



# CALA

Canadian Association for  
Laboratory Accreditation Inc.

## CALA Directory of Laboratories

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**Membership Number:** 3775

**Laboratory Name:** AGAT Laboratories - Edmonton

**Parent Institution:** AGAT Laboratories Ltd.

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**Standard:** Conforms with requirements of ISO/IEC 17025

**Clients Served:**

**Revised On:** January 15, 2019

**Valid To:** May 5, 2021

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### Scope of Accreditation

#### Oil (Inorganic)

Atmospheric Distillation - Oil (Petroleum Lab) (071)

HC-320-22011; ASTM D86

THERMOMETER/DISTILLATION

Atmospheric Distillation

#### Oil (Inorganic)

Basic Sediment and Water (BSW) - Oil (Petroleum Lab) (070)

HC-320-22010; modified from ASTM D4007

CENTRIFUGATION

Sediment

Water

#### Oil (Inorganic)

Cloud Point - Oil (Petroleum Lab) (064)

HC-320-22004; ASTM D2500

CLOUD POINT ANALYZER

Cloud Point

#### Oil (Inorganic)

Colour - Oil (Petroleum Lab) (066)

HC-320-22006; ASTM D1500

OIL COMPARATOR WITH GLASS COLOR STANDARDS

Color

#### Oil (Inorganic)

Density and API - Oil (Petroleum Lab) (065)

HC-320-22005; modified from ASTM D4052 and ASTM D5002

DIGITAL DENSITY METER

API Gravity

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Density

**Oil (Inorganic)**

Elemental Sulphur - Oil (Petroleum Lab) (061)

HC-320-22001; ASTM D4294

X-RAY FLUORESCENCE SPECTROMETRY

Elemental Sulfur

**Oil (Inorganic)**

Flashpoint - Oil (Petroleum Lab) (060)

HC-320-22000; modified from ASTM D93

PENSKY MARTENS CLOSED CUP TESTER

Flashpoint

**Oil (Inorganic)**

Metals - Oil (Petroleum Lab) (076)

HC-320-22017; ASTM D5708A

ICP/OES (DILUTION METHOD)

Aluminum

Barium

Boron

Cadmium

Calcium

Chromium

Copper

Iron

Lead

Magnesium

Manganese

Molybdenum

Nickel

Phosphorus

Silicon

Silver

Sodium

Tin

Titanium

Vanadium

Zinc

**Oil (Inorganic)**

Metals - Oil (Petroleum Lab) (102)

HC-320-22016; ASTM D5708B and ASTM D7691 and UOP 714

ICP/OES

Iron

Nickel

Vanadium

**Oil (Inorganic)**

Micro carbon residue - Oil (Petroleum Lab) (067)

HC-320-22007; ASTM D4530

MICRO METHOD

Micro carbon residue

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**Oil (Inorganic)**

Organic Chlorides - Oil (Petroleum Lab) (080)  
HC-320-22023; modified from ASTM D4929, PROCEDURE A  
POTENTIOMETRIC TITRATION  
Chloride from 204 degrees cut of crude oil

**Oil (Inorganic)**

Pour Point - Oil (Petroleum Lab) (063)  
HC-320-22003; ASTM D5853 and ASTM D97  
POUR POINT ANALYZER  
Pour Point

**Oil (Inorganic)**

Salt - Oil (Petroleum Lab) (068)  
HC-320-22008; ASTM D3230  
ELECTROMETRIC  
Salt Content

**Oil (Inorganic)**

Sediment - Oil (Petroleum Lab) (069)  
HC-320-22009; modified from ASTM D4807  
MEMBRANE FILTRATION  
Solids

**Oil (Inorganic)**

Sediment - Oil (Petroleum Lab) (101)  
HC-320-22027; modified from ASTM D473  
GRAVIMETRIC - EXTRACTION  
Sediment

**Oil (Inorganic)**

Simulated Distillation - Oil (Petroleum Lab) (074)  
HC-320-22014; modified from ASTM D7169  
HIGH TEMPERATURE GC  
Crude oil-Boiling Point Fractions

**Oil (Inorganic)**

Sulphur Compounds - Oil (Petroleum Lab) (078)  
HC-320-22019; modified from ASTM 5504 and ASTM D5623  
GC/SCD  
2-Propanethiol  
Carbon sulfide  
Cobalt Sulfide  
Diethyl disulfide  
Dimethyl disulfide  
Ethyl mercaptan  
Ethyl methyl sulfide  
Ethyl sulfide  
Hydrogen Sulfide  
Isobutyl mercaptan  
Methyl mercaptan  
Methyl sulfide  
n-Butyl mercaptan  
n-Propylmercaptan  
sec-Butyl mercaptan  
tert-Butyl mercaptan  
tert-Butyl methyl mercaptan  
Thiophene

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**Oil (Inorganic)**

Total Acid Number - Oil (Petroleum Lab) (072)  
HC-320-22012; modified from ASTM D664  
POTENTIOMETRIC  
Total Acid Number

**Oil (Inorganic)**

Total Mercury - Oil (Petroleum Lab) (079)  
HC-320-22021; modified from UOP 938  
MERCURY ANALYZER  
Total Mercury

**Oil (Inorganic)**

True Vapour Pressure - Oil (Petroleum Lab) (073)  
HC-320-22013; ASTM D6377  
VAPOUR PRESSURE ANALYZER  
Vapour Pressure of crude oil

**Oil (Inorganic)**

Viscosity - Oil (Petroleum Lab) (062)  
HC-320-22002; ASTM D7042  
STABINGER VISCOMETER  
Dynamic Viscosity  
Kinematic Viscosity

**Oil (Inorganic)**

Volatile Organic Phosphorus - Oil (Petroleum Lab) (075)  
HC-320-22015; CCQTA  
ICP/OES  
Phosphorus in crude oil 250 degrees C cut

**Petroleum Products (Inorganic)**

Reid Vapor Pressure - Fuel (Petroleum Lab) (099)  
HC-320-22026; ASTM D323  
VAPOR PRESSURE ANALYZER (REID METHOD)  
Reid Vapor Pressure

**Petroleum Products (Inorganic)**

Vapor Pressure - Fuel (Petroleum Lab) (100)  
HC-320-22025; ASTM D4953 and ASTM D5191  
VAPOR PRESSURE ANALYZER  
Dry Vapor Pressure

**Solids (Inorganic)**

Ammonia Nitrogen - Solids [Soil] (108)  
INOR-171-6211;  
COLORIMETRIC  
Ammonia-N

**Solids (Inorganic)**

Anions - Solids [Soil] (001)  
INOR-171-6200, INOR-171-6002; SM 4110 B and SOIL SAMPLING & METHODS OF ANALYSIS, CARTER  
IC - EXTRACTION  
Chloride  
Nitrate-N  
Nitrite  
Sulphate

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**Solids (Inorganic)**

Atterberg Plasticity Index - Soil (107)

; modified from D4318 STANDARD TEST METHOD FOR LIQUID PLASTICITY INDEX OF SOILS METHOD B  
LIQUID LIMIT DEVICE

Liquid Limit

Plastic Index

Plastic Limit

**Solids (Inorganic)**

Boron - Solids [Soil] (002)

INOR-171-6201, INOR-171-6005; SM 3120 B and SOIL SAMPLING & METHODS OF ANALYSIS, CARTER  
ICP - HOT WATER EXTRACTION

Boron

**Solids (Inorganic)**

Bulk Density - Solids [Bulk, Soil] (103)

INOR-171-6004; BLAKE, G.R., MSA BULK DENSITY, 1986  
GRAVIMETRIC

Bulk Density

**Solids (Inorganic)**

Cations - Solids [Soil] (056)

INOR-171-6201, INOR-171-6002; modified from SM 3120 B and SOIL SAMPLING & METHODS OF ANALYSIS  
CHAPTER 15

ICP/OES - SATURATED PASTE EXTRACTION

Boron

Calcium

Magnesium

Potassium

Sodium

Sulphur

**Solids (Inorganic)**

Chloride - Solids [Soil] (057)

INOR-171-6212, INOR-171-6002; modified from SM 4500-CL- E  
COLORIMETRIC

Chloride

**Solids (Inorganic)**

Chloride - Solids [Soil] (Mobile Lab) (090)

INOR-59-6000, INOR-59-6002; SM 4500-CL- E and SOIL SAMPLING & METHODS OF ANALYSIS, CARTER  
15.2

COLORIMETRIC

Chloride

**Solids (Inorganic)**

Conductivity - Solids [Sediment, Soil] (004)

INOR-171-6002, INOR-171-6208; CURTIN, 2007 EC SOLUBLE IONS PG 161-171 SM 2510 and MILLER, J.M.  
CONDUCTIVITY METER

Conductivity (saturated)

Conductivity (2:1)

**Solids (Inorganic)**

Conductivity - Solids [Sediment, Soil] (Mobile Lab) (087)

INOR-59-6000, INOR-59-6001; modified from MANUAL ON SOIL SAMPLING & METHODS OF ANALYSIS,  
MCKEAGUE 4.1 (1978)

CONDUCTIVITY METER

Conductivity (saturated paste)

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**Solids (Inorganic)**

Extractable Barium - Solids [Soil] (005)

INOR-171-6201, INOR-171-6007; modified from ALBERTA ENVIRONMENT SOIL QUALITY GUIDELINES 6.2.2

ICP/OES - EXTRACTION

Extractable Barium -0.1M CaCl<sub>2</sub>

**Solids (Inorganic)**

Flashpoint - Solids [Ash, Soil] (029)

ORG-170-5210; modified from ASTM D93

PENSKY MARTENS CLOSED CUP TESTER

Flashpoint

**Solids (Inorganic)**

Free Liquid - Solids (017)

INOR-171-6012; modified from EPA 9095

PAINT FILTER TEST

Free Liquid

**Solids (Inorganic)**

Hexavalent Chromium - Solids [Soil] (006)

INOR-171-6215; modified from SSSA PART 2 BY REISENAUER

SPECTROPHOTOMETRIC - EXTRACTION

Hexavalent chromium

**Solids (Inorganic)**

Metals - Solids (018)

INOR-171-6201, INOR-171-6011; IN-HOUSE (PREPARATION)

ICP/OES - LEACHATE PREPARATION

Antimony

Arsenic

Barium

Beryllium

Boron

Cadmium

Chromium

Cobalt

Copper

Iron

Lead

Mercury

Nickel

Selenium

Silver

Thallium

Uranium

Vanadium

Zinc

Zirconium

**Solids (Inorganic)**

Metals - Solids [Soil] (008)

INOR-171-6202, INOR-171-6006; modified from BC MOE LABORATORY MANUAL SECTION C and EPA 3050B and SM 3125

ICP/MS - DIGESTION

Antimony

Arsenic

Barium

Beryllium

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Cadmium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Manganese  
Mercury  
Molybdenum  
Nickel  
Selenium  
Silver  
Strontium  
Thallium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

**Solids (Inorganic)**

Moisture - Solids (105)

LAB-175-4002; SOIL SAMPLING & METHODS OF ANALYSIS, CARTER, 2008  
GRAVIMETRIC

Percent Moisture

**Solids (Inorganic)**

Oil and Grease - Solids [Soil] (019)

ORG-170-5200; modified from EPA 1664  
FTIR - EXTRACTION

Oil and Grease

**Solids (Inorganic)**

Organic Carbon - Solids [Soil] (009)

INOR-171-6216; modified from MSA PART 3 CH. 34  
CHEMICAL OXIDATION UV/VISIBLE

Organic Carbon

Total Organic Carbon (TOC)

**Solids (Inorganic)**

Particle Size Analysis (PSA) - Solids [Soil] (010)

INOR-171-6010; modified from SHELDRIK, B.H. & WANG, C, "PARTICLE SIZE DISTRIBUTION IN SOIL"  
SAMPLING & METHODS OF ANALYSIS  
HYDROMETER (2 PT)

% clay

% Sand

Silt

**Solids (Inorganic)**

Particle Size Analysis (PSA) - Solids [Soil] (011)

INOR-171-6009; modified from SHELDRIK, B.H. & WANG, C, "PARTICLE SIZE DISTRIBUTION IN SOIL"  
SAMPLING & METHODS OF ANALYSIS  
SIEVE ANALYSIS

Particle Size (75 um)

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**Solids (Inorganic)**

Percent Saturation - Solids [Soil] (012)

INOR-171-6000, INOR-171-6002, INOR-401-0120; modified from SOIL SAMPLING & METHODS OF ANALYSIS, CARTER, 2ND ED.

GRAVIMETRIC - SATURATED PASTE

Percent Saturation

**Solids (Inorganic)**

Percent Saturation - Solids [Soil] (Mobile Lab) (088)

INOR-59-6000; modified from SOIL SAMPLING & METHODS OF ANALYSIS, CARTER 15.2

GRAVIMETRIC - SATURATED PASTE

Percent Saturation (Saturated Paste)

**Solids (Inorganic)**

pH - Solids [Sediment, Soil] (014)

INOR-171-6002, INOR-171-6205; modified from SOIL SAMPLING & METHODS OF ANALYSIS, CARTER, 2ND ED.

PC TITRATE

pH (1:2) Soil: CaCl<sub>2</sub>

**Solids (Inorganic)**

pH - Solids [Sediment, Soil] (058)

INOR-171-6207; modified from SOIL SAMPLING & METHODS OF ANALYSIS, CARTER, 2ND ED.

pH METER

pH (1:1)

pH (1:2) Soil: CaCl<sub>2</sub>

pH (2:1)

pH (Saturated Paste)

**Solids (Inorganic)**

pH - Solids [Sediment, Soil] (Mobile Lab) (089)

INOR-59-6000, INOR-59-6001; modified from MANUAL ON SOIL SAMPLING & METHODS OF ANALYSIS, MCKEAGUE 4.1 (1978)

pH METER

pH (Saturated Paste)

**Solids (Inorganic)**

Phenols - Solids [Soil] (015)

INOR-171-6213; modified from EPA 4-79-020 and EPA 420.3 and EPA 600

COLORIMETRIC

Total Phenolics

**Solids (Inorganic)**

Specific Gravity - Solids [Soil] (104)

INOR-171-6003; PROCEDURE FOR USING BAROID MUD BALANCE

MUD BALANCE

Specific Gravity

**Solids (Inorganic)**

Total Barium - Solids [Soil] (016)

INOR-171-6201, INOR-171-6008; modified from ASTM D4503 and SM 3120 B

ICP - FUSION

Total Barium

**Solids (Organic)**

Alcohols - Solids [Soil] (091)

ORG-170-5442; EPA 5021 and EPA 8015B

GC/FID

1-Butanol

2-Butanol

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Ethanol  
Isobutanol  
Isopropanol  
Methanol  
Pentanol  
Propanol  
tert-Butyl alcohol

**Solids (Organic)**

BTEX - Solids (Mobile Lab) (083)  
MO-0500; modified from MONOCYCLIC AROMATIC HYDROCARBONS (BTEX) IN SOILS BY DYNAMIC HEADSPACE & GC/PID/FID, BC ENVIRONMENTAL LABORATORY MANUAL: 2009 EDITION  
GC/PID - HEADSPACE  
Benzene  
Ethylbenzene  
m/p-xylene  
o-xylene  
Toluene

**Solids (Organic)**

BTEX - Solids [Soil] (021)  
ORG-170-5100, ORG-170-5430, ORG-170-5440; IN-HOUSE (PREPARATION)  
GC/MS - LEACHATE  
Benzene  
Ethylbenzene  
m,p-Xylene  
o-Xylene  
Toluene

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (022)  
ORG-170-5300, ORG-170-5120; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD  
GC/FID - EXTRACTION COLD SHAKE  
F2: C10-C16  
F3: C16-C34  
F4: C34-C50

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (023)  
ORG-170-5120; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD  
GRAVIMETRIC - EXTRACTION COLD SHAKE  
F4: Gravimetric

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (024)  
ORG-170-5430, ORG-170-5140; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD  
GC/FID - PURGE AND TRAP  
F1: C6-C10

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (059)  
ORG-170-5440, ORG-170-5110; modified from EPA 5021A and EPA B  
GC/FID - HEADSPACE  
F1: C6-C10  
TPGH (C5-C10)

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## Solids (Organic)

Polycyclic Aromatic Hydrocarbons (PAH) and Alkylated Polycyclic Aromatic Hydrocarbons (PAH) - Solids [Soil] (025)

ORG-170-5420; modified from EPA 3540C and EPA 3570 and EPA 8270D

GC/MS - EXTRACTION

1-Methylnaphthalene  
2-Methylnaphthalene  
Acenaphthene  
Acenaphthylene  
Acridine  
Anthracene  
Benzo (a) anthracene  
Benzo (a) pyrene  
Benzo (b) fluoranthene  
Benzo(e)pyrene  
Benzo (g,h,i) perylene  
Benzo (k) fluoranthene  
Biphenyl  
C1-Acenaphthenes  
C1-Benzo(a)anthracenes/Chrysenes  
C1-Benzofluoranthenes/Benzopyrenes  
C1-Biphenyls  
C1-Dibenzothiophenes  
C1-Fluoranthenes/Pyrenes  
C1-Fluorenes  
C1-Phenanthrenes/Anthracenes  
C2-Benz(a)anthracenes/Chrysenes  
C2-Benzofluoranthenes/Benzopyrenes  
C2-Biphenyls  
C2-Dibenzothiophenes  
C2-Fluoranthenes/Pyrenes  
C2-Fluorenes  
C2-Naphthalenes  
C2-Phenanthrenes/Anthracenes  
C3-Dibenzothiophenes  
C3-Fluoranthenes/Pyrenes  
C3-Fluorenes  
C3-Naphthalenes  
C3-Phenanthrenes/Anthracenes  
C4-Dibenzothiophenes  
C4-Fluoranthenes/Pyrenes  
C4-Naphthalenes  
C4-Phenanthrenes/Anthracenes  
Chrysene  
Dibenzo (a,h) anthracene  
Dibenzothiophene  
Fluoranthene  
Fluorene  
Indeno (1,2,3 - cd) pyrene  
Naphthalene  
Perylene  
Phenanthrene  
Pyrene

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Quinoline  
Retene

**Solids (Organic)**

Total Extractable Hydrocarbons (TEH) - Solids (Mobile Lab) (081)  
MO-0300; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD  
GC/FID - EXTRACTION  
EPH C10-C19  
EPH C19-C32  
F2: C10-C16  
F3: C16-C34  
F4: C34-C50  
SASK (C11-C22)  
SASK (C23-C60)  
Total Extractable Hydrocarbons (TEH): C10-C32

**Solids (Organic)**

Total Extractable Hydrocarbons (TEH) - Solids [Soil] (026)  
ORG-170-5300, ORG-170-5120; modified from AEC V92-G108 and AEC V92-M2 and EPA CH. 4  
GC/FID - EXTRACTION  
SASK (C11-C22)  
SASK (C23-C60)  
Total Extractable Hydrocarbons (TEH): C11-C30

**Solids (Organic)**

Total Petroleum Hydrocarbons (TPH) - Solids [Soil] (Mobile Lab) (082)  
MO-0500; modified from MONOCYCLIC AROMATIC HYDROCARBONS (BTEX) IN SOILS BY DYNAMIC  
HEADSPACE & GC/PID/FID, BC ENVIRONMENTAL LABORATORY MANUAL: 2009 EDITION  
GC/FID - HEADSPACE  
F1: C6-C10  
TPGH (C5-C10)

**Solids (Organic)**

Volatile Organic Compounds (VOC) - Solids [Soil] (027)  
ORG-170-5400, ORG-170-5170; modified from EPA 5030B and EPA 8260B  
GC/MS - PURGE AND TRAP/EXTRACTION  
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  
1,2-Dichloropropane  
1,2,4-Trichlorobenzene  
1,3-Dichlorobenzene  
1,4-dichlorobenzene  
2-Hexanone (MBK)  
Acetone (2-Propanone)  
Benzene  
Bromodichloromethane  
Bromoform  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene

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Chlorodibromomethane  
Chloroethane  
Chloroform  
Chloromethane  
cis-1,2-Dichloroethylene  
cis-1,3-Dichloropropene  
Dichloromethane  
Ethylbenzene  
Ethylene Dibromide  
m/p-xylene  
Methyl Ethyl Ketone  
Methyl isobutyl Ketone  
Methyl t-butyl ether  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
trans-1,2-Dichloroethylene  
trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl chloride

**Solids (Organic)**

Volatile Organic Compounds (VOC) - Solids [Soil] (028)

ORG-170-5410, ORG-170-5160; modified from EPA 5021 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  
1,2-dichlorobenzene  
1,2-dichloroethane  
1,2-Dichloropropane  
1,2,4-Trichlorobenzene  
1,3-Dichlorobenzene  
1,4-dichlorobenzene  
2-Hexanone (MBK)  
Acetone (2-Propanone)  
Benzene  
Bromodichloromethane  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroethane  
Chloroform  
Chloromethane  
cis-1,2-Dichloroethylene  
cis-1,3-Dichloropropene  
Dichloromethane

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Ethylbenzene  
Ethylene Dibromide  
m/p-xylene  
Methyl Ethyl Ketone  
Methyl isobutyl Ketone  
Methyl t-butyl ether  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl chloride

**Water (Inorganic)**

Alkalinity - Water (030)  
INOR-171-6205; modified from SM 2320 B  
AUTO TITRIMETRIC (PC TITRATE)  
Alkalinity (pH 4.5)

**Water (Inorganic)**

Ammonia - Water (031)  
INOR-171-6211; modified from SM 4500-NH3 G  
COLORIMETRIC  
Ammonia

**Water (Inorganic)**

Anions - Water (032)  
INOR-171-6200; modified from SM 4110 B  
ION CHROMATOGRAPHY  
Bromide  
Chloride  
Fluoride  
Nitrate  
Nitrite  
Phosphate  
Sulfate

**Water (Inorganic)**

Biochemical Oxygen Demand (BOD) - Water (054)  
MIC-171-7000; modified from SM 5210 B  
D.O. METER  
BOD (5 day)  
CBOD (5 day)

**Water (Inorganic)**

Carbon - Water (033)  
INOR-171-6217; modified from SM 5310 B  
COMBUSTION - INFRARED  
Inorganic Carbon  
Organic Carbon

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**Water (Inorganic)**

Chemical Oxygen Demand (COD) - Water (034)  
INOR-171-6210; modified from EPA 410.4  
SPECTROPHOTOMETRIC  
COD

**Water (Inorganic)**

Chloride - Water (Mobile Lab) (095)  
INOR-59-6002; SM 4500-CL- E  
COLORIMETRIC  
Chloride

**Water (Inorganic)**

Conductivity - Water (035)  
INOR-171-6205; modified from SM 2510 B  
PC TITRATE  
Conductivity (25°C)

**Water (Inorganic)**

Conductivity - Water (Mobile Lab) (092)  
INOR-59-6001; SM 2510 B  
CONDUCTIVITY METER  
Conductivity (25°C)

**Water (Inorganic)**

Dissolved Metals - Water (037)  
INOR-171-6201, INOR-171-6100; modified from SM 3120 B  
ICP/OES  
Aluminum  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Lithium  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Phosphorus  
Potassium  
Silicon  
Sodium  
Strontium  
Sulfur  
Titanium  
Tungsten  
Zinc  
Zirconium

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**Water (Inorganic)**

Dissolved Metals - Water (038)

INOR-171-6202, INOR-171-6100; modified from SM 3125

ICP/MS

Aluminum

Antimony

Arsenic

Barium

Beryllium

Boron

Cadmium

Chromium

Cobalt

Copper

Iron

Lead

Lithium

Manganese

Molybdenum

Nickel

Phosphorus

Selenium

Silver

Strontium

Thallium

Thorium

Tin

Titanium

Uranium

Vanadium

Zinc

**Water (Inorganic)**

Hexavalent Chromium - Water (097)

INOR-171-6219; modified from SM 3500-CR B

SPECTROPHOTOMETRIC

Hexavalent Chromium

**Water (Inorganic)**

Mercury - Water (039)

INOR-171-6204; modified from SM 3112 B

COLD VAPOUR AA

Mercury

**Water (Inorganic)**

Oil and Grease - Water (046)

ORG-170-5200; modified from EPA 1664

FTIR - EXTRACTION

Total Oil and Grease

**Water (Inorganic)**

pH - Water (040)

INOR-171-6205; modified from SM 4500-H+

AUTO TITRIMETRIC (PC TITRATE)

pH

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**Water (Inorganic)**

pH - Water (Mobile Lab) (093)  
INOR-59-6001; modified from SM 4500-H+  
pH METER  
pH

**Water (Inorganic)**

Phenols - Water (041)  
INOR-171-6213; modified from EPA 4-79-020 and EPA 600  
AUTO COLOR  
Total Phenolics

**Water (Inorganic)**

Solids - Water (042)  
INOR-171-6102, INOR-171-6104; SM 2540 C and SM 2540 D  
GRAVIMETRIC  
Total Dissolved Solids  
Total Suspended Solids

**Water (Inorganic)**

Sulphide - Water (106)  
INOR-171-6222; METHOD 4500-S2 SULFIDE  
COLORIMETRIC  
Sulphide

**Water (Inorganic)**

Total Kjeldahl Nitrogen (TKN) - Water (096)  
INOR-171-6220; modified from HACH 10242  
SPECTROPHOTOMETRIC  
Total Kjeldahl Nitrogen

**Water (Inorganic)**

Total Metals - Water (043)  
INOR-171-6201, INOR-171-6100; modified from SM 3120 B  
ICP/OES - NITRIC ACID DIGESTION  
Aluminum  
Barium  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Lithium  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Phosphorus  
Potassium  
Silicon  
Silver  
Sodium  
Strontium  
Sulfur  
Tin

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Uranium  
Vanadium  
Zinc  
Zirconium

**Water (Inorganic)**

Total Metals - Water (044)

INOR-171-6202, INOR-171-6100; modified from SM 3030 E and SM 3125

ICP/MS - NITRIC ACID DIGESTION

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Lithium  
Manganese  
Molybdenum  
Nickel  
Phosphorus  
Selenium  
Silver  
Strontium  
Thallium  
Thorium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc  
Zirconium

**Water (Inorganic)**

Turbidity - Water (045)

INOR-171-6101; SM 2130 B

NEPHELOMETRY

Turbidity

**Water (Organic)**

Alcohols - Water (094)

ORG-170-5442; EPA 5021 and EPA 8015B

GC/FID

1-Butanol  
2-Butanol  
Ethanol  
Isobutanol  
Isopropanol  
Methanol

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Pentanol  
Propanol  
tert-Butyl alcohol

**Water (Organic)**

BTEX - Water (Mobile Lab) (086)  
MO-0500; modified from BC MOE LABORATORY MANUAL  
GC/PID  
Benzene  
Ethylbenzene  
m/p-xylene  
o-xylene  
Styrene  
Toluene

**Water (Organic)**

Polycyclic Aromatic Hydrocarbons (PAH) and Alkylated Polycyclic Aromatic Hydrocarbons (PAH) - Water (048)  
ORG-170-5421; modified from EPA 3510B and EPA 3511 and EPA 8270C  
GC/MS - EXTRACTION  
1-Methylnaphthalene  
2-Methylnaphthalene  
Acenaphthene  
Acenaphthylene  
Acridine  
Anthracene  
Benzo (a) anthracene  
Benzo (a) pyrene  
Benzo (b) fluoranthene  
Benzo(e)pyrene  
Benzo (g,h,i) perylene  
Benzo (k) fluoranthene  
Biphenyl  
C1-Acenaphthenes  
C1-Benz(a)anthracenes/Chrysenes  
C1-Benzofluoranthenes/Benzopyrenes  
C1-Biphenyls  
C1-Dibenzothiophenes  
C1-Fluoranthenes/Pyrenes  
C1-Fluorenes  
C1-Phenanthrenes/Anthracenes  
C2 Biphenyls  
C2 Fluorenes  
C2-Benz(a)anthracenes/Chrysenes  
C2-Benzofluoranthenes/Benzopyrenes  
C2-Dibenzothiophenes  
C2-Fluoranthenes/Pyrenes  
C2-Naphthalenes  
C2-Phenanthracenes/Anthracenes  
C3-Benzanthracenes/Chrysenes  
C3-Dibenzothiophenes  
C3-Naphthalenes  
C3-Phenanthrenes/Anthracenes  
C4-Benzanthracenes/Chrysenes  
C4-Dibenzothiophenes  
C4-Naphthalenes

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C4-Phenanthrenes/Anthracenes  
Chrysene  
Dibenzo (a,h) anthracene  
Dibenzothiophene  
Fluoranthene  
Fluorene  
Indeno (1,2,3 - cd) pyrene  
Naphthalene  
Perylene  
Phenanthrene  
Phenanthrene  
Pyrene  
Pyrene  
Quinoline  
Retene

**Water (Organic)**

Total Extractable Hydrocarbons (TEH) - Water (049)  
ORG-170-5300, ORG-170-5120; modified from AEC V92-M2 and BC MOE CONTAMINATED SITES  
REGULATION (CSR) A108 and EPA 3510  
GC/FID - EXTRACTION  
C11-C30  
F2: C10-C16  
SASK (C11-C22)  
SASK (C23-C60)

**Water (Organic)**

Total Extractable Hydrocarbons (TEH) - Water (Mobile Lab) (085)  
MO-0300; modified from BC MOE LABORATORY MANUAL  
GC/FID - EXTRACTION  
EPH C10-C19  
EPH C19-C32  
F2: C10-C16  
F3: C16-C34  
F4: C34-C50  
SASK (C11-C22)  
SASK (C23-C60)  
Total Extractable Hydrocarbons (TEH): C10-C32

**Water (Organic)**

Total Petroleum Hydrocarbons (TPH) - Water (050)  
ORG-170-5140, ORG-170-5430; modified from EPA 5030B and EPA 8260B  
GC/FID - PURGE AND TRAP  
F1: C6-C10  
TPGH (C5-C10)  
Volatile Hydrocarbons (VH): C6-C10

**Water (Organic)**

Total Purgeable Hydrocarbons (TPH) - Water (Mobile Lab) (084)  
MO-0500; modified from BC MOE LABORATORY MANUAL  
GC/FID - HEADSPACE  
F1: C6-C10  
TPGH (C5-C10)  
Volatile Hydrocarbons (VH): C6-C10

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**Water (Organic)**

Volatile Organic Compounds (VOC) - Water (051)

ORG-170-5400, ORG-170-5170; modified from EPA 5030B and EPA 8260B

GC/MS - PURGE AND TRAP

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  
1,2-Dichloropropane  
1,2,4-Trichlorobenzene  
1,3-Dichlorobenzene  
1,4-dichlorobenzene  
2-Hexanone (MBK)  
Acetone (2-Propanone)  
Benzene  
Bromodichloromethane  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroethane  
Chloroform  
Chloromethane  
cis-1,2-Dichloroethylene  
cis-1,3-Dichloropropene  
Dibromochloromethane  
Dichloromethane  
Ethylbenzene  
Ethylene Dibromide  
m/p-xylene  
Methyl Ethyl Ketone  
Methyl isobutyl Ketone  
Methyl t-butyl ether  
Methyl t-butyl ether (MTBE)  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene  
Trichloroethane  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl Chloride

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**Water (Organic)**

Volatile Organic Compounds (VOC) - Water (052)

ORG-170-5410, ORG-170-5160; 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  
1,2-Dibromomethane  
1,2-dichlorobenzene  
1,2-dichloroethane  
1,2-Dichloropropane  
1,2,4-Trichlorobenzene  
1,3-Dichlorobenzene  
1,4-dichlorobenzene  
2-Hexanone (MBK)  
Acetone (2-Propanone)  
Benzene  
Bromodichloromethane  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroethane  
Chloroform  
Chloromethane  
cis-1,2-Dichloroethylene  
cis-1,3-Dichloropropene  
Dichloromethane  
Ethylbenzene  
Ethylene Dibromide  
m/p-xylene  
Methyl Ethyl Ketone  
Methyl isobutyl Ketone  
Methyl t-butyl ether  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl Chloride

**Water (Toxicology)**

Microtox - Water (053)

TOX-171-7100; EPS 1/RM/24

BIOLUMINESCENCE

Microtox IC50 (15 min)

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