

Energy Laboratories Inc

ANALYTICAL RUN Summary

13-Jan-22

Run ID GCFID-HP5-B_220111A

Run Start Date:	1/11/2022
Analyst:	Ann Nebel
Ical:	
Column ID:	
Comments:	ICAL-SW8015C_DRO220111JA.CAL

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO211012B	#2 Diesel in Acetone 150,000 ug/mL					ICV	11/5/2023
DRO211101A	OTP-4000 ug/mL DCM					OTP-CAL	9/30/2024
DRO211214C	Diesel Fuel #2 50,000 ug/mL in DCM					CCV-CAL	4/30/2023
DRO220102D	ALASKA MARKER-200ug/mL					MARKER	5/31/2022

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist						
14976981	CCV_0111HP50	HC-8015-DRO-	CCV		1/11/2022 8:59:2	1	R373149		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		3.205893		15	0	0	0.0749	0.3	50	21%	80	120	0%	S
o-Terphenyl		S	mg/L		0.1968894		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						
14976982	CCV_0111HP50	HC-8015-DRO-	CAL1		1/11/2022 10:25:	1	R373149		0	0							
Analyte		T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl		S	mg/L		0.00201677		0.002	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						
14976983	CCV_0111HP50	HC-8015-DRO-	CAL2		1/11/2022 11:08:	1	R373149		0	0							
Analyte		T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl		S	mg/L		0.0489019		0.05	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					
14976984	CCV_0111HP50	HC-8015-DRO-	CAL3		1/11/2022 11:51:	1	R373149		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.2047389		0.2	0	0	0.000429	0.002	0	102%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14976985	CCV_0111HP50	HC-8015-DRO-	CAL4		1/11/2022 12:34:	1	R373149		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.4884362		0.5	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					
14976986	CCV_0111HP50	HC-8015-DRO-	CAL5		1/11/2022 1:17:0	1	R373149		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		1.013008		1	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					
14976987	CCV_0111HP50	HC-8015-DRO-	CAL1		1/11/2022 1:59:5	1	R373149		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		0.1635249		0.15	0	0	0.0749	0.3	50	109%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14976989	CCV_0111HP51	HC-8015-DRO-	CAL2		1/11/2022 2:42:3	1	R373149		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		3.698293		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					
14976990	CCV_0111HP51	HC-8015-DRO-	CAL3		1/11/2022 3:25:2	1	R373149		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		14.75864		15	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					
14976991	CCV_0111HP51	HC-8015-DRO-	CAL4		1/11/2022 4:08:0	1	R373149		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		36.29137		37.5	0	0	0.0749	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					
14976992	CCV_0111HP51	HC-8015-DRO-	CAL5		1/11/2022 4:51:0	1	R373149		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		48.59718		50	0	0	0.0749	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					
14976993	CCV_0111HP51	HC-8015-DRO-	ICV		1/11/2022 5:34:2	1	R373149		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		14.05379		15	0	0	0.0749	0.3	50	94%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
	G:\org\HP5\DAT\HP5011122_b\0111HP5.01r	DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.02r	CCV_0111HP502r, DRO ;0111HP5 , DRO220102D	G:\Org\HP5\Methods\DC_8015-JA-L%.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.03r	DCM-Baseline Check-V03	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.04r	CCV_0111HP504r, CAL1 ;0111HP5 , 2 ug per mL OTP (10 uL of Cal3 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DS_8015-JA-L#.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.05r	CCV_0111HP505r, CAL2 ;0111HP5 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5\Methods\DS_8015-JA-L#.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.06r	CCV_0111HP506r, CAL3 ;0111HP5 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14647)	G:\Org\HP5\Methods\DS_8015-JA-L#.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.07r	CCV_0111HP507r, CAL4 ;0111HP5 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14647)	G:\Org\HP5\Methods\DS_8015-JA-L#.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.08r	CCV_0111HP508r, CAL5 ;0111HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211101A + 750 DCM(14647)	G:\Org\HP5\Methods\DS_8015-JA-L#.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.09r	CCV_0111HP509r, CAL1 ;0111HP5 , 150 ug per mL Diesel (20 uL of Cal3 + 980 uL DCM(14647), then 100 uL of that + 100 uL of DCM (14647)	G:\Org\HP5\Methods\DC_8015-JA-L%.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.10r	CCV_0111HP510r, CAL2 ;0111HP5 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5\Methods\DC_8015-JA-L%.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.11r	CCV_0111HP511r, CAL3 ;0111HP5 , 15000 ug per mL Diesel (300 uL of DRO211214C + 700 uL DCM(14647)	G:\Org\HP5\Methods\DC_8015-JA-L%.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.12r	CCV_0111HP512r, CAL4 ;0111HP5 , 37500ug per mL Diesel (750 uL of DRO211214C + 250 uL DCM(14647)	G:\Org\HP5\Methods\DC_8015-JA-L%.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.13r	CCV_0111HP513r, CAL5 ;0111HP5 , 50000 ug per mL Diesel (200 uL of DRO211214C)	G:\Org\HP5\Methods\DC_8015-JA-L%.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122_b\0111HP5.14r	CCV_0111HP514r, Second Source ;0111HP5 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14647)	G:\Org\HP5\Methods\DC_8015-JA-L%.met	1	1	1	1	0

File Name: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL

Version: 12

Creator: AMN 01/13/2022

Description: 8015C-DRO. New ICal Per 0111HP5 (2022)-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

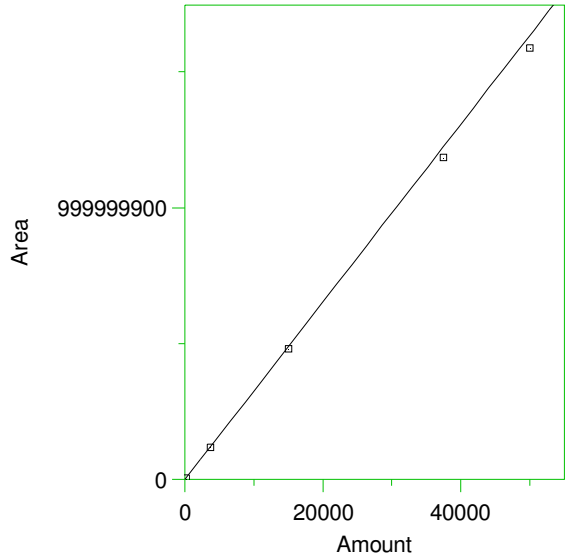
No default component

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

No calibration update report

All levels are normal data points.

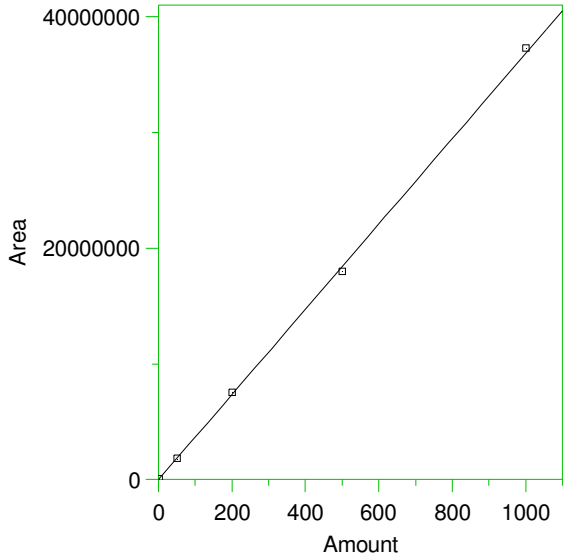
1 DRO Range Start



Expected retention time: 6.68 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 = 32675.36 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9980255
 Average error: 3.607%
 Average CF: 32675.36
 RSD: 5.100%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	5343235	35621.57	9.017	Manual	1/13/2022 12:28:36 PM
2	3750	1.20843E+08	32224.8	-1.379	Manual	1/13/2022 12:29:11 PM
3	15000	4.82244E+08	32149.6	-1.609	Manual	1/13/2022 12:29:24 PM
4	37500	1.185834E+09	31622.24	-3.223	Manual	1/13/2022 12:29:37 PM
5	50000	1.58793E+09	31758.6	-2.806	Manual	1/13/2022 12:28:57 PM

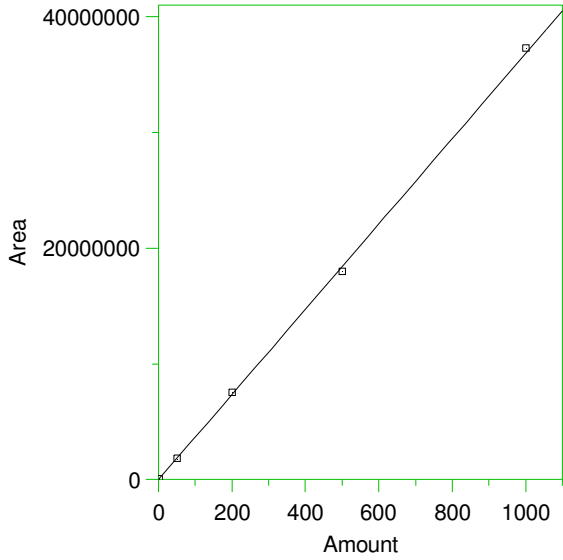
2 *o-Terphenyl



Expected retention time: 12.35 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
 $Y = 36857.86 X + 0$
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9995278
 Average error: 1.804%
 Average CF: 36857.86
 RSD: 2.132%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	74333.97	37166.98	0.839	G:\Org\HP5\DAT\HP5011122_b\0111HP5.0004.BND	1/13/2022 12:27:15 PM
2	50	1802420	36048.4	-2.196	G:\Org\HP5\DAT\HP5011122_b\0111HP5.0005.BND	1/13/2022 12:27:23 PM
3	200	7546240	37731.2	2.369	G:\Org\HP5\DAT\HP5011122_b\0111HP5.0006.BND	1/13/2022 12:27:28 PM
4	500	1.800271E+07	36005.42	-2.313	G:\Org\HP5\DAT\HP5011122_b\0111HP5.0007.BND	1/13/2022 12:27:34 PM
5	1000	3.733731E+07	37337.31	1.301	G:\Org\HP5\DAT\HP5011122_b\0111HP5.0008.BND	1/13/2022 12:27:40 PM

3 *1-Chlorooctadecane



Expected retention time: 13.16 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
 $Y = 36857.86 X + 0$
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9995278
 Average error: 1.804%
 Average CF: 36857.86
 RSD: 2.132%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	74333.97	37166.98	0.839	Manual	1/13/2022 12:27:45 PM
2	50	1802420	36048.4	-2.196	Manual	1/13/2022 12:27:47 PM
3	200	7546240	37731.2	2.369	Manual	1/13/2022 12:27:49 PM
4	500	1.800271E+07	36005.42	-2.313	Manual	1/13/2022 12:27:51 PM
5	1000	3.733731E+07	37337.31	1.301	Manual	1/13/2022 12:27:53 PM

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
		DCM-Baseline Check-V01	G:\Org\HP5-Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integration
		CCV_0111HP502r, DRO ;0111HP5 , DRO220102D	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	No Integration
		DCM-Baseline Check-V03	G:\Org\HP5-Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integration
		CCV_0111HP504r, CAL1 ;0111HP5 , 2 ug per mL OTP (10 uL of Cal3 + 900 uL DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
		CCV_0111HP505r, CAL2 ;0111HP5 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
		CCV_0111HP506r, CAL3 ;0111HP5 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
		CCV_0111HP507r, CAL4 ;0111HP5 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
		CCV_0111HP508r, CAL5 ;0111HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211101A + 750 DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
		CCV_0111HP509r, CAL1 ;0111HP5 , 150 ug per mL Diesel (20 uL of Cal3 + 980 uL DCM(14647), then 100 uL of that + 100 uL of DCM (14647))	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
		CCV_0111HP510r, CAL2 ;0111HP5 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
		CCV_0111HP511r, CAL3 ;0111HP5 , 15000 ug per mL Diesel (300 uL of DRO211214C + 700 uL DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
		CCV_0111HP512r, CAL4 ;0111HP5 , 37500ug per mL Diesel (750 uL of DRO211214C + 250 uL DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
		CCV_0111HP513r, CAL5 ;0111HP5 , 50000 ug per mL Diesel (200 uL of DRO211214C)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
		CCV_0111HP514r, Second Source ;0111HP5 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.02.11 10:29:19 -07:00

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
		DCM-Baseline Check-V01	G:\Org\HP5-Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integration
		CCV_0111HP502r, DRO ;0111HP5 , DRO220102D	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	No Integration
		DCM-Baseline Check-V03	G:\Org\HP5-Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integration
	G:\org\HP5\DAT\HP5011122_b\0111HP5.04r	CCV_0111HP504r, CAL1 ;0111HP5 , 2 ug per mL OTP (10 uL of Cal3 + 990 uL DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.05r	CCV_0111HP505r, CAL2 ;0111HP5 , 50 ug per mL OTP (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.06r	CCV_0111HP506r, CAL3 ;0111HP5 , 200 ug per mL OTP (100uL of Cal5 + 400 uL DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.07r	CCV_0111HP507r, CAL4 ;0111HP5 , 500 ug per mL OTP (250uL of Cal5 + 250 uL DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.08r	CCV_0111HP508r, CAL5 ;0111HP5 , 1000 ug per mL OTP (250 uL 4000 ug/mL OTP DRO211101A + 750 DCM(14647)	G:\Org\HP5-Methods\DS_8015-JA-L#.met	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 12.01 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.09r	CCV_0111HP509r, CAL1 ;0111HP5 , 150 ug per mL Diesel (20 uL of Cal3 + 980 uL DCM(14647), then 100 uL of that + 100 uL of DCM (14647))	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.10r	CCV_0111HP510r, CAL2 ;0111HP5 , 3750 ug per mL Diesel (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.11r	CCV_0111HP511r, CAL3 ;0111HP5 , 15000 ug per mL Diesel (300 uL of DRO211214C + 700 uL DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.12r	CCV_0111HP512r, CAL4 ;0111HP5 , 37500ug per mL Diesel (750 uL of DRO211214C + 250 uL DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.13r	CCV_0111HP513r, CAL5 ;0111HP5 , 50000 ug per mL Diesel (200 uL of DRO211214C)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.14r	CCV_0111HP514r, Second Source ;0111HP5 , 15000 ug per mL (100uL of DRO211012B + 900uL DCM(14647)	G:\Org\HP5-Methods\DC_8015-JA-L%.met	1	1	1	1	0	The integration of Diesel Range Organics and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline on All Valley on at 16.36 minutes.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.02.11 10:29:19 -07:00

Energy Laboratories Inc

ANALYTICAL RUN Summary

14-Jan-22

Run ID GCFID-HP5-B_220111C

Run Start Date: 1/11/2022
Analyst: Ann Nebel
Ical:
Column ID:
Comments: ICAL- SW8015C_ORO220111BA.CAL with Triacontane

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO210902A	50,000 ug/mL Oil Std for RRO-In DCM					ICV	9/1/2026
DRO211006A	Triacontane SURR 2000 ug/mL					CAL-SURR	4/6/2026
DRO211118A	50,000 ug/mL Oil Std For AK103 RRO-In DCM					CAL-ORO	10/31/2028

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14977288	CCV_0111HP52	HC-8015-DRO-	CAL1		1/12/2022 3:39:1	1	R373160		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.00190245		0.002	0	0	0.000336	0.002	0	95%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14977289	CCV_0111HP52	HC-8015-DRO-	CAL2		1/12/2022 4:22:1	1	R373160		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.04984459		0.05	0	0	0.000336	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					
14977290	CCV_0111HP53	HC-8015-DRO-	CAL3		1/12/2022 5:05:2	1	R373160		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.2024053		0.2	0	0	0.000336	0.002	0	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14977291	CCV_0111HP53	HC-8015-DRO-	CAL4		1/12/2022 5:48:3	1	R373160		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.5035697		0.5	0	0	0.000336	0.002	0	101%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14977292	CCV_0111HP55	HC-8015-DRO-	CAL5		1/12/2022 8:49:5	1	R373160		0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		1.032718		1	0	0	0.000336	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					
14977293	CCV_0111HP55	HC-8015-DRO-	CAL1		1/13/2022 3:06:1	1	R373160		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		0.15954587		0.15	0	0	0.0879	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					
14977294	CCV_0111HP55	HC-8015-DRO-	CAL2		1/13/2022 4:31:3	1	R373160		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		1.03294141		1	0	0	0.0879	0.3	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					
14977295	CCV_0111HP55	HC-8015-DRO-	CAL3		1/13/2022 5:57:4	1	R373160		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		4.9326875		5	0	0	0.0879	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					
14977296	CCV_0111HP56	HC-8015-DRO-	CAL4		1/13/2022 7:24:1	1	R373160		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		14.328667		15	0	0	0.0879	0.3	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					
14977297	CCV_0111HP56	HC-8015-DRO-	CAL5		1/13/2022 8:50:3	1	R373160		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		28.7914395		30	0	0	0.0879	0.3	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					
14977298	CCV_0111HP56	HC-8015-DRO-	ICV		1/14/2022 8:18:1	0	R373160		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		5.07699902		5	0	0	0	0.3	0	102%	80	120	0%	

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
	G:\org\HP5\DAT\HP5011122 b\0111HP5.25f	DCM-Baseline Check-V25	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.26f	Marker_0111HP526r, DRO :0111HP5 , DRO220111A	G:\org\HP5\Methods\CSC210212.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.27f	DCM-Baseline Check-V27	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.28f	CCV_0111HP528r, CAL1 :0111HP5 , 2 ug per mL Triacotane (10 uL of Cal3 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.29f	CCV_0111HP529r, CAL2 :0111HP5 , 50 ug per mL Triacotane (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.30f	CCV_0111HP530r, CAL3 :0111HP5 , 200 ug per mL Triacotane (100uL of Cal5 + 400 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.31f	CCV_0111HP531r, CAL4 :0111HP5 , 500 ug per mL Triacotane (250uL of Cal5 + 250 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.32f	DCM-Baseline Check-V32	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.50f	CCV_0111HP550r, CAL5 :0111HP5 , 1000 ug per mL Triacotane (DRO211006A)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.51f	DCM-Baseline Check-V51	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.52f	DCM-Baseline Check-V52	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.53f	Marker_0111HP553r, DRO :0111HP5 , DRO220111A	G:\org\HP5\Methods\CSC210212.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.54f	DCM-Baseline Check-V54	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.55f	CCV_0111HP555r, CAL1 :0111HP5 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-55-BA-L%.xls	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.56f	DCM-Baseline Check-V56	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.57f	CCV_0111HP557r, CAL2 :0111HP5 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-57-BA-L%.xls	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.58f	DCM-Baseline Check-V58	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.59f	CCV_0111HP559r, CAL3 :0111HP5 , 5000 ug per mL Oil (100 uL of DRO211118A + 900 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-59-BA-L%.xls	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.60f	DCM-Baseline Check-V60	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.61f	CCV_0111HP561r, CAL4 :0111HP5 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-61-BA-L%.xls	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.62f	DCM-Baseline Check-V62	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.63f	CCV_0111HP563r, CAL5 :0111HP5 , 30000 ug per mL Oil (600 uL of DRO211118A + 400 uL of DCM)	G:\Org\HP5\Methods\DC_ORO-BA-L%.xls	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.64f	DCM-Baseline Check-V64	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.65f	DCM-Baseline Check-V65	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.66f	DCM-Baseline Check-V66	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.68f	DCM-Baseline Check-V68	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	G:\org\HP5\DAT\HP5011122 b\0111HP5.69f	CCV_0111HP567r, Second Source :0111HP5 , 5000 ug per mL (100uL of DRO210902A + 900uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-59-BA-L%.xls	1	1	1	1	0

File Name: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL

Version: 11

Creator: AMN

Description: 8015C-Oil Range with Triacontane. New ICal Per 0111HP5,(2022)-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

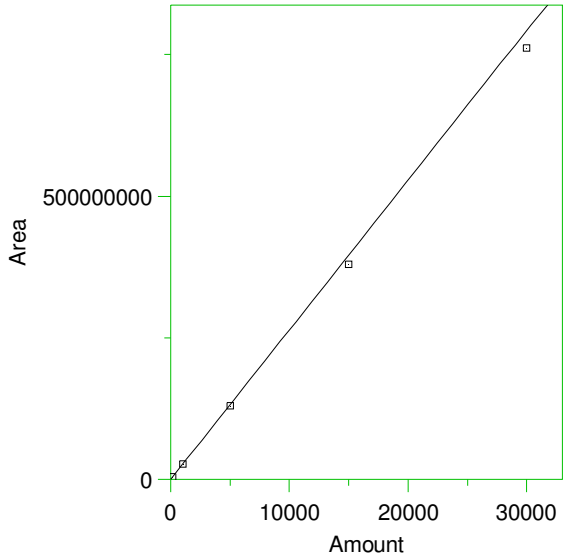
No default component

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

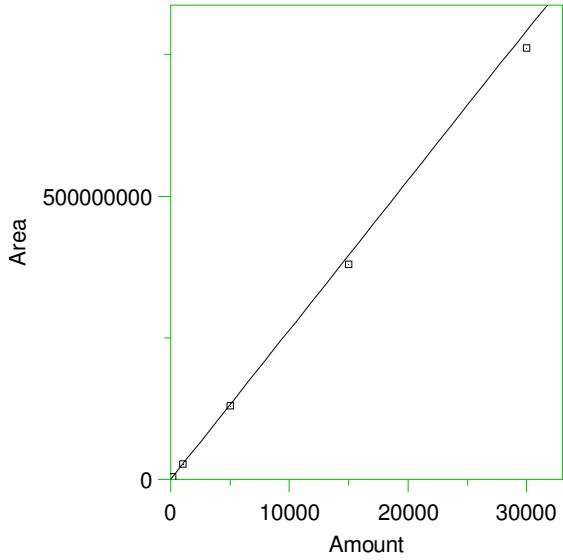
Single peak quantification by area

$Y = 26424.55 X + 0$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9969108
 Average error: 3.495%
 Average CF: 26424.55
 RSD: 4.293%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	4177025	27846.83	5.382	Manual	1/14/2022 7:51:42 AM
2	1000	2.73111E+07	27311.1	3.355	Manual	1/14/2022 8:05:40 AM
3	5000	1.313247E+08	26264.94	-0.604	Manual	1/14/2022 8:05:24 AM
4	15000	3.796282E+08	25308.55	-4.223	Manual	1/14/2022 8:05:07 AM
5	30000	7.617404E+08	25391.35	-3.910	Manual	1/14/2022 8:04:35 AM

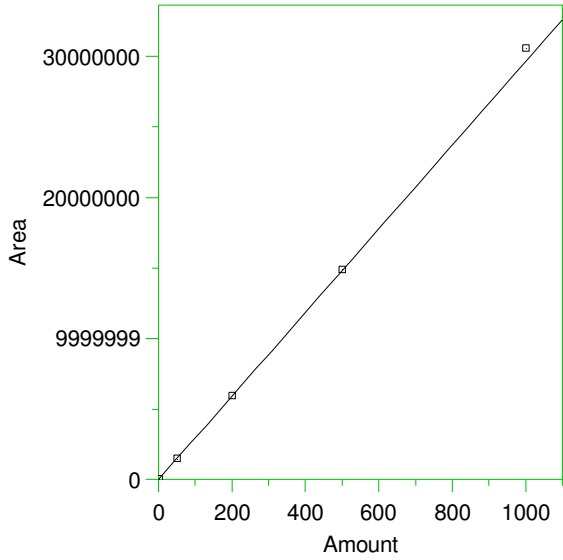
2 #C20



Expected retention time: 12.56 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 = 26424.55 X + 0
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9969108
 Average error: 3.495%
 Average CF: 26424.55
 RSD: 4.293%

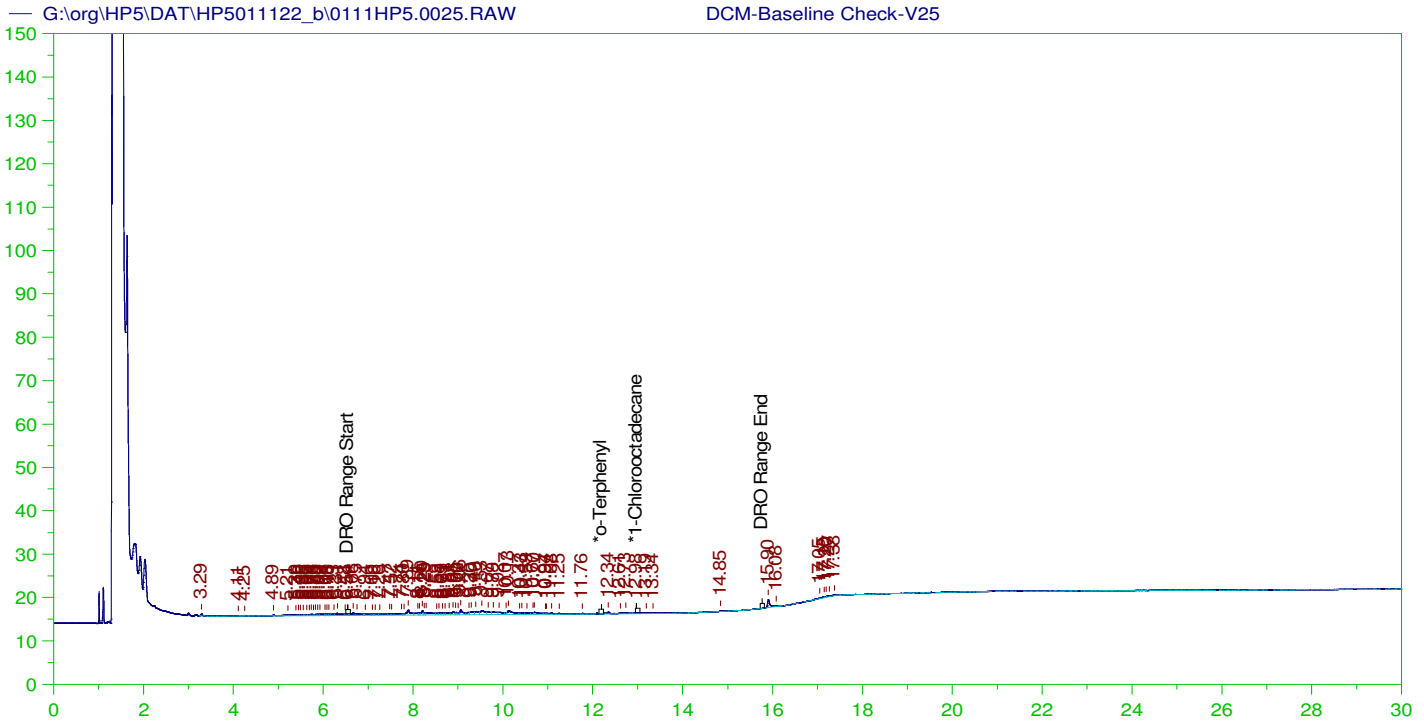
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	4177025	27846.83	5.382	Manual	1/14/2022 8:06:03 AM
2	1000	2.73111E+07	27311.1	3.355	Manual	1/14/2022 8:06:05 AM
3	5000	1.313247E+08	26264.94	-0.604	Manual	1/14/2022 8:06:06 AM
4	15000	3.796282E+08	25308.55	-4.223	Manual	1/14/2022 8:06:11 AM
5	30000	7.617404E+08	25391.35	-3.910	Manual	1/14/2022 8:06:13 AM

3 *#Triacontane



Expected retention time: 16.44 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
 $Y = 29636.1 X + 0$
 Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9984925
 Average error: 2.075%
 Average CF: 29636.1
 RSD: 3.023%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	2	56381.2	28190.6	-4.878	Manual	1/13/2022 12:38:47 PM
2	50	1477199	29543.98	-0.311	Manual	1/13/2022 12:38:50 PM
3	200	5998503	29992.52	1.203	Manual	1/13/2022 12:38:53 PM
4	500	1.492384E+07	29847.68	0.714	Manual	1/13/2022 12:38:56 PM
5	1000	3.060573E+07	30605.73	3.272	Manual	1/13/2022 12:39:03 PM



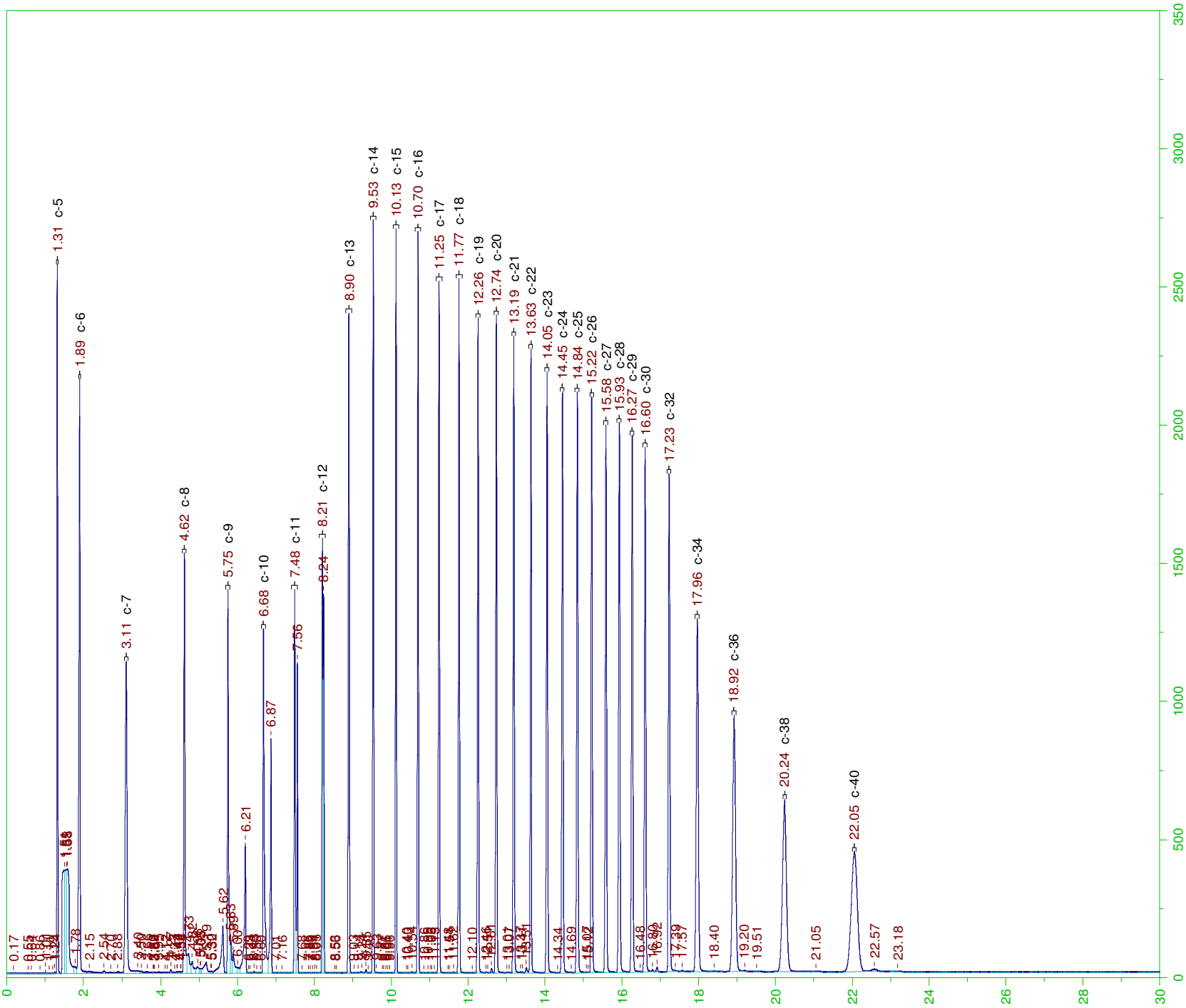
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

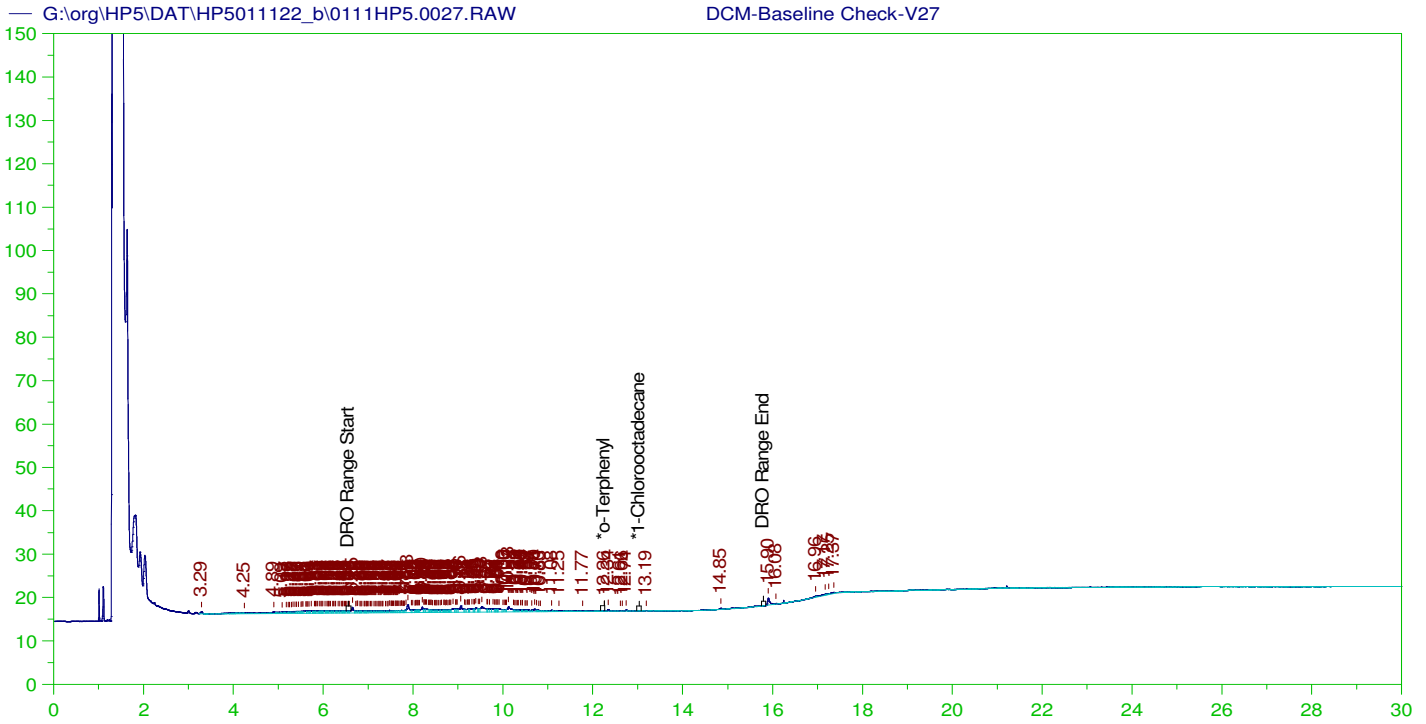
Sample Name: DCM-Baseline Check-V25
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0025.RAW
 Date & Time Acquired: 1/12/2022 1:29:46 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.899	200.	.	-
*1-Chlorooctadecane	12.975	200.	.017	.01

DRO Area:132028.6 DRO Amount: 4.211011
 TEH Area:186308.4 TEH Amount: 5.942247





DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V27
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0027.RAW
 Date & Time Acquired: 1/12/2022 2:56:04 AM
 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

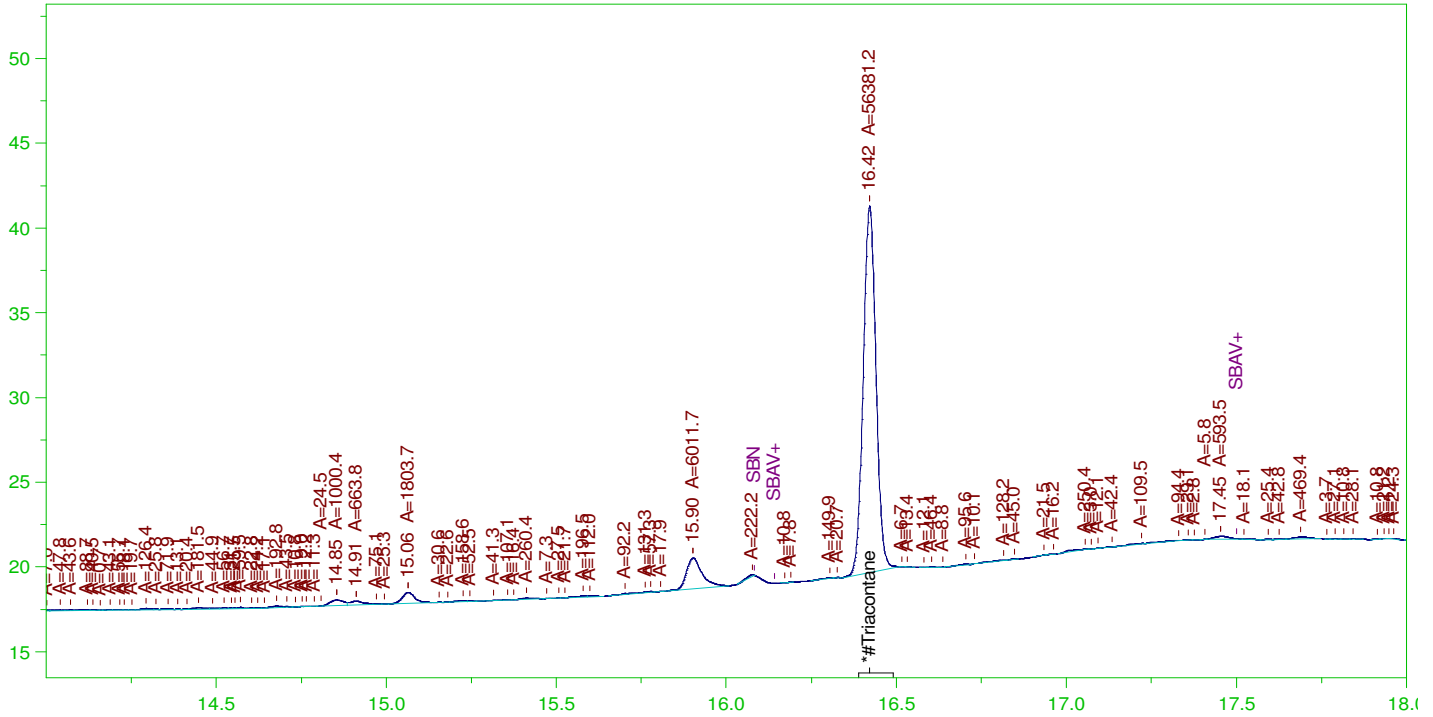
Mean RF for TEH: 29457.33
 Rt range for Diesel Range Organics: 6.51 to 15.85

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.261	200.	.017	.01 -
*1-Chlorooctadecane	29.983	200.	.	. -

DRO Area:193795.7 DRO Amount: 6.578862
 TEH Area:272770 TEH Amount: 9.259835

G:\org\HP5\DAT\HP5011122_b\0111HP5.0028.RAW

CCV_0111HP528r, CAL1 ;0111HP5 , 2 ug per mL Triacontane



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP528r, CAL1 ;0111HP5 , 2 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0028.RAW
 Date & Time Acquired: 1/12/2022 3:39:11 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111ba.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: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.421	500.	1.902	.38

RRO Area:11465.21 RRO AMOUNT: 0.4016902

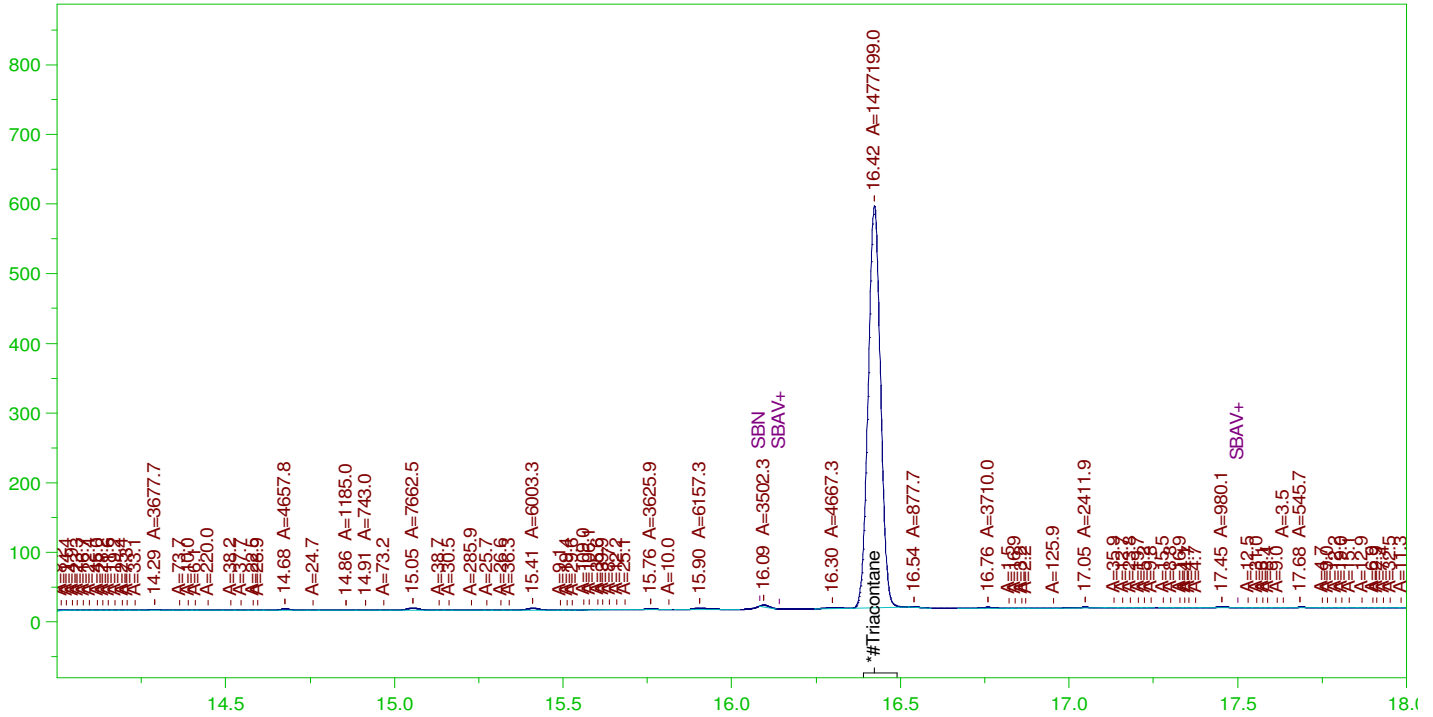
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0028.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.056	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.421	200.	1.902	.95	75-125

G:\org\HP5\DAT\HP5011122_b\0111HP5.0029.RAW

CCV_0111HP529r, CAL2 ;0111HP5 , 50 ug per mL Triacontane



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP529r, CAL2 ;0111HP5 , 50 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0029.RAW
 Date & Time Acquired: 1/12/2022 4:22:15 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111ba.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: 12.51 to 30.05

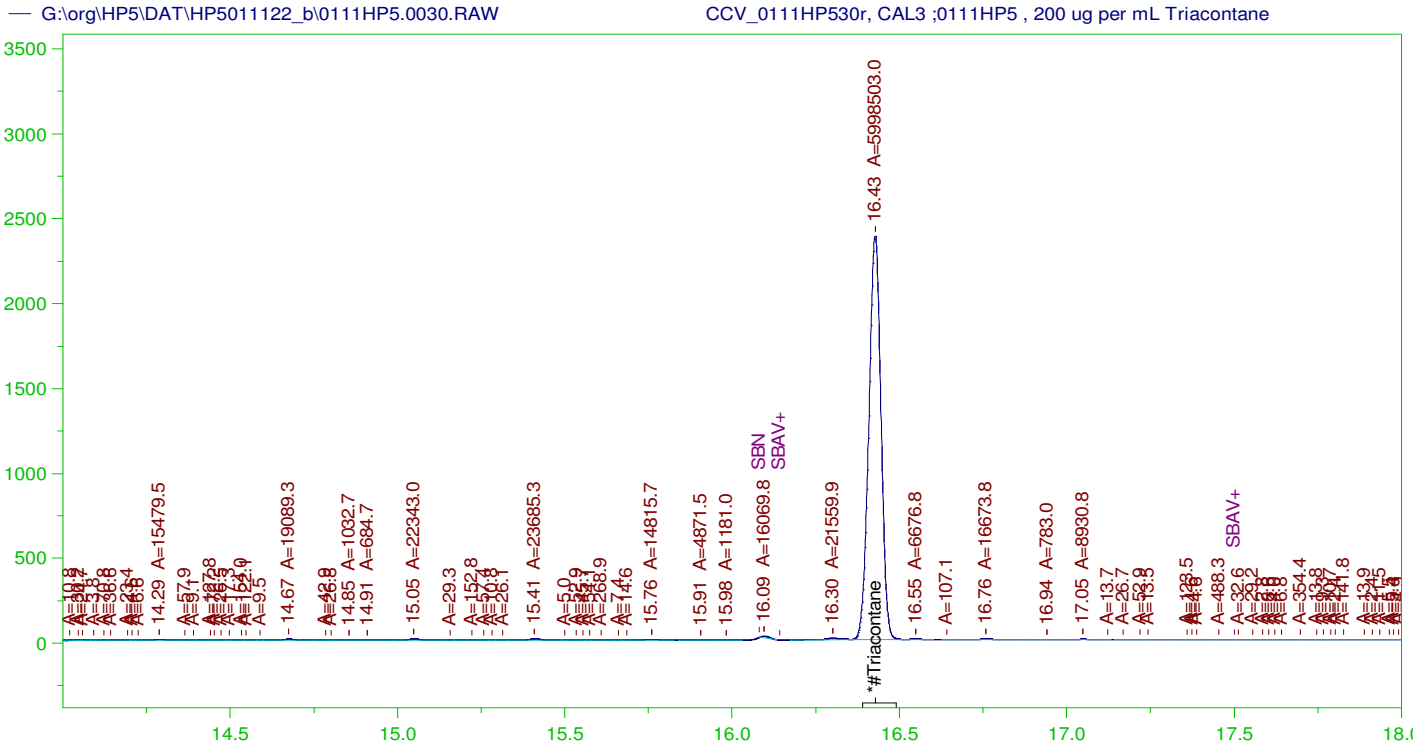
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.423	500.	49.845	9.97	-

RRO Area:60154.51 RRO AMOUNT: 2.107548

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0029.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.423	200.	49.845	24.92	75-125



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP530r, CAL3 ;0111HP5 , 200 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0030.RAW
 Date & Time Acquired: 1/12/2022 5:05:25 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111ba.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: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.427	500.	202.405	40.48	-

RRO Area:200104.8 RRO AMOUNT: 7.01079

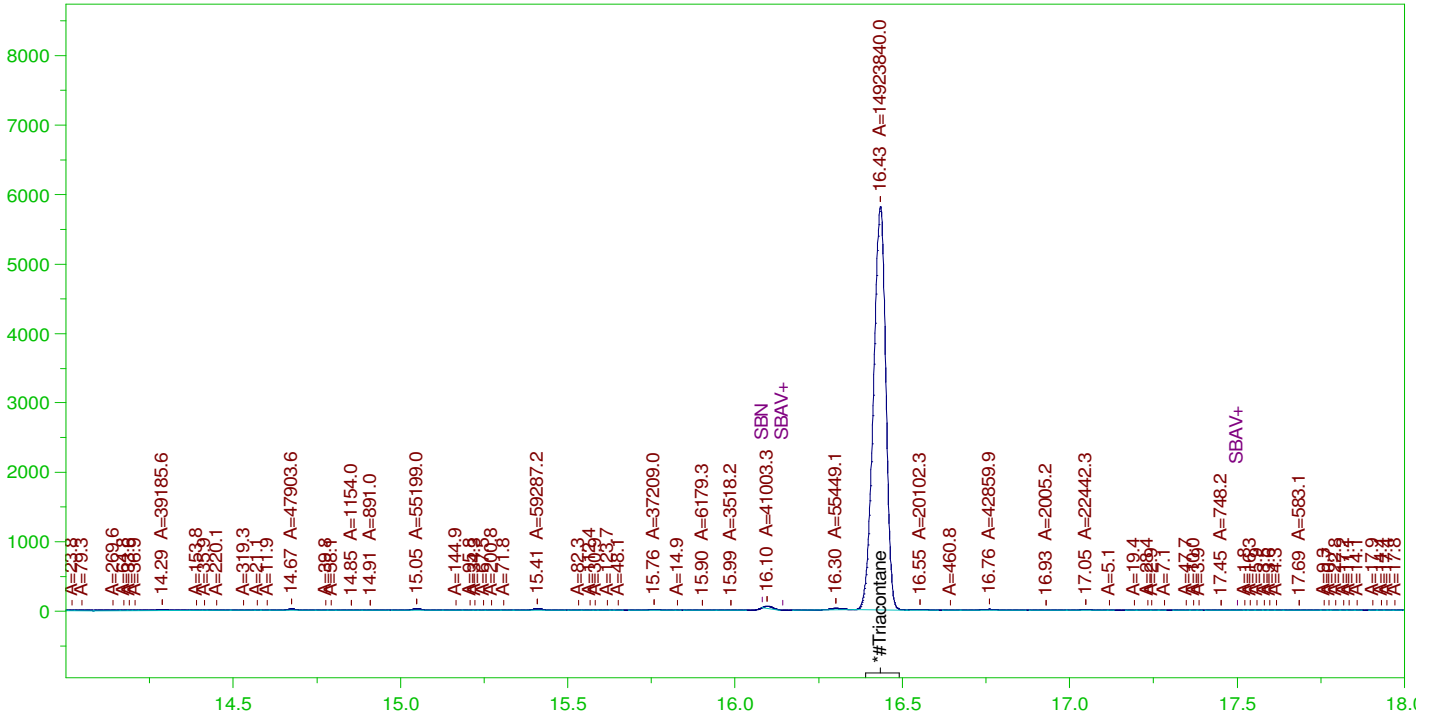
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0030.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.427	200.	202.405	101.2	75-125

G:\org\HP5\DAT\HP5011122_b\0111HP5.0031.RAW

CCV_0111HP531r, CAL4 ;0111HP5 , 500 ug per mL Triacontane



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP531r, CAL4 ;0111HP5 , 500 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0031.RAW
 Date & Time Acquired: 1/12/2022 5:48:34 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111ba.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: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.434	500.	503.57	100.71	-

RRO Area:497882.9 RRO AMOUNT: 17.44362

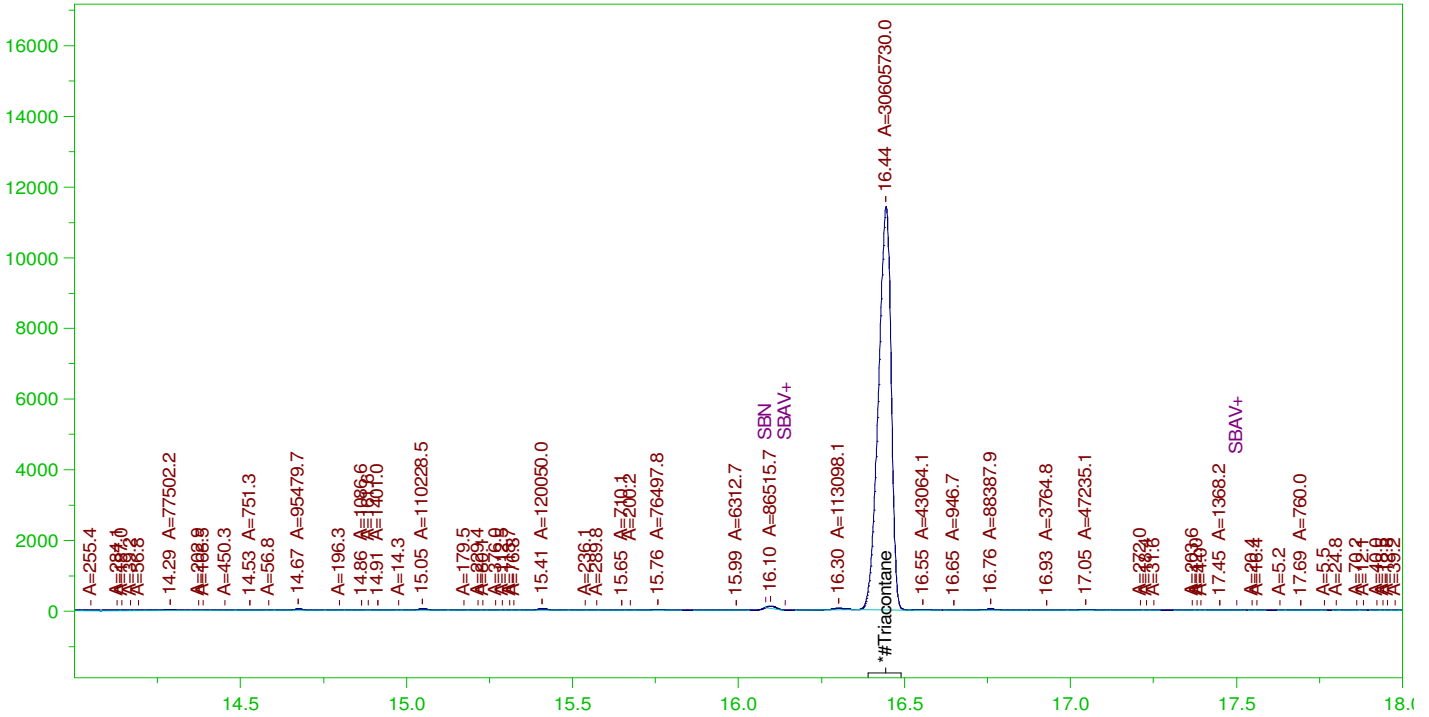
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0031.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.434	200.	503.57	251.78	75-125

G:\org\HP5\DAT\HP5011122_b\0111HP5.0050.RAW

CCV_0111HP550r, CAL5 ;0111HP5 , 1000 ug per mL Triacontane



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP550r, CAL5 ;0111HP5 , 1000 ug per mL Triacontane
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0050.RAW
 Date & Time Acquired: 1/12/2022 8:49:58 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111ba.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: 12.51 to 30.05

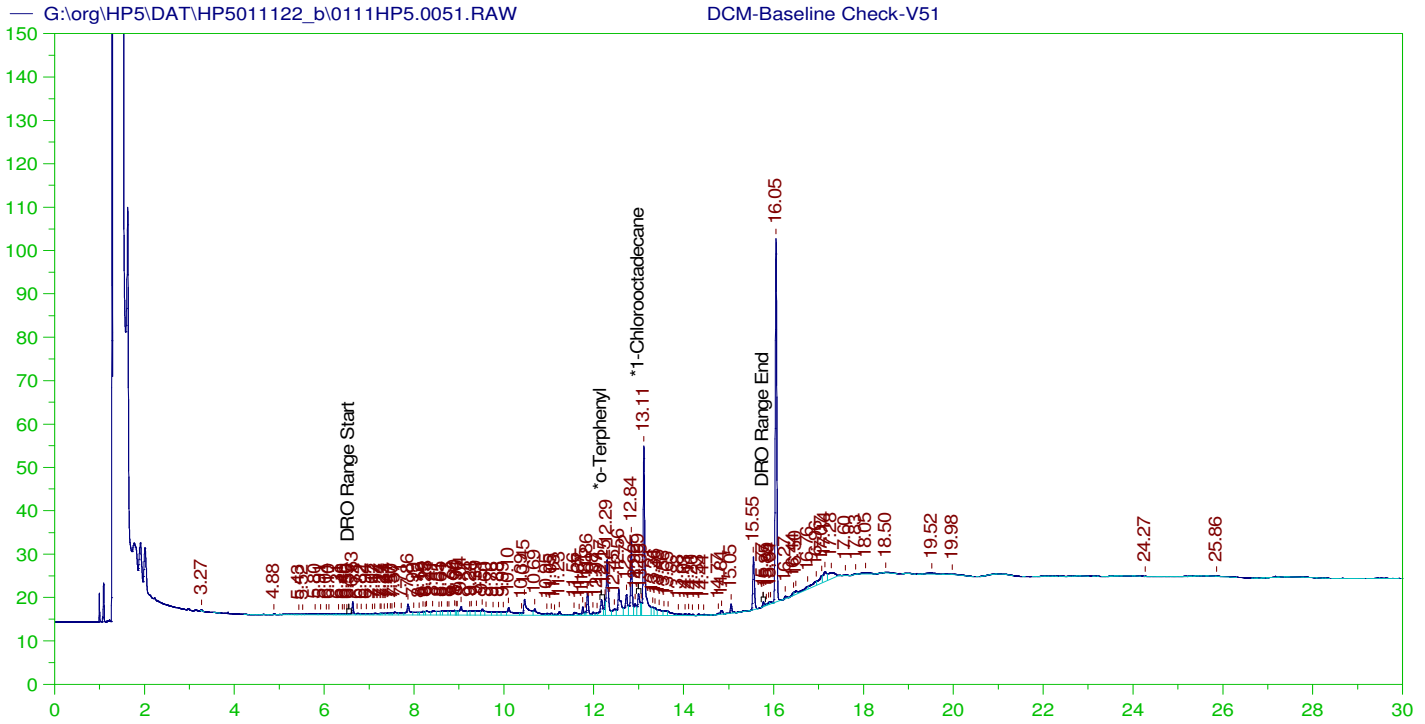
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.444	500.	1032.718	206.54	-

RRO Area:993904.8 RRO AMOUNT: 34.82203

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0050.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.444	200.	1032.718	516.36	75-125



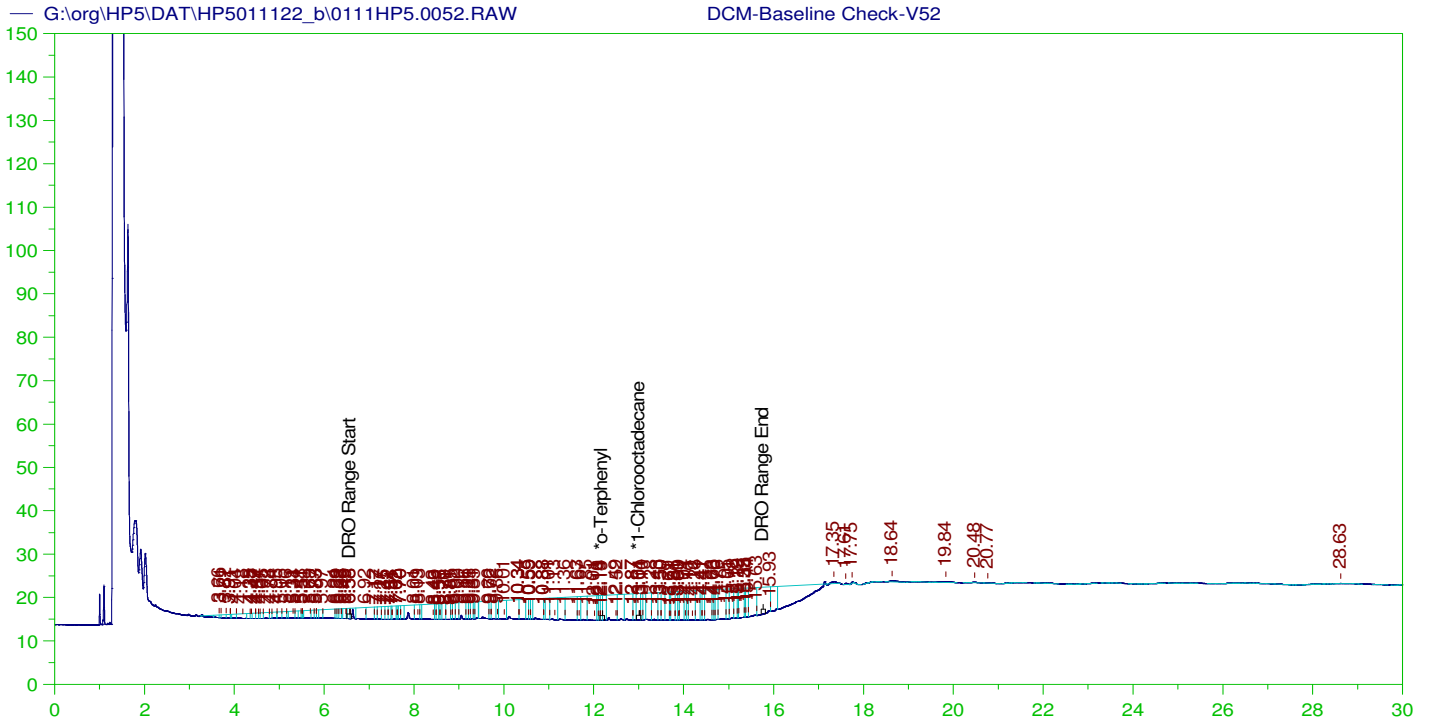
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V51
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0051.RAW
 Date & Time Acquired: 1/13/2022 12:15:29 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.166	200.	.369	.18	-
*1-Chlorooctadecane	12.994	200.	.464	.23	-

DRO Area: 587062.5 DRO Amount: 18.72417
 TEH Area: 891448.4 TEH Amount: 28.43246



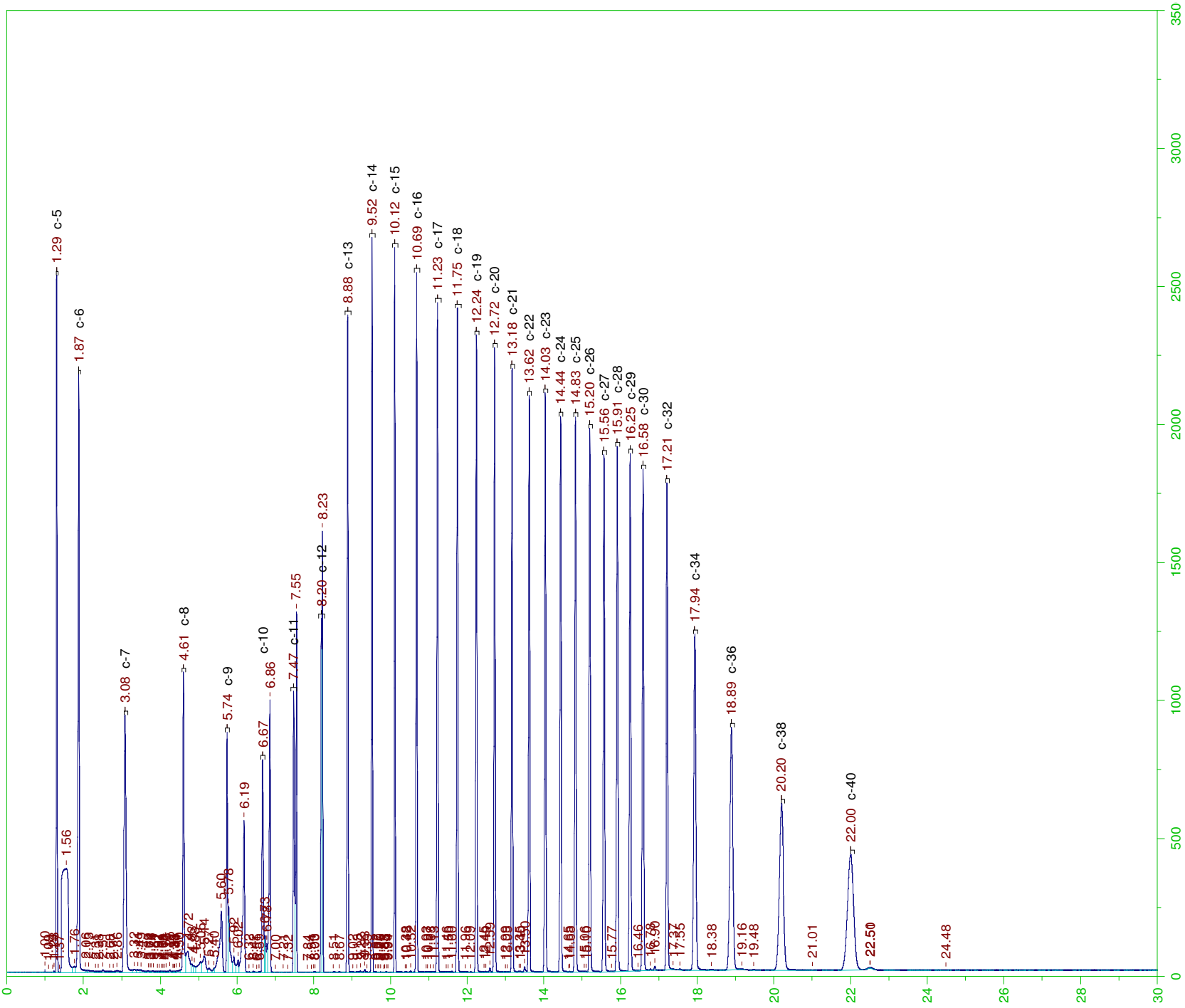
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

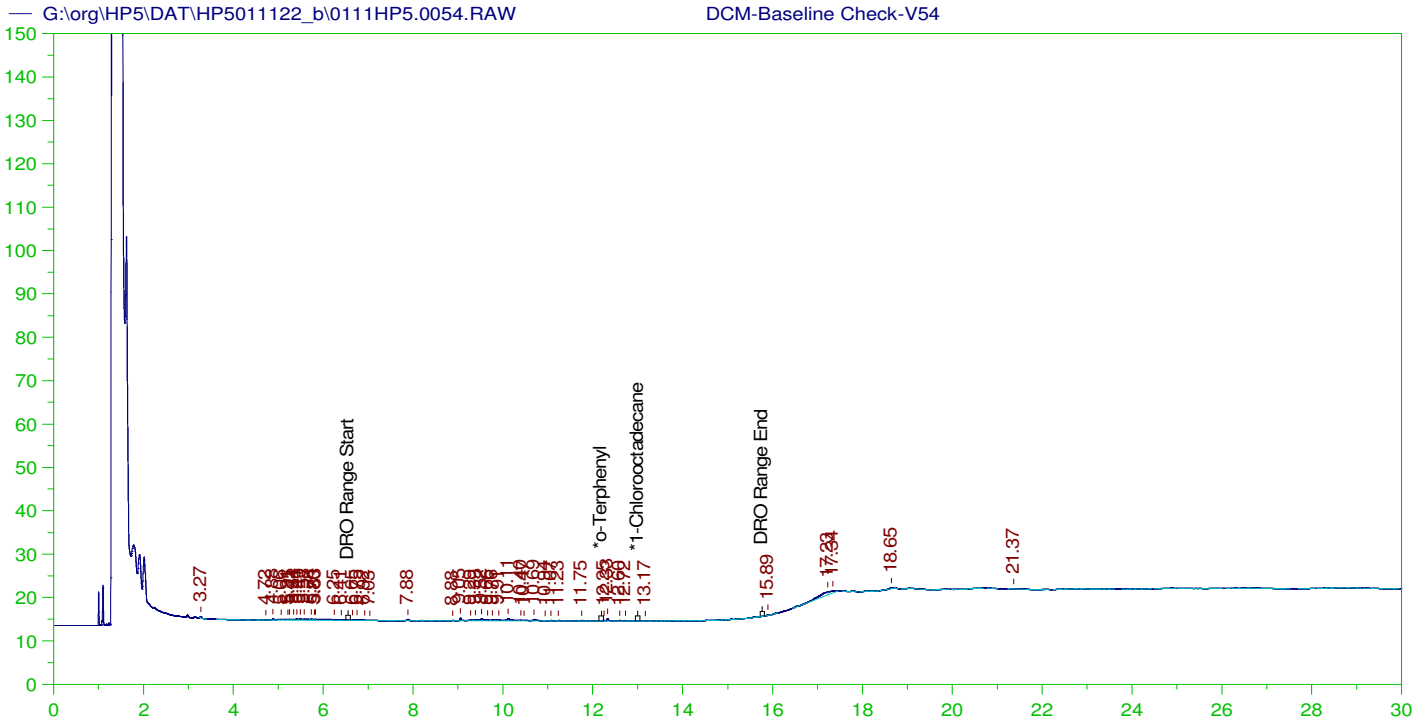
Sample Name: DCM-Baseline Check-V52
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0052.RAW
 Date & Time Acquired: 1/13/2022 12:58:31 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.192	200.	.855	.43	-
*1-Chlorooctadecane	13.007	200.	.955	.48	-

DRO Area:2710300 DRO Amount: 86.44414
 TEH Area:2842315 TEH Amount: 90.65472





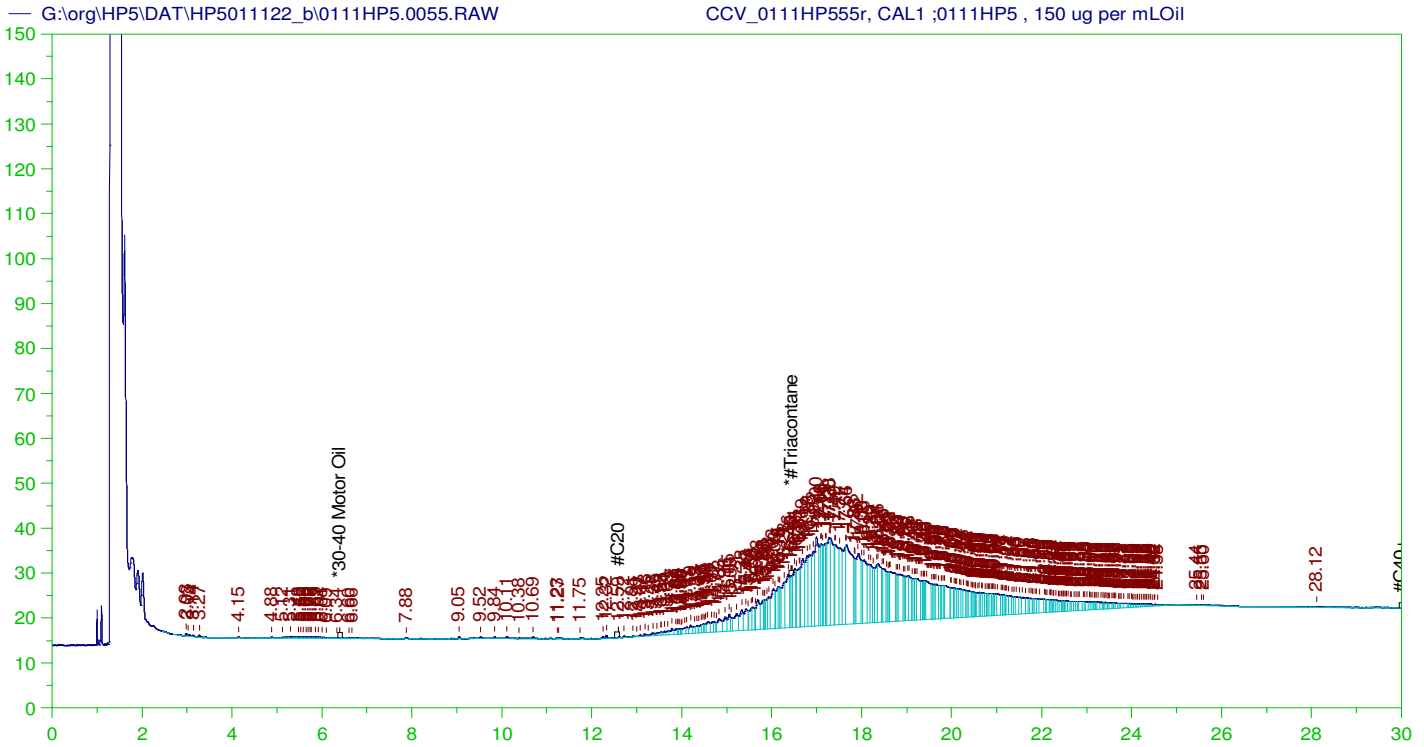
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V54
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 Date & Time Acquired: 1/13/2022 2:23:42 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.882	200.	.	-
*1-Chlorooctadecane	29.882	200.	.	-

DRO Area:44798.44 DRO Amount: 1.428832
 TEH Area:97771.24 TEH Amount: 3.118382



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP555r, CAL1 ;0111HP5 , 150 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0055.RAW
 Date & Time Acquired: 1/13/2022 3:06:11 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-55-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.51 to 30.05

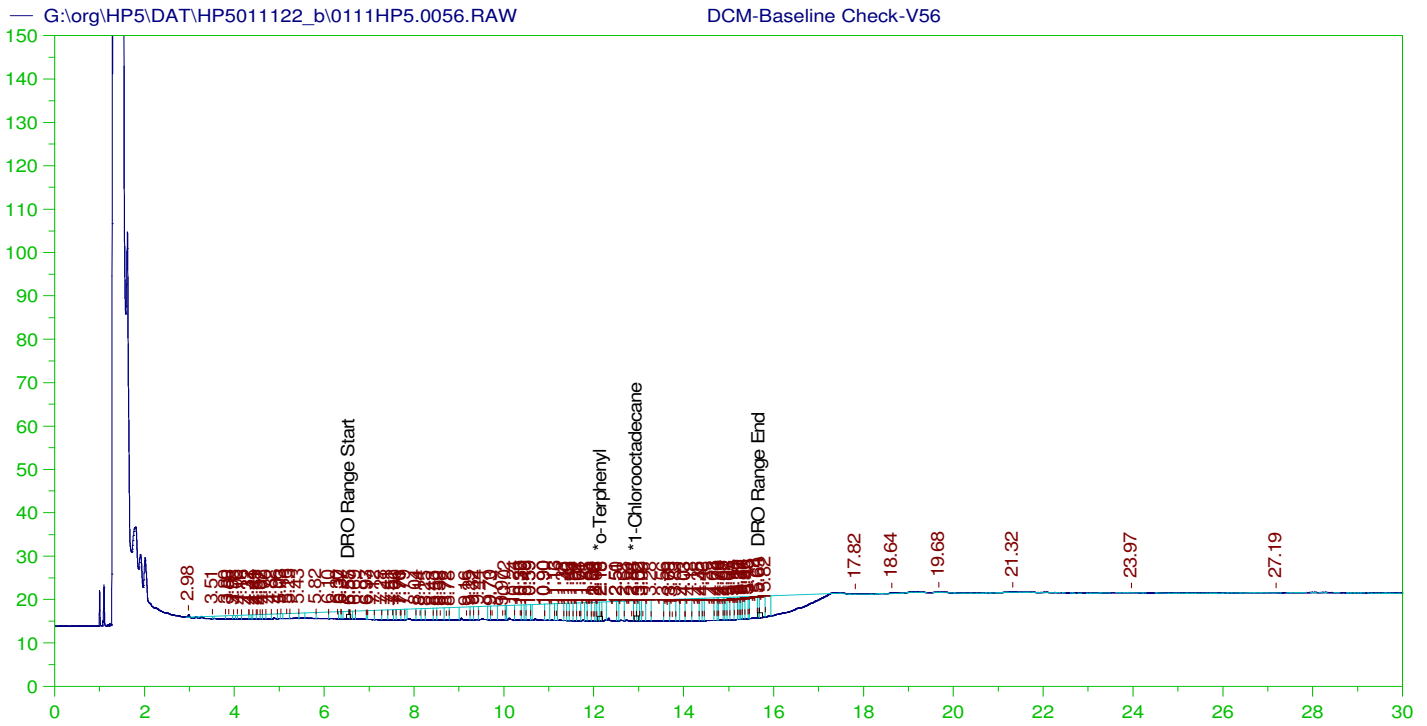
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.447	500.	.47	.09	-

RRO Area: 4215928 RRO AMOUNT: 159.5459

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0055.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.447	200.	.47	.23	75-125



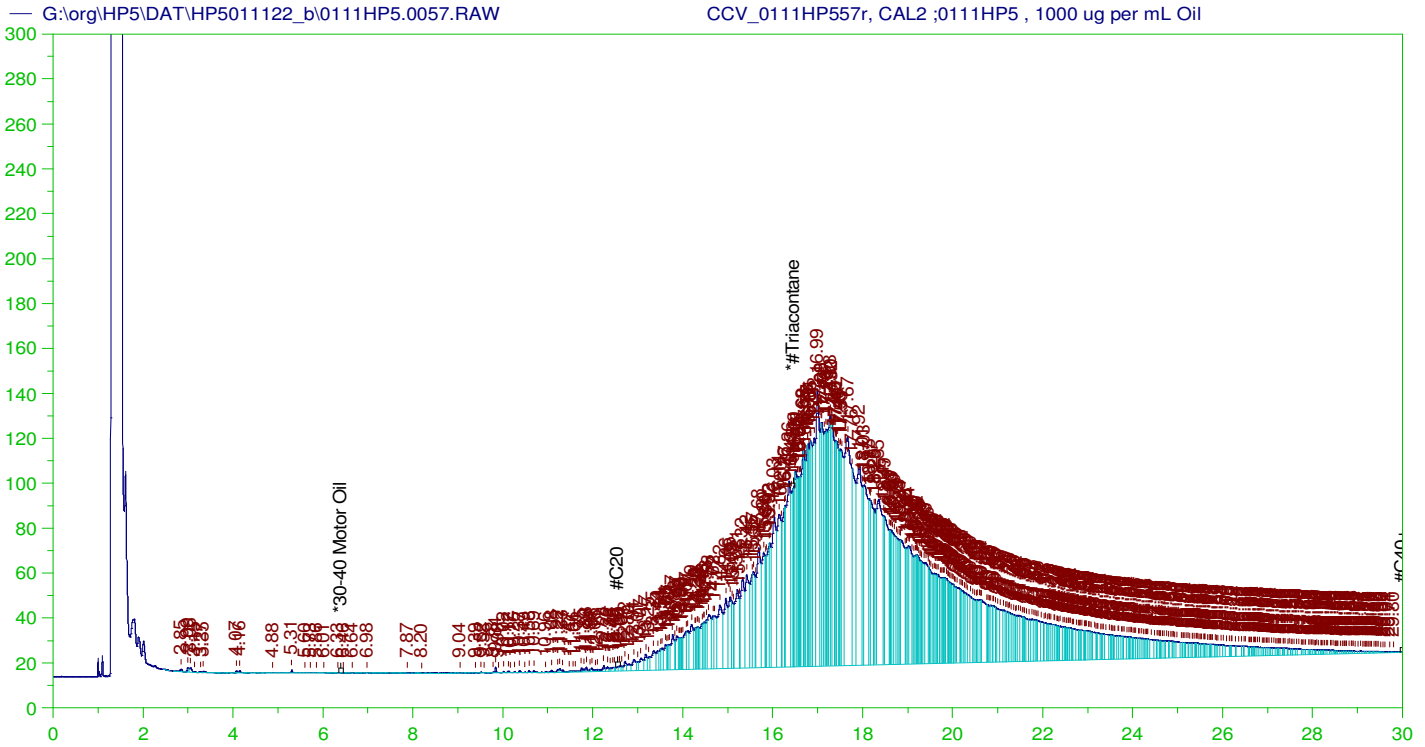
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V56
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0056.RAW
 Date & Time Acquired: 1/13/2022 3:48:53 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	12.162	200.	.406	.2
*1-Chlorooctadecane	29.946	200.	.	.

DRO Area:2125703 DRO Amount: 72.16209
 TEH Area:2146824 TEH Amount: 72.8791



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP557r, CAL2 ;0111HP5 , 1000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0057.RAW
 Date & Time Acquired: 1/13/2022 4:31:31 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-57-BA-L\MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.51 to 30.05

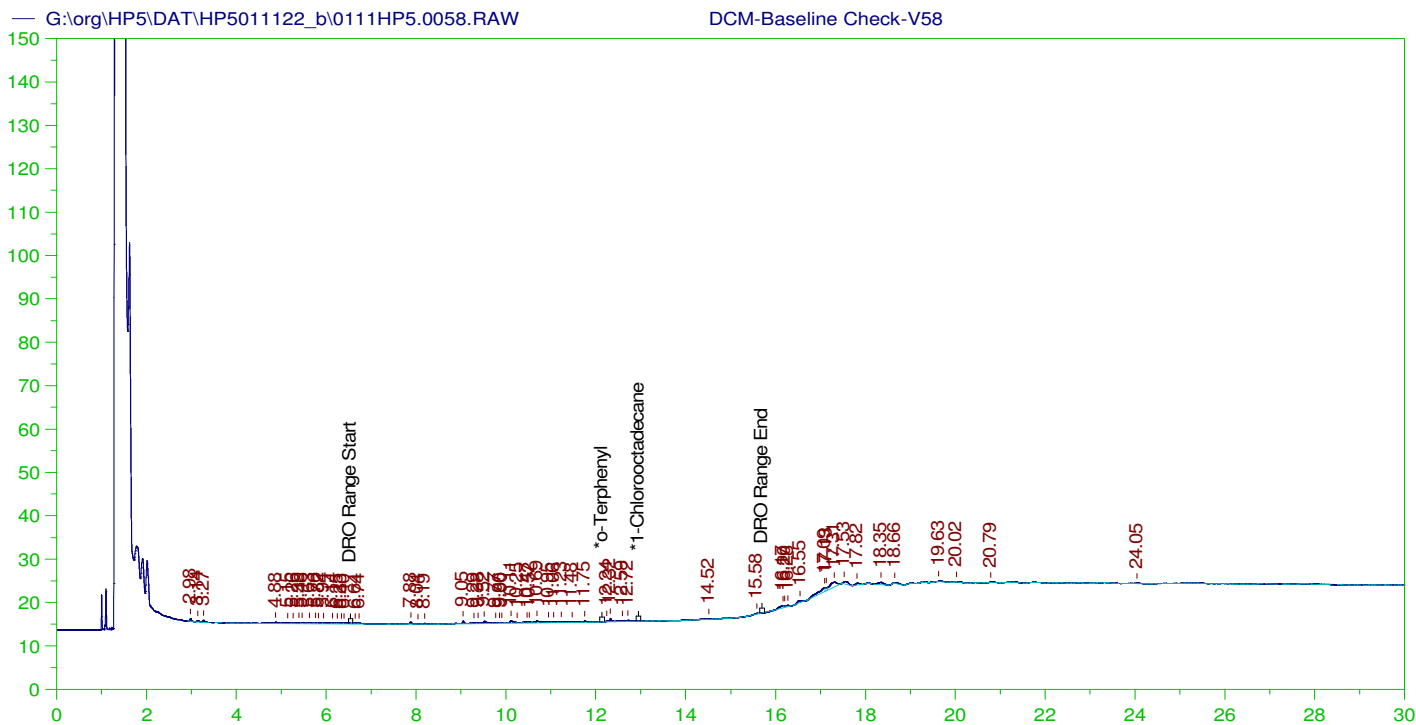
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.454	500.	3.058	.61

RRO Area: 2.729502E+07 RRO AMOUNT: 1032.941

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0057.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.454	200.	3.058	1.53	75-125



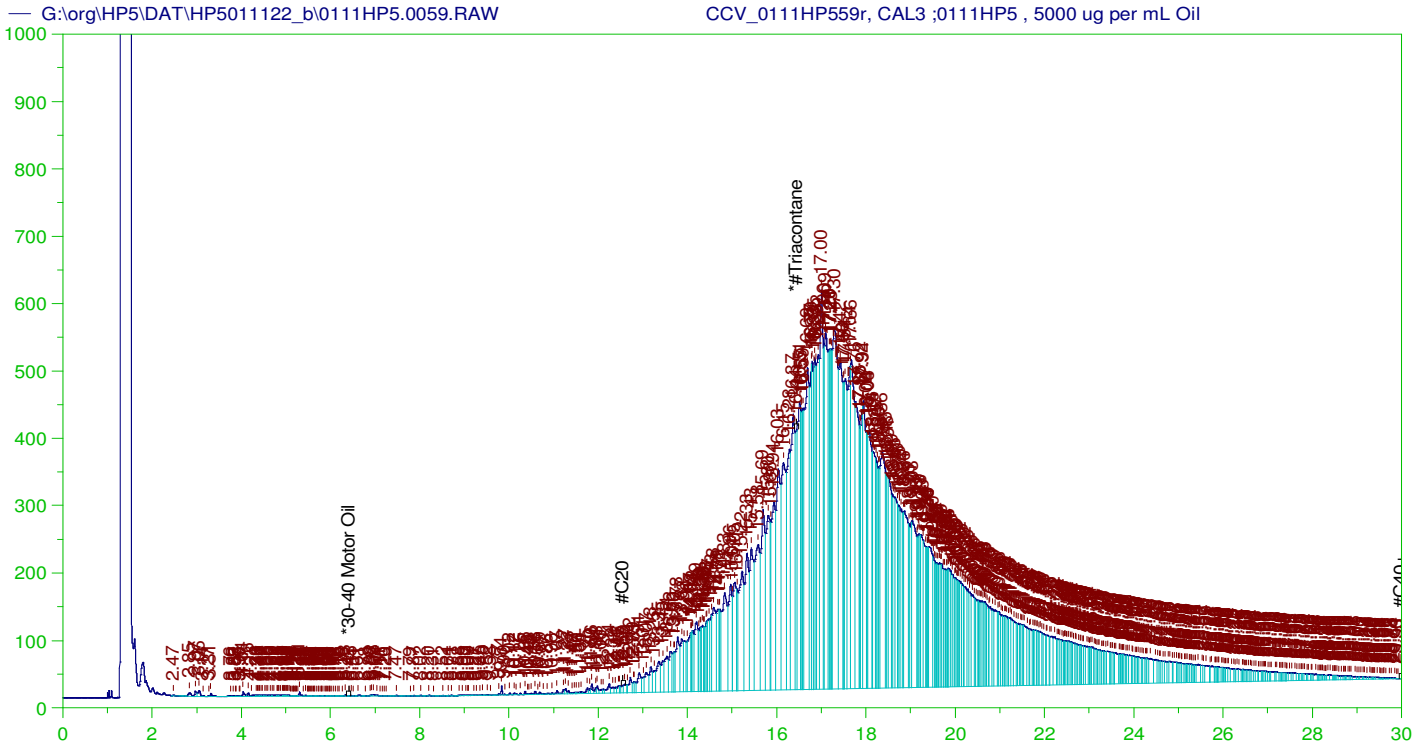
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V58
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0058.RAW
 Date & Time Acquired: 1/13/2022 5:14:45 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	29.94	200.	.	-
*1-Chlorooctadecane	29.94	200.	.	-

DRO Area:48306.73 DRO Amount: 1.639888
 TEH Area:141285.5 TEH Amount: 4.796276



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP559r, CAL3 ;0111HP5 , 5000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0059.RAW
 Date & Time Acquired: 1/13/2022 5:57:48 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-59-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.51 to 30.05

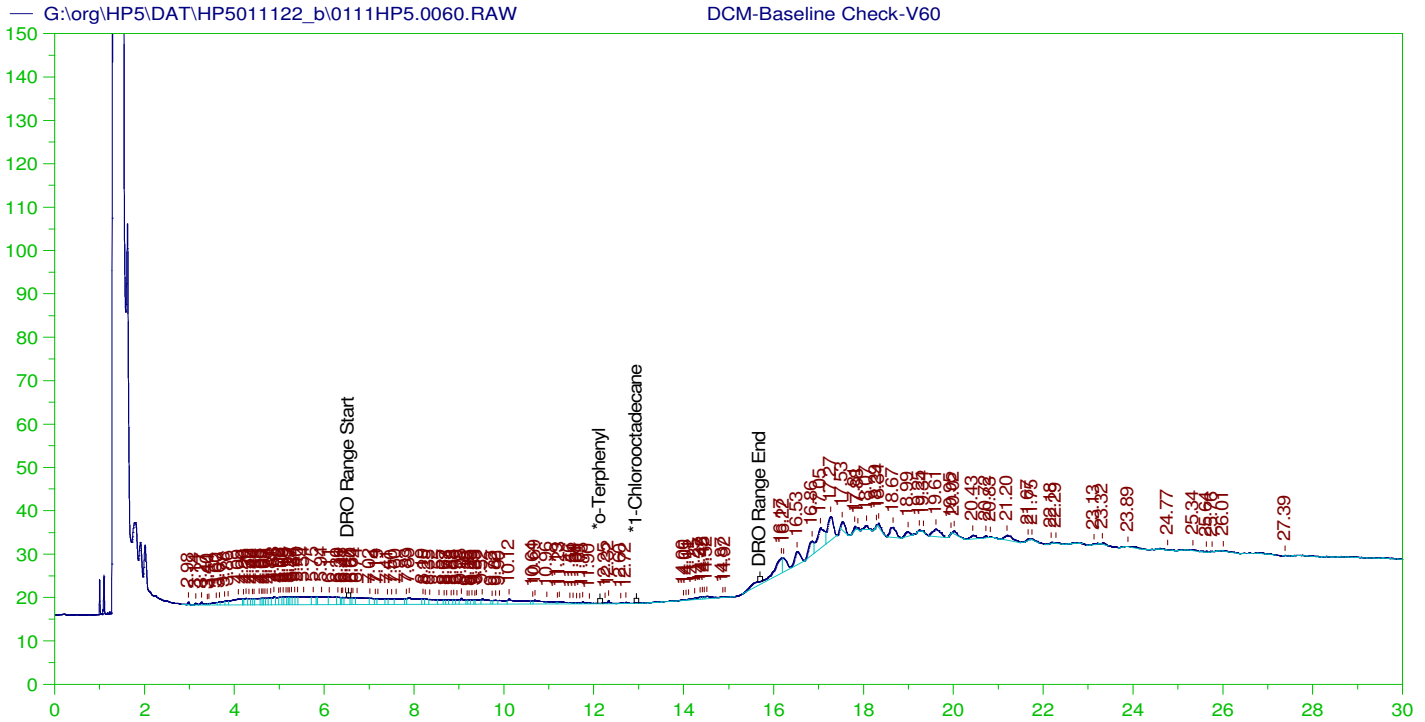
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.442	500.	33.09	6.62	-

RRO Area: 1.303441E+08 RRO AMOUNT: 4932.688

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0059.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.037	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.442	200.	33.09	16.54	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

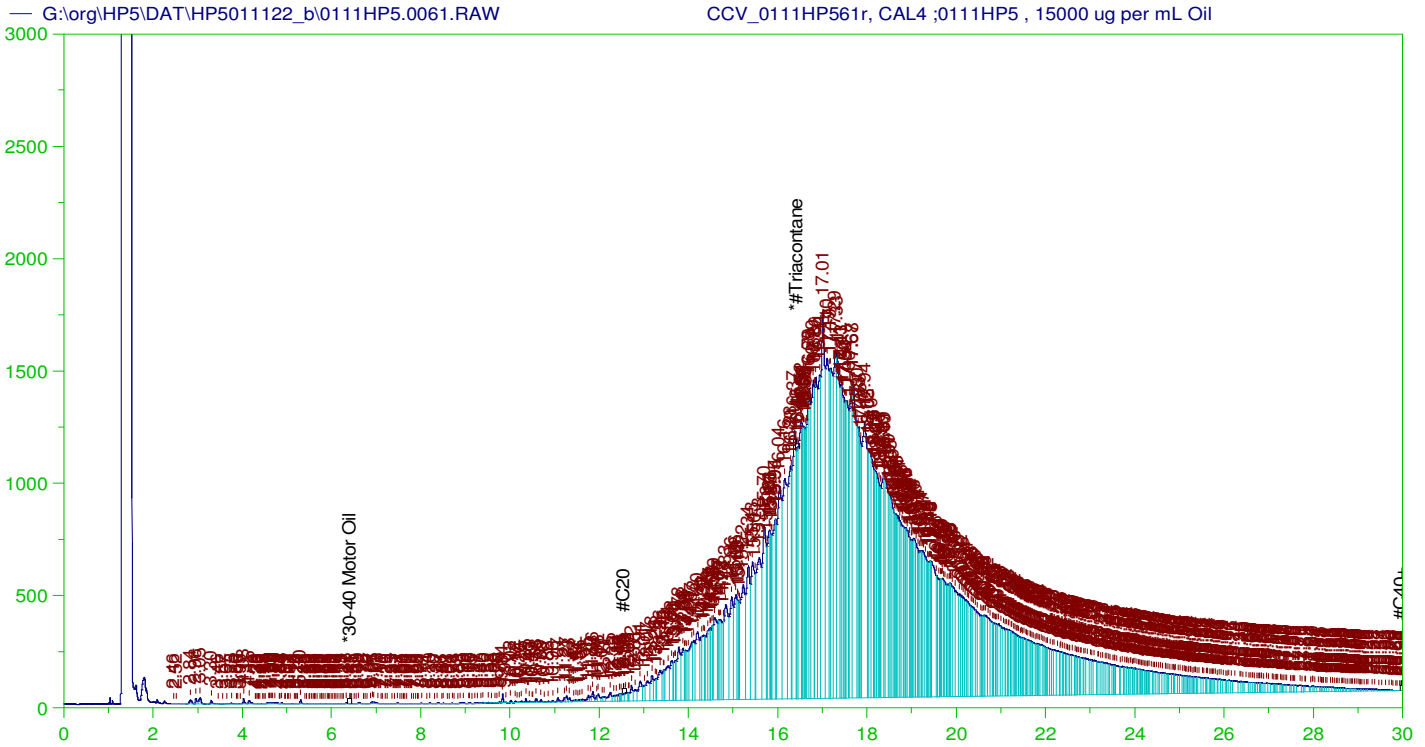
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 Date & Time Acquired: 1/13/2022 6:41:03 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	29.911	200.	.	.
*1-Chlorooctadecane	29.911	200.	.	.

DRO Area:316779.5 DRO Amount: 10.75384
 TEH Area:980005.5 TEH Amount: 33.26864



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP561r, CAL4 ;0111HP5 , 15000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0061.RAW
 Date & Time Acquired: 1/13/2022 7:24:16 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-61-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.51 to 30.05

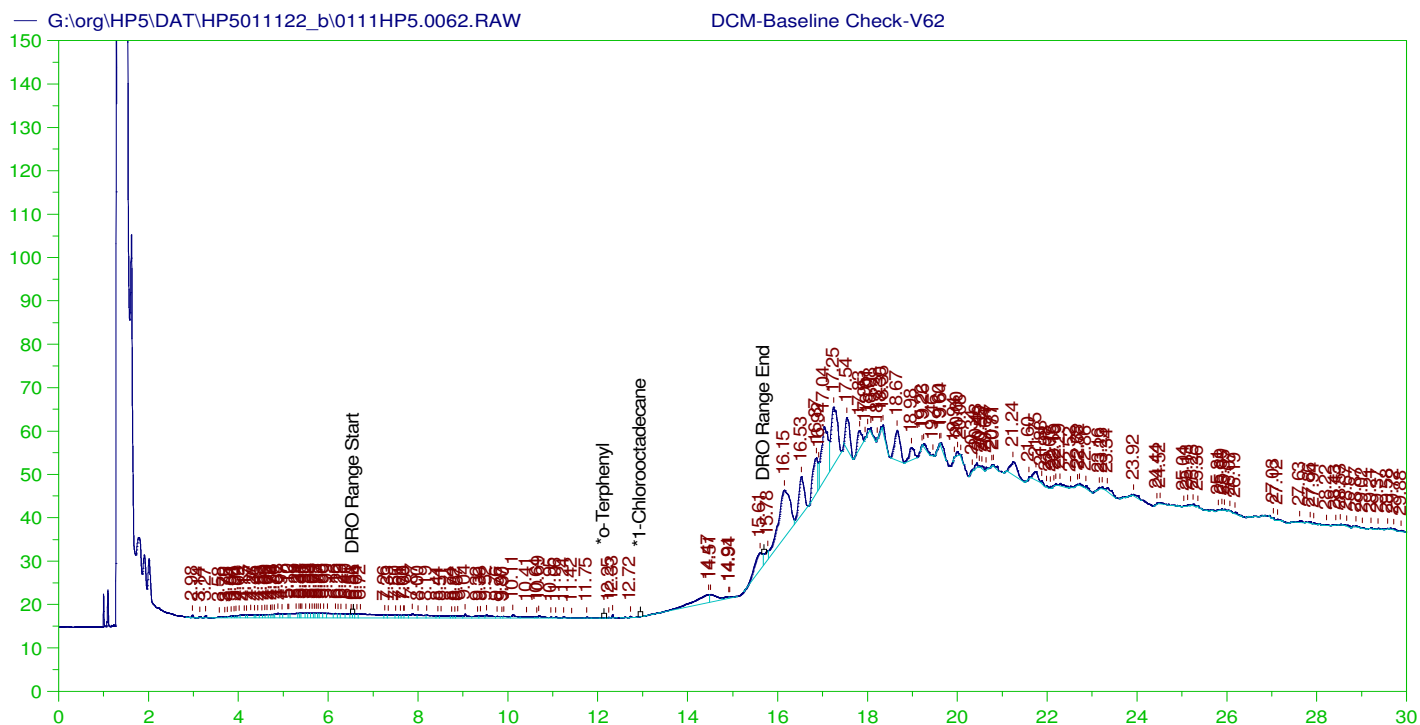
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.429	500.	33.728	6.75	-

RRO Area: 3.786286E+08 RRO AMOUNT: 14328.67

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0061.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.086	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.429	200.	33.728	16.86	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

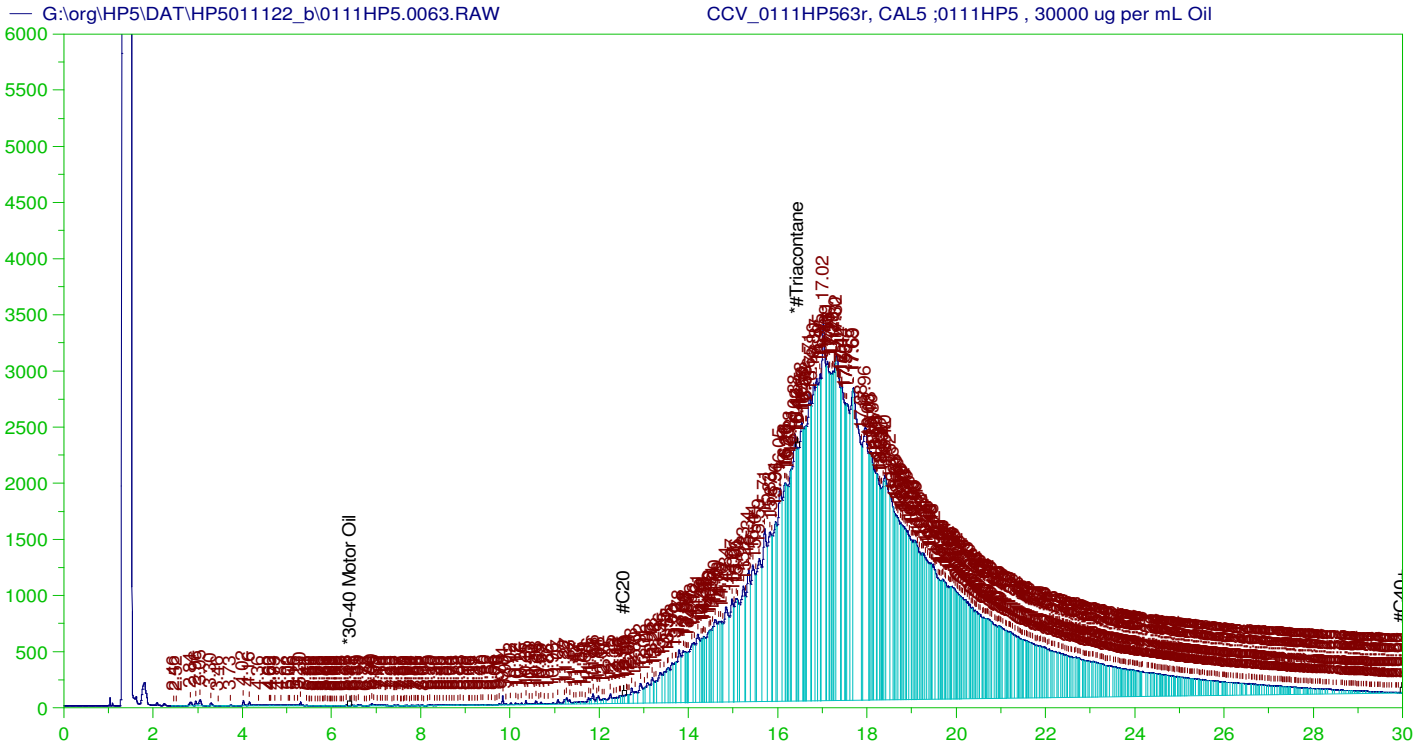
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 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	29.883	200.	.	-
*1-Chlorooctadecane	29.883	200.	.	-

DRO Area: 289041.4 DRO Amount: 9.812207
 TEH Area: 1408450 TEH Amount: 47.81323



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP563r, CAL5 ;0111HP5 , 30000 ug per mL Oil
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0063.RAW
 Date & Time Acquired: 1/13/2022 8:50:32 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.51 to 30.05

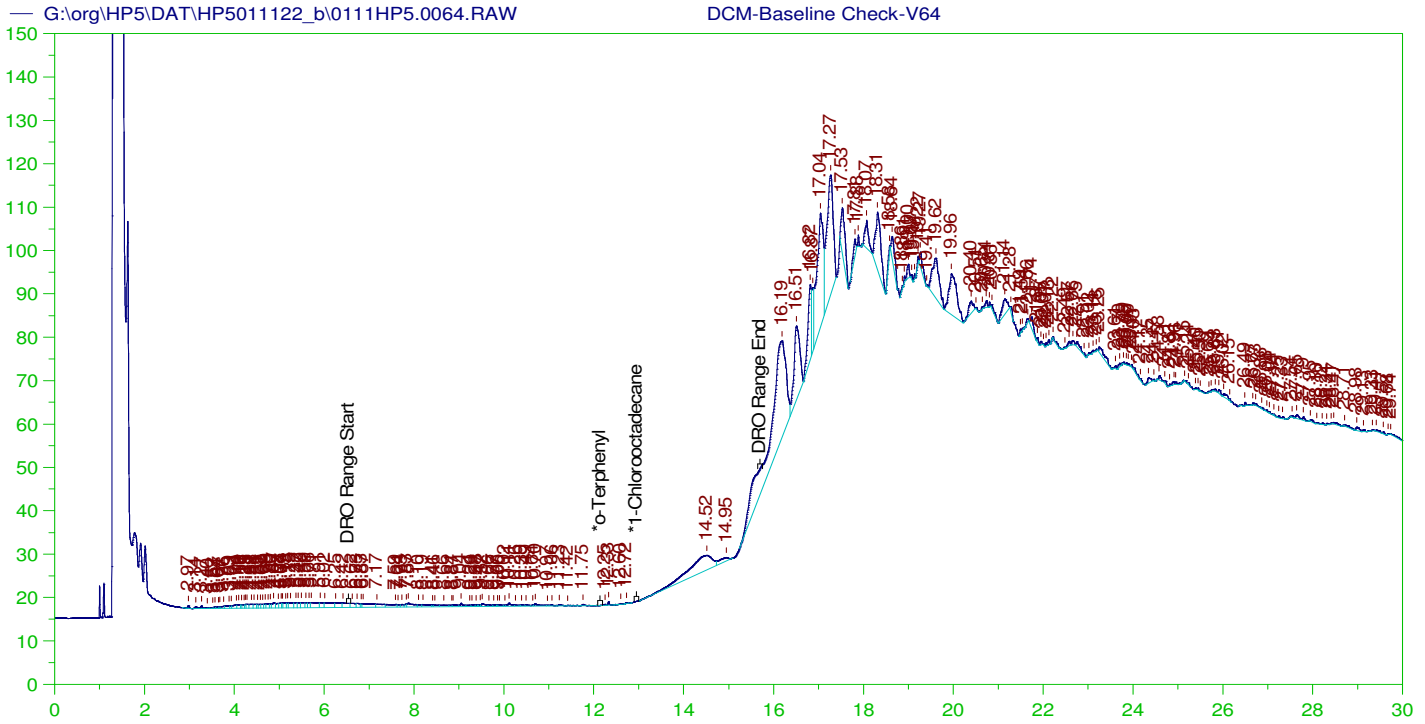
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.44	500.	102.625	20.52	-

RRO Area: 7.608009E+08 RRO AMOUNT: 28791.44

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0063.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.102	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.44	200.	102.625	51.31	75-125



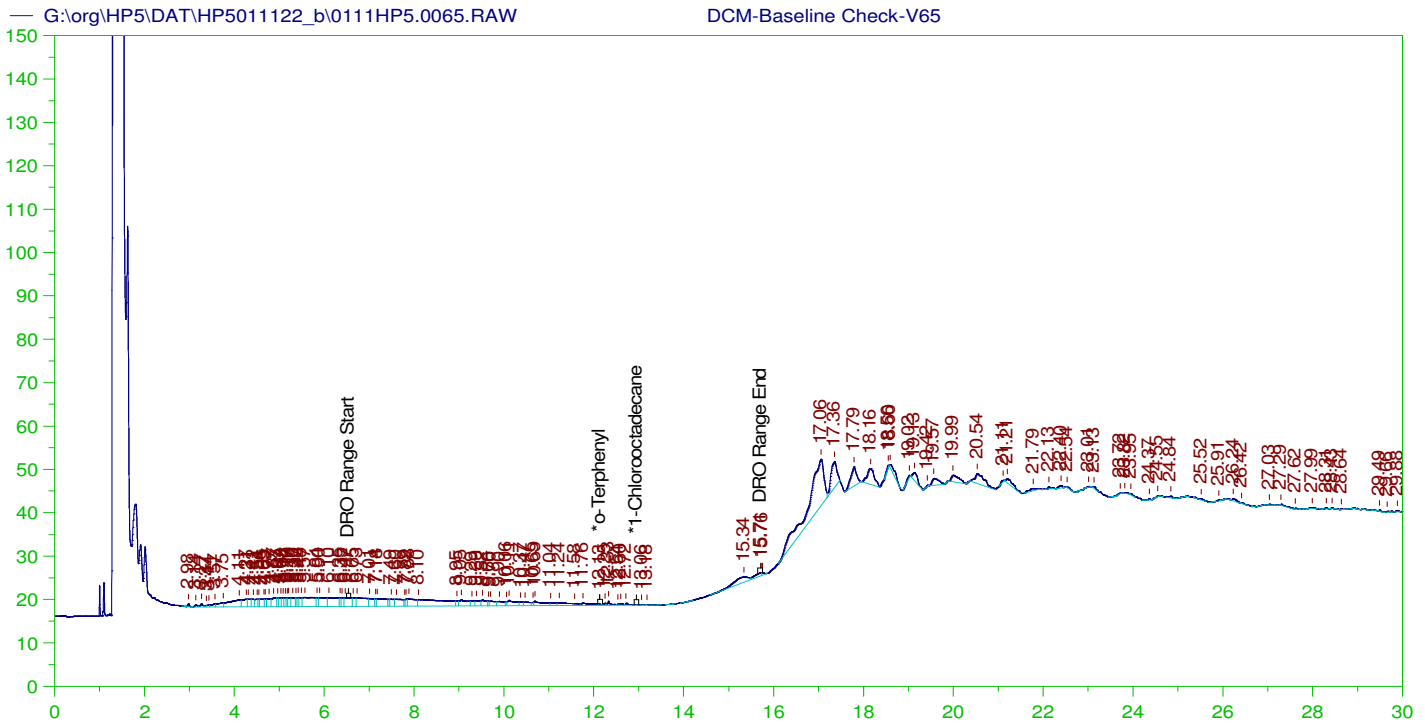
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V64
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0064.RAW
 Date & Time Acquired: 1/13/2022 9:33:32 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	29.741	200.	.	-
*1-Chlorooctadecane	29.741	200.	.	-

DRO Area:282237.4 DRO Amount: 9.581227
 TEH Area:2669631 TEH Amount: 90.62704



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

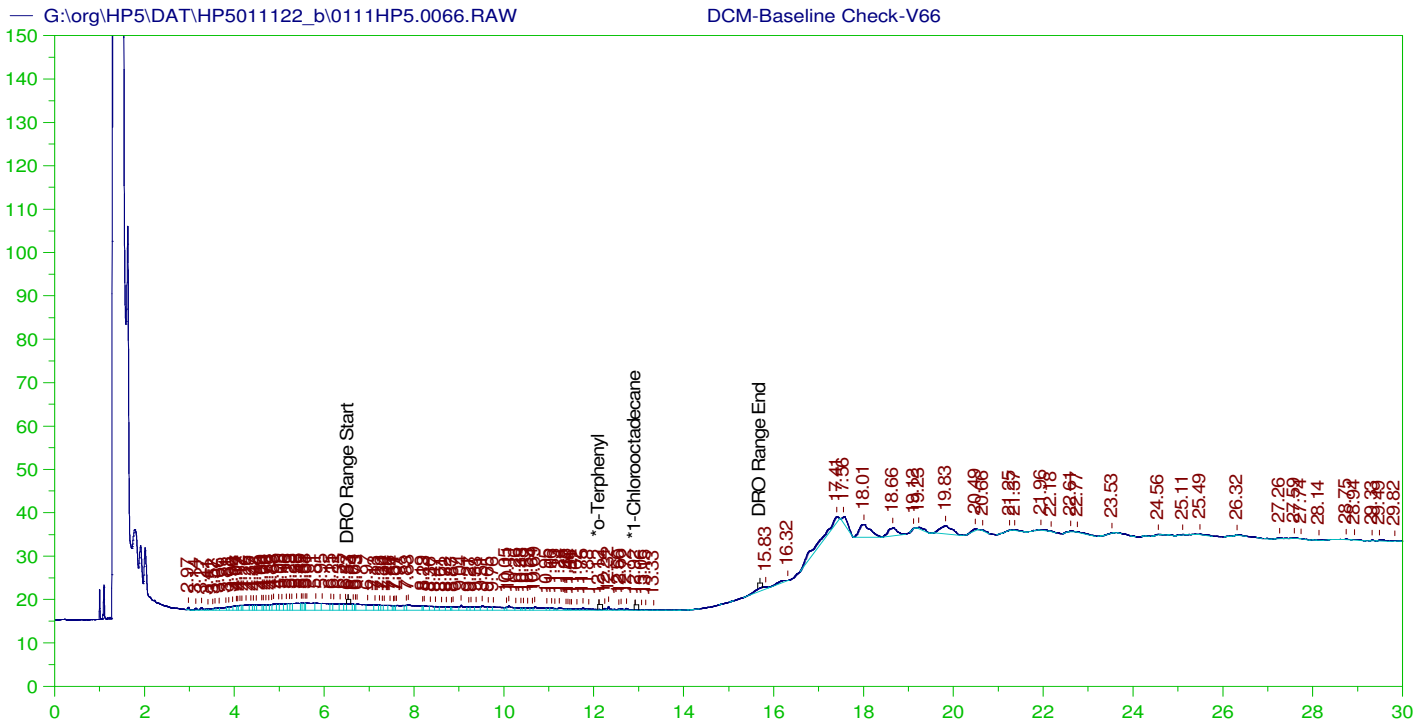
Sample Name: DCM-Baseline Check-V65
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0065.RAW
 Date & Time Acquired: 1/13/2022 10:16:33 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	12.129	200.	.021	.01
*1-Chlorooctadecane	29.884	200.	.	.

DRO Area:397141.5 DRO Amount: 13.48192
 TEH Area:1310457 TEH Amount: 44.48662



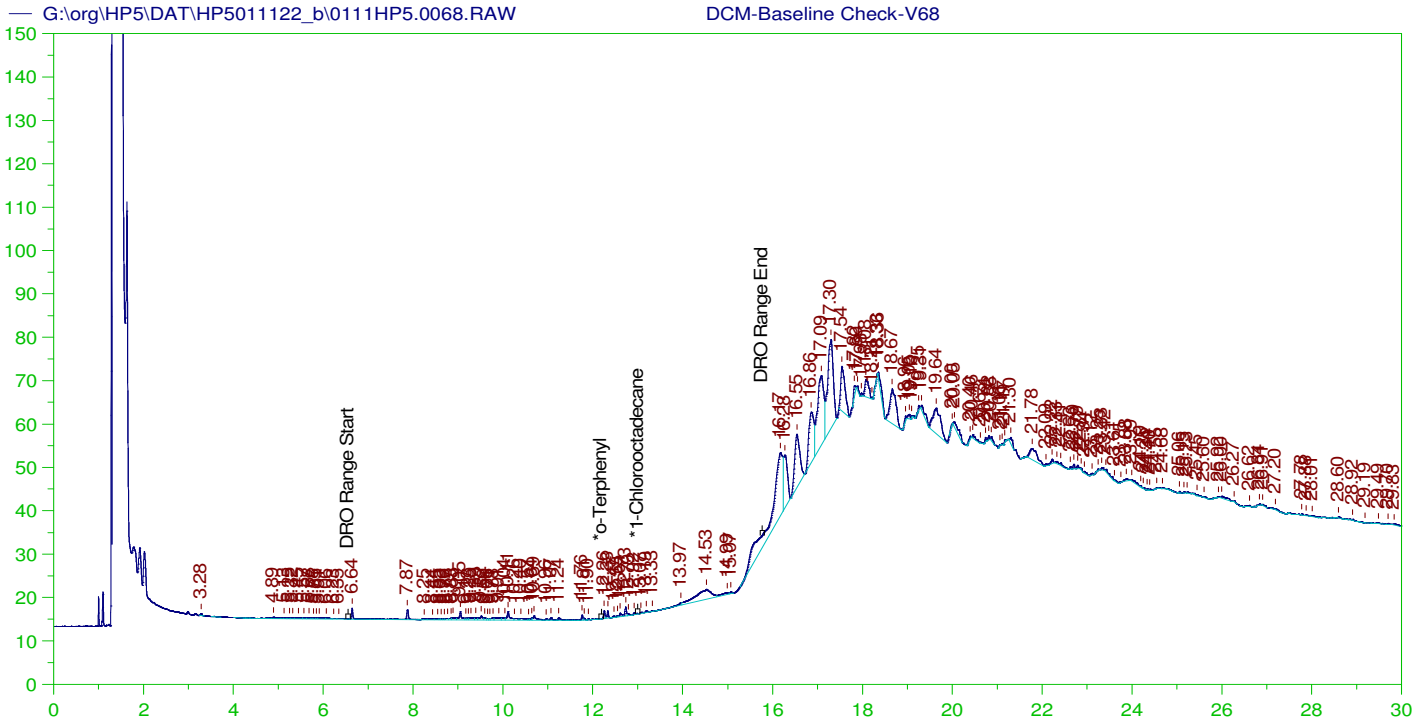
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V66
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0066.RAW
 Date & Time Acquired: 1/13/2022 10:59:39 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	12.12	200.	.025	.01
*1-Chlorooctadecane	12.922	200.	.037	.02

DRO Area: 278500.4 DRO Amount: 9.454367
 TEH Area: 757930.2 TEH Amount: 25.72976



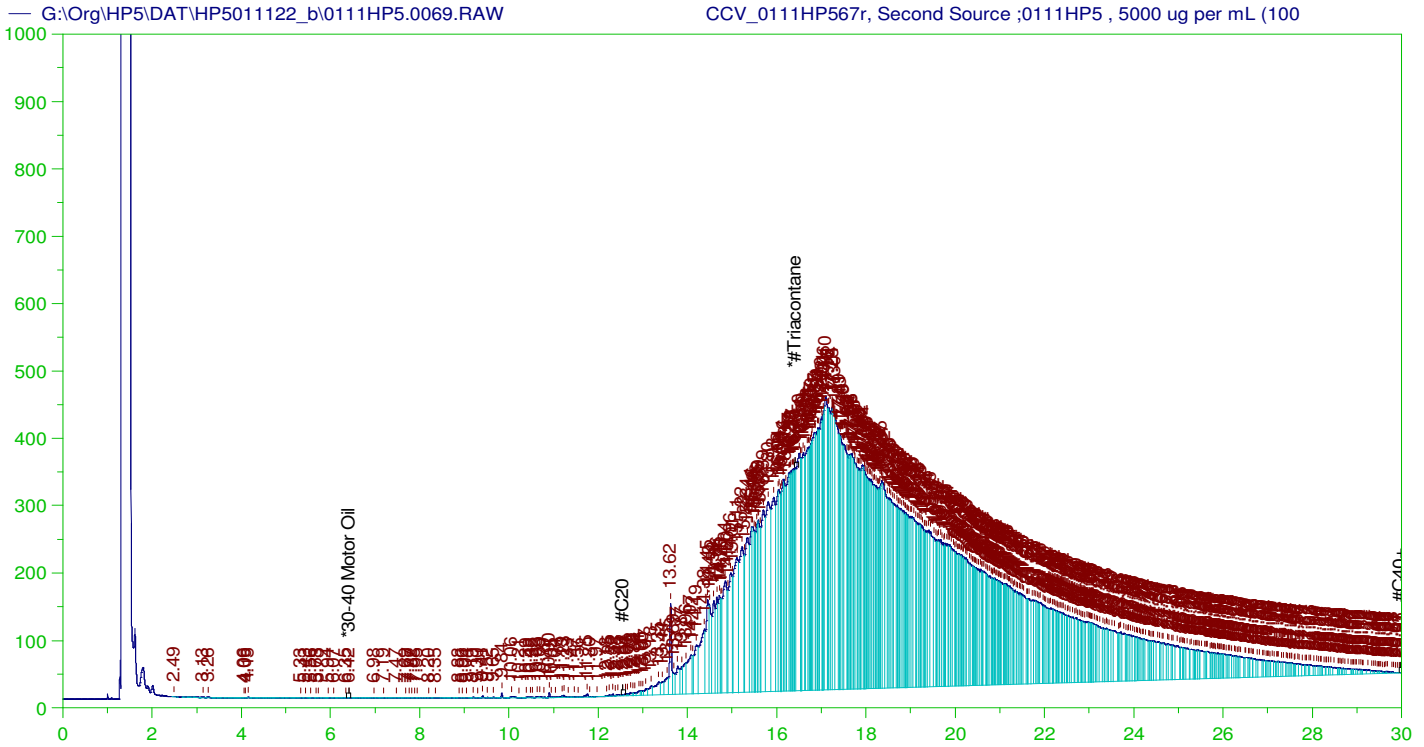
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V68
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0068.RAW
 Date & Time Acquired: 1/14/2022 7:35:26 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.5 to 15.82

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.833	200.	.	-
*1-Chlorooctadecane	29.833	200.	.	-

DRO Area:178261.1 DRO Amount: 5.685582
 TEH Area:1513925 TEH Amount: 48.28614



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0111HP567r, Second Source ;0111HP5 , 5000 ug per mL (100
 Raw File: G:\Org\HP5\DAT\HP5011122_b\0111HP5.0069.RAW
 Date & Time Acquired: 1/14/2022 8:18:14 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-59-BA-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.51 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.408	500.	23.958	4.79	-

RRO Area:1.341574E+08 RRO AMOUNT: 5076.999

CONTINUING CALIBRATION REPORT: G:\Org\HP5\DAT\HP5011122_b\0111HP5.0069.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.408	200.	23.958	11.98	75-125

Write Sequence	Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.25r	DCM-Baseline Check-V25	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.26r	Marker_0111HP526r_DRO_0111HP5 , DRO220111A	G:\org\HP5\Methods\CSC210212.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.27r	DCM-Baseline Check-V27	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.28r	CCV_0111HP528r, CAL1 :0111HP5 , 2 ug per mL Triacontane (10 uL of Cal3 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.29r	CCV_0111HP529r, CAL2 :0111HP5 , 50 ug per mL Triacontane (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.30r	CCV_0111HP530r, CAL3 :0111HP5 , 200 ug per mL Triacontane (100uL of Cal5 + 400 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.31r	CCV_0111HP531r, CAL4 :0111HP5 , 500 ug per mL Triacontane (250uL of Cal5 + 250 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.32r	DCM-Baseline Check-V33	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.50r	CCV_0111HP550r, CAL5 :0111HP5 , 1000 ug per mL Triacontane (DRO211006A)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.51r	DCM-Baseline Check-V51	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.52r	DCM-Baseline Check-V52	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.53r	Marker_0111HP553r_DRO_0111HP5 , DRO220111A	G:\org\HP5\Methods\CSC210212.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.54r	DCM-Baseline Check-V54	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.55r	CCV_0111HP555r, CAL1 :0111HP5 , 150 ug per mL Oil (10 uL of Cal4 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-55-BA-L%.xls	1	1	1	1	0	The integration of TEH(Oil Range)is the hydrocarbon response with reference to the baseline. Assigned Set Baseline Now at 25 minutes. Y-Scale adjusted.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.56r	DCM-Baseline Check-V56	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.57r	CCV_0111HP557r, CAL2 :0111HP5 , 1000 ug per mL Oil (200 uL of Cal 3 +800 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-57-BA-L%.xls	1	1	1	1	0	The integration of TEH(Oil Range)is the hydrocarbon response with reference to the baseline. Y-Scale adjusted.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.58r	DCM-Baseline Check-V58	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.59r	CCV_0111HP559r, CAL3 :0111HP5 , 5000 ug per mL Oil (100 uL of DRO211118A + 900 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-59-BA-L%.xls	1	1	1	1	0	The integration of TEH(Oil Range)is the hydrocarbon response with reference to the baseline. Y-Scale adjusted.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.60r	DCM-Baseline Check-V60	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.61r	CCV_0111HP561r, CAL4 :0111HP5 , 15000 ug per mL Oil (200 uL of CAL5 + 200 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-61-BA-L%.xls	1	1	1	1	0	The integration of TEH(Oil Range)is the hydrocarbon response with reference to the baseline. Y-Scale adjusted.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.62r	DCM-Baseline Check-V62	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.63r	CCV_0111HP563r, CAL5 :0111HP5 , 30000 ug per mL Oil (600 uL of DRO211118A + 400 uL of DCM)	G:\Org\HP5\Methods\DC_ORO-BA-L%.xls	1	1	1	1	0	The integration of TEH(Oil Range)is the hydrocarbon response with reference to the baseline. Y-Scale adjusted.
	G:\org\HP5\DAT\HP5011122_b\0111HP5.64r	DCM-Baseline Check-V64	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.65r	DCM-Baseline Check-V65	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.66r	DCM-Baseline Check-V66	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.68r	DCM-Baseline Check-V68	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
	G:\org\HP5\DAT\HP5011122_b\0111HP5.69r	CCV_0111HP567r, Second Source :0111HP5 , 5000 ug per mL (100uL of DRO210902A + 900uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-59-BA-L%.xls	1	1	1	1	0	The integration of TEH(Oil Range)is the hydrocarbon response with reference to the baseline. Y-Scale adjusted.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.02.11 10:29:31 -07:00

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **163074** Prep Temp **NA °C**

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

Prep Start Date: **1/19/2022 4:29:51 PM**
 Prep End Date: **1/21/2022 4:59:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-163074			1000	0	0	1.00	0.001		1/19/2022	1/21/2022
Start time: 4:16 PM, 1/19/2022. End time: 01/20/2022 at 10:16 AM. SGT by ALN on remainder of sample on 1/24/2022.										
LCS-163074			1000	0	0	1.00	0.001		1/19/2022	1/21/2022
All bottles were completely used, defaced and disposed of on 1/19/2022. S SGT by ALN on remainder of sample on 1/24/2022.										
LCS-163074-RRO			1000	0	0	1.00	0.001		1/19/2022	1/21/2022
SGT by ALN on remainder of sample on 1/24/2022.										
MBN2-163074			1000	0	0	1.00	0.001		1/19/2022	1/21/2022
SGT by ALN on remainder of sample on 1/24/2022.										
MDL2-163074			1000	0	0	1.00	0.001		1/19/2022	1/21/2022
SGT by ALN on remainder of sample on 1/24/2022.										
B22011136-001D	Ground Water	2	1010	0	0	1.00	0.00099		1/19/2022	1/21/2022
Bottle 1/6. Clear, orange sediment. SGT by ALN on remainder of sample on 1/24/2022.										
B22011136-001DMS	Ground Water	2	1010	0	0	1.00	0.00099		1/19/2022	1/21/2022
Bottle 2/6. Clear, orange sediment. SGT by ALN on remainder of sample on 1/24/2022.										
B22011136-001DMSD	Ground Water	2	1010	0	0	1.00	0.00099		1/19/2022	1/21/2022
Bottle 3/6. Clear, orange sediment. SGT by ALN on remainder of sample on 1/24/2022.										
B22011136-001DMS-RRO	Ground Water	2	1000	0	0	1.00	0.001		1/19/2022	1/21/2022
Bottle 4/6. Clear, orange sediment. SGT by ALN on remainder of sample on 1/24/2022.										
B22011136-001DMSD-RRO	Ground Water	2	1030	0	0	1.00	0.000971		1/19/2022	1/21/2022
Bottle 5/6. Clear, orange sediment. SGT by ALN on remainder of sample on 1/24/2022.										
B22011124-001D	Ground Water	2	1000	0	0	1.00	0.001		1/19/2022	1/21/2022
Bottle 1/2. Clear.										
B22011125-001D	Ground Water	2	990	0	0	1.00	0.00101		1/19/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										
B22011126-001D	Ground Water	2	1050	0	0	1.00	0.000952		1/19/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										
B22011127-001D	Ground Water	2	1050	0	0	1.00	0.000952		1/19/2022	1/21/2022
Bottle 1/2. Clear.										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14719	4ML, Amber Vial, 20220104	1/4/2027
14747	Dichloromethane EC849	11/1/2023

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220113 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 01/18/22 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220119A	Triacontane SURR 1000 ug/mL	All except LCS, L	100 uL	4/6/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS,	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, LCSD	100 uL	9/1/2026
DRO211121C	MDL Diesel SPK 3000 ug/mL in Acet	MDL	50 uL	11/5/2023
DRO220117A	OTPolny SURR 20 ug/mL	MDL	100 uL	9/30/2024

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **163074** Prep Temp **NA °C**

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

Prep Start Date: **1/19/2022 4:29:51 PM**
 Prep End Date: **1/21/2022 4:59:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B22011128-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/19/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										
B22011129-001D	Ground Water	2	1050	0	0	1.00	0.000952		1/19/2022	1/21/2022
Bottle 1/2. Turbid, light sediment. SGT by ALN on remainder of sample on 1/24/2022.										
B22011130-001D	Ground Water	2	1050	0	0	1.00	0.000952		1/19/2022	1/21/2022
Bottle 1/2. Clear.										
B22011131-001D	Ground Water	2	1050	0	0	1.00	0.000952		1/19/2022	1/21/2022
Bottle 1/2. Clear.										
B22011132-001D	Ground Water	2	1010	0	0	1.00	0.00099		1/19/2022	1/21/2022
Bottle 1/2. Clear, light sediment.										
B22011133-001D	Ground Water	2	970	0	0	1.00	0.00103		1/19/2022	1/21/2022
Bottle 1/2. Clear.										
B22011134-001D	Ground Water	2	1000	0	0	1.00	0.001		1/19/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										
B22011134-002B	Ground Water	2	990	0	0	1.00	0.00101		1/19/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										
B22011135-001D	Ground Water	2	990	0	0	1.00	0.00101		1/19/2022	1/21/2022
Bottle 1/2. Clear, light sediment. SGT by ALN on remainder of sample on 1/24/2022.										
B22011137-001D	Ground Water	2	1030	0	0	1.00	0.000971		1/19/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										
MDL1-163074-RRO			1000	0	0	1.00	0.001		1/20/2022	1/21/2022
Lines 25-28 Start time: 1:12 PM, 1/20/2022. End time: 01/21/2022 at 7:52 AM. SGT by ALN on remainder of sample on 1/24/2022.										
LOD-163074-RRO			1000	0	0	1.00	0.001		1/20/2022	1/21/2022
SGT by ALN on remainder of sample on 1/24/2022.										
B22011214-001D	Ground Water	2	1000	0	0	1.00	0.001		1/20/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										
B22011227-001D	Ground Water	2	990	0	0	1.00	0.00101		1/20/2022	1/21/2022
Bottle 1/2. Clear. SGT by ALN on remainder of sample on 1/24/2022.										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14719	4ML, Amber Vial, 20220104	1/4/2027
14747	Dichloromethane EC849	11/1/2023

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220113 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 01/18/22 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220119A	Triacontane SURR 1000 ug/mL	All except LCS, L	100 uL	4/6/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS,	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, LCSD	100 uL	9/1/2026
DRO211121C	MDL Diesel SPK 3000 ug/mL in Acet	MDL	50 uL	11/5/2023
DRO220117A	OTPNonly SURR 20 ug/mL	MDL	100 uL	9/30/2024

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **163074** Prep Temp **NA °C**

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

Prep Start Date: **1/19/2022 4:29:51 PM**
 Prep End Date: **1/21/2022 4:59:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B22011228-001D	Ground Water	2	1020	0	0	1.00	0.00098		1/20/2022	1/21/2022
Bottle 1/2. Clear. Start time: 2:18 PM, 1/20/2022. End time: 01/21/2022 at 8:20 AM. SGT by ALN on remainder of sample on 1/24/2022.										

Number	Reagent Name	Exp Date
11	Carbon Filter Water	1/1/2023
13379	PTFE Boiling Stones 27463755	12/30/2025
14206	pH-indicator Strips 0-14 HC160347	8/26/2026
14719	4ML, Amber Vial, 20220104	1/4/2027
14747	Dichloromethane EC849	11/1/2023

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220113 14446	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 01/18/22 (	Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220119A	Triacontane SURR 1000 ug/mL	All except LCS, L	100 uL	4/6/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS, LCSD, MS,	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS-RRO, LCSD	100 uL	9/1/2026
DRO211121C	MDL Diesel SPK 3000 ug/mL in Acet	MDL	50 uL	11/5/2023
DRO220117A	OTPonly SURR 20 ug/mL	MDL	100 uL	9/30/2024

Energy Laboratories Inc

ANALYTICAL RUN Summary

25-Jan-22

Run ID GCFID-HP5-B_220122A

Run Start Date: 1/22/2022
Analyst: Ann Nebel
Ical:
Column ID:
Comments: DRO-8015-ICAL information is in Index GCFID-HP5-B_220111A 8015C OIL range calibration GCFID-HP5-B_220111C

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
DRO220111A	Carbon Scan STD-Marker					MARKER	7/13/2026
DRO220114A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023
DRO220118A	5,000 ug/mL RRO CCV 200 ug/mL Triacontane					CCV-RRO	4/6/2026

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14993838	CCV_0122HP50	HC-8015-DRO-	CCV		1/22/2022 12:23:	1	R373590		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		4.58725049		5	0	0	0.0879	0.3	0	92%	80	120	0%	
n-Triacontane	S	mg/L		0.2082392		0.2	0	0	0.000336	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
14993839	CCV_0122HP50	HC-8015-DRO-	CCV		1/22/2022 1:05:5	1	R373590		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		14.31278		15	0	0	0.0389	0.3	0	95%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.83332		15	0	0	0.0749	0.3	50	99%	80	120	0%	
o-Terphenyl	S	mg/L		0.2057624		0.2	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
14993840	LCS-163074	HC-8015-DRO-	LCS-DOD		1/22/2022 3:13:4	1	163074	1/19/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
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Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993840	LCS-163074	HC-8015-DRO-	LCS-DOD		1/22/2022 3:13:4	1	163074	1/19/2022 4:	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		12.4444		15	0	0	0.0389	0.3	0	83%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		13.27563		15	0	0	0.0749	0.3	50	89%	60	132	0%	
o-Terphenyl	S	mg/L		0.19445		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					
14993841	MB-163074	HC-8015-DRO-	MBLK		1/22/2022 3:56:2	1	163074	1/19/2022 4:	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		0.099		0.1	0	0	0.000336	0.002	0	99%	50	150	0%	
o-Terphenyl	S	mg/L		0.1900033		0.2	0	0	0.000429	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					
14993842	B22011133-001	HC-8015-DRO-	SAMP		1/22/2022 4:38:5	1	163074	1/19/2022 4:	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	0.040067	0.309	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.090537	0.309	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.077147	0.309	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.104		0.103	0	0	0.0003461	0.00206	0	101%	50	150	0%	
o-Terphenyl	S	mg/L		0.2001346		0.206	0	0	0.0004419	0.00206	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					
14993843	B22011130-001	HC-8015-DRO-	SAMP		1/22/2022 5:21:4	1	163074	1/19/2022 4:	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		0.093		0.0952	0	0	0.0003199	0.001904	0	98%	50	150	0%	
o-Terphenyl	S	mg/L		0.1795577		0.1904	0	0	0.0004084	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					
14993844	B22011127-001	HC-8015-DRO-	SAMP		1/22/2022 6:04:4	1	163074	1/19/2022 4:	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		0.093		0.0952	0	0	0.0003199	0.001904	0	98%	50	150	0%	
o-Terphenyl	S	mg/L	0.1770193			0.1904	0	0	0.0004084	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					
14993845	B22011124-001	HC-8015-DRO-	SAMP		1/22/2022 7:30:3	1	163074	1/19/2022 4:	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	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0879	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0749	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.098		0.1	0	0	0.000336	0.002	0	98%	50	150	0%	
o-Terphenyl	S	mg/L	0.1868575			0.2	0	0	0.000429	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					
14993846	B22011136-001	HC-8015-DRO-	SAMP		1/22/2022 8:13:2	1	163074	1/19/2022 4:	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	0.04119858			0	0	0	0.038511	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.087021	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L	0.133291			0	0	0	0.074151	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.098		0.099	0	0	0.0003326	0.00198	0	99%	50	150	0%	
o-Terphenyl	S	mg/L	0.1798325			0.198	0	0	0.0004247	0.002	0	91%	56	125	0%	
TEH(Oil Range)	X	mg/L	0.12946054			0	0	0	0.087021	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					
14993847	B22011136-001	HC-8015-DRO-	MS-DOD		1/22/2022 8:56:2	1	163074	1/19/2022 4:	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		12.01359		14.85	0.0411986	0	0.038511	0.3	0	81%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		12.84102		14.85	0.133291	0	0.074151	0.3	50	86%	60	132	0%	
o-Terphenyl	S	mg/L	0.1797402			0.198	0	0	0.0004247	0.002	0	91%	56	125	0%	

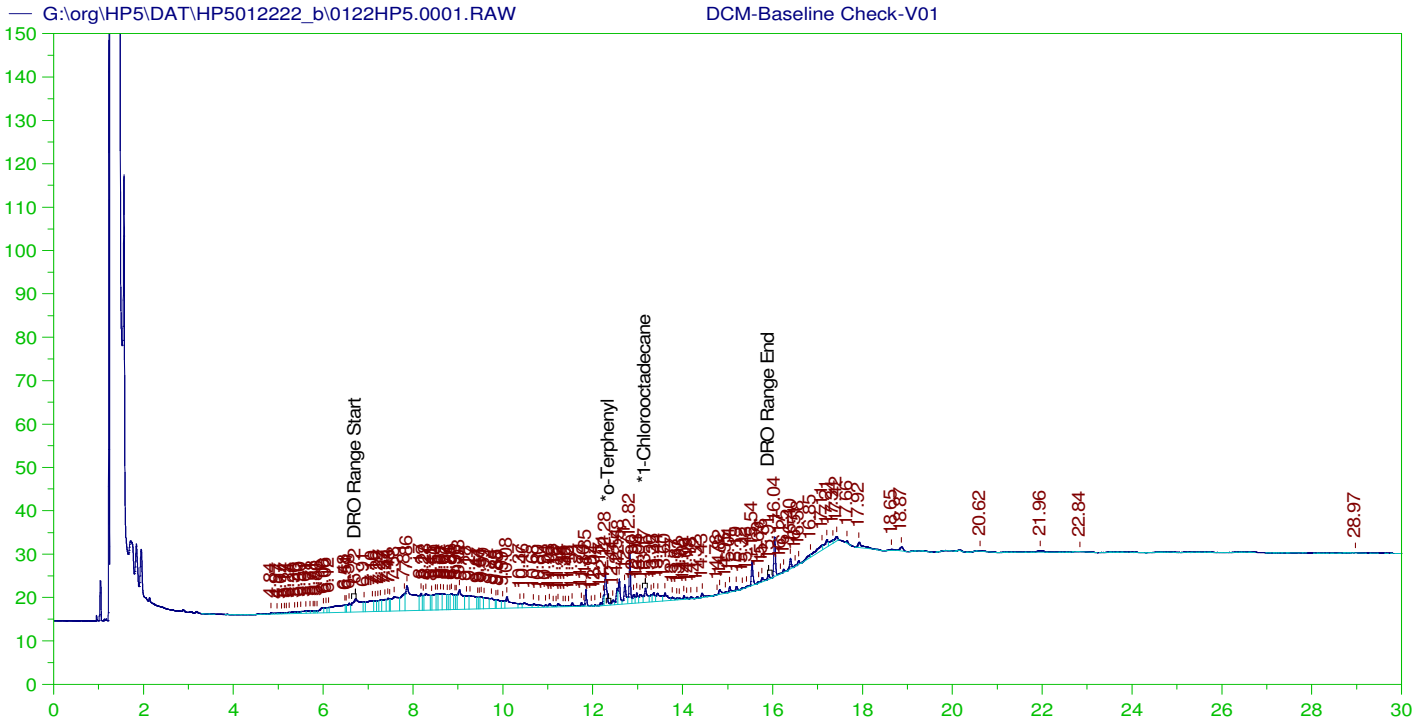
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993848	B22011136-001	HC-8015-DRO-	MSD-DOD		1/22/2022 9:39:2	1	163074	1/19/2022 4:	1E+07	1E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		12.86723		14.85	0.0411986	12.01359	0.038511	0.3	0	86%	36	132	7%	
Total Extractable Hydrocarbons	A	mg/L		13.80055		14.85	0.133291	12.84102	0.074151	0.3	50	92%	60	132	7%	
o-Terphenyl	S	mg/L		0.1917537		0.198	0	0	0.0004247	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					
14993849	CCV_0122HP51	HC-8015-DRO-	CCV		1/22/2022 11:05:	1	R373590			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		4.6328252		5	0	0	0.0879	0.3	0	93%	80	120	0%	
n-Triacontane	S	mg/L		0.2100352		0.2	0	0	0.000336	0.002	0	105%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993850	CCV_0122HP52	HC-8015-DRO-	CCV		1/22/2022 11:47:	1	R373590			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		15.16167		15	0	0	0.0389	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.67054		15	0	0	0.0749	0.3	50	104%	80	120	0%	
o-Terphenyl	S	mg/L		0.21784		0.2	0	0	0.000429	0.002	0	109%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993851	B22011131-001	HC-8015-DRO-	SAMP		1/23/2022 1:56:3	1	163074	1/19/2022 4:		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		0.096		0.0952	0	0	0.0003199	0.001904	0	101%	50	150	0%	
o-Terphenyl	S	mg/L		0.1823359		0.1904	0	0	0.0004084	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					
14993852	B22011137-001	HC-8015-DRO-	SAMP		1/23/2022 2:39:2	1	163074	1/19/2022 4:		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					
14993852	B22011137-001	HC-8015-DRO-	SAMP		1/23/2022 2:39:2	1	163074	1/19/2022 4:	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		5.152228		0	0	0	0.0377719	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.42649785		0	0	0	0.0853509	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		5.573177		0	0	0	0.0727279	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.094		0.0971	0	0	0.0003263	0.001942	0	97%	50	150	0%	
o-Terphenyl	S	mg/L		0.1442989		0.1942	0	0	0.0004166	0.002	0	74%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993853	B22011132-001	HC-8015-DRO-	SAMP		1/23/2022 4:05:0	1	163074	1/19/2022 4:	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	0.038511	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.087021	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.074151	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.097		0.099	0	0	0.0003326	0.00198	0	98%	50	150	0%	
o-Terphenyl	S	mg/L		0.1822185		0.198	0	0	0.0004247	0.002	0	92%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993854	B22011134-001	HC-8015-DRO-	SAMP		1/23/2022 4:48:0	1	163074	1/19/2022 4:	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		0.1591228		0	0	0	0.0389	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0879	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0.1883437		0	0	0	0.0749	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.097		0.1	0	0	0.000336	0.002	0	97%	50	150	0%	
o-Terphenyl	S	mg/L		0.1194513		0.2	0	0	0.000429	0.002	0	60%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993855	B22011134-002	HC-8015-DRO-	SAMP		1/23/2022 5:30:4	1	163074	1/19/2022 4:	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		0.2807122		0	0	0	0.039289	0.303	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.23253545		0	0	0	0.088779	0.303	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.5500479		0	0	0	0.075649	0.303	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.106		0.101	0	0	0.0003394	0.00202	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					
14993855	B22011134-002	HC-8015-DRO-	SAMP		1/23/2022 5:30:4	1	163074	1/19/2022 4:	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.2003157		0.202	0	0	0.0004333	0.00202	0	99%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993856	B22011126-001	HC-8015-DRO-	SAMP		1/23/2022 6:56:2	1	163074	1/19/2022 4:	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		0.1177243		0	0	0	0.0370328	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.24069065		0	0	0	0.0836808	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3627226		0	0	0	0.0713048	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.087		0.0952	0	0	0.0003199	0.001904	0	91%	50	150	0%	
o-Terphenyl	S	mg/L		0.1628372		0.1904	0	0	0.0004084	0.002	0	86%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993857	B22011128-001	HC-8015-DRO-	SAMP		1/23/2022 7:38:5	1	163074	1/19/2022 4:	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		0.1783622		0	0	0	0.0377719	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.40822896		0	0	0	0.0853509	0.3	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0.6003284		0	0	0	0.0727279	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.097		0.0971	0	0	0.0003263	0.001942	0	100%	50	150	0%	
o-Terphenyl	S	mg/L		0.1865468		0.1942	0	0	0.0004166	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					
14993858	B22011125-001	HC-8015-DRO-	SAMP		1/23/2022 8:21:3	1	163074	1/19/2022 4:	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		0.05833516		0	0	0	0.039289	0.303	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.24068913		0	0	0	0.088779	0.303	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.3083444		0	0	0	0.075649	0.303	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.103		0.101	0	0	0.0003394	0.00202	0	102%	50	150	0%	
o-Terphenyl	S	mg/L		0.1957013		0.202	0	0	0.0004333	0.00202	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					
14993859	CCV_0122HP53	HC-8015-DRO-	CCV		1/23/2022 9:46:5	1	R373590			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		4.44504004		5	0	0	0.0879	0.3	0	89%	80	120	0%	
n-Triacontane	S	mg/L		0.2019936		0.2	0	0	0.000336	0.002	0	101%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993860	CCV_0122HP53	HC-8015-DRO-	CCV		1/23/2022 10:29:	1	R373590			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		13.80116		15	0	0	0.0389	0.3	0	92%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.29655		15	0	0	0.0749	0.3	50	95%	80	120	0%	
o-Terphenyl	S	mg/L		0.1996613		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					
14993861	LCS-163074-RR	HC-8015-DRO-	LCS-DOD		1/23/2022 4:52:4	1	163074	1/19/2022 4:		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		4.99422026		5	0	0	0.0879	0.3	0	100%	41	113	0%	
n-Triacontane	S	mg/L		0.098		0.1	0	0	0.000336	0.002	0	98%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993862	B22011136-001	HC-8015-DRO-	MS-DOD		1/23/2022 6:18:4	1	163074	1/19/2022 4:	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		4.77760887		5	0.1294605	0	0.0879	0.3	0	93%	41	113	0%	
n-Triacontane	S	mg/L		0.094		0.1	0	0	0.000336	0.002	0	94%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993863	B22011136-001	HC-8015-DRO-	MSD-DOD		1/23/2022 7:01:4	1	163074	1/19/2022 4:	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		4.87107563		4.855	0.1294605	4.7776089	0.0853509	0.3	0	98%	41	113	2%	
n-Triacontane	S	mg/L		0.088		0.0971	0	0	0.0003263	0.002	0	91%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
14993864	CCV_0122HP54	HC-8015-DRO-	CCV		1/23/2022 8:27:3	1	R373590		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	4.44444043			5	0	0	0.0879	0.3	0	89%	80	120	0%	
n-Triacontane	S	mg/L	0.1929698			0.2	0	0	0.000336	0.002	0	96%	80	120	0%	



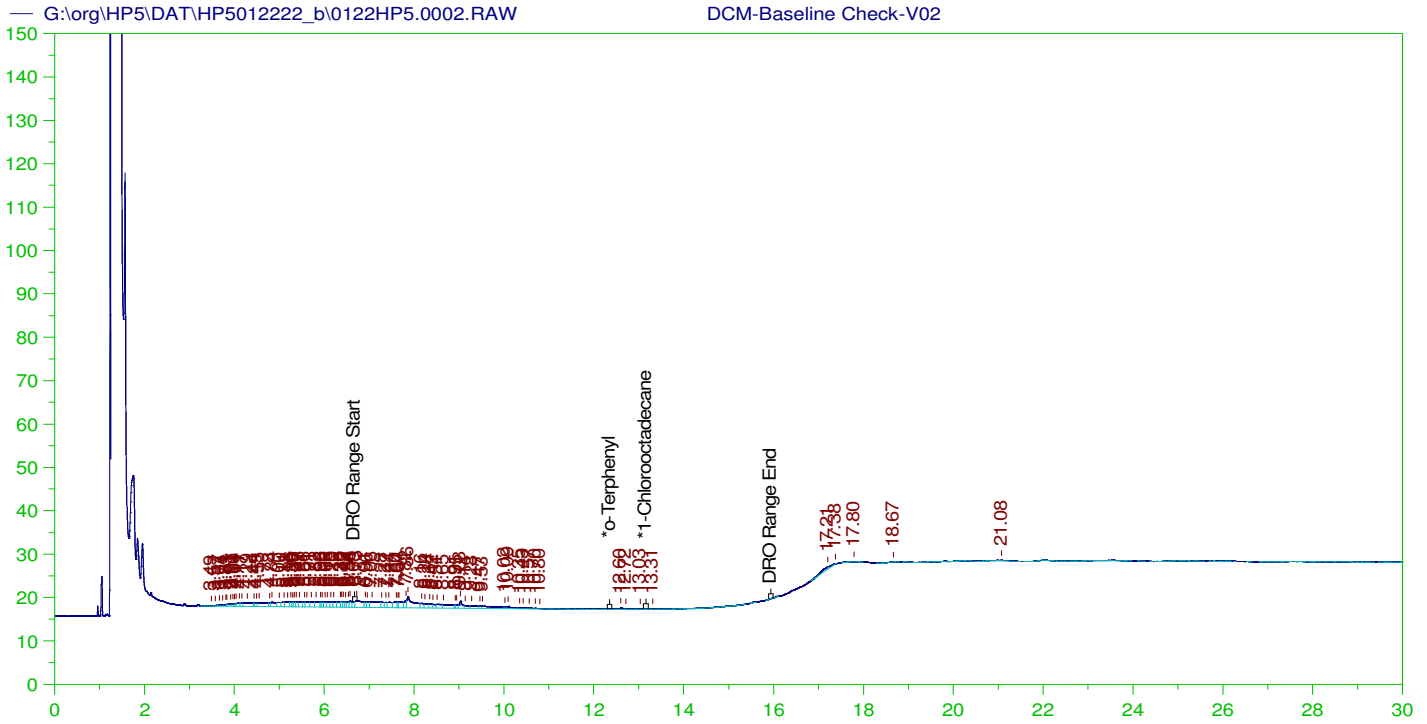
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0001.RAW
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 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.971	200.	.	-
*1-Chlorooctadecane	13.166	200.	.441	.22

DRO Area: 909998 DRO Amount: 27.84967
 TEH Area: 1102300 TEH Amount: 33.7349



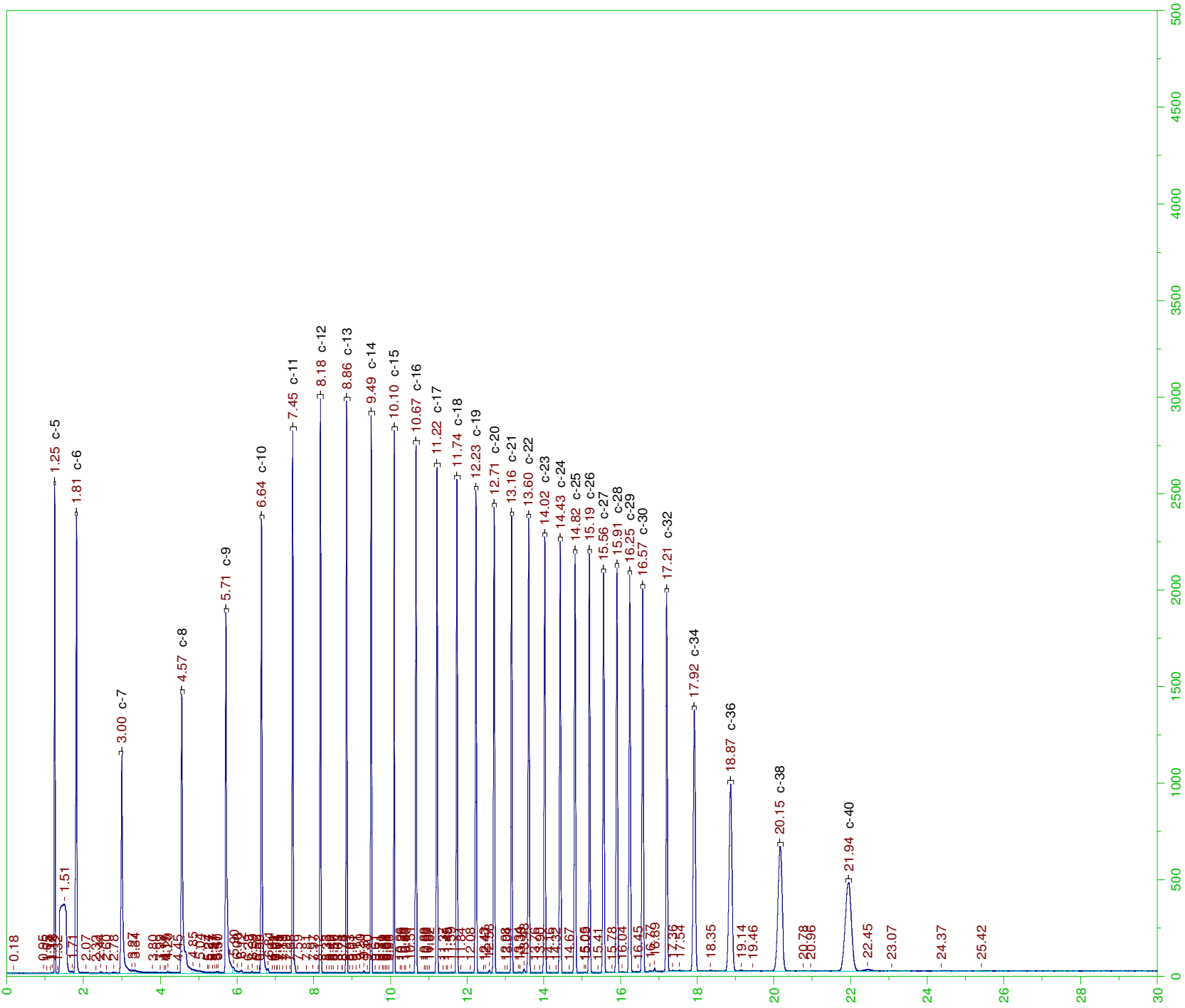
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

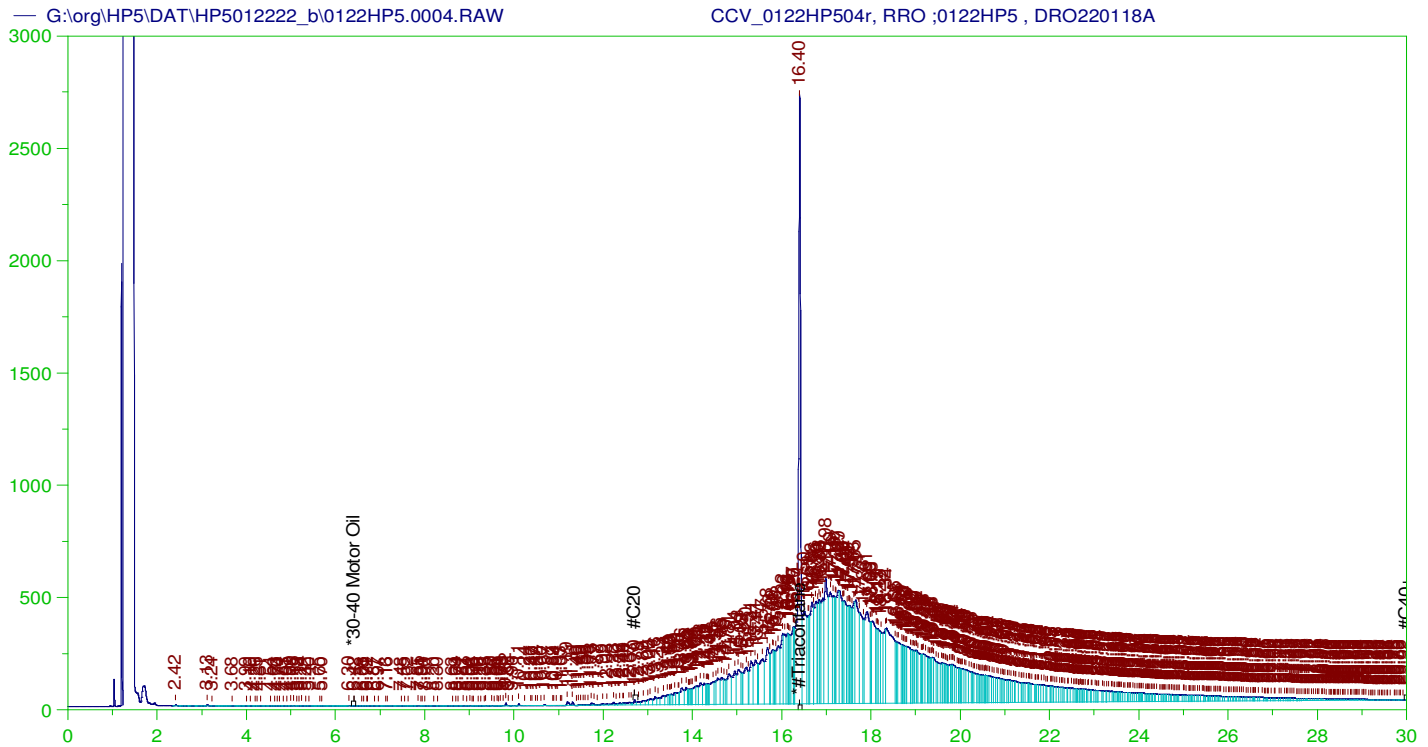
Sample Name: DCM-Baseline Check-V02
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0002.RAW
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 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.985	200.	.	-
*1-Chlorooctadecane	29.985	200.	.	-

DRO Area: 216019.8 DRO Amount: 6.611093
 TEH Area: 418614 TEH Amount: 12.81131





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP504r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0004.RAW
 Date & Time Acquired: 1/22/2022 12:23:23 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.399	500.	326.875	65.37	-

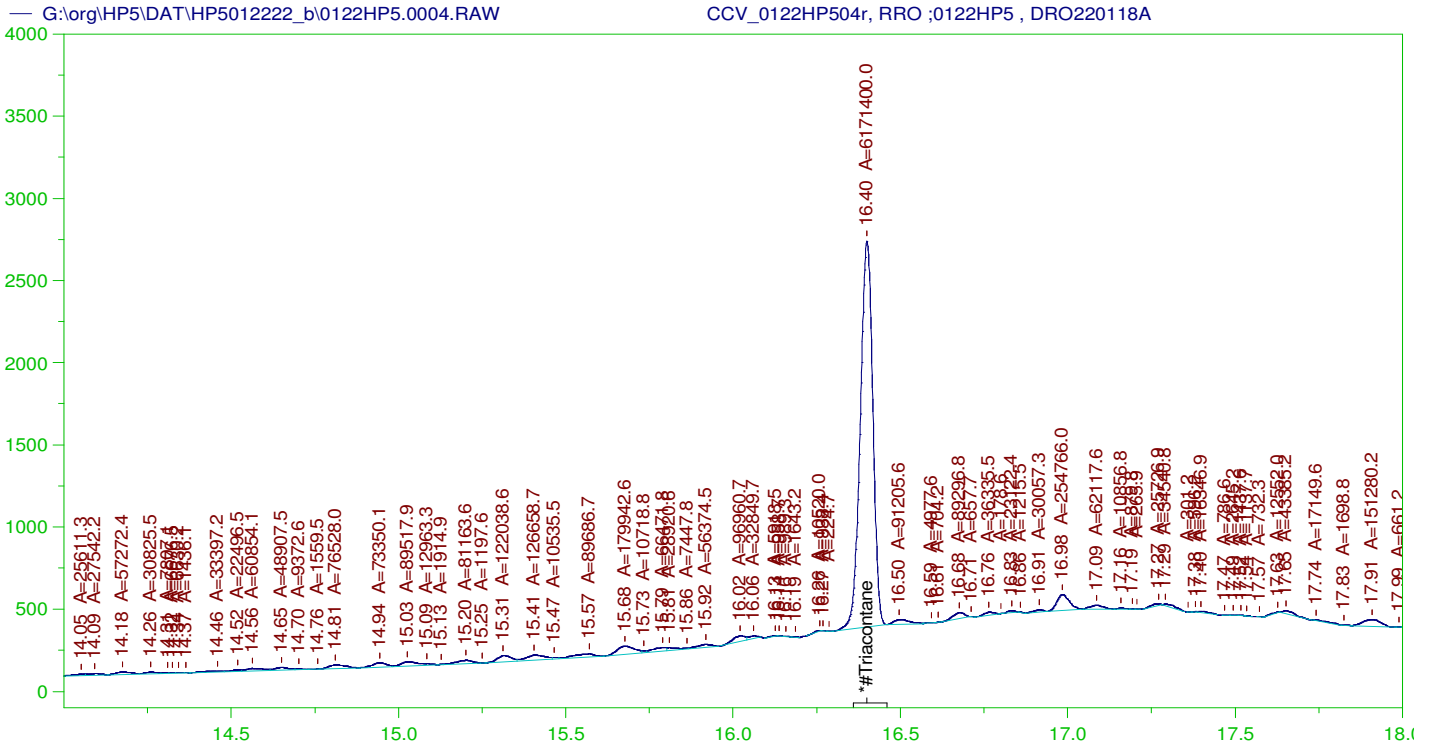
RRO TEH(Oil Range) Area:1.21216E+08 RRO TEH(Oil Range) AMOUNT: 4587.25

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.399	200.	326.875	163.44	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP504r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0004.RAW
 Date & Time Acquired: 1/22/2022 12:23:23 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.67 to 30.05

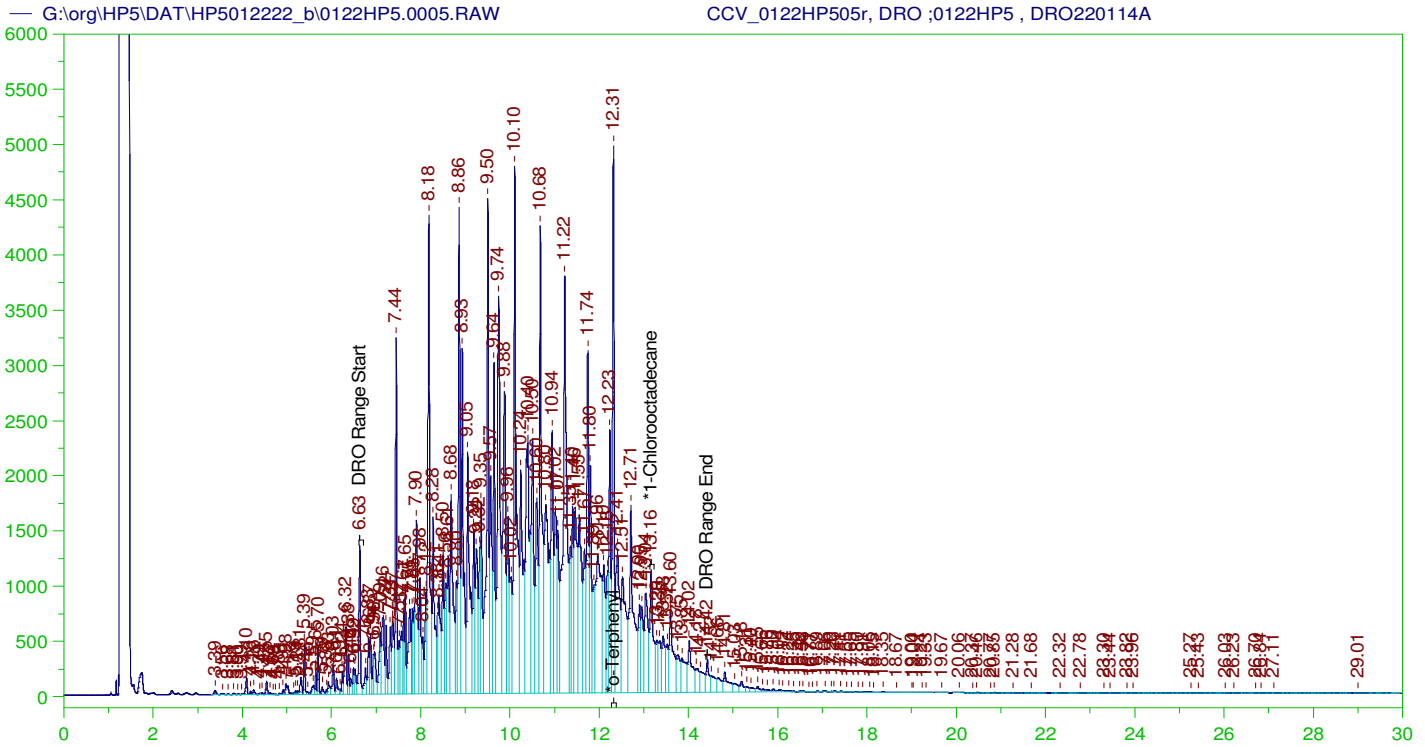
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.399	500.	208.239	41.65	-

RRO Area:3046862 RRO AMOUNT: 115.3042

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.399	200.	208.239	104.12	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0122HP505r, DRO ;0122HP5 , DRO220114A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0005.RAW
 Date & Time Acquired: 1/22/2022 1:05:51 PM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JB-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.314	200.	330.973	165.49
*1-Chlorooctadecane	13.16	200.	154.387	77.19

DRO Area: 4.676752E+08 DRO Amount: 14312.78
 TEH Area: 4.846842E+08 TEH Amount: 14833.32

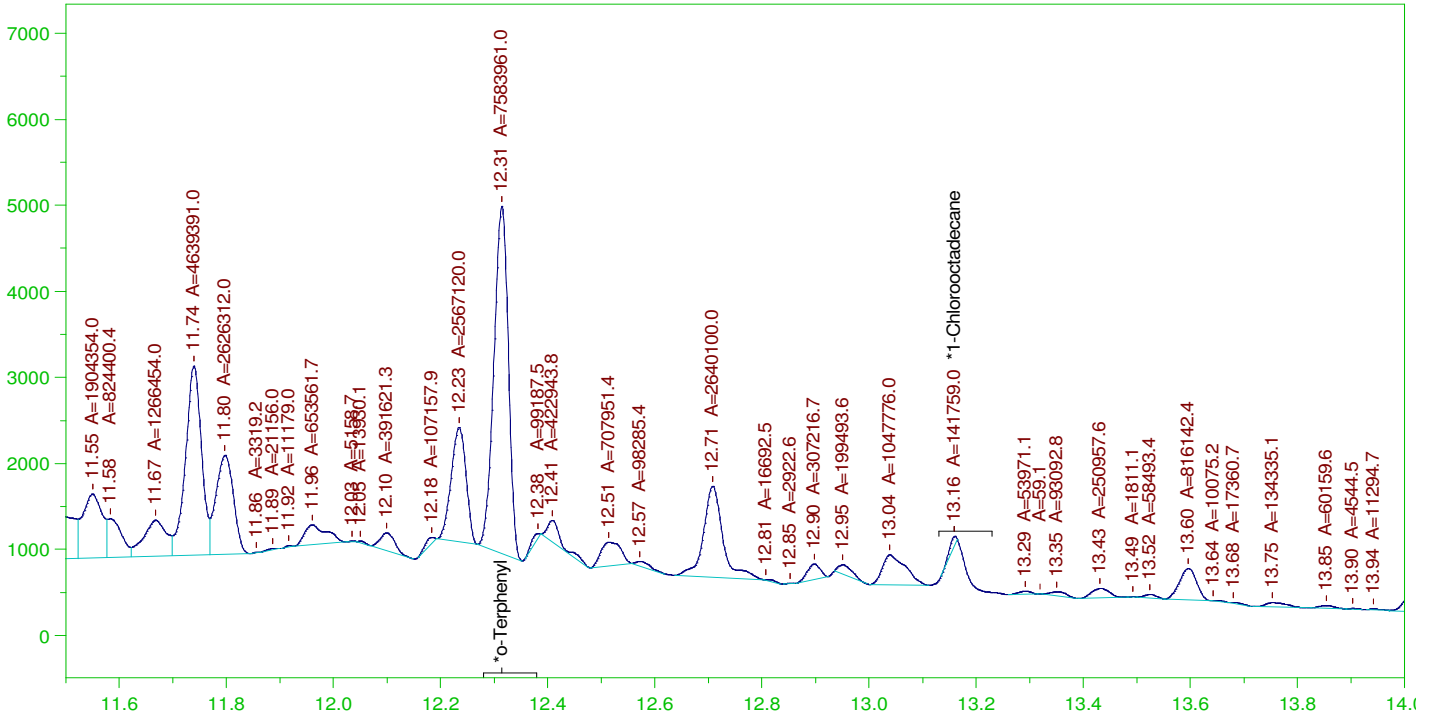
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14833.32	98.89	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.314	200.	330.973	165.49	85-115
*1-Chlorooctadecane	13.16	200.	154.387	77.19	85-115

G:\org\HP5\DAT\HP5012222_b\0122HP5.0005.RAW

CCV_0122HP505r, DRO ;0122HP5 , DRO220114A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0122HP505r, DRO ;0122HP5 , DRO220114A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0005.RAW
 Date & Time Acquired: 1/22/2022 1:05:51 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JB-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

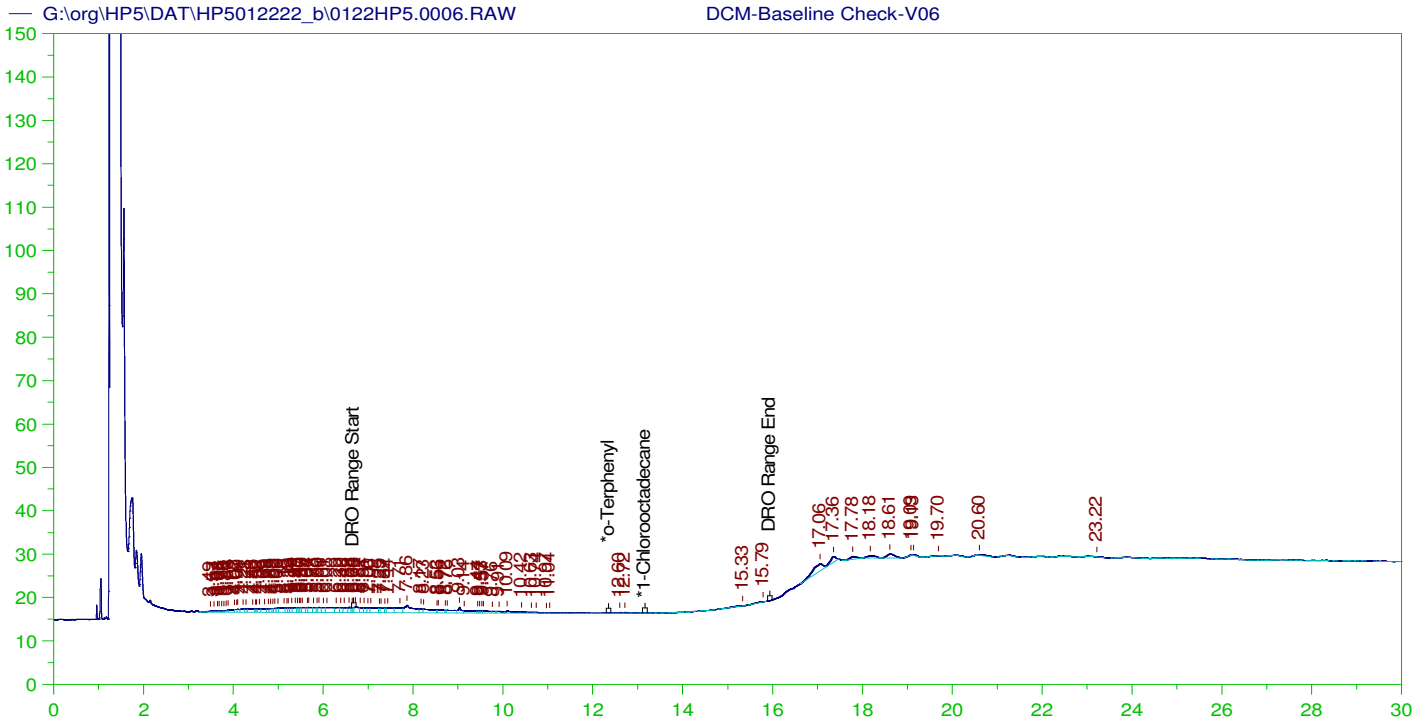
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.314	200.	205.762	102.88
*1-Chlorooctadecane	13.16	200.	3.846	1.92

DRO Area: 2.416375E+08 DRO Amount: 7395.099
 TEH Area: 2.523883E+08 TEH Amount: 7724.116

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7724.12	51.49	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.314	200.	205.762	102.88	85-115
*1-Chlorooctadecane	13.16	200.	3.846	1.92	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

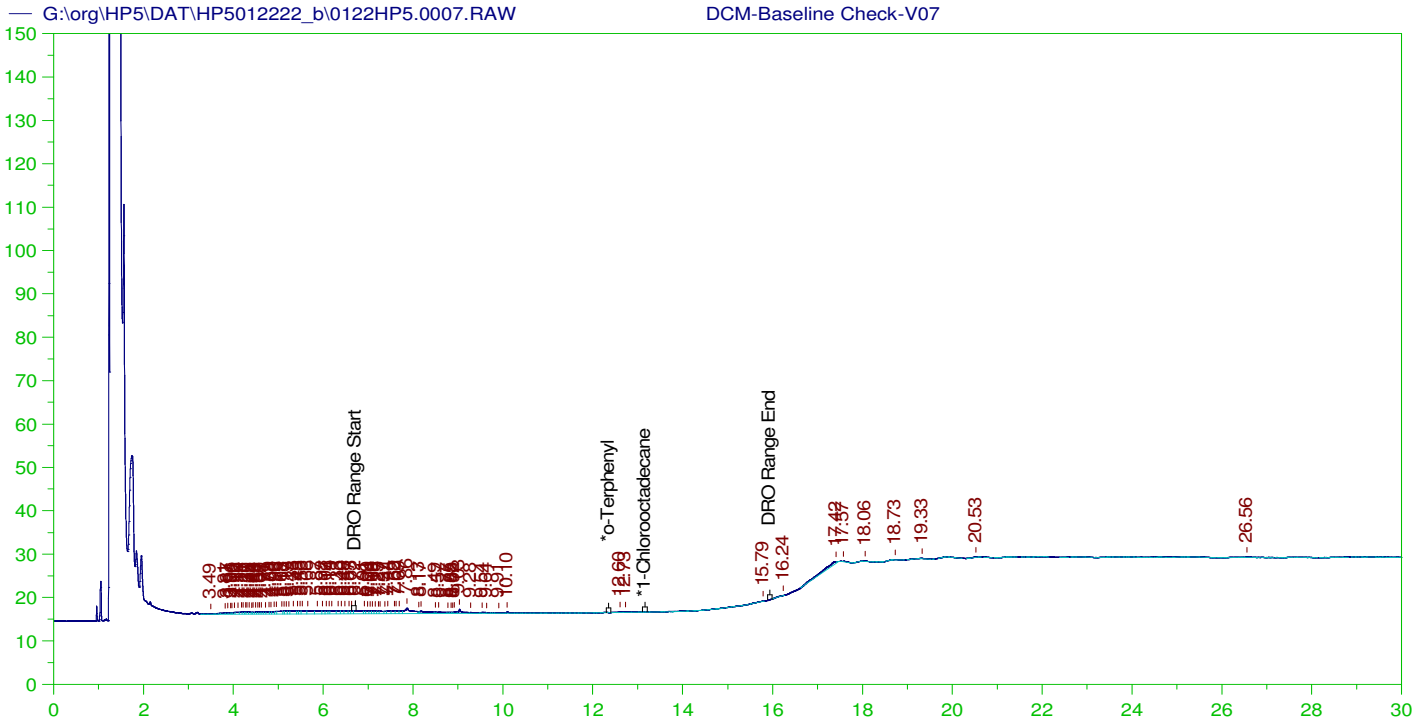
Sample Name: DCM-Baseline Check-V06
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0006.RAW
 Date & Time Acquired: 1/22/2022 1:48:24 PM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.963	200.	.	-
*1-Chlorooctadecane	29.963	200.	.	-

DRO Area:182864 DRO Amount: 5.59639
 TEH Area:432282.7 TEH Amount: 13.22962



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V07
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0007.RAW
 Date & Time Acquired: 1/22/2022 2:31:08 PM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

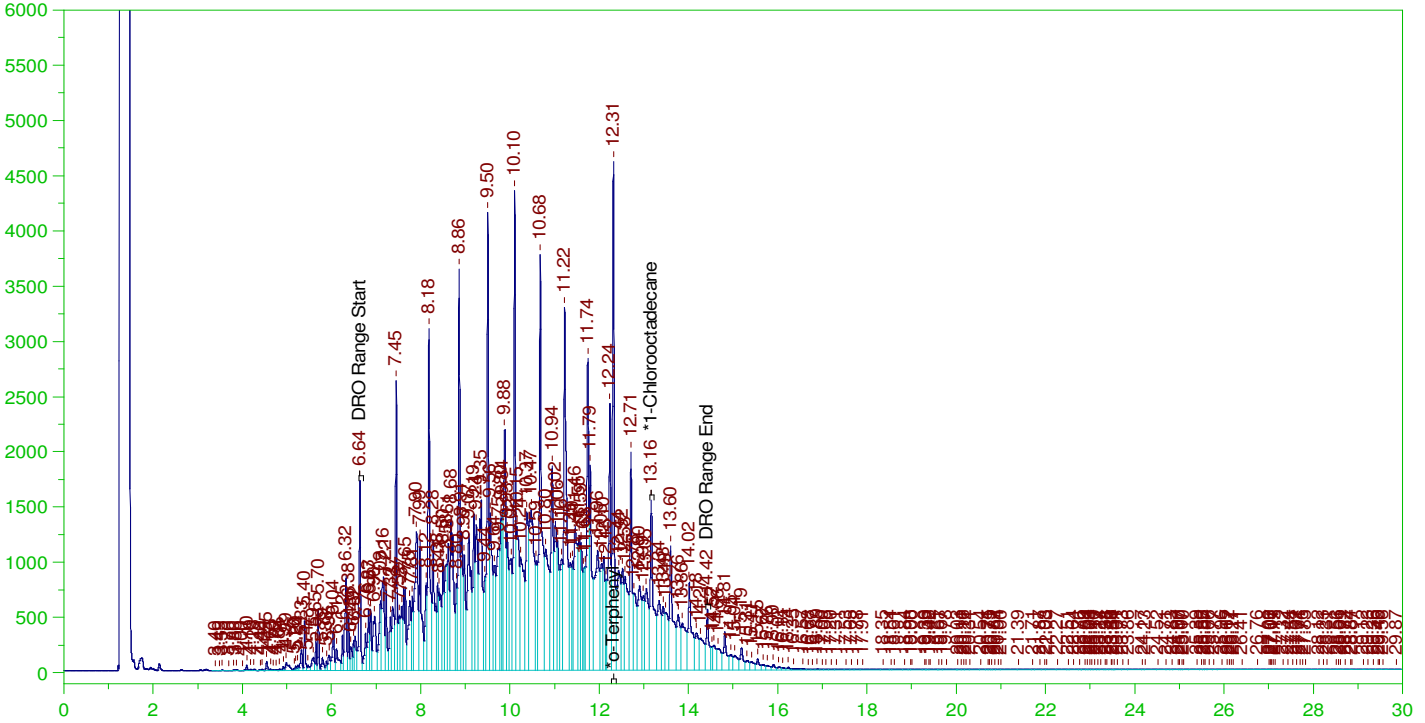
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.915	200.	.	-
*1-Chlorooctadecane	29.915	200.	.	-

DRO Area: 92756.09 DRO Amount: 2.838717
 TEH Area: 220008.3 TEH Amount: 6.733156

Batch ID: 163074

LCS-163074 ;0122HP5 ,

G:\org\HP5\DAT\HP5012222_b\0122HP5.0008.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-163074 ;0122HP5 ,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0008.RAW
Date & Time Acquired: 1/22/2022 3:13:41 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

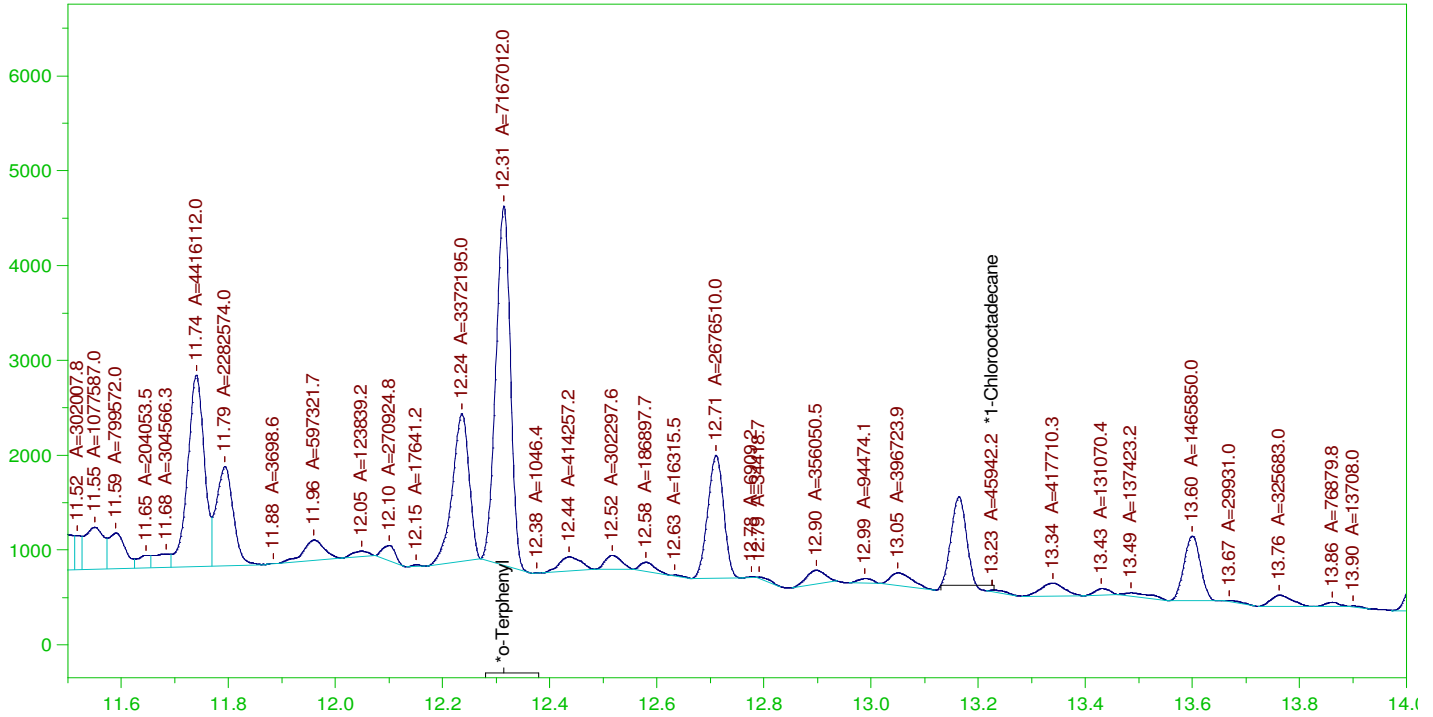
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.314	.2	.339	169.56	-
*1-Chlorooctadecane	13.164	.2	.199	99.55	-

DRO Area: 4.066252E+08 DRO Amount: 12.4444
TEH Area: 4.337861E+08 TEH Amount: 13.27563

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0008.RAW

LCS-163074 ;0122HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

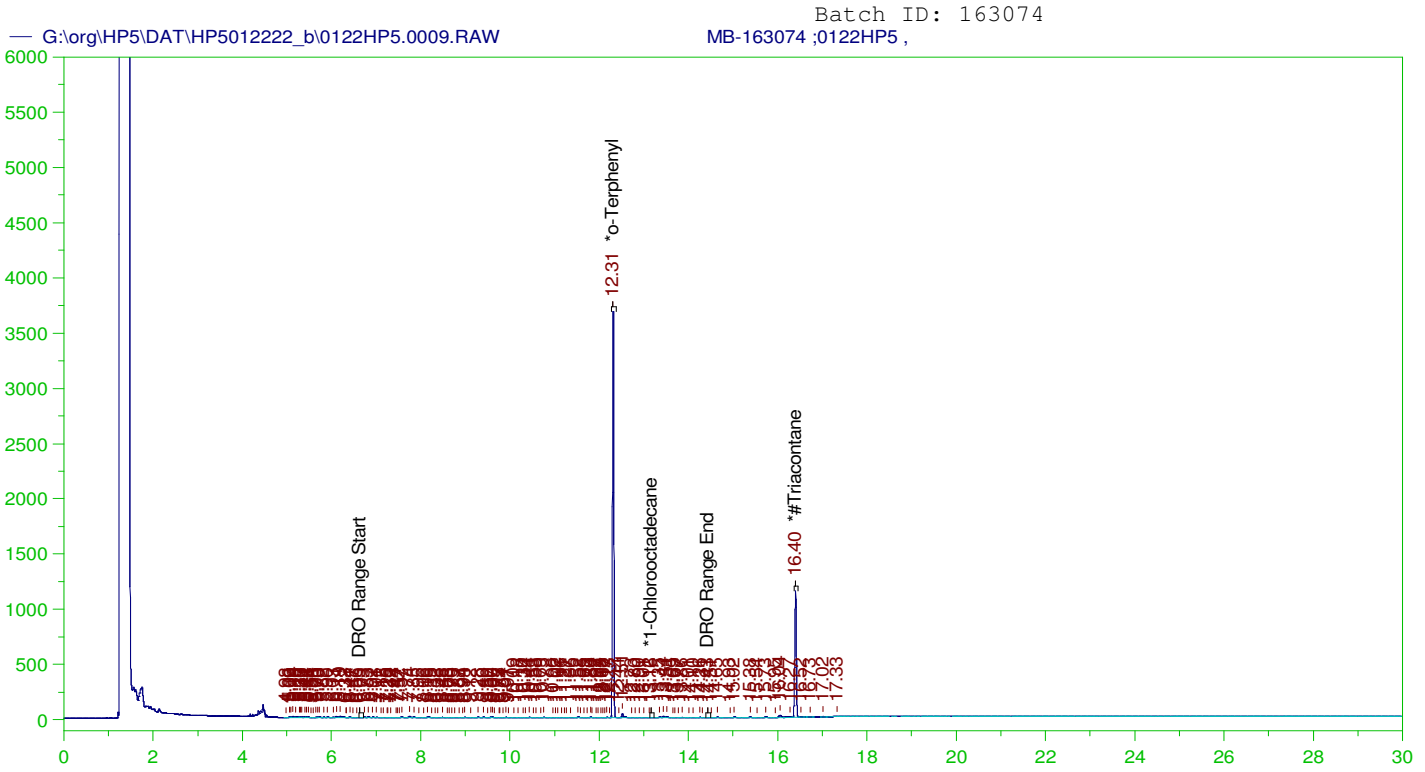
Sample Name: LCS-163074 ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0008.RAW
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 Method File: G:\Org\HP5\Methods\DS_8015-C24-JB-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.314	.2	.194	97.23
*1-Chlorooctadecane	13.226	.2	.001	.62

DRO Area: 1.903552E+08 DRO Amount: 5.82565
 TEH Area: 2.03395E+08 TEH Amount: 6.224721



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-163074 ;0122HP5 ,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0009.RAW
Date & Time Acquired: 1/22/2022 3:56:20 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

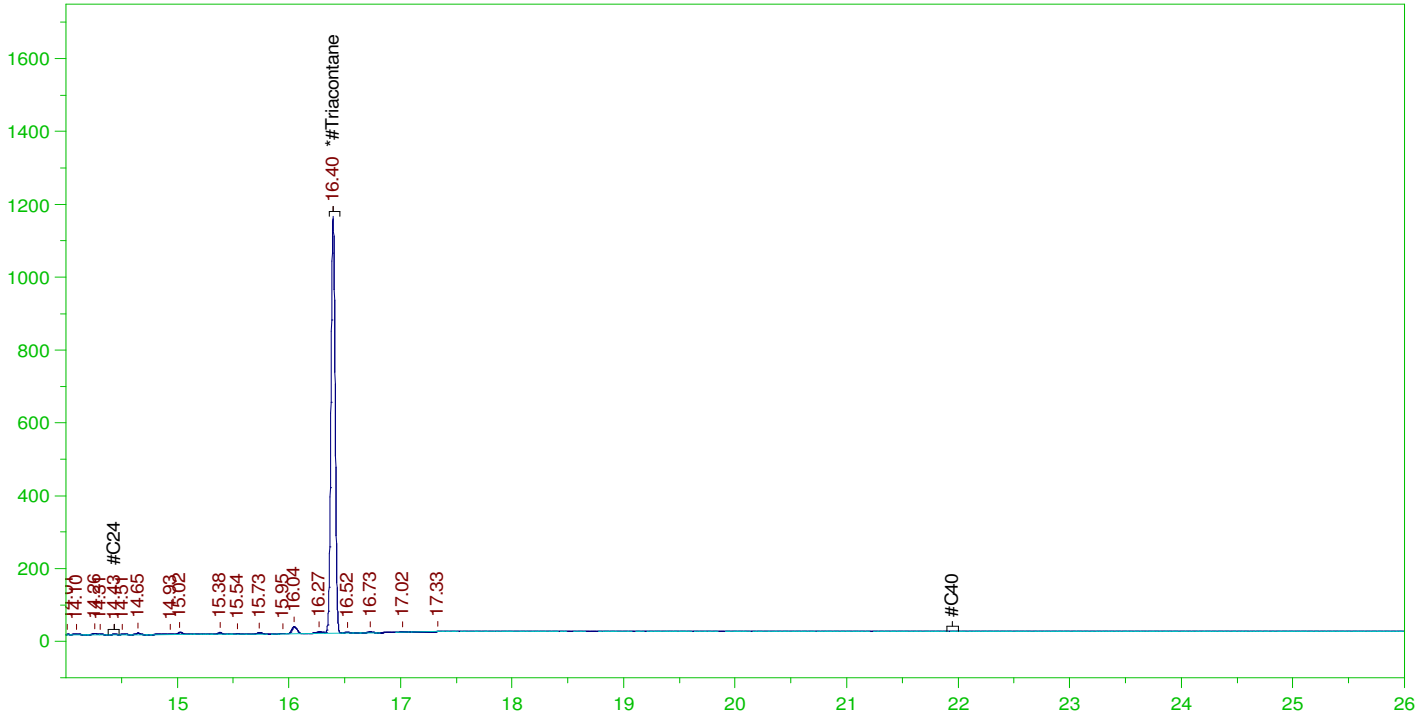
Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.31	.2	.19	95.08 -
*1-Chlorooctadecane	13.164	.2	.03	-
*#Triacontane	16.396	.2	.1	49.86 -

DRO Area: 601706.3 DRO Amount: 1.841468E-02
TEH Area: 972402.9 TEH Amount: 2.975952E-02

G:\org\HP5\DAT\HP5012222_b\0122HP5.0009.RAW

MB-163074 ;0122HP5 ,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-163074 ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0009.RAW
 Date & Time Acquired: 1/22/2022 3:56:20 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.38 to 22

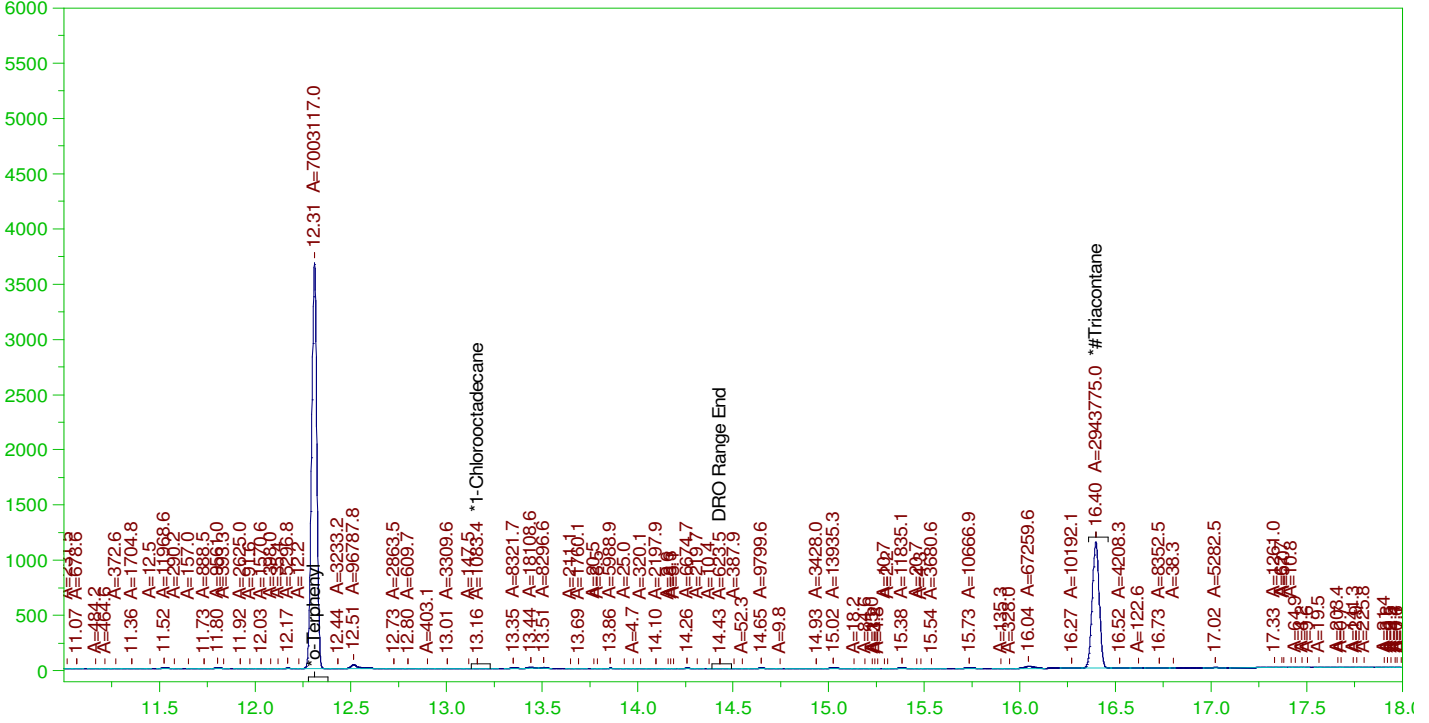
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.396	.5	.1	19.94 -

RRO Area:170165.5 RRO AMOUNT: 6.439672E-03

Batch ID: 163074

MB-163074 ;0122HP5 ,

G:\org\HP5\DAT\HP5012222_b\0122HP5.0009.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-163074 ;0122HP5 ,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0009.RAW
Date & Time Acquired: 1/22/2022 3:56:20 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.31	.2	.19	95. -
*1-Chlorooctadecane	13.164	.2	.01	-
*#Triacontane	16.396	.2	.099	49.67 -

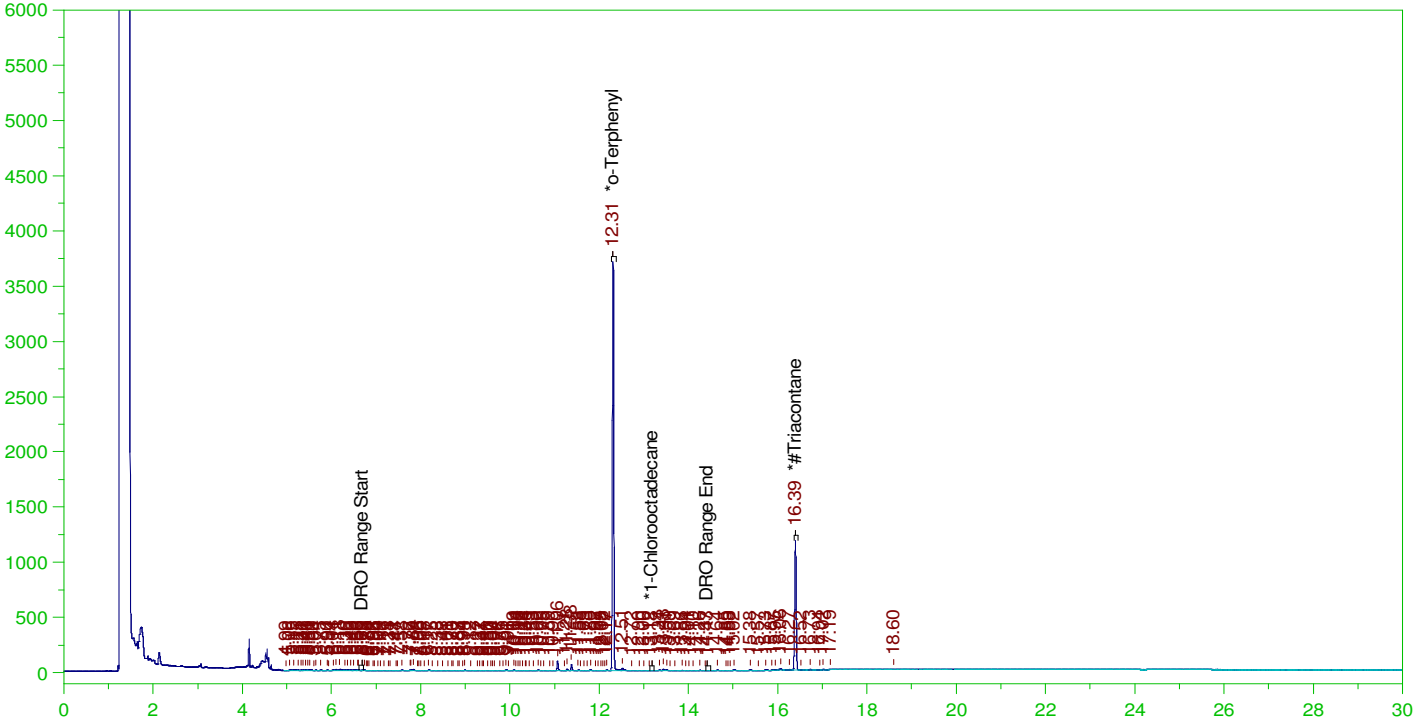
DRO Area:470968.8 DRO Amount: 1.441358E-02
TEH Area:1767367 TEH Amount: 5.408867E-02

ERH2444 (OWDFMW01)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0010.RAW

B22011133-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011133-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0010.RAW
Date & Time Acquired: 1/22/2022 4:38:57 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.308	.206	.201	97.31	-
*1-Chlorooctadecane	13.177	.206	.	.07	-
*#Triacontane	16.393	.206	.104	50.61	-

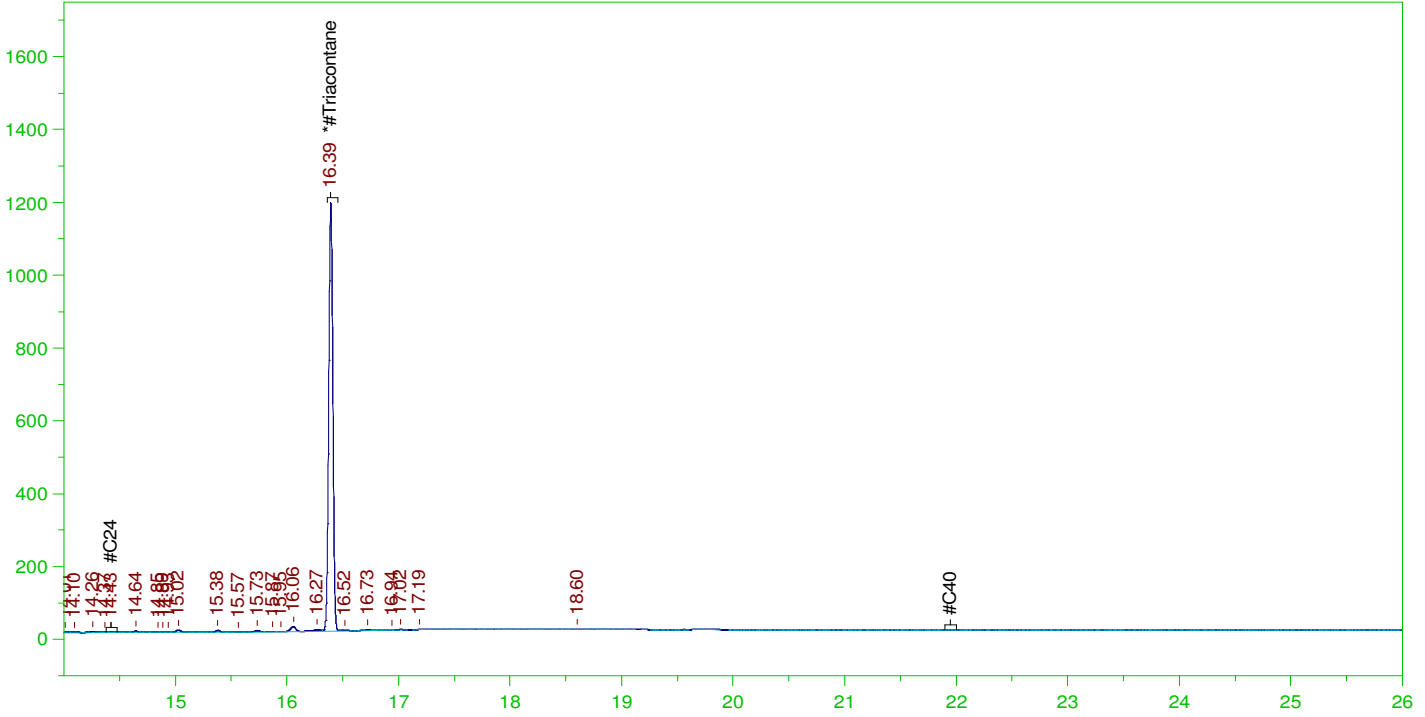
DRO Area:796086.2 DRO Amount: 2.511701E-02
TEH Area:1185946 TEH Amount: 3.741732E-02

ERH2444 (OWDFMW01)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0010.RAW

B22011133-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011133-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0010.RAW
 Date & Time Acquired: 1/22/2022 4:38:57 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
 Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.393	.515	.104	20.24

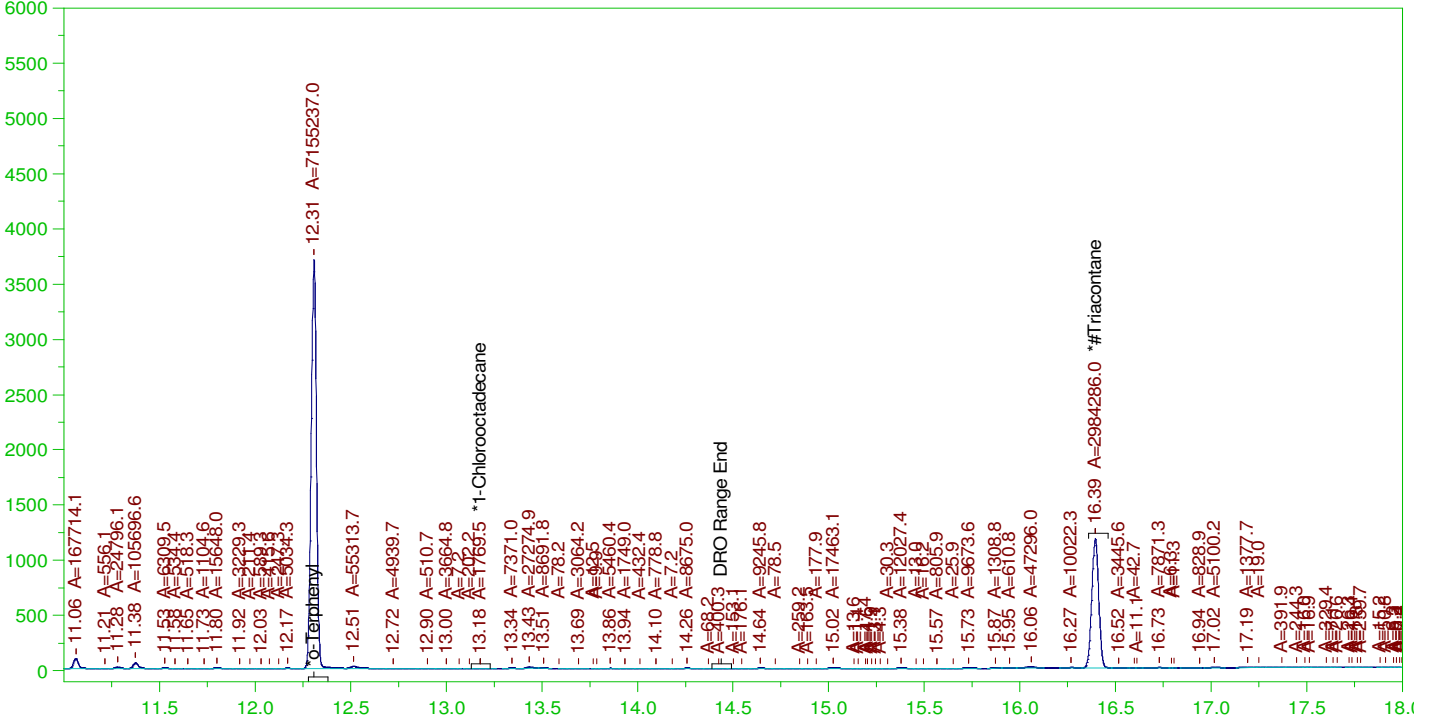
RRO Area:151454.3 RRO AMOUNT: 5.908842E-03

ERH2444 (OWDFMW01)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0010.RAW

B22011133-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011133-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0010.RAW
Date & Time Acquired: 1/22/2022 4:38:57 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.308	.206	.2	97.07	-
*1-Chlorooctadecane	13.177	.206	.	.02	-
*#Triacontane	16.393	.206	.104	50.35	-

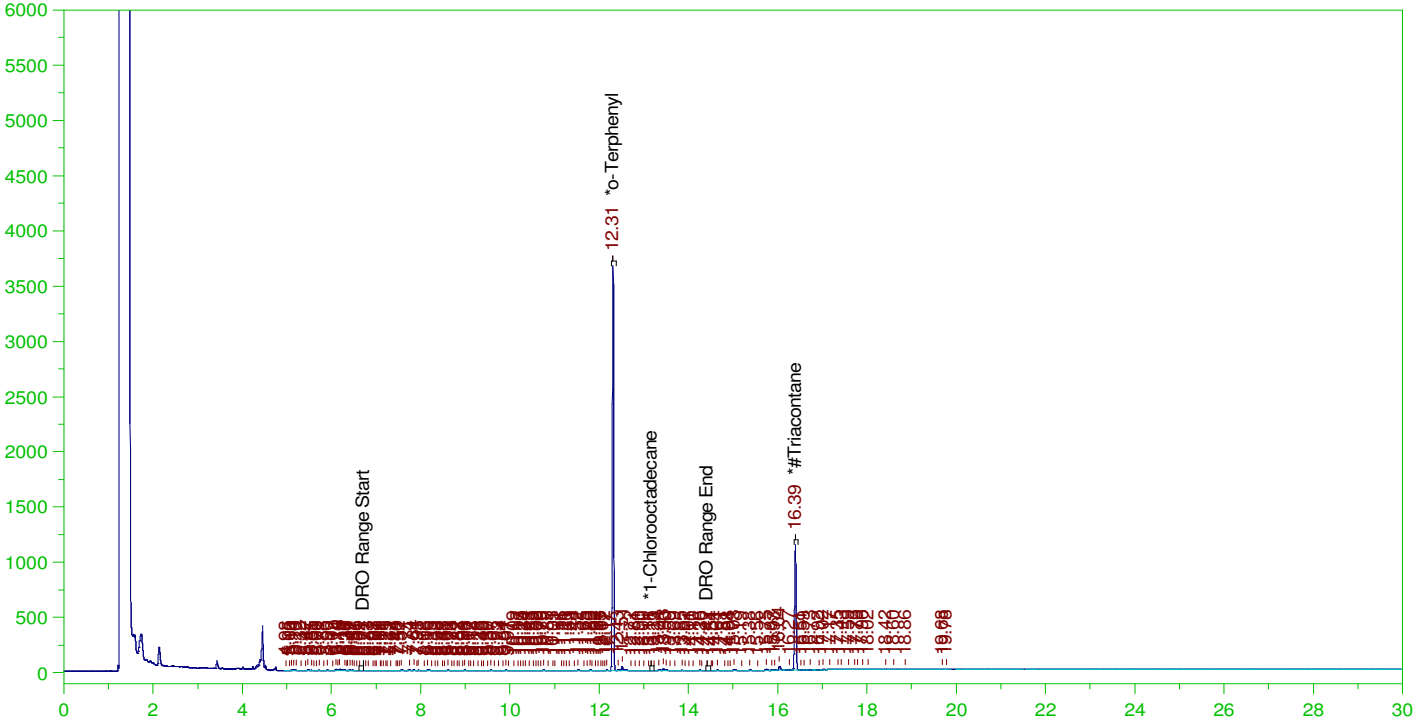
DRO Area:691580.6 DRO Amount: 2.181979E-02
TEH Area:3448091 TEH Amount: 0.1087894

ERH2458 (RHMW16)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0011.RAW

B22011130-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011130-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0011.RAW
Date & Time Acquired: 1/22/2022 5:21:49 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.307	.19	.18	94.44	-
*1-Chlorooctadecane	13.162	.19	.	.06	-
*#Triacontane	16.392	.19	.094	49.15	-

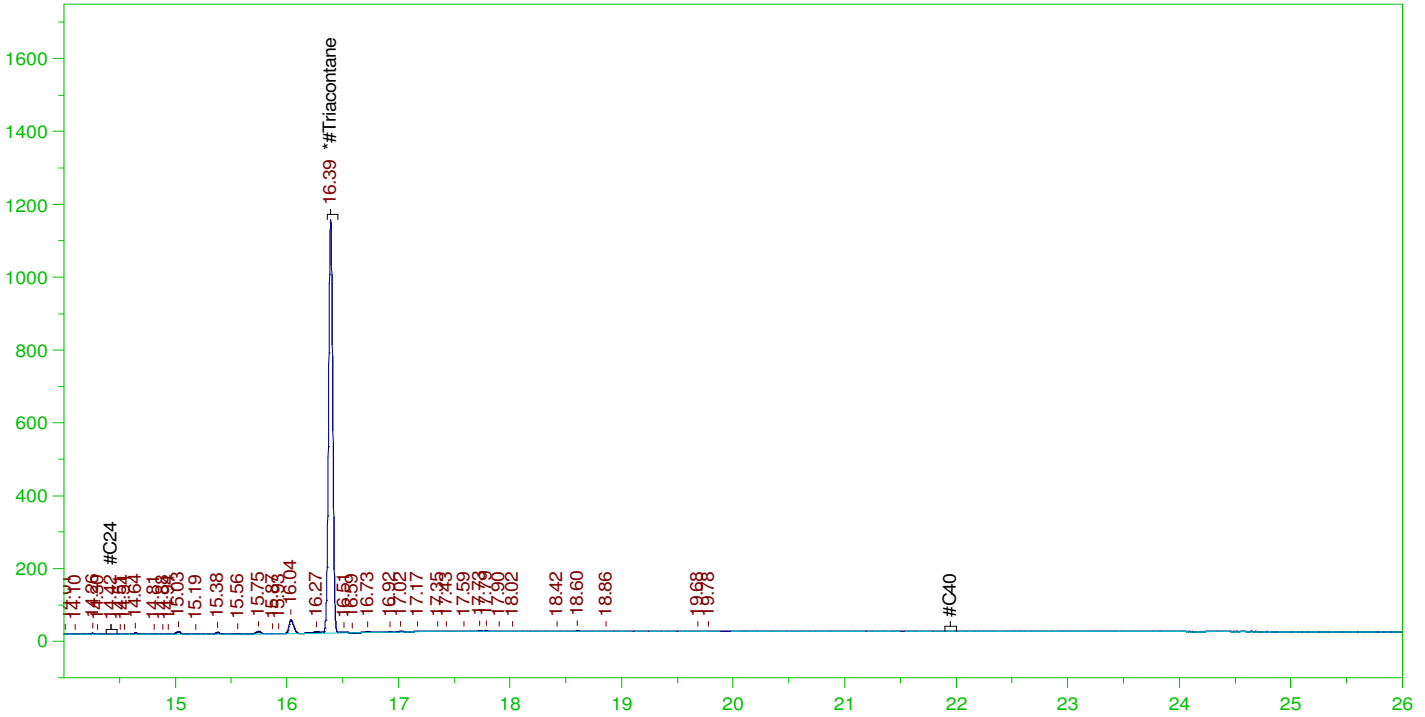
DRO Area:696204.8 DRO Amount: 2.029211E-02
TEH Area:1196130 TEH Amount: 3.486333E-02

ERH2458 (RHMW16)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0011.RAW

B22011130-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011130-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0011.RAW
Date & Time Acquired: 1/22/2022 5:21:49 PM
Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.392	.476	.094	19.66

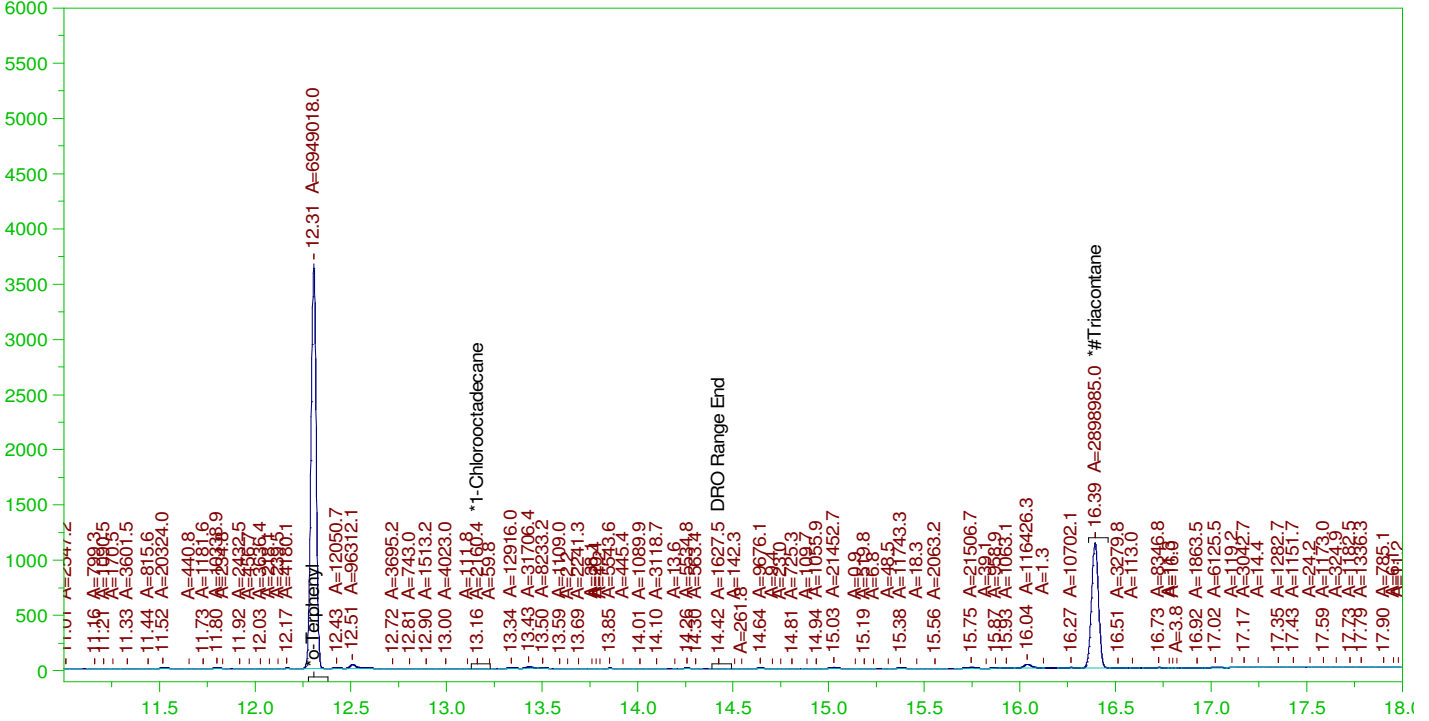
RRO Area:272393.1 RRO AMOUNT: 9.817461E-03

ERH2458 (RHMW16)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0011.RAW

B22011130-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011130-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0011.RAW
Date & Time Acquired: 1/22/2022 5:21:49 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.307	.19	.18	94.27
*1-Chlorooctadecane	13.162	.19	.	.03
*#Triacontane	16.392	.19	.093	48.91

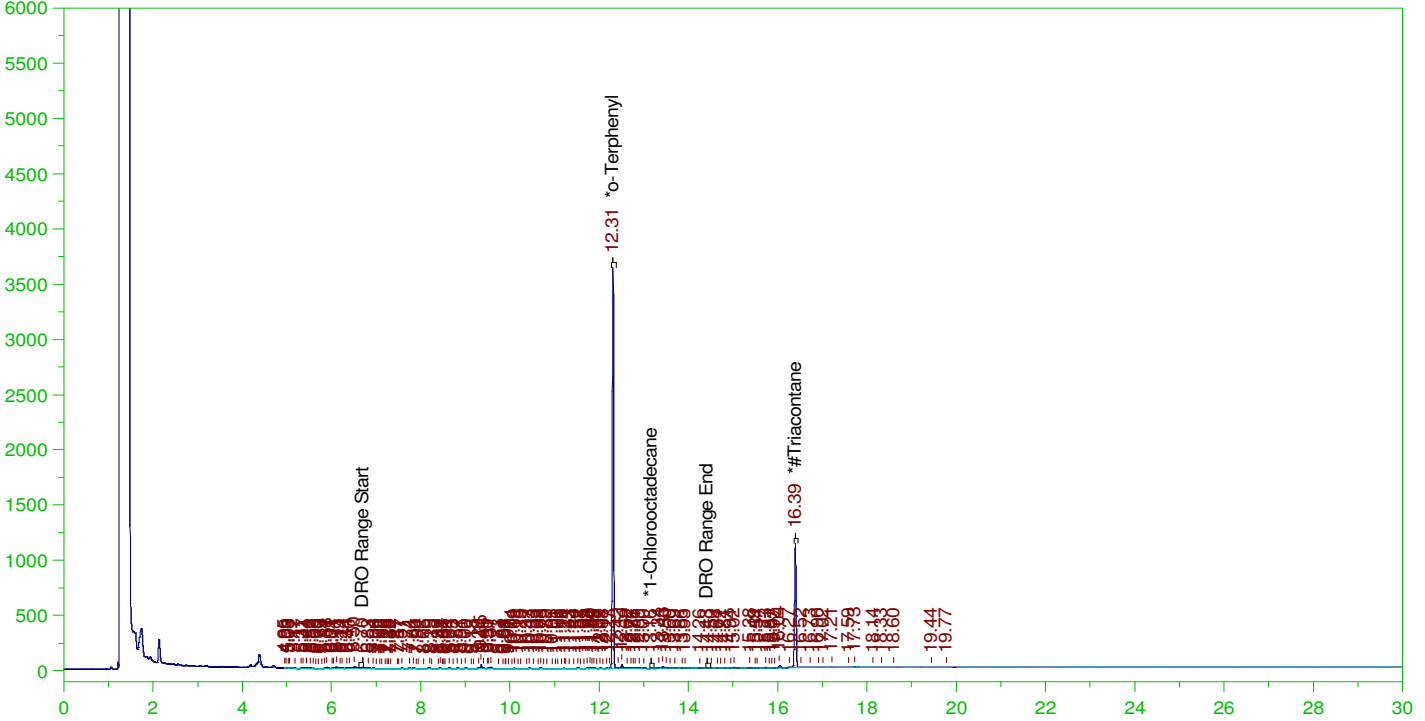
DRO Area:533968.3 DRO Amount: 1.556345E-02
TEH Area:2906831 TEH Amount: 0.0847247

ERH2454 (OWDFMW08A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0012.RAW

B22011127-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011127-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0012.RAW
Date & Time Acquired: 1/22/2022 6:04:41 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.19	.177	93.09	-
*1-Chlorooctadecane	13.162	.19	.	.02	-
*#Triacontane	16.391	.19	.093	48.86	-

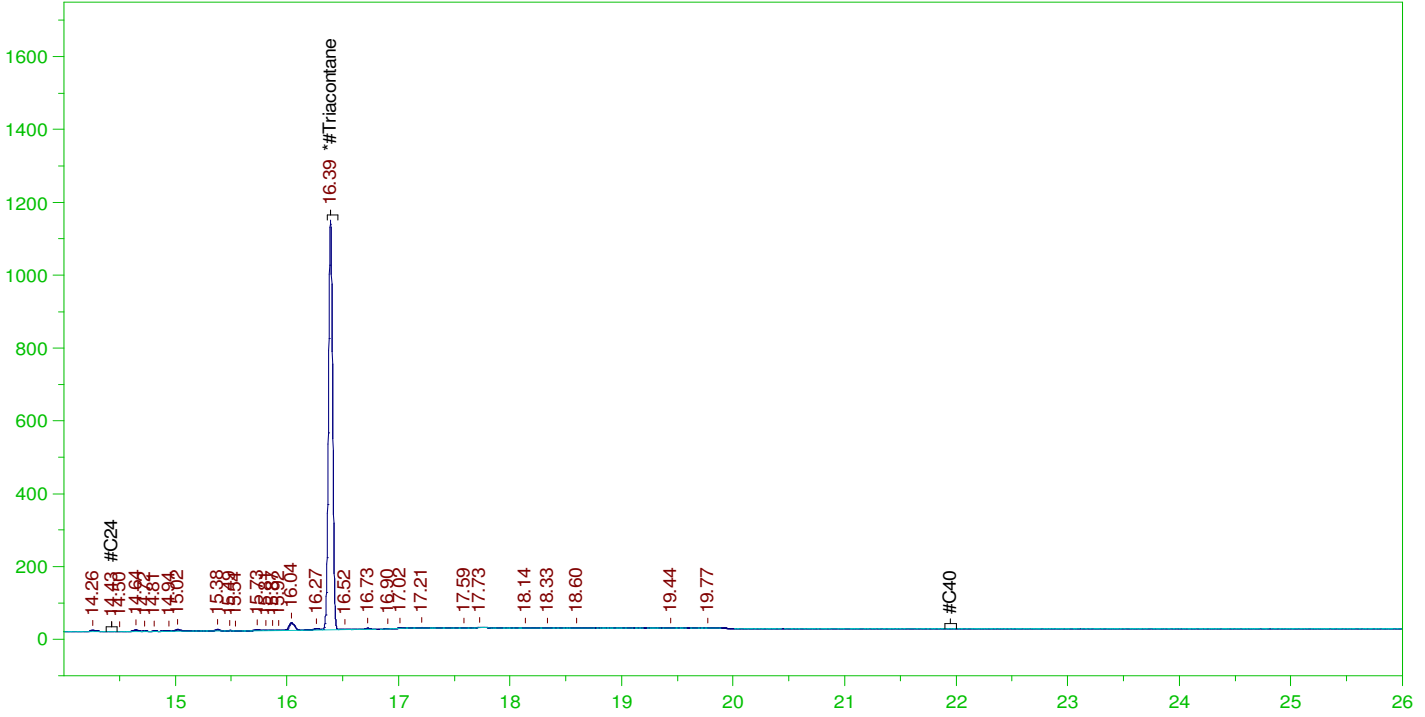
DRO Area:761408.3 DRO Amount: 2.219259E-02
TEH Area:1251325 TEH Amount: 3.647208E-02

ERH2454 (OWDFMW08A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0012.RAW

B22011127-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011127-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0012.RAW
 Date & Time Acquired: 1/22/2022 6:04:41 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.391	.476	.093	19.54

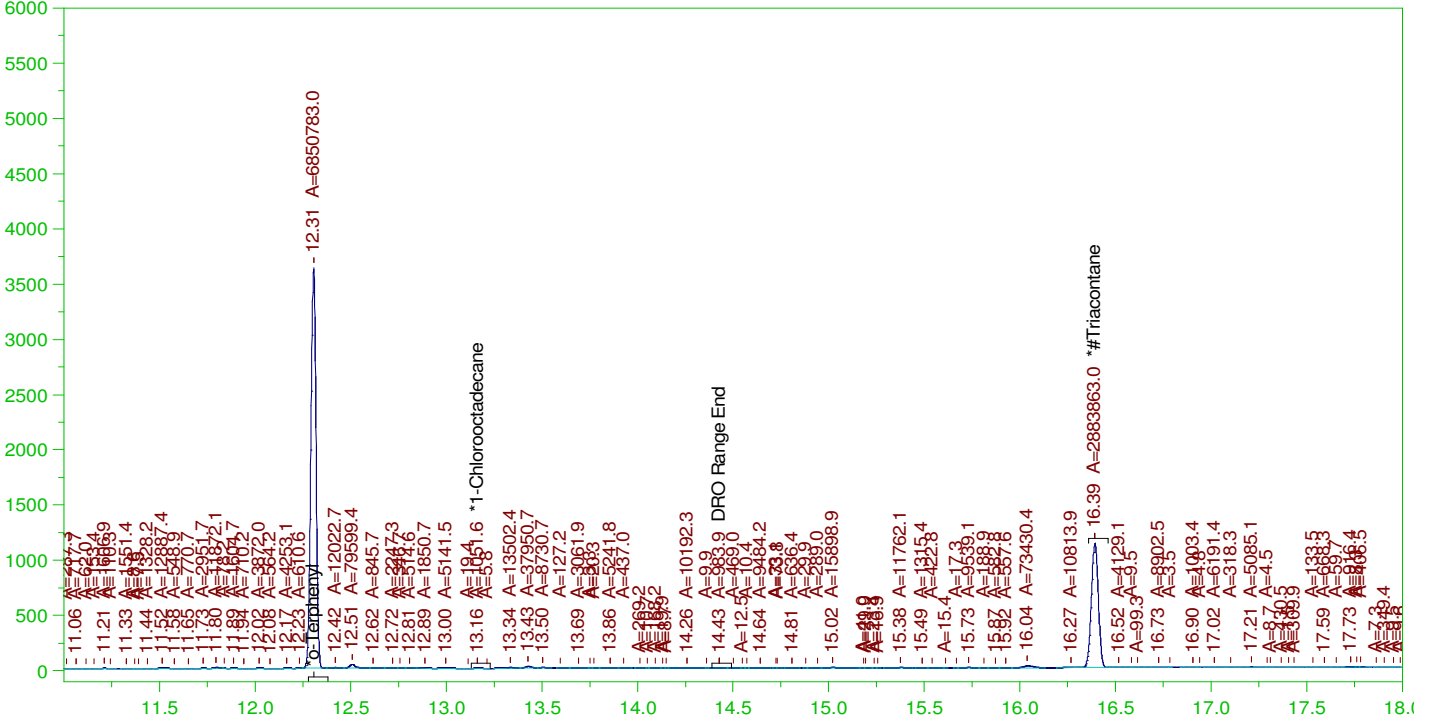
RRO Area:200455.3 RRO AMOUNT: 7.224711E-03

ERH2454 (OWDFMW08A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0012.RAW

B22011127-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

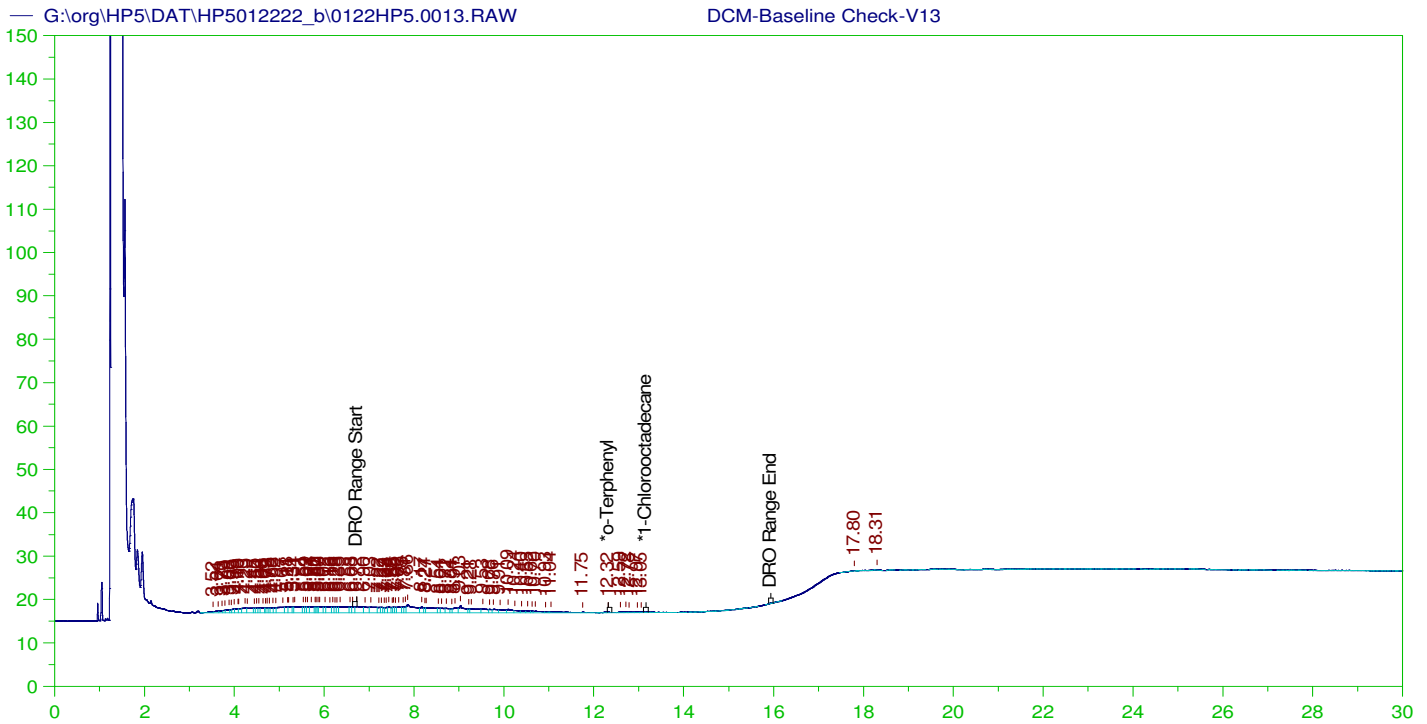
Sample Name: B22011127-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0012.RAW
Date & Time Acquired: 1/22/2022 6:04:41 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.19	.177	92.94	-
*1-Chlorooctadecane	13.162	.19	.	.01	-
*#Triacontane	16.391	.19	.093	48.65	-

DRO Area:647737.5 DRO Amount: 1.887945E-02
TEH Area:2172185 TEH Amount: 6.331217E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V13
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0013.RAW
 Date & Time Acquired: 1/22/2022 6:47:38 PM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.322	200.	.027	.01
*1-Chlorooctadecane	29.97	200.	.	.

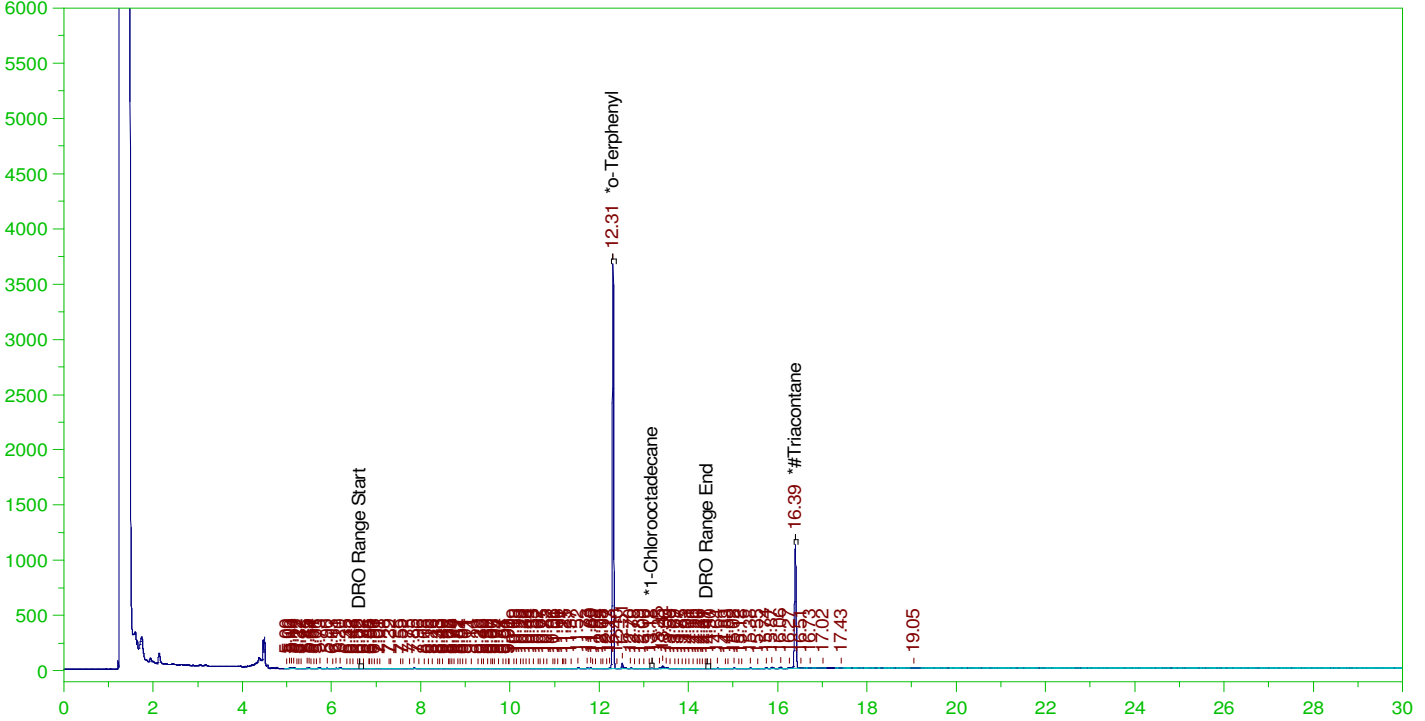
DRO Area:245628.8 DRO Amount: 7.517249
 TEH Area:464553 TEH Amount: 14.21723

ERH2446 (RHMW15 zone5)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0014.RAW

B22011124-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011124-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0014.RAW
Date & Time Acquired: 1/22/2022 7:30:31 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.307	.2	.187	93.57	-
*1-Chlorooctadecane	13.177	.2	.	.13	-
*#Triacontane	16.391	.2	.098	49.12	-

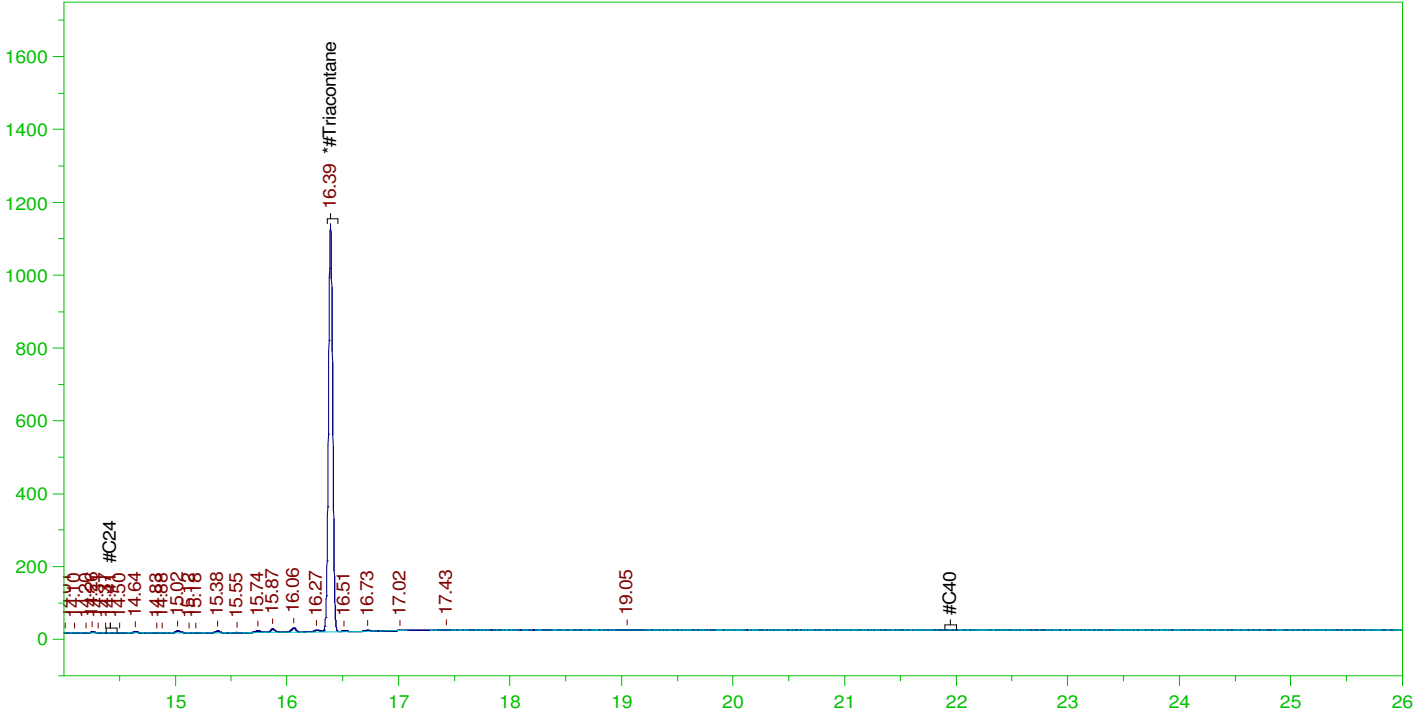
DRO Area:625003.7 DRO Amount: 1.912768E-02
TEH Area:963934.3 TEH Amount: 2.950034E-02

ERH2446 (RHMW15 zone5)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0014.RAW

B22011124-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011124-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0014.RAW
 Date & Time Acquired: 1/22/2022 7:30:31 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.391	.5	.098	19.65

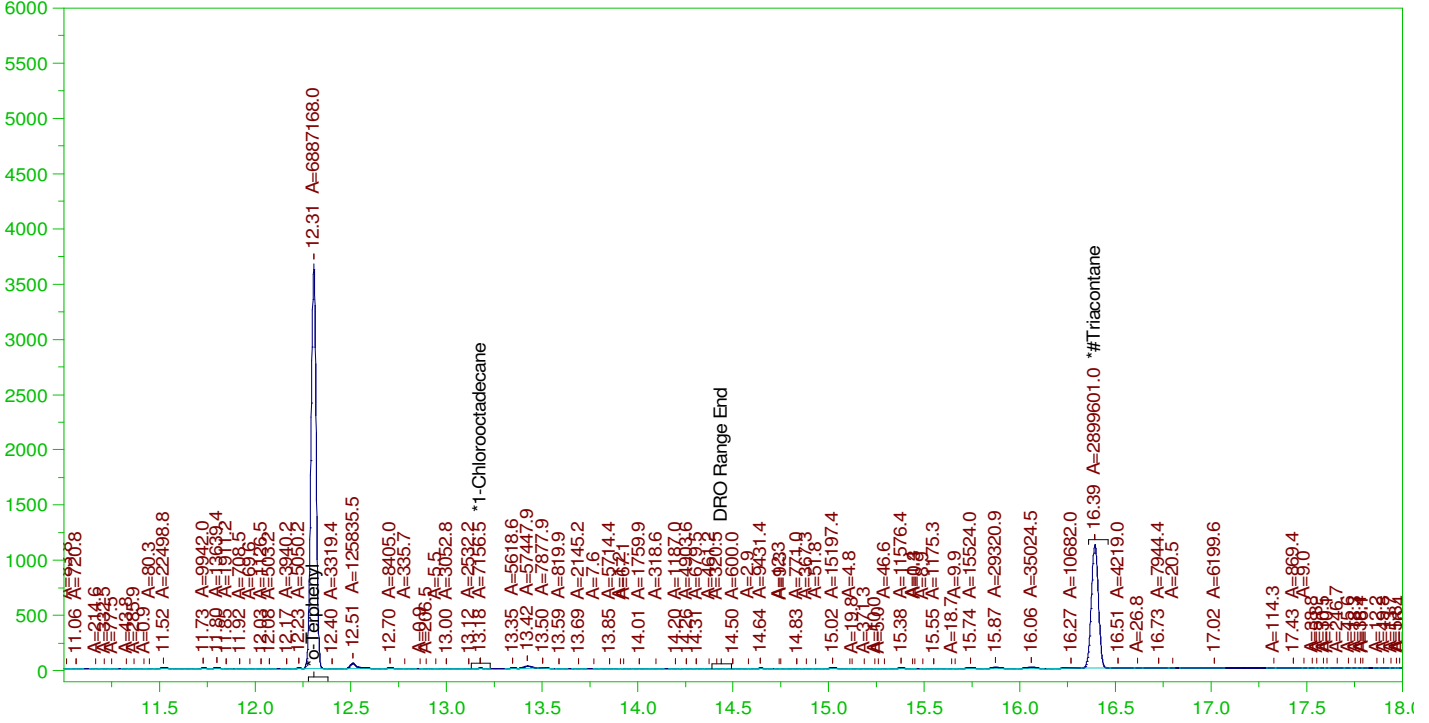
RRO Area:174585 RRO AMOUNT: 6.606924E-03

ERH2446 (RHMW15 zone5)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0014.RAW

B22011124-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011124-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0014.RAW
Date & Time Acquired: 1/22/2022 7:30:31 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

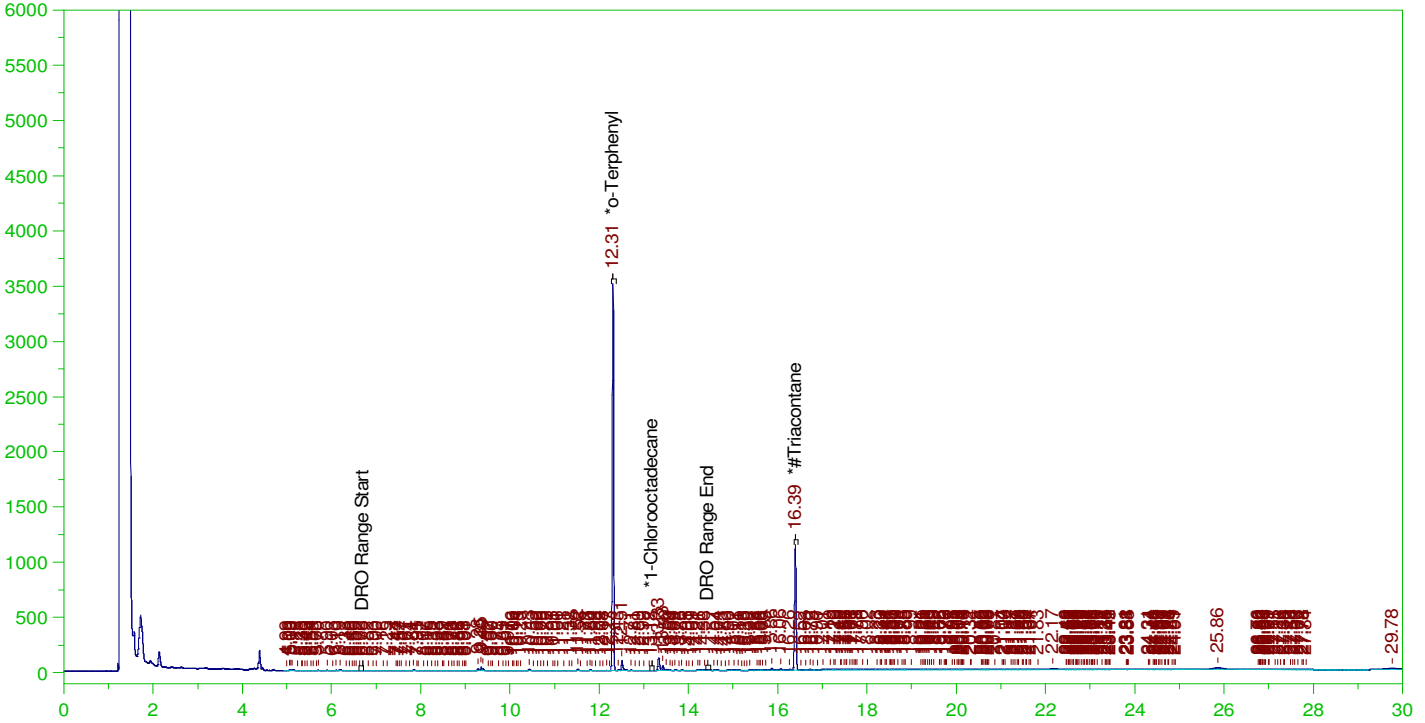
Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.307	.2	.187	93.43
*1-Chlorooctadecane	13.177	.2	.1	-
*#Triacontane	16.391	.2	.098	48.92

DRO Area:456479.3 DRO Amount: 1.397014E-02
TEH Area:2940520 TEH Amount: 8.999197E-02

ERH2433 (RHMW05 w/MS/MSD volumes)
G:\org\HP5\DAT\HP5012222_b\0122HP5.0015.RAW

Batch ID: 163074
B22011136-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011136-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0015.RAW
Date & Time Acquired: 1/22/2022 8:13:28 PM
Method File: G:\Org\HP5\Methods\DR_8015-012215-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

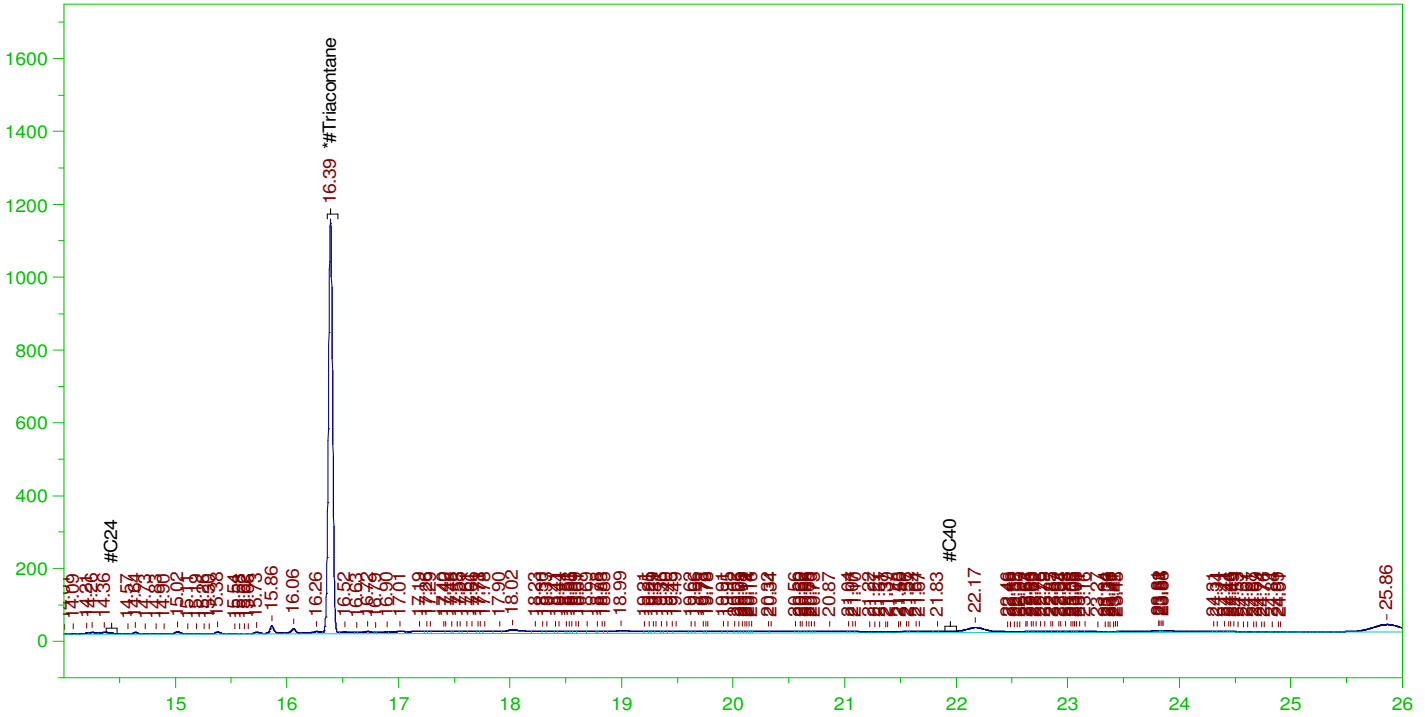
Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.198	.18	90.97	-
*1-Chlorooctadecane	13.178	.198	.	.13	-
*#Triacontane	16.391	.198	.099	49.88	-

DRO Area:1359640 DRO Amount: 4.119858E-02
TEH Area:4398886 TEH Amount: 0.133291

ERH2433 (RHMW05 w/MS/MSD volumes)
G:\org\HP5\DAT\HP5012222_b\0122HP5.0015.RAW

Batch ID: 163074
B22011136-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011136-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0015.RAW
Date & Time Acquired: 1/22/2022 8:13:28 PM
Method File: G:\Org\HP5\Methods\DR_OROS-012215-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

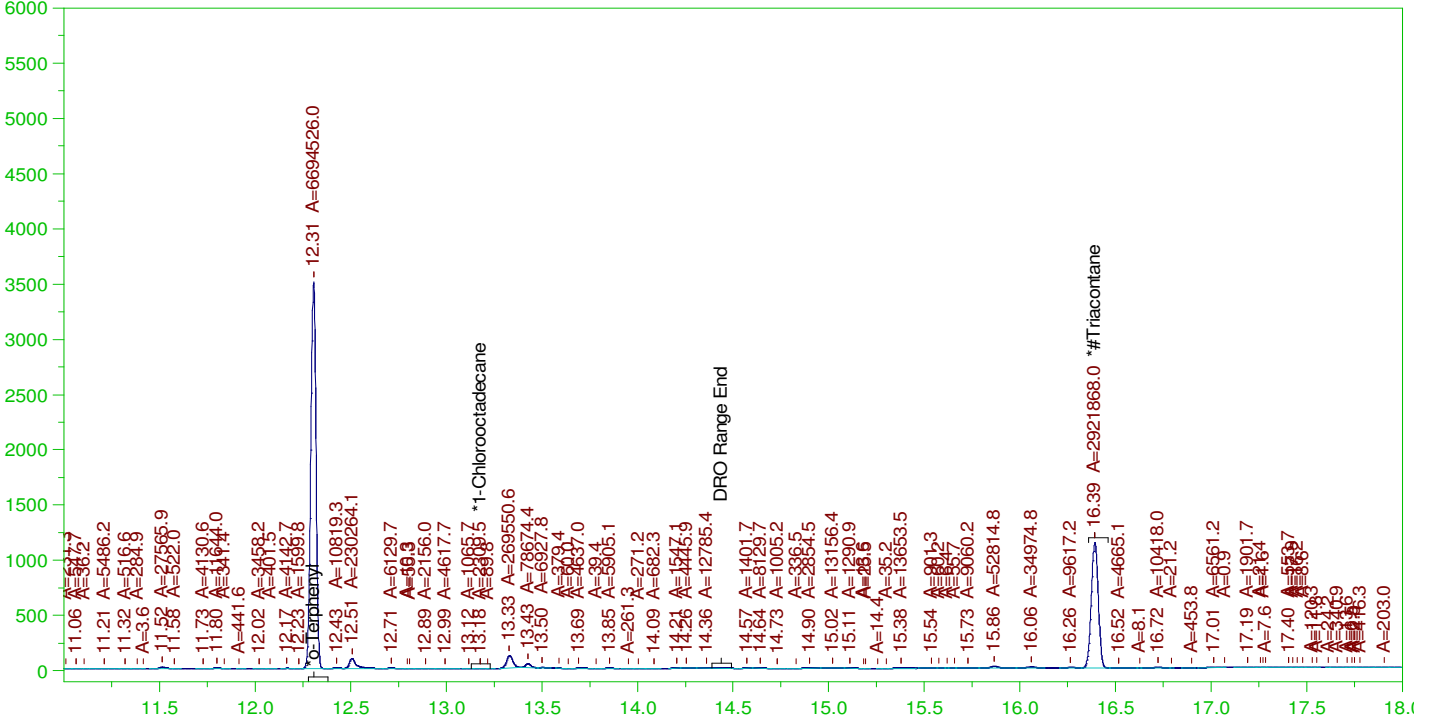
Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.391	.495	.099	19.95

RRO Area:1814018 RRO AMOUNT: 6.796927E-02

ERH2433 (RHMW05 w/MS/MSD volumes)
G:\org\HP5\DAT\HP5012222_b\0122HP5.0015.RAW

Batch ID: 163074
B22011136-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011136-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0015.RAW
Date & Time Acquired: 1/22/2022 8:13:28 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

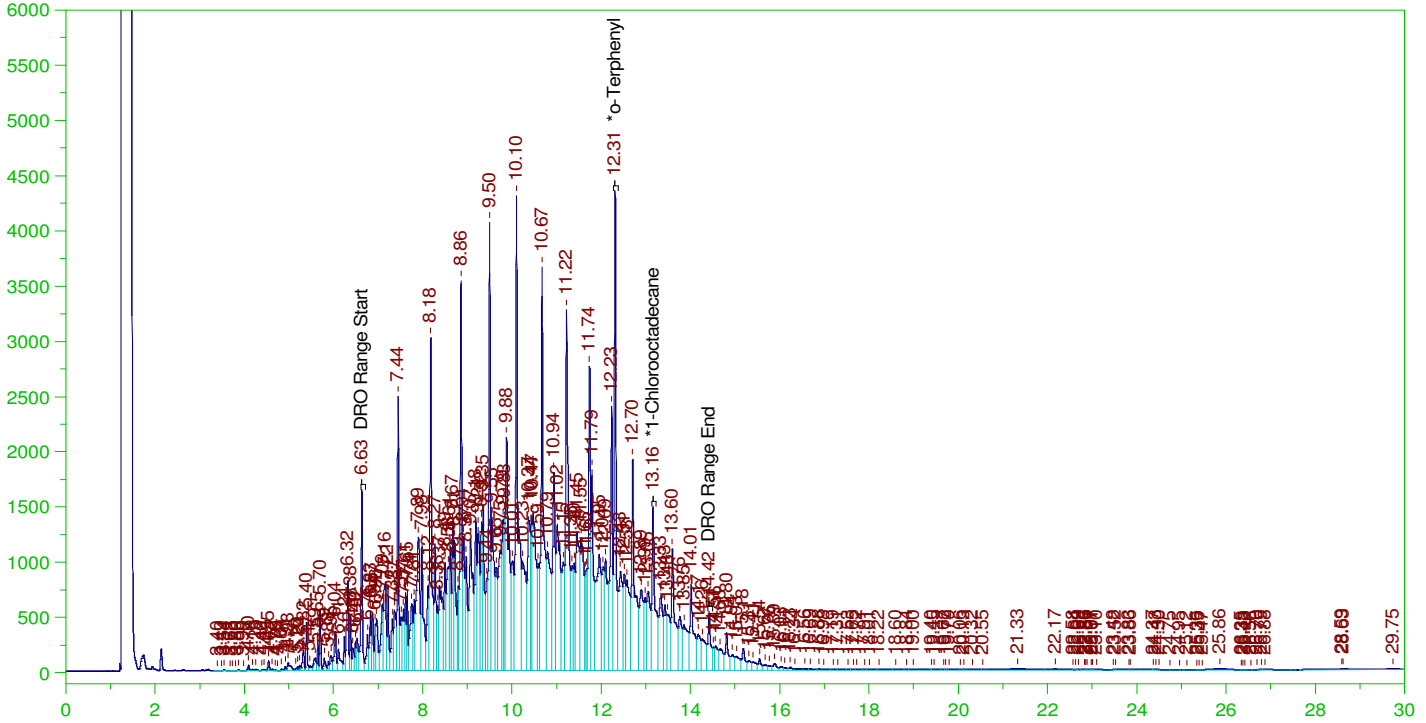
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.198	.18	90.82	-
*1-Chlorooctadecane	13.178	.198	.	.03	-
*#Triacontane	16.391	.198	.098	49.3	-

DRO Area:1069270 DRO Amount: 3.240005E-02
TEH Area:2962380 TEH Amount: 8.976335E-02

Batch ID: 163074

B22011136-001DMS ;0122HP5 ,

G:\org\HP5\DAT\HP5012222_b\0122HP5.0016.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011136-001DMS ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0016.RAW
 Date & Time Acquired: 1/22/2022 8:56:24 PM
 Method File: G:\Org\HP5\Methods\D3_8015-C24-JB-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

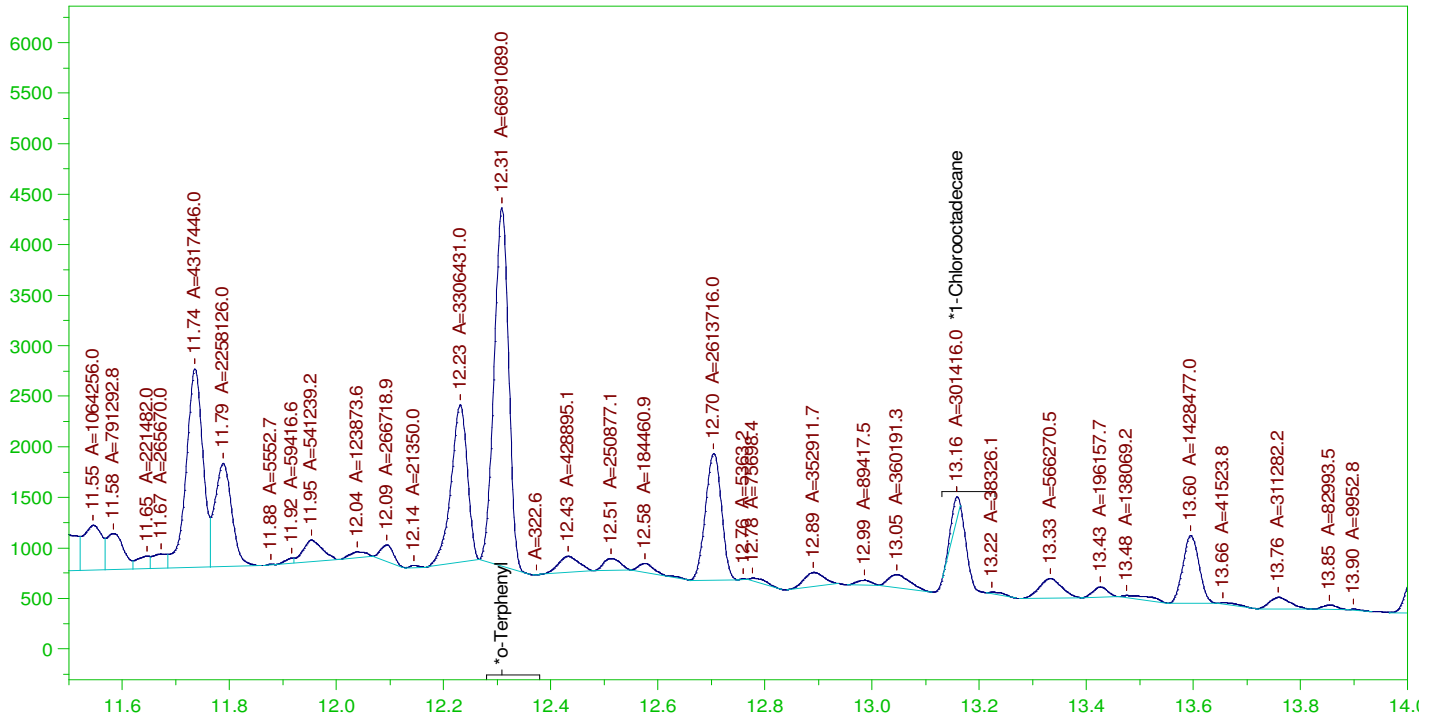
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.308	.198	.306	154.42	-
*1-Chlorooctadecane	13.159	.198	.191	96.66	-

DRO Area: 3.964739E+08 DRO Amount: 12.01359
 TEH Area: 4.237807E+08 TEH Amount: 12.84102

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0016.RAW

B22011136-001DMS ;0122HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011136-001DMS ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0016.RAW
 Date & Time Acquired: 1/22/2022 8:56:24 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JB-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.308	.198	.18	90.77	-
*1-Chlorooctadecane	13.159	.198	.008	4.09	-

DRO Area:1.858293E+08

DRO Amount: 5.63083

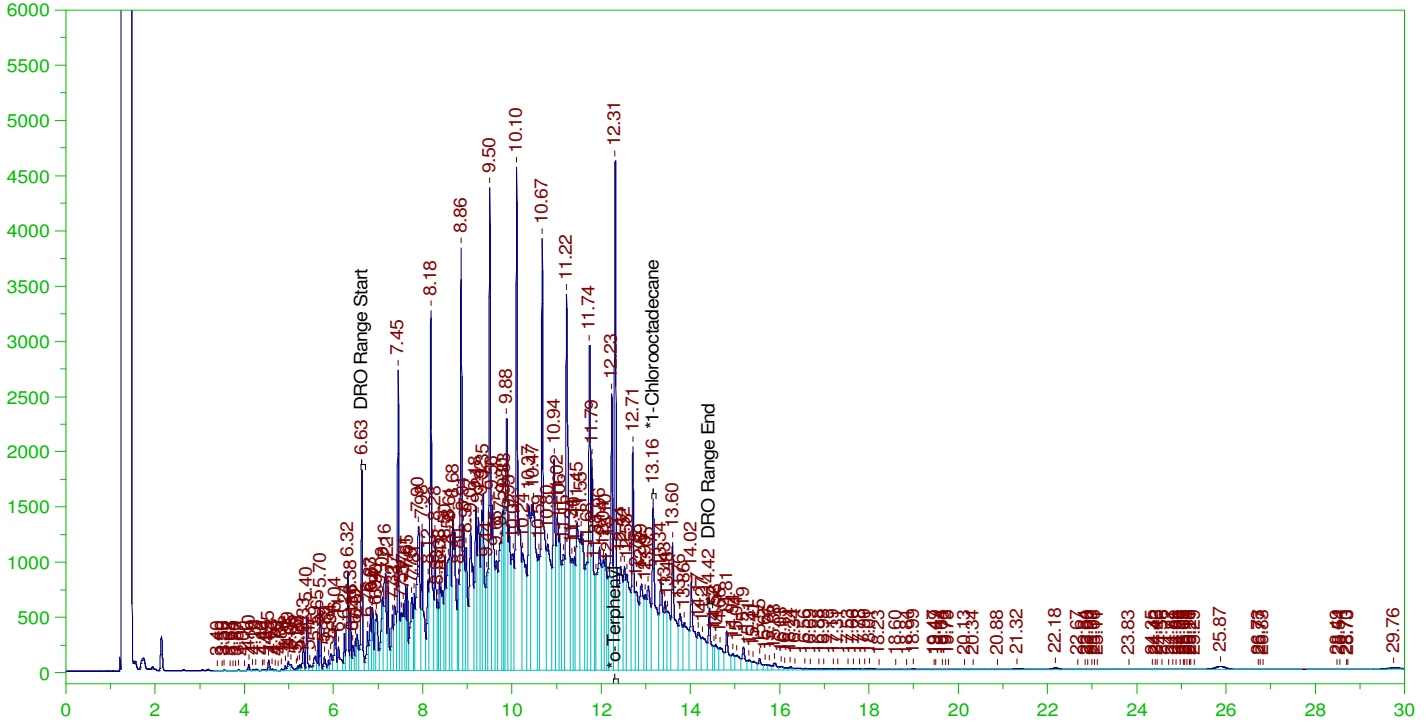
TEH Area:1.986222E+08

TEH Amount: 6.018469

Batch ID: 163074

B22011136-001DMSD ;0122HP5 ,

G:\org\HP5\DAT\HP5012222_b\0122HP5.0017.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011136-001DMSD ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0017.RAW
 Date & Time Acquired: 1/22/2022 9:39:20 PM
 Method File: G:\Org\HP5\Methods\D3_8015-C24-JB-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

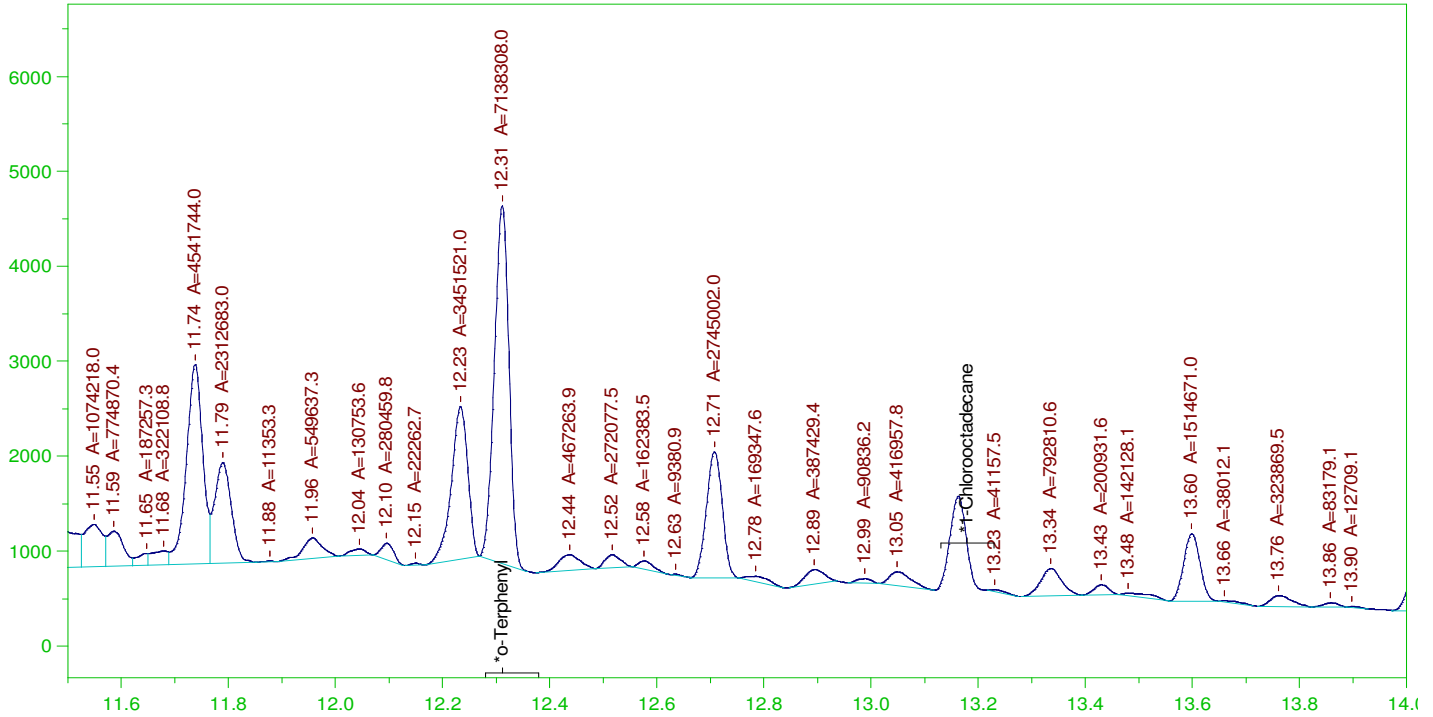
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.311	.198	.333	167.99
*1-Chlorooctadecane	13.163	.198	.202	101.8

DRO Area: 4.246459E+08 DRO Amount: 12.86723
 TEH Area: 4.554472E+08 TEH Amount: 13.80055

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0017.RAW

B22011136-001DMSD ;0122HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

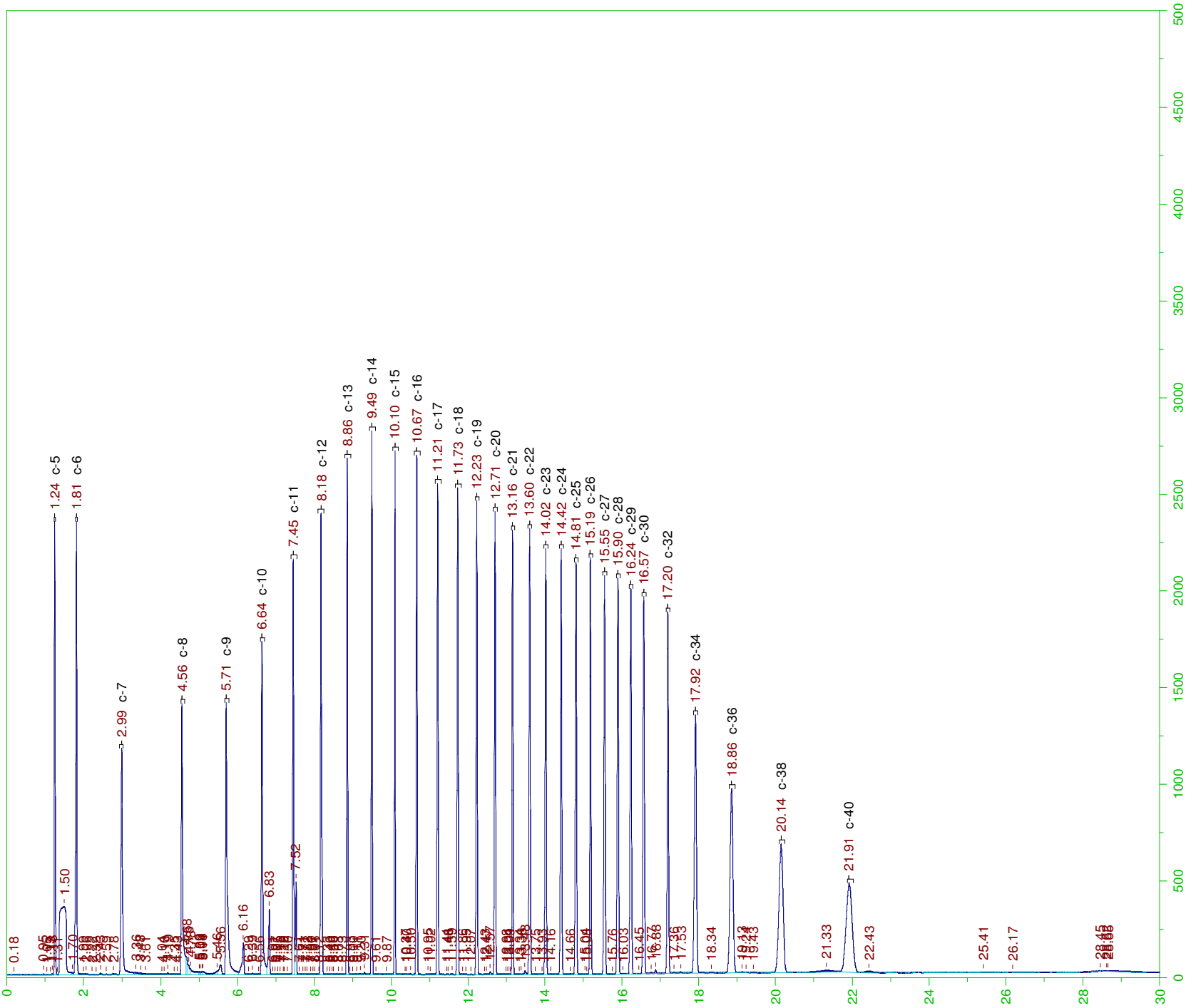
Sample Name: B22011136-001DMSD ;0122HP5 ,
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 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

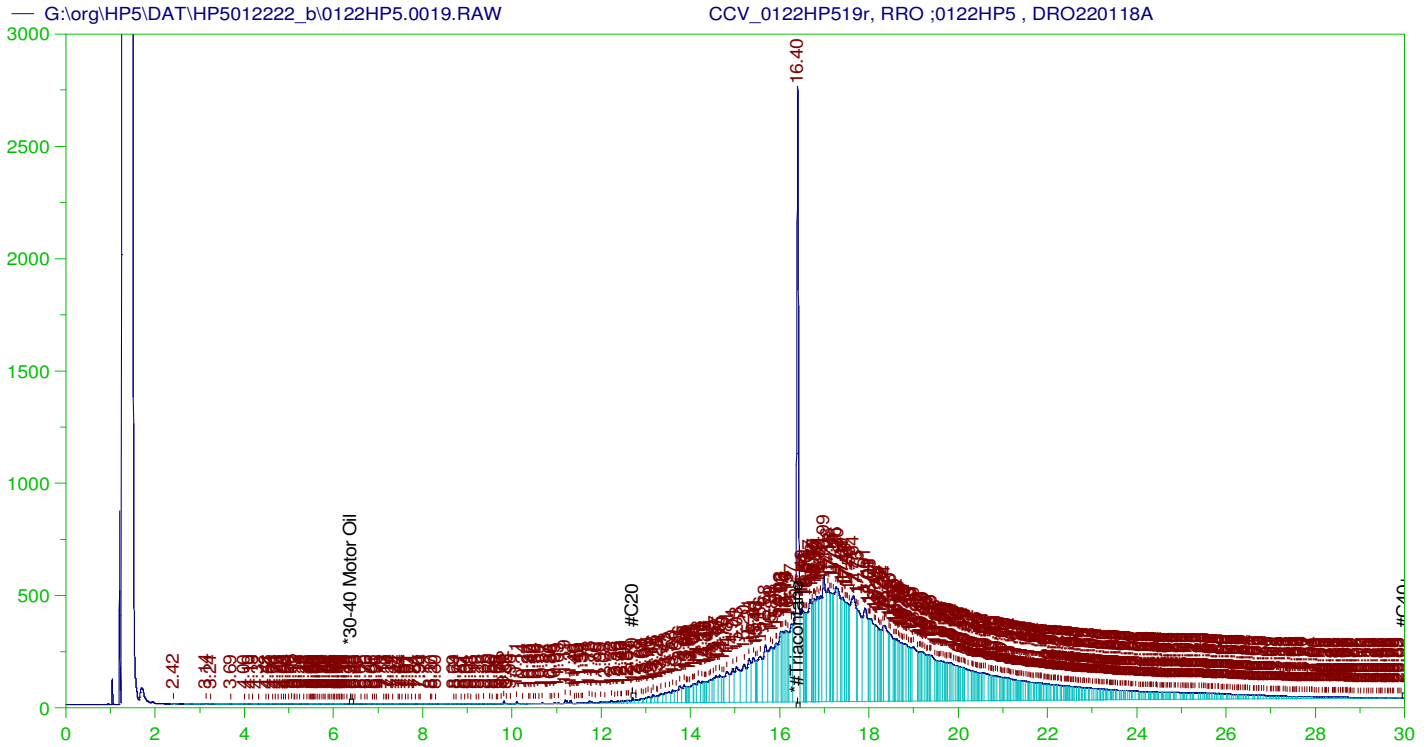
Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.311	.198	.192	96.84
*1-Chlorooctadecane	15.761	.198	.	-

DRO Area: 1.99379E+08 DRO Amount: 6.041402
 TEH Area: 2.136257E+08 TEH Amount: 6.473092





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP519r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0019.RAW
 Date & Time Acquired: 1/22/2022 11:05:03 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.4	500.	333.51	66.7	-

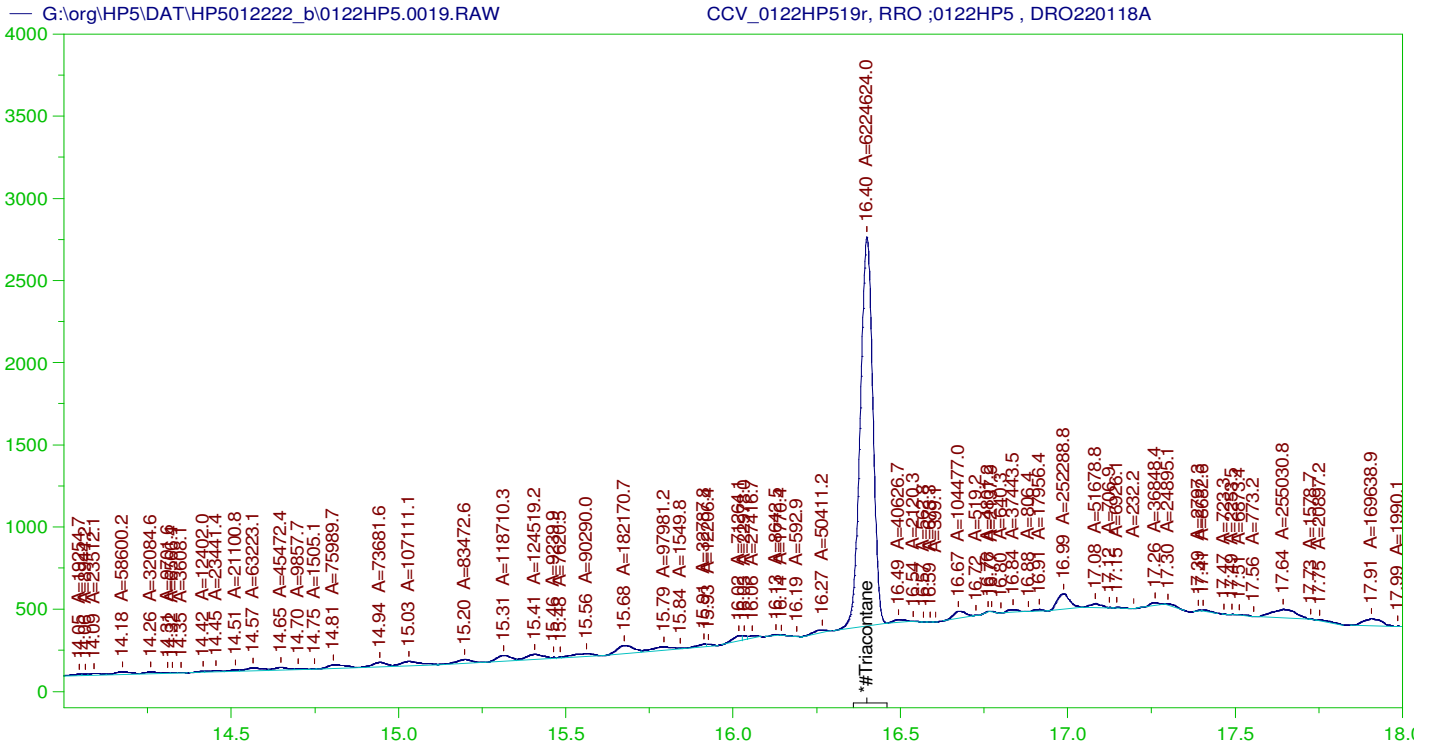
RRO TEH(Oil Range) Area: 1.224203E+08 RRO TEH(Oil Range) AMOUNT: 4632.825

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.024	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.4	200.	333.51	166.75	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP519r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0019.RAW
 Date & Time Acquired: 1/22/2022 11:05:03 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.67 to 30.05

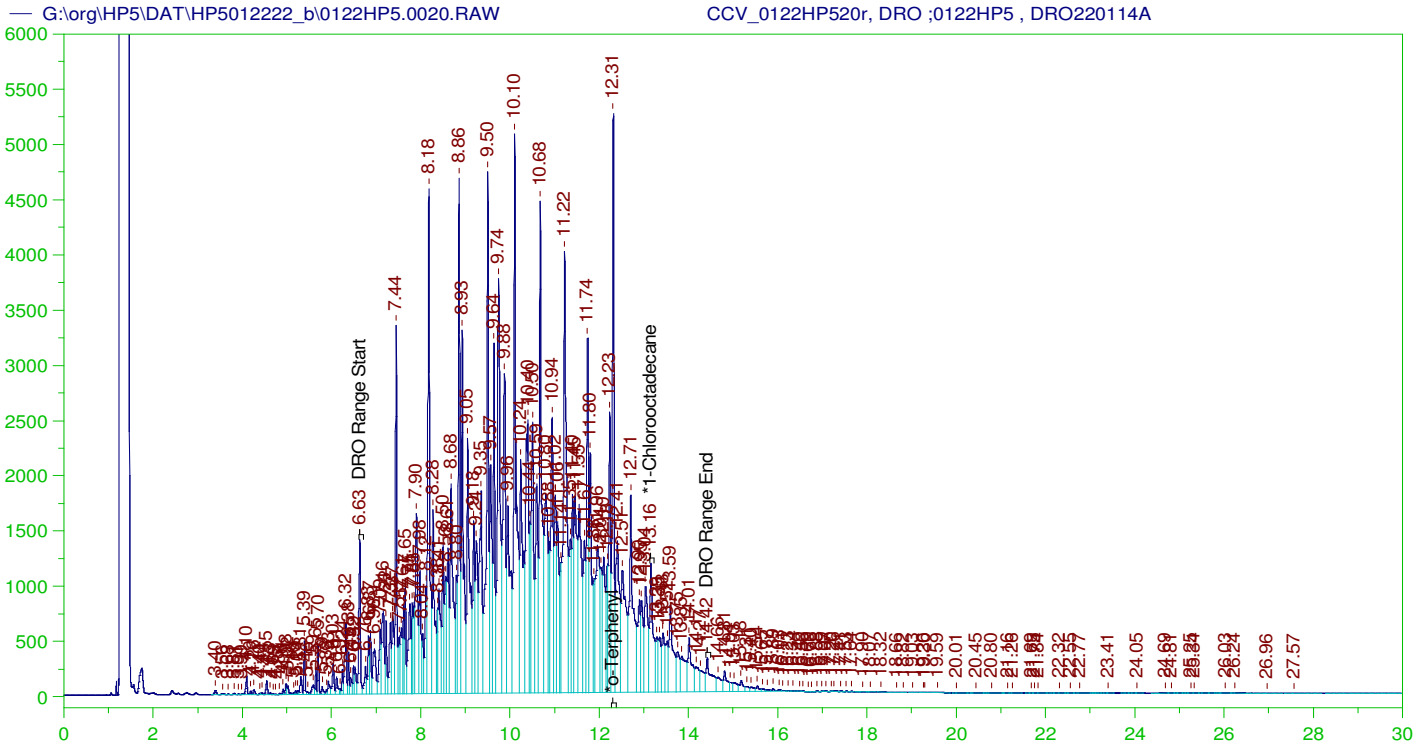
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.4	500.	210.035	42.01	-

RRO Area:3252572 RRO AMOUNT: 123.089

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.024	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.4	200.	210.035	105.02	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0122HP520r, DRO ;0122HP5 , DRO220114A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0020.RAW
 Date & Time Acquired: 1/22/2022 11:47:55 PM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JB-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.312	200.	350.301	175.15
*1-Chlorooctadecane	13.158	200.	164.571	82.29

DRO Area: 4.954132E+08 DRO Amount: 15161.67
 TEH Area: 5.120406E+08 TEH Amount: 15670.54

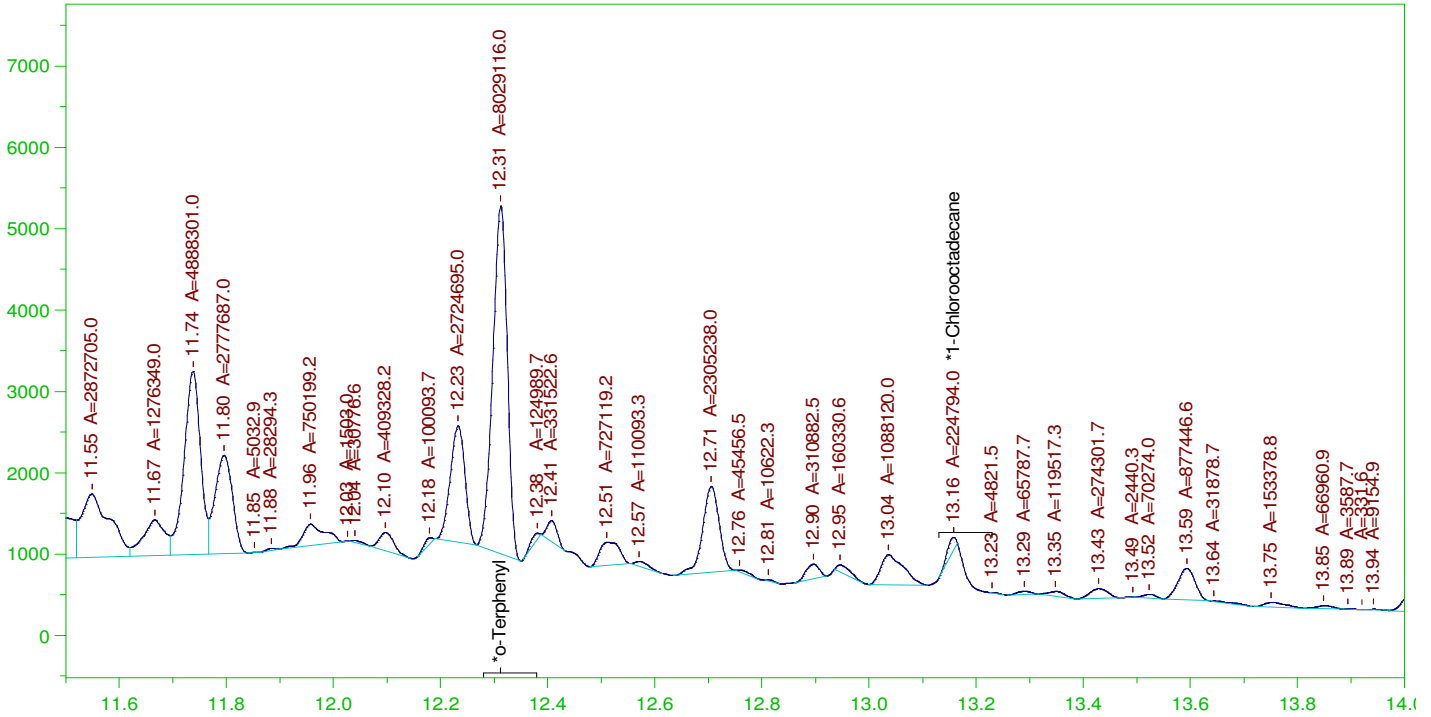
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15670.54	104.47	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.312	200.	350.301	175.15	85-115
*1-Chlorooctadecane	13.158	200.	164.571	82.29	85-115

G:\org\HP5\DAT\HP5012222_b\0122HP5.0020.RAW

CCV_0122HP520r, DRO ;0122HP5 , DRO220114A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0122HP520r, DRO ;0122HP5 , DRO220114A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0020.RAW
 Date & Time Acquired: 1/22/2022 11:47:55 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JB-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

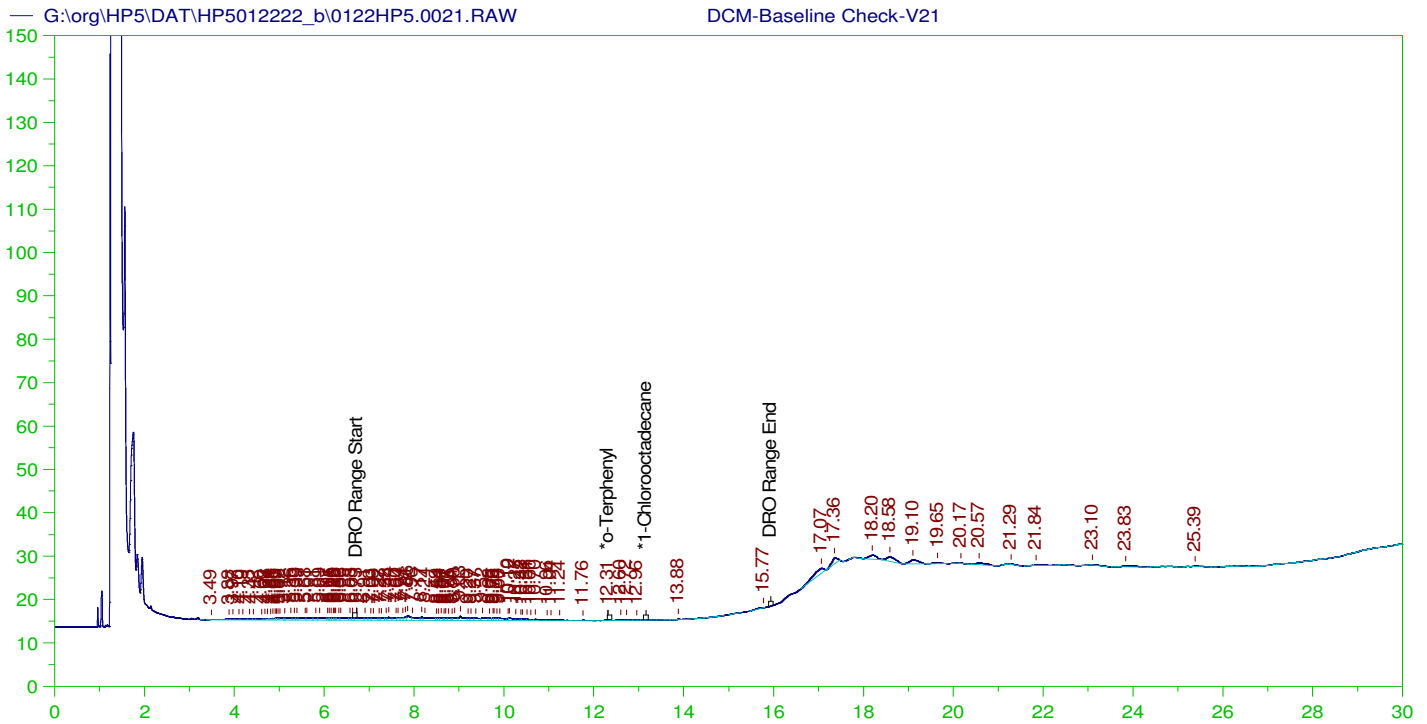
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.312	200.	217.84	108.92
*1-Chlorooctadecane	13.158	200.	6.099	3.05

DRO Area: 2.539744E+08 DRO Amount: 7772.658
 TEH Area: 2.651958E+08 TEH Amount: 8116.079

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8116.08	54.11	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.312	200.	217.84	108.92	85-115
*1-Chlorooctadecane	13.158	200.	6.099	3.05	85-115



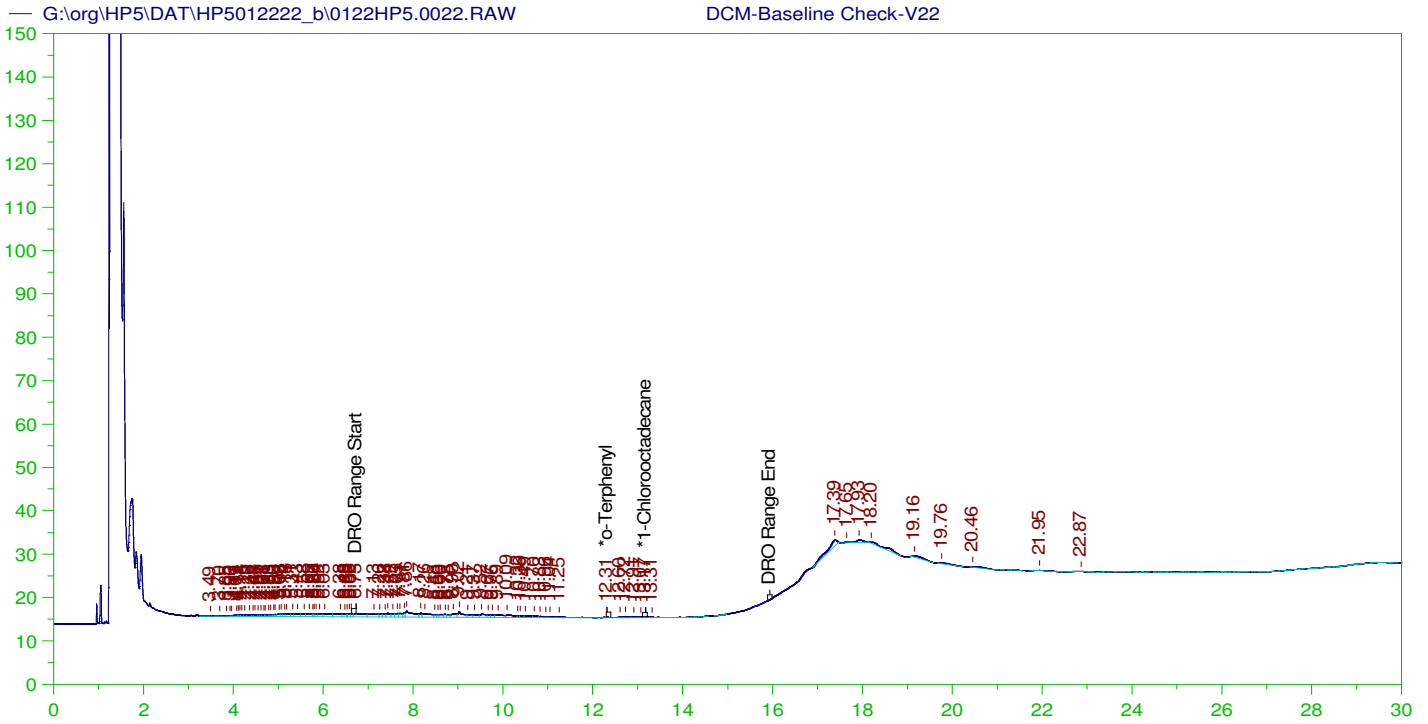
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V21
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0021.RAW
 Date & Time Acquired: 1/23/2022 12:30:51 AM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.31	200.	.014	.01 -
*1-Chlorooctadecane	29.975	200.	.	. -

DRO Area:137493.4 DRO Amount: 4.207861
 TEH Area:305057.9 TEH Amount: 9.336024



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V22
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0022.RAW
 Date & Time Acquired: 1/23/2022 1:13:40 AM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.31	200.	.03	.02	-
*1-Chlorooctadecane	13.175	200.	.021	.01	-

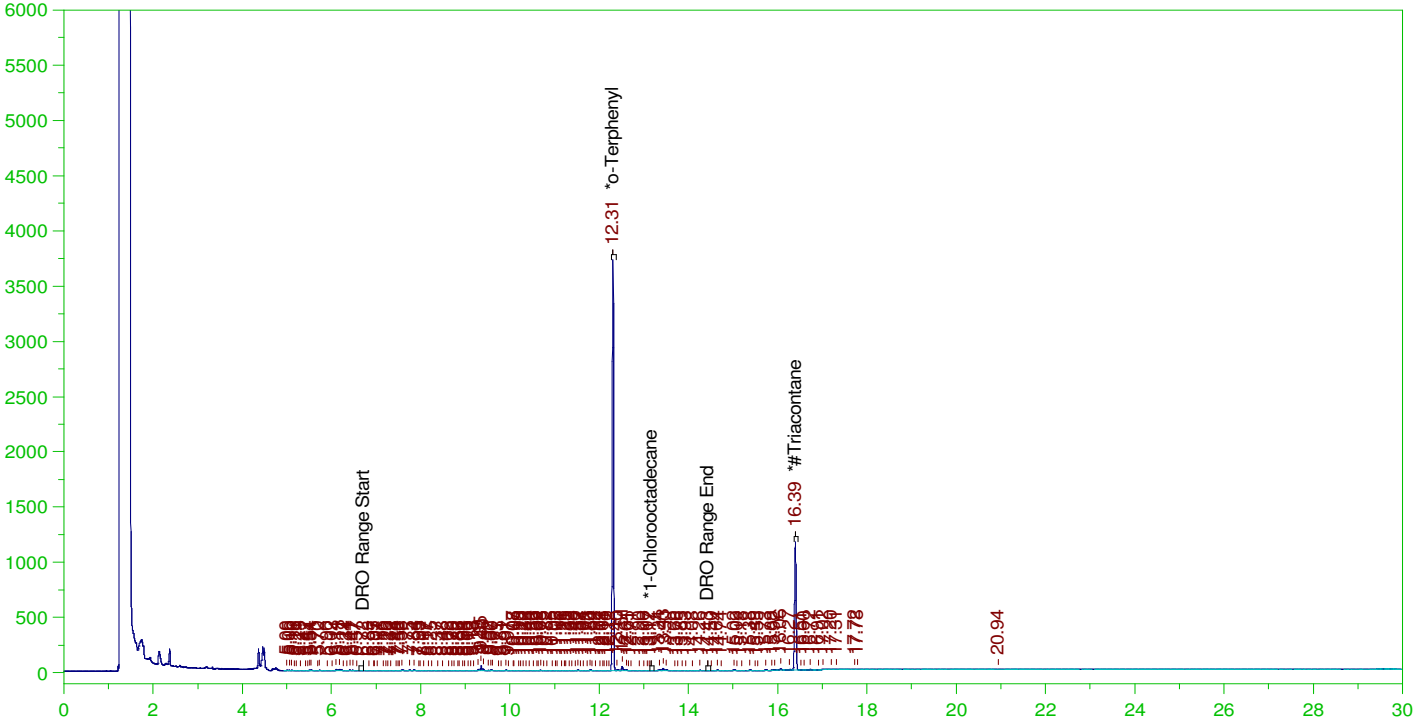
DRO Area:174763 DRO Amount: 5.348466
 TEH Area:336703.6 TEH Amount: 10.30451

ERH2460 (RHMW12A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0023.RAW

B22011131-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011131-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0023.RAW
Date & Time Acquired: 1/23/2022 1:56:33 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.305	.19	.183	95.87	-
*1-Chlorooctadecane	13.172	.19	.	.03	-
*#Triacontane	16.392	.19	.096	50.6	-

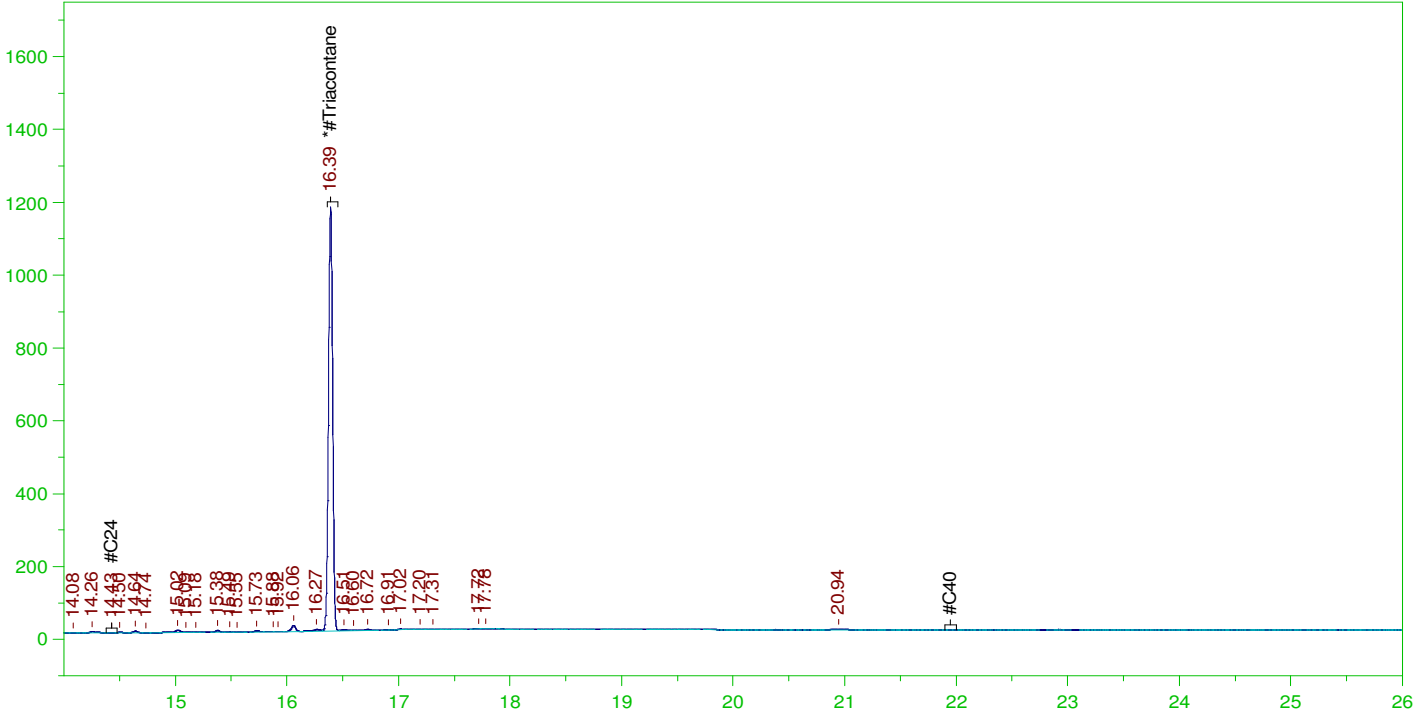
DRO Area:838382.9 DRO Amount: 2.443615E-02
TEH Area:1264552 TEH Amount: 3.685759E-02

ERH2460 (RHMW12A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0023.RAW

B22011131-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011131-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0023.RAW
Date & Time Acquired: 1/23/2022 1:56:33 AM
Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.392	.476	.096	20.24

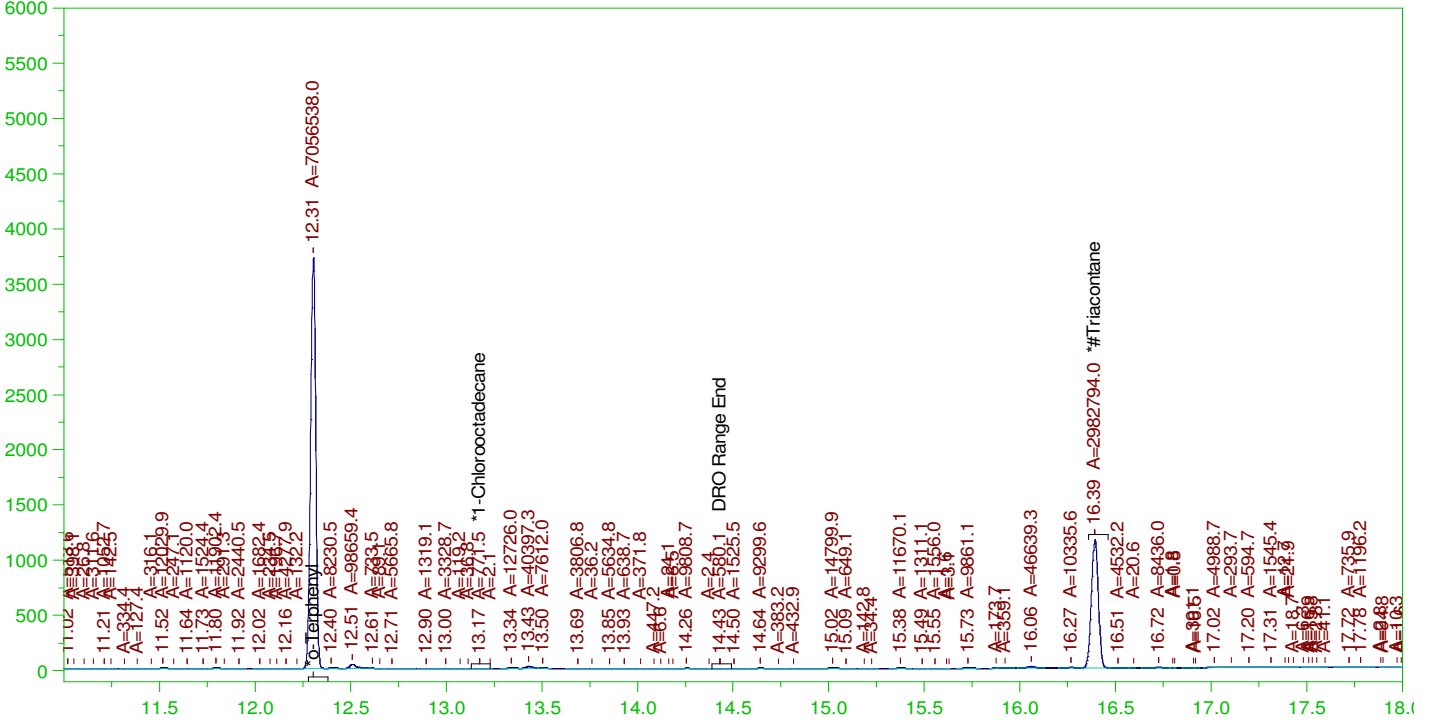
RRO Area:177800.6 RRO AMOUNT: 6.408204E-03

ERH2460 (RHMW12A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0023.RAW

B22011131-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011131-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0023.RAW
Date & Time Acquired: 1/23/2022 1:56:33 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.305	.19	.182	95.73	-
*1-Chlorooctadecane	13.172	.19	.	.01	-
*#Triacontane	16.392	.19	.096	50.32	-

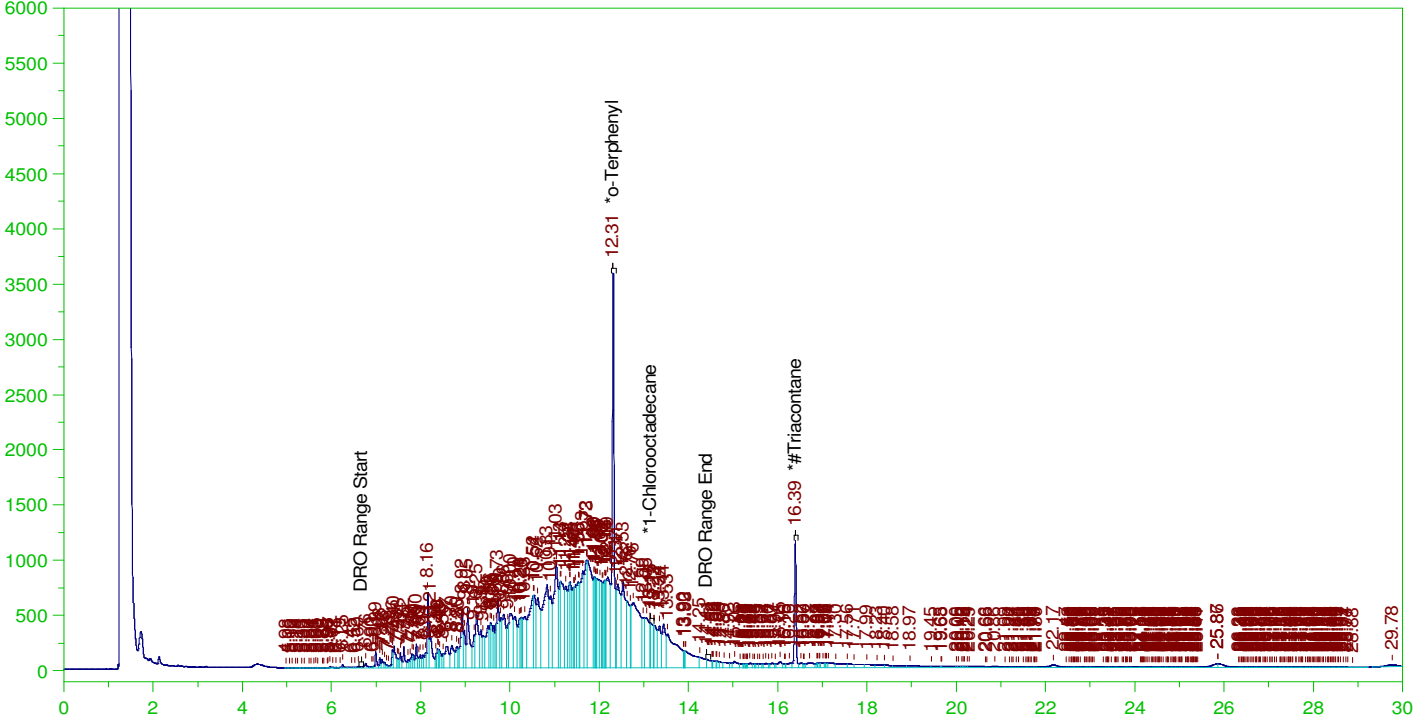
DRO Area:655314 DRO Amount: 1.910028E-02
TEH Area:2780181 TEH Amount: 8.103328E-02

ERH2429 (RHMW02)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0024.RAW

B22011137-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011137-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0024.RAW
 Date & Time Acquired: 1/23/2022 2:39:24 AM
 Method File: G:\Org\HP5\Methods\D3_8015-C24T-JB-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.31	.194	.282	145.12	-
*1-Chlorooctadecane	13.154	.194	.036	18.29	-
*#Triacontane	16.39	.194	.106	54.41	-

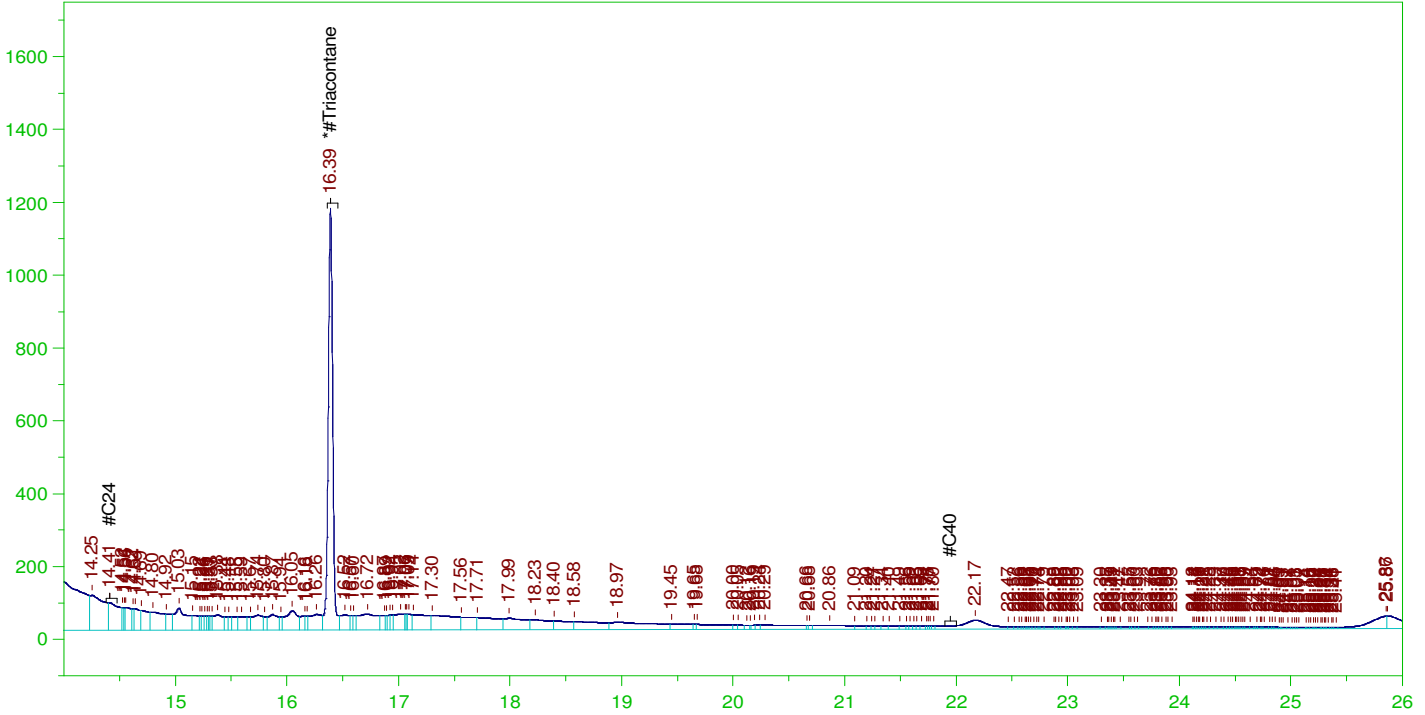
DRO Area:1.734014E+08 DRO Amount: 5.152228
 TEH Area:1.875687E+08 TEH Amount: 5.573177

ERH2429 (RHMW02)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0024.RAW

B22011137-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011137-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0024.RAW
Date & Time Acquired: 1/23/2022 2:39:24 AM
Method File: G:\Org\HP5\Methods\D3_OROS-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.39	.485	.106	21.76

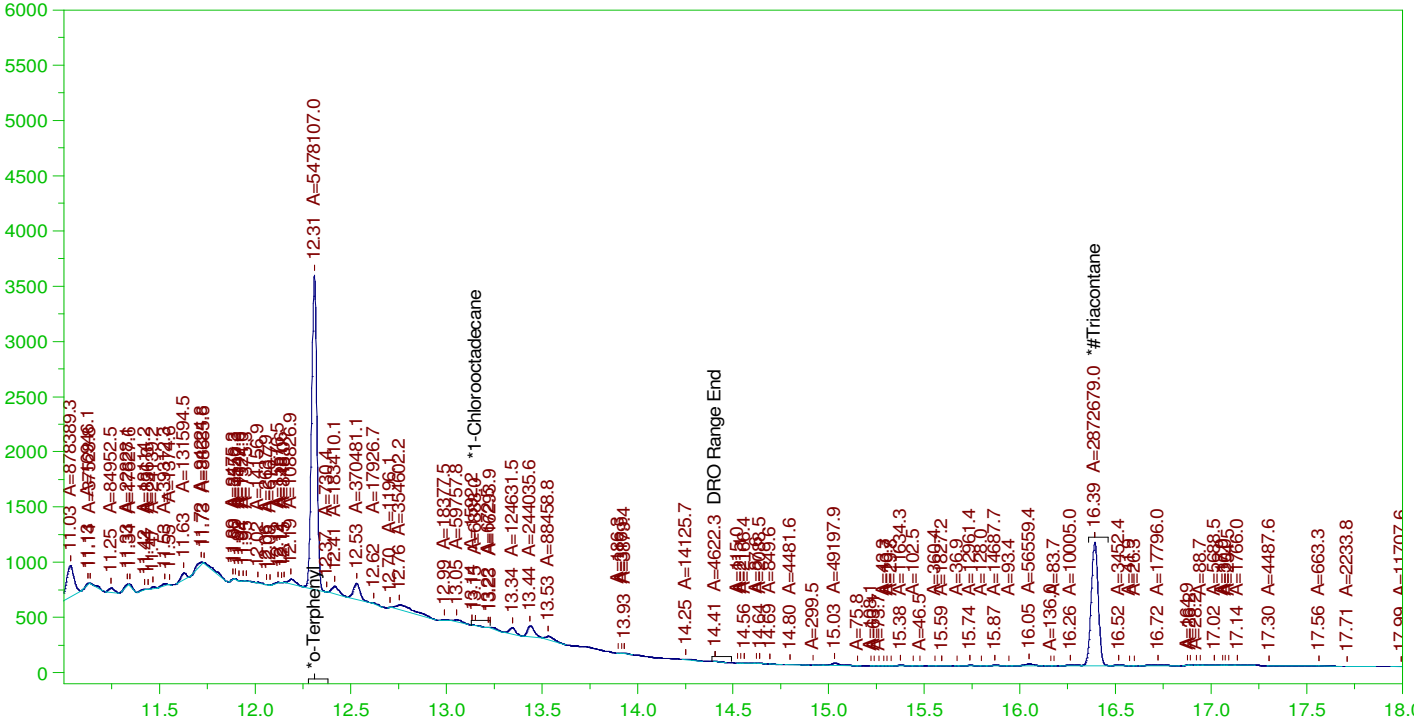
RRO Area:1.160812E+07 RRO AMOUNT: 0.4264978

ERH2429 (RHMW02)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0024.RAW

B22011137-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

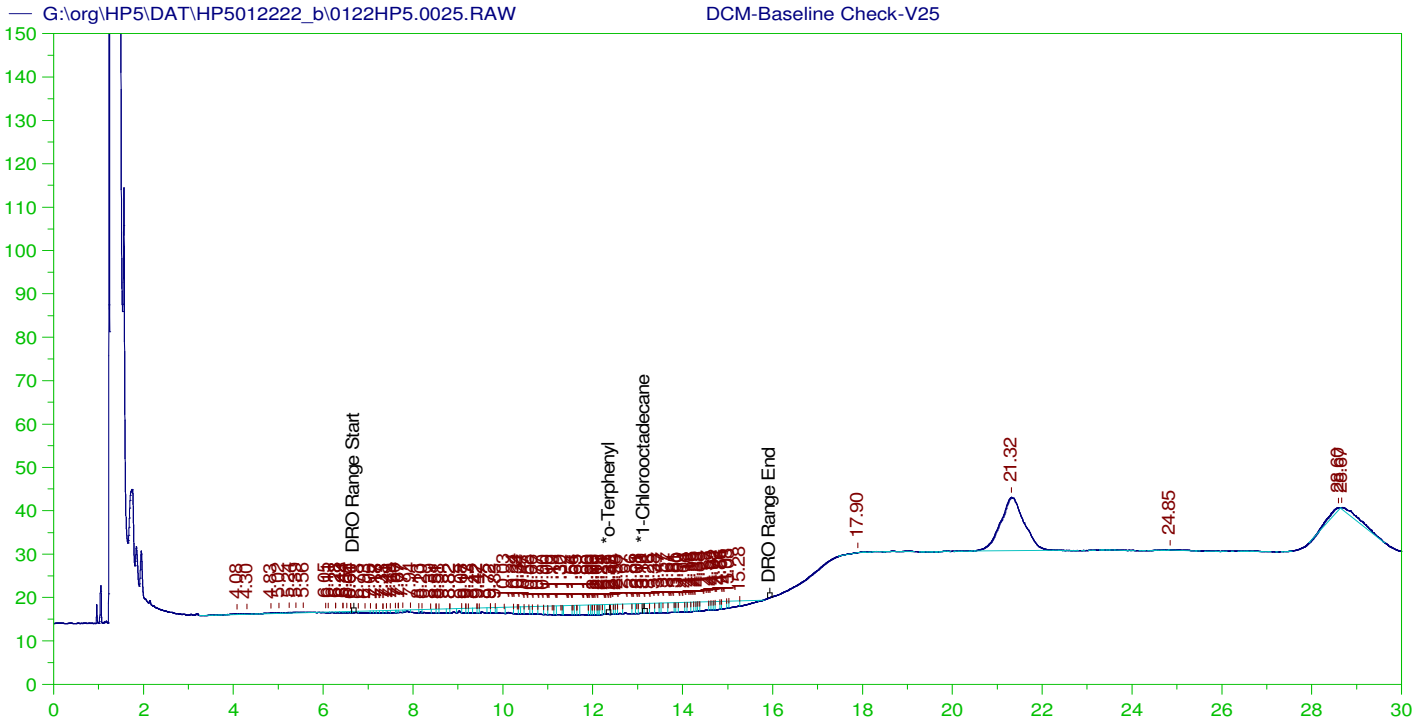
Sample Name: B22011137-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0024.RAW
Date & Time Acquired: 1/23/2022 2:39:24 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.31	.194	.144	74.31
*1-Chlorooctadecane	13.154	.194	.09	-
*#Triacontane	16.39	.194	.094	48.47

DRO Area: 2.254794E+07 DRO Amount: 0.6699606
TEH Area: 2.434994E+07 TEH Amount: 0.7235029



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V25
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0025.RAW
 Date & Time Acquired: 1/23/2022 3:22:17 AM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.371	200.	.457	.23	-
*1-Chlorooctadecane	13.142	200.	.452	.23	-

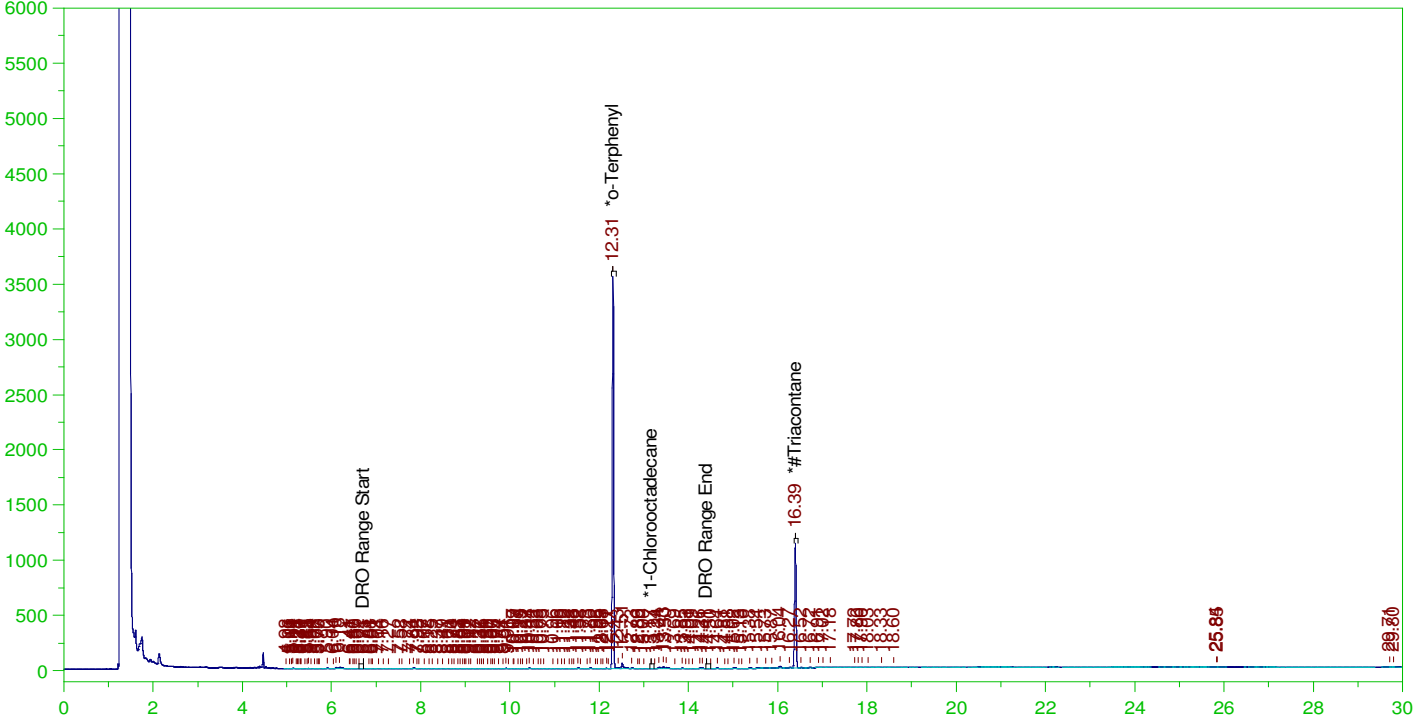
DRO Area: 799684.3 DRO Amount: 24.47362
 TEH Area: 1332747 TEH Amount: 40.78753

ERH2466 (RHMW09)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0026.RAW

B22011132-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011132-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0026.RAW
Date & Time Acquired: 1/23/2022 4:05:09 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.198	.183	92.21	-
*1-Chlorooctadecane	13.167	.198	.	.01	-
*#Triacontane	16.391	.198	.097	49.16	-

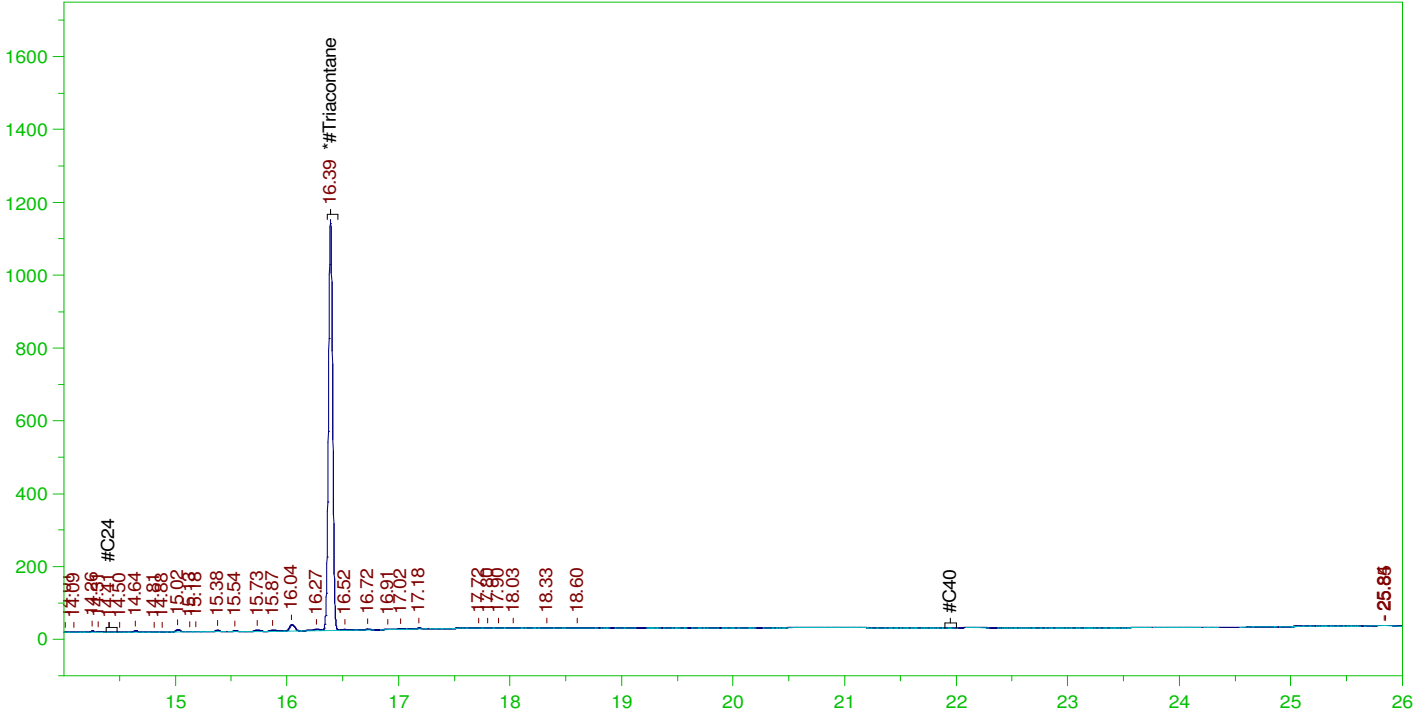
DRO Area:611390.4 DRO Amount: 1.852579E-02
TEH Area:990232.6 TEH Amount: 3.000513E-02

ERH2466 (RHMW09)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0026.RAW

B22011132-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011132-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0026.RAW
 Date & Time Acquired: 1/23/2022 4:05:09 AM
 Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.391	.495	.097	19.66

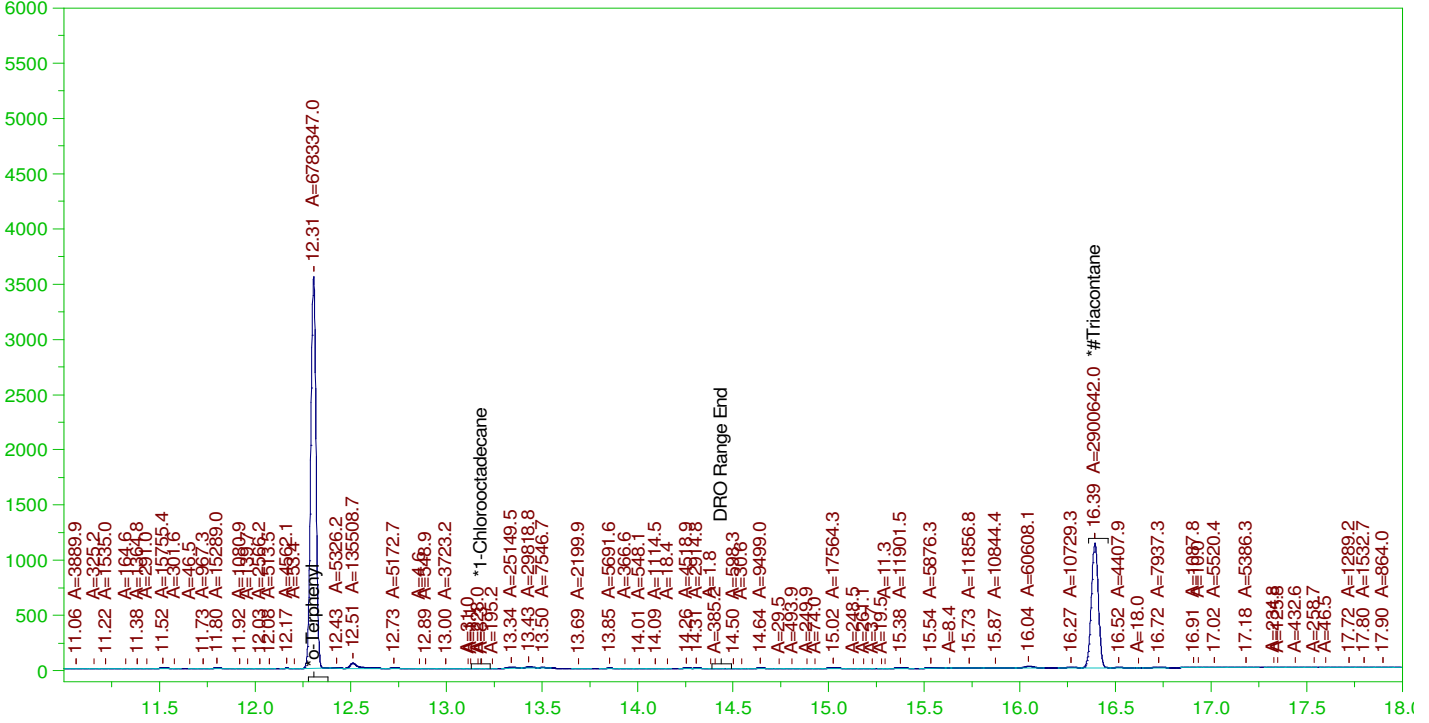
RRO Area:199769 RRO AMOUNT: 7.485125E-03

ERH2466 (RHMW09)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0026.RAW

B22011132-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011132-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0026.RAW
 Date & Time Acquired: 1/23/2022 4:05:09 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
 Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.198	.182	92.02	-
*1-Chlorooctadecane	29.805	.198	.		-
*Triacontane	16.391	.198	.097	48.94	-

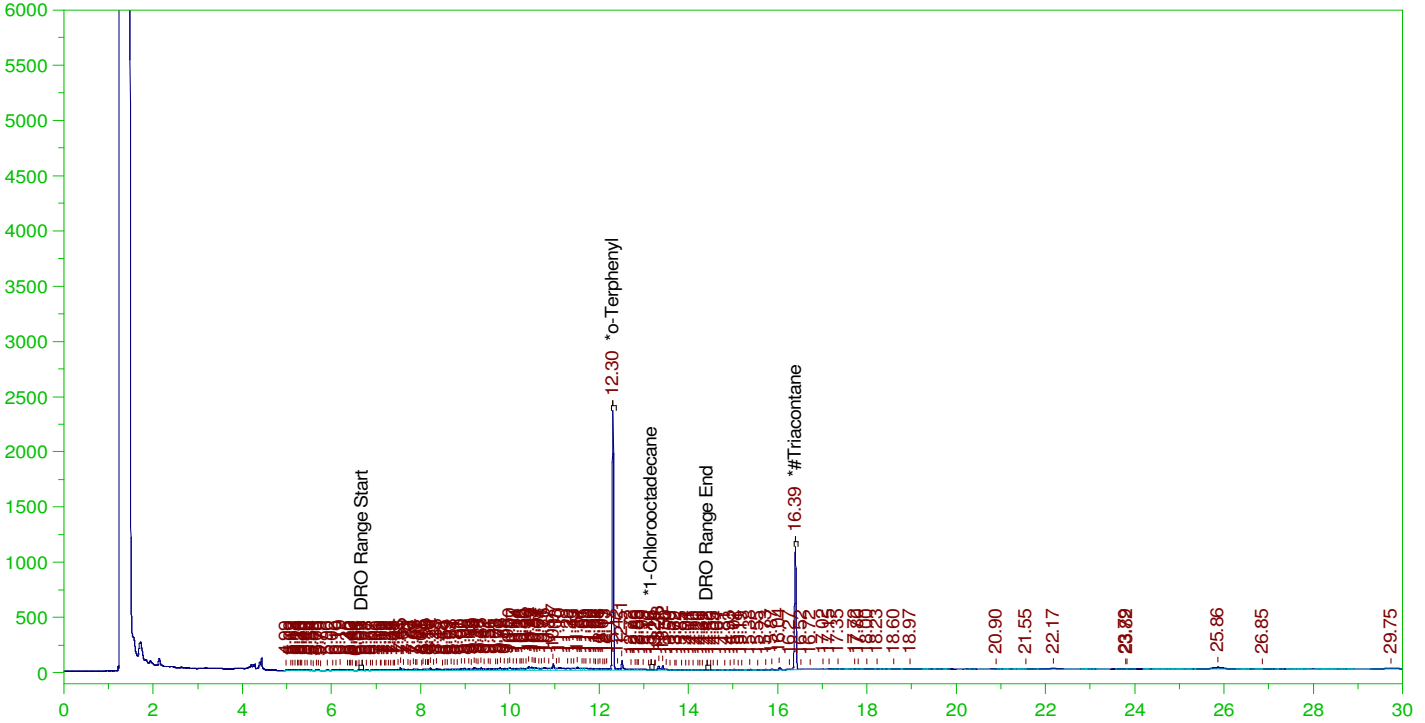
DRO Area:434290.4 DRO Amount: 1.315947E-02
 TEH Area:1266974 TEH Amount: 3.839068E-02

ERH2426 (RHMW01R)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0027.RAW

B22011134-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011134-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0027.RAW
Date & Time Acquired: 1/23/2022 4:48:00 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.303	.2	.122	61.09	-
*1-Chlorooctadecane	13.164	.2	.001	.37	-
*#Triacontane	16.392	.2	.097	48.57	-

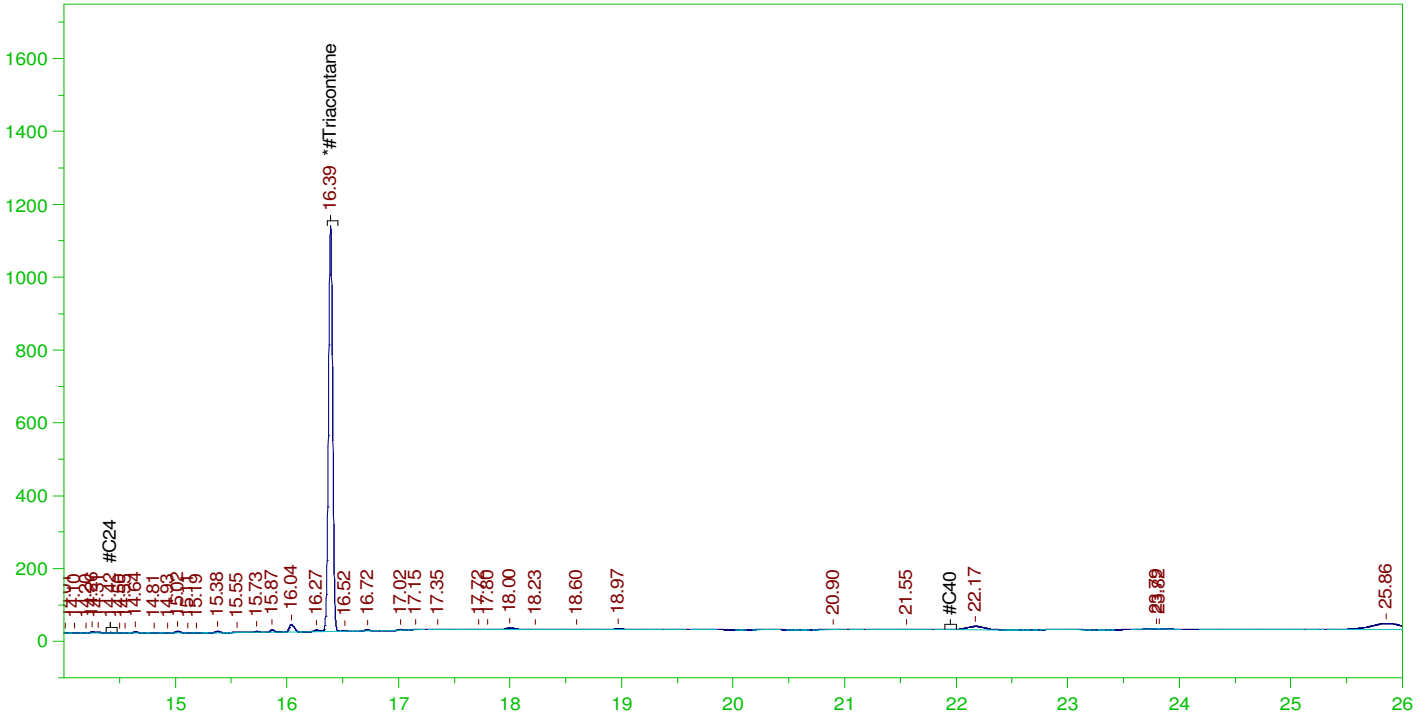
DRO Area:5199394 DRO Amount: 0.1591228
TEH Area:6154199 TEH Amount: 0.1883437

ERH2426 (RHMW01R)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0027.RAW

B22011134-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011134-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0027.RAW
 Date & Time Acquired: 1/23/2022 4:48:00 AM
 Method File: G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.392	.5	.097	19.43

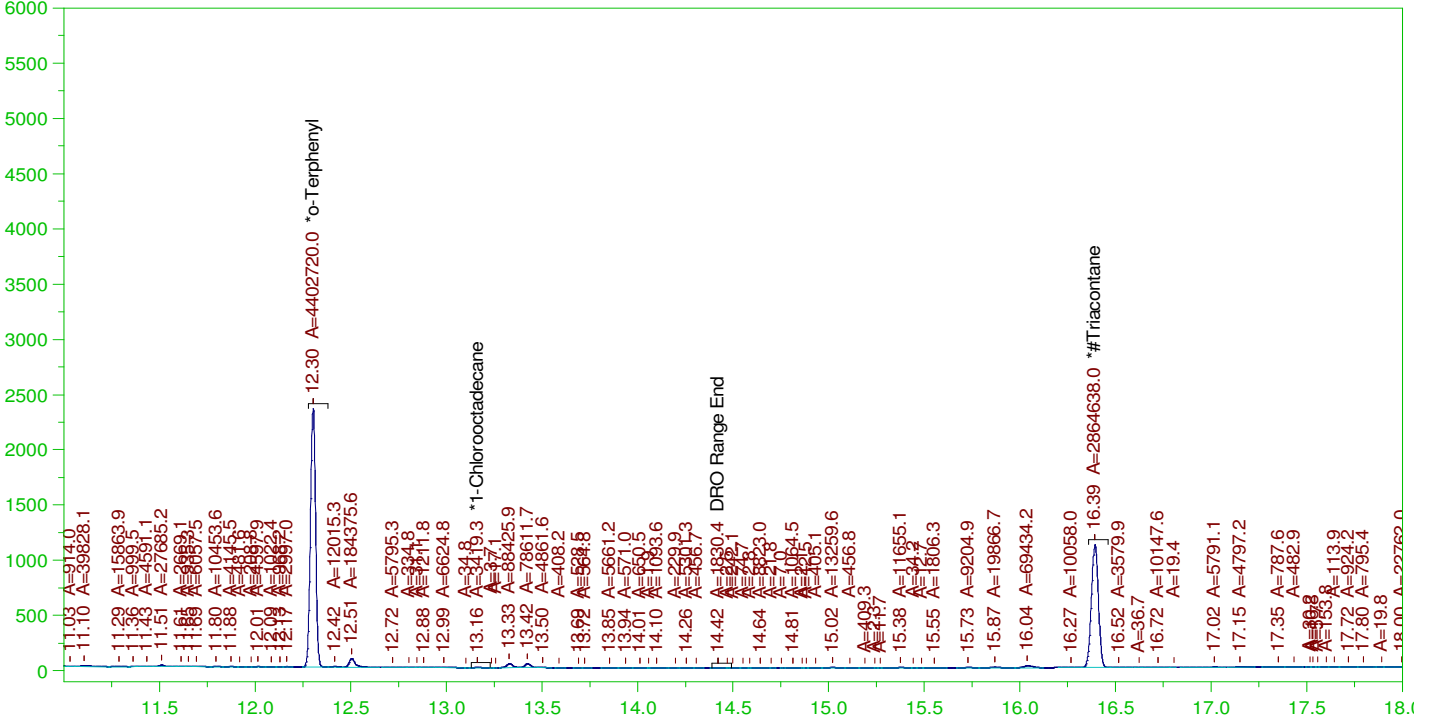
RRO Area:254600.5 RRO AMOUNT: 9.634999E-03

ERH2426 (RHMW01R)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0027.RAW

B22011134-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011134-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0027.RAW
Date & Time Acquired: 1/23/2022 4:48:00 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.303	.2	.119	59.73	-
*1-Chlorooctadecane	13.164	.2	.05		-
*#Triacontane	16.392	.2	.097	48.33	-

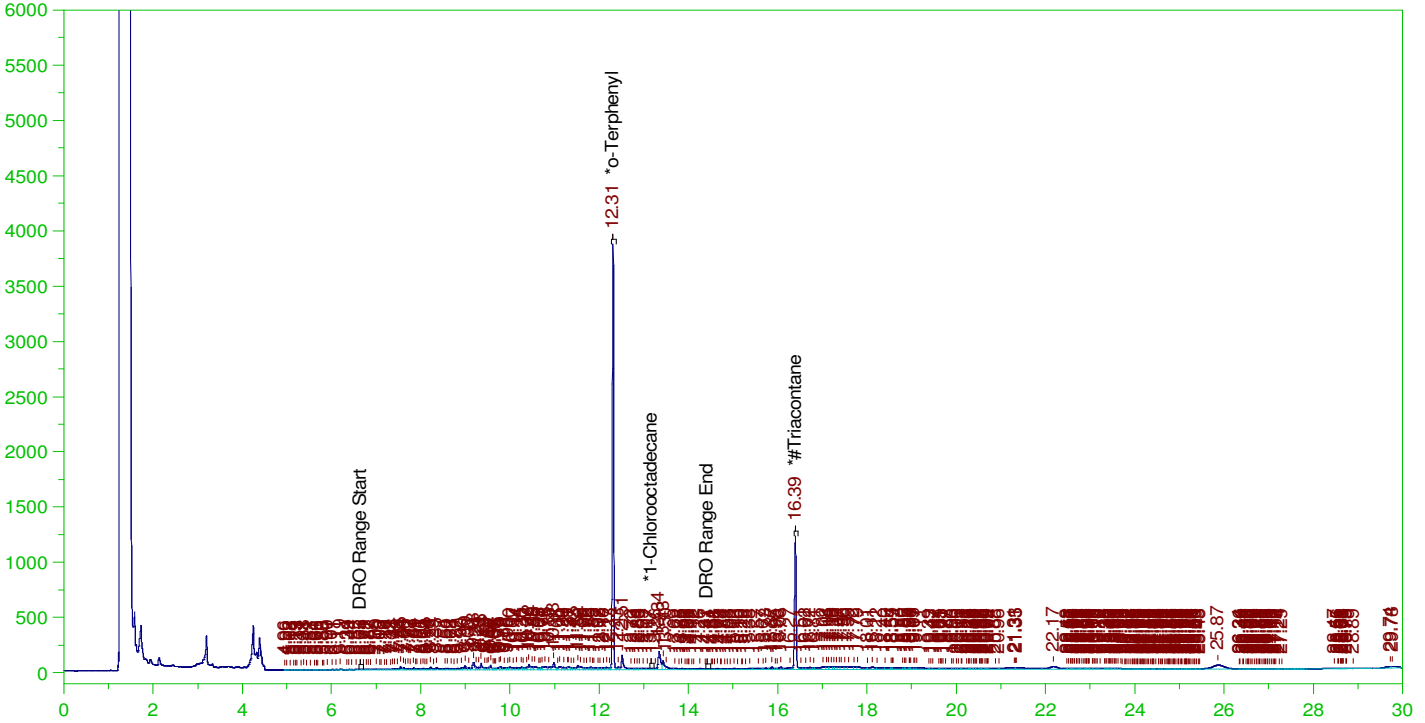
DRO Area:1726446 DRO Amount: 5.283631E-02
TEH Area:3833031 TEH Amount: 0.1173065

ERH2427 (RHMW01R)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0028.RAW

B22011134-002B ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011134-002B ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0028.RAW
Date & Time Acquired: 1/23/2022 5:30:48 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.307	.202	.204	101.13	-
*1-Chlorooctadecane	13.173	.202	.001	.71	-
*#Triacontane	16.392	.202	.111	55.03	-

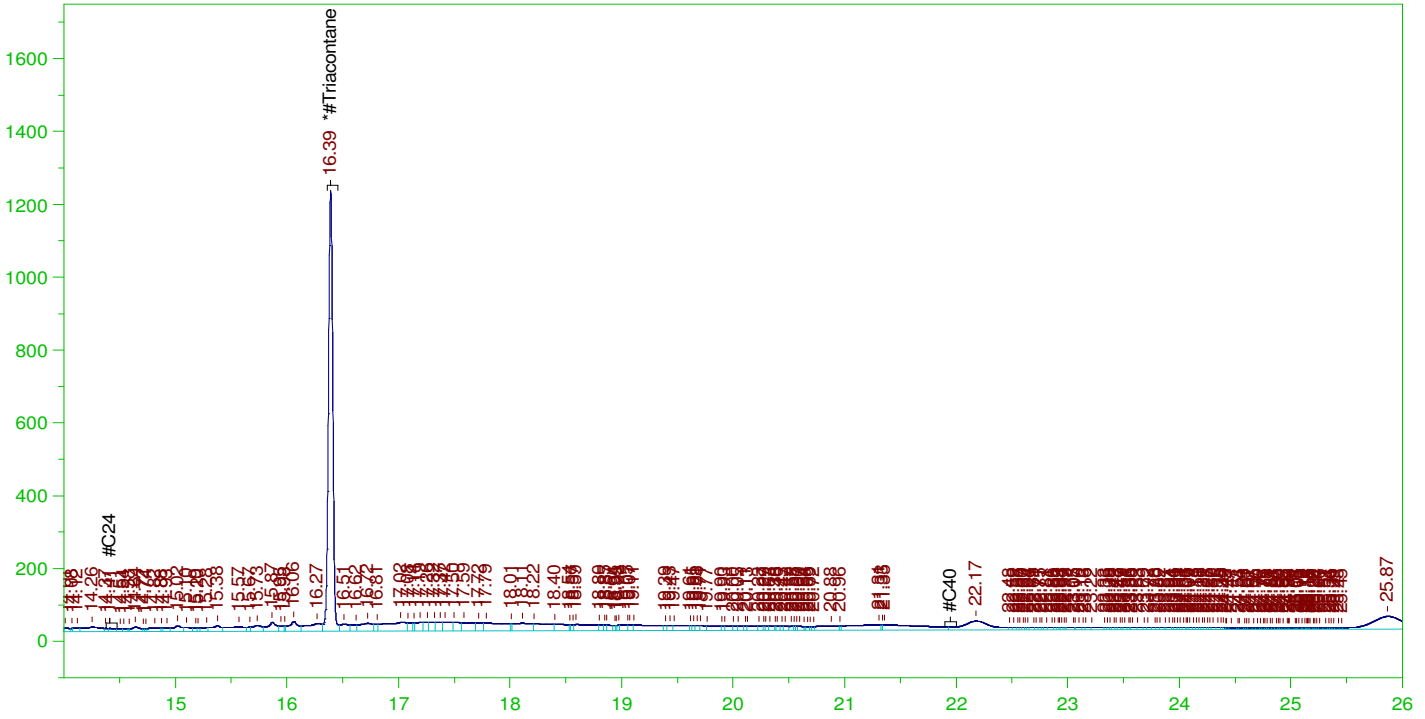
DRO Area:9080650 DRO Amount: 0.2807122
TEH Area:1.779328E+07 TEH Amount: 0.5500479

ERH2427 (RHMW01R)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0028.RAW

B22011134-002B ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011134-002B ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0028.RAW
Date & Time Acquired: 1/23/2022 5:30:48 AM
Method File: G:\Org\HP5\Methods\D3_OROS-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.392	.505	.111	22.01

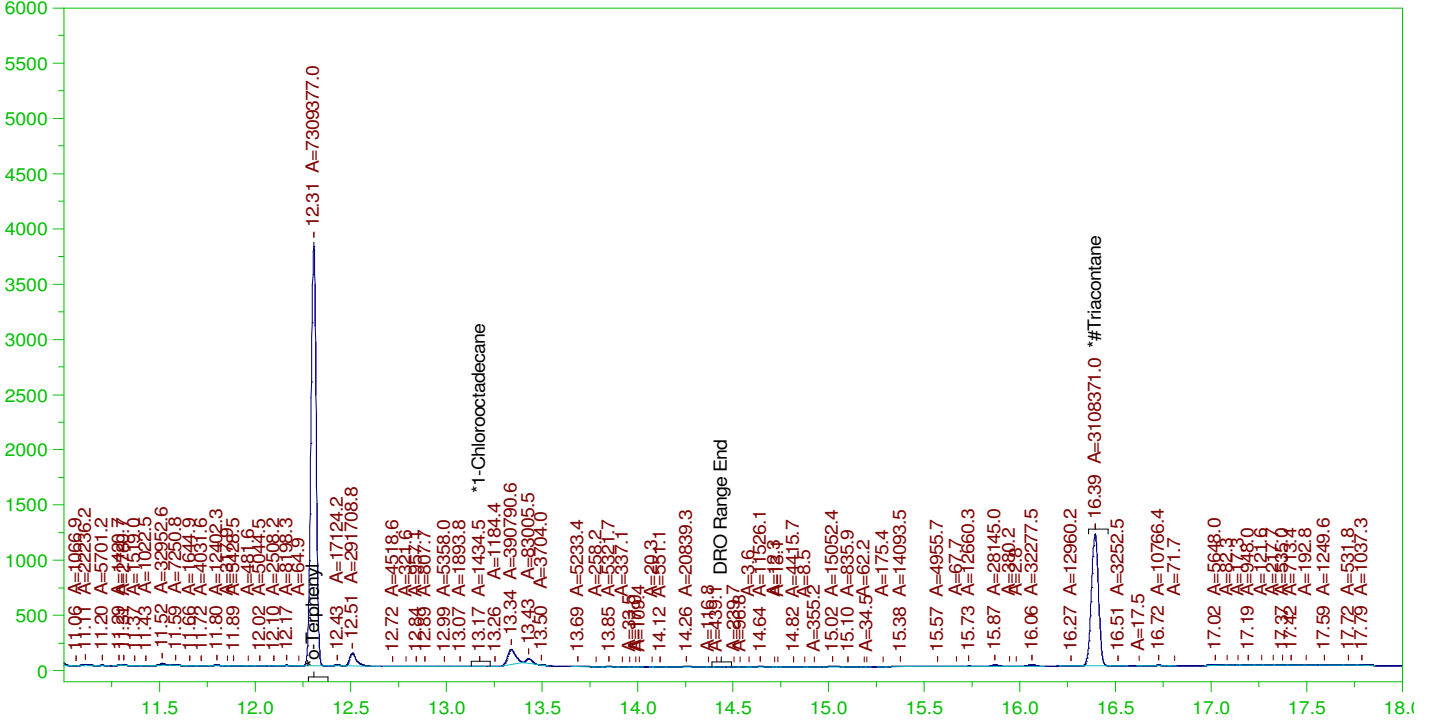
RRO Area:6083199 RRO AMOUNT: 0.2325355

ERH2427 (RHMW01R)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0028.RAW

B22011134-002B ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

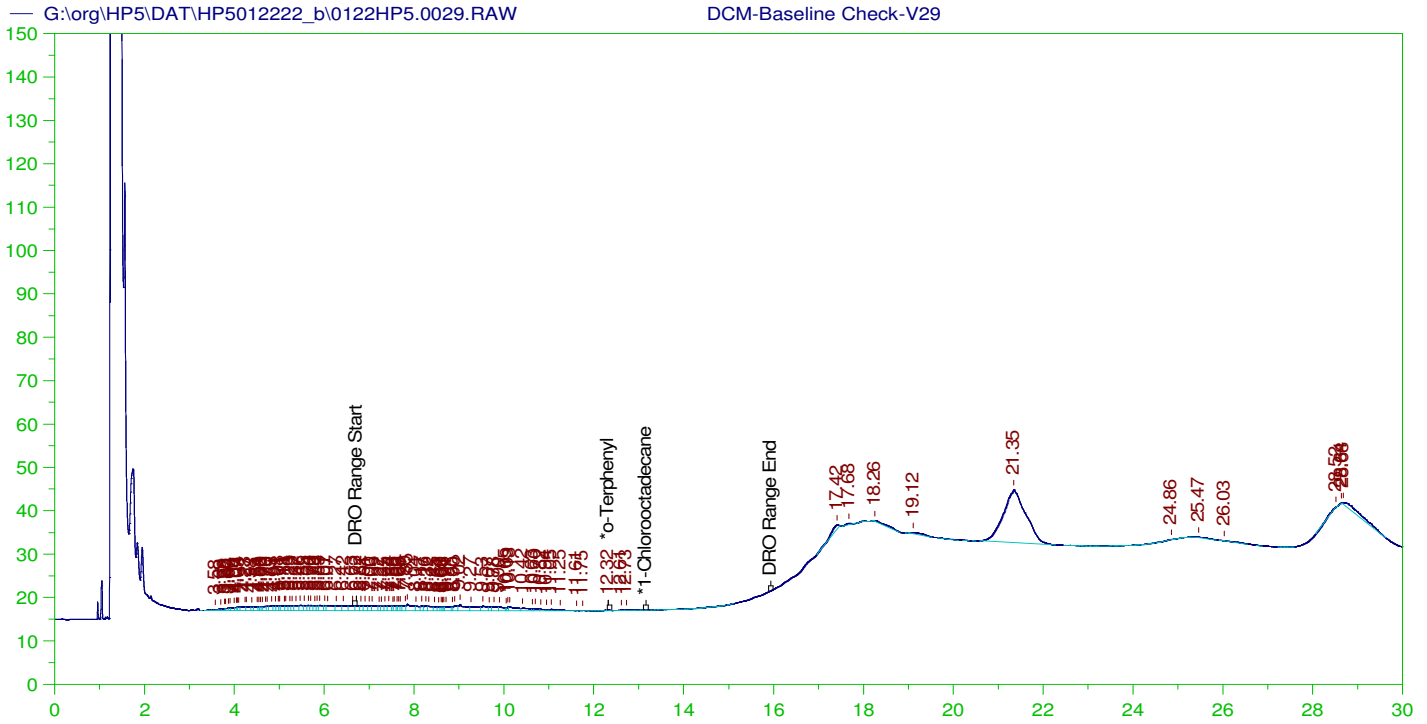
Sample Name: B22011134-002B ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0028.RAW
Date & Time Acquired: 1/23/2022 5:30:48 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.307	.202	.2	99.16	-
*1-Chlorooctadecane	13.173	.202	.	.02	-
*#Triacontane	16.392	.202	.106	52.44	-

DRO Area:2870056 DRO Amount: 8.872272E-02
TEH Area:7762694 TEH Amount: 0.23997



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V29
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0029.RAW
 Date & Time Acquired: 1/23/2022 6:13:37 AM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.318	200.	.023	.01
*1-Chlorooctadecane	28.681	200.	.	.

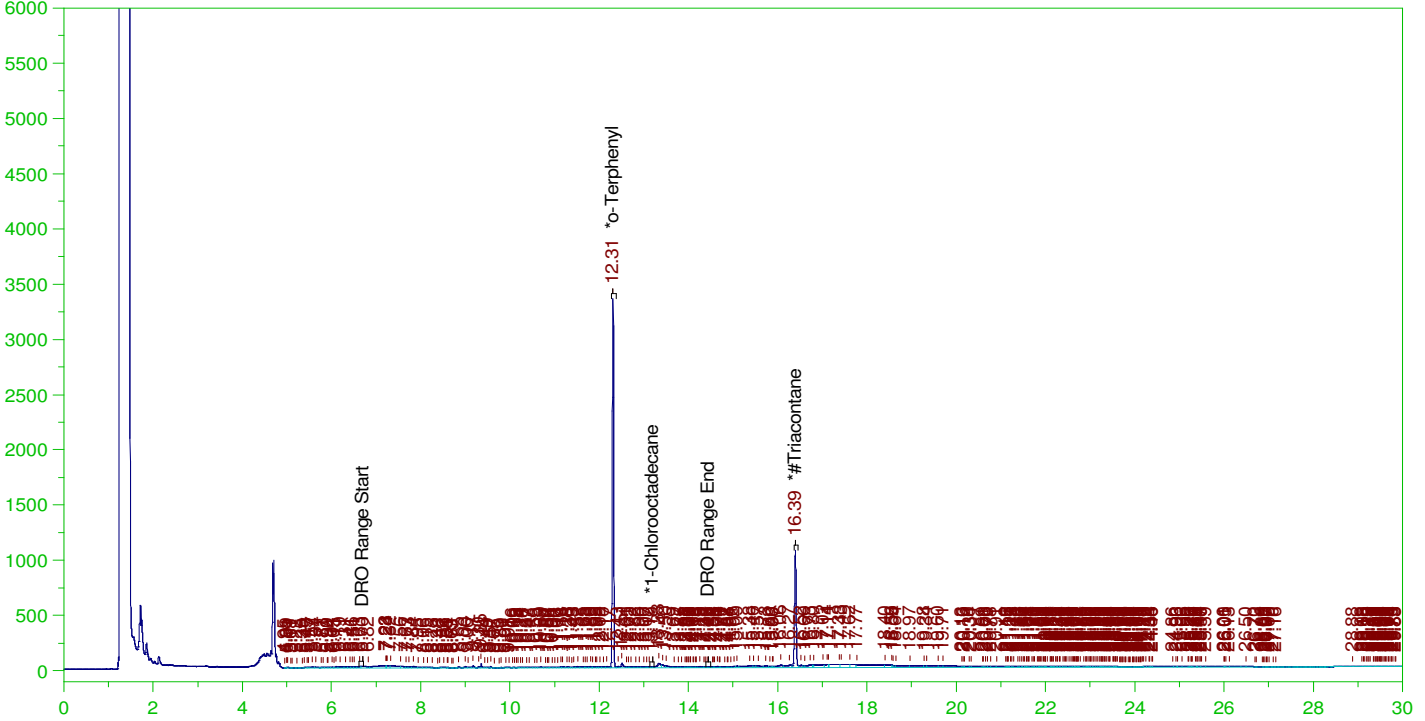
DRO Area:227191.7 DRO Amount: 6.952997
 TEH Area:903688.1 TEH Amount: 27.65656

ERH2450 (OWDFMW05A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0030.RAW

B22011126-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011126-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0030.RAW
Date & Time Acquired: 1/23/2022 6:56:23 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.19	.165	86.52	-
*1-Chlorooctadecane	13.189	.19	.001	.36	-
*#Triacontane	16.391	.19	.092	48.33	-

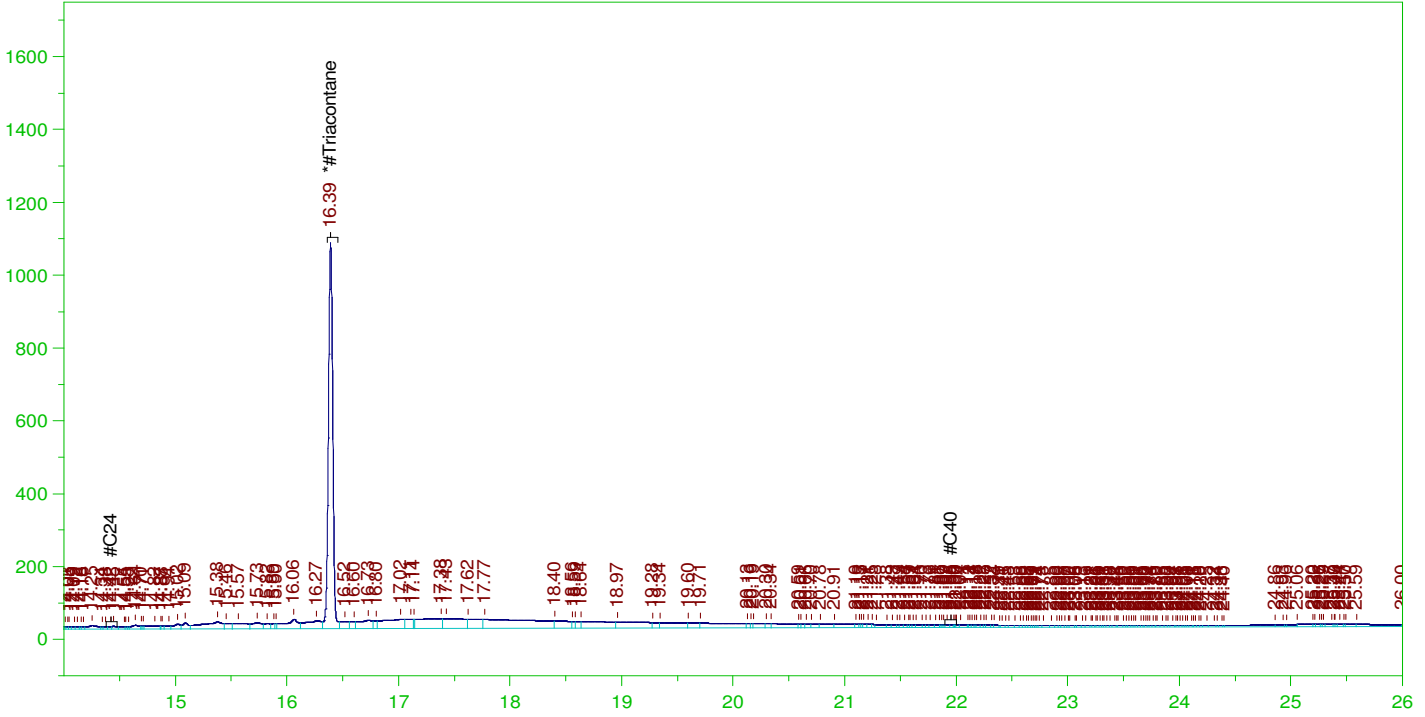
DRO Area:4039019 DRO Amount: 0.1177243
TEH Area:1.24447E+07 TEH Amount: 0.3627226

ERH2450 (OWDFMW05A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0030.RAW

B22011126-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011126-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0030.RAW
Date & Time Acquired: 1/23/2022 6:56:23 AM
Method File: G:\Org\HP5\Methods\D3_OROS-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.391	.476	.092	19.33

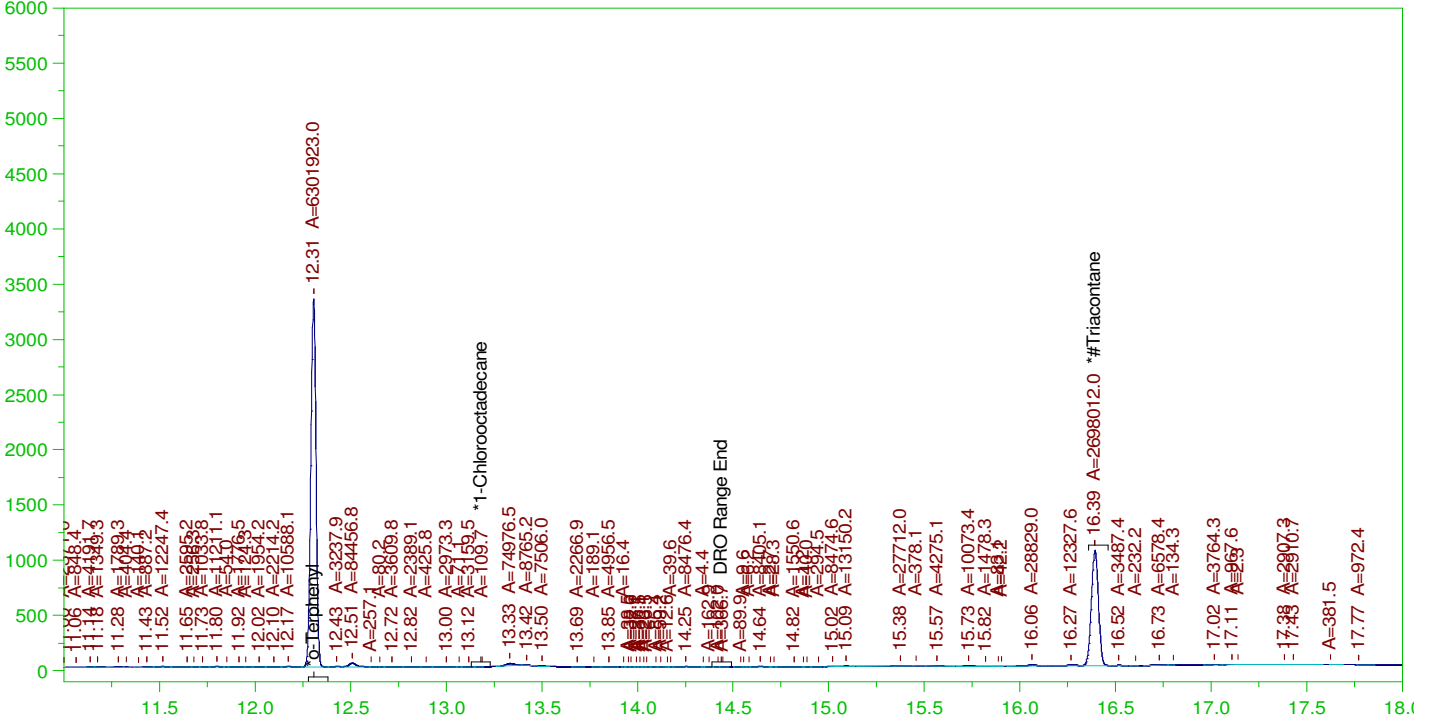
RRO Area:6678150 RRO AMOUNT: 0.2406906

ERH2450 (OWDFMW05A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0030.RAW

B22011126-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011126-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0030.RAW
Date & Time Acquired: 1/23/2022 6:56:23 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.19	.163	85.49	-
*1-Chlorooctadecane	29.988	.19	.		-
*#Triacontane	16.391	.19	.087	45.52	-

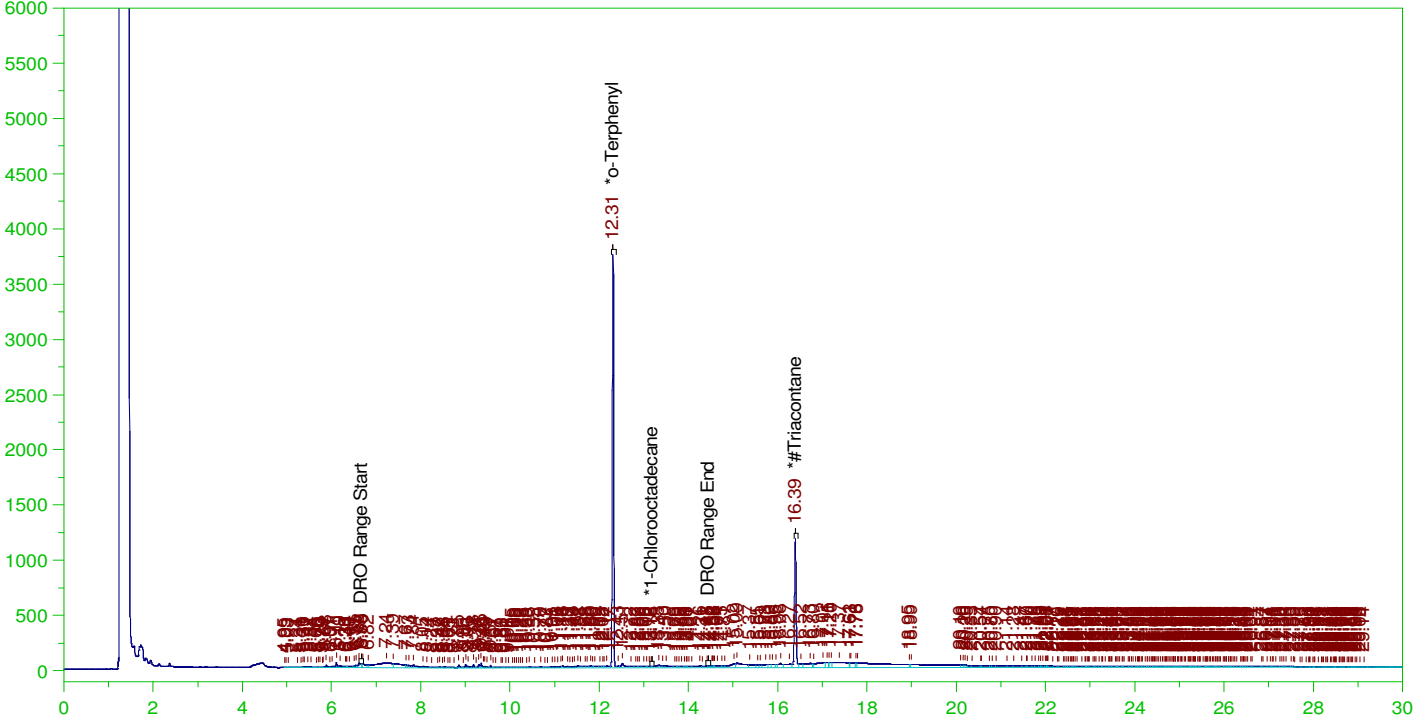
DRO Area:2163584 DRO Amount: 6.306146E-02
TEH Area:8371480 TEH Amount: 0.2440015

ERH2448 (OWDFMW04A)

G:\org\HP5\DAT\HP5012222_b\0122HP5.0031.RAW

Batch ID: 163074

B22011128-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011128-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0031.RAW
Date & Time Acquired: 1/23/2022 7:38:54 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.307	.194	.189	97.56	-
*1-Chlorooctadecane	13.179	.194	.	.21	-
*#Triacontane	16.391	.194	.105	54.28	-

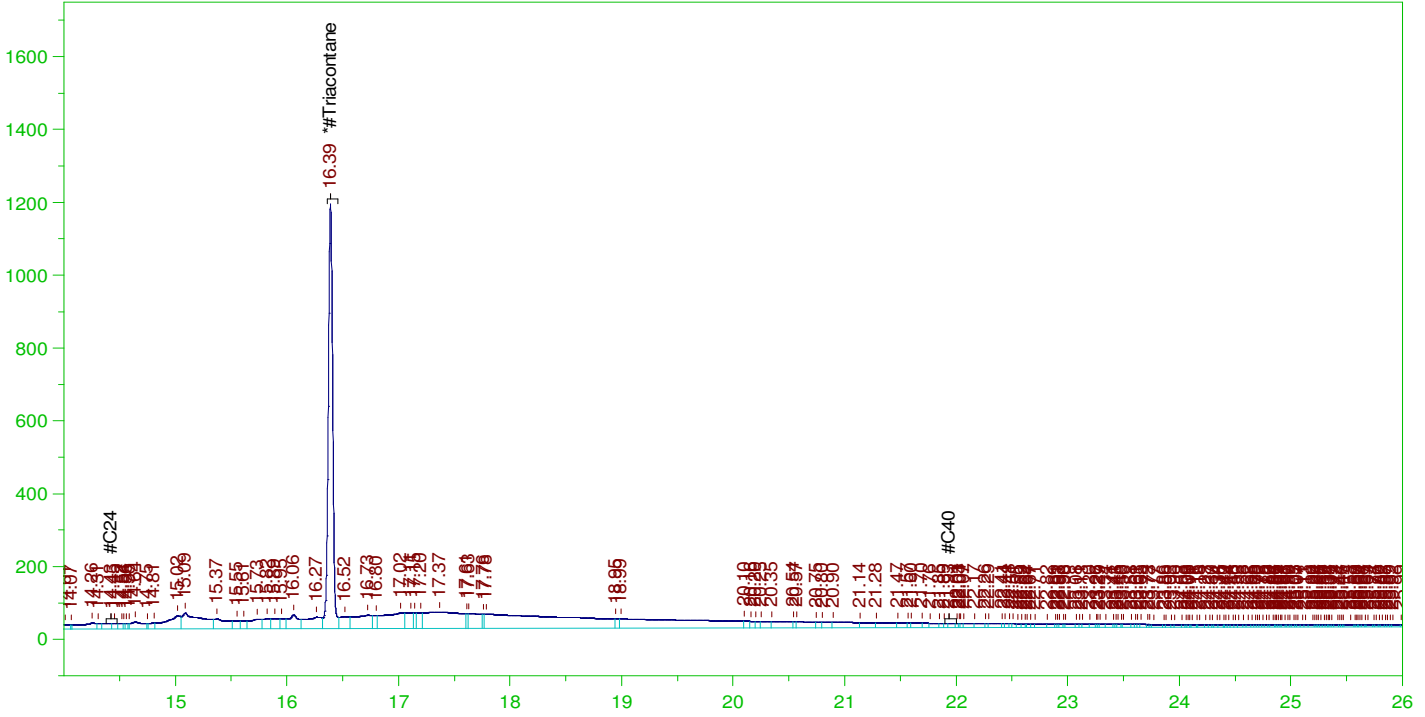
DRO Area:6002891 DRO Amount: 0.1783622
TEH Area:2.020443E+07 TEH Amount: 0.6003284

ERH2448 (OWDFMW04A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0031.RAW

B22011128-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011128-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0031.RAW
Date & Time Acquired: 1/23/2022 7:38:54 AM
Method File: G:\Org\HP5\Methods\D3_OROS-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.391	.485	.105	21.71

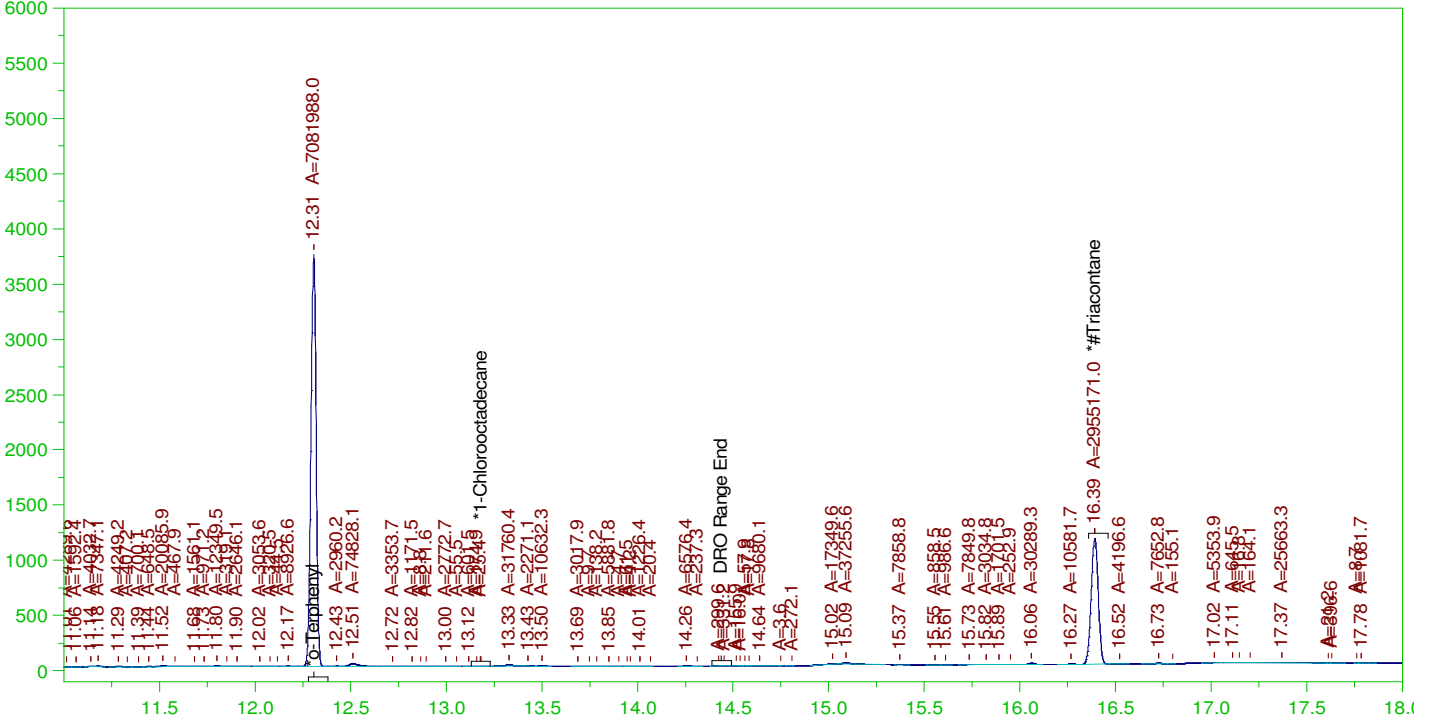
RRO Area:1.111089E+07 RRO AMOUNT: 0.408229

ERH2448 (OWDFMW04A)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0031.RAW

B22011128-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011128-001D ;0122HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0031.RAW
 Date & Time Acquired: 1/23/2022 7:38:54 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.307	.194	.187	96.07
*1-Chlorooctadecane	29.983	.194	.	-
*#Triacontane	16.391	.194	.097	49.86

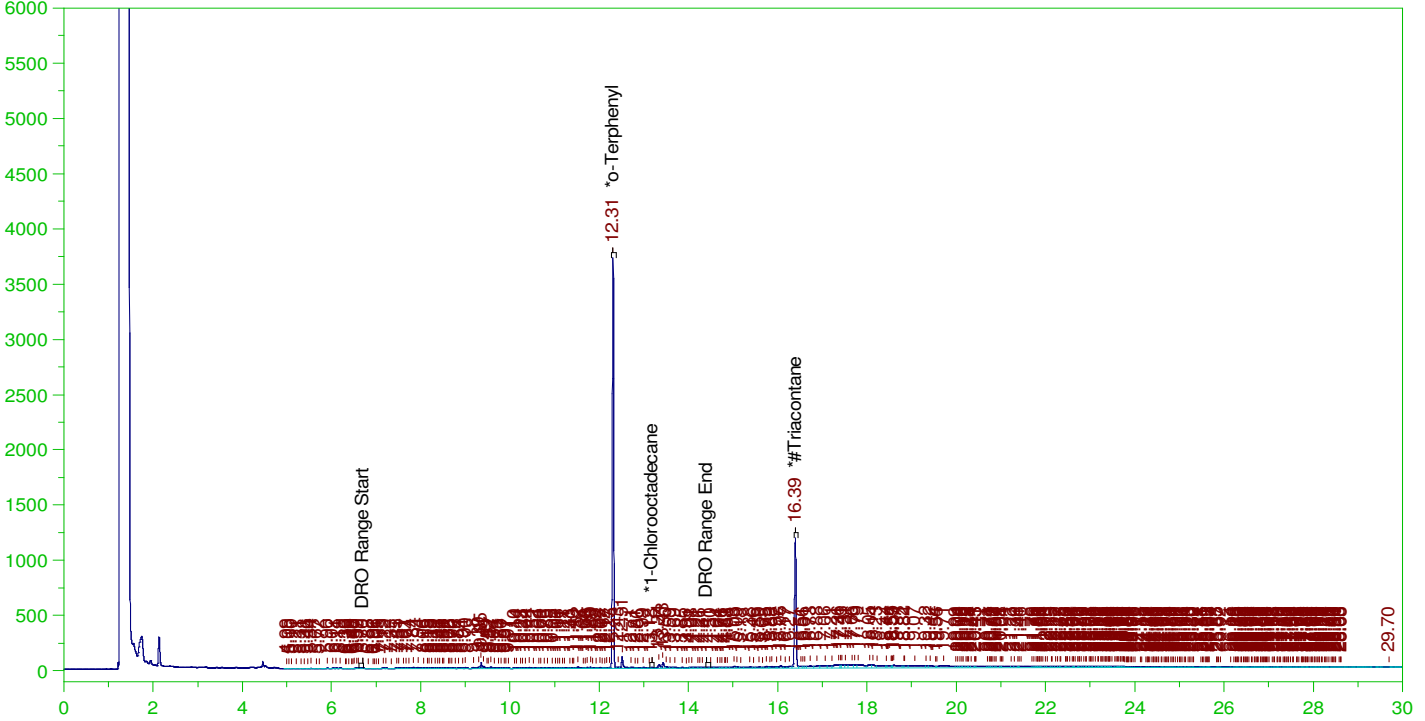
DRO Area:3455137 DRO Amount: 0.1026615
 TEH Area:5686573 TEH Amount: 0.1689635

ERH2472 (RHMW04)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0032.RAW

B22011125-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011125-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0032.RAW
Date & Time Acquired: 1/23/2022 8:21:33 AM
Method File: G:\Org\HP5\Methods\D3_8015-012232-JB-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.307	.202	.197	97.28	-
*1-Chlorooctadecane	13.175	.202	.001	.32	-
*#Triacontane	16.391	.202	.108	53.28	-

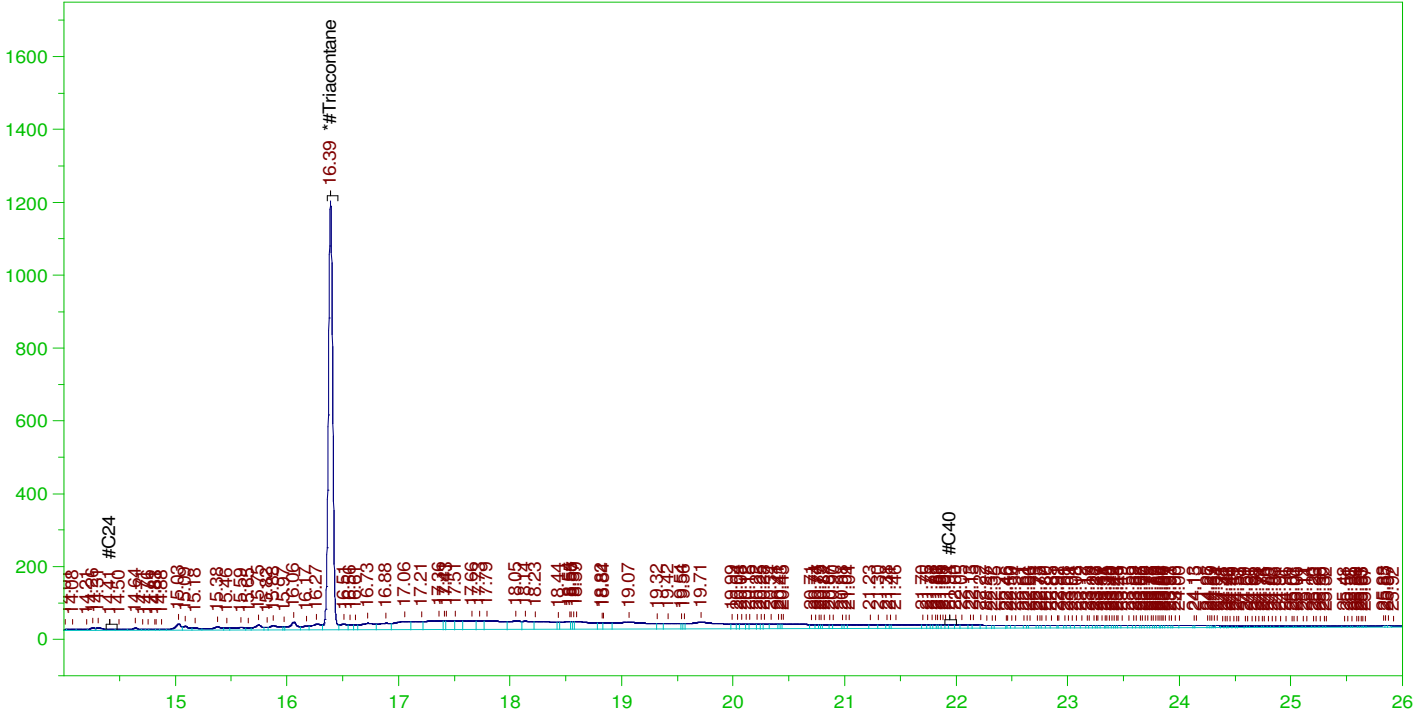
DRO Area:1887061 DRO Amount: 5.833516E-02
TEH Area:9974510 TEH Amount: 0.3083444

ERH2472 (RHMW04)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0032.RAW

B22011125-001D ;0122HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011125-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0032.RAW
Date & Time Acquired: 1/23/2022 8:21:33 AM
Method File: G:\Org\HP5\Methods\D3_OROS-012232-BBb-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BBb_SAMP.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.38 to 22

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.391	.505	.108	21.31

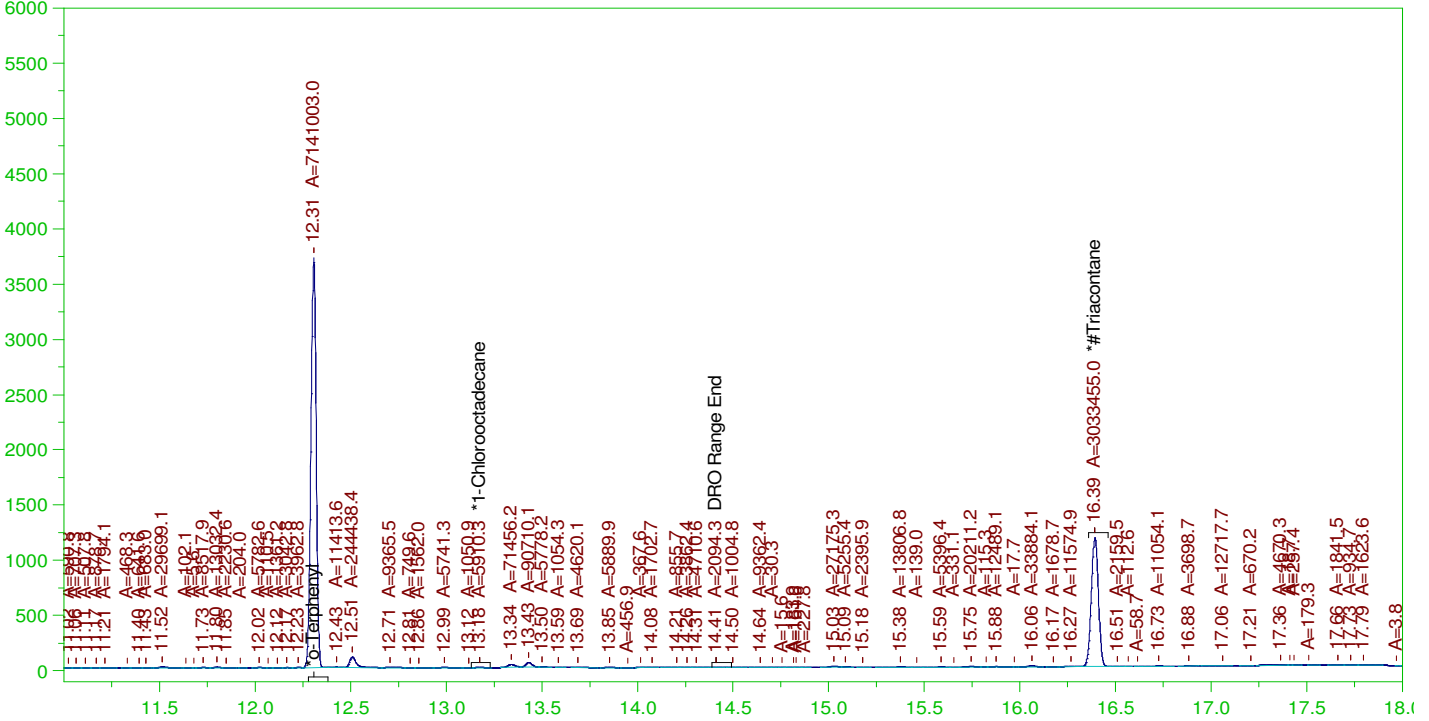
RRO Area:6296502 RRO AMOUNT: 0.2406891

ERH2472 (RHMW04)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0032.RAW

B22011125-001D ; 0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

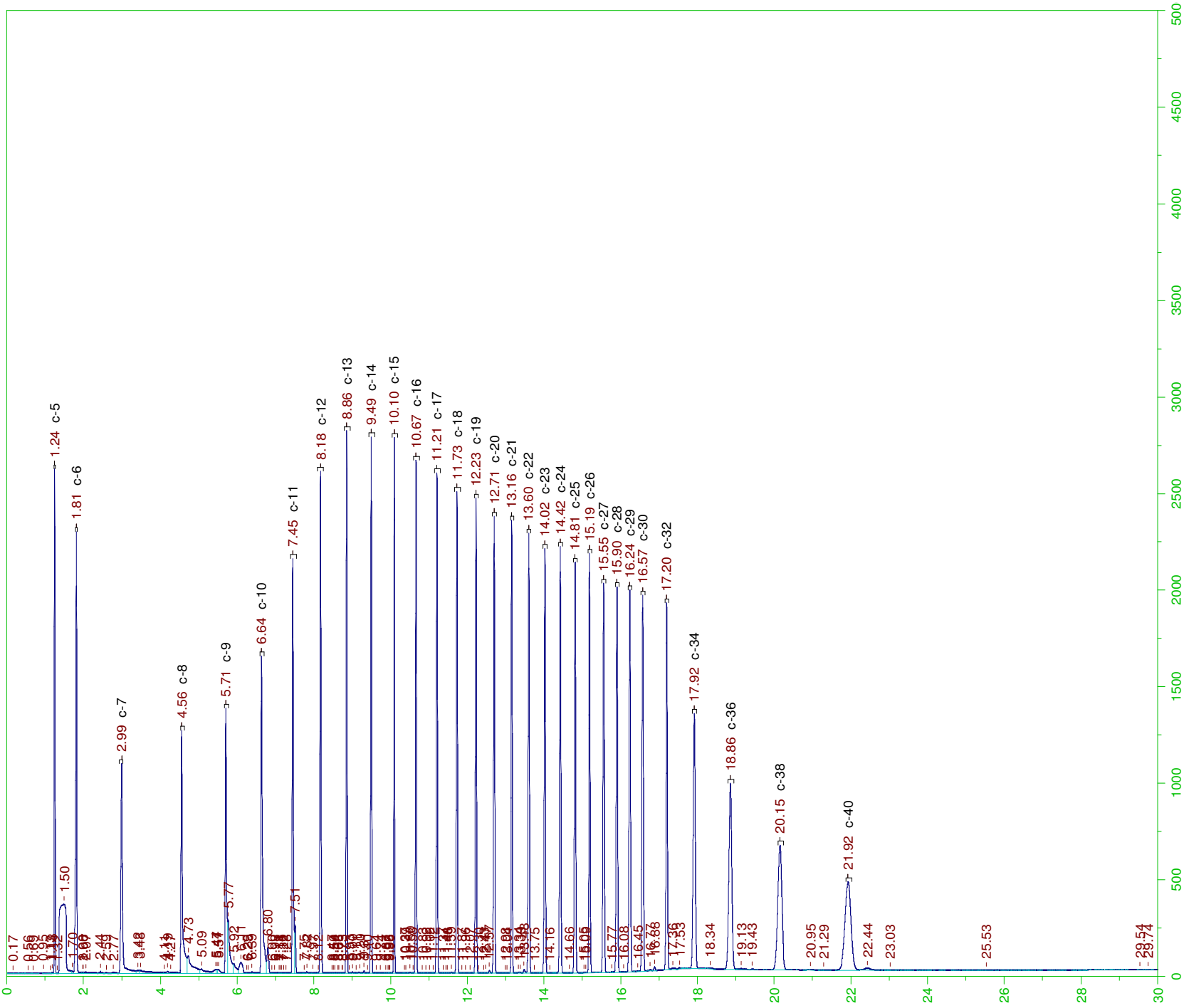
Sample Name: B22011125-001D ; 0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0032.RAW
Date & Time Acquired: 1/23/2022 8:21:33 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-BB-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

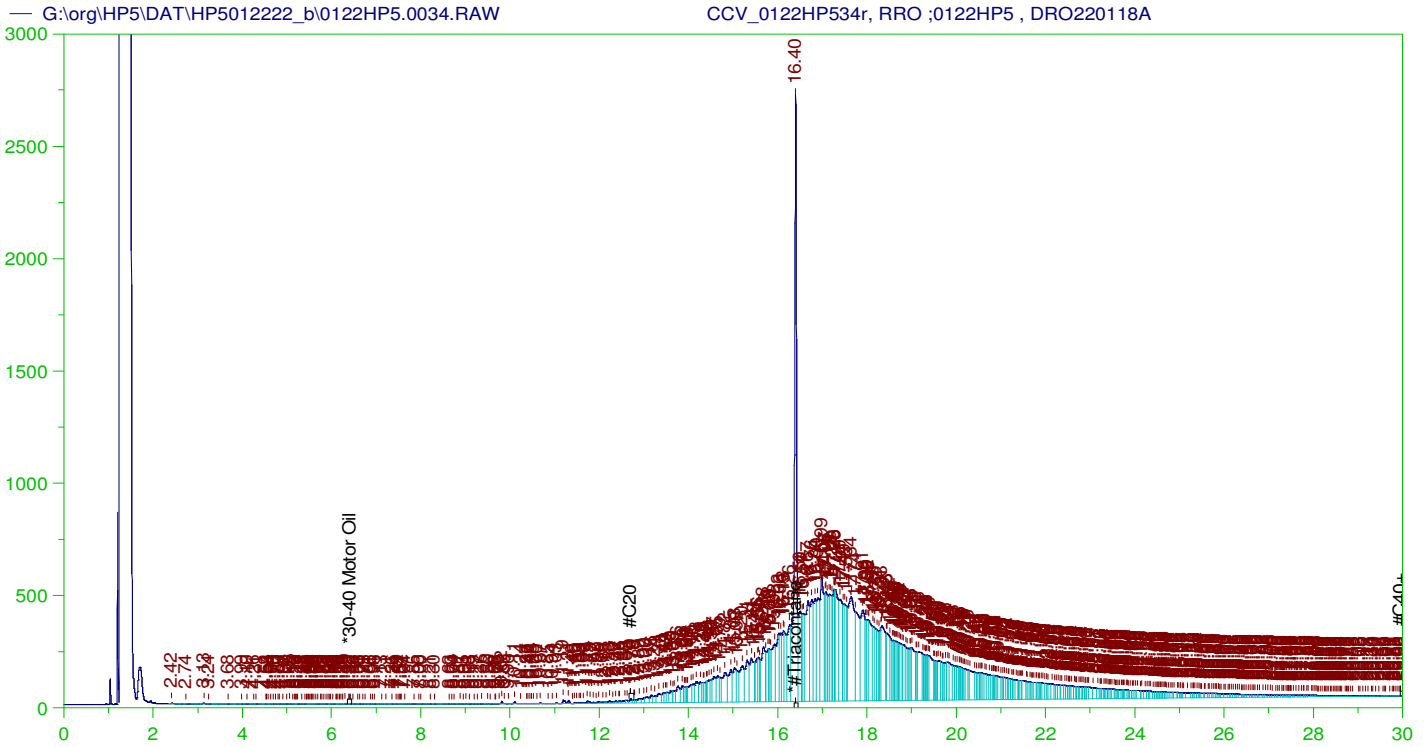
Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.307	.202	.196	96.87	-
*1-Chlorooctadecane	13.175	.202	.	.08	-
*#Triacontane	16.391	.202	.103	51.18	-

DRO Area:1231728 DRO Amount: 3.807671E-02
TEH Area:2086401 TEH Amount: 6.449739E-02





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP534r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0034.RAW
 Date & Time Acquired: 1/23/2022 9:46:55 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.398	500.	324.005	64.8	-

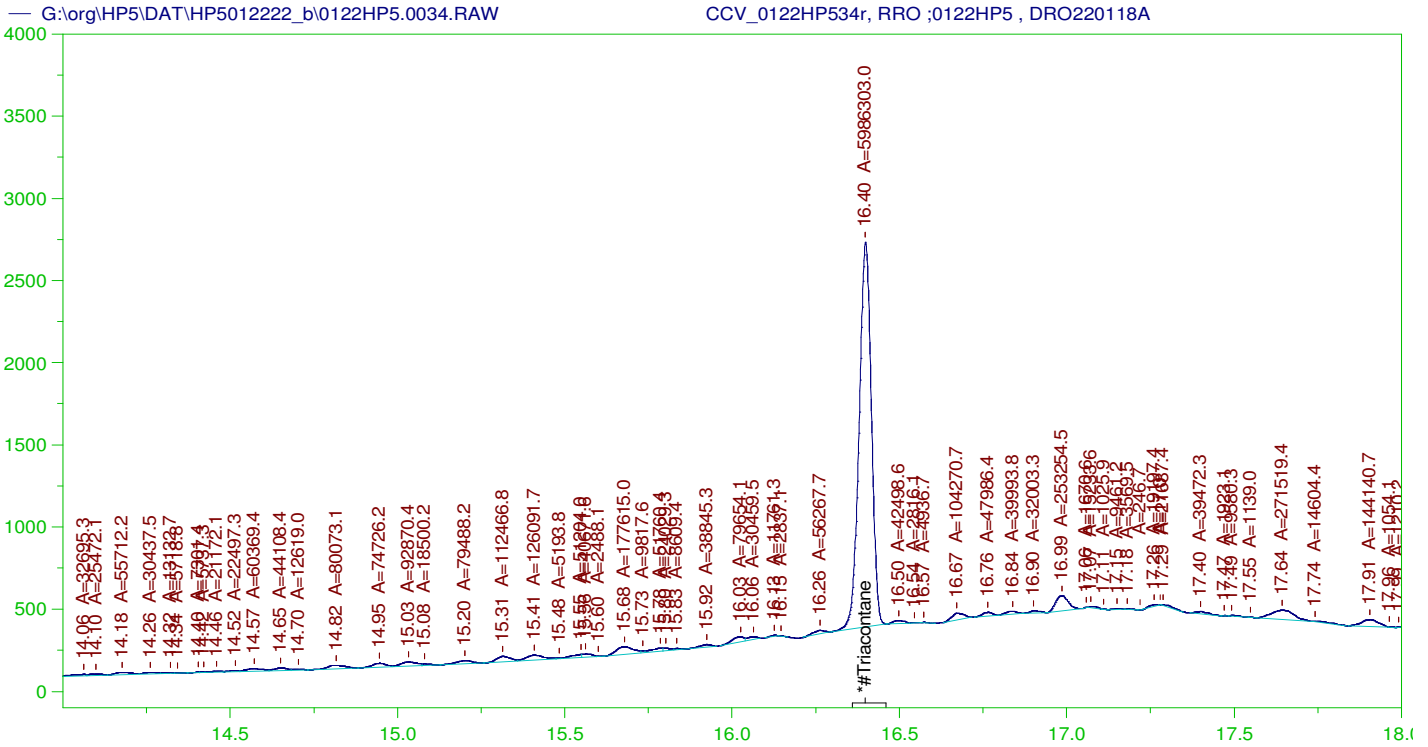
RRO TEH(Oil Range) Area:1.174582E+08 RRO TEH(Oil Range) AMOUNT: 4445.04

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0034.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.096	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.398	200.	324.005	162.	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP534r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0034.RAW
 Date & Time Acquired: 1/23/2022 9:46:55 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.67 to 30.05

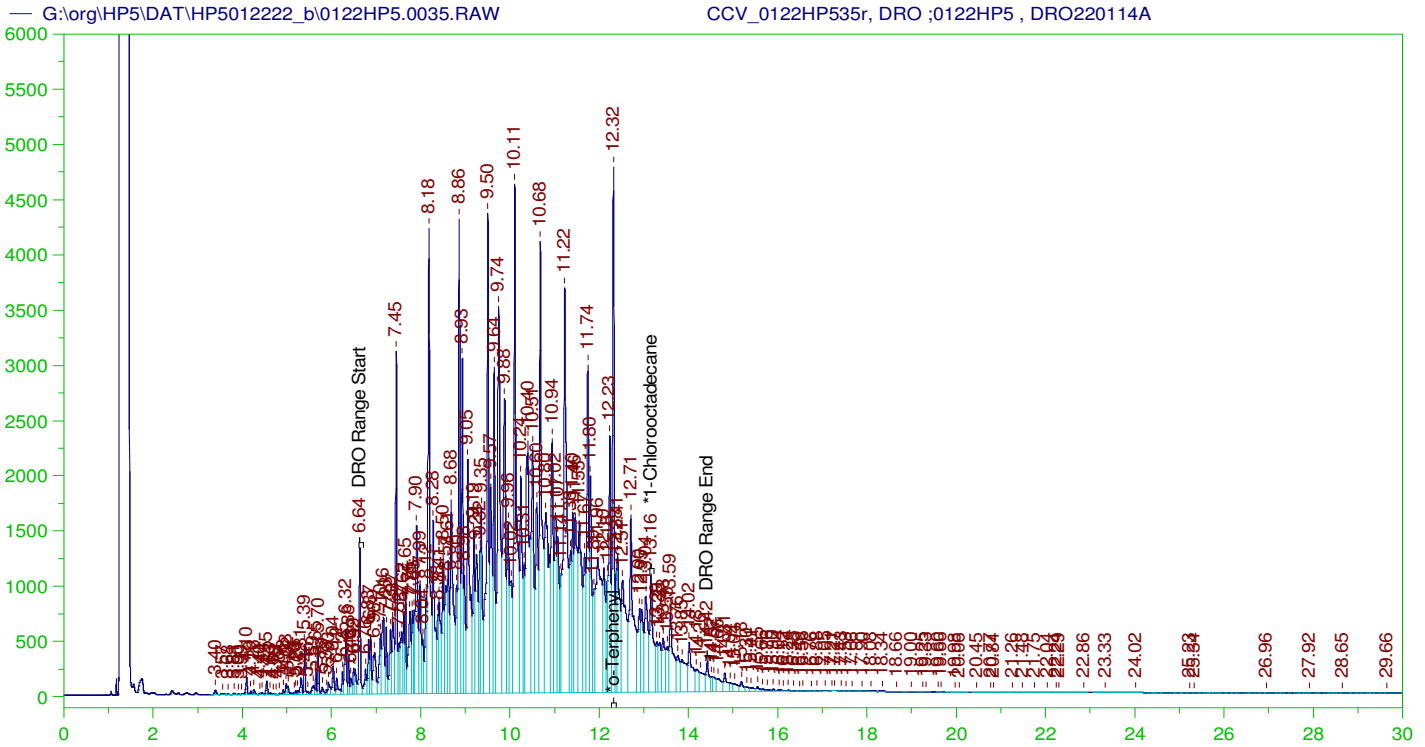
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.398	500.	201.994	40.4	-

RRO Area:3237772 RRO AMOUNT: 122.5289

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0034.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.096	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.398	200.	201.994	101.	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0122HP535r, DRO ;0122HP5 , DRO220114A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0035.RAW
 Date & Time Acquired: 1/23/2022 10:29:33 AM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JB-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

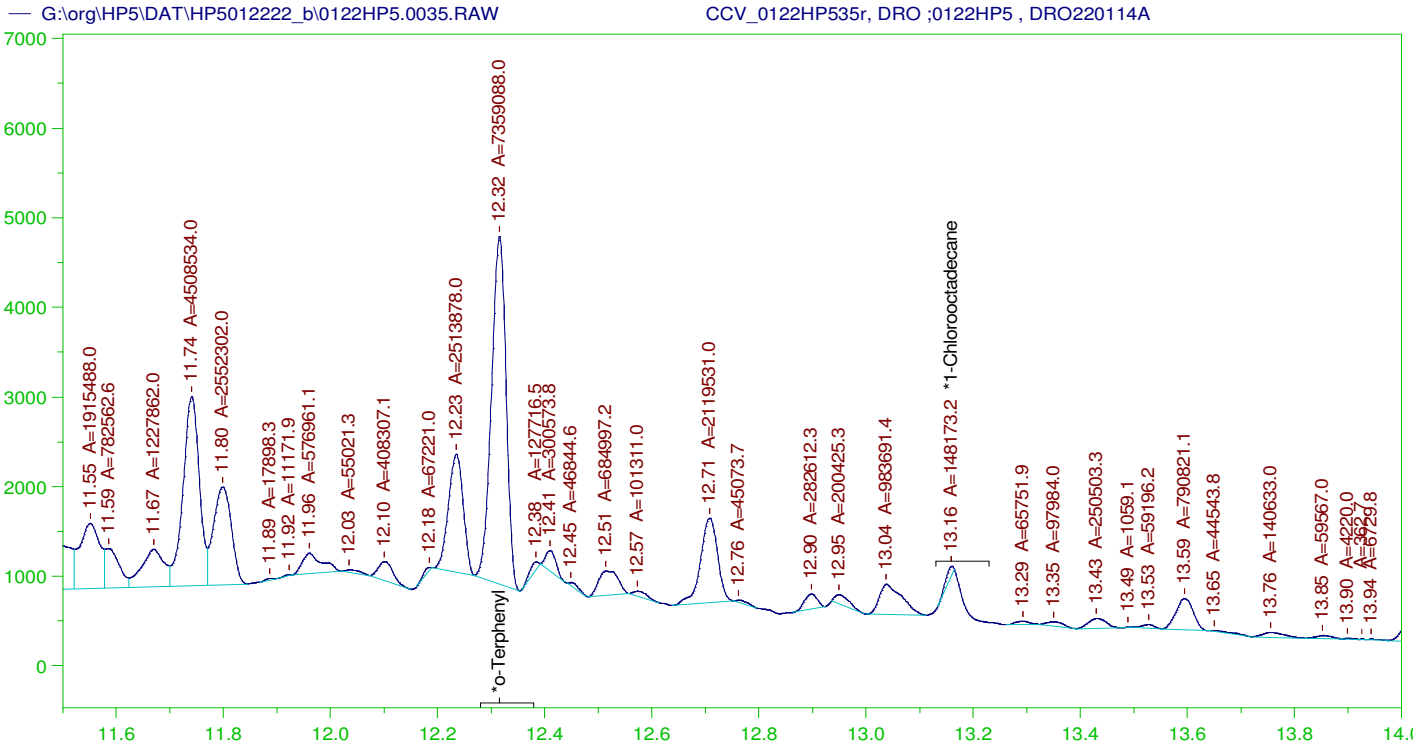
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.315	200.	320.323	160.16
*1-Chlorooctadecane	13.16	200.	150.577	75.29

DRO Area: 4.509578E+08 DRO Amount: 13801.16
 TEH Area: 4.671448E+08 TEH Amount: 14296.55

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14296.55	95.31	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.315	200.	320.323	160.16	85-115
*1-Chlorooctadecane	13.16	200.	150.577	75.29	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0122HP535r, DRO ;0122HP5 , DRO220114A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0035.RAW
 Date & Time Acquired: 1/23/2022 10:29:33 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JB-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

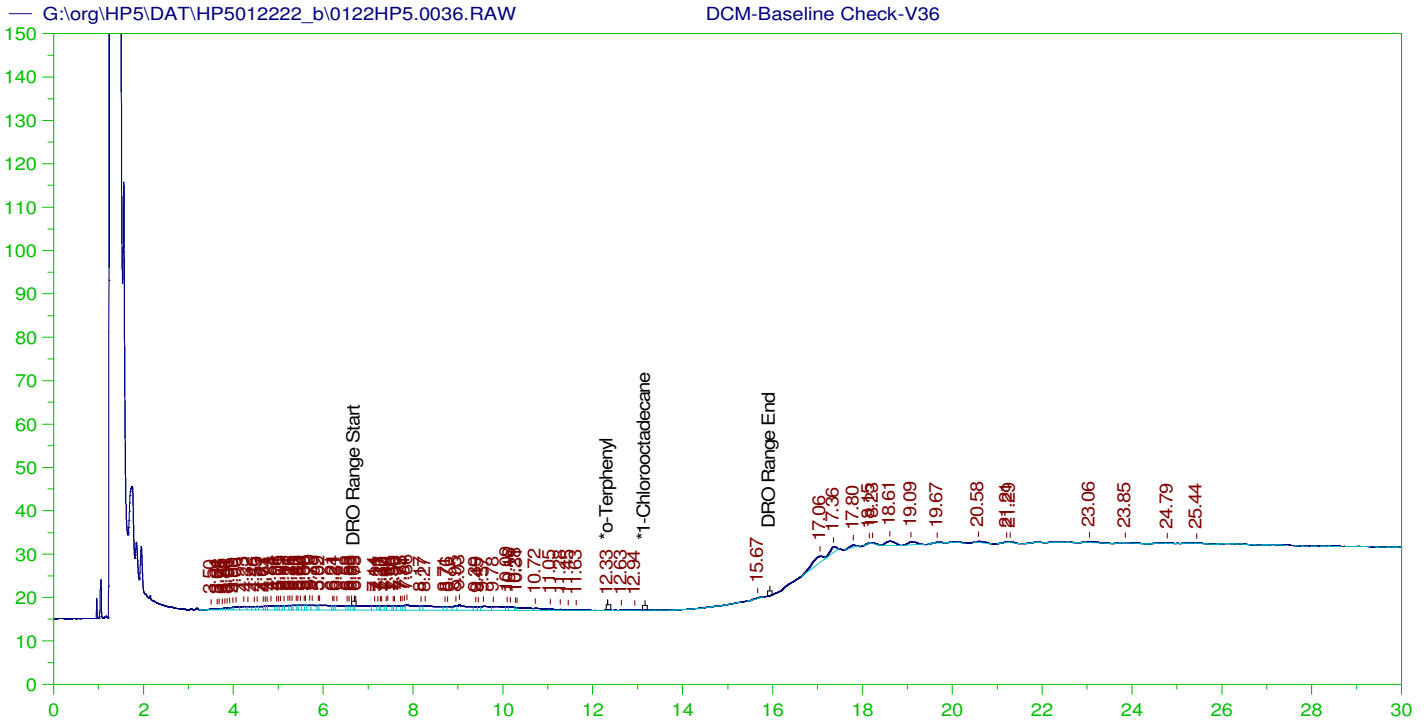
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.315	200.	199.661	99.83
*1-Chlorooctadecane	13.16	200.	4.02	2.01

DRO Area: 2.342497E+08 DRO Amount: 7169.001
 TEH Area: 2.446785E+08 TEH Amount: 7488.165

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7488.17	49.92	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.315	200.	199.661	99.83	85-115
*1-Chlorooctadecane	13.16	200.	4.02	2.01	85-115



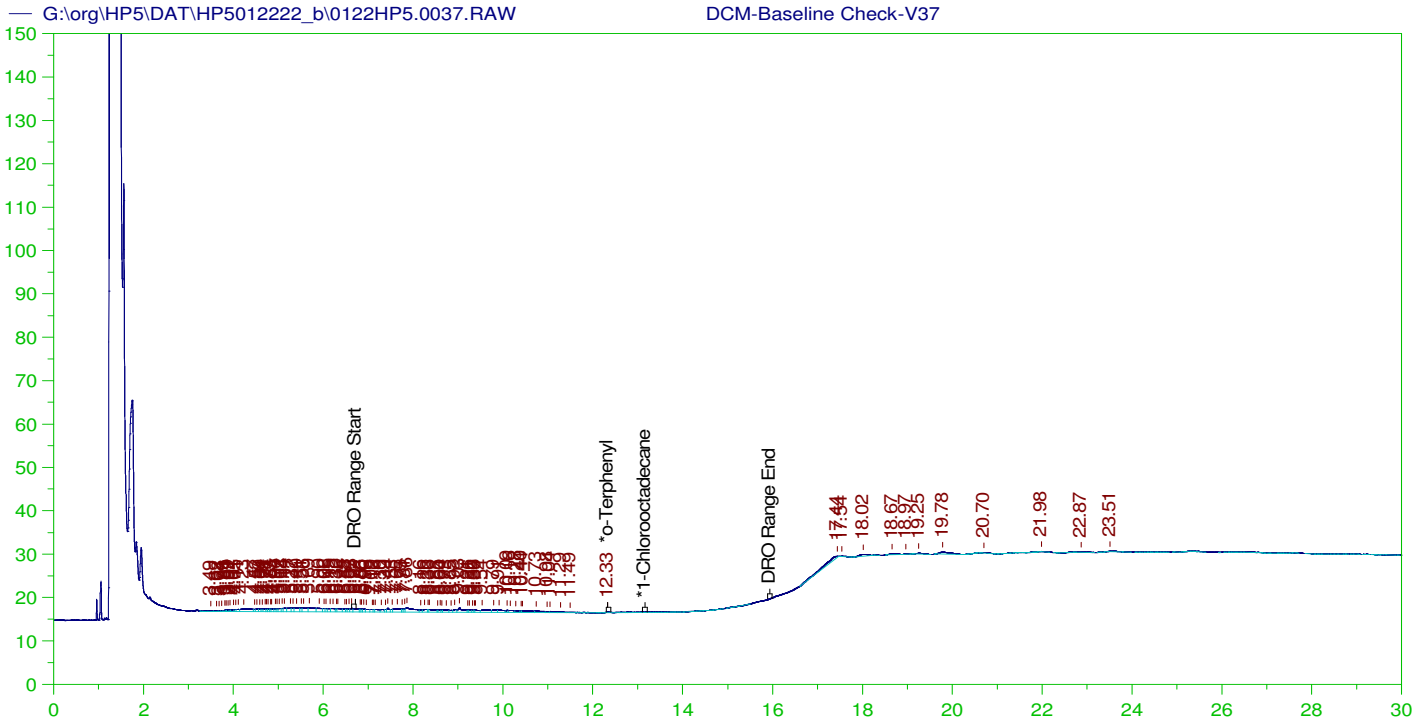
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V36
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0036.RAW
 Date & Time Acquired: 1/23/2022 11:12:03 AM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.329	200.	.023	.01
*1-Chlorooctadecane	29.916	200.	.	.

DRO Area: 224679.8 DRO Amount: 6.876124
 TEH Area: 475304.3 TEH Amount: 14.54626



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V37
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0037.RAW
 Date & Time Acquired: 1/23/2022 11:54:43 AM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.326	200.	.031	.02 -
*1-Chlorooctadecane	29.916	200.	.	. -

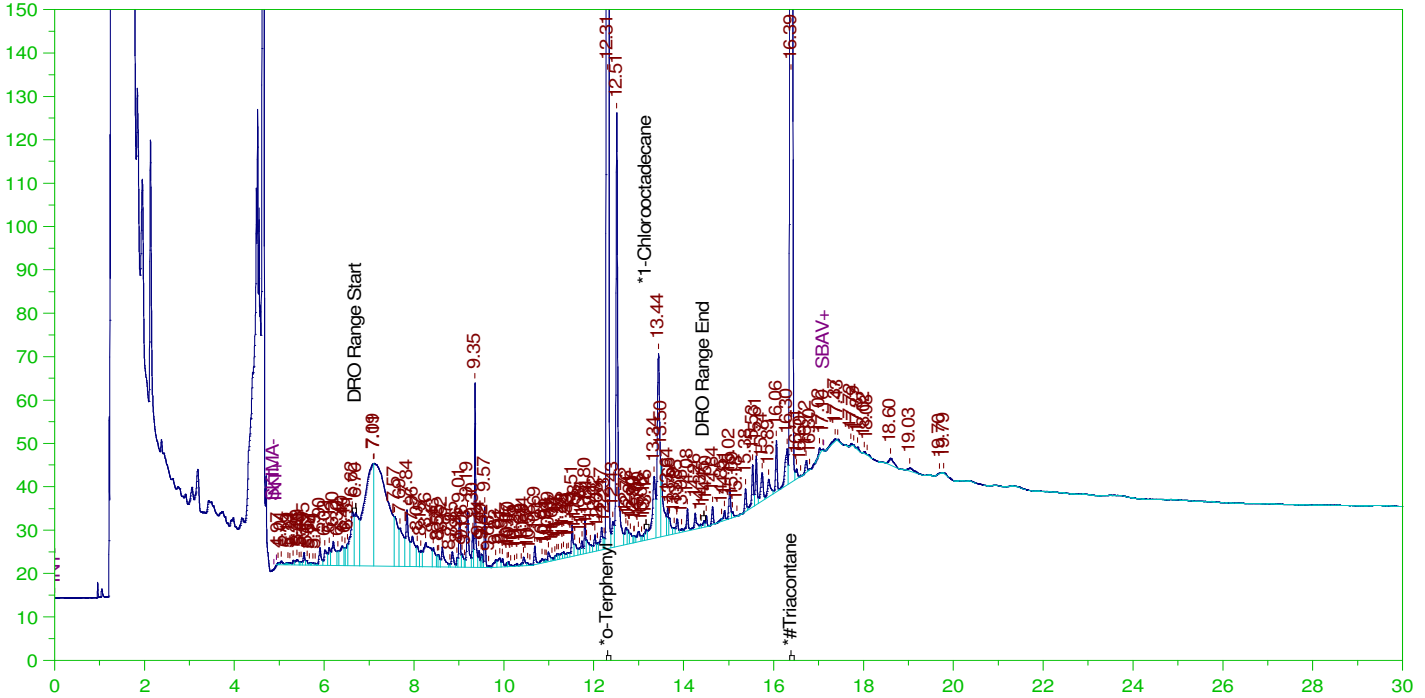
DRO Area:154802.9 DRO Amount: 4.737605
 TEH Area:324343.8 TEH Amount: 9.92625

ERH2424 (RHMW14 Zone3)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0038.RAW

B22011228-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011228-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0038.RAW
Date & Time Acquired: 1/23/2022 12:37:26 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L0.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.306	.196	.188	95.9	-
*1-Chlorooctadecane	13.16	.196	.	.11	-
*#Triacontane	16.39	.196	.1	51.06	-

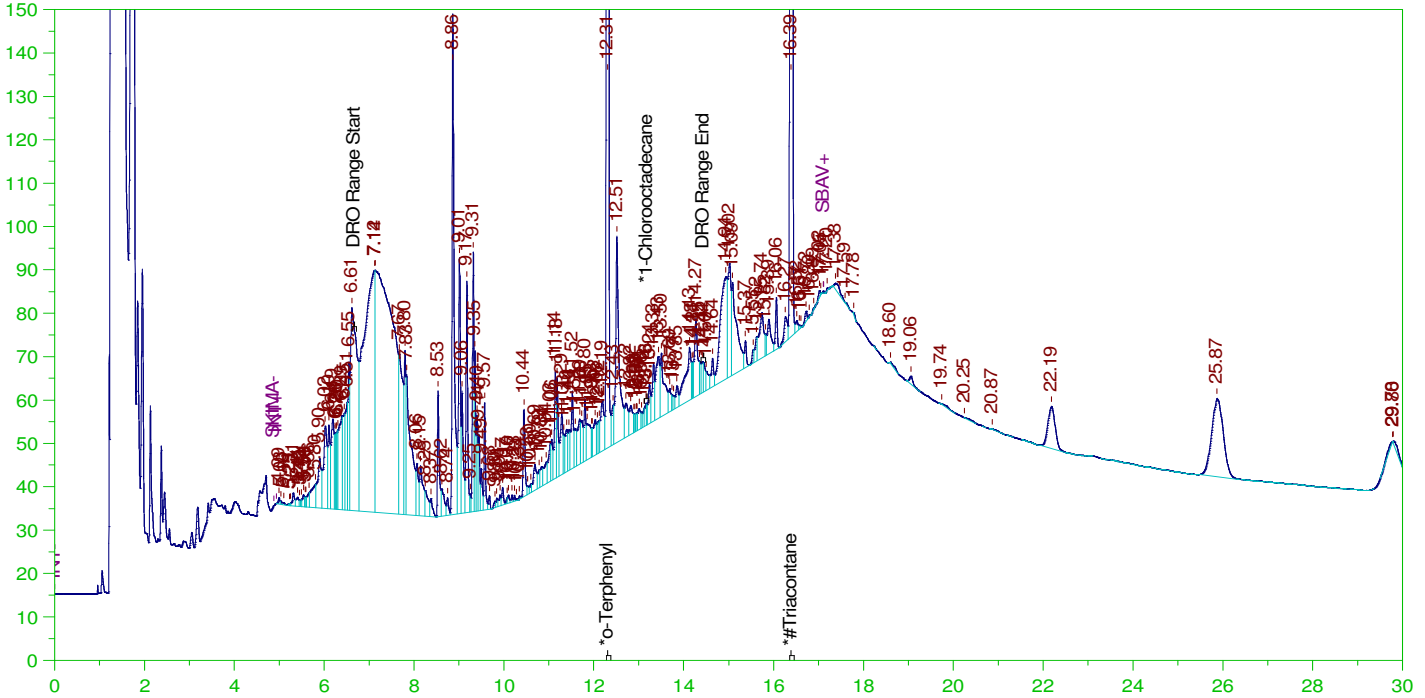
DRO Area:2580882 DRO Amount: 7.743684E-02
TEH Area:3053680 TEH Amount: 9.162269E-02

ERH2431 (RHMW03)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0039.RAW

B22011135-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011135-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0039.RAW
Date & Time Acquired: 1/23/2022 1:20:00 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L0.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.308	.202	.186	91.89	-
*1-Chlorooctadecane	13.178	.202	.	.08	-
*#Triacontane	16.391	.202	.097	48.25	-

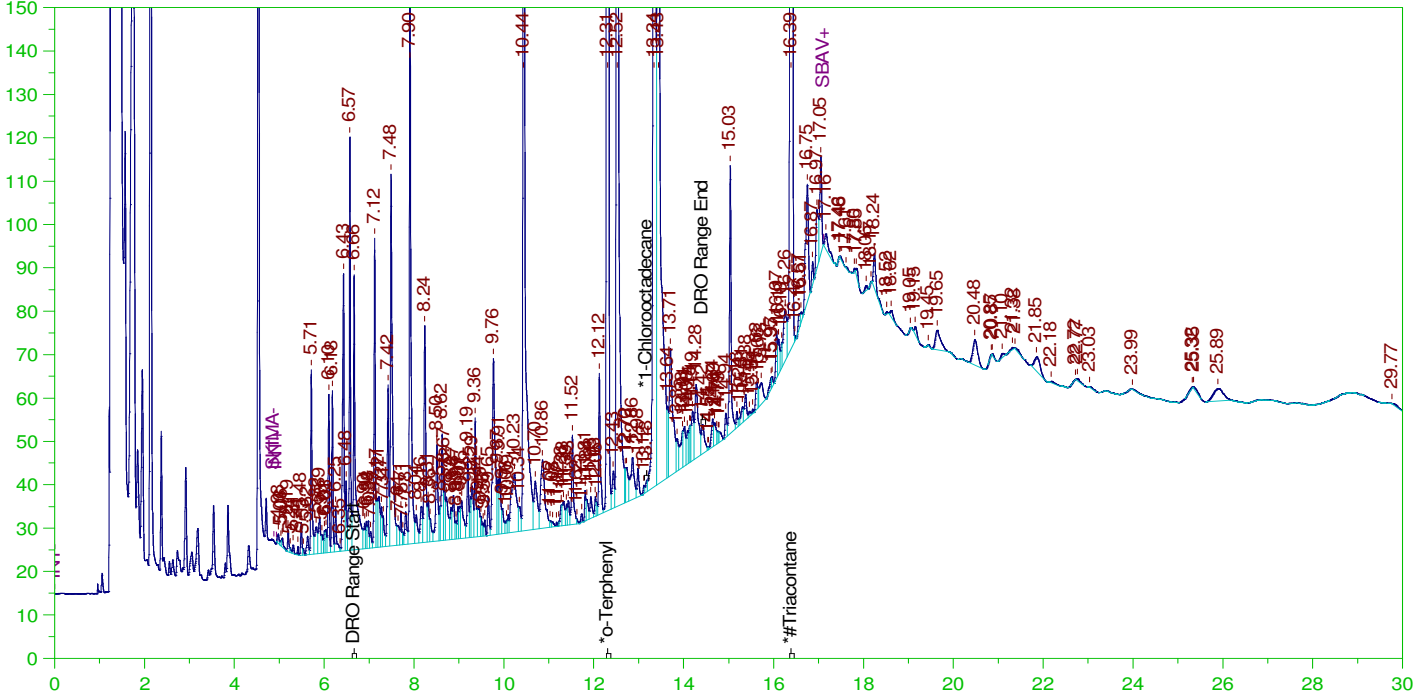
DRO Area:6437470 DRO Amount: 0.199003
TEH Area:9164600 TEH Amount: 0.2833074

ERH2422 (RHMW04)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0040.RAW

B22011129-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

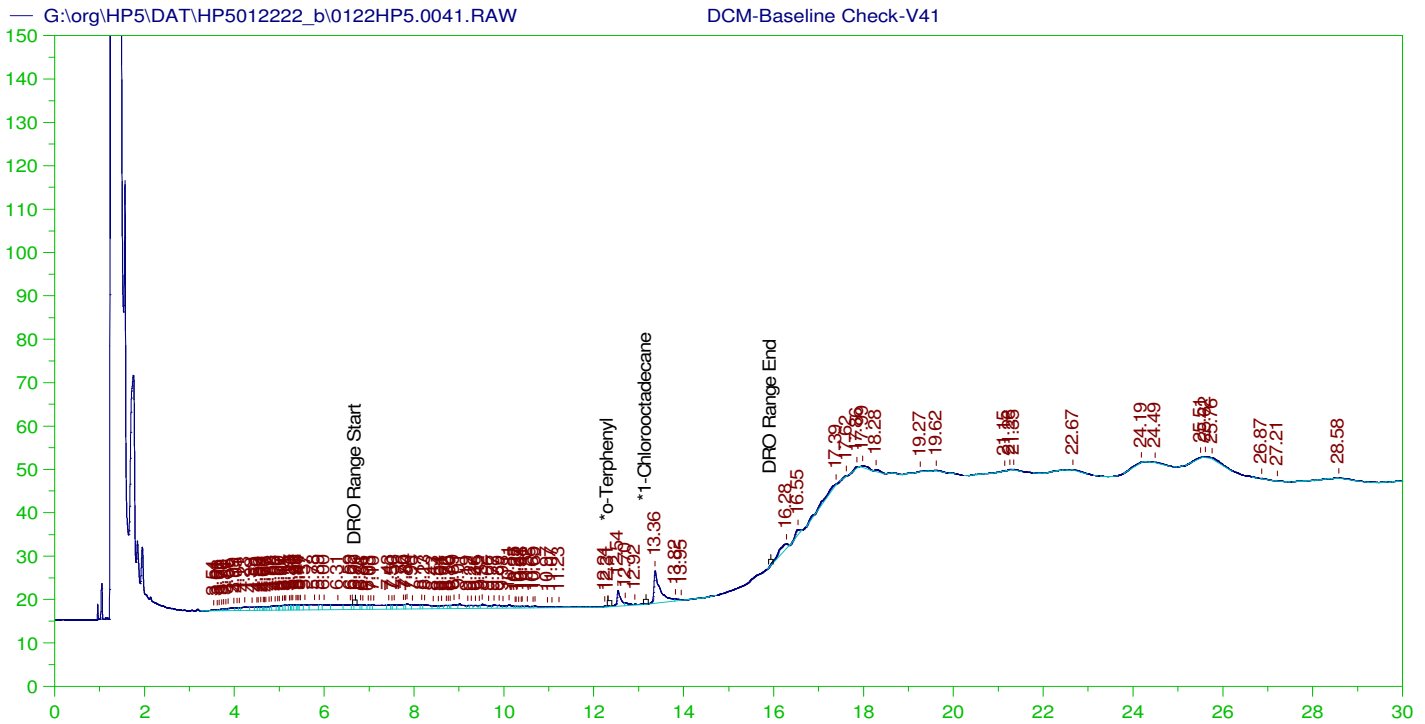
Sample Name: B22011129-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0040.RAW
Date & Time Acquired: 1/23/2022 2:02:33 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L0.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.308	.19	.158	83.18	-
*1-Chlorooctadecane	13.176	.19	.	.1	-
*#Triacontane	16.392	.19	.092	48.13	-

DRO Area: 9540176 DRO Amount: 0.2780652
TEH Area: 1.136886E+07 TEH Amount: 0.3313655



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V41
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0041.RAW
 Date & Time Acquired: 1/23/2022 2:45:17 PM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.312	200.	.02	.01
*1-Chlorooctadecane	29.947	200.	.	.

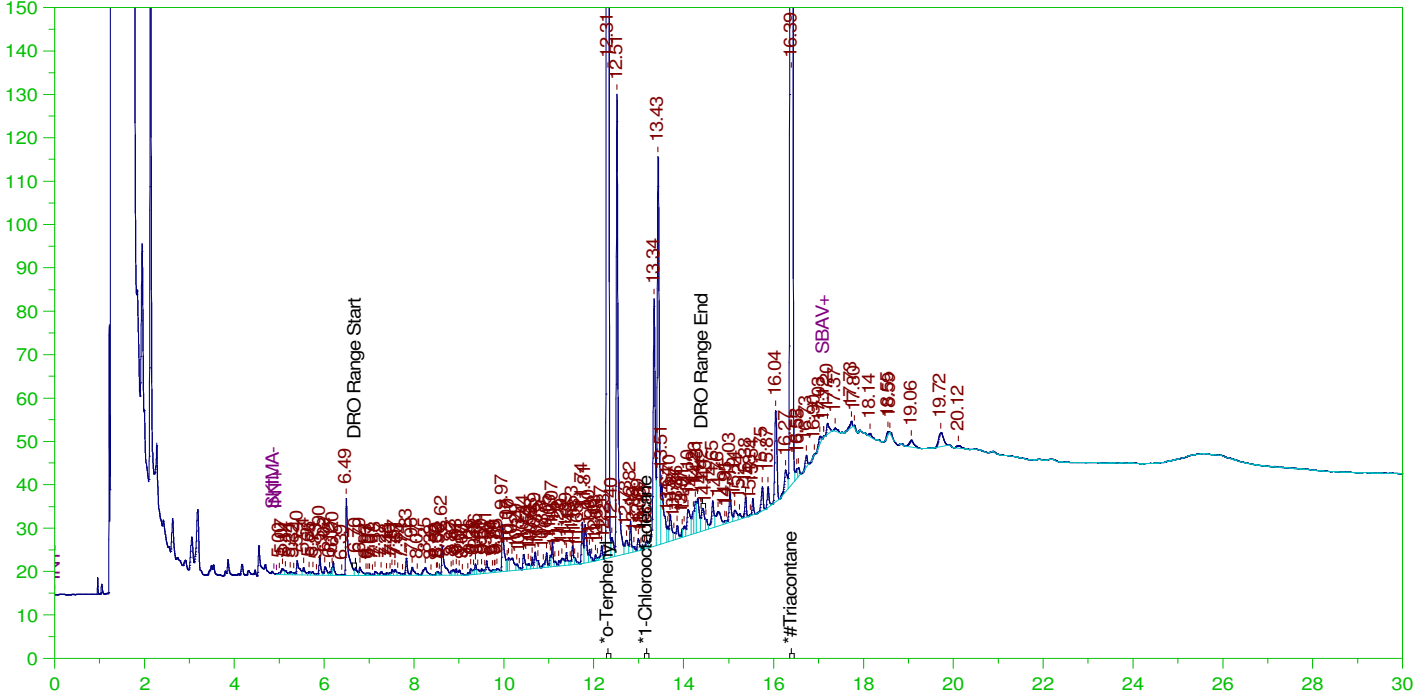
DRO Area:290940.1 DRO Amount: 8.90396
 TEH Area:565844.9 TEH Amount: 17.31717

ERH2464 (RHMW08)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0042.RAW

B22011214-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011214-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0042.RAW
Date & Time Acquired: 1/23/2022 3:27:46 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L0.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.31	.2	.17	84.89
*1-Chlorooctadecane	13.173	.2	.08	-
*#Triacontane	16.395	.2	.097	48.37

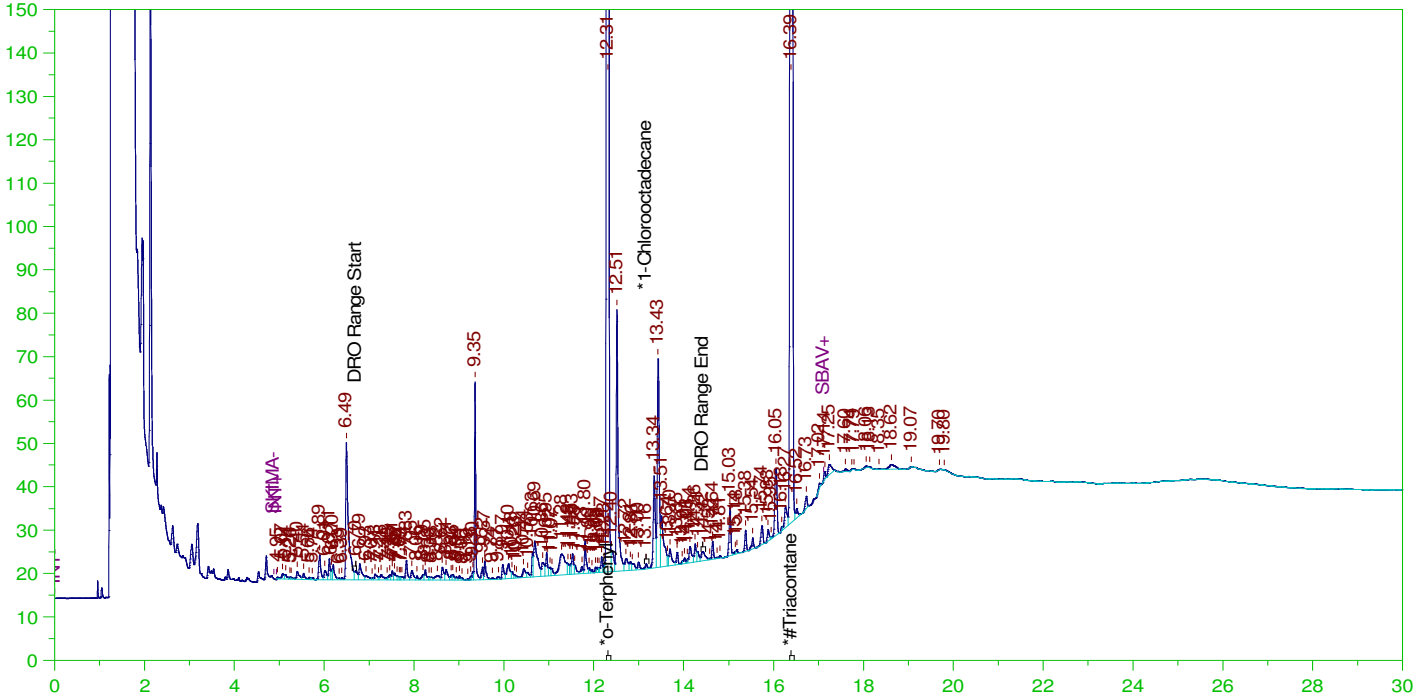
DRO Area:1485269 DRO Amount: 4.545531E-02
TEH Area:1991736 TEH Amount: 0.0609553

ERH2468 (RHMW06)

Batch ID: 163074

G:\org\HP5\DAT\HP5012222_b\0122HP5.0043.RAW

B22011227-001D ;0122HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

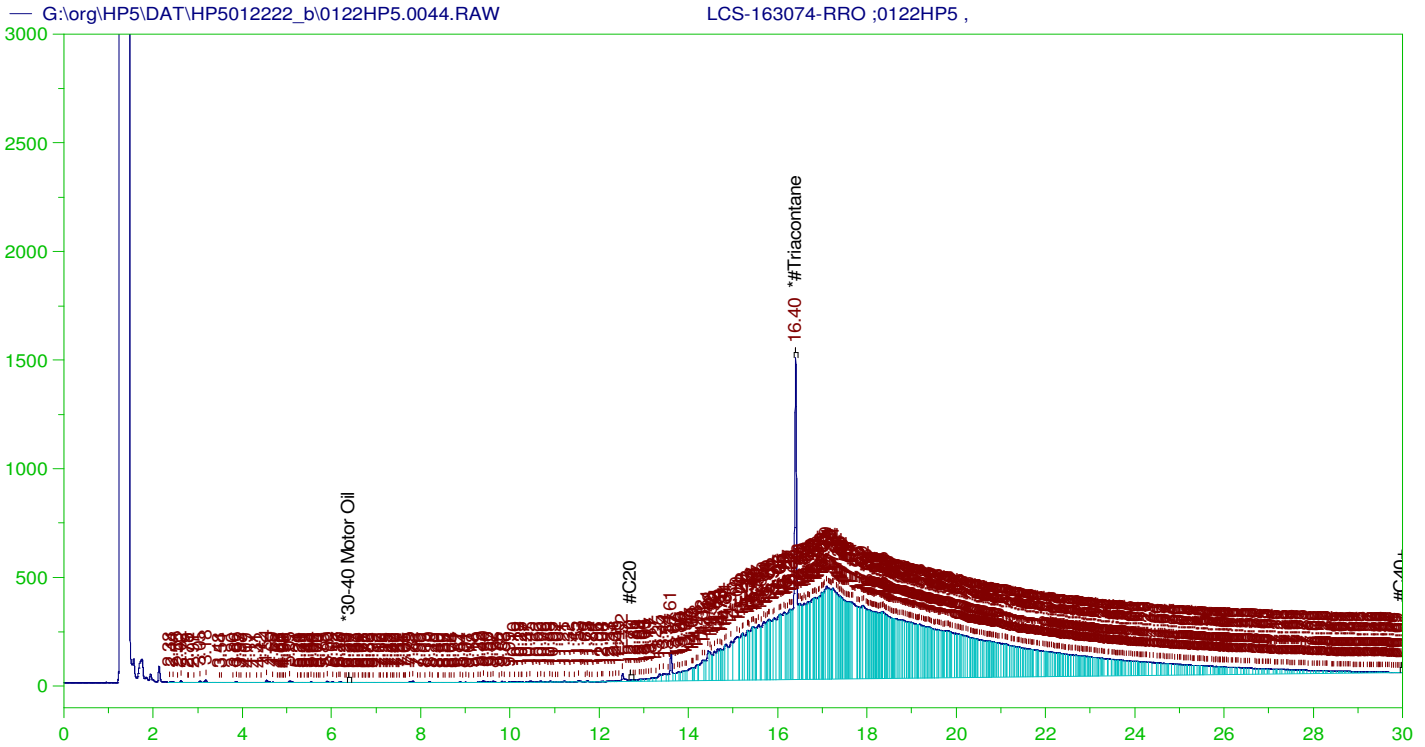
Sample Name: B22011227-001D ;0122HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0043.RAW
Date & Time Acquired: 1/23/2022 4:10:20 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JB-L0.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24-T.CAL
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.309	.202	.197	97.37	-
*1-Chlorooctadecane	13.162	.202	.	.05	-
*#Triacontane	16.393	.202	.104	51.26	-

DRO Area:1120403 DRO Amount: 3.463528E-02
TEH Area:1578742 TEH Amount: 4.880403E-02



RESIDUAL RANGE ORGANICS CHROMATOGRAM

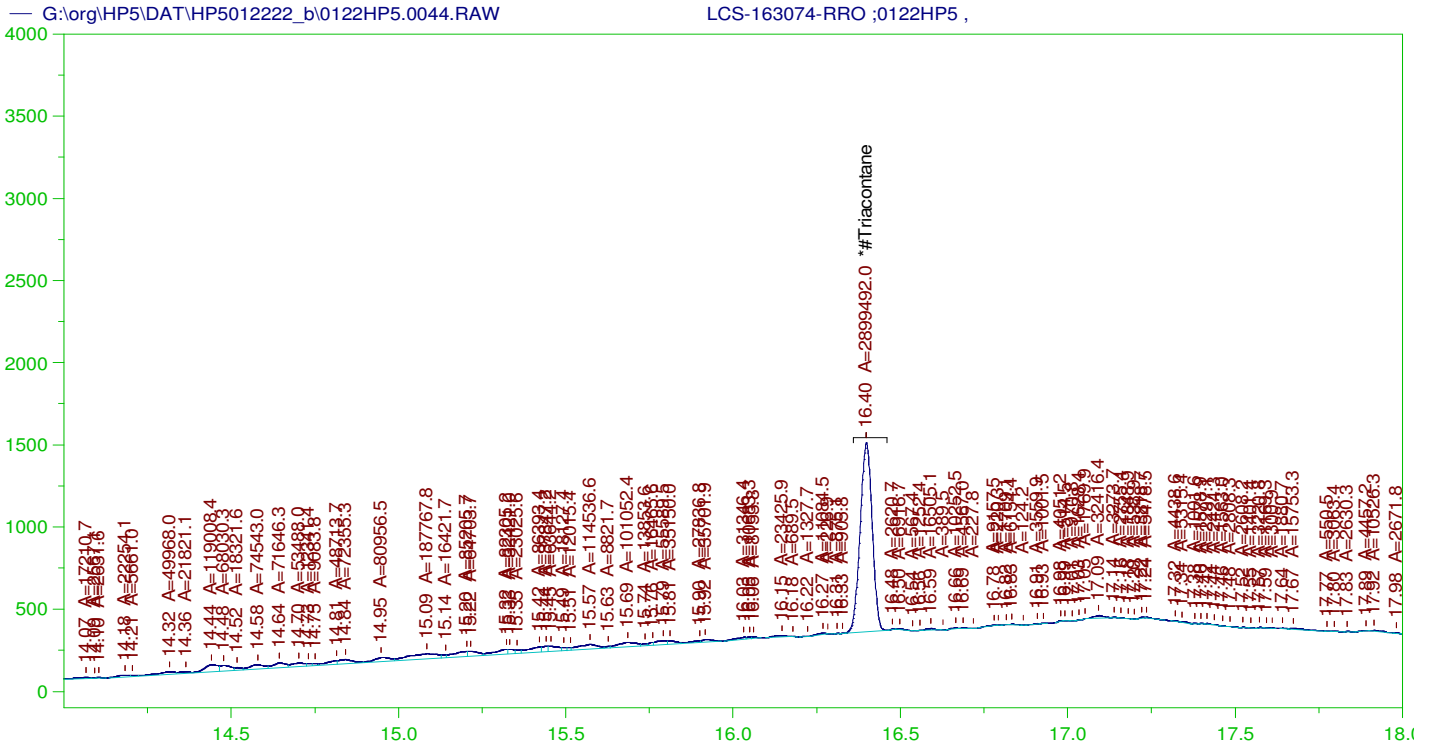
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 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0044.RAW
 Date & Time Acquired: 1/23/2022 4:52:48 PM
 Method File: G:\Org\HP5\Methods\D3_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.398	.5	.183	36.65

RRO TEH(Oil Range) Area:1.3197E+08 RRO TEH(Oil Range) AMOUNT: 4.99422

AMN 02/15/2022



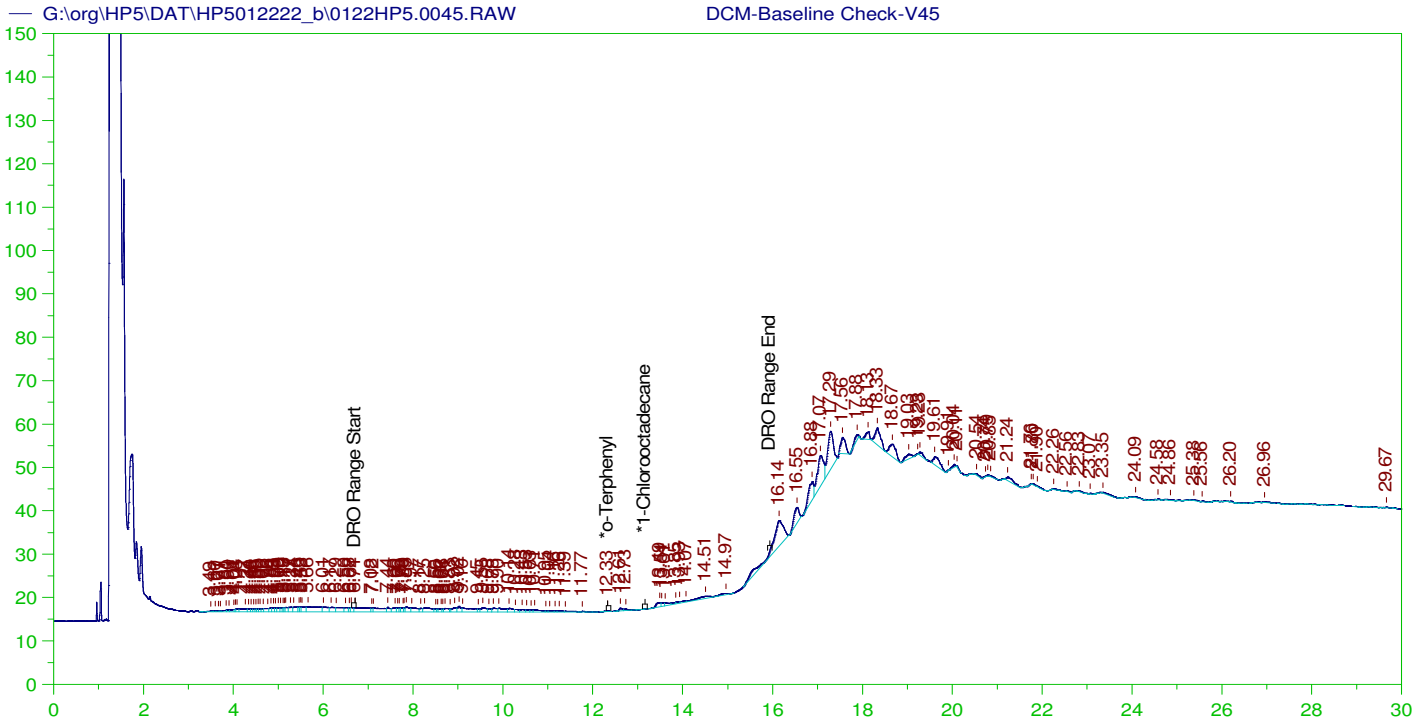
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-163074-RRO ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0044.RAW
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 Method File: G:\Org\HP5\Methods\DS_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.398	.5	.098	19.57

RRO Area:2881369 RRO AMOUNT: 0.1090413



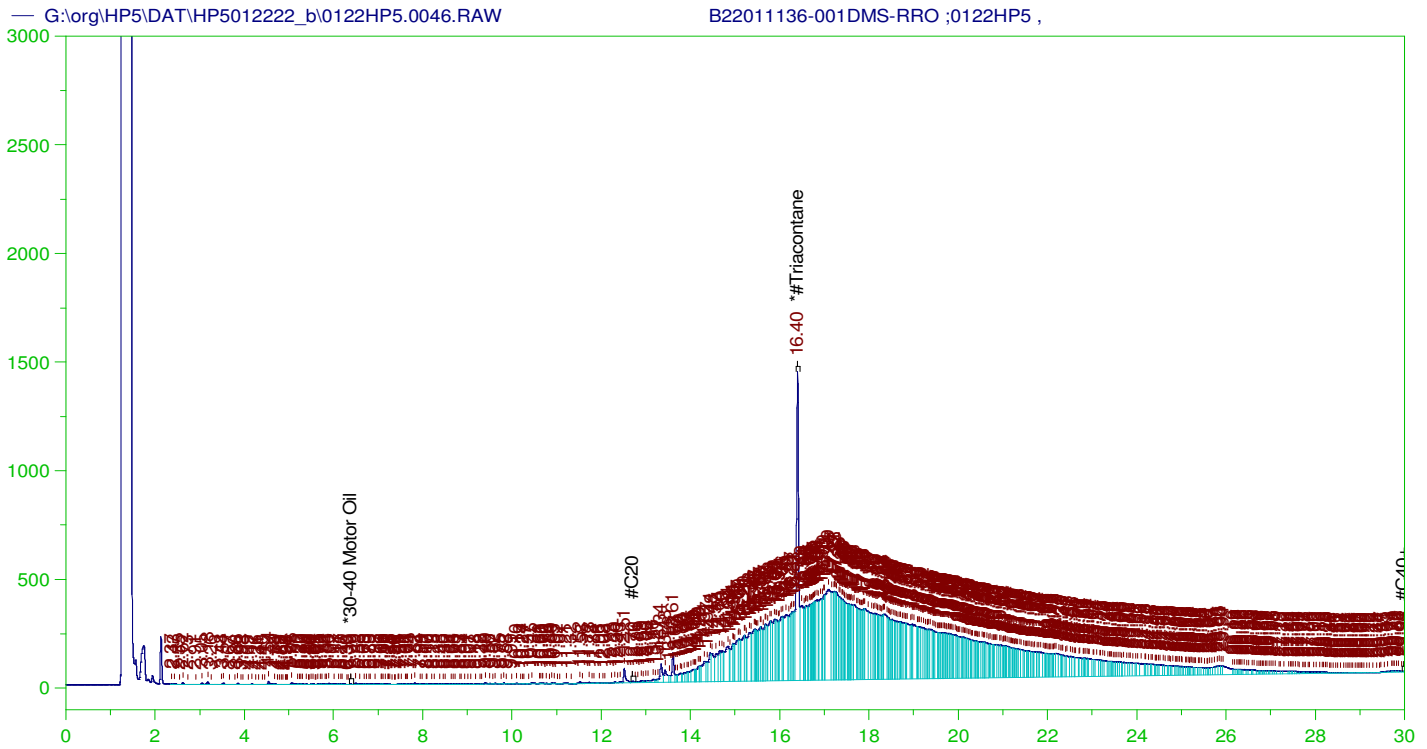
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V45
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0045.RAW
 Date & Time Acquired: 1/23/2022 5:35:47 PM
 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.63 to 15.99

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.326	200.	.027	.01
*1-Chlorooctadecane	29.838	200.	.	.

DRO Area: 247334.5 DRO Amount: 7.569449
 TEH Area: 930788.8 TEH Amount: 28.48595



RESIDUAL RANGE ORGANICS CHROMATOGRAM

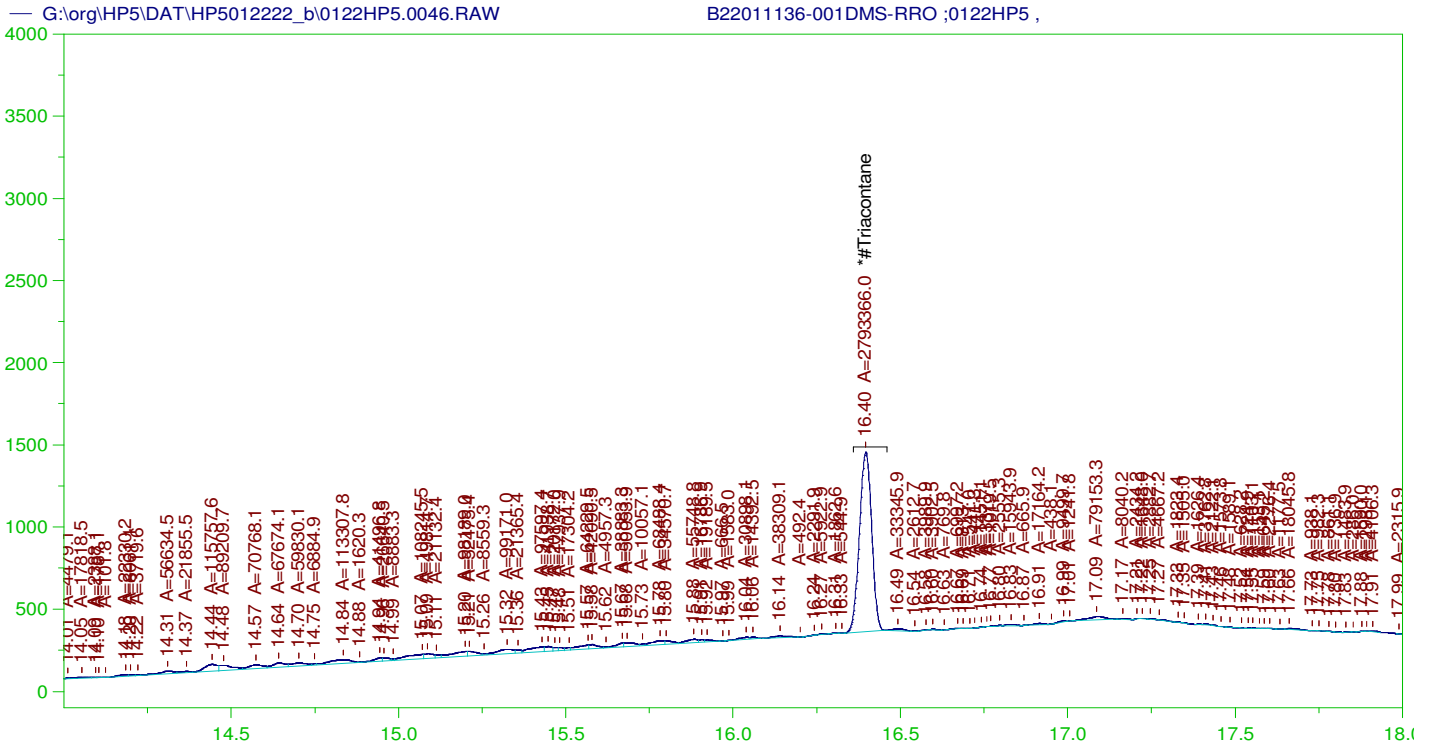
Sample Name: B22011136-001DMS-RRO ;0122HP5 ,
Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0046.RAW
Date & Time Acquired: 1/23/2022 6:18:45 PM
Method File: G:\Org\HP5\Methods\D3_ORO-BB-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.396	.5	.173	34.54

~~RRO~~ TEH(Oil Range) Area:1.262462E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.777609

AMN 02/15/2022



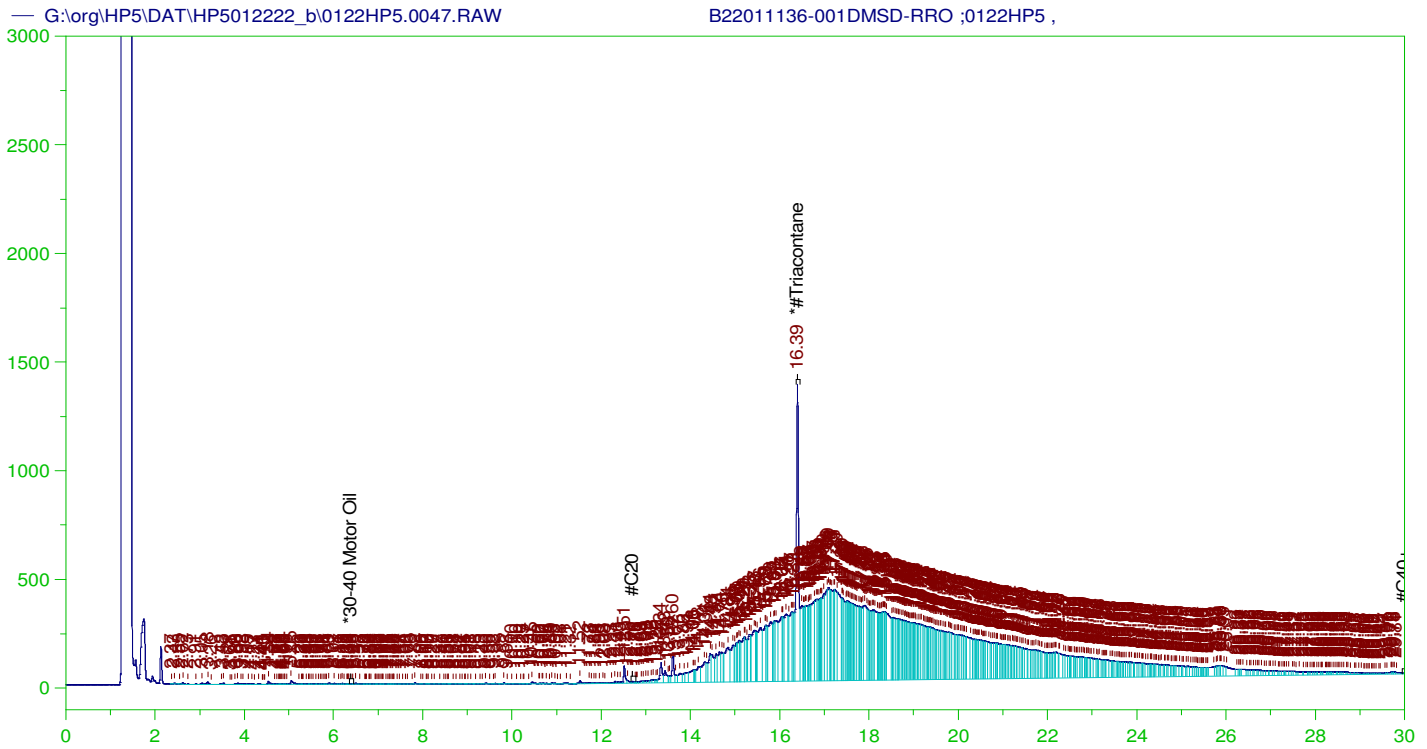
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011136-001DMS-RRO ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0046.RAW
 Date & Time Acquired: 1/23/2022 6:18:45 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.396	.5	.094	18.85 -

RRO Area:3150566 RRO AMOUNT: 0.1192287



RESIDUAL RANGE ORGANICS CHROMATOGRAM

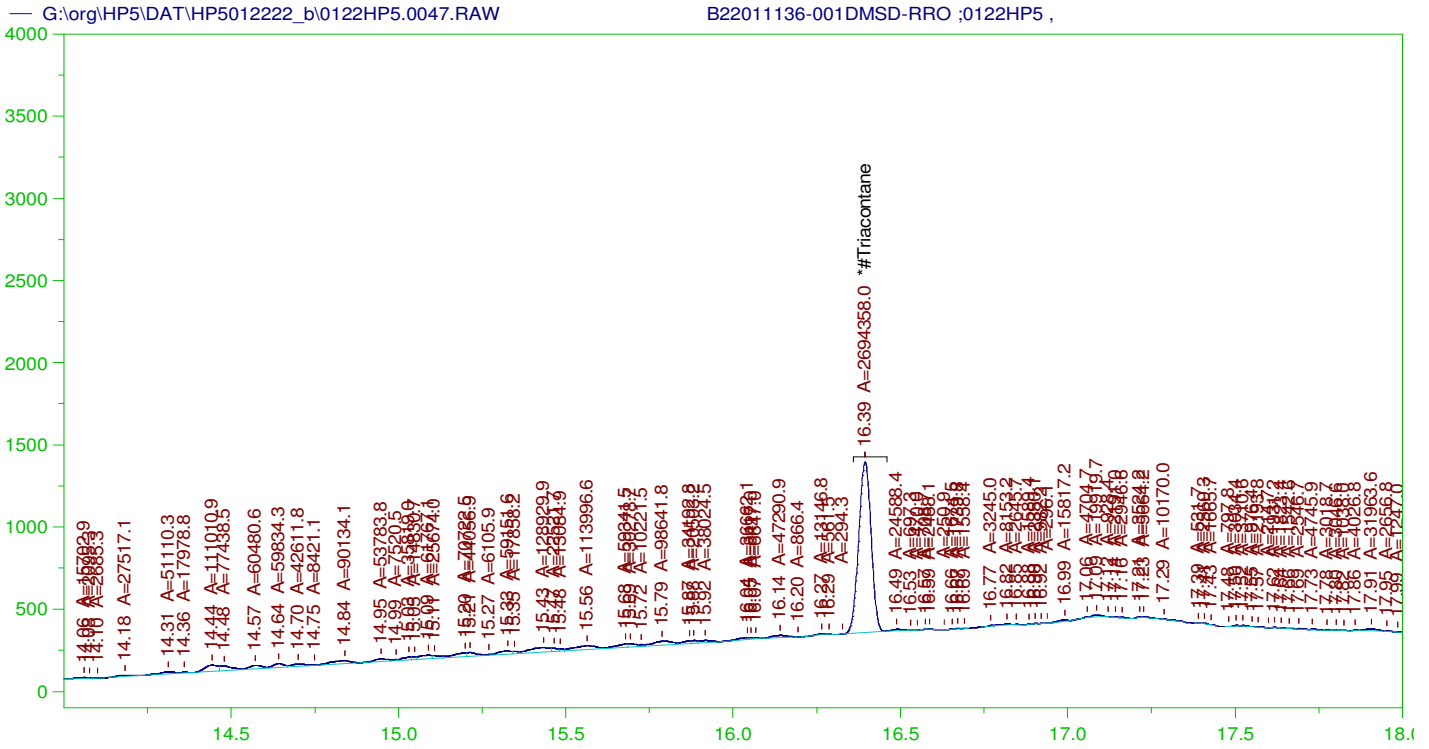
Sample Name: B22011136-001DMSD-RRO ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0047.RAW
 Date & Time Acquired: 1/23/2022 7:01:41 PM
 Method File: G:\Org\HP5\Methods\D3_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.394	.485	.166	34.15	-

~~RRO~~ TEH(Oil Range) Area:1.325775E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.871076

AMN 02/15/2022



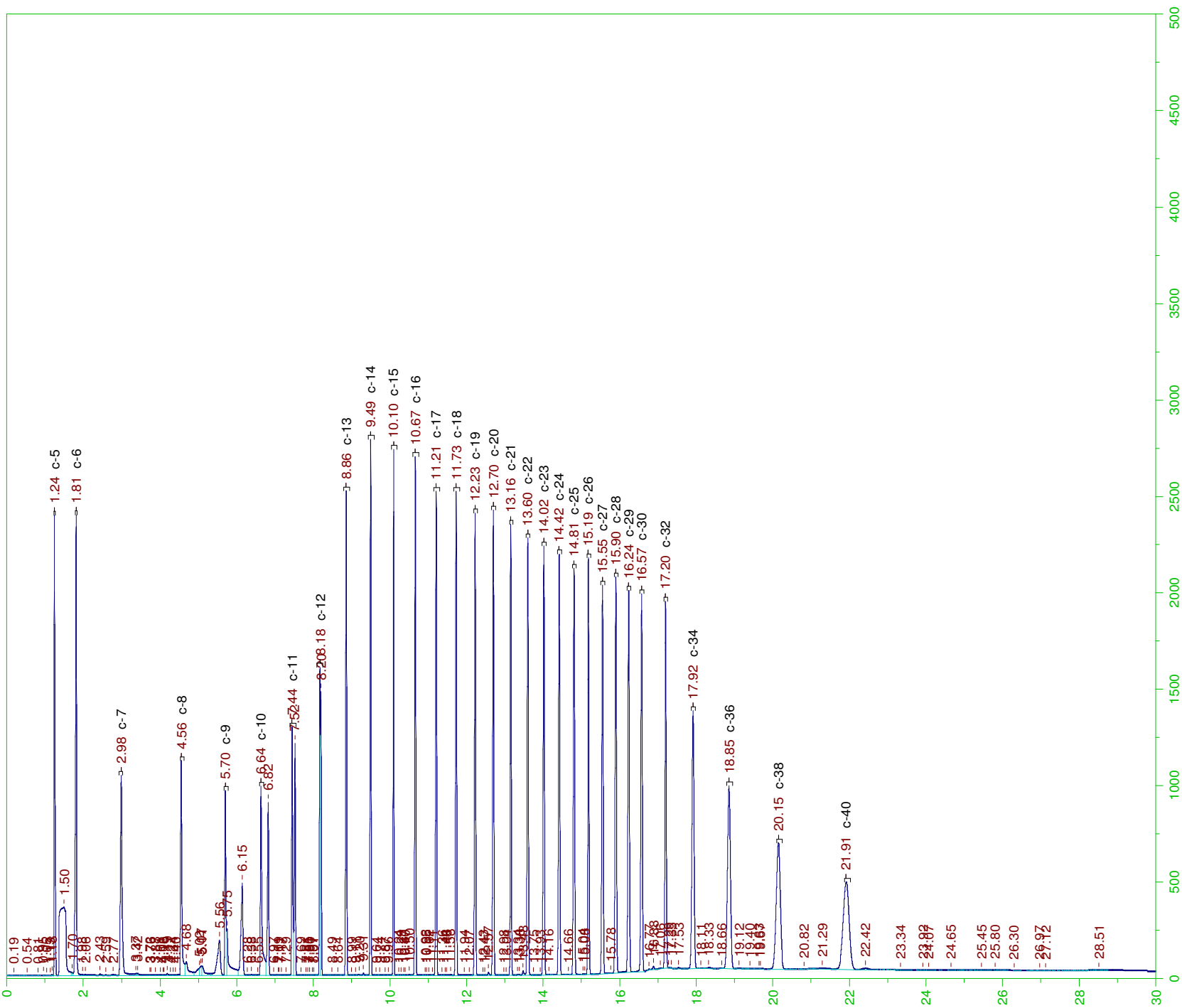
RESIDUAL RANGE ORGANICS CHROMATOGRAM

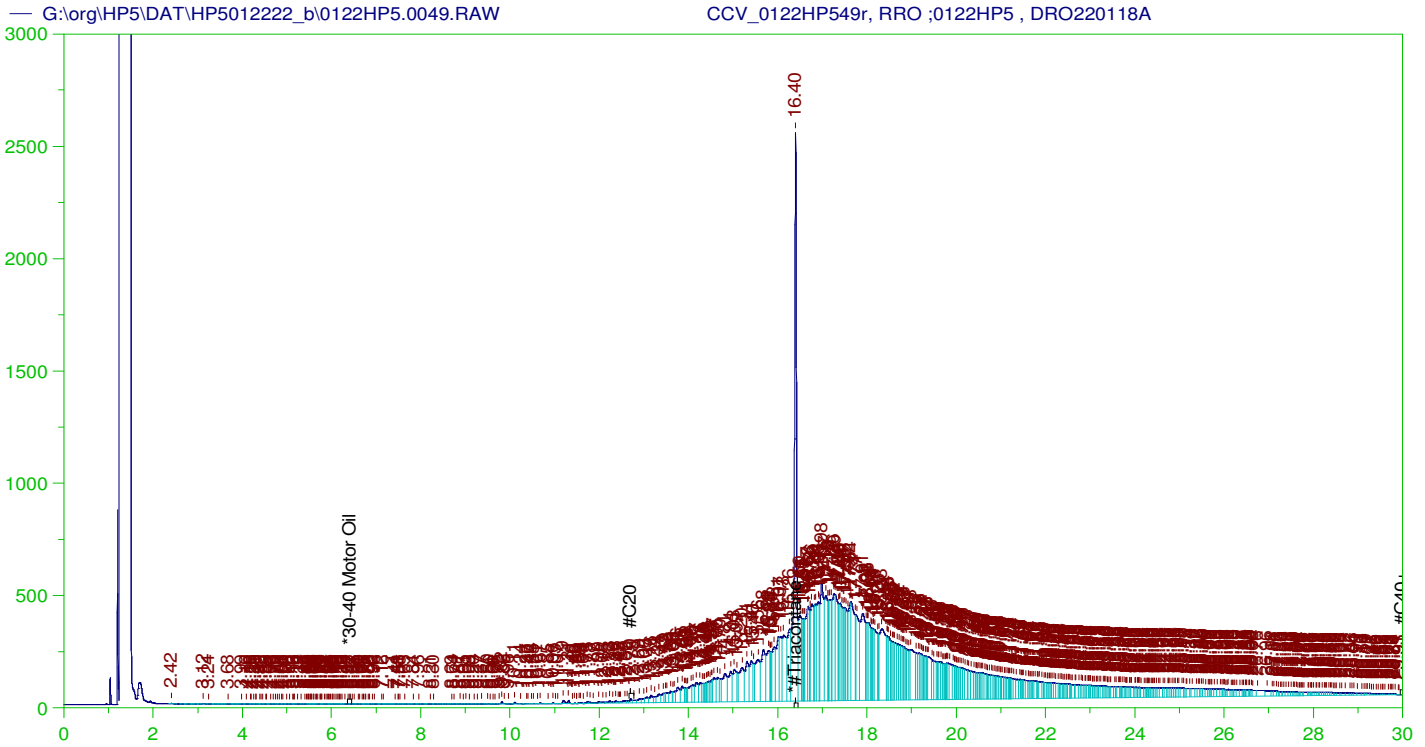
Sample Name: B22011136-001DMSD-RRO ;0122HP5 ,
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0047.RAW
 Date & Time Acquired: 1/23/2022 7:01:41 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.394	.485	.088	18.18

RRO Area:2774162 RRO AMOUNT: 0.1019264





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP549r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0049.RAW
 Date & Time Acquired: 1/23/2022 8:27:34 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.67 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.397	500.	305.407	61.08	-

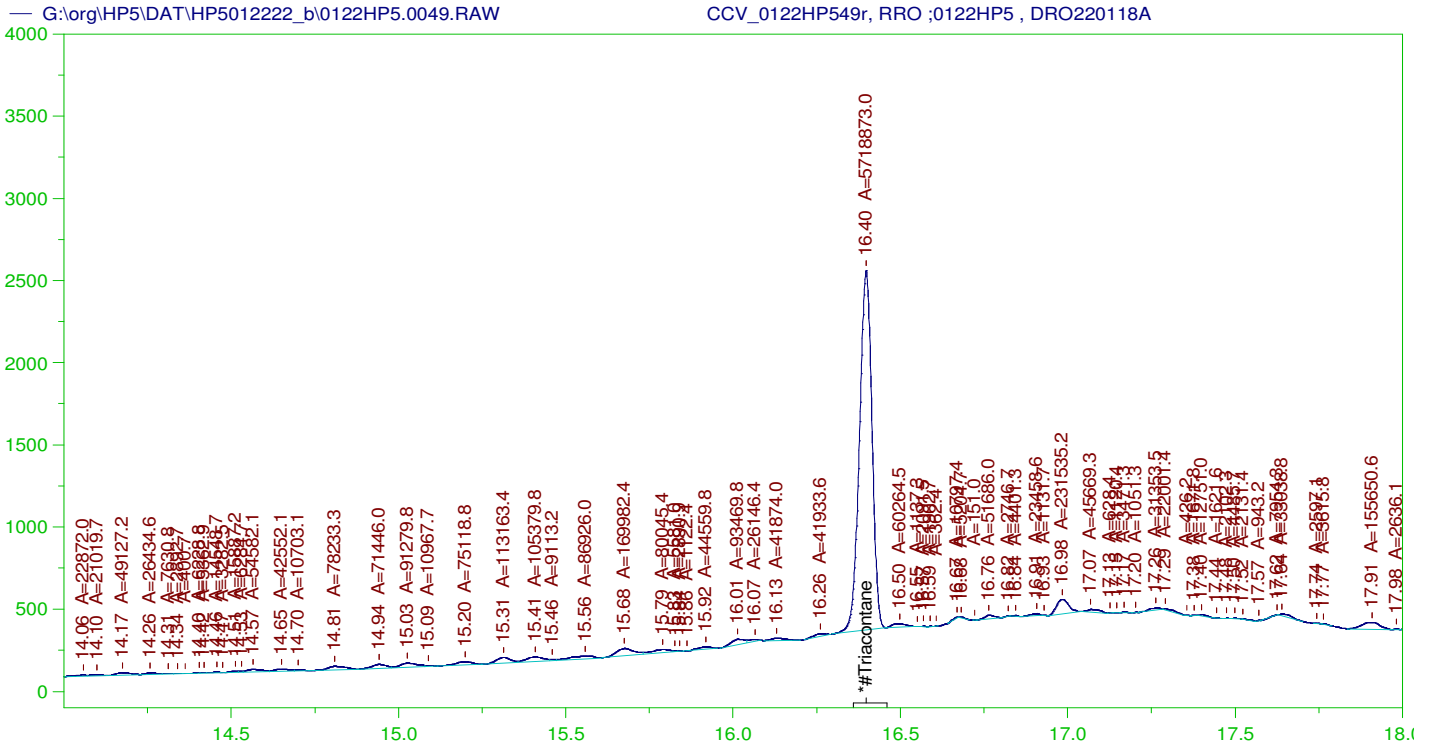
RRO TEH(Oil Range) Area:1.174424E+08 RRO TEH(Oil Range) AMOUNT: 4444.44

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0049.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.107	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.397	200.	305.407	152.7	75-125

AMN 02/15/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0122HP549r, RRO ;0122HP5 , DRO220118A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0049.RAW
 Date & Time Acquired: 1/23/2022 8:27:34 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BB-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BB.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.67 to 30.05

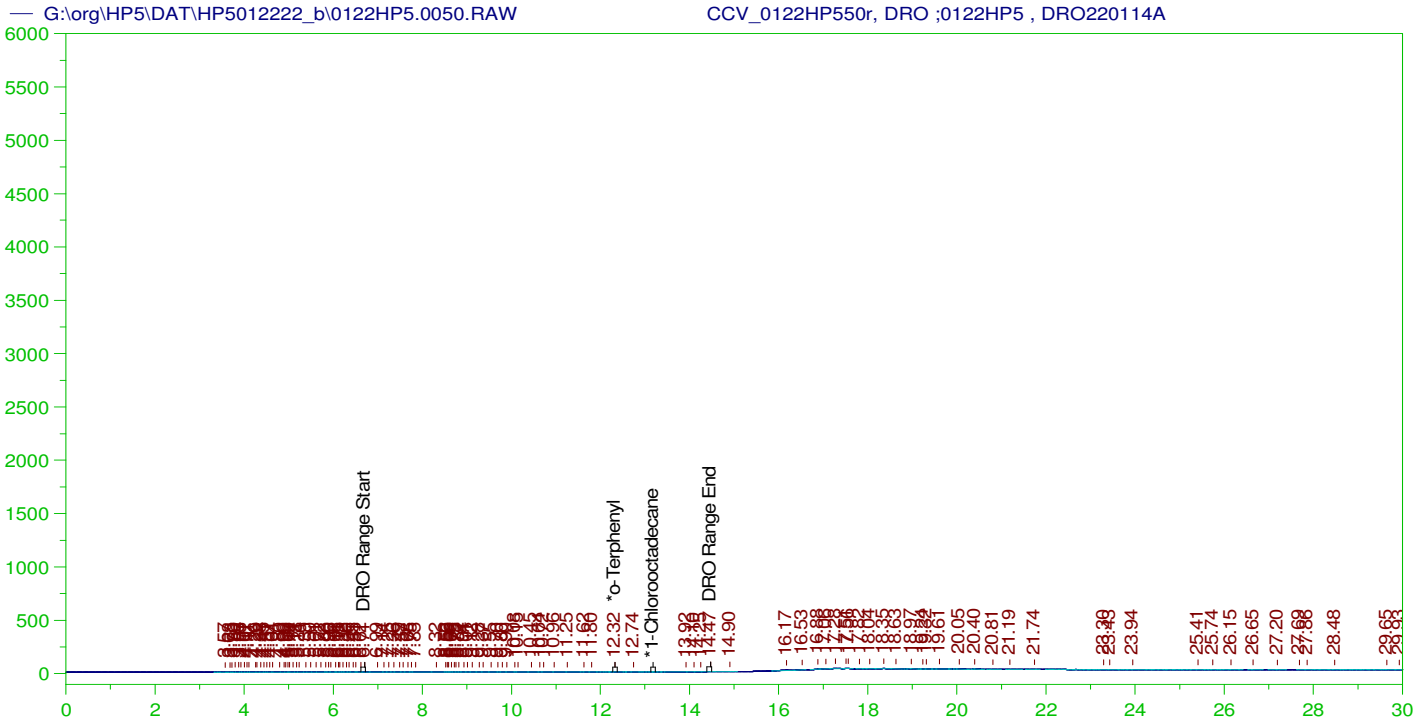
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.397	500.	192.97	38.59	-

RRO Area:2841696 RRO AMOUNT: 107.54

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0049.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.107	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.397	200.	192.97	96.48	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0122HP550r, DRO ;0122HP5 , DRO220114A
 Raw File: G:\org\HP5\DAT\HP5012222_b\0122HP5.0050.RAW
 Date & Time Acquired: 1/23/2022 9:09:23 PM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JB-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JB-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.62 to 14.49

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.32	200.	.028	.01
*1-Chlorooctadecane	29.931	200.	.	.

DRO Area:188614.5 DRO Amount: 5.772377
 TEH Area:500723.3 TEH Amount: 15.32419

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5012222_b\0122HP5.0050.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.32	200.	.028	.01	85-115
*1-Chlorooctadecane	29.931	200.	.	.	85-115

G:\org\HP5\DAT\HP5012222_b0122HP5.24r	B22011137-001D :0122HP5 , \$HC-8015-DRO-W.	G:\Org\HP5\Methods\I3_8015-C24T-JB-L%.met G:\Org\HP5\Methods\I3_OROS-BBb-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.25r	DCM-Baseline Check-V25	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.26r	B22011132-001D :0122HP5 , \$HC-8015-DRO-W.	G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	1010	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.27r	B22011134-001D :0122HP5 , \$HC-8015-DRO-W.	G:\Org\HP5\Methods\DR_8015-C24T-JB-L%.met G:\Org\HP5\Methods\DR_OROS-BBb-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 17.12 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.28r	B22011134-002B :0122HP5 , \$HC-8015-DRO-W.	G:\Org\HP5\Methods\I3_8015-C24T-JB-L%.met G:\Org\HP5\Methods\I3_OROS-BBb-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	990	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.29r	DCM-Baseline Check-V29	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.30r	B22011126-001D :0122HP5 , \$HC-8015-DRO-W.	G:\Org\HP5\Methods\I3_8015-C24T-JB-L%.met G:\Org\HP5\Methods\I3_OROS-BBb-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.31r	B22011128-001D :0122HP5 , \$HC-8015-DRO-W.	G:\Org\HP5\Methods\I3_8015-C24T-JB-L%.met G:\Org\HP5\Methods\I3_OROS-BBb-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	1030	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.32r	B22011125-001D :0122HP5 , \$HC-8015-DRO-W.	G:\Org\HP5\Methods\I3_8015-012232-JB-L%.met G:\Org\HP5\Methods\I3_OROS-012232-BBb-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	990	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with peak width adjusted. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.33r	MARKER_0122HP533r_DRO :0122HP5 , DRO220111A	g:\org\HP5\Methods\CSC220120.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.34r	CCV_0122HP534r_RRO :0122HP5 , DRO220118A	G:\Org\HP5\Methods\DC_ORO-BB-L%.MET G:\Org\HP5\Methods\I3_8015-C24T-BB-Lf.m	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on placed at 16.14 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.35r	CCV_0122HP535r_DRO :0122HP5 , DRO220114A	G:\Org\HP5\Methods\DC_8015-C24-JB-L%.met G:\Org\HP5\Methods\I3_8015-C24-JB-Lf.m	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.35 minutes. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on placed at 12.01 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.36r	DCM-Baseline Check-V36	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.37r	DCM-Baseline Check-V37	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.38r	B22011228-001D :0122HP5 , \$HC-8015-DRO-W. Needs Rerun due to ending CCV not peking	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1020	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.39r	B22011135-001D :0122HP5 , \$HC-8015-DRO-W. Needs Rerun due to ending CCV not peking	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	990	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.40r	B22011129-001D :0122HP5 , \$HC-8015-DRO-W. Needs Rerun due to ending CCV not peking	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1050	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.41r	DCM-Baseline Check-V41	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.42r	B22011214-001D :0122HP5 , \$HC-8015-DRO-W. Needs rr due to baseline	G:\Org\HP5\Methods\DR_8015-C24T-JB-L0.met	1000	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.43r	B22011227-001D :0122HP5 , \$HC-8015-DRO-W. Needs rr due to baseline	G:\Org\HP5\Methods\DR_8015-C24T-JB-L0.met	990	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.44r	LCS-163074-RRO :0122HP5 ,	G:\Org\HP5\Methods\I3_ORO-BB-L%.MET G:\Org\HP5\Methods\I3_ORO-BB-L%.MET	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on placed at 16.14 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.45r	DCM-Baseline Check-V45	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.46r	B22011136-001DMS-RRO :0122HP5 ,	G:\Org\HP5\Methods\DC_ORO-BB-L%.MET G:\Org\HP5\Methods\I3_ORO-BB-L%.MET	1000	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on placed at 16.14 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.47r	B22011136-001DMS-RRO :0122HP5 ,	G:\Org\HP5\Methods\I3_ORO-BB-L%.MET G:\Org\HP5\Methods\I3_ORO-BB-L%.MET	1030	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on placed at 16.14 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.48r	MARKER_0122HP548r_DRO :0122HP5 , DRO220111A	g:\org\HP5\Methods\CSC220120.met	1	1	1	1	0	No integrations.
G:\org\HP5\DAT\HP5012222_b0122HP5.49r	CCV_0122HP549r_RRO :0122HP5 , DRO220118A	G:\Org\HP5\Methods\DC_ORO-BB-L%.MET G:\Org\HP5\Methods\I3_ORO-BB-L%.MET	1	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set Baseline All Valleys on placed at 16.14 minutes and X-axis scaling showing surrogate peak from 14-18 minutes.
G:\org\HP5\DAT\HP5012222_b0122HP5.50r	CCV_0122HP550r_DRO :0122HP5 , DRO220114A-lost communication with acquisition did not poke any vial just ran	G:\Org\HP5\Methods\DC_8015-C24-JB-L0.met	1	1	1	1	0	No integrations.

Ann Nebel

Digitally signed by
Ann Nebel
Date: 2022.02.15 15:09:41 -07:00



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO180126C

Standard Name: 2-Fluorobiphenyl

Prep Date: 1/26/2018

Exp Date: 10/31/2024

Department: dropr

Vendor: Chemservice

Lot Number: 5599700

Balance ID:

Comments:

Type: Neat

Prep By: Todd C Cooper

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
2-Fluorobiphenyl	10069		mL	10/31/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO180823A

Standard Name: 2-Bromonaphthalene

Prep Date: 8/22/2016

Exp Date: 5/31/2022

Department: dropr

Vendor: Chemservice

Lot Number: 3150700

Balance ID:

Comments:

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
2-Bromonaphthalene	10701		mL	5/31/2022
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO181105A

Standard Name: #2 Diesel (NEAT)

Prep Date: 11/5/2018

Exp Date: 11/5/2023

Department: dropr

Vendor: conoco

Lot Number:

Balance ID:

Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: 250 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
				11/5/2023
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO200430B
Standard Name: O-Terphenyl
Prep Date: 4/30/2020
Exp Date: 9/30/2024
Department: dropr
Vendor: Chemservice
Lot Number: 9972100
Balance ID:
Comments: ID#: 6271

Type: Neat
Prep By: Ann Nebel
Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	12650	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO201014C

Standard Name: 1-Chlorooctadecane

Prep Date: 10/14/2019

Exp Date: 12/31/2024

Department: dropr

Vendor: CSI1

Lot Number: 10809500

Balance ID:

Comments: Date Certified: 12/9/16 ; N-10042-1G; 99.5% purity

Type: Neat

Prep By: Ann Nebel

Status: Open

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
1-Chlorooctadecane	13192	1	g	12/31/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO201014D

Standard Name: n-Pentacosane

Prep Date: 10/14/2020

Exp Date: 2/28/2025

Department: dropr

Vendor: Chem Service

Lot Number: 9642200

Balance ID:

Comments: C-25; Used in AKDRO Marker

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
n-Pentacosane	13193	100	mg	2/28/2025
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211012B

Standard Name: #2 Diesel in Acetone 150,000 ug/mL

Prep Date: 10/12/2021

Exp Date: 11/5/2023

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: #2 Diesel in Acetone 150,000 ug/mL.

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA662	14050	25	mL	11/5/2023
Stock Source	Base Units	Amount Added		
DRO181105A	ug/mL	3.7507 g		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211025B

Standard Name: Ali Hydro Std 1000ug/mL

Prep Date: 10/25/2021

Exp Date: 11/30/2024

Department: dropr

Vendor: Agilent

Lot Number: 0006643302

Balance ID:

Comments: Ali Hydro Std 1000ug/mL For CCVs.

Type: Primary

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Aliphatic Hydrocarbon Standard	14434	1	mL	11/30/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Spike ID: DRO211101A

Spike Name: OTP-4000 ug/mL DCM

Prep Date: 11/1/2021

Exp Date: 9/30/2024

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Used to Prep DRO-8015 ICAL and CCV Solutions

Type: Secondary

Prep By: Ann Nebel

Status: Open

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC328	14408	25	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO200430B	ug/mL	0.1012 g



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211214C

Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM

Prep Date: 12/14/2021

Exp Date: 4/30/2023

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: LRAC6316

Balance ID:

Comments: Diesel Fuel #2 For CCVs.

Type: Primary

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Diesel Fuel No. 2	14623	1	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211222B

Standard Name: EPH (4) SURR-1000 ug/mL ea. in Hexane

Prep Date: 12/22/2021

Exp Date: 5/31/2022

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: EPH (4) SURR-1000 ug/mL ea. in Hexane

Type: Secondary

Prep By: Jillian L Bostwick

Status: Open

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Hexane EB754	14543	50	mL	5/31/2022

Stock Source	Base Units	Amount Added
DRO180823A	ug/mL	0.0507 g
DRO200430B	ug/mL	0.0504 g
DRO180126C	ug/mL	0.0496 g
DRO201014C	ug/mL	0.0504 g



Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO220102D

Standard Name: ALASKA MARKER-200ug/mL

Prep Date: 1/2/2022

Exp Date: 5/31/2022

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: ALASKA MARKER w/ C-10, C-25, and OTP/COD. Optimal C-25 is 0.0012g.

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 5.5 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Hexane EB754	14543	3.3	mL	5/31/2022

Stock Source	Base Units	Amount Added
DRO201014D	ug/mL	0.0016 g
DRO211222B	ug/mL	1.1 mL
DRO211025B	ug/mL	1.1 mL

Certificate of Analysis

Diesel Fuel No. 2

*Certified
Reference
Material*

Description

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

ID #: 14623

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

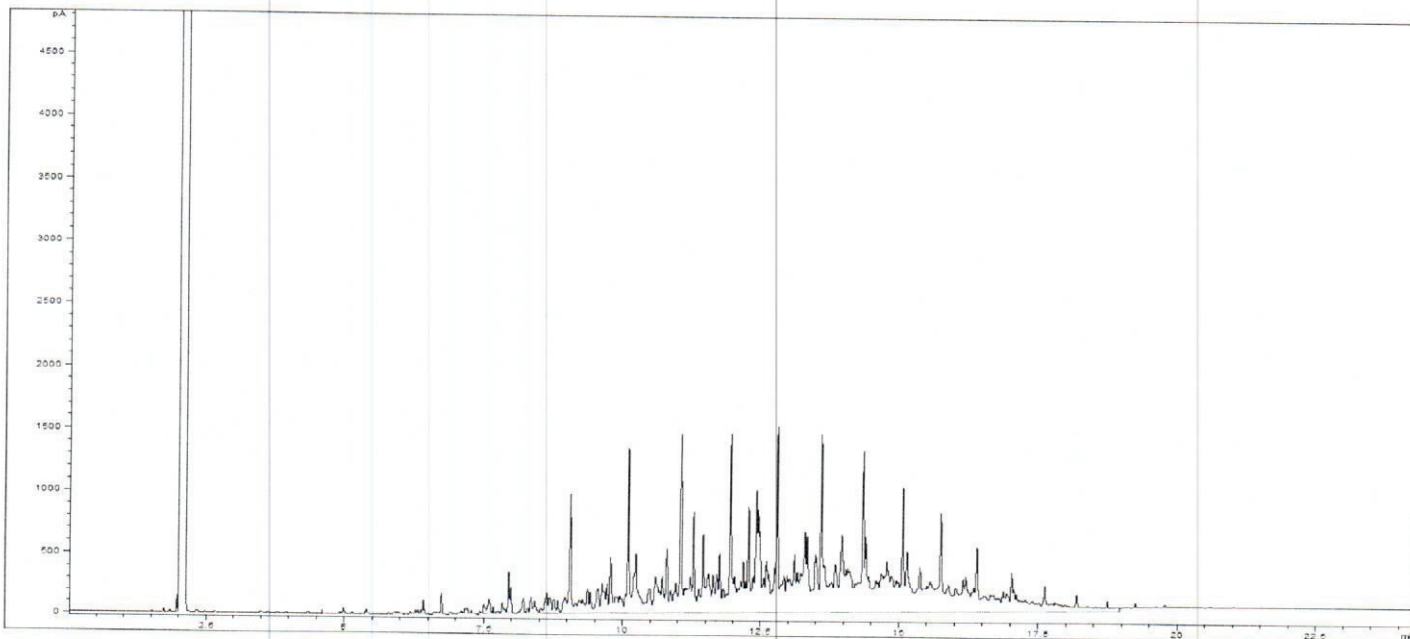
Rec'd: 12/14/2021

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

Certified Values

Analyte	Certified Value ^{1,4}	Units	Raw Material Purity, %	Raw Material Lot	CAS
NO.2 FUEL OIL	50001 ± 2770	µg/mL	100.0	LA80505	68476-34-6

Informational Values



Additional Information:

Analytical Method Parameters:

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)

Carrier Gas: H₂, Flow: 4.0 mL/min

Inlet Temperature: 250 °C, Injection Volume: 1.0 µL

Injection Mode: Split, Split Ratio: 10: 1

Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

1 Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$U_{CRM} = \sqrt{u_{char}^2 + u_{homogeneity}^2 + u_{stability}^2}$$

k: Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

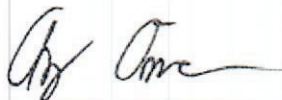
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

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

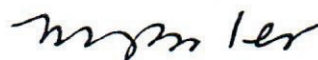
MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH ISO/IEC 17025:2017 (ANAB Cert AT-1467) and ISO 17034:2016 (ANAB Cert AR-1470).



Andy Ommen - QC Manager

Certification Date April 30, 2020
Version 0-4302020



Mark Pooler - QA Supervisor



Anna

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

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

Rec'd: 4/30/2020

Energyl Laboratories Inc 1120 So. 27th Street

Billings MT 59107

COA Form
Revision 3 (3/2015)

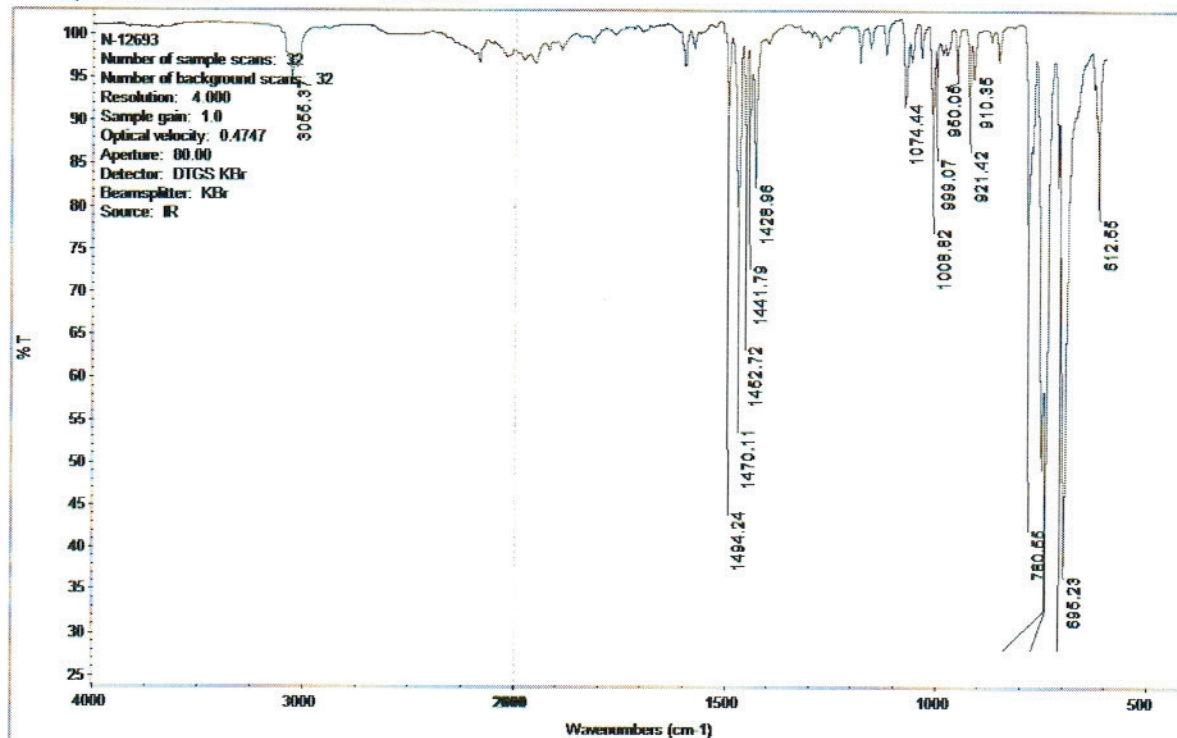
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

Data File: D:\msdchem\2019 DATA\0919\0923-01.D
Acq On : 23 Sep 2019 10:40
Operator :
Sample : n-12693
Misc :
ALS Vial : 95

Integration Parameters: autoint1.e
Integrator: ChemStation

DataAcq Meth: SCREEN.M
Method : D:\msdchem\2019 DATA\0919\0903-09.D\ERIN.M

Signal : TIC: 0923-01.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	11.844	1597	1606	1613	BB	32038221	432253484	100.00%	100.000%

Sum of corrected areas: 432253484

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

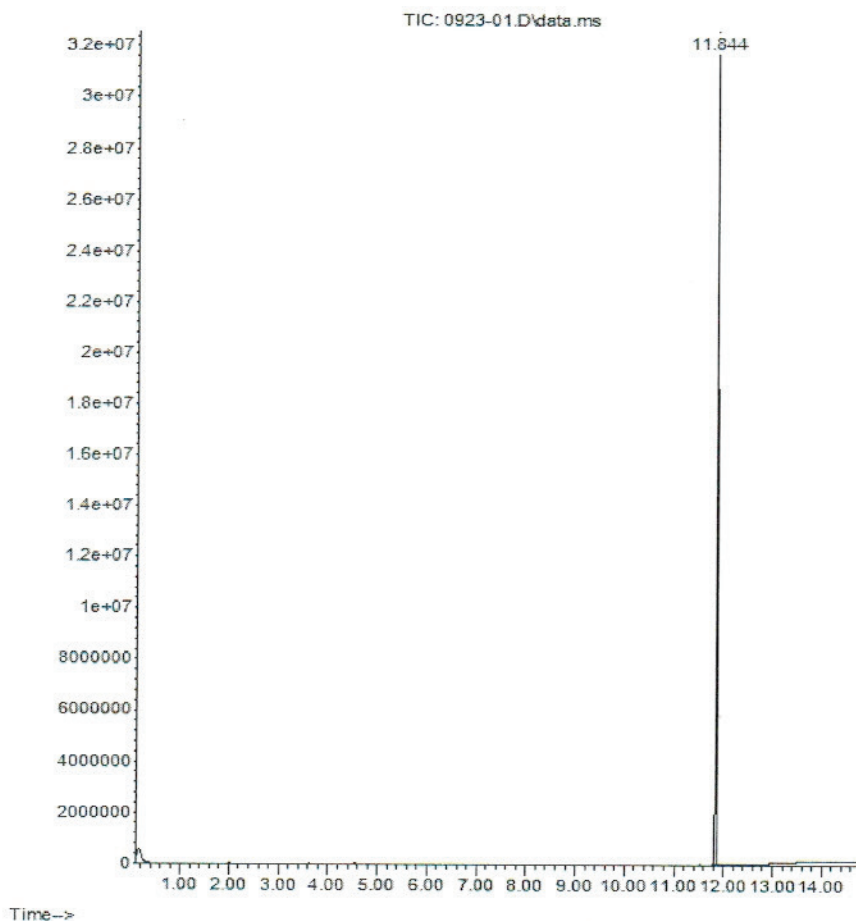
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



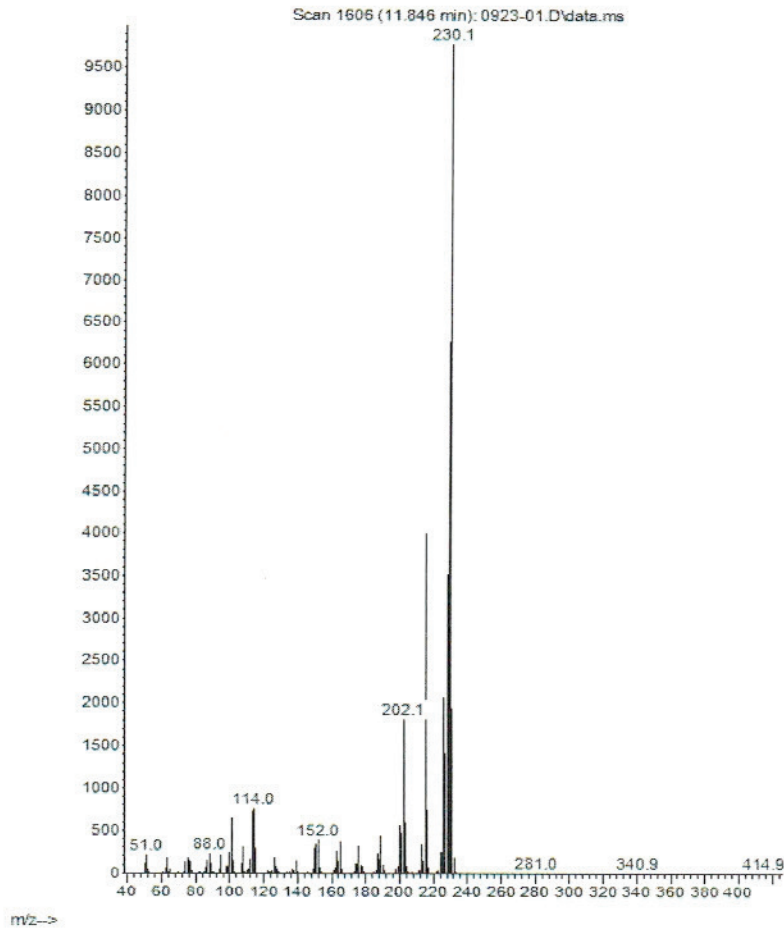
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



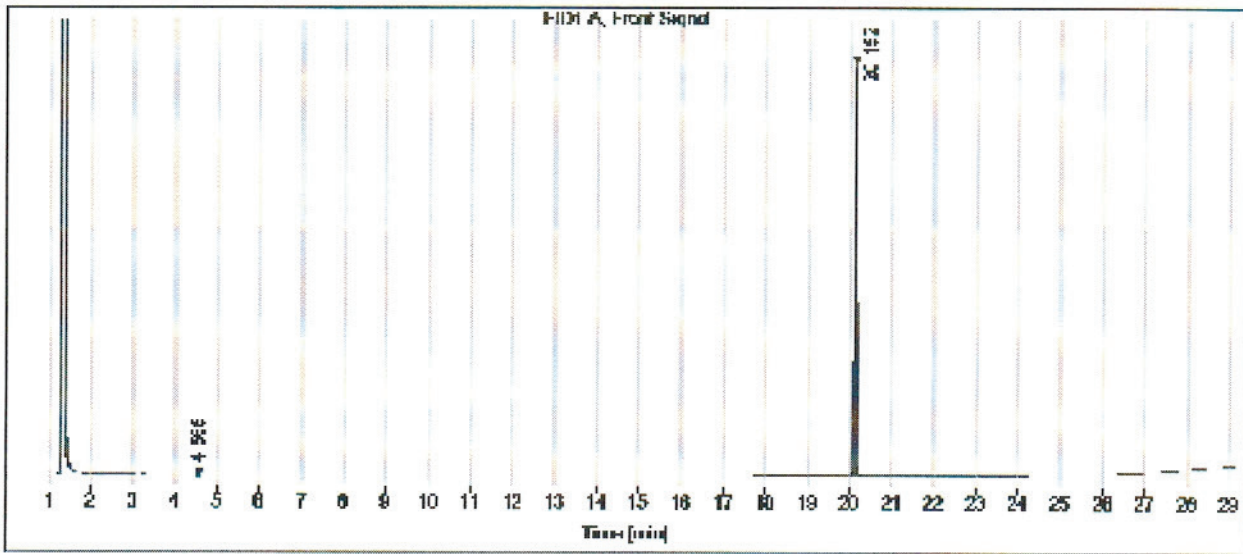
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\
 Sample name: N-12893
 Instrument: GC 2
 Injection date: 8/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
4.565	BB	0.0305	1.2408	0.5122	0.11
20.152	BB	0.0391	1171.9556	439.4599	99.89
		Sum	1173.1963		

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





Analytical RunID GCFID-HP5-B_220111c Standards Traceability Report

Standard ID: DRO210406A

Standard Name: Triacontane-d62 Surr For AK103 RRO

Prep Date: 4/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: MBBC4347

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	13736		mL	4/6/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111c Standards Traceability Report

Standard ID: DRO210901A

Standard Name: 30W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: F1620C1

Balance ID:

Comments: Used to make 2nd Source Standard for AK103 method.

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111c Standards Traceability Report

Standard ID: DRO210901B

Standard Name: 40W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: L0717H2

Balance ID:

Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 40 Motor Oil	14231		mL	9/1/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220111c Standards Traceability Report

Standard ID: DRO210902A

Standard Name: 50,000 ug/mL Oil Std for RRO-In DCM

Prep Date: 9/2/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: .625 g of 30W and 40 W each LCS for Oil range

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EB867	14196	25	mL	9/1/2026

Stock Source	Base Units	Amount Added
DRO210901A	ug/mL	0.6254 g
DRO210901B	ug/mL	0.6261 g



Analytical RunID GCFID-HP5-B_220111c Standards Traceability Report

Standard ID: DRO211006A

Standard Name: Triacontane SURR 2000 ug/mL

Prep Date: 10/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	50	mL	4/6/2026
Stock Source	Base Units	Amount Added		
DRO210406A	ug/mL	0.1001 g		



Analytical RunID GCFID-HP5-B_220111c Standards Traceability Report

Standard ID: DRO211118A

Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DCM

Prep Date: 11/18/2021

Exp Date: 10/31/2028

Department: dropr

Vendor: Restek

Lot Number: A0176667

Balance ID: Sartorius 4 place balance

Comments:

Type: Primary

Prep By: Ann Nebel

Status: Open

Final Volume: 1 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Residual Range Calibration Standard	14531	1	mL	10/31/2028
Stock Source	Base Units	Amount Added		
DRO211118A	ug/mL			



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817

Lot No.: A0176667

Description : Residual Range Calibration Standard (RCS)

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : October 31, 2028

Storage: 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil) CAS # 64742-65-0.F Purity ----%	50,102.0 µg/mL	+/- 293.3582	µg/mL	Gravimetric
	(Lot A0126386)		+/- 1,492.1008	µg/mL	Unstressed
			+/- 1,591.3244	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

ID #: 14531

Opened: _____

Residual Range Calibration Standard

Expires: 10/31/2028

Rec'd: 11/18/2021

Energv Laboratories Inc 1120 So. 27th Street

Billings MT 59107

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

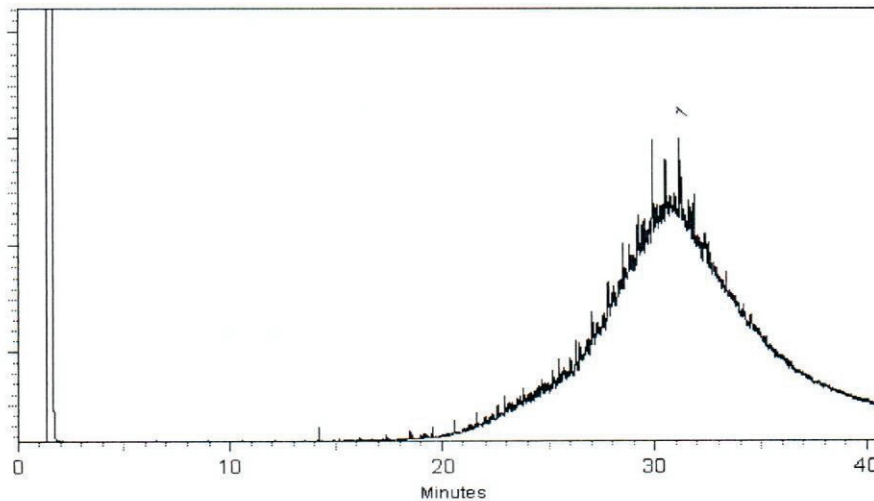
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Sam Moodler

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021

Balance: 1128360905

Alexis Shelow

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

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



ID #: 13736

Opened: _____

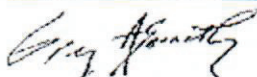
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

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

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



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO181105A

Spike Name: #2 Diesel (NEAT)

Prep Date: 11/5/2018

Exp Date: 11/5/2023

Department: dropr

Vendor: conoco

Lot Number:

Balance ID:

Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: 250 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
				11/5/2023
Stock Source	Base Units	Amount Added		



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO200430B

Spike Name: O-Terphenyl

Prep Date: 4/30/2020

Exp Date: 9/30/2024

Department: dropr

Vendor: Chemservice

Lot Number: 9972100

Balance ID:

Comments: ID#: 6271

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	12650	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO210406A

Spike Name: Triacontane-d62 Surr For AK103 RRO

Type: Neat

Prep Date: 4/6/2021

Prep By: Ann Nebel

Exp Date: 4/6/2026

Status: New

Department: dropr

Vendor: Sigma-Aldrich

Final Volume: mL

Lot Number: MBBC4347

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	13736	500	mg	4/6/2026
Stock Source	Base Units	Amount Added		



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO210901A

Spike Name: 30W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: F1620C1

Balance ID:

Comments: Used to make 2nd Source Standard for AK103 method.

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 30 Motor Oil	14232		mL	9/1/2026
Stock Source	Base Units	Amount Added		



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO210901B

Spike Name: 40W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: L0717H2

Balance ID:

Comments: Used to Make 2nd Source Standards For Alaska AK103 RRO Method and Oil

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Valvoline SAE 40 Motor Oil	14231		mL	9/1/2026

Stock Source	Base Units	Amount Added
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Prep Batch 163074 Standards Traceability Report

Spike ID: DRO210902A

Spike Name: 50,000 ug/mL Oil Std for RRO-In DCM

Prep Date: 9/2/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: .625 g of 30W and 40 W each LCS for Oil range

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EB867	14196	25	mL	9/1/2026

Stock Source	Base Units	Amount Added
DRO210901A	ug/mL	0.6254 g
DRO210901B	ug/mL	0.6261 g



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO210902B

Spike Name: 30,000 ug/mL Oil Std For RRO-In DCM

Prep Date: 9/2/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments:

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EB867	14196	1.6	mL	9/1/2026

Stock Source	Base Units	Amount Added
DRO210902A	ug/mL	2.4 mL



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO210902C

Spike Name: 3,000 ug/mL Oil Std For MDLS-In DCM

Prep Date: 9/2/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 100 uL for MDL = .3 mg/L

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EB867	14196	3.6	mL	9/1/2026

Stock Source	Base Units	Amount Added
DRO210902B	ug/mL	0.4 mL



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO211006A

Spike Name: Triacontane SURR 2000 ug/mL

Prep Date: 10/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	50	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO210406A	ug/mL	0.1001 g



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO211006B

Spike Name: Triacontane SURR 20 ug/mL

Prep Date: 10/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 100X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	3.96	mL	4/6/2026
Stock Source	Base Units	Amount Added		
DRO211006A	ug/mL	40 uL		



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO211012B

Spike Name: #2 Diesel in Acetone 150,000 ug/mL

Prep Date: 10/12/2021

Exp Date: 11/5/2023

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: #2 Diesel in Acetone 150,000 ug/mL.

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA662	14050	25	mL	11/5/2023

Stock Source	Base Units	Amount Added
DRO181105A	ug/mL	3.7507 g



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO211121C

Spike Name: MDL Diesel SPK 3000 ug/mL in Acetone

Type: Secondary

Prep Date: 11/21/2021

Prep By: Ann Nebel

Exp Date: 11/5/2023

Status: New

Department: dropr

Vendor:

Final Volume: 5 mL

Lot Number:

Balance ID:

Comments: use 100 uL DRO MDLs-mdw)

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DY299	13297	4.9	mL	11/5/2023

Stock Source	Base Units	Amount Added
DRO211012B	ug/mL	0.1 mL



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO211213A

Spike Name: OTP only SURR 2000 ug/mL

Prep Date: 12/13/2021

Exp Date: 9/30/2024

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: OTP SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 100 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	100	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO200430B	ug/mL	0.2015 g



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO220106C

Spike Name: #2 Diesel in Acetone 150,000 ug/mL

Type: Secondary

Prep Date: 1/6/2022

Prep By: Ann Nebel

Exp Date: 11/5/2023

Status: New

Department: dropr

Vendor:

Final Volume: 25 mL

Lot Number:

Balance ID: BAL-DRO

Comments:

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	25	mL	11/5/2023
Stock Source	Base Units	Amount Added		
DRO181105A	ug/mL	3.7506 g		



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO220112A

Spike Name: 50,000 ug/mL Oil Std for RRO-In DCM

Prep Date: 1/12/2022

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: .625 g of 30W and 40 W each LCS for Oil range

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC832	14647	25	mL	9/1/2026

Stock Source	Base Units	Amount Added
DRO210901A	ug/mL	0.6225 g
DRO210901B	ug/mL	0.6273 g



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO220117A

Spike Name: OTPonly SURR 20 ug/mL

Prep Date: 1/17/2022

Exp Date: 9/30/2024

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 100X dilution of OTPonly SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA776	13927	3.96	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO211213A	ug/mL	40 uL



Prep Batch 163074 Standards Traceability Report

Spike ID: DRO220119A

Spike Name: Triacontane SURR 1000 ug/mL

Prep Date: 1/19/2022

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 2X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 10 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC849	14747	5	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO211006A	ug/mL	5 mL

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CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

Rec'd: 4/30/2020

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

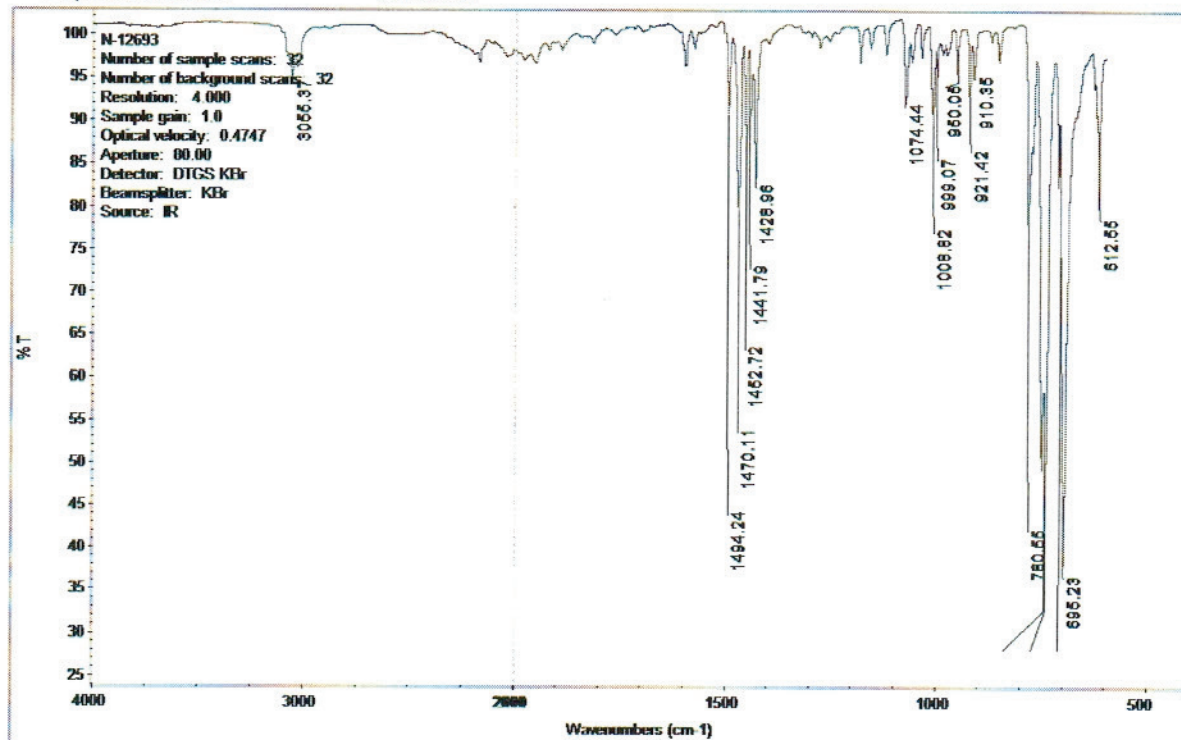
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

Data File: D:\msdchem\2019 DATA\0919\0923-01.D
Acq On : 23 Sep 2019 10:40
Operator :
Sample : n-12693
Misc :
ALS Vial : 95

Integration Parameters: autoint1.e
Integrator: ChemStation

DataAcq Meth: SCREEN.M
Method : D:\msdchem\2019 DATA\0919\0903-09.D\ERIN.M

Signal : TIC: 0923-01.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
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Sum of corrected areas: 432253484

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

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



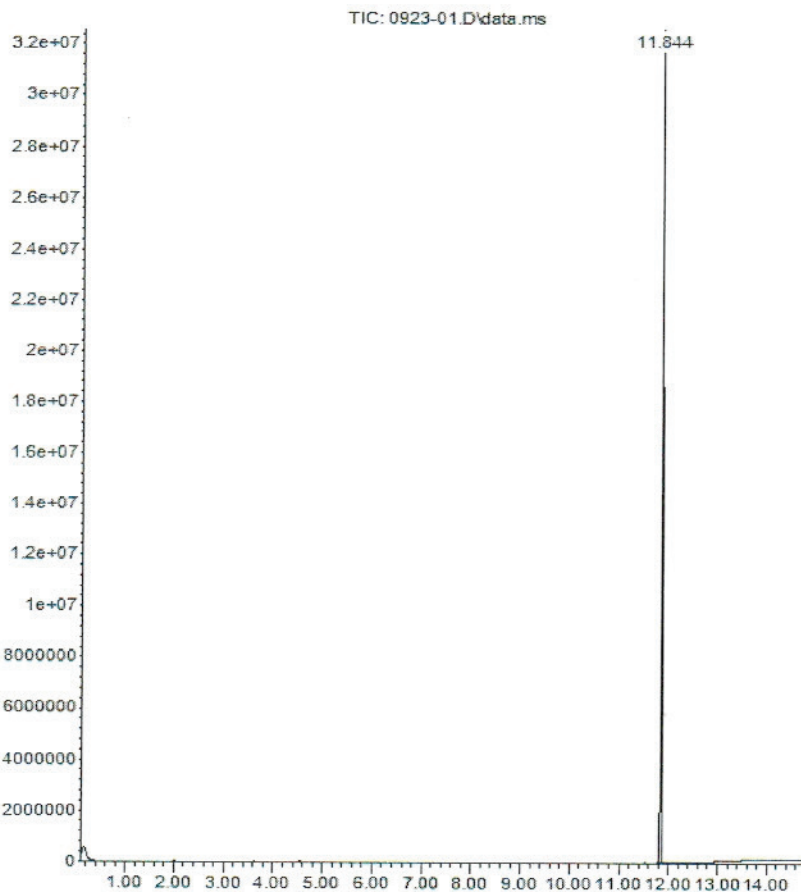
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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



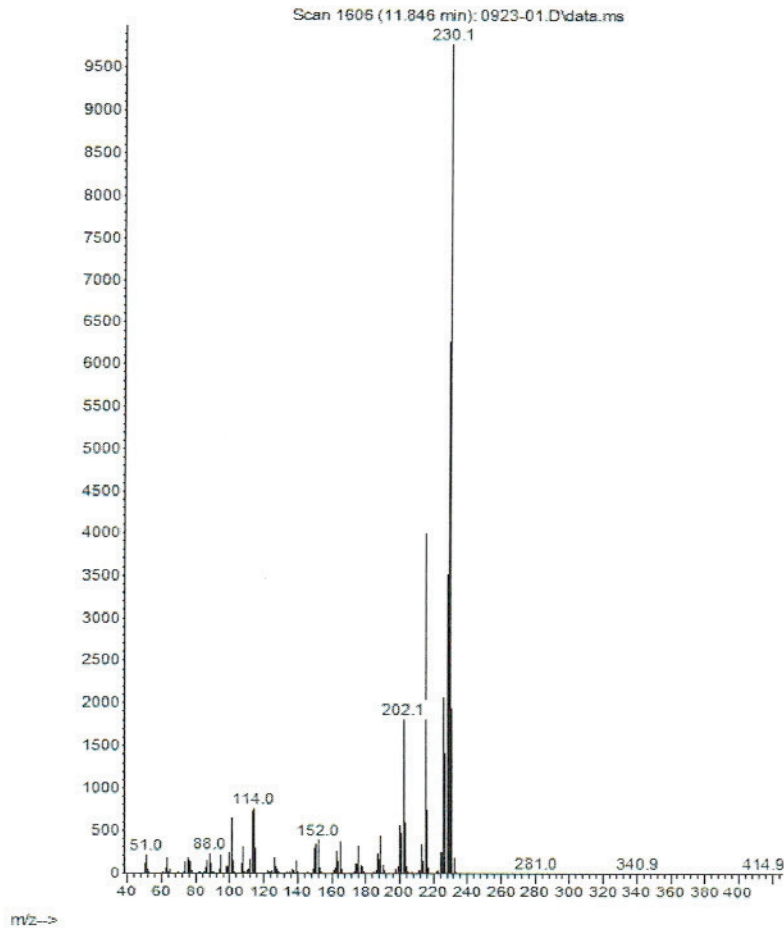
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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

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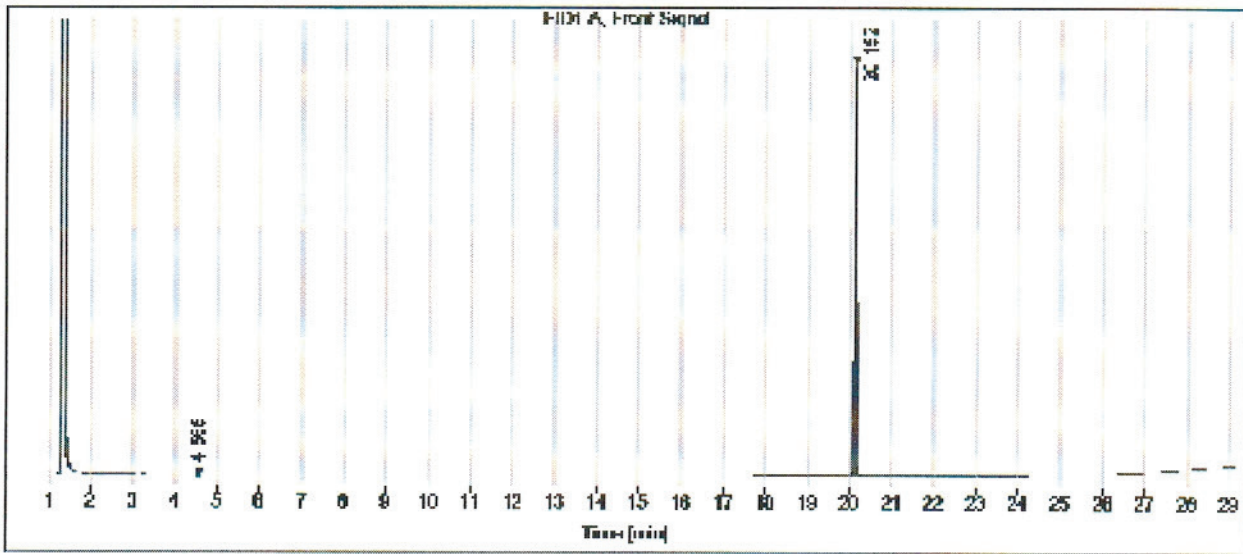
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Gas

Data file: C:\CHEM3\
 Sample name: N-12893
 Instrument: GC 2
 Injection date: 8/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
4.565	BB	0.0305	1.2408	0.5122	0.11
20.152	BB	0.0391	1171.9556	439.4599	99.89
		Sum	1173.1963		

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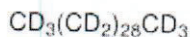


3050 Spruce Street, Saint Louis, MO 63103, USA
 Website: www.sigmaaldrich.com
 Email USA: techserv@sial.com
 Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
 Triacontane-d62 - 98 atom % D

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



ID #: 13736

Opened: _____

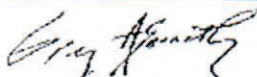
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

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

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



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO200430B
Standard Name: O-Terphenyl
Prep Date: 4/30/2020
Exp Date: 9/30/2024
Department: dropr
Vendor: Chemservice
Lot Number: 9972100
Balance ID:
Comments: ID#: 6271

Type: Neat
Prep By: Ann Nebel
Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
o-Terphenyl	12650	500	mg	9/30/2024
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO210406A

Standard Name: Triacontane-d62 Surr For AK103 RRO

Prep Date: 4/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: MBBC4347

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Type: Neat

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	13736	500	mg	4/6/2026
Stock Source	Base Units	Amount Added		



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO211006A

Standard Name: Triacontane SURR 2000 ug/mL

Prep Date: 10/6/2021

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	50	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO210406A	ug/mL	0.1001 g



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Spike ID: DRO211101A
Spike Name: OTP-4000 ug/mL DCM
Prep Date: 11/1/2021
Exp Date: 9/30/2024
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: Used to Prep DRO-8015 ICAL and CCV Solutions

Type: Secondary
Prep By: Ann Nebel
Status: Open

Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC328	14408	25	mL	9/30/2024

Stock Source	Base Units	Amount Added
DRO200430B	ug/mL	0.1012 g



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO211118A

Standard Name: 50,000 ug/mL Oil Std For AK103 RRO-In DCM

Prep Date: 11/18/2021

Exp Date: 10/31/2028

Department: dropr

Vendor: Restek

Lot Number: A0176667

Balance ID: Sartorius 4 place balance

Comments:

Type: Primary

Prep By: Ann Nebel

Status: Open

Final Volume: 1 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Residual Range Calibration Standard	14531	1	mL	10/31/2028
Stock Source	Base Units	Amount Added		
DRO211118A	ug/mL			



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO211214C

Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM

Prep Date: 12/14/2021

Exp Date: 4/30/2023

Department: dropr

Vendor: Sigma-Aldrich

Lot Number: LRAC6316

Balance ID:

Comments: Diesel Fuel #2 For CCVs.

Type: Primary

Prep By: Ann Nebel

Status: New

Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Diesel Fuel No. 2	14623	1	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO220106B

Standard Name: Triacontane SURR 1000 ug/mL

Prep Date: 1/6/2022

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: 2X dilution of Triacontane SURR 2000 ug/mL

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 10 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC832	14647	5	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO211006A	ug/mL	5 mL



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO220110A

Standard Name: Carbon Scan STD-Marker

Prep Date: 1/11/2022

Exp Date: 7/13/2026

Department: dropr

Vendor: ASI2

Lot Number: 55064

Balance ID:

Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Type: Neat

Prep By: Ann Nebel

Status: Open

Final Volume: 1.2 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
n-Hydrocarbons- C5 to C30, C32, C34, C36, C38, C40	14737	1.2	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO220111A

Standard Name: Carbon Scan STD-Marker

Prep Date: 1/11/2022

Exp Date: 7/13/2026

Department: dropr

Vendor: ASI2

Lot Number: 071306

Balance ID:

Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

Type: Primary

Prep By: Ann Nebel

Status: Open

Final Volume: 2.4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Carbon Disulfide 55064	7477	1.2	mL	7/13/2026

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	1.2 mL



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO220114A

Standard Name: 8015 CCV-15,000ug/mL + 200 OTP

Prep Date: 1/14/2022

Exp Date: 4/30/2023

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: 8015DRO CCV MIX-15,000ug/mL +200 OTP #2 Diesel

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC832	14647	2.6	mL	4/30/2023

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	1.2 mL
DRO211101A	ug/mL	0.2 mL



Analytical RunID GCFID-HP5-B_220122A Standards Traceability Report

Standard ID: DRO220118A

Standard Name: 5,000 ug/mL RRO CCV 200 ug/mL Triacontane

Type: Secondary

Prep Date: 1/18/2022

Prep By: Ann Nebel

Exp Date: 4/6/2026

Status: New

Department: dropr

Vendor:

Final Volume: 4 mL

Lot Number:

Balance ID:

Comments: CCV for AK102 and 8015C RRO.

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC849	14747	2.8	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO220106B	ug/mL	800 µL
DRO211118A	ug/mL	400 µL

Anna

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CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

ID #: 12650

Opened: _____

o-Terphenyl

Expires: 9/30/2024

Rec'd: 4/30/2020

Energyl Laboratories Inc 1120 So. 27th Street

Billings MT 59107

COA Form
Revision 3 (3/2015)

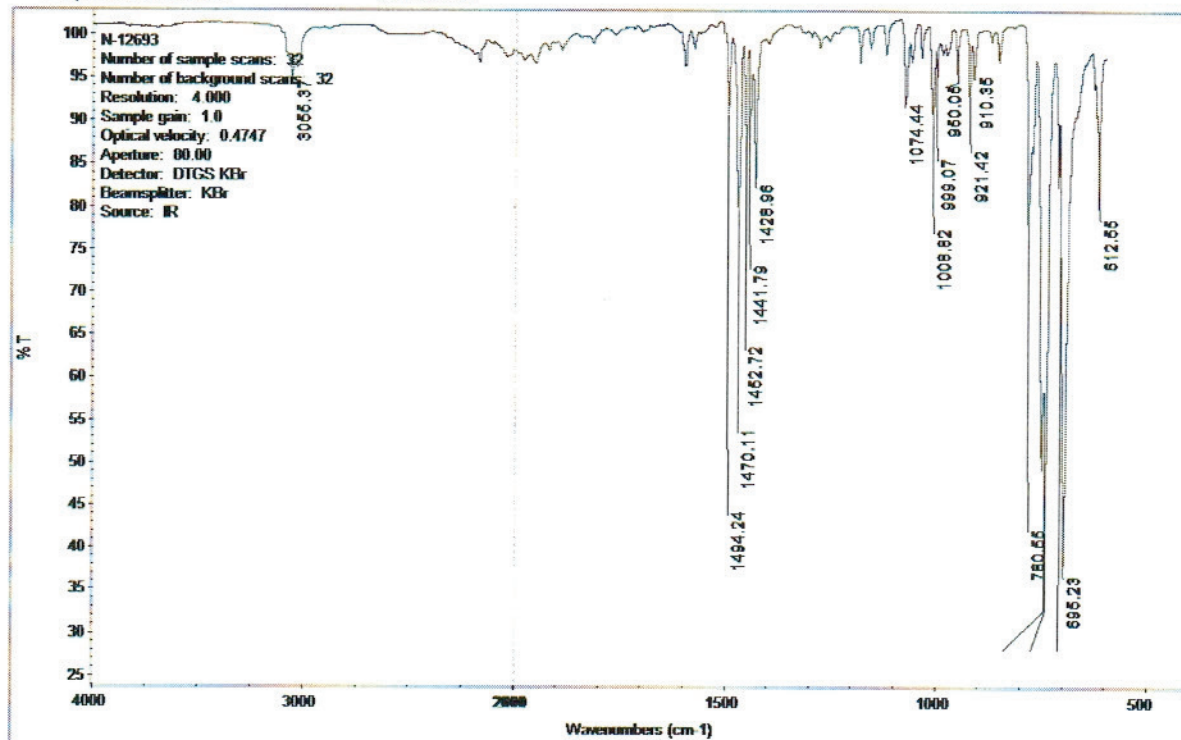
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CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

Data File: D:\msdchem\2019 DATA\0919\0923-01.D
Acq On : 23 Sep 2019 10:40
Operator :
Sample : n-12693
Misc :
ALS Vial : 95

Integration Parameters: autoint1.e
Integrator: ChemStation

DataAcq Meth: SCREEN.M
Method : D:\msdchem\2019 DATA\0919\0903-09.D\ERIN.M

Signal : TIC: 0923-01.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	11.844	1597	1606	1613	BB	32038221	432253484	100.00%	100.000%

Sum of corrected areas: 432253484

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

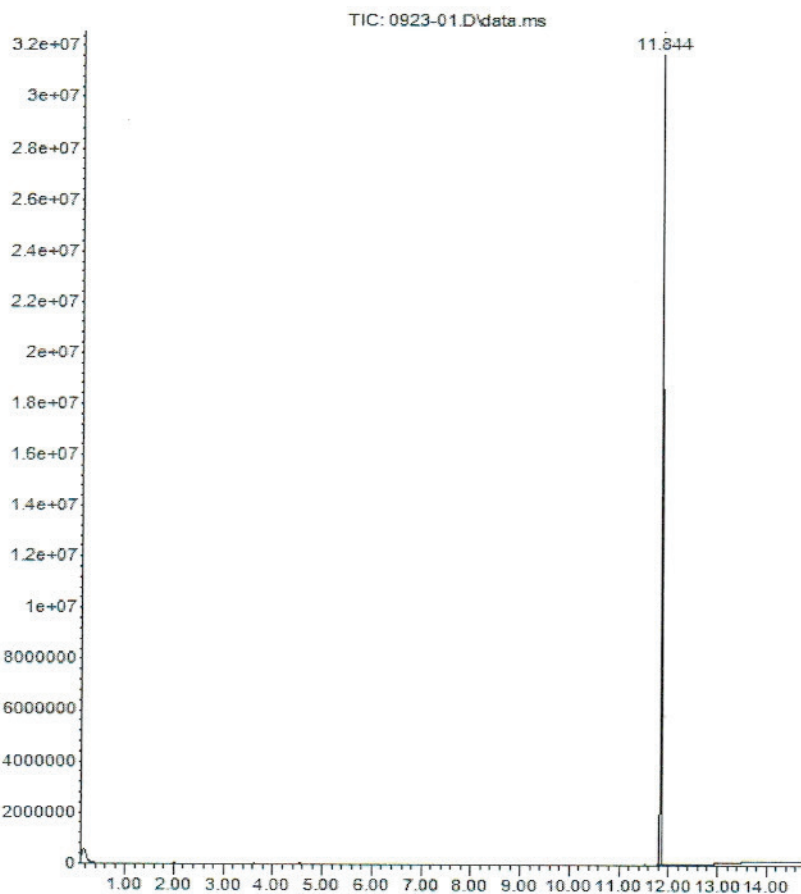
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CERTIFICATE OF ANALYSIS

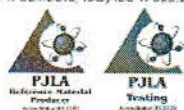
Analysis Method:

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

Abundance



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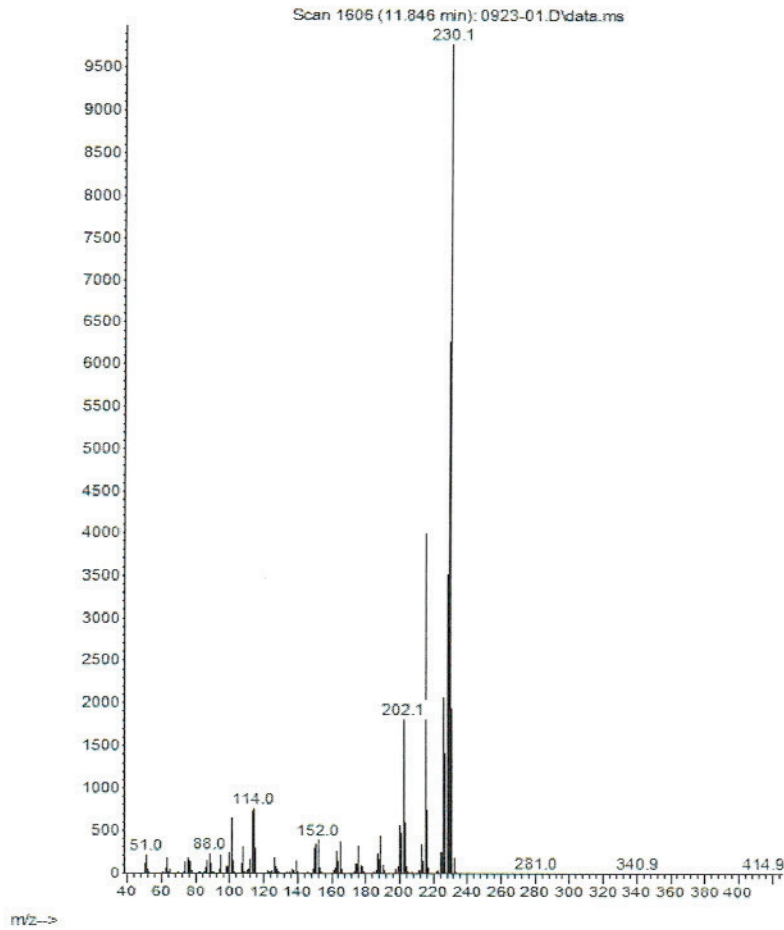


CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



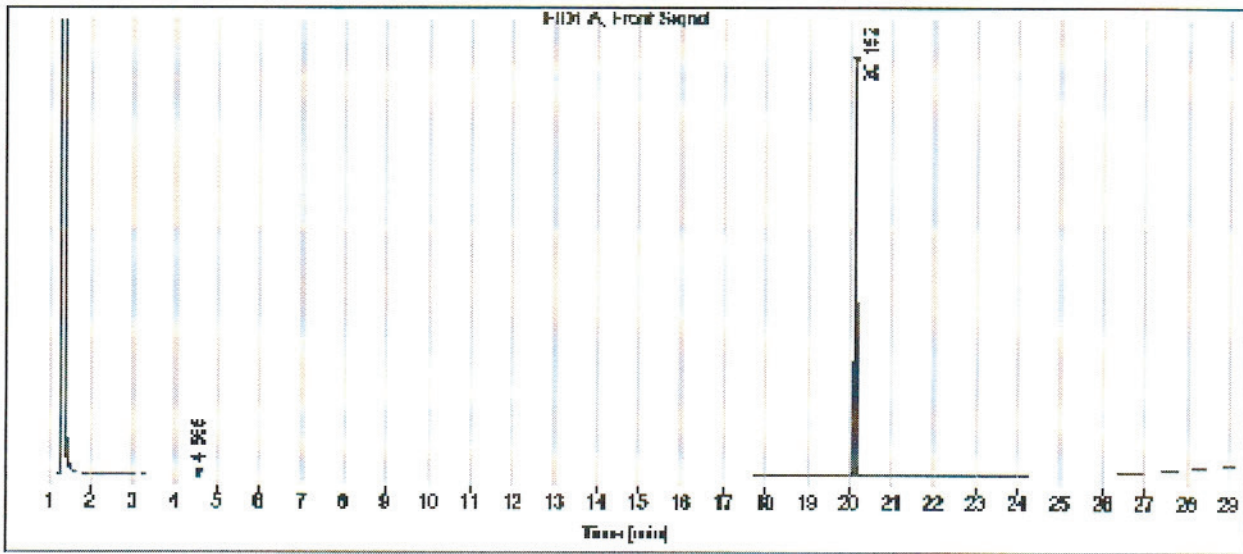
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 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

Data file: C:\CHEM3\
 Sample name: N-12893
 Instrument: GC 2
 Injection date: 8/23/2019 9:58:34 AM
 Acq. method: SCREEN.M
 Column name: HP-5

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
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20.152	BB	0.0391	1171.9556	439.4599	99.89
		Sum	1173.1963		

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



3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

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



ID #: 13736

Opened: _____

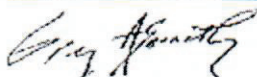
Triacontane-d62-98 atom % D

Expires: 4/6/2026

Rec'd: 4/6/2021

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

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



Greg Abernathy, Supervisor
 Quality Control
 Miamisburg, Ohio US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0176667

Description : Residual Range Calibration Standard (RCS)

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

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

Expiration Date : October 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Motor Oil SAE30 & SAE40 Blend (Pennzoil) CAS # 64742-65-0.F Purity ----%	50,102.0 µg/mL	+/- 293.3582	µg/mL	Gravimetric
	(Lot A0126386)		+/- 1,492.1008	µg/mL	Unstressed
			+/- 1,591.3244	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

ID #: 14531

Opened: _____

Residual Range Calibration Standard

Expires: 10/31/2028

Rec'd: 11/18/2021

Energv Laboratories Inc 1120 So. 27th Street

Billings MT 59107

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

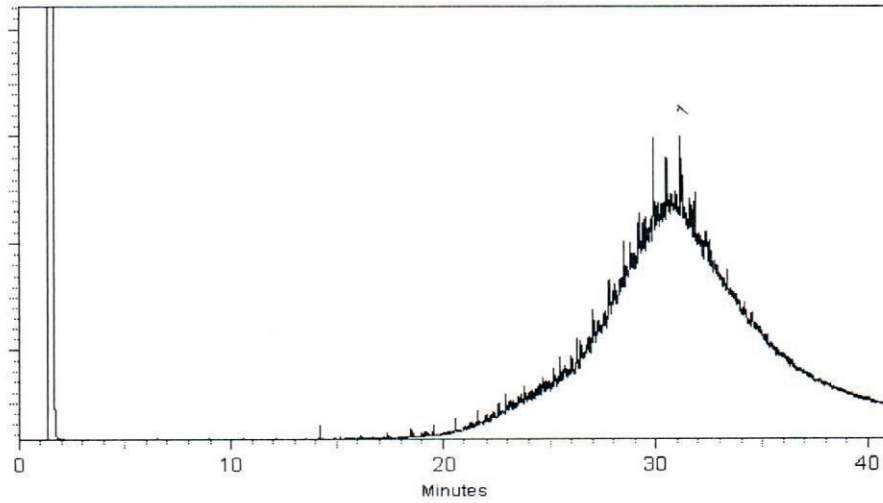
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Sam Moodler

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021

Balance: 1128360905

Alexis Shelow

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Certificate of Analysis

Diesel Fuel No. 2

*Certified
Reference
Material*

Description

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

ID #: 14623

Opened: _____

Diesel Fuel No. 2

Expires: 4/30/2023

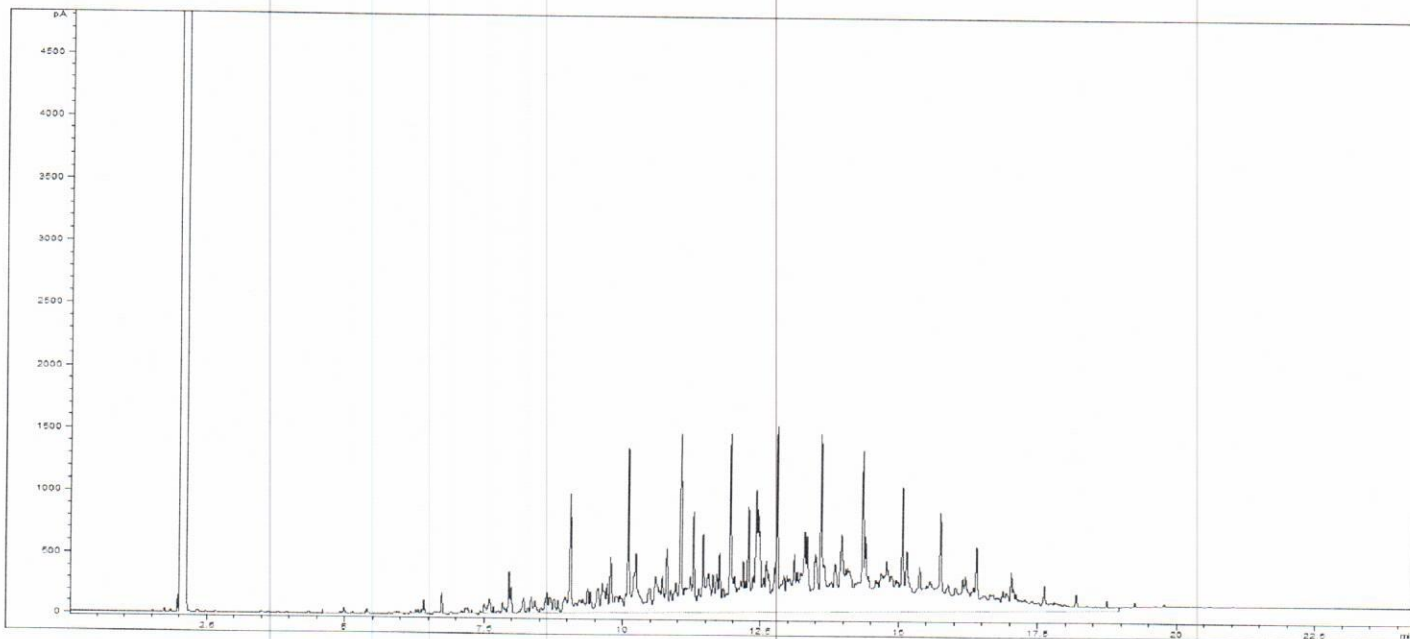
Rec'd: 12/14/2021

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

Certified Values

Analyte	Certified Value ^{1,4}	Units	Raw Material Purity,%	Raw Material Lot	CAS
NO.2 FUEL OIL	50001 ± 2770	µg/mL	100.0	LA80505	68476-34-6

Informational Values



Additional Information:

Analytical Method Parameters:

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)

Carrier Gas: H₂, Flow: 4.0 mL/min

Inlet Temperature: 250 °C, Injection Volume: 1.0 µL

Injection Mode: Split, Split Ratio: 10: 1

Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)

Detector: FID

Detector Temperature: 300 °C



SIGMA-ALDRICH®

2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

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

1 Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a t-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

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

k: Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

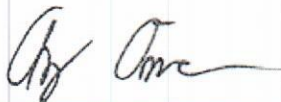
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

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

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH ISO/IEC 17025:2017 (ANAB Cert AT-1467) and ISO 17034:2016 (ANAB Cert AR-1470).



Andy Ommen - QC Manager

Certification Date April 30, 2020
Version 0-4302020



Mark Pooler - QA Supervisor

