



CALA

Canadian Association for
Laboratory Accreditation Inc.

CALA Directory of Laboratories

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: November 5, 2018

Valid To: May 5, 2021

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)

Asphaltenes - Fuel (Petroleum Lab) (098)
HC-320-22022; ASTM D6560
GRAVIMETRIC
Asphaltenes

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
Nitrite

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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 CaCl₂

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: CaCl₂

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: CaCl₂

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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