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	Insert Entries(Have the first cell for entries selecte 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

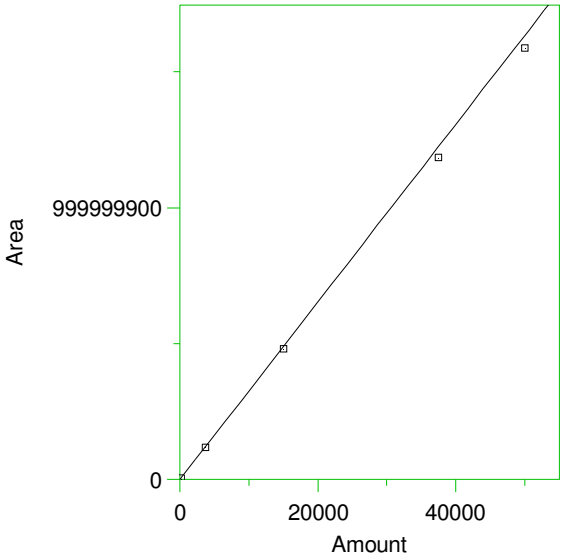
Creator: AMN 01/13/2022
Description: 8015C-DRO. New ICal Per 0111HP5 (2022)-2 uL Inj.; COD added using OTP RFs
Reason for change:

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

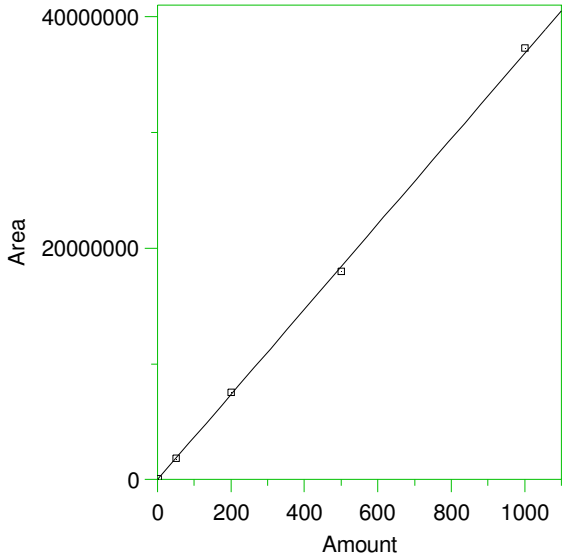
Y = 32675.36 X + 0

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

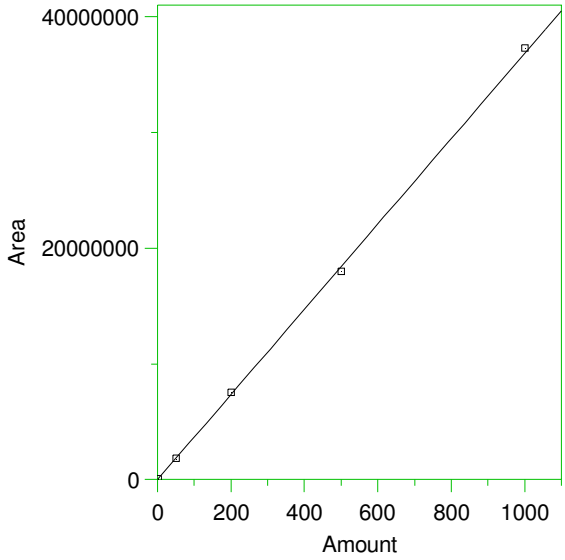
Y = 36857.86 X + 0

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

Ann Nebel

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

Energy Laboratories Inc

ANALYTICAL RUN Summary

14-Jan-22

Run ID GCFID-HP5-B_220111C

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

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

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977288	CCV_0111HP52	HC-8015-DRO-	CAL1		1/12/2022 3:39:1	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.00190245		0.002	0	0	0.000336	0.002	0	95%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977289	CCV_0111HP52	HC-8015-DRO-	CAL2		1/12/2022 4:22:1	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.04984459		0.05	0	0	0.000336	0.002	0	100%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977290	CCV_0111HP53	HC-8015-DRO-	CAL3		1/12/2022 5:05:2	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.2024053		0.2	0	0	0.000336	0.002	0	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977291	CCV_0111HP53	HC-8015-DRO-	CAL4		1/12/2022 5:48:3	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		0.5035697		0.5	0	0	0.000336	0.002	0	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977292	CCV_0111HP55	HC-8015-DRO-	CAL5		1/12/2022 8:49:5	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
n-Triacontane	S	mg/L		1.032718		1	0	0	0.000336	0.002	0	103%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977293	CCV_0111HP55	HC-8015-DRO-	CAL1		1/13/2022 3:06:1	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		0.15954587		0.15	0	0	0.0879	0.3	0	106%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977294	CCV_0111HP55	HC-8015-DRO-	CAL2		1/13/2022 4:31:3	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		1.03294141		1	0	0	0.0879	0.3	0	103%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977295	CCV_0111HP55	HC-8015-DRO-	CAL3		1/13/2022 5:57:4	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.9326875		5	0	0	0.0879	0.3	0	99%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977296	CCV_0111HP56	HC-8015-DRO-	CAL4		1/13/2022 7:24:1	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		14.328667		15	0	0	0.0879	0.3	0	96%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977297	CCV_0111HP56	HC-8015-DRO-	CAL5		1/13/2022 8:50:3	1	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		28.7914395		30	0	0	0.0879	0.3	0	96%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
14977298	CCV_0111HP56	HC-8015-DRO-	ICV		1/14/2022 8:18:1	0	R373160		0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.07699902		5	0	0	0	0.3	0	102%	80	120	0%	

Write Sequence	Insert Entries(Have the first cell for entries selecte						
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP5\DAT\HP5011122_b\0111HP5.25r	DCM-Baseline Check-V25	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5011122_b\0111HP5.26r	Marker_0111HP526r, DRO ;0111HP5 , DRO220111A	g:\org\HP5\Methods\\CSC210212.met	1	1	1	1	0
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
G:\org\HP5\DAT\HP5011122_b\0111HP5.28r	CCV_0111HP528r, CAL1 ;0111HP5 , 2 ug per mL Triacontane (10 uL of Cal3 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
G:\org\HP5\DAT\HP5011122_b\0111HP5.29r	CCV_0111HP529r, CAL2 ;0111HP5 , 50 ug per mL Triacontane (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
G:\org\HP5\DAT\HP5011122_b\0111HP5.30r	CCV_0111HP530r, CAL3 ;0111HP5 , 200 ug per mL Triacontane (100uL of Cal5 + 400 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
G:\org\HP5\DAT\HP5011122_b\0111HP5.31r	CCV_0111HP531r, CAL4 ;0111HP5 , 500 ug per mL Triacontane (250uL of Cal5 + 250 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
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
G:\org\HP5\DAT\HP5011122_b\0111HP5.50r	CCV_0111HP550r, CAL5 ;0111HP5 , 1000 ug per mL Triacontane (DRO211006A)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0
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
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
G:\org\HP5\DAT\HP5011122_b\0111HP5.53r	Marker_0111HP553r, DRO ;0111HP5 , DRO220111A	g:\org\HP5\Methods\\CSC210212.met	1	1	1	1	0
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
G:\org\HP5\DAT\HP5011122_b\0111HP5.55r	CCV_0111HP555r, CAL1 ;0111HP5 , 150 ug per mLOil (10 uL of Cal4 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DC_ORO-55-BA-L%.xls	1	1	1	1	0
G:\org\HP5\DAT\HP5011122_b\0111HP5.56r	DCM-Baseline Check-V56	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5011122_b\0111HP5.57r	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
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
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
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
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
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
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
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
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
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
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
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

File Name: G:\Org\HP5\Cals\SW8015C_ORO220111BA.CAL
Version: 11

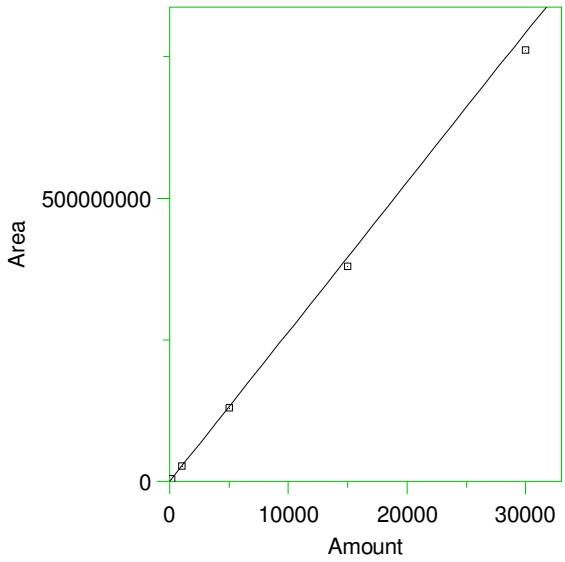
Creator: AMN
Description: 8015C-Oil Range with Triacontane. New ICal Per 0111HP5,(2022)-2 uL Inj.;
Reason for change:

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

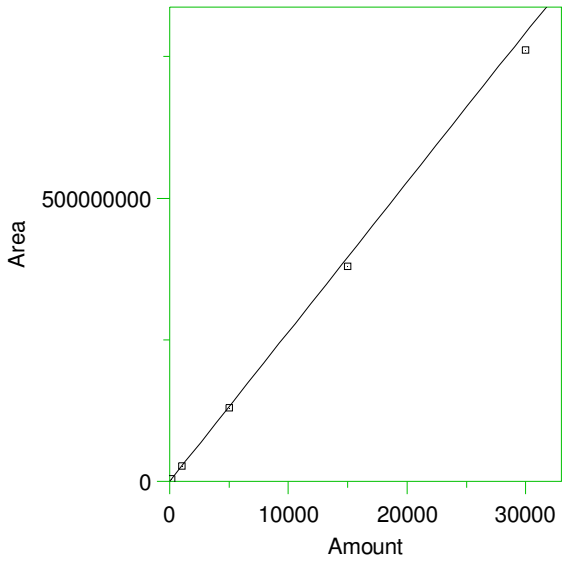
Y = 26424.55 X + 0

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

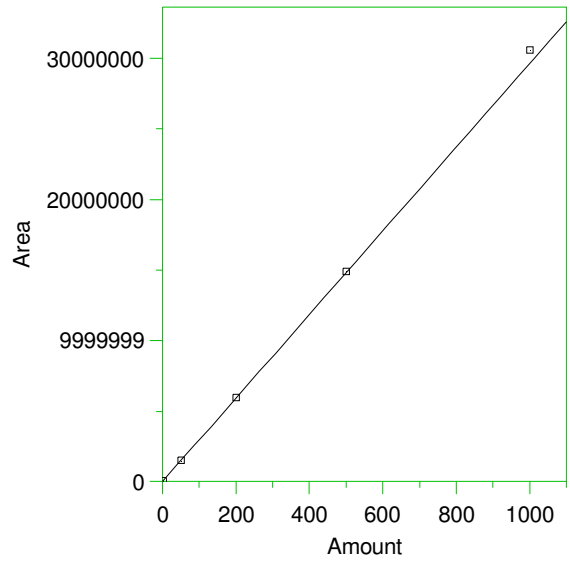
Y = 26424.55 X + 0

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

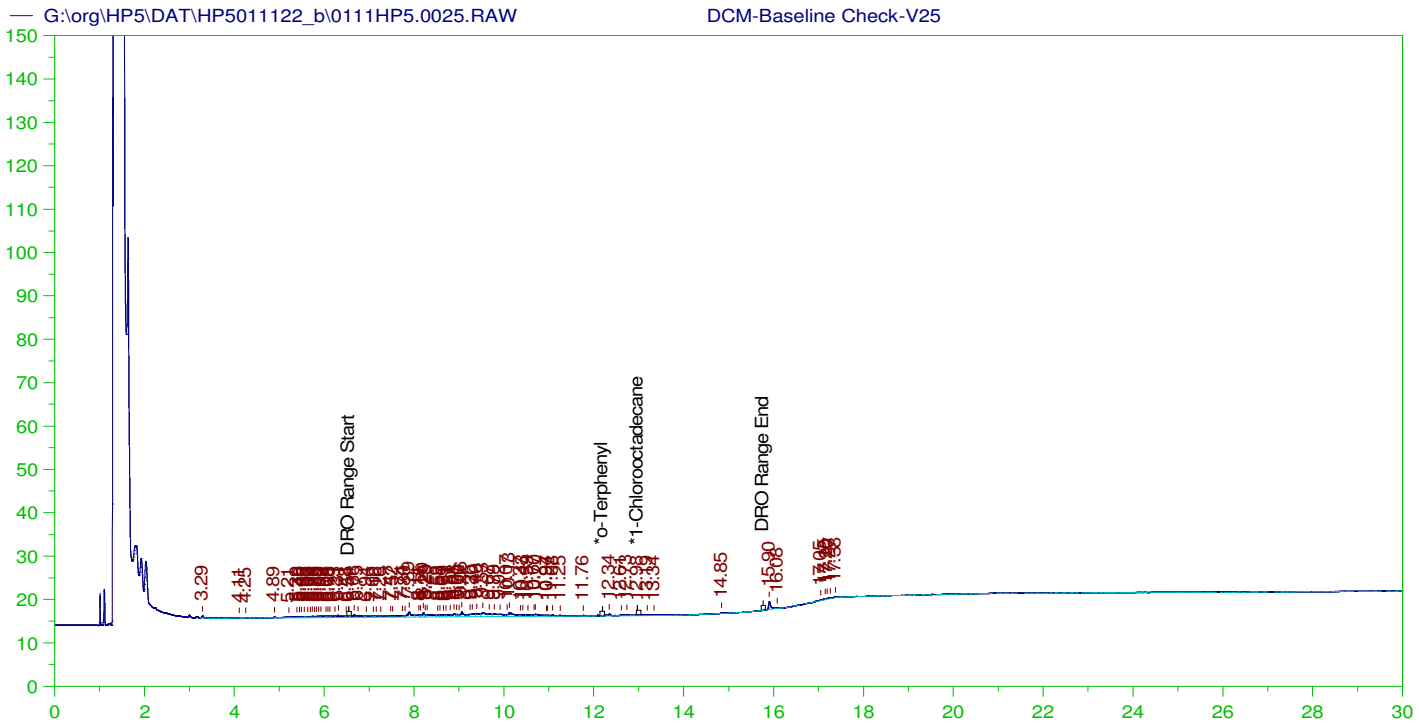
Single peak quantification by area

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



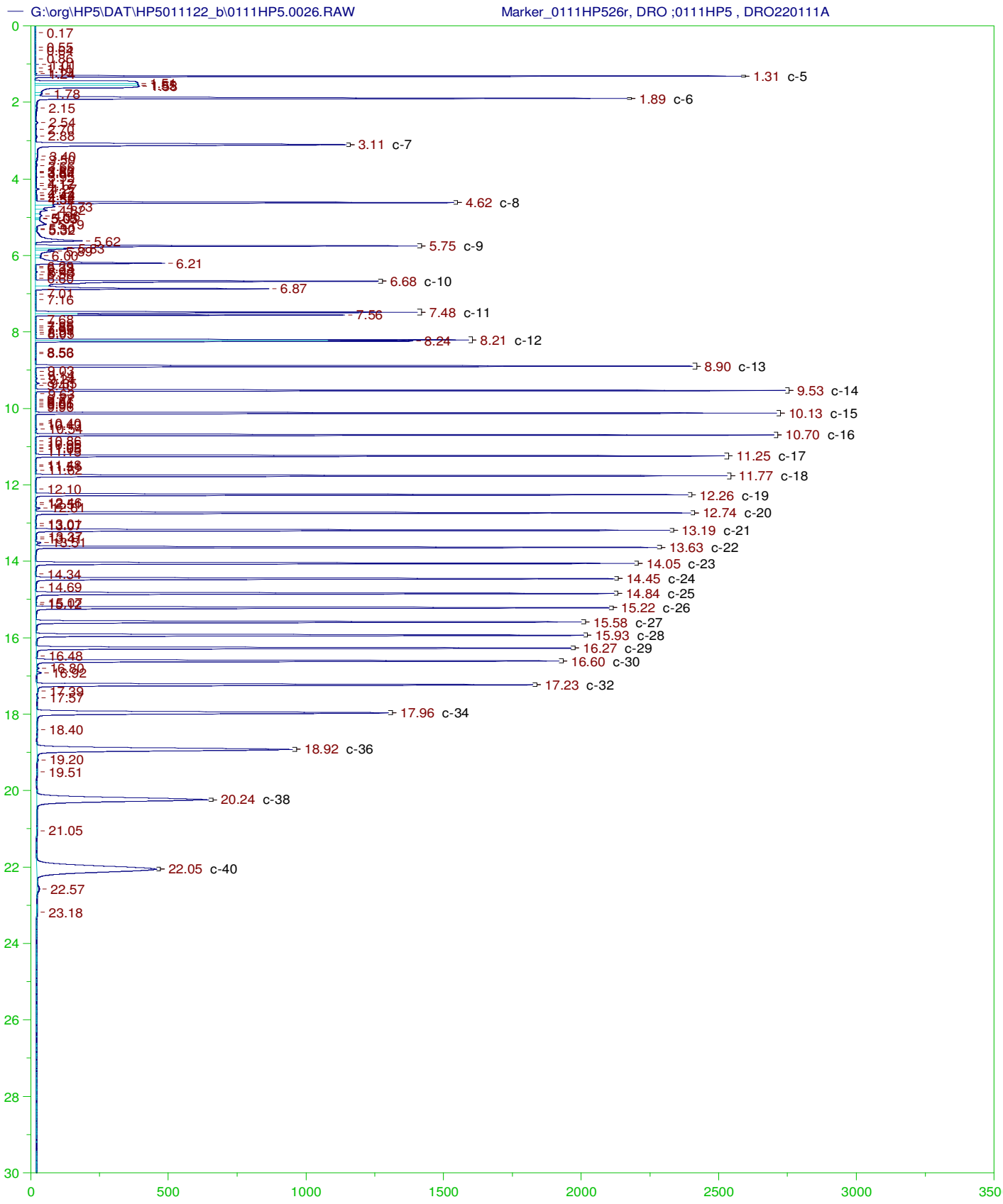
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

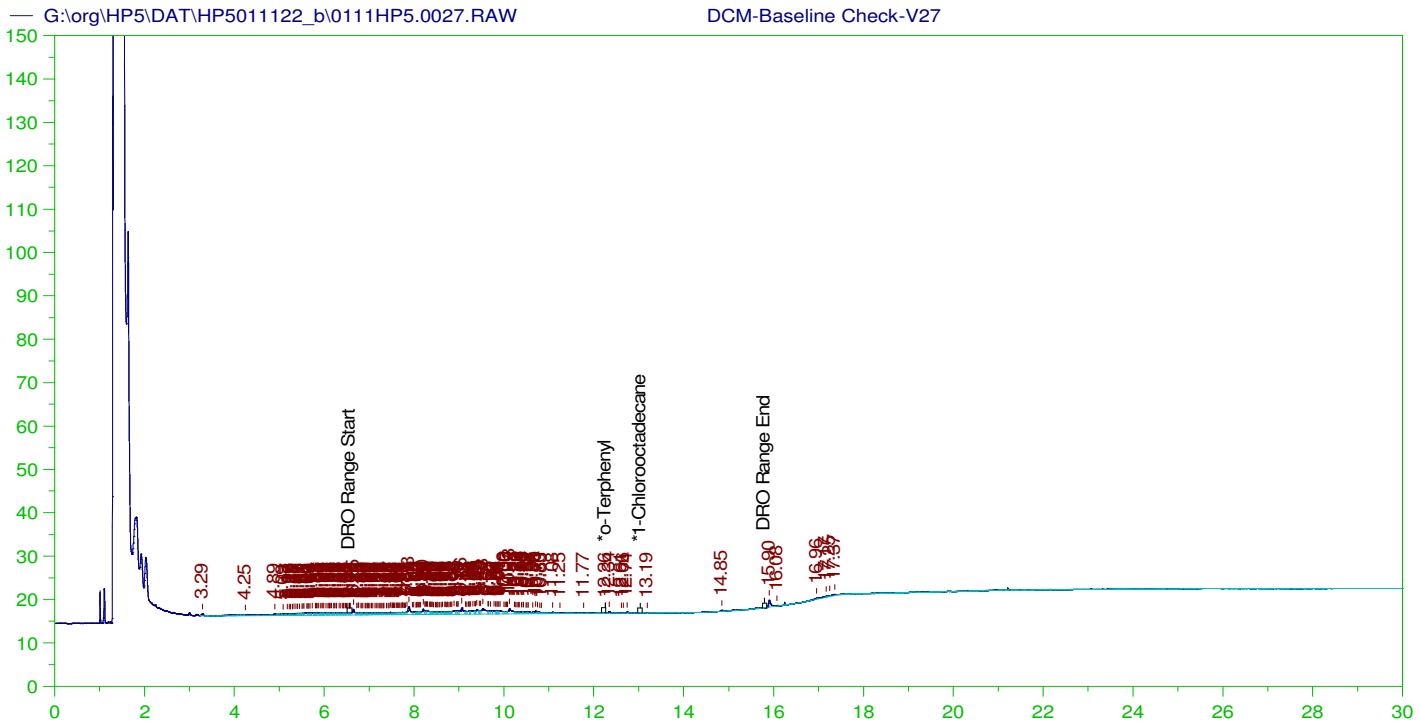
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.5 to 15.82

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



G:\org\HP5\dat\HP5011122_b\Review\026_Marker_0111HP526r_CSC220111.xls



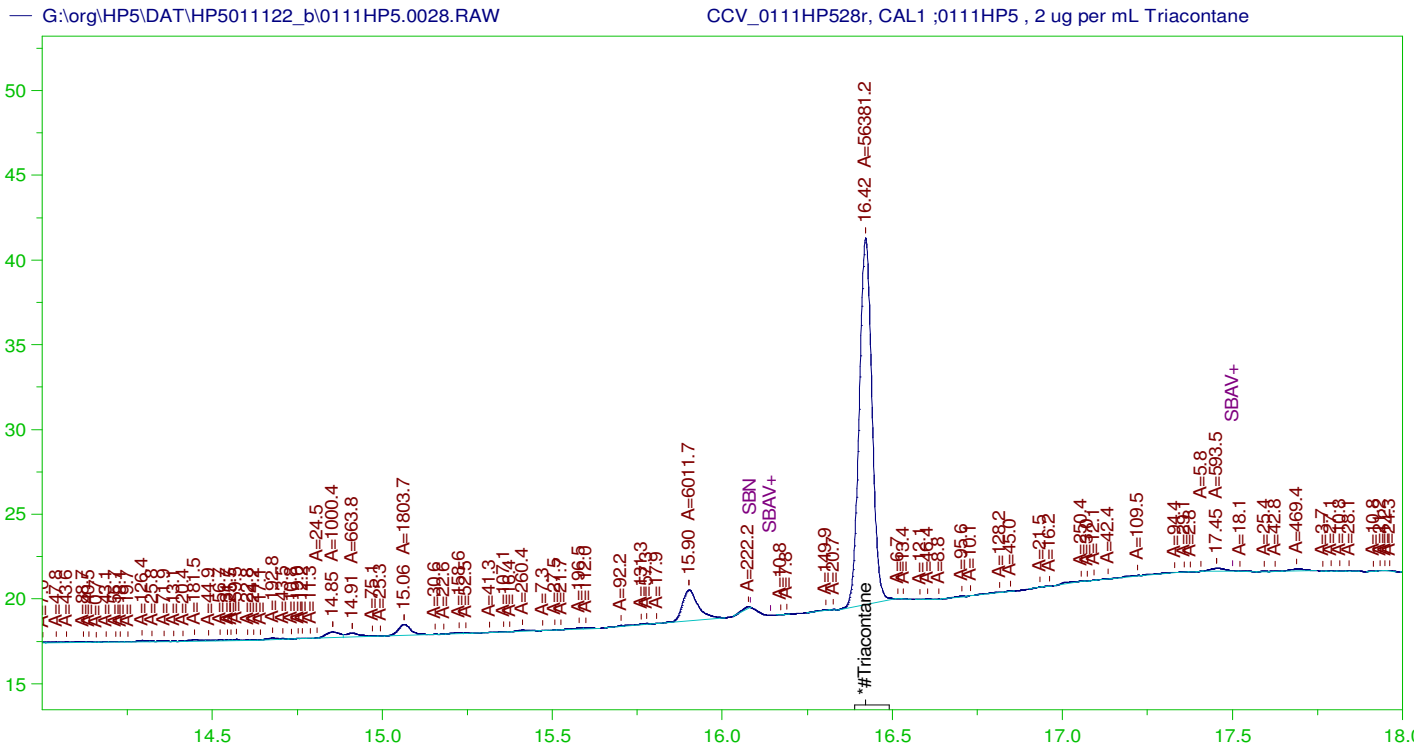
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

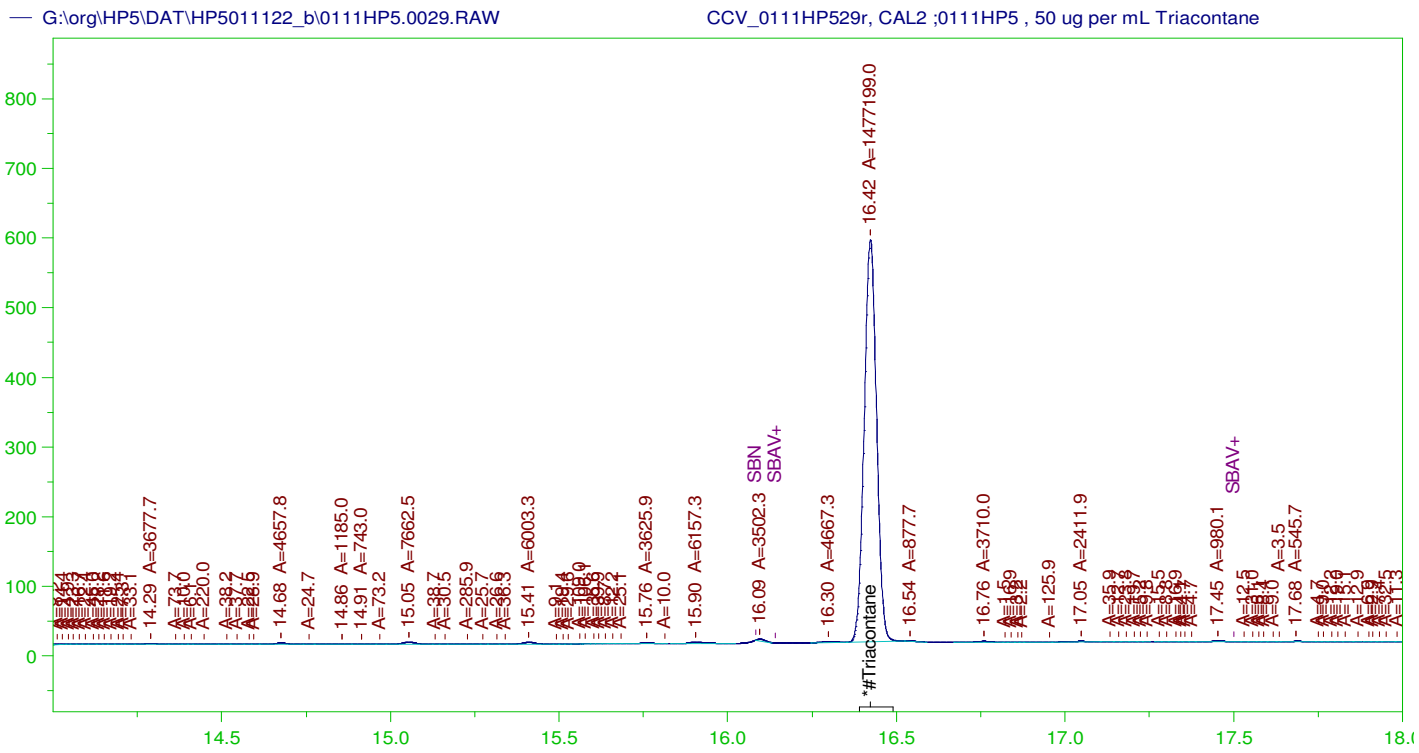
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.421	500.	1.902	.38	-

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



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

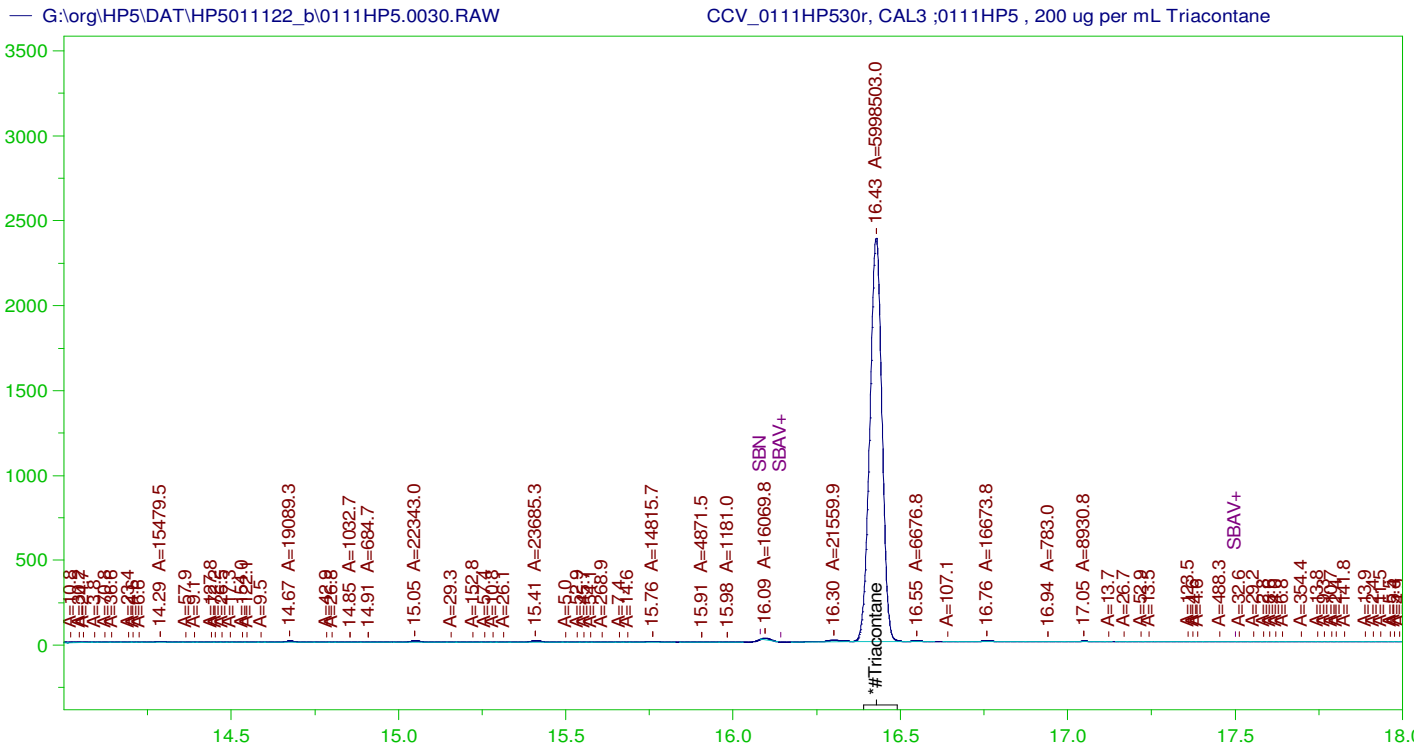
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.423	500.	49.845	9.97	-

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

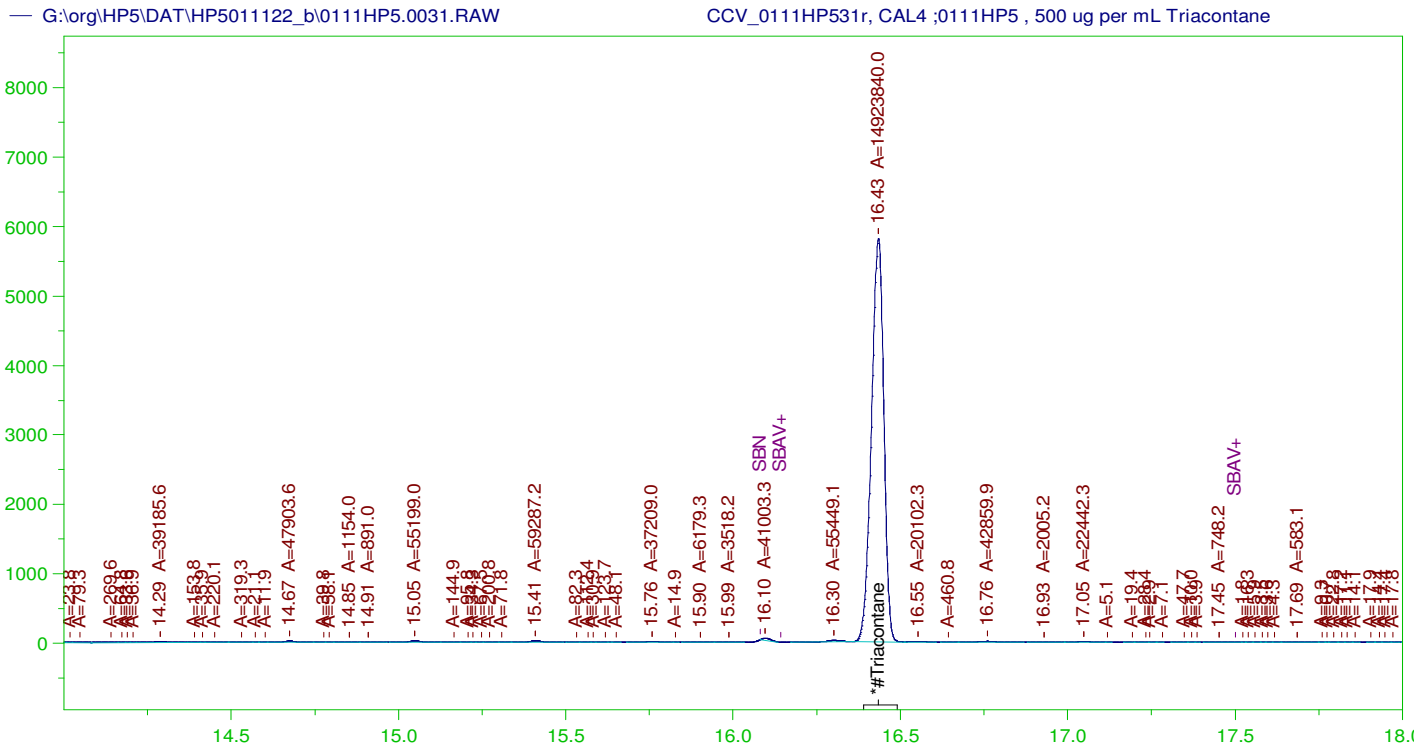
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.427	500.	202.405	40.48	-

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



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

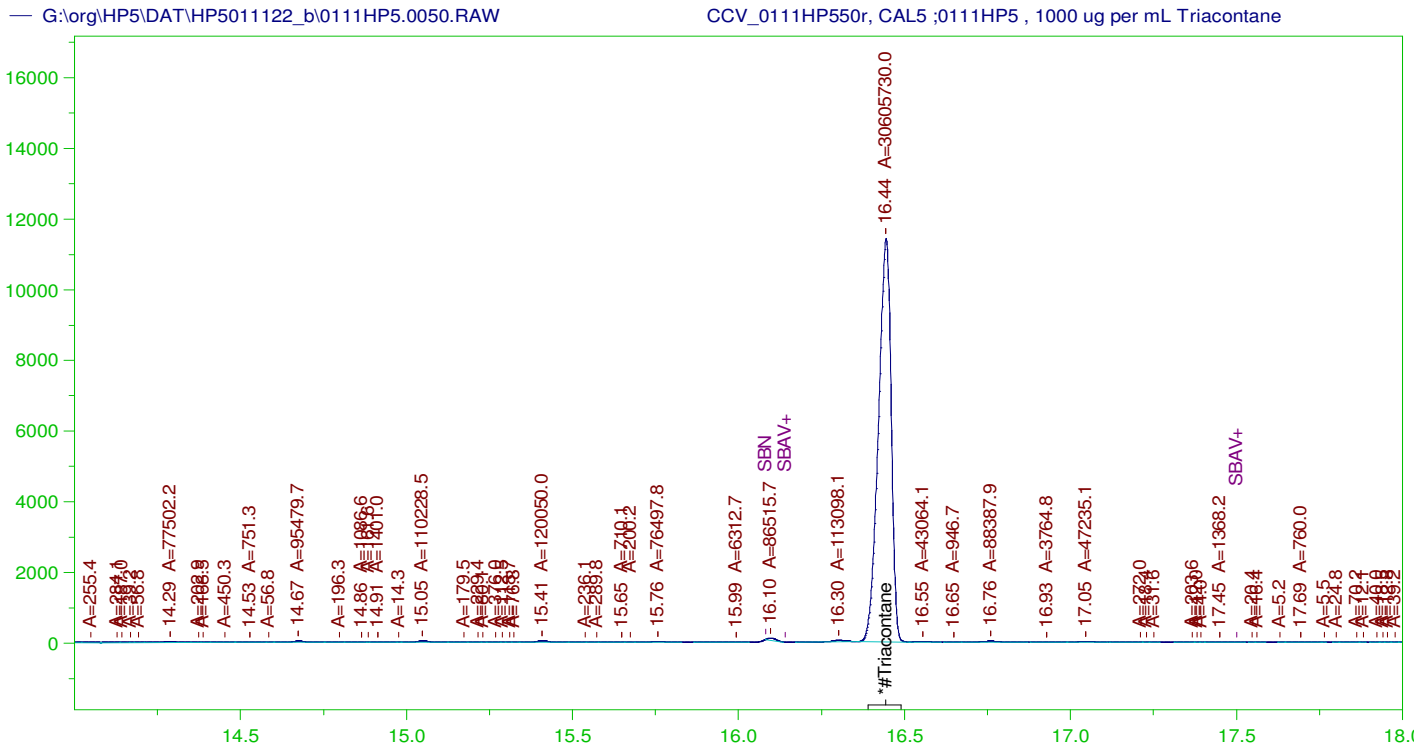
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.434	500.	503.57	100.71	-

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



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

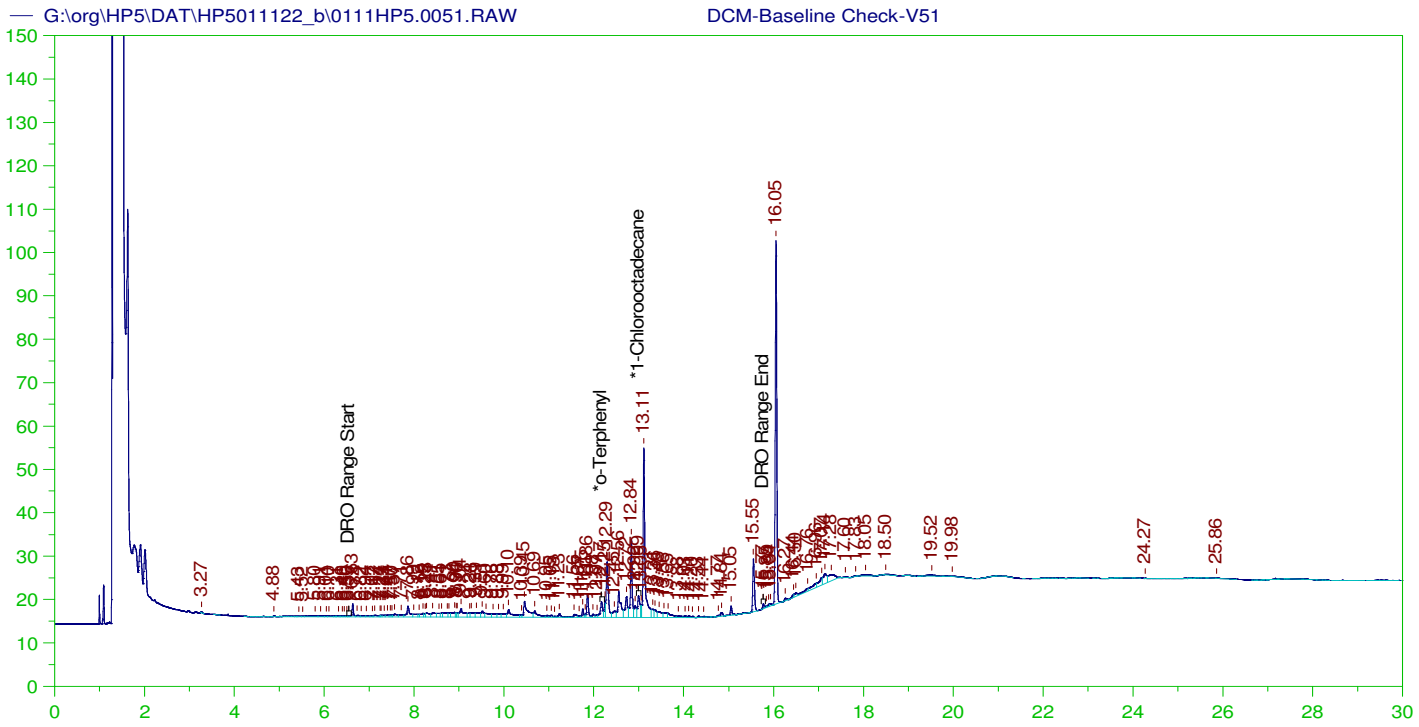
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.444	500.	1032.718	206.54	-

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

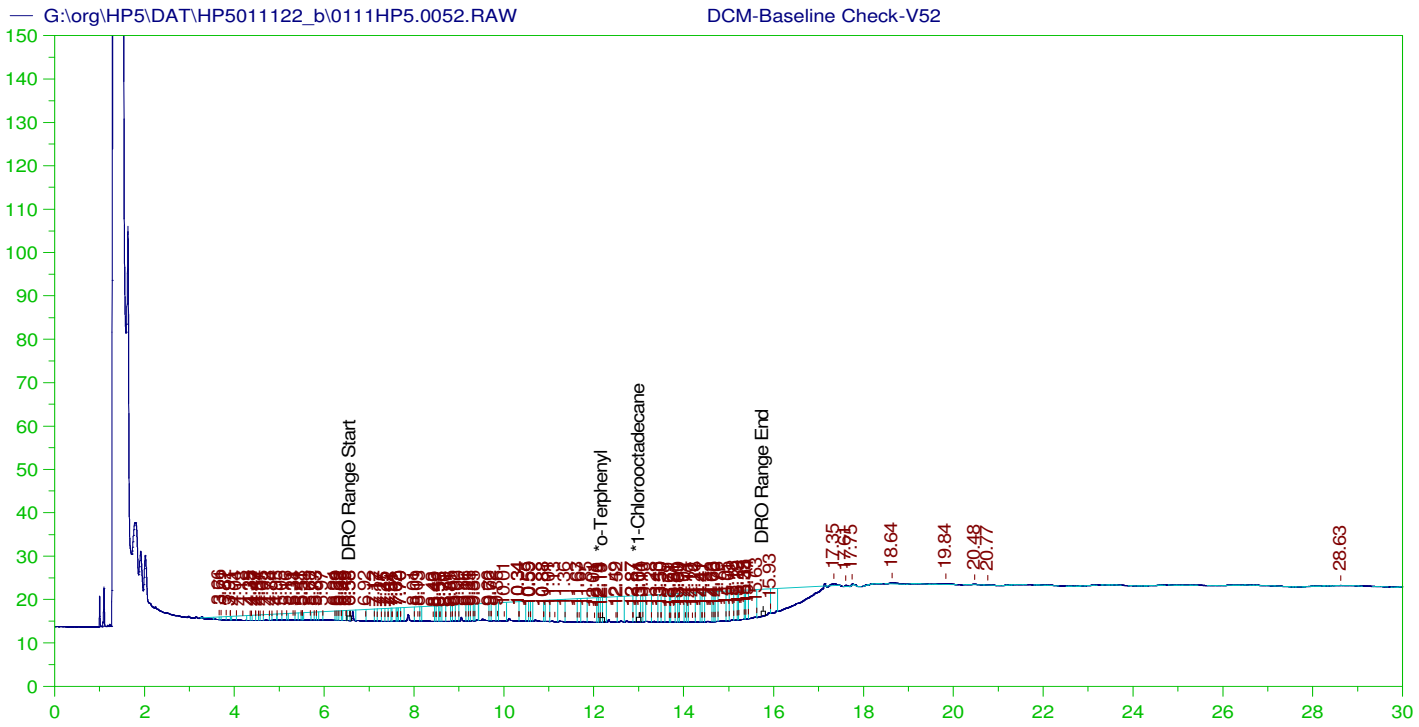


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V51
Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0051.RAW
Date & Time Acquired: 1/13/2022 12:15:29 PM
Method File: G:\Org\HP5\Methods\DR_8015-IC-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC.CAL
Sample Weight: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



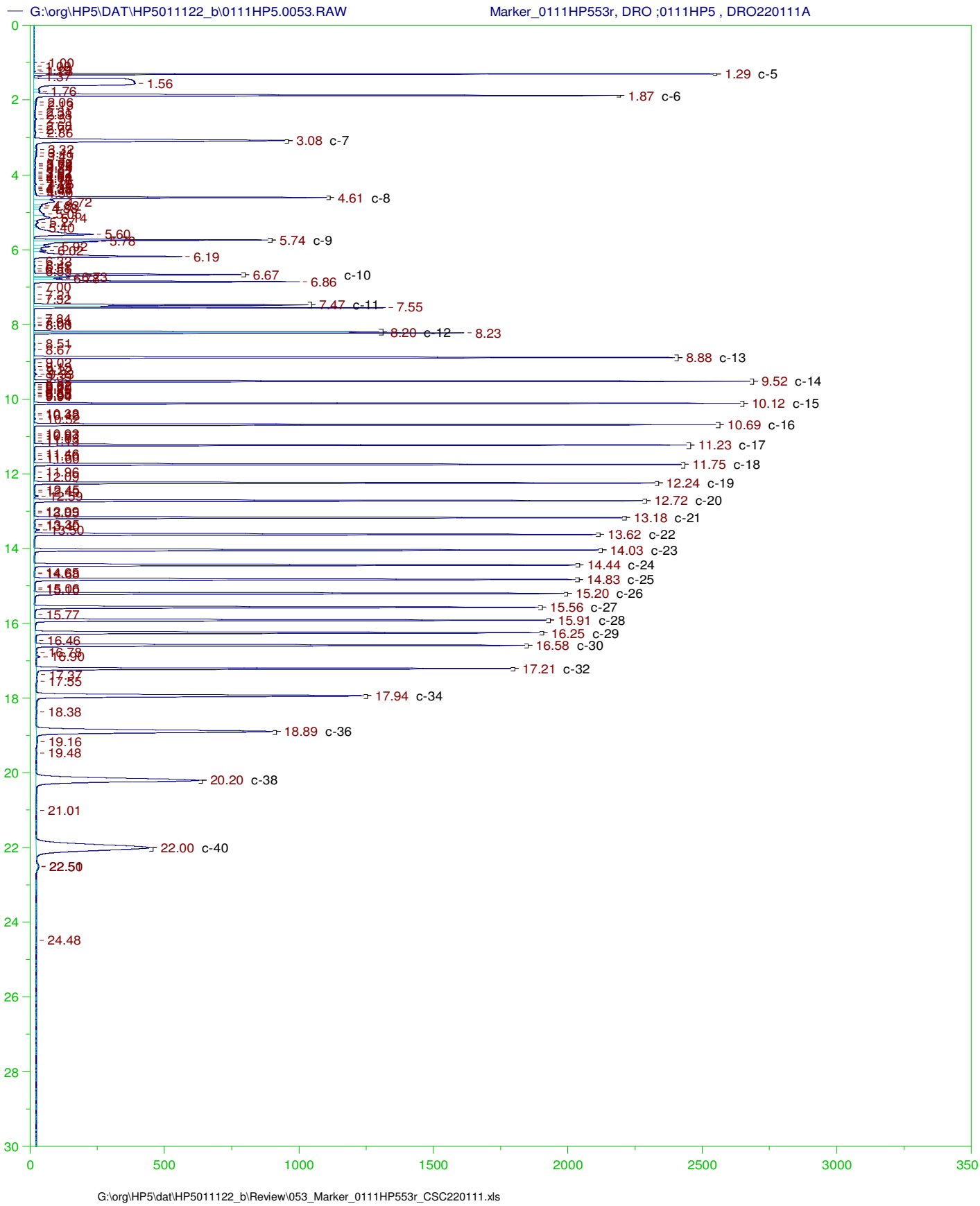
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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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1.29 c-5
1.56
1.87 c-6
3.08 c-7
4.61 c-8
5.74 c-9
6.19
6.67
6.86 c-10
7.47 c-11
7.55
8.20 c-12
8.23
8.88 c-13
9.52 c-14
10.12 c-15
10.69 c-16
11.23 c-17
11.75 c-18
12.24 c-19
12.72 c-20
13.18 c-21
13.62 c-22
14.03 c-23
14.44 c-24
14.83 c-25
15.20 c-26
15.56 c-27
15.91 c-28
16.25 c-29
16.58 c-30
17.21 c-32
17.94 c-34
18.38
18.89 c-36
19.16
19.48
20.20 c-38
21.01
22.00 c-40
22.50
24.48
0
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1500
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2500
3000
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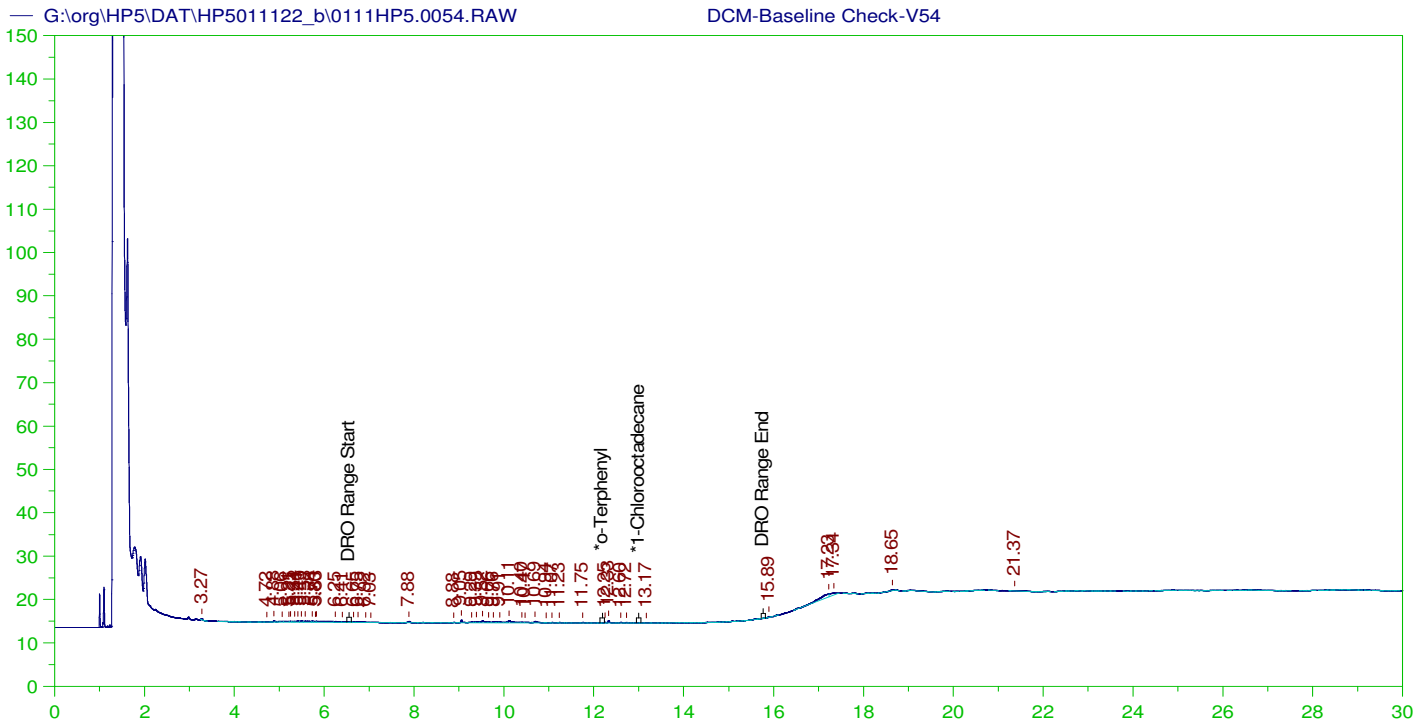


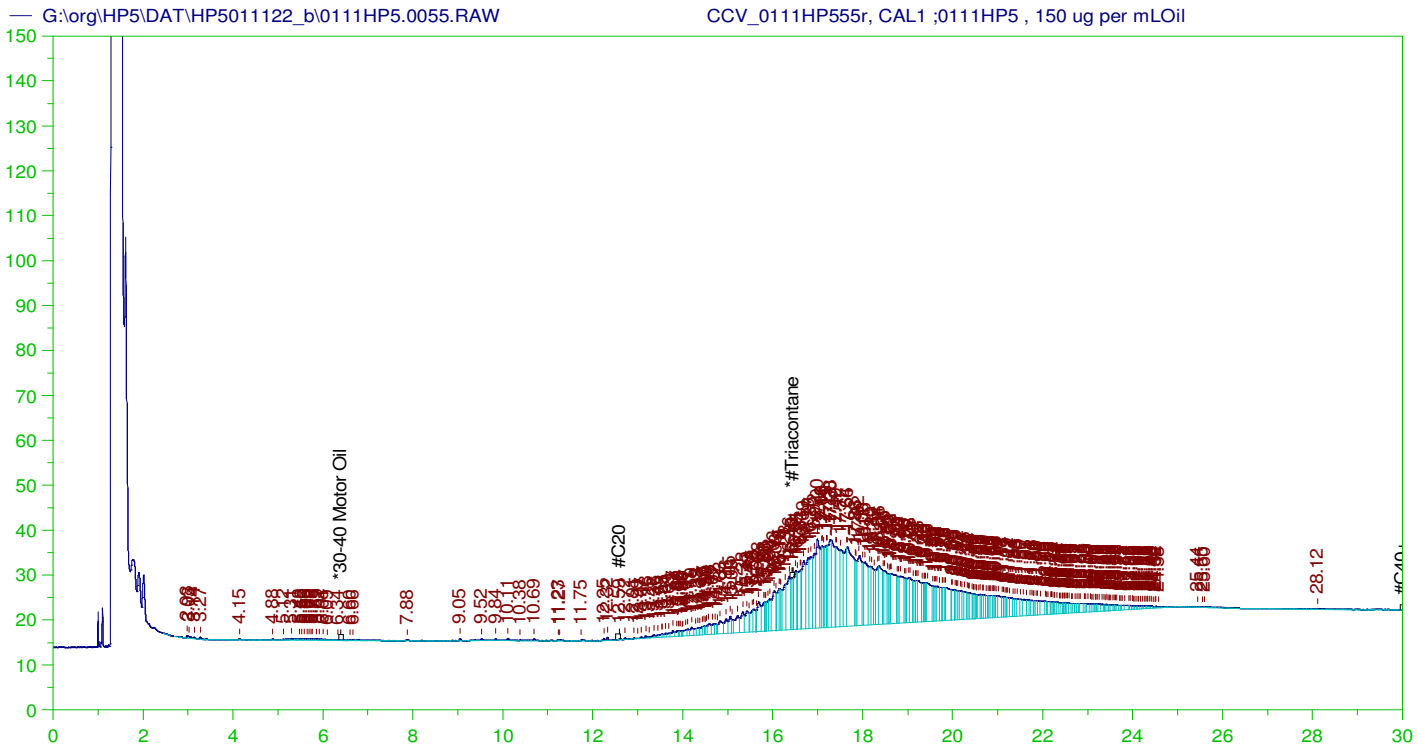
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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 mLOil
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

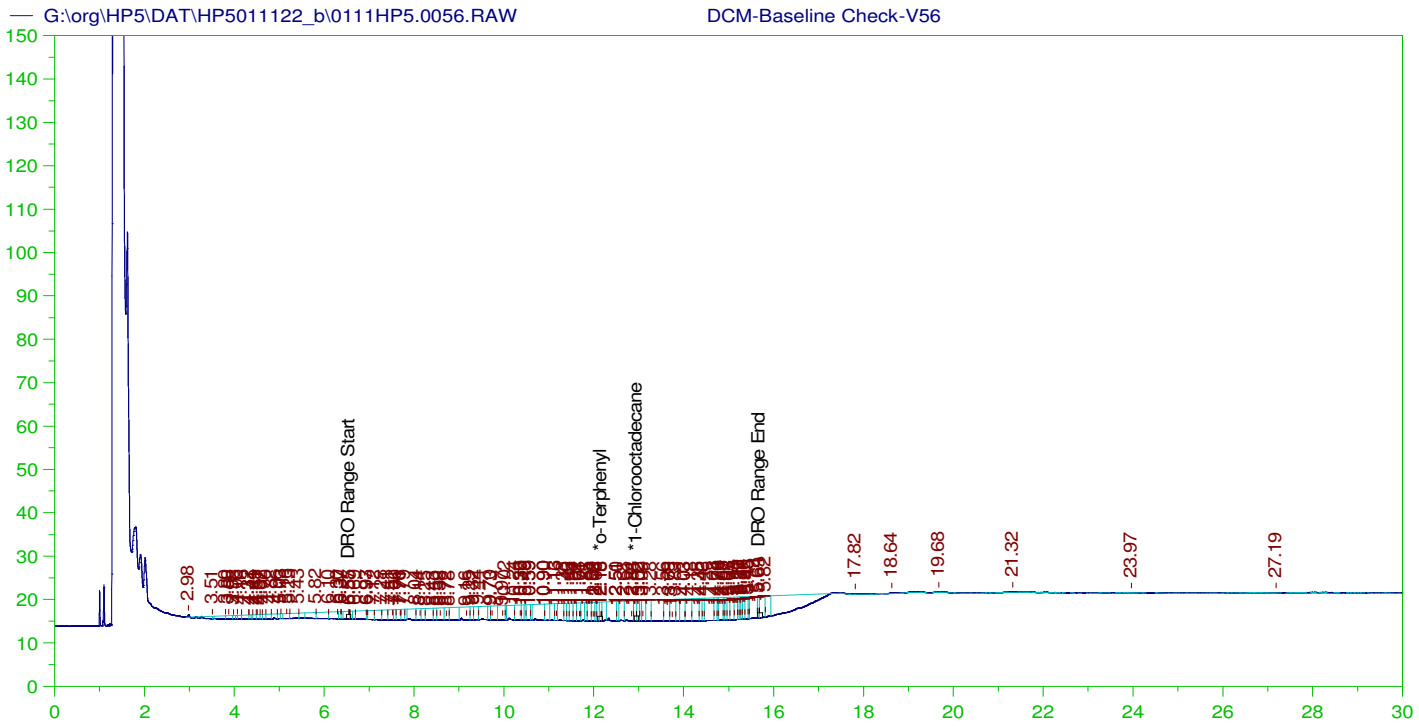
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.447	500.	.47	.09	-

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



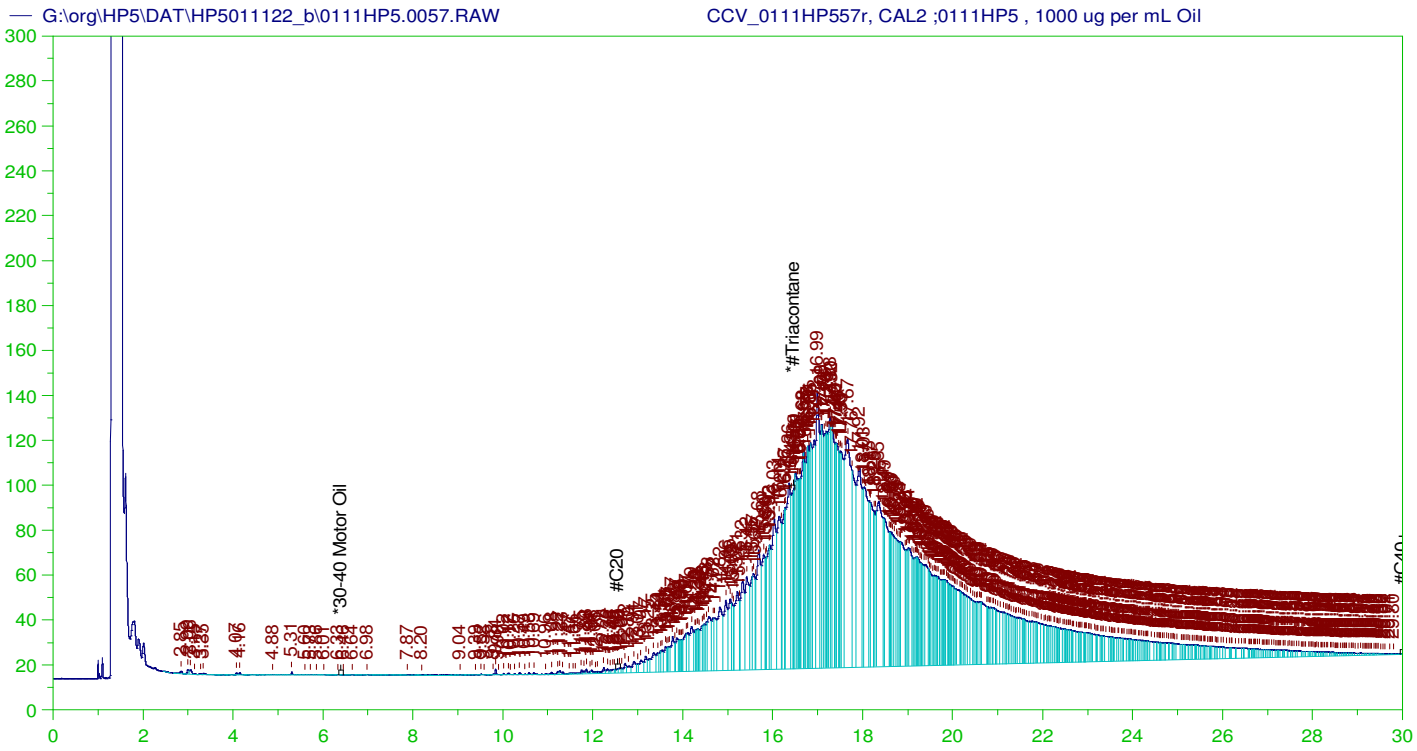
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

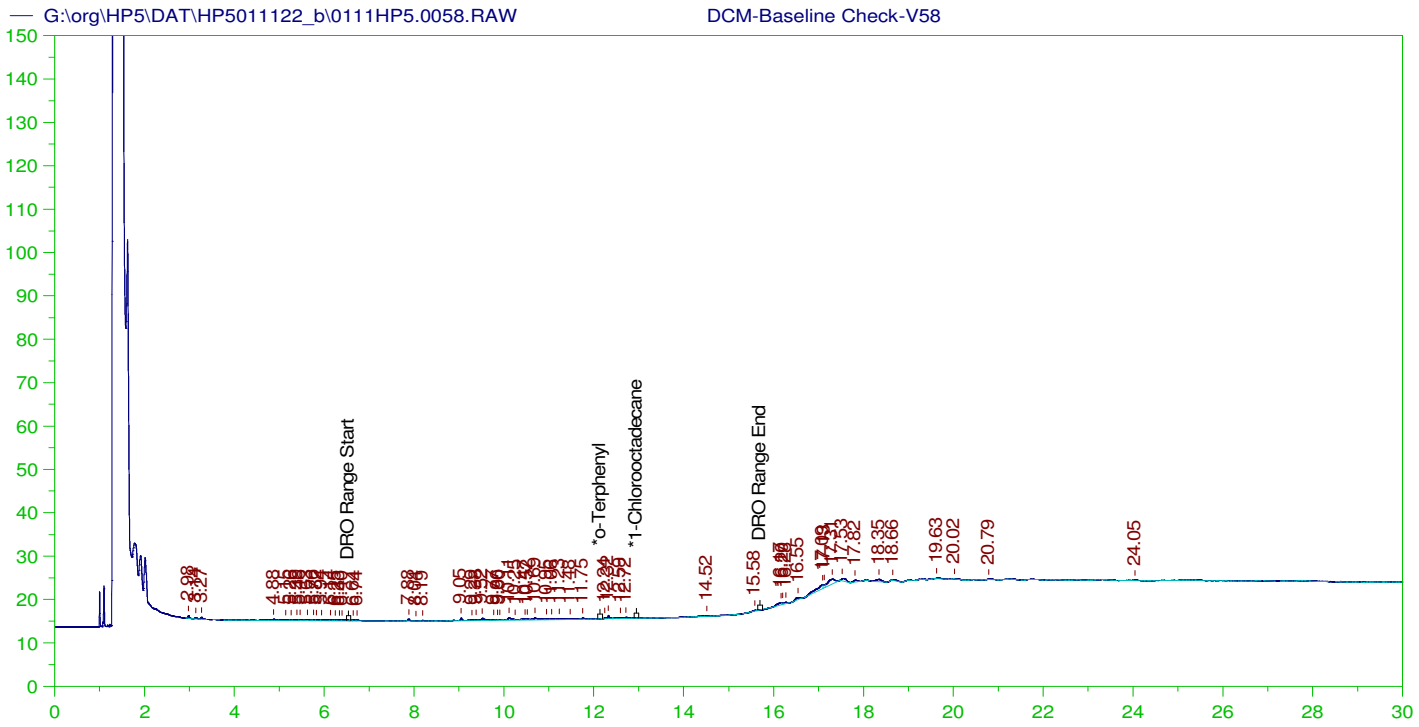
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.454	500.	3.058	.61	-

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



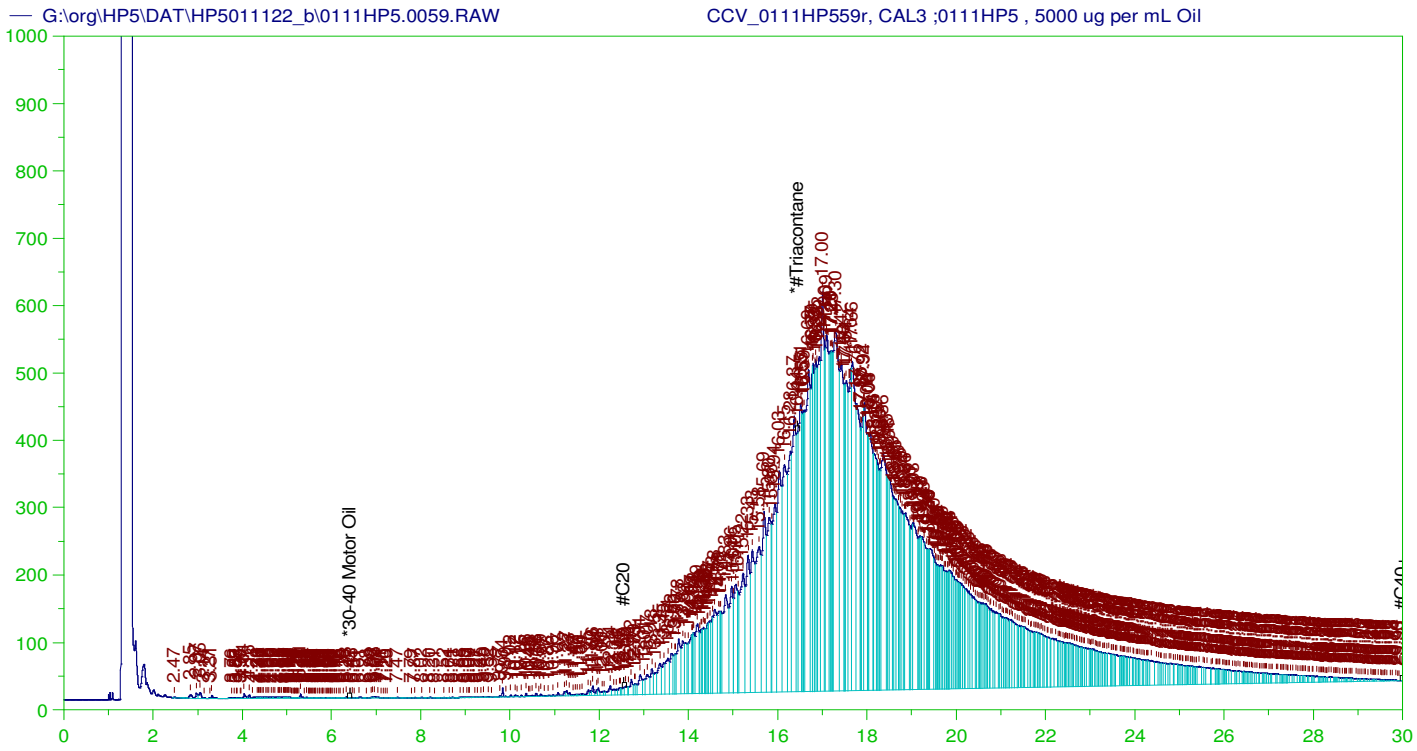
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

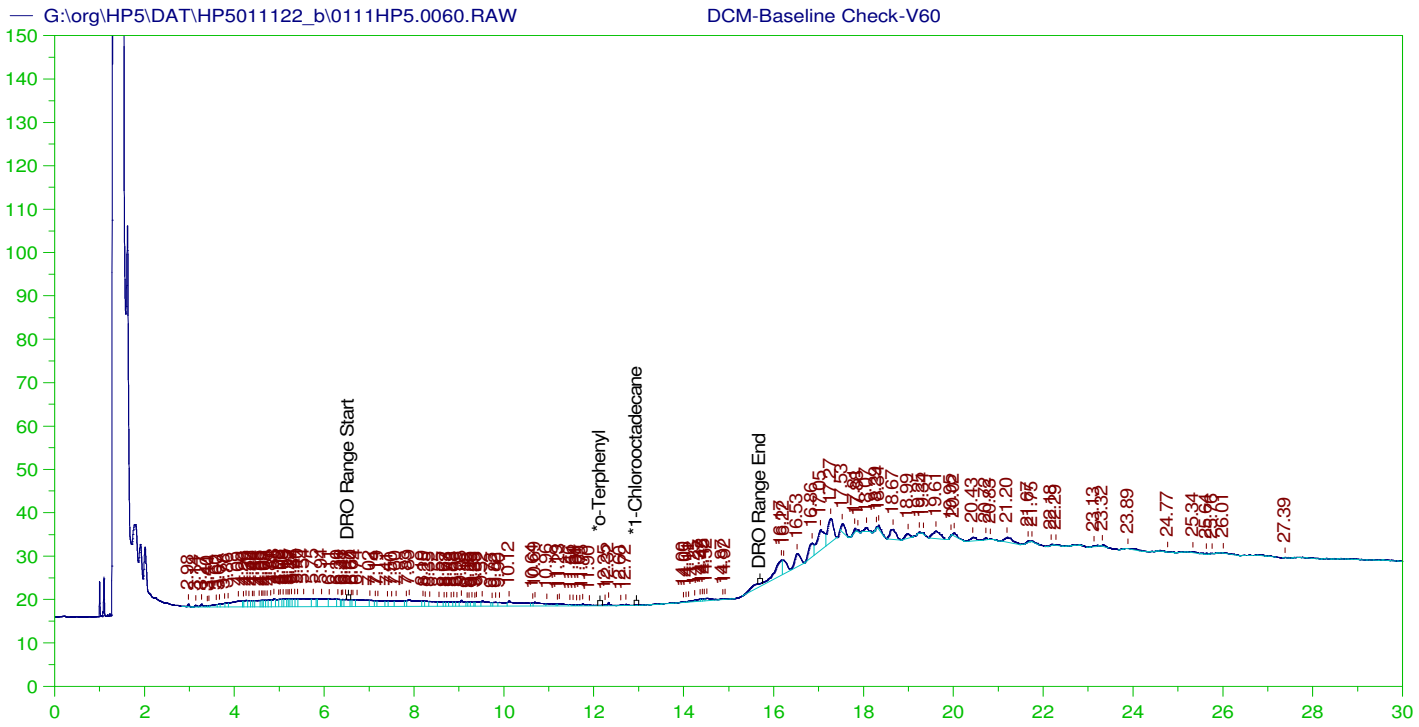
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.442	500.	33.09	6.62	-

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

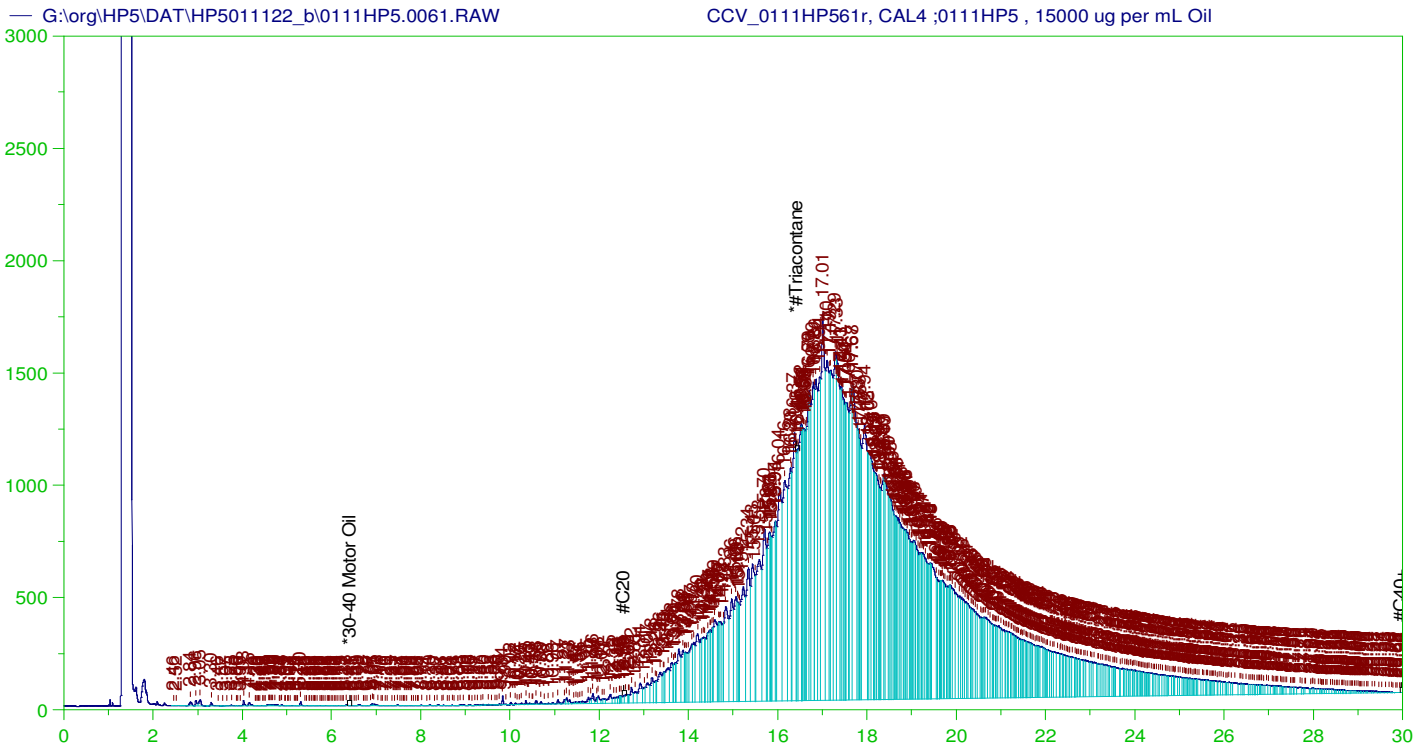


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V60
Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0060.RAW
Date & Time Acquired: 1/13/2022 6:41:03 PM
Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.911	200.	.	.	-
*1-Chlorooctadecane	29.911	200.	.	.	-

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

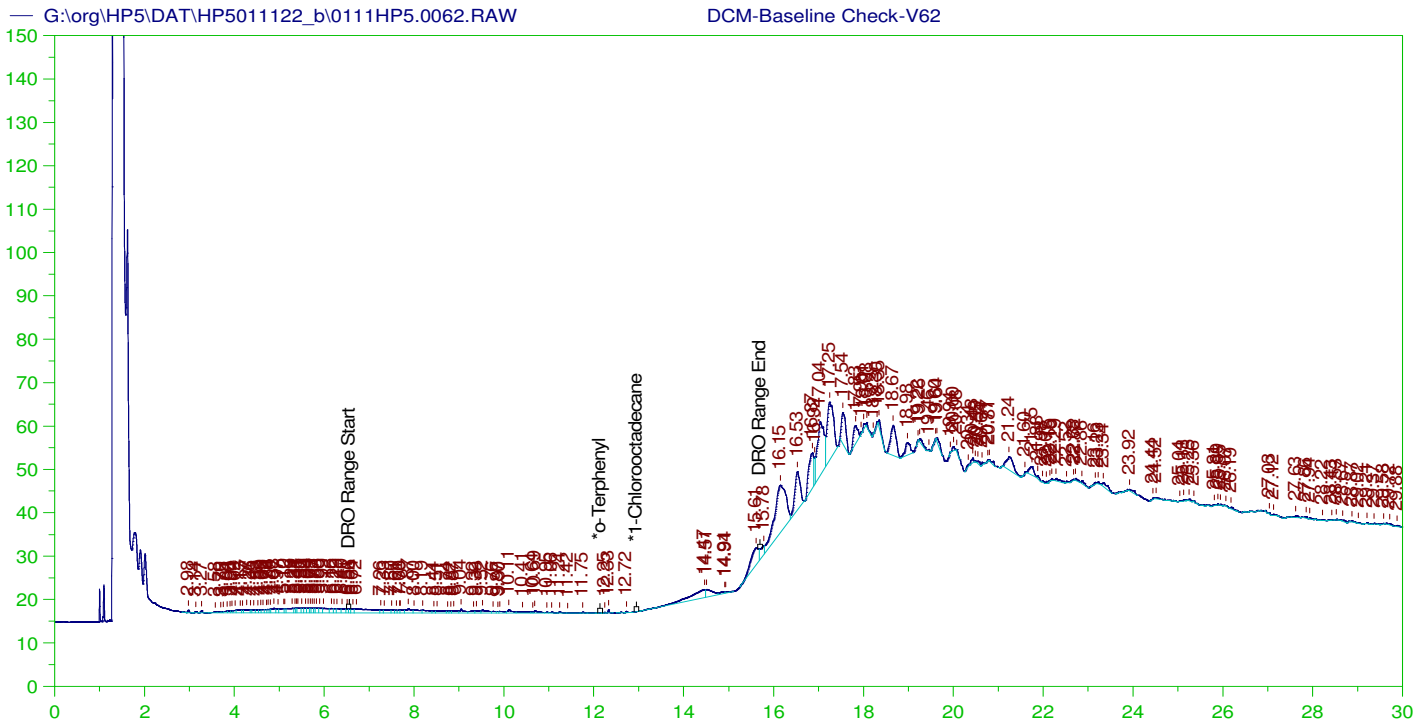
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.429	500.	33.728	6.75	-

RRO Area:3.786286E+08 RRO AMOUNT: 14328.67

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

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

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



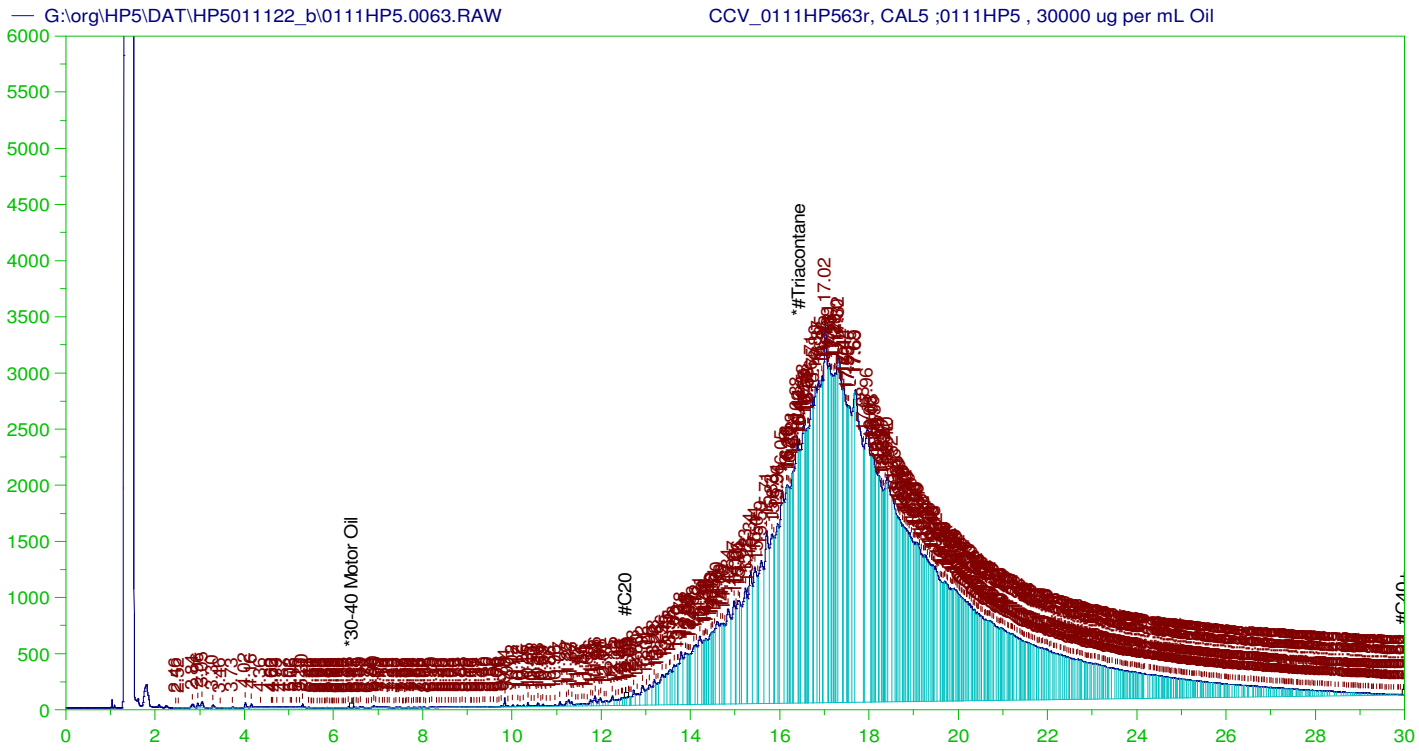
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V62
Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0062.RAW
Date & Time Acquired: 1/13/2022 8:07:28 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	29.883	200.	.	.	-
*1-Chlorooctadecane	29.883	200.	.	.	-

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

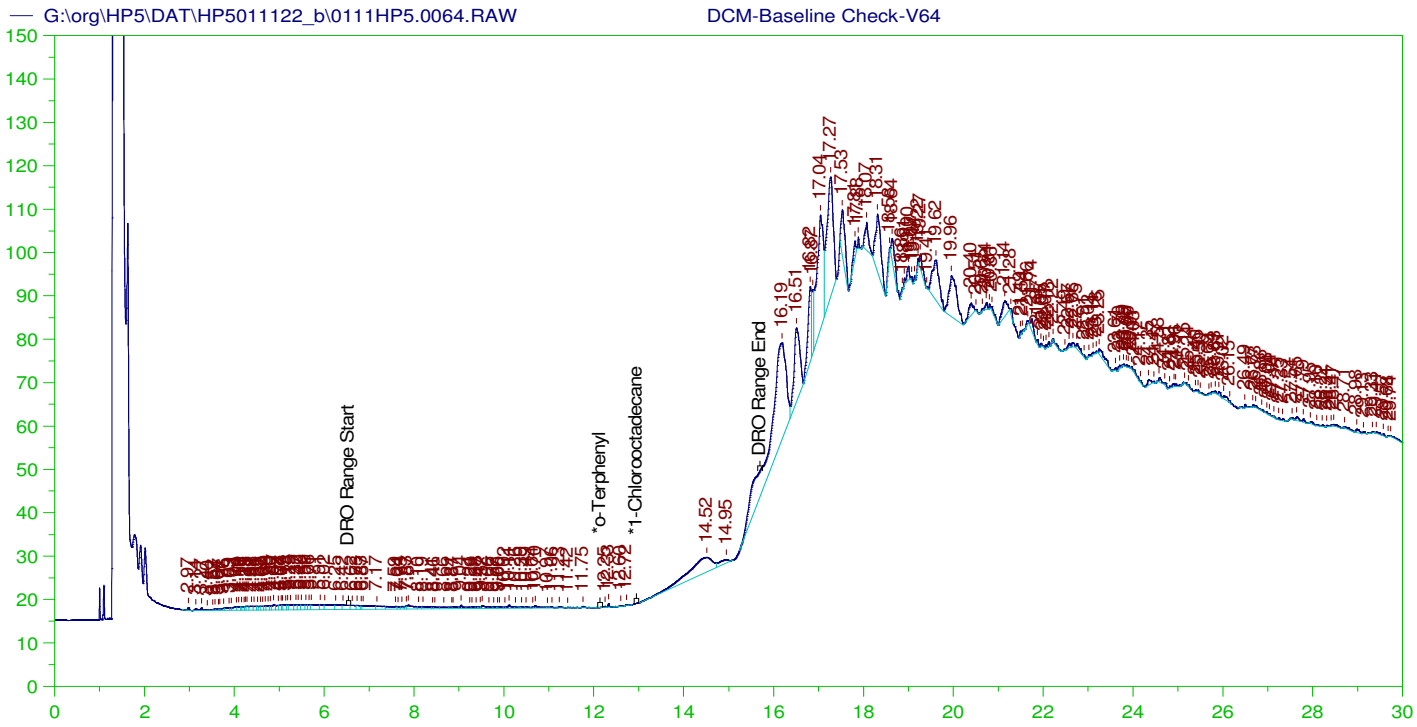
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.44	500.	102.625	20.52	-

RRO Area:7.608009E+08 RRO AMOUNT: 28791.44

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

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

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

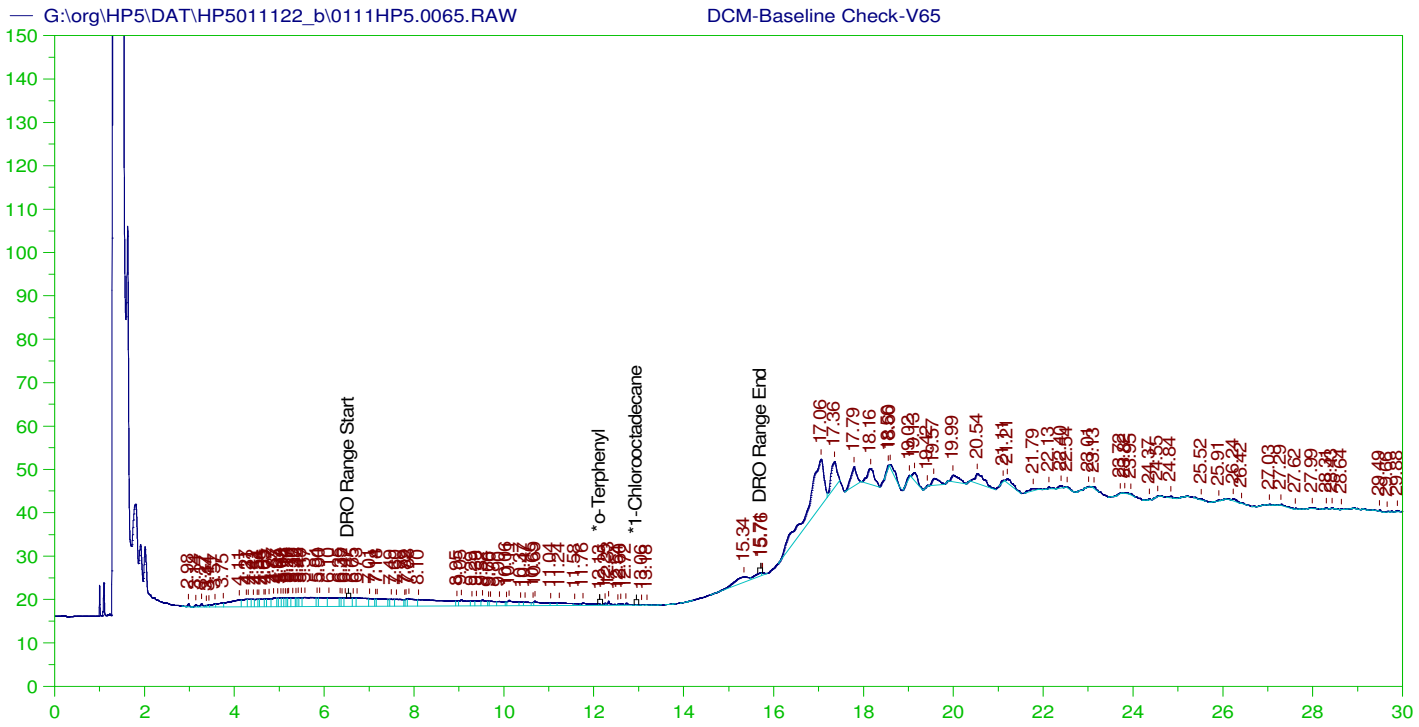


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V64
Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0064.RAW
Date & Time Acquired: 1/13/2022 9:33:32 PM
Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED		%REC
*o-Terphenyl	29.741	200.	.	.	-
*1-Chlorooctadecane	29.741	200.	.	.	-

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

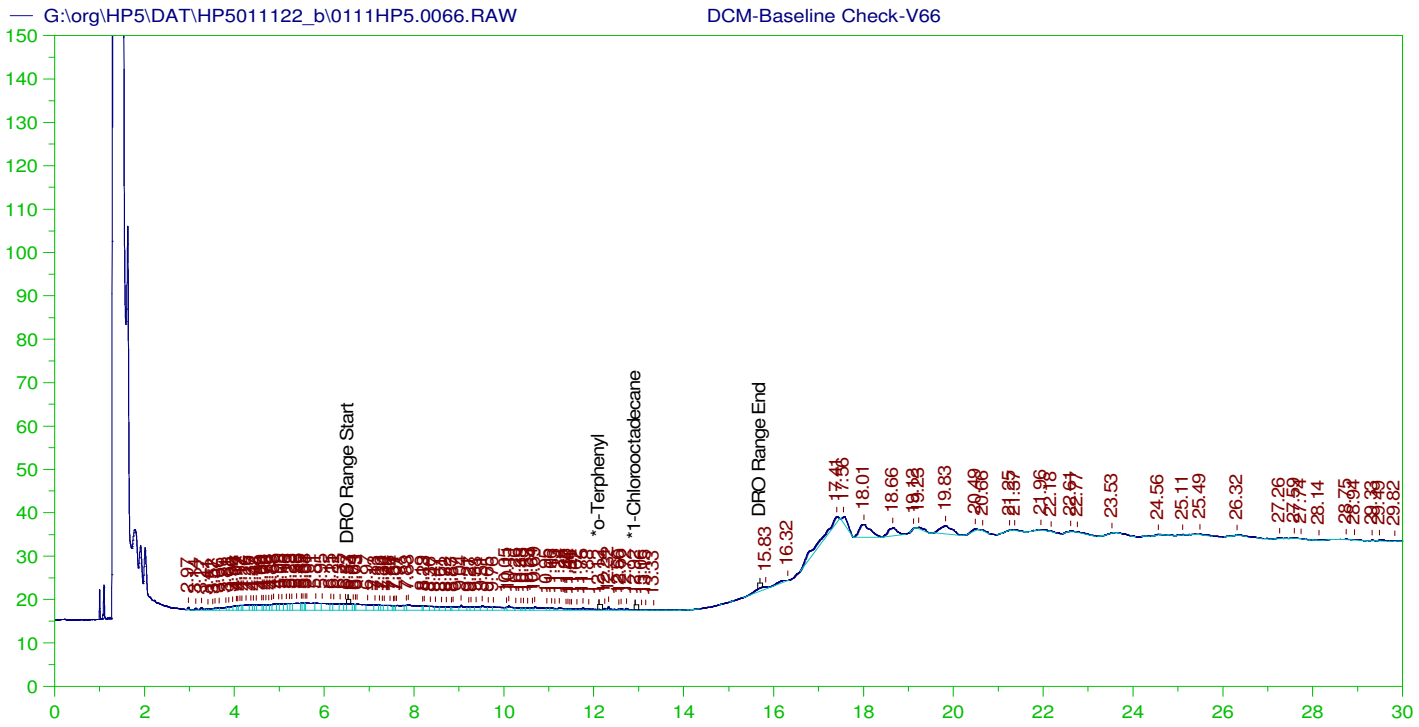


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V65
Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0065.RAW
Date & Time Acquired: 1/13/2022 10:16:33 PM
Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
Sample Weight: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

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.129	200.	.021	.01	-
*1-Chlorooctadecane	29.884	200.	.	.	-

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



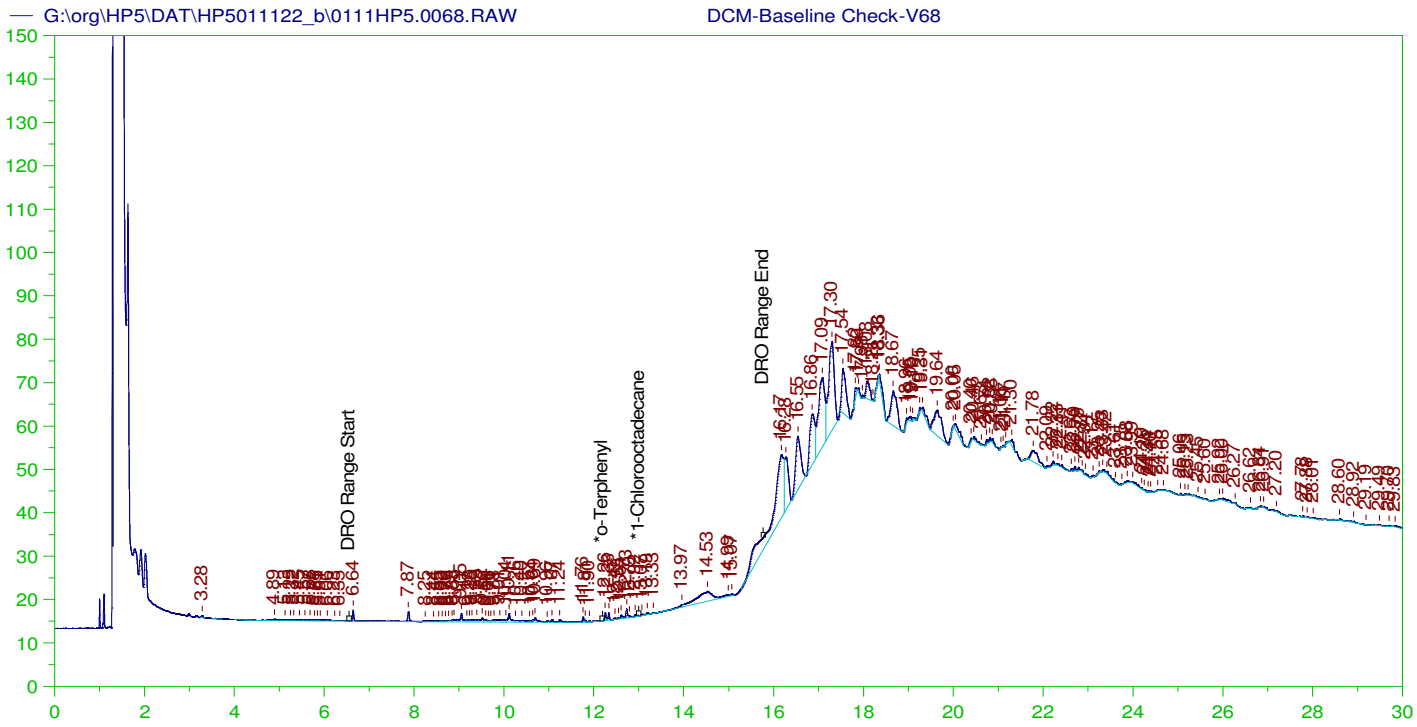
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V66
Raw File: G:\org\HP5\DAT\HP5011122_b\0111HP5.0066.RAW
Date & Time Acquired: 1/13/2022 10:59:39 PM
Method File: G:\Org\HP5\Methods\DR_8015-HE-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO210108HE.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.12	200.	.025	.01	-
*1-Chlorooctadecane	12.922	200.	.037	.02	-

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



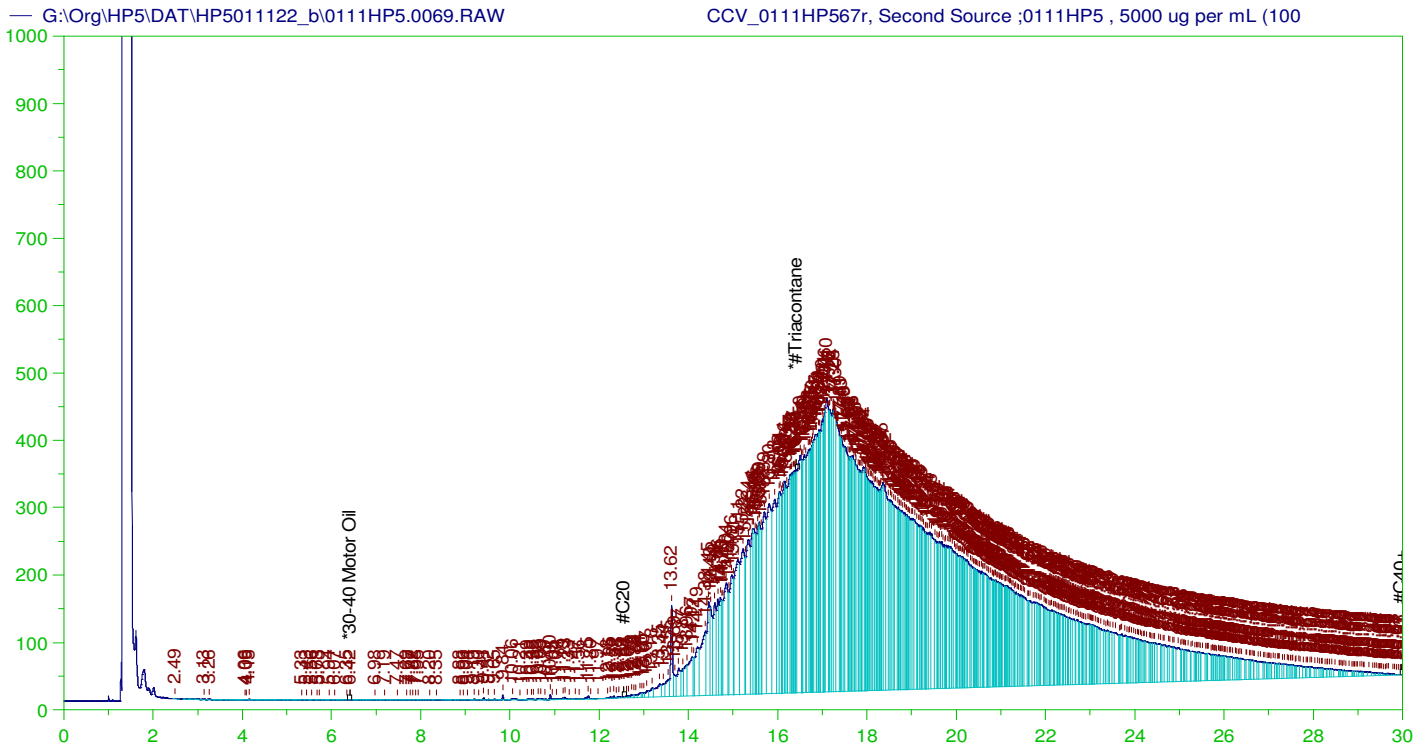
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

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

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

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

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



RESIDUAL RANGE ORGANICS CHROMATOGRAM

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

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

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

RRO Area:1.341574E+08 RRO AMOUNT: 5076.999

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

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

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

Write Sequence	Insert Entries(Have the first cell for entries selecte								
Data File	Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.25r	DCM-Baseline Check-V25	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.26r	Marker_0111HP526r, DRO ;0111HP5 , DRO220111A	g:\org\HP5\Methods\\CSC210212.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.27r	DCM-Baseline Check-V27	G:\Org\HP5\Methods\DR_8015-HS-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.28r	CCV_0111HP528r, CAL1 ;0111HP5 , 2 ug per mL Triacontane (10 uL of Cal3 + 990 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
G:\org\HP5\DAT\HP5011122_b\0111HP5.29r	CCV_0111HP529r, CAL2 ;0111HP5 , 50 ug per mL Triacontane (100 uL Cal4 + 900 uL of DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
G:\org\HP5\DAT\HP5011122_b\0111HP5.30r	CCV_0111HP530r, CAL3 ;0111HP5 , 200 ug per mL Triacontane (100uL of Cal5 + 400 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
G:\org\HP5\DAT\HP5011122_b\0111HP5.31r	CCV_0111HP531r, CAL4 ;0111HP5 , 500 ug per mL Triacontane (250uL of Cal5 + 250 uL DCM(14647)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
G:\org\HP5\DAT\HP5011122_b\0111HP5.32r	DCM-Baseline Check-V33	G:\Org\HP5\Methods\DR_8015-HE-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.50r	CCV_0111HP550r, CAL5 ;0111HP5 , 1000 ug per mL Triacontane (DRO211006A)	G:\Org\HP5\Methods\DS_ORO-BA-L#.MET	1	1	1	1	0	Surrogates are integrated using a valley to valley integration Set Baseline All Valley on at 16.04 minutes.
G:\org\HP5\DAT\HP5011122_b\0111HP5.51r	DCM-Baseline Check-V51	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.52r	DCM-Baseline Check-V52	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.53r	Marker_0111HP553r, DRO ;0111HP5 , DRO220111A	g:\org\HP5\Methods\\CSC210212.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.54r	DCM-Baseline Check-V54	G:\Org\HP5\Methods\DR_8015-IC-LEXP.met	1	1	1	1	0	No Integrations
G:\org\HP5\DAT\HP5011122_b\0111HP5.55r	CCV_0111HP555r, CAL1 ;0111HP5 , 150 ug per mLOil (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** Technician: **Aloysia L. Noble** Prep Start Date: **2/24/2022 4:20:19 PM**

Prep Batch **164025** Prep Temp **NA °C** Batch Units: **ML** Prep End Date: **2/25/2022 3:17:00 PM**

Sample ID	Matrix	pH	Initial Samp Amt	Sol Added	Sol Recovered	Final Vol (mL)	Factor	Balance	Prep Start Date	Prep End Date
MB-164025			1000	0	0	1.00	0.001		2/24/2022	2/25/2022
Start time: 4:33PM, 2/24/2022. End time: 2/25/2022 at 10:45 AM. IDOC for ALN supervised by AMN. SGT on remaining samples by ALN on 3/1/2022.										
LCS-164025			1000	0	0	1.00	0.001		2/24/2022	2/25/2022
All bottles were completely used, defaced and disposed of on 2/24/2022. SGT on remaining samples by ALN on 3/1/2022.										
LCSD-164025			1000	0	0	1.00	0.001		2/24/2022	2/25/2022
SGT on remaining samples by ALN on 3/1/2022.										
LCS-RRO-164025			1000	0	0	1.00	0.001		2/24/2022	2/25/2022
SGT on remaining samples by ALN on 3/1/2022.										
LCSD-RRO-164025			1000	0	0	1.00	0.001		2/24/2022	2/25/2022
SGT on remaining samples by ALN on 3/1/2022.										
B22021627-001D	Ground Water	2	1050	0	0	1.00	0.000952		2/24/2022	2/25/2022
Bottle 1/2: clear no sediment. SGT on remaining samples by ALN on 3/1/2022.										
B22021627-001DMS	Ground Water	2	1050	0	0	1.00	0.000952		2/24/2022	2/25/2022
Bottle 2/2: clear no sediment. SGT on remaining samples by ALN on 3/1/2022.										
B22021627-006D	Ground Water	2	1060	0	0	1.00	0.000943		2/24/2022	2/25/2022
Bottle 1/2: clear no sediment. SGT on remaining samples by ALN on 3/1/2022.										
B22021627-006DMS-RRO	Ground Water	2	1060	0	0	1.00	0.000943		2/24/2022	2/25/2022
Bottle 2/2: clear no sediment. SGT on remaining samples by ALN on 3/1/2022.										
B22021627-011D	Ground Water	2	1060	0	0	1.00	0.000943		2/24/2022	2/25/2022
Bottle 1/2: clear no sediment.										

Number	Reagent Name	Exp Date	
11	Carbon Filter Water	1/1/2023	
13379	PTFE Boiling Stones 27463755	12/30/2025	
14206	pH-indicator Strips 0-14 HC160347	8/26/2026	
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

Energy Laboratories Inc

ANALYTICAL RUN Summary

01-Mar-22

Run ID GCFID-HP5-B_220228A

Run Start Date:	2/28/2022
Analyst:	Ann Nebel
Ical:	
Column ID:	
Comments:	DRO-8015-ICAL information is in Index GCFID-HP5-B_220111A 8015C OIL range calibration GCFID-HP5-B_220111C.

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
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
DRO220211A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060764	CCV_0228HP50	HC-8015-DRO-	CCV		2/28/2022 9:54:5	1	R375375		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		4.71791064		5	0	0	0.0879	0.3	0	94%	80	120	0%	
n-Triacontane	S	mg/L		0.174449		0.2	0	0	0.000336	0.002	0	87%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060765	CCV_0228HP50	HC-8015-DRO-	CCV		2/28/2022 10:37:	1	R375375		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		16.1797		15	0	0	0.0389	0.3	0	108%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.74287		15	0	0	0.0749	0.3	50	112%	80	120	0%	
o-Terphenyl	S	mg/L		0.2063879		0.2	0	0	0.000429	0.002	0	103%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060766	LCS-164025	HC-8015-DRO-	LCS-DOD		2/28/2022 12:45:	1	164025	2/24/2022 4:	0	0	

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

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060766	LCS-164025	HC-8015-DRO-	LCS-DOD		2/28/2022 12:45:	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		13.50777		15	0	0	0.0389	0.3	0	90%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		14.41199		15	0	0	0.0749	0.3	50	96%	60	132	0%	
o-Terphenyl	S	mg/L		0.2088965		0.2	0	0	0.000429	0.002	0	104%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060767	LCSD-164025	HC-8015-DRO-	LCSD-DOD		2/28/2022 1:28:1	1	164025	2/24/2022 4:	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		13.93985		15	0	13.50777	0.0389	0.3	0	93%	36	132	3%	
Total Extractable Hydrocarbons	A	mg/L		14.87349		15	0	14.41199	0.0749	0.3	50	99%	60	132	3%	
o-Terphenyl	S	mg/L		0.2100128		0.2	0	0	0.000429	0.002	0	105%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060768	MB-164025	HC-8015-DRO-	MBLK		2/28/2022 2:11:0	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0389	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0		0	0	0	0.0879	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons	A	mg/L		0		0	0	0	0.0749	0.15	50	0%	0	0	0%	
n-Triacontane	S	mg/L		0.097		0.1	0	0	0.000336	0.002	0	97%	50	150	0%	
o-Terphenyl	S	mg/L		0.2095418		0.2	0	0	0.000429	0.002	0	105%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060769	B22021627-011	HC-8015-DRO-	SAMP		2/28/2022 2:54:0	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0		0	0	0	0.0366827	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		0.091		0.0943	0	0	0.0003168	0.001886	0	97%	50	150	0%	
o-Terphenyl	S	mg/L		0.1991884		0.1886	0	0	0.0004045	0.002	0	106%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060770	B22021627-001	HC-8015-DRO-	SAMP		2/28/2022 3:37:0	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		0.04905796		0	0	0	0.0370328	0.3	0	0%	0	0	0%	J
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.18298429		0	0	0	0.0836808	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		0.2584189		0	0	0	0.0713048	0.3	50	0%	0	0	0%	J
n-Triacontane	S	mg/L		0.087		0.0952	0	0	0.0003199	0.001904	0	91%	50	150	0%	
o-Terphenyl	S	mg/L		0.1711771		0.1904	0	0	0.0004084	0.002	0	90%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060771	B22021627-001	HC-8015-DRO-	MS-DOD		2/28/2022 4:19:5	1	164025	2/24/2022 4:	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		11.93541		14.28	0.049058	0	0.0370328	0.3	0	83%	36	132	0%	
Total Extractable Hydrocarbons	A	mg/L		12.91212		14.28	0.2584189	0	0.0713048	0.3	50	89%	60	132	0%	
o-Terphenyl	S	mg/L		0.1680075		0.1904	0	0	0.0004084	0.002	0	88%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060772	B22021627-006	HC-8015-DRO-	SAMP		2/28/2022 5:46:2	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (C10 to C24)	A	mg/L		1.121501		0	0	0	0.0366827	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (C24 to C40	A	mg/L		0.1616533		0	0	0	0.0828897	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons	A	mg/L		1.279272		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		0.1735743		0.1886	0	0	0.0004045	0.002	0	92%	56	125	0%	
TEH(Oil Range)	X	mg/L		0.43692219		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
15060773	B22021627-006	HC-8015-DRO-	MS-DOD		2/28/2022 6:29:3	1	164025	2/24/2022 4:	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		5.07925415		4.715	0.4369222	0	0.0828897	0.3	0	98%	41	113	0%	
n-Triacontane	S	mg/L		0.087		0.0943	0	0	0.0003168	0.002	0	92%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060774	LCS-RRO-1640	HC-8015-DRO-	LCS-DOD		2/28/2022 7:12:5	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		5.28568840		5	0	0	0.0879	0.3	0	106%	41	113	0%	
n-Triacontane	S	mg/L		0.088		0.1	0	0	0.000336	0.002	0	88%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060775	LCSD-RRO-164	HC-8015-DRO-	LCSD-DOD		2/28/2022 7:56:0	1	164025	2/24/2022 4:	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		5.633986		5	0	5.2856884	0.0879	0.3	0	113%	41	113	6%	
n-Triacontane	S	mg/L		0.095		0.1	0	0	0.000336	0.002	0	95%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060776	CCV_0228HP52	HC-8015-DRO-	CCV		2/28/2022 9:22:3	1	R375375		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		4.8416709		5	0	0	0.0879	0.3	0	97%	80	120	0%	
n-Triacontane	S	mg/L		0.1779362		0.2	0	0	0.000336	0.002	0	89%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15060777	CCV_0228HP52	HC-8015-DRO-	CCV		2/28/2022 10:05:	1	R375375		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		15.53818		15	0	0	0.0389	0.3	0	104%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.07354		15	0	0	0.0749	0.3	50	107%	80	120	0%	
o-Terphenyl	S	mg/L		0.1979716		0.2	0	0	0.000429	0.002	0	99%	80	120	0%	

Energy Laboratories Inc

ANALYTICAL RUN Summary

02-Mar-22

Run ID GCFID-HP5-B_220301A

Run Start Date:	3/1/2022
Analyst:	Ann Nebel
Ical:	
Column ID:	
Comments:	DRO-8015-ICAL information is in Index GCFID-HP5-B_220111A 8015C OIL range calibration GCFID-HP5-B_220111C.

Std ID	Std Name	Std Amount	Std Units	Samp Amount	Samp Units	SampType	Expiration Date
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
DRO220211A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023
DRO220301A	8015 CCV-15,000ug/mL + 200 OTP					CCV-DRO	4/30/2023

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062458	CCV_0301HP50	HC-8015-DRO-	CCV		3/1/2022 11:33:3	1	R375439		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		4.82313477		5	0	0	0.0879	0.3	0	96%	80	120	0%	
n-Triacontane	S	mg/L		0.1797607		0.2	0	0	0.000336	0.002	0	90%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062459	CCV_0301HP50	HC-8015-DRO-	CCV		3/1/2022 12:16:0	1	R375439		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		15.85165		15	0	0	0.0389	0.3	0	106%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		16.40802		15	0	0	0.0749	0.3	50	109%	80	120	0%	
o-Terphenyl	S	mg/L		0.2010359		0.2	0	0	0.000429	0.002	0	101%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062460	LCS-164025	HC-8015-DRO-	LCS-DOD		3/1/2022 2:23:19	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		12.06676		15	0	0	0.0281	0.3	0	80%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.79833		15	0	0	0.0357	0.3	0	85%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1951009		0.2	0	0	0.000429	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
15062461	LCSD-164025	HC-8015-DRO-	LCSD-DOD		3/1/2022 3:05:57	1	164025	2/24/2022 4:	0	2E+07	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		11.46638		15	0	12.06676	0.0281	0.3	0	76%	36	132	5%	
Total Extractable Hydrocarbons (SGT	A	mg/L		12.1472		15	0	12.79833	0.0357	0.3	0	81%	60	132	5%	
o-Terphenyl (SGT)	S	mg/L		0.1831279		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
15062462	MB-164025	HC-8015-DRO-	MBLK		3/1/2022 3:48:23	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0		0	0	0	0.0281	0.15	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0879	0.15	0	0%	0	0	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		0		0	0	0	0.0357	0.15	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.088		0.1	0	0	0.000336	0.002	0	88%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1959993		0.2	0	0	0.000429	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
15062463	B22021627-001	HC-8015-DRO-	SAMP		3/1/2022 4:30:48	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0		0	0	0	0.0267512	0.3	0	0%	0	0	0%	U
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0		0	0	0	0.0836808	0.3	0	0%	0	0	0%	U
Total Extractable Hydrocarbons (SGT	A	mg/L		0.08306444		0	0	0	0.0339864	0.3	0	0%	0	0	0%	J
n-Triacontane (SGT)	S	mg/L		0.084		0.0952	0	0	0.0003199	0.001904	0	88%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1709162		0.1904	0	0	0.0004084	0.001904	0	90%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062464	B22021627-001	HC-8015-DRO-	MS-DOD		3/1/2022 5:13:36	1	164025	2/24/2022 4:	2E+07	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		10.78516		14.28	0	0	0.0267512	0.3	0	76%	36	132	0%	
Total Extractable Hydrocarbons (SGT	A	mg/L		11.4496		14.28	0.0830644	0	0.0339864	0.3	0	80%	60	132	0%	
o-Terphenyl (SGT)	S	mg/L		0.1620341		0.1904	0	0	0.0004084	0.002	0	85%	56	125	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062465	B22021627-006	HC-8015-DRO-	SAMP		3/1/2022 6:39:01	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
Diesel Range Organics (SGT-C10 to	A	mg/L		0.9478972		0	0	0	0.0264983	0.3	0	0%	0	0	0%	
Oil Range Hydrocarbons (SGT-C24 t	A	mg/L		0.11543720		0	0	0	0.0828897	0.3	0	0%	0	0	0%	J
Total Extractable Hydrocarbons (SGT	A	mg/L		1.055977		0	0	0	0.0336651	0.3	0	0%	0	0	0%	
n-Triacontane (SGT)	S	mg/L		0.072		0.0943	0	0	0.0003168	0.001886	0	76%	50	150	0%	
o-Terphenyl (SGT)	S	mg/L		0.1706662		0.1886	0	0	0.0004045	0.001886	0	90%	56	125	0%	
TEH (SGT-Oil Range)	X	mg/L		0.35280085		0	0	0	0.0828897	0.2829	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
15062466	B22021627-006	HC-8015-DRO-	MS-DOD		3/1/2022 7:21:49	1	164025	2/24/2022 4:	2E+07	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		4.80636978		4.715	0.3528008	0	0.0828897	0.3	0	94%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.075		0.0943	0	0	0.0003168	0.002	0	80%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062467	LCS-RRO-1640	HC-8015-DRO-	LCS-DOD		3/1/2022 8:47:46	1	164025	2/24/2022 4:	0	0	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		5.2780509		5	0	0	0.0879	0.3	0	106%	41	113	0%	
n-Triacontane (SGT)	S	mg/L		0.084		0.1	0	0	0.000336	0.002	0	84%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062468	LCSD-RRO-164	HC-8015-DRO-	LCSD-DOD		3/1/2022 9:30:49	1	164025	2/24/2022 4:	0	2E+07	

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
15062468	LCSD-RRO-164	HC-8015-DRO-	LCSD-DOD		3/1/2022 9:30:49	1	164025	2/24/2022 4:	0	2E+07	

Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH (SGT-Oil Range)	A	mg/L		5.21193886		5	0	5.2780509	0.0879	0.3	0	104%	41	113	1%	
n-Triacontane (SGT)	S	mg/L		0.08		0.1	0	0	0.000336	0.002	0	80%	50	150	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062469	CCV_0301HP52	HC-8015-DRO-	CCV		3/1/2022 10:56:5	1	R375439		0	0	

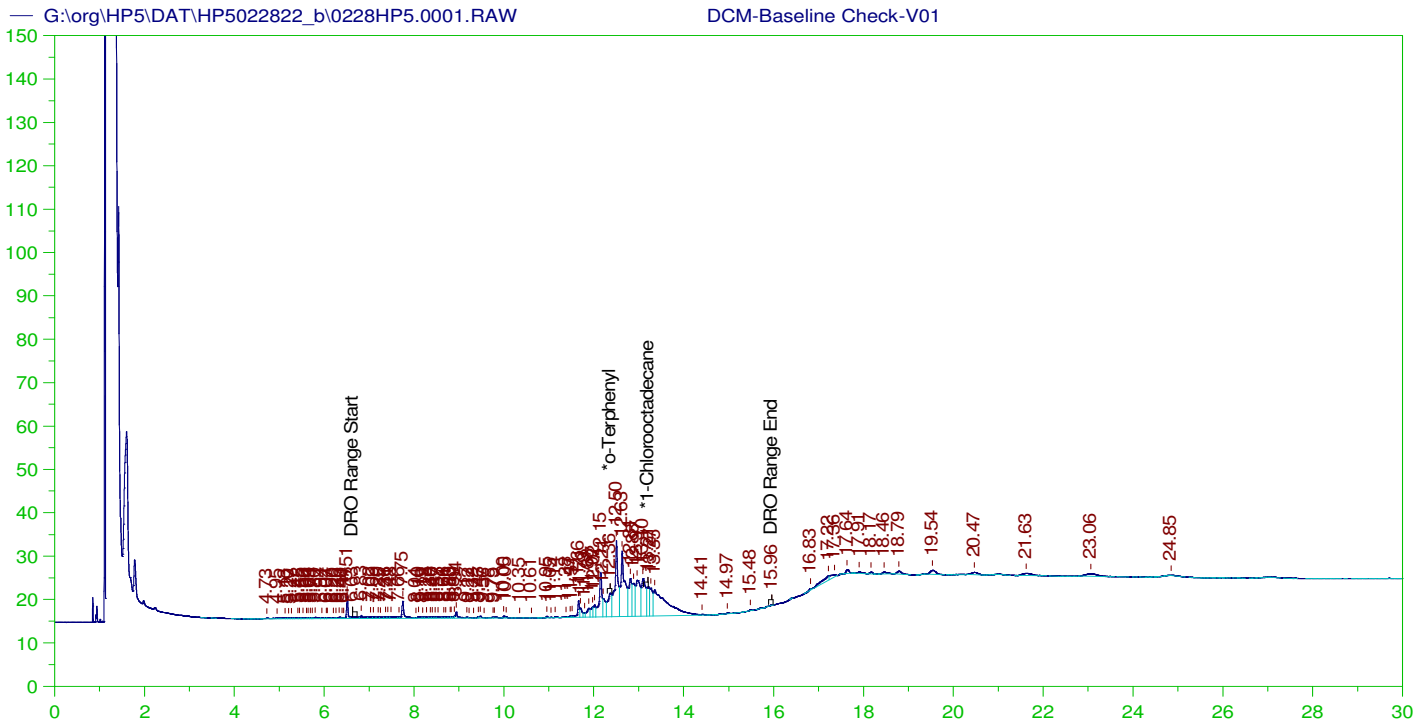
Analyte	T	Units	RAW	Final	Text	Spike	SPKref	RPDref	MDL	PQL	UQL	%REC	LOW	HIGH	%RPD	Q
TEH(Oil Range)	A	mg/L		4.81556006		5	0	0	0.0879	0.3	0	96%	80	120	0%	
n-Triacontane	S	mg/L		0.1778209		0.2	0	0	0.000336	0.002	0	89%	80	120	0%	

Seq No	Lab ID	Test Code	Sample Typ	File ID	Analysis Date	DF	Batch ID	Prep Date	SPKref	RPDref	pmoist
15062470	CCV_0301HP52	HC-8015-DRO-	CCV		3/1/2022 11:40:0	1	R375439		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		13.53839		15	0	0	0.0389	0.3	0	90%	80	120	0%	
Total Extractable Hydrocarbons	A	mg/L		13.99932		15	0	0	0.0749	0.3	50	93%	80	120	0%	
o-Terphenyl	S	mg/L		0.1840934		0.2	0	0	0.000429	0.002	0	92%	80	120	0%	

Write Sequence Data File	Insert Entries(Have the first cell for entries selecte Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP5\DAT\HP5022822_b\0228HP5.01r	DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.02r	DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.03r	MARKER_0228HP503r, CSCAN ;0228HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220228.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.04r	CCV_0228HP504r, RRO ;0228HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-L%.MET	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.05r	CCV_0228HP505r, DRO 8015;0228HP5 , DRO220211A	G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.06r	DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.07r	DCM-Baseline Check-V07	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.08r	LCS-164025 ;0228HP5 ,	G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1000	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.09r	LCSD-164025 ;0228HP5 ,	G:\Org\HP5\Methods\D3_8015-022809-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1000	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.10r	MB-164025 ;0228HP5 ,	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-L#.met	1000	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.11r	B22021627-011D ;0228HP5 , $HC-8015-DRO-W,	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-L#.met	1060	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.12r	B22021627-001D ;0228HP5 , $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-L#.met	1050	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.13r	B22021627-001DMS ;0228HP5 ,	G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1050	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.14r	DCM-Baseline Check-V14	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.15r	B22021627-006D ;0228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-022815-JFb-L%.met G:\Org\HP5\Methods\D3_OROS-022815-BF-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met	1060	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.16r	B22021627-006DMS-RRO ;0228HP5 ,	G:\Org\HP5\Methods\D3_ORO-022816-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-L%.MET	1060	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.17r	LCS-RRO-164025 ;0228HP5 ,	G:\Org\HP5\Methods\D3_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-L%.MET	1000	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.18r	LCSD-RRO-164025 ;0228HP5 ,	G:\Org\HP5\Methods\D3_ORO-022816-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-L%.MET	1000	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.19r	MARKER_0228HP519r, CSCAN ;0228HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220228.met	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.20r	CCV_0228HP520r, RRO ;0228HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BF-L%.MET G:\Org\HP5\Methods\DS_ORO-BF-L%.MET	1	1	1	1	0
G:\org\HP5\DAT\HP5022822_b\0228HP5.21r	CCV_0228HP521r, DRO 8015;0228HP5 , DRO220211A	G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1	1	1	1	0

Write Sequence Data File	Insert Entries(Have the first cell for entries selecte Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID
G:\org\HP5\DAT\HP5030122_b\0301HP5.01r	DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.02r	DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.03r	MARKER_0301HP503r, CSCAN ;0301HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220301.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.04r	CCV_0301HP504r, RRO ;0301HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-L%.MET	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.05r	CCV_0301HP505r, DRO 8015;0301HP5 , DRO220211A	G:\Org\HP5\Methods\DC_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.06r	DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.07r	DCM-Baseline Check-V07	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.08r	LCS-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1000	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.09r	LCSD-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_8015-030109-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1000	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.10r	MB-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\DR_8015-C24T-JG-L%.met G:\Org\HP5\Methods\DR_OROS-BG-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met	1000	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.11r	B22021627-001D ;0301HP5 , $HC-8015-DRO-W, SGT	G:\Org\HP5\Methods\DR_8015-030111-JG-L%.met G:\Org\HP5\Methods\D3_OROS-030111-BG-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met	1050	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.12r	B22021627-001DMS ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1050	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.13r	DCM-Baseline Check-V13	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.14r	B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT	G:\Org\HP5\Methods\DR_8015-030114-JG-L%.met G:\Org\HP5\Methods\D3_OROS-030114-BG-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met	1060	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.15r	B22021627-006DMS-RRO ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-L%.MET	1060	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.16r	DCM-Baseline Check-V16	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.17r	LCS-RRO-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-L%.MET	1000	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.18r	LCSD-RRO-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-L%.MET	1000	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.19r	MARKER_0301HP519r, CSCAN ;0301HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220301.met	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.20r	CCV_0301HP520r, RRO ;0301HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-L%.MET	1	1	1	1	0
G:\org\HP5\DAT\HP5030122_b\0301HP5.21r	CCV_0301HP521r, DRO ;0301HP5 , DRO220301A	G:\Org\HP5\Methods\DC_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1	1	1	1	0



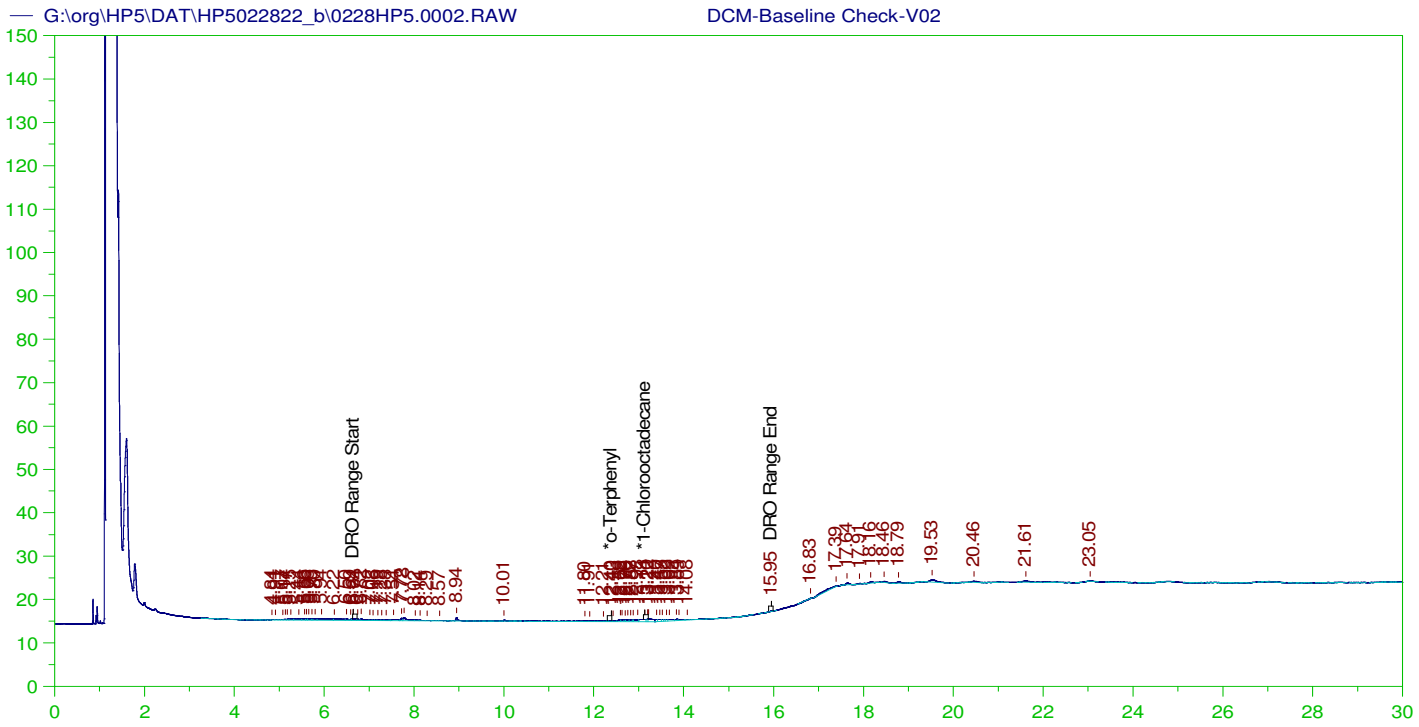
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0001.RAW
Date & Time Acquired: 2/28/2022 7:46:55 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	12.365	200.	.918	.46	-
*1-Chlorooctadecane	13.207	200.	.763	.38	-

DRO Area:734385.5 DRO Amount: 22.47521
TEH Area:854316.6 TEH Amount: 26.14559



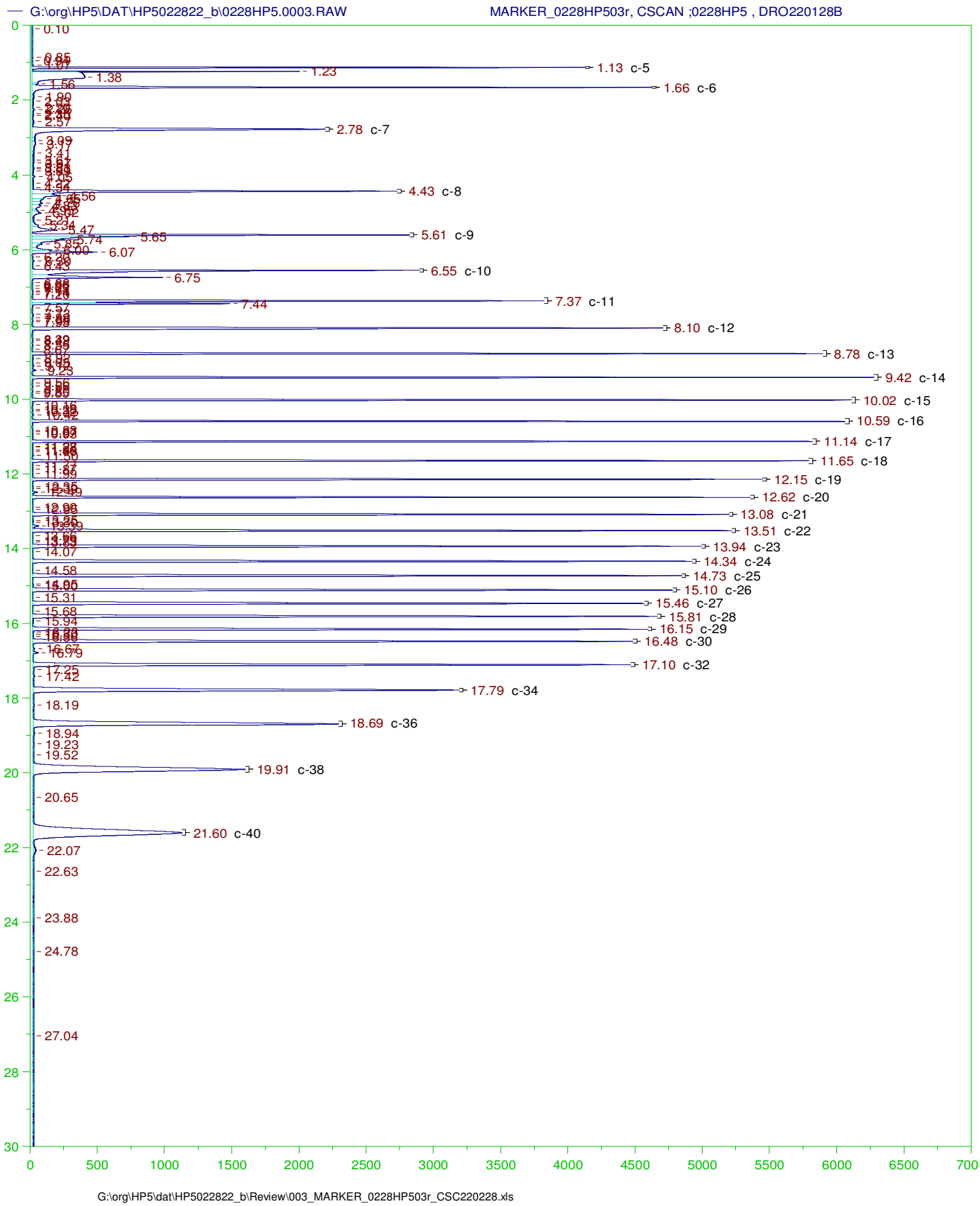
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V02
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0002.RAW
Date & Time Acquired: 2/28/2022 8:29:29 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	12.396	200.	.027	.01	-
*1-Chlorooctadecane	13.14	200.	.114	.06	-

DRO Area:66567.78 DRO Amount: 2.037247
TEH Area:126754.4 TEH Amount: 3.879205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1.23
1.38
1.56
1.66 c-6
2.57
2.78 c-7
4.43 c-8
5.61 c-9
5.65
6.07
6.55 c-10
6.75
7.37 c-11
7.44
8.10 c-12
8.78 c-13
9.42 c-14
10.02 c-15
10.59 c-16
11.14 c-17
11.65 c-18
12.15 c-19
12.62 c-20
13.08 c-21
13.51 c-22
13.94 c-23
14.07
14.34 c-24
14.58
14.73 c-25
15.10 c-26
15.31
15.46 c-27
15.68
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15.94
16.15 c-29
16.48 c-30
16.79
17.10 c-32
17.25
17.42
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18.19
18.69 c-36
18.94
19.23
19.52
19.91 c-38
20.65
21.60 c-40
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22.63
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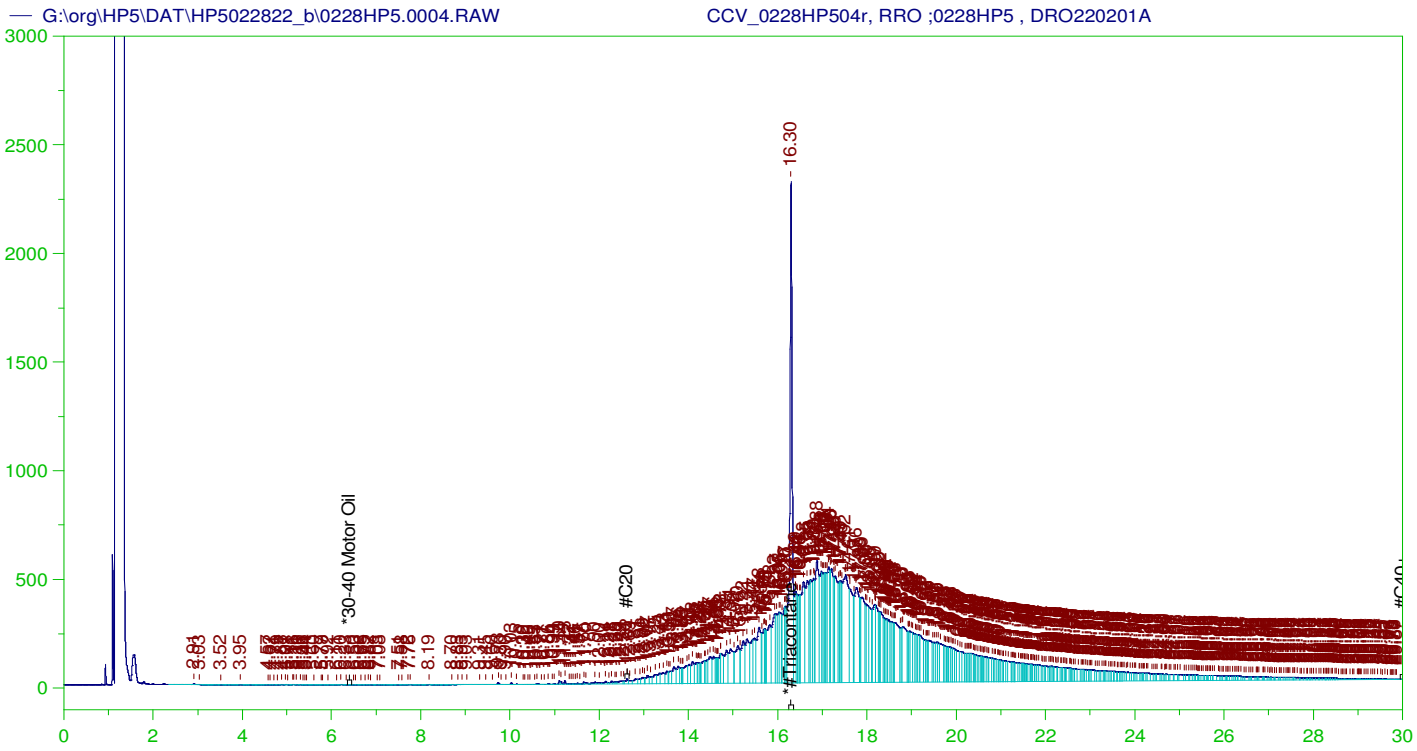

RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0228HP504r, RRO ;0228HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0004.RAW
Date & Time Acquired: 2/28/2022 9:54:59 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	16.298	500.	290.935	58.19	-

~~RRO~~ TEH(Oil Range) Area:1.246687E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4717.911

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.298	200.	290.935	145.47	75-125

AMN 03/01/2022

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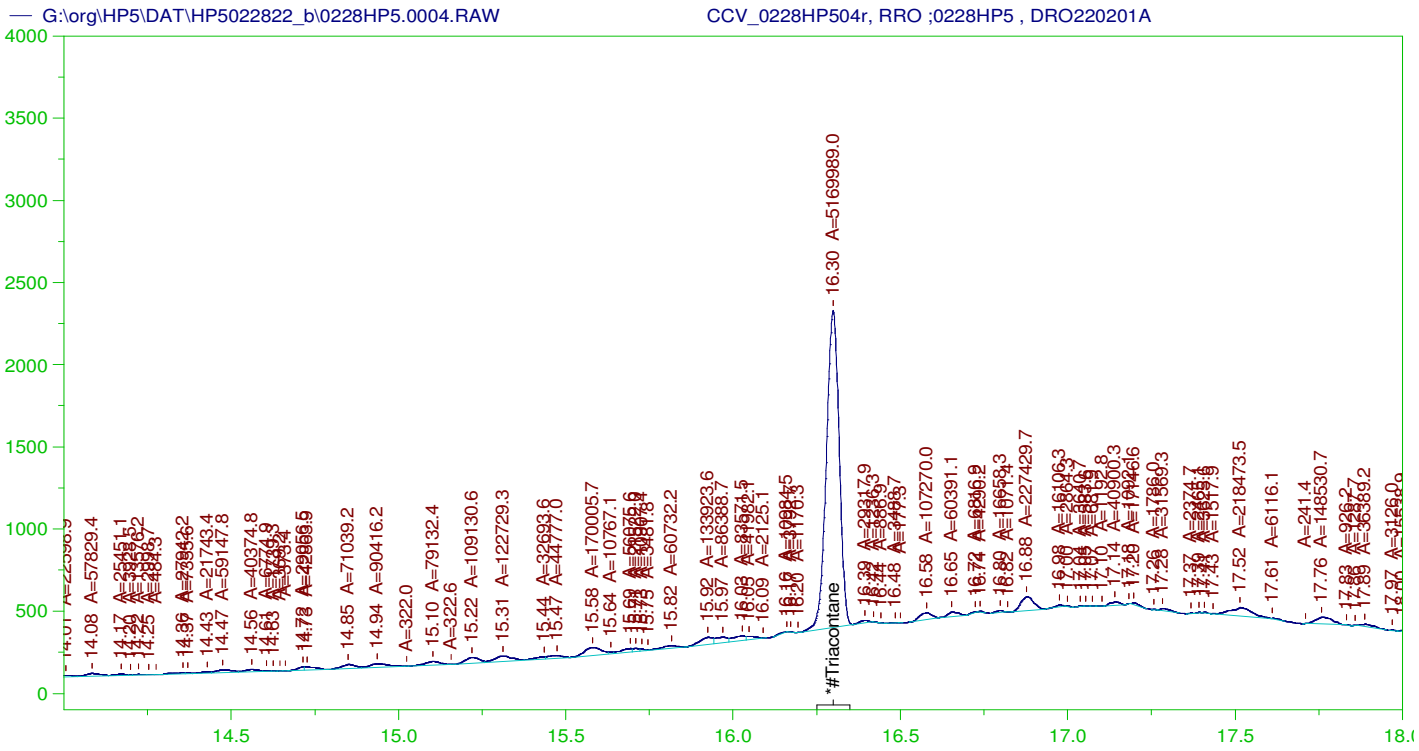


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0228HP504r, RRO ;0228HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0004.RAW
Date & Time Acquired: 2/28/2022 9:54:59 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

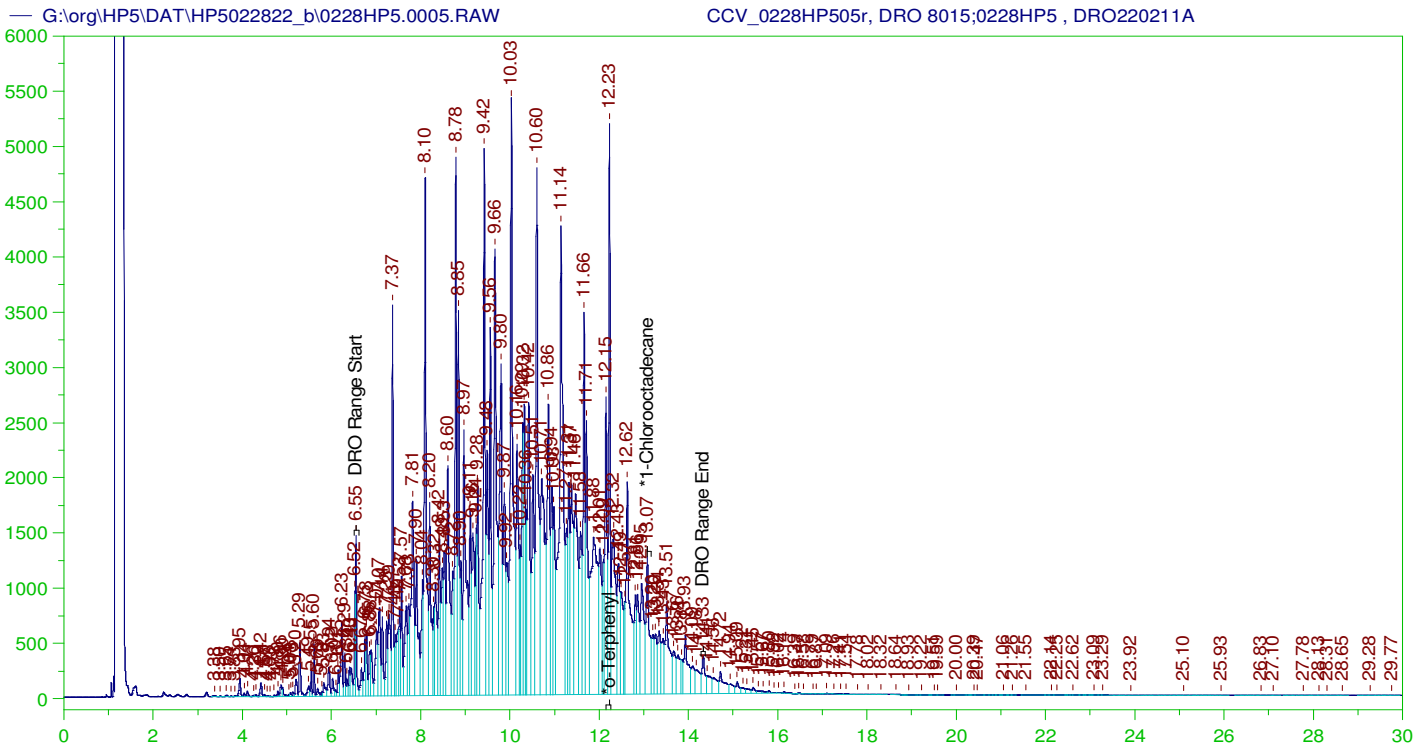
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.298	500.	174.449	34.89	-

RRO Area:3296608 RRO AMOUNT: 124.7555

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0004.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.298	200.	174.449	87.22	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0228HP505r, DRO 8015;0228HP5 , DRO220211A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0005.RAW
Date & Time Acquired: 2/28/2022 10:37:42 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	12.226	200.	345.408	172.7	-
*1-Chlorooctadecane	13.073	200.	173.389	86.69	-

DRO Area:5.286776E+08 DRO Amount: 16179.7
TEH Area:5.470795E+08 TEH Amount: 16742.88

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16742.88	111.62	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.226	200.	345.408	172.7	85-115
*1-Chlorooctadecane	13.073	200.	173.389	86.69	85-115

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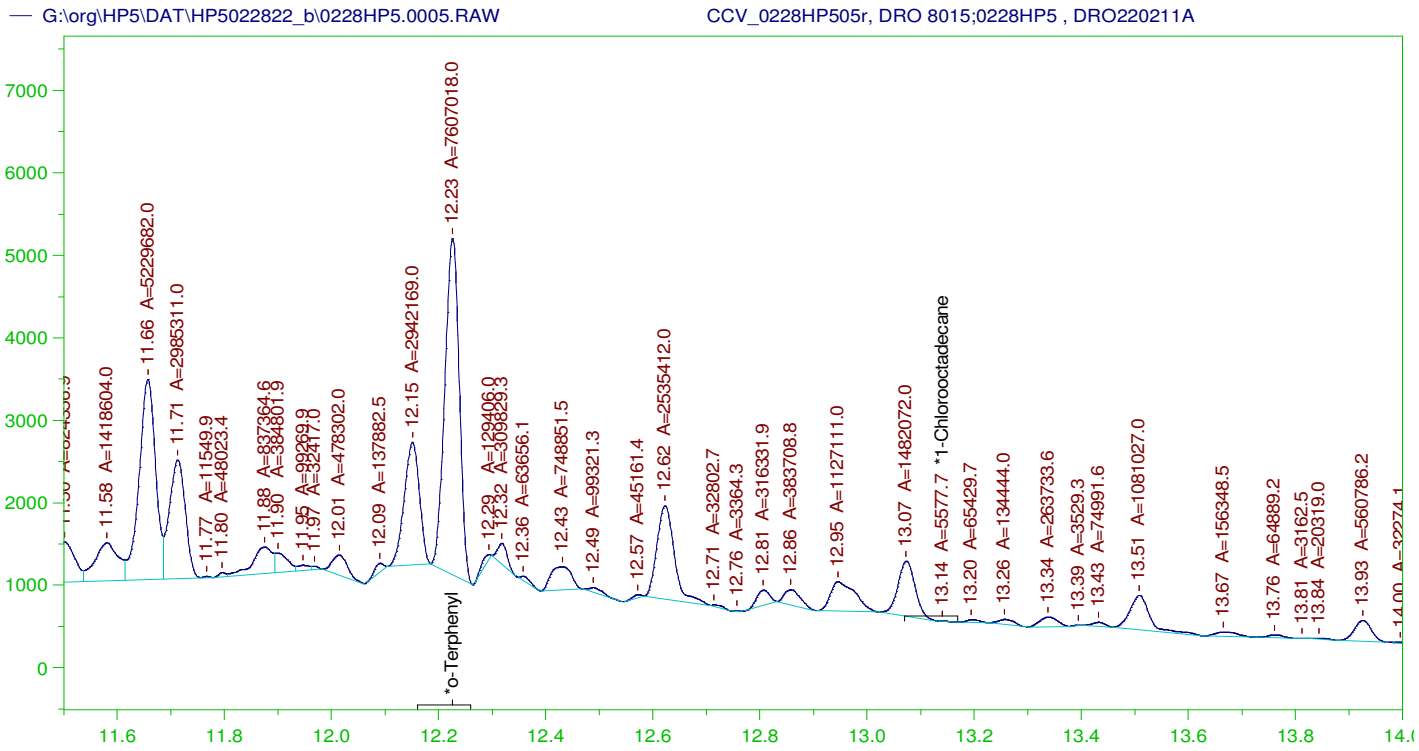


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0228HP505r, DRO 8015;0228HP5 , DRO220211A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0005.RAW
Date & Time Acquired: 2/28/2022 10:37:42 AM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
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

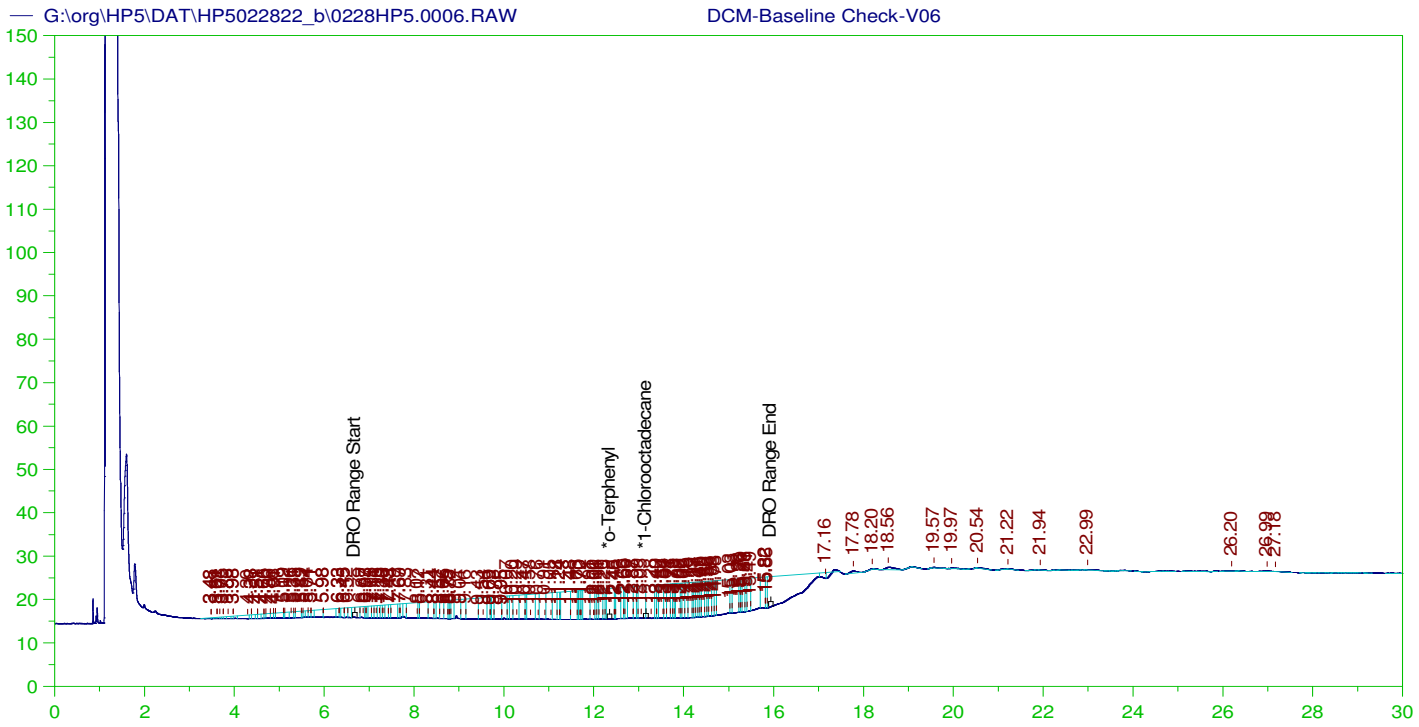
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.226	200.	206.388	103.19	-
*1-Chlorooctadecane	13.141	200.	.151	.08	-

DRO Area:2.727418E+08 DRO Amount: 8347.017
TEH Area:2.844918E+08 TEH Amount: 8706.616

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8706.62	58.04	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.226	200.	206.388	103.19	85-115
*1-Chlorooctadecane	13.141	200.	.151	.08	85-115



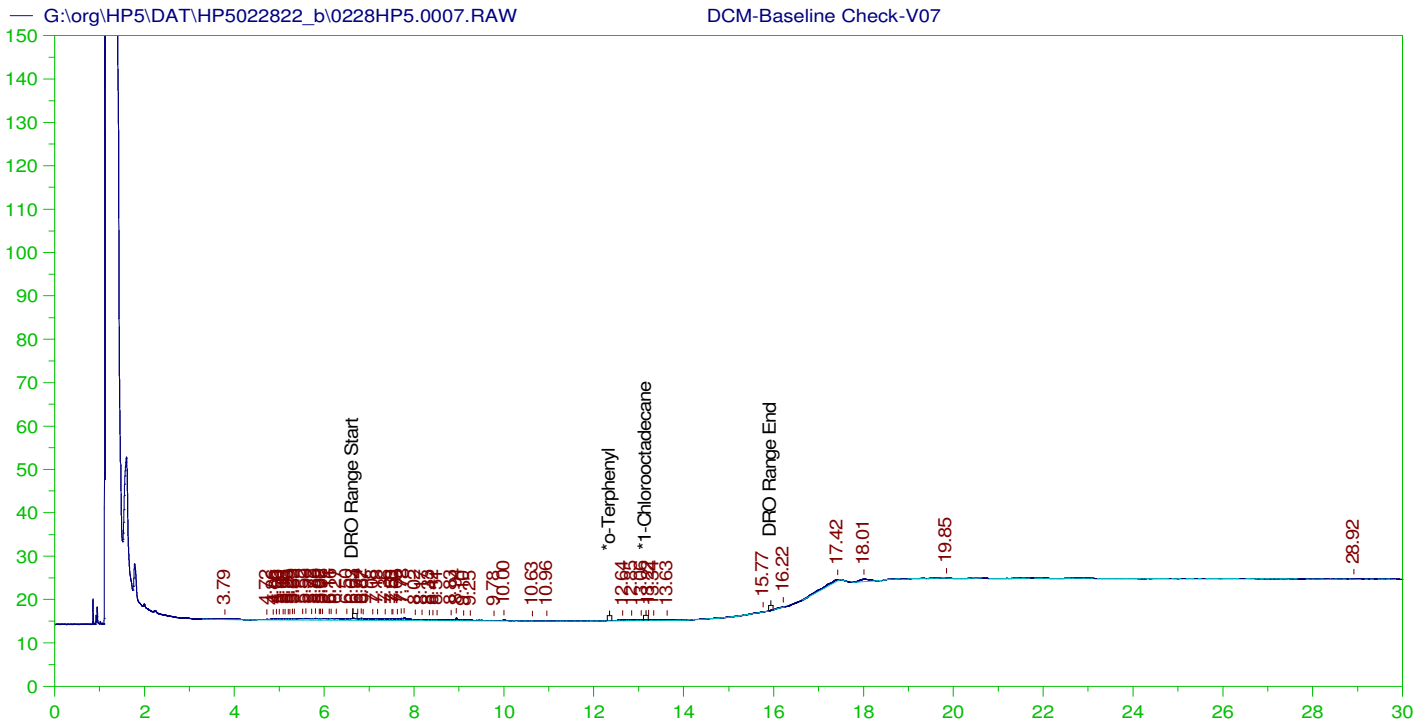
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V06
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0006.RAW
Date & Time Acquired: 2/28/2022 11:20:24 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	29.936	200.	.	.	-
*1-Chlorooctadecane	29.936	200.	.	.	-

DRO Area:3564024 DRO Amount: 109.0737
TEH Area:3827855 TEH Amount: 117.1481



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

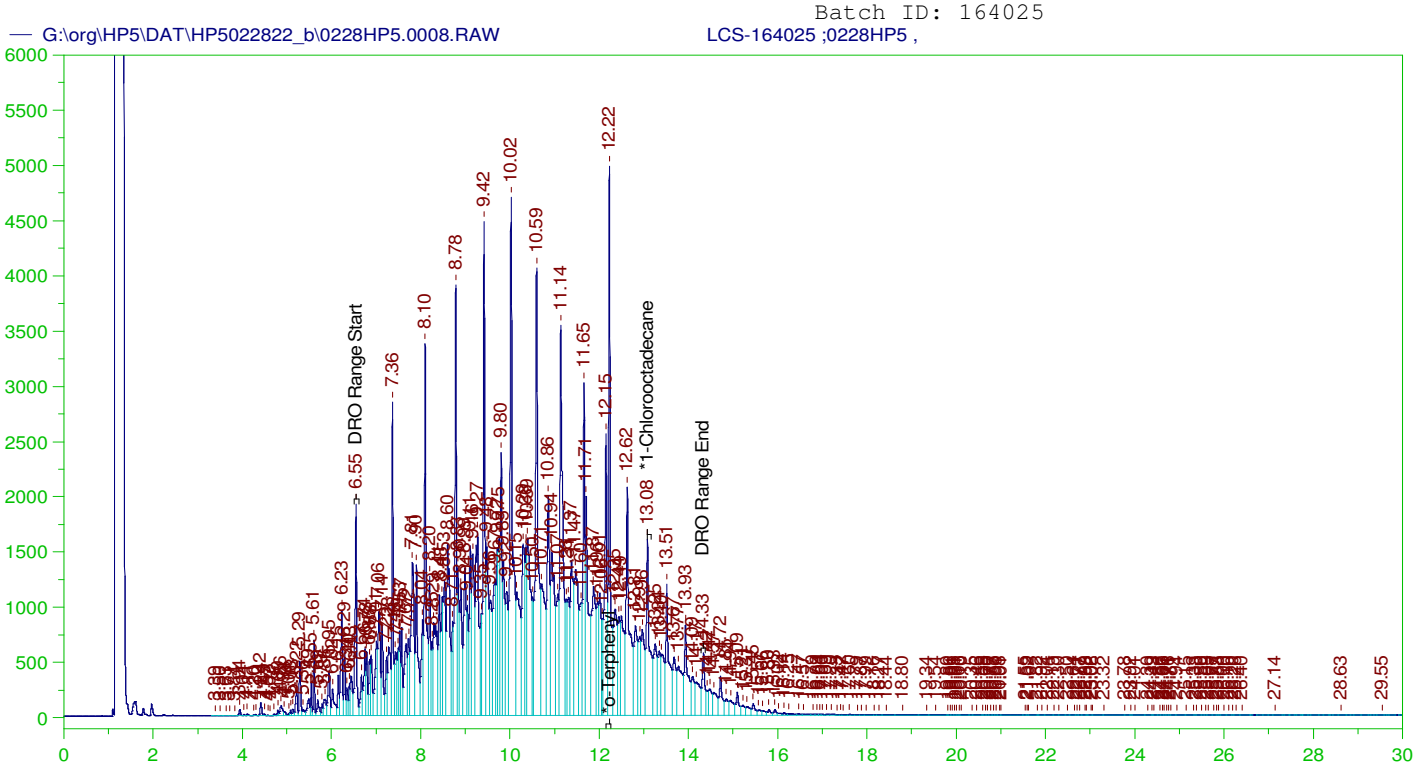
Sample Name: DCM-Baseline Check-V07
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0007.RAW
Date & Time Acquired: 2/28/2022 12:02:50 PM
Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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	29.724	200.	.	.	-
*1-Chlorooctadecane	29.724	200.	.	.	-

DRO Area:58182.93 DRO Amount: 1.780636
TEH Area:126791.1 TEH Amount: 3.880329

Batch ID: 164025



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

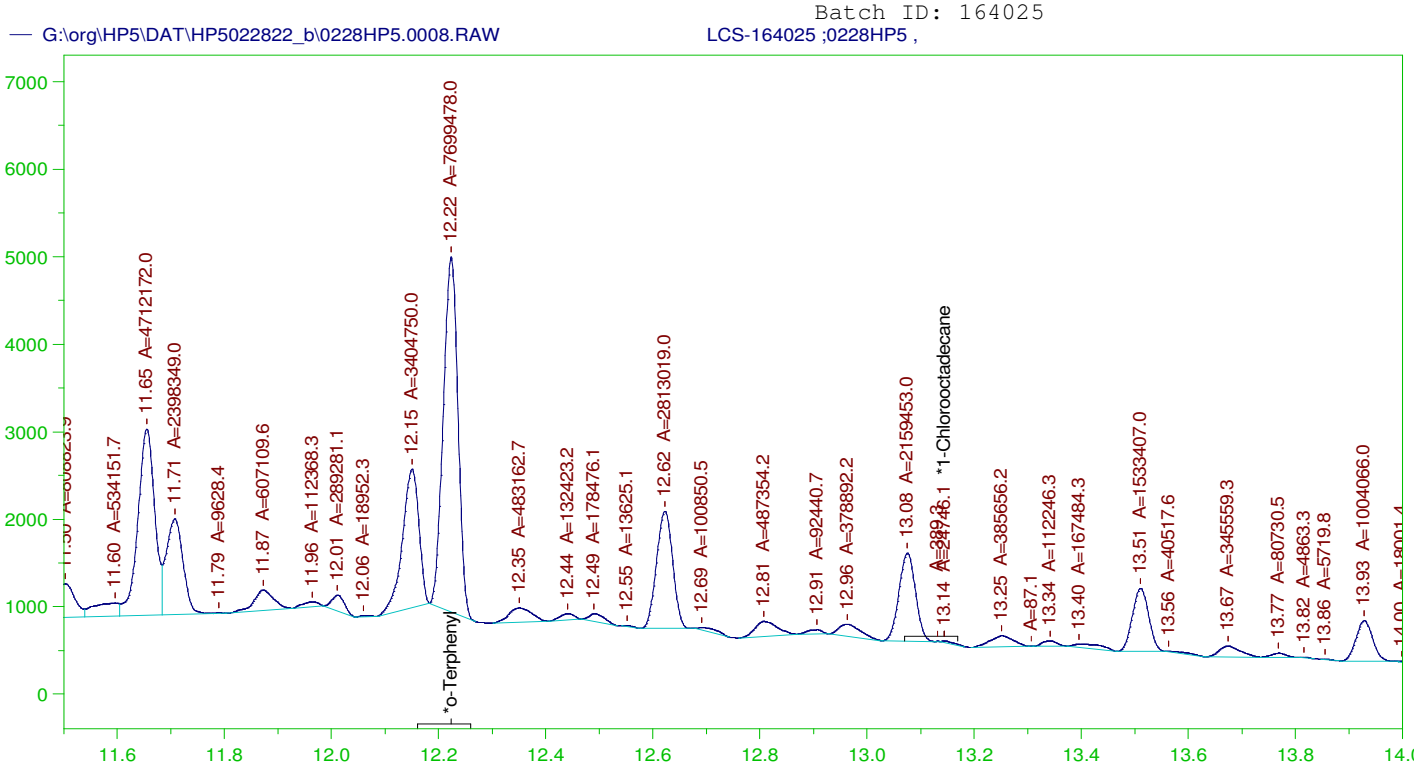
Sample Name: LCS-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0008.RAW
Date & Time Acquired: 2/28/2022 12:45:33 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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	.378	188.98	-
*1-Chlorooctadecane	13.075	.2	.216	107.87	-

DRO Area:4.413712E+08 DRO Amount: 13.50777
TEH Area:4.709171E+08 TEH Amount: 14.41199

Batch ID: 164025



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

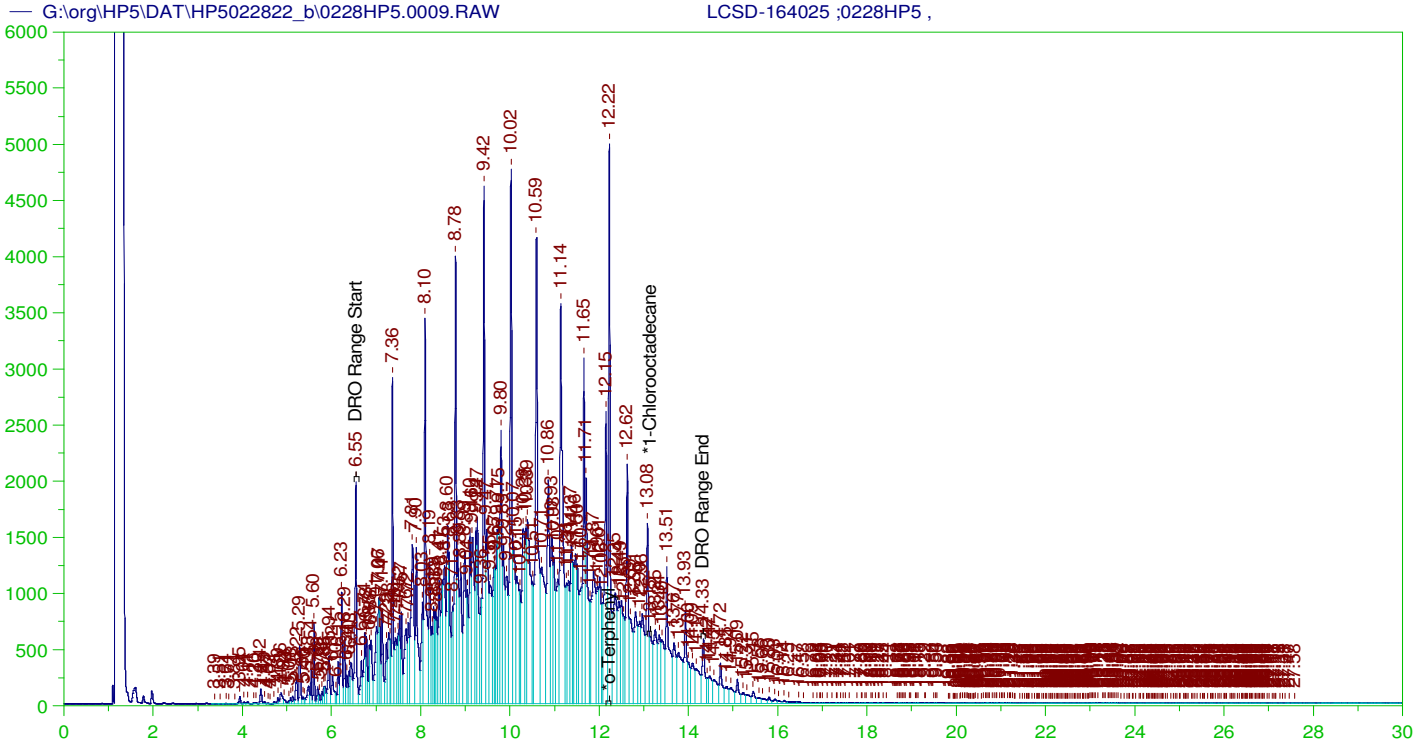
Sample Name: LCS-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0008.RAW
Date & Time Acquired: 2/28/2022 12:45:33 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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	.209	104.45	-
*1-Chlorooctadecane	13.145	.2	.001	.34	-

DRO Area:2.092589E+08 DRO Amount: 6.40418
TEH Area:2.245493E+08 TEH Amount: 6.872129

Batch ID: 164025

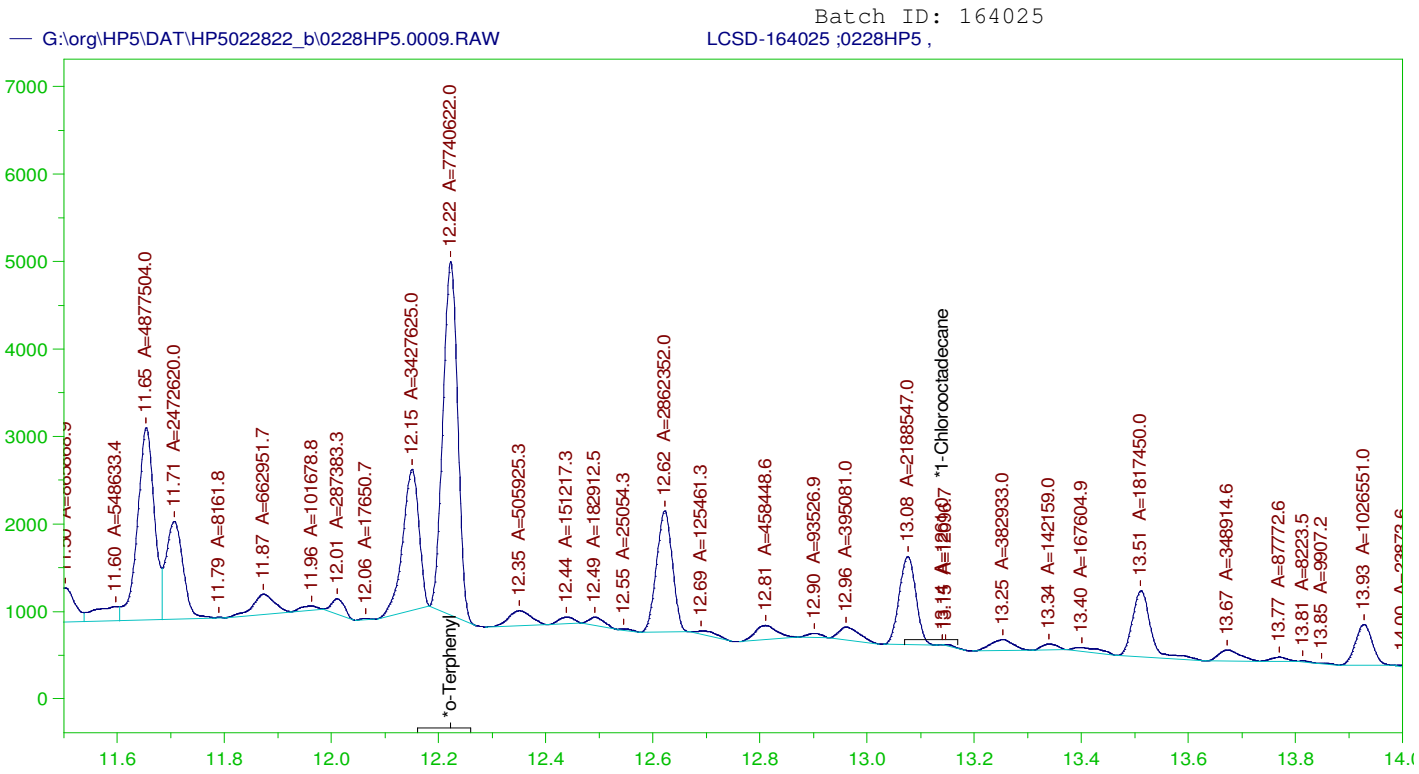


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: LCSD-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0009.RAW
Date & Time Acquired: 2/28/2022 1:28:14 PM
Method File: G:\Org\HP5\Methods\D3_8015-022809-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample 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	12.222	.2	.364	182.21	-
*1-Chlorooctadecane	13.147	.2	.064	31.8	-

DRO Area:4.554898E+08 DRO Amount: 13.93985
TEH Area:4.859965E+08 TEH Amount: 14.87349



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

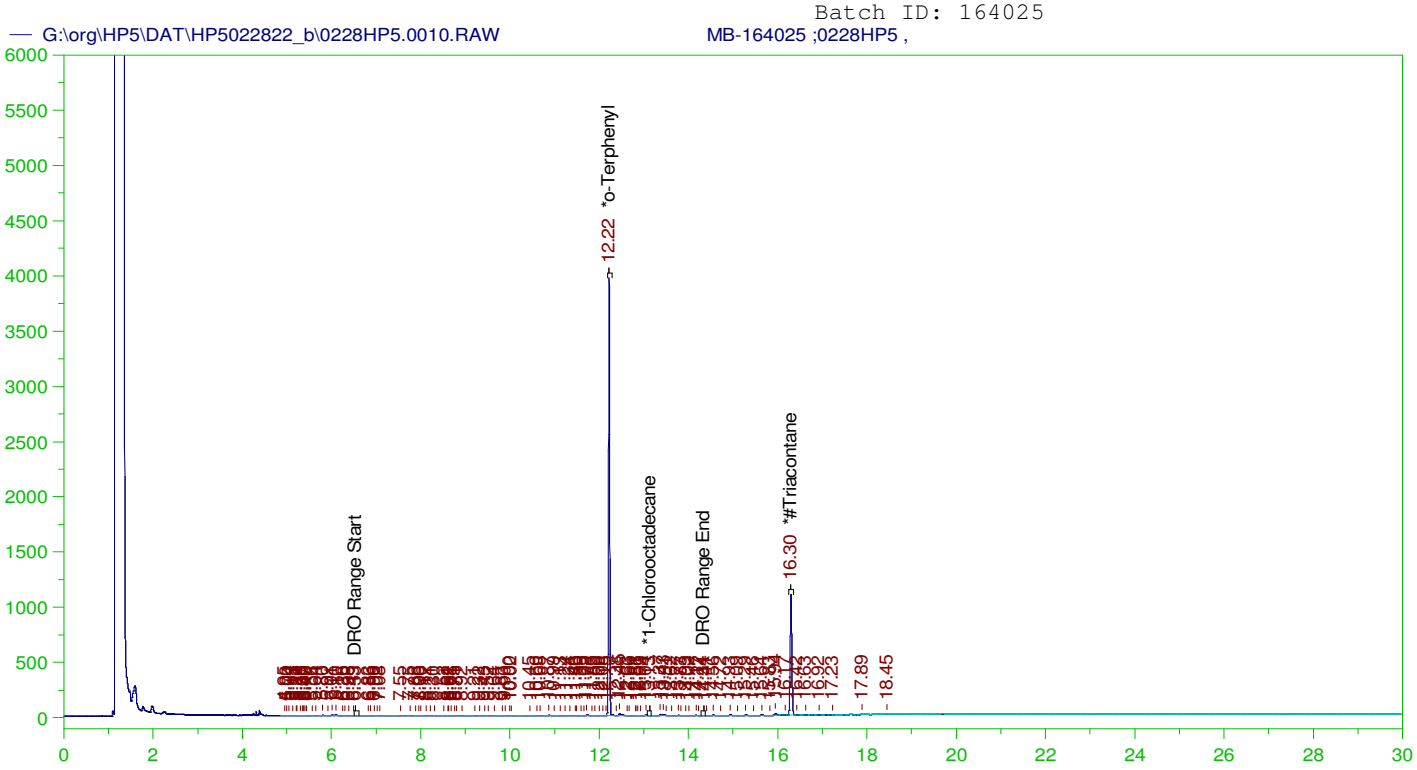
Sample Name: LCSD-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0009.RAW
Date & Time Acquired: 2/28/2022 1:28:14 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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	12.222	.2	.21	105.01	-
*1-Chlorooctadecane	13.14	.2	.	.02	-

DRO Area:2.148472E+08 DRO Amount: 6.575207
TEH Area:2.307212E+08 TEH Amount: 7.061013

Batch ID: 164025

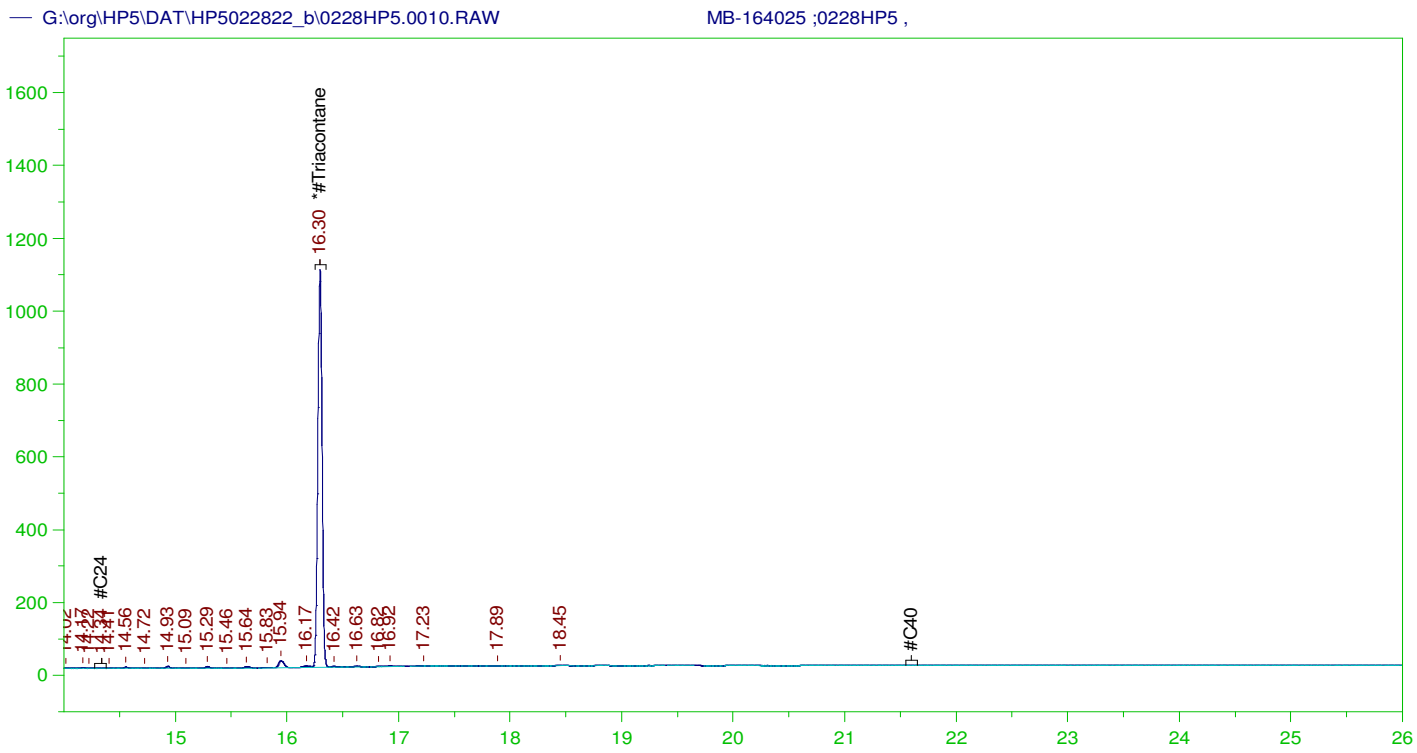


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: MB-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0010.RAW
Date & Time Acquired: 2/28/2022 2:11:07 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample 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	12.218	.2	.21	105.02	-
*1-Chlorooctadecane	13.133	.2	.01		-
*#Triacontane	16.296	.2	.098	48.79	-

DRO Area:416012.4 DRO Amount: 1.273169E-02
TEH Area:700216.8 TEH Amount: 0.0214295



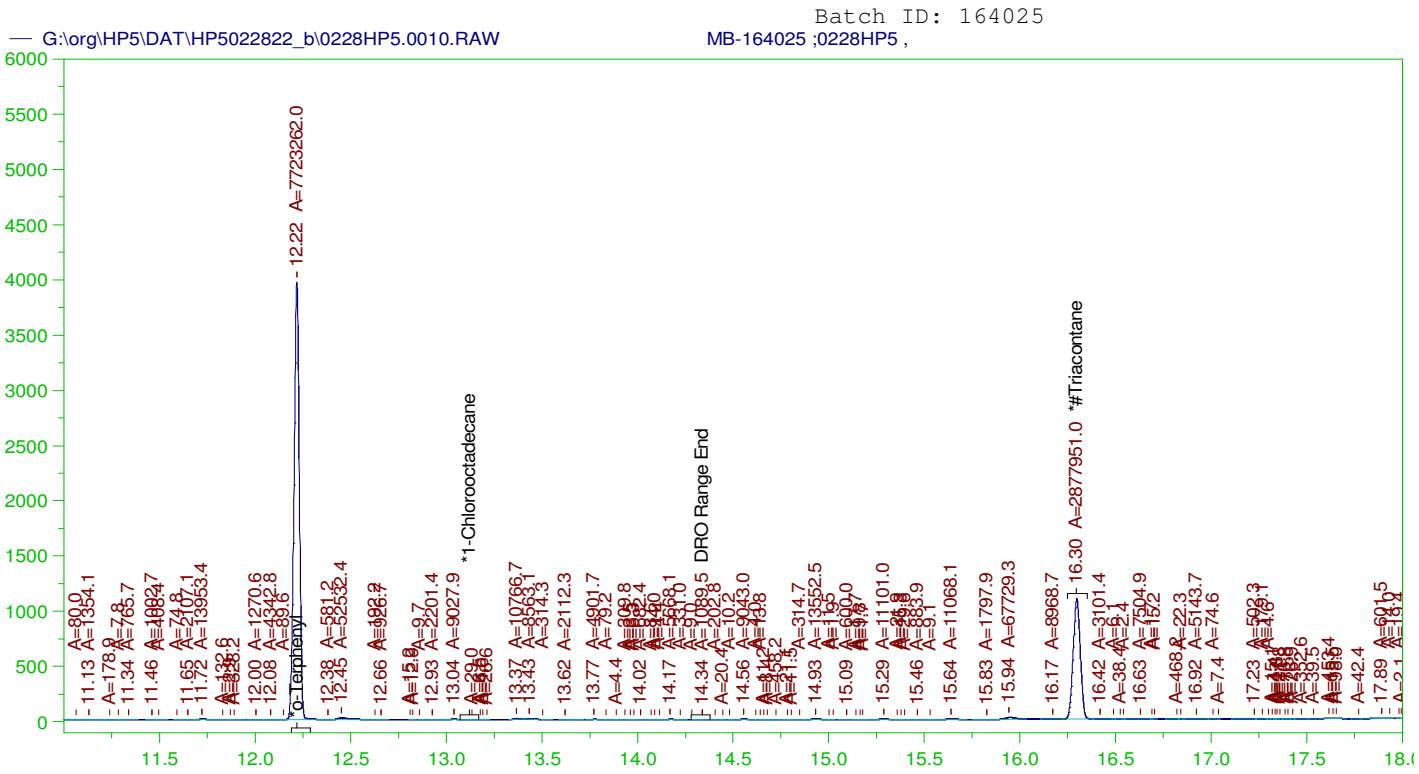
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0010.RAW
Date & Time Acquired: 2/28/2022 2:11:07 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	16.296	.5	.098	19.52	-

RRO Area:165369.8 RRO AMOUNT: 6.258188E-03



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0010.RAW
Date & Time Acquired: 2/28/2022 2:11:07 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

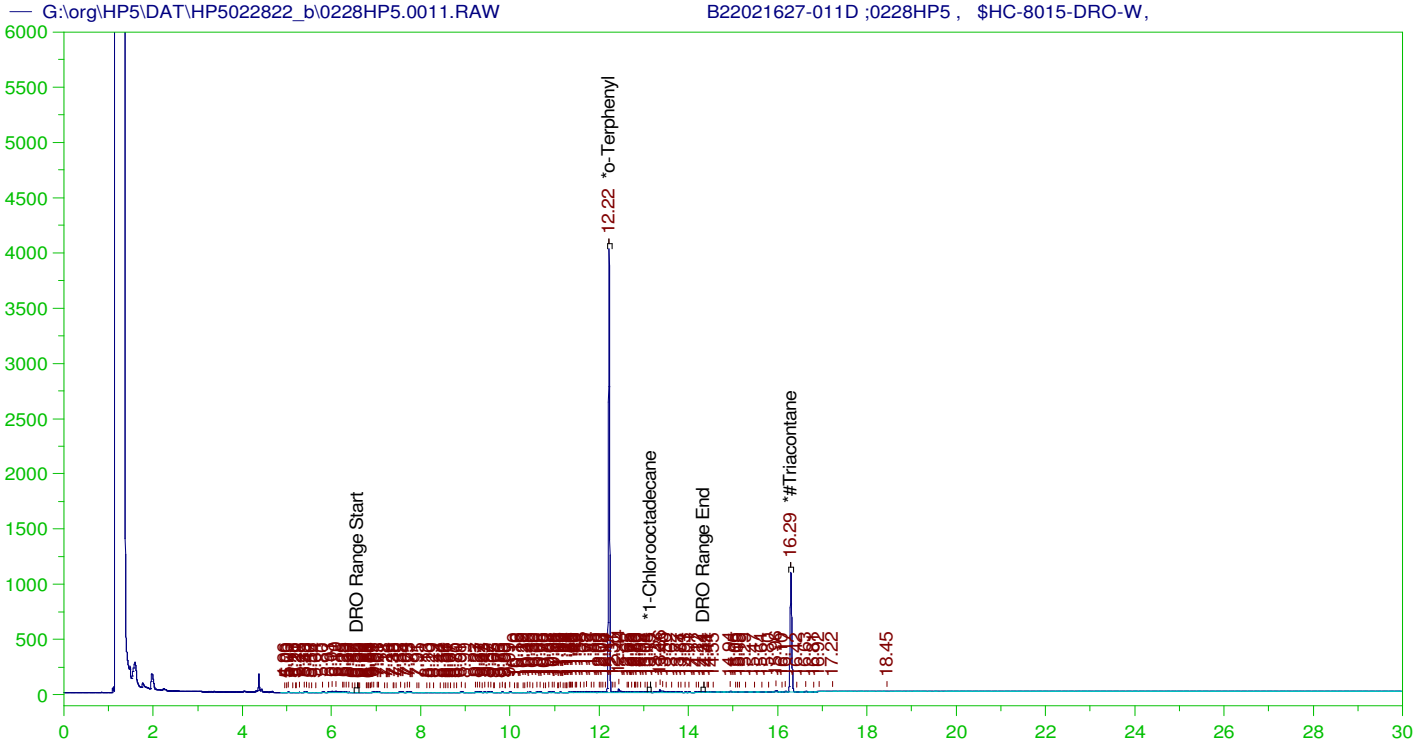
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.218	.2	.21	104.77	-
*1-Chlorooctadecane	29.978	.2	.	.	-
*#Triacontane	16.296	.2	.097	48.55	-

DRO Area:255289.1 DRO Amount: 7.812894E-03
TEH Area:810139.7 TEH Amount: 0.0247936

ERH2567 (RHMW2254-01 Low-flow) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0011.RAW B22021627-011D ;0228HP5 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-011D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0011.RAW
Date & Time Acquired: 2/28/2022 2:54:01 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

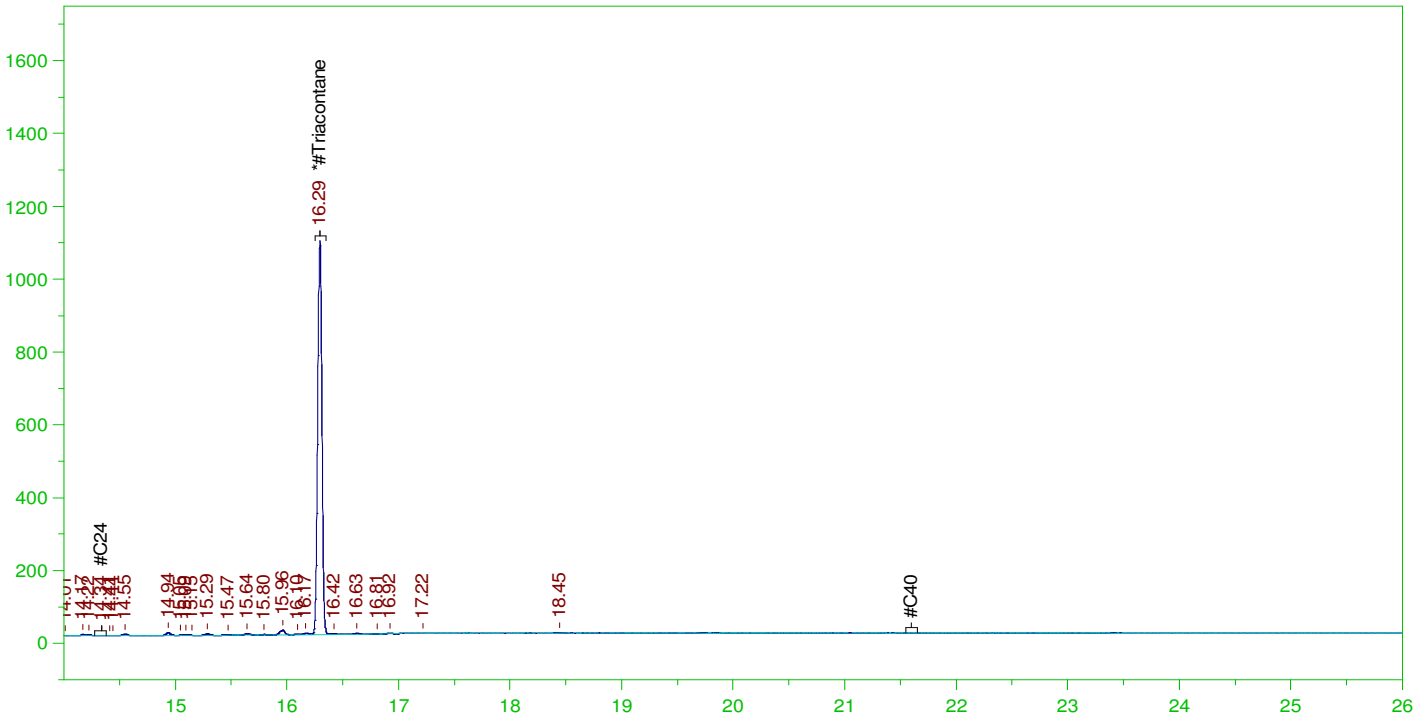
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.217	.189	.2	105.91	-
*1-Chlorooctadecane	13.145	.189	.	.01	-
*#Triacontane	16.295	.189	.091	48.45	-

DRO Area:641070.1 DRO Amount: 1.850884E-02
TEH Area:987348.9 TEH Amount: 2.850653E-02

ERH2567 (RHMW2254-01 Low-flow) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0011.RAW B22021627-011D ;0228HP5 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021627-011D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0011.RAW
Date & Time Acquired: 2/28/2022 2:54:01 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

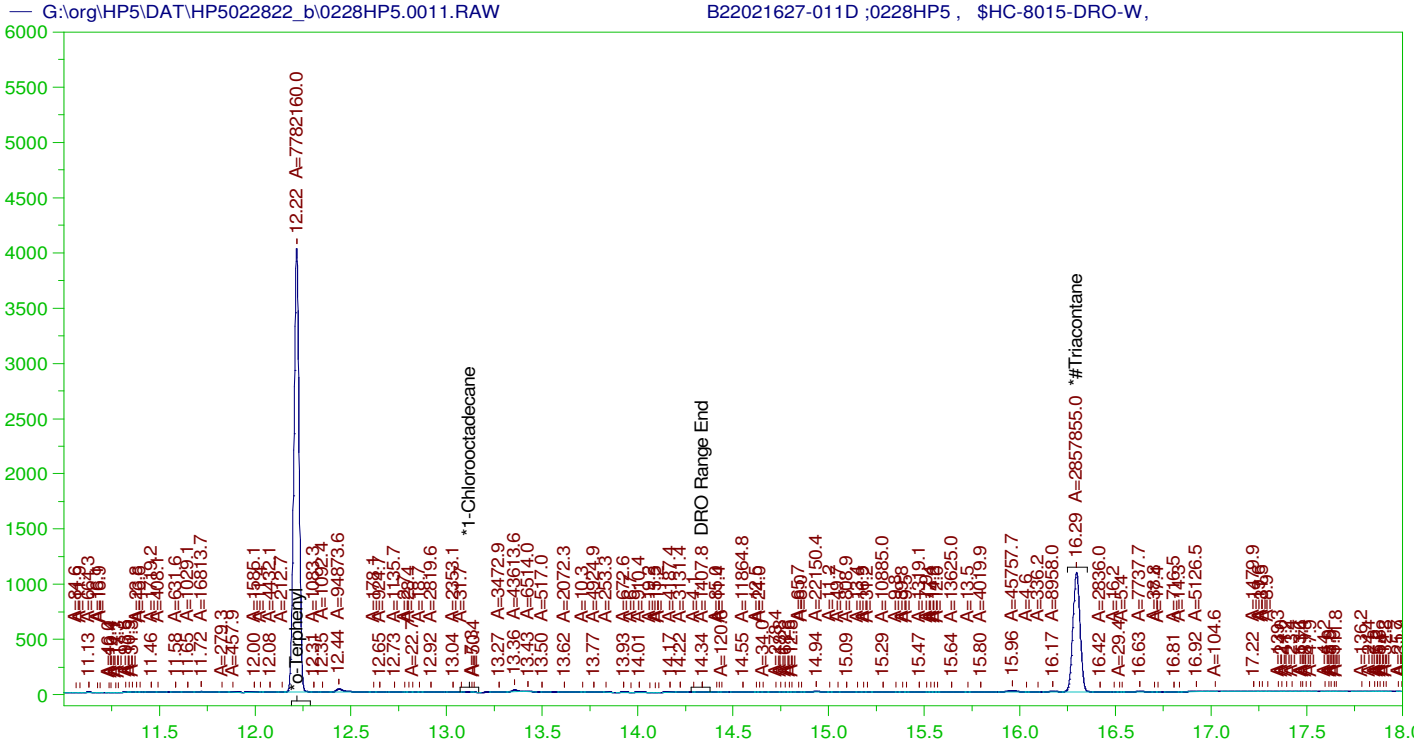
Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.295	.472	.091	19.38	-

RRO Area:167281.7 RRO AMOUNT: 5.972207E-03

ERH2567 (RHMW2254-01 Low-flow) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0011.RAW B22021627-011D ;0228HP5 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-011D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0011.RAW
Date & Time Acquired: 2/28/2022 2:54:01 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

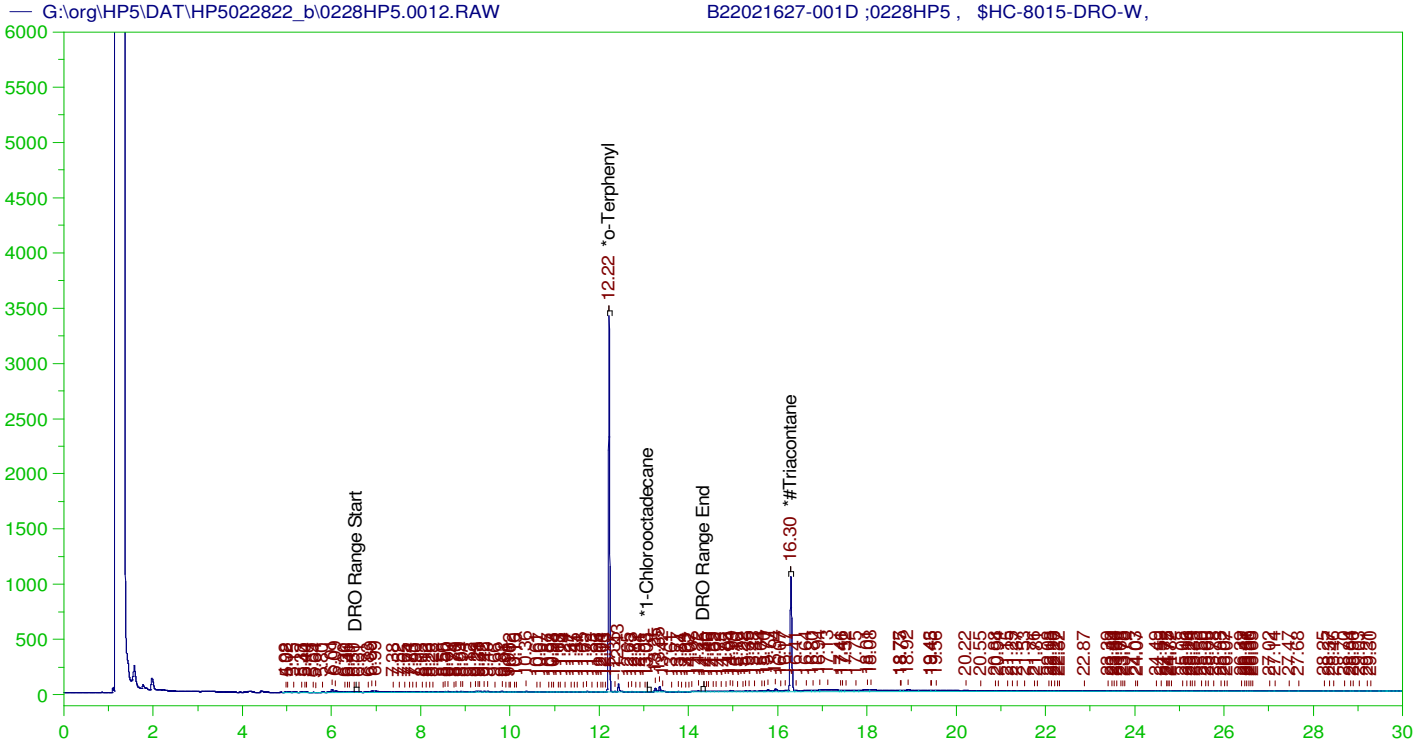
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.217	.189	.199	105.57	-
*1-Chlorooctadecane	29.992	.189	.	.	-
*#Triacontane	16.295	.189	.091	48.22	-

DRO Area:411236.2 DRO Amount: 1.187313E-02
TEH Area:1256467 TEH Amount: 3.627645E-02

ERH2565 (RHMW2254-01 Bailer) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0012.RAW B22021627-001D ;0228HP5 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-001D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0012.RAW
Date & Time Acquired: 2/28/2022 3:37:03 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: 1050 Dilution: 1 S.A.: 1

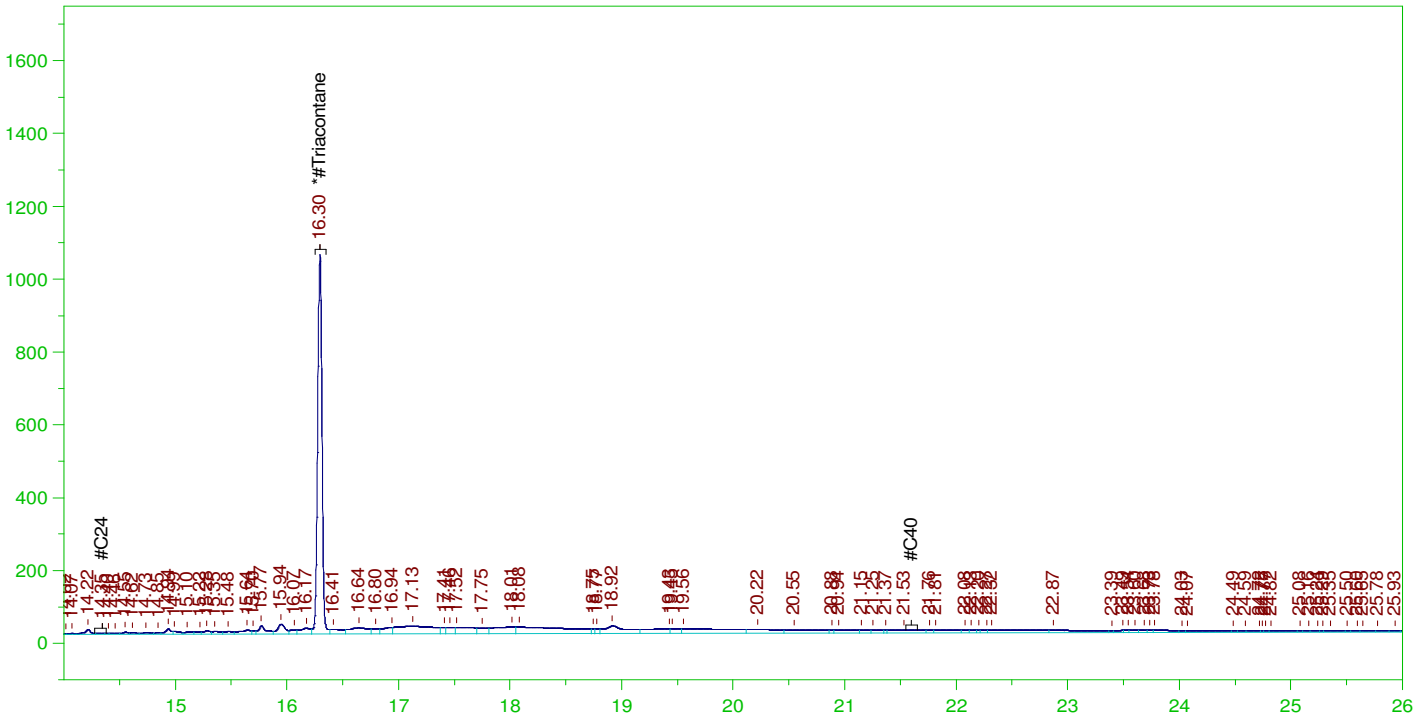
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.218	.19	.172	90.11	-
*1-Chlorooctadecane	13.08	.19	.	.09	-
*#Triacontane	16.295	.19	.091	47.97	-

DRO Area:1683136 DRO Amount: 4.905796E-02
TEH Area:8866128 TEH Amount: 0.2584189

ERH2565 (RHMW2254-01 Bailer) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0012.RAW B22021627-001D ;0228HP5 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021627-001D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0012.RAW
Date & Time Acquired: 2/28/2022 3:37:03 PM
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

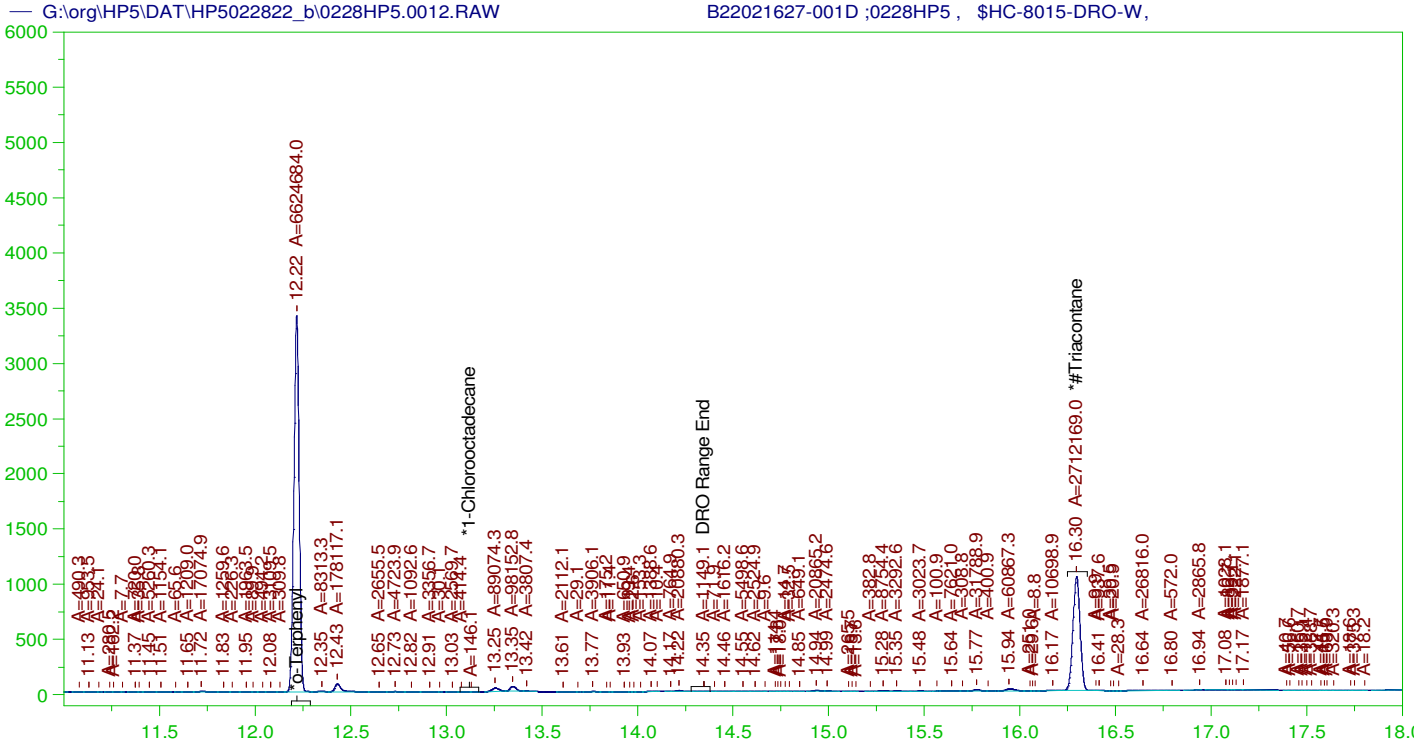
Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.295	.476	.091	19.19	-

RRO Area:5077042 RRO AMOUNT: 0.1829843

ERH2565 (RHMW2254-01 Bailer) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0012.RAW B22021627-001D ;0228HP5 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

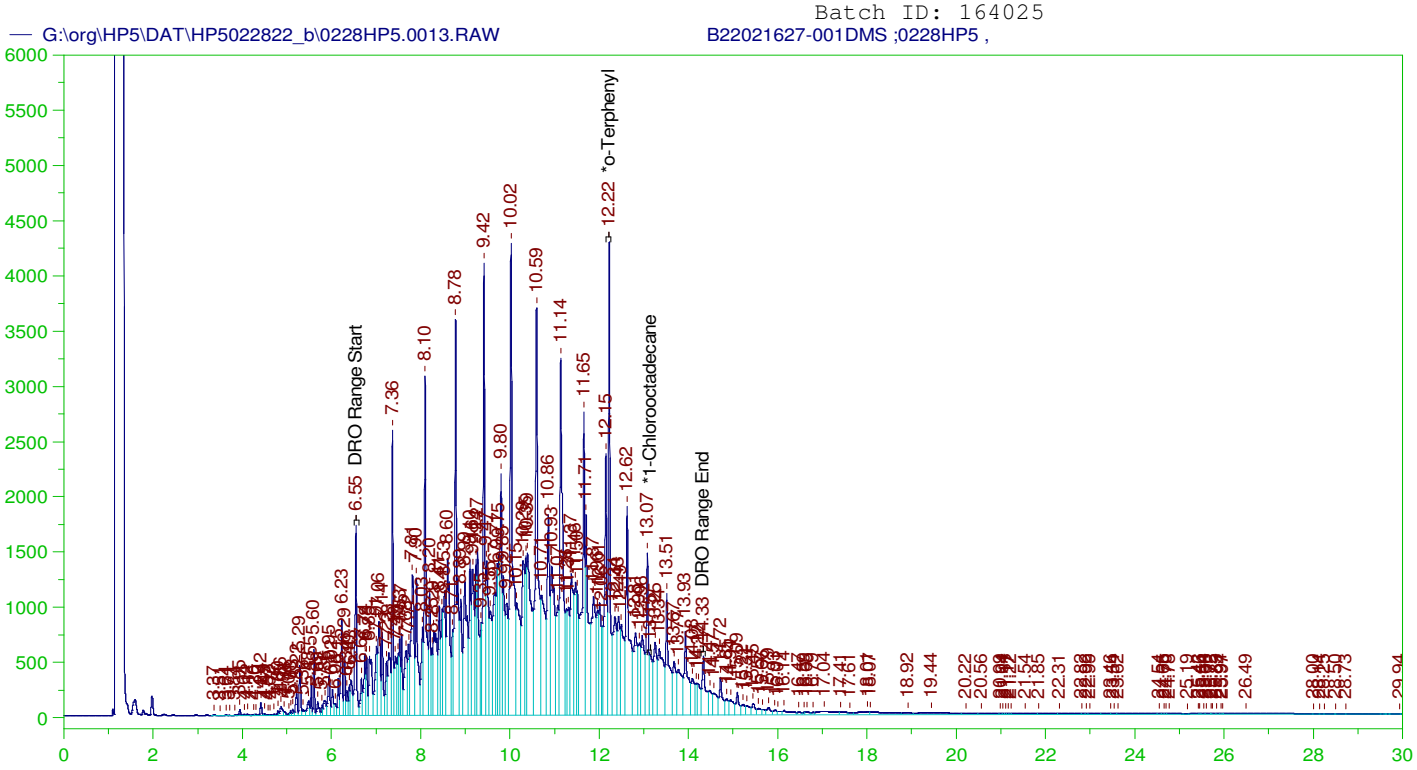
Sample Name: B22021627-001D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0012.RAW
Date & Time Acquired: 2/28/2022 3:37:03 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1050 Dilution: 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	12.218	.19	.171	89.87	-
*1-Chlorooctadecane	29.987	.19	.	.	-
*#Triacontane	16.295	.19	.087	45.76	-

DRO Area:1333376 DRO Amount: 0.0388636
TEH Area:2132646 TEH Amount: 6.215971E-02

Batch ID: 164025



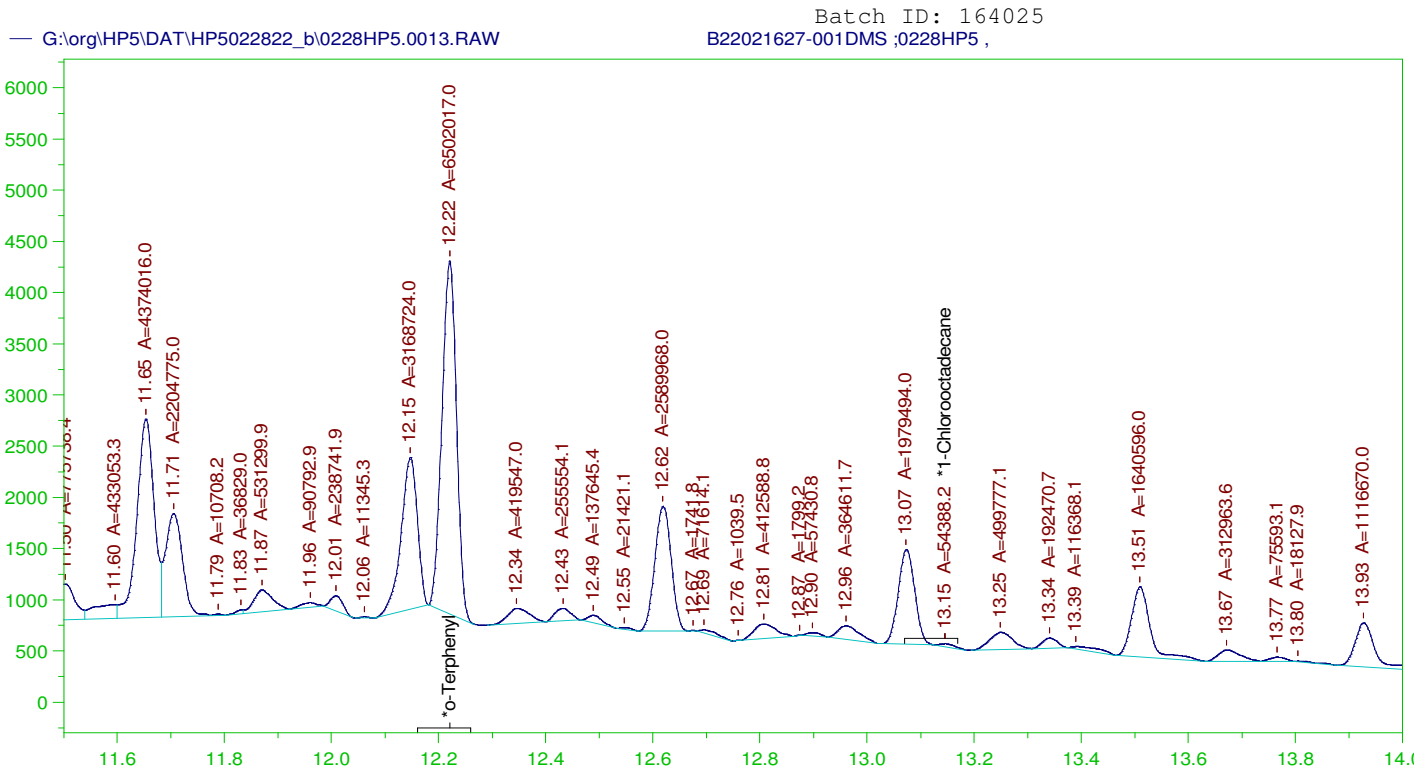
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-001DMS ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0013.RAW
Date & Time Acquired: 2/28/2022 4:19:52 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	12.221	.19	.302	158.55	-
*1-Chlorooctadecane	13.146	.19	.053	27.63	-

DRO Area:4.094935E+08 DRO Amount: 11.93541
TEH Area:4.430037E+08 TEH Amount: 12.91212

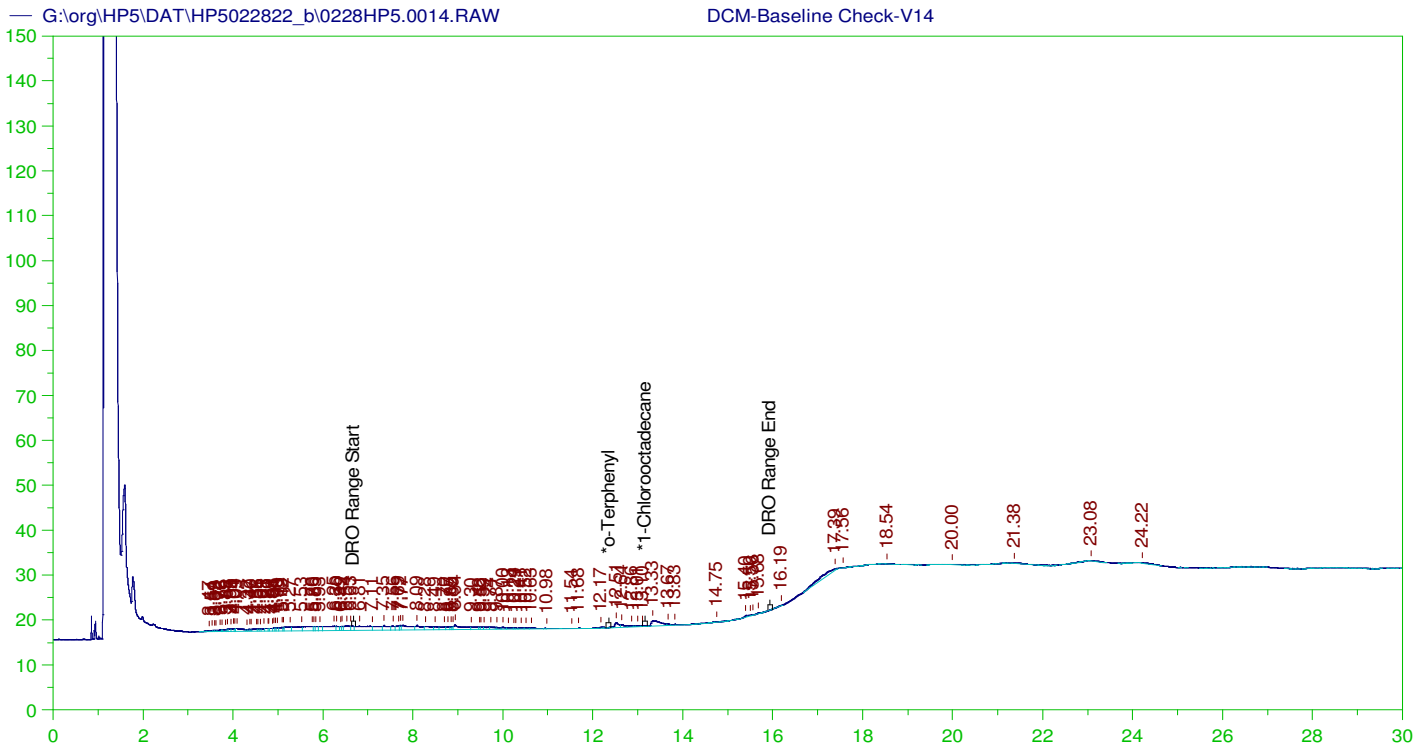


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: B22021627-001DMS ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0013.RAW
Date & Time Acquired: 2/28/2022 4:19:52 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24.CAL
Sample Weight: 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	12.221	.19	.168	88.2	-
*1-Chlorooctadecane	13.146	.19	.001	.74	-

DRO Area:1.907825E+08 DRO Amount: 5.560691
TEH Area:2.045868E+08 TEH Amount: 5.963042



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V14
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0014.RAW
Date & Time Acquired: 2/28/2022 5:03:11 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

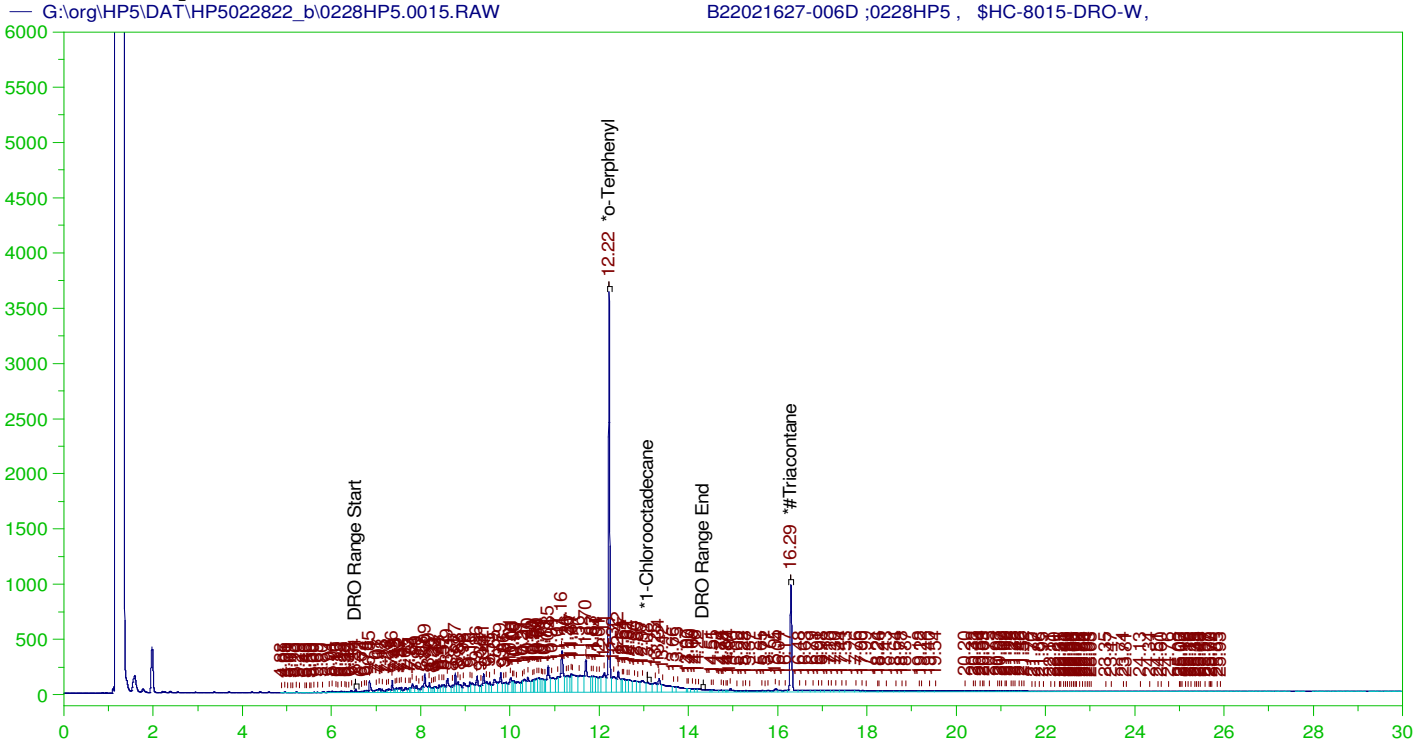
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.63 to 15.99

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

DRO Area:191573.4 DRO Amount: 5.862933
TEH Area:362872.6 TEH Amount: 11.10539

ERH2569 (Sump Adit 3) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0015.RAW B22021627-006D ;0228HP5 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-006D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0015.RAW
Date & Time Acquired: 2/28/2022 5:46:26 PM
Method File: G:\Org\HP5\Methods\D3_8015-022815-JFb-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JFb-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

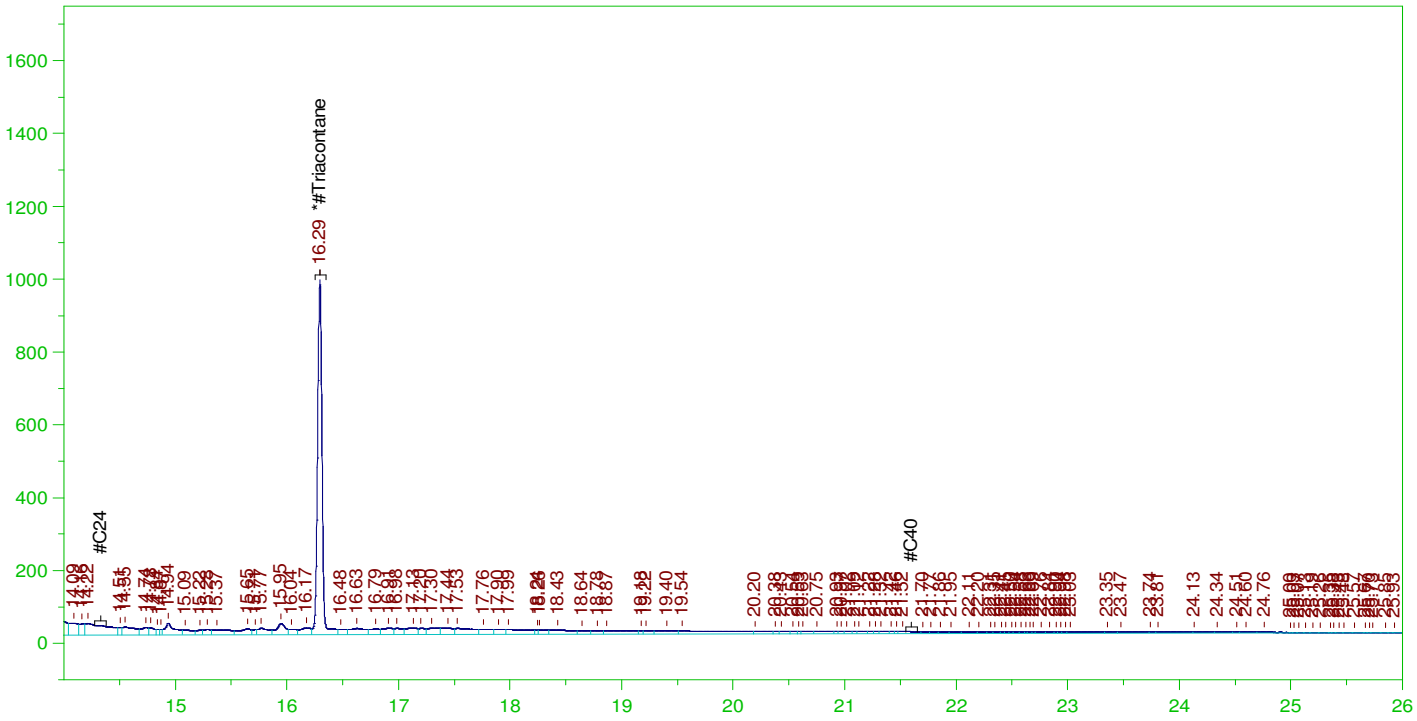
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.218	.189	.198	104.83	-
*1-Chlorooctadecane	13.079	.189	.016	8.63	-
*#Triacontane	16.294	.189	.087	46.15	-

DRO Area:3.884418E+07 DRO Amount: 1.121501
TEH Area:4.43087E+07 TEH Amount: 1.279272

ERH2569 (Sump Adit 3) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0015.RAW B22021627-006D ;0228HP5 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021627-006D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0015.RAW
Date & Time Acquired: 2/28/2022 5:46:26 PM
Method File: G:\Org\HP5\Methods\D3_OROS-022815-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

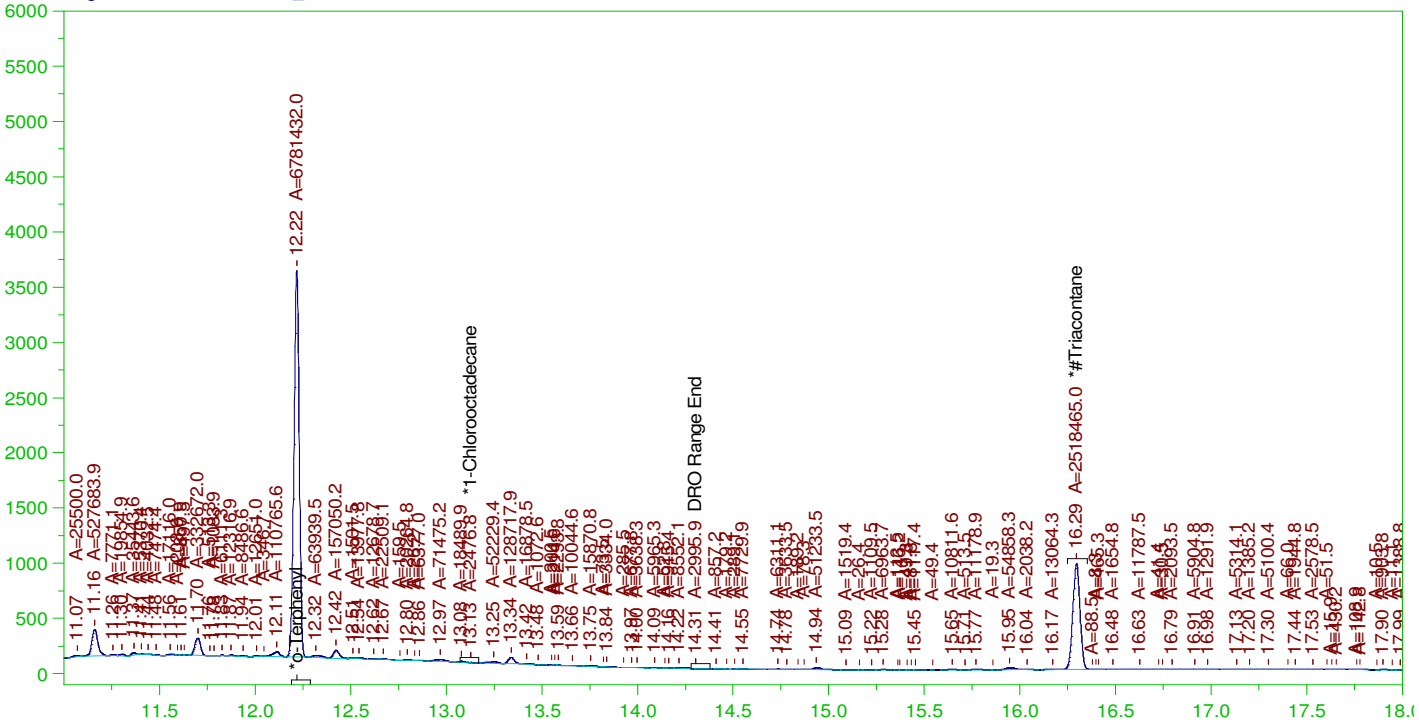
Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.28 to 21.65

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.294	.472	.087	18.46	-

RRO Area:4527913 RRO AMOUNT: 0.1616533

ERH2569 (Sump Adit 3) Batch ID: 164025

G:\org\HP5\DAT\HP5022822_b\0228HP5.0015.RAW B22021627-006D ;0228HP5 , $HC-8015-DRO-W,



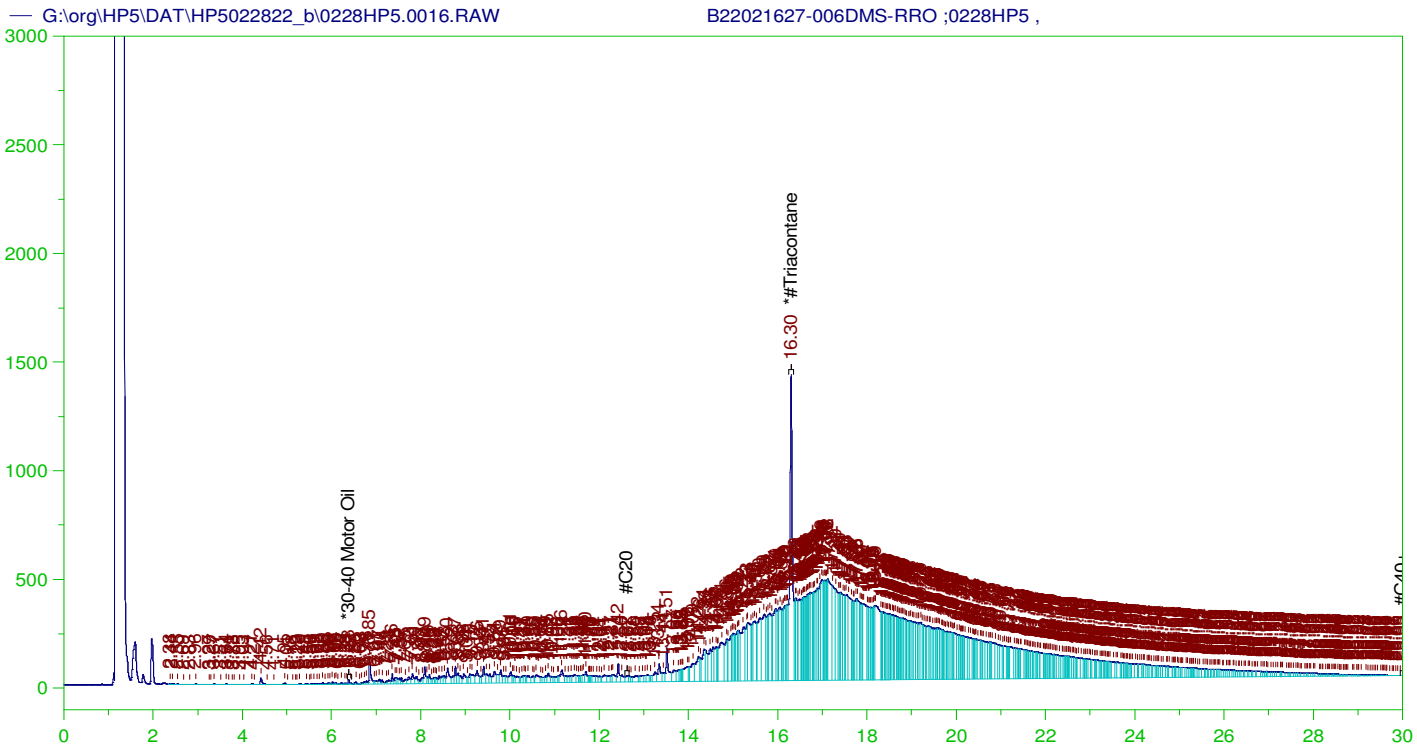
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-006D ;0228HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0015.RAW
Date & Time Acquired: 2/28/2022 5:46:26 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	12.218	.189	.174	91.99	-
*1-Chlorooctadecane	13.128	.189	.	.03	-
*#Triacontane	16.294	.189	.08	42.49	-

DRO Area:7932971 DRO Amount: 0.2290391
TEH Area:8560944 TEH Amount: 0.2471698



RESIDUAL RANGE ORGANICS CHROMATOGRAM

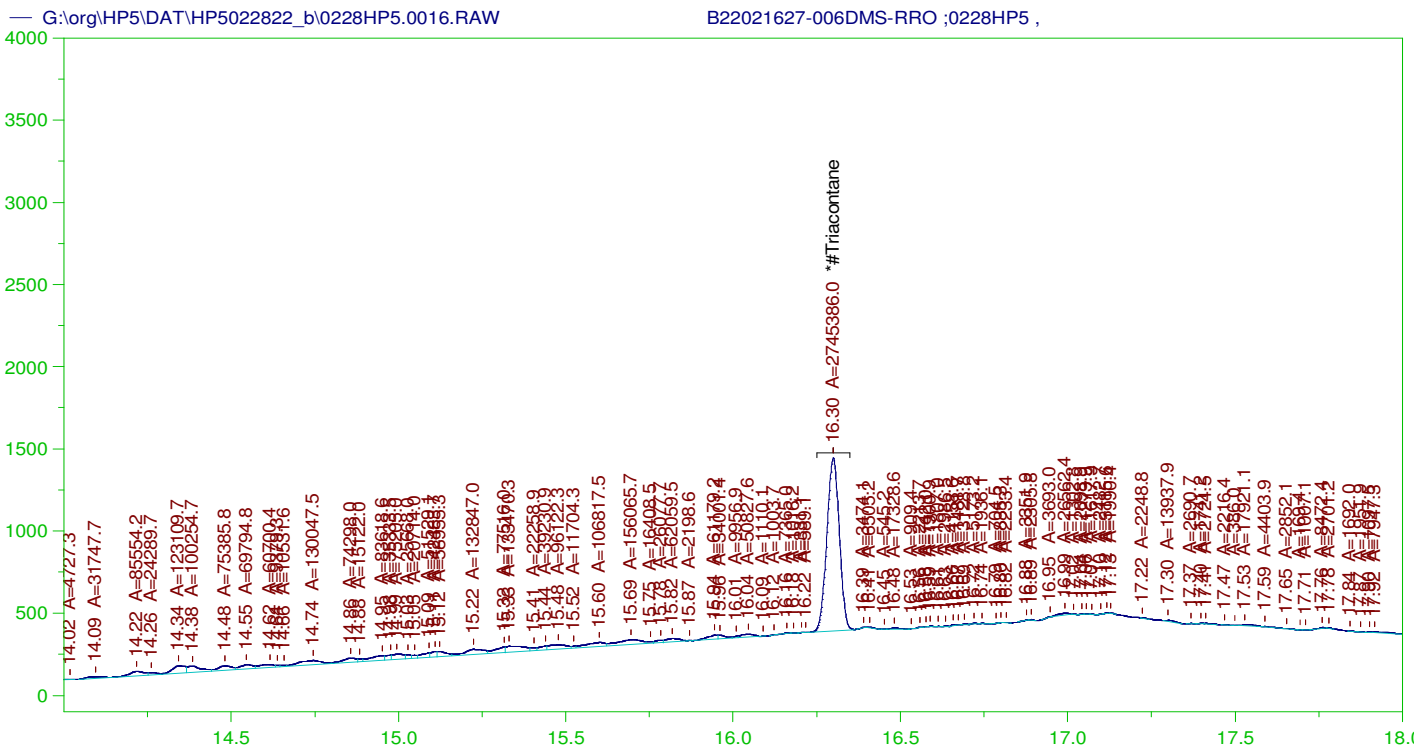
Sample Name: B22021627-006DMS-RRO ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0016.RAW
Date & Time Acquired: 2/28/2022 6:29:38 PM
Method File: G:\Org\HP5\Methods\D3_ORO-022816-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

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	16.299	.472	.181	38.39	-

~~RRO~~ TEH(Oil Range) Area:1.4227E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5.079254

AMN 03/01/2022



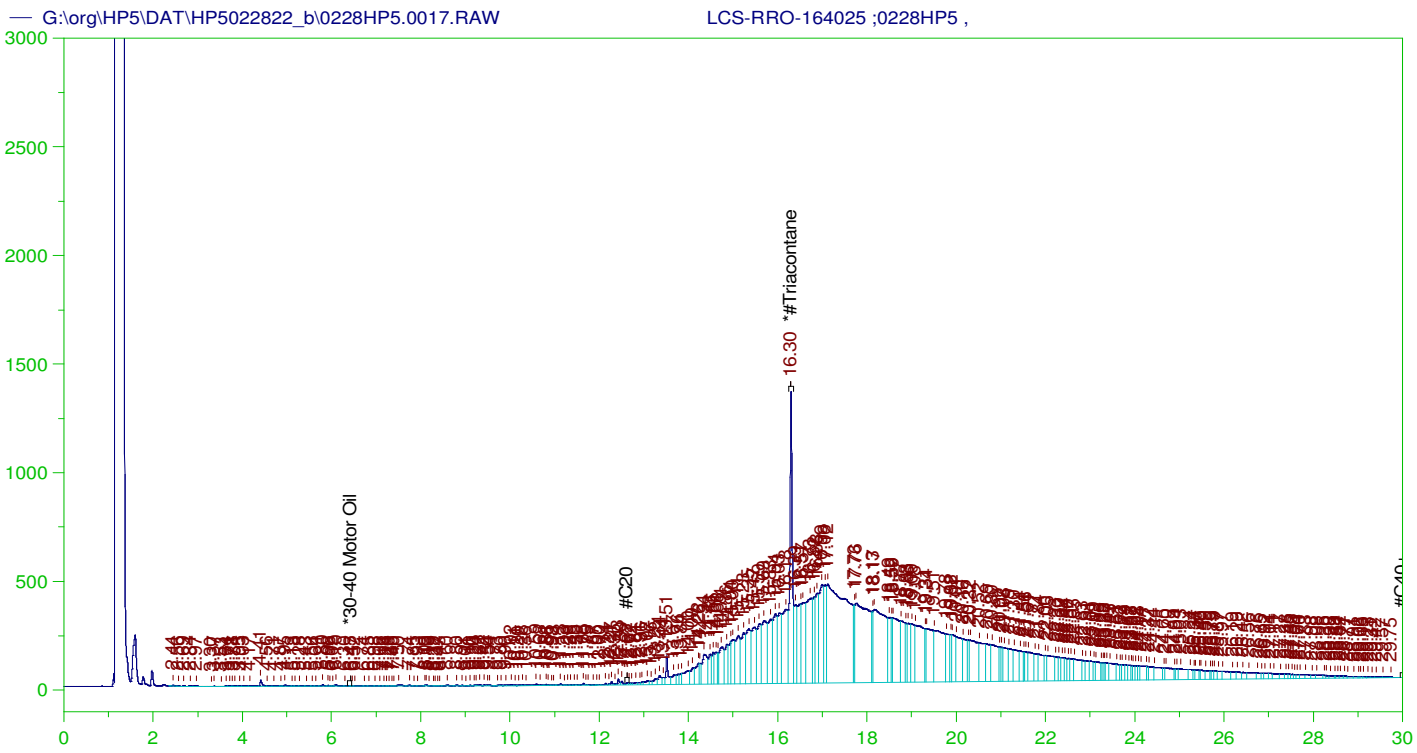
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021627-006DMS-RRO ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0016.RAW
Date & Time Acquired: 2/28/2022 6:29:38 PM
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	16.299	.472	.087	18.53	-

RRO Area:3388776 RRO AMOUNT: 0.1209844



RESIDUAL RANGE ORGANICS CHROMATOGRAM

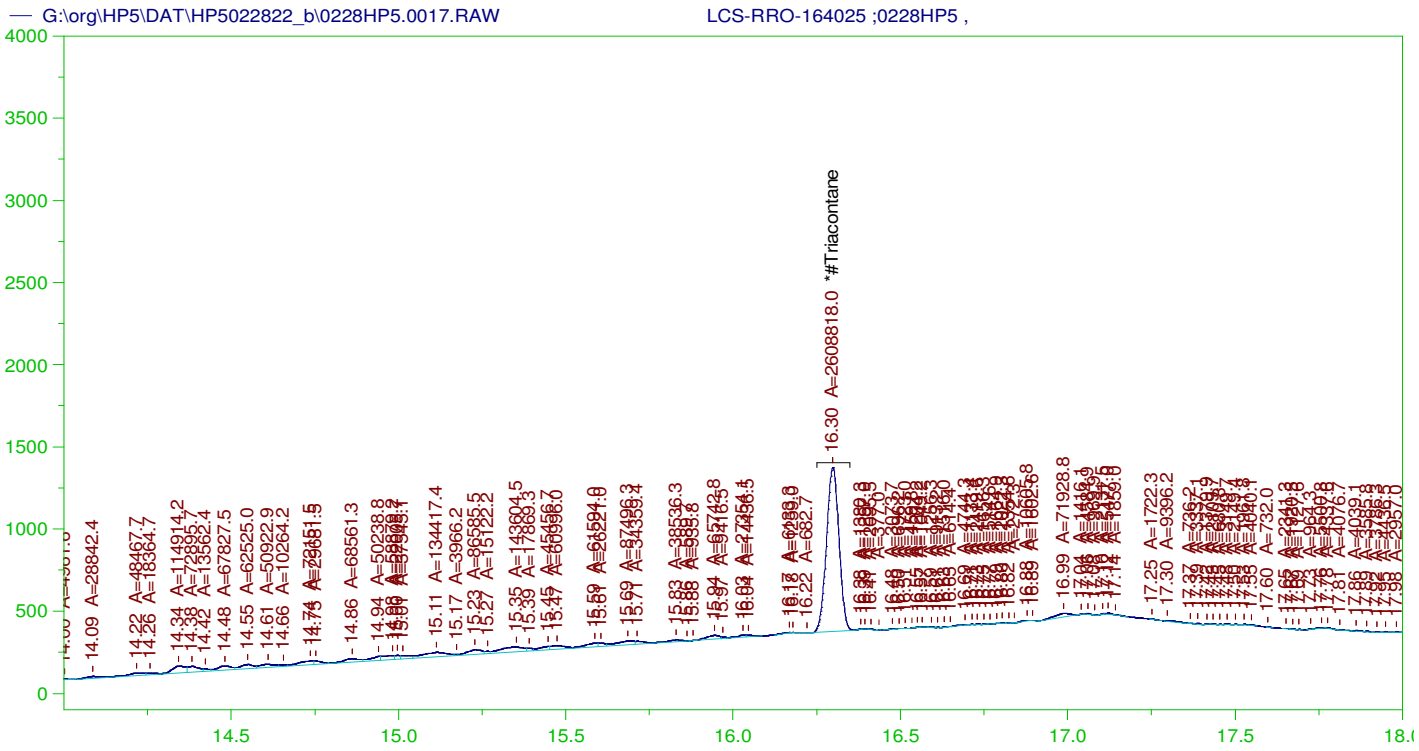
Sample Name: LCS-RRO-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0017.RAW
Date & Time Acquired: 2/28/2022 7:12:50 PM
Method File: G:\Org\HP5\Methods\D3_ORO-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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	16.298	.5	.179	35.72	-

~~RRO~~ TEH(Oil Range) Area:1.39672E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5.285688

AMN 03/01/2022



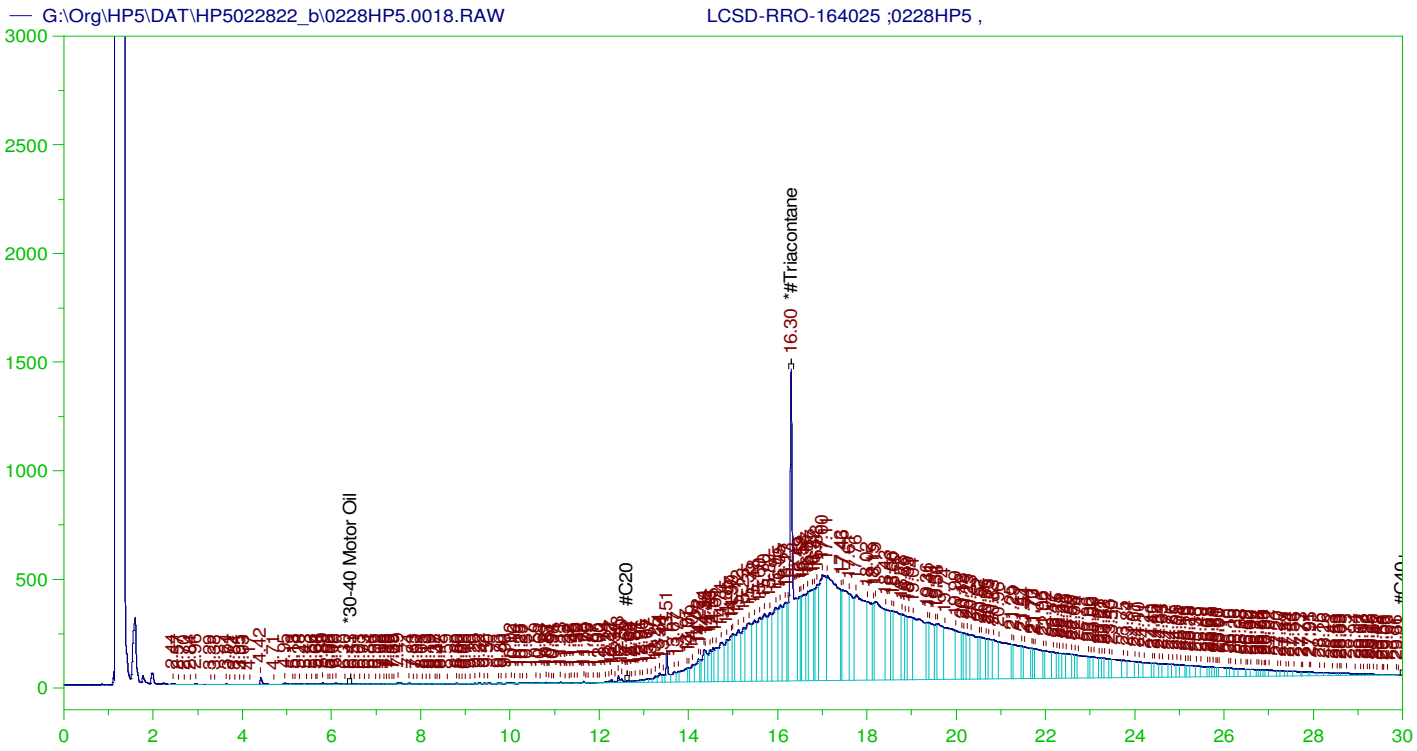
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-RRO-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0017.RAW
Date & Time Acquired: 2/28/2022 7:12:50 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	16.298	.5	.088	17.61	-

RRO Area:2685724 RRO AMOUNT: 0.1016374



RESIDUAL RANGE ORGANICS CHROMATOGRAM

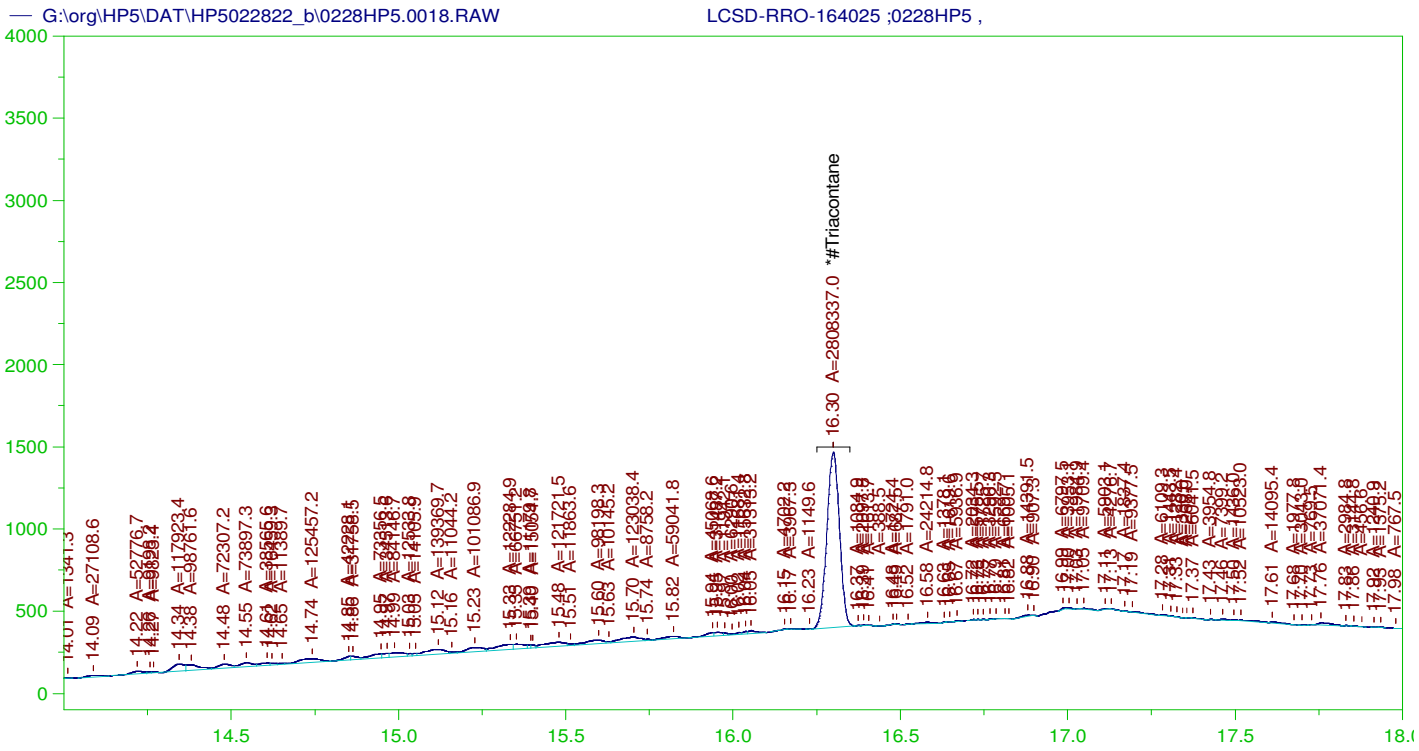
Sample Name: LCSD-RRO-164025 ;0228HP5 ,
Raw File: G:\Org\HP5\DAT\HP5022822_b\0228HP5.0018.RAW
Date & Time Acquired: 2/28/2022 7:56:02 PM
Method File: G:\Org\HP5\Methods\D3_ORO-BF-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BF.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

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	16.299	.5	.255	51.06	-

~~RRO~~ TEH(Oil Range) Area:1.488756E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5.633986

AMN 03/01/2022



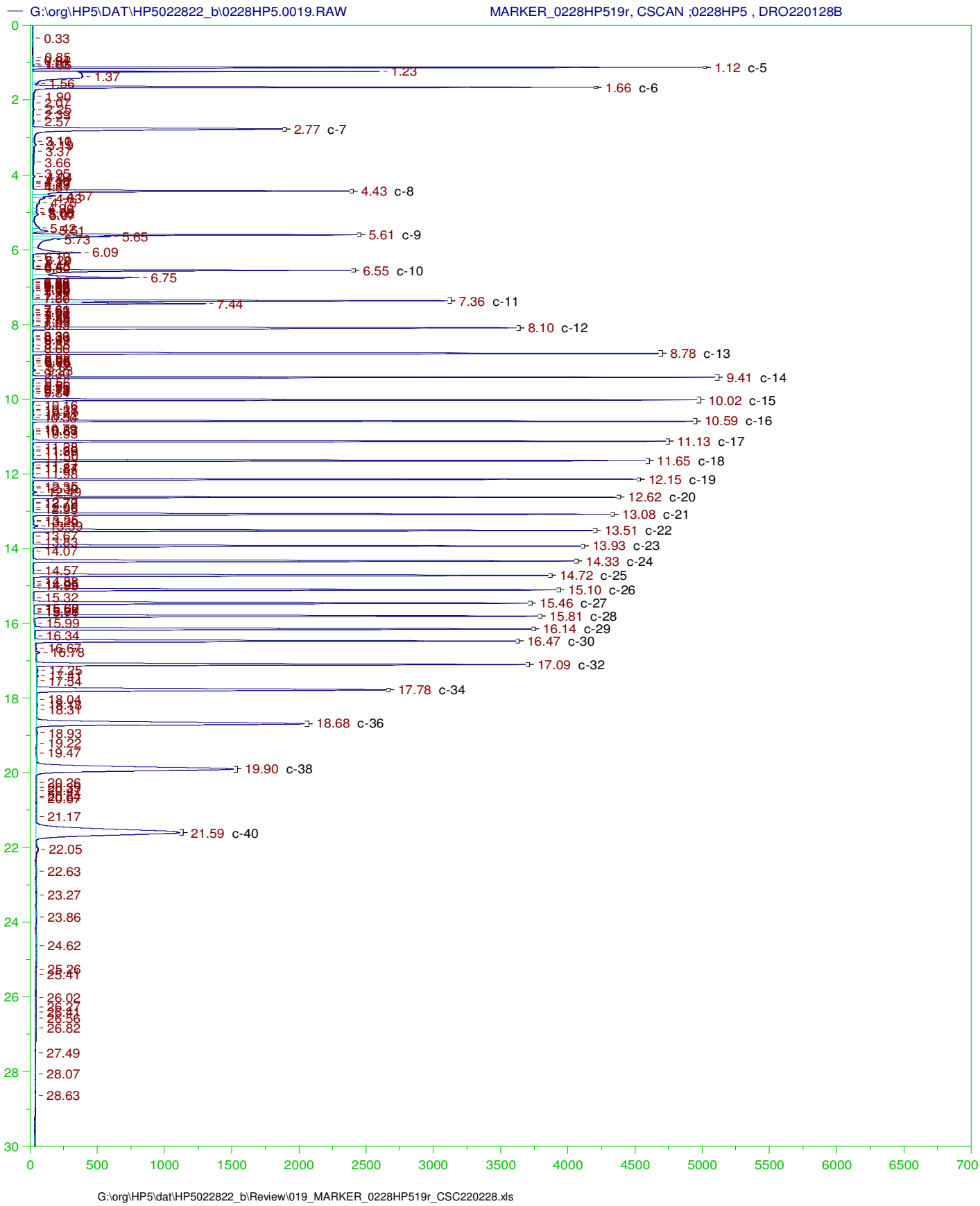
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCSD-RRO-164025 ;0228HP5 ,
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0018.RAW
Date & Time Acquired: 2/28/2022 7:56:02 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	16.299	.5	.095	18.95

RRO Area:3005576 RRO AMOUNT: 0.1137418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1.12 c-5
1.23
1.37
1.56
1.66 c-6
1.90
2.57
2.77 c-7
3.37
3.66
4.43 c-8
5.61 c-9
5.65
5.73
6.09
6.55 c-10
6.75
7.36 c-11
7.44
8.10 c-12
8.78 c-13
9.41 c-14
10.02 c-15
10.59 c-16
11.13 c-17
11.65 c-18
12.15 c-19
12.62 c-20
13.08 c-21
13.51 c-22
13.93 c-23
14.07
14.33 c-24
14.57
14.72 c-25
15.10 c-26
15.32
15.46 c-27
15.81 c-28
15.99
16.14 c-29
16.34
16.47 c-30
16.78
17.09 c-32
17.34
17.78 c-34
18.31
18.68 c-36
18.93
19.22
19.47
19.90 c-38
20.07
21.17
21.59 c-40
22.05
22.63
23.27
23.86
24.62
25.26
25.41
26.02
26.56
26.82
27.49
28.07
28.63
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1500
2000
2500
3000
3500
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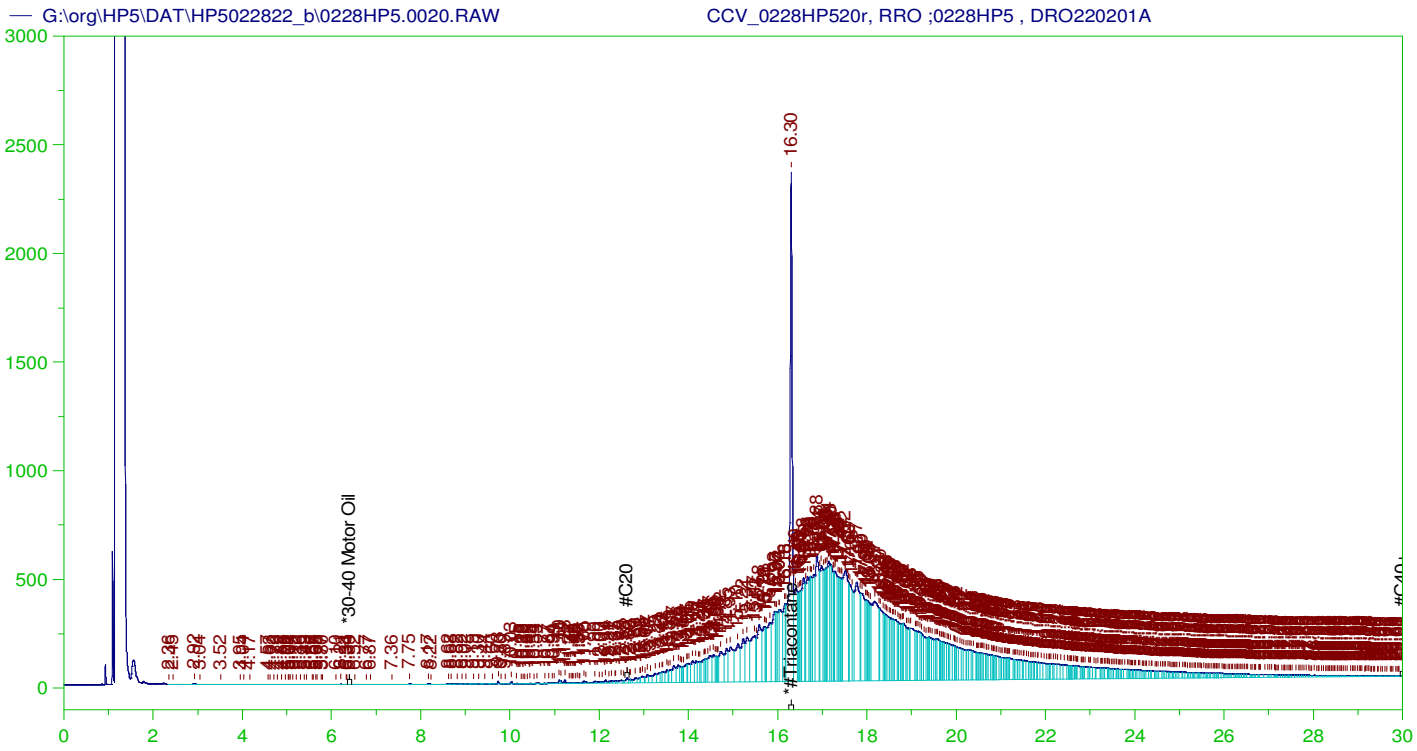


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0228HP520r, RRO ;0228HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0020.RAW
Date & Time Acquired: 2/28/2022 9:22:31 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	16.301	500.	305.227	61.05	-

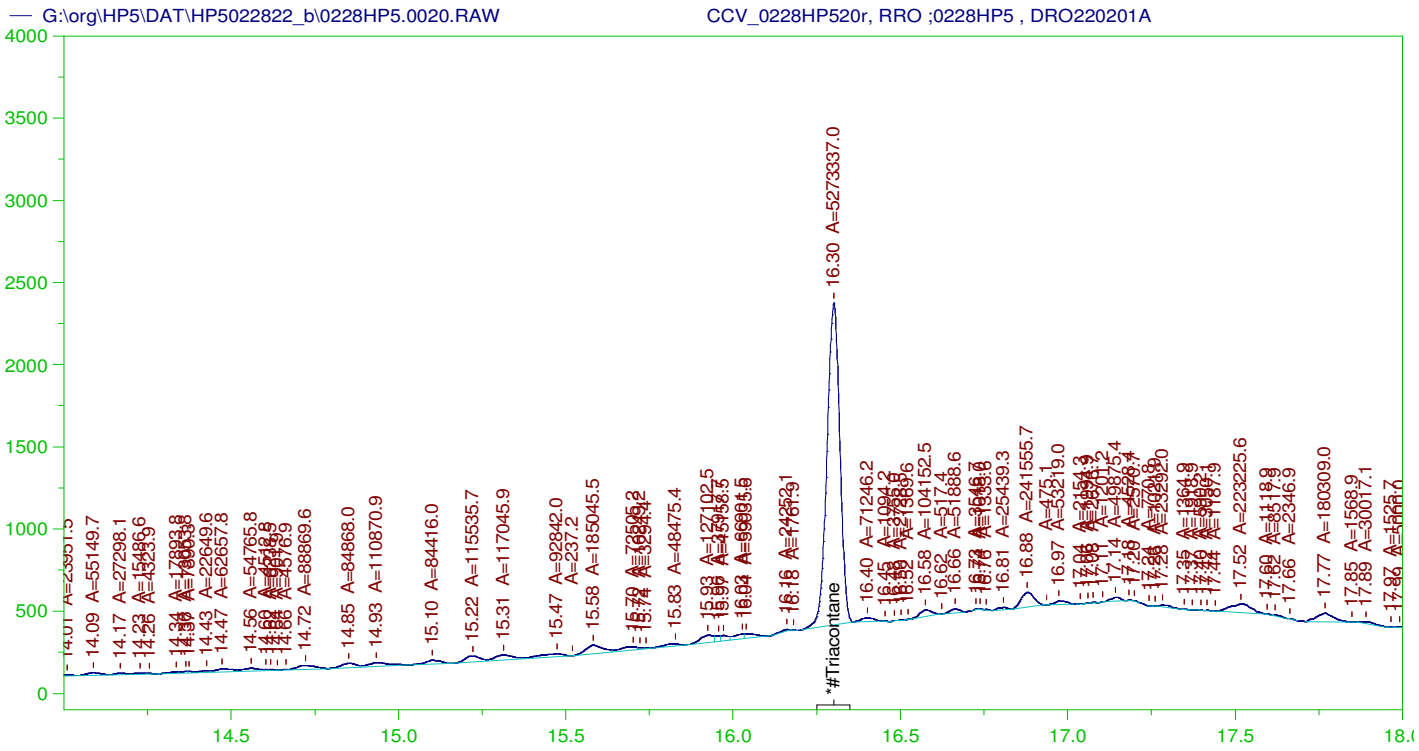
~~RRO~~ TEH(Oil Range) Area:1.27939E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4841.671

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0020.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.301	200.	305.227	152.61	75-125

AMN 03/01/2022



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0228HP520r, RRO ;0228HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0020.RAW
Date & Time Acquired: 2/28/2022 9:22:31 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

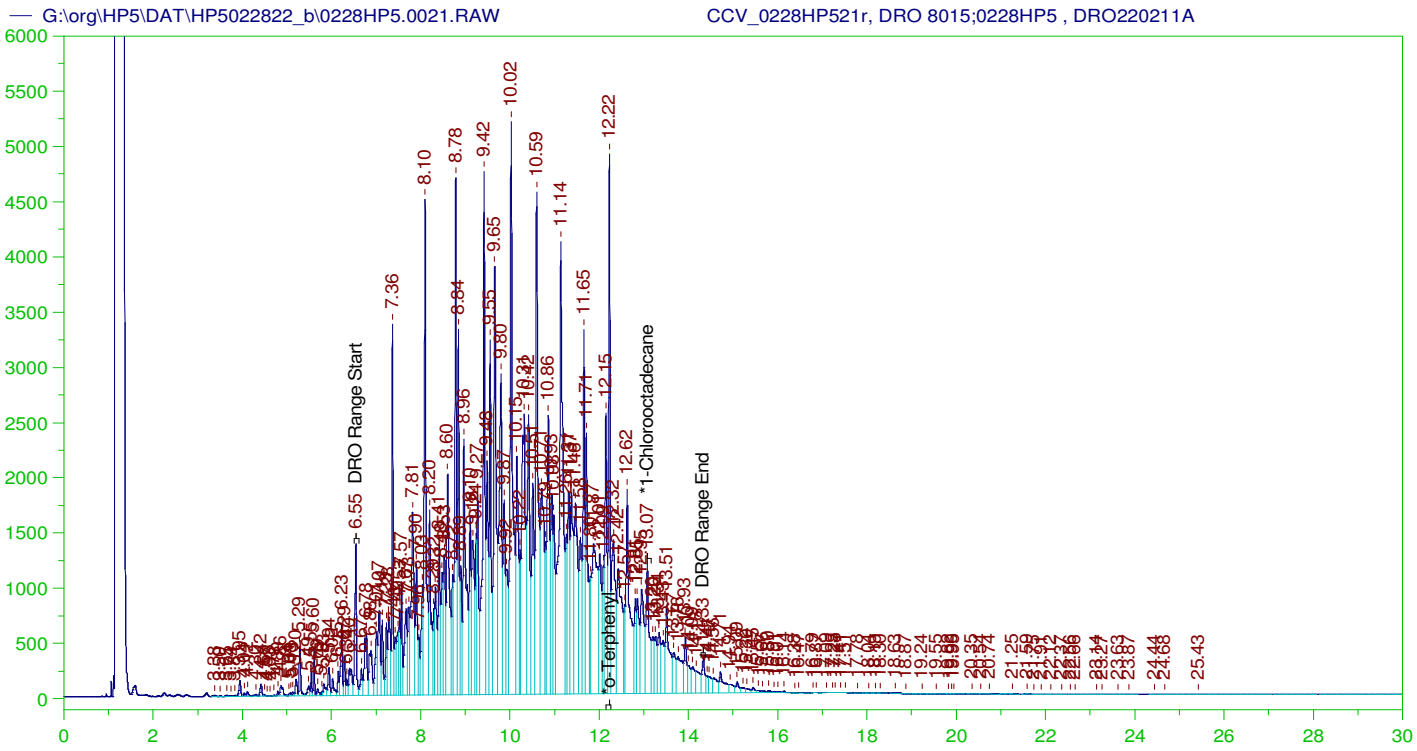
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.301	500.	177.936	35.59	-

RRO Area:3567994 RRO AMOUNT: 135.0257

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0020.RAW

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.301	200.	177.936	88.97	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0228HP521r, DRO 8015;0228HP5 , DRO220211A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0021.RAW
Date & Time Acquired: 2/28/2022 10:05:44 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

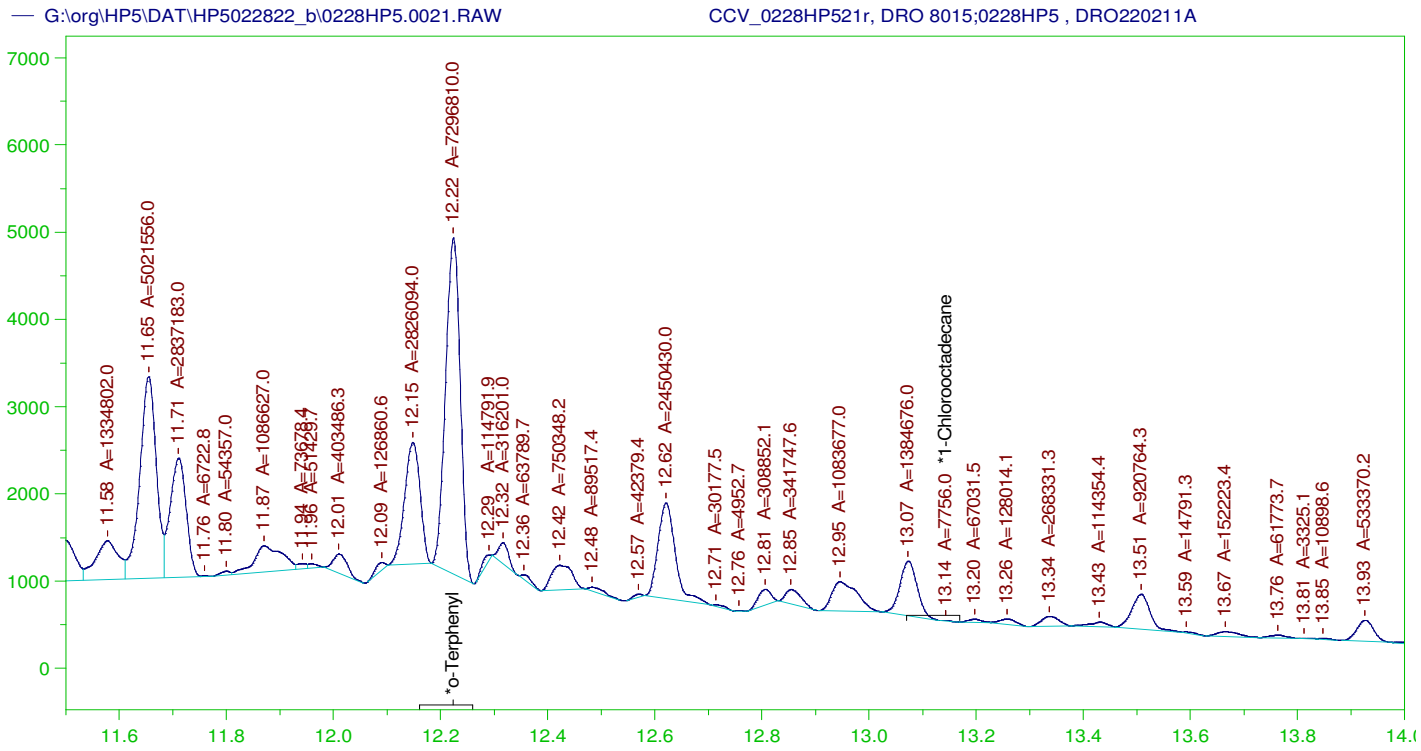
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.224	200.	331.773	165.89	-
*1-Chlorooctadecane	13.073	200.	161.935	80.97	-

DRO Area:5.077157E+08 DRO Amount: 15538.18
TEH Area:5.252085E+08 TEH Amount: 16073.54

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0021.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16073.54	107.16	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.224	200.	331.773	165.89	85-115
*1-Chlorooctadecane	13.073	200.	161.935	80.97	85-115



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0228HP521r, DRO 8015;0228HP5 , DRO220211A
Raw File: G:\org\HP5\DAT\HP5022822_b\0228HP5.0021.RAW
Date & Time Acquired: 2/28/2022 10:05:44 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

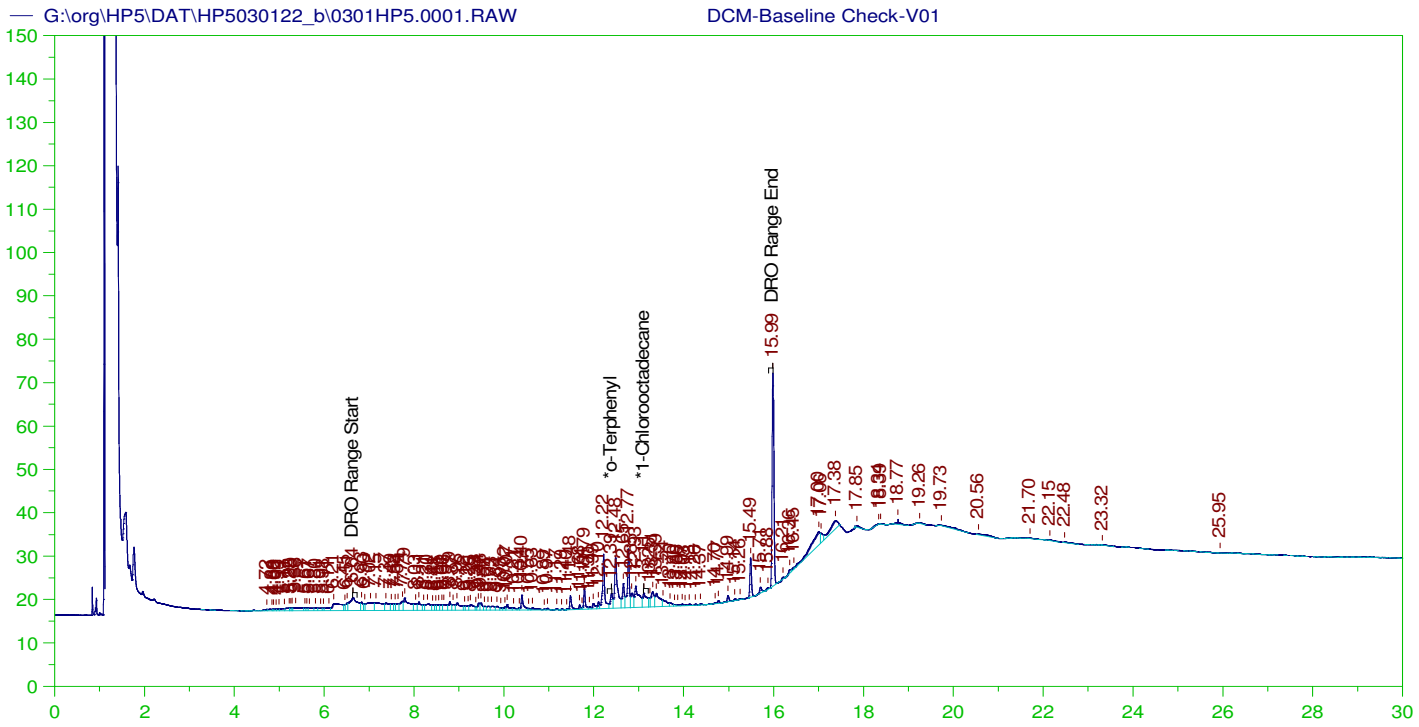
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.224	200.	197.972	98.99	-
*1-Chlorooctadecane	13.143	200.	.21	.11	-

DRO Area:2.620536E+08 DRO Amount: 8019.916
TEH Area:2.73234E+08 TEH Amount: 8362.079

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5022822_b\0228HP5.0021.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8362.08	55.75	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.224	200.	197.972	98.99	85-115
*1-Chlorooctadecane	13.143	200.	.21	.11	85-115



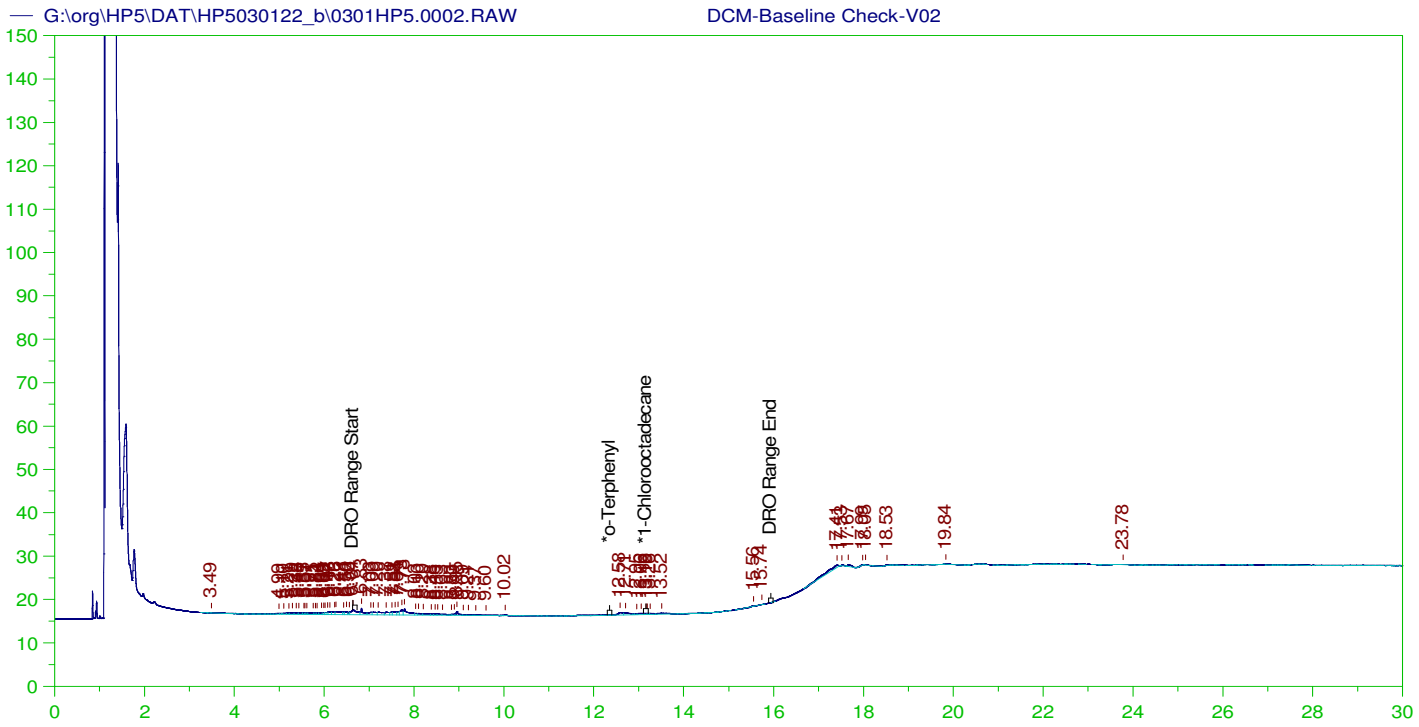
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V01
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0001.RAW
Date & Time Acquired: 3/1/2022 9:26:15 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	12.391	200.	.365	.18	-
*1-Chlorooctadecane	13.113	200.	.571	.29	-

DRO Area:802141.4 DRO Amount: 24.54881
TEH Area:999896.4 TEH Amount: 30.60093



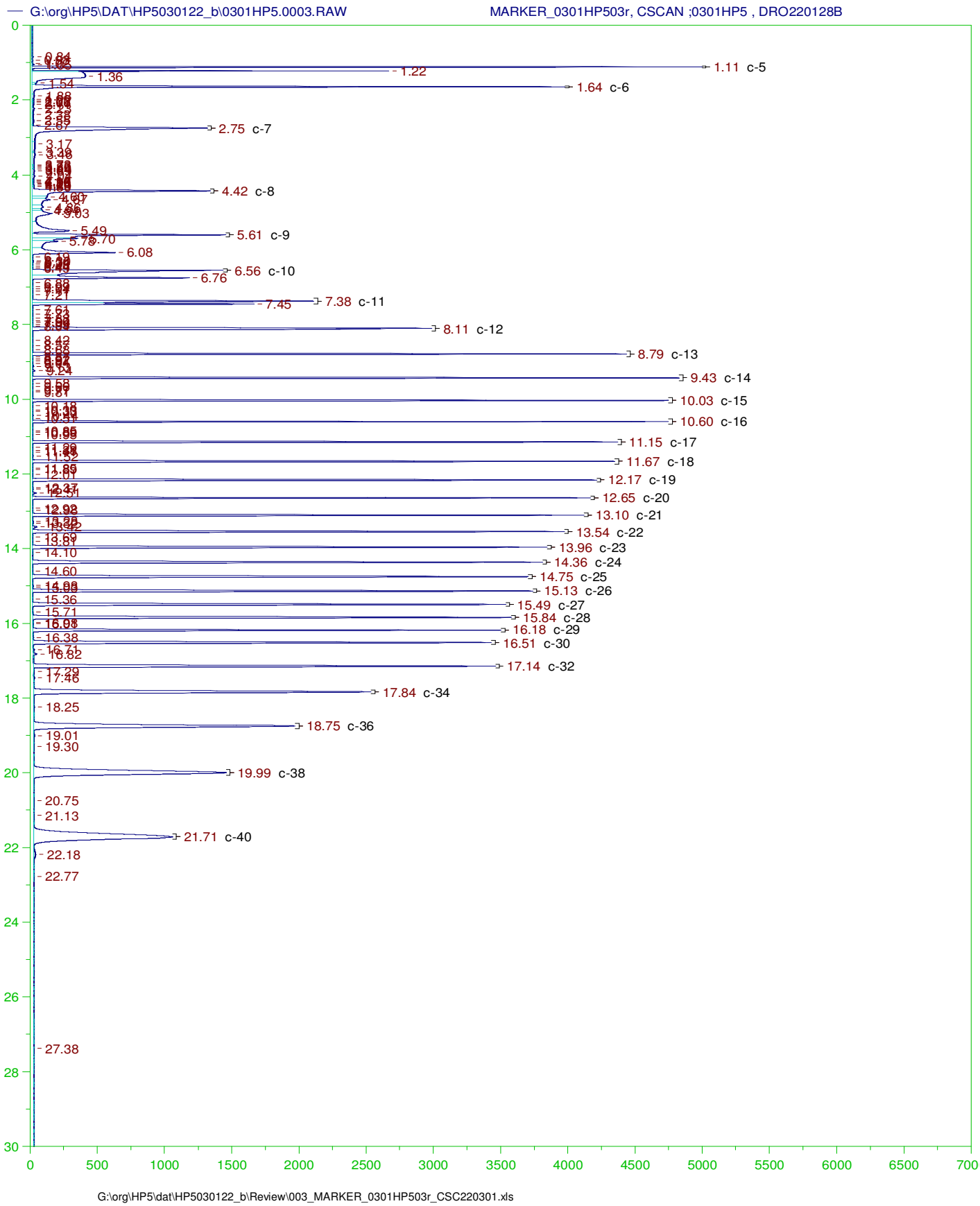
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V02
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0002.RAW
Date & Time Acquired: 3/1/2022 10:08:41 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	29.917	200.	.	-
*1-Chlorooctadecane	13.16	200.	.024	.01 -

DRO Area:103824.2 DRO Amount: 3.177445
TEH Area:185694.5 TEH Amount: 5.683014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1.22
1.36
1.54
1.64 c-6
2.75 c-7
3.17
4.42 c-8
5.49
5.61 c-9
6.08
6.56 c-10
6.76
7.38 c-11
7.45
8.11 c-12
8.79 c-13
9.43 c-14
10.03 c-15
10.60 c-16
11.15 c-17
11.67 c-18
12.17 c-19
12.65 c-20
13.10 c-21
13.54 c-22
13.96 c-23
14.10
14.36 c-24
14.60
14.75 c-25
15.13 c-26
15.36
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16.18 c-29
16.38
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16.82
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17.46
17.84 c-34
18.25
18.75 c-36
19.01
19.30
19.99 c-38
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21.13
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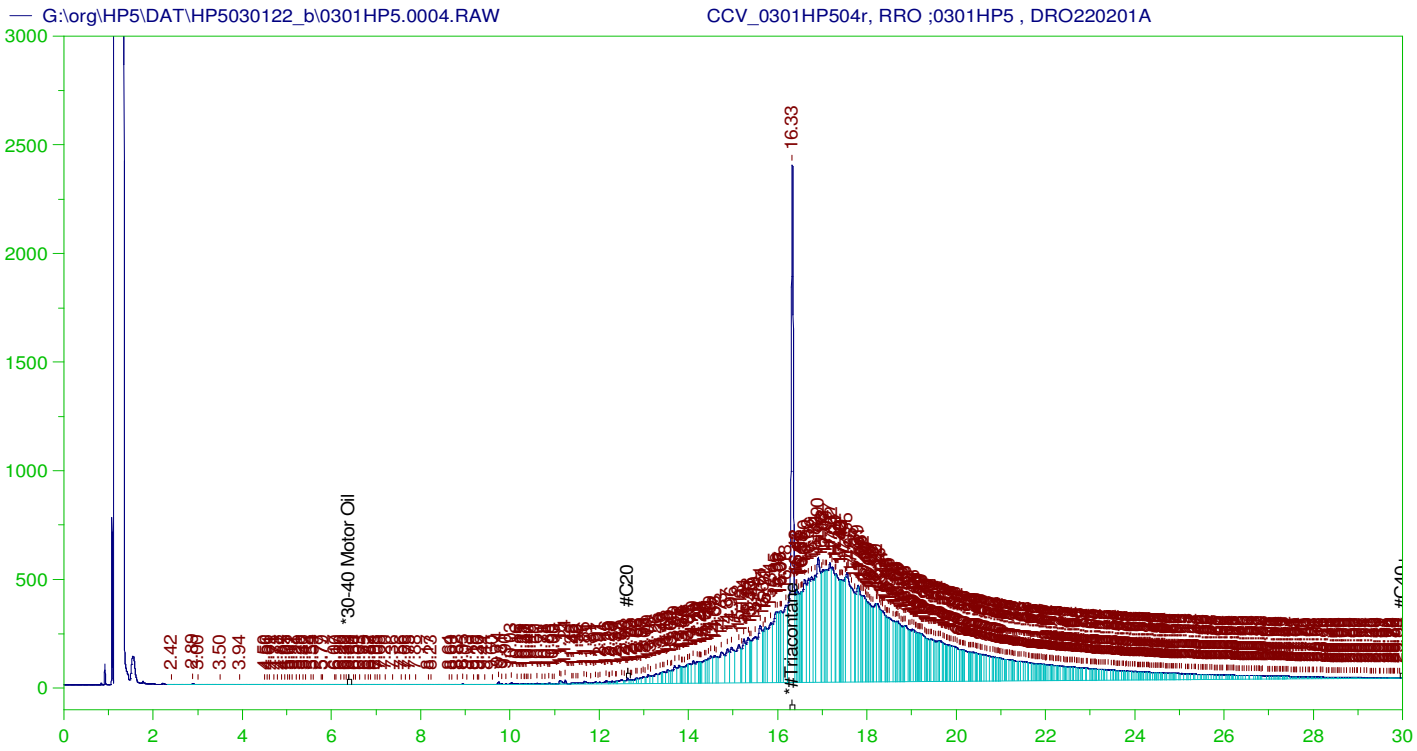

RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0301HP504r, RRO ;0301HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0004.RAW
Date & Time Acquired: 3/1/2022 11:33:37 AM
Method File: G:\Org\HP5\Methods\DC_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.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: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.325	500.	310.27	62.05	-

~~RRO~~ TEH(Oil Range) Area:1.274492E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4823.135

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0004.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.039	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.325	200.	310.27	155.13	75-125

AMN 03/02/2022

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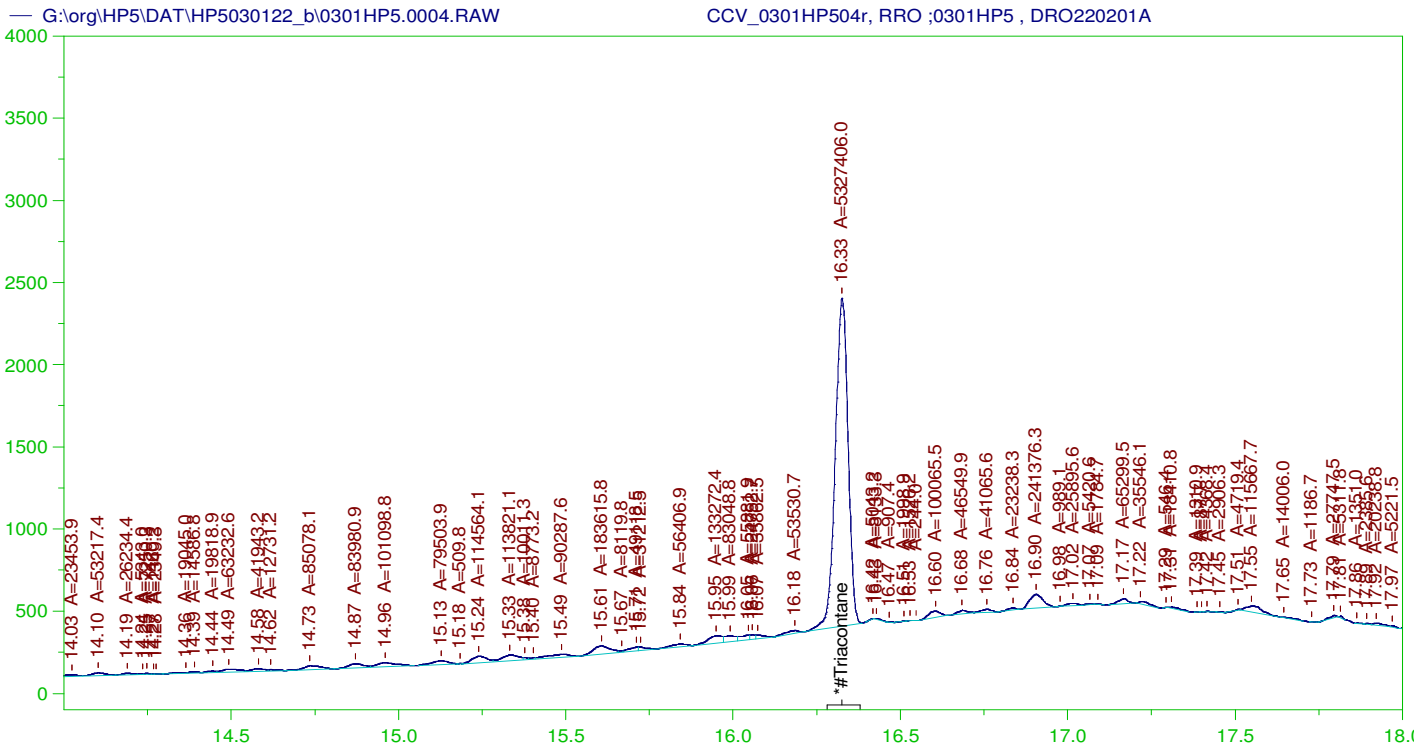


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0301HP504r, RRO ;0301HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0004.RAW
Date & Time Acquired: 3/1/2022 11:33:37 AM
Method File: G:\Org\HP5\Methods\DS_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.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: 12.6 to 30.05

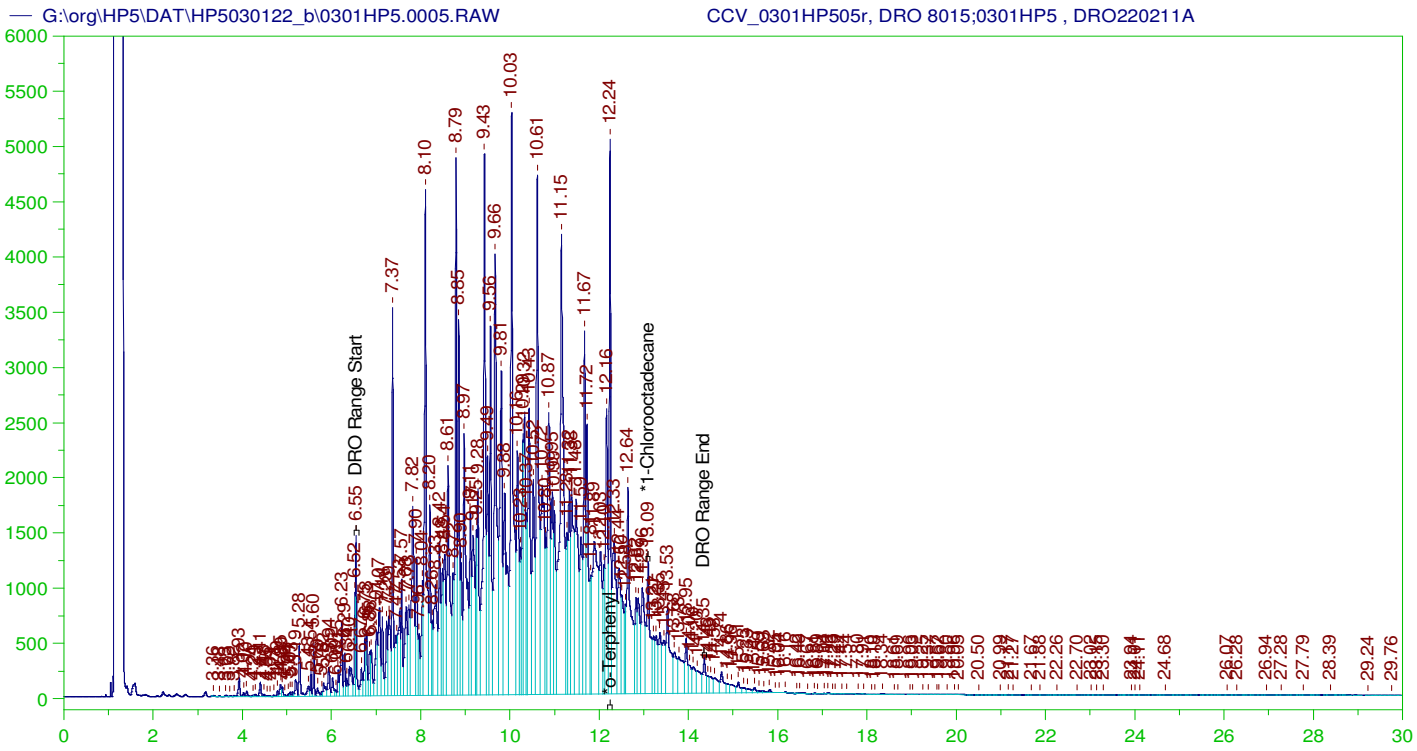
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.325	500.	179.761	35.95	-

RRO Area:3250300 RRO AMOUNT: 123.003

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0004.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.039	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.325	200.	179.761	89.88	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: CCV_0301HP505r, DRO 8015;0301HP5 , DRO220211A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0005.RAW
Date & Time Acquired: 3/1/2022 12:16:06 PM
Method File: G:\Org\HP5\Methods\DC_8015-C24-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.239	200.	335.946	167.97	-
*1-Chlorooctadecane	13.091	200.	169.782	84.89	-

DRO Area:5.179584E+08 DRO Amount: 15851.65
TEH Area:5.361378E+08 TEH Amount: 16408.02

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	16408.02	109.39	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.239	200.	335.946	167.97	85-115
*1-Chlorooctadecane	13.091	200.	169.782	84.89	85-115

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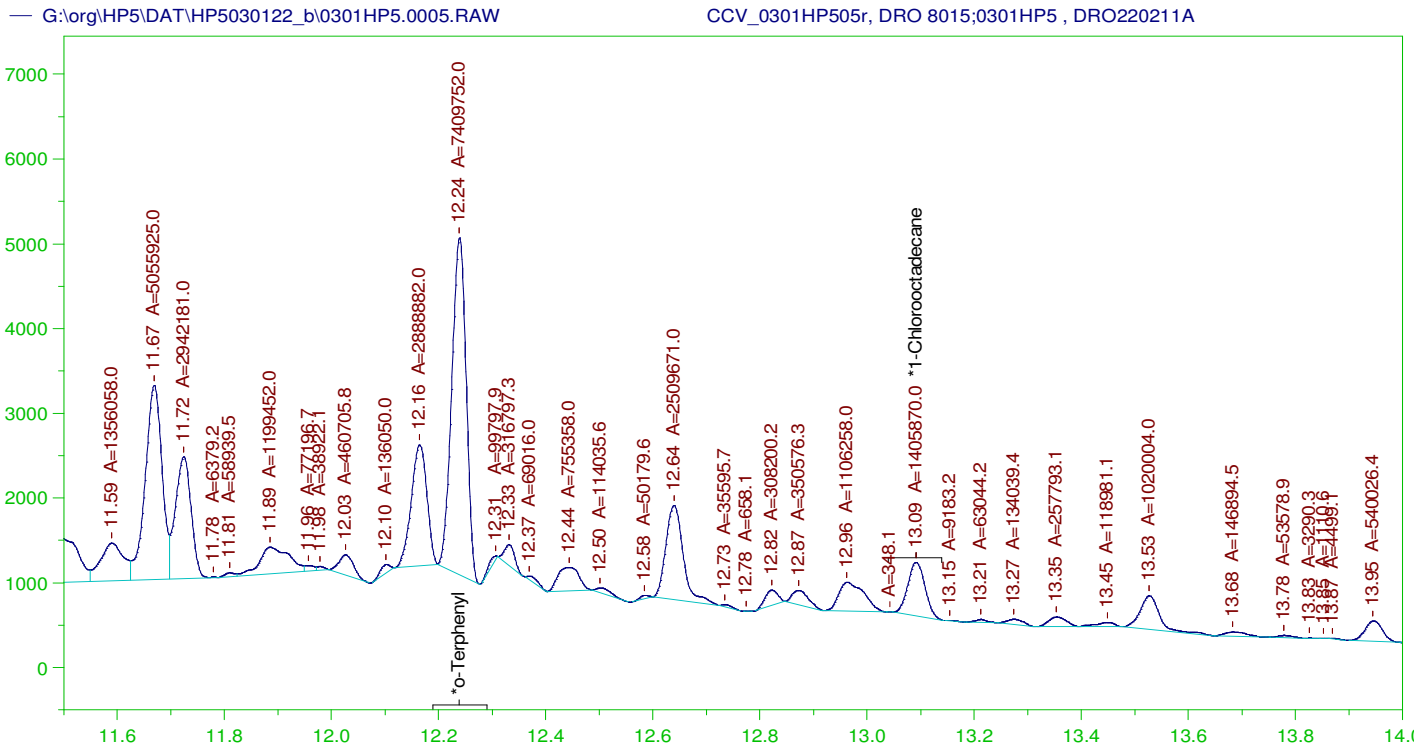


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0301HP505r, DRO 8015;0301HP5 , DRO220211A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0005.RAW
Date & Time Acquired: 3/1/2022 12:16:06 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-C24.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.41

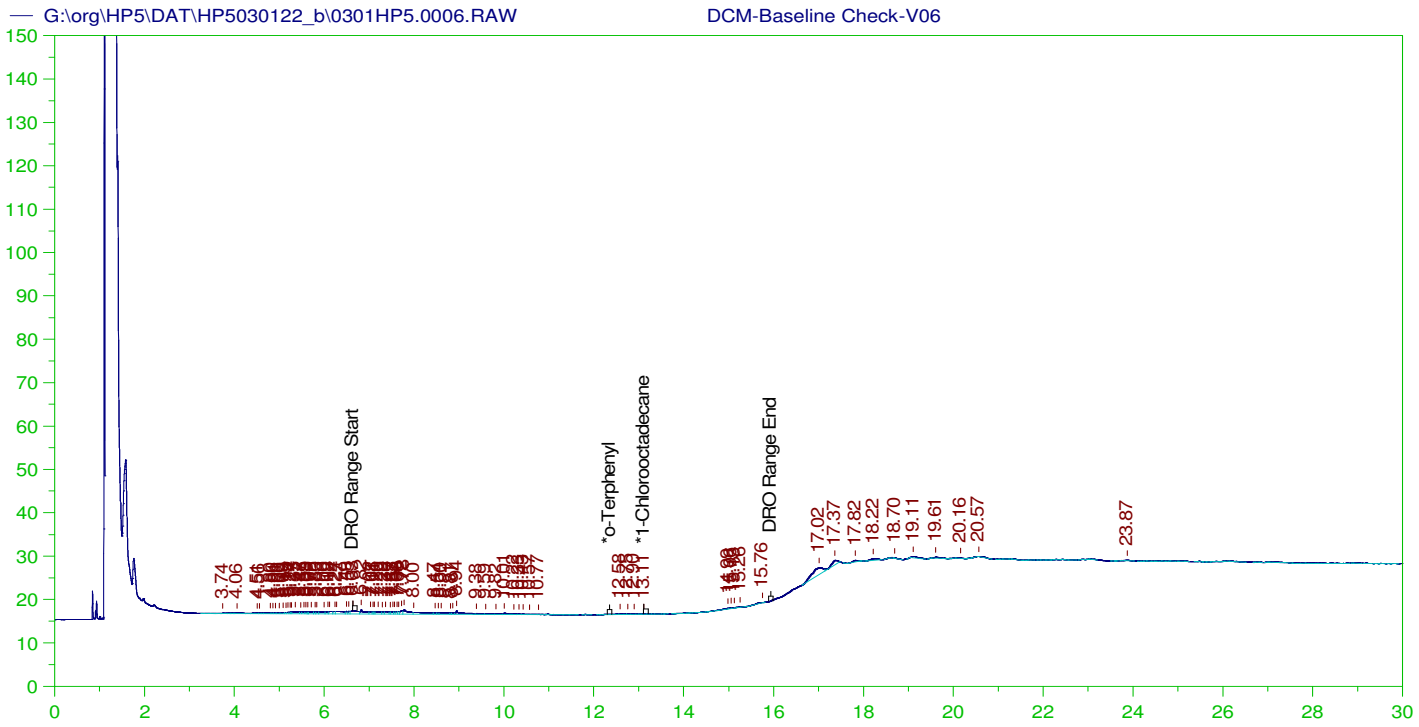
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.239	200.	201.036	100.52	-
*1-Chlorooctadecane	13.091	200.	38.143	19.07	-

DRO Area:2.674341E+08 DRO Amount: 8184.581
TEH Area:2.791357E+08 TEH Amount: 8542.696

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0005.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	8542.7	56.95	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.239	200.	201.036	100.52	85-115
*1-Chlorooctadecane	13.091	200.	38.143	19.07	85-115



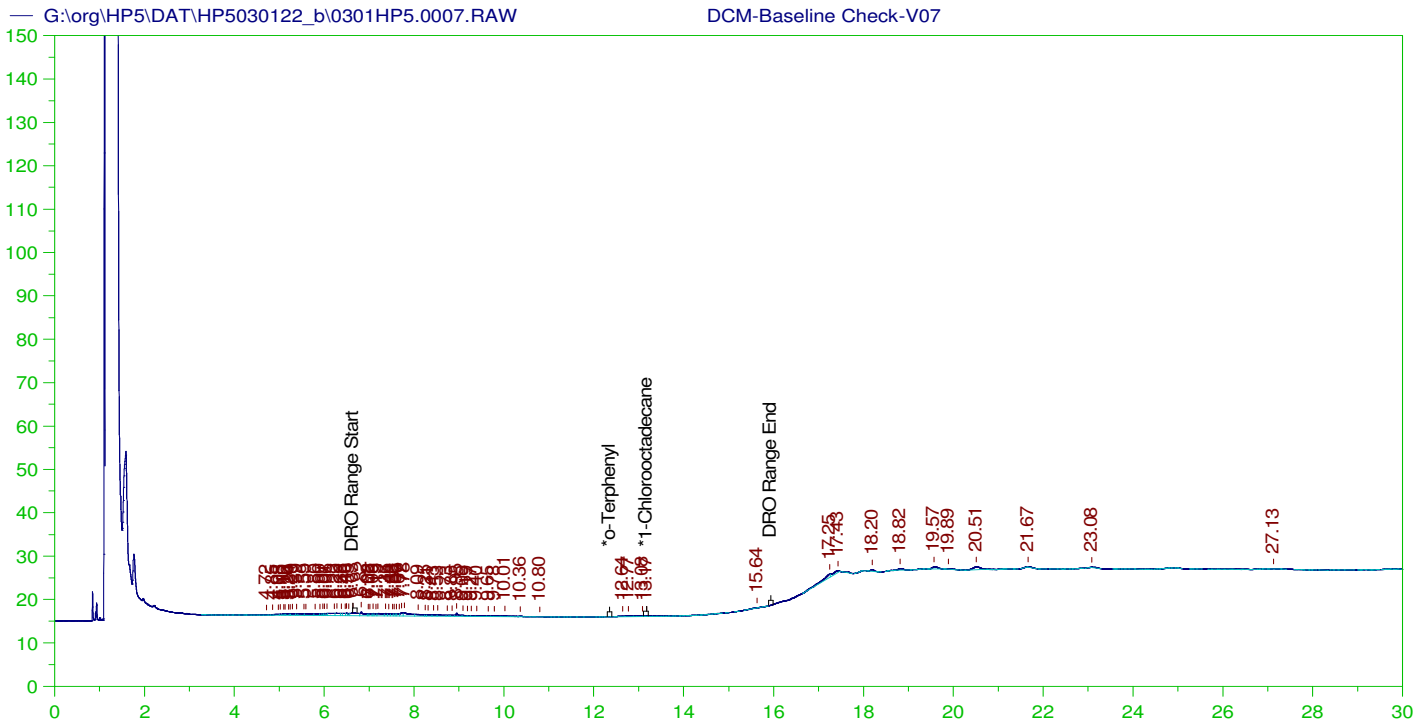
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V06
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0006.RAW
Date & Time Acquired: 3/1/2022 12:58:27 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	29.847	200.	.	-
*1-Chlorooctadecane	13.115	200.	.015	.01 -

DRO Area:104394.3 DRO Amount: 3.194893
TEH Area:233874.3 TEH Amount: 7.157512



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

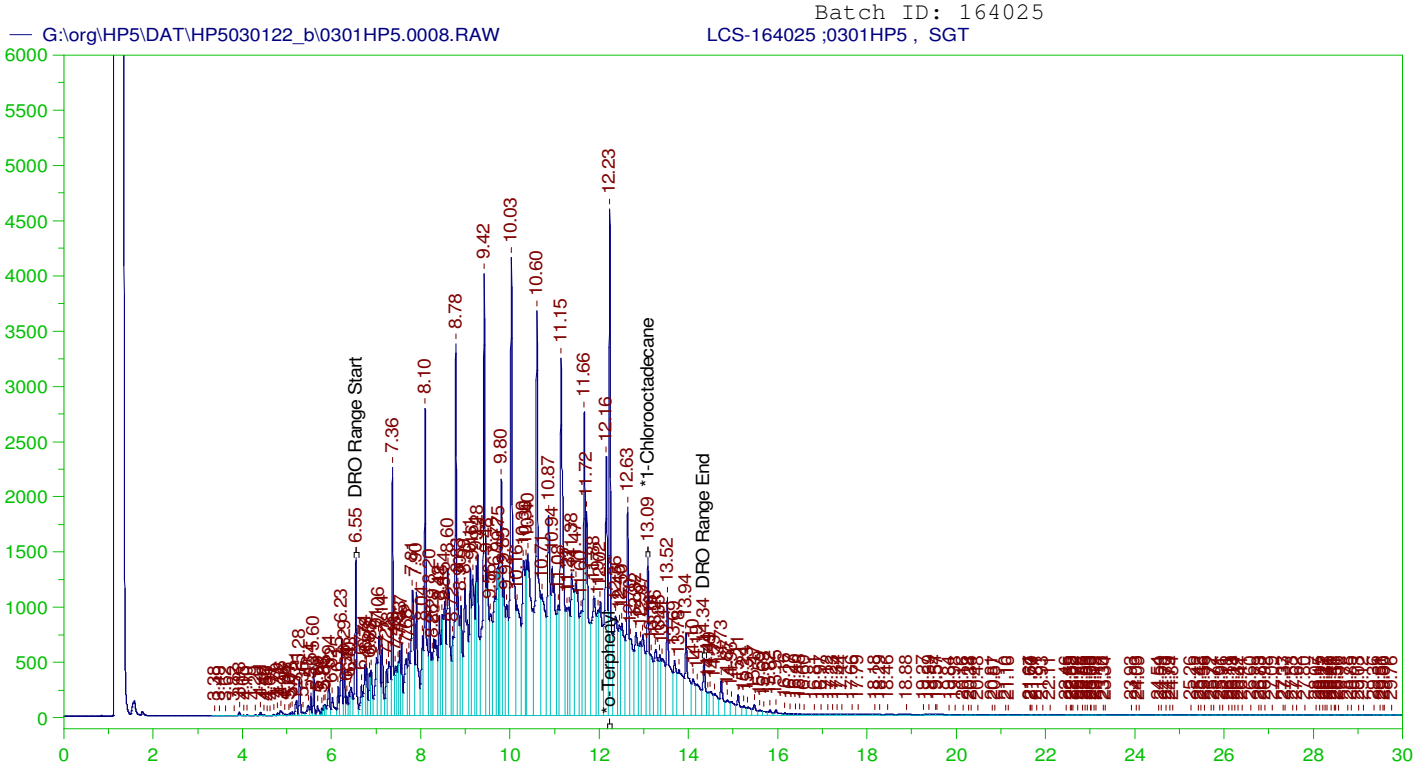
Sample Name: DCM-Baseline Check-V07
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0007.RAW
Date & Time Acquired: 3/1/2022 1:40:47 PM
Method File: G:\Org\HP5\Methods\DR_8015-JA-LEXP.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JA.CAL
Sample Weight: 1 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*o-Terphenyl	29.957	200.	.	-
*1-Chlorooctadecane	13.172	200.	.019	.01 -

DRO Area:82033.51 DRO Amount: 2.510562
TEH Area:171771.4 TEH Amount: 5.256908

Batch ID: 164025



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

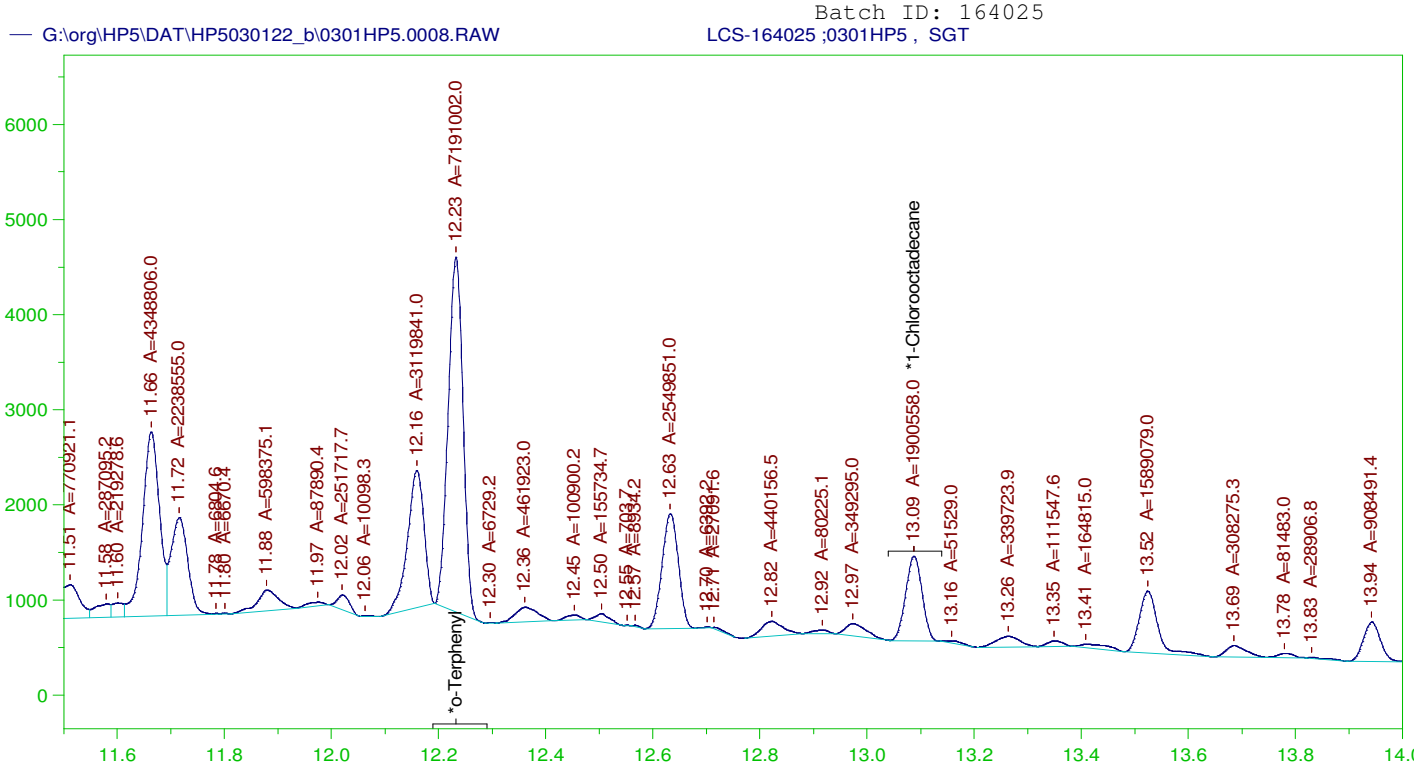
Sample Name: LCS-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0008.RAW
Date & Time Acquired: 3/1/2022 2:23:19 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.232	.2	.349	174.3	-
*1-Chlorooctadecane	13.087	.2	.137	68.7	-

DRO Area:3.942857E+08 DRO Amount: 12.06676
TEH Area:4.1819E+08 TEH Amount: 12.79833

Batch ID: 164025



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

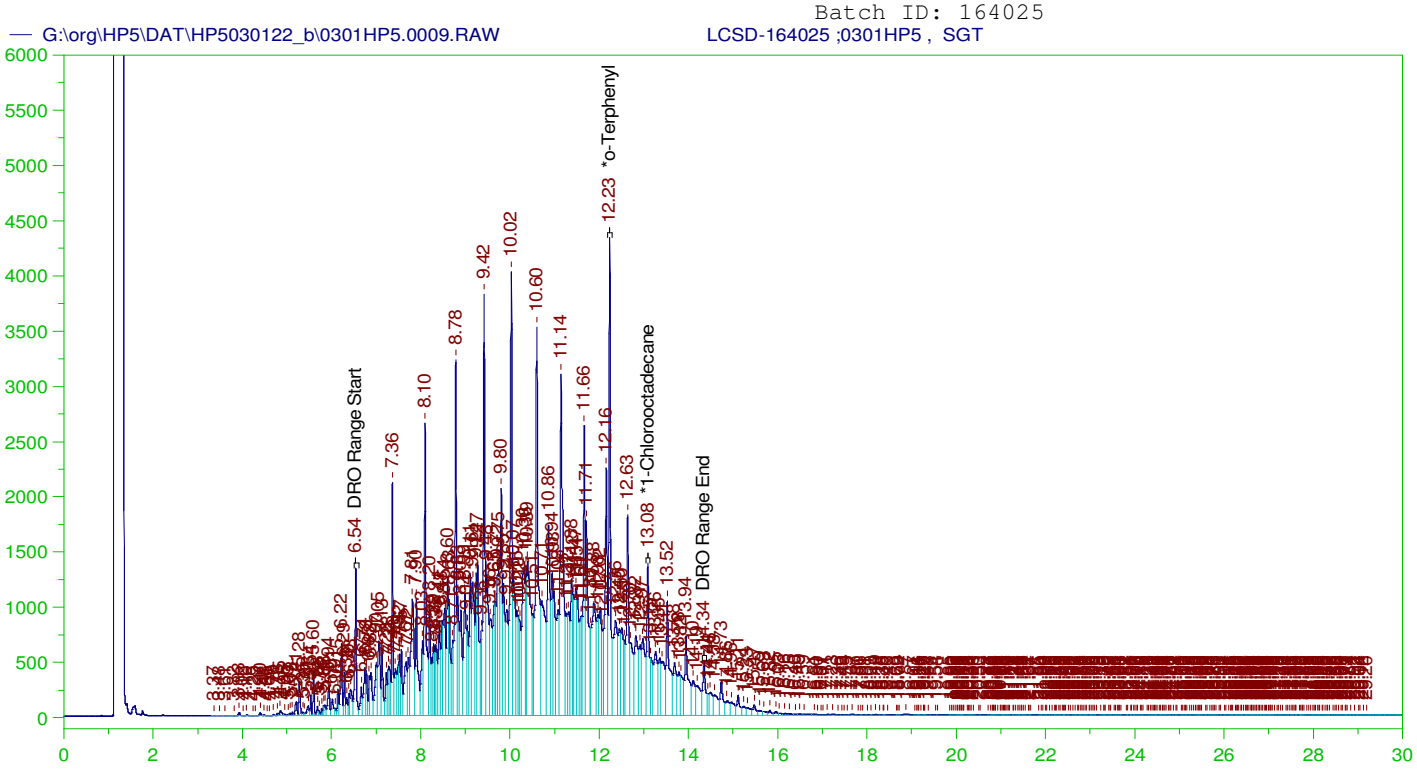
Sample Name: LCS-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0008.RAW
Date & Time Acquired: 3/1/2022 2:23:19 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-C24.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.232	.2	.195	97.55	-
*1-Chlorooctadecane	13.087	.2	.052	25.78	-

DRO Area:1.80259E+08 DRO Amount: 5.516664
TEH Area:1.907457E+08 TEH Amount: 5.8376

Batch ID: 164025



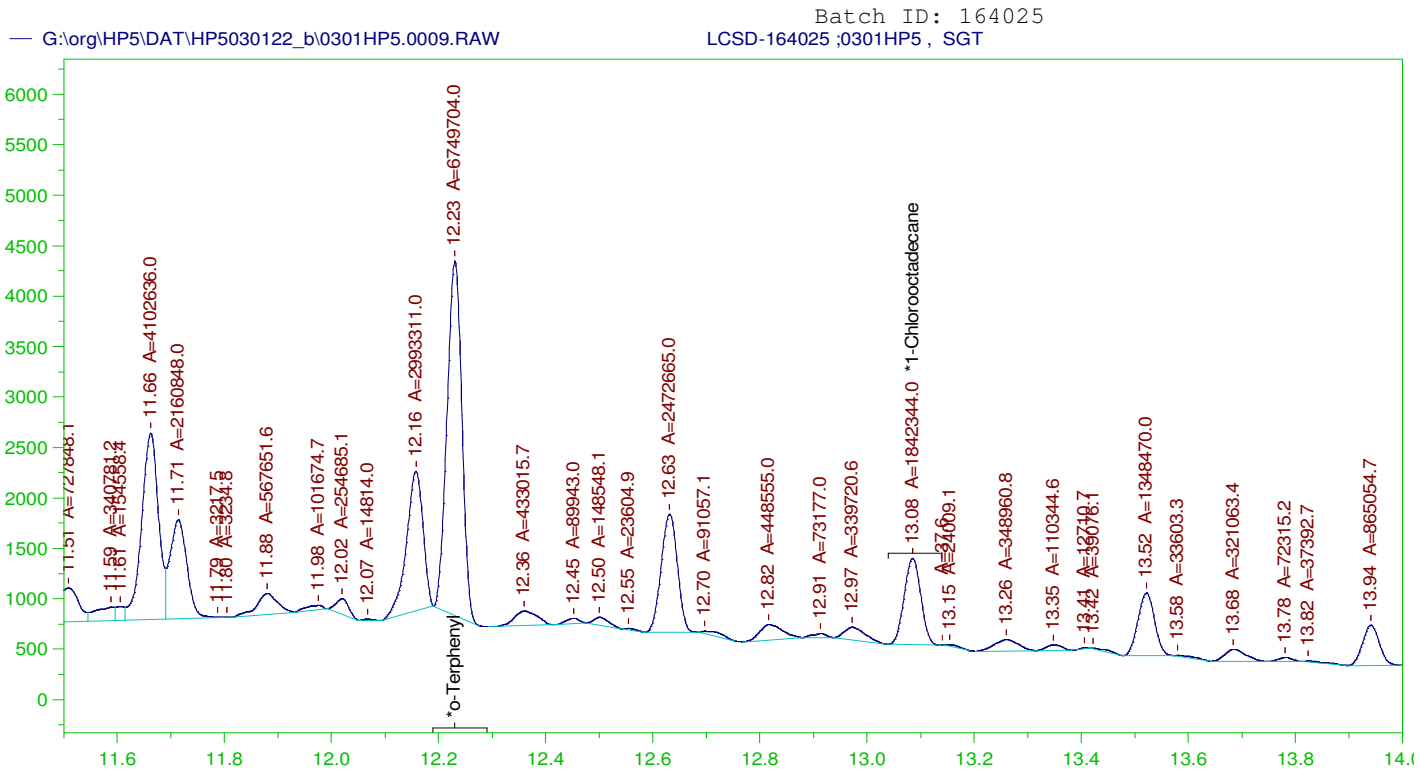
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCSD-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0009.RAW
Date & Time Acquired: 3/1/2022 3:05:57 PM
Method File: G:\Org\HP5\Methods\D3_8015-030109-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.23	.2	.317	158.27	-
*1-Chlorooctadecane	13.085	.2	.142	71.04	-

DRO Area:3.746679E+08 DRO Amount: 11.46638
TEH Area:3.96914E+08 TEH Amount: 12.1472



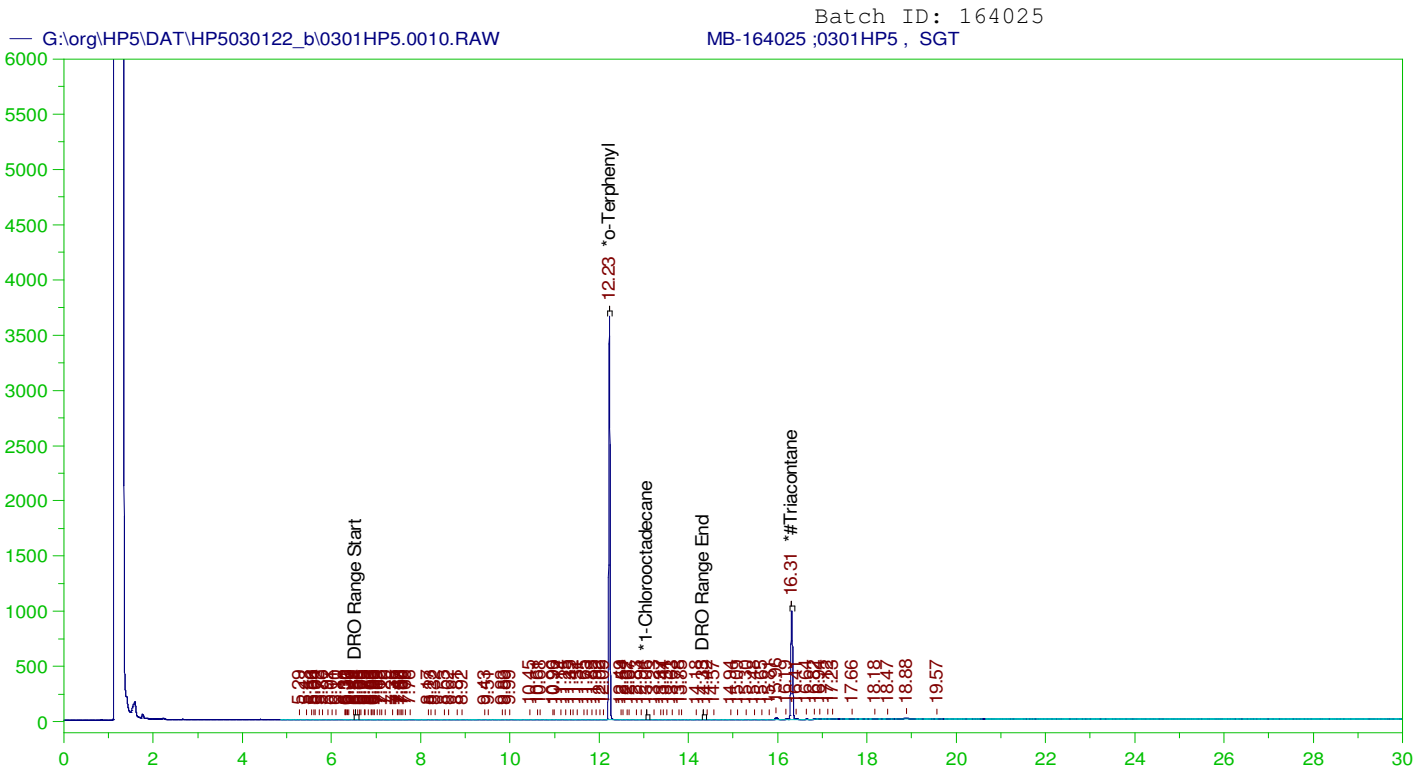
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: LCSD-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0009.RAW
Date & Time Acquired: 3/1/2022 3:05:57 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.23	.2	.183	91.56	-
*1-Chlorooctadecane	13.085	.2	.05	24.99	-

DRO Area:1.709244E+08 DRO Amount: 5.230989
TEH Area:1.806866E+08 TEH Amount: 5.529752

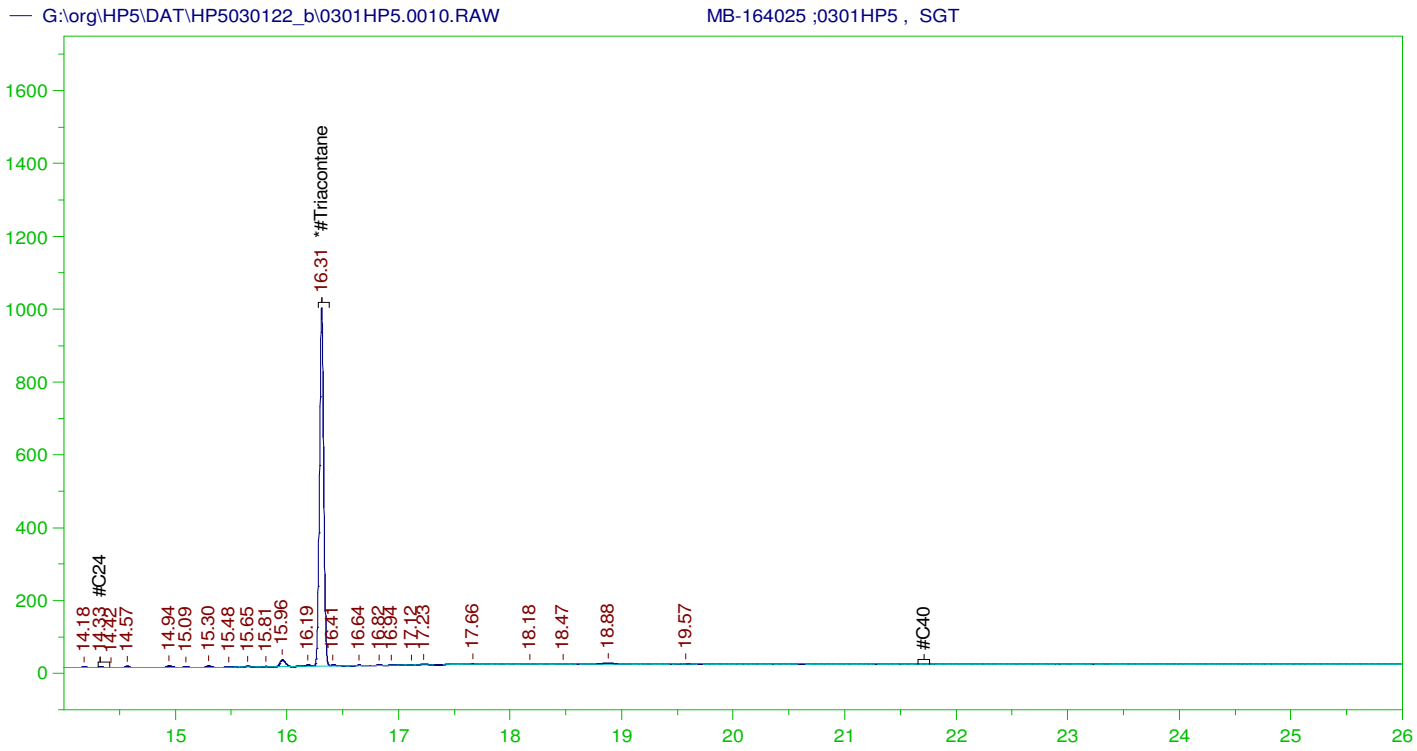


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: MB-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0010.RAW
Date & Time Acquired: 3/1/2022 3:48:23 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-C24-T.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.225	.2	.196	98.12	-
*1-Chlorooctadecane	13.057	.2	.14		-
*#Triacontane	16.311	.2	.089	44.3	-

DRO Area:192136.4 DRO Amount: 5.880161E-03
TEH Area:500325.8 TEH Amount: 1.531202E-02



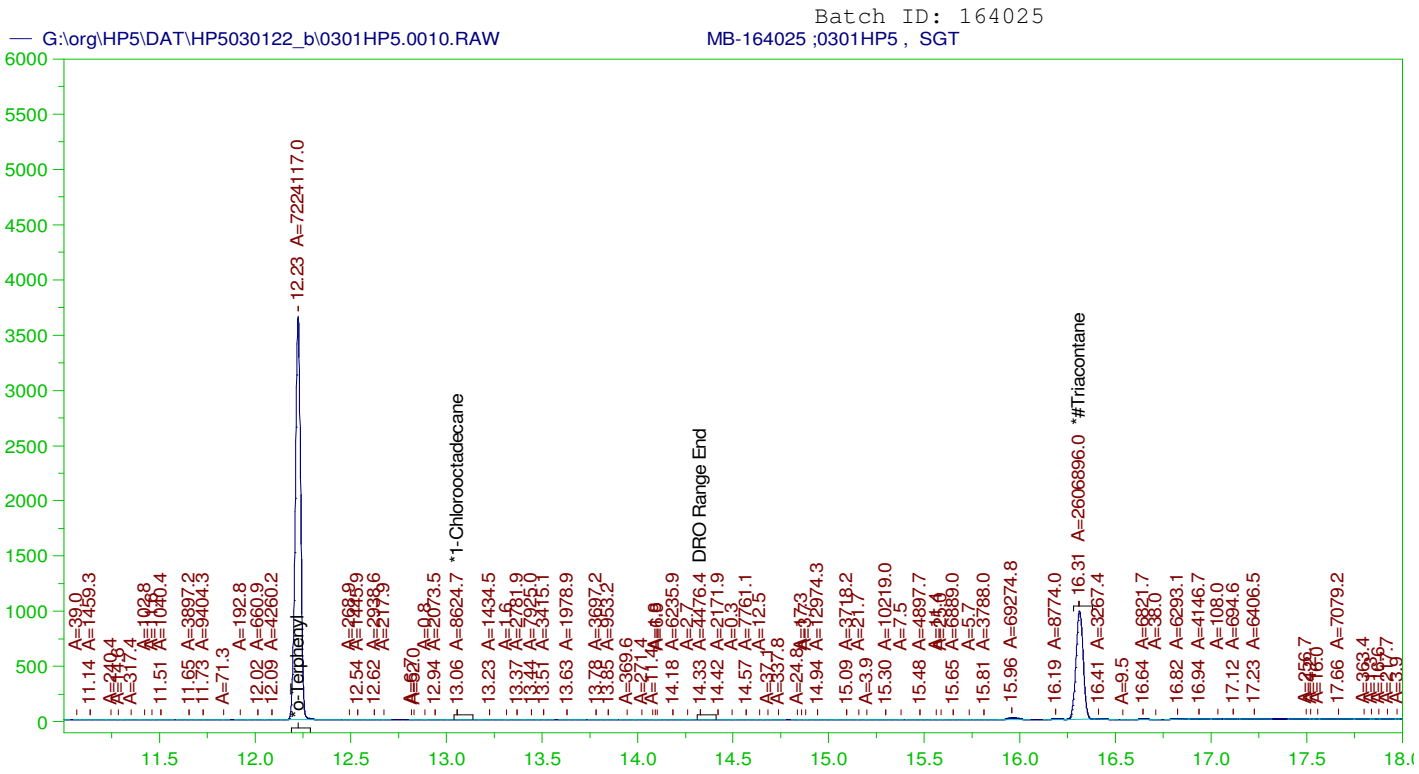
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: MB-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0010.RAW
Date & Time Acquired: 3/1/2022 3:48:23 PM
Method File: G:\Org\HP5\Methods\DR_OROS-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG_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: 14.31 to 21.76

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.311	.5	.089	17.72	-

RRO Area:237274.2 RRO AMOUNT: 8.979307E-03



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: MB-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0010.RAW
Date & Time Acquired: 3/1/2022 3:48:23 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.225	.2	.196	98.	-
*1-Chlorooctadecane	13.057	.2	.	.12	-
*#Triacontane	16.311	.2	.088	43.98	-

DRO Area:139675.8 DRO Amount: 4.274653E-03
TEH Area:475816.2 TEH Amount: 1.456193E-02

ERH2565 (RHMW2254-01 Bailer) Batch ID: 164025

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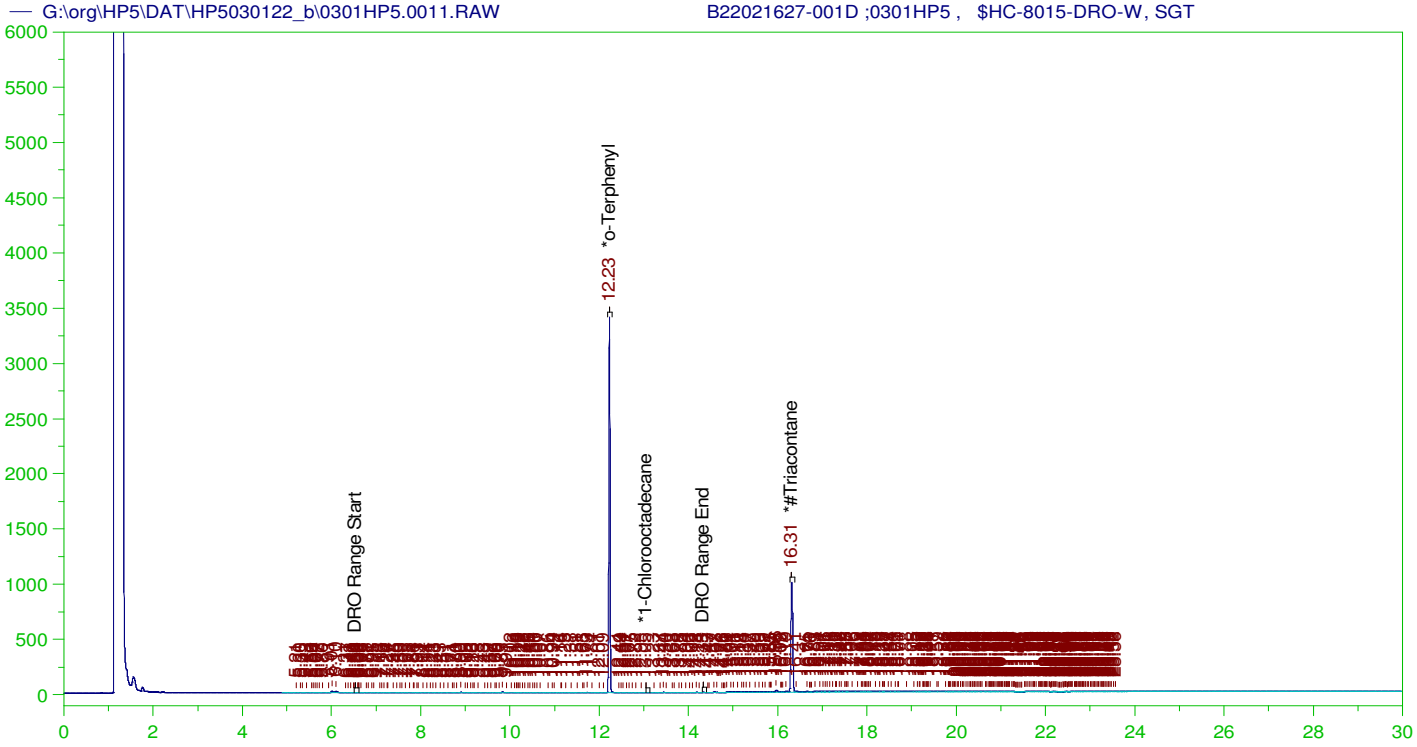

DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-001D ;0301HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0011.RAW
Date & Time Acquired: 3/1/2022 4:30:48 PM
Method File: G:\Org\HP5\Methods\DR_8015-030111-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.225	.19	.171	89.88	-
*1-Chlorooctadecane	13.049	.19	.	.08	-
*#Triacontane	16.313	.19	.086	44.93	-

DRO Area:537915.5 DRO Amount: 0.0156785
TEH Area:2849868 TEH Amount: 8.306444E-02

ERH2565 (RHMW2254-01 Bailer) Batch ID: 164025

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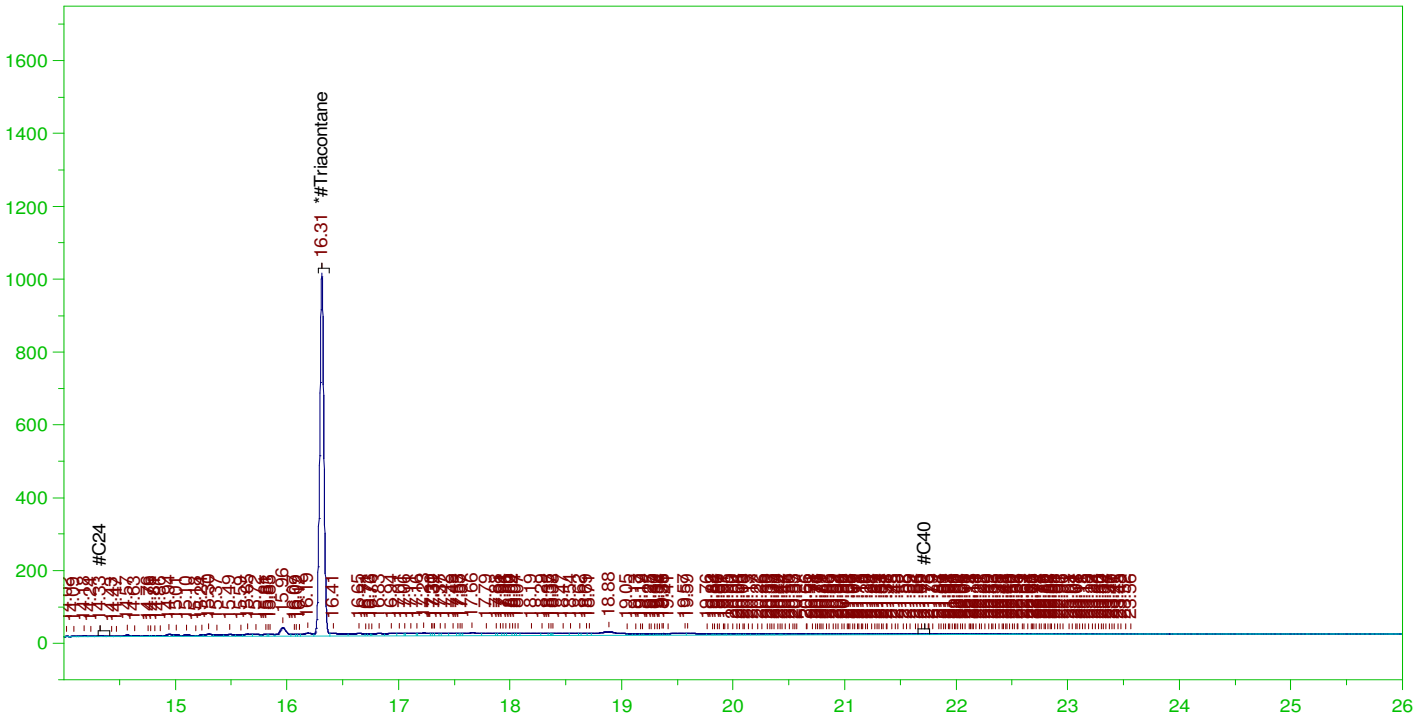


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021627-001D ;0301HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0011.RAW
Date & Time Acquired: 3/1/2022 4:30:48 PM
Method File: G:\Org\HP5\Methods\D3_OROS-030111-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG_SAMP.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

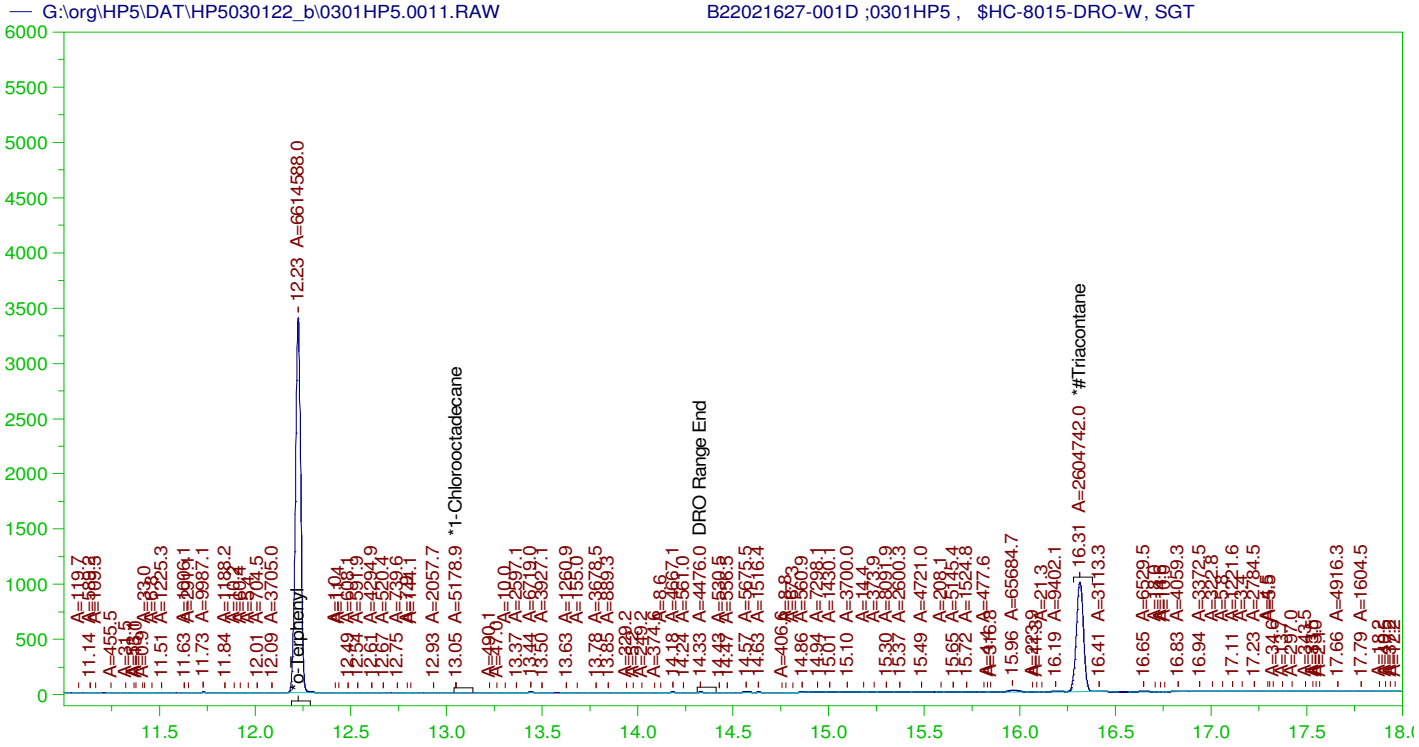
Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.31 to 21.76

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.313	.476	.086	17.97	-

RRO Area:2015539 RRO AMOUNT: 0.0726431

ERH2565 (RHMW2254-01 Bailer) Batch ID: 164025

G:\org\HP5\DAT\HP5030122_b\0301HP5.0011.RAW B22021627-001D ;0301HP5 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

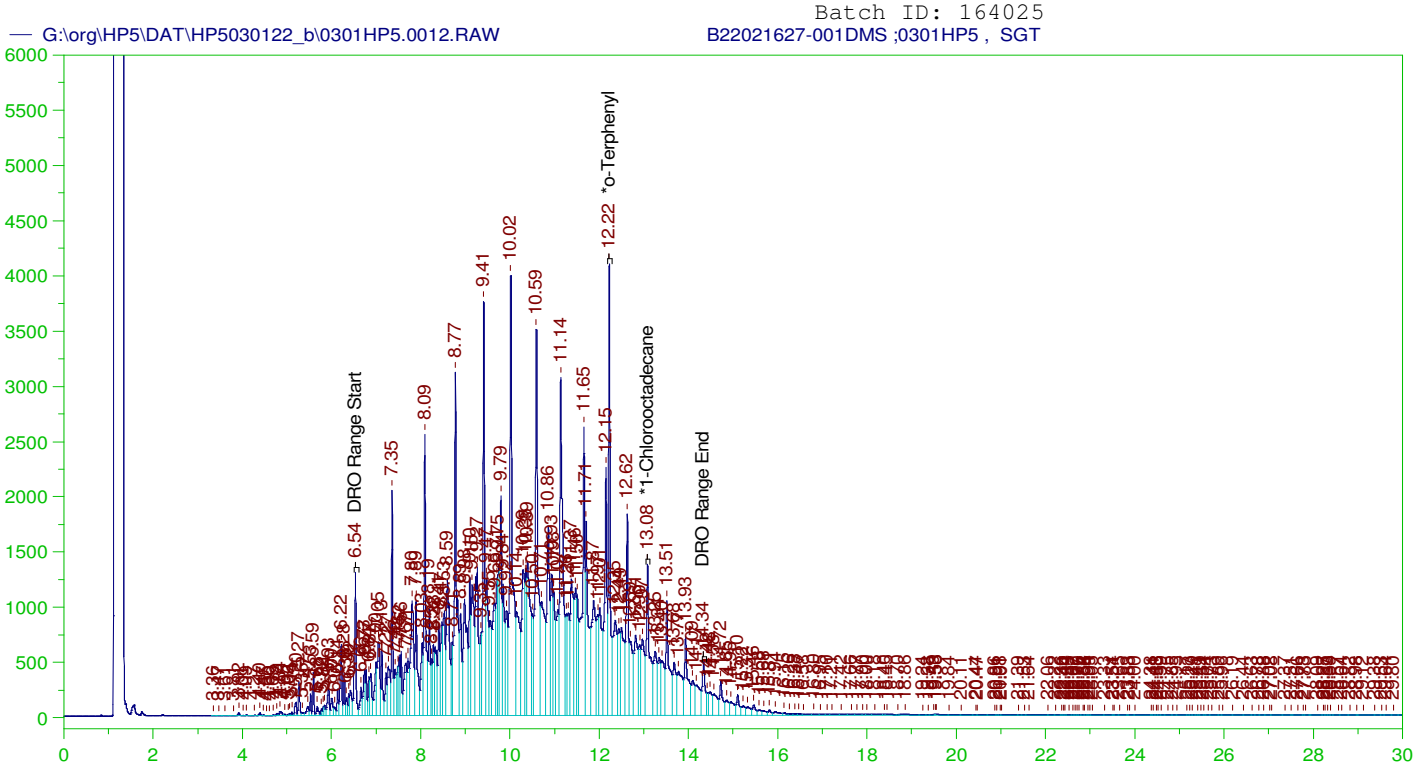
Sample Name: B22021627-001D ;0301HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0011.RAW
Date & Time Acquired: 3/1/2022 4:30:48 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-C24-T.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.225	.19	.171	89.73	-
*1-Chlorooctadecane	13.049	.19	.	.07	-
*#Triacontane	16.313	.19	.084	43.95	-

DRO Area:437804.4 DRO Amount: 1.276058E-02
TEH Area:823822.8 TEH Amount: 2.401177E-02

Batch ID: 164025



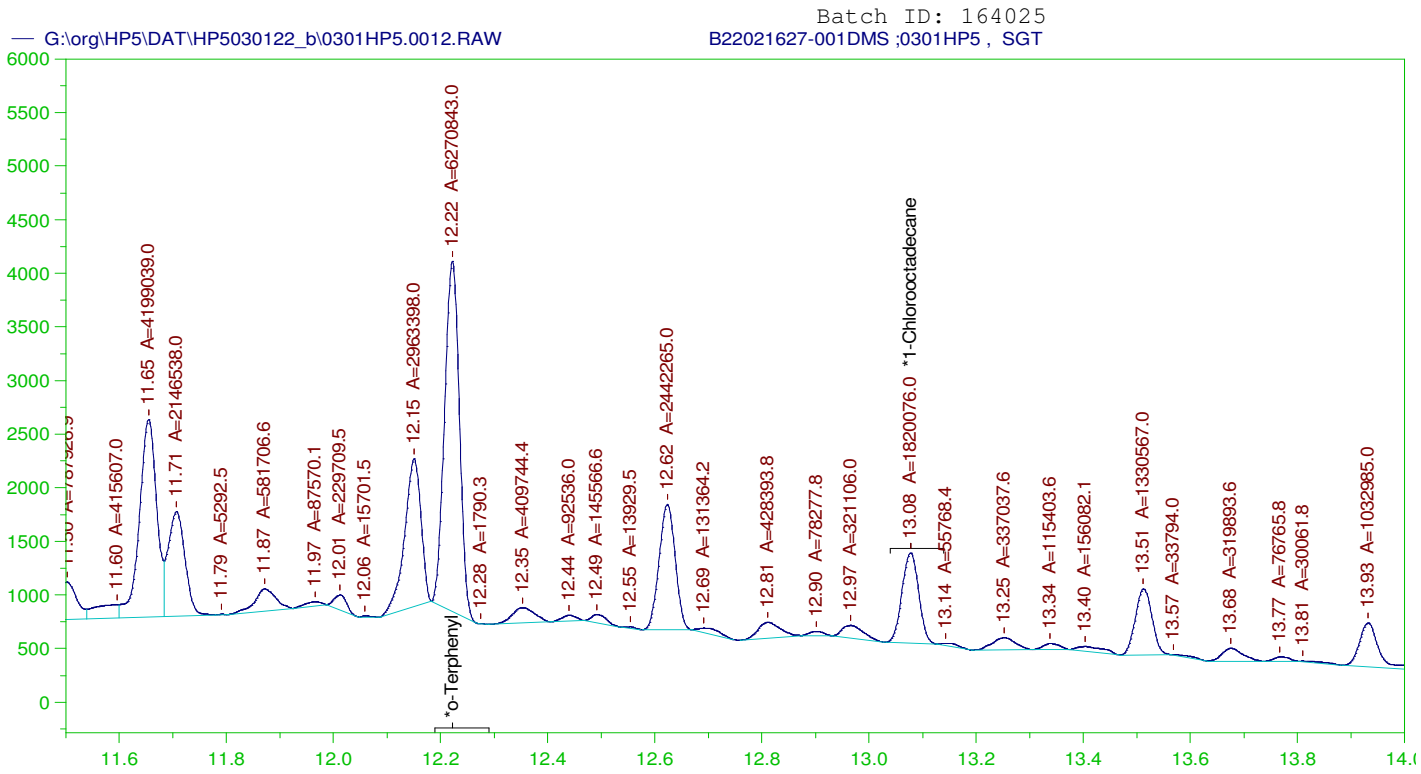
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-001DMS ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0012.RAW
Date & Time Acquired: 3/1/2022 5:13:36 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.19	.292	153.33	-
*1-Chlorooctadecane	13.078	.19	.177	92.74	-

DRO Area:3.700296E+08 DRO Amount: 10.78516
TEH Area:3.928259E+08 TEH Amount: 11.4496

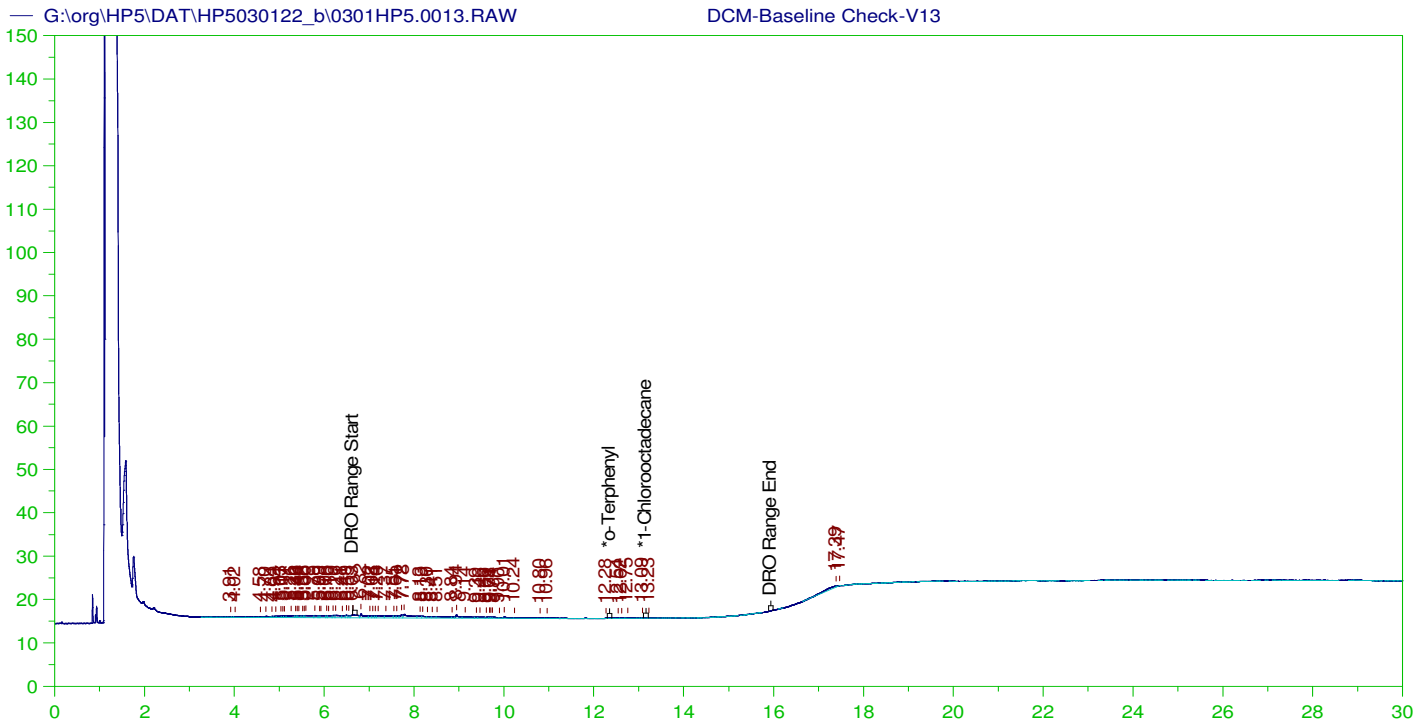


DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: B22021627-001DMS ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0012.RAW
Date & Time Acquired: 3/1/2022 5:13:36 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-C24.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	.19	.162	85.07	-
*1-Chlorooctadecane	13.078	.19	.047	24.69	-

DRO Area:1.681148E+08 DRO Amount: 4.900001
TEH Area:1.777364E+08 TEH Amount: 5.180439



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: DCM-Baseline Check-V13
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0013.RAW
Date & Time Acquired: 3/1/2022 5:56:19 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

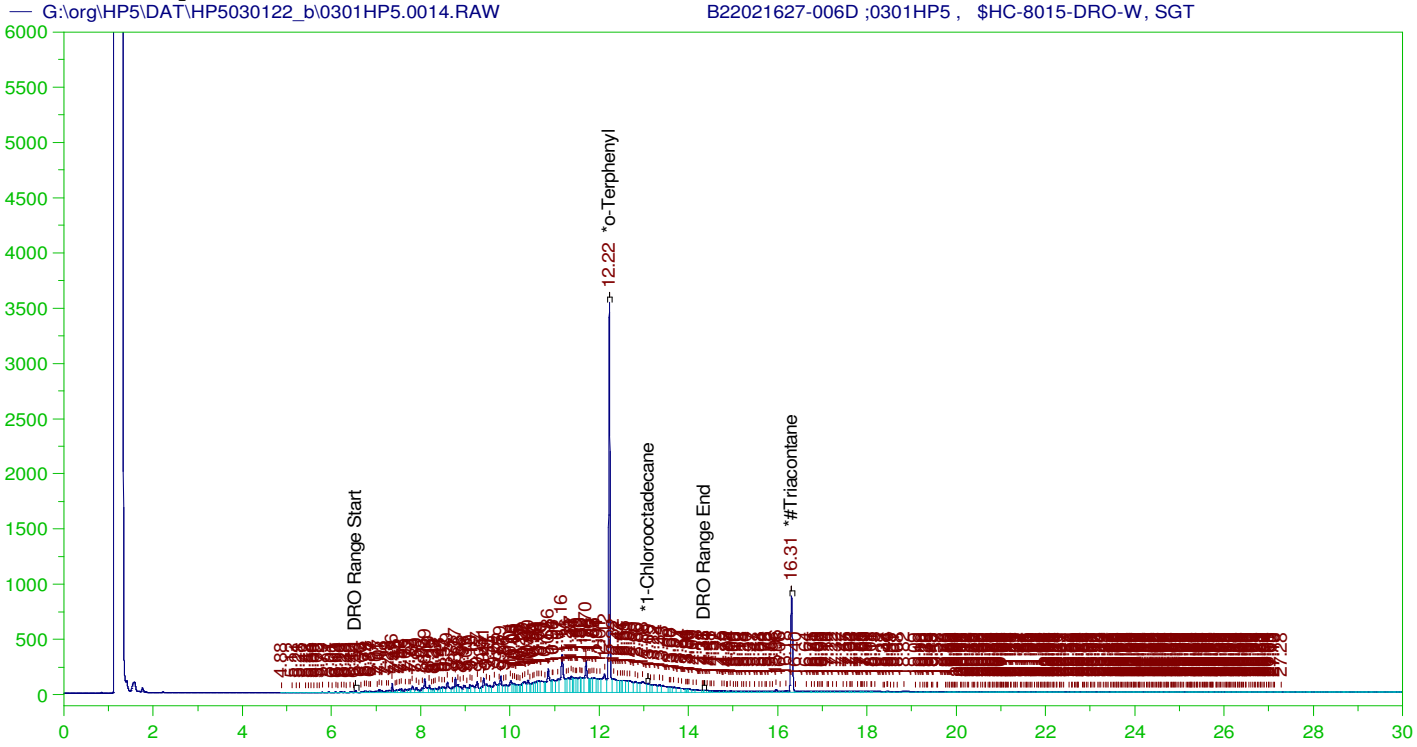
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.63 to 15.99

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

DRO Area:102142.5 DRO Amount: 3.12598
TEH Area:179174.5 TEH Amount: 5.483474

ERH2569 (Sump Adit 3) Batch ID: 164025

G:\org\HP5\DAT\HP5030122_b\0301HP5.0014.RAW B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0014.RAW
Date & Time Acquired: 3/1/2022 6:39:01 PM
Method File: G:\Org\HP5\Methods\DR_8015-030114-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-C24-T.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

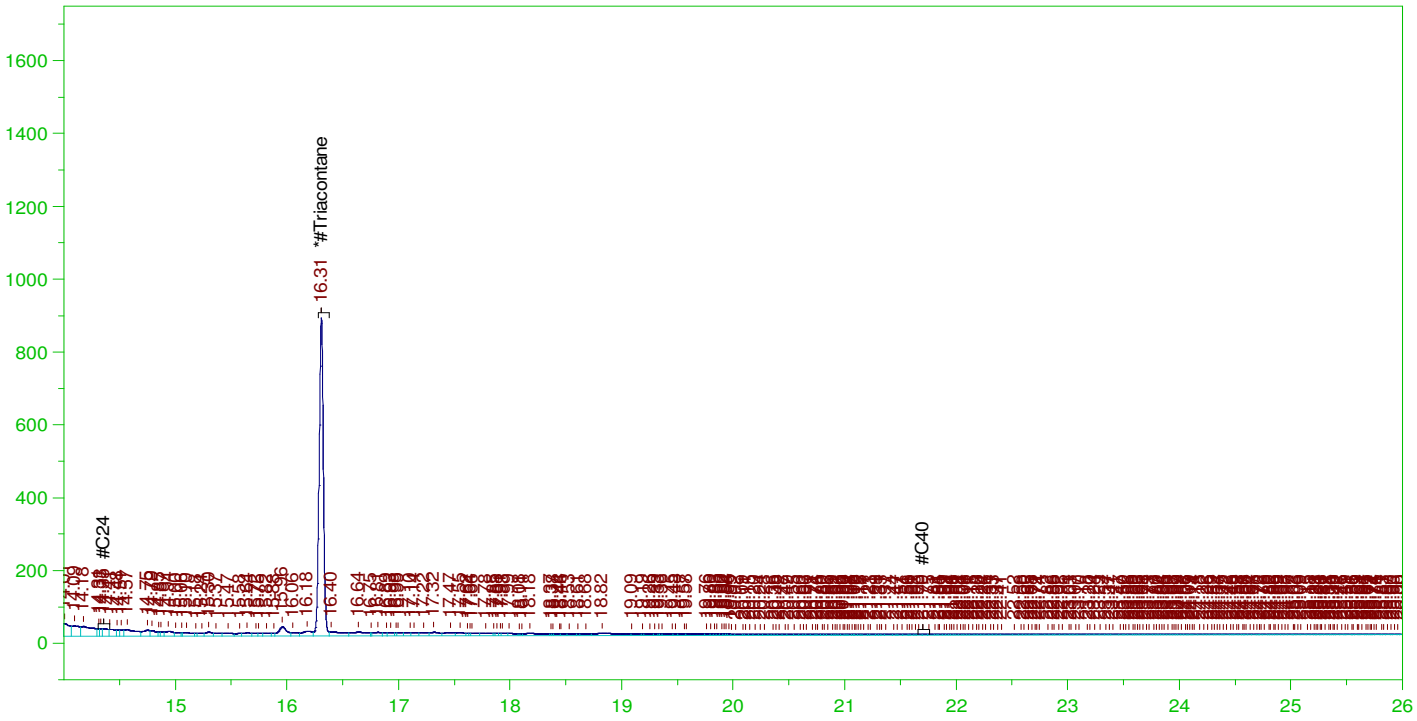
Mean RF for TEH: 32675.36
Rt range for Diesel Range Organics: 6.51 to 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.224	.189	.194	102.94	-
*1-Chlorooctadecane	13.089	.189	.01	5.31	-
*#Triacontane	16.307	.189	.075	39.95	-

DRO Area:3.283126E+07 DRO Amount: 0.9478972
TEH Area:3.657471E+07 TEH Amount: 1.055977

ERH2569 (Sump Adit 3) Batch ID: 164025

G:\org\HP5\DAT\HP5030122_b\0301HP5.0014.RAW B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0014.RAW
Date & Time Acquired: 3/1/2022 6:39:01 PM
Method File: G:\Org\HP5\Methods\D3_OROS-030114-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG_SAMP.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

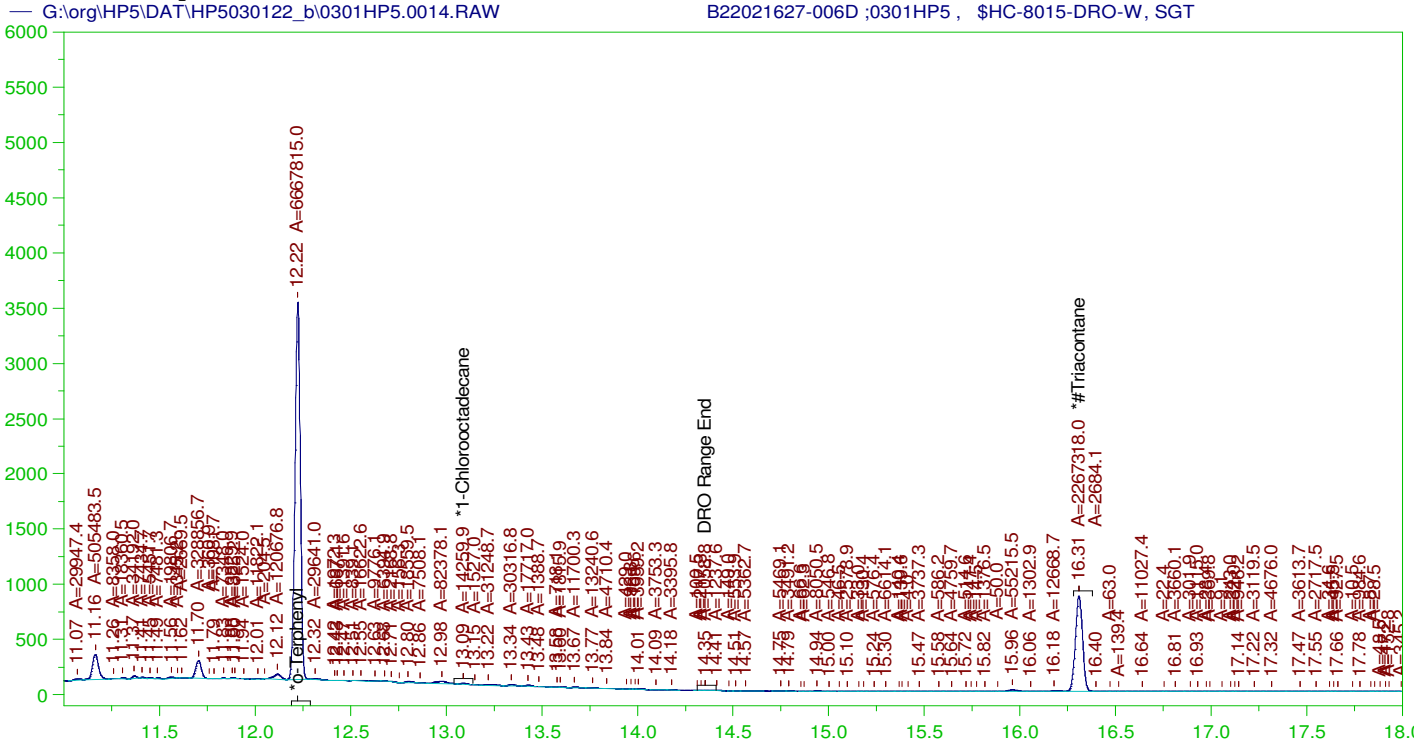
Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.31 to 21.76

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.307	.472	.075	15.98	-

RRO Area:3233399 RRO AMOUNT: 0.1154372

ERH2569 (Sump Adit 3) Batch ID: 164025

G:\org\HP5\DAT\HP5030122_b\0301HP5.0014.RAW B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT



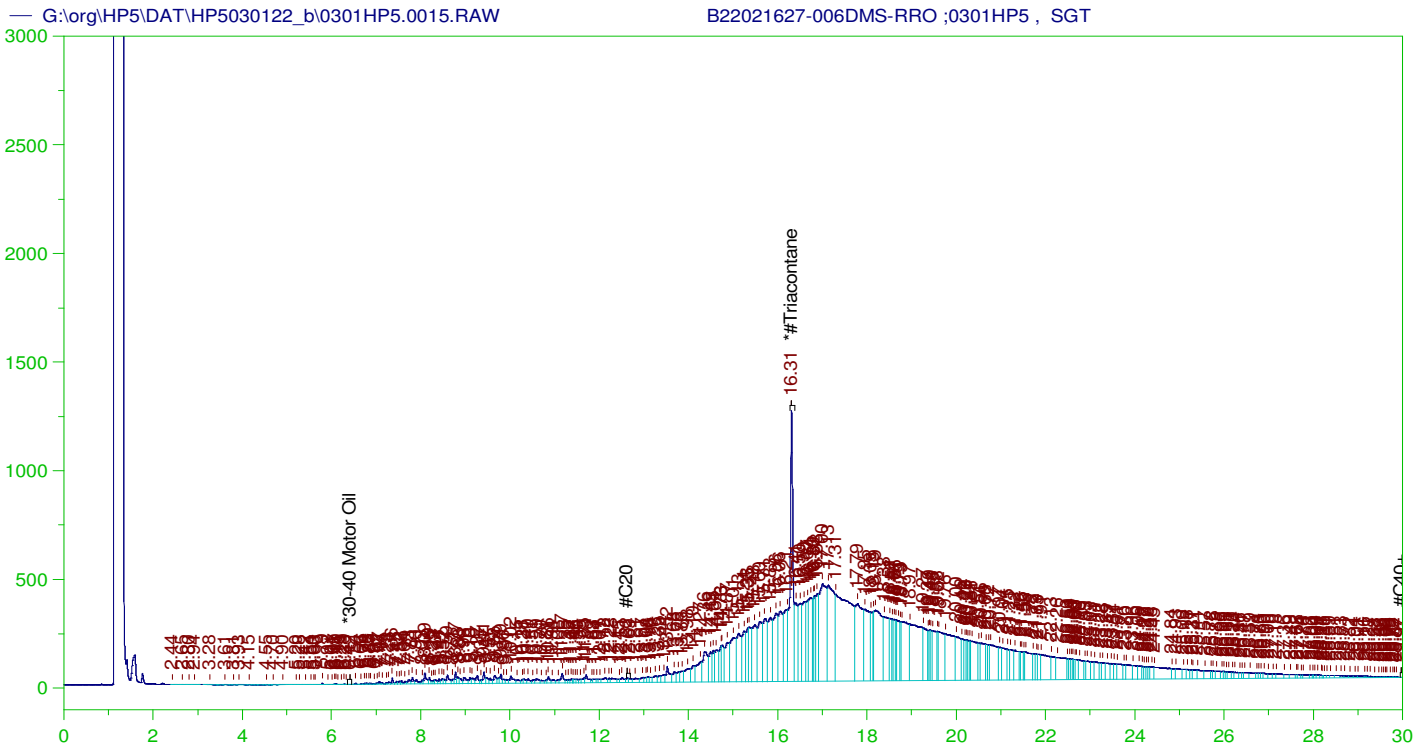
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0014.RAW
Date & Time Acquired: 3/1/2022 6:39:01 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.224	.189	.171	90.45	-
*1-Chlorooctadecane	13.089	.189	.	.19	-
*#Triacontane	16.307	.189	.072	38.25	-

DRO Area:6191413 DRO Amount: 0.1787572
TEH Area:6520698 TEH Amount: 0.1882642



RESIDUAL RANGE ORGANICS CHROMATOGRAM

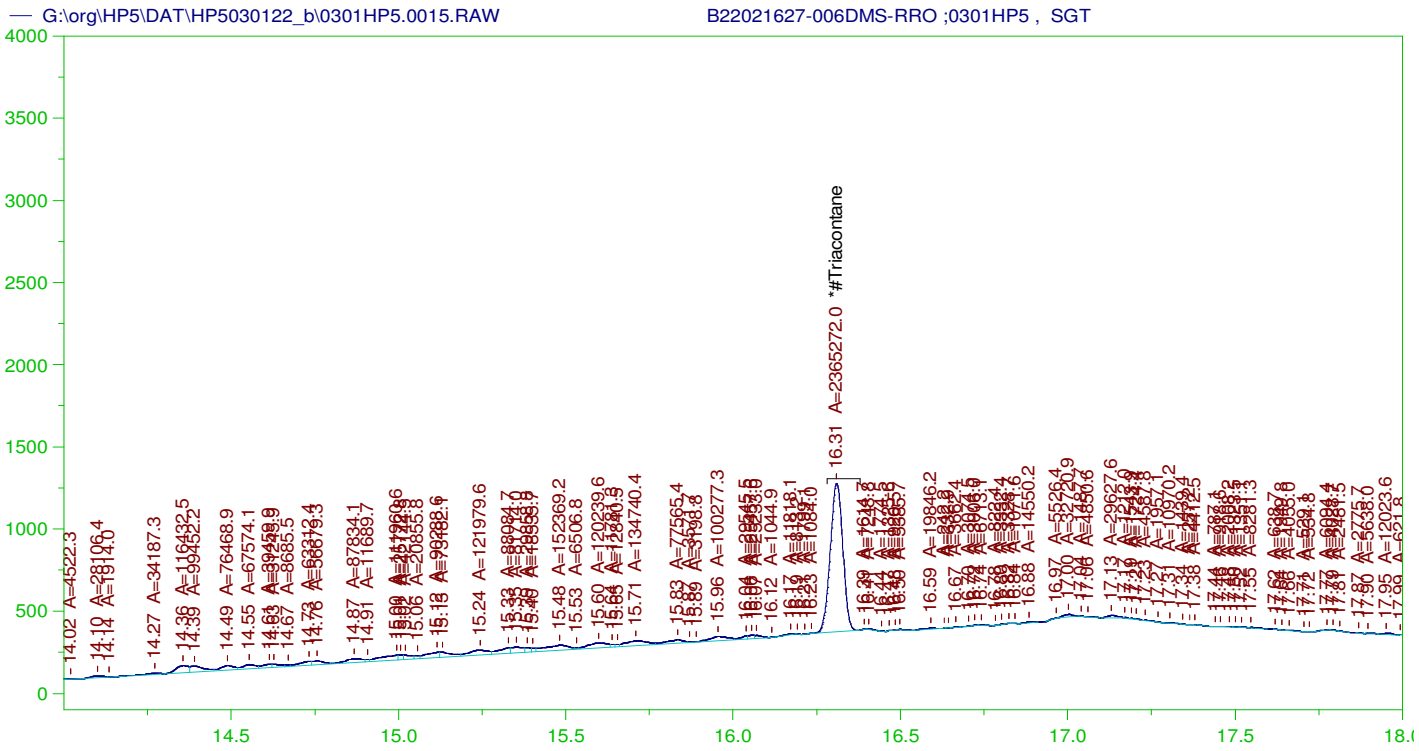
Sample Name: B22021627-006DMS-RRO ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0015.RAW
Date & Time Acquired: 3/1/2022 7:21:49 PM
Method File: G:\Org\HP5\Methods\D3_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.CAL
Sample Weight: 1060 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.309	.472	.172	36.41	-

~~RRO~~ TEH(Oil Range) Area:1.346265E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4.80637

AMN 03/02/2022



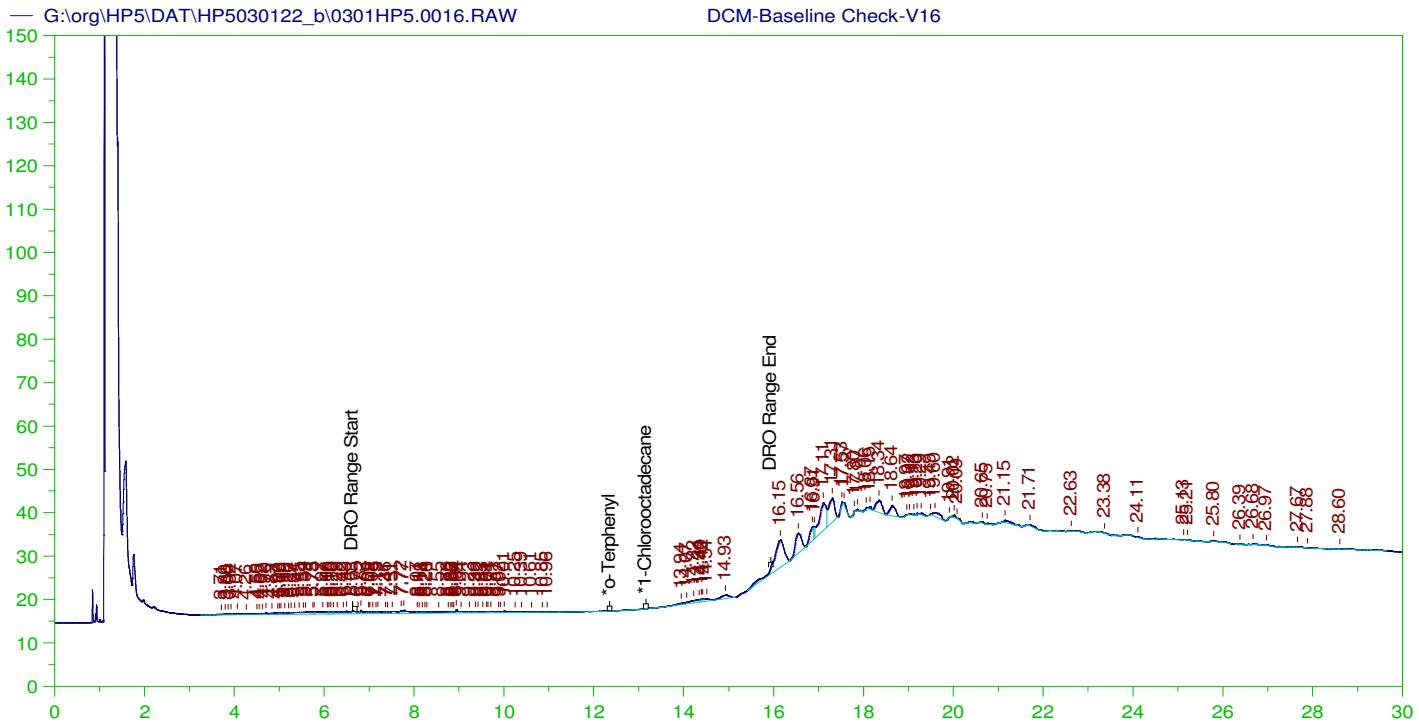
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22021627-006DMS-RRO ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0015.RAW
Date & Time Acquired: 3/1/2022 7:21:49 PM
Method File: G:\Org\HP5\Methods\DS_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.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: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.309	.472	.075	15.96	-

RRO Area:3029783 RRO AMOUNT: 0.1081678



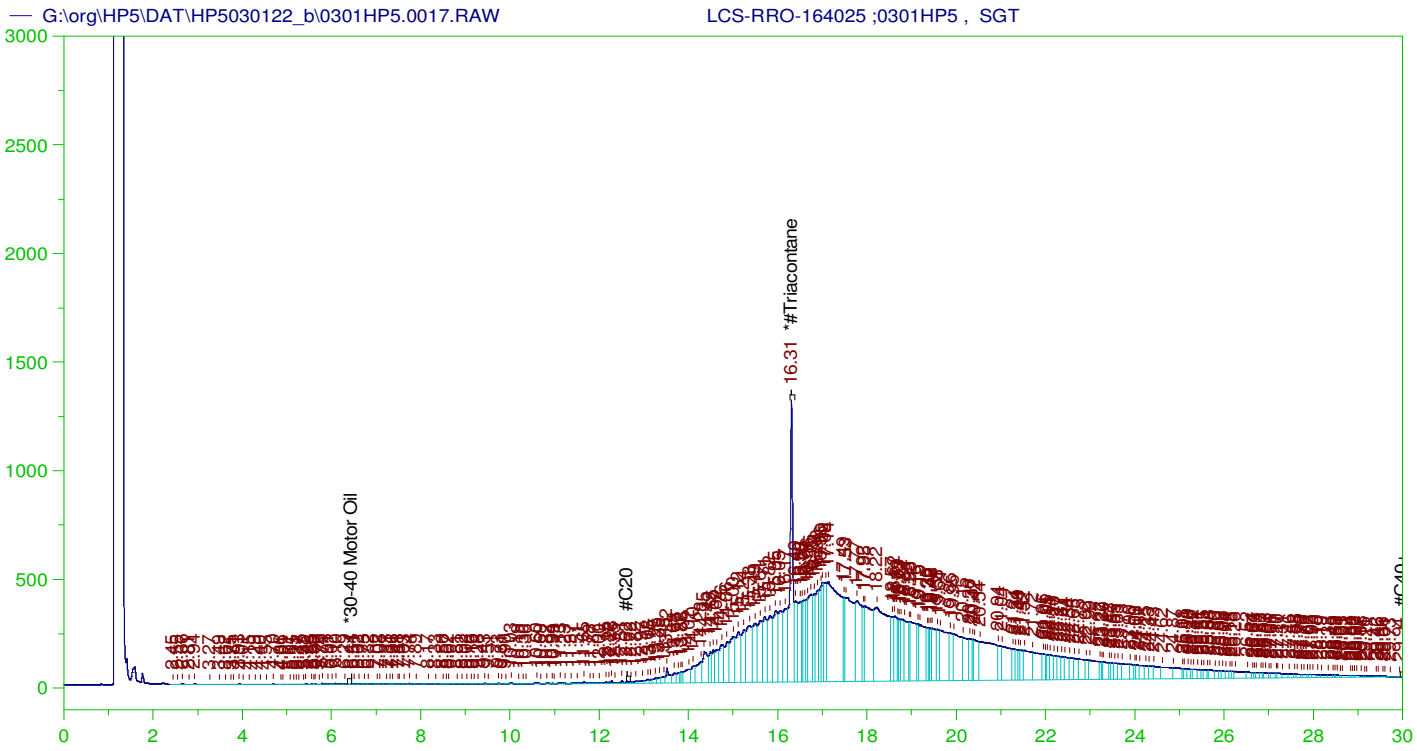
DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: DCM-Baseline Check-V16
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0016.RAW
Date & Time Acquired: 3/1/2022 8:04:54 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	29.608	200.	.	.	-
*1-Chlorooctadecane	29.608	200.	.	.	-

DRO Area:114637.2 DRO Amount: 3.508367
TEH Area:590782.6 TEH Amount: 18.08037



RESIDUAL RANGE ORGANICS CHROMATOGRAM

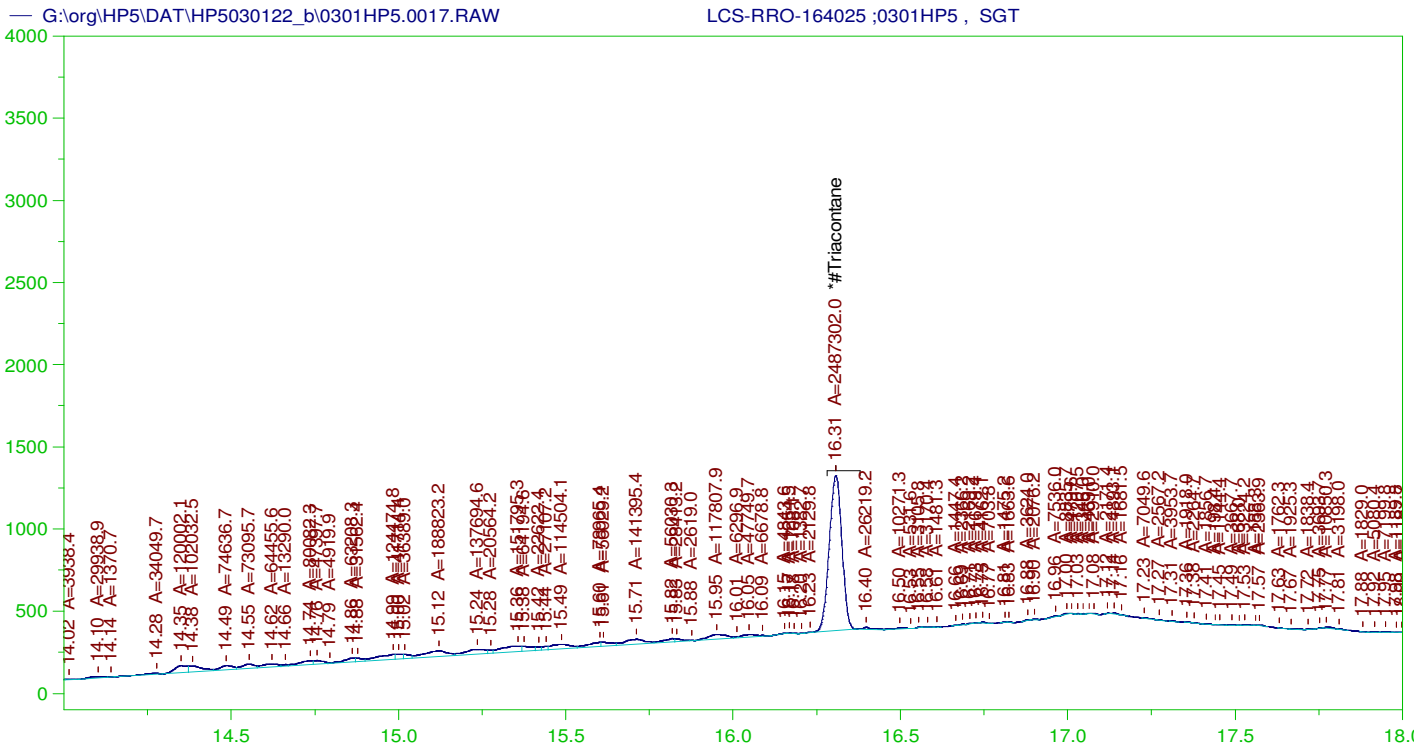
Sample Name: LCS-RRO-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0017.RAW
Date & Time Acquired: 3/1/2022 8:47:46 PM
Method File: G:\Org\HP5\Methods\D3_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.307	.5	.193	38.57	-

~~RRO~~ TEH(Oil Range) Area:1.394701E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5.278051

AMN 03/02/2022



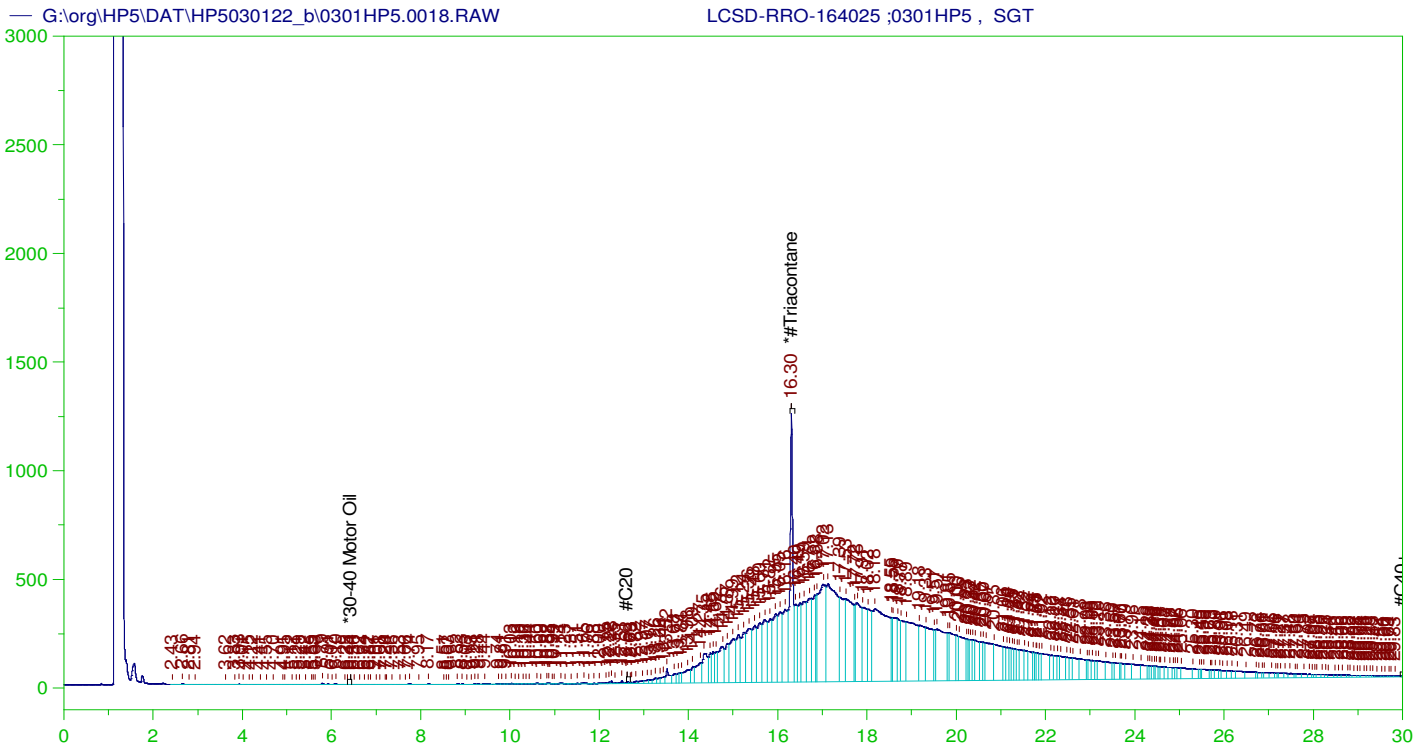
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCS-RRO-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0017.RAW
Date & Time Acquired: 3/1/2022 8:47:46 PM
Method File: G:\Org\HP5\Methods\DS_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.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: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.307	.5	.084	16.79

RRO Area:3002700 RRO AMOUNT: 0.1136329



RESIDUAL RANGE ORGANICS CHROMATOGRAM

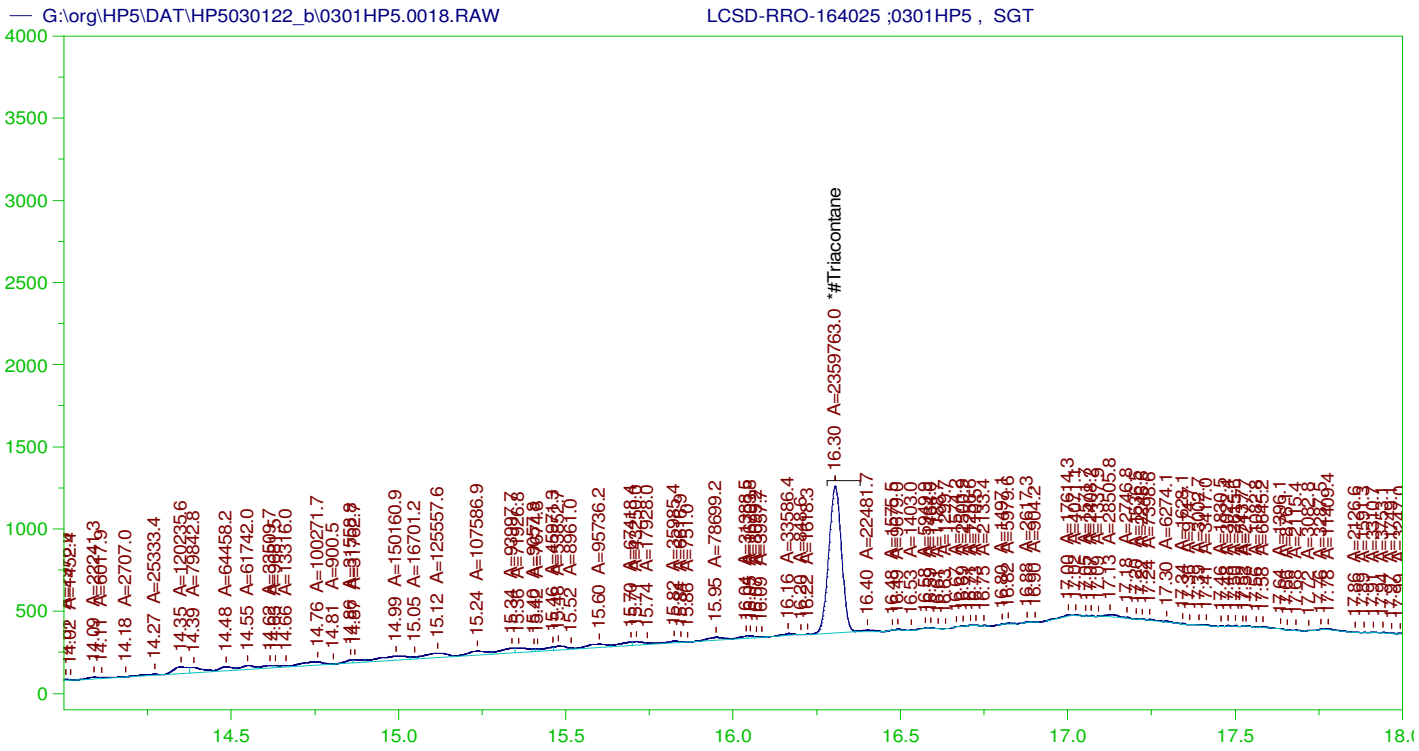
Sample Name: LCSD-RRO-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0018.RAW
Date & Time Acquired: 3/1/2022 9:30:49 PM
Method File: G:\Org\HP5\Methods\D3_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for ~~Residual~~ TEH(Oil Range) Organics Calculations: 26424.55
Rt range for ~~Residual~~ TEH(Oil Range) Organics: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.305	.5	.171	34.25	-

~~RRO~~ TEH(Oil Range) Area:1.377232E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 5.211939

AMN 03/02/2022



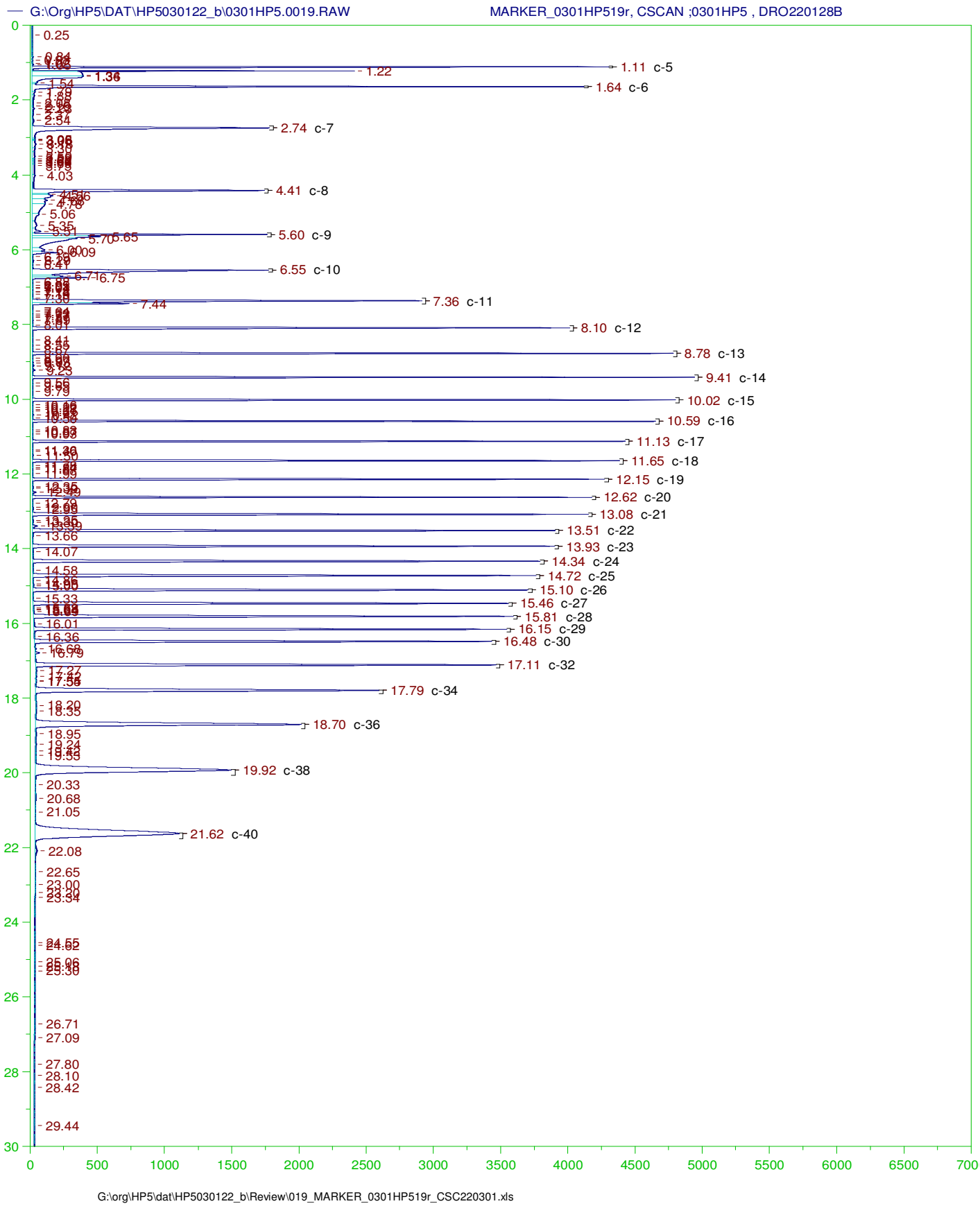
RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: LCSD-RRO-164025 ;0301HP5 , SGT
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0018.RAW
Date & Time Acquired: 3/1/2022 9:30:49 PM
Method File: G:\Org\HP5\Methods\DS_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.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: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.305	.5	.08	15.92	-

RRO Area:2524149 RRO AMOUNT: 9.552287E-02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MARKER_0301HP519r, CSCAN ;0301HP5 , DRO220128B
1.11 c-5
1.64 c-6
2.74 c-7
4.41 c-8
5.60 c-9
6.55 c-10
7.36 c-11
8.10 c-12
8.78 c-13
9.41 c-14
10.02 c-15
10.59 c-16
11.13 c-17
11.65 c-18
12.15 c-19
12.62 c-20
13.08 c-21
13.51 c-22
13.93 c-23
14.34 c-24
14.72 c-25
15.10 c-26
15.46 c-27
15.81 c-28
16.15 c-29
16.48 c-30
17.11 c-32
17.79 c-34
18.70 c-36
19.92 c-38
21.62 c-40
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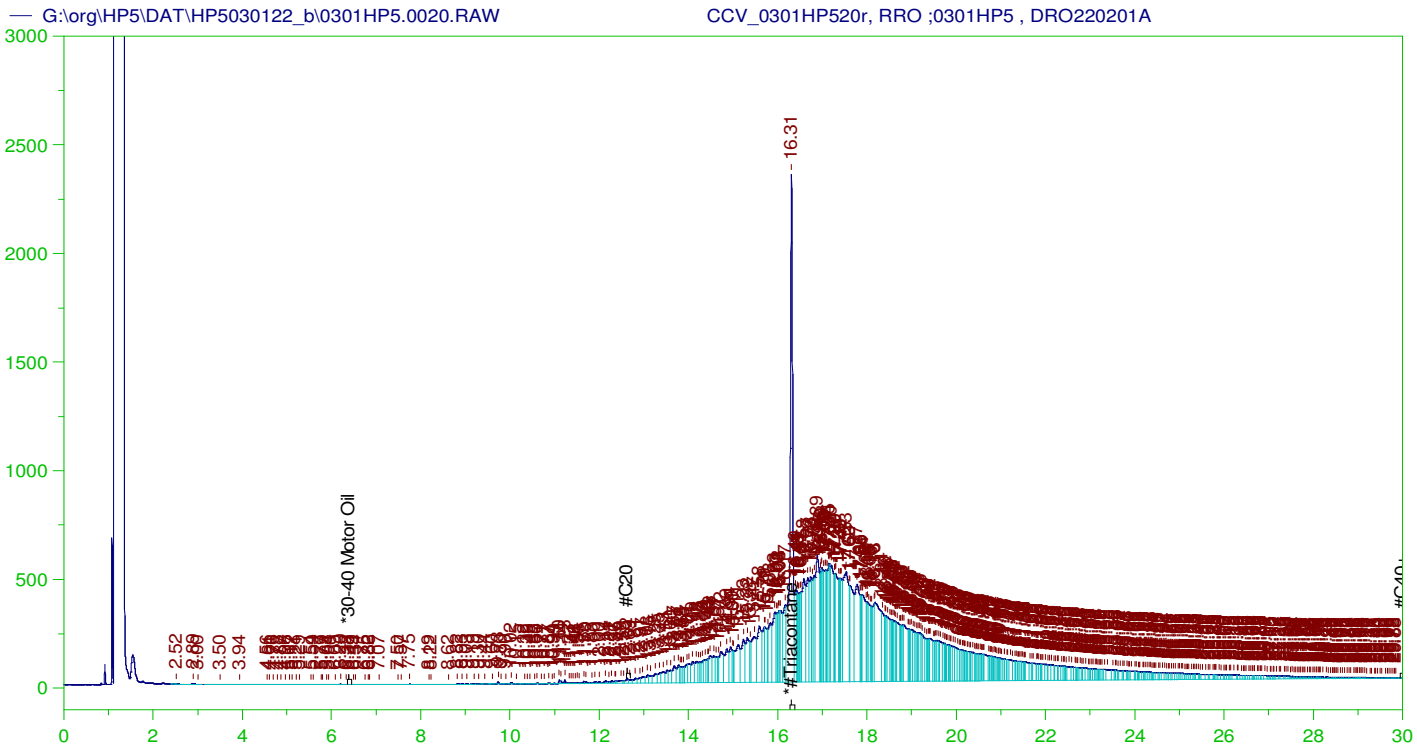


RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0301HP520r, RRO ;0301HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0020.RAW
Date & Time Acquired: 3/1/2022 10:56:59 PM
Method File: G:\Org\HP5\Methods\DC_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.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: 12.6 to 30.05

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.307	500.	308.16	61.63	-

~~RRO~~ TEH(Oil Range) Area:1.27249E+08 ~~RRO~~ TEH(Oil Range) AMOUNT: 4815.56

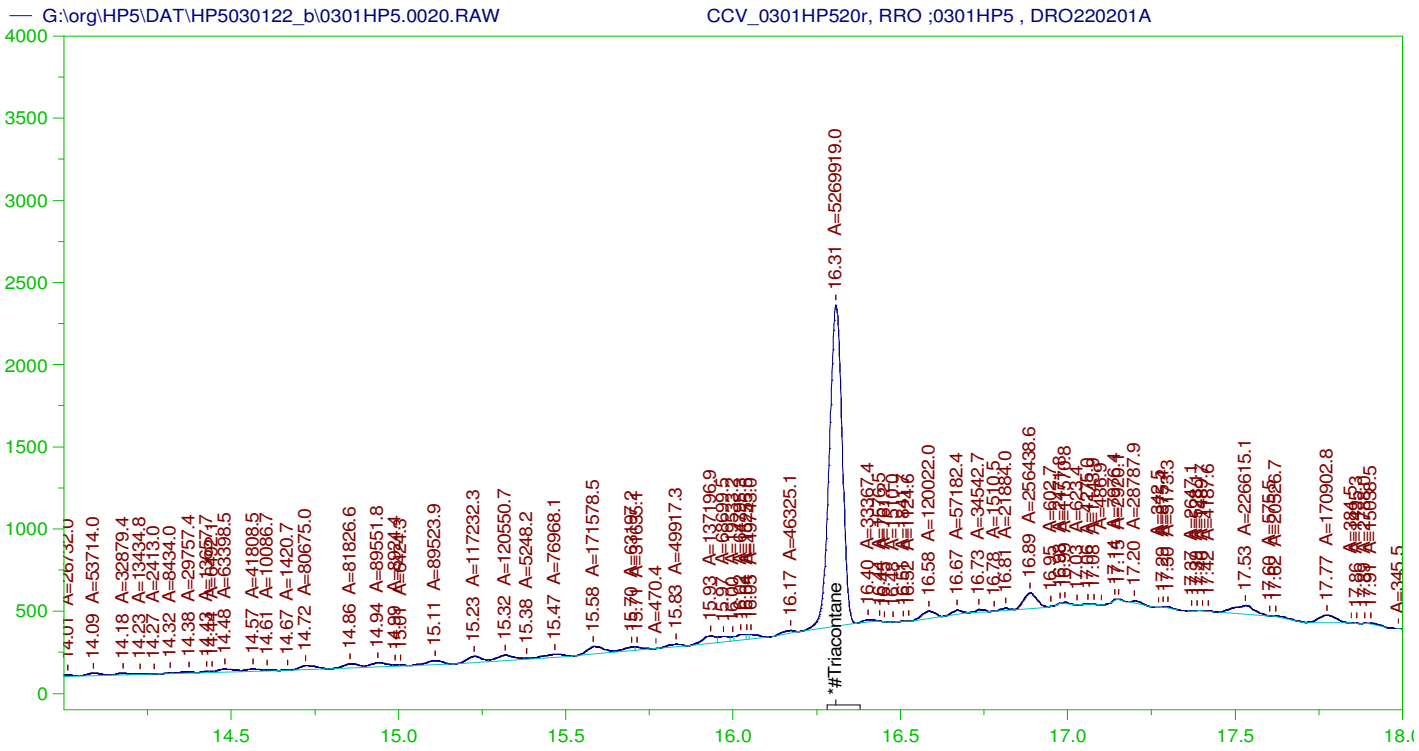
CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.025	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.307	200.	308.16	154.08	75-125

AMN 03/02/2022

G:\org\HP5\dat\HP5030122_b\Review\020_CCV_0301HP520r_DC_ORO-BG-L%.xls



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: CCV_0301HP520r, RRO ;0301HP5 , DRO220201A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0020.RAW
Date & Time Acquired: 3/1/2022 10:56:59 PM
Method File: G:\Org\HP5\Methods\DS_ORO-BG-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BG.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: 12.6 to 30.05

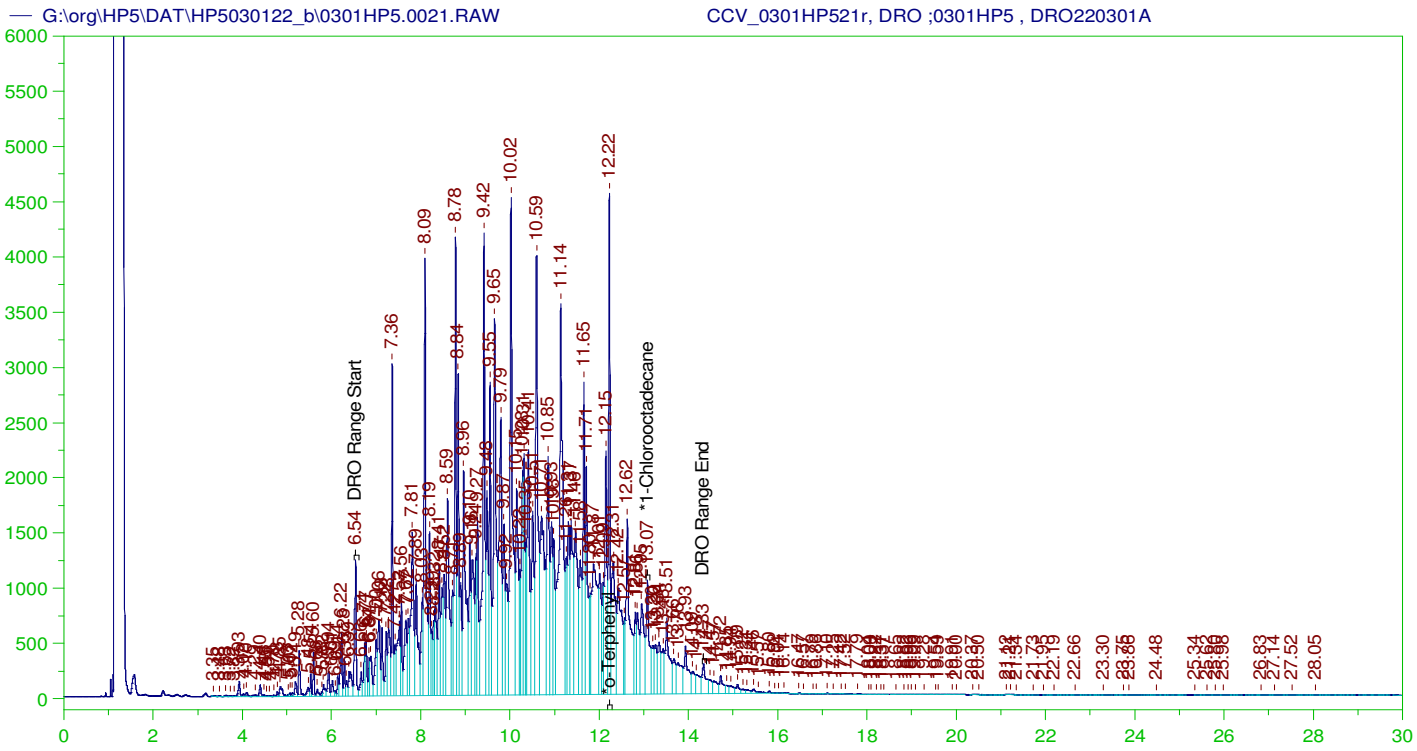
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.307	500.	177.821	35.56	-

RRO Area:3394872 RRO AMOUNT: 128.4742

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0020.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
*30-40 Motor Oil	5000.	.025	.	75-125

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*#Triacontane	16.307	200.	177.821	88.91	75-125



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0301HP521r, DRO ;0301HP5 , DRO220301A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0021.RAW
Date & Time Acquired: 3/1/2022 11:40:07 PM
Method File: G:\Org\HP5\Methods\DC_8015-C24-JG-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	200.	301.652	150.83	-
*1-Chlorooctadecane	13.075	200.	142.284	71.14	-

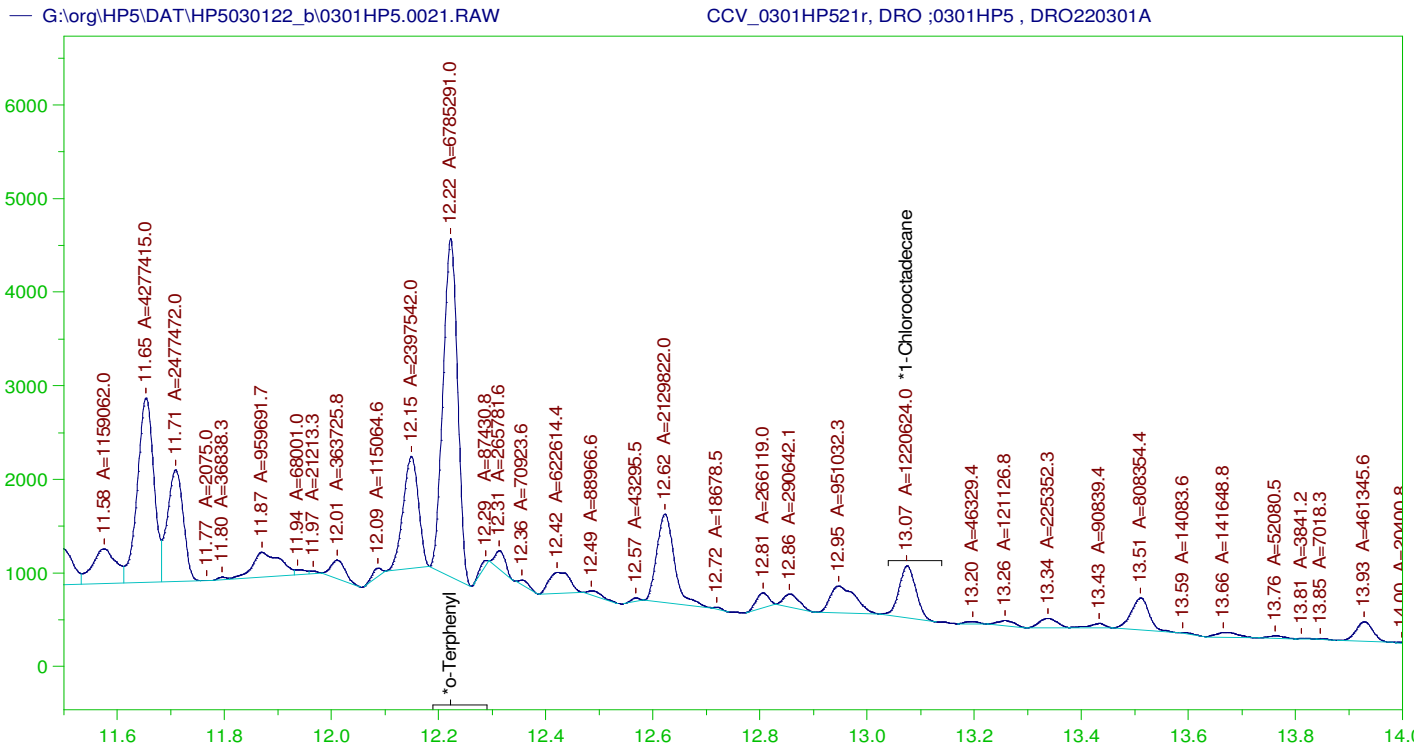
DRO Area:4.423719E+08 DRO Amount: 13538.39
TEH Area:4.57433E+08 TEH Amount: 13999.33

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0021.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	13999.33	93.33	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.222	200.	301.652	150.83	85-115
*1-Chlorooctadecane	13.075	200.	142.284	71.14	85-115

G:\org\HP5\dat\HP5030122_b\Review\021_CCV_0301HP521r_DC_8015-C24-JG-L%.xls



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT
Sample Name: CCV_0301HP521r, DRO ;0301HP5 , DRO220301A
Raw File: G:\org\HP5\DAT\HP5030122_b\0301HP5.0021.RAW
Date & Time Acquired: 3/1/2022 11:40:07 PM
Method File: G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JG-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 14.41

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.222	200.	184.093	92.05	-
*1-Chlorooctadecane	13.075	200.	33.117	16.56	-

DRO Area:2.2735E+08 DRO Amount: 6957.842
TEH Area:2.374445E+08 TEH Amount: 7266.775

CONTINUING CALIBRATION REPORT: G:\org\HP5\DAT\HP5030122_b\0301HP5.0021.RAW

COMPOUND	ACTUAL(NG)	MEASURED(NG)	%RECOVERY	LIMITS
TOTAL DRO	15000.	7266.78	48.45	85-115

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	LIMITS
*o-Terphenyl	12.222	200.	184.093	92.05	85-115
*1-Chlorooctadecane	13.075	200.	33.117	16.56	85-115

Write Sequence / Data File	Insert Entries(Have the first cell for entries selected) / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP5\DAT\HP5022822_b\0228HP5.01r	DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5022822_b\0228HP5.02r	DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5022822_b\0228HP5.03r	MARKER_0228HP503r, CSCAN ;0228HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220228.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5022822_b\0228HP5.04r	CCV_0228HP504r, RRO ;0228HP5 , 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\HP5022822_b\0228HP5.05r	CCV_0228HP505r, DRO 8015;0228HP5 , DRO220211A	G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 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\HP5022822_b\0228HP5.06r	DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5022822_b\0228HP5.07r	DCM-Baseline Check-V07	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5022822_b\0228HP5.08r	LCS-164025 ;0228HP5 ,	G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set baseline All Valleys on placed at 12.01 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5022822_b\0228HP5.09r	LCSD-164025 ;0228HP5 ,	G:\Org\HP5\Methods\D3_8015-022809-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline with peak width adjusted and an Set Baseline Alll Valleys on placed at 28.71 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\HP5022822_b\0228HP5.10r	MB-164025 ;0228HP5 ,	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-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 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\HP5022822_b\0228HP5.11r	B22021627-011D ;0228HP5 , $HC-8015-DRO-W,	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-L#.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. 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\HP5022822_b\0228HP5.12r	B22021627-001D ;0228HP5 , $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-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the 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\HP5022822_b\0228HP5.13r	B22021627-001DMS ;0228HP5 ,	G:\Org\HP5\Methods\D3_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set baseline All Valleys on placed at 12.01 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5022822_b\0228HP5.14r	DCM-Baseline Check-V14	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5022822_b\0228HP5.15r	B22021627-006D ;0228HP5 , $HC-8015-DRO-W,	G:\Org\HP5\Methods\D3_8015-022815-JFb-L%.met G:\Org\HP5\Methods\D3_OROS-022815-BF-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JFb-L#.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 with a Set Baseline All Valleys on at 26.23 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\HP5022822_b\0228HP5.16r	B22021627-006DMS-RRO ;0228HP5 ,	G:\Org\HP5\Methods\D3_ORO-022816-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 with peak width adjusted. 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\HP5022822_b\0228HP5.17r	LCS-RRO-164025 ;0228HP5 ,	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\HP5022822_b\0228HP5.18r	LCSD-RRO-164025 ;0228HP5 ,	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\HP5022822_b\0228HP5.19r	MARKER_0228HP519r, CSCAN ;0228HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220228.met	1	1	1	1	0	No integrations

G:\org\HP5\DAT\HP5022822_b\0228HP5.20r	CCV_0228HP520r, RRO ;0228HP5 , 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\HP5022822_b\0228HP5.21r	CCV_0228HP521r, DRO 8015;0228HP5 , DRO220211A	G:\Org\HP5\Methods\DC_8015-C24-JFb-L%.met G:\Org\HP5\Methods\DS_8015-C24-JFb-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 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.

Ann Nebel

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Ann Nebel
Date: 2022.03.02 13:02:09 -07:00

Write Sequence / Data File	Insert Entries(Have the first cell for entries selected) / Sample Name	Method	Weight	Dil Factor	Amt Inj.	IS	Cal ID	Manual Integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.01r	DCM-Baseline Check-V01	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.02r	DCM-Baseline Check-V02	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.03r	MARKER_0301HP503r, CSCAN ;0301HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220301.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.04r	CCV_0301HP504r, RRO ;0301HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-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\HP5030122_b\0301HP5.05r	CCV_0301HP505r, DRO 8015;0301HP5 , DRO220211A	G:\Org\HP5\Methods\DC_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 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\HP5030122_b\0301HP5.06r	DCM-Baseline Check-V06	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.07r	DCM-Baseline Check-V07	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.08r	LCS-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set baseline All Valleys on placed at 12.01 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5030122_b\0301HP5.09r	LCSD-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_8015-030109-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline with peak width adjusted. 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\HP5030122_b\0301HP5.10r	MB-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\DR_8015-C24T-JG-L%.met G:\Org\HP5\Methods\DR_OROS-BG-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met	1000	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 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\HP5030122_b\0301HP5.11r	B22021627-001D ;0301HP5 , $HC-8015-DRO-W, SGT	G:\Org\HP5\Methods\DR_8015-030111-JG-L%.met G:\Org\HP5\Methods\D3_OROS-030111-BG-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24), C24-C40, and Total Extractable Hydrocarbons (TEH) is the hydrocarbon response with reference to the baseline with Set Baseline Now at 23.92 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\HP5030122_b\0301HP5.12r	B22021627-001DMS ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1050	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Surrogates are integrated using a valley to valley integration using Set baseline All Valleys on placed at 12.01 minutes and X-axis scaling showing surrogate peak from 11.5-14 minutes.
G:\org\HP5\DAT\HP5030122_b\0301HP5.13r	DCM-Baseline Check-V13	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.14r	B22021627-006D ;0301HP5 , $HC-8015-DRO-W, SGT	G:\Org\HP5\Methods\DR_8015-030114-JG-L%.met G:\Org\HP5\Methods\D3_OROS-030114-BG-L%.MET G:\Org\HP5\Methods\DS_8015-C24T-JG-L#.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 with Set Baseline Now at 27.91 minutes and peak width adjusted. Surrogates are integrated using a valley to valley integration using Set baseline All Valleys on at 10.78 minutes and X-axis scaling showing surrogate peak from 11-18 minutes.
G:\org\HP5\DAT\HP5030122_b\0301HP5.15r	B22021627-006DMS-RRO ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-L%.MET	1060	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\HP5030122_b\0301HP5.16r	DCM-Baseline Check-V16	G:\Org\HP5\Methods\DR_8015-JA-LEXP.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.17r	LCS-RRO-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-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\HP5030122_b\0301HP5.18r	LCSD-RRO-164025 ;0301HP5 , SGT	G:\Org\HP5\Methods\D3_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-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\HP5030122_b\0301HP5.19r	MARKER_0301HP519r, CSCAN ;0301HP5 , DRO220128B	g:\org\HP5\Methods\\CSC220301.met	1	1	1	1	0	No integrations
G:\org\HP5\DAT\HP5030122_b\0301HP5.20r	CCV_0301HP520r, RRO ;0301HP5 , DRO220201A	G:\Org\HP5\Methods\DC_ORO-BG-L%.MET G:\Org\HP5\Methods\DS_ORO-BG-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\HP5030122_b\0301HP5.21r	CCV_0301HP521r, DRO ;0301HP5 , DRO220301A	G:\Org\HP5\Methods\DC_8015-C24-JG-L%.met G:\Org\HP5\Methods\DS_8015-C24-JG-L#.met	1	1	1	1	0	The integration of Diesel Range Organics (C10-C24) and Total Extractable Hydrocarbons is the hydrocarbon response with reference to the baseline. Assigned Set Baseline All Valley on at 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.

Ann Nebel

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Ann Nebel
Date: 2022.03.02 13:02:30 -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)
Type: Neat
Prep Date: 11/5/2018
Prep By: Ann Nebel
Exp Date: 11/5/2023
Status: New
Department: dropr
Vendor: conoco
Final Volume: 250 mL
Lot Number:
Balance ID:
Comments: -18 Cloud peak. (Conoco Gas Sation 1240 S. 27th Billings, MT) 2nd Source

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
				11/5/2023

Stock Source	Base Units	Amount Added

Analytical RunID GCFID-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
Type: Neat
Prep Date: 10/14/2019
Prep By: Ann Nebel
Exp Date: 12/31/2024
Status: Open
Department: dropr
Vendor: CSI1
Final Volume: mL
Lot Number: 10809500
Balance ID:
Comments: Date Certified: 12/9/16 ; N-10042-1G; 99.5% purity

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
1-Chlorooctadecane	13192	1	g	12/31/2024

Stock Source	Base Units	Amount Added

Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO201014D
Standard Name: n-Pentacosane
Prep Date: 10/14/2020
Exp Date: 2/28/2025
Department: dropr
Vendor: Chem Service
Lot Number: 9642200
Balance ID:
Comments: C-25; Used in AKDRO Marker

Type: Neat
Prep By: Ann Nebel
Status: New
Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
n-Pentacosane	13193	100	mg	2/28/2025

Stock Source	Base Units	Amount Added

Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211012B
Standard Name: #2 Diesel in Acetone 150,000 ug/mL
Prep Date: 10/12/2021
Exp Date: 11/5/2023
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: #2 Diesel in Acetone 150,000 ug/mL.

Type: Secondary
Prep By: Ann Nebel
Status: New
Final Volume: 25 mL

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

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

Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211025B
Standard Name: Ali Hydro Std 1000ug/mL
Prep Date: 10/25/2021
Exp Date: 11/30/2024
Department: dropr
Vendor: Agilent
Lot Number: 0006643302
Balance ID:
Comments: Ali Hydro Std 1000ug/mL For CCVs.

Type: Primary
Prep By: Ann Nebel
Status: New
Final Volume: mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Aliphatic Hydrocarbon Standard	14434	1	mL	11/30/2024

Stock Source	Base Units	Amount Added

Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

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

Type: Secondary
Prep By: Ann Nebel
Status: Open
Final Volume: 25 mL

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

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

Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211214C
Standard Name: Diesel Fuel #2 50,000 ug/mL in DCM
Prep Date: 12/14/2021
Exp Date: 4/30/2023
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: LRAC6316
Balance ID:
Comments: Diesel Fuel #2 For CCVs.

Type: Primary
Prep By: Ann Nebel
Status: New
Final Volume: mL

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

Stock Source	Base Units	Amount Added
DRO211214C	ug/mL	

Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO211222B
Standard Name: EPH (4) SURR-1000 ug/mL ea. in Hexane
Prep Date: 12/22/2021
Exp Date: 5/31/2022
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments: EPH (4) SURR-1000 ug/mL ea. in Hexane

Type: Secondary
Prep By: Jillian L Bostwick
Status: Open
Final Volume: 50 mL

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

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

Analytical RunID GCFID-HP5-B_220111A Standards Traceability Report

Standard ID: DRO220102D
Standard Name: ALASKA MARKER-200ug/mL
Prep Date: 1/2/2022
Exp Date: 5/31/2022
Department: dropr
Vendor:
Lot Number:
Balance ID:
Comments: ALASKA MARKER w/ C-10, C-25, and OTP/COD. Optimal C-25 is 0.0012g.

Type: Secondary
Prep By: Ann Nebel
Status: New
Final Volume: 5.5 mL

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

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

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

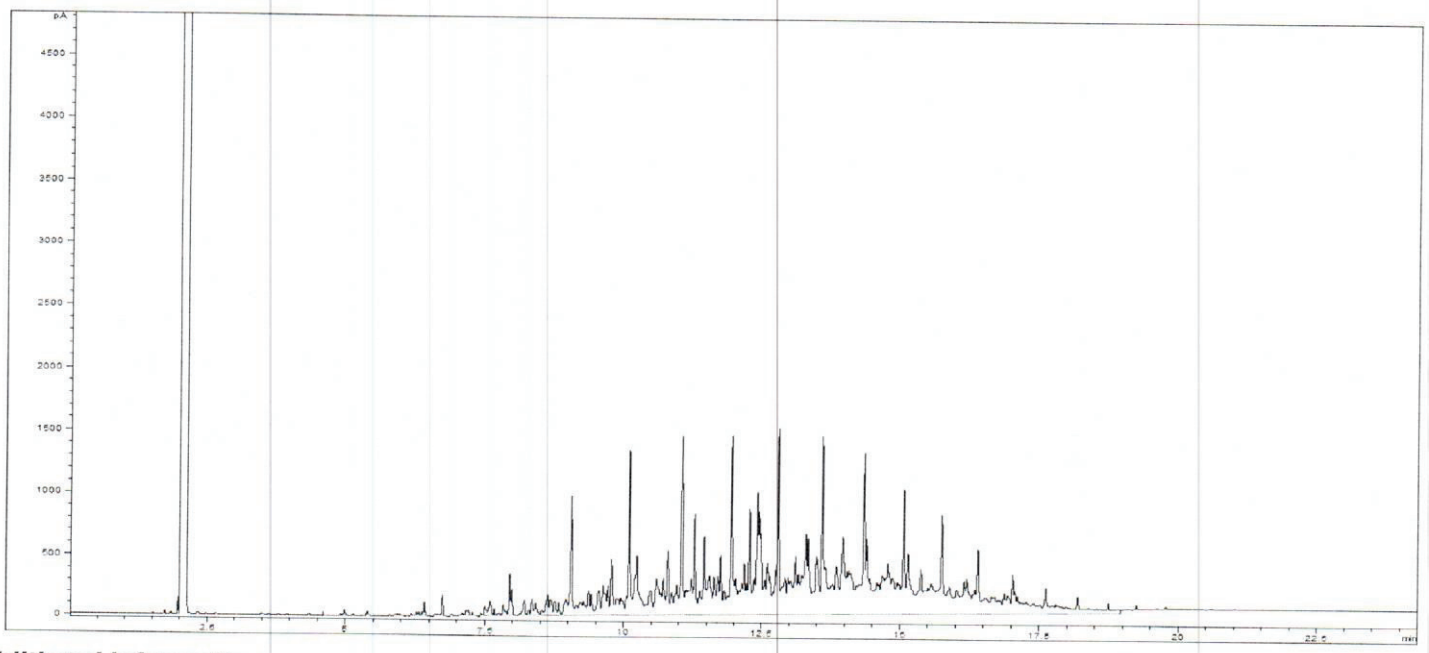
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14623
Opened:
Diesel Fuel No. 2
Expires: 4/30/2023
Rec'd: 12/14/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.0 mL/min
Inlet Temperature: 250 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 10: 1
Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)
Detector: FID
Detector Temperature: 300 °C

ANAB ACCREDITED 1063 ISO 17034 REFERENCE MATERIAL PRODUCER

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

Description

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

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

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

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 preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

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

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

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

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

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

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

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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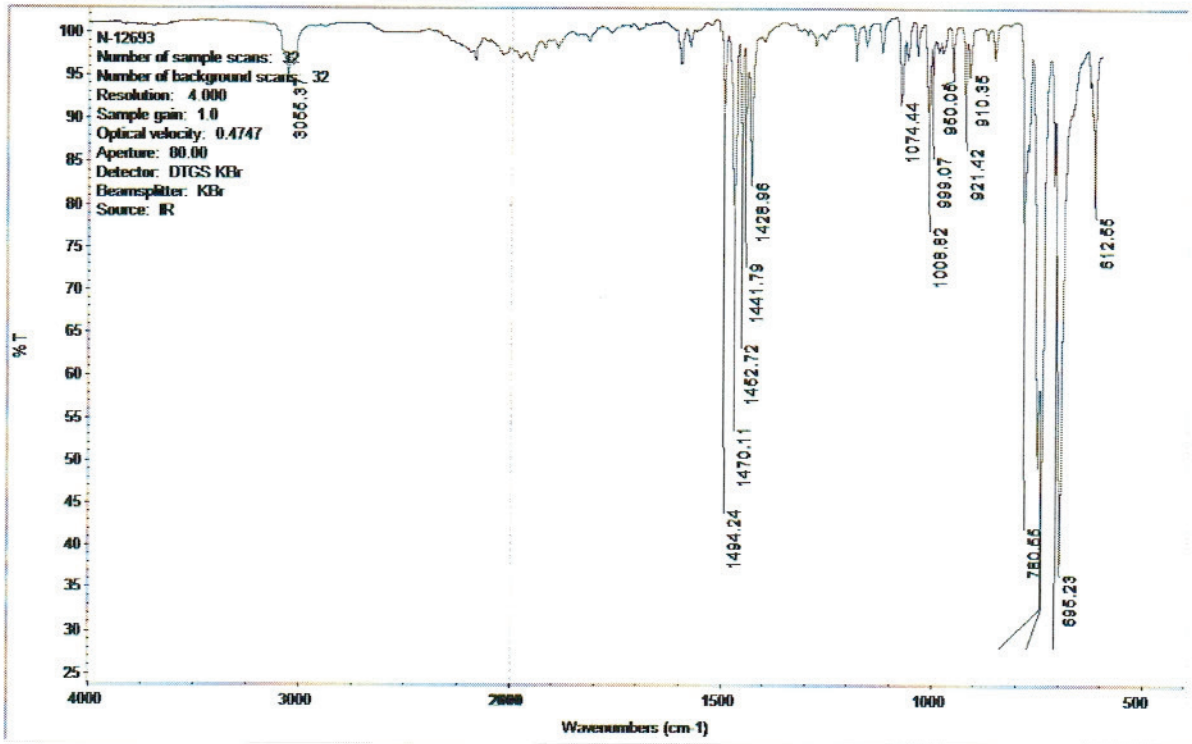
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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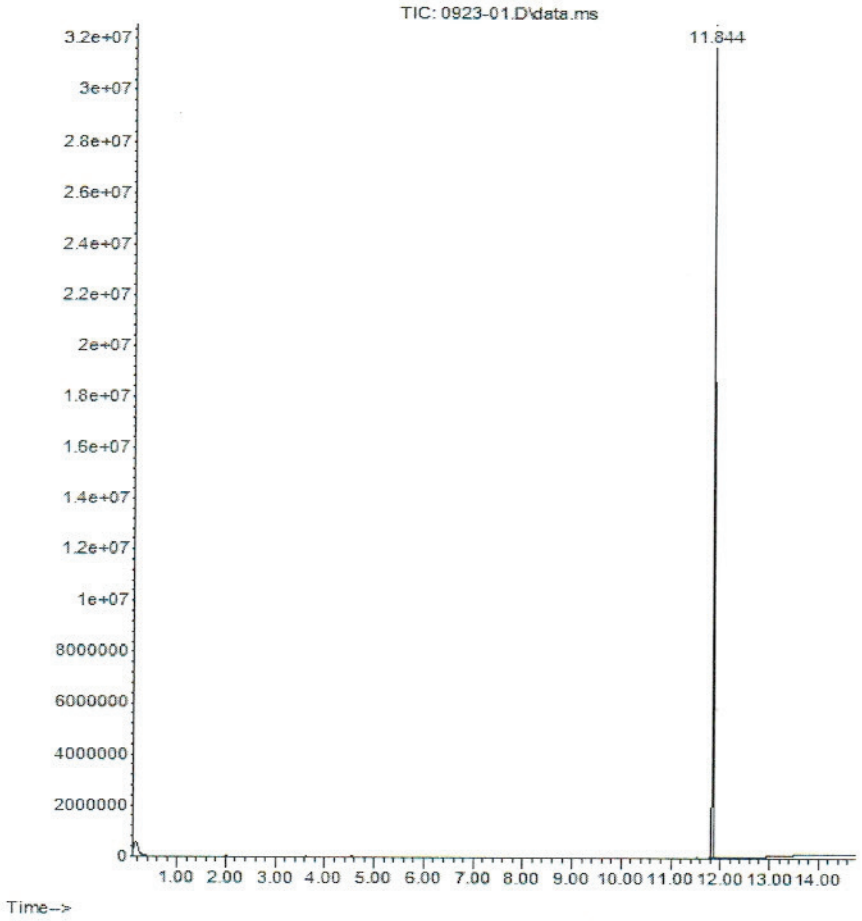
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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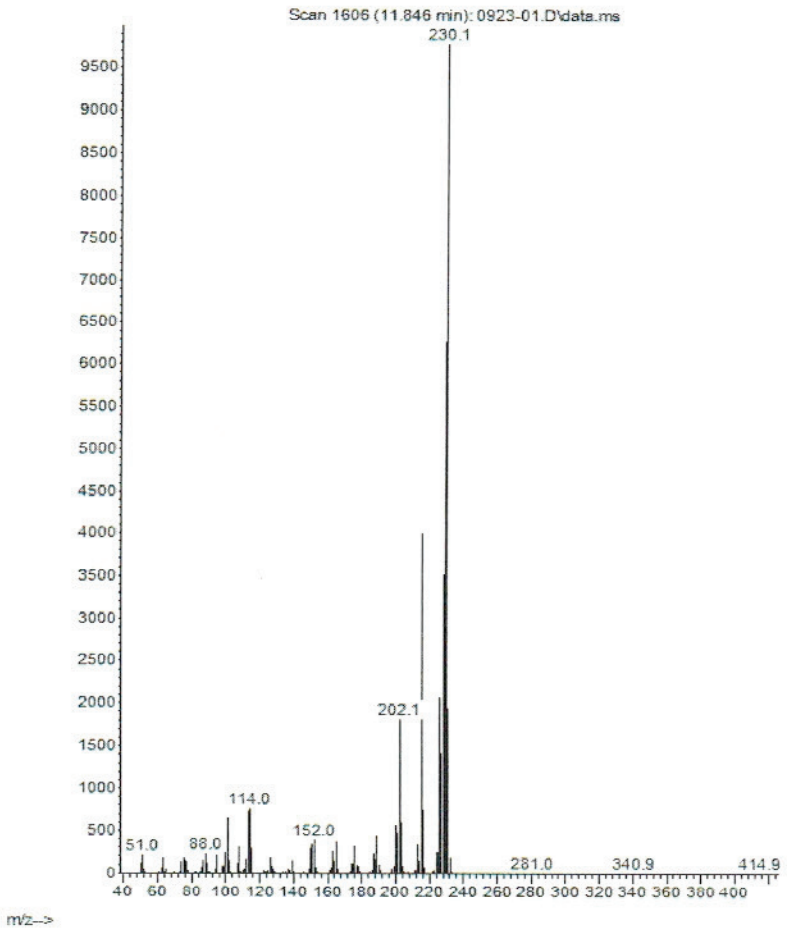
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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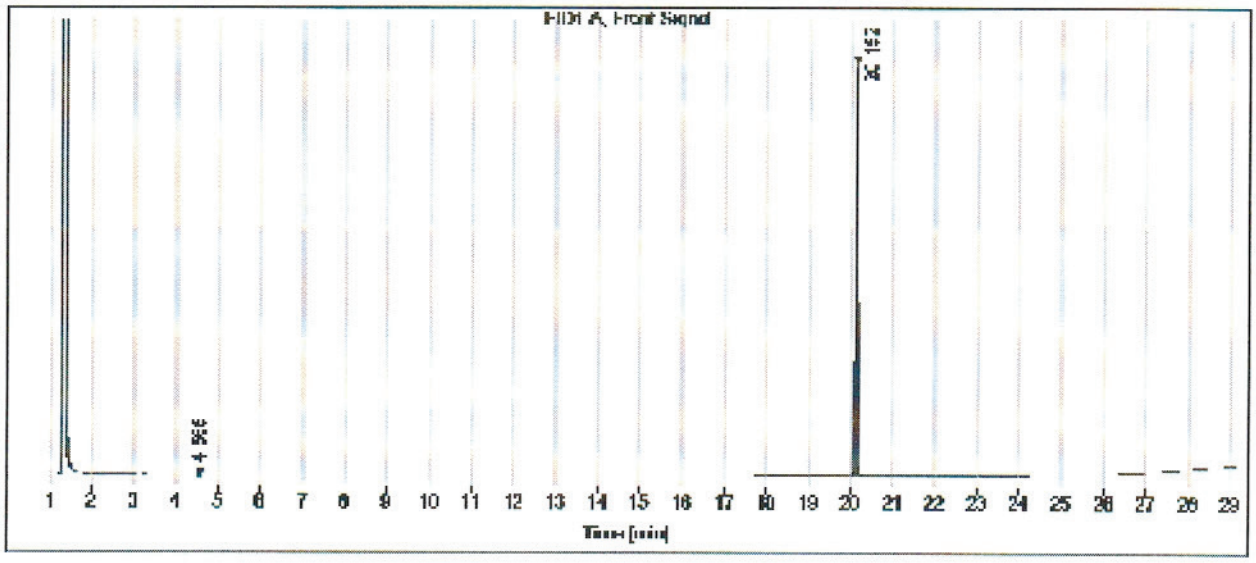
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	[illegible]	[illegible]
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

Analytical RunID GCFID-HP5-B_220111c Standards Traceability Report

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Type: Neat
Prep Date: 4/6/2021
Prep By: Ann Nebel
Exp Date: 4/6/2026
Status: New
Department: dropr
Vendor: Sigma-Aldrich
Final Volume: mL
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Triacontane-d62-98 atom % D	13736		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
Type: Primary
Prep Date: 9/1/2021
Prep By: Jillian L Bostwick
Exp Date: 9/1/2026
Status: New
Department: dropr
Vendor:
Final Volume: mL
Lot Number: F1620C1
Balance ID:
Comments: Used to make 2nd Source Standard for AK103 method.

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

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

Stock Source	Base Units	Amount Added

Analytical RunID GCFID-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	

Ana

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0176667

Description : Residual Range Calibration Standard (RCS)

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

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

Expiration Date : October 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

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

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

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

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

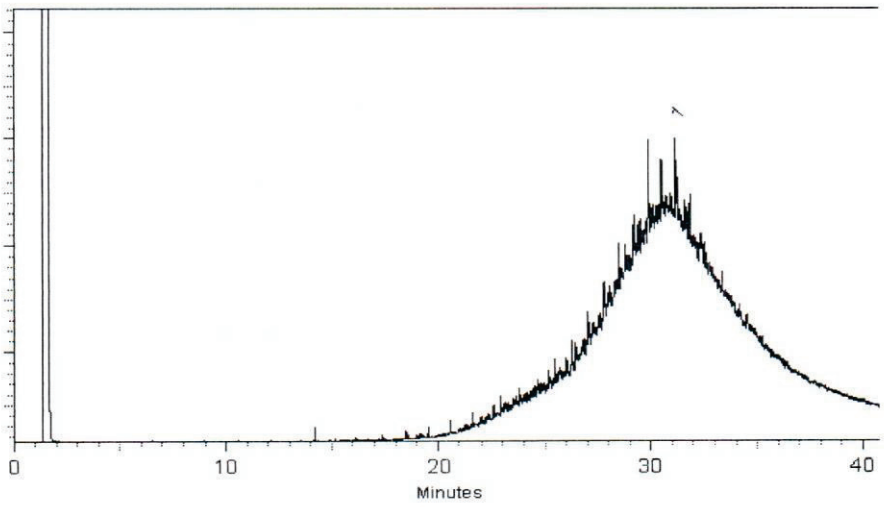
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021 **Balance:** 1128360905

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

SIGMA-ALDRICH®

sigma-aldrich.com

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

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

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

$CD_3(CD_2)_{28}CD_3$

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

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

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Prep Batch 164025 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 164025 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 164025 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 164025 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 164025 Standards Traceability Report

Spike ID: DRO211123B
Spike Name: Triacontane-d62 Surr For AK103 RRO
Prep Date: 11/23/2021
Exp Date: 11/23/2026
Department: dropr
Vendor: Sigma-Aldrich
Lot Number: MBBD2031
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	14545		mL	11/23/2026

Stock Source	Base Units	Amount Added

Prep Batch 164025 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 164025 Standards Traceability Report

Spike ID: DRO220106C
Spike Name: #2 Diesel in Acetone 150,000 ug/mL
Prep Date: 1/6/2022
Exp Date: 11/5/2023
Department: dropr
Vendor:
Lot Number:
Balance ID: BAL-DRO
Comments:

Type: Secondary
Prep By: Ann Nebel
Status: New
Final Volume: 25 mL

Chemical/Solvent Used	Bottle No	Amt	Units	Expires
Acetone DZ509	13553	25	mL	11/5/2023

Stock Source	Base Units	Amount Added
DRO181105A	ug/mL	3.7506 g

Prep Batch 164025 Standards Traceability Report

Spike ID: DRO220112A
Spike Name: 50,000 ug/mL Oil Std for RRO-In DCM
Type: Secondary
Prep Date: 1/12/2022
Prep By: Jillian L Bostwick
Exp Date: 9/1/2026
Status: New
Department: dropr
Vendor:
Final Volume: 25 mL
Lot Number:
Balance ID: BAL-DRO
Comments: .625 g of 30W and 40 W each LCS for Oil range

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 164025 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 164025 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

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CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

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

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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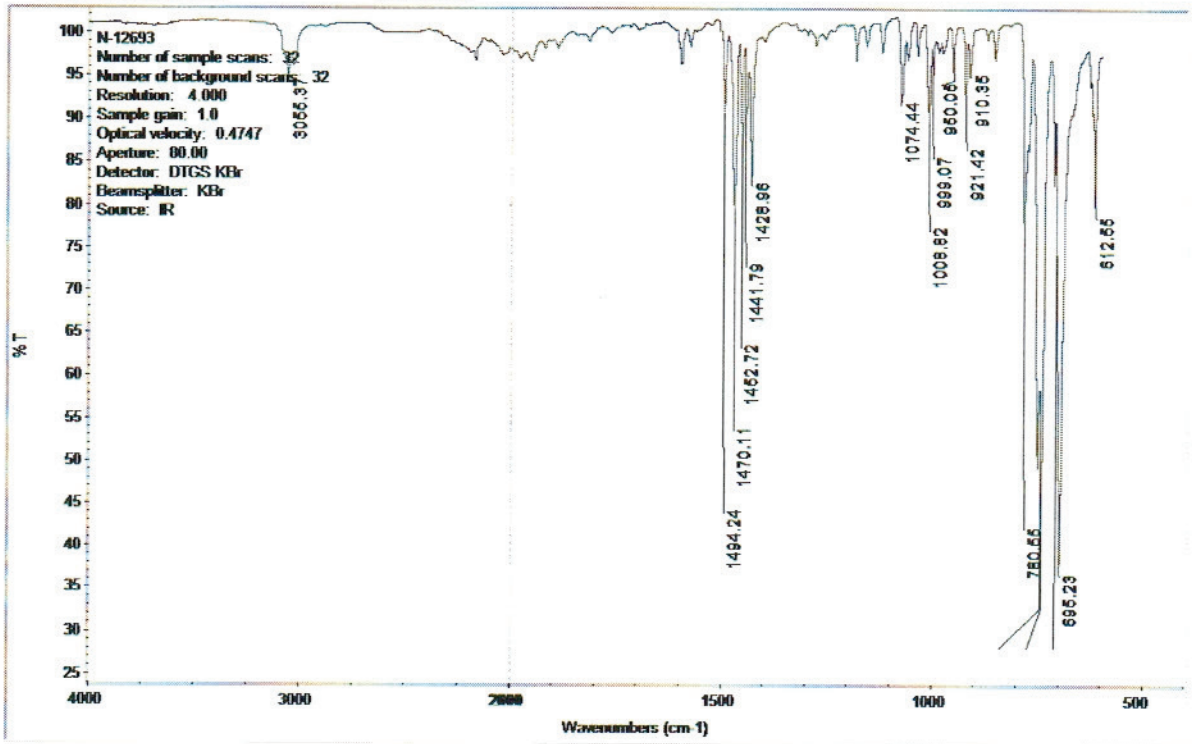
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

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

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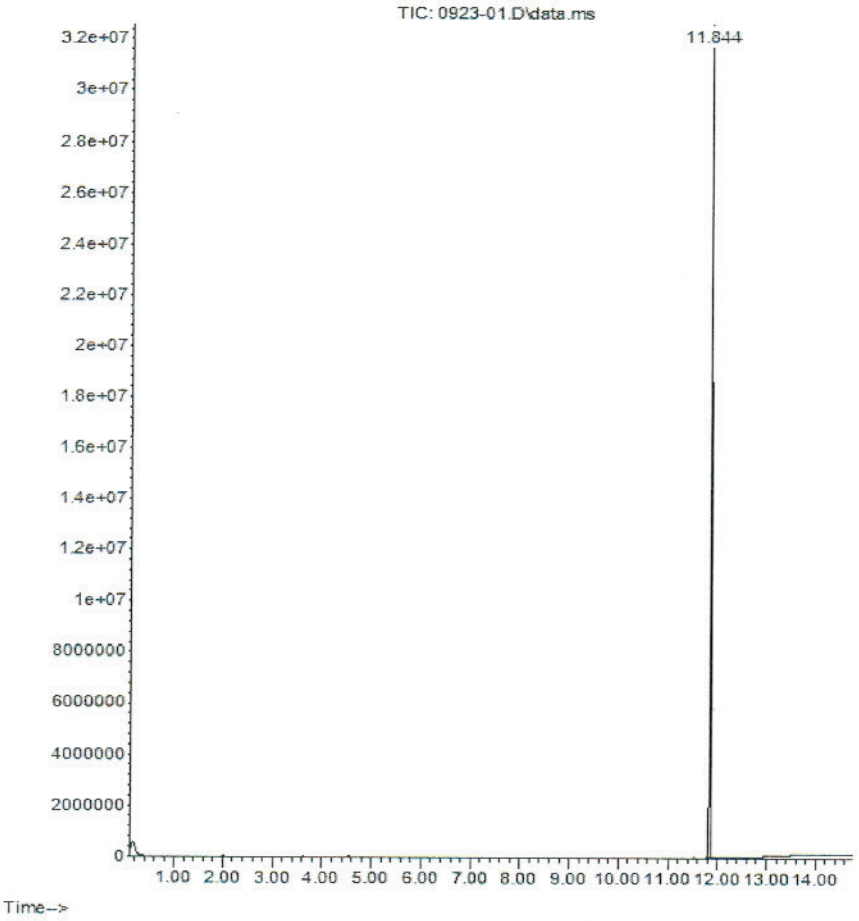
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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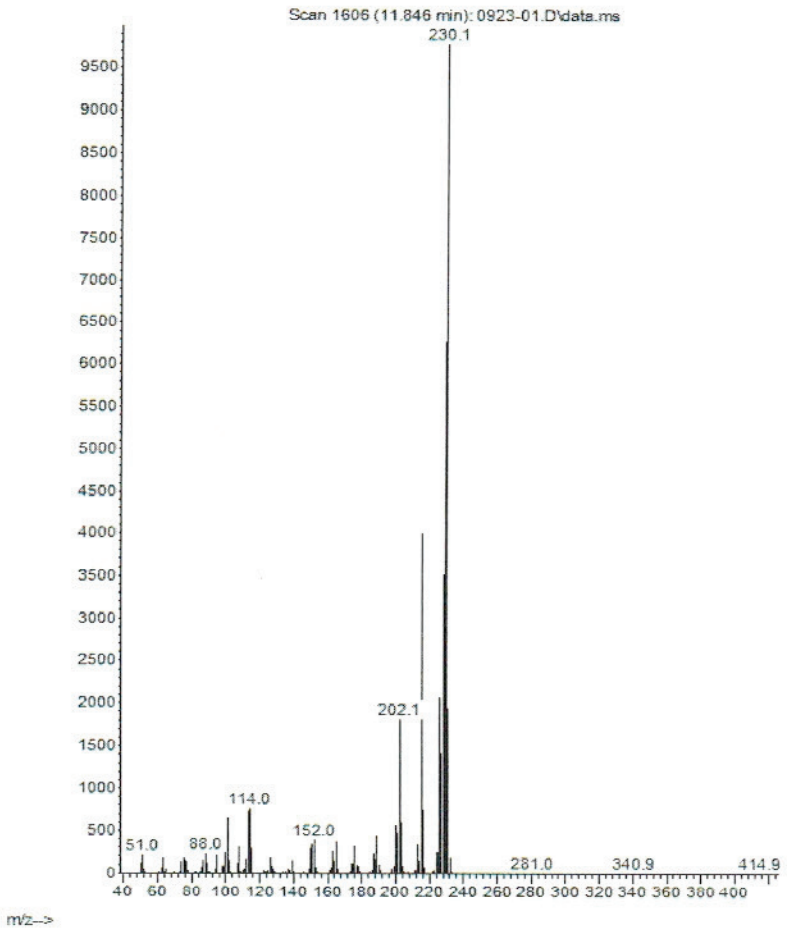
CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

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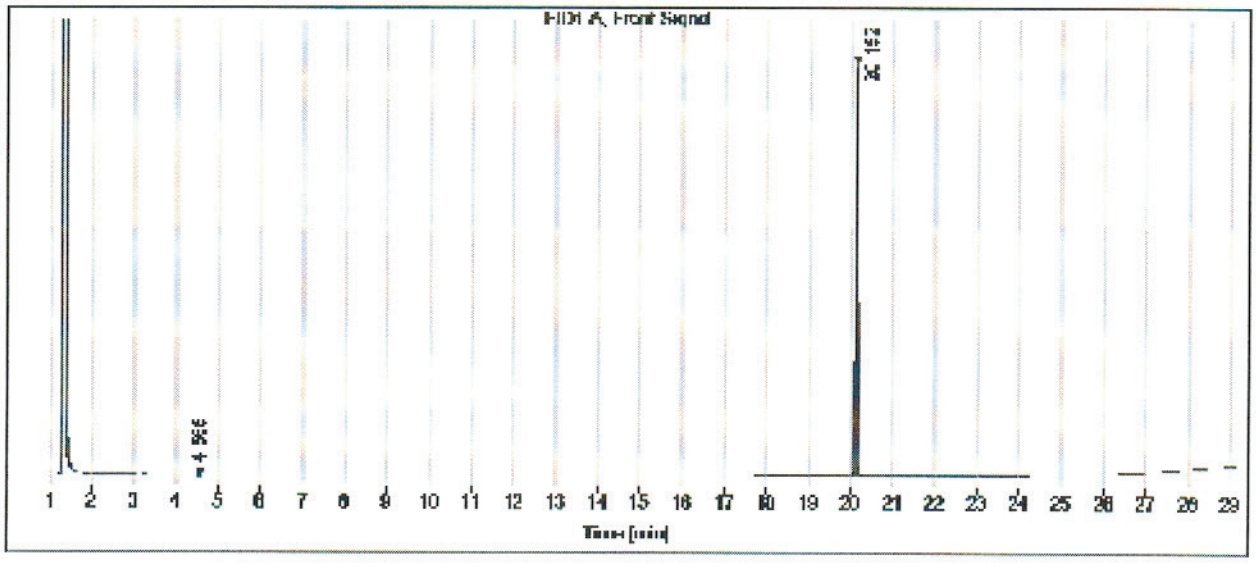
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	[illegible]	[illegible]
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

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:	**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

$CD_3(CD_2)_{28}CD_3$

ID #: 14545
Opened:
Triacontane-d62-98 atom % D
Expires: 11/23/2026
Rec'd: 11/23/2021
Energy 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

Version Number: 1

Analytical RunID GCFID-HP5-B_220228A 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_220228A 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_220228A 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_220228A 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_220228A 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_220228A 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_220228A Standards Traceability Report

Standard ID: DRO220110A
Standard Name: Carbon Scan STD-Marker
Type: Neat
Prep Date: 1/11/2022
Prep By: Ann Nebel
Exp Date: 7/13/2026
Status: Open
Department: dropr
Vendor: ASI2
Final Volume: 1.2 mL
Lot Number: 55064
Balance ID:
Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

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

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	

Analytical RunID GCFID-HP5-B_220228A Standards Traceability Report

Standard ID: DRO220119A
Standard Name: Triacontane SURR 1000 ug/mL
Type: Secondary
Prep Date: 1/19/2022
Prep By: Jillian L Bostwick
Exp Date: 4/6/2026
Status: New
Department: dropr
Vendor:
Final Volume: 10 mL
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacontane SURR 2000 ug/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_220228A Standards Traceability Report

Standard ID: DRO220128B
Standard Name: Carbon Scan STD-Marker
Type: Primary
Prep Date: 1/28/2022
Prep By: Jillian L Bostwick
Exp Date: 7/13/2026
Status: Open
Department: dropr
Vendor: ASI2
Final Volume: 2.4 mL
Lot Number: 071306
Balance ID:
Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

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

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

Analytical RunID GCFID-HP5-B_220228A 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

Analytical RunID GCFID-HP5-B_220228A Standards Traceability Report

Standard ID: DRO220211A
Standard Name: 8015 CCV-15,000ug/mL + 200 OTP
Prep Date: 2/11/2022
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: Ann Nebel
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

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

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

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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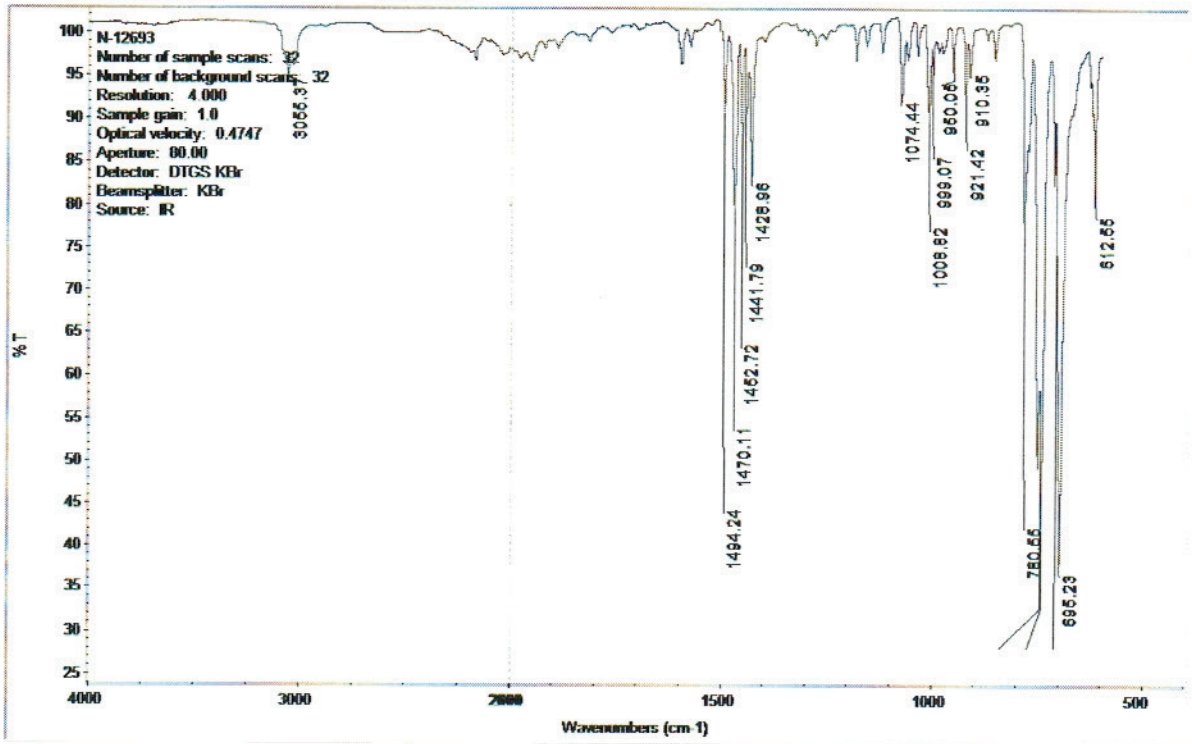
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

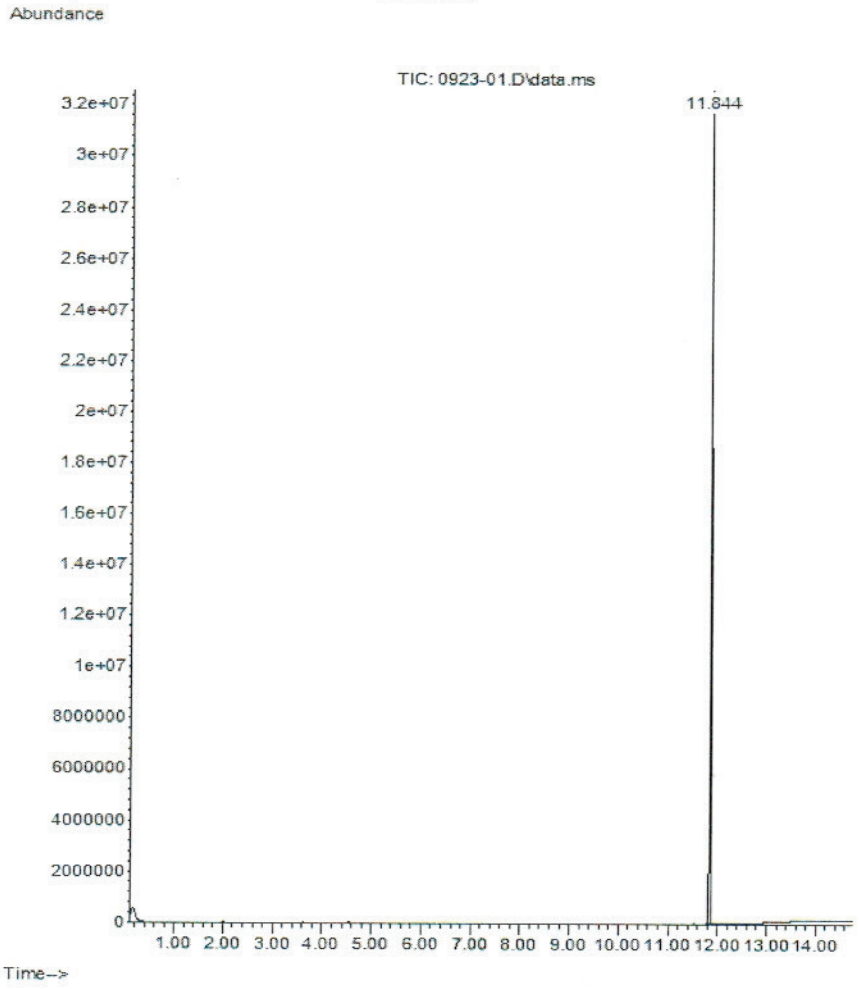
ERIN.M Mon Sep 23 10:55:51 2019

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

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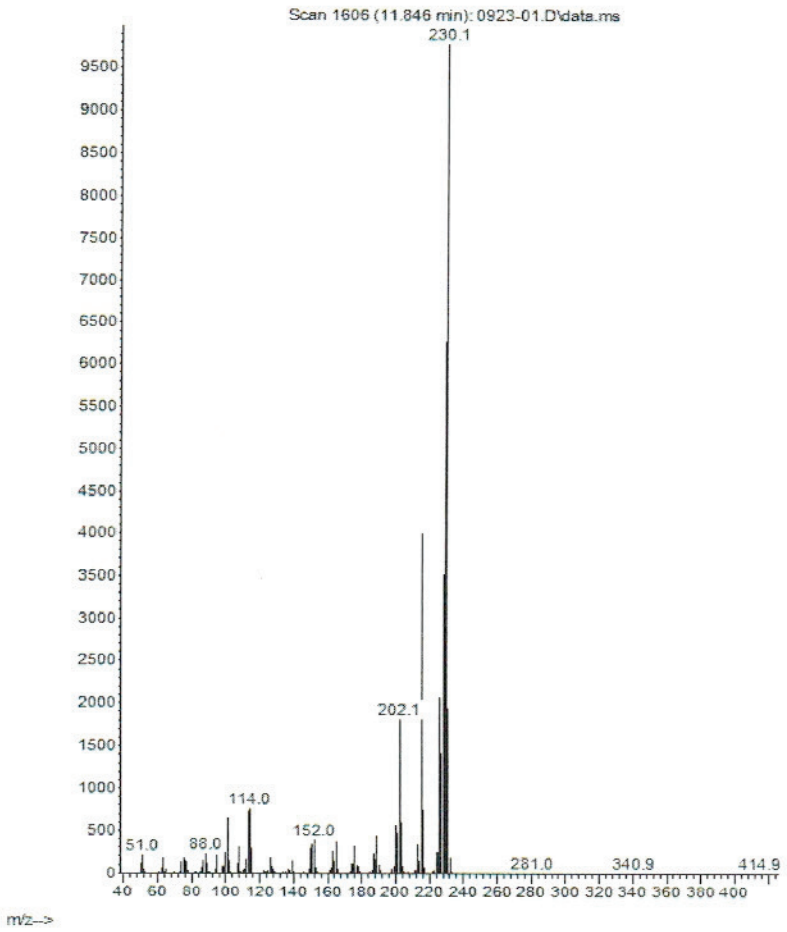

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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
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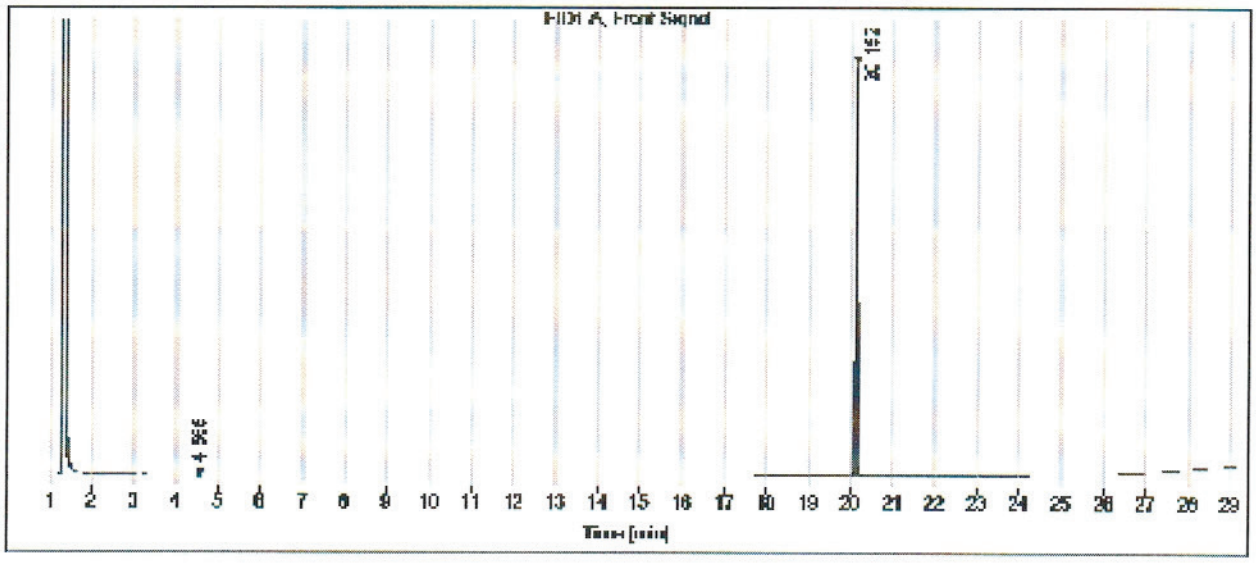
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	[illegible]	[illegible]
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

SIGMA-ALDRICH®

sigma-aldrich.com

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

Certificate of Analysis

Product Name:
Triacontane-d62 - 98 atom % D

$CD_3(CD_2)_{28}CD_3$

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

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

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

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Version Number: 1

Ana

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0176667

Description : Residual Range Calibration Standard (RCS)

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

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

Expiration Date : October 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

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

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

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

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

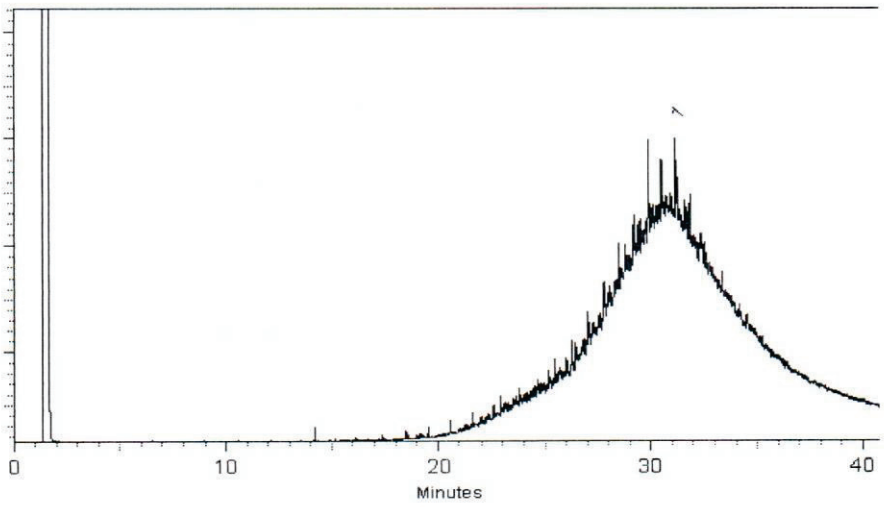
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021 **Balance:** 1128360905

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

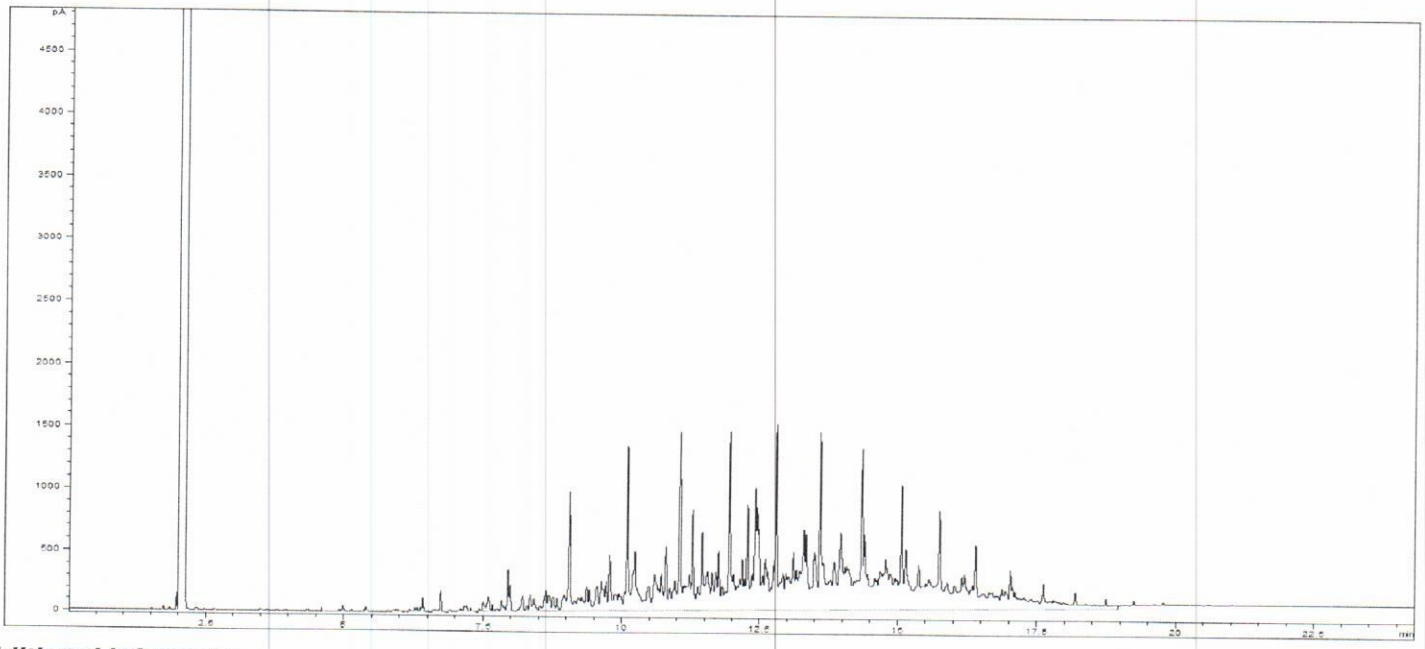
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14623
Opened:
Diesel Fuel No. 2
Expires: 4/30/2023
Rec'd: 12/14/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.0 mL/min
Inlet Temperature: 250 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 10: 1
Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)
Detector: FID
Detector Temperature: 300 °C

ANAB ACCREDITED ANSI-ASQ National Accreditation Board REFERENCE MATERIAL PRODUCER

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

Description

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

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

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

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

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

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

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

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

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

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

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Analytical RunID GCFID-HP5-B_220301A 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_220301A Standards Traceability Report

Standard ID: DRO210406A
Standard Name: Triacontane-d62 Surr For AK103 RRO
Type: Neat
Prep Date: 4/6/2021
Prep By: Ann Nebel
Exp Date: 4/6/2026
Status: New
Department: dropr
Vendor: Sigma-Aldrich
Final Volume: mL
Lot Number: MBBC4347
Balance ID:
Comments: Alaska surr [for AK103 RRO]

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

Stock Source	Base Units	Amount Added

Analytical RunID GCFID-HP5-B_220301A 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_220301A 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_220301A 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_220301A 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_220301A Standards Traceability Report

Standard ID: DRO220110A
Standard Name: Carbon Scan STD-Marker
Type: Neat
Prep Date: 1/11/2022
Prep By: Ann Nebel
Exp Date: 7/13/2026
Status: Open
Department: dropr
Vendor: ASI2
Final Volume: 1.2 mL
Lot Number: 55064
Balance ID:
Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

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

Stock Source	Base Units	Amount Added
DRO220110A	ug/mL	

Analytical RunID GCFID-HP5-B_220301A Standards Traceability Report

Standard ID: DRO220119A
Standard Name: Triacontane SURR 1000 ug/mL
Type: Secondary
Prep Date: 1/19/2022
Prep By: Jillian L Bostwick
Exp Date: 4/6/2026
Status: New
Department: dropr
Vendor:
Final Volume: 10 mL
Lot Number:
Balance ID: BAL-DRO
Comments: 2X dilution of Triacontane SURR 2000 ug/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_220301A Standards Traceability Report

Standard ID: DRO220128B
Standard Name: Carbon Scan STD-Marker
Type: Primary
Prep Date: 1/28/2022
Prep By: Jillian L Bostwick
Exp Date: 7/13/2026
Status: Open
Department: dropr
Vendor: ASI2
Final Volume: 2.4 mL
Lot Number: 071306
Balance ID:
Comments: FOR Qualitative analyst only.31 compounds-C5 to C30,32,34,36,38,40.

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

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

Analytical RunID GCFID-HP5-B_220301A 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

Analytical RunID GCFID-HP5-B_220301A Standards Traceability Report

Standard ID: DRO220211A
Standard Name: 8015 CCV-15,000ug/mL + 200 OTP
Prep Date: 2/11/2022
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: Ann Nebel
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_220301A Standards Traceability Report

Standard ID: DRO220301A
Standard Name: 8015 CCV-15,000ug/mL + 200 OTP
Prep Date: 3/1/2022
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 ED092	14828	2.6	mL	4/30/2023

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

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

o-Terphenyl

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

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

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

PJLA Reference Material Producer
PJLA Testing

COA Form
Revision 3 (3/2015)

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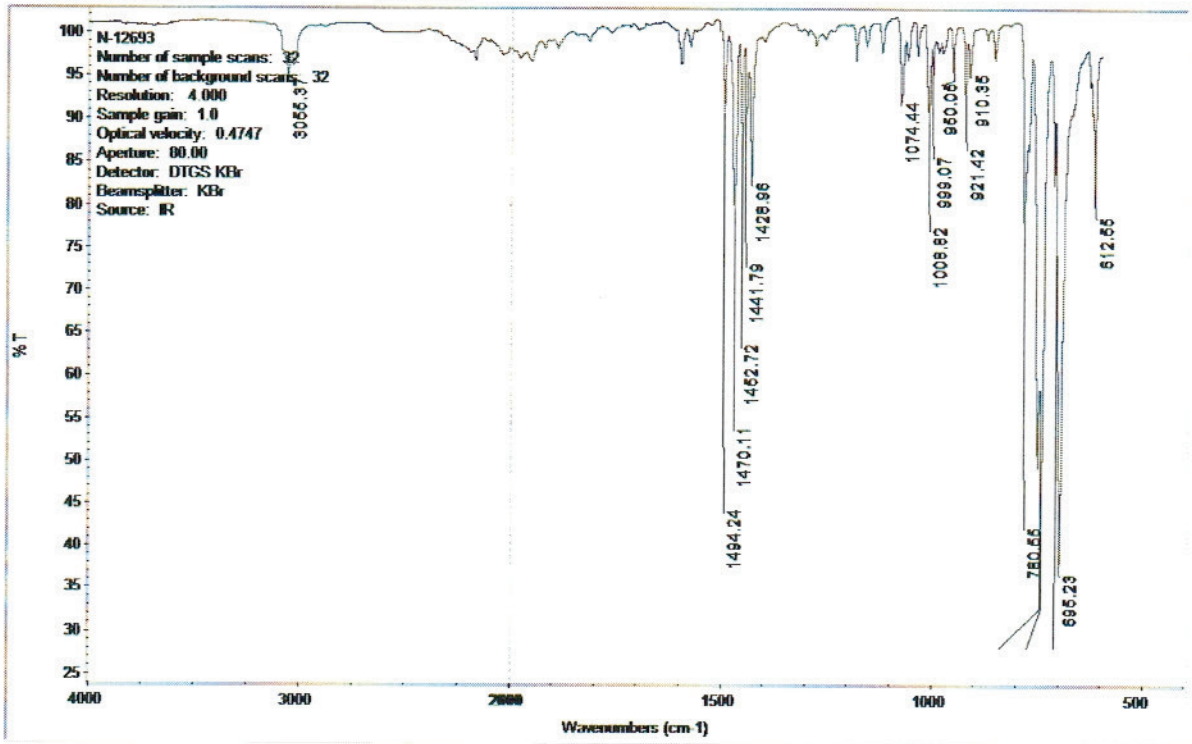
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

Chem Service Inc Area Percent Report

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

Integration Parameters: autoint1.e
Integrator: ChemStation

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

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

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

Sum of corrected areas: 432253484

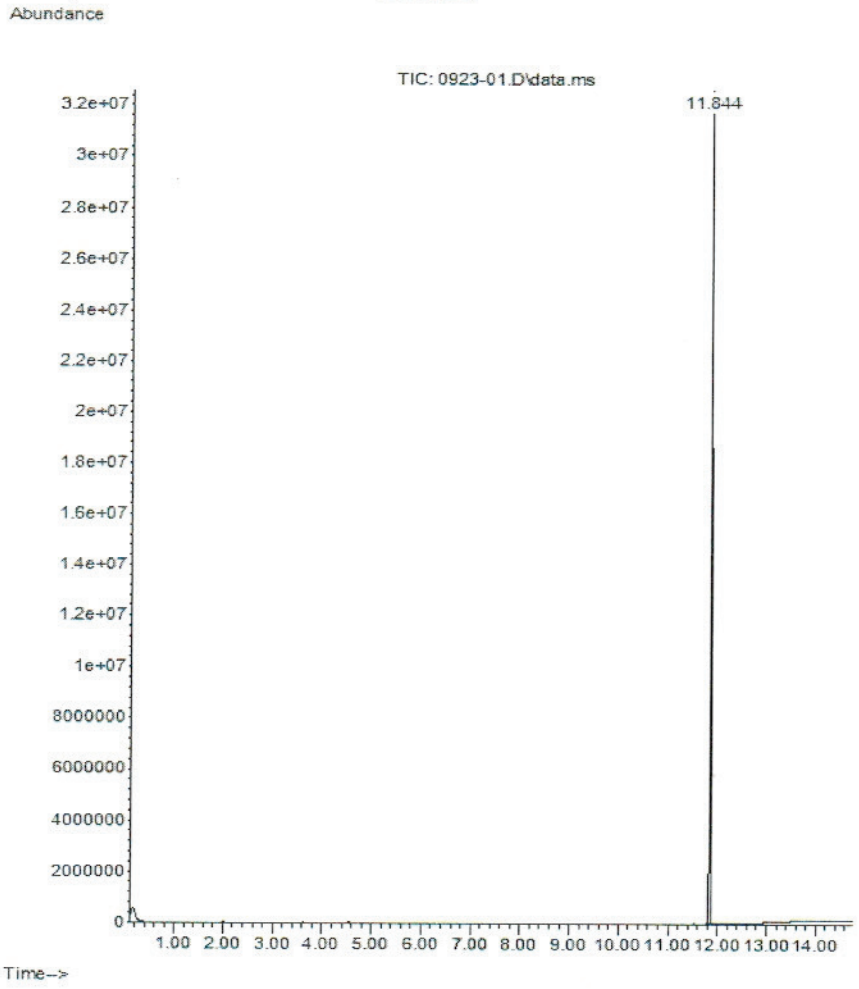
ERIN.M Mon Sep 23 10:55:51 2019

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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



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CERTIFICATE OF ANALYSIS

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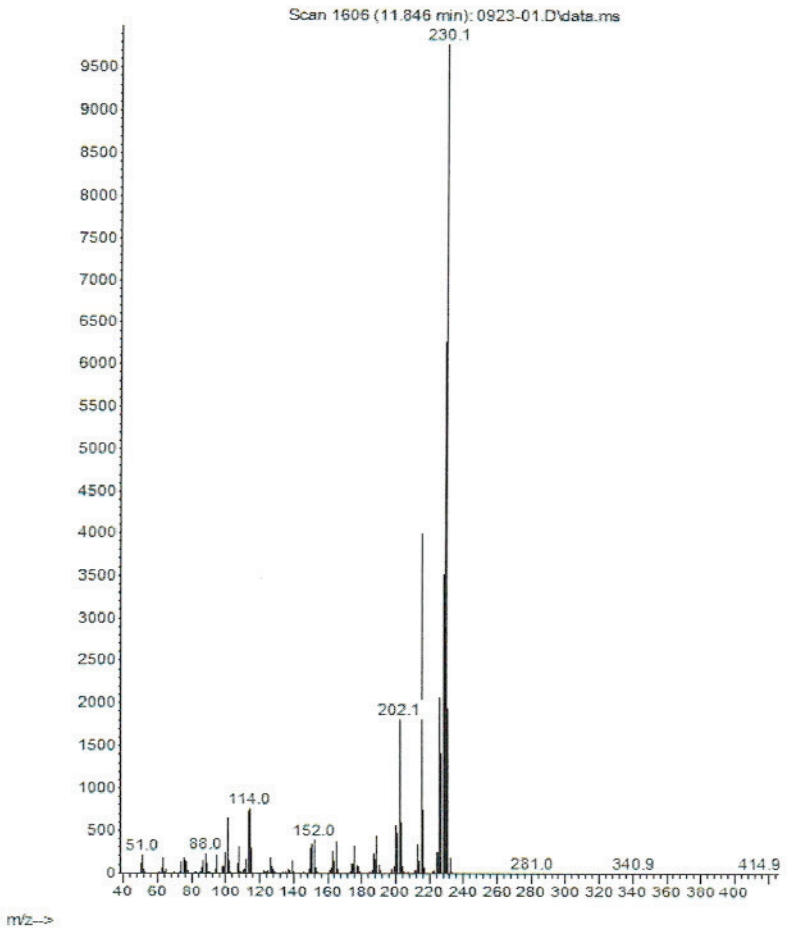
Lot Number:	9972100
Expiration Date:	09/30/24



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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-12693-500MG
Description:	o-Terphenyl
Lot Number:	9972100
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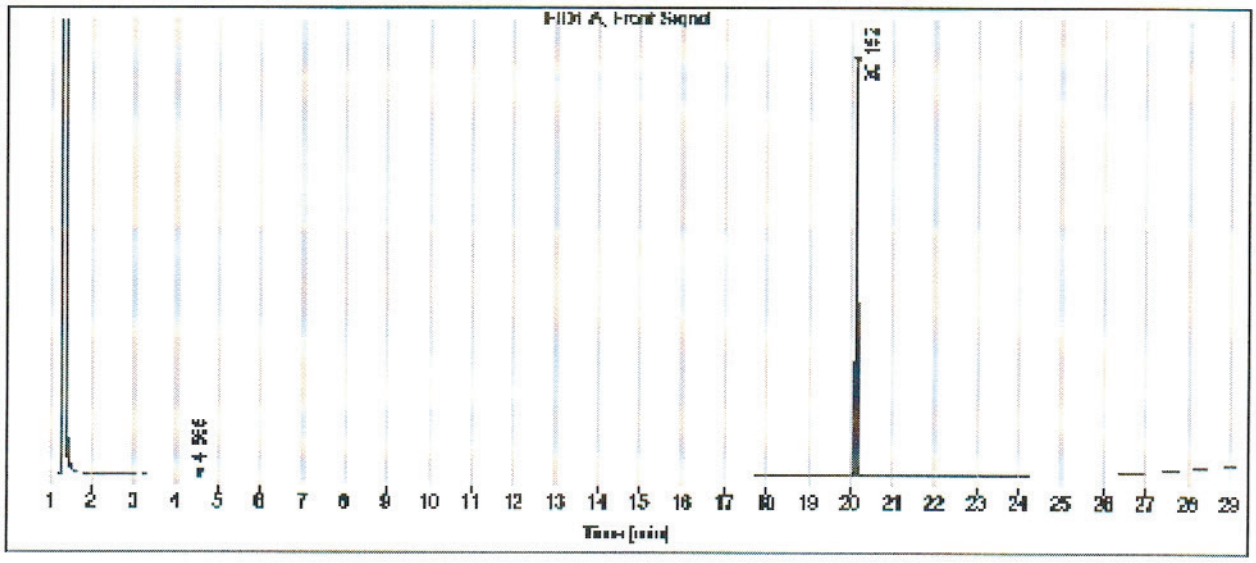
Gas

CERTIFICATE OF ANALYSIS

Data file:	C:\CHEM3\		
Sample name:	N-12693		
Instrument:	GC 2	[illegible]	[illegible]
Injection date:	9/23/2019 9:56:34 AM	**Location:**	Vial 141
Acq. method:	SCREEN.M	**Injection volume:**	1.0uL
Column name:	HP-5		



Signal: FID1 A, Front Signal

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

SIGMA-ALDRICH®

sigma-aldrich.com

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

Certificate of Analysis

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

$CD_3(CD_2)_{28}CD_3$

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

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

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

Greg Abernathy, Supervisor
Quality Control
Miamisburg, Ohio US

Ana

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31817 **Lot No.:** A0176667

Description : Residual Range Calibration Standard (RCS)

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

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

Expiration Date : October 31, 2028 **Storage:** 25°C nominal

Ship: Ambient

CERTIFIED VALUES

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

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

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

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

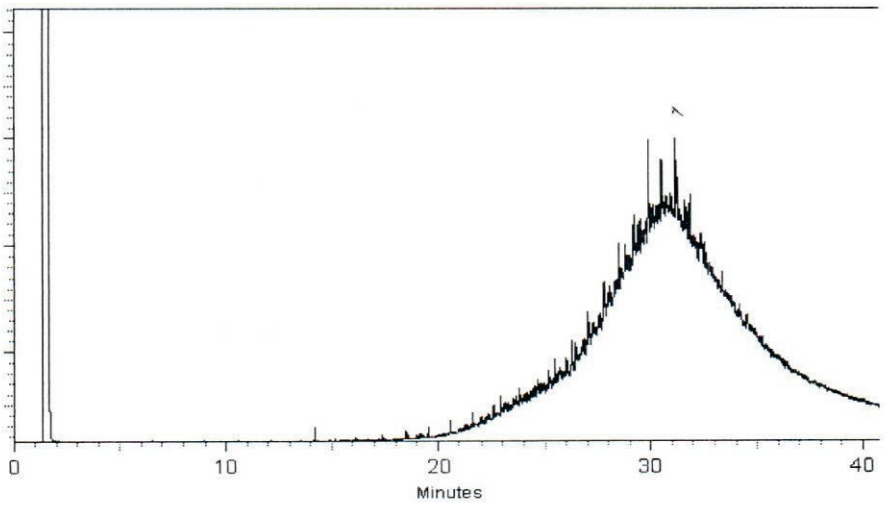
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Sam Moodler - Operations Tech I

Date Mixed: 22-Sep-2021 **Balance:** 1128360905

Alexis Shelow - Operations Tech I

Date Passed: 23-Sep-2021

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Certificate of Analysis

Diesel Fuel No. 2

Certified Reference Material

Description

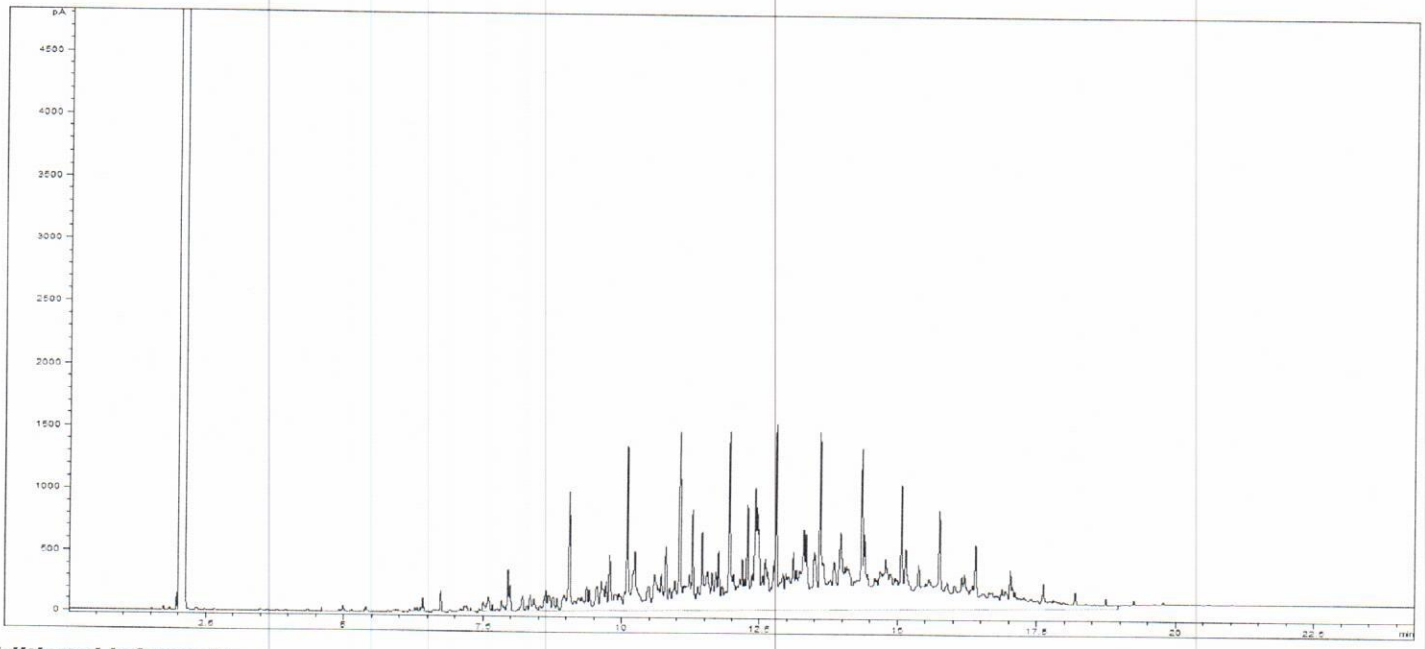
Product ID UST148
Lot **LRAC6316**
Expiration Date April 2023
Manufacturing Date April 2020
Storage Conditions Room Temperature
Solvent/Matrix DICHLOROMETHANE

ID #: 14623
Opened:
Diesel Fuel No. 2
Expires: 4/30/2023
Rec'd: 12/14/2021
Energy Laboratories Inc 1120 So. 27th Street
Billings MT 59107

Certified Values

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

Informational Values



Additional Information:

Analytical Method Parameters:
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #214)
Carrier Gas: H2, Flow: 4.0 mL/min
Inlet Temperature: 250 °C, Injection Volume: 1.0 µL
Injection Mode: Split, Split Ratio: 10: 1
Temperature Program: 40 °C (Hold 2 min) @ 15 °C/min to 300 °C (Hold 5 min)
Detector: FID
Detector Temperature: 300 °C

ANAB ACCREDITED 6013 REFERENCE MATERIAL PRODUCER

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

Description

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

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

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

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 preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

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

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

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

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

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date April 30, 2020
Version 0-4302020

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER