



SCOPE OF ACCREDITATION

**Bureau Veritas Canada (2019) Inc., formerly known as Maxxam Analytics
Maxxam Analytics Calgary
2021 - 41st Avenue, N.E.
Calgary, AB
T2E 6P2**

Accredited Laboratory No. 836
(Conforms with requirements of ISO/IEC 17025:2017)

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URL:	http://www.bvlabs.com
CLIENTS SERVED:	All interested parties Some tests are available on-site (Mobile Laboratory).
FIELDS OF TESTING:	Biological, Chemical/Physical
PROGRAM SPECIALTY AREA:	Agriculture Inputs, Food, Animal Health and Plant Protection (PSA-AFAP), Environmental
INITIAL ACCREDITATION DATE:	2016-08-30
MOST RECENT ACCREDITATION:	2019-10-15
ACCREDITATION VALID TO:	2024-08-30

Testing is performed at the following locations:

Air testing: #1 2080-39th Avenue N.E. Calgary, AB. T2E 6P7
Inorganic chemistry and water microbiology: 4000-19 Street N.E Calgary, AB T2E 6P8
Organic chemistry: 2021 – 41 Avenue NE, Calgary, Alberta T2E 6P2
Food testing: #112, 3442-118 Ave S.E. Calgary, AB T2Z 3X1
Mobile Laboratory, for specific tests where identified below.



ANIMAL AND PLANTS (AGRICULTURE)

Foods and Edible Products: (Human and Animal Consumption)

Assurance GDS® MPX Top Assay BioControl Assurance GDS® MPX Top 6 STEC 6 STEC Assay	
Assurance GDS® MPX Top BioControl Assurance GDS® MPX Top 7 STEC 7 STEC Assay	
MFHPB-10	Isolation of <i>Escherichia coli</i> O157:H7/NM from foods and environmental surface samples
MFHPB-18	Determination of Aerobic Colony Counts in Foods
MFHPB-20	Isolation and Identification of <i>Salmonella</i> from Food and Environmental Samples
MFHPB-22	Enumeration of Yeast and Moulds in Foods
MFHPB-30	Isolation of <i>Listeria monocytogenes</i> and <i>Listeria spp.</i> from foods and environmental samples
MFHPB-33	Enumeration of Total Aerobic Bacteria in Food Products and Food Ingredients Using 3M™ Petrifilm™ Aerobic Count Plates
MFHPB-34	Enumeration of <i>Escherichia coli</i> and Coliforms in Food Products and Food Ingredients Using 3M™ Petrifilm™ <i>E. coli</i> Count Plates
MFLP-09	Enumeration of <i>Enterobacteriaceae</i> species in Food and Environmental Samples Using 3M™ Petrifilm™ <i>Enterobacteriaceae</i> Count Plates
MFLP-16	Detection of <i>Escherichia coli</i> O157:H7 in foods - Assurance GDS® for <i>E. coli</i> O157:H7 Tq Gene Detection System
MFLP-21	Enumeration of <i>Staphylococcus aureus</i> in Foods and Environmental Samples Using 3MT Petrifilm™ <i>Staph.</i> Express Count (STX) Plates
MFLP-28	The Qualicon Bax® System Method for the Detection of <i>Listeria monocytogenes</i> in a Variety of Food.
MFLP-29	The BAX® System Method for the detection of <i>Salmonella</i> in foods and environmental surface samples.
MFLP-30	Detection of <i>Escherichia coli</i> O157:H7 in Select Foods using the BAX® System <i>E. coli</i> O157:H7 MP.
MFLP-36	Detection of <i>Salmonella</i> in Foods and Environmental Surface Samples-Assurance GDS® for <i>Salmonella</i> Tq Genetic Detection System
MFLP-54	Detection of <i>Listeria monocytogenes</i> from selected foods using iQ-Check™ <i>Listeria monocytogenes</i> Real-Time PCR Test Kit
MFLP-74	Enumeration of <i>Listeria monocytogenes</i> in foods
MFLP-79	Detection of <i>Listeria spp.</i> in Environmental Surface Samples using the BAX® System Real-Time PCR Assay for <i>Listeria</i> genus
MLG4	Isolation and Identification of <i>Salmonella</i> from Meat, Poultry, Pasteurized Egg and Siluriformes (fish) Products and Carcass and environmental sponges



MLG41

Isolation and Identification of *Campylobacter jejuni/coli/lari* from Poultry Rinse, Sponge and Raw Product Samples

ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Environmental

(Soil, Solid, Waste)

AB SOP-00045	Specific Gravity [Modified from SM 2710 F, MSSMA 2.25, and Petroleum and Natural Gas Industries- Field Testing of Drilling Fluids] [Also includes Water - Inorganic, Modified from SM 2710F-Gravimetric Specific Gravity
AB SOP-00047	Free Liquid (Paint Filter Test) [Modified from EPA 9095 B] Volumetric Free Liquid in Waste Samples
CAL SOP-00028	Flammability Test of Readily Combustible Solids [Modified from Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria, Section 33] Visual Flammability

(Water)

AB SOP-00011	Silica (Reactive) by Konelab - Molybdate/ANSA Reduction Method [Modified from EPA 370.1] Colorimetric Reactive Silica
AB SOP-00016	Chemical Oxygen Demand (Total and Dissolved) [Modified from SM 5220 [D] Colorimetric COD
AB SOP-00017	Biochemical Oxygen Demand [Modified from SM 5210 B] D.O. Meter BOD (5 day) CBOD (5 day)
AB SOP-00018	Sulfate by Konelab - Automated Turbidimetry Method [Modified from SM 4500-SO4 E] Turbidimetric Sulfate



AB SOP-00024	Total Phosphorus by Konelab - Ascorbic Acid Reduction Method [Modified from SM 4500-P, A, B, F] Colorimetric Inorganic phosphorus Total Phosphorus
AB SOP-00032	The Determination of Residual Chlorine in Waters [Modified from SM 4500 C1G] Colorimetric Free Chlorine Total Chlorine
AB SOP-00041	Ferrous and Ferric Iron in Water-Colorimetric Determination [Modified from SM 3500-Fe A, B] Colorimetric Ferrous Iron
AB SOP-00058	Dissolved Oxygen- Modified Winkler Method [Modified from SM 4500-O C] Titrimetric Dissolved Oxygen
AB SOP-00060	Naphthenic Acids in water by FTIR [Modified from EPA 3510C R3/FTIR] IR Naphthenic Acids
AB SOP-00061	Total Suspended Solids, Total Fixed Solids, Total Volatile Solids [Modified from SM 2540 D, E] Gravimetric Total Suspended Solids Total Suspended Solids Fixed Total Suspended Solids Volatile
AB SOP-00065	Total Dissolved Solids [Modified from SM 2540 C] Gravimetric Total Dissolved Solids
AB SOP-00070	Extraction and Analysis of Naphthenic Acids in Water (DCM Extraction) [Modified from Syncrude 1995 m] IR DCM Extraction Naphthenic Acids
AB SOP-00080	Sulphide, Low level [Modified from SM 4500-S2D, A, F] Colorimetric Sulphide
CAL SOP-00007	Mercury in Water Samples by Cold Vapour Atomic Fluorescence [Modified from EPA 1631] Cold Vapour AF Mercury



CAL SOP-00040	Bromate, Chlorate, Chlorite by IC – Conductivity detection [Modified from SM 4110 D] Ion Chromatography Bromate Chlorate Chlorite
CAL SOP-00049	Colour by Konelab [Modified from SM 2120C] Spectrophotometric Apparent colour True Color
CAL SOP-00055	Volatile Organic Acids [Modified from Dionex ICE-AS6 DOC NO 34961] Ion Chromatography Glycolic Acid Lactic Acid
CAL SOP-00057	Iodide/Thiocyanate/Thiosulfate [Modified from DIONEX, DOC NO 034035] Ion Chromatography Iodide Thiocyanate Thiosulfate
CAL SOP-00063	Volatile Organic Acids [Modified from DIONEX ICE-AS1 DOC NO 031181] - Waters Ion Chromatography Acetic Acid Butyric Acid Formic Acid Propionic Acid
CAL SOP-00065	Oxalic Acid by Ion Chromatography - Conductivity Detection [Modified from Standard Methods for Examination of Water and Wastewater, Method 4110B] Ion Chromatography Oxalic Acid
CAL SOP-00071	Sulphite by IC [Modified from SM 4110 B] Ion Chromatography - Conductivity Detector Sulfite
CAL SOP-00074	Total Solids [Modified from SM 2540 B, E] Gravimetric Total Solids Total Solids Fixed Total Solids Volatile



CAL SOP-00076	Total Inorganic Carbon and Dissolved Inorganic Carbon – Auto IR analysis [Modified from SM 5310 A, C] Auto Infrared Inorganic Carbon
AB SOP-00087	Organic Carbon by Technicon - Persulfate UV Oxidation [Modified from Methods Manual for Chemical Analysis of Water and Wastes, Method Code 119] Colorimetric Organic Carbon
CAL SOP-00081	Turbidity – Nephelometric Method [Modified from SM 2130 B] Nephelometric Turbidity
CAL SOP-00099	Extraction and analysis of Resin and Fatty Acids in water by GCMS [Modified from AE 129.0 and EPA 8270E] GC/MS 12,14-Dichlorodehydroabietic Acid 12-Chlorodehydroabietic Acid 14-Chlorodehydroabietic Acid 9,10-Dichlorostearic Acid (C18) Abietic Acid Decanoic Acid C10 Dehydroabietic Acid Docosanoic Acid C22 Dodecanoic Acid C12 Eicosanoic Acid C20 Hexadecanoic Acid C16 Isopimaric Acid Linoleic Acid C18:2 Linoleic Acid C18:3 Neoabietic Acid Octadecanoic Acid C18 Oleic Acid C18:1 Palustric Acid Pimaric Acid Sandaracopimaric Acid Tetradecanoic Acid (C14) Undecanoic Acid (C11) Total of Resin Acids Total of Fatty Acids

(Water and Soil (Toxicology))



AB SOP-00083 15 min. Microtox BioAssay using *Vibrio fischeri* [EPS 1/RM/24]
BIOLUMINESCENCE
Microtox IC50 (15 min)

Air

AIR SOP-00009 Sorbent traps for the determination of Mercury Emissions (Field)
[Modified from: Method 30B: Determination of total vapor phase
mercury emissions from Coal-Fired Combustion Sources Using
Carbon Sorbent Traps. US EPA Code of Regulations]
Spectrometer - Atomic Absorption Detector
Mercury (Hg)

AIR SOP-00110 Anions-Water
[Modified from Methods Manual for Chemical Analysis of
Atmospheric Pollutants, method 52121]
Ion Chromatography - Conductivity Detector
Chloride
Fluoride
Nitrate
Sulfate

AIR SOP-00111 Ammonia – Water
[Modified from Methods Manual for Chemical Analysis of
Atmospheric Pollutants, method 52626] Ion Chromatography -
Conductivity Detector

AIR SOP-00112 Ammonia
Fixed Gases - Air
[Modified from Method 3, Alberta Stack Sampling Code, 1995,
Publication Number: REF.89 and EPA 3C
GC/TCD
CO
CO₂
N₂
O₂

AIR SOP-00113 Formaldehyde – Water
[Modified from Methods Manual for Chemical Analysis of
Atmospheric Pollutants, method 12525] Colorimetric
Formaldehyde

AIR SOP-00114 Hydrocarbons - Air
[Modified from AENV18]
GC/FID
Total Hydrocarbons as Methane



AIR SOP-00115	Total Particulates - Air Filter [Modified from method 5, Determination of Particulate Emissions from Stationary Sources, Alberta Stack Sampling Code, 1995, Publication Number: REF.89] Gravimetric Particulates
AIR SOP-00116	Total/Trace Reduced Sulfur - Air (Field) [Modified from AENV.TRS.P&P-1 and AENV.TRS.SGP-1] GC/PID Carbon disulfide Carbonyl Sulfide Dimethyl disulfide Dimethyl sulfide Hydrogen Sulphide Methyl mercaptan
AIR SOP-00122	Chlorine and Chlorine Dioxide – Air (Field) [Modified from Alberta Environment Stack Code, 1995, Publication Number REF 89] Iodometric Determination Chlorine Chlorine Dioxide

Soil/Solid

AB SOP-00002	Moisture Content in Soil [Modified from CCME Petroleum Hydrocarbons in Soil - Tier 1 Method Section 13] Gravimetric % Moisture
AB SOP-00003	Analysis of PAH in Water, Soil, Oil and Leachates by GC/MS [Modified from EPA 8270E,, EPA 3540C, EPA 8270E] - Soils and water 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Acridine Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b, j) fluoranthene Benzo (g,h,i) perylene Benzo (k) fluoranthene Benzo(c)phenanthrene



	Benzo(e)pyrene
	Chrysene
	Dibenzo (a,h) anthracene
	Fluoranthene
	Fluorene
	Indeno (1,2,3 - cd) pyrene
	Naphthalene
	Perylene
	Phenanthrene
	Pyrene
	Quinoline
AB SOP-00004	Determination of Electrolytic Conductivity by Manual Meter [Modified from SM 2510B - Soils and waters Conductivity Meter (Manual) Conductivity
AB SOP-00005	Alkalinity Conductivity Fluoride and pH by PC-Titrate [Modified from SM 2510 B, SM 4500 H+B, SM 2320 B, SM 4500- F C] - Soil & Waters PC Titrate Conductivity (25 °C) Alkalinity Fluoride pH Acidity
AB SOP-00006	pH by Manual Meter [Modified from SM 4500-H+ B] Soils and waters pH Meter pH
AB SOP-00007	Ammonia-Nitrogen by Konelab - Phenate colorimetric method [Modified from SM4500-NH3 A&G]- Soils and water [Modified from SM4500-NH3 A&G]- Waters Ammonia Ammonia – Extraction Colorimetric
AB SOP-00008	TKN by Konelab [Modified from EPA 351.1, EPA 351.2] - Soil and Waters Colorimetric Total Kjeldahl Nitrogen
AB SOP-00012	Total Organic Carbon and Organic Matter in Soil [Modified from Methods Manual for Soil and Plant Analysis, Pages 27-30] Reflux – Titrimetric Organic Matter – Calculation Total Organic Carbon



AB SOP-00019	Calcium Carbonate Equivalence by pH [Modified from SSMA 20.2] pH Meter Calcium Carbonate Equivalence (CCE)
AB SOP-00020	Chloride by Konelab - Automated Ferric Thiocyanate Method [Modified from SM 4500CI-E] - Soils and waters Colorimetric Chloride
AB SOP-00022	Particle Size Distribution by Sieve Analysis [Modified from ASTM D6913] Gravimetric/SIEVE Grain size Particle size by sieve (Special)
AB SOP-00023	Nitrite and Nitrate by Ion Chromatography [Modified from SM 4110 B] – Soil and Waters Ion Chromatography Nitrate Nitrite
AB SOP-00025	Ortho-phosphate by Konelab - Ascorbic Acid Reduction Method [Modified from SM 4500-P , A and F] - Waters and soils Colorimetric Auto Color Ortho-phosphate
AB SOP-00026	Chloride, Sulphate and Bromide by Ion Chromatography [Modified from SM 4110B] - Soils and waters Ion Chromatography Chloride Sulfate
AB SOP-00030	PSA by Hydrometer - Texture (Sand, Silt, Clay and gravel) Analysis [Modified from SSMA 55.3] Hydrometer % clay % gravel % sand % silt
AB SOP-00033	Preparation of Saturation and Water-Soil Ratio Samples [Modified from SSMA Method 15.2] Gravimetric % Saturation



AB SOP-00039	Extraction and Analysis of BTEX/F1 and select Volatiles by HS/GC/MS/FID Water, Soil and Oil [BTEX: Modified from EPA 8260D, GC/MS - HEADSPACE] - Soils and Waters [F1/PHC: Modified from CCME Petroleum Hydrocarbons - Tier 1 Method and EPA5021A] - Soils and Waters [BTEX TCLP: EPA 1311] GC/MS - HEADSPACE 1,2,4-Trimethyl Benzene Benzene C5-C10 Ethylbenzene F1: C6-C10 Hexane m/p-xylene Methyl tert-butyl ether (MTBE) o-xylene Styrene Toluene
AB SOP-00040	Analysis of Extractable Hydrocarbons in Water and Soils by GCFID C6-C50 Hydrocarbons F2(C10-C16 Hydrocarbons) F3(C16-C34 Hydrocarbons) F3A(C16-C22 Hydrocarbons) F3B(C22-C50 Hydrocarbons) F4(C34-C50 Hydrocarbons) Reached Baseline at C50 F4G-SG (Heavy Hydrocarbons-Grav.) Total Extractables C10 to C30 Total Extractables C10 to C22 Total Extractables C23 to C60 F4 HTG(>C34 – High Temp GC) Total Petroleum Hydrocarbon Visible Sheen
AB SOP-00042	Metals on Liquids and Solids by ICPOES [Modified EPA 6010 D-Soils and Waters ICP/OES Aluminum Barium Boron Calcium Chromium Iron Lithium



AB SOP-00043

Magnesium
Manganese
Phosphorus
Potassium
Silicon
Sodium
Strontium
Sulfur
Thorium
Metals Analysis on Soils and Waters Using ICPMS
[Modified from EPA 6020 B] - Soils and Waters
[TCLP: EPA 1311]
ICP/MS
Aluminum
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Lithium
Magnesium
Manganese
Mercury
Molybdenum
Nickel
Palladium
Potassium
Selenium
Silicon
Silver
Sodium
Strontium
Sulphur
Tellurium



	Thallium
	Tin
	Titanium
	Tungsten
	Uranium
	Vanadium
	Zinc
	Zirconium
AB SOP-00049	Particle Size Distribution by Hydrometer [Modified from ASTM D422-63] Hydrometer Particle Size Distribution
AB SOP-00050	Dry Bulk Density and Wet Bulk Density [Modified from McKeague and MSSMA Section 2.21] Gravimetric Bulk Density
AB SOP-00052	Bromide by Ion Chromatography - UV Detection [Modified from SM 4110 B] – Soils and waters Ion Chromatography/UV Detector Bromide
AB SOP-00056	Preparation and Analysis VOC -Water and Soil by HS/GC/MS/FID [Modified from EPA8260D and EPA5021A]–Soils and Waters GC/MS/FID [Headspace] 1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-dichloroethylene 1,2 dibromoethane 1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene 1,2-dichlorobenzene 1,2-dichloroethane 1,2-Dichloropropane 1,3,5 Trichlorobenzene 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene 1,4-dichlorobenzene Benzene Bromodichloromethane Bromoform



	Bromomethane
	Carbon Tetrachloride
	Chlorobenzene
	Chlorodibromomethane
	Chloroethane
	Chloroform
	Chloromethane
	cis-1,2-Dichloroethylene
	cis-1,3-Dichloropropene
	Dichloromethane
	Ethylbenzene
	m/p-xylene
	Methyl methacrylate
	Methyl t-butyl ether
	o-xylene
	Styrene
	Tetrachloroethylene
	Toluene
	trans-1,2-Dichloroethylene
	trans-1,3-Dichloropropene
	Trichloroethylene
	Trichlorofluoromethane
	Vinyl Chloride
AB SOP-00062	Flashpoint by Small Scale Closed Cup Tester (SetaFlash) [Modified from ASTM D3828] Seta Flash Closed Cup Flashpoint
AB SOP-00063	Hexavalent Chromium by Konelab [Modified from SM 3500-Cr B]- Soil and water Colorimetric
AB SOP-00071	Hexavalent Chromium Electrolytic Conductivity in Water and Soil by Manual Meter - Mobile Lab [Modified from SM 2510 B] – Waters and soil Conductivity Meter Conductivity (25 °C)
AB SOP-00073	Moisture in Solid Samples-Mobile Lab [Modified from CCME PHC-CWS] Gravimetric % Moisture
AB SOP-00074	Determination of pH in Water and Soil by Manual Meter - Mobile Laboratory) [Modified from SM 4500H+ B] – Soils and waters pH Meter



	pH
AB SOP-00075	Preparation of Saturation Samples - Mobile Lab [Modified from SSMA Method 15.2] Gravimetric % Saturation
AB SOP-00076	BTEX/F1 – Soil and Water (Mobile lab) [BTEX: Modified from EPA 8021B] – GC/PID - Headspace [F1: CCME Hydrocarbons Tier 1, BCMOE Section D, BCMELP] - GC/FID - Headspace Benzene C6-O-Xylene Ethylbenzene F1:C6-C10 m/p-xylene o-xylene O-Xylene-C10 Styrene Toluene Total C6-C10
AB SOP-00077	Extractable Hydrocarbon – Soil and Water (Mobile lab) [Modified from CCME hydrocarbons Analysis tier 1, BCMOE Section D, BCMELP]-Soils and waters GC/FID - Direct Injection EPH (C10-C19) EPH (C19-C32) F2: C10-C16 F3: C16-C34 F4: C34-C50 TEH (C10-C30)
AB SOP-00078	Chloride Analysis by Hach DR2800- Mobile Laboratory [Modified from SM 4500-Cl E] - Soils and waters Colorimetric Chloride
AB SOP-00082	Nitrate and Nitrite by Technicon [Modified from SM 4500 NO ₃ -] Soil and water Colorimetric Nitrate Nitrite
AB SOP-00067	Elemental Sulfur [Modified from Canadian Journal of Soil Science, 65. Pages 811- 813, 1985] Colour-Extraction Elemental Sulphur



CAL SOP-00032	Spontaneous combustion (Self Heating) [Modified from Recommendations on the Transport of Dangerous Goods: Manual of Tests and Criteria. Sixth Revised. Edition. United Nations.2015sections 33.3.1.3 and 33.3.1.6] Combustion Spontaneous Combustion
CAL SOP-00052	Diisopropanolamine [Modified from DIONEX PAX500 DOC #034217] - Water and soil IC -Extraction
CAL SOP-00054	Diisopropanolamine (DIPA) Amines [Modified from DIONEX PAX500 DOC #034217] - Water and soil IC – Extraction Diethanolamine (DEA) Methyldiethanolamine (MDEA) Monoethanolamine (MEA)
AB SOP-00088	Phenolics Phenolics Automated 4-AAP Colorimetry [Modified from SSMA Chapter 40]-Soil [Modified from EPA 9066]- Water Colorimetric – Distillation Extraction Phenol
CAL SOP-00093	Preparation and Analysis of Glycols and Sulfolane in Water, Soil and oil by GC-FID [Modified from EPA 8015D] – Soils, waters and oil GC/FID – Extraction Diethylene Glycol Ethylene Glycol Propylene Glycol Sulfolane Tetraethylene Glycol Triethylene Glycol
CAL SOP-00094	Herbicides [Modified from EPA 8151A and EPA 8270E] – Soils and Waters GC/MS – Extraction 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) 2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP) 2,4-Dichlorophenoxyacetic acid (2,4-D) 2,4-Dichlorophenoxybutyric acid (2,4-DB) 3,5-Dichlorobenzoic Acid Bentazon Bromoxynil Chloramben Dicamba Dichlorprop



	Diclofop-methyl
	Dinoseb (DNBP)
	MCPA
	MCPP
	Pentachlorophenol
	Picloram
CAL SOP-00096	Extraction and Analysis of OG and TPH in Water and Soil by FTIR [Modified from SM 23 5520 C m] - Soils and waters IR – Extraction Oil and Grease Total Petroleum Hydrocarbons
CAL SOP-00104	Preparation and Analysis of Extended VOC in Water and Soils by HS/GC/MS [Modified from EPA 8260D and EPA 5021A] [VOC TCLP: EPA 1311]- Soils and waters GC/MS – HS/Extraction 1,2,3-trichloropropane 1,1-dichloropropene 1,2-dibromo-3-chloropropane 1,3-dichloropropane 2,2-dichloropropane 2-butanone (MEK) 2-chlorotoluene 2-hexanone 2-nitropropane 4-chlorotoluene 4-methyl-2-pentanone (MIBK) Acetone Acetonitrile Acrolein Acrylonitrile Bromobenzene Bromochloromethane Carbon disulphide Cyclohexane Cyclohexanone Dibromomethane Dichlorodifluoromethane Dicyclopentadiene Ethyl acetate Ethyl ether Ethyl methacrylate



	Hexachlorobutadiene
	Hexane
	Iodomethane
	Isopropylbenzene
	Naphthalene
	n-Butylbenzene
	Nitrobenzene
	n-Propylbenzene
	p-Isopropyltoluene
	sec-Butylbenzene
	tert-Butylbenzene
CAL SOP-00149	Polychlorinated Biphenyls (PCB) [Modified from EPA 8082A] -Soils, waters and oil GC/ECD - Extraction
	Aroclor 1016
	Aroclor 1221
	Aroclor 1232
	Aroclor 1242
	Aroclor 1248
	Aroclor 1254
	Aroclor 1260
	Aroclor 1262
	Aroclor 1268
	Total PCB
CAL SOP-00164	Semi Volatile Phenols [Modified from 8270E] - Soils and waters GC/MS - Extraction
	2,3,4,5-tetrachlorophenol
	2,3,4,6-tetrachlorophenol
	2,3,4-trichlorophenol
	2,3,5,6-tetrachlorophenol
	2,3,5-trichlorophenol
	2,3,6-trichlorophenol
	2,3-dichlorophenol
	2,4,5-trichlorophenol
	2,4,6-trichlorophenol
	2,4-dichlorophenol
	2,4-dimethylphenol
	2,4-dinitrophenol
	2,5-dichlorophenol
	2,6- dimethylphenol
	2,6-dichlorophenol



	2-chlorophenol
	2-methylphenol
	2-nitrophenol
	3&4-chlorophenol
	3&4-methylphenol
	3,4,5-trichlorophenol
	3,4-dichlorophenol
	3,4-dimethylphenol
	3,5-dichlorophenol
	4,6-dinitro-2-methylphenol
	4-chloro-3-methylphenol
	4-nitrophenol
	Pentachlorophenol
	Phenol
CAL SOP-00184	Aliphatic and Aromatic fractionation and analysis for >C10-C50 PHC [Modified from Atl RBCA m] – Soils and Waters GC/FID >C10-C12 Aliphatic >C10-C12 Aromatic >C12-C16 Aliphatic >C12-C16 Aromatic >C16-C21 Aliphatic >C16-C21 Aromatic >C21-C34 Aliphatic >C21-C34 Aromatic >C34 Aliphatic (Up to C50) >C34 Aromatic (Up to C50)
CAL SOP-00239	BC Extractable Petroleum Hydrocarbons in Water and Soil by GC/FID [Modified from BCMOE EPH S 12/16]- soils and water GC/FID EPH: C10-C19 EPH: C19-C32
CAL SOP-00240	Fractionation for C6-C10 and BC method VPH by Headspace GC/FID/MS [Modified from volatile HC in soils by GC/FID and EPA method 5021A, BC MELP VH; Atl. RBCA] - Soils and waters GC/FID Benzene C6-C8 C6-o-Xylene C8-C10 Aromatic



	Ethylbenzene
	m&p-xylene
	Methyl-tert-butylether
	o-xylene
	o-Xylene-C10
	Styrene
	Toluene
CAL SOP-00243/CAL SOP-00263	Carbon, Nitrogen and Sulfur [Modified from LECO Corporation Form No. 203-821-170,203-821-165 and Vario EI Cube No AN-A-030609, Total Organic Carbon (TOC/FOC) in soil/sediment by combustion (PBM)] - Soils IR Combustion
	Carbon
	Nitrogen
	Organic Carbon
	Sulphur
CAL SOP-00250	Preparation and analysis of Alkylated PAH in soils and water [Modified from SM 8270 E and ESTD-OR-20]- Soils and waters GC/MS – Extraction
	1-Methylnaphthalene
	2-Methylnaphthalene
	Acenaphthene
	Acenaphthylene
	Acridine
	Anthracene
	Benzo (a) anthracene
	Benzo (a) pyrene
	Benzo (g,h,i) perylene
	Benzo (k) fluoranthene
	Benzo(b&j)fluoranthene
	Benzo(c)phenanthrene
	Benzo(e)pyrene
	Biphenyl
	C1-Acenaphthene
	C1-Benzo(bjk)fluoranthene / Benzo[a]pyrene
	C1-Biphenyl
	C1-Benzo(a) anthracene/ Chrysene
	C1-Dibenzothiopene
	C1-Fluorene
	C1-Naphthalene
	C1-Phenanthrene / anthracene
	C1- Fluoranthene / pyrene
	C2-Benzo(bjk)fluoranthene / Benzo[a]pyrene



	C2-Biphenyl
	C2-Benzo(a)anthracene / chrysene
	C2-Dibenzothiophene
	C2-Fluorene
	C2-Naphthalene
	C2-Phenanthrene/ anthracene
	C2- Fluoranthene / Pyrene
	C3Benzo(a)anthracene / Chrysene
	C3-Dibenzothiophene
	C3-Fluorene
	C3-Naphthalene
	C3-Phenanthrene/ anthracene
	C3- Fluoranthene / Pyrene
	C4- Benzo(a)anthracene / Chrysene
	C4-Dibenzothiophene
	C4-Naphthalene
	C4-Phenanthrene/ anthracene
	C4- Fluoranthene / Pyrene
	Chrysene
	Dibenzo (a,h) anthracene
	Dibenzothiophene
	Fluoranthene
	Fluorene
	Indeno (1,2,3 - cd) pyrene
	Indeno (1,2,3-cd) fluoranthene
	Naphthalene
	Perylene
	Phenanthrene
	Pyrene
	Quinoline
	Retene
CAL SOP-00251	Extraction and analysis of low level Sulfolane in water and soil by GCMS [Modified from EPA 8270E] GC/MSD - Extraction Sulfolane
CAL SOP-00258	Liquid limit, plastic limit and plasticity index of soil [Modified from ASTM D4318] ATTERBERG LIMITS TEST Liquid limit Plastic limit Plasticity index



CAL SOP-00264	Preparation and Analysis of Alcohol/Solvents (Water, soil, oil) by GCFID [Modified from EPA 8015D] –Soils and waters GC/FID – Extraction 2-Methylphenol 3-Methylphenol 4-Methylphenol Acetone (2-Propanone) Ethanol Isobutanol Isopropanol Methanol n-butanol Nitrobenzene n-propanol Pyridine
CAL SOP-00265	ICPMS Analysis for Low Level Metals [Modified from EPA SW846 Method 6020B]-Soils and waters ICPMS Aluminum Antimony Arsenic Barium Beryllium Bismuth Boron Cadmium Calcium Cesium Chromium Cobalt Copper Iron Lanthanum Lead Lithium Magnesium Manganese Mercury Molybdenum Nickel Phosphorus



Potassium
Rubidium
Selenium
Silicon
Silver
Sodium
Strontium
Sulphur
Tellurium
Thallium
Thorium
Tin
Titanium
Tungsten
Uranium
Vanadium
Zinc
Zirconium

CAL SOP-00266

Free Cyanide
[Modified from EPA Method 9016]-Water
Colorimetric- Distillation
Free cyanide

CAL SOP-00270

Determination of cyanide by automated colourimetry
[Modified from SM 23 4500-CN-, O]-Soil and Water
Colorimetric- Distillation
Cyanide SAD
Cyanide WAD

Water (Microbiology)

CAL SOP-00012

Heterotrophic Plate Count (HPC)
[Modified from SM 9215 A, B]
Pour Plate

AB SOP-00089

Heterotrophic Plate Count (HPC)
Total and Fecal Coliforms by defined substrate technique.
[Modified from SM 9223 A, B]
Most Probable Number (Colilert)
Escherichia coli (*E. coli*)
Total Coliforms
Fecal (Thermotolerant) Coliforms



AB SOP-00085

Determination of Iron-Related and Sulfate Reducing Bacteria
using the BART Method

[Modified from Dbi Env Tech Verification of the Irb Bart Tester for
the Detection and Evaluation of Iron Bacteria in Water and Dbi
Enviro Tech Verification of the Srb Bart Tester for the Detection
and Verification of Sulphate Reducing Bacteria in Water
BART™

Iron Related Bacteria (IRB)

Sulfate Reducing Bacteria (SRB)

Notes:

ISO/IEC 17025: General Requirements for the Competence of Testing and Calibration
Laboratories

MFHPB: Microbiological Foods Health Protection Branch, Health Canada

MFLP: Microbiological Food Laboratory Procedure, Health Canada

MLG: Food Safety and Inspection Services Microbiology Laboratory Guidebook, U.S.
Department of Agriculture

AB SOP: Internal test method (Alberta)

CAL SOP: Internal test method (Calgary)

CCME: Canadian Council of Ministers of the Environment

Elias Rafoul, Vice-President
Accreditation Services
Date: 2019-10-15

Number of Scope Listings: 128
SCC 1003-15/1043
Partner: SCC