



# CALA

Canadian Association for  
Laboratory Accreditation Inc.

## CALA Directory of Laboratories

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**Membership Number:** 2472  
**Laboratory Name:** SRC Environmental Analytical Laboratories  
**Parent Institution:** Saskatchewan Research Council  
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**Standard:** Conforms with requirements of ISO/IEC 17025  
**Clients Served:** All Interested Parties  
**Revised On:** November 13, 2019  
**Valid To:** August 29, 2020

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### Scope of Accreditation

#### Air (Inorganic)

Metals - Air [Filter] (171)

CHM-522, PRP-034; modified from EPA 29

ICP/MS - DIGESTION

Aluminum

Antimony ((Parameter suspended on 11/13/2019))

Arsenic

Barium

Beryllium

Cadmium

Chromium

Cobalt

Copper

Iron

Lead

Manganese

Molybdenum

Nickel

Selenium

Strontium

Thallium

Tin

Titanium

Uranium

Vanadium

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Zinc

**Air (Organic)**

Volatile Organic Compounds (VOC) - Air (169)

GLC-113; modified from EPA TO-15

GC/MS - CRYOGENIC PRECONCENTRATION

1,1-Dichloroethane  
1,1-Dichloroethene  
1,1,1-Trichloroethane  
1,1,2-Trichloro-1,2,2-Trifluoroethane (CFC113)  
1,1,2-Trichloroethane  
1,1,2,2-Tetrachloroethane  
1,2-Dibromoethane (Ethylene dibromide)  
1,2-Dichlorobenzene  
1,2-Dichloroethane  
1,2-Dichloroethylene  
1,2-Dichloropropane  
1,2,4-Trichlorobenzene  
1,2,4-Trimethylbenzene  
1,3-Butadiene  
1,3-Dichlorobenzene  
1,3-Dichloropropene (E)  
1,3-Dichloropropene (Z)  
1,3,5-Trimethylbenzene  
1,4-Dichlorobenzene  
2-Butanone (Methyl ethyl ketone, MEK)  
2-Hexanone (Methyl butyl ketone, MBK)  
2-Propanol (Isopropyl alcohol)  
2,2,4-Trimethylpentane (Isooctane)  
4-Ethyltoluene (1-Ethyl-4-methylbenzene)  
Allyl chloride (3-chloropropene)  
Benzene  
Benzyl chloride (a-Chlorotoluene)  
Bromodichloromethane  
Bromoethene (Vinyl bromide)  
Bromomethane  
Carbon disulfide  
Carbon tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroethene (Vinyl chloride)  
Chloroform  
Chloromethane (Methyl chloride)  
Cyclohexane  
Dichlorodifluoromethane  
Dichloromethane (Methylene Chloride)  
Dichlorotetrafluoroethane  
Ethyl acetate  
Ethyl chloride  
Ethylbenzene

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Hexachlorobutadiene  
Hexane  
m,p-Xylene  
Methyl isobutyl ketone (MIBK)  
Methyl tert-butyl ether (MTBE)  
o-Xylene  
Propene (Propylene)  
Styrene  
Tetrachloroethylene  
Tetrahydrofuran (THF)  
Toluene  
trans-1,2-Dichloroethylene  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl acetate

**Air (Radiochemistry)**

Gross Alpha Activity and Gross Beta Activity - Air [Wipe] (170)

RAD-110; modified from SM 7110

GAS FLOW PROPORTIONAL COUNTING

Gross Alpha

Gross Beta

**Air (Radiochemistry)**

Radon - Air (103)

RAD-119; EPA 420-R-92-004

ALPHA TRACKS

Radon

**Animal Biological Tissue (Radiochemistry)**

Thorium Isotopes - Tissue [Biological] (141)

PRP-034, RAD-106; modified from SILL & WILLIAMS, ANALYTICAL CHEM, VOL 53, NO3, 1981

ALPHA SPECTROSCOPY

Thorium-228

Thorium-230

Thorium-232

**Biological Tissue (Inorganic)**

Metals - Tissue [Biological] (081)

CHM-522, PRP-034; modified from EPA 3052 and SM 3125

ICP/MS - DIGESTION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

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Iron  
Lead  
Magnesium  
Manganese  
Mercury  
Molybdenum  
Nickel  
Phosphorus  
Potassium  
Selenium  
Silver  
Sodium  
Strontium  
Thallium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

**Biological Tissue (Radiochemistry)**

Radium - Tissue [Biological] (082)  
PRP-034, RAD-105; modified from CANMET NUTP 3E  
ALPHA SPECTROSCOPY  
Radium-226

**Biological Tissues (Radiochemistry)**

Lead-210 - Tissue [Biological] (130)  
PRP-034, RAD-101; modified from CANMET REPORT 78-22  
GAS FLOW PROPORTIONAL COUNTING  
Lead-210

**Biological Tissues (Radiochemistry)**

Polonium-210 - Tissue [Biological] (128)  
PRP-034, RAD-103; modified from ASTM D7535 and CANMET REPORT 78-22  
ALPHA SPECTROSCOPY  
Polonium-210

**Cannabis (Inorganic)**

Metals - Cannabis (176)  
CHM-522, PRP-034; modified from EPA 3052 (PREPARATION) and SM 3125 (ANALYSIS)  
ICP/MS  
Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper

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Iron  
Lead  
Magnesium  
Manganese  
Mercury  
Molybdenum  
Nickel  
Phosphorus  
Potassium  
Selenium  
Silver  
Sodium  
Strontium  
Thallium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

**Cannabis (Inorganic)**

Metals - Cannabis [Cannabis Oil] (177)

CHM-522, PRP-034; modified from EPA 3052 (PREPARATION) and SM 3125 (ANALYSIS)

ICP/MS

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Magnesium  
Manganese  
Mercury  
Molybdenum  
Nickel  
Phosphorus  
Potassium  
Selenium  
Silver  
Sodium  
Strontium  
Thallium

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Titanium  
Uranium  
Vanadium  
Zinc

**Food Oil (Inorganic)**

Metals - Food [Food Oil, Oil] (117)

CHM-522, PRP-034; modified from EPA 3052 and SM 3125  
ICP/MS - DIGESTION

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Magnesium  
Manganese  
Mercury  
Molybdenum  
Nickel  
Phosphorus  
Potassium  
Selenium  
Silver  
Sodium  
Strontium  
Thallium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

**Fuel (Inorganic)**

Anions - Fuel [Fuel Ethanol] (096)

CHM-133, CHM-134; modified from ASTM D7319  
ION CHROMATOGRAPHY

Inorganic Chloride  
Sulphate (Sulfate)

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**Fuel (Inorganic)**

Conductivity - Fuel [Fuel Ethanol] (137)

CHM-987; ASTM D1125

CONDUCTIVITY METER

Conductivity

**Fuel (Inorganic)**

Copper - Fuel [Fuel Ethanol] (102)

CHM-1000, CHM-517; modified from ASTM 1688 METHOD A

ICP/OES

Copper

**Fuel (Inorganic)**

Density - Fuel [Fuel Ethanol] (101)

GLC-292; ASTM D4052

DENSITY METER

Density

**Fuel (Inorganic)**

Iron Corrosion - Fuel [Fuel Ethanol] (138)

CHM-985; ASTM D7548

OBSERVATION

Iron Corrosion

**Fuel (Inorganic)**

pHe - Fuel [Fuel Ethanol] (095)

CHM-317; ASTM 6423

pH METER

pHe

**Fuel (Inorganic)**

Phosphorus - Fuel [Fuel Ethanol] (139)

CHM-986; modified from ASTM D3231

COLORIMETRIC

Phosphorus

**Fuel (Inorganic)**

Solvent Washed Gum Content - Fuel [Fuel Ethanol] (098)

GLC-291; modified from ASTM D381

GRAVIMETRIC

Solvent washed gum content

**Fuel (Inorganic)**

Total Acidity - Fuel [Fuel Ethanol] (094)

CHM-319; ASTM D1613

TITRATION

Total Acidity

**Fuel (Inorganic)**

Total Sulphur - Fuel [Fuel Ethanol] (097)

RAD-180; modified from ASTM D5453

UV-FLUORESCENCE

Total Sulphur (Total Sulfur)

**Fuel (Inorganic)**

Water Content - Fuel [Fuel Ethanol] (100)

GLC-EQ-220; modified from ASTM E1064

KARL FISCHER

Water Content

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**Fuel (Organic)**

Components in Fuel Ethanol - Fuel (099)  
GLC-290; modified from ASTM D5501 and CGSB3.0 NO 14.3  
GC/FID  
Aromatics  
Benzene  
Denaturants  
Ethanol  
Methanol

**Oil**

Water Content - Oil (131)  
GLC-052; modified from ASTM D95  
DEAN STARK  
Water Content

**Oil (Organic)**

Total Polychlorinated Biphenyls (PCB) - Oil (033)  
GLC-133; modified from ASTM D4059  
GC/ECD - EXTRACTION  
Total PCB

**Soil**

Mercury - Solids [Soil] (164)  
CHM-311, CHM-313; EPA 7473  
COMBUSTION AND ATOMIC ABSORPTION  
Mercury

**Soil (Inorganic)**

Mercury - Solids [Soil] (157)  
CHM-309, CHM-PRP-024; EPA 1311 and EPA 1631  
TCLP LEACH/CVAF  
Mercury

**Soil (Inorganic)**

Metals - Solids [Soil] (159)  
CHM-522, CHM-PRP-024; EPA 1311 and SM 3125  
ICP/MS - TCLP LEACH  
Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Boron  
Cadmium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Manganese  
Molybdenum  
Nickel  
Selenium  
Silver

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Strontium  
Thallium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

**Soil (Organic)**

Volatile Organic Compounds (VOC) - Solids [Soil] (167)

GLC-186; modified from EPA 5021A and EPA 8260C

GC/MS - HEADSPACE

Benzene  
Ethylbenzene  
F1: C6-C10  
m,p-Xylene  
o-Xylene  
Toluene

**Solids (Inorganic)**

Chloride - Solids [Soil] (121)

CHM-133, CHM-620; modified from SM 4110 B and SOIL SAMPLING & METHODS OF ANALYSIS  
ION CHROMATOGRAPHY

Chloride

**Solids (Inorganic)**

Metals - Solids [Sediment, Soil] (079)

CHM-504, CHM-522, PRP-034; modified from EPA 3052 and SM 3125

ICP/MS - DIGESTION

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Lead  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Phosphorus  
Potassium  
Selenium  
Silver  
Sodium  
Strontium  
Thallium

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Thorium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

**Solids (Inorganic)**

Particle Size Distribution - Solids [Sediment, Soil] (124)  
CHM-1200; modified from ASTM C1070  
LASER DIFFRACTION  
Particle Size Characterization

**Solids (Inorganic)**

Sulphate - Solids [Soil] (053)  
CHM-517, CHM-624; modified from MEND REPORT 1.20.1 and SM 3120  
ICP/OES - DIGESTION  
Sulphate (Sulfate)

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (077)  
GLC-186; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD  
GC/FID - EXTRACTION  
F2: C10-C16  
F3: C16-C34  
F4: C34-C50

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (084)  
GLC-186; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD  
GRAVIMETRIC  
F4: Gravimetric

**Solids (Organic)**

Total Polychlorinated Biphenyls (PCB) - Solids [Soil] (058)  
GLC-135; modified from EPA 3545A and EPA 8082A  
GC/ECD - EXTRACTION  
Total PCB

**Solids (Organic)**

Volatile Organic Compounds (VOC) - Solids [Soil] (174)  
GLC-PRP-024; EPA 1311 (PREPARATION)  
GC/MS - HEADSPACE - TCLP  
1,2-Dichlorobenzene  
1,2-Dichloroethane  
1,4-Dichlorobenzene  
Benzene  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
Dichloromethane  
Tetrachloroethylene  
Trichloroethylene

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**Solids (Radiochemistry)**

Lead-210 - Solids [Soil] (073)

PRP-034, RAD-101; modified from ASTM D7535 and CANMET REPORT 78-22

GAS FLOW PROPORTIONAL COUNTING

Lead-210

**Solids (Radiochemistry)**

Polonium-210 - Solids [Soil] (074)

PRP-034, RAD-103; modified from ASTM D7535 and CANMET REPORT 78-22

ALPHA SPECTROSCOPY

Polonium-210

**Solids (Radiochemistry)**

Radionuclides - Solids [Soil] (071)

RAD-300; SM 7120 B

GAMMA SPECTROSCOPY

Actinium-228

Americium-241

Bismuth-212

Bismuth-214

Cesium-134

Cesium-137

Iodine-131

Lead-210

Lead-211

Lead-212

Lead-214

Manganese-54

Potassium-40

Radium-226

Radium-228

Thallium-208

Thorium-227

Thorium-230

Thorium-234

Uranium-235

Zinc-65

**Solids (Radiochemistry)**

Radium Isotopes - Solids [Soil] (075)

RAD-105; modified from CANMET NUTP-3E

ALPHA SPECTROSCOPY

Radium-226

**Solids (Radiochemistry)**

Radium-228 - Solids [Soil] (133)

RAD-114; modified from EICHROM METHOD RAW01VBS and EICHROM METHOD SPA-01

GAS FLOW PROPORTIONAL COUNTING

Radium-228

**Solids (Radiochemistry)**

Strontium-90 - Solids (160)

PRP-034, RAD-112; modified from EPA D5811

MICROWAVE/SOLID PHASE EXTRACTION/BETA COUNTING

Strontium-90

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**Solids (Radiochemistry)**

Thorium Isotopes - Solids [Soil] (072)

PRP-034, RAD-106; modified from SILL & WILLIAMS, ANALYTICAL CHEM, VOL 53, NO3, 1981

ALPHA SPECTROSCOPY

Thorium-228

Thorium-230

Thorium-232

**Swab (Organic)**

Polychlorinated Biphenyls (PCB) - Solids [Swab] (168)

GLC-140; modified from ASTM D4059

GC/ECD - EXTRACTION

Total PCB

**Vegetation**

Lead-210 - Tissue [Vegetation] (129)

PRP-034, RAD-101; modified from ASTM D7535 and CANMET REPORT 78-22

GAS FLOW PROPORTIONAL COUNTING

Lead-210

**Vegetation**

Polonium-210 - Tissue [Vegetation] (127)

RAD-103; modified from ASTM D7535 and CANMET REPORT 78-22

ALPHA SPECTROSCOPY

Polonium-210

**Vegetation**

Radionuclides - Tissue [Vegetation] (126)

RAD-300; SM 7120 B

GAMMA SPECTROSCOPY

Actinium-228

Americium-241

Bismuth-214

Cesium-134

Cesium-137

Iodine-131

Lead-210

Lead-212

Lead-214

Manganese-54

Potassium-40

Radium-226

Ruthenium-103

Thorium-230

Thorium-234

Zinc-65

**Vegetation**

Radium Isotopes - Tissue [Vegetation] (125)

PRP-034, RAD-105; modified from CANMET NUTP-3E

ALPHA SPECTROSCOPY

Radium-226

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**Vegetation**

Thorium Isotopes - Tissue [Vegetation] (140)

PRP-034, RAD-106; modified from SILL & WILLIAMS, ANALYTICAL CHEM, VOL 53, NO3, 1981  
ALPHA SPECTROSCOPY

Thorium-228

Thorium-230

Thorium-232

**Vegetation (Inorganic)**

Metals - Tissue [Vegetation] (080)

CHM-522, PRP-034; modified from EPA 3052 and SM 3125  
ICP/MS - DIGESTION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Phosphorus

Potassium

Selenium

Silver

Sodium

Strontium

Thallium

Tin

Titanium

Uranium

Vanadium

Zinc

**Waste (Inorganic)**

Flashpoint - Waste (155)

CHM-790; modified from ASTM D93  
PENSKY-MARTENS CLOSED CUP

Flashpoint

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**Water (Inorganic)**

Alkalinity - Water (001)

CHM-211, CHM-404; modified from SM 2320

TITRIMETRIC

Alkalinity (pH 4.5)

Bicarbonate (calculation)

Carbonate (calculation)

Hydroxide (calculation)

Inorganic Carbon (calculation)

Phenolphthalein Alkalinity

**Water (Inorganic)**

Ammonia - Water (088)

CHM-123; modified from EPA 351.2

COLORIMETRIC - DISCRETE

Ammonia

**Water (Inorganic)**

Anionic Surfactants - Water (119)

CHM-312; modified from SM 5540 C

COLORIMETRIC

Methylene blue active substances (MBAS)

**Water (Inorganic)**

Anions - Water (002)

CHM-133, CHM-134; modified from SM 4110 B

ION CHROMATOGRAPHY

Chloride

Sulfate

**Water (Inorganic)**

Biochemical Oxygen Demand (BOD) - Water (011)

CHM-400; modified from SM 5210 B

D.O. METER

BOD (5 day)

CBOD (5 day)

**Water (Inorganic)**

Carbon - Water (049)

CHM-399; modified from SM 5310 C

UV/PERSULPHATE

Organic Carbon

Total Carbon (calculation)

**Water (Inorganic)**

Chemical Oxygen Demand (COD) - Water (048)

CHM-402; modified from SM 5220 D

COLORIMETRIC

COD

**Water (Inorganic)**

Chlorate and Chlorite and Bromate - Water (111)

CHM-133, CHM-134; modified from SM 4110 D

ION CHROMATOGRAPHY

Bromate

Chlorate

Chlorite

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**Water (Inorganic)**

Chloride - Water (018)  
CHM-115; modified from SM 4500-CL- E  
COLORIMETRIC  
Chloride

**Water (Inorganic)**

Chlorine and Chlorination Byproducts - Water (118)  
CHM-340; modified from SM 4500-CL G  
COLORIMETRIC  
Dichloramine  
Free Chlorine  
Monochloramine  
Total Chlorine

**Water (Inorganic)**

Colour - Water (162)  
CHM-220; SM 2120 C  
SPECTROPHOTOMETRIC  
True Colour

**Water (Inorganic)**

Conductivity - Water (003)  
CHM-211; modified from SM 2510  
CONDUCTIVITY METER  
Conductivity (25°C)

**Water (Inorganic)**

Cyanide - Water (173)  
CHM-350; ISO 14403-2  
CONTINUOUS FLOW  
Cyanide (WAD)  
Total Cyanide

**Water (Inorganic)**

Dissolved Cations - Water (020)  
CHM-501, CHM-507, CHM-508; modified from SM 3030 and SM 3120  
ICP/OES  
Calcium  
Hardness (calculation)  
Magnesium  
Potassium  
Sodium  
Sulphur (Sulfur)

**Water (Inorganic)**

Dissolved Metals - Water (008)  
CHM-501, CHM-517; modified from SM 3030 and SM 3120  
ICP/OES  
Aluminum  
Barium  
Beryllium  
Boron  
Cadmium  
Chromium  
Cobalt

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Iron  
Lead  
Manganese  
Molybdenum  
Nickel  
Silver  
Strontium  
Titanium  
Vanadium  
Zinc

**Water (Inorganic)**

Dissolved Metals - Water (076)

CHM-501, CHM-522; modified from SM 3030 and SM 3125

ICP/MS

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Cerium  
Chromium  
Cobalt  
Copper  
Dysprosium  
Erbium  
Europium  
Gadolinium  
Holmium  
Iron  
Lanthanum  
Lead  
Lithium  
Lutetium  
Manganese  
Molybdenum  
Neodymium  
Nickel  
Phosphorus  
Praseodymium  
Samarium  
Scandium  
Selenium  
Silver  
Strontium  
Terbium

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Thorium  
Thorium-230  
Thulium  
Tin  
Titanium  
Uranium  
Vanadium  
Ytterbium  
Yttrium  
Zinc

**Water (Inorganic)**

Fluoride - Water (005)  
CHM-211; SM 4500-F- C  
SELECTIVE ION ELECTRODE  
Fluoride

**Water (Inorganic)**

Mercury - Water (123)  
CHM-309; modified from EPA 1631  
COLD VAPOUR ATOMIC FLUORESCENCE - DIGESTION  
Mercury

**Water (Inorganic)**

Nitrate - Water (089)  
CHM-124; modified from EPA 353.2  
COLORIMETRIC - DISCRETE  
Nitrate plus Nitrite  
Nitrite

**Water (Inorganic)**

Nitilotriacetic Acid (NTA) - Water (085)  
CHM-320; EPA 430.1  
COLORIMETRIC  
Nitilotriacetic Acid (NTA)

**Water (Inorganic)**

Oil and Grease - Water (054)  
CHM-610; modified from EPA 1664B  
GRAVIMETRIC  
Mineral Oil and Grease  
Total Oil and Grease

**Water (Inorganic)**

pH - Water (004)  
CHM-211; modified from SM 4500-H+  
pH METER  
pH

**Water (Inorganic)**

Phenols - Water (064)  
CHM-304; modified from EPA 420.4  
COLORIMETRIC  
Total Phenolics

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**Water (Inorganic)**

Phosphate - Water (009)

CHM-116; modified from SM 4500-P F

COLOR

Inorganic Phosphate

Organic Phosphate (calculation)

Phosphate

**Water (Inorganic)**

Solids - Water (012)

CHM-203, CHM-206; modified from SM 2540 C and SM 2540 D

GRAVIMETRIC

Total Dissolved Solids

Total Solids (TS) (calculation)

Total Suspended Solids

**Water (Inorganic)**

Total Kjeldahl Nitrogen (TKN) - Water (110)

CHM-111, CHM-128, PRP-128; modified from EPA 351.2 and SM 4500-N A

COLOR - DIGESTION - SEAL

Total Kjeldahl Nitrogen

Total Nitrogen (Calculation)

**Water (Inorganic)**

Total Metals - Water (092)

CHM-501, CHM-522; modified from EPA 200.8 and SM 3125

ICP/MS - DIGESTION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Chromium

Cobalt

Copper

Iron

Lead

Lithium

Manganese

Molybdenum

Nickel

Selenium

Silver

Strontium

Thallium

Thorium-230

Titanium

Total Phosphorus

Uranium

Vanadium

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Zinc

**Water (Inorganic)**

Turbidity - Water (065)  
CHM-316; SM 2130 B  
TURBIDIMETRIC  
Turbidity

**Water (Microbiology)**

Coliforms - Water (013)  
CHM-410; modified from SM 9223  
CHROM. SUBSTRATE - COLILERT TEST KIT  
Escherichia coli  
Total Coliforms

**Water (Microbiology)**

Fecal (Thermotolerant) Coliforms - Water (120)  
CHM-407; COLILERT-18 FECAL COLIFORM PROTOCOL ADDENDUM  
CHROM. SUBSTRATE - COLILERT TEST KIT  
Fecal (Thermotolerant) Coliforms

**Water (Microbiology)**

Heterotrophic Plate Count (HPC) - Water (066)  
CHM-412; SM 9215 E  
MOST PROBABLE NUMBER (MPN) (SIMPLATE)  
Heterotrophic Plate Count (HPC)

**Water (Organic)**

Chlorophenols - Water (142)  
GLC-150; modified from EPA 3510C and EPA 8041A  
GC/MSD - EXTRACTION  
2,3,4,6-Tetrachlorophenol  
2,4-Dichlorophenol  
2,4,6-Trichlorophenol  
Pentachlorophenol

**Water (Organic)**

Formation Potential (Haloacetic Acids) - Water (107)  
GLC-122, GLC-351; modified from JOURNAL OF CHROMATOGRAPHY A, 1217 (2010) 4873-4876 and SM 5710  
B  
CHLORINE INCUBATION and LC-MS/MS  
Bromochloroacetic acid  
Dibromoacetic acid  
Dichloroacetic acid (DCAA)  
HAA-5 (calculation)  
Monobromoacetic acid  
Monochloroacetic acid (MCAA)  
Total Haloacetic acids (HAA) (calculation)  
Trichloroacetic acid

**Water (Organic)**

Formation Potential (Trihalomethanes) - Water (135)  
GLC-119, GLC-122; modified from EPA 5021A and EPA 8260C and SM 5710 B  
CHLORINE INCUBATION & GC/MS - HEADSPACE  
Bromodichloromethane  
Bromoform  
Chlorodibromomethane  
Chloroform

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Total Trihalomethanes (TTHM) (calculation)

**Water (Organic)**

Glyphosate - Water (172)

GLC-081; modified from GL SCIENCES INC. LC TECHNICAL NOTE 13

HPLC/FL-PRECOLUMN DERIVATIZATION

APMA

Glyphosate

**Water (Organic)**

Haloacetic Acids (HAA) - Water (179)

GLC-351; modified from JOURNAL OF CHROMATOGRAPHY A, 1217 (2010) 4873-4876

LC-MS/MS

Bromochloroacetic acid

Dibromoacetic acid

Dichloroacetic acid

HAA-5 (calculation)

Monobromoacetic acid

Monochloroacetic acid

Total Haloacetic acids (HAA) (calculation)

Trichloroacetic acid

**Water (Organic)**

Herbicides - Water (144)

GLC-095; modified from EPA 3510C and EPA 8151A and EPA 8270D

GC/MS - EXTRACTION

2,4-Dichlorophenoxyacetic acid

2,4-Dichlorophenoxypropionic acid (2,4-DP, Dichlorprop)

2,4,5-TP (Silvex)

2,4,5-Trichlorophenoxyacetic acid

Bromoxynil

Dicamba

Diclofop-methyl (as free acid)

MCPA (2-Methyl-4-chlorophenoxyacetic acid)

Picloram

**Water (Organic)**

Herbicides - Water (178)

GLC-370; IN-HOUSE

LC-MS/MS

2,4-Dichlorophenoxyacetic acid (2,4-D)

2,4-Dichlorophenoxypropionic acid (2,4-DP)

2,4,5-TP (Silvex)

2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)

Bromoxynil

Dicamba

Diclofop-methyl

MCPA (2-Methyl-4-chlorophenoxyacetic acid)

Picloram

**Water (Organic)**

Herbicides and Pesticides - Water (143)

GLC-129; modified from EPA 3510C and EPA 8270D

GC/MS - EXTRACTION

Atrazine

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Carbofuran  
Chlorpyrifos ethyl  
Dimethoate  
Ethalfuralin  
Malathion  
Triallate  
Trifluralin

**Water (Organic)**

Hydrocarbons - Water (036)  
GLC-180; modified from EPA 3510C and EPA 8015D  
GC/FID - EXTRACTION  
F2: C10-C16  
F3: C16-C34  
F4: C34-C50

**Water (Organic)**

Hydrocarbons - Water (166)  
GLC-119; modified from EPA 5021A and EPA 8260C  
GC/FID - HEADSPACE  
F1: C6-C10

**Water (Organic)**

Pesticides and Polychlorinated Biphenyls (PCB) - Water (146)  
GLC-131, GLC-132; modified from EPA 3510C and EPA 8081B and EPA 8082A  
GC/ECD - EXTRACTION  
A -BHC  
a - Chlordane  
Aldrin  
Dieldrin  
Endosulfan I  
Endosulfan II  
Endrin  
g - Chlordane  
Heptachlor  
Heptachlor epoxide  
Lindane (gamma-BHC)  
Mirex  
o,p' - DDT  
p,p' - DDT  
p,p' Methoxychlor  
Total PCB  
Toxaphene

**Water (Organic)**

Polycyclic Aromatic Hydrocarbons (PAH) - Water (145)  
GLC-011; modified from EPA 3510C and EPA 8270D  
GC/MS - EXTRACTION  
1-Methylnaphthalene  
2-Methylnaphthalene  
Acenaphthene  
Acenaphthylene  
Acridine  
Anthracene

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Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b,j,k)fluoranthene  
Benzo(e)pyrene  
Benzo(g,h,i)perylene  
Chrysene  
Dibenzo(a,h)anthracene  
Fluoranthene  
Fluorene  
Indeno(1,2,3 - cd)pyrene  
Naphthalene  
Perylene  
Phenanthrene  
Pyrene  
Quinoline

**Water (Organic)**

Volatile Organic Compounds (VOC) - Water (134)  
GLC-119; modified from EPA 5021A and EPA 8260C  
GC/MS - HEADSPACE  
1,1-Dichloroethane  
1,1-Dichloroethylene  
1,1,1-Trichloroethane  
1,1,1,2-Tetrachloroethane  
1,1,2-Trichloroethane  
1,1,2,2-Tetrachloroethane  
1,2-Dichlorobenzene  
1,2-Dichloroethane  
1,4-Dichlorobenzene  
Benzene  
Bromodichloromethane  
Bromoform  
Carbon tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroform  
Dichloromethane  
Ethylbenzene  
m,p-Xylene  
Methyl t-butyl ether  
o-Xylene  
Styrene  
Tetrachloroethylene  
Toluene  
Total Trihalomethanes (TTHM) (calculation)  
Total Xylenes (calculation)  
Trichloroethylene  
Vinyl chloride

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**Water (Radiochemistry)**

Gross Alpha Activity and Gross Beta Activity - Water (031)

RAD-110; modified from SM 7110 B

GAS-FLOW PROPORTIONAL COUNTING

Gross Alpha Activity

Gross Beta Activity

**Water (Radiochemistry)**

Lead-210 - Water (038)

RAD-101; modified from CANMET REPORT 78-22

GAS FLOW PROPORTIONAL COUNTING

Lead-210

**Water (Radiochemistry)**

Polonium-210 - Water (039)

RAD-103; modified from ASTM D7535 and CANMET REPORT 78-22

ALPHA SPECTROSCOPY

Polonium-210

**Water (Radiochemistry)**

Radionuclides - Water (070)

RAD-300; SM 7120 B

GAMMA SPECTROSCOPY

Actinium-228

Americium-241

Bismuth-212

Bismuth-214

Cesium-134

Cesium-137

Cobalt-60

Iodine-131

Lead-210

Lead-211

Lead-212

Lead-214

Manganese-54

Potassium-40

Radium-226

Radium-228

Thallium-208

Thorium-227

Thorium-230

Thorium-234

Uranium-235

Zinc-65

**Water (Radiochemistry)**

Radium-226 - Water (041)

RAD-105; modified from CANMET NUTP-3E

ALPHA SPECTROSCOPY

Radium-226

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**Water (Radiochemistry)**

Radium-228 - Water (132)

RAD-114; modified from EICHROM METHOD RAW01VBS and EICHROM METHOD SPA-01  
GAS FLOW PROPORTIONAL COUNTING

Radium-228

**Water (Radiochemistry)**

Strontium-90 - Water (161)

RAD-112; modified from ASTM D5811

SOLID PHASE EXTRACTION/BETA COUNTING

Strontium-90

**Water (Radiochemistry)**

Thorium Isotopes - Water (042)

RAD-106; modified from SILL & WILLIAMS, ANALYTICAL CHEMISTRY, VOL 53, NO3, 1981  
ALPHA SPECTROSCOPY

Thorium-228

Thorium-230

Thorium-232

**Water (Toxicology)**

Daphnia magna - Water (189)

TOX-002; EPS 1/RM/14

LETHALITY

Daphnia LC50 (48 h)

Daphnia Single Concentration (48h)

**Water (Toxicology)**

Rainbow Trout - Water (191)

; EPS 1/RM/13

LETHALITY

Single Concentration (96h)

Trout LC50 (96 h)

**Water (Toxicology)**

Rainbow Trout [pH Stabilization] - Water (190)

TOX-005; EPS 1/RM/13 and EPS 1/RM/50

LETHALITY

Single Concentration (96h)

Trout LC50 (96h)

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