



CALA

Canadian Association for
Laboratory Accreditation Inc.

CALA Directory of Laboratories

Membership Number: 3915
Laboratory Name: AGAT Laboratories - Lloydminster
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Standard: Conforms with requirements of ISO/IEC 17025
Clients Served: All Interested Parties
Revised On: June 5, 2018
Valid To: October 3, 2019

Scope of Accreditation

Soil (Inorganic)

Ammonia - Solids [Soil] (010)
INOR-190-6012; modified from SM 4500-NH3 F
SPECTROPHOTOMETRIC
Ammonia

Soil (Inorganic)

Anions - Solids [Soil] (001)
INOR-190-6008, INOR-190-6002; modified from MANUAL ON SOIL SAMPLING & METHODS OF ANALYSIS,
MCKEAGUE 3.21 and SM 4110 B
IC - SATURATED PASTE EXTRACTION
Chloride
Fluoride
Nitrate
Nitrite
Sulfate

Soil (Inorganic)

Chromium - Solids [Soil] (029)
INOR-190-6016; modified from BARTLETT, R.J., JAMES, B.R. (1996), CHROMIUM PP. 683-701
COLORIMETRIC - DIGESTION
Chromium

Soil (Inorganic)

Conductivity - Solids [Sediment, Soil] (004)
INOR-190-6011, INOR-190-6002; modified from MANUAL ON SOIL SAMPLING & METHODS OF ANALYSIS,
MCKEAGUE 3.21 and MANUAL ON SOIL SAMPLING & METHODS OF ANALYSIS, MCKEAGUE 4.12 and
MANUAL ON SOIL SAMPLING & METHODS OF ANALYSIS, MCKEAGUE 4.13
CONDUCTIVITY METER
Conductivity (saturated paste)

† "OSDWA" indicates the appendix is used for the analysis of Ontario drinking water samples, which is subject to the rules and related regulations under the Ontario "Safe Drinking Water Act" (2002).

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Soil (Inorganic)

Flashpoint - Solids [Ash, Soil] (009)
ORG-190-5100; modified from ASTM D93-02A
PENSKY MARTENS CLOSED CUP
Flashpoint

Soil (Inorganic)

Hot Water Soluble Boron - Solids [Soil] (028)
INOR-190-6009, INOR-190-6014; modified from SOIL SAMPLING & METHODS OF ANALYSIS, CARTER, 2008
ICP/OES
Boron

Soil (Inorganic)

Metals - Solids [Soil] (030)
INOR-190-6017; modified from SM 3125 B
ICP/MS
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Copper
Lead
Mercury
Molybdenum
Nickel
Selenium
Silver
Thallium
Tin
Uranium
Vanadium
Zinc

Soil (Inorganic)

Particle Size Analysis (PSA) - Solids [Soil] (006)
INOR-190-6004; modified from SHELDRIK, B.H. & WANG, C, CARTER MO ED. 1993
SIEVE ANALYSIS
Particle Size (75um)

Soil (Inorganic)

Particle Size Analysis (PSA) - Solids [Soil] (022)
INOR-190-6013; modified from SHELDRIK, B.H. & WANG, C, CARTER MO ED. 1993
HYDROMETER (2 PT)
% clay
% Sand
% silt

Soil (Inorganic)

Percent Saturation - Solids [Soil] (002)
INOR-190-6002; modified from MANUAL ON SOIL SAMPLING & METHODS OF ANALYSIS, MCKEAGUE 3.21
GRAVIMETRIC - SATURATED
Percent Saturation (Saturated Paste)

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Soil (Inorganic)

pH - Solids [Sediment, Soil] (007)

INOR-190-6010, INOR-190-6002; modified from SOIL SAMPLING & METHODS OF ANALYSIS, CARTER, 2ND ED.

pH METER

pH (1:1) Soil: Water

pH (Saturated Paste)

Soil (Inorganic)

Soluble Cations - Solids [Soil] (013)

INOR-190-6009, INOR-190-6002; modified from SM 3120 B and SOIL SAMPLING & METHODS OF ANALYSIS CHAPTER 15

ICP/OES - SATURATED PASTE EXTRACTION

Boron

Calcium

Magnesium

Potassium

Sodium

Sulphur

Soil (Inorganic)

Specific Gravity - Solids [Soil] (003)

INOR-190-6003; modified from ASTM D4380, G50 and BAROID MUD BALANCE and DRILLING WASTE MANAGEMENT

MUD BALANCE

Specific Gravity

Soil (Organic)

Petroleum Hydrocarbons (PHC) - Solids [Soil] (012)

ORG-190-5103; modified from EPA 5030C and EPA 8260

GC/MS

Benzene

Ethylbenzene

m/p-xylene

o-xylene

Toluene

Soil (Organic)

Petroleum Hydrocarbons (PHC) - Solids [Soil] (014)

ORG-190-5102; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD

GC/FID - EXTRACTION COLD SHAKE

F2: C10-C16

F3: C16-C34

F4: C34-C50

Soil (Organic)

Petroleum Hydrocarbons (PHC) - Solids [Soil] (015)

ORG-190-5102; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD

GRAVIMETRIC - EXTRACTION COLD SHAKE

F4: Gravimetric

Soil (Organic)

Petroleum Hydrocarbons (PHC) - Solids [Soil] (027)

ORG-190-5103; modified from CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD

GC/FID - PURGE AND TRAP

F1: C6-C10

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Soil (Organic)

Total Extractable Hydrocarbons (TEH) - Solids [Soil] (023)

ORG-190-5104; modified from AEC V92-G108 and AEC V92-M2 and BC MOE CONTAMINATED SITES

REGULATION (CSR) and EPA CH.4

GC/FID - EXTRACTION

EPH C10-C19

EPH C19-C32

SASK (C10-C22)

SASK (C23-C60)

Total Extractable Hydrocarbons (TEH): C11-C30

Soil (Organic)

Total Purgeable Hydrocarbons (TPH) - Solids [Soil] (025)

ORG-190-5103; BC MOE LABORATORY MANUAL

GC/FID

TPqH (C5-C10)

VH: C6-C10

Solids (Organic)

BTEX - Solids [Soil] (011)

ORG-190-5101; IN-HOUSE

GC/MS - LEACHATE PURGE AND TRAP

Benzene

Ethylbenzene

m,p-Xylene

o-Xylene

Toluene

Waste (Inorganic)

Free Liquid - Waste [Liquid] (005)

INOR-190-6006; modified from EPA 9095

PAINT FILTER TEST

Free Liquid

Waste (Organic)

Metals - Waste (008)

INOR-190-6005, INOR-190-6009; IN-HOUSE

ICP/OES - EXTRACTION

Antimony

Arsenic

Barium

Boron

Cadmium

Chromium

Copper

Iron

Lead

Mercury

Selenium

Silver

Thallium

Uranium

Vanadium

Zinc

Zirconium

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Water (Inorganic)

Ammonia - Water (017)

INOR-190-6012; modified from SM 4500-NH3 F
SPECTROPHOTOMETRIC

Ammonia

Water (Inorganic)

Anions - Water (016)

INOR-190-6008; modified from SM 4110 B
ION CHROMATOGRAPHY

Chloride

Fluoride

Nitrate

Nitrite

Sulfate

Water (Inorganic)

Soluble Cations - Water (018)

INOR-190-6009; modified from SM 3120 B
ICP/OES

Calcium

Magnesium

Potassium

Sodium

Water (Organic)

Petroleum Hydrocarbons (PHC) - Water (019)

ORG-190-5106; modified from EPA 5030C and EPA 8260
GC/MS

Benzene

Ethylbenzene

m/p-xylene

o-xylene

Toluene

Water (Organic)

Petroleum Hydrocarbons (PHC) - Water (020)

ORG-190-5102; IN-HOUSE

GC/FID - EXTRACTION COLD SHAKE

F2: C10-C16

F3: C16-C34

F4: C34-C50

Water (Organic)

Total Extractable Hydrocarbons (TEH) - Water (024)

ORG-190-5105; modified from AECV92-M2 and BC MOE CONTAMINATED SITES REGULATION (CSR) and
EPA -3510

GC/FID - EXTRACTION

EPH C10-C19

EPH C19-C32

SASK (C10-C22)

SASK (C23-C60)

Total Extractable Hydrocarbons (TEH): C11-C30

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Water (Organic)

Total Petroleum Hydrocarbons (TPH) - Water (026)
ORG-190-5106; modified from EPA 5021 and EPA 8015B
GC/MS - PURGE AND TRAP
F1: C6-C10
TPgH (C5-C10)
Volatile Hydrocarbons (VH): C6-C10

Water (Toxicology)

Microtox - Water (021)
TOX-190-19000; modified from EPS 1/RM/24
BIOLUMINESCENCE
Microtox IC50 (15 min)

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