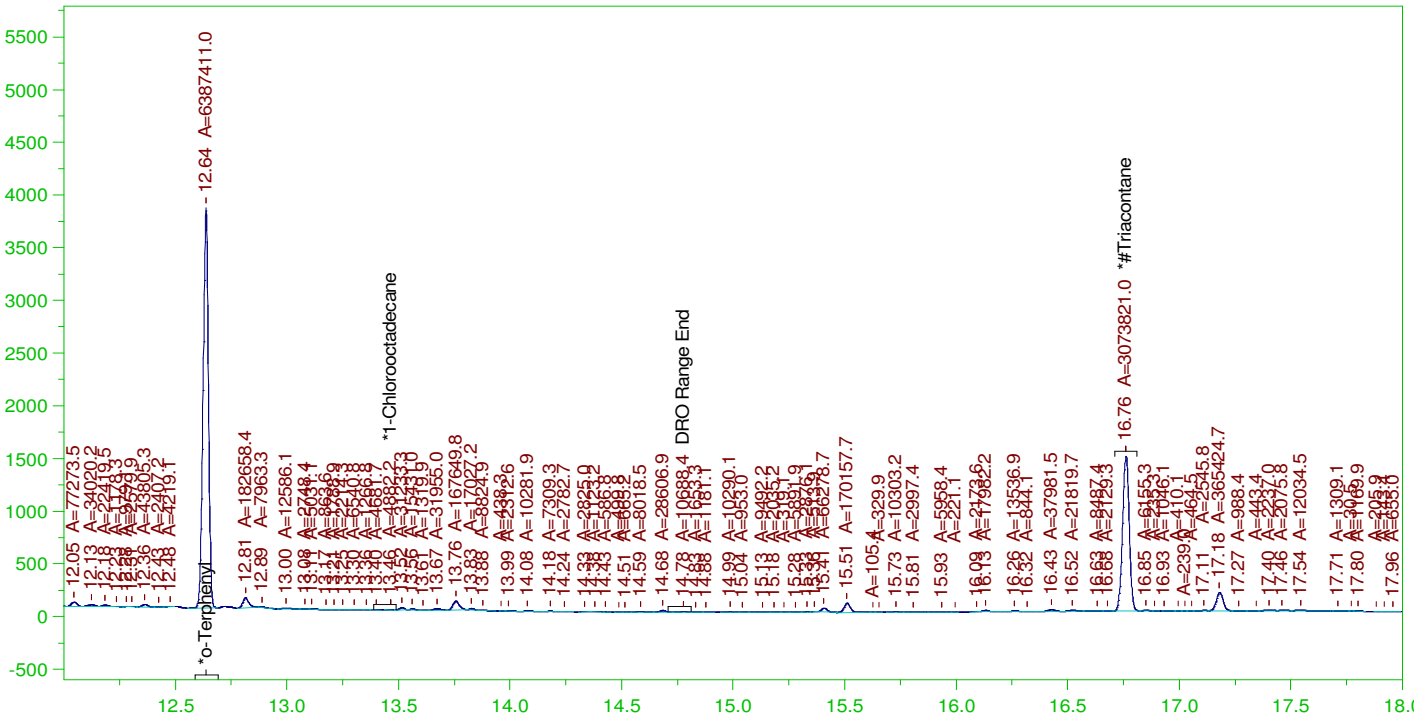
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.76	.485	.129	26.63	-

RRO Area:1.196344E+07 RRO AMOUNT: 0.47351

ERH2291 (Sump Adit3) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0011.RAW B21122204-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122204-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0011.RAW
Date & Time Acquired: 1/5/2022 2:34:32 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

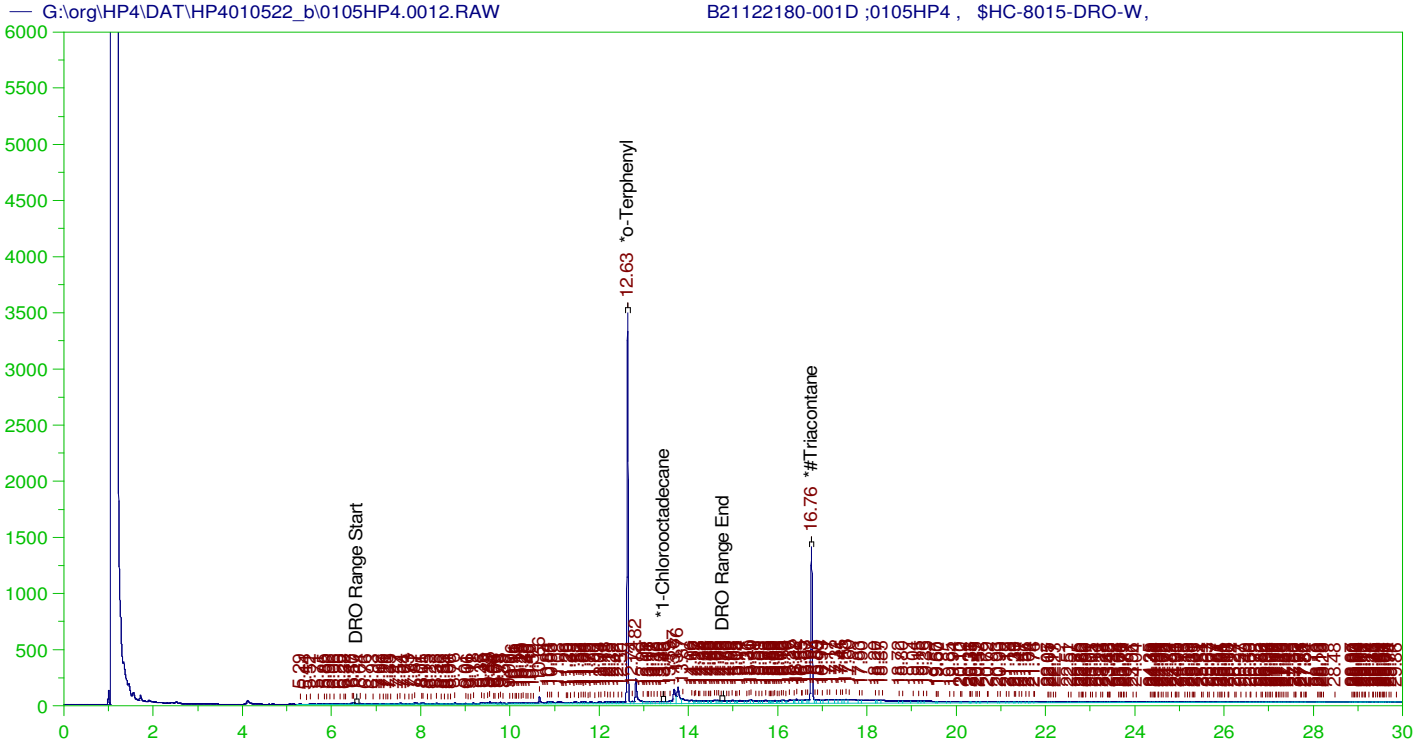
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.637	.194	.186	95.85	-
*1-Chlorooctadecane	13.463	.194	.	.07	-
*#Triacontane	16.76	.194	.119	61.54	-

DRO Area:4.077645E+07 DRO Amount: 1.347782
TEH Area:4.279459E+07 TEH Amount: 1.414488

ERH2283 (RHMW03) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0012.RAW B21122180-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122180-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0012.RAW
Date & Time Acquired: 1/5/2022 3:20:46 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

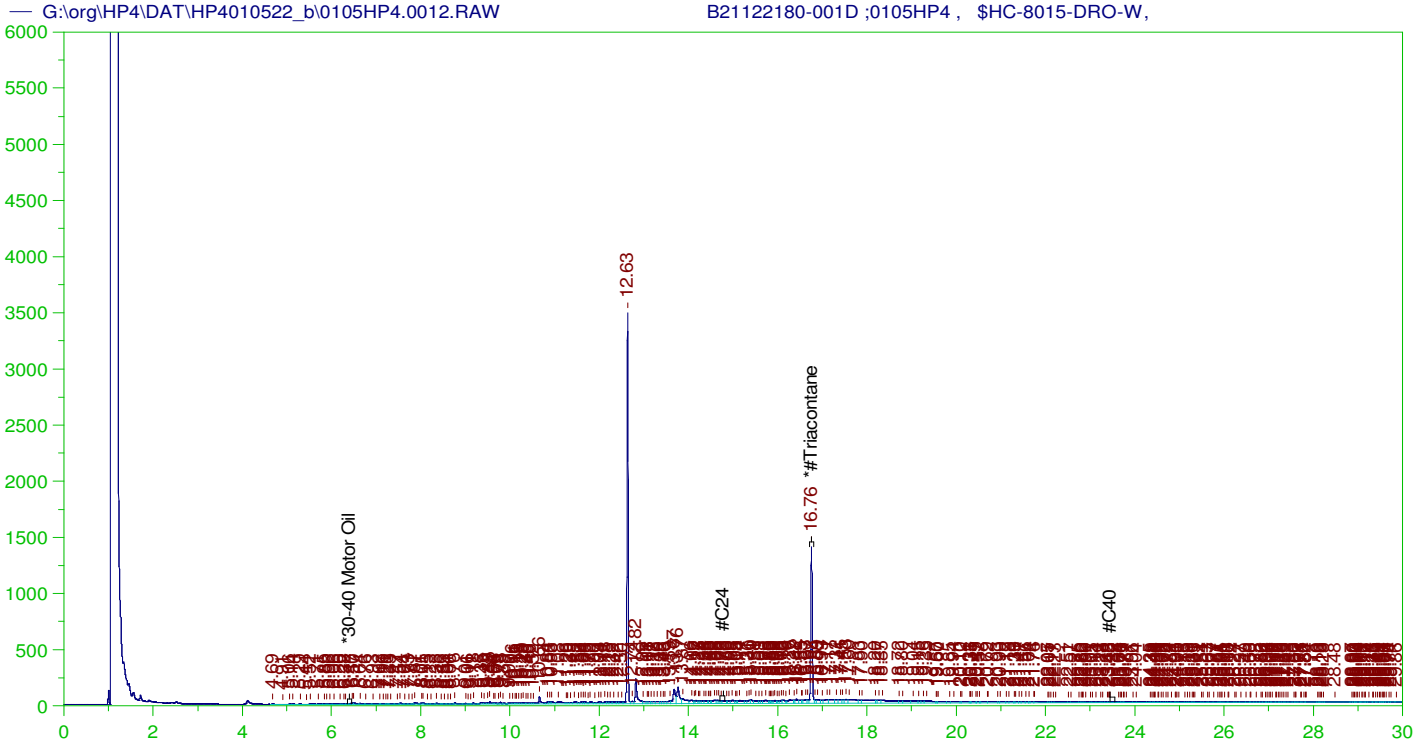
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.632	.204	.187	91.87	-
*1-Chlorooctadecane	13.43	.204	.002	1.06	-
*#Triacontane	16.755	.204	.127	62.08	-

DRO Area:6812206 DRO Amount: 0.2366515
TEH Area:1.851538E+07 TEH Amount: 0.6432119

ERH2283 (RHMW03) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0012.RAW B21122180-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122180-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0012.RAW
Date & Time Acquired: 1/5/2022 3:20:46 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

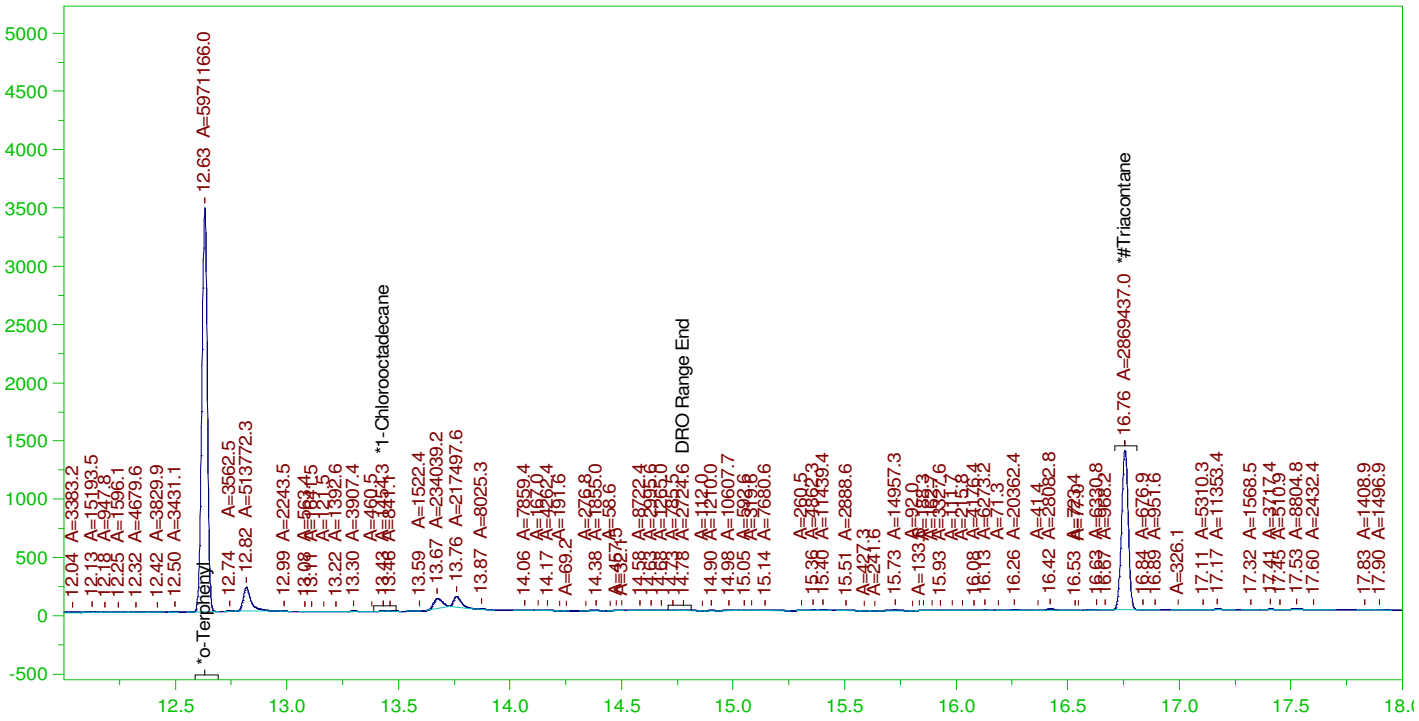
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.755	.51	.127	24.83	-

RRO Area:1.042623E+07 RRO AMOUNT: 0.4337218

ERH2283 (RHMW03) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0012.RAW B21122180-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122180-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0012.RAW
Date & Time Acquired: 1/5/2022 3:20:46 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

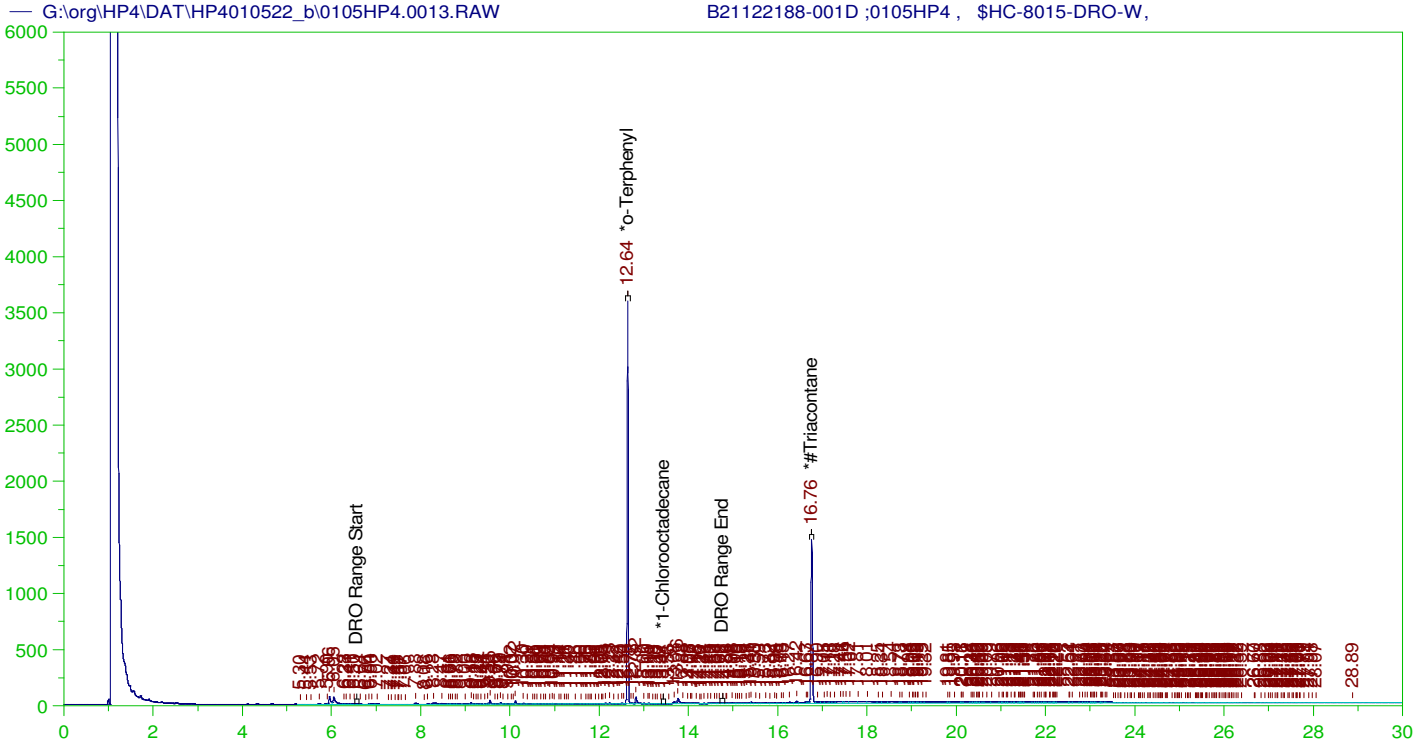
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.632	.204	.183	89.6	-
*1-Chlorooctadecane	13.43	.204	.	.02	-
*#Triacontane	16.755	.204	.117	57.45	-

DRO Area:2106155 DRO Amount: 7.316644E-02
TEH Area:2729102 TEH Amount: 9.480719E-02

ERH2276 (RHMW14 Zone3) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0013.RAW B21122188-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122188-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0013.RAW
Date & Time Acquired: 1/5/2022 4:06:13 PM
Method File: G:\Org\HP4\methods\D3_8015-010513-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

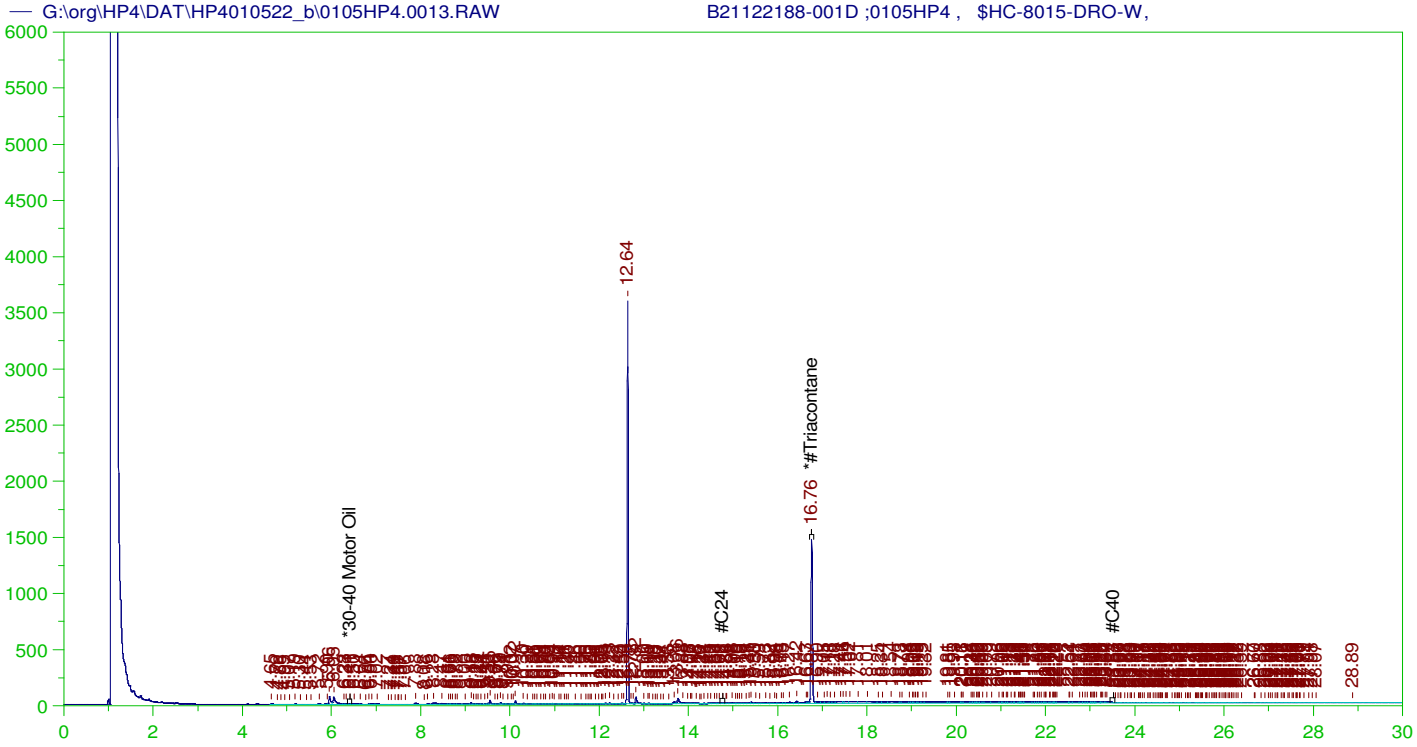
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.204	.191	93.37	-
*1-Chlorooctadecane	13.436	.204	. .15		-
*#Triacontane	16.759	.204	.128	62.67	-

DRO Area:1452894 DRO Amount: 5.047259E-02
TEH Area:7847855 TEH Amount: 0.2726293

ERH2276 (RHMW14 Zone3) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0013.RAW B21122188-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122188-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0013.RAW
Date & Time Acquired: 1/5/2022 4:06:13 PM
Method File: G:\Org\HP4\Methods\D3_ORO-010513-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

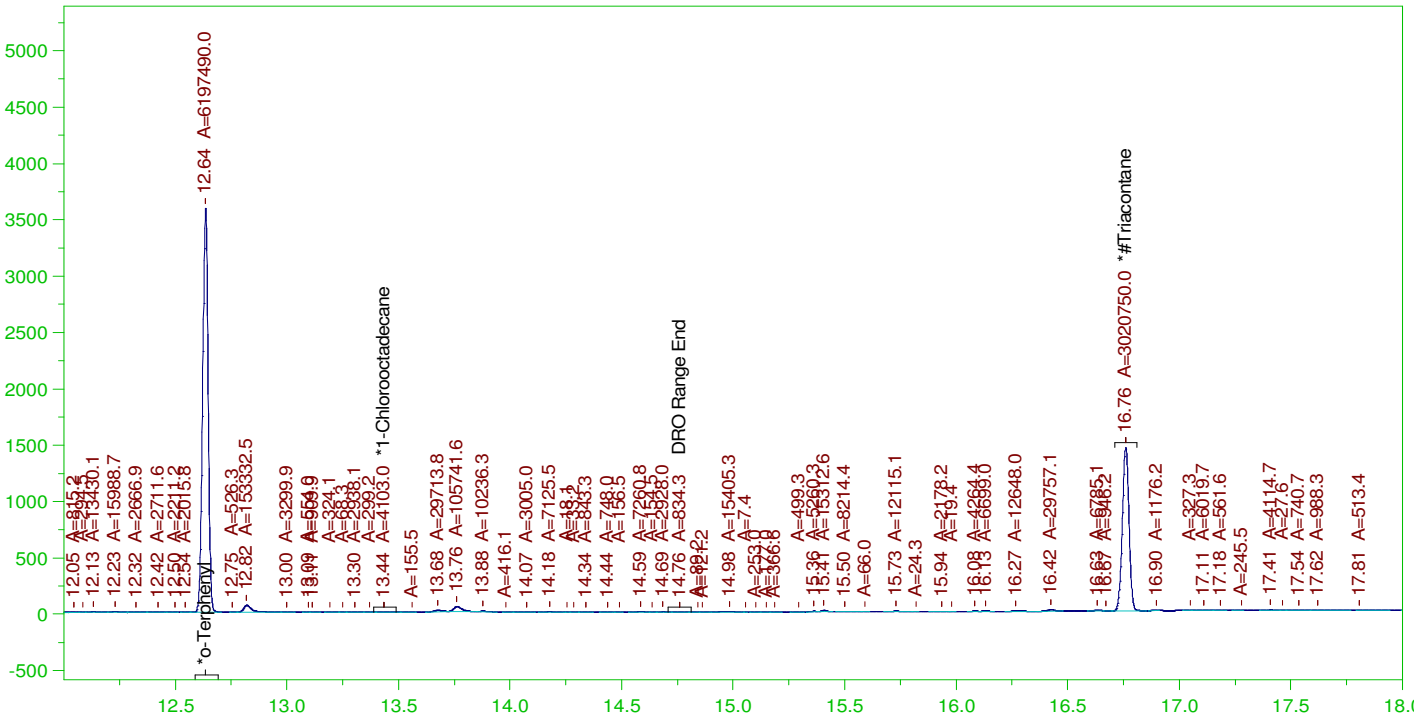
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.759	.51	.128	25.07	-

RRO Area:5039337 RRO AMOUNT: 0.209632

ERH2276 (RHMW14 Zone3) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0013.RAW B21122188-001D ;0105HP4 , $HC-8015-DRO-W,



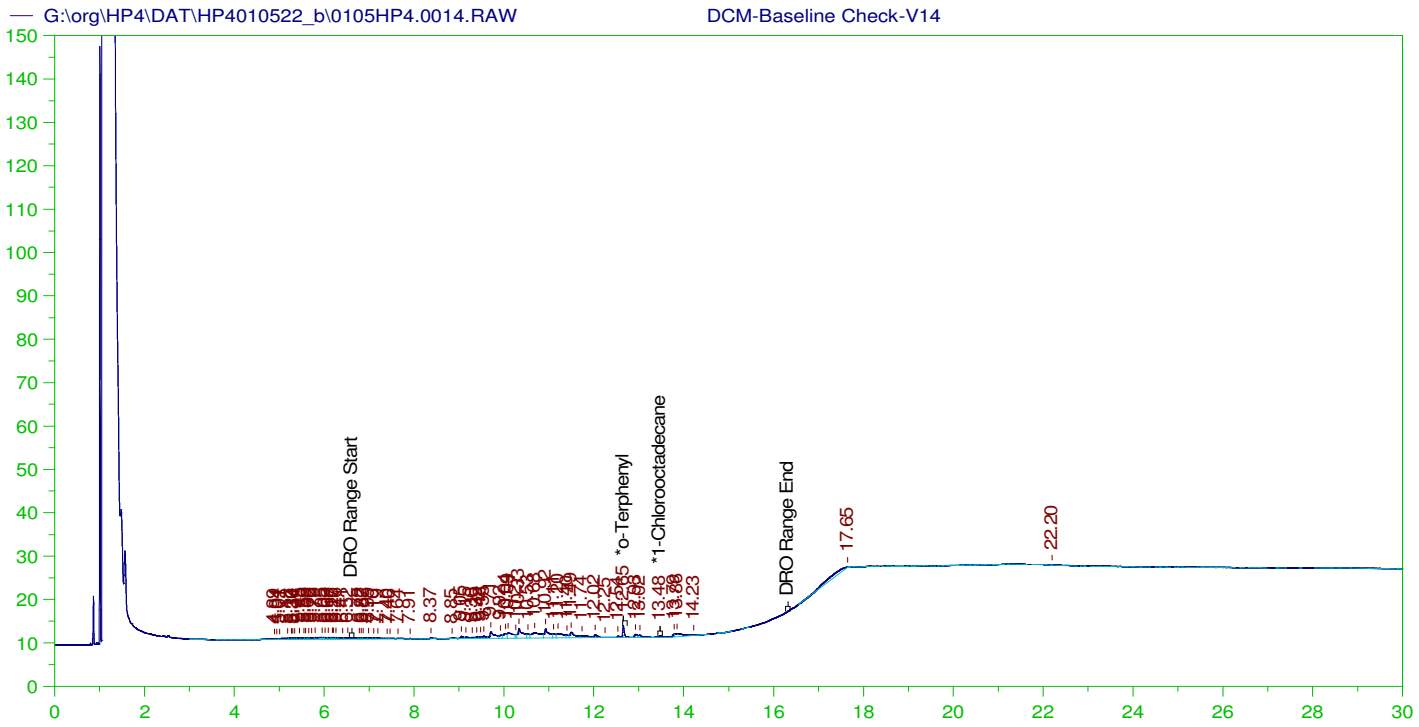
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122188-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0013.RAW
Date & Time Acquired: 1/5/2022 4:06:13 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.204	.19	93.	-
*1-Chlorooctadecane	13.436	.204	.	.06	-
*#Triacontane	16.759	.204	.123	60.48	-

DRO Area:1076191 DRO Amount: 3.738617E-02
TEH Area:1981969 TEH Amount: 6.885228E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0014.RAW
Date & Time Acquired: 1/5/2022 4:51:31 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

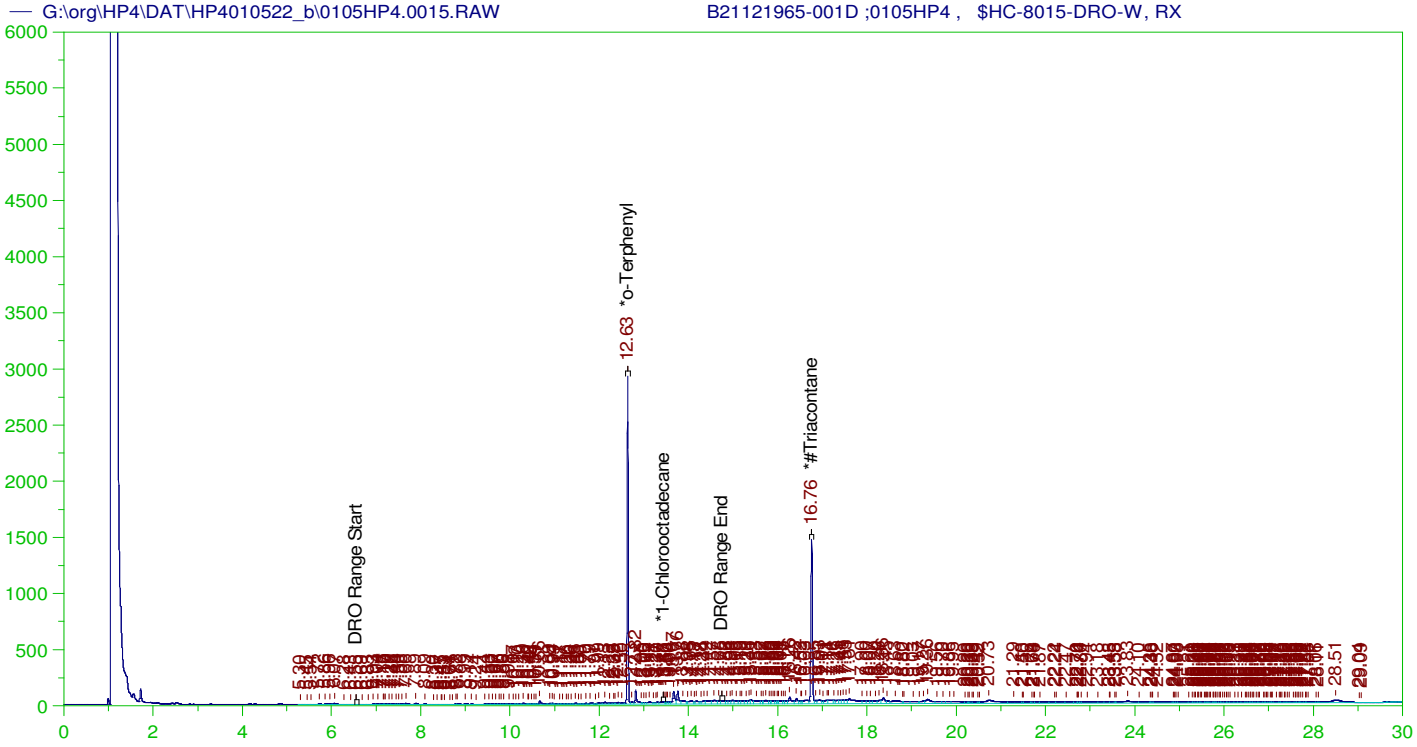
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.654	200.	.242	.12	-
*1-Chlorooctadecane	13.477	200.	.044	.02	-

DRO Area:179139.8 DRO Amount: 6.098732
TEH Area:259473.1 TEH Amount: 8.833645

ERH2238 (RHMW03) Batch ID: 162502

G:\org\HP4\DAT\HP4010522_b\0105HP4.0015.RAW B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0015.RAW
Date & Time Acquired: 1/5/2022 5:36:53 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

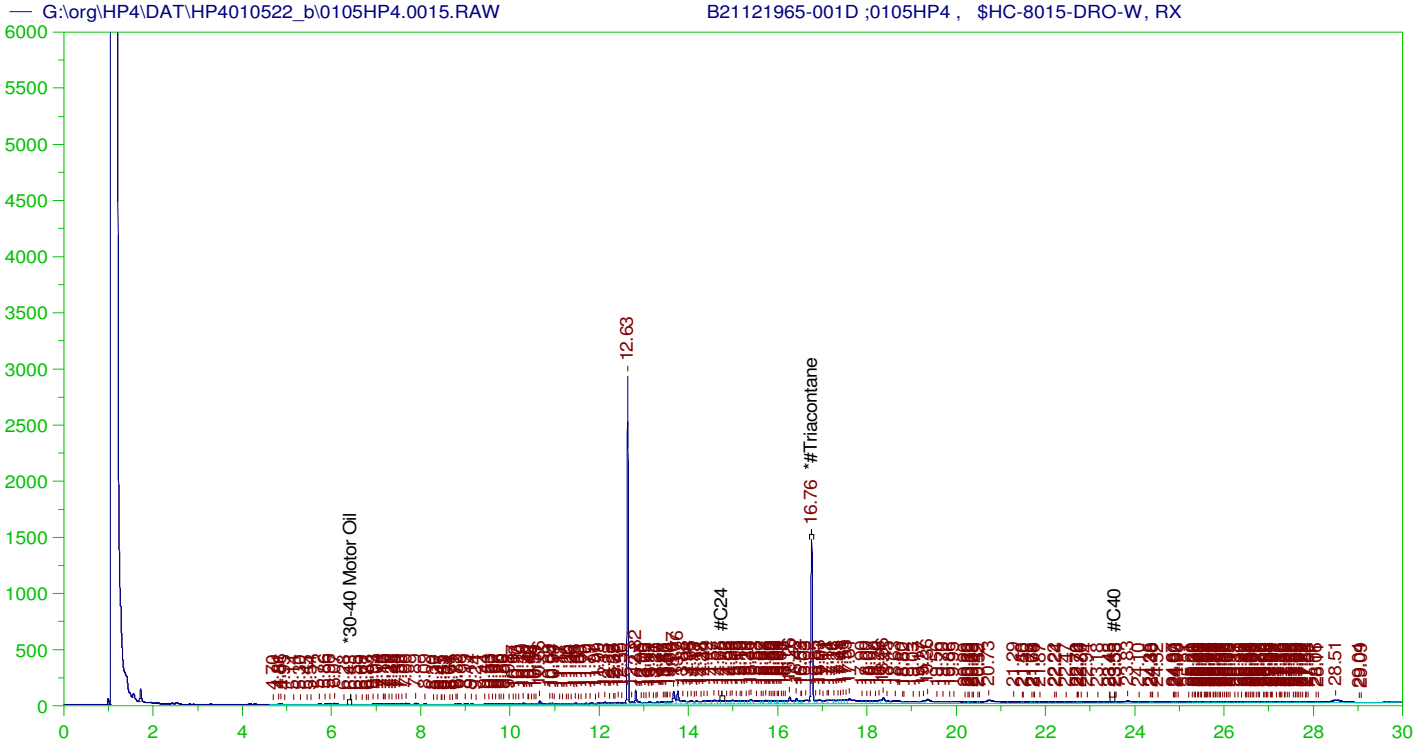
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.194	.148	76.3	-
*1-Chlorooctadecane	13.433	.194	.003	1.75	-
*#Triacontane	16.759	.194	.124	63.83	-

DRO Area:4084940 DRO Amount: 0.1350194
TEH Area:1.574077E+07 TEH Amount: 0.520279

ERH2238 (RHMW03) Batch ID: 162502

G:\org\HP4\DAT\HP4010522_b\0105HP4.0015.RAW B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0015.RAW
Date & Time Acquired: 1/5/2022 5:36:53 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

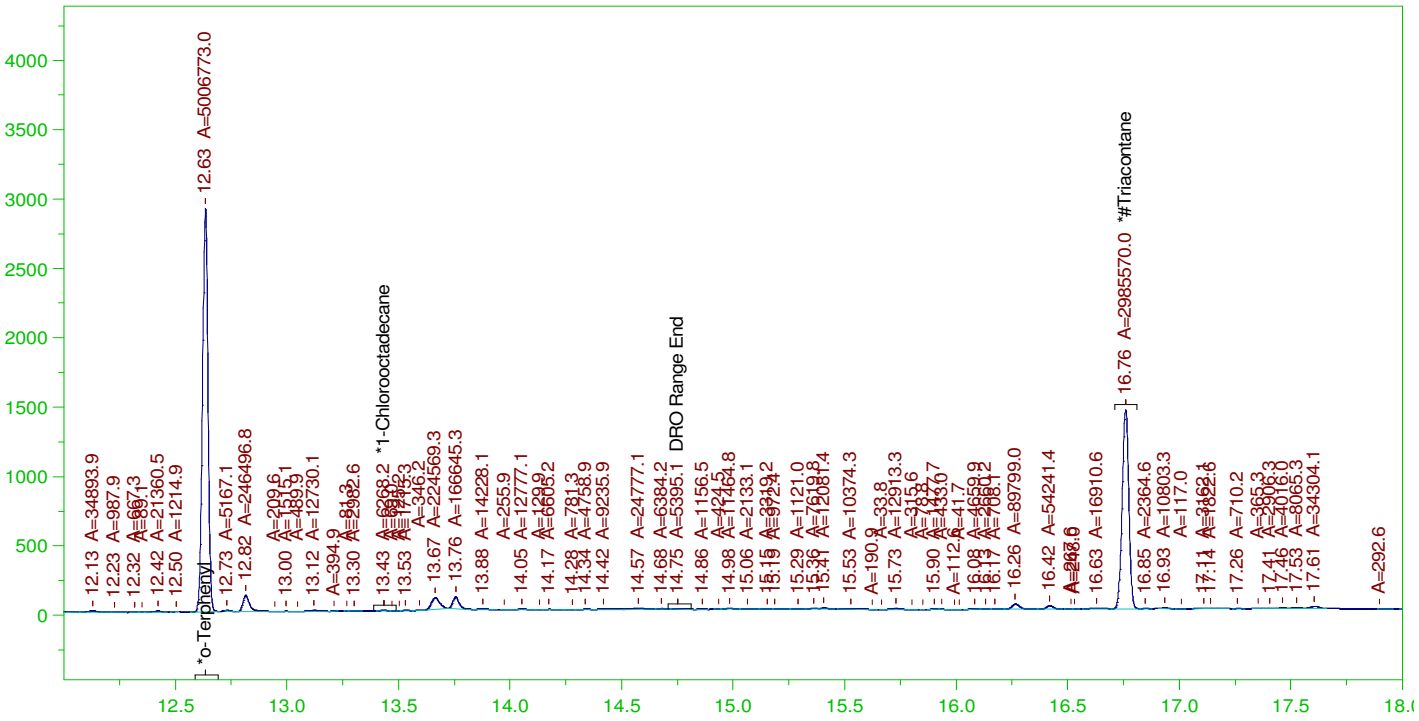
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.759	.485	.124	25.53	-

RRO Area:1.009989E+07 RRO AMOUNT: 0.3997511

ERH2238 (RHMW03) Batch ID: 162502

G:\org\HP4\DAT\HP4010522_b\0105HP4.0015.RAW B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX



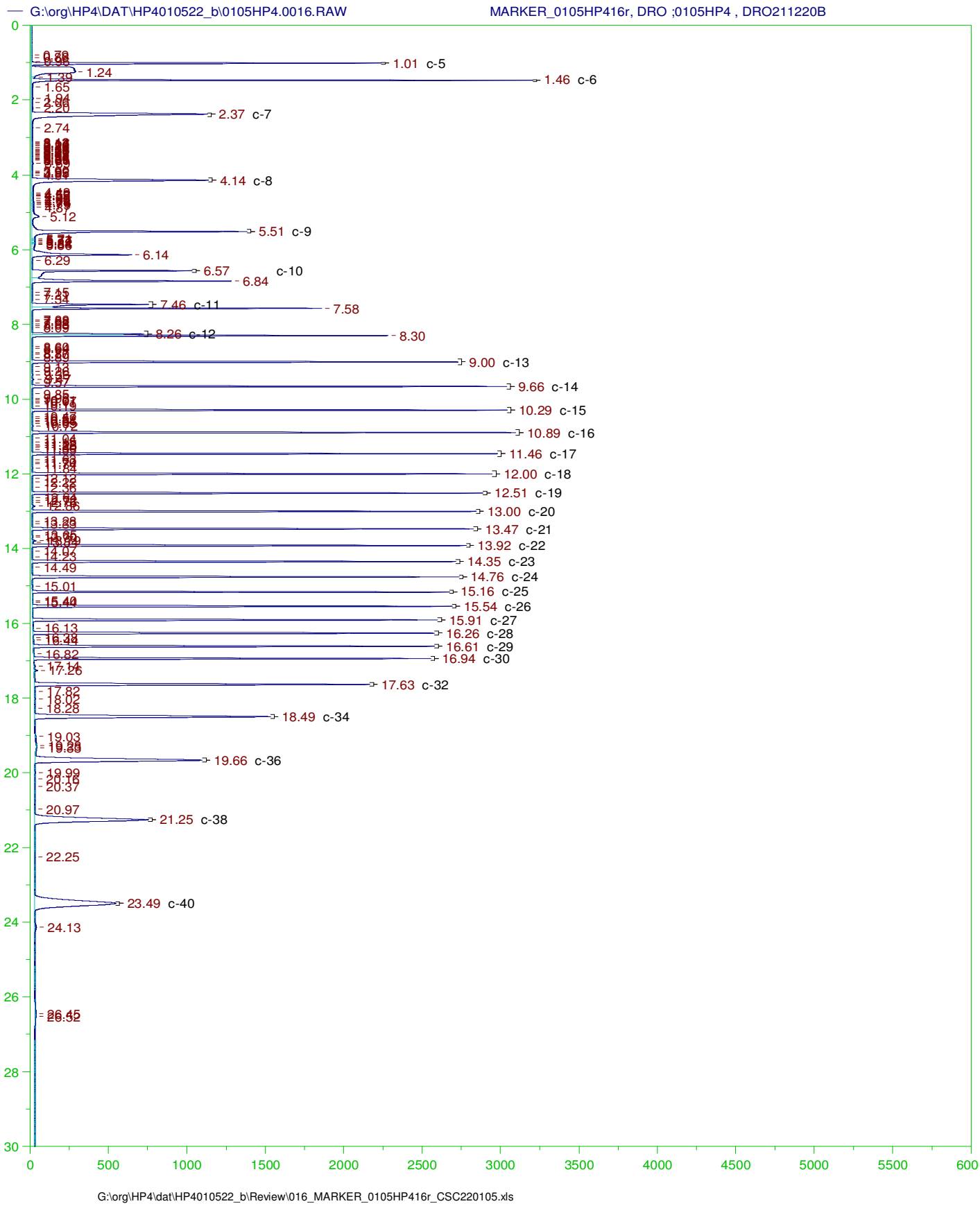
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

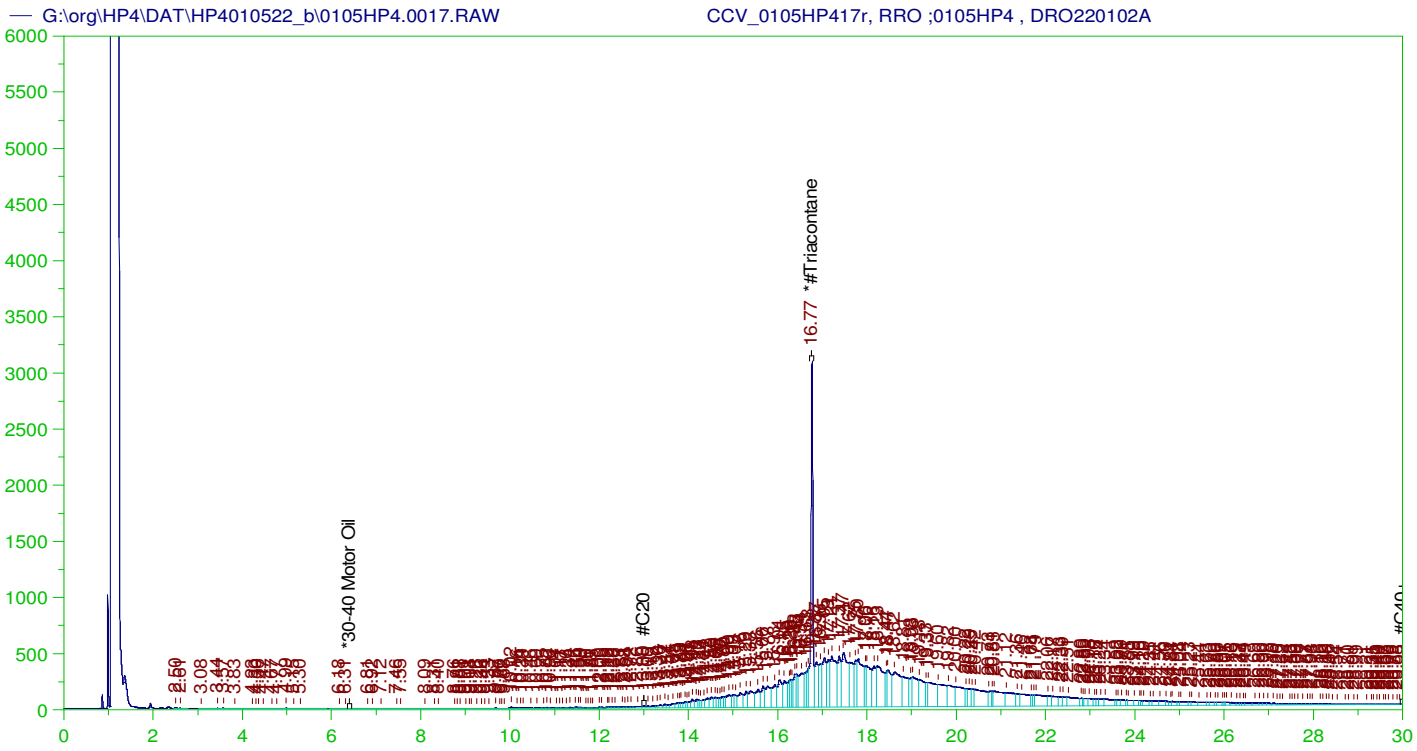
Sample Name: B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0015.RAW
Date & Time Acquired: 1/5/2022 5:36:53 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.194	.146	75.13	-
*1-Chlorooctadecane	13.433	.194	. .09		-
*#Triacontane	16.759	.194	.116	59.77	-

DRO Area:1300018 DRO Amount: 4.296943E-02
TEH Area:2721712 TEH Amount: 8.996063E-02


G:\org\HP4\DAT\HP4010522_b\0105HP4.0016.RAW
MARKER_0105HP416r, DRO ;0105HP4 , DRO211220B
1.01 c-5
1.24
1.46 c-6
1.65
2.37 c-7
2.74
4.14 c-8
5.12
5.51 c-9
6.14
6.29
6.57
c-10
6.84
7.46 c-11
7.58
8.26 c-12
8.30
9.00 c-13
9.66 c-14
10.29 c-15
10.89 c-16
11.46 c-17
12.00 c-18
12.51 c-19
13.00 c-20
13.47 c-21
13.92 c-22
14.35 c-23
14.49
14.76 c-24
15.01
15.16 c-25
15.54 c-26
15.91 c-27
16.13
16.26 c-28
16.61 c-29
16.82
16.94 c-30
17.26
17.63 c-32
17.82
18.25
18.49 c-34
19.03
19.66 c-36
19.99
20.37
20.97
21.25 c-38
22.25
23.49 c-40
24.13
26.45
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
600
G:\org\HP4\dat\HP4010522_b\Review\016_MARKER_0105HP416r_CSC220105.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP417r, RRO ;0105HP4 , DRO220102A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0017.RAW
Date & Time Acquired: 1/5/2022 7:07:04 PM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.766	500.	342.932	68.59	-

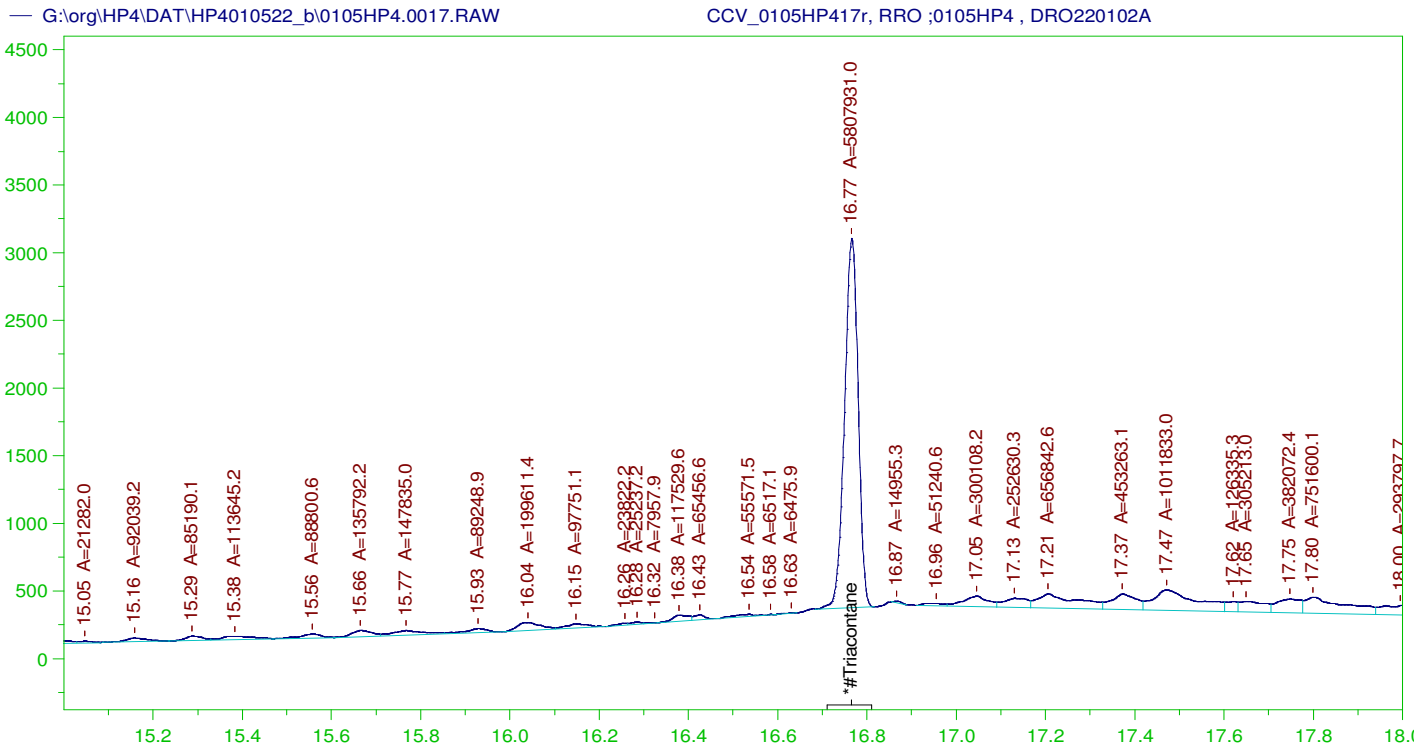
~~RRO~~ TEH (Oil Range) Area:1.145799E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4671.094

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0017.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.766	200.	342.932	171.47	75-125

AMN 01/25/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP417r, RRO ;0105HP4 , DRO220102A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0017.RAW
Date & Time Acquired: 1/5/2022 7:07:04 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

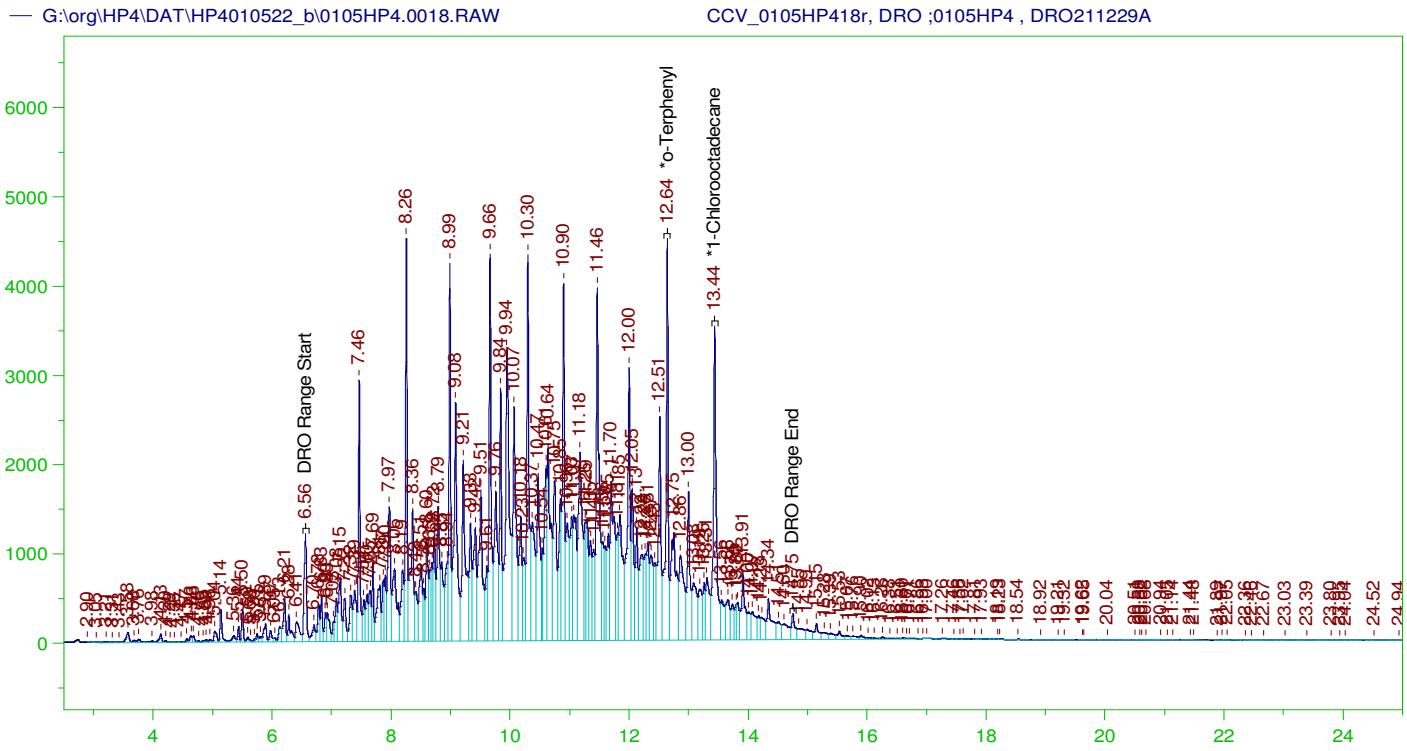
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.766	500.	232.561	46.51	-

RRO Area:1.060009E+07 RRO AMOUNT: 432.1355

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0017.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.766	200.	232.561	116.28	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0105HP418r, DRO ;0105HP4 , DRO211229A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0018.RAW
Date & Time Acquired: 1/5/2022 7:51:49 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.642	200.	357.049	178.52	-
*1-Chlorooctadecane	13.438	200.	355.724	177.86	-

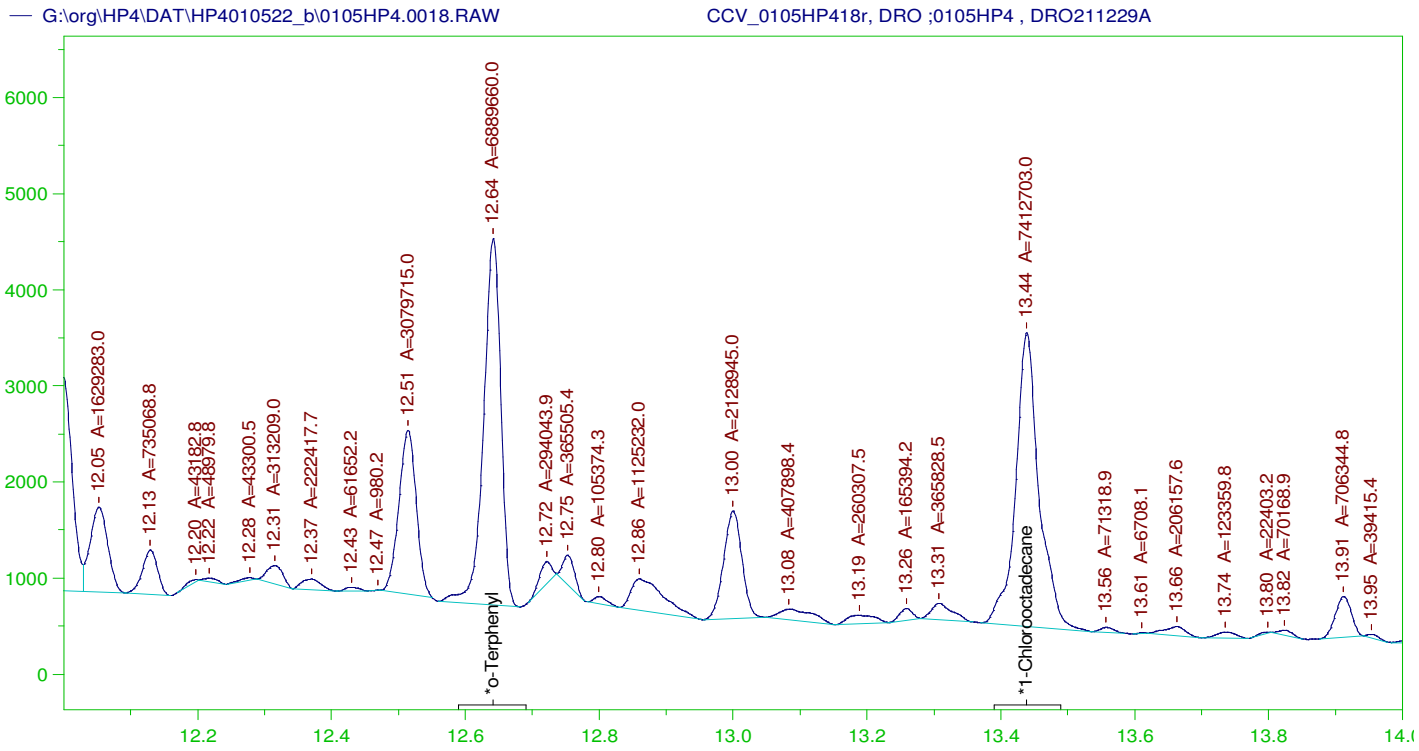
DRO Area:4.254741E+08 DRO Amount: 14485.07
TEH Area:4.412612E+08 TEH Amount: 15022.54

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0018.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15022.54	100.15	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.642	200.	357.049	178.52	85-115
*1-Chlorooctadecane	13.438	200.	355.724	177.86	85-115

G:\org\HP4\dat\HP4010522_b\Review\018_CCV_0105HP418r_DC_8015-C24-OI-L%.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0105HP418r, DRO ;0105HP4 , DRO211229A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0018.RAW
Date & Time Acquired: 1/5/2022 7:51:49 PM
Method File: G:\Org\HP4\methods\DS_8015-C24-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

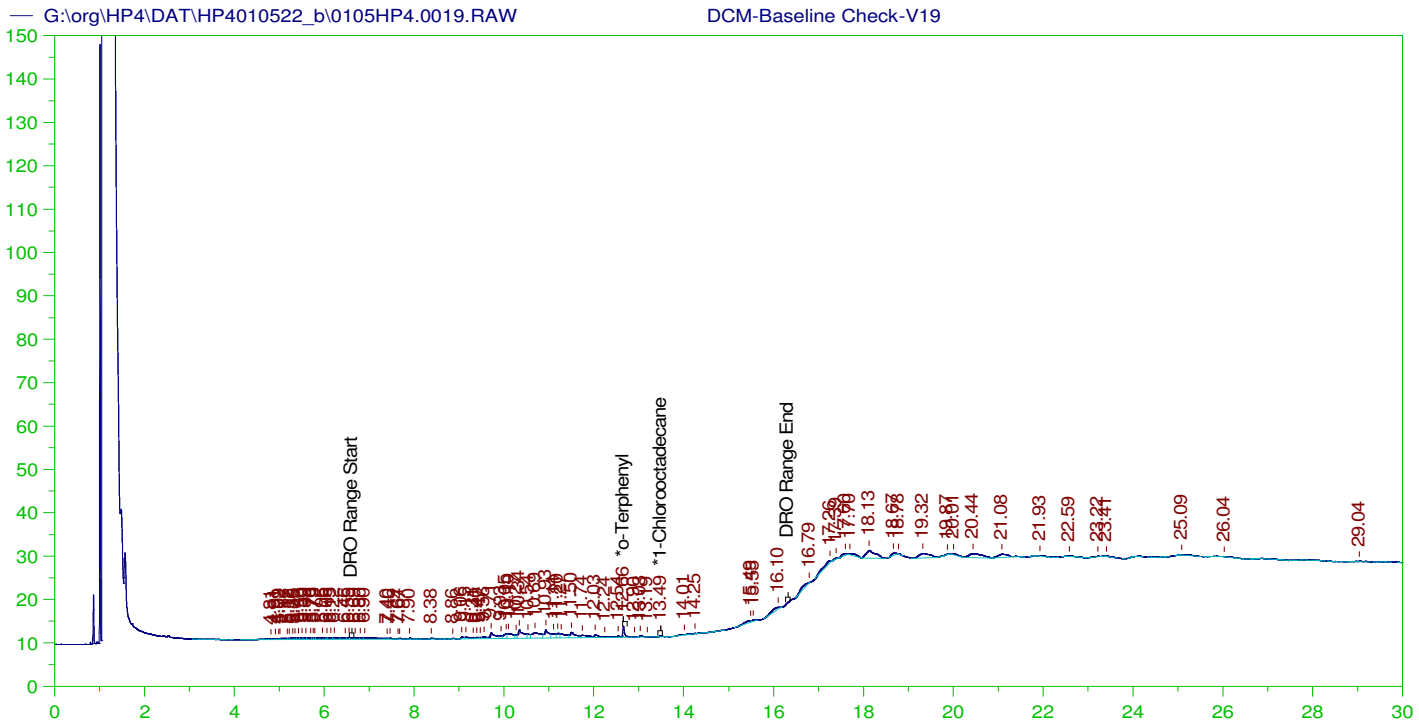
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.642	200.	206.774	103.39	-
*1-Chlorooctadecane	13.438	200.	222.472	111.24	-

DRO Area:1.889004E+08 DRO Amount: 6431.03
TEH Area:1.98937E+08 TEH Amount: 6772.721

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0018.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6772.72	45.15	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.642	200.	206.774	103.39	85-115
*1-Chlorooctadecane	13.438	200.	222.472	111.24	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V19
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0019.RAW
Date & Time Acquired: 1/5/2022 8:36:43 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

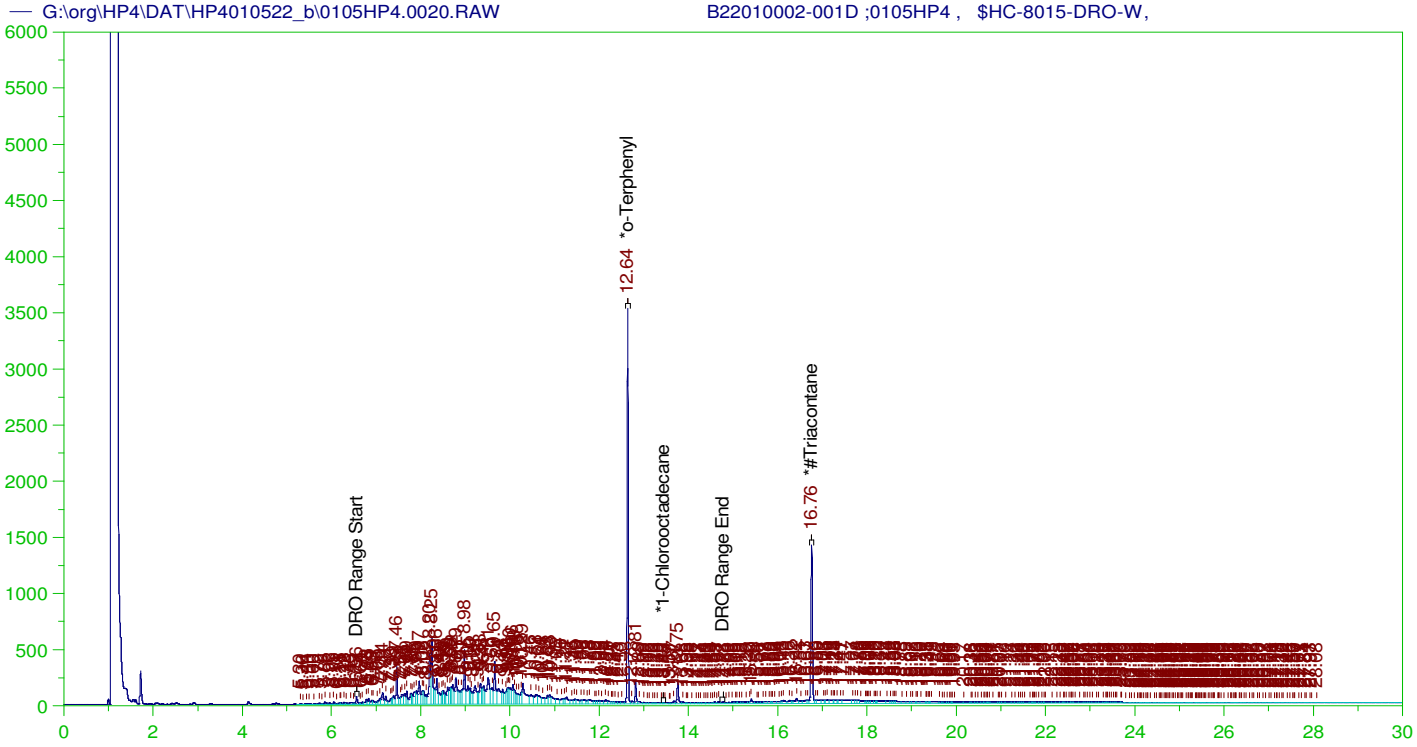
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.656	200.	.238	.12	-
*1-Chlorooctadecane	13.49	200.	.037	.02	-

DRO Area:181177.9 DRO Amount: 6.16812
TEH Area:346545.3 TEH Amount: 11.79798

ERH2287 (RHMW2254-01 Bailer) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0020.RAW B22010002-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0020.RAW
Date & Time Acquired: 1/5/2022 9:21:48 PM
Method File: G:\Org\HP4\methods\D3_8015-010513-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

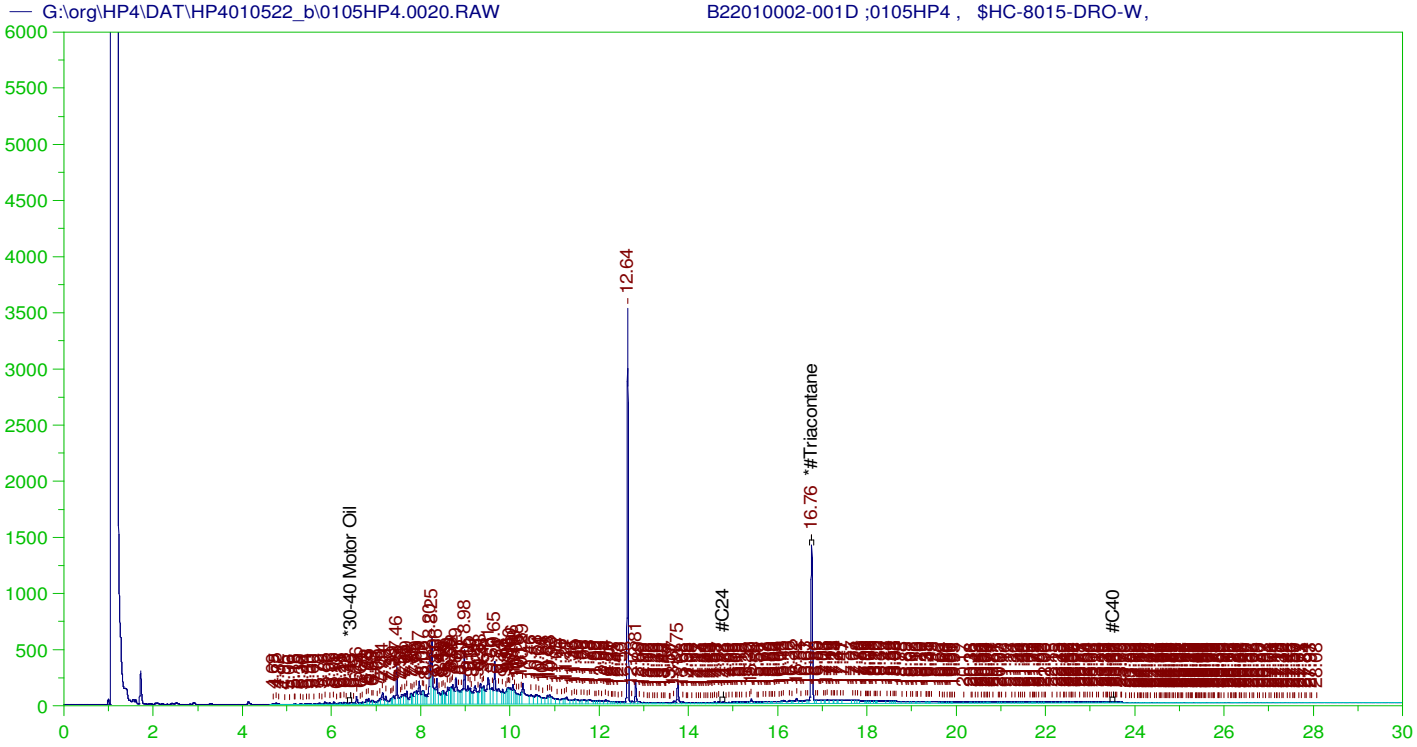
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.204	.19	93.05	-
*1-Chlorooctadecane	13.431	.204	.19		-
*#Triacontane	16.758	.204	.127	62.42	-

DRO Area:3.279891E+07 DRO Amount: 1.139412
TEH Area:4.160582E+07 TEH Amount: 1.445358

ERH2287 (RHMW2254-01 Bailer) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0020.RAW B22010002-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010002-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0020.RAW
Date & Time Acquired: 1/5/2022 9:21:48 PM
Method File: G:\Org\HP4\Methods\D3_ORO-010513-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

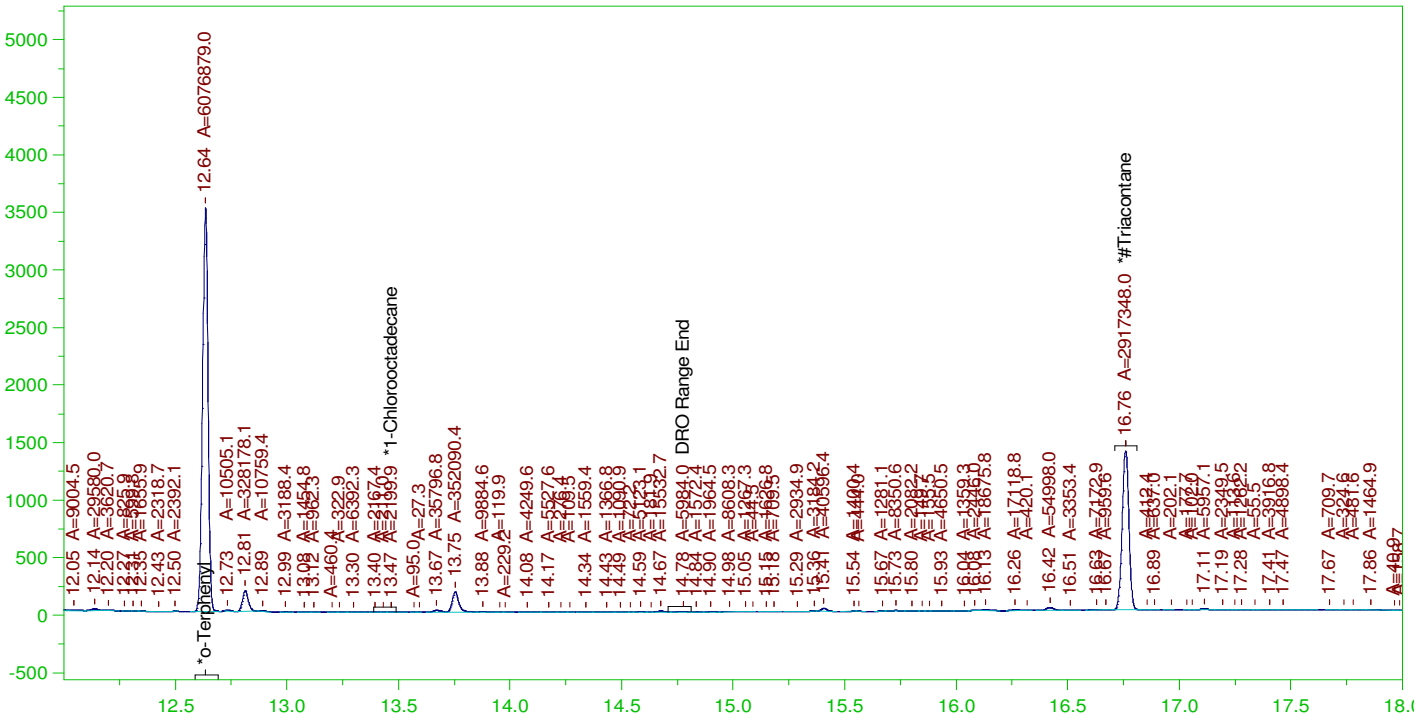
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	.51	.127	24.97	-

RRO Area:7791871 RRO AMOUNT: 0.3241349

ERH2287 (RHMW2254-01 Bailer) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0020.RAW B22010002-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0020.RAW
Date & Time Acquired: 1/5/2022 9:21:48 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

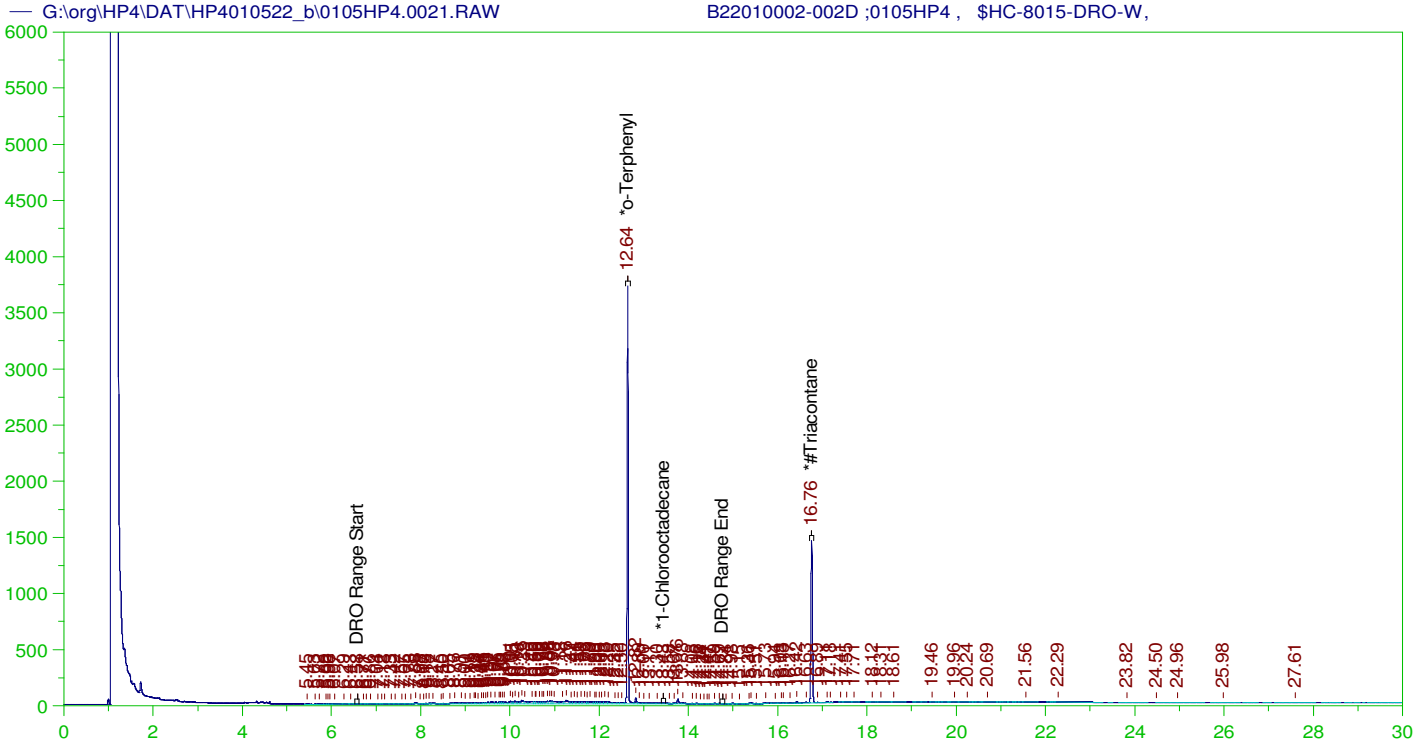
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.204	.186	91.19	-
*1-Chlorooctadecane	13.468	.204	.	.03	-
*#Triacontane	16.758	.204	.119	58.41	-

DRO Area:2.546451E+07 DRO Amount: 0.8846203
TEH Area:2.622275E+07 TEH Amount: 0.9109611

ERH2289 (RHMW2254-01 LF) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0021.RAW B22010002-002D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-002D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0021.RAW
Date & Time Acquired: 1/5/2022 10:06:50 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

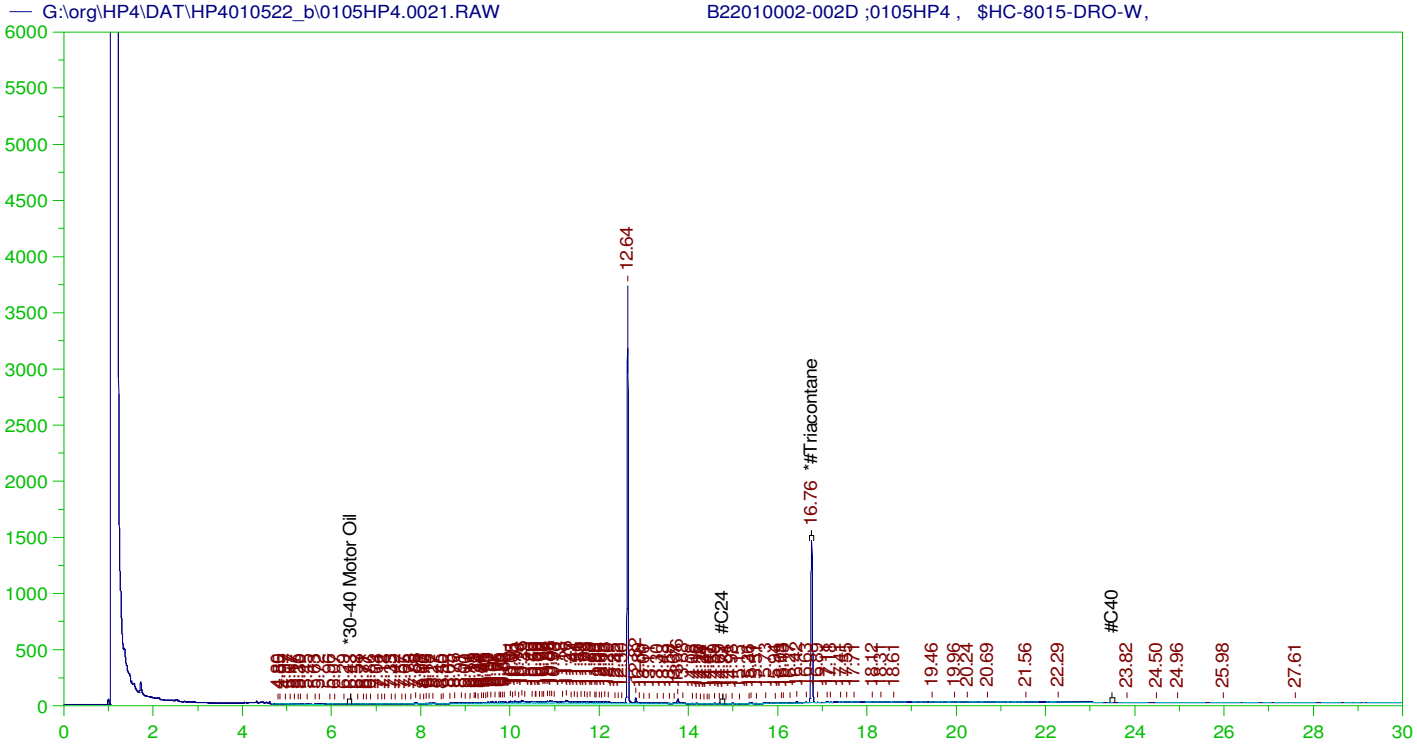
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.19	.188	98.57	-
*1-Chlorooctadecane	13.435	.19	.001	.4	-
*#Triacontane	16.758	.19	.117	61.62	-

DRO Area:4614550 DRO Amount: 0.1496193
TEH Area:4889961 TEH Amount: 0.1585491

ERH2289 (RHMW2254-01 LF) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0021.RAW B22010002-002D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010002-002D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0021.RAW
Date & Time Acquired: 1/5/2022 10:06:50 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

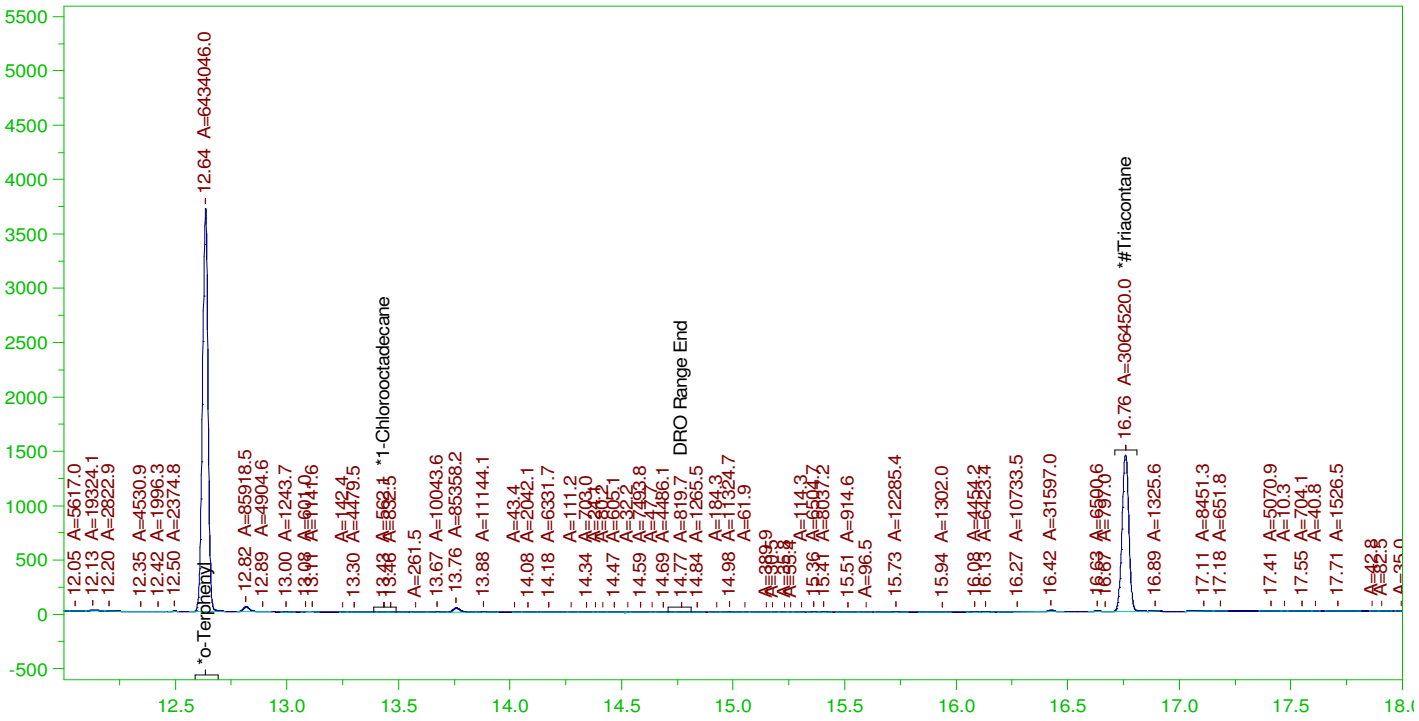
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	.476	.117	24.54	-

RRO Area:186232.1 RRO AMOUNT: 7.230619E-03

ERH2289 (RHMW2254-01 LF) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0021.RAW B22010002-002D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-002D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0021.RAW
Date & Time Acquired: 1/5/2022 10:06:50 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

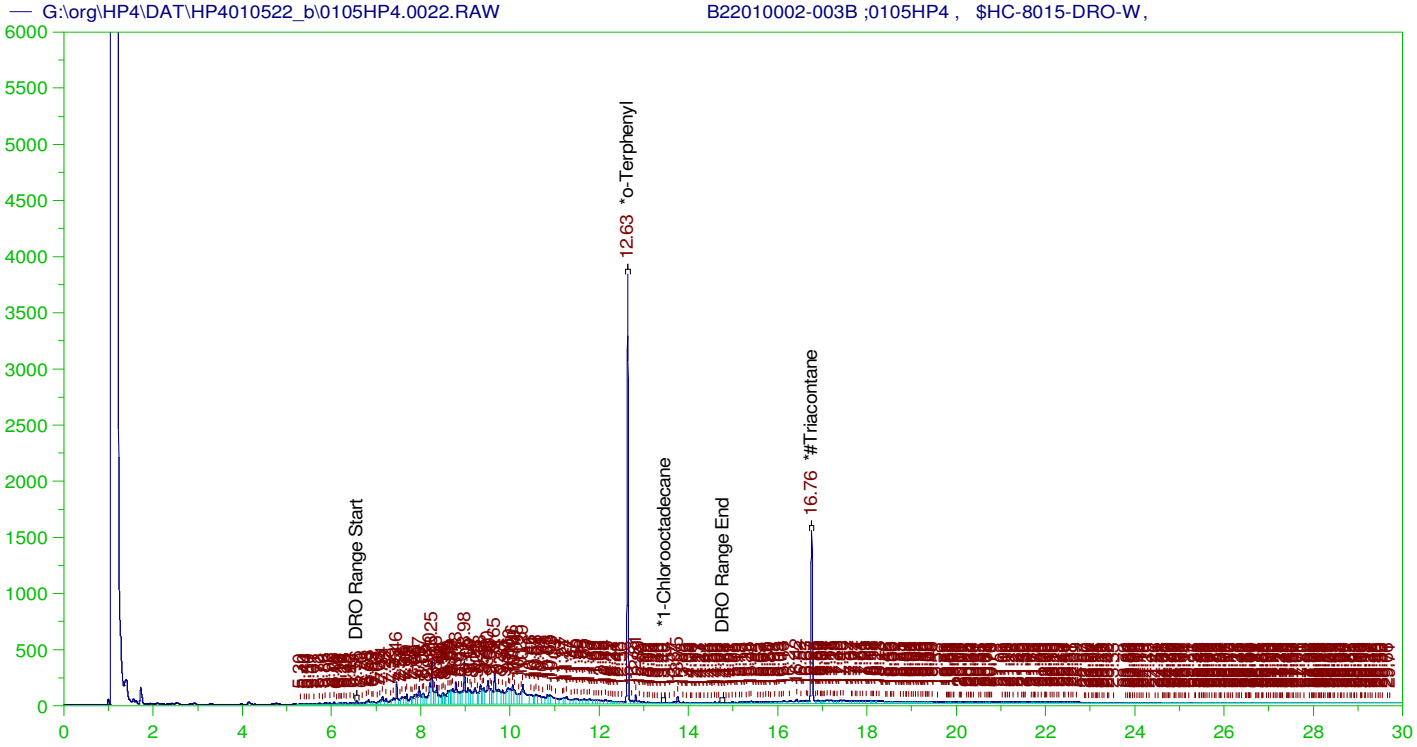
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.19	.184	96.55	-
*1-Chlorooctadecane	13.435	.19	.	.01	-
*#Triacontane	16.758	.19	.117	61.35	-

DRO Area:1715131 DRO Amount: 5.561033E-02
TEH Area:2366073 TEH Amount: 0.0767161

ERH2288 (RHMW2254-01 Bailer) FD Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0022.RAW B22010002-003B ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-003B ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0022.RAW
Date & Time Acquired: 1/5/2022 10:51:42 PM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

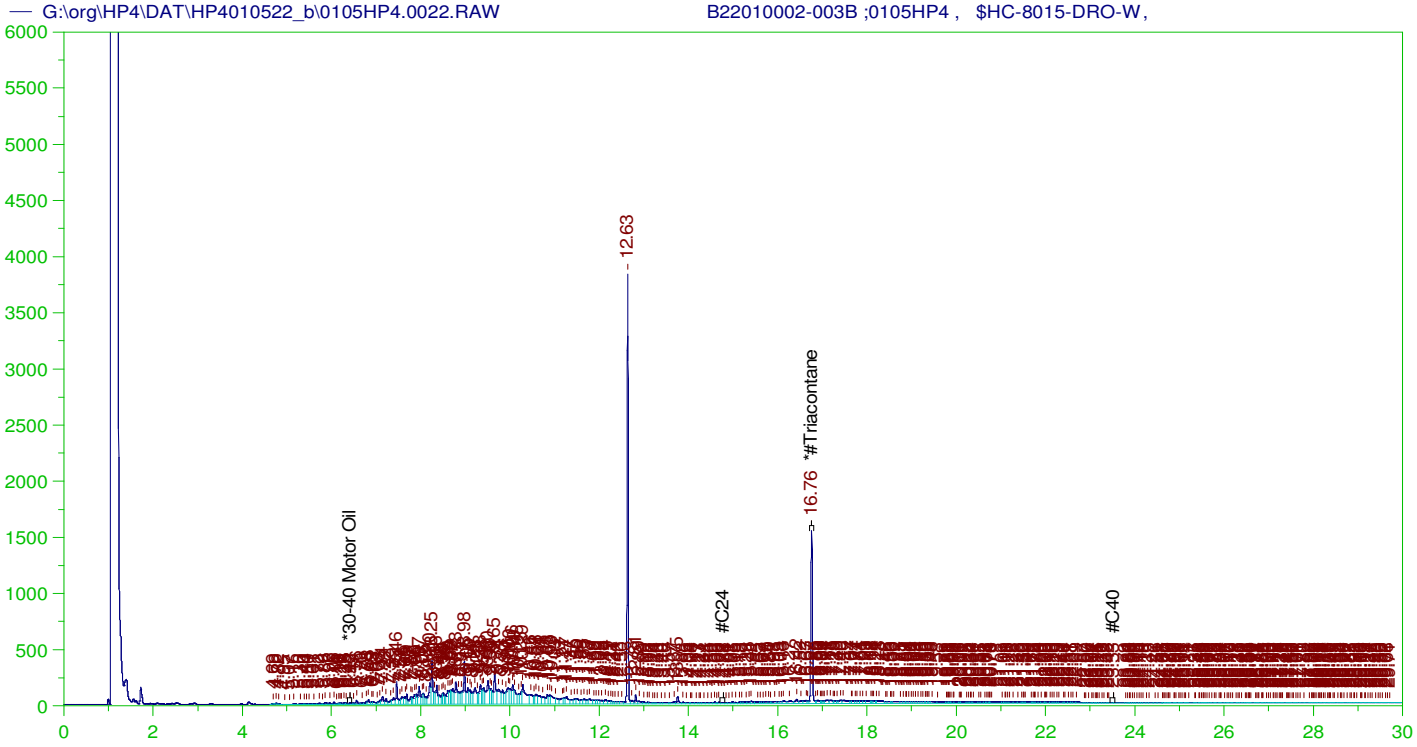
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.192	.197	102.25	-
*1-Chlorooctadecane	13.46	.192	.002	1.04	-
*#Triacontane	16.758	.192	.131	68.29	-

DRO Area:2.838205E+07 DRO Amount: 0.9290905
TEH Area:3.717354E+07 TEH Amount: 1.216881

ERH2288 (RHMW2254-01 Bailer) FD Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0022.RAW B22010002-003B ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010002-003B ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0022.RAW
Date & Time Acquired: 1/5/2022 10:51:42 PM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

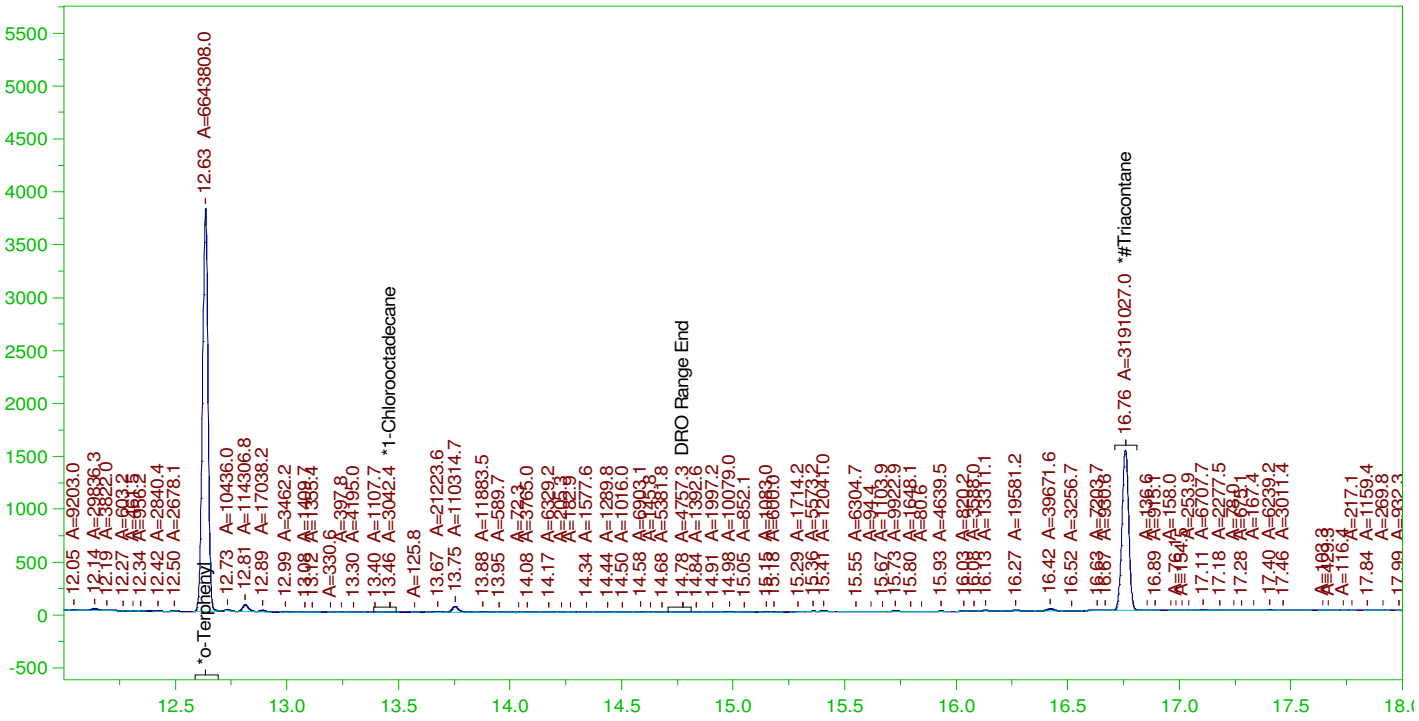
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	.481	.131	27.32	-

RRO Area:7627556 RRO AMOUNT: 0.2989938

ERH2288 (RHMW2254-01 Bailer) FD Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0022.RAW B22010002-003B ;0105HP4 , $HC-8015-DRO-W,



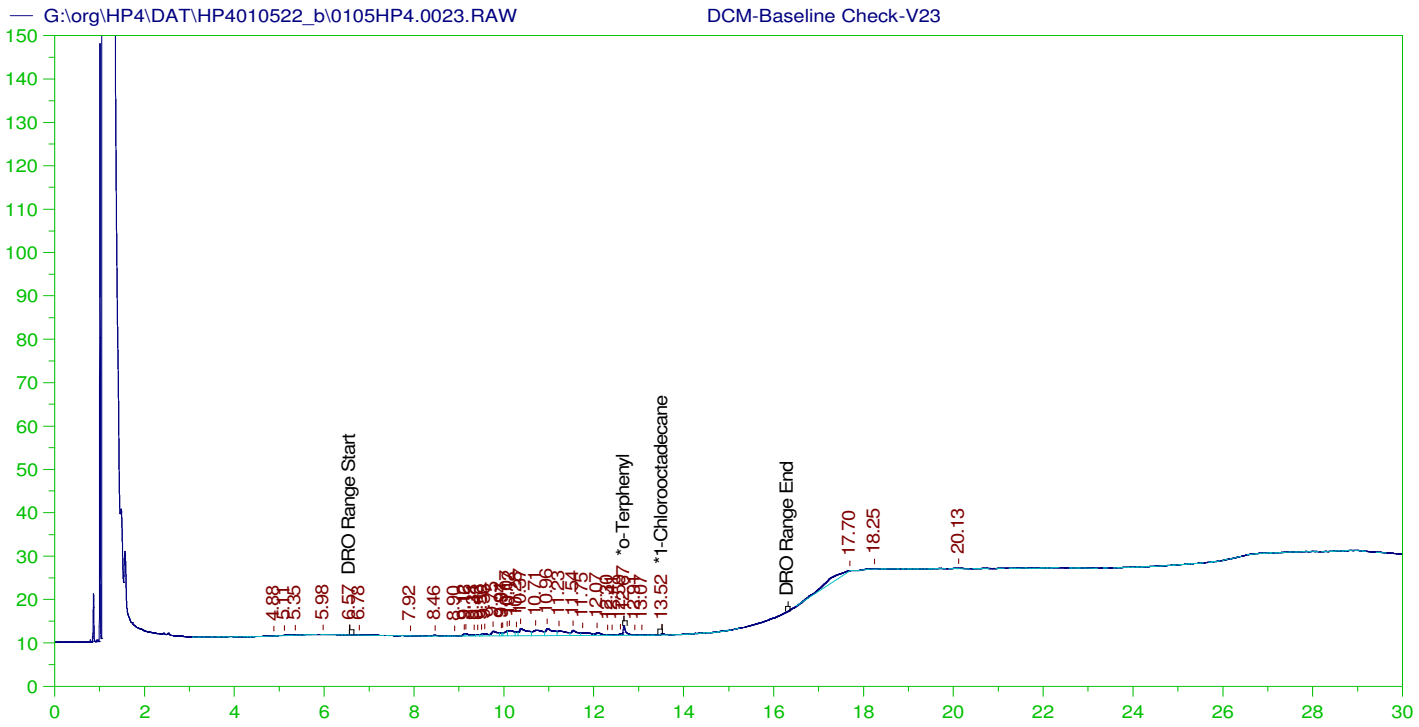
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-003B ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0022.RAW
Date & Time Acquired: 1/5/2022 10:51:42 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.635	.192	.192	99.7	-
*1-Chlorooctadecane	13.46	.192	.	.05	-
*#Triacontane	16.758	.192	.123	63.89	-

DRO Area:2.00894E+07 DRO Amount: 0.6576294
TEH Area:2.070843E+07 TEH Amount: 0.6778934



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V23
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0023.RAW
Date & Time Acquired: 1/5/2022 11:36:23 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

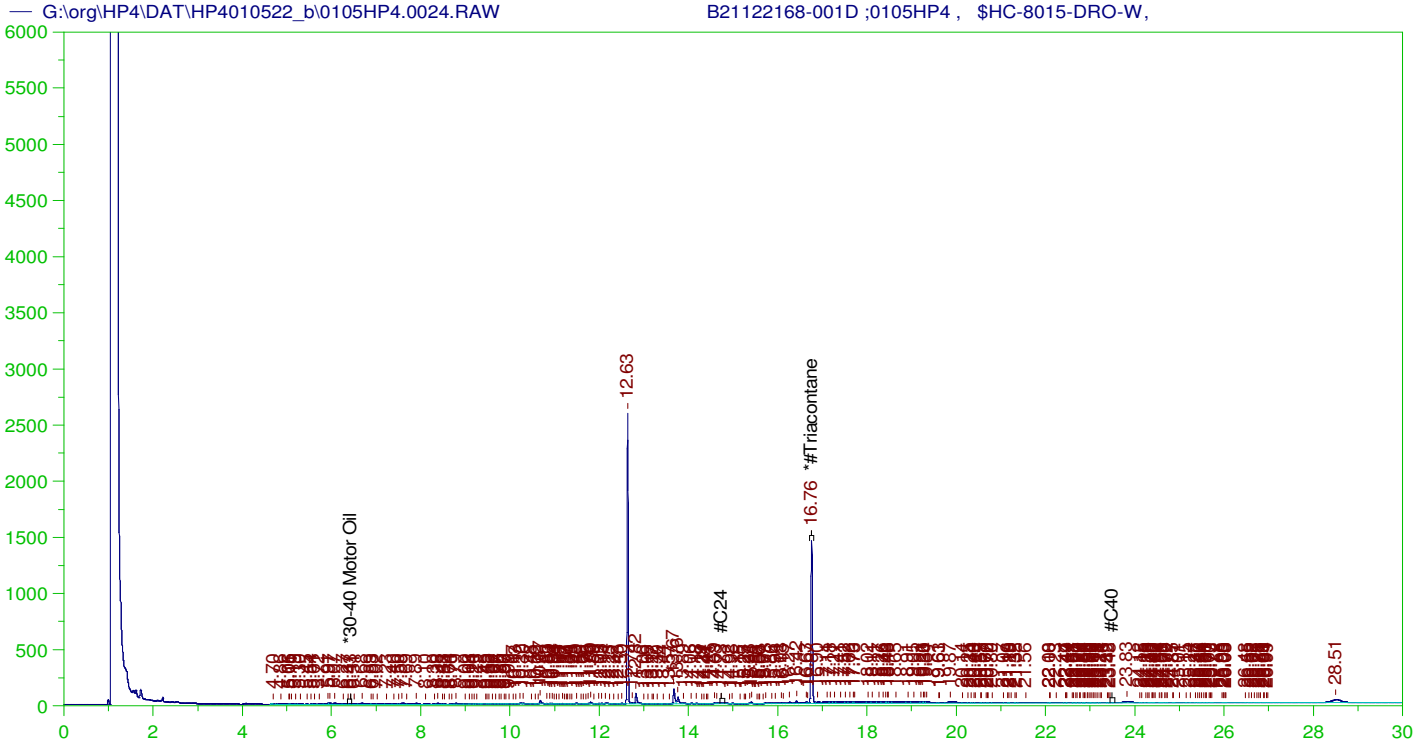
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.671	200.	.291	.15	-
*1-Chlorooctadecane	13.523	200.	.045	.02	-

DRO Area:162002.6 DRO Amount: 5.515304
TEH Area:224578.3 TEH Amount: 7.645666

ERH2285 (RHMW05) MS/MSD Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0024.RAW B21122168-001D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0024.RAW
Date & Time Acquired: 1/6/2022 12:21:17 AM
Method File: G:\Org\HP4\Methods\D3_ORO-010524-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

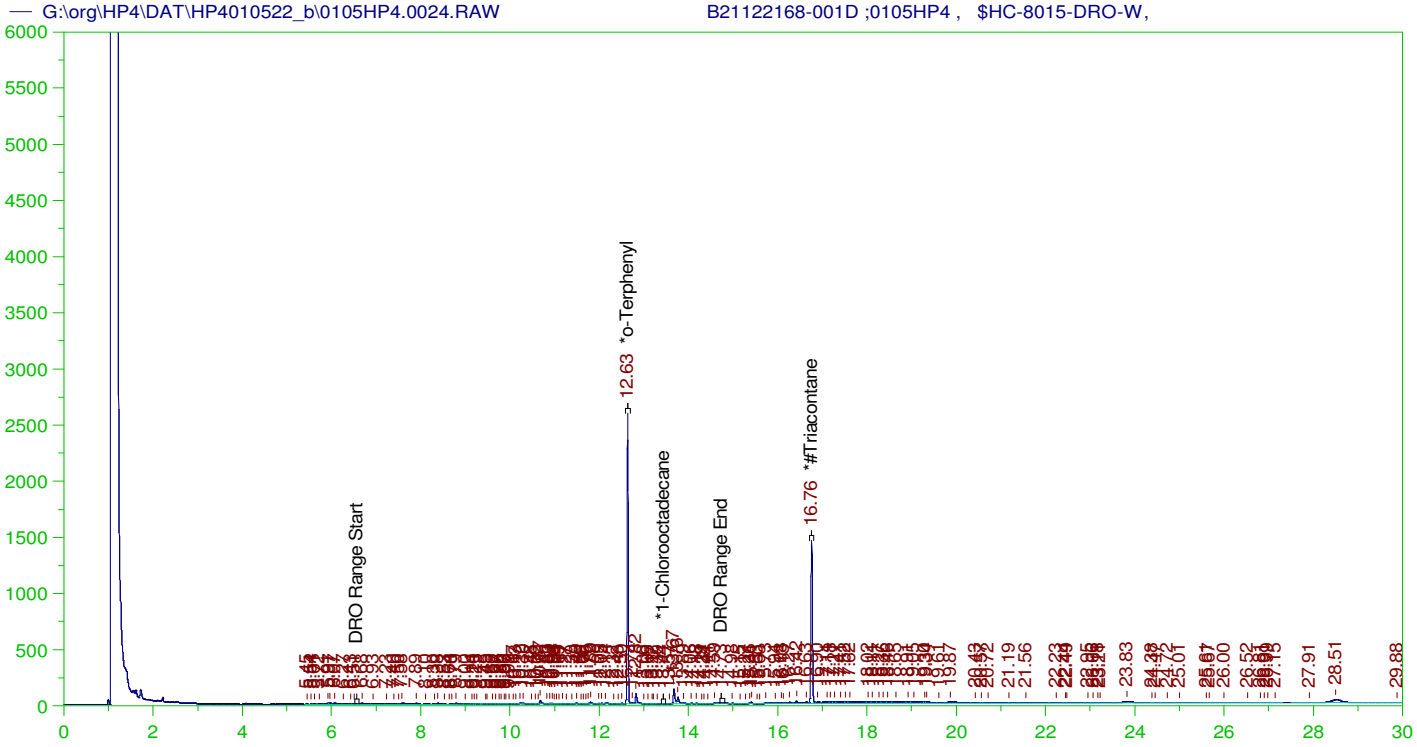
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	.485	.123	25.32	-

RRO Area:3896277 RRO AMOUNT: 0.1542137

ERH2285 (RHMW05) MS/MSD Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0024.RAW B21122168-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0024.RAW
Date & Time Acquired: 1/6/2022 12:21:17 AM
Method File: G:\Org\HP4\methods\DR_8015-010524-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

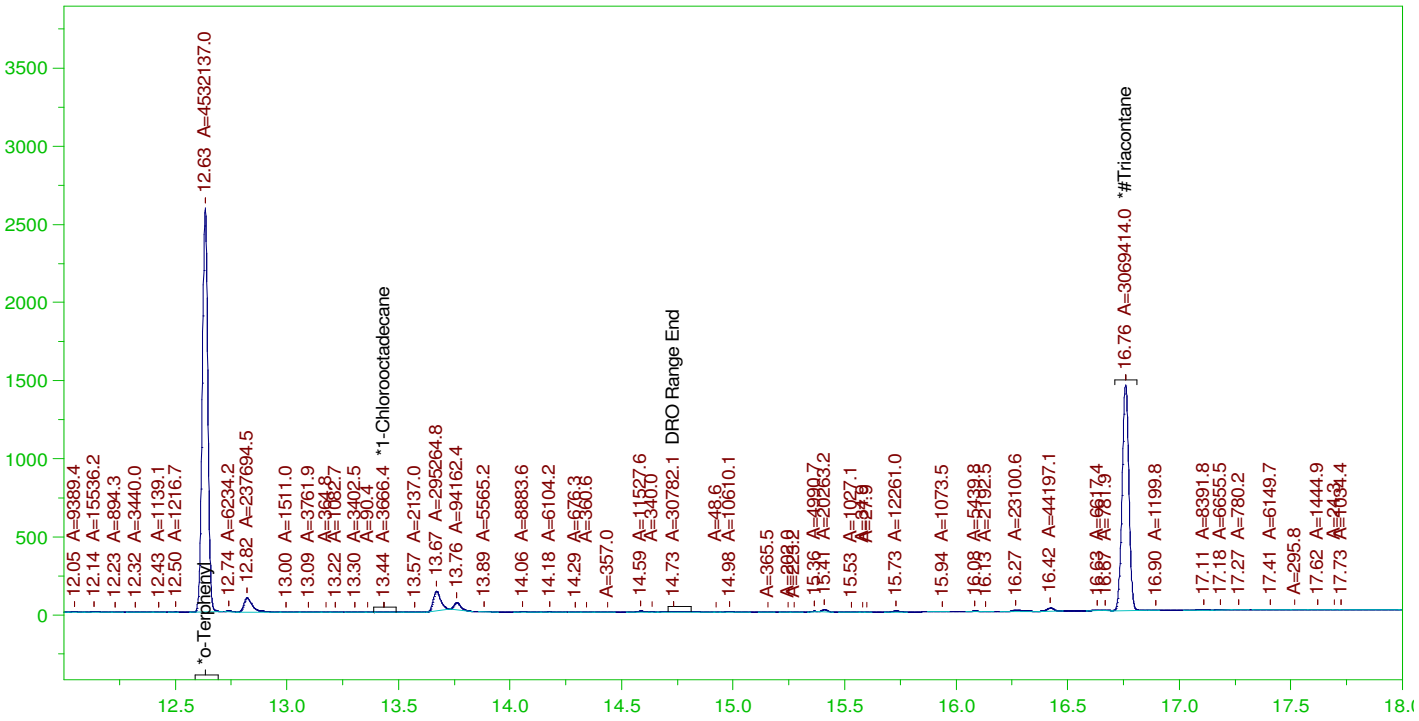
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.634	.194	.133	68.56	-
*1-Chlorooctadecane	13.435	.194	.	.06	-
*#Triacontane	16.758	.194	.123	63.29	-

DRO Area:1894916 DRO Amount: 6.263258E-02
TEH Area:6883917 TEH Amount: 0.2275338

ERH2285 (RHMW05) MS/MSD Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0024.RAW B21122168-001D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

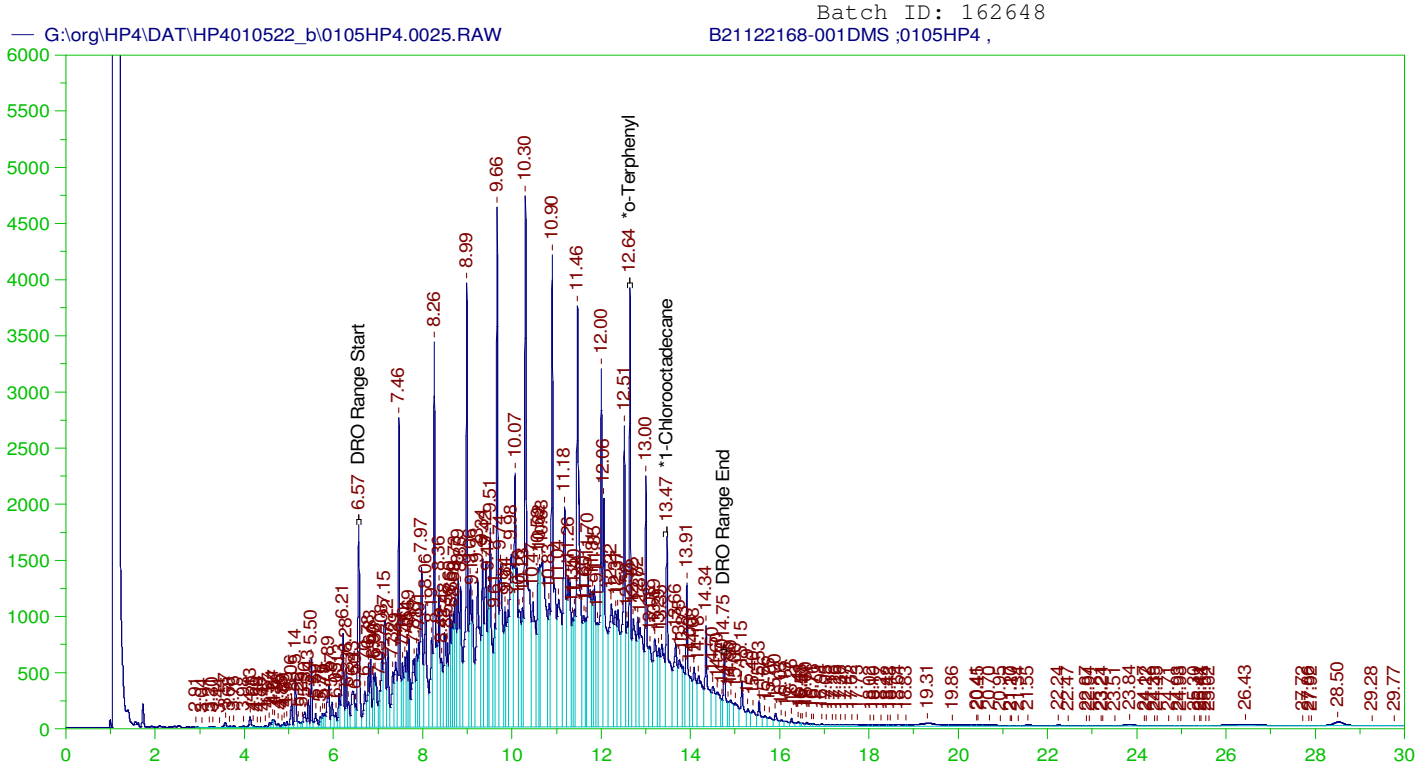
Sample Name: B21122168-001D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0024.RAW
Date & Time Acquired: 1/6/2022 12:21:17 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.634	.194	.132	68.01	-
*1-Chlorooctadecane	13.435	.194	.	.06	-
*#Triacontane	16.758	.194	.119	61.45	-

DRO Area:1310128 DRO Amount: 4.330361E-02
TEH Area:2406885 TEH Amount: 7.955468E-02

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-001DMS ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0025.RAW
Date & Time Acquired: 1/6/2022 1:06:20 AM
Method File: G:\Org\HP4\methods\D3_8015-C24-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

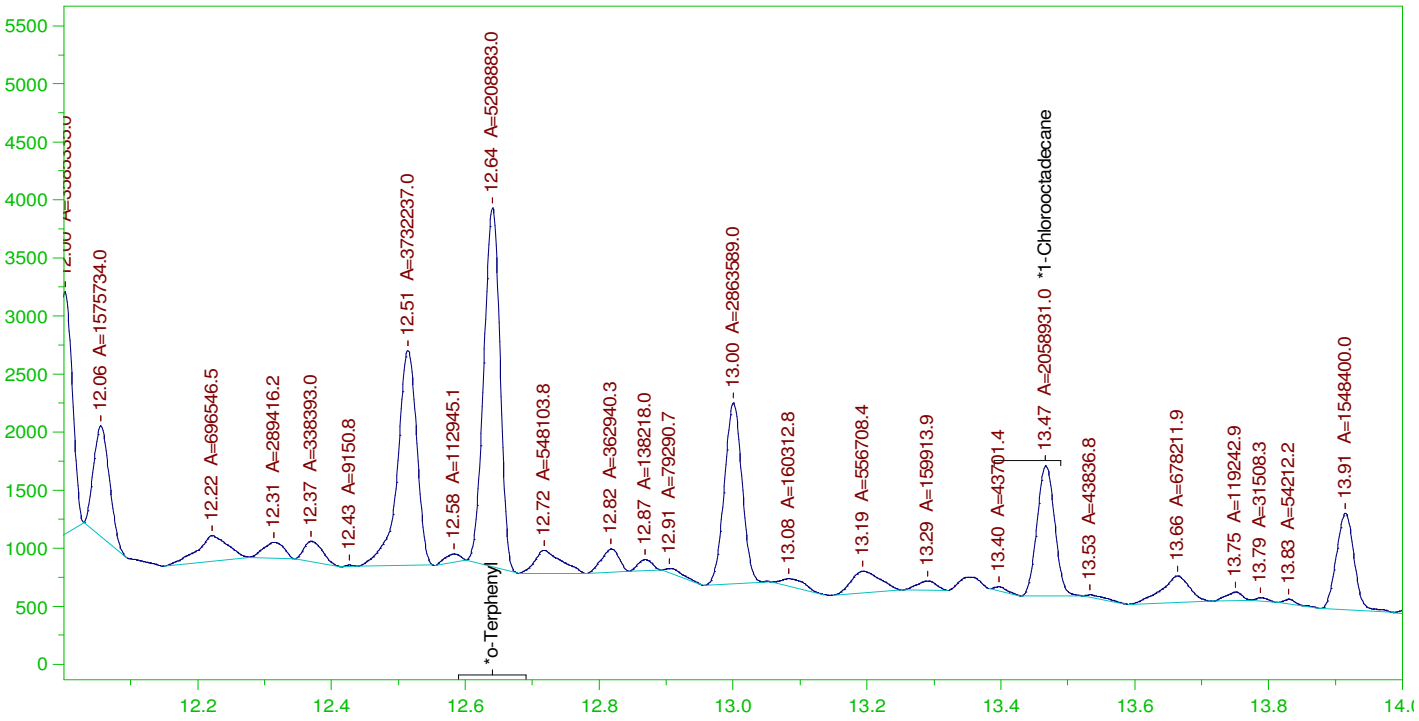
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.641	.194	.266	136.84	-
*1-Chlorooctadecane	13.467	.194	.217	111.68	-

DRO Area:4.386229E+08 DRO Amount: 14.49779
TEH Area:4.737095E+08 TEH Amount: 15.6575

Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0025.RAW B21122168-001DMS ;0105HP4 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

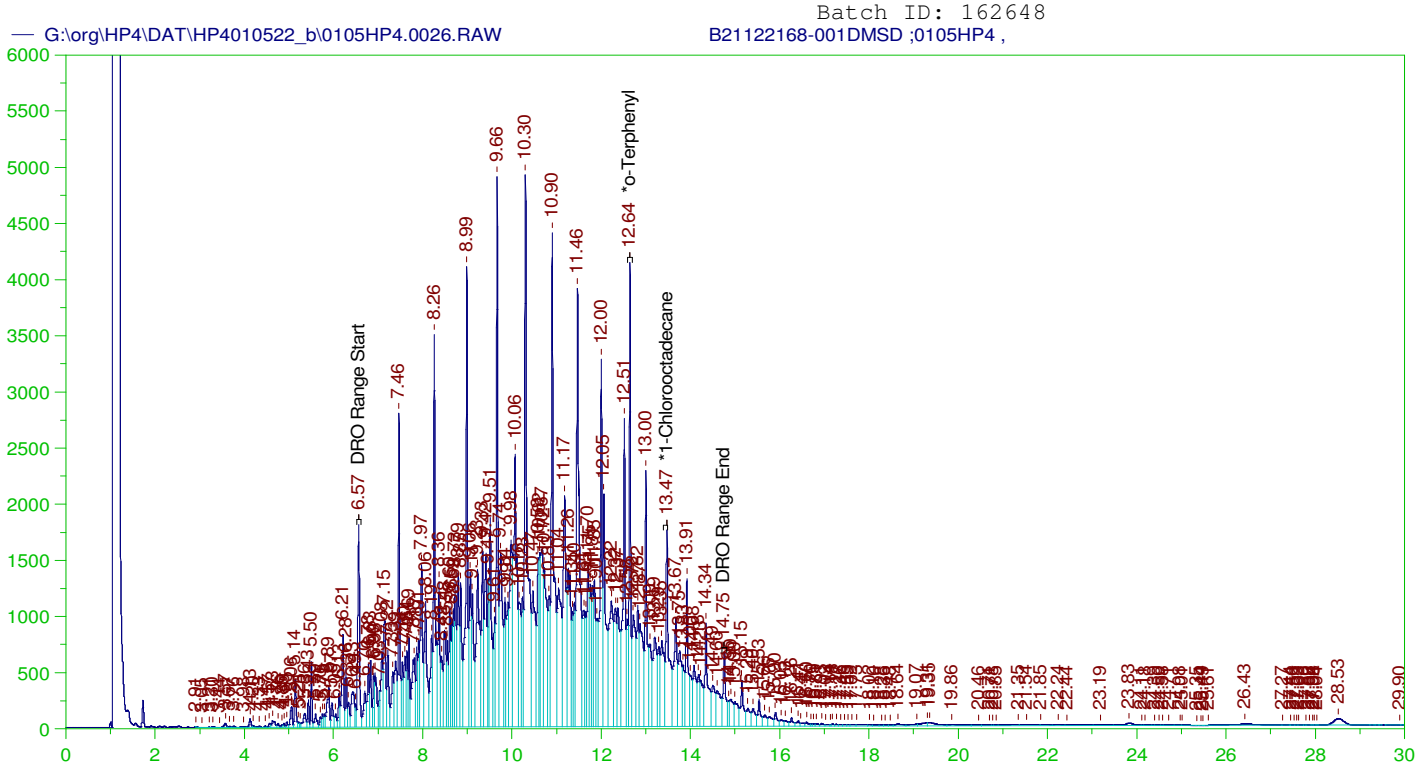
Sample Name: B21122168-001DMS ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0025.RAW
Date & Time Acquired: 1/6/2022 1:06:20 AM
Method File: G:\Org\HP4\methods\DS_8015-C24-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.641	.194	.152	78.17	-
*1-Chlorooctadecane	13.467	.194	.06	30.9	-

DRO Area:1.802197E+08 DRO Amount: 5.956796
TEH Area:1.969731E+08 TEH Amount: 6.510544

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

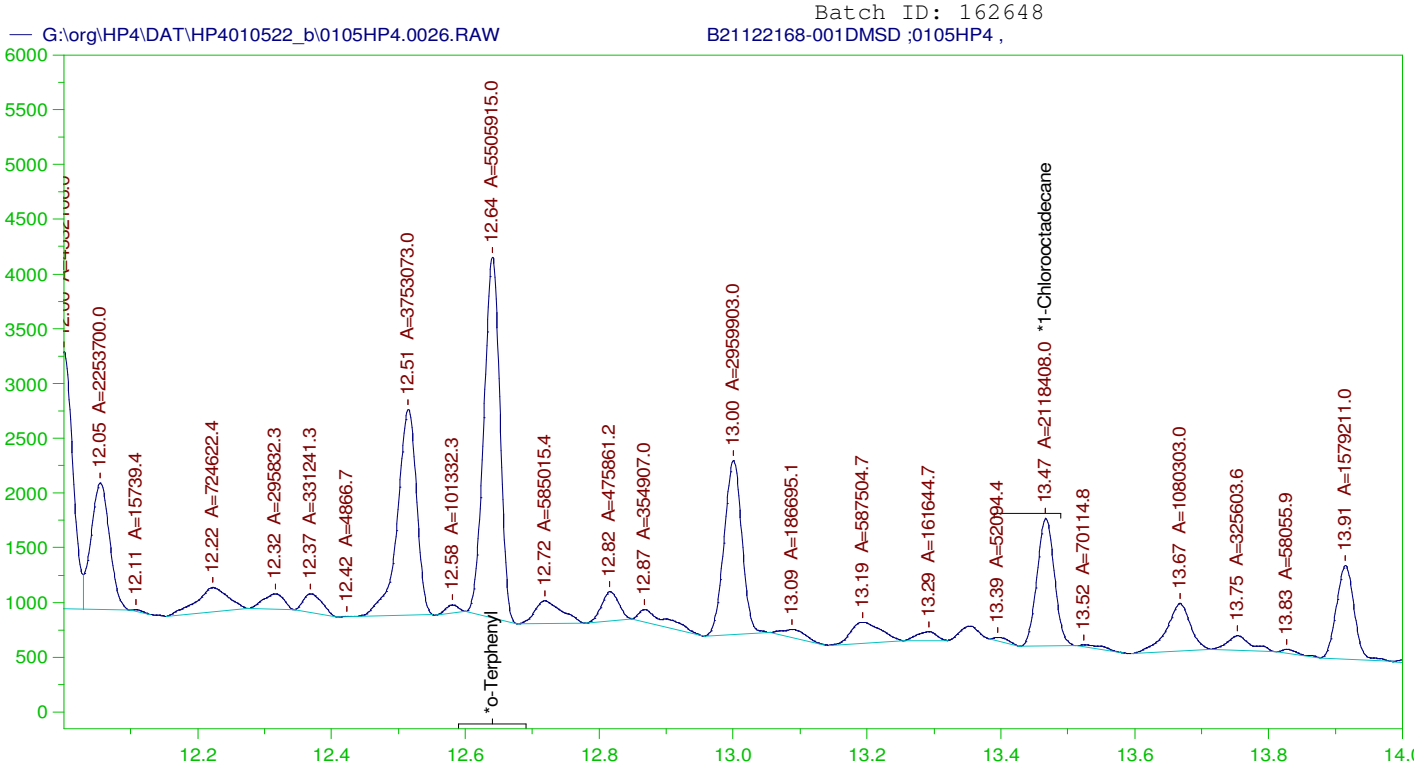
Sample Name: B21122168-001DMSD ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0026.RAW
Date & Time Acquired: 1/6/2022 1:51:26 AM
Method File: G:\Org\HP4\methods\D3_8015-C24-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.641	.192	.273	141.98	-
*1-Chlorooctadecane	13.467	.192	.225	117.1	-

DRO Area:4.569778E+08 DRO Amount: 14.95923
TEH Area:4.920652E+08 TEH Amount: 16.10783

Batch ID: 162648



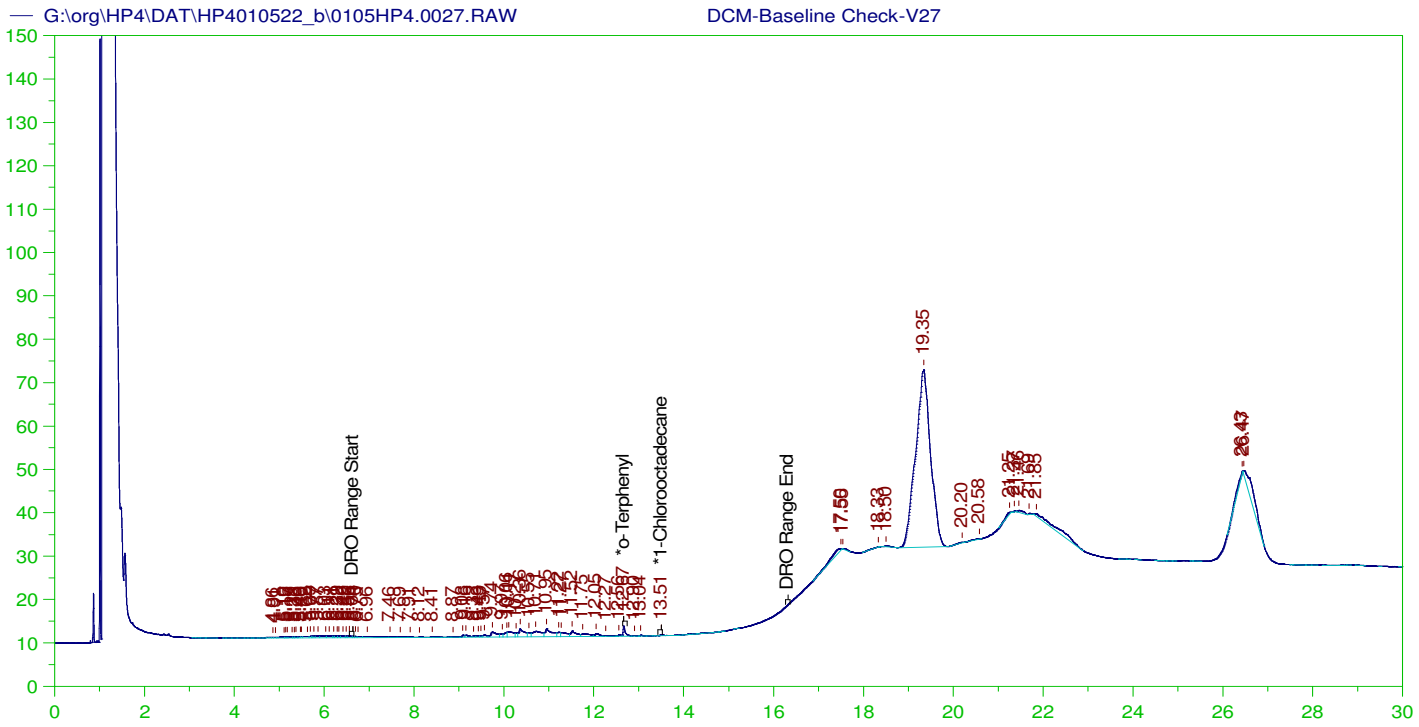
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-001DMSD ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0026.RAW
Date & Time Acquired: 1/6/2022 1:51:26 AM
Method File: G:\Org\HP4\methods\DS_8015-C24-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.641	.192	.159	82.62	-
*1-Chlorooctadecane	13.467	.192	.061	31.79	-

DRO Area:1.919582E+08 DRO Amount: 6.28378
TEH Area:2.08566E+08 TEH Amount: 6.827437

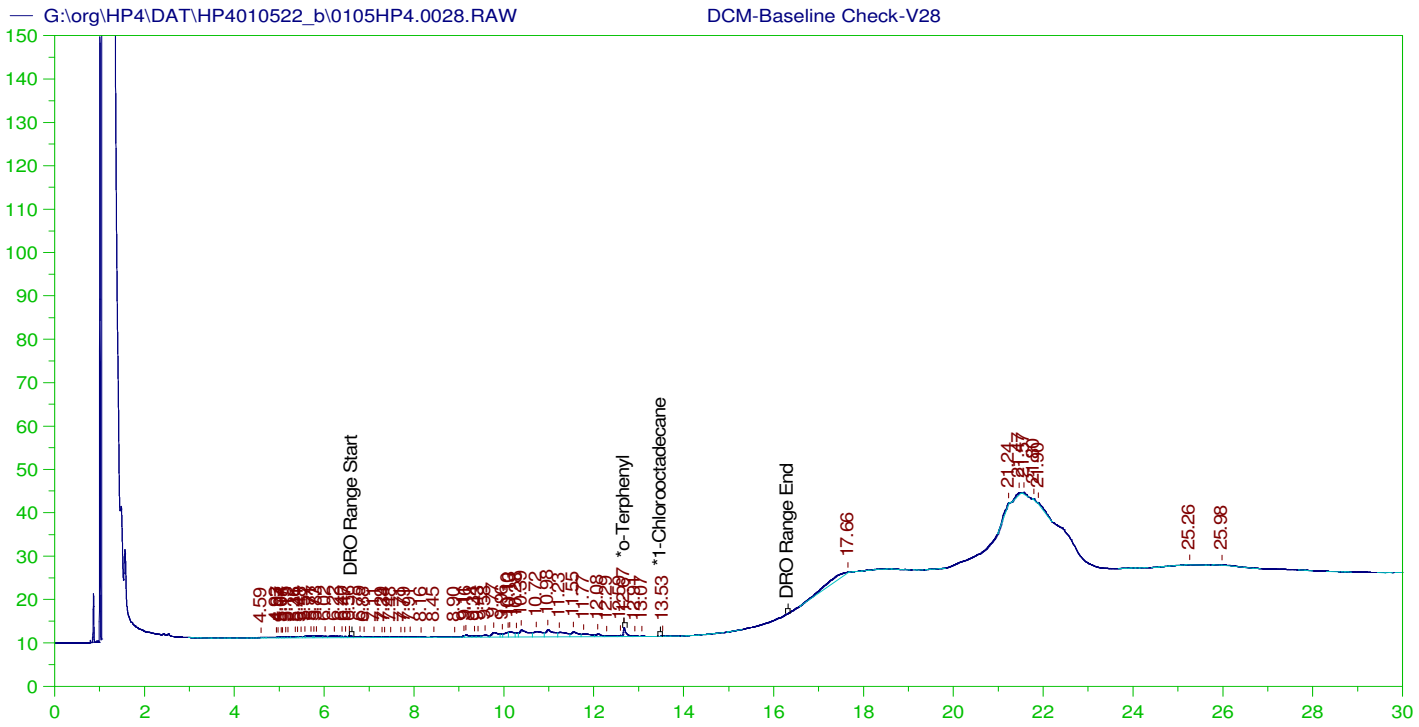


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V27
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0027.RAW
Date & Time Acquired: 1/6/2022 2:36:11 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 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	12.666	200.	.261	.13	-
*1-Chlorooctadecane	13.506	200.	.039	.02	-

DRO Area:168028.3 DRO Amount: 5.720448
TEH Area:1316537 TEH Amount: 44.8209



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V28
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0028.RAW
Date & Time Acquired: 1/6/2022 3:21:07 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

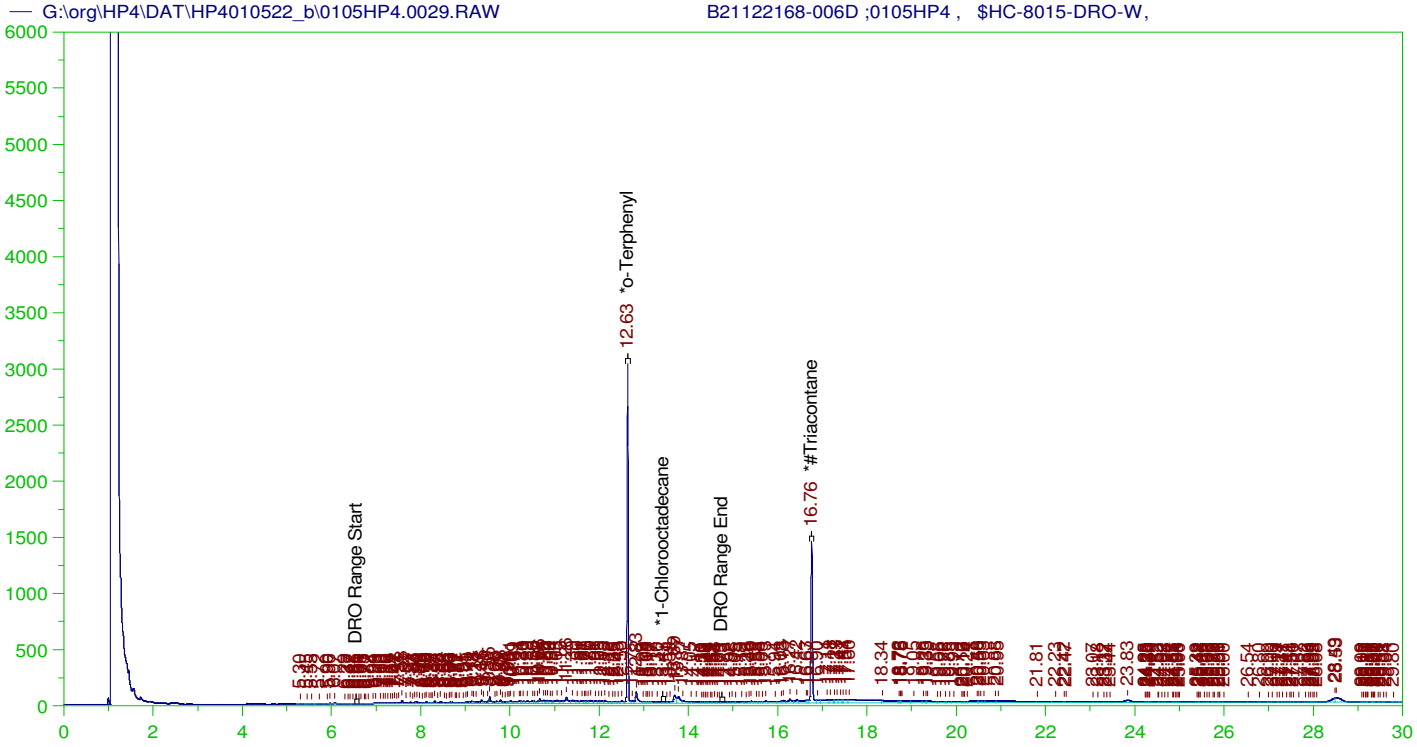
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.675	200.	.282	.14	-
*1-Chlorooctadecane	29.883	200.	.	.	-

DRO Area:183006 DRO Amount: 6.230358
TEH Area:294553.1 TEH Amount: 10.02793

ERH2278 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0029.RAW B21122168-006D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-006D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0029.RAW
Date & Time Acquired: 1/6/2022 4:06:01 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

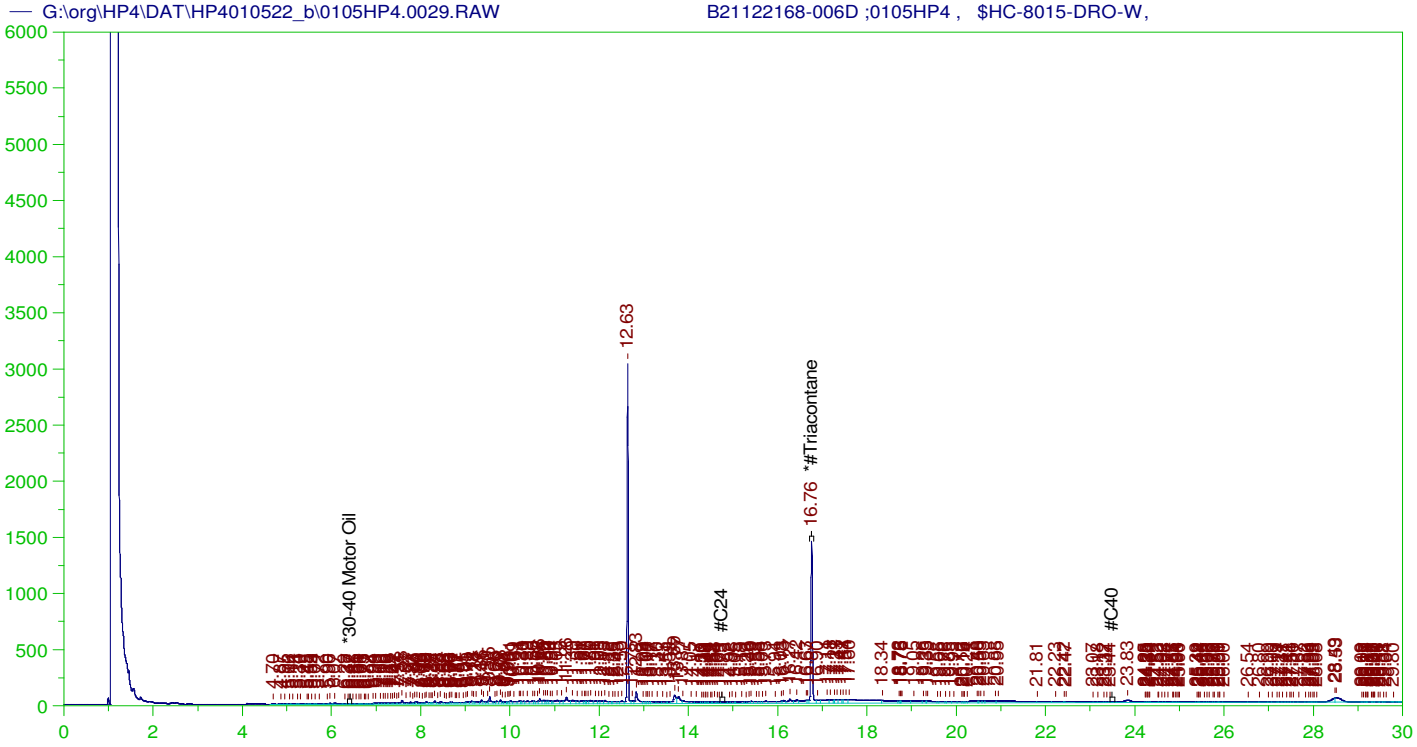
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.634	.19	.153	80.41	-
*1-Chlorooctadecane	13.428	.19	.003	1.57	-
*#Triacontane	16.758	.19	.123	64.59	-

DRO Area:8970960 DRO Amount: 0.2908688
TEH Area:2.110624E+07 TEH Amount: 0.6843358

ERH2278 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0029.RAW B21122168-006D ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-006D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0029.RAW
Date & Time Acquired: 1/6/2022 4:06:01 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

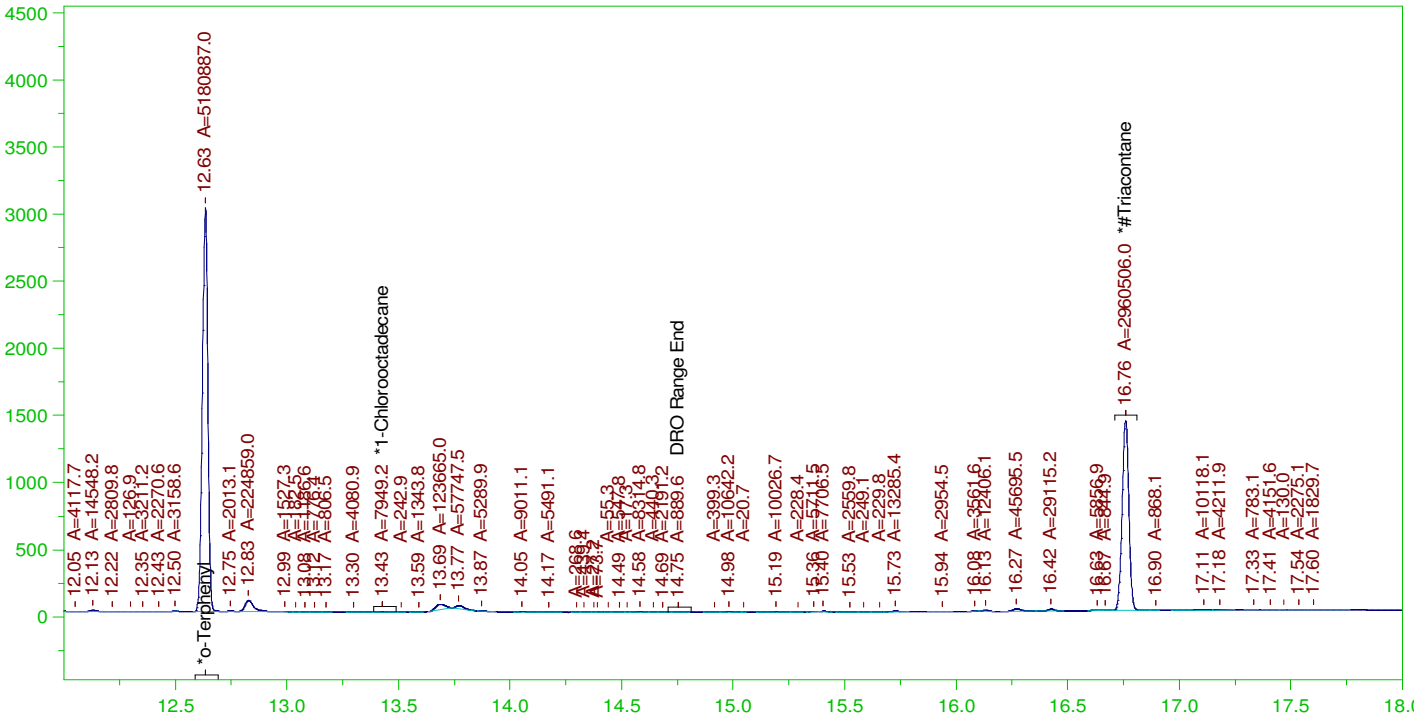
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.758	.476	.123	25.85	-

RRO Area:9740899 RRO AMOUNT: 0.3781986

ERH2278 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0029.RAW B21122168-006D ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-006D ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0029.RAW
Date & Time Acquired: 1/6/2022 4:06:01 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

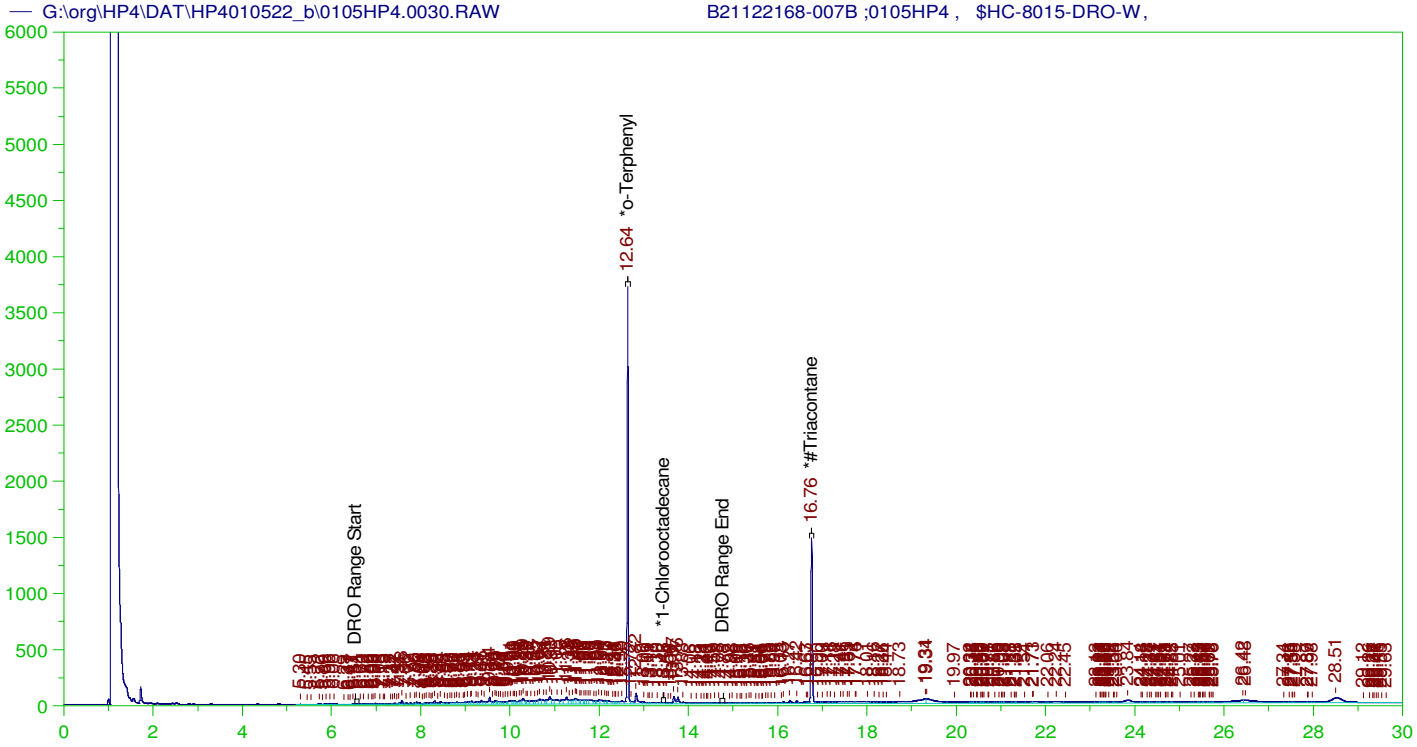
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.634	.19	.148	77.75	-
*1-Chlorooctadecane	13.428	.19	.	.12	-
*#Triacontane	16.758	.19	.113	59.27	-

DRO Area:2348964 DRO Amount: 7.616135E-02
TEH Area:3016971 TEH Amount: 9.782041E-02

ERH2279 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0030.RAW B21122168-007B ;0105HP4 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-007B ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0030.RAW
Date & Time Acquired: 1/6/2022 4:50:51 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

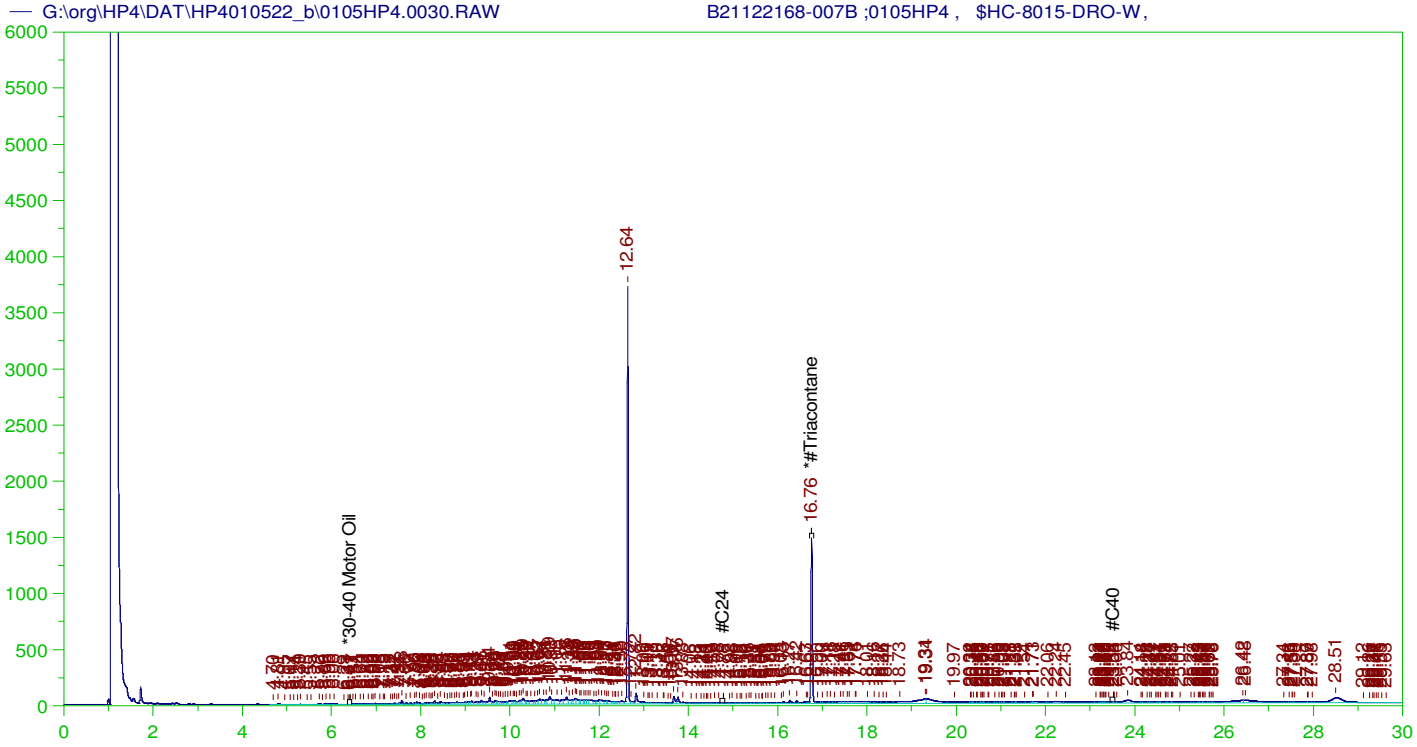
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.19	.187	98.41	-
*1-Chlorooctadecane	13.433	.19	.001	.43	-
*#Triacontane	16.757	.19	.121	63.47	-

DRO Area:8747491 DRO Amount: 0.2836232
TEH Area:1.832561E+07 TEH Amount: 0.5941782

ERH2279 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0030.RAW B21122168-007B ;0105HP4 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-007B ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0030.RAW
Date & Time Acquired: 1/6/2022 4:50:51 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

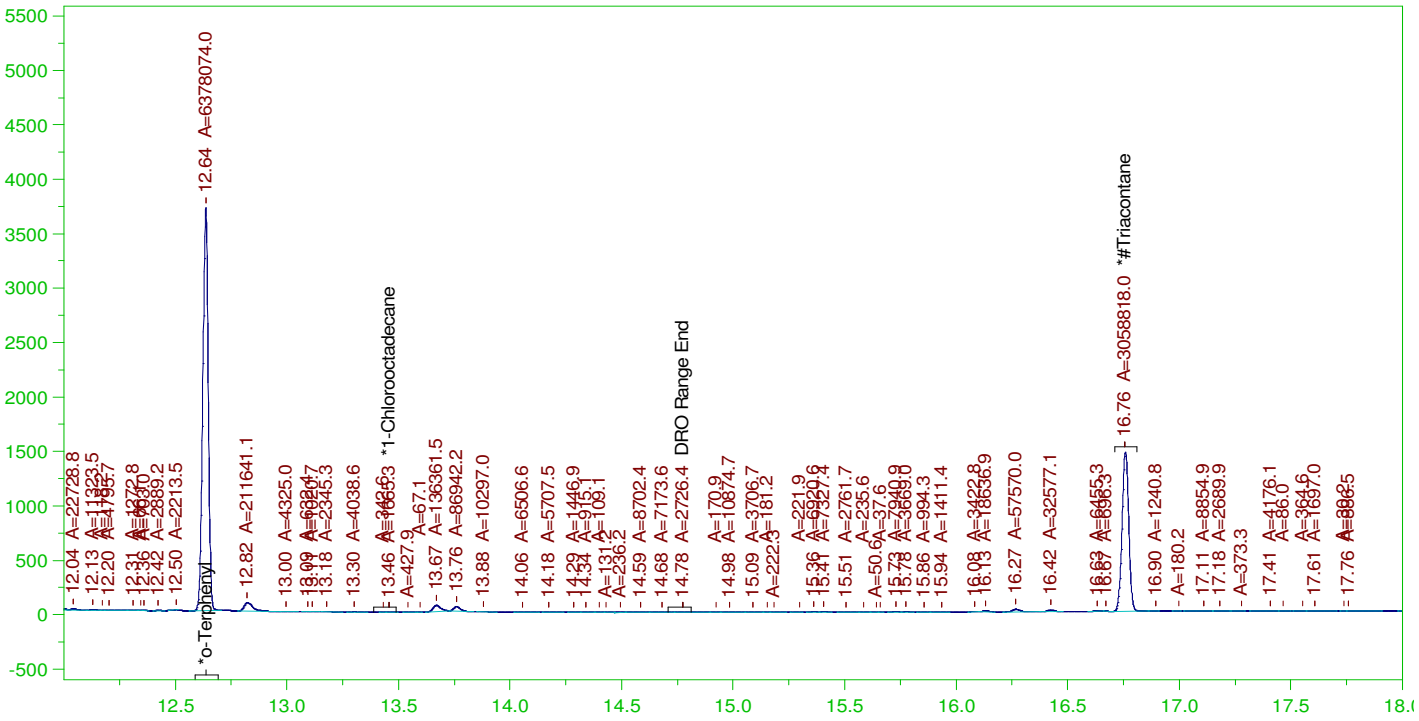
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.71 to 23.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.757	.476	.121	25.39	-

RRO Area:6274947 RRO AMOUNT: 0.2436301

ERH2279 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010522_b\0105HP4.0030.RAW B21122168-007B ;0105HP4 , $HC-8015-DRO-W,



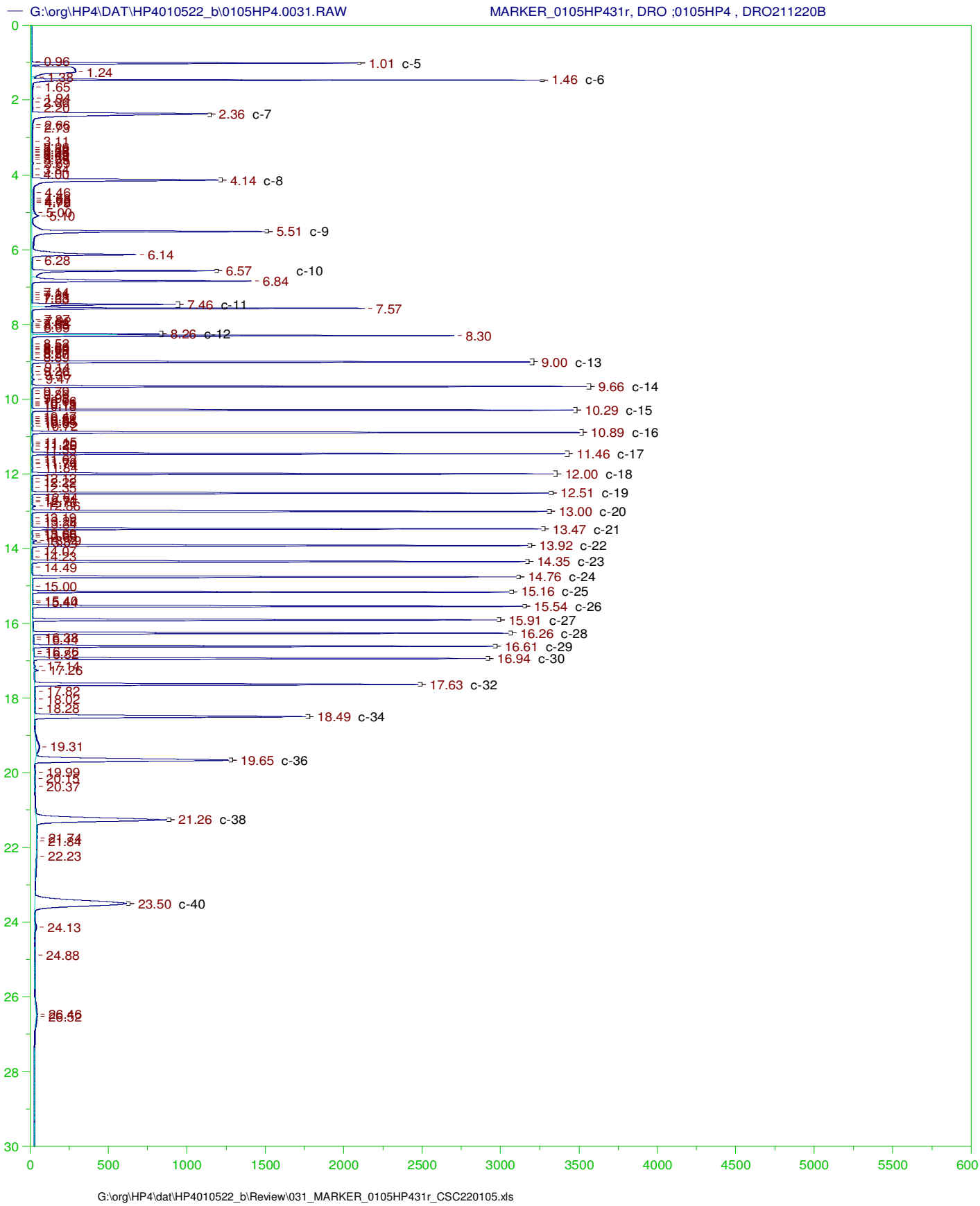
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

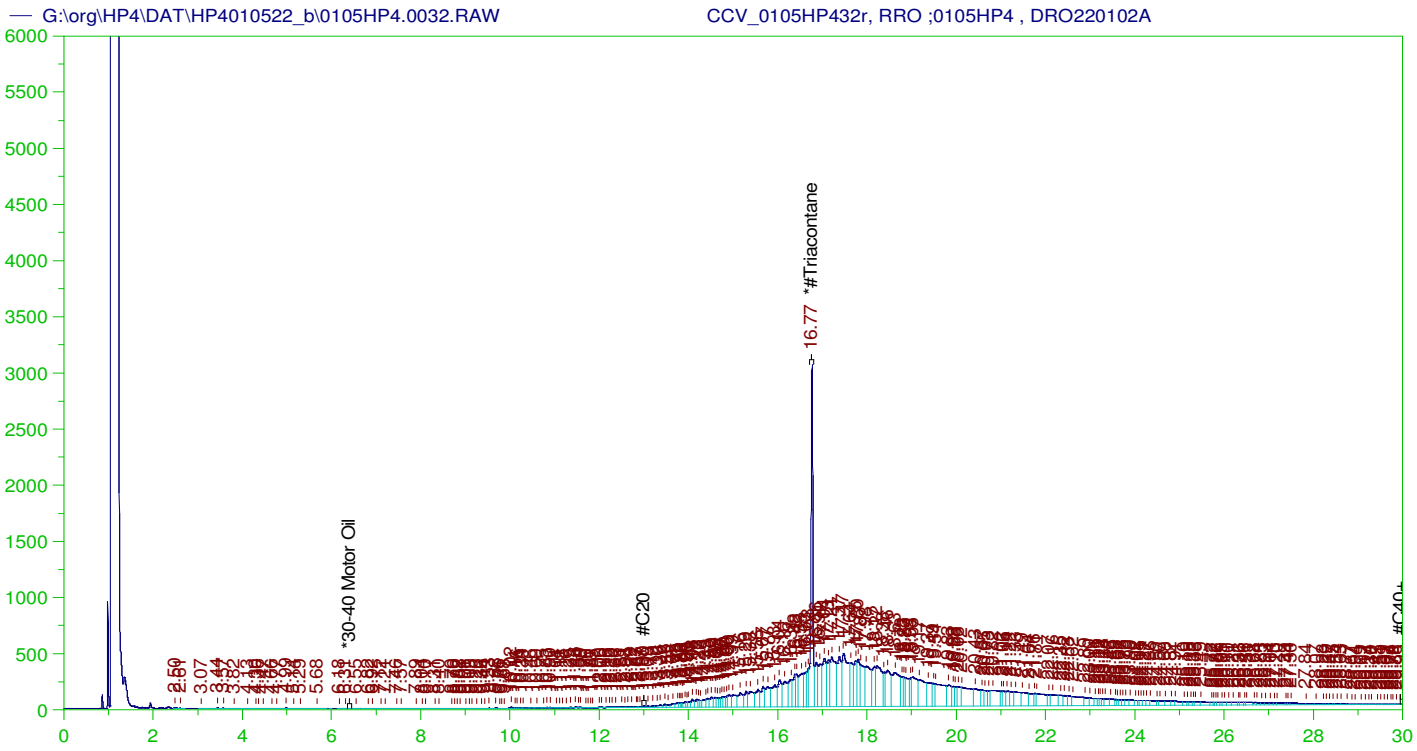
Sample Name: B21122168-007B ;0105HP4 , $HC-8015-DRO-W,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0030.RAW
Date & Time Acquired: 1/6/2022 4:50:51 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.636	.19	.182	95.71	-
*1-Chlorooctadecane	13.459	.19	.	.02	-
*#Triacontane	16.757	.19	.117	61.24	-

DRO Area:2637996 DRO Amount: 8.553273E-02
TEH Area:4065884 TEH Amount: 0.1318297


G:\org\HP4\DAT\HP4010522_b\0105HP4.0031.RAW
MARKER_0105HP431r, DRO ;0105HP4 , DRO211220B
1.01 c-5
1.46 c-6
2.36 c-7
4.14 c-8
5.51 c-9
6.57 c-10
7.46 c-11
8.26 c-12
9.00 c-13
9.66 c-14
10.29 c-15
10.89 c-16
11.46 c-17
12.00 c-18
12.51 c-19
13.00 c-20
13.47 c-21
13.92 c-22
14.35 c-23
14.76 c-24
15.16 c-25
15.54 c-26
15.91 c-27
16.26 c-28
16.61 c-29
16.94 c-30
17.63 c-32
18.49 c-34
19.65 c-36
21.26 c-38
23.50 c-40
G:\org\HP4\dat\HP4010522_b\Review\031_MARKER_0105HP431r_CSC220105.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP432r, RRO ;0105HP4 , DRO220102A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0032.RAW
Date & Time Acquired: 1/6/2022 6:20:47 AM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.766	500.	340.383	68.08	-

~~RRO~~ TEH (Oil Range) Area:1.164336E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4746.663

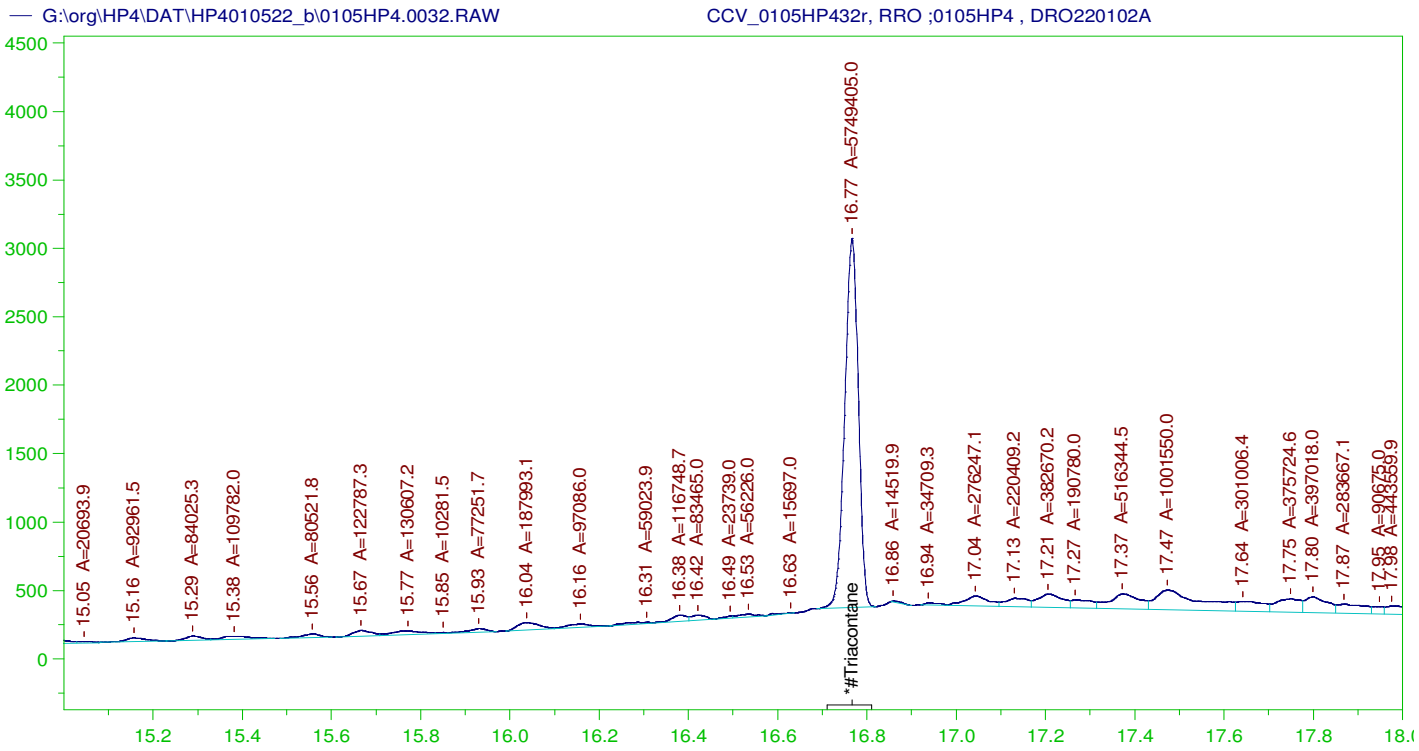
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0032.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.766	200.	340.383	170.19	75-125

AMN 01/25/2022

G:\org\HP4\dat\HP4010522_b\Review\032_CCV_0105HP432r_DC_ORO-T-AC-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP432r, RRO ;0105HP4 , DRO220102A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0032.RAW
Date & Time Acquired: 1/6/2022 6:20:47 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

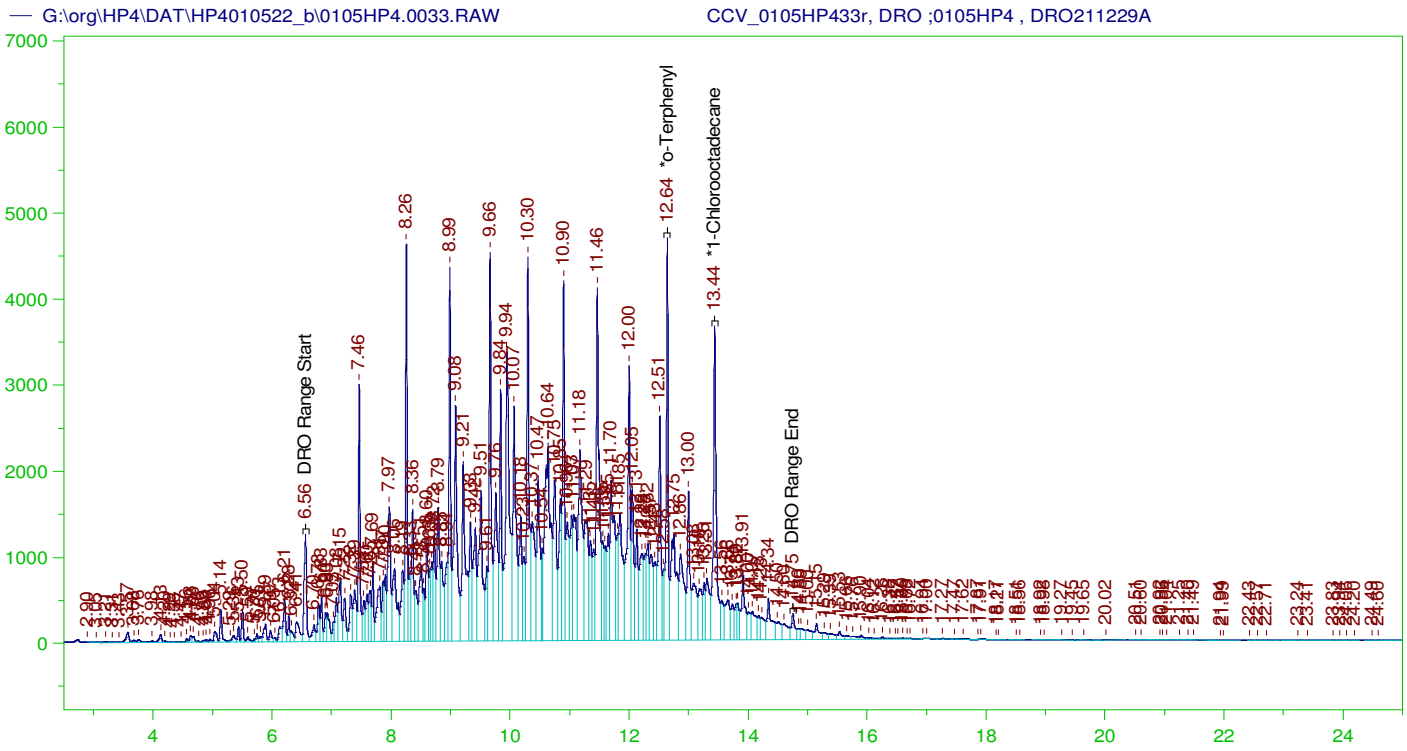
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.766	500.	230.217	46.04	-

RRO Area:1.055944E+07 RRO AMOUNT: 430.478

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0032.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.766	200.	230.217	115.11	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0105HP433r, DRO ;0105HP4 , DRO211229A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0033.RAW
Date & Time Acquired: 1/6/2022 7:05:47 AM
Method File: G:\Org\HP4\methods\DC_8015-C24-OI-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

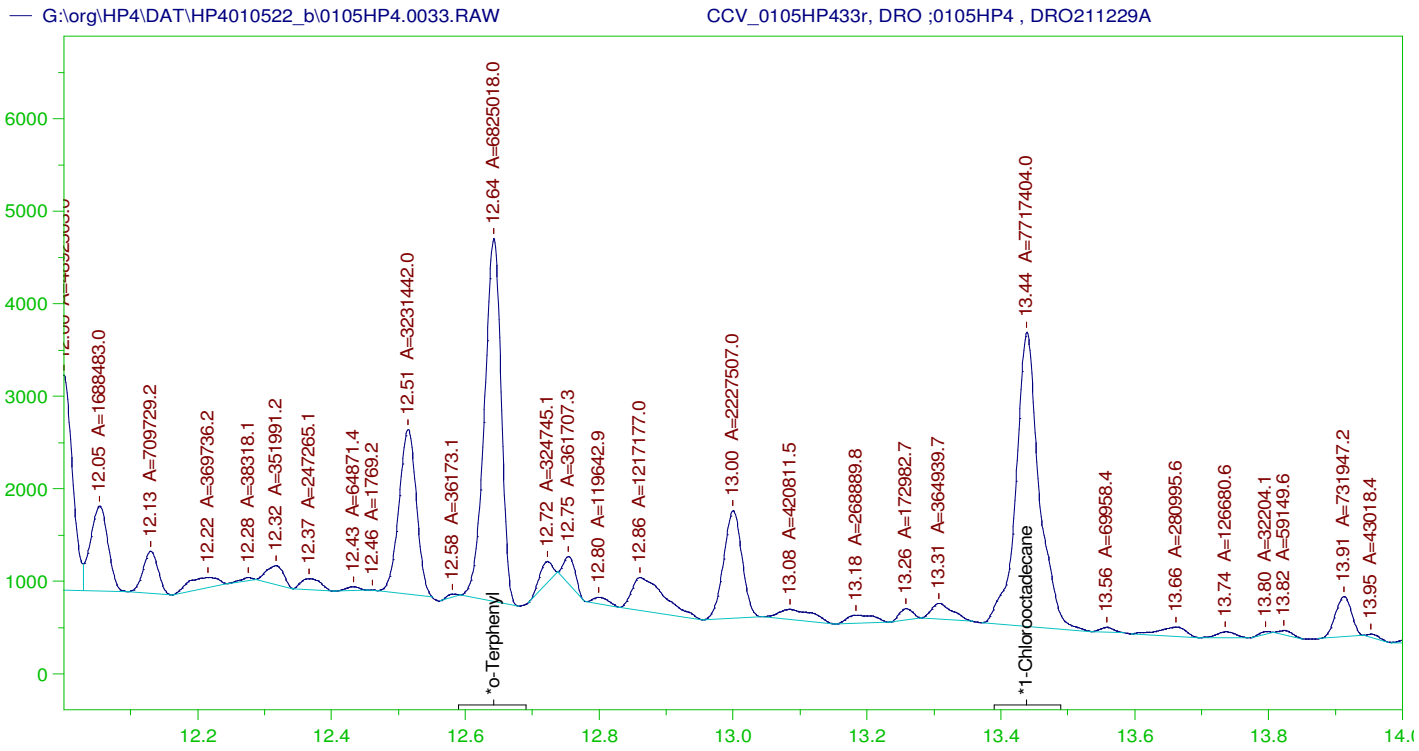
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.642	200.	324.642	162.32	-
*1-Chlorooctadecane	13.439	200.	369.249	184.62	-

DRO Area:4.443882E+08 DRO Amount: 15129
TEH Area:4.607541E+08 TEH Amount: 15686.17

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0033.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15686.17	104.57	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.642	200.	324.642	162.32	85-115
*1-Chlorooctadecane	13.439	200.	369.249	184.62	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0105HP433r, DRO ;0105HP4 , DRO211229A
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0033.RAW
Date & Time Acquired: 1/6/2022 7:05:47 AM
Method File: G:\Org\HP4\methods\DS_8015-C24-OI-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OI-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.52 to 14.81

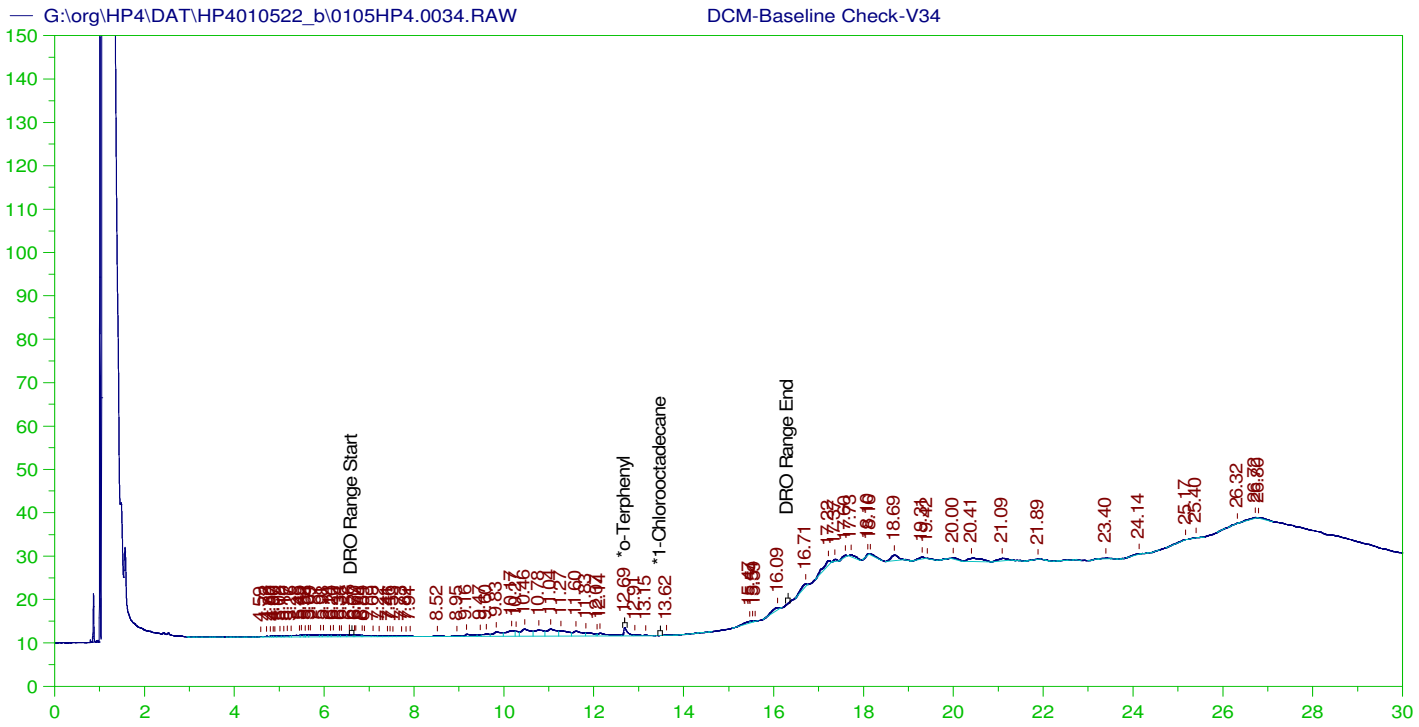
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.642	200.	204.834	102.42	-
*1-Chlorooctadecane	13.439	200.	231.617	115.81	-

DRO Area:1.961419E+08 DRO Amount: 6677.562
TEH Area:2.065052E+08 TEH Amount: 7030.375

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010522_b\0105HP4.0033.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7030.38	46.87	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.642	200.	204.834	102.42	85-115
*1-Chlorooctadecane	13.439	200.	231.617	115.81	85-115

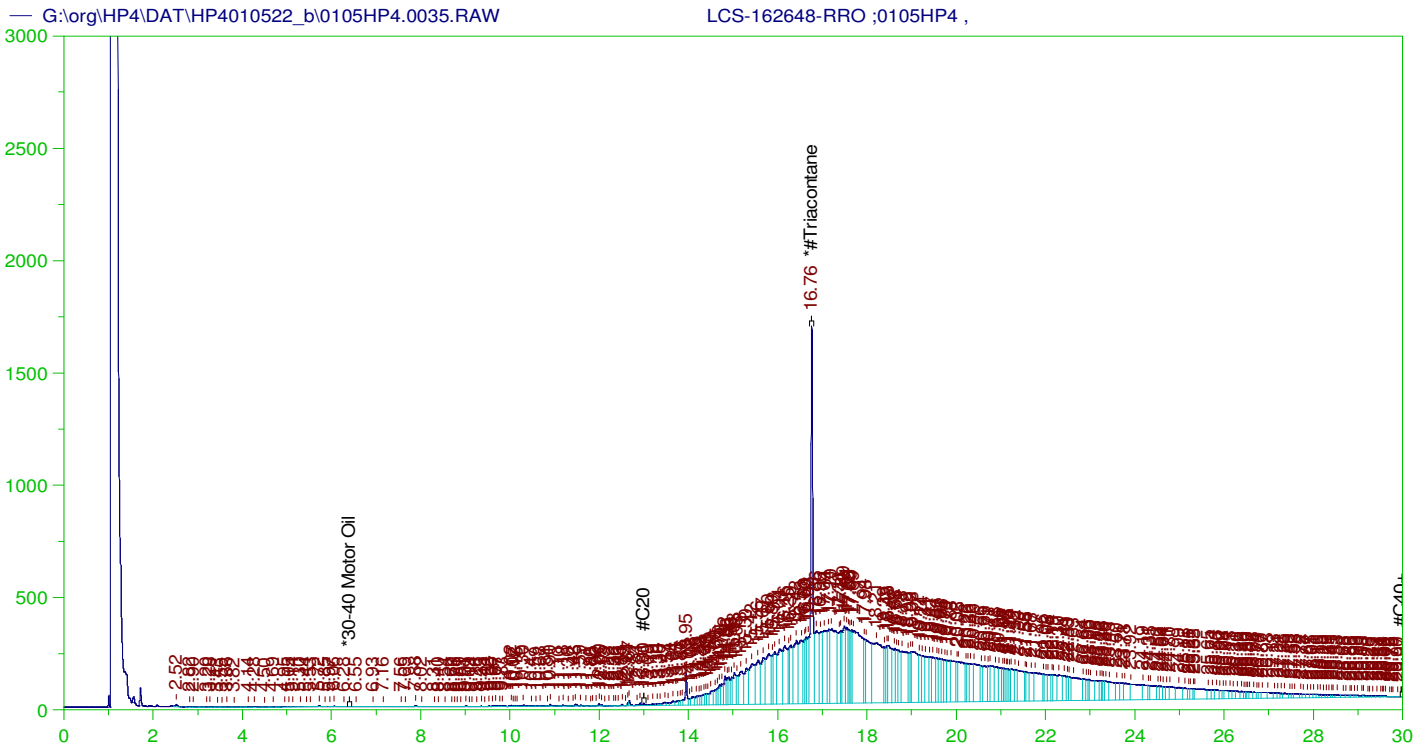


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V34
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0034.RAW
Date & Time Acquired: 1/6/2022 7:50:51 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.685	200.	.336	.17	-
*1-Chlorooctadecane	26.796	200.	.	.	-

DRO Area:208955.7 DRO Amount: 7.113802
TEH Area:360967 TEH Amount: 12.28896



RESIDUAL RANGE ORGANICS CHROMATOGRAM

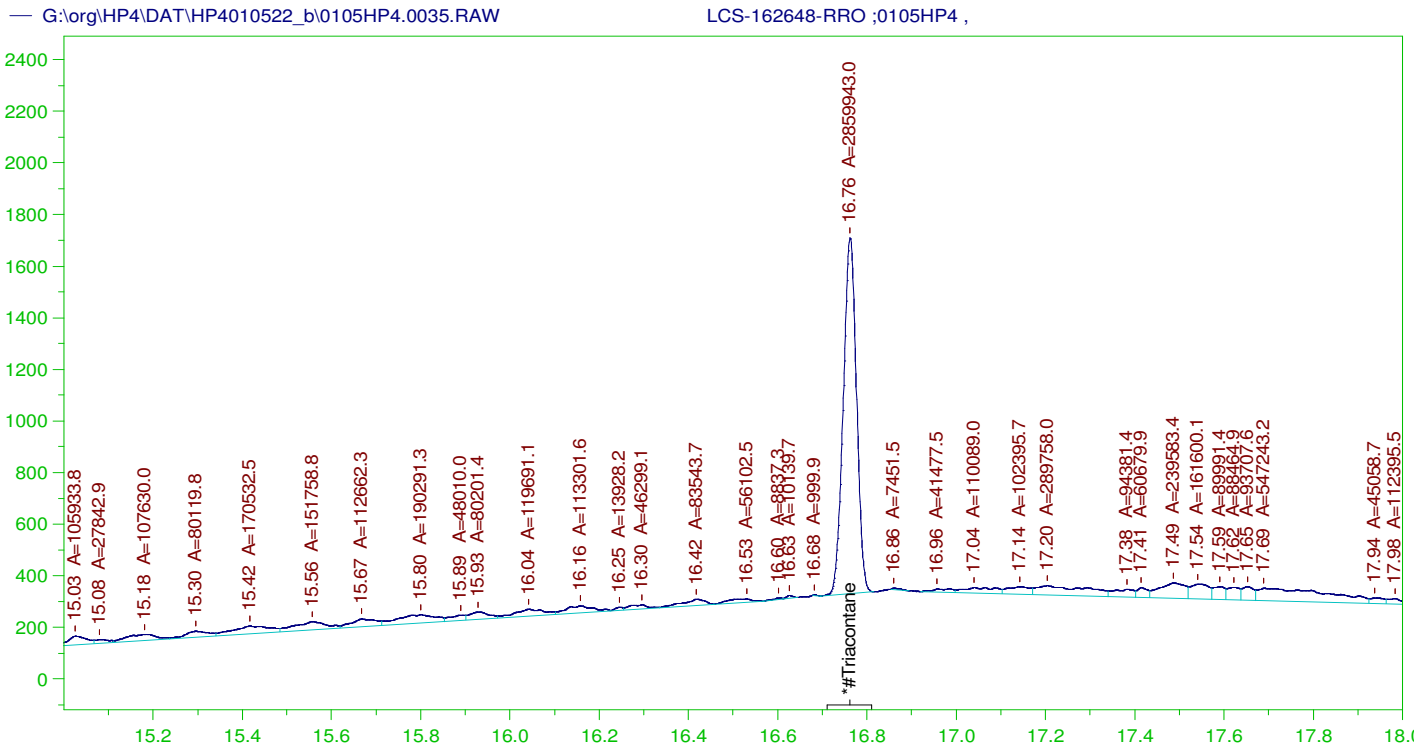
Sample Name: LCS-162648-RRO ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0035.RAW
Date & Time Acquired: 1/6/2022 8:36:11 AM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.762	.5	.2	40.06	-

~~RRO~~ TEH (Oil Range) Area:1.144854E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4.667243

AMN 01/25/2022



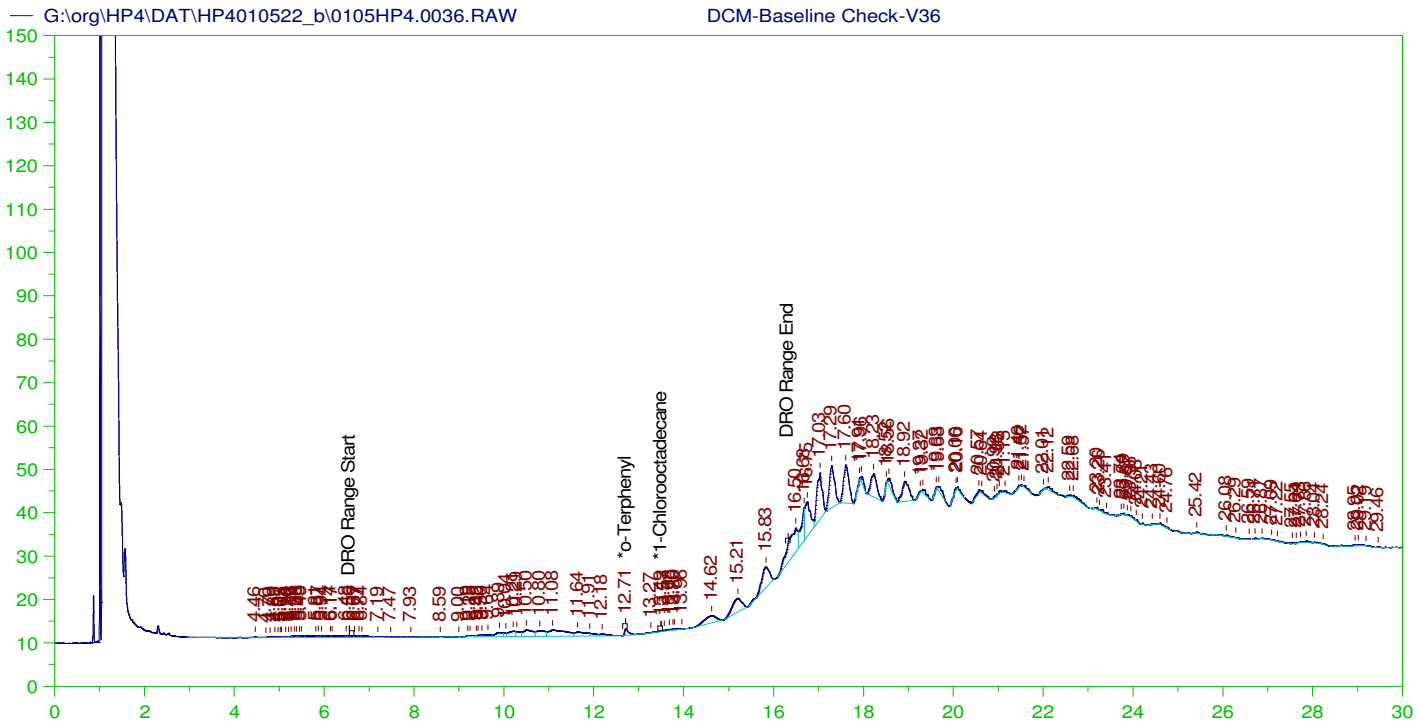
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162648-RRO ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0035.RAW
Date & Time Acquired: 1/6/2022 8:36:11 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.762	.5	.115	22.9	-

RRO Area:6221012 RRO AMOUNT: 0.2536128

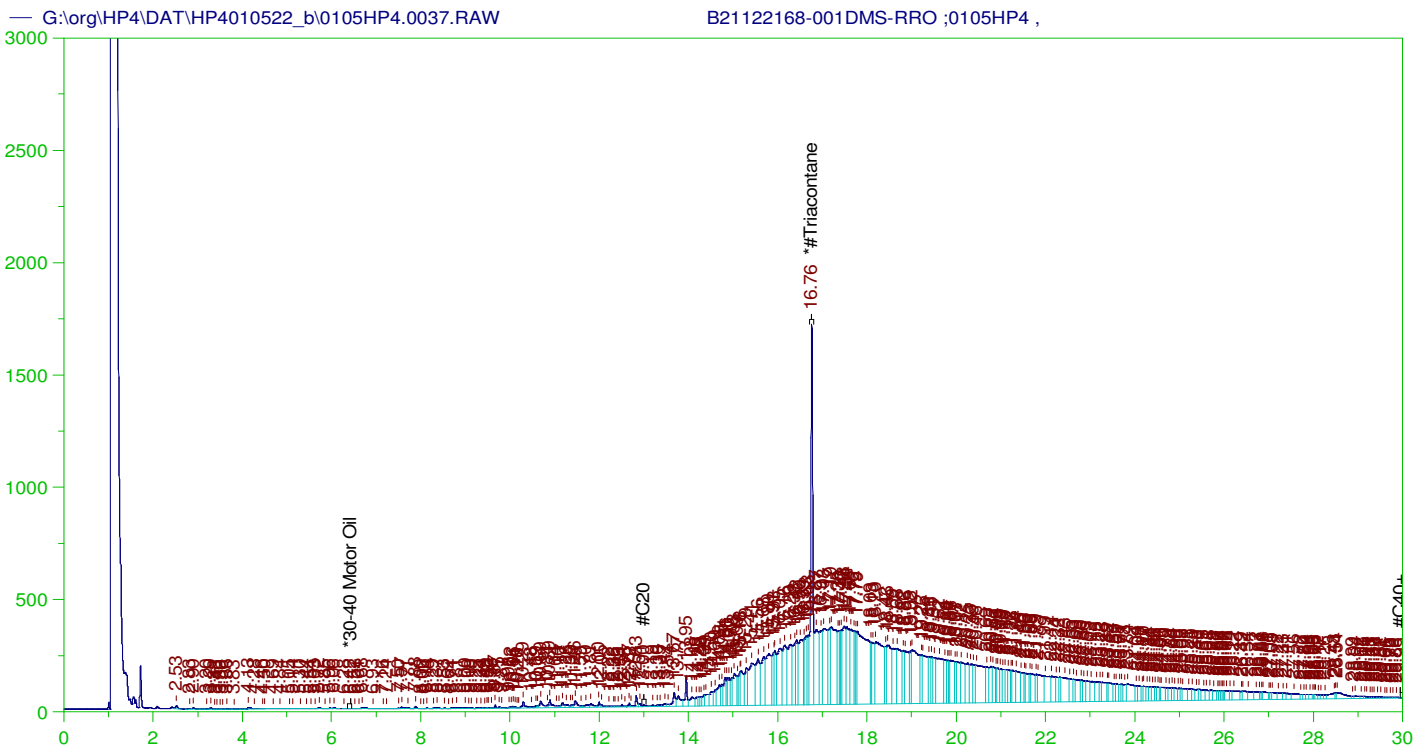


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V36
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0036.RAW
Date & Time Acquired: 1/6/2022 9:21:42 AM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 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	12.71	200.	.271	.14	-
*1-Chlorooctadecane	13.495	200.	.067	.03	-

DRO Area:321841.3 DRO Amount: 10.95694
TEH Area:1034865 TEH Amount: 35.23151



RESIDUAL RANGE ORGANICS CHROMATOGRAM

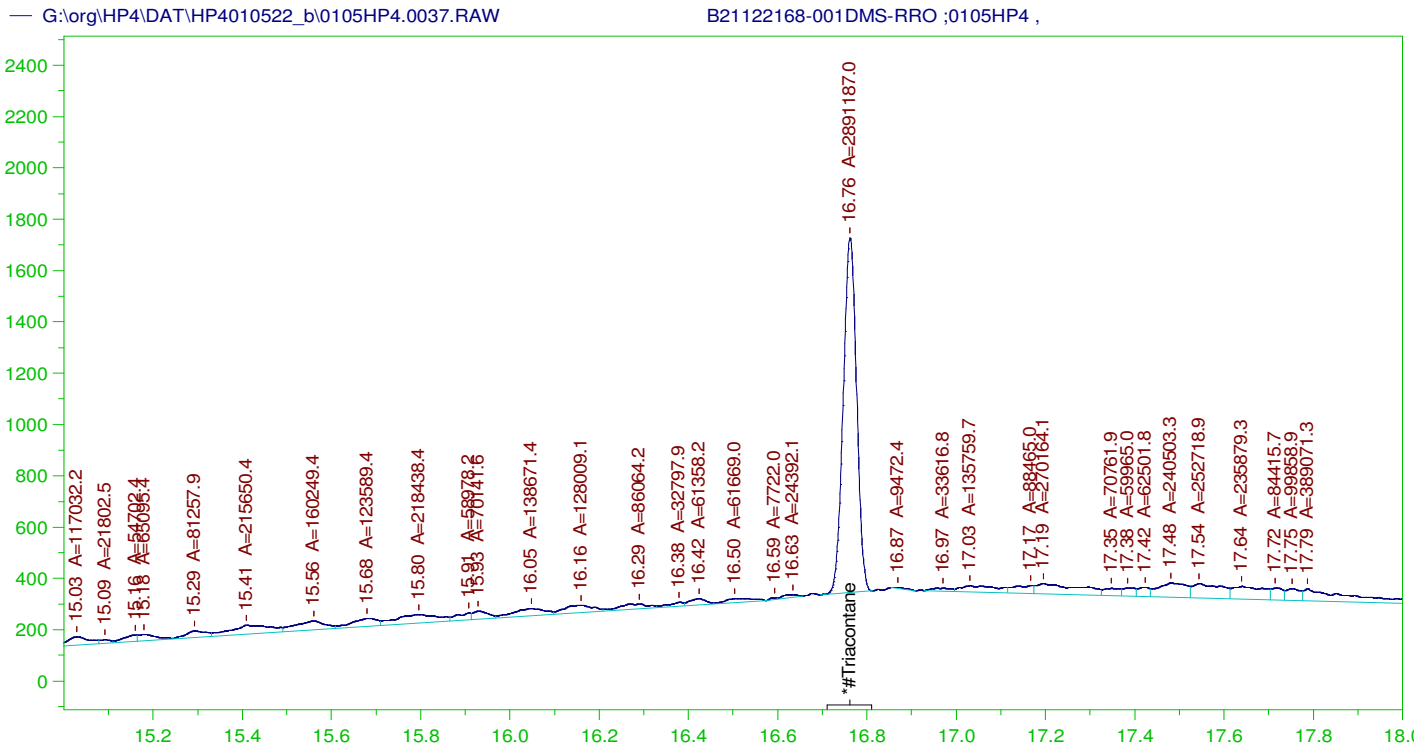
Sample Name: B21122168-001DMS-RRO ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0037.RAW
Date & Time Acquired: 1/6/2022 10:06:58 AM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.762	.49	.199	40.64	-

~~RRO~~ TEH (Oil Range) Area:1.182933E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4.727922

AMN 01/25/2022



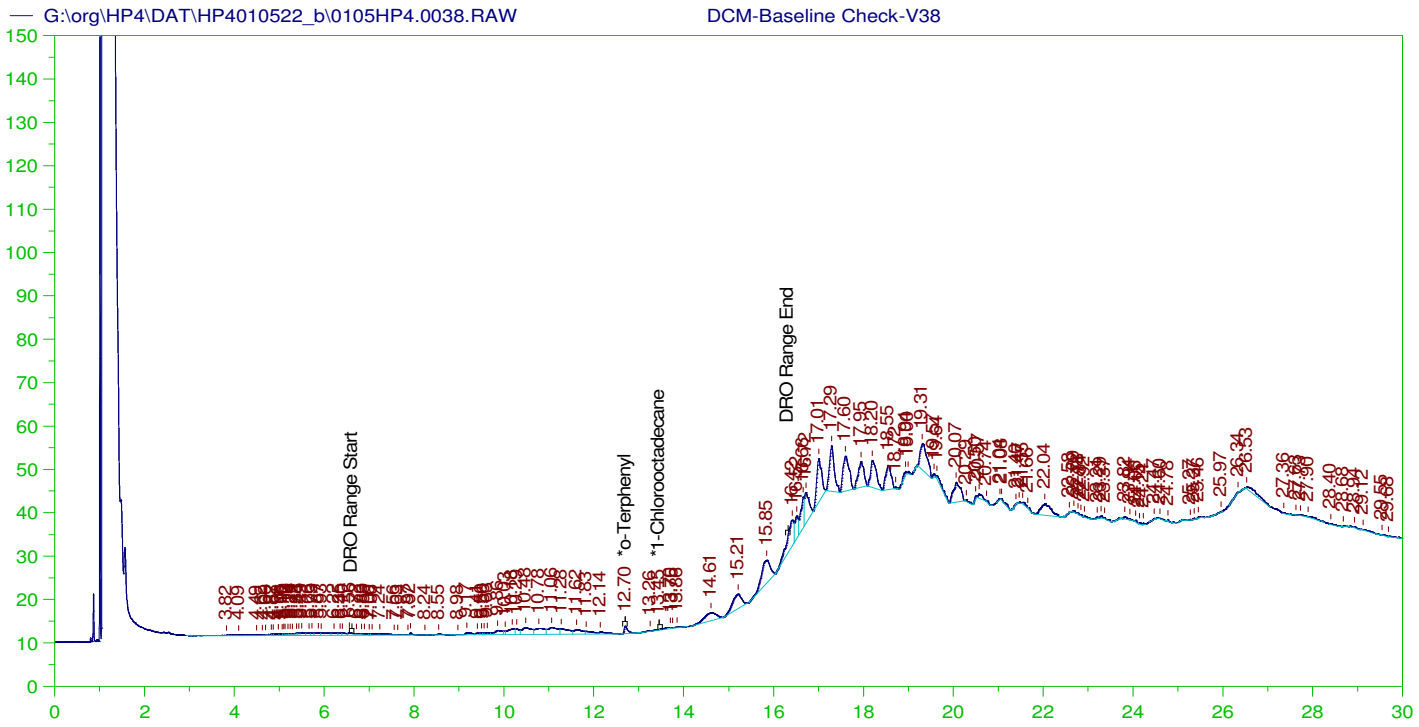
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-001DMS-RRO ;0105HP4 ,
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0037.RAW
Date & Time Acquired: 1/6/2022 10:06:58 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.762	.49	.113	23.15	-

RRO Area:7001074 RRO AMOUNT: 0.2798174



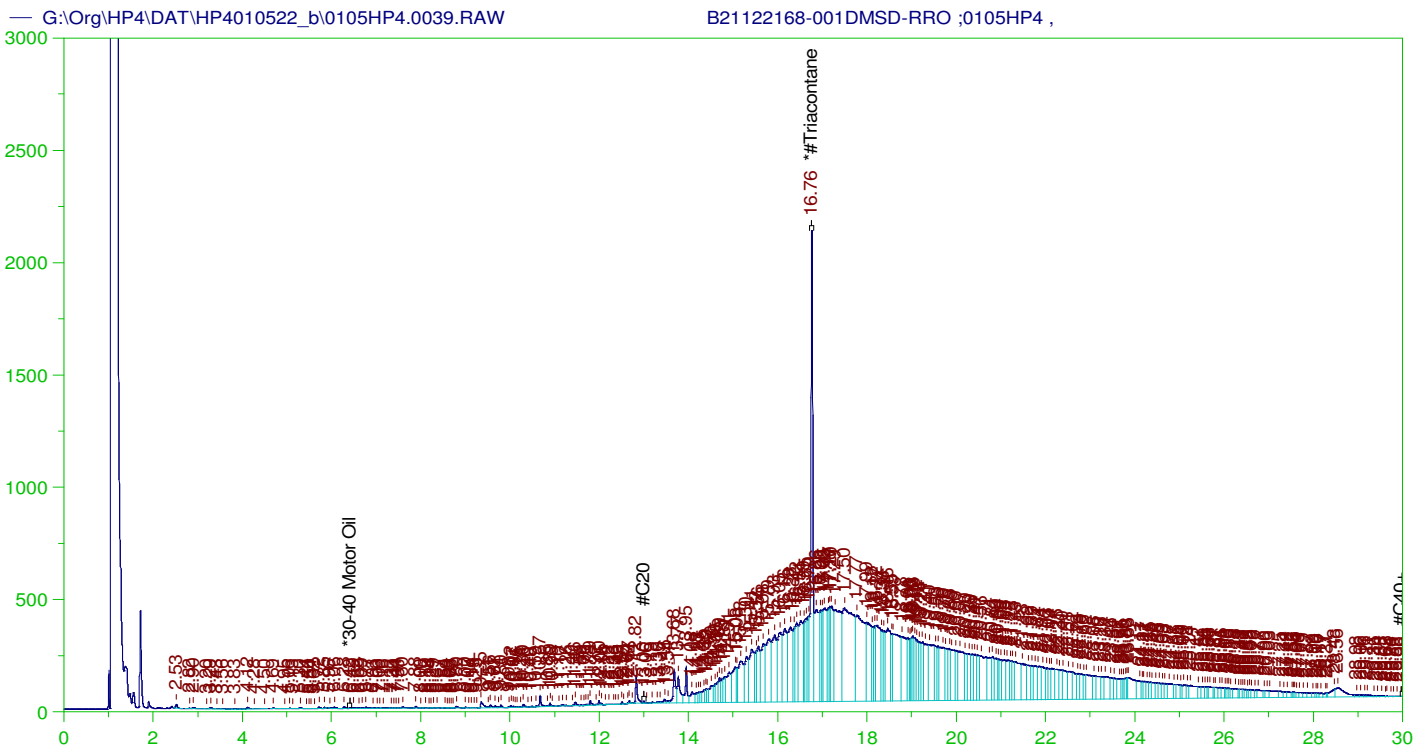
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V38
Raw File: G:\org\HP4\DAT\HP4010522_b\0105HP4.0038.RAW
Date & Time Acquired: 1/6/2022 10:52:26 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	12.7	200.	.284	.14	-
*1-Chlorooctadecane	13.451	200.	.045	.02	-

DRO Area:351617 DRO Amount: 11.97064
TEH Area:1247084 TEH Amount: 42.45641



RESIDUAL RANGE ORGANICS CHROMATOGRAM

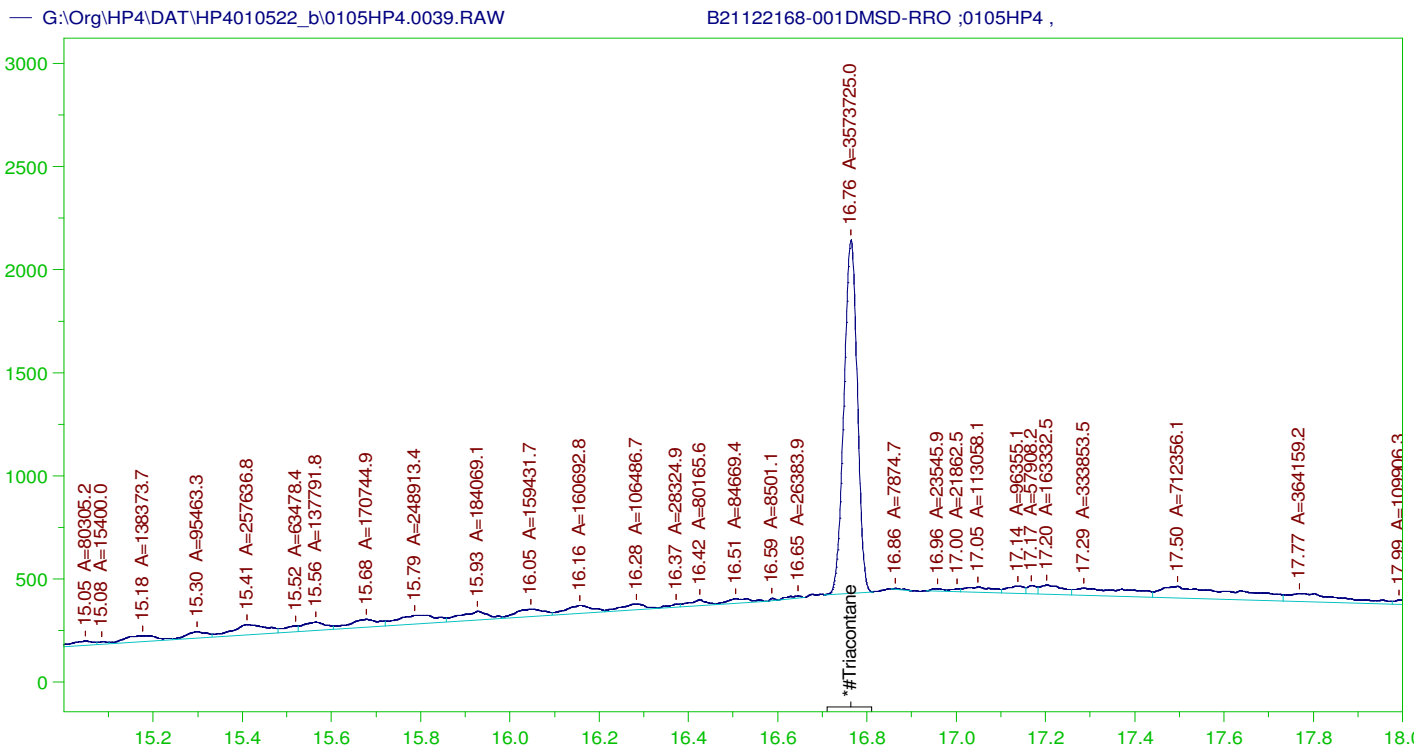
Sample Name: B21122168-001DMSD-RRO ;0105HP4 ,
Raw File: G:\Org\HP4\DAT\HP4010522_b\0105HP4.0039.RAW
Date & Time Acquired: 1/6/2022 11:37:49 AM
Method File: G:\Org\HP4\Methods\D3_ORO-T -AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.764	.476	.231	48.6	-

~~RRO~~ TEH (Oil Range) Area:1.422924E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 5.524624

AMN 01/25/2022



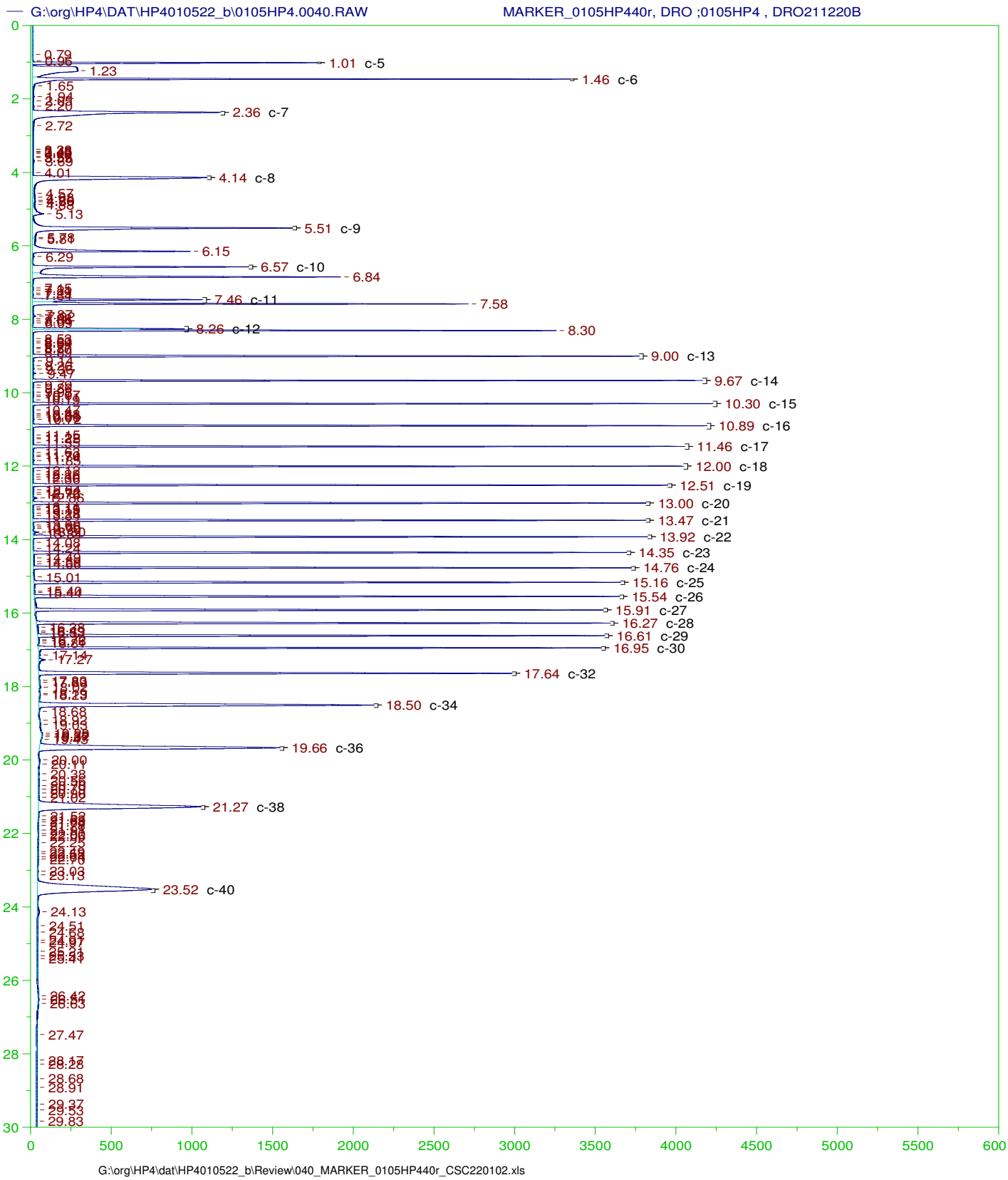
RESIDUAL RANGE ORGANICS CHROMATOGRAM

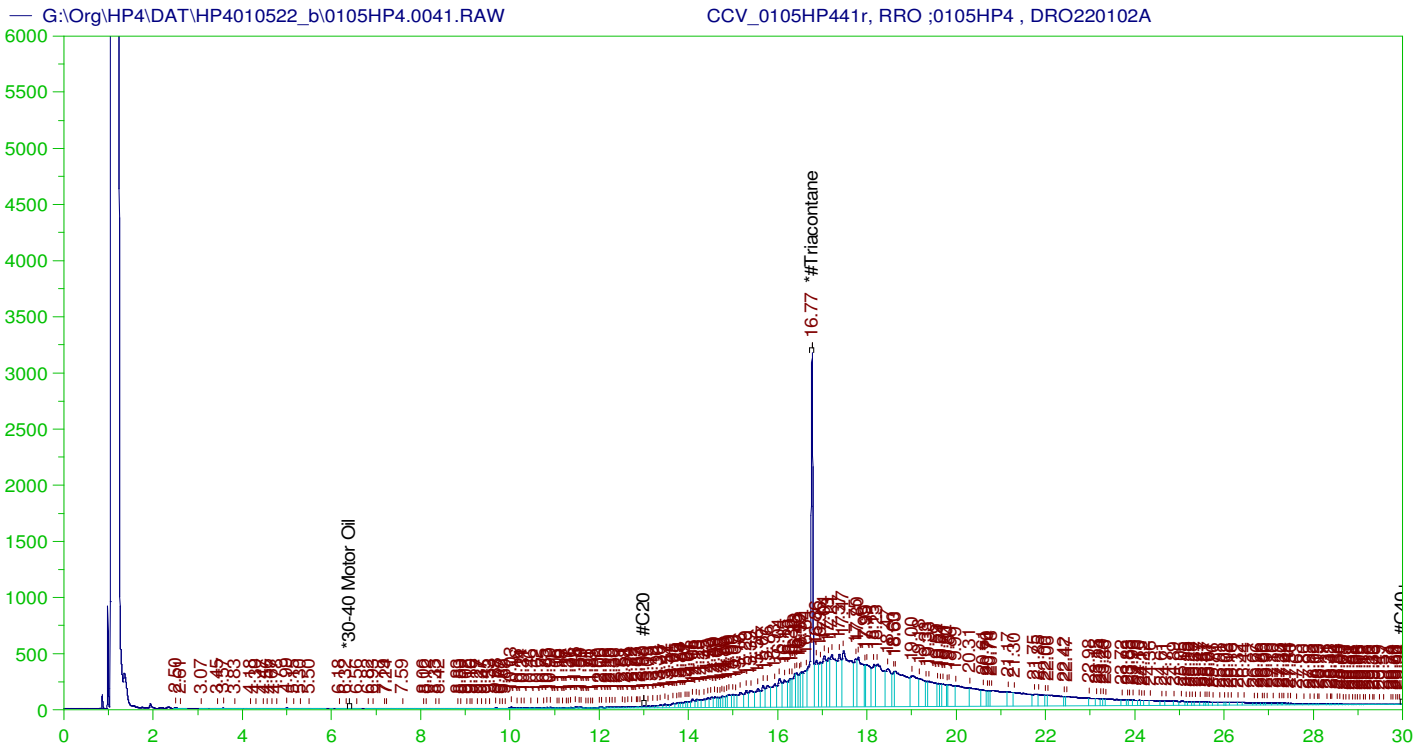
Sample Name: B21122168-001DMSD-RRO ;0105HP4 ,
Raw File: G:\Org\HP4\DAT\HP4010522_b\0105HP4.0039.RAW
Date & Time Acquired: 1/6/2022 11:37:49 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.764	.476	.136	28.62	-

RRO Area:8272379 RRO AMOUNT: 0.3211821


G:\org\HP4\DAT\HP4010522_b\0105HP4.0040.RAW
MARKER_0105HP440r, DRO ;0105HP4 , DRO211220B
1.01 c-5
1.23
1.46 c-6
1.65
2.36 c-7
2.72
4.01
4.14 c-8
5.13
5.51 c-9
6.15
6.29
6.57 c-10
6.84
7.46 c-11
7.58
8.26 c-12
8.30
9.00 c-13
9.67 c-14
10.30 c-15
10.89 c-16
11.46 c-17
12.00 c-18
12.51 c-19
13.00 c-20
13.47 c-21
13.92 c-22
14.35 c-23
14.76 c-24
15.01
15.16 c-25
15.54 c-26
15.91 c-27
16.27 c-28
16.61 c-29
16.95 c-30
17.27
17.64 c-32
18.50 c-34
18.68
19.66 c-36
20.00
21.27 c-38
23.52 c-40
24.13
27.47
28.68
28.91
29.37
29.53
29.83
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
600
G:\org\HP4\dat\HP4010522_b\Review\040_MARKER_0105HP440r_CSC220102.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP441r, RRO ;0105HP4 , DRO220102A
Raw File: G:\Org\HP4\DAT\HP4010522_b\0105HP4.0041.RAW
Date & Time Acquired: 1/6/2022 1:08:43 PM
Method File: G:\Org\HP4\Methods\Dc_ORO-T-Ac-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.767	500.	389.164	77.83	-

~~RRO~~ TEH (Oil Range) Area:1.179846E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4809.896

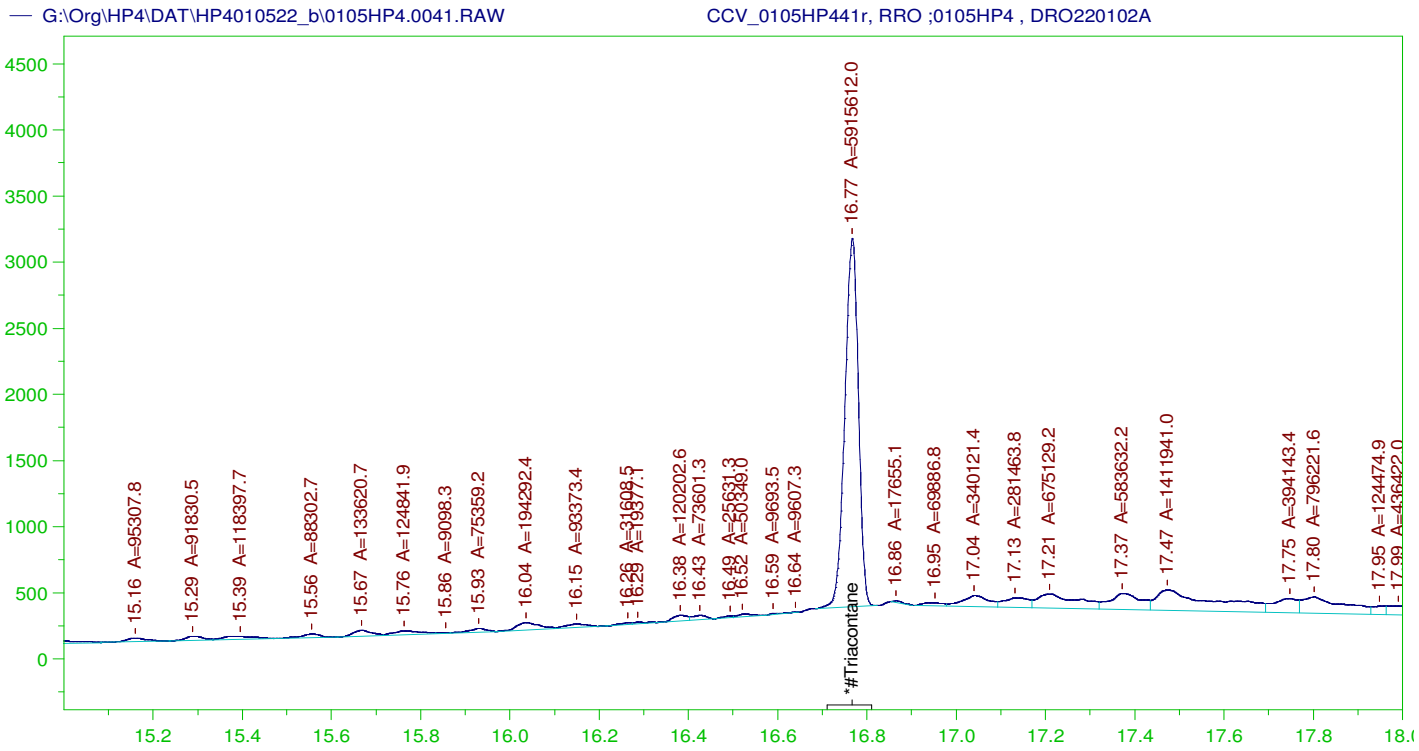
CONTINUING CALIBRATION REPORT: G:\Org\HP4\DAT\HP4010522_b\0105HP4.0041.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.767	200.	389.164	194.58	75-125

AMN 01/25/2022

G:\org\HP4\dat\HP4010522_b\Review\041_CCV_0105HP441r_Dc_ORO-T-Ac-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0105HP441r, RRO ;0105HP4 , DRO220102A
Raw File: G:\Org\HP4\DAT\HP4010522_b\0105HP4.0041.RAW
Date & Time Acquired: 1/6/2022 1:08:43 PM
Method File: G:\Org\HP4\Methods\Ds_ORO-T-Ac-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

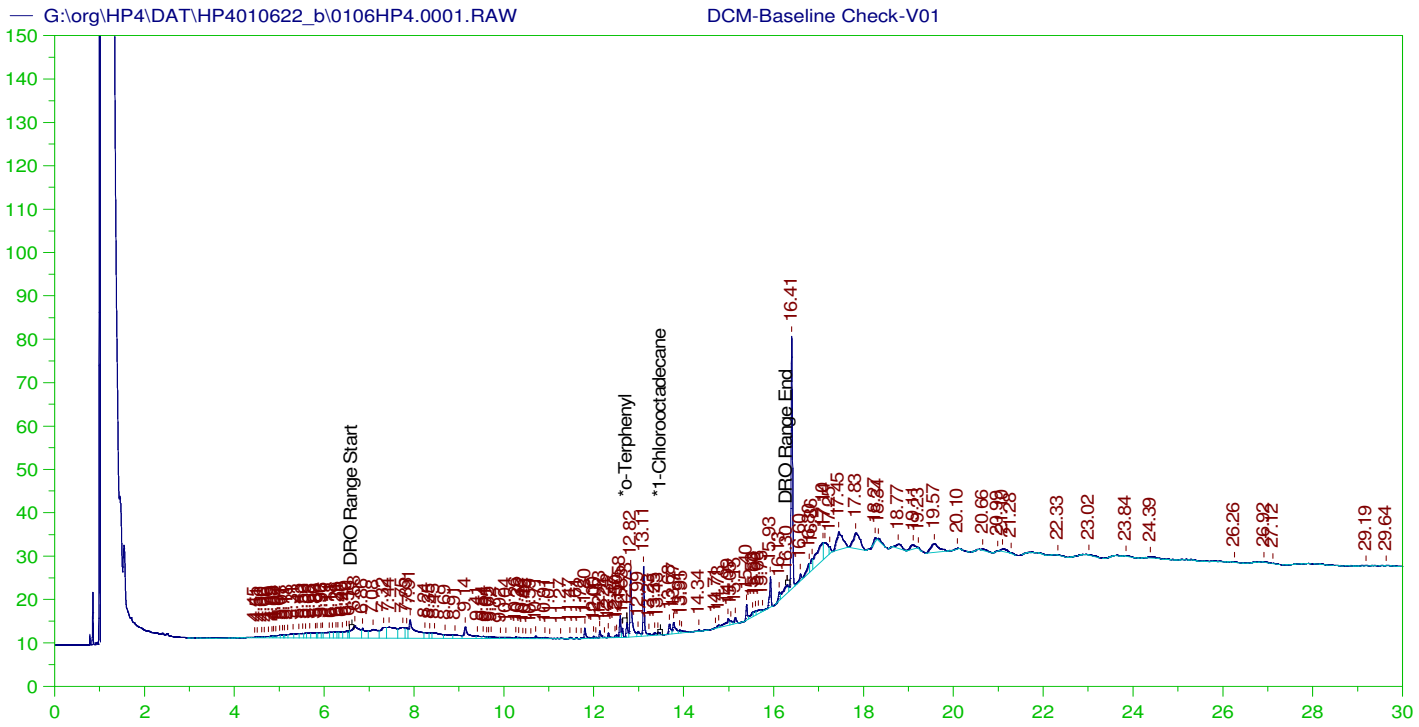
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.767	500.	236.873	47.37	-

RRO Area:1.111534E+07 RRO AMOUNT: 453.1404

CONTINUING CALIBRATION REPORT: G:\Org\HP4\DAT\HP4010522_b\0105HP4.0041.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.767	200.	236.873	118.44	75-125



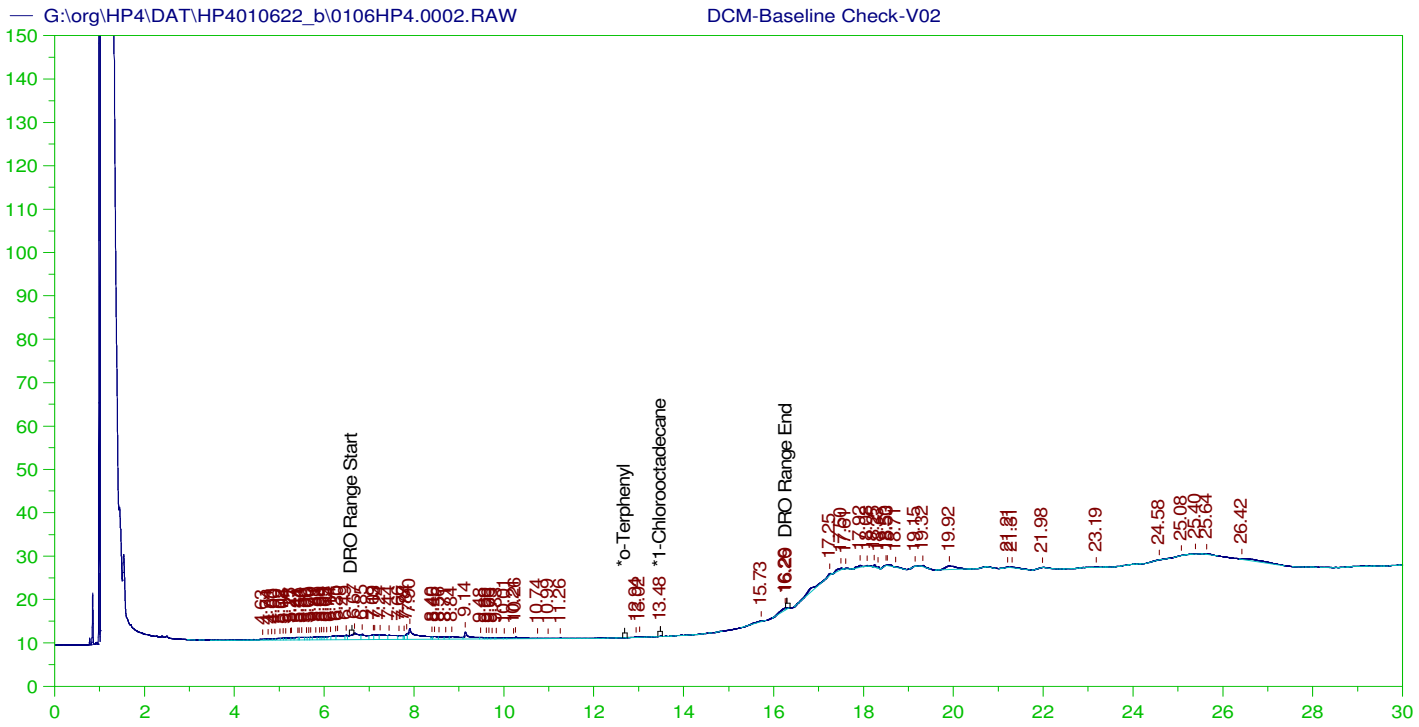
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0001.RAW
Date & Time Acquired: 1/6/2022 4:35:36 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	12.734	200.	.249	.12	-
*1-Chlorooctadecane	29.968	200.	.	.	-

DRO Area:553480.9 DRO Amount: 18.84301
TEH Area:1067678 TEH Amount: 36.3486



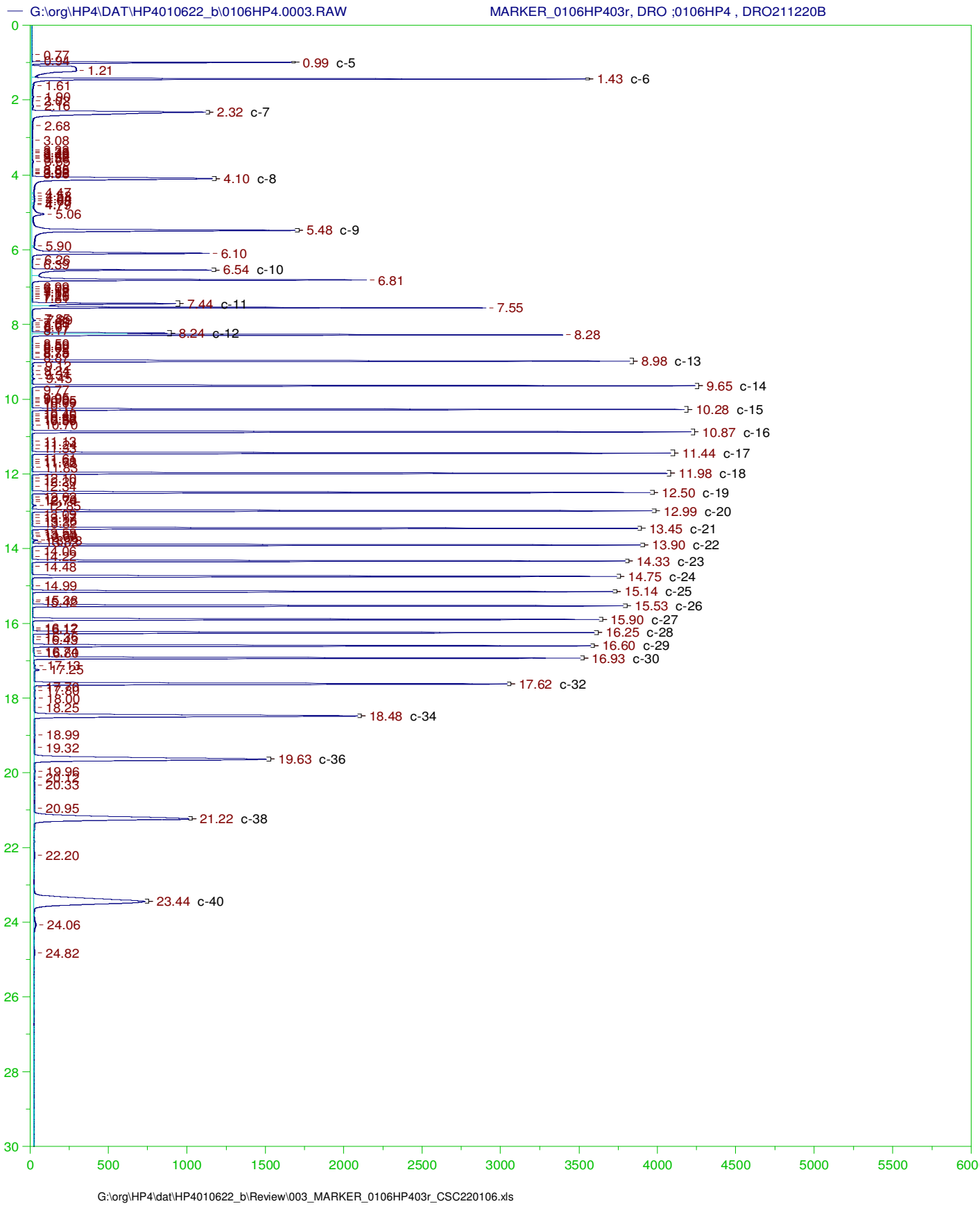
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

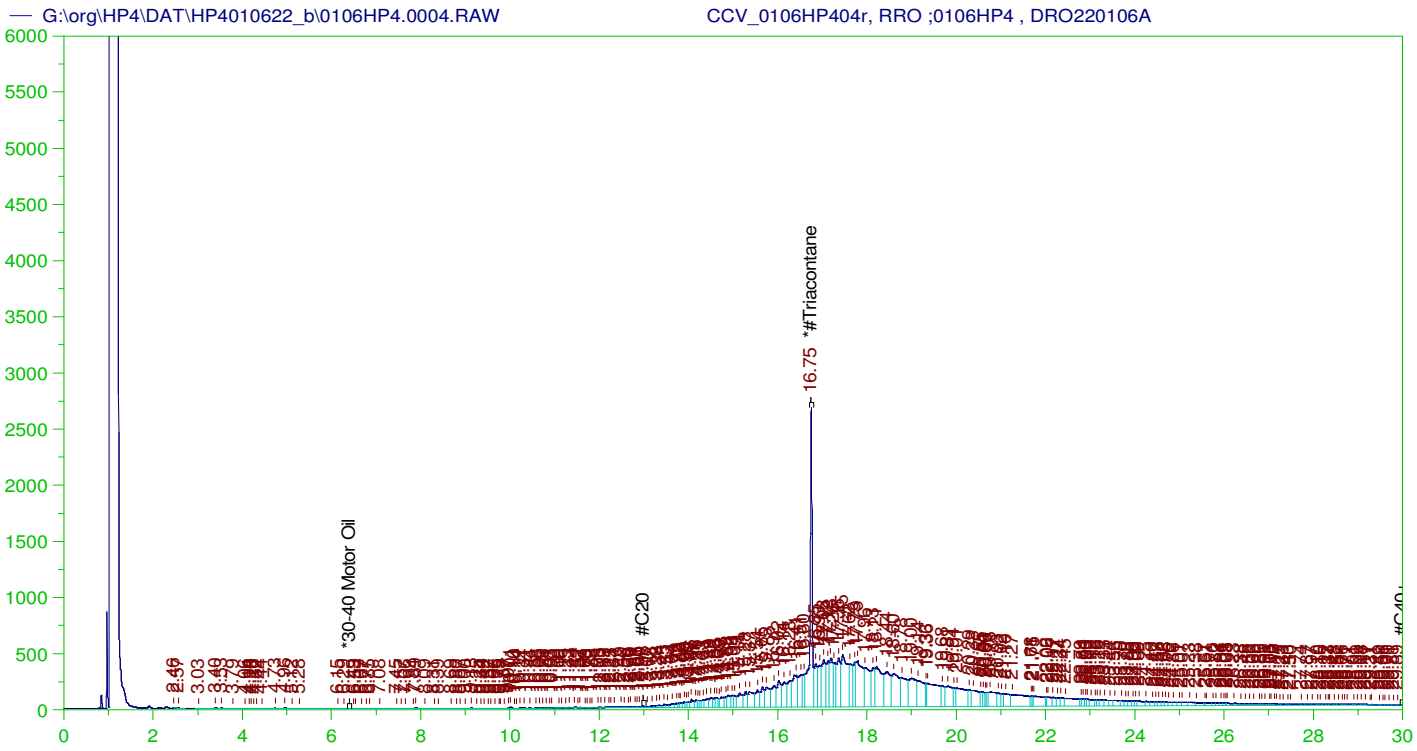
Sample Name: DCM-Baseline Check-V02
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0002.RAW
Date & Time Acquired: 1/6/2022 5:27:55 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.973	200.	.	. -
*1-Chlorooctadecane	13.481	200.	.017	.01 -

DRO Area:185110 DRO Amount: 6.301986
TEH Area:326495.3 TEH Amount: 11.11539


G:\org\HP4\DAT\HP4010622_b\0106HP4.0003.RAW
MARKER_0106HP403r, DRO ;0106HP4 , DRO211220B
0.99 c-5
1.21
1.43 c-6
2.32 c-7
4.10 c-8
5.06
5.48 c-9
5.90
6.10
6.54 c-10
6.81
7.44 c-11
7.55
8.24 c-12
8.28
8.98 c-13
9.65 c-14
10.28 c-15
10.87 c-16
11.44 c-17
11.98 c-18
12.50 c-19
12.99 c-20
13.45 c-21
13.90 c-22
14.33 c-23
14.75 c-24
15.14 c-25
15.53 c-26
15.90 c-27
16.25 c-28
16.60 c-29
16.93 c-30
17.62 c-32
18.48 c-34
19.63 c-36
21.22 c-38
22.20
23.44 c-40
24.06
24.82
G:\org\HP4\dat\HP4010622_b\Review\003_MARKER_0106HP403r_CSC220106.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP404r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0004.RAW
Date & Time Acquired: 1/6/2022 6:57:52 PM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.751	500.	345.856	69.17	-

~~RRO~~ TEH (Oil Range) Area:1.073566E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4376.621

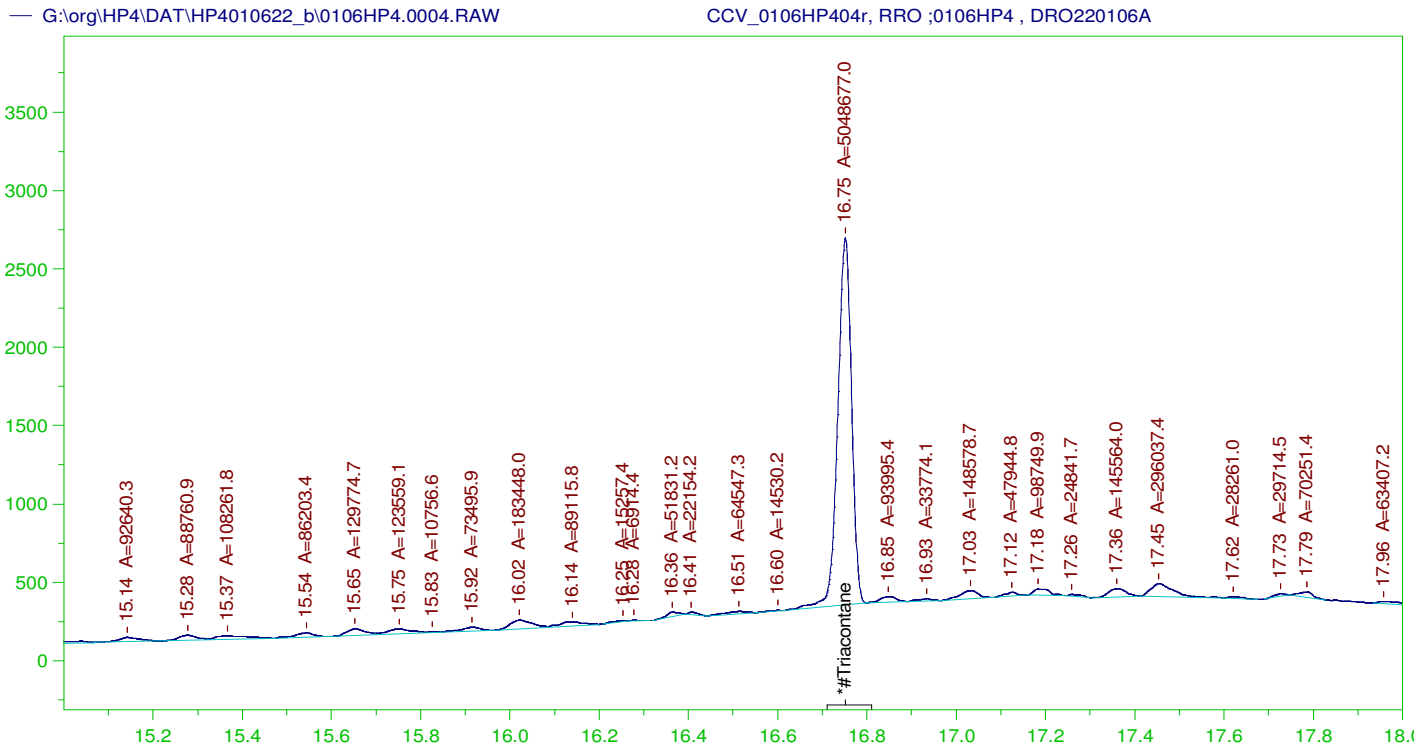
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.751	200.	345.856	172.93	75-125

AMN 01/26/2022

G:\org\HP4\dat\HP4010622_b\Review\004_CCV_0106HP404r_DC_ORO-T-AC-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP404r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0004.RAW
Date & Time Acquired: 1/6/2022 6:57:52 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

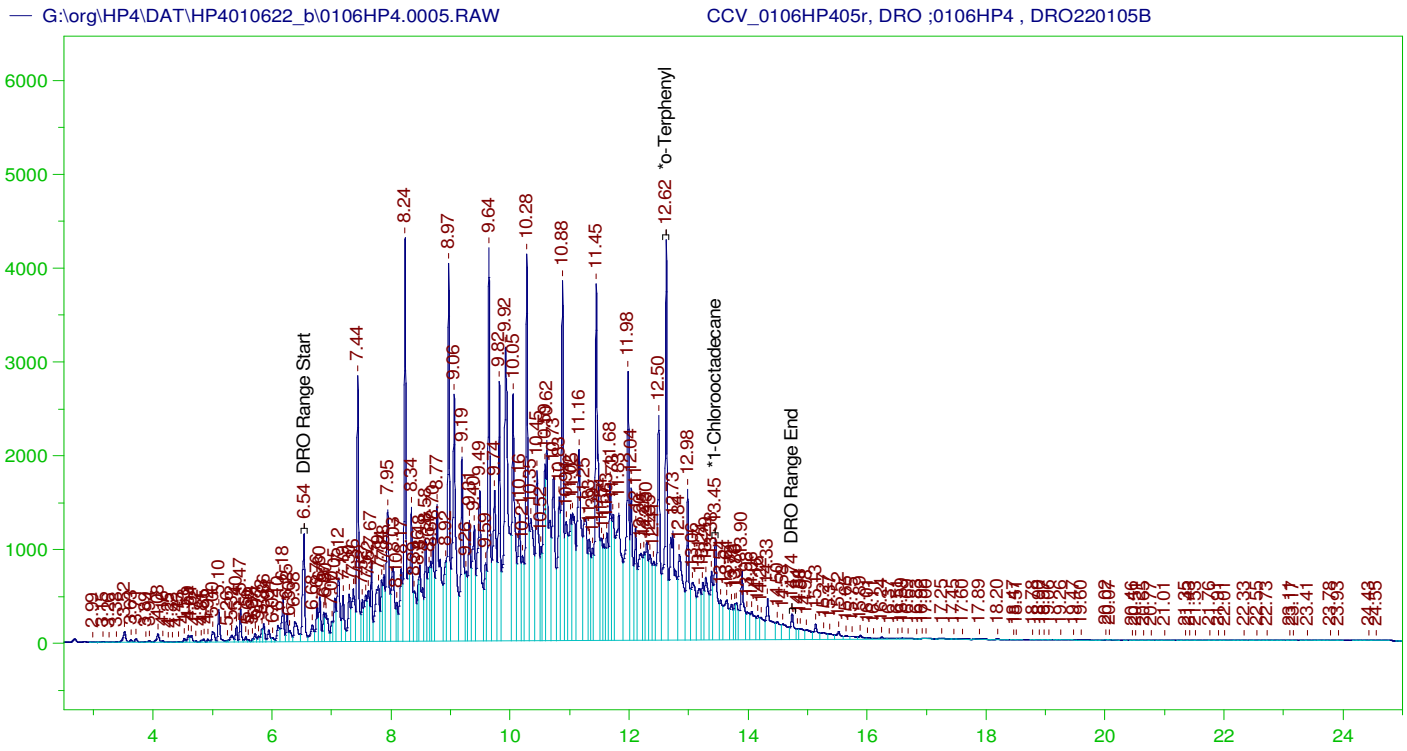
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.751	500.	202.159	40.43	-

RRO Area:4304519 RRO AMOUNT: 175.4829

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.751	200.	202.159	101.08	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP405r, DRO ;0106HP4 , DRO220105B
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0005.RAW
Date & Time Acquired: 1/6/2022 7:43:00 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.624	200.	339.029	169.51	-
*1-Chlorooctadecane	13.449	200.	126.768	63.38	-

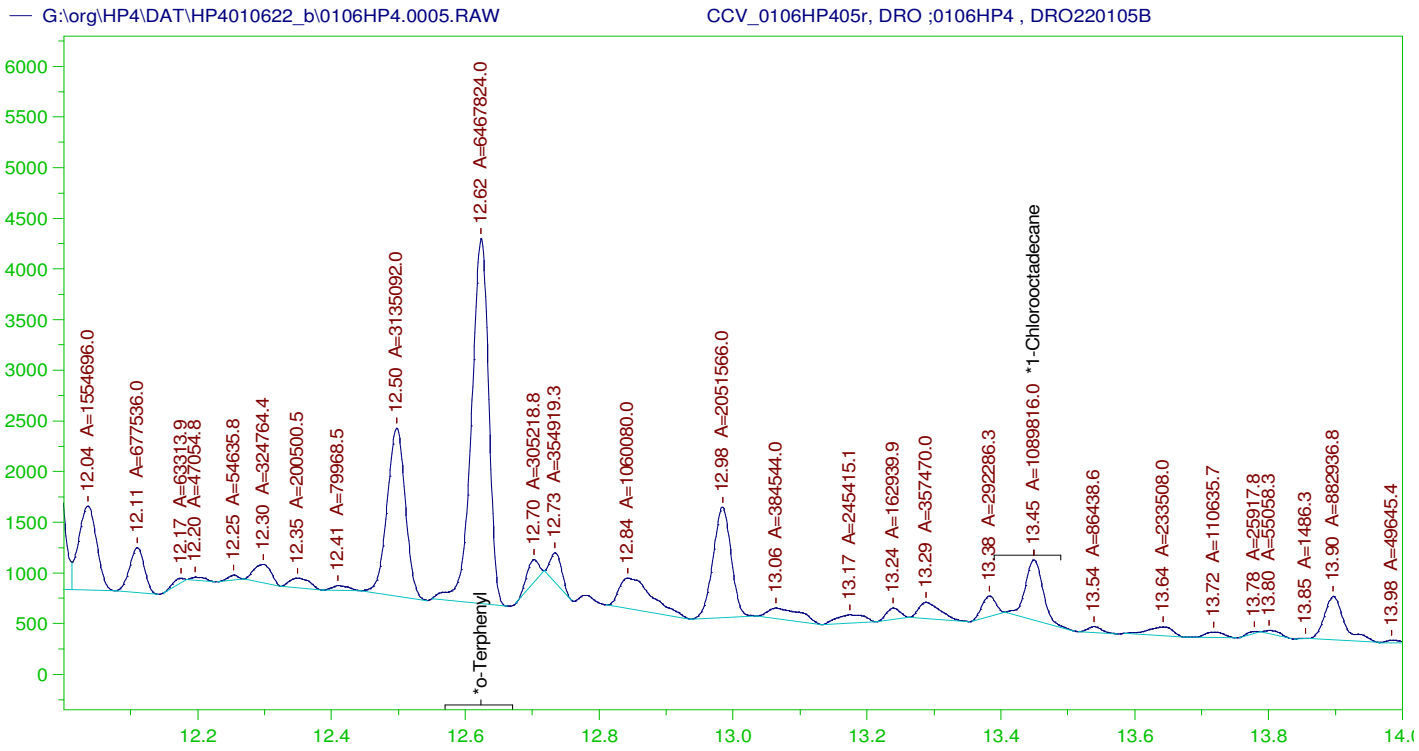
DRO Area:4.134095E+08 DRO Amount: 14074.34
TEH Area:4.286969E+08 TEH Amount: 14594.79

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14594.79	97.3	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.624	200.	339.029	169.51	85-115
*1-Chlorooctadecane	13.449	200.	126.768	63.38	85-115

G:\org\HP4\dat\HP4010622_b\Review\005_CCV_0106HP405r_DC_8015-C24-OJ-L%.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP405r, DRO ;0106HP4 , DRO220105B
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0005.RAW
Date & Time Acquired: 1/6/2022 7:43:00 PM
Method File: G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.624	200.	194.114	97.06	-
*1-Chlorooctadecane	13.449	200.	32.708	16.35	-

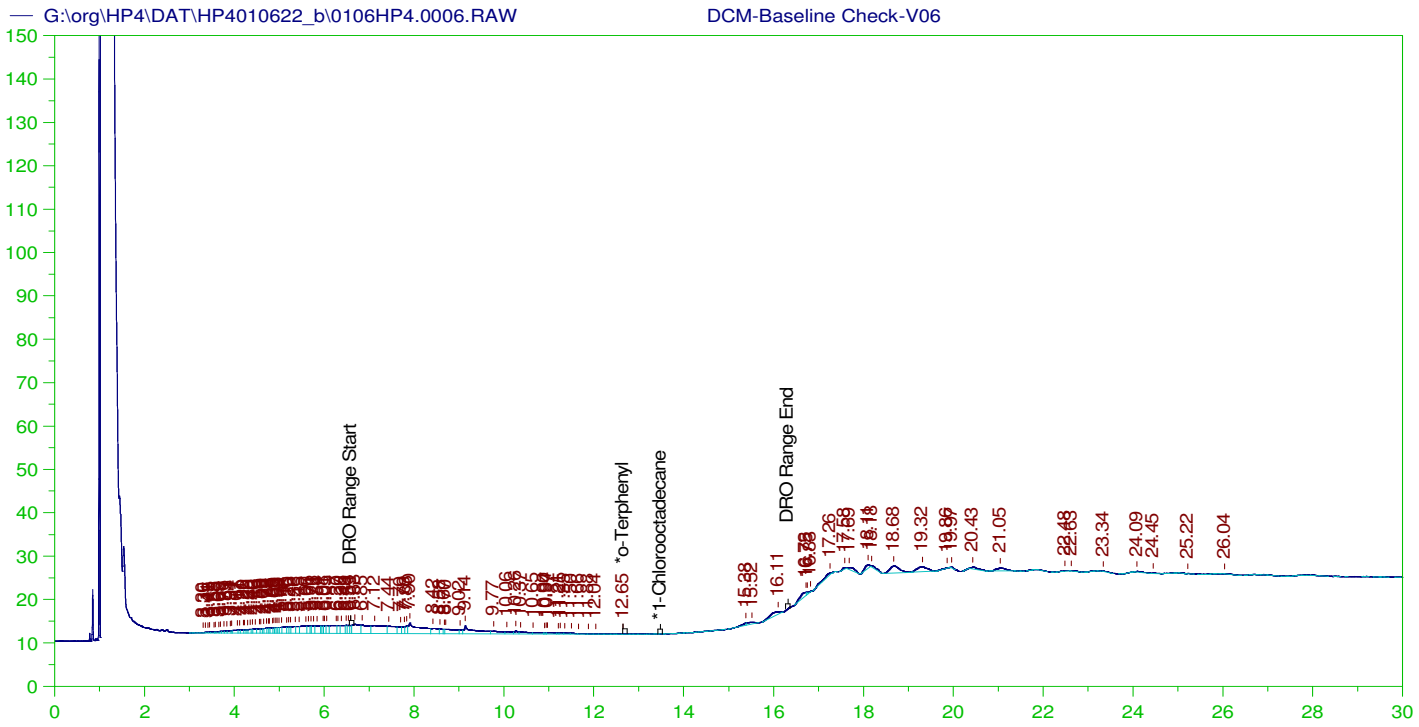
DRO Area:1.820825E+08 DRO Amount: 6198.918
TEH Area:1.919679E+08 TEH Amount: 6535.461

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6535.46	43.57	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.624	200.	194.114	97.06	85-115
*1-Chlorooctadecane	13.449	200.	32.708	16.35	85-115

G:\org\HP4\dat\HP4010622_b\Review\005_CCV_0106HP405r_DS_8015-C24-OJ-L#.xls



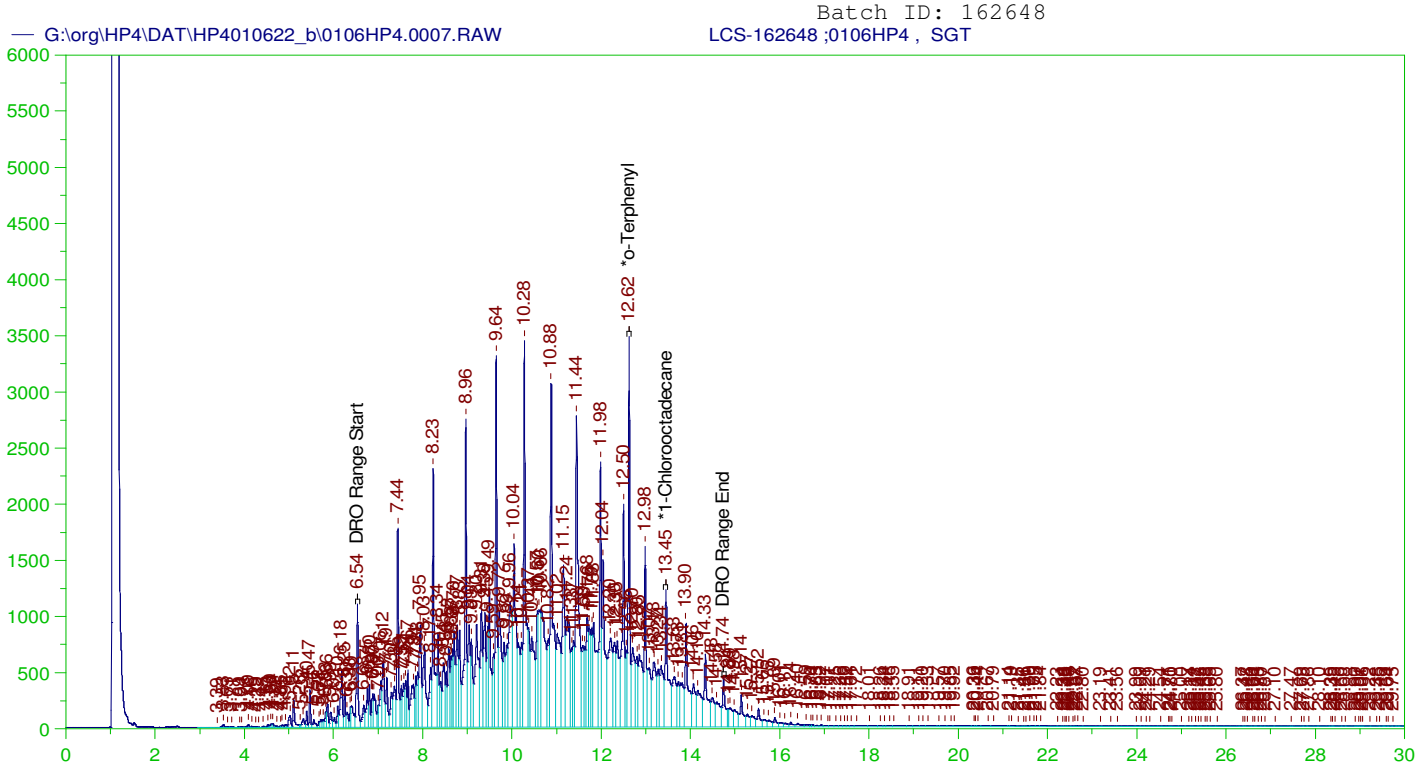
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V06
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0006.RAW
Date & Time Acquired: 1/6/2022 8:28:19 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 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	12.649	200.	.016	.01	-
*1-Chlorooctadecane	29.852	200.	.	.	-

DRO Area:336100.3 DRO Amount: 11.44238
TEH Area:691493.9 TEH Amount: 23.5416

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

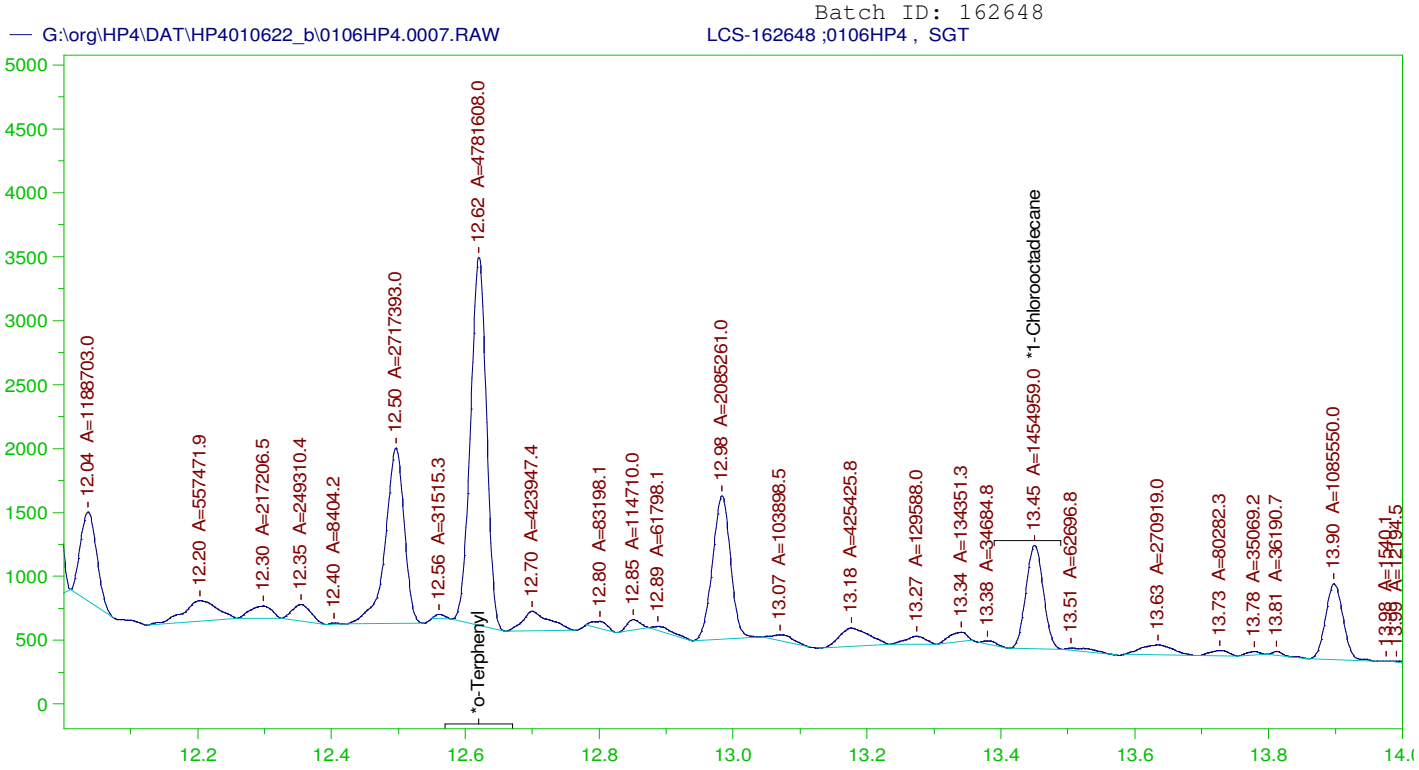
Sample Name: LCS-162648 ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0007.RAW
Date & Time Acquired: 1/6/2022 9:13:27 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.62	.2	.231	115.56	-
*1-Chlorooctadecane	13.45	.2	.165	82.65	-

DRO Area:3.086614E+08 DRO Amount: 10.50824
TEH Area:3.290731E+08 TEH Amount: 11.20314

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

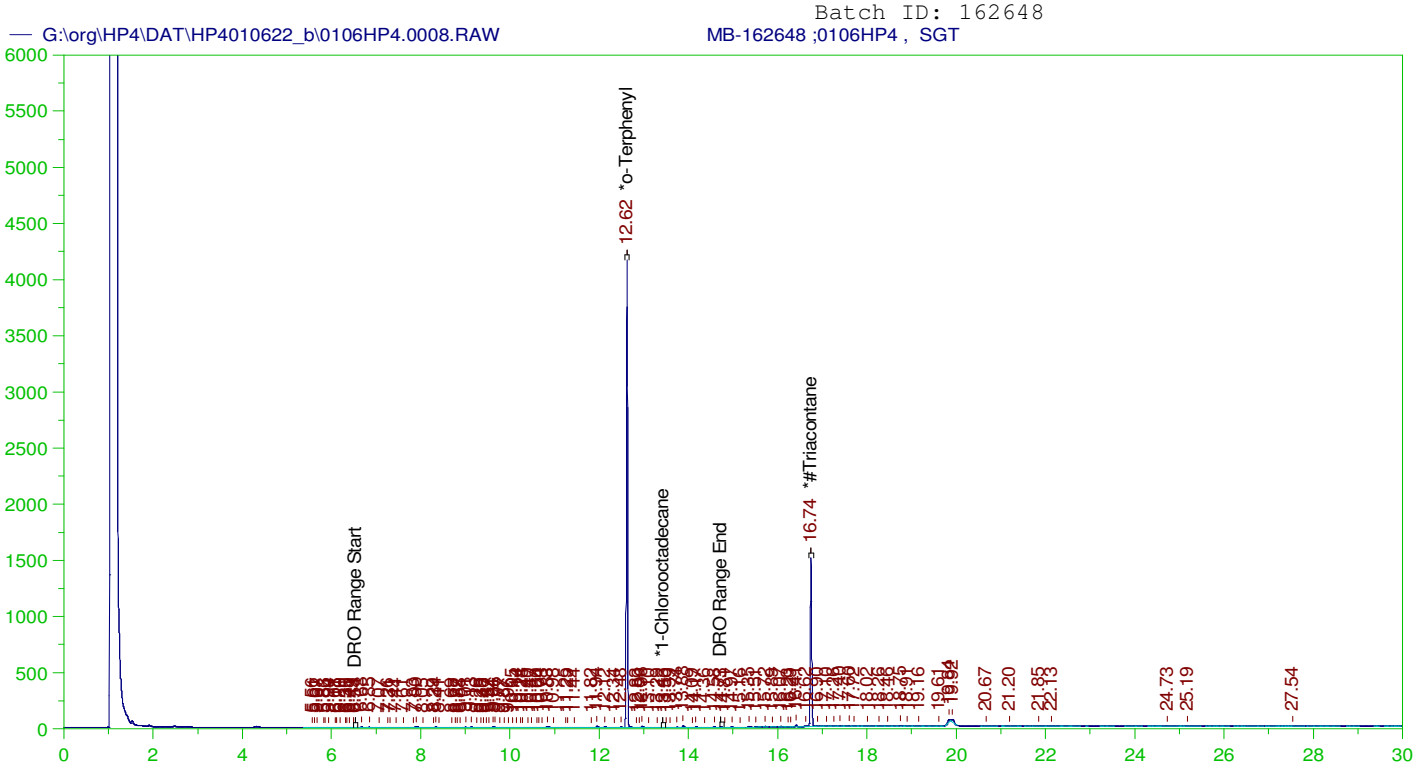
Sample Name: LCS-162648 ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0007.RAW
Date & Time Acquired: 1/6/2022 9:13:27 PM
Method File: G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.62	.2	.144	71.75	-
*1-Chlorooctadecane	13.45	.2	.044	21.83	-

DRO Area:1.237214E+08 DRO Amount: 4.212039
TEH Area:1.32783E+08 TEH Amount: 4.520536

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

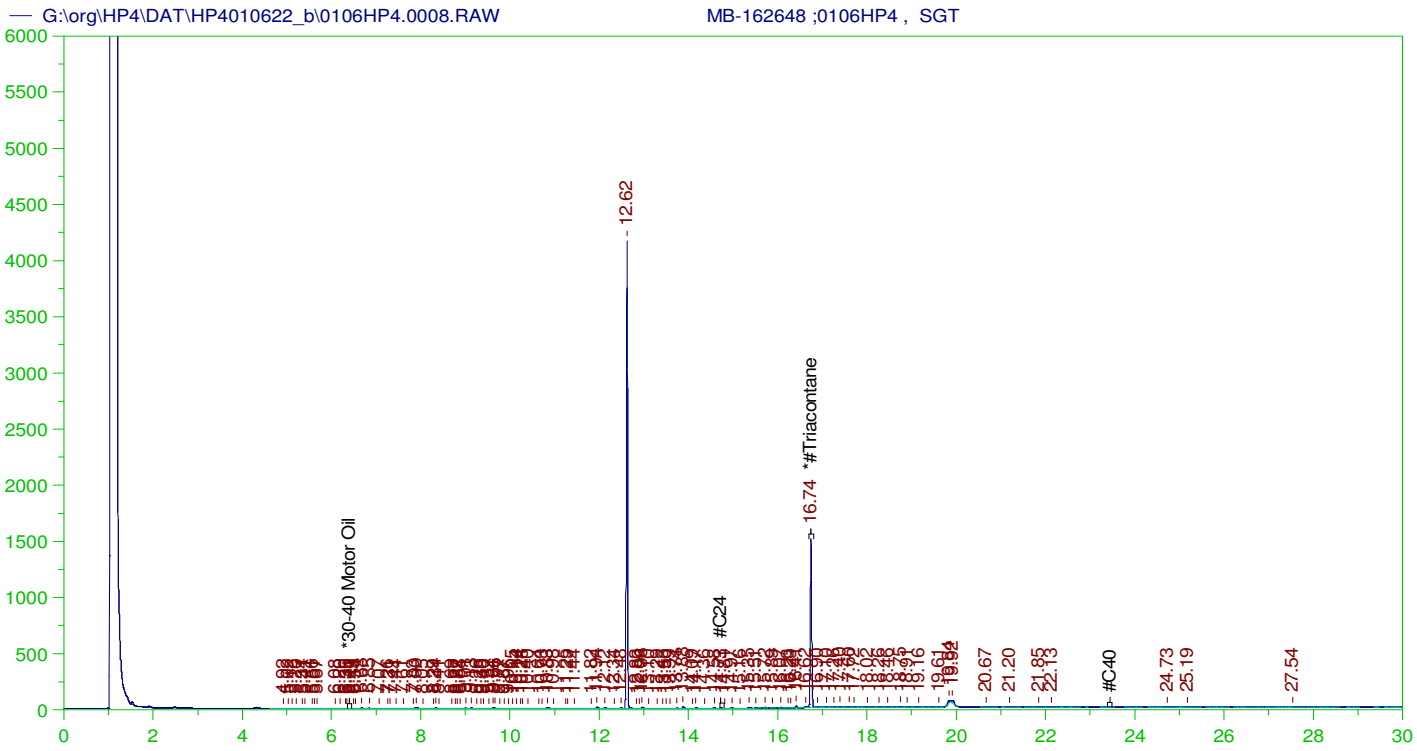
Sample Name: MB-162648 ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0008.RAW
Date & Time Acquired: 1/6/2022 9:58:42 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.619	.2	.22	109.86	-
*1-Chlorooctadecane	13.429	.2	.03		-
*#Triacontane	16.745	.2	.127	63.54	-

DRO Area:341012.2 DRO Amount: 0.0116096
TEH Area:758928.7 TEH Amount: 2.583739E-02

G:\org\HP4\dat\HP4010622_b\Review\008_MB-162648_DR_8015-C24T-OJ-L%.xls



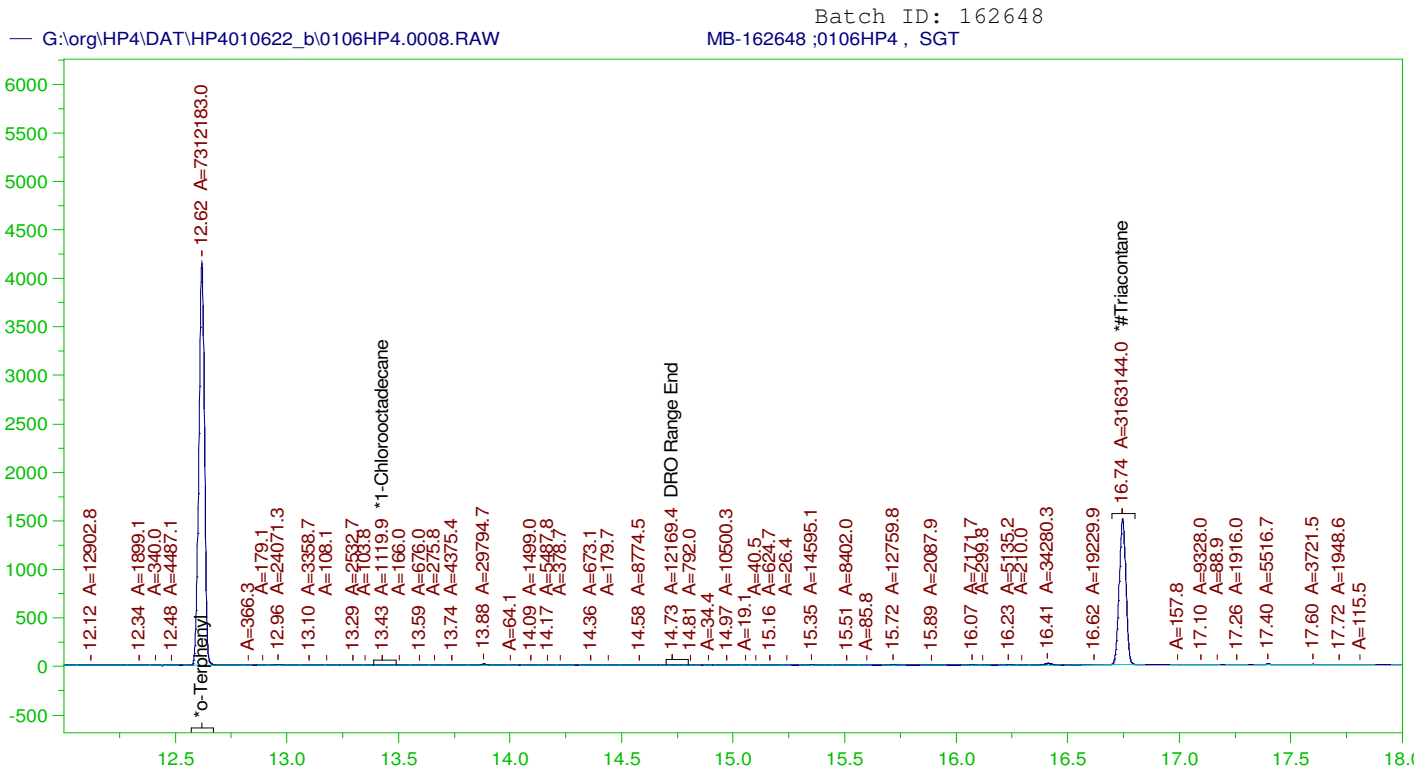
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-162648 ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0008.RAW
Date & Time Acquired: 1/6/2022 9:58:42 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-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: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.745	.5	.127	25.35	-

RRO Area:397773.8 RRO AMOUNT: 0.0162161



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-162648 ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0008.RAW
Date & Time Acquired: 1/6/2022 9:58:42 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

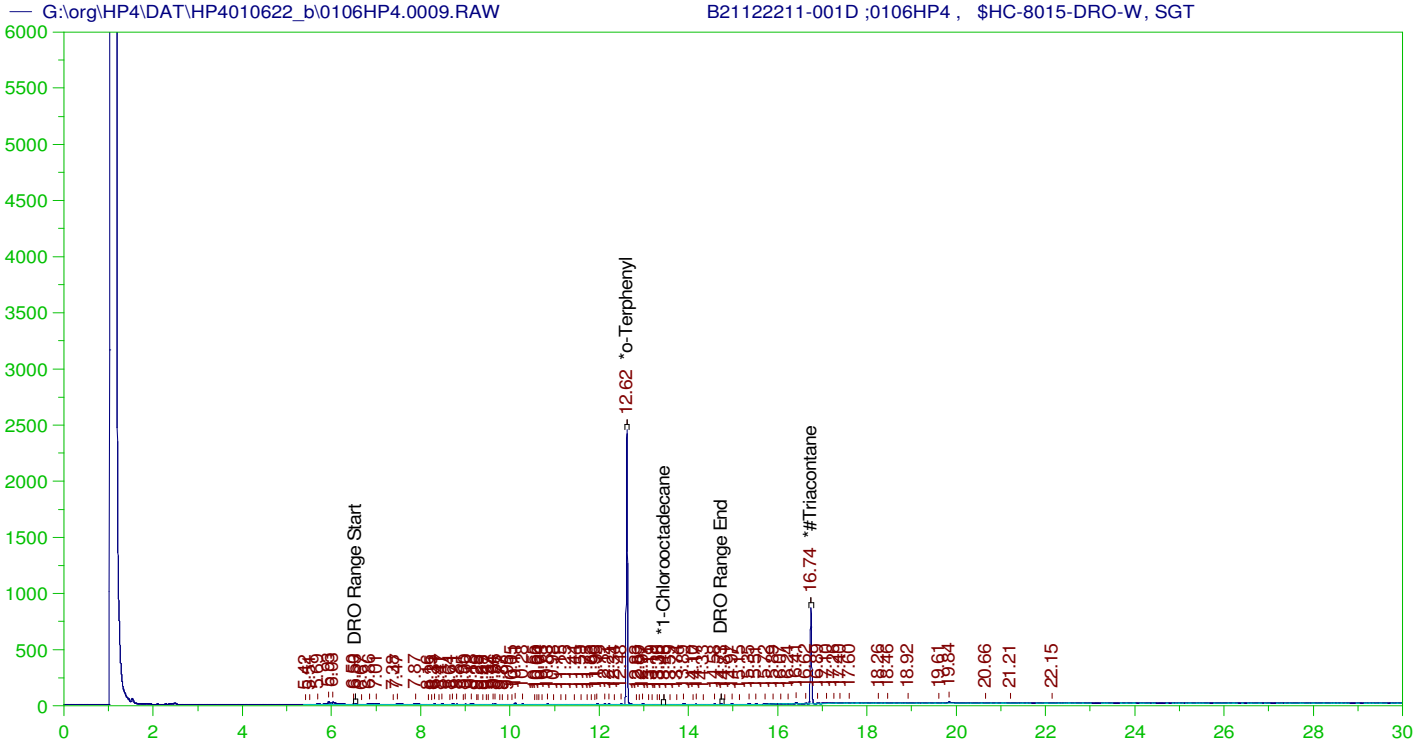
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.619	.2	.219	109.73	-
*1-Chlorooctadecane	13.429	.2	.02	10	-
*#Triacontane	16.745	.2	.127	63.33	-

DRO Area:221642.6 DRO Amount: 7.545724E-03
TEH Area:648784.2 TEH Amount: 2.208756E-02

ERH2293 (OWDFMW01) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0009.RAW B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0009.RAW
Date & Time Acquired: 1/6/2022 10:43:36 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

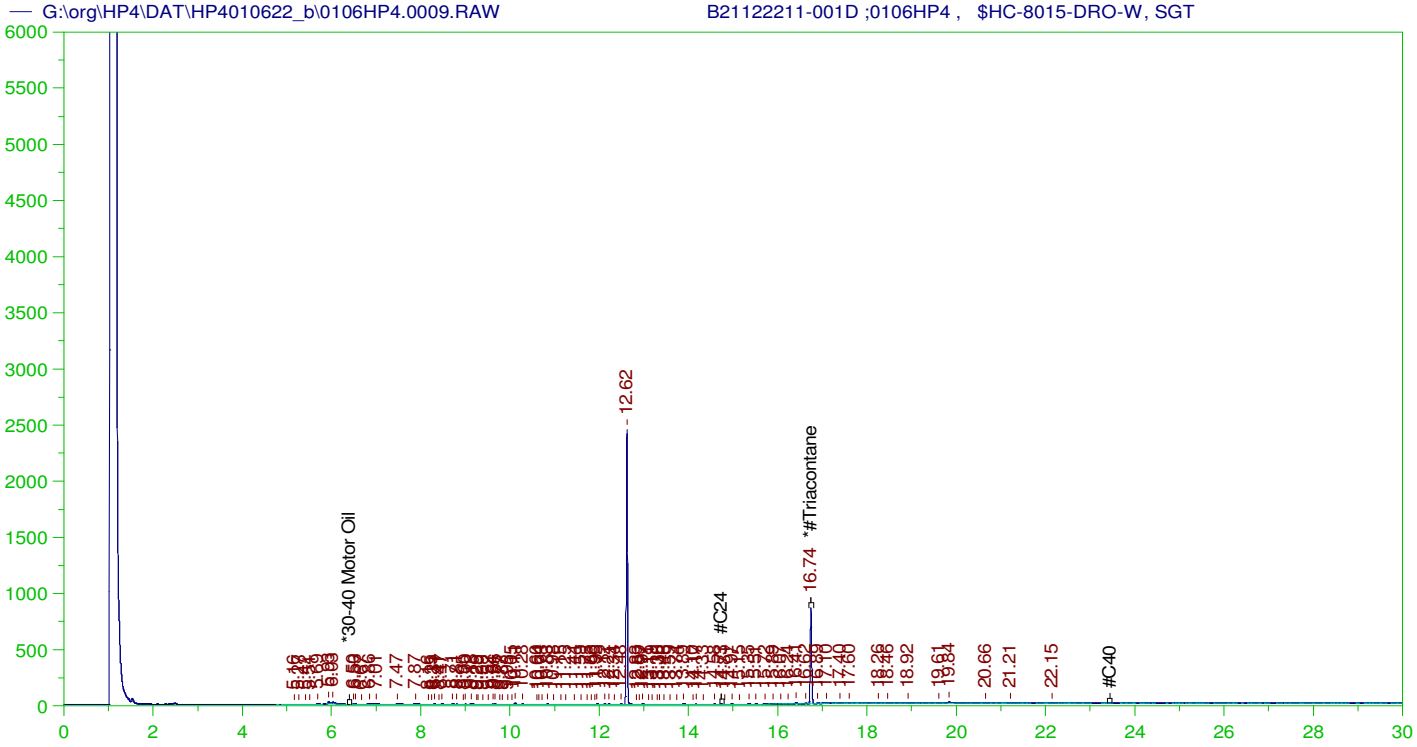
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.615	.196	.127	64.81	-
*1-Chlorooctadecane	13.457	.196	.	.03	-
*#Triacontane	16.744	.196	.072	36.69	-

DRO Area:358038.3 DRO Amount: 1.195025E-02
TEH Area:724613.3 TEH Amount: 2.418542E-02

ERH2293 (OWDFMW01) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0009.RAW B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0009.RAW
Date & Time Acquired: 1/6/2022 10:43:36 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

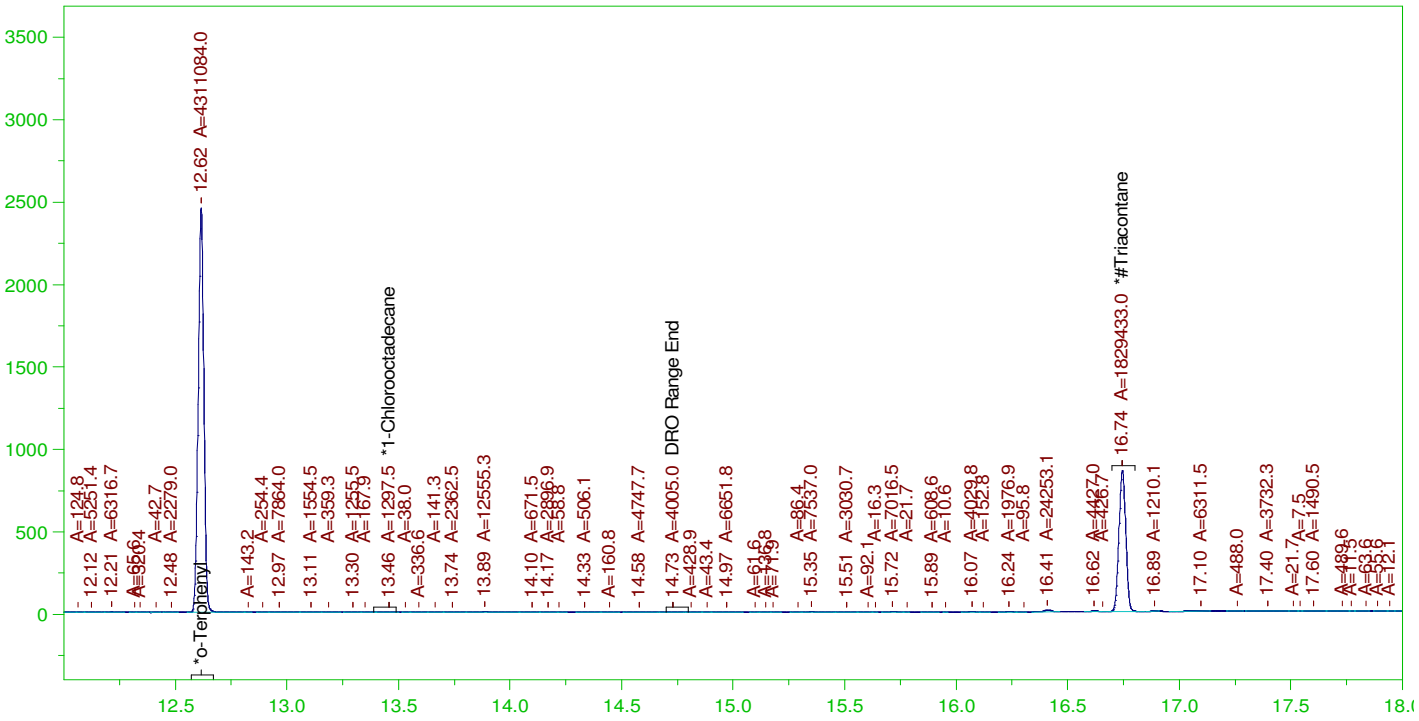
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.744	.49	.072	14.66	-

RRO Area:155034.1 RRO AMOUNT: 6.196368E-03

ERH2293 (OWDFMW01) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0009.RAW B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0009.RAW
Date & Time Acquired: 1/6/2022 10:43:36 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

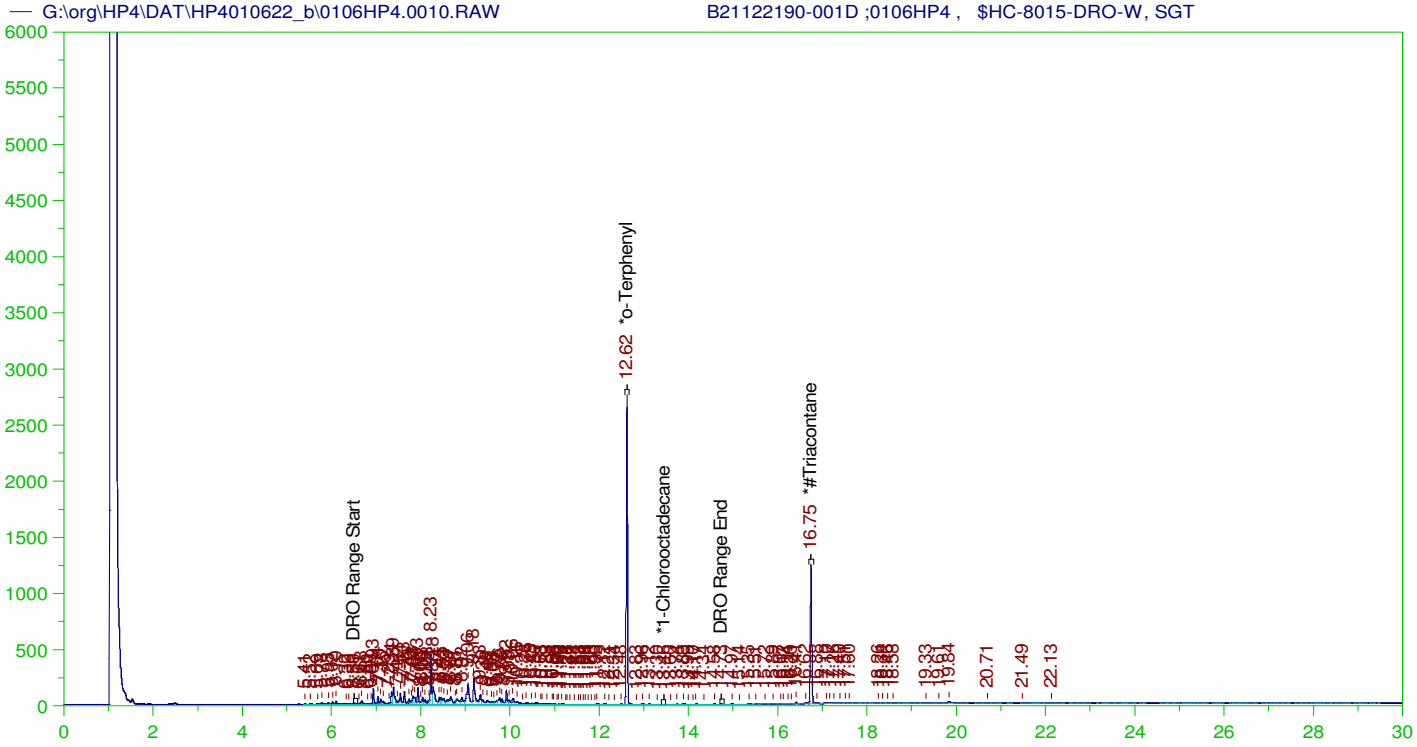
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.615	.196	.127	64.69	-
*1-Chlorooctadecane	13.457	.196	.	.02	-
*#Triacontane	16.744	.196	.072	36.63	-

DRO Area:243467.3 DRO Amount: 8.12621E-03
TEH Area:614579.3 TEH Amount: 2.051282E-02

ERH2281 (RHMW02) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0010.RAW B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0010.RAW
Date & Time Acquired: 1/6/2022 11:28:52 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

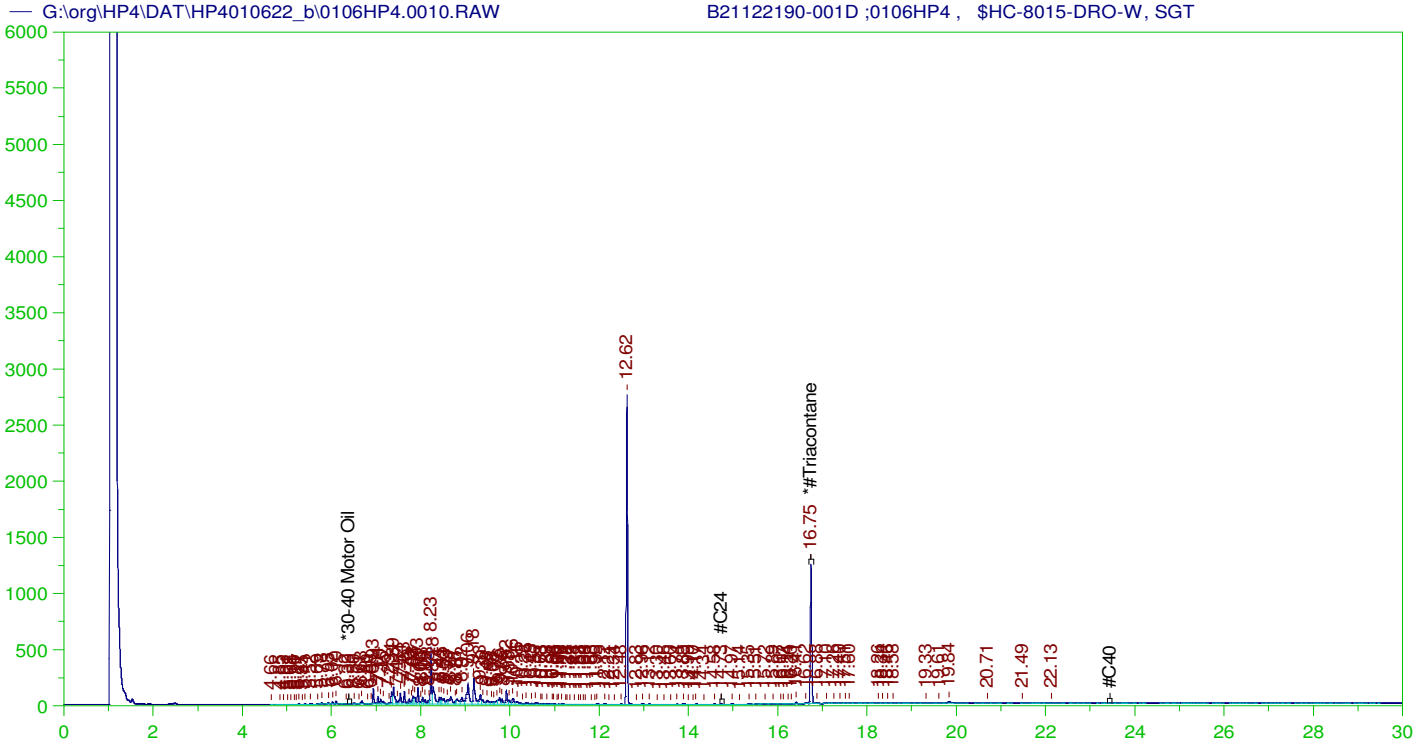
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.196	.143	72.97	-
*1-Chlorooctadecane	13.456	.196	.	.03	-
*#Triacontane	16.746	.196	.104	52.79	-

DRO Area:9666660 DRO Amount: 0.3226442
TEH Area:1.015297E+07 TEH Amount: 0.3388759

ERH2281 (RHMW02) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0010.RAW B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0010.RAW
Date & Time Acquired: 1/6/2022 11:28:52 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

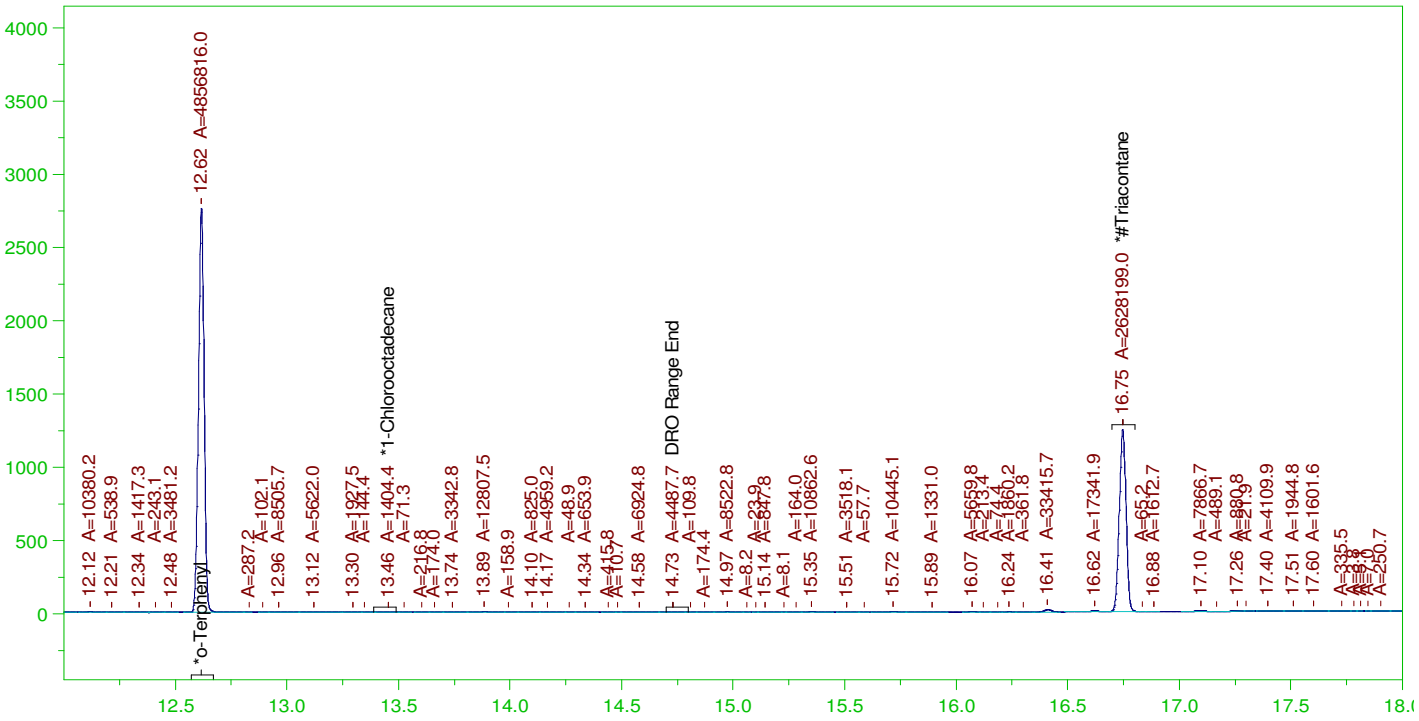
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.746	.49	.103	21.06	-

RRO Area:216488.4 RRO AMOUNT: 8.652559E-03

ERH2281 (RHMW02) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0010.RAW B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0010.RAW
Date & Time Acquired: 1/6/2022 11:28:52 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

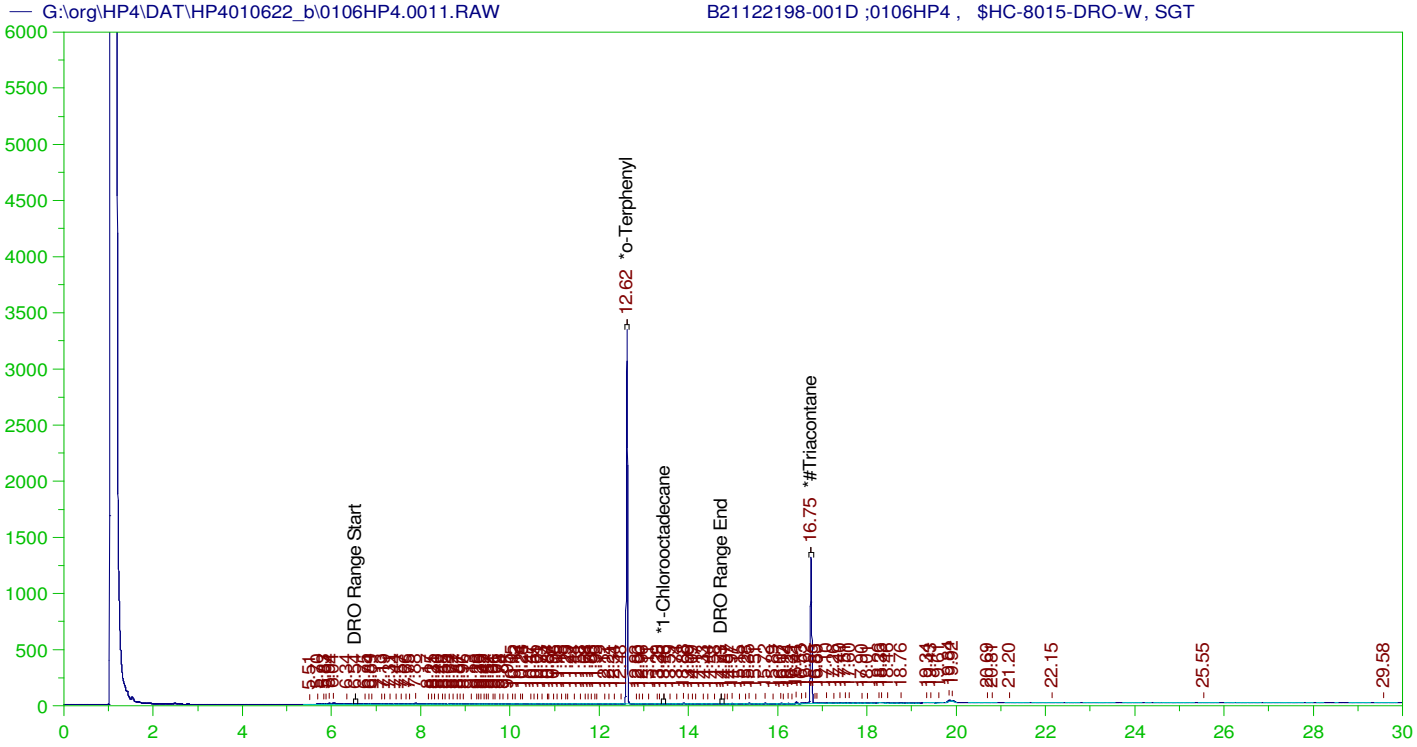
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.196	.143	72.88	-
*1-Chlorooctadecane	13.456	.196	.	.02	-
*#Triacontane	16.746	.196	.103	52.62	-

DRO Area:9770271 DRO Amount: 0.3261024
TEH Area:1.039798E+07 TEH Amount: 0.3470533

ERH2319 (RHMW06) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0011.RAW B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0011.RAW
Date & Time Acquired: 1/7/2022 12:14:16 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

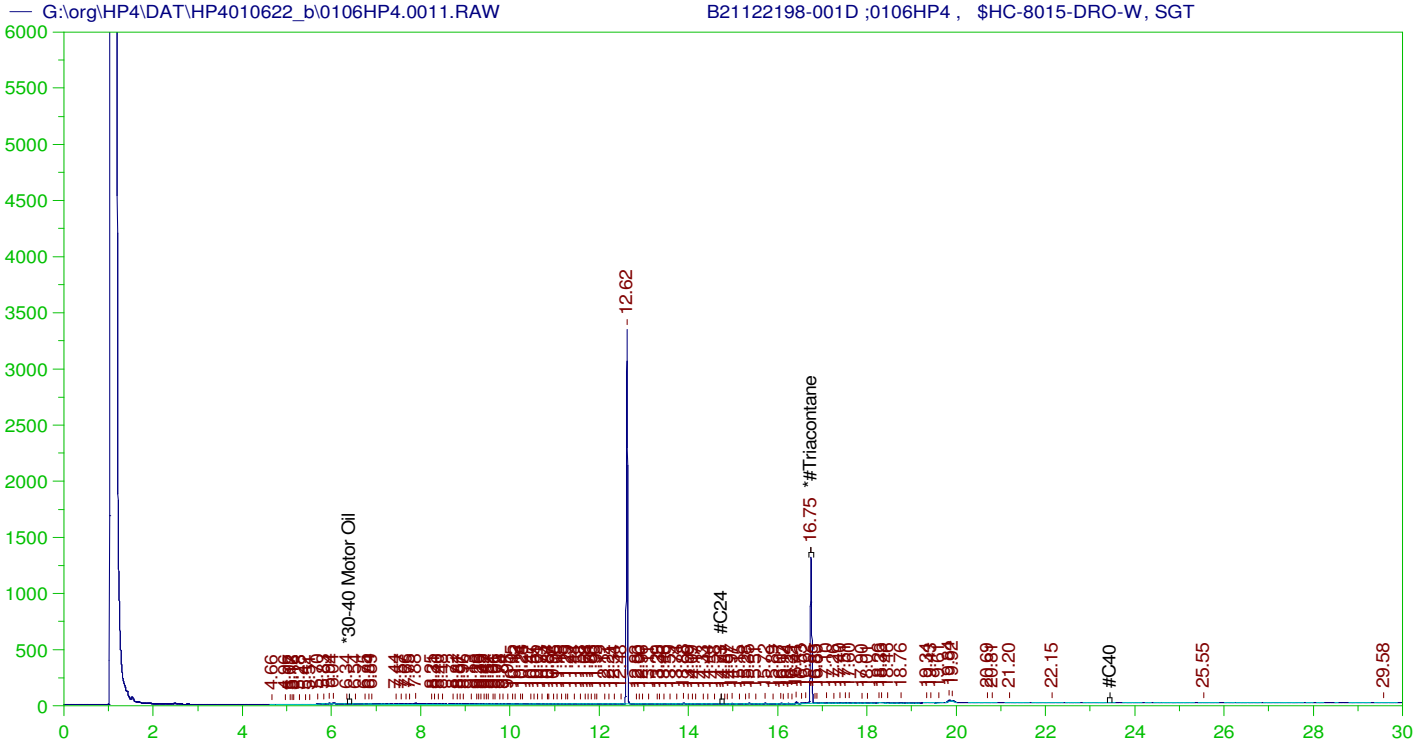
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.194	.169	87.1	-
*1-Chlorooctadecane	13.456	.194	.	.03	-
*#Triacontane	16.746	.194	.108	55.47	-

DRO Area:338646.3 DRO Amount: 1.119326E-02
TEH Area:740404 TEH Amount: 2.447254E-02

ERH2319 (RHMW06) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0011.RAW B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0011.RAW
Date & Time Acquired: 1/7/2022 12:14:16 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

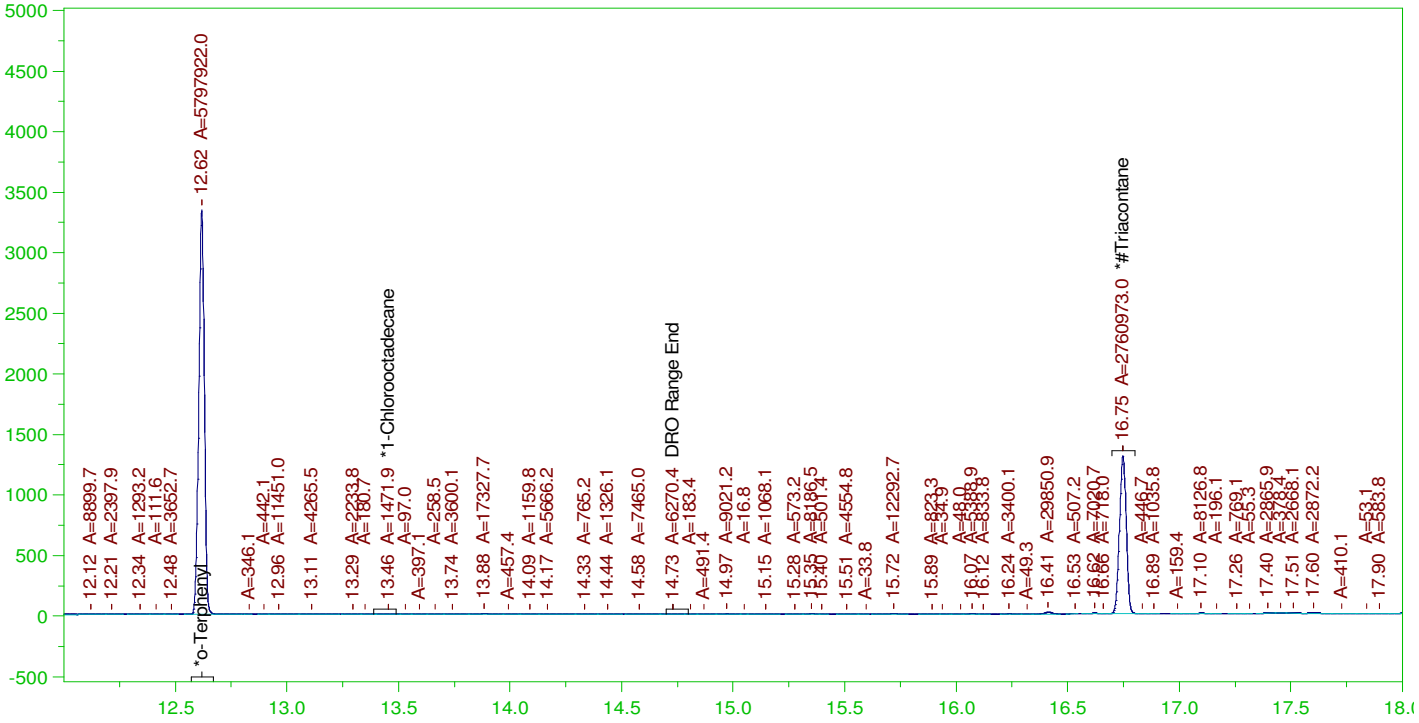
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.746	.485	.107	22.12	-

RRO Area:245776.6 RRO AMOUNT: 9.727773E-03

ERH2319 (RHMW06) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0011.RAW B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT



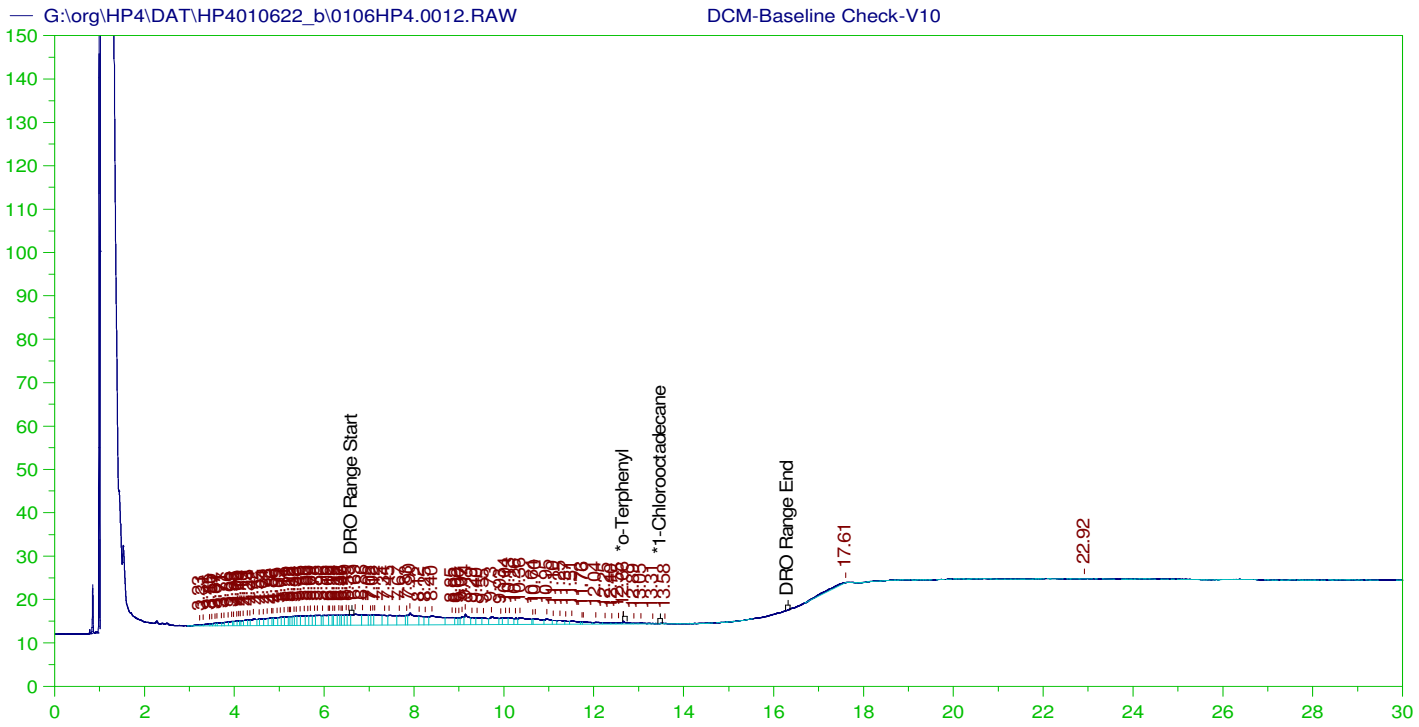
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0011.RAW
Date & Time Acquired: 1/7/2022 12:14:16 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.194	.169	87.	-
*1-Chlorooctadecane	13.456	.194	.	.02	-
*#Triacontane	16.746	.194	.107	55.28	-

DRO Area:261766.5 DRO Amount: 8.652156E-03
TEH Area:642307.5 TEH Amount: 2.123016E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V10
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0012.RAW
Date & Time Acquired: 1/7/2022 12:59:43 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

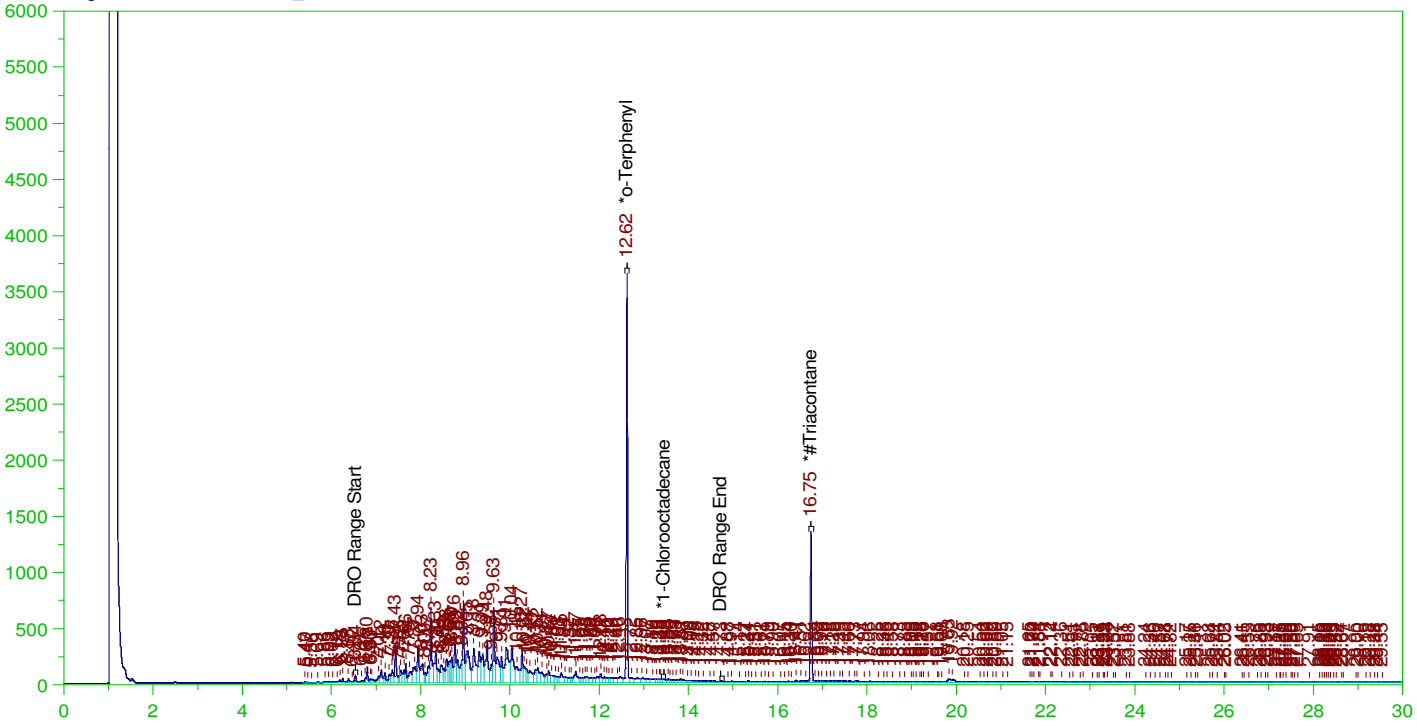
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.658	200.	.113	.06	-
*1-Chlorooctadecane	29.957	200.	.	.	-

DRO Area:532794.8 DRO Amount: 18.13876
TEH Area:885223.4 TEH Amount: 30.13703

ERH2291 (Sump Adit3) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0013.RAW B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0013.RAW
Date & Time Acquired: 1/7/2022 1:44:55 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

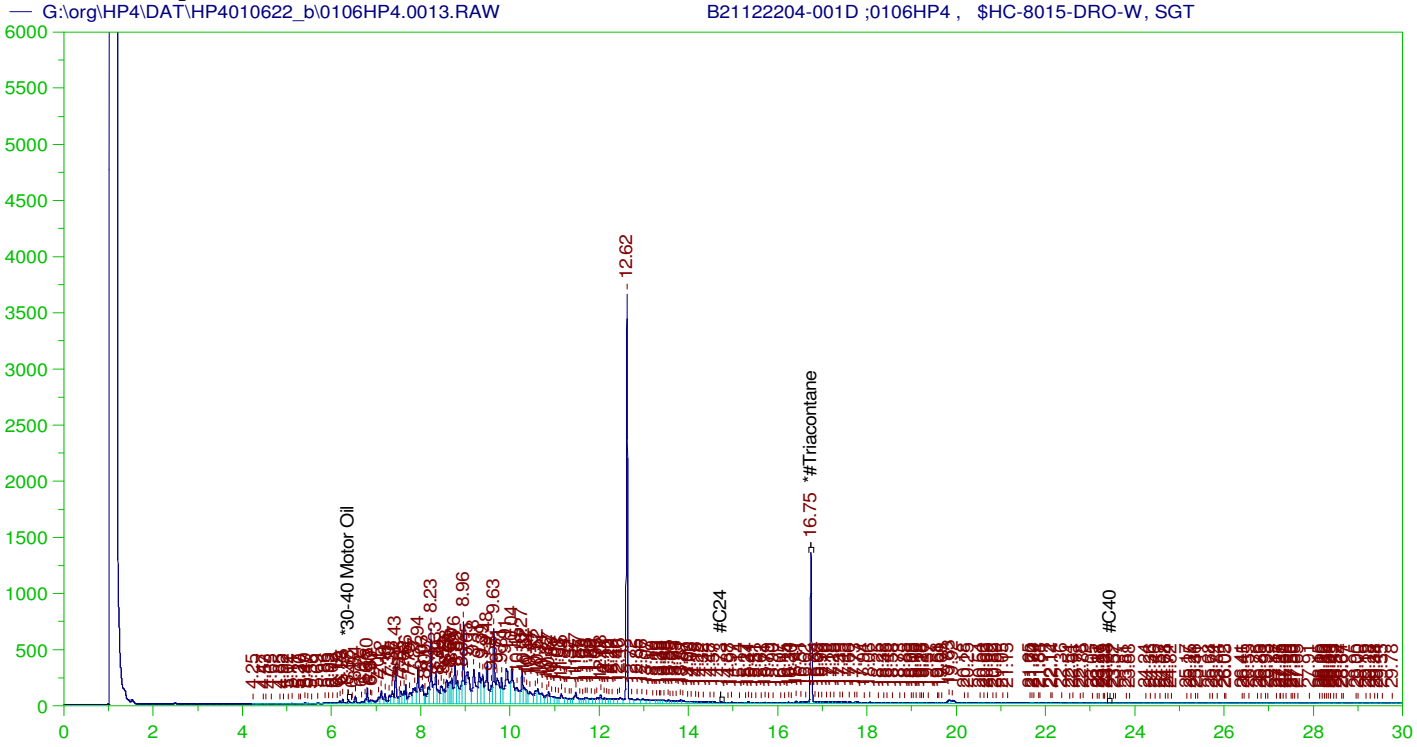
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.194	.191	98.38	-
*1-Chlorooctadecane	13.445	.194	.004	1.92	-
*#Triacontane	16.745	.194	.112	57.87	-

DRO Area:4.465968E+07 DRO Amount: 1.476135
TEH Area:4.9271E+07 TEH Amount: 1.628552

ERH2291 (Sump Adit3) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0013.RAW B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0013.RAW
Date & Time Acquired: 1/7/2022 1:44:55 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

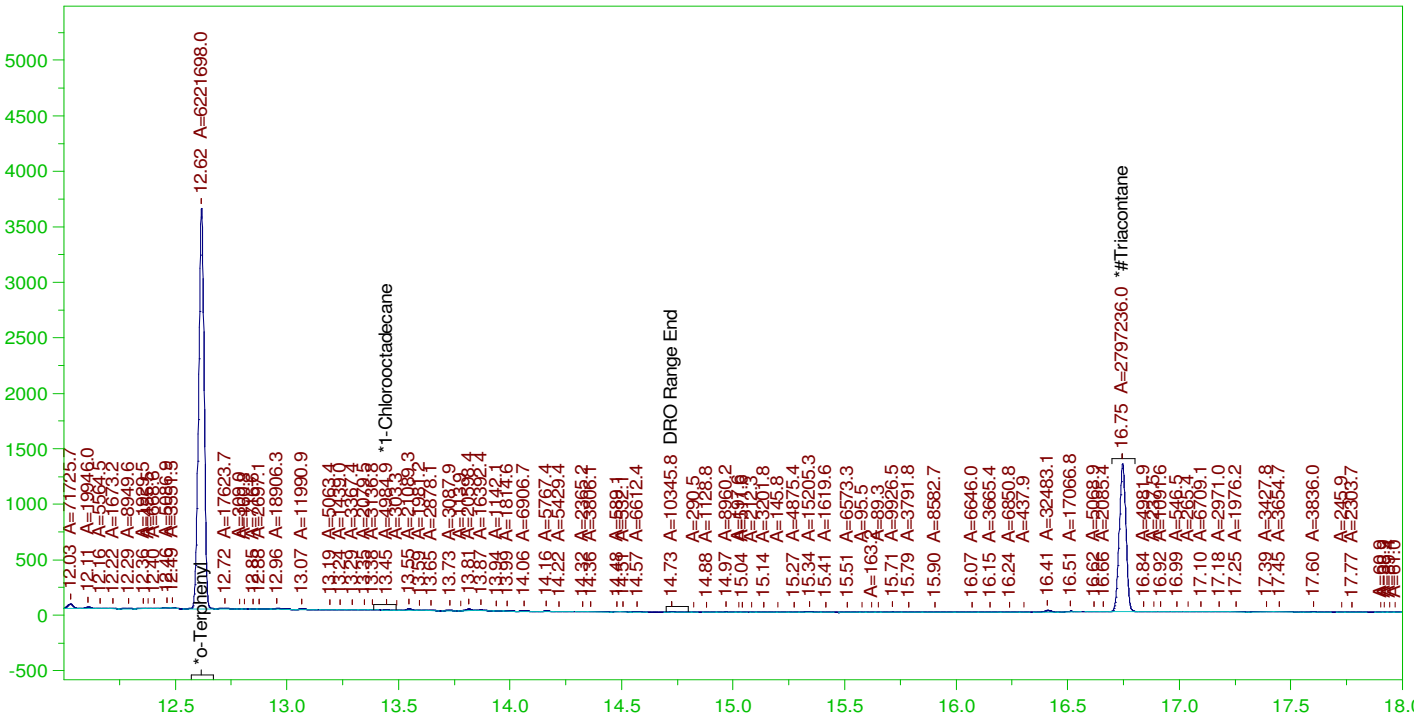
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.745	.485	.113	23.19	-

RRO Area:3965750 RRO AMOUNT: 0.1569634

ERH2291 (Sump Adit3) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0013.RAW B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0013.RAW
Date & Time Acquired: 1/7/2022 1:44:55 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

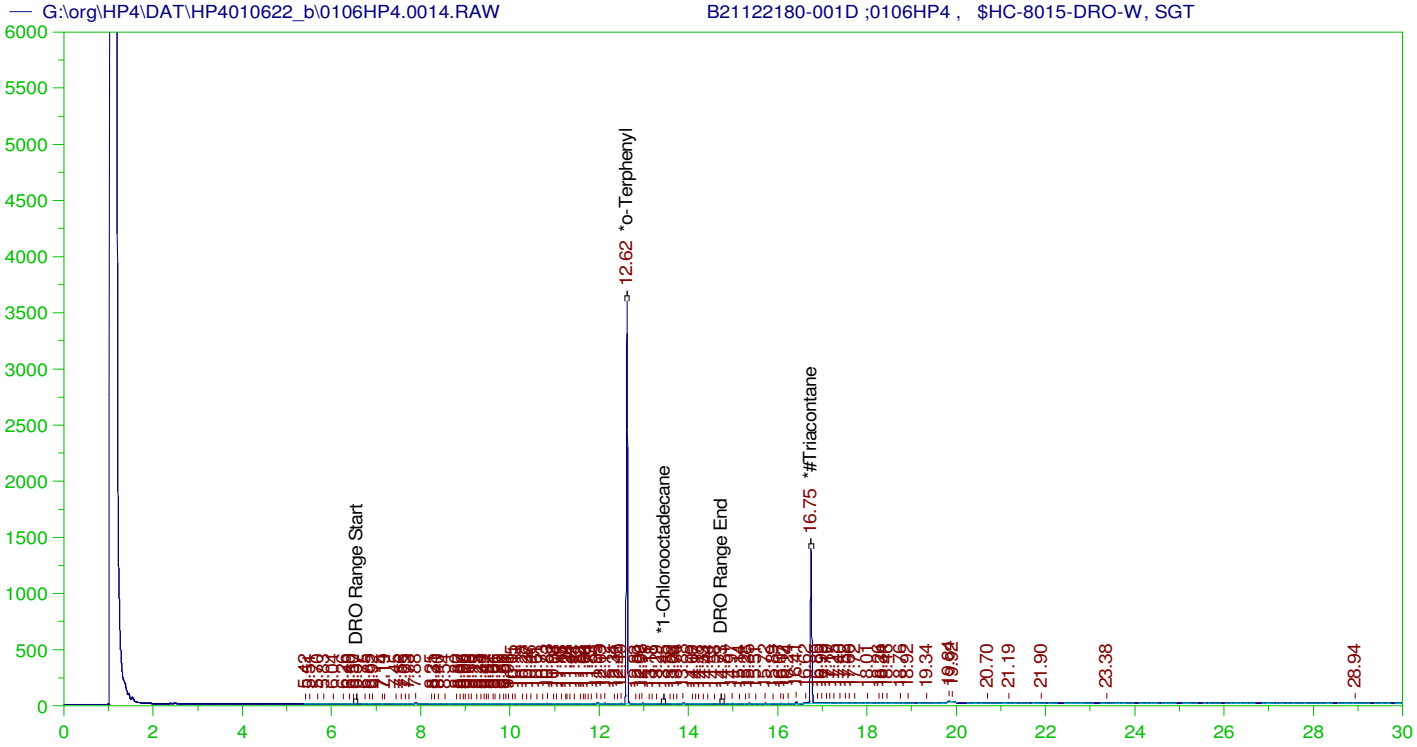
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.194	.181	93.36	-
*1-Chlorooctadecane	13.445	.194	. .07		-
*#Triacontane	16.745	.194	.109	56.	-

DRO Area:3.265764E+07 DRO Amount: 1.079432
TEH Area:3.338271E+07 TEH Amount: 1.103397

ERH2283 (RHMW03) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0014.RAW B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0014.RAW
Date & Time Acquired: 1/7/2022 2:30:09 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

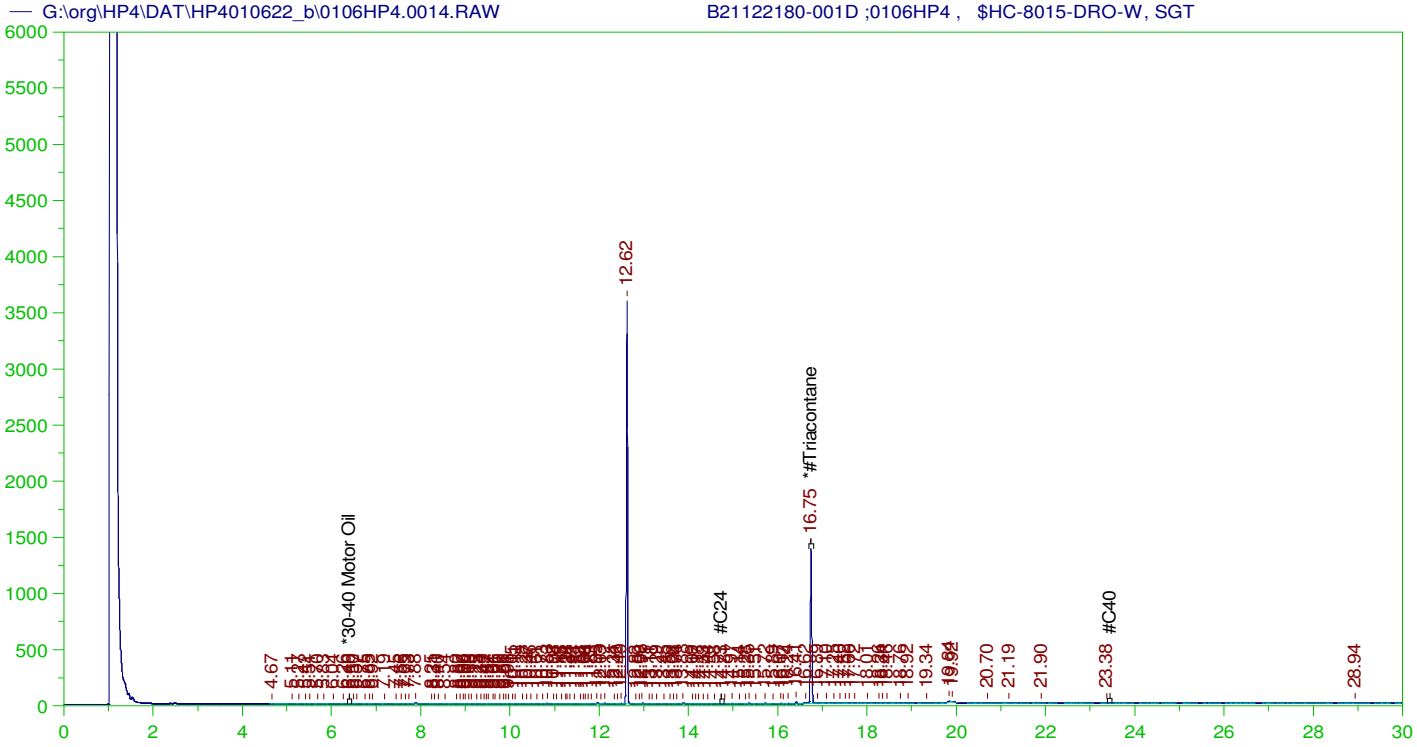
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.204	.192	93.93	-
*1-Chlorooctadecane	13.451	.204	.12		-
*#Triacontane	16.746	.204	.117	57.45	-

DRO Area:491349.8 DRO Amount: 1.706916E-02
TEH Area:816185.1 TEH Amount: 2.835373E-02

ERH2283 (RHMW03) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0014.RAW B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0014.RAW
Date & Time Acquired: 1/7/2022 2:30:09 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

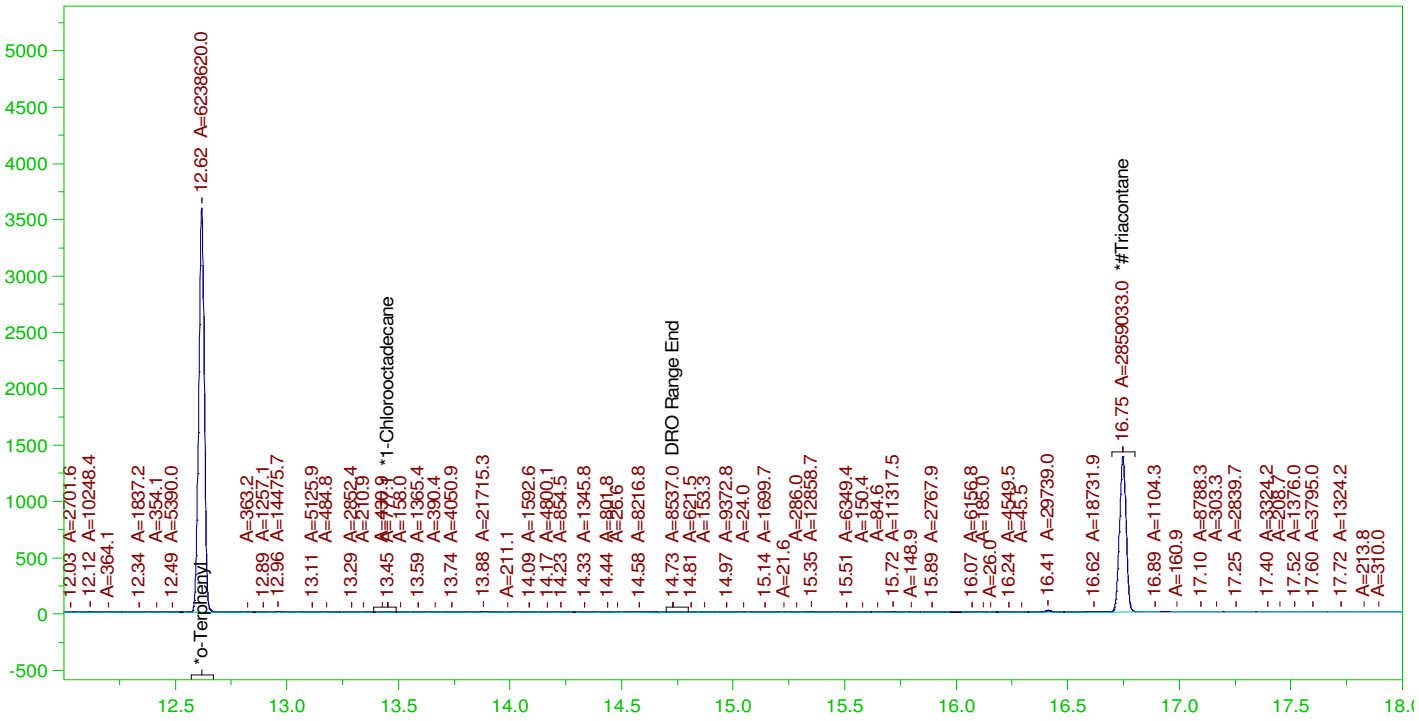
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.746	.51	.117	22.91	-

RRO Area:244699.3 RRO AMOUNT: 1.017928E-02

ERH2283 (RHMW03) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0014.RAW B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0014.RAW
Date & Time Acquired: 1/7/2022 2:30:09 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

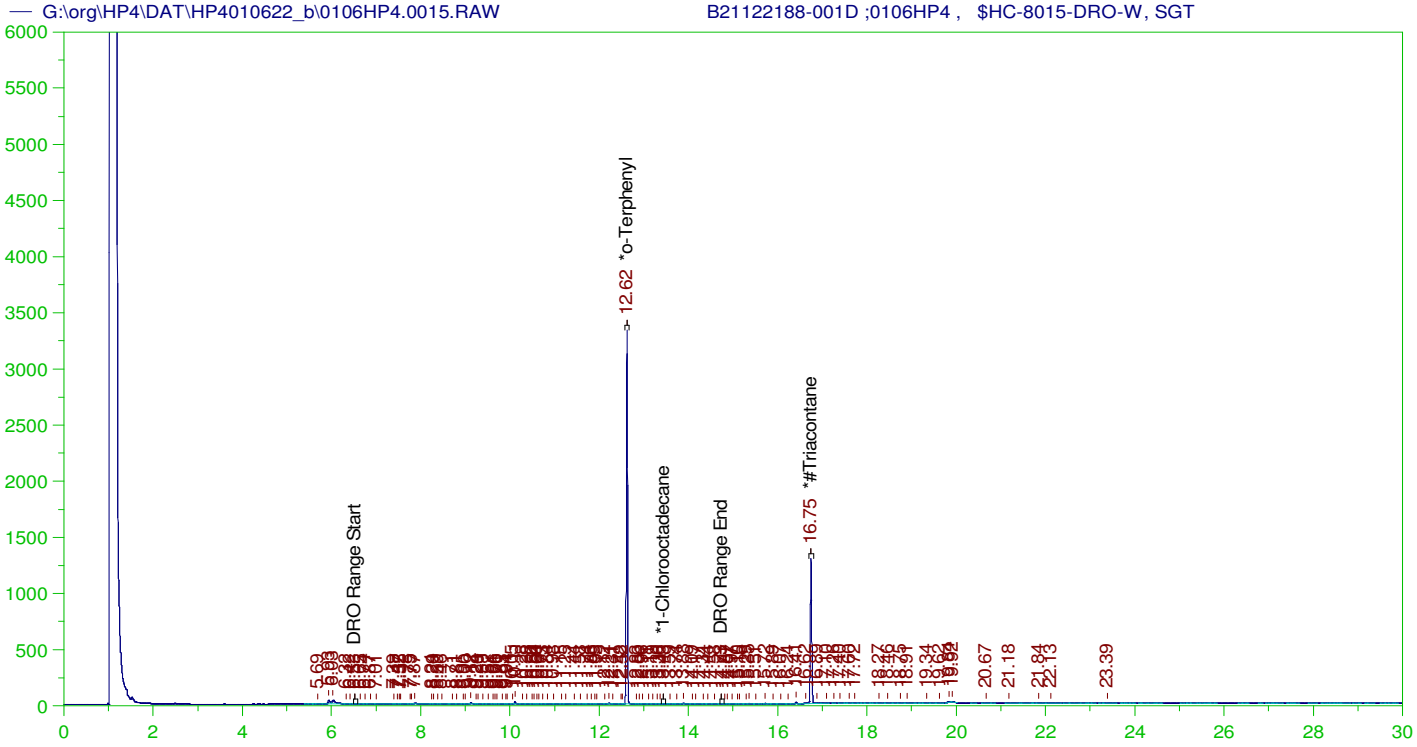
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.204	.191	93.62	-
*1-Chlorooctadecane	13.451	.204	.	.01	-
*#Triacontane	16.746	.204	.117	57.24	-

DRO Area:419258.3 DRO Amount: 1.456475E-02
TEH Area:810161.3 TEH Amount: 2.814446E-02

ERH2276 (RHMW14 Zone3) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0015.RAW B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0015.RAW
Date & Time Acquired: 1/7/2022 3:15:30 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

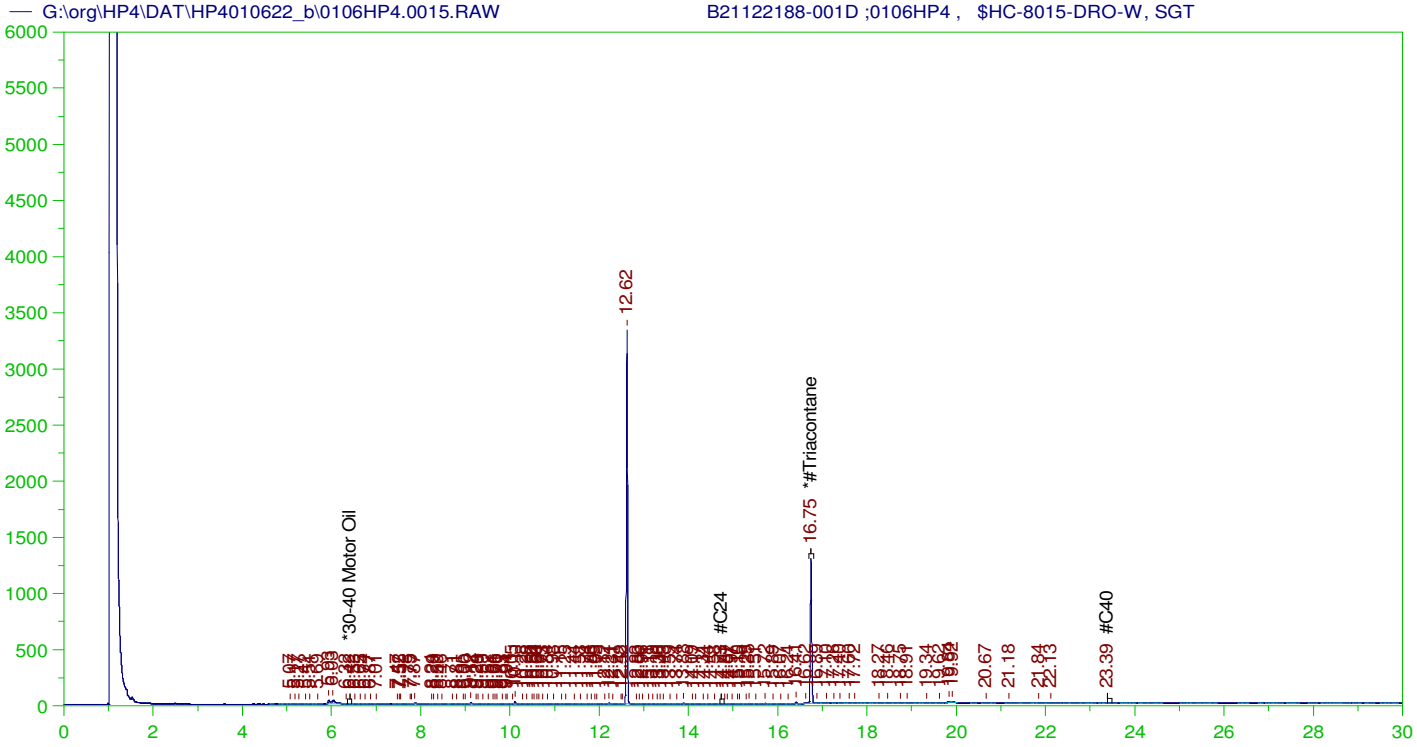
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.204	.177	86.69	-
*1-Chlorooctadecane	13.43	.204	. .04		-
*#Triacontane	16.746	.204	.111	54.63	-

DRO Area:475113.4 DRO Amount: 1.650512E-02
TEH Area:1085418 TEH Amount: 3.770671E-02

ERH2276 (RHMW14 Zone3) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0015.RAW B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0015.RAW
Date & Time Acquired: 1/7/2022 3:15:30 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

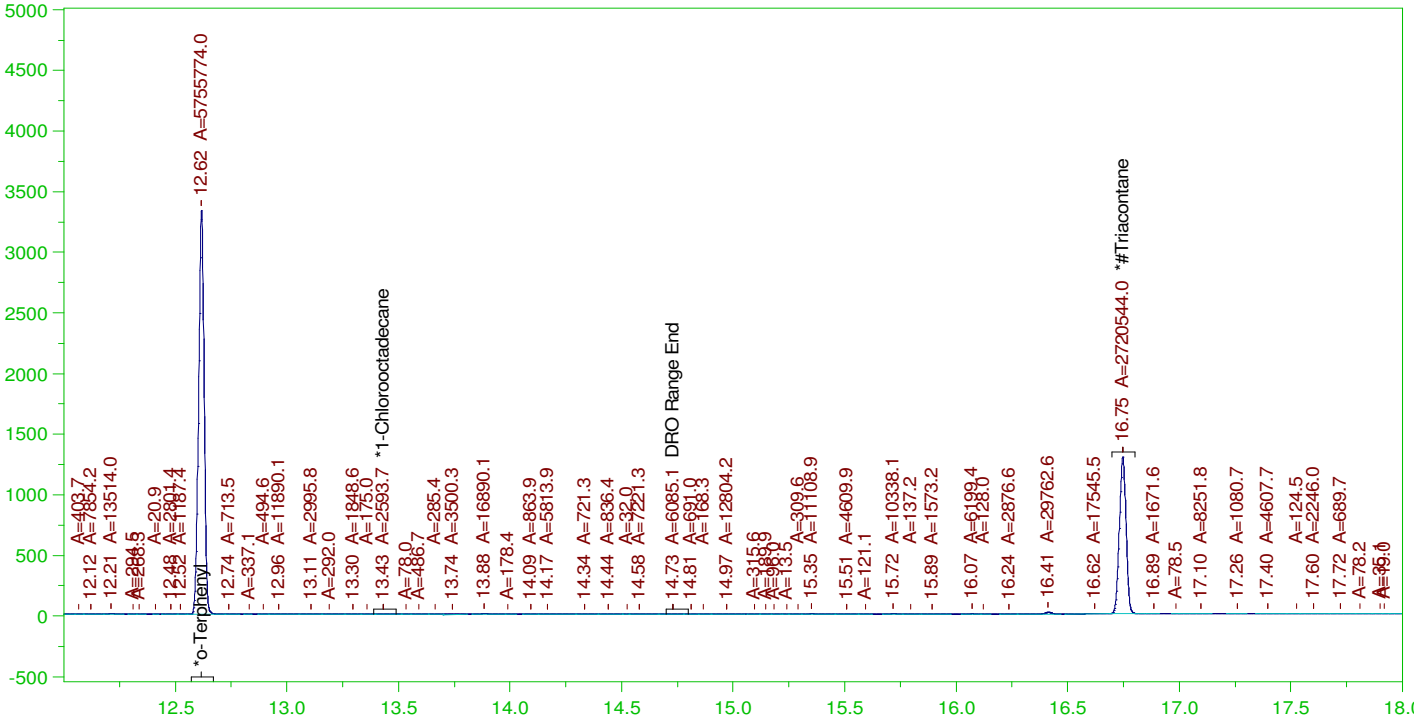
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.746	.51	.111	21.8	-

RRO Area:196536.8 RRO AMOUNT: 8.175758E-03

ERH2276 (RHMW14 Zone3) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0015.RAW B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT



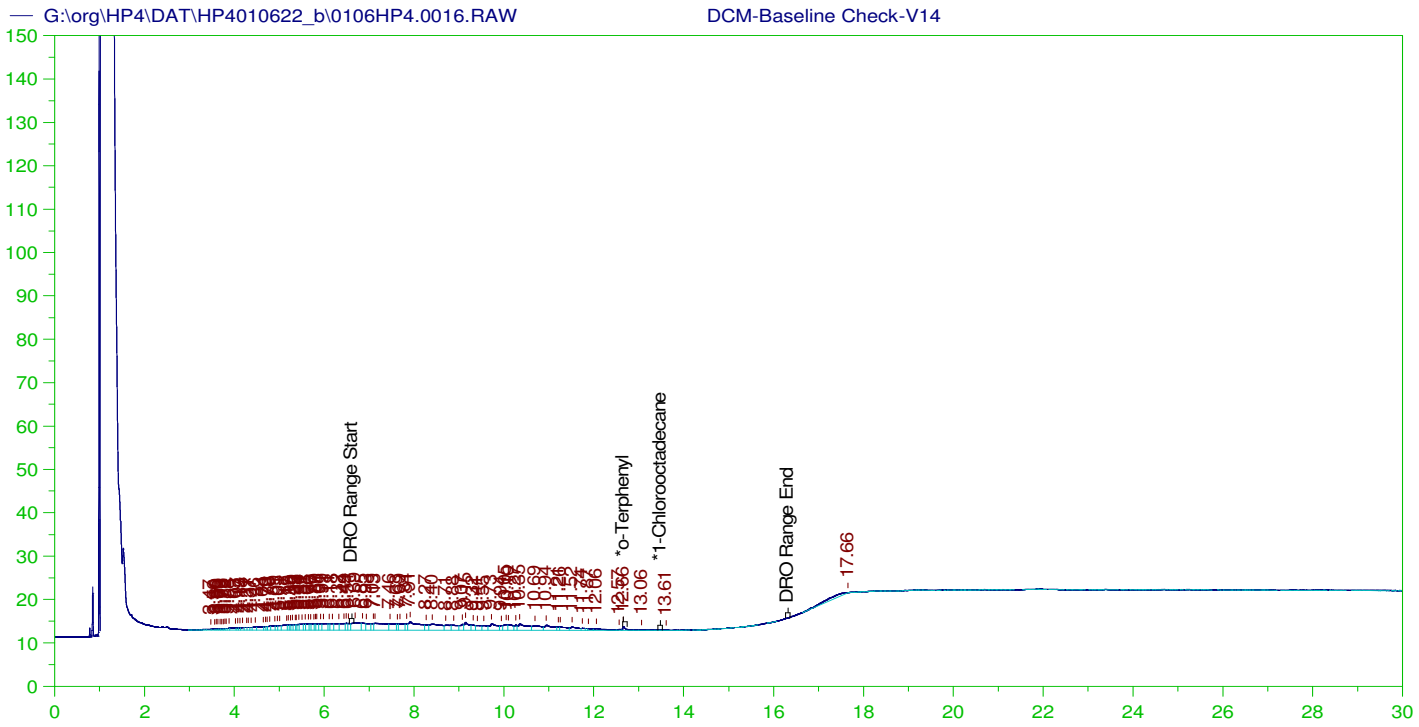
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0015.RAW
Date & Time Acquired: 1/7/2022 3:15:30 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.204	.176	86.37	-
*1-Chlorooctadecane	13.43	.204	. .04		-
*#Triacontane	16.746	.204	.111	54.47	-

DRO Area:559626.2 DRO Amount: 1.944104E-02
TEH Area:1277264 TEH Amount: 4.437129E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0016.RAW
Date & Time Acquired: 1/7/2022 4:00:40 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

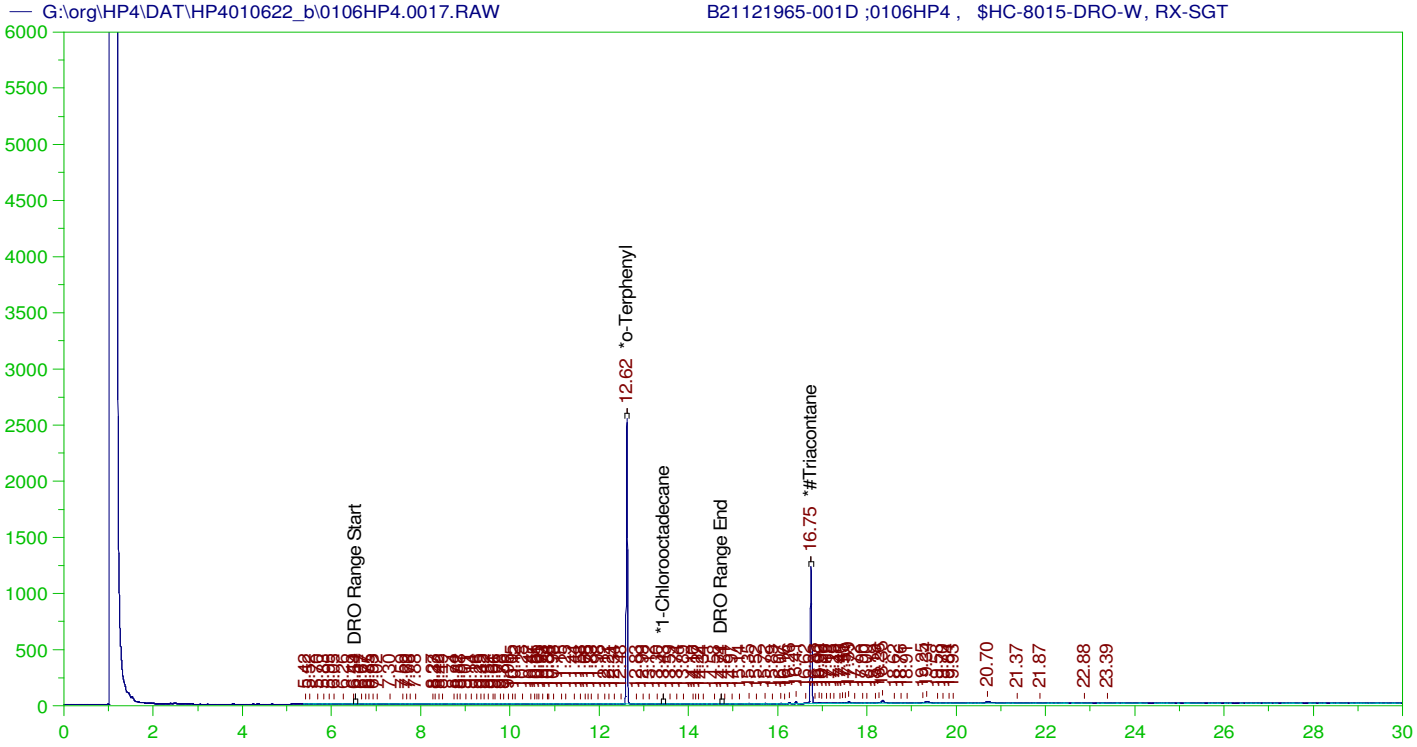
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.655	200.	.121	.06	-
*1-Chlorooctadecane	29.934	200.	.	.	-

DRO Area:370493.9 DRO Amount: 12.6133
TEH Area:585631.3 TEH Amount: 19.93755

ERH2238 (RHMW03) Batch ID: 162502

G:\org\HP4\DAT\HP4010622_b\0106HP4.0017.RAW B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0017.RAW
Date & Time Acquired: 1/7/2022 4:46:07 AM
Method File: G:\Org\HP4\methods\DR_8015-010617-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

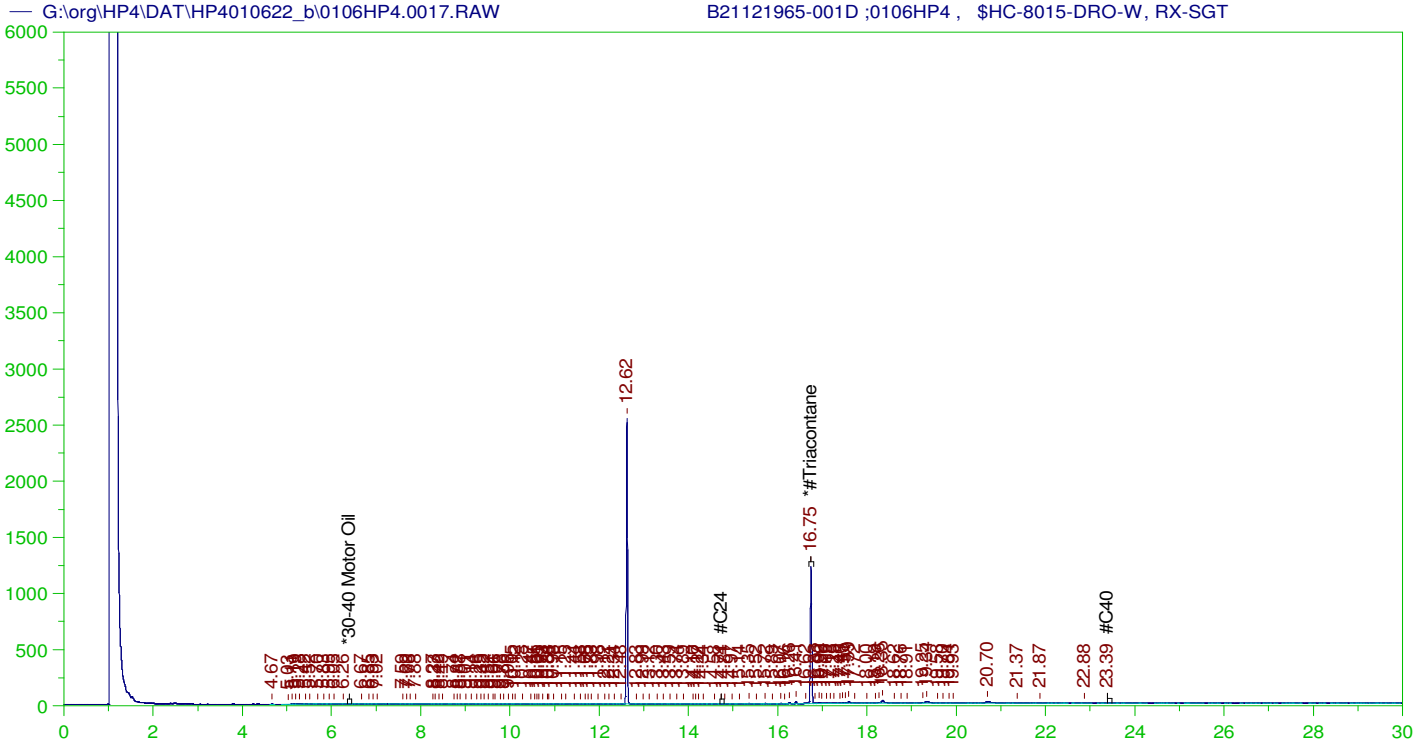
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.615	.194	.131	67.29	-
*1-Chlorooctadecane	13.43	.194	.	.14	-
*#Triacontane	16.746	.194	.1	51.42	-

DRO Area:225342.7 DRO Amount: 7.448243E-03
TEH Area:1053063 TEH Amount: 3.480686E-02

ERH2238 (RHMW03) Batch ID: 162502

G:\org\HP4\DAT\HP4010622_b\0106HP4.0017.RAW B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0017.RAW
Date & Time Acquired: 1/7/2022 4:46:07 AM
Method File: G:\Org\HP4\Methods\DR_ORO-010617-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

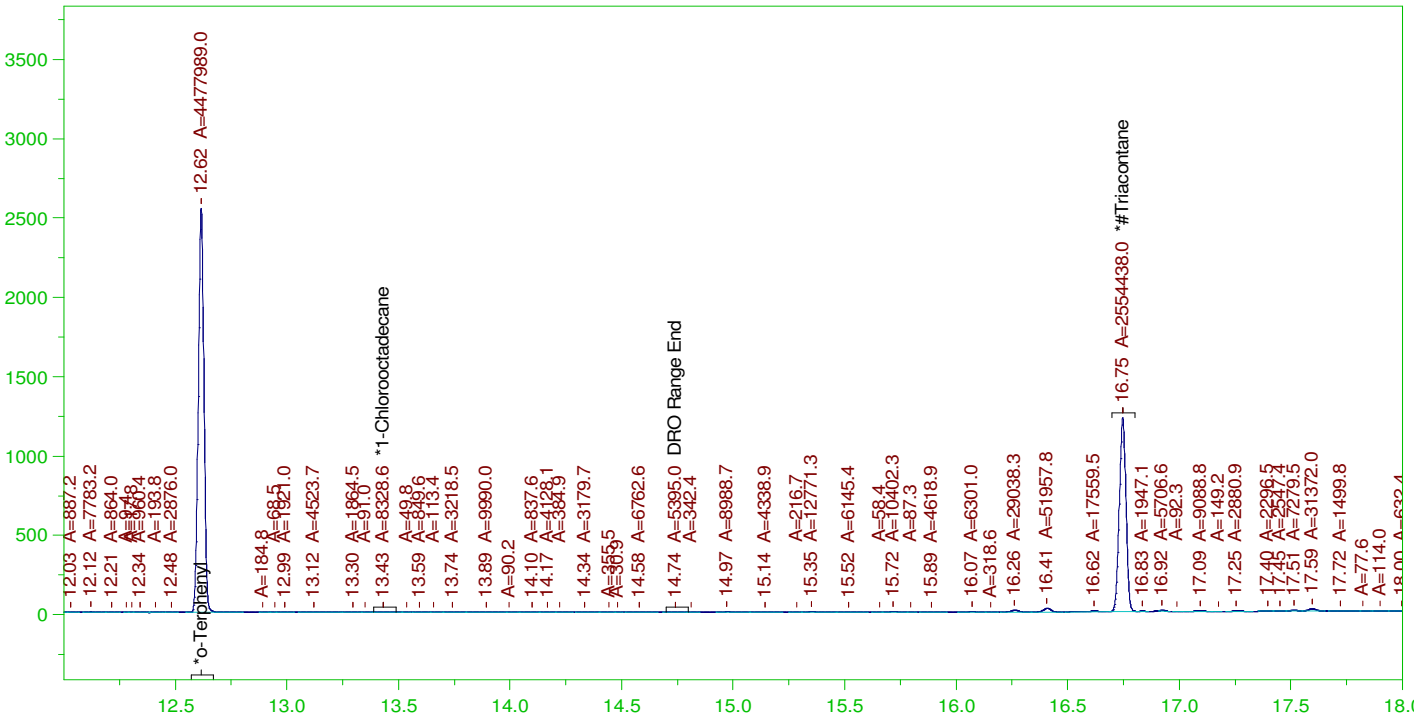
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.746	.485	.1	20.57	-

RRO Area:758869.8 RRO AMOUNT: 3.003587E-02

ERH2238 (RHMW03) Batch ID: 162502

G:\org\HP4\DAT\HP4010622_b\0106HP4.0017.RAW B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT



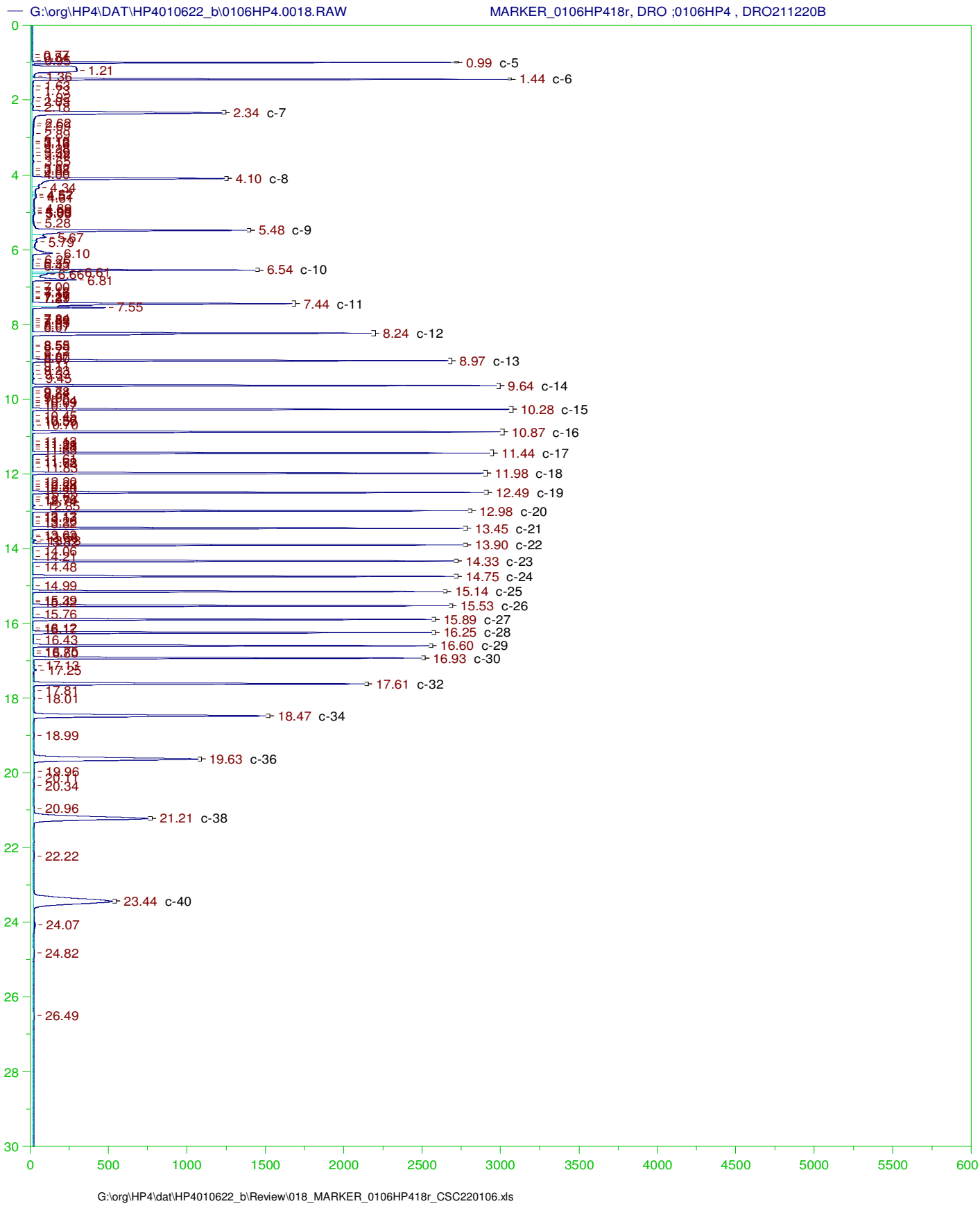
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

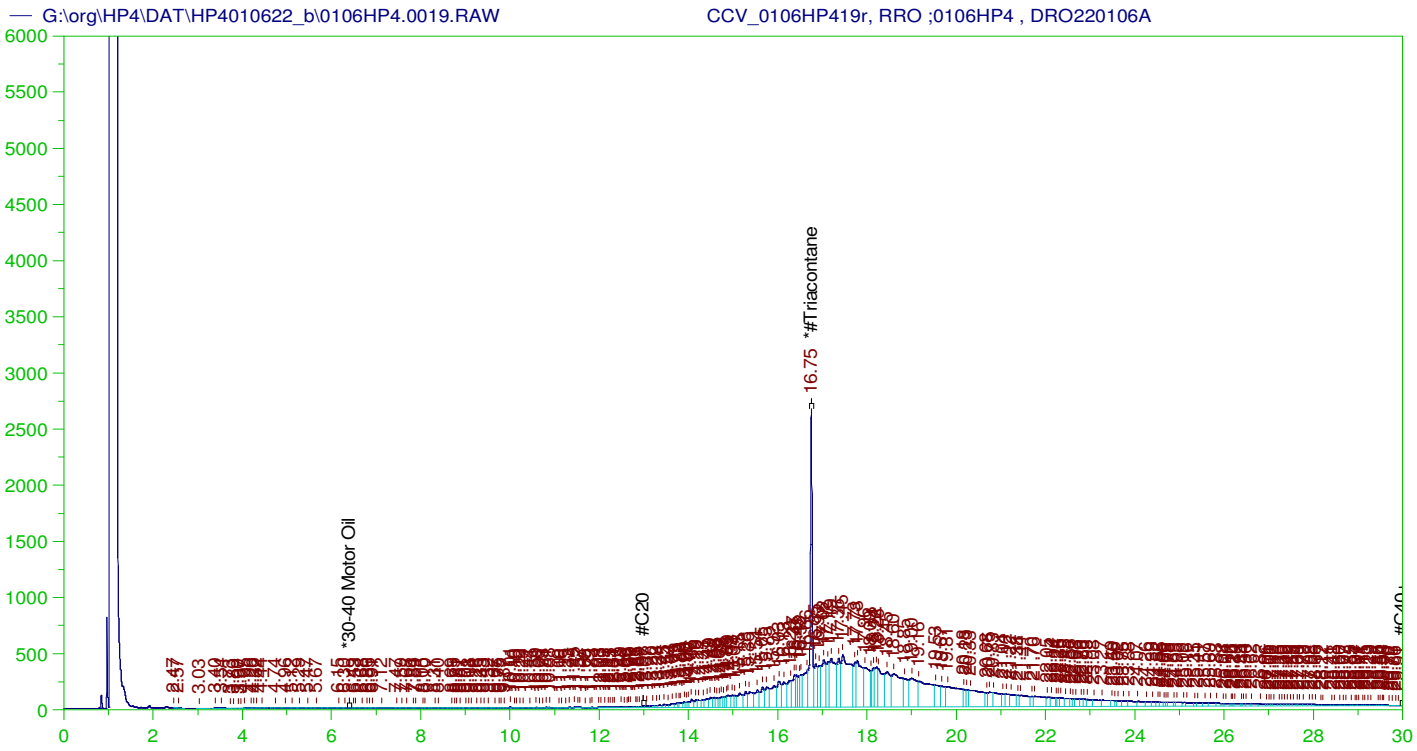
Sample Name: B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0017.RAW
Date & Time Acquired: 1/7/2022 4:46:07 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.615	.194	.13	67.2	-
*1-Chlorooctadecane	13.43	.194	.	.12	-
*#Triacontane	16.746	.194	.099	51.14	-

DRO Area:169507.8 DRO Amount: 5.602735E-03
TEH Area:763783.6 TEH Amount: 2.524531E-02


G:\org\HP4\DAT\HP4010622_b\0106HP4.0018.RAW
MARKER_0106HP418r, DRO ;0106HP4 , DRO211220B
0.99 c-5
1.21
1.44 c-6
2.34 c-7
4.10 c-8
5.48 c-9
6.54 c-10
7.44 c-11
8.24 c-12
8.97 c-13
9.64 c-14
10.28 c-15
10.87 c-16
11.44 c-17
11.98 c-18
12.49 c-19
12.98 c-20
13.45 c-21
13.90 c-22
14.33 c-23
14.75 c-24
15.14 c-25
15.53 c-26
15.89 c-27
16.25 c-28
16.60 c-29
16.93 c-30
17.61 c-32
18.47 c-34
19.63 c-36
21.21 c-38
23.44 c-40
G:\org\HP4\dat\HP4010622_b\Review\018_MARKER_0106HP418r_CSC220106.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP419r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0019.RAW
Date & Time Acquired: 1/7/2022 6:16:24 AM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.752	500.	308.68	61.74	-

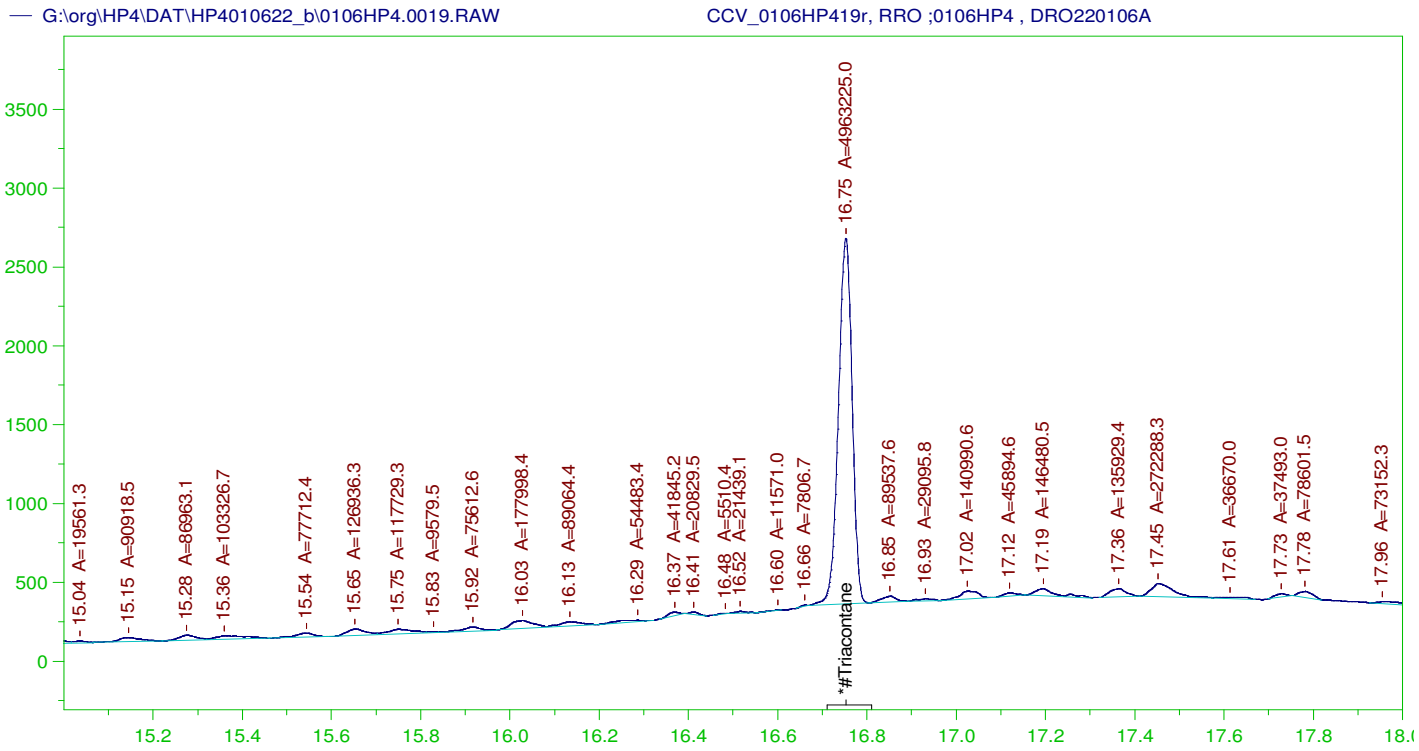
~~RRO~~ TEH (Oil Range) Area:1.090281E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4444.763

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0019.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.752	200.	308.68	154.34	75-125

AMN 01/26/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP419r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0019.RAW
Date & Time Acquired: 1/7/2022 6:16:24 AM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

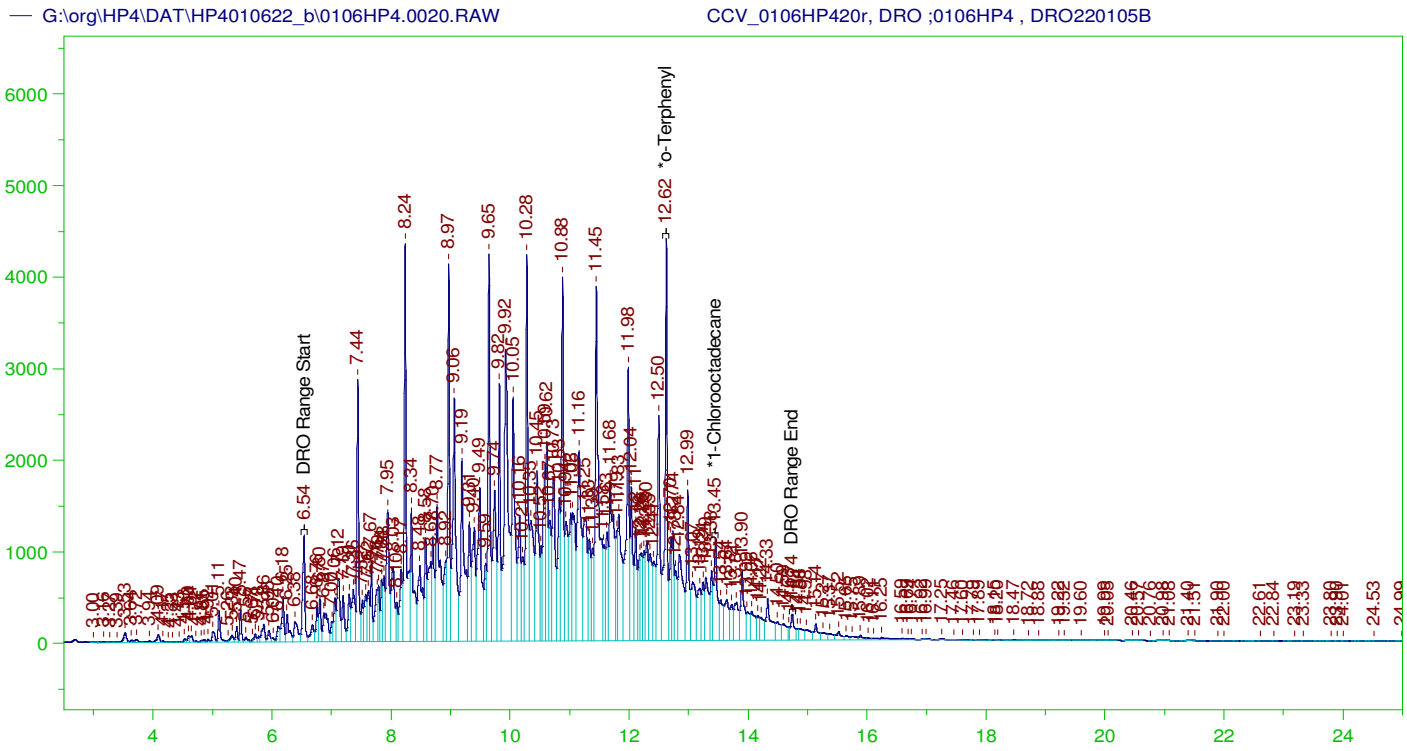
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.752	500.	198.737	39.75	-

RRO Area:4049751 RRO AMOUNT: 165.0967

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0019.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.752	200.	198.737	99.37	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0106HP420r, DRO ;0106HP4 , DRO220105B
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0020.RAW
Date & Time Acquired: 1/7/2022 7:01:36 AM
Method File: G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.625	200.	352.765	176.38	-
*1-Chlorooctadecane	13.451	200.	132.034	66.02	-

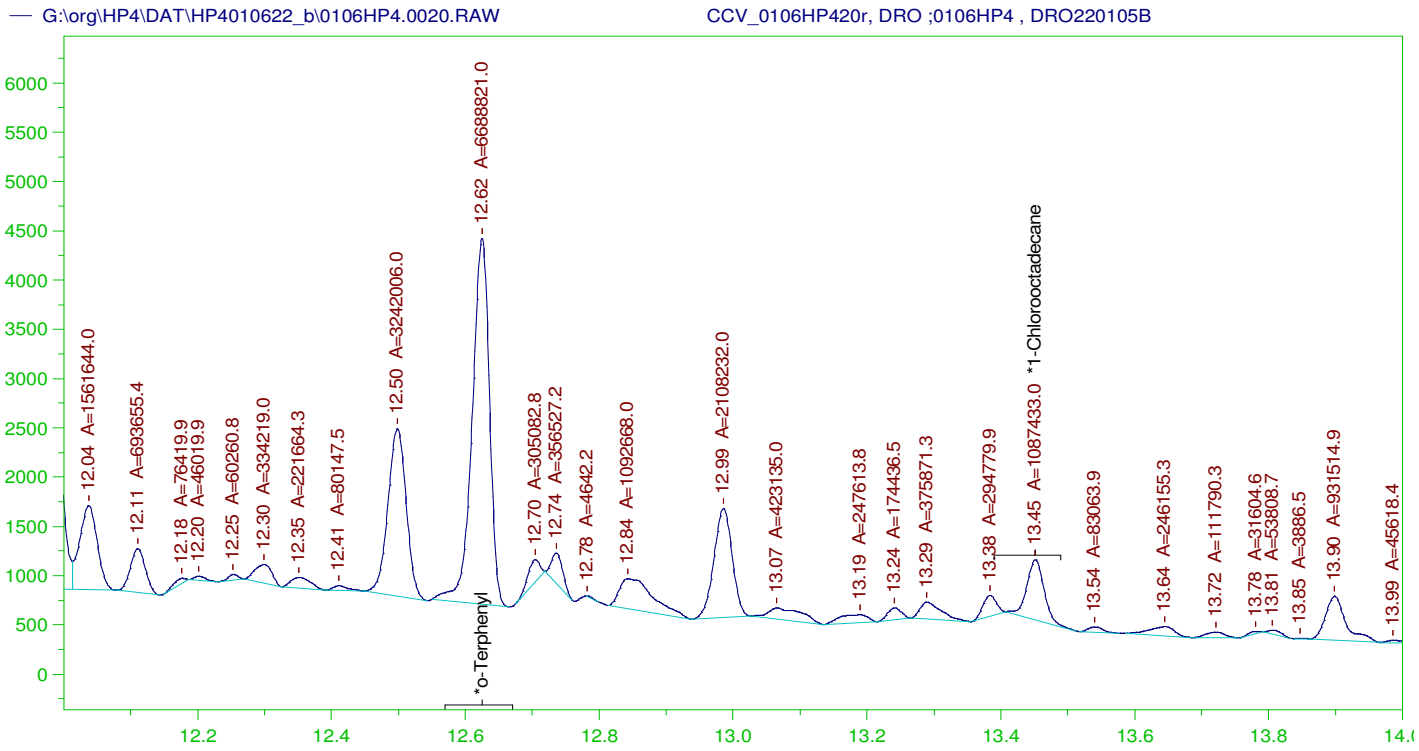
DRO Area:4.248929E+08 DRO Amount: 14465.29
TEH Area:4.408388E+08 TEH Amount: 15008.16

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15008.16	100.05	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.625	200.	352.765	176.38	85-115
*1-Chlorooctadecane	13.451	200.	132.034	66.02	85-115

G:\org\HP4\dat\HP4010622_b\Review\020_CCV_0106HP420r_DC_8015-C24-OJ-L%.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0106HP420r, DRO ;0106HP4 , DRO220105B
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0020.RAW
Date & Time Acquired: 1/7/2022 7:01:36 AM
Method File: G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.625	200.	200.747	100.37	-
*1-Chlorooctadecane	13.451	200.	32.636	16.32	-

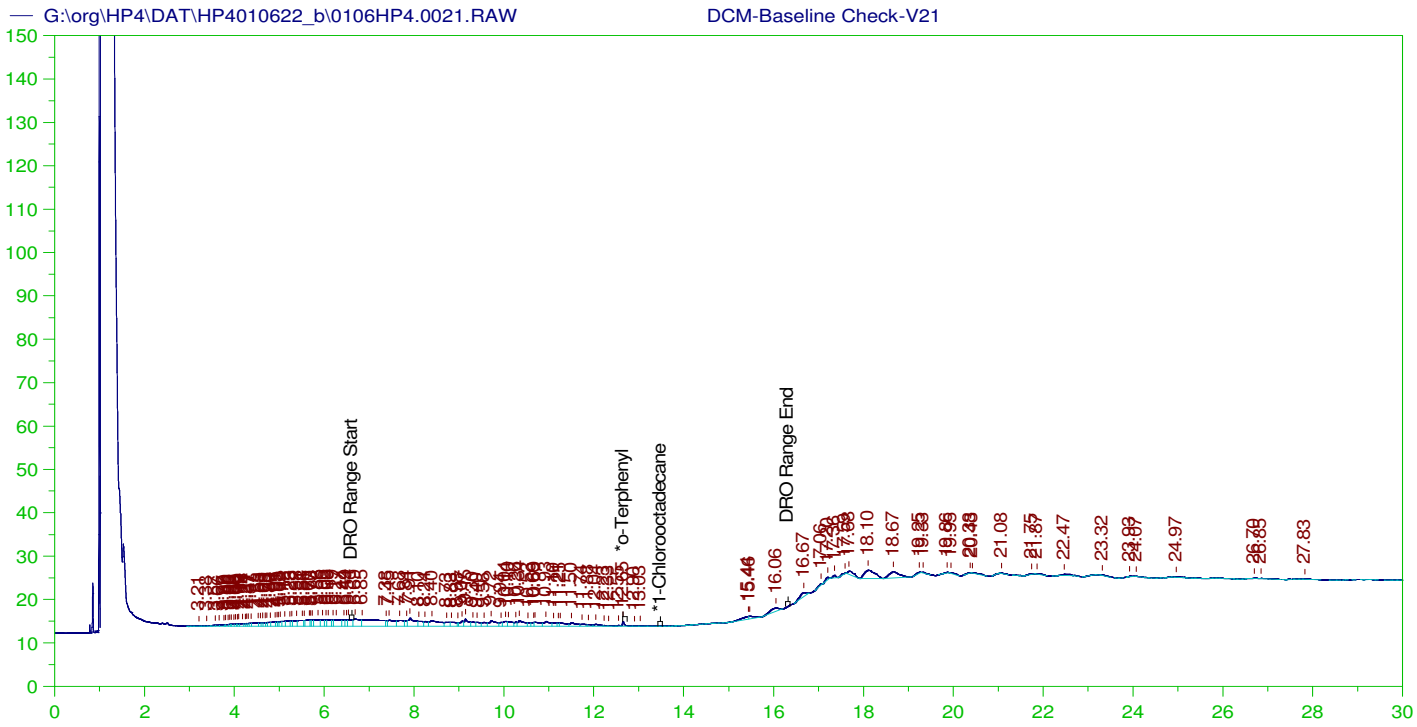
DRO Area:1.865504E+08 DRO Amount: 6351.024
TEH Area:1.964838E+08 TEH Amount: 6689.204

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6689.2	44.59	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.625	200.	200.747	100.37	85-115
*1-Chlorooctadecane	13.451	200.	32.636	16.32	85-115

G:\org\HP4\dat\HP4010622_b\Review\020_CCV_0106HP420r_DS_8015-C24-OJ-L#.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V21
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0021.RAW
Date & Time Acquired: 1/7/2022 7:46:26 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

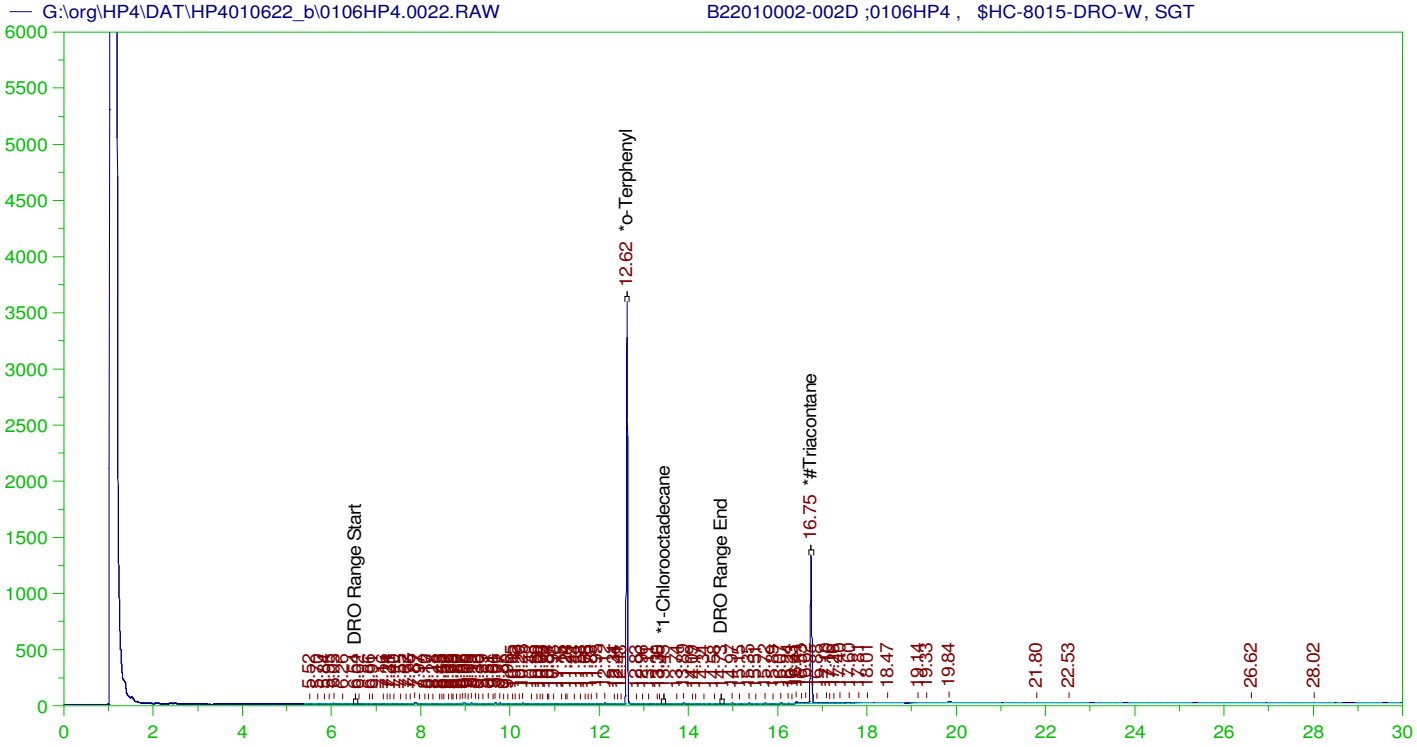
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	200.	.141	.07	-
*1-Chlorooctadecane	29.913	200.	.	.	-

DRO Area:356398.2 DRO Amount: 12.13341
TEH Area:661091.3 TEH Amount: 22.50655

ERH2289 (RHMW2254-01 LF) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0022.RAW B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0022.RAW
Date & Time Acquired: 1/7/2022 8:31:12 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

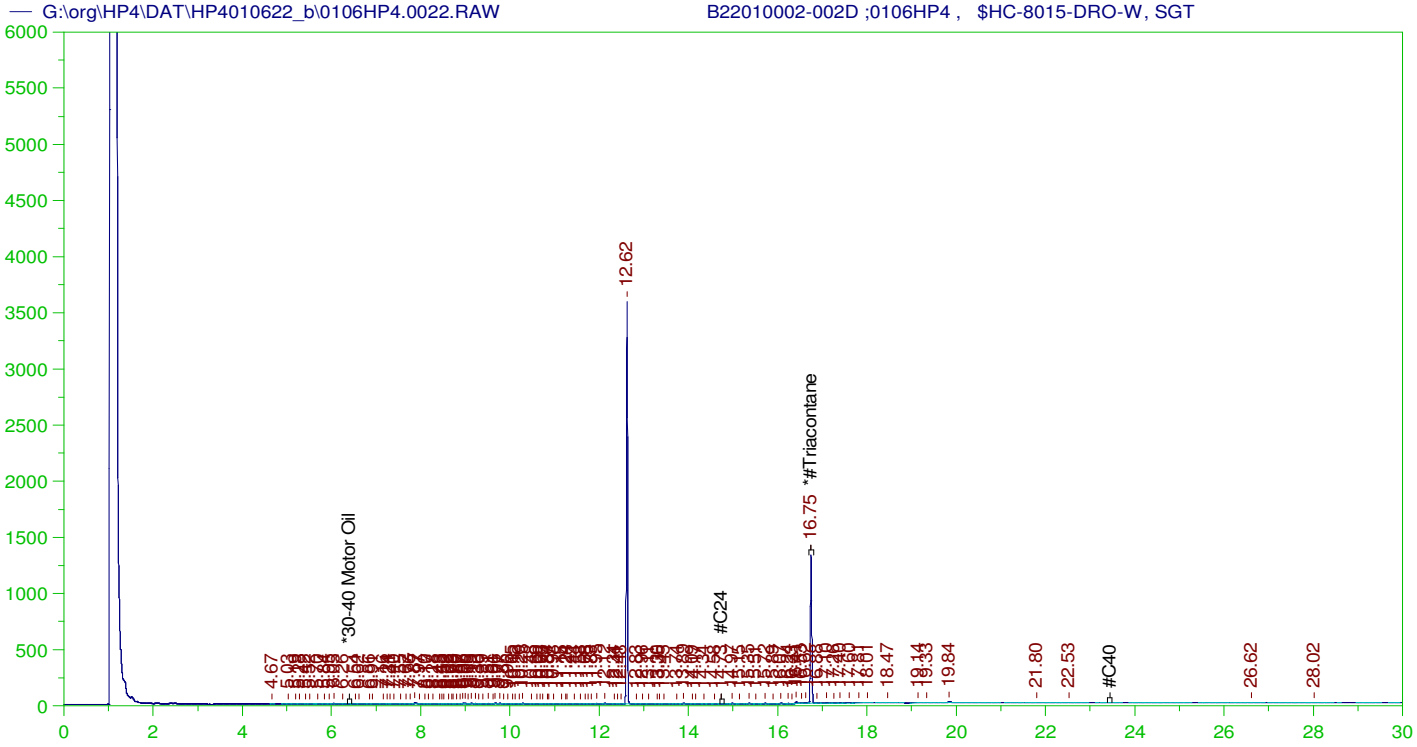
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.619	.19	.181	95.06	-
*1-Chlorooctadecane	13.455	.19	.	.05	-
*#Triacontane	16.746	.19	.107	56.14	-

DRO Area:781695.1 DRO Amount: 0.0253452
TEH Area:1094582 TEH Amount: 3.549004E-02

ERH2289 (RHMW2254-01 LF) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0022.RAW B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0022.RAW
Date & Time Acquired: 1/7/2022 8:31:12 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

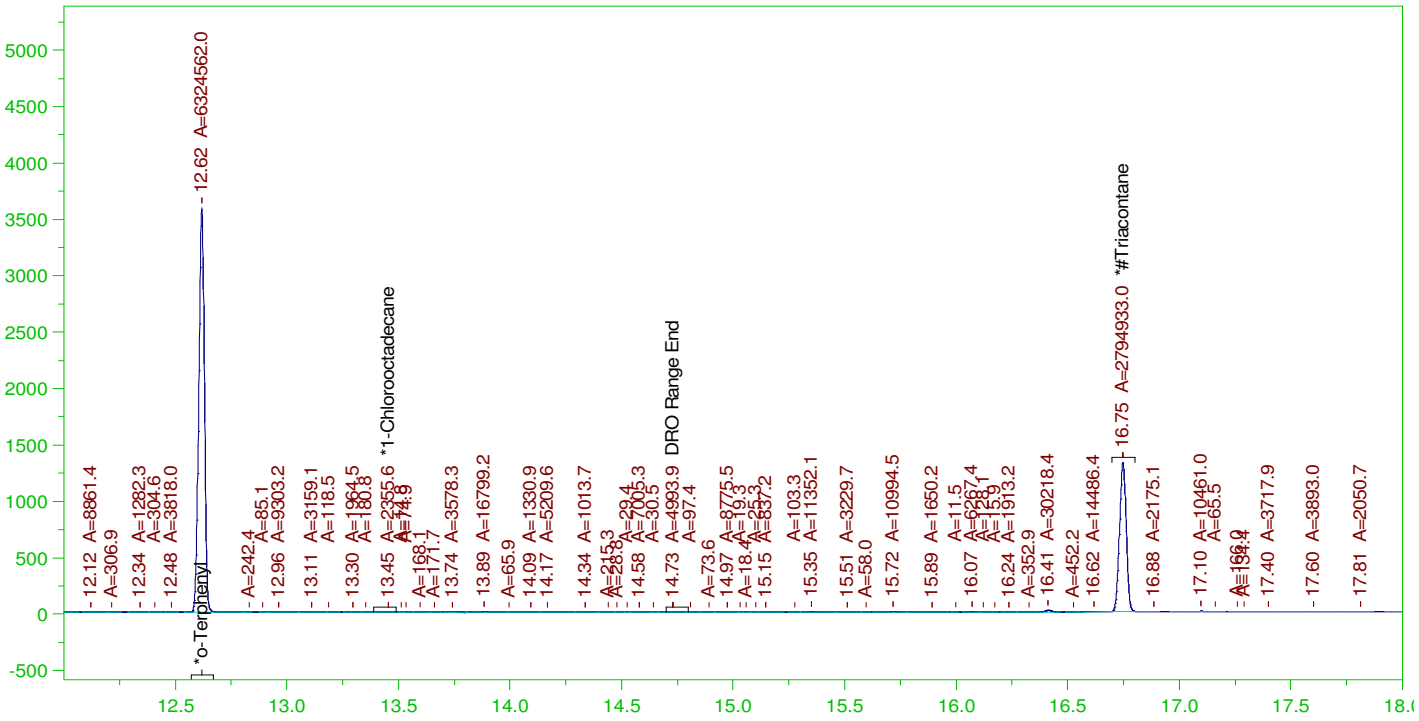
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.746	.476	.107	22.38	-

RRO Area:208912.8 RRO AMOUNT: 8.111217E-03

ERH2289 (RHMW2254-01 LF) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0022.RAW B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0022.RAW
Date & Time Acquired: 1/7/2022 8:31:12 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

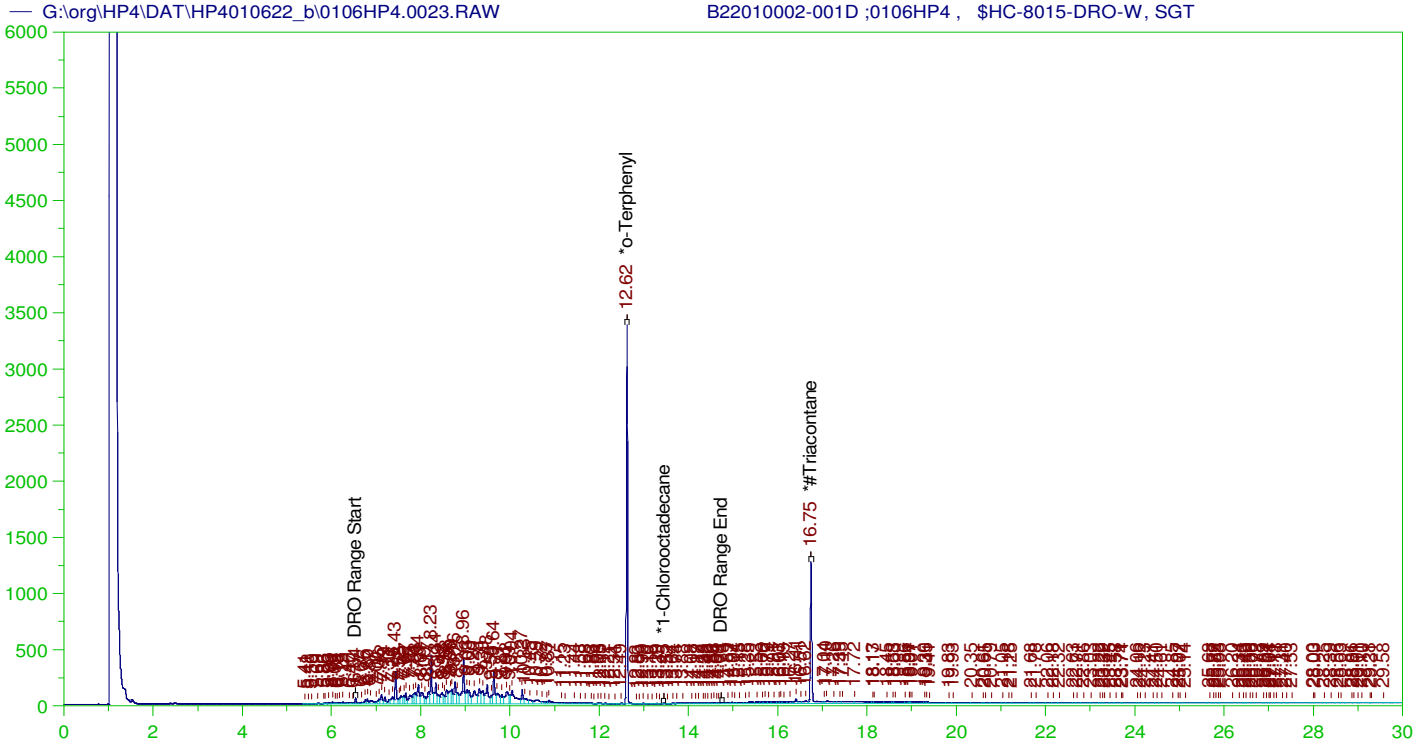
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.619	.19	.181	94.91	-
*1-Chlorooctadecane	13.455	.19	.	.04	-
*#Triacontane	16.746	.19	.107	55.96	-

DRO Area:707685.6 DRO Amount: 2.294556E-02
TEH Area:1004856 TEH Amount: 3.258084E-02

ERH2287 (RHMW2254-01 Bailer) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0023.RAW B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0023.RAW
Date & Time Acquired: 1/7/2022 9:16:25 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

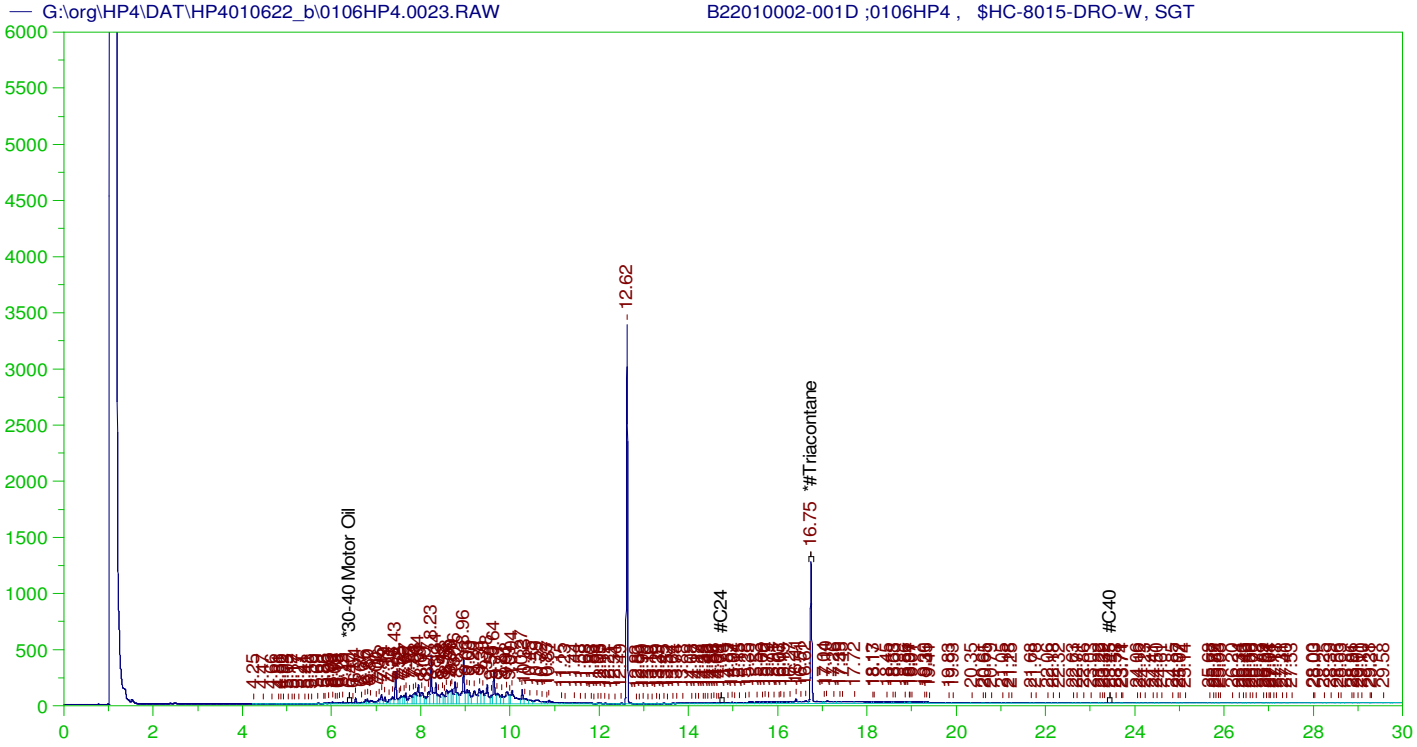
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.619	.204	.179	87.78	-
*1-Chlorooctadecane	13.452	.204	. .11		-
*#Triacontane	16.746	.204	.122	59.74	-

DRO Area:1.955581E+07 DRO Amount: 0.6793557
TEH Area:2.56502E+07 TEH Amount: 0.8910708

ERH2287 (RHMW2254-01 Bailer) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0023.RAW B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0023.RAW
Date & Time Acquired: 1/7/2022 9:16:25 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

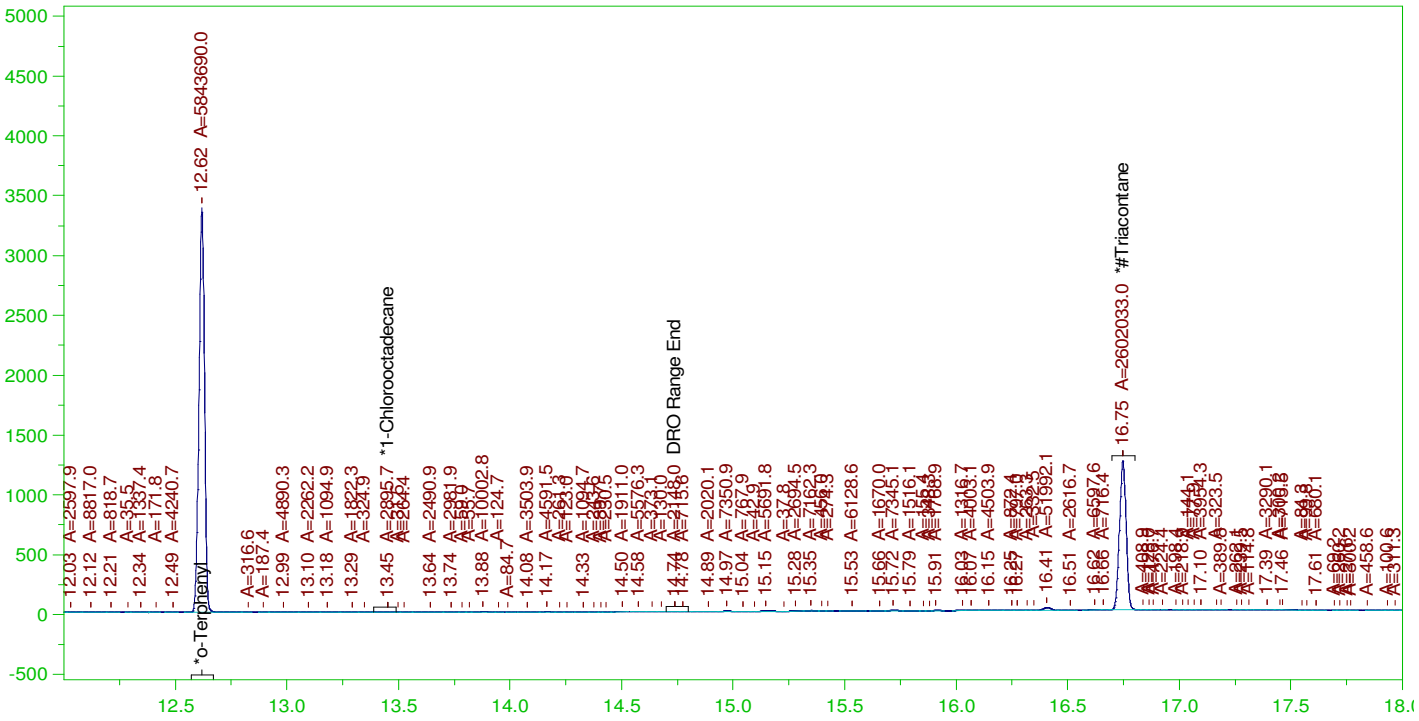
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.746	.51	.122	23.89	-

RRO Area:5179576 RRO AMOUNT: 0.2154658

ERH2287 (RHMW2254-01 Bailer) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0023.RAW B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0023.RAW
Date & Time Acquired: 1/7/2022 9:16:25 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

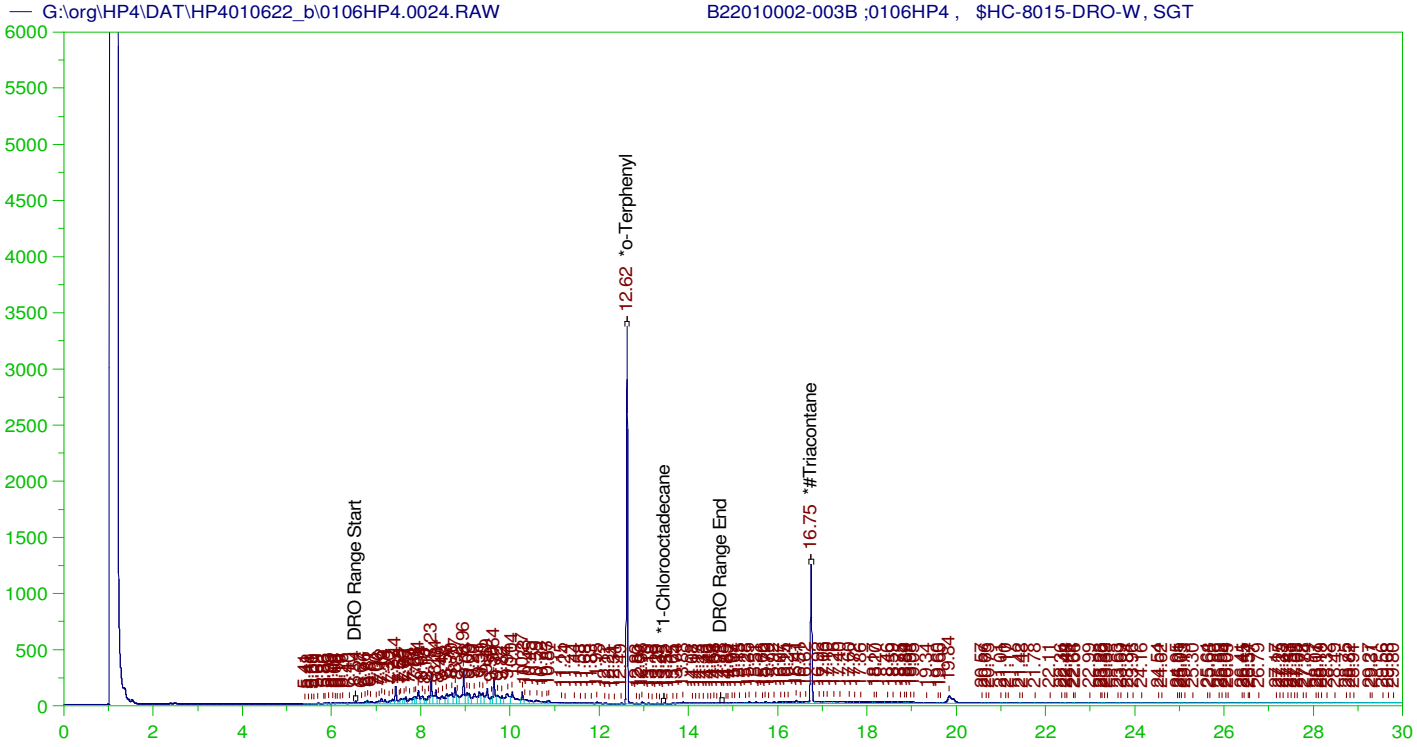
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.619	.204	.179	87.69	-
*1-Chlorooctadecane	13.452	.204	.	.04	-
*#Triacontane	16.746	.204	.106	52.1	-

DRO Area:1.910345E+07 DRO Amount: 0.6636412
TEH Area:1.968773E+07 TEH Amount: 0.6839387

ERH2288 (RHMW2254-01 Bailer) FD Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0024.RAW B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0024.RAW
Date & Time Acquired: 1/7/2022 10:01:39 AM
Method File: G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

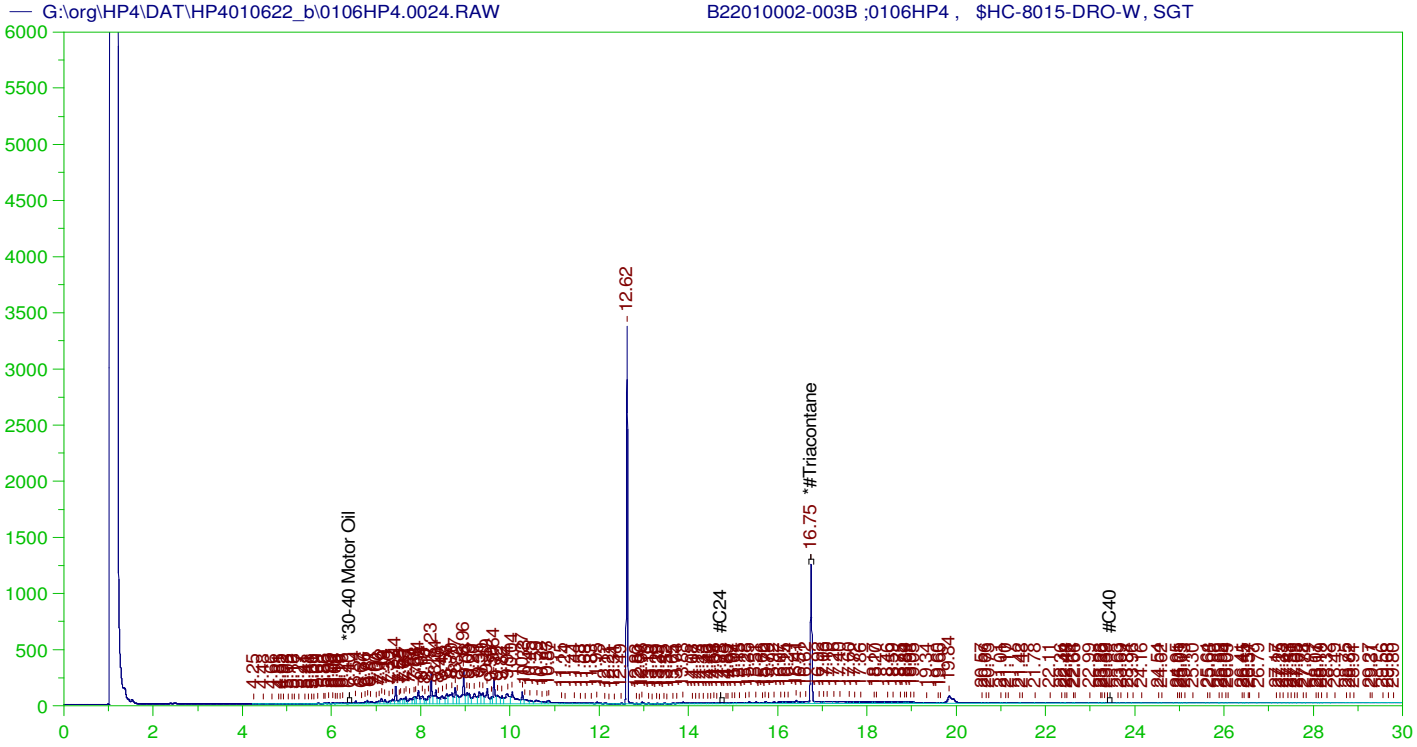
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.62	.192	.168	87.14	-
*1-Chlorooctadecane	13.454	.192	.	.07	-
*#Triacontane	16.748	.192	.103	53.44	-

DRO Area:1.462289E+07 DRO Amount: 0.4786824
TEH Area:2.039748E+07 TEH Amount: 0.6677145

ERH2288 (RHMW2254-01 Bailer) FD Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0024.RAW B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0024.RAW
Date & Time Acquired: 1/7/2022 10:01:39 AM
Method File: G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

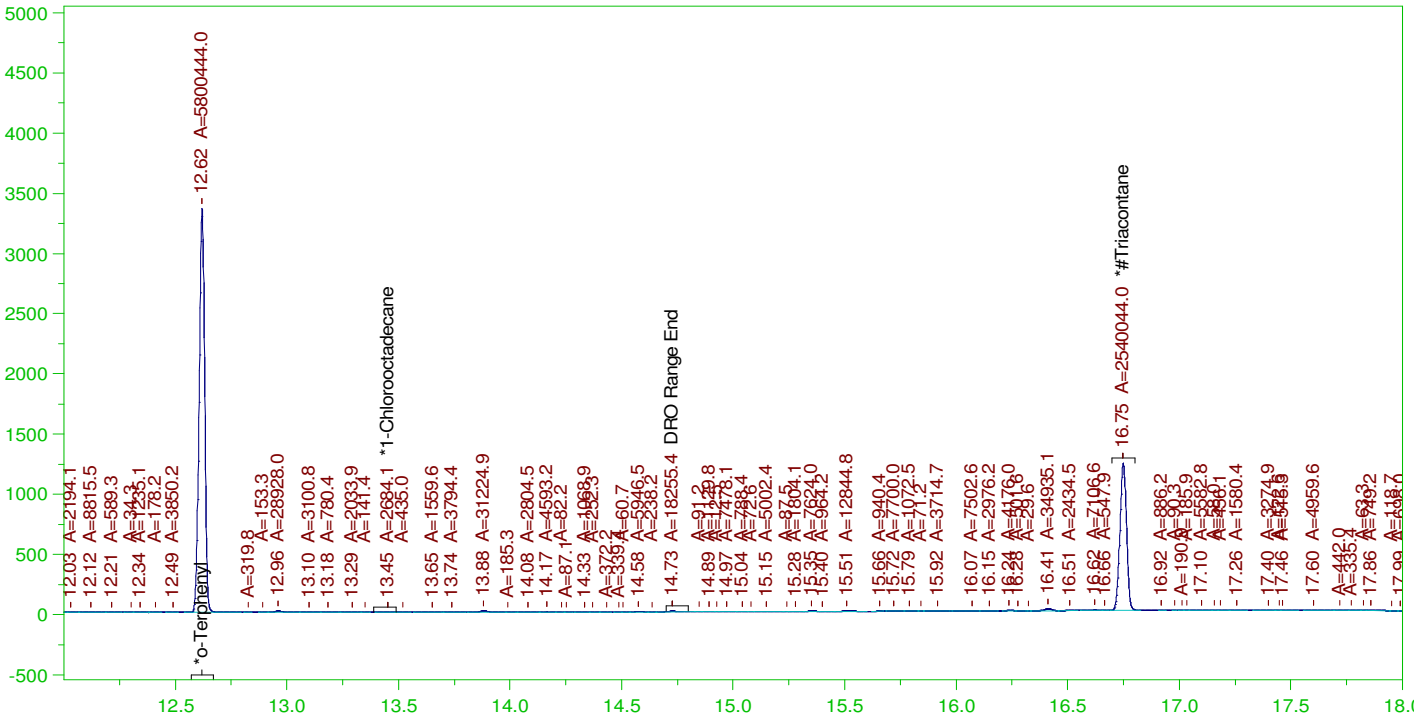
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.748	.481	.103	21.38	-

RRO Area:5021851 RRO AMOUNT: 0.1968524

ERH2288 (RHMW2254-01 Bailer) FD Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0024.RAW B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT



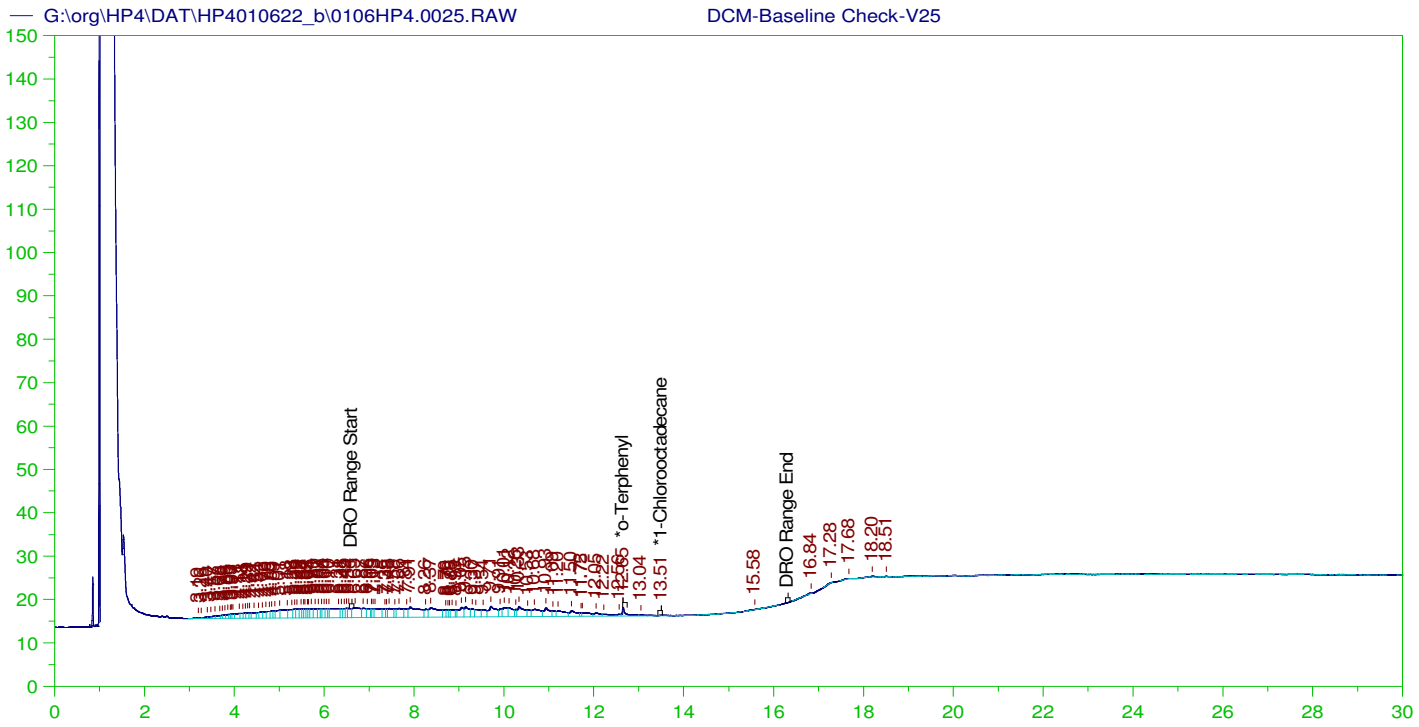
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0024.RAW
Date & Time Acquired: 1/7/2022 10:01:39 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.62	.192	.167	87.04	-
*1-Chlorooctadecane	13.454	.192	.	.04	-
*#Triacontane	16.748	.192	.098	50.85	-

DRO Area:1.425142E+07 DRO Amount: 0.4665222
TEH Area:1.493396E+07 TEH Amount: 0.4888652



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V25
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0025.RAW
Date & Time Acquired: 1/7/2022 10:47:04 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

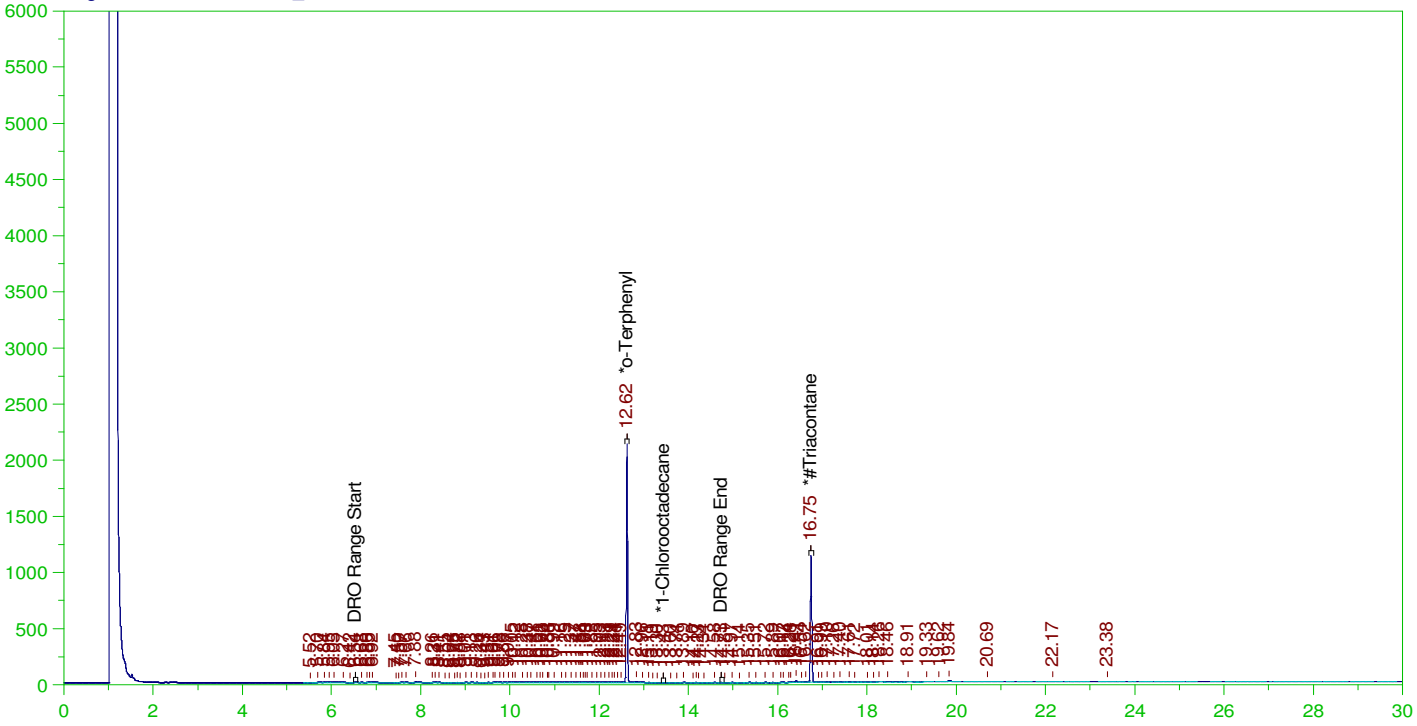
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.56 to 16.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	200.	.314	.16	-
*1-Chlorooctadecane	13.505	200.	.029	.01	-

DRO Area:547591.6 DRO Amount: 18.64251
TEH Area:868764.1 TEH Amount: 29.57668

ERH2285 (RHMW05) MS/MSD Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0026.RAW B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0026.RAW
Date & Time Acquired: 1/7/2022 11:31:57 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

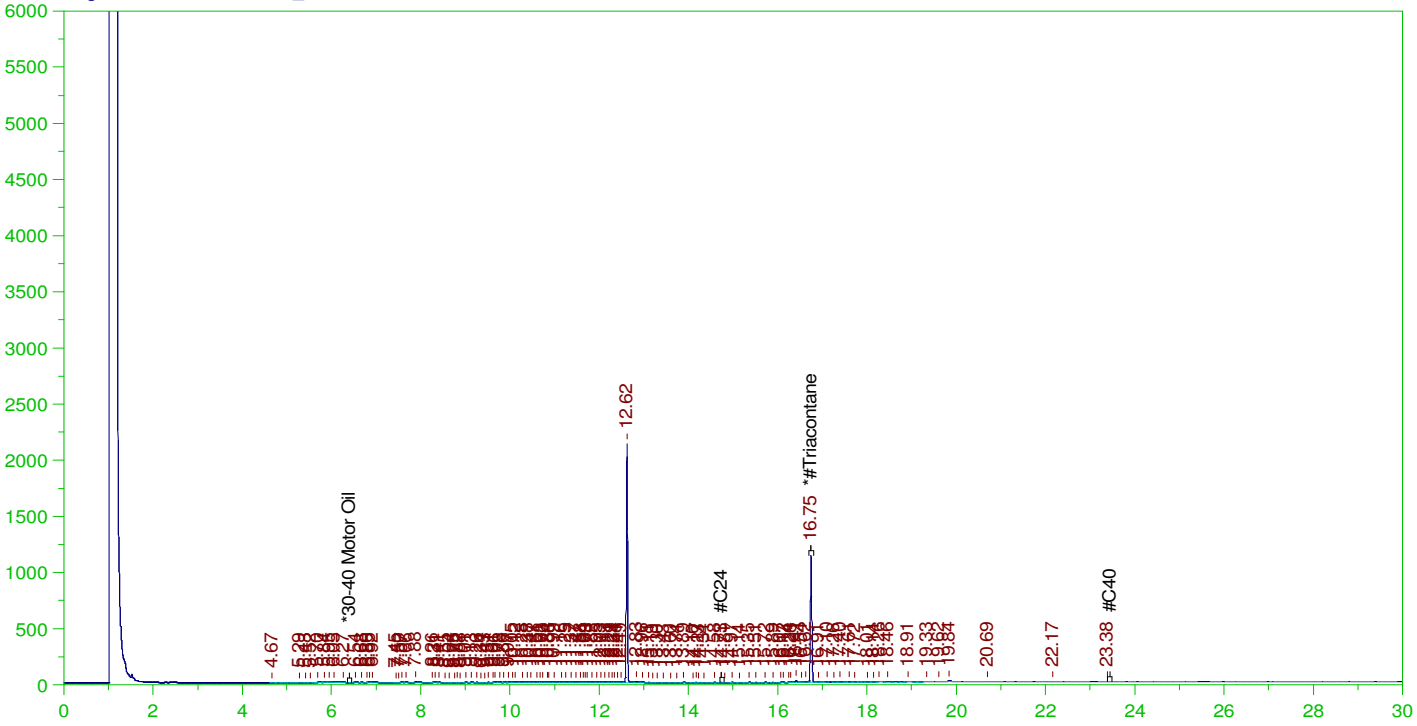
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.194	.11	56.53	-
*1-Chlorooctadecane	13.434	.194	.	.12	-
*#Triacontane	16.747	.194	.094	48.48	-

DRO Area:748481.1 DRO Amount: 2.473952E-02
TEH Area:1043627 TEH Amount: 3.449497E-02

ERH2285 (RHMW05) MS/MSD Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0026.RAW B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0026.RAW
Date & Time Acquired: 1/7/2022 11:31:57 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

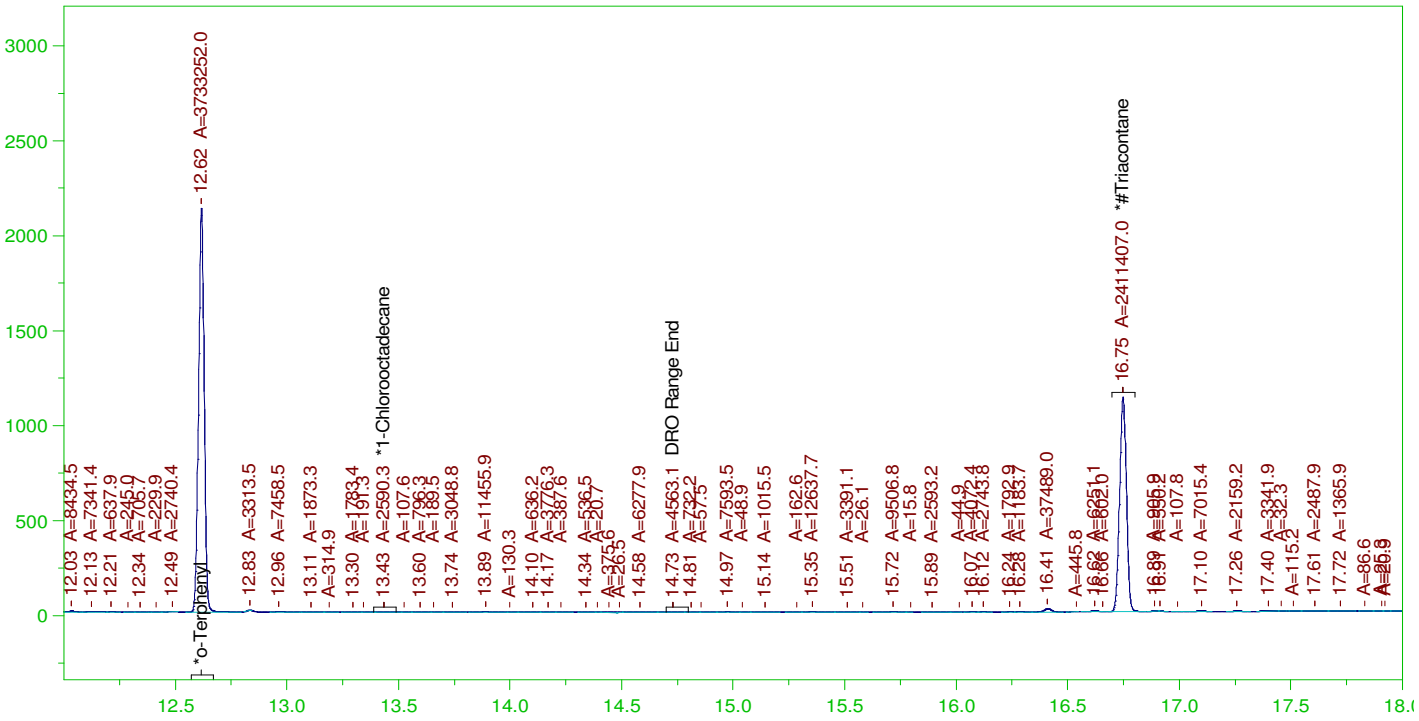
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.747	.485	.094	19.32	-

RRO Area:214828.6 RRO AMOUNT: 8.502862E-03

ERH2285 (RHMW05) MS/MSD Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0026.RAW B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0026.RAW
Date & Time Acquired: 1/7/2022 11:31:57 AM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

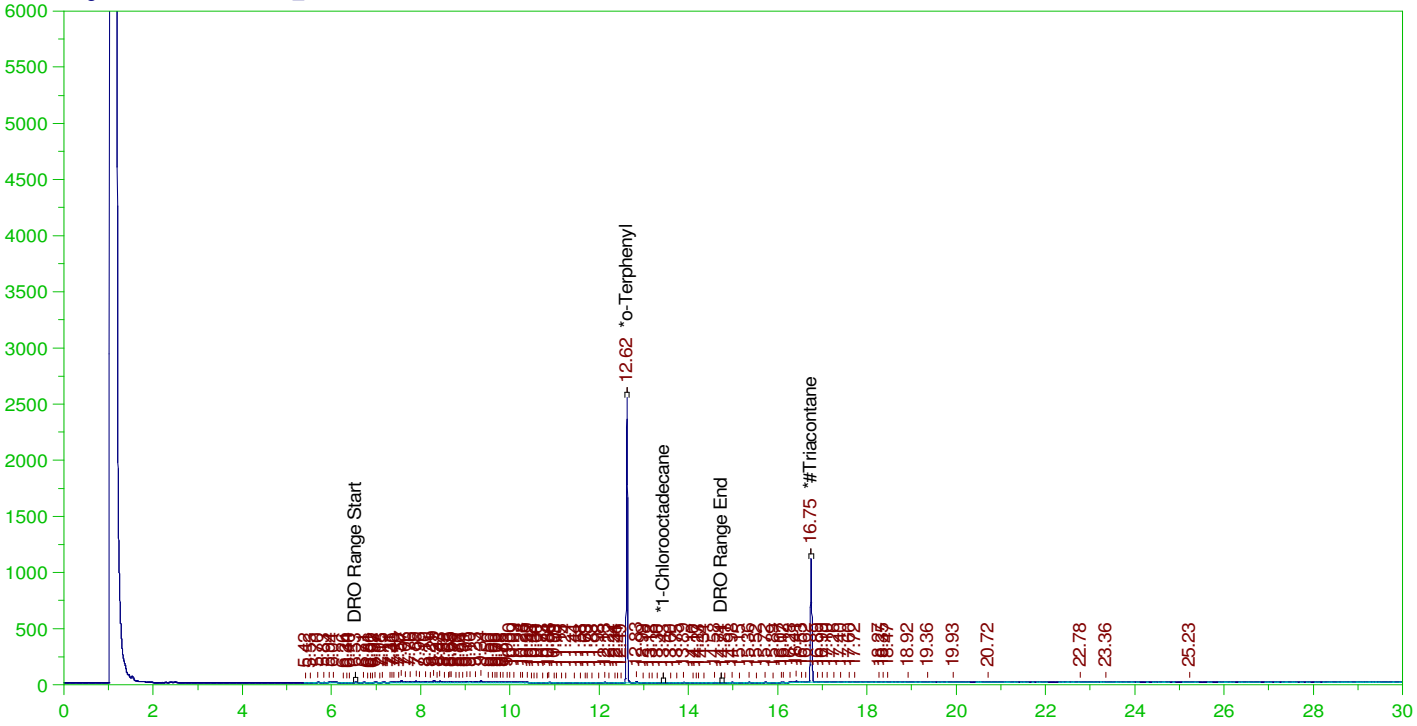
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.617	.194	.109	56.02	-
*1-Chlorooctadecane	13.434	.194	.	.04	-
*#Triacontane	16.747	.194	.094	48.28	-

DRO Area:356567 DRO Amount: 0.0117856
TEH Area:789979.1 TEH Amount: 2.611115E-02

ERH2278 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0027.RAW B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0027.RAW
Date & Time Acquired: 1/7/2022 12:16:59 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

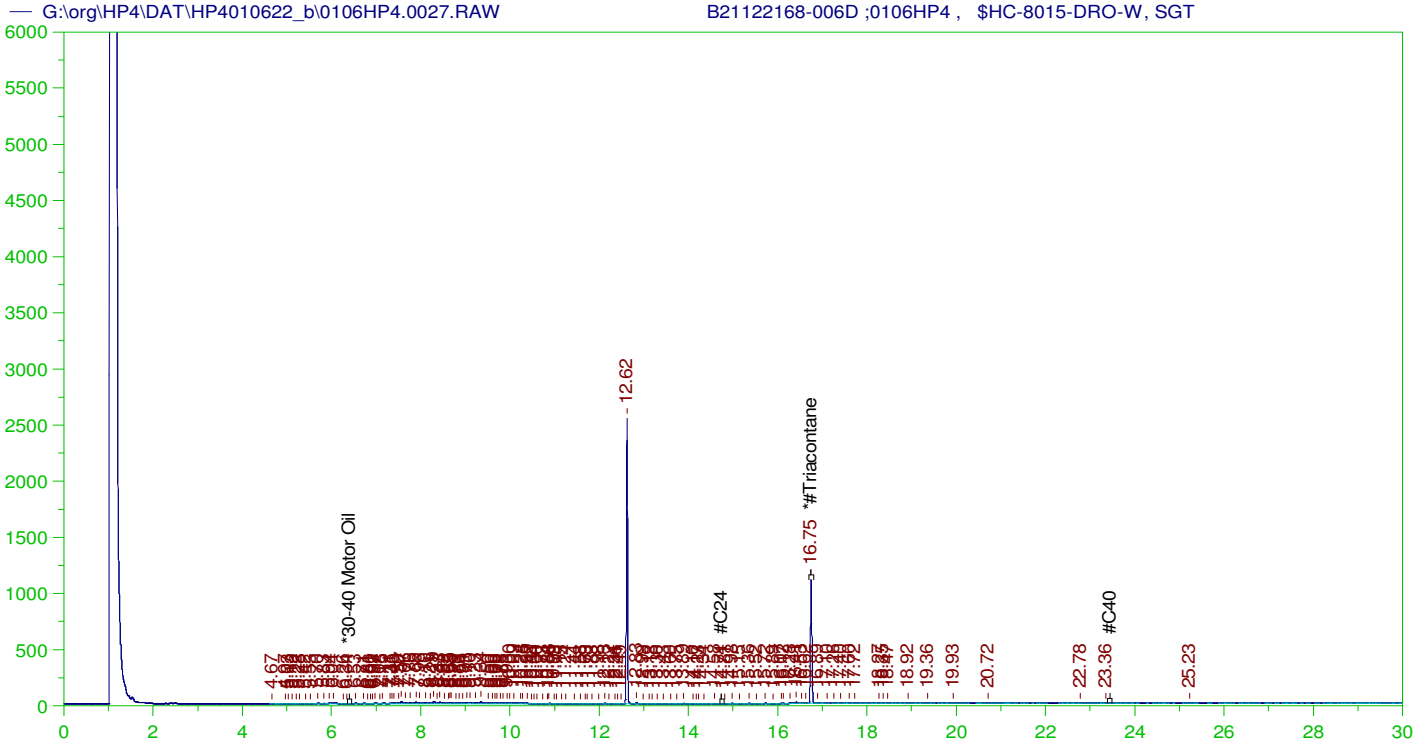
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.19	.126	66.38	-
*1-Chlorooctadecane	13.434	.19	. .1		-
*#Triacontane	16.748	.19	.092	48.08	-

DRO Area:1377441 DRO Amount: 4.466128E-02
TEH Area:1619001 TEH Amount: 0.0524935

ERH2278 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0027.RAW B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0027.RAW
Date & Time Acquired: 1/7/2022 12:16:59 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

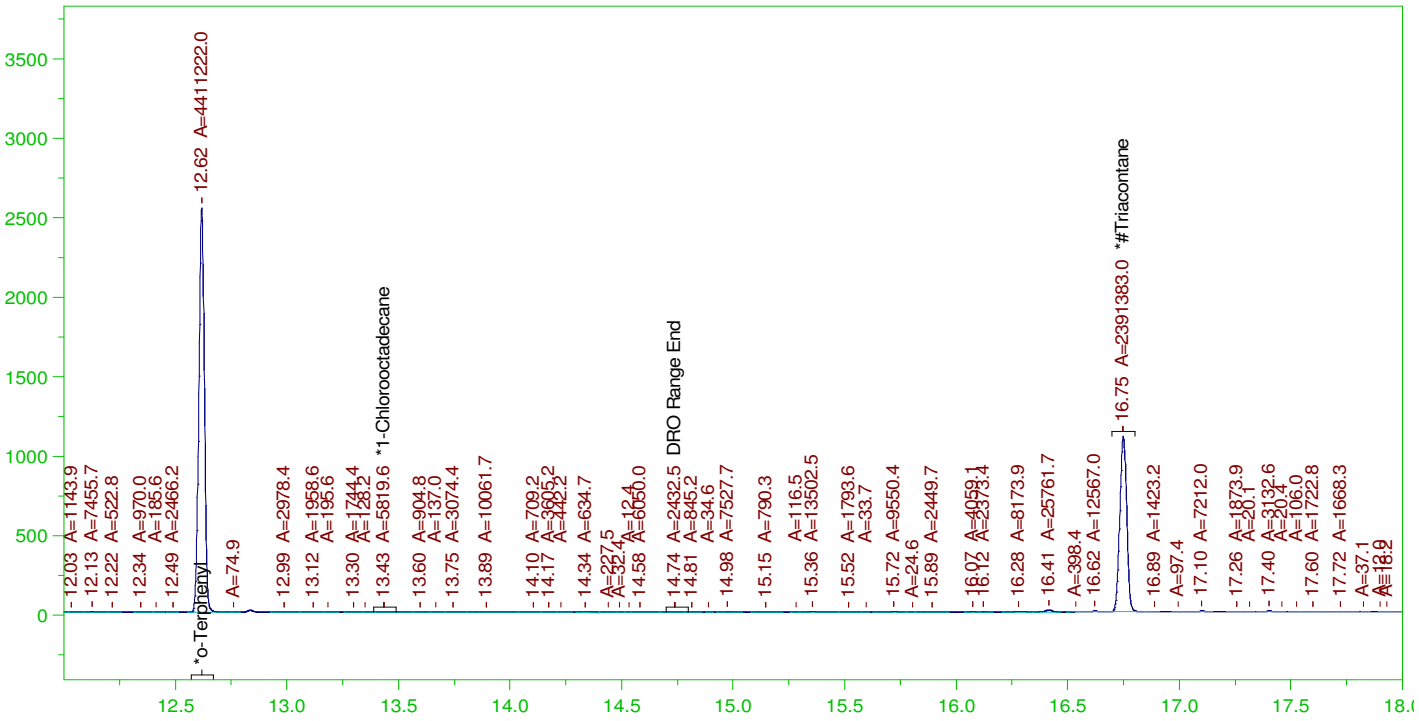
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.748	.476	.091	19.15	-

RRO Area:147915.1 RRO AMOUNT: 5.742928E-03

ERH2278 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0027.RAW B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0027.RAW
Date & Time Acquired: 1/7/2022 12:16:59 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

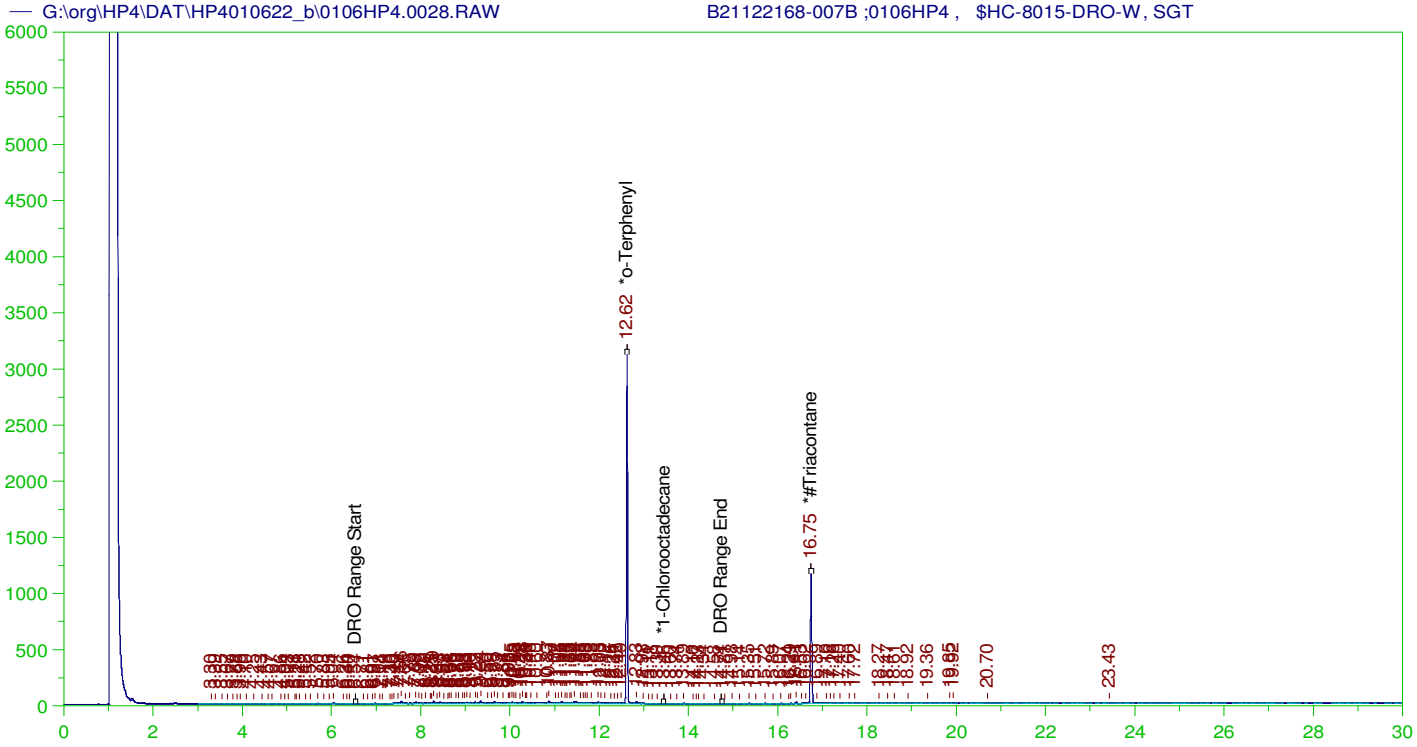
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.19	.126	66.2	-
*1-Chlorooctadecane	13.434	.19	.	.09	-
*#Triacontane	16.748	.19	.091	47.88	-

DRO Area:1414487 DRO Amount: 4.586246E-02
TEH Area:1820297 TEH Amount: 5.902017E-02

ERH2279 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0028.RAW B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0028.RAW
Date & Time Acquired: 1/7/2022 1:01:52 PM
Method File: G:\Org\HP4\methods\DR_8015-010628-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

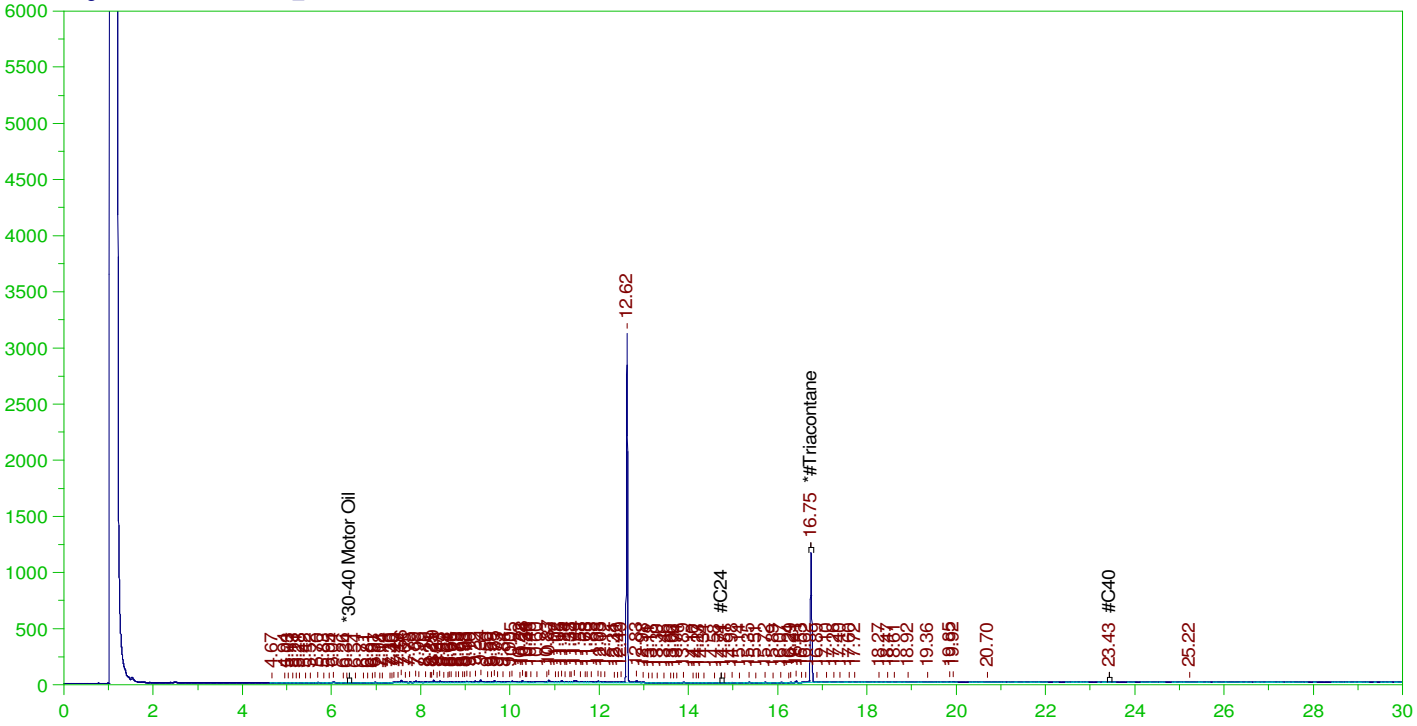
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.19	.156	81.75	-
*1-Chlorooctadecane	13.457	.19	.	.24	-
*#Triacontane	16.747	.19	.094	49.52	-

DRO Area:3475985 DRO Amount: 0.1127032
TEH Area:3885431 TEH Amount: 0.1259788

ERH2279 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0028.RAW B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0028.RAW
Date & Time Acquired: 1/7/2022 1:01:52 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007ACA-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

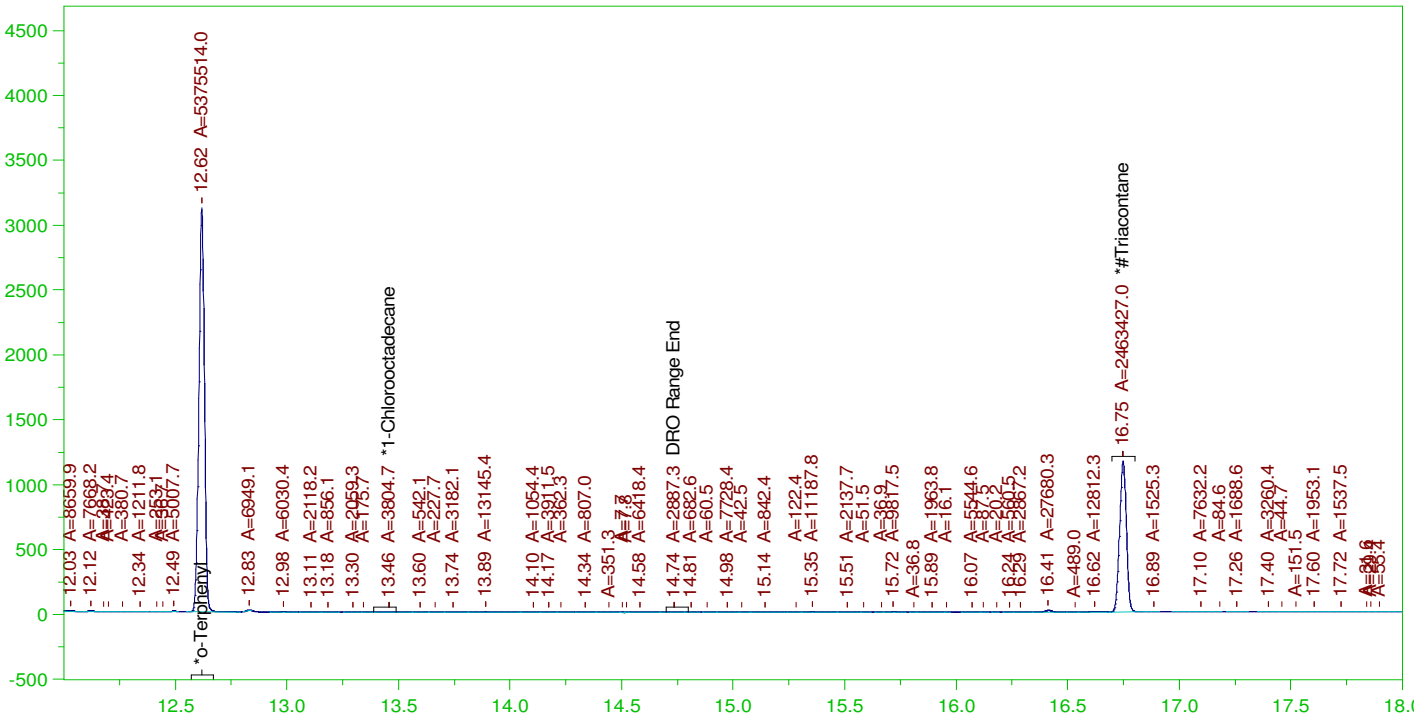
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.7 to 23.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.747	.476	.094	19.73	-

RRO Area:139797.8 RRO AMOUNT: 5.427766E-03

ERH2279 (RHMW01R) Batch ID: 162648

G:\org\HP4\DAT\HP4010622_b\0106HP4.0028.RAW B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

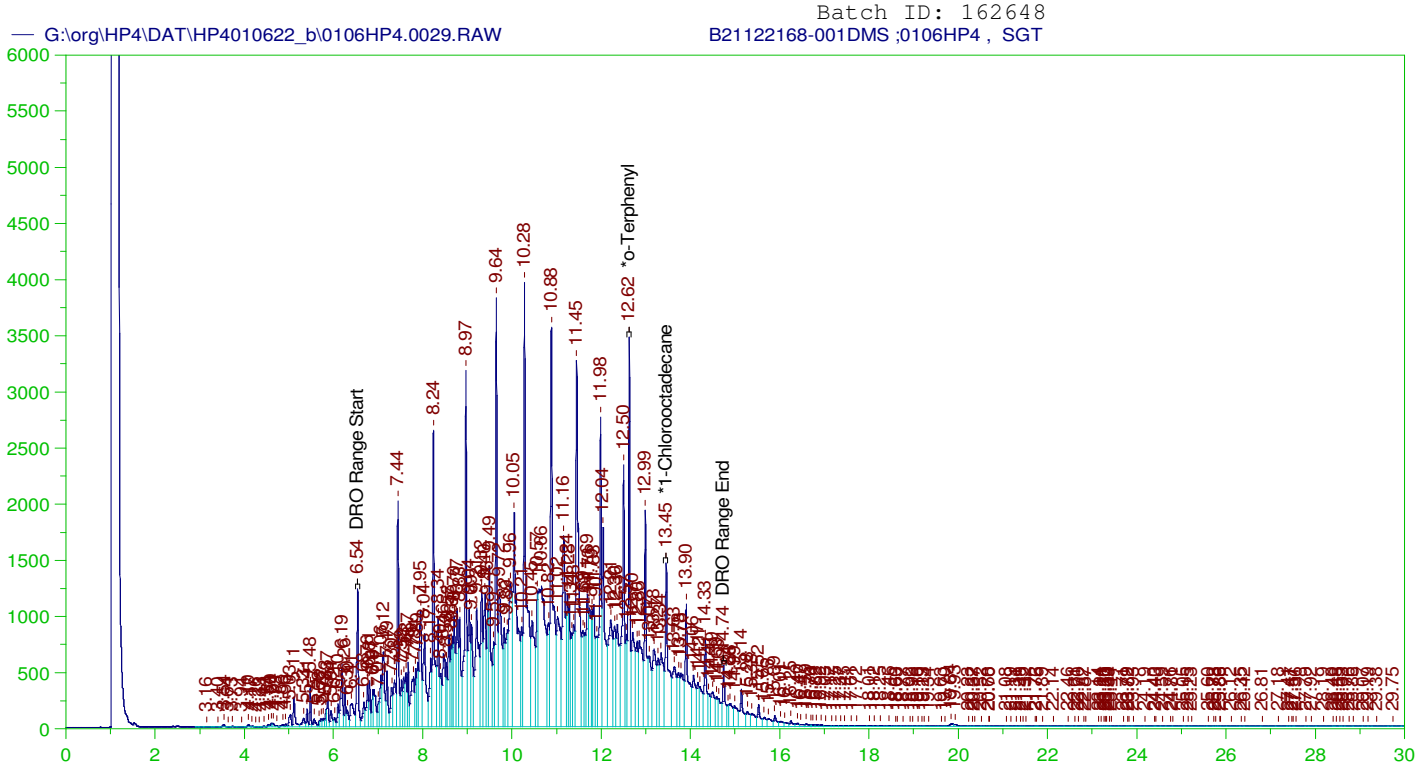
Sample Name: B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0028.RAW
Date & Time Acquired: 1/7/2022 1:01:52 PM
Method File: G:\Org\HP4\methods\DS_8015-T-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.618	.19	.154	80.67	-
*1-Chlorooctadecane	13.457	.19	.	.06	-
*#Triacontane	16.747	.19	.094	49.32	-

DRO Area:1196757 DRO Amount: 3.880292E-02
TEH Area:1387549 TEH Amount: 4.498903E-02

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

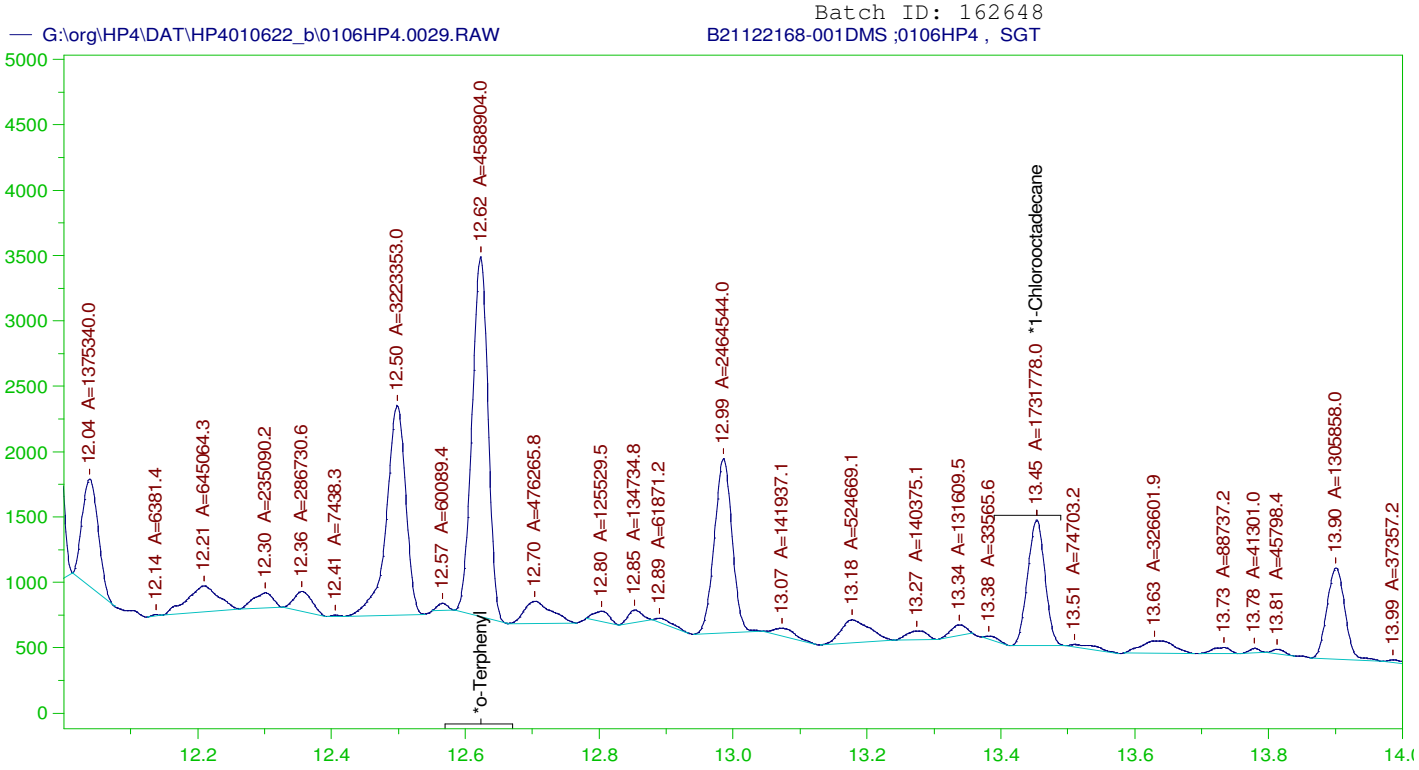
Sample Name: B21122168-001DMS ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0029.RAW
Date & Time Acquired: 1/7/2022 1:46:33 PM
Method File: G:\Org\HP4\methods\D3_8015-C24-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.623	.194	.234	120.53	-
*1-Chlorooctadecane	13.453	.194	.19	98.02	-

DRO Area:3.632761E+08 DRO Amount: 12.00735
TEH Area:3.858411E+08 TEH Amount: 12.75319

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

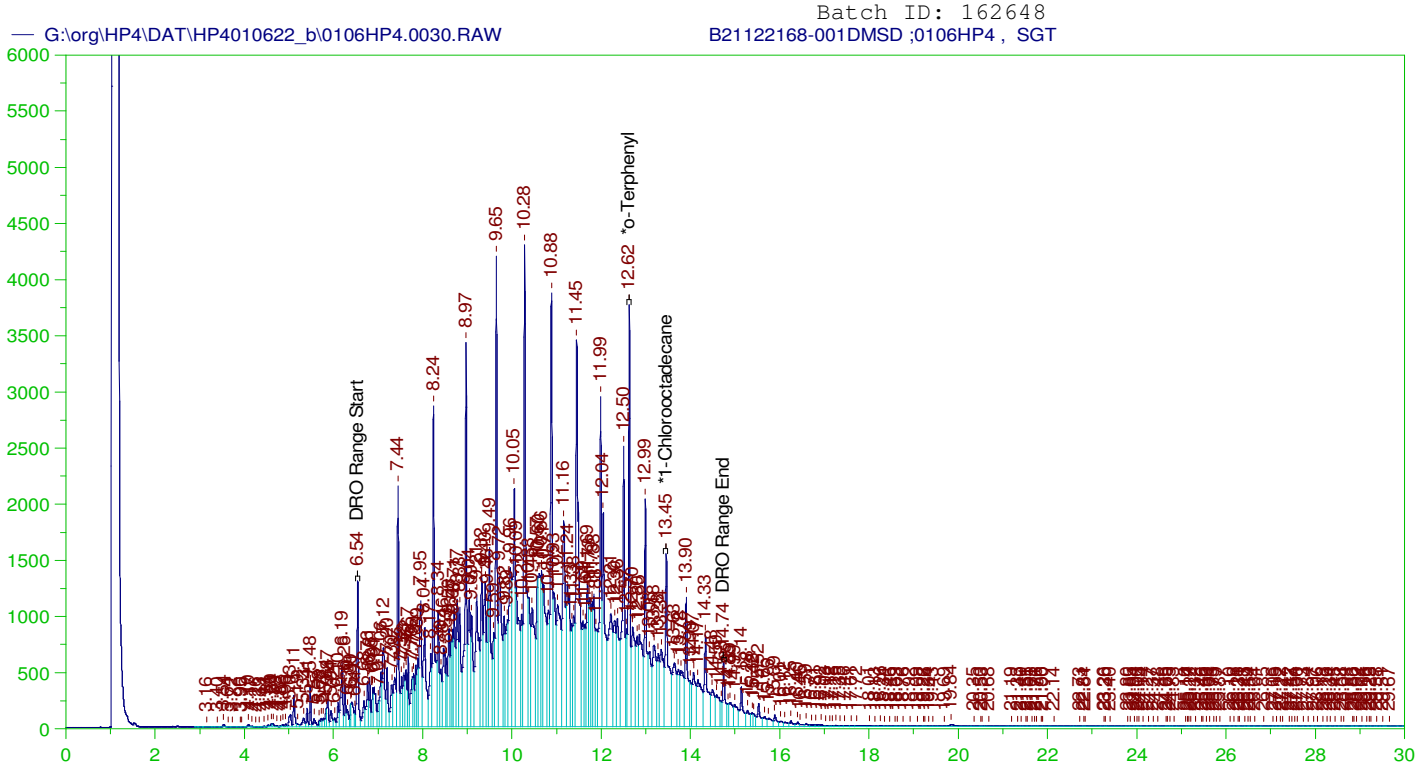
Sample Name: B21122168-001DMS ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0029.RAW
Date & Time Acquired: 1/7/2022 1:46:33 PM
Method File: G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.623	.194	.134	68.86	-
*1-Chlorooctadecane	13.453	.194	.05	25.99	-

DRO Area:1.441423E+08 DRO Amount: 4.76433
TEH Area:1.540749E+08 TEH Amount: 5.092633

Batch ID: 162648



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

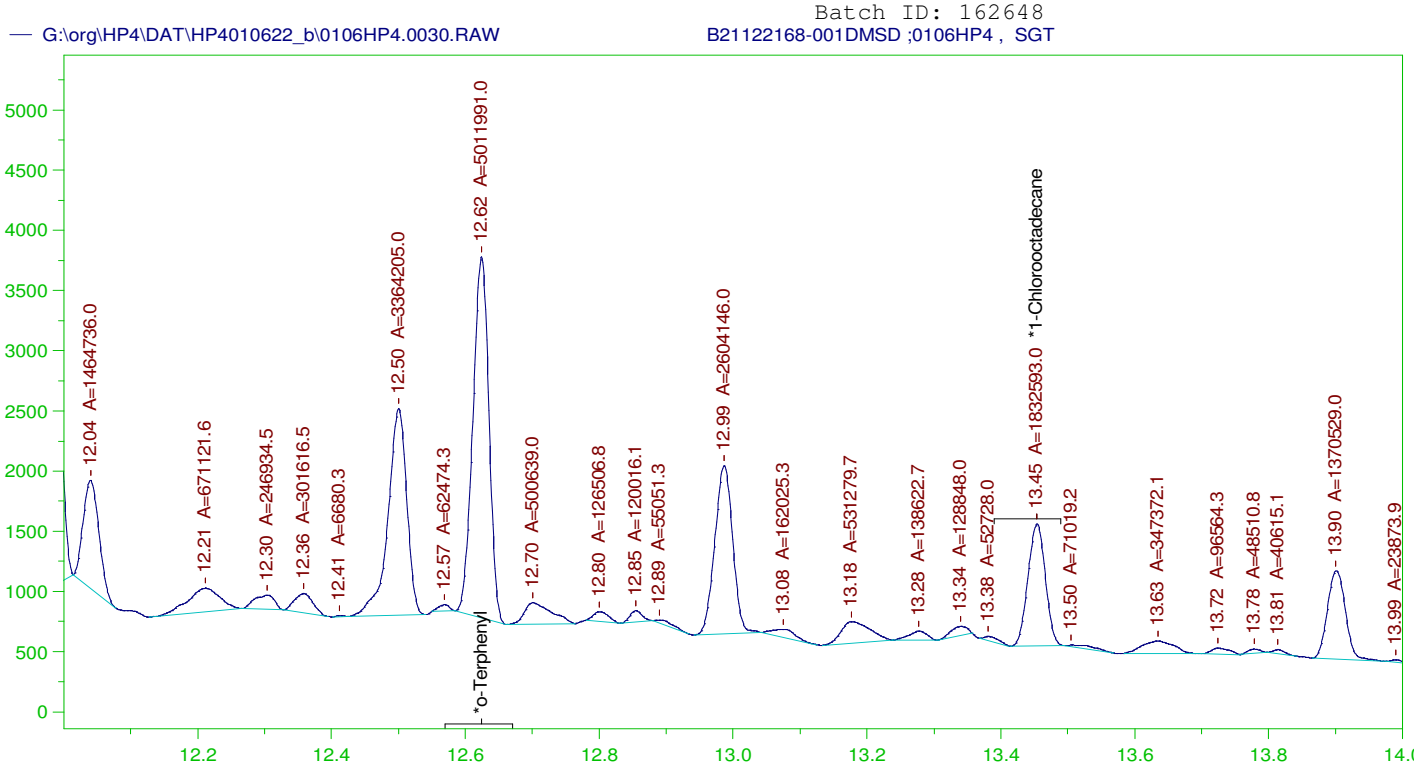
Sample Name: B21122168-001DMSD ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0030.RAW
Date & Time Acquired: 1/7/2022 2:31:18 PM
Method File: G:\Org\HP4\methods\D3_8015-010630-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.624	.192	.247	128.44	-
*1-Chlorooctadecane	13.454	.192	.202	104.92	-

DRO Area:3.933835E+08 DRO Amount: 12.87747
TEH Area:4.167325E+08 TEH Amount: 13.6418

Batch ID: 162648



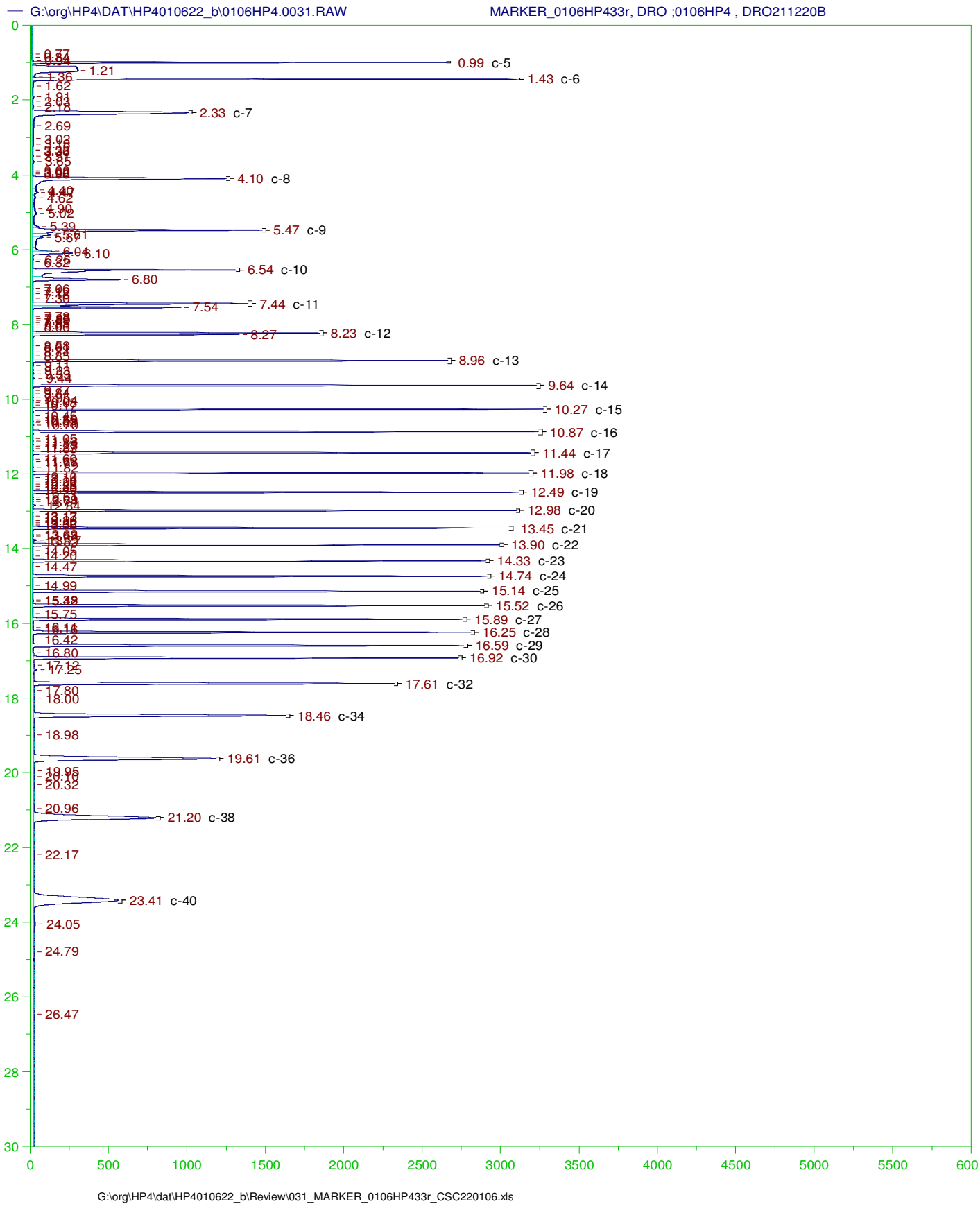
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

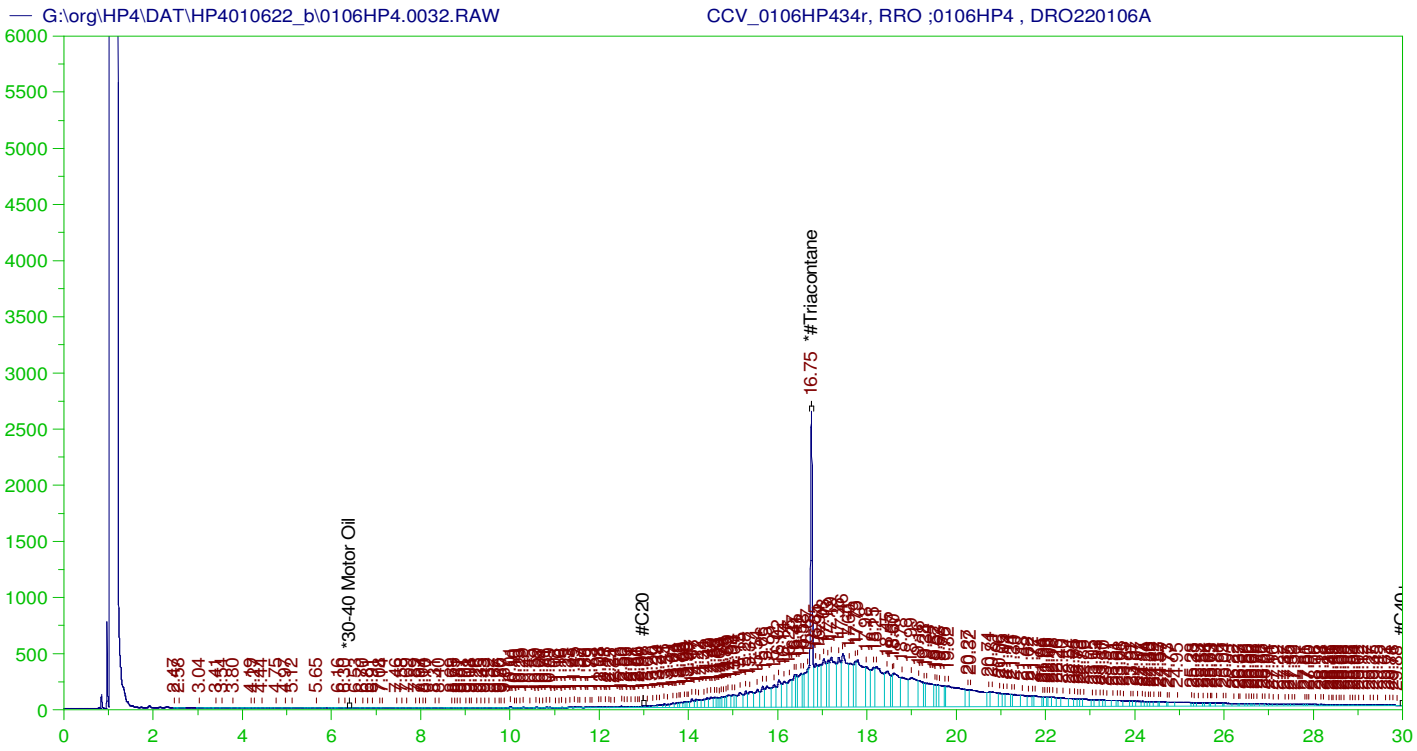
Sample Name: B21122168-001DMSD ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0030.RAW
Date & Time Acquired: 1/7/2022 2:31:18 PM
Method File: G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.624	.192	.145	75.21	-
*1-Chlorooctadecane	13.454	.192	.053	27.5	-

DRO Area:1.585548E+08 DRO Amount: 5.190313
TEH Area:1.688324E+08 TEH Amount: 5.526754


G:\org\HP4\DAT\HP4010622_b\0106HP4.0031.RAW
MARKER_0106HP433r, DRO ;0106HP4 , DRO211220B
0.99 c-5
1.21
1.43 c-6
2.33 c-7
4.10 c-8
5.47 c-9
6.10
6.54 c-10
6.80
7.44 c-11
7.54
8.23 c-12
8.27
8.96 c-13
9.64 c-14
10.27 c-15
10.87 c-16
11.44 c-17
11.98 c-18
12.49 c-19
12.98 c-20
13.45 c-21
13.90 c-22
14.33 c-23
14.47
14.74 c-24
14.99
15.14 c-25
15.52 c-26
15.75
15.89 c-27
16.25 c-28
16.42
16.59 c-29
16.80
16.92 c-30
17.25
17.61 c-32
17.80
18.00
18.46 c-34
18.98
19.61 c-36
20.32
20.96
21.20 c-38
22.17
23.41 c-40
24.05
24.79
26.47
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
600
G:\org\HP4\dat\HP4010622_b\Review\031_MARKER_0106HP433r_CSC220106.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP434r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0032.RAW
Date & Time Acquired: 1/7/2022 4:01:11 PM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.755	500.	308.982	61.8	-

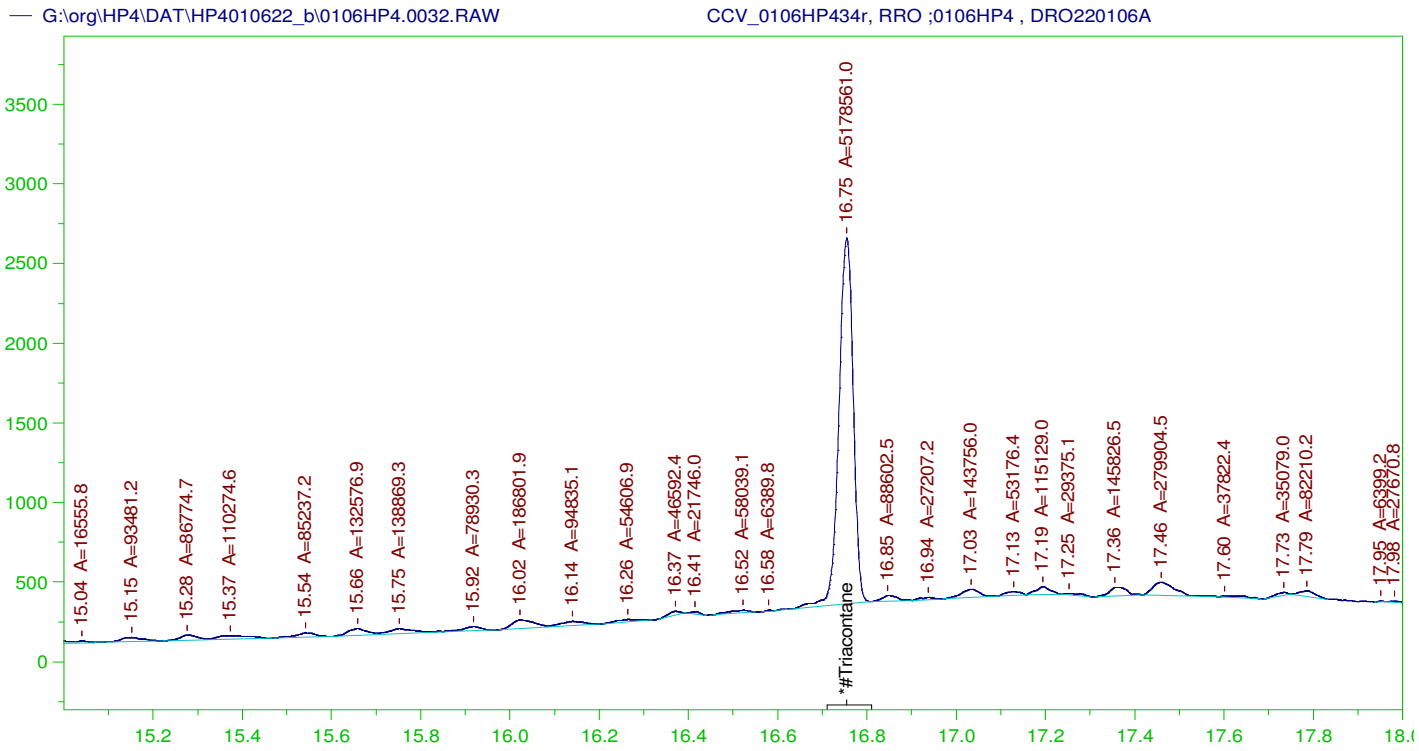
~~RRO~~ TEH (Oil Range) Area:1.109706E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4523.952

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0032.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.755	200.	308.982	154.49	75-125

AMN 01/26/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP434r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0032.RAW
Date & Time Acquired: 1/7/2022 4:01:11 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

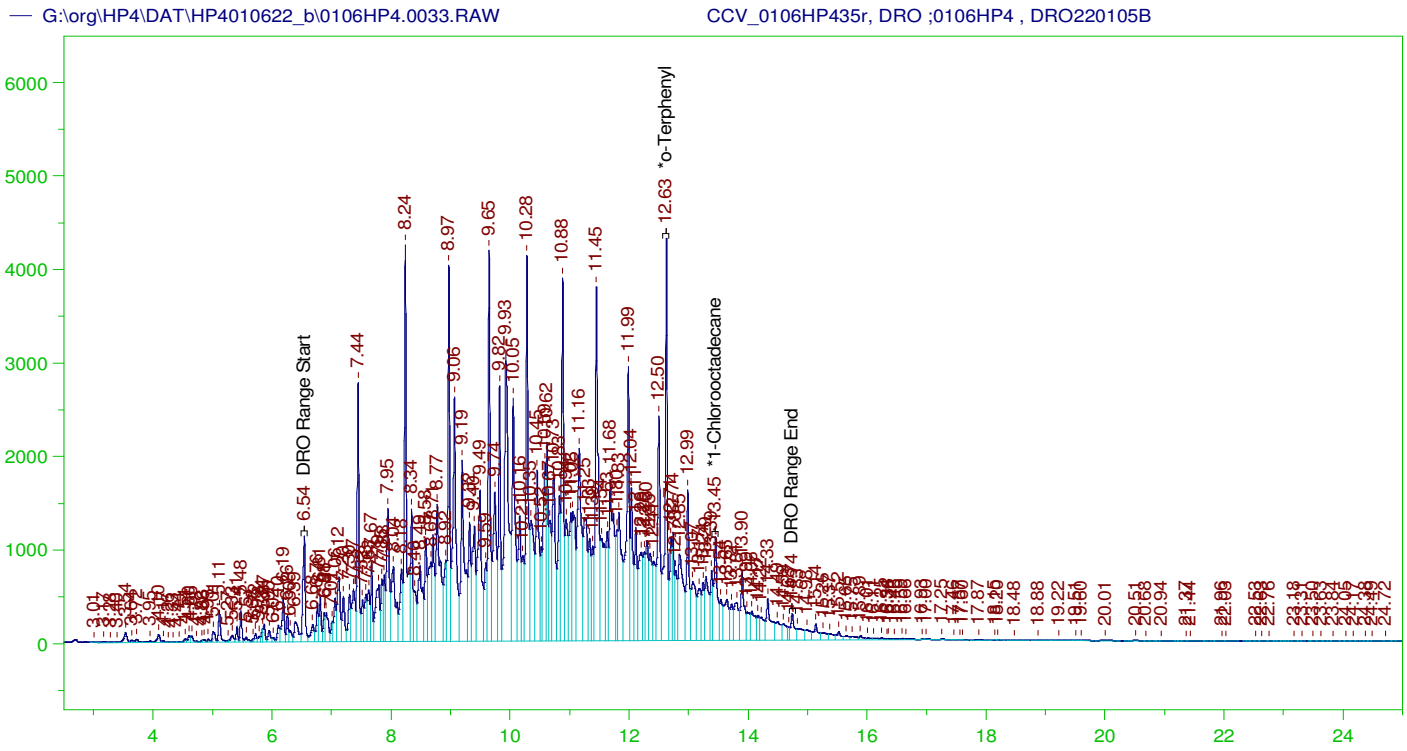
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.755	500.	207.36	41.47	-

RRO Area:4222053 RRO AMOUNT: 172.121

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0032.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.755	200.	207.36	103.68	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0106HP435r, DRO ;0106HP4 , DRO220105B
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0033.RAW
Date & Time Acquired: 1/7/2022 4:45:57 PM
Method File: G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.627	200.	341.278	170.64	-
*1-Chlorooctadecane	13.452	200.	129.526	64.76	-

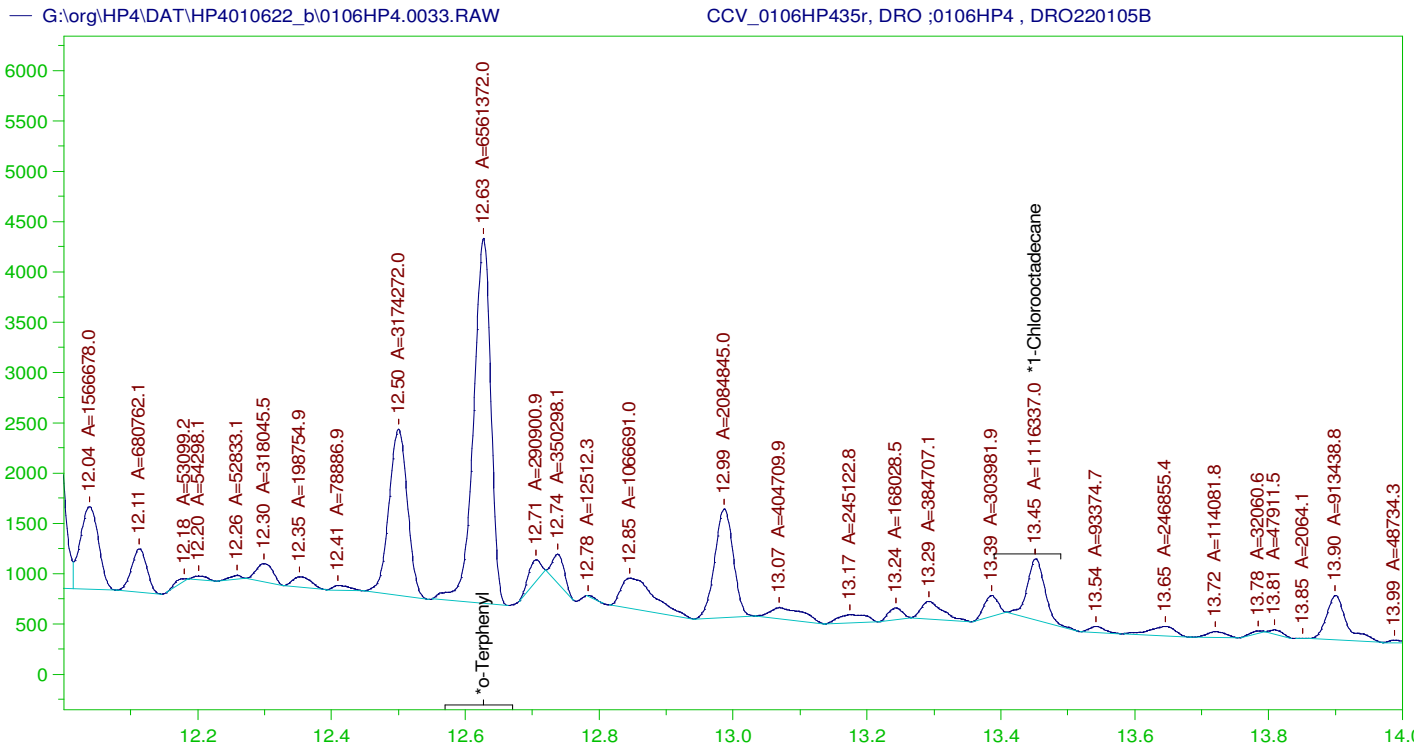
DRO Area:4.187167E+08 DRO Amount: 14255.02
TEH Area:4.344426E+08 TEH Amount: 14790.4

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0033.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14790.4	98.6	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.627	200.	341.278	170.64	85-115
*1-Chlorooctadecane	13.452	200.	129.526	64.76	85-115

G:\org\HP4\dat\HP4010622_b\Review\033_CCV_0106HP435r_DC_8015-C24-OJ-L%.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0106HP435r, DRO ;0106HP4 , DRO220105B
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0033.RAW
Date & Time Acquired: 1/7/2022 4:45:57 PM
Method File: G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OJ-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.49 to 14.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.627	200.	196.922	98.46	-
*1-Chlorooctadecane	13.452	200.	33.504	16.75	-

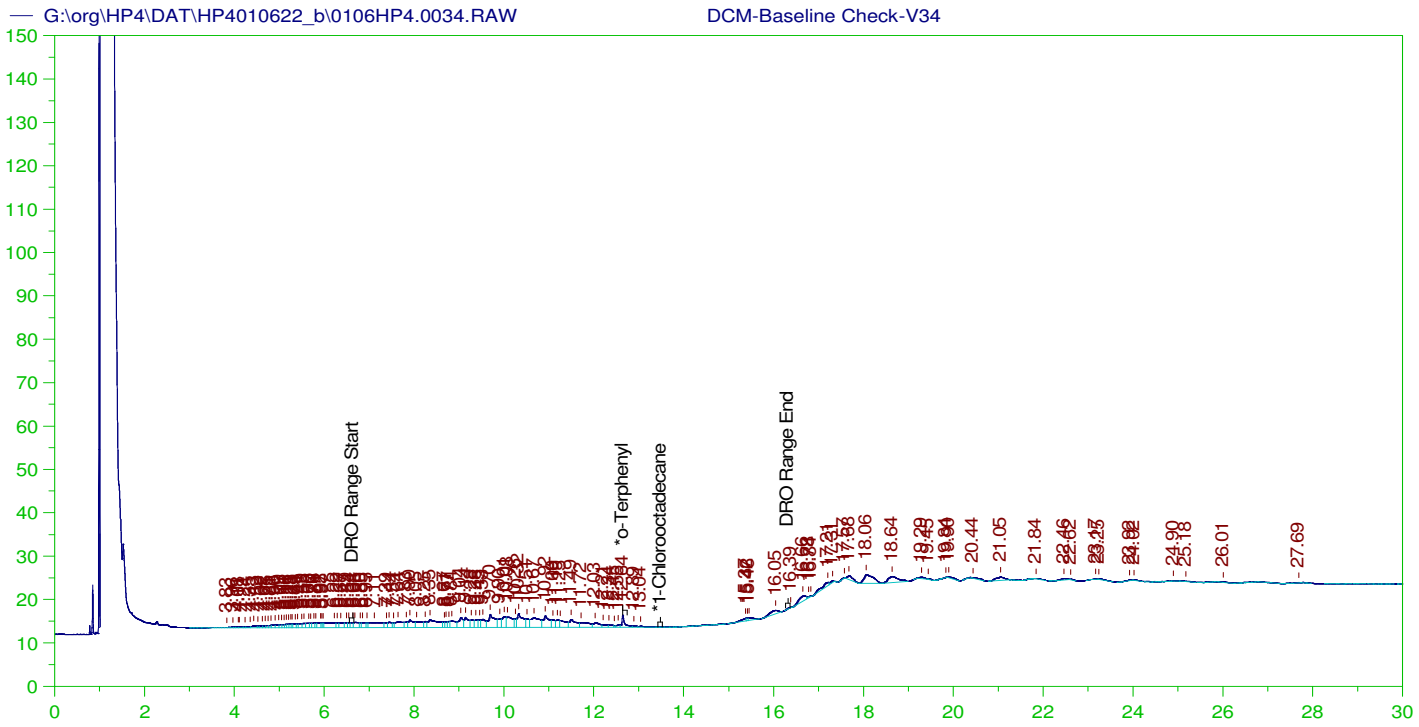
DRO Area:1.840263E+08 DRO Amount: 6265.092
TEH Area:1.938164E+08 TEH Amount: 6598.394

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0033.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	6598.39	43.99	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.627	200.	196.922	98.46	85-115
*1-Chlorooctadecane	13.452	200.	33.504	16.75	85-115

G:\org\HP4\dat\HP4010622_b\Review\033_CCV_0106HP435r_DS_8015-C24-OJ-L#.xls



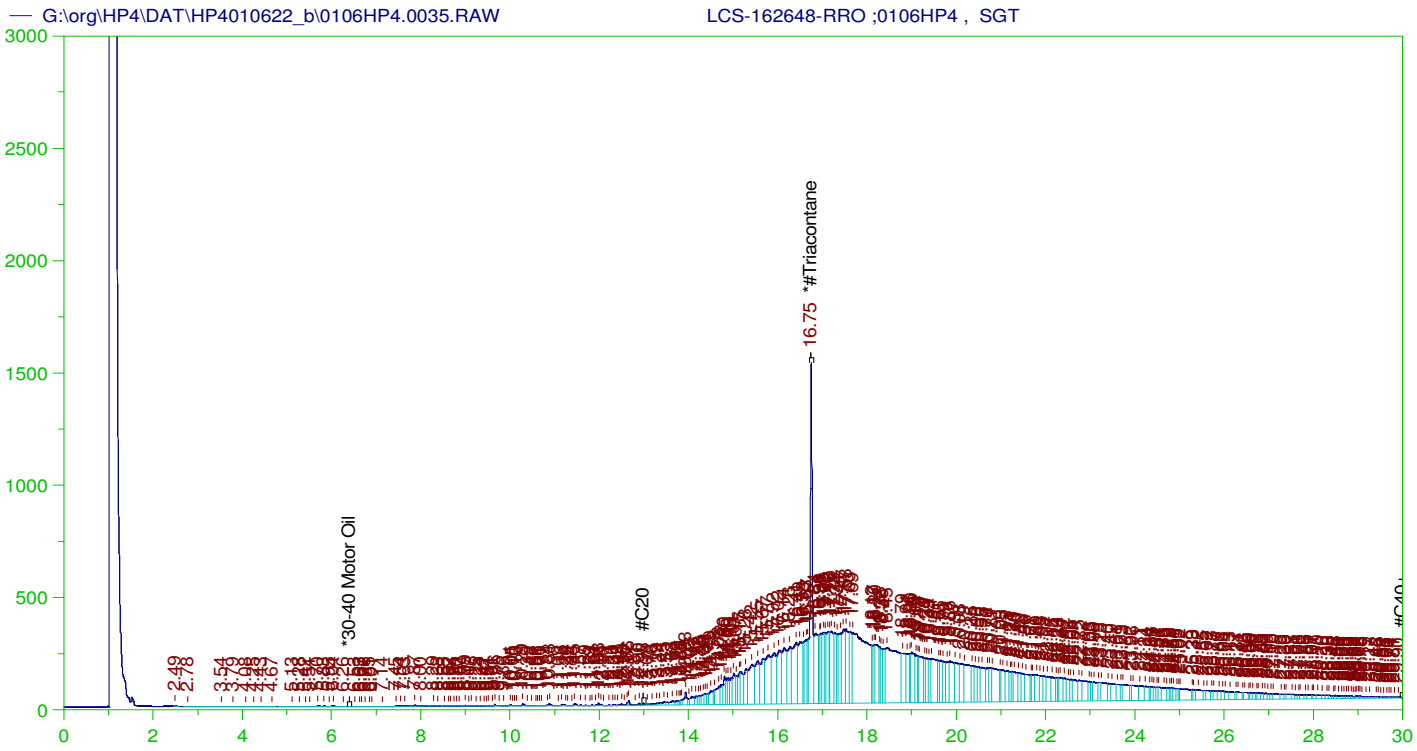
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V34
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0034.RAW
Date & Time Acquired: 1/7/2022 5:31:06 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	12.643	200.	.381	.19	-
*1-Chlorooctadecane	29.93	200.	.	.	-

DRO Area:546209.5 DRO Amount: 18.59546
TEH Area:799537.7 TEH Amount: 27.2199



RESIDUAL RANGE ORGANICS CHROMATOGRAM

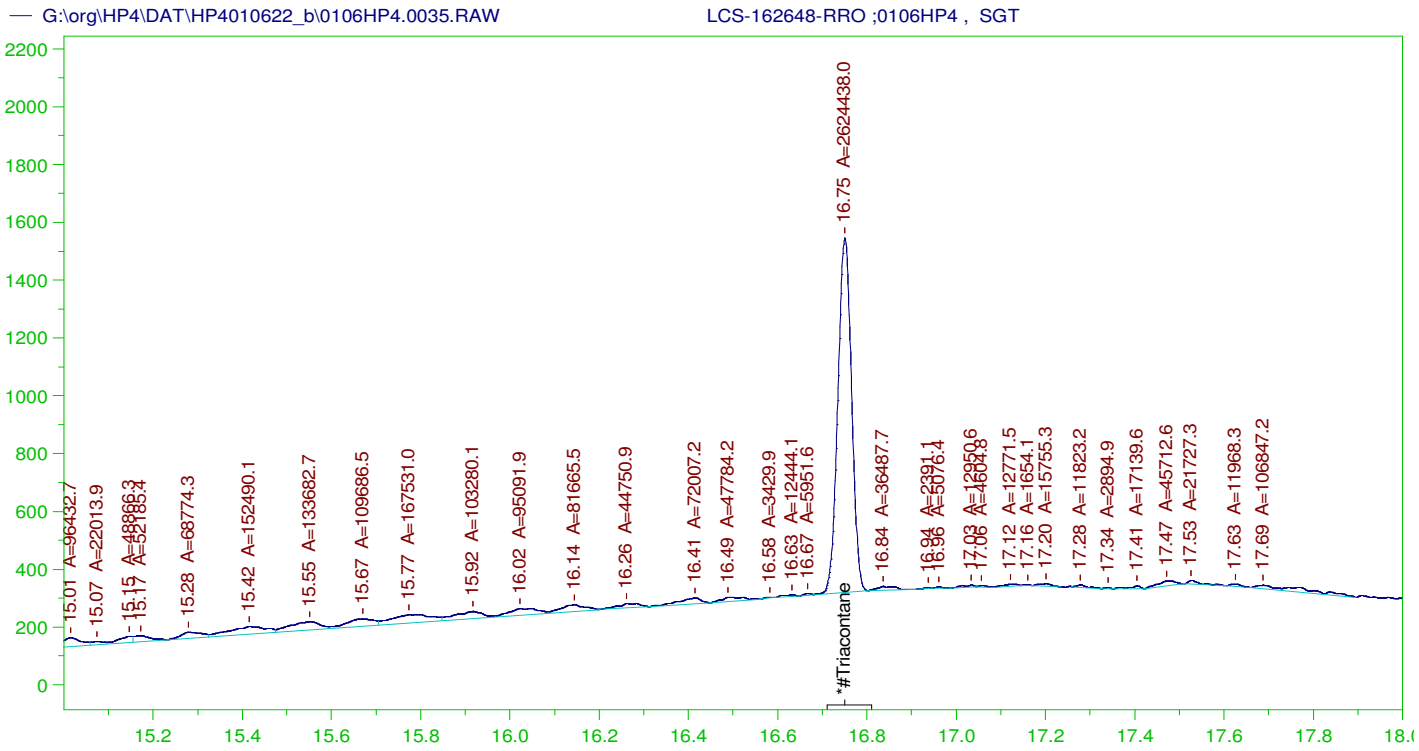
Sample Name: LCS-162648-RRO ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0035.RAW
Date & Time Acquired: 1/7/2022 6:16:12 PM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.75	.5	.19	38.03	-

~~RRO~~ TEH (Oil Range) Area:1.097602E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4.474609

AMN 01/26/2022



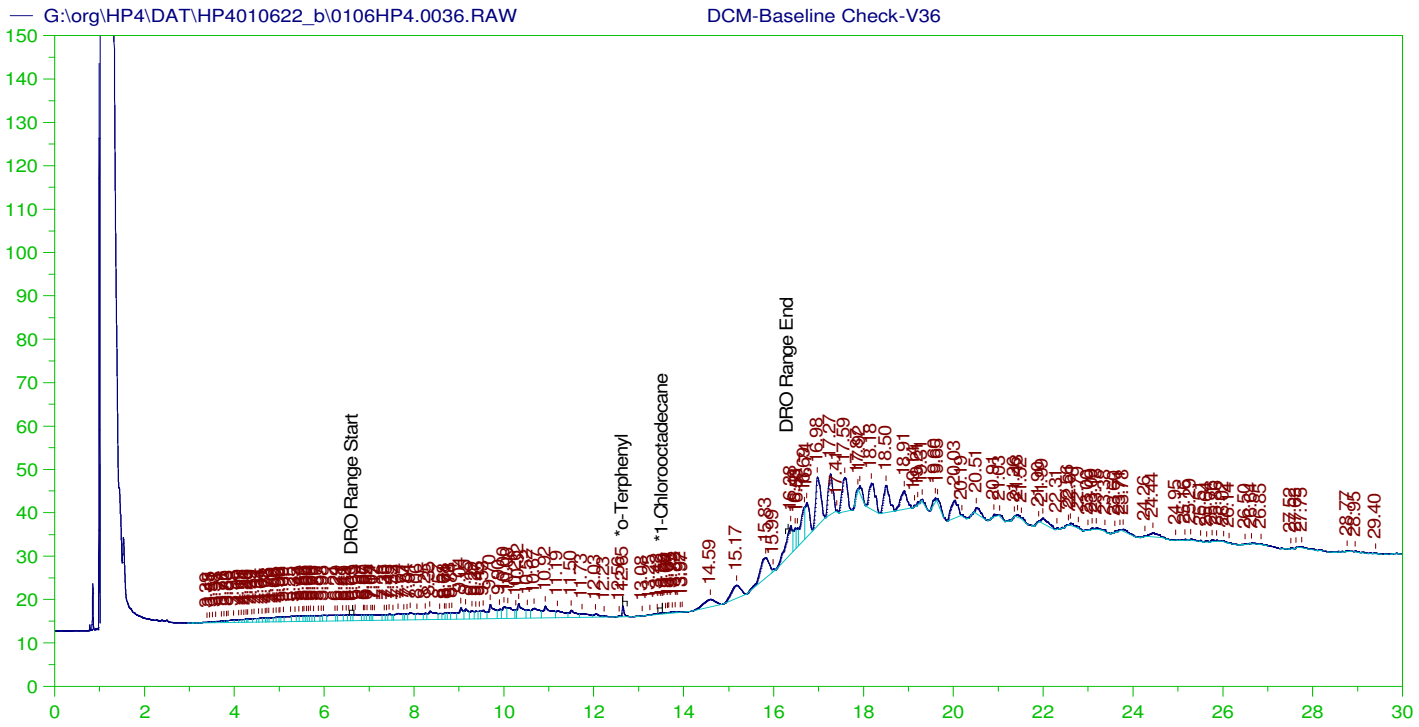
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-162648-RRO ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0035.RAW
Date & Time Acquired: 1/7/2022 6:16:12 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.75	.5	.105	21.02	-

RRO Area:3103414 RRO AMOUNT: 0.1265173



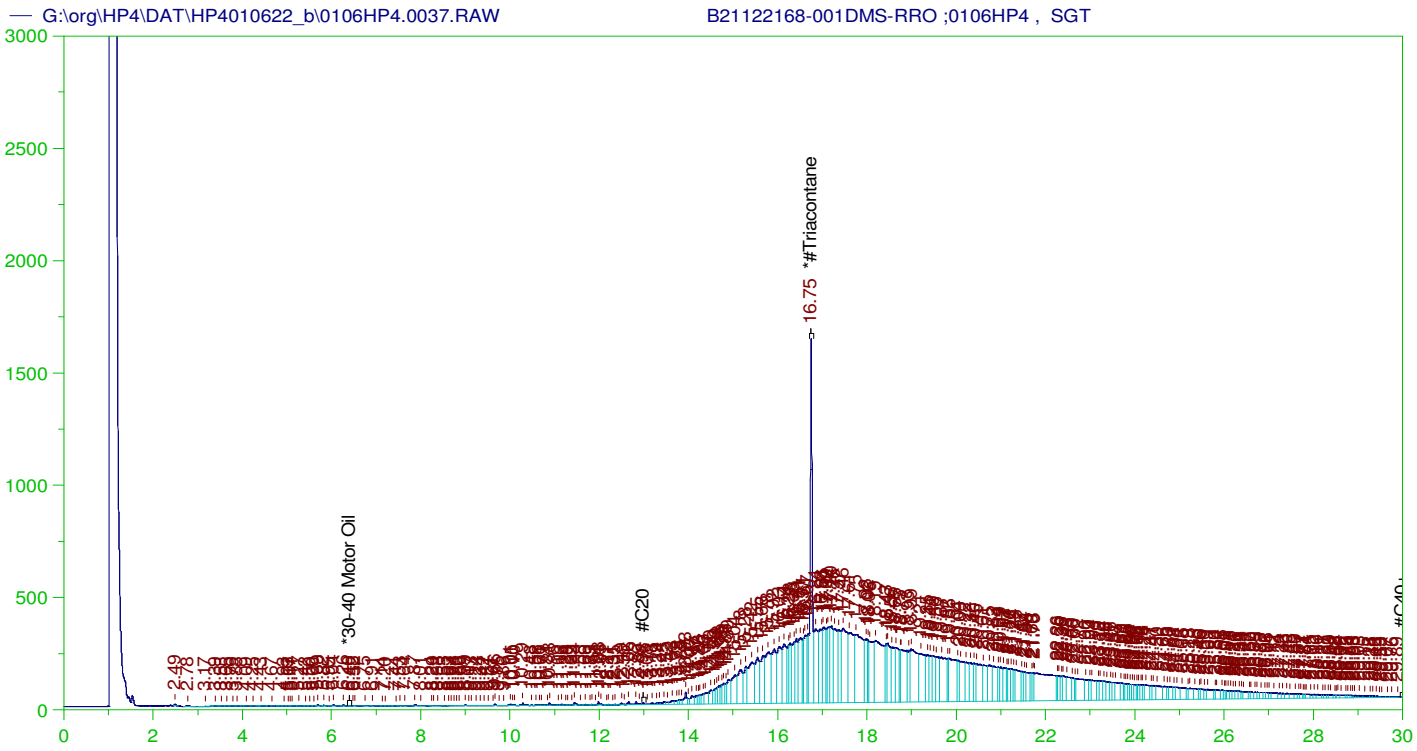
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V36
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0036.RAW
Date & Time Acquired: 1/7/2022 7:01:21 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	12.645	200.	.241	.12	-
*1-Chlorooctadecane	13.524	200.	.048	.02	-

DRO Area:677147.3 DRO Amount: 23.05317
TEH Area:1632627 TEH Amount: 55.58205



RESIDUAL RANGE ORGANICS CHROMATOGRAM

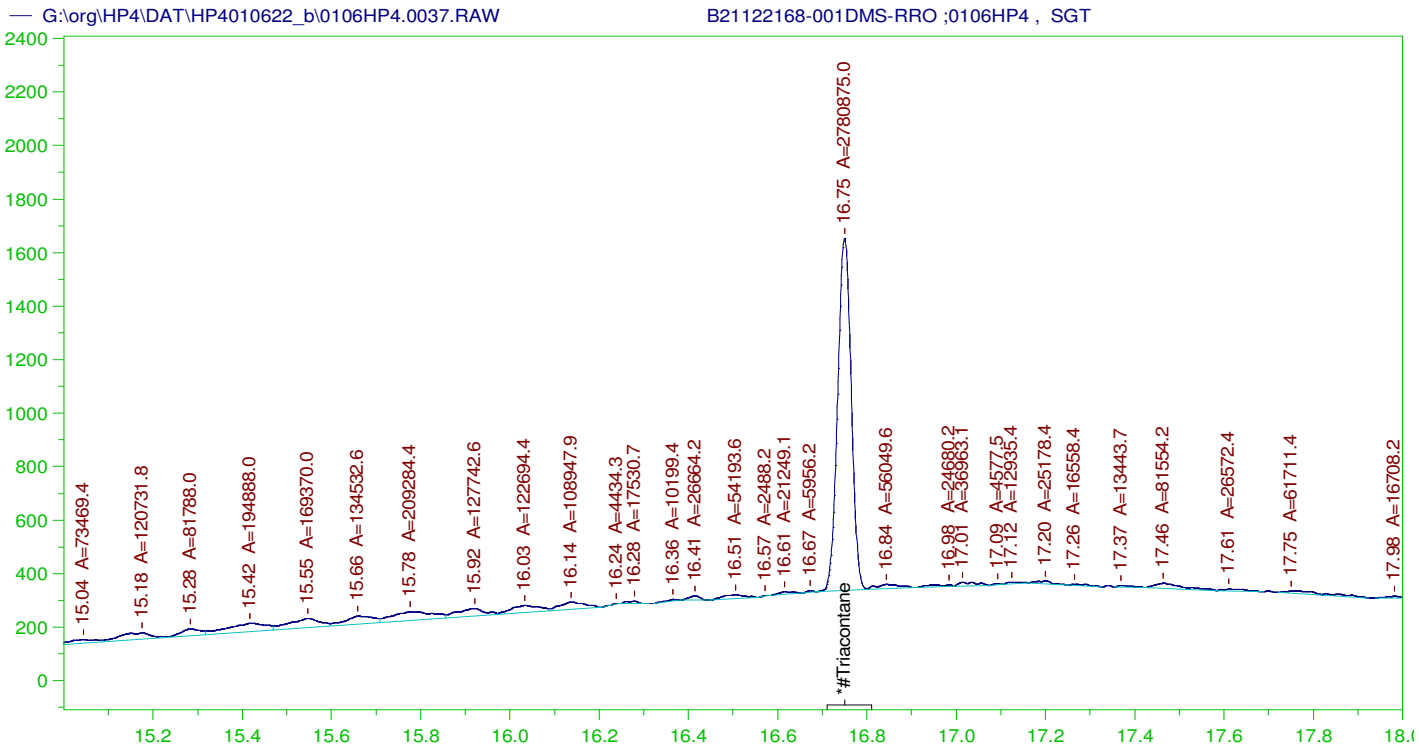
Sample Name: B21122168-001DMS-RRO ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0037.RAW
Date & Time Acquired: 1/7/2022 7:46:27 PM
Method File: G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.749	.49	.19	38.86	-

~~RRO~~ TEH (Oil Range) Area:1.150775E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4.599393

AMN 01/26/2022



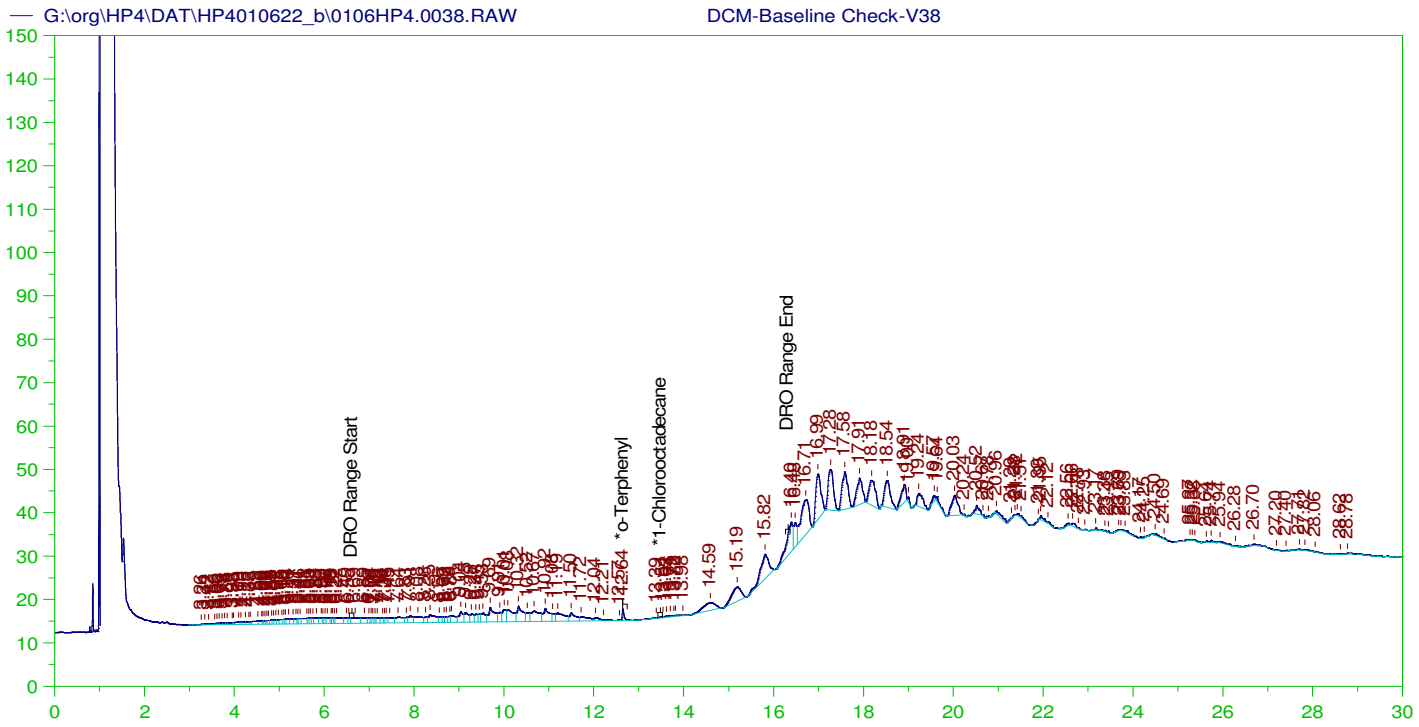
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21122168-001DMS-RRO ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0037.RAW
Date & Time Acquired: 1/7/2022 7:46:27 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.749	.49	.109	22.27	-

RRO Area:3100048 RRO AMOUNT: 0.123902



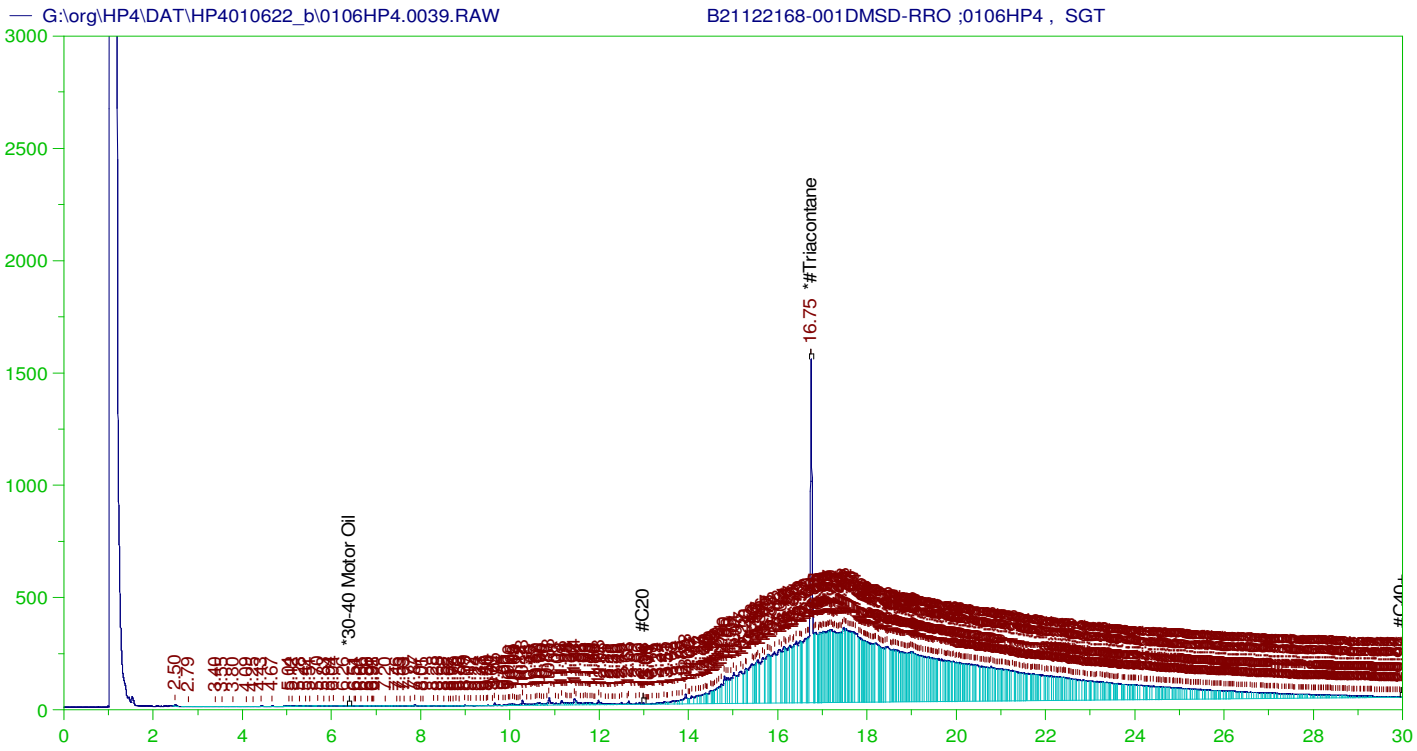
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V38
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0038.RAW
Date & Time Acquired: 1/7/2022 8:31:29 PM
Method File: G:\Org\HP4\methods\DR_8015-OH-LEXP.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.645	200.	.255	.13	-
*1-Chlorooctadecane	29.981	200.	.	.	-

DRO Area:689583.4 DRO Amount: 23.47655
TEH Area:1682843 TEH Amount: 57.29165



RESIDUAL RANGE ORGANICS CHROMATOGRAM

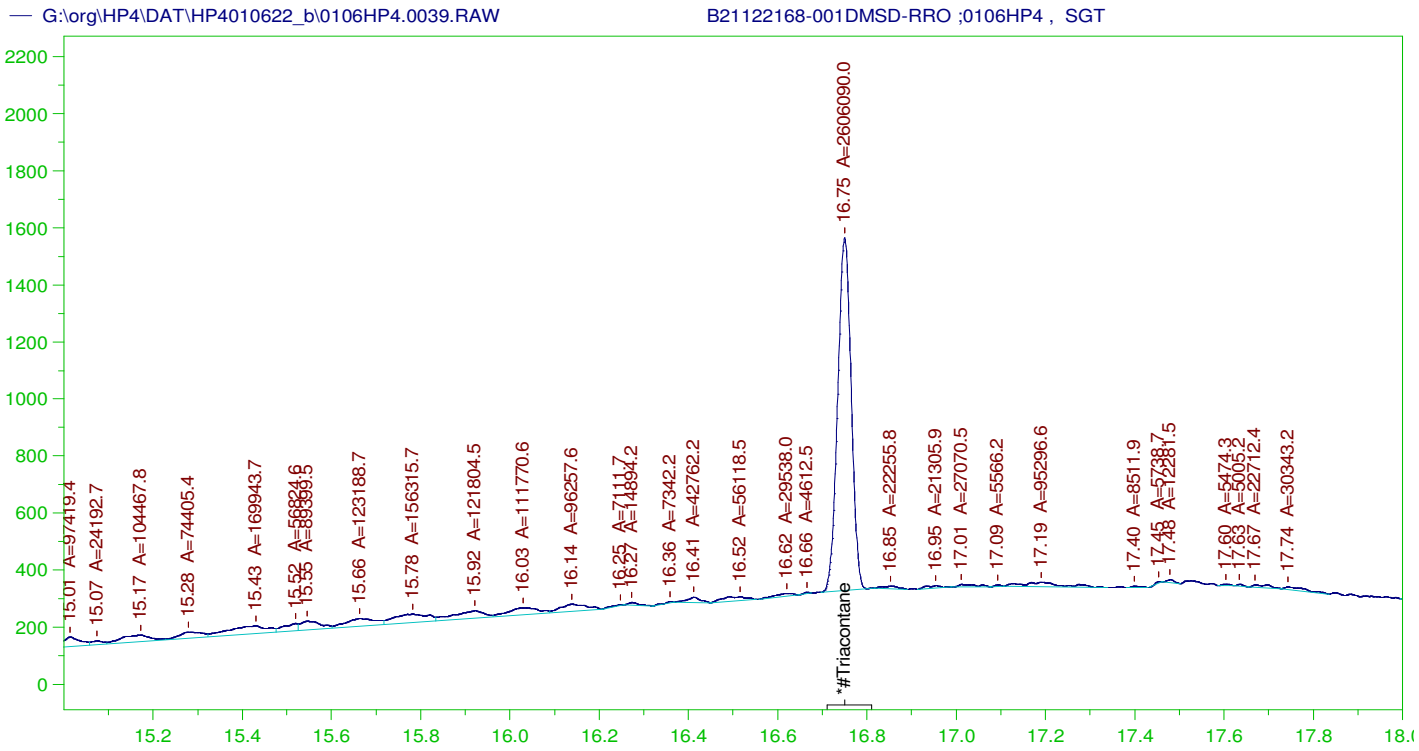
Sample Name: B21122168-001DMSD-RRO ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0039.RAW
Date & Time Acquired: 1/7/2022 9:16:27 PM
Method File: G:\Org\HP4\Methods\D3_ORO-010639-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH (Oil Range) Organics Calculations: 24529.56
Rt range for ~~Residual~~ TEH (Oil Range) Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.75	.476	.169	35.48	-

~~RRO~~ TEH (Oil Range) Area:1.107334E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4.299319

AMN 01/26/2022



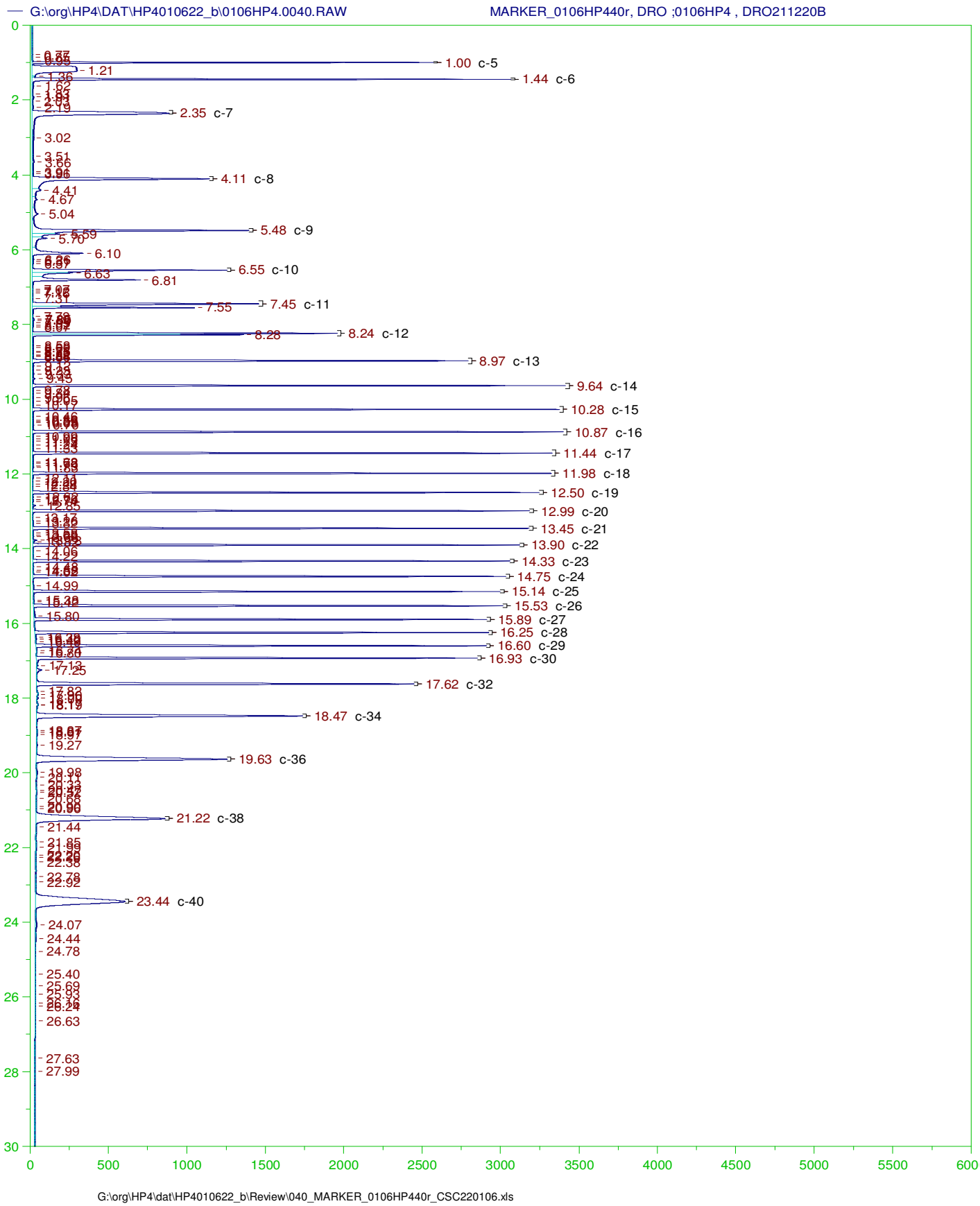
RESIDUAL RANGE ORGANICS CHROMATOGRAM

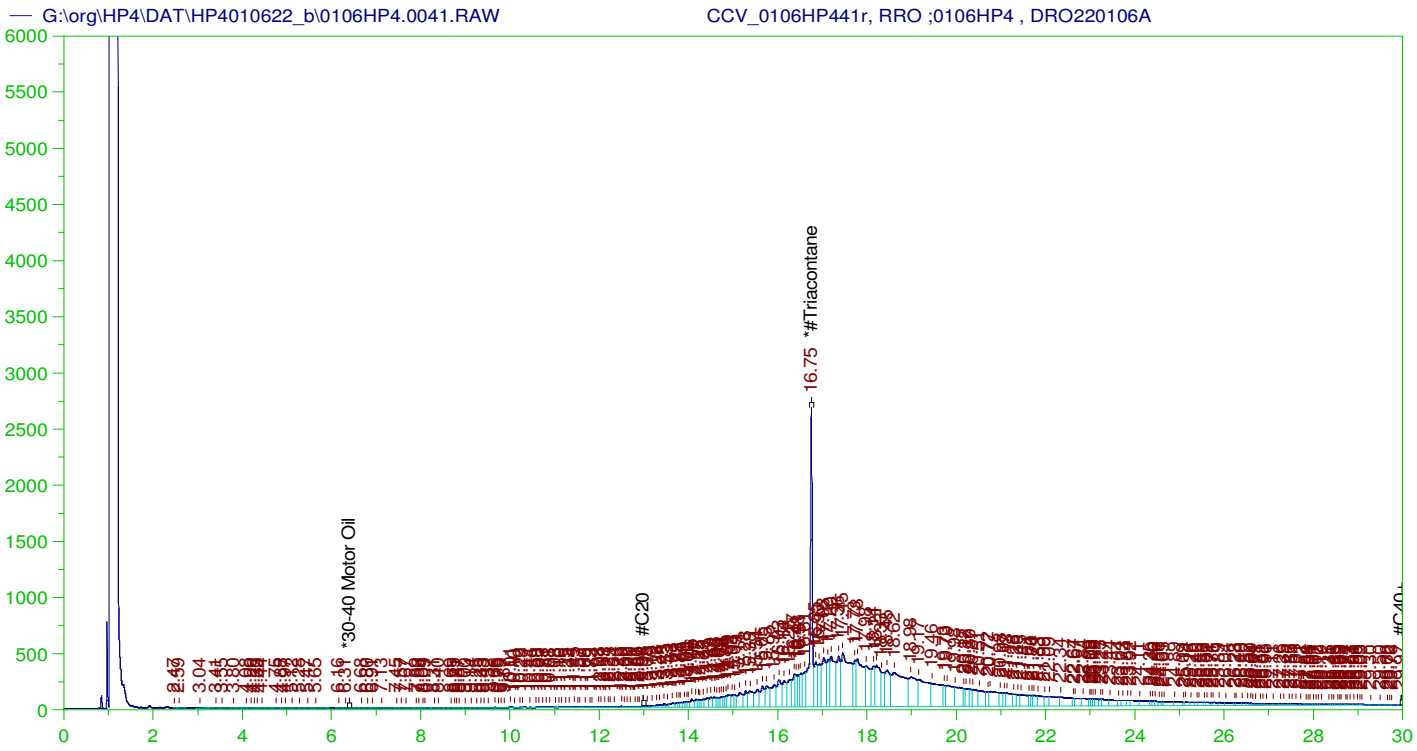
Sample Name: B21122168-001DMSD-RRO ;0106HP4 , SGT
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0039.RAW
Date & Time Acquired: 1/7/2022 9:16:27 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.75	.476	.099	20.87	-

RRO Area:3204162 RRO AMOUNT: 0.1244043


G:\org\HP4\DAT\HP4010622_b\0106HP4.0040.RAW
MARKER_0106HP440r, DRO ;0106HP4 , DRO211220B
1.00 c-5
1.21
1.44 c-6
2.35 c-7
3.02
4.11 c-8
4.41
4.67
5.04
5.48 c-9
5.59
5.70
6.10
6.55 c-10
6.63
6.81
7.45 c-11
7.55
8.24 c-12
8.28
8.97 c-13
9.64 c-14
10.28 c-15
10.87 c-16
11.44 c-17
11.98 c-18
12.50 c-19
12.99 c-20
13.45 c-21
13.90 c-22
14.33 c-23
14.75 c-24
14.99
15.14 c-25
15.53 c-26
15.80
15.89 c-27
16.25 c-28
16.60 c-29
16.93 c-30
17.25
17.62 c-32
18.19
18.47 c-34
19.27
19.63 c-36
19.98
21.22 c-38
21.44
22.78
23.44 c-40
24.07
24.44
24.78
25.40
25.69
26.63
27.63
27.99
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
600
G:\org\HP4\dat\HP4010622_b\Review\040_MARKER_0106HP440r_CSC220106.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP441r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0041.RAW
Date & Time Acquired: 1/7/2022 10:46:23 PM
Method File: G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.753	500.	354.372	70.87	-

~~RRO~~ TEH (Oil Range) Area:1.115587E+08 ~~RRO~~ TEH (Oil Range) AMOUNT: 4547.931

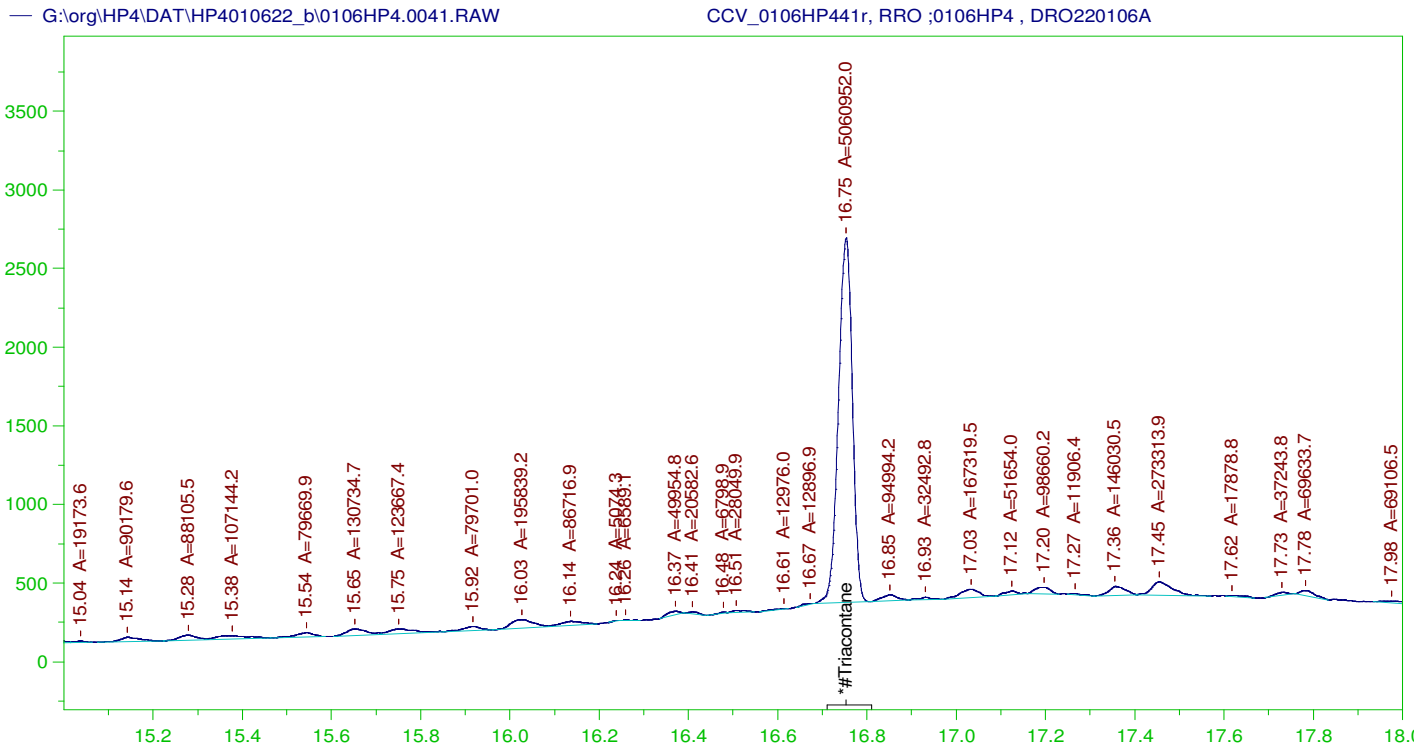
CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0041.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.753	200.	354.372	177.19	75-125

AMN 01/26/2022

G:\org\HP4\dat\HP4010622_b\Review\041_CCV_0106HP441r_DC_ORO-T-AC-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0106HP441r, RRO ;0106HP4 , DRO220106A
Raw File: G:\org\HP4\DAT\HP4010622_b\0106HP4.0041.RAW
Date & Time Acquired: 1/7/2022 10:46:23 PM
Method File: G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AC.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: 12.95 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.753	500.	202.65	40.53	-

RRO Area:4227363 RRO AMOUNT: 172.3375

CONTINUING CALIBRATION REPORT: G:\org\HP4\DAT\HP4010622_b\0106HP4.0041.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.753	200.	202.65	101.33	75-125

Write Sequence	Insert Entries(Have the first cell for entries selected								
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP5\DAT\HP5122821_b\1228HP5.18r	Marker_1228HP518r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.19r	CCV_1228HP519r, 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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.20r	CCV_1228HP520r, DRO ;1228HP5 , DRO211220A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.31r	Marker_1228HP531r, DRO ;1228HP5 , DRO211203B	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.32r	LCS-162502 ;1228HP5 ,	G:\Org\HP5\Methods\D3_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.33r	MB-162502 ;1228HP5 ,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.34r	Marker_1228HP534r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.35r	CCV_1228HP535r, 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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.36r	CCV_1228HP536r, DRO ;1228HP5 , DRO211229A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.37r	DCM-Baseline Check-V37	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.38r	B21121968-001D ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.39r	B21121957-001B ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.40r	B21121977-001D ;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-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.41r	B21121977-002D ;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-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.42r	DCM-Baseline Check-V42	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.43r	B21121981-001D ;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-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.44r	B21121981-001DMS ;1228HP5 ,	G:\Org\HP5\Methods\D3_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.45r	B21121981-001DMSD ;1228HP5 ,	G:\Org\HP5\Methods\D3_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.46r	DCM-Baseline Check-V46	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.47r	B21121979-003D ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met G:\Org\HP5\Methods\DR_OROS-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.48r	B21121979-001D ;1228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\DR_8015-122848-IM-L%.met G:\Org\HP5\Methods\D3_OROS-122848-AL-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-IM-L#.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with Set Baseline Now set at 25.88 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.50r	Marker_1228HP550r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.51r	CCV_1228HP551r, 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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.52r	CCV_1228HP536r, DRO ;1228HP5 , DRO211229A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.53r	DCM-Baseline Check-V53	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.54r	B21121979-002B ;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-L#.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.55r	B21121965-001D ;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-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.56r	DCM-Baseline Check-V56	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.57r	B21121967-001D ;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-L#.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.

G:\org\HP5\DAT\HP5122821_b\1228HP5.58r	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-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.59r	DCM-Baseline Check-V59	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.60r	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-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with Set Baseline Now set at 26.4 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.61r	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-L#.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with Set Baseline Now set at 27.62 minutes. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.62r	DCM-Baseline Check-V62	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.64r	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-L#.met	1010	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.65r	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-L#.met	1010	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5122821_b\1228HP5.66r	Marker_1228HP566r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.67r	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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.68r	CCV_1228HP568r, DRO ;1228HP5 , DRO211229A	G:\Org\HP5\Methods\DC_8015-24-IM-L%.met G:\Org\HP5\Methods\DS_8015-24-IM-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 16.83 minutes. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.69r	DCM-Baseline Check-V69	G:\Org\HP5\Methods\DR_8015-IBb-LEXP.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.70r	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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.71r	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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.72r	B21121981-001DMSD-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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_b\1228HP5.73r	Marker_1228HP573r, DRO ;1228HP5 , DRO211220B	g:\org\HP5\Methods\\CSC211228.met	1	1	1	1	0	No Integratoins
G:\org\HP5\DAT\HP5122821_b\1228HP5.74r	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 basline. Surrogates are integrated using a valley to valley integration using Set Basline 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.

Digitally signed by
Ann Nebel
Date: 2022.01.24 12:40:21 -07:00

Write Sequence / Data File	Insert Entries(Have the fist cell for entries selected) / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manul Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.01r	MARKER_0105HP401r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220105.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.02r	CCV_0105HP402r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley on placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.03r	CCV_0105HP403r, DRO ;0105HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.55 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.04r	DCM-Baseline Check-V04	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.05r	LCS-162648 ;0105HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.55 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.06r	MB-162648 ;0105HP4 ,	G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.07r	B21122211-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.08r	B21122190-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.09r	B21122198-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.10r	DCM-Baseline Check-V10	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.11r	B21122204-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.12r	B21122180-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	980	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.13r	B21122188-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-010513-OI-L%.met G:\Org\HP4\Methods\D3_ORO-010513-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	980	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline with a Set Baseline Now at 28.32 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.14r	DCM-Baseline Check-V14	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.15r	B21121965-001D ;0105HP4 , $HC-8015-DRO-W, RX	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.16r	MARKER_0105HP416r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220105.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.17r	CCV_0105HP417r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley on placed at 16.25 minutes slig and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.18r	CCV_0105HP418r, DRO ;0105HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.55 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.19r	DCM-Baseline Check-V19	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations

G:\org\HP4\DAT\HP4010522_b\0105HP4.20r	B22010002-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-010513-OI-L%.met G:\Org\HP4\Methods\D3_ORO-010513-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	980	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline wth a Set Baseline now at 28.32 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.21r	B22010002-002D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-C24T-OI-L%.met G:\Org\HP4\Methods\DR_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.22r	B22010002-003B ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.23r	DCM-Baseline Check-V23	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.24r	B21122168-001D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\DR_8015-010524-OI-L%.met G:\Org\HP4\Methods\D3_ORO-010524-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline wth a Set Baseline now at 27.26 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.25r	B21122168-001DMS ;0105HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.55 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.26r	B21122168-001DMSD ;0105HP4 ,	G:\Org\HP4\methods\D3_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-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 basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.55 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.27r	DCM-Baseline Check-V27	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.28r	DCM-Baseline Check-V28	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.29r	B21122168-006D ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.30r	B21122168-007B ;0105HP4 , $HC-8015-DRO-W,	G:\Org\HP4\methods\D3_8015-C24T-OI-L%.met G:\Org\HP4\Methods\D3_ORO-S-AC-L%.met G:\Org\HP4\methods\DS_8015-T-OI-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.72 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.31r	MARKER_0105HP431r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220105.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.32r	CCV_0105HP432r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley on placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.33r	CCV_0105HP433r, DRO ;0105HP4 , DRO211229A	G:\Org\HP4\methods\DC_8015-C24-OI-L%.met G:\Org\HP4\methods\DS_8015-C24-OI-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.55 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.34r	DCM-Baseline Check-V34	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.35r	LCS-162648-RRO ;0105HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley on placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.36r	DCM-Baseline Check-V36	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.37r	B21122168-001DMS-RRO ;0105HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1020	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley on placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.38r	DCM-Baseline Check-V38	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.39r	B21122168-001DMSD-RRO ;0105HP4 ,	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1050	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley on placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010522_b\0105HP4.40r	MARKER_0105HP440r, DRO ;0105HP4 , DRO211220B	g:\org\HP4\Methods\CSC220102.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010522_b\0105HP4.41r	CCV_0105HP441r, RRO ;0105HP4 , DRO220102A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley on placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.01.26 11:46:58 -07:00

Write Sequence / Data File	Insert Entries(Have the first cell for entries selected) / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.01r	DCM-Baseline Check-V01	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.02r	DCM-Baseline Check-V02	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.03r	MARKER_0106HP403r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.04r	CCV_0106HP404r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.05r	CCV_0106HP405r, DRO ;0106HP4 , DRO220105B	G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.54 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.06r	DCM-Baseline Check-V06	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.07r	LCS-162648 ;0106HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.54 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.08r	MB-162648 ;0106HP4 , SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.09r	B21122211-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.10r	B21122190-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.11r	B21122198-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.12r	DCM-Baseline Check-V12	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.13r	B21122204-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.14r	B21122180-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	980	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.15r	B21122188-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	980	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.16r	DCM-Baseline Check-V16	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations

G:\org\HP4\DAT\HP4010622_b\0106HP4.17r	B21121965-001D ;0106HP4 , $HC-8015-DRO-W, RX-SGT	G:\Org\HP4\methods\DR_8015-010617-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-010617-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.93 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.18r	MARKER_0106HP418r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.19r	CCV_0106HP419r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.20r	CCV_0106HP420r, DRO ;0106HP4 , DRO220105B	G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.54 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.21r	DCM-Baseline Check-V21	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.22r	B22010002-002D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.23r	B22010002-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	980	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.24r	B22010002-003B ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\D3_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\D3_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1040	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.25r	DCM-Baseline Check-V25	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.26r	B21122168-001D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.27r	B21122168-006D ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-C24T-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.28r	B21122168-007B ;0106HP4 , $HC-8015-DRO-W, SGT	G:\Org\HP4\methods\DR_8015-010628-OJ-L%.met G:\Org\HP4\Methods\DR_ORO-S-ACA-L%.met G:\Org\HP4\methods\DS_8015-T-OJ-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.39 minutes and 16.93 minutes for (C24-C40). Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.51 minutes and after the surrogate peak at 12.84 minutes, Set Basline All Valley on 14.07 minutes and and Set Baseline Now at 16.91 minutes and X-axis scaling showing surrogate peak from 12-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.29r	B21122168-001DMS ;0106HP4 , SGT	G:\Org\HP4\methods\D3_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.54 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.30r	B21122168-001DMSD ;0106HP4 , SGT	G:\Org\HP4\methods\D3_8015-010630-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-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 basline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.54 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.31r	MARKER_0106HP433r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0	No Integrations

G:\org\HP4\DAT\HP4010622_b\0106HP4.32r	CCV_0106HP434r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0 The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.33r	CCV_0106HP435r, DRO ;0106HP4 , DRO220105B	G:\Org\HP4\methods\DC_8015-C24-OJ-L%.met G:\Org\HP4\methods\DS_8015-C24-OJ-L#.met	1	1	1	1	0 The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the basline. Assigned Set Baseline All Valley on at 17.1 minutes. Surrogates are integrated using a valley to valley integration using Set Basline Now placed before at 12.54 minutes and after the surrogate peak at 12.78 minutes and X-axis scaling showing surrogate peak from 12-14 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.34r	DCM-Baseline Check-V34	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0 No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.35r	LCS-162648-RRO ;0106HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1000	1	1	1	0 The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.36r	DCM-Baseline Check-V36	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0 No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.37r	B21122168-001DMS-RRO ;0106HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1020	1	1	1	0 The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.38r	DCM-Baseline Check-V38	G:\Org\HP4\methods\DR_8015-OH-LEXP.met	1	1	1	1	0 No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.39r	B21122168-001DMSD-RRO ;0106HP4 , SGT	G:\Org\HP4\Methods\D3_ORO-010639-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1050	1	1	1	0 The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.
G:\org\HP4\DAT\HP4010622_b\0106HP4.40r	MARKER_0106HP440r, DRO ;0106HP4 , DRO211220B	g:\org\HP4\Methods\CSC220106.met	1	1	1	1	0 No Integrations
G:\org\HP4\DAT\HP4010622_b\0106HP4.41r	CCV_0106HP441r, RRO ;0106HP4 , DRO220106A	G:\Org\HP4\Methods\DC_ORO-T-AC-L%.met G:\Org\HP4\Methods\DS_ORO-T-AC-L%.met	1	1	1	1	0 The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the basline. Surrogates are integrated using a valley to valley integration using Set Basline All Valley placed at 16.25 minutes and X-axis scaling showing surrogate peak from 15-18 minutes.

Digitally signed by
Ann Nebel
Date: 2022.01.26 11:47:17 -07:00

Energy Laboratories Inc

Spike LOG

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

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

Final Volume: 25 mL

Stock Source		Base Units	Amount Added
DRO200430B	O-Terphenyl	ug/mL	0.1012 g

Analytes		CAS	Conc:	ug/mL
A	O-Terphenyl	84-15-1		4000

Energy Laboratories Inc

Standard LOG

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

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

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes		**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

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

PJLA Reference Material Producer
PJLA Testing

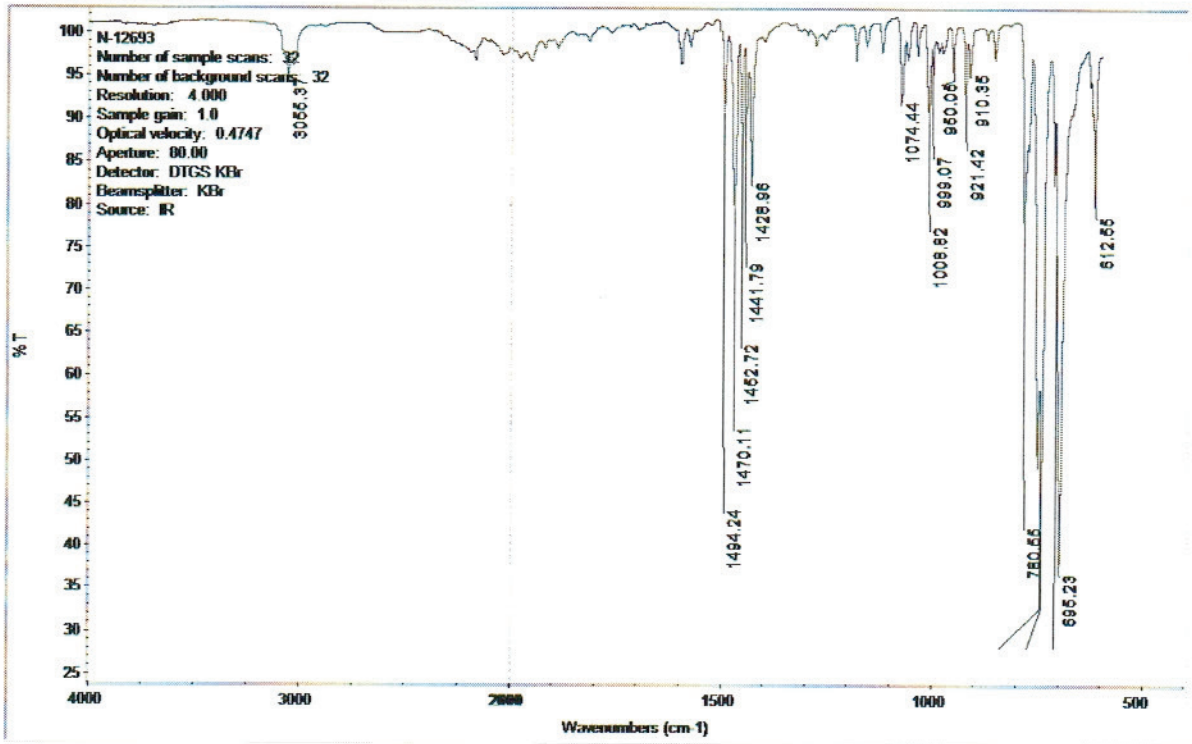
COA Form
Revision 3 (3/2015)

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



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

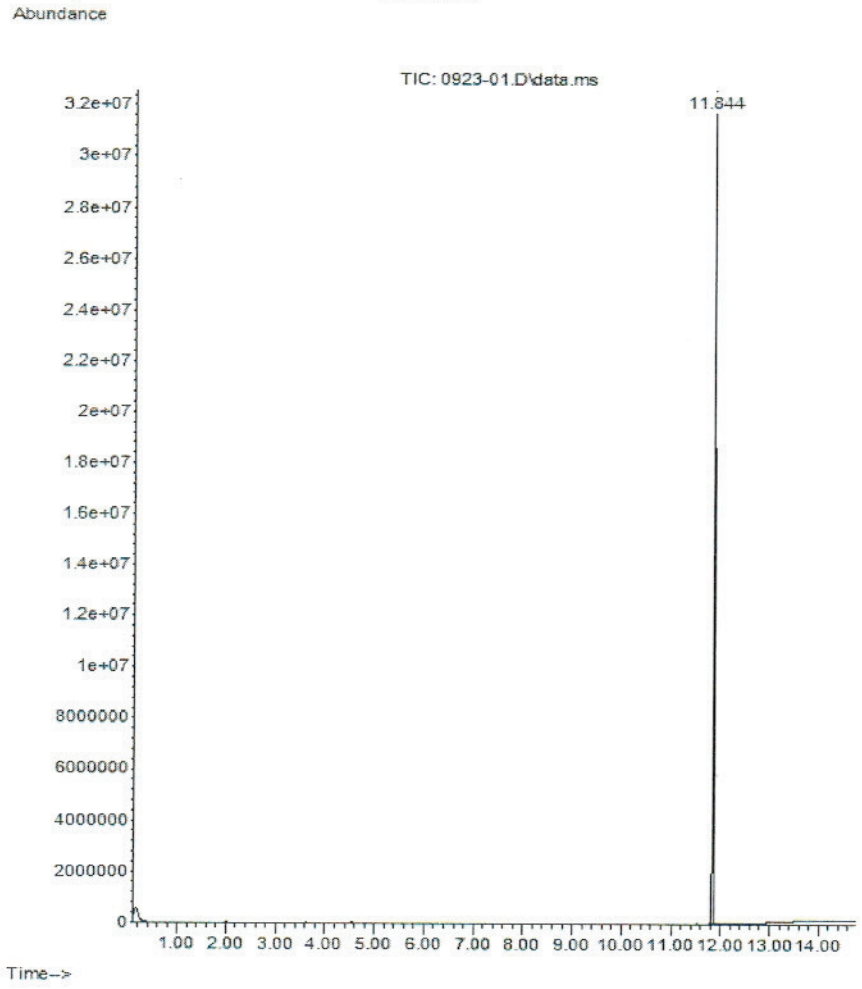
ERIN.M Mon Sep 23 10:55:51 2019

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

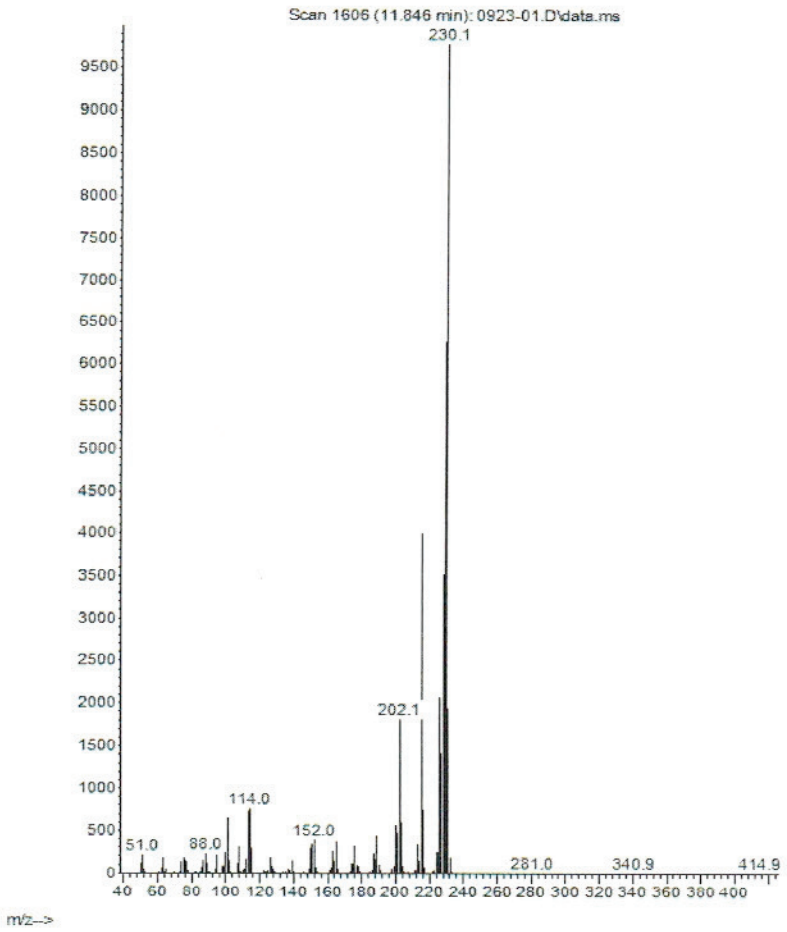


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

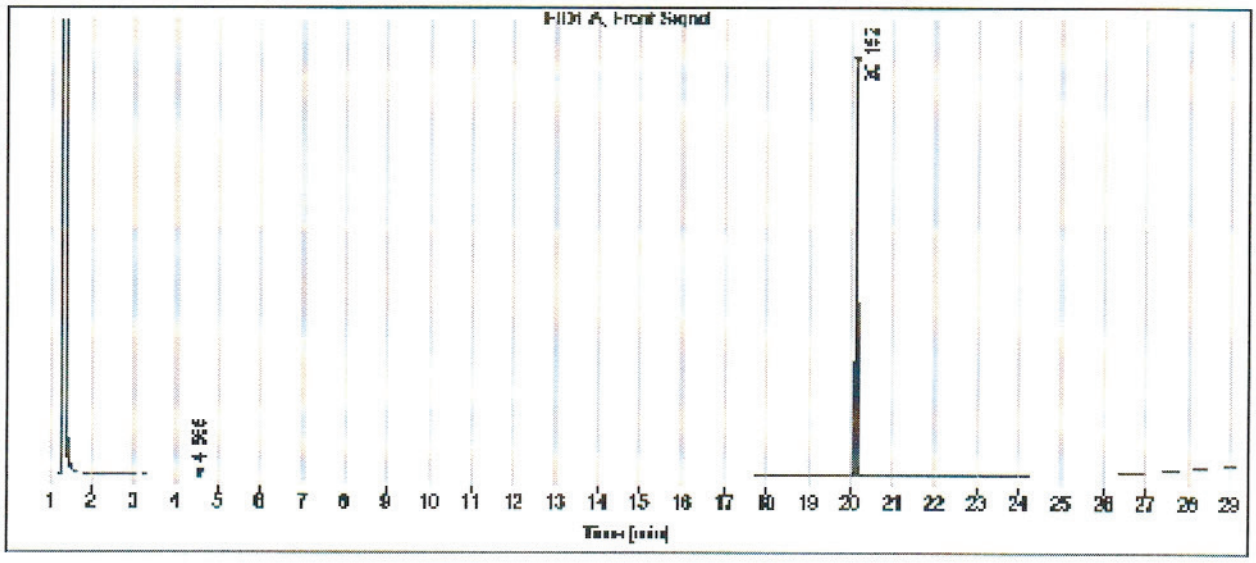
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

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

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**
Analytes	**CAS**	Conc: **ug/mL**
Diesel Fuel #2		0

Page: *1 of 1*

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

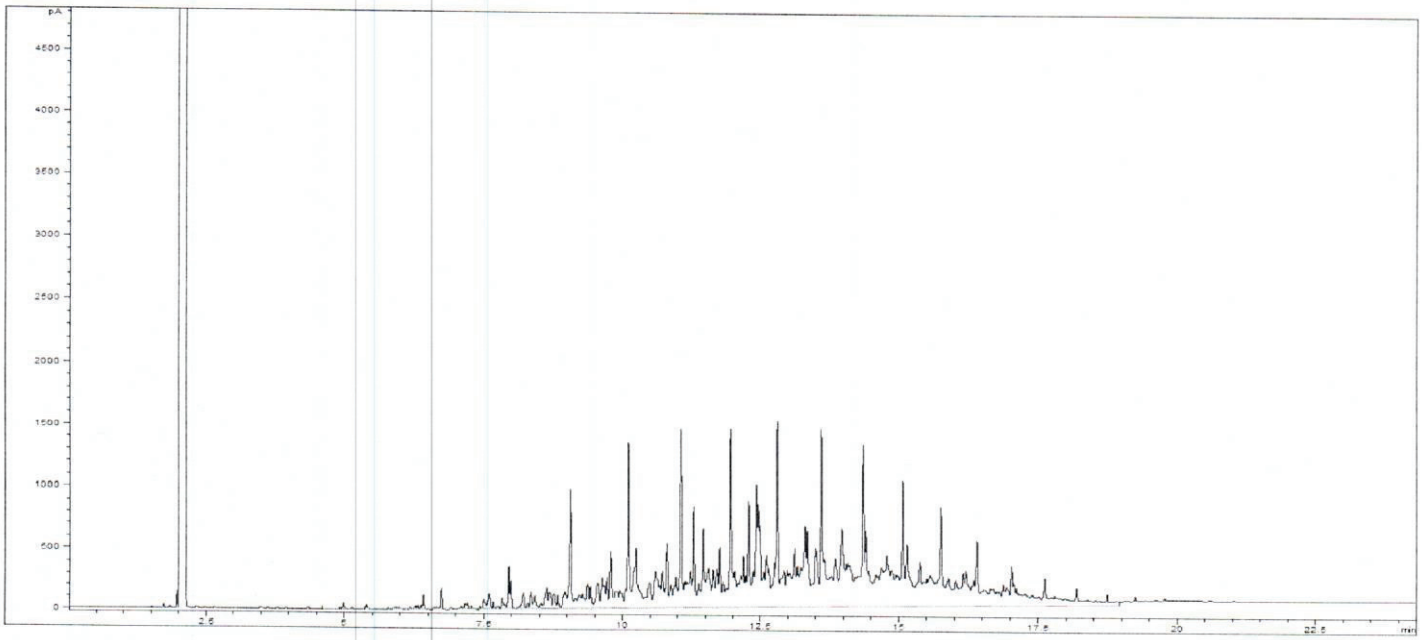
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

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

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.0 mL/min
Inlet Temperature: 250 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 10: 1
Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)
Detector: FID
Detector Temperature: 300 °C

ANAB ACCREDITED 5017/2014 REFERENCE MATERIAL PRODUCER

SIGMA-ALDRICH®
2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

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

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

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

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

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

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

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

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

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

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Energy Laboratories Inc

Standard LOG

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

Comments:

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

Final Volume: 1 mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Residual Range Calibration Standard (RCS)

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

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

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

CERTIFIED VALUES

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

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

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

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

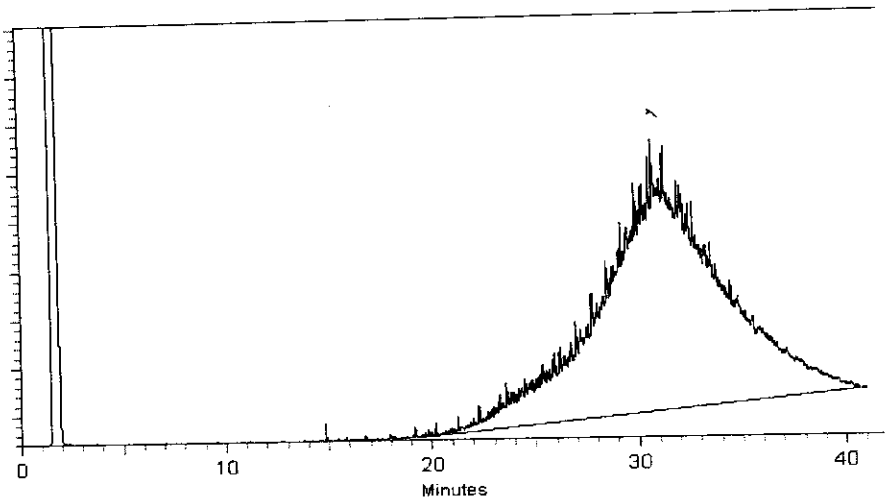
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Brandon Reish - Mix Technician

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

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 30-Jul-2018

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

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211006A		
Standard Name	Triacontane SURR 2000 ug/mL	Type:	Secondary
Date Prepared	10/6/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source		**Base Units**	**Amount Added**
DRO210406A	Triacontane-d62 Surr For AK103 RRO	ug/mL	0.1001 g

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			2000

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210406A		
Standard Name	Triacontane-d62 Surr For AK103 RRO	Type:	Neat
Date Prepared	4/6/2021	BY:	Ann Nebel
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:	Sigma-Aldrich		
Lot Number:	MBBC4347		
Balance ID:			
Comments:	Alaska surr [for AK103 RRO]		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**
A Triacontane-d62		1

Page: *1 of 1*

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

$CD_3(CD_2)_{28}CD_3$

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

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

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

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Version Number: 1

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		**Base Units**	**Amount Added**
DRO181105A	#2 Diesel (NEAT)	ug/mL	3.7507 g

Analytes		**CAS**	Conc:	**ug/mL**
A	#2 Diesel	68476-34-6		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

Final Volume: 250 mL

Stock Source	Base Units	Amount Added	
Analytes	**CAS**	Conc:	**ug/mL**
A #2 Diesel	68476-34-6		1

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210217A		
Standard Name	20,000 ug/mL Oil Std For AK103 RRO-In DC	Type:	Secondary
Date Prepared	2/17/2021	BY:	Ann Nebel
Date Expires:	8/23/2021		
Department	dropr	Status:	Expired
Vendor:			
Lot Number:			
Balance ID:	Sartorius 4 place balance		

Comments:

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EA342	13510	25	mL	11/17

Final Volume: 25 mL

Stock Source		Base Units	Amount Added
DRO160823C	30W Motor Oil-Valvoline	ug/mL	0.2501 g
DRO160823D	40W Motor Oil-Valvoline	ug/mL	0.2527 g

Analytes		CAS	Conc:	ug/mL
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	Type:	Primary
Date Prepared	8/23/2016	BY:	Todd C Cooper
Date Expires:	8/23/2021		
Department	dropr	Status:	Expired
Vendor:			
Lot Number:			
Balance ID:			

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**
Analytes	**CAS**	Conc: **ug/mL**
A 30W-Motor oil		1

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO160823D		
Standard Name	40W Motor Oil-Valvoline	Type:	Primary
Date Prepared	8/23/2016	BY:	Todd C Cooper
Date Expires:	8/23/2021		
Department	dropr	Status:	Expired
Vendor:			
Lot Number:			
Balance ID:			

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**
Analytes	**CAS**	Conc: **ug/mL**
A 40W-Motor oil		1

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210902A		
Standard Name	50,000 ug/mL Oil Std for RRO-In DCM	Type:	Secondary
Date Prepared	9/2/2021	BY:	Jillian L Bostwick
Date Expires:	9/1/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	.625 g of 30W and 40 W each LCS for Oil range		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EB867	14196	25	mL	6/18/

Final Volume: 25 mL

Stock Source		Base Units	Amount Added
DRO210901B	40W Motor Oil-Valvoline	ug/mL	0.6261 g
DRO210901A	30W Motor Oil-Valvoline	ug/mL	0.6254 g

Analytes		CAS	Conc: ug/mL
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	Type:	Primary
Date Prepared	9/1/2021	BY:	Jillian L Bostwick
Date Expires:	9/1/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:	F1620C1		
Balance ID:			

Comments: Used to make 2nd Source Standard for AK103 method.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**
A 30W-Motor oil		1

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210901B		
Standard Name	40W Motor Oil-Valvoline	Type:	Primary
Date Prepared	9/1/2021	BY:	Jillian L Bostwick
Date Expires:	9/1/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:	L0717H2		
Balance ID:			

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	9/1/2

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**
A 40W-Motor oil		1

Page: *1 of 1*

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		Base Units	Amount Added
DRO210401B	50,000 ug/mL Oil Std For AK103 RRO-I	ug/mL	400 µL
DRO211129A	Triacontane SURR 1000 ug/mL	ug/mL	800 µL

Analytes		CAS	Conc:	ug/mL
A	30/40W Motor Oil			5000
A	Triacontane-d62			200

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210401B		
Standard Name	50,000 ug/mL Oil Std For AK103 RRO-In DC	Type:	Primary
Date Prepared	4/1/2021	BY:	Ann Nebel
Date Expires:	1/31/2028		
Department	dropr	Status:	Open
Vendor:	Restek		
Lot Number:	A0166827		
Balance ID:	Sartorius 4 place balance		

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**
Analytes	**CAS**	Conc: **ug/mL**

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0166827

Description : Residual Range Calibration Standard (RCS)

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

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

Expiration Date : January 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil)	50,056.0 µg/mL	+/- 293.0889	µg/mL	Gravimetric
	CAS # 64742-65-0.F (Lot A0126386)		+/- 1,490.7309	µg/mL	Unstressed
	Purity ----%		+/- 1,589.8634	µg/mL	Stressed

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

ID #: 13714
Opened:
Residual Range Calibration Standard (RCS)
Expires: 1/31/2028
Rec'd: 4/1/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

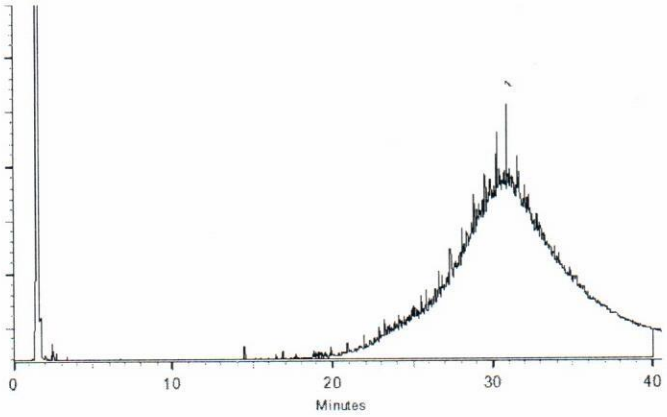
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Kylie Struble - Operations Technician I

Date Mixed: 02-Dec-2020 **Balance:** 1128353505

Justine Albertson - Operations Tech-ARM QC

Date Passed: 07-Dec-2020

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211129A		
Standard Name	Triacontane SURR 1000 ug/mL	Type:	Secondary
Date Prepared	11/29/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	2X dilution of Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC735	14518	5	mL	10/14

Final Volume: 10 mL

Stock Source		**Base Units**	**Amount Added**
DRO211006A	Triacontane SURR 2000 ug/mL	ug/mL	5 mL

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			1000

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211006A		
Standard Name	Triacontane SURR 2000 ug/mL	Type:	Secondary
Date Prepared	10/6/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source		**Base Units**	**Amount Added**
DRO210406A	Triacontane-d62 Surr For AK103 RRO	ug/mL	0.1001 g

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			2000

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210406A		
Standard Name	Triacontane-d62 Surr For AK103 RRO	Type:	Neat
Date Prepared	4/6/2021	BY:	Ann Nebel
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:	Sigma-Aldrich		
Lot Number:	MBBC4347		
Balance ID:			
Comments:	Alaska surr [for AK103 RRO]		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes **CAS** Conc: **ug/mL**

A Triacontane-d62

Page: *1 of 1*

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

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

$CD_3(CD_2)_{28}CD_3$

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

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

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

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

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		Base Units	Amount Added
DRO210401B	50,000 ug/mL Oil Std For AK103 RRO-I	ug/mL	400 µL
DRO211129A	Triacontane SURR 1000 ug/mL	ug/mL	800 µL

Analytes		CAS	Conc:	ug/mL
A	30/40W Motor Oil			5000
A	Triacontane-d62			200

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210401B		
Standard Name	50,000 ug/mL Oil Std For AK103 RRO-In DC	Type:	Primary
Date Prepared	4/1/2021	BY:	Ann Nebel
Date Expires:	1/31/2028		
Department	dropr	Status:	Open
Vendor:	Restek		
Lot Number:	A0166827		
Balance ID:	Sartorius 4 place balance		

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**
Analytes	**CAS**	Conc: **ug/mL**

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0166827

Description : Residual Range Calibration Standard (RCS)

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

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

Expiration Date : January 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil) 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)

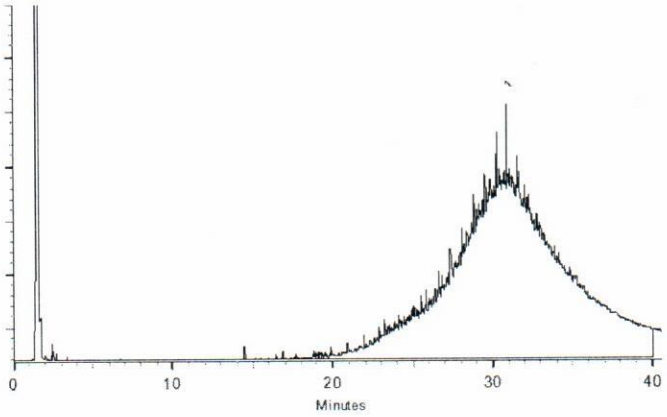
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 - Operations Technician I

Date Mixed: 02-Dec-2020 **Balance:** 1128353505

Justine Albertson - Operations Tech-ARM QC

Date Passed: 07-Dec-2020

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211129A		
Standard Name	Triacontane SURR 1000 ug/mL	Type:	Secondary
Date Prepared	11/29/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	2X dilution of Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC735	14518	5	mL	10/14

Final Volume: 10 mL

Stock Source		**Base Units**	**Amount Added**
DRO211006A	Triacontane SURR 2000 ug/mL	ug/mL	5 mL

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			1000

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211006A		
Standard Name	Triacontane SURR 2000 ug/mL	Type:	Secondary
Date Prepared	10/6/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source		**Base Units**	**Amount Added**
DRO210406A	Triacontane-d62 Surr For AK103 RRO	ug/mL	0.1001 g

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			2000

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210406A		
Standard Name	Triacontane-d62 Surr For AK103 RRO	Type:	Neat
Date Prepared	4/6/2021	BY:	Ann Nebel
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:	Sigma-Aldrich		
Lot Number:	MBBC4347		
Balance ID:			
Comments:	Alaska surr [for AK103 RRO]		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes **CAS** Conc: **ug/mL**

A Triacontane-d62

Page: *1 of 1*

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

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

$CD_3(CD_2)_{28}CD_3$

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

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

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

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO220106A		
Standard Name	5,000 ug/mL RRO CCV 200 ug/mL Triaconta	Type:	Secondary
Date Prepared	1/6/2022	BY:	Ann Nebel
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	Sartorius 4 place balance		
Comments:	CCV for AK102 and 8015C RRO.		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	2.8	mL	10/28

Final Volume: 4 mL

Stock Source		Base Units	Amount Added
DRO210401B	50,000 ug/mL Oil Std For AK103 RRO-I	ug/mL	400 µL
DRO220105A	Triacontane SURR 1000 ug/mL	ug/mL	800 µL

Analytes		CAS	Conc:	ug/mL
A	30/40W Motor Oil			5000
A	Triacontane-d62			200

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210401B		
Standard Name	50,000 ug/mL Oil Std For AK103 RRO-In DC	Type:	Primary
Date Prepared	4/1/2021	BY:	Ann Nebel
Date Expires:	1/31/2028		
Department	dropr	Status:	Open
Vendor:	Restek		
Lot Number:	A0166827		
Balance ID:	Sartorius 4 place balance		

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**
Analytes	**CAS**	Conc: **ug/mL**

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0166827

Description : Residual Range Calibration Standard (RCS)

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

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

Expiration Date : January 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil)	50,056.0 µg/mL	+/- 293.0889	µg/mL	Gravimetric
	CAS # 64742-65-0.F (Lot A0126386)		+/- 1,490.7309	µg/mL	Unstressed
	Purity ----%		+/- 1,589.8634	µg/mL	Stressed

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

ID #: 13714
Opened:
Residual Range Calibration Standard (RCS)
Expires: 1/31/2028
Rec'd: 4/1/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

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

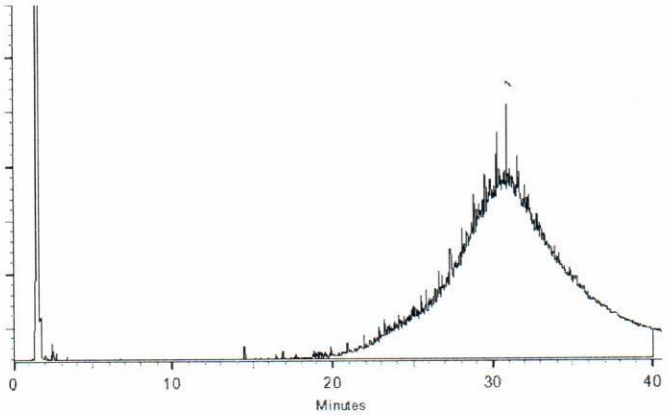
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Kylie Struble - Operations Technician I

Date Mixed: 02-Dec-2020 **Balance:** 1128353505

Justine Albertson - Operations Tech-ARM QC

Date Passed: 07-Dec-2020

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO220105A		
Standard Name	Triacontane SURR 1000 ug/mL	Type:	Secondary
Date Prepared	1/5/2022	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	2X dilution of Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	5	mL	10/28

Final Volume: 10 mL

Stock Source		**Base Units**	**Amount Added**
DRO211006A	Triacontane SURR 2000 ug/mL	ug/mL	5 mL

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			1000

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211006A		
Standard Name	Triacontane SURR 2000 ug/mL	Type:	Secondary
Date Prepared	10/6/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source		**Base Units**	**Amount Added**
DRO210406A	Triacontane-d62 Surr For AK103 RRO	ug/mL	0.1001 g

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			2000

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

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

$CD_3(CD_2)_{28}CD_3$

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

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211229A		
Standard Name	8015 CCV-15,000ug/mL + 200 OTP/COD	Type:	Secondary
Date Prepared	12/29/2021	BY:	Ann Nebel
Date Expires:	4/30/2023		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:			

Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP/COD #2 Diesel

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	2.4	mL	10/28

Final Volume: 4 mL

Stock Source		Base Units	Amount Added
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

	Analytes	CAS	Conc: ug/mL
A	#2 Diesel		15000
A	1-Chlorooctadecane	3386-33-2	200
	Diesel Fuel #2		0
A	O-Terphenyl	84-15-1	200

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211102B		
Standard Name	Diesel Fuel #2 50,000 ug/mL in DCM	Type:	Primary
Date Prepared	11/2/2021	BY:	Ann Nebel
Date Expires:	4/30/2023		
Department	dropr	Status:	New
Vendor:	Sigma-Aldrich		
Lot Number:	LRAC6316		
Balance ID:			
Comments:	Diesel Fuel #2 For CCVs.		

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**
Analytes	**CAS**	Conc: **ug/mL**
Diesel Fuel #2		0

Page: *1 of 1*

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

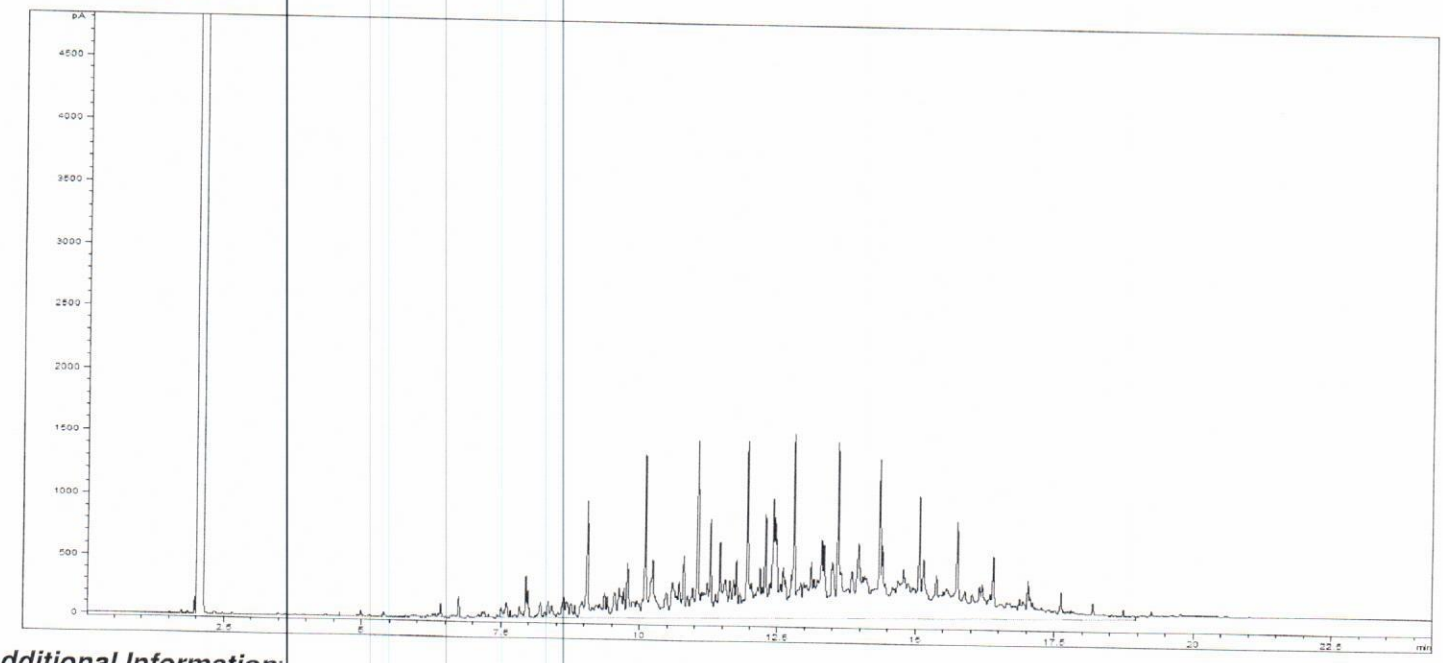
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14478
Opened:_____
Diesel Fuel No. 2
Expires: 4/30/2023
Rec'd: 11/2/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.0 mL/min
Inlet Temperature: 250 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 10: 1
Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)
Detector: FID
Detector Temperature: 300 °C

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

SIGMA-ALDRICH
2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@millliporesigma.com www.sigma-aldrich.com

Description

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

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

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

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

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

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

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

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

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

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

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211112C		
Standard Name	OTP/COD SURR 2000 ug/mL	Type:	Secondary
Date Prepared	11/12/2021	BY:	Jillian L Bostwick
Date Expires:	9/30/2024		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	OTP/COD SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	100	mL	7/22/

Final Volume: 100 mL

Stock Source		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

Analytes		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	Type:	Neat
Date Prepared	4/30/2020	BY:	Ann Nebel
Date Expires:	9/30/2024		
Department	dropr	Status:	New
Vendor:	Chemservice		
Lot Number:	9972100		
Balance ID:			
Comments:	ID#: 6271		

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

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes		**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

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

PJLA Reference Material Producer

PJLA Testing

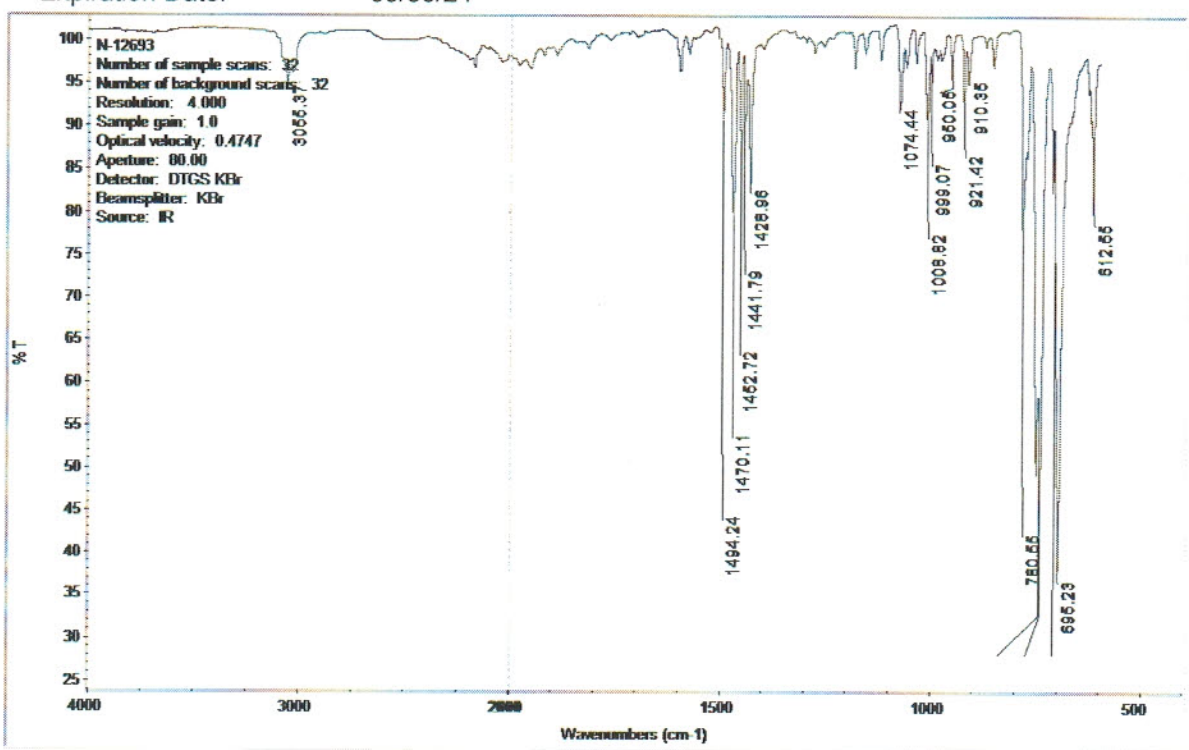
COA Form
Revision 3 (3/2015)

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



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

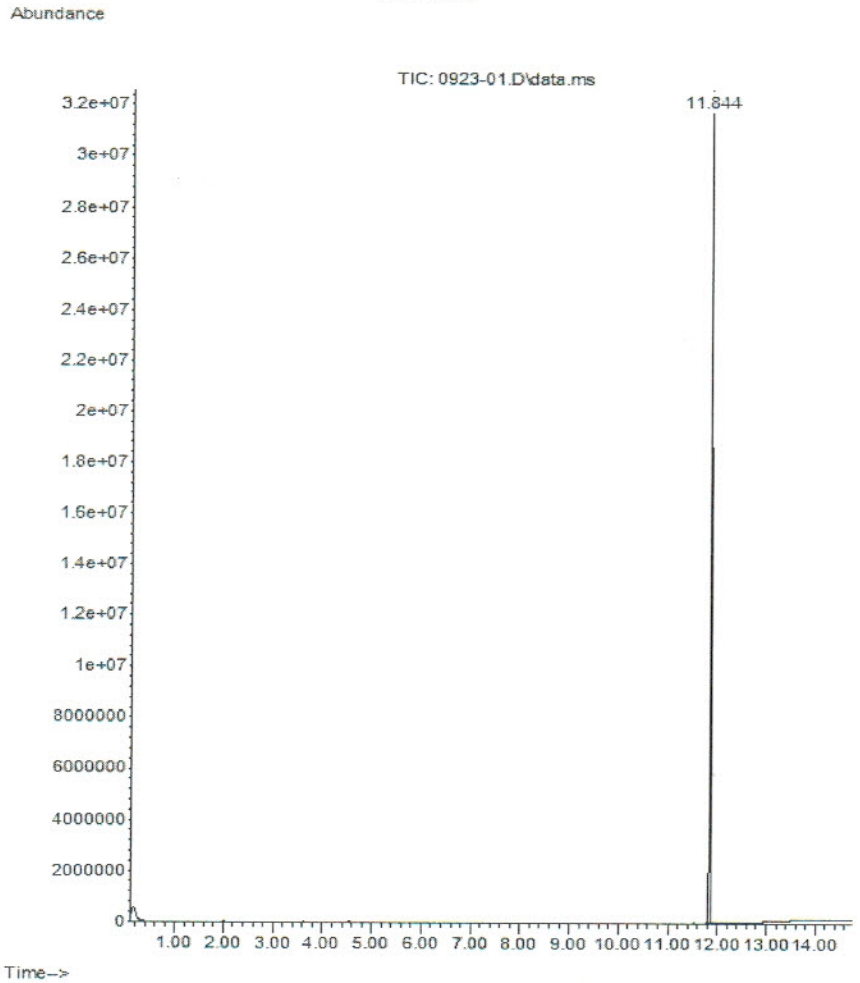
ERIN.M Mon Sep 23 10:55:51 2019

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

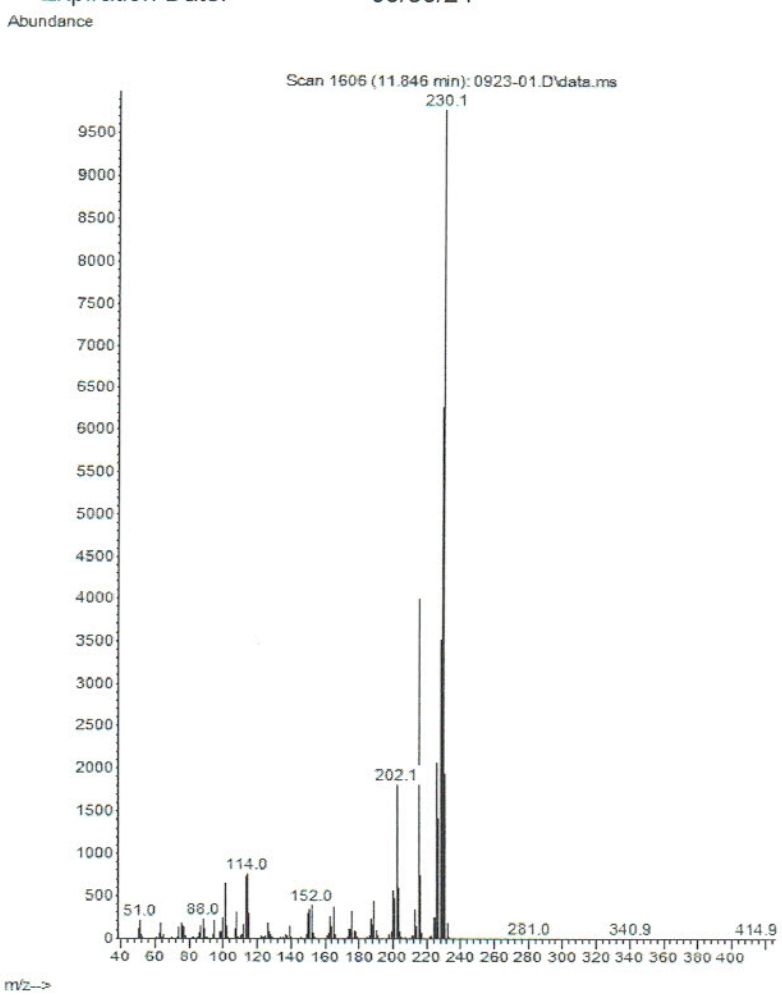


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

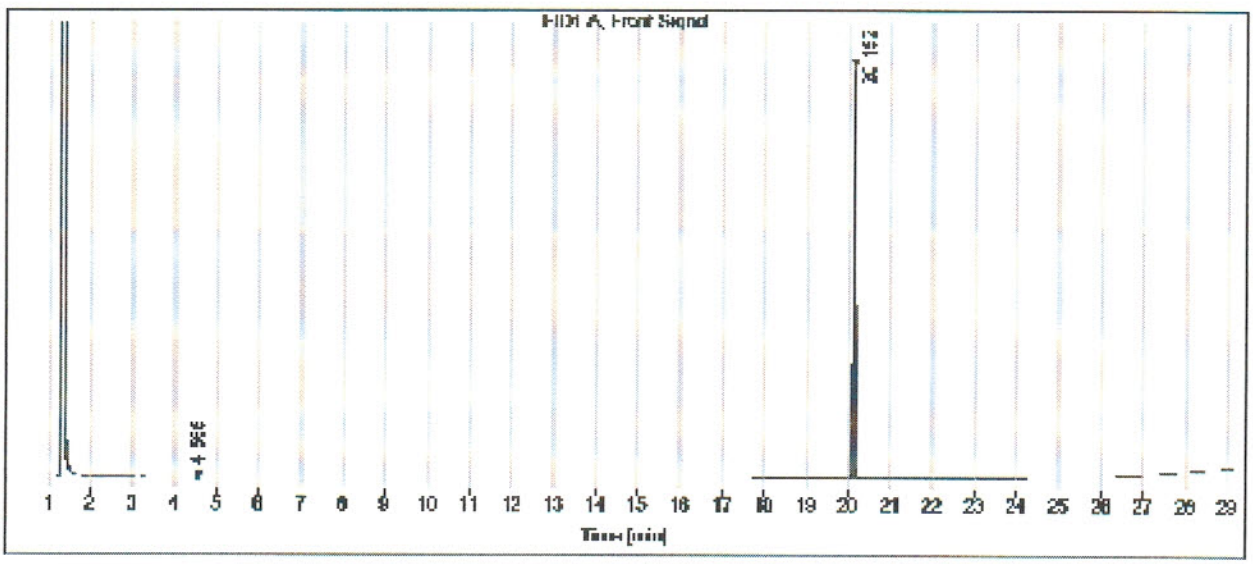
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

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

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	13191	500	mg	9/30/

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes		**CAS**	Conc:	**ug/mL**
A	O-Terphenyl	84-15-1		1

Am

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.

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.

ID #: 13191
Opened:
o-Terphenyl
Expires: 9/30/2024
Rec'd: 10/14/2020
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified By:

Mary Beth O'Donnell

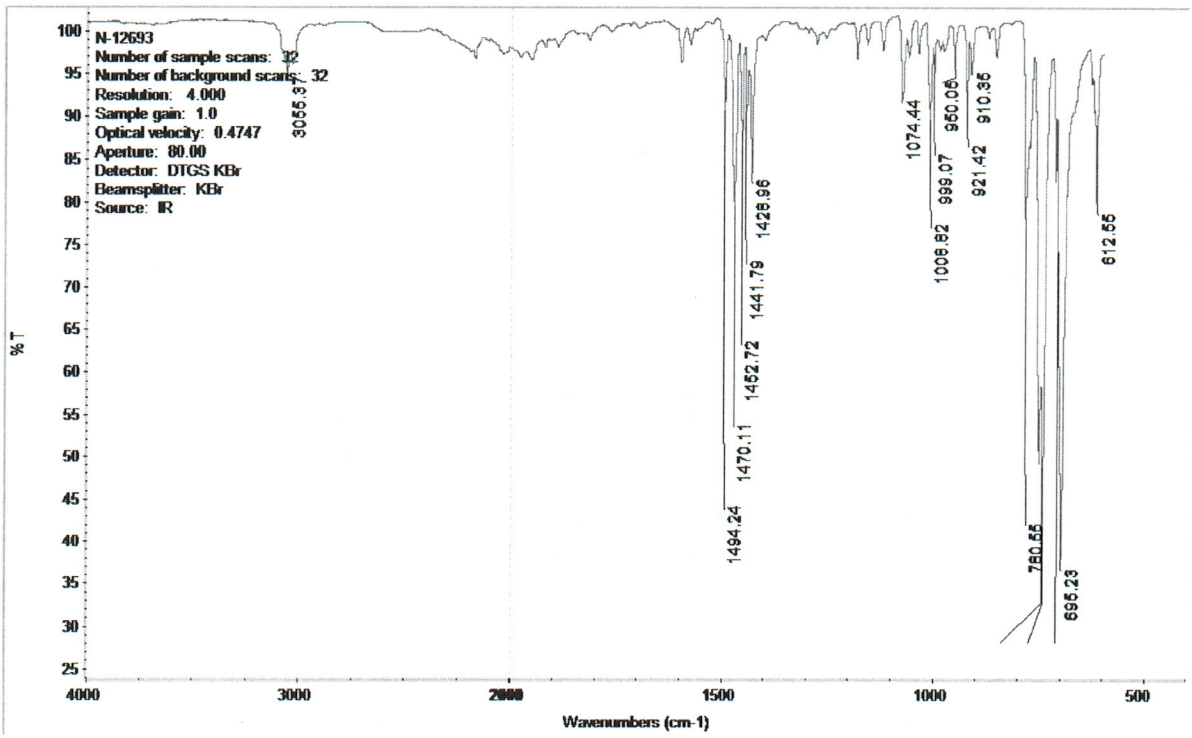
Mary Beth O'Donnell
CSM/TC

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



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 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

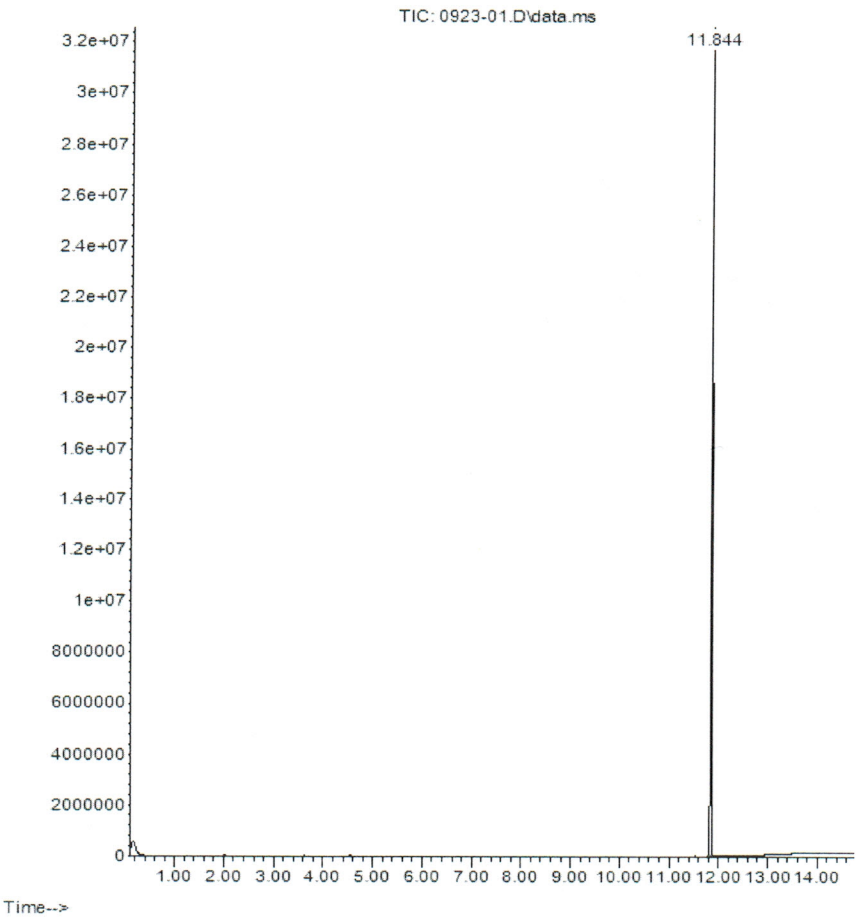
ERIN.M Mon Sep 23 10:55:51 2019

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

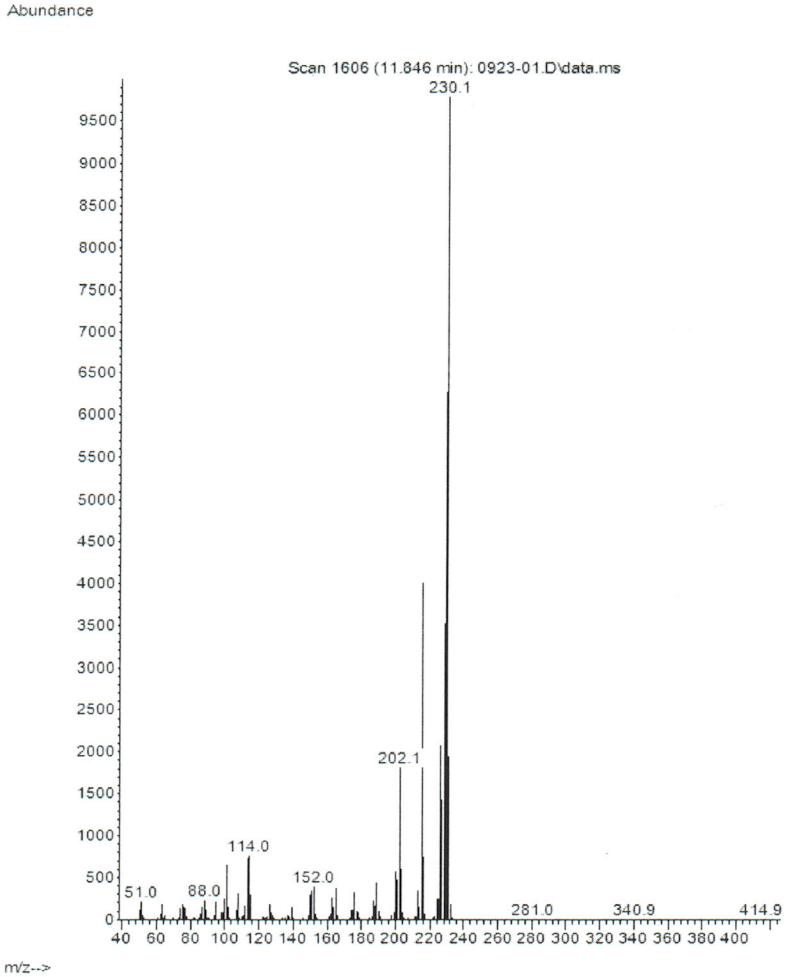


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

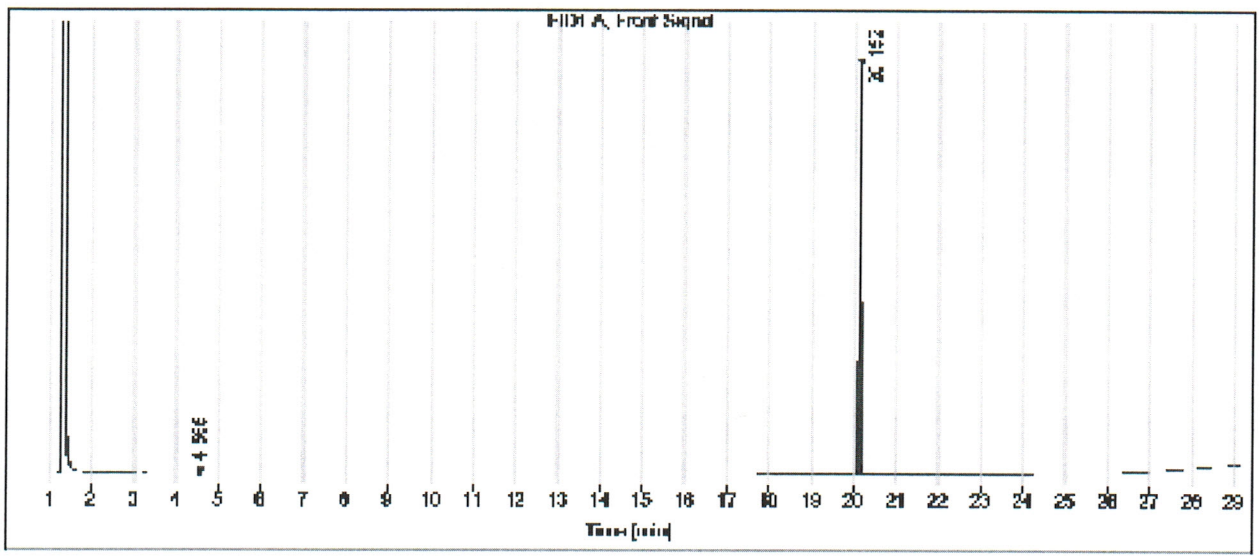
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	10029300
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM32		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO220105B		
Standard Name	8015 CCV-15,000ug/mL + 200 OTP	Type:	Secondary
Date Prepared	1/5/2022	BY:	Ann Nebel
Date Expires:	4/30/2023		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:			
Comments:	8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC832	14647	2.6	mL	10/28

Final Volume: 4 mL

Stock Source		Base Units	Amount Added
DRO211101A	OTP-4000 ug/mL DCM	ug/mL	0.2 mL
DRO211214C	Diesel Fuel #2 50,000 ug/mL in DCM	ug/mL	1.2 mL

	Analytes	CAS	Conc: ug/mL
A	#2 Diesel		15000
	Diesel Fuel #2		0
A	O-Terphenyl	84-15-1	200

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211214C		
Standard Name	Diesel Fuel #2 50,000 ug/mL in DCM	Type:	Primary
Date Prepared	12/14/2021	BY:	Ann Nebel
Date Expires:	4/30/2023		
Department	dropr	Status:	New
Vendor:	Sigma-Aldrich		
Lot Number:	LRAC6316		
Balance ID:			
Comments:	Diesel Fuel #2 For CCVs.		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Diesel Fuel No. 2	14623	1	mL	4/30/

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**
Diesel Fuel #2		0

Page: *1 of 1*

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

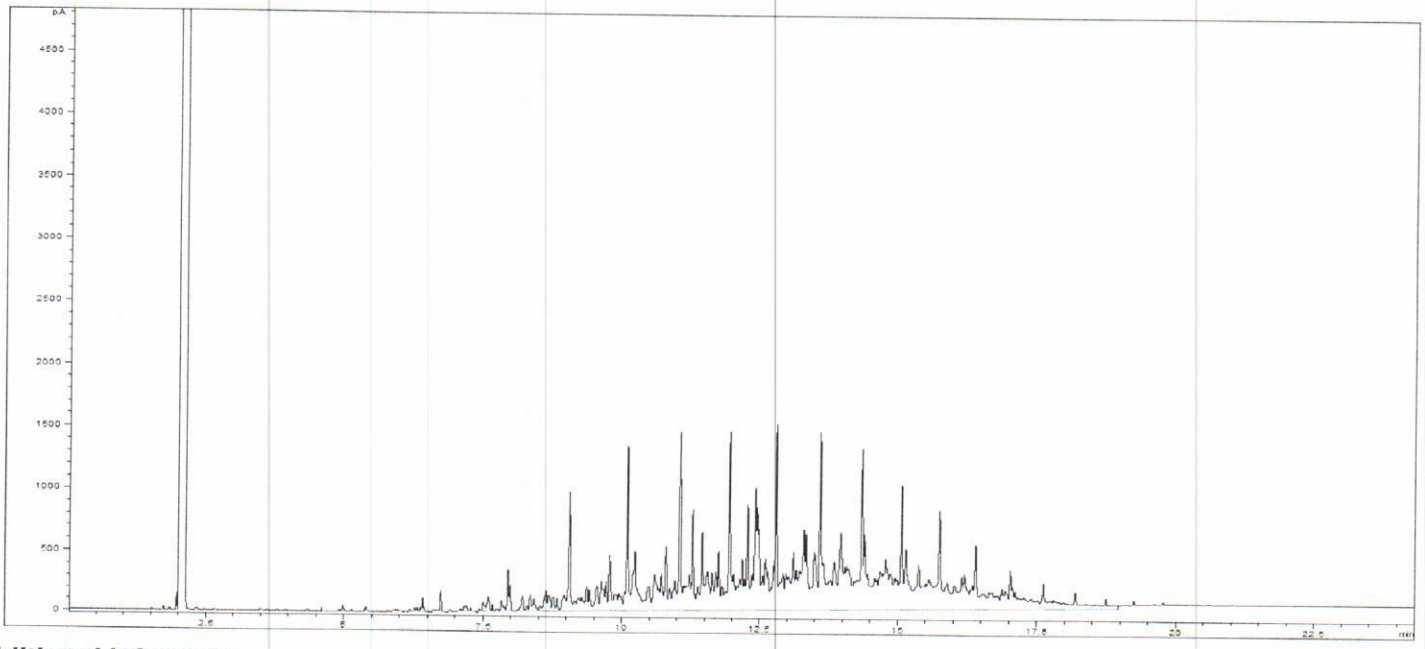
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14623
Opened:
Diesel Fuel No. 2
Expires: 4/30/2023
Rec'd: 12/14/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.0 mL/min
Inlet Temperature: 250 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 10: 1
Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)
Detector: FID
Detector Temperature: 300 °C

ANAB ACCREDITED 6013 REFERENCE MATERIAL PRODUCER

SIGMA-ALDRICH
2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

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

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

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

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

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

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

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

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

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

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Energy Laboratories Inc

Spike LOG

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

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

Final Volume: 25 mL

Stock Source		Base Units	Amount Added
DRO200430B	O-Terphenyl	ug/mL	0.1012 g

Analytes		CAS	Conc:	ug/mL
A	O-Terphenyl	84-15-1		4000

Energy Laboratories Inc

Standard LOG

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

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

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**
A O-Terphenyl	84-15-1	1

Page: *1 of 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

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

PJLA Reference Material Producer

PJLA Testing

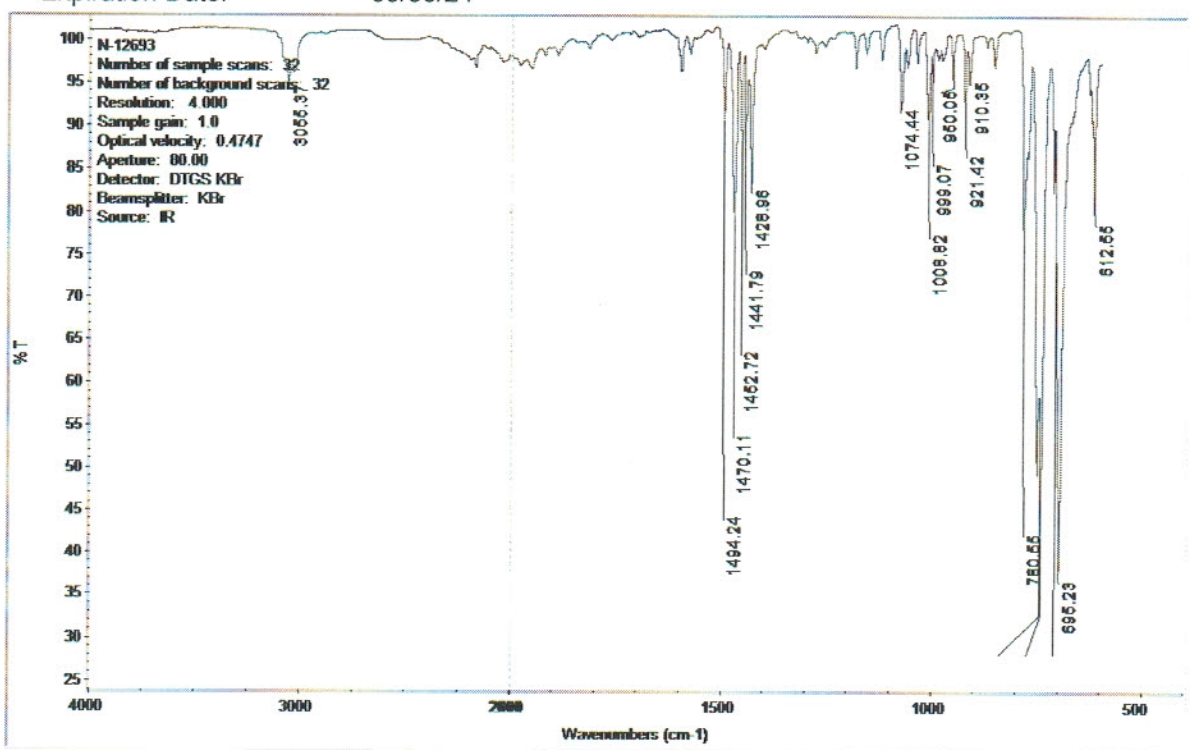
COA Form
Revision 3 (3/2015)

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



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

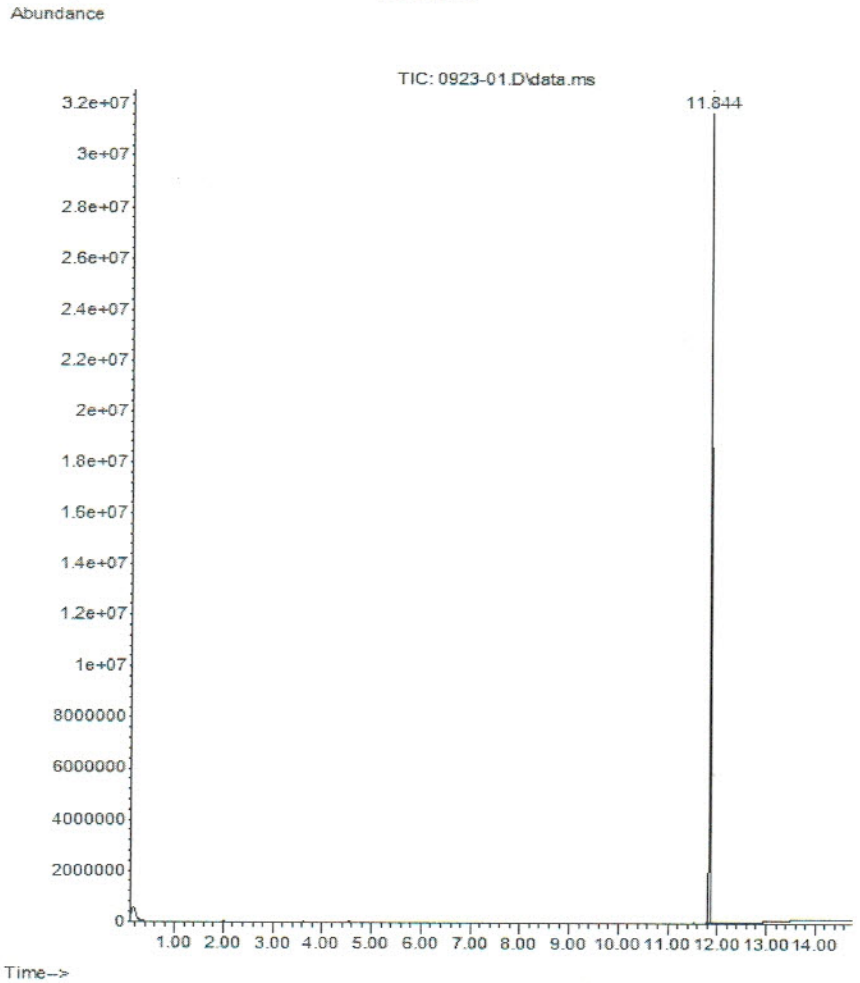
ERIN.M Mon Sep 23 10:55:51 2019

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

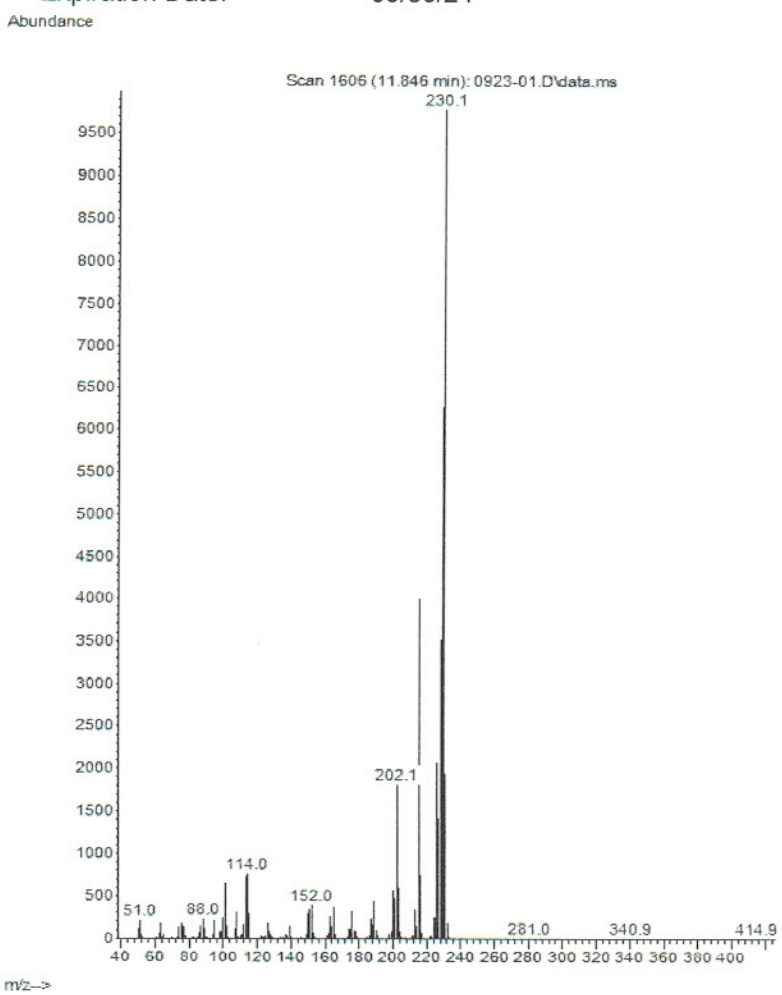


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

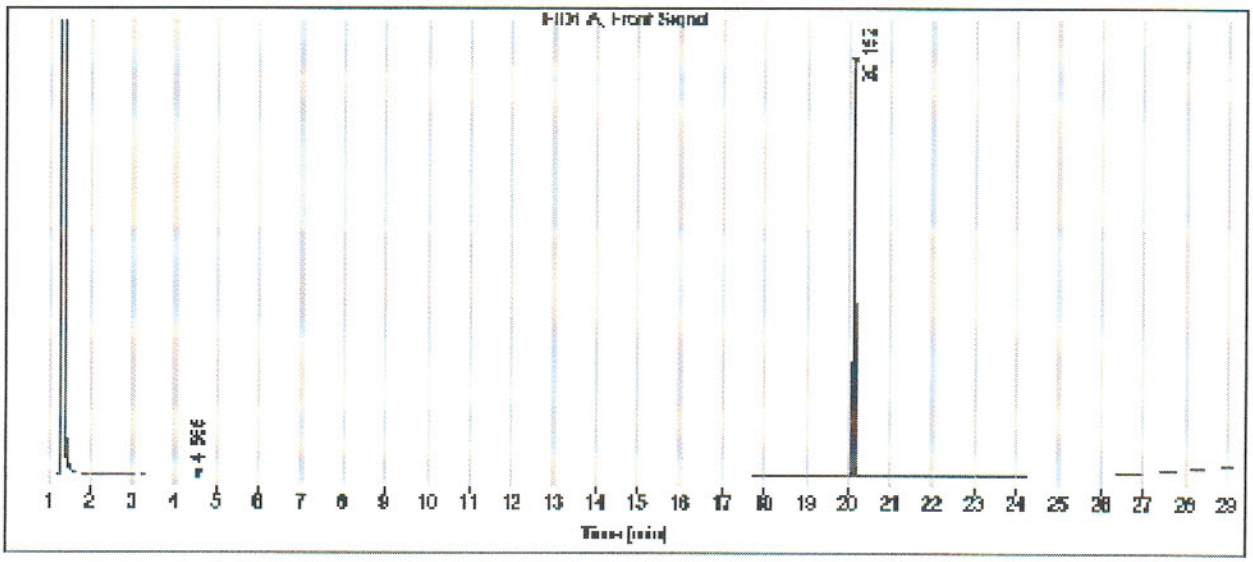
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211220A		
Standard Name	8015 CCV-15,000ug/mL + 200 OTP	Type:	Secondary
Date Prepared	12/20/2021	BY:	Ann Nebel
Date Expires:	4/30/2023		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:			
Comments:	8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC757	14596	2.6	mL	10/20

Final Volume: 4 mL

Stock Source		Base Units	Amount Added
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

Analytes		CAS	Conc: ug/mL
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	Type:	Primary
Date Prepared	11/2/2021	BY:	Ann Nebel
Date Expires:	4/30/2023		
Department	dropr	Status:	New
Vendor:	Sigma-Aldrich		
Lot Number:	LRAC6316		
Balance ID:			
Comments:	Diesel Fuel #2 For CCVs.		

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**
Analytes	**CAS**	Conc: **ug/mL**
Diesel Fuel #2		0

Page: *1 of 1*

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

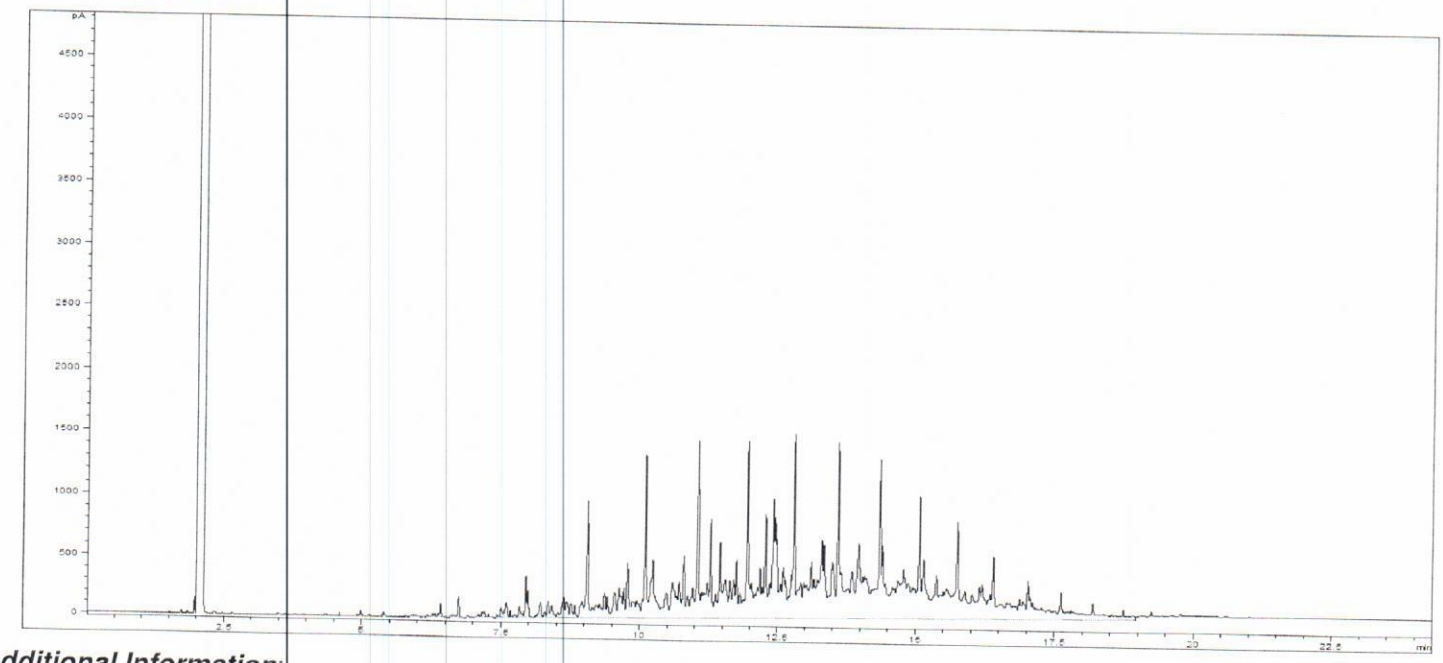
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14478
Opened:_____
Diesel Fuel No. 2
Expires: 4/30/2023
Rec'd: 11/2/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.0 mL/min
Inlet Temperature: 250 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 10: 1
Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)
Detector: FID
Detector Temperature: 300 °C

ANAB ACCREDITED
REFERENCE MATERIAL PRODUCER

SIGMA-ALDRICH
2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

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

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

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

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

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

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

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

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

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

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Energy Laboratories Inc

Spike LOG

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

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

Final Volume: 25 mL

Stock Source		Base Units	Amount Added
DRO200430B	O-Terphenyl	ug/mL	0.1012 g

Analytes		CAS	Conc:	ug/mL
A	O-Terphenyl	84-15-1		4000

Energy Laboratories Inc

Standard LOG

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

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

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes		**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

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

PJLA Reference Material Producer

PJLA Testing

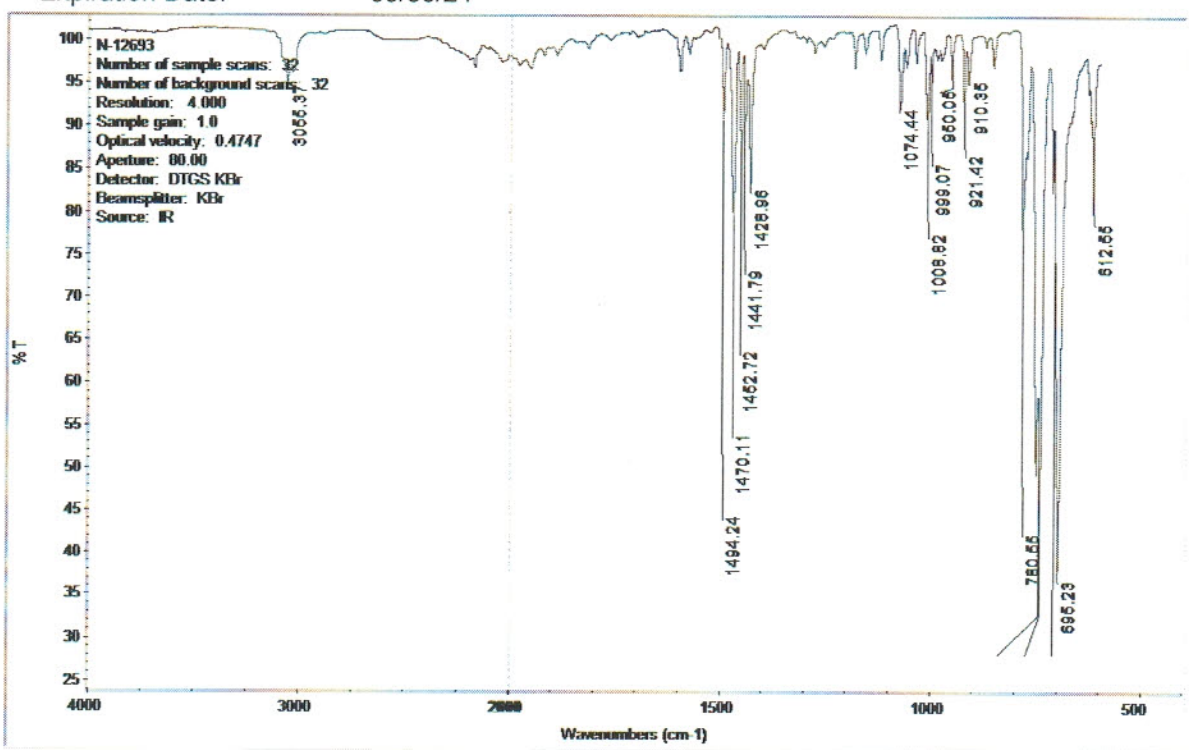
COA Form
Revision 3 (3/2015)

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



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

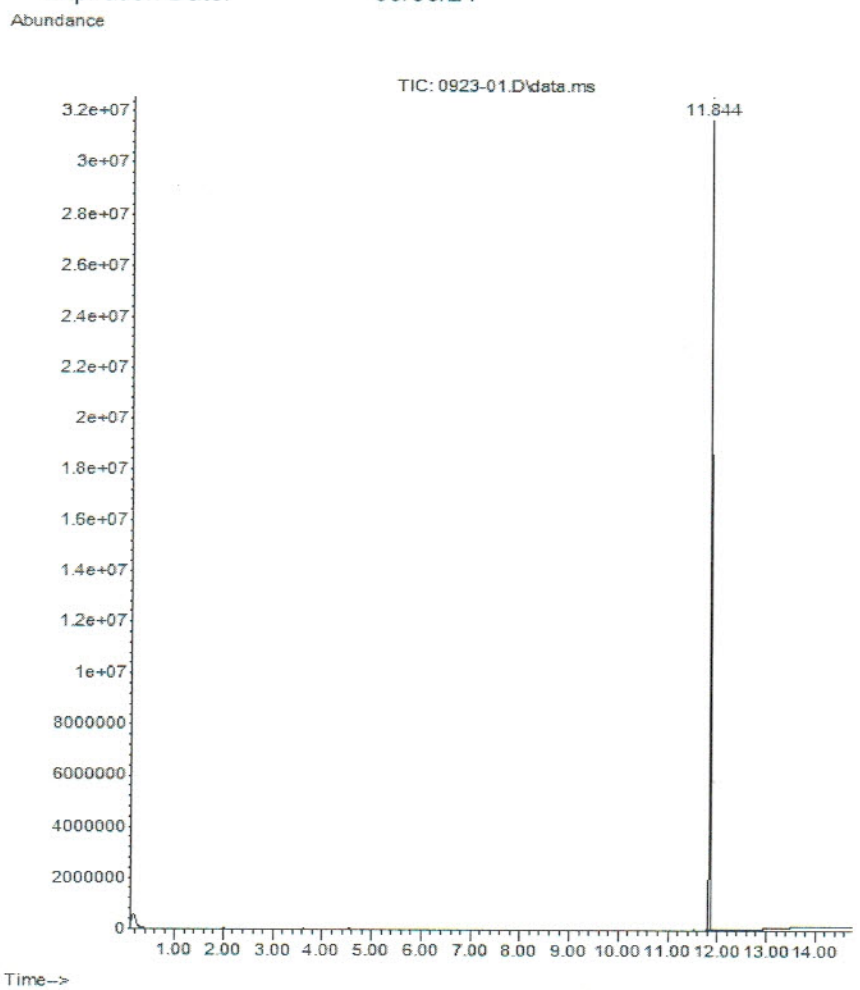
ERIN.M Mon Sep 23 10:55:51 2019

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

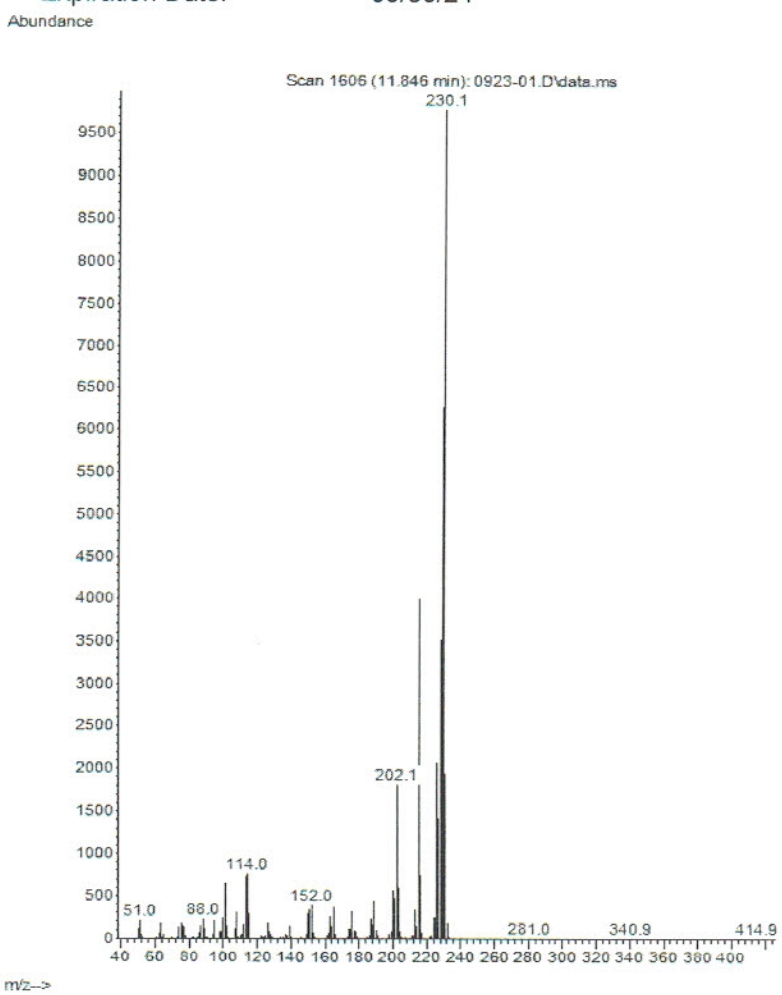


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

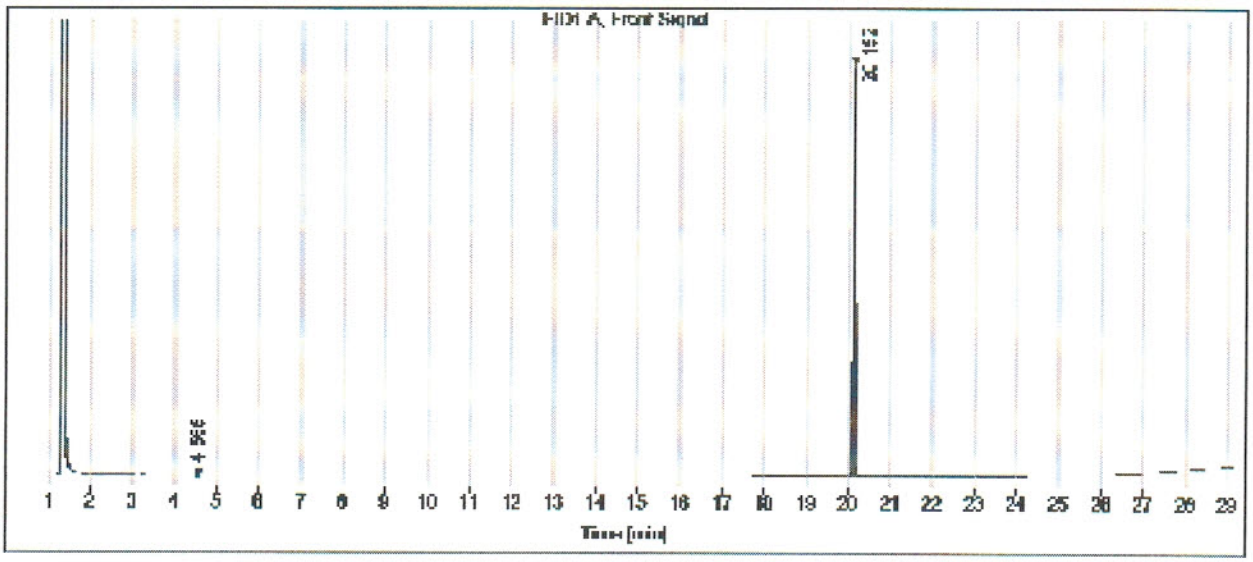
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211213A		
Standard Name	OTP only SURR 2000 ug/mL	Type:	Secondary
Date Prepared	12/13/2021	BY:	Jillian L Bostwick
Date Expires:	9/30/2024		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	OTP SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	100	mL	7/22/

Final Volume: 100 mL

Stock Source		**Base Units**	**Amount Added**
DRO200430B	O-Terphenyl	ug/mL	0.2015 g

Analytes		**CAS**	Conc:	**ug/mL**
A	1-Chlorooctadecane	3386-33-2		2000

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

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

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

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes		**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

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

PJLA Reference Material Producer

PJLA Testing

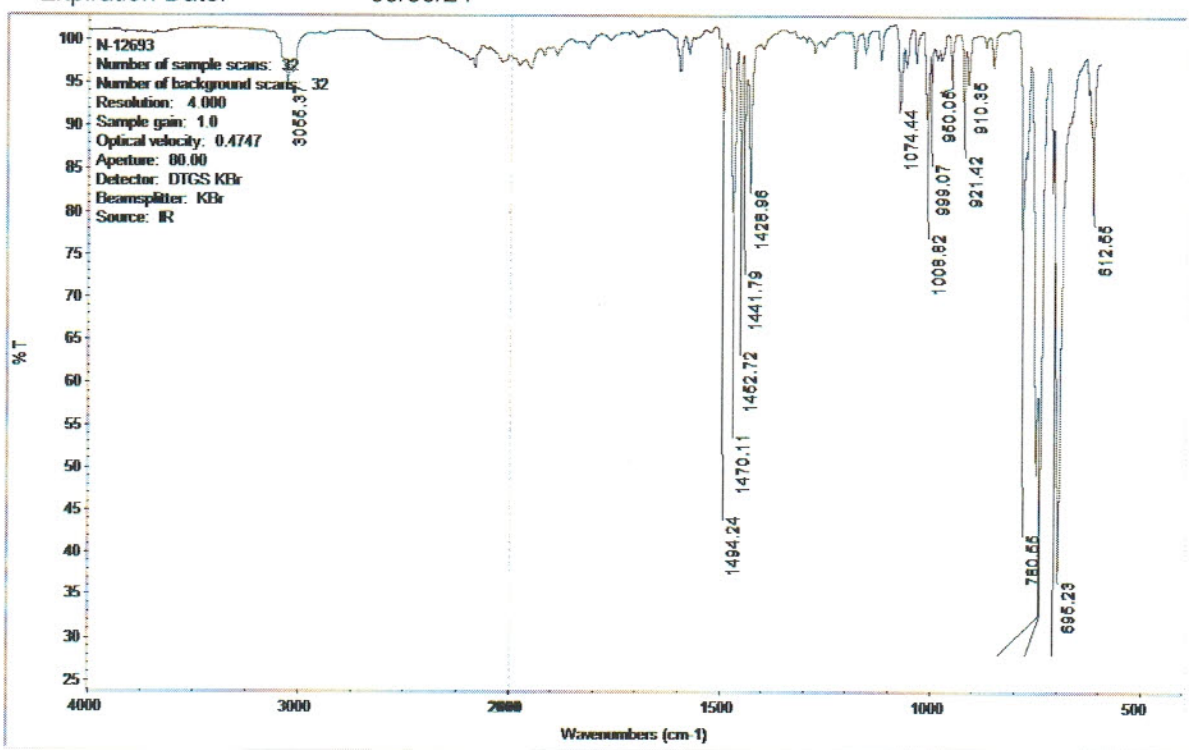
COA Form
Revision 3 (3/2015)

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



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

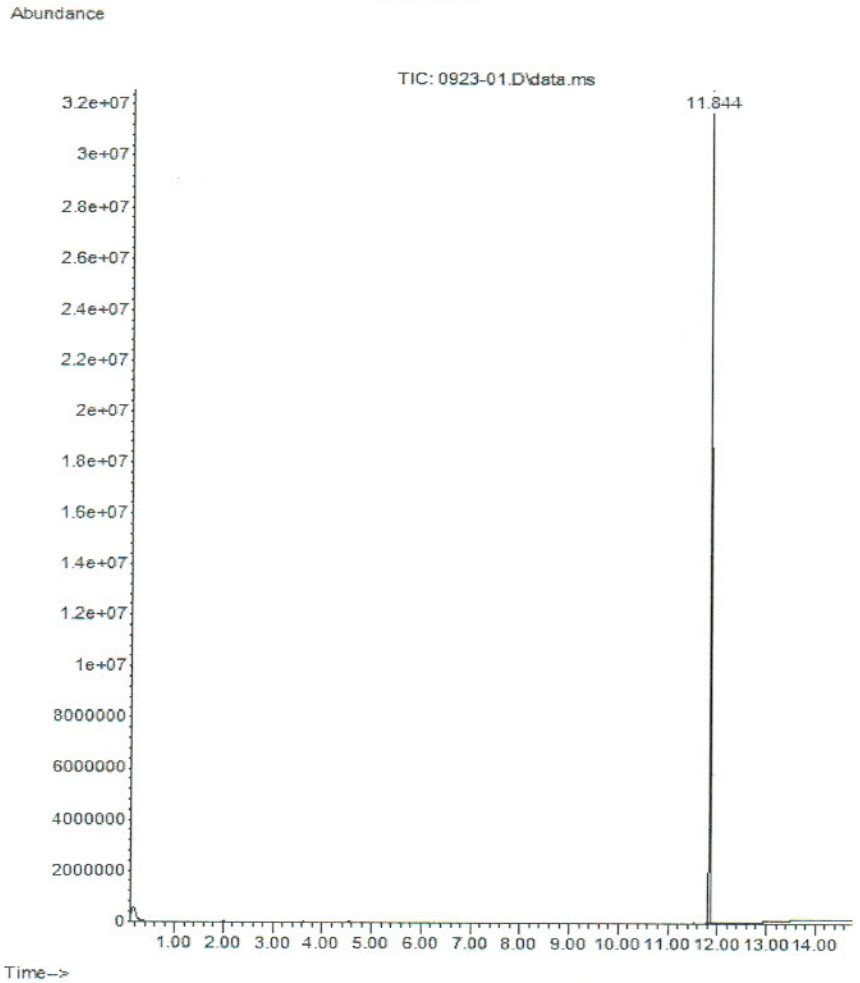
ERIN.M Mon Sep 23 10:55:51 2019

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

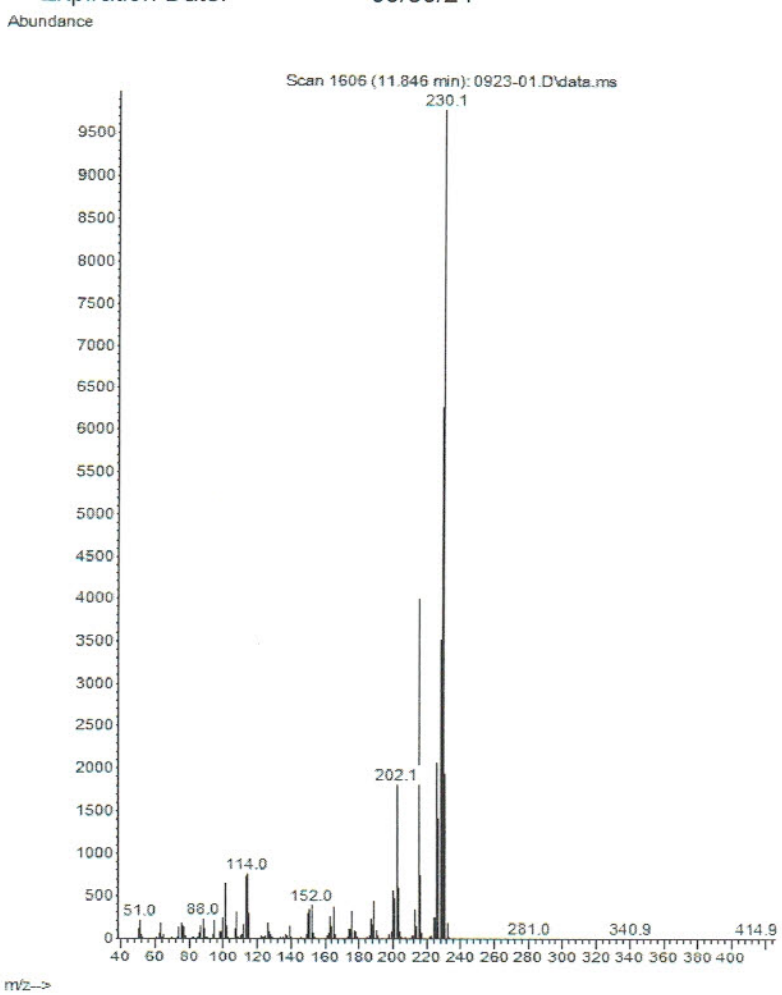


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

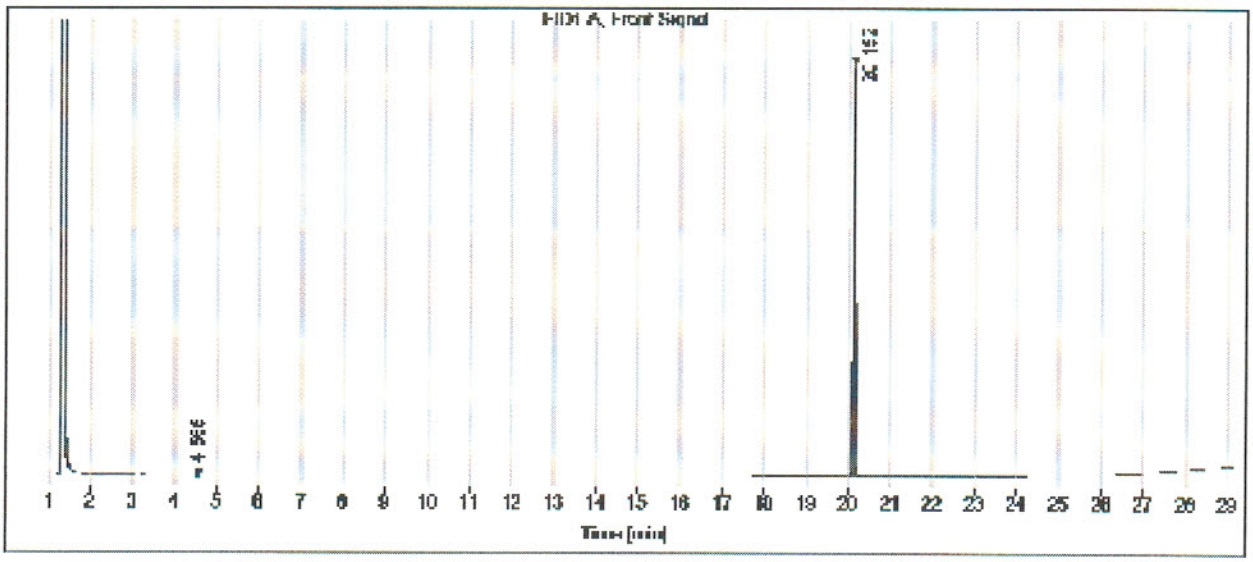
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211112C		
Standard Name	OTP/COD SURR 2000 ug/mL	Type:	Secondary
Date Prepared	11/12/2021	BY:	Jillian L Bostwick
Date Expires:	9/30/2024		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	OTP/COD SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	100	mL	7/22/

Final Volume: 100 mL

Stock Source		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

Analytes		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:	DRO201014B		
Standard Name	O-Terphenyl	Type:	Neat
Date Prepared	10/14/2020	BY:	Ann Nebel
Date Expires:	9/30/2024		
Department	dropr	Status:	New
Vendor:	Chemservice		
Lot Number:	10029300		
Balance ID:			
Comments:	ID#: 6271		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
o-Terphenyl	13191	500	mg	9/30/

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes		**CAS**	Conc:	**ug/mL**
A	O-Terphenyl	84-15-1		1

Am

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.

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.

ID #: 13191
Opened:
o-Terphenyl
Expires: 9/30/2024
Rec'd: 10/14/2020
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified By:

Mary Beth O'Donnell

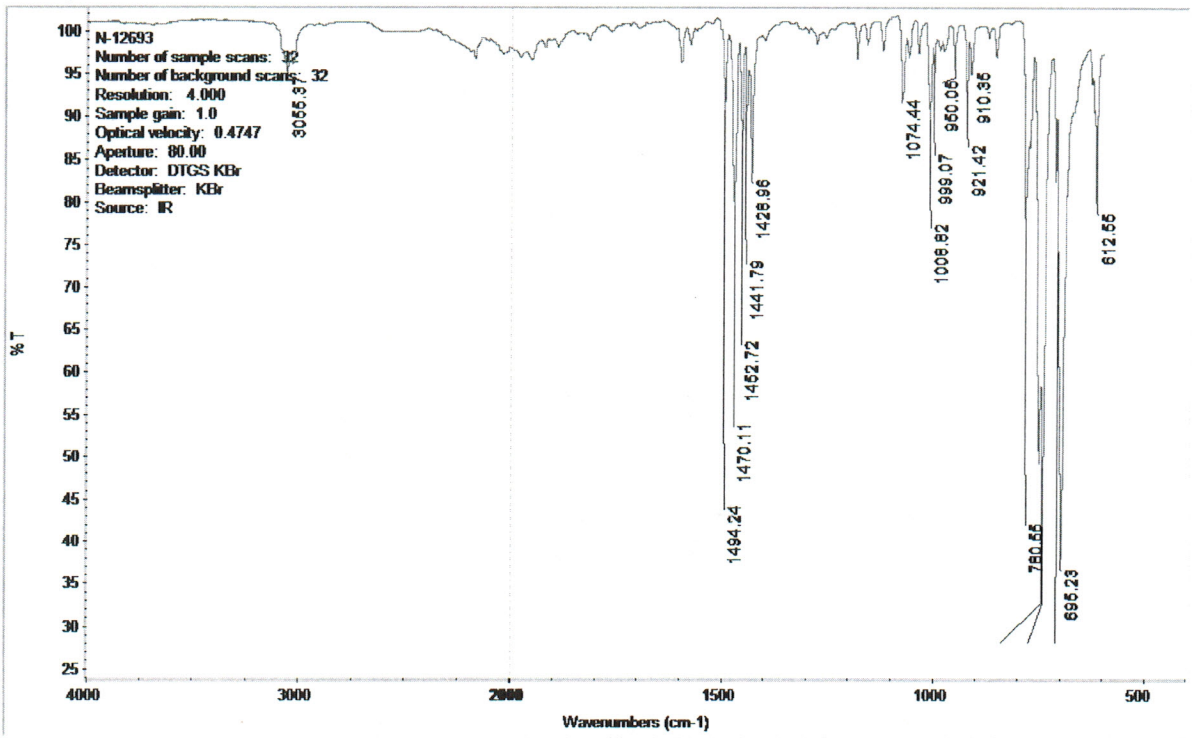
Mary Beth O'Donnell
CSM/TC

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



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 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

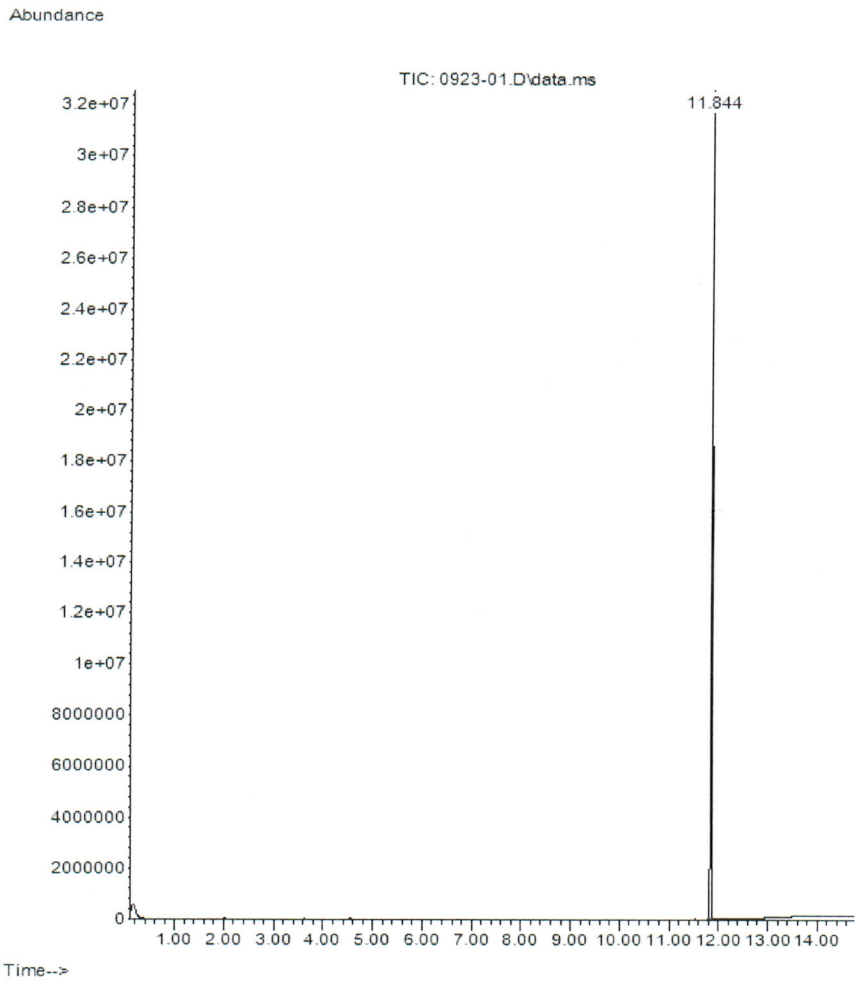
ERIN.M Mon Sep 23 10:55:51 2019

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

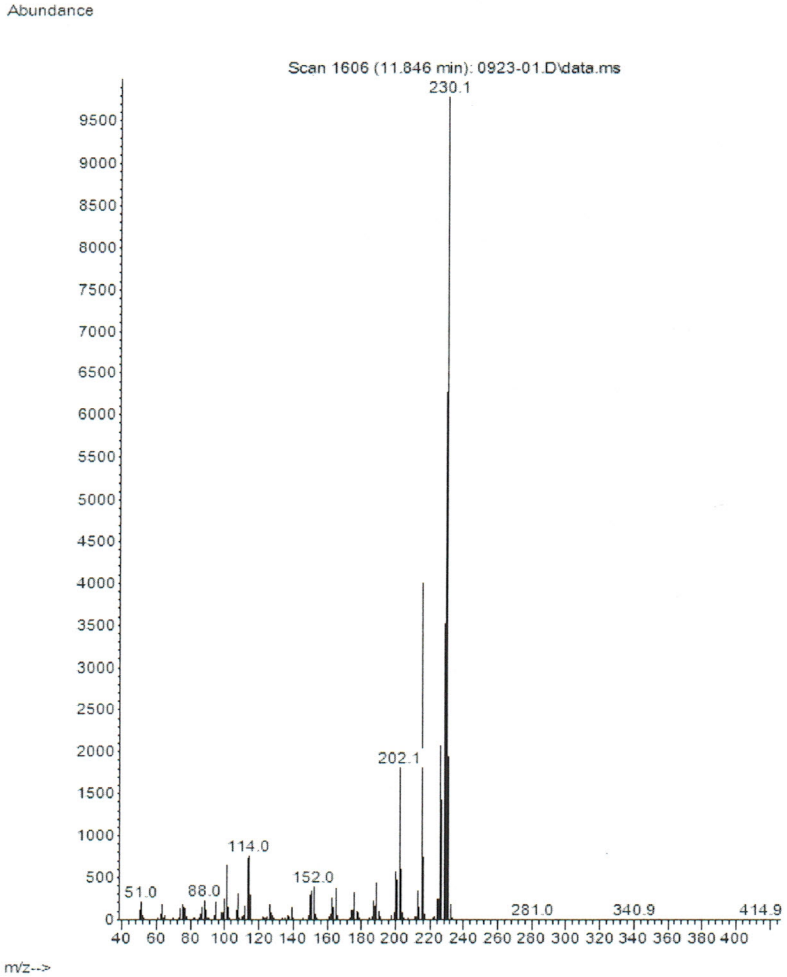


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

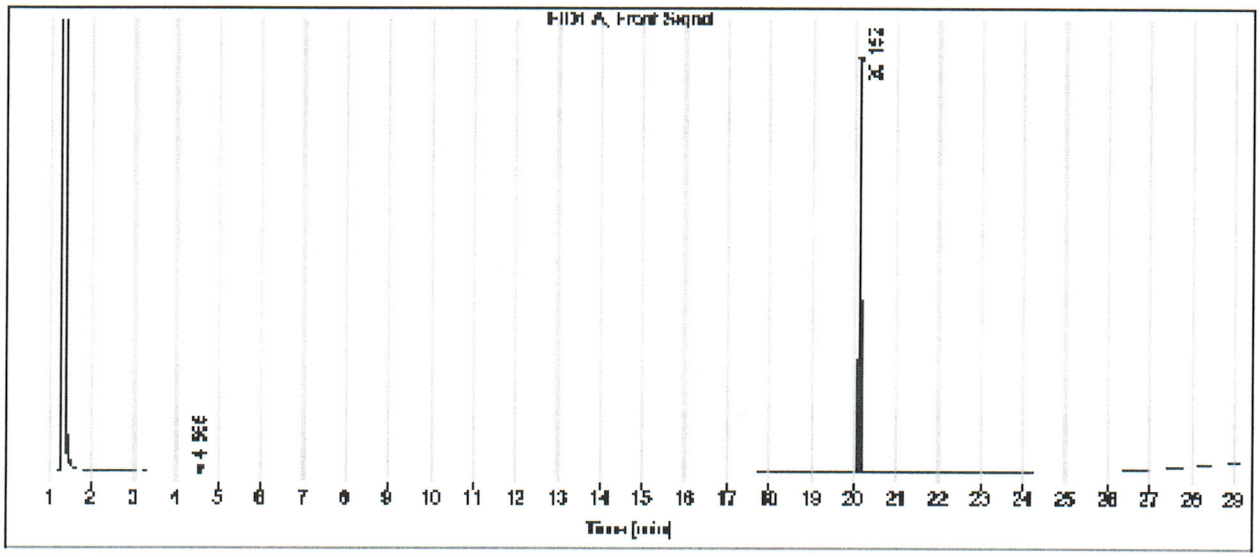
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	10029300
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM32		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

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

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

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**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

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

PJLA Reference Material Producer

PJLA Testing

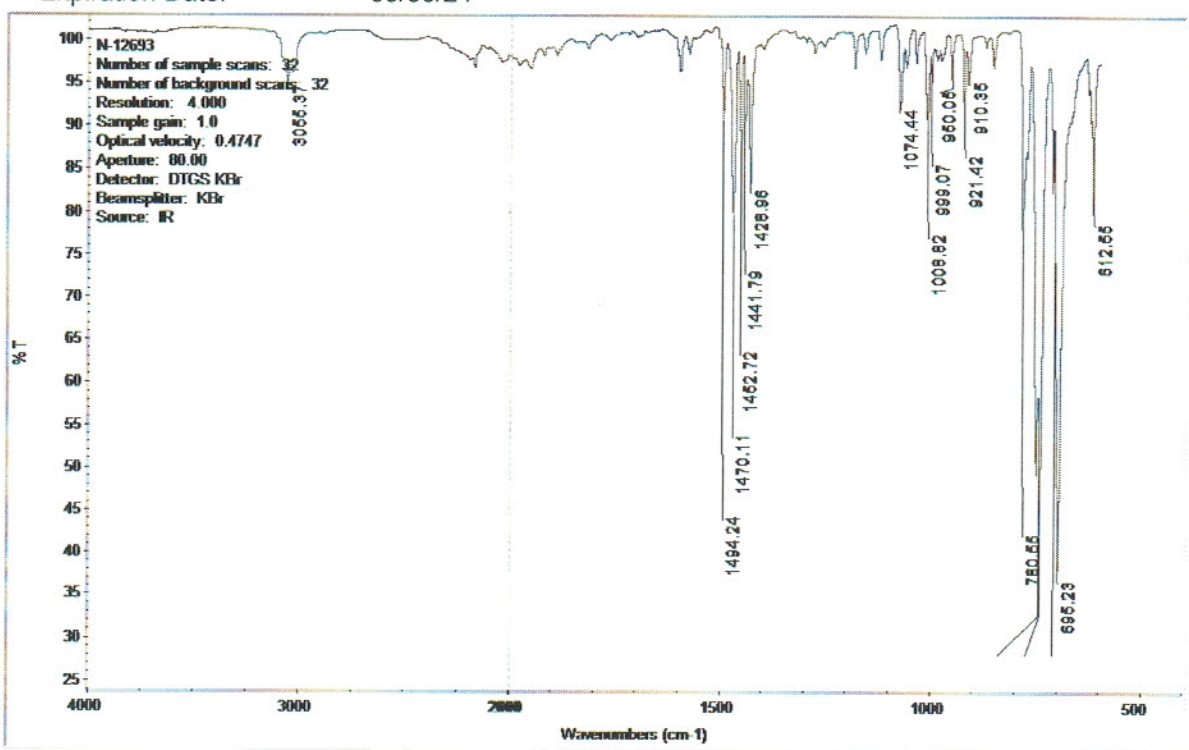
COA Form
Revision 3 (3/2015)

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



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

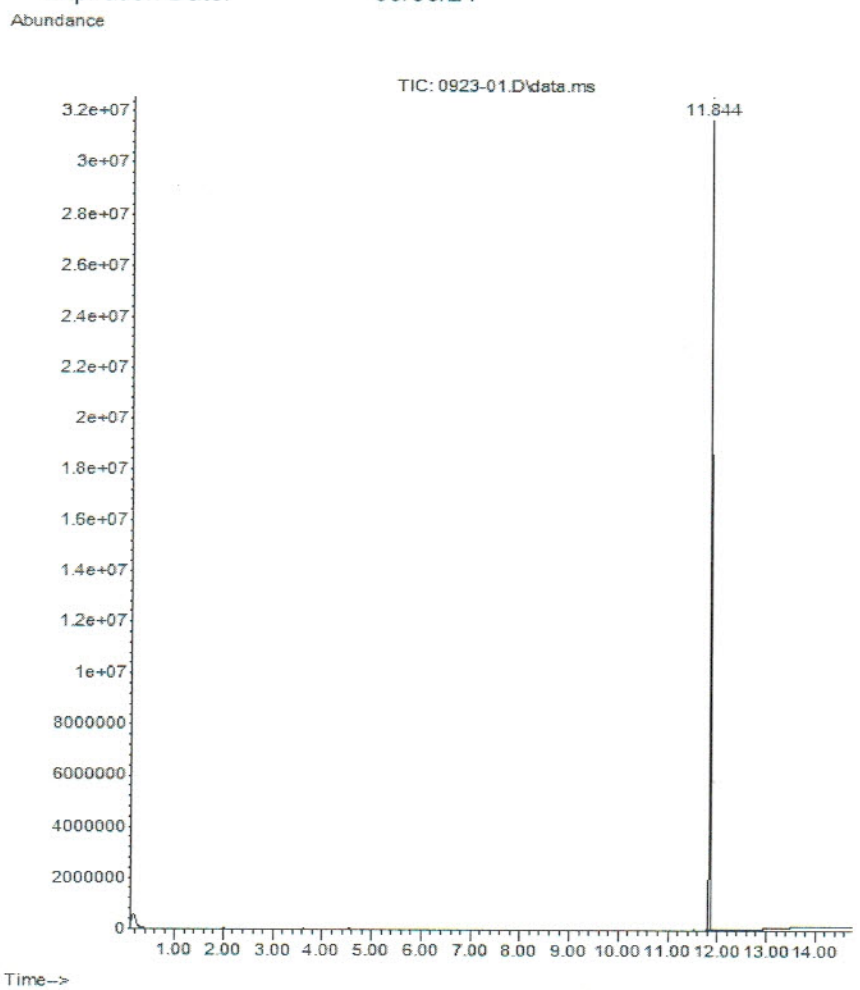
ERIN.M Mon Sep 23 10:55:51 2019

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

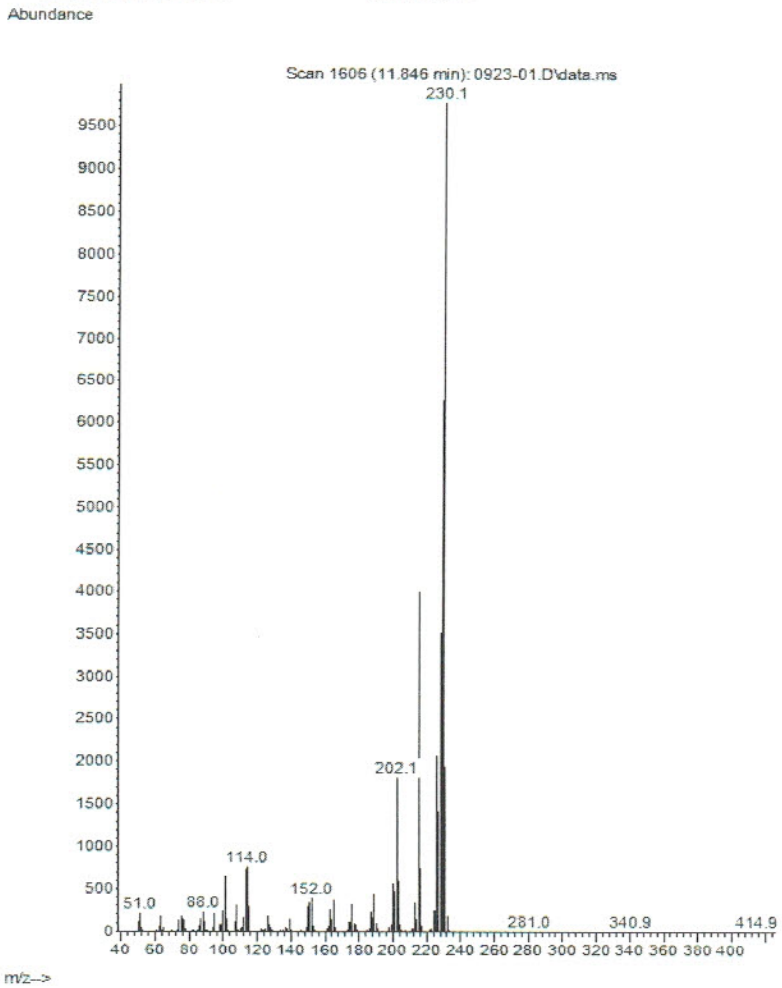


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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:

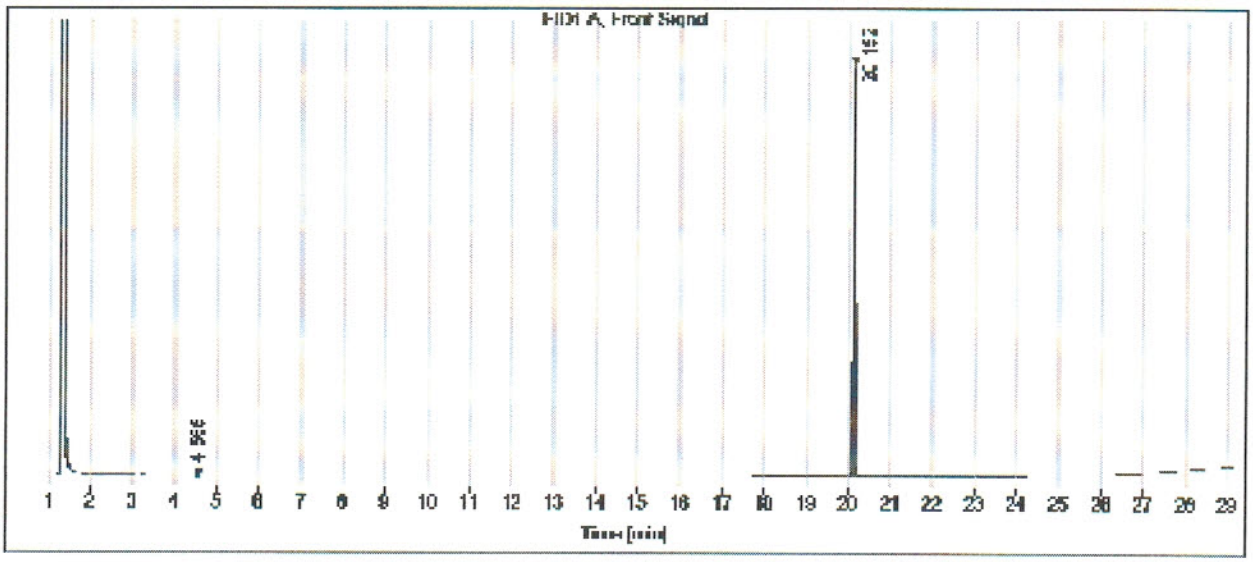
Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
Expiration Date:	09/30/24

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

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	**Sample type:**	Sample
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210902A		
Standard Name	50,000 ug/mL Oil Std for RRO-In DCM	Type:	Secondary
Date Prepared	9/2/2021	BY:	Jillian L Bostwick
Date Expires:	9/1/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	.625 g of 30W and 40 W each LCS for Oil range		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EB867	14196	25	mL	6/18/

Final Volume: 25 mL

Stock Source		Base Units	Amount Added
DRO210901B	40W Motor Oil-Valvoline	ug/mL	0.6261 g
DRO210901A	30W Motor Oil-Valvoline	ug/mL	0.6254 g

Analytes		CAS	Conc: ug/mL
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	Type:	Primary
Date Prepared	9/1/2021	BY:	Jillian L Bostwick
Date Expires:	9/1/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:			

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	9/1/2

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**
A 40W-Motor oil		1

Page: *1 of 1*

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210901A		
Standard Name	30W Motor Oil-Valvoline	Type:	Primary
Date Prepared	9/1/2021	BY:	Jillian L Bostwick
Date Expires:	9/1/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:			

Comments: Used to make 2nd Source Standard for AK103 method.

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2

Final Volume: mL

Stock Source	**Base Units**	**Amount Added**
Analytes	**CAS**	Conc: **ug/mL**
A 30W-Motor oil		1

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211220D		
Standard Name	Triacontane SURR 1000 ug/mL	Type:	Secondary
Date Prepared	12/20/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	2X dilution of Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Dichloromethane EC757	14596	5	mL	10/20

Final Volume: 10 mL

Stock Source		**Base Units**	**Amount Added**
DRO211006A	Triacontane SURR 2000 ug/mL	ug/mL	5 mL

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			1000

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO211006A		
Standard Name	Triacontane SURR 2000 ug/mL	Type:	Secondary
Date Prepared	10/6/2021	BY:	Jillian L Bostwick
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:			
Lot Number:			
Balance ID:	BAL-DRO		
Comments:	Triacontane SURR 2000 ug/mL		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Acetone DZ509	13553	50	mL	7/22/

Final Volume: 50 mL

Stock Source		**Base Units**	**Amount Added**
DRO210406A	Triacontane-d62 Surr For AK103 RRO	ug/mL	0.1001 g

Analytes		**CAS**	Conc:	**ug/mL**
A	Triacontane-d62			2000

Energy Laboratories Inc

Standard LOG

Standard ID:	DRO210406A		
Standard Name	Triacontane-d62 Surr For AK103 RRO	Type:	Neat
Date Prepared	4/6/2021	BY:	Ann Nebel
Date Expires:	4/6/2026		
Department	dropr	Status:	New
Vendor:	Sigma-Aldrich		
Lot Number:	MBBC4347		
Balance ID:			
Comments:	Alaska surr [for AK103 RRO]		

Chemical / Solvent Used	BottleNo	Amt	Units	Exp
Triacontane-d62-98 atom % D	13736		mL	4/6/2

Final Volume: mL

Stock Source **Base Units** **Amount Added**

Analytes **CAS** Conc: **ug/mL**

A Triacontane-d62

Page: *1 of 1*

SIGMA-ALDRICH®

sigma-aldrich.com

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

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

$CD_3(CD_2)_{28}CD_3$

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

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

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

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US