



CALA

Canadian Association for
Laboratory Accreditation Inc.

CALA Directory of Laboratories

Membership Number: 2702
Laboratory Name: AGAT Laboratories (Calgary)
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Standard: Conforms with requirements of ISO/IEC 17025
Clients Served: All Interested Parties
Revised On: January 15, 2018
Valid To: March 26, 2020

Scope of Accreditation

Oil (Organic)

Polychlorinated Biphenyls (PCB) - Oil (015)
TO-0420; modified from AEC M106.0 and ASTM D4059-00
GC/ECD - EXTRACTION
Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268
Total PCB

Paint (Inorganic)

Lead - Paint (230)
PANT-0280; modified from AOAC 974.02 and SM 3120 B
ICP
Lead

Solids (Inorganic)

Ammonia - Soil (050)
INOR-401-0120, INST-0340, INST-0420, SOIL-0110, SOIL-0630; modified from SM 4500-NH3 G
COLORIMETRIC - EXTRACTION
Ammonia

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Solids (Inorganic)

Anions - Soil (043)

INST-0150, SOIL-140; modified from SM 4110 B
IC - SATURATED PASTE EXTRACTION

Chloride

Nitrate

Nitrite

Sulfate

Solids (Inorganic)

Atterberg Plasticity Index - Soils (242)

SOIL-0655; ASTM D4318-10E1
LIQUID LIMIT DEVICE

Liquid Limit

Plastic Limit

Plasticity Index

Solids (Inorganic)

Available Nutrients - Soil (213)

SOIL-0131, SOIL-0132, INST-0140; RECOMMENDED METHODS FOR SOIL ANALYSIS, ALBERTA
AGRICULTURE (RMSA), SM 3120 B

ICP/OES

Potassium

Sulphur

Solids (Inorganic)

Available Nutrients - Soil (214)

SOIL-0130, INST-0400; RECOMMENDED METHODS FOR SOIL ANALYSIS, ALBERTA AGRICULTURE
(RMSA) and EPA 600/R-93/100

COLORIMETRIC

Phosphorus

Solids (Inorganic)

Boron - Soil (085)

SOIL-270, INST-0140, INST-0141; modified from SOIL SAMPLING & METHODS OF ANALYSIS", CARTER 2008
and SM 3120 B and SM 3125 B

ICP - HOT WATER EXTRACTION

Boron

Solids (Inorganic)

Bulk Density - Soil (232)

SOIL-0220; BLAKE, G.R., MSA BULK DENSITY, 1986
GRAVIMETRIC

Bulk Density

Solids (Inorganic)

Chloride - Soil, Sediment (177)

INST-0330, INST-0500; modified from SM 4500-CL- E

AUTO COLOR

Chloride

Solids (Inorganic)

Conductivity - Soil (086)

INST-0120, SOIL-0260; modified from SM 2510 B
CONDUCTIVITY METER - EXTRACTION

Conductivity (2:1)

Conductivity (saturated paste)

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Solids (Inorganic)

Conductivity - Soil, Sediment (174)

INST-0101, SOIL-0260; SM 2510

CONDUCTIVITY METER

Conductivity

Solids (Inorganic)

Extractable Barium - Soil (190)

SOIL-0610, INST-0140; modified from AB SOIL QUALITY GUIDELINES/BC ME METHOD 9 and SM 3120 B

ICP/OES - EXTRACTION

Extractable Barium -0.1M CaCl₂

Extractable Barium -1.0M CaCl₂

Solids (Inorganic)

Flashpoint - Soil (088)

TO-2210; modified from ASTM D93-02A

PENSKY MARTENS CLOSED CUP TESTER

Flashpoint

Solids (Inorganic)

Hexavalent Chromium - Soil (091)

SOIL-0600; modified from SSSA PART 3 CH 25

SPECTROPHOTOMETRIC - EXTRACTION

Hexavalent chromium

Solids (Inorganic)

Hydraulic Conductivity - Soil (244)

SOIL-0660; modified from SOIL SCIENCE SOCIETY OF AMERICA

FALLING-HEAD METHOD

Hydraulic Conductivity

Solids (Inorganic)

Mercury - Soil (024)

INST-0161, SOIL-390; modified from SM 3112 B and EPA SW-846 3050B and BC LAB MANUAL SECTION C

COLD VAPOUR AA - DIGESTION

Mercury

Solids (Inorganic)

Metals - Soil (026)

INST-0140, SOIL-390; modified from SM 3120 and EPA SW-846 3050B and BC LAB MANUAL SECTION C

ICP - DIGESTION

Aluminum

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Lithium

Magnesium

Manganese

Molybdenum

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Nickel
Phosphorus
Potassium
Selenium
Silicon
Silver
Sodium
Strontium
Sulphur
Thallium
Titanium
Tungsten
Vanadium
Zinc
Zirconium

Solids (Inorganic)

Metals - Soil (145)

INST-0141, SOIL-390; modified from SM 3125 and EPA SW-846 3050A and BC LAB MANUAL SECTION C
ICP/MS - DIGESTION

Antimony
Arsenic
Barium
Beryllium
Boron
Cadmium
Chromium
Cobalt
Copper
Lead
Manganese
Mercury
Nickel
Strontium
Tin
Titanium
Uranium
Vanadium
Zinc

Solids (Inorganic)

Moisture - Soil (234)

SOIL-310; CARTER 2008, SOIL SAMPLING & METHODS OF ANALYSIS
GRAVIMETRIC

Moisture Content

Solids (Inorganic)

Nitrate plus Nitrite - Soil, Sediment and Sludge (236)

INST-0470, SOIL-0130, SOIL-0630; modified from EPA 600
AUTO COLOR

Nitrate plus Nitrite
Nitrite

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Solids (Inorganic)

Oil and Grease - Soil (047)
TO-2200; modified from EPA 821-R-98-002 METHOD 1664
FTIR - EXTRACTION
Oil and Grease

Solids (Inorganic)

Organic Carbon - Soil (049)
INOR-401-0120, SOIL-110, SOIL-480; modified from MSA PART 3 CH. 34
WALKLEY-BLACK WET OXID.
Organic Matter
Total Organic Carbon (TOC)

Solids (Inorganic)

Organic Matter - Soil, Sediment and Sludge (237)
SOIL-0470; modified from SSSA and LOSS ON IGNITION METHOD, 1996
LOSS ON IGNITION
Organic Matter

Solids (Inorganic)

Particle Size Analysis (PSA) - Soil (058)
SOIL-520; modified from JONES J. 2001 LAB GUIDE FOR CONDUCTING SOIL TEST & PLANT ANALYSIS
HYDROMETER (2 PT.)
% clay
% Sand
% silt texture

Solids (Inorganic)

Particle Size Analysis (PSA) - Soil (059)
SOIL-540; modified from SHELDRIK, B.H. & WANG, C, "PARTICLE SIZE DISTRIBUTION" IN "SOIL
SAMPLING and METHODS OF ANALYSIS", CARTER MO ED. 2007.
GRAVIMETRIC - SIEVE
Particle Size

Solids (Inorganic)

Percent Saturation - Soil (093)
SOIL-0140; modified from CURTIN, MILLER, C S S S, 2007
GRAVIMETRIC - SATURATED PASTE
Percent Saturation (Saturated Paste)

Solids (Inorganic)

pH - Soil (046)
INOR-401-0120, INST-0104, SOIL-0110, SOIL-0140; modified from SM 4500-H+
PH METER
pH
pH (2:1)
pH (Saturated Paste)

Solids (Inorganic)

pH - Soil (202)
SOIL-0260; CARTER, ET AL - SOIL SAMPLING & METHOD ANALYSIS, 2ND EDITION and modified from SM
4500-H+
pH METER - EXTRACTION
pH (1:2) Soil: CaCl₂

Solids (Inorganic)

Phenols - Soil (197)
INST-0300; modified from EPA 600-4-79-20 and EPA 420.2
AUTO COLOR
Total Phenolics

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Solids (Inorganic)

Soluble Cations - Soil (189)

INST-0140, SOIL-0140; modified from SSMA CHAPTER 15 and SM 3120 B

ICP/OES - SATURATED PASTE EXTRACTION

Boron

Calcium

Magnesium

Potassium

Sodium

Sulphur

Solids (Inorganic)

Specific Gravity - Soil (233)

SOIL-0230; PROCEDURE FOR USING THE BAROID MUD BALANCE

MUD BALANCE

Specific Gravity

Solids (Inorganic)

Sulfur - Soil (224)

TO-3502; IN-HOUSE

HPLC

Elemental Sulfur

Solids (Inorganic)

Total Barium - Soil (196)

INST-0140, SOIL-0620; modified from ASTM D4503 and SM 3120 B

ICP - FUSION

Total Barium

Solids (Inorganic)

Total Kjeldahl Nitrogen (TKN) - Soil, Sediment, Sludge (231)

INST-0430, INST-0520, SOIL-0500; modified from EPA 351.2

COLORIMETRIC

Total Kjeldahl Nitrogen (TKN)

Solids (Microbiology)

Heterotrophic Plate Count (HPC) - Soil (055)

MIC-0300, MIC-0400; modified from SM 9215 C and SSMA CH.27

SPREAD PLATE

Heterotrophic Plate Count (HPC)

Solids (Organic)

Alcohols - Soil, Sediment (165)

TO-1420; EPA 8015B and EPA 5021

GC/FID

1-Butanol

2-Butanol

Ethanol

Isobutanol

Isopropanol

Methanol

Pentanol

Propanol

tert-Butyl alcohol

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Solids (Organic)

Amines - Soil (141)

TO-1400; IN-HOUSE

GC/FID - EXTRACTION

Diethanolamine

Diethylethanolamine

Diisopropanolamine

Ethanolamine

Methyl diethanolamine

Monoisopropylamine

Sulfolane

Solids (Organic)

Base Neutral Extractables - Soil, Sediment (200)

TO1500; modified from EPA 8270D

GC/MS

1,2-Dichlorobenzene

1,2,3-Trichlorobenzene

1,2,3,4-Tetrachlorobenzene

1,2,3,5-Tetrachlorobenzene

1,2,4-Trichlorobenzene

1,2,4,5-Tetrachlorobenzene

1,3-Dichlorobenzene

1,3,5-Trichlorobenzene

1,4-Dichlorobenzene

Hexachlorobenzene

Hexachlorobutadiene

Hexachlorocyclopentadiene

Hexachloroethane

Pentachlorobenzene

Solids (Organic)

BTEX - Soil (092)

TO-0050; IN-HOUSE LEACHATE and EPA SW-846 5030B and EPA SW-846 8260B

GC/MS - LEACHATE

Benzene

Ethylbenzene

m,p-Xylene

o-Xylene

Toluene

Solids (Organic)

BTEX - Soil (228)

TO-0050; IN-HOUSE LEACHATE and EPA SW-846 5030B and EPA SW-846 8260B

GC/MS - LEACHATE

Benzene

Ethylbenzene

m,p-Xylene

o-Xylene

Toluene

Solids (Organic)

Ethanolamines - Soil (209)

TO-2240; IN-HOUSE

HPLC

Diethanolamine

Diisopropanolamine

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Monoethanolamine (MEA)
Monoisopropanolamine

Solids (Organic)

Glycols - Soil, Sediment (161)
TO-1410; EPA SW-846 8015D and EPA SW-846 3570 and NIOSH 5523
GC/FID
Diethylene glycol
Ethylene Glycol
Propylene glycol
Tetraethylene glycol
Triethylene glycol

Solids (Organic)

Glyphosate - Soil, Sediment (170)
TO-1320; IN-HOUSE
HPLC
Glyphosate

Solids (Organic)

Nitroaromatics and Nitramines and Nitrate Esters - Soil, Sediment (203)
TO-1100, TO-2100; EPA 8330
HPLC
1,3-DNB
1,3,5-TNB
2-A-4, 6-DNT (2-am-dnt)
2-Nitrotoluene
2,4-DNT
2,4,6-TNT
2,6-DNT
3-Nitrotoluene
3,5-DNA
4-A-2, 6-DNT (4-am-dnt)
4-Nitrotoluene
Cyclotetramethylenetetranitramine (HMX)
Nitrobenzene
Nitroglycerin
PETN
RDX
Tetryl

Solids (Organic)

Petroleum Hydrocarbons (PHC) - Soil (132)
TO-0570; CCME CWS-PHC-TIER 1 METHOD
GC/FID - PURGE AND TRAP
F1: C6-C10

Solids (Organic)

Petroleum Hydrocarbons (PHC) - Soil (133)
TO-0550; modified from CCME CWS-PHC-TIER 1 METHOD
GRAVIMETRIC - SOXHLET EXTRACTION
F4: Gravimetric

Solids (Organic)

Petroleum Hydrocarbons (PHC) - Soil (136)
TO-0560; CCME CWS-PHC-TIER 1 METHOD
GC/FID - COLD SHAKE EXTRACTION
F2: C10-C16

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F3: C16-C34

F4: C34-C50

Solids (Organic)

Petroleum Hydrocarbons (PHC) - Soil (137)

TO-0560; CCME CWS-PHC-TIER 1 METHOD

GRAVIMETRIC - COLD SHAKE EXTRACTION

F4: Gravimetric

Solids (Organic)

Petroleum Hydrocarbons (PHC) - Soil (151)

TO-0543; modified from CCME CWS-PHC TIER 1 METHOD

GC/MS - HEADSPACE

F1: C6-C10

Solids (Organic)

Phenols - Soil, Sediment (199)

TO1200; modified from EPA 8321B

HPLC/UV - EXTRACTION

2-Chlorophenol

2-Methyl-4,6-dinitrophenol

2-Methylphenol

2-Nitrophenol

2,3,4-Trichlorophenol

2,3,4,5-Tetrachlorophenol

2,3,4,6-Tetrachlorophenol

2,3,5-Trichlorophenol

2,3,5,6-Tetrachlorophenol

2,3,6-Trichlorophenol

2,4-Dichlorophenol

2,4-Dimethylphenol

2,4-Dinitrophenol

2,4,5-Trichlorophenol

2,4,6-Trichlorophenol

2,6-Dichlorophenol

3/4-Methylphenol

3,4,5-Trichlorophenol

4-Chloro-3-methyl phenol

4-Nitrophenol

Dinoseb

Pentachlorophenol

Phenol

Solids (Organic)

Polychlorinated Biphenyls (PCB) - Soil (071)

TO-0410; modified from AEC G106.0 and EPA SW-846 8082

GC/ECD - EXTRACTION

Arochlor 1016

Arochlor 1221

Arochlor 1232

Arochlor 1262

Arochlor 1268

Arochlor 1242

Arochlor 1248

Arochlor 1254

Arochlor 1260

Total PCB

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Solids (Organic)

Polycyclic Aromatic Hydrocarbons (PAH) - Soil (028)

TO-0210; modified from EPA SW-846 8270D and EPA SW-846 3540C and EPA SW-846 3570

GC/MS - EXTRACTION

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

Solids (Organic)

Sterilant Herbicides - Soil, Sediment (195)

TO-1315; IN-HOUSE

HPLC

- Atrazine
- Bromacil
- Diuron
- Linuron
- Simazine
- Tebuthiuron

Solids (Organic)

Sulfolane - Soil (241)

TO-3501; IN-HOUSE

GC/MS

Sulfolane

Solids (Organic)

Total Extractable Hydrocarbons (TEH) - Soil (053)

TO-0510; modified from AEC V92-M2 and EPA 8015D and BCMOE CSR EPH IN SOLIDS BY GC/FID

GC/FID - EXTRACTION

- EPH C10-C19
- EPH C19-C32
- SASK (C11-C22)
- SASK (C23-C60)
- Total Extractable Hydrocarbons (TEH): C10-C30

Solids (Organic)

Total Petroleum Hydrocarbons (TPH) - Soil (082)

TO-0550; CCME CWS-PHC-TIER 1 METHOD

GC/FID - SOXHLET EXTRACTION

F2: C10-C16

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F3: C16-C34

F4: C34-C50

Solids (Organic)

Total Purgeable Hydrocarbons (TPH) - Soil (052)

TO-0570; modified from CCME PHC TIER 1 METHOD

GC/FID - EXTRACTION

TPGH (C5-C10)

Volatile Hydrocarbons (VH): C6-C10

Solids (Organic)

Total Purgeable Hydrocarbons (TPH) - Soil (227)

TO-0543-HEADSPACE; modified from CCME PHC TIER 1 METHOD

GC/FID - HEADSPACE

TPqH (C5-C10)

Volatile Hydrocarbons (VH): C6-C10

Solids (Organic)

Volatile Organic Compounds (VOC) - Soil (099)

TO-0330; modified from EPA SW-846 5030C and EPA SW-846 8260C

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

Acetone (2-Propanone)

Benzene

Bromform

Bromodichloromethane

Bromomethane

Carbon Tetrachloride

Chlorobenzene

Chlorodibromomethane

Chloroethane

Chloroform

Chloromethane

cis-1,2-Dichloroethylene

cis-1,3-Dichloropropene

cis-1,3-Dichloropropene

Dichloromethane

Ethylbenzene

Ethylene Dibromide

m/p-xylene

Methyl Ethyl Ketone

Methyl isobutyl Ketone

Methyl t-butyl ether

o-xylene

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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) - Soil (152)

TO-0332; modified from EPA SW-846 8260C and EPA SW-846 5021A

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
Acetone (2-Propanone)
Benzene
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

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Waste (Inorganic)

Anions - Waste (184)

INST-0150, SOIL-0650; modified from SCHED 4, BC HAZARDOUS WASTE REGULATIONS and SM 4110 B
IC - EXTRACTION (MODIFIED SWEP)

Fluoride

Nitrate

Nitrite

Waste (Inorganic)

Cyanide - Waste (185)

INST-0310, SOIL-0650; modified from SCHED 4, BC HAZARDOUS WASTE REGULATIONS
COLORIMETRIC (MODIFIED SWEP)

Cyanide

Waste (Inorganic)

Free Liquid - Waste (181)

SOIL-0580; modified from EPA SW-846 9095

PAINT FILTER TEST

Free Liquid

Waste (Inorganic)

Mercury - Waste (180)

INST-0160, SOIL-0420; BC LAB MANUAL SECTION C-10

COLD VAPOUR AA - Leachate

Mercury

Waste (Inorganic)

Mercury - Waste (183)

INST-0160, SOIL-0650; modified from SCHED 4, BC HAZARDOUS WASTE REGULATIONS

COLD VAPOUR AA - EXTRACTION (MODIFIED SWEP)

Mercury

Waste (Inorganic)

Metals - Waste (179)

INST-0140, SOIL-0420; IN-HOUSE LEACHATE and SM 3120 B

ICP/OES

Antimony

Arsenic

Barium

Beryllium

Boron

Cadmium

Chromium

Cobalt

Copper

Iron

Lead

Mercury

Nickel

Selenium

Silver

Thallium

Uranium

Vanadium

Zinc

Zirconium

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Waste (Inorganic)

Metals - Waste (182)

INST-0140, SOIL-0650; modified from SCHED 4, BC HAZARDOUS WASTE REGULATIONS and SM 3120 B
ICP/OES - EXTRACTION (MODIFIED SWEP)

Arsenic
Barium
Boron
Cadmium
Chromium
Copper
Lead
Mercury
Selenium
Silver
Uranium
Zinc

Waste (Inorganic)

Oil and Grease - Waste (186)

TO-3500; modified from SECTION D219, BC LAB MANUAL, 2013 EDITION
GRAVIMETRIC (SWOG)

Oil and Grease

Water (Inorganic)

Adsorbable Organic Halides (AOX) - Water (219)

INST-480; modified from SM 5320
COLORIMETRIC - TITRATION

Adsorbent Organic Halides

Water (Inorganic)

Alkalinity - Water (001)

INST-0100; modified from SM 2320 B
TITRIMETRIC

Alkalinity (pH 4.5)

Water (Inorganic)

Alkalinity - Water (171)

INST-0101; modified from SM 2320 B
AUTO TITRIMETRIC (PC TITRATE)

Alkalinity (pH 4.5)

Water (Inorganic)

Ammonia - Water (063)

INST-0340, INST-0420; modified from SM 4500-NH3 G
COLORIMETRIC

Ammonia

Water (Inorganic)

Anions - Water (002)

INS-0150, WATR-0200; modified from SM 4110 B
ION CHROMATOGRAPHY

Bromate
Bromide
Chlorate
Chloride
Chlorite
Fluoride
Nitrate

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Nitrite
Sulfate

Water (Inorganic)

Biochemical Oxygen Demand (BOD) - Water (010)
MIC-1500; modified from SM 5210 B and SM 4500-O D
D.O. METER
BOD (5 day)
CBOD (5 day)

Water (Inorganic)

Carbon - Water (062)
INST-0170; modified from SM 5310 B
COMBUSTION - INFRARED
Inorganic Carbon
Organic Carbon

Water (Inorganic)

Chemical Oxygen Demand (COD) - Water (061)
INST-0280; modified from EPA 410.4
SPECTROPHOTOMETRIC
COD

Water (Inorganic)

Colour - Water (243)
WATR-0710; SM 2120 C
COLORIMETRIC - UV/VISIBLE
Apparent Colour
True Colour

Water (Inorganic)

Conductivity - Water (003)
INST-0120; modified from SM 2510 B
CONDUCTIVITY METER
Conductivity (25°C)

Water (Inorganic)

Conductivity - Water (173)
INST-0101; SM 2510
AUTO TITRIMETRIC (PC TITRATE)
Conductivity (25°C)

Water (Inorganic)

Cyanide - Water (021)
INST-0310; modified from EPA 335.4
COLOR - DISTILLATION
Cyanide (SAD)
Free Cyanide

Water (Inorganic)

Dissolved Metals - Water (004)
INST-0140, WATR-0200; modified from SM 3120 B
ICP/OES
Aluminum
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron

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Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Lithium
Magnesium
Manganese
Molybdenum
Nickel
Phosphorus
Potassium
Selenium
Silicon
Silver
Sodium
Strontium
Sulfur
Thallium
Vanadium
Zinc
Zirconium

Water (Inorganic)

Dissolved Metals - Water (129)

INST-0141, WATR-0200; modified from SM 3125

ICP/MS

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

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Zirconium

Water (Inorganic)

Mercury - Water (073)
INST-0160; BC LAB MANUAL SECTION C-10
COLD VAPOUR AA
Mercury

Water (Inorganic)

Mercury - Water [LOW LEVEL] (206)
INST-0162; EPA 1631
COLD VAPOUR ATOMIC FLUORESCENCE - DIGESTION
Mercury

Water (Inorganic)

Naphthenic Acids - Water (239)
TO-2220; IN-HOUSE
FTIR - EXTRACTION
Naphthenic Acids

Water (Inorganic)

Oil and Grease - Water (069)
TO-2200; modified from EPA 821-R-98-002 METHOD 1664
FTIR - EXTRACTION
Total Oil and Grease

Water (Inorganic)

pH - Water (135)
INST-0104; modified from SM 4500-H+ B
pH METER
pH

Water (Inorganic)

pH - Water (172)
INST-0101; modified from SM 4500-H+
AUTO TITRIMETRIC (PC TITRATE)
pH

Water (Inorganic)

Phenols - Water (124)
INST-0300; modified from EPA 420.2
AUTO COLOR
Total Phenolics

Water (Inorganic)

Phosphate - Water (103)
INST-0410, INST-0530; SM 4500-P F
AUTO COLOR
Phosphate

Water (Inorganic)

Phosphorus - Water (229)
INST-0530, WATR-0720; SM 4500-P F
AUTO COLOR
Total Dissolved Phosphorus
Total Phosphorus

Water (Inorganic)

Reactive Silica - Water (007)
INST-0460, INST-0510; modified from EPA 600/4-79-20
AUTO COLOR
Reactive Silica

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Water (Inorganic)

Residual Chlorine - Water (238)
WATR-0700; modified from SM 4500-CL
IODOMETRIC
Total Chlorine

Water (Inorganic)

Solids - Water (011)
WATR-0600, WATR-0610; SM 2540 C and SM 2540 D
GRAVIMETRIC
Total Dissolved Solids
Total Suspended Solids

Water (Inorganic)

Sulfide - Water (105)
WATR-0100; modified from SM 4500-S2- D
COLORIMETRIC
Sulphide

Water (Inorganic)

Total Hexavalent Chromium - Water (235)
WATR-0300; modified from SM 3500-CR
COLORIMETRIC
Hexavalent Chromium

Water (Inorganic)

Total Kjeldahl Nitrogen (TKN) - Water (009)
INST-0430, INST-0520; modified from EPA 351.2
AUTO COLOR - DIGESTION
Total Kjeldahl Nitrogen

Water (Inorganic)

Total Metals - Water (143)
INST-0140, WATR-0200; modified from SM 3120
ICP/OES - NITRIC ACID DIGESTION
Aluminum
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Lithium
Magnesium
Manganese
Molybdenum
Nickel
Phosphorus
Potassium
Selenium
Silicon

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Silver
Sodium
Strontium
Sulfur
Thallium
Tin
Titanium
Uranium
Vanadium
Zinc
Zirconium

Water (Inorganic)

Total Metals - Water (144)

INST-0141, WATR-0200; modified from SM 3125

ICP/MS - NITRIC ACID DIGESTION

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

Water (Inorganic)

Turbidity - Water (107)

WATR-0500; SM 2130 B

NEPHELOMETRY

Turbidity

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Water (Microbiology)

Coliforms - Water (208)

MIC-0205; SM 9223

MOST PROBABLE NUMBER (COLILERT - QUANTI-TRAY)

Escherichia coli (E. coli)

Fecal (Thermotolerant) Coliforms

Total Coliforms

Water (Microbiology)

Coliforms - Water (211)

MIC-0202; modified from SM 9222 B

MEMBRANE FILTRATION (MI AGAR)

Escherichia coli (E. coli)

Total Coliforms

Water (Microbiology)

Fecal (Thermotolerant) Coliforms - Water (012)

MIC-0203; SM 9222 D

MEMBRANE FILTRATION (mFC)

Fecal (Thermotolerant) Coliforms

Water (Microbiology)

Heterotrophic Plate Count (HPC) - Water (068)

MIC-0300; modified from SM 9215 C

SPREAD PLATE

Heterotrophic Plate Count (HPC)

Water (Microbiology)

Pseudomonas - Water (215)

MIC-0630; modified from SM 9213

IDEXX PSEUDALERT QUANTI-TRAY

Pseudomonas aeruginosa

Water (Organic)

Alcohols - Water (166)

TO-1420; EPA 8015B and EPA 5021

GC/FID

1-Butanol

2-Butanol

Ethanol

Isobutanol

Isopropanol

Methanol

Pentanol

Propanol

tert-Butyl alcohol

Water (Organic)

Base Neutral Extractables - Wastewater (201)

TO1500; modified from EPA 8270D

GC/MS

1,2-Dichlorobenzene

1,2,3-Trichlorobenzene

1,2,3,4-Tetrachlorobenzene

1,2,3,5-Tetrachlorobenzene

1,2,4-Trichlorobenzene

1,2,4,5-Tetrachlorobenzene

1,3-Dichlorobenzene

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1,3,5-Trichlorobenzene
1,4-Dichlorobenzene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Pentachlorobenzene

Water (Organic)

Ethanolamines - Water (210)
TO-2240; IN-HOUSE
HPLC
Diethanolamine
Diisopropanolamine
Monoethanolamine (MEA)
Monoisopropanolamine

Water (Organic)

Glycols - Water (162)
TO-1410; modified from NIOSH 5523
GC/FID
Diethylene glycol
Ethylene glycol
Propylene glycol
Tetraethylene glycol
Triethylene glycol

Water (Organic)

Glyphosate - Water (169)
TO-1320; OSHA PV2067
HPLC
Glyphosate

OSDWA †

Water (Organic)

Nitrilotriacetic Acid (NTA) - Water (218)
TO-3503; IN-HOUSE
HPLC
Nitrilotriacetic acid (NTA)

Water (Organic)

Nitroaromatics and Nitramines and Nitrate Esters - Water (204)
TO-1100, TO-2100; EPA 8330
HPLC
1,3-DNB
1,3,5-TNB
2-A-4, 6-DNT (2-am-dnt)
2-Nitrotoluene
2,4-DNT
2,4,6-TNT
2,6-DNT
3-Nitrotoluene
3,5-DNA
4-A-2, 6-DNT (4-am-dnt)
4-Nitrotoluene
Cyclotetramethylenetetranitramine (HMX)
Nitrobenzene
Nitroglycerin
PETN

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RDX
Tetryl

Water (Organic)

Phenols - Water, Wastewater (198)

TO-1100, TO-1200; IN-HOUSE
HPLC/UV - EXTRACTION
2-Chlorophenol
2-Methyl-4,6-dinitrophenol
2-Methylphenol
2-Nitrophenol
2,3,4-Trichlorophenol
2,3,4,5-Tetrachlorophenol
2,3,4,6-Tetrachlorophenol
2,3,5-Trichlorophenol
2,3,5,6-Tetrachlorophenol
2,3,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,6-Dichlorophenol
3,4,5-Trichlorophenol
4-Chloro-3-methyl phenol
4-Nitrophenol
Dinoseb
m,p-Cresol
Pentachlorophenol
Phenol

Water (Organic)

Polychlorinated Biphenyls (PCB) - Water (160)

TO-0400; modified from EPA 8082
GC/ECD
Arochlor 1016
Arochlor 1221
Arochlor 1232
Arochlor 1262
Arochlor 1268
Arochlor 1242
Arochlor 1248
Arochlor 1254
Arochlor 1260
Total PCB

Water (Organic)

Polycyclic Aromatic Hydrocarbons (PAH) - Water (014)

TO-0200; modified from EPA SW-846 8270C and EPA SW-846 3510B and EPA SW-846 3511
GC/MS - EXTRACTION
1-Methylnaphthalene
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Acridine
Anthracene

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

Water (Organic)

Sterilant Herbicides - Water (194)

TO-1315; IN-HOUSE

HPLC

Atrazine

Bromacil

Diuron

Linuron

Simazine

Tebuthiuron

Water (Organic)

Sulfolane - Water (240)

TO-3501; IN-HOUSE

GC/MS

Sulfolane

Water (Organic)

Total Amines - Water (142)

TO-1400; IN-HOUSE

GC/FID - EXTRACTION

Diethanolamine

Diethylethanolamine

Diisopropanolamine

Ethanolamine

Methyl diethanolamine

Monoisopropylamine

Sulfolane

Water (Organic)

Total Extractable Hydrocarbons (TEH) - Water (066)

TO-0511; modified from EPA SW-846 3510 and AEC V92-M2 and BCMOE CSR EPH IN WATER BY GC/FID

GC/FID - EXTRACTION

C10-C32

EPH C10-C19

EPH C19-C32

F2: C10-C16

F3: C16-C34

F4: C34-C50

SASK (C11-C22)

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SASK (C23-C60)

Water (Organic)

Total Purgeable Hydrocarbons (TPH) - Water (065)

TO-0540; modified from EPA SW-846 5030B and EPA SW-846 8260B

GC/FID - PURGE AND TRAP

F1: C6-C10

TPGH (C5-C10)

Volatile Hydrocarbons (VH): C6-C10

Water (Organic)

Total Purgeable Hydrocarbons (TPH) - Water (150)

TO-0542; modified from EPA SW-846 5021A and EPA SW-846 8260 and BC LAB MANUAL

GC/MS - HEADSPACE

F1: C6-C10

TPGH (C5-C10)

Volatile Hydrocarbons (VH): C6-C10

Water (Organic)

Volatile Organic Acids - Water (212)

TO-2230; IN-HOUSE

ION CHROMATOGRAPHY

Acetic acid

Butyric acid

Caproic acid

Formic acid

Isobutyric acid

Isovaleric acid

Propionic acid

Valeric acid

Water (Organic)

Volatile Organic Compounds (VOC) - Water (125)

TO-0330; modified from EPA SW-846 8260C and EPA SW-846 5030C

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

Acetone (2-Propanone)

Benzene

Bromodichloromethane

Bromoform

Bromomethane

Carbon Tetrachloride

Chlorobenzene

Chlorodibromomethane

Chloroethane

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Chloroform
Chloromethane
cis-1,2-Dichloroethylene
cis-1,3-Dichloropropene
Dibromochloromethane
Dichloromethane
Ethylbenzene
Ethylene Dibromide
m/p-xylene
Methyl t-butyl ether (MTBE)
Methyl Ethyl Ketone
Methyl isobutyl Ketone
Methyl t-butyl ether
o-xylene
Styrene
Tetrachloroethylene
Toluene
trans-1,2-Dichloroethylene
trans-1,3-Dichloropropene
Trichloroethene
Trichloroethylene
Trichlorofluoromethane
Vinyl Chloride

Water (Organic)

Volatile Organic Compounds (VOC) - Water (153)

TO-0332; modified from EPA SW-846 8260C and EPA SW-846 5021A

GC/MS - HEADSPACE

1,1-Dichloroethane
1,1-dichloroethylene
1,1,1-Trichloroethane
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
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
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 - Liquid Phase - Water (020)

TOX-0100; EPS 1/RM/24

BIOLUMINESCENCE

Microtox IC50 (15 min)

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