Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: 19125747
Your C.O.C. #: 644253-02-01

Attention: AURELIE BELLAVANCE

GOLDER ASSOCIATES LTD.
CALGARY - NATIONAL CONTRACT
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Report Date: 2021/09/07
Report #: R3068279
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C164651
Received: 2021/08/31, 08:35

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Asbestos by PLM - 0.5 RDL (by layer) (1, 2)	2	N/A	2021/09/07	COR3SOP-00002	EPA 600/M4-82-020

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Bureau Veritas Laboratories' Asbestos Laboratory is accredited by NVLAP for bulk asbestos analysis by polarized light microscopy, NVLAP Code 600163-0.

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Bureau Veritas Laboratories' scope of accreditation includes EPA-600/M4-82-020: "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" and EPA-600/R-93/116: "Method for the Determination of Asbestos in Bulk Building Materials".

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Vancouver

(2) The Asbestos Analysis is based on NIOSH 9002 method and EPA/600R-93/116 Method.

Bureau Veritas Laboratories Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: 19125747
Your C.O.C. #: 644253-02-01

Attention: AURELIE BELLAVANCE

GOLDER ASSOCIATES LTD.
CALGARY - NATIONAL CONTRACT
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Report Date: 2021/09/07
Report #: R3068279
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C164651
Received: 2021/08/31, 08:35

Encryption Key

Cynny Hagen
Key Account Specialist
08 Sep 2021 17:41:08

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273
==========
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BV Labs Job #: C164651
Report Date: 2021/09/07

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: 19125747
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

Asbestos Analytical Results

The Asbestos Analysis is based on NIOSH 9002 method and EPA/600R-93/116 Method. P.O.B. - Percent of Bulk

TP21-165-AS

BV Labs ID: AFA113 Date Analyzed: 2021/09/07

	P.O.B	Sample Morphology	Asbestos	Other Fibres		Particulate
Layer 1	100	Homogeneous white fibrous material	Not Detected	Fibreglass	20%	Non-Fibrous

TP21-12-FOAM

BV Labs ID: AFA114 Date Analyzed: 2021/09/07

	P.O.B	Sample Morphology	Asbestos	Other Fibres		Particulate
Layer 1	90	Homogeneous off-white foam	Not Detected			Non-Fibrous
Layer 2	10	Homogeneous brown fibrous material	Not Detected	Cellulose	70%	Non-Fibrous

The limit of quantitation is 0.50%, although asbestos may be qualitatively detected at concentrations less than 0.50%. Samples for which asbestos is detected at <0.50% are reported as trace, "<0.50%". "Not Detected" indicates that no asbestos fibres were observed.

Calibrated Visual Estimate (%)
Date Format : yyyy/mm/dd

BV Labs Job #: C164651
Report Date: 2021/09/07

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: 19125747
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	9.3°C
Package 3	5.7°C
Package 4	4.7°C
Package 5	6.0°C
Package 6	5.7°C
Package 7	5.7°C
Package 8	5.7°C
Package 9	5.3°C

Results relate only to the items tested.

Bureau Veritas Laboratories Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

BV Labs Job #: C164651
Report Date: 2021/09/07

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: 19125747
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

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For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Maxxam
A Bureau Veritas Group Company

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

Page	CHAIN OF CUSTODY #
1 of 1	644253-02-01
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COOLER OBSERVATIONS: * some COC's were soaked in water

CUSTODY SEAL PRESENT (YES/NO)	INTACT (YES/NO)	ICE PRESENT (YES/NO)	COOLER ID	TEMP 1	TEMP 2	TEMP 3
YES ✓	YES ✓	YES ✓		5	4	5
YES ✓	YES ✓	YES ✓		9	10	9
YES ✓	YES ✓	YES ✓		6	4	7
YES ✓	YES ✓	YES ✓		4	4	6
YES ✓	YES ✓	YES ✓		4	7	7
YES ✓	YES ✓	YES ✓		3	7	7
YES ✓	YES ✓	YES ✓		4	6	7
YES ✓	YES ✓	YES ✓		6	4	7
YES ✓	YES ✓	YES ✓		6	6	4

MAXXAM JOB#: C164651

CUSTODY SEAL PRESENT (YES/NO)	INTACT (YES/NO)	ICE PRESENT (YES/NO)	COOLER ID	TEMP 1	TEMP 2	TEMP 3

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
Jose Mercamo	[signature]	2021/08/31	8:35 AM

MaxXam
A Bureau Veritas Group Company

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

Page	CHAIN OF CUSTODY #
Page 1 of 1	644253-02-01
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
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Page ___ of ___	
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COOLER OBSERVATIONS:

MAXXAM JOB#: C164651

CUSTODY SEAL PRESENT	CUSTODY SEAL INTACT	ICE PRESENT	COOLER ID	TEMP 1	TEMP 2	TEMP 3
YES ✓	YES ✓	YES ✓		1	1	1
YES ✓	YES ✓	YES ✓		1	0	1
YES ✓	YES ✓	YES ✓		0	0	0
YES ✓	YES ✓	YES ✓		1	2	1
YES ✓	YES ✓	YES ✓		0	1	2
YES ✓	YES ✓	YES ✓		4	4	4
YES ✓	YES ✓	YES ✓		0	0	0
YES ✓	YES ✓	YES ✓		-1	-1	-1
YES ✓	YES ✓	YES ✓		1	0	-1
YES ✓	YES ✓	YES ✓		2	1	1
YES ✓	YES ✓	YES ✓		1	1	0

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
[signature]	Dawit Kibreab	2024/09/01	15:00

Bureau Veritas Laboratories
4000 19st N.E. Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

65

Chain Of Custody Record

Page of 1 of 1

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#2045 GOLDER ASSOCIATES LTD	Company Name	GOLDER ASSOCIATES $3340	Quotation #	C004480	BV Labs Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	PETER TAN / Aurelie Bellavance	P.O. #	20368099-7000-1001	C164651	644253
Address	16820-107 AVE	Address	2800, 700 - 2ND STREET SW	Project #	20368099-6000-1001	Chain Of Custody Record	Project Manager
	EDMONTON AB T5P 4C3		Calgary, AB	Project Name		C#644253-02-01	Carmen McKay
Phone	(780) 483-3499 Fax: (780) 483-1574	Phone	(780) 483-3499 4032995600	Site #			
Email	CanadaAccountsPayableInvoices@golder.com	Email	peter_tan@golder.com, Aurelie_Bellavance@golder.com	Sampled By			

Regulatory Criteria

Special Instructions: email: shelldqr@golder.com

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to BV Labs

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	Hexavalent Chromium, Nitrate, Sulphate, True Total Barium	BTEX and F1-F4 in Soil (Vials)	ASB PLM05-13	# of Bottles	Comments
1	N/A	TP21-165-AS	2021/08/20	10:40	Fibre glass						✓	1	PLM - qualitative + semi quantitation of Asbestos in bulk materials.
2		TP21-12-FOAM	2021/08/20	10:45	FOAM						✓	1	
3													
4													
5													
6													
7													
8													
9													
10													

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____ ☐
Rush Confirmation Number _____ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Shell DQR, A. Bellavance	21/08/24	15:00	Jin Dawit Kibreab	2021/09/01	15:00		☐	See ACTR	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell

Sampling Date: August 20, 2021

Golder Project Number: 20368099-6000-1001

Laboratory: Bureau Veritas Calgary

Lab Submission Number: C164651

Was the Cooler Received at the lab under a sealed and intact custody seal?	Yes
Was proper chain of custody of the samples documented and kept?	Yes
Were sample temperatures acceptable when they reached lab?:	Yes
Were all samples analyzed and extracted within hold times?:	Yes
Has lab warranted all tests were in statistical control in CoA?:	Yes
Was sufficient sample provided for the requested analysis?	Yes
Has lab warranted all samples were analyzed with limited headspace present?:	n/a

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Surrogate Recovery			X	No laboratory QC samples were analyzed.
Method Blank Concentration			X	
Laboratory Duplicate RPD			X	
Matrix Spike Recovery			X	
Blank Spike Recovery			X	

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration			X	No field QC samples were collected.
Trip Blank Concentration			X	
Field Duplicate RPD			X	

Is data considered reliable (Yes/No/Suspect)?: Yes

If answer is "No" or "Suspect", describe and provide rationale:

Data Reviewed by (Print): Anita Colbert

Data Reviewed by (Signature): Anita Colbert

Date: September 9, 2021

Your P.O. #: 20368099-7000-1000
Your Project #: 20368099-6000-1000
Your C.O.C. #: 644253-03-01

Attention: AURELIE BELLAVANCE

GOLDER ASSOCIATES LTD.
CALGARY - NATIONAL CONTRACT
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Report Date: 2021/09/09
Report #: R3069503
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C164652
Received: 2021/08/31, 08:35

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1)	2	2021/09/05	2021/09/08	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	2	N/A	2021/09/08		Auto Calc
Chromium III (Calc'd) (1)	2	2021/09/03	2021/09/09		Auto Calc
Hexavalent Chromium (1, 2)	2	2021/09/07	2021/09/07	AB SOP-00063	SM 23 3500-Cr B m
CCME Hydrocarbons (F2-F4 in soil) (1, 3)	2	2021/09/05	2021/09/07	AB SOP-00036	CCME PHC-CWS m
Elements by ICPMS - Soils (1)	2	2021/09/08	2021/09/08	AB SOP-00001 / AB SOP-00043	EPA 6020b R2 m
Non Routine/Non Validated Matrix Tested (1, 4)	2	N/A	2021/09/03		
Benzo[a]pyrene Equivalency (1)	2	N/A	2021/09/08		Auto Calc
PAH in Soil by GC/MS (1)	2	2021/09/05	2021/09/07	AB SOP-00036 / AB SOP-00003	EPA 3540C/8270E m
Polychlorinated Biphenyls in Soil (1)	2	2021/09/07	2021/09/07	CAL SOP-00149	EPA 8082A R1 m
Total PCBs in Soil (1)	2	N/A	2021/09/08		Auto Calc

Remarks:

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All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Your P.O. #: 20368099-7000-1000
Your Project #: 20368099-6000-1000
Your C.O.C. #: 644253-03-01

Attention: AURELIE BELLAVANCE

GOLDER ASSOCIATES LTD.
CALGARY - NATIONAL CONTRACT
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Report Date: 2021/09/09
Report #: R3069503
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C164652
Received: 2021/08/31, 08:35

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary Environmental

(2) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(3) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(4) Sample(s) analyzed using methodologies that have not been subjected to Bureau Veritas Laboratories' standard validation process for the submitted matrix and is not an accredited method. Analysis performed with client consent, however results should be viewed with discretion.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
09 Sep 2021 17:57:49

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273

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BV Labs Job #: C164652
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1000
Your P.O. #: 20368099-7000-1000
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

BV Labs ID		AFA115	AFA116	AFA116		
Sampling Date		2021/08/24 15:00	2021/08/24 15:15	2021/08/24 15:15		
COC Number		644253-03-01	644253-03-01	644253-03-01		
	UNITS	WP21-CF01	WP21-CF02	WP21-CF02 Lab-Dup	RDL	QC Batch
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	110	110	N/A	10	A342390
F3 (C16-C34 Hydrocarbons)	mg/kg	320	660	N/A	50	A342390
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	89	N/A	50	A342390
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	N/A	A342390
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	A343313
Toluene	mg/kg	0.12	0.092	0.068	0.050	A343313
Ethylbenzene	mg/kg	0.018	0.024	0.027	0.010	A343313
m & p-Xylene	mg/kg	0.076	0.16	0.13	0.040	A343313
o-Xylene	mg/kg	0.067	0.21	0.19	0.020	A343313
Xylenes (Total)	mg/kg	0.14	0.36	N/A	0.045	A340894
F1 (C6-C10) - BTEX	mg/kg	17	23	N/A	10	A340894
F1 (C6-C10)	mg/kg	18	23	13	10	A343313
Surrogate Recovery (%)						
1,4-Difluorobenzene (sur.)	%	97	94	99	N/A	A343313
4-Bromofluorobenzene (sur.)	%	105	103	97	N/A	A343313
D10-o-Xylene (sur.)	%	81	80	74	N/A	A343313
D4-1,2-Dichloroethane (sur.)	%	95	93	96	N/A	A343313
O-TERPHENYL (sur.)	%	86	85	N/A	N/A	A342390

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164652
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1000
Your P.O. #: 20368099-7000-1000
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF SOIL

BV Labs ID		AFA115	AFA116		
Sampling Date		2021/08/24 15:00	2021/08/24 15:15		
COC Number		644253-03-01	644253-03-01		
	UNITS	WP21-CF01	WP21-CF02	RDL	QC Batch
Calculated Parameters					
Chromium III	mg/kg	8.4	24	2.0	A341256
Elements					
Hex. Chromium (Cr 6+)	mg/kg	<0.080 (1)	<0.080 (1)	0.080	A343760
MISCELLANEOUS					
Sample Matrix	N/A	WOOD	WOOD	N/A	ONSITE

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Hexavalent Chromium results reported as mg/kg without moisture correction. Refer to AB PDF-00074.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1000
Your P.O. #: 20368099-7000-1000
Sampler Initials: AB

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

BV Labs ID		AFA115		AFA116		
Sampling Date		2021/08/24 15:00		2021/08/24 15:15		
COC Number		644253-03-01		644253-03-01		
	UNITS	WP21-CF01	RDL	WP21-CF02	RDL	QC Batch
Polychlorinated Biphenyls						
Aroclor 1016	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1221	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1232	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1242	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1248	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1254	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1260	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1262	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Aroclor 1268	mg/kg	<0.060	0.060	<0.050	0.050	A342685
Total PCB	mg/kg	<0.060	0.060	<0.050	0.050	A341258
Surrogate Recovery (%)						
NONACHLOROBIPHENYL (sur.)	%	61	N/A	88	N/A	A342685

RDL = Reportable Detection Limit
N/A = Not Applicable

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1000
Your P.O. #: 20368099-7000-1000
Sampler Initials: AB

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

BV Labs ID		AFA115		AFA116		
Sampling Date		2021/08/24 15:00		2021/08/24 15:15		
COC Number		644253-03-01		644253-03-01		
	UNITS	WP21-CF01	RDL	WP21-CF02	RDL	QC Batch
Polycyclic Aromatics						
Acenaphthene	mg/kg	<0.020	0.020	0.025	0.015	A342151
B[a]P TPE Total Potency Equivalents	mg/kg	<0.029	0.029	<0.021	0.021	A340997
Acenaphthylene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Acridine	mg/kg	0.058	0.040	<0.030	0.030	A342151
Anthracene	mg/kg	<0.016	0.016	<0.012	0.012	A342151
Benzo(a)anthracene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Benzo(b&j)fluoranthene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Benzo(k)fluoranthene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Benzo(g,h,i)perylene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Benzo(c)phenanthrene	mg/kg	<0.020	0.020	0.24	0.015	A342151
Benzo(a)pyrene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Benzo(e)pyrene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Chrysene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Dibenz(a,h)anthracene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Fluoranthene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Fluorene	mg/kg	0.021	0.020	0.041	0.015	A342151
Indeno(1,2,3-cd)pyrene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
1-Methylnaphthalene	mg/kg	0.18	0.020	1.5	0.015	A342151
2-Methylnaphthalene	mg/kg	0.28	0.020	1.9	0.015	A342151
Naphthalene	mg/kg	0.15	0.020	0.84	0.015	A342151
Phenanthrene	mg/kg	0.29	0.020	<0.015	0.015	A342151
Perylene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Pyrene	mg/kg	<0.020	0.020	<0.015	0.015	A342151
Quinoline	mg/kg	<0.040	0.040	<0.030	0.030	A342151
Surrogate Recovery (%)						
D10-ANTHRACENE (sur.)	%	100	N/A	113	N/A	A342151
D8-ACENAPHTHYLENE (sur.)	%	90	N/A	101	N/A	A342151
D8-NAPHTHALENE (sur.)	%	89	N/A	98	N/A	A342151
TERPHENYL-D14 (sur.)	%	82	N/A	88	N/A	A342151

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C164652
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1000
Your P.O. #: 20368099-7000-1000
Sampler Initials: AB

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

BV Labs ID		AFA115	AFA116		
Sampling Date		2021/08/24 15:00	2021/08/24 15:15		
COC Number		644253-03-01	644253-03-01		
	UNITS	WP21-CF01	WP21-CF02	RDL	QC Batch
Elements					
Total Arsenic (As)	mg/kg	<2.0	<2.0	2.0	A344252
Total Chromium (Cr)	mg/kg	8.4	24	2.0	A344252
Total Copper (Cu)	mg/kg	2.6	3.0	2.0	A344252
RDL = Reportable Detection Limit					

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C
Package 2	0.7°C
Package 3	0.0°C
Package 4	1.3°C
Package 5	1.0°C
Package 6	4.0°C
Package 7	0.0°C
Package 8	-1.0°C
Package 9	0.0°C
Package 10	1.3°C
Package 11	0.7°C

Hexavalent Chromium results reported as mg/kg without moisture correction. Refer to AB PDF-00074.

Sample AFA115 [WP21-CF01] : Sample received was not in compliance with CCME sampling requirements for VOC/BTEX/F1 in soil.

Sample AFA116 [WP21-CF02] : Sample received was not in compliance with CCME sampling requirements for VOC/BTEX/F1 in soil.

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL) Comments

Sample AFA115 [WP21-CF01] Polychlorinated Biphenyls in Soil: Detection limits raised due to sample matrix.
Sample AFA116 [WP21-CF02] Polychlorinated Biphenyls in Soil: Detection limits raised due to sample matrix.

SEMIVOLATILE ORGANICS BY GC-MS (SOIL) Comments

Sample AFA115 [WP21-CF01] PAH in Soil by GC/MS: Detection limits raised due to sample matrix.
Sample AFA116 [WP21-CF02] PAH in Soil by GC/MS: Detection limits raised due to sample matrix.

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL) Comments

Sample AFA115 [WP21-CF01] Elements by ICPMS - Soils: Detection limits raised based on sample weight used for analysis.
Sample AFA116 [WP21-CF02] Elements by ICPMS - Soils: Detection limits raised based on sample weight used for analysis.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A342151	JC7	Matrix Spike	D10-ANTHRACENE (sur.)	2021/09/04		94	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2021/09/04		90	%	50 - 130
			D8-NAPHTHALENE (sur.)	2021/09/04		87	%	50 - 130
			TERPHENYL-D14 (sur.)	2021/09/04		79	%	50 - 130
			Acenaphthene	2021/09/04		90	%	50 - 130
			Acenaphthylene	2021/09/04		91	%	50 - 130
			Acridine	2021/09/04		65	%	50 - 130
			Anthracene	2021/09/04		82	%	50 - 130
			Benzo(a)anthracene	2021/09/04		86	%	50 - 130
			Benzo(b&j)fluoranthene	2021/09/04		81	%	50 - 130
			Benzo(k)fluoranthene	2021/09/04		85	%	50 - 130
			Benzo(g,h,i)perylene	2021/09/04		85	%	50 - 130
			Benzo(c)phenanthrene	2021/09/04		82	%	50 - 130
			Benzo(a)pyrene	2021/09/04		88	%	50 - 130
			Benzo(e)pyrene	2021/09/04		79	%	50 - 130
			Chrysene	2021/09/04		84	%	50 - 130
			Dibenz(a,h)anthracene	2021/09/04		88	%	50 - 130
			Fluoranthene	2021/09/04		87	%	50 - 130
			Fluorene	2021/09/04		92	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/09/04		88	%	50 - 130
			1-Methylnaphthalene	2021/09/04		73	%	50 - 130
			2-Methylnaphthalene	2021/09/04		89	%	50 - 130
			Naphthalene	2021/09/04		85	%	50 - 130
			Phenanthrene	2021/09/04		88	%	50 - 130
			Perylene	2021/09/04		84	%	50 - 130
			Pyrene	2021/09/04		87	%	50 - 130
			Quinoline	2021/09/04		104	%	50 - 130
A342151	JC7	Spiked Blank	D10-ANTHRACENE (sur.)	2021/09/04		99	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2021/09/04		96	%	50 - 130
			D8-NAPHTHALENE (sur.)	2021/09/04		90	%	50 - 130
			TERPHENYL-D14 (sur.)	2021/09/04		91	%	50 - 130
			Acenaphthene	2021/09/04		94	%	50 - 130
			Acenaphthylene	2021/09/04		95	%	50 - 130
			Acridine	2021/09/04		68	%	50 - 130
			Anthracene	2021/09/04		86	%	50 - 130
			Benzo(a)anthracene	2021/09/04		104	%	50 - 130
			Benzo(b&j)fluoranthene	2021/09/04		97	%	50 - 130
			Benzo(k)fluoranthene	2021/09/04		93	%	50 - 130
			Benzo(g,h,i)perylene	2021/09/04		94	%	50 - 130
			Benzo(c)phenanthrene	2021/09/04		96	%	50 - 130
			Benzo(a)pyrene	2021/09/04		100	%	50 - 130
			Benzo(e)pyrene	2021/09/04		88	%	50 - 130
			Chrysene	2021/09/04		96	%	50 - 130
			Dibenz(a,h)anthracene	2021/09/04		99	%	50 - 130
			Fluoranthene	2021/09/04		105	%	50 - 130
			Fluorene	2021/09/04		101	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/09/04		104	%	50 - 130
			1-Methylnaphthalene	2021/09/04		75	%	50 - 130
			2-Methylnaphthalene	2021/09/04		93	%	50 - 130
			Naphthalene	2021/09/04		88	%	50 - 130
			Phenanthrene	2021/09/04		93	%	50 - 130
			Perylene	2021/09/04		88	%	50 - 130
			Pyrene	2021/09/04		103	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Quinoline	2021/09/04		99	%	50 - 130
A342151	JC7	Method Blank	D10-ANTHRACENE (sur.)	2021/09/04		105	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2021/09/04		103	%	50 - 130
			D8-NAPHTHALENE (sur.)	2021/09/04		97	%	50 - 130
			TERPHENYL-D14 (sur.)	2021/09/04		101	%	50 - 130
			Acenaphthene	2021/09/04	<0.0050		mg/kg	
			Acenaphthylene	2021/09/04	<0.0050		mg/kg	
			Acridine	2021/09/04	<0.010		mg/kg	
			Anthracene	2021/09/04	<0.0040		mg/kg	
			Benzo(a)anthracene	2021/09/04	<0.0050		mg/kg	
			Benzo(b&j)fluoranthene	2021/09/04	<0.0050		mg/kg	
			Benzo(k)fluoranthene	2021/09/04	<0.0050		mg/kg	
			Benzo(g,h,i)perylene	2021/09/04	<0.0050		mg/kg	
			Benzo(c)phenanthrene	2021/09/04	<0.0050		mg/kg	
			Benzo(a)pyrene	2021/09/04	<0.0050		mg/kg	
			Benzo(e)pyrene	2021/09/04	<0.0050		mg/kg	
			Chrysene	2021/09/04	<0.0050		mg/kg	
			Dibenz(a,h)anthracene	2021/09/04	<0.0050		mg/kg	
			Fluoranthene	2021/09/04	<0.0050		mg/kg	
			Fluorene	2021/09/04	<0.0050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2021/09/04	<0.0050		mg/kg	
			1-Methylnaphthalene	2021/09/04	<0.0050		mg/kg	
			2-Methylnaphthalene	2021/09/04	<0.0050		mg/kg	
			Naphthalene	2021/09/04	<0.0050		mg/kg	
			Phenanthrene	2021/09/04	<0.0050		mg/kg	
			Perylene	2021/09/04	<0.0050		mg/kg	
			Pyrene	2021/09/04	<0.0050		mg/kg	
			Quinoline	2021/09/04	<0.010		mg/kg	
A342151	JC7	RPD	Acenaphthene	2021/09/04	NC		%	50
			Acenaphthylene	2021/09/04	NC		%	50
			Acridine	2021/09/04	NC		%	50
			Anthracene	2021/09/04	NC		%	50
			Benzo(a)anthracene	2021/09/04	NC		%	50
			Benzo(b&j)fluoranthene	2021/09/04	NC		%	50
			Benzo(k)fluoranthene	2021/09/04	NC		%	50
			Benzo(g,h,i)perylene	2021/09/04	NC		%	50
			Benzo(c)phenanthrene	2021/09/04	NC		%	50
			Benzo(a)pyrene	2021/09/04	NC		%	50
			Benzo(e)pyrene	2021/09/04	NC		%	50
			Chrysene	2021/09/04	NC		%	50
			Dibenz(a,h)anthracene	2021/09/04	NC		%	50
			Fluoranthene	2021/09/04	NC		%	50
			Fluorene	2021/09/04	NC		%	50
			Indeno(1,2,3-cd)pyrene	2021/09/04	NC		%	50
			1-Methylnaphthalene	2021/09/04	NC		%	50
			2-Methylnaphthalene	2021/09/04	NC		%	50
			Naphthalene	2021/09/04	NC		%	50
			Phenanthrene	2021/09/04	NC		%	50
			Perylene	2021/09/04	NC		%	50
			Pyrene	2021/09/04	NC		%	50
			Quinoline	2021/09/04	NC		%	50
A342390	MHF	Matrix Spike	O-TERPHENYL (sur.)	2021/09/05		123	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05		117	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F3 (C16-C34 Hydrocarbons)	2021/09/05		124	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/05		120	%	60 - 140
A342390	MHF	Spiked Blank	O-TERPHENYL (sur.)	2021/09/05		107	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05		101	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/05		106	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/05		102	%	60 - 140
A342390	MHF	Method Blank	O-TERPHENYL (sur.)	2021/09/05		115	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/05	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/05	<50		mg/kg	
A342390	MHF	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/05	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/05	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/05	NC		%	40
A342685	JU2	Matrix Spike	Aroclor 1260	2021/09/07		88	%	50 - 130
			NONACHLOROBIPHENYL (sur.)	2021/09/07		87	%	50 - 130
A342685	JU2	Spiked Blank	Aroclor 1260	2021/09/07		100	%	50 - 130
			NONACHLOROBIPHENYL (sur.)	2021/09/07		106	%	50 - 130
A342685	JU2	Method Blank	Aroclor 1016	2021/09/07	<0.010		mg/kg	
			Aroclor 1221	2021/09/07	<0.010		mg/kg	
			Aroclor 1232	2021/09/07	<0.010		mg/kg	
			Aroclor 1242	2021/09/07	<0.010		mg/kg	
			Aroclor 1248	2021/09/07	<0.010		mg/kg	
			Aroclor 1254	2021/09/07	<0.010		mg/kg	
			Aroclor 1260	2021/09/07	<0.010		mg/kg	
			Aroclor 1262	2021/09/07	<0.010		mg/kg	
			Aroclor 1268	2021/09/07	<0.010		mg/kg	
			NONACHLOROBIPHENYL (sur.)	2021/09/07		106	%	50 - 130
A342685	JU2	RPD	Aroclor 1016	2021/09/07	NC		%	50
			Aroclor 1221	2021/09/07	NC		%	50
			Aroclor 1232	2021/09/07	NC		%	50
			Aroclor 1242	2021/09/07	NC		%	50
			Aroclor 1248	2021/09/07	NC		%	50
			Aroclor 1254	2021/09/07	NC		%	50
			Aroclor 1260	2021/09/07	NC		%	50
			Aroclor 1262	2021/09/07	NC		%	50
			Aroclor 1268	2021/09/07	NC		%	50
A343313	RSU	Matrix Spike [AFA116-01]	1,4-Difluorobenzene (sur.)	2021/09/08		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		113	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		103	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		104	%	50 - 140
			Benzene	2021/09/08		89	%	50 - 140
			Toluene	2021/09/08		93	%	50 - 140
			Ethylbenzene	2021/09/08		107	%	50 - 140
			m & p-Xylene	2021/09/08		111	%	50 - 140
			o-Xylene	2021/09/08		118	%	50 - 140
			F1 (C6-C10)	2021/09/08		86	%	60 - 140
A343313	RSU	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/08		95	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		111	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		107	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		106	%	50 - 140
			Benzene	2021/09/08		71	%	60 - 130
			Toluene	2021/09/08		78	%	60 - 130
			Ethylbenzene	2021/09/08		76	%	60 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			m & p-Xylene	2021/09/08		78	%	60 - 130
			o-Xylene	2021/09/08		74	%	60 - 130
			F1 (C6-C10)	2021/09/08		103	%	60 - 140
A343313	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/08		93	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		101	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		95	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		100	%	50 - 140
			Benzene	2021/09/08	<0.0050		mg/kg	
			Toluene	2021/09/08	<0.050		mg/kg	
			Ethylbenzene	2021/09/08	<0.010		mg/kg	
			m & p-Xylene	2021/09/08	<0.040		mg/kg	
			o-Xylene	2021/09/08	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/08	<10		mg/kg	
A343313	RSU	RPD [AFA116-01]	Benzene	2021/09/08	NC		%	50
			Toluene	2021/09/08	31		%	50
			Ethylbenzene	2021/09/08	11		%	50
			m & p-Xylene	2021/09/08	20		%	50
			o-Xylene	2021/09/08	10		%	50
			F1 (C6-C10)	2021/09/08	NC		%	40
A343760	NR	Spiked Blank	Hex. Chromium (Cr 6+)	2021/09/07		101	%	80 - 120
A343760	NR	Method Blank	Hex. Chromium (Cr 6+)	2021/09/07	<0.080		mg/kg	
A344252	LQ1	Matrix Spike	Total Arsenic (As)	2021/09/08		103	%	75 - 125
			Total Chromium (Cr)	2021/09/08		118	%	75 - 125
			Total Copper (Cu)	2021/09/08		103	%	75 - 125
A344252	LQ1	QC Standard	Total Arsenic (As)	2021/09/08		102	%	53 - 147
			Total Chromium (Cr)	2021/09/08		93	%	59 - 141
			Total Copper (Cu)	2021/09/08		100	%	83 - 117
A344252	LQ1	Spiked Blank	Total Arsenic (As)	2021/09/08		97	%	80 - 120
			Total Chromium (Cr)	2021/09/08		99	%	80 - 120
			Total Copper (Cu)	2021/09/08		101	%	80 - 120
A344252	LQ1	Method Blank	Total Arsenic (As)	2021/09/08	<1.0		mg/kg	
			Total Chromium (Cr)	2021/09/08	<1.0		mg/kg	
			Total Copper (Cu)	2021/09/08	<1.0		mg/kg	
A344252	LQ1	RPD	Total Arsenic (As)	2021/09/08	8.4		%	30
			Total Chromium (Cr)	2021/09/08	5.6		%	30
			Total Copper (Cu)	2021/09/08	10		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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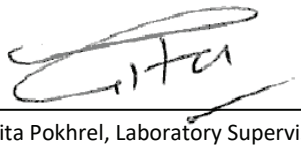
GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1000
Your P.O. #: 20368099-7000-1000
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



Gita Pokhrel, Laboratory Supervisor

Janet Gao, B.Sc., QP, Supervisor, Organics

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Maxxam
A Bureau Veritas Group Company

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page ___ of ___	
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COOLER OBSERVATIONS:

MAXXAM JOB#: C164652

COOLER ID	CUSTODY SEAL PRESENT (YES / NO)	CUSTODY SEAL INTACT (YES / NO)	ICE PRESENT (YES / NO)	TEMP 1	TEMP 2	TEMP 3
	✓ /	✓ /	✓ /	1	1	1
	✓ /	✓ /	✓ /	1	0	1
	✓ /	✓ /	✓ /	0	0	0
	✓ /	✓ /	✓ /	1	2	1
	✓ /	✓ /	✓ /	0	1	2
	✓ /	✓ /	✓ /	4	4	4
	✓ /	✓ /	✓ /	0	0	0
	✓ /	✓ /	✓ /	-1	-1	-1
	✓ /	✓ /	✓ /	1	0	-1
	✓ /	✓ /	✓ /	2	1	1

COOLER ID	CUSTODY SEAL PRESENT (YES / NO)	CUSTODY SEAL INTACT (YES / NO)	ICE PRESENT (YES / NO)	TEMP 1	TEMP 2	TEMP 3
	✓ /	✓ /	✓ /	1	1	0

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
[signature]	Dawit Kibreab	2024/09/01	15:00

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ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page 1 of 1	
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COOLER OBSERVATIONS: * some COC's were soaked in water

MAXXAM JOB#: C-164652

Cooler	Custody seal present (YES/NO)	Custody seal intact (YES/NO)	Ice present (YES/NO)	Cooler ID	Temp 1	Temp 2	Temp 3
1	YES /	YES /	YES /		5	4	5
2	YES /	YES /	YES /		9	10	9
3	YES /	YES /	YES /		6	4	7
4	YES /	YES /	YES /		4	4	6
5	YES /	YES /	YES /		4	7	7
6	YES /	YES /	YES /		3	7	7
7	YES /	YES /	YES /		4	6	7
8	YES /	YES /	YES /		6	4	7
9	YES /	YES /	YES /		6	6	4
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
Jose Mercary	[signature]	2021/08/31	8:35 AM

Bureau Veritas Laboratories
4000 19st N.E. Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#2045, GOLDER ASSOCIATES LTD	Company Name	Golder Associates	Quotation #	C00480	BV Labs Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	PETER TAN, Aurelie Bellavance	P.O. #	2036809 99-7000-100	C164652	644253
Address	16820-107 AVE	Address	2800, 700 2nd St. SW	Project #	2036809 99-6000-100	Chain Of Custody Record	Project Manager
	EDMONTON AB T5P 4C3		Calgary, AB 403-816-0245	Project Name		C#644253-03-01	Carmen McKay
Phone	(780) 483-3499 Fax: (780) 483-1574	Phone	(780) 483-3499 Fax:	Site #			
Email	CanadaAccountsPayableInvoices@golder.com	Email	peter_tan@golder.com, abellavance@golder.com	Sampled By			

Regulatory Criteria: CCME

Special Instructions: shellDGR@golder.com

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to BV Labs

Analysis Requested

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	Hexavalent Chromium, Nitrate, Sulphate, True Total Barium	BTEX and F1-F4 in Soil (Vials)	CCME BTEX & PHC F1-F4	PAH	Chromated copper, Arsenate (Total Cr, Cu As, Trivalent Cr)	Hexavalent Cr	Trivalent Cr	PCB	extraction process for wood	# of Bottles	Comments
1	NA	WP21-CF01	21/08/24	15:00	wood						X	X	X	X	X	X	X	1	
2	NA	WP21-CF02	↓	15:15	wood						X	X	X	X	X	X	X	1	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

31-Aug-21 08:35
Carmen McKay-Mat. lea
C164652
MXP INS-0009

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT X
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number _____ *(call lab for #)*

Received in Yellowknife
By: J. Meraw
@ 5:35 PM
AUG 31 2021
See ACTR
Temp: / /

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Claudia A Bellavance	21/08/24	15:30	Dr Dawit Kibreab	2021/09/01	15:00			See ACTR	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

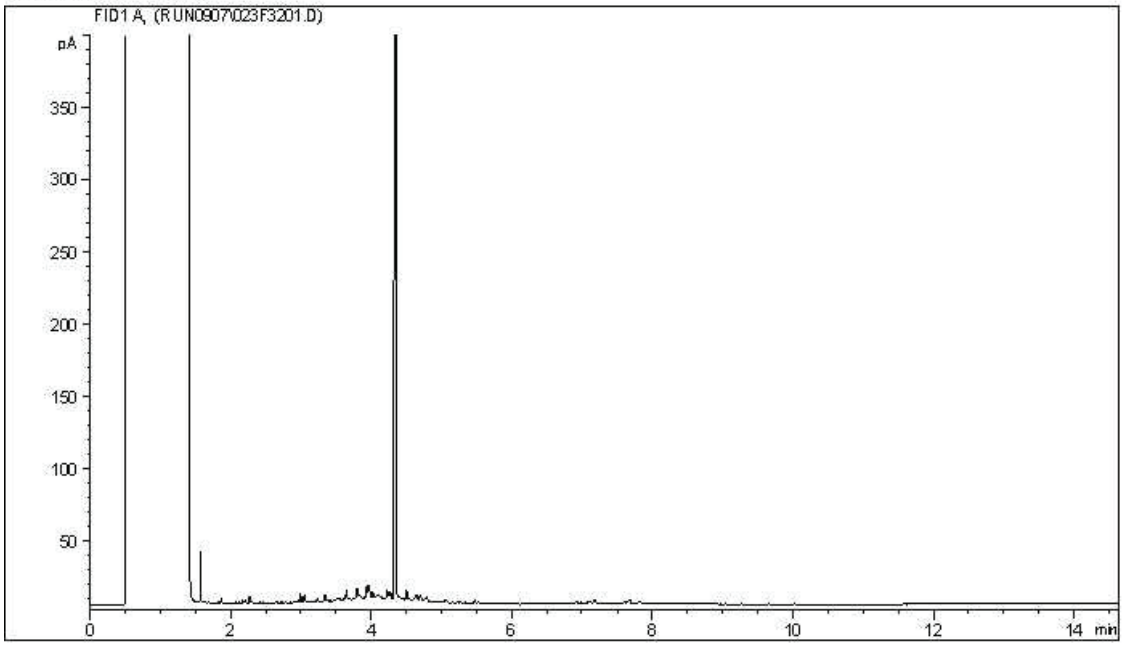
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

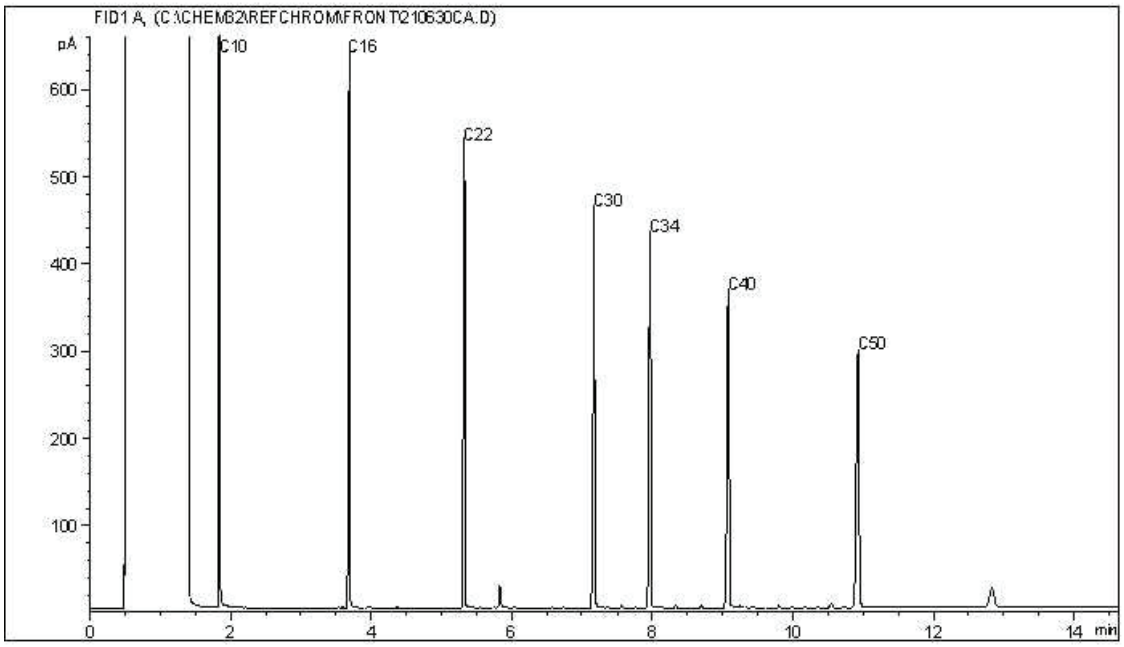
Bureau Veritas Canada (2019) Inc.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



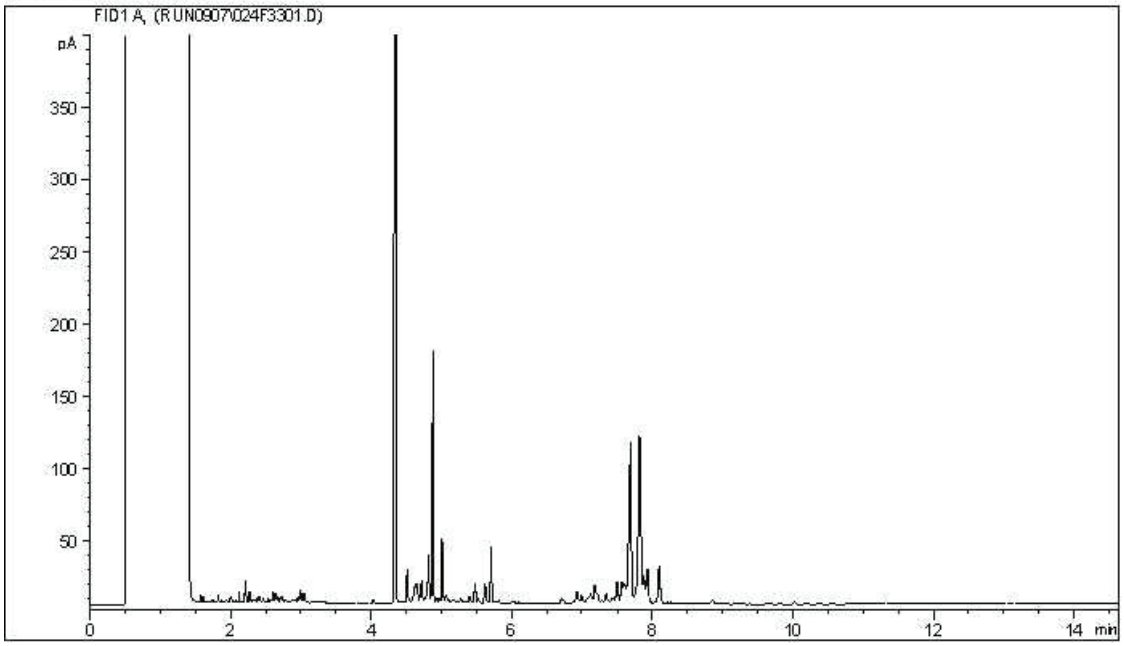
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

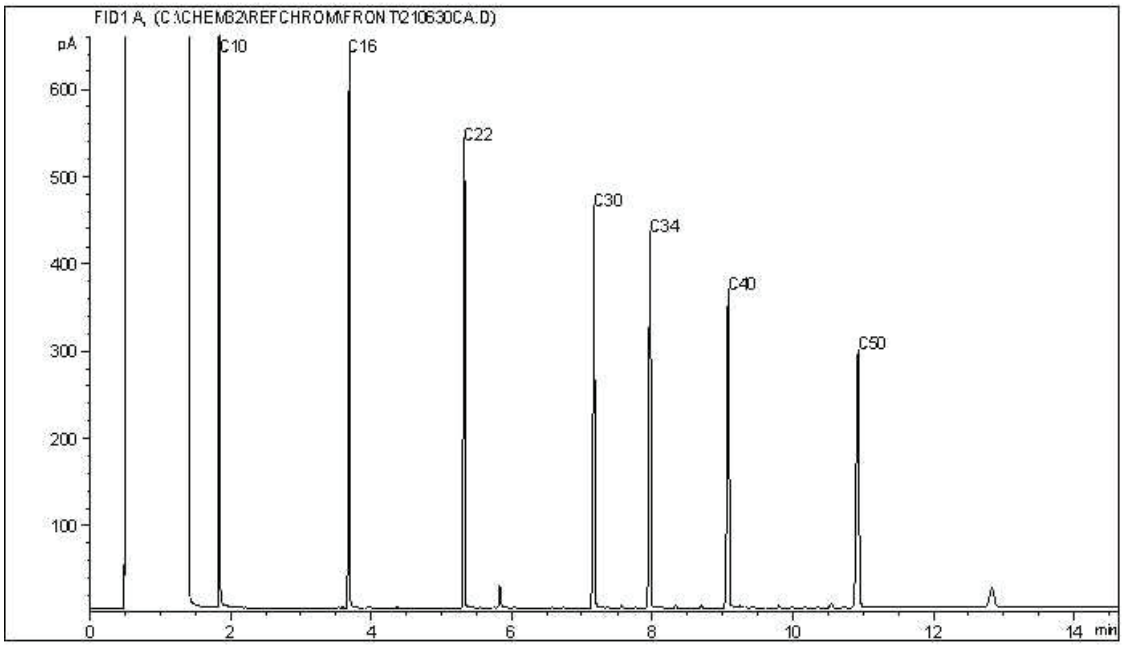
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell

Sampling Date: August 24, 2021

Golder Project Number: 20368099-6000-1001

Laboratory: Bureau Veritas Edmonton

Lab Submission Number: C164652

Was the Cooler Received at the lab under a sealed and intact custody seal?	Yes
Was proper chain of custody of the samples documented and kept?	Yes
Were sample temperatures acceptable when they reached lab?:	Yes
Were all samples analyzed and extracted within hold times?:	Yes
Has lab warranted all tests were in statistical control in CoA?:	Yes
Was sufficient sample provided for the requested analysis?	No
Has lab warranted all samples were analyzed with limited headspace present?:	Yes

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Surrogate Recovery	X			All laboratory QC results are within
Method Blank Concentration	X			acceptance criteria.
Laboratory Duplicate RPD	X			
Matrix Spike Recovery	X			
Blank Spike Recovery	X			

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration			X	No field QC samples were collected.
Trip Blank Concentration			X	
Field Duplicate RPD			X	

Is data considered reliable (Yes/No/Suspect)?: Yes

If answer is "No" or "Suspect", describe and provide rationale:

Data Reviewed by (Print): Anita Colbert

Data Reviewed by (Signature): Anita Colbert

Date: September 10, 2021

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-51-01, 644511-59-01, 644511-60-01, 644511-61-01

Report Date: 2021/09/28
Report #: R3077732
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C164653
Received: 2021/08/31, 08:35

Sample Matrix: Soil
Samples Received: 40

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Barium on ICP using Fusion Extraction (1)	3	2021/09/15	2021/09/16	AB SOP-00044 / AB SOP-00042	EPA 6010d R5 m
Boron (Hot Water Soluble) (1)	1	2021/09/09	2021/09/09	AB SOP-00034 / AB SOP-00042	EPA 6010d R5 m
Boron (Hot Water Soluble) (1)	2	2021/09/15	2021/09/16	AB SOP-00034 / AB SOP-00042	EPA 6010d R5 m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	39	N/A	2021/09/07	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	1	N/A	2021/09/08	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	40	N/A	2021/09/08		Auto Calc
Hexavalent Chromium (1, 3)	3	2021/09/07	2021/09/07	AB SOP-00063	SM 23 3500-Cr B m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	20	2021/09/04	2021/09/07	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	14	2021/09/05	2021/09/07	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	5	2021/09/05	2021/09/08	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	1	2021/09/05	2021/09/09	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F4G in soil) (1, 4)	1	2021/09/04	2021/09/09	AB SOP-00036 AB SOP-00040	CCME PHC-CWS m
Elements by ICPMS - Soils (1)	3	2021/09/05	2021/09/06	AB SOP-00001 / AB SOP-00043	EPA 6020b R2 m
Moisture (1)	40	N/A	2021/09/05	AB SOP-00002	CCME PHC-CWS m
Nitrite-N and Nitrate-N (soluble) (1)	3	2021/09/05	2021/09/07	AB SOP-00033 / AB SOP-00023	SM 23 4110 B m
Soluble Ions (1)	3	2021/09/05	2021/09/07	AB SOP-00033 / AB SOP-00042	EPA 6010d R5 m
Soluble Paste (1)	3	2021/09/05	2021/09/05	AB SOP-00033	Carter 2nd ed 15.2 m
Soluble Boron Calculation (1)	3	N/A	2021/09/09		Auto Calc
Soluble Ions Calculation (1)	3	N/A	2021/09/05		Auto Calc

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-51-01, 644511-59-01, 644511-60-01, 644511-61-01

Report Date: 2021/09/28
Report #: R3077732
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C164653
Received: 2021/08/31, 08:35

Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.
(3) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.
(4) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-51-01, 644511-59-01, 644511-60-01, 644511-61-01

Report Date: 2021/09/28
Report #: R3077732
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C164653
Received: 2021/08/31, 08:35

Encryption Key

Bureau Veritas
28 Sep 2021 18:46:17

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273

==========

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Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA117	AFA117		AFA118	AFA119	AFA120		
Sampling Date		2021/08/27 14:20	2021/08/27 14:20		2021/08/27 14:30	2021/08/27 14:19	2021/08/27 14:41		
COC Number		644511-51-01	644511-51-01		644511-51-01	644511-51-01	644511-51-01		
	UNITS	**TP21-04-03**	**TP21-04-03 Lab-Dup**	**RDL**	**TP21-04-05**	**TP21-04-01**	**TP21-05-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	44 (1)	N/A	32	160	320	95	10	A342519
F3 (C16-C34 Hydrocarbons)	mg/kg	1100 (1)	N/A	160	130	770	230	50	A342519
F4 (C34-C50 Hydrocarbons)	mg/kg	440 (1)	N/A	160	<50	75	<50	50	A342519
Reached Baseline at C50	mg/kg	Yes	N/A	N/A	Yes	Yes	Yes	N/A	A342519
Physical Properties									
Moisture	%	69	N/A	0.30	16	14	14	0.30	A342516
Volatiles									
Xylenes (Total)	mg/kg	<0.20	N/A	0.20	0.54	<0.045	<0.045	0.045	A339733
F1 (C6-C10) - BTEX	mg/kg	<13	N/A	13	35	<10	<10	10	A339733
Field Preserved Volatiles									
Benzene	mg/kg	0.15 (2)	0.092	0.022	<0.0050	<0.0050	<0.0050	0.0050	A341608
Toluene	mg/kg	0.41 (2)	0.28	0.22	<0.050	<0.050	<0.050	0.050	A341608
Ethylbenzene	mg/kg	0.053 (2)	<0.045	0.045	0.15	0.014	<0.010	0.010	A341608
m & p-Xylene	mg/kg	0.19 (2)	<0.18	0.18	0.19	<0.040	<0.040	0.040	A341608
o-Xylene	mg/kg	<0.090 (2)	<0.090	0.090	0.35	<0.020	<0.020	0.020	A341608
F1 (C6-C10)	mg/kg	<13 (3)	<13	13	36	<10	<10	10	A341608
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	88	100	N/A	86	82	84	N/A	A341608
4-Bromofluorobenzene (sur.)	%	108	86	N/A	104	107	108	N/A	A341608
D10-o-Xylene (sur.)	%	109	66	N/A	124	120	112	N/A	A341608
D4-1,2-Dichloroethane (sur.)	%	108	77	N/A	112	107	108	N/A	A341608
O-TERPHENYL (sur.)	%	105	N/A	N/A	90	112	102	N/A	A342519

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.
(2) Detection limits raised based on sample weight used for analysis.
(3) Detection limit reported based on MDL and sample weight used for analysis.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA121	AFA122	AFA123	AFA124	AFA125	AFA126		
Sampling Date		2021/08/27 14:42	2021/08/27 14:53	2021/08/27 15:02	2021/08/27 15:03	2021/08/27 15:10	2021/08/27 15:10		
COC Number		644511-51-01	644511-51-01	644511-51-01	644511-51-01	644511-51-01	644511-51-01		
	UNITS	**TP21-05-04**	**TP21-05-06**	**TP21-34-01**	**TP21-34-03**	**TP21-34-05**	**DUP-II**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	430	26	<10	<10	10	A342519
F3 (C16-C34 Hydrocarbons)	mg/kg	70	<50	580	94	<50	<50	50	A342519
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	<50	<50	<50	50	A342519
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A342519
Physical Properties									
Moisture	%	17	17	14	5.8	12	14	0.30	A342516
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	0.045	A339733
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	<10	<10	10	A339733
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	A341608
Toluene	mg/kg	0.12	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	A341608
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A341608
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	A341608
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A341608
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	<10	10	A341608
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	90	90	90	102	89	89	N/A	A341608
4-Bromofluorobenzene (sur.)	%	102	104	102	85	105	105	N/A	A341608
D10-o-Xylene (sur.)	%	101	103	97	77	103	99	N/A	A341608
D4-1,2-Dichloroethane (sur.)	%	96	97	101	76	97	97	N/A	A341608
O-TERPHENYL (sur.)	%	111	117	99	110	100	113	N/A	A342519

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA127	AFA127		AFA128	AFA128		AFA129		
Sampling Date		2021/08/27 08:55	2021/08/27 08:55		2021/08/27 08:56	2021/08/27 08:56		2021/08/27 09:11		
COC Number		644511-59-01	644511-59-01		644511-59-01	644511-59-01		644511-59-01		
	UNITS	TP21-20-01	TP21-20-01 Lab-Dup	QC Batch	TP21-20-03	TP21-20-03 Lab-Dup	RDL	TP21-20-06	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	34 (1)	130 (2)	A342519	200	N/A	10	<10	10	A342519
F3 (C16-C34 Hydrocarbons)	mg/kg	190	270	A342519	380	N/A	50	<50	50	A342519
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	A342519	<50	N/A	50	<50	50	A342519
Reached Baseline at C50	mg/kg	Yes	Yes	A342519	Yes	N/A	N/A	Yes	N/A	A342519
Physical Properties										
Moisture	%	15	N/A	A342516	13	13	0.30	17	0.30	A342516
Volatiles										
Xylenes (Total)	mg/kg	<0.045	N/A	A339733	<0.045	N/A	0.045	<0.045	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	16	N/A	A339733	20	N/A	10	<16	16	A340129
Field Preserved Volatiles										
Benzene	mg/kg	<0.0050	N/A	A341608	<0.0050	N/A	0.0050	<0.0050	0.0050	A341608
Toluene	mg/kg	<0.050	N/A	A341608	0.091	N/A	0.050	<0.050	0.050	A341608
Ethylbenzene	mg/kg	<0.010	N/A	A341608	<0.010	N/A	0.010	<0.010	0.010	A341608
m & p-Xylene	mg/kg	<0.040	N/A	A341608	<0.040	N/A	0.040	<0.040	0.040	A341608
o-Xylene	mg/kg	<0.020	N/A	A341608	<0.020	N/A	0.020	<0.020	0.020	A341608
F1 (C6-C10)	mg/kg	16	N/A	A341608	20	N/A	10	<16 (3)	16	A341608
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	89	N/A	A341608	88	N/A	N/A	85	N/A	A341608
4-Bromofluorobenzene (sur.)	%	102	N/A	A341608	101	N/A	N/A	106	N/A	A341608
D10-o-Xylene (sur.)	%	96	N/A	A341608	96	N/A	N/A	115	N/A	A341608
D4-1,2-Dichloroethane (sur.)	%	100	N/A	A341608	96	N/A	N/A	94	N/A	A341608
O-TERPHENYL (sur.)	%	89	98	A342519	98	N/A	N/A	113	N/A	A342519

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.
(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Detection limit raised due to interferent.

BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA130		AFA131		AFA132		AFA133		
Sampling Date		2021/08/27 09:13		2021/08/27 09:14		2021/08/27 09:26		2021/08/27 09:39		
COC Number		644511-59-01		644511-59-01		644511-59-01		644511-59-01		
	UNITS	TP21-21-02	RDL	TP21-21-04	RDL	TP21-21-06	QC Batch	TP21-22-01	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	500	10	20	10	<10	A342519	130	10	A342304
F3 (C16-C34 Hydrocarbons)	mg/kg	1000	50	66	50	<50	A342519	290	50	A342304
F4 (C34-C50 Hydrocarbons)	mg/kg	210	50	<50	50	<50	A342519	<50	50	A342304
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	N/A	Yes	A342519	Yes	N/A	A342304
Physical Properties										
Moisture	%	28	0.30	14	0.30	18	A342516	17	0.30	A342306
Volatiles										
Xylenes (Total)	mg/kg	0.24	0.045	0.25	0.045	<0.045	A340129	<0.045	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	46	10	<16	16	<10	A340129	<10	10	A340129
Field Preserved Volatiles										
Benzene	mg/kg	0.062	0.0050	0.034	0.0050	<0.0050	A341608	<0.0050	0.0050	A341608
Toluene	mg/kg	1.7	0.050	0.25	0.050	<0.050	A341608	<0.050	0.050	A341608
Ethylbenzene	mg/kg	0.042	0.010	0.043	0.010	<0.010	A341608	0.014	0.010	A341608
m & p-Xylene	mg/kg	0.12	0.040	0.15	0.040	<0.040	A341608	<0.040	0.040	A341608
o-Xylene	mg/kg	0.12	0.020	0.10	0.020	<0.020	A341608	<0.020	0.020	A341608
F1 (C6-C10)	mg/kg	48	10	<16 (1)	16	<10	A341608	<10	10	A341608
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	85	N/A	82	N/A	85	A341608	87	N/A	A341608
4-Bromofluorobenzene (sur.)	%	100	N/A	102	N/A	103	A341608	103	N/A	A341608
D10-o-Xylene (sur.)	%	99	N/A	99	N/A	99	A341608	100	N/A	A341608
D4-1,2-Dichloroethane (sur.)	%	95	N/A	90	N/A	93	A341608	98	N/A	A341608
O-TERPHENYL (sur.)	%	105	N/A	108	N/A	112	A342519	90	N/A	A342304

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limit raised due to interferent.

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BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA134			AFA135	AFA136		AFA137		
Sampling Date		2021/08/27 09:40			2021/08/27 09:46	2021/08/27 09:46		2021/08/27 09:47		
COC Number		644511-59-01			644511-59-01	644511-59-01		644511-60-01		
	UNITS	**TP21-22-03**	**RDL**	**QC Batch**	**TP21-22-05**	**DUP-GG**	**QC Batch**	**TP21-22-06**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	350	10	A342304	64	3300	A342304	6800	10	A342304
F3 (C16-C34 Hydrocarbons)	mg/kg	1700	50	A342304	<50	<50	A342304	99	50	A342304
F4 (C34-C50 Hydrocarbons)	mg/kg	390	50	A342304	<50	<50	A342304	<50	50	A342304
Reached Baseline at C50	mg/kg	No	N/A	A342304	Yes	Yes	A342304	Yes	N/A	A342304
Physical Properties										
Moisture	%	46	0.30	A342394	8.2	10	A342306	16	0.30	A342394
Volatiles										
Xylenes (Total)	mg/kg	<0.14	0.14	A340129	0.25	1.2	A340129	19	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	<10	10	A340129	11	42	A340129	850	10	A340129
Field Preserved Volatiles										
Benzene	mg/kg	0.11 (1)	0.015	A341608	0.088	0.091	A341608	0.39	0.0050	A341610
Toluene	mg/kg	2.8 (1)	0.15	A341608	0.074	0.14	A341608	4.8	0.050	A341610
Ethylbenzene	mg/kg	<0.029 (2)	0.029	A341608	0.065	0.29	A341608	4.2	0.010	A341610
m & p-Xylene	mg/kg	<0.12 (1)	0.12	A341608	0.14	0.75	A341608	12	0.040	A341610
o-Xylene	mg/kg	<0.060 (1)	0.060	A341608	0.10	0.44	A341608	7.0	0.020	A341610
F1 (C6-C10)	mg/kg	<10 (2)	10	A341608	12	44	A341608	880	10	A341610
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	86	N/A	A341608	87	87	A341608	99	N/A	A341610
4-Bromofluorobenzene (sur.)	%	104	N/A	A341608	103	98	A341608	104	N/A	A341610
D10-o-Xylene (sur.)	%	91	N/A	A341608	90	92	A341608	102	N/A	A341610
D4-1,2-Dichloroethane (sur.)	%	95	N/A	A341608	96	98	A341608	101	N/A	A341610
O-TERPHENYL (sur.)	%	89	N/A	A342304	92	92	A342304	86	N/A	A342304

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limits raised based on sample weight used for analysis.
(2) Detection limit reported based on MDL and sample weight used for analysis.

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BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA137	AFA138		AFA139	AFA140	AFA141		
Sampling Date		2021/08/27 09:47	2021/08/27 10:01		2021/08/27 10:02	2021/08/27 10:11	2021/08/27 10:11		
COC Number		644511-60-01	644511-60-01		644511-60-01	644511-60-01	644511-60-01		
	UNITS	TP21-22-06 Lab-Dup	TP21-23-01	QC Batch	TP21-23-03	TP21-23-06	DUP-HH	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	100	A342304	120	190	610	10	A342304
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	240	A342304	250	94	120	50	A342304
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	<50	A342304	<50	<50	<50	50	A342304
Reached Baseline at C50	mg/kg	N/A	Yes	A342304	Yes	Yes	Yes	N/A	A342304
Physical Properties									
Moisture	%	N/A	13	A342394	15	17	15	0.30	A342306
Volatiles									
Xylenes (Total)	mg/kg	N/A	0.071	A340129	<0.045	1.2	0.59	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	N/A	<10	A340129	<10	44	230	10	A340129
Field Preserved Volatiles									
Benzene	mg/kg	0.41	<0.0050	A341610	<0.0050	0.56	0.23	0.0050	A341610
Toluene	mg/kg	5.0	<0.050	A341610	<0.050	0.073	0.086	0.050	A341610
Ethylbenzene	mg/kg	4.4	0.024	A341610	<0.010	0.60	0.56	0.010	A341610
m & p-Xylene	mg/kg	13	0.071 (1)	A341610	<0.040	0.42	0.44	0.040	A341610
o-Xylene	mg/kg	7.4	<0.020	A341610	0.029 (1)	0.81	0.15	0.020	A341610
F1 (C6-C10)	mg/kg	870	<10	A341610	<10	46	230	10	A341610
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	100	94	A341610	93	94	96	N/A	A341610
4-Bromofluorobenzene (sur.)	%	110	107	A341610	105	102	102	N/A	A341610
D10-o-Xylene (sur.)	%	106	100	A341610	94	109	101	N/A	A341610
D4-1,2-Dichloroethane (sur.)	%	104	97	A341610	99	97	103	N/A	A341610
O-TERPHENYL (sur.)	%	N/A	89	A342304	87	96	97	N/A	A342304

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA142	AFA143	AFA143	AFA144	AFA145	AFA146		
Sampling Date		2021/08/27 10:27	2021/08/27 10:28	2021/08/27 10:28	2021/08/27 10:38	2021/08/27 10:46	2021/08/27 10:47		
COC Number		644511-60-01	644511-60-01	644511-60-01	644511-60-01	644511-60-01	644511-60-01		
	UNITS	**TP21-24-01**	**TP21-24-03**	**TP21-24-03 Lab-Dup**	**TP21-24-06**	**TP21-25-02**	**TP21-25-04**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	97	380	360	39	360	74	10	A342304
F3 (C16-C34 Hydrocarbons)	mg/kg	280	520	460	75	320	370	50	A342304
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	<50	<50	110	50	A342304
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A342304
Physical Properties									
Moisture	%	13	14	N/A	17	15	36	0.30	A342306
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	N/A	0.054	<0.045	0.18	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	<10	14	N/A	17	<10	17	10	A340129
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	N/A	<0.0050	<0.0050	<0.0050	0.0050	A341610
Toluene	mg/kg	<0.050	0.076	N/A	0.26	<0.050	2.4	0.050	A341610
Ethylbenzene	mg/kg	<0.010	0.013	N/A	0.021	<0.010	0.028	0.010	A341610
m & p-Xylene	mg/kg	<0.040	<0.040	N/A	<0.040	<0.040	0.092	0.040	A341610
o-Xylene	mg/kg	<0.020	0.028	N/A	0.054 (1)	<0.020	0.091	0.020	A341610
F1 (C6-C10)	mg/kg	<10	14	N/A	17	<10	20	10	A341610
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	94	92	N/A	93	92	94	N/A	A341610
4-Bromofluorobenzene (sur.)	%	100	99	N/A	103	101	107	N/A	A341610
D10-o-Xylene (sur.)	%	102	95	N/A	92	103	107	N/A	A341610
D4-1,2-Dichloroethane (sur.)	%	99	99	N/A	98	98	101	N/A	A341610
O-TERPHENYL (sur.)	%	104	92	92	99	101	107	N/A	A342304

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Qualifying ion outside of acceptance criteria. Results are tentatively identified and potentially biased high.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA147	AFA148		AFA149	AFA150		
Sampling Date		2021/08/27 10:59	2021/08/27 13:37		2021/08/27 13:38	2021/08/27 13:53		
COC Number		644511-61-01	644511-61-01		644511-61-01	644511-61-01		
	UNITS	TP21-25-06	TP21-26-02	QC Batch	TP21-26-04	TP21-26-06	RDL	QC Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	120	A342304	2100	100	10	A342519
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	320	A342304	1600	130	50	A342519
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	59	A342304	130	<50	50	A342519
Reached Baseline at C50	mg/kg	Yes	Yes	A342304	Yes	Yes	N/A	A342519
Physical Properties								
Moisture	%	18	13	A342306	25	13	0.30	A342516
Volatiles								
Xylenes (Total)	mg/kg	<0.045	<0.045	A340129	5.4	0.25	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	<10	<10	A340129	310	17	10	A340129
Field Preserved Volatiles								
Benzene	mg/kg	<0.0050	<0.0050	A341610	0.087	0.011	0.0050	A341610
Toluene	mg/kg	0.12	<0.050	A341610	1.8	<0.050	0.050	A341610
Ethylbenzene	mg/kg	<0.010	<0.010	A341610	1.1	0.055	0.010	A341610
m & p-Xylene	mg/kg	<0.040	<0.040	A341610	2.6	0.12	0.040	A341610
o-Xylene	mg/kg	<0.020	<0.020	A341610	2.8	0.13	0.020	A341610
F1 (C6-C10)	mg/kg	<10	<10	A341610	320	17	10	A341610
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	94	93	A341610	95	95	N/A	A341610
4-Bromofluorobenzene (sur.)	%	102	100	A341610	103	99	N/A	A341610
D10-o-Xylene (sur.)	%	107	98	A341610	105	86	N/A	A341610
D4-1,2-Dichloroethane (sur.)	%	97	98	A341610	102	95	N/A	A341610
O-TERPHENYL (sur.)	%	105	107	A342304	122	105	N/A	A342519

RDL = Reportable Detection Limit
N/A = Not Applicable

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BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA151	AFA152		AFA153	AFA154		
Sampling Date		2021/08/27 13:56	2021/08/27 13:57		2021/08/27 14:04	2021/08/27 15:22		
COC Number		644511-61-01	644511-61-01		644511-61-01	644511-61-01		
	UNITS	TP21-27-02	TP21-27-04	QC Batch	TP21-27-05	TP21-58-01	RDL	QC Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	230	140	A342304	50	140	10	A342519
F3 (C16-C34 Hydrocarbons)	mg/kg	460	190	A342304	110	290	50	A342519
F4 (C34-C50 Hydrocarbons)	mg/kg	65	<50	A342304	<50	<50	50	A342519
Reached Baseline at C50	mg/kg	Yes	Yes	A342304	Yes	Yes	N/A	A342519
Physical Properties								
Moisture	%	15	6.7	A342306	9.9	9.4	0.30	A342516
Volatiles								
Xylenes (Total)	mg/kg	<0.045	<0.045	A340129	<0.045	<0.045	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	<10	19	A340129	11	<10	10	A340129
Field Preserved Volatiles								
Benzene	mg/kg	<0.0050	<0.0050	A341610	<0.0050	<0.0050	0.0050	A341610
Toluene	mg/kg	<0.050	<0.050	A341610	0.23	<0.050	0.050	A341610
Ethylbenzene	mg/kg	<0.010	<0.010	A341610	<0.010	<0.010	0.010	A341610
m & p-Xylene	mg/kg	<0.040	<0.040	A341610	<0.040	<0.040	0.040	A341610
o-Xylene	mg/kg	<0.020	<0.020	A341610	<0.020	<0.020	0.020	A341610
F1 (C6-C10)	mg/kg	<10	19	A341610	11	<10	10	A341610
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	97	97	A341610	96	96	N/A	A341610
4-Bromofluorobenzene (sur.)	%	99	100	A341610	101	98	N/A	A341610
D10-o-Xylene (sur.)	%	85	94	A341610	97	92	N/A	A341610
D4-1,2-Dichloroethane (sur.)	%	96	94	A341610	95	94	N/A	A341610
O-TERPHENYL (sur.)	%	104	100	A342304	99	114	N/A	A342519

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFA155	AFA156		
Sampling Date		2021/08/27 15:23	2021/08/27 15:32		
COC Number		644511-61-01	644511-61-01		
	UNITS	TP21-58-03	TP21-58-06	RDL	QC Batch
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	51	<10	10	A342304
F3 (C16-C34 Hydrocarbons)	mg/kg	270	<50	50	A342304
F4 (C34-C50 Hydrocarbons)	mg/kg	58	<50	50	A342304
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	A342304
Physical Properties					
Moisture	%	9.6	15	0.30	A342306
Volatiles					
Xylenes (Total)	mg/kg	<0.045	<0.045	0.045	A340129
F1 (C6-C10) - BTEX	mg/kg	<10	<10	10	A340129
Field Preserved Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	A341610
Toluene	mg/kg	0.33	<0.050	0.050	A341610
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	A341610
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	A341610
o-Xylene	mg/kg	<0.020	<0.020	0.020	A341610
F1 (C6-C10)	mg/kg	<10	<10	10	A341610
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	98	97	N/A	A341610
4-Bromofluorobenzene (sur.)	%	101	98	N/A	A341610
D10-o-Xylene (sur.)	%	91	96	N/A	A341610
D4-1,2-Dichloroethane (sur.)	%	95	95	N/A	A341610
O-TERPHENYL (sur.)	%	98	104	N/A	A342304

RDL = Reportable Detection Limit
N/A = Not Applicable

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BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 REGULATED METALS - SOILS (SOIL)

BV Labs ID		AFA148		AFA149			AFA150	AFA150		
Sampling Date		2021/08/27 13:37		2021/08/27 13:38			2021/08/27 13:53	2021/08/27 13:53		
COC Number		644511-61-01		644511-61-01			644511-61-01	644511-61-01		
	UNITS	TP21-26-02	RDL	TP21-26-04	RDL	QC Batch	TP21-26-06	TP21-26-06 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Calculated Boron (B)	mg/kg	<0.048	0.048	<0.064	0.064	A339887	<0.030	N/A	0.030	A339887
Elements										
Hex. Chromium (Cr 6+)	mg/kg	<0.080	0.080	<0.080	0.080	A343267	<0.080	N/A	0.080	A343717
Soluble Parameters										
Soluble Boron (B)	mg/L	<0.10	0.10	<0.10	0.10	A343801	<0.10	<0.10	0.10	A343801
Saturation %	%	48	N/A	64	N/A	A342449	30	29	N/A	A342449
Soluble Sulphate (SO4)	mg/L	390	5.0	72	5.0	A343801	110	100	5.0	A343801
Elements										
Total Antimony (Sb)	mg/kg	<0.50	0.50	<0.50	0.50	A342492	<0.50	N/A	0.50	A342492
Total Arsenic (As)	mg/kg	5.5	1.0	5.2	1.0	A342492	6.6	N/A	1.0	A342492
Total Barium (Ba)	mg/kg	1900	1.0	880	1.0	A342492	660	N/A	1.0	A342492
Total Beryllium (Be)	mg/kg	<0.40	0.40	<0.40	0.40	A342492	<0.40	N/A	0.40	A342492
Total Cadmium (Cd)	mg/kg	0.12	0.050	0.14	0.050	A342492	0.10	N/A	0.050	A342492
Total Chromium (Cr)	mg/kg	8.8	1.0	8.5	1.0	A342492	7.6	N/A	1.0	A342492
Total Cobalt (Co)	mg/kg	3.0	0.50	3.8	0.50	A342492	4.2	N/A	0.50	A342492
Total Copper (Cu)	mg/kg	7.9	1.0	7.1	1.0	A342492	5.8	N/A	1.0	A342492
Total Lead (Pb)	mg/kg	12	0.50	7.6	0.50	A342492	6.4	N/A	0.50	A342492
Total Mercury (Hg)	mg/kg	0.052	0.050	<0.050	0.050	A342492	<0.050	N/A	0.050	A342492
Total Molybdenum (Mo)	mg/kg	0.67	0.40	0.62	0.40	A342492	0.59	N/A	0.40	A342492
Total Nickel (Ni)	mg/kg	8.1	1.0	10	1.0	A342492	12	N/A	1.0	A342492
Total Selenium (Se)	mg/kg	<0.50	0.50	<0.50	0.50	A342492	<0.50	N/A	0.50	A342492
Total Silver (Ag)	mg/kg	<0.20	0.20	<0.20	0.20	A342492	<0.20	N/A	0.20	A342492
Total Thallium (Tl)	mg/kg	<0.10	0.10	<0.10	0.10	A342492	<0.10	N/A	0.10	A342492
Total Tin (Sn)	mg/kg	<1.0	1.0	<1.0	1.0	A342492	<1.0	N/A	1.0	A342492
Total Uranium (U)	mg/kg	0.50	0.20	0.49	0.20	A342492	0.42	N/A	0.20	A342492
Total Vanadium (V)	mg/kg	19	1.0	17	1.0	A342492	15	N/A	1.0	A342492
Total Zinc (Zn)	mg/kg	28	10	27	10	A342492	31	N/A	10	A342492

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF SOIL

BV Labs ID		AFA148		AFA149			AFA150	AFA150		
Sampling Date		2021/08/27 13:37		2021/08/27 13:38			2021/08/27 13:53	2021/08/27 13:53		
COC Number		644511-61-01		644511-61-01			644511-61-01	644511-61-01		
	UNITS	**TP21-26-02**	**RDL**	**TP21-26-04**	**RDL**	**QC Batch**	**TP21-26-06**	**TP21-26-06 Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters										
Calculated Sulphate (SO4)	mg/kg	190	2.4	46	3.2	A340064	32	N/A	1.5	A340064
Calculated Nitrate (N)	mg/kg	<0.096	0.096	<0.13	0.13	A340064	<0.060	N/A	0.060	A340064
Elements										
Soluble (Hot water) Boron (B)	mg/kg	0.58	0.10	0.64	0.10	A352904	0.31	0.29	0.10	A345747
Soluble Parameters										
Soluble Nitrite (N)	mg/L	0.84	0.20	<0.20	0.20	A343137	<0.20	<0.20	0.20	A343137
Soluble Nitrate (N)	mg/L	0.60	0.20	<0.20	0.20	A343137	0.21	<0.20	0.20	A343137

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GOLDER ASSOCIATES LTD.
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Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		AFA134		
Sampling Date		2021/08/27 09:40		
COC Number		644511-59-01		
	UNITS	**TP21-22-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon				
F4G-SG (Heavy Hydrocarbons-Grav.)	mg/kg	3700	500	A345413
RDL = Reportable Detection Limit				

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BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

BV Labs ID		AFA148	AFA149	AFA150		
Sampling Date		2021/08/27 13:37	2021/08/27 13:38	2021/08/27 13:53		
COC Number		644511-61-01	644511-61-01	644511-61-01		
	UNITS	TP21-26-02	TP21-26-04	TP21-26-06	RDL	QC Batch
Elements						
Total Fusion Barium (Ba)	mg/kg	3100	1600	1200	50	A352608
RDL = Reportable Detection Limit						

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GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	9.3°C
Package 3	5.7°C
Package 4	4.7°C
Package 5	6.0°C
Package 6	5.7°C
Package 7	5.7°C
Package 8	5.7°C
Package 9	5.3°C

Version #4: Report reissued without rework data as per clietn request.

Version #3: Report reissued to include additional results for F2 & BTEX on sampleTP21-22-05, Dup-GG, TP21-23-06 and Dup-HH due to request for re-analysis by client. Sample reanalysis indicates sample non-homogeneity, both sets of data are reported.

Sample AFA135 [TP21-22-05] : Sample was analyzed past method specified hold time for CCME Hydrocarbons (F2-F4 in soil).

Sample AFA136 [DUP-GG] : Sample was analyzed past method specified hold time for CCME Hydrocarbons (F2-F4 in soil).

Sample AFA140 [TP21-23-06] : Sample was analyzed past method specified hold time for CCME Hydrocarbons (F2-F4 in soil).

Sample AFA141 [DUP-HH] : Sample was analyzed past method specified hold time for CCME Hydrocarbons (F2-F4 in soil).

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A341608	DO1	Matrix Spike [AFA117-02]	1,4-Difluorobenzene (sur.)	2021/09/07		87	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		112	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		121	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		104	%	50 - 140
			Benzene	2021/09/07		111	%	50 - 140
			Toluene	2021/09/07		116	%	50 - 140
			Ethylbenzene	2021/09/07		132	%	50 - 140
			m & p-Xylene	2021/09/07		127	%	50 - 140
			o-Xylene	2021/09/07		127	%	50 - 140
			F1 (C6-C10)	2021/09/07		103	%	60 - 140
A341608	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/07		75	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		96	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		97	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		99	%	50 - 140
			Benzene	2021/09/07		88	%	60 - 130
			Toluene	2021/09/07		90	%	60 - 130
			Ethylbenzene	2021/09/07		98	%	60 - 130
			m & p-Xylene	2021/09/07		96	%	60 - 130
			o-Xylene	2021/09/07		84	%	60 - 130
			F1 (C6-C10)	2021/09/07		83	%	60 - 140
A341608	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/07		88	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		108	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		107	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		107	%	50 - 140
			Benzene	2021/09/07	<0.0050		mg/kg	
			Toluene	2021/09/07	<0.050		mg/kg	
			Ethylbenzene	2021/09/07	<0.010		mg/kg	
			m & p-Xylene	2021/09/07	<0.040		mg/kg	
			o-Xylene	2021/09/07	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/07	<10		mg/kg	
A341608	DO1	RPD [AFA117-02]	Benzene	2021/09/08	46		%	50
			Toluene	2021/09/08	36		%	50
			Ethylbenzene	2021/09/08	17		%	50
			m & p-Xylene	2021/09/08	7.5		%	50
			o-Xylene	2021/09/08	NC		%	50
			F1 (C6-C10)	2021/09/08	NC		%	30
A341610	PKL	Matrix Spike [AFA137-02]	1,4-Difluorobenzene (sur.)	2021/09/07		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		103	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		100	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		102	%	50 - 140
			Benzene	2021/09/07		87	%	50 - 140
			Toluene	2021/09/07		88	%	50 - 140
			Ethylbenzene	2021/09/07		94	%	50 - 140
			m & p-Xylene	2021/09/07		92	%	50 - 140
			o-Xylene	2021/09/07		95	%	50 - 140
			F1 (C6-C10)	2021/09/07		103	%	60 - 140
A341610	PKL	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/07		95	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		98	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		89	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		100	%	50 - 140
			Benzene	2021/09/07		81	%	60 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Toluene	2021/09/07		87	%	60 - 130
			Ethylbenzene	2021/09/07		90	%	60 - 130
			m & p-Xylene	2021/09/07		90	%	60 - 130
			o-Xylene	2021/09/07		87	%	60 - 130
			F1 (C6-C10)	2021/09/07		83	%	60 - 140
A341610	PKL	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/07		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		101	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		83	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		97	%	50 - 140
			Benzene	2021/09/07	<0.0050		mg/kg	
			Toluene	2021/09/07	<0.050		mg/kg	
			Ethylbenzene	2021/09/07	<0.010		mg/kg	
			m & p-Xylene	2021/09/07	<0.040		mg/kg	
			o-Xylene	2021/09/07	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/07	<10		mg/kg	
A341610	PKL	RPD [AFA137-02]	Benzene	2021/09/07	3.9		%	50
			Toluene	2021/09/07	3.7		%	50
			Ethylbenzene	2021/09/07	3.9		%	50
			m & p-Xylene	2021/09/07	3.5		%	50
			o-Xylene	2021/09/07	5.0		%	50
			F1 (C6-C10)	2021/09/07	0.59		%	30
A342304	GG3	Matrix Spike [AFA143-01]	O-TERPHENYL (sur.)	2021/09/07		92	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		83	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		88	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		95	%	60 - 140
A342304	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		87	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		82	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		87	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		88	%	60 - 140
A342304	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/07		92	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342304	GG3	RPD [AFA143-01]	F2 (C10-C16 Hydrocarbons)	2021/09/07	5.1		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/07	12		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/07	NC		%	40
A342306	SVI	Method Blank	Moisture	2021/09/05	<0.30		%	
A342306	SVI	RPD	Moisture	2021/09/05	14		%	20
A342394	RIL	Method Blank	Moisture	2021/09/05	<0.30		%	
A342394	RIL	RPD	Moisture	2021/09/05	1.8		%	20
A342449	KKC	QC Standard	Saturation %	2021/09/05		102	%	75 - 125
A342449	KKC	RPD [AFA150-03]	Saturation %	2021/09/05	2.4		%	12
A342492	KH2	Matrix Spike	Total Antimony (Sb)	2021/09/06		99	%	75 - 125
			Total Arsenic (As)	2021/09/06		NC	%	75 - 125
			Total Barium (Ba)	2021/09/06		125	%	75 - 125
			Total Beryllium (Be)	2021/09/06		98	%	75 - 125
			Total Cadmium (Cd)	2021/09/06		109	%	75 - 125
			Total Chromium (Cr)	2021/09/06		NC	%	75 - 125
			Total Cobalt (Co)	2021/09/06		109	%	75 - 125
			Total Copper (Cu)	2021/09/06		NC	%	75 - 125
			Total Lead (Pb)	2021/09/06		NC	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Mercury (Hg)	2021/09/06		110	%	75 - 125
			Total Molybdenum (Mo)	2021/09/06		NC	%	75 - 125
			Total Nickel (Ni)	2021/09/06		NC	%	75 - 125
			Total Selenium (Se)	2021/09/06		111	%	75 - 125
			Total Silver (Ag)	2021/09/06		123	%	75 - 125
			Total Thallium (Tl)	2021/09/06		103	%	75 - 125
			Total Tin (Sn)	2021/09/06		103	%	75 - 125
			Total Uranium (U)	2021/09/06		104	%	75 - 125
			Total Vanadium (V)	2021/09/06		108	%	75 - 125
			Total Zinc (Zn)	2021/09/06		NC	%	75 - 125
A342492	KH2	QC Standard	Total Antimony (Sb)	2021/09/07		109	%	15 - 182
			Total Arsenic (As)	2021/09/07		110	%	53 - 147
			Total Barium (Ba)	2021/09/07		108	%	80 - 119
			Total Cadmium (Cd)	2021/09/07		103	%	72 - 128
			Total Chromium (Cr)	2021/09/07		105	%	59 - 141
			Total Cobalt (Co)	2021/09/07		101	%	58 - 142
			Total Copper (Cu)	2021/09/07		109	%	83 - 117
			Total Lead (Pb)	2021/09/07		115	%	79 - 121
			Total Molybdenum (Mo)	2021/09/07		109	%	67 - 133
			Total Nickel (Ni)	2021/09/07		109	%	79 - 121
			Total Silver (Ag)	2021/09/07		107	%	47 - 153
			Total Tin (Sn)	2021/09/07		111	%	67 - 133
			Total Uranium (U)	2021/09/07		102	%	77 - 123
			Total Vanadium (V)	2021/09/07		109	%	79 - 121
			Total Zinc (Zn)	2021/09/07		106	%	79 - 121
A342492	KH2	Spiked Blank	Total Antimony (Sb)	2021/09/06		105	%	80 - 120
			Total Arsenic (As)	2021/09/06		105	%	80 - 120
			Total Barium (Ba)	2021/09/06		109	%	80 - 120
			Total Beryllium (Be)	2021/09/06		105	%	80 - 120
			Total Cadmium (Cd)	2021/09/06		107	%	80 - 120
			Total Chromium (Cr)	2021/09/06		105	%	80 - 120
			Total Cobalt (Co)	2021/09/06		106	%	80 - 120
			Total Copper (Cu)	2021/09/06		108	%	80 - 120
			Total Lead (Pb)	2021/09/06		107	%	80 - 120
			Total Mercury (Hg)	2021/09/06		114	%	80 - 120
			Total Molybdenum (Mo)	2021/09/06		111	%	80 - 120
			Total Nickel (Ni)	2021/09/06		106	%	80 - 120
			Total Selenium (Se)	2021/09/06		107	%	80 - 120
			Total Silver (Ag)	2021/09/06		109	%	80 - 120
			Total Thallium (Tl)	2021/09/06		105	%	80 - 120
			Total Tin (Sn)	2021/09/06		110	%	80 - 120
			Total Uranium (U)	2021/09/06		106	%	80 - 120
			Total Vanadium (V)	2021/09/06		106	%	80 - 120
			Total Zinc (Zn)	2021/09/06		105	%	80 - 120
A342492	KH2	Method Blank	Total Antimony (Sb)	2021/09/06	<0.50		mg/kg	
			Total Arsenic (As)	2021/09/06	<1.0		mg/kg	
			Total Barium (Ba)	2021/09/06	<1.0		mg/kg	
			Total Beryllium (Be)	2021/09/06	<0.40		mg/kg	
			Total Cadmium (Cd)	2021/09/06	<0.050		mg/kg	
			Total Chromium (Cr)	2021/09/06	<1.0		mg/kg	
			Total Cobalt (Co)	2021/09/06	<0.50		mg/kg	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Copper (Cu)	2021/09/06	<1.0		mg/kg	
			Total Lead (Pb)	2021/09/06	<0.50		mg/kg	
			Total Mercury (Hg)	2021/09/06	<0.050		mg/kg	
			Total Molybdenum (Mo)	2021/09/06	<0.40		mg/kg	
			Total Nickel (Ni)	2021/09/06	<1.0		mg/kg	
			Total Selenium (Se)	2021/09/06	<0.50		mg/kg	
			Total Silver (Ag)	2021/09/06	<0.20		mg/kg	
			Total Thallium (Tl)	2021/09/06	<0.10		mg/kg	
			Total Tin (Sn)	2021/09/06	<1.0		mg/kg	
			Total Uranium (U)	2021/09/06	<0.20		mg/kg	
			Total Vanadium (V)	2021/09/06	<1.0		mg/kg	
			Total Zinc (Zn)	2021/09/06	<10		mg/kg	
A342492	KH2	RPD	Total Antimony (Sb)	2021/09/07	13		%	30
			Total Arsenic (As)	2021/09/07	4.1		%	30
			Total Barium (Ba)	2021/09/07	27		%	35
			Total Beryllium (Be)	2021/09/07	NC		%	30
			Total Cadmium (Cd)	2021/09/07	5.1		%	30
			Total Chromium (Cr)	2021/09/07	12		%	30
			Total Cobalt (Co)	2021/09/07	4.5		%	30
			Total Copper (Cu)	2021/09/07	2.8		%	30
			Total Lead (Pb)	2021/09/07	22		%	35
			Total Molybdenum (Mo)	2021/09/07	2.6		%	35
			Total Nickel (Ni)	2021/09/07	12		%	30
			Total Selenium (Se)	2021/09/07	NC		%	30
			Total Silver (Ag)	2021/09/07	2.2		%	35
			Total Thallium (Tl)	2021/09/07	29		%	30
			Total Tin (Sn)	2021/09/07	27		%	35
			Total Uranium (U)	2021/09/07	28		%	30
			Total Vanadium (V)	2021/09/07	4.6		%	30
			Total Zinc (Zn)	2021/09/07	3.9		%	30
A342516	ARV	Method Blank	Moisture	2021/09/05	<0.30		%	
A342516	ARV	RPD [AFA128-01]	Moisture	2021/09/05	0.77		%	20
A342519	GG3	Matrix Spike [AFA127-01]	O-TERPHENYL (sur.)	2021/09/07		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		63	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		100	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		117	%	60 - 140
A342519	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		98	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		99	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		109	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		106	%	60 - 140
A342519	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/07		110	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342519	GG3	RPD [AFA127-01]	F2 (C10-C16 Hydrocarbons)	2021/09/08	117 (1)		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/08	34		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/08	NC		%	40
A343137	KD9	Matrix Spike [AFA150-03]	Soluble Nitrite (N)	2021/09/07		101	%	75 - 125
			Soluble Nitrate (N)	2021/09/07		100	%	75 - 125
A343137	KD9	QC Standard	Soluble Nitrate (N)	2021/09/07		107	%	75 - 125
A343137	KD9	Spiked Blank	Soluble Nitrite (N)	2021/09/07		101	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Soluble Nitrate (N)	2021/09/07		101	%	80 - 120
A343137	KD9	Method Blank	Soluble Nitrite (N)	2021/09/07	<0.20		mg/L	
			Soluble Nitrate (N)	2021/09/07	<0.20		mg/L	
A343137	KD9	RPD [AFA150-03]	Soluble Nitrite (N)	2021/09/07	NC		%	30
			Soluble Nitrate (N)	2021/09/07	4.6		%	30
A343267	KWE	Matrix Spike	Hex. Chromium (Cr 6+)	2021/09/07		93	%	75 - 125
A343267	KWE	Spiked Blank	Hex. Chromium (Cr 6+)	2021/09/07		97	%	80 - 120
A343267	KWE	Method Blank	Hex. Chromium (Cr 6+)	2021/09/07	<0.080		mg/kg	
A343267	KWE	RPD	Hex. Chromium (Cr 6+)	2021/09/07	NC		%	35
A343717	NR	Matrix Spike	Hex. Chromium (Cr 6+)	2021/09/07		92	%	75 - 125
A343717	NR	Spiked Blank	Hex. Chromium (Cr 6+)	2021/09/07		101	%	80 - 120
A343717	NR	Method Blank	Hex. Chromium (Cr 6+)	2021/09/07	<0.080		mg/kg	
A343717	NR	RPD	Hex. Chromium (Cr 6+)	2021/09/07	NC		%	35
A343801	MAP	Matrix Spike [AFA150-03]	Soluble Boron (B)	2021/09/07		101	%	75 - 125
A343801	MAP	QC Standard	Soluble Sulphate (SO4)	2021/09/07		110	%	75 - 125
A343801	MAP	Spiked Blank	Soluble Boron (B)	2021/09/09		105	%	80 - 120
A343801	MAP	Method Blank	Soluble Boron (B)	2021/09/07	<0.10		mg/L	
			Soluble Sulphate (SO4)	2021/09/07	<5.0		mg/L	
A343801	MAP	RPD [AFA150-03]	Soluble Boron (B)	2021/09/07	NC		%	30
			Soluble Sulphate (SO4)	2021/09/07	5.4		%	30
A345413	JB9	Spiked Blank	F4G-SG (Heavy Hydrocarbons-Grav.)	2021/09/09		100	%	60 - 140
A345413	JB9	Method Blank	F4G-SG (Heavy Hydrocarbons-Grav.)	2021/09/09	<500		mg/kg	
A345747	MPU	Matrix Spike [AFA150-03]	Soluble (Hot water) Boron (B)	2021/09/09		117	%	75 - 125
A345747	MPU	Spiked Blank	Soluble (Hot water) Boron (B)	2021/09/09		106	%	80 - 120
A345747	MPU	Method Blank	Soluble (Hot water) Boron (B)	2021/09/09	<0.10		mg/kg	
A345747	MPU	RPD [AFA150-03]	Soluble (Hot water) Boron (B)	2021/09/09	8.5		%	35
A352608	MAP	QC Standard	Total Fusion Barium (Ba)	2021/09/16		85	%	75 - 125
A352608	MAP	Spiked Blank	Total Fusion Barium (Ba)	2021/09/16		93	%	75 - 125
A352608	MAP	Method Blank	Total Fusion Barium (Ba)	2021/09/16	<50		mg/kg	
A352608	MAP	RPD	Total Fusion Barium (Ba)	2021/09/16	12		%	35
A352904	MAP	Matrix Spike	Soluble (Hot water) Boron (B)	2021/09/16		113	%	75 - 125
A352904	MAP	Spiked Blank	Soluble (Hot water) Boron (B)	2021/09/16		103	%	80 - 120
A352904	MAP	Method Blank	Soluble (Hot water) Boron (B)	2021/09/16	<0.10		mg/kg	
A352904	MAP	RPD	Soluble (Hot water) Boron (B)	2021/09/16	1.9		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

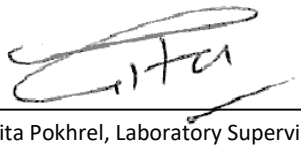
BV Labs Job #: C164653
Report Date: 2021/09/28

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

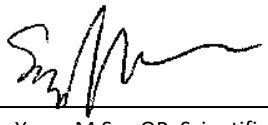
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



Gita Pokhrel, Laboratory Supervisor



Sandy Yuan, M.Sc., QP, Scientific Specialist

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

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ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page 1 of 1	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	

COOLER OBSERVATIONS: * some COC's were soaked in water

MAXXAM JOB#: C164B53

Cooler	Custody Seal Present (Yes / No)	Custody Seal Intact (Yes / No)	Ice Present (Yes / No)	Cooler ID	Temp 1	Temp 2	Temp 3
1	✓ /	✓ /	✓ /		5	4	5
2	✓ /	✓ /	✓ /		9	10	9
3	✓ /	✓ /	✓ /		6	4	7
4	✓ /	✓ /	✓ /		4	4	6
5	✓ /	✓ /	✓ /		4	7	7
6	✓ /	✓ /	✓ /		3	7	7
7	✓ /	✓ /	✓ /		4	6	7
8	✓ /	✓ /	✓ /		6	4	7
9	✓ /	✓ /	✓ /		6	6	4
10	/	/	/				

Cooler	Custody Seal Present (Yes / No)	Custody Seal Intact (Yes / No)	Ice Present (Yes / No)	Cooler ID	Temp 1	Temp 2	Temp 3
11	/	/	/				
12	/	/	/				
13	/	/	/				
14	/	/	/				
15	/	/	/				
16	/	/	/				
17	/	/	/				
18	/	/	/				
19	/	/	/				
20	/	/	/				

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
Jose Mercamo	[signature]	2021/08/31	8:35 AM

MaxXam
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ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	

COOLER OBSERVATIONS:

MAXXAM JOB#: C164653

COOLER ID	CUSTODY SEAL PRESENT (YES/NO)	CUSTODY SEAL INTACT (YES/NO)	ICE PRESENT (YES/NO)	TEMP 1	TEMP 2	TEMP 3
	YES ✓	YES ✓	YES ✓	1	1	1
–	YES ✓	YES ✓	YES ✓	1	0	1
	YES ✓	YES ✓	YES ✓	0	0	0
	YES ✓	YES ✓	YES ✓	1	2	1
	YES ✓	YES ✓	YES ✓	0	1	2
	YES ✓	YES ✓	YES ✓	4	4	4
	YES ✓	YES ✓	YES ✓	0	0	0
	YES ✓	YES ✓	YES ✓	-1	-1	-1
	YES ✓	YES ✓	YES ✓	1	0	-1
	YES ✓	YES ✓	YES ✓	2	1	1
	YES ✓	YES ✓	YES ✓	1	1	0

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
[signature]	Dawit Kibreab	2024/09/01	15:00

Bureau Veritas Laboratories
4000 19st N.E. Calgary, Alberta Canada T2E 6P8 Tel.(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #:	Bottle Order #:
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001	C164653	644511
Address:	2800, 700 -2nd Street SW	Address:	2800, 700 -2nd Street SW	Project:	20368099-6000-1001	COC #:	Project Manager:
	CALGARY AB T2P 2W2		CALGARY AB T2P 2W2	Project Name:		C#644511-51-01	Carmen McKay
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Site #:			
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email: shelldgre@golder.com Facility Code: 4125954

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered (Y / N)	~~ATH~~ Regulated Metals - Soils	~~ATH~~ BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-04-03	21/08/27	14:20	SOIL			X									3	
2		TP21-04-05		14:30				X										
3		TP21-04-01		14:19				X										
4		TP21-05-02		14:41				X										Received in Yellowknife
5		TP21-05-04		14:42				X										By: J. MERCADO
6		TP21-05-06		14:53				X										@ 8:35 AM
7		TP21-34-01		15:02				X										AUG 31 2021
8		TP21-34-03		15:03				X										See ACTR
9		TP21-34-05		15:10				X										Temp:
10		DUP-11		15:10				X										

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Chelsea Bellavance	21/08/27	16:30	Dawit Kibreab	2021/08/01	15:10		[ ]	see ACTR	[ ] Yes [ ] No

Laboratory Use Only

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Laboratories
4000 19st N.E. Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001
Address:	2800, 700 -2nd Street SW	Address:	2800, 700 -2nd Street SW	Project:	20368099-6000-1001
	CALGARY AB T2P 2W2		CALGARY AB T2P 2W2	Project Name:	
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Site #:	
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Sampled By:	

Laboratory Use Only:

BV Labs Job #:	Bottle Order #:
	644511
COC #:	Project Manager:
C#644511-59-01	Carmen McKay

Regulatory Criteria:

- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions:
email shelldqr@golder.com
Facility code: 41259544

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

#	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	AT1 BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	NA	TP21-20-01	21/08/27	8:55	Soil			X									3	
2	↓	TP21-20-03	↓	8:56	↓			X									↓	
3		TP21-20-06		9:11				X										Received in Yellowknife
4		TP21-21-02		9:13				X										By: J. Mercano @ 8:35 hr
5		TP21-21-04		9:14				X										AUG 31 2021
6		TP21-21-06		9:26				X										see ACTR
7		TP21-22-01		9:39				X										Temp: / /
8		TP21-22-03		9:40				X										
9		TP21-22-05		9:46				X										
10		DUP-GG		9:46				X										

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

- [x] **Regular (Standard) TAT:**
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details
- [ ] **Job Specific Rush TAT (if applies to entire submission)**
Date Required: ______
Rush Confirmation Number: ______ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
[signature] A.Bellavance	21/08/27	16:30	[signature] Dawit Kibreab	2021/09/01	15:00	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[ ]	See ACTR.	[ ] Yes [ ] No

White: BV Labs Yellow: Client

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* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Laboratories
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #:	Bottle Order #:
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		644511
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001	COC #:	Project Manager:
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:		C#644511-60-01	Carmen McKay
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email shelldqr@golder.com
Facility code 41259544

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	AT1 BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-22-06	~~21/08/27~~	9:47	Soil			X									3	
2		TP21-23-01		10:01				X										
3		TP21-23-03		10:02				X										
4		TP21-23-06		10:11				X										Received in Yellowknife By: J MERCADO @ 8:55 AM AUG 31 2021
5		DUP-HH		10:11				X										
6		TP21-24-01		10:27				X										
7		TP21-24-03		10:28				X										Temp: / /
8		TP21-24-06		10:38				X										
9		TP21-25-02		10:46				X										
10		TP21-25-04		10:47				X										

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
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Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Laboratory Use Only: Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
Aurelie A Belavance	21/08/27	16:30	Dawit Kibreab	2021/09/01	15:in		[ ]	See ACTR	[ ] Yes [ ] No

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
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Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001
Address:	2800, 700 -2nd Street SW	Address:	2800, 700 -2nd Street SW	Project:	20368099-6000-1001
	CALGARY AB T2P 2W2		CALGARY AB T2P 2W2	Project Name:	
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Site #:	
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Sampled By:	

Laboratory Use Only:

BV Labs Job #:	Bottle Order #:
	644511
COC #:	Project Manager:
C#644511-61-01	Carmen McKay

Regulatory Criteria:

- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email shelldqr@golder.com facility code 41259544

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1	N/A	TP21-25-06	21/08/27	10:59	Soil			X									3	
2	↓	TP21-26-02	↓	13:37	↓		X	X		X	X						4	1 bag
3		TP21-26-04		13:38			X	X		X	X						4	1 bag
4		TP21-26-06		13:53			X	X		X	X						4	1 bag
5		TP21-27-02		13:56				X									3	
6		TP21-27-04		13:57				X									3	Received in Yellowknife
7		TP21-27-05		14:04				X									3	By: J.McCarthy 08:35 am
8		TP21-58-01		15:22				X									3	AUG 31 2021
9		TP21-58-03		15:23				X									3	See ACTR
10	↓	TP21-58-06	↓	15:32	↓			X									3	Temp: / /

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
[signature] A. Bellavance	21/08/27	16:30	[signature] Dawit Kibreab	2021/09/01	15:00	

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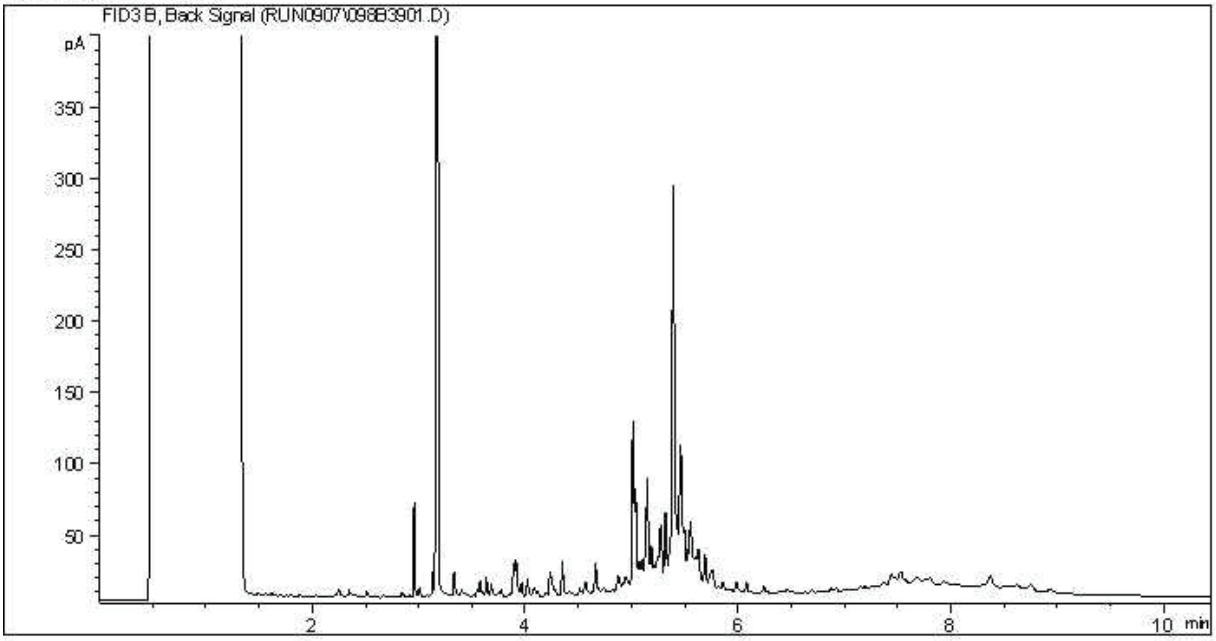
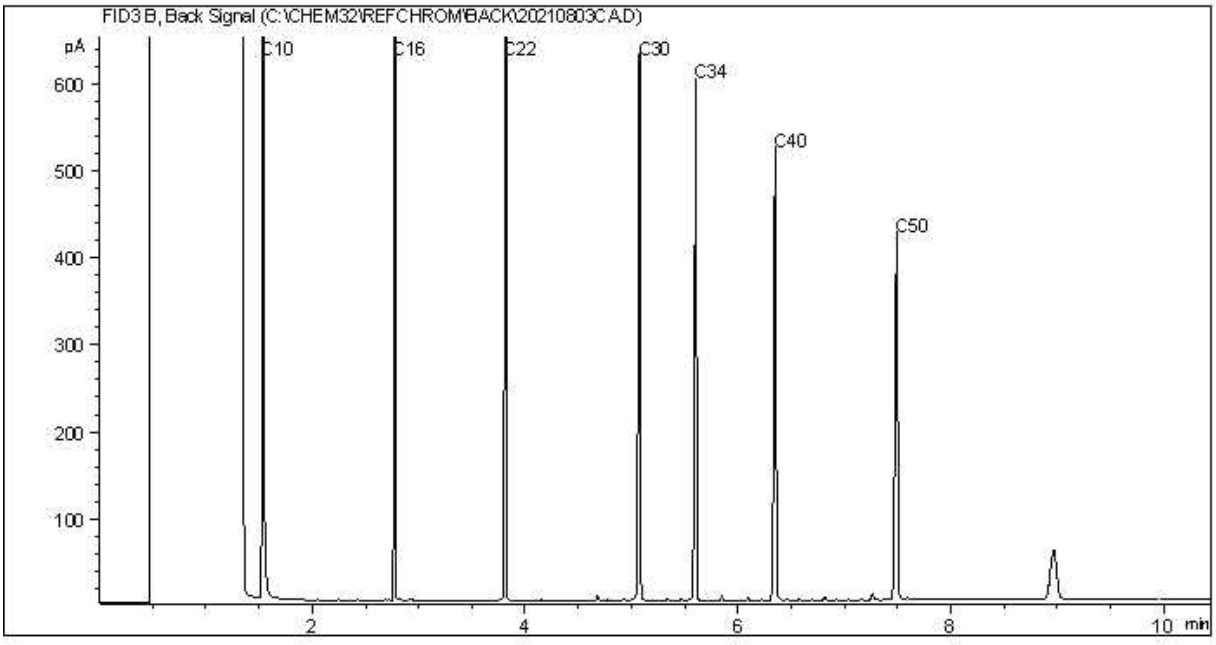
White: BV Labs Yellow: Client

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



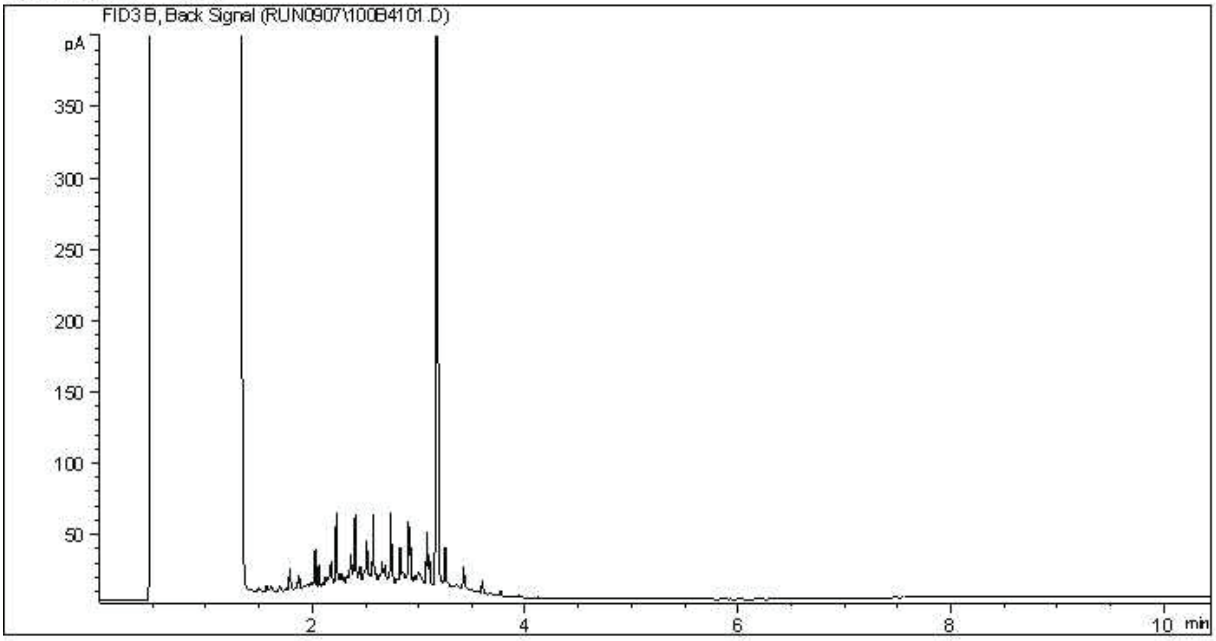
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

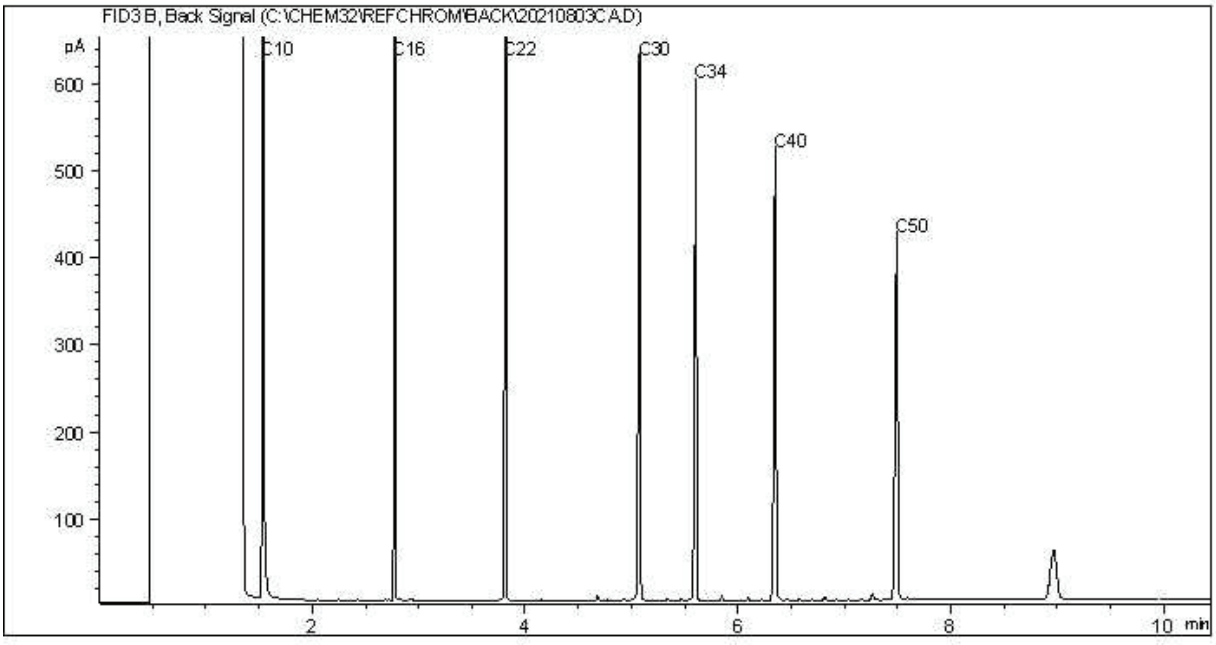
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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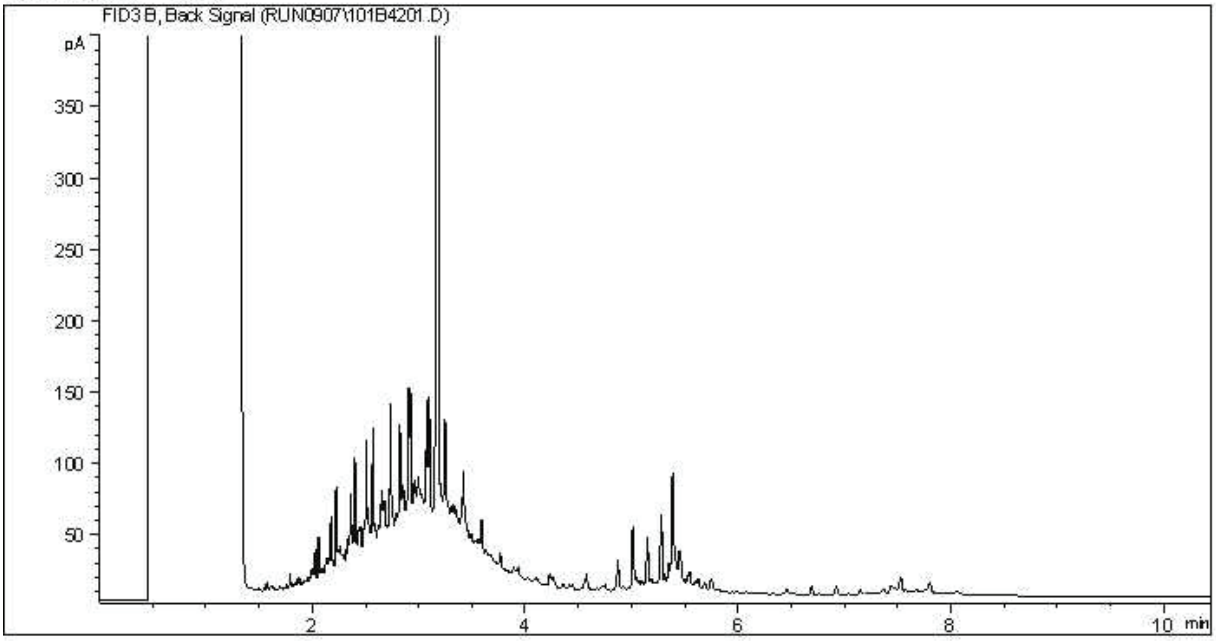
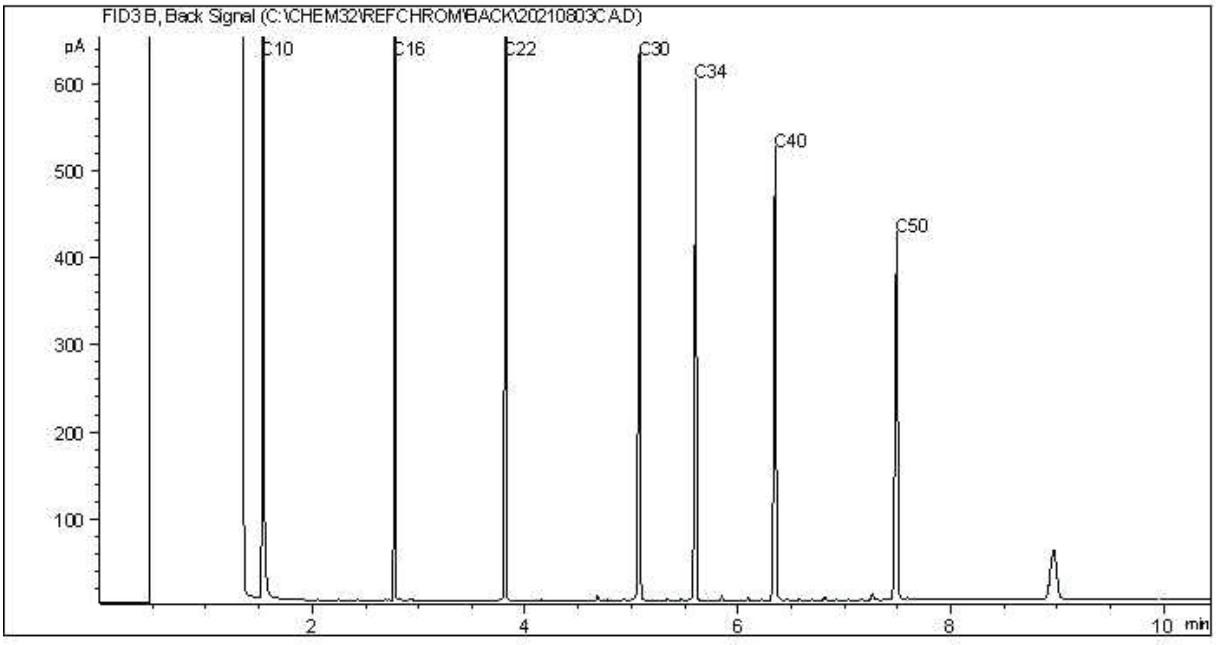


Carbon Range Distribution - Reference Chromatogram



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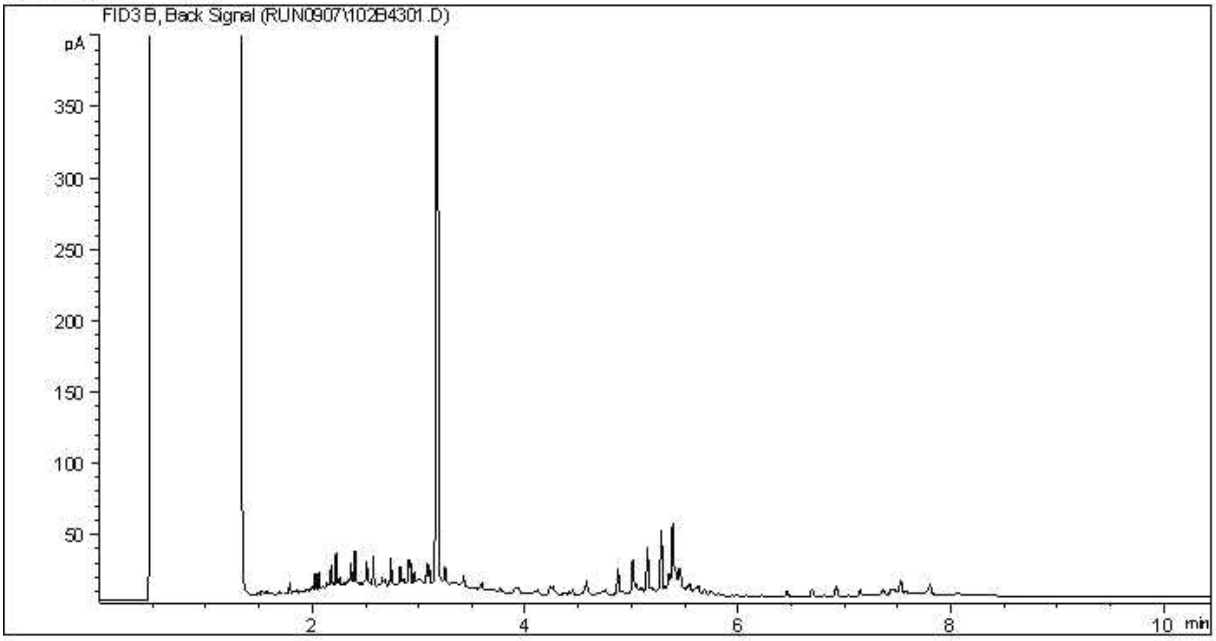
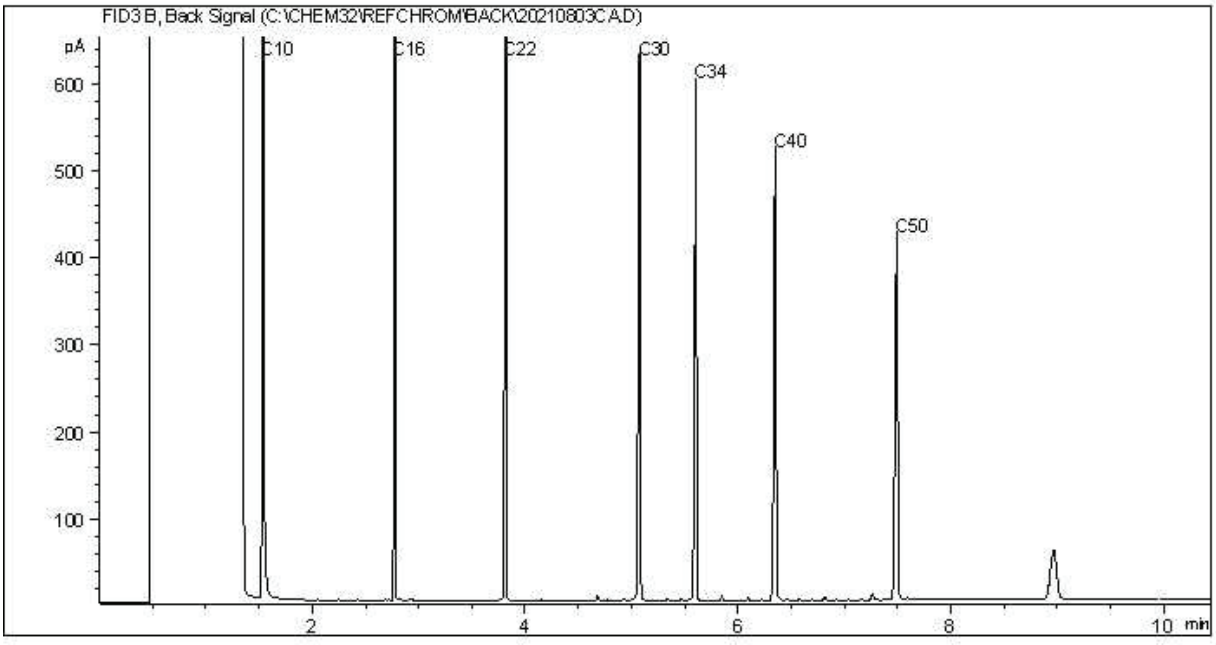


Carbon Range Distribution - Reference Chromatogram



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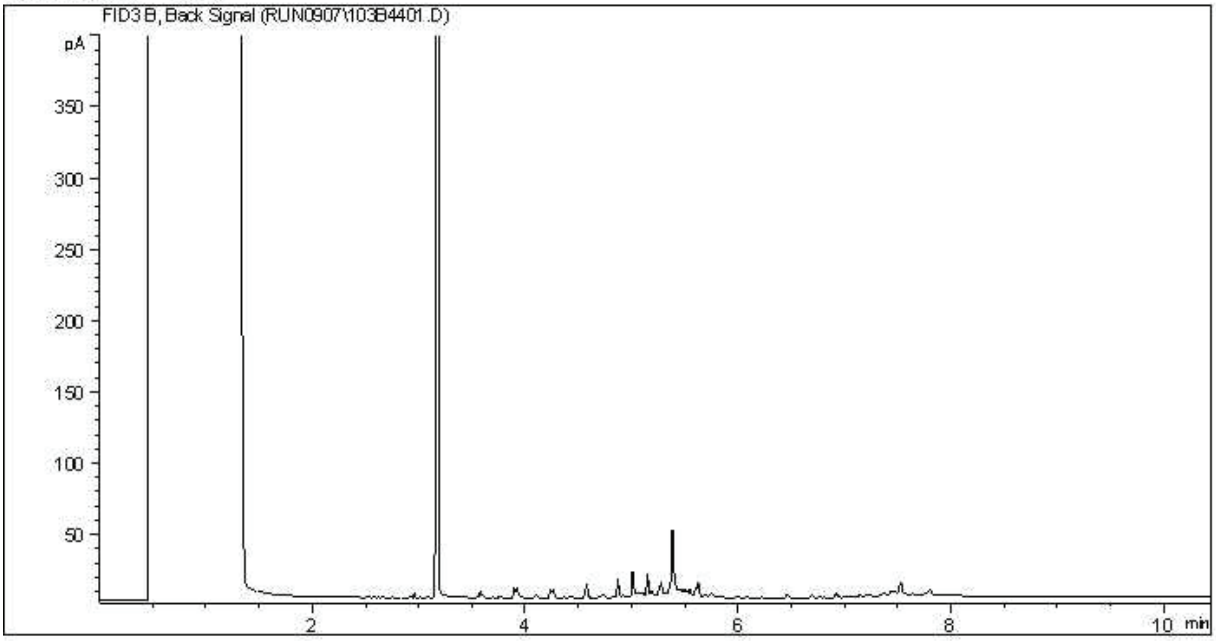
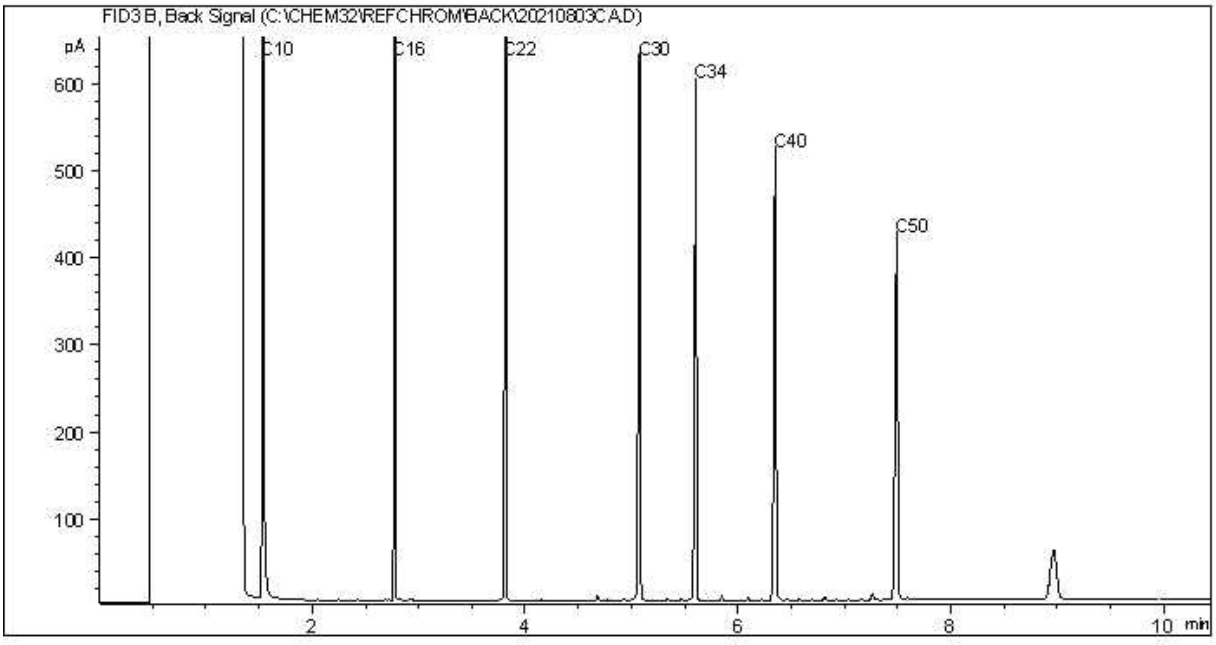


Carbon Range Distribution - Reference Chromatogram



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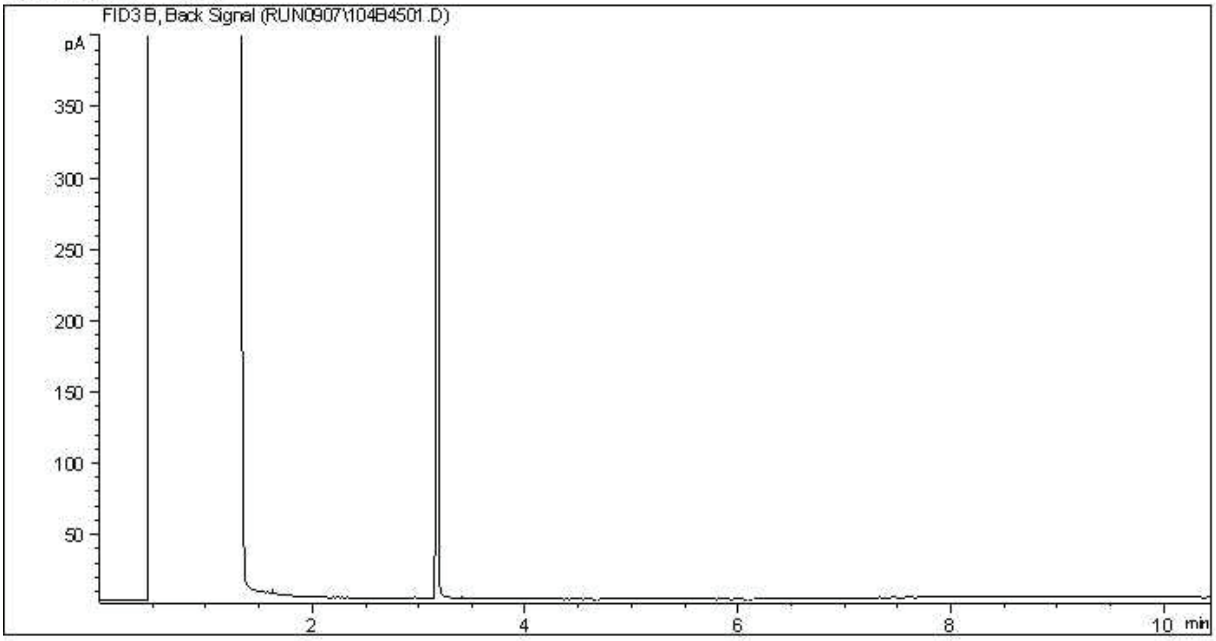
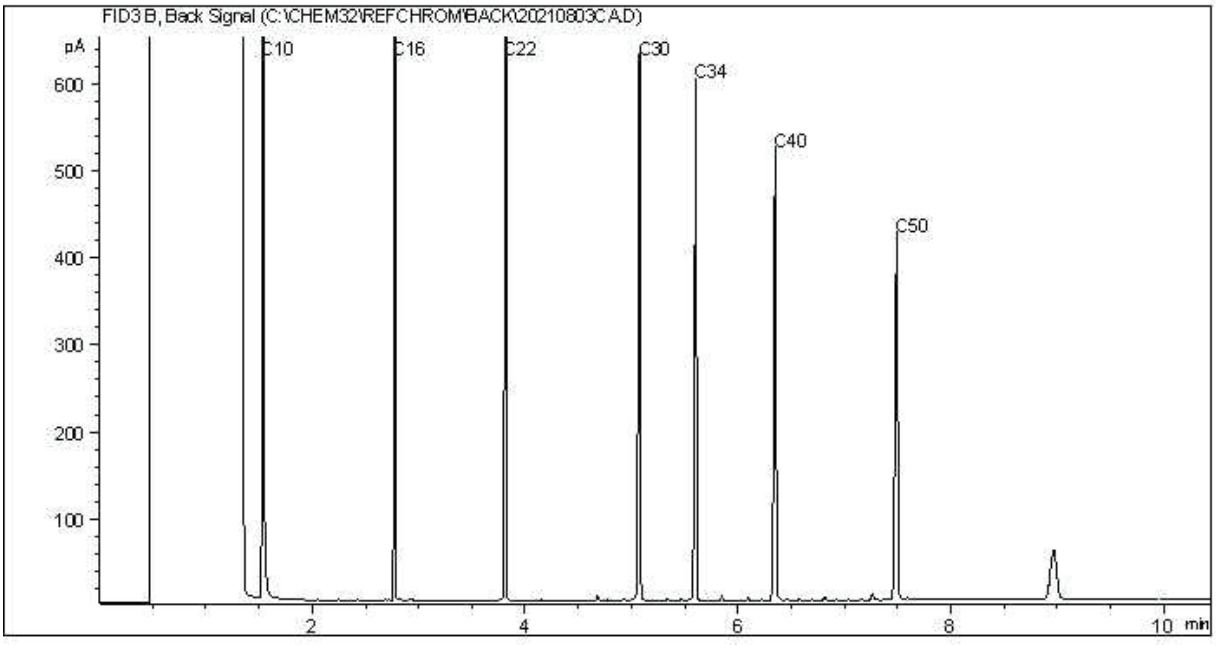


Carbon Range Distribution - Reference Chromatogram



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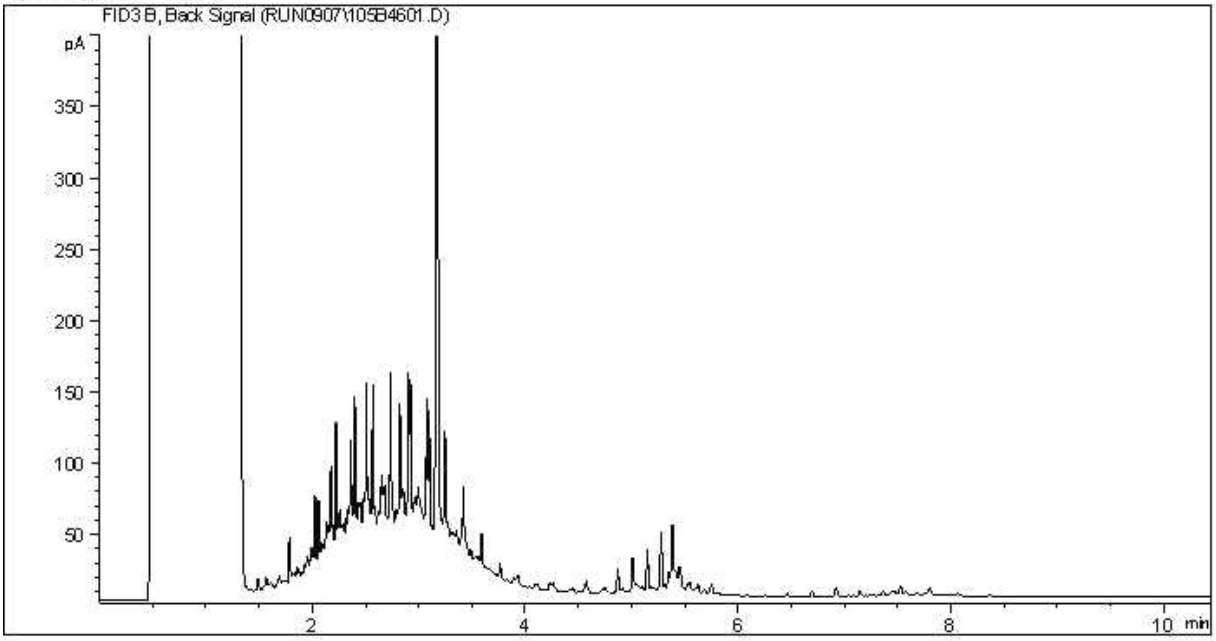
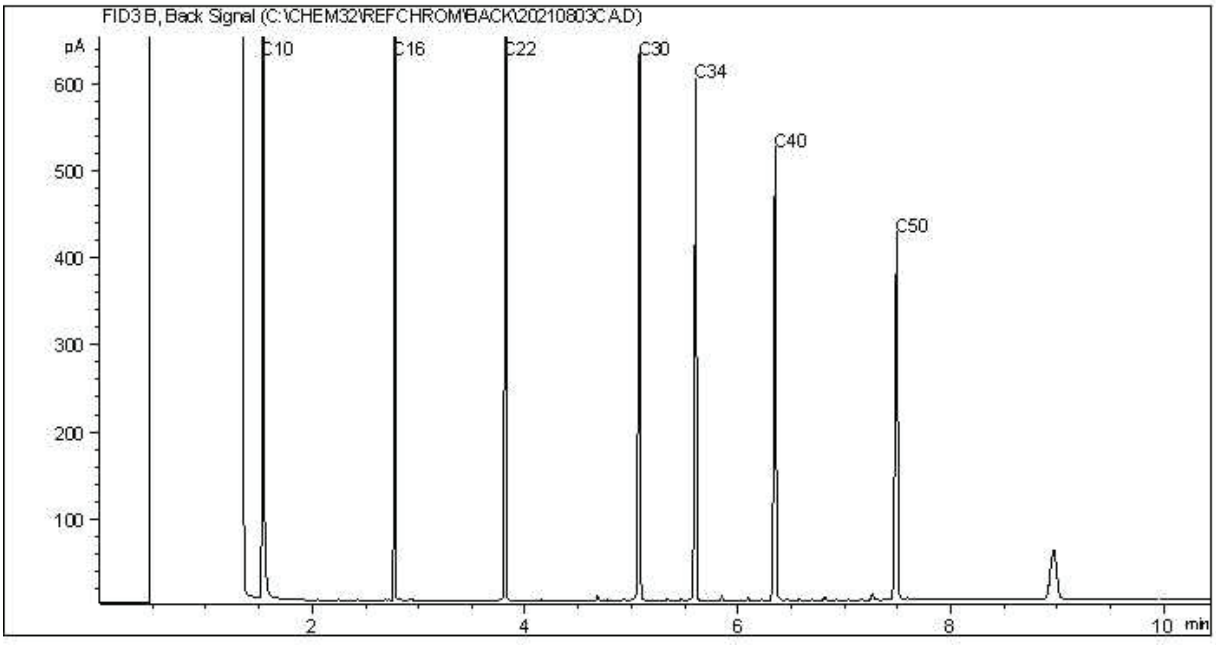


Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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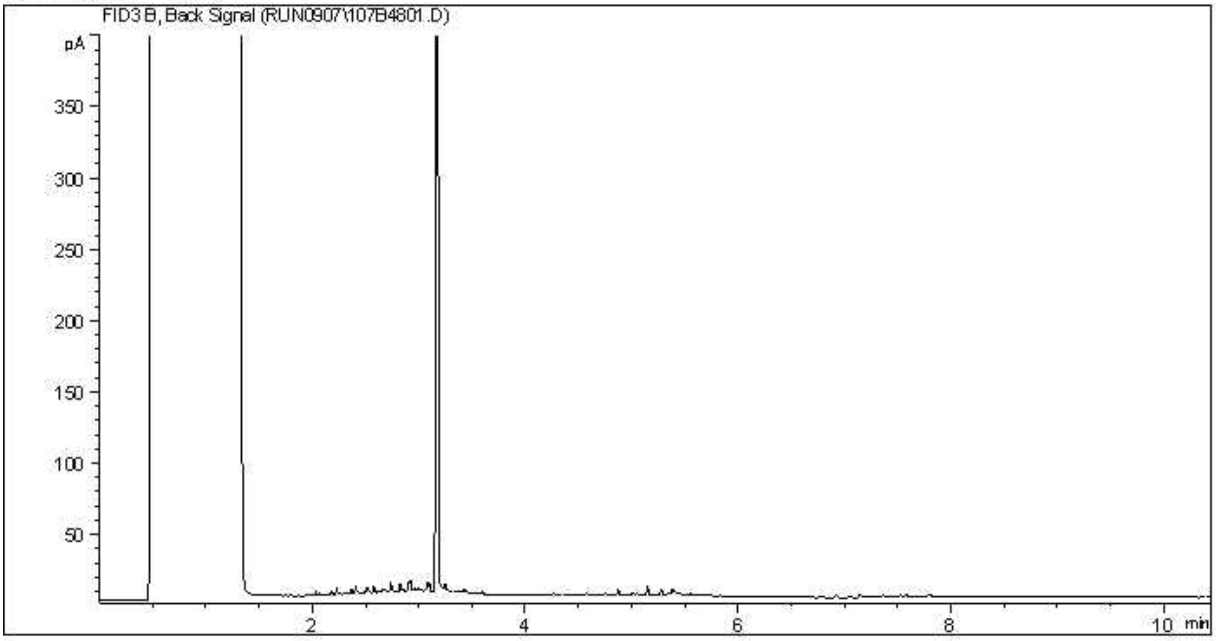
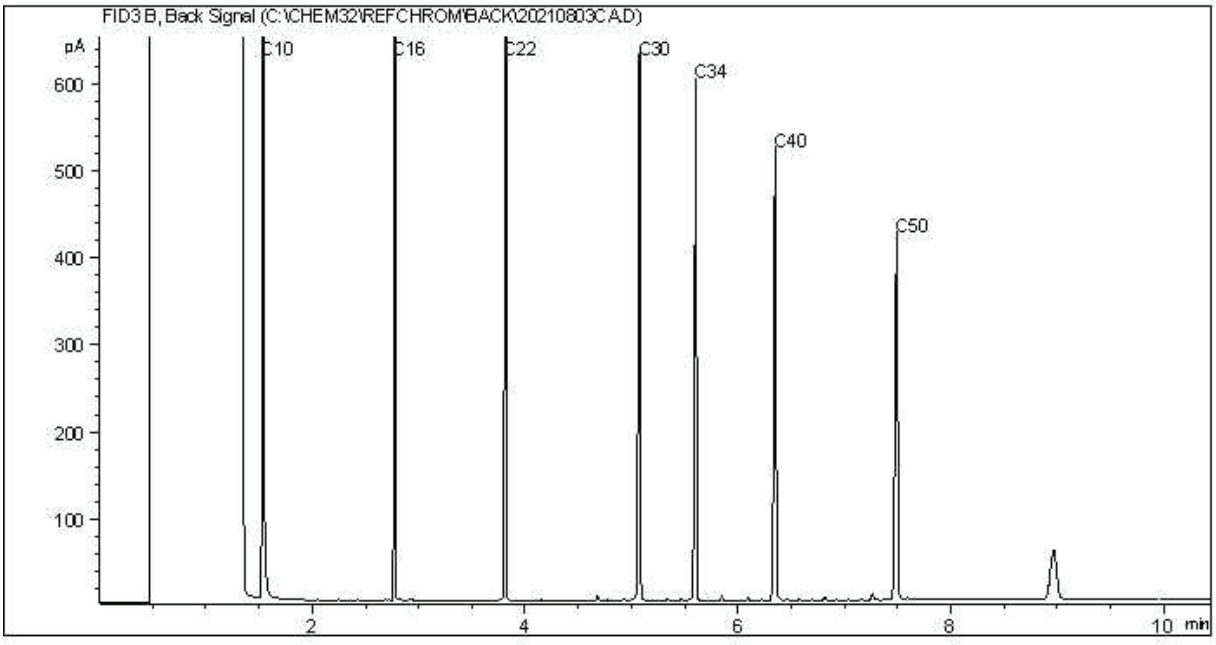


Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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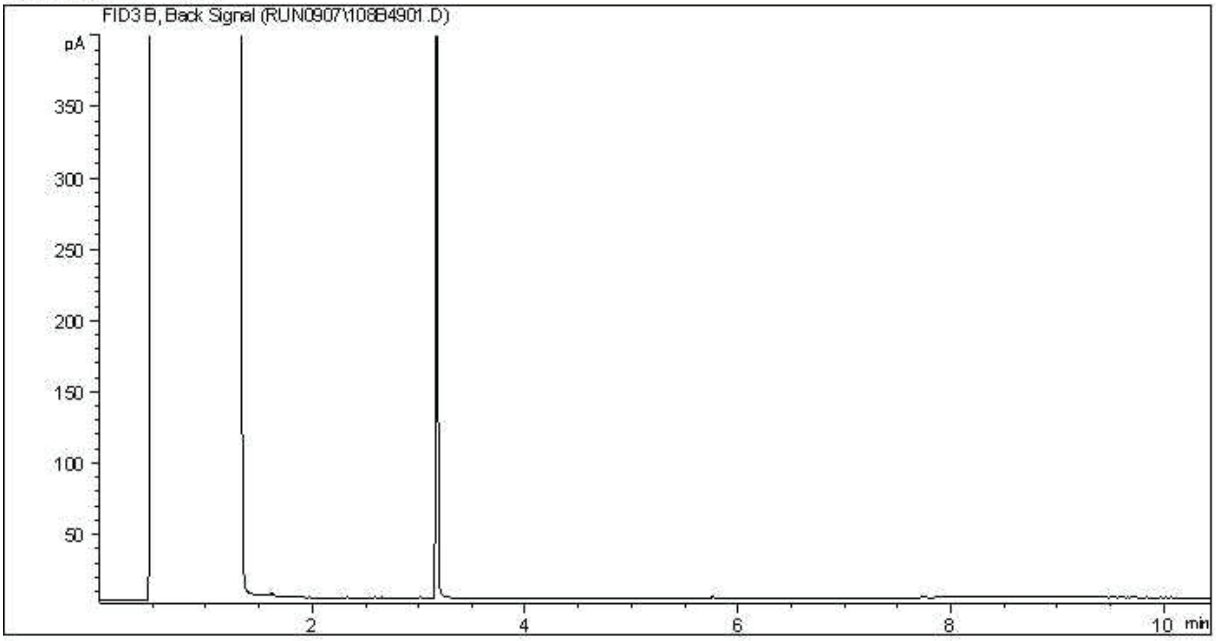
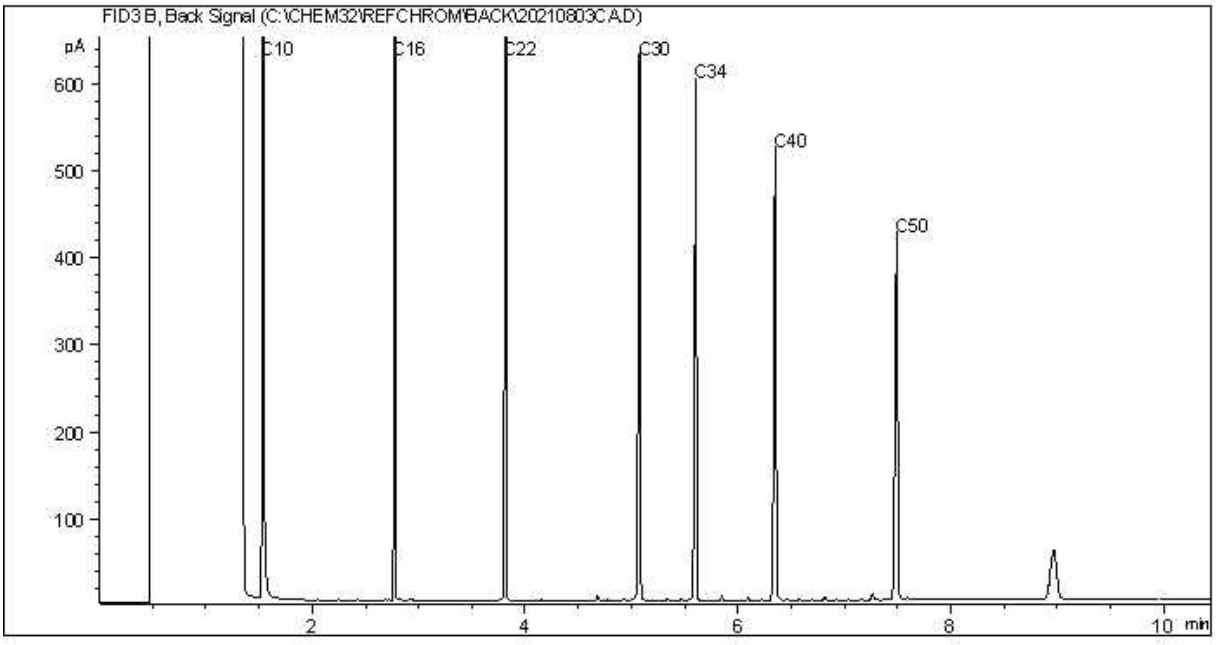


Carbon Range Distribution - Reference Chromatogram



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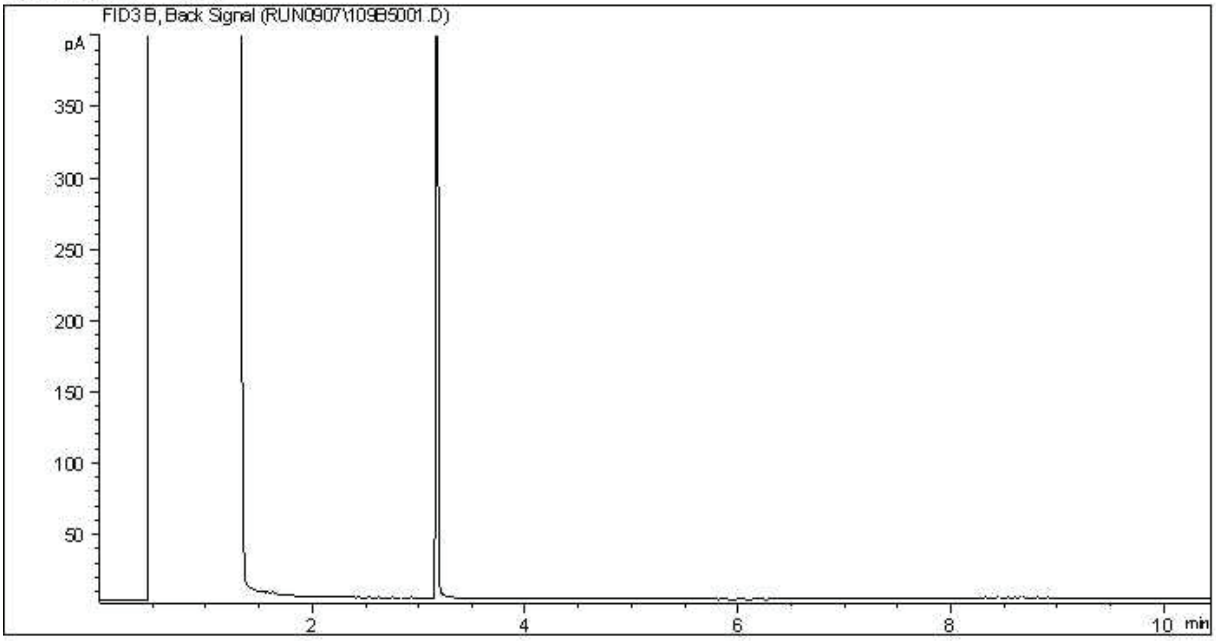
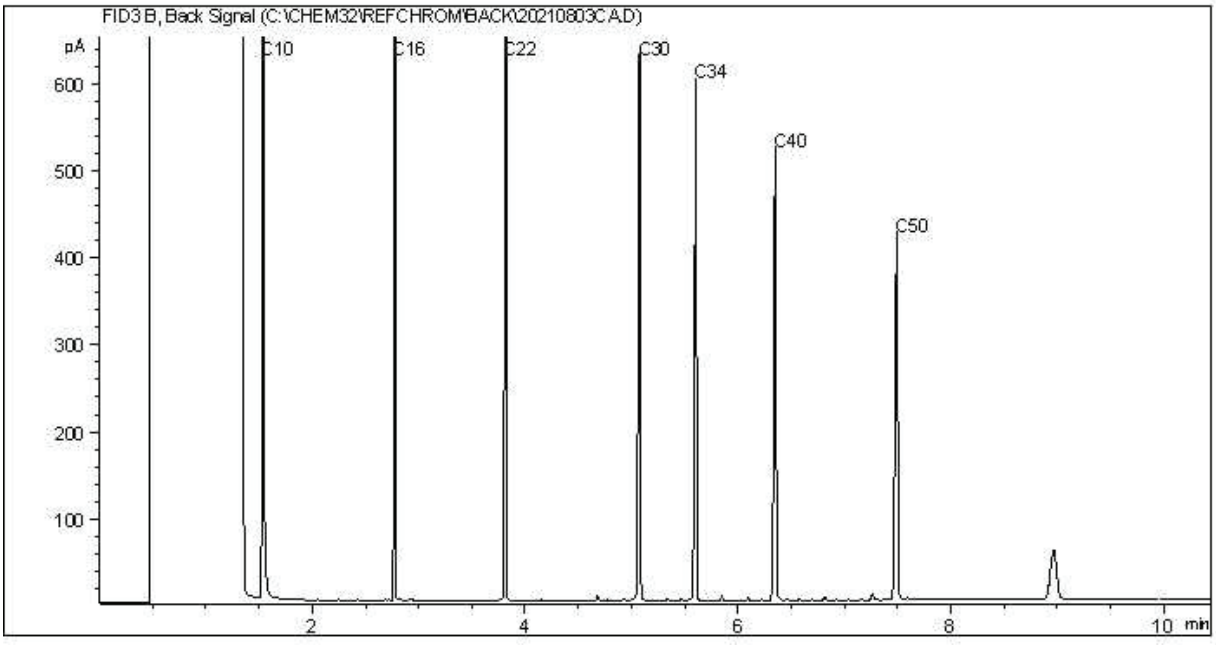
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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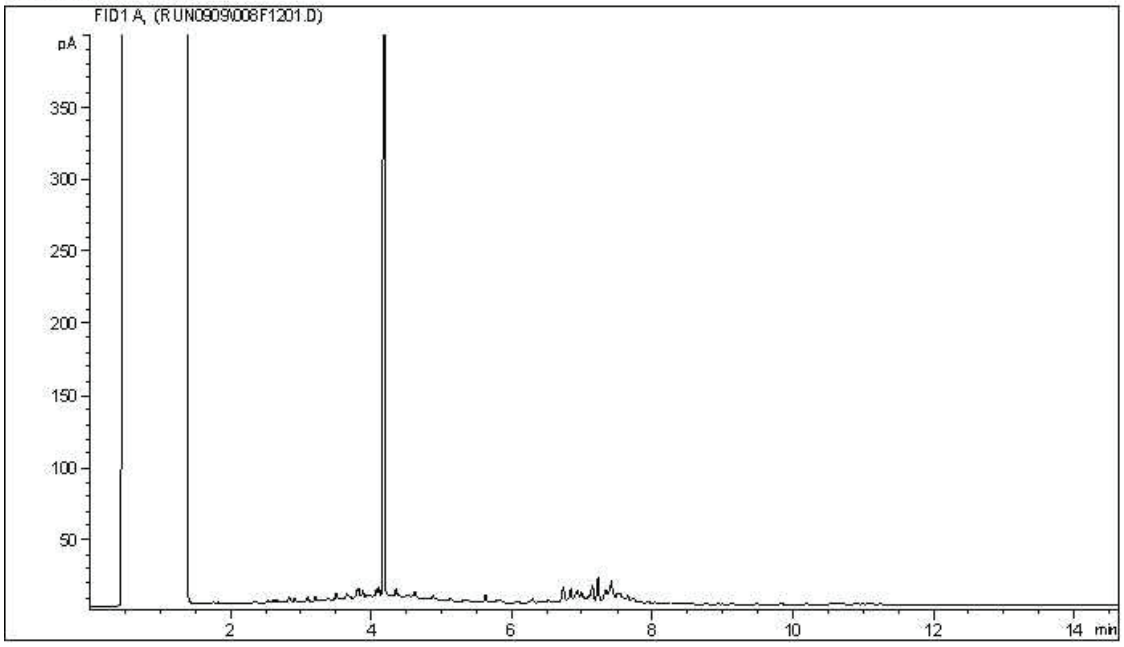

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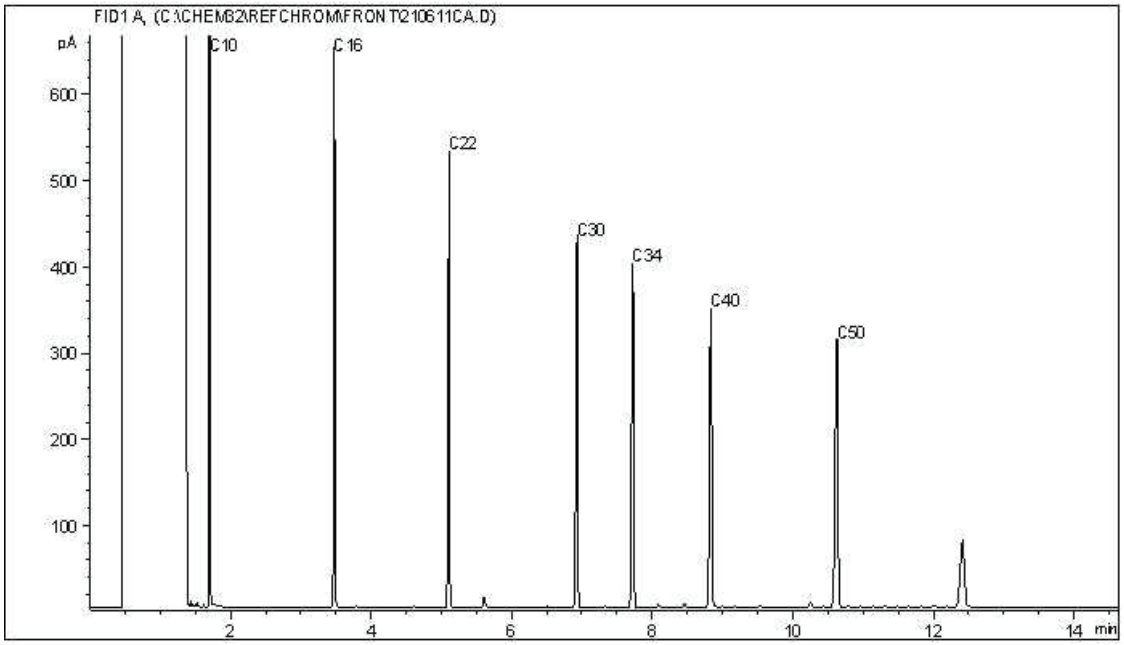

TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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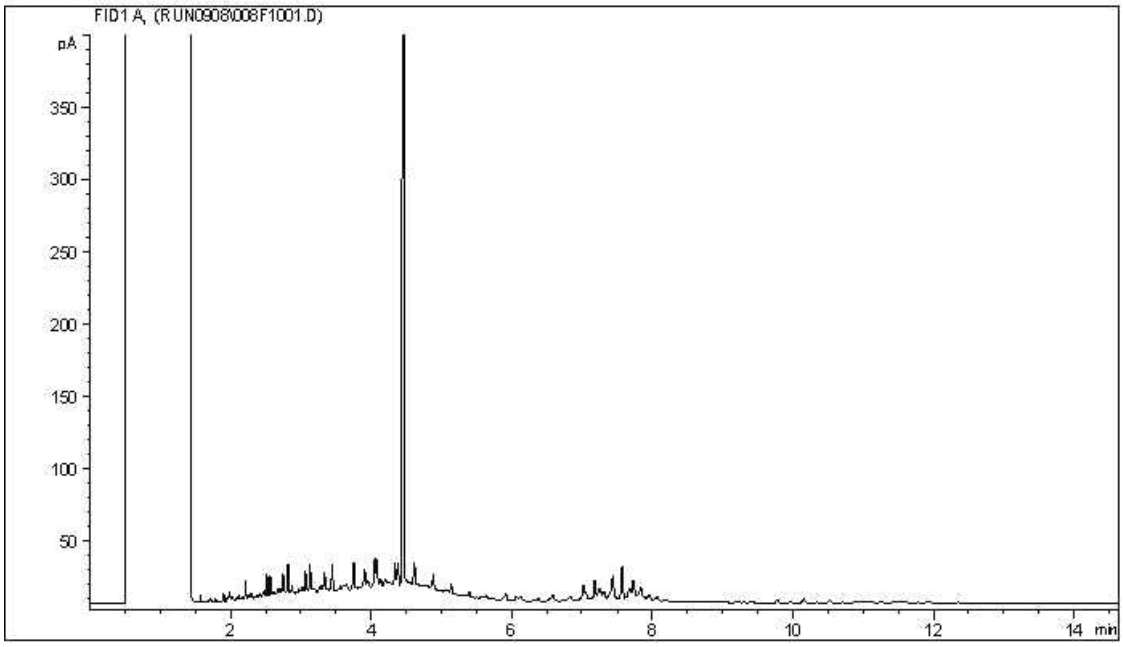
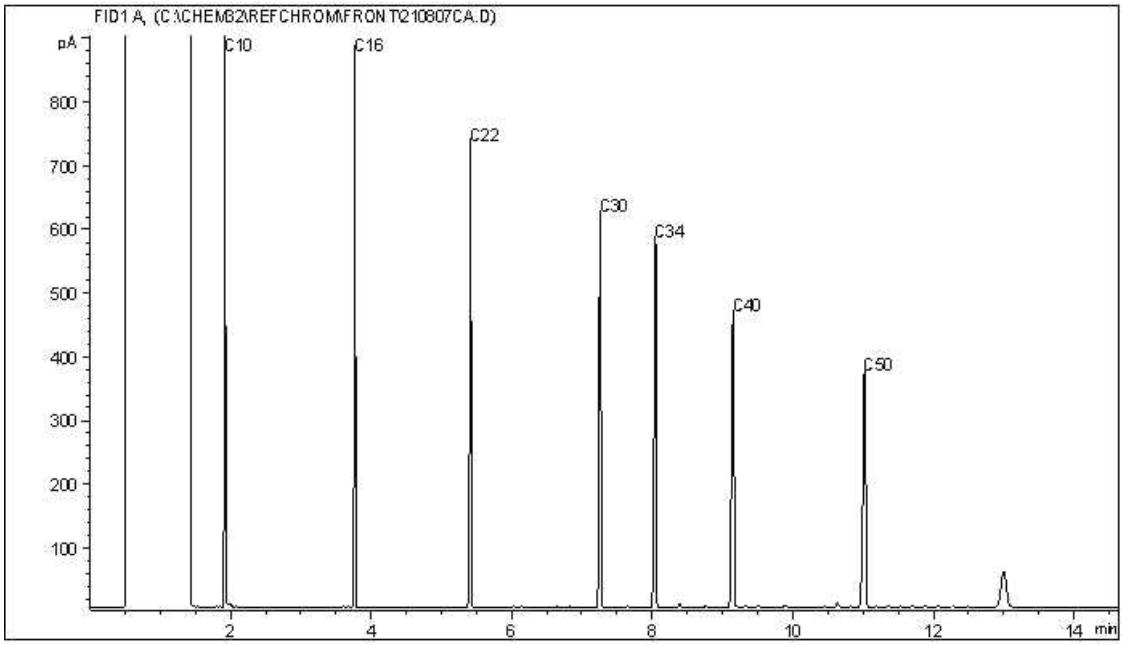
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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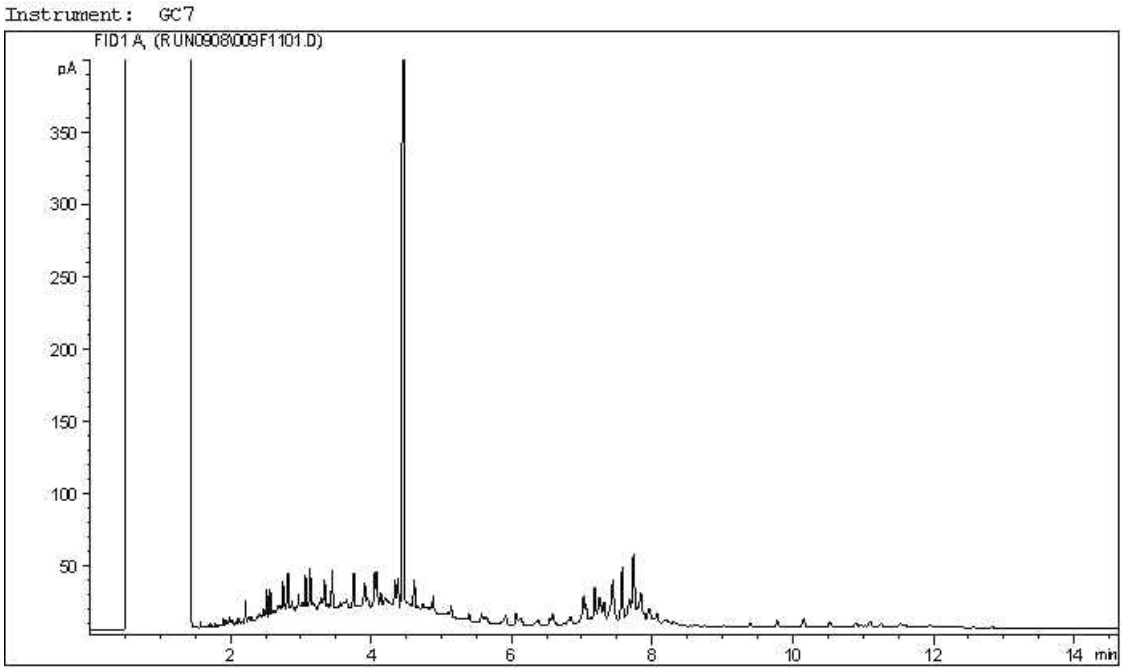
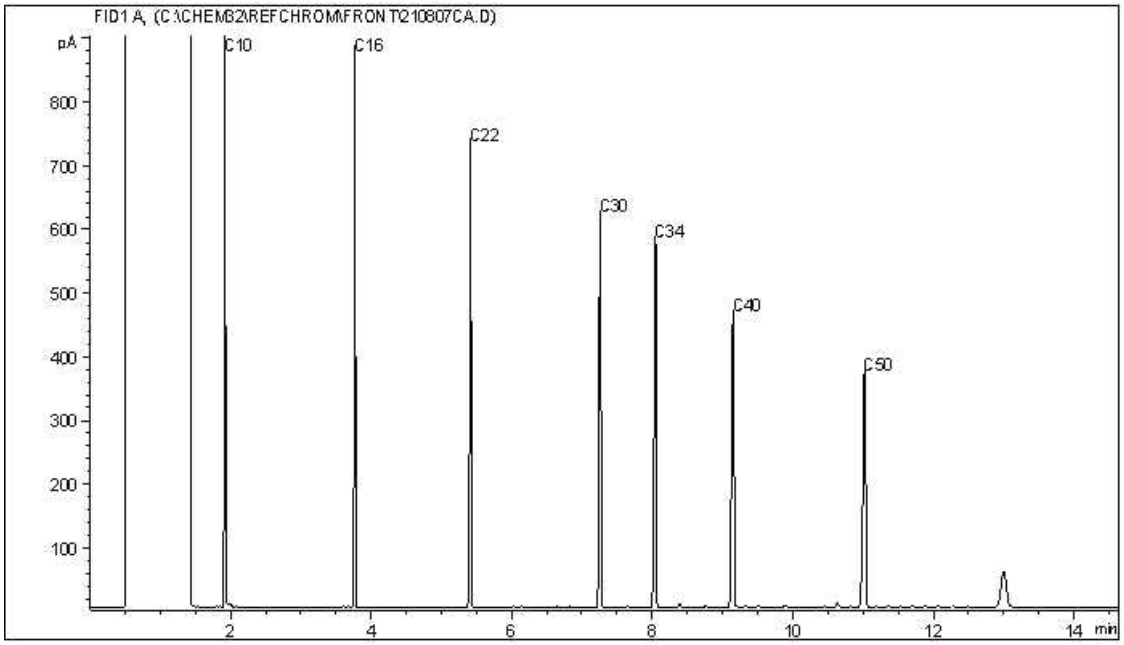
CCME Hydrocarbons (F2-F4 in soil) Chromatogram



Carbon Range Distribution - Reference Chromatogram



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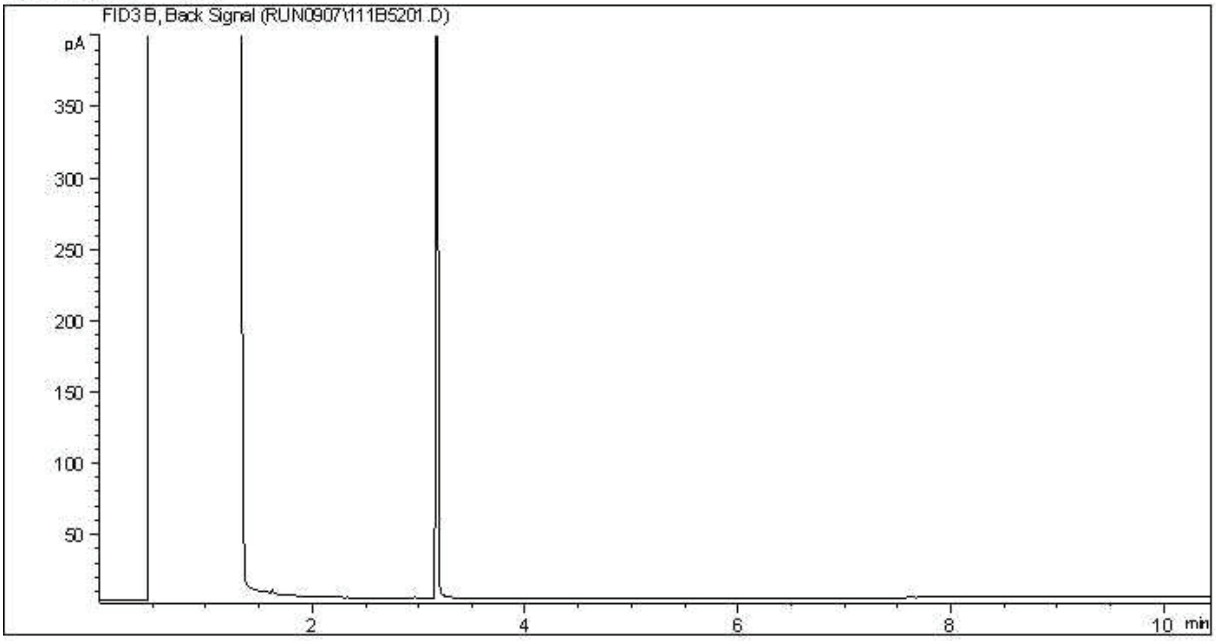
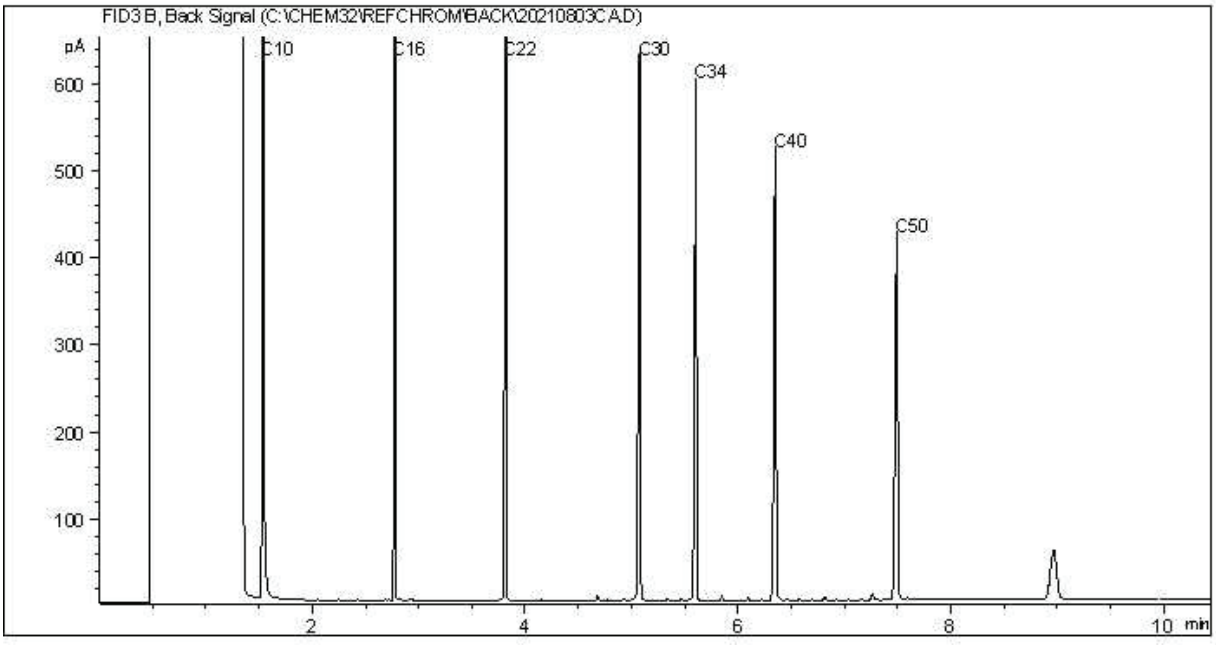
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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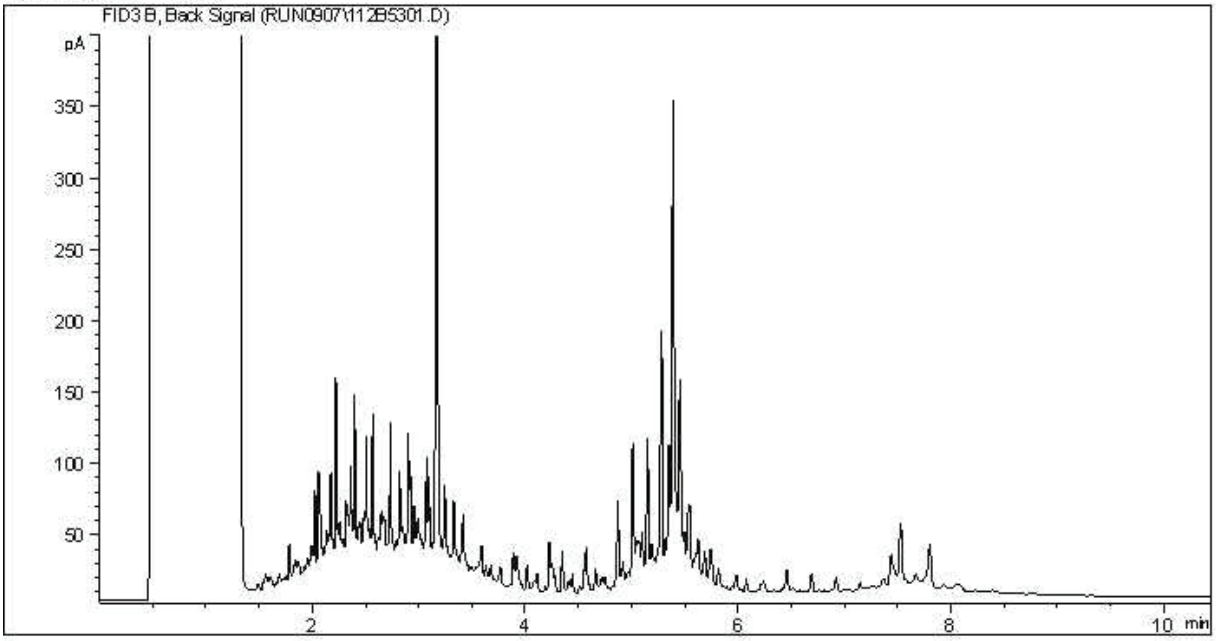
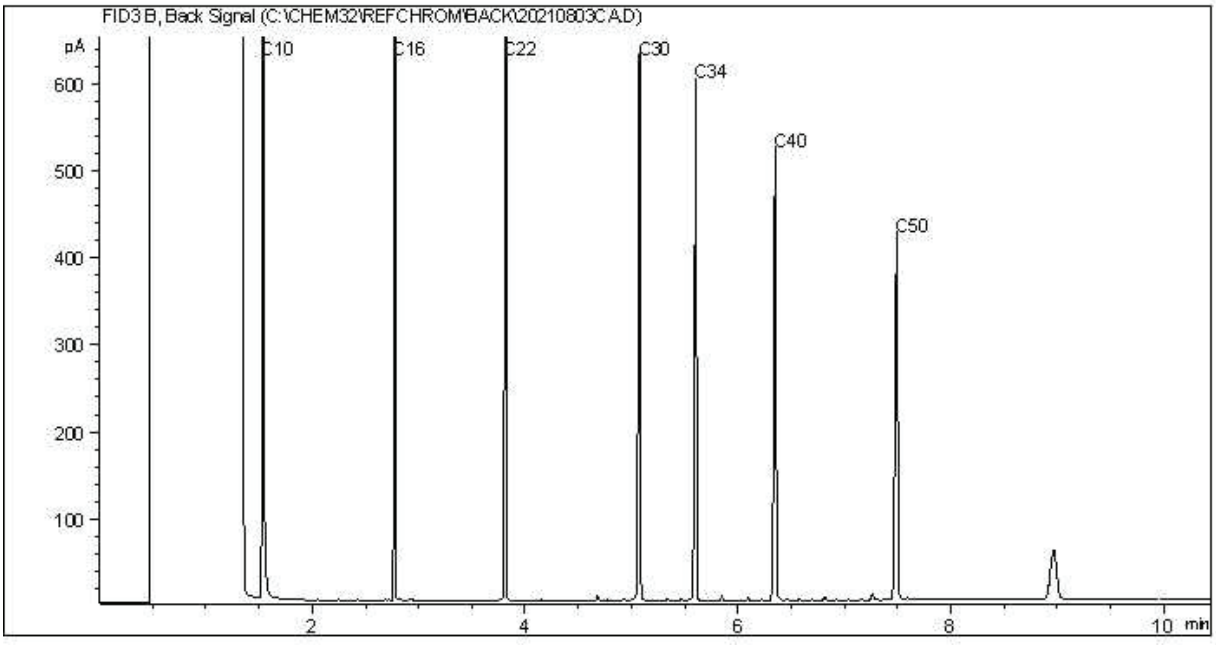
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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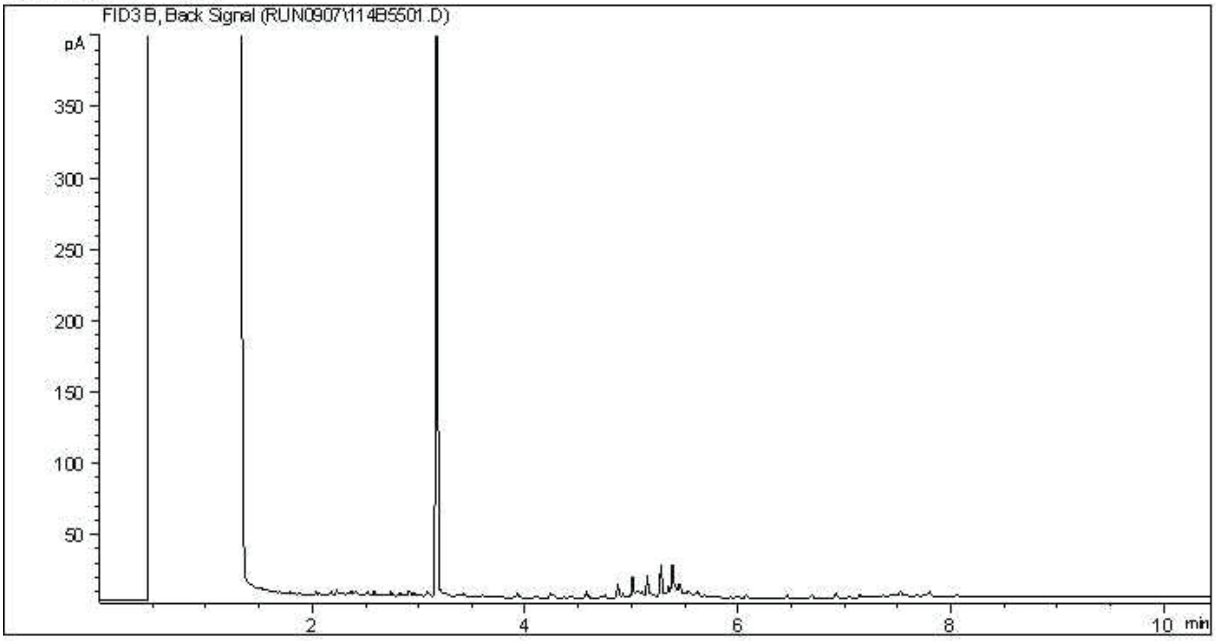
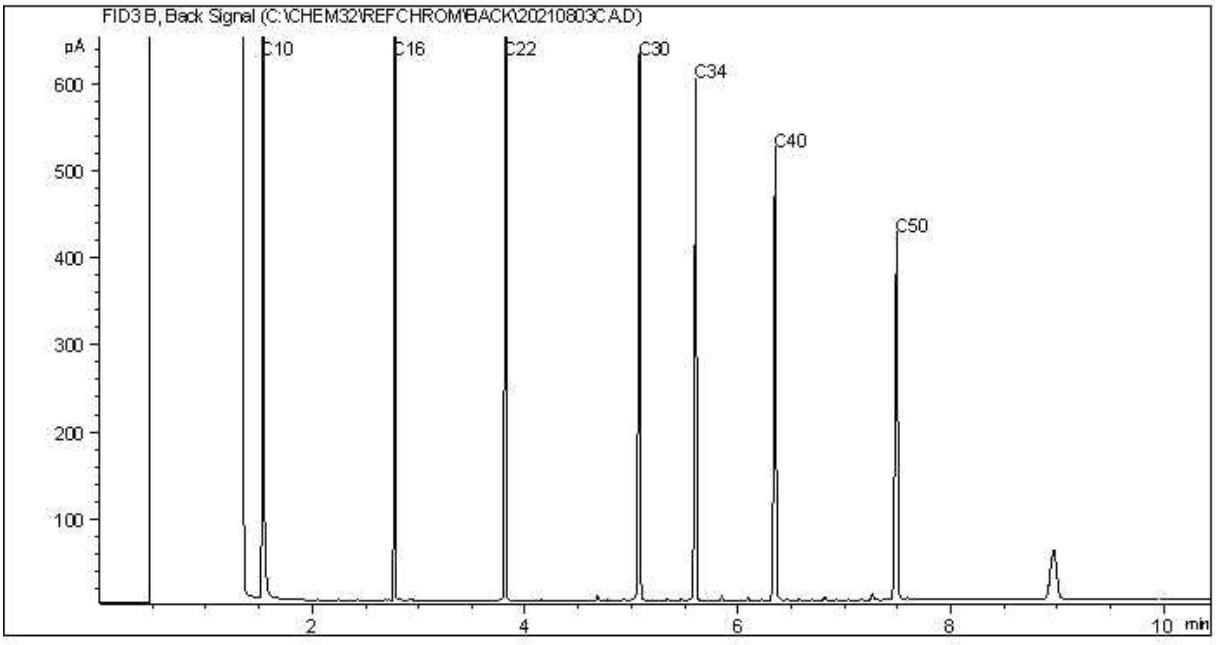
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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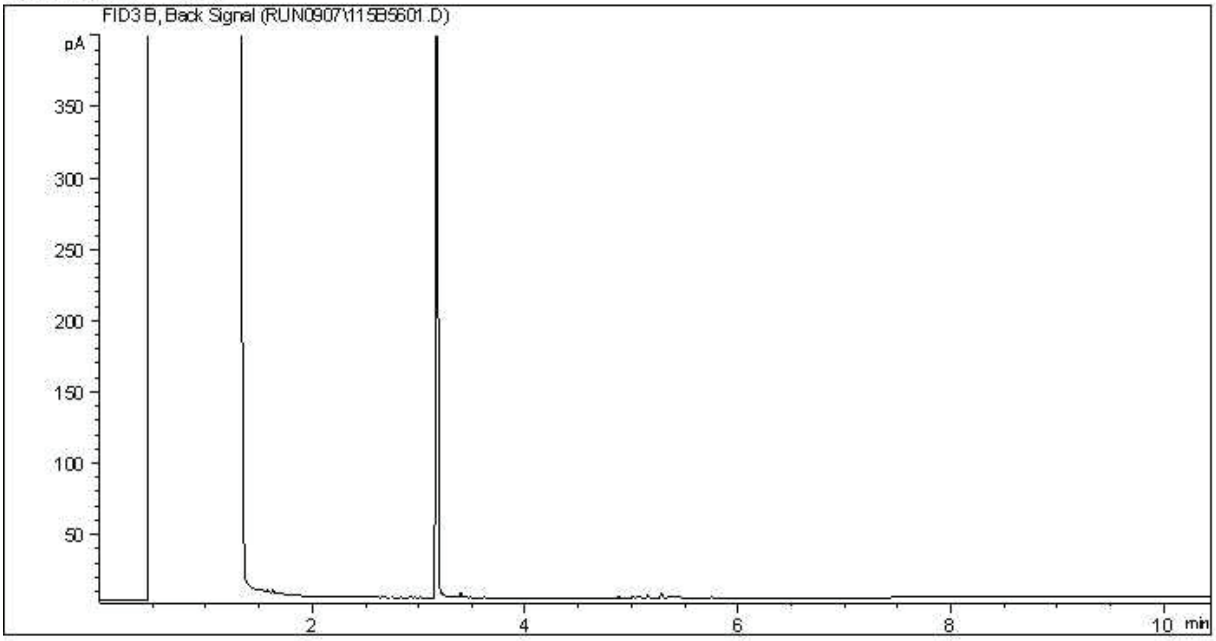
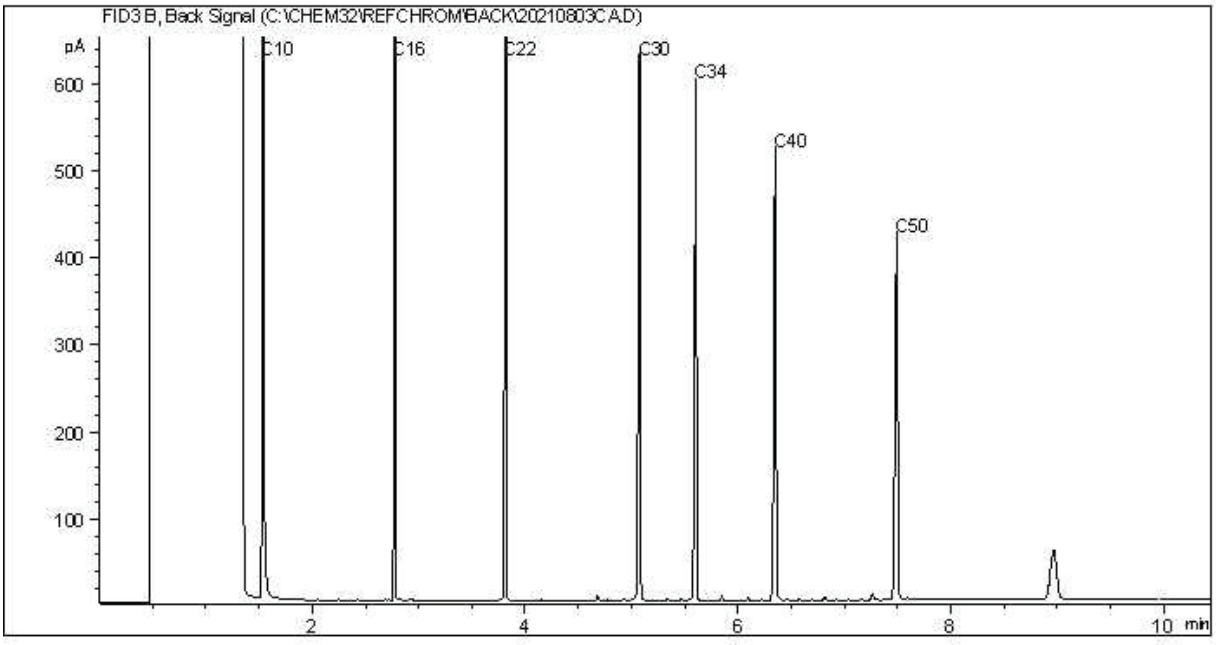
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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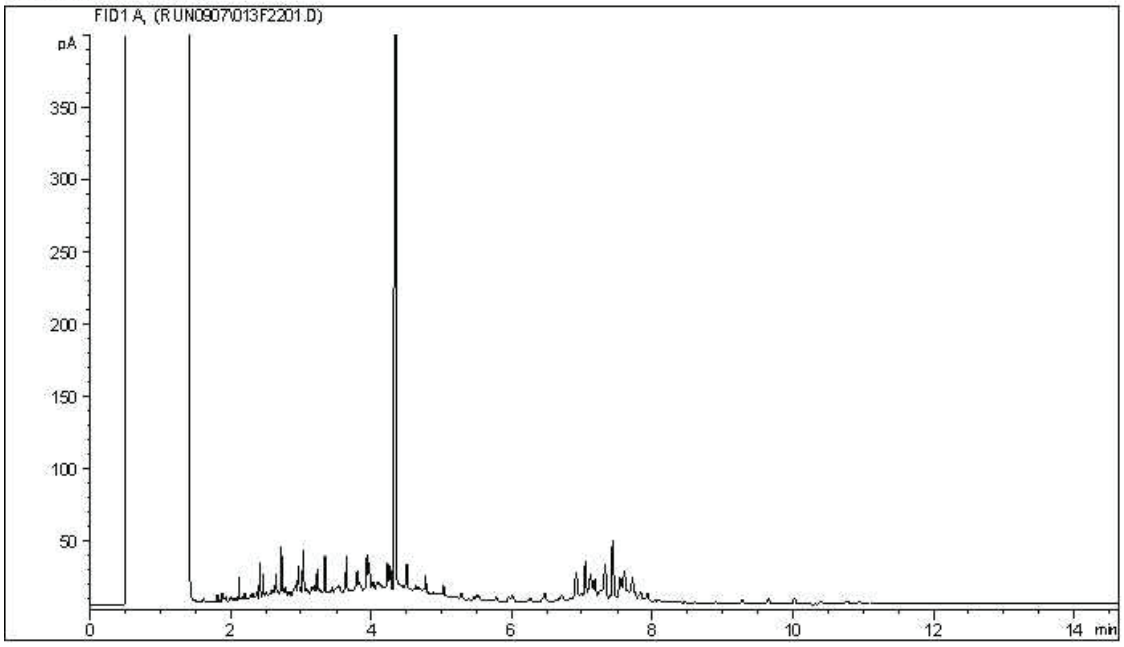
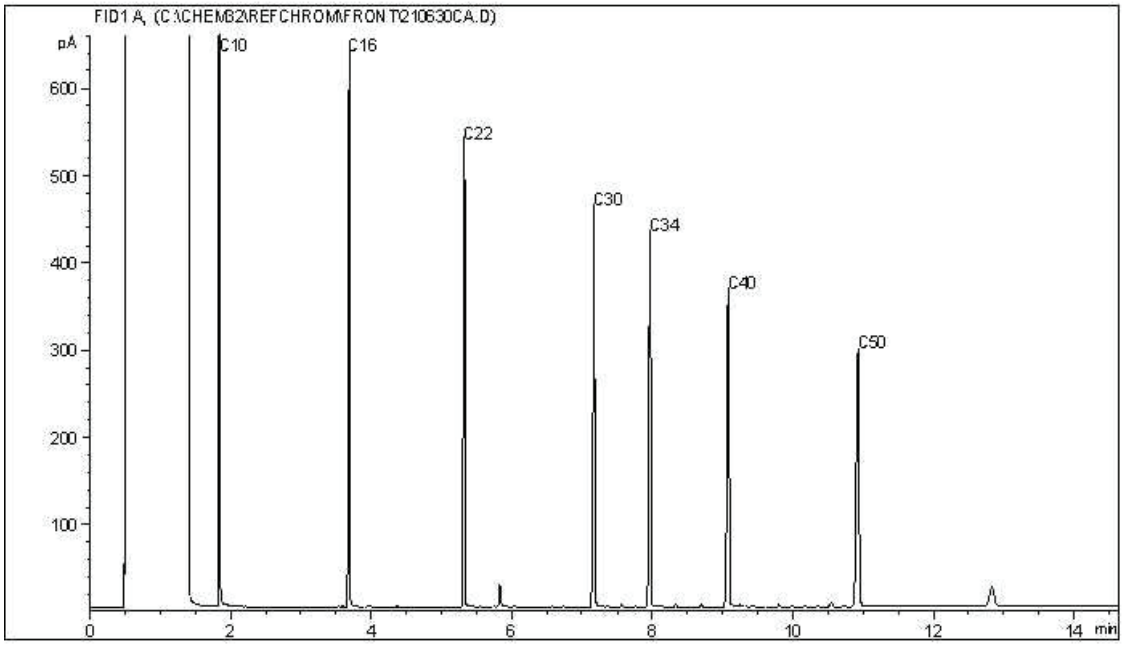
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



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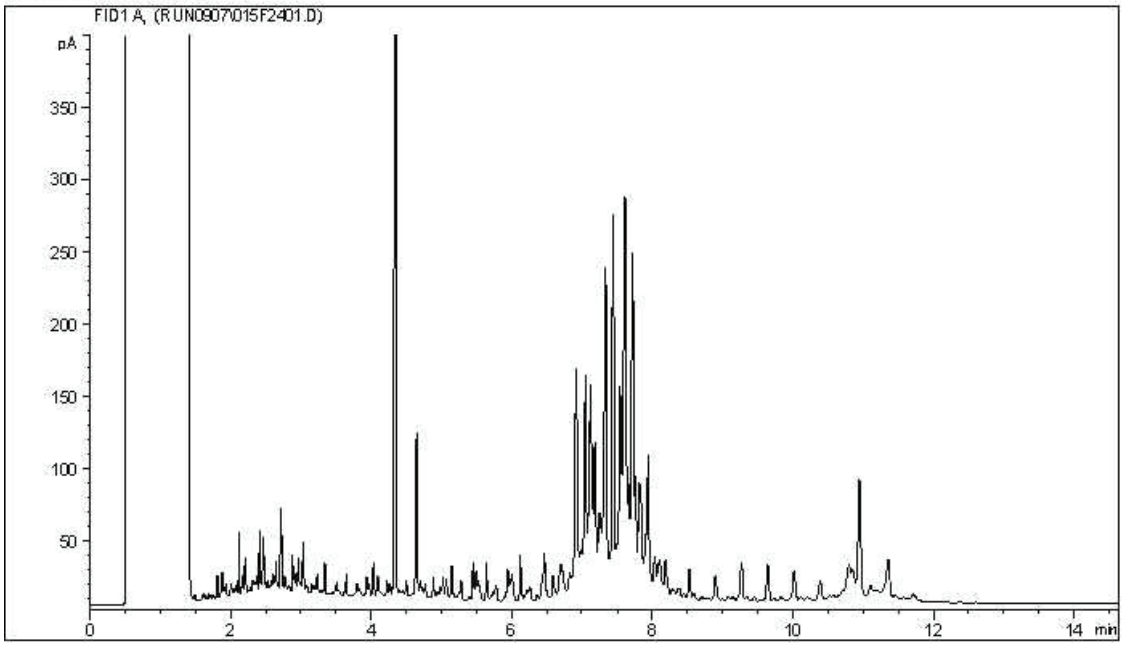
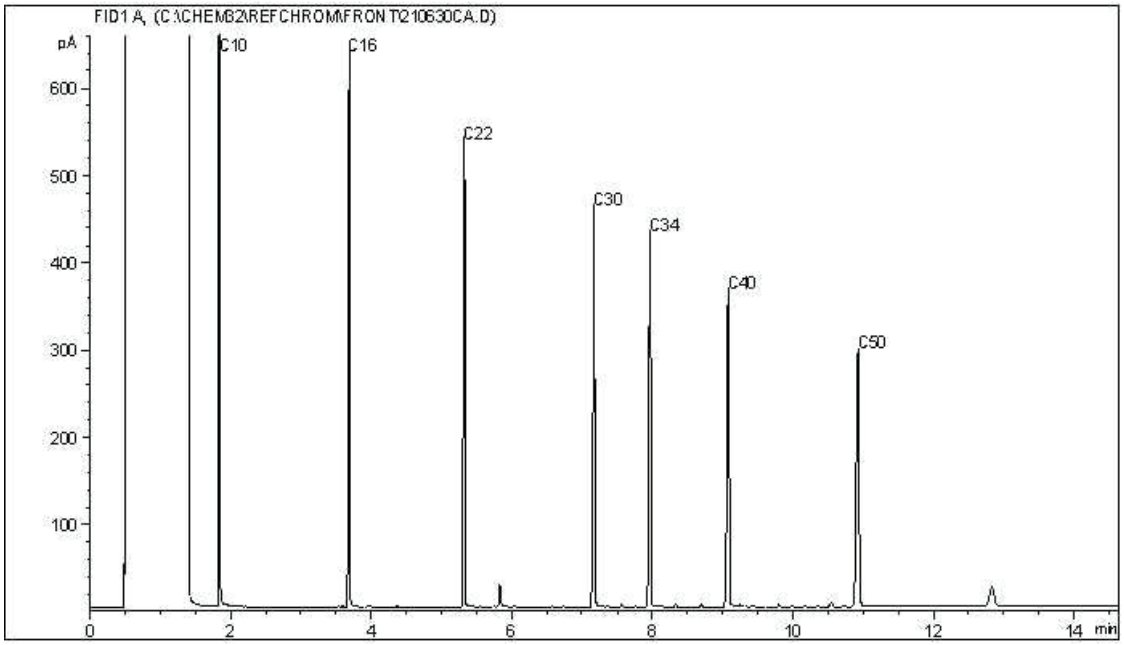
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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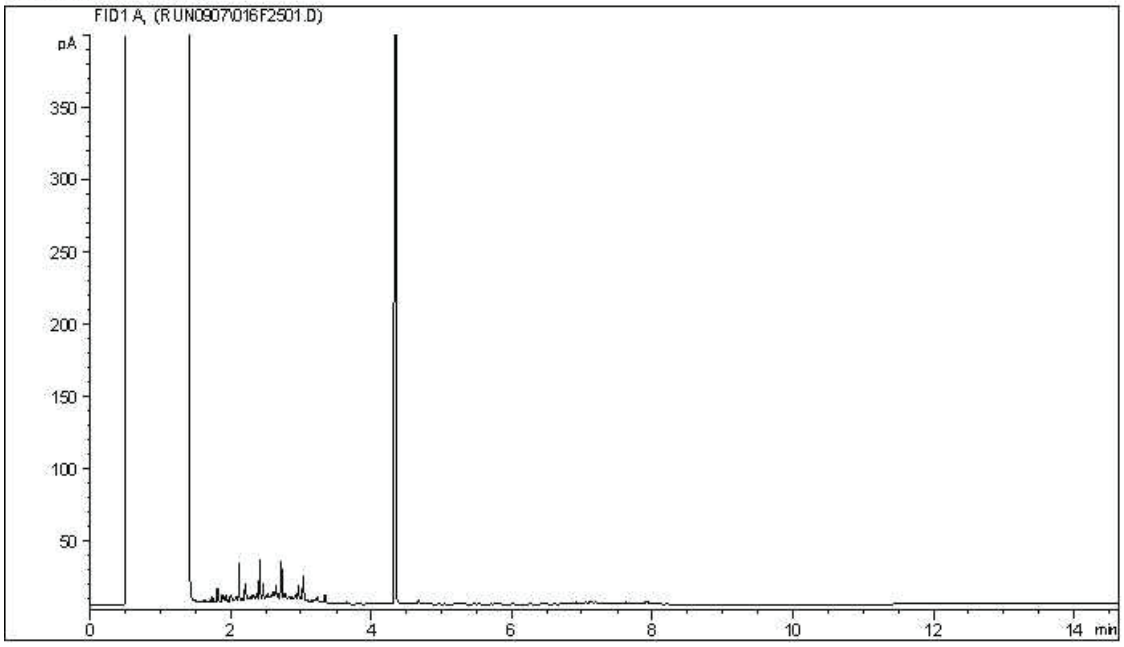

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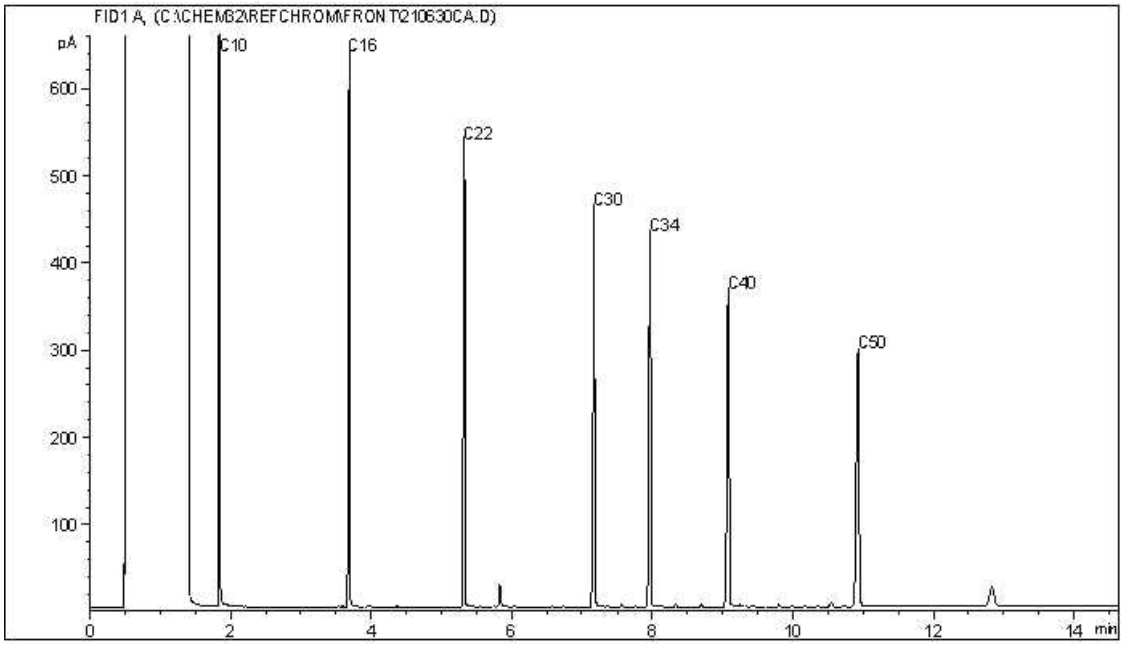

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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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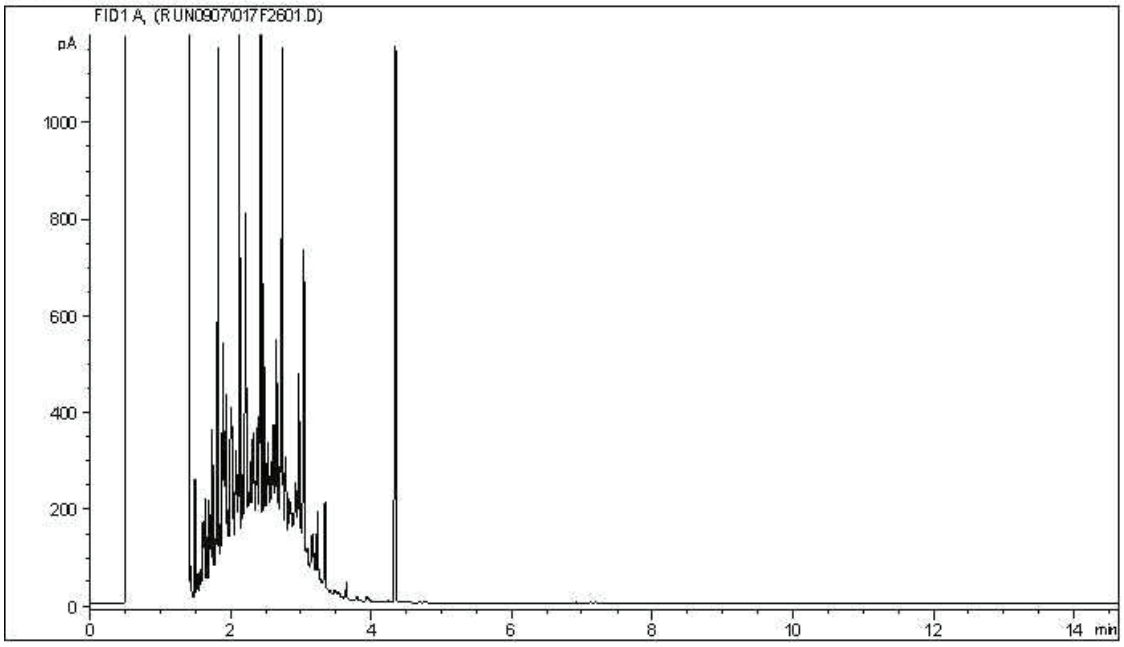
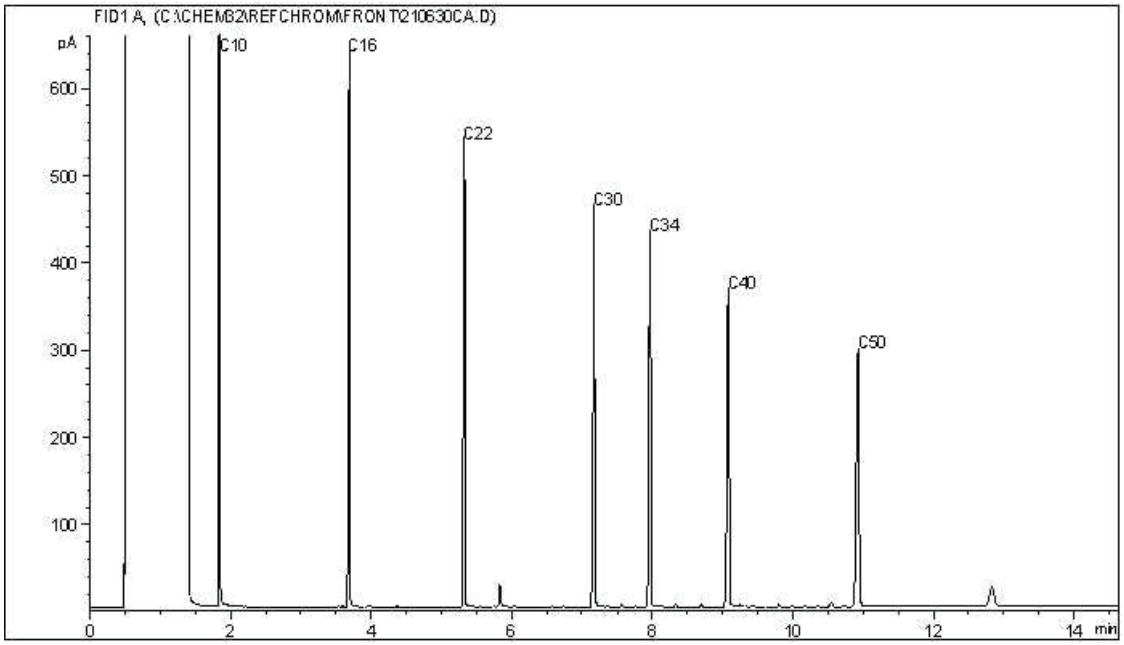


Carbon Range Distribution - Reference Chromatogram



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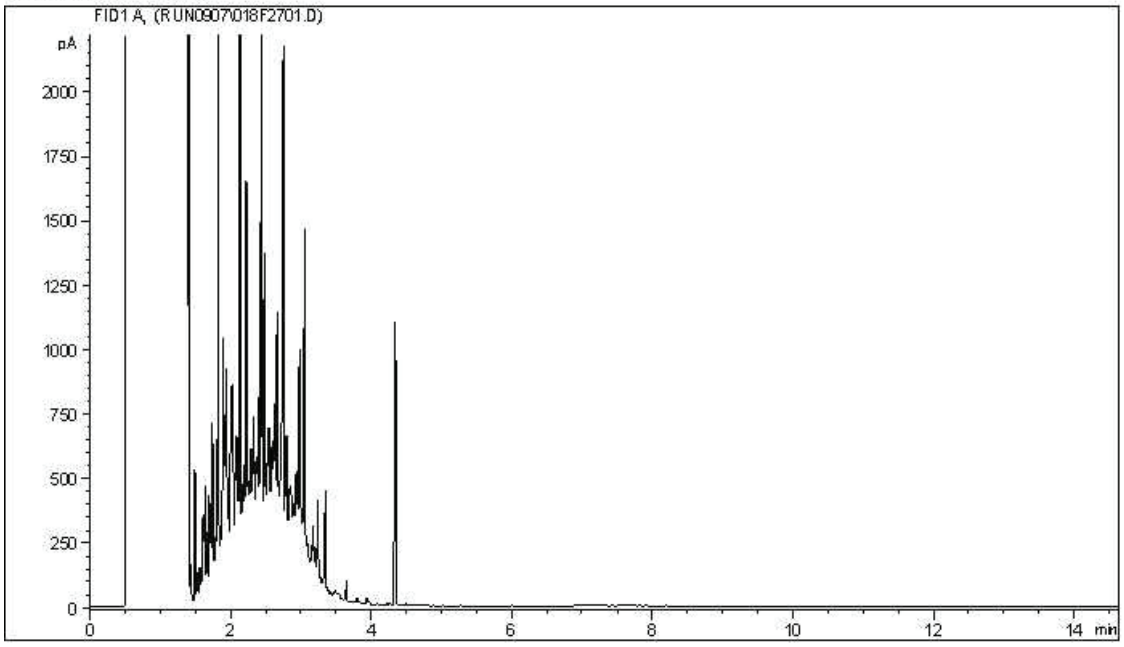
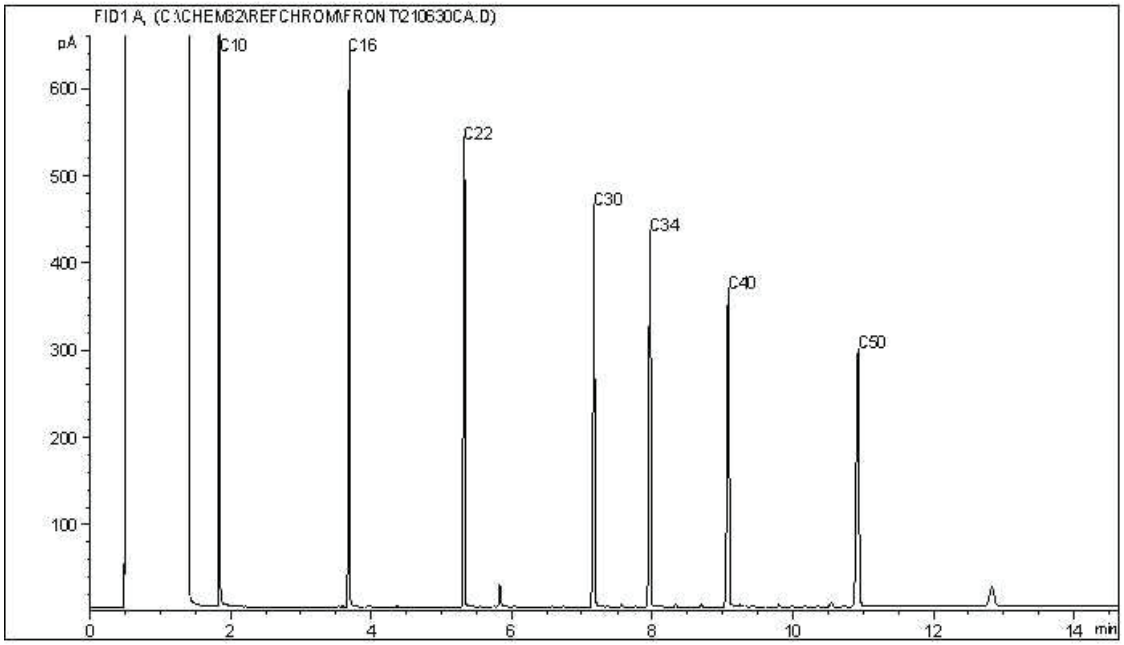


Carbon Range Distribution - Reference Chromatogram



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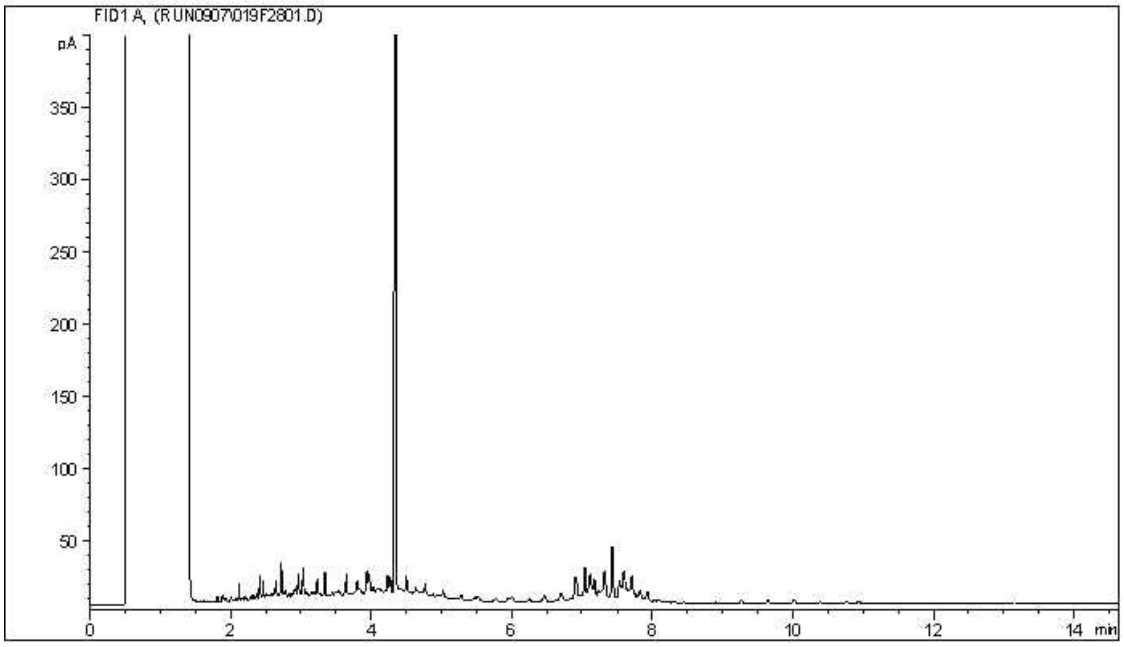
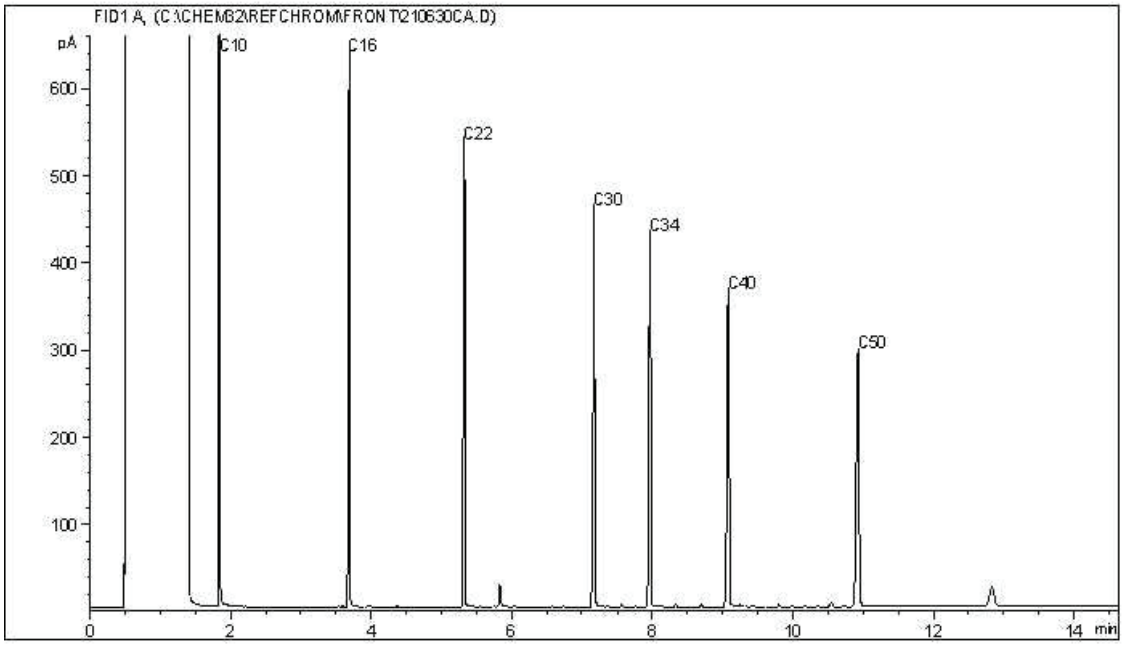


Carbon Range Distribution - Reference Chromatogram



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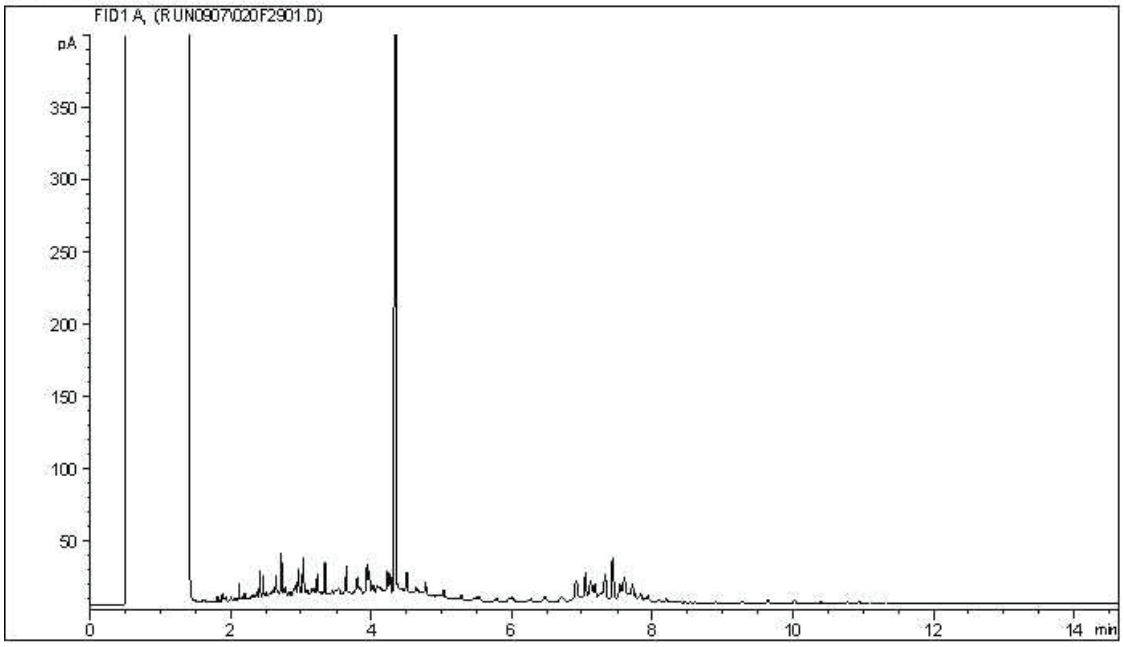
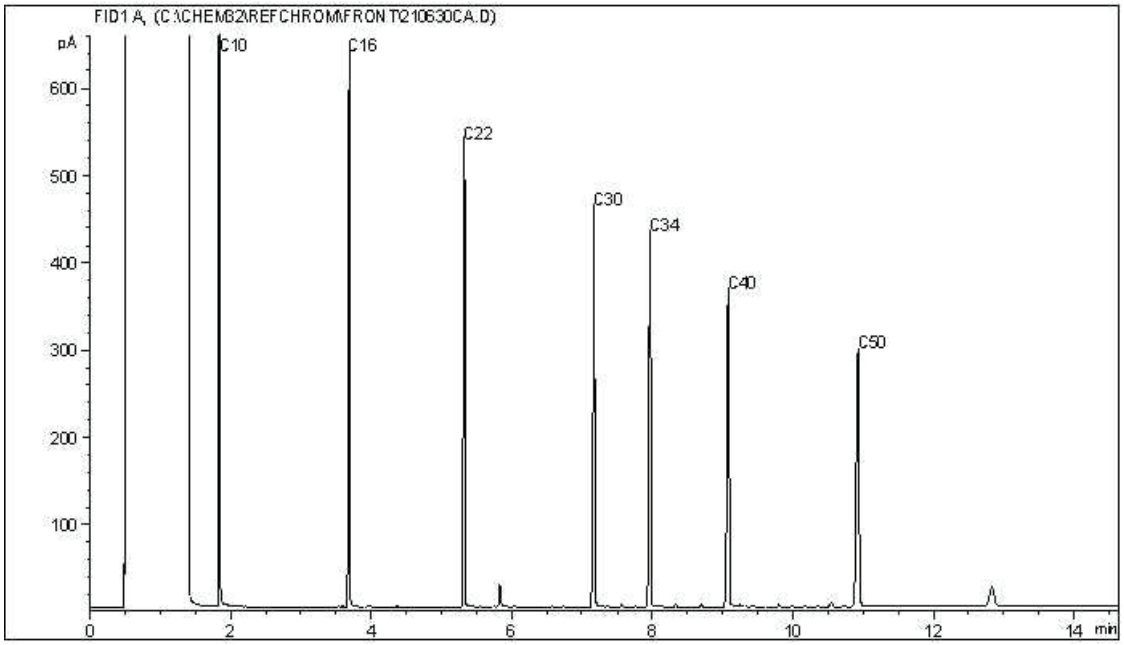


Carbon Range Distribution - Reference Chromatogram



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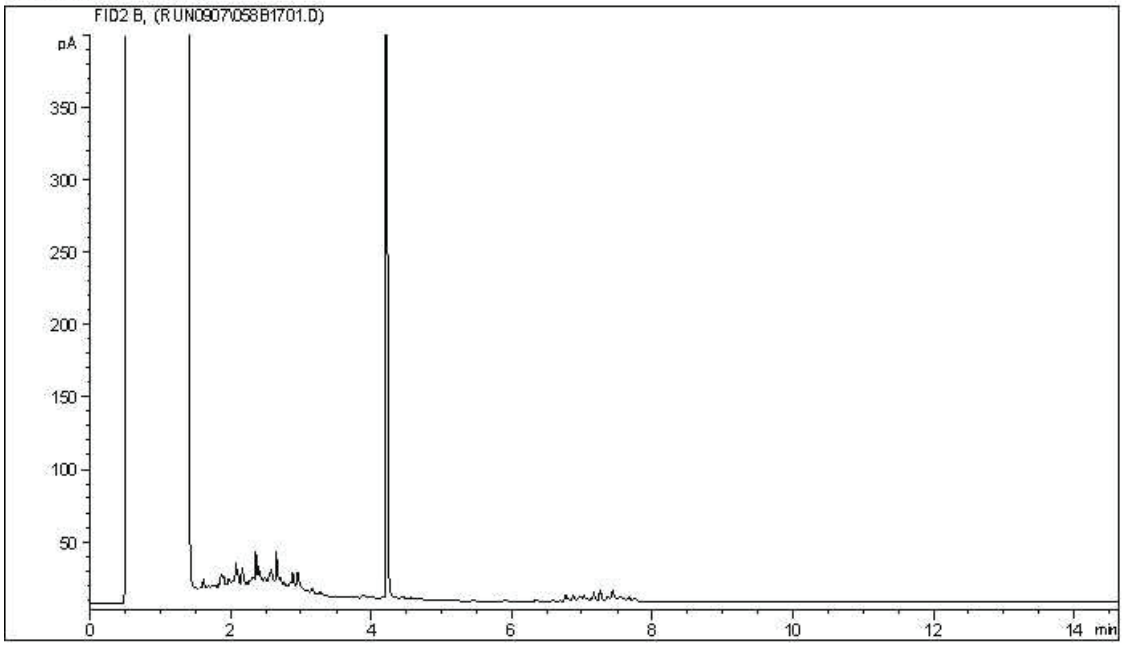
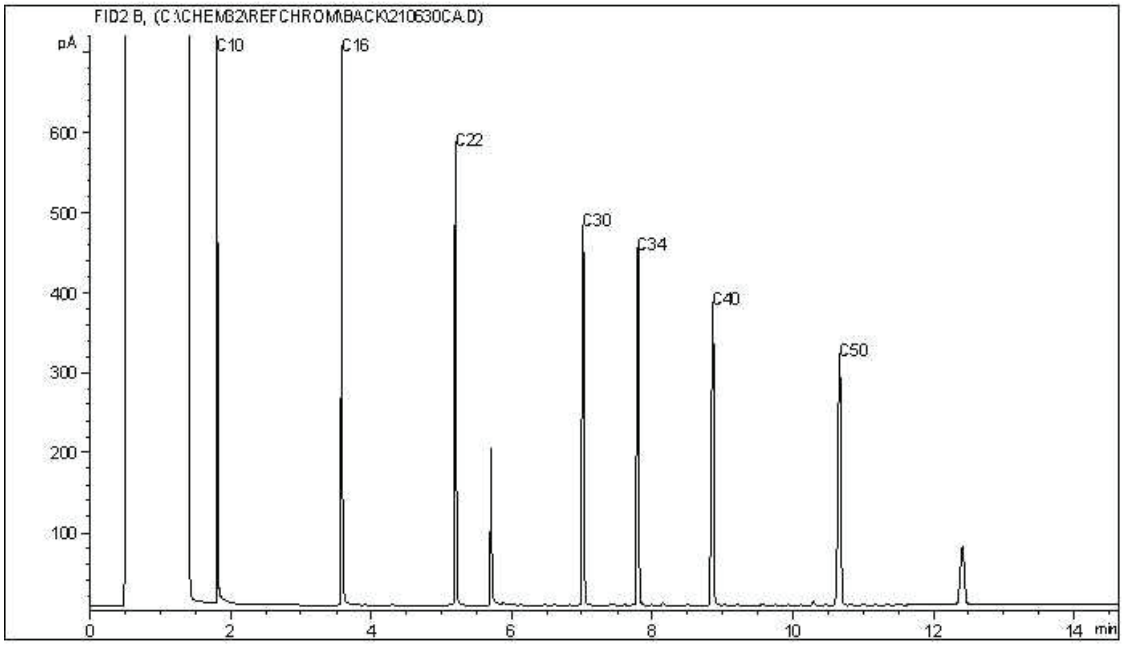


Carbon Range Distribution - Reference Chromatogram



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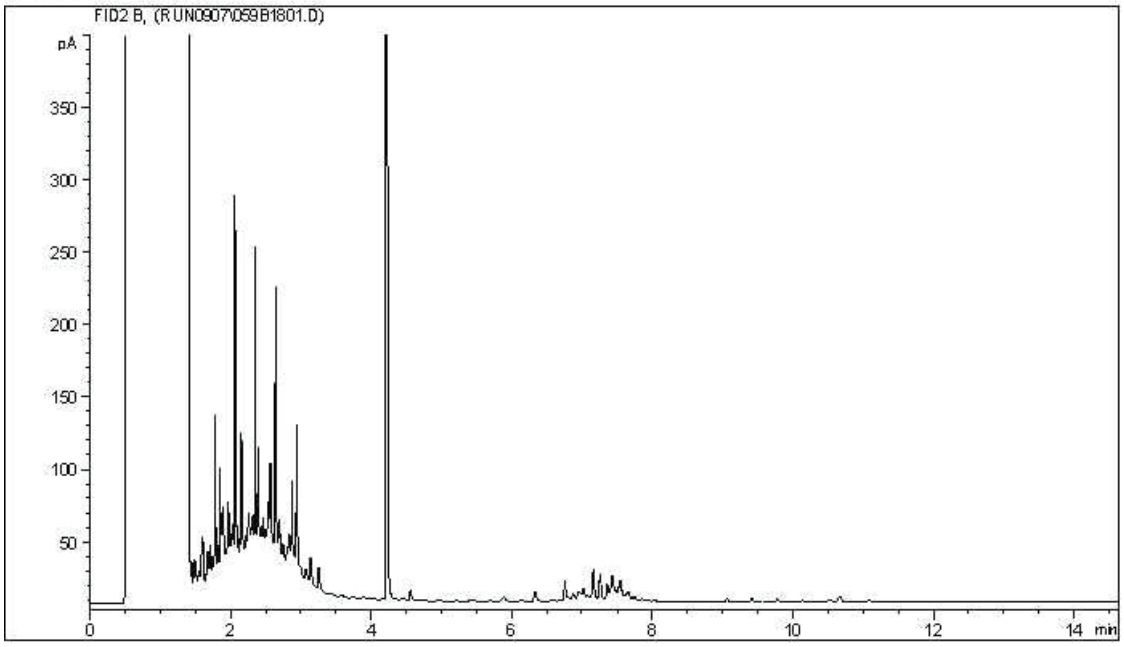

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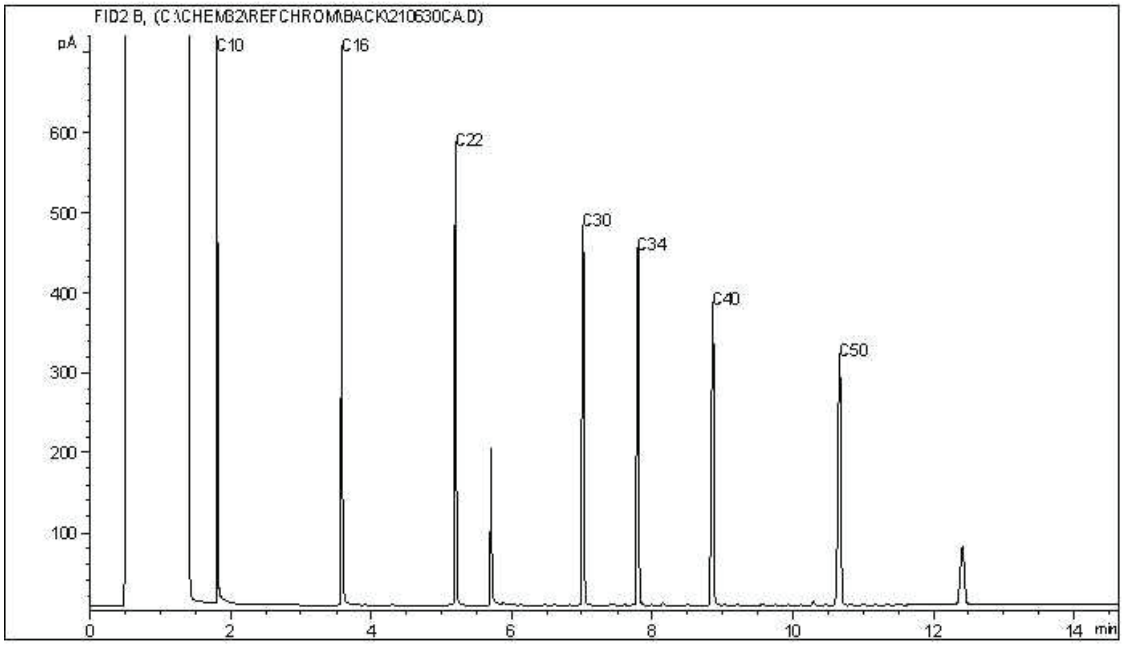

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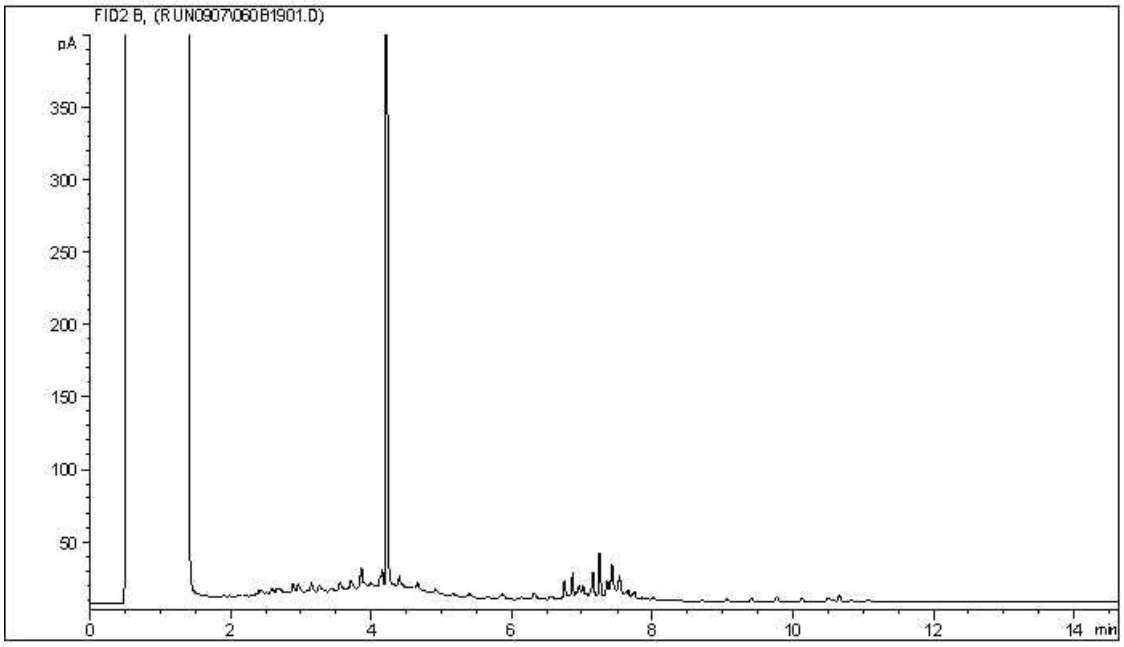

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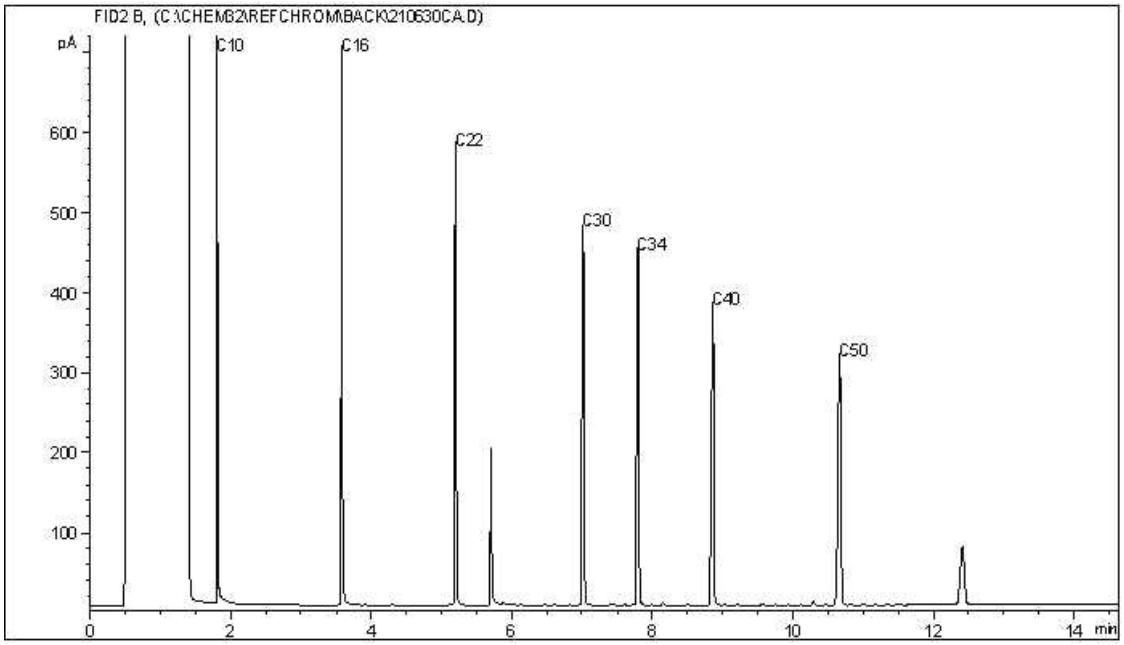

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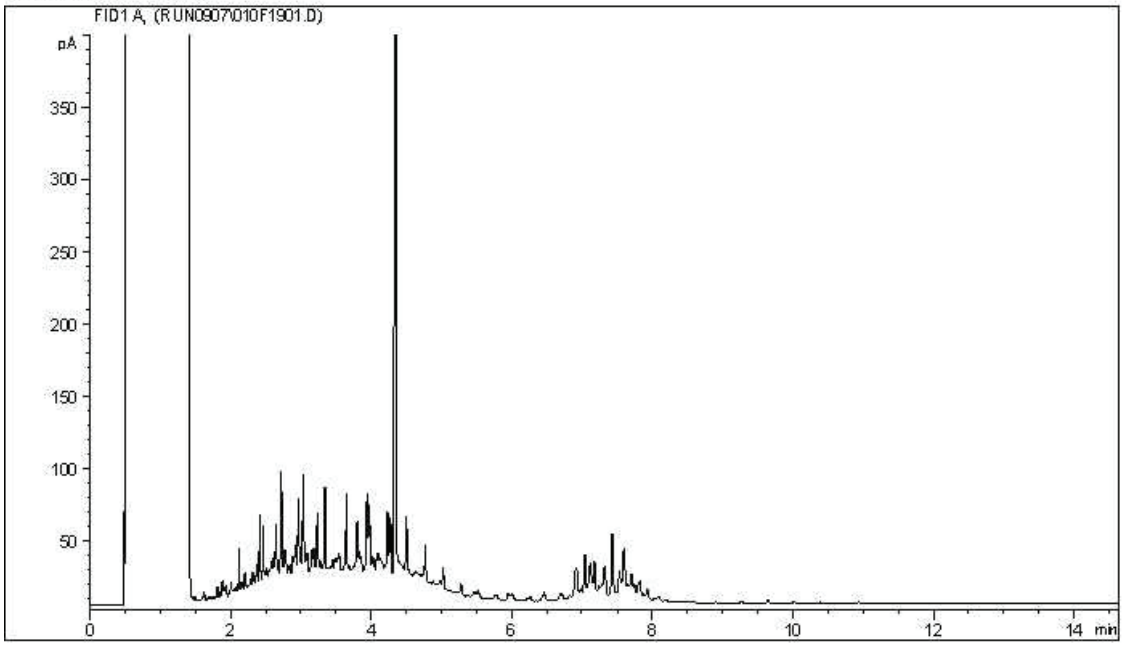

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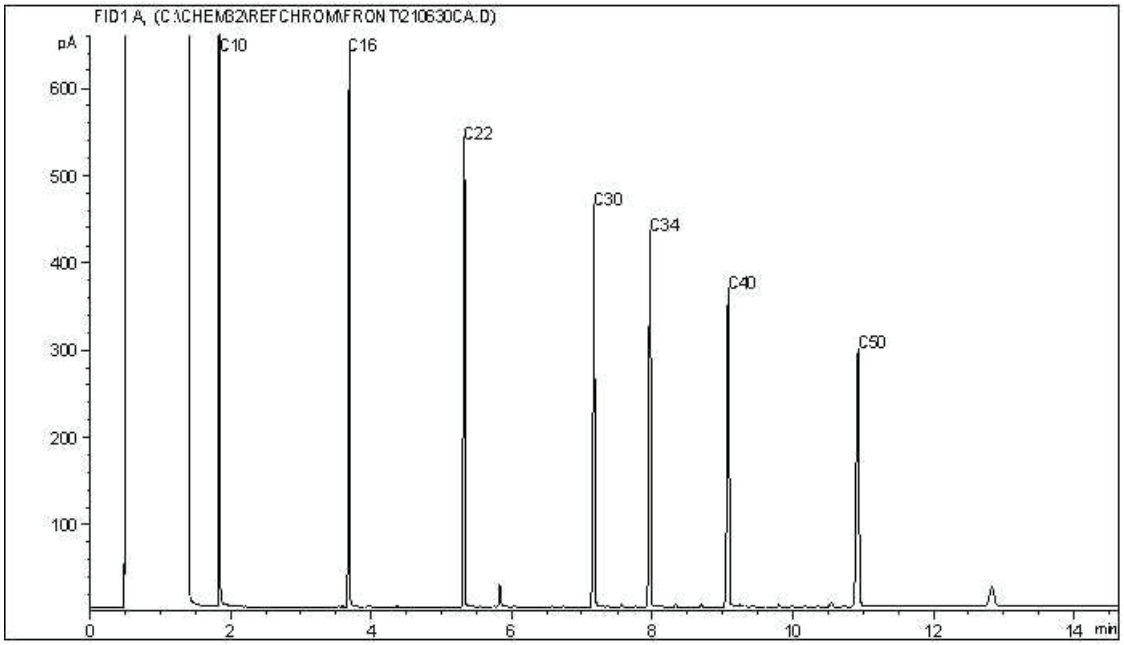

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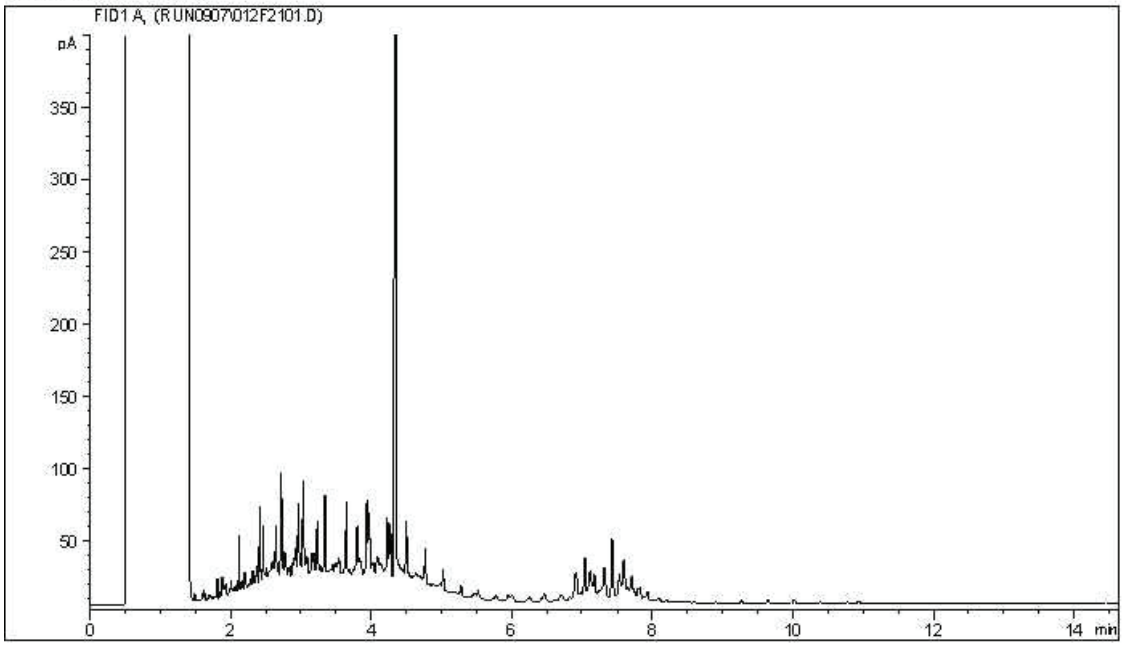

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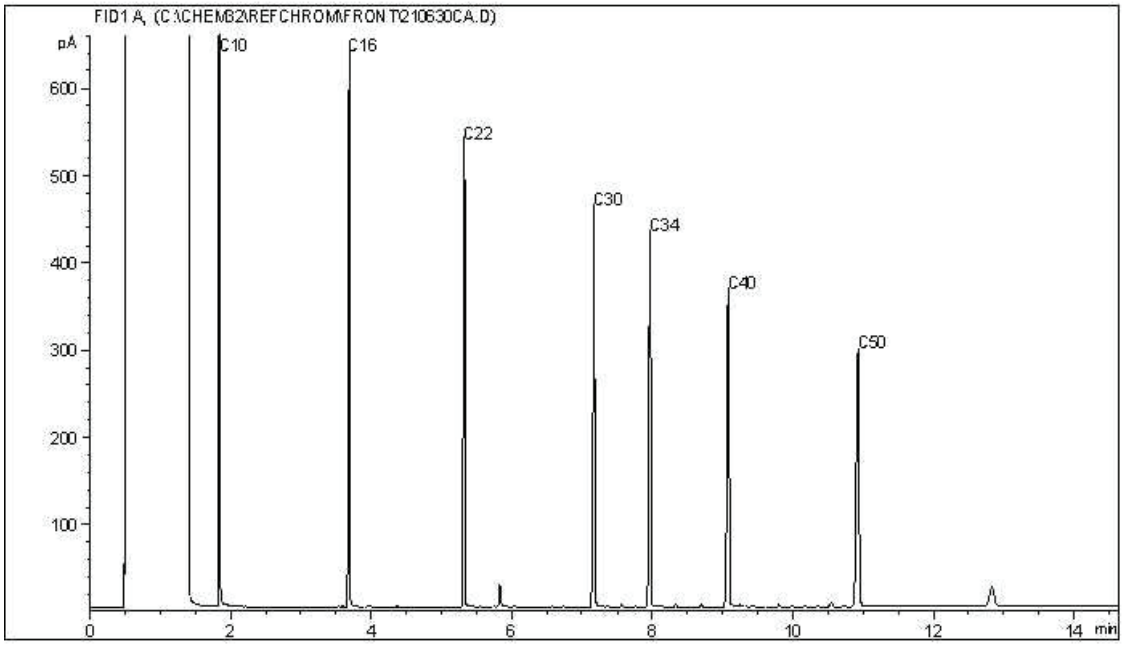

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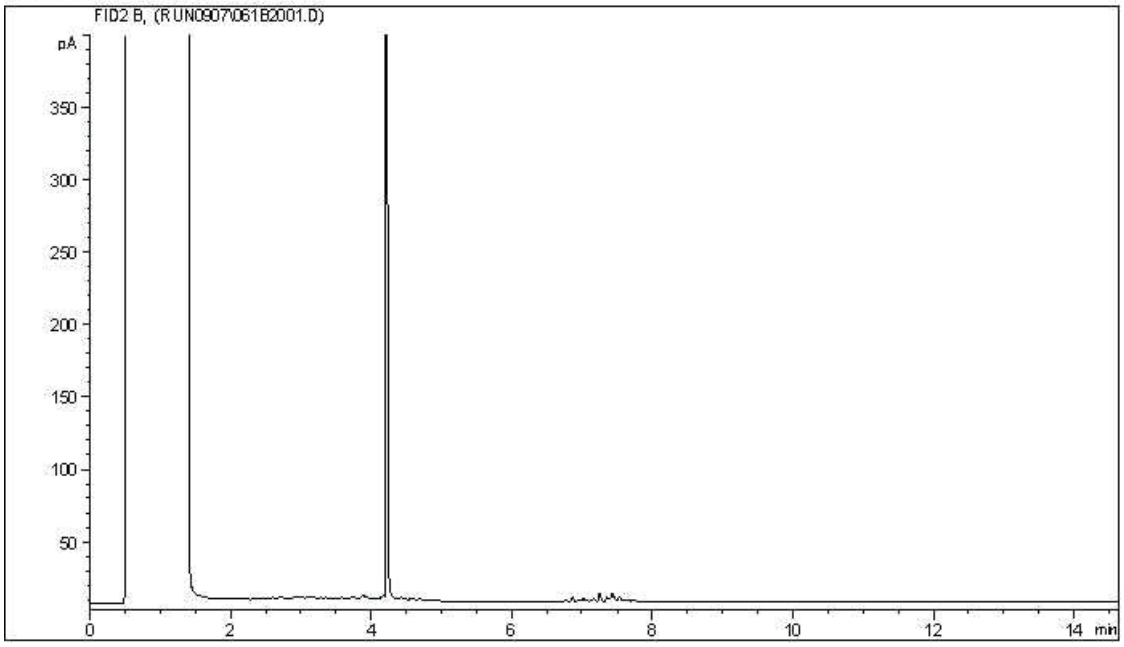
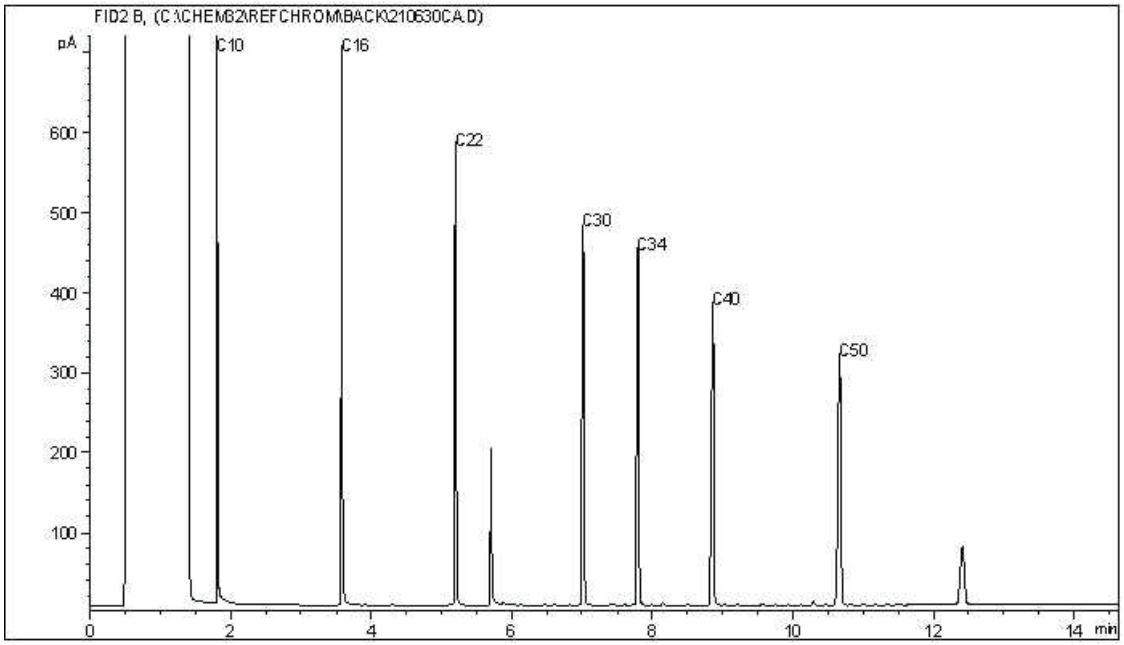
Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



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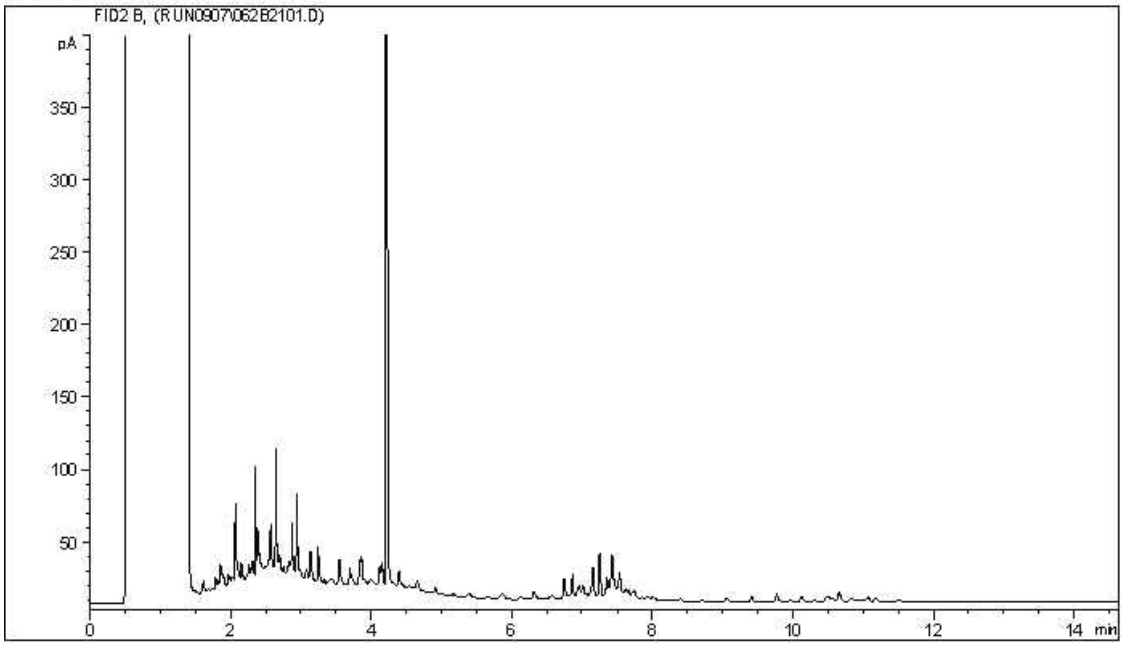
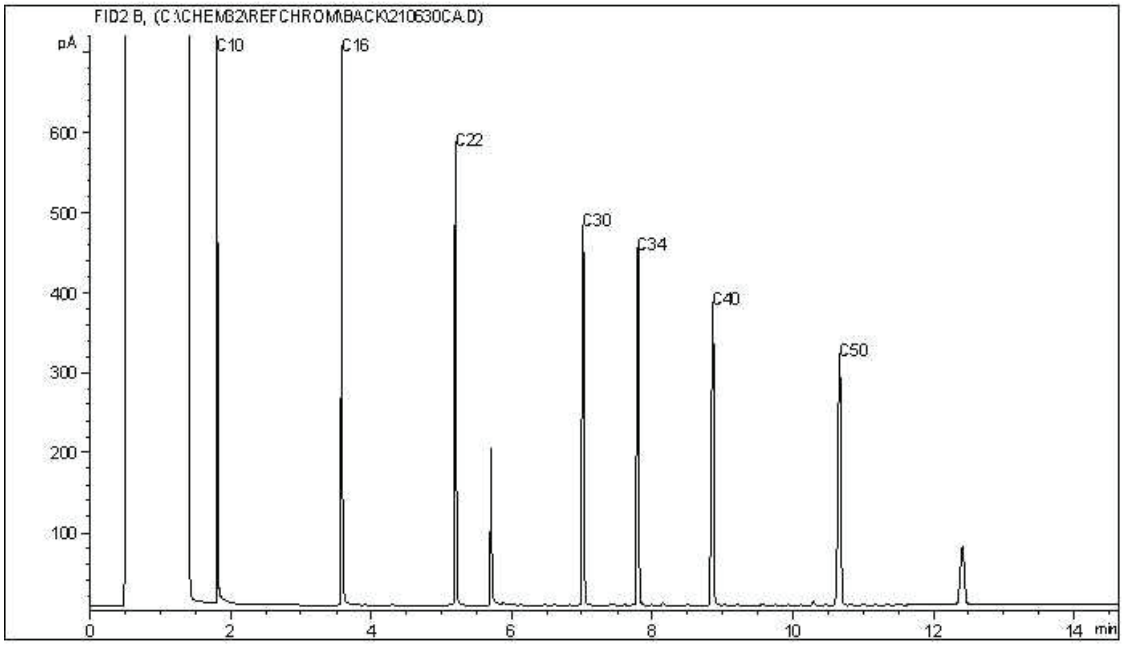
Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
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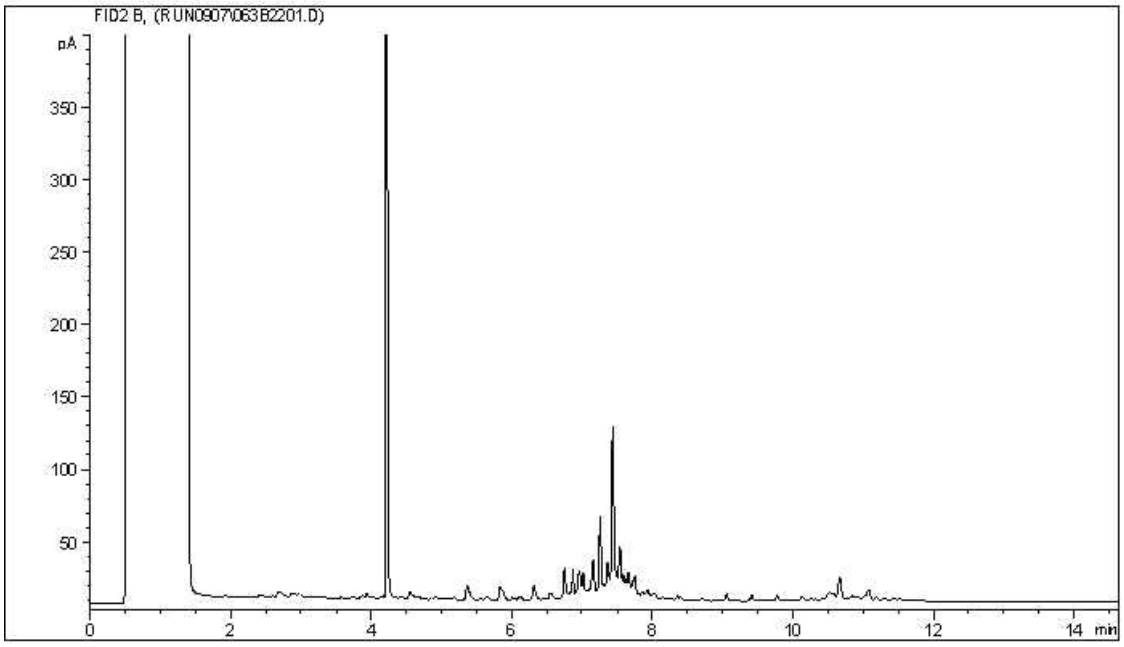
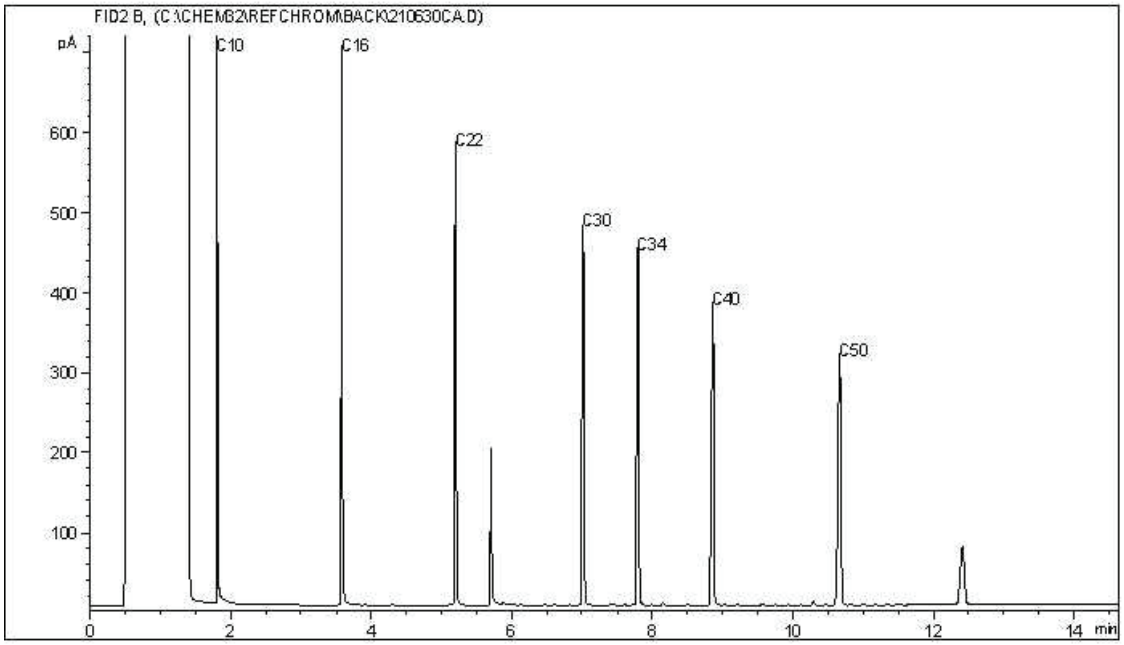
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



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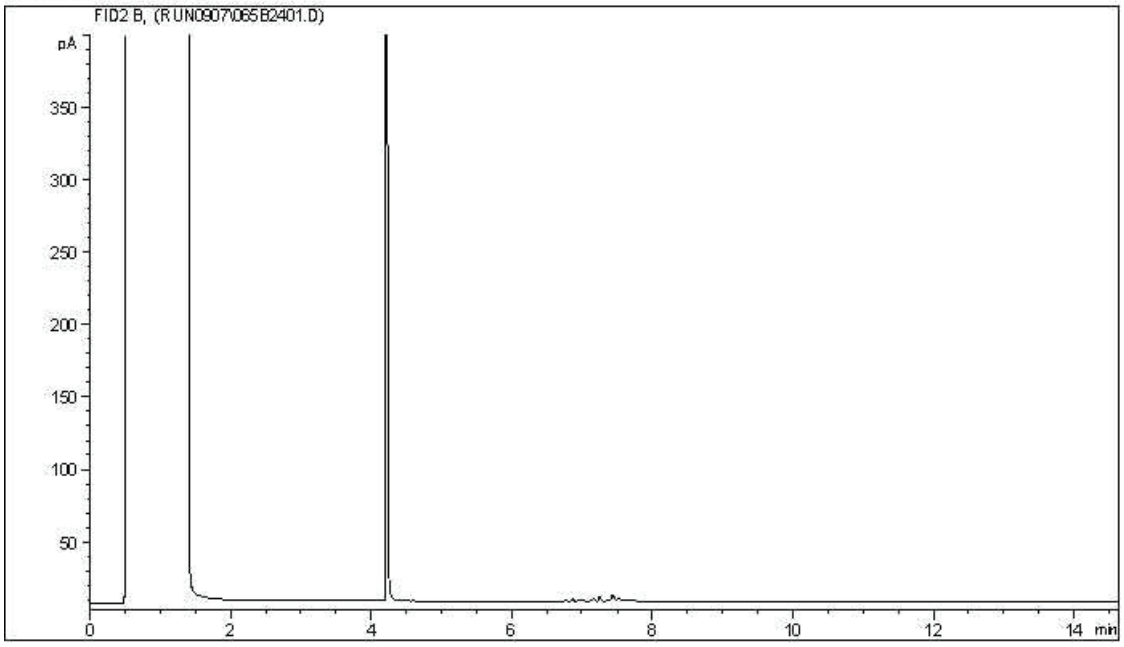
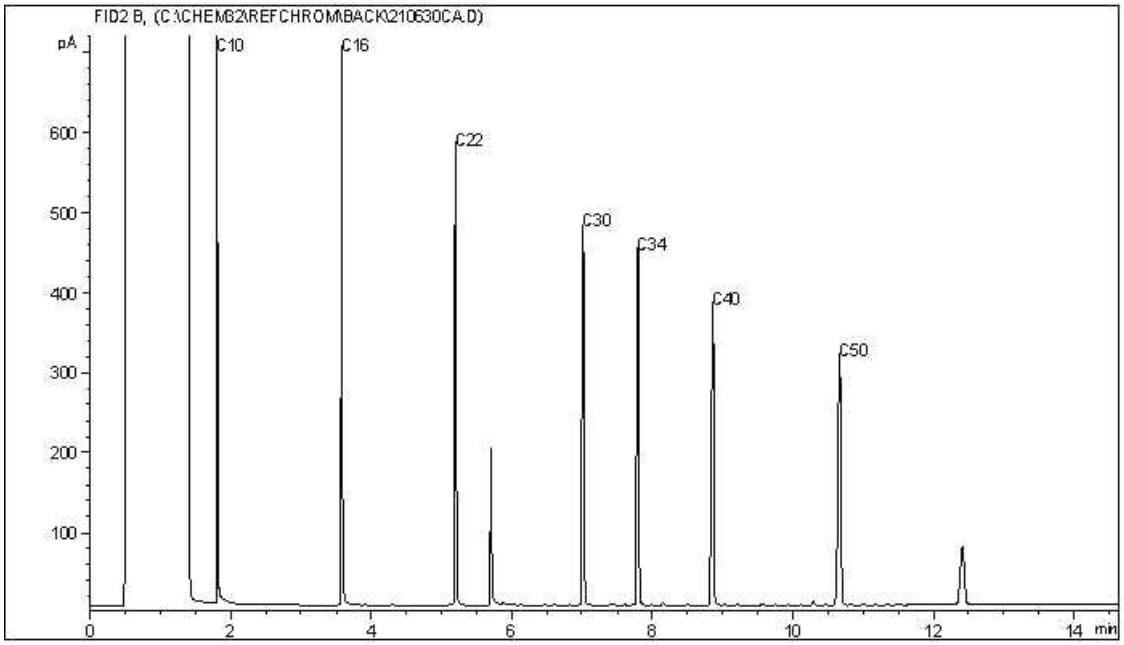


Carbon Range Distribution - Reference Chromatogram



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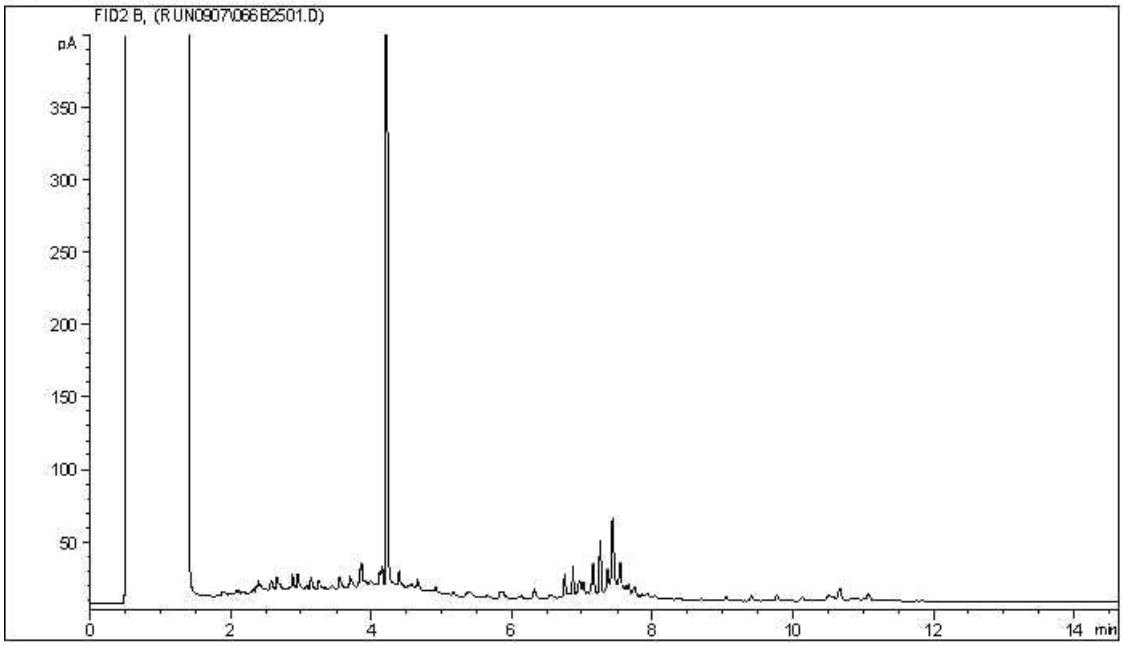
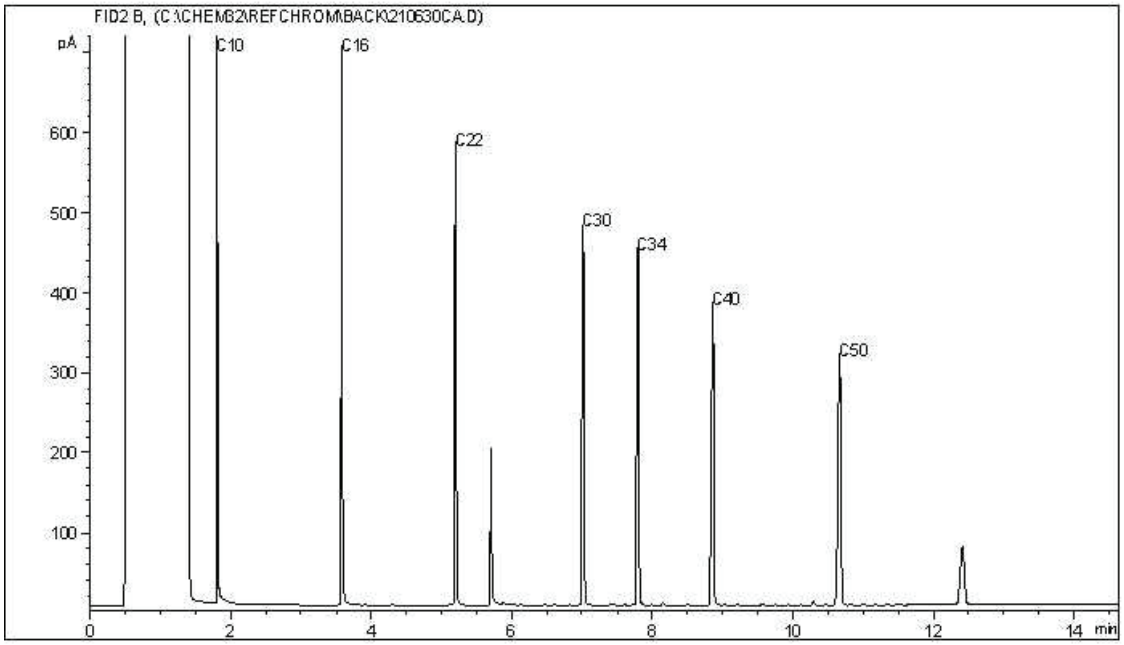


Carbon Range Distribution - Reference Chromatogram



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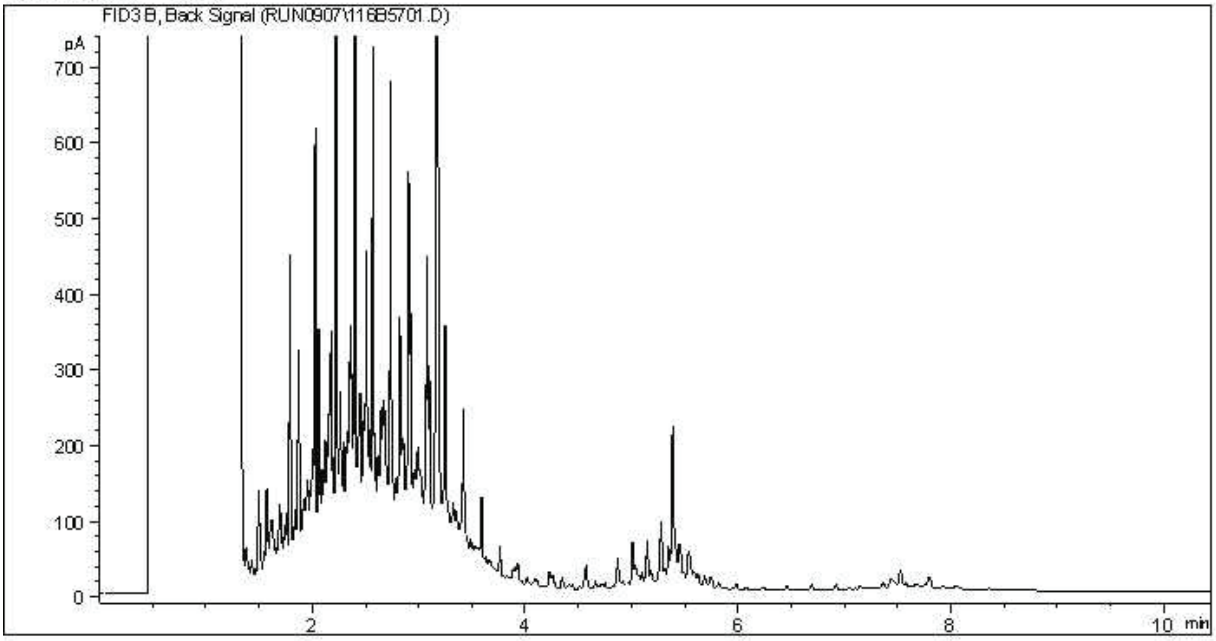
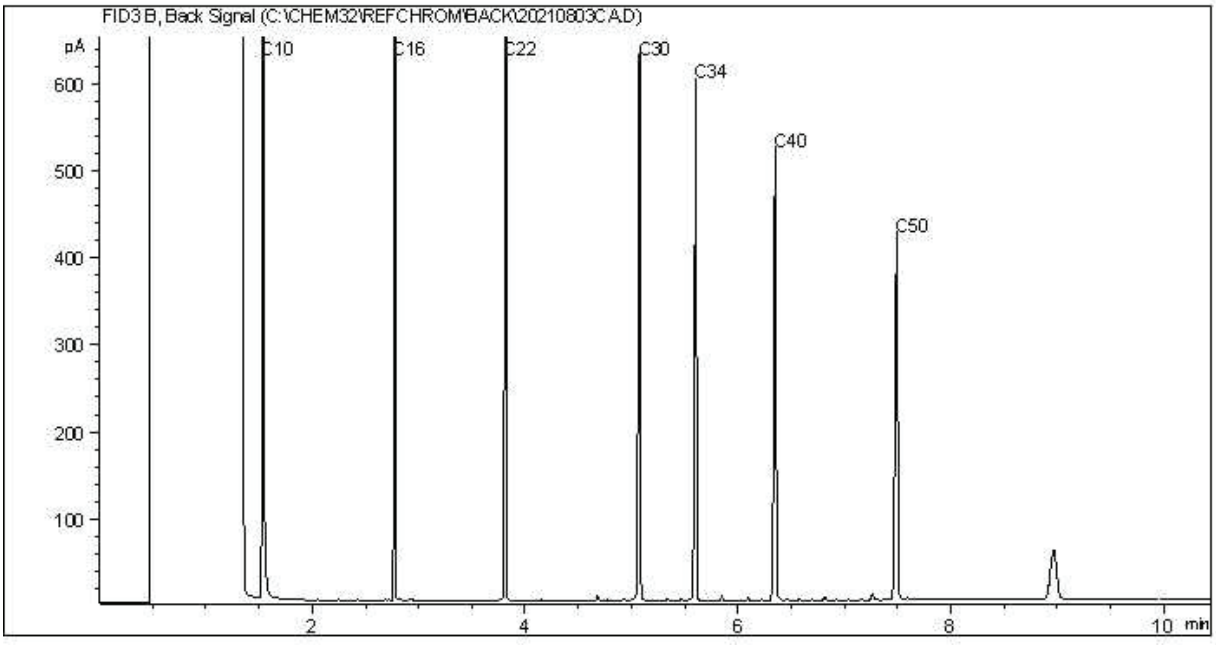
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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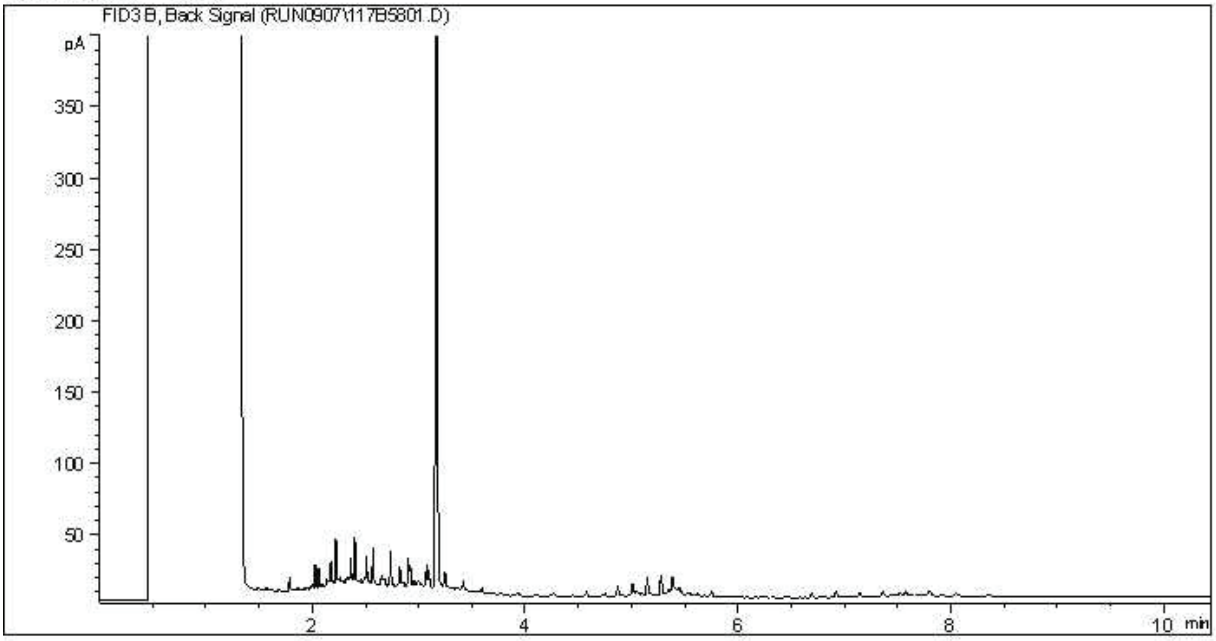
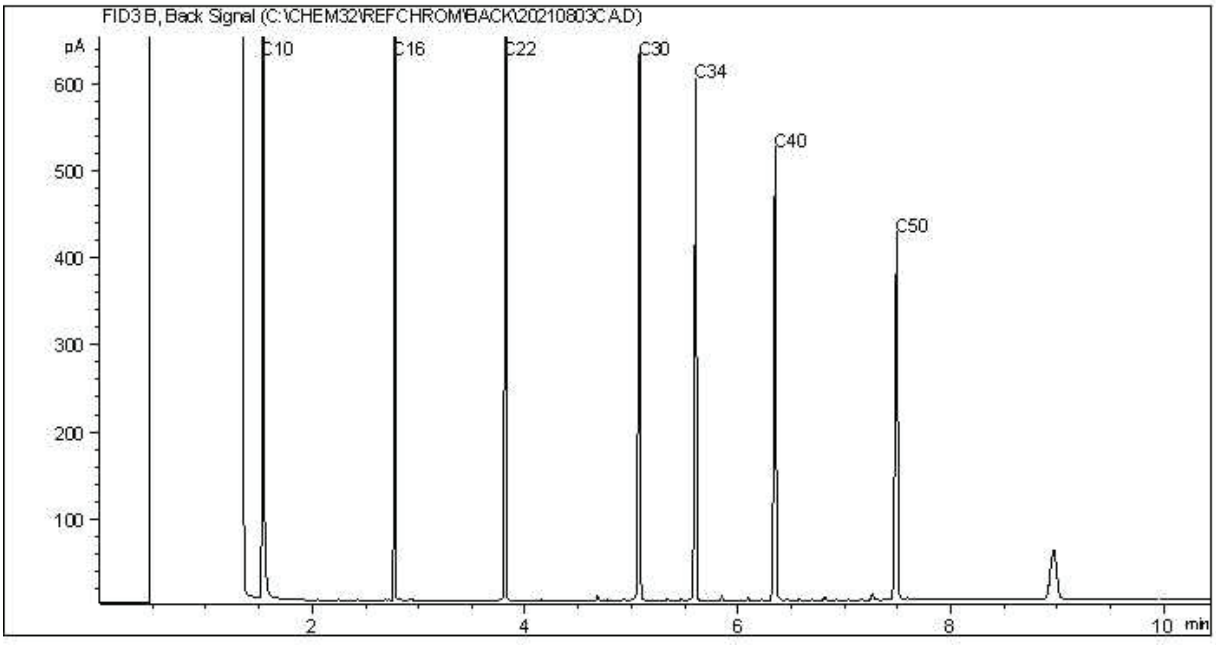
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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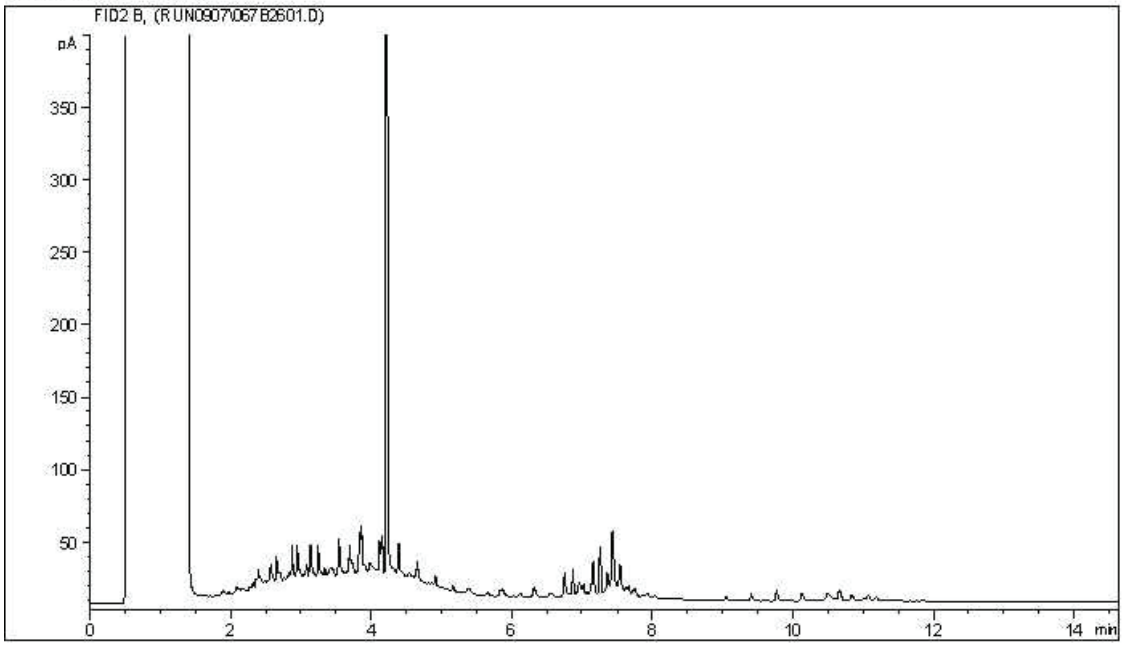
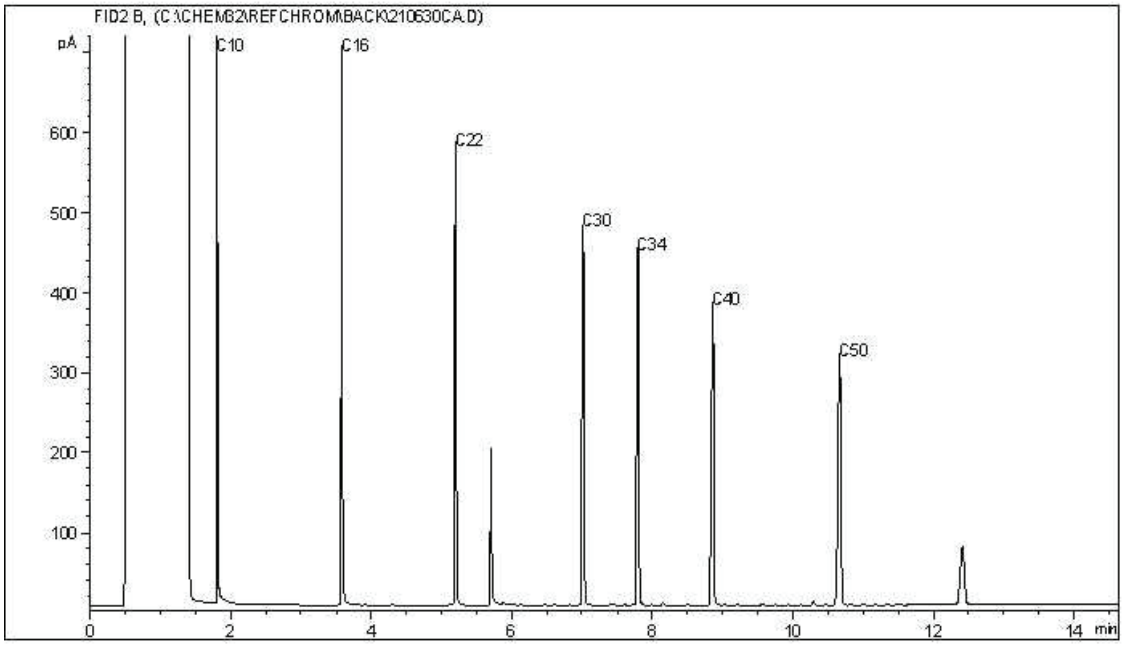


Carbon Range Distribution - Reference Chromatogram



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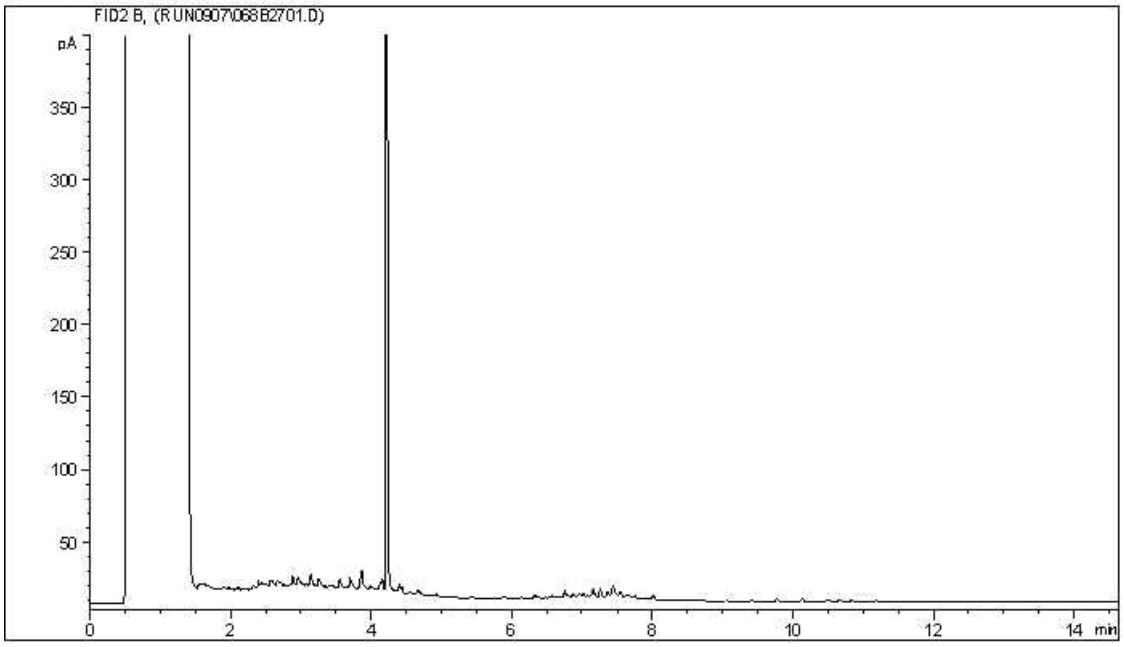
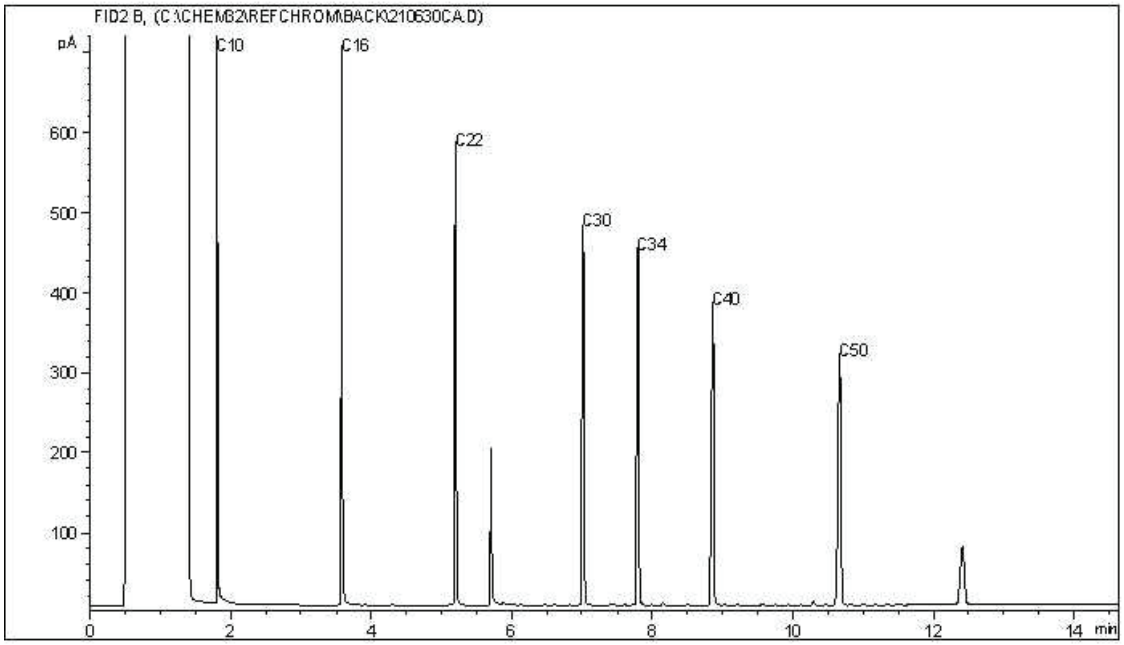


Carbon Range Distribution - Reference Chromatogram



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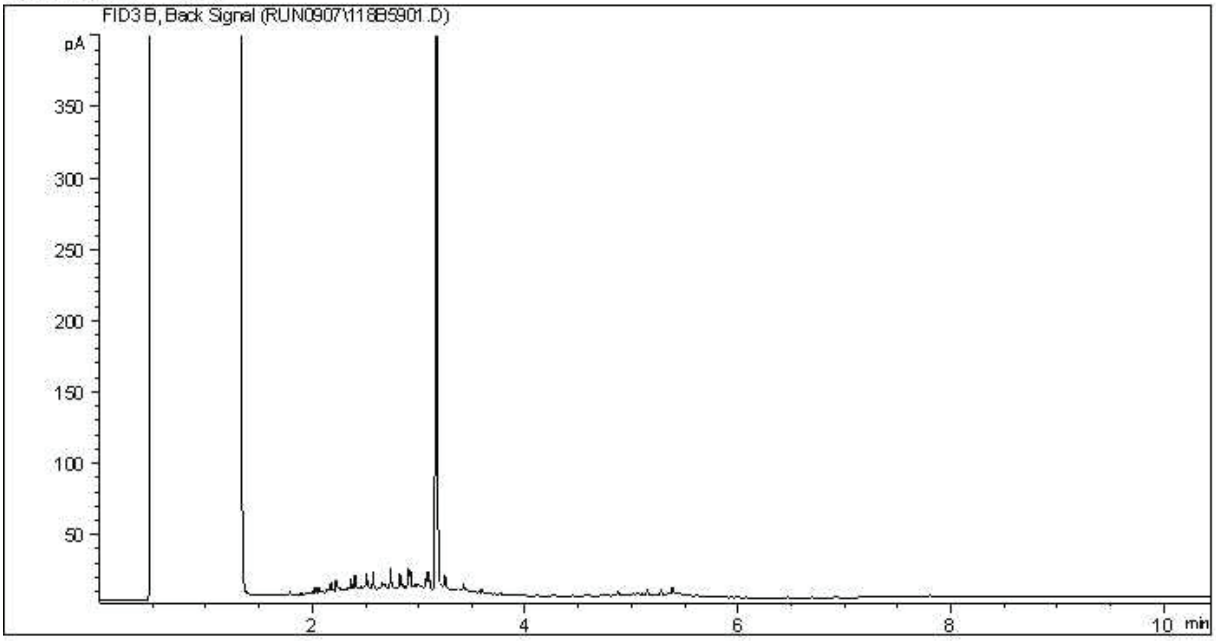

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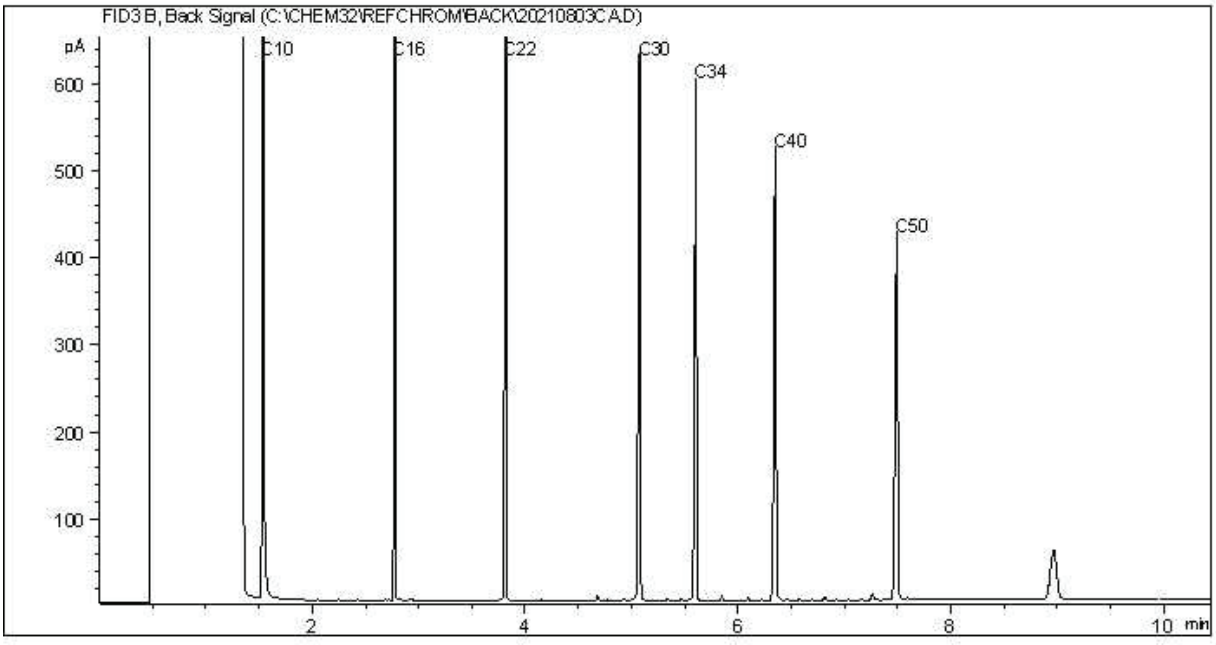

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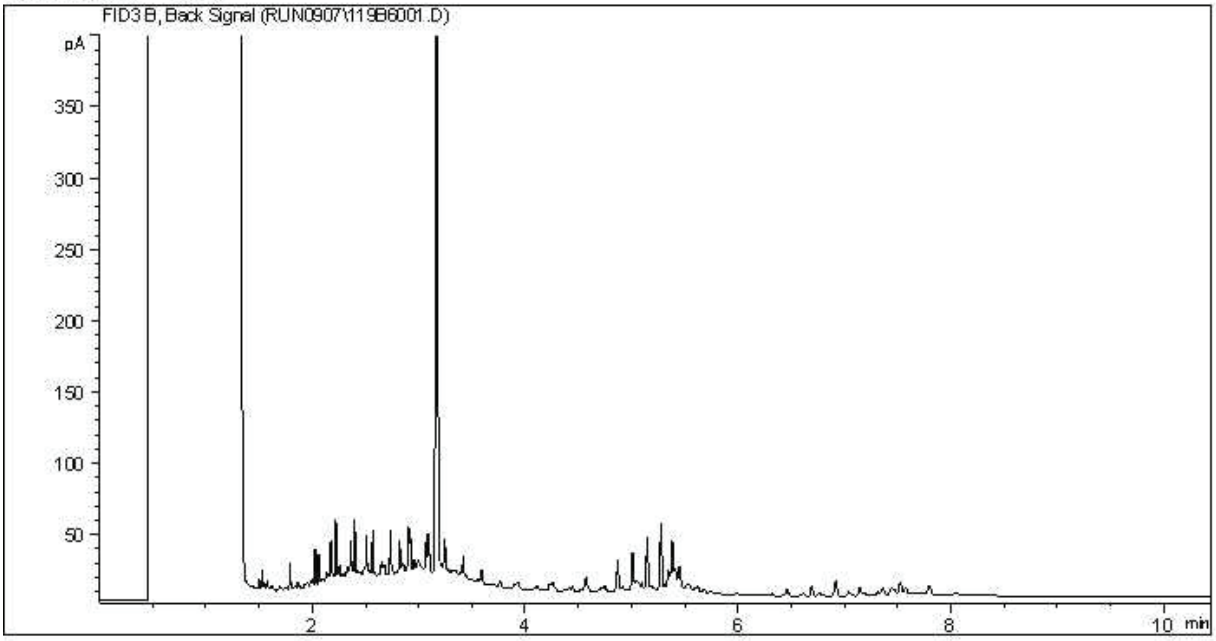

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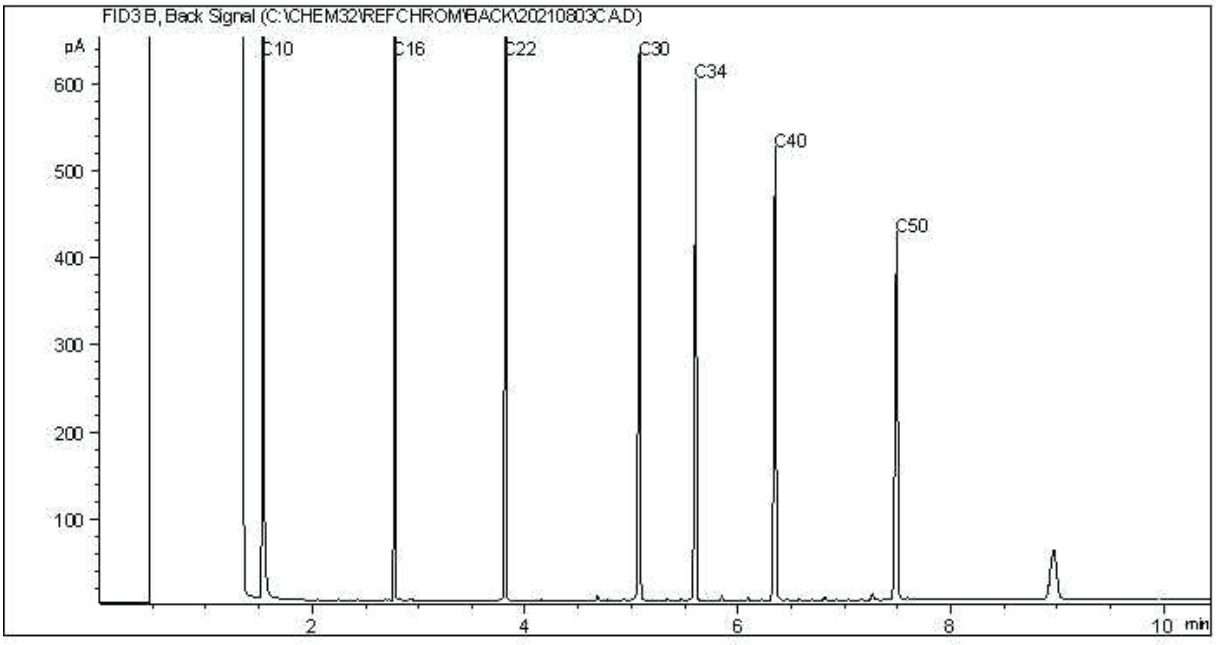

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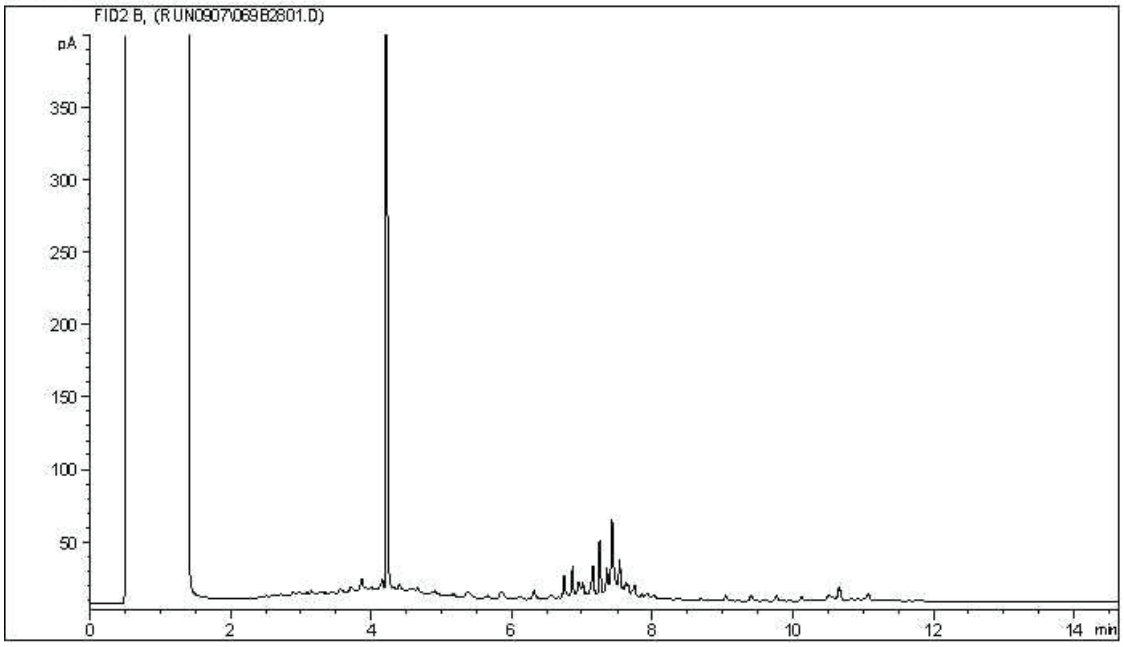

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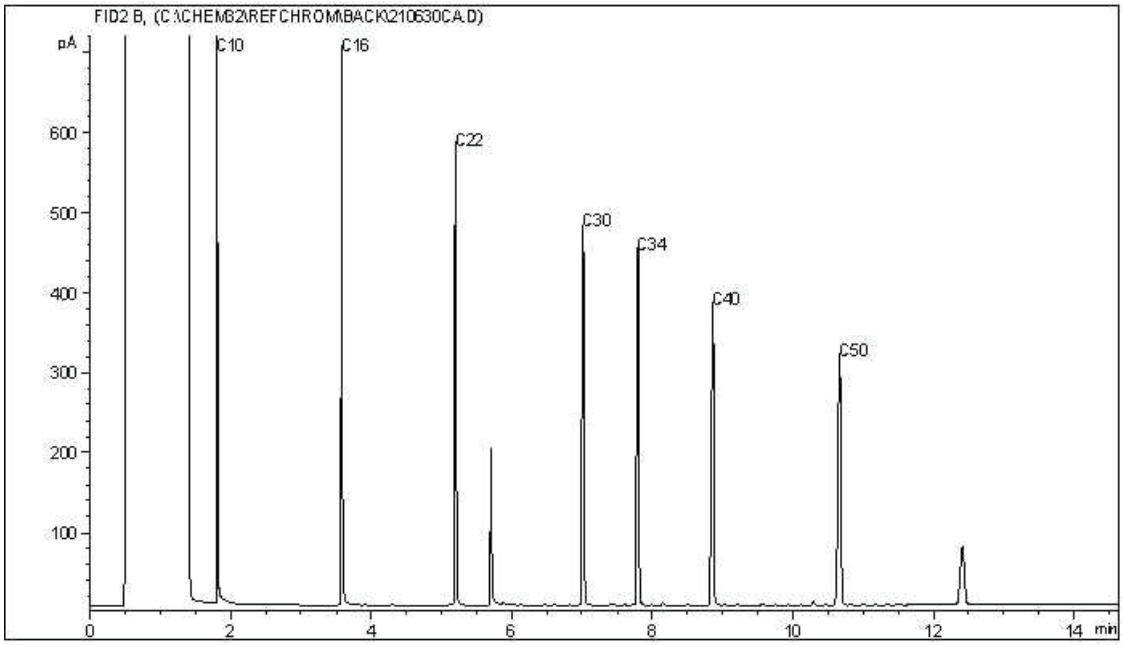

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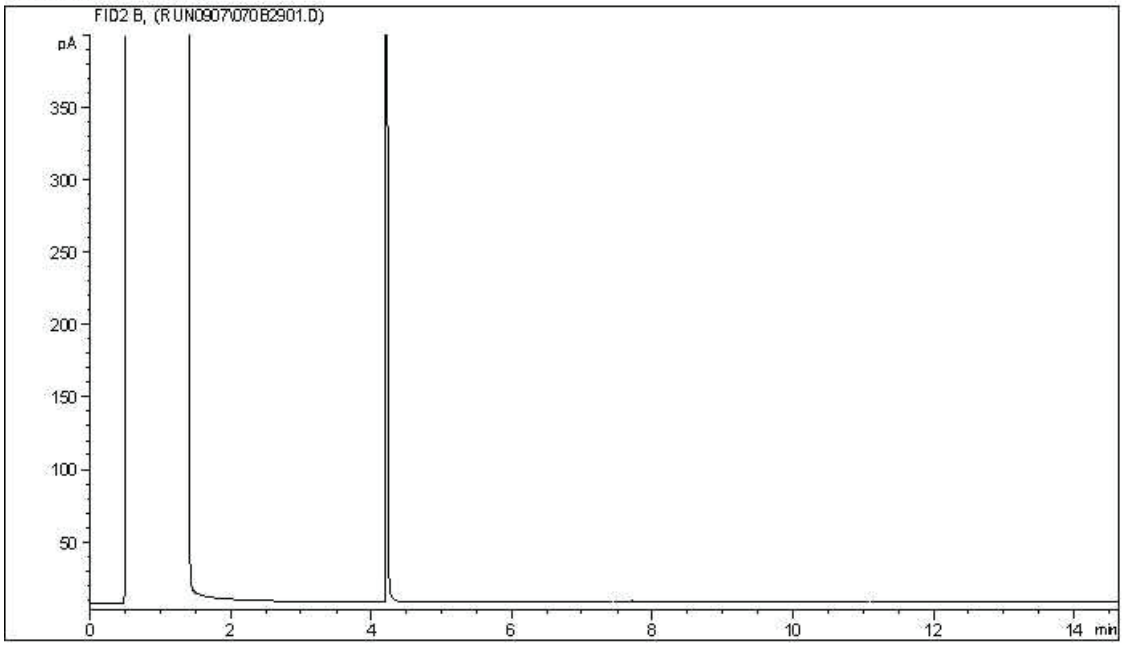

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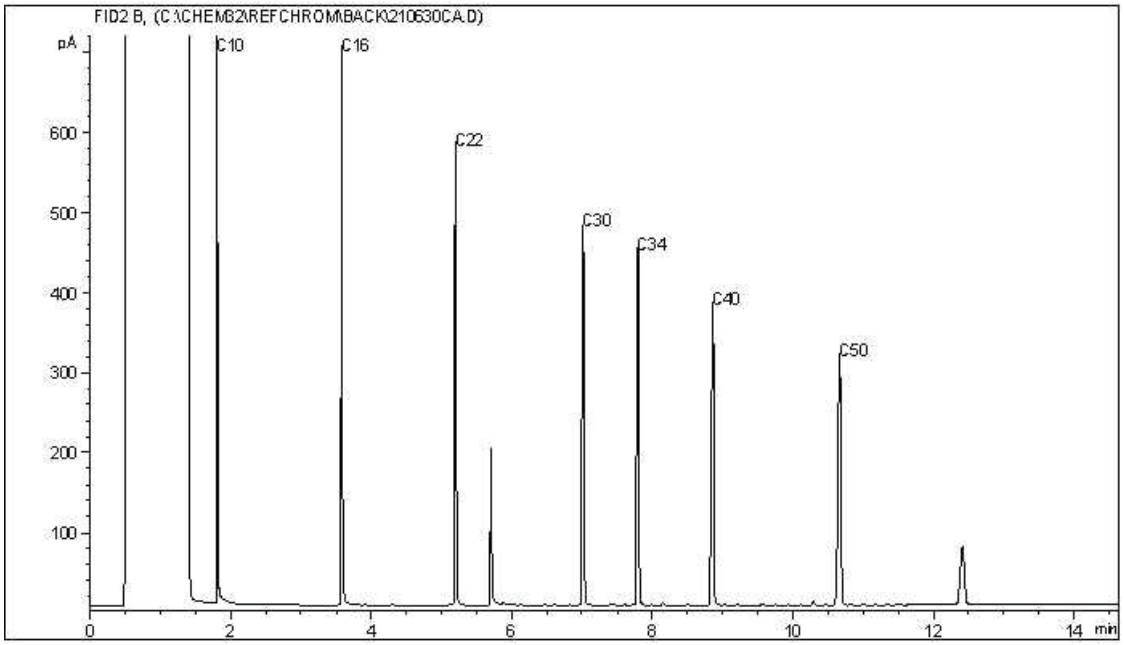

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GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell

Sampling Date: August 27, 2021

Golder Project Number: 20368099-6000-1001

Laboratory: Bureau Veritas Edmonton

Lab Submission Number: C164653

Was the Cooler Received at the lab under a sealed and intact custody seal?	Yes
Was proper chain of custody of the samples documented and kept?	Yes
Were sample temperatures acceptable when they reached lab?:	Yes
Were all samples analyzed and extracted within hold times?:	Yes
Has lab warranted all tests were in statistical control in CoA?:	Yes
Was sufficient sample provided for the requested analysis?	Yes
Has lab warranted all samples were analyzed with limited headspace present?:	Yes

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Surrogate Recovery	X			Matrix duplicate RPD for F2 (117%) exceed the
Method Blank Concentration	X			acceptance criteria (40%).
Laboratory Duplicate RPD		X		All remaining laboratory QC results are within
Matrix Spike Recovery	X			acceptance criteria.
Blank Spike Recovery	X			

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration			X	Samples TP21-22-05 and DUP-GG exceed the alert
Trip Blank Concentration			X	limits for ethylbenzene (127%), total xylenes (131%)
Field Duplicate RPD		X		and F2 (192%). Samples TP21-23-06 and DUP-HH exceed the alert limit for F2 (105%). All remaining field QC samples are within alert limits.

Is data considered reliable (Yes/No/Suspect)?: Suspect

If answer is "No" or "Suspect", describe and provide rationale:

Please see QA/QC appendix for details

Data Reviewed by (Print): Anita Colbert

Data Reviewed by (Signature): Anita Colbert

Date: September 28, 2021

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-69-01, 644511-67-01, 644511-68-01, 644511-46-01

Report Date: 2021/09/09
Report #: R3069502
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C164860
Received: 2021/08/31, 08:35

Sample Matrix: Soil
Samples Received: 31

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	20	N/A	2021/09/07	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	11	N/A	2021/09/08	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	20	N/A	2021/09/08		Auto Calc
F1-BTEX (1)	11	N/A	2021/09/09		Auto Calc
CCME Hydrocarbons (F2-F4 in soil) (1, 3)	3	2021/09/04	2021/09/05	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 3)	27	2021/09/04	2021/09/07	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 3)	1	2021/09/04	2021/09/08	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F4G in soil) (1, 3)	2	2021/09/04	2021/09/09	AB SOP-00036 AB SOP-00040	CCME PHC-CWS m
Moisture (1)	31	N/A	2021/09/05	AB SOP-00002	CCME PHC-CWS m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-69-01, 644511-67-01, 644511-68-01, 644511-46-01

Report Date: 2021/09/09
Report #: R3069502
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C164860
Received: 2021/08/31, 08:35

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary Environmental

(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(3) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
09 Sep 2021 17:57:08

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273

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This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB066	AFB066		AFB067		AFB068	AFB069		
Sampling Date		2021/08/29 10:17	2021/08/29 10:17		2021/08/29 10:29		2021/08/29 10:30	2021/08/29 10:38		
COC Number		644511-69-01	644511-69-01		644511-69-01		644511-69-01	644511-69-01		
	UNITS	DUP-MM	DUP-MM Lab-Dup	RDL	TP21-97-02	RDL	TP-21-97-04	TP21-97-06	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	N/A	10	100	10	<10	23	10	A342301
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	N/A	50	2300	50	<50	51	50	A342301
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	N/A	50	910	50	<50	<50	50	A342301
Reached Baseline at C50	mg/kg	Yes	N/A	N/A	No	N/A	Yes	Yes	N/A	A342301
Physical Properties										
Moisture	%	12	N/A	0.30	49	0.30	6.9	16	0.30	A342276
Volatiles										
Xylenes (Total)	mg/kg	<0.045	N/A	0.045	<0.11	0.11	<0.045	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<10	N/A	10	<24	24	<10	<10	10	A340320
Field Preserved Volatiles										
Benzene	mg/kg	<0.0050	<0.0050	0.0050	<0.0090 (1)	0.0090	<0.0050	<0.0050	0.0050	A341613
Toluene	mg/kg	<0.050	<0.050	0.050	0.31 (2)	0.12	<0.050	<0.050	0.050	A341613
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	<0.013 (1)	0.013	<0.010	<0.010	0.010	A341613
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	<0.094 (2)	0.094	<0.040	<0.040	0.040	A341613
o-Xylene	mg/kg	<0.020	<0.020	0.020	<0.047 (2)	0.047	<0.020	<0.020	0.020	A341613
F1 (C6-C10)	mg/kg	<10	<10	10	<24 (2)	24	<10	<10	10	A341613
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	93	92	N/A	93	N/A	93	93	N/A	A341613
4-Bromofluorobenzene (sur.)	%	107	106	N/A	106	N/A	106	106	N/A	A341613
D10-o-Xylene (sur.)	%	104	104	N/A	114	N/A	111	105	N/A	A341613
D4-1,2-Dichloroethane (sur.)	%	106	107	N/A	105	N/A	105	106	N/A	A341613
O-TERPHENYL (sur.)	%	123	N/A	N/A	103	N/A	102	106	N/A	A342301

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Detection limit reported based on MDL and sample weight used for analysis.
(2) Detection limits raised based on sample weight used for analysis.

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BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB070			AFB071			AFB072		
Sampling Date		2021/08/29 10:47			2021/08/29 10:48			2021/08/29 10:54		
COC Number		644511-69-01			644511-69-01			644511-69-01		
	UNITS	TP21-98-03	RDL	QC Batch	TP21-98-04	RDL	QC Batch	TP21-98-05	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	470	10	A342301	30	10	A342301	<10	10	A342301
F3 (C16-C34 Hydrocarbons)	mg/kg	550	50	A342301	830	50	A342301	<50	50	A342301
F4 (C34-C50 Hydrocarbons)	mg/kg	83	50	A342301	300	50	A342301	<50	50	A342301
Reached Baseline at C50	mg/kg	Yes	N/A	A342301	No	N/A	A342301	Yes	N/A	A342301
Physical Properties										
Moisture	%	20	0.30	A342276	42	0.30	A342380	7.3	0.30	A342274
Volatiles										
Xylenes (Total)	mg/kg	<0.045	0.045	A340320	<0.13	0.13	A340320	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<10	10	A340320	<10	10	A340320	<10	10	A340320
Field Preserved Volatiles										
Benzene	mg/kg	<0.0050	0.0050	A341613	<0.011 (1)	0.011	A341613	<0.0050	0.0050	A341613
Toluene	mg/kg	<0.050	0.050	A341613	<0.14 (2)	0.14	A341613	<0.050	0.050	A341613
Ethylbenzene	mg/kg	<0.010	0.010	A341613	<0.016 (1)	0.016	A341613	<0.010	0.010	A341613
m & p-Xylene	mg/kg	<0.040	0.040	A341613	<0.12 (2)	0.12	A341613	<0.040	0.040	A341613
o-Xylene	mg/kg	<0.020	0.020	A341613	<0.058 (2)	0.058	A341613	<0.020	0.020	A341613
F1 (C6-C10)	mg/kg	<10	10	A341613	<10 (1)	10	A341613	<10	10	A341613
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	94	N/A	A341613	91	N/A	A341613	91	N/A	A341613
4-Bromofluorobenzene (sur.)	%	105	N/A	A341613	106	N/A	A341613	106	N/A	A341613
D10-o-Xylene (sur.)	%	118	N/A	A341613	112	N/A	A341613	113	N/A	A341613
D4-1,2-Dichloroethane (sur.)	%	107	N/A	A341613	104	N/A	A341613	108	N/A	A341613
O-TERPHENYL (sur.)	%	108	N/A	A342301	100	N/A	A342301	100	N/A	A342301

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limit reported based on MDL and sample weight used for analysis.
(2) Detection limits raised based on sample weight used for analysis.

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BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB072		AFB073	AFB074	AFB075	AFB105		
Sampling Date		2021/08/29 10:54		2021/08/29 13:32	2021/08/29 13:33	2021/08/29 13:40	2021/08/29 09:10		
COC Number		644511-69-01		644511-69-01	644511-69-01	644511-69-01	644511-67-01		
	UNITS	TP21-98-05 Lab-Dup	QC Batch	TP21-99-01	TP21-99-04	TP21-99-06	TP21-87-04	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	A342301	30	<10	<10	87	10	A342301
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	A342301	130	<50	<50	180	50	A342301
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	A342301	<50	<50	<50	<50	50	A342301
Reached Baseline at C50	mg/kg	N/A	A342301	Yes	Yes	Yes	Yes	N/A	A342301
Physical Properties									
Moisture	%	6.7	A342274	7.3	6.3	14	9.3	0.30	A342380
Volatiles									
Xylenes (Total)	mg/kg	N/A	A340320	<0.045	<0.045	<0.045	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	N/A	A340320	<10	<10	<10	<10	10	A340320
Field Preserved Volatiles									
Benzene	mg/kg	N/A	A341613	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	A341613
Toluene	mg/kg	N/A	A341613	<0.050	<0.050	<0.050	0.35	0.050	A341613
Ethylbenzene	mg/kg	N/A	A341613	0.012	<0.010	<0.010	<0.010	0.010	A341613
m & p-Xylene	mg/kg	N/A	A341613	<0.040	<0.040	<0.040	<0.040	0.040	A341613
o-Xylene	mg/kg	N/A	A341613	<0.020	<0.020	<0.020	<0.020	0.020	A341613
F1 (C6-C10)	mg/kg	N/A	A341613	<10	<10	<10	<10	10	A341613
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	N/A	A341613	92	90	94	92	N/A	A341613
4-Bromofluorobenzene (sur.)	%	N/A	A341613	106	105	107	106	N/A	A341613
D10-o-Xylene (sur.)	%	N/A	A341613	113	113	107	111	N/A	A341613
D4-1,2-Dichloroethane (sur.)	%	N/A	A341613	107	105	110	107	N/A	A341613
O-TERPHENYL (sur.)	%	N/A	A342301	83	88	90	97	N/A	A342301

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB106	AFB107			AFB108		AFB109		
Sampling Date		2021/08/29 09:17	2021/08/29 09:30			2021/08/29 09:31		2021/08/29 09:38		
COC Number		644511-67-01	644511-67-01			644511-67-01		644511-67-01		
	UNITS	**TP21-87-06**	**TP21-88-03**	**RDL**	**QC Batch**	**TP21-88-04**	**RDL**	**TP21-88-05**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	10	A342301	36	10	<10	10	A342282
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	<50	50	A342301	680	50	<50	50	A342282
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	50	A342301	180	50	<50	50	A342282
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	A342301	Yes	N/A	Yes	N/A	A342282
Physical Properties										
Moisture	%	18	3.9	0.30	A342380	42	0.30	12	0.30	A342380
Volatiles										
Xylenes (Total)	mg/kg	<0.045	<0.045	0.045	A340320	<0.097	0.097	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<10	<10	10	A340320	<22	22	<10	10	A340320
Field Preserved Volatiles										
Benzene	mg/kg	<0.0050	<0.0050	0.0050	A341613	0.027 (1)	0.011	<0.0050	0.0050	A341613
Toluene	mg/kg	<0.050	<0.050	0.050	A341613	18 (1)	0.11	<0.050	0.050	A341613
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	A341613	<0.012 (2)	0.012	<0.010	0.010	A341613
m & p-Xylene	mg/kg	<0.040	<0.040	0.040	A341613	<0.087 (1)	0.087	<0.040	0.040	A341613
o-Xylene	mg/kg	<0.020	<0.020	0.020	A341613	<0.044 (1)	0.044	0.027	0.020	A341613
F1 (C6-C10)	mg/kg	<10	<10	10	A341613	<22 (1)	22	<10	10	A341613
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	89	91	N/A	A341613	89	N/A	88	N/A	A341613
4-Bromofluorobenzene (sur.)	%	105	106	N/A	A341613	108	N/A	108	N/A	A341613
D10-o-Xylene (sur.)	%	122	115	N/A	A341613	123	N/A	114	N/A	A341613
D4-1,2-Dichloroethane (sur.)	%	103	103	N/A	A341613	110	N/A	108	N/A	A341613
O-TERPHENYL (sur.)	%	96	86	N/A	A342301	92	N/A	94	N/A	A342282

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limits raised based on sample weight used for analysis.
(2) Detection limit reported based on MDL and sample weight used for analysis.

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BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB110	AFB110		AFB111		AFB112		
Sampling Date		2021/08/29 09:48	2021/08/29 09:48		2021/08/29 09:58		2021/08/29 10:06		
COC Number		644511-67-01	644511-67-01		644511-67-01		644511-67-01		
	UNITS	TP21-89-03	TP21-89-03 Lab-Dup	QC Batch	TP21-89-06	QC Batch	TP21-90-02	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	37	44	A342282	<10	A342296	200	10	A342282
F3 (C16-C34 Hydrocarbons)	mg/kg	280	360	A342282	57	A342296	420	50	A342282
F4 (C34-C50 Hydrocarbons)	mg/kg	65	85	A342282	<50	A342296	<50	50	A342282
Reached Baseline at C50	mg/kg	Yes	Yes	A342282	Yes	A342296	Yes	N/A	A342282
Physical Properties									
Moisture	%	15	N/A	A342380	17	A342307	6.5	0.30	A342380
Volatiles									
Xylenes (Total)	mg/kg	<0.045	N/A	A340320	<0.045	A340320	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<10	N/A	A340320	<10	A340320	<10	10	A340320
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	N/A	A341613	<0.0050	A341613	<0.0050	0.0050	A341613
Toluene	mg/kg	0.53	N/A	A341613	<0.050	A341613	<0.050	0.050	A341613
Ethylbenzene	mg/kg	<0.010	N/A	A341613	<0.010	A341613	<0.010	0.010	A341613
m & p-Xylene	mg/kg	<0.040	N/A	A341613	<0.040	A341613	<0.040	0.040	A341613
o-Xylene	mg/kg	<0.020	N/A	A341613	<0.020	A341613	<0.020	0.020	A341613
F1 (C6-C10)	mg/kg	<10	N/A	A341613	<10	A341613	<10	10	A341613
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	89	N/A	A341613	88	A341613	87	N/A	A341613
4-Bromofluorobenzene (sur.)	%	110	N/A	A341613	108	A341613	107	N/A	A341613
D10-o-Xylene (sur.)	%	131	N/A	A341613	117	A341613	119	N/A	A341613
D4-1,2-Dichloroethane (sur.)	%	111	N/A	A341613	109	A341613	106	N/A	A341613
O-TERPHENYL (sur.)	%	96	109	A342282	103	A342296	102	N/A	A342282

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB113			AFB114		AFB119		
Sampling Date		2021/08/29 10:07			2021/08/29 10:17		2021/08/29 13:49		
COC Number		644511-67-01			644511-67-01		644511-68-01		
	UNITS	TP21-90-04	RDL	QC Batch	TP21-90-06	QC Batch	TP21-100-01	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	67	10	A342282	<10	A342234	18	10	A342296
F3 (C16-C34 Hydrocarbons)	mg/kg	220	50	A342282	<50	A342234	92	50	A342296
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	50	A342282	<50	A342234	<50	50	A342296
Reached Baseline at C50	mg/kg	Yes	N/A	A342282	Yes	A342234	Yes	N/A	A342296
Physical Properties									
Moisture	%	6.6	0.30	A342380	14	A342380	9.0	0.30	A342307
Volatiles									
Xylenes (Total)	mg/kg	<0.045	0.045	A340320	<0.045	A340320	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<24	24	A340320	<10	A340320	<10	10	A340320
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	0.0050	A341613	<0.0050	A341613	<0.0050	0.0050	A343206
Toluene	mg/kg	<0.050	0.050	A341613	<0.050	A341613	<0.050	0.050	A343206
Ethylbenzene	mg/kg	<0.010	0.010	A341613	<0.010	A341613	<0.010	0.010	A343206
m & p-Xylene	mg/kg	<0.040	0.040	A341613	<0.040	A341613	<0.040	0.040	A343206
o-Xylene	mg/kg	<0.020	0.020	A341613	<0.020	A341613	<0.020	0.020	A343206
F1 (C6-C10)	mg/kg	<24 (1)	24	A341613	<10	A341613	<10	10	A343206
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	85	N/A	A341613	85	A341613	96	N/A	A343206
4-Bromofluorobenzene (sur.)	%	113	N/A	A341613	107	A341613	103	N/A	A343206
D10-o-Xylene (sur.)	%	120	N/A	A341613	124	A341613	88	N/A	A343206
D4-1,2-Dichloroethane (sur.)	%	103	N/A	A341613	106	A341613	114	N/A	A343206
O-TERPHENYL (sur.)	%	97	N/A	A342282	108	A342234	101	N/A	A342296

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limit raised due to interferent.

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BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB120			AFB121		AFB122		
Sampling Date		2021/08/29 13:50			2021/08/29 13:56		2021/08/29 14:07		
COC Number		644511-68-01			644511-68-01		644511-68-01		
	UNITS	TP21-100-03	RDL	QC Batch	TP21-100-06	QC Batch	TP21-101-01	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<22 (1)	22	A342282	17	A342296	33	10	A342234
F3 (C16-C34 Hydrocarbons)	mg/kg	370 (1)	110	A342282	120	A342296	110	50	A342234
F4 (C34-C50 Hydrocarbons)	mg/kg	<110 (1)	110	A342282	<50	A342296	<50	50	A342234
Reached Baseline at C50	mg/kg	Yes	N/A	A342282	Yes	A342296	Yes	N/A	A342234
Physical Properties									
Moisture	%	54	0.30	A342380	14	A342307	7.9	0.30	A342307
Volatiles									
Xylenes (Total)	mg/kg	<0.12	0.12	A340320	<0.045	A340320	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<18	18	A340320	<10	A340320	<10	10	A340320
Field Preserved Volatiles									
Benzene	mg/kg	<0.0086 (2)	0.0086	A343206	<0.0050	A343206	<0.0050	0.0050	A343206
Toluene	mg/kg	0.47 (3)	0.13	A343206	0.16	A343206	<0.050	0.050	A343206
Ethylbenzene	mg/kg	<0.010 (2)	0.010	A343206	<0.010	A343206	<0.010	0.010	A343206
m & p-Xylene	mg/kg	<0.10 (3)	0.10	A343206	<0.040	A343206	<0.040	0.040	A343206
o-Xylene	mg/kg	<0.052 (3)	0.052	A343206	<0.020	A343206	<0.020	0.020	A343206
F1 (C6-C10)	mg/kg	<18 (2)	18	A343206	<10	A343206	<10	10	A343206
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	97	N/A	A343206	98	A343206	96	N/A	A343206
4-Bromofluorobenzene (sur.)	%	102	N/A	A343206	103	A343206	103	N/A	A343206
D10-o-Xylene (sur.)	%	105	N/A	A343206	93	A343206	104	N/A	A343206
D4-1,2-Dichloroethane (sur.)	%	109	N/A	A343206	111	A343206	111	N/A	A343206
O-TERPHENYL (sur.)	%	96	N/A	A342282	107	A342296	102	N/A	A342234

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.
(2) Detection limit reported based on MDL and sample weight used for analysis.
(3) Detection limits raised based on sample weight used for analysis.

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BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB123	AFB123	AFB124	AFB124		AFB125		
Sampling Date		2021/08/29 14:08	2021/08/29 14:08	2021/08/29 14:16	2021/08/29 14:16		2021/08/29 14:26		
COC Number		644511-68-01	644511-68-01	644511-68-01	644511-68-01		644511-68-01		
	UNITS	TP21-101-04	TP21-101-04 Lab-Dup	TP21-101-05	TP21-101-05 Lab-Dup	QC Batch	TP21-102-03	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	28	N/A	<10	<10	A342296	44	10	A342301
F3 (C16-C34 Hydrocarbons)	mg/kg	120	N/A	<50	56	A342296	74	50	A342301
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	N/A	<50	<50	A342296	<50	50	A342301
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	Yes	A342296	Yes	N/A	A342301
Physical Properties									
Moisture	%	8.7	9.5	6.8	N/A	A342307	9.7	0.30	A342307
Volatiles									
Xylenes (Total)	mg/kg	<0.045	N/A	<0.045	N/A	A340320	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<10	N/A	<10	N/A	A340320	<10	10	A340320
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	N/A	<0.0050	N/A	A343206	<0.0050	0.0050	A343206
Toluene	mg/kg	<0.050	N/A	<0.050	N/A	A343206	<0.050	0.050	A343206
Ethylbenzene	mg/kg	<0.010	N/A	<0.010	N/A	A343206	<0.010	0.010	A343206
m & p-Xylene	mg/kg	<0.040	N/A	<0.040	N/A	A343206	<0.040	0.040	A343206
o-Xylene	mg/kg	<0.020	N/A	<0.020	N/A	A343206	<0.020	0.020	A343206
F1 (C6-C10)	mg/kg	<10	N/A	<10	N/A	A343206	<10	10	A343206
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	97	N/A	97	N/A	A343206	97	N/A	A343206
4-Bromofluorobenzene (sur.)	%	102	N/A	103	N/A	A343206	104	N/A	A343206
D10-o-Xylene (sur.)	%	105	N/A	102	N/A	A343206	104	N/A	A343206
D4-1,2-Dichloroethane (sur.)	%	112	N/A	112	N/A	A343206	111	N/A	A343206
O-TERPHENYL (sur.)	%	104	N/A	100	104	A342296	90	N/A	A342301

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFB126	AFB127	AFB128		AFB130		
Sampling Date		2021/08/29 14:37	2021/08/29 14:49	2021/08/29 14:50		2021/08/29 14:54		
COC Number		644511-68-01	644511-68-01	644511-68-01		644511-46-01		
	UNITS	TP21-102-06	TP21-103-02	TP21-103-04	QC Batch	TP21-103-06	RDL	QC Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	51	55	A342296	<10	10	A342234
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	190	120	A342296	100	50	A342234
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	A342296	<50	50	A342234
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	A342296	Yes	N/A	A342234
Physical Properties								
Moisture	%	17	9.5	7.7	A342307	13	0.30	A342307
Volatiles								
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	A340320	<0.045	0.045	A340320
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	A340320	<10	10	A340320
Field Preserved Volatiles								
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	A343206	<0.0050	0.0050	A343206
Toluene	mg/kg	<0.050	<0.050	<0.050	A343206	<0.050	0.050	A343206
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	A343206	<0.010	0.010	A343206
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	A343206	<0.040	0.040	A343206
o-Xylene	mg/kg	<0.020	<0.020	<0.020	A343206	0.026	0.020	A343206
F1 (C6-C10)	mg/kg	<10	<10	<10	A343206	<10	10	A343206
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	95	96	95	A343206	94	N/A	A343206
4-Bromofluorobenzene (sur.)	%	102	102	104	A343206	104	N/A	A343206
D10-o-Xylene (sur.)	%	106	104	101	A343206	96	N/A	A343206
D4-1,2-Dichloroethane (sur.)	%	111	111	112	A343206	119	N/A	A343206
O-TERPHENYL (sur.)	%	105	107	105	A342296	98	N/A	A342234

RDL = Reportable Detection Limit
N/A = Not Applicable

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GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		AFB067	AFB071		
Sampling Date		2021/08/29 10:29	2021/08/29 10:48		
COC Number		644511-69-01	644511-69-01		
	UNITS	TP21-97-02	TP21-98-04	RDL	QC Batch
Ext. Pet. Hydrocarbon					
F4G-SG (Heavy Hydrocarbons-Grav.)	mg/kg	6000	2400	500	A345342
RDL = Reportable Detection Limit					

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GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	9.3°C
Package 3	5.7°C
Package 4	4.7°C
Package 5	6.0°C
Package 6	5.7°C
Package 7	5.7°C
Package 8	5.7°C
Package 9	5.3°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A341613	DO1	Matrix Spike [AFB066-02]	1,4-Difluorobenzene (sur.)	2021/09/07		89	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		108	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		118	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		106	%	50 - 140
			Benzene	2021/09/07		115	%	50 - 140
			Toluene	2021/09/07		118	%	50 - 140
			Ethylbenzene	2021/09/07		134	%	50 - 140
			m & p-Xylene	2021/09/07		129	%	50 - 140
			o-Xylene	2021/09/07		131	%	50 - 140
			F1 (C6-C10)	2021/09/07		90	%	60 - 140
A341613	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/07		79	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		93	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		92	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		97	%	50 - 140
			Benzene	2021/09/07		84	%	60 - 130
			Toluene	2021/09/07		87	%	60 - 130
			Ethylbenzene	2021/09/07		93	%	60 - 130
			m & p-Xylene	2021/09/07		92	%	60 - 130
			o-Xylene	2021/09/07		83	%	60 - 130
			F1 (C6-C10)	2021/09/07		104	%	60 - 140
A341613	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/07		94	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		107	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		98	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		105	%	50 - 140
			Benzene	2021/09/07	<0.0050		mg/kg	
			Toluene	2021/09/07	<0.050		mg/kg	
			Ethylbenzene	2021/09/07	<0.010		mg/kg	
			m & p-Xylene	2021/09/07	<0.040		mg/kg	
			o-Xylene	2021/09/07	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/07	<10		mg/kg	
A341613	DO1	RPD [AFB066-02]	Benzene	2021/09/07	NC		%	50
			Toluene	2021/09/07	NC		%	50
			Ethylbenzene	2021/09/07	NC		%	50
			m & p-Xylene	2021/09/07	NC		%	50
			o-Xylene	2021/09/07	NC		%	50
			F1 (C6-C10)	2021/09/07	NC		%	30
A342234	MHF	Matrix Spike	O-TERPHENYL (sur.)	2021/09/04		105	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/04		100	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/04		104	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/04		102	%	60 - 140
A342234	MHF	Spiked Blank	O-TERPHENYL (sur.)	2021/09/04		106	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/04		100	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/04		103	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/04		101	%	60 - 140
A342234	MHF	Method Blank	O-TERPHENYL (sur.)	2021/09/04		110	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/04	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/04	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/04	<50		mg/kg	
A342234	MHF	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/04	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/04	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/04	NC		%	40

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A342274	ARV	Method Blank	Moisture	2021/09/05	<0.30		%	
A342274	ARV	RPD [AFB072-01]	Moisture	2021/09/05	8.6		%	20
A342276	ARV	Method Blank	Moisture	2021/09/05	<0.30		%	
A342276	ARV	RPD	Moisture	2021/09/05	2.7		%	20
A342282	GG3	Matrix Spike [AFB110-01]	O-TERPHENYL (sur.)	2021/09/07		113	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		95	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		96	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		96	%	60 - 140
A342282	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		107	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		88	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		87	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		89	%	60 - 140
A342282	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/07		95	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342282	GG3	RPD [AFB110-01]	F2 (C10-C16 Hydrocarbons)	2021/09/08	18		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/08	26		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/08	27		%	40
A342296	GG3	Matrix Spike [AFB124-01]	O-TERPHENYL (sur.)	2021/09/07		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		95	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		100	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		95	%	60 - 140
A342296	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		94	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		98	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		94	%	60 - 140
A342296	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/07		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342296	GG3	RPD [AFB124-01]	F2 (C10-C16 Hydrocarbons)	2021/09/07	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/07	11		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/07	NC		%	40
A342301	GG3	Matrix Spike	O-TERPHENYL (sur.)	2021/09/07		105	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		NC	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		90	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		94	%	60 - 140
A342301	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		115	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		96	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		101	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		94	%	60 - 140
A342301	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/07		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342301	GG3	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/07	6.7		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/07	13		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/07	15		%	40
A342307	SVI	Method Blank	Moisture	2021/09/05	<0.30		%	
A342307	SVI	RPD [AFB123-01]	Moisture	2021/09/05	8.8		%	20

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A342380	ARV	Method Blank	Moisture	2021/09/05	<0.30		%	
A342380	ARV	RPD	Moisture	2021/09/05	18		%	20
A343206	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2021/09/08		92	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		103	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		99	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		113	%	50 - 140
			Benzene	2021/09/08		93	%	50 - 140
			Toluene	2021/09/08		91	%	50 - 140
			Ethylbenzene	2021/09/08		101	%	50 - 140
			m & p-Xylene	2021/09/08		96	%	50 - 140
			o-Xylene	2021/09/08		99	%	50 - 140
			F1 (C6-C10)	2021/09/08		102	%	60 - 140
A343206	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/08		85	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		89	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		84	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		103	%	50 - 140
			Benzene	2021/09/08		79	%	60 - 130
			Toluene	2021/09/08		84	%	60 - 130
			Ethylbenzene	2021/09/08		86	%	60 - 130
			m & p-Xylene	2021/09/08		83	%	60 - 130
			o-Xylene	2021/09/08		76	%	60 - 130
			F1 (C6-C10)	2021/09/08		85	%	60 - 140
A343206	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/08		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		103	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		89	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		109	%	50 - 140
			Benzene	2021/09/08	<0.0050		mg/kg	
			Toluene	2021/09/08	<0.050		mg/kg	
			Ethylbenzene	2021/09/08	<0.010		mg/kg	
			m & p-Xylene	2021/09/08	<0.040		mg/kg	
			o-Xylene	2021/09/08	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/08	<10		mg/kg	
A343206	DO1	RPD	Benzene	2021/09/08	NC		%	50
			Toluene	2021/09/08	NC		%	50
			Ethylbenzene	2021/09/08	NC		%	50
			m & p-Xylene	2021/09/08	NC		%	50
			o-Xylene	2021/09/08	NC		%	50
			F1 (C6-C10)	2021/09/08	NC		%	30
A345342	JB9	Spiked Blank	F4G-SG (Heavy Hydrocarbons-Grav.)	2021/09/09		109	%	60 - 140
A345342	JB9	Method Blank	F4G-SG (Heavy Hydrocarbons-Grav.)	2021/09/09	<500		mg/kg	

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A345342	JB9	RPD	F4G-SG (Heavy Hydrocarbons-Grav.)	2021/09/09	7.1 (1)		%	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Detection limits raised due to high moisture content, samples contain => 50% moisture.

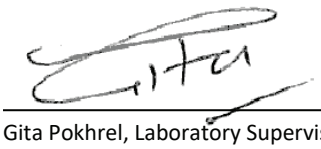
Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164860
Report Date: 2021/09/09

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

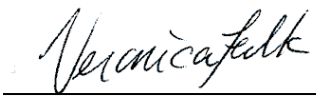
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Gita Pokhrel, Laboratory Supervisor

Janet Gao, B.Sc., QP, Supervisor, Organics



Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas Laboratories
4000 19st N.E. Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #:	Bottle Order #:
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001	C164860	644511
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001	COC #:	Project Manager:
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:		C#644511-69-01	Carmen McKay
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email: shelldqre golder.com facility code: 41259544

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	AT1 BTEX and F1-F4 in Soil (Vials)	BiC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	~~TP21~~ DUP-MM	29 AUG 21	10:17	Soil			V									3	
2		TP21 - 97-02		10:29				V									3	
3		TP21 - 97-04		10:30				V									3	
4		TP21 - 97-06		10:38				V									3	Received in Yellowknife
5		TP21 - 98-03		10:47				V									3	By: J.McCann 08:35 AM
6		TP21 - 98-04		10:48				V									3	AUG 31 2021
7		TP21 - 98-05		10:54				V									3	see ACTR
8		TP21 - 99-01		13:32				V									3	Temp: / /
9		TP21 - 99-04		13:33				V									3	
10		TP21 - 99-06		13:40				V									3	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
A.Bellavance	21/08/29	16:00	Dawit Kibreab	2021/09/01	15:10	

Laboratory Use Only		
Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[ ]	See ACTR	[ ] Yes [ ] No

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: BV Labs Yellow: Client

Bureau Veritas Laboratories
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #: C164860	Bottle Order #: 644511
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001		
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:		COC #: C#644511-67-01	Project Manager: Carmen McKay
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email: shelldqr@golder.com facility code: 41259544

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	AT1 BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-87-04	29/AUG/21	9:10	SOIL			✓									3	
2		TP21-87-06		9:17				✓									3	
3		TP21-88-03		9:30				✓									3	
4		TP21-88-04		9:31				✓									3	Received in Yellowknife
5		TP21-88-05		9:38				✓									3	By: J.Mercredi @ 8:35 AM
6		TP21-89-03		9:48				✓									3	AUG 31 2021
7		TP21-89-06		9:58				✓									3	
8		TP21-90-02		10:06				✓									3	Temp:
9		TP21-90-04		10:07				✓									3	
10		TP21-90-06		10:17				✓									3	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
A. Bellavance	21/08/29	16:00	Dan Dawit Kibreab	2021/09/01	15:10	

Laboratory Use Only: Time Sensitive [ ] | Temperature (°C) on Receipt: See ACTR | Custody Seal Intact on Cooler? [ ] Yes [ ] No

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White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Laboratories
4000 19st N E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #: C16 4860	Bottle Order #: 644511
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001	COC #: C#644511-68-01	Project Manager: Carmen McKay
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:			
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email: shelldqre@golder.com facility code 41259544

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	AT1 BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21 - 100 - 01	29/Aug/21	13:49	SOIL			✓									3	
2		TP21 - 100 - 03		13:50				✓									3	
3		TP21 - 100 - 06		13:56				✓									3	
4		TP21 - 101 - 01		14:07				✓									3	Received in Yellowknife
5		TP21 - 101 - 04		14:08				✓									3	By: J. MCCANN
6		TP21 - 101 - 05		14:16				✓									3	AUG 31 2021
7		TP21 - 102 - 03		14:26				✓									3	
8		TP21 - 102 - 06		14:37				✓									3	Temp: / /
9		TP21 - 103 - 02		14:49				✓									3	
10		TP21 - 103 - 04		14:50				✓									3	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Cecelia A. Bellavance	21/08/29	16:00	Dawit Tebreab	2021/09/01	15:00		[ ]	See ACTR	[ ] Yes [ ] No

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White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

BUREAU VERITAS

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #:	Bottle Order #:
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001	C164860	644511
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001	COC #:	Project Manager:
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:		C#644511-46-01	Carmen McKay
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email: shelldqre@golder.com facility code: 41259544

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ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	AT1 BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-103-06	29 AUG/21	14:54	SOIL			✓									3	
2		~~TP21~~						~~✓~~									~~3~~	
3		~~TP21~~						~~✓~~									~~3~~	
4		~~TP21~~						~~✓~~									~~3~~	Received in Yellowknife
5		~~TP21~~						~~✓~~									~~3~~	By: J. Mckmo
6		~~TP21~~						~~✓~~									~~3~~	08:35 AM
7		~~TP21~~						~~✓~~									~~3~~	AUG 31 2021
8		~~TP21~~						~~✓~~									~~3~~	See ACTR
9		~~TP21~~						~~✓~~									~~3~~	Temp:
10		~~TP21~~						~~✓~~									~~3~~	

Turnaround Time (TAT) Required:

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A. Bellavance	21/AUG/29	16:00	Paul Dawit kibreab	2021/08/30	15:20		[ ]	See ACTR	[ ] Yes [ ] No

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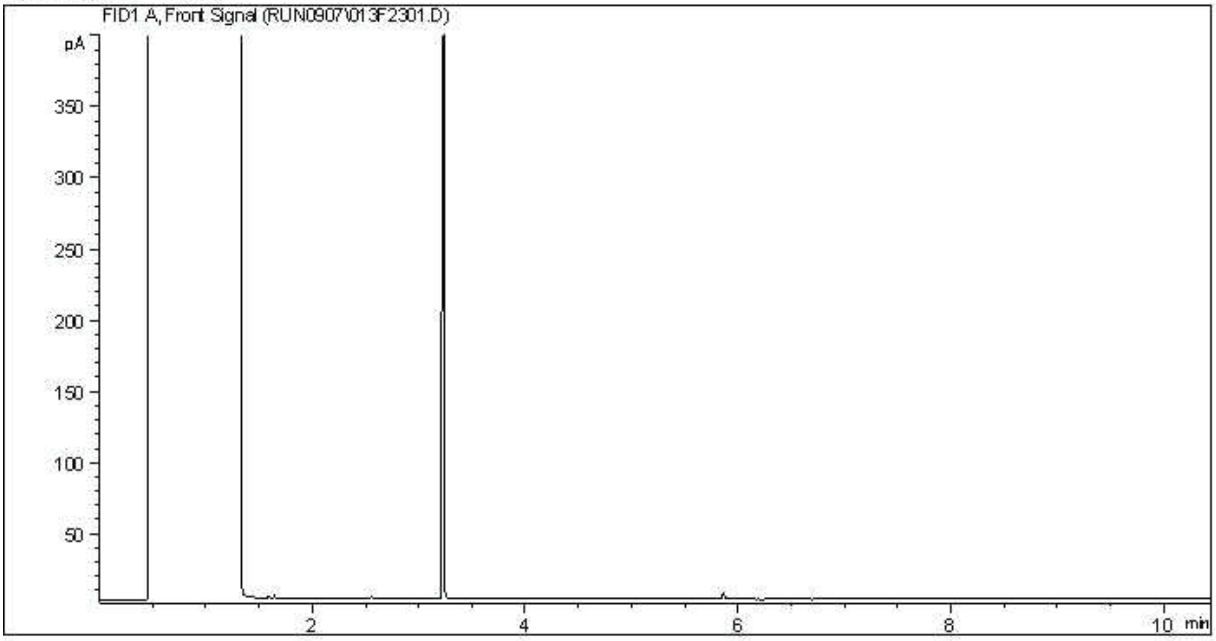
White: BV Labs Yellow: Client

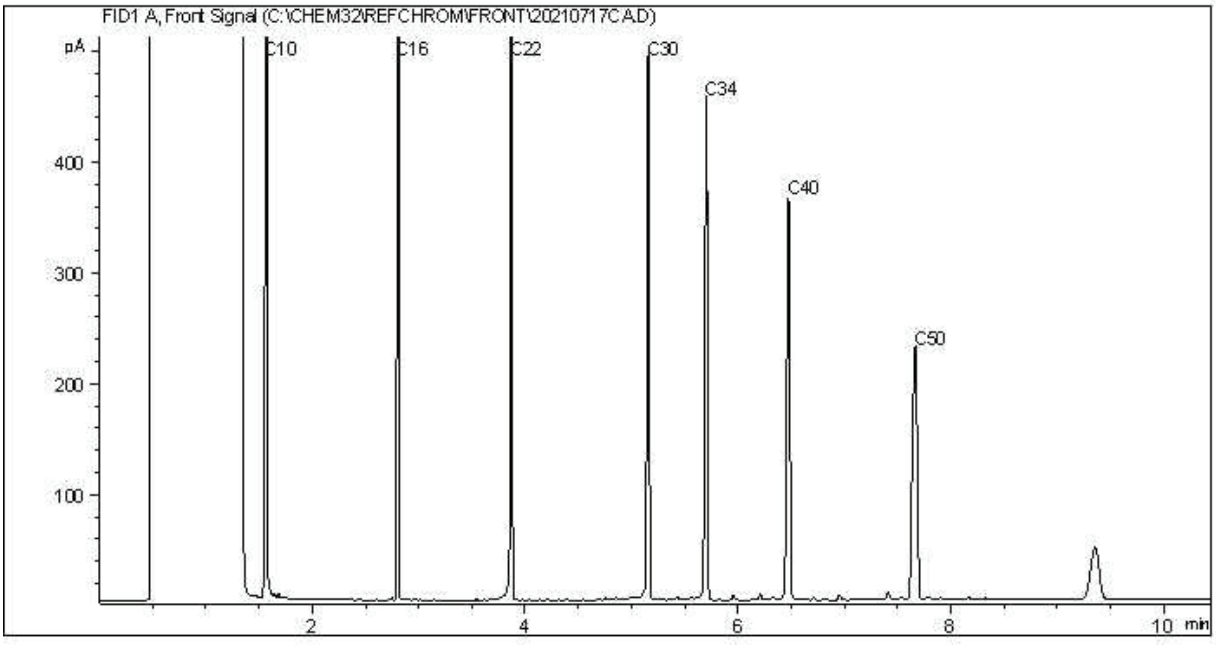
Bureau Veritas Canada (2019) Inc.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



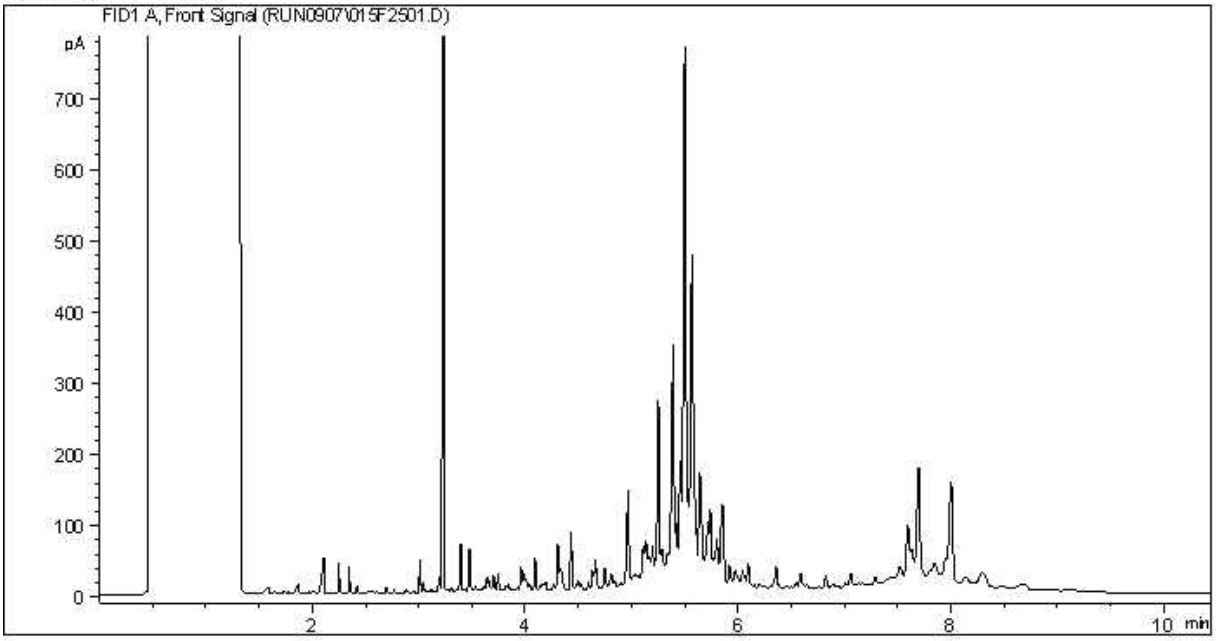
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

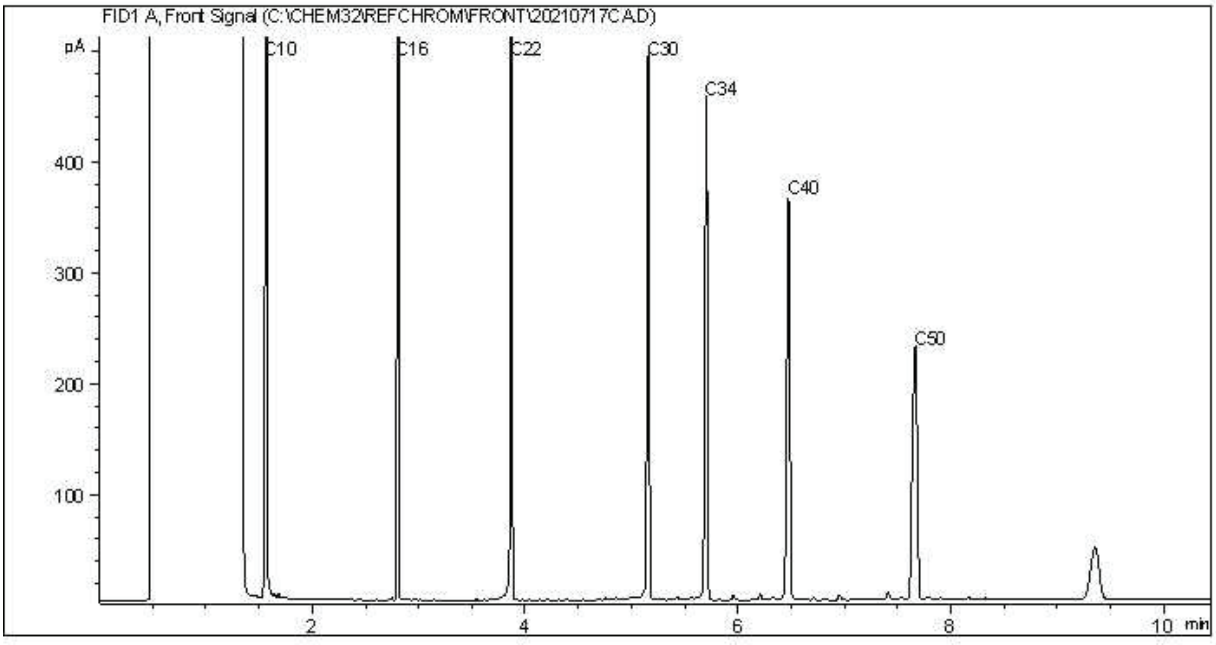
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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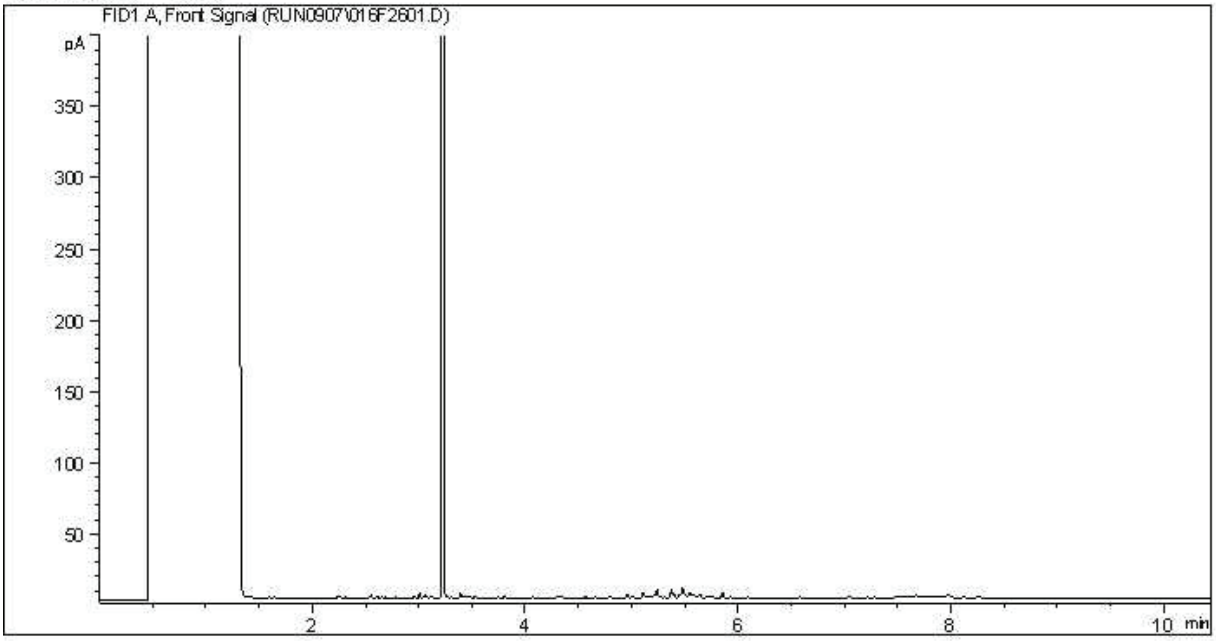
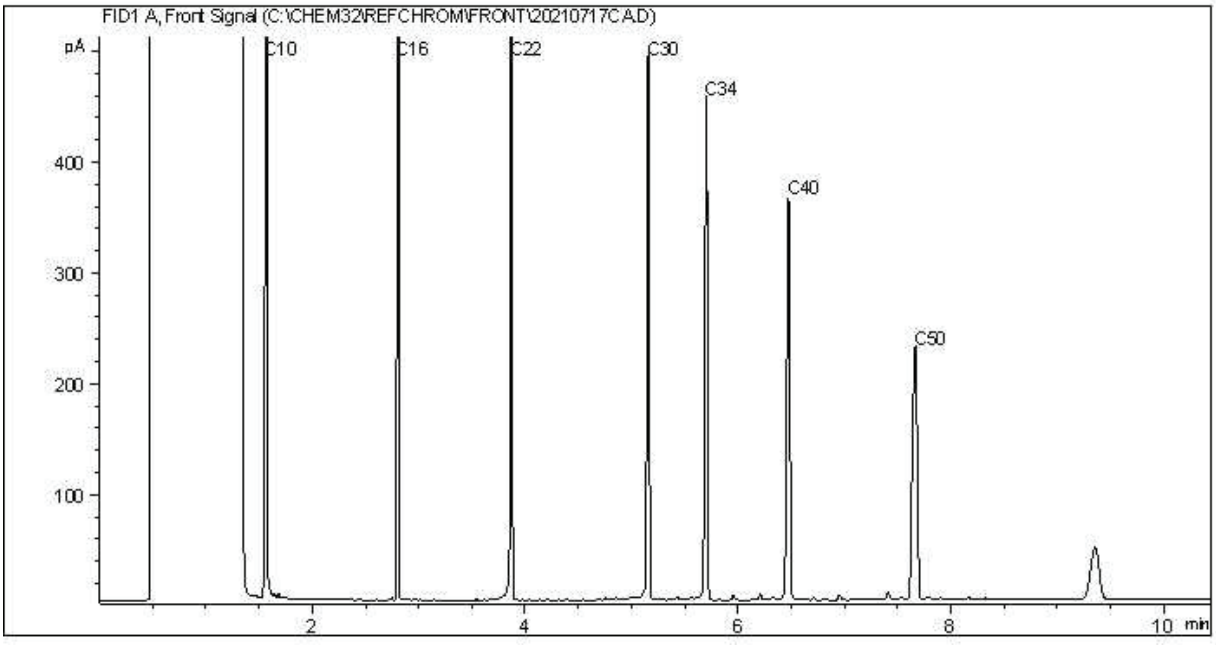
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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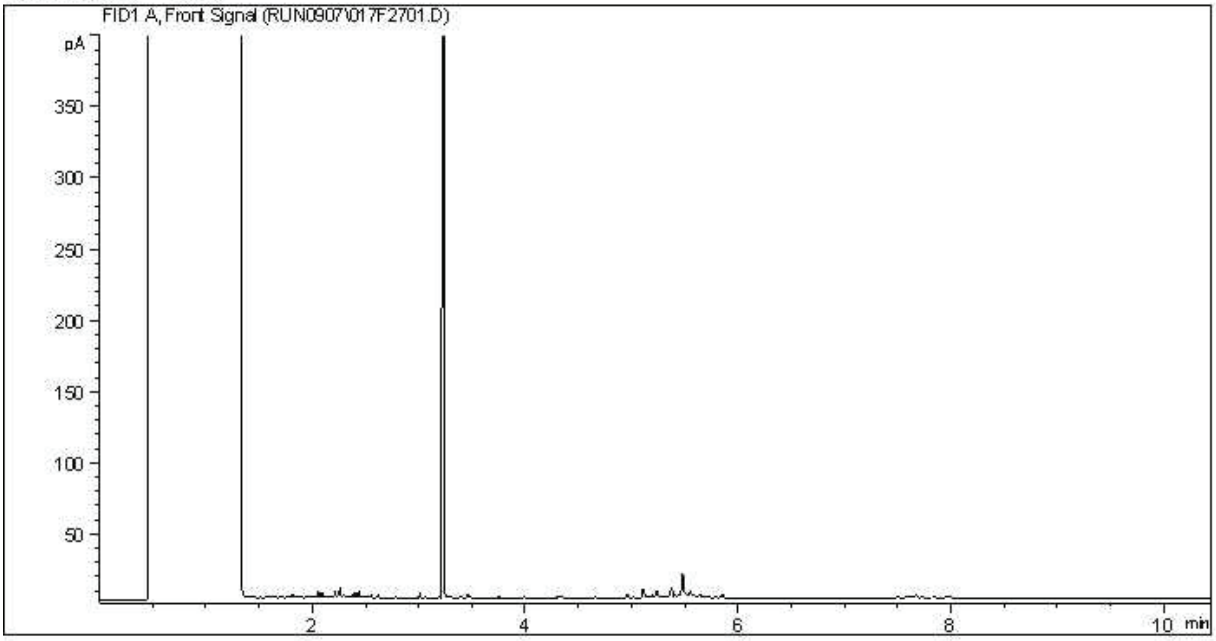
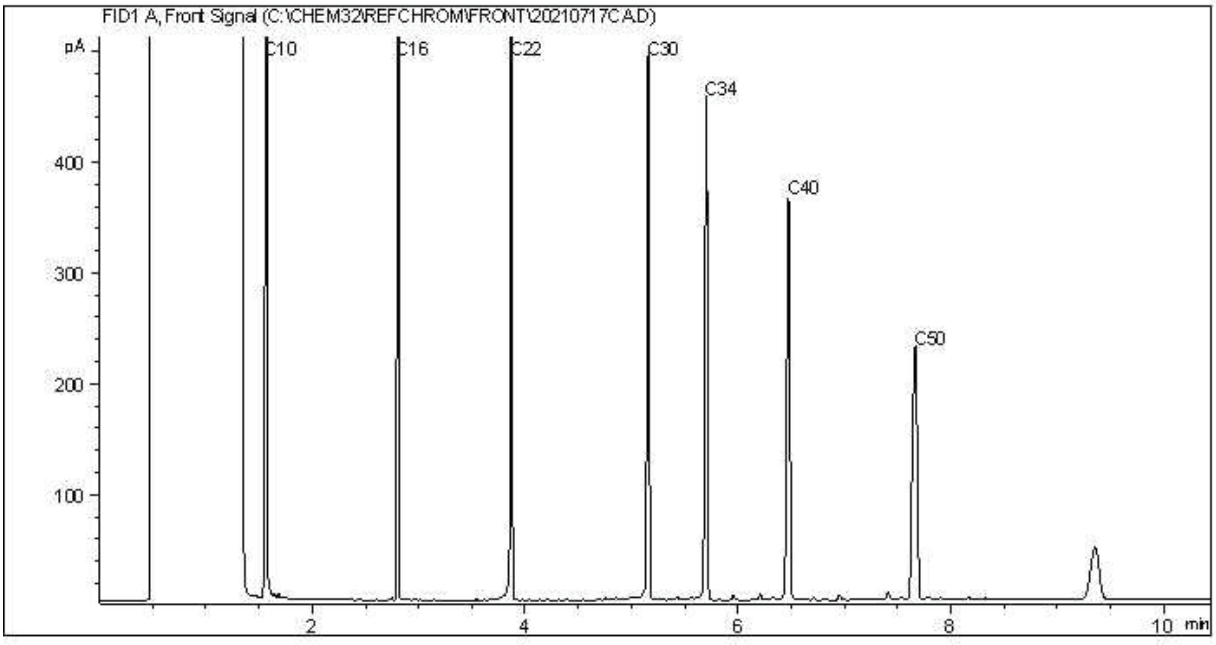


Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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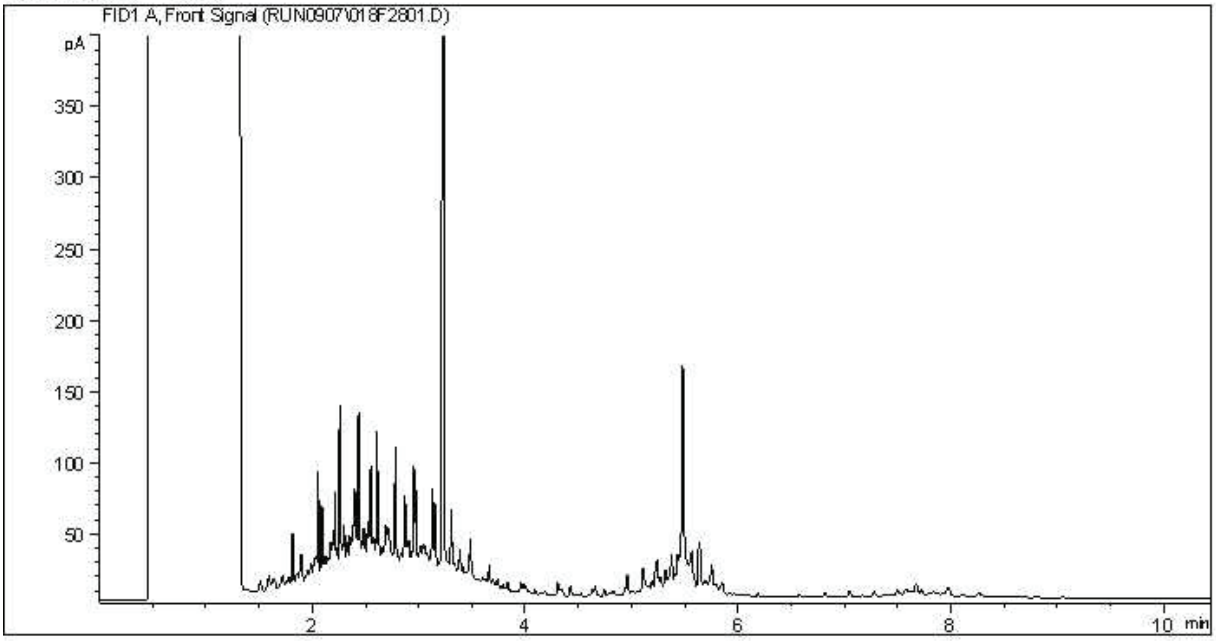
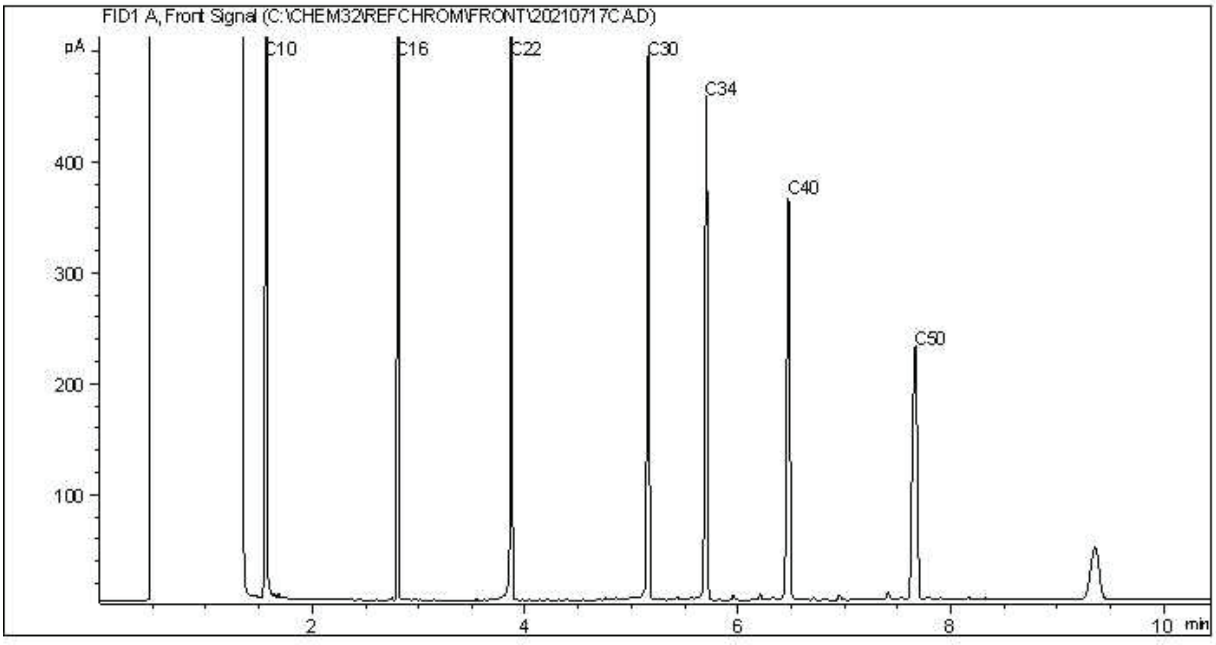


Carbon Range Distribution - Reference Chromatogram



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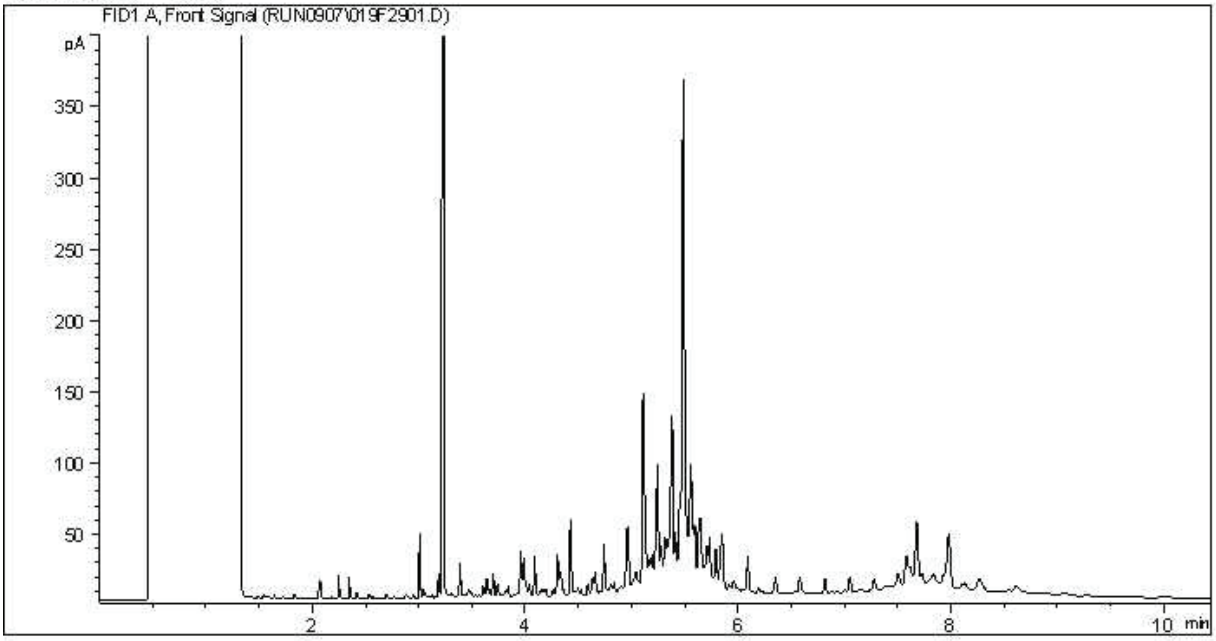
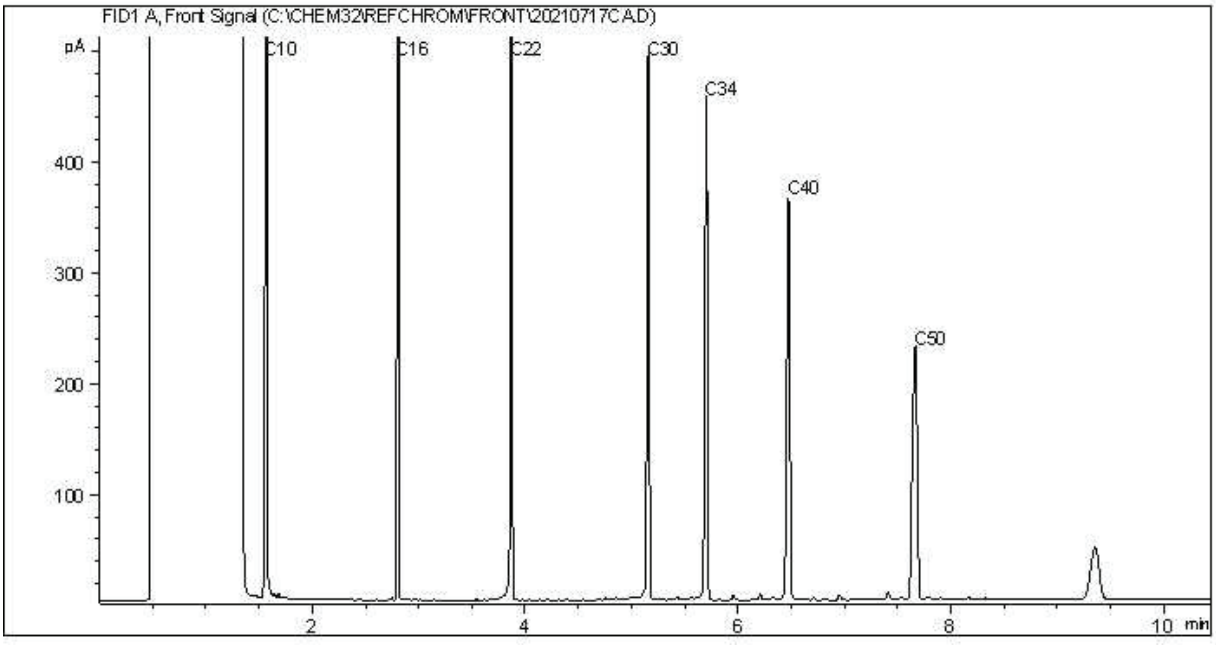
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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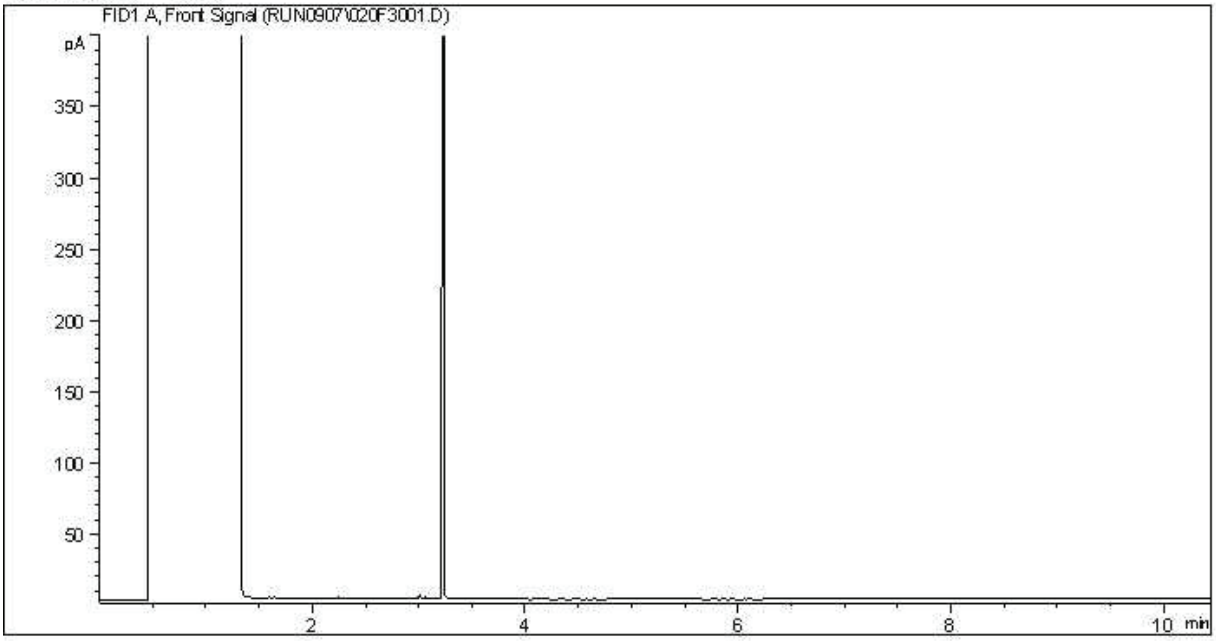
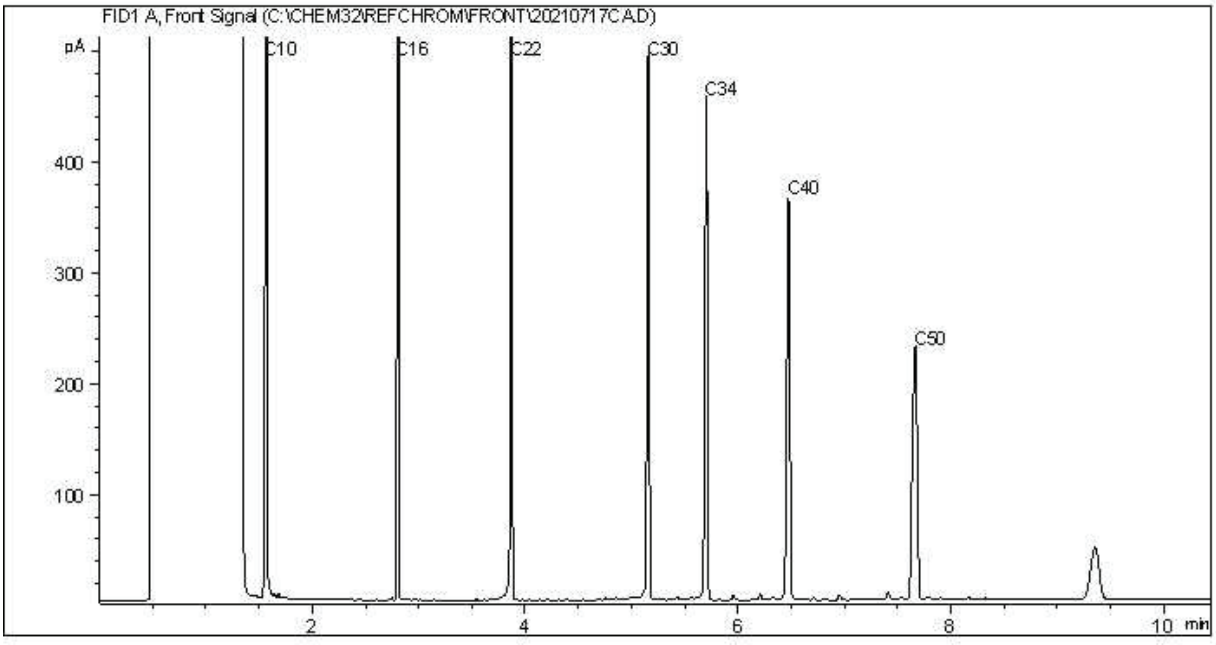
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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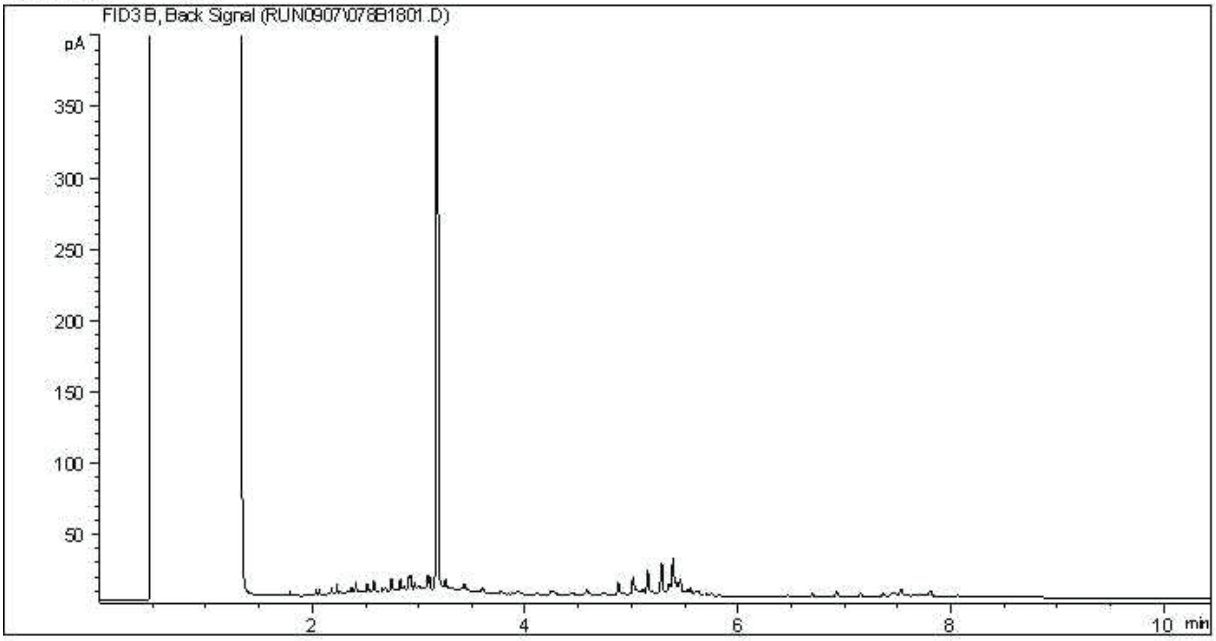
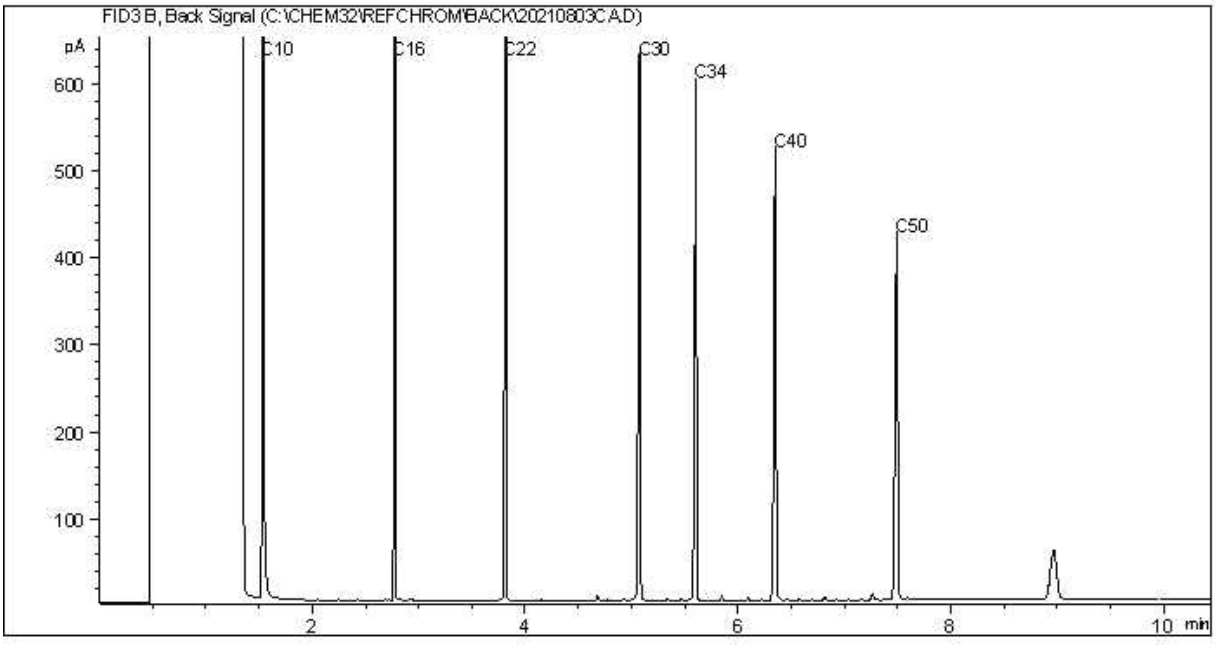


Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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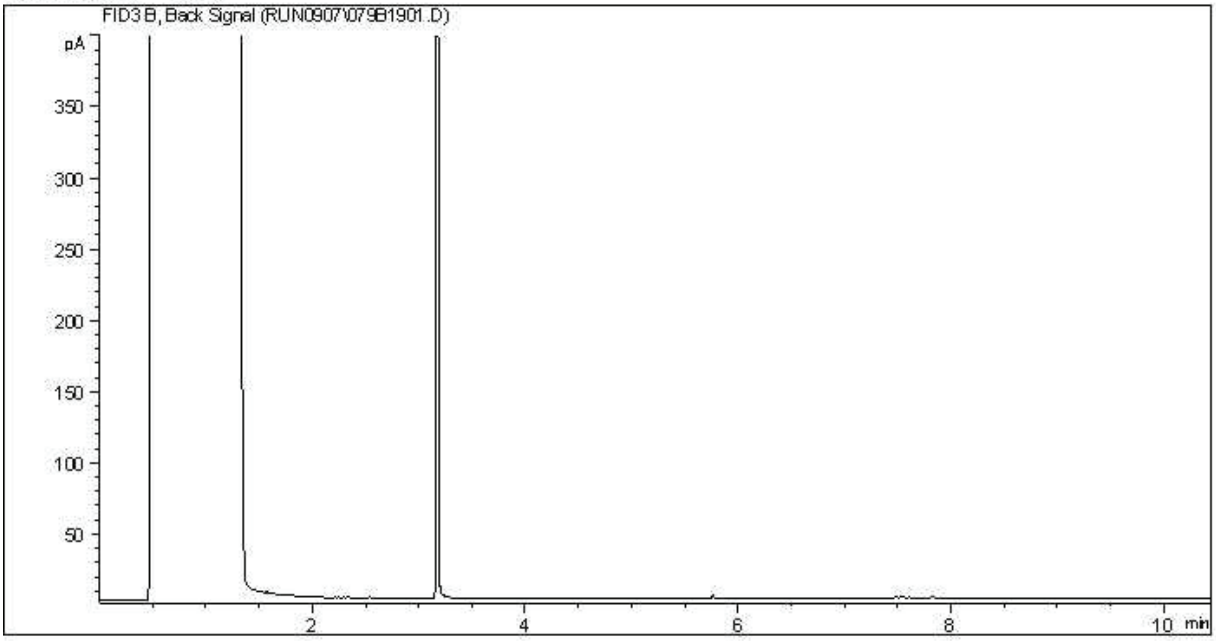
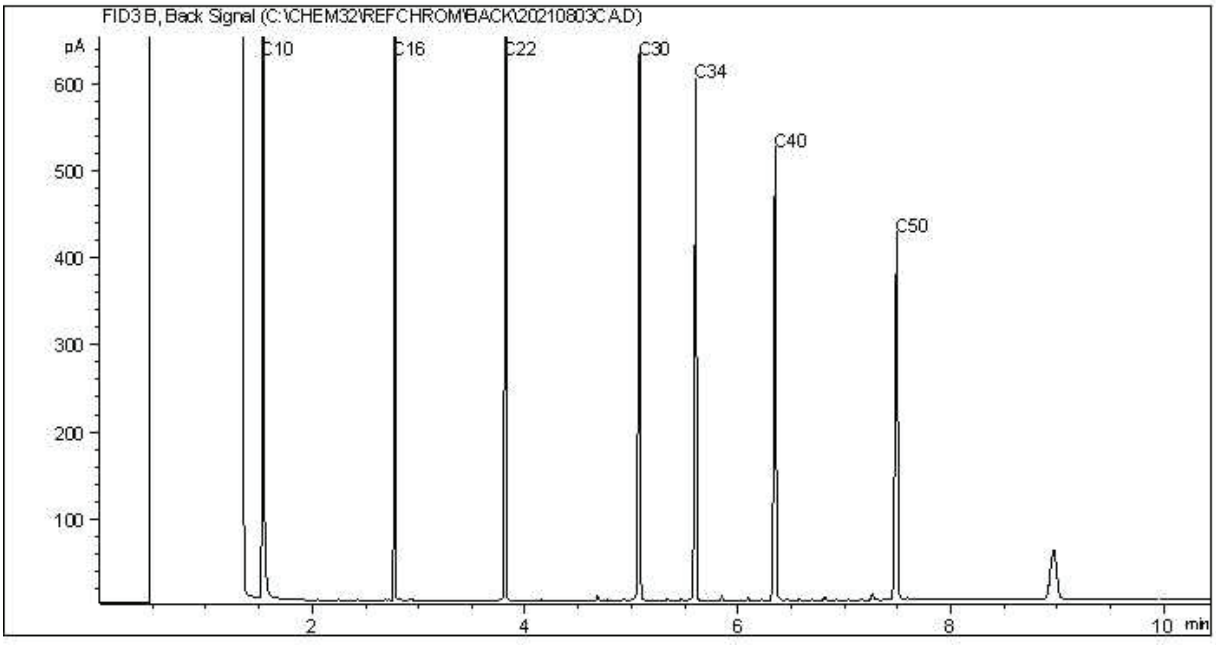
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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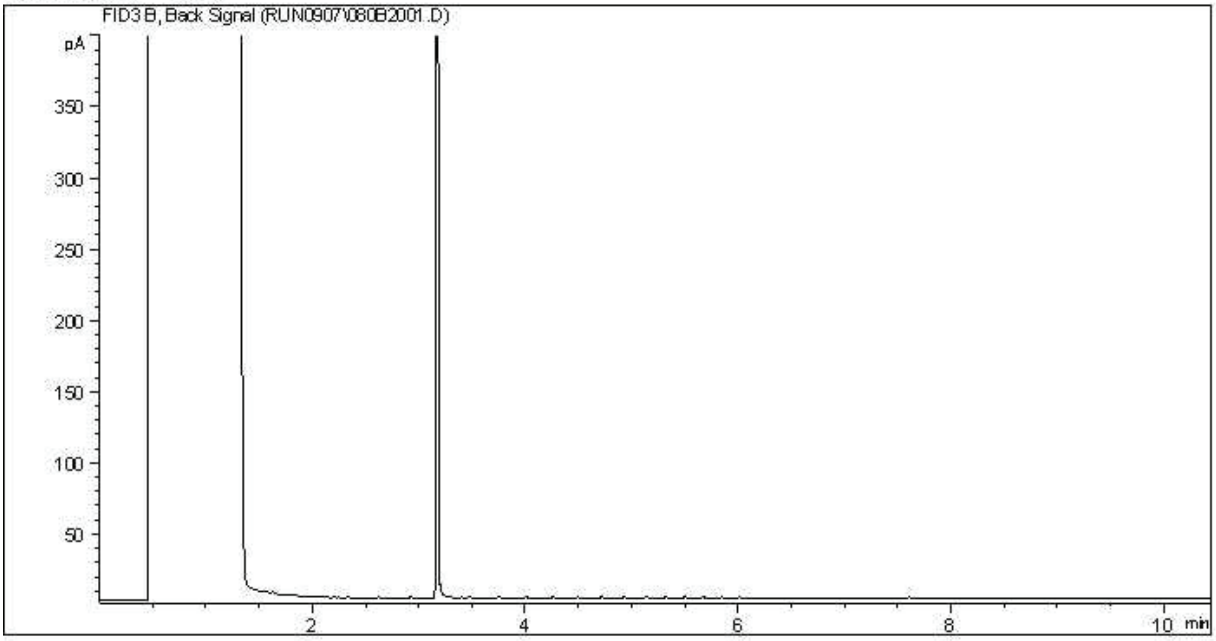
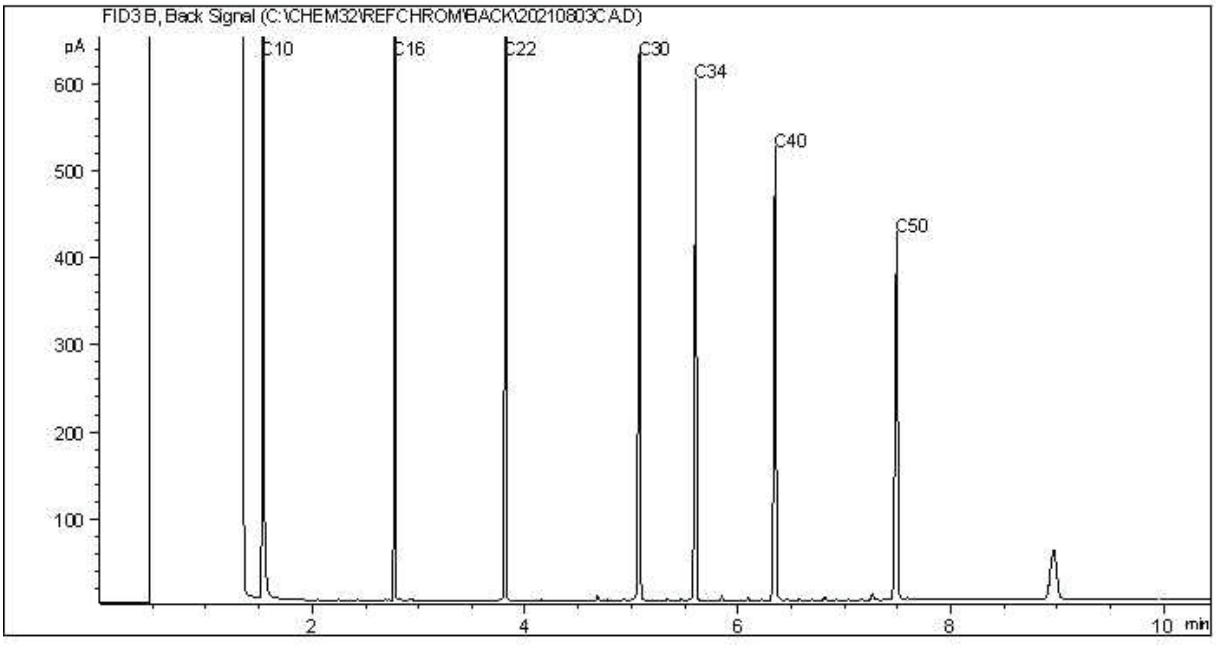
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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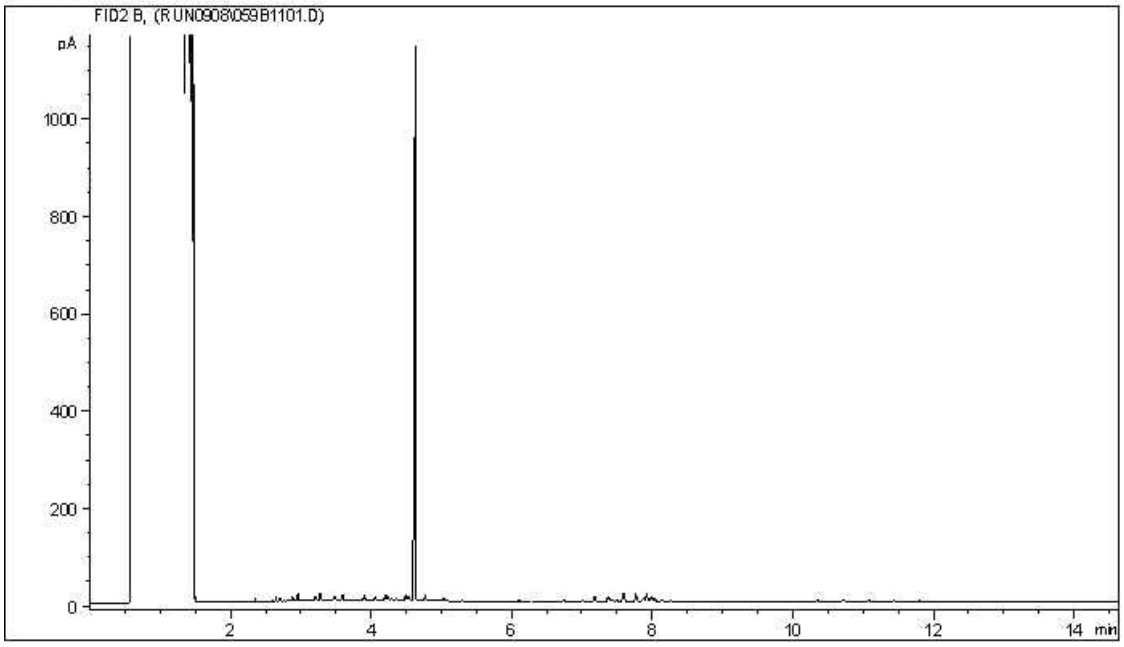
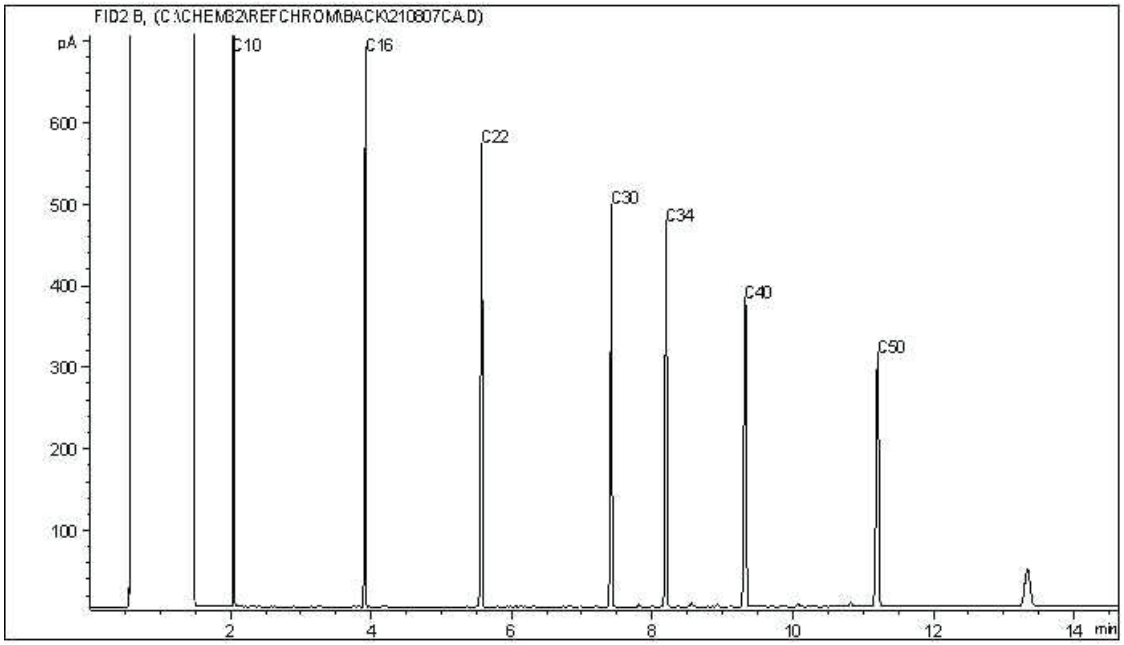
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC7



Carbon Range Distribution - Reference Chromatogram



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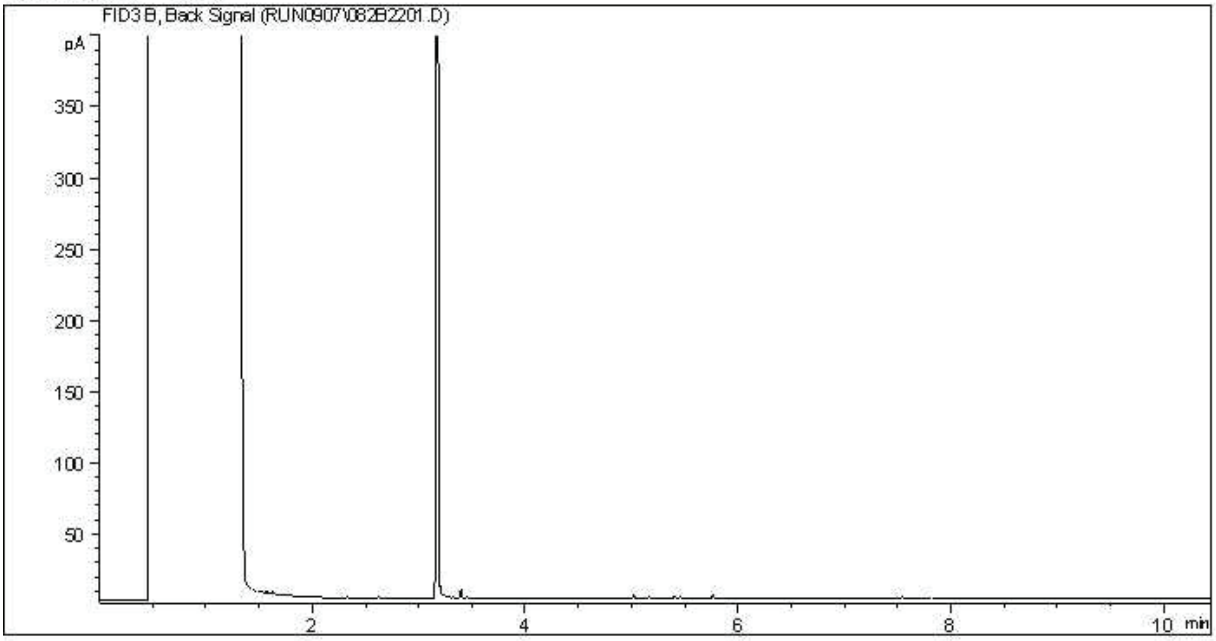
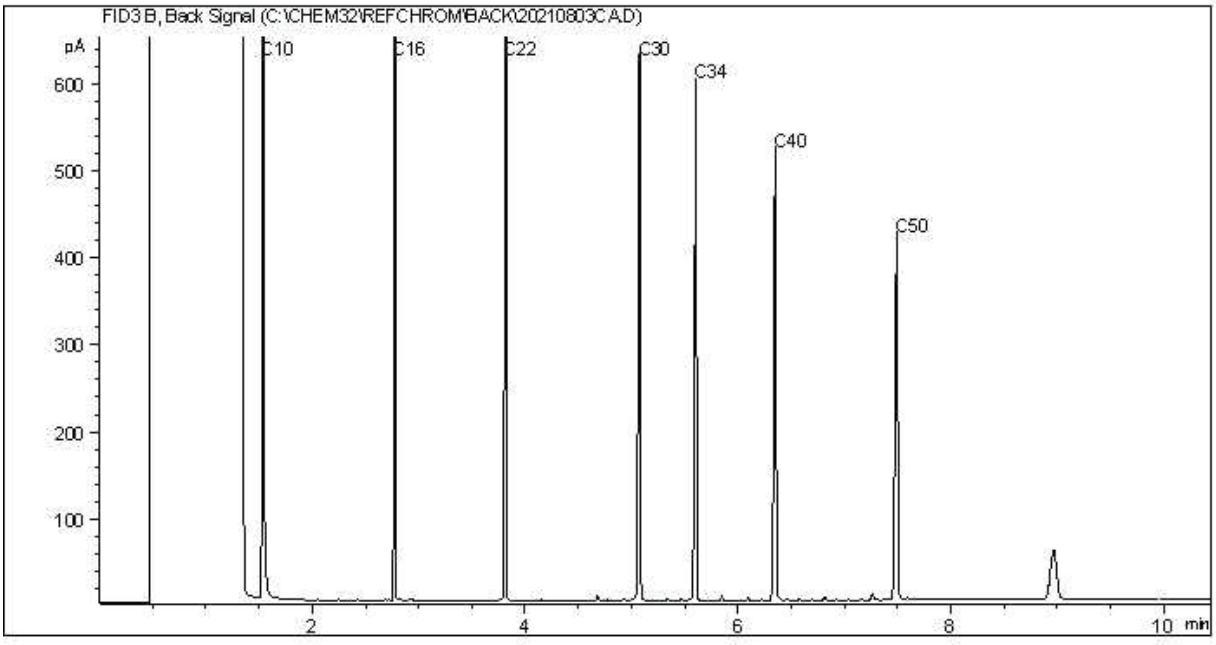
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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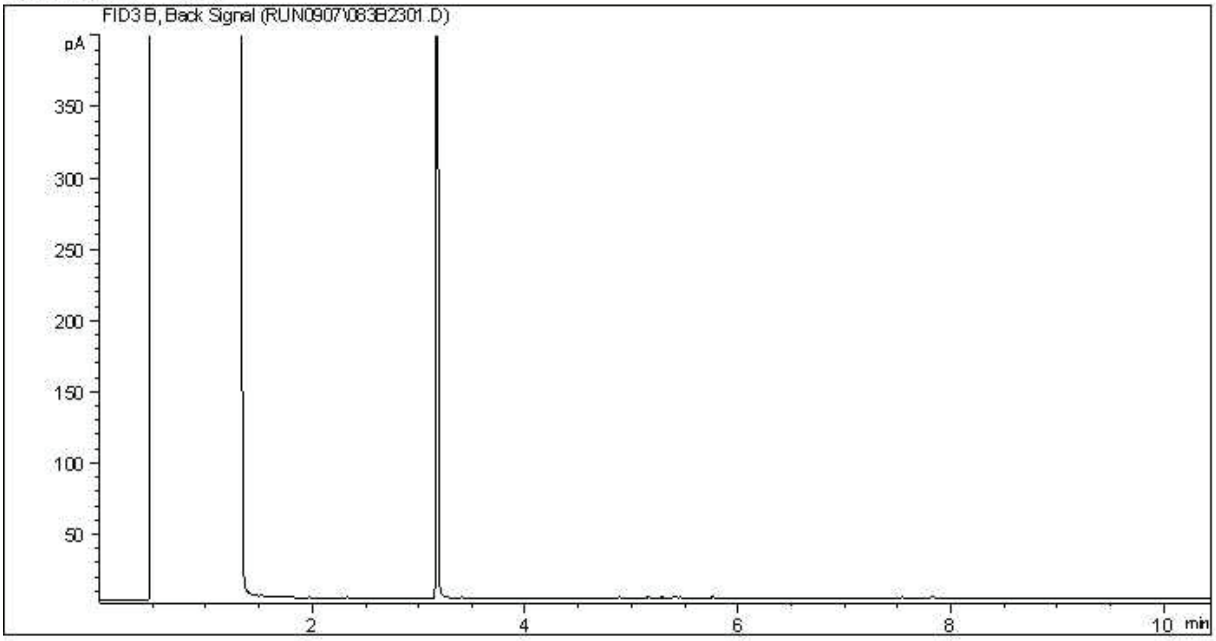
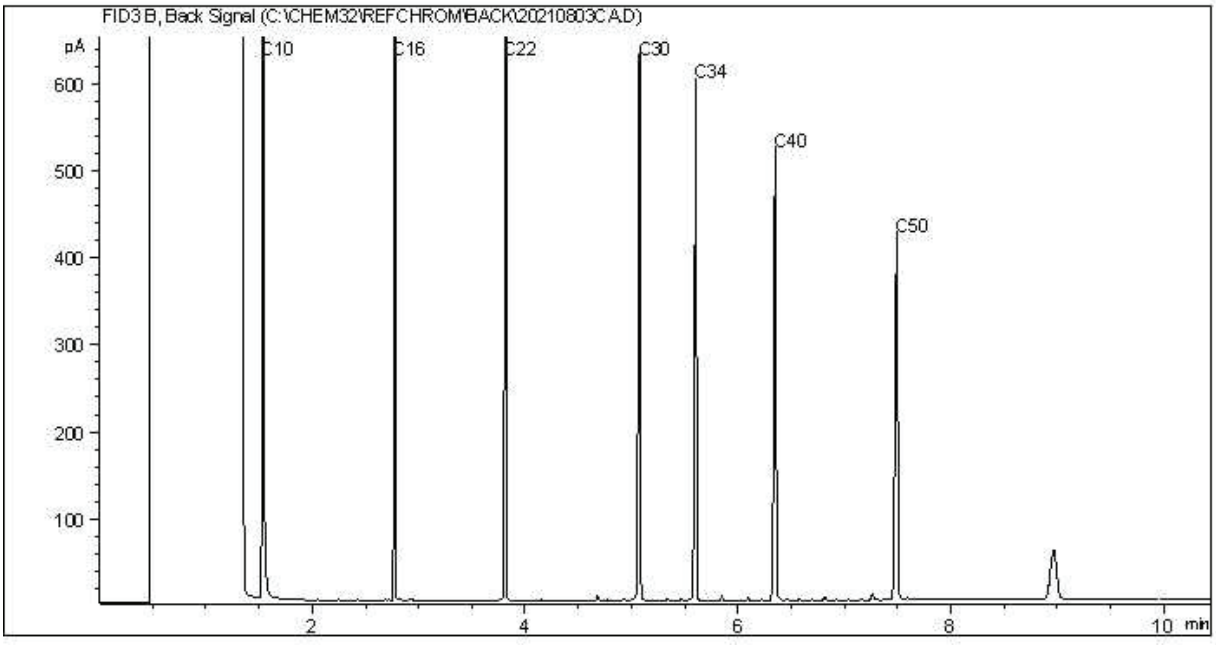


Carbon Range Distribution - Reference Chromatogram



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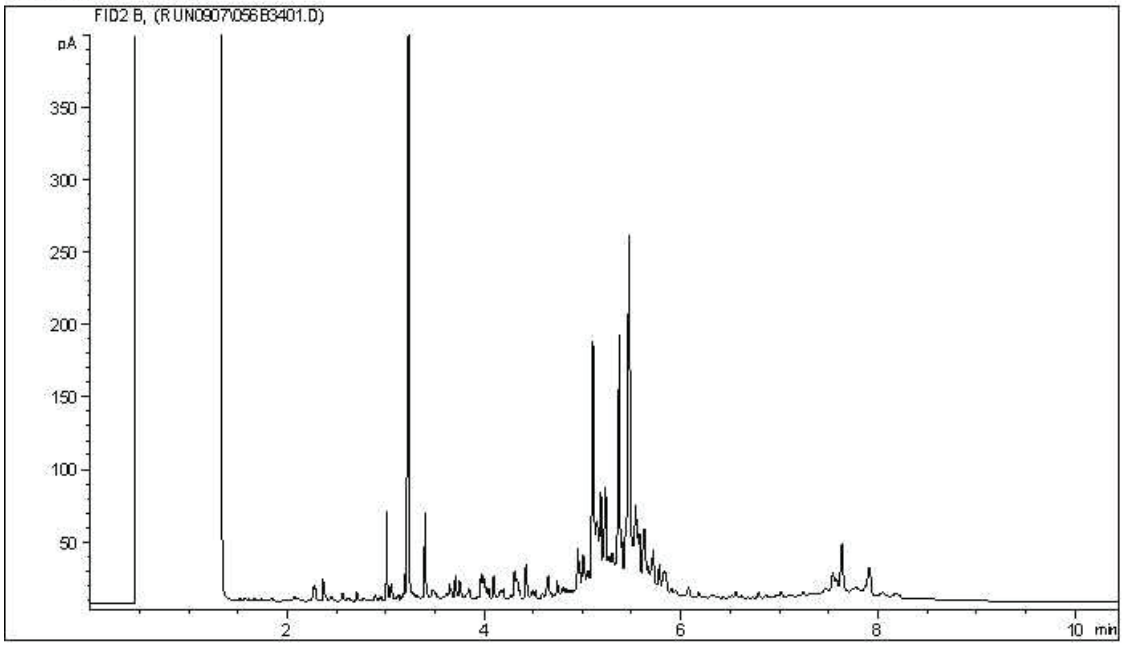
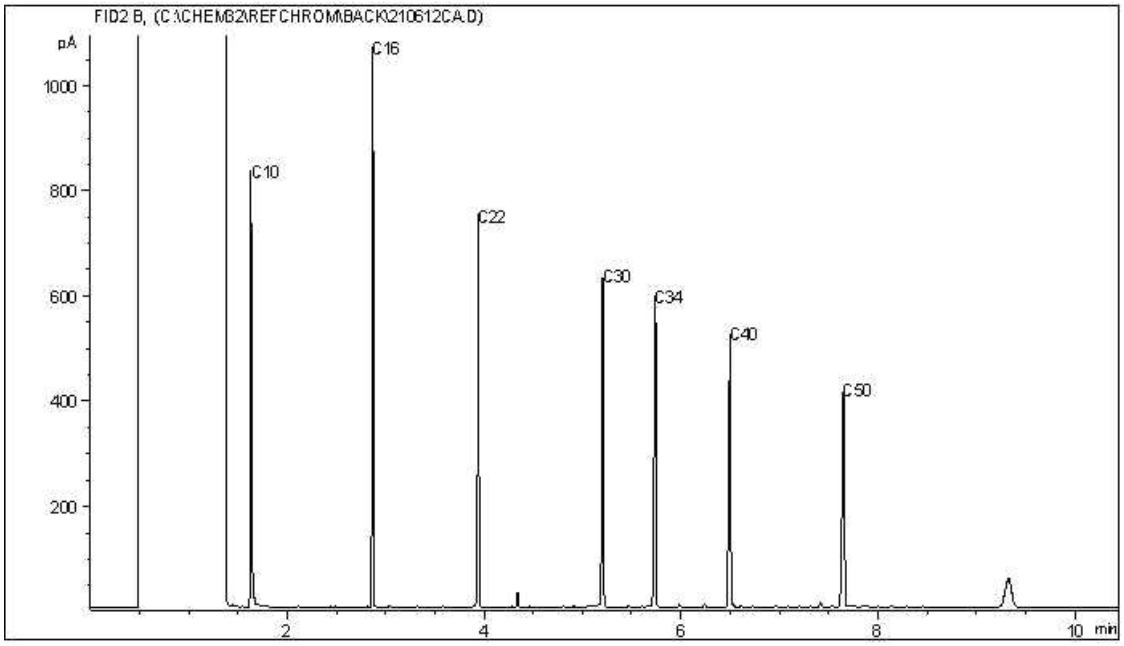
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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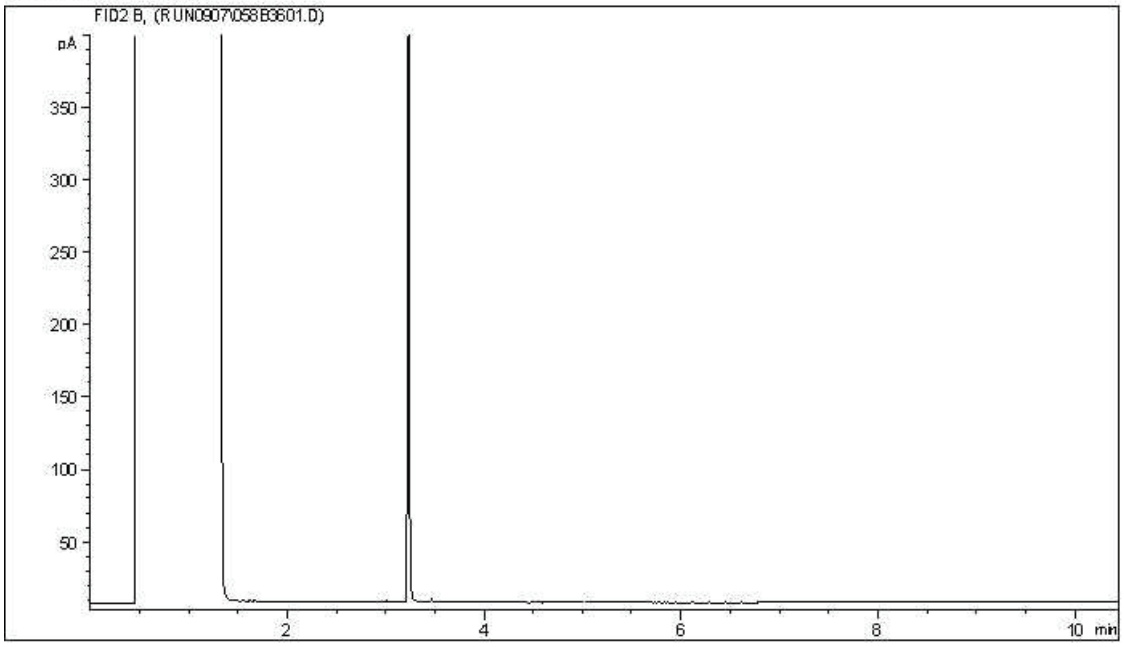
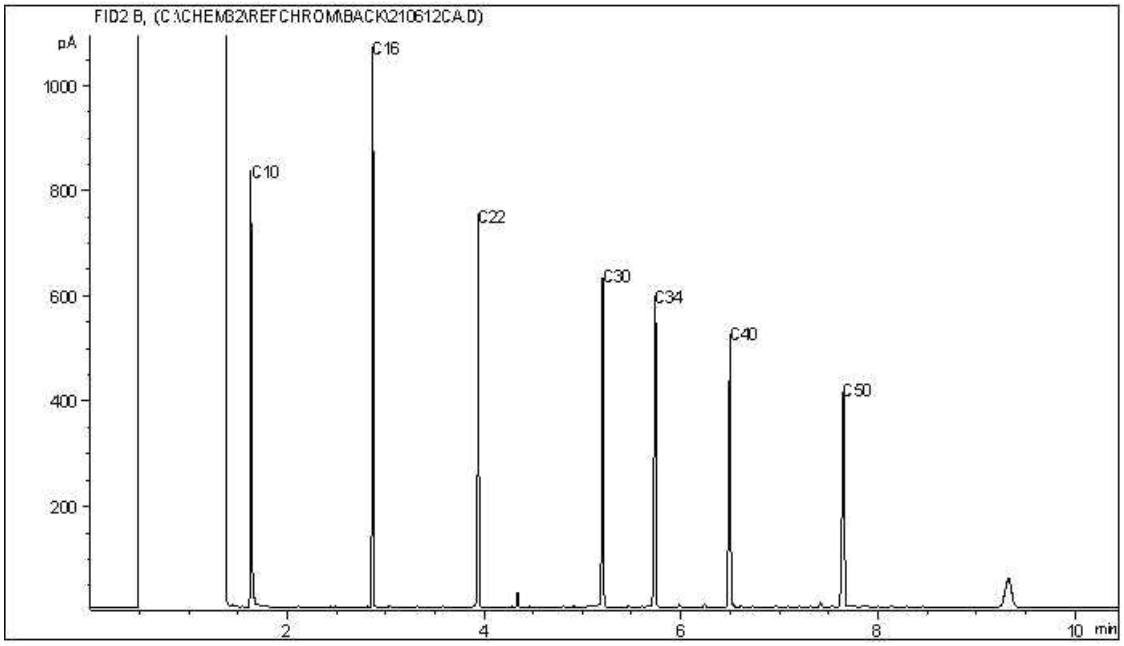


Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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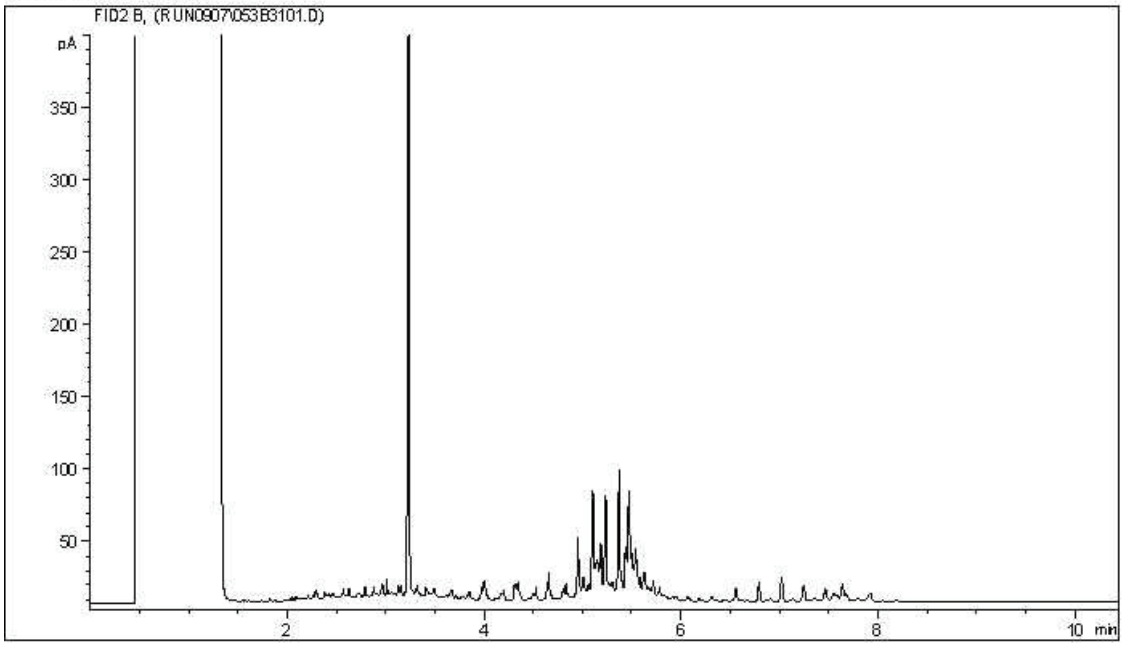
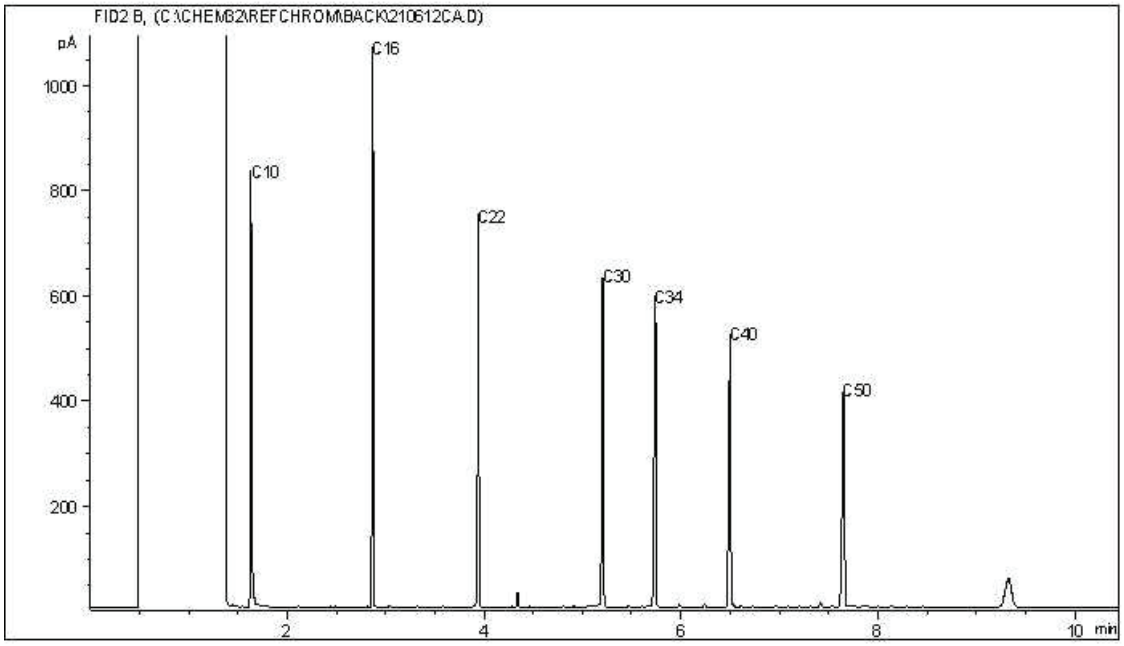


Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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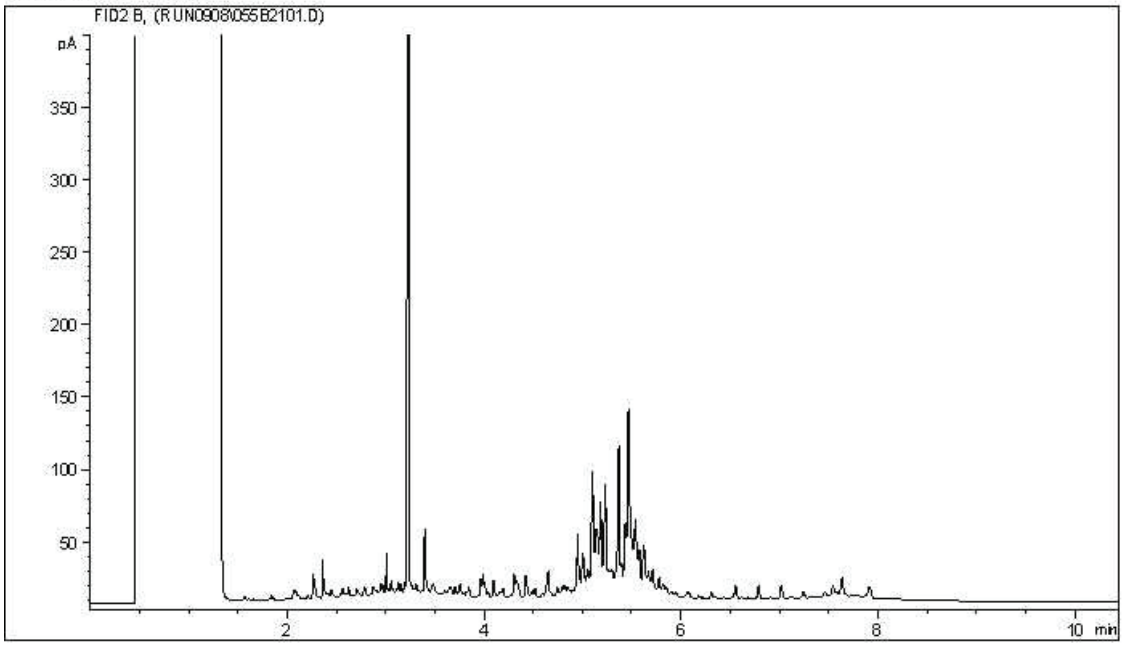

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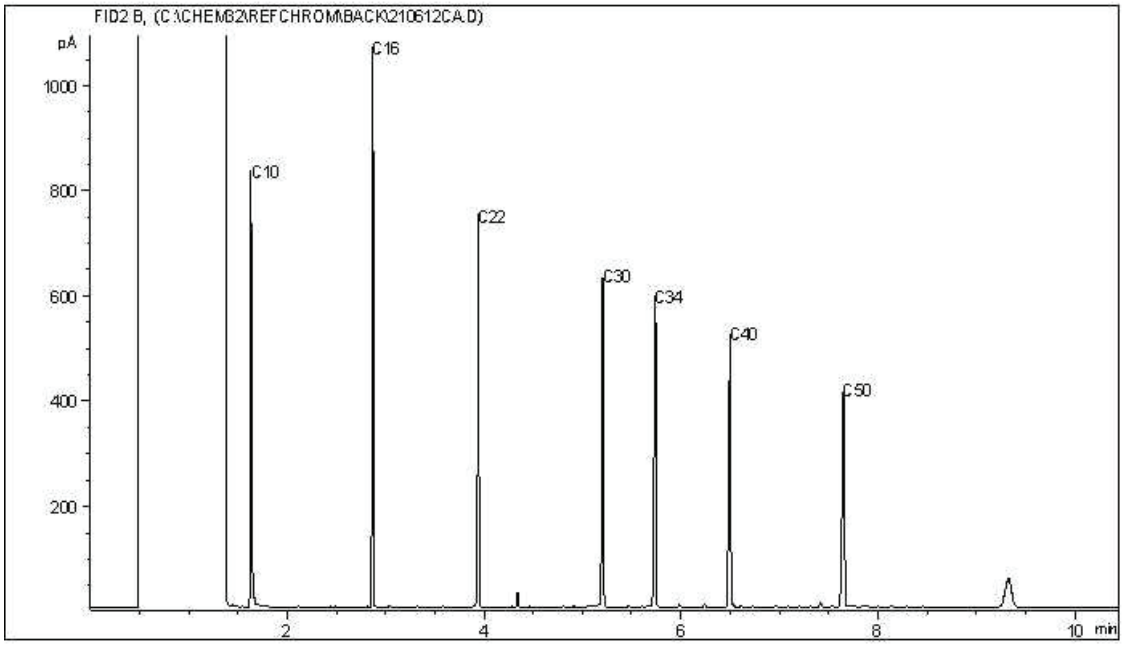

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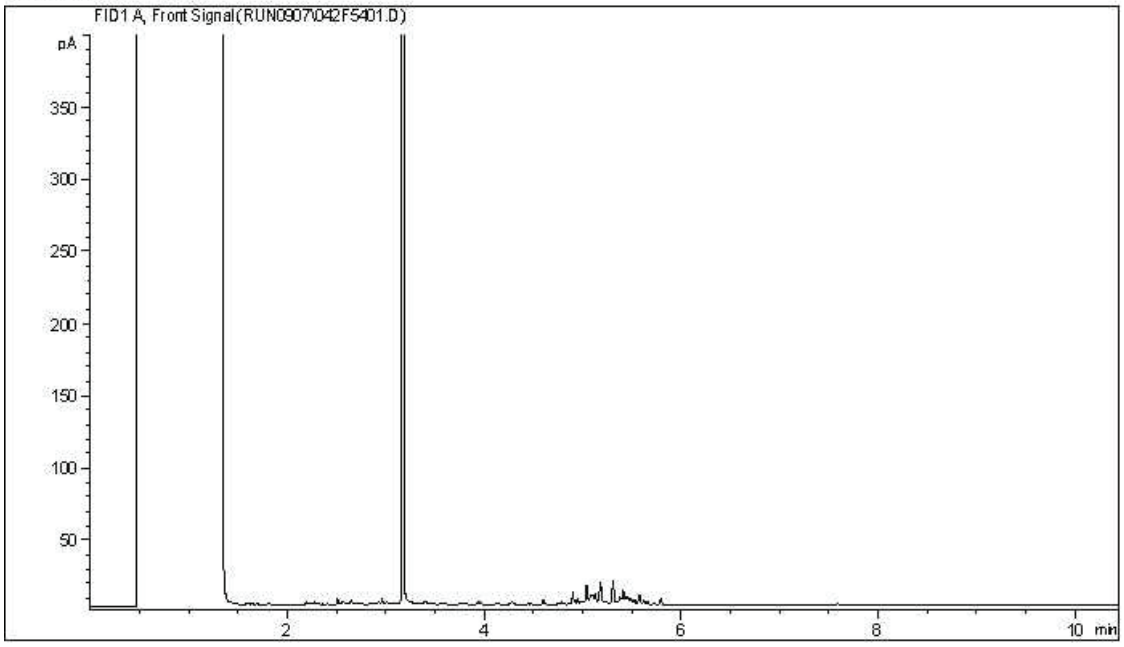
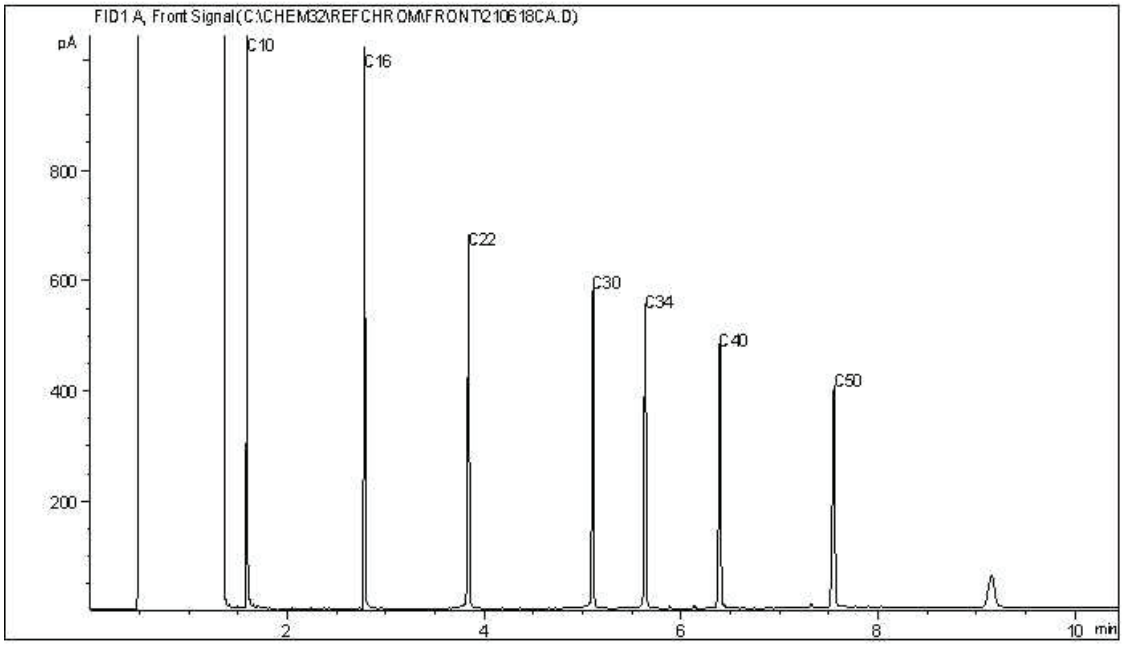
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



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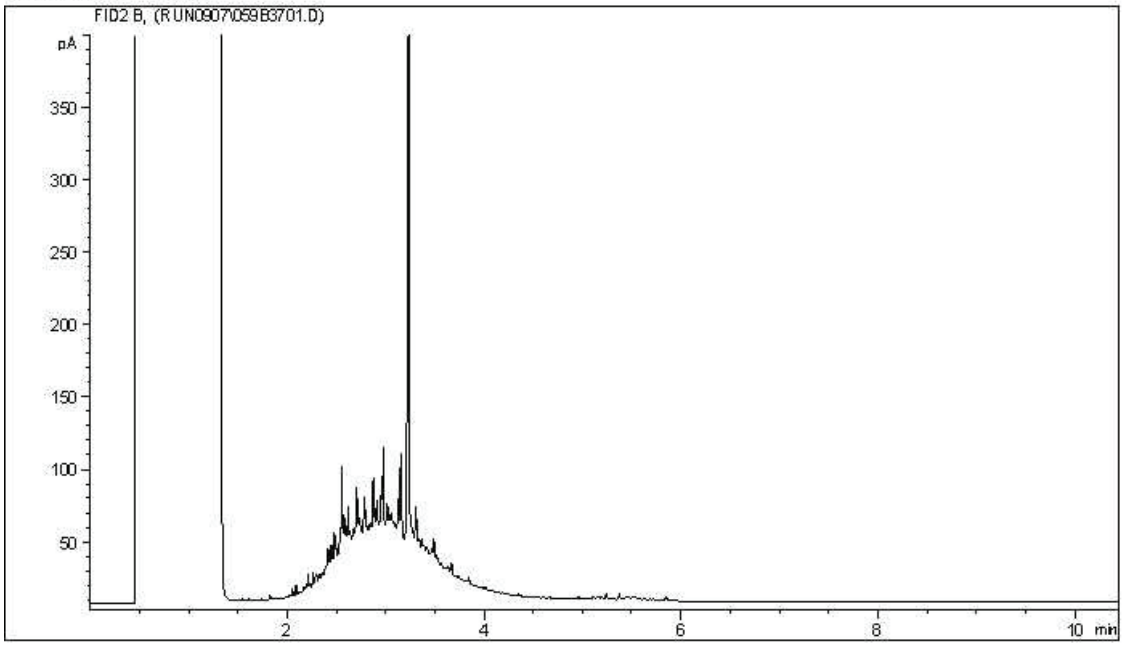
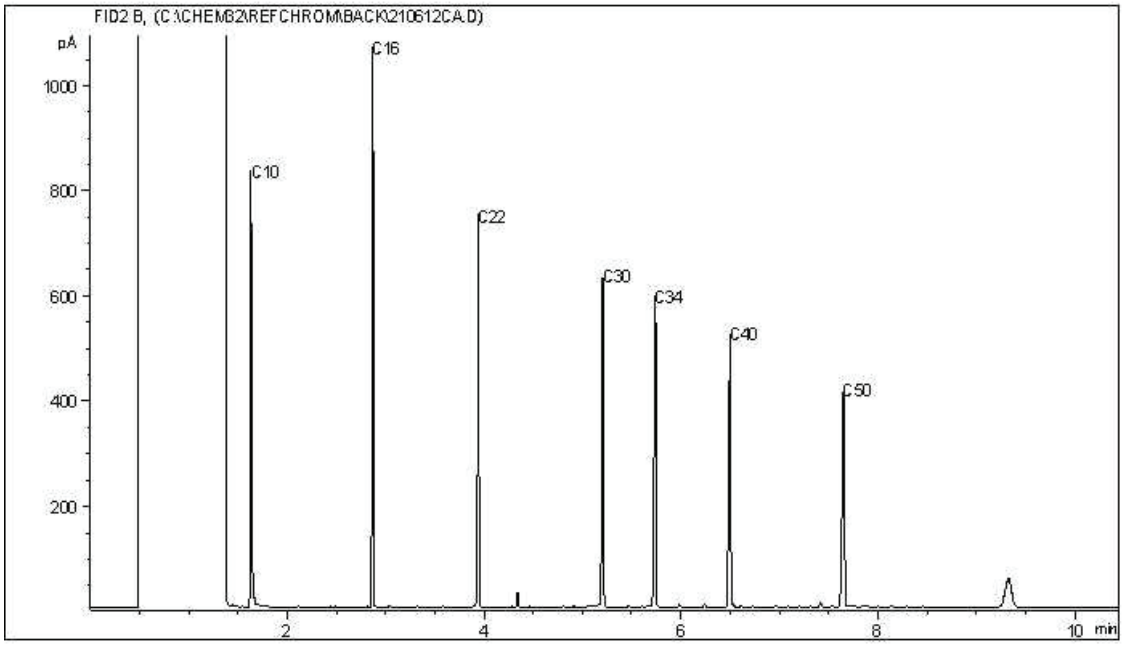
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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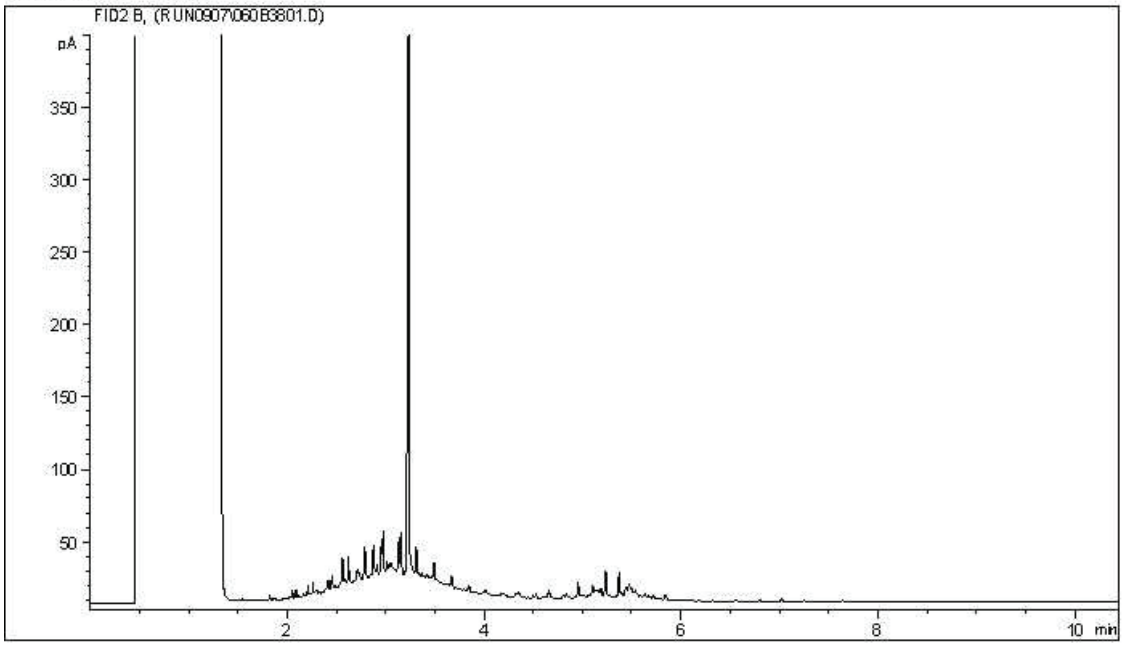
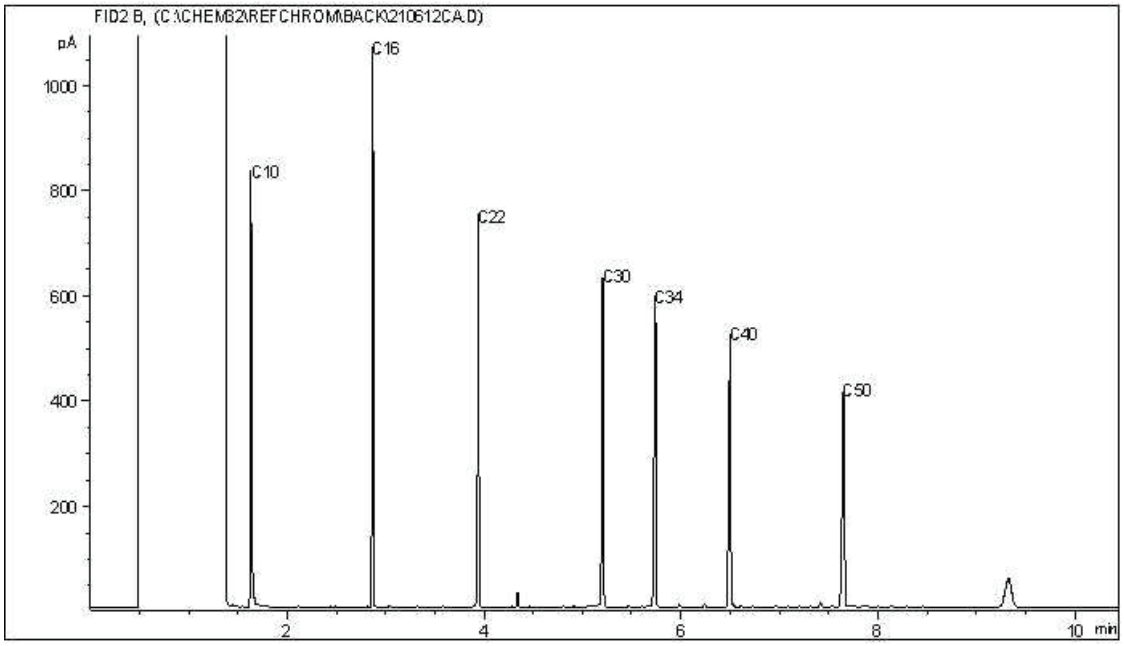


Carbon Range Distribution - Reference Chromatogram



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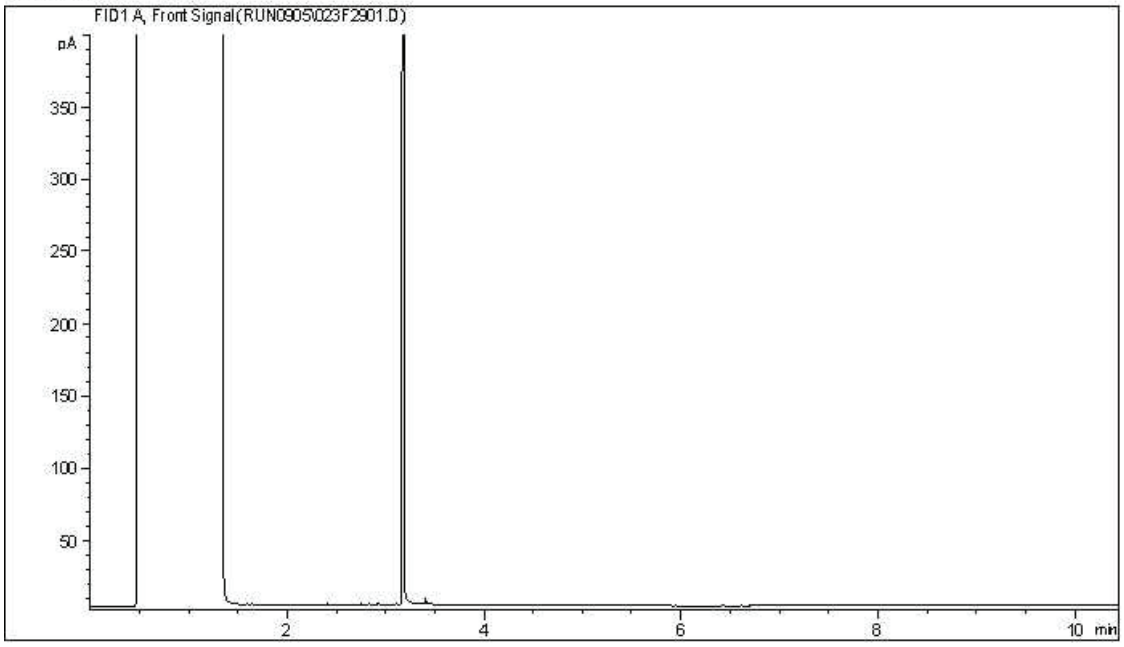

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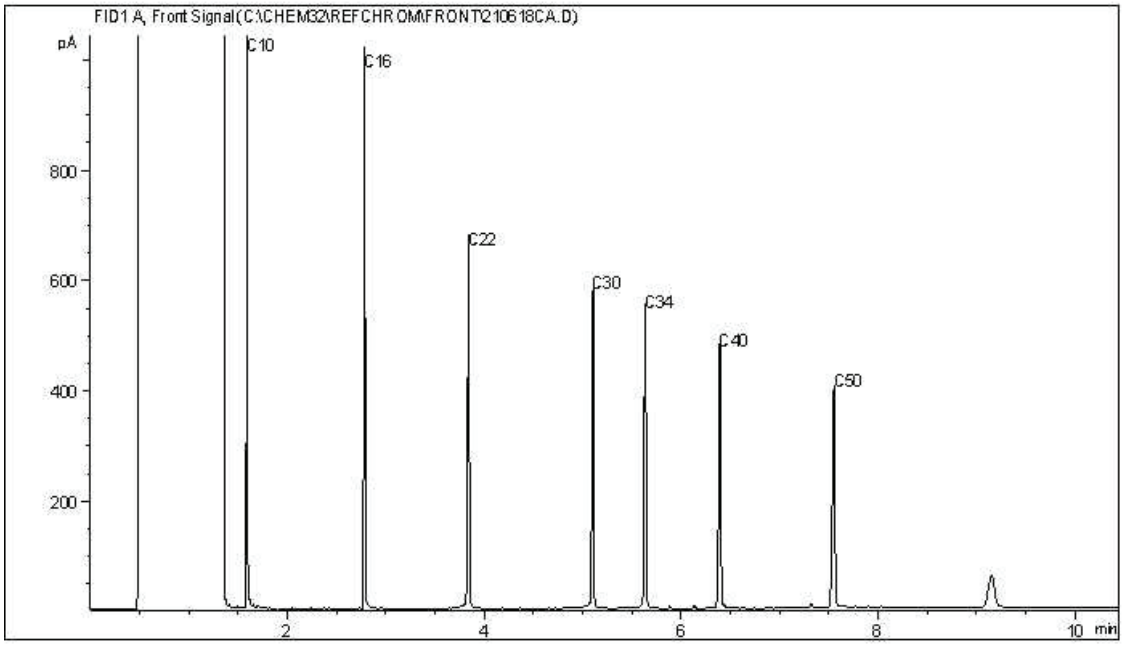

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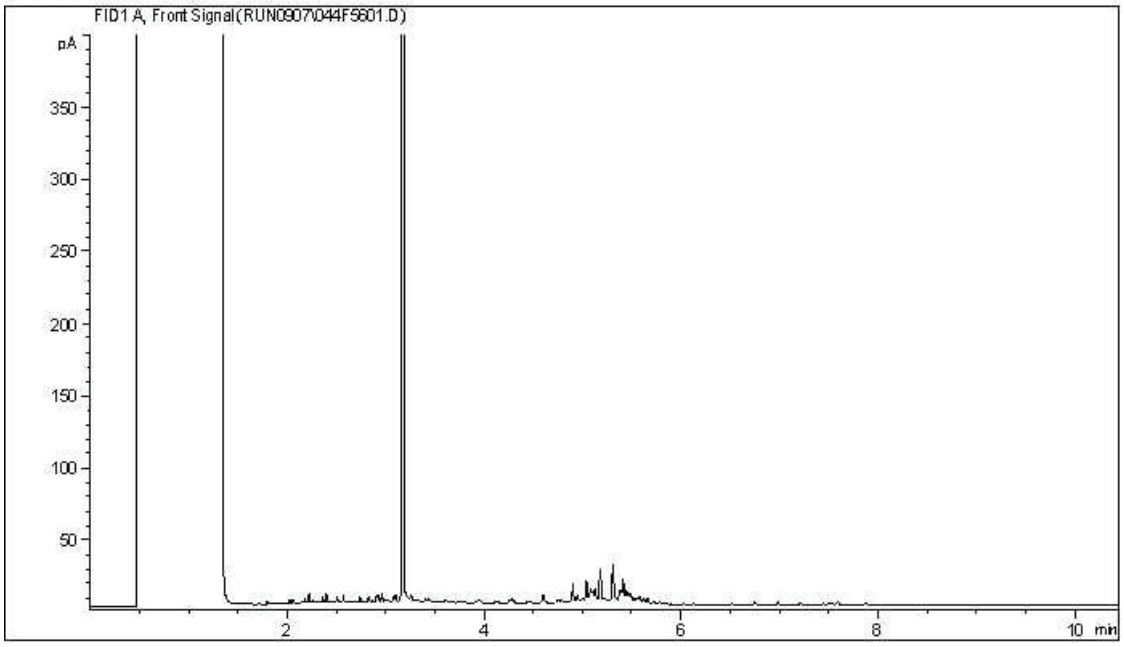

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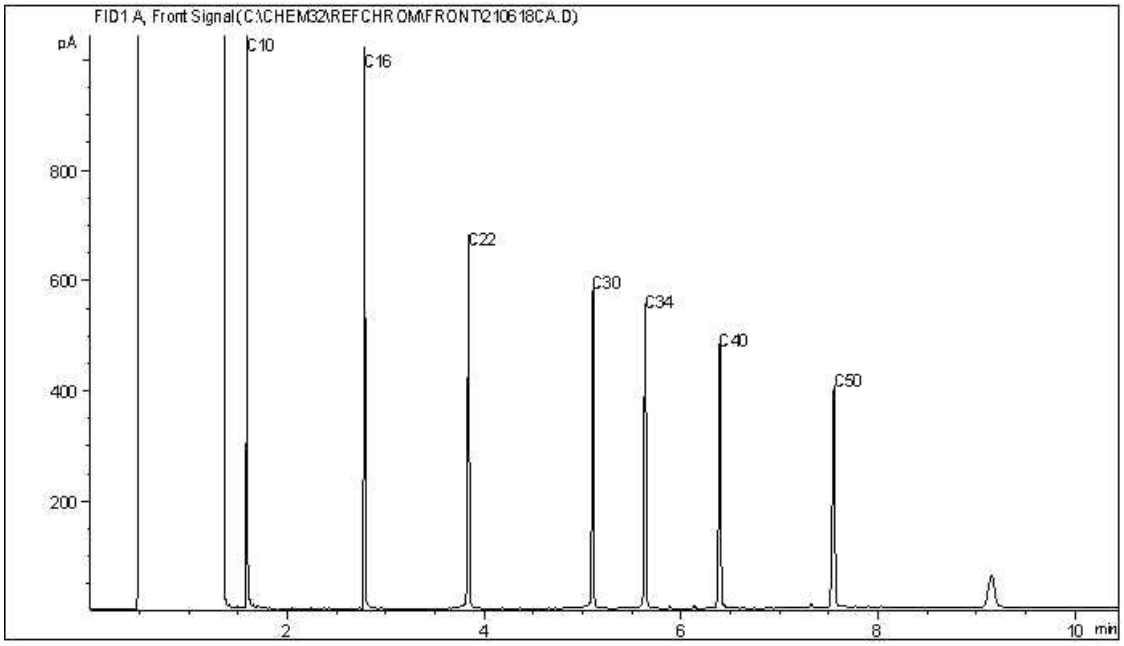

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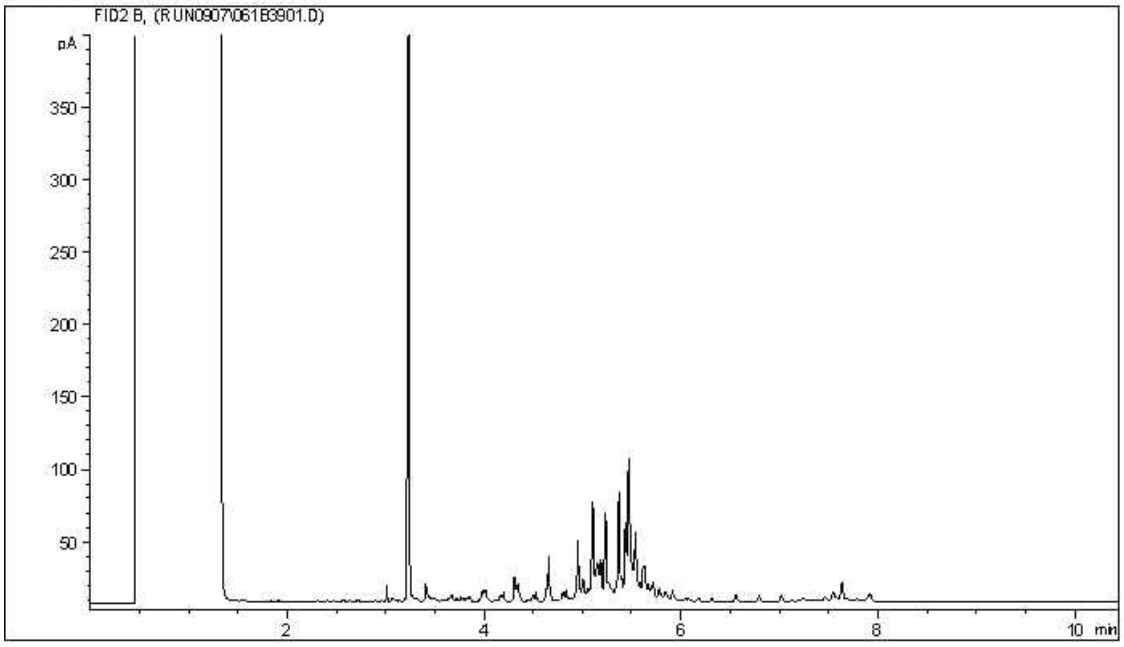

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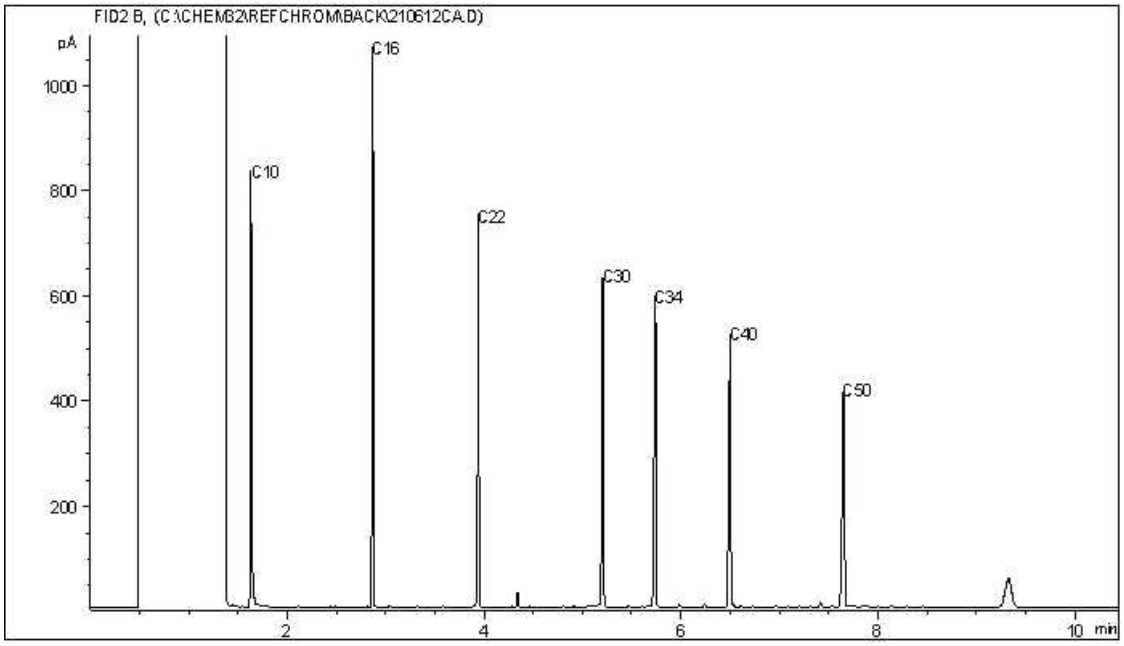

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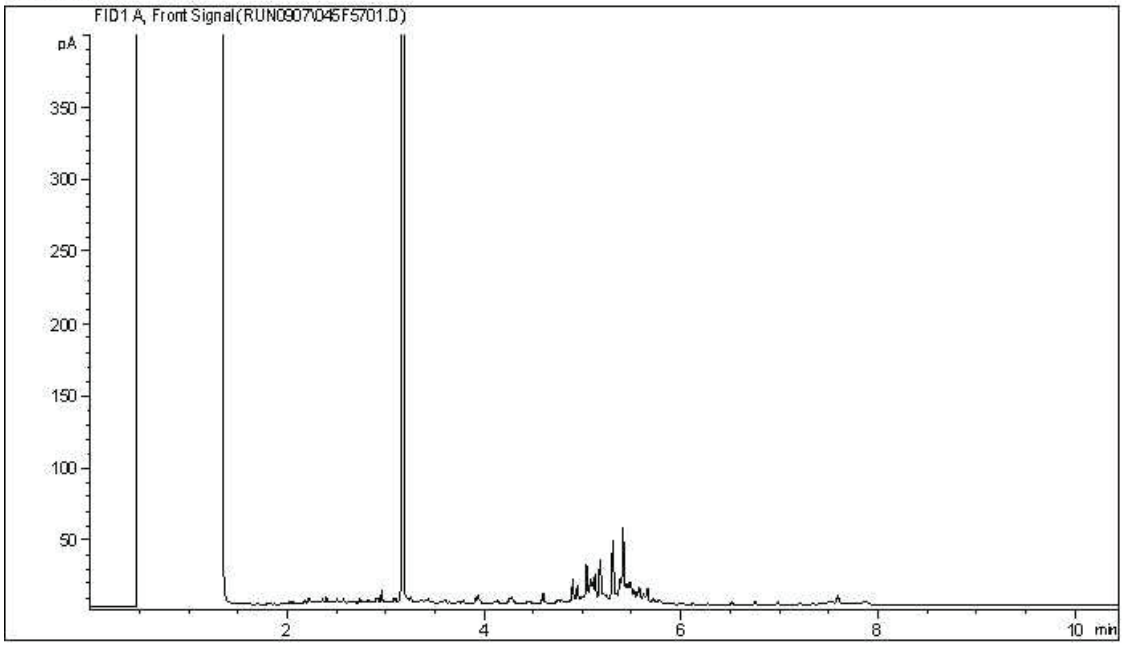

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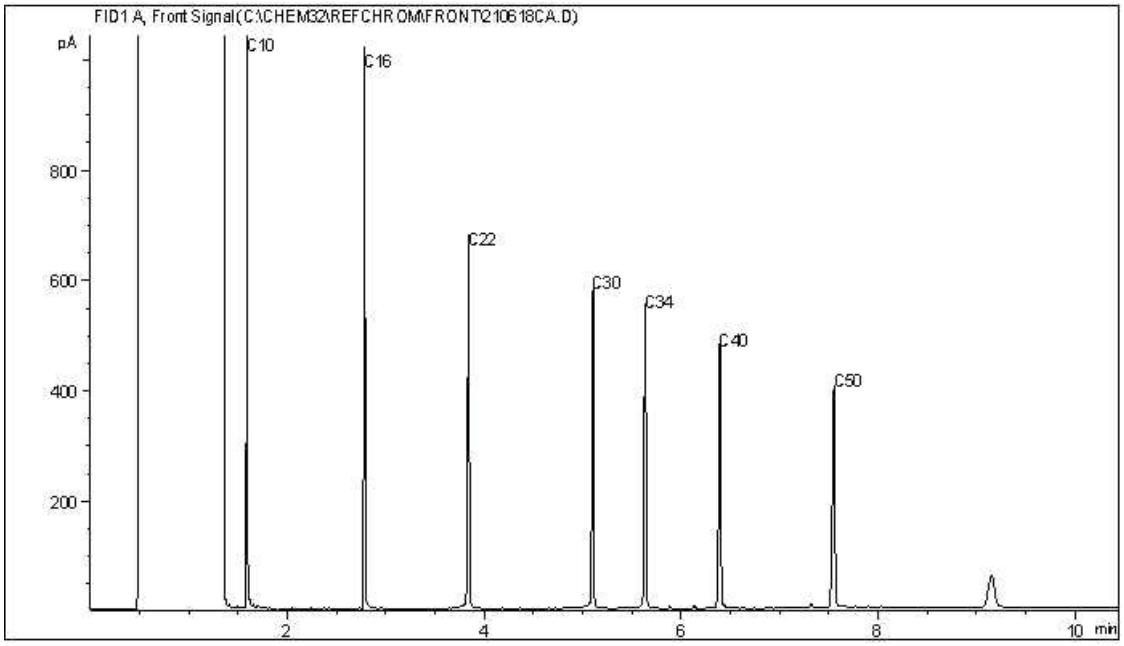

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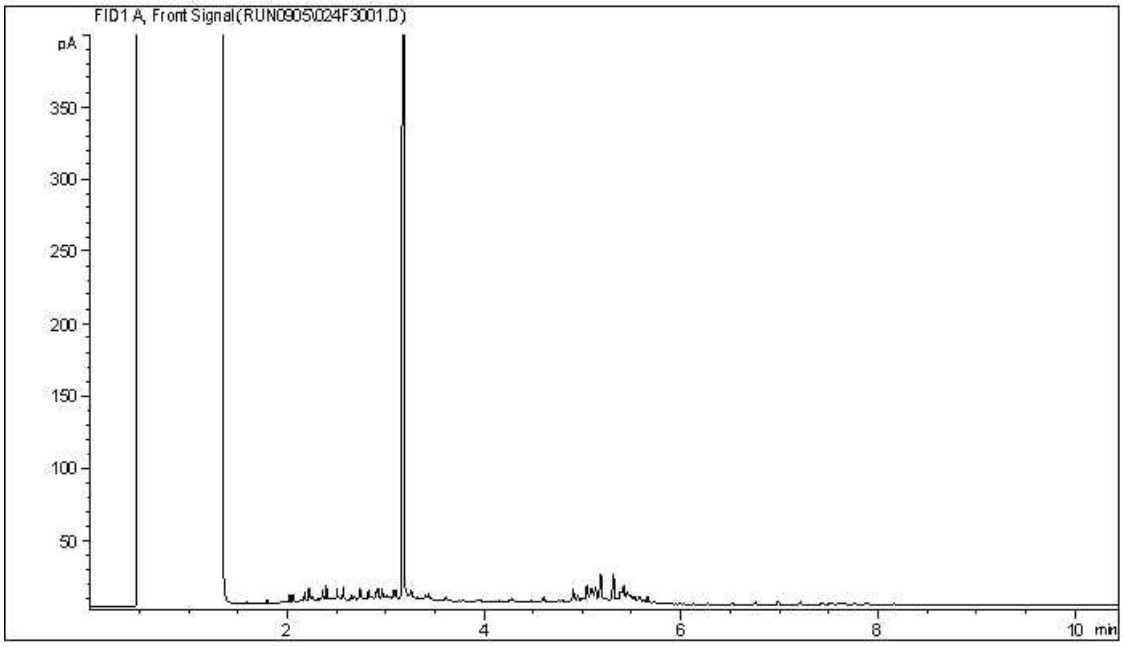

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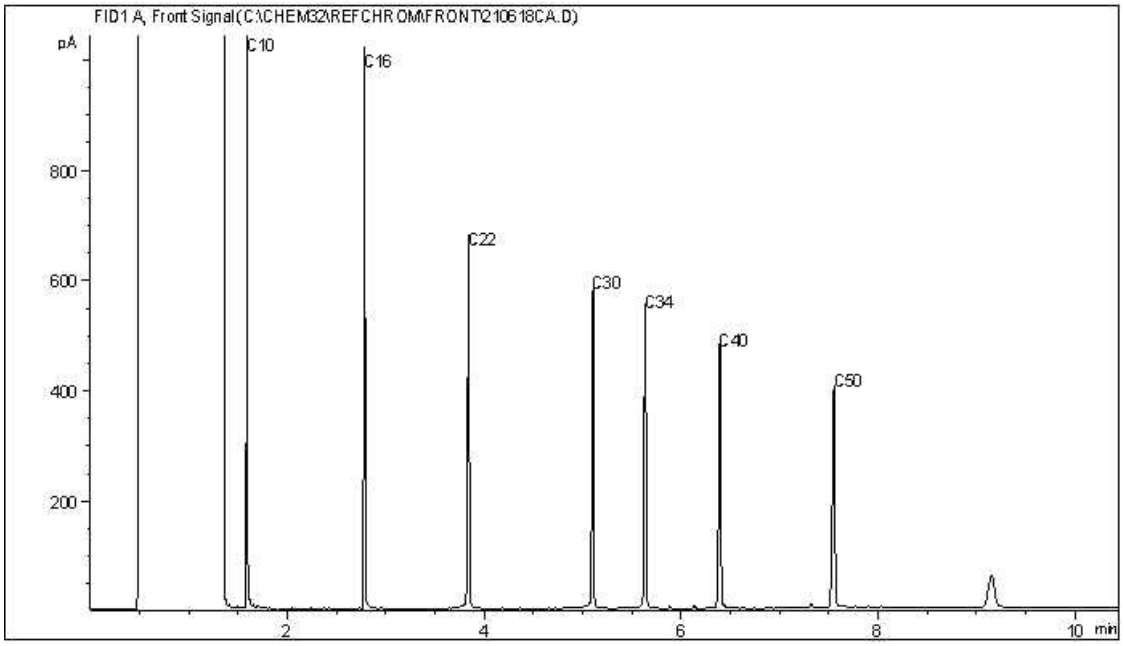

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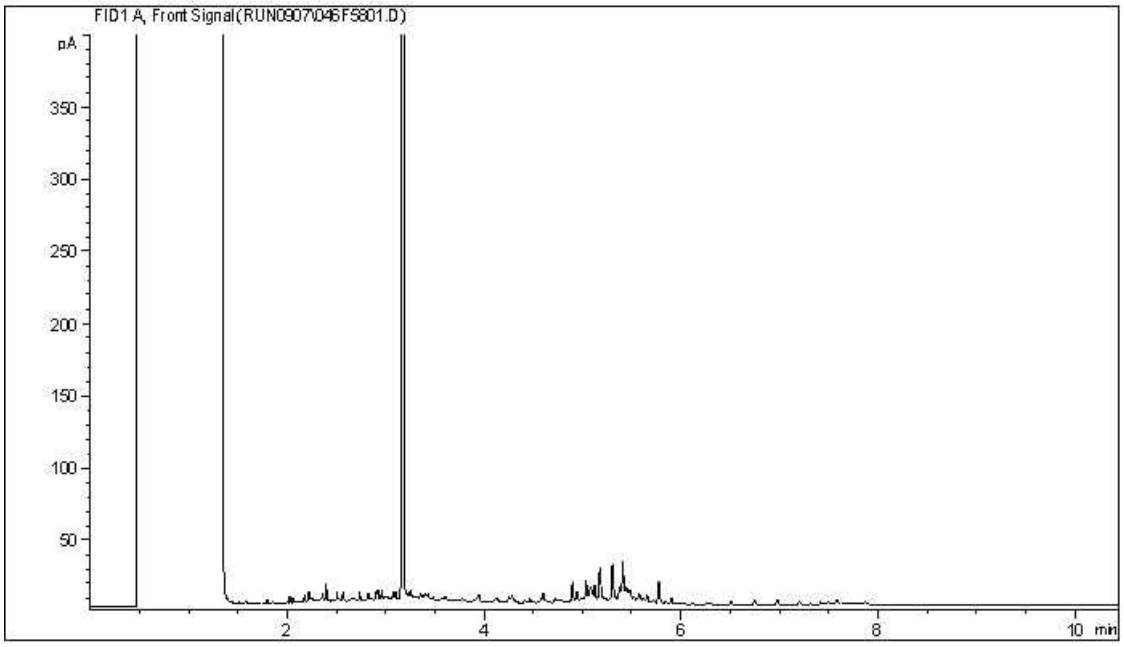

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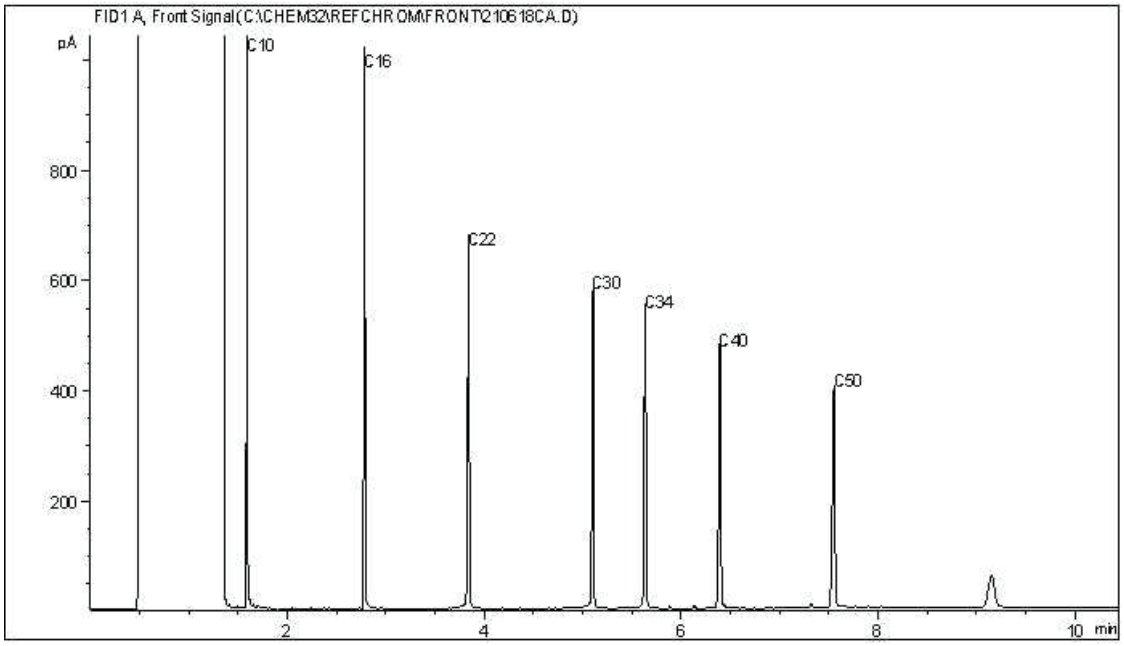

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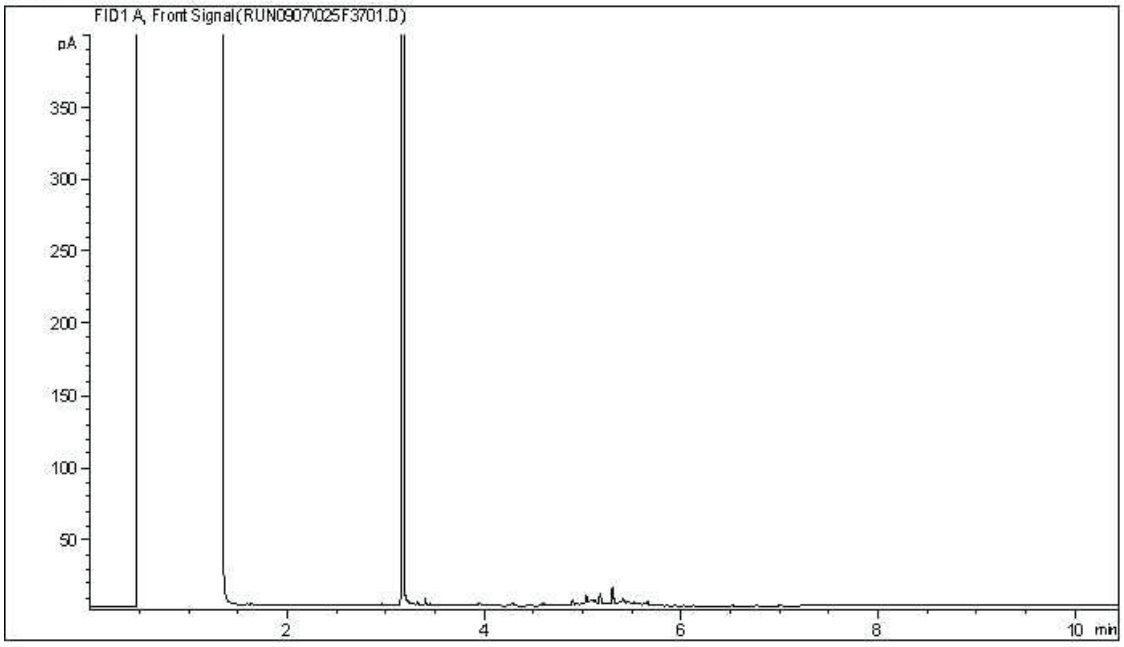

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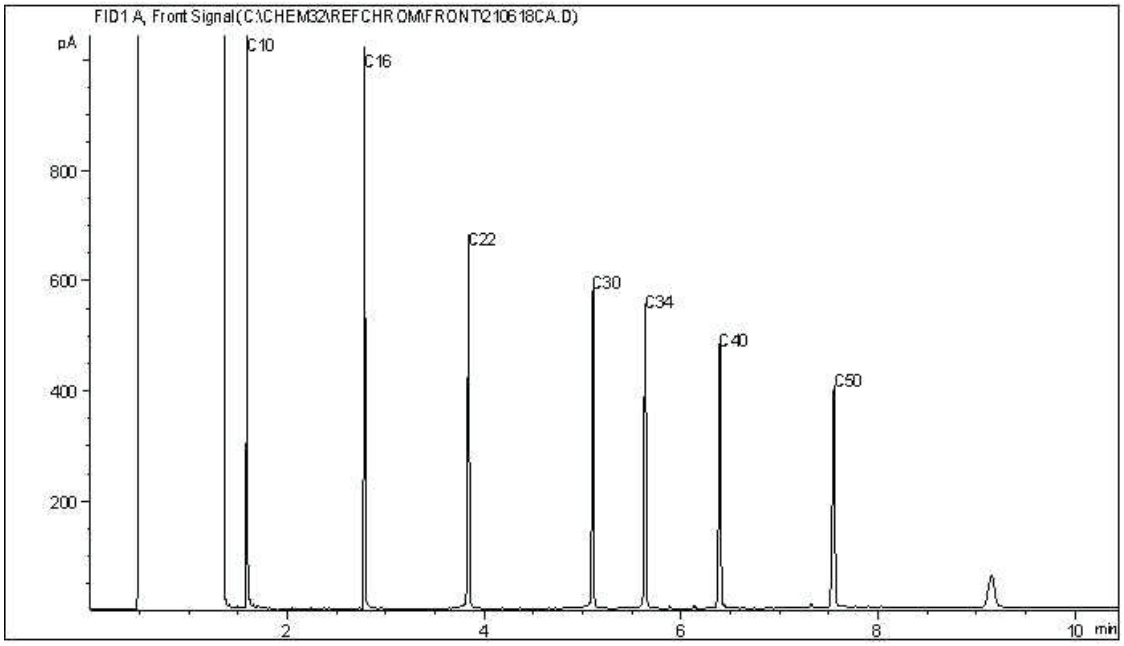

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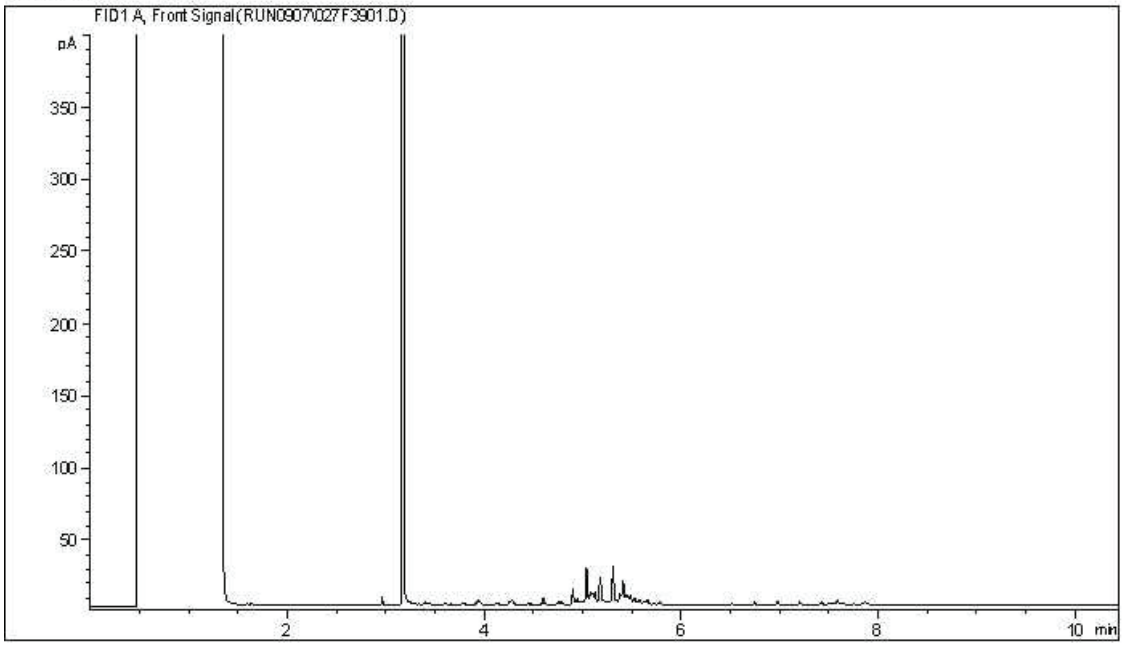
Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

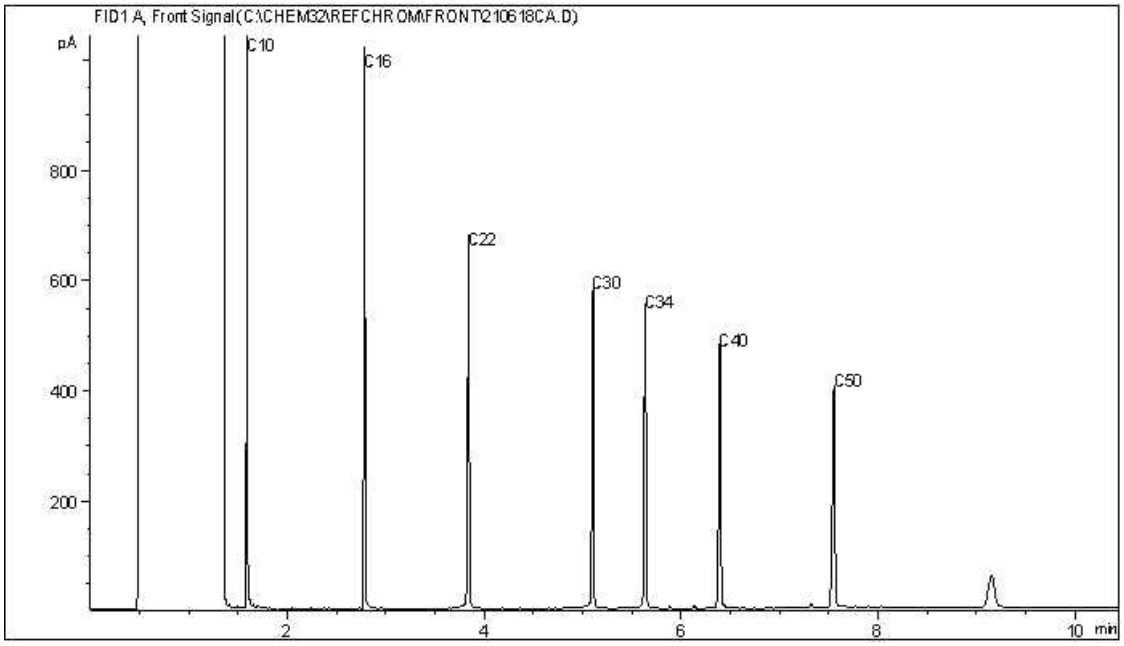
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



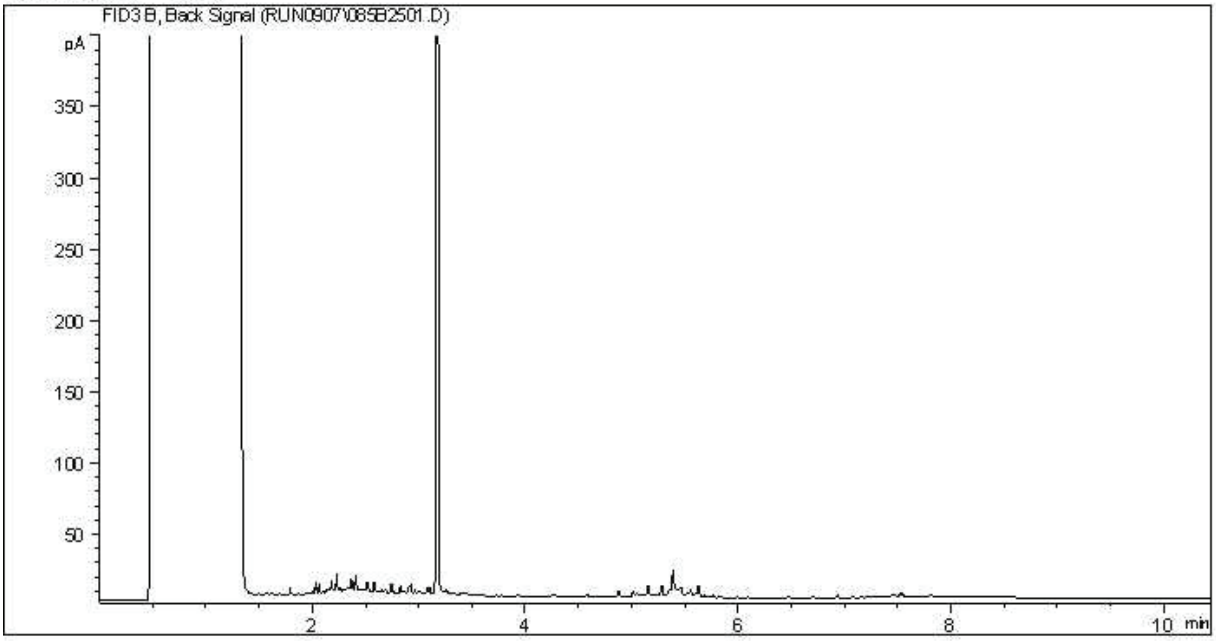
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

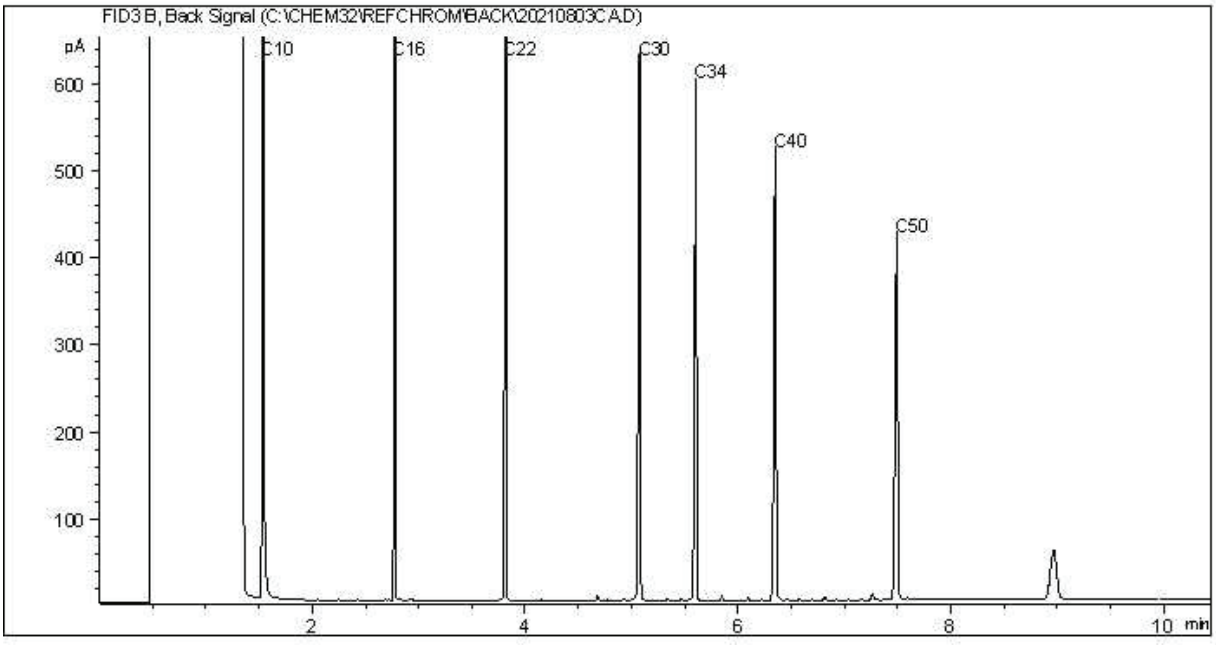
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



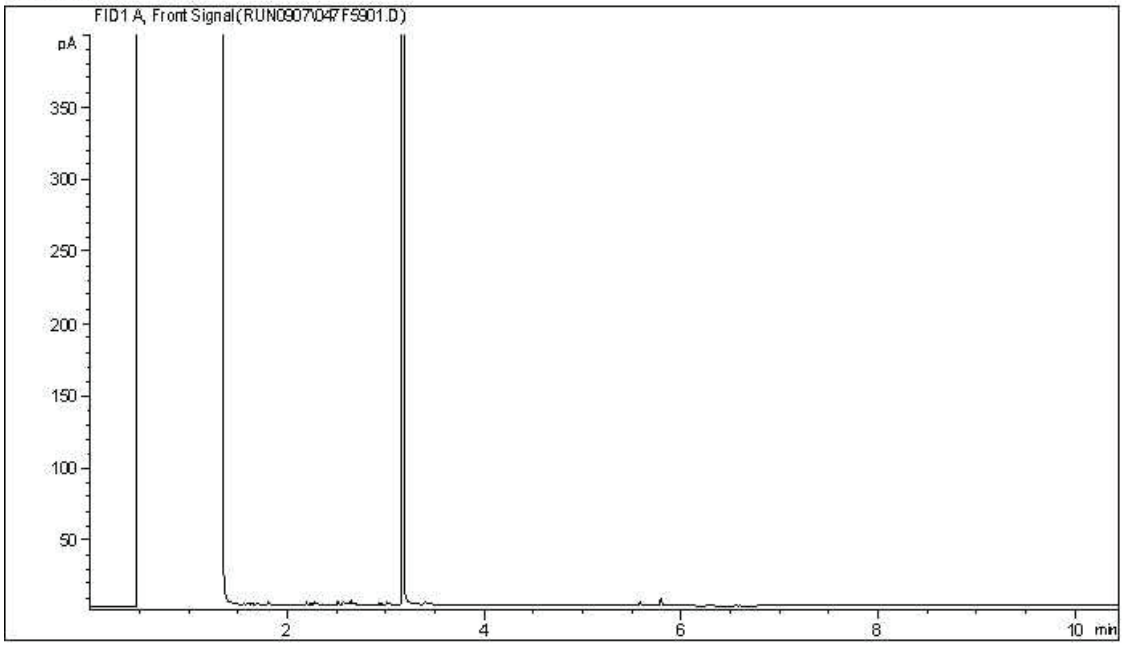
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

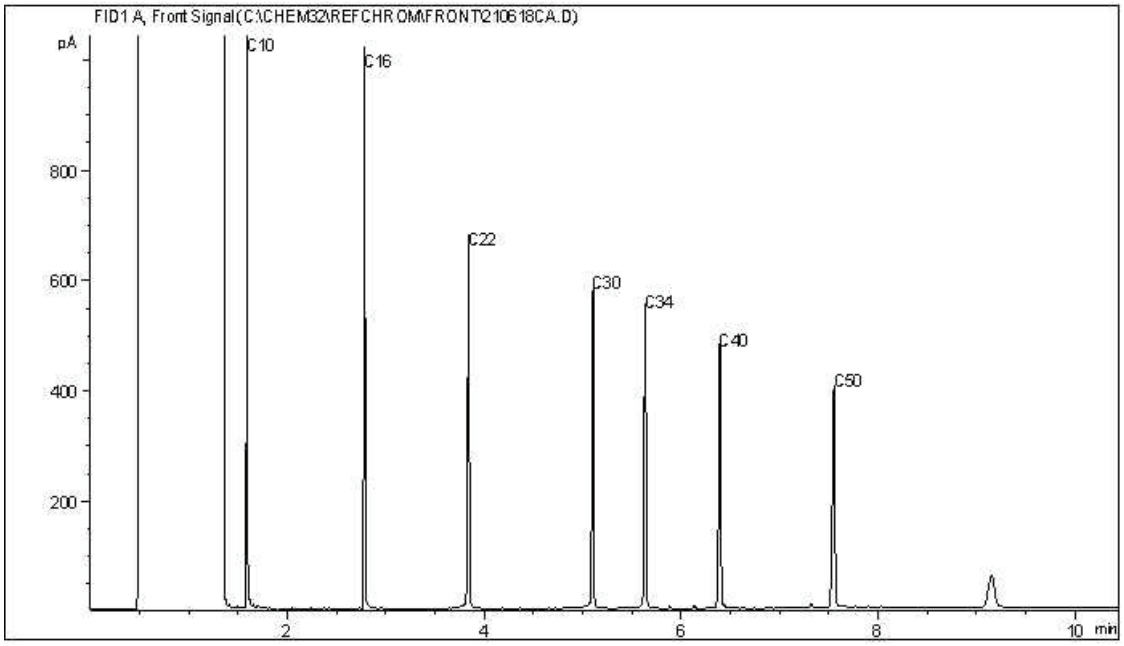
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
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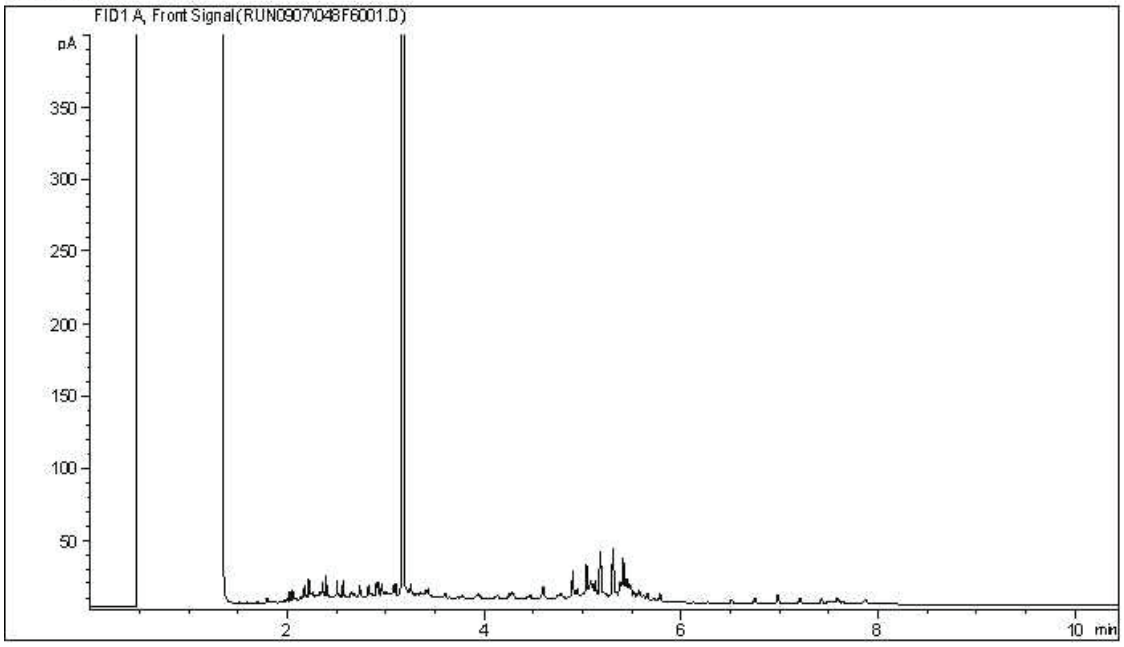
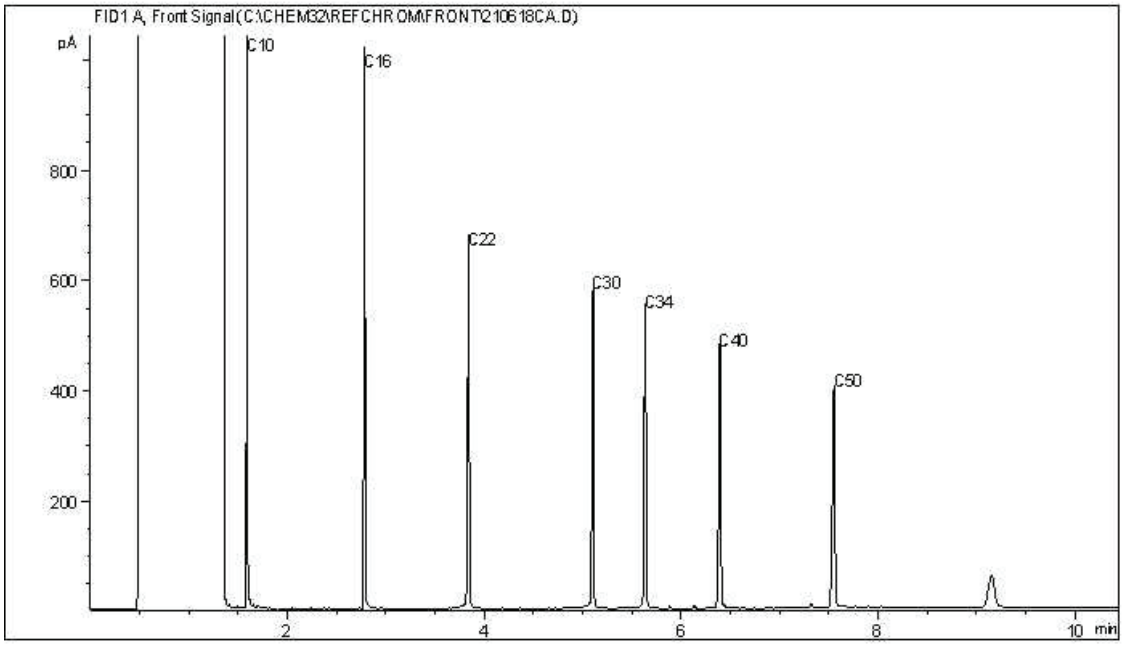
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



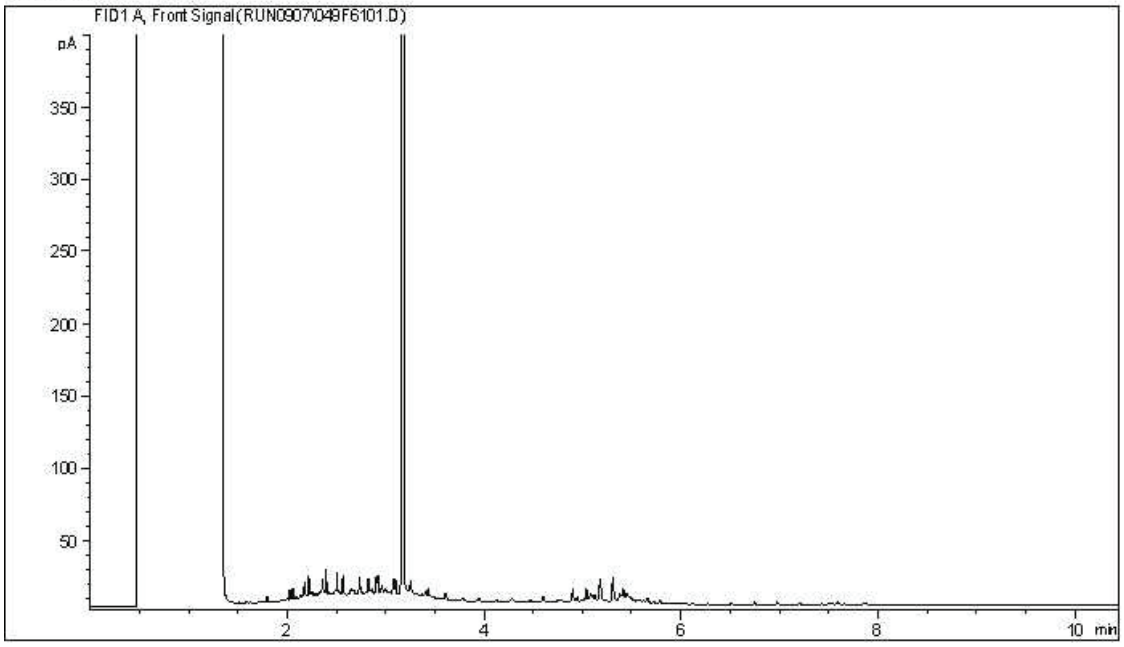
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

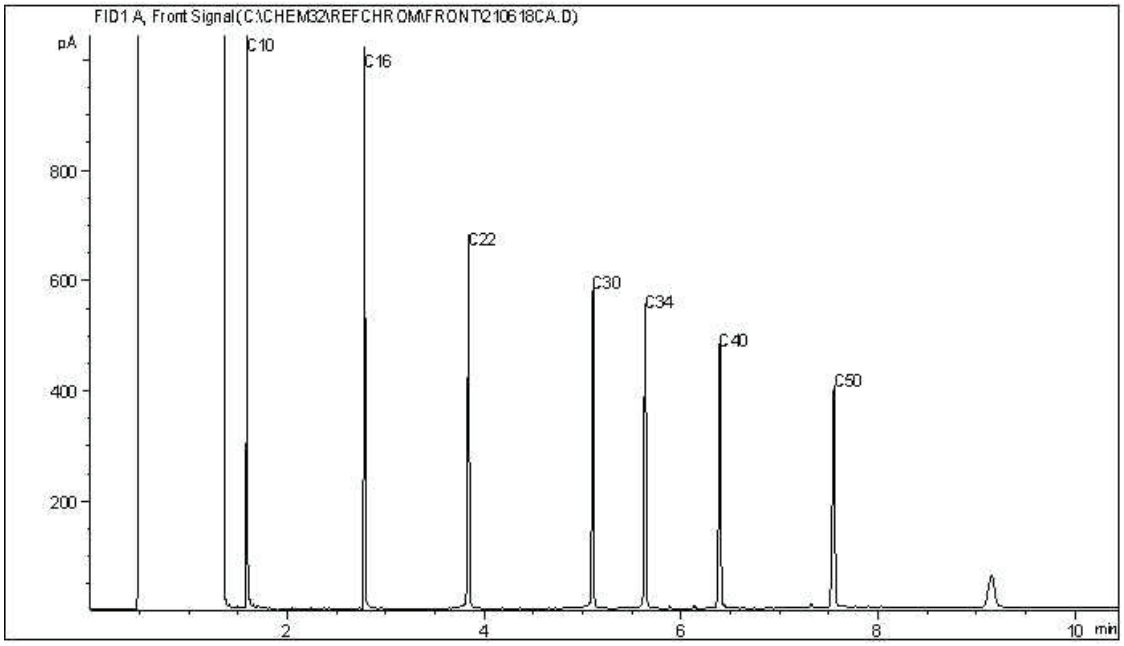
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



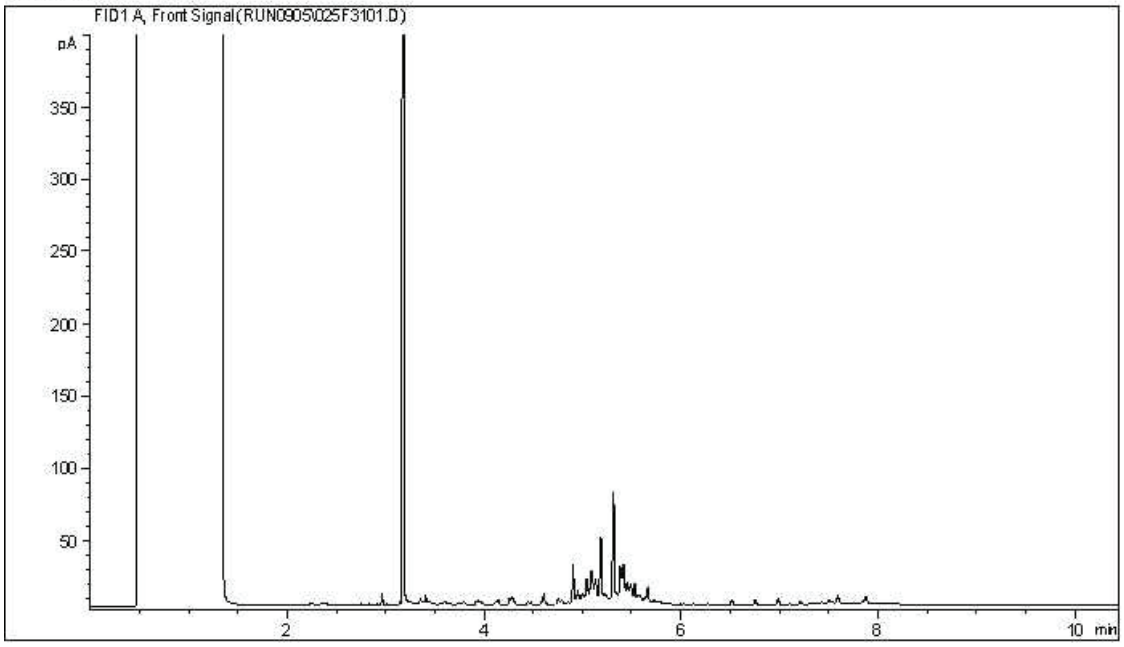
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

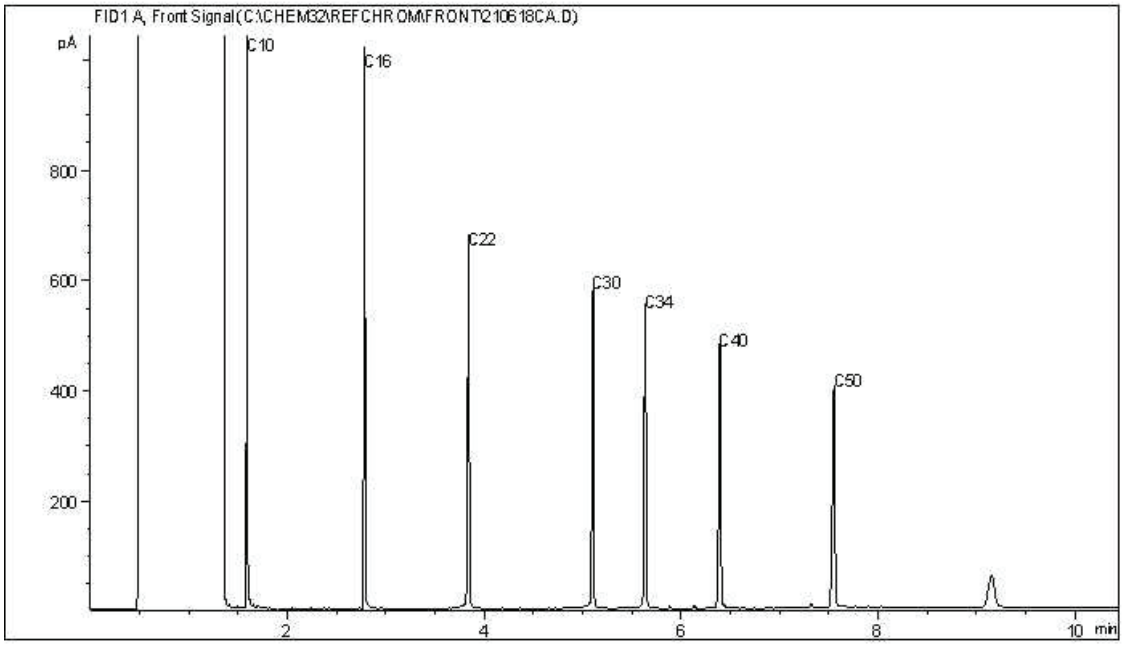
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

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Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell

Sampling Date: August 29, 2021

Golder Project Number: 20368099-6000-1001

Laboratory: Bureau Veritas Edmonton

Lab Submission Number: C164860

Was the Cooler Received at the lab under a sealed and intact custody seal?	Yes
Was proper chain of custody of the samples documented and kept?	Yes
Were sample temperatures acceptable when they reached lab?:	Yes
Were all samples analyzed and extracted within hold times?:	Yes
Has lab warranted all tests were in statistical control in CoA?:	Yes
Was sufficient sample provided for the requested analysis?	Yes
Has lab warranted all samples were analyzed with limited headspace present?:	Yes

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Surrogate Recovery	X			All laboratory QC results are within
Method Blank Concentration	X			acceptance criteria.
Laboratory Duplicate RPD	X			
Matrix Spike Recovery	X			
Blank Spike Recovery	X			

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration			X	All field QC samples are within
Trip Blank Concentration			X	alert limits.
Field Duplicate RPD	X			

Is data considered reliable (Yes/No/Suspect)?: Yes

If answer is "No" or "Suspect", describe and provide rationale:

Data Reviewed by (Print): Anita Colbert

Data Reviewed by (Signature): Anita Colbert

Date: September 10, 2021

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-42-01, 644511-43-01, 644511-44-01, 644511-45-01

Report Date: 2021/09/15
Report #: R3071641
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C164989
Received: 2021/08/31, 08:35

Sample Matrix: Soil
Samples Received: 41

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1)	3	2021/09/09	2021/09/10	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	34	N/A	2021/09/07	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	4	N/A	2021/09/08	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	38	N/A	2021/09/08		Auto Calc
F1-BTEX (1)	3	N/A	2021/09/10		Auto Calc
CCME Hydrocarbons (F2-F4)+F3A/B in soil (1, 3)	4	2021/09/04	2021/09/07	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4)+F3A/B in soil (1, 3)	1	2021/09/08	2021/09/08	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	15	2021/09/03	2021/09/05	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	16	2021/09/04	2021/09/07	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	3	2021/09/04	2021/09/08	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	1	2021/09/04	2021/09/09	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 4)	1	2021/09/09	2021/09/09	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2/F2+F3B) in soil (1, 5)	5	N/A	2021/09/05		Auto Calc
Moisture (1)	15	N/A	2021/09/04	AB SOP-00002	CCME PHC-CWS m
Moisture (1)	25	N/A	2021/09/05	AB SOP-00002	CCME PHC-CWS m
Moisture (1)	1	N/A	2021/09/09	AB SOP-00002	CCME PHC-CWS m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-42-01, 644511-43-01, 644511-44-01, 644511-45-01

Report Date: 2021/09/15
Report #: R3071641
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C164989
Received: 2021/08/31, 08:35

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary Environmental
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.
(3) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(4) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(5) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Cynny Hagen
Key Account Specialist
15 Sep 2021 15:17:10

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273

==========

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (SOIL)

BV Labs ID		AFC301			AFC382	AFC385		
Sampling Date		2021/08/23 09:59			2021/08/23 15:18	2021/08/23 15:45		
COC Number		644511-42-01			644511-45-01	644511-45-01		
	UNITS	TP21-02-02	RDL	QC Batch	TP21-51-06	TP21-52-05	RDL	QC Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	140 (1)	37	A346257	<10	<10	10	A341906
F3 (C16-C34 Hydrocarbons)	mg/kg	1700 (1)	180	A346257	<50	<50	50	A341906
F4 (C34-C50 Hydrocarbons)	mg/kg	810 (1)	180	A346257	<50	<50	50	A341906
Reached Baseline at C50	mg/kg	Yes	N/A	A346257	Yes	Yes	N/A	A341906
Physical Properties								
Moisture	%	73	0.30	A346245	16	13	0.30	A341982
Volatiles								
Benzene	mg/kg	<0.017 (2)	0.017	A343327	<0.0050	<0.0050	0.0050	A343327
Toluene	mg/kg	<0.080 (3)	0.080	A343327	<0.050	<0.050	0.050	A343327
Ethylbenzene	mg/kg	<0.035 (2)	0.035	A343327	<0.010	<0.010	0.010	A343327
m & p-Xylene	mg/kg	<0.14 (2)	0.14	A343327	<0.040	<0.040	0.040	A343327
o-Xylene	mg/kg	<0.069 (2)	0.069	A343327	<0.020	<0.020	0.020	A343327
Xylenes (Total)	mg/kg	<0.16	0.16	A346003	<0.045	<0.045	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	<24	24	A346003	<10	<10	10	A340815
F1 (C6-C10)	mg/kg	<24 (3)	24	A343327	<10	<10	10	A343327
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	99	N/A	A343327	106	104	N/A	A343327
4-Bromofluorobenzene (sur.)	%	88	N/A	A343327	85	83	N/A	A343327
D10-o-Xylene (sur.)	%	83	N/A	A343327	72	75	N/A	A343327
D4-1,2-Dichloroethane (sur.)	%	81	N/A	A343327	77	77	N/A	A343327
O-TERPHENYL (sur.)	%	74	N/A	A346257	90	97	N/A	A341906

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.
(2) Detection limits raised based on sample weight used for analysis.
(3) Detection limits raised based on MDL and sample weight used for analysis.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC300	AFC300		AFC302	AFC303	AFC304		
Sampling Date		2021/08/23 09:47	2021/08/23 09:47		2021/08/23 10:01	2021/08/23 10:10	2021/08/23 10:11		
COC Number		644511-42-01	644511-42-01		644511-42-01	644511-42-01	644511-42-01		
	UNITS	**TP21-01-02**	**TP21-01-02 Lab-Dup**	**RDL**	**TP21-02-03**	**TP21-03-01**	**TP21-03-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<27 (1)	N/A	27	<10	110	960	10	A342301
F3 (C16-C34 Hydrocarbons)	mg/kg	360 (1)	N/A	130	<50	150	220	50	A342301
F4 (C34-C50 Hydrocarbons)	mg/kg	<130 (1)	N/A	130	<50	<50	<50	50	A342301
Reached Baseline at C50	mg/kg	Yes	N/A	N/A	Yes	Yes	Yes	N/A	A342301
Physical Properties									
Moisture	%	63	N/A	0.30	12	15	13	0.30	A342276
Volatiles									
Xylenes (Total)	mg/kg	<0.19	N/A	0.19	<0.045	0.092	0.94	0.045	A340601
F1 (C6-C10) - BTEX	mg/kg	<29	N/A	29	<10	<10	<10	10	A340601
Field Preserved Volatiles									
Benzene	mg/kg	<0.014 (2)	<0.014	0.014	<0.0050	0.014	0.035	0.0050	A342606
Toluene	mg/kg	<0.050 (2)	<0.050	0.050	<0.050	0.077	0.079	0.050	A342606
Ethylbenzene	mg/kg	<0.016 (2)	<0.016	0.016	<0.010	0.022	0.11	0.010	A342606
m & p-Xylene	mg/kg	<0.17 (3)	<0.17	0.17	<0.040	0.063	0.58	0.040	A342606
o-Xylene	mg/kg	<0.087 (3)	<0.087	0.087	<0.020	0.029	0.36	0.020	A342606
F1 (C6-C10)	mg/kg	<29 (2)	<29	29	<10	<10	<10	10	A342606
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	101	96	N/A	99	98	98	N/A	A342606
4-Bromofluorobenzene (sur.)	%	86	100	N/A	101	103	102	N/A	A342606
D10-o-Xylene (sur.)	%	78	111	N/A	117	105	104	N/A	A342606
D4-1,2-Dichloroethane (sur.)	%	75	108	N/A	104	108	108	N/A	A342606
O-TERPHENYL (sur.)	%	100	N/A	N/A	89	98	99	N/A	A342301

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.
(2) Detection limit reported based on MDL and sample weight used for analysis.
(3) Detection limits raised based on sample weight used for analysis.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC305	AFC305		AFC306	AFC307	AFC308		
Sampling Date		2021/08/23 10:23	2021/08/23 10:23		2021/08/23 10:33	2021/08/23 10:34	2021/08/23 10:39		
COC Number		644511-42-01	644511-42-01		644511-42-01	644511-42-01	644511-42-01		
	UNITS	TP21-03-06	TP21-03-06 Lab-Dup	QC Batch	TP21-35-02	TP21-35-04	TP21-35-05	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	1000	1100	A342301	160	240	66	10	A342282
F3 (C16-C34 Hydrocarbons)	mg/kg	210	240	A342301	230	270	62	50	A342282
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	58	A342301	<50	<50	<50	50	A342282
Reached Baseline at C50	mg/kg	Yes	Yes	A342301	Yes	Yes	Yes	N/A	A342282
Physical Properties									
Moisture	%	31	N/A	A342276	10	9.0	15	0.30	A342276
Volatiles									
Xylenes (Total)	mg/kg	1.3	N/A	A340601	<0.045	0.15	<0.045	0.045	A340601
F1 (C6-C10) - BTEX	mg/kg	64	N/A	A340601	<10	<10	<10	10	A340601
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	N/A	A342606	<0.0050	0.0078	<0.0050	0.0050	A342606
Toluene	mg/kg	0.25	N/A	A342606	0.21	0.54	<0.050	0.050	A342606
Ethylbenzene	mg/kg	0.11	N/A	A342606	<0.010	0.038	0.014	0.010	A342606
m & p-Xylene	mg/kg	0.83	N/A	A342606	<0.040	0.13	<0.040	0.040	A342606
o-Xylene	mg/kg	0.52	N/A	A342606	<0.020	0.026	0.026	0.020	A342606
F1 (C6-C10)	mg/kg	66	N/A	A342606	<10	<10	<10	10	A342606
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	97	N/A	A342606	96	99	99	N/A	A342606
4-Bromofluorobenzene (sur.)	%	103	N/A	A342606	102	102	101	N/A	A342606
D10-o-Xylene (sur.)	%	90	N/A	A342606	109	99	101	N/A	A342606
D4-1,2-Dichloroethane (sur.)	%	107	N/A	A342606	104	107	104	N/A	A342606
O-TERPHENYL (sur.)	%	88	108	A342301	102	104	97	N/A	A342282

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC309	AFC321			AFC322	AFC322		
Sampling Date		2021/08/23 10:52	2021/08/23 10:53			2021/08/23 10:54	2021/08/23 10:54		
COC Number		644511-42-01	644511-43-01			644511-43-01	644511-43-01		
	UNITS	TP21-36-02	TP21-36-03	RDL	QC Batch	TP21-36-05	TP21-36-05 Lab-Dup	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	N/A	10	A342282	53 (1)	N/A	21	A342301
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	N/A	50	A342282	500 (1)	N/A	100	A342301
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	N/A	50	A342282	160 (1)	N/A	100	A342301
Reached Baseline at C50	mg/kg	N/A	N/A	N/A	A342282	Yes	N/A	N/A	A342301
Physical Properties									
Moisture	%	10	16	0.30	A342276	52	53	0.30	A342276
Volatiles									
Xylenes (Total)	mg/kg	0.10	0.34	0.045	A340601	0.63	N/A	0.15	A340601
F1 (C6-C10) - BTEX	mg/kg	13	42	10	A340601	<20	N/A	20	A340601
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	0.0050	A342606	<0.013 (2)	N/A	0.013	A342606
Toluene	mg/kg	0.25	0.61	0.050	A342606	1.7 (3)	N/A	0.17	A342606
Ethylbenzene	mg/kg	0.019	0.078	0.010	A342606	0.073 (3)	N/A	0.035	A342606
m & p-Xylene	mg/kg	0.049	0.14	0.040	A342606	0.37 (3)	N/A	0.14	A342606
o-Xylene	mg/kg	0.051	0.20	0.020	A342606	0.26 (3)	N/A	0.069	A342606
F1 (C6-C10)	mg/kg	13	43	10	A342606	<20 (2)	N/A	20	A342606
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	100	98	N/A	A342606	103	N/A	N/A	A342606
4-Bromofluorobenzene (sur.)	%	103	101	N/A	A342606	89	N/A	N/A	A342606
D10-o-Xylene (sur.)	%	102	97	N/A	A342606	93	N/A	N/A	A342606
D4-1,2-Dichloroethane (sur.)	%	107	109	N/A	A342606	80	N/A	N/A	A342606
O-TERPHENYL (sur.)	%	N/A	N/A	N/A	A342282	97	N/A	N/A	A342301

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.
(2) Detection limit reported based on MDL and sample weight used for analysis.
(3) Detection limits raised based on sample weight used for analysis.

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BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC323			AFC324		AFC325	AFC326		
Sampling Date		2021/08/23 10:58			2021/08/23 11:15		2021/08/23 11:16	2021/08/23 11:17		
COC Number		644511-43-01			644511-43-01		644511-43-01	644511-43-01		
	UNITS	TP21-36-06	RDL	QC Batch	TP21-37-01	QC Batch	TP21-37-04	TP21-37-06	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	21	A342301	140	A342282	150	<10	10	A342282
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	100	A342301	320	A342282	290	<50	50	A342282
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	100	A342301	<50	A342282	<50	<50	50	A342282
Reached Baseline at C50	mg/kg	N/A	N/A	A342301	Yes	A342282	Yes	Yes	N/A	A342282
Physical Properties										
Moisture	%	26	0.30	A342274	13	A342274	12	13	0.30	A342276
Volatiles										
Xylenes (Total)	mg/kg	<0.045	0.045	A340601	0.075	A340601	<0.045	0.070	0.045	A340601
F1 (C6-C10) - BTEX	mg/kg	<10	10	A340601	18	A340601	<10	<10	10	A340601
Field Preserved Volatiles										
Benzene	mg/kg	0.0092	0.0050	A342606	<0.0050	A342606	<0.0050	0.040	0.0050	A342606
Toluene	mg/kg	0.16	0.050	A342606	0.077	A342606	0.091	<0.050	0.050	A342606
Ethylbenzene	mg/kg	0.018	0.010	A342606	0.017	A342606	<0.010	0.021	0.010	A342606
m & p-Xylene	mg/kg	<0.040	0.040	A342606	0.051	A342606	<0.040	<0.040	0.040	A342606
o-Xylene	mg/kg	0.033	0.020	A342606	0.024	A342606	<0.020	0.070	0.020	A342606
F1 (C6-C10)	mg/kg	<10	10	A342606	18	A342606	<10	<10	10	A342606
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	96	N/A	A342606	97	A342606	100	99	N/A	A342606
4-Bromofluorobenzene (sur.)	%	102	N/A	A342606	102	A342606	104	105	N/A	A342606
D10-o-Xylene (sur.)	%	117	N/A	A342606	137	A342606	103	113	N/A	A342606
D4-1,2-Dichloroethane (sur.)	%	107	N/A	A342606	106	A342606	106	106	N/A	A342606
O-TERPHENYL (sur.)	%	N/A	N/A	N/A	104	A342282	102	99	N/A	A342282

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC327	AFC328		AFC329	AFC330	AFC341		
Sampling Date		2021/08/23 13:46	2021/08/23 13:47		2021/08/23 13:55	2021/08/23 14:02	2021/08/23 14:10		
COC Number		644511-43-01	644511-43-01		644511-43-01	644511-43-01	644511-44-01		
	UNITS	**TP21-38-03**	**TP21-38-04**	**QC Batch**	**TP21-38-05**	**TP21-38-07**	**TP21-39-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	300	350	A342282	930	1700	130	10	A342282
F3 (C16-C34 Hydrocarbons)	mg/kg	290	260	A342282	530	310	190	50	A342282
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	A342282	<50	<50	<50	50	A342282
Reached Baseline at C50	mg/kg	Yes	Yes	A342282	Yes	Yes	Yes	N/A	A342282
Physical Properties									
Moisture	%	11	15	A342276	10	18	16	0.30	A342274
Volatiles									
Xylenes (Total)	mg/kg	0.10	0.19	A340601	1.3	7.2	<0.045	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	<10	27	A340601	86	270	23	10	A340815
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	0.0078	A342606	0.024	0.084	0.0069	0.0050	A342606
Toluene	mg/kg	0.20	0.79	A342606	0.68	0.93	<0.050	0.050	A342606
Ethylbenzene	mg/kg	0.019	0.027	A342606	0.17	1.3	0.015	0.010	A342606
m & p-Xylene	mg/kg	0.059	0.075	A342606	0.47	4.5	<0.040	0.040	A342606
o-Xylene	mg/kg	0.043	0.11	A342606	0.81	2.7	0.033	0.020	A342606
F1 (C6-C10)	mg/kg	<10	28	A342606	89	280	23	10	A342606
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	99	100	A342606	98	98	97	N/A	A342606
4-Bromofluorobenzene (sur.)	%	102	102	A342606	102	104	102	N/A	A342606
D10-o-Xylene (sur.)	%	97	108	A342606	105	103	108	N/A	A342606
D4-1,2-Dichloroethane (sur.)	%	105	105	A342606	110	107	106	N/A	A342606
O-TERPHENYL (sur.)	%	106	108	A342282	122	122	98	N/A	A342282

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC342	AFC342		AFC343	AFC344		AFC345		
Sampling Date		2021/08/23 14:14	2021/08/23 14:14		2021/08/23 14:15	2021/08/23 14:11		2021/08/23 14:38		
COC Number		644511-44-01	644511-44-01		644511-44-01	644511-44-01		644511-44-01		
	UNITS	**TP21-39-05**	**TP21-39-05 Lab-Dup**	**RDL**	**TP21-39-06**	**TP21-39-04**	**QC Batch**	**TP21-40-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	N/A	10	<10	150	A342282	190	10	A341853
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	N/A	50	<50	190	A342282	310	50	A341853
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	N/A	50	<50	<50	A342282	54	50	A341853
Reached Baseline at C50	mg/kg	N/A	N/A	N/A	Yes	Yes	A342282	Yes	N/A	A341853
Physical Properties										
Moisture	%	41	N/A	0.30	17	9.1	A342274	12	0.30	A341991
Volatiles										
Xylenes (Total)	mg/kg	<0.12	N/A	0.12	0.52	0.10	A340815	0.082	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	<18	N/A	18	<10	<10	A340815	<10	10	A340815
Field Preserved Volatiles										
Benzene	mg/kg	0.16 (1)	0.16	0.013	0.079	<0.0050	A342607	<0.0050	0.0050	A342607
Toluene	mg/kg	2.3 (1)	2.2	0.13	0.10	0.11	A342607	0.072	0.050	A342607
Ethylbenzene	mg/kg	<0.010 (2)	<0.010	0.010	0.17	0.020	A342607	<0.010	0.010	A342607
m & p-Xylene	mg/kg	<0.11 (1)	<0.11	0.11	0.27	0.057	A342607	0.056	0.040	A342607
o-Xylene	mg/kg	<0.053 (1)	<0.053	0.053	0.24	0.044	A342607	0.026	0.020	A342607
F1 (C6-C10)	mg/kg	<18 (2)	<18	18	<10	<10	A342607	<10	10	A342607
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	97	97	N/A	98	97	A342607	95	N/A	A342607
4-Bromofluorobenzene (sur.)	%	105	103	N/A	102	102	A342607	102	N/A	A342607
D10-o-Xylene (sur.)	%	105	99	N/A	115	106	A342607	119	N/A	A342607
D4-1,2-Dichloroethane (sur.)	%	108	111	N/A	105	108	A342607	109	N/A	A342607
O-TERPHENYL (sur.)	%	N/A	N/A	N/A	102	107	A342282	100	N/A	A341853

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Detection limits raised based on sample weight used for analysis.
(2) Detection limit reported based on MDL and sample weight used for analysis.

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BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC346	AFC347	AFC348	AFC348		AFC349		
Sampling Date		2021/08/23 14:39	2021/08/23 14:45	2021/08/23 14:54	2021/08/23 14:54		2021/08/23 14:55		
COC Number		644511-44-01	644511-44-01	644511-44-01	644511-44-01		644511-44-01		
	UNITS	TP21-40-04	TP21-40-06	TP21-41-02	TP21-41-02 Lab-Dup	QC Batch	TP21-41-04	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	140	12	200	N/A	A341853	150	10	A342282
F3 (C16-C34 Hydrocarbons)	mg/kg	330	<50	400	N/A	A341853	290	50	A342282
F4 (C34-C50 Hydrocarbons)	mg/kg	76	<50	<50	N/A	A341853	<50	50	A342282
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	N/A	A341853	Yes	N/A	A342282
Physical Properties									
Moisture	%	13	18	13	13	A341991	11	0.30	A342274
Volatiles									
Xylenes (Total)	mg/kg	0.088	<0.045	<0.045	N/A	A340815	<0.045	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	11	<10	16	N/A	A340815	<10	10	A340815
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	N/A	A342607	<0.0050	0.0050	A342607
Toluene	mg/kg	0.090	<0.050	<0.050	N/A	A342607	0.11	0.050	A342607
Ethylbenzene	mg/kg	0.022	<0.010	<0.010	N/A	A342607	<0.010	0.010	A342607
m & p-Xylene	mg/kg	0.054	<0.040	<0.040	N/A	A342607	<0.040	0.040	A342607
o-Xylene	mg/kg	0.035	<0.020	<0.020	N/A	A342607	<0.020	0.020	A342607
F1 (C6-C10)	mg/kg	11	<10	16	N/A	A342607	<10	10	A342607
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	96	96	98	N/A	A342607	99	N/A	A342607
4-Bromofluorobenzene (sur.)	%	104	104	101	N/A	A342607	102	N/A	A342607
D10-o-Xylene (sur.)	%	113	109	97	N/A	A342607	93	N/A	A342607
D4-1,2-Dichloroethane (sur.)	%	109	108	105	N/A	A342607	107	N/A	A342607
O-TERPHENYL (sur.)	%	106	103	103	N/A	A341853	105	N/A	A342282

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC350		AFC380	AFC381	AFC383	AFC384		
Sampling Date		2021/08/23 14:56		2021/08/23 15:16	2021/08/23 15:17	2021/08/23 15:30	2021/08/23 15:31		
COC Number		644511-44-01		644511-45-01	644511-45-01	644511-45-01	644511-45-01		
	UNITS	TP21-41-05	QC Batch	TP21-51-01	TP21-51-03	TP21-52-01	TP21-52-03	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	A342282	170	290	37	52	10	A341906
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	A342282	300	450	100	130	50	A341906
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	A342282	<50	77	<50	<50	50	A341906
Reached Baseline at C50	mg/kg	N/A	A342282	Yes	Yes	Yes	Yes	N/A	A341906
Physical Properties									
Moisture	%	35	A342274	12	13	10	11	0.30	A341982
Volatiles									
Xylenes (Total)	mg/kg	0.18	A340815	<0.045	<0.045	<0.045	0.082	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	13	A340815	<10	<10	<10	<10	10	A340815
Field Preserved Volatiles									
Benzene	mg/kg	0.016	A342607	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	A342607
Toluene	mg/kg	0.22	A342607	<0.050	0.48	<0.050	0.085	0.050	A342607
Ethylbenzene	mg/kg	0.056	A342607	<0.010	<0.010	<0.010	0.018	0.010	A342607
m & p-Xylene	mg/kg	0.085	A342607	<0.040	<0.040	<0.040	0.054	0.040	A342607
o-Xylene	mg/kg	0.094	A342607	<0.020	0.031	<0.020	0.028	0.020	A342607
F1 (C6-C10)	mg/kg	13	A342607	<10	<10	<10	<10	10	A342607
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	97	A342607	102	98	97	97	N/A	A342607
4-Bromofluorobenzene (sur.)	%	102	A342607	86	103	103	102	N/A	A342607
D10-o-Xylene (sur.)	%	100	A342607	74	98	112	97	N/A	A342607
D4-1,2-Dichloroethane (sur.)	%	109	A342607	76	110	109	108	N/A	A342607
O-TERPHENYL (sur.)	%	N/A	A342282	106	109	95	96	N/A	A341906

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC386		AFC387	AFC387			AFC388		
Sampling Date		2021/08/23 10:39		2021/08/23 10:54	2021/08/23 10:54			2021/08/23 13:55		
COC Number		644511-45-01		644511-45-01	644511-45-01			644511-45-01		
	UNITS	DUP V	RDL	DUP W	DUP W Lab-Dup	RDL	QC Batch	DUP X	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	39	10	75 (1)	<29	29	A341906	990	10	A341853
F3 (C16-C34 Hydrocarbons)	mg/kg	73	50	470 (1)	280	140	A341906	480	50	A341853
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	50	<140 (1)	<140	140	A341906	55	50	A341853
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	Yes	N/A	A341906	Yes	N/A	A341853
Physical Properties										
Moisture	%	16	0.30	65	N/A	0.30	A341982	14	0.30	A341732
Volatiles										
Xylenes (Total)	mg/kg	<0.045	0.045	1.8	N/A	0.20	A340815	4.0	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	<10	10	<30	N/A	30	A340815	210	10	A340815
Field Preserved Volatiles										
Benzene	mg/kg	<0.0050	0.0050	<0.015 (2)	N/A	0.015	A342607	0.092	0.0050	A342607
Toluene	mg/kg	<0.050	0.050	5.7 (3)	N/A	0.22	A342607	1.6	0.050	A342607
Ethylbenzene	mg/kg	<0.010	0.010	0.22 (3)	N/A	0.044	A342607	0.64	0.010	A342607
m & p-Xylene	mg/kg	<0.040	0.040	0.99 (3)	N/A	0.18	A342607	2.3	0.040	A342607
o-Xylene	mg/kg	0.028	0.020	0.76 (3)	N/A	0.087	A342607	1.7	0.020	A342607
F1 (C6-C10)	mg/kg	<10	10	<30 (2)	N/A	30	A342607	210	10	A342607
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	98	N/A	98	N/A	N/A	A342607	100	N/A	A342607
4-Bromofluorobenzene (sur.)	%	102	N/A	102	N/A	N/A	A342607	101	N/A	A342607
D10-o-Xylene (sur.)	%	106	N/A	107	N/A	N/A	A342607	140	N/A	A342607
D4-1,2-Dichloroethane (sur.)	%	106	N/A	108	N/A	N/A	A342607	108	N/A	A342607
O-TERPHENYL (sur.)	%	95	N/A	88	92	N/A	A341906	104	N/A	A341853

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Detection limits raised due to high moisture content, sample contains => 50% moisture.
(2) Detection limit reported based on MDL and sample weight used for analysis.
(3) Detection limits raised based on sample weight used for analysis.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC389	AFC390		
Sampling Date		2021/08/23 15:45	2021/08/23		
COC Number		644511-45-01	644511-45-01		
	UNITS	DUP Y	TP21-22-02	RDL	QC Batch
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	800	10	A341853
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	660	50	A341853
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	120	50	A341853
Reached Baseline at C50	mg/kg	Yes	Yes	N/A	A341853
Physical Properties					
Moisture	%	14	23	0.30	A341732
Volatiles					
Xylenes (Total)	mg/kg	<0.045	1.1	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	<10	74	10	A340815
Field Preserved Volatiles					
Benzene	mg/kg	<0.0050	0.013	0.0050	A342607
Toluene	mg/kg	0.16	1.7	0.050	A342607
Ethylbenzene	mg/kg	<0.010	0.16	0.010	A342607
m & p-Xylene	mg/kg	<0.040	0.46	0.040	A342607
o-Xylene	mg/kg	<0.020	0.66	0.020	A342607
F1 (C6-C10)	mg/kg	<10	77	10	A342607
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	102	98	N/A	A342607
4-Bromofluorobenzene (sur.)	%	88	102	N/A	A342607
D10-o-Xylene (sur.)	%	78	115	N/A	A342607
D4-1,2-Dichloroethane (sur.)	%	75	106	N/A	A342607
O-TERPHENYL (sur.)	%	102	102	N/A	A341853

RDL = Reportable Detection Limit
N/A = Not Applicable

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BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		AFC309	AFC321	AFC323	AFC342	AFC350	AFC350		
Sampling Date		2021/08/23 10:52	2021/08/23 10:53	2021/08/23 10:58	2021/08/23 14:14	2021/08/23 14:56	2021/08/23 14:56		
COC Number		644511-42-01	644511-43-01	644511-43-01	644511-44-01	644511-44-01	644511-44-01		
	UNITS	**TP21-36-02**	**TP21-36-03**	**TP21-36-06**	**TP21-39-05**	**TP21-41-05**	**TP21-41-05 Lab-Dup**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	320	300	130	41	150 (1)	190	10	A342281
F3 (C16-C34 Hydrocarbons)	mg/kg	430	370	75	600	490	N/A	71	A340819
F3A (C16-C22)	mg/kg	270	190	75	57	150 (1)	160	50	A342281
F3B (C22-C34)	mg/kg	160	180	<50	540	340	450	50	A342281
F2% (BIC)	mg/kg	NC	NC	NC	7.0	31	N/A	N/A	A340819
F4 (C34-C50 Hydrocarbons)	mg/kg	53	64	<50	190	94	180	50	A342281
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A342281
Surrogate Recovery (%)									
O-TERPHENYL (sur.)	%	101	93	93	92	94	98	N/A	A342281

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Matrix spike exceeds acceptance limits due to matrix interference.

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GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C
Package 2	0.7°C
Package 3	0.0°C
Package 4	1.3°C
Package 5	1.0°C
Package 6	4.0°C
Package 7	0.0°C
Package 8	-1.0°C
Package 9	0.0°C
Package 10	1.3°C
Package 11	0.7°C

Version #3: Report reissued to include results for missing F2 data on sample TP21-39-05 (AFC342) 20210915

Sample AFC301 [TP21-02-02] : Sample received was not in compliance with CCME sampling requirements for VOC/BTEX/F1 in soil. Sample was analyzed past method specified hold time for CCME Hydrocarbons (F2-F4 in soil).

Sample AFC350 [TP21-41-05] : Sample was analyzed past method specified hold time for CCME Hydrocarbons (F2-F4)+F3A/B in soil.

Sample AFC382 [TP21-51-06] : Sample received was not in compliance with CCME sampling requirements for VOC/BTEX/F1 in soil.

Sample AFC385 [TP21-52-05] : Sample received was not in compliance with CCME sampling requirements for VOC/BTEX/F1 in soil.

Results relate only to the items tested.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A341732	KLG	Method Blank	Moisture	2021/09/04	<0.30		%	
A341732	KLG	RPD	Moisture	2021/09/04	6.2		%	20
A341853	MHF	Matrix Spike	O-TERPHENYL (sur.)	2021/09/05		120	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05		111	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/05		104	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/05		102	%	60 - 140
A341853	MHF	Spiked Blank	O-TERPHENYL (sur.)	2021/09/05		129	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05		119	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/05		111	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/05		109	%	60 - 140
A341853	MHF	Method Blank	O-TERPHENYL (sur.)	2021/09/05		98	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/05	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/05	<50		mg/kg	
A341853	MHF	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/05	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/05	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/05	NC		%	40
A341906	MHF	Matrix Spike [AFC387-01]	O-TERPHENYL (sur.)	2021/09/05		107	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05		78	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/05		71	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/05		87	%	60 - 140
A341906	MHF	Spiked Blank	O-TERPHENYL (sur.)	2021/09/05		114	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05		95	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/05		95	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/05		97	%	60 - 140
A341906	MHF	Method Blank	O-TERPHENYL (sur.)	2021/09/05		94	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/05	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/05	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/05	<50		mg/kg	
A341906	MHF	RPD [AFC387-01]	F2 (C10-C16 Hydrocarbons)	2021/09/07	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/07	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/07	NC		%	40
A341982	KLG	Method Blank	Moisture	2021/09/04	<0.30		%	
A341982	KLG	RPD	Moisture	2021/09/04	3.6		%	20
A341991	WLE	Method Blank	Moisture	2021/09/04	<0.30		%	
A341991	WLE	RPD [AFC348-01]	Moisture	2021/09/04	0.78		%	20
A342274	ARV	Method Blank	Moisture	2021/09/05	<0.30		%	
A342274	ARV	RPD	Moisture	2021/09/05	8.6		%	20
A342276	ARV	Method Blank	Moisture	2021/09/05	<0.30		%	
A342276	ARV	RPD [AFC322-01]	Moisture	2021/09/05	2.7		%	20
A342281	MHF	Matrix Spike [AFC350-01]	O-TERPHENYL (sur.)	2021/09/07		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		56 (1)	%	60 - 140
			F3A (C16-C22)	2021/09/07		52 (1)	%	60 - 140
			F3B (C22-C34)	2021/09/07		83	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		85	%	60 - 140
A342281	MHF	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		101	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		91	%	60 - 140
			F3A (C16-C22)	2021/09/07		84	%	60 - 140
			F3B (C22-C34)	2021/09/07		85	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		83	%	60 - 140
A342281	MHF	Method Blank	O-TERPHENYL (sur.)	2021/09/07		98	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3A (C16-C22)	2021/09/07	<50		mg/kg	
			F3B (C22-C34)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342281	MHF	RPD [AFC350-01]	F2 (C10-C16 Hydrocarbons)	2021/09/07	22		%	40
			F3A (C16-C22)	2021/09/07	5.2		%	40
			F3B (C22-C34)	2021/09/07	27		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/07	NC		%	40
A342282	GG3	Matrix Spike	O-TERPHENYL (sur.)	2021/09/07		113	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		95	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		96	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		96	%	60 - 140
A342282	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		107	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		88	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		87	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		89	%	60 - 140
A342282	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/07		95	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342282	GG3	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/08	18		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/08	26		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/08	27		%	40
A342301	GG3	Matrix Spike [AFC305-01]	O-TERPHENYL (sur.)	2021/09/07		105	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		NC	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		90	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		94	%	60 - 140
A342301	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/07		115	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07		96	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/07		101	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/07		94	%	60 - 140
A342301	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/07		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/07	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/07	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/07	<50		mg/kg	
A342301	GG3	RPD [AFC305-01]	F2 (C10-C16 Hydrocarbons)	2021/09/07	6.7		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/07	13		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/07	15		%	40
A342606	DO1	Matrix Spike [AFC300-02]	1,4-Difluorobenzene (sur.)	2021/09/07		90	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		103	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		99	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		106	%	50 - 140
			Benzene	2021/09/07		92	%	50 - 140
			Toluene	2021/09/07		91	%	50 - 140
			Ethylbenzene	2021/09/07		100	%	50 - 140
			m & p-Xylene	2021/09/07		96	%	50 - 140
			o-Xylene	2021/09/07		100	%	50 - 140
			F1 (C6-C10)	2021/09/07		94	%	60 - 140
A342606	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/07		85	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		90	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		81	%	50 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D4-1,2-Dichloroethane (sur.)	2021/09/07		100	%	50 - 140
			Benzene	2021/09/07		76	%	60 - 130
			Toluene	2021/09/07		82	%	60 - 130
			Ethylbenzene	2021/09/07		86	%	60 - 130
			m & p-Xylene	2021/09/07		83	%	60 - 130
			o-Xylene	2021/09/07		76	%	60 - 130
			F1 (C6-C10)	2021/09/07		100	%	60 - 140
A342606	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/07		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		100	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		99	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		105	%	50 - 140
			Benzene	2021/09/07	<0.0050		mg/kg	
			Toluene	2021/09/07	<0.050		mg/kg	
			Ethylbenzene	2021/09/07	<0.010		mg/kg	
			m & p-Xylene	2021/09/07	<0.040		mg/kg	
			o-Xylene	2021/09/07	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/07	<10		mg/kg	
A342606	DO1	RPD [AFC300-02]	Benzene	2021/09/07	NC		%	50
			Toluene	2021/09/07	NC		%	50
			Ethylbenzene	2021/09/07	NC		%	50
			m & p-Xylene	2021/09/07	NC		%	50
			o-Xylene	2021/09/07	NC		%	50
			F1 (C6-C10)	2021/09/07	NC		%	30
A342607	DO1	Matrix Spike [AFC342-02]	1,4-Difluorobenzene (sur.)	2021/09/07		89	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		101	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		101	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		104	%	50 - 140
			Benzene	2021/09/07		93	%	50 - 140
			Toluene	2021/09/07		92	%	50 - 140
			Ethylbenzene	2021/09/07		102	%	50 - 140
			m & p-Xylene	2021/09/07		96	%	50 - 140
			o-Xylene	2021/09/07		100	%	50 - 140
			F1 (C6-C10)	2021/09/07		99	%	60 - 140
A342607	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/07		83	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		91	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		83	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		102	%	50 - 140
			Benzene	2021/09/07		79	%	60 - 130
			Toluene	2021/09/07		86	%	60 - 130
			Ethylbenzene	2021/09/07		88	%	60 - 130
			m & p-Xylene	2021/09/07		87	%	60 - 130
			o-Xylene	2021/09/07		79	%	60 - 130
			F1 (C6-C10)	2021/09/07		98	%	60 - 140
A342607	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/07		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/07		103	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/07		82	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/07		104	%	50 - 140
			Benzene	2021/09/07	<0.0050		mg/kg	
			Toluene	2021/09/07	<0.050		mg/kg	
			Ethylbenzene	2021/09/07	<0.010		mg/kg	
			m & p-Xylene	2021/09/07	<0.040		mg/kg	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o-Xylene	2021/09/07	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/07	<10		mg/kg	
A342607	DO1	RPD [AFC342-02]	Benzene	2021/09/07	0.48		%	50
			Toluene	2021/09/07	5.9		%	50
			Ethylbenzene	2021/09/07	NC		%	50
			m & p-Xylene	2021/09/07	NC		%	50
			o-Xylene	2021/09/07	NC		%	50
			F1 (C6-C10)	2021/09/07	NC		%	30
A343327	PKL	Matrix Spike	1,4-Difluorobenzene (sur.)	2021/09/08		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		101	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		114	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		102	%	50 - 140
			Benzene	2021/09/08		111	%	50 - 140
			Toluene	2021/09/08		115	%	50 - 140
			Ethylbenzene	2021/09/08		118	%	50 - 140
			m & p-Xylene	2021/09/08		119	%	50 - 140
			o-Xylene	2021/09/08		119	%	50 - 140
			F1 (C6-C10)	2021/09/08		93	%	60 - 140
A343327	PKL	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/08		99	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		104	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		105	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		107	%	50 - 140
			Benzene	2021/09/08		102	%	60 - 130
			Toluene	2021/09/08		96	%	60 - 130
			Ethylbenzene	2021/09/08		84	%	60 - 130
			m & p-Xylene	2021/09/08		87	%	60 - 130
			o-Xylene	2021/09/08		76	%	60 - 130
			F1 (C6-C10)	2021/09/08		84	%	60 - 140
A343327	PKL	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/08		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/08		100	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/08		104	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/08		105	%	50 - 140
			Benzene	2021/09/08	<0.0050		mg/kg	
			Toluene	2021/09/08	<0.050		mg/kg	
			Ethylbenzene	2021/09/08	<0.010		mg/kg	
			m & p-Xylene	2021/09/08	<0.040		mg/kg	
			o-Xylene	2021/09/08	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/08	<10		mg/kg	
A343327	PKL	RPD	Benzene	2021/09/08	NC		%	50
			Toluene	2021/09/08	NC		%	50
			Ethylbenzene	2021/09/08	NC		%	50
			m & p-Xylene	2021/09/08	NC		%	50
			o-Xylene	2021/09/08	NC		%	50
			F1 (C6-C10)	2021/09/08	NC		%	40
A346245	RIL	Method Blank	Moisture	2021/09/09	<0.30		%	
A346245	RIL	RPD	Moisture	2021/09/09	3.4		%	20
A346257	EC0	Matrix Spike	O-TERPHENYL (sur.)	2021/09/09		88	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/09		86	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/09		84	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/09		80	%	60 - 140
A346257	EC0	Spiked Blank	O-TERPHENYL (sur.)	2021/09/09		90	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F2 (C10-C16 Hydrocarbons)	2021/09/09		84	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/09		87	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/09		81	%	60 - 140
A346257	EC0	Method Blank	O-TERPHENYL (sur.)	2021/09/09		91	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/09	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/09	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/09	<50		mg/kg	
A346257	EC0	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/09	12		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/09	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/09	NC		%	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

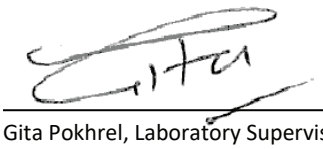
Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C164989
Report Date: 2021/09/15

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

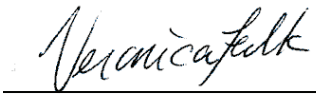
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Gita Pokhrel, Laboratory Supervisor

Janet Gao, B.Sc., QP, Supervisor, Organics



Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas Laboratories
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65

CHAIN OF CUSTODY RECORD

Page 1/4

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #: C164989	Bottle Order #: 644511
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		
Address:	2800, 700 -2nd Street SW	Address:	2800, 700 -2nd Street SW	Project:	20368099-6000-1001		
	CALGARY AB T2P 2W2		CALGARY AB T2P 2W2	Project Name:		COC #: C#644511-42-01	Project Manager: Carmen McKay
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Site #:			
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	~~ATI~~ Regulated Metals - Soils	~~ATI~~ BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-01-02	23AUG/21	947	SOIL			✓									3	
2		TP21-02-02		959				✓									3	
3		TP21-02-03		1001				✓									3	
4		TP21-03-01		10:10				✓									3	
5		TP21-03-03		10:11				✓									3	
6		TP21-03-06		10:23				✓									3	
7		TP21-35-02		10:33				✓									3	
8		TP21-35-04		10:34				✓									3	
9		TP21-35-05		10:39				✓									3	
10		TP21-36-02		10:52				✓	✓								3	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

Received in Yellowknife
By: J. MacLatchy
@ 8:25 am
AUG 31 2021
PM. See ACTR
Temp: / /

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Laboratory Use Only: Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
A Bellavance	21/08/24	8:30	Jan Dawit Kibreab	2021/09/01	15:00		[ ]	See ACTR	[ ] Yes [ ] No

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #: C1649 89	Bottle Order #: 644511
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		
Address:	2800, 700 -2nd Street SW	Address:	2800, 700 -2nd Street SW	Project:	20368099-6000-1001	COC #: C#644511-43-01	Project Manager: Carmen McKay
	CALGARY AB T2P 2W2		CALGARY AB T2P 2W2	Project Name:			
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Site #:			
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	~~AT1~~ Regulated Metals - Soils	~~AT1~~ BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-36-03	23AUG21	1053	SOIL			✓	✓								3	
2		TP21-36-05		1054				✓									3	
3		TP21-36-06		1058				✓	✓								3	
4		TP21-37-01		1115				✓									3	Received in Yellowknife
5		TP21-37-04		1116				✓									3	By: J. Mercier @ 8:30 AM
6		TP21-37-06		1117				✓									3	AUG 31 2021
7		TP21-38-03		1346				✓									3	see ACTR
8		TP21-38-04		1347				✓									3	Temp: / /
9		TP21-38-05		1355				✓									3	
10		TP21-38-07		1402				✓									3	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
A. Bellavance	21/08/24	8:30	Dawit Kibreab	2021/09/01	15:10		[ ]	See ACTR	[ ] Yes [ ] No

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #: C16 4989	Bottle Order #: 644511
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001		
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:		COC #: C#644511-44-01	Project Manager: Carmen McKay
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

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Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	ANALYSIS REQUESTED (PLEASE BE SPECIFIC): ~~AT~~ Regulated Metals - Soils	~~AT~~ BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-39-03	23AUG21	1410	SOIL			✓								3	
2		TP21-39-05		1414				✓	✓							3	
3		TP21-39-06		1415				✓								3	
4		TP21-39-04		1411				✓								3	Received in Yellowknife
5		TP21-40-02		1438				✓								3	By: J.Mercano
6		TP21-40-04		1439				✓								3	@ 8:20 AM
7		TP21-40-06		1445				✓								3	AUG 31 2021
8		TP21-41-02		1454				✓								3	
9		TP21-41-04		1455				✓								3	Temp: / /
10		TP21-41-05		1456				✓	✓							3	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
A.Belavance	21/08/24	8:30	@ Dawit Kibreab	2021/09/01	15:10		[ ]	See ACTR	[ ] Yes [ ] No

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CHAIN OF CUSTODY RECORD

Page 4/4

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #: C164989	Bottle Order #: 644511
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001		
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:		COC #: C#644511-45-01	Project Manager: Carmen McKay
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	~~ATI~~ Regulated Metals - Soils	~~ATI~~ BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-51-01	~~03~~AUG/21	1516	SOIL			✓									3	
2		TP21-51-03		1517				✓									3	
3		TP21-51-06		1518				✓									3	
4		TP21-52-01		1530				✓									3	Received in Yellowknife
5		TP21-52-03		1531				✓									3	By: J. McCann @ 8:30 am
6		TP21-52-05		1545				✓									3	AUG 31 2021
7		~~TP21~~ DUP V		1039				✓									3	
8		~~TP21~~ DUP W		1054				✓									3	Temp: / /
9		~~TP21~~ DUP X		1355				✓									3	
10		~~TP21~~ DUP Y		1545				✓									3	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
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Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Aseela, A. Bellavance	21/08/24	8:30	Dawit Kibreab	2021/08/01	15:10		[ ]	See ACTR	[ ] Yes [ ] No

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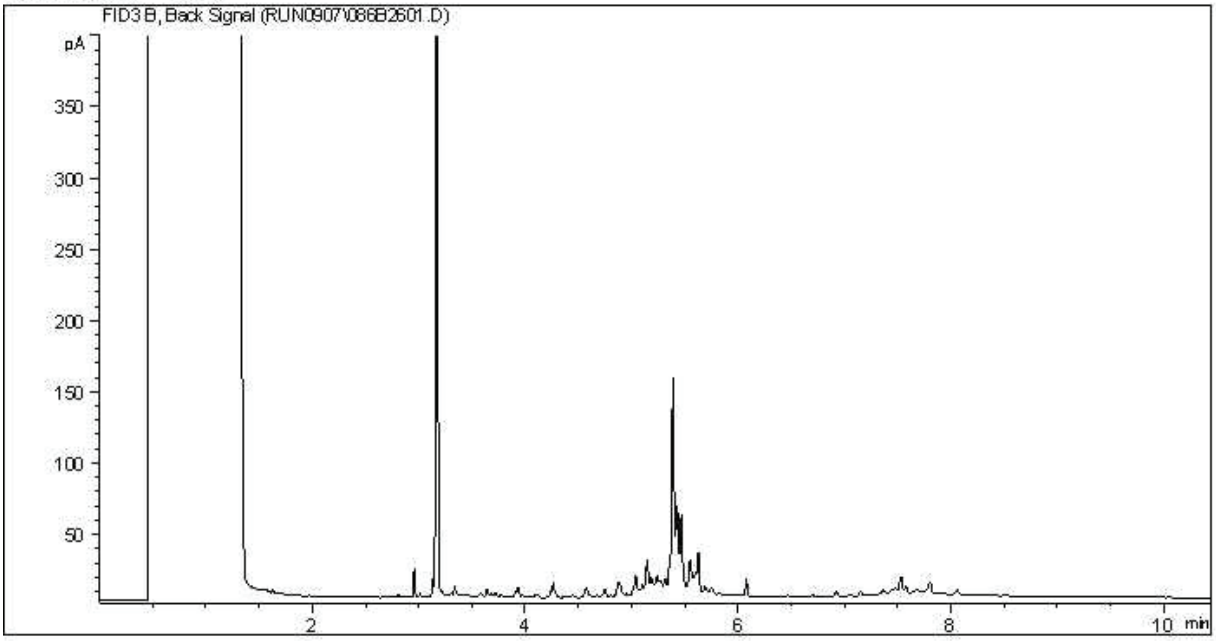
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: BV Labs Yellow: Client

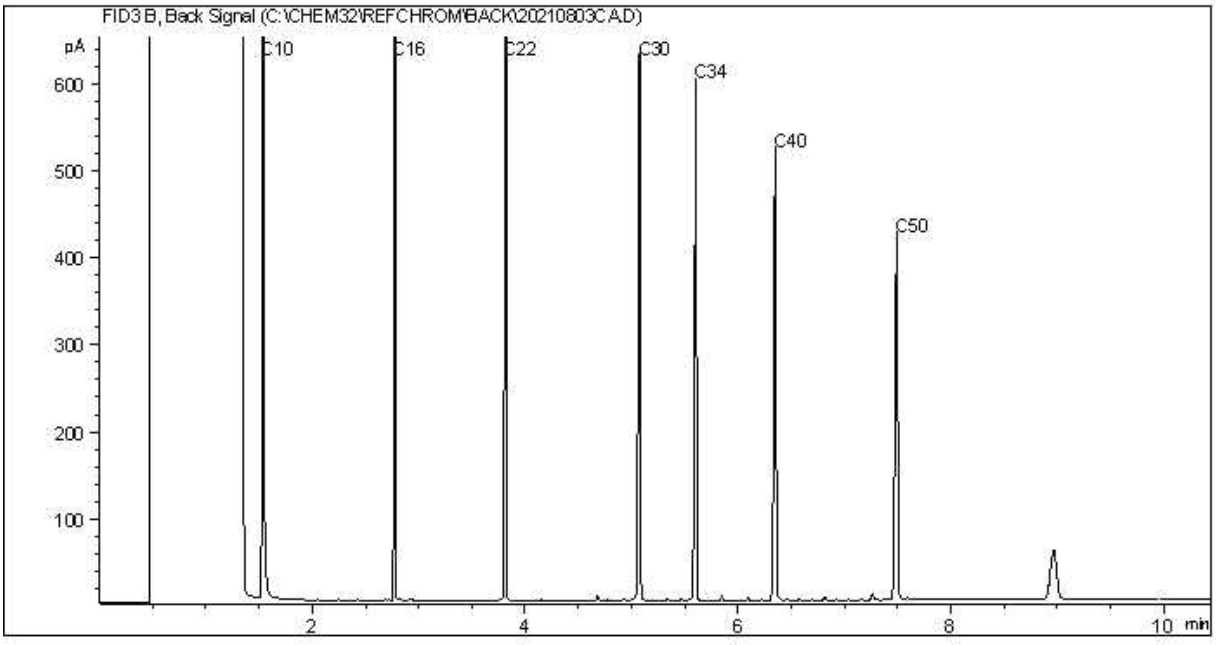
Bureau Veritas Canada (2019) Inc.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



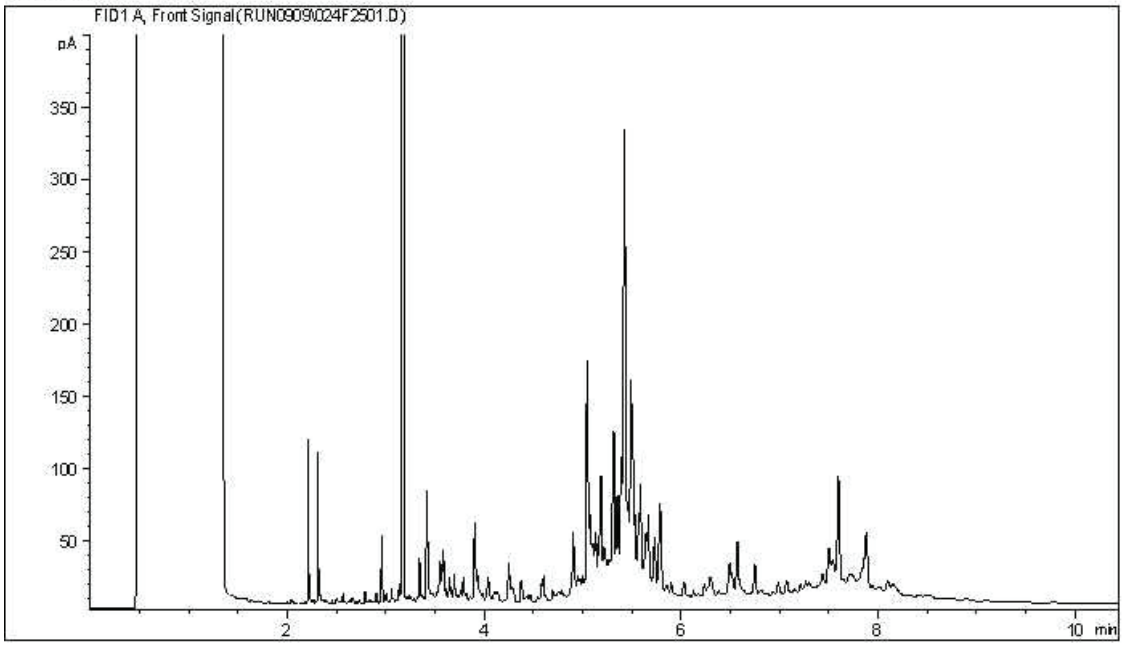
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

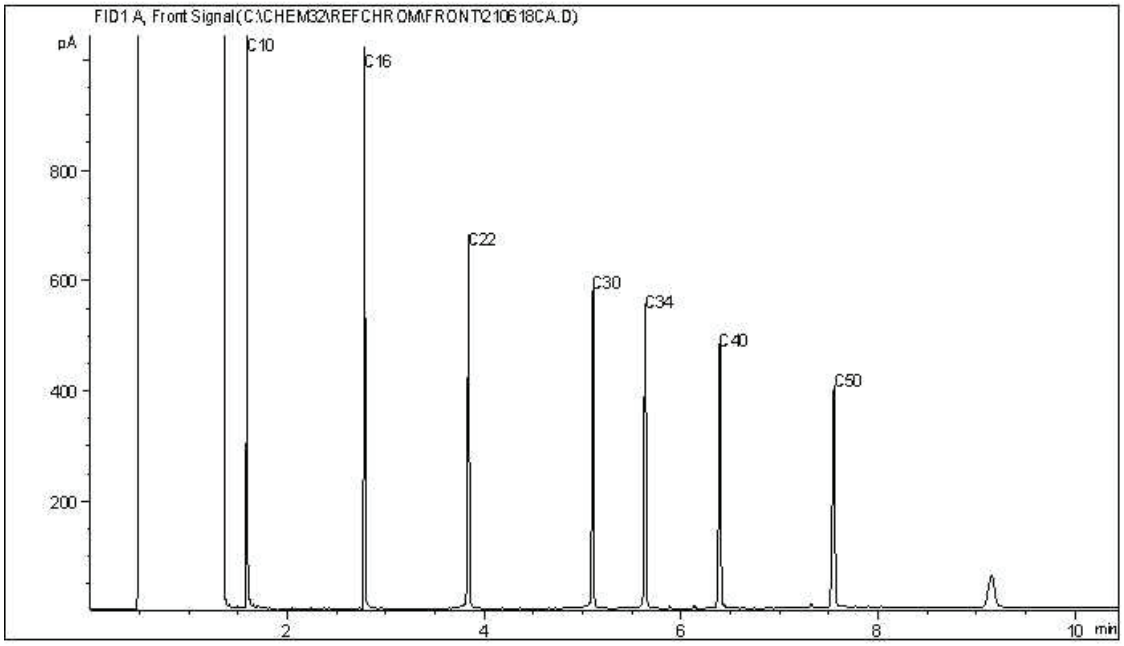
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



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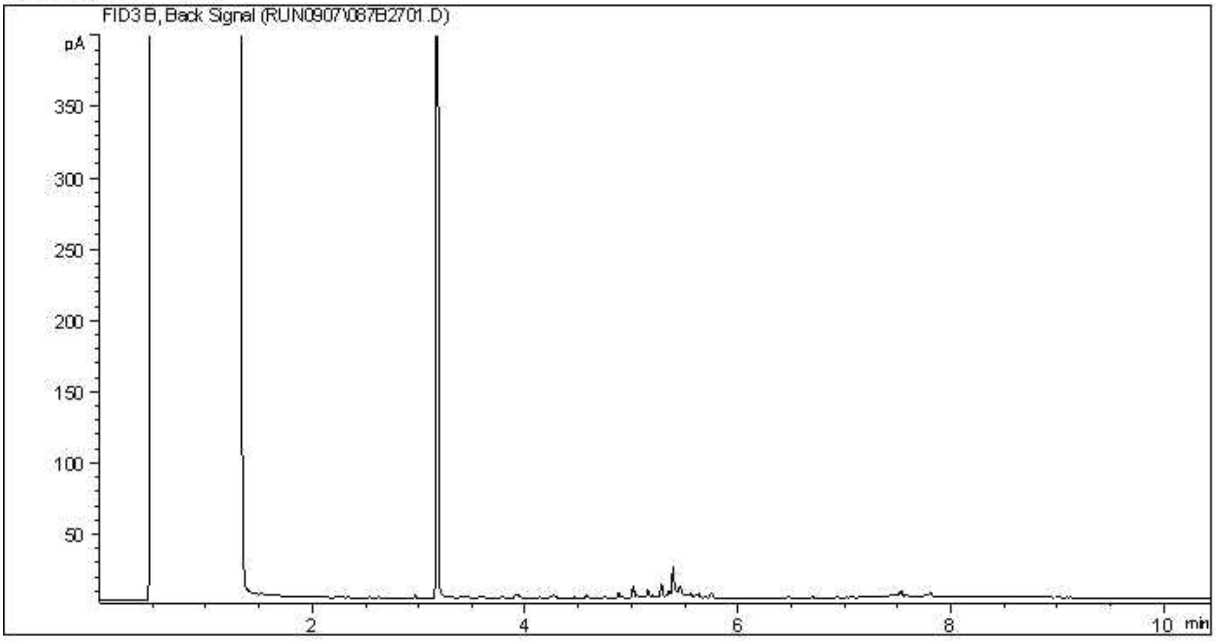
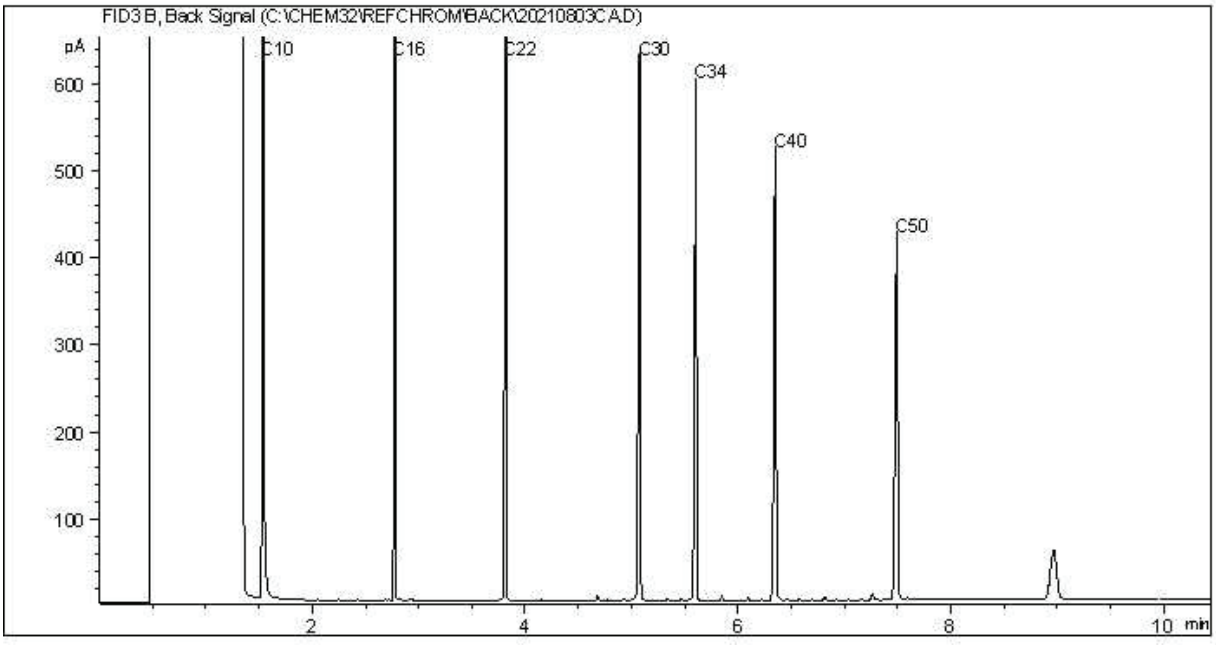
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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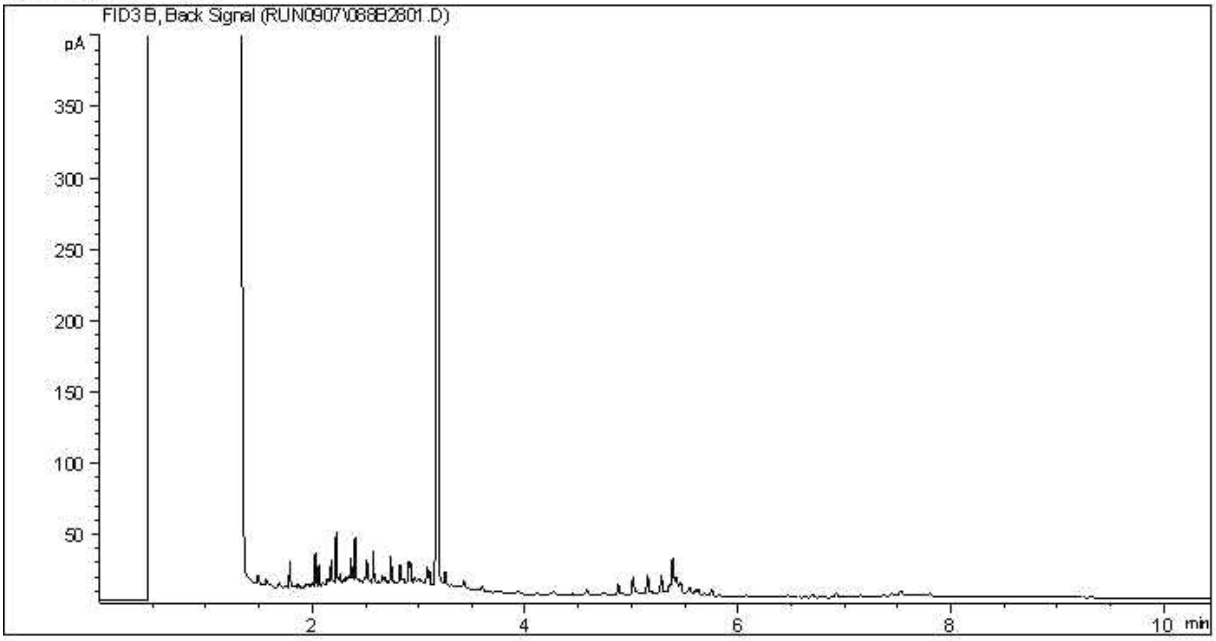
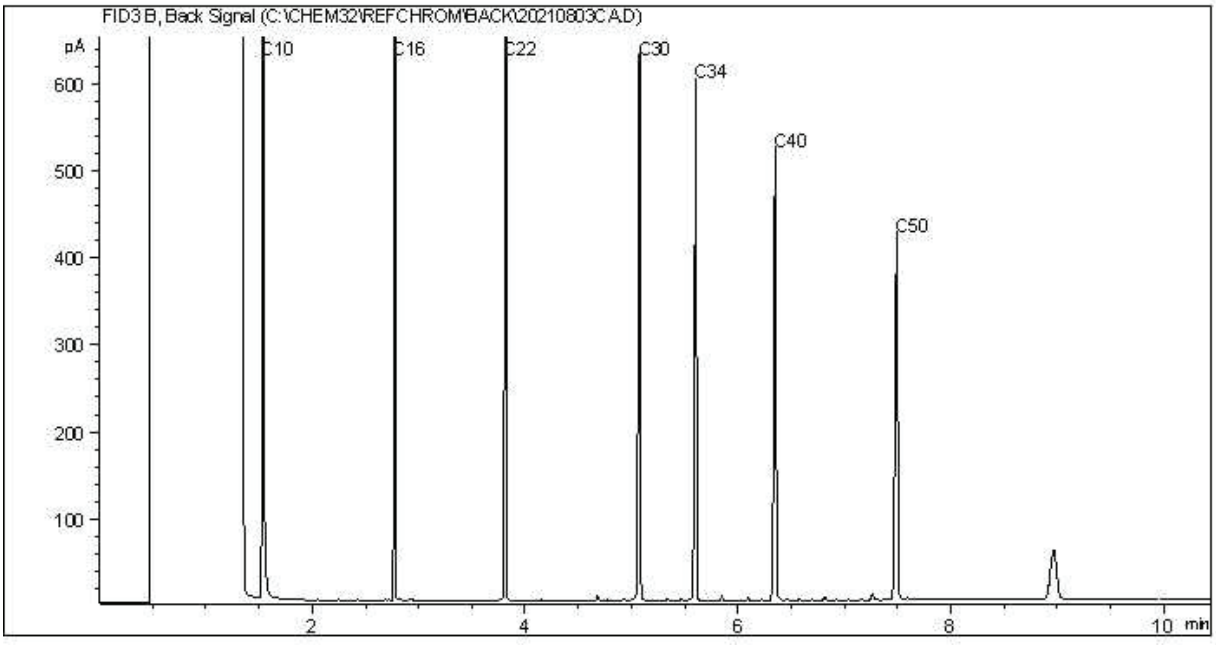
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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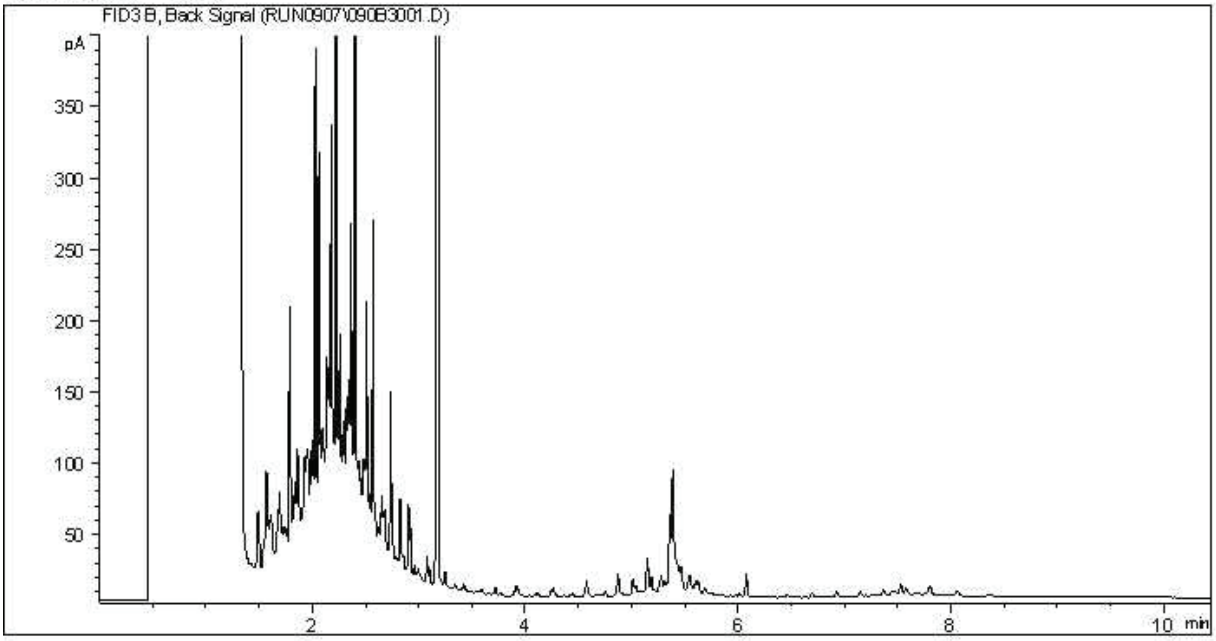
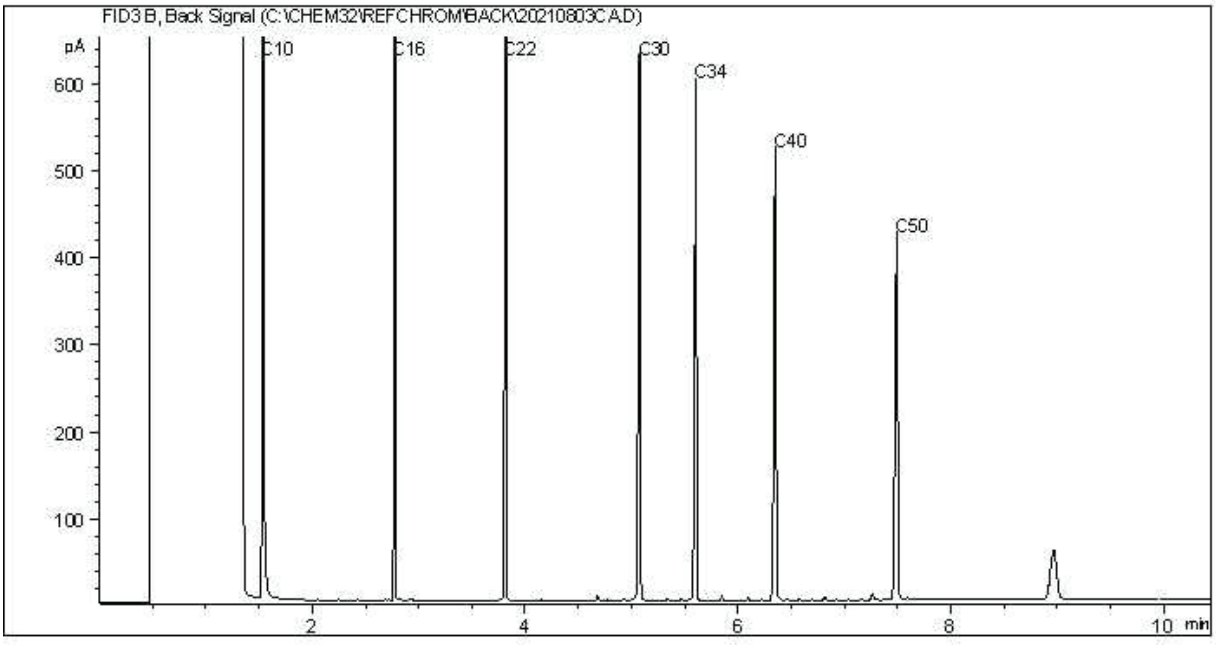
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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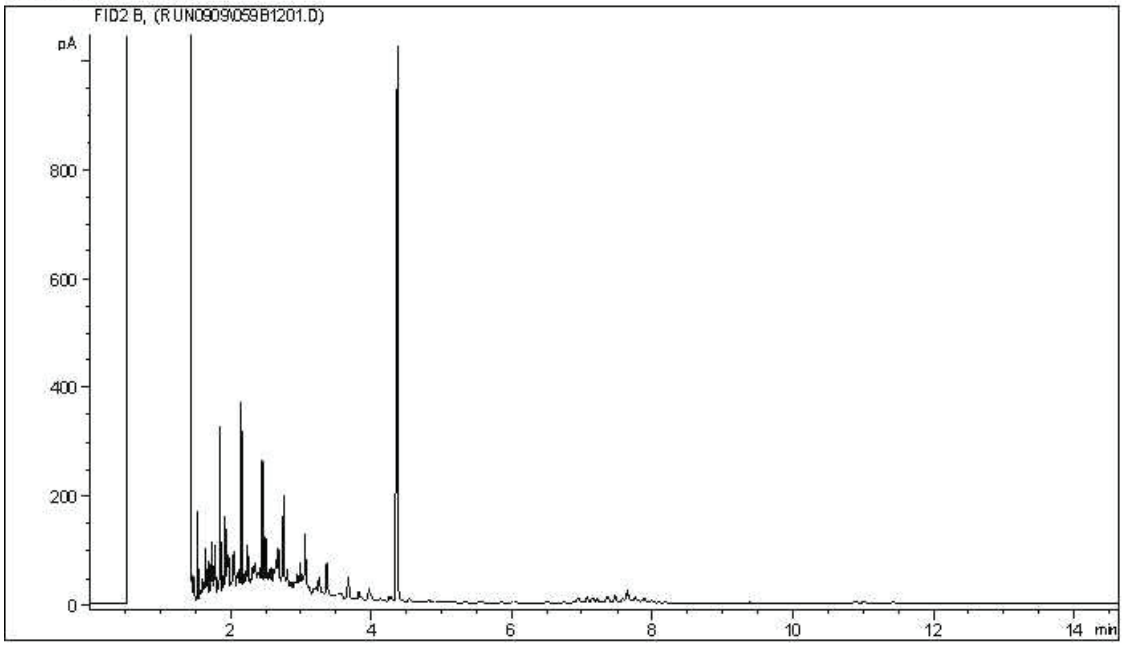
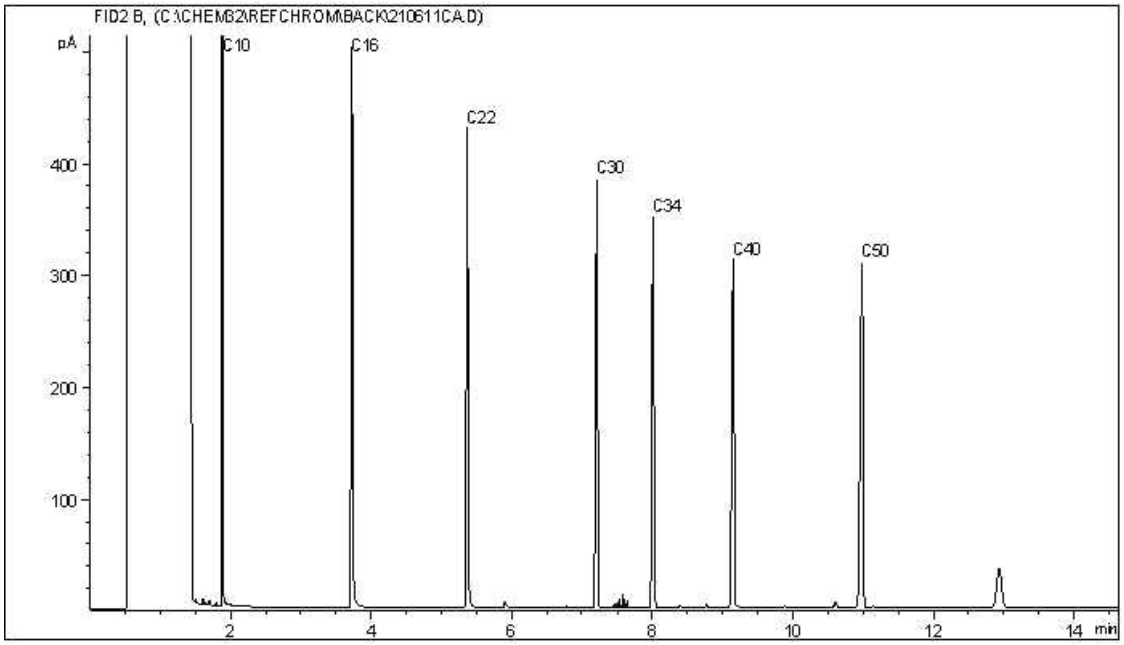
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



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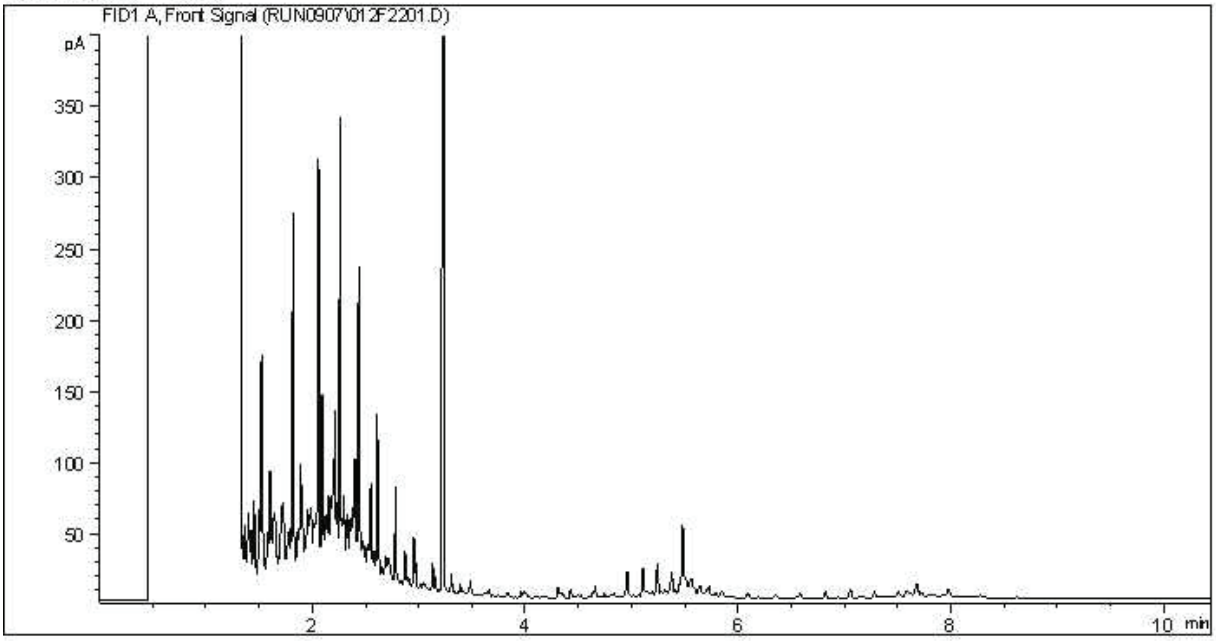
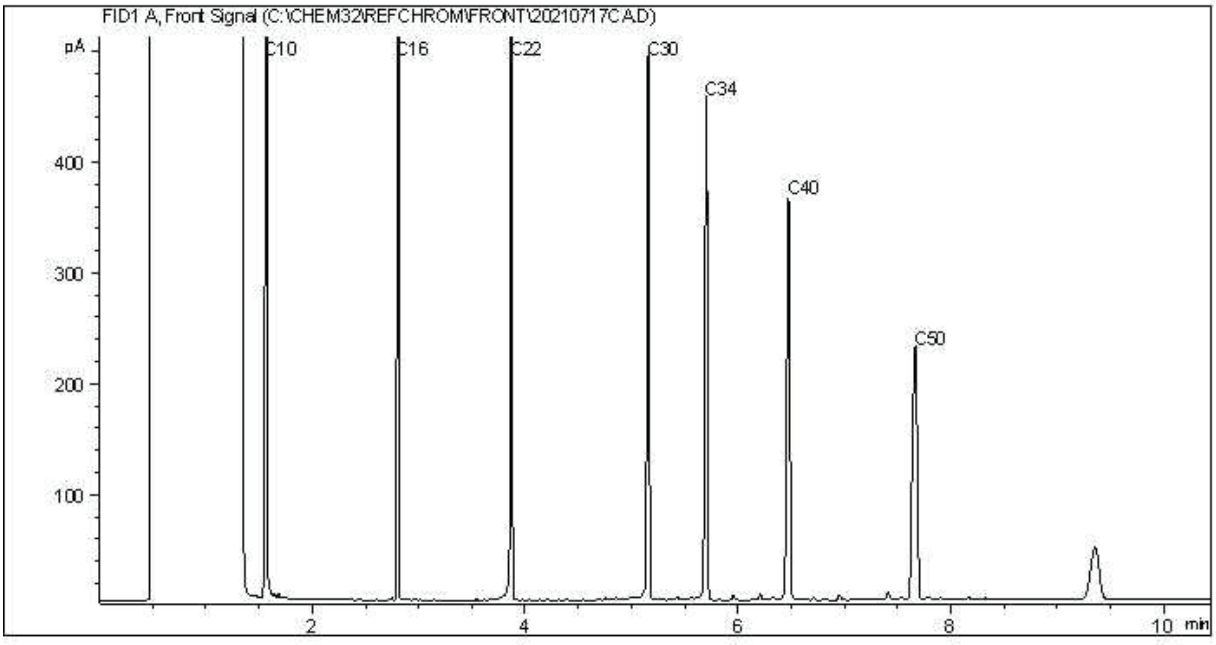
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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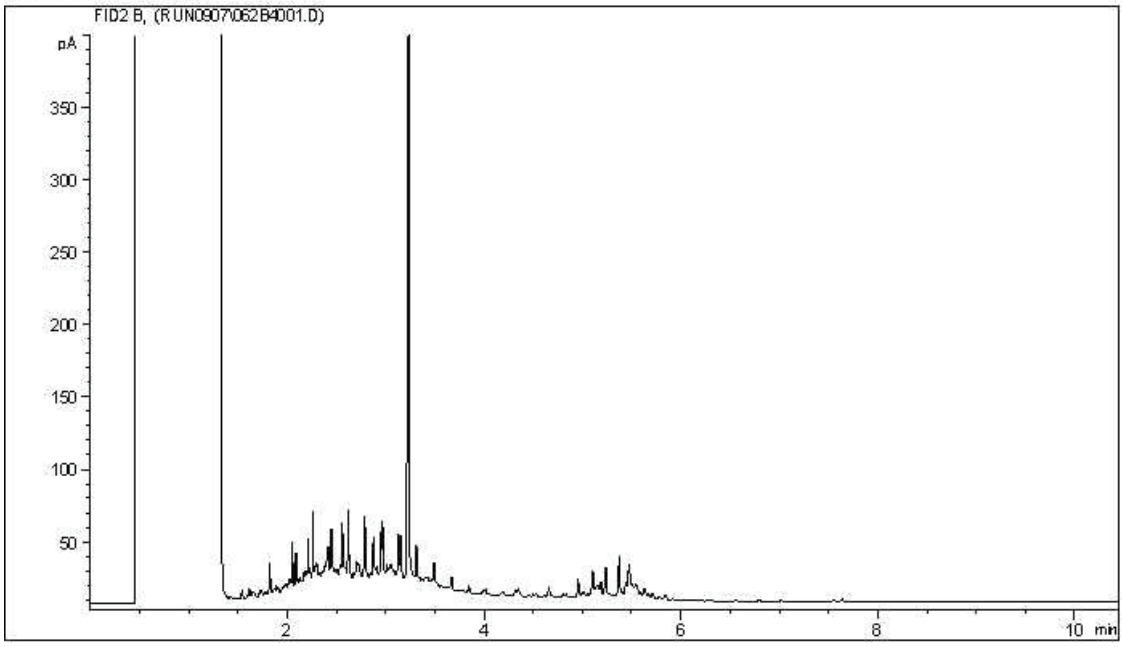
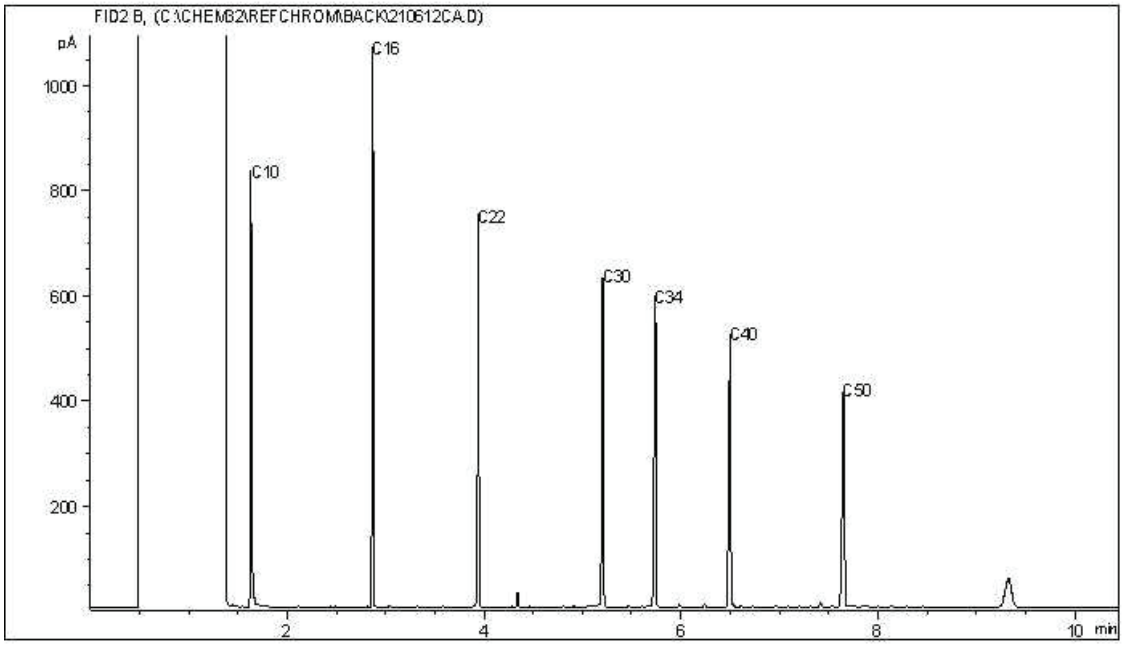
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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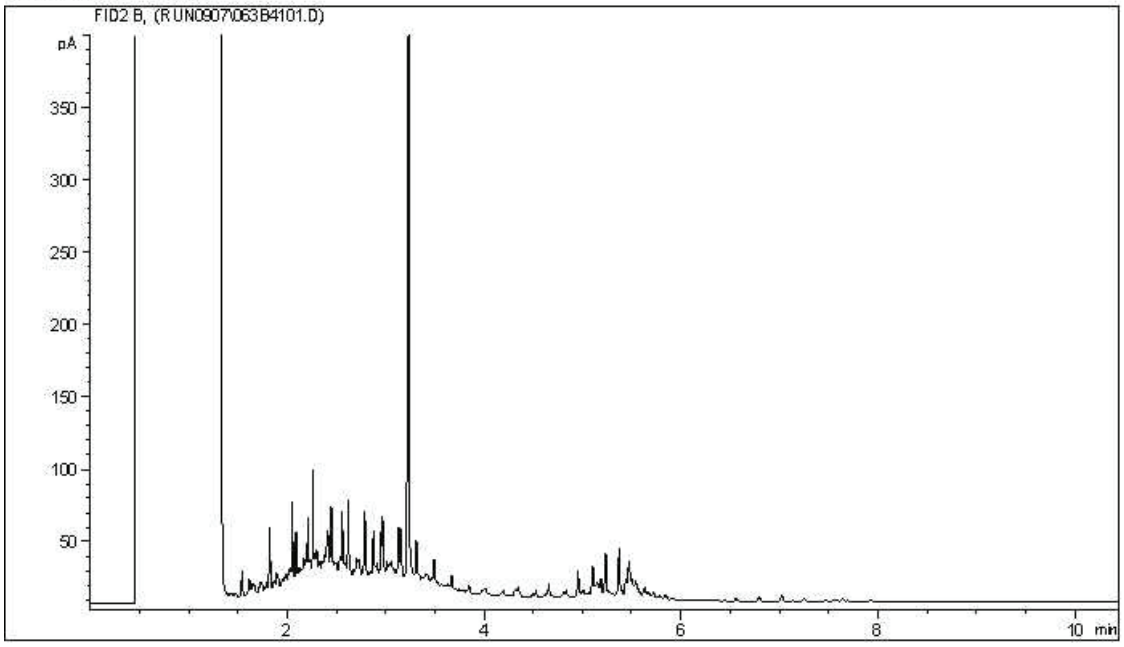
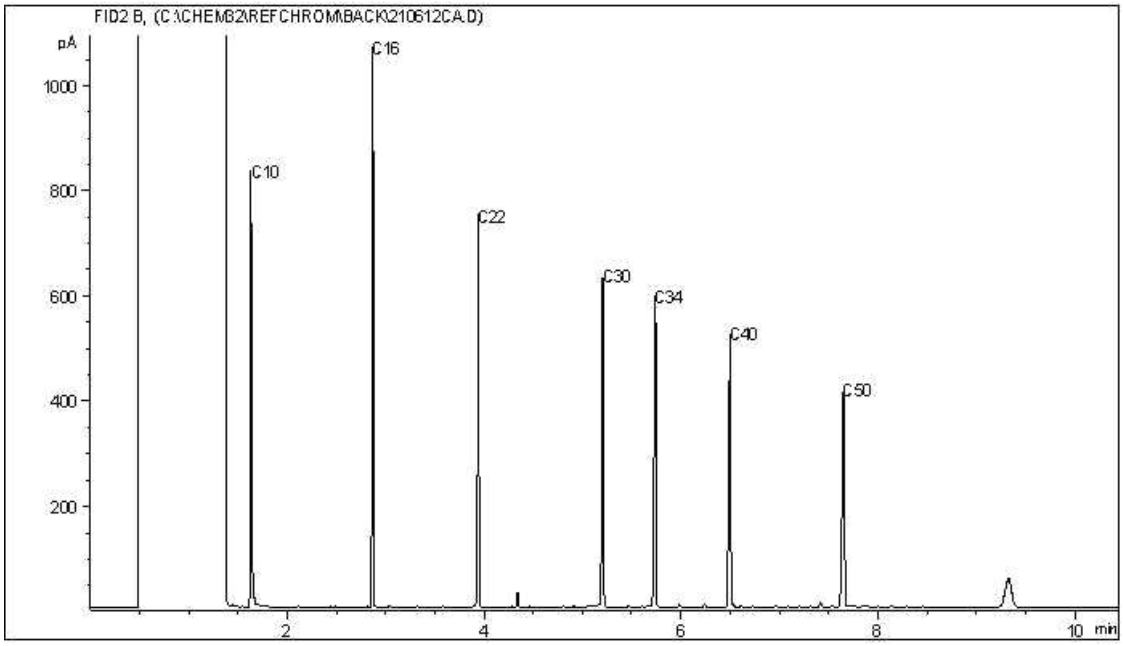
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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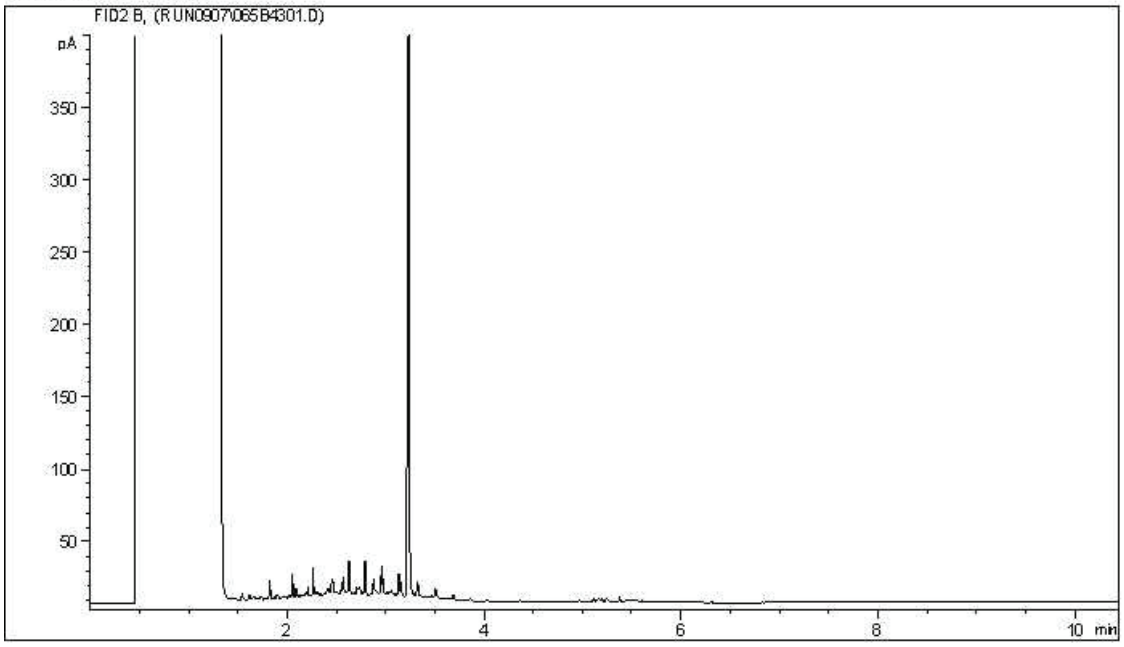
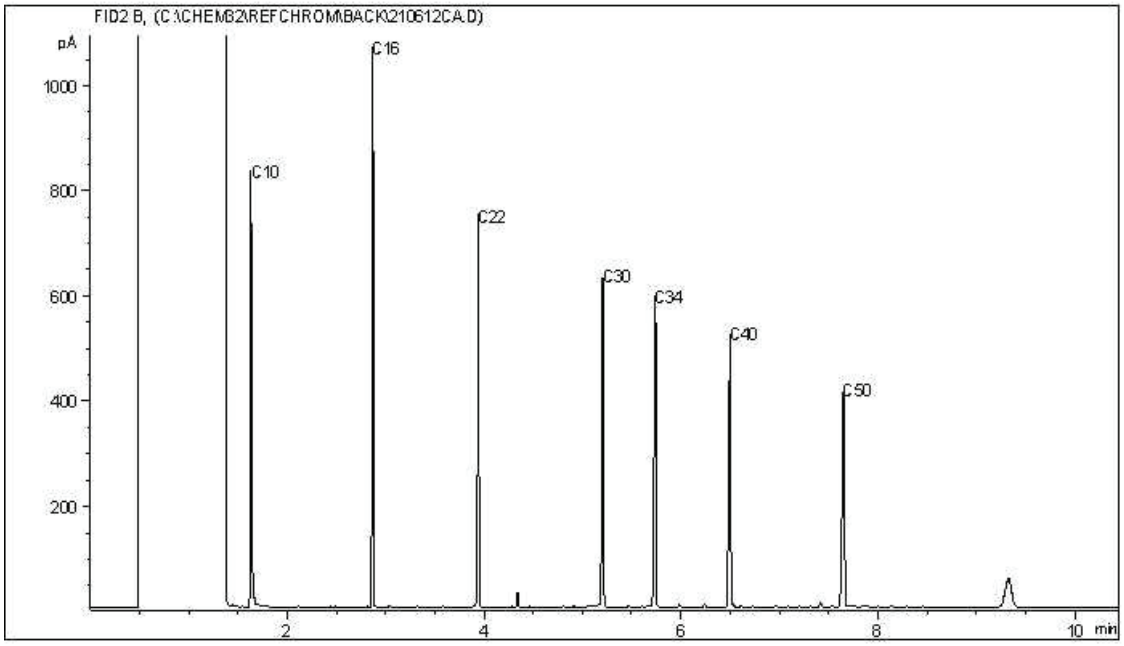
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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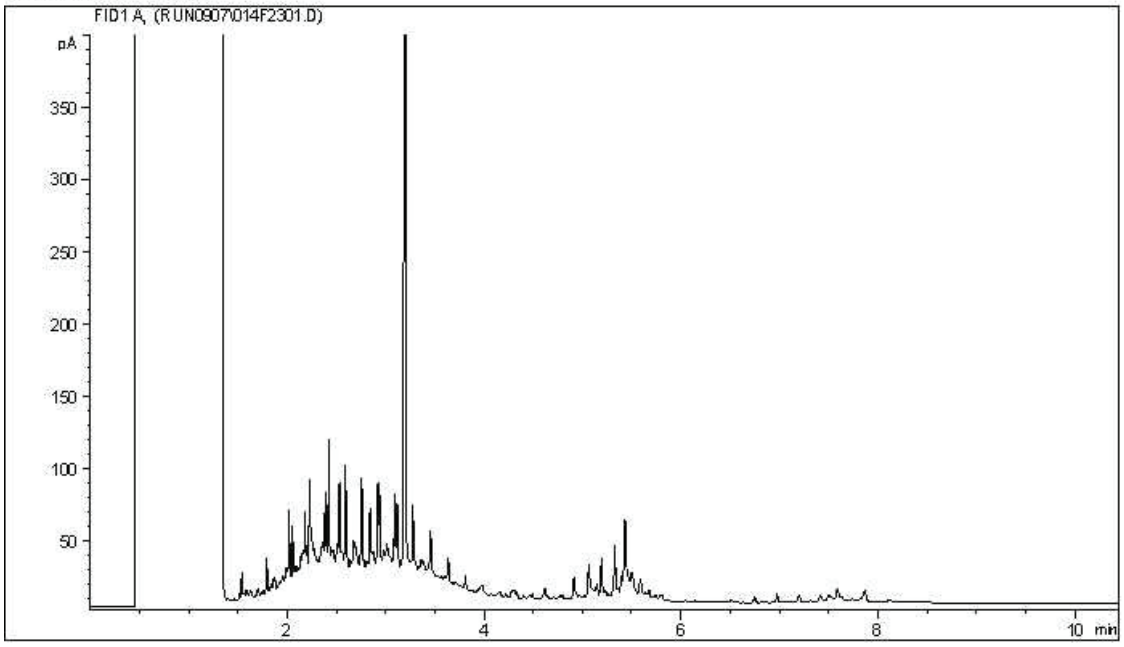
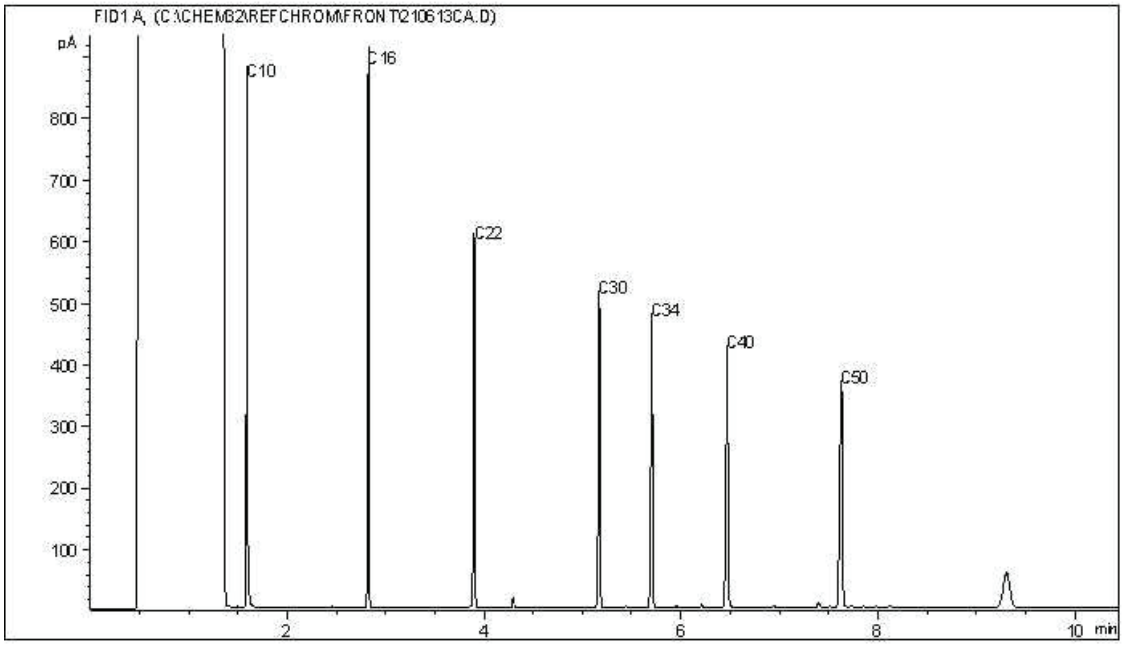
CCME Hydrocarbons (F2-F4)+F3A/B in soil Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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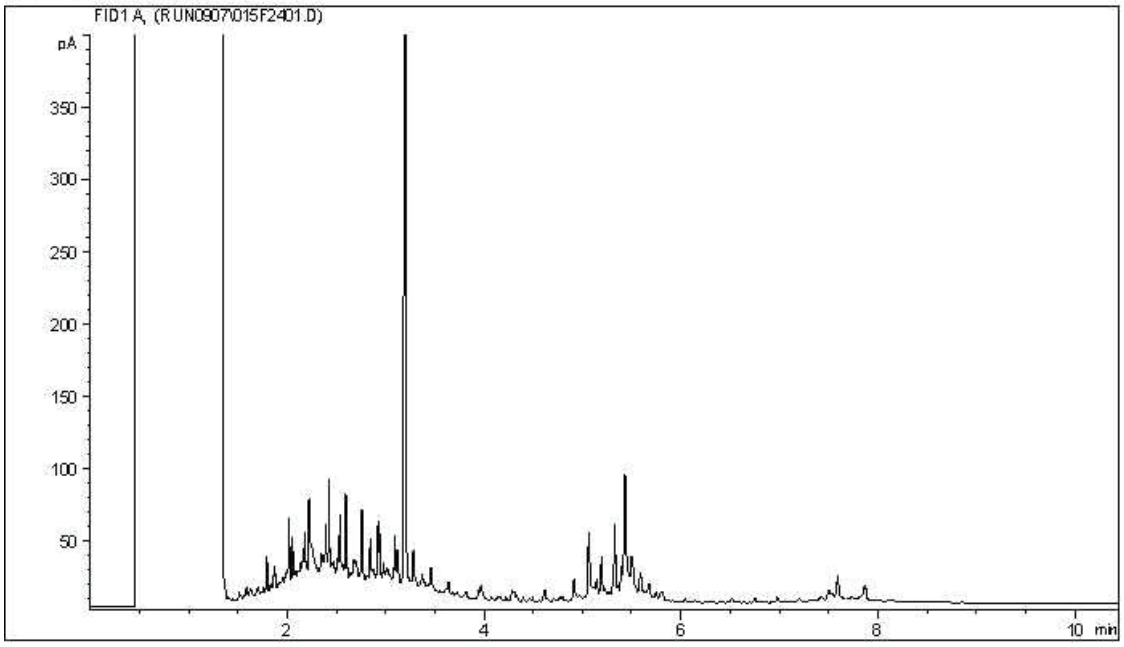
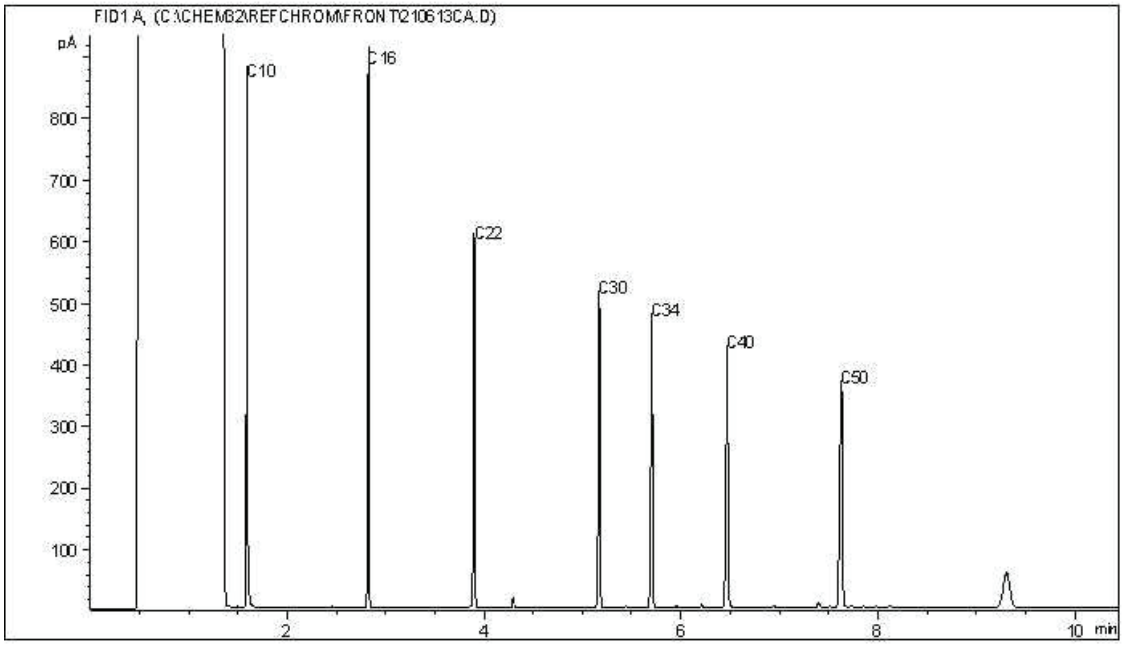
CCME Hydrocarbons (F2-F4)+F3A/B in soil Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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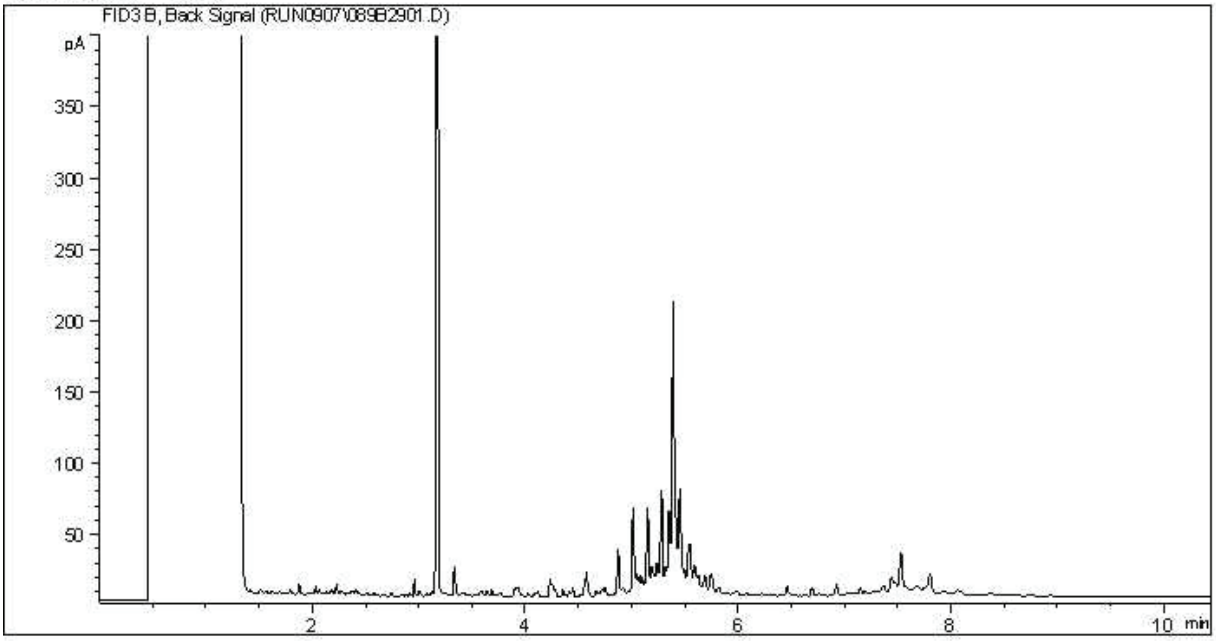
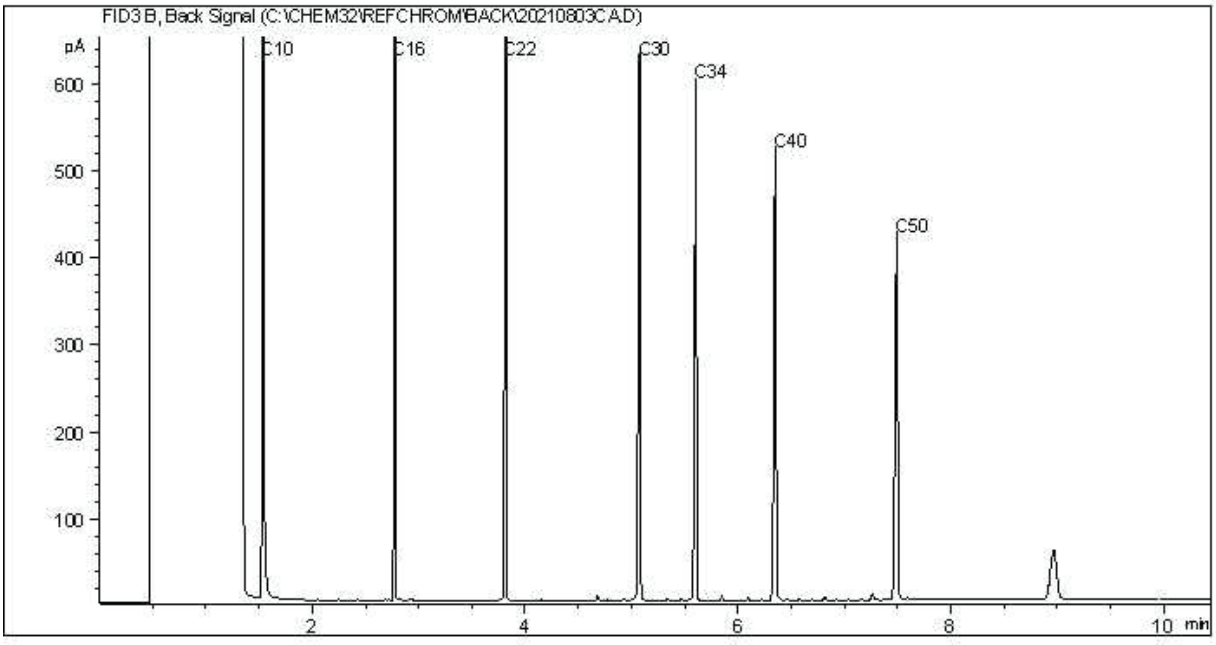
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC20



Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4)+F3A/B in soil Chromatogram

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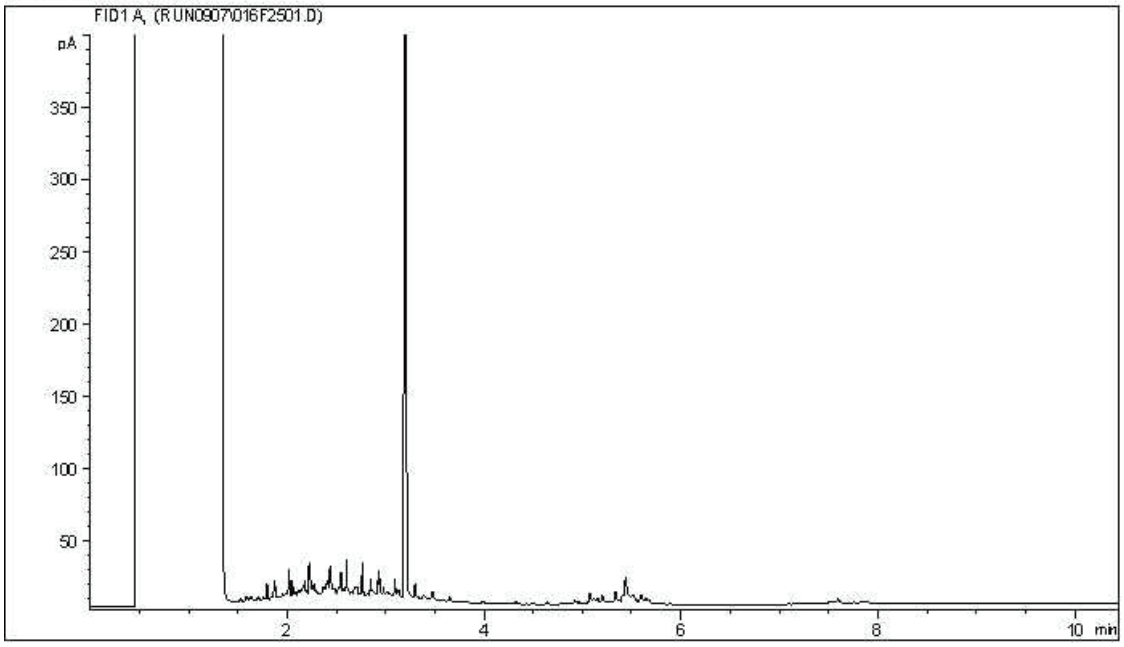

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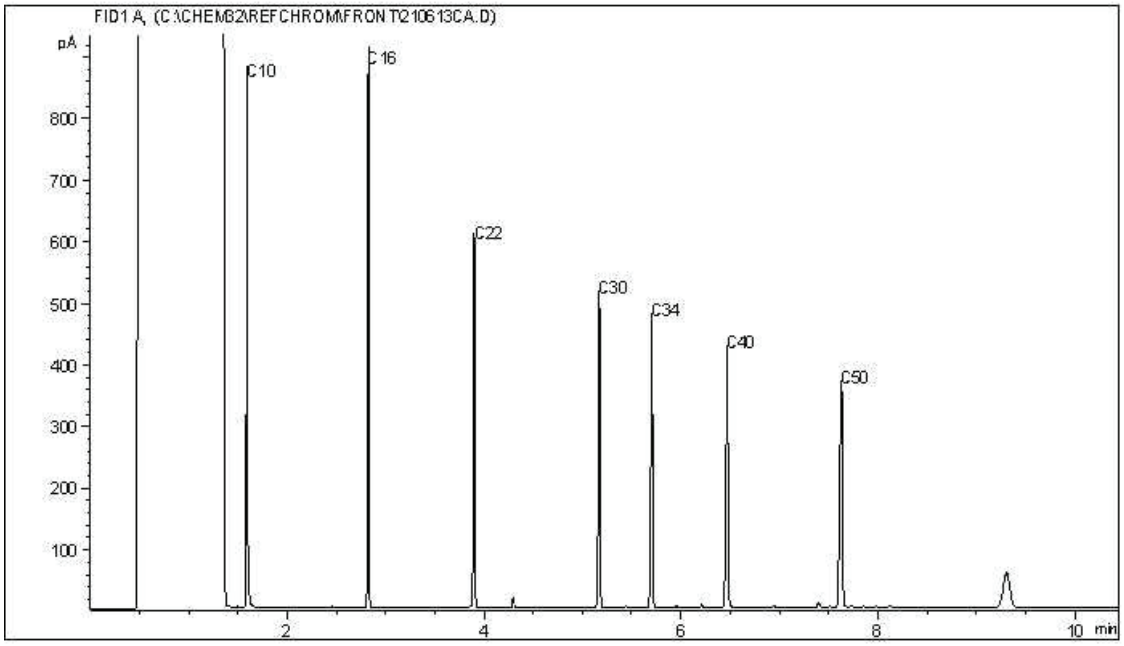

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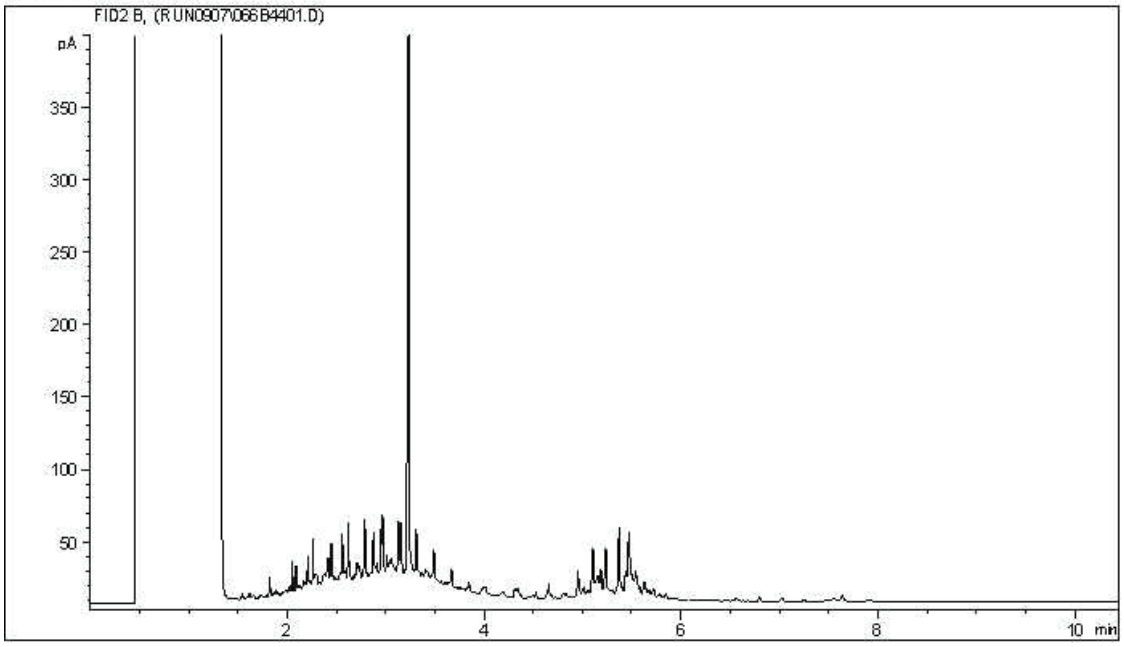

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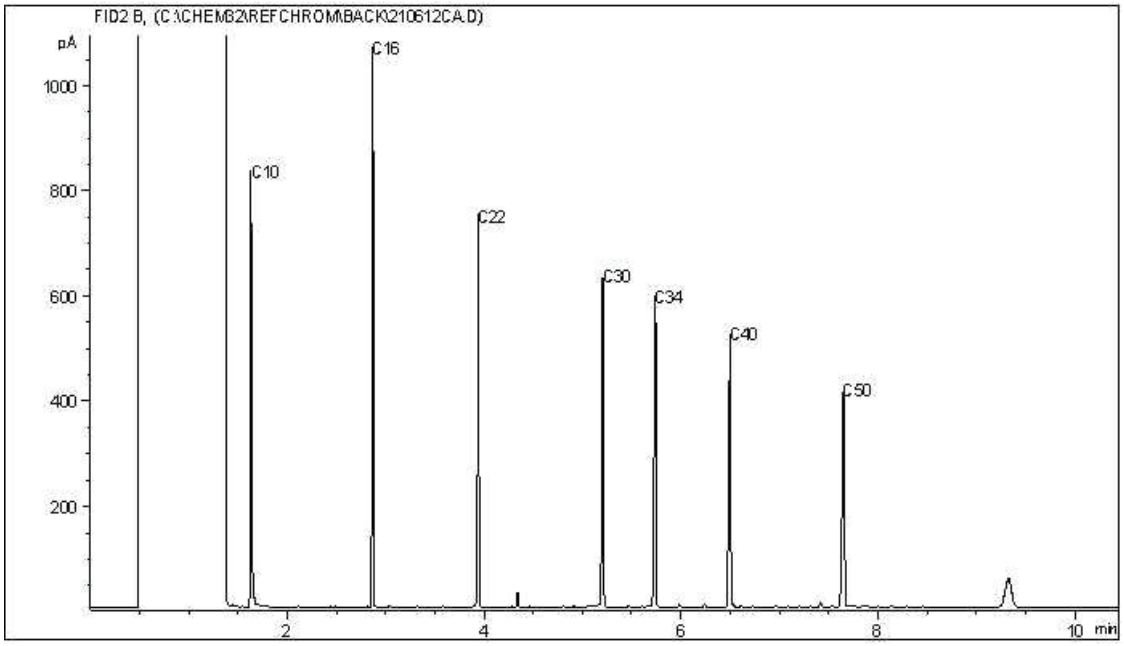

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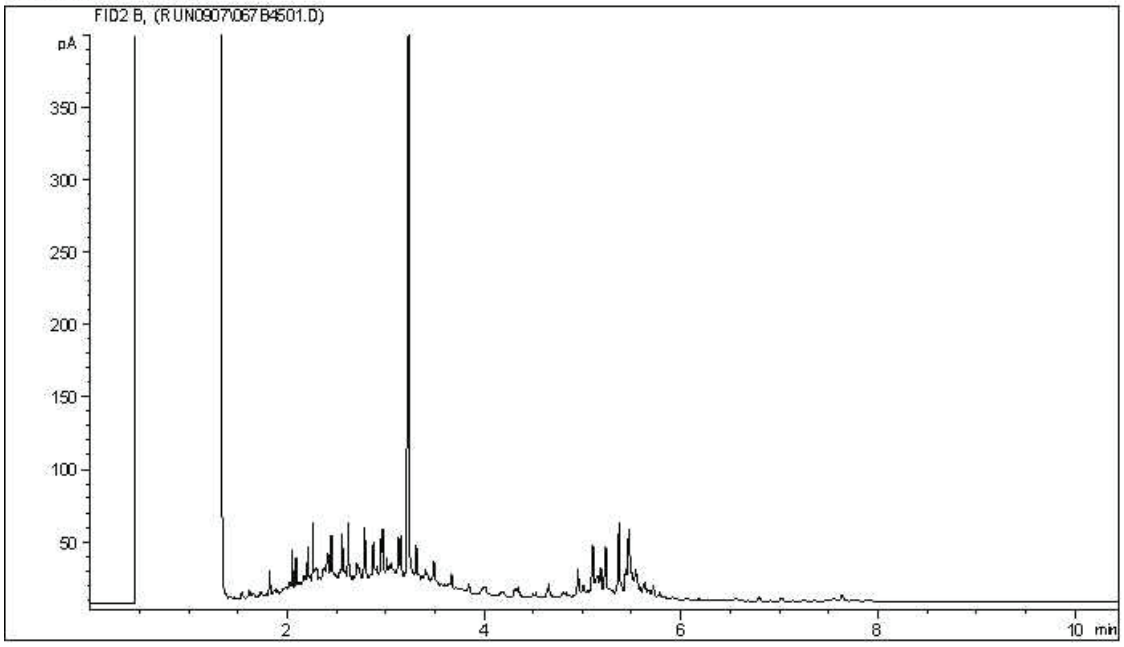

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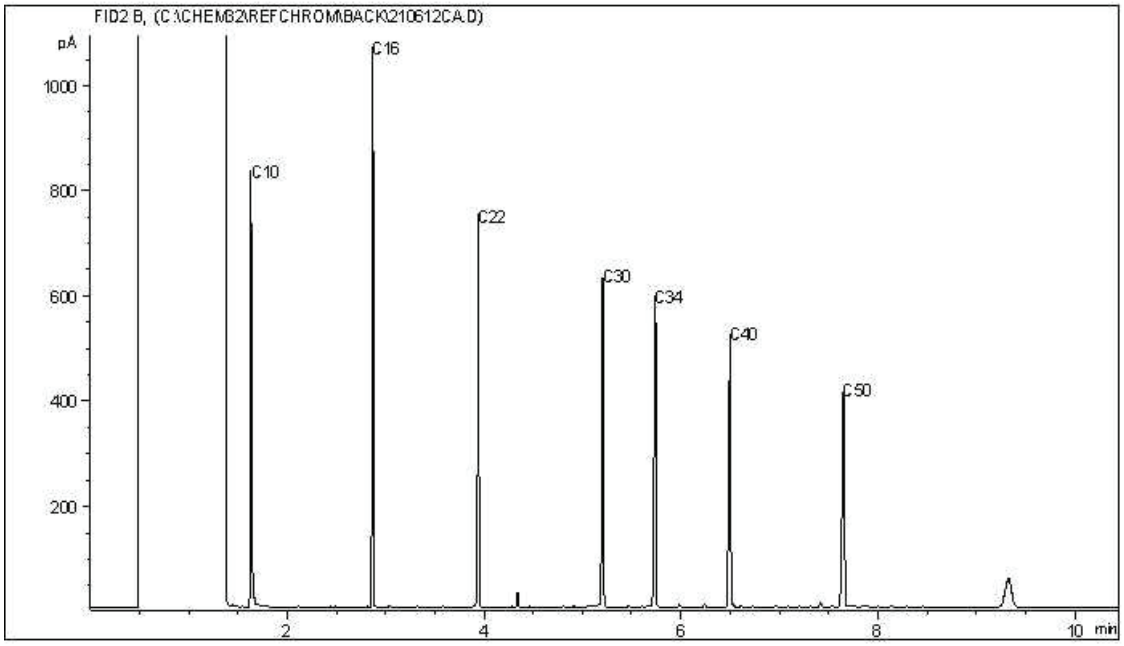

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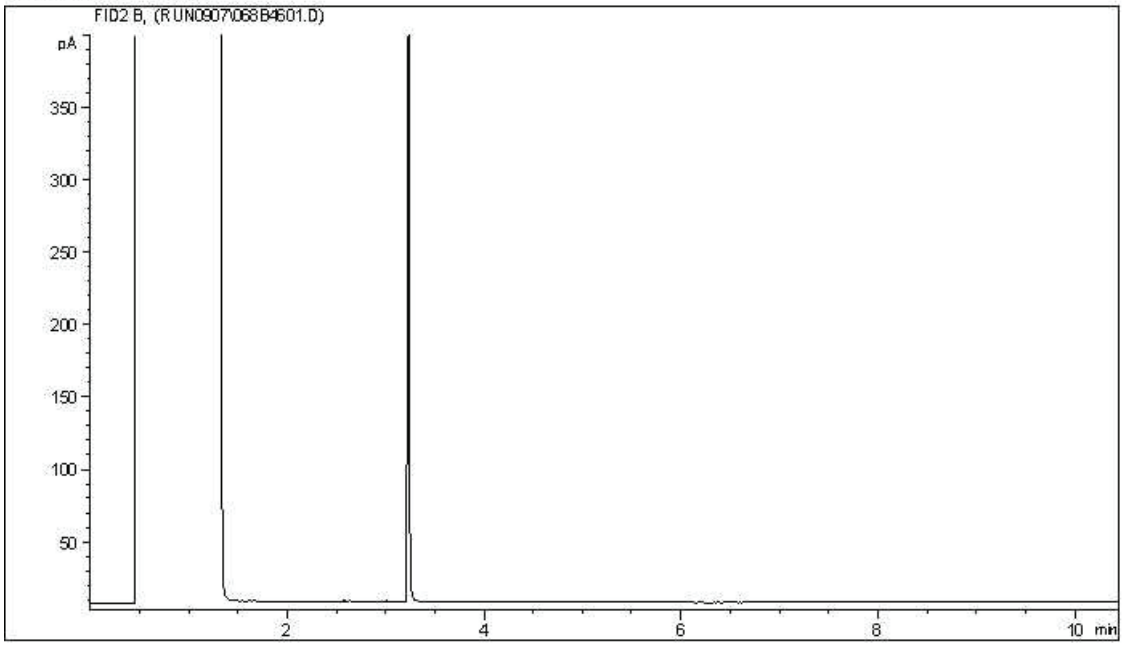
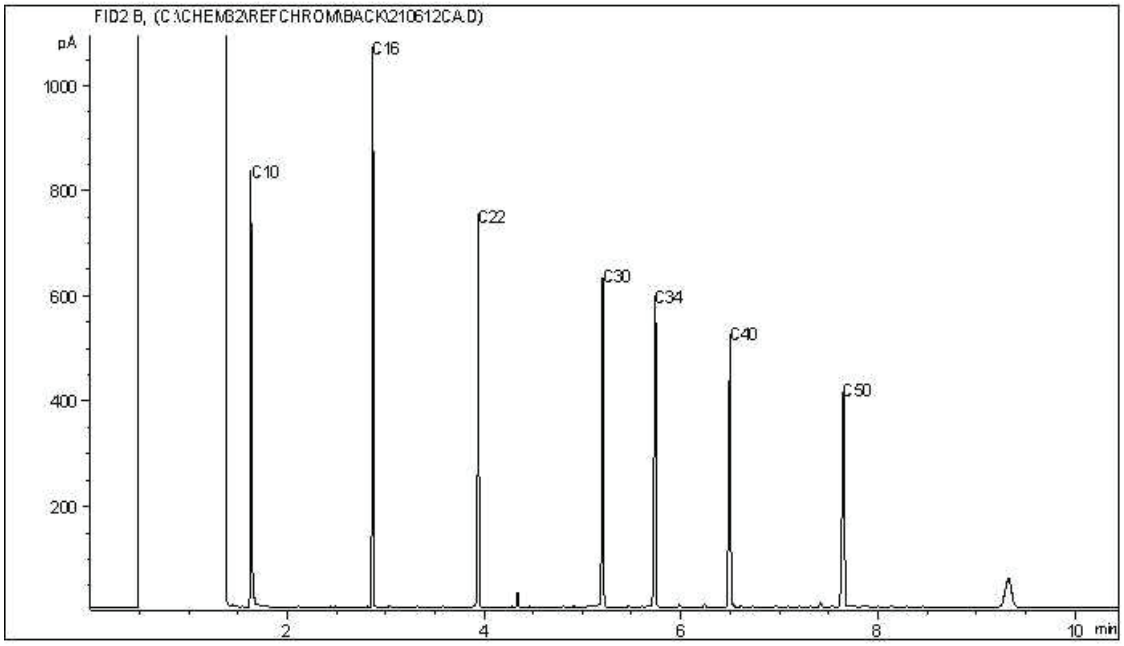


Carbon Range Distribution - Reference Chromatogram



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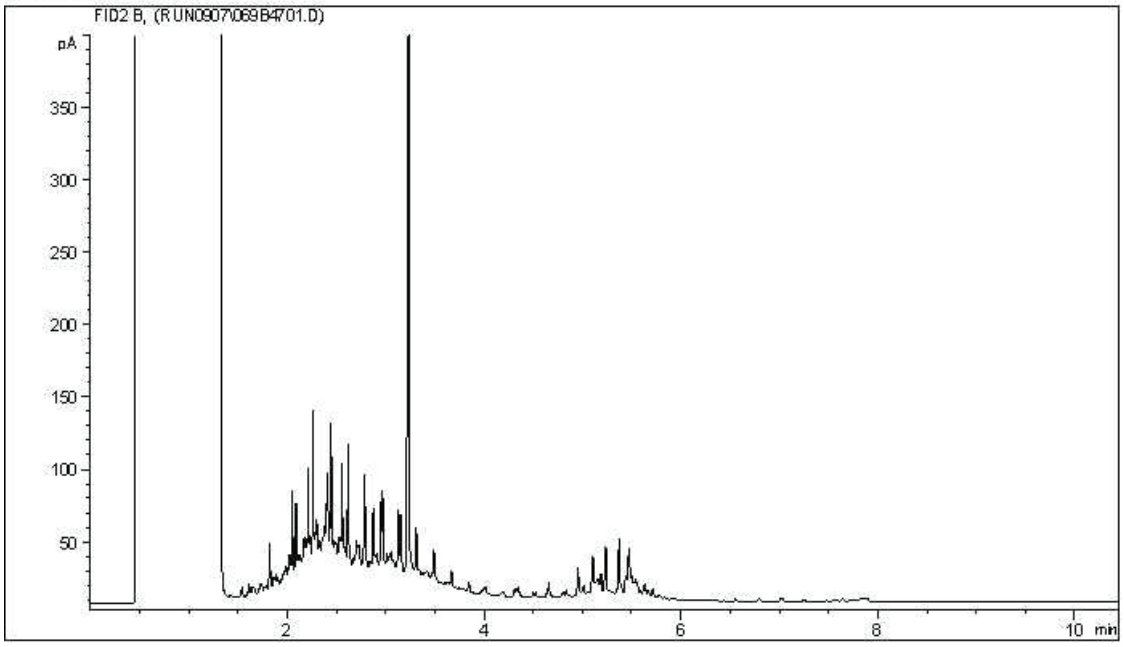
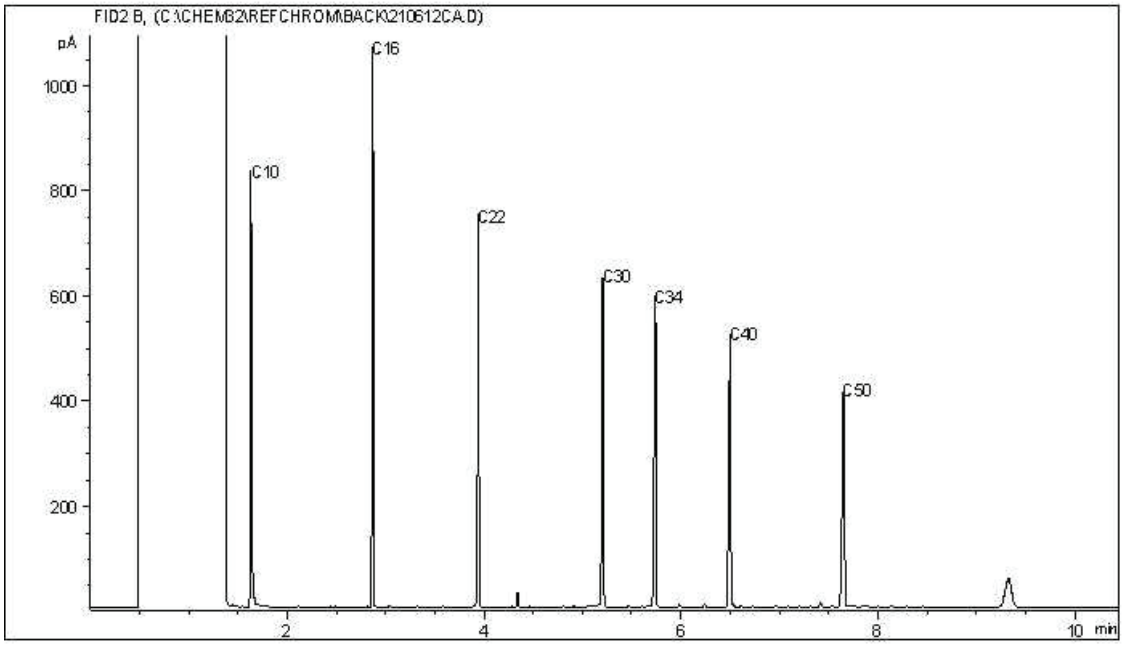


Carbon Range Distribution - Reference Chromatogram



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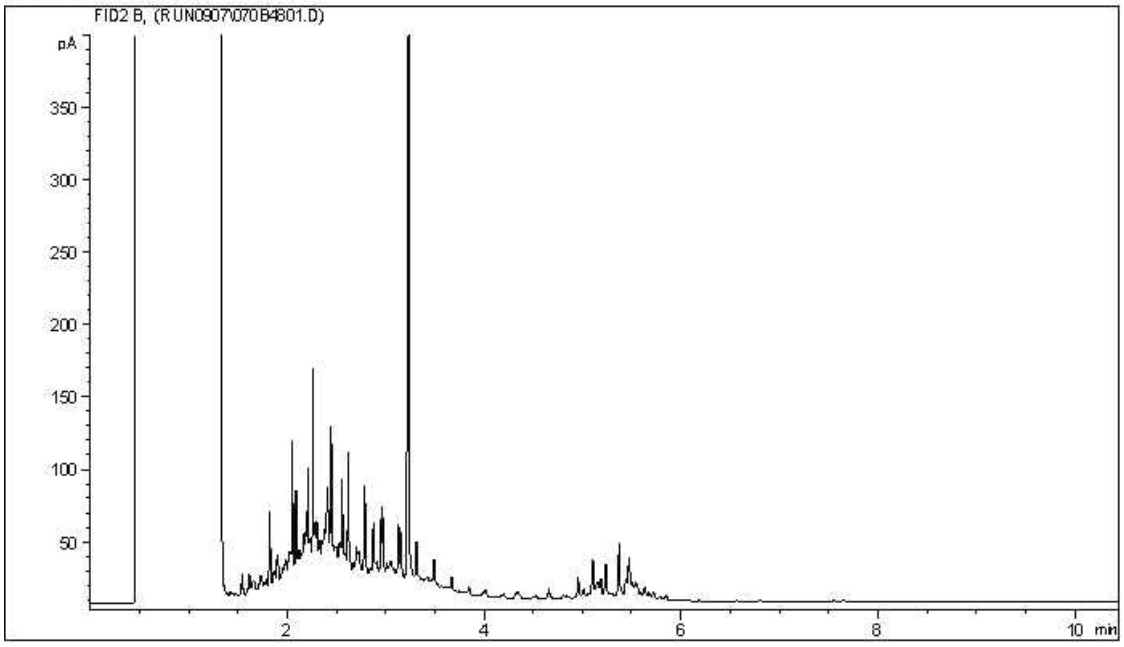
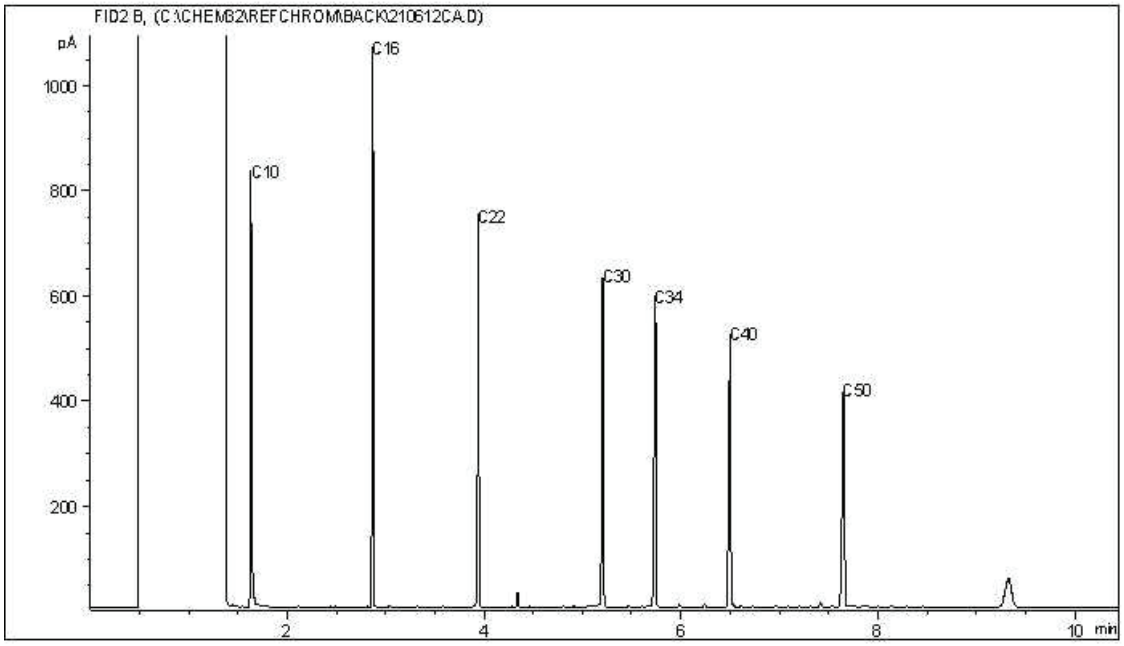
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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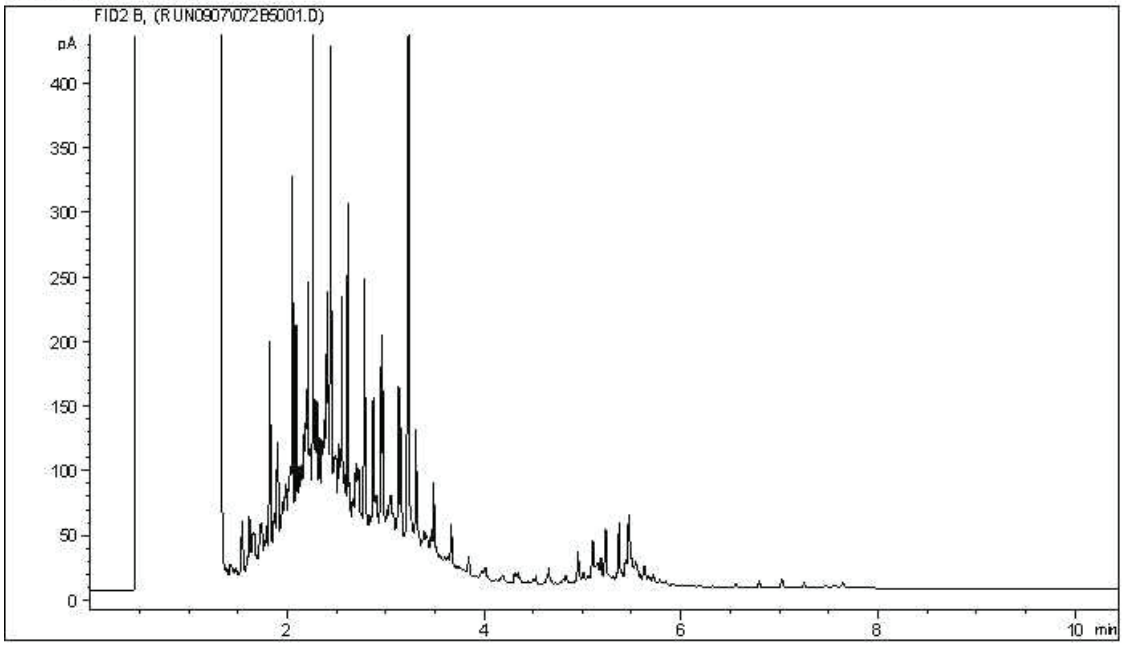
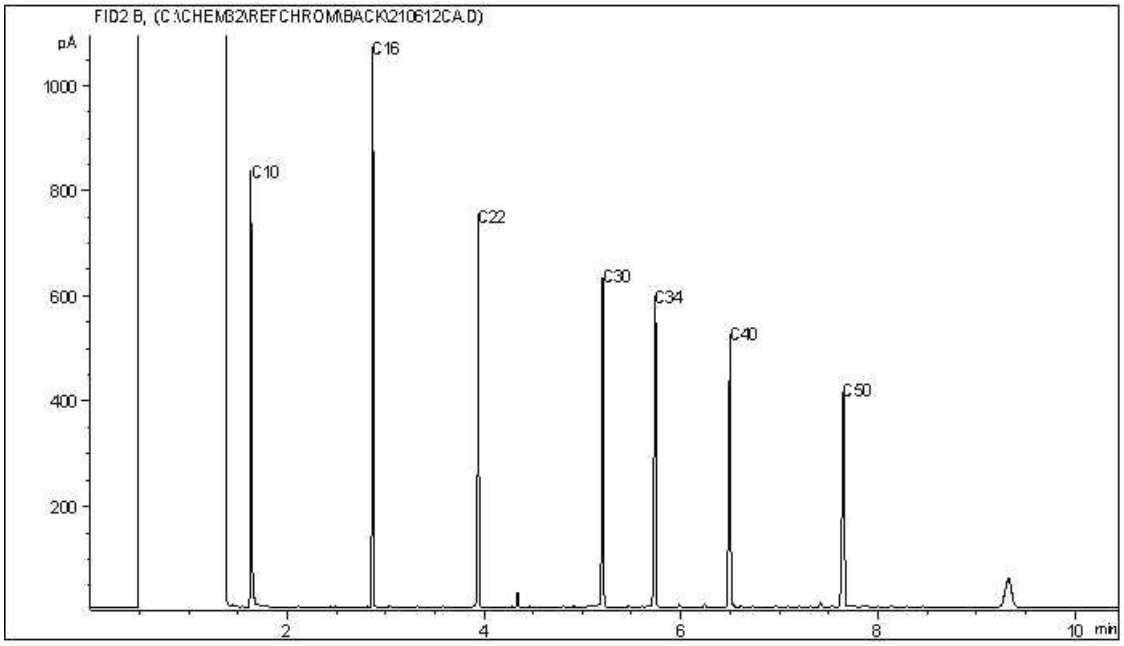
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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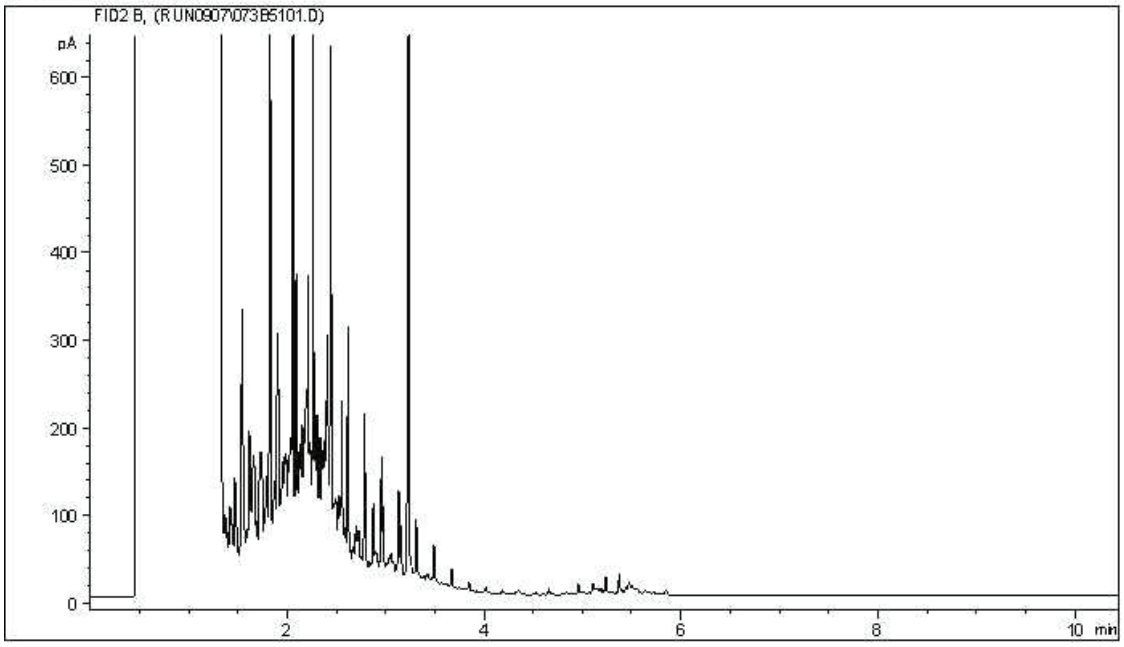
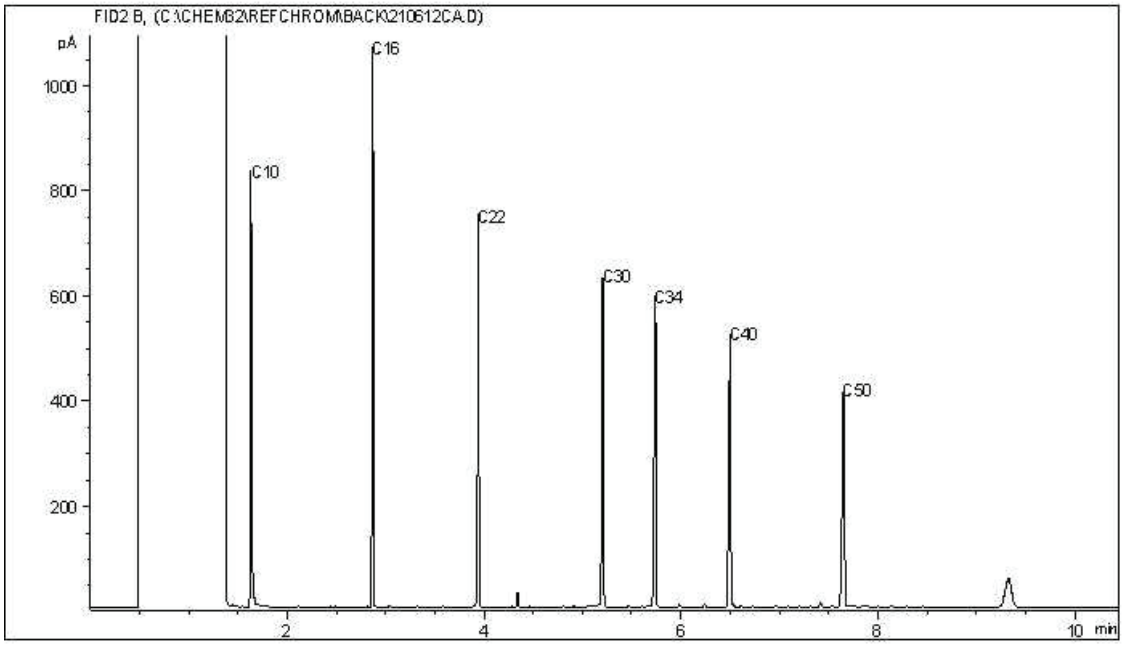
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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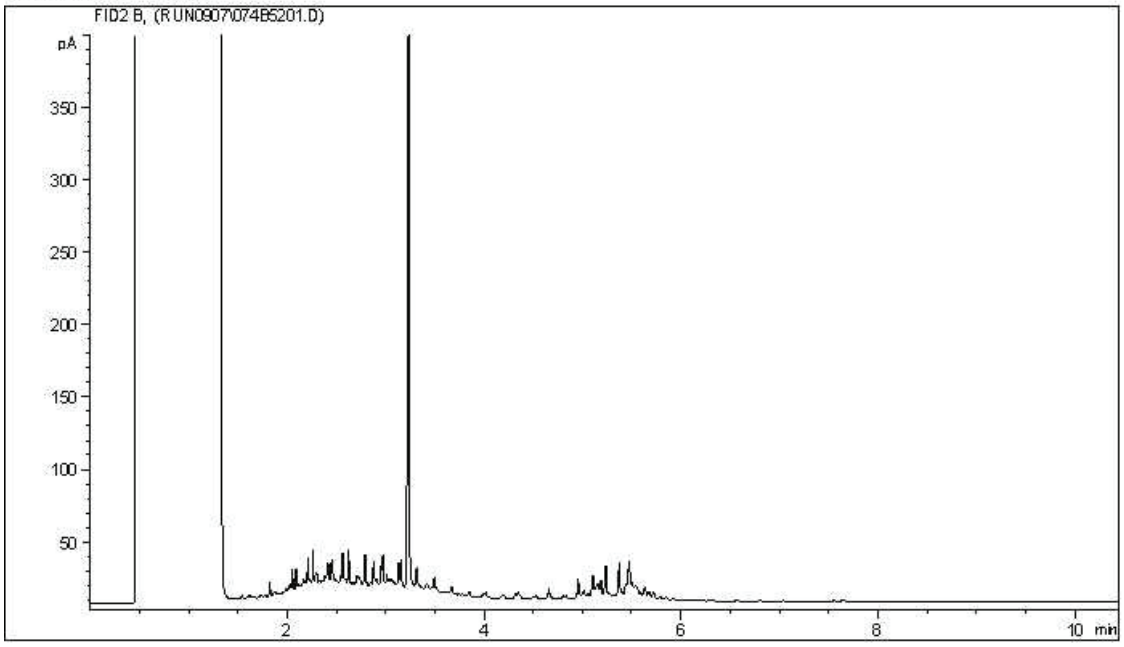
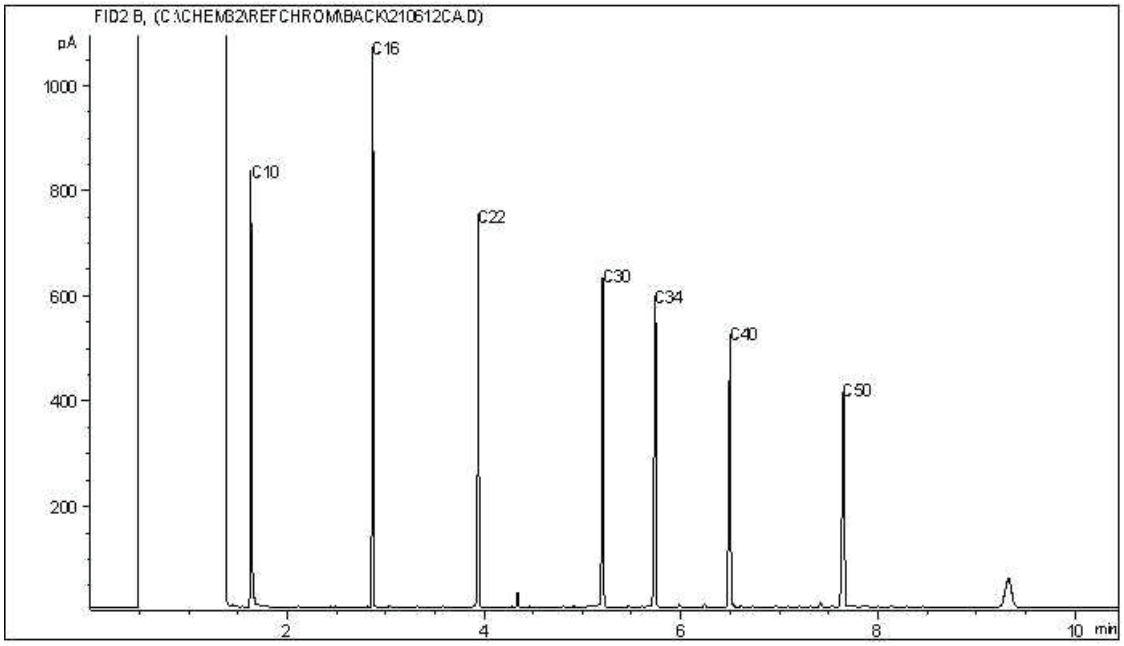


Carbon Range Distribution - Reference Chromatogram



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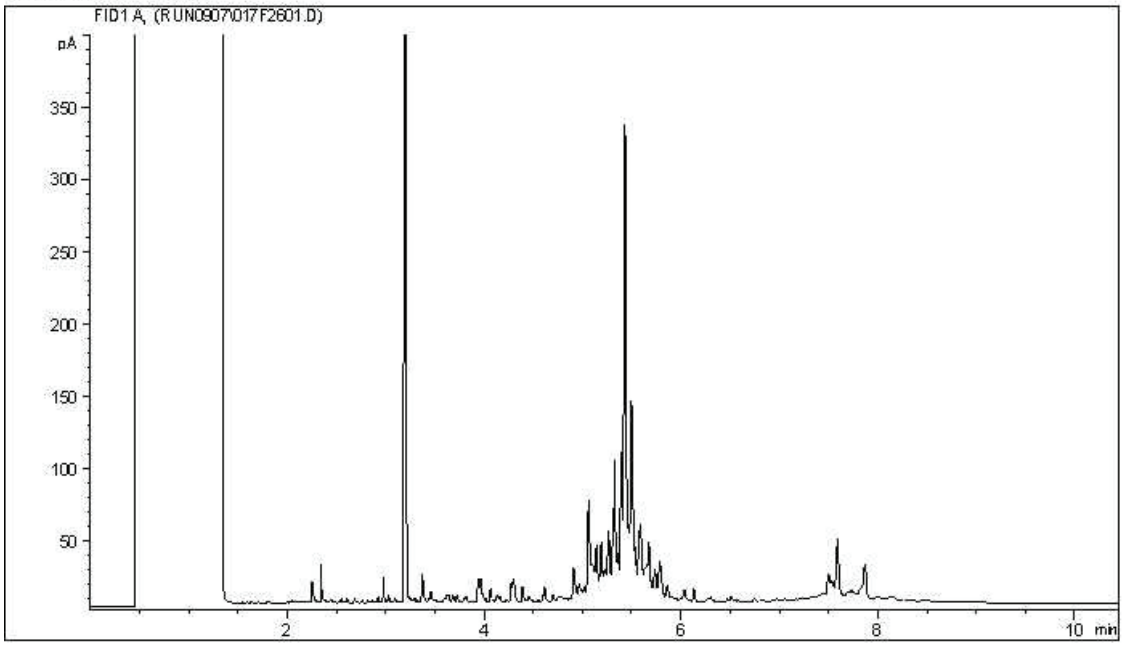
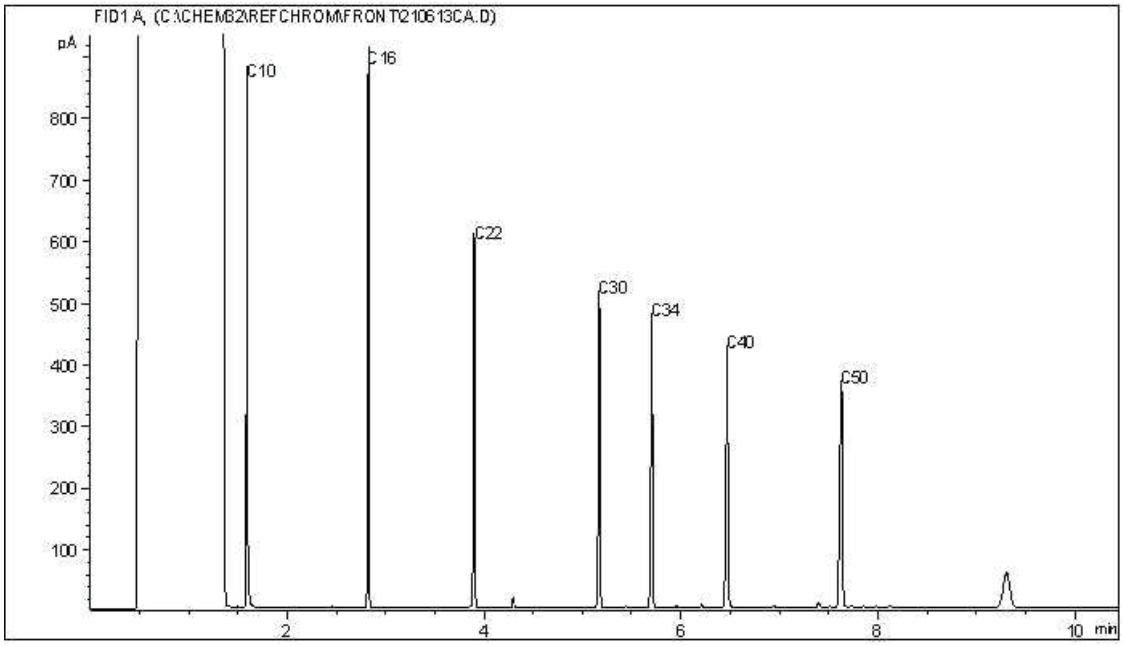
CCME Hydrocarbons (F2-F4)+F3A/B in soil Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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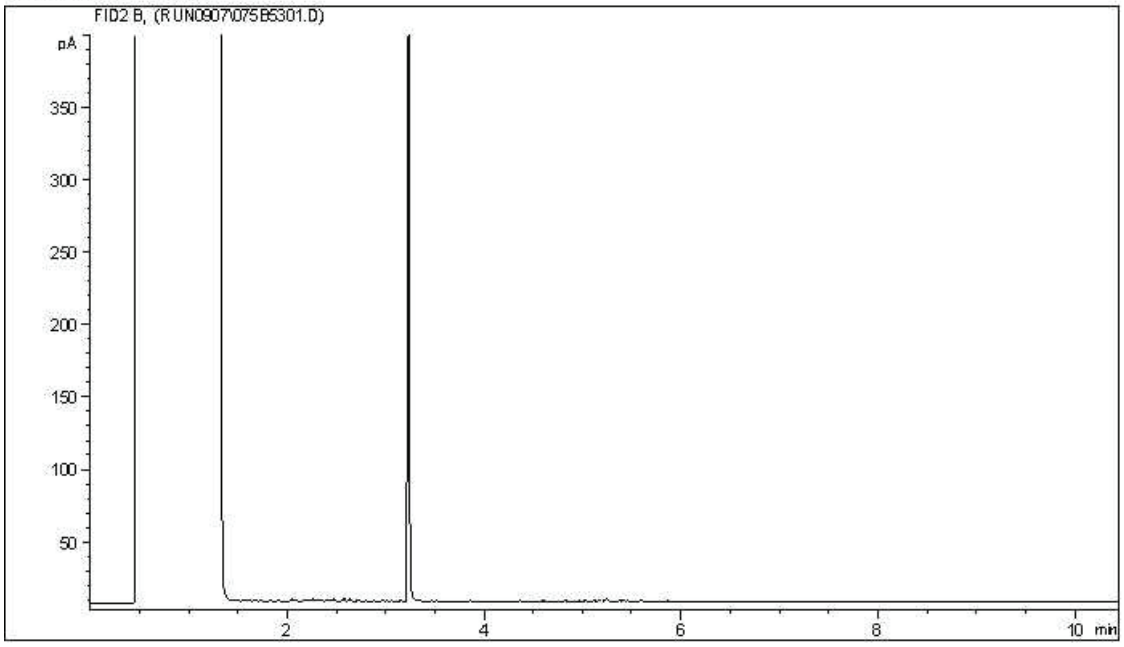
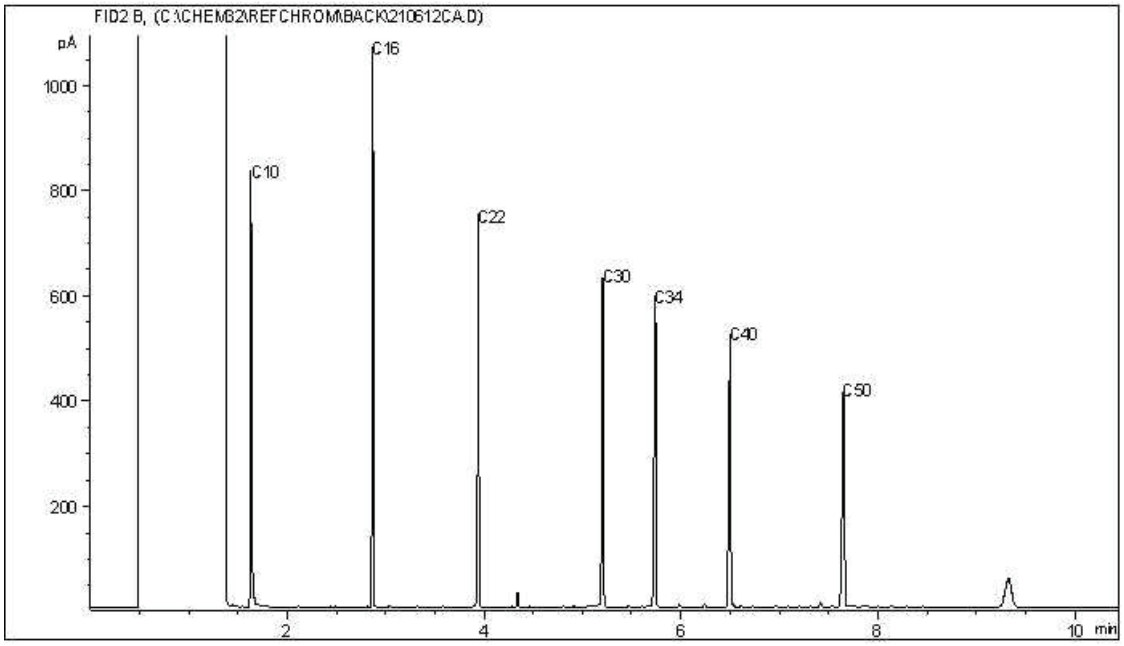
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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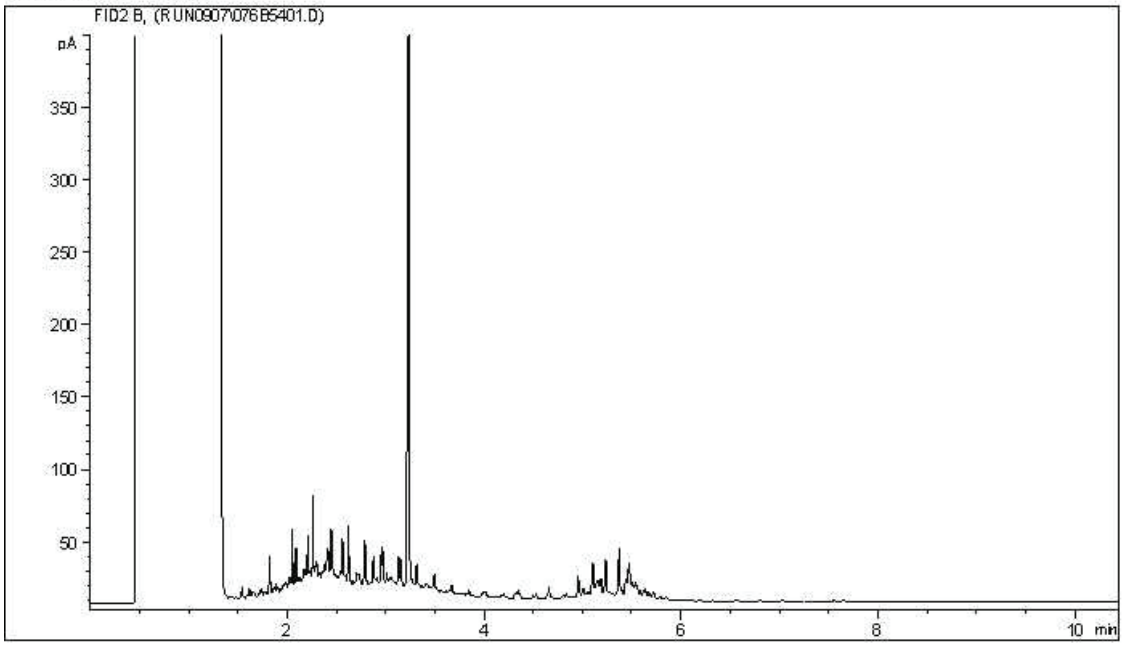
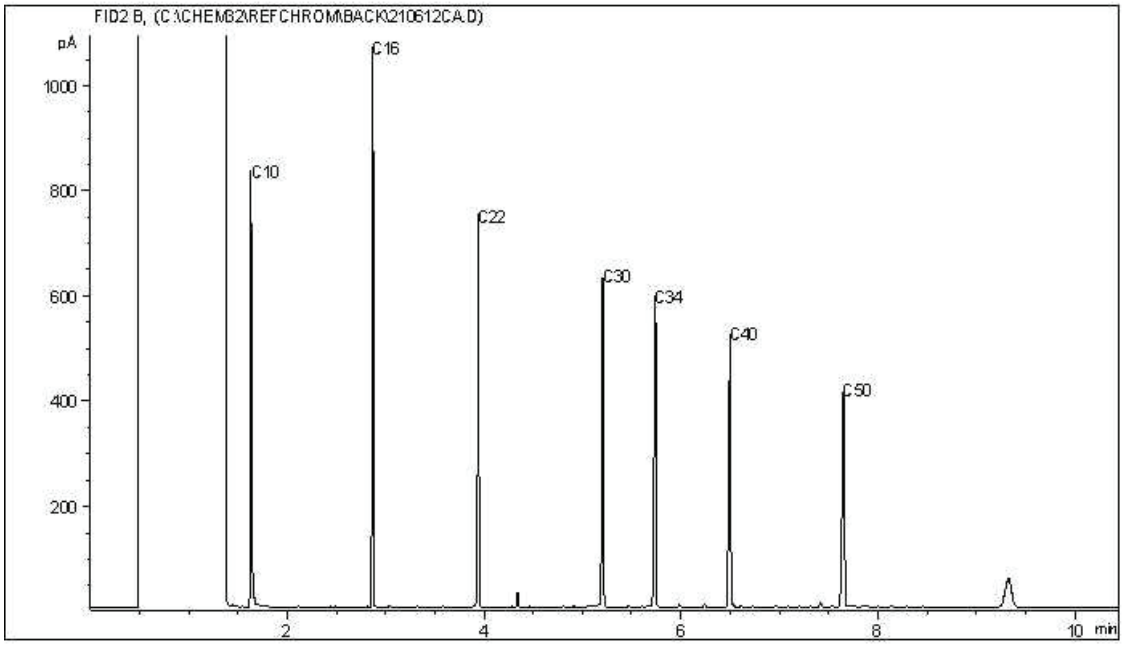


Carbon Range Distribution - Reference Chromatogram



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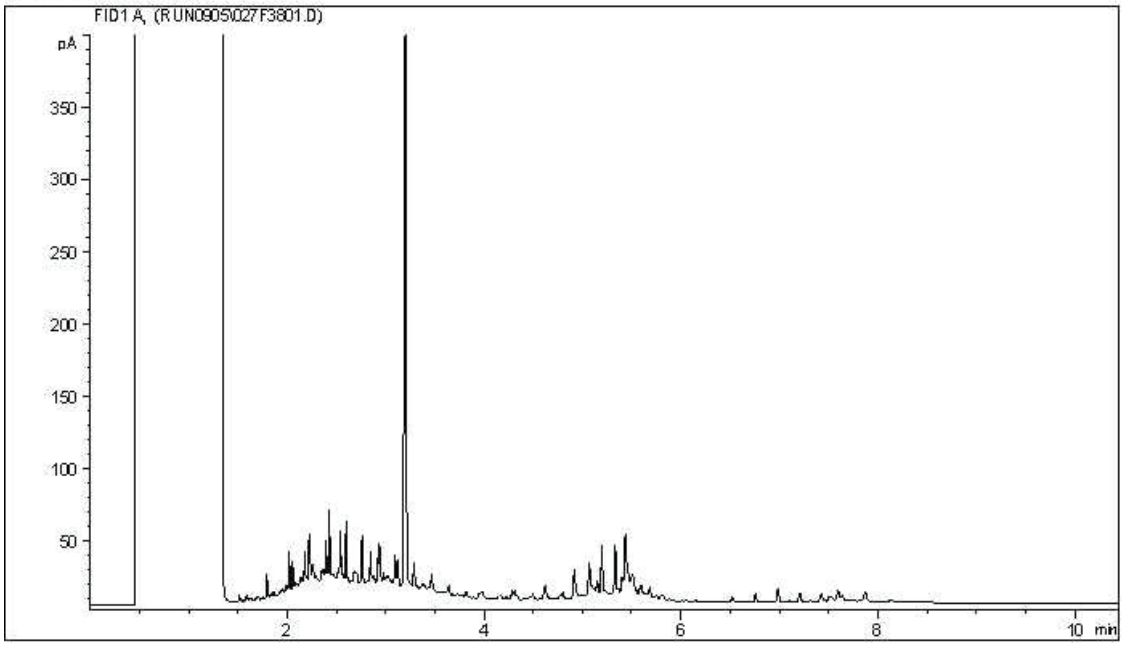

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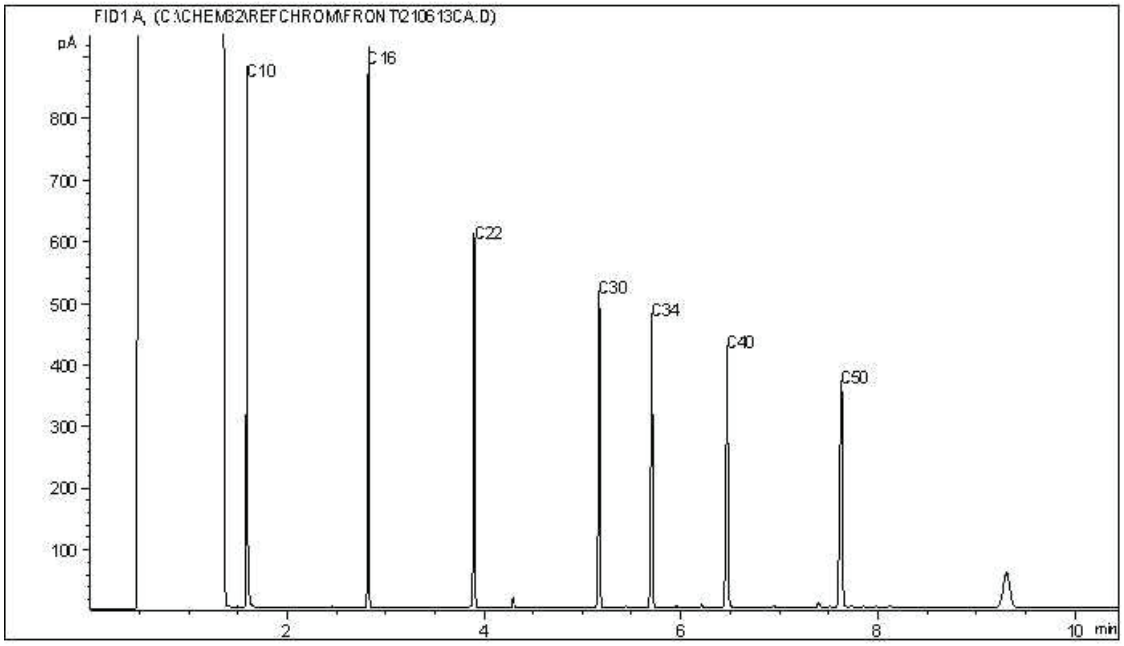

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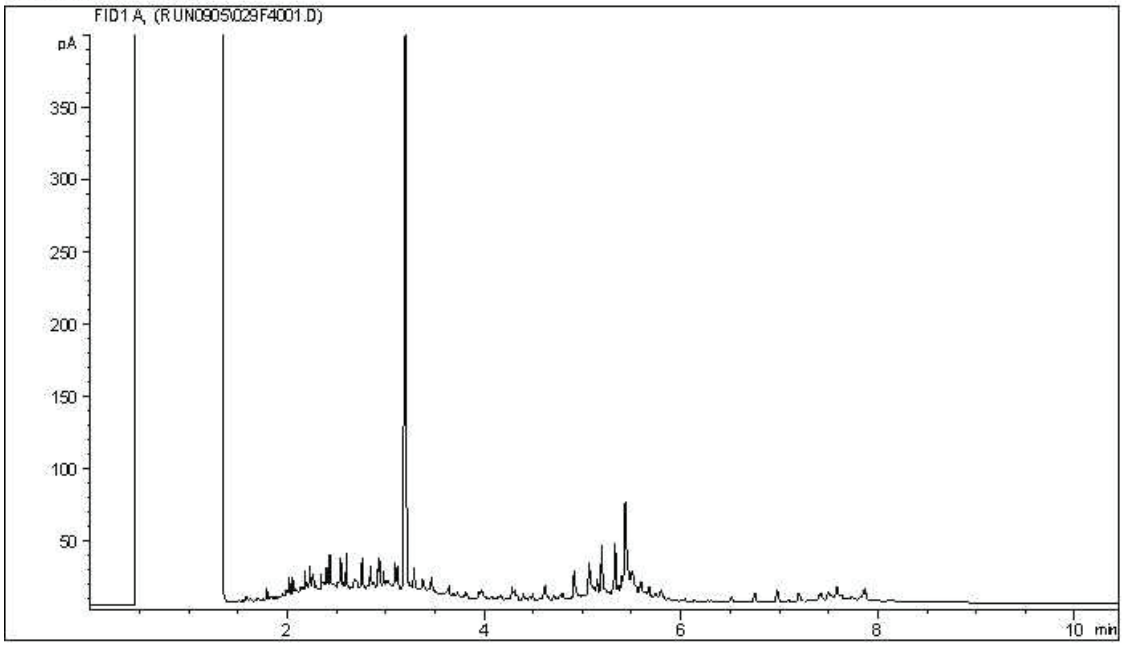
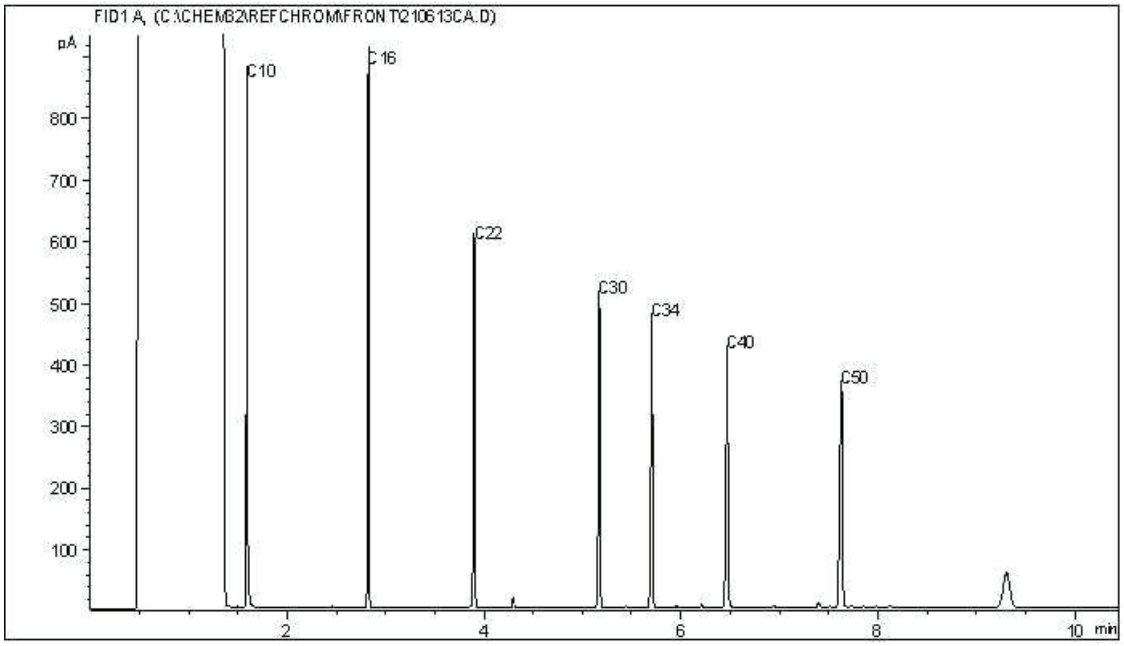


Carbon Range Distribution - Reference Chromatogram



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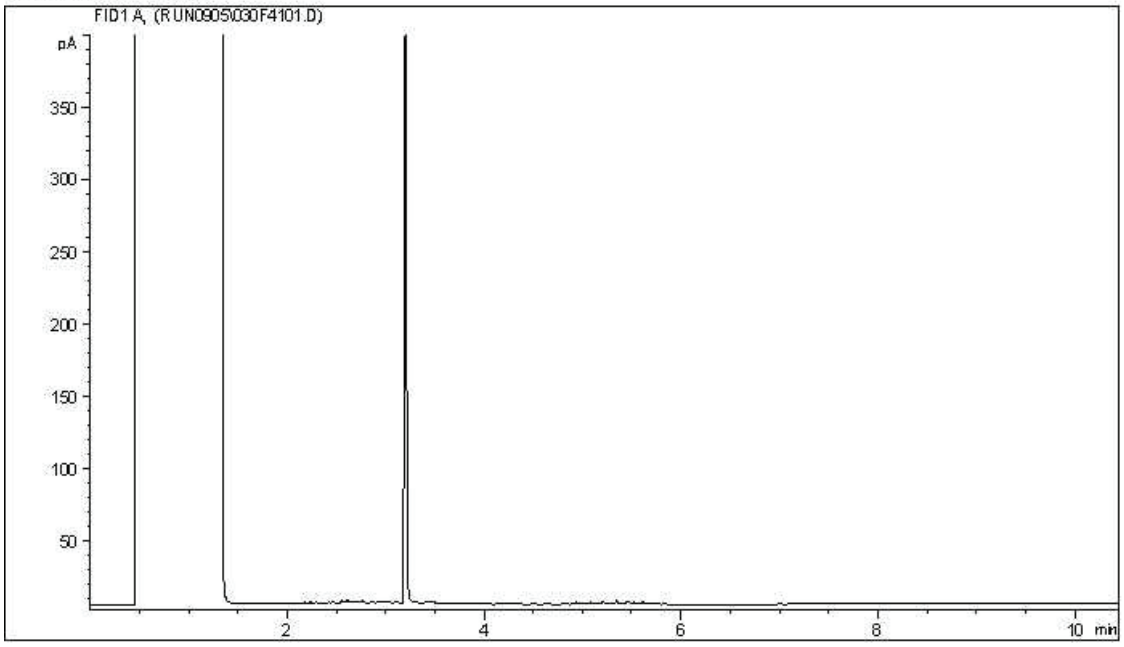
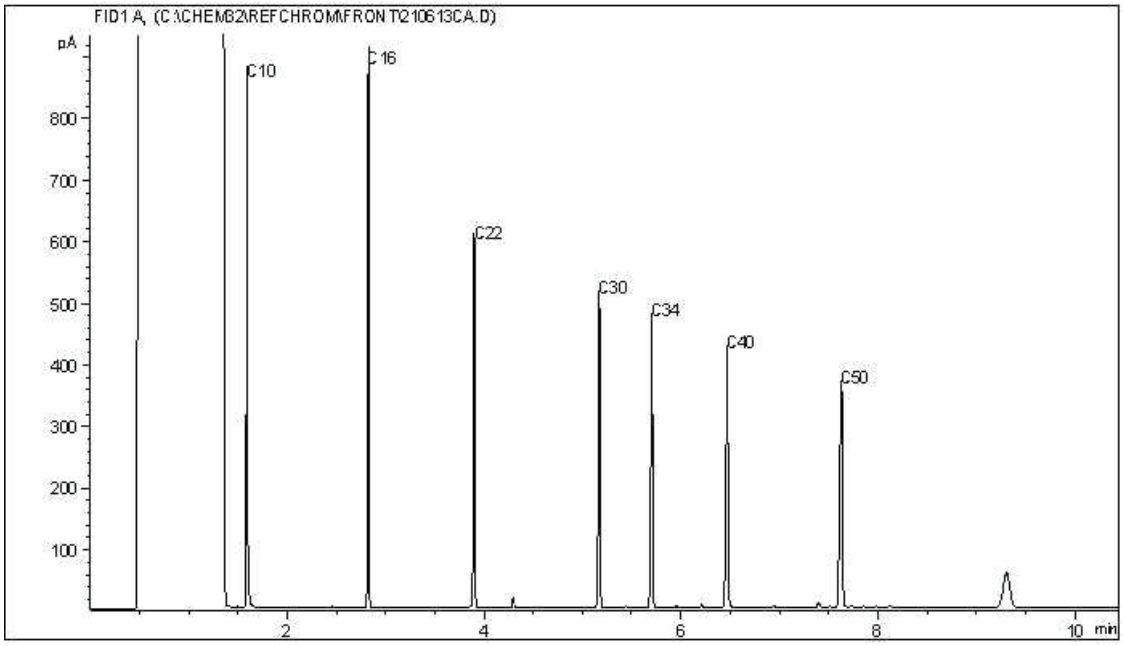


Carbon Range Distribution - Reference Chromatogram



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CCME Hydrocarbons (F2-F4 in soil) Chromatogram

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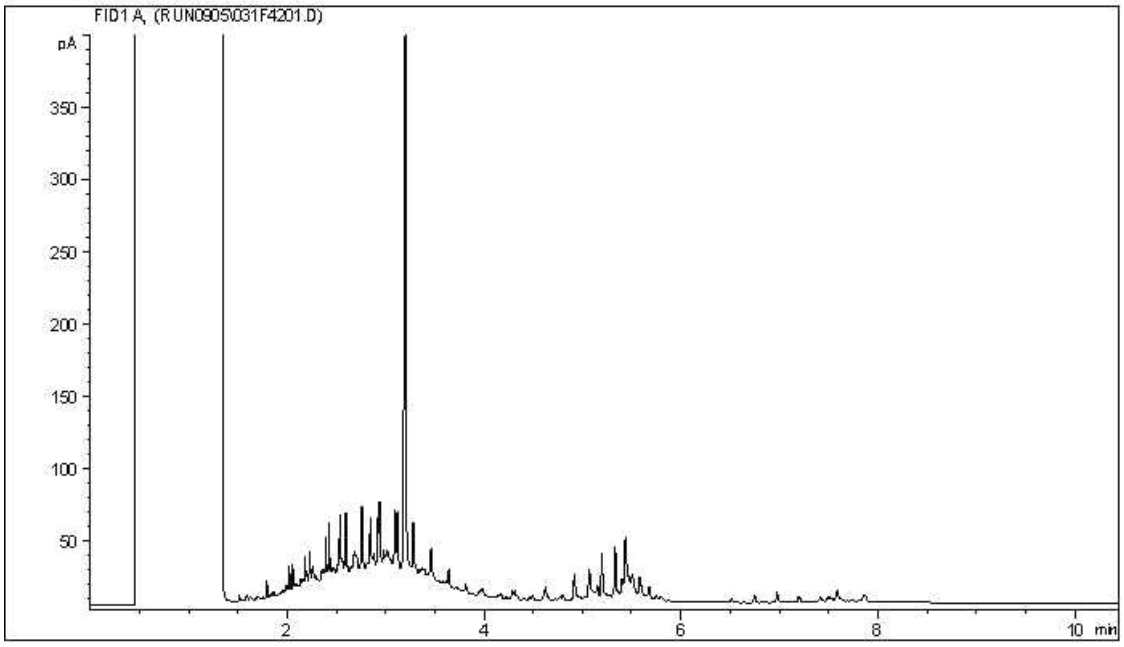
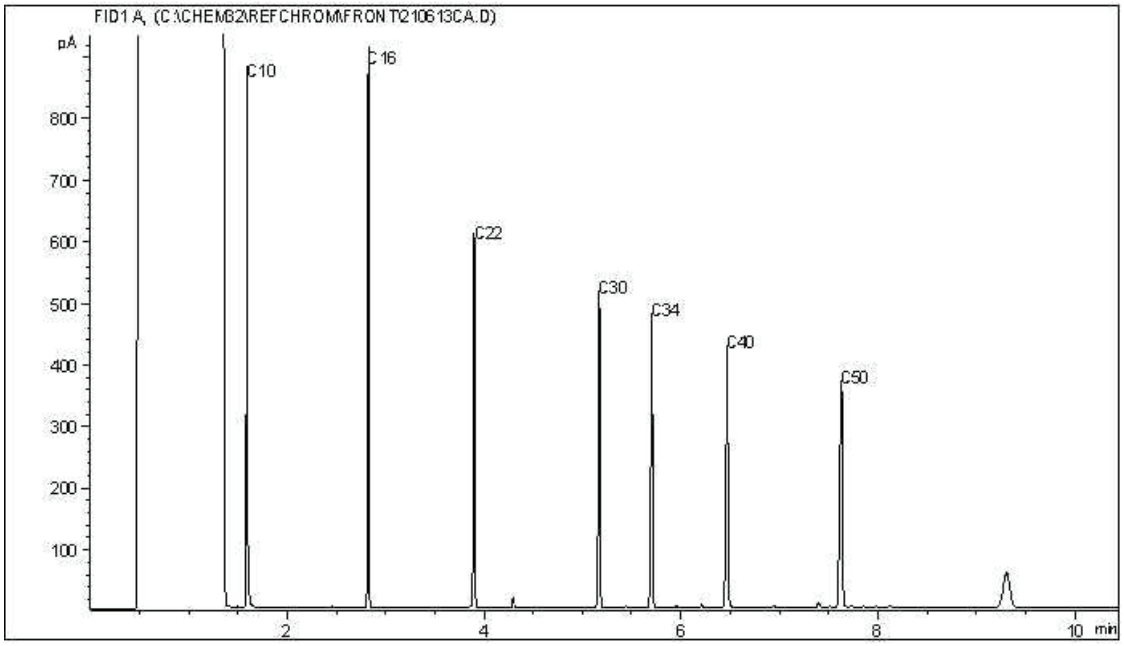


Carbon Range Distribution - Reference Chromatogram



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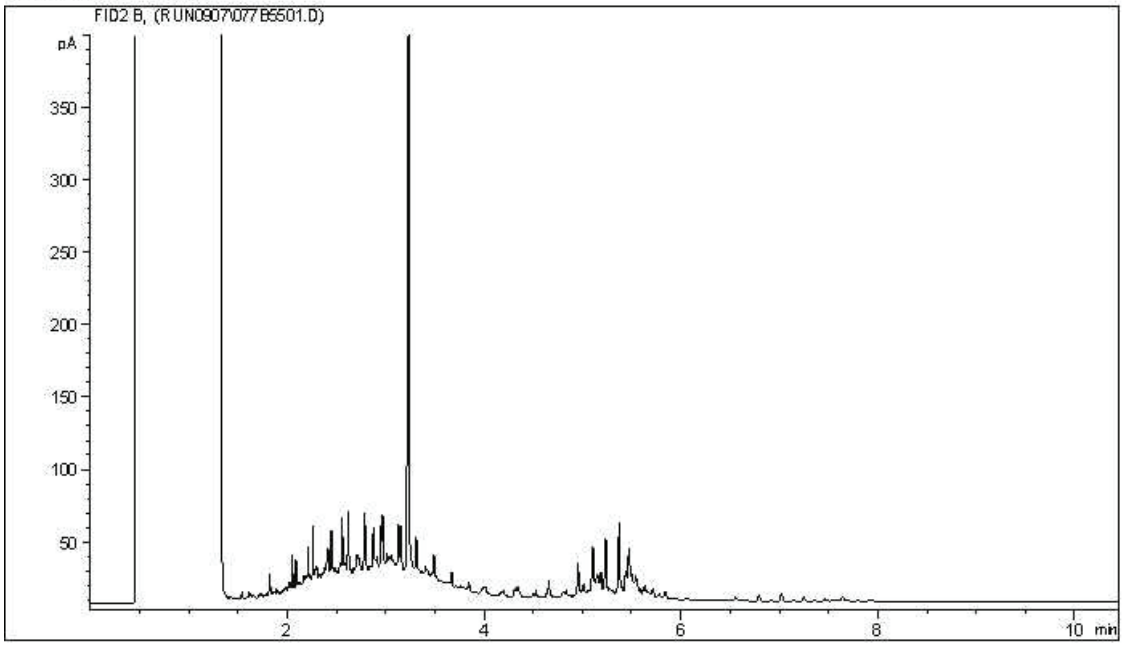

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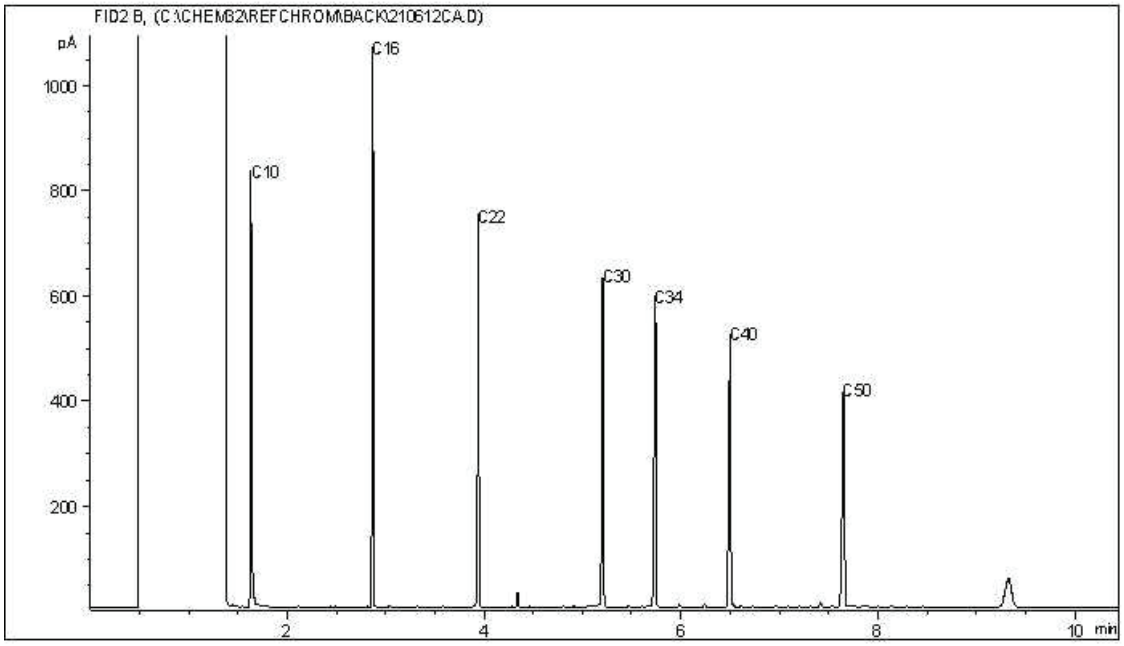

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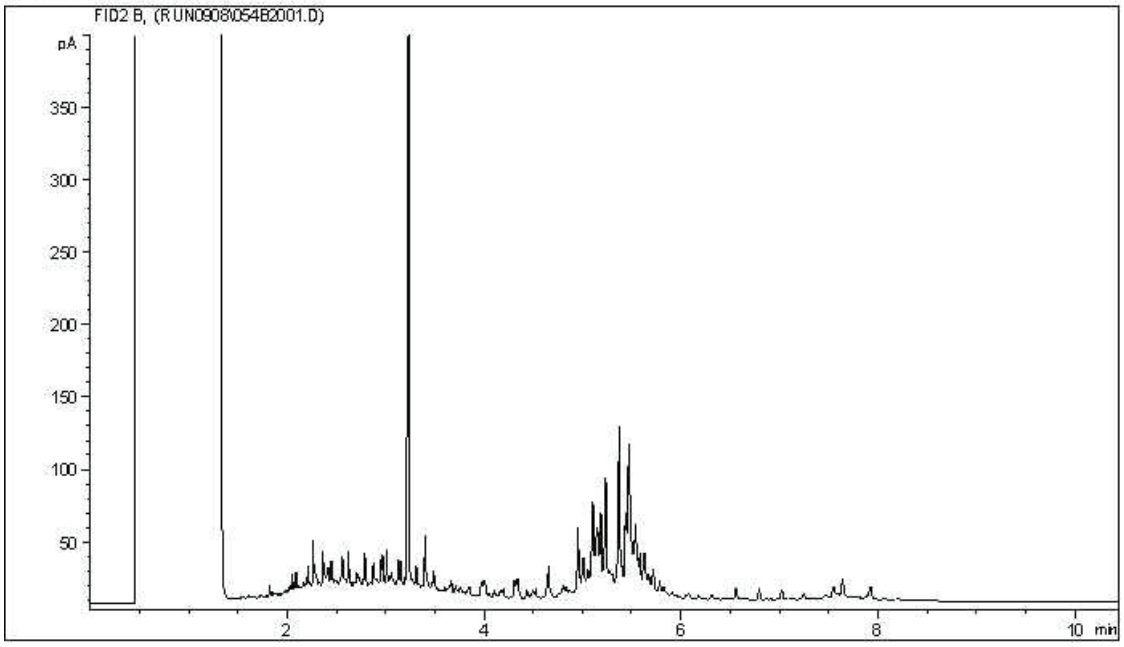
CCME Hydrocarbons (F2-F4)+F3A/B in soil Chromatogram

Instrument: GC10



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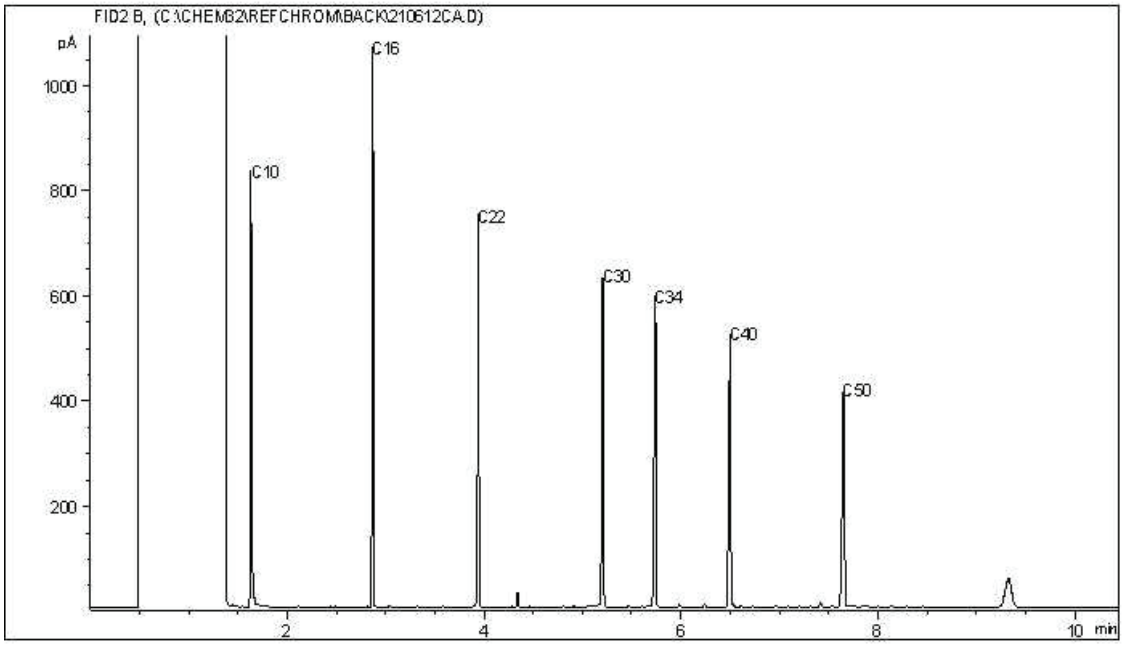

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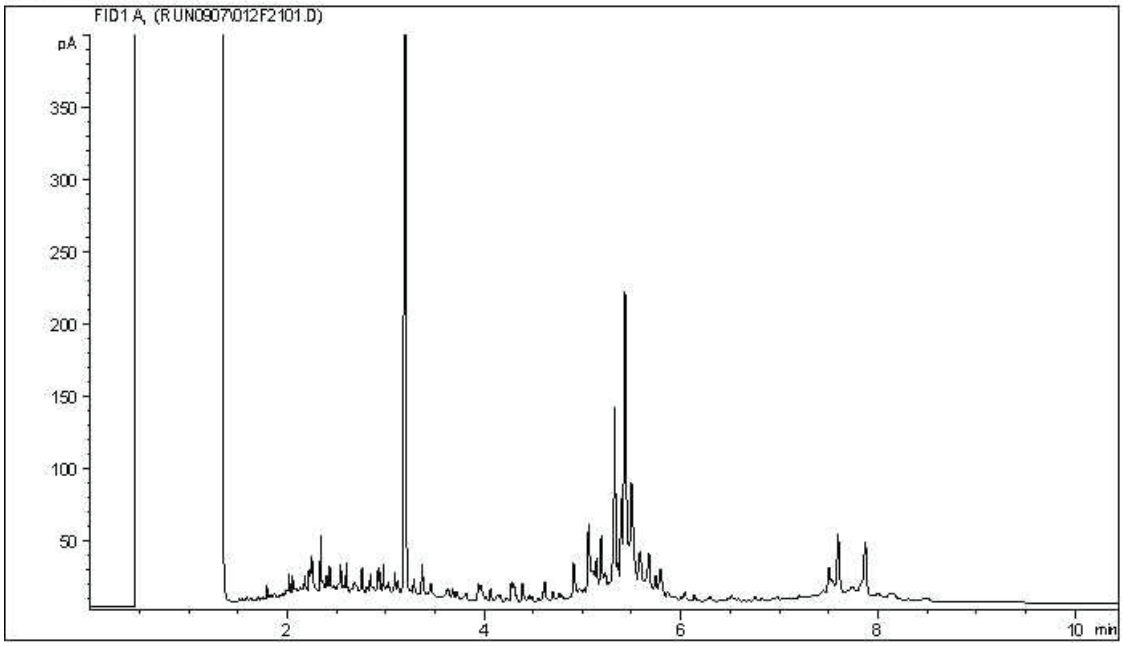

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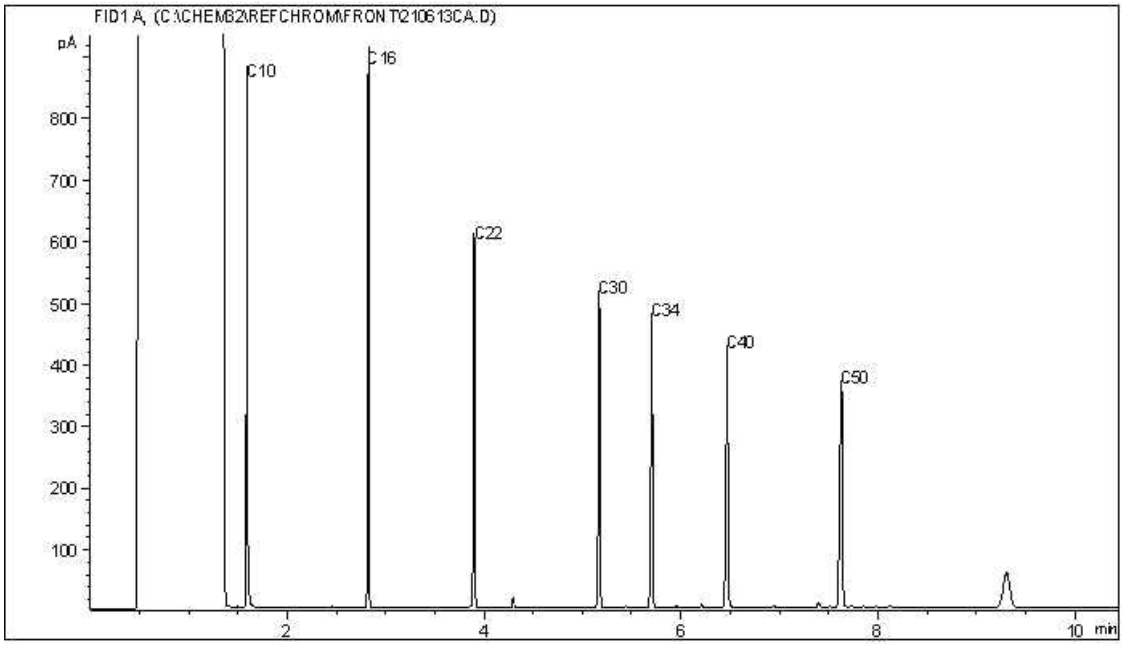

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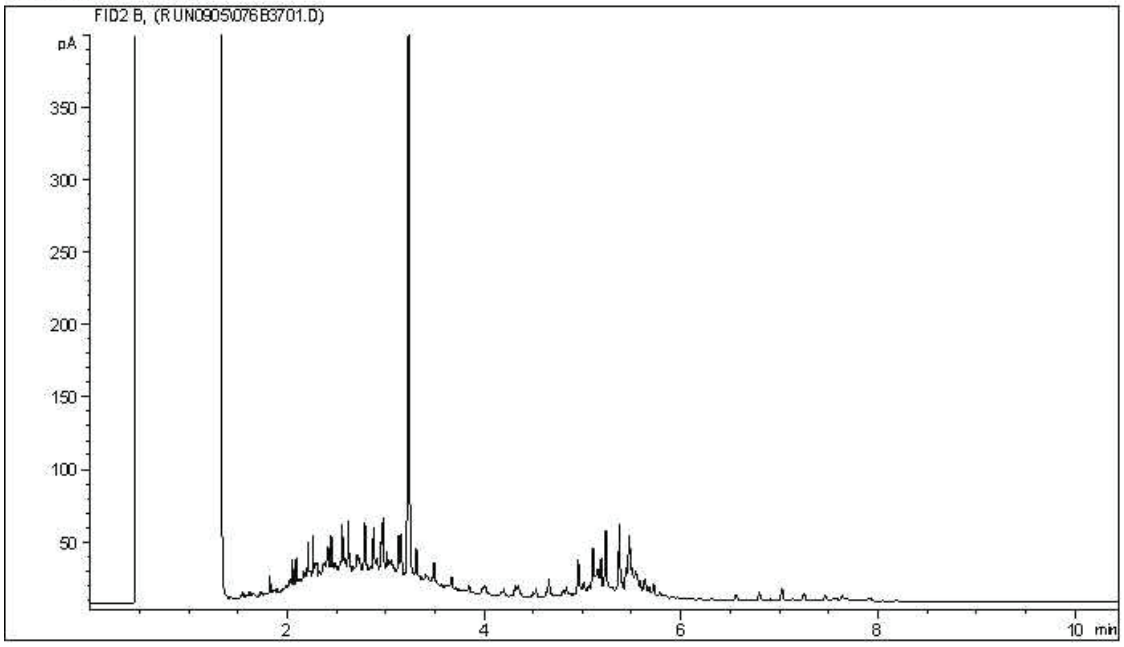

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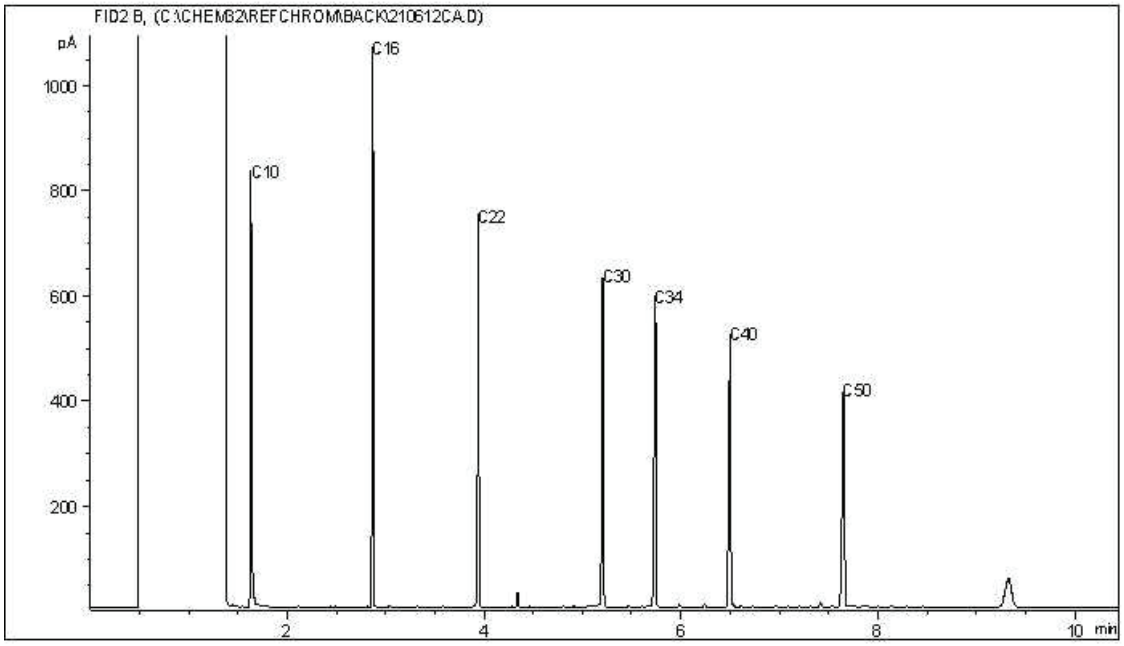

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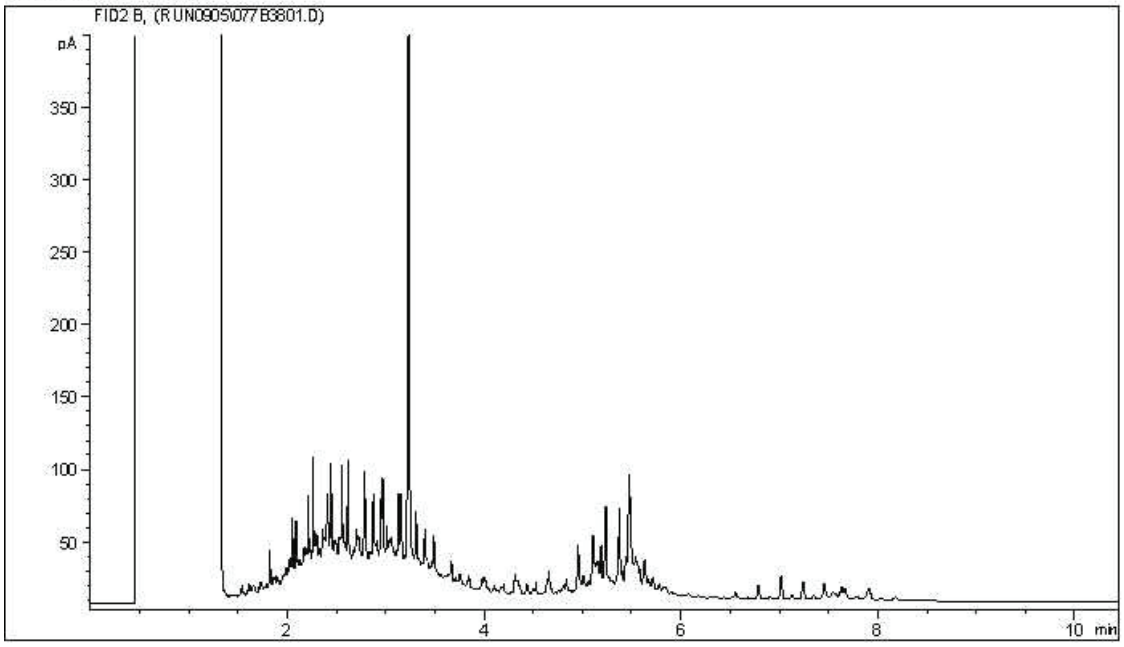

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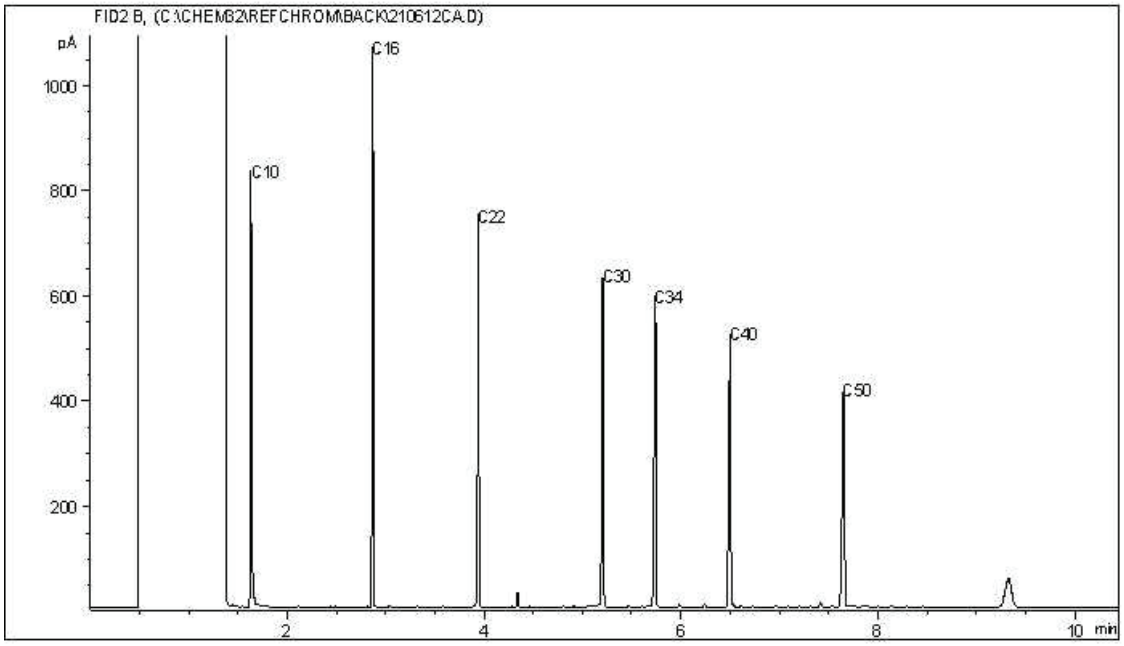

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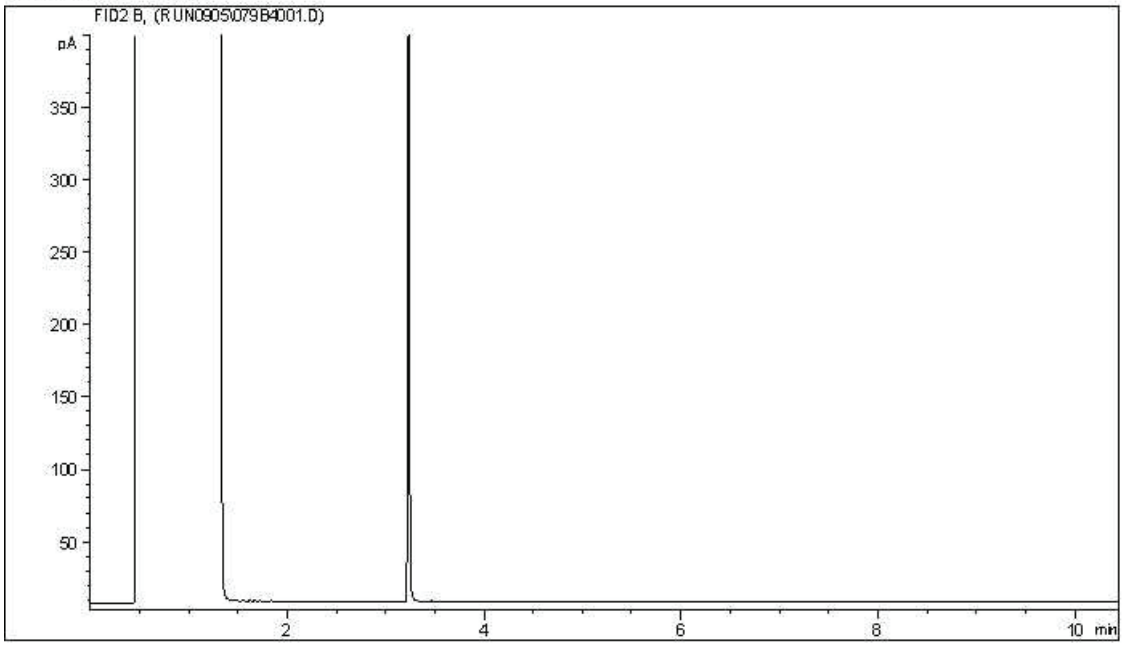

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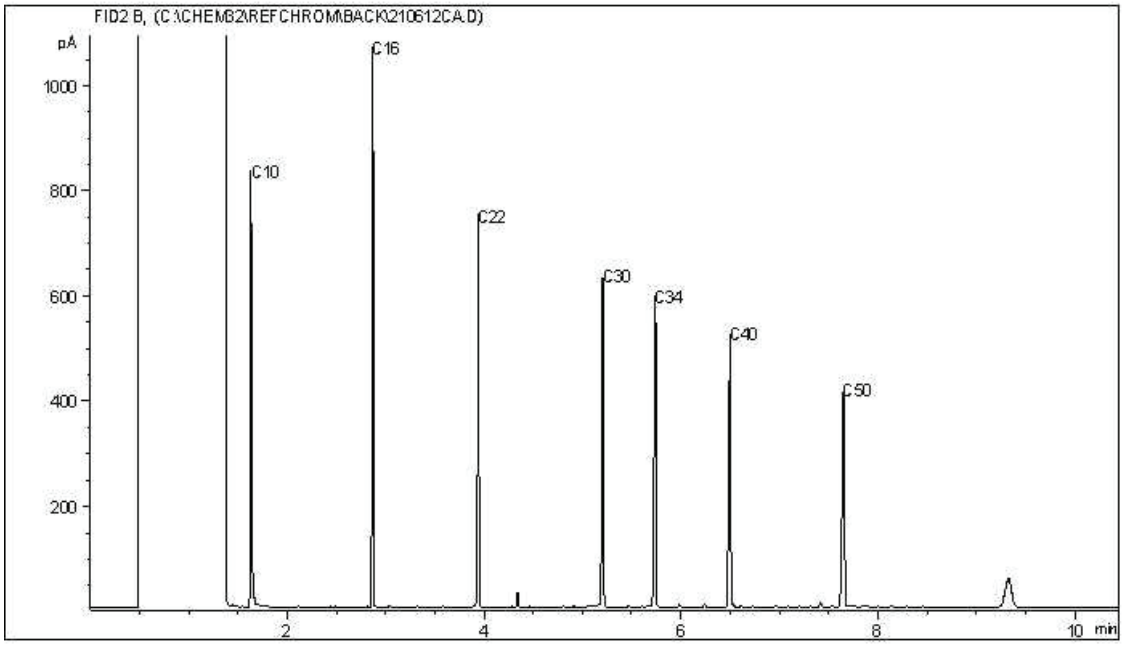

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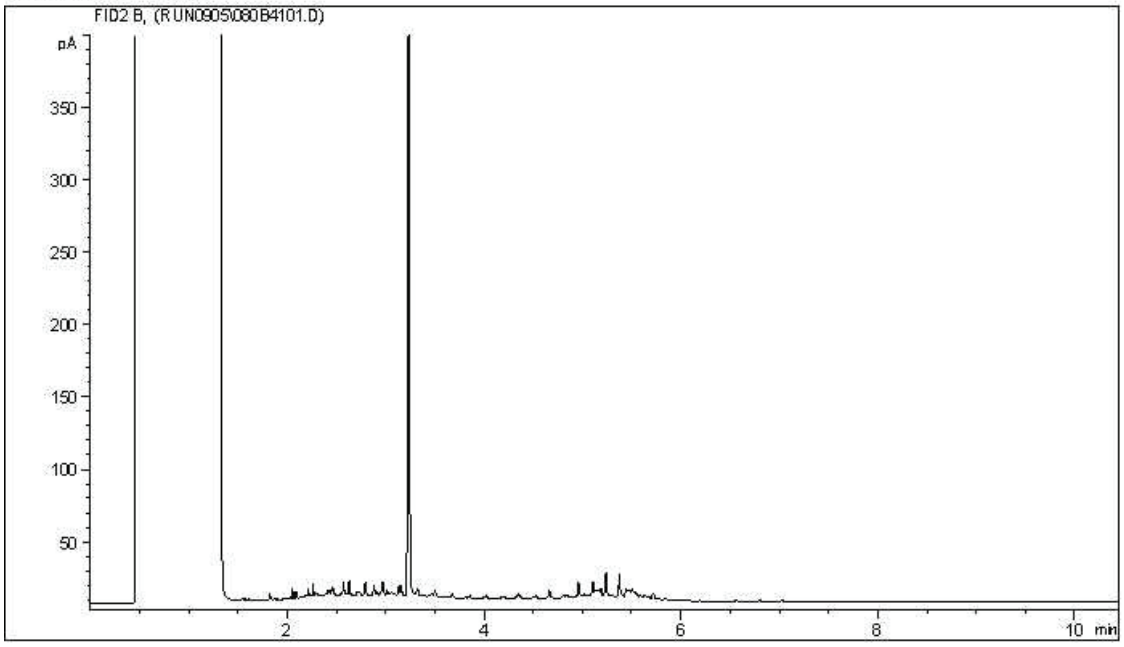

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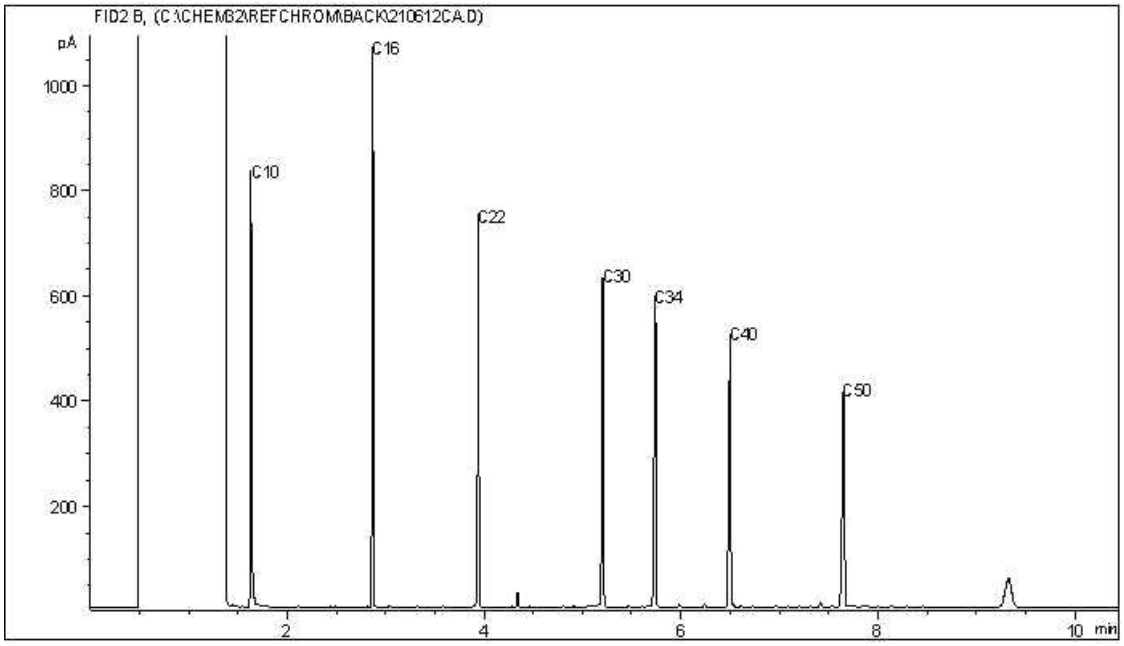

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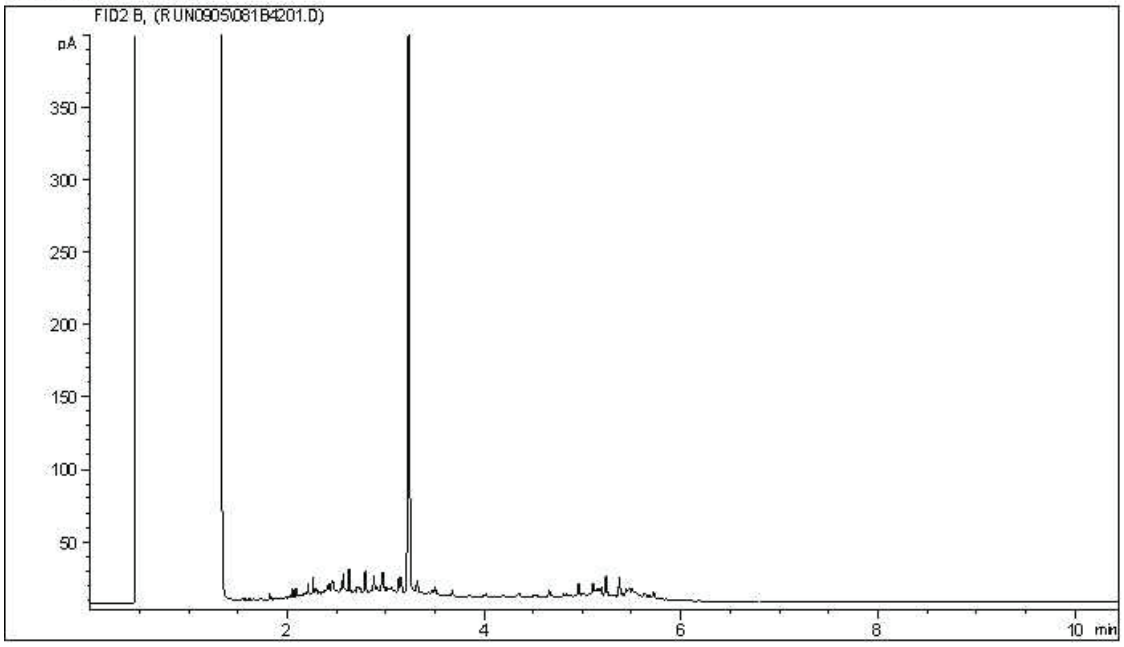

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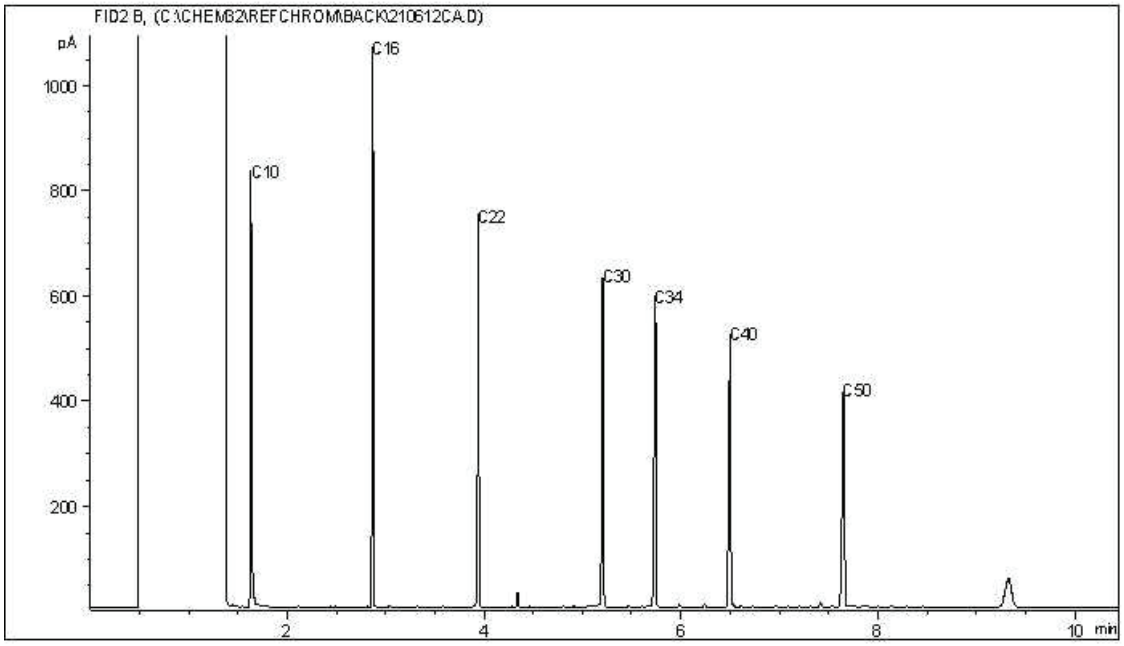

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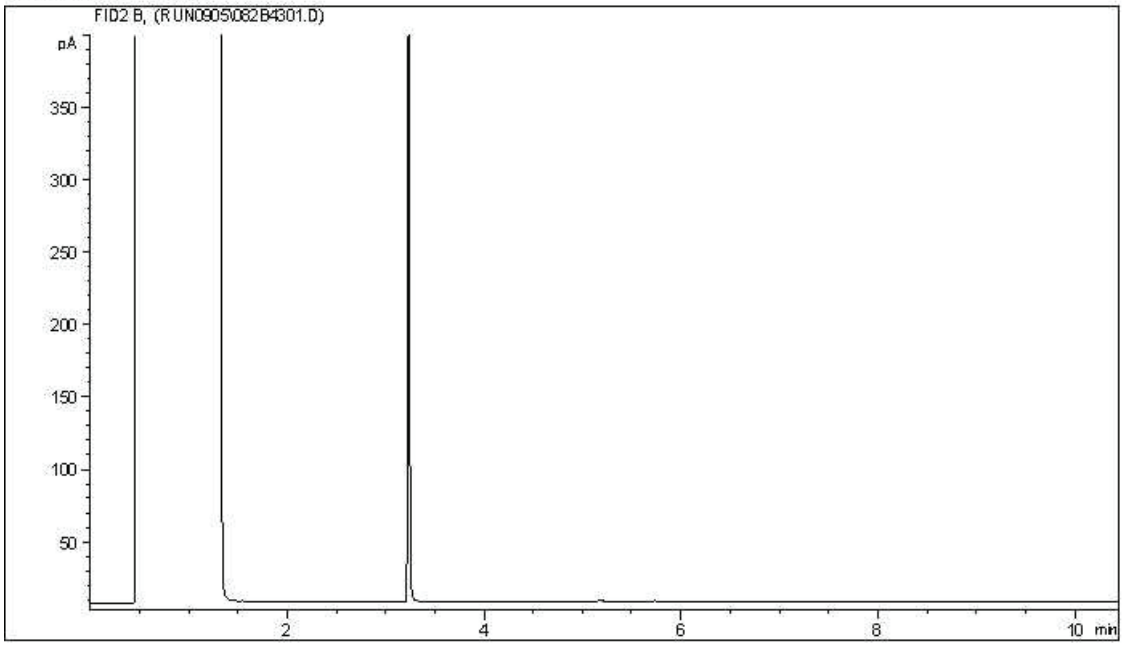

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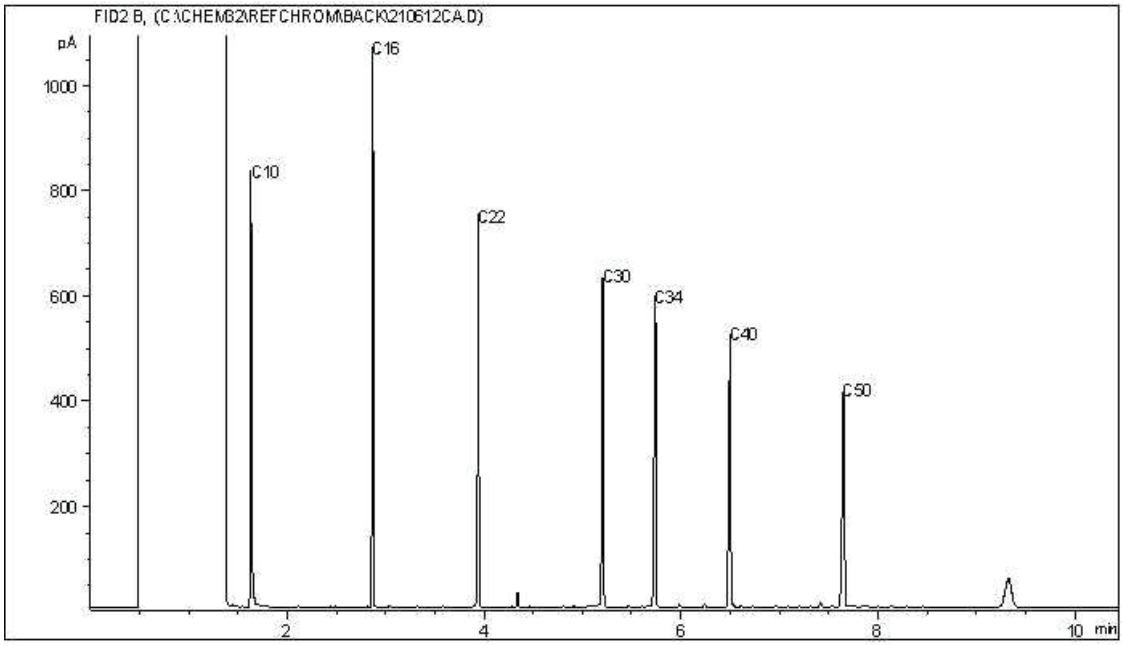

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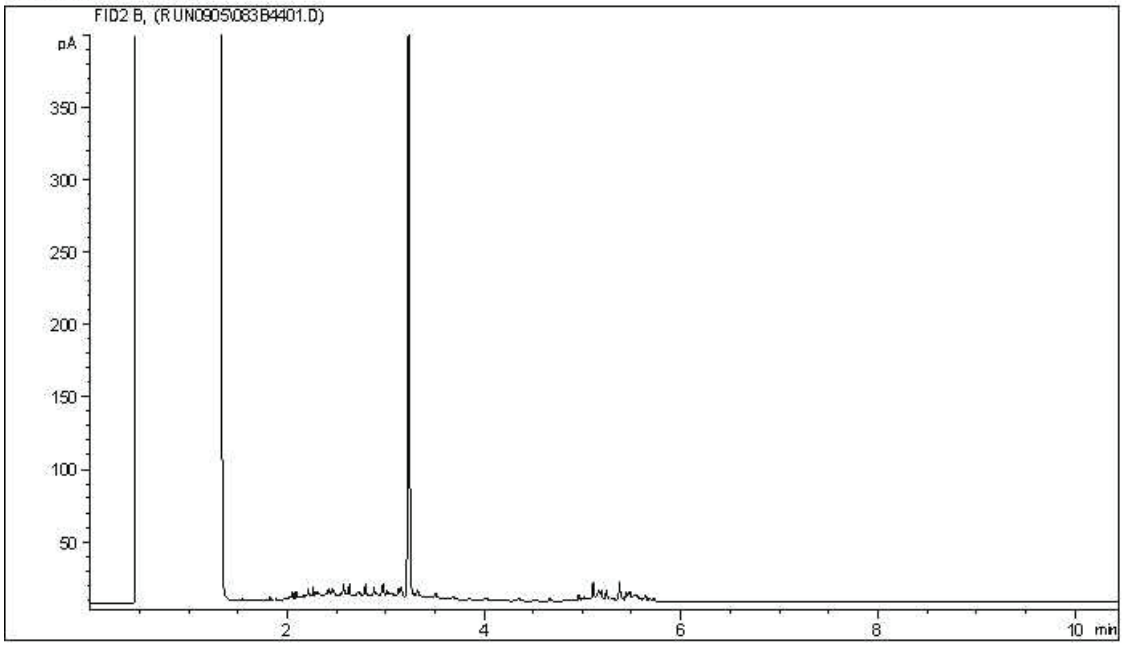

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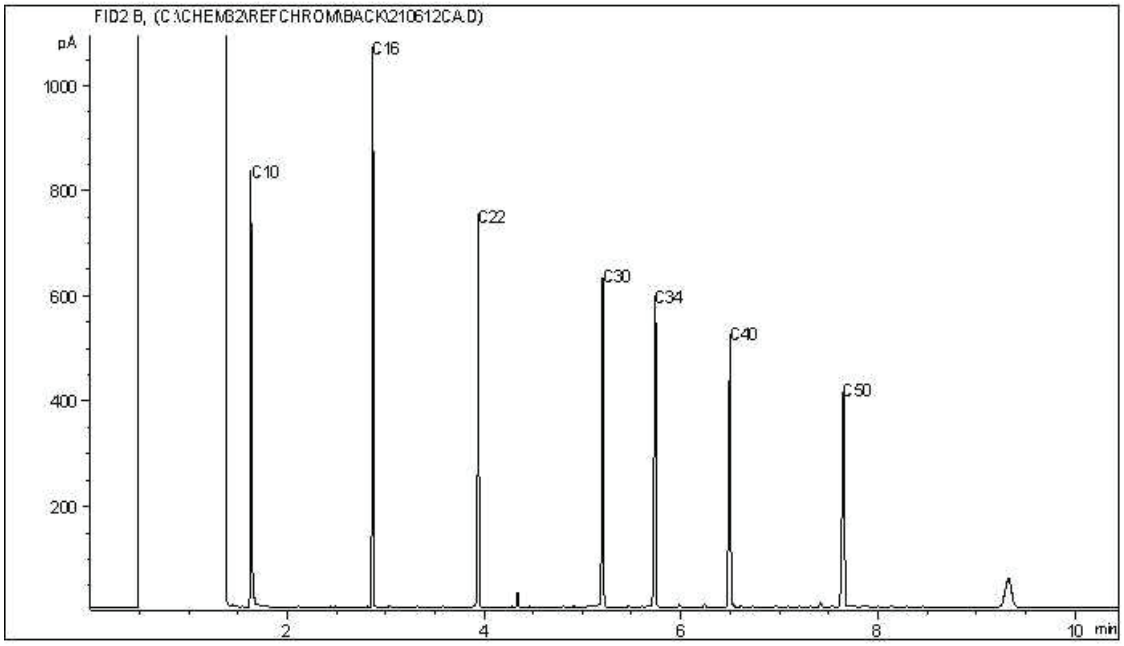


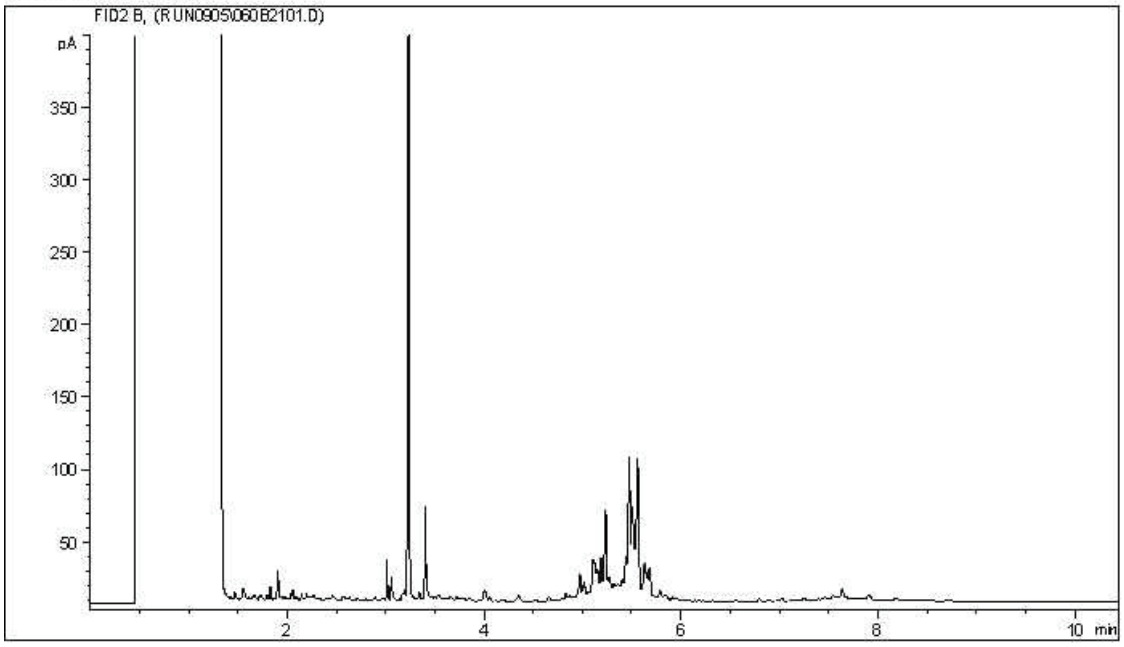
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

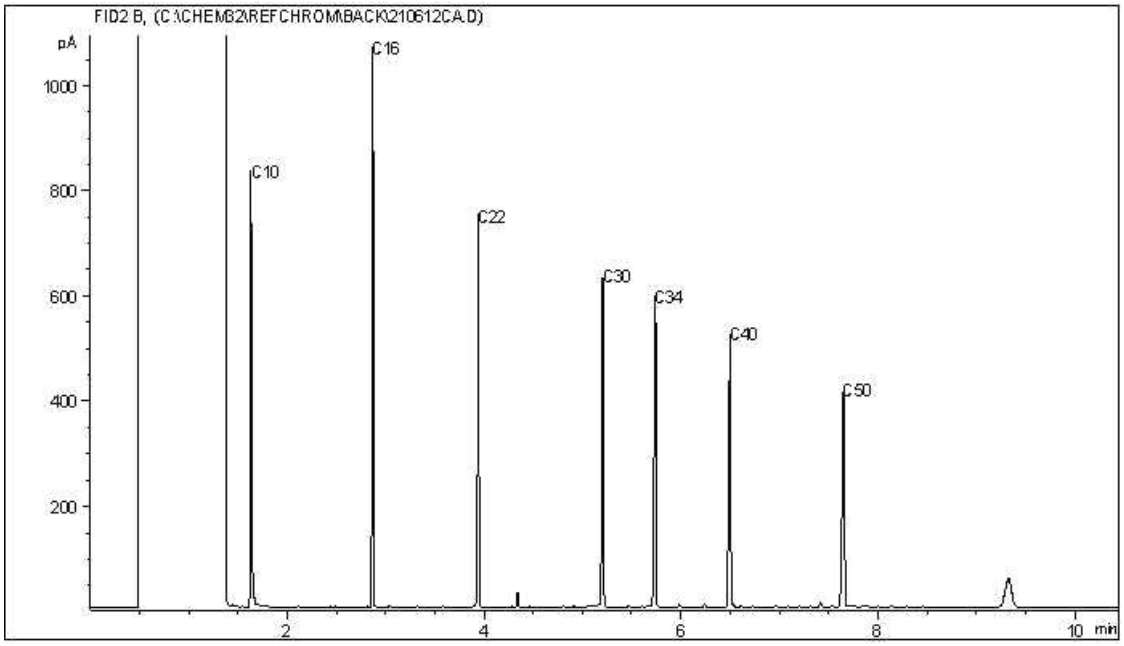
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
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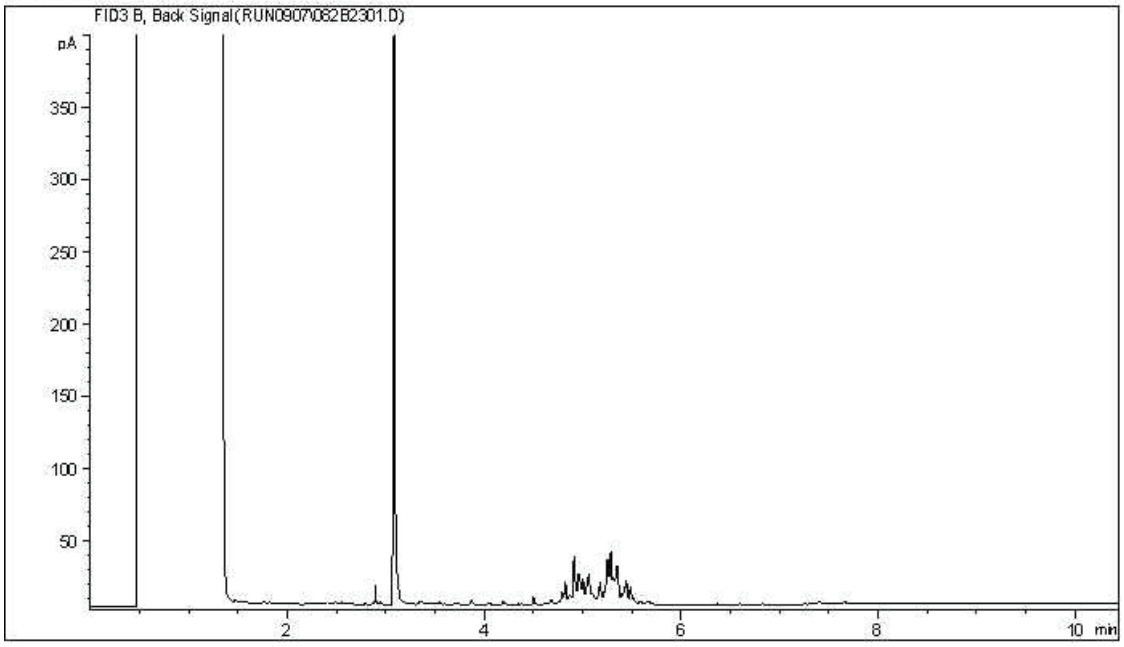
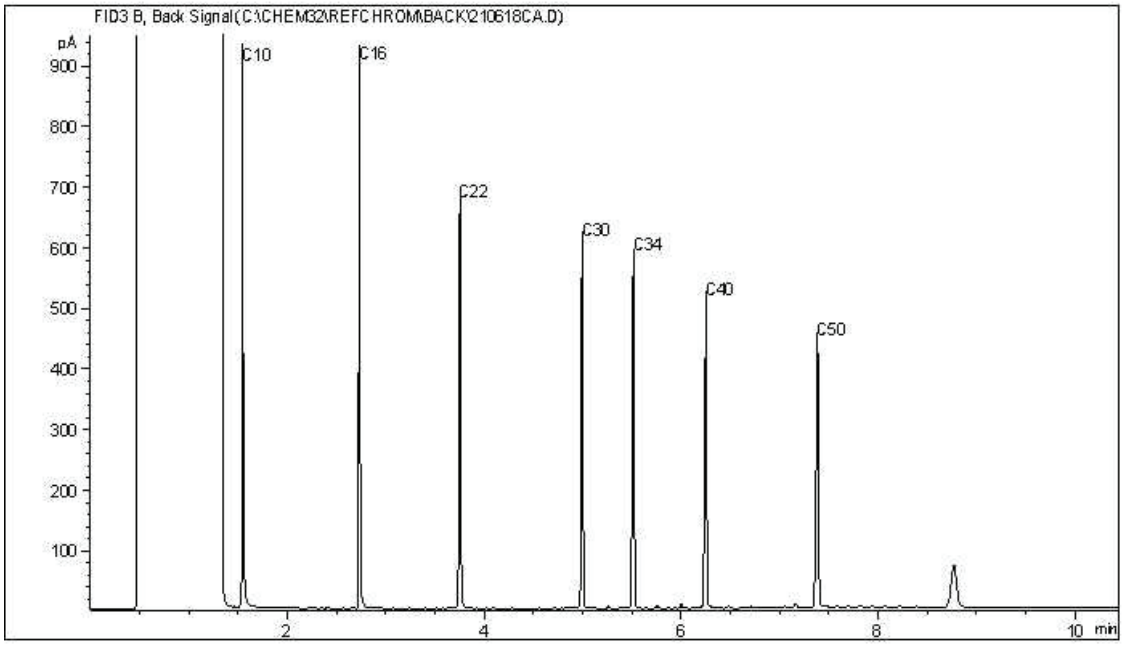
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

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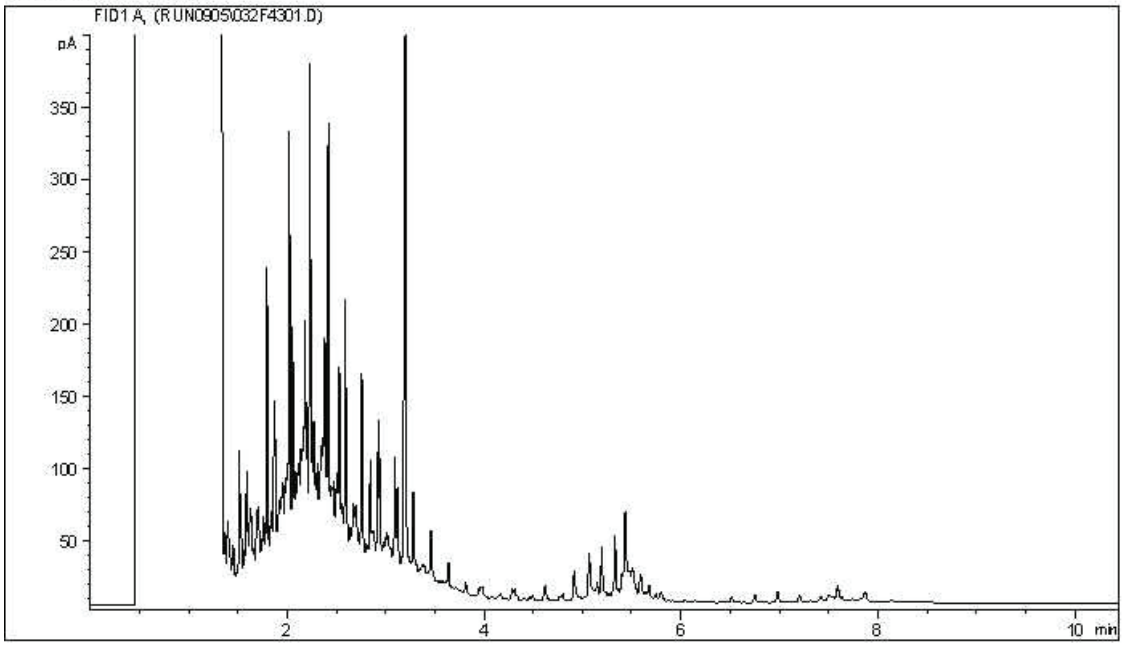
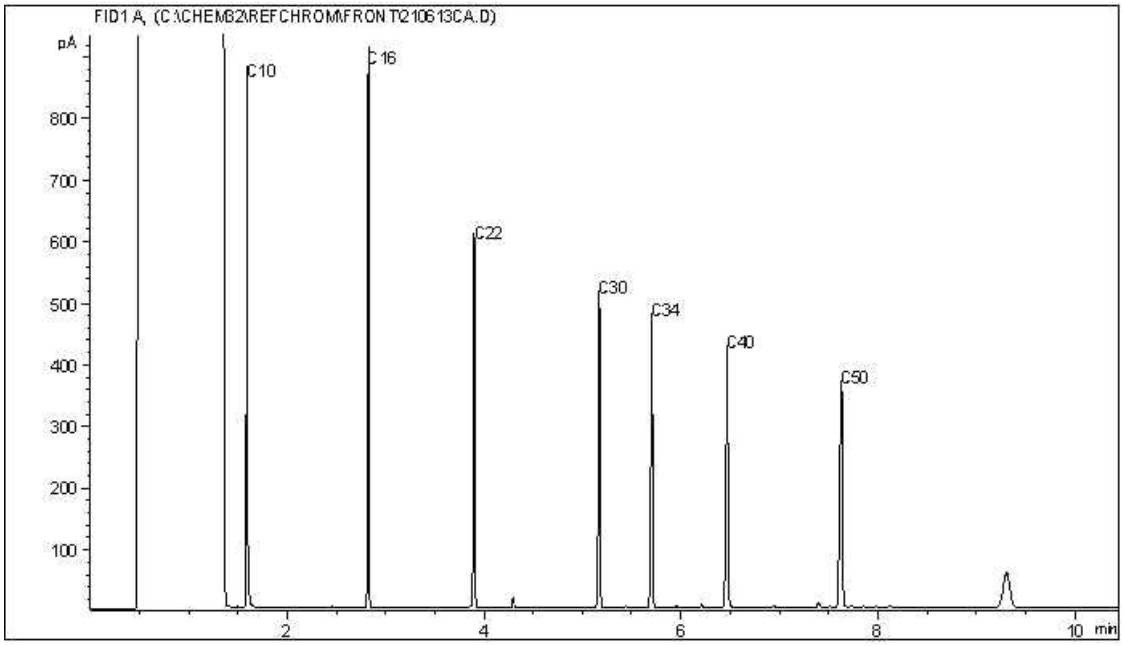
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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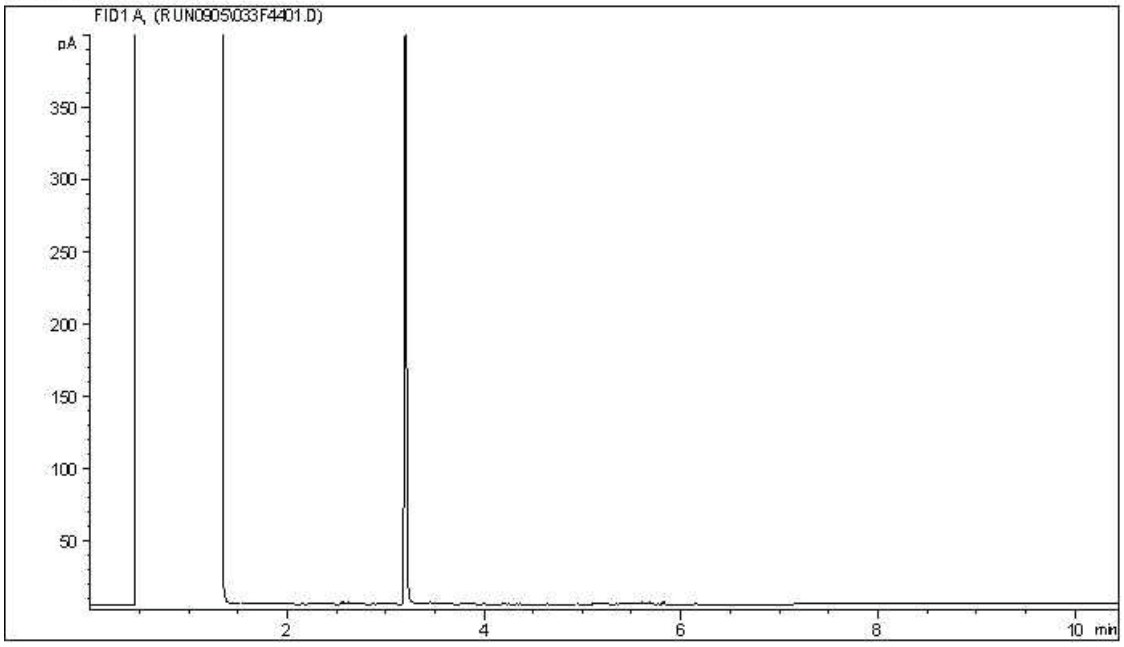
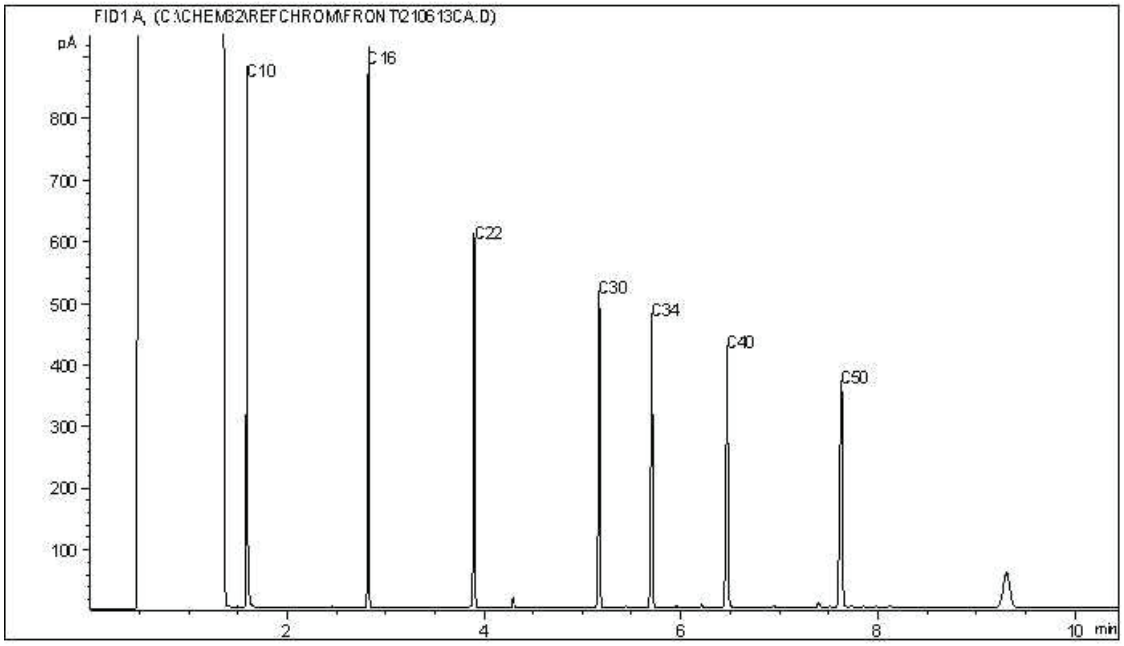
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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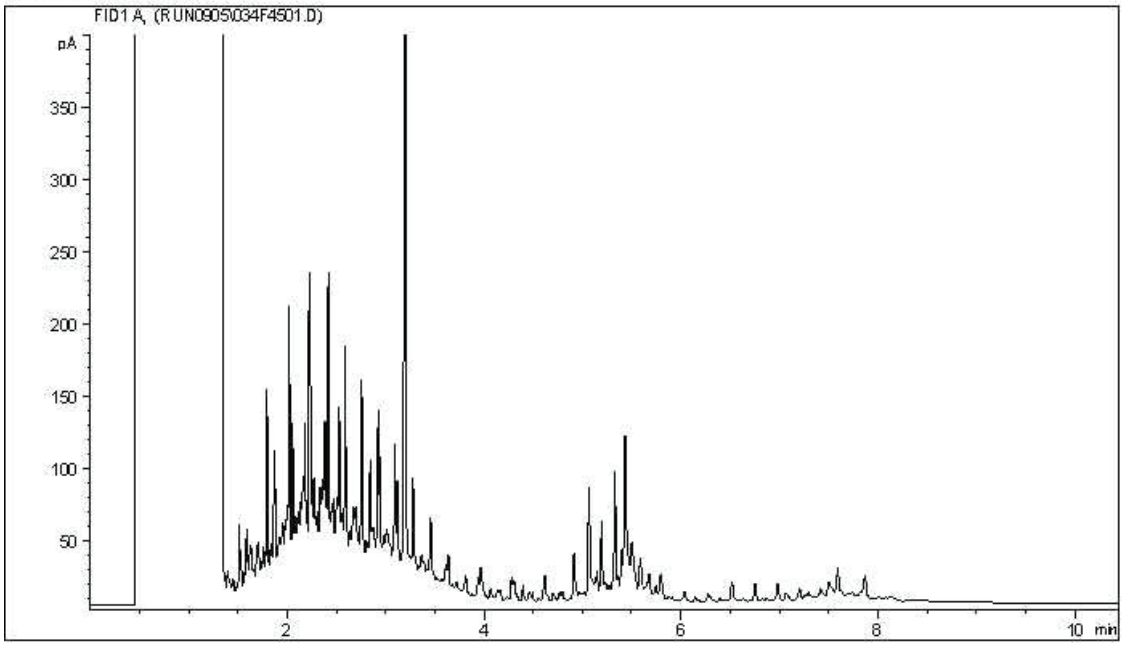
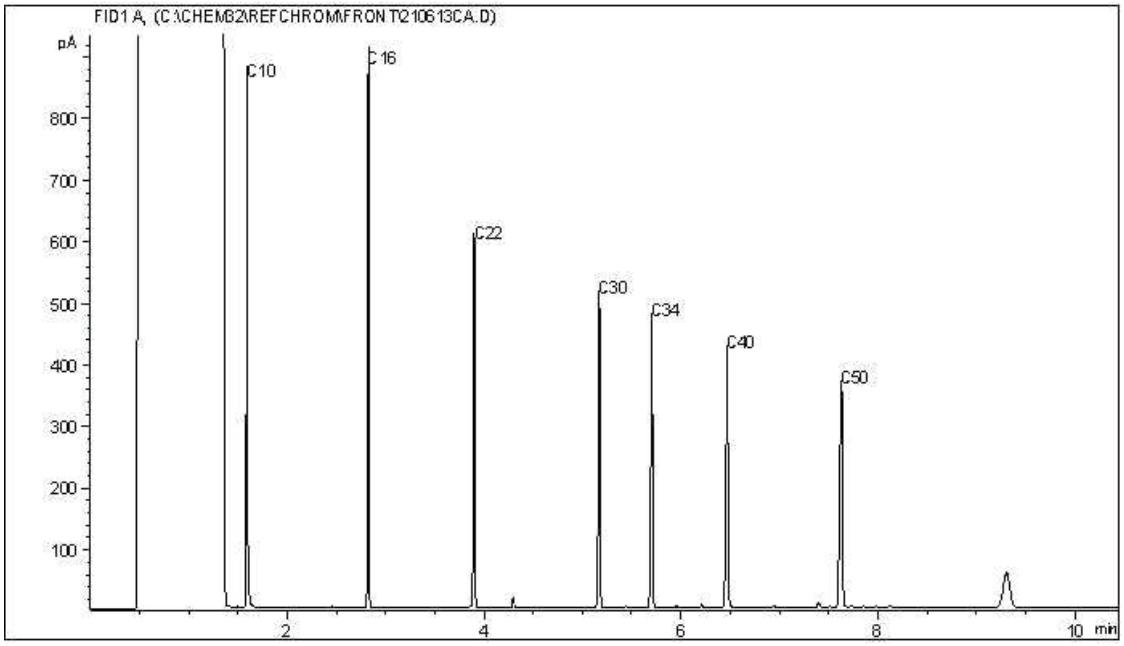
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC10



Carbon Range Distribution - Reference Chromatogram



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Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell

Sampling Date: August 23, 2021

Golder Project Number: 20368099-6000-1001

Laboratory: Bureau Veritas Edmonton

Lab Submission Number: C164989

Was the Cooler Received at the lab under a sealed and intact custody seal?	Yes
Was proper chain of custody of the samples documented and kept?	Yes
Were sample temperatures acceptable when they reached lab?:	Yes
Were all samples analyzed and extracted within hold times?:	No
Has lab warranted all tests were in statistical control in CoA?:	Yes
Was sufficient sample provided for the requested analysis?	Yes
Has lab warranted all samples were analyzed with limited headspace present?:	Yes

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Surrogate Recovery	X			Matrix spike recovery for F2 (56%) and F3A (C16-C22)
Method Blank Concentration	X			(52%) below the acceptance criteria of (60-140%).
Laboratory Duplicate RPD	X			All remaining laboratory QC results are within
Matrix Spike Recovery		X		acceptance criteria.
Blank Spike Recovery	X			

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration			X	Samples TP21-36-05 and DUP W exceed the alert limit
Trip Blank Concentration			X	for toluene (108%). Samples TP21-38-05 and DUP X
Field Duplicate RPD		X		exceed the alert limits for ethylbenzene (116%), total
				xylenes (102%) and F1 (C6-C10) - BTEX (84%).

Is data considered reliable (Yes/No/Suspect)?: Suspect

If answer is "No" or "Suspect", describe and provide rationale:

Please see QA/QC appendix for details

Data Reviewed by (Print): Anita Colbert

Data Reviewed by (Signature): Anita Colbert

Date: September 20, 2021

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site#: CKD Landfill Management
Your C.O.C. #: 644511-74-01

Attention: AURELIE BELLAVANCE

GOLDER ASSOCIATES LTD.
CALGARY - NATIONAL CONTRACT
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Report Date: 2021/09/11
Report #: R3070099
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C165063
Received: 2021/09/01, 08:00

Sample Matrix: Soil
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	5	N/A	2021/09/09	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	2	N/A	2021/09/10	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	7	N/A	2021/09/10		Auto Calc
CCME Hydrocarbons (F2-F4 in soil) (1, 3)	6	2021/09/08	2021/09/09	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 3)	1	2021/09/08	2021/09/10	AB SOP-00036	CCME PHC-CWS m
Moisture (1)	7	N/A	2021/09/09	AB SOP-00002	CCME PHC-CWS m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary Environmental
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.
(3) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site#: CKD Landfill Management
Your C.O.C. #: 644511-74-01

Attention: AURELIE BELLAVANCE

GOLDER ASSOCIATES LTD.
CALGARY - NATIONAL CONTRACT
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Report Date: 2021/09/11
Report #: R3070099
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C165063
Received: 2021/09/01, 08:00

reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Bureau Veritas
11 Sep 2021 11:06:14

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273

==========

This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C165063
Report Date: 2021/09/11

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC794	AFC795	AFC796	AFC797	AFC798	AFC799		
Sampling Date		2021/08/30 09:20	2021/08/30 09:22	2021/08/30 09:29	2021/08/30 09:38	2021/08/30 09:39	2021/08/30 09:40		
COC Number		644511-74-01	644511-74-01	644511-74-01	644511-74-01	644511-74-01	644511-74-01		
	UNITS	**TP21-115-01**	**TP21-115-03**	**TP21-115-06**	**TP21-116-02**	**TP21-116-04**	**TP21-116-06**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	<10	34	<10	<10	10	A345019
F3 (C16-C34 Hydrocarbons)	mg/kg	64	150	<50	150	<50	<50	50	A345019
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	<50	<50	<50	50	A345019
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A345019
Physical Properties									
Moisture	%	9.8	15	15	8.7	4.7	19	0.30	A345076
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	<10	<10	10	A340815
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	0.016	<0.0050	<0.0050	<0.0050	0.0050	A346074
Toluene	mg/kg	<0.050	<0.050	<0.050	0.13	<0.050	<0.050	0.050	A346074
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.015	<0.010	<0.010	0.010	A346074
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	A346074
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A346074
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	<10	10	A346074
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	99	101	97	97	96	97	N/A	A346074
4-Bromofluorobenzene (sur.)	%	98	97	101	100	98	101	N/A	A346074
D10-o-Xylene (sur.)	%	112	111	100	96	103	91	N/A	A346074
D4-1,2-Dichloroethane (sur.)	%	102	105	97	96	95	96	N/A	A346074
O-TERPHENYL (sur.)	%	94	108	85	87	99	99	N/A	A345019

RDL = Reportable Detection Limit
N/A = Not Applicable

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFC800		
Sampling Date		2021/08/30 09:41		
COC Number		644511-74-01		
	UNITS	TP21-115-05	RDL	QC Batch
Ext. Pet. Hydrocarbon				
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	10	A345019
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	50	A345019
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	50	A345019
Reached Baseline at C50	mg/kg	Yes	N/A	A345019
Physical Properties				
Moisture	%	5.9	0.30	A345076
Volatiles				
Xylenes (Total)	mg/kg	<0.045	0.045	A340815
F1 (C6-C10) - BTEX	mg/kg	<10	10	A340815
Field Preserved Volatiles				
Benzene	mg/kg	<0.0050	0.0050	A346074
Toluene	mg/kg	<0.050	0.050	A346074
Ethylbenzene	mg/kg	<0.010	0.010	A346074
m & p-Xylene	mg/kg	<0.040	0.040	A346074
o-Xylene	mg/kg	<0.020	0.020	A346074
F1 (C6-C10)	mg/kg	<10	10	A346074
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	95	N/A	A346074
4-Bromofluorobenzene (sur.)	%	100	N/A	A346074
D10-o-Xylene (sur.)	%	88	N/A	A346074
D4-1,2-Dichloroethane (sur.)	%	94	N/A	A346074
O-TERPHENYL (sur.)	%	105	N/A	A345019

RDL = Reportable Detection Limit
N/A = Not Applicable

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C

Results relate only to the items tested.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C165063
Report Date: 2021/09/11

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A345019	GG3	Matrix Spike	O-TERPHENYL (sur.)	2021/09/09		101	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/09		92	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/09		95	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/09		97	%	60 - 140
A345019	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/09		102	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/09		93	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/09		94	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/09		96	%	60 - 140
A345019	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/09		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/09	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/09	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/09	<50		mg/kg	
A345019	GG3	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/09	NC		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/09	NC		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/09	NC		%	40
A345076	SVI	Method Blank	Moisture	2021/09/09	<0.30		%	
A345076	SVI	RPD	Moisture	2021/09/09	4.7		%	20
A346074	PKL	Matrix Spike	1,4-Difluorobenzene (sur.)	2021/09/09		98	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/09		102	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/09		93	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/09		98	%	50 - 140
			Benzene	2021/09/09		91	%	50 - 140
			Toluene	2021/09/09		93	%	50 - 140
			Ethylbenzene	2021/09/09		99	%	50 - 140
			m & p-Xylene	2021/09/09		97	%	50 - 140
			o-Xylene	2021/09/09		101	%	50 - 140
			F1 (C6-C10)	2021/09/09		95	%	60 - 140
A346074	PKL	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/09		96	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/09		101	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/09		90	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/09		95	%	50 - 140
			Benzene	2021/09/09		89	%	60 - 130
			Toluene	2021/09/09		92	%	60 - 130
			Ethylbenzene	2021/09/09		96	%	60 - 130
			m & p-Xylene	2021/09/09		98	%	60 - 130
			o-Xylene	2021/09/09		103	%	60 - 130
			F1 (C6-C10)	2021/09/09		94	%	60 - 140
A346074	PKL	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/09		97	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/09		99	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/09		86	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/09		96	%	50 - 140
			Benzene	2021/09/09	<0.0050		mg/kg	
			Toluene	2021/09/09	<0.050		mg/kg	
			Ethylbenzene	2021/09/09	<0.010		mg/kg	
			m & p-Xylene	2021/09/09	<0.040		mg/kg	
			o-Xylene	2021/09/09	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/09	<10		mg/kg	
A346074	PKL	RPD	Benzene	2021/09/09	NC		%	50
			Toluene	2021/09/09	NC		%	50
			Ethylbenzene	2021/09/09	NC		%	50
			m & p-Xylene	2021/09/09	NC		%	50
			o-Xylene	2021/09/09	NC		%	50

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F1 (C6-C10)	2021/09/09	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C165063
Report Date: 2021/09/11

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Janet Gao, B.Sc., QP, Supervisor, Organics

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas Laboratories
4000 19st N E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

139

Page 1 of 1

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#254 GOLDER ASSOCIATES LTD.	Company Name:	#6340 GOLDER ASSOCIATES LTD.	Quotation #:	C00480	BV Labs Job #: C163063	Bottle Order #: 644511
Attention:	ACCOUNTS PAYABLE	Attention:	Aurelie Belavance	P.O. #:	20368099-7000-1001		
Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Address:	2800, 700 -2nd Street SW CALGARY AB T2P 2W2	Project:	20368099-6000-1001	COC #: C#644511-74-01	Project Manager: Carmen McKay
Tel:	(905) 567-6100 Ext: 1167 Fax: (403) 299-5606	Tel:	(403) 299-5600 Fax:	Project Name:			
Email:	canadaaccountspayableinvoices@golder.com	Email:	abellavance@golder.com	Site #:			
				Sampled By:			

Regulatory Criteria:
- [ ] ATI
- [x] CCME
- [ ] Other

Special Instructions: email: shelldqv@golder.com facility code 41259544

- SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)* [ ]

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	AT1 Regulated Metals - Soils	AT1 BTEX and F1-F4 in Soil (Vials)	BIC SCALE Analysis (F2/F2+F3B) in soil	Sulphate / nitrate	Barium on ICP using Fusion Extraction (True Barium)	CCME BTEX and F1-F2 in Water	Routine Water	Regulated Metals (CCME/AT1) - Dissolved	PAH in Water by GC/MS	Limited Sample	# of Bottles	Comments
1	N/A	TP21-115-01	08/Sep/2021	09:20	Soil			X										
2		TP21-115-03		09:22				X										
3		TP21-115-06		09:29				X										
4		TP21-116-02		09:38				X										Received in Yellowknife By: J.Mercado @5:09 PM SEP 01 2021
5		TP21-116-04		09:59				X										
6		TP21-116-06		09:40				X										
7		TP21-115-05		09:41				X										Temp: 4 4 1
8																		ICE-YES - CS YES
9																		
10																		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
PETER TAN	21/08/30	13:00	Alicia Lin	2021/09/02	15:10		[ ]	2.7/3.4/3.2	[x] Yes [ ] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

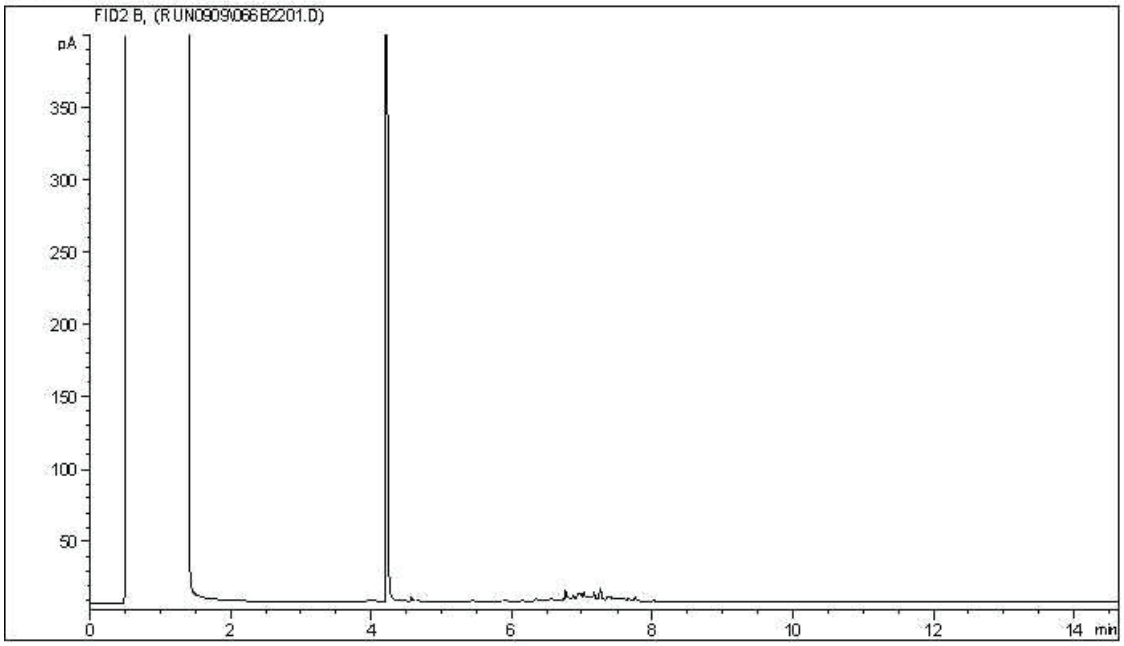
ICE-Y

White: BV Labs Yellow: Client

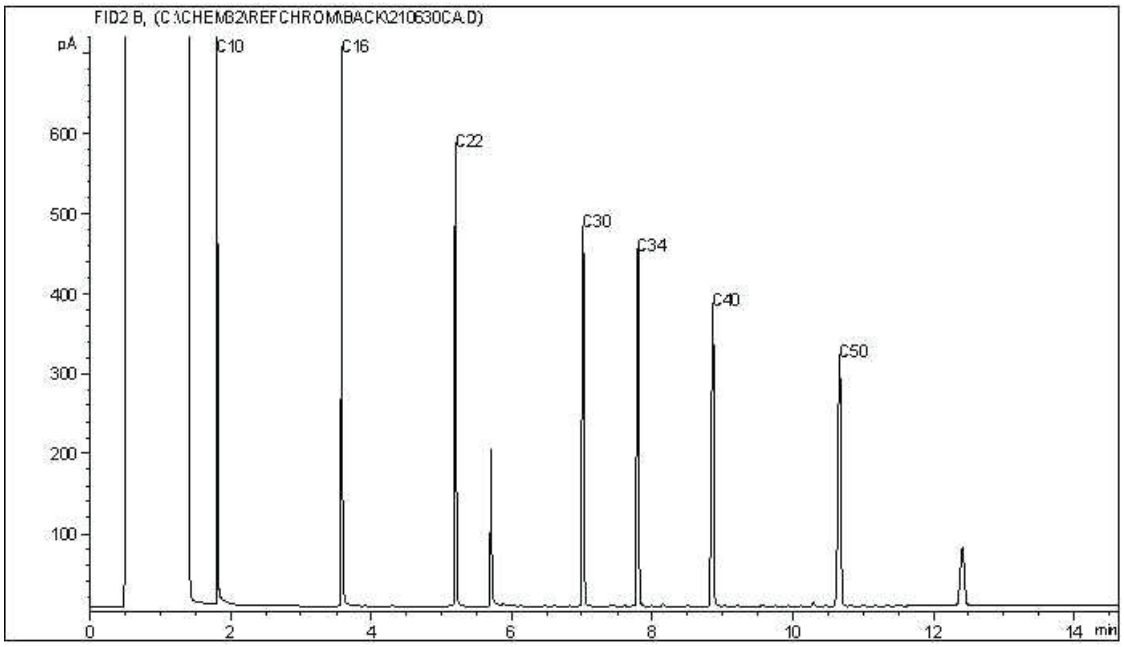
Bureau Veritas Canada (2019) Inc.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



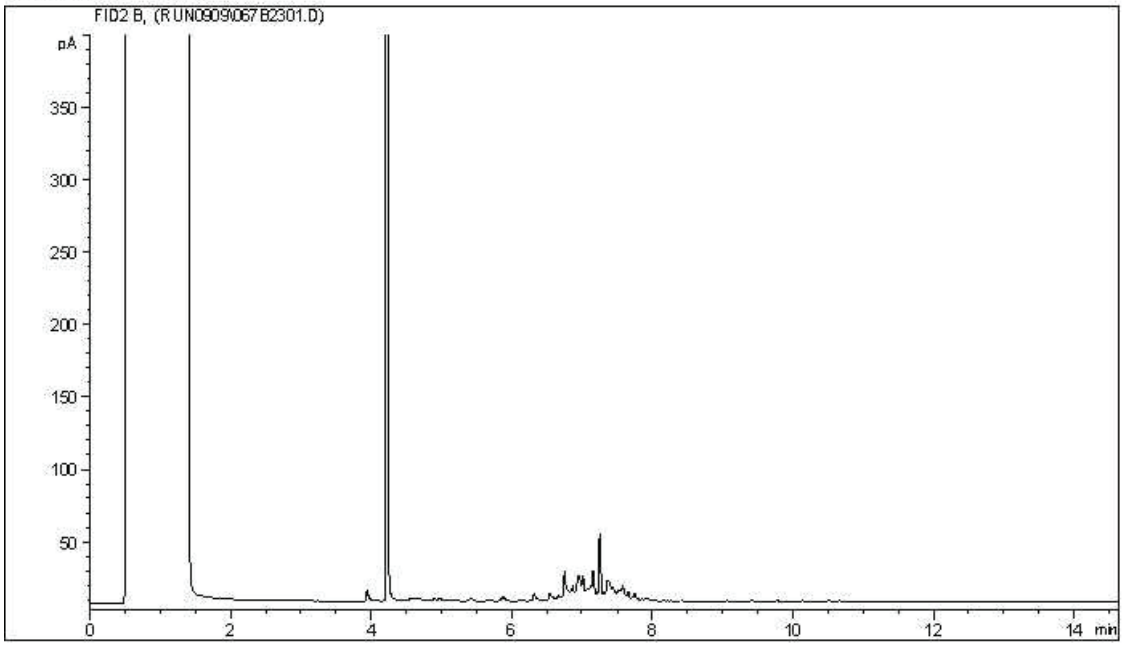
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

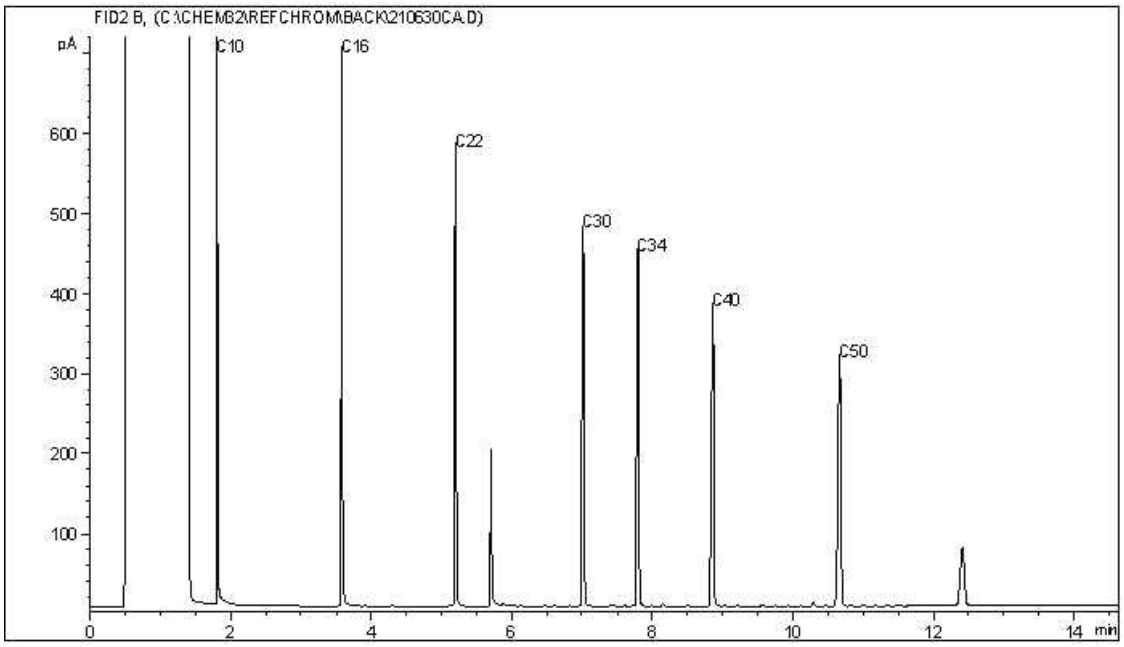
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



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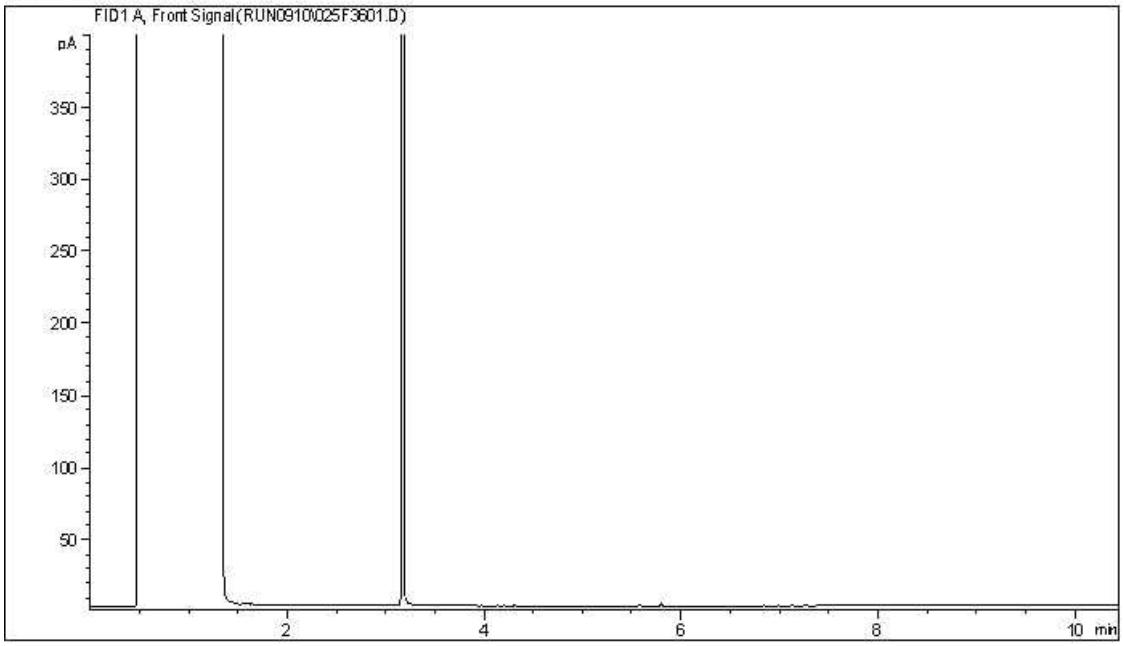
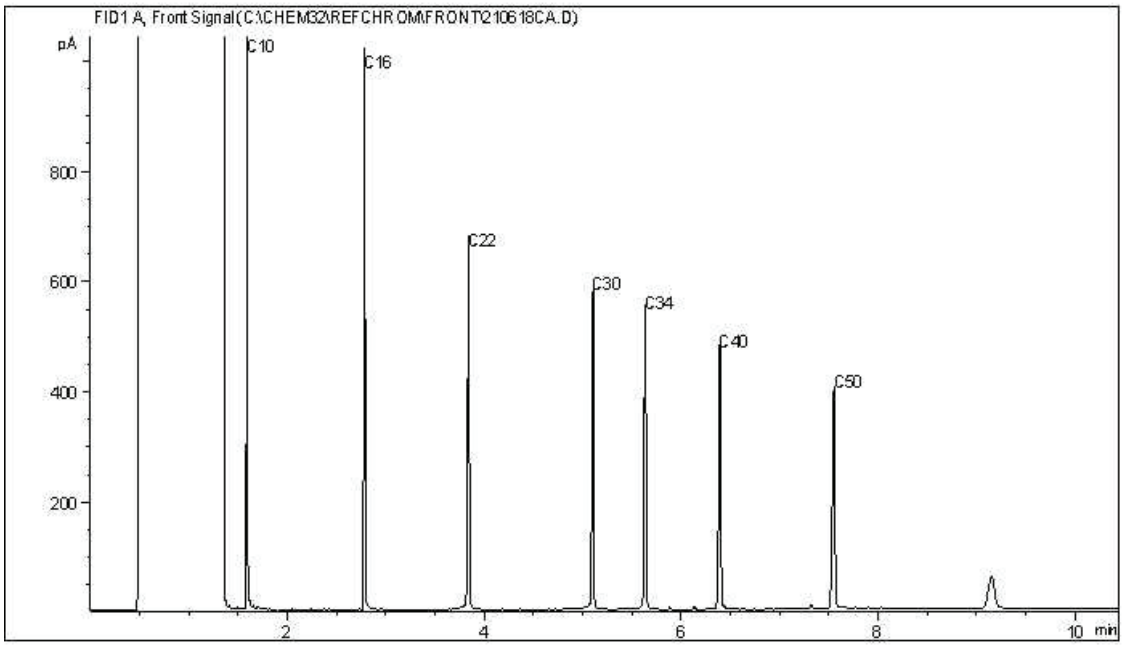
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC13



Carbon Range Distribution - Reference Chromatogram



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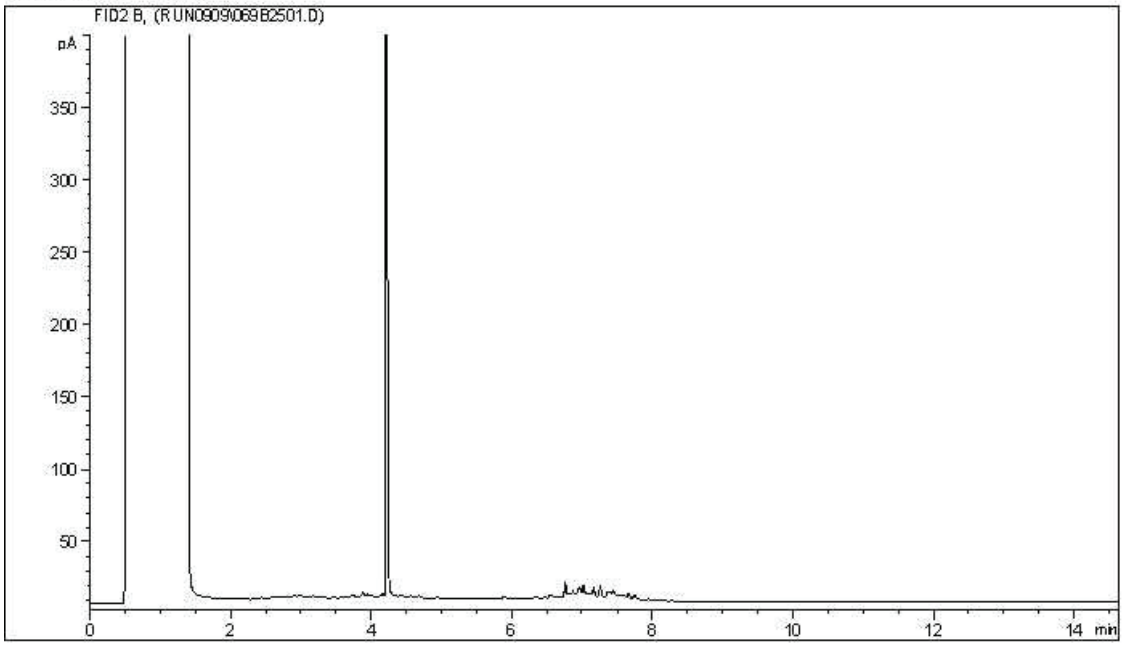
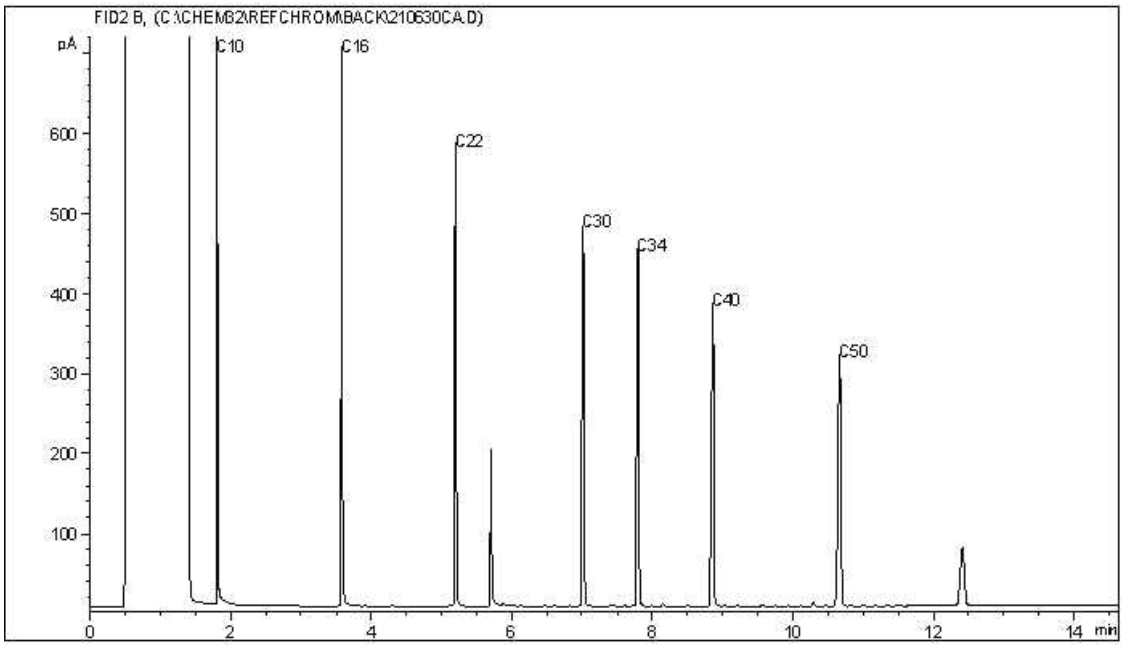
CCME Hydrocarbons (F2-F4 in soil) Chromatogram

Instrument: GC12



Carbon Range Distribution - Reference Chromatogram



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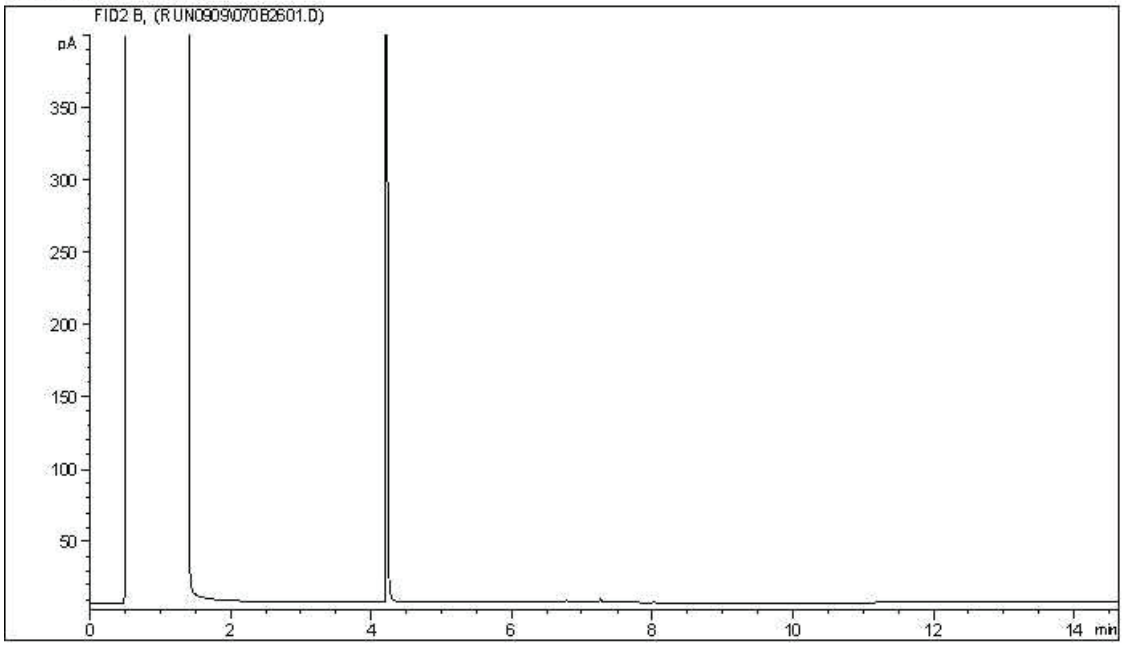
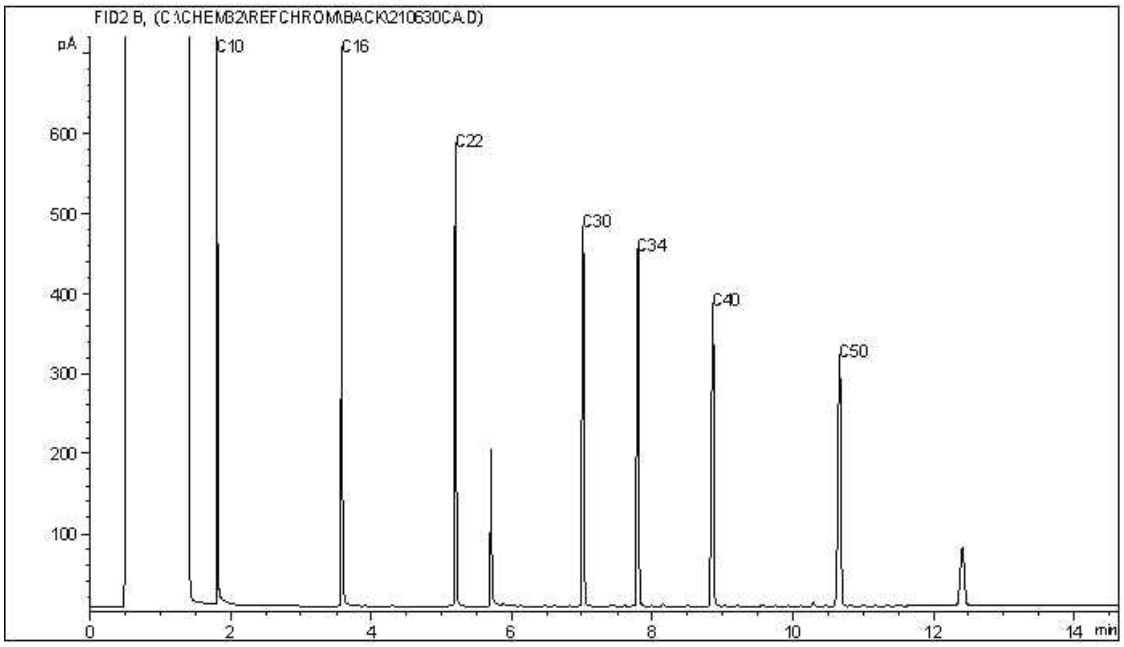


Carbon Range Distribution - Reference Chromatogram



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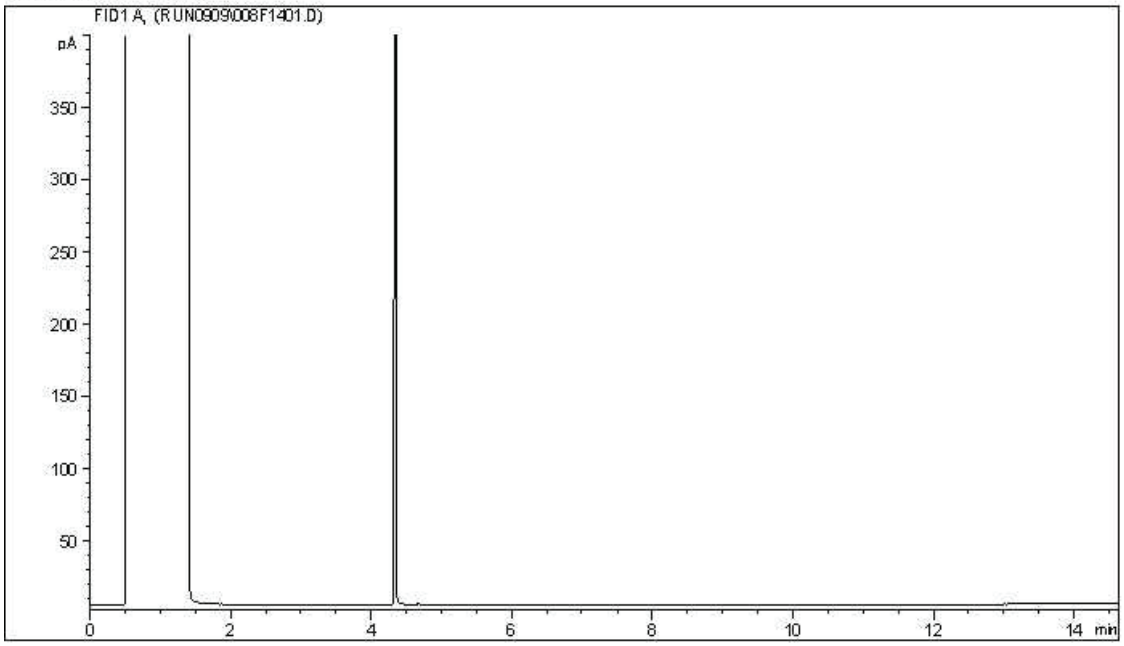
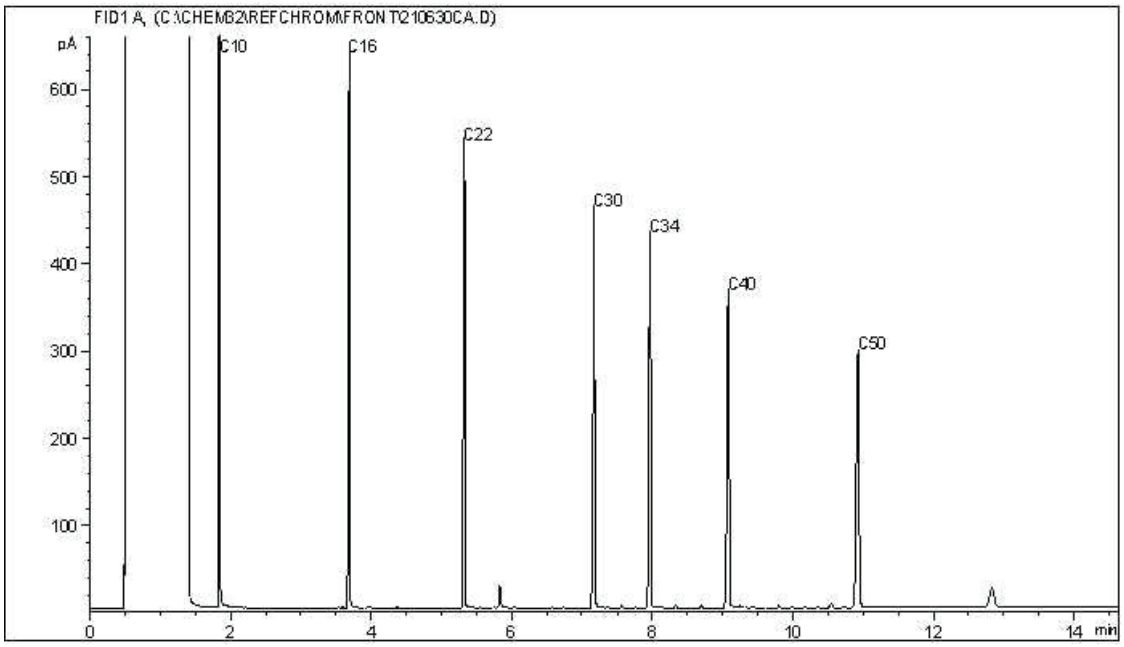


Carbon Range Distribution - Reference Chromatogram



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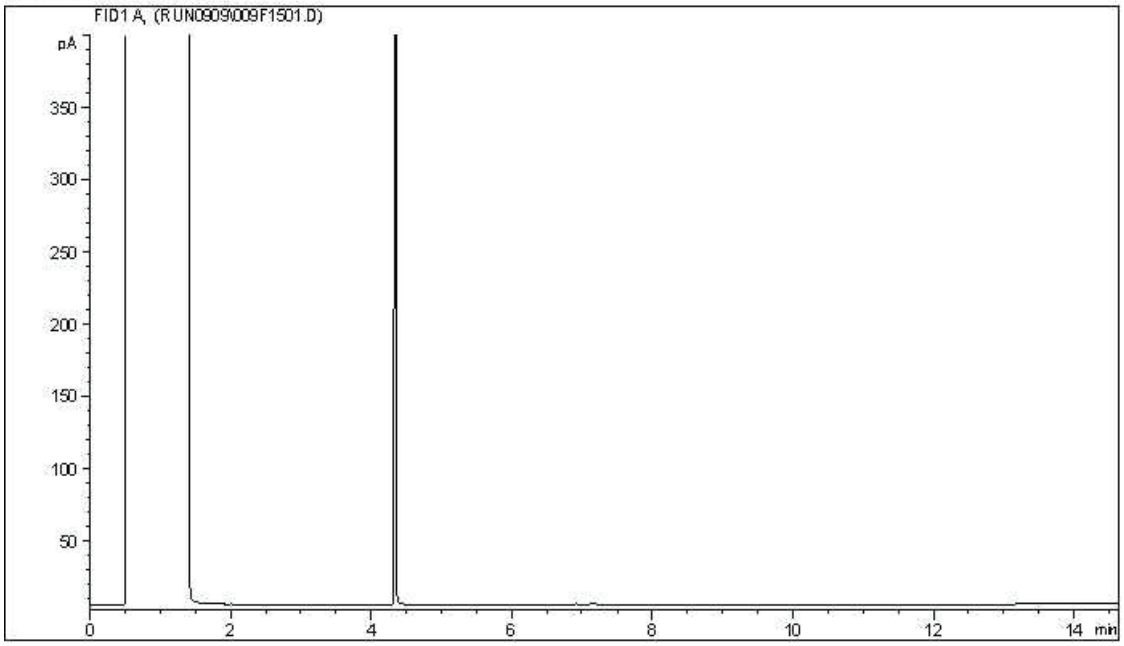
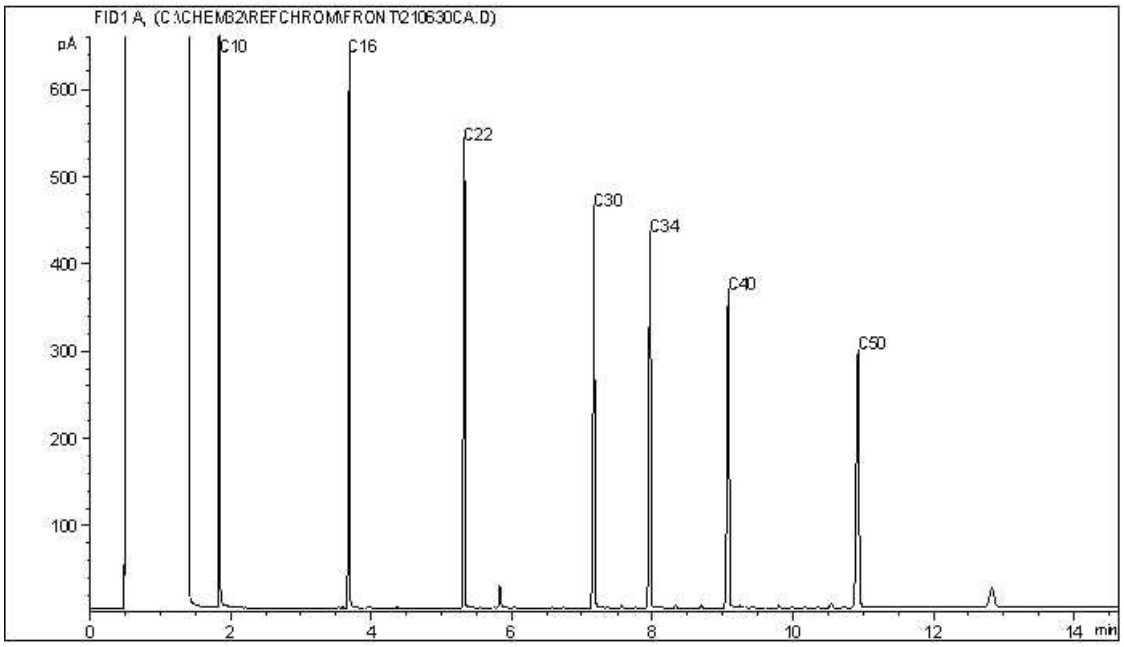


Carbon Range Distribution - Reference Chromatogram



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Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell

Sampling Date: August 30, 2021

Golder Project Number: 20368099-6000-1001

Laboratory: Bureau Veritas Edmonton

Lab Submission Number: C165063

Was the Cooler Received at the lab under a sealed and intact custody seal?	Yes
Was proper chain of custody of the samples documented and kept?	Yes
Were sample temperatures acceptable when they reached lab?:	Yes
Were all samples analyzed and extracted within hold times?:	Yes
Has lab warranted all tests were in statistical control in CoA?:	Yes
Was sufficient sample provided for the requested analysis?	Yes
Has lab warranted all samples were analyzed with limited headspace present?:	Yes

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Surrogate Recovery	X			All laboratory QC results are within
Method Blank Concentration	X			acceptance criteria.
Laboratory Duplicate RPD	X			
Matrix Spike Recovery	X			
Blank Spike Recovery	X			

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration			X	No field QC samples were collected.
Trip Blank Concentration			X	
Field Duplicate RPD			X	

Is data considered reliable (Yes/No/Suspect)?: Yes

If answer is "No" or "Suspect", describe and provide rationale:

Data Reviewed by (Print): Anita Colbert

Data Reviewed by (Signature): Anita Colbert

Date: September 13, 2021

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Your C.O.C. #: 644255-02-01

Attention: PETER TAN

GOLDER ASSOCIATES LTD
16820-107 AVE
EDMONTON, AB
CANADA T5P 4C3

Report Date: 2021/09/20
Report #: R3074031
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C167904
Received: 2021/09/10, 09:00

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	2	N/A	2021/09/16	AB SOP-00005	SM 23 2320 B m
BTEX/F1 in Water by HS GC/MS/FID (1)	4	N/A	2021/09/15	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	4	N/A	2021/09/16		Auto Calc
Cadmium - low level CCME - Dissolved (1)	2	N/A	2021/09/20		Auto Calc
Cadmium - low level CCME (Total) (1)	2	N/A	2021/09/17		Auto Calc
Chloride/Sulphate by Auto Colourimetry (1)	2	N/A	2021/09/17	AB SOP-00020	SM23-4500-Cl/SO4-E m
Conductivity @25C (1)	2	N/A	2021/09/15	AB SOP-00005	SM 23 2510 B m
CCME Hydrocarbons (F2-F4 in water) (1, 2)	3	2021/09/15	2021/09/17	AB SOP-00037	CCME PHC-CWS m
CCME Hydrocarbons in Water (F2; C10-C16) (1, 2)	1	2021/09/15	2021/09/17	AB SOP-00037 AB SOP-00040	CCME PHC-CWS m
Hardness (1)	2	N/A	2021/09/19		Auto Calc
Elements by ICP - Dissolved (1, 3)	2	N/A	2021/09/19	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	2	N/A	2021/09/18	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	2	2021/09/17	2021/09/18	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS - Dissolved (1, 3)	2	N/A	2021/09/17	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	2	2021/09/17	2021/09/17	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Ion Balance (1)	2	N/A	2021/09/19		Auto Calc
Nitrate and Nitrite (1)	2	N/A	2021/09/14		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (1)	2	N/A	2021/09/14	AB SOP-00091	SM 23 4500 NO3m
Nitrate (as N) (1)	2	2021/09/13	2021/09/14		Auto Calc
Benzo[a]pyrene Equivalency (1, 4)	3	N/A	2021/09/16		Auto Calc
PAH in Water by GC/MS (1)	3	2021/09/15	2021/09/16	AB SOP-00037 / AB SOP-00003	EPA 3510C/8270E m
Total LMW, HMW, Total PAH Calc (1)	3	N/A	2021/09/16		Auto Calc
pH @25°C (1, 5)	2	N/A	2021/09/16	AB SOP-00005	SM 23 4500-H+B m
Total Dissolved Solids (Calculated) (1)	2	N/A	2021/09/19		Auto Calc

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Your C.O.C. #: 644255-02-01

Attention: PETER TAN

GOLDER ASSOCIATES LTD
16820-107 AVE
EDMONTON, AB
CANADA T5P 4C3

Report Date: 2021/09/20
Report #: R3074031
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C167904
Received: 2021/09/10, 09:00

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) Silica gel clean up employed.
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) B[a]P TPE is calculated using 1/2 of the RDL for non detect results as per Alberta Environment instructions. This protocol may not apply in other jurisdictions.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas Laboratories endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Bureau Veritas
20 Sep 2021 16:57:32

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273

==========

This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C167904
Report Date: 2021/09/20

GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

RESULTS OF CHEMICAL ANALYSES OF WATER

BV Labs ID		AFU653	AFU654			AFU655		
Sampling Date		2021/09/01 16:30	2021/09/01 16:30			2021/09/01 16:30		
COC Number		644255-02-01	644255-02-01			644255-02-01		
	UNITS	**SW21-01**	**DUP A**	**RDL**	**QC Batch**	**FIELD BLANK**	**RDL**	**QC Batch**
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	<0.020	0.020	A349986			
Total Cadmium (Cd)	ug/L	0.068	0.063	0.020	A349380			
Polycyclic Aromatics								
Low Molecular Weight PAH`s	ug/L	<0.20	<0.20	0.20	A350553	<0.20	0.20	A350553
High Molecular Weight PAH`s	ug/L	<0.050	<0.050	0.050	A350553	<0.050	0.050	A350553
Total PAH	ug/L	<0.20	<0.20	0.20	A350553	<0.20	0.20	A350553
RDL = Reportable Detection Limit								

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167904
Report Date: 2021/09/20

GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

RESULTS OF CHEMICAL ANALYSES OF WATER

BV Labs ID		AFU656	AFU657		
Sampling Date		2021/09/06 09:00	2021/09/06 09:00		
COC Number		644255-02-01	644255-02-01		
	UNITS	SW21-01	DUP A	RDL	QC Batch
Calculated Parameters					
Hardness (CaCO3)	mg/L	150	140	0.50	A350436
Ion Balance (% Difference)	%	0.90	4.9	N/A	A350466
Dissolved Nitrate (N)	mg/L	<0.010	<0.010	0.010	A350424
Dissolved Nitrate (NO3)	mg/L	<0.044	<0.044	0.044	A350438
Dissolved Nitrite (NO2)	mg/L	<0.033	<0.033	0.033	A350438
Calculated Total Dissolved Solids	mg/L	210	210	10	A350440
Misc. Inorganics					
Conductivity	uS/cm	390	380	2.0	A351277
pH	pH	8.12	8.01	N/A	A351276
Anions					
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	A351273
Alkalinity (Total as CaCO3)	mg/L	100	110	1.0	A351273
Bicarbonate (HCO3)	mg/L	130	140	1.0	A351273
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	A351273
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	A351273
Dissolved Chloride (Cl)	mg/L	33	31	1.0	A356082
Dissolved Sulphate (SO4)	mg/L	45	45	1.0	A356082
Nutrients					
Dissolved Nitrite (N)	mg/L	<0.010	<0.010	0.010	A351384
Dissolved Nitrate plus Nitrite (N)	mg/L	<0.010	<0.010	0.010	A351384

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167904
Report Date: 2021/09/20

GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		AFU651			AFU653	AFU654	AFU655		
Sampling Date		2021/08/30 11:55			2021/09/01 16:30	2021/09/01 16:30	2021/09/01 16:30		
COC Number		644255-02-01			644255-02-01	644255-02-01	644255-02-01		
	UNITS	**P06-07**	**RDL**	**QC Batch**	**SW21-01**	**DUP A**	**FIELD BLANK**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/L	<0.21 (1)	0.21	A349747	<0.10	<0.10	<0.10	0.10	A352602
F3 (C16-C34 Hydrocarbons)	mg/L				<0.10	<0.10	<0.10	0.10	A352602
F4 (C34-C50 Hydrocarbons)	mg/L				<0.20	<0.20	<0.20	0.20	A352602
Surrogate Recovery (%)									
O-TERPHENYL (sur.)	%				100	100	104		A352602
O-TERPHENYL (sur.)	%	99		A349747					

RDL = Reportable Detection Limit
(1) Detection limit raised based on sample volume used for analysis.

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GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

SEMIVOLATILE ORGANICS BY GC-MS (WATER)

BV Labs ID		AFU653	AFU654	AFU655		
Sampling Date		2021/09/01 16:30	2021/09/01 16:30	2021/09/01 16:30		
COC Number		644255-02-01	644255-02-01	644255-02-01		
	UNITS	SW21-01	DUP A	FIELD BLANK	RDL	QC Batch
Polycyclic Aromatics						
B[a]P TPE Total Potency Equivalents	ug/L	<0.010	<0.010	<0.010	0.010	A350439
Acenaphthene	ug/L	<0.10	<0.10	<0.10	0.10	A352619
Acenaphthylene	ug/L	<0.10	<0.10	<0.10	0.10	A352619
Acridine	ug/L	<0.040	<0.040	<0.040	0.040	A352619
Anthracene	ug/L	<0.010	<0.010	<0.010	0.010	A352619
Benzo(a)anthracene	ug/L	<0.0085	<0.0085	<0.0085	0.0085	A352619
Benzo(b&j)fluoranthene	ug/L	<0.0085	<0.0085	<0.0085	0.0085	A352619
Benzo(k)fluoranthene	ug/L	<0.0085	<0.0085	<0.0085	0.0085	A352619
Benzo(g,h,i)perylene	ug/L	<0.0085	<0.0085	<0.0085	0.0085	A352619
Benzo(c)phenanthrene	ug/L	<0.050	<0.050	<0.050	0.050	A352619
Benzo(a)pyrene	ug/L	<0.0075	<0.0075	<0.0075	0.0075	A352619
Benzo(e)pyrene	ug/L	<0.050	<0.050	<0.050	0.050	A352619
Chrysene	ug/L	<0.0085	<0.0085	<0.0085	0.0085	A352619
Dibenz(a,h)anthracene	ug/L	<0.0075	<0.0075	<0.0075	0.0075	A352619
Fluoranthene	ug/L	<0.010	<0.010	<0.010	0.010	A352619
Fluorene	ug/L	<0.050	<0.050	<0.050	0.050	A352619
Indeno(1,2,3-cd)pyrene	ug/L	<0.0085	<0.0085	<0.0085	0.0085	A352619
1-Methylnaphthalene	ug/L	<0.10	<0.10	<0.10	0.10	A352619
2-Methylnaphthalene	ug/L	<0.10	<0.10	<0.10	0.10	A352619
Naphthalene	ug/L	<0.10	<0.10	<0.10	0.10	A352619
Phenanthrene	ug/L	<0.050	<0.050	<0.050	0.050	A352619
Perylene	ug/L	<0.050	<0.050	<0.050	0.050	A352619
Pyrene	ug/L	<0.020	<0.020	<0.020	0.020	A352619
Quinoline	ug/L	<0.20	<0.20	<0.20	0.20	A352619
Surrogate Recovery (%)						
D10-ANTHRACENE (sur.)	%	120	110	110		A352619
D8-ACENAPHTHYLENE (sur.)	%	104	95	97		A352619
D8-NAPHTHALENE (sur.)	%	90	81	86		A352619
TERPHENYL-D14 (sur.)	%	147 (1)	118	140 (1)		A352619

RDL = Reportable Detection Limit

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

BV Labs Job #: C167904
Report Date: 2021/09/20

GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

BV Labs ID		AFU653	AFU654			AFU656	AFU657		
Sampling Date		2021/09/01 16:30	2021/09/01 16:30			2021/09/06 09:00	2021/09/06 09:00		
COC Number		644255-02-01	644255-02-01			644255-02-01	644255-02-01		
	UNITS	SW21-01	DUP A	RDL	QC Batch	SW21-01	DUP A	RDL	QC Batch
Elements									
Dissolved Aluminum (Al)	mg/L	0.016	0.015	0.0030	A351227				
Total Aluminum (Al)	mg/L	2.2	1.1 (1)	0.0030	A356008				
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A351227				
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A356008				
Dissolved Arsenic (As)	mg/L	0.00079	0.00076	0.00020	A351227				
Total Arsenic (As)	mg/L	0.0020	0.0019	0.00020	A356008				
Dissolved Barium (Ba)	mg/L	0.097	0.10	0.010	A354608				
Total Barium (Ba)	mg/L	0.14	0.13	0.010	A356061				
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A351227				
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A356008				
Dissolved Boron (B)	mg/L	0.020	0.021	0.020	A354608				
Total Boron (B)	mg/L	0.029	0.026	0.020	A356061				
Dissolved Calcium (Ca)	mg/L	32	33	0.30	A354608				
Total Calcium (Ca)	mg/L	35	34	0.30	A356061				
Dissolved Chromium (Cr)	mg/L	0.0013	0.0014	0.0010	A351227				
Total Chromium (Cr)	mg/L	0.0036	0.0030	0.0010	A356008				
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A351227				
Total Cobalt (Co)	mg/L	0.0012	0.00085	0.00030	A356008				
Dissolved Copper (Cu)	mg/L	0.0027	0.0027	0.00020	A351227				
Total Copper (Cu)	mg/L	0.0045	0.0038	0.00020	A356008				
Dissolved Iron (Fe)	mg/L	<0.060	<0.060	0.060	A354608				
Total Iron (Fe)	mg/L	2.6	2.0	0.060	A356061				
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A351227				
Total Lead (Pb)	mg/L	0.0015	0.0012	0.00020	A356008				
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	0.020	A354608				
Total Lithium (Li)	mg/L	<0.020	<0.020	0.020	A356061				
Dissolved Magnesium (Mg)	mg/L	14	14	0.20	A354608				
Total Magnesium (Mg)	mg/L	15	15	0.20	A356061				
Dissolved Manganese (Mn)	mg/L	0.0073	0.016	0.0040	A354608				
Total Manganese (Mn)	mg/L	0.072	0.062	0.0040	A356061				
Dissolved Molybdenum (Mo)	mg/L	0.0027	0.0027	0.00020	A351227				

RDL = Reportable Detection Limit
(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.

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GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

BV Labs ID		AFU653	AFU654			AFU656	AFU657		
Sampling Date		2021/09/01 16:30	2021/09/01 16:30			2021/09/06 09:00	2021/09/06 09:00		
COC Number		644255-02-01	644255-02-01			644255-02-01	644255-02-01		
	UNITS	SW21-01	DUP A	RDL	QC Batch	SW21-01	DUP A	RDL	QC Batch
Total Molybdenum (Mo)	mg/L	0.0025	0.0026	0.00020	A356008				
Dissolved Nickel (Ni)	mg/L	0.0026	0.0027	0.00050	A351227				
Total Nickel (Ni)	mg/L	0.0056	0.0047	0.00050	A356008				
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A354608				
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A356061				
Dissolved Potassium (K)	mg/L	0.78	0.87	0.30	A354608				
Total Potassium (K)	mg/L	1.1	1.0	0.30	A356061				
Dissolved Selenium (Se)	mg/L	0.00038	0.00032	0.00020	A351227				
Total Selenium (Se)	mg/L	0.00046	0.00033	0.00020	A356008				
Dissolved Silicon (Si)	mg/L	0.31	0.36	0.10	A354608				
Total Silicon (Si)	mg/L	2.0	1.5	0.10	A356061				
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A351227				
Total Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A356008				
Dissolved Sodium (Na)	mg/L	19	20	0.50	A354608				
Total Sodium (Na)	mg/L	19	19	0.50	A356061				
Dissolved Strontium (Sr)	mg/L	0.24	0.25	0.020	A354608				
Total Strontium (Sr)	mg/L	0.24	0.24	0.020	A356061				
Dissolved Sulphur (S)	mg/L	17	17	0.20	A354608				
Total Sulphur (S)	mg/L	15	15	0.20	A356061				
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A351227				
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A356008				
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A351227				
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A356008				
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	0.0010	A351227				
Total Titanium (Ti)	mg/L	0.047	0.034 (1)	0.0010	A356008				
Dissolved Uranium (U)	mg/L	0.0010	0.0010	0.00010	A351227				
Total Uranium (U)	mg/L	0.0012	0.0011	0.00010	A356008				
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A351227				
Total Vanadium (V)	mg/L	0.0055	0.0042	0.0010	A356008				
Dissolved Zinc (Zn)	mg/L	0.0041	0.0073	0.0030	A351227				
Total Zinc (Zn)	mg/L	0.015	0.012	0.0030	A356008				

RDL = Reportable Detection Limit
(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.

BV Labs Job #: C167904
Report Date: 2021/09/20

GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

BV Labs ID		AFU653	AFU654			AFU656	AFU657		
Sampling Date		2021/09/01 16:30	2021/09/01 16:30			2021/09/06 09:00	2021/09/06 09:00		
COC Number		644255-02-01	644255-02-01			644255-02-01	644255-02-01		
	UNITS	**SW21-01**	**DUP A**	**RDL**	**QC Batch**	**SW21-01**	**DUP A**	**RDL**	**QC Batch**
Lab Filtered Elements									
Dissolved Calcium (Ca)	mg/L					35	34	0.30	A354759
Dissolved Iron (Fe)	mg/L					0.085	0.076	0.060	A354759
Dissolved Magnesium (Mg)	mg/L					15	14	0.20	A354759
Dissolved Manganese (Mn)	mg/L					0.0067	<0.0040	0.0040	A354759
Dissolved Potassium (K)	mg/L					0.99	0.94	0.30	A354759
Dissolved Sodium (Na)	mg/L					20	19	0.50	A354759
RDL = Reportable Detection Limit									

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GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

VOLATILE ORGANICS BY GC-MS (WATER)

BV Labs ID		AFU651		AFU653	AFU654	AFU655		
Sampling Date		2021/08/30 11:55		2021/09/01 16:30	2021/09/01 16:30	2021/09/01 16:30		
COC Number		644255-02-01		644255-02-01	644255-02-01	644255-02-01		
	UNITS	P06-07	QC Batch	SW21-01	DUP A	FIELD BLANK	RDL	QC Batch
Volatiles								
Benzene	mg/L	<0.00040	A352650	<0.00040	<0.00040	<0.00040	0.00040	A352650
Toluene	mg/L	0.0082	A352650	<0.00040	<0.00040	<0.00040	0.00040	A352650
Ethylbenzene	mg/L	<0.00040	A352650	<0.00040	<0.00040	<0.00040	0.00040	A352650
m & p-Xylene	mg/L	<0.00080	A352650	<0.00080	<0.00080	<0.00080	0.00080	A352650
o-Xylene	mg/L	0.00079	A352650	<0.00040	<0.00040	<0.00040	0.00040	A352650
Xylenes (Total)	mg/L	<0.00089	A350769	<0.00089	<0.00089	<0.00089	0.00089	A350435
F1 (C6-C10) - BTEX	mg/L	<0.10	A350769	<0.10	<0.10	<0.10	0.10	A350435
F1 (C6-C10)	mg/L	<0.10	A352650	<0.10	<0.10	<0.10	0.10	A352650
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	101	A352650	103	101	104		A352650
4-Bromofluorobenzene (sur.)	%	97	A352650	100	94	98		A352650
D4-1,2-Dichloroethane (sur.)	%	98	A352650	100	98	103		A352650

RDL = Reportable Detection Limit

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
Package 2	5.3°C
Package 3	5.7°C
Package 4	3.0°C
Package 5	3.3°C
Package 6	3.3°C
Package 7	1.7°C
Package 8	2.7°C

Sample AFU651 [P06-07] : Sample was analyzed past method specified hold time for BTEX/F1 in Water by HS GC/MS/FID. Sample was analyzed past method specified hold time for CCME Hydrocarbons in Water (F2; C10-C16).

Sample AFU656 [SW21-01] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample AFU657 [DUP A] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

PETROLEUM HYDROCARBONS (CCME) Comments

Sample AFU651 [P06-07] CCME Hydrocarbons in Water (F2; C10-C16): Sample required decanting due to inappropriate sample container.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A349747	GG3	Matrix Spike	O-TERPHENYL (sur.)	2021/09/16		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		103	%	60 - 140
A349747	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/16		110	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		110	%	60 - 140
A349747	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/16		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16	<0.10		mg/L	
A349747	GG3	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/16	NC		%	30
A351227	LQ1	Matrix Spike	Dissolved Aluminum (Al)	2021/09/19		89	%	80 - 120
			Dissolved Antimony (Sb)	2021/09/19		116	%	80 - 120
			Dissolved Arsenic (As)	2021/09/19		102	%	80 - 120
			Dissolved Beryllium (Be)	2021/09/19		114	%	80 - 120
			Dissolved Chromium (Cr)	2021/09/19		103	%	80 - 120
			Dissolved Cobalt (Co)	2021/09/19		102	%	80 - 120
			Dissolved Copper (Cu)	2021/09/19		98	%	80 - 120
			Dissolved Lead (Pb)	2021/09/19		102	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/09/19		111	%	80 - 120
			Dissolved Nickel (Ni)	2021/09/19		102	%	80 - 120
			Dissolved Selenium (Se)	2021/09/19		107	%	80 - 120
			Dissolved Silver (Ag)	2021/09/19		106	%	80 - 120
			Dissolved Thallium (Tl)	2021/09/19		100	%	80 - 120
			Dissolved Tin (Sn)	2021/09/19		113	%	80 - 120
			Dissolved Titanium (Ti)	2021/09/19		108	%	80 - 120
			Dissolved Uranium (U)	2021/09/19		104	%	80 - 120
			Dissolved Vanadium (V)	2021/09/19		106	%	80 - 120
			Dissolved Zinc (Zn)	2021/09/19		107	%	80 - 120
A351227	LQ1	Spiked Blank	Dissolved Aluminum (Al)	2021/09/17		113	%	80 - 120
			Dissolved Antimony (Sb)	2021/09/17		110	%	80 - 120
			Dissolved Arsenic (As)	2021/09/17		96	%	80 - 120
			Dissolved Beryllium (Be)	2021/09/17		103	%	80 - 120
			Dissolved Chromium (Cr)	2021/09/17		98	%	80 - 120
			Dissolved Cobalt (Co)	2021/09/17		95	%	80 - 120
			Dissolved Copper (Cu)	2021/09/17		96	%	80 - 120
			Dissolved Lead (Pb)	2021/09/17		93	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/09/17		102	%	80 - 120
			Dissolved Nickel (Ni)	2021/09/17		93	%	80 - 120
			Dissolved Selenium (Se)	2021/09/17		101	%	80 - 120
			Dissolved Silver (Ag)	2021/09/17		98	%	80 - 120
			Dissolved Thallium (Tl)	2021/09/17		91	%	80 - 120
			Dissolved Tin (Sn)	2021/09/17		104	%	80 - 120
			Dissolved Titanium (Ti)	2021/09/17		105	%	80 - 120
			Dissolved Uranium (U)	2021/09/17		98	%	80 - 120
			Dissolved Vanadium (V)	2021/09/17		98	%	80 - 120
			Dissolved Zinc (Zn)	2021/09/17		102	%	80 - 120
A351227	LQ1	Method Blank	Dissolved Aluminum (Al)	2021/09/17	<0.0030		mg/L	
			Dissolved Antimony (Sb)	2021/09/17	<0.00060		mg/L	
			Dissolved Arsenic (As)	2021/09/17	<0.00020		mg/L	
			Dissolved Beryllium (Be)	2021/09/17	<0.0010		mg/L	
			Dissolved Chromium (Cr)	2021/09/17	<0.0010		mg/L	
			Dissolved Cobalt (Co)	2021/09/17	<0.00030		mg/L	
			Dissolved Copper (Cu)	2021/09/17	<0.00020		mg/L	
			Dissolved Lead (Pb)	2021/09/17	<0.00020		mg/L	
			Dissolved Molybdenum (Mo)	2021/09/17	<0.00020		mg/L	
			Dissolved Nickel (Ni)	2021/09/17	<0.00050		mg/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Selenium (Se)	2021/09/17	<0.00020		mg/L	
			Dissolved Silver (Ag)	2021/09/17	<0.00010		mg/L	
			Dissolved Thallium (Tl)	2021/09/17	<0.00020		mg/L	
			Dissolved Tin (Sn)	2021/09/17	<0.0010		mg/L	
			Dissolved Titanium (Ti)	2021/09/17	<0.0010		mg/L	
			Dissolved Uranium (U)	2021/09/17	<0.00010		mg/L	
			Dissolved Vanadium (V)	2021/09/17	<0.0010		mg/L	
			Dissolved Zinc (Zn)	2021/09/17	<0.0030		mg/L	
A351227	LQ1	RPD	Dissolved Aluminum (Al)	2021/09/19	NC		%	20
			Dissolved Antimony (Sb)	2021/09/19	NC		%	20
			Dissolved Arsenic (As)	2021/09/19	1.6		%	20
			Dissolved Beryllium (Be)	2021/09/19	NC		%	20
			Dissolved Chromium (Cr)	2021/09/19	NC		%	20
			Dissolved Cobalt (Co)	2021/09/19	NC		%	20
			Dissolved Copper (Cu)	2021/09/19	NC		%	20
			Dissolved Lead (Pb)	2021/09/19	NC		%	20
			Dissolved Molybdenum (Mo)	2021/09/19	4.2		%	20
			Dissolved Nickel (Ni)	2021/09/19	6.8		%	20
			Dissolved Selenium (Se)	2021/09/19	NC		%	20
			Dissolved Silver (Ag)	2021/09/19	NC		%	20
			Dissolved Thallium (Tl)	2021/09/19	NC		%	20
			Dissolved Tin (Sn)	2021/09/19	NC		%	20
			Dissolved Titanium (Ti)	2021/09/19	NC		%	20
			Dissolved Uranium (U)	2021/09/19	4.3		%	20
			Dissolved Vanadium (V)	2021/09/19	NC		%	20
			Dissolved Zinc (Zn)	2021/09/19	NC		%	20
A351273	IK0	Spiked Blank	Alkalinity (Total as CaCO3)	2021/09/16		94	%	80 - 120
A351273	IK0	Method Blank	Alkalinity (PP as CaCO3)	2021/09/16	<1.0		mg/L	
			Alkalinity (Total as CaCO3)	2021/09/16	<1.0		mg/L	
			Bicarbonate (HCO3)	2021/09/16	<1.0		mg/L	
			Carbonate (CO3)	2021/09/16	<1.0		mg/L	
			Hydroxide (OH)	2021/09/16	<1.0		mg/L	
A351273	IK0	RPD	Alkalinity (PP as CaCO3)	2021/09/16	NC		%	20
			Alkalinity (Total as CaCO3)	2021/09/16	2.2		%	20
			Bicarbonate (HCO3)	2021/09/16	2.2		%	20
			Carbonate (CO3)	2021/09/16	NC		%	20
			Hydroxide (OH)	2021/09/16	NC		%	20
A351276	IK0	Spiked Blank	pH	2021/09/15		100	%	97 - 103
A351276	IK0	RPD	pH	2021/09/16	0.059		%	N/A
A351277	IK0	Spiked Blank	Conductivity	2021/09/14		101	%	90 - 110
A351277	IK0	Method Blank	Conductivity	2021/09/14	<2.0		uS/cm	
A351277	IK0	RPD	Conductivity	2021/09/15	0.42		%	10
A351384	JFH	Matrix Spike	Dissolved Nitrite (N)	2021/09/14		98	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/09/14		105	%	80 - 120
A351384	JFH	Spiked Blank	Dissolved Nitrite (N)	2021/09/14		104	%	80 - 120
			Dissolved Nitrate plus Nitrite (N)	2021/09/14		105	%	80 - 120
A351384	JFH	Method Blank	Dissolved Nitrite (N)	2021/09/14	<0.010		mg/L	
			Dissolved Nitrate plus Nitrite (N)	2021/09/14	<0.010		mg/L	
A351384	JFH	RPD	Dissolved Nitrite (N)	2021/09/14	NC		%	20
			Dissolved Nitrate plus Nitrite (N)	2021/09/14	NC		%	20
A352602	GG3	Matrix Spike [AFU653-03]	O-TERPHENYL (sur.)	2021/09/17		102	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/17		104	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/17		101	%	60 - 140

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F4 (C34-C50 Hydrocarbons)	2021/09/17		99	%	60 - 140
A352602	GG3	Spiked Blank	O-TERPHENYL (sur.)	2021/09/17		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/17		99	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/17		101	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/17		97	%	60 - 140
A352602	GG3	Method Blank	O-TERPHENYL (sur.)	2021/09/17		104	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/17	<0.10		mg/L	
			F3 (C16-C34 Hydrocarbons)	2021/09/17	<0.10		mg/L	
			F4 (C34-C50 Hydrocarbons)	2021/09/17	<0.20		mg/L	
A352602	GG3	RPD [AFU655-01]	F2 (C10-C16 Hydrocarbons)	2021/09/17	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/09/17	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/09/17	NC		%	30
A352619	JU2	Matrix Spike	D10-ANTHRACENE (sur.)	2021/09/16		125	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2021/09/16		111	%	50 - 130
			D8-NAPHTHALENE (sur.)	2021/09/16		84	%	50 - 130
			TERPHENYL-D14 (sur.)	2021/09/16		173 (1)	%	50 - 130
			Acenaphthene	2021/09/16		111	%	50 - 130
			Acenaphthylene	2021/09/16		109	%	50 - 130
			Acridine	2021/09/16		77	%	50 - 130
			Anthracene	2021/09/16		94	%	50 - 130
			Benzo(a)anthracene	2021/09/16		110	%	50 - 130
			Benzo(b&j)fluoranthene	2021/09/16		104	%	50 - 130
			Benzo(k)fluoranthene	2021/09/16		98	%	50 - 130
			Benzo(g,h,i)perylene	2021/09/16		84	%	50 - 130
			Benzo(c)phenanthrene	2021/09/16		126	%	50 - 130
			Benzo(a)pyrene	2021/09/16		99	%	50 - 130
			Benzo(e)pyrene	2021/09/16		102	%	50 - 130
			Chrysene	2021/09/16		124	%	50 - 130
			Dibenz(a,h)anthracene	2021/09/16		81	%	50 - 130
			Fluoranthene	2021/09/16		116	%	50 - 130
			Fluorene	2021/09/16		121	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/09/16		90	%	50 - 130
			1-Methylnaphthalene	2021/09/16		80	%	50 - 130
			2-Methylnaphthalene	2021/09/16		96	%	50 - 130
			Naphthalene	2021/09/16		93	%	50 - 130
			Phenanthrene	2021/09/16		116	%	50 - 130
			Perylene	2021/09/16		86	%	50 - 130
			Pyrene	2021/09/16		115	%	50 - 130
			Quinoline	2021/09/16		97	%	50 - 130
A352619	JU2	Spiked Blank	D10-ANTHRACENE (sur.)	2021/09/16		120	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2021/09/16		106	%	50 - 130
			D8-NAPHTHALENE (sur.)	2021/09/16		88	%	50 - 130
			TERPHENYL-D14 (sur.)	2021/09/16		151 (1)	%	50 - 130
			Acenaphthene	2021/09/16		93	%	50 - 130
			Acenaphthylene	2021/09/16		94	%	50 - 130
			Acridine	2021/09/16		74	%	50 - 130
			Anthracene	2021/09/16		80	%	50 - 130
			Benzo(a)anthracene	2021/09/16		97	%	50 - 130
			Benzo(b&j)fluoranthene	2021/09/16		94	%	50 - 130
			Benzo(k)fluoranthene	2021/09/16		81	%	50 - 130
			Benzo(g,h,i)perylene	2021/09/16		80	%	50 - 130
			Benzo(c)phenanthrene	2021/09/16		116	%	50 - 130
			Benzo(a)pyrene	2021/09/16		90	%	50 - 130

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(e)pyrene	2021/09/16		93	%	50 - 130
			Chrysene	2021/09/16		111	%	50 - 130
			Dibenz(a,h)anthracene	2021/09/16		76	%	50 - 130
			Fluoranthene	2021/09/16		100	%	50 - 130
			Fluorene	2021/09/16		100	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2021/09/16		87	%	50 - 130
			1-Methylnaphthalene	2021/09/16		71	%	50 - 130
			2-Methylnaphthalene	2021/09/16		86	%	50 - 130
			Naphthalene	2021/09/16		88	%	50 - 130
			Phenanthrene	2021/09/16		96	%	50 - 130
			Perylene	2021/09/16		79	%	50 - 130
			Pyrene	2021/09/16		100	%	50 - 130
			Quinoline	2021/09/16		90	%	50 - 130
A352619	JU2	Method Blank	D10-ANTHRACENE (sur.)	2021/09/16		115	%	50 - 130
			D8-ACENAPHTHYLENE (sur.)	2021/09/16		100	%	50 - 130
			D8-NAPHTHALENE (sur.)	2021/09/16		77	%	50 - 130
			TERPHENYL-D14 (sur.)	2021/09/16		152 (1)	%	50 - 130
			Acenaphthene	2021/09/16	<0.10		ug/L	
			Acenaphthylene	2021/09/16	<0.10		ug/L	
			Acridine	2021/09/16	<0.040		ug/L	
			Anthracene	2021/09/16	<0.010		ug/L	
			Benzo(a)anthracene	2021/09/16	<0.0085		ug/L	
			Benzo(b&j)fluoranthene	2021/09/16	<0.0085		ug/L	
			Benzo(k)fluoranthene	2021/09/16	<0.0085		ug/L	
			Benzo(g,h,i)perylene	2021/09/16	<0.0085		ug/L	
			Benzo(c)phenanthrene	2021/09/16	<0.050		ug/L	
			Benzo(a)pyrene	2021/09/16	<0.0075		ug/L	
			Benzo(e)pyrene	2021/09/16	<0.050		ug/L	
			Chrysene	2021/09/16	<0.0085		ug/L	
			Dibenz(a,h)anthracene	2021/09/16	<0.0075		ug/L	
			Fluoranthene	2021/09/16	<0.010		ug/L	
			Fluorene	2021/09/16	<0.050		ug/L	
			Indeno(1,2,3-cd)pyrene	2021/09/16	<0.0085		ug/L	
			1-Methylnaphthalene	2021/09/16	<0.10		ug/L	
			2-Methylnaphthalene	2021/09/16	<0.10		ug/L	
			Naphthalene	2021/09/16	<0.10		ug/L	
			Phenanthrene	2021/09/16	<0.050		ug/L	
			Perylene	2021/09/16	<0.050		ug/L	
			Pyrene	2021/09/16	<0.020		ug/L	
			Quinoline	2021/09/16	<0.20		ug/L	
A352619	JU2	RPD [AFU655-01]	Acenaphthene	2021/09/16	NC		%	30
			Acenaphthylene	2021/09/16	NC		%	30
			Acridine	2021/09/16	NC		%	30
			Anthracene	2021/09/16	NC		%	30
			Benzo(a)anthracene	2021/09/16	NC		%	30
			Benzo(b&j)fluoranthene	2021/09/16	NC		%	30
			Benzo(k)fluoranthene	2021/09/16	NC		%	30
			Benzo(g,h,i)perylene	2021/09/16	NC		%	30
			Benzo(c)phenanthrene	2021/09/16	NC		%	30
			Benzo(a)pyrene	2021/09/16	NC		%	30
			Benzo(e)pyrene	2021/09/16	NC		%	30
			Chrysene	2021/09/16	NC		%	30
			Dibenz(a,h)anthracene	2021/09/16	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Fluoranthene	2021/09/16	NC		%	30
			Fluorene	2021/09/16	NC		%	30
			Indeno(1,2,3-cd)pyrene	2021/09/16	NC		%	30
			1-Methylnaphthalene	2021/09/16	NC		%	30
			2-Methylnaphthalene	2021/09/16	NC		%	30
			Naphthalene	2021/09/16	NC		%	30
			Phenanthrene	2021/09/16	NC		%	30
			Perylene	2021/09/16	NC		%	30
			Pyrene	2021/09/16	NC		%	30
			Quinoline	2021/09/16	NC		%	30
A352650	DO1	Matrix Spike	1,4-Difluorobenzene (sur.)	2021/09/15		101	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/15		101	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/15		101	%	50 - 140
			Benzene	2021/09/15		100	%	50 - 140
			Toluene	2021/09/15		101	%	50 - 140
			Ethylbenzene	2021/09/15		97	%	50 - 140
			m & p-Xylene	2021/09/15		101	%	50 - 140
			o-Xylene	2021/09/15		99	%	50 - 140
			F1 (C6-C10)	2021/09/15		86	%	60 - 140
A352650	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/15		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/15		100	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/15		97	%	50 - 140
			Benzene	2021/09/15		101	%	60 - 130
			Toluene	2021/09/15		102	%	60 - 130
			Ethylbenzene	2021/09/15		99	%	60 - 130
			m & p-Xylene	2021/09/15		102	%	60 - 130
			o-Xylene	2021/09/15		100	%	60 - 130
			F1 (C6-C10)	2021/09/15		101	%	60 - 140
A352650	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/15		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/15		98	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/15		100	%	50 - 140
			Benzene	2021/09/15	<0.00040		mg/L	
			Toluene	2021/09/15	<0.00040		mg/L	
			Ethylbenzene	2021/09/15	<0.00040		mg/L	
			m & p-Xylene	2021/09/15	<0.00080		mg/L	
			o-Xylene	2021/09/15	<0.00040		mg/L	
			F1 (C6-C10)	2021/09/15	<0.10		mg/L	
A352650	DO1	RPD	Benzene	2021/09/15	1.0		%	30
			Toluene	2021/09/15	2.5		%	30
			Ethylbenzene	2021/09/15	NC		%	30
			m & p-Xylene	2021/09/15	0.90		%	30
			o-Xylene	2021/09/15	25		%	30
			F1 (C6-C10)	2021/09/15	NC		%	30
A354608	JAB	Matrix Spike	Dissolved Barium (Ba)	2021/09/18		103	%	80 - 120
			Dissolved Boron (B)	2021/09/18		111	%	80 - 120
			Dissolved Calcium (Ca)	2021/09/18		95	%	80 - 120
			Dissolved Iron (Fe)	2021/09/18		98	%	80 - 120
			Dissolved Lithium (Li)	2021/09/18		94	%	80 - 120
			Dissolved Magnesium (Mg)	2021/09/18		96	%	80 - 120
			Dissolved Manganese (Mn)	2021/09/18		95	%	80 - 120
			Dissolved Phosphorus (P)	2021/09/18		112	%	80 - 120
			Dissolved Potassium (K)	2021/09/18		99	%	80 - 120
			Dissolved Silicon (Si)	2021/09/18		98	%	80 - 120

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Sodium (Na)	2021/09/18		95	%	80 - 120
			Dissolved Strontium (Sr)	2021/09/18		102	%	80 - 120
			Dissolved Sulphur (S)	2021/09/18		113	%	80 - 120
A354608	JAB	Spiked Blank	Dissolved Barium (Ba)	2021/09/18		108	%	80 - 120
			Dissolved Boron (B)	2021/09/18		112	%	80 - 120
			Dissolved Calcium (Ca)	2021/09/18		98	%	80 - 120
			Dissolved Iron (Fe)	2021/09/18		99	%	80 - 120
			Dissolved Lithium (Li)	2021/09/18		94	%	80 - 120
			Dissolved Magnesium (Mg)	2021/09/18		98	%	80 - 120
			Dissolved Manganese (Mn)	2021/09/18		96	%	80 - 120
			Dissolved Phosphorus (P)	2021/09/18		111	%	80 - 120
			Dissolved Potassium (K)	2021/09/18		99	%	80 - 120
			Dissolved Silicon (Si)	2021/09/18		107	%	80 - 120
			Dissolved Sodium (Na)	2021/09/18		95	%	80 - 120
			Dissolved Strontium (Sr)	2021/09/18		103	%	80 - 120
			Dissolved Sulphur (S)	2021/09/18		111	%	80 - 120
A354608	JAB	Method Blank	Dissolved Barium (Ba)	2021/09/19	<0.010		mg/L	
			Dissolved Boron (B)	2021/09/19	<0.020		mg/L	
			Dissolved Calcium (Ca)	2021/09/19	<0.30		mg/L	
			Dissolved Iron (Fe)	2021/09/19	<0.060		mg/L	
			Dissolved Lithium (Li)	2021/09/19	<0.020		mg/L	
			Dissolved Magnesium (Mg)	2021/09/19	<0.20		mg/L	
			Dissolved Manganese (Mn)	2021/09/19	<0.0040		mg/L	
			Dissolved Phosphorus (P)	2021/09/19	<0.10		mg/L	
			Dissolved Potassium (K)	2021/09/19	<0.30		mg/L	
			Dissolved Silicon (Si)	2021/09/19	<0.10		mg/L	
			Dissolved Sodium (Na)	2021/09/19	<0.50		mg/L	
			Dissolved Strontium (Sr)	2021/09/19	<0.020		mg/L	
			Dissolved Sulphur (S)	2021/09/19	<0.20		mg/L	
A354608	JAB	RPD	Dissolved Barium (Ba)	2021/09/19	7.6		%	20
			Dissolved Boron (B)	2021/09/19	NC		%	20
			Dissolved Calcium (Ca)	2021/09/19	0.86		%	20
			Dissolved Iron (Fe)	2021/09/19	1.7		%	20
			Dissolved Lithium (Li)	2021/09/19	2.6		%	20
			Dissolved Magnesium (Mg)	2021/09/19	0.36		%	20
			Dissolved Manganese (Mn)	2021/09/19	1.4		%	20
			Dissolved Phosphorus (P)	2021/09/19	3.0		%	20
			Dissolved Potassium (K)	2021/09/19	2.3		%	20
			Dissolved Silicon (Si)	2021/09/19	1.4		%	20
			Dissolved Sodium (Na)	2021/09/19	0.72		%	20
			Dissolved Strontium (Sr)	2021/09/19	0.38		%	20
			Dissolved Sulphur (S)	2021/09/19	NC		%	20
A354759	JAB	Matrix Spike	Dissolved Calcium (Ca)	2021/09/18		NC	%	80 - 120
			Dissolved Iron (Fe)	2021/09/18		NC	%	80 - 120
			Dissolved Magnesium (Mg)	2021/09/18		93	%	80 - 120
			Dissolved Manganese (Mn)	2021/09/18		93	%	80 - 120
			Dissolved Potassium (K)	2021/09/18		94	%	80 - 120
			Dissolved Sodium (Na)	2021/09/18		90	%	80 - 120
A354759	JAB	Spiked Blank	Dissolved Calcium (Ca)	2021/09/18		95	%	80 - 120
			Dissolved Iron (Fe)	2021/09/18		102	%	80 - 120
			Dissolved Magnesium (Mg)	2021/09/18		96	%	80 - 120
			Dissolved Manganese (Mn)	2021/09/18		97	%	80 - 120
			Dissolved Potassium (K)	2021/09/18		97	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Sodium (Na)	2021/09/18		93	%	80 - 120
A354759	JAB	Method Blank	Dissolved Calcium (Ca)	2021/09/18	<0.30		mg/L	
			Dissolved Iron (Fe)	2021/09/18	<0.060		mg/L	
			Dissolved Magnesium (Mg)	2021/09/18	<0.20		mg/L	
			Dissolved Manganese (Mn)	2021/09/18	<0.0040		mg/L	
			Dissolved Potassium (K)	2021/09/18	<0.30		mg/L	
			Dissolved Sodium (Na)	2021/09/18	<0.50		mg/L	
A354759	JAB	RPD	Dissolved Calcium (Ca)	2021/09/18	2.6		%	20
			Dissolved Iron (Fe)	2021/09/18	2.4		%	20
			Dissolved Magnesium (Mg)	2021/09/18	2.5		%	20
			Dissolved Manganese (Mn)	2021/09/18	0.95		%	20
			Dissolved Potassium (K)	2021/09/18	0.60		%	20
			Dissolved Sodium (Na)	2021/09/18	0.80		%	20
A356008	PC5	Matrix Spike	Total Aluminum (Al)	2021/09/17		101	%	80 - 120
			Total Antimony (Sb)	2021/09/17		109	%	80 - 120
			Total Arsenic (As)	2021/09/17		98	%	80 - 120
			Total Beryllium (Be)	2021/09/17		106	%	80 - 120
			Total Chromium (Cr)	2021/09/17		99	%	80 - 120
			Total Cobalt (Co)	2021/09/17		98	%	80 - 120
			Total Copper (Cu)	2021/09/17		97	%	80 - 120
			Total Lead (Pb)	2021/09/17		100	%	80 - 120
			Total Molybdenum (Mo)	2021/09/17		109	%	80 - 120
			Total Nickel (Ni)	2021/09/17		97	%	80 - 120
			Total Selenium (Se)	2021/09/17		101	%	80 - 120
			Total Silver (Ag)	2021/09/17		104	%	80 - 120
			Total Thallium (Tl)	2021/09/17		100	%	80 - 120
			Total Tin (Sn)	2021/09/17		107	%	80 - 120
			Total Titanium (Ti)	2021/09/17		103	%	80 - 120
			Total Uranium (U)	2021/09/17		102	%	80 - 120
			Total Vanadium (V)	2021/09/17		101	%	80 - 120
			Total Zinc (Zn)	2021/09/17		90	%	80 - 120
A356008	PC5	Spiked Blank	Total Aluminum (Al)	2021/09/17		113	%	80 - 120
			Total Antimony (Sb)	2021/09/17		115	%	80 - 120
			Total Arsenic (As)	2021/09/17		106	%	80 - 120
			Total Beryllium (Be)	2021/09/17		113	%	80 - 120
			Total Chromium (Cr)	2021/09/17		109	%	80 - 120
			Total Cobalt (Co)	2021/09/17		107	%	80 - 120
			Total Copper (Cu)	2021/09/17		109	%	80 - 120
			Total Lead (Pb)	2021/09/17		109	%	80 - 120
			Total Molybdenum (Mo)	2021/09/17		112	%	80 - 120
			Total Nickel (Ni)	2021/09/17		107	%	80 - 120
			Total Selenium (Se)	2021/09/17		111	%	80 - 120
			Total Silver (Ag)	2021/09/17		110	%	80 - 120
			Total Thallium (Tl)	2021/09/17		107	%	80 - 120
			Total Tin (Sn)	2021/09/17		111	%	80 - 120
			Total Titanium (Ti)	2021/09/17		112	%	80 - 120
			Total Uranium (U)	2021/09/17		107	%	80 - 120
			Total Vanadium (V)	2021/09/17		108	%	80 - 120
			Total Zinc (Zn)	2021/09/17		108	%	80 - 120
A356008	PC5	Method Blank	Total Aluminum (Al)	2021/09/17	<0.0030		mg/L	
			Total Antimony (Sb)	2021/09/17	<0.00060		mg/L	
			Total Arsenic (As)	2021/09/17	<0.00020		mg/L	
			Total Beryllium (Be)	2021/09/17	<0.0010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Chromium (Cr)	2021/09/17	<0.0010		mg/L	
			Total Cobalt (Co)	2021/09/17	<0.00030		mg/L	
			Total Copper (Cu)	2021/09/17	<0.00020		mg/L	
			Total Lead (Pb)	2021/09/17	<0.00020		mg/L	
			Total Molybdenum (Mo)	2021/09/17	<0.00020		mg/L	
			Total Nickel (Ni)	2021/09/17	<0.00050		mg/L	
			Total Selenium (Se)	2021/09/17	<0.00020		mg/L	
			Total Silver (Ag)	2021/09/17	<0.00010		mg/L	
			Total Thallium (Tl)	2021/09/17	<0.00020		mg/L	
			Total Tin (Sn)	2021/09/17	<0.0010		mg/L	
			Total Titanium (Ti)	2021/09/17	<0.0010		mg/L	
			Total Uranium (U)	2021/09/17	<0.00010		mg/L	
			Total Vanadium (V)	2021/09/17	<0.0010		mg/L	
			Total Zinc (Zn)	2021/09/17	<0.0030		mg/L	
A356008	PC5	RPD [AFU654-01]	Total Aluminum (Al)	2021/09/17	37 (1)		%	20
			Total Antimony (Sb)	2021/09/17	NC		%	20
			Total Arsenic (As)	2021/09/17	7.8		%	20
			Total Beryllium (Be)	2021/09/17	NC		%	20
			Total Chromium (Cr)	2021/09/17	NC		%	20
			Total Cobalt (Co)	2021/09/17	8.5		%	20
			Total Copper (Cu)	2021/09/17	0.73		%	20
			Total Lead (Pb)	2021/09/17	5.6		%	20
			Total Molybdenum (Mo)	2021/09/17	1.3		%	20
			Total Nickel (Ni)	2021/09/17	14		%	20
			Total Selenium (Se)	2021/09/17	19		%	20
			Total Silver (Ag)	2021/09/17	NC		%	20
			Total Thallium (Tl)	2021/09/17	NC		%	20
			Total Tin (Sn)	2021/09/17	NC		%	20
			Total Titanium (Ti)	2021/09/17	43 (1)		%	20
			Total Uranium (U)	2021/09/17	9.1		%	20
			Total Vanadium (V)	2021/09/17	5.4		%	20
			Total Zinc (Zn)	2021/09/17	0.41		%	20
A356061	JAB	Matrix Spike [AFU653-01]	Total Barium (Ba)	2021/09/18		106	%	80 - 120
			Total Boron (B)	2021/09/18		117	%	80 - 120
			Total Calcium (Ca)	2021/09/18		105	%	80 - 120
			Total Iron (Fe)	2021/09/18		NC	%	80 - 120
			Total Lithium (Li)	2021/09/18		99	%	80 - 120
			Total Magnesium (Mg)	2021/09/18		105	%	80 - 120
			Total Manganese (Mn)	2021/09/18		101	%	80 - 120
			Total Phosphorus (P)	2021/09/18		113	%	80 - 120
			Total Potassium (K)	2021/09/18		103	%	80 - 120
			Total Silicon (Si)	2021/09/18		128 (2)	%	80 - 120
			Total Sodium (Na)	2021/09/18		102	%	80 - 120
			Total Strontium (Sr)	2021/09/18		107	%	80 - 120
			Total Sulphur (S)	2021/09/18		120	%	80 - 120
A356061	JAB	Spiked Blank	Total Barium (Ba)	2021/09/18		104	%	80 - 120
			Total Boron (B)	2021/09/18		114	%	80 - 120
			Total Calcium (Ca)	2021/09/18		100	%	80 - 120
			Total Iron (Fe)	2021/09/18		103	%	80 - 120
			Total Lithium (Li)	2021/09/18		98	%	80 - 120
			Total Magnesium (Mg)	2021/09/18		101	%	80 - 120
			Total Manganese (Mn)	2021/09/18		99	%	80 - 120
			Total Phosphorus (P)	2021/09/18		111	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Potassium (K)	2021/09/18		102	%	80 - 120
			Total Silicon (Si)	2021/09/18		113	%	80 - 120
			Total Sodium (Na)	2021/09/18		97	%	80 - 120
			Total Strontium (Sr)	2021/09/18		105	%	80 - 120
			Total Sulphur (S)	2021/09/18		117	%	80 - 120
A356061	JAB	Method Blank	Total Barium (Ba)	2021/09/18	<0.010		mg/L	
			Total Boron (B)	2021/09/18	<0.020		mg/L	
			Total Calcium (Ca)	2021/09/18	<0.30		mg/L	
			Total Iron (Fe)	2021/09/18	<0.060		mg/L	
			Total Lithium (Li)	2021/09/18	<0.020		mg/L	
			Total Magnesium (Mg)	2021/09/18	<0.20		mg/L	
			Total Manganese (Mn)	2021/09/18	<0.0040		mg/L	
			Total Phosphorus (P)	2021/09/18	<0.10		mg/L	
			Total Potassium (K)	2021/09/18	<0.30		mg/L	
			Total Silicon (Si)	2021/09/18	<0.10		mg/L	
			Total Sodium (Na)	2021/09/18	<0.50		mg/L	
			Total Strontium (Sr)	2021/09/18	<0.020		mg/L	
			Total Sulphur (S)	2021/09/18	<0.20		mg/L	
A356061	JAB	RPD [AFU654-01]	Total Barium (Ba)	2021/09/18	0.52		%	20
			Total Boron (B)	2021/09/18	5.3		%	20
			Total Calcium (Ca)	2021/09/18	0.97		%	20
			Total Iron (Fe)	2021/09/18	4.3		%	20
			Total Lithium (Li)	2021/09/18	NC		%	20
			Total Magnesium (Mg)	2021/09/18	0.17		%	20
			Total Manganese (Mn)	2021/09/18	1.4		%	20
			Total Phosphorus (P)	2021/09/18	NC		%	20
			Total Potassium (K)	2021/09/18	0.98		%	20
			Total Silicon (Si)	2021/09/18	3.3		%	20
			Total Sodium (Na)	2021/09/18	0.89		%	20
			Total Strontium (Sr)	2021/09/18	0.51		%	20
			Total Sulphur (S)	2021/09/18	1.6		%	20
A356082	BFE	Matrix Spike	Dissolved Chloride (Cl)	2021/09/17		106	%	80 - 120
			Dissolved Sulphate (SO4)	2021/09/17		108	%	80 - 120
A356082	BFE	Spiked Blank	Dissolved Chloride (Cl)	2021/09/17		103	%	80 - 120
			Dissolved Sulphate (SO4)	2021/09/17		97	%	80 - 120
A356082	BFE	Method Blank	Dissolved Chloride (Cl)	2021/09/17	<1.0		mg/L	
			Dissolved Sulphate (SO4)	2021/09/17	<1.0		mg/L	
A356082	BFE	RPD	Dissolved Chloride (Cl)	2021/09/17	18		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Sulphate (SO4)	2021/09/17	0.32		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Matrix spike exceeds acceptance limits due to matrix interference.

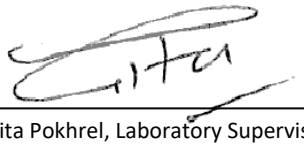
Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167904
Report Date: 2021/09/20

GOLDER ASSOCIATES LTD
Client Project #: 20368099-6000-1001
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

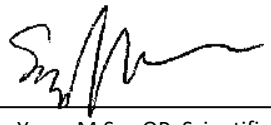
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Gita Pokhrel, Laboratory Supervisor

Janet Gao, B.Sc., QP, Supervisor, Organics



Sandy Yuan, M.Sc., QP, Scientific Specialist

Veronica Falk, B.Sc., P.Chem., QP, Scientific Specialist, Organics

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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COR FCD-00265 / 4
Page ___ of ___

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page 1 of 1	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
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Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	

COOLER OBSERVATIONS:

MAXXAM JOB#: C167904

CUSTODY SEAL	YES	NO	COOLER ID	TEMP 1	TEMP 2	TEMP 3
PRESENT	✓			3	4	6
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓			6	7	3
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓			9	6	2
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓			2	2	5
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓			2	5	3
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓			8	1	1
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓			2	2	1
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓			1	5	1
INTACT	✓					
ICE PRESENT	✓					
PRESENT	✓					
INTACT						
ICE PRESENT						
PRESENT						
INTACT						
ICE PRESENT						

CUSTODY SEAL	YES	NO	COOLER ID	TEMP 1	TEMP 2	TEMP 3
PRESENT						
INTACT						
ICE PRESENT						
PRESENT						
INTACT						
ICE PRESENT						
PRESENT						
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ICE PRESENT						

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
Jose Merano	[signature]	2021/09/10	9:00

604

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ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
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Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	
Page ___ of ___	

COOLER OBSERVATIONS: MCAL

MAXXAM JOB#: C167904

CUSTODY SEAL PRESENT (YES/NO)	CUSTODY SEAL INTACT (YES/NO)	ICE PRESENT (YES/NO)	COOLER ID	TEMP 1	TEMP 2	TEMP 3
YES ✓	YES ✓	YES ✓		0	1	0
YES ✓	YES ✓	YES ✓		2	2	4
YES ✓	YES ✓	YES ✓		1	1	4
YES ✓	YES ✓	YES ✓		5	4	4
YES ✓	YES ✓	YES ✓		3	2	1
YES ✓	YES ✓	YES ✓		0	0	-1
YES ✓	YES ✓	YES ✓		5	1	4
YES ✓	YES ✓	YES ✓		-1	0	0
YES ✓	YES ✓	YES ✓		1	2	2

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
[signature]	Alicia Lin	2021/09/11	14:40

Bureau Veritas Laboratories
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvlabs.com

Chain Of Custody Record

Page of 1 of 1

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#2045 GOLDER ASSOCIATES LTD	Company Name	#6340 GOLDER ASSOCIATES LTD	Quotation #	C004860	BV Labs Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	PETER TAN, Aurelie Bellavance	P.O. #	20368099-7000-1001	C167904	644255
Address	16820-107 AVE EDMONTON AB T5P 4C3	Address	2800, 700 - 2nd Street SW CALGARY, AB	Project #	20368099-6000-1001	Chain Of Custody Record	Project Manager
Phone	(780) 483-3499 Fax: (780) 483-1574	Phone	(780) 483-3499 4037295600 Fax	Project Name		C#644255-02-01	Carmen McKay
Email	CanadaAccountsPayableInvoices@golder.com	Email	peter_tan@golder.com, Abellavance@golder.com	Site #			
				Sampled By			

Regulatory Criteria: CCME

Special Instructions: email: shelldqr@golder.com facility code: 412595544

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to BV Labs

Analysis Requested

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y/N)	Metals Field Filtered ? (Y/N)	Regulated Metals (CCME/AT1) - Dissolved (Filt/Pres.)	PAH	CCME BTEX and F1-F4 in Water	Routine Water	TOTAL METALS (Filt/Pres.)	# of Bottles	Comments
1	N/A	P06-07	30 Aug/21	11:55	H_2O	N				✓			2	
2	N/A	P19-06	30 Aug/21	11:35	H_2O	N				✓			1	min. volume
3	↓	SW21-01	1 Sept/21	1630	H_2O	N	Y	✓	✓	✓	■	✓	#6	Surface Water
4		DUP A	1 Sept/21	1630	H_2O	N	Y	✓	✓	✓	■	✓	#6	Surface Water.
5		Field Blank	1 Sept/21	1630	H_2O	N			✓	✓			4	
6		SW21-01	6 Sept 21	09:00	H_2O	N					X		2	Surface water.
7		Dup A.	6 Sept 21.	0900	H_2O	N					X		2	Surface water.
8														
9														
10														

Received in Yellowknife By: J. McCann 09:00 AM SEP 10 2021 see ACTR Temp:

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number _____ *(call lab for #)*

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
P. TAN	21/09/10	11:30	Alicia Lin	2021/09/11	14:40	

Lab Use Only: Time Sensitive ☐ | Temperature (°C) on Receipt: SEE ACTR | Custody Seal Intact on Cooler? ☐ Yes ☐ No

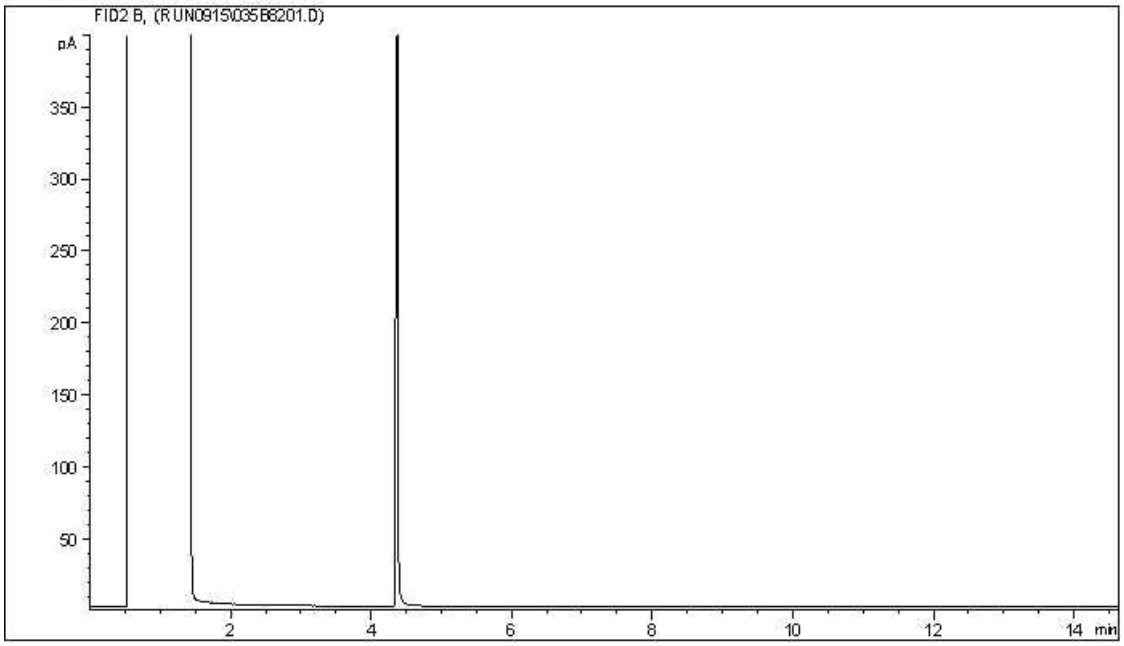
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

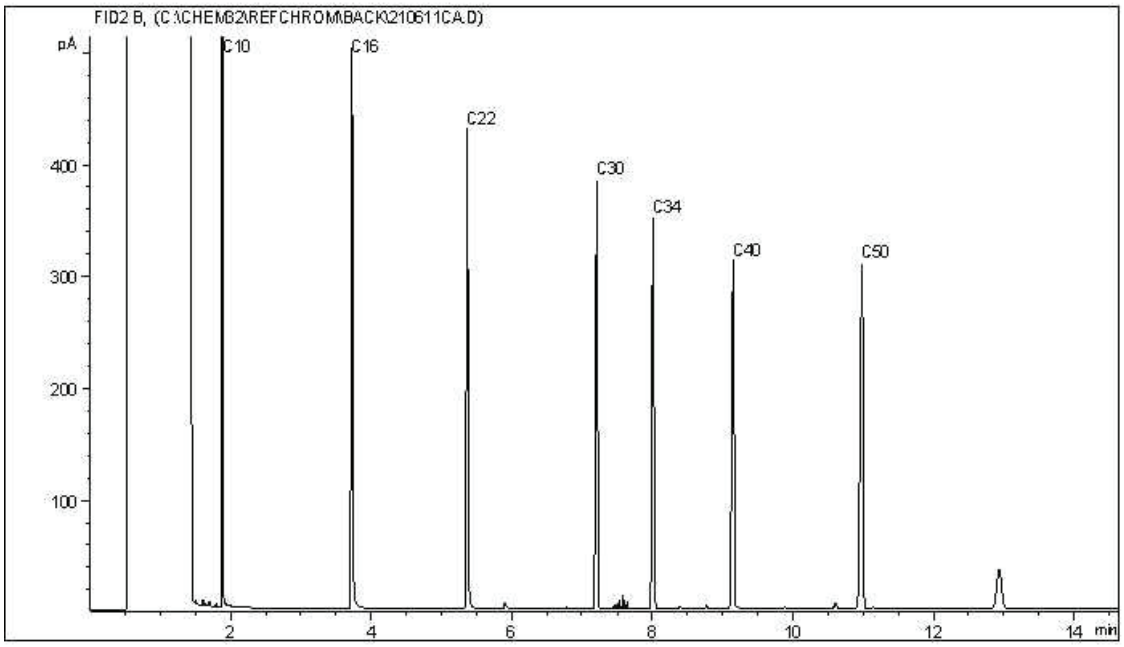
Bureau Veritas Canada (2019) Inc.

CCME Hydrocarbons in Water (F2; C10-C16) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



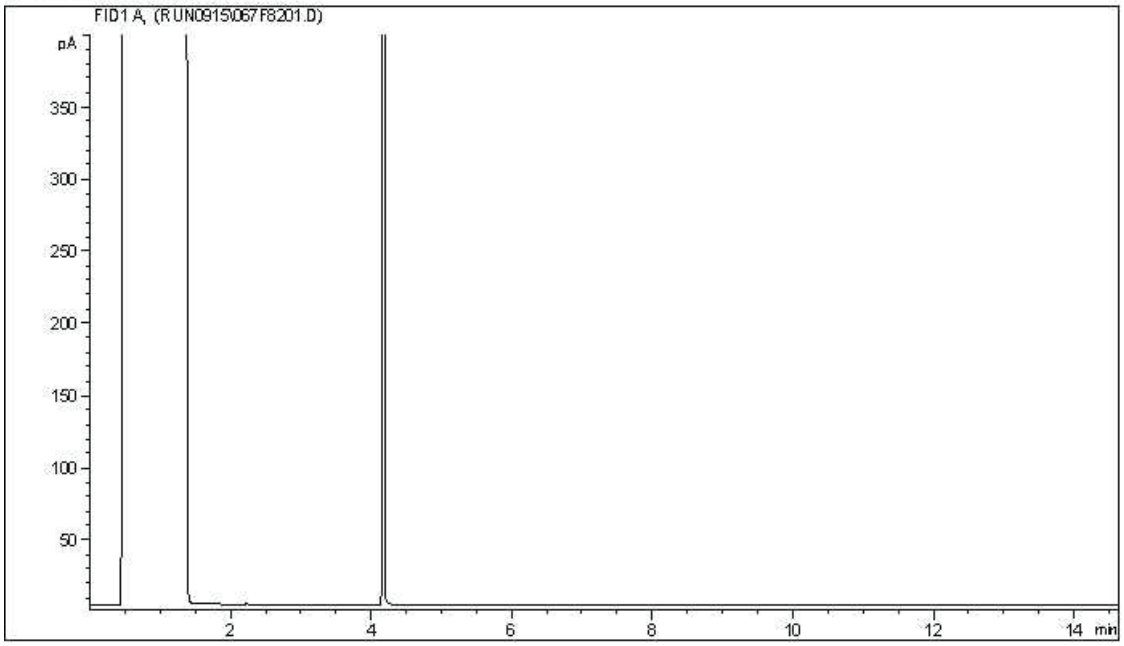
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

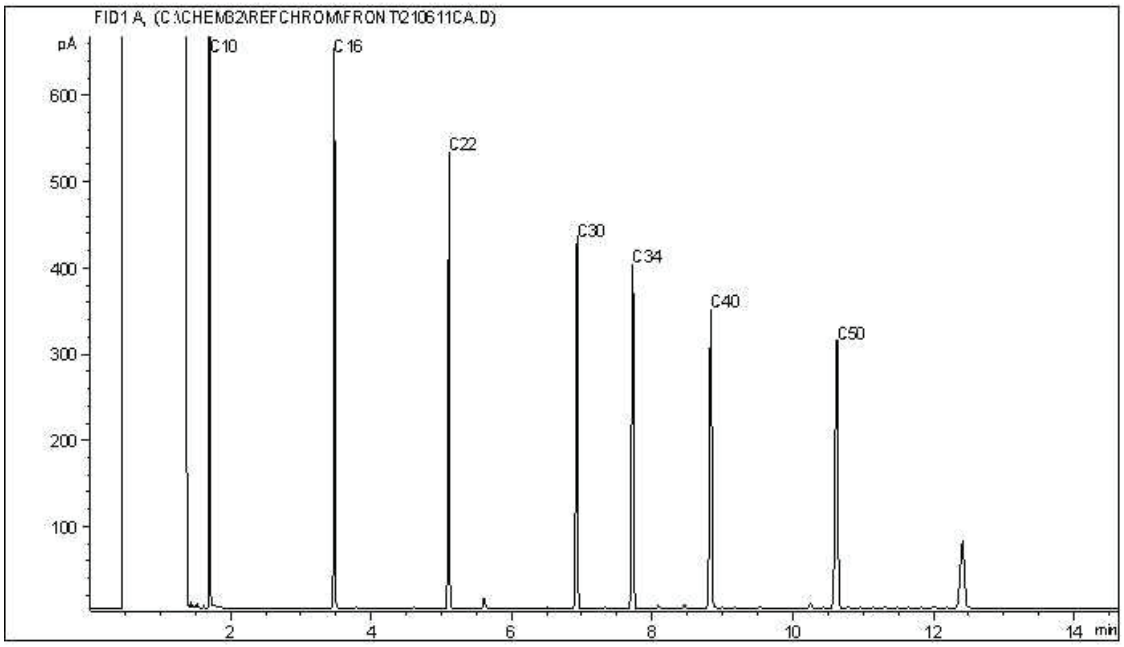
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in water) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



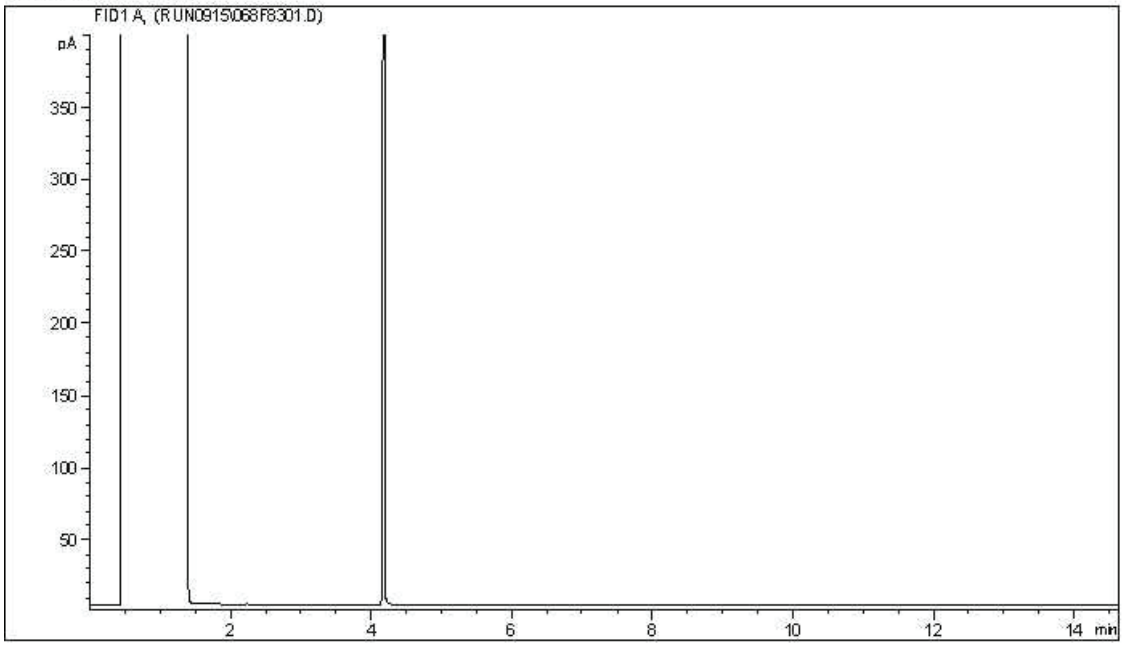
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

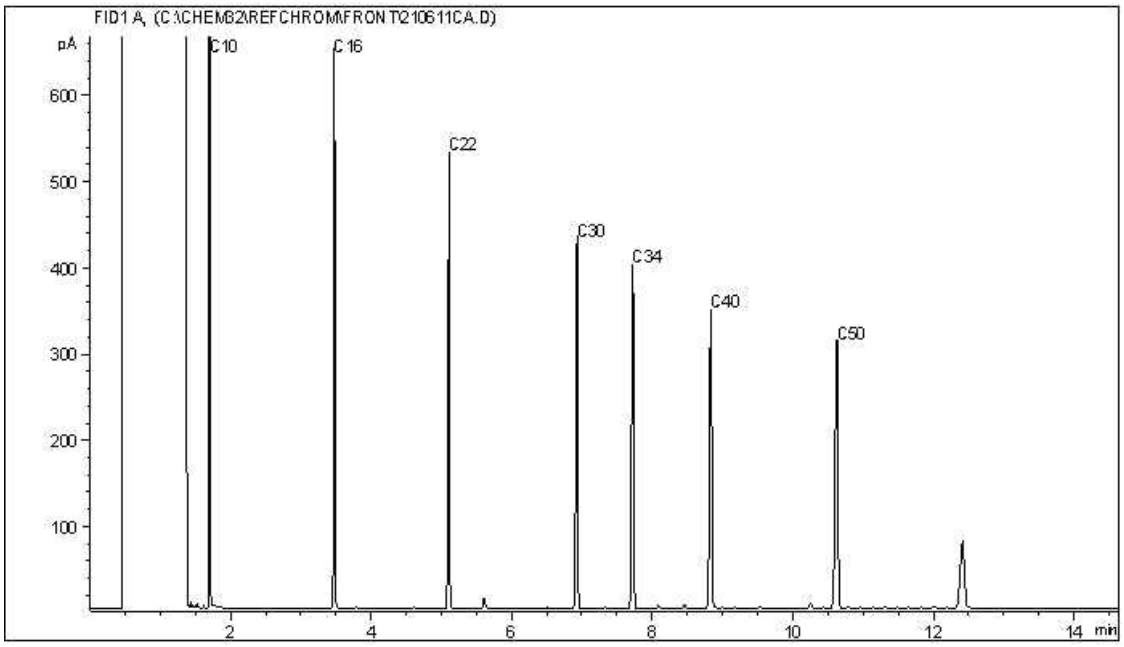
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in water) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



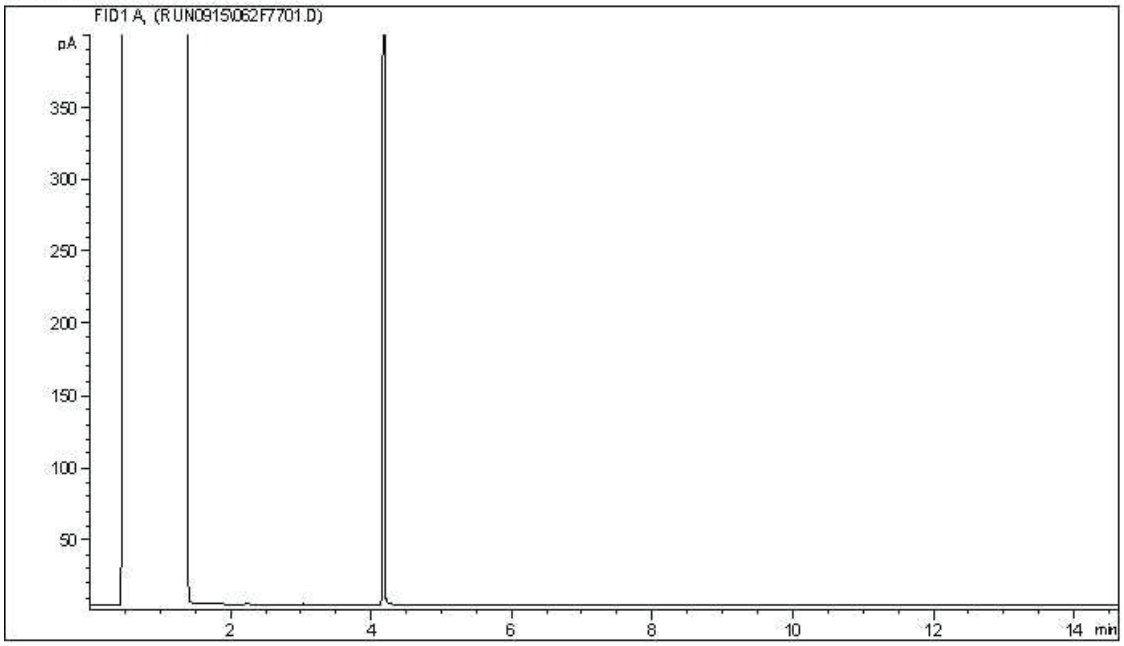
TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

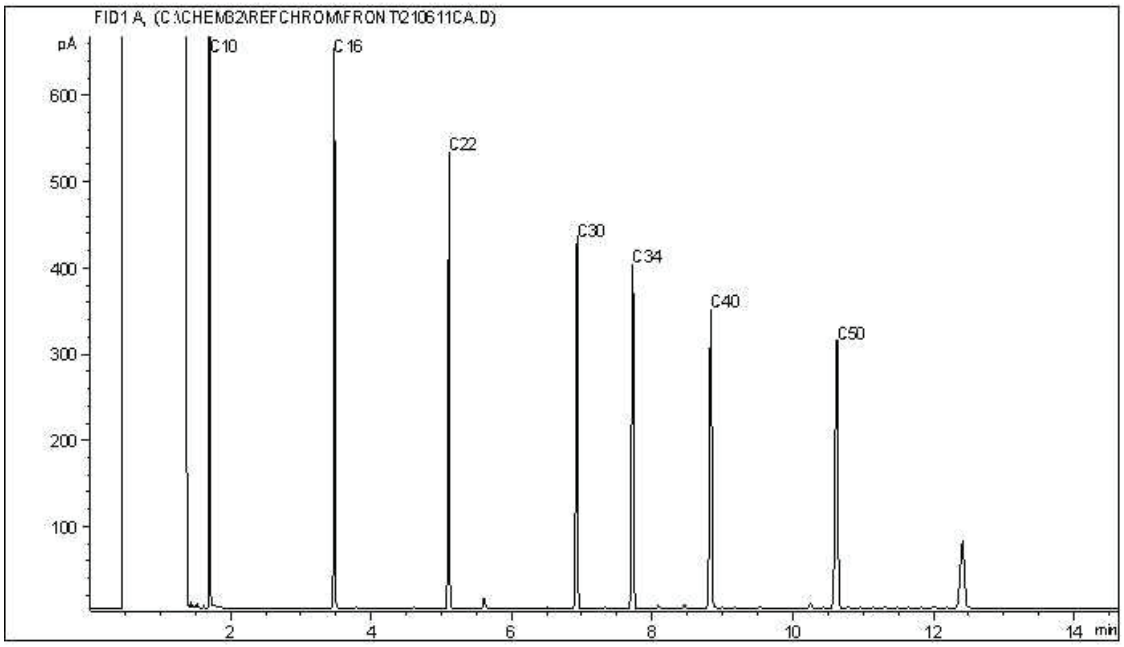
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in water) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

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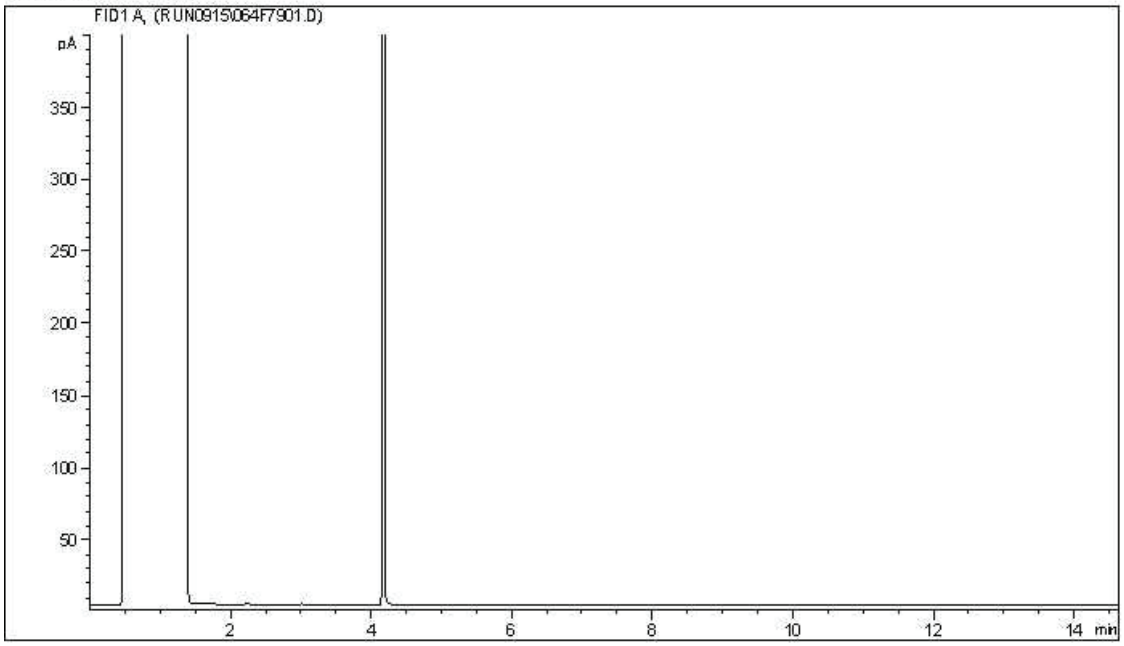
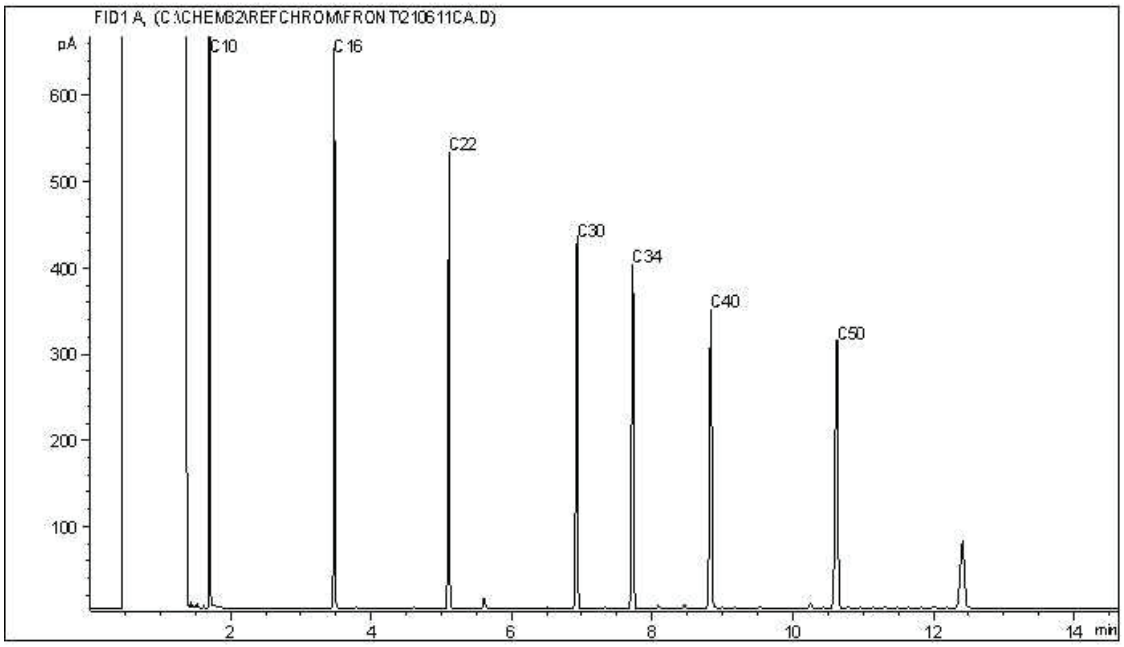
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

CCME Hydrocarbons (F2-F4 in water) Chromatogram

Instrument: GC6



Carbon Range Distribution - Reference Chromatogram



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline:	C4 - C12	Diesel:	C8 - C22
Varsol:	C8 - C12	Lubricating Oils:	C20 - C40
Kerosene:	C7 - C16	Crude Oils:	C3 - C60+

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

GOLDER DATA QUALITY REVIEW CHECKLIST

Site Location: Camp Farewell

Sampling Date: August 30, September 1 and 6, 2021

Golder Project Number: 20368099-6000-1001

Laboratory: Bureau Veritas Edmonton

Lab Submission Number: C167904

Was the Cooler Received at the lab under a sealed and intact custody seal?	Yes
Was proper chain of custody of the samples documented and kept?	Yes
Were sample temperatures acceptable when they reached lab?:	Yes
Were all samples analyzed and extracted within hold times?:	No
Has lab warranted all tests were in statistical control in CoA?:	Yes
Was sufficient sample provided for the requested analysis?	Yes
Has lab warranted all samples were analyzed with limited headspace present?:	Yes

Are All Laboratory QC Within Acceptance Criteria (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Surrogate Recovery		X		All remaining laboratory QC results are within
Method Blank Concentration		X		acceptance criteria, please see QA/QC
Laboratory Duplicate RPD		X		appendix.
Matrix Spike Recovery		X		
Blank Spike Recovery		X		

Are All Field QC Samples Within Alert Limits (Yes, No, Not Applicable)?

	Yes	No	NA	Comments
Field Blank Concentration	X			Samples SW21-01 and DUP A exceed the alert limit for
Trip Blank Concentration			X	total aluminum (67%). All remaining field QC
Field Duplicate RPD		X		samples are within alert limits.

Is data considered reliable (Yes/No/Suspect)?: Suspect

If answer is "No" or "Suspect", describe and provide rationale:

Please see QA/QC appendix for details

Data Reviewed by (Print): Anita Colbert

Data Reviewed by (Signature): Anita Colbert

Date: September 29, 2021

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-71-01, 644511-72-01, 644511-78-01, 644511-77-01, 644511-75-01

Report Date: 2021/09/22
Report #: R3075223
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C167913
Received: 2021/09/10, 09:00

Sample Matrix: Soil
Samples Received: 49

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	8	N/A	2021/09/16	AB SOP-00039	CCME CWS/EPA 8260d m
BTEX/F1 by HS GC/MS/FID (MeOH extract) (1, 2)	41	N/A	2021/09/17	AB SOP-00039	CCME CWS/EPA 8260d m
F1-BTEX (1)	9	N/A	2021/09/17		Auto Calc
F1-BTEX (1)	40	N/A	2021/09/18		Auto Calc
Hexavalent Chromium (1, 3)	6	2021/09/17	2021/09/17	AB SOP-00063	SM 23 3500-Cr B m
CCME Hydrocarbons (F2-F4)+F3A/B in soil (1, 4)	2	2021/09/13	2021/09/16	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	23	2021/09/13	2021/09/16	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2-F4 in soil) (1, 5)	24	2021/09/13	2021/09/17	AB SOP-00036	CCME PHC-CWS m
CCME Hydrocarbons (F2/F2+F3B) in soil (1, 6)	2	N/A	2021/09/14		Auto Calc
Elements by ICPMS - Soils (1)	6	2021/09/17	2021/09/17	AB SOP-00001 / AB SOP-00043	EPA 6020b R2 m
Moisture (1)	49	N/A	2021/09/14	AB SOP-00002	CCME PHC-CWS m
Nitrate-N (soluble) (1)	6	2021/09/13	2021/09/18		Auto Calc
Soluble Ions (1)	6	2021/09/17	2021/09/19	AB SOP-00033 / AB SOP-00042	EPA 6010d R5 m
Soluble Paste (1)	6	2021/09/17	2021/09/17	AB SOP-00033	Carter 2nd ed 15.2 m
Soluble Boron Calculation (1)	6	N/A	2021/09/19		Auto Calc
Soluble Ions Calculation (1)	6	N/A	2021/09/22		Auto Calc

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-71-01, 644511-72-01, 644511-78-01, 644511-77-01, 644511-75-01

Report Date: 2021/09/22
Report #: R3075223
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C167913
Received: 2021/09/10, 09:00

implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8

(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is date sampled unless otherwise stated.

(3) Some soil samples may react with the Cr(VI) spike reducing it to Cr(III). These samples are highly unlikely to contain native hexavalent chromium. Thus a failed spike recovery does not invalidate a negative result on the native sample.

(4) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(5) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(6) All CCME results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil, Validation of Performance-Based Alternative Methods September 2003. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Your P.O. #: 20368099-7000-1001
Your Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories

Attention: Aurelie Belavance

GOLDER ASSOCIATES LTD.
2800, 700 -2nd Street SW
CALGARY, AB
CANADA T2P 2W2

Your C.O.C. #: 644511-71-01, 644511-72-01, 644511-78-01, 644511-77-01, 644511-75-01

Report Date: 2021/09/22
Report #: R3075223
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C167913
Received: 2021/09/10, 09:00

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Cynny Hagen, Key Account Specialist
Email: Cynny.HAGEN@bureauveritas.com
Phone# (403)735-2273

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU721	AFU721	AFU722	AFU723	AFU724	AFU724		
Sampling Date		2021/08/31 09:41	2021/08/31 09:41	2021/08/31 09:42	2021/08/31 09:45	2021/08/31 09:42	2021/08/31 09:42		
COC Number		644511-71-01	644511-71-01	644511-71-01	644511-71-01	644511-71-01	644511-71-01		
	UNITS	TP21-104-01	TP21-104-01 Lab-Dup	TP21-104-03	TP21-104-06	DUP NN	DUP NN Lab-Dup	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	31	N/A	23	<10	54	44	10	A350636
F3 (C16-C34 Hydrocarbons)	mg/kg	130	N/A	130	<50	170	150	50	A350636
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	N/A	<50	<50	<50	<50	50	A350636
Reached Baseline at C50	mg/kg	Yes	N/A	Yes	Yes	Yes	Yes	N/A	A350636
Physical Properties									
Moisture	%	8.7	N/A	9.3	13	8.0	9.4	0.30	A350640
Volatiles									
Xylenes (Total)	mg/kg	<0.045	N/A	<0.045	<0.045	<0.045	N/A	0.045	A350212
F1 (C6-C10) - BTEX	mg/kg	<10	N/A	<10	<10	<10	N/A	10	A350212
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	N/A	0.0050	A351787
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	N/A	0.050	A351787
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	N/A	0.010	A351787
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	N/A	0.040	A351787
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	N/A	0.020	A351787
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	N/A	10	A351787
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	104	102	103	103	105	N/A	N/A	A351787
4-Bromofluorobenzene (sur.)	%	96	99	97	98	96	N/A	N/A	A351787
D10-o-Xylene (sur.)	%	92	88	88	85	95	N/A	N/A	A351787
D4-1,2-Dichloroethane (sur.)	%	101	98	101	100	102	N/A	N/A	A351787
O-TERPHENYL (sur.)	%	78	N/A	83	90	91	87	N/A	A350636

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU725	AFU726	AFU727	AFU728	AFU729	AFU730		
Sampling Date		2021/08/31 10:00	2021/08/31 10:03	2021/08/31 10:11	2021/08/31 10:03	2021/08/31 09:32	2021/08/31 10:23		
COC Number		644511-71-01	644511-71-01	644511-71-01	644511-71-01	644511-71-01	644511-71-01		
	UNITS	**TP21-117-01**	**TP21-117-03**	**TP21-117-05**	**DUP 00**	**TP21-118-02**	**TP21-118-04**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	53	10	<10	<10	33	74	10	A350636
F3 (C16-C34 Hydrocarbons)	mg/kg	66	<50	<50	<50	98	1400	50	A350636
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	<50	<50	580	50	A350636
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A350636
Physical Properties									
Moisture	%	5.5	7.0	3.9	8.3	7.5	36	0.30	A350640
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	<0.045	<0.045	0.053	0.045	A350212
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	<10	<10	10	A350212
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.019	0.0050	A351787
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	18	0.050	A351787
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A351787
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	A351787
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	0.053	0.020	A351787
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	22	10	A351787
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	103	103	103	103	103	105	N/A	A351787
4-Bromofluorobenzene (sur.)	%	96	98	99	98	95	101	N/A	A351787
D10-o-Xylene (sur.)	%	85	92	87	91	91	84	N/A	A351787
D4-1,2-Dichloroethane (sur.)	%	103	104	102	100	103	103	N/A	A351787
O-TERPHENYL (sur.)	%	91	89	92	81	83	96	N/A	A350636

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU731	AFU732	AFU733	AFU734	AFU735	AFU736		
Sampling Date		2021/08/31 10:31	2021/08/31 10:31	2021/08/31 10:38	2021/08/31 10:39	2021/08/31 10:39	2021/08/31 10:51		
COC Number		644511-72-01	644511-72-01	644511-72-01	644511-72-01	644511-72-01	644511-72-01		
	UNITS	TP21-118-06	DUP PP	TP21-119-01	TP21-119-03	DUP QQ	TP21-119-05	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	77	51	68	<10	10	A350636
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	<50	160	200	180	<50	50	A350636
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	64	<50	<50	50	A350636
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A350636
Physical Properties									
Moisture	%	14	15	8.8	14	13	4.1	0.30	A350640
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	0.045	A350212
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	<10	<10	10	A350212
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	A351787
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	0.079	<0.050	0.050	A351787
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A351787
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	A351787
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A351787
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	<10	10	A351787
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	103	104	101	104	102	103	N/A	A351787
4-Bromofluorobenzene (sur.)	%	99	100	98	99	99	100	N/A	A351787
D10-o-Xylene (sur.)	%	90	97	87	91	95	88	N/A	A351787
D4-1,2-Dichloroethane (sur.)	%	107	107	110	105	101	102	N/A	A351787
O-TERPHENYL (sur.)	%	83	85	79	82	82	80	N/A	A350636

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU737	AFU738	AFU739	AFU740		AFU741		
Sampling Date		2021/08/31 10:55	2021/08/31 10:57	2021/08/31 10:57	2021/08/31 11:03		2021/08/31 09:42		
COC Number		644511-72-01	644511-72-01	644511-72-01	644511-72-01		644511-78-01		
	UNITS	TP21-120-02	TP21-120-04	DUP RR	TP21-120-06	QC Batch	TP21-104-05	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	280	<10	<10	<10	A350636	14	10	A350638
F3 (C16-C34 Hydrocarbons)	mg/kg	280	81	<50	<50	A350636	230	50	A350638
F4 (C34-C50 Hydrocarbons)	mg/kg	71	<50	<50	<50	A350636	52	50	A350638
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	A350636	Yes	N/A	A350638
Physical Properties									
Moisture	%	34	5.2	5.0	5.0	A350640	15	0.30	A350639
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	<0.045	A350212	<0.045	0.045	A350212
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	A350212	<10	10	A350212
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	A351787	<0.0050	0.0050	A351792
Toluene	mg/kg	0.10	<0.050	<0.050	<0.050	A351787	<0.050	0.050	A351792
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	A351787	<0.010	0.010	A351792
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	A351787	<0.040	0.040	A351792
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	A351787	<0.020	0.020	A351792
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	A351787	<10	10	A351792
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	103	103	103	102	A351787	101	N/A	A351792
4-Bromofluorobenzene (sur.)	%	97	97	99	98	A351787	97	N/A	A351792
D10-o-Xylene (sur.)	%	106	96	86	88	A351787	96	N/A	A351792
D4-1,2-Dichloroethane (sur.)	%	101	98	103	101	A351787	93	N/A	A351792
O-TERPHENYL (sur.)	%	89	87	86	86	A350636	95	N/A	A350638

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU741	AFU742		AFU743		AFU744		
Sampling Date		2021/08/31 09:42	2021/08/31 11:18		2021/08/31 11:20		2021/08/31 11:24		
COC Number		644511-78-01	644511-78-01		644511-78-01		644511-78-01		
	UNITS	TP21-104-05 Lab-Dup	TP21-121-01	QC Batch	TP21-121-03	QC Batch	TP21-121-05	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	N/A	100	A350638	43	A350638	15	10	A350638
F3 (C16-C34 Hydrocarbons)	mg/kg	N/A	280	A350638	360	A350638	340	50	A350638
F4 (C34-C50 Hydrocarbons)	mg/kg	N/A	<50	A350638	81	A350638	54	50	A350638
Reached Baseline at C50	mg/kg	N/A	Yes	A350638	Yes	A350638	Yes	N/A	A350638
Physical Properties									
Moisture	%	N/A	11	A350639	21	A350639	17	0.30	A350639
Volatiles									
Xylenes (Total)	mg/kg	N/A	<0.045	A350212	<0.045	A350557	<0.045	0.045	A350558
F1 (C6-C10) - BTEX	mg/kg	N/A	<10	A350212	<10	A350557	<10	10	A350558
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	A351792	<0.0050	A351792	<0.0050	0.0050	A351792
Toluene	mg/kg	<0.050	<0.050	A351792	0.57	A351792	<0.050	0.050	A351792
Ethylbenzene	mg/kg	<0.010	<0.010	A351792	<0.010	A351792	<0.010	0.010	A351792
m & p-Xylene	mg/kg	<0.040	<0.040	A351792	<0.040	A351792	<0.040	0.040	A351792
o-Xylene	mg/kg	<0.020	<0.020	A351792	<0.020	A351792	<0.020	0.020	A351792
F1 (C6-C10)	mg/kg	<10	<10	A351792	<10	A351792	<10	10	A351792
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	101	101	A351792	103	A351792	100	N/A	A351792
4-Bromofluorobenzene (sur.)	%	97	96	A351792	96	A351792	96	N/A	A351792
D10-o-Xylene (sur.)	%	93	87	A351792	97	A351792	101	N/A	A351792
D4-1,2-Dichloroethane (sur.)	%	94	95	A351792	96	A351792	94	N/A	A351792
O-TERPHENYL (sur.)	%	N/A	98	A350638	99	A350638	90	N/A	A350638

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU744	AFU745		AFU746	AFU747	AFU748		
Sampling Date		2021/08/31 11:24	2021/08/31 11:24		2021/08/31 13:35	2021/08/31 13:40	2021/08/31 13:45		
COC Number		644511-78-01	644511-78-01		644511-78-01	644511-78-01	644511-78-01		
	UNITS	TP21-121-05 Lab-Dup	DUP SS	QC Batch	TP21-122-02	TP21-122-04	TP21-122-06	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	18	<10	A350638	30	<10	<10	10	A350637
F3 (C16-C34 Hydrocarbons)	mg/kg	320	<50	A350638	190	<50	<50	50	A350637
F4 (C34-C50 Hydrocarbons)	mg/kg	56	<50	A350638	59	<50	<50	50	A350637
Reached Baseline at C50	mg/kg	Yes	Yes	A350638	Yes	Yes	Yes	N/A	A350637
Physical Properties									
Moisture	%	16	15	A350639	13	4.7	7.5	0.30	A350634
Volatiles									
Xylenes (Total)	mg/kg	N/A	<0.045	A350558	<0.045	<0.045	<0.045	0.045	A350558
F1 (C6-C10) - BTEX	mg/kg	N/A	<10	A350558	<10	<10	<10	10	A350558
Field Preserved Volatiles									
Benzene	mg/kg	N/A	<0.0050	A351792	<0.0050	<0.0050	<0.0050	0.0050	A351792
Toluene	mg/kg	N/A	<0.050	A351792	<0.050	<0.050	<0.050	0.050	A351792
Ethylbenzene	mg/kg	N/A	<0.010	A351792	<0.010	<0.010	<0.010	0.010	A351792
m & p-Xylene	mg/kg	N/A	<0.040	A351792	<0.040	<0.040	<0.040	0.040	A351792
o-Xylene	mg/kg	N/A	<0.020	A351792	<0.020	<0.020	<0.020	0.020	A351792
F1 (C6-C10)	mg/kg	N/A	<10	A351792	<10	<10	<10	10	A351792
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	N/A	102	A351792	101	102	102	N/A	A351792
4-Bromofluorobenzene (sur.)	%	N/A	97	A351792	96	97	98	N/A	A351792
D10-o-Xylene (sur.)	%	N/A	93	A351792	84	91	95	N/A	A351792
D4-1,2-Dichloroethane (sur.)	%	N/A	95	A351792	96	95	94	N/A	A351792
O-TERPHENYL (sur.)	%	98	93	A350638	95	97	89	N/A	A350637

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU749	AFU750	AFU751	AFU752	AFU753	AFU754		
Sampling Date		2021/08/31 13:45	2021/08/31 14:07	2021/08/31 14:08	2021/08/31 14:08	2021/08/31 14:13	2021/08/31 14:25		
COC Number		644511-78-01	644511-78-01	644511-77-01	644511-77-01	644511-77-01	644511-77-01		
	UNITS	**DUP TT**	**TP21-129-01**	**TP21-129-03**	**DUP UU**	**TP21-129-05**	**TP21-130-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	74	10	16	<10	150	10	A350637
F3 (C16-C34 Hydrocarbons)	mg/kg	<50	240	<50	60	<50	220	50	A350637
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	61	<50	<50	<50	<50	50	A350637
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A350637
Physical Properties									
Moisture	%	5.4	11	7.4	3.9	14	17	0.30	A350634
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	<0.045	<0.045	<0.045	<0.045	0.045	A350558
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	<10	<10	10	A350558
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	A351792
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	A351792
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A351792
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	A351792
o-Xylene	mg/kg	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A351792
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	<10	10	A351792
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	103	103	102	102	102	102	N/A	A351792
4-Bromofluorobenzene (sur.)	%	99	96	95	96	96	97	N/A	A351792
D10-o-Xylene (sur.)	%	91	91	95	94	92	103	N/A	A351792
D4-1,2-Dichloroethane (sur.)	%	95	97	94	92	95	94	N/A	A351792
O-TERPHENYL (sur.)	%	93	95	87	94	98	96	N/A	A350637

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU755	AFU756	AFU757	AFU758	AFU759	AFU760		
Sampling Date		2021/08/31 14:28	2021/08/31 14:28	2021/08/31 14:35	2021/08/31 14:40	2021/08/31 14:41	2021/08/31 14:52		
COC Number		644511-77-01	644511-77-01	644511-77-01	644511-77-01	644511-77-01	644511-77-01		
	UNITS	TP21-130-04	DUP VV	TP21-130-06	TP21-131-01	TP21-131-03	TP21-131-05	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	130	160	24	120	140	<10	10	A350637
F3 (C16-C34 Hydrocarbons)	mg/kg	190	200	<50	230	170	<50	50	A350637
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	<50	55	<50	<50	50	A350637
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	Yes	Yes	N/A	A350637
Physical Properties									
Moisture	%	11	14	16	15	12	4.5	0.30	A350634
Volatiles									
Xylenes (Total)	mg/kg	<0.045	<0.045	0.15	<0.045	<0.045	<0.045	0.045	A350558
F1 (C6-C10) - BTEX	mg/kg	<10	<10	<10	<10	<10	<10	10	A350558
Field Preserved Volatiles									
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	A351792
Toluene	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	A351792
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A351792
m & p-Xylene	mg/kg	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	A351792
o-Xylene	mg/kg	<0.020	<0.020	0.15	<0.020	<0.020	<0.020	0.020	A351792
F1 (C6-C10)	mg/kg	<10	<10	<10	<10	<10	<10	10	A351792
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	103	102	103	101	103	103	N/A	A351792
4-Bromofluorobenzene (sur.)	%	97	97	96	97	94	98	N/A	A351792
D10-o-Xylene (sur.)	%	90	91	91	91	99	89	N/A	A351792
D4-1,2-Dichloroethane (sur.)	%	94	95	95	95	93	93	N/A	A351792
O-TERPHENYL (sur.)	%	98	92	94	95	92	92	N/A	A350637

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU761		AFU762		AFU763		AFU764		
Sampling Date		2021/08/31 14:59		2021/08/31 15:04		2021/08/31 15:07		2021/08/31 15:15		
COC Number		644511-75-01		644511-75-01		644511-75-01		644511-75-01		
	UNITS	TP21-132-01	RDL	TP21-132-04	RDL	TP21-132-06	RDL	TP21-133-02	RDL	QC Batch
Ext. Pet. Hydrocarbon										
F2 (C10-C16 Hydrocarbons)	mg/kg	67	10	N/A	10	<10	10	3200	10	A350637
F3 (C16-C34 Hydrocarbons)	mg/kg	200	50	N/A	50	<50	50	550	50	A350637
F4 (C34-C50 Hydrocarbons)	mg/kg	50	50	N/A	50	<50	50	93	50	A350637
Reached Baseline at C50	mg/kg	Yes	N/A	N/A	N/A	Yes	N/A	Yes	N/A	A350637
Physical Properties										
Moisture	%	9.0	0.30	9.7	0.30	8.1	0.30	39	0.30	A350634
Volatiles										
Xylenes (Total)	mg/kg	<0.045	0.045	0.076	0.045	<0.045	0.045	<0.094	0.094	A350558
F1 (C6-C10) - BTEX	mg/kg	<10	10	<12	12	<10	10	<21	21	A350558
Field Preserved Volatiles										
Benzene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0050	<0.0080 (1)	0.0080	A351821
Toluene	mg/kg	<0.050	0.050	<0.050	0.050	<0.050	0.050	0.12 (2)	0.11	A351821
Ethylbenzene	mg/kg	<0.010	0.010	<0.010	0.010	<0.010	0.010	<0.012 (1)	0.012	A351821
m & p-Xylene	mg/kg	<0.040	0.040	0.076	0.040	<0.040	0.040	<0.085 (2)	0.085	A351821
o-Xylene	mg/kg	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.042 (2)	0.042	A351821
F1 (C6-C10)	mg/kg	<10	10	<12 (3)	12	<10	10	<21 (2)	21	A351821
Surrogate Recovery (%)										
1,4-Difluorobenzene (sur.)	%	100	N/A	89	N/A	90	N/A	91	N/A	A351821
4-Bromofluorobenzene (sur.)	%	99	N/A	120	N/A	122	N/A	120	N/A	A351821
D10-o-Xylene (sur.)	%	97	N/A	74	N/A	78	N/A	80	N/A	A351821
D4-1,2-Dichloroethane (sur.)	%	101	N/A	98	N/A	100	N/A	101	N/A	A351821
O-TERPHENYL (sur.)	%	92	N/A	N/A	N/A	93	N/A	102	N/A	A350637

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Detection limit reported based on MDL and sample weight used for analysis.
(2) Detection limits raised based on sample weight used for analysis.
(3) Detection limit raised due to interferent.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU764			AFU765		AFU766		
Sampling Date		2021/08/31 15:15			2021/08/31 15:16		2021/08/31 15:21		
COC Number		644511-75-01			644511-75-01		644511-75-01		
	UNITS	TP21-133-02 Lab-Dup	RDL	QC Batch	TP21-133-03	RDL	TP21-133-05	RDL	QC Batch
Ext. Pet. Hydrocarbon									
F2 (C10-C16 Hydrocarbons)	mg/kg	3400	10	A350637	N/A	10	<10	10	A350637
F3 (C16-C34 Hydrocarbons)	mg/kg	470	50	A350637	N/A	50	<50	50	A350637
F4 (C34-C50 Hydrocarbons)	mg/kg	81	50	A350637	N/A	50	<50	50	A350637
Reached Baseline at C50	mg/kg	Yes	N/A	A350637	N/A	N/A	Yes	N/A	A350637
Physical Properties									
Moisture	%	N/A	0.30	A350634	16	0.30	4.7	0.30	A350639
Volatiles									
Xylenes (Total)	mg/kg	N/A	0.094	A350558	<0.045	0.045	<0.045	0.045	A350558
F1 (C6-C10) - BTEX	mg/kg	N/A	21	A350558	<11	11	<16	16	A350558
Field Preserved Volatiles									
Benzene	mg/kg	N/A	0.0080	A351821	<0.0050	0.0050	<0.0050	0.0050	A351821
Toluene	mg/kg	N/A	0.11	A351821	<0.050	0.050	<0.050	0.050	A351821
Ethylbenzene	mg/kg	N/A	0.012	A351821	<0.010	0.010	<0.010	0.010	A351821
m & p-Xylene	mg/kg	N/A	0.085	A351821	<0.040	0.040	<0.040	0.040	A351821
o-Xylene	mg/kg	N/A	0.042	A351821	<0.020	0.020	<0.020	0.020	A351821
F1 (C6-C10)	mg/kg	N/A	21	A351821	<11 (1)	11	<16 (1)	16	A351821
Surrogate Recovery (%)									
1,4-Difluorobenzene (sur.)	%	N/A	N/A	A351821	90	N/A	90	N/A	A351821
4-Bromofluorobenzene (sur.)	%	N/A	N/A	A351821	120	N/A	120	N/A	A351821
D10-o-Xylene (sur.)	%	N/A	N/A	A351821	77	N/A	81	N/A	A351821
D4-1,2-Dichloroethane (sur.)	%	N/A	N/A	A351821	99	N/A	98	N/A	A351821
O-TERPHENYL (sur.)	%	101	N/A	A350637	N/A	N/A	95	N/A	A350637

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Detection limit raised due to interferent.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 BTEX AND F1-F4 IN SOIL (VIALS)

BV Labs ID		AFU767	AFU768		AFU769	AFU769		
Sampling Date		2021/08/31 14:42	2021/08/31 15:21		2021/08/31 15:00	2021/08/31 15:00		
COC Number		644511-75-01	644511-75-01		644511-75-01	644511-75-01		
	UNITS	TP21-131-04	TP21-133-06	QC Batch	TP21-132-03	TP21-132-03 Lab-Dup	RDL	QC Batch
Ext. Pet. Hydrocarbon								
F2 (C10-C16 Hydrocarbons)	mg/kg	32	<10	A350638	21	N/A	10	A350637
F3 (C16-C34 Hydrocarbons)	mg/kg	110	76	A350638	250	N/A	50	A350637
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	<50	A350638	80	N/A	50	A350637
Reached Baseline at C50	mg/kg	Yes	Yes	A350638	Yes	N/A	N/A	A350637
Physical Properties								
Moisture	%	6.9	15	A350639	34	31	0.30	A350634
Volatiles								
Xylenes (Total)	mg/kg	<0.045	<0.045	A350558	0.38	N/A	0.045	A350558
F1 (C6-C10) - BTEX	mg/kg	<10	<10	A350558	15	N/A	10	A350558
Field Preserved Volatiles								
Benzene	mg/kg	<0.0050	<0.0050	A351821	<0.0050	N/A	0.0050	A351821
Toluene	mg/kg	<0.050	<0.050	A351821	<0.050	N/A	0.050	A351821
Ethylbenzene	mg/kg	<0.010	<0.010	A351821	0.033	N/A	0.010	A351821
m & p-Xylene	mg/kg	<0.040	<0.040	A351821	0.31	N/A	0.040	A351821
o-Xylene	mg/kg	<0.020	<0.020	A351821	0.068	N/A	0.020	A351821
F1 (C6-C10)	mg/kg	<10	<10	A351821	16	N/A	10	A351821
Surrogate Recovery (%)								
1,4-Difluorobenzene (sur.)	%	90	91	A351821	92	N/A	N/A	A351821
4-Bromofluorobenzene (sur.)	%	119	119	A351821	120	N/A	N/A	A351821
D10-o-Xylene (sur.)	%	77	83	A351821	90	N/A	N/A	A351821
D4-1,2-Dichloroethane (sur.)	%	99	101	A351821	100	N/A	N/A	A351821
O-TERPHENYL (sur.)	%	91	101	A350638	96	N/A	N/A	A350637

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 REGULATED METALS - SOILS (SOIL)

BV Labs ID		AFU725	AFU726			AFU727	AFU727		
Sampling Date		2021/08/31 10:00	2021/08/31 10:03			2021/08/31 10:11	2021/08/31 10:11		
COC Number		644511-71-01	644511-71-01			644511-71-01	644511-71-01		
	UNITS	TP21-117-01	TP21-117-03	RDL	QC Batch	TP21-117-05	TP21-117-05 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Calculated Boron (B)	mg/kg	0.048	0.047	0.028	A349974	<0.033	N/A	0.033	A349974
Elements									
Hex. Chromium (Cr 6+)	mg/kg	<0.080	<0.080	0.080	A356105	<0.080	<0.080	0.080	A356383
Soluble Parameters									
Soluble Boron (B)	mg/L	0.17	0.17	0.10	A357683	<0.10	N/A	0.10	A357683
Saturation %	%	28	28	N/A	A354884	33	N/A	N/A	A354884
Soluble Sulphate (SO4)	mg/L	43	87	5.0	A357683	54	N/A	5.0	A357683
Elements									
Total Antimony (Sb)	mg/kg	<0.50	<0.50	0.50	A355882	<0.50	N/A	0.50	A355882
Total Arsenic (As)	mg/kg	5.1	4.8	1.0	A355882	3.6	N/A	1.0	A355882
Total Barium (Ba)	mg/kg	880	850	1.0	A355882	84	N/A	1.0	A355882
Total Beryllium (Be)	mg/kg	<0.40	<0.40	0.40	A355882	<0.40	N/A	0.40	A355882
Total Cadmium (Cd)	mg/kg	0.064	0.065	0.050	A355882	0.075	N/A	0.050	A355882
Total Chromium (Cr)	mg/kg	5.7	5.4	1.0	A355882	5.3	N/A	1.0	A355882
Total Cobalt (Co)	mg/kg	2.1	1.9	0.50	A355882	3.4	N/A	0.50	A355882
Total Copper (Cu)	mg/kg	5.2	4.7	1.0	A355882	5.0	N/A	1.0	A355882
Total Lead (Pb)	mg/kg	8.8	8.7	0.50	A355882	2.8	N/A	0.50	A355882
Total Mercury (Hg)	mg/kg	0.051	<0.050	0.050	A355882	<0.050	N/A	0.050	A355882
Total Molybdenum (Mo)	mg/kg	0.45	0.41	0.40	A355882	<0.40	N/A	0.40	A355882
Total Nickel (Ni)	mg/kg	4.8	4.4	1.0	A355882	9.5	N/A	1.0	A355882
Total Selenium (Se)	mg/kg	<0.50	<0.50	0.50	A355882	<0.50	N/A	0.50	A355882
Total Silver (Ag)	mg/kg	<0.20	<0.20	0.20	A355882	<0.20	N/A	0.20	A355882
Total Thallium (Tl)	mg/kg	<0.10	<0.10	0.10	A355882	<0.10	N/A	0.10	A355882
Total Tin (Sn)	mg/kg	<1.0	<1.0	1.0	A355882	<1.0	N/A	1.0	A355882
Total Uranium (U)	mg/kg	0.32	0.33	0.20	A355882	0.30	N/A	0.20	A355882
Total Vanadium (V)	mg/kg	12	12	1.0	A355882	12	N/A	1.0	A355882
Total Zinc (Zn)	mg/kg	18	20	10	A355882	24	N/A	10	A355882

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

AT1 REGULATED METALS - SOILS (SOIL)

BV Labs ID		AFU750		AFU751	AFU753		
Sampling Date		2021/08/31 14:07		2021/08/31 14:08	2021/08/31 14:13		
COC Number		644511-78-01		644511-77-01	644511-77-01		
	UNITS	TP21-129-01	RDL	TP21-129-03	TP21-129-05	RDL	QC Batch
Calculated Parameters							
Calculated Boron (B)	mg/kg	0.059	0.039	0.030	0.044	0.029	A349974
Elements							
Hex. Chromium (Cr 6+)	mg/kg	<0.080	0.080	<0.080	<0.080	0.080	A356105
Soluble Parameters							
Soluble Boron (B)	mg/L	0.15	0.10	0.10	0.15	0.10	A357683
Saturation %	%	39	N/A	29	29	N/A	A354884
Soluble Sulphate (SO4)	mg/L	58	5.0	27	94	5.0	A357683
Elements							
Total Antimony (Sb)	mg/kg	<0.50	0.50	<0.50	<0.50	0.50	A355882
Total Arsenic (As)	mg/kg	5.4	1.0	5.7	5.5	1.0	A355882
Total Barium (Ba)	mg/kg	790	1.0	89	66	1.0	A355882
Total Beryllium (Be)	mg/kg	<0.40	0.40	<0.40	<0.40	0.40	A355882
Total Cadmium (Cd)	mg/kg	0.10	0.050	0.077	0.070	0.050	A355882
Total Chromium (Cr)	mg/kg	21	1.0	5.0	6.4	1.0	A355882
Total Cobalt (Co)	mg/kg	3.2	0.50	3.6	3.6	0.50	A355882
Total Copper (Cu)	mg/kg	6.0	1.0	3.4	3.9	1.0	A355882
Total Lead (Pb)	mg/kg	10	0.50	2.9	2.9	0.50	A355882
Total Mercury (Hg)	mg/kg	<0.050	0.050	<0.050	<0.050	0.050	A355882
Total Molybdenum (Mo)	mg/kg	0.87	0.40	0.40	0.50	0.40	A355882
Total Nickel (Ni)	mg/kg	14	1.0	8.1	9.6	1.0	A355882
Total Selenium (Se)	mg/kg	<0.50	0.50	<0.50	<0.50	0.50	A355882
Total Silver (Ag)	mg/kg	<0.20	0.20	<0.20	<0.20	0.20	A355882
Total Thallium (Tl)	mg/kg	<0.10	0.10	<0.10	<0.10	0.10	A355882
Total Tin (Sn)	mg/kg	<1.0	1.0	<1.0	<1.0	1.0	A355882
Total Uranium (U)	mg/kg	0.30	0.20	0.21	0.34	0.20	A355882
Total Vanadium (V)	mg/kg	16	1.0	10	11	1.0	A355882
Total Zinc (Zn)	mg/kg	26	10	23	26	10	A355882

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

RESULTS OF CHEMICAL ANALYSES OF SOIL

BV Labs ID		AFU725	AFU726		AFU727		AFU750		
Sampling Date		2021/08/31 10:00	2021/08/31 10:03		2021/08/31 10:11		2021/08/31 14:07		
COC Number		644511-71-01	644511-71-01		644511-71-01		644511-78-01		
	UNITS	TP21-117-01	TP21-117-03	RDL	TP21-117-05	RDL	TP21-129-01	RDL	QC Batch
Calculated Parameters									
Soluble Nitrate (N)	mg/L	0.37	<0.20	0.20	<0.20	0.20	<0.20	0.20	A350563
Calculated Calcium (Ca)	mg/kg	5.2	9.0	0.42	22	0.50	21	0.59	A362522
Calculated Magnesium (Mg)	mg/kg	1.1	1.8	0.28	4.1	0.33	3.9	0.39	A362522
Calculated Sodium (Na)	mg/kg	4.7	5.3	0.70	6.7	0.83	7.3	0.98	A362522
Calculated Potassium (K)	mg/kg	2.0	2.5	0.36	5.3	0.43	1.5	0.51	A362522
Calculated Boron (B)	mg/kg	0.048	0.047	0.028	<0.033	0.033	0.059	0.039	A362522
Calculated Sulphate (SO4)	mg/kg	12	24	1.4	18	1.7	23	2.0	A362522
Calculated Nitrate (N)	mg/kg	0.10	<0.056	0.056	<0.066	0.066	<0.079	0.079	A362522
Calculated Nitrite (N)	mg/kg	0.12	<0.056	0.056	<0.066	0.066	<0.079	0.079	A362522
Calculated Total Nitrogen (N)	mg/kg	CALCERROR	CALCERROR	N/A	CALCERROR	N/A	CALCERROR	N/A	A362522

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs ID		AFU751		AFU753		
Sampling Date		2021/08/31 14:08		2021/08/31 14:13		
COC Number		644511-77-01		644511-77-01		
	UNITS	TP21-129-03	RDL	TP21-129-05	RDL	QC Batch
Calculated Parameters						
Soluble Nitrate (N)	mg/L	0.23	0.20	8.0	0.20	A350563
Calculated Calcium (Ca)	mg/kg	8.6	0.44	16	0.43	A362522
Calculated Magnesium (Mg)	mg/kg	2.0	0.29	3.5	0.29	A362522
Calculated Sodium (Na)	mg/kg	4.7	0.73	8.2	0.71	A362522
Calculated Potassium (K)	mg/kg	0.50	0.38	1.0	0.37	A362522
Calculated Boron (B)	mg/kg	0.030	0.029	0.044	0.029	A362522
Calculated Sulphate (SO4)	mg/kg	7.9	1.5	27	1.4	A362522
Calculated Nitrate (N)	mg/kg	0.066	0.059	2.3	0.057	A362522
Calculated Nitrite (N)	mg/kg	<0.059	0.059	0.067	0.057	A362522
Calculated Total Nitrogen (N)	mg/kg	CALCERROR	N/A	CALCERROR	N/A	A362522

RDL = Reportable Detection Limit
N/A = Not Applicable

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

PETROLEUM HYDROCARBONS (CCME)

BV Labs ID		AFU762	AFU762		AFU765		
Sampling Date		2021/08/31 15:04	2021/08/31 15:04		2021/08/31 15:16		
COC Number		644511-75-01	644511-75-01		644511-75-01		
	UNITS	TP21-132-04	TP21-132-04 Lab-Dup	QC Batch	TP21-133-03	RDL	QC Batch
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	14	32	A350635	120	10	A350635
F3 (C16-C34 Hydrocarbons)	mg/kg	100	N/A	A350561	240	71	A350562
F3A (C16-C22)	mg/kg	<50	72	A350635	61	50	A350635
F3B (C22-C34)	mg/kg	100 (1)	320 (2)	A350635	180	50	A350635
F2% (BIC)	mg/kg	NC	N/A	A350561	NC	N/A	A350562
F4 (C34-C50 Hydrocarbons)	mg/kg	<50	130	A350635	70	50	A350635
Reached Baseline at C50	mg/kg	Yes	Yes	A350635	Yes	N/A	A350635
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	102	105	A350635	99	N/A	A350635

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.
(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
Package 2	5.3°C
Package 3	5.7°C
Package 4	3.0°C
Package 5	3.3°C
Package 6	3.3°C
Package 7	1.7°C
Package 8	2.3°C

Version #2: Report reissued in mg/kg unit for Sulphate and Nitrate data.

Results relate only to the items tested.

BV Labs Job #: C167913
Report Date: 2021/09/22

GOLDER ASSOCIATES LTD.
Client Project #: 20368099-6000-1001
Site Location: Camp Farewell and Unipkat I-22, Northwest Territories
Your P.O. #: 20368099-7000-1001
Sampler Initials: PT

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A350634	ARV	Method Blank	Moisture	2021/09/14	<0.30		%	
A350634	ARV	RPD [AFU769-01]	Moisture	2021/09/14	8.3		%	20
A350635	EC0	Matrix Spike [AFU762-01]	O-TERPHENYL (sur.)	2021/09/16		96	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		97	%	60 - 140
			F3A (C16-C22)	2021/09/16		110	%	60 - 140
			F3B (C22-C34)	2021/09/16		112	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/16		102	%	60 - 140
A350635	EC0	Spiked Blank	O-TERPHENYL (sur.)	2021/09/16		105	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		104	%	60 - 140
			F3A (C16-C22)	2021/09/16		109	%	60 - 140
			F3B (C22-C34)	2021/09/16		105	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/16		106	%	60 - 140
A350635	EC0	Method Blank	O-TERPHENYL (sur.)	2021/09/16		111	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16	<10		mg/kg	
			F3A (C16-C22)	2021/09/16	<50		mg/kg	
			F3B (C22-C34)	2021/09/16	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/16	<50		mg/kg	
A350635	EC0	RPD [AFU762-01]	F2 (C10-C16 Hydrocarbons)	2021/09/16	NC		%	40
			F3A (C16-C22)	2021/09/16	36		%	40
			F3B (C22-C34)	2021/09/16	102 (1)		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/16	NC		%	40
A350636	EC0	Matrix Spike [AFU724-01]	O-TERPHENYL (sur.)	2021/09/16		74	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		70	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/16		81	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/16		86	%	60 - 140
A350636	EC0	Spiked Blank	O-TERPHENYL (sur.)	2021/09/16		79	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		75	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/16		83	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/16		82	%	60 - 140
A350636	EC0	Method Blank	O-TERPHENYL (sur.)	2021/09/16		94	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/16	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/16	<50		mg/kg	
A350636	EC0	RPD [AFU724-01]	F2 (C10-C16 Hydrocarbons)	2021/09/16	21		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/16	13		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/16	NC		%	40
A350637	CAU	Matrix Spike [AFU764-01]	O-TERPHENYL (sur.)	2021/09/16		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		NC	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/16		64	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/16		77	%	60 - 140
A350637	CAU	Spiked Blank	O-TERPHENYL (sur.)	2021/09/16		101	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16		93	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/16		91	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/16		85	%	60 - 140
A350637	CAU	Method Blank	O-TERPHENYL (sur.)	2021/09/16		93	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/16	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/16	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/16	<50		mg/kg	
A350637	CAU	RPD [AFU764-01]	F2 (C10-C16 Hydrocarbons)	2021/09/16	4.9		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/16	15		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/16	14		%	40

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
A350638	EC0	Matrix Spike [AFU744-01]	O-TERPHENYL (sur.)	2021/09/17		98	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/17		91	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/17		93	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/17		96	%	60 - 140
A350638	EC0	Spiked Blank	O-TERPHENYL (sur.)	2021/09/17		92	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/17		82	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2021/09/17		89	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2021/09/17		87	%	60 - 140
A350638	EC0	Method Blank	O-TERPHENYL (sur.)	2021/09/17		110	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2021/09/17	<10		mg/kg	
			F3 (C16-C34 Hydrocarbons)	2021/09/17	<50		mg/kg	
			F4 (C34-C50 Hydrocarbons)	2021/09/17	<50		mg/kg	
A350638	EC0	RPD [AFU744-01]	F2 (C10-C16 Hydrocarbons)	2021/09/17	21		%	40
			F3 (C16-C34 Hydrocarbons)	2021/09/17	3.1		%	40
			F4 (C34-C50 Hydrocarbons)	2021/09/17	3.1		%	40
A350639	SNA	Method Blank	Moisture	2021/09/14	<0.30		%	
A350639	SNA	RPD [AFU744-01]	Moisture	2021/09/14	1.2		%	20
A350640	SNA	Method Blank	Moisture	2021/09/14	<0.30		%	
A350640	SNA	RPD [AFU724-01]	Moisture	2021/09/14	16		%	20
A351787	DO1	Matrix Spike [AFU721-02]	1,4-Difluorobenzene (sur.)	2021/09/17		102	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/17		97	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/17		91	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/17		102	%	50 - 140
			Benzene	2021/09/17		99	%	50 - 140
			Toluene	2021/09/17		95	%	50 - 140
			Ethylbenzene	2021/09/17		97	%	50 - 140
			m & p-Xylene	2021/09/17		95	%	50 - 140
			o-Xylene	2021/09/17		95	%	50 - 140
			F1 (C6-C10)	2021/09/17		107	%	60 - 140
A351787	DO1	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/17		101	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/17		101	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/17		89	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/17		100	%	50 - 140
			Benzene	2021/09/17		92	%	60 - 130
			Toluene	2021/09/17		89	%	60 - 130
			Ethylbenzene	2021/09/17		92	%	60 - 130
			m & p-Xylene	2021/09/17		89	%	60 - 130
			o-Xylene	2021/09/17		89	%	60 - 130
			F1 (C6-C10)	2021/09/17		97	%	60 - 140
A351787	DO1	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/17		103	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/17		95	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/17		89	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/17		98	%	50 - 140
			Benzene	2021/09/17	<0.0050		mg/kg	
			Toluene	2021/09/17	<0.050		mg/kg	
			Ethylbenzene	2021/09/17	<0.010		mg/kg	
			m & p-Xylene	2021/09/17	<0.040		mg/kg	
			o-Xylene	2021/09/17	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/17	<10		mg/kg	
A351787	DO1	RPD [AFU721-02]	Benzene	2021/09/17	NC		%	50
			Toluene	2021/09/17	NC		%	50

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylbenzene	2021/09/17	NC		%	50
			m & p-Xylene	2021/09/17	NC		%	50
			o-Xylene	2021/09/17	NC		%	50
			F1 (C6-C10)	2021/09/17	NC		%	30
A351792	RSU	Matrix Spike [AFU741-02]	1,4-Difluorobenzene (sur.)	2021/09/17		100	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/17		98	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/17		100	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/17		91	%	50 - 140
			Benzene	2021/09/17		78	%	50 - 140
			Toluene	2021/09/17		81	%	50 - 140
			Ethylbenzene	2021/09/17		85	%	50 - 140
			m & p-Xylene	2021/09/17		87	%	50 - 140
			o-Xylene	2021/09/17		85	%	50 - 140
			F1 (C6-C10)	2021/09/17		86	%	60 - 140
A351792	RSU	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/17		105	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/17		101	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/17		93	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/17		98	%	50 - 140
			Benzene	2021/09/17		73	%	60 - 130
			Toluene	2021/09/17		76	%	60 - 130
			Ethylbenzene	2021/09/17		77	%	60 - 130
			m & p-Xylene	2021/09/17		80	%	60 - 130
			o-Xylene	2021/09/17		81	%	60 - 130
			F1 (C6-C10)	2021/09/17		91	%	60 - 140
A351792	RSU	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/17		101	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/17		99	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/17		88	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/17		96	%	50 - 140
			Benzene	2021/09/17	<0.0050		mg/kg	
			Toluene	2021/09/17	<0.050		mg/kg	
			Ethylbenzene	2021/09/17	<0.010		mg/kg	
			m & p-Xylene	2021/09/17	<0.040		mg/kg	
			o-Xylene	2021/09/17	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/17	<10		mg/kg	
A351792	RSU	RPD [AFU741-02]	Benzene	2021/09/17	NC		%	50
			Toluene	2021/09/17	NC		%	50
			Ethylbenzene	2021/09/17	NC		%	50
			m & p-Xylene	2021/09/17	NC		%	50
			o-Xylene	2021/09/17	NC		%	50
			F1 (C6-C10)	2021/09/17	NC		%	30
A351821	JNG	Matrix Spike	1,4-Difluorobenzene (sur.)	2021/09/16		90	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/16		118	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/16		76	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/16		96	%	50 - 140
			Benzene	2021/09/16		83	%	50 - 140
			Toluene	2021/09/16		81	%	50 - 140
			Ethylbenzene	2021/09/16		81	%	50 - 140
			m & p-Xylene	2021/09/16		79	%	50 - 140
			o-Xylene	2021/09/16		82	%	50 - 140
			F1 (C6-C10)	2021/09/16		109	%	60 - 140
A351821	JNG	Spiked Blank	1,4-Difluorobenzene (sur.)	2021/09/16		89	%	50 - 140

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			4-Bromofluorobenzene (sur.)	2021/09/16		122	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/16		74	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/16		99	%	50 - 140
			Benzene	2021/09/16		75	%	60 - 130
			Toluene	2021/09/16		74	%	60 - 130
			Ethylbenzene	2021/09/16		76	%	60 - 130
			m & p-Xylene	2021/09/16		74	%	60 - 130
			o-Xylene	2021/09/16		76	%	60 - 130
			F1 (C6-C10)	2021/09/16		86	%	60 - 140
A351821	JNG	Method Blank	1,4-Difluorobenzene (sur.)	2021/09/16		90	%	50 - 140
			4-Bromofluorobenzene (sur.)	2021/09/16		120	%	50 - 140
			D10-o-Xylene (sur.)	2021/09/16		76	%	50 - 140
			D4-1,2-Dichloroethane (sur.)	2021/09/16		99	%	50 - 140
			Benzene	2021/09/16	<0.0050		mg/kg	
			Toluene	2021/09/16	<0.050		mg/kg	
			Ethylbenzene	2021/09/16	<0.010		mg/kg	
			m & p-Xylene	2021/09/16	<0.040		mg/kg	
			o-Xylene	2021/09/16	<0.020		mg/kg	
			F1 (C6-C10)	2021/09/16	<10		mg/kg	
A351821	JNG	RPD	Benzene	2021/09/17	NC		%	50
			Toluene	2021/09/17	NC		%	50
			Ethylbenzene	2021/09/17	NC		%	50
			m & p-Xylene	2021/09/17	NC		%	50
			o-Xylene	2021/09/17	NC		%	50
			F1 (C6-C10)	2021/09/17	NC		%	30
A354884	LZ0	QC Standard	Saturation %	2021/09/17		101	%	75 - 125
A354884	LZ0	RPD	Saturation %	2021/09/17	0.94		%	12
A355882	PC5	Matrix Spike	Total Antimony (Sb)	2021/09/17		113	%	75 - 125
			Total Arsenic (As)	2021/09/17		103	%	75 - 125
			Total Barium (Ba)	2021/09/17		NC	%	75 - 125
			Total Beryllium (Be)	2021/09/17		114	%	75 - 125
			Total Cadmium (Cd)	2021/09/17		101	%	75 - 125
			Total Chromium (Cr)	2021/09/17		108	%	75 - 125
			Total Cobalt (Co)	2021/09/17		104	%	75 - 125
			Total Copper (Cu)	2021/09/17		104	%	75 - 125
			Total Lead (Pb)	2021/09/17		97	%	75 - 125
			Total Mercury (Hg)	2021/09/17		94	%	75 - 125
			Total Molybdenum (Mo)	2021/09/17		105	%	75 - 125
			Total Nickel (Ni)	2021/09/17		107	%	75 - 125
			Total Selenium (Se)	2021/09/17		109	%	75 - 125
			Total Silver (Ag)	2021/09/17		102	%	75 - 125
			Total Thallium (Tl)	2021/09/17		94	%	75 - 125
			Total Tin (Sn)	2021/09/17		104	%	75 - 125
			Total Uranium (U)	2021/09/17		93	%	75 - 125
			Total Vanadium (V)	2021/09/17		121	%	75 - 125
			Total Zinc (Zn)	2021/09/17		112	%	75 - 125
A355882	PC5	QC Standard	Total Antimony (Sb)	2021/09/17		119	%	15 - 182
			Total Arsenic (As)	2021/09/17		97	%	53 - 147
			Total Barium (Ba)	2021/09/17		88	%	80 - 119
			Total Cadmium (Cd)	2021/09/17		91	%	72 - 128
			Total Chromium (Cr)	2021/09/17		91	%	59 - 141

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Cobalt (Co)	2021/09/17		94	%	58 - 142
			Total Copper (Cu)	2021/09/17		100	%	83 - 117
			Total Lead (Pb)	2021/09/17		103	%	79 - 121
			Total Molybdenum (Mo)	2021/09/17		107	%	67 - 133
			Total Nickel (Ni)	2021/09/17		100	%	79 - 121
			Total Silver (Ag)	2021/09/17		84	%	47 - 153
			Total Tin (Sn)	2021/09/17		98	%	67 - 133
			Total Uranium (U)	2021/09/17		100	%	77 - 123
			Total Vanadium (V)	2021/09/17		96	%	79 - 121
			Total Zinc (Zn)	2021/09/17		101	%	79 - 121
A355882	PC5	Spiked Blank	Total Antimony (Sb)	2021/09/17		108	%	80 - 120
			Total Arsenic (As)	2021/09/17		97	%	80 - 120
			Total Barium (Ba)	2021/09/17		90	%	80 - 120
			Total Beryllium (Be)	2021/09/17		105	%	80 - 120
			Total Cadmium (Cd)	2021/09/17		94	%	80 - 120
			Total Chromium (Cr)	2021/09/17		98	%	80 - 120
			Total Cobalt (Co)	2021/09/17		98	%	80 - 120
			Total Copper (Cu)	2021/09/17		100	%	80 - 120
			Total Lead (Pb)	2021/09/17		91	%	80 - 120
			Total Mercury (Hg)	2021/09/17		92	%	80 - 120
			Total Molybdenum (Mo)	2021/09/17		97	%	80 - 120
			Total Nickel (Ni)	2021/09/17		96	%	80 - 120
			Total Selenium (Se)	2021/09/17		103	%	80 - 120
			Total Silver (Ag)	2021/09/17		95	%	80 - 120
			Total Thallium (Tl)	2021/09/17		90	%	80 - 120
			Total Tin (Sn)	2021/09/17		94	%	80 - 120
			Total Uranium (U)	2021/09/17		88	%	80 - 120
			Total Vanadium (V)	2021/09/17		98	%	80 - 120
			Total Zinc (Zn)	2021/09/17		100	%	80 - 120
A355882	PC5	Method Blank	Total Antimony (Sb)	2021/09/17	<0.50		mg/kg	
			Total Arsenic (As)	2021/09/17	<1.0		mg/kg	
			Total Barium (Ba)	2021/09/17	<1.0		mg/kg	
			Total Beryllium (Be)	2021/09/17	<0.40		mg/kg	
			Total Cadmium (Cd)	2021/09/17	<0.050		mg/kg	
			Total Chromium (Cr)	2021/09/17	<1.0		mg/kg	
			Total Cobalt (Co)	2021/09/17	<0.50		mg/kg	
			Total Copper (Cu)	2021/09/17	<1.0		mg/kg	
			Total Lead (Pb)	2021/09/17	<0.50		mg/kg	
			Total Mercury (Hg)	2021/09/17	<0.050		mg/kg	
			Total Molybdenum (Mo)	2021/09/17	<0.40		mg/kg	
			Total Nickel (Ni)	2021/09/17	<1.0		mg/kg	
			Total Selenium (Se)	2021/09/17	<0.50		mg/kg	
			Total Silver (Ag)	2021/09/17	<0.20		mg/kg	
			Total Thallium (Tl)	2021/09/17	<0.10		mg/kg	
			Total Tin (Sn)	2021/09/17	<1.0		mg/kg	
			Total Uranium (U)	2021/09/17	<0.20		mg/kg	
			Total Vanadium (V)	2021/09/17	<1.0		mg/kg	
			Total Zinc (Zn)	2021/09/17	<10		mg/kg	
A355882	PC5	RPD	Total Antimony (Sb)	2021/09/17	NC		%	30
			Total Arsenic (As)	2021/09/17	0.75		%	30
			Total Barium (Ba)	2021/09/17	1.4		%	35

Bureau Veritas Laboratories Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Beryllium (Be)	2021/09/17	NC		%	30
			Total Cadmium (Cd)	2021/09/17	5.9		%	30
			Total Chromium (Cr)	2021/09/17	2.7		%	30
			Total Cobalt (Co)	2021/09/17	1.4		%	30
			Total Copper (Cu)	2021/09/17	2.4		%	30
			Total Lead (Pb)	2021/09/17	1.2		%	35
			Total Mercury (Hg)	2021/09/17	NC		%	35
			Total Molybdenum (Mo)	2021/09/17	NC		%	35
			Total Nickel (Ni)	2021/09/17	5.7		%	30
			Total Selenium (Se)	2021/09/17	NC		%	30
			Total Silver (Ag)	2021/09/17	NC		%	35
			Total Thallium (Tl)	2021/09/17	NC		%	30
			Total Tin (Sn)	2021/09/17	NC		%	35
			Total Uranium (U)	2021/09/17	0.28		%	30
			Total Vanadium (V)	2021/09/17	1.4		%	30
			Total Zinc (Zn)	2021/09/17	0.38		%	30
A356105	BFE	Matrix Spike	Hex. Chromium (Cr 6+)	2021/09/17		91	%	75 - 125
A356105	BFE	Spiked Blank	Hex. Chromium (Cr 6+)	2021/09/17		98	%	80 - 120
A356105	BFE	Method Blank	Hex. Chromium (Cr 6+)	2021/09/17	<0.080		mg/kg	
A356105	BFE	RPD	Hex. Chromium (Cr 6+)	2021/09/17	NC		%	35
A356383	BFE	Matrix Spike [AFU727-03]	Hex. Chromium (Cr 6+)	2021/09/17		105	%	75 - 125
A356383	BFE	Spiked Blank	Hex. Chromium (Cr 6+)	2021/09/17		100	%	80 - 120
A356383	BFE	Method Blank	Hex. Chromium (Cr 6+)	2021/09/17	<0.080		mg/kg	
A356383	BFE	RPD [AFU727-03]	Hex. Chromium (Cr 6+)	2021/09/17	NC		%	35
A357683	JAB	Matrix Spike	Soluble Boron (B)	2021/09/19		96	%	75 - 125
A357683	JAB	QC Standard	Soluble Sulphate (SO4)	2021/09/19		110	%	75 - 125
A357683	JAB	Spiked Blank	Soluble Boron (B)	2021/09/19		96	%	80 - 120
A357683	JAB	Method Blank	Soluble Boron (B)	2021/09/19	<0.10		mg/L	
			Soluble Sulphate (SO4)	2021/09/19	<5.0		mg/L	
A357683	JAB	RPD	Soluble Boron (B)	2021/09/19	21		%	30
			Soluble Sulphate (SO4)	2021/09/19	9.9		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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