

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

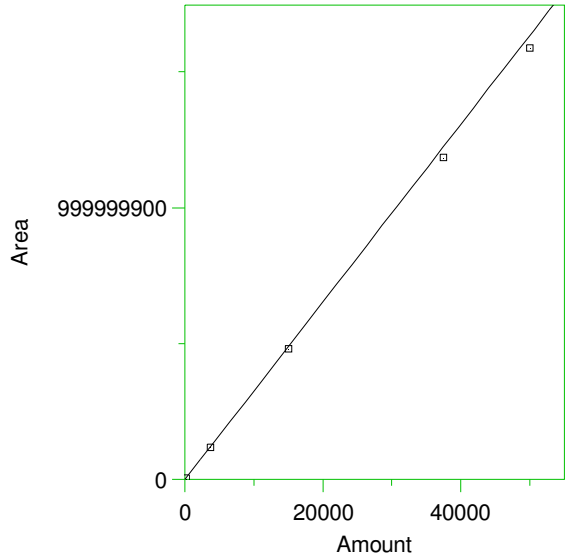
No default component

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

No calibration update report

All levels are normal data points.

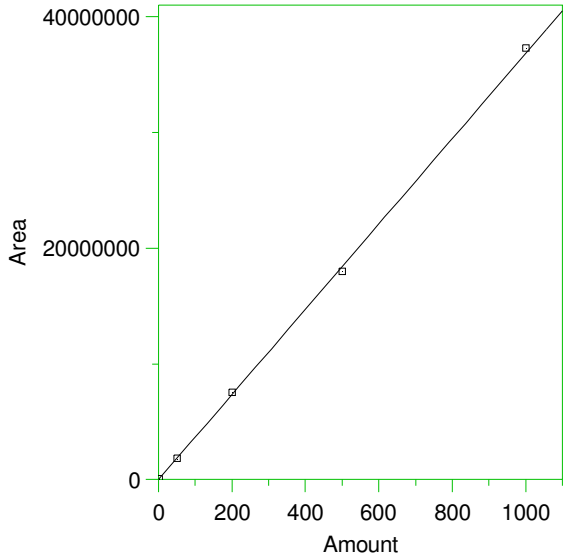
1 DRO Range Start



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

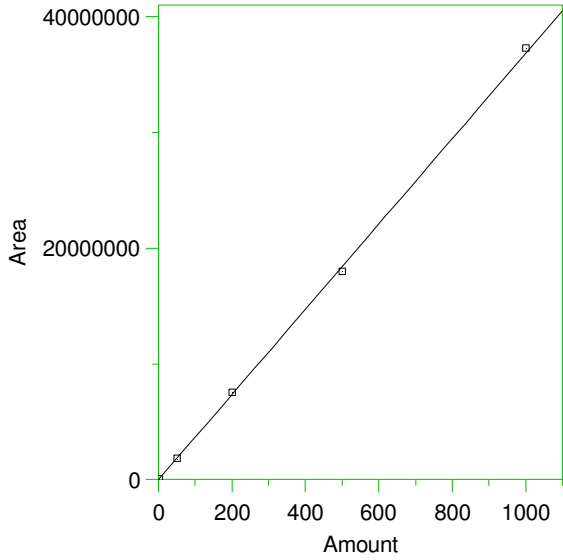
2 *o-Terphenyl



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
	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

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 + 90 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

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
	b\0111HP5.25f	DCM-Baseline Check-V25	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	b\0111HP5.26f	Marker_0111HP526r, DRO :0111HP5 , DRO220111A	G:\Org\HP5\Methods\CSC210212.met	1	1	1	1	0
	b\0111HP5.27f	DCM-Baseline Check-V27	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0
	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
	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
	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
	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
	b\0111HP5.32f	DCM-Baseline Check-V32	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	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
	b\0111HP5.51f	DCM-Baseline Check-V51	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	b\0111HP5.52f	DCM-Baseline Check-V52	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	b\0111HP5.53f	Marker_0111HP553r, DRO :0111HP5 , DRO220111A	G:\Org\HP5\Methods\CSC210212.met	1	1	1	1	0
	b\0111HP5.54f	DCM-Baseline Check-V54	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	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
	b\0111HP5.56f	DCM-Baseline Check-V56	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	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
	b\0111HP5.58f	DCM-Baseline Check-V58	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	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
	b\0111HP5.60f	DCM-Baseline Check-V60	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	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
	b\0111HP5.62f	DCM-Baseline Check-V62	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	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
	b\0111HP5.64f	DCM-Baseline Check-V64	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	b\0111HP5.65f	DCM-Baseline Check-V65	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	b\0111HP5.66f	DCM-Baseline Check-V66	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
	b\0111HP5.68f	DCM-Baseline Check-V68	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
	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

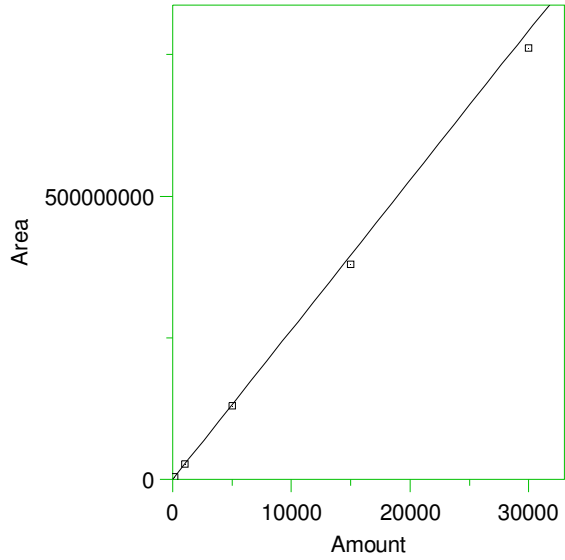
No default component

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

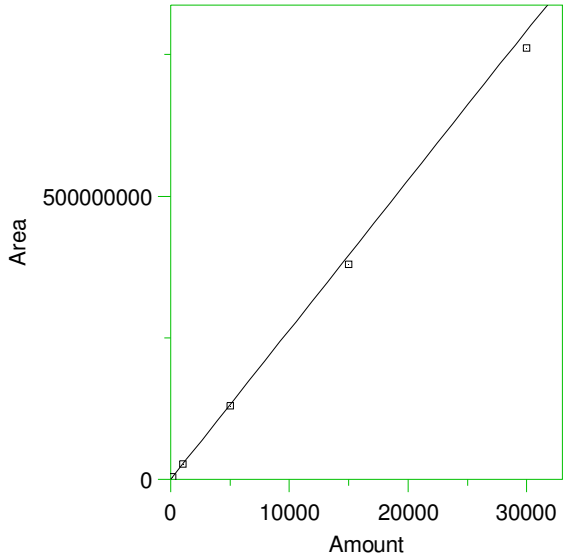
Single peak quantification by area

$Y = 26424.55 X + 0$

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

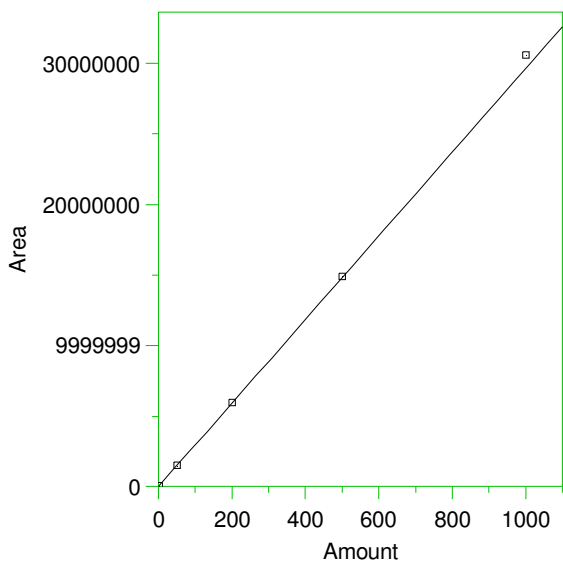
2 #C20



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%

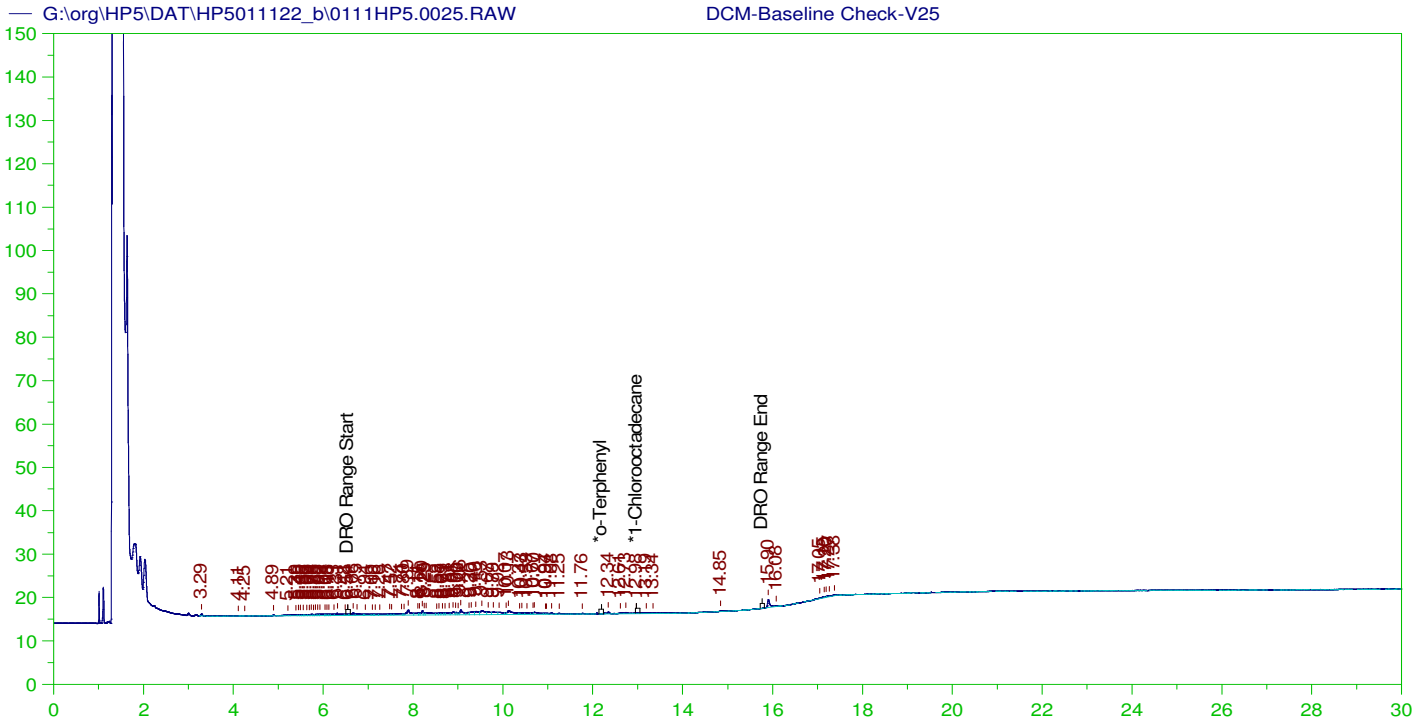
Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	150	4177025	27846.83	5.382	Manual	1/14/2022 8:06:03 AM
2	1000	2.73111E+07	27311.1	3.355	Manual	1/14/2022 8:06:05 AM
3	5000	1.313247E+08	26264.94	-0.604	Manual	1/14/2022 8:06:06 AM
4	15000	3.796282E+08	25308.55	-4.223	Manual	1/14/2022 8:06:11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



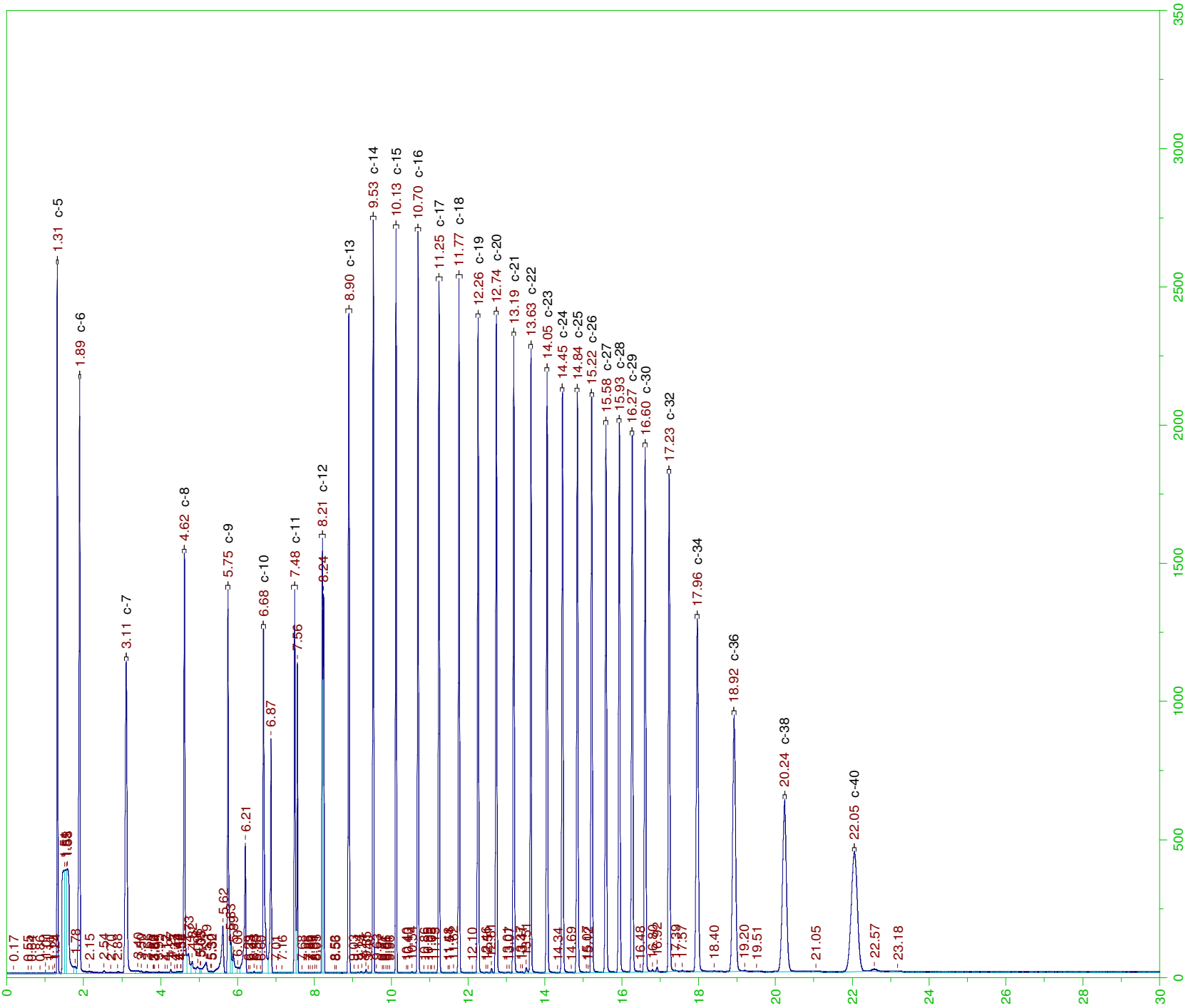
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

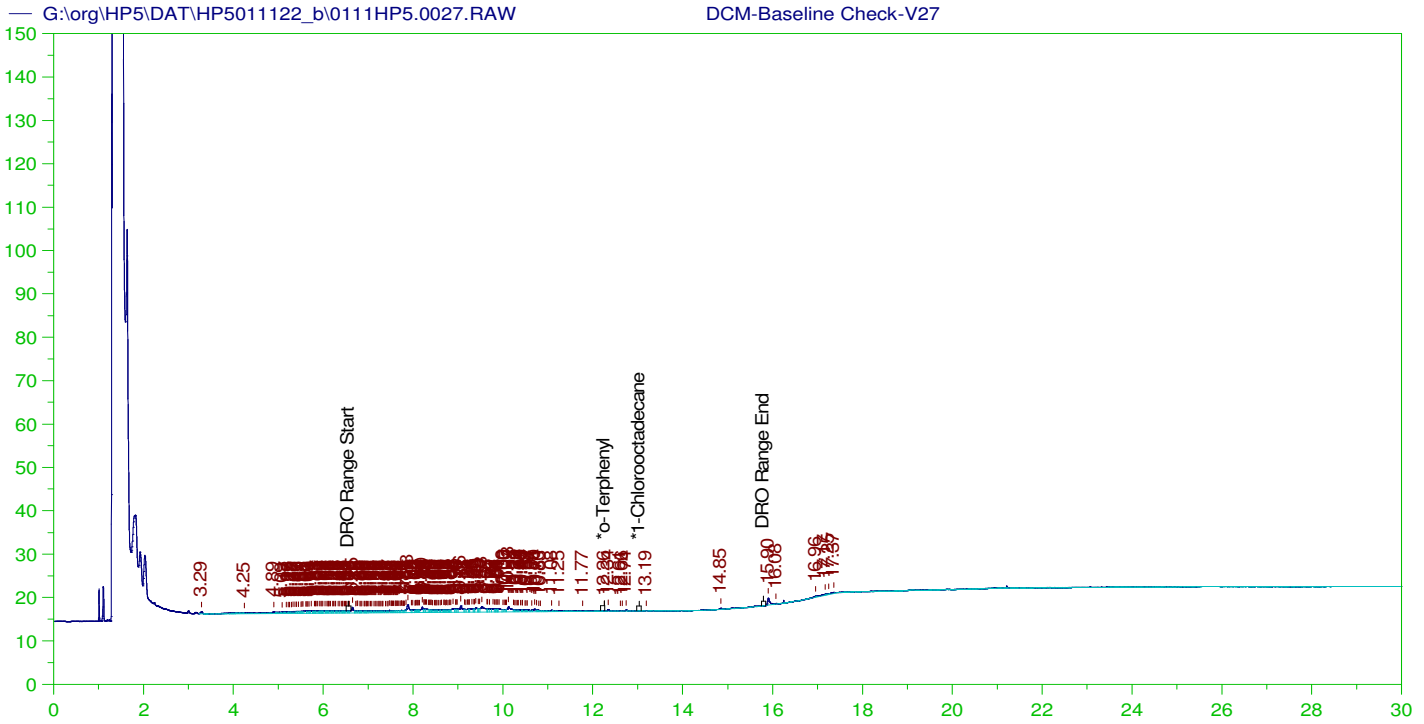
Sample Name: DCM-Baseline Check-V25
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0025.RAW
 Date & Time Acquired: 1/12/2022 1:29:46 AM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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





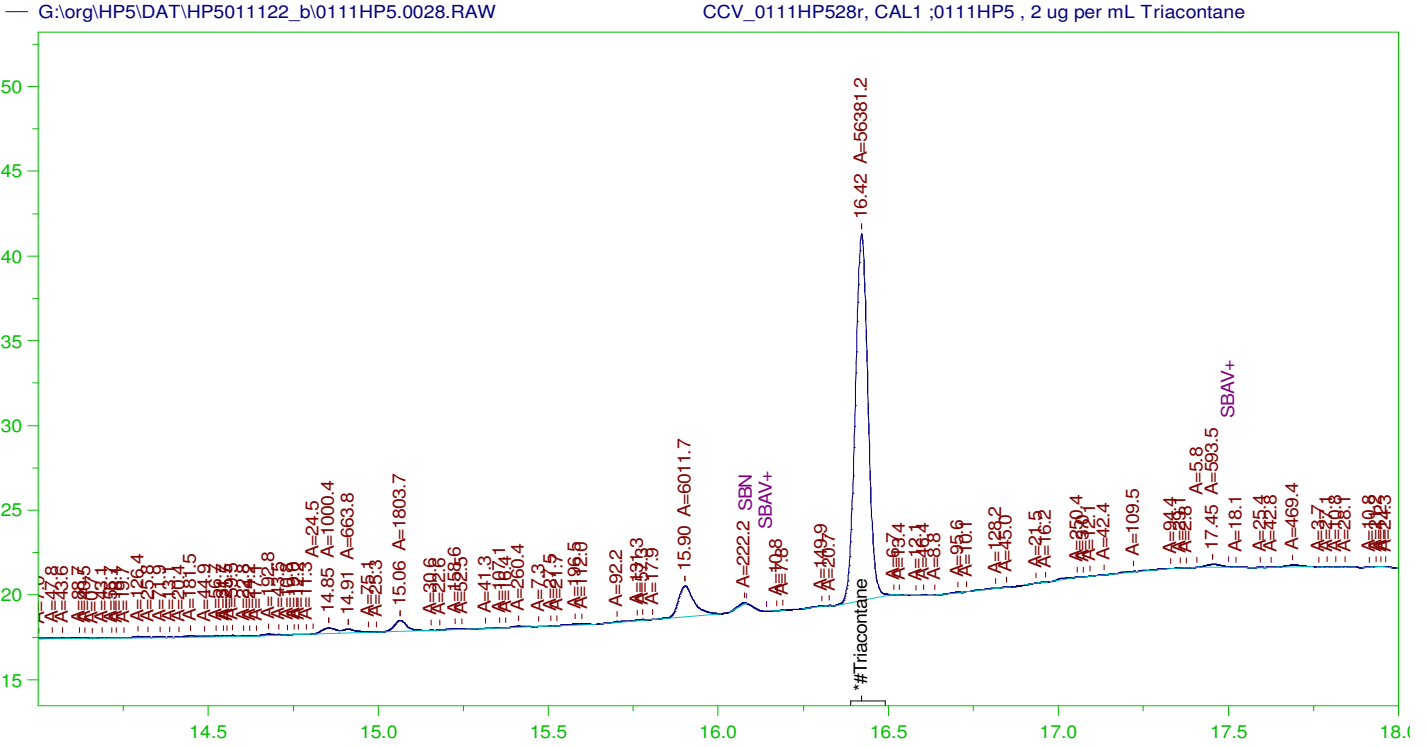
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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



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

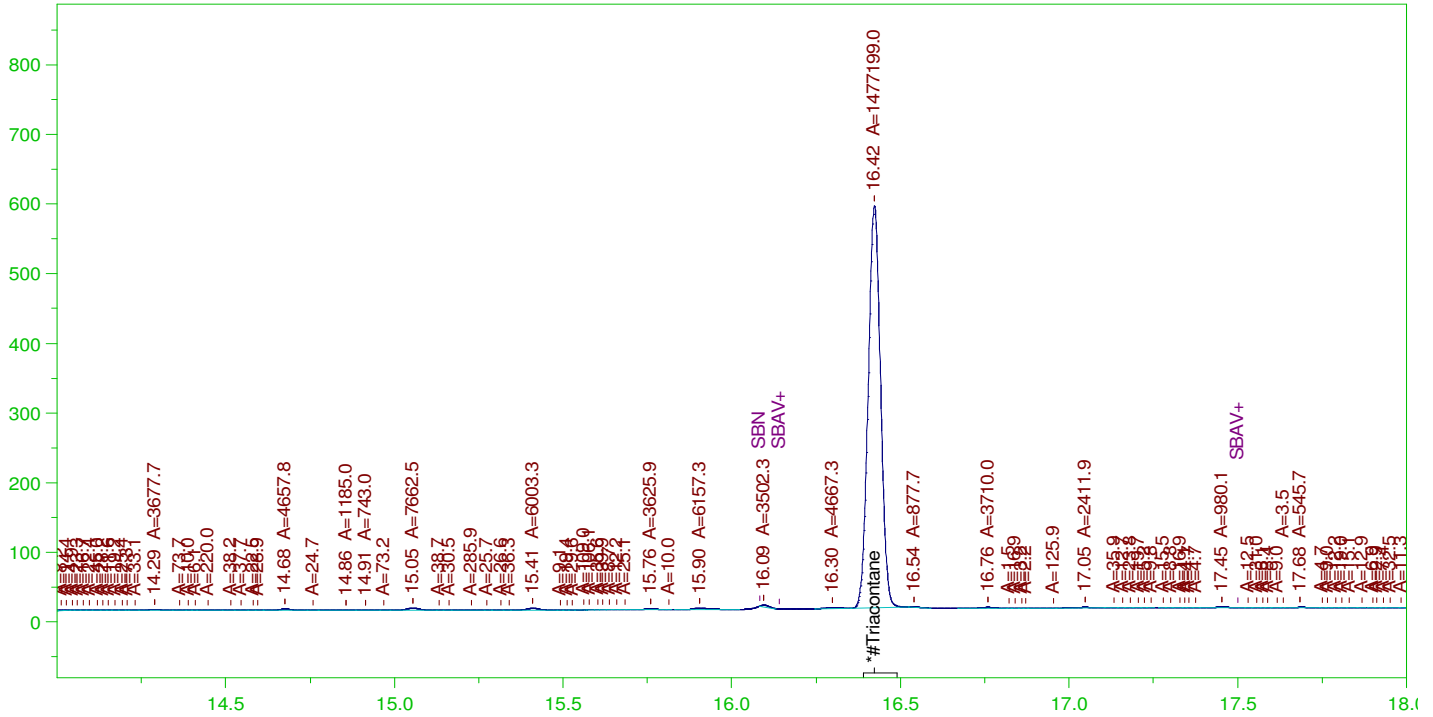
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0028.RAW

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

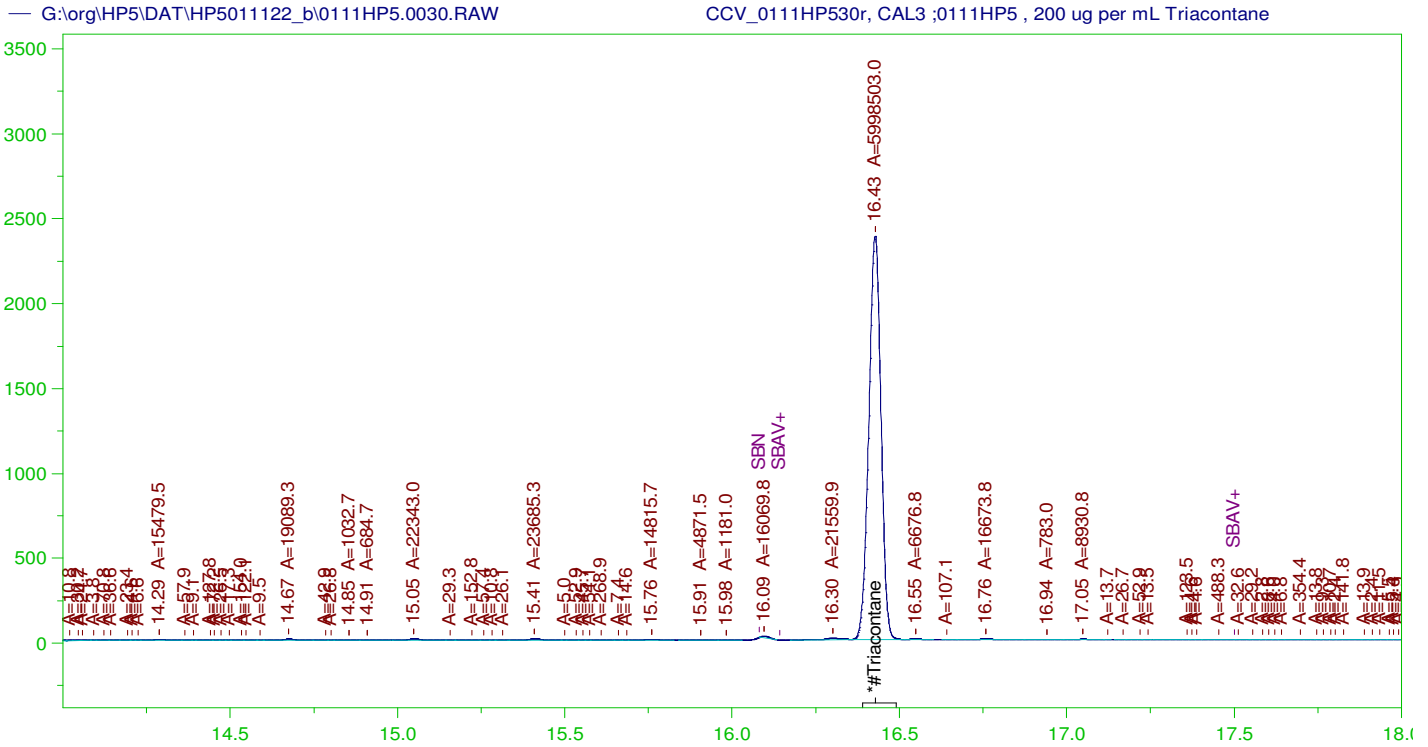
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.423	500.	49.845	9.97	-

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

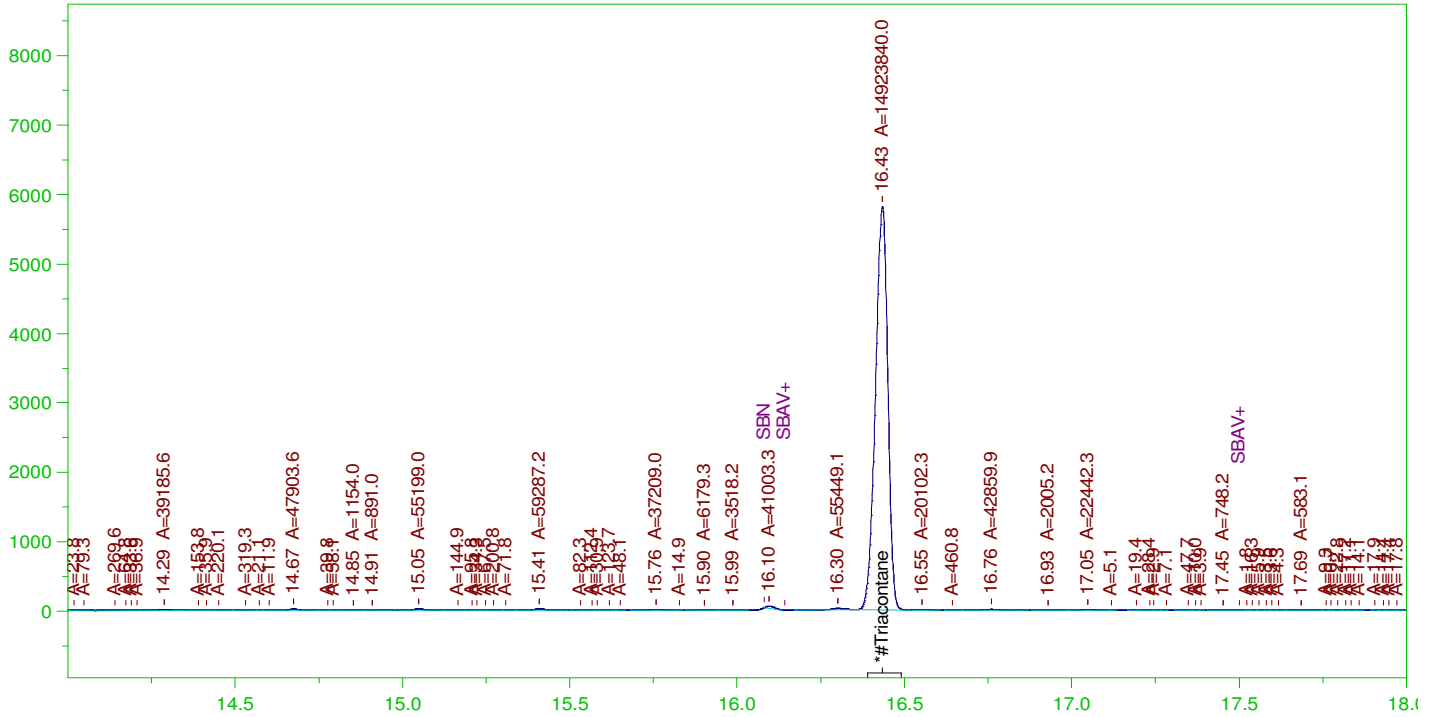
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0030.RAW

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

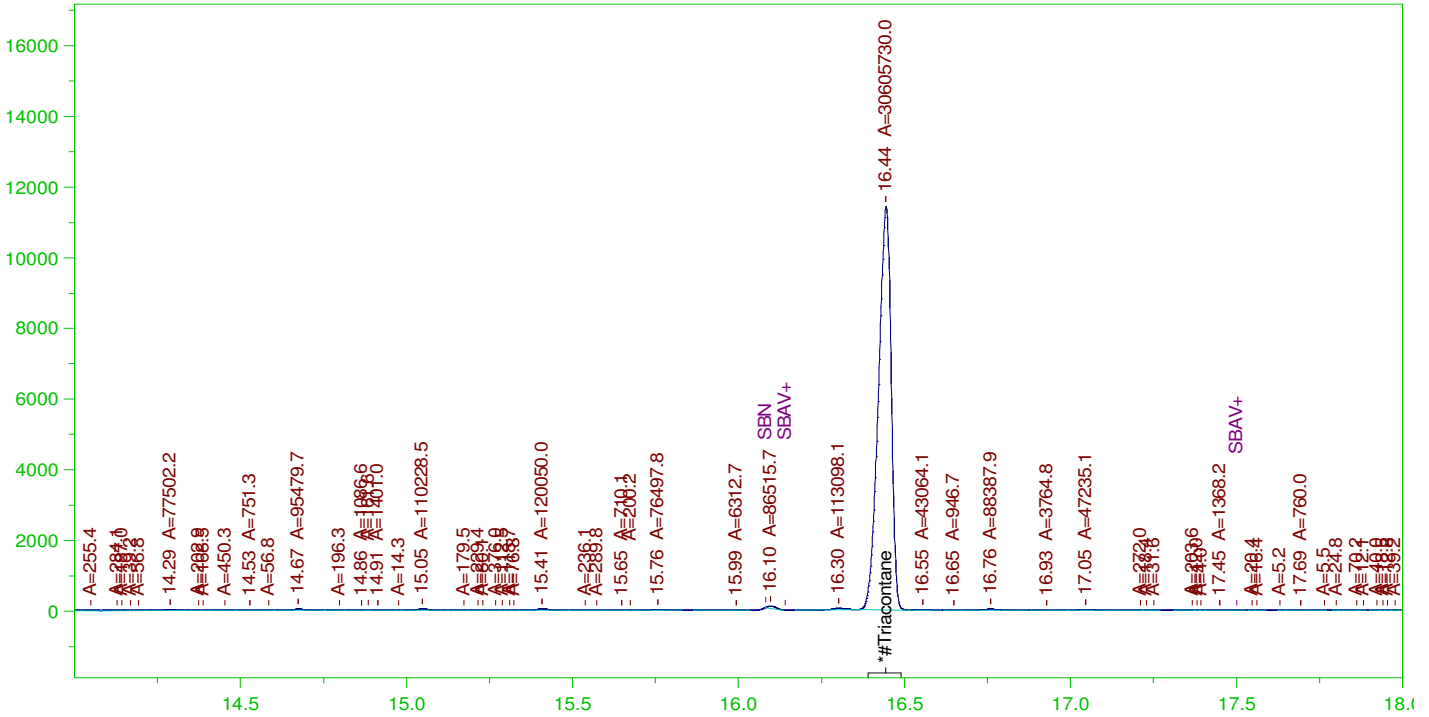
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5011122_b\0111HP5.0031.RAW

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

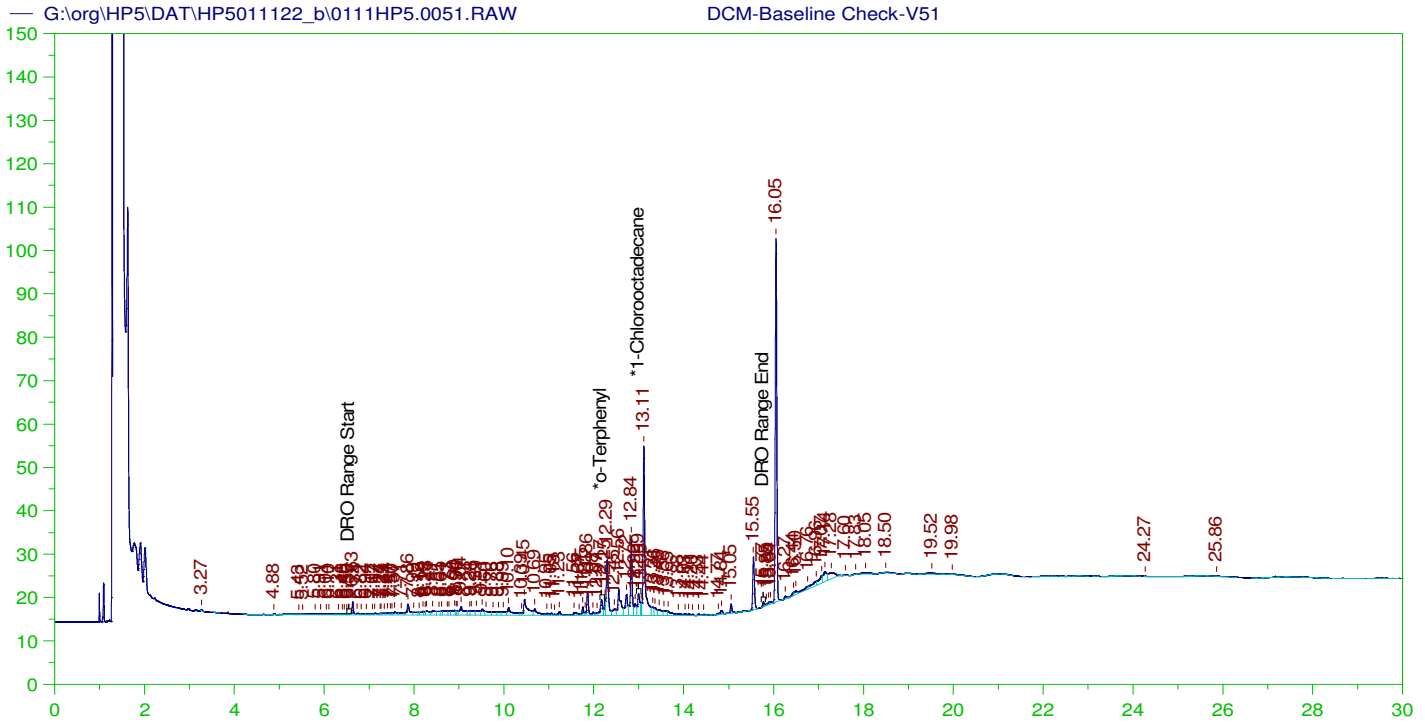
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.444	500.	1032.718	206.54

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



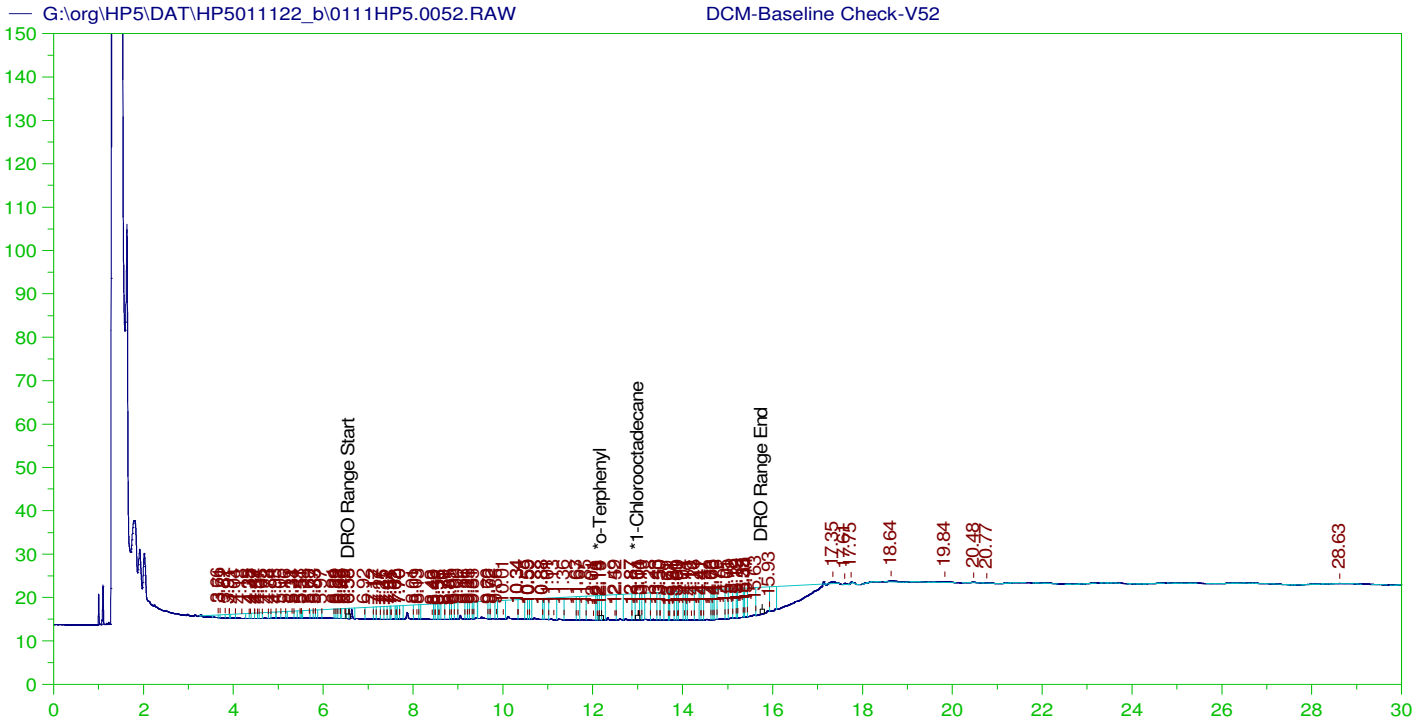
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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



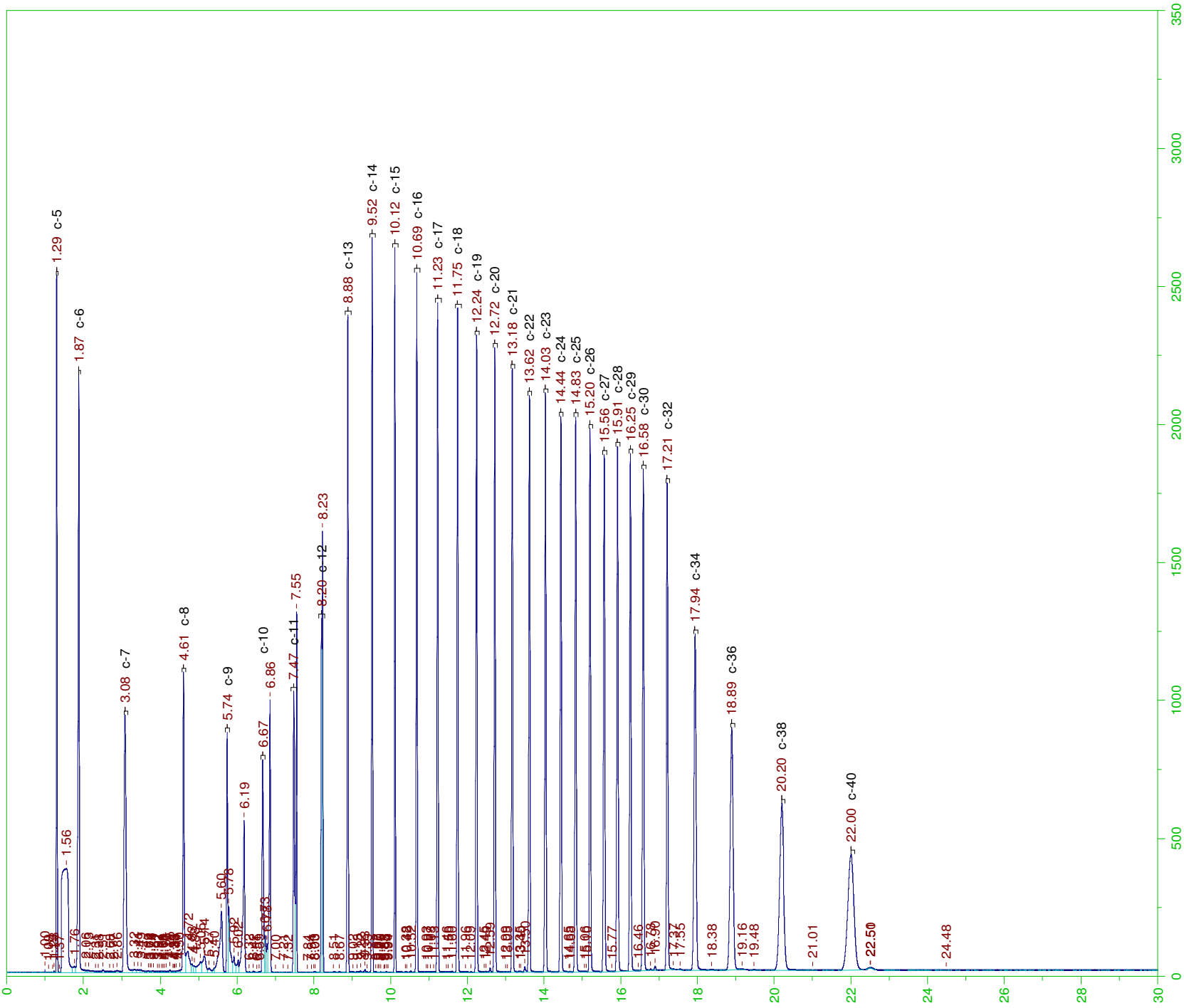
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

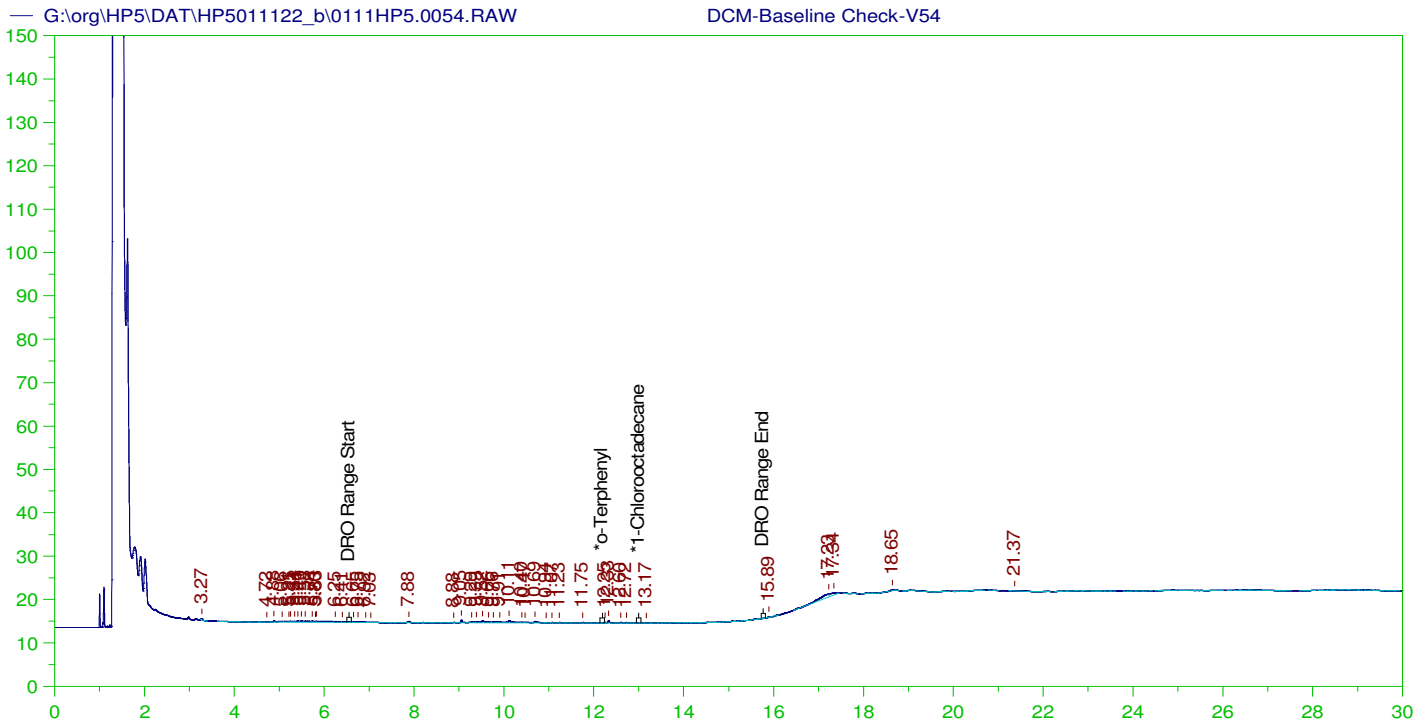
Sample Name: DCM-Baseline Check-V52
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0052.RAW
 Date & Time Acquired: 1/13/2022 12:58:31 PM
 Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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





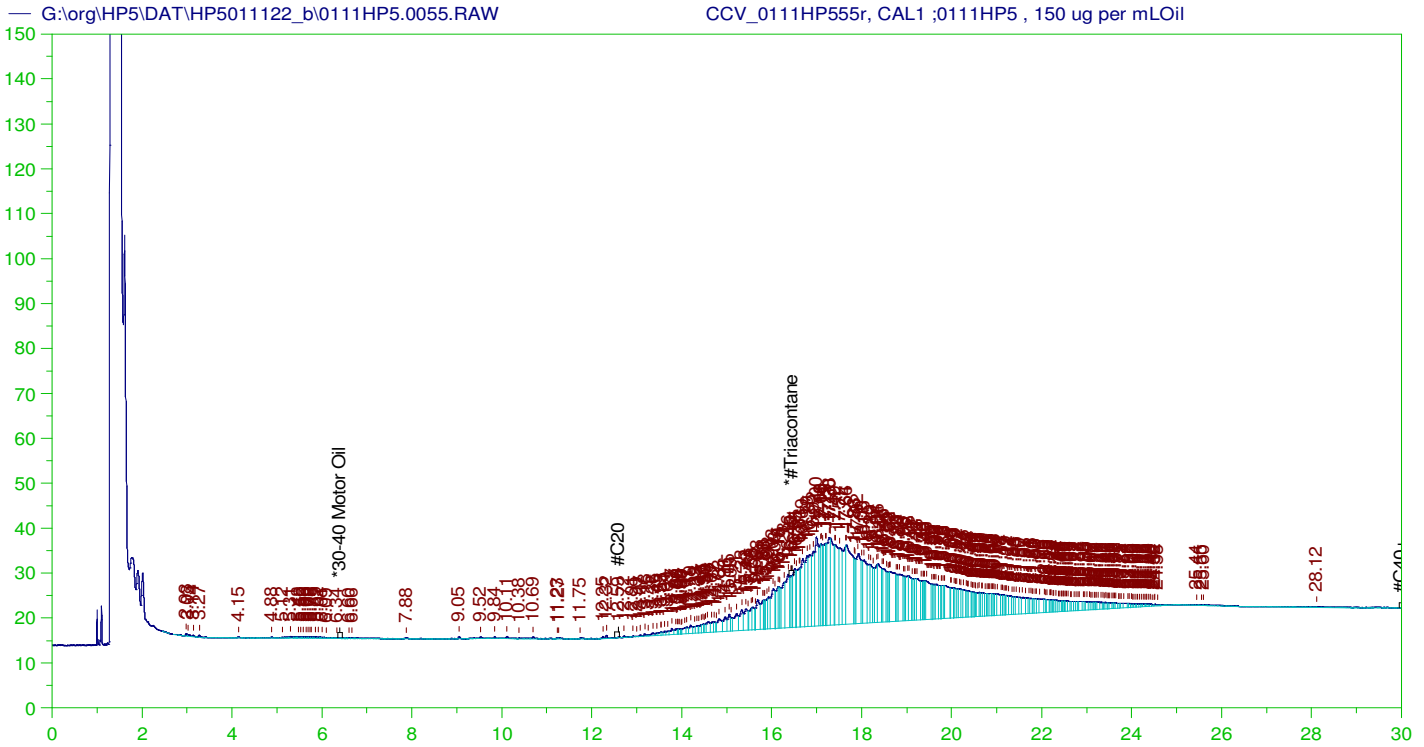
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V54
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0054.RAW
 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

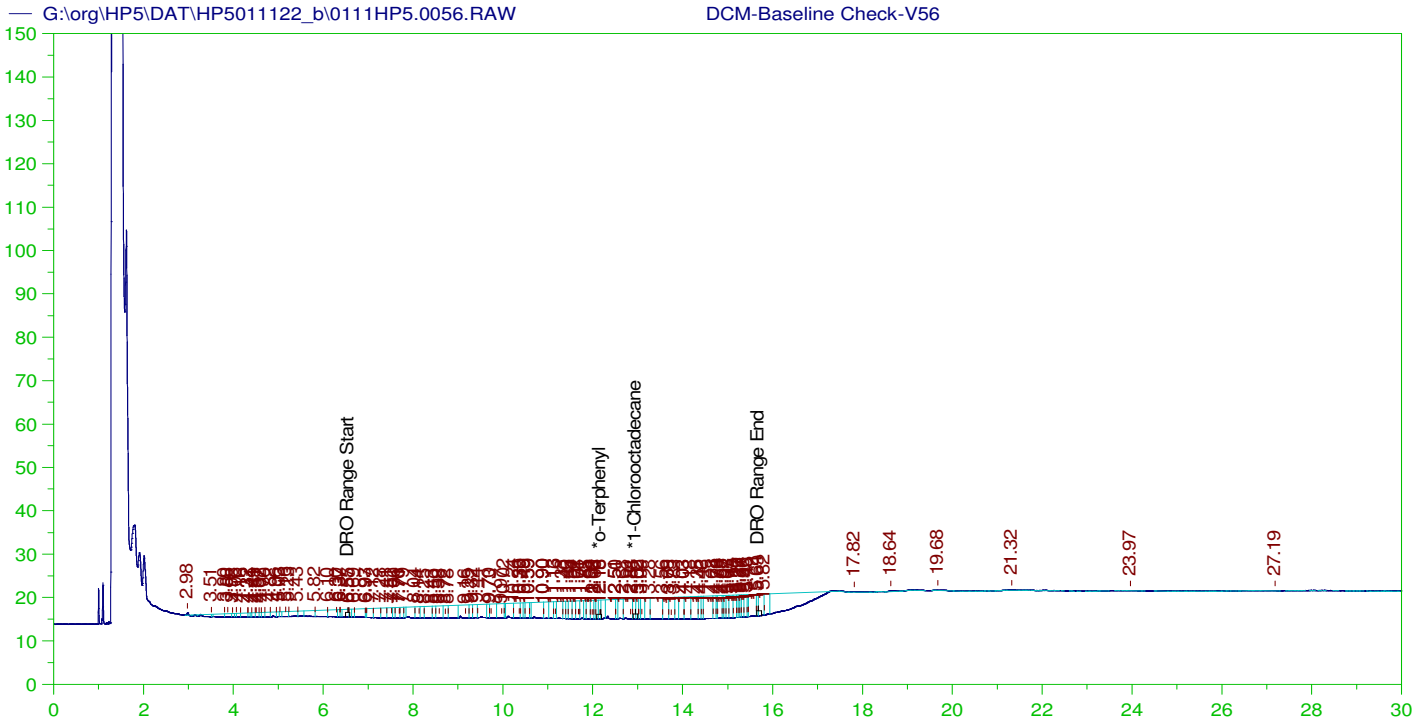
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.447	500.	.47	.09	-

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

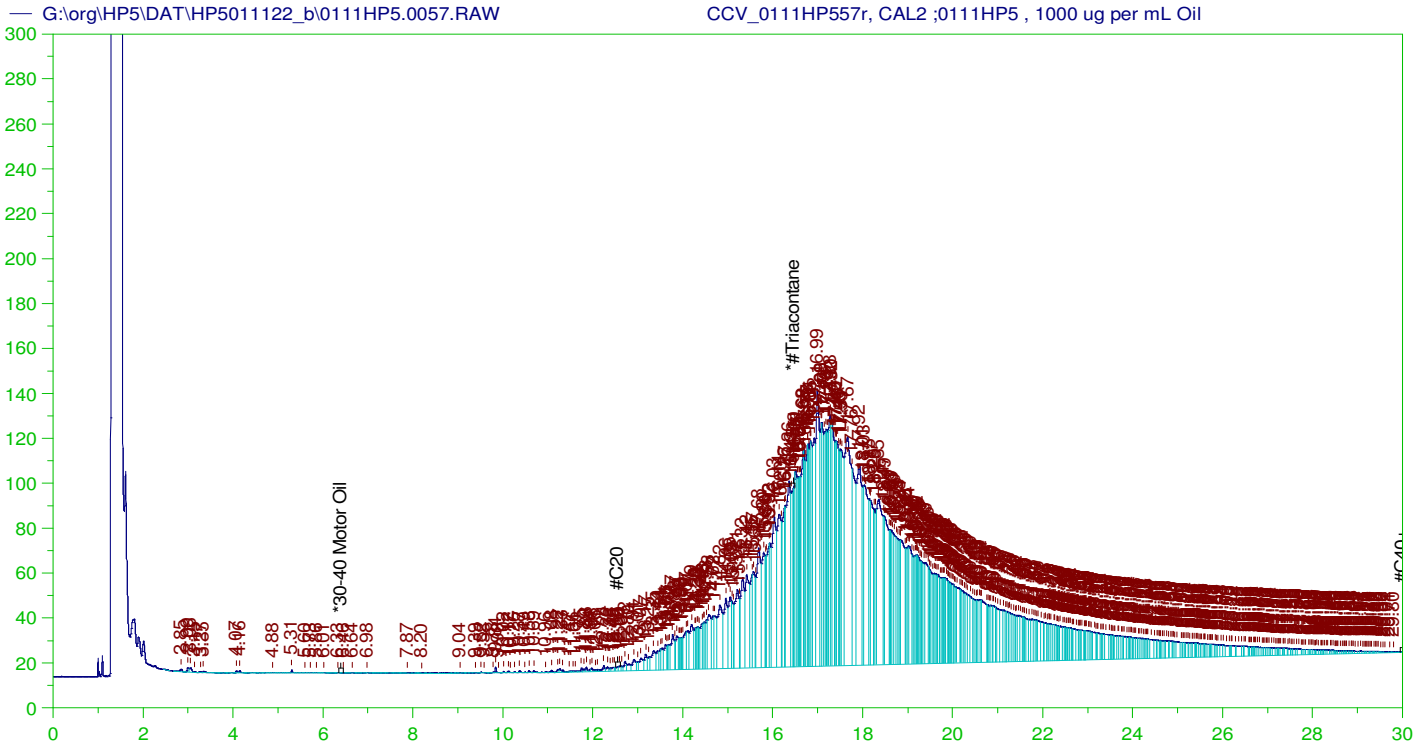
Sample Name: DCM-Baseline Check-V56
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0056.RAW
 Date & Time Acquired: 1/13/2022 3:48:53 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

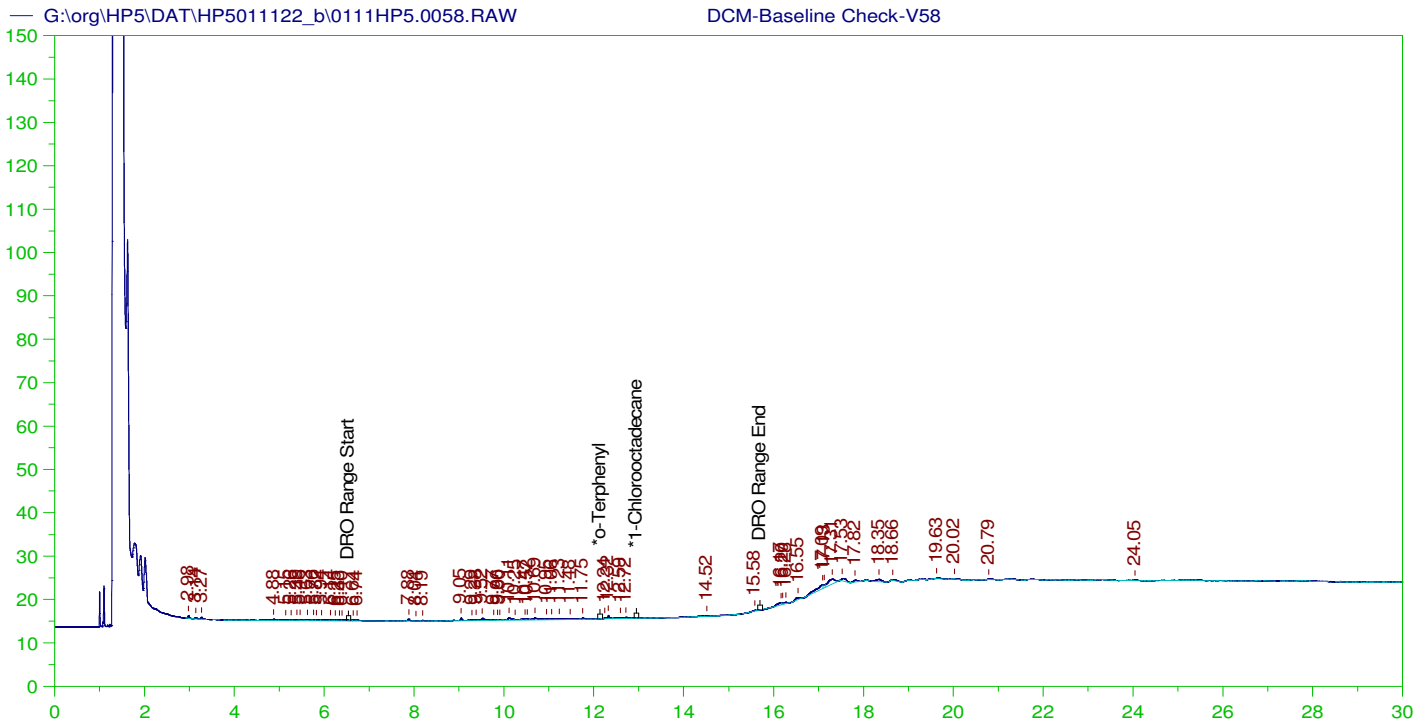
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.454	500.	3.058	.61

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

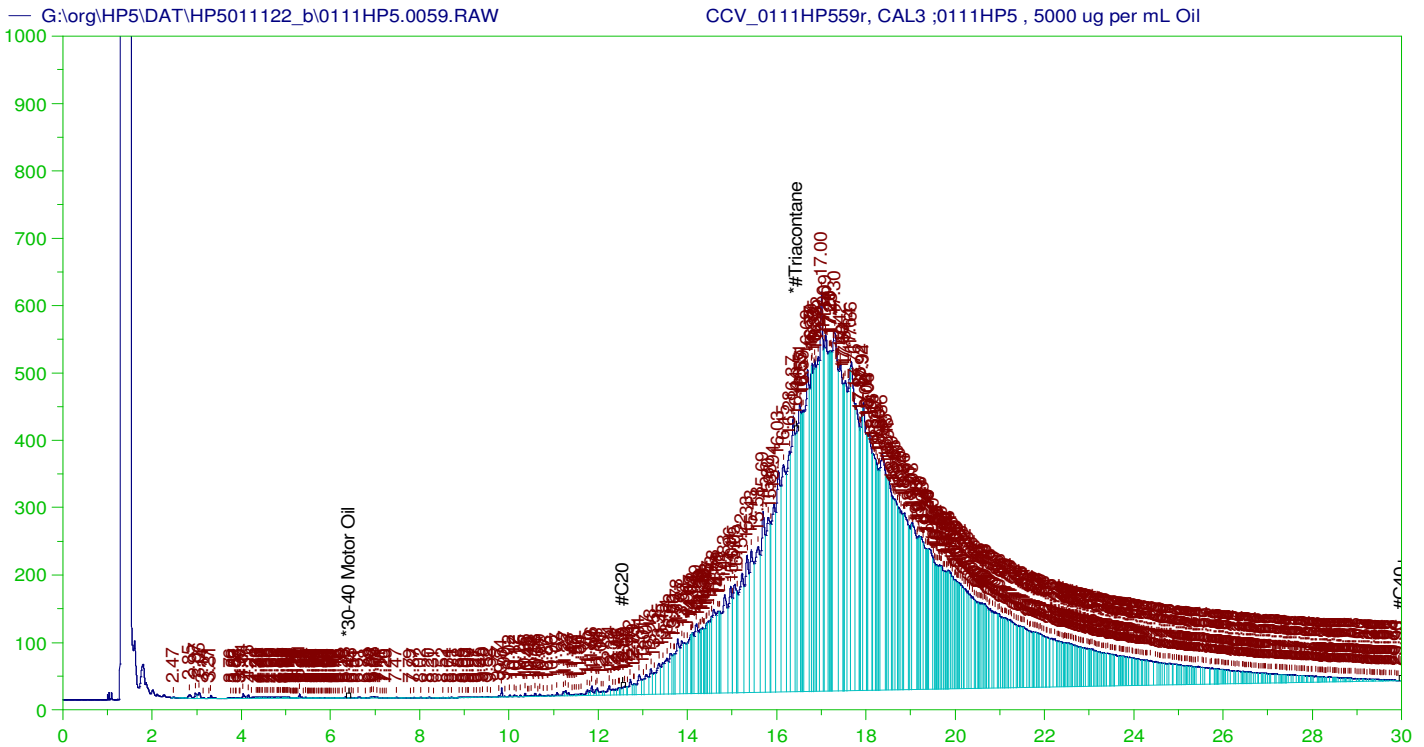
Sample Name: DCM-Baseline Check-V58
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0058.RAW
 Date & Time Acquired: 1/13/2022 5:14:45 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

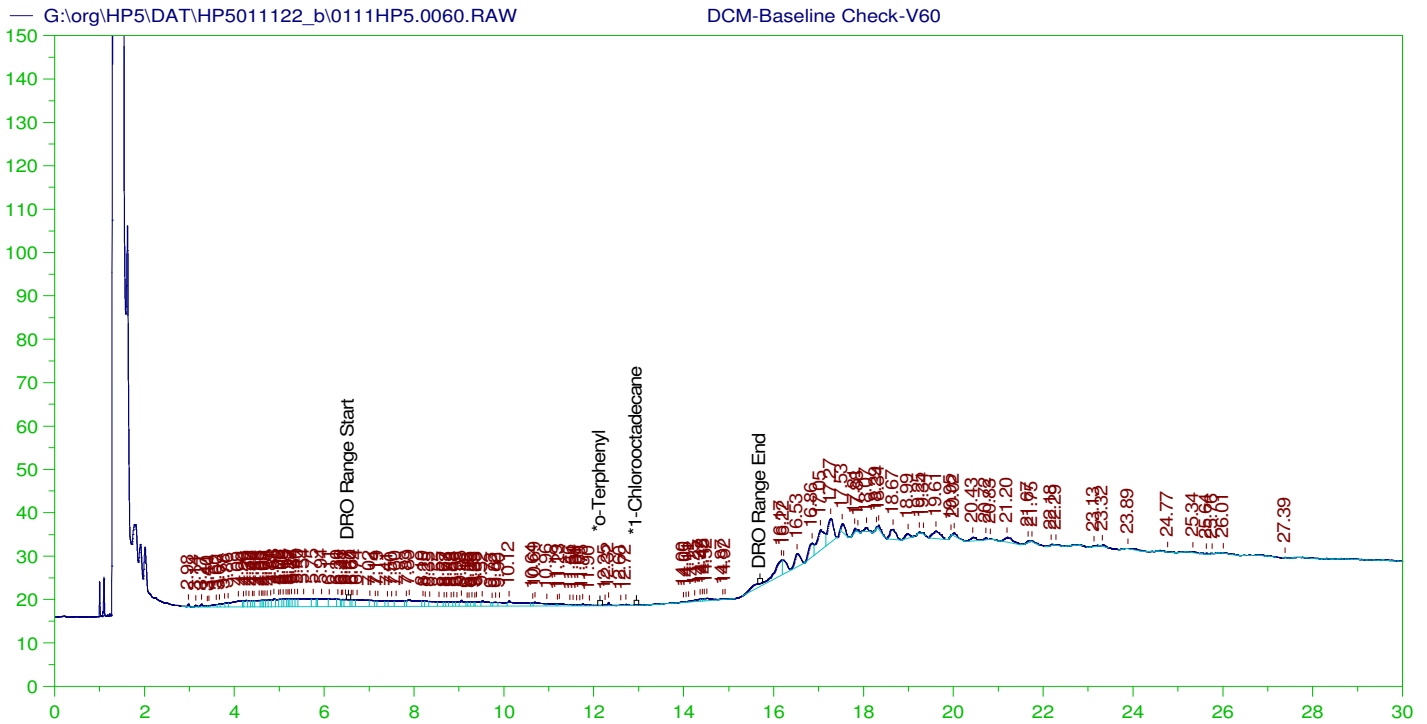
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.442	500.	33.09	6.62	-

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

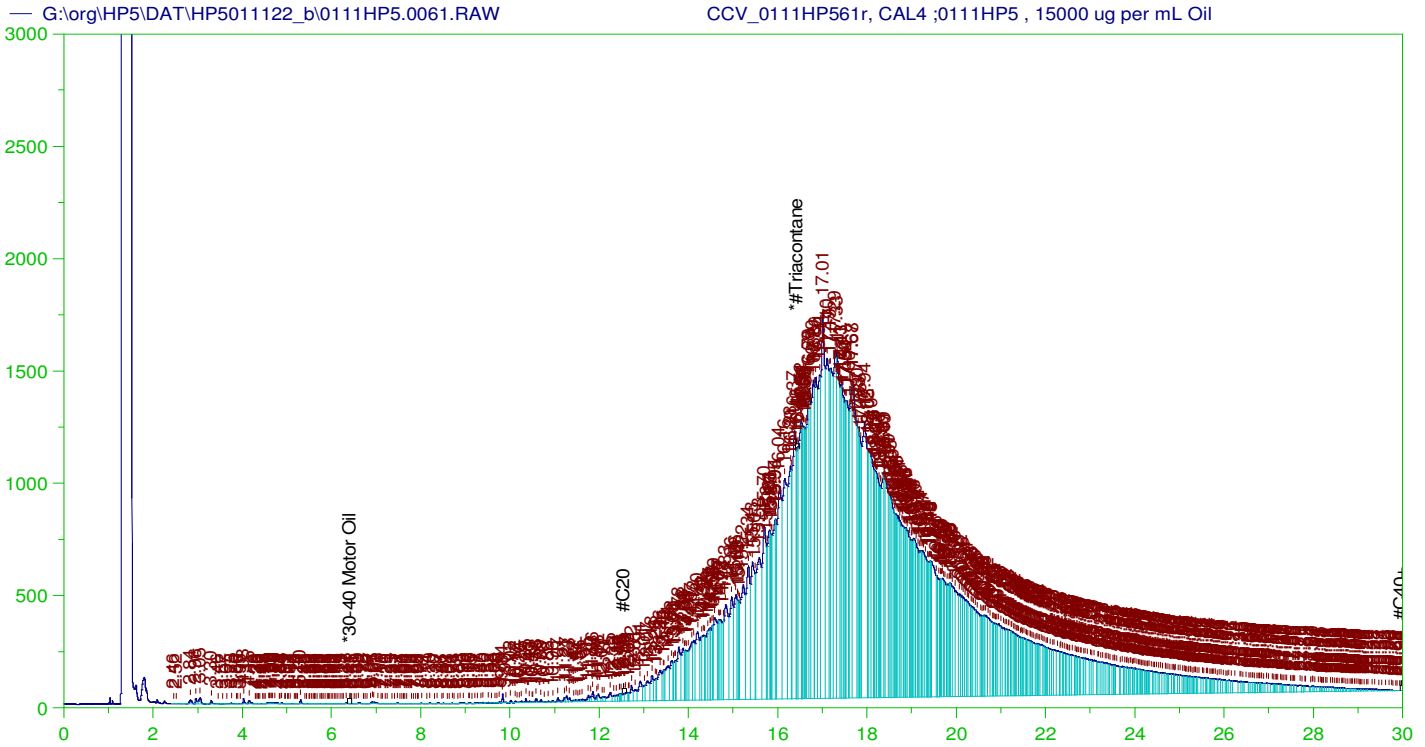
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 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0060.RAW
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 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 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	29.911	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

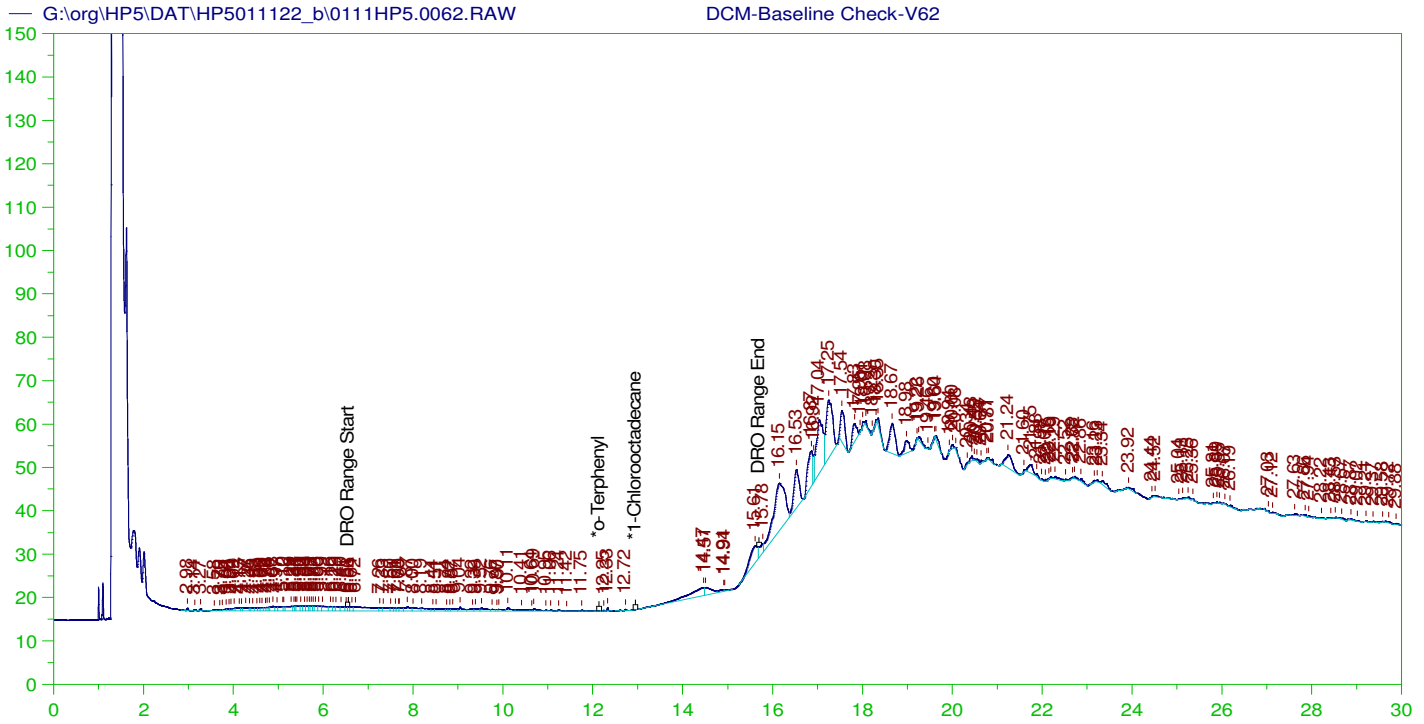
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.429	500.	33.728	6.75	-

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

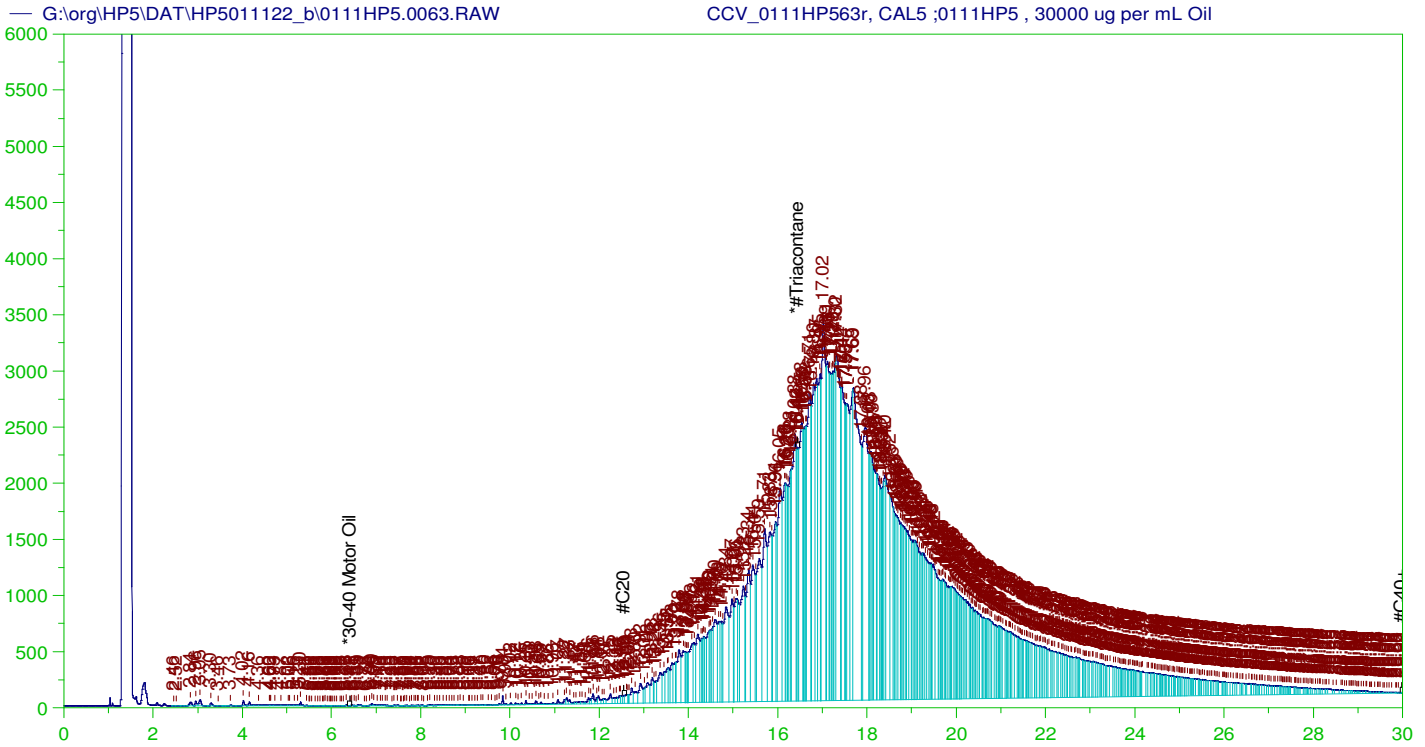
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 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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

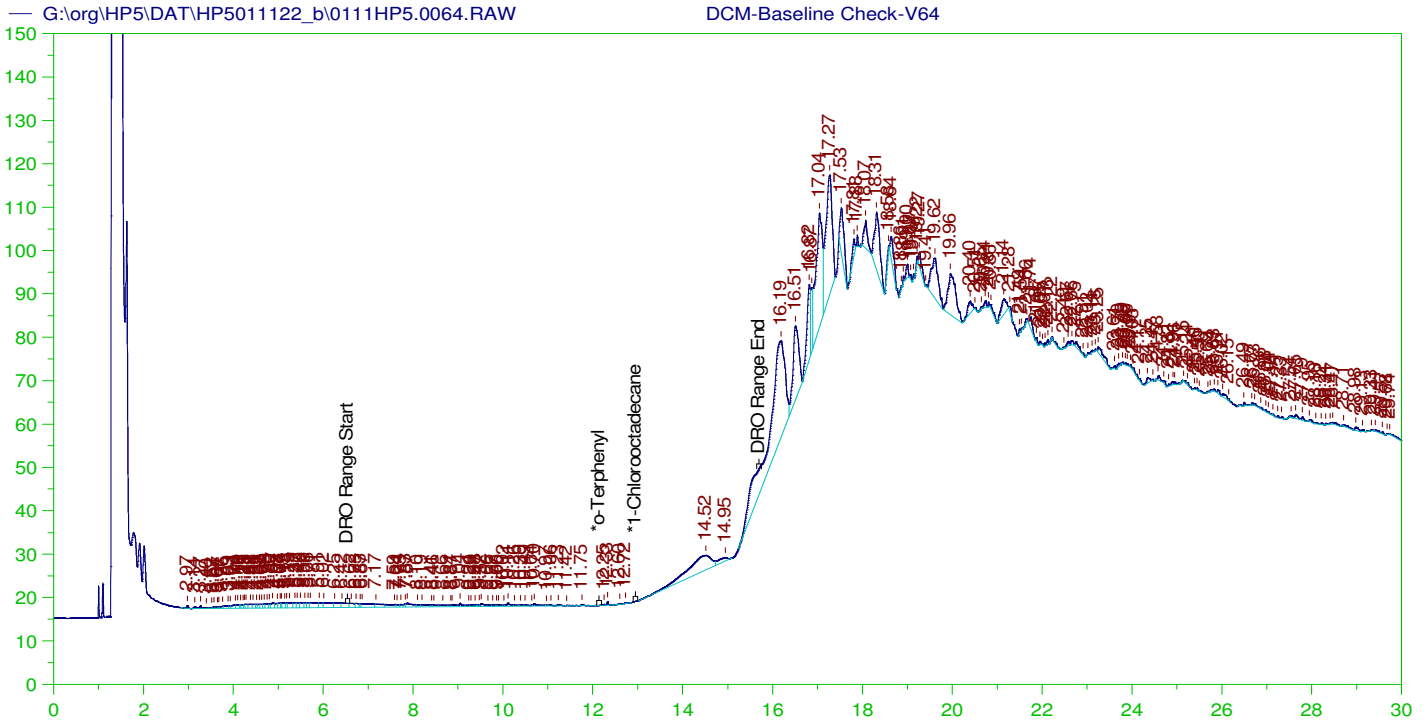
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.44	500.	102.625	20.52	-

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

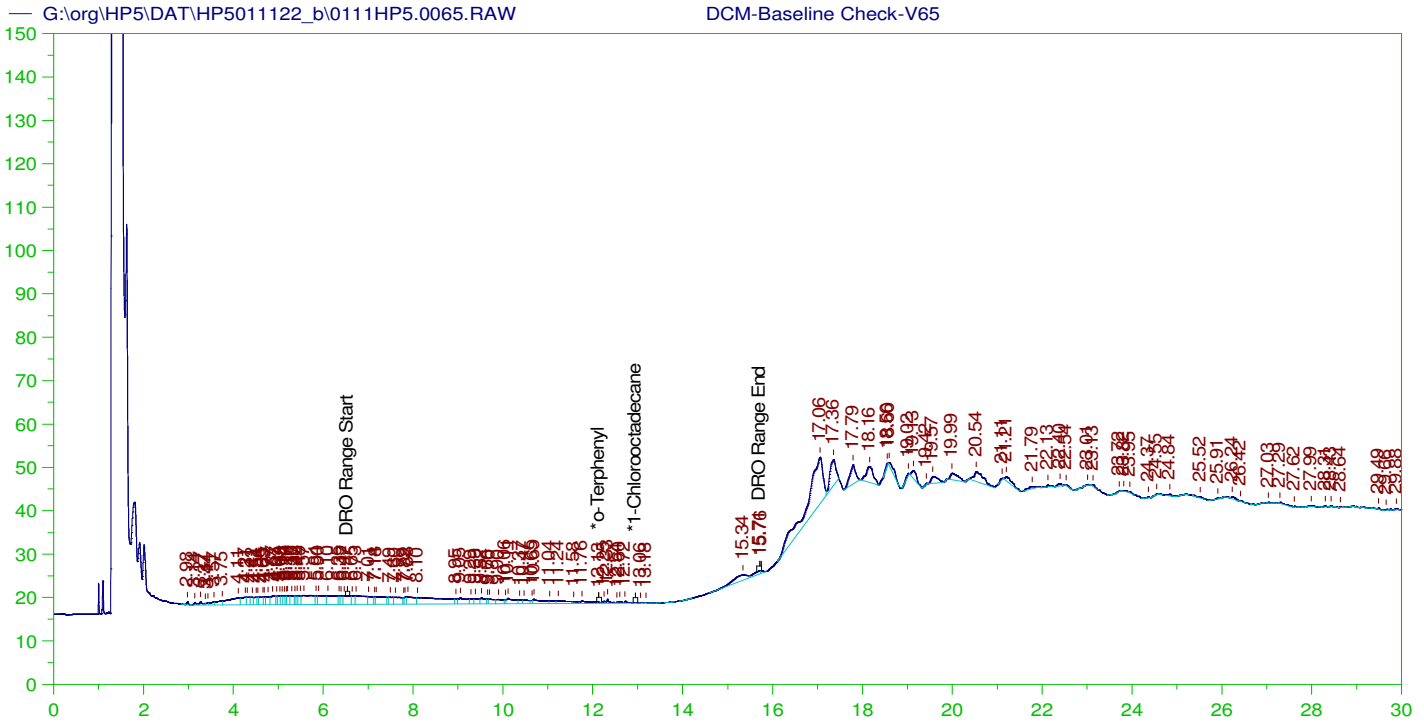
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Date & Time Acquired: 1/13/2022 9:33:32 PM
Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

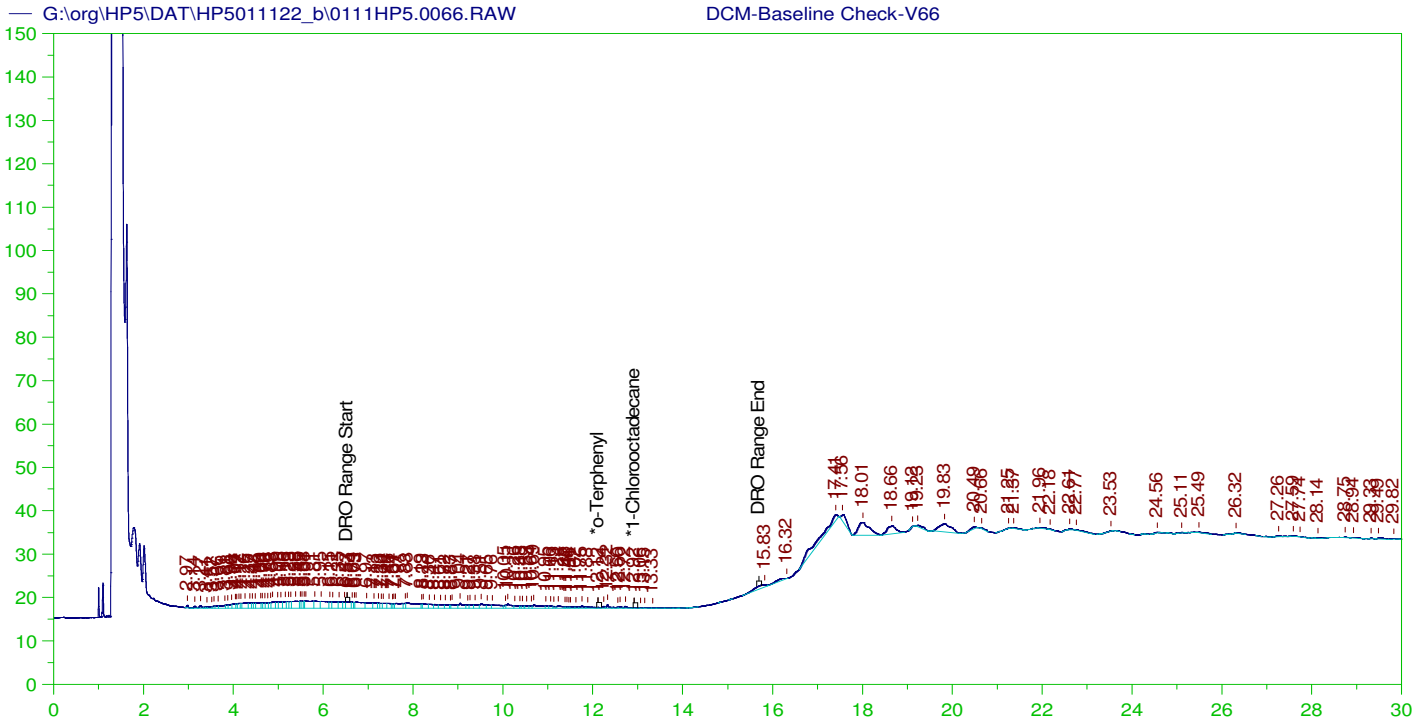
Sample Name: DCM-Baseline Check-V65
 Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0065.RAW
 Date & Time Acquired: 1/13/2022 10:16:33 PM
 Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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



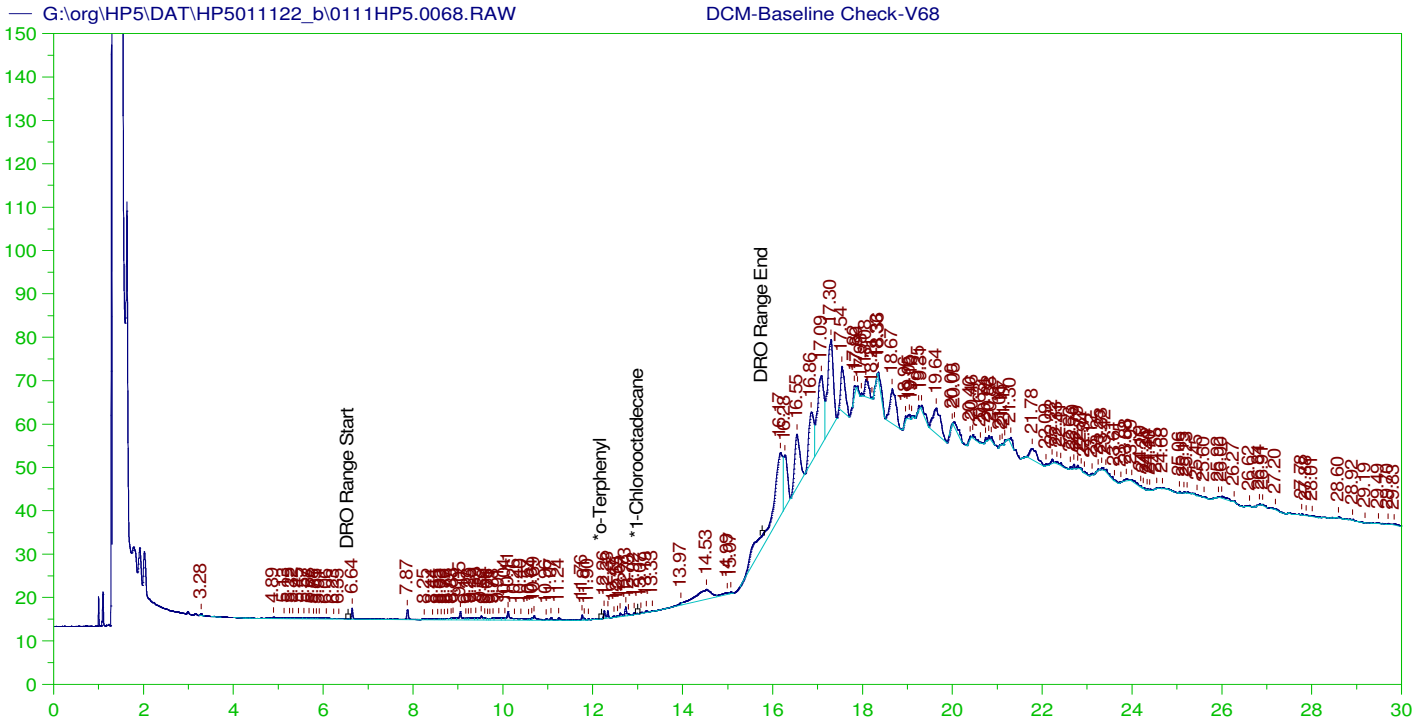
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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



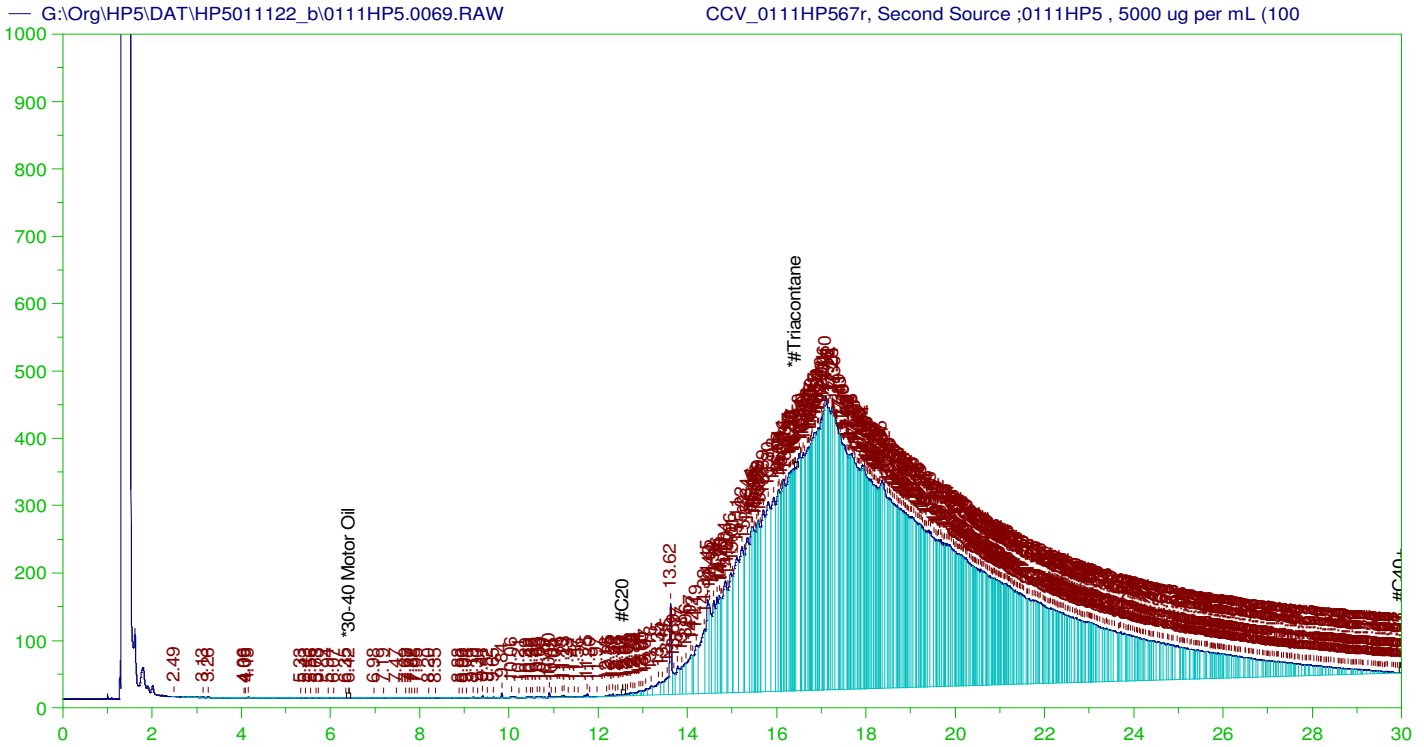
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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 Triacotane (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 Triacotane (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 Triacotane (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 Triacotane (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 Triacotane (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 **163927** Prep Temp **NA °C**

Technician: **Aloysia L. Noble**
 Batch Units: **ML**

Prep Start Date: **2/22/2022 12:25:00 P**
 Prep End Date: **2/23/2022 1:43:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-163927			1000	0	0	1.00	0.001		2/22/2022	2/23/2022
Start time: 12:53PM, 2/22/2022. End time: 2/23/2022 at 7:45 AM IDOC for ALN supervised by AMN. JLB assisted with taking down, transfer, and blow down of samples. SGT on remaining sample by ALN on 2/24/2022.										
LCS-163927			1000	0	0	1.00	0.001		2/22/2022	2/23/2022
All bottles were completely used, defaced and disposed of on 2/22/2022. SGT on remaining sample by ALN on 2/24/2022.										
LCSD-163927			1000	0	0	1.00	0.001		2/22/2022	2/23/2022
SGT on remaining sample by ALN on 2/24/2022.										
LCS-RRO-163927			1000	0	0	1.00	0.001		2/22/2022	2/23/2022
SGT on remaining sample by ALN on 2/24/2022.										
LCSD-RRO-163927			1000	0	0	1.00	0.001		2/22/2022	2/23/2022
SGT on remaining sample by ALN on 2/24/2022.										
B21120381-005E	Ground Water	2	1020	0	0	1.00	0.00098		2/22/2022	2/23/2022
Bottle 2/2: clear, no sediment. reextract. Taken out of fridge on 2/1/2022. SGT on remaining sample by ALN on 2/24/2022.										
B21120381-006E	Ground Water	2	1000	0	0	1.00	0.001		2/22/2022	2/23/2022
Bottle 2/2: clear, no sediment. reextract. Taken out of fridge on 2/1/2022. SGT on remaining sample by ALN on 0/25/2022.										
B22021435-001D	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment.										
B22021435-006D	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment.										
B22021435-007B	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment.										
B22021435-012D	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment. SGT on remaining sample by ALN on 2/24/2022.										
B22021435-012DMS	Ground Water	2	1050	0	0	1.00	0.000952		2/22/2022	2/23/2022
Bottle 2/2: clear, no sediment. SGT on remaining sample by ALN on 2/24/2022.										
B22021435-017D	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment. SGT on remaining sample by ALN on 2/24/2022.										

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
14828	Dichloromethane ED092	12/12/2023

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220217 14244	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 02/15/22 (Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220222B	Triacontane SURR 1000 ug/mL	All except LCS/D,	100 uL	11/23/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS/D, MS	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026
SG220222(13376)	Baked Silica Gel	SGT	5g	2/28/2030

PREP BATCH REPORT

Prep Code: **HC-3520-DRO**
 Prep Batch **163927** Prep Temp **NA °C**

Technician: **Aloysia L. Noble**
 Batch Units: **ML**

Prep Start Date: **2/22/2022 12:25:00 P**
 Prep End Date: **2/23/2022 1:43:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
B22021435-017DMS-RRO	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 2/2: clear, no sediment. SGT on remaining sample by ALN on 2/24/2022.										
B22021435-022D	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment.										
B22021435-027D	Ground Water	2	1060	0	0	1.00	0.000943		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment.										
B22021435-032D	Ground Water	2	1050	0	0	1.00	0.000952		2/22/2022	2/23/2022
Bottle 1/2: clear, no sediment. SGT on remaining sample by ALN on 2/24/2022.										
B22010971-001J	Ground Water	2	990	0	0	1.00	0.00101		2/22/2022	2/23/2022
Bottle 2/2: clear no sediment. reextract. Start time: 3:11PM, 2/22/2022. End time: 9:55AM, 2/23/2022.										
B22010974-001J	Ground Water	2	1020	0	0	1.00	0.00098		2/22/2022	2/23/2022
Bottle 2/2: clear no sediment. reextract. SGT on remaining sample by ALN on 0/25/2022.										

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
14828	Dichloromethane ED092	12/12/2023

Spk ID	Spike Name	SampType	AmtAdd	Exp Date
FP220217 14244	DCM RINSED FILTER PAPER	all	1	4/6/2026
Sulfate 02/15/22 (Baked Sodium Sulfate	all	Varies	11/29/2026
DRO220222B	Triacotane SURR 1000 ug/mL	All except LCS/D,	100 uL	11/23/2026
DRO211213A	OTP only SURR 2000 ug/mL	All except RRO-L	100 uL	9/30/2024
DRO220106C	#2 Diesel in Acetone 150,000 ug/mL	LCS/D, MS	100 uL	11/5/2023
DRO220112A	50,000 ug/mL Oil Std for RRO-In D	LCS/D-RRO, MS-	100 uL	9/1/2026
SG220222(13376)	Baked Silica Gel	SGT	5g	2/28/2030

Energy Laboratories Inc

ANALYTICAL RUN Summary

28-Feb-22

Run ID GCFID-HP5-B_220223A

Run Start Date: 2/23/2022
Analyst: Ann Nebel
Ical:
Column ID:
Comments: IDOC_JLB supervised by AMN. 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
DRO220128A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023
DRO220128B	Carbon Scan STD-Marker					MARKER	7/13/2026
DRO220201A	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
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15052973	CCV_0223HP50	HC-8015-DRO-	CCV		2/23/2022 11:22:	1	R375155			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		5.57271484		5	0	0	0.0879	0.3	0	111%	80	120	0%	
n-Triacontane	S	mg/L		0.1916358		0.2	0	0	0.000336	0.002	0	96%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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15052974	CCV_0223HP50	HC-8015-DRO-	CCV		2/23/2022 12:05:	1	R375155			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		14.4472		15	0	0	0.0389	0.3	0	96%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.95091		15	0	0	0.0749	0.3	50	100%	80	120	0%	
o-Terphenyl	S	mg/L		0.1832562		0.2	0	0	0.000429	0.002	0	92%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
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15052975	LCS-163927	HC-8015-DRO-	LCS-DOD		2/23/2022 2:22:3	1	163927	2/22/2022	1	0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052975	LCS-163927	HC-8015-DRO-	LCS-DOD		2/23/2022 2:22:3	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		12.13923		15	0	0	0.0389	0.3	0	81%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		12.97362		15	0	0	0.0749	0.3	50	86%	60	132	0%	
o-Terphenyl	S	mg/L		0.1847253		0.2	0	0	0.000429	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					
15052976	LCSD-163927	HC-8015-DRO-	LCSD-DOD		2/23/2022 3:05:2	1	163927	2/22/2022 1	0	2E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		12.55913		15	0	12.13923	0.0389	0.3	0	84%	36	132	3%	
Total Extractable Hydrocarbons	A	mg/L		13.41683		15	0	12.97362	0.0749	0.3	50	89%	60	132	3%	
o-Terphenyl	S	mg/L		0.1906214		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					
15052977	MB-163927	HC-8015-DRO-	MBLK		2/23/2022 3:48:3	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0389	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		0.085		0.1	0	0	0.000336	0.002	0	85%	50	150	0%	
o-Terphenyl	S	mg/L		0.1852074		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					
15052978	B22021435-001	HC-8015-DRO-	SAMP		2/23/2022 4:31:2	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0366827	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0828897	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0706307	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.077		0.0943	0	0	0.0003168	0.001886	0	82%	50	150	0%	
o-Terphenyl	S	mg/L		0.1681357		0.1886	0	0	0.0004045	0.002	0	89%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052979	B22021435-027	HC-8015-DRO-	SAMP		2/23/2022 5:14:2	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0366827	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0828897	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0706307	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.078		0.0943	0	0	0.0003168	0.001886	0	83%	50	150	0%	
o-Terphenyl	S	mg/L		0.1709738		0.1886	0	0	0.0004045	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					
15052980	B22021435-006	HC-8015-DRO-	SAMP		2/23/2022 5:57:2	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0366827	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0828897	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0706307	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.08		0.0943	0	0	0.0003168	0.001886	0	85%	50	150	0%	
o-Terphenyl	S	mg/L		0.1763518		0.1886	0	0	0.0004045	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					
15052981	B22021435-007	HC-8015-DRO-	SAMP		2/23/2022 7:23:3	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0366827	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0828897	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0706307	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.079		0.0943	0	0	0.0003168	0.001886	0	84%	50	150	0%	
o-Terphenyl	S	mg/L		0.1709435		0.1886	0	0	0.0004045	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					
15052982	B22021435-012	HC-8015-DRO-	SAMP		2/23/2022 8:06:2	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0366827	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.10800213		0	0	0	0.0828897	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.1516906		0	0	0	0.0706307	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.084		0.0943	0	0	0.0003168	0.001886	0	89%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052982	B22021435-012	HC-8015-DRO-	SAMP		2/23/2022 8:06:2	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
o-Terphenyl	S	mg/L		0.1821386		0.1886	0	0	0.0004045	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					
15052983	B22021435-012	HC-8015-DRO-	MS-DOD		2/23/2022 8:49:2	1	163927	2/22/2022 1	2E+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		12.09407		14.28	0	0	0.0370328	0.3	0	85%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		13.2048		14.28	0.1516906	0	0.0713048	0.3	50	91%	60	132	0%	
o-Terphenyl	S	mg/L		0.1816385		0.1904	0	0	0.0004084	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					
15052984	CCV_0223HP51	HC-8015-DRO-	CCV		2/23/2022 10:15:	1	R375155			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		5.32369482		5	0	0	0.0879	0.3	0	106%	80	120	0%	
n-Triacontane	S	mg/L		0.196561		0.2	0	0	0.000336	0.002	0	98%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052985	CCV_0223HP52	HC-8015-DRO-	CCV		2/23/2022 10:58:	1	R375155			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		13.85259		15	0	0	0.0389	0.3	0	92%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		14.33465		15	0	0	0.0749	0.3	50	96%	80	120	0%	
o-Terphenyl	S	mg/L		0.1759299		0.2	0	0	0.000429	0.002	0	88%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052986	B22021435-022	HC-8015-DRO-	SAMP		2/24/2022 1:07:0	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0366827	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.0828897	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0706307	0.3	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.08		0.0943	0	0	0.0003168	0.001886	0	85%	50	150	0%	
o-Terphenyl	S	mg/L		0.1752052		0.1886	0	0	0.0004045	0.002	0	93%	56	125	0%	

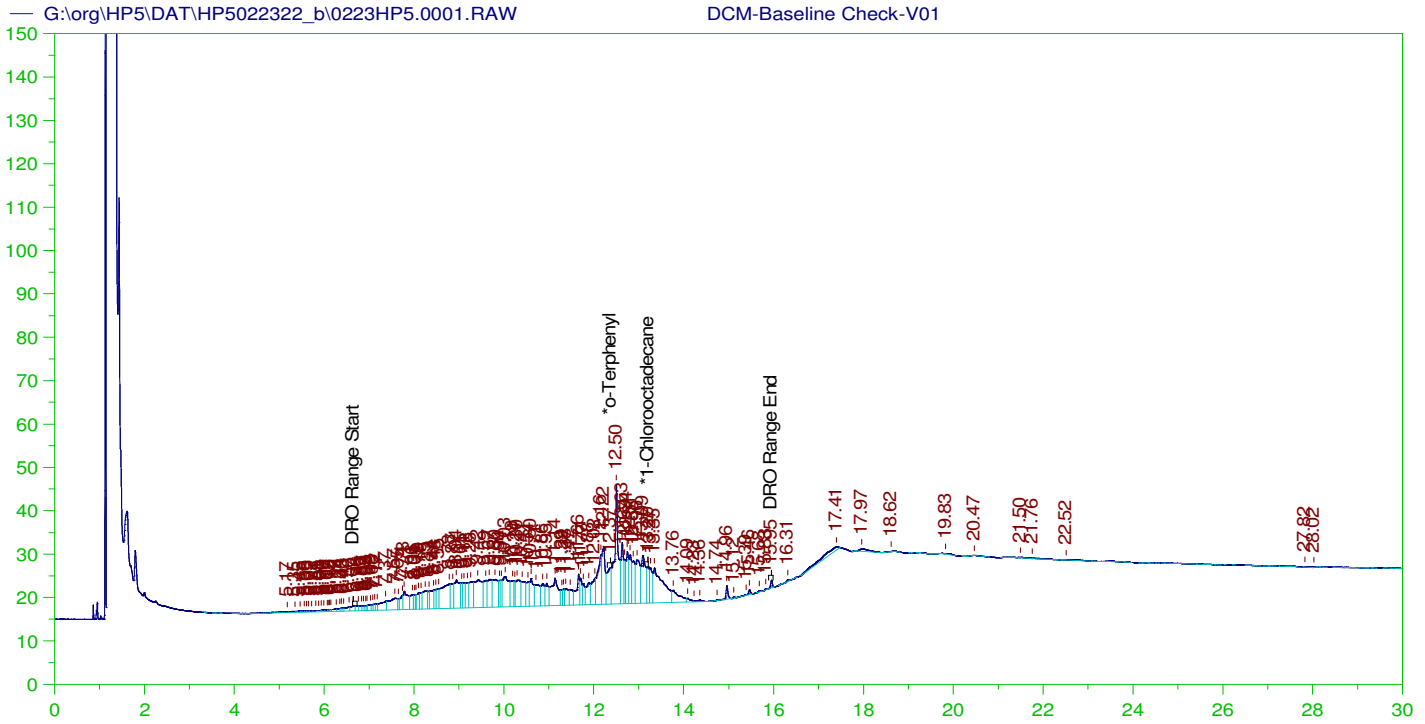
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052987	B22021435-032	HC-8015-DRO-	SAMP		2/24/2022 1:50:0	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.1832749		0	0	0	0.0370328	0.3	0	0%	0	0	0%	J
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		0.2836644		0	0	0	0.0713048	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.085		0.0952	0	0	0.0003199	0.001904	0	89%	50	150	0%	
o-Terphenyl	S	mg/L		0.1863598		0.1904	0	0	0.0004084	0.002	0	98%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052988	B21120381-005	HC-8015-DRO-	SAMP		2/24/2022 3:16:0	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.2790776		0	0	0	0.038122	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.24157847		0	0	0	0.086142	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.7787862		0	0	0	0.073402	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.09		0.098	0	0	0.0003293	0.00196	0	92%	50	150	0%	
o-Terphenyl	S	mg/L		0.1913729		0.196	0	0	0.0004204	0.002	0	98%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052989	B22021435-017	HC-8015-DRO-	SAMP		2/24/2022 6:51:0	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.2710032		0	0	0	0.0366827	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.16862467		0	0	0	0.0828897	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.5621383		0	0	0	0.0706307	0.3	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.08		0.0943	0	0	0.0003168	0.001886	0	85%	50	150	0%	
o-Terphenyl	S	mg/L		0.1615342		0.1886	0	0	0.0004045	0.002	0	86%	56	125	0%	
TEH(Oil Range)	X	mg/L		0.42185515		0	0	0	0.0828897	0.3	0	0%	0	0	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052990	B22021435-017	HC-8015-DRO-	MS-DOD		2/24/2022 7:34:0	1	163927	2/22/2022 1	2E+07	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.83436966		4.715	0.4218552	0	0.0828897	0.3	0	94%	41	113	0%	
n-Triacontane	S	mg/L		0.078		0.0943	0	0	0.0003168	0.002	0	83%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052991	CCV_0223HP53	HC-8015-DRO-	CCV		2/24/2022 8:59:4	1	R375155		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		5.33268652		5	0	0	0.0879	0.3	0	107%	80	120	0%	
n-Triacontane	S	mg/L		0.1952711		0.2	0	0	0.000336	0.002	0	98%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15052992	CCV_0223HP53	HC-8015-DRO-	CCV		2/24/2022 9:42:3	1	R375155		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		14.83249		15	0	0	0.0389	0.3	0	99%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.34833		15	0	0	0.0749	0.3	50	102%	80	120	0%	
o-Terphenyl	S	mg/L		0.1887991		0.2	0	0	0.000429	0.002	0	94%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15054063	LCS-RRO-1639	HC-8015-DRO-	LCS-DOD		2/24/2022 2:02:1	1	163927	2/22/2022 1	0	0						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.18764496		5	0	0	0.0879	0.3	0	104%	41	113	0%	
n-Triacontane	S	mg/L		0.091		0.1	0	0	0.000336	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					
15054064	LCSD-RRO-163	HC-8015-DRO-	LCSD-DOD		2/24/2022 2:45:2	1	163927	2/22/2022 1	0	2E+07						
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.14587259		5	0	5.187645	0.0879	0.3	0	103%	41	113	1%	
n-Triacontane	S	mg/L		0.087		0.1	0	0	0.000336	0.002	0	87%	50	150	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15054065	CCV_0223HP54	HC-8015-DRO-	CCV		2/24/2022 4:14:2	1	R375155		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		5.47073486		5	0	0	0.0879	0.3	0	109%	80	120	0%	
n-Triacontane	S	mg/L		0.1994149		0.2	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					
15054066	CCV_0223HP54	HC-8015-DRO-	CCV		2/24/2022 4:57:2	1	R375155			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		14.60069		15	0	0	0.0389	0.3	0	97%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.11004		15	0	0	0.0749	0.3	50	101%	80	120	0%	
o-Terphenyl	S	mg/L		0.1844133		0.2	0	0	0.000429	0.002	0	92%	80	120	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15054067	B22010971-001J	HC-8015-DRO-	SAMP		2/24/2022 7:49:0	1	163927	2/22/2022 3:		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	0.039289	0.303	0	0%	0	0	0%	U
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0		0	0	0	0.088779	0.303	0	0%	0	0	0%	U
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.075649	0.303	50	0%	0	0	0%	U
n-Triacontane	S	mg/L		0.087		0.101	0	0	0.0003394	0.00202	0	86%	50	150	0%	
o-Terphenyl	S	mg/L		0.1857743		0.202	0	0	0.0004333	0.00202	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					
15054068	B22010974-001J	HC-8015-DRO-	SAMP		2/24/2022 8:32:0	1	163927	2/22/2022 3:		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		0.05241669		0	0	0	0.038122	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40)	A	mg/L		0.1777698		0	0	0	0.086142	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2706022		0	0	0	0.073402	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.09		0.098	0	0	0.0003293	0.00196	0	92%	50	150	0%	
o-Terphenyl	S	mg/L		0.1957443		0.196	0	0	0.0004204	0.002	0	100%	56	125	0%	
Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15054069	B21120381-006	HC-8015-DRO-	SAMP		2/24/2022 10:40:	1	163927	2/22/2022 1		0	0					
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.07043283		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		0.1992047		0	0	0	0.0749	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.091		0.1	0	0	0.000336	0.002	0	91%	50	150	0%	
o-Terphenyl	S	mg/L		0.1928833		0.2	0	0	0.000429	0.002	0	96%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15054070	CCV_0223HP55	HC-8015-DRO-	CCV		2/25/2022 12:06:	1	R375155		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		5.16831689		5	0	0	0.0879	0.3	0	103%	80	120	0%	
n-Triacontane	S	mg/L		0.1912295		0.2	0	0	0.000336	0.002	0	96%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist					
15054071	CCV_0223HP55	HC-8015-DRO-	CCV		2/25/2022 12:49:	1	R375155		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		15.18332		15	0	0	0.0389	0.3	0	101%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		15.71208		15	0	0	0.0749	0.3	50	105%	80	120	0%	
o-Terphenyl	S	mg/L		0.1922749		0.2	0	0	0.000429	0.002	0	96%	80	120	0%	



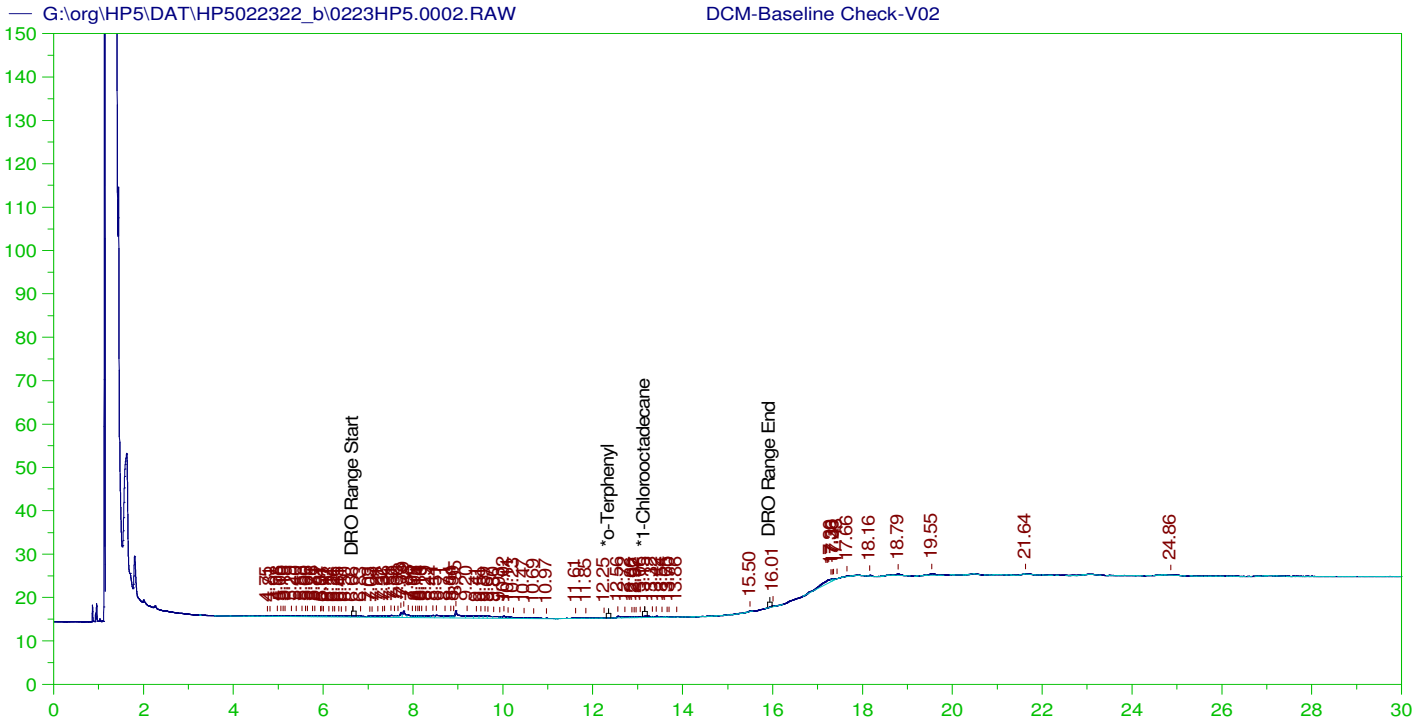
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0001.RAW
 Date & Time Acquired: 2/23/2022 9:14:00 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	12.373	200.	1.427	.71	-
*1-Chlorooctadecane	13.204	200.	.908	.45	-

DRO Area:2296364 DRO Amount: 70.27815
 TEH Area:2389002 TEH Amount: 73.11324



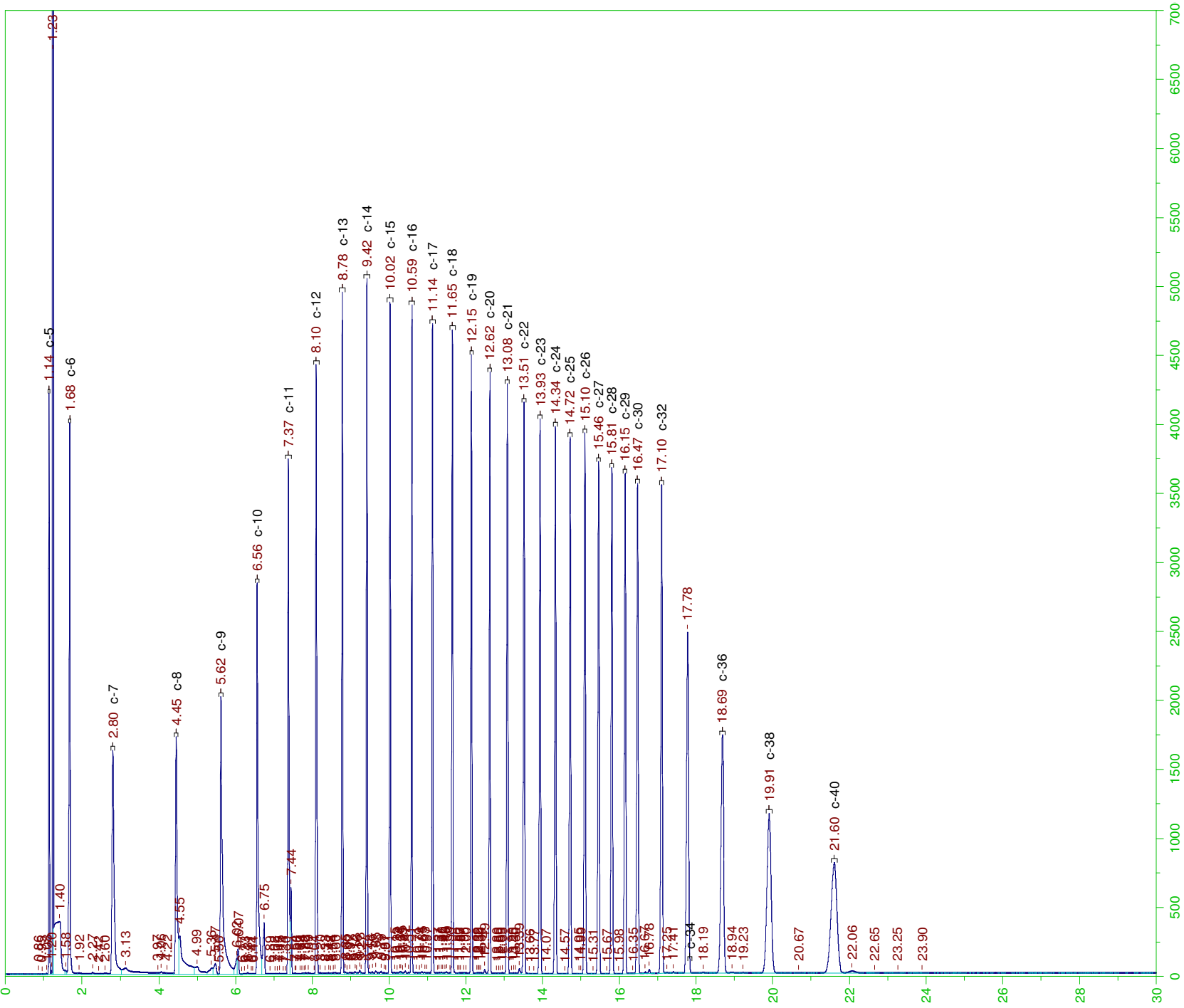
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

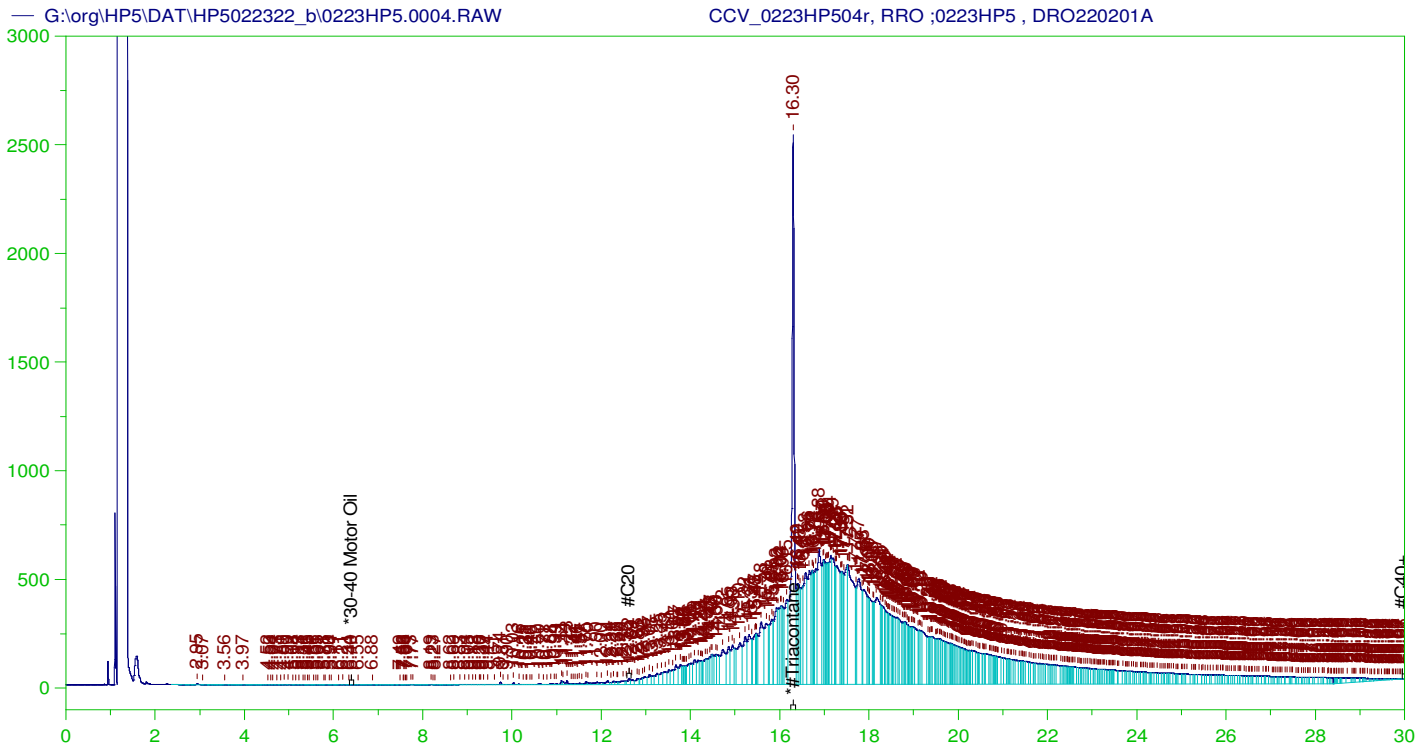
Sample Name: DCM-Baseline Check-V02
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0002.RAW
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 Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

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	29.974	200.	.	-
*1-Chlorooctadecane	13.155	200.	.093	.05

DRO Area:117857.4 DRO Amount: 3.60692
 TEH Area:178950.2 TEH Amount: 5.47661





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP504r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0004.RAW
 Date & Time Acquired: 2/23/2022 11:22:59 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.3	500.	330.74	66.15	-

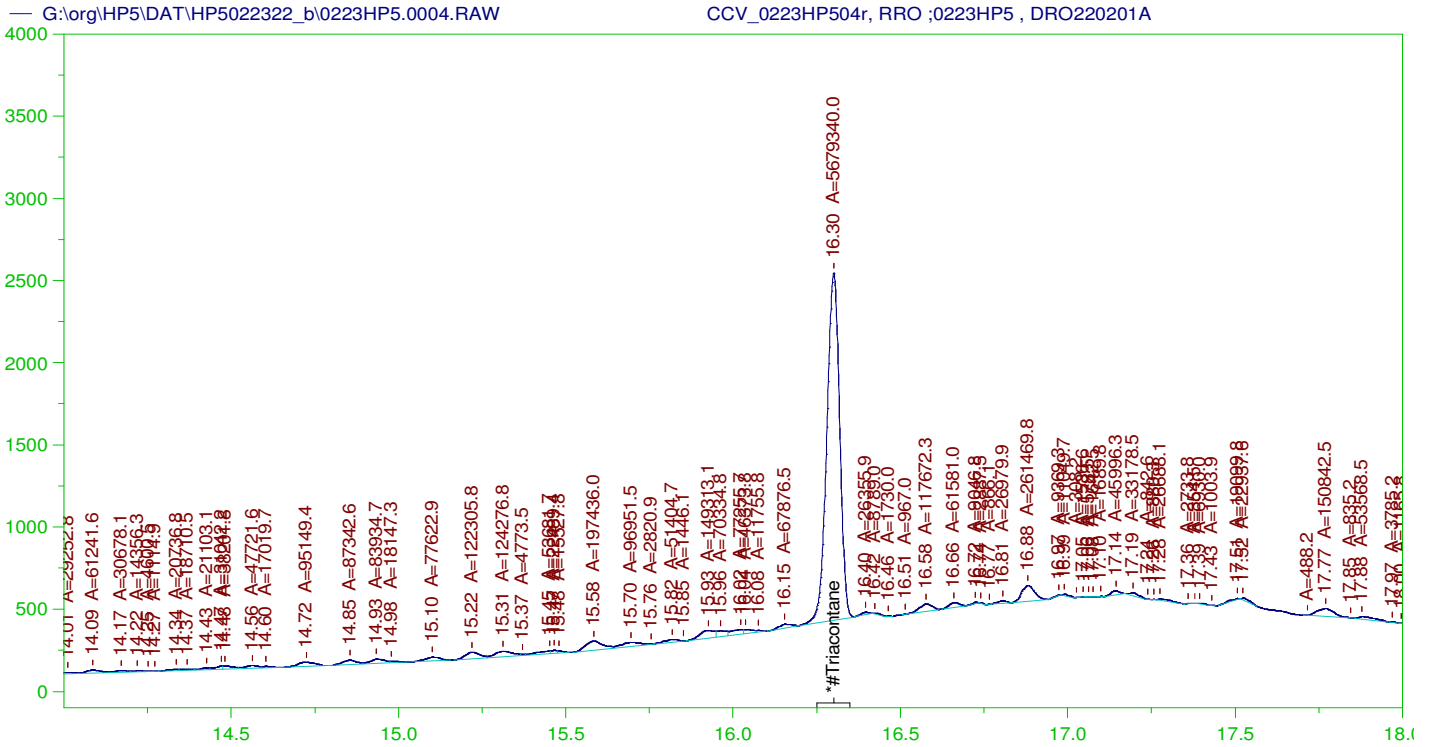
~~RRO~~ TEH(Oil Range) Area:1.472565E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5572.715

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.3	200.	330.74	165.37	75-125

JLB 02/28/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP504r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0004.RAW
 Date & Time Acquired: 2/23/2022 11:22:59 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

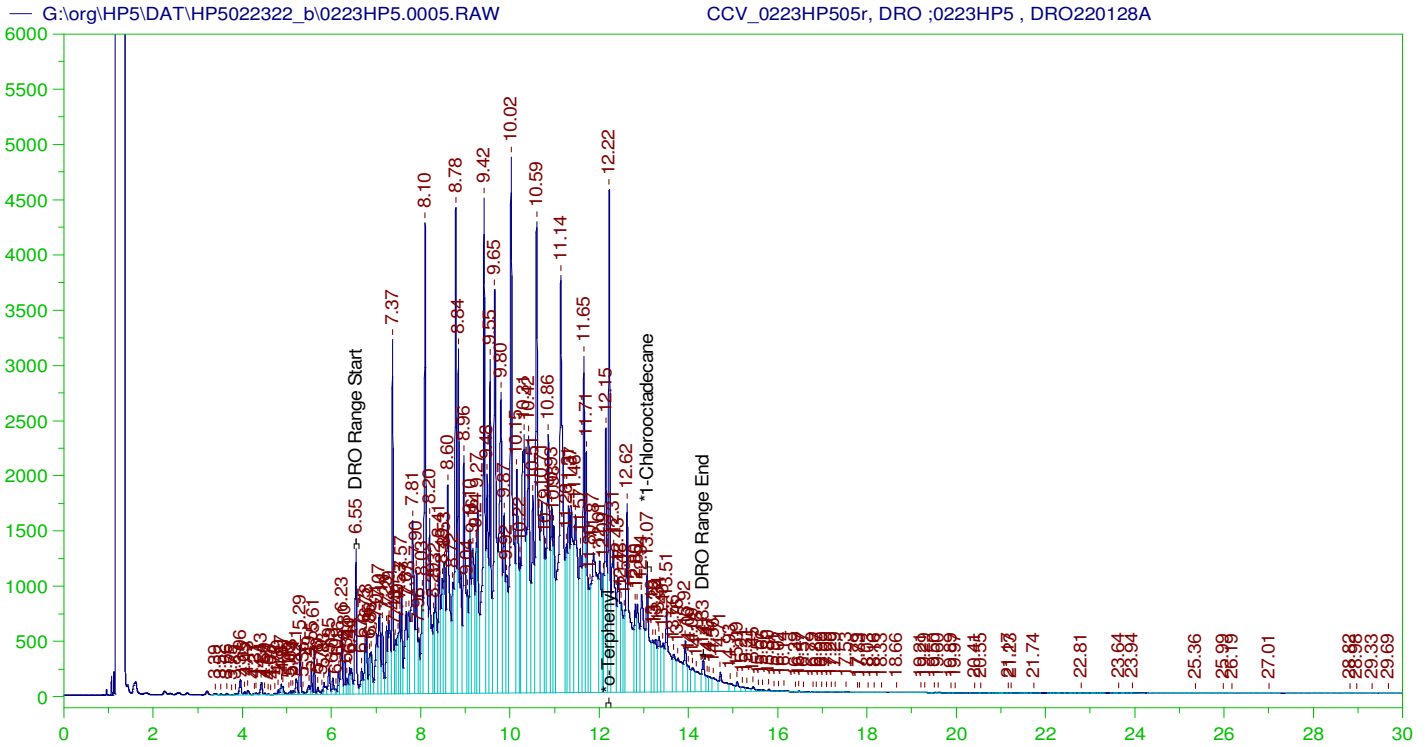
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.3	500.	191.636	38.33	-

RRO Area:3528689 RRO AMOUNT: 133.5383

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane_____	16.3	200.	191.636	95.82	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP505r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0005.RAW
 Date & Time Acquired: 2/23/2022 12:05:48 PM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.221	200.	306.296	153.15
*1-Chlorooctadecane	13.071	200.	152.078	76.04

DRO Area: 4.720673E+08 DRO Amount: 14447.2
 TEH Area: 4.885262E+08 TEH Amount: 14950.91

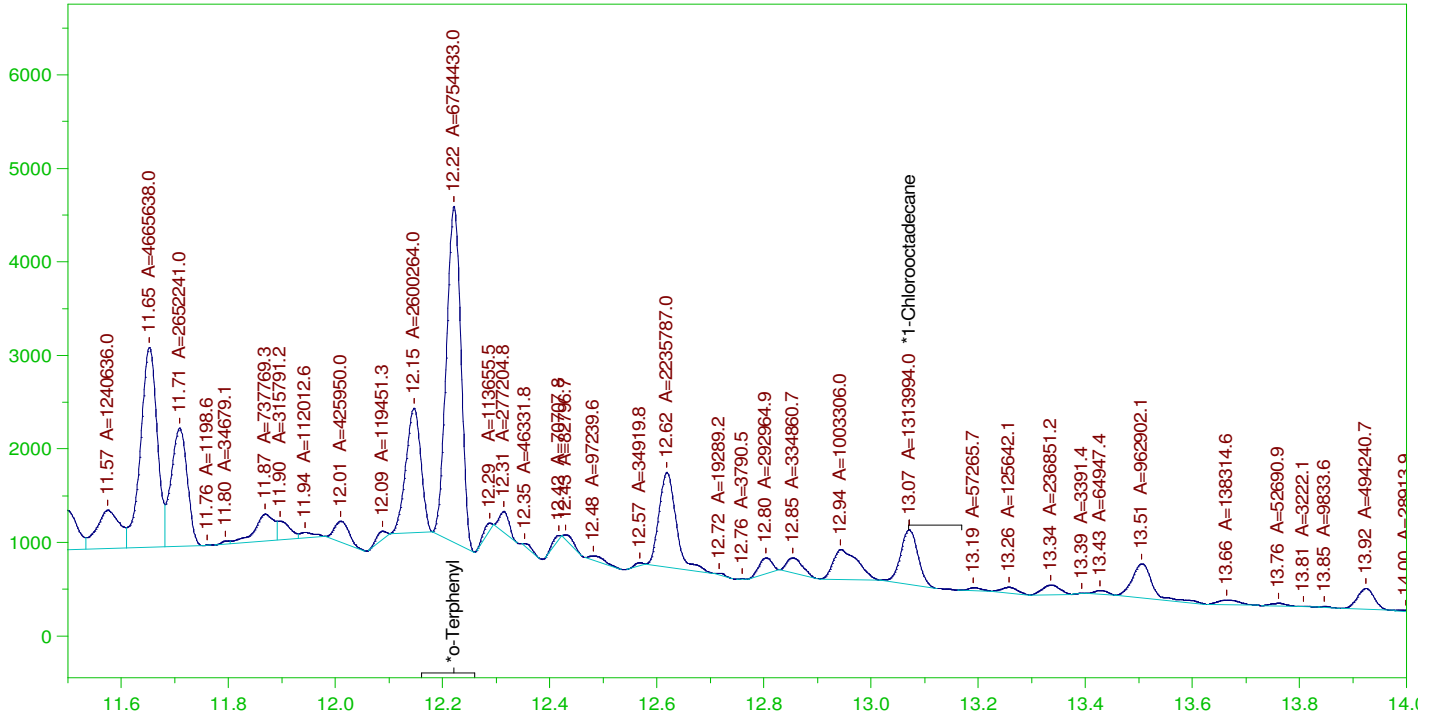
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14950.91	99.67	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.221	200.	306.296	153.15	85-115
*1-Chlorooctadecane	13.071	200.	152.078	76.04	85-115

G:\org\HP5\DAT\HP5022322_b\0223HP5.0005.RAW

CCV_0223HP505r, DRO ;0223HP5 , DRO220128A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP505r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0005.RAW
 Date & Time Acquired: 2/23/2022 12:05:48 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

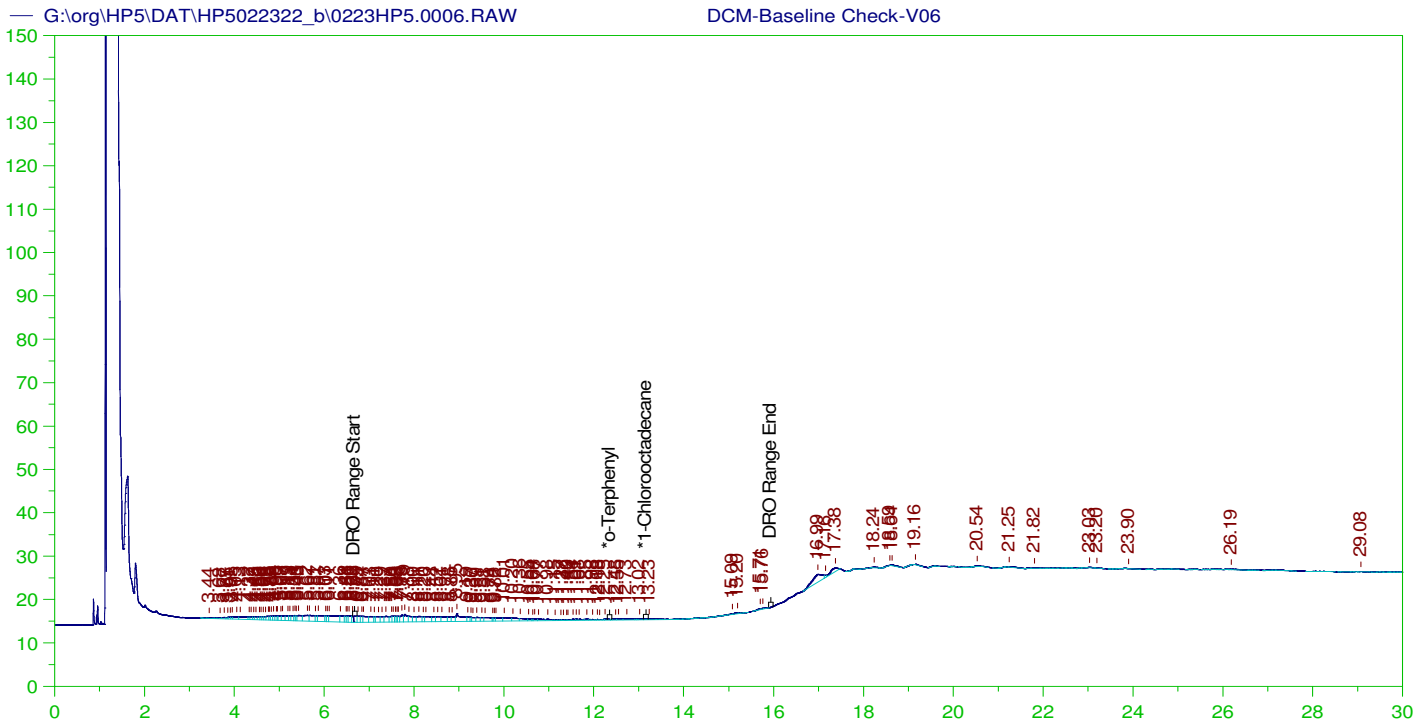
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.221	200.	183.256	91.63
*1-Chlorooctadecane	13.071	200.	35.65	17.83

DRO Area: 2.434776E+08 DRO Amount: 7451.414
 TEH Area: 2.541509E+08 TEH Amount: 7778.06

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0005.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7778.06	51.85	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.221	200.	183.256	91.63	85-115
*1-Chlorooctadecane	13.071	200.	35.65	17.83	85-115



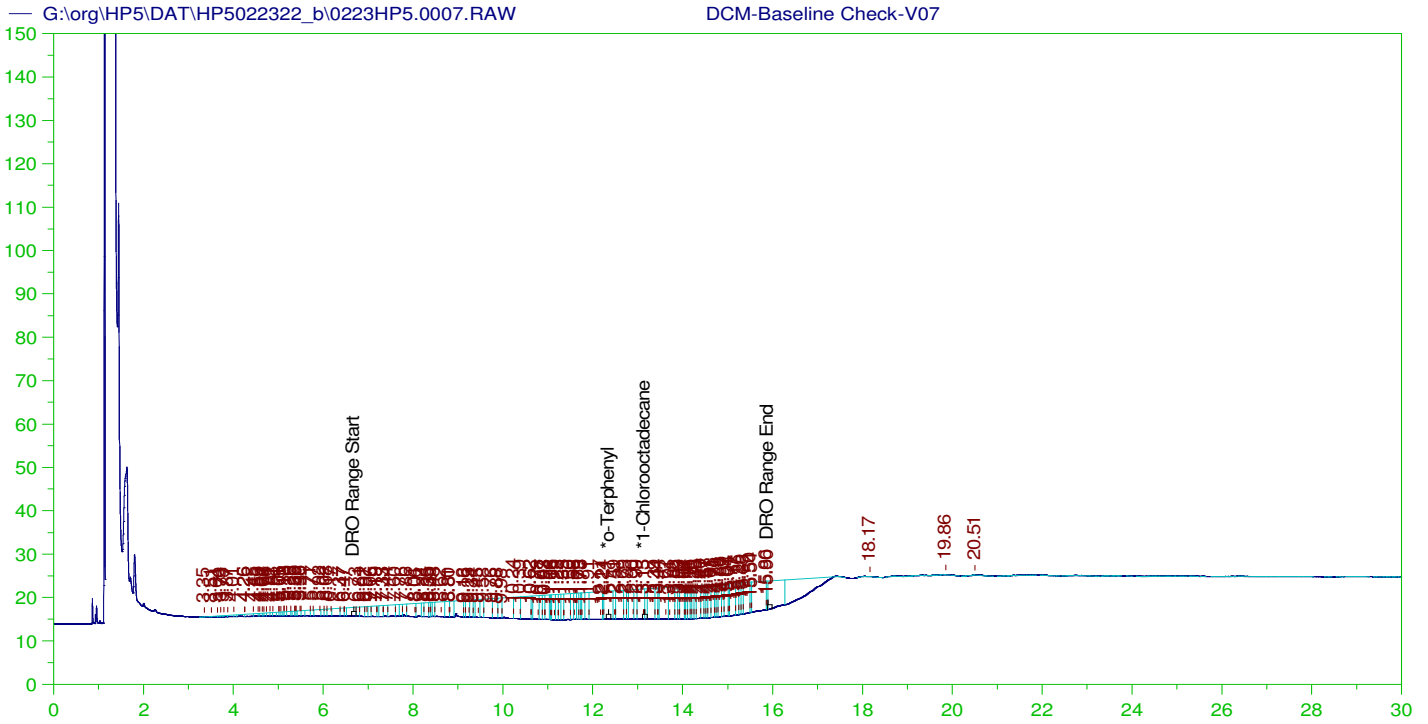
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V06
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 Date & Time Acquired: 2/23/2022 12:48:45 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	29.989	200.	.	-
*1-Chlorooctadecane	29.989	200.	.	-

DRO Area:282560.2 DRO Amount: 8.6475
 TEH Area:524330.1 TEH Amount: 16.04665



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V07
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0007.RAW
 Date & Time Acquired: 2/23/2022 1:39:50 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

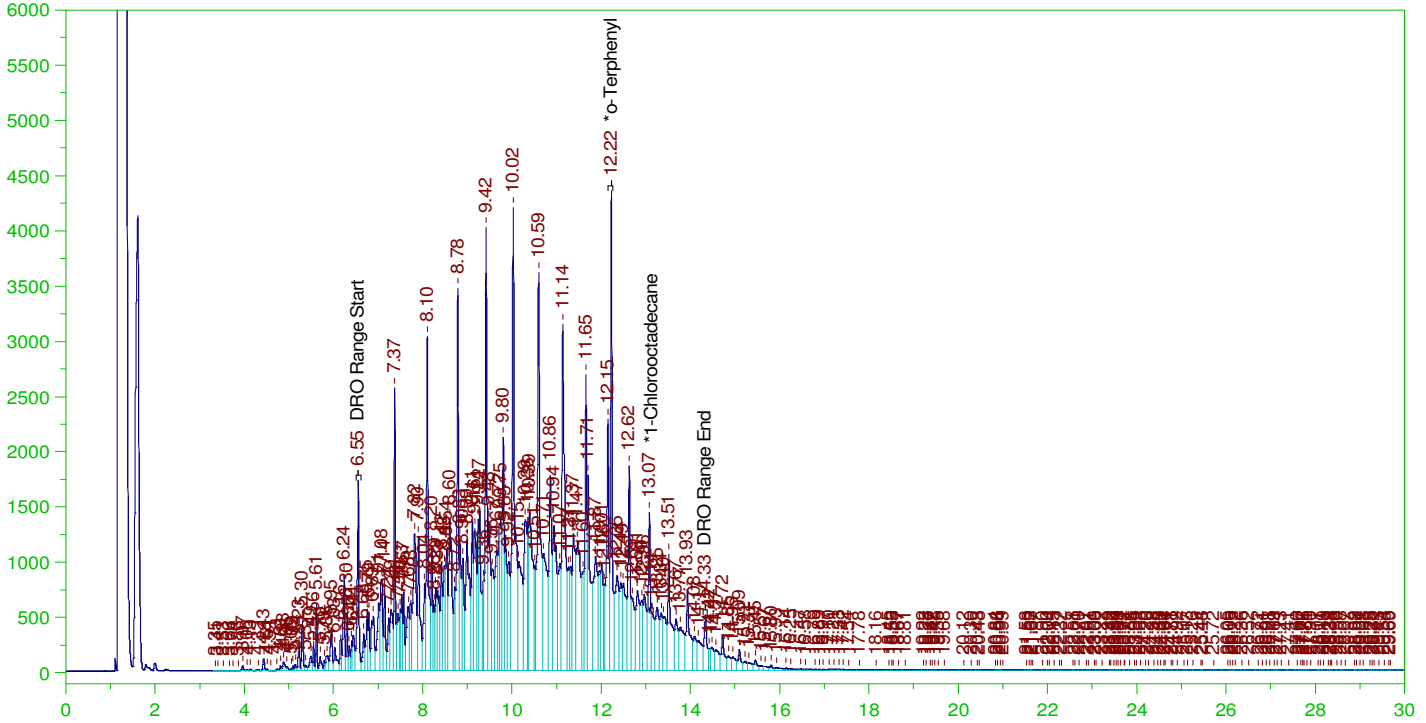
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.964	200.	.	-
*1-Chlorooctadecane	13.154	200.	.662	.33

DRO Area:3092806 DRO Amount: 94.65256
 TEH Area:3067000 TEH Amount: 93.86276

Batch ID: 163927

LCS-163927 ;0223HP5 ,

G:\org\HP5\DAT\HP5022322_b\0223HP5.0008.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-163927 ;0223HP5 ,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0008.RAW
Date & Time Acquired: 2/23/2022 2:22:35 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

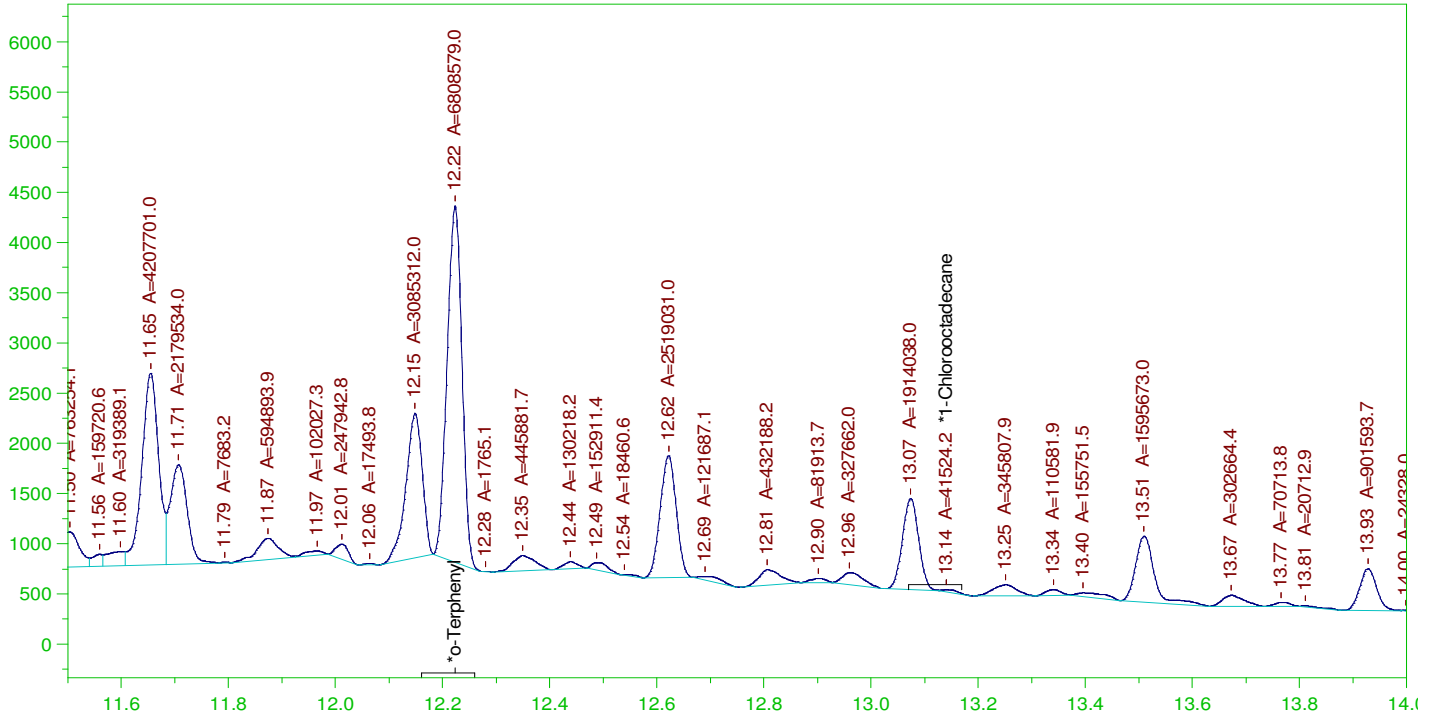
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.2	.324	162.24	-
*1-Chlorooctadecane	13.141	.2	.052	26.01	-

DRO Area:3.966536E+08 DRO Amount: 12.13923
TEH Area:4.239178E+08 TEH Amount: 12.97362

Batch ID: 163927

G:\Org\HP5\DAT\HP5022322_b\0223HP5.0008.RAW

LCS-163927 ;0223HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCS-163927 ;0223HP5 ,
 Raw File: G:\Org\HP5\DAT\HP5022322_b\0223HP5.0008.RAW
 Date & Time Acquired: 2/23/2022 2:22:35 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

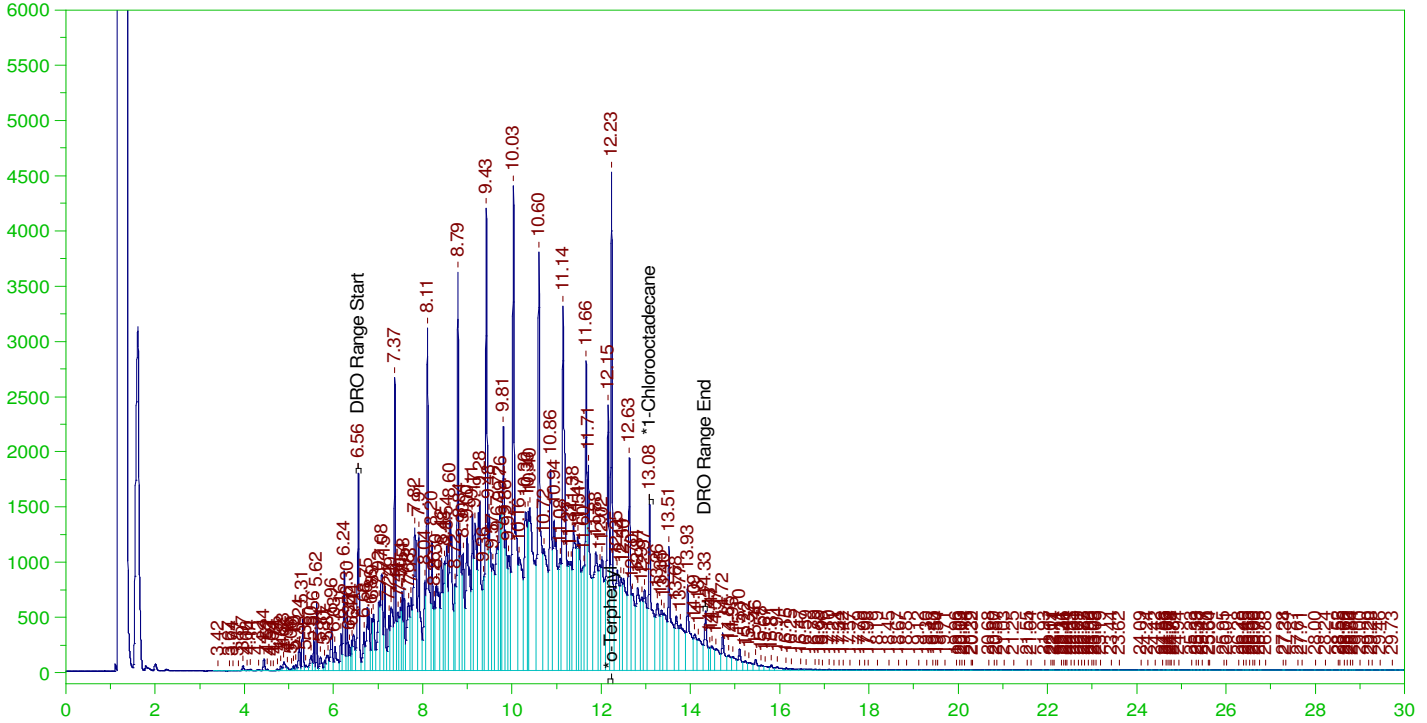
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.223	.2	.185	92.36
*1-Chlorooctadecane	13.141	.2	.001	.56

DRO Area:1.862692E+08 DRO Amount: 5.700603
 TEH Area:1.999577E+08 TEH Amount: 6.119527

Batch ID: 163927

LCSD-163927 ;0223HP5 ,

G:\org\HP5\DAT\HP5022322_b\0223HP5.0009.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCSD-163927 ;0223HP5 ,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0009.RAW
Date & Time Acquired: 2/23/2022 3:05:29 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

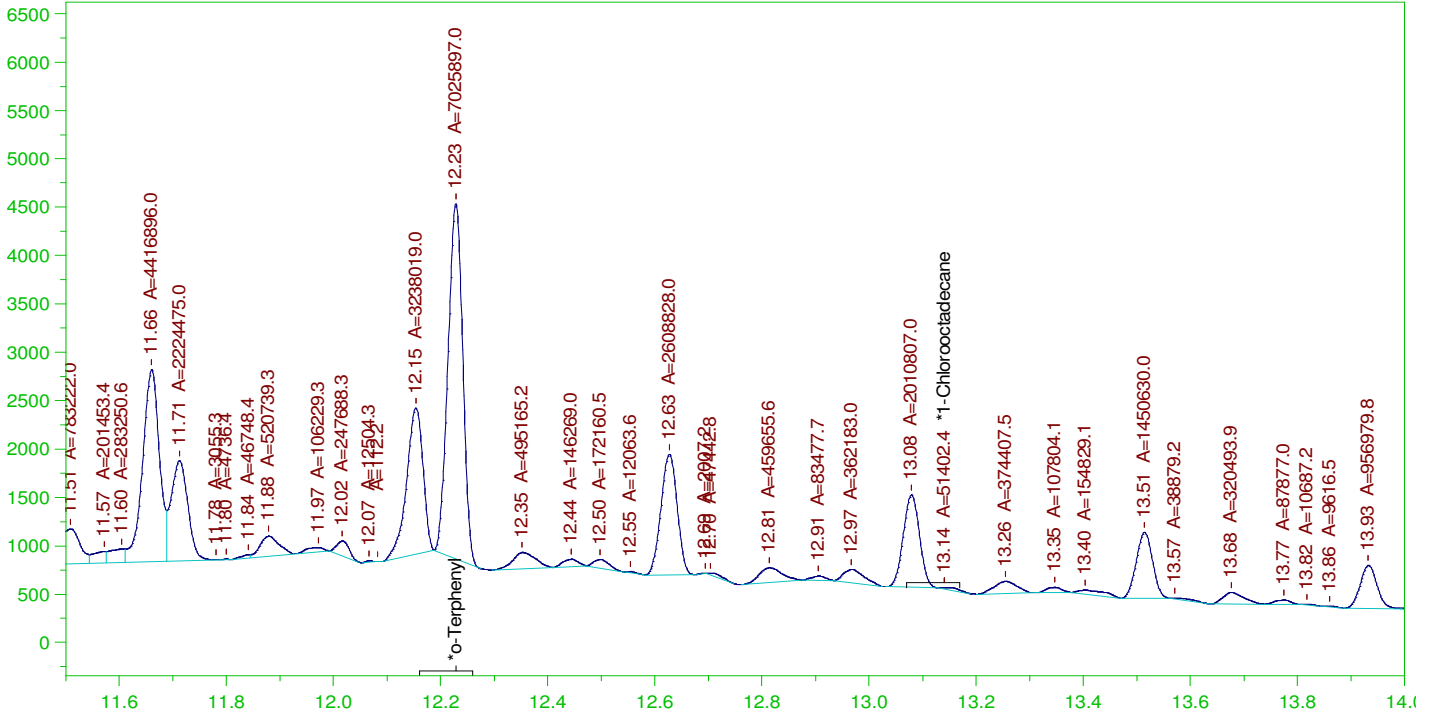
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.228	.2	.333	166.6	-
*1-Chlorooctadecane	13.079	.2	.204	102.13	-

DRO Area: 4.10374E+08 DRO Amount: 12.55913
TEH Area: 4.383998E+08 TEH Amount: 13.41683

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0009.RAW

LCSD-163927 ;0223HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCSD-163927 ;0223HP5 ,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0009.RAW
 Date & Time Acquired: 2/23/2022 3:05:29 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

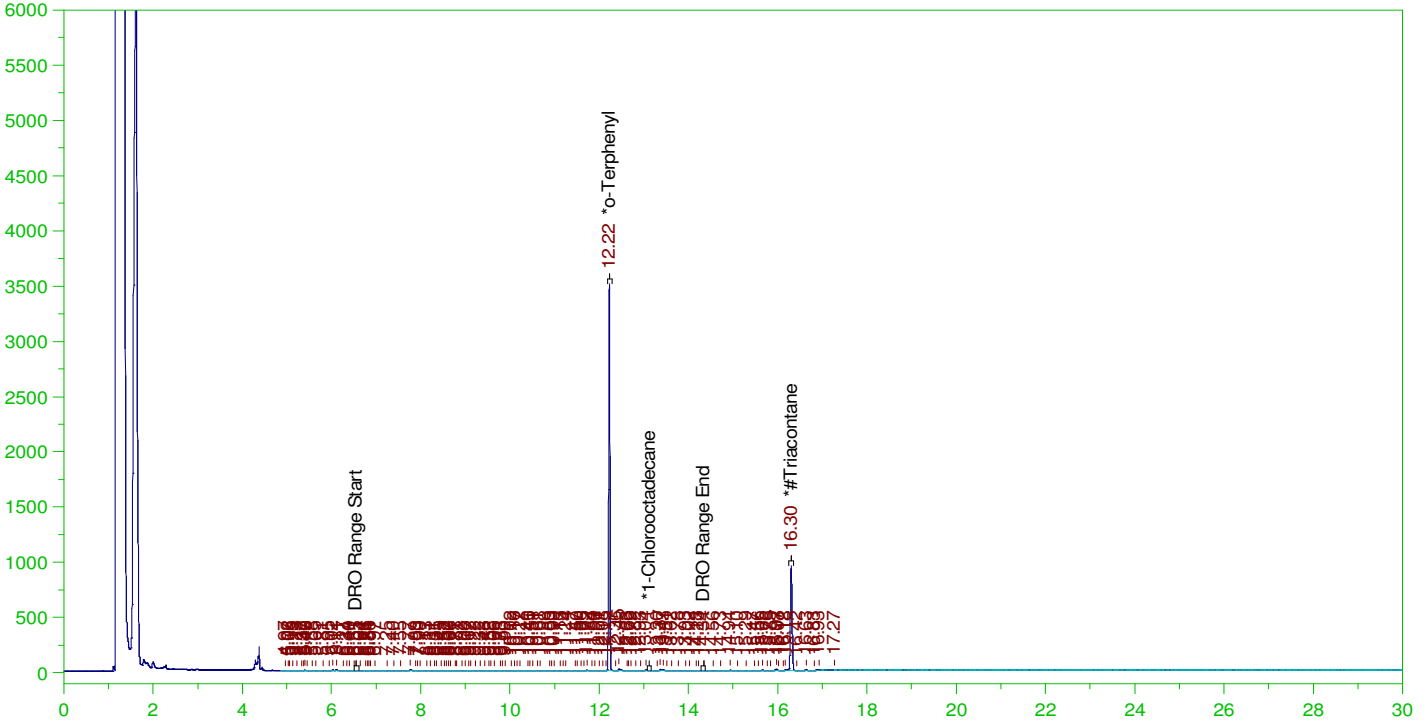
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.228	.2	.191	95.31
*1-Chlorooctadecane	13.141	.2	.001	.7

DRO Area:1.941302E+08 DRO Amount: 5.94118
 TEH Area:2.082833E+08 TEH Amount: 6.374324

Batch ID: 163927

MB-163927 ;0223HP5 ,

G:\org\HP5\DAT\HP5022322_b\0223HP5.0010.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-163927 ;0223HP5 ,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0010.RAW
Date & Time Acquired: 2/23/2022 3:48:30 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

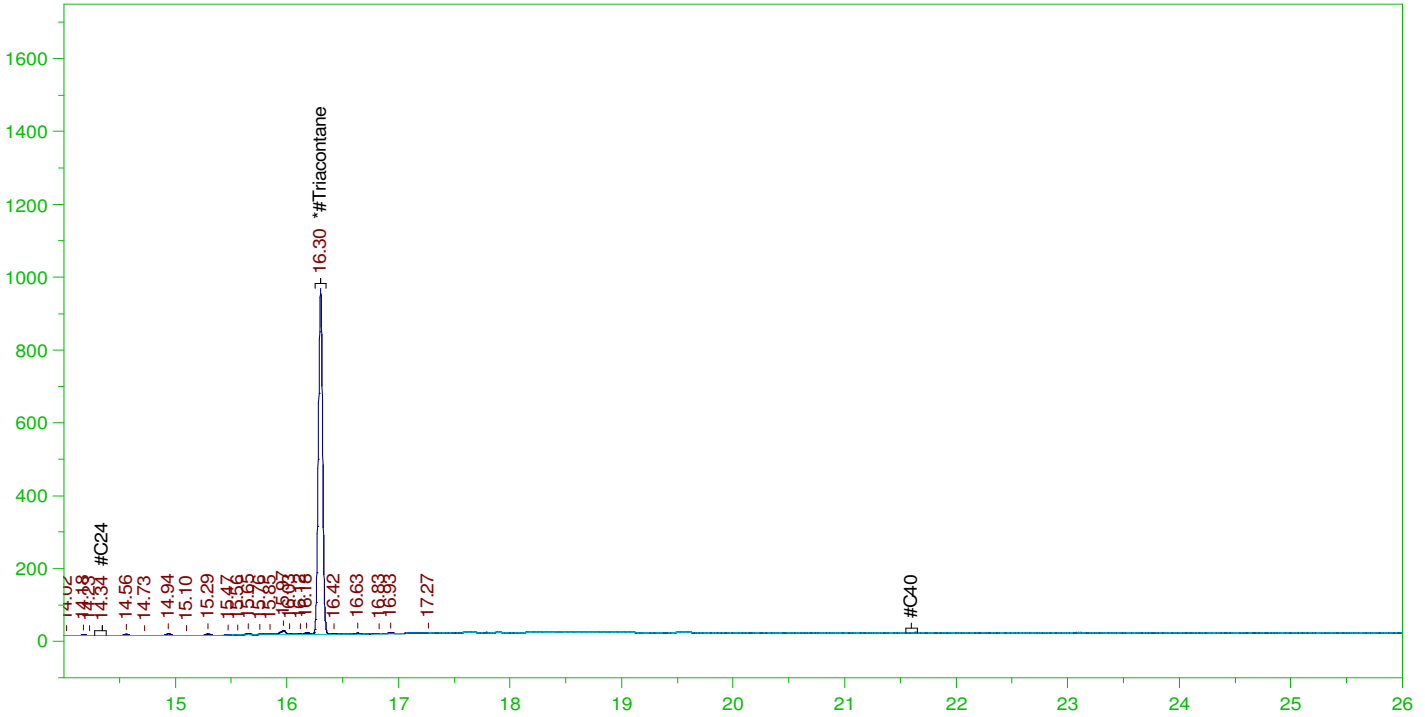
Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.2	.186	92.88	-
*1-Chlorooctadecane	29.978	.2	.		-
*#Triacontane	16.301	.2	.085	42.55	-

DRO Area:483691 DRO Amount: 1.480293E-02
TEH Area:786379.3 TEH Amount: 2.406643E-02

G:\org\HP5\DAT\HP5022322_b\0223HP5.0010.RAW

MB-163927 ;0223HP5 ,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-163927 ;0223HP5 ,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0010.RAW
 Date & Time Acquired: 2/23/2022 3:48:30 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_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: 14.28 to 21.65

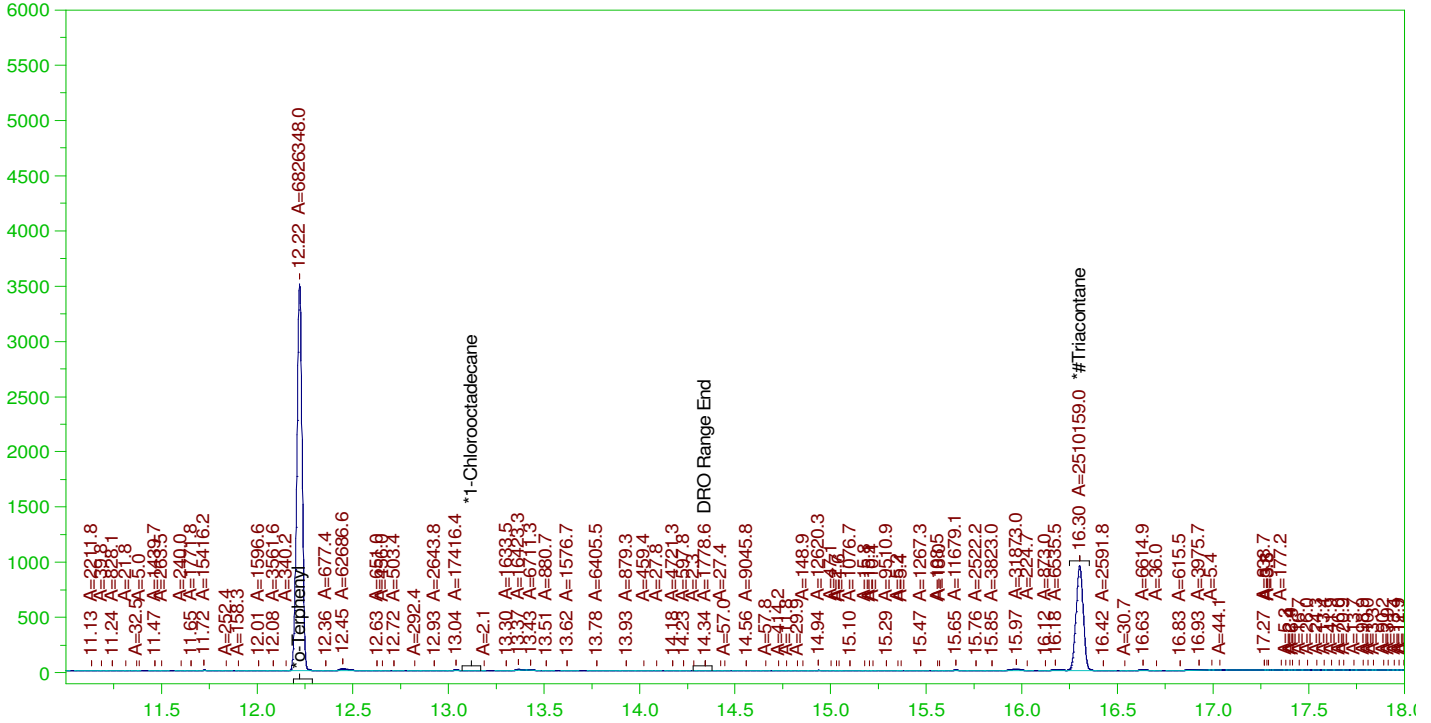
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.301	.5	.085	17.02

RRO Area:158314.7 RRO AMOUNT: 5.991196E-03

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0010.RAW

MB-163927 ;0223HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-163927 ;0223HP5 ,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0010.RAW
Date & Time Acquired: 2/23/2022 3:48:30 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.222	.2	.185	92.6
*1-Chlorooctadecane	29.978	.2	.	-
*#Triacontane	16.301	.2	.085	42.35

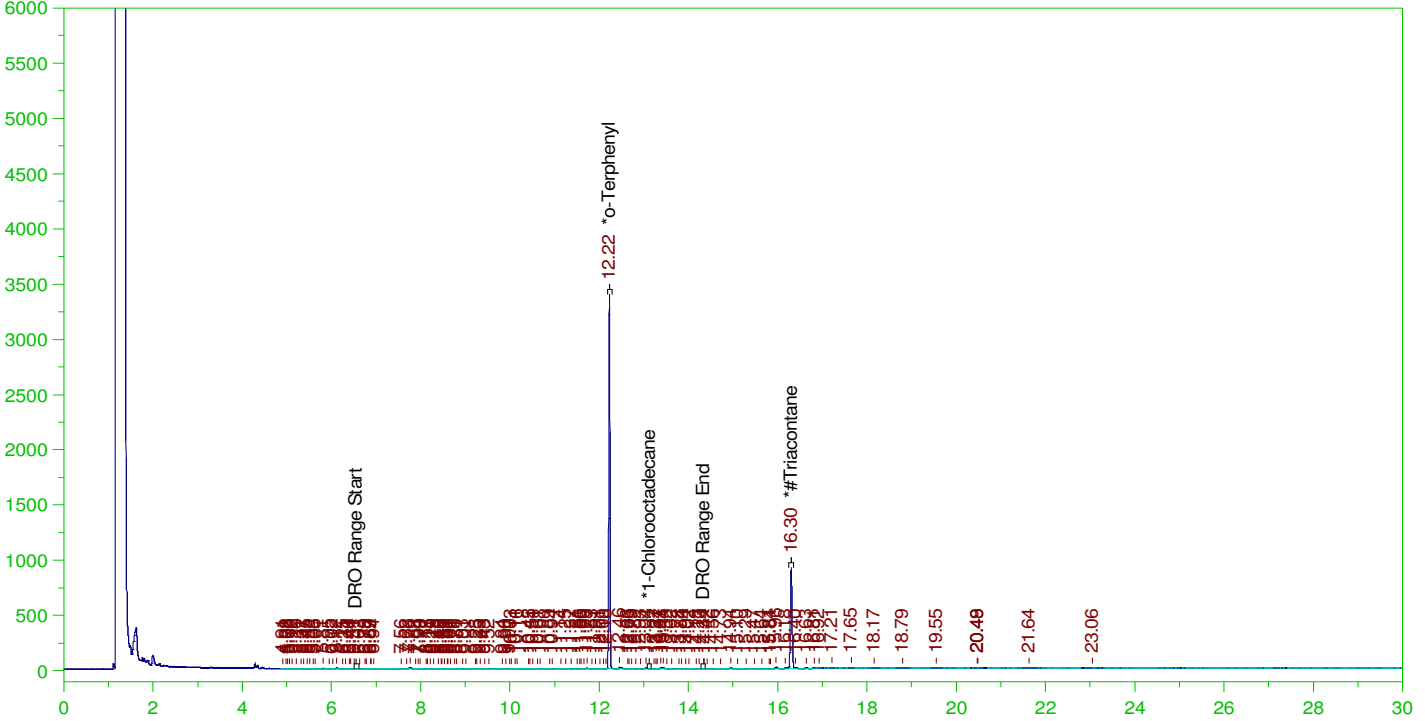
DRO Area:319936.2 DRO Amount: 9.791359E-03
TEH Area:1542342 TEH Amount: 4.720198E-02

ERH2542 (OWDFMW07A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0011.RAW

B22021435-001D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-001D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0011.RAW
Date & Time Acquired: 2/23/2022 4:31:21 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.224	.189	.169	89.37	-
*1-Chlorooctadecane	29.972	.189	.		-
*#Triacontane	16.301	.189	.077	40.98	-

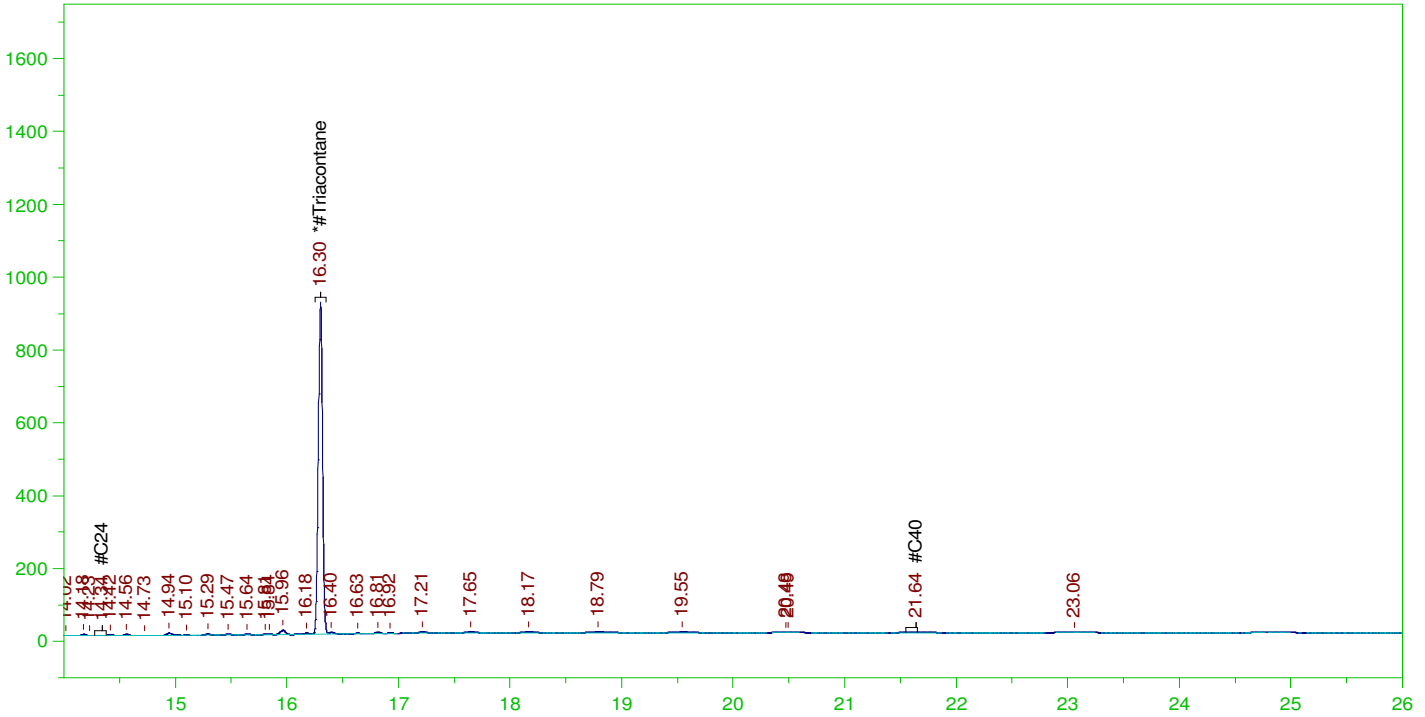
DRO Area:412457.1 DRO Amount: 1.190838E-02
TEH Area:828424.2 TEH Amount: 2.391809E-02

ERH2542 (OWDFMW07A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0011.RAW

B22021435-001D ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-001D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0011.RAW
Date & Time Acquired: 2/23/2022 4:31:21 PM
Method File: G:\Org\HP5\Methods\DR_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.301	.472	.077	16.39

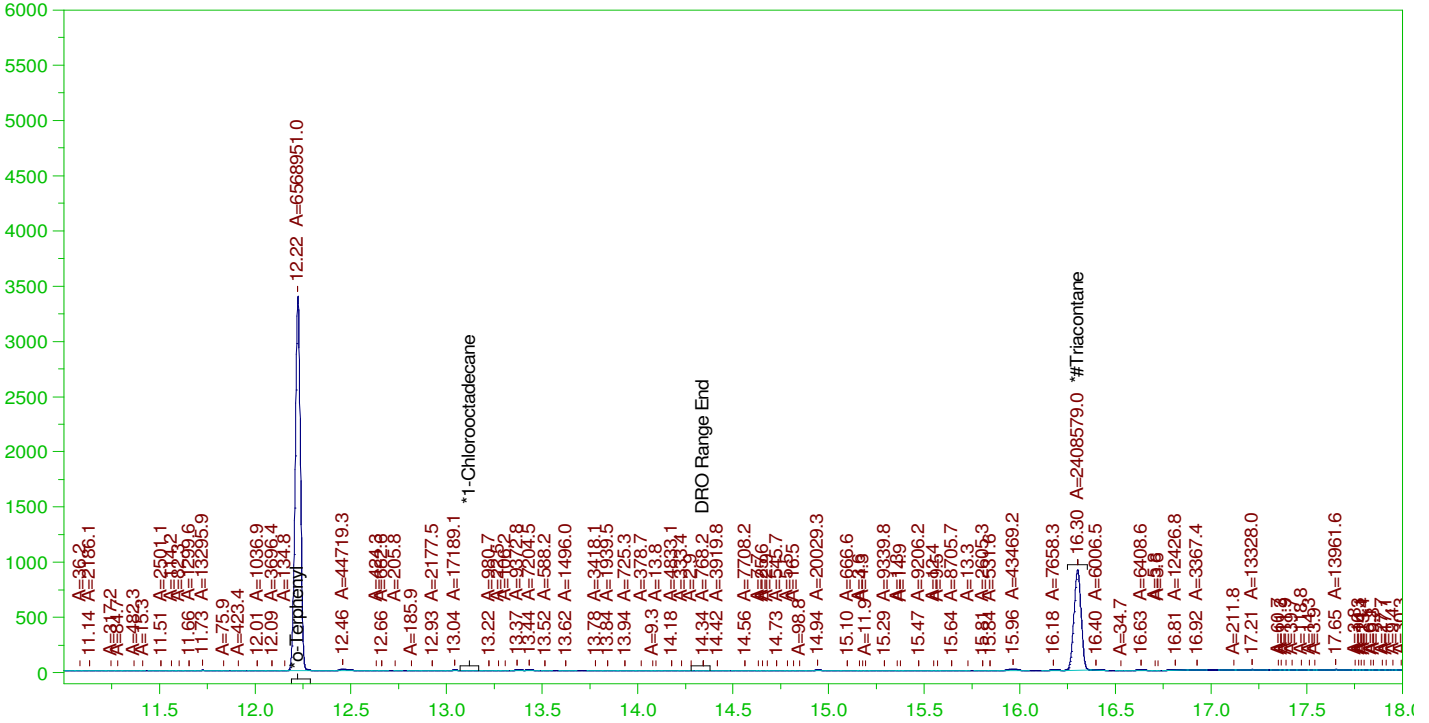
RRO Area:276649 RRO AMOUNT: 9.876785E-03

ERH2542 (OWDFMW07A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0011.RAW

B22021435-001D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-001D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0011.RAW
Date & Time Acquired: 2/23/2022 4:31:21 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.224	.189	.168	89.11
*1-Chlorooctadecane	29.972	.189	.	-
*#Triacontane	16.301	.189	.077	40.64

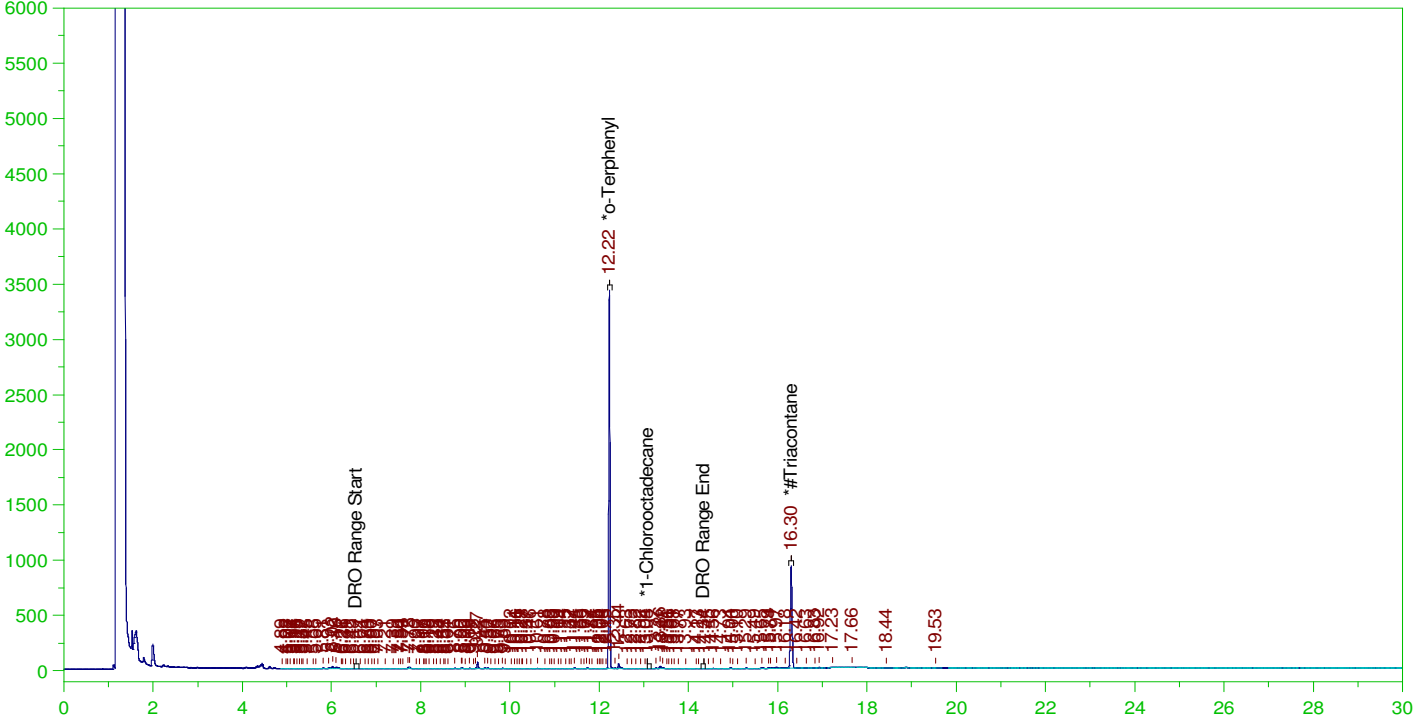
DRO Area:278540.2 DRO Amount: 8.041956E-03
TEH Area:977895 TEH Amount: 2.823358E-02

ERH2553 (RHMW2254-01 Low Flow)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0012.RAW

B22021435-027D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-027D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0012.RAW
Date & Time Acquired: 2/23/2022 5:14:25 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.189	.172	90.96	-
*1-Chlorooctadecane	13.078	.189	.	.07	-
*#Triacontane	16.299	.189	.079	41.7	-

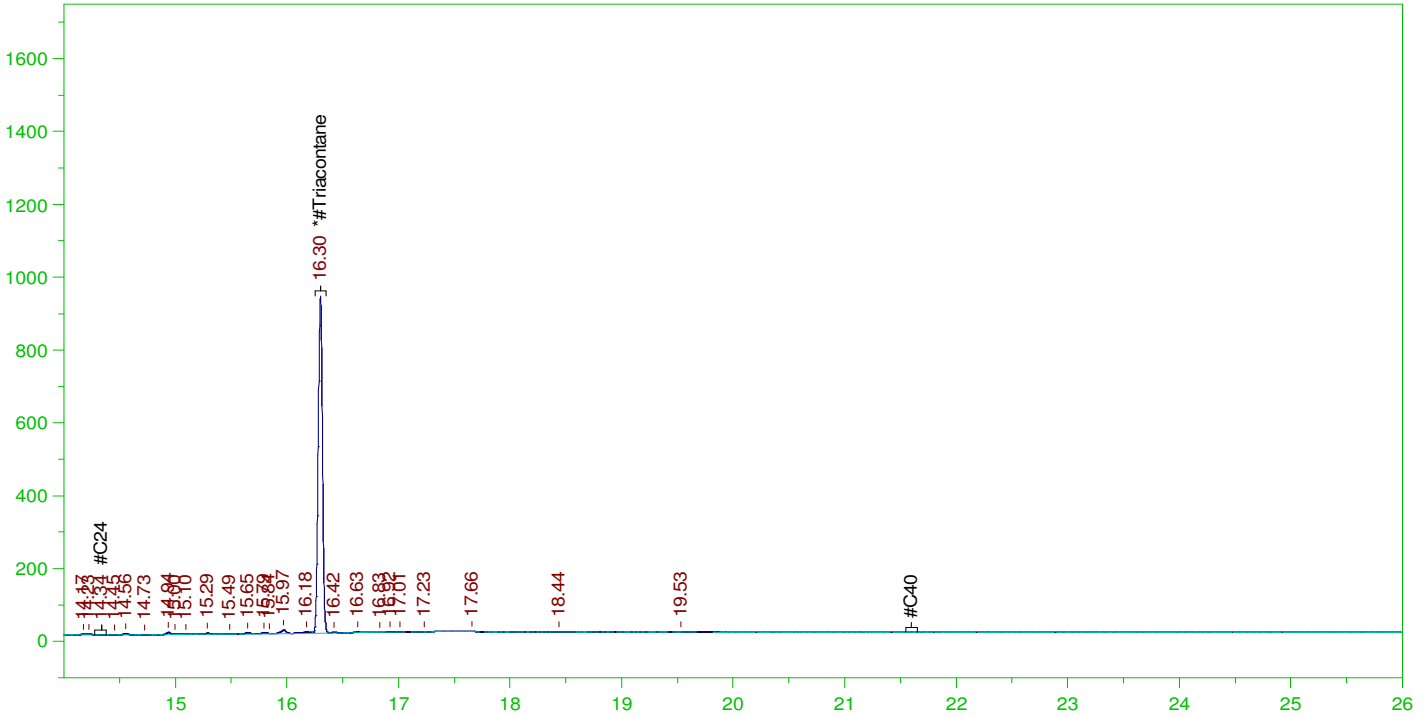
DRO Area:967812.6 DRO Amount: 2.794249E-02
TEH Area:1388966 TEH Amount: 4.010195E-02

ERH2553 (RHMW2254-01 Low Flow)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0012.RAW

B22021435-027D ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-027D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0012.RAW
Date & Time Acquired: 2/23/2022 5:14:25 PM
Method File: G:\Org\HP5\Methods\DR_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.299	.472	.079	16.68

RRO Area:156538.7 RRO AMOUNT: 5.588667E-03

ERH2553 (RHMW2254-01 Low Flow)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0012.RAW

B22021435-027D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-027D ;0223HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0012.RAW
 Date & Time Acquired: 2/23/2022 5:14:25 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.189	.171	90.62	-
*1-Chlorooctadecane	13.078	.189	.	.01	-
*#Triacontane	16.299	.189	.078	41.48	-

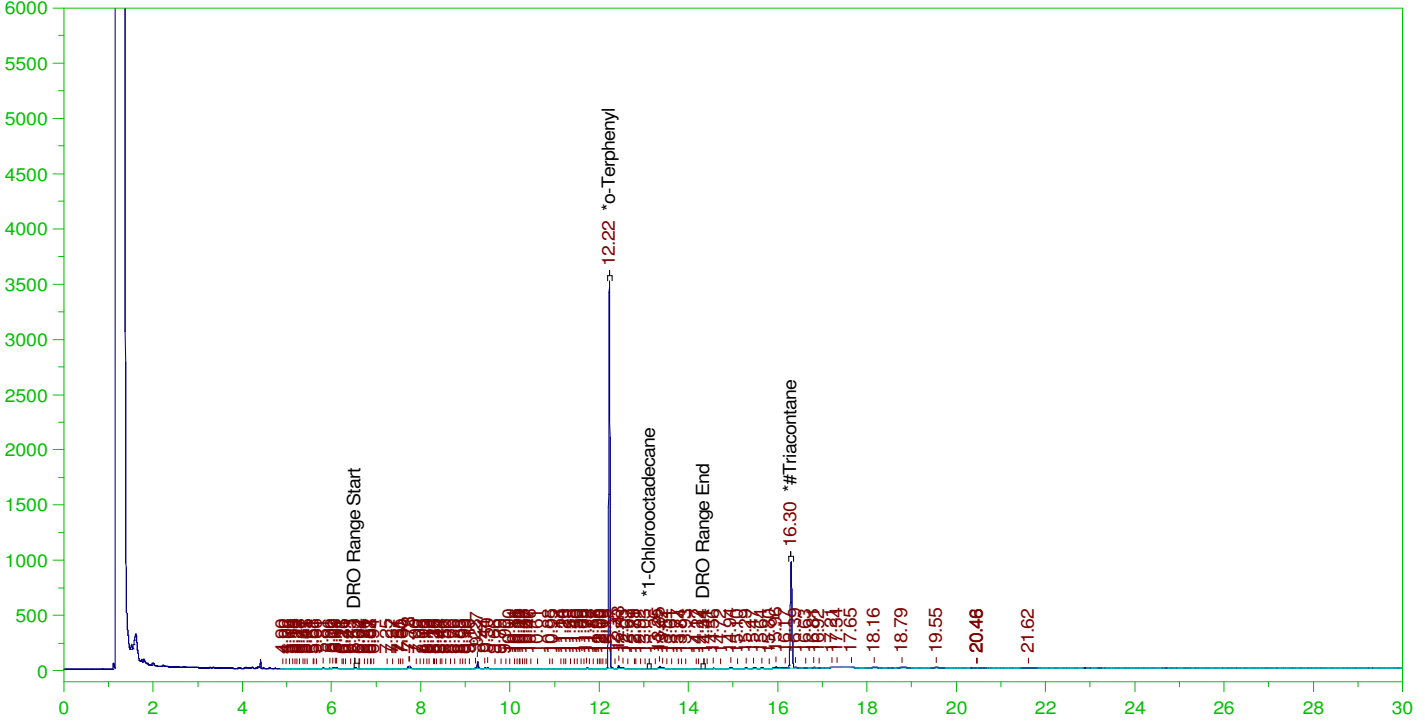
DRO Area:774304.3 DRO Amount: 2.235555E-02
 TEH Area:1693029 TEH Amount: 4.888077E-02

ERH2544 (OWDFMW08A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0013.RAW

B22021435-006D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-006D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0013.RAW
Date & Time Acquired: 2/23/2022 5:57:22 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.189	.177	93.78	-
*1-Chlorooctadecane	29.987	.189	.	.	-
*#Triacontane	16.298	.189	.081	43.03	-

DRO Area:922744.9
TEH Area:1381699

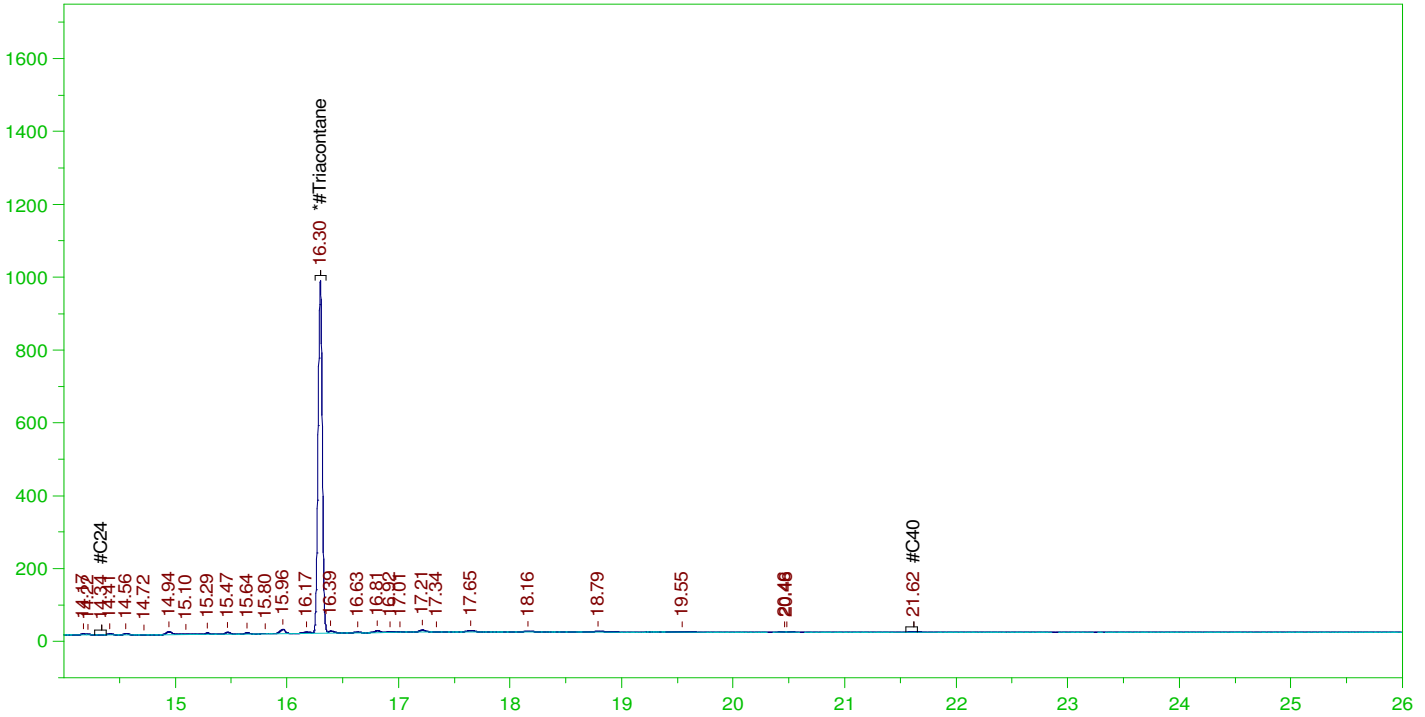
DRO Amount: 0.0266413
TEH Amount: 3.989212E-02

ERH2544 (OWDFMW08A)

Batch ID: 163927

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B22021435-006D ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-006D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0013.RAW
Date & Time Acquired: 2/23/2022 5:57:22 PM
Method File: G:\Org\HP5\Methods\DR_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.298	.472	.081	17.21

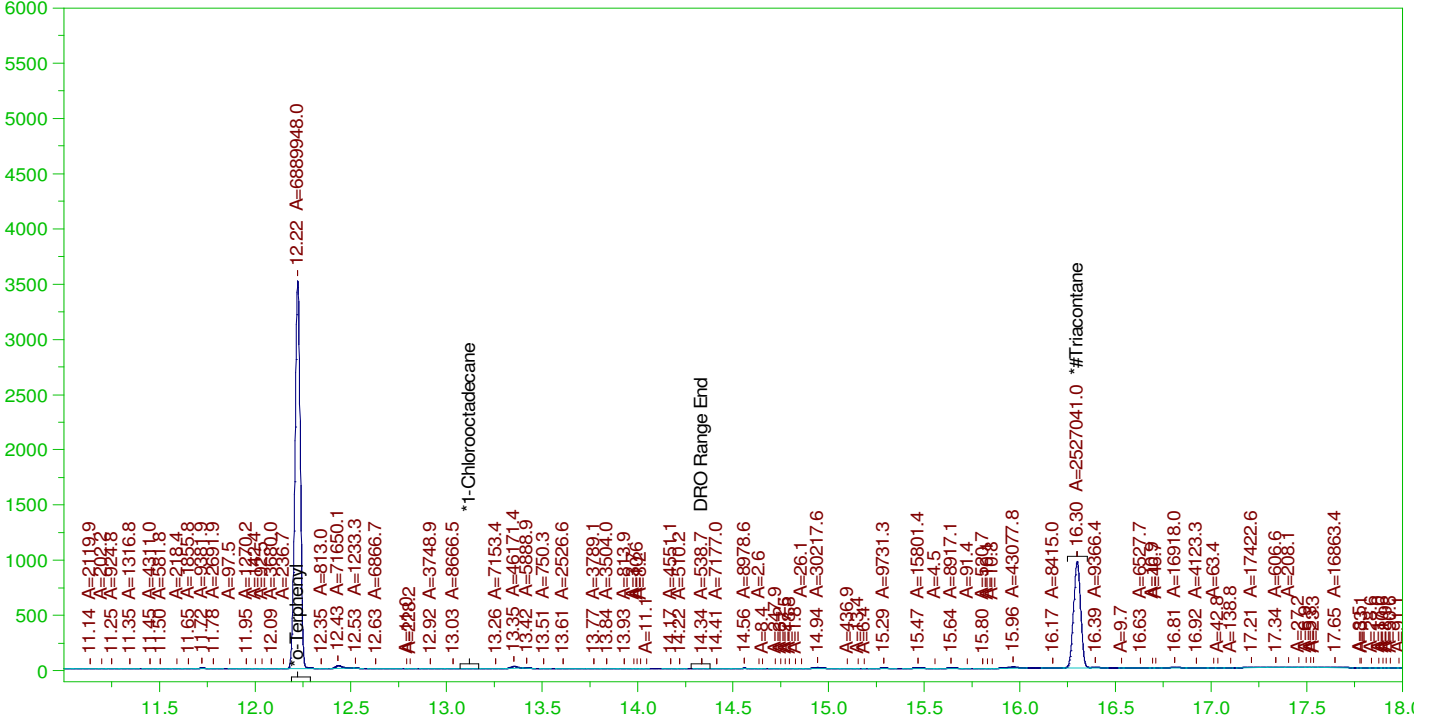
RRO Area:303201.2 RRO AMOUNT: 1.082474E-02

ERH2544 (OWDFMW08A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0013.RAW

B22021435-006D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

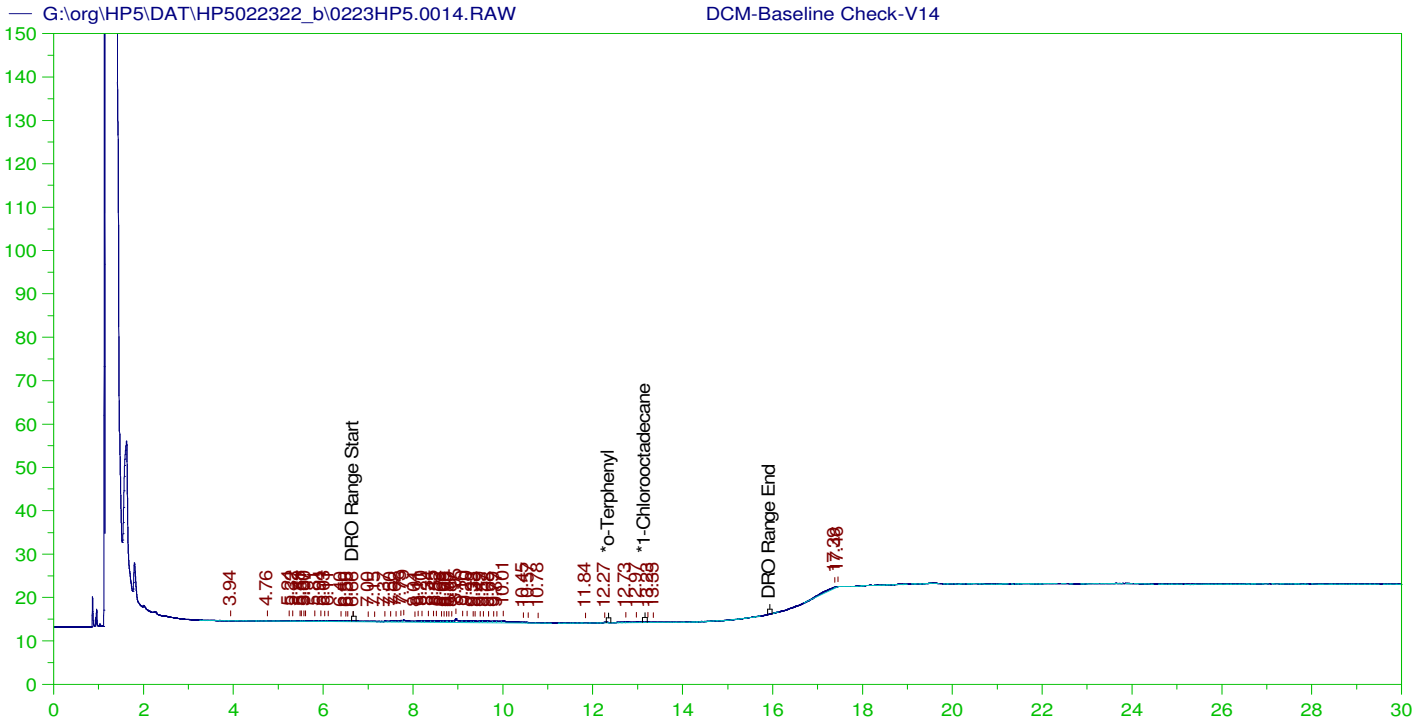
Sample Name: B22021435-006D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0013.RAW
Date & Time Acquired: 2/23/2022 5:57:22 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.189	.176	93.47	-
*1-Chlorooctadecane	29.987	.189	.		-
*#Triacontane	16.298	.189	.08	42.63	-

DRO Area:752153.4 DRO Amount: 2.171602E-02
TEH Area:1626248 TEH Amount: 4.695271E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0014.RAW
 Date & Time Acquired: 2/23/2022 6:40:31 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	29.909	200.	.	-
*1-Chlorooctadecane	29.909	200.	.	-

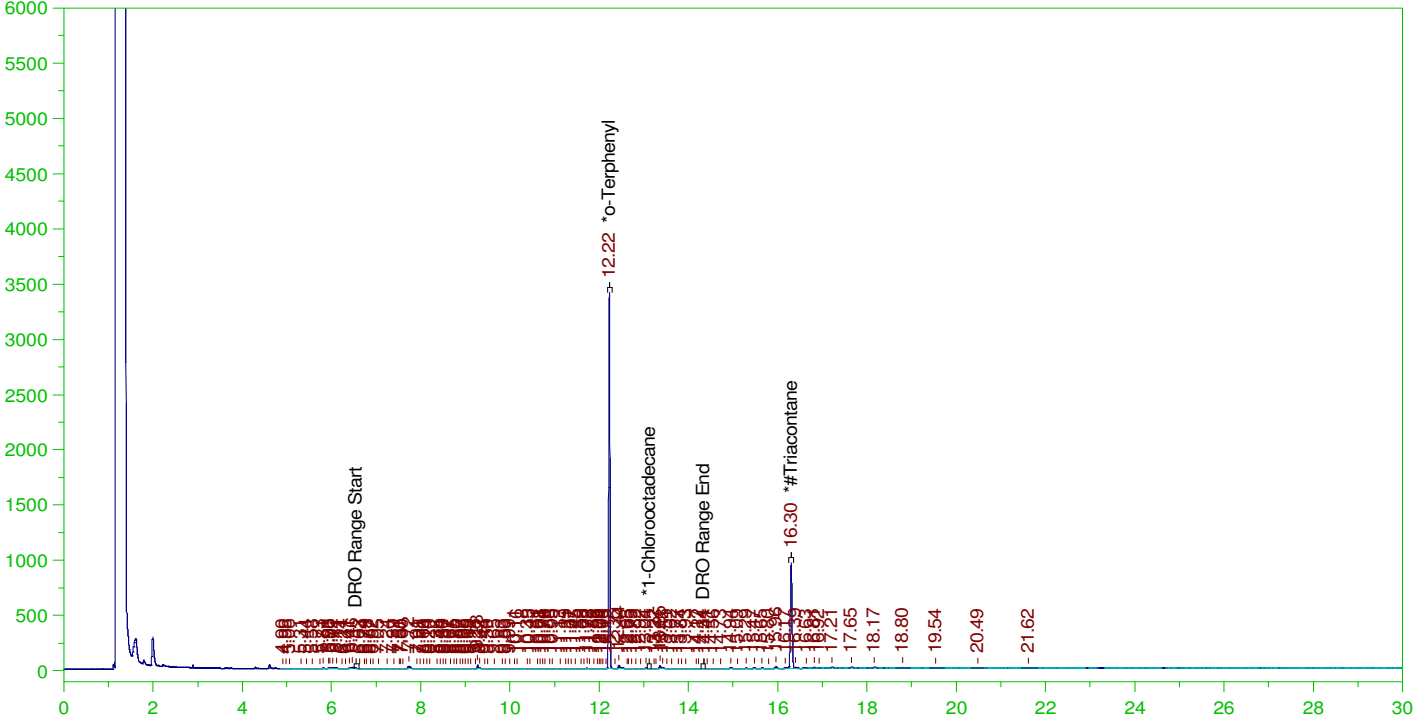
DRO Area:71395.02 DRO Amount: 2.18498
 TEH Area:114696 TEH Amount: 3.510168

ERH2545 (OWDFMW08A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0015.RAW

B22021435-007B ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-007B ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0015.RAW
Date & Time Acquired: 2/23/2022 7:23:31 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.189	.171	90.85	-
*1-Chlorooctadecane	29.964	.189	.	.	-
*#Triacontane	16.3	.189	.08	42.51	-

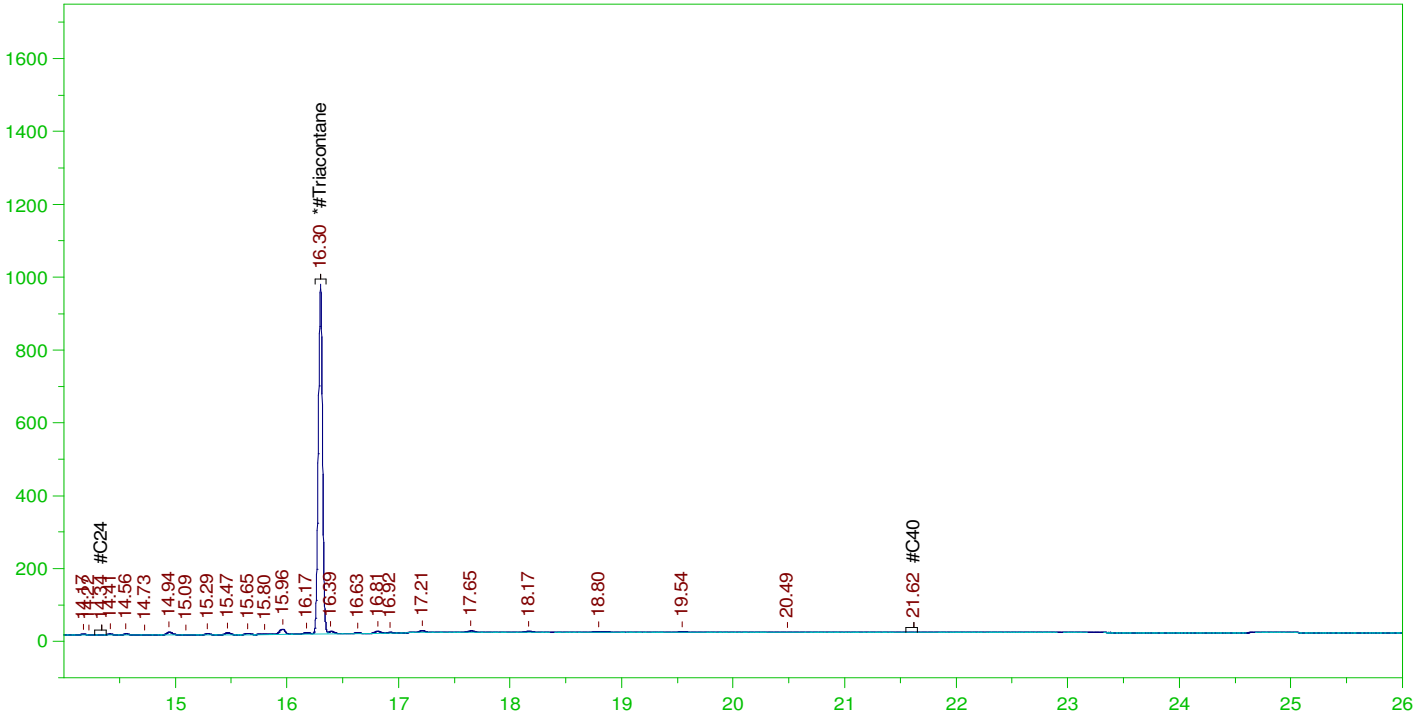
DRO Area:765806.6 DRO Amount: 2.211021E-02
TEH Area:1364010 TEH Amount: 3.938141E-02

ERH2545 (OWDFMW08A)

Batch ID: 163927

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B22021435-007B ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-007B ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0015.RAW
Date & Time Acquired: 2/23/2022 7:23:31 PM
Method File: G:\Org\HP5\Methods\DR_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane_____	16.3	.472	.08	17.01	-

RRO Area:349287.5 RRO AMOUNT: 1.247009E-02

ERH2545 (OWDFMW08A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0015.RAW

B22021435-007B ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-007B ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0015.RAW
Date & Time Acquired: 2/23/2022 7:23:31 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.189	.171	90.6	-
*1-Chlorooctadecane	29.964	.189	.		-
*#Triacontane	16.3	.189	.079	42.08	-

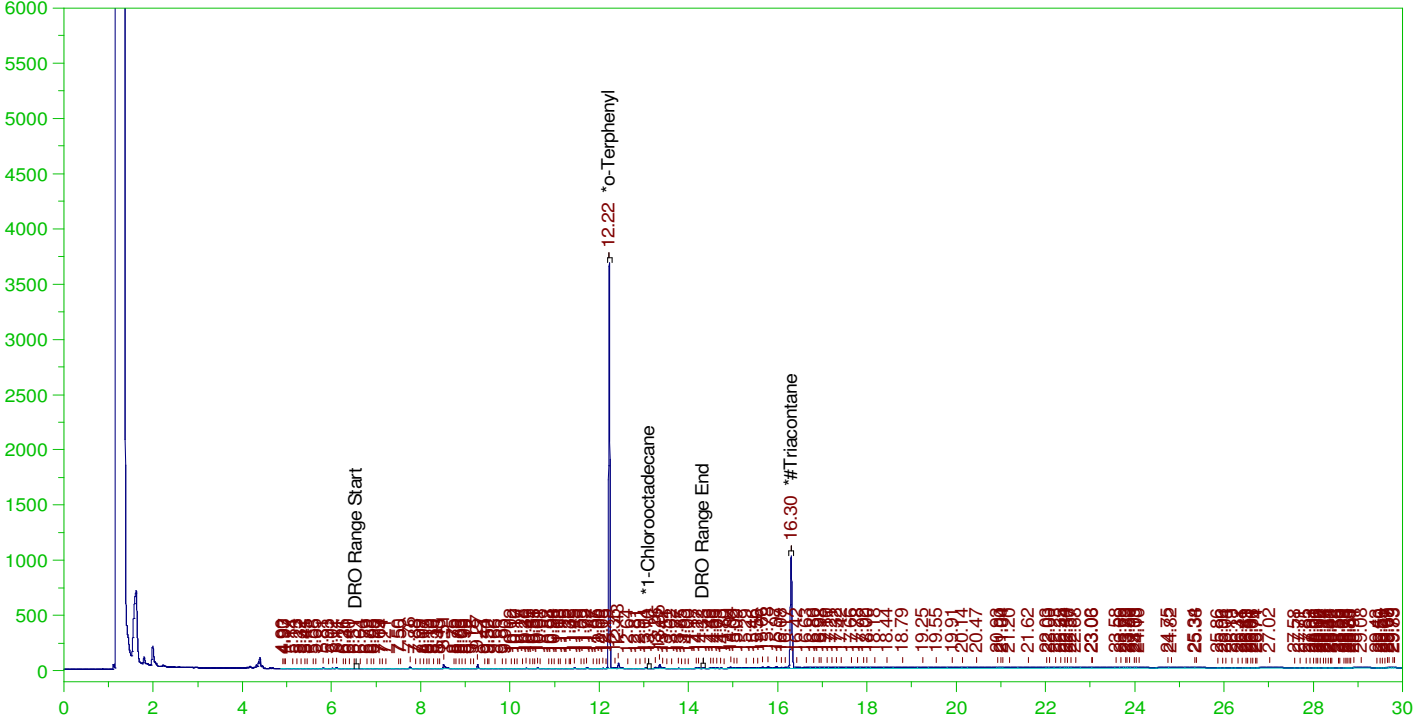
DRO Area:607508.8 DRO Amount: 1.753987E-02
TEH Area:1442275 TEH Amount: 4.164107E-02

ERH2547 (RHMW19)

Batch ID: 163927

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B22021435-012D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-012D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0016.RAW
Date & Time Acquired: 2/23/2022 8:06:27 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.189	.183	96.82	-
*1-Chlorooctadecane	13.098	.189	.	.05	-
*#Triacontane	16.299	.189	.086	45.57	-

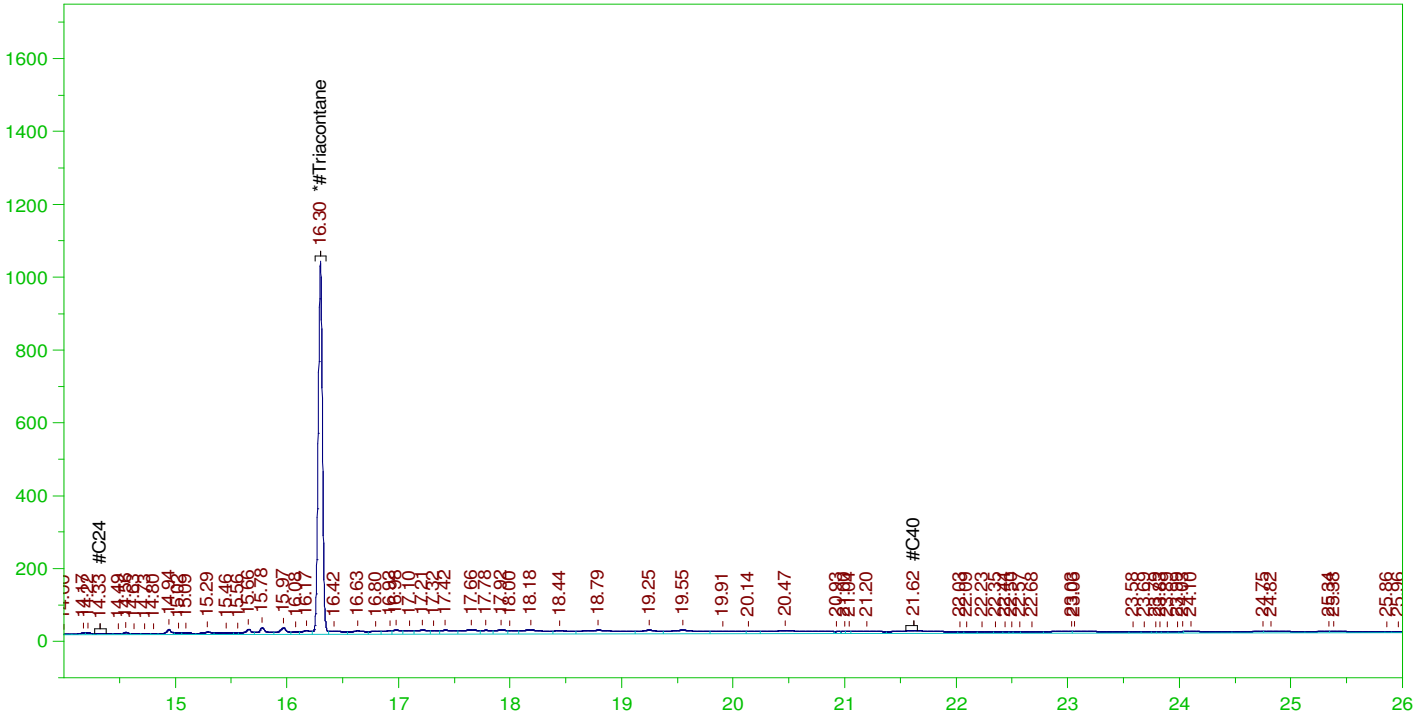
DRO Area:1055986 DRO Amount: 3.048821E-02
TEH Area:5253937 TEH Amount: 0.1516906

ERH2547 (RHMW19)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0016.RAW

B22021435-012D ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-012D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0016.RAW
Date & Time Acquired: 2/23/2022 8:06:27 PM
Method File: G:\Org\HP5\Methods\D3_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.299	.472	.086	18.23

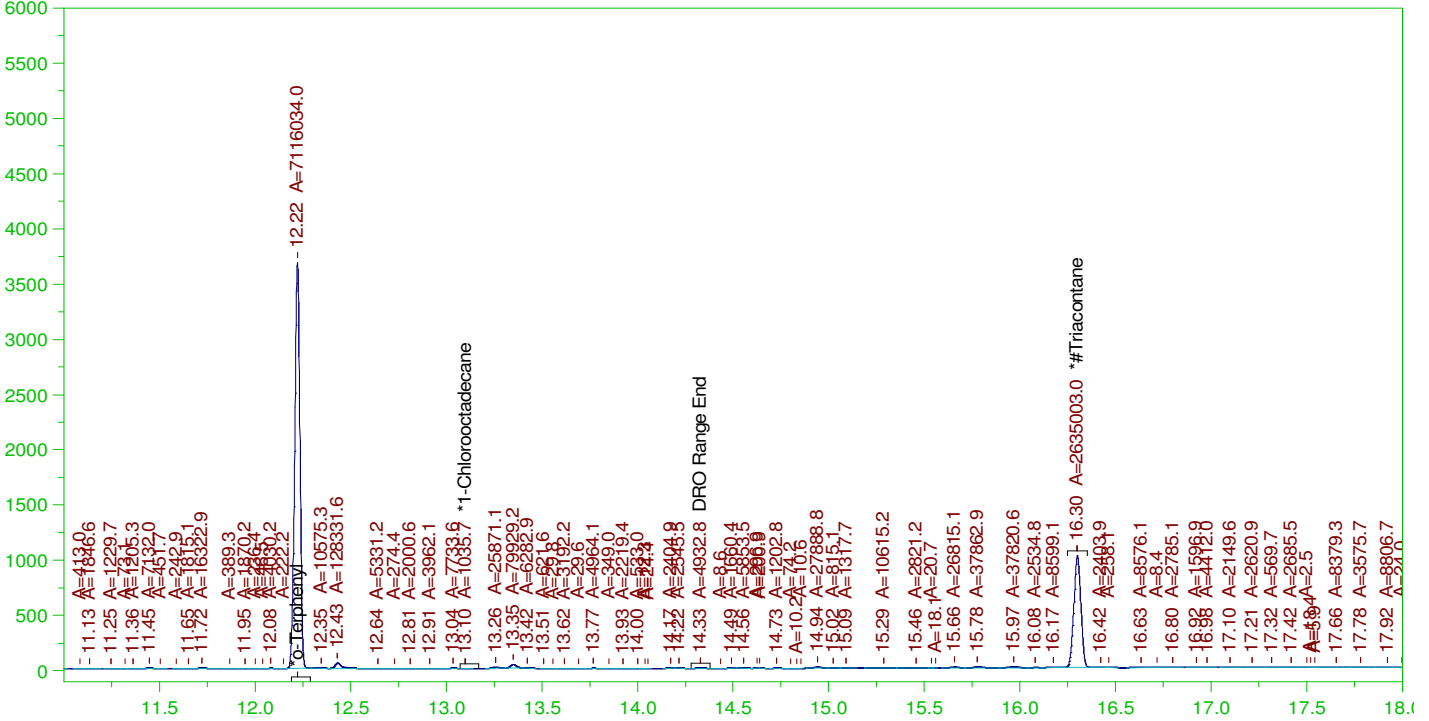
RRO Area:3025143 RRO AMOUNT: 0.1080021

ERH2547 (RHMW19)

Batch ID: 163927

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B22021435-012D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-012D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0016.RAW
Date & Time Acquired: 2/23/2022 8:06:27 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

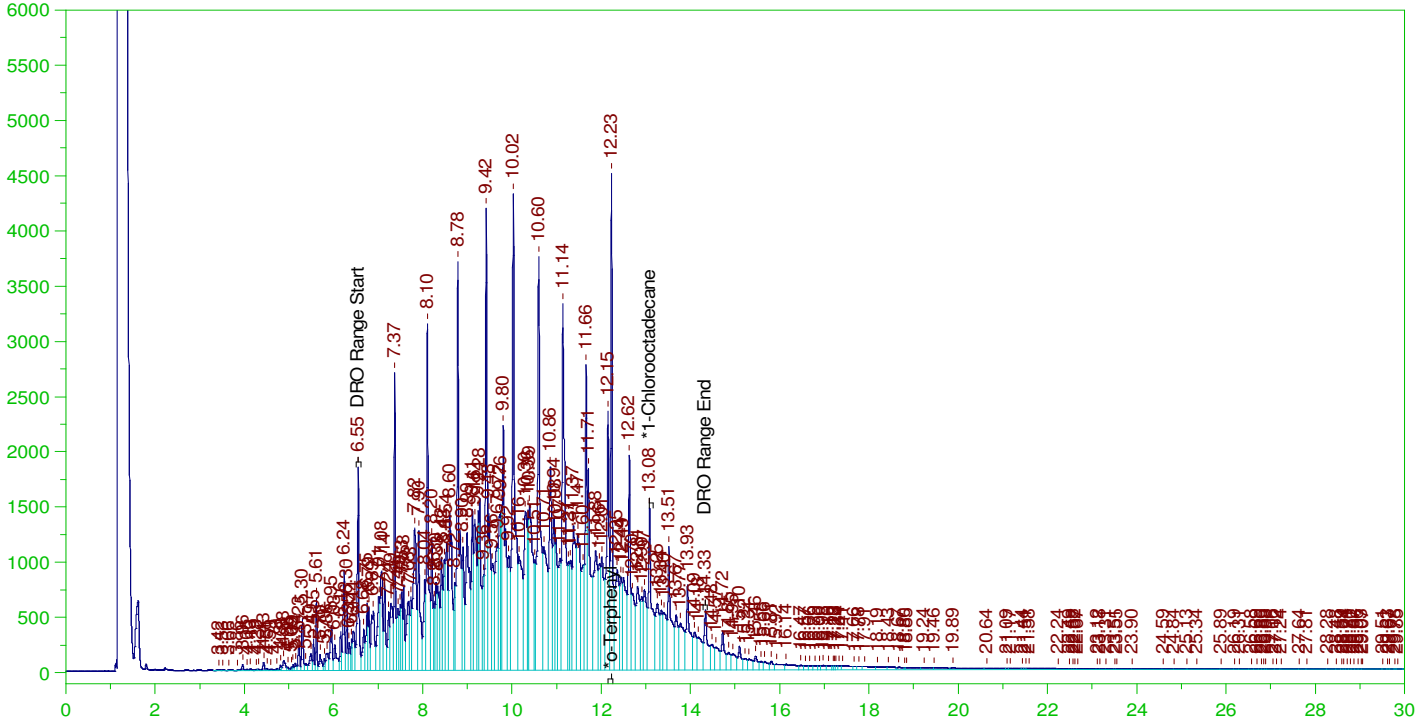
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.189	.182	96.53	-
*1-Chlorooctadecane	13.098	.189	.	.01	-
*Triacontane	16.299	.189	.084	44.46	-

DRO Area:792326.3 DRO Amount: 2.287588E-02
TEH Area:1960971 TEH Amount: 5.661675E-02

Batch ID: 163927

B22021435-012DMS ;0223HP5 ,

G:\org\HP5\DAT\HP5022322_b\0223HP5.0017.RAW



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-012DMS ;0223HP5 ,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0017.RAW
Date & Time Acquired: 2/23/2022 8:49:20 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

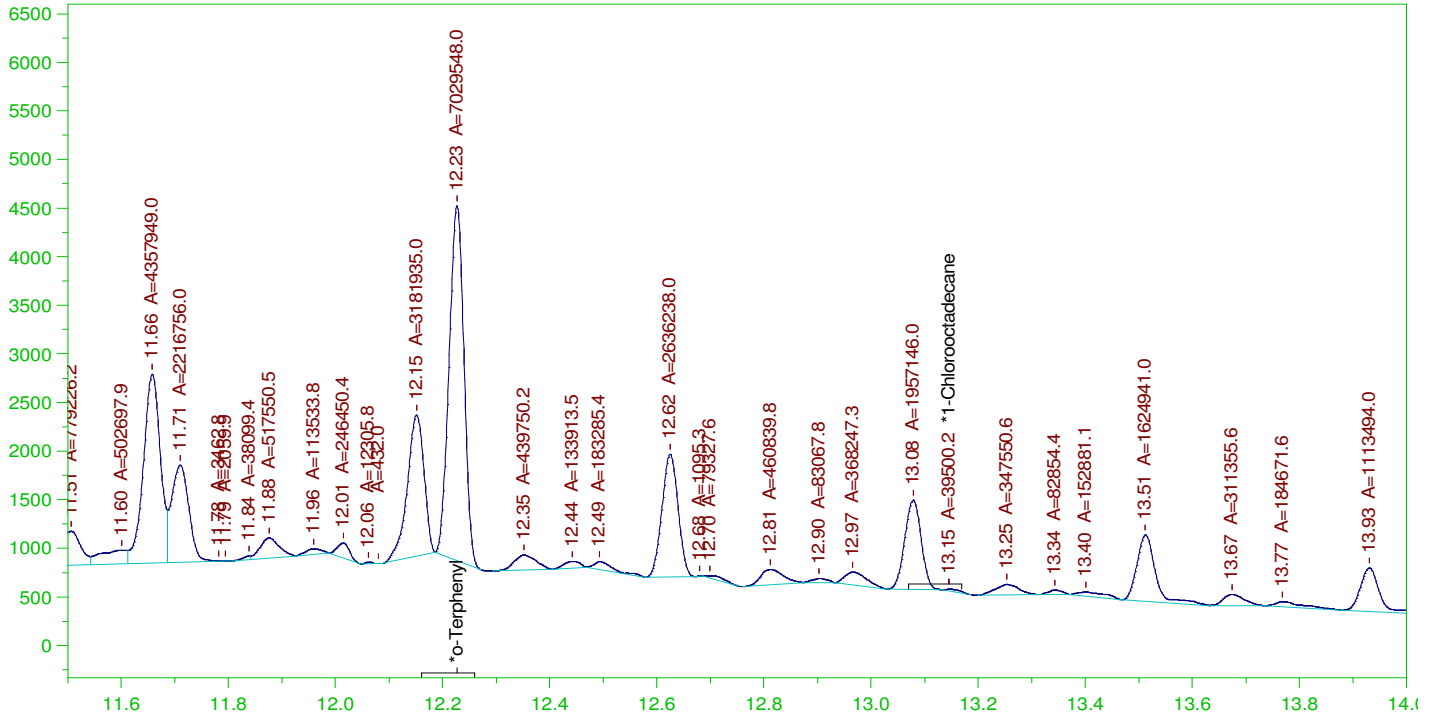
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.227	.19	.317	166.28	-
*1-Chlorooctadecane	13.079	.19	.194	101.74	-

DRO Area: 4.149369E+08 DRO Amount: 12.09407
TEH Area: 4.530452E+08 TEH Amount: 13.2048

Batch ID: 163927

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B22021435-012DMS ;0223HP5 ,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

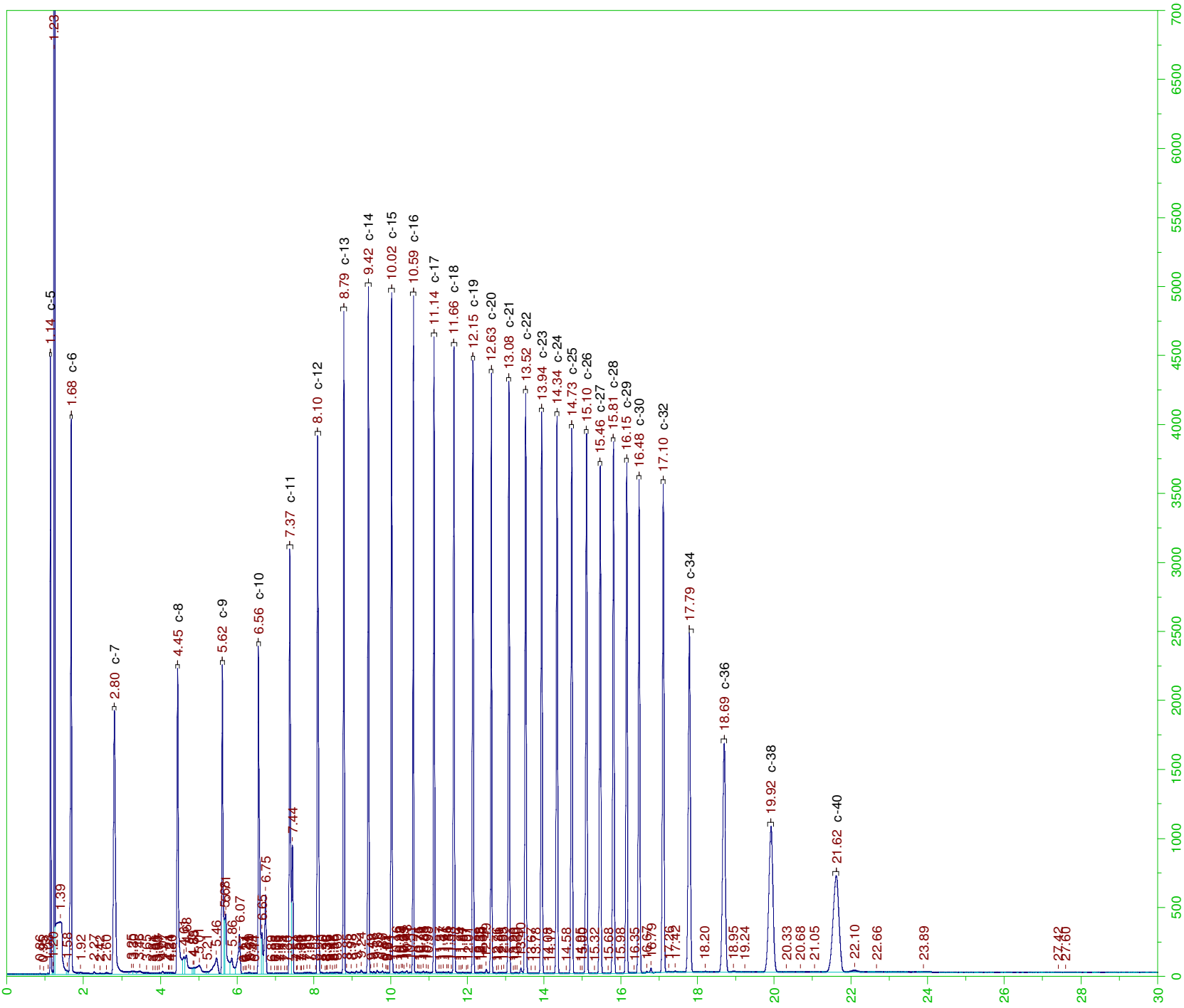
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 Sample Weight: 1050 Dilution: 1 S.A.: 1

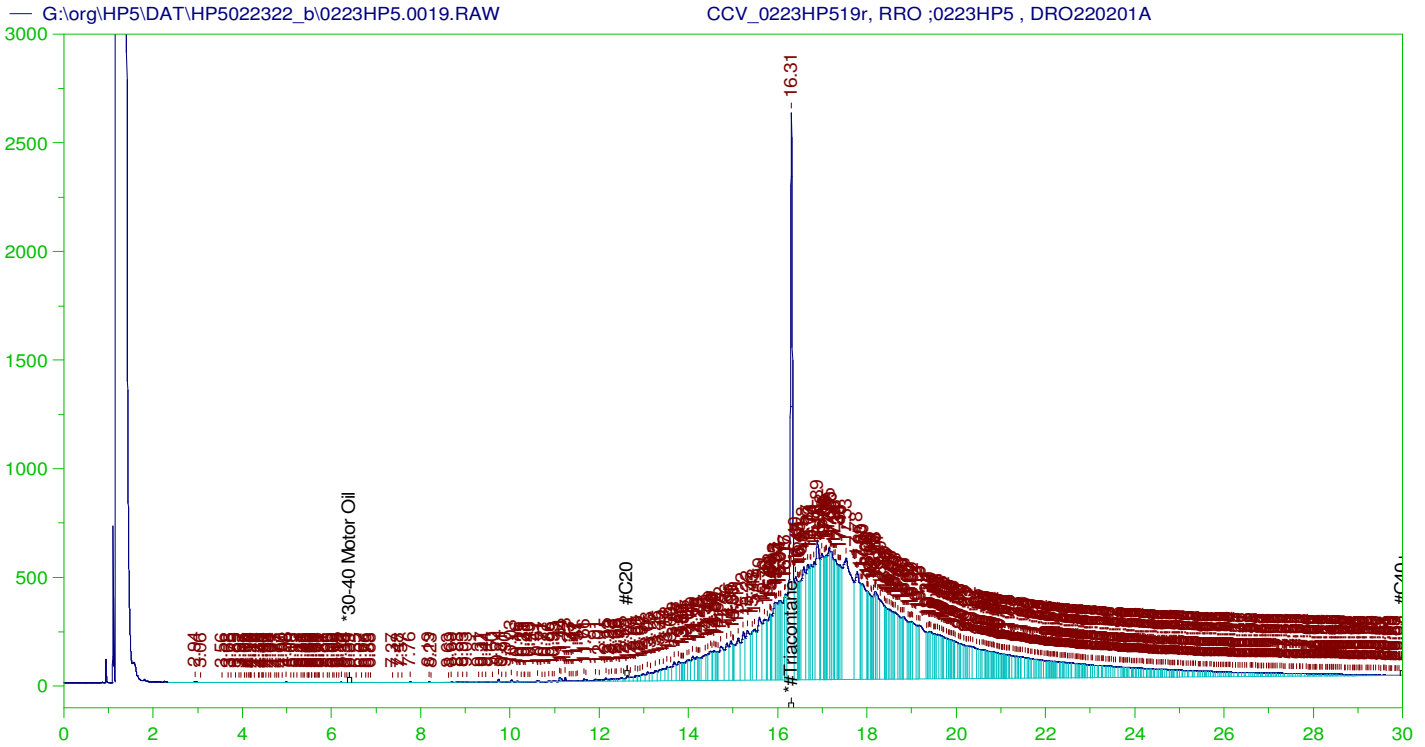
Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.227	.19	.182	95.36	-
*1-Chlorooctadecane	13.146	.19	.001	.54	-

DRO Area:1.935154E+08 DRO Amount: 5.640347
 TEH Area:2.073155E+08 TEH Amount: 6.042576





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP519r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0019.RAW
 Date & Time Acquired: 2/23/2022 10:15:14 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.306	500.	336.984	67.4	-

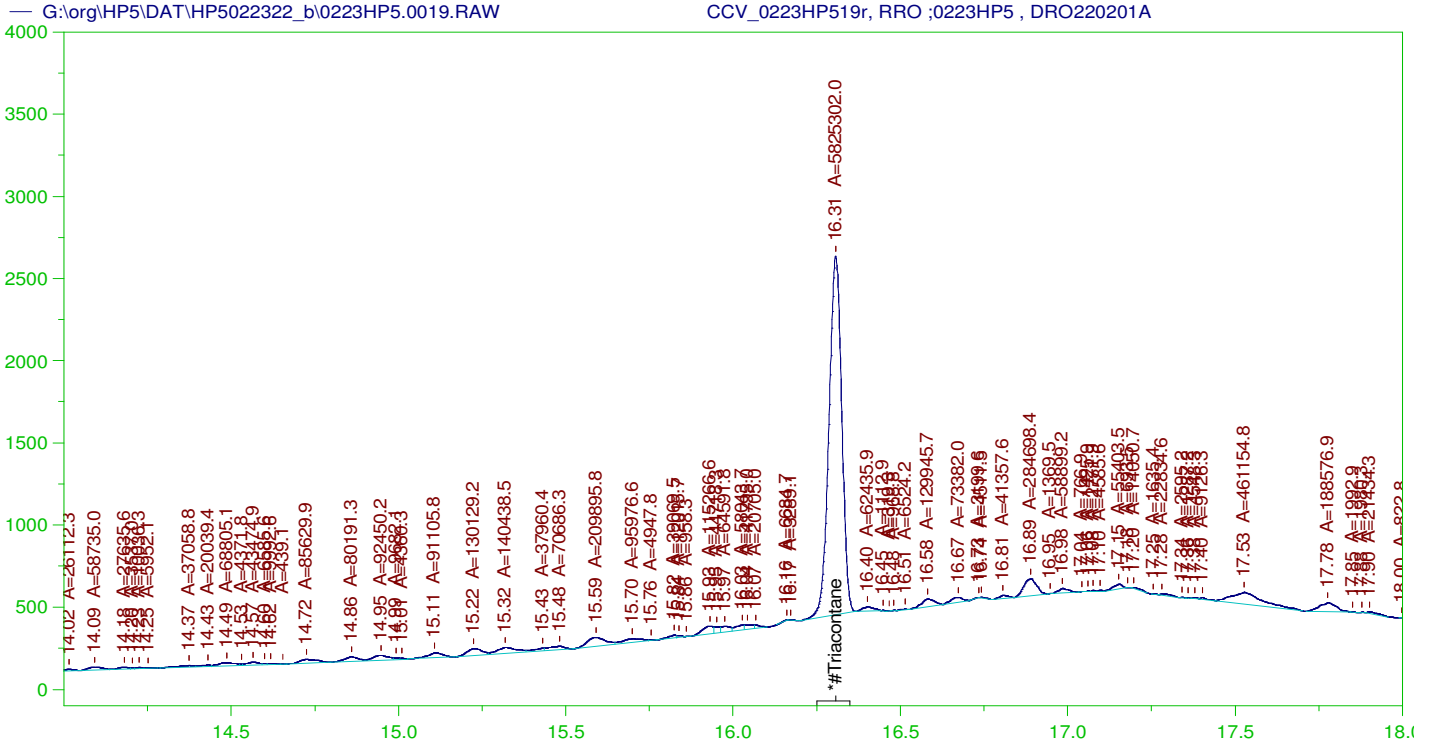
RRO TEH(Oil Range) Area:1.406763E+08 RRO TEH(Oil Range) AMOUNT: 5323.695

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.045	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.306	200.	336.984	168.49	75-125

JLB 02/28/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP519r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0019.RAW
 Date & Time Acquired: 2/23/2022 10:15:14 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

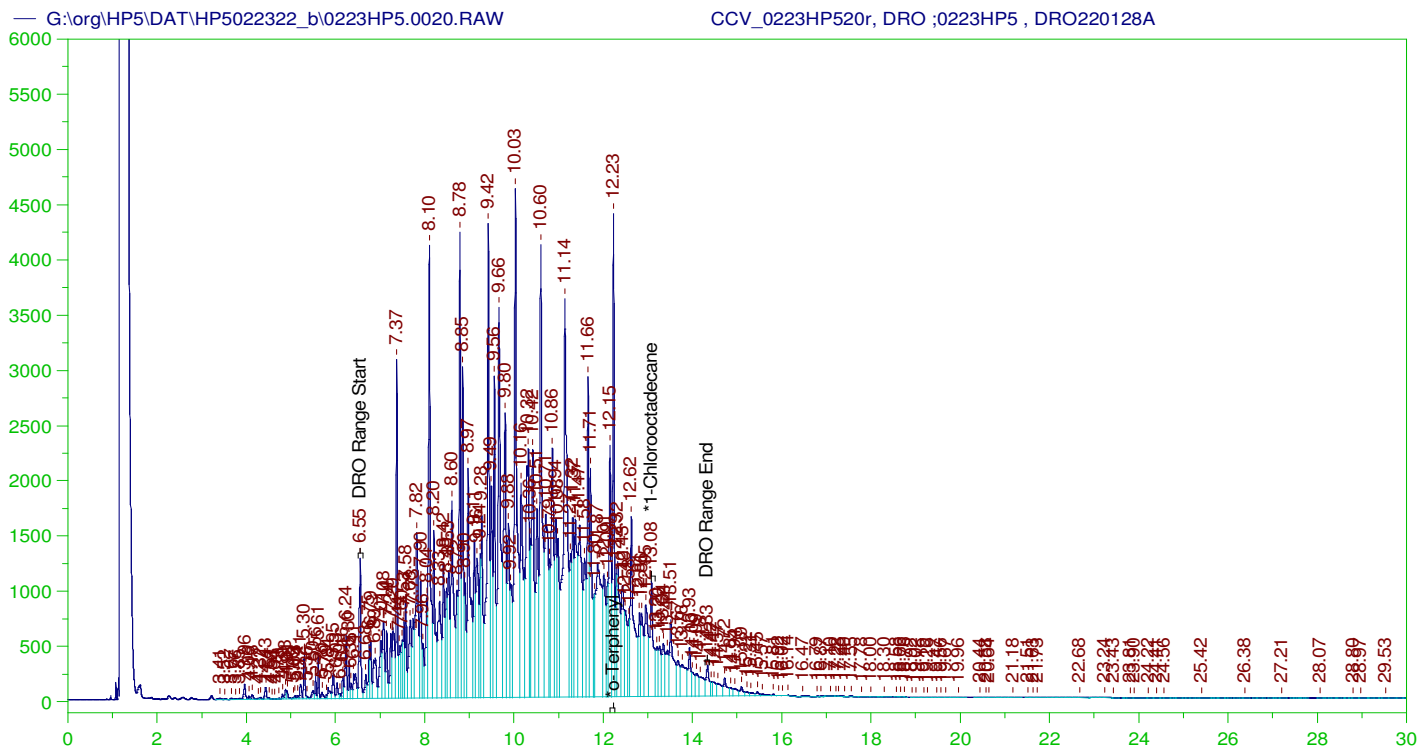
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.306	500.	196.561	39.31	-

RRO Area:3969923 RRO AMOUNT: 150.2362

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0019.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.045	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.306	200.	196.561	98.28	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP520r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0020.RAW
 Date & Time Acquired: 2/23/2022 10:58:15 PM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.51 to 14.38

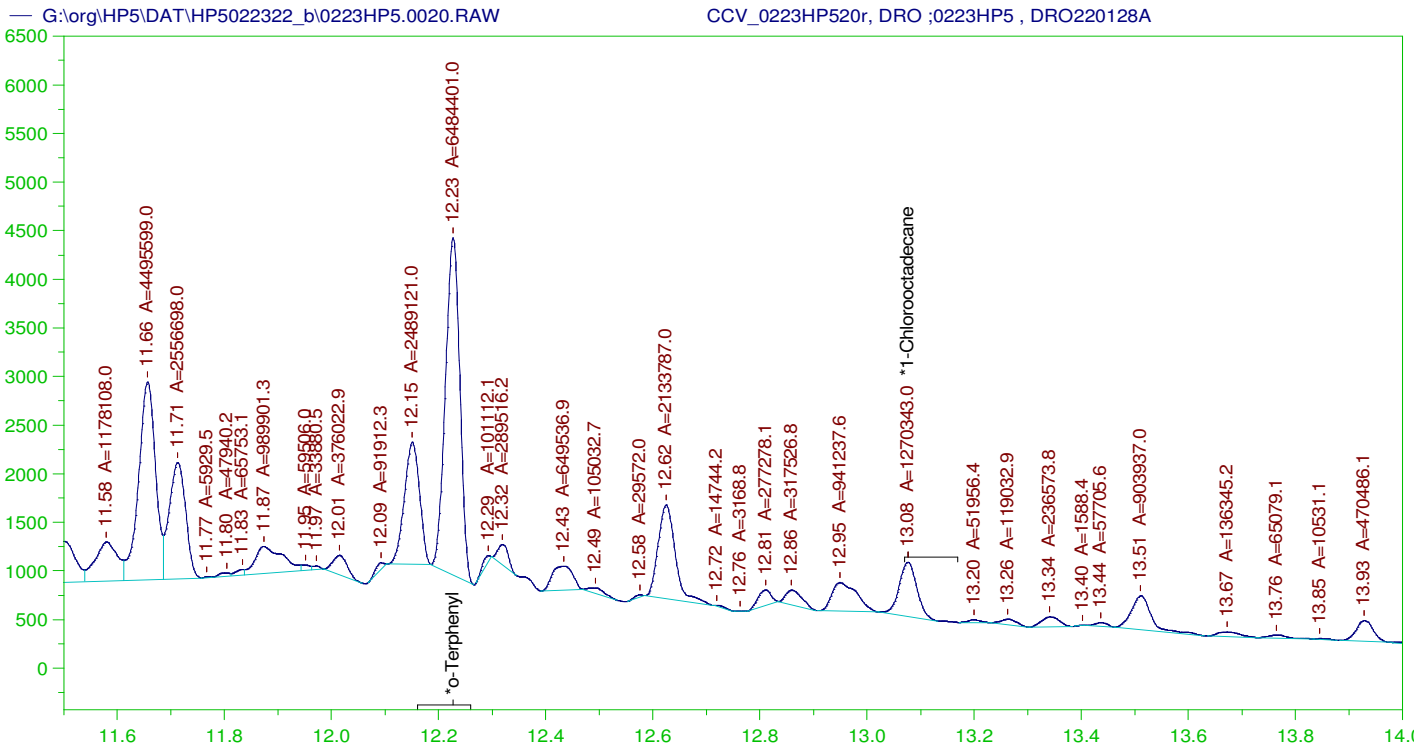
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.227	200.	296.758	148.38	-
*1-Chlorooctadecane	13.077	200.	150.689	75.34	-

DRO Area: 4.526384E+08 DRO Amount: 13852.59
 TEH Area: 4.683899E+08 TEH Amount: 14334.65

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	14334.65	95.56	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.227	200.	296.758	148.38	85-115
*1-Chlorooctadecane	13.077	200.	150.689	75.34	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP520r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0020.RAW
 Date & Time Acquired: 2/23/2022 10:58:15 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

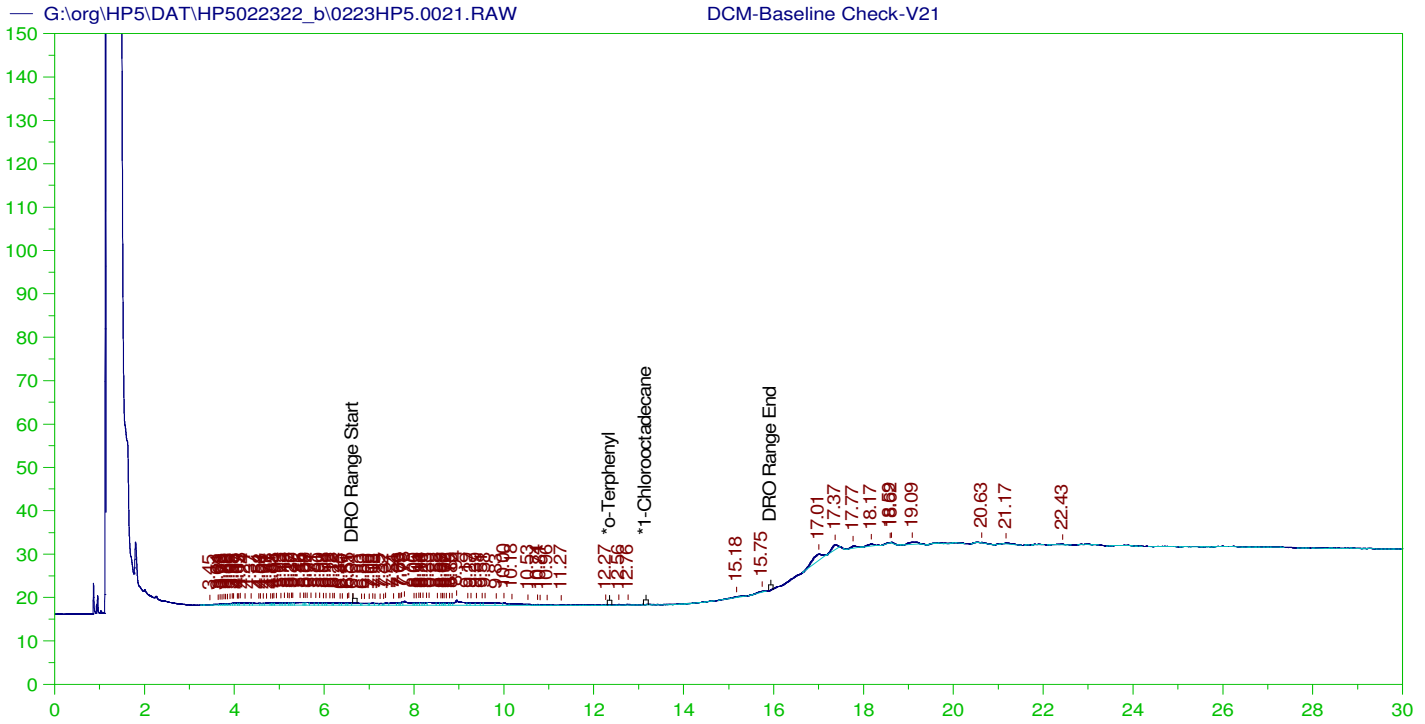
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.227	200.	175.93	87.96
*1-Chlorooctadecane	13.077	200.	34.466	17.23

DRO Area: 2.34572E+08 DRO Amount: 7178.865
 TEH Area: 2.447862E+08 TEH Amount: 7491.461

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0020.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7491.46	49.94	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.227	200.	175.93	87.96	85-115
*1-Chlorooctadecane	13.077	200.	34.466	17.23	85-115



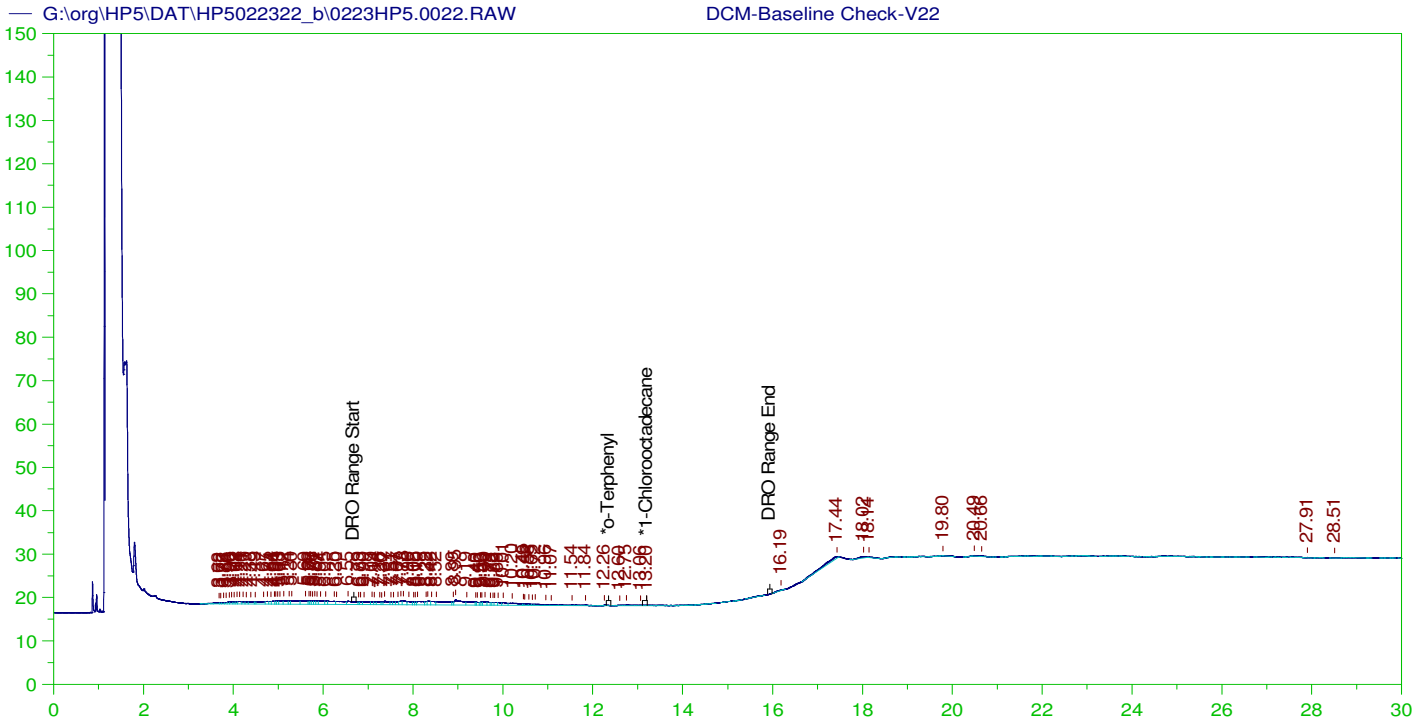
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V21
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0021.RAW
 Date & Time Acquired: 2/23/2022 11:41:11 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	29.981	200.	.	-
*1-Chlorooctadecane	29.981	200.	.	-

DRO Area:133013 DRO Amount: 4.070743
 TEH Area:288966.9 TEH Amount: 8.843574



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V22
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0022.RAW
 Date & Time Acquired: 2/24/2022 12:24:11 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	29.94	200.	.	-
*1-Chlorooctadecane	13.2	200.	.014	.01

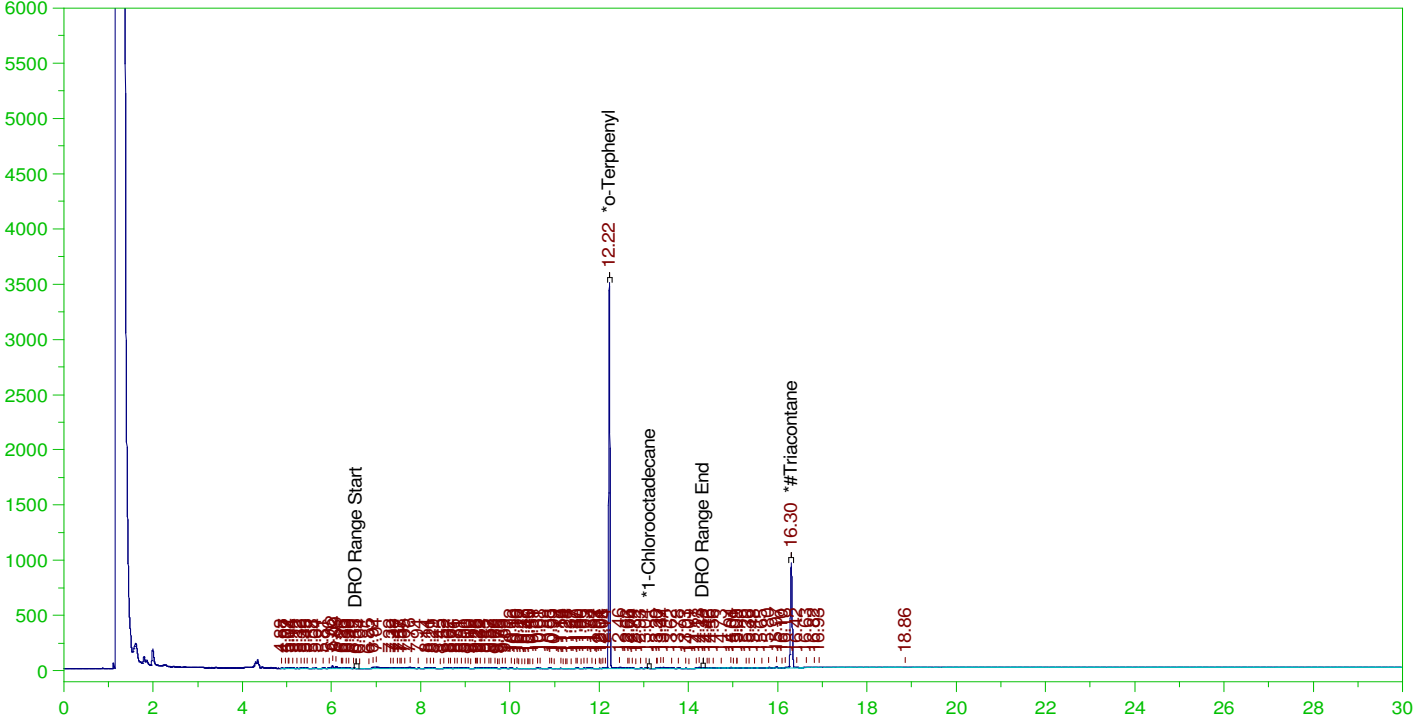
DRO Area:159834 DRO Amount: 4.891575
 TEH Area:309844.9 TEH Amount: 9.482525

ERH2551 (RHMW2254-01 Bailer)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0023.RAW

B22021435-022D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-022D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0023.RAW
Date & Time Acquired: 2/24/2022 1:07:07 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.189	.176	93.05	-
*1-Chlorooctadecane	29.989	.189	.	.	-
*#Triacontane	16.302	.189	.081	42.78	-

DRO Area:685565.2

DRO Amount: 0.0197935

TEH Area:1123990

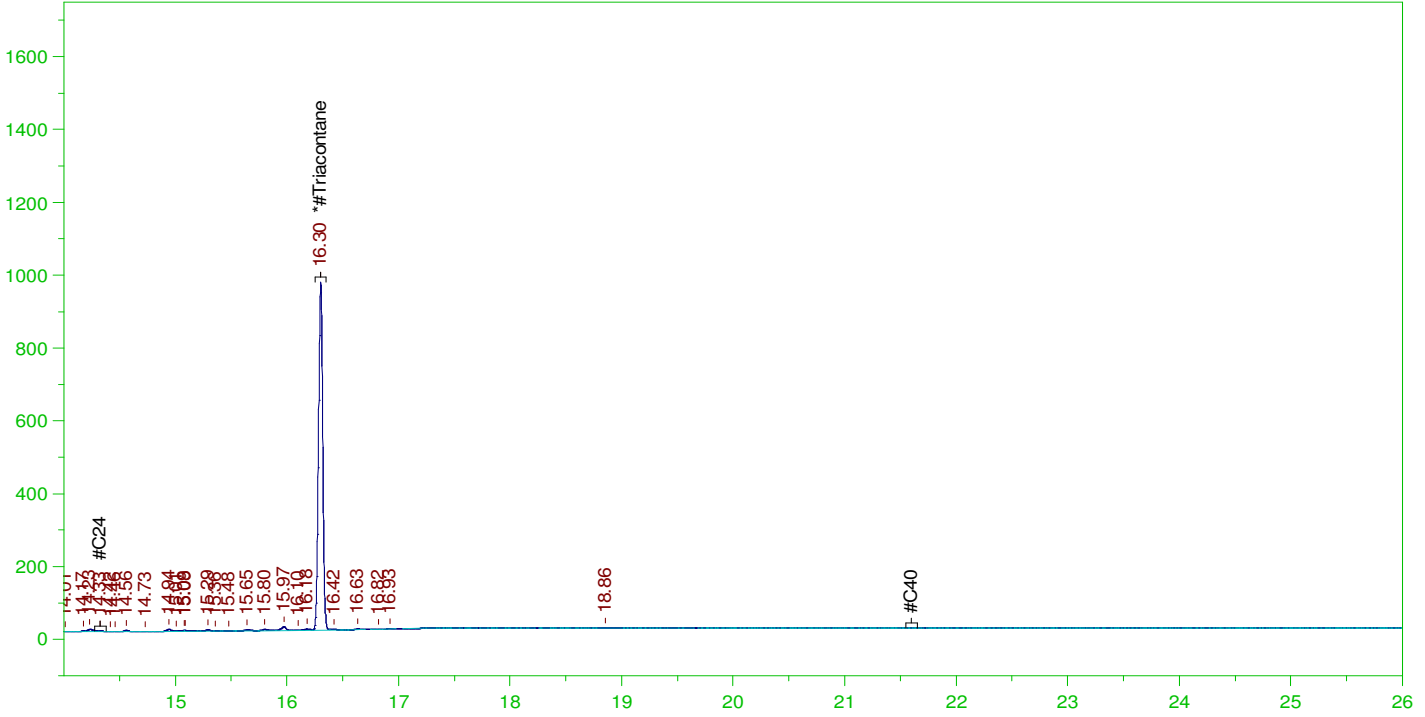
TEH Amount: 3.245162E-02

ERH2551 (RHMW2254-01 Bailer)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0023.RAW

B22021435-022D ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-022D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0023.RAW
Date & Time Acquired: 2/24/2022 1:07:07 AM
Method File: G:\Org\HP5\Methods\DR_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.302	.472	.081	17.11

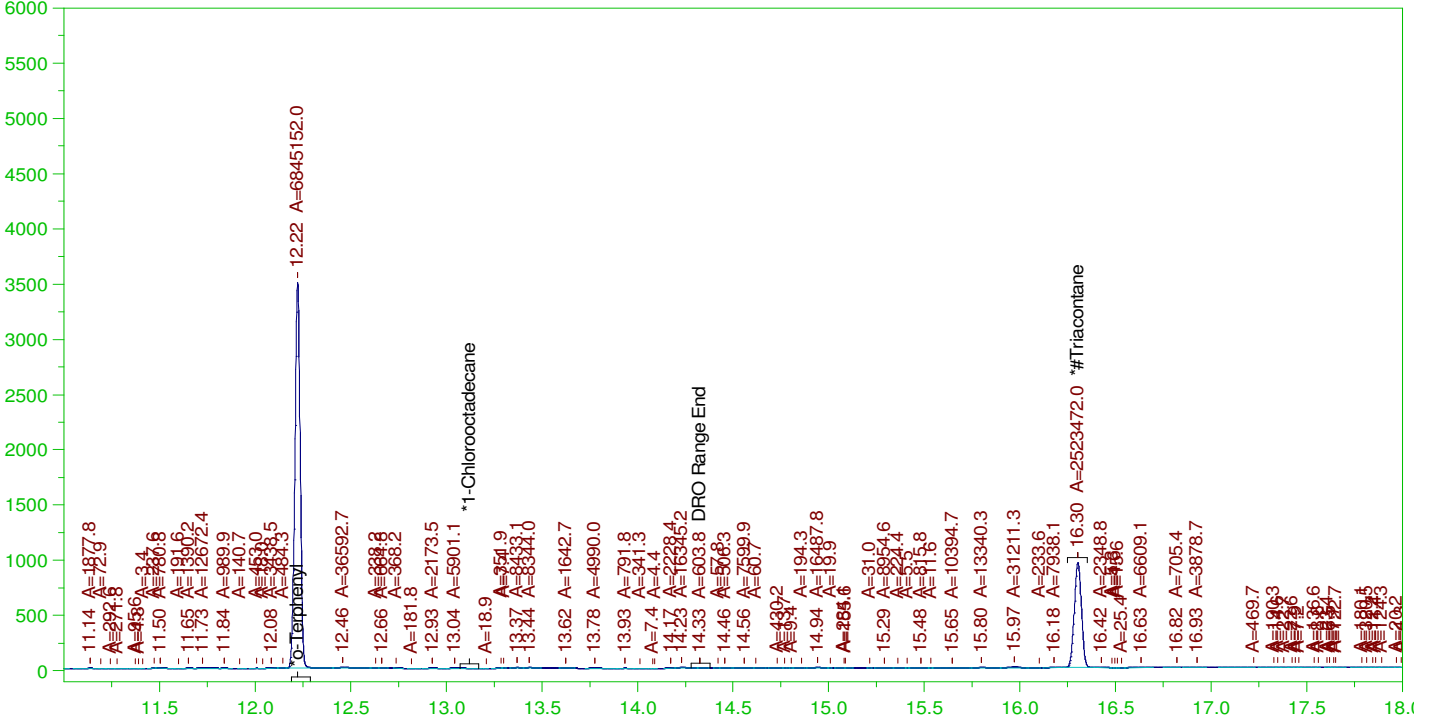
RRO Area:151105.1 RRO AMOUNT: 5.39468E-03

ERH2551 (RHMW2254-01 Bailer)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0023.RAW

B22021435-022D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-022D ;0223HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0023.RAW
 Date & Time Acquired: 2/24/2022 1:07:07 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.189	.175	92.86	-
*1-Chlorooctadecane	29.989	.189	.		-
*#Triacontane	16.302	.189	.08	42.57	-

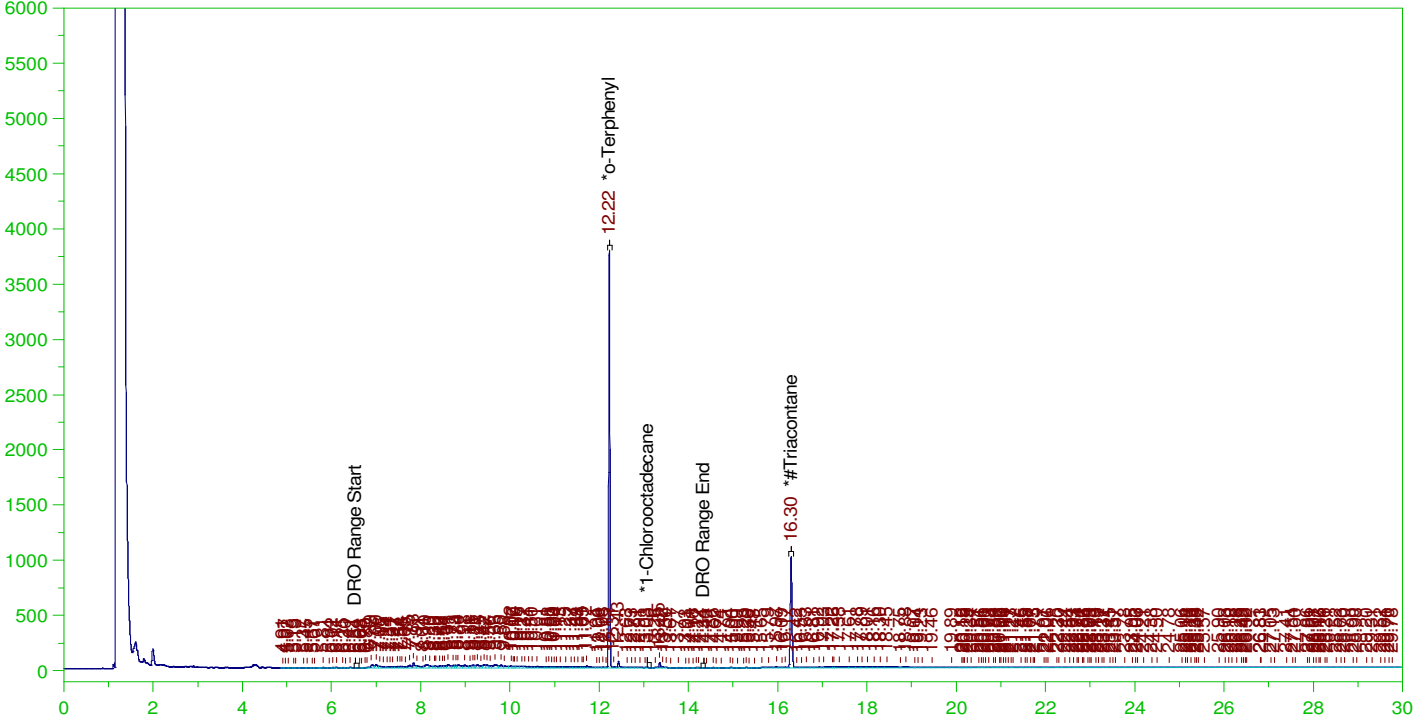
DRO Area:549199.9 DRO Amount: 1.585639E-02
 TEH Area:1549310 TEH Amount: 4.473136E-02

ERH2555 (Sump Audit 3)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0024.RAW

B22021435-032D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-032D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0024.RAW
Date & Time Acquired: 2/24/2022 1:50:09 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.19	.188	98.68	-
*1-Chlorooctadecane	13.078	.19	.	.26	-
*#Triacontane	16.299	.19	.087	45.57	-

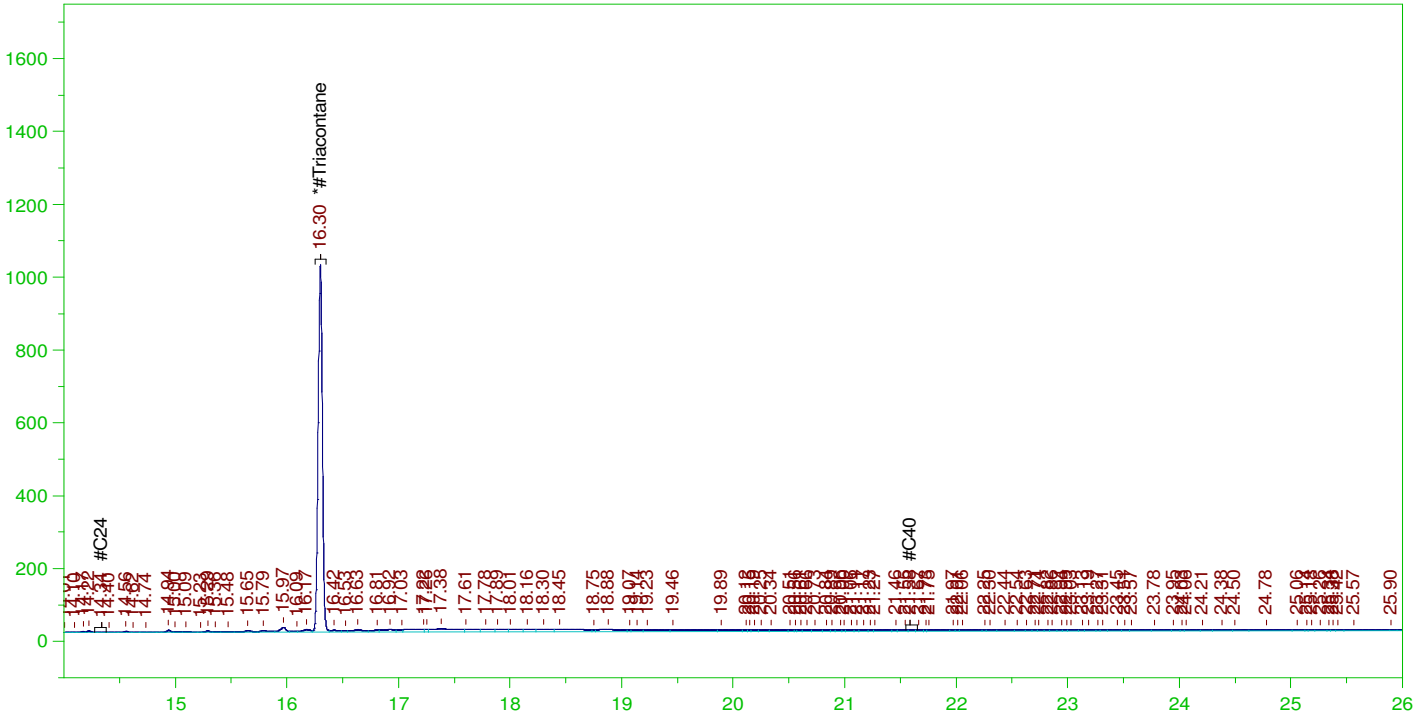
DRO Area:6288002 DRO Amount: 0.1832749
TEH Area:9732279 TEH Amount: 0.2836644

ERH2555 (Sump Audit 3)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0024.RAW

B22021435-032D ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-032D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0024.RAW
Date & Time Acquired: 2/24/2022 1:50:09 AM
Method File: G:\Org\HP5\Methods\D3_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_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: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.299	.476	.087	18.23

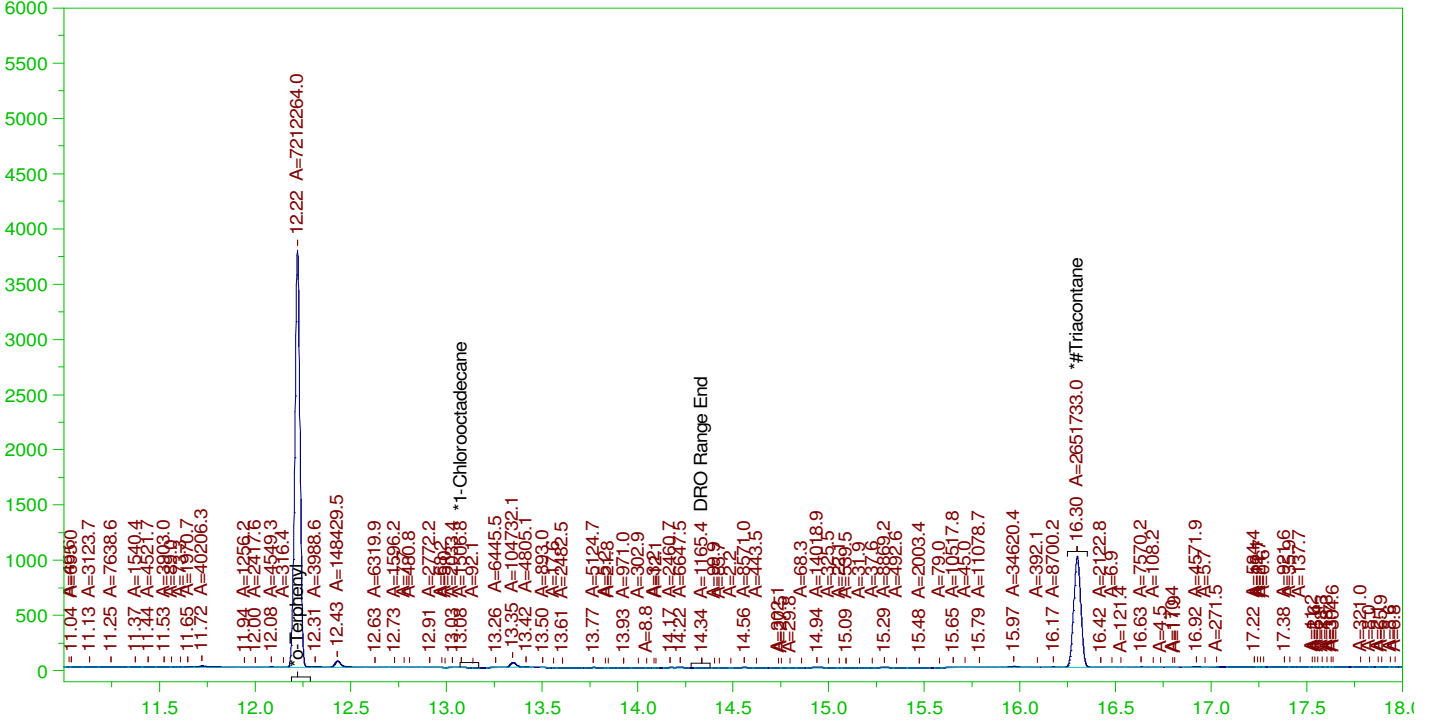
RRO Area:2175531 RRO AMOUNT: 7.840945E-02

ERH2555 (Sump Audit 3)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0024.RAW

B22021435-032D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

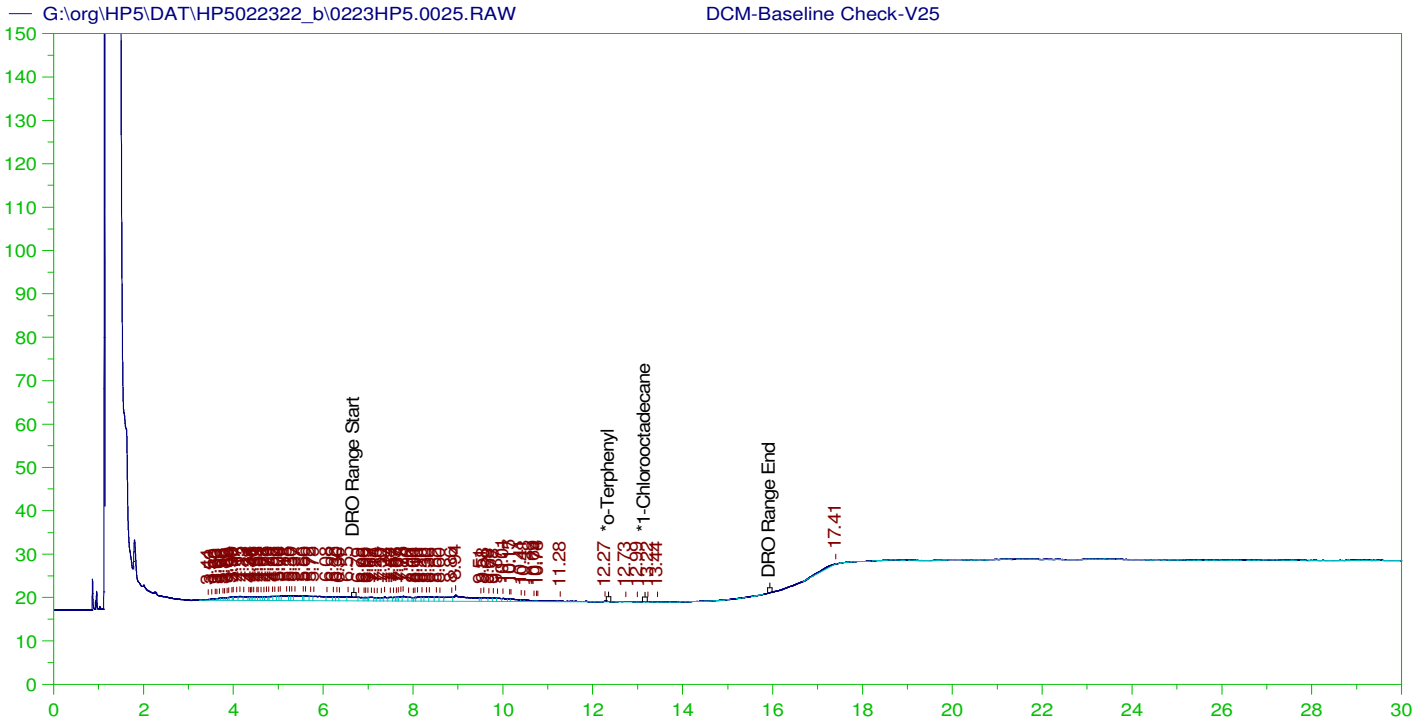
Sample Name: B22021435-032D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0024.RAW
Date & Time Acquired: 2/24/2022 1:50:09 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.19	.186	97.84	-
*1-Chlorooctadecane	13.078	.19	.	.02	-
*#Triacontane	16.299	.19	.085	44.74	-

DRO Area:3700968 DRO Amount: 0.1078712
TEH Area:4458493 TEH Amount: 0.1299506



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V25
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0025.RAW
 Date & Time Acquired: 2/24/2022 2:33:05 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	29.953	200.	.	-
*1-Chlorooctadecane	29.953	200.	.	-

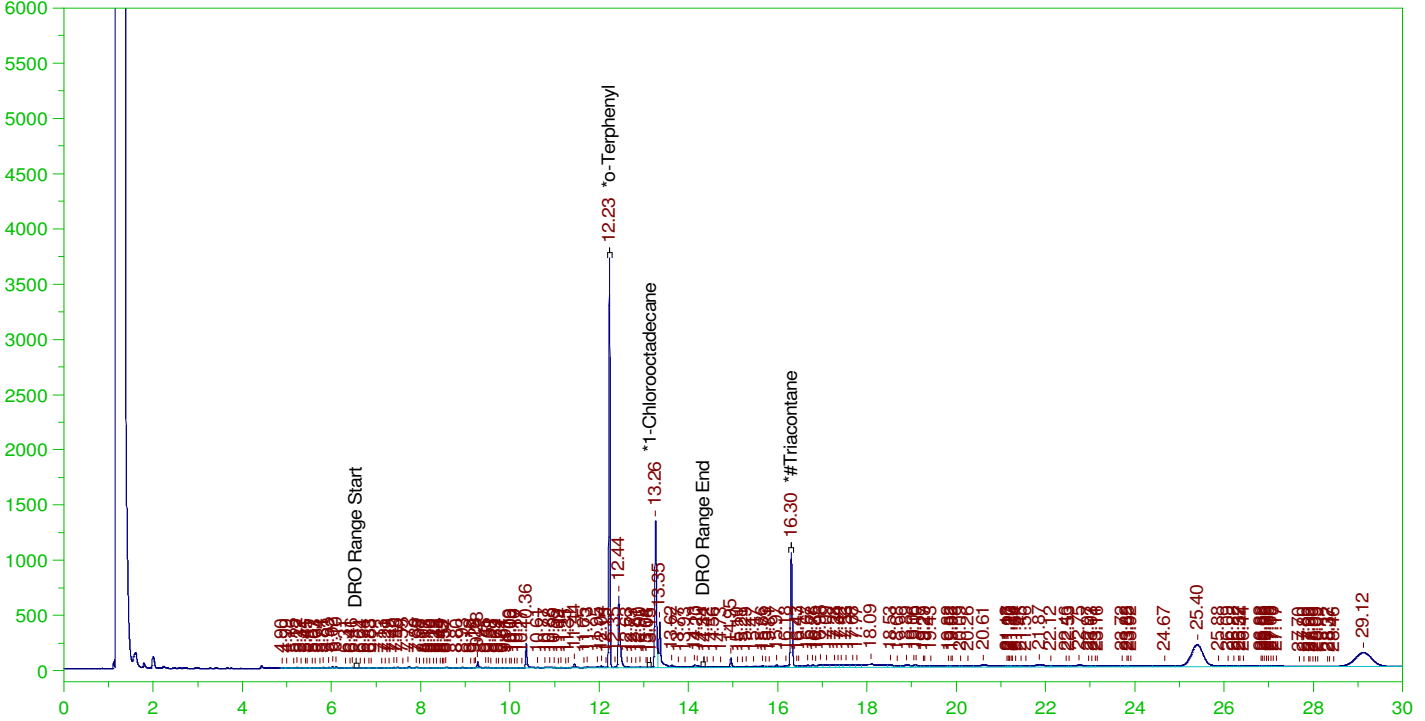
DRO Area:199588.4 DRO Amount: 6.108224
 TEH Area:379623.3 TEH Amount: 11.61803

ERH2013 (RHMW08)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0026.RAW

B21120381-005E ;0223HP5 , \$HC-8015-DRO-W, RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21120381-005E ;0223HP5 , \$HC-8015-DRO-W, RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0026.RAW
 Date & Time Acquired: 2/24/2022 3:16:09 AM
 Method File: G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.226	.196	.192	98.09	-
*1-Chlorooctadecane	13.148	.196	.	.06	-
*#Triacontane	16.303	.196	.095	48.38	-

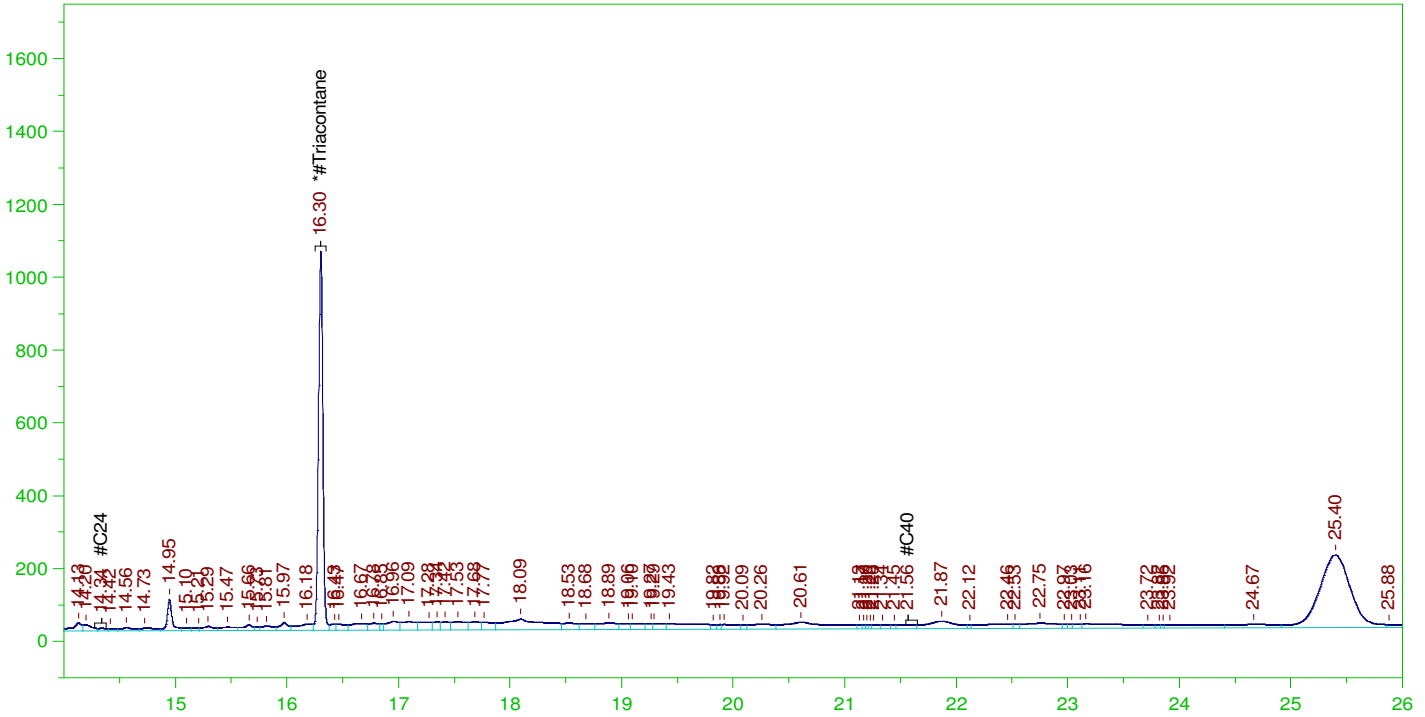
DRO Area:9301341 DRO Amount: 0.2790776
 TEH Area:2.595606E+07 TEH Amount: 0.7787862

ERH2013 (RHMW08)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0026.RAW

B21120381-005E ;0223HP5 , \$HC-8015-DRO-W, RX



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21120381-005E ;0223HP5 , \$HC-8015-DRO-W, RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0026.RAW
 Date & Time Acquired: 2/24/2022 3:16:09 AM
 Method File: G:\Org\HP5\Methods\D3_OROS-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.303	.49	.095	19.35

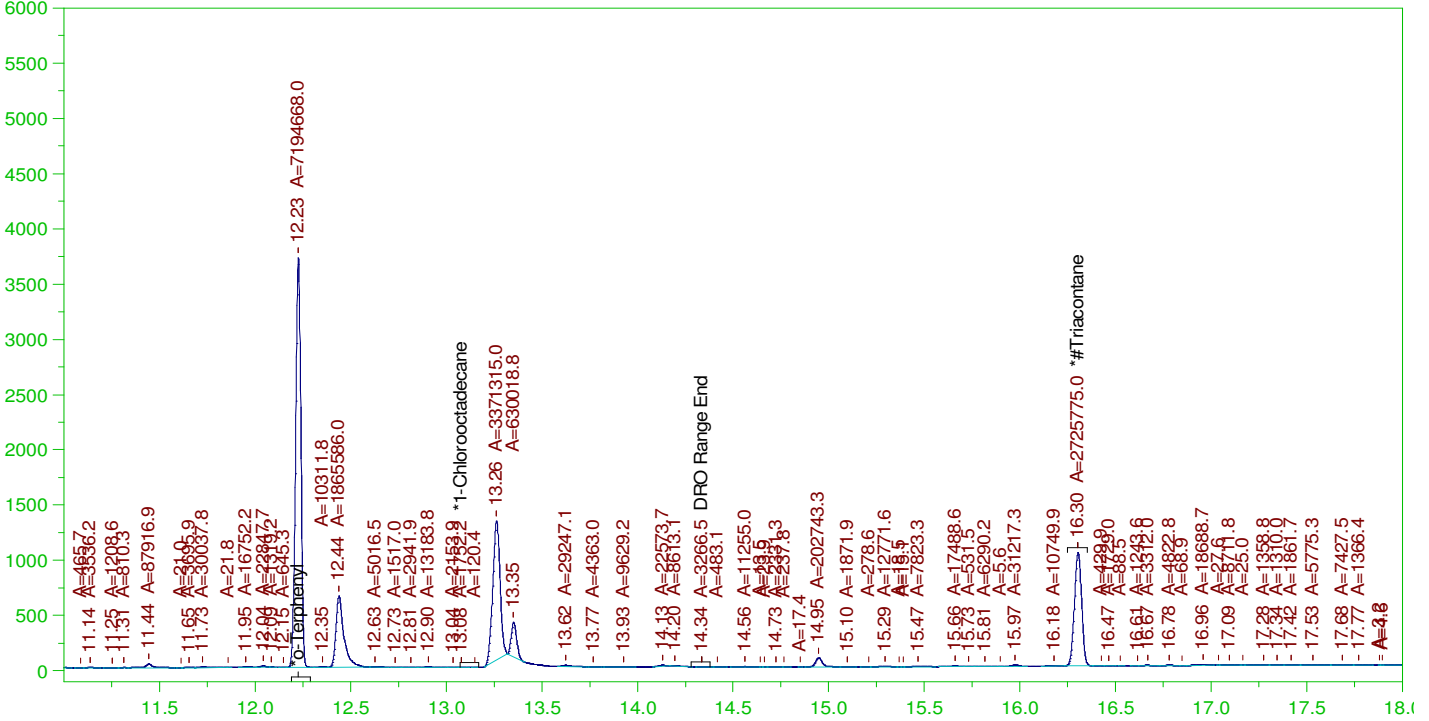
RRO Area:6511276 RRO AMOUNT: 0.2415785

ERH2013 (RHMW08)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0026.RAW

B21120381-005E ;0223HP5 , \$HC-8015-DRO-W, RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21120381-005E ;0223HP5 , \$HC-8015-DRO-W, RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0026.RAW
 Date & Time Acquired: 2/24/2022 3:16:09 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.226	.196	.191	97.6	-
*1-Chlorooctadecane	13.08	.196	.	.02	-
*#Triacontane	16.303	.196	.09	45.99	-

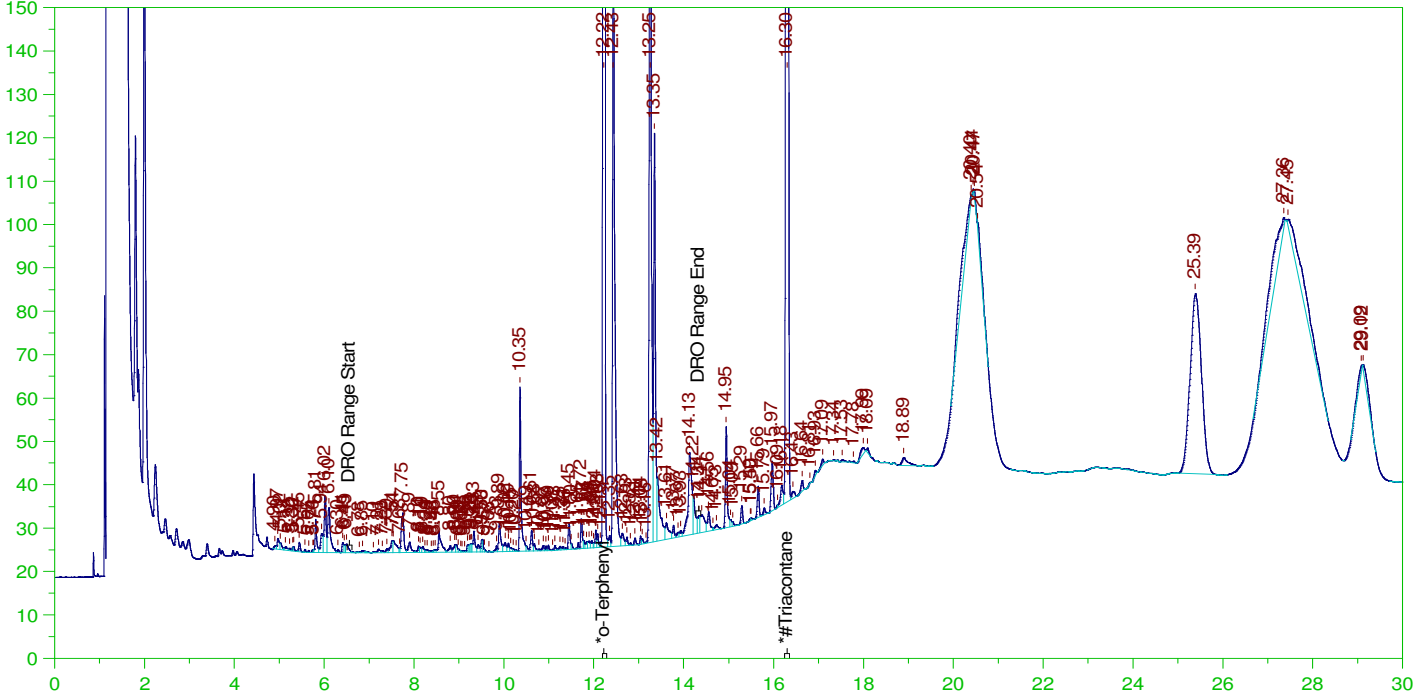
DRO Area:7230102 DRO Amount: 0.2169321
 TEH Area:1.178664E+07 TEH Amount: 0.3536465

ERH2014 (RHMW08)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0027.RAW

B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0027.RAW
 Date & Time Acquired: 2/24/2022 3:59:07 AM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JF-C24-T.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 16.35

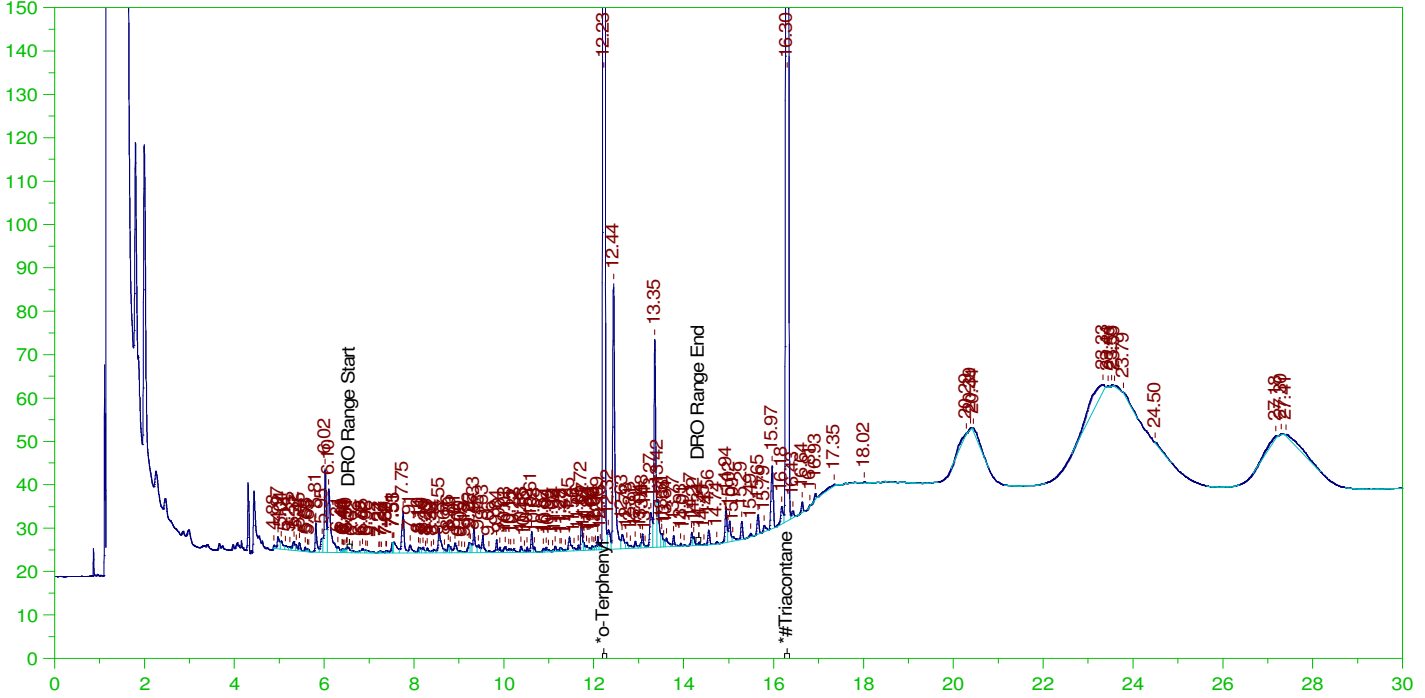
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.225	.2	.194	97.12	-
*#Triacontane	16.303	.2	.092	46.02	-

DRO Area:5111198 DRO Amount: 0.1564236
 TEH Area:3942016 TEH Amount: 0.1206418

ERH2410 (RHMW12A)

G:\org\HP5\DAT\HP5022322_b\0223HP5.0028.RAW

B22010971-001E ;0223HP5 , \$HC-8015-DRO-W, RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001E ;0223HP5 , \$HC-8015-DRO-W, RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0028.RAW
 Date & Time Acquired: 2/24/2022 4:42:02 AM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JF-C24-T.CAL
 Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 16.35

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.225	.202	.195	96.52	-
*#Triacontane	16.303	.202	.092	45.54	-

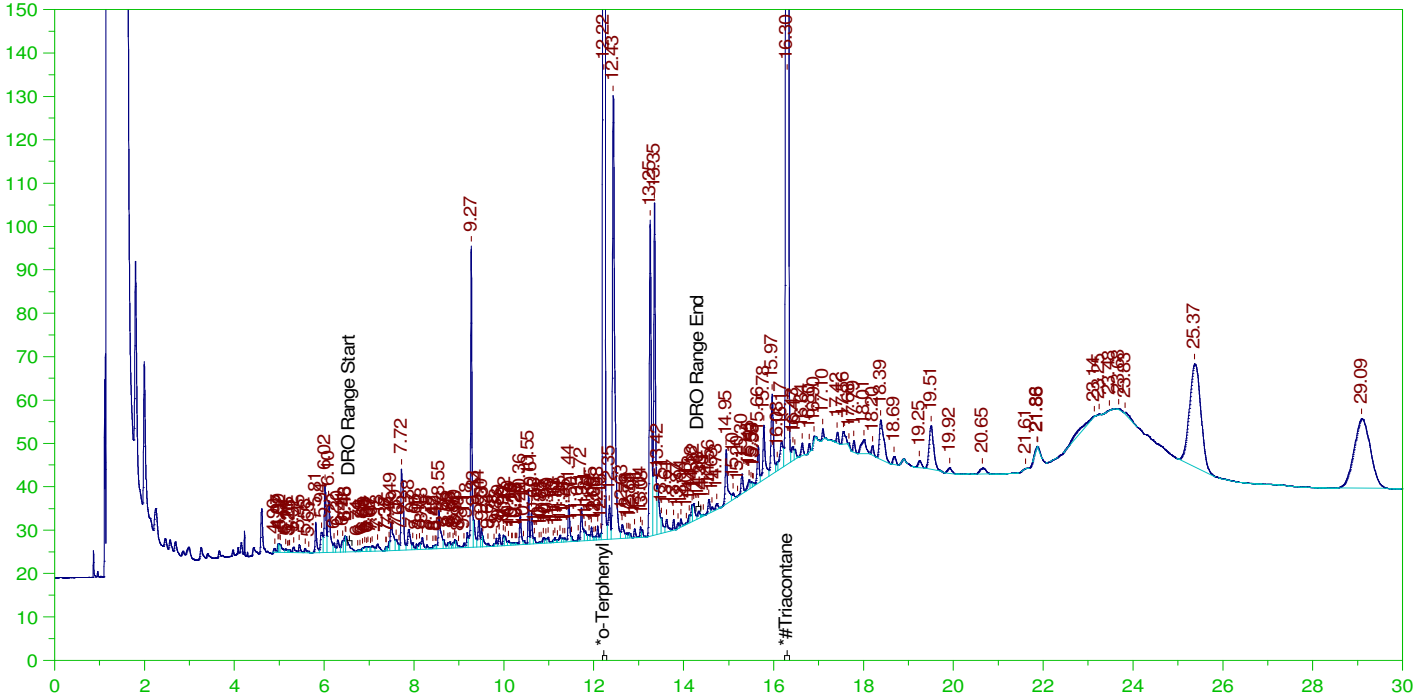
DRO Area:3679557
 TEH Area:1419776

DRO Amount: 0.113747
 TEH Amount: 4.388986E-02

ERH2420 (RHMW19)

G:\org\HP5\DAT\HP5022322_b\0223HP5.0029.RAW

B22010974-001E ;0223HP5 , \$HC-8015-DRO-W, RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001E ;0223HP5 , \$HC-8015-DRO-W, RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0029.RAW
 Date & Time Acquired: 2/24/2022 5:25:00 AM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JF-C24-T.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 16.35

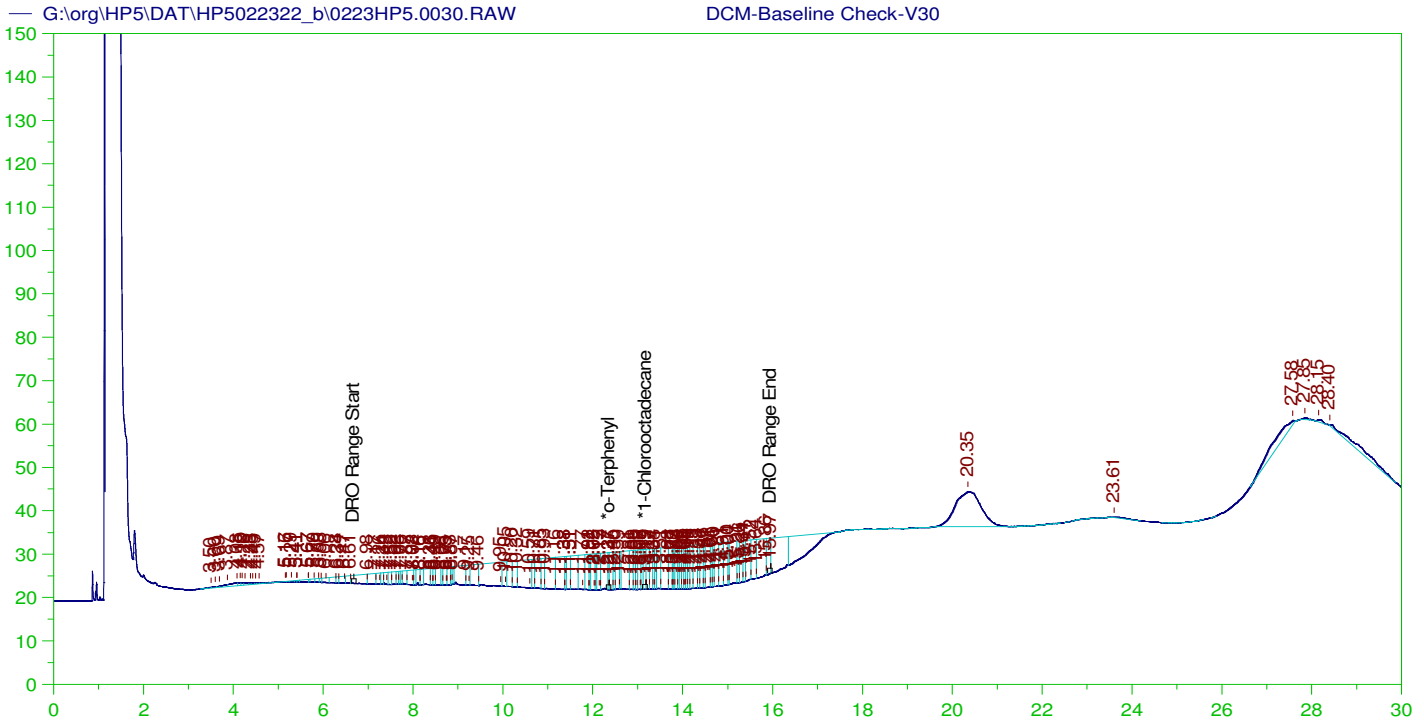
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.224	.196	.198	101.14	-
*#Triacontane	16.304	.196	.091	46.63	-

DRO Area:4660337

DRO Amount: 0.1398288

TEH Area:3273533

TEH Amount: 9.821913E-02



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V30
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0030.RAW
 Date & Time Acquired: 2/24/2022 6:08:02 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	12.367	200.	.431	.22	-
*1-Chlorooctadecane	13.185	200.	.94	.47	-

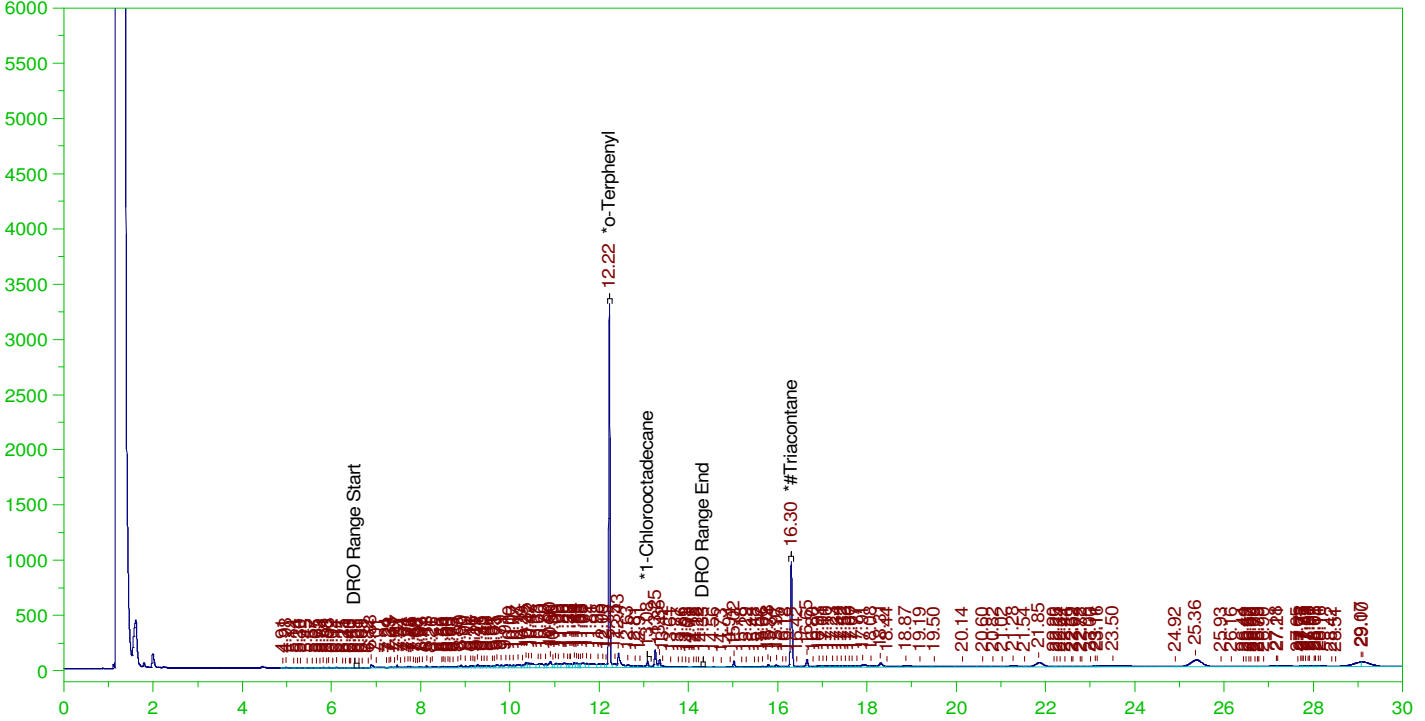
DRO Area:3933249 DRO Amount: 120.3735
 TEH Area:4337997 TEH Amount: 132.7605

ERH2549 (RHMW01R)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0031.RAW

B22021435-017D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021435-017D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0031.RAW
Date & Time Acquired: 2/24/2022 6:51:00 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.224	.189	.168	88.96	-
*1-Chlorooctadecane	13.079	.189	.005	2.89	-
*#Triacontane	16.301	.189	.083	44.08	-

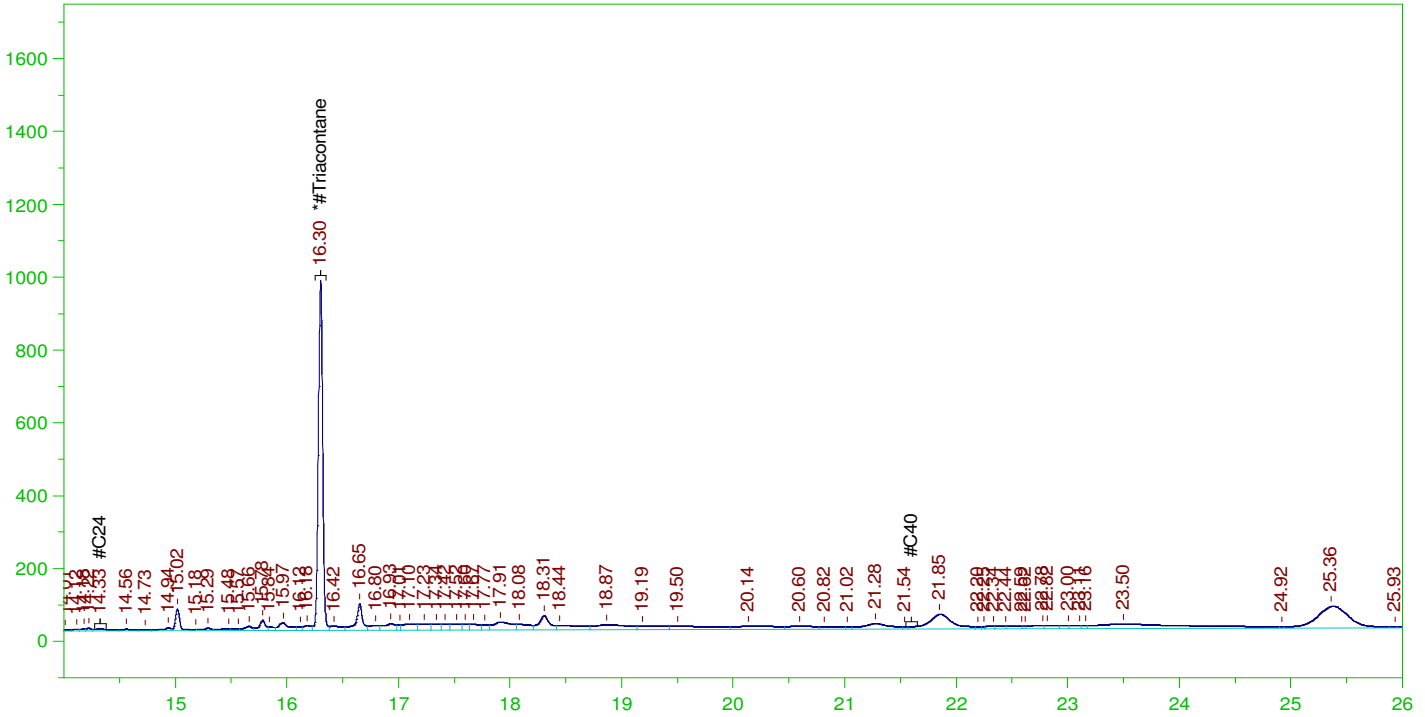
DRO Area: 9386433 DRO Amount: 0.2710032
TEH Area: 1.947016E+07 TEH Amount: 0.5621383

ERH2549 (RHMW01R)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0031.RAW

B22021435-017D ;0223HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021435-017D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0031.RAW
Date & Time Acquired: 2/24/2022 6:51:00 AM
Method File: G:\Org\HP5\Methods\D3_OROS-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.301	.472	.083	17.63

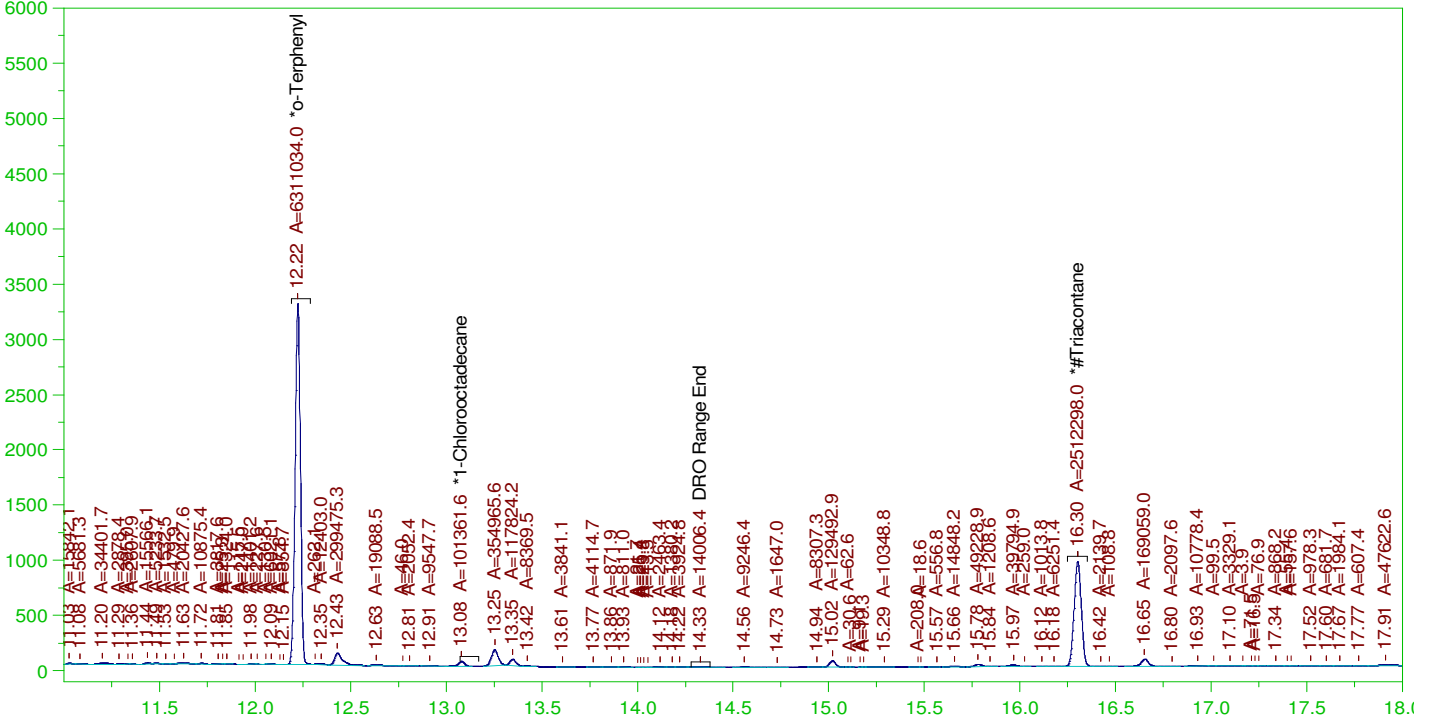
RRO Area:4723182 RRO AMOUNT: 0.1686247

ERH2549 (RHMW01R)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0031.RAW

B22021435-017D ;0223HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

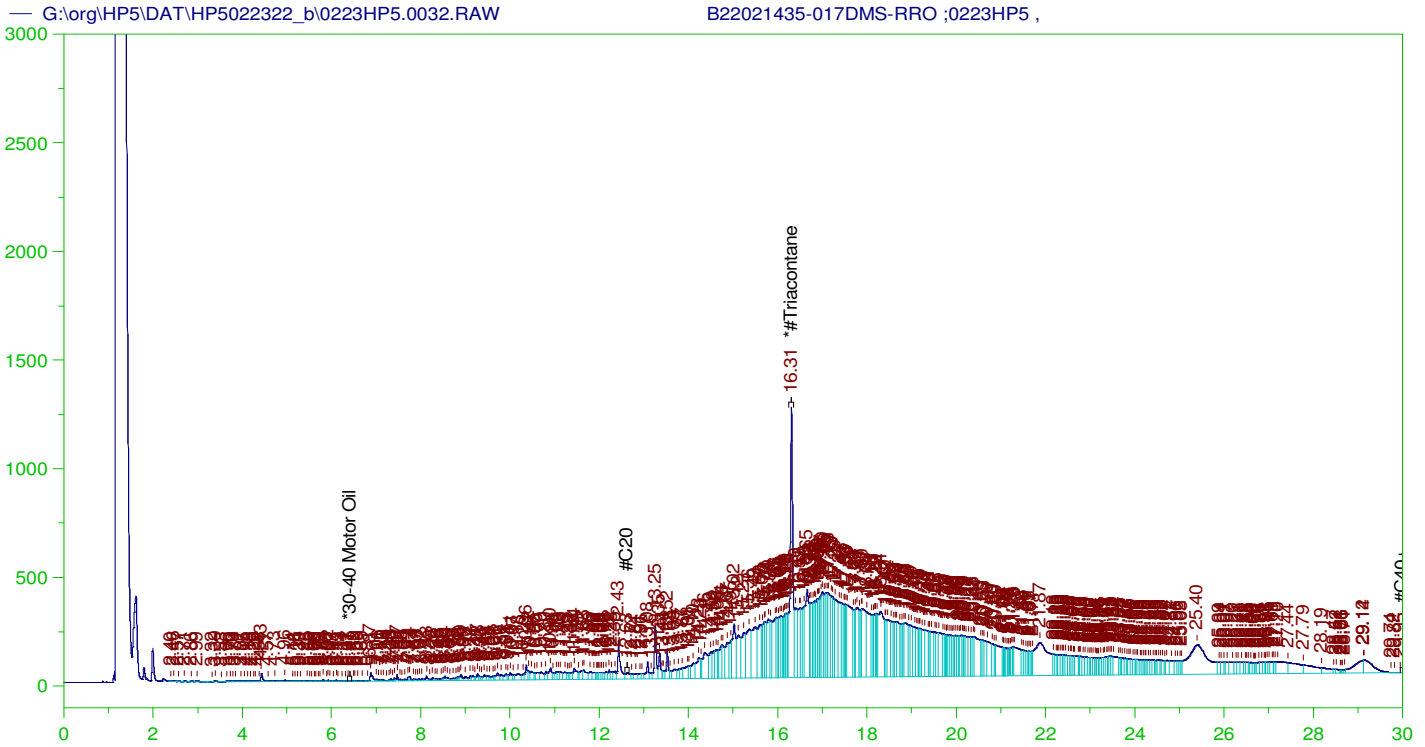
Sample Name: B22021435-017D ;0223HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0031.RAW
Date & Time Acquired: 2/24/2022 6:51:00 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.224	.189	.162	85.61
*1-Chlorooctadecane	13.079	.189	.003	1.38
*#Triacontane	16.301	.189	.08	42.39

DRO Area:2468751 DRO Amount: 7.127726E-02
TEH Area:4088517 TEH Amount: 0.1180428



RESIDUAL RANGE ORGANICS CHROMATOGRAM

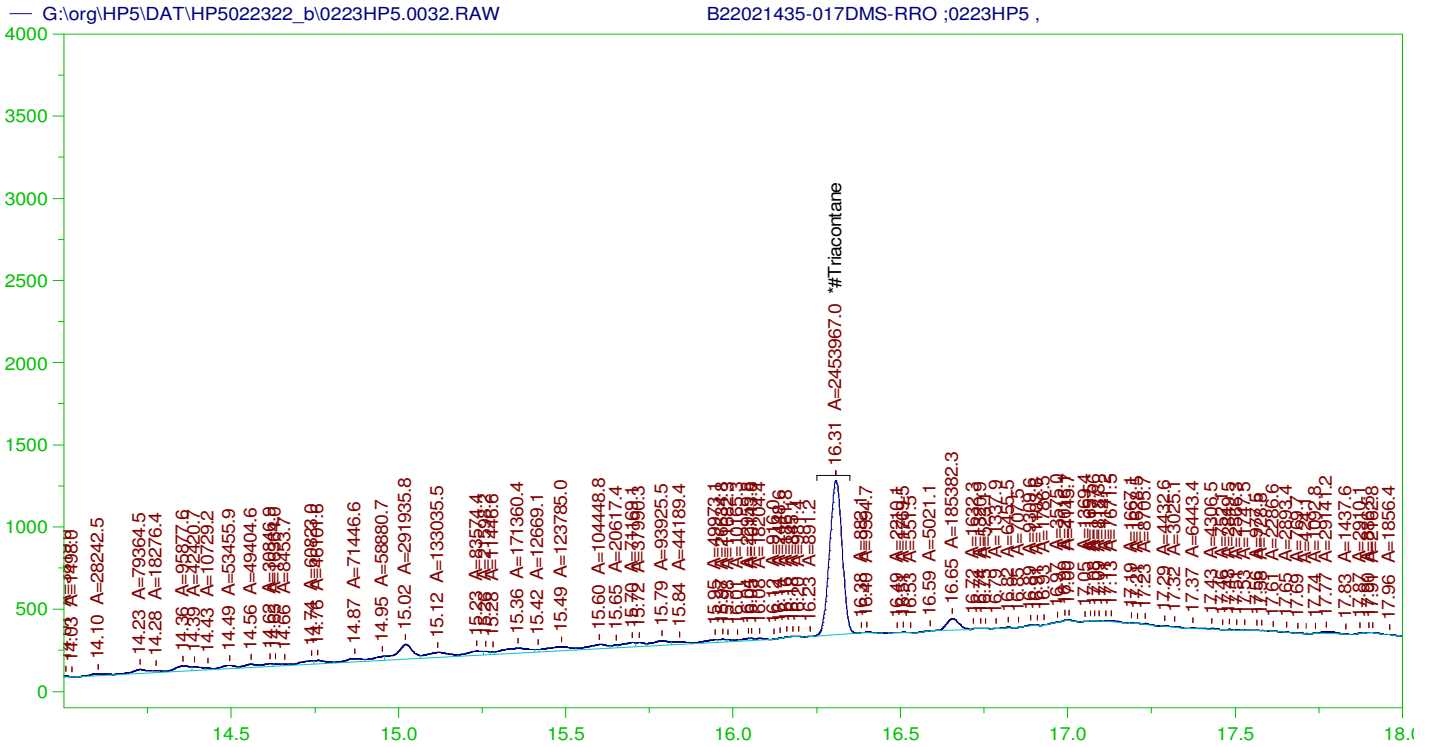
Sample Name: B22021435-017DMS-RRO ;0223HP5 ,
Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0032.RAW
Date & Time Acquired: 2/24/2022 7:34:01 AM
Method File: G:\Org\HP5\Methods\D3_ORO-022332-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.307	.472	.157	33.22	-

~~RRO~~ TEH(Oil Range) Area:1.354108E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.83437

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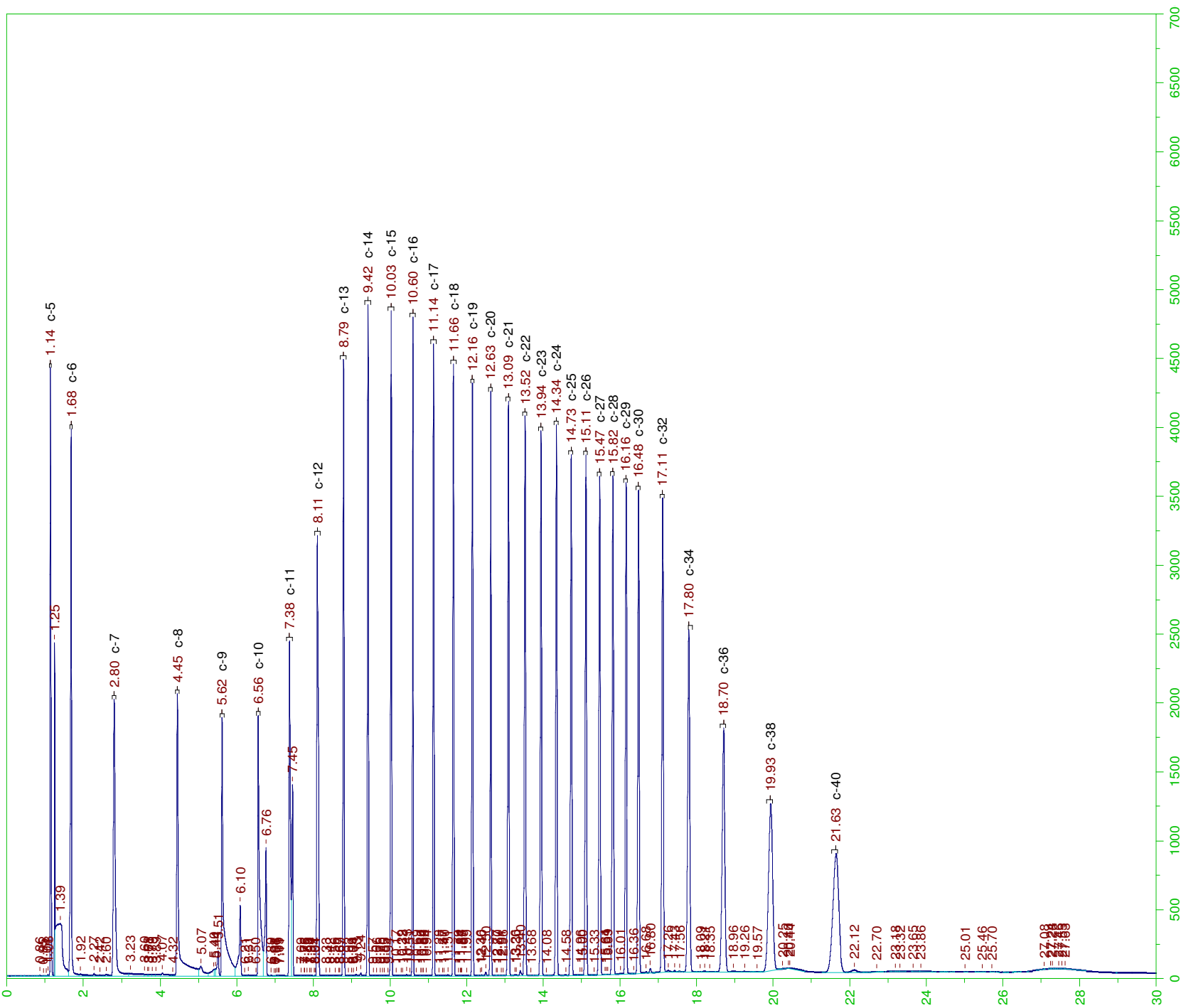
RESIDUAL RANGE ORGANICS CHROMATOGRAM

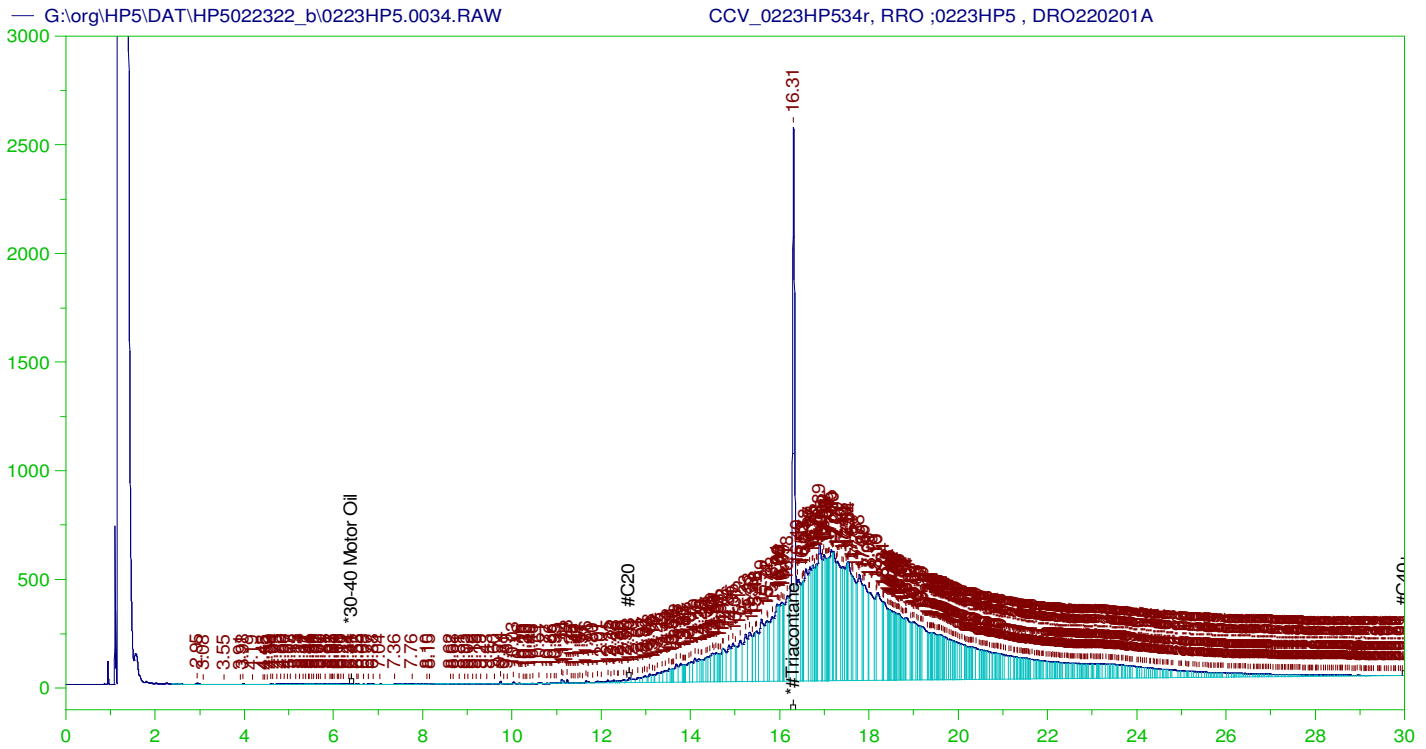
Sample Name: B22021435-017DMS-RRO ;0223HP5 ,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0032.RAW
 Date & Time Acquired: 2/24/2022 7:34:01 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.CAL
 Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.307	.472	.078	16.56

RRO Area:5542503 RRO AMOUNT: 0.1978757





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP534r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0034.RAW
 Date & Time Acquired: 2/24/2022 8:59:45 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.31	500.	338.925	67.78	-

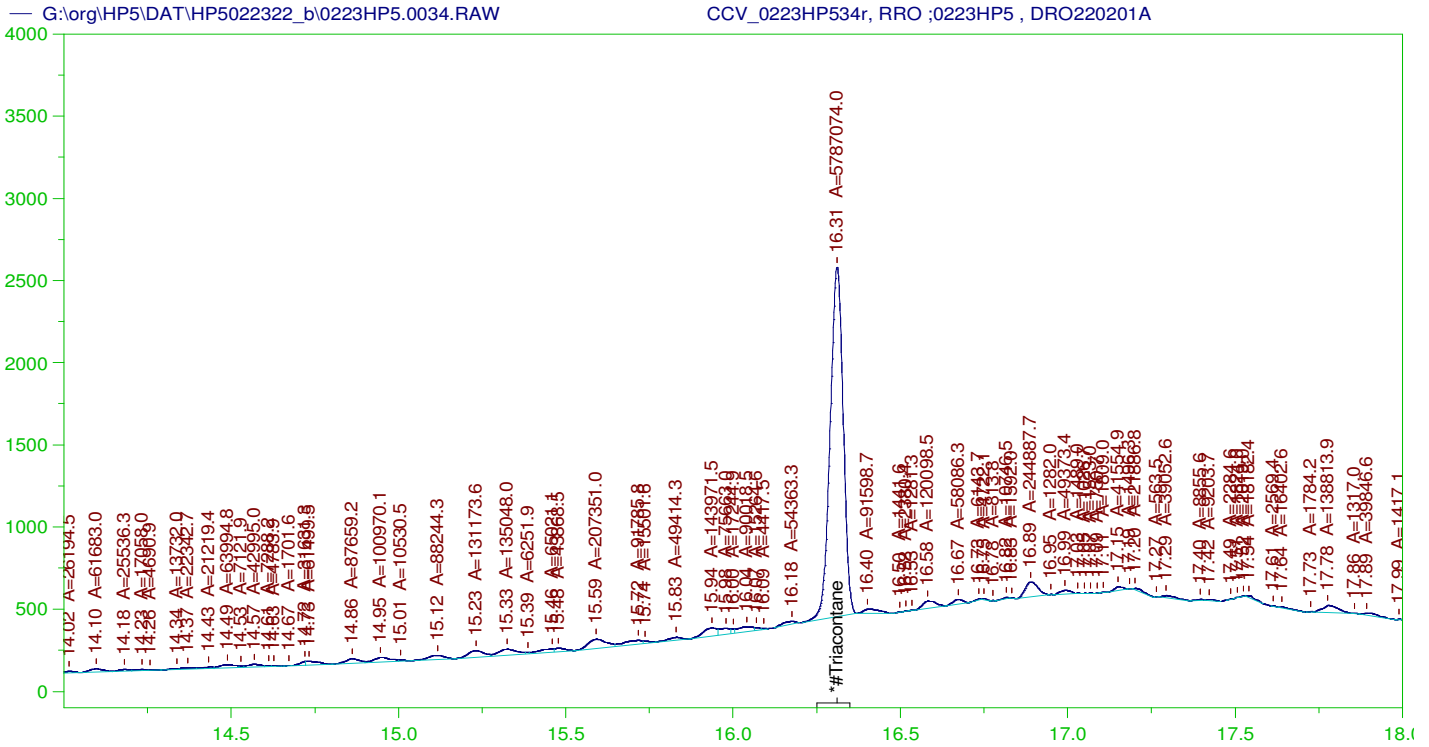
~~RRO~~ TEH(Oil Range) Area:1.409139E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5332.687

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0034.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.31	200.	338.925	169.46	75-125

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RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP534r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0034.RAW
 Date & Time Acquired: 2/24/2022 8:59:45 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

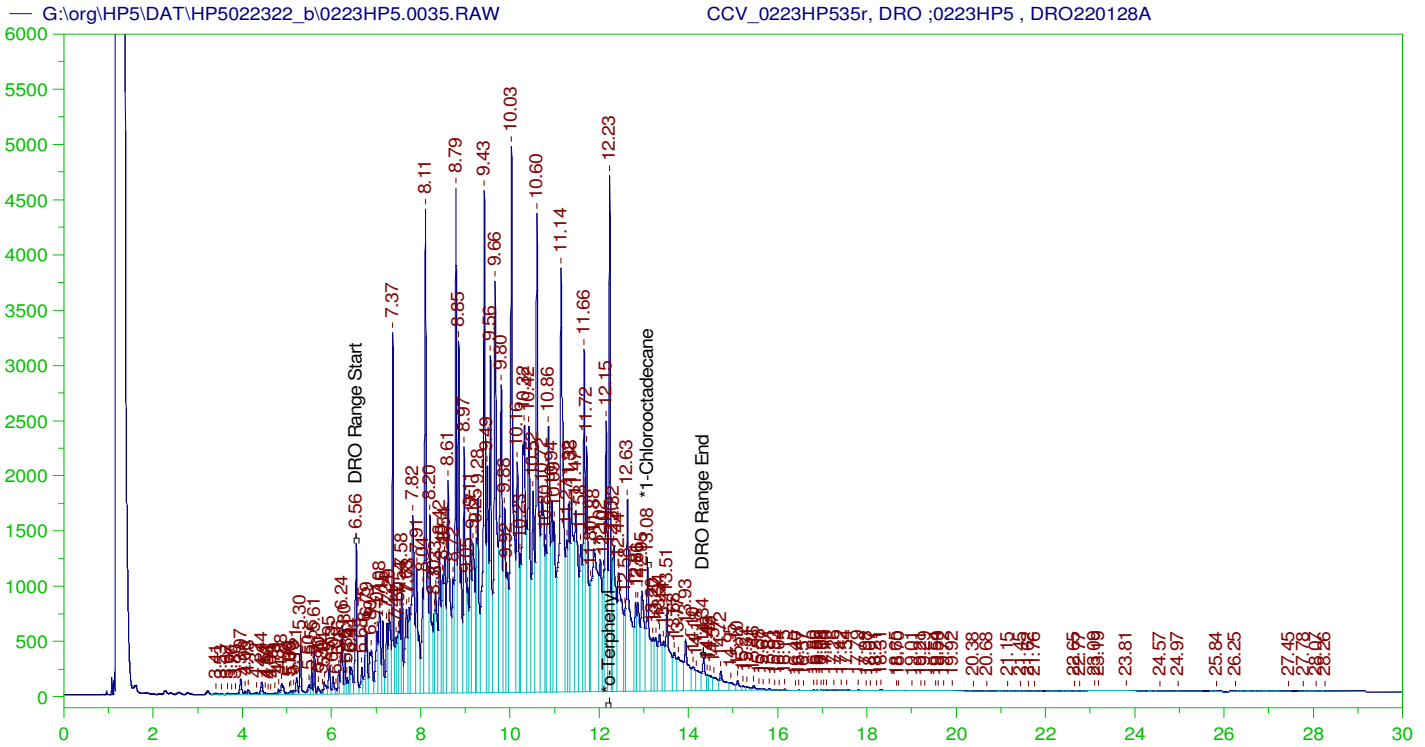
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.31	500.	195.271	39.05	-

RRO Area:3512713 RRO AMOUNT: 132.9337

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0034.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.31	200.	195.271	97.64	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP535r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0035.RAW
 Date & Time Acquired: 2/24/2022 9:42:33 AM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.23	200.	315.503	157.75
*1-Chlorooctadecane	13.08	200.	154.412	77.21

DRO Area: 4.846569E+08 DRO Amount: 14832.49
 TEH Area: 5.015122E+08 TEH Amount: 15348.33

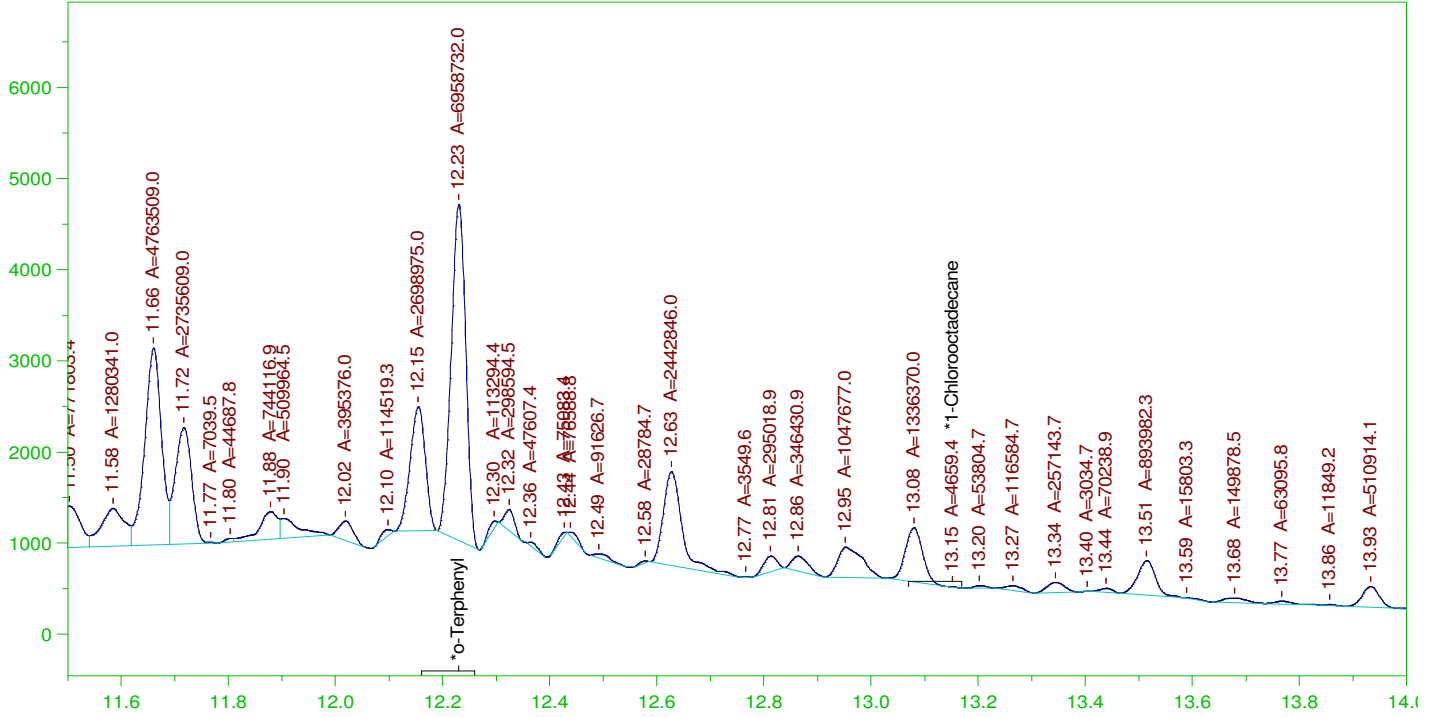
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15348.33	102.32	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.23	200.	315.503	157.75	85-115
*1-Chlorooctadecane	13.08	200.	154.412	77.21	85-115

G:\org\HP5\DAT\HP5022322_b\0223HP5.0035.RAW

CCV_0223HP535r, DRO ;0223HP5 , DRO220128A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP535r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0035.RAW
 Date & Time Acquired: 2/24/2022 9:42:33 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

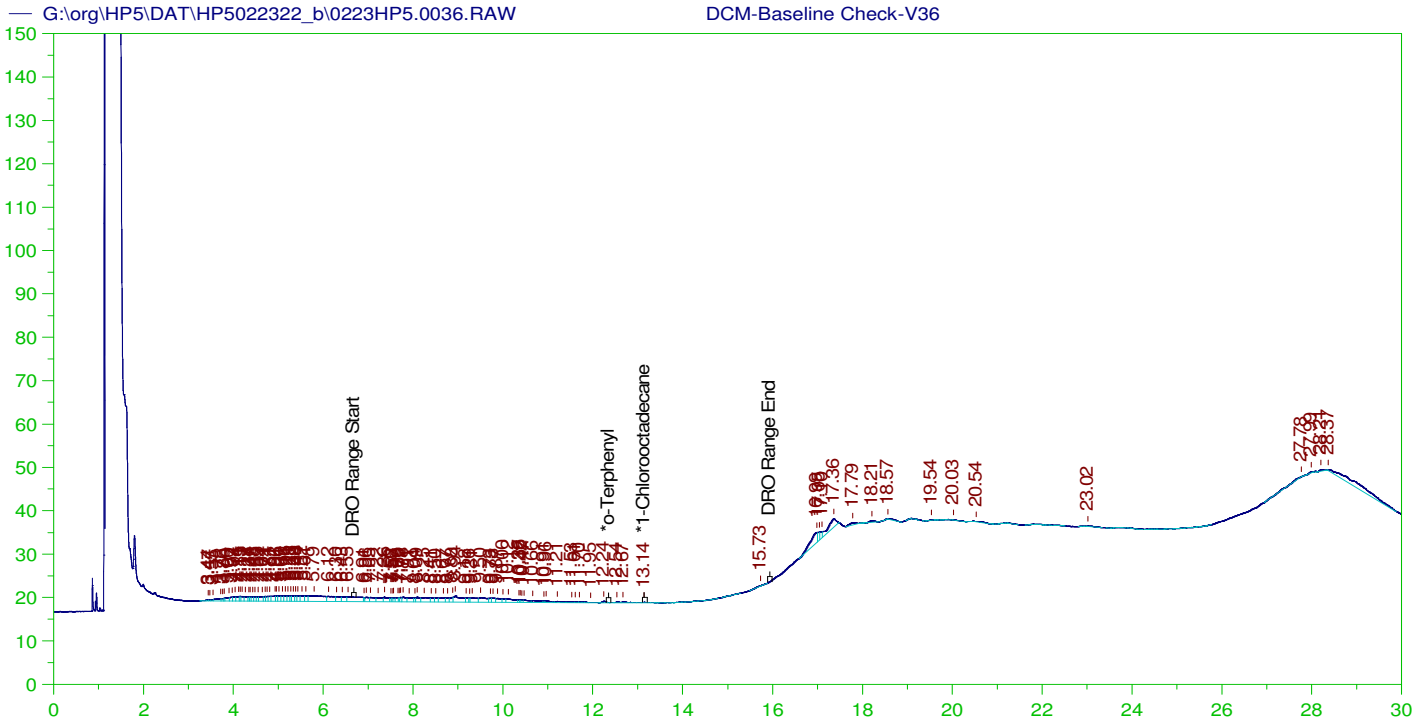
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.23	200.	188.799	94.4
*1-Chlorooctadecane	13.152	200.	.126	.06

DRO Area: 2.517076E+08 DRO Amount: 7703.286
 TEH Area: 2.626296E+08 TEH Amount: 8037.544

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0035.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8037.54	53.58	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.23	200.	188.799	94.4	85-115
*1-Chlorooctadecane	13.152	200.	.126	.06	85-115



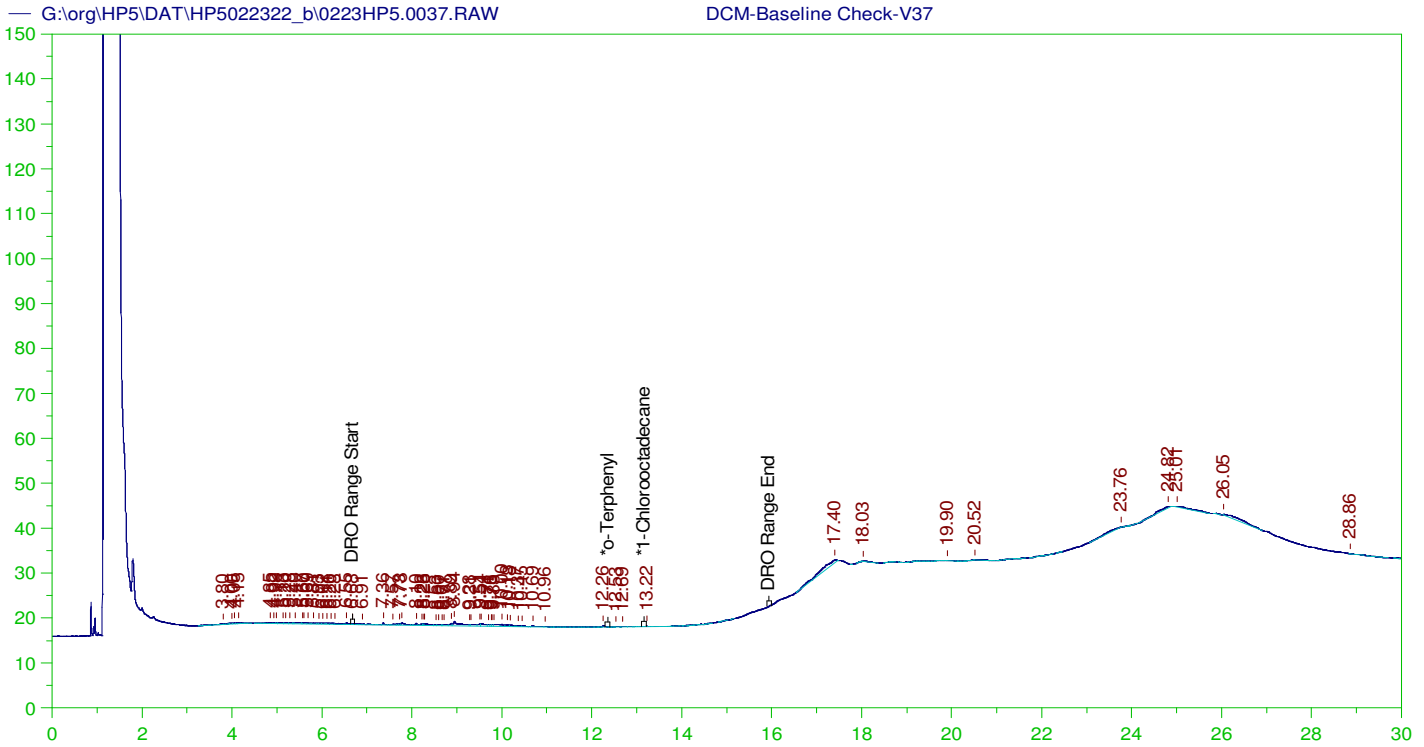
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V36
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0036.RAW
 Date & Time Acquired: 2/24/2022 10:25:12 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	28.369	200.	.	-
*1-Chlorooctadecane	13.144	200.	.017	.01

DRO Area: 215728.4 DRO Amount: 6.602173
 TEH Area: 580610.6 TEH Amount: 17.76906



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V37
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0037.RAW
 Date & Time Acquired: 2/24/2022 11:07:52 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	29.949	200.	.	-
*1-Chlorooctadecane	29.949	200.	.	-

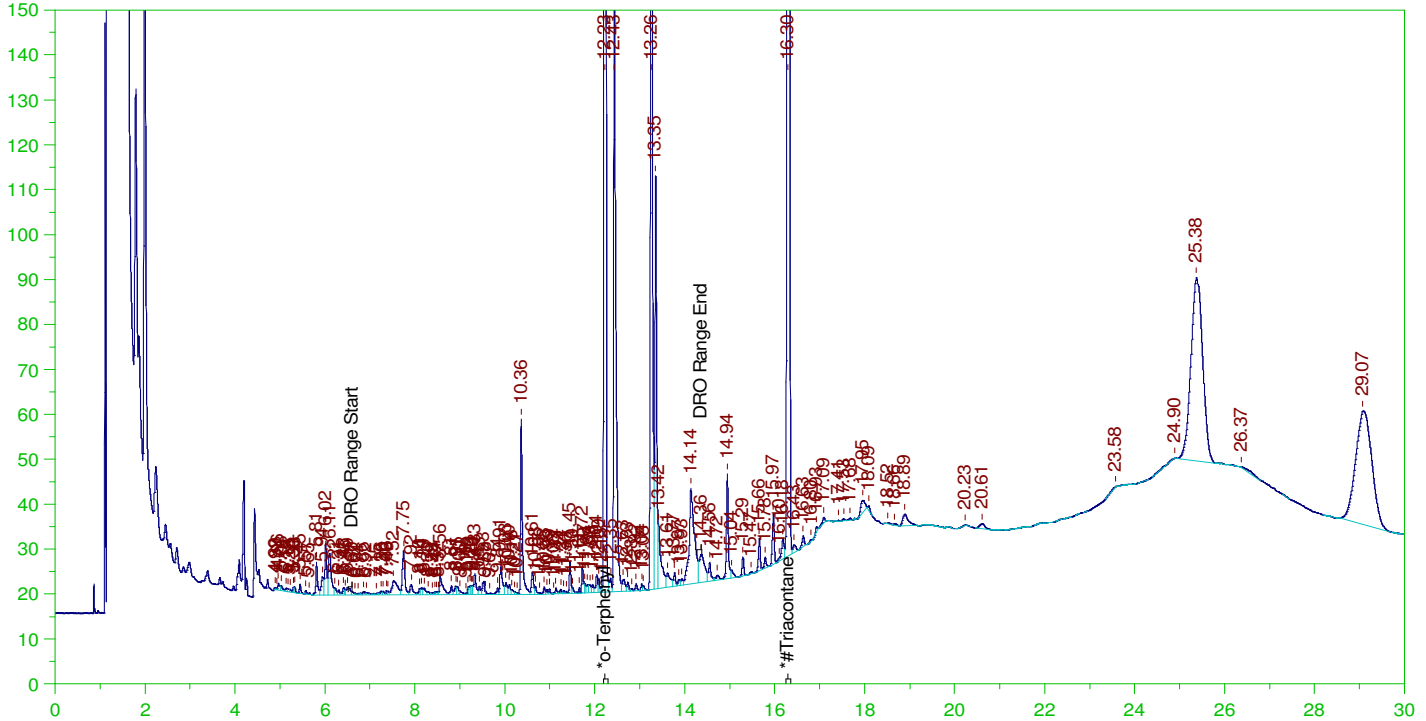
DRO Area: 73605.98 DRO Amount: 2.252645
 TEH Area: 181792.6 TEH Amount: 5.563599

ERH2014 (RHMW08)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0038.RAW

B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX- Needs sec



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX- Needs sec
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0038.RAW
 Date & Time Acquired: 2/24/2022 11:50:45 AM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JF-C24-T.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 16.35

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.225	.2	.192	96.09
*#Triacontane	16.301	.2	.091	45.59

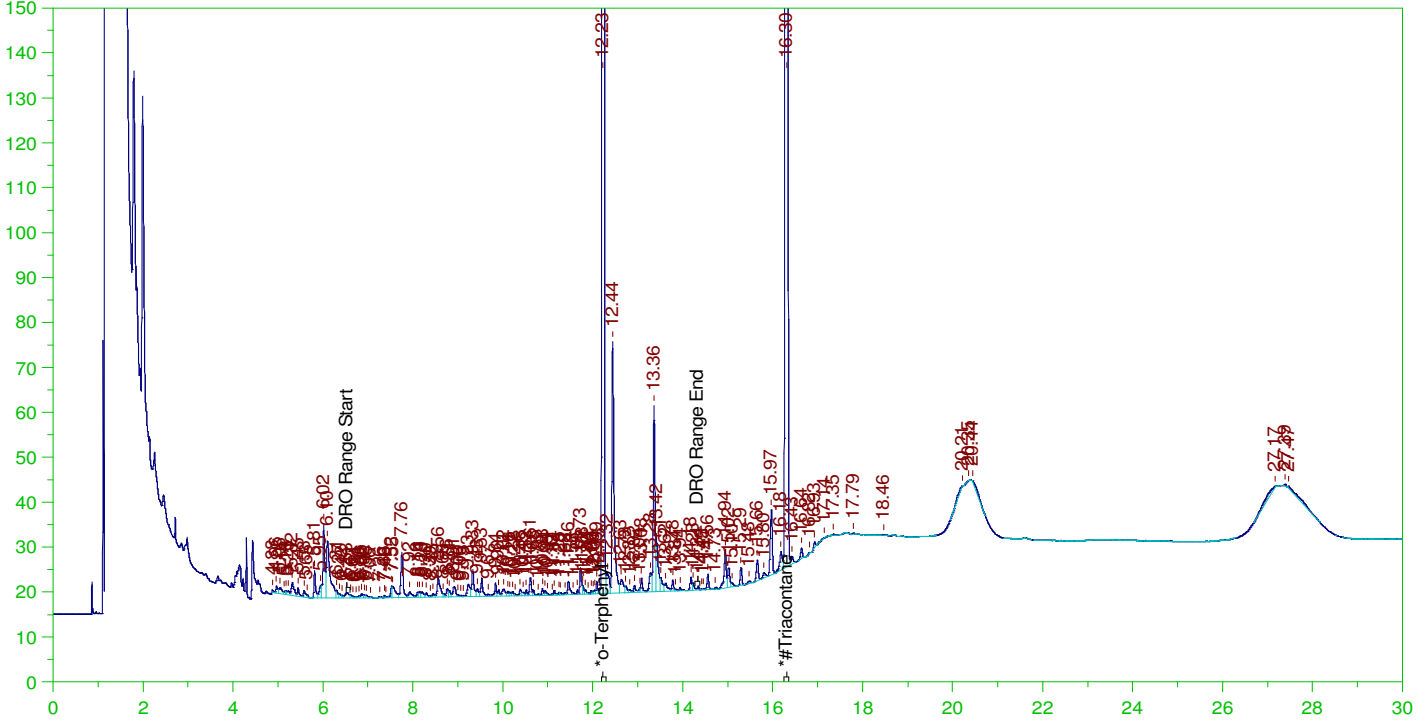
DRO Area:5170410 DRO Amount: 0.1582357
 TEH Area:4126795 TEH Amount: 0.1262968

ERH2410 (RHMW12A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0039.RAW

B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX Needs seco



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX Needs seco
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0039.RAW
 Date & Time Acquired: 2/24/2022 12:33:36 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JF-C24-T.CAL
 Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 16.35

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.226	.202	.193	95.37	-
*#Triacontane	16.304	.202	.091	44.99	-

DRO Area:3616814
 TEH Area:1228739

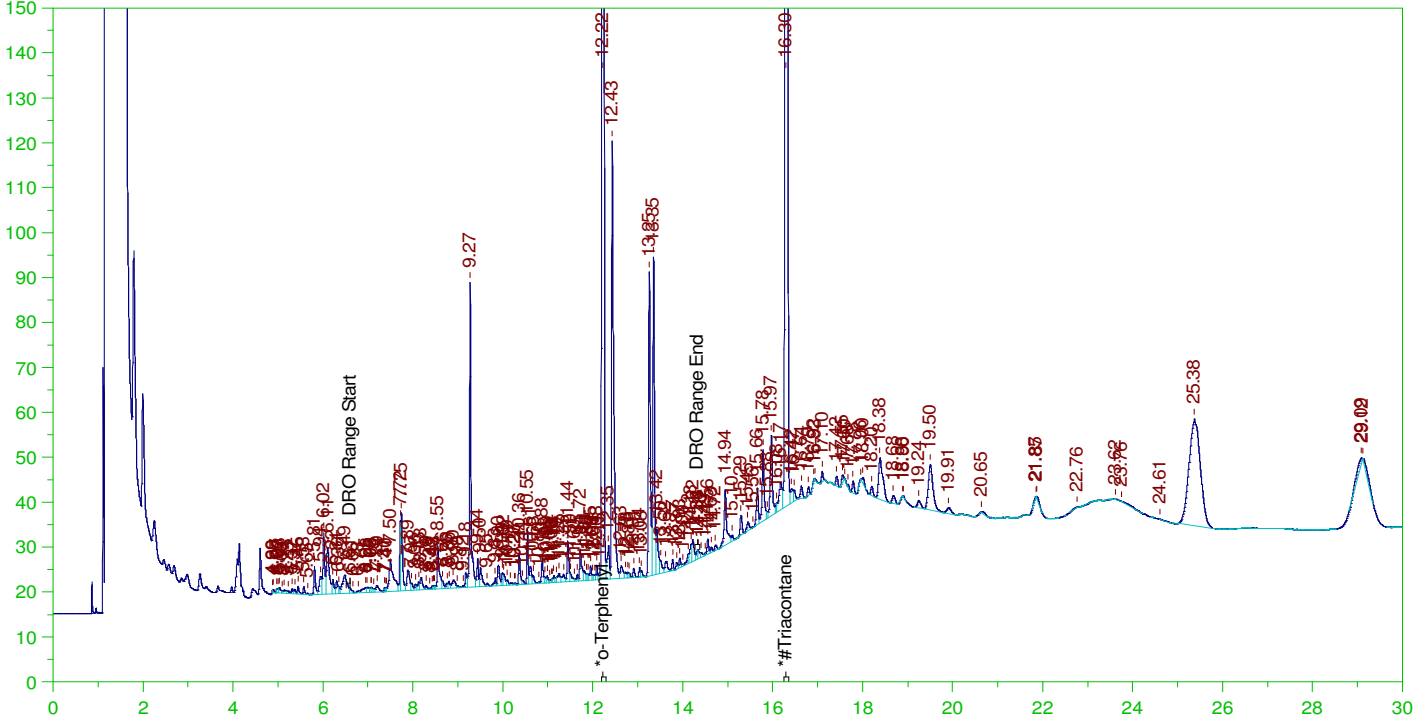
DRO Amount: 0.1118074
 TEH Amount: 3.798429E-02

ERH2420 (RHMW19)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0040.RAW

B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX Needs seco



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX Needs seco
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0040.RAW
 Date & Time Acquired: 2/24/2022 1:16:14 PM
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 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JF-C24-T.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

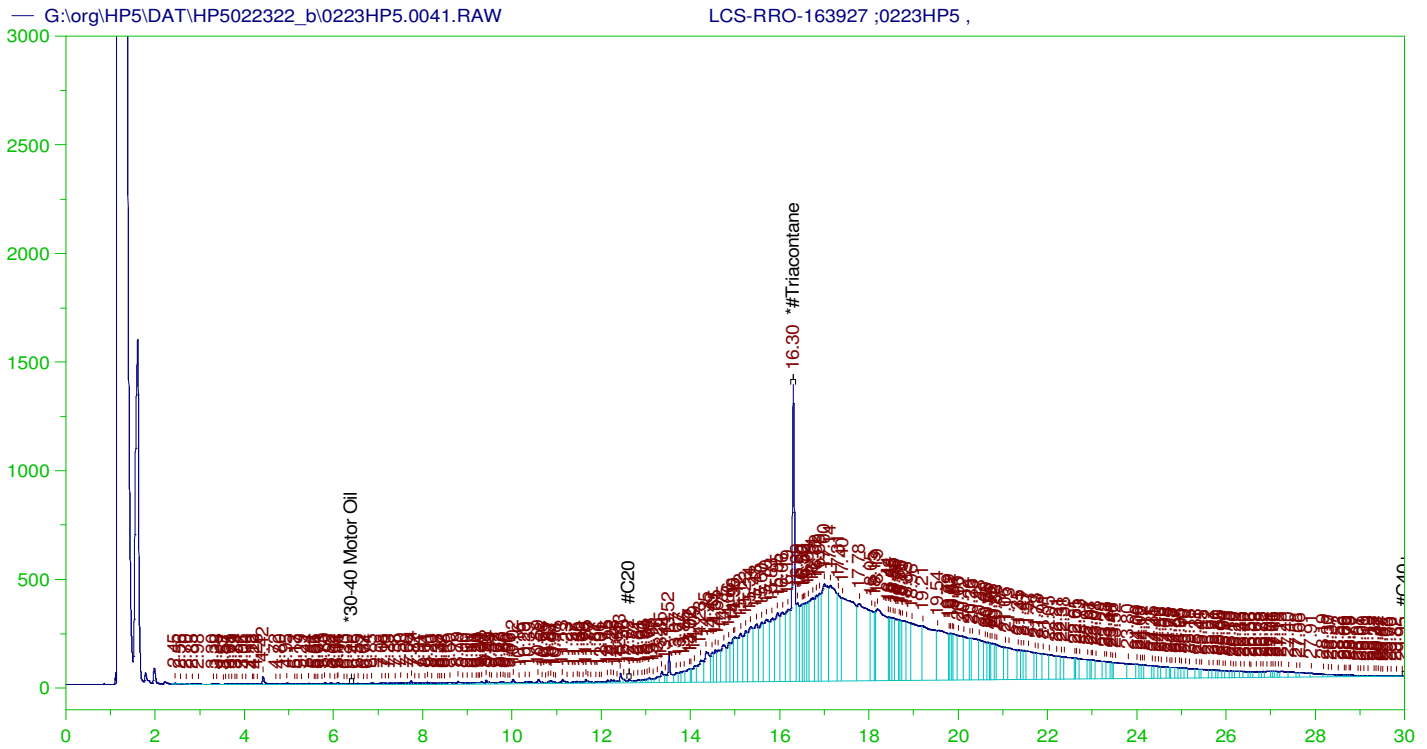
Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 16.35

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.225	.196	.195	99.46	-
*#Triacontane	16.301	.196	.09	45.84	-

DRO Area:4582338
 TEH Area:2779646

DRO Amount: 0.1374886
 TEH Amount: 8.340054E-02



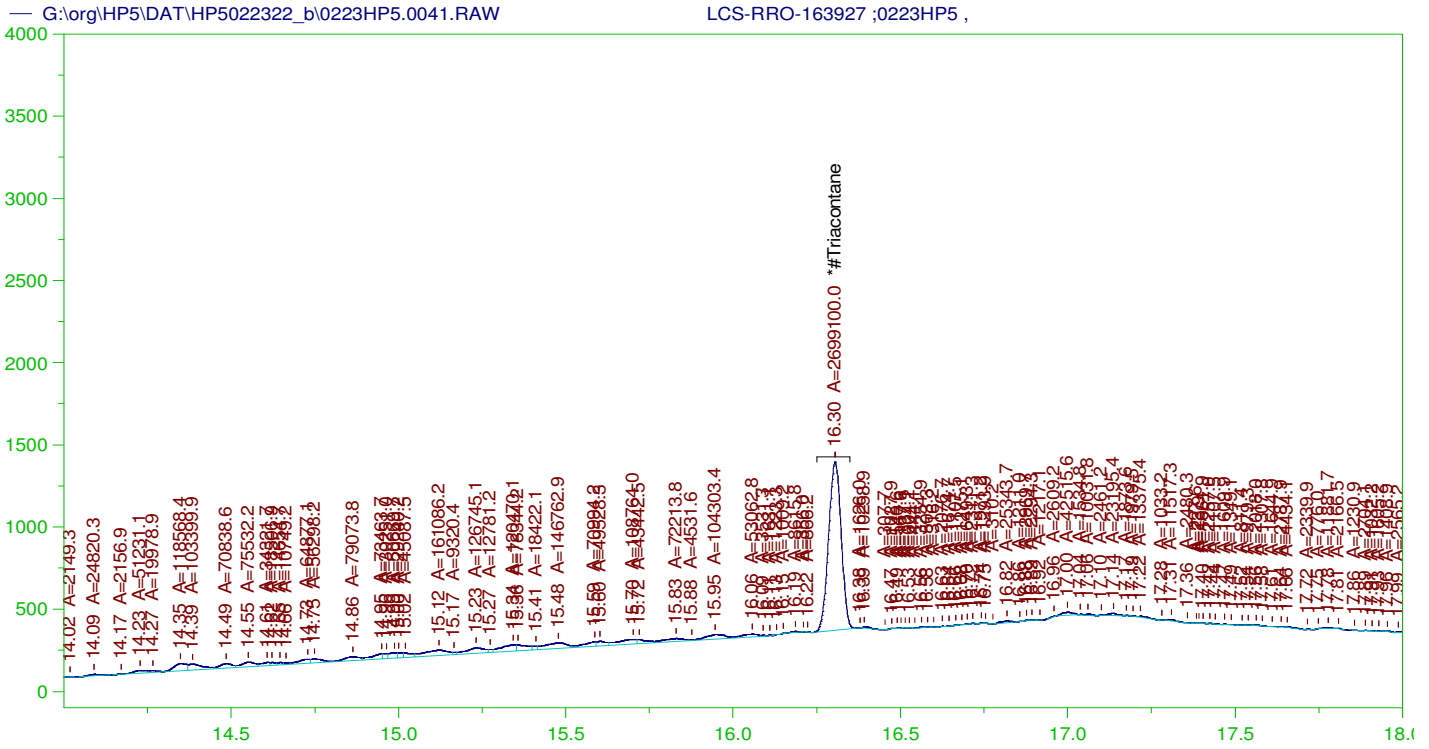
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-RRO-163927 ;0223HP5 ,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0041.RAW
 Date & Time Acquired: 2/24/2022 2:02:16 PM
 Method File: G:\Org\HP5\Methods\D3_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF.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: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.304	.5	.177	35.37 -

RRO TEH(Oil Range) Area:1.370812E+08 RRO TEH(Oil Range) AMOUNT: 5.187645



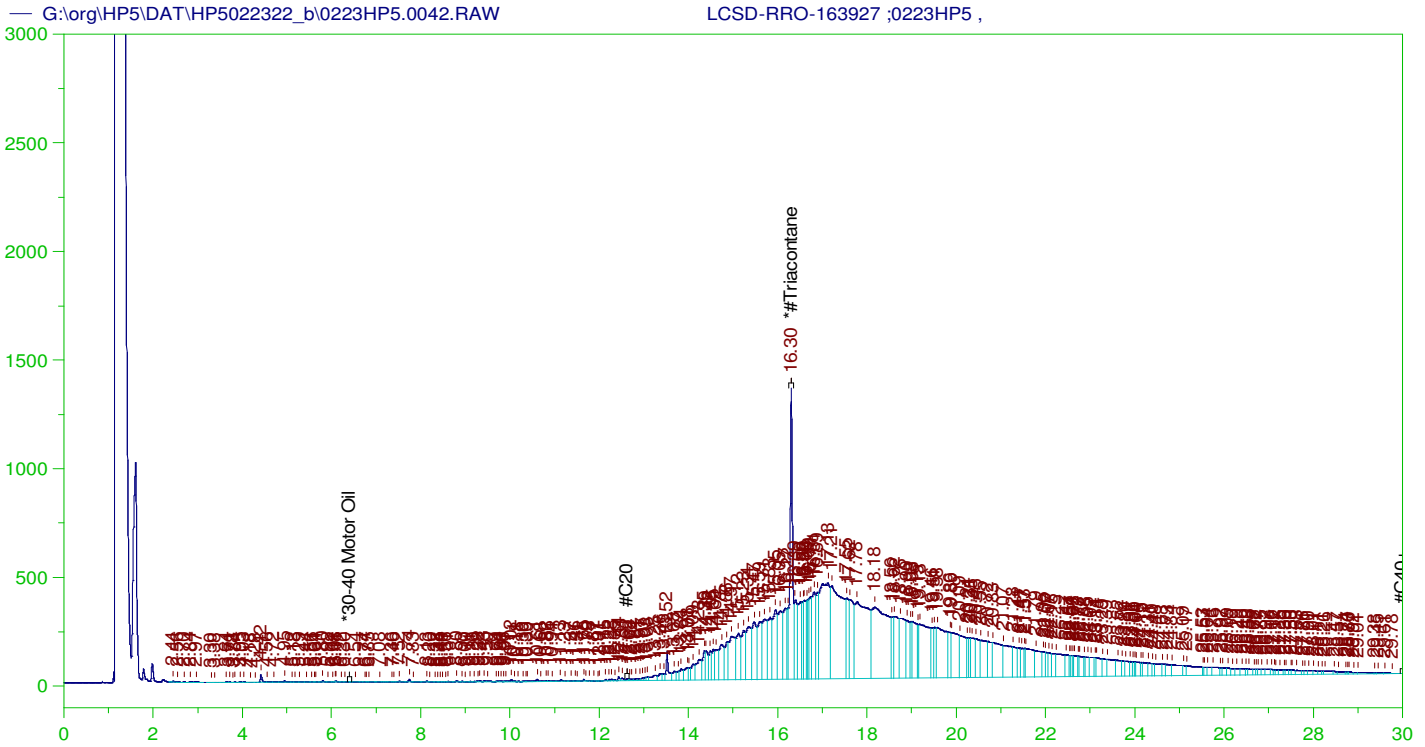
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-RRO-163927 ;0223HP5 ,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0041.RAW
 Date & Time Acquired: 2/24/2022 2:02:16 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.304	.5	.091	18.21 -

RRO Area:3244644 RRO AMOUNT: 0.122789



RESIDUAL RANGE ORGANICS CHROMATOGRAM

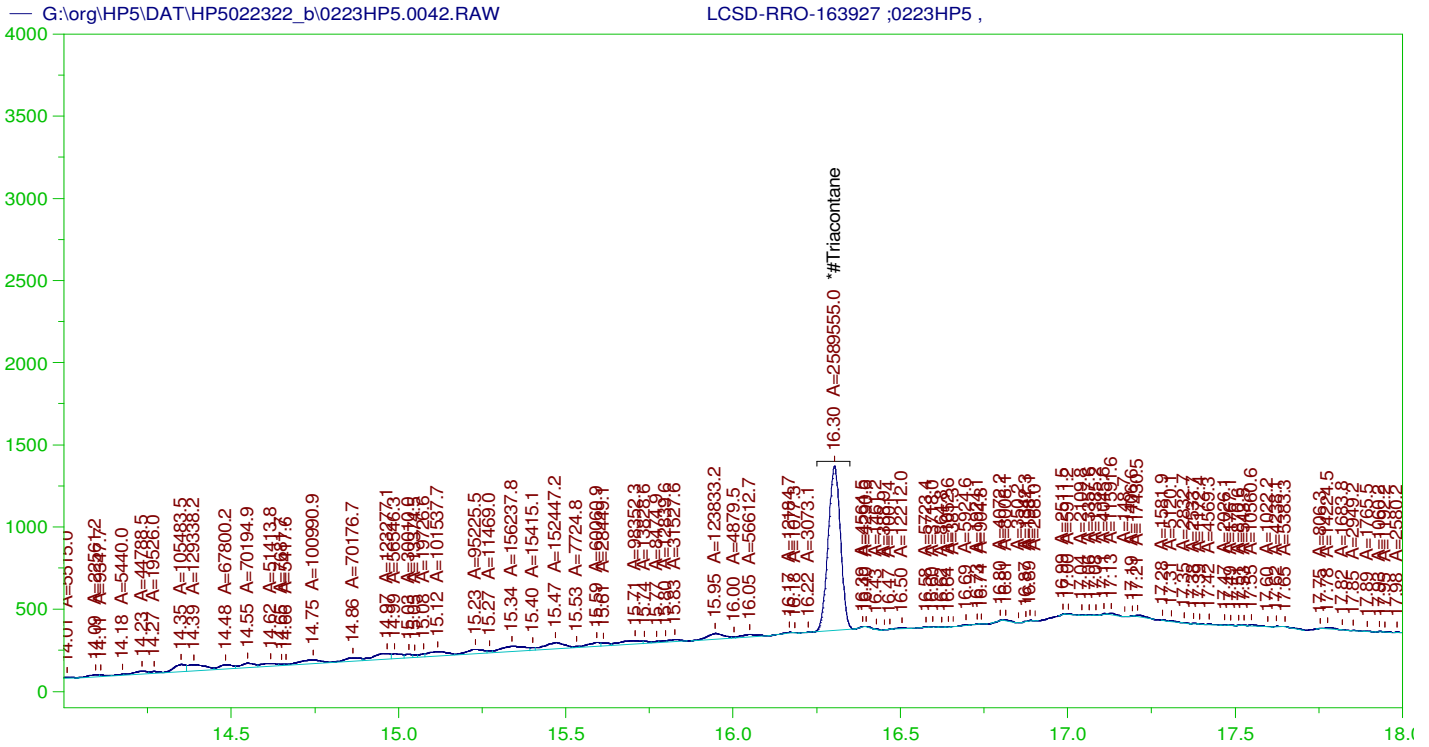
Sample Name: LCSD-RRO-163927 ;0223HP5 ,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0042.RAW
 Date & Time Acquired: 2/24/2022 2:45:24 PM
 Method File: G:\Org\HP5\Methods\D3_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
 Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.303	.5	.175	35. -

RRO TEH(Oil Range) Area:1.359774E+08 RRO TEH(Oil Range) AMOUNT: 5.145873

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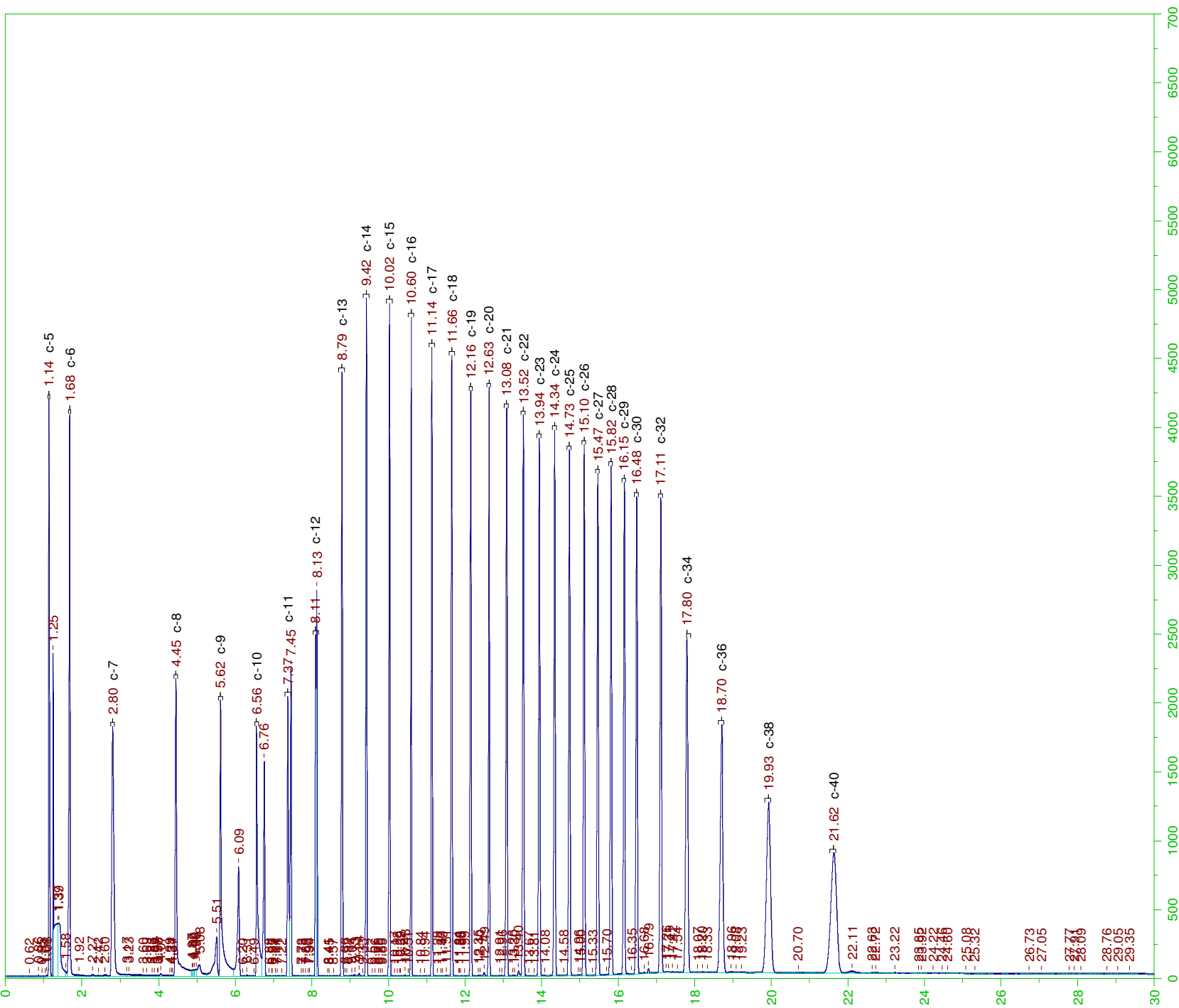
RESIDUAL RANGE ORGANICS CHROMATOGRAM

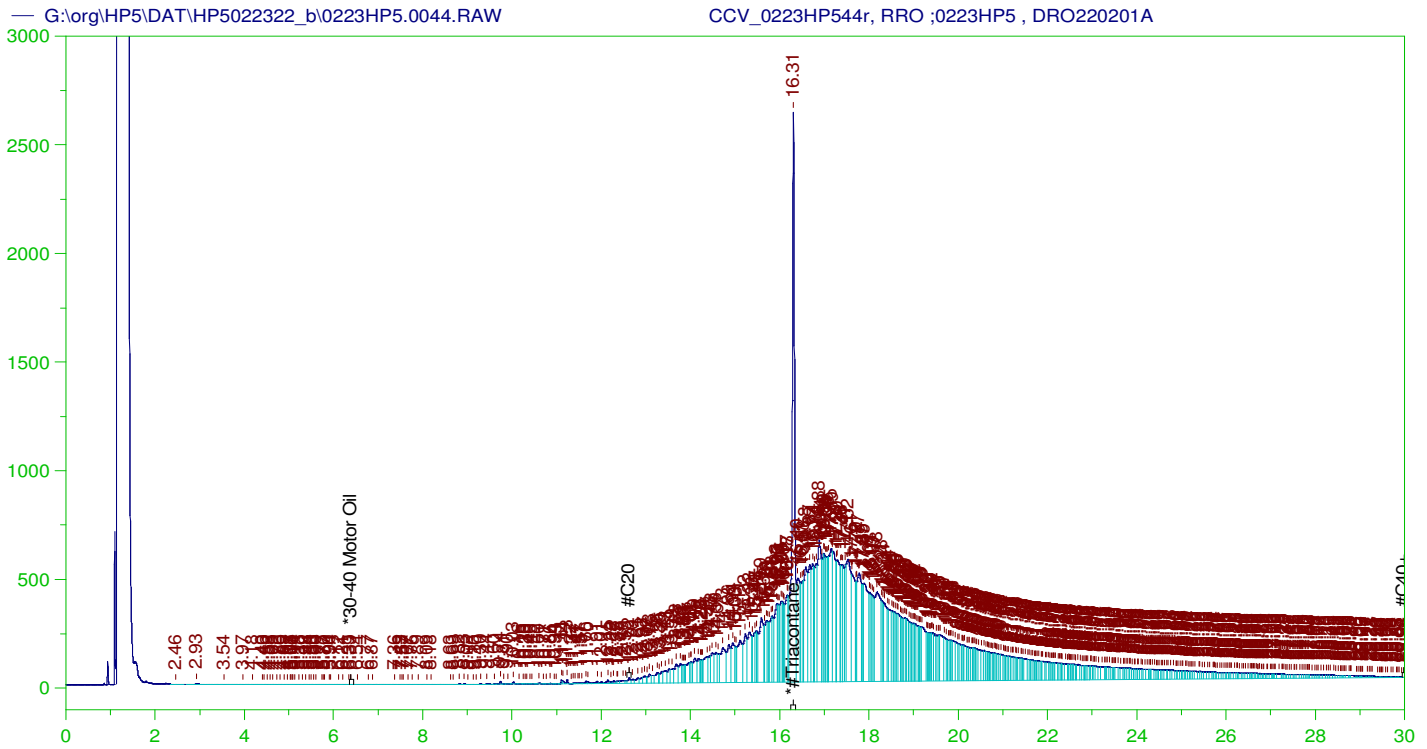
Sample Name: LCSD-RRO-163927 ;0223HP5 ,
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0042.RAW
 Date & Time Acquired: 2/24/2022 2:45:24 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.303	.5	.087	17.48

RRO Area:2853525 RRO AMOUNT: 0.1079876





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP544r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0044.RAW
 Date & Time Acquired: 2/24/2022 4:14:25 PM
 Method File: G:\Org\HP5\Methods\DC_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.305	500.	346.808	69.36	-

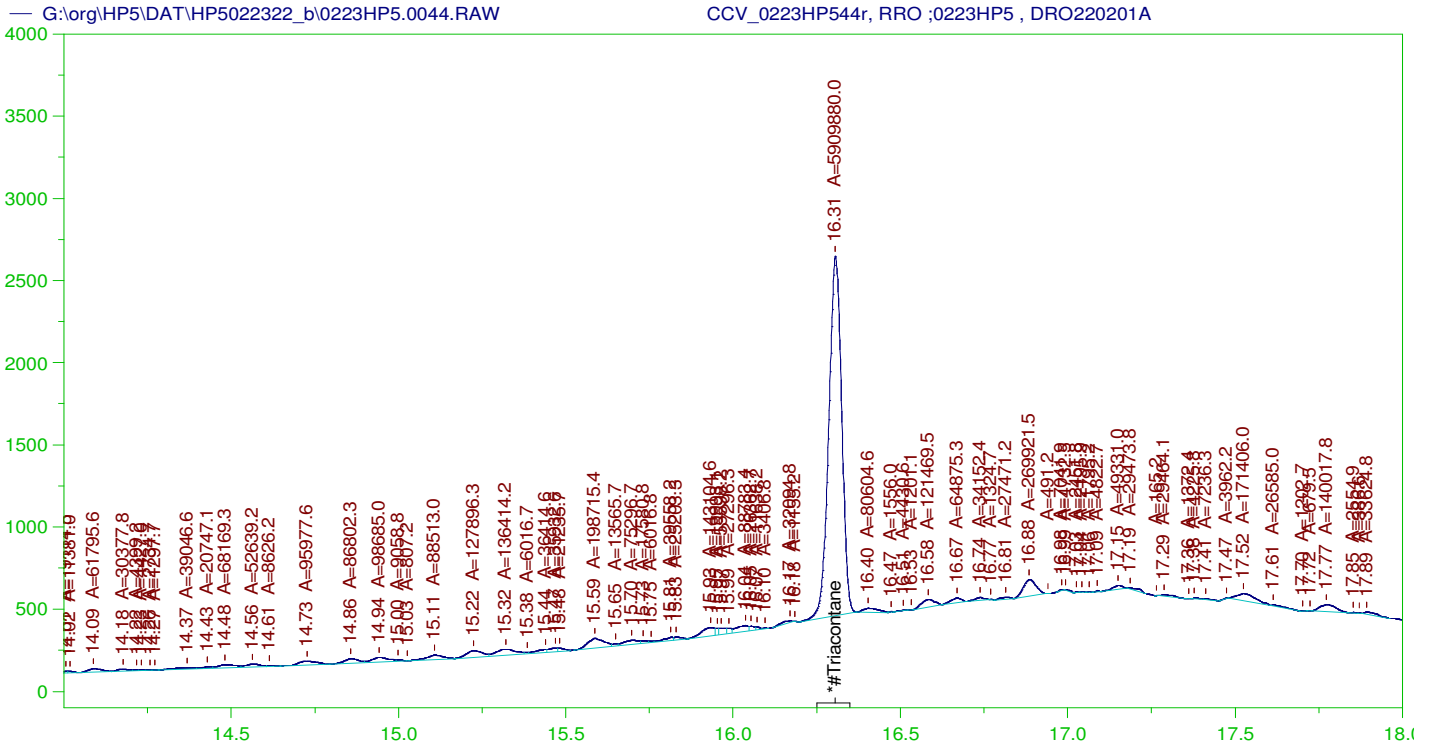
RRO TEH(Oil Range) Area:1.445617E+08 RRO TEH(Oil Range) AMOUNT: 5470.735

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0044.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.028	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.305	200.	346.808	173.4	75-125

JLB 02/28/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP544r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0044.RAW
 Date & Time Acquired: 2/24/2022 4:14:25 PM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

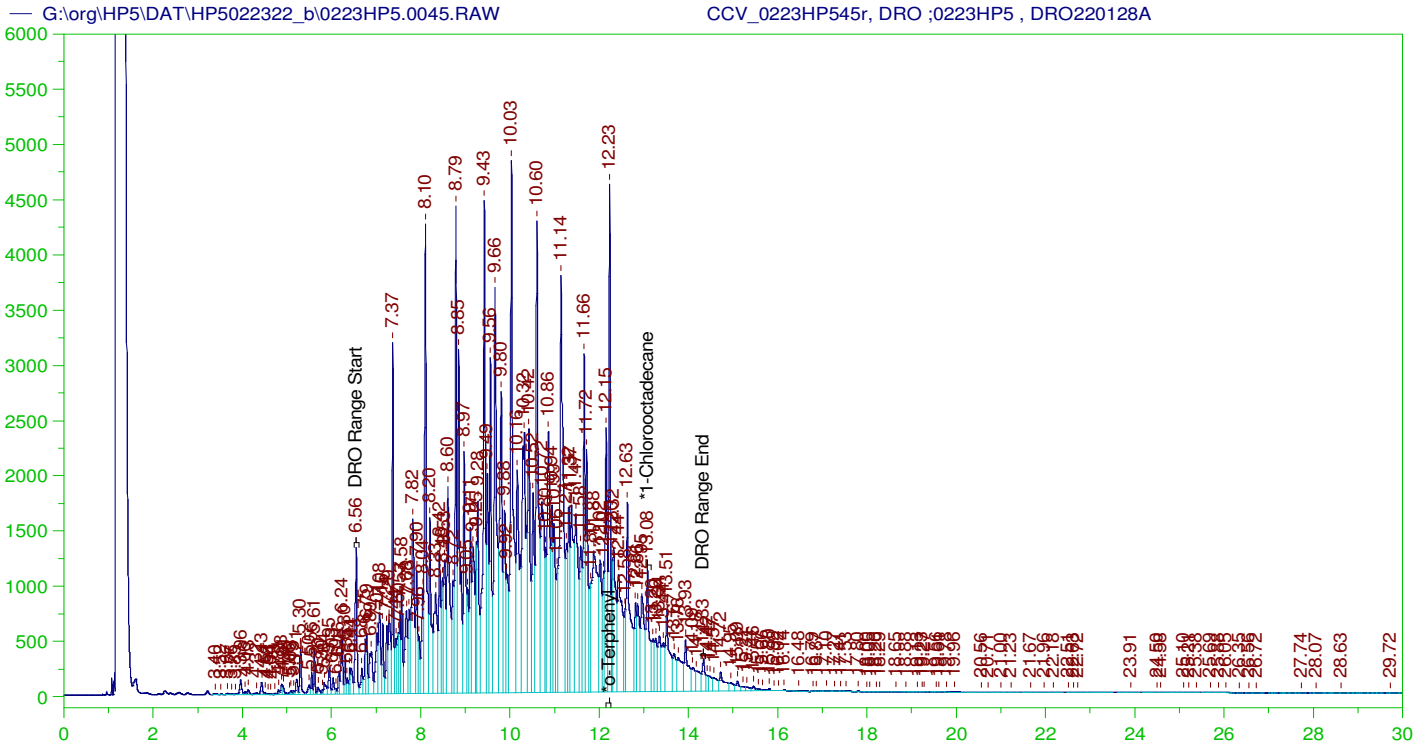
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.305	500.	199.415	39.88	-

RRO Area:3829081 RRO AMOUNT: 144.9062

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0044.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.028	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.305	200.	199.415	99.71	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP545r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0045.RAW
 Date & Time Acquired: 2/24/2022 4:57:21 PM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.23	200.	310.51	155.26
*1-Chlorooctadecane	13.078	200.	154.14	77.07

DRO Area: 4.770827E+08 DRO Amount: 14600.69
 TEH Area: 4.937261E+08 TEH Amount: 15110.04

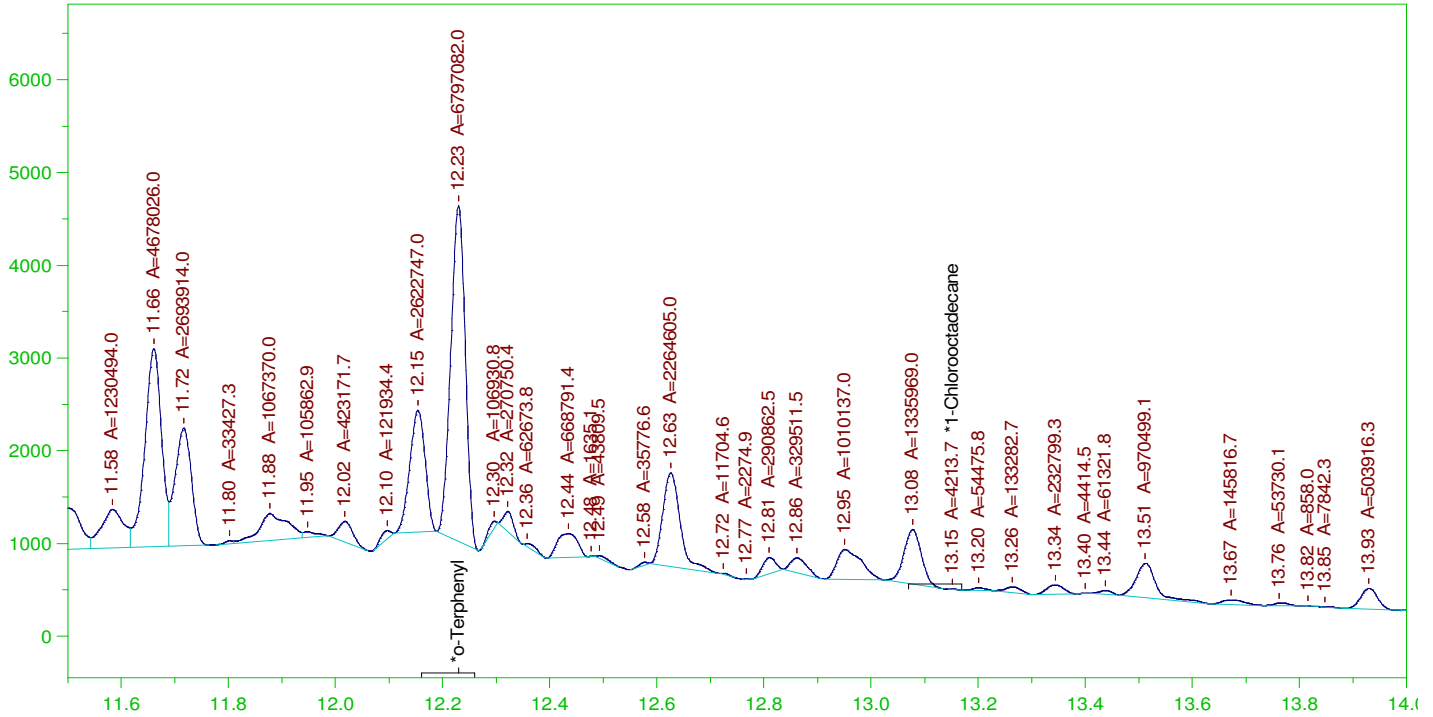
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0045.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15110.04	100.73	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.23	200.	310.51	155.26	85-115
*1-Chlorooctadecane	13.078	200.	154.14	77.07	85-115

G:\org\HP5\DAT\HP5022322_b\0223HP5.0045.RAW

CCV_0223HP545r, DRO ;0223HP5 , DRO220128A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP545r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0045.RAW
 Date & Time Acquired: 2/24/2022 4:57:21 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

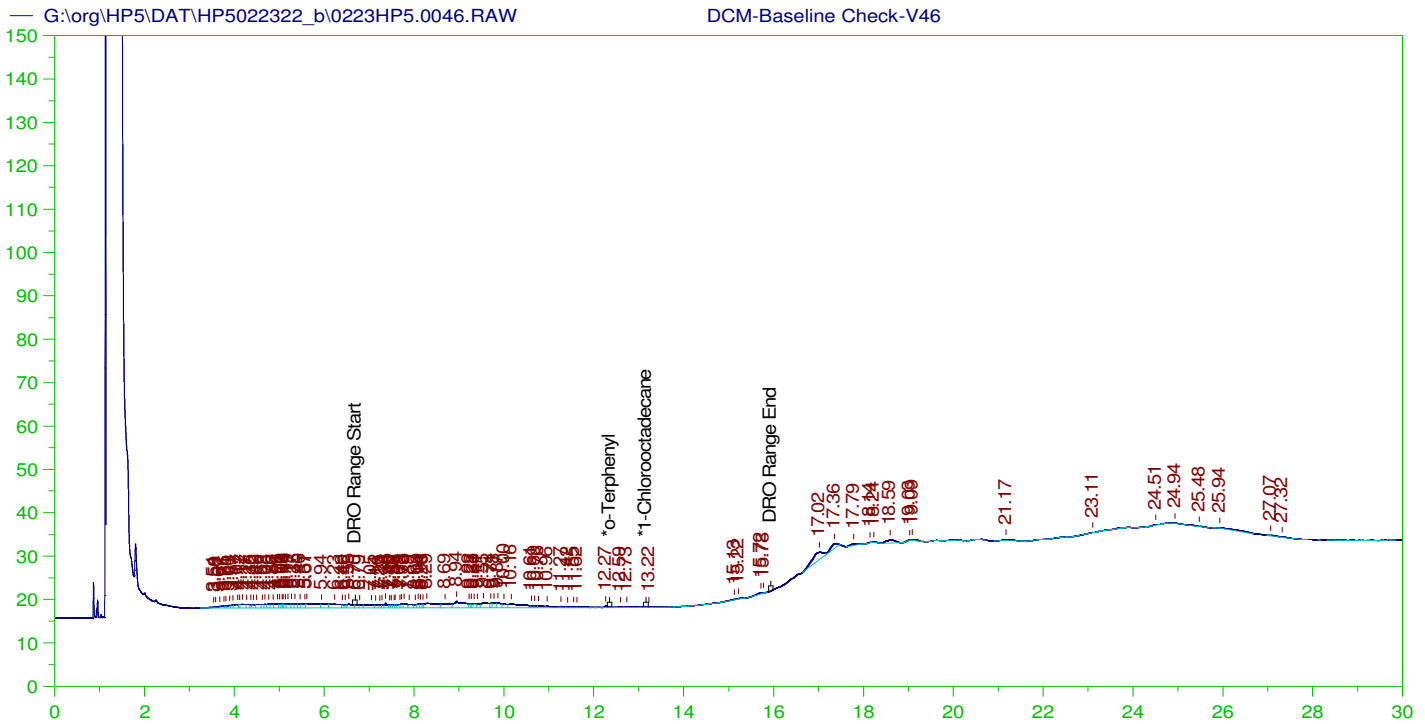
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.23	200.	184.413	92.21	-
*1-Chlorooctadecane	13.152	200.	.114	.06	-

DRO Area: 2.475213E+08 DRO Amount: 7575.168
 TEH Area: 2.582118E+08 TEH Amount: 7902.341

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0045.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7902.34	52.68	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.23	200.	184.413	92.21	85-115
*1-Chlorooctadecane	13.152	200.	.114	.06	85-115



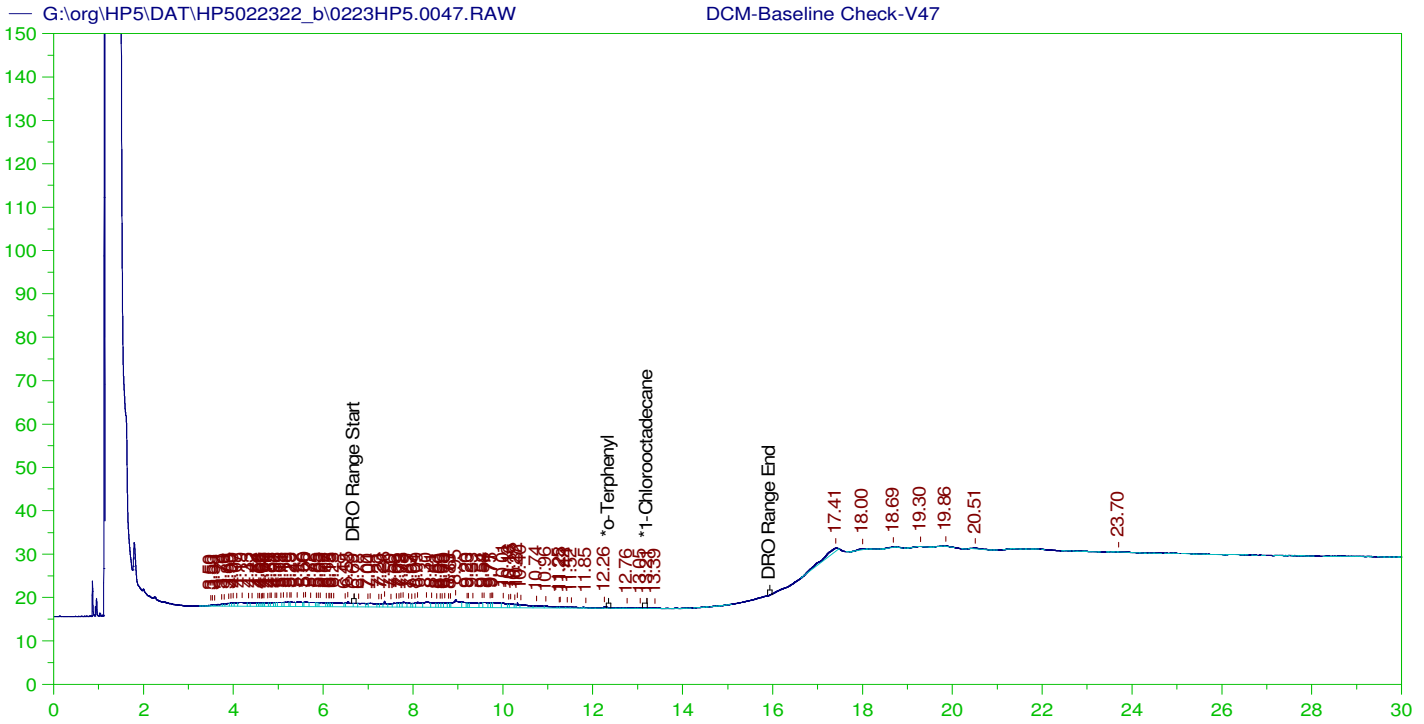
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V46
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 Date & Time Acquired: 2/24/2022 5:40:15 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	29.811	200.	.	.
*1-Chlorooctadecane	29.811	200.	.	.

DRO Area: 216657.9 DRO Amount: 6.63062
 TEH Area: 460003.9 TEH Amount: 14.07801



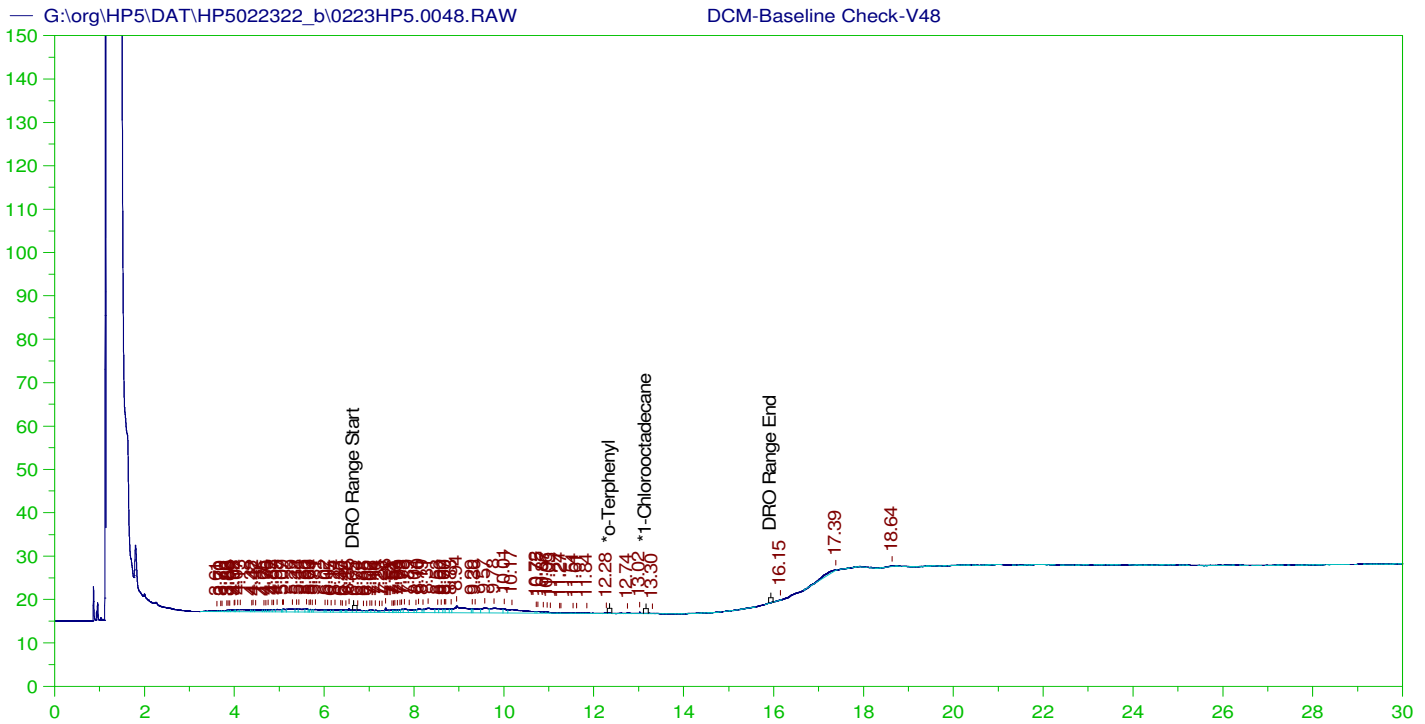
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V47
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0047.RAW
 Date & Time Acquired: 2/24/2022 6:23:11 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	29.973	200.	.	-
*1-Chlorooctadecane	13.207	200.	.015	.01

DRO Area:242120.1 DRO Amount: 7.409869
 TEH Area:443274.5 TEH Amount: 13.56602



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V48
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0048.RAW
 Date & Time Acquired: 2/24/2022 7:06:10 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	29.959	200.	.	-
*1-Chlorooctadecane	29.959	200.	.	-

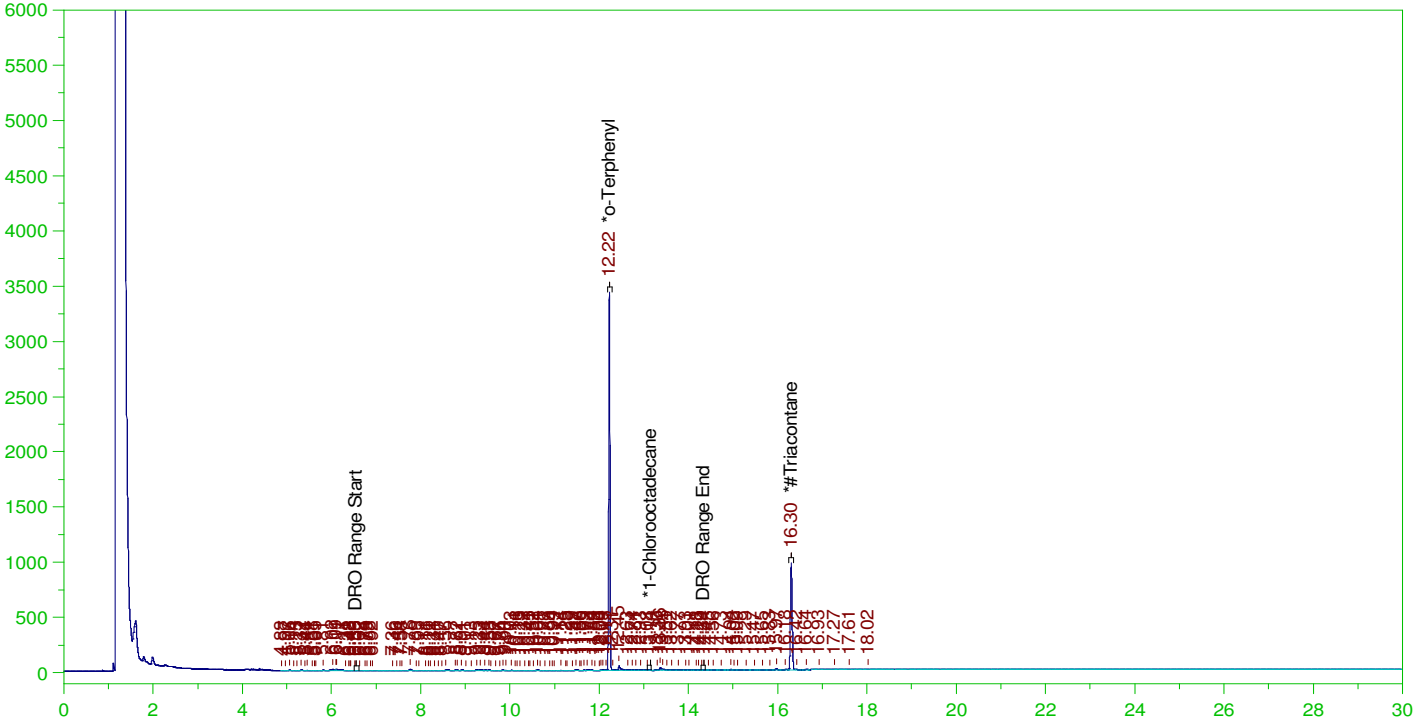
DRO Area:204099.1 DRO Amount: 6.24627
 TEH Area:318468.6 TEH Amount: 9.746445

ERH2410 (RHMW12A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0049.RAW

B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0049.RAW
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 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.202	.187	92.33	-
*1-Chlorooctadecane	13.144	.202	.	.02	-
*#Triacontane	16.302	.202	.088	43.54	-

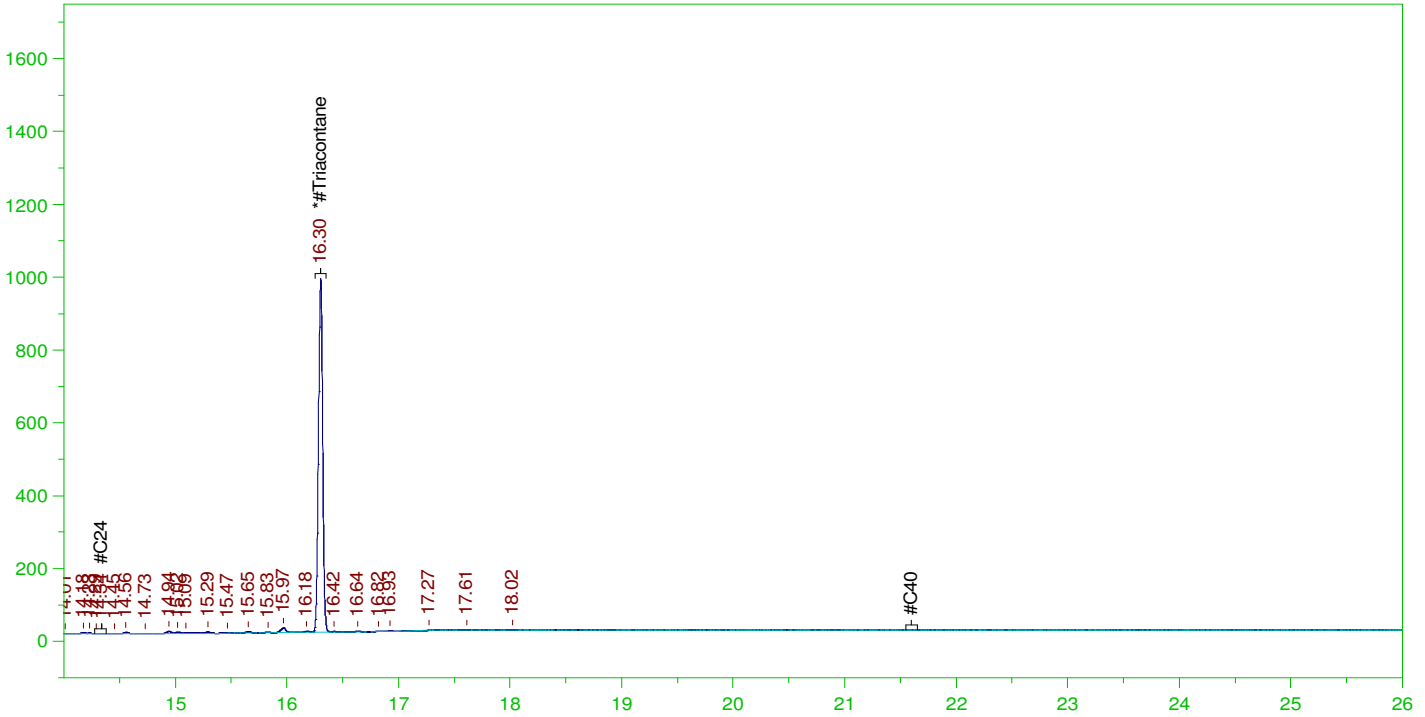
DRO Area: 755762.1 DRO Amount: 2.336305E-02
 TEH Area: 1112435 TEH Amount: 3.438895E-02

ERH2410 (RHMW12A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0049.RAW

B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0049.RAW
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 Method File: G:\Org\HP5\Methods\DR_OROS-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_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: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.302	.505	.088	17.42

RRO Area:167473.6 RRO AMOUNT: 6.401821E-03

ERH2410 (RHMW12A)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0049.RAW

B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010971-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0049.RAW
 Date & Time Acquired: 2/24/2022 7:49:05 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.202	.186	91.96	-
*1-Chlorooctadecane	13.082	.202	.	.09	-
*#Triacontane	16.302	.202	.087	43.27	-

DRO Area:505764.1
 TEH Area:1032091

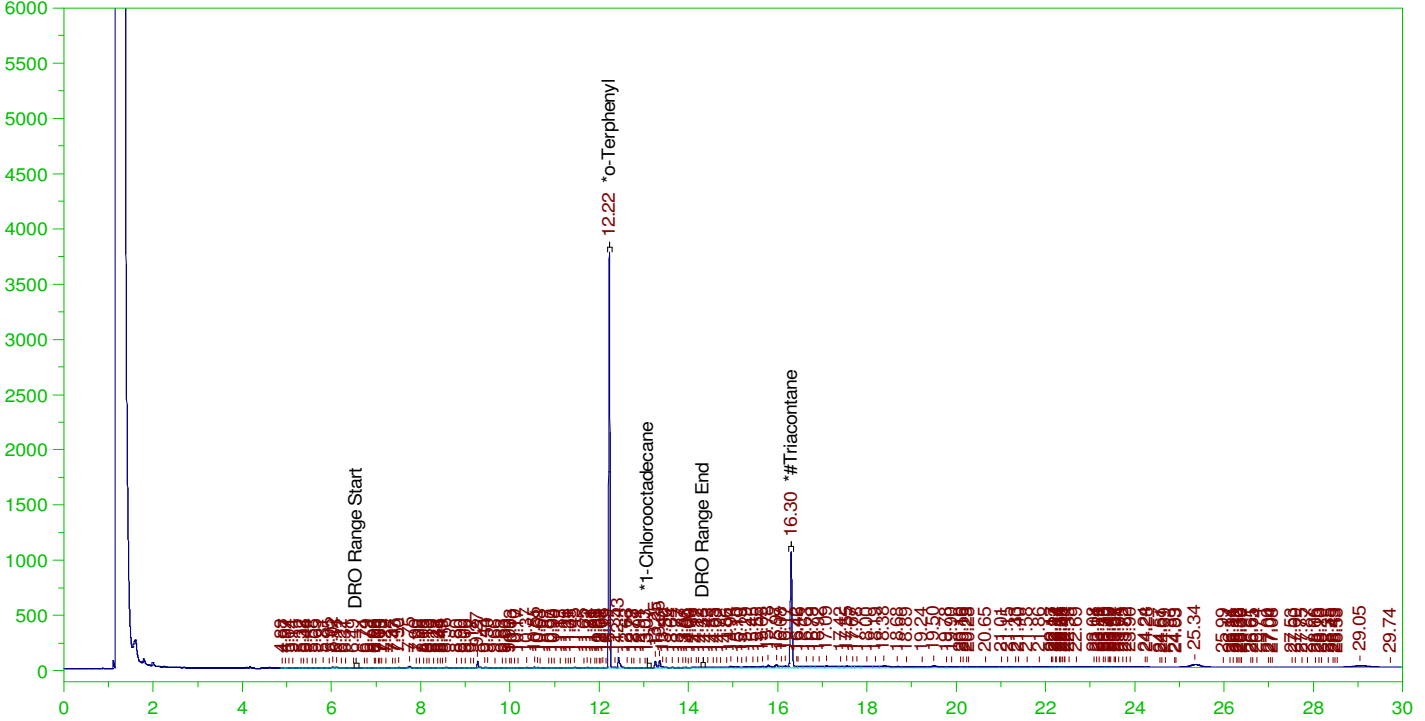
DRO Amount: 0.0156348
 TEH Amount: 3.190526E-02

ERH2420 (RHMW19)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0050.RAW

B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0050.RAW
 Date & Time Acquired: 2/24/2022 8:32:02 PM
 Method File: G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.196	.196	100.16	-
*1-Chlorooctadecane	13.074	.196	.	.06	-
*#Triacontane	16.299	.196	.095	48.3	-

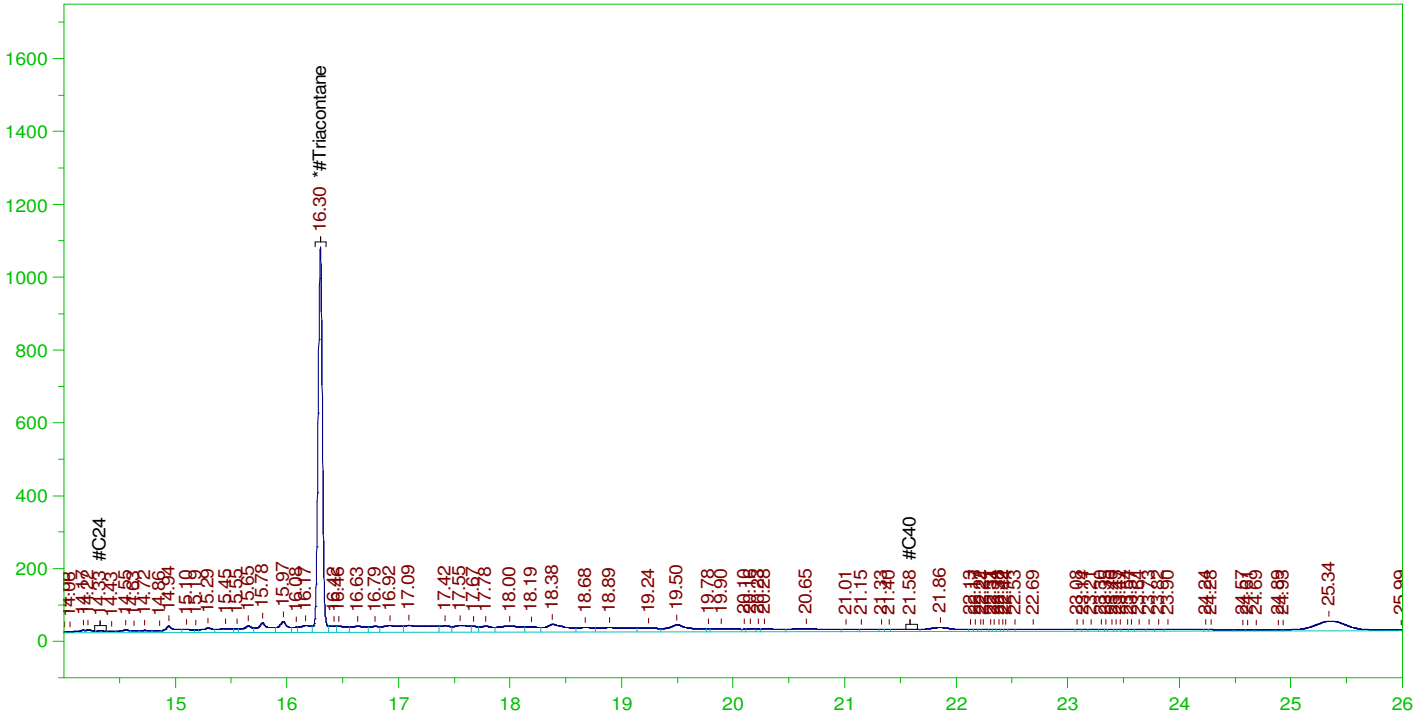
DRO Area:1746989 DRO Amount: 5.241669E-02
 TEH Area:9018864 TEH Amount: 0.2706022

ERH2420 (RHMW19)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0050.RAW

B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0050.RAW
 Date & Time Acquired: 2/24/2022 8:32:02 PM
 Method File: G:\Org\HP5\Methods\D3_OROS-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.299	.49	.095	19.32

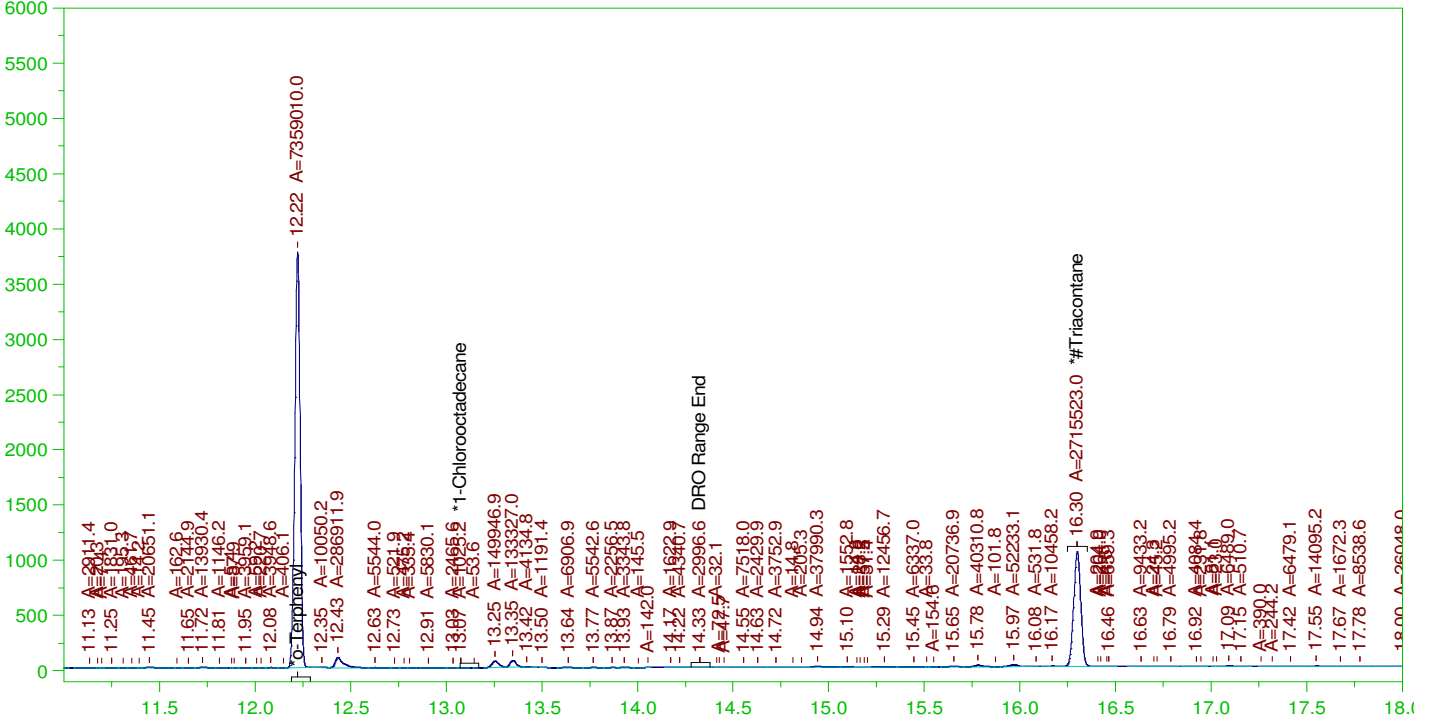
RRO Area:4791437 RRO AMOUNT: 0.1777698

ERH2420 (RHMW19)

Batch ID: 163927

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B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010974-001J ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0050.RAW
 Date & Time Acquired: 2/24/2022 8:32:02 PM
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 Sample Weight: 1020 Dilution: 1 S.A.: 1

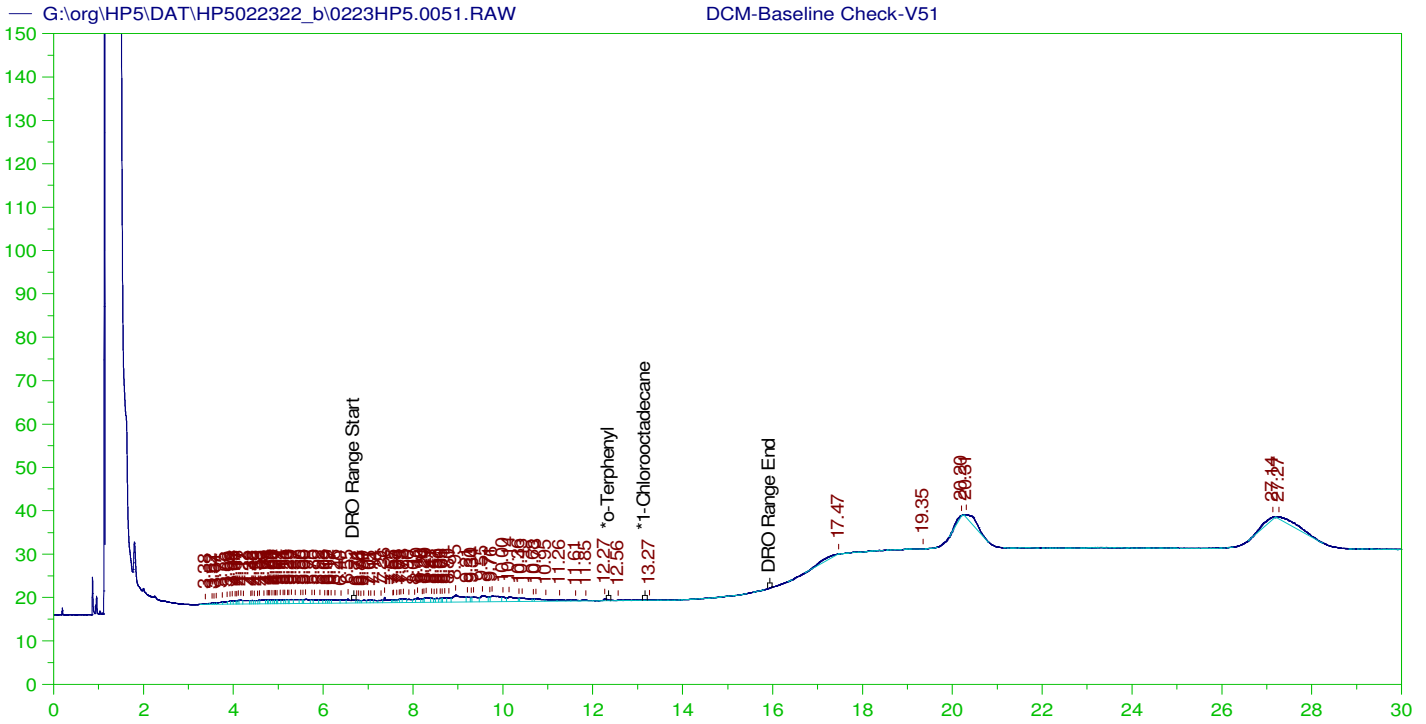
Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.223	.196	.196	99.83	-
*1-Chlorooctadecane	13.074	.196	.	.01	-
*#Triacontane	16.299	.196	.09	45.81	-

DRO Area:1265634
 TEH Area:2631723

DRO Amount: 0.0379741
 TEH Amount: 7.896226E-02



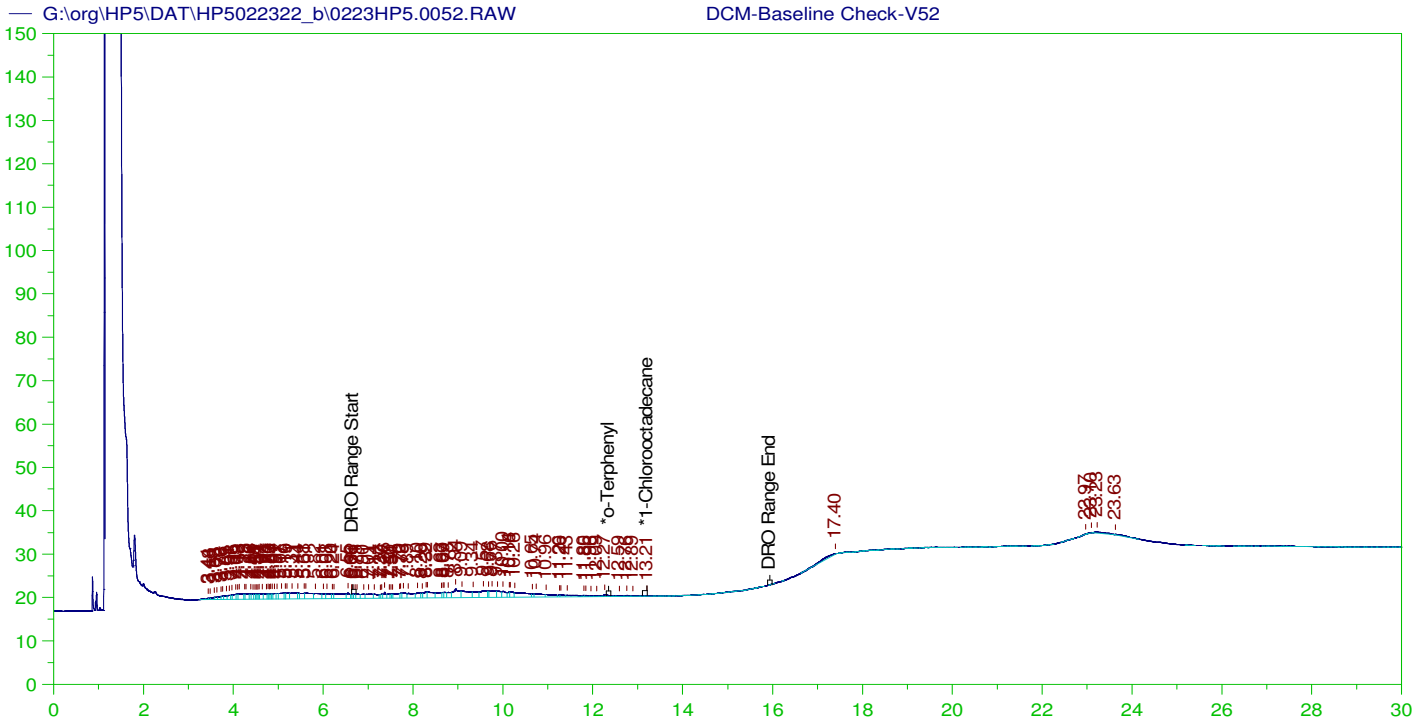
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V51
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0051.RAW
 Date & Time Acquired: 2/24/2022 9:15:00 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	29.943	200.	.	-
*1-Chlorooctadecane	29.943	200.	.	-

DRO Area:233617.3 DRO Amount: 7.149647
 TEH Area:494615.3 TEH Amount: 15.13725



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V52
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0052.RAW
 Date & Time Acquired: 2/24/2022 9:57:57 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	29.976	200.	.	-
*1-Chlorooctadecane	13.208	200.	.027	.01

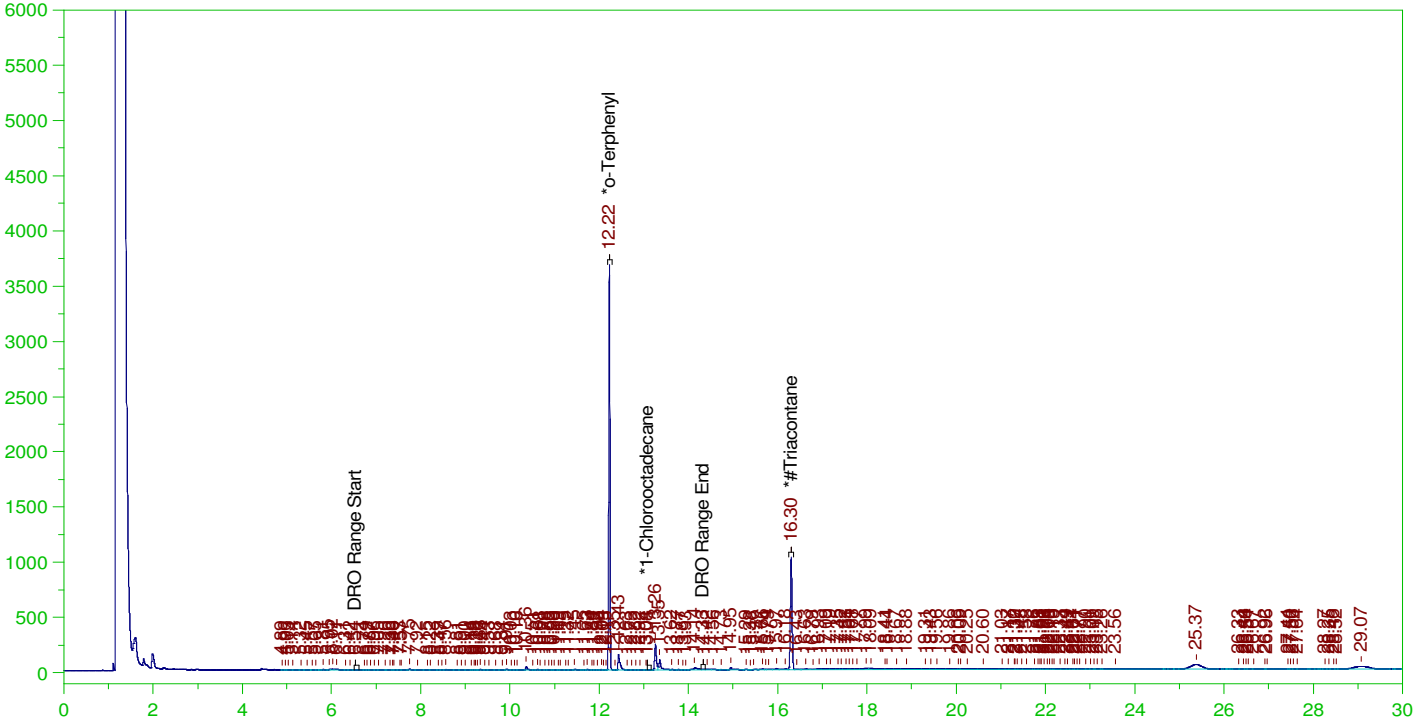
DRO Area:308497.3 DRO Amount: 9.441283
 TEH Area:540891.1 TEH Amount: 16.55349

ERH2014 (RHMW08)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0053.RAW

B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0053.RAW
 Date & Time Acquired: 2/24/2022 10:40:51 PM
 Method File: G:\Org\HP5\Methods\D3_8015-022353-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.224	.2	.193	96.67 -
*1-Chlorooctadecane	13.077	.2	.04	-
*#Triacontane	16.3	.2	.092	46.23 -

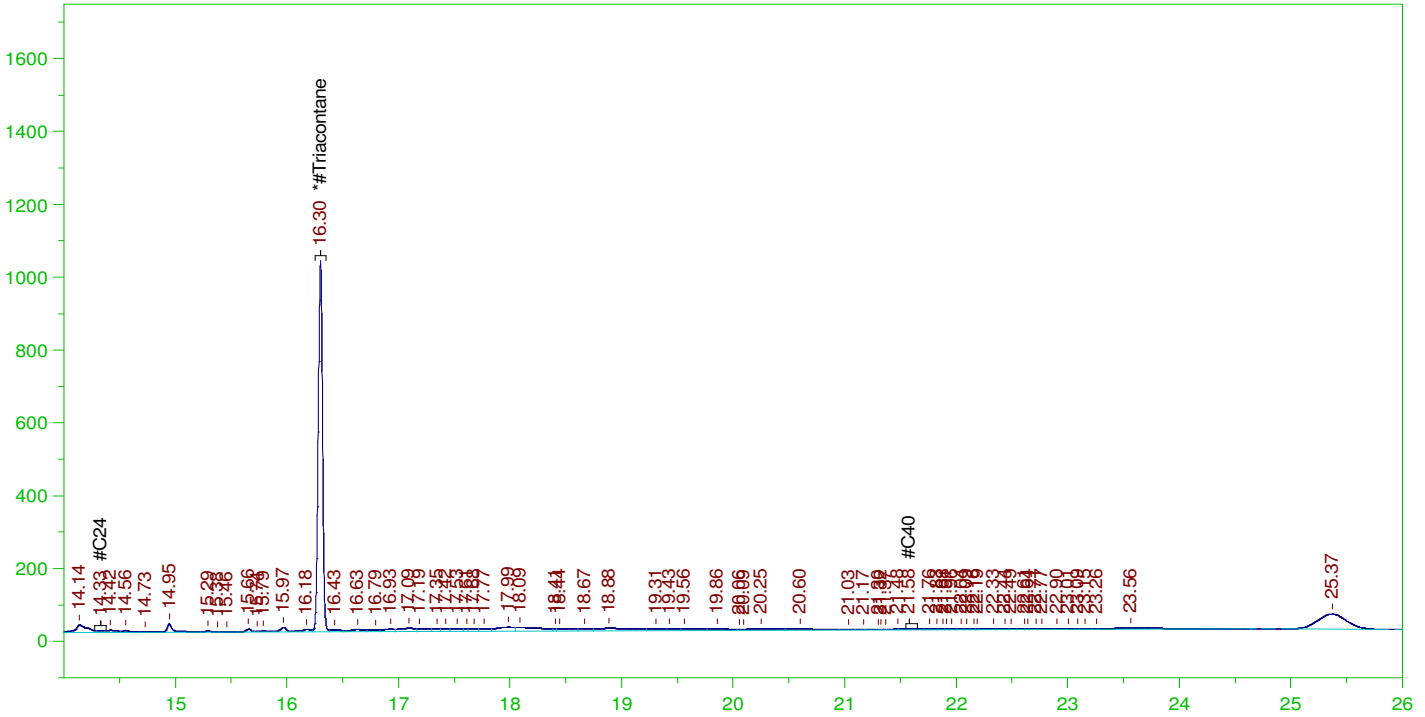
DRO Area:2301418 DRO Amount: 7.043283E-02
 TEH Area:6509086 TEH Amount: 0.1992047

ERH2014 (RHMW08)

Batch ID: 163927

G:\org\HP5\DAT\HP5022322_b\0223HP5.0053.RAW

B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0053.RAW
 Date & Time Acquired: 2/24/2022 10:40:51 PM
 Method File: G:\Org\HP5\Methods\D3_OROS-022353-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_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: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.3	.5	.092	18.49

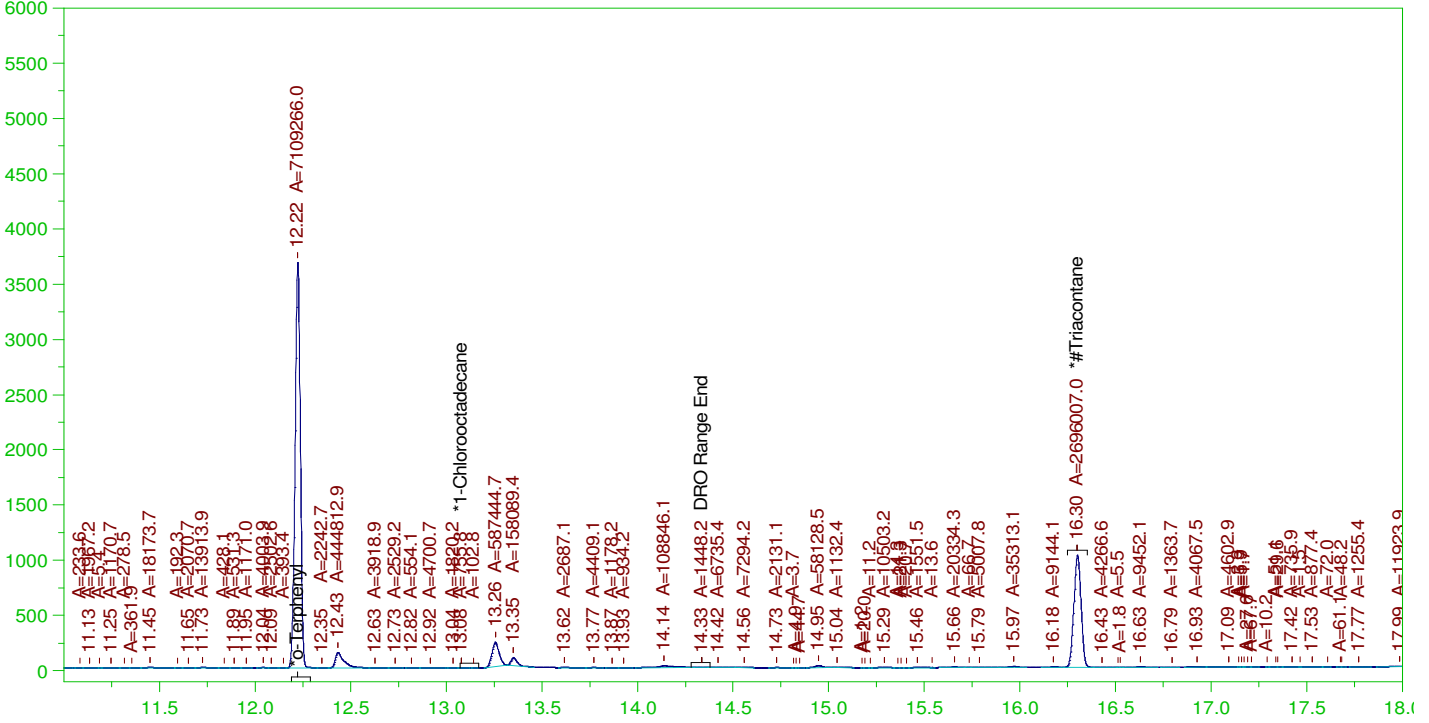
RRO Area:2196276 RRO AMOUNT: 8.311498E-02

ERH2014 (RHMW08)

Batch ID: 163927

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B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

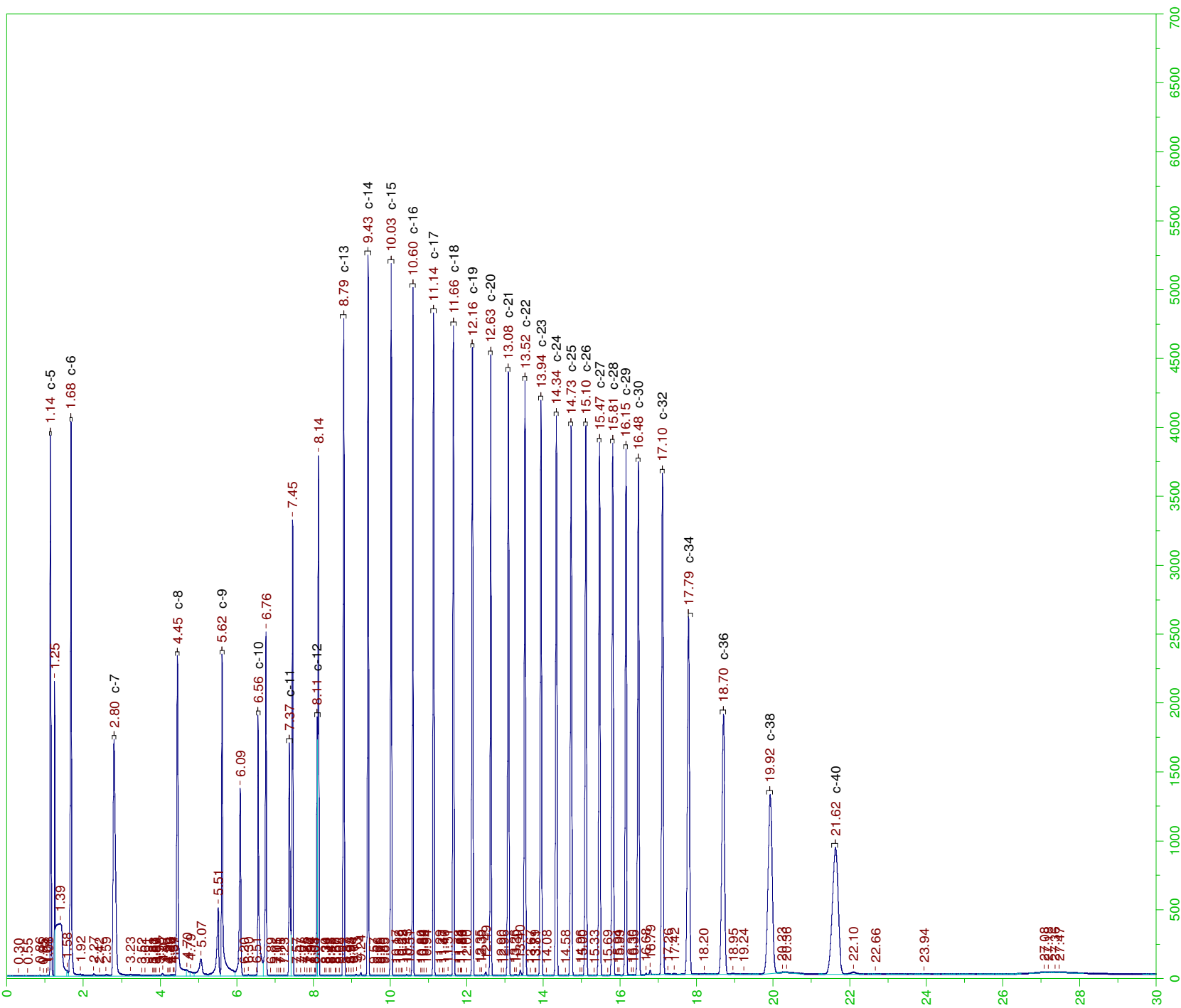
Sample Name: B21120381-006E ;0223HP5 , \$HC-8015-DRO-W, RR-RX
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0053.RAW
 Date & Time Acquired: 2/24/2022 10:40:51 PM
 Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

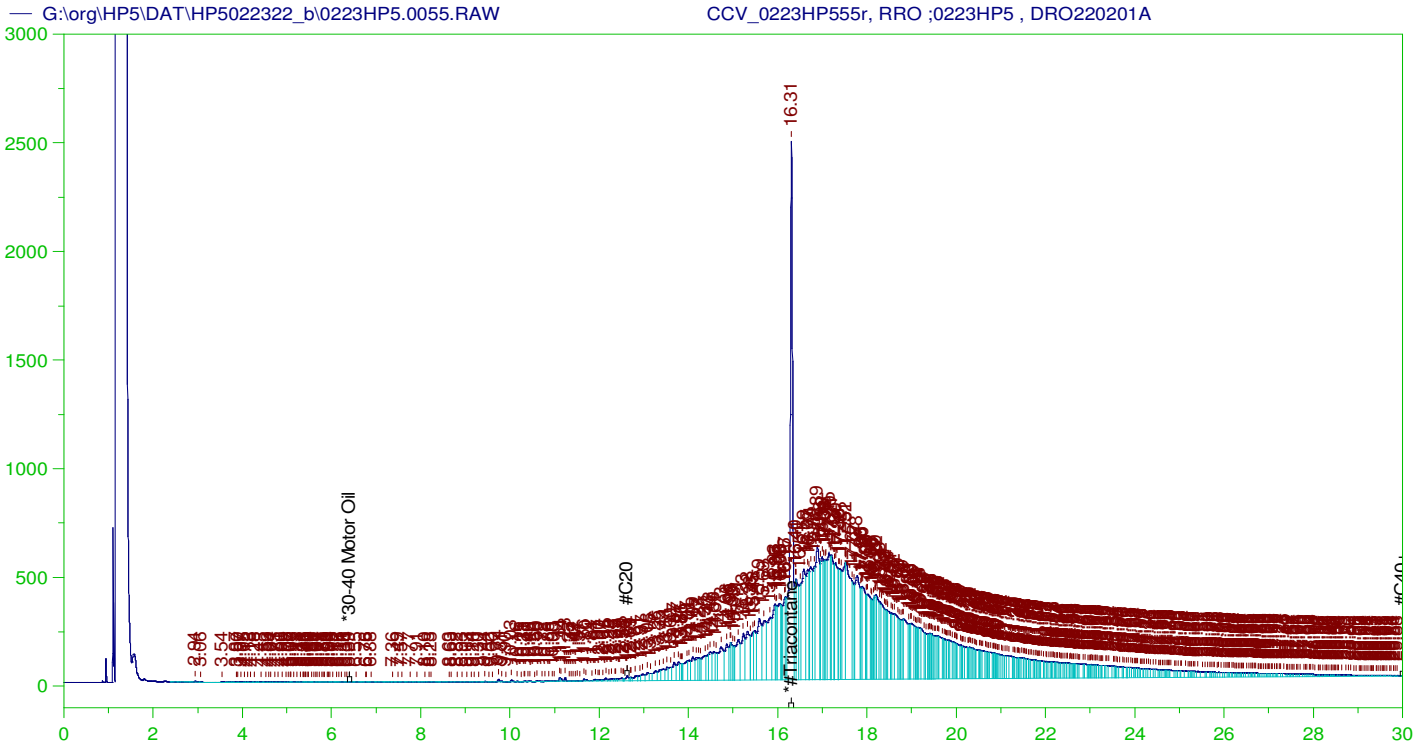
Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.224	.2	.193	96.44
*1-Chlorooctadecane	13.077	.2	.01	-
*#Triacontane	16.3	.2	.091	45.49

DRO Area:1839433 DRO Amount: 5.629419E-02
 TEH Area:3275044 TEH Amount: 0.1002298





RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP555r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0055.RAW
 Date & Time Acquired: 2/25/2022 12:06:39 AM
 Method File: G:\Org\HP5\Methods\DC_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.307	500.	328.748	65.75	-

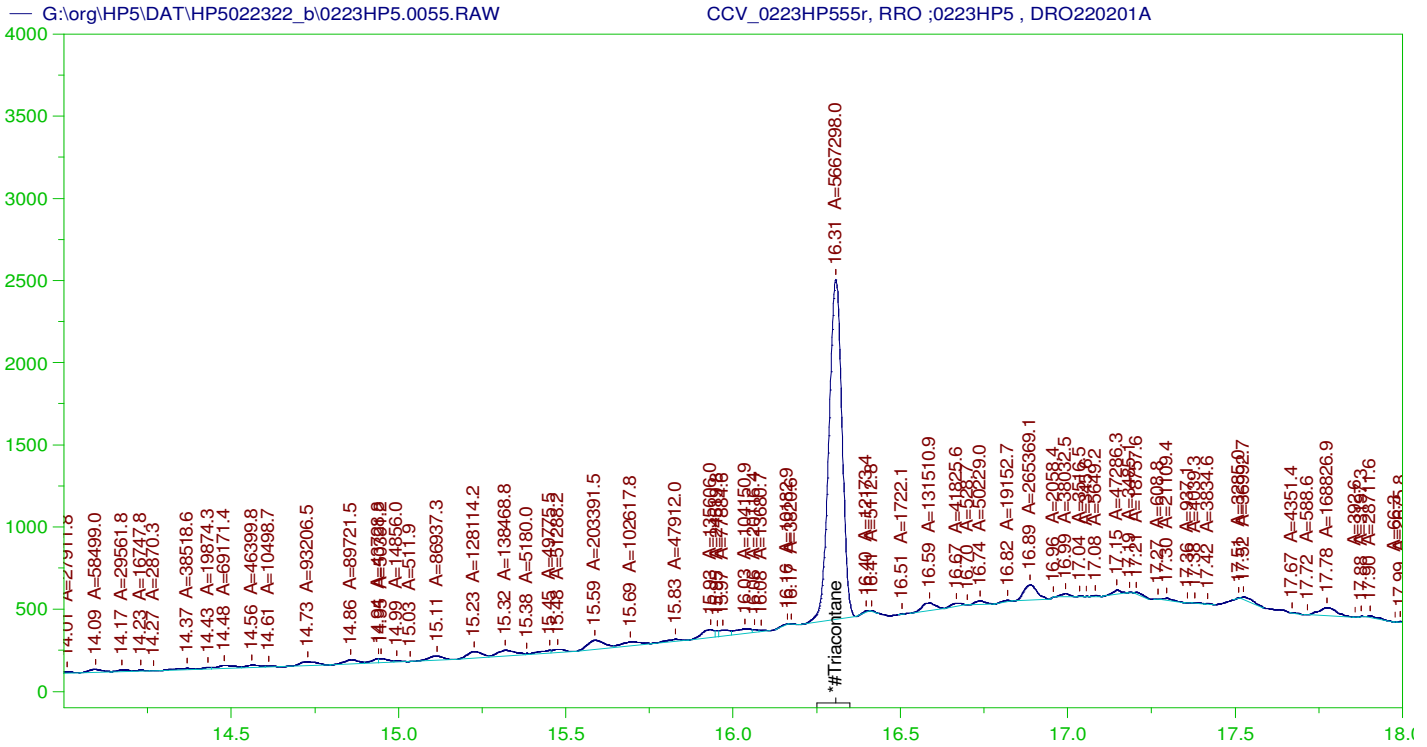
~~RRO~~ TEH(Oil Range) Area:1.365705E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5168.317

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0055.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.307	200.	328.748	164.37	75-125

JLB 02/28/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0223HP555r, RRO ;0223HP5 , DRO220201A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0055.RAW
 Date & Time Acquired: 2/25/2022 12:06:39 AM
 Method File: G:\Org\HP5\Methods\DS_ORO-BF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111Bf.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: 12.57 to 30.05

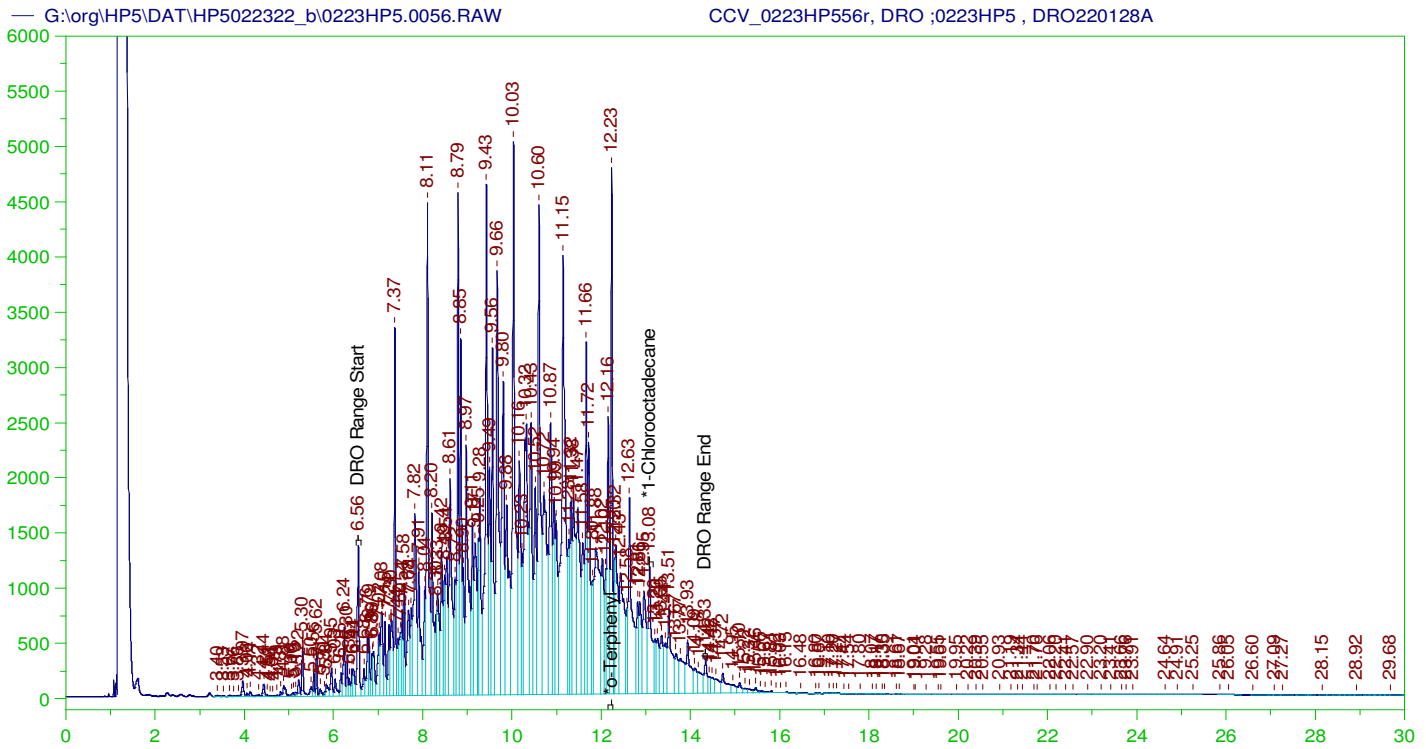
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.307	500.	191.23	38.25	-

RRO Area:3420924 RRO AMOUNT: 129.46

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0055.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.307	200.	191.23	95.61	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP556r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0056.RAW
 Date & Time Acquired: 2/25/2022 12:49:37 AM
 Method File: G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
 Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.231	200.	323.226	161.61
*1-Chlorooctadecane	13.08	200.	162.009	81.

DRO Area: 4.961203E+08 DRO Amount: 15183.32
 TEH Area: 5.133977E+08 TEH Amount: 15712.08

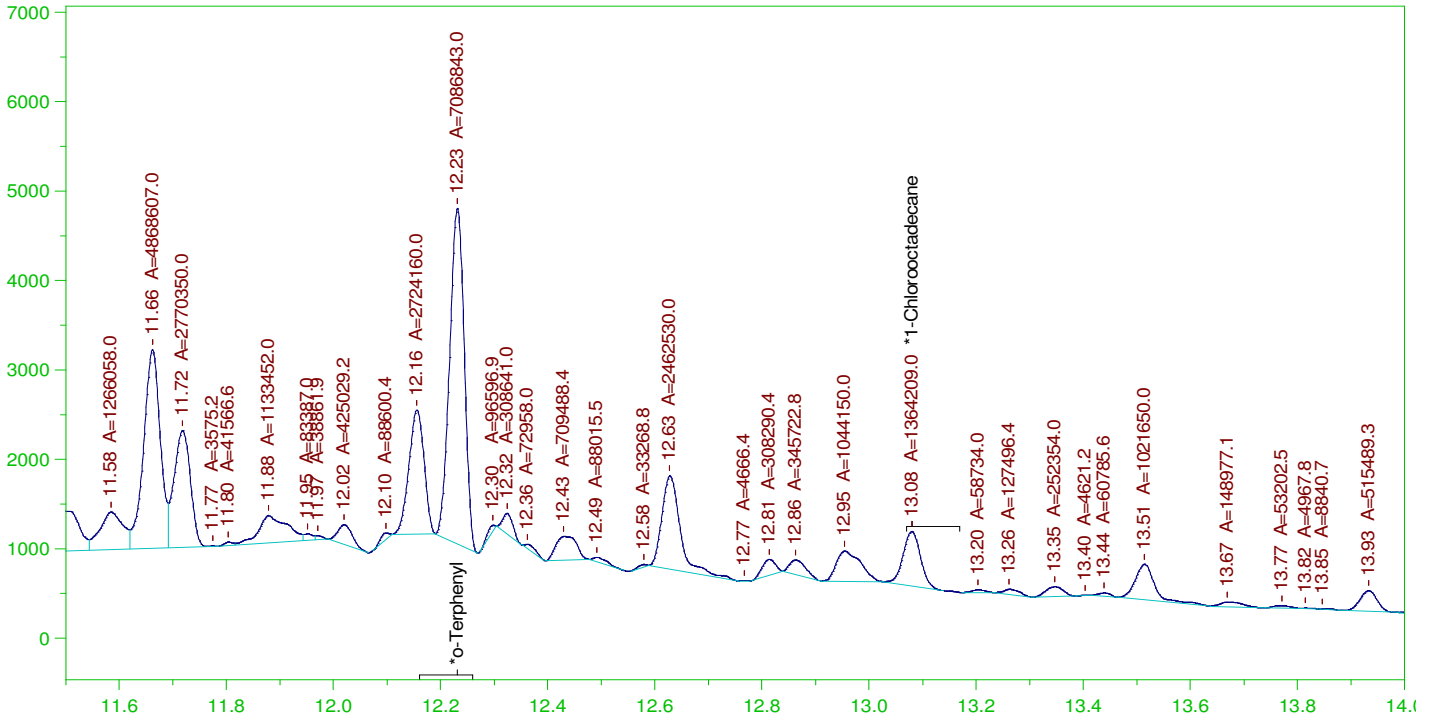
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0056.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	15712.08	104.75	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.231	200.	323.226	161.61	85-115
*1-Chlorooctadecane	13.08	200.	162.009	81.	85-115

G:\org\HP5\DAT\HP5022322_b\0223HP5.0056.RAW

CCV_0223HP56r, DRO ;0223HP5 , DRO220128A



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0223HP56r, DRO ;0223HP5 , DRO220128A
 Raw File: G:\org\HP5\DAT\HP5022322_b\0223HP5.0056.RAW
 Date & Time Acquired: 2/25/2022 12:49:37 AM
 Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
 Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	12.231	200.	192.275	96.14
*1-Chlorooctadecane	13.08	200.	37.013	18.51

DRO Area: 2.553195E+08 DRO Amount: 7813.824
 TEH Area: 2.663224E+08 TEH Amount: 8150.556

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022322_b\0223HP5.0056.RAW

COMPOUND	ACTUAL (NG)	MEASURED (NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8150.56	54.34	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.231	200.	192.275	96.14	85-115
*1-Chlorooctadecane	13.08	200.	37.013	18.51	85-115

G:\org\HP5\DAT\HP5022322_b\0223HP5.26r	B21120381-005E :0223HP5 , \$HC-8015-DRO-W, RX	G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met G:\Org\HP5\Methods\D3_OROS-BF-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JFb-Lf%.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the 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\HP5022322_b\0223HP5.27r	B21120381-006E :0223HP5 , \$HC-8015-DRO-W, RX_needs RR due to possible carry over	G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met	1000	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.28r	B22010971-001J :0223HP5 , \$HC-8015-DRO-W, RXneeds RR due to possible carry over	G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met	990	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.29r	B22010974-001J :0223HP5 , \$HC-8015-DRO-W, RXneeds RR due to possible carry over	G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met	1020	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.30r	DCM-Baseline Check-V30	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.31r	B22011435-017D :0223HP5 , \$HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met G:\Org\HP5\Methods\D3_OROS-BF-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JFb-Lf%.met	1060	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\HP5022322_b\0223HP5.32r	B22011435-017DMS-RR0 :0223HP5 ,	G:\Org\HP5\Methods\D3_ORO-022332-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-L%.MET	1060	1	1	1	0	The integration of Oil Range hydrocarbon is the hydrocarbon response with reference to the baseline. Adjusted Peak Width. Placed Split at 16.23 minutes. 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\HP5022322_b\0223HP5.33r	MARKER :0223HP533r, DRO :0223HP5_DRO220128B	g:\org\HP5\Methods\CSC220223.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.34r	CCV :0223HP534r, RRO :0223HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-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\HP5022322_b\0223HP5.35r	CCV :0223HP535r, DRO :0223HP5 , DRO220128A	G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-Lf%.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.35 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\HP5022322_b\0223HP5.36r	DCM-Baseline Check-V36	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.37r	DCM-Baseline Check-V37	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.38r	B21120381-006E :0223HP5 , \$HC-8015-DRO-W, RR-RX- Needs second RR due to baseline	G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met	1000	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.39r	B22010971-001J :0223HP5 , \$HC-8015-DRO-W, RR-RX Needs second RR due to baseline	G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met	990	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.40r	B22010974-001J :0223HP5 , \$HC-8015-DRO-W, RR-RX Needs second RR due to baseline	G:\Org\HP5\Methods\DR_8015-C24T-JF-L0.met	1020	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.41r	LCS-RR0-163927 :0223HP5 ,	G:\Org\HP5\Methods\D3_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-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\HP5022322_b\0223HP5.42r	LCS-RR0-163927 :0223HP5 ,	G:\Org\HP5\Methods\D3_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-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\HP5022322_b\0223HP5.43r	MARKER :0223HP543r, DRO :0223HP5_DRO220128B	g:\org\HP5\Methods\CSC220223.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.44r	CCV :0223HP544r, RRO :0223HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-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\HP5022322_b\0223HP5.45r	CCV :0223HP545r, DRO :0223HP5 , DRO220128A	G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-Lf%.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.35 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\HP5022322_b\0223HP5.46r	DCM-Baseline Check-V46	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.47r	DCM-Baseline Check-V47	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.48r	DCM-Baseline Check-V48	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.49r	B22010971-001J :0223HP5 , \$HC-8015-DRO-W, RR-RX	G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met G:\Org\HP5\Methods\DR_OROS-BF-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JFb-Lf%.met	990	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.6 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\HP5022322_b\0223HP5.50r	B22010974-001J :0223HP5 , \$HC-8015-DRO-W, RR-RX	G:\Org\HP5\Methods\D3_8015-C24T-JFb-L%.met G:\Org\HP5\Methods\D3_OROS-BF-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JFb-Lf%.met	1020	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the 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\HP5022322_b\0223HP5.51r	DCM-Baseline Check-V51	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.52r	DCM-Baseline Check-V52	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.53r	B21120381-006E :0223HP5 , \$HC-8015-DRO-W, RR-RX	G:\Org\HP5\Methods\D3_8015-022353-JFb-L%.met G:\Org\HP5\Methods\D3_OROS-022353-BF-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JFb-Lf%.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Set Baseline Now assigned at 24.89 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\HP5022322_b\0223HP5.54r	MARKER :0223HP554r, DRO :0223HP5_DRO220128B	g:\org\HP5\Methods\CSC220223.met	1	1	1	1	0	No integration
G:\org\HP5\DAT\HP5022322_b\0223HP5.55r	CCV :0223HP555r, RRO :0223HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-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\HP5022322_b\0223HP5.56r	CCV :0223HP556r, DRO :0223HP5 , DRO220128A	G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-Lf%.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 16.35 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.

Jillian Bostwick
Analyst

Digitally signed by
Jillian L. Bostwick
Date: 2022.03.01 09:42:04 -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
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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

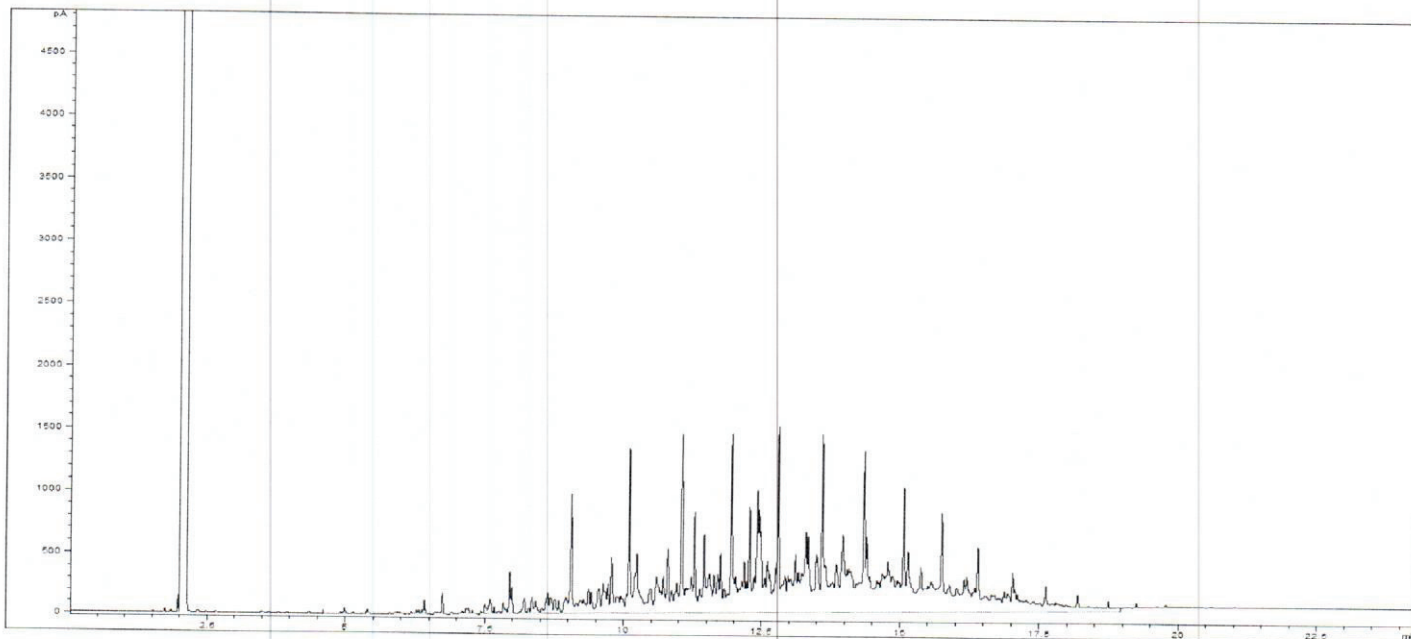
Rec'd: 12/14/2021

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.

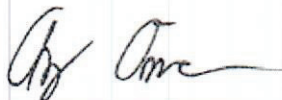
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

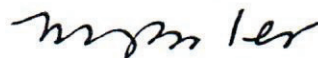
MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

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



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

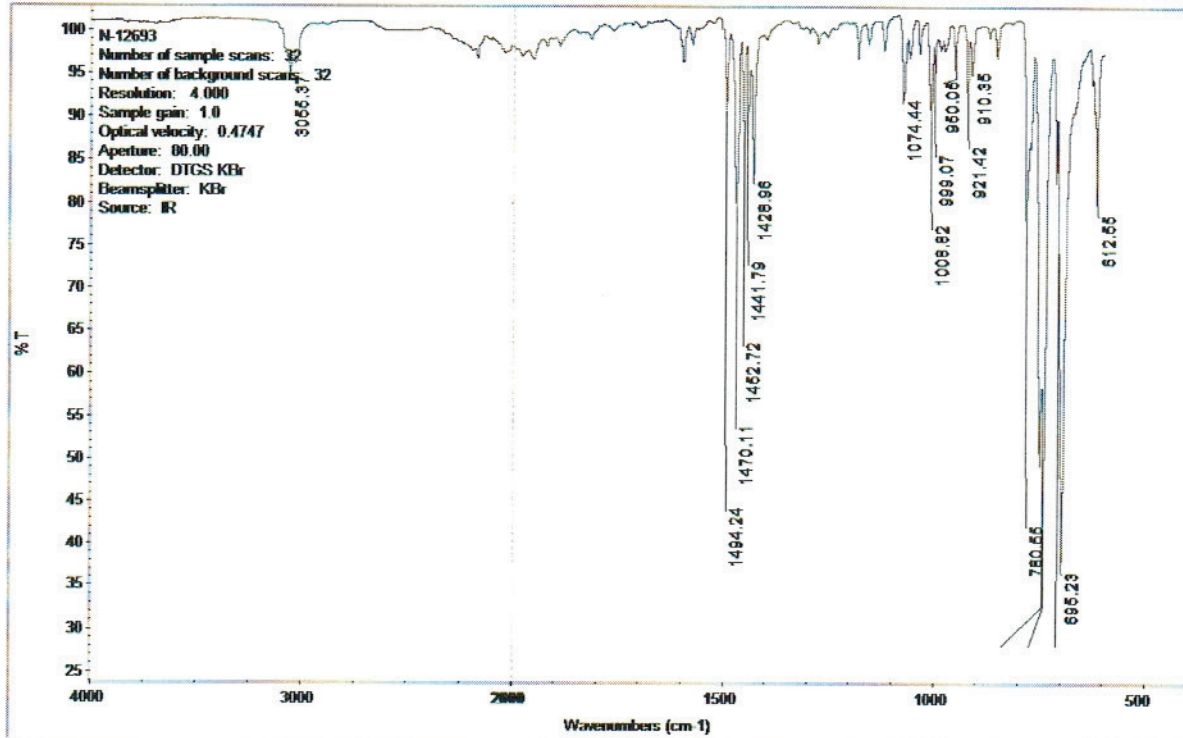
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

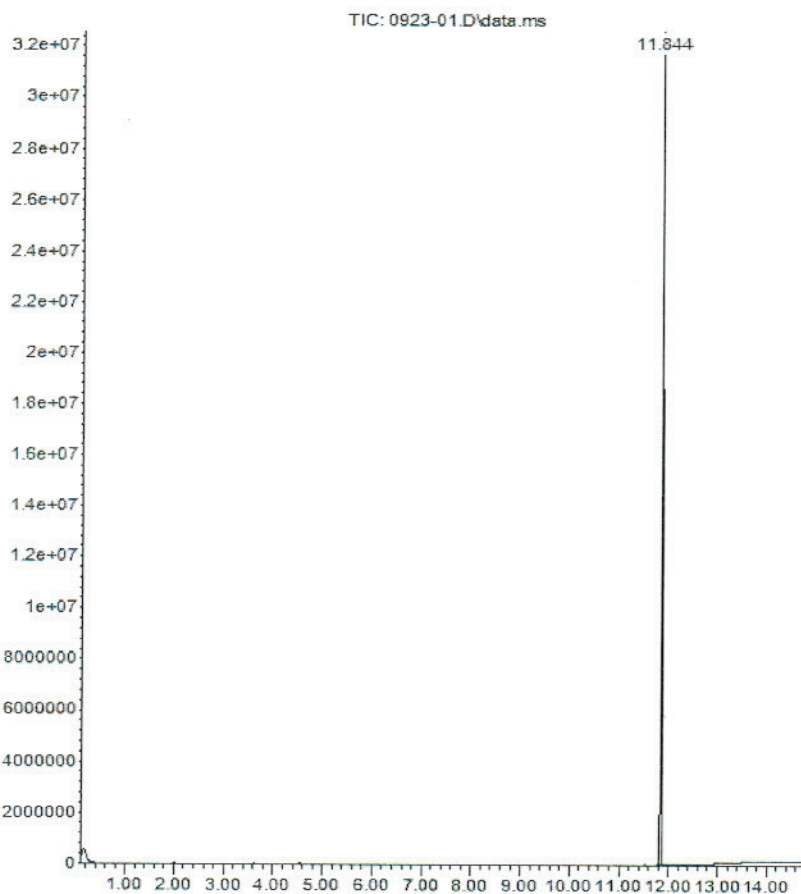
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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

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



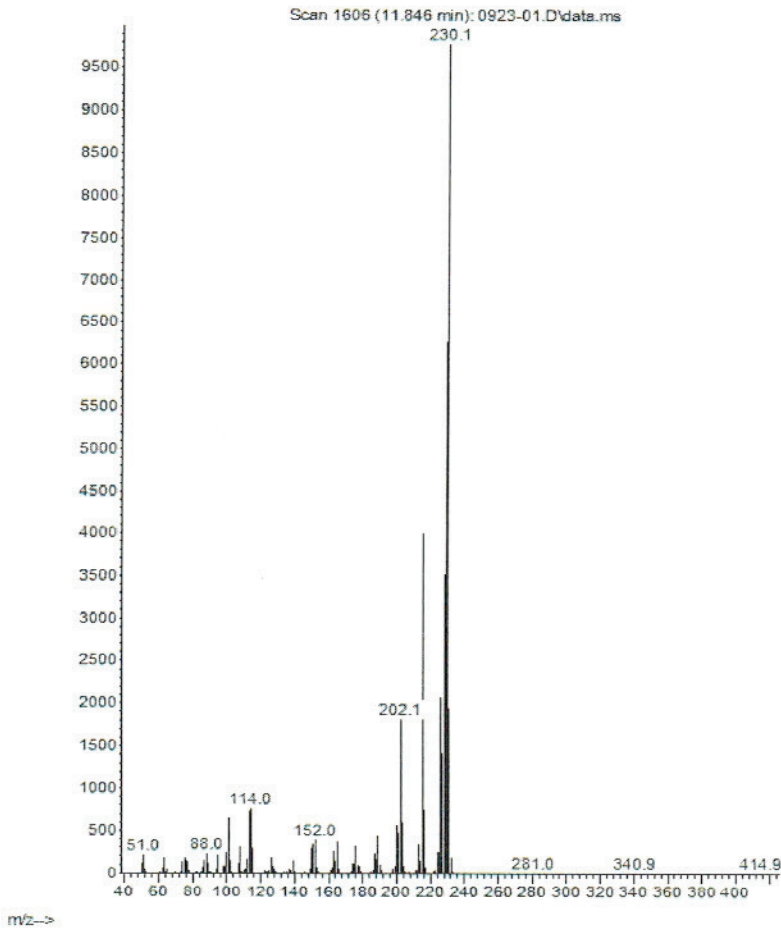
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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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



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

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



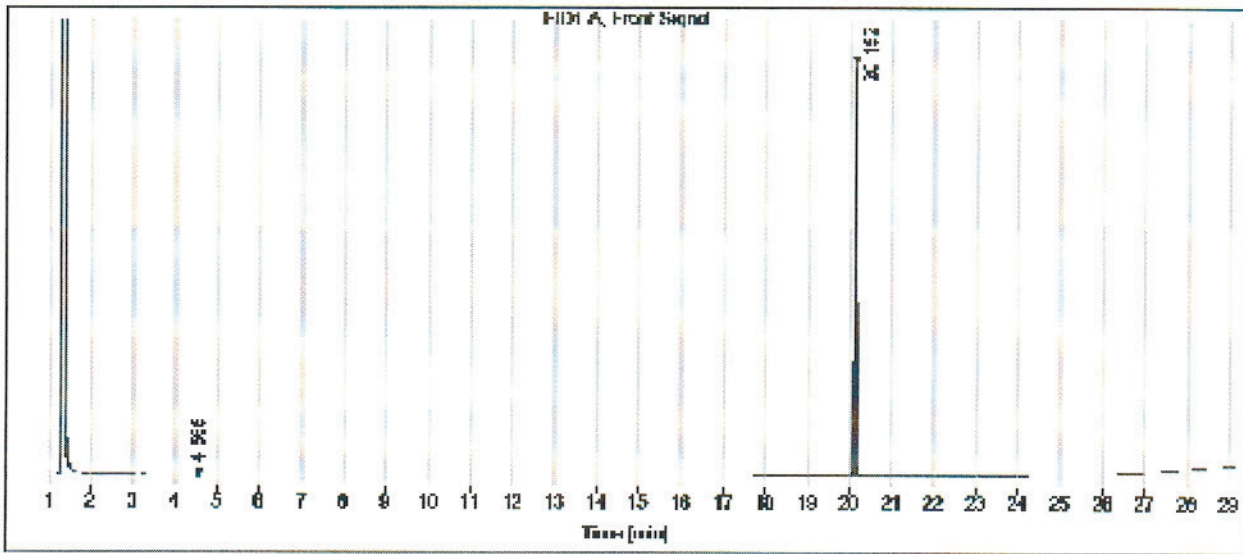
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 1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

Gas

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

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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





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 +/- 1,492.1008 µg/mL +/- 1,591.3244 µg/mL	Gravimetric Unstressed Stressed

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

ID #: 14531
Opened: _____
Residual Range Calibration Standard
Expires: 10/31/2028
Rec'd: 11/18/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

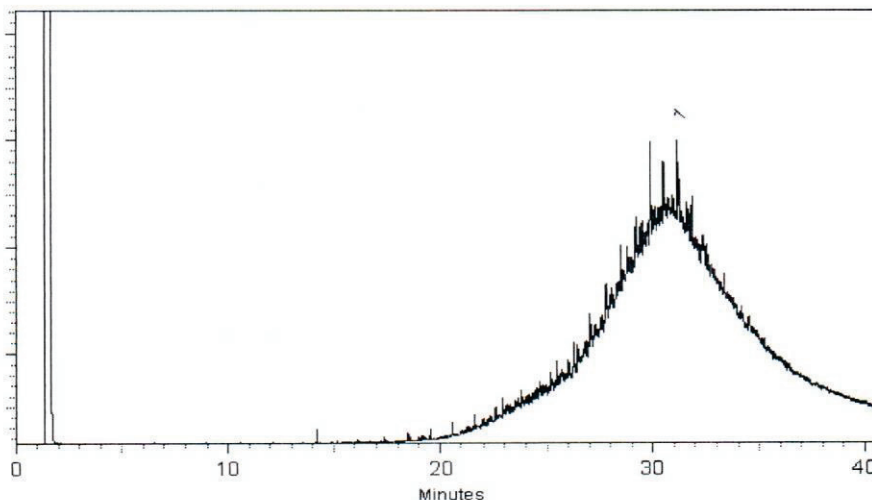
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Sam Moodler

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: _____

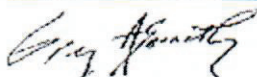
Triacontane-d62-98 atom % D

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 163927 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 163927 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 163927 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 163927 Standards Traceability Report

Spike ID: DRO210901B

Spike Name: 40W Motor Oil-Valvoline

Prep Date: 9/1/2021

Exp Date: 9/1/2026

Department: dropr

Vendor:

Lot Number: L0717H2

Balance ID:

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

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: mL

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



Prep Batch 163927 Standards Traceability Report

Spike ID: DRO211123B

Spike Name: Triacontane-d62 Surr For AK103 RRO

Type: Neat

Prep Date: 11/23/2021

Prep By: Ann Nebel

Exp Date: 11/23/2026

Status: New

Department: dropr

Vendor: Sigma-Aldrich

Final Volume: mL

Lot Number: MBBD2031

Balance ID:

Comments: Alaska surr [for AK103 RRO]

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	14545		mL	11/23/2026
Stock Source	Base Units	Amount Added		



Prep Batch 163927 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 163927 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 163927 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 163927 Standards Traceability Report

Spike ID: DRO220222A

Spike Name: Triacontane SURR 2000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

Comments: Triacontane SURR 2000 ug/mL

Type: Primary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 50 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane ED092	14828	50	mL	11/23/2026

Stock Source	Base Units	Amount Added
DRO211123B	ug/mL	0.1003 g



Prep Batch 163927 Standards Traceability Report

Spike ID: DRO220222B

Spike Name: Triacontane SURR 1000 ug/mL

Prep Date: 2/22/2022

Exp Date: 11/23/2026

Department: dropr

Vendor:

Lot Number:

Balance ID: BAL-DRO

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

Type: Secondary

Prep By: Jillian L Bostwick

Status: New

Final Volume: 10 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone EA776	13927	5	mL	11/23/2026
Stock Source	Base Units	Amount Added		
DRO220222A	ug/mL	5 mL		

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)

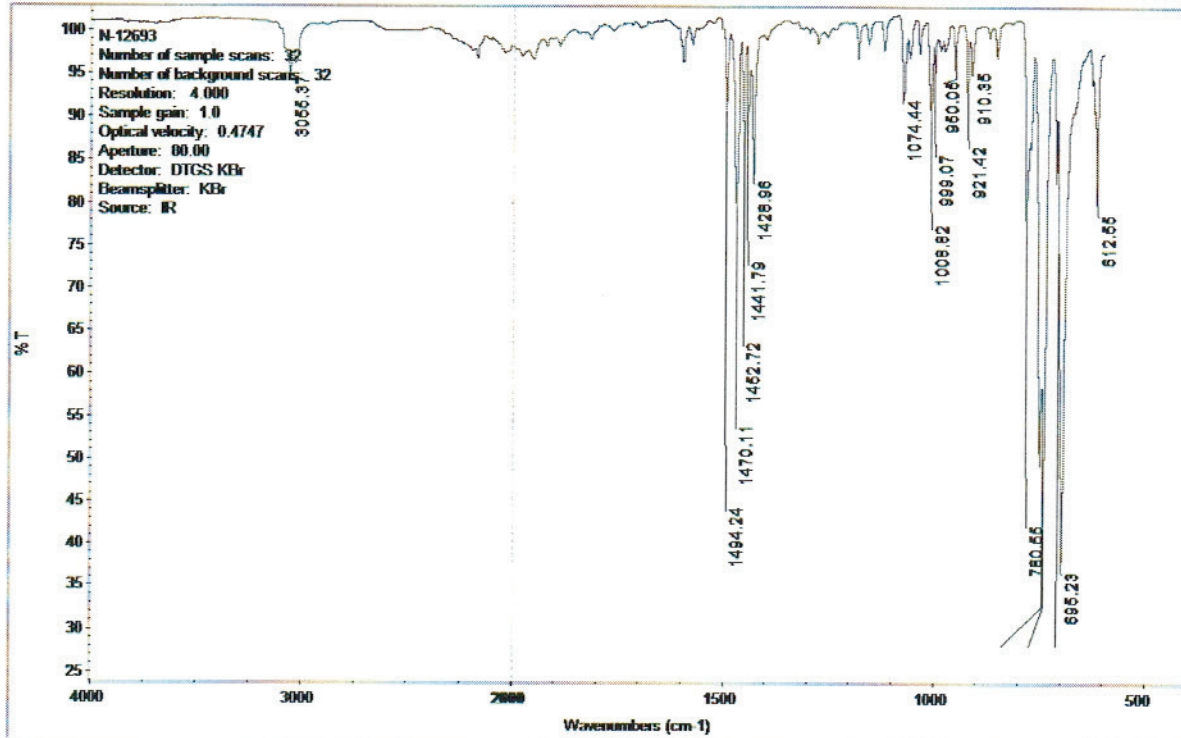
Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



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
1	11.844	1597	1606	1613	BB	32038221	432253484	100.00%	100.000%

Sum of corrected areas: 432253484

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

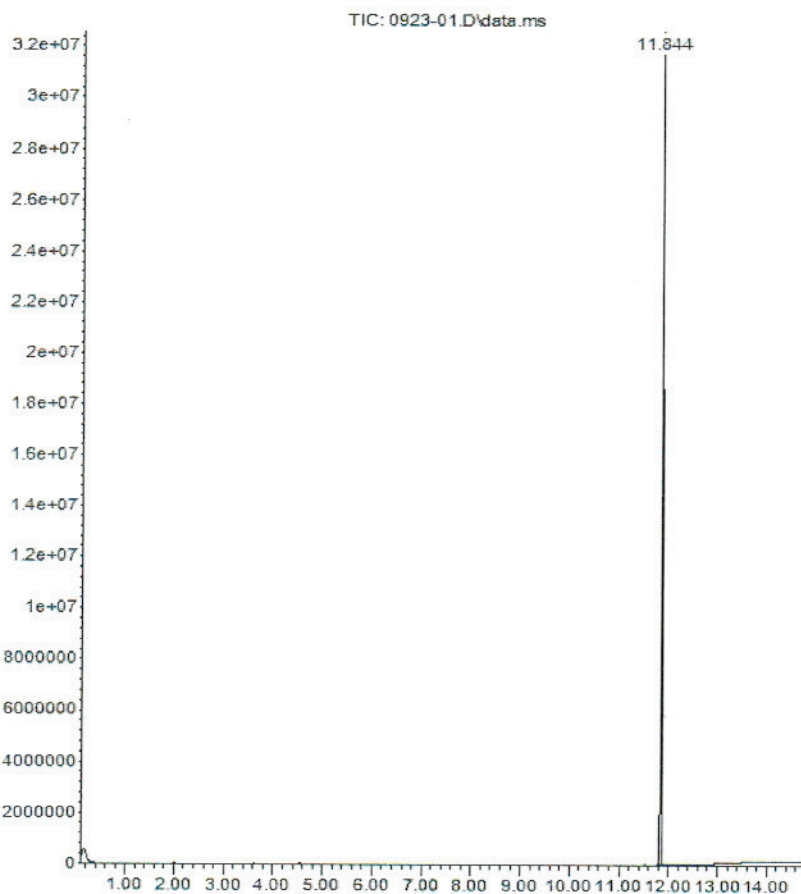
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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

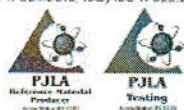
Analysis Method:

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

Abundance



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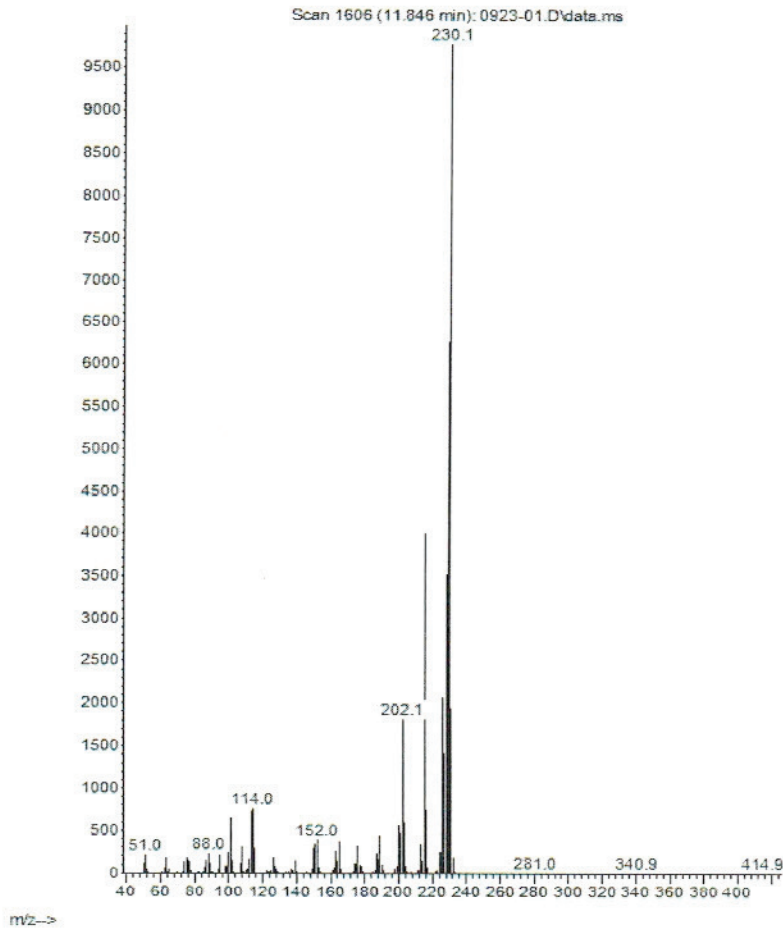


CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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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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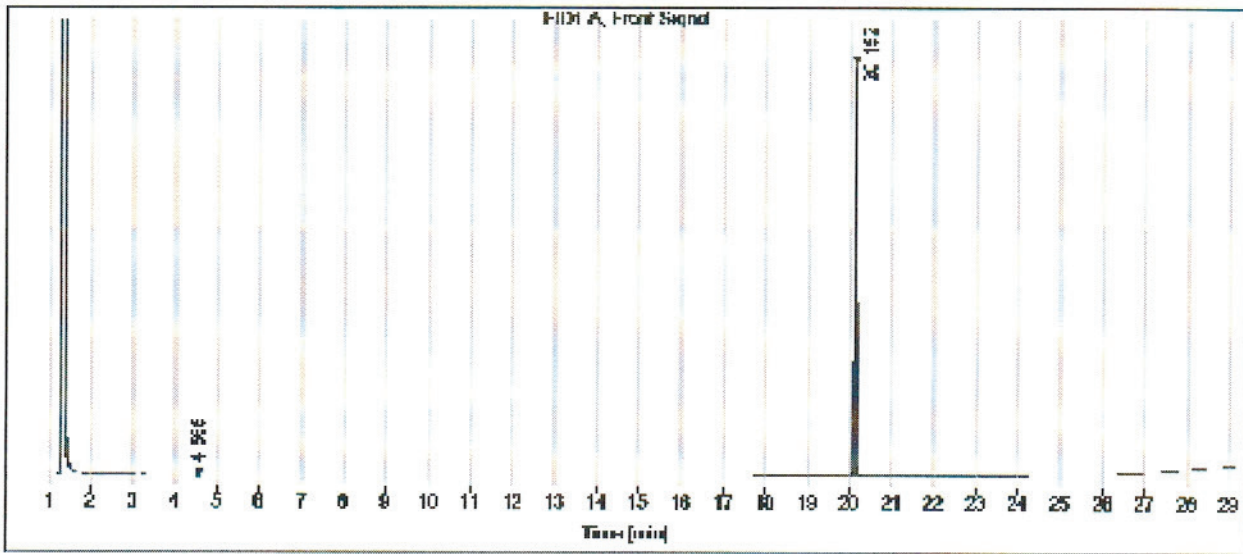
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Gas

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.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

TRIACONTANE-D62, 98 ATOM % D

Product Number:

451789

Batch Number:

MBBD2031

Brand:

ALDRICH

CAS Number:

93952-07-9

MDL Number:

MFCD00209794

Formula:

C30D62

Formula Weight:

485.20 g/mol

Quality Release Date:

18 JUN 2021



ID #: 14545

Opened: _____

Triacontane-d62-98 atom % D

Expires: 11/23/2026

Rec'd: 11/23/2021

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

Test	Specification	Result
Purity (HPLC)	≥ 99 %	99 %
Proton NMR Spectrum	Conforms to Structure	Conforms
D Enrichment	≥ 98.0 %	98.9 %
Initial Melting Point		60 °C
Final Melting Point		62 °C



Laura E. Baird, Manager
Quality Assurance & Control
Miamisburg, Ohio US

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





Analytical RunID GCFID-HP5-B_220223A 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_220223A 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_220223A 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_220223A 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_220223A 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_220223A 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_220223A 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_220223A Standards Traceability Report

Standard ID: DRO220119A

Standard 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



Analytical RunID GCFID-HP5-B_220223A Standards Traceability Report

Standard ID: DRO220128A

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

Prep Date: 1/28/2022

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 EC 978	14777	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_220223A Standards Traceability Report

Standard ID: DRO220128B

Standard Name: Carbon Scan STD-Marker

Prep Date: 1/28/2022

Exp Date: 7/13/2026

Department: dropr

Vendor: ASI2

Lot Number: 071306

Balance ID:

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

Type: Primary

Prep By: Jillian L Bostwick

Status: Open

Final Volume: 2.4 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_220223A Standards Traceability Report

Standard ID: DRO220201A

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

Prep Date: 2/1/2022

Exp Date: 4/6/2026

Department: dropr

Vendor:

Lot Number:

Balance ID:

Comments: CCV for AK102 and 8015C RRO.

Type: Secondary

Prep By: Ann Nebel

Status: New

Final Volume: 4 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Dichloromethane EC 978	14777	2.8	mL	4/6/2026

Stock Source	Base Units	Amount Added
DRO220119A	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

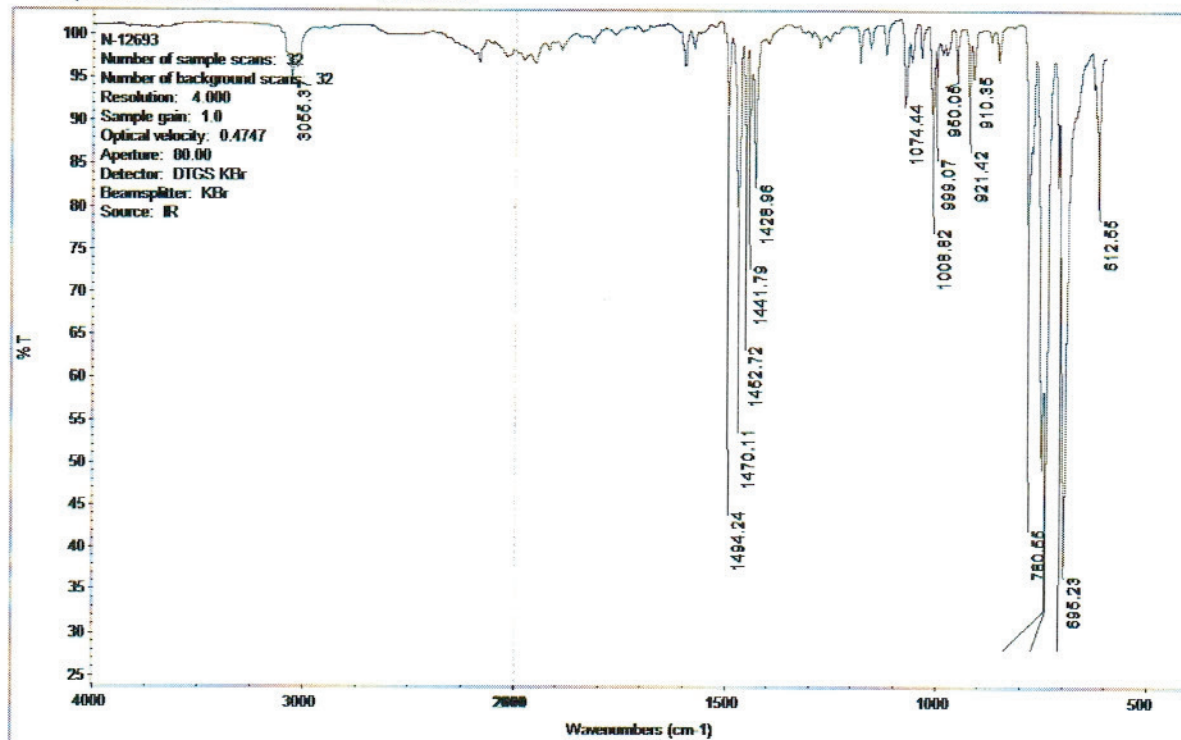
Rec'd: 4/30/2020

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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



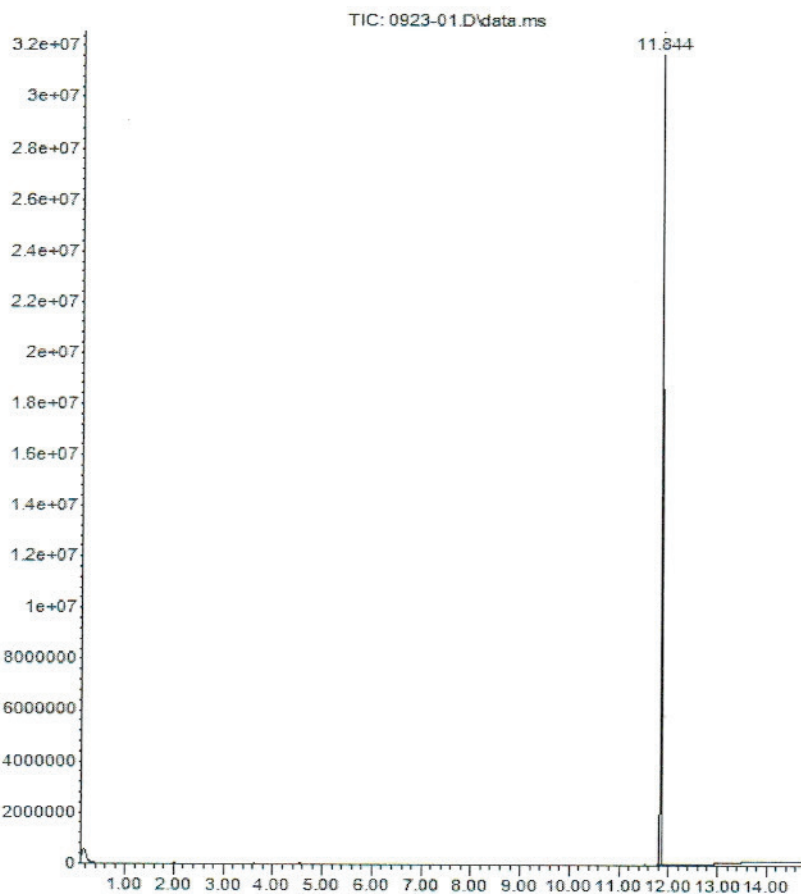
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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



Time-->

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



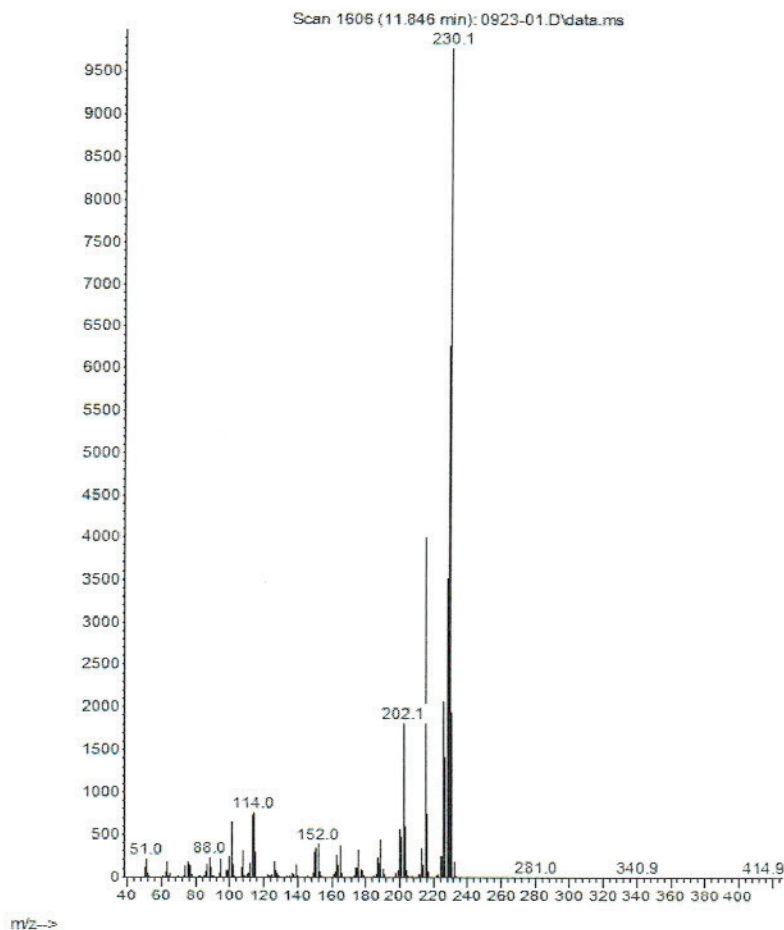
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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Abundance



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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



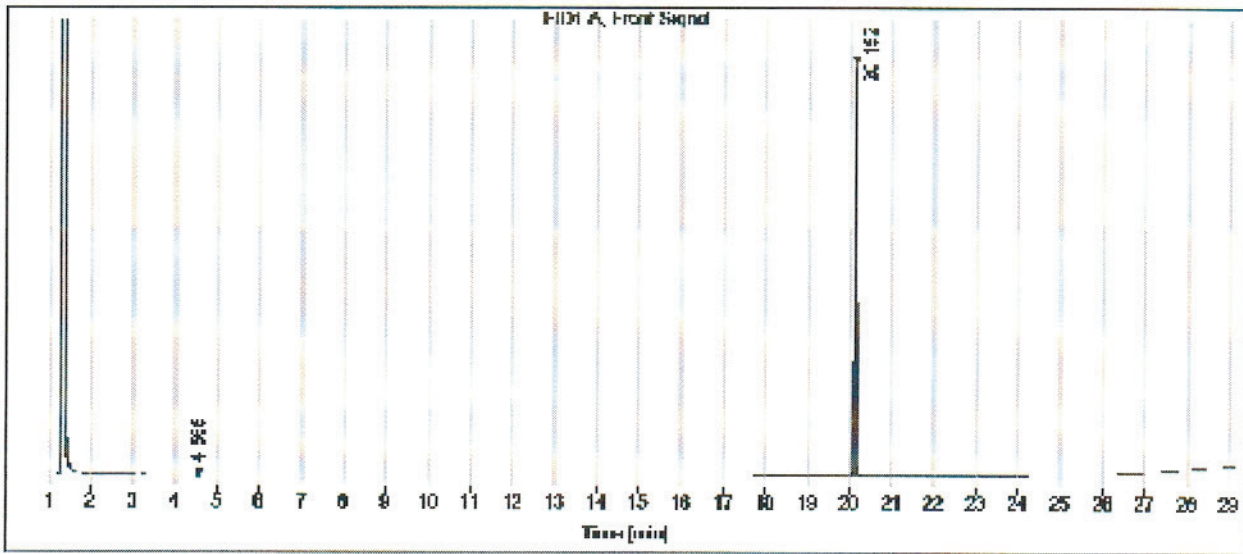
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info@chemservice.com • www.chemservice.com

Gas

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

CERTIFICATE OF ANALYSIS

Location: Vial 141
 Injection volume: 1.0uL



Signal: FID1 A, Front Signal

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

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



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: _____

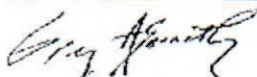
Triacontane-d62-98 atom % D

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

Energ Laboratories Inc 1120 So. 27th Street

Billings MT 59107

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

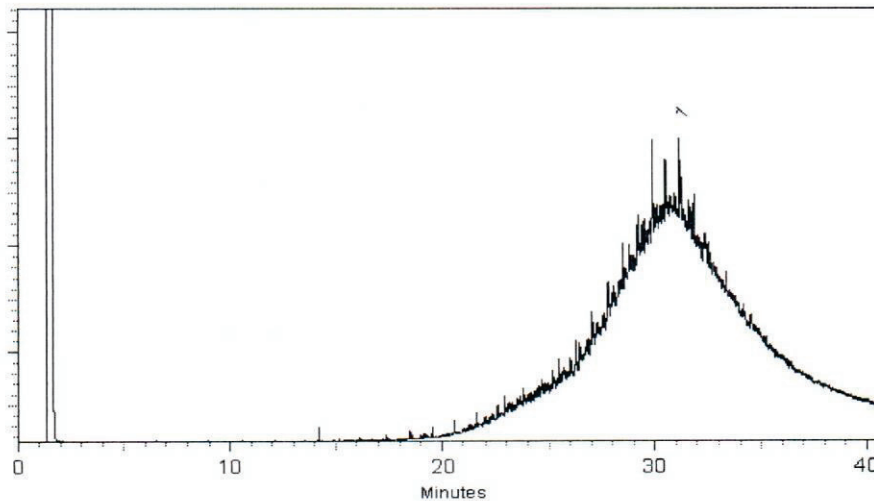
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Sam Moodler

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021

Balance: 1128360905

Alexis Shelow

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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

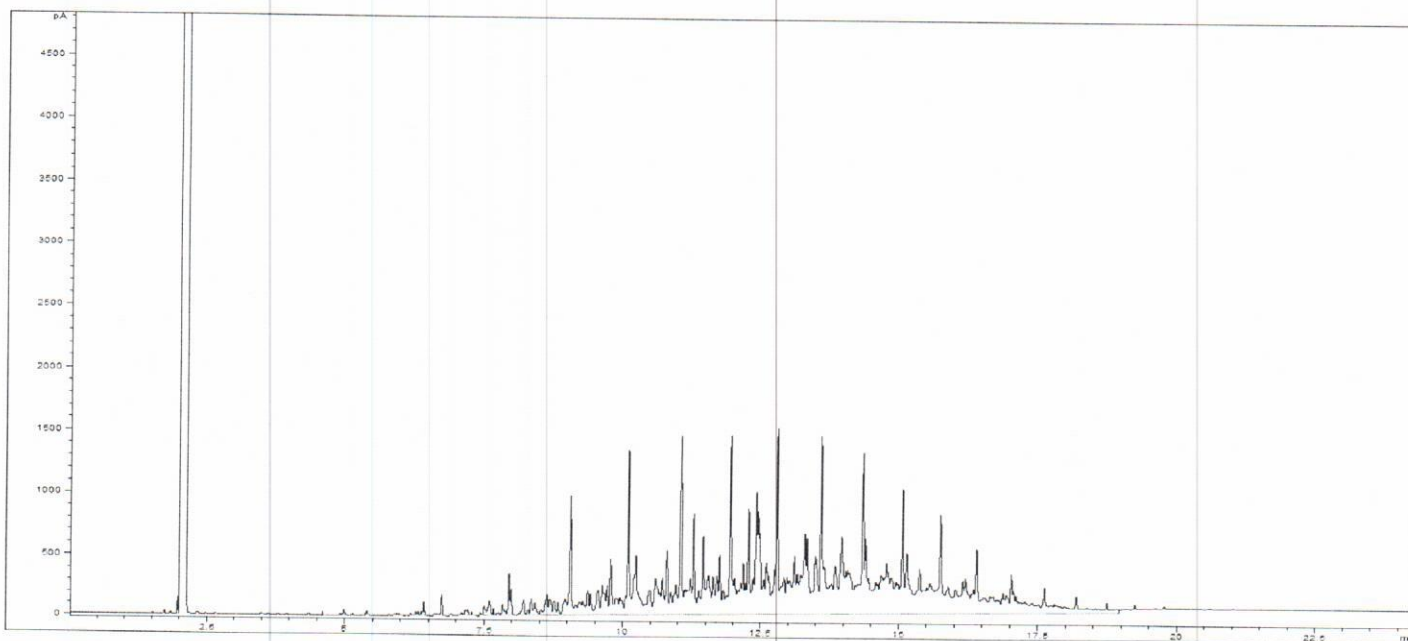
Rec'd: 12/14/2021

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.

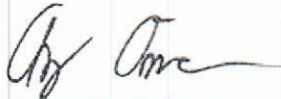
Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual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

