



CALA

Canadian Association for
Laboratory Accreditation Inc.

CALA Directory of Laboratories

Membership Number: 2728
Laboratory Name: Caduceon Environmental Laboratories (Kingston)
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Standard: Conforms with requirements of ISO/IEC 17025
Clients Served:
Revised On: February 14, 2019
Valid To: June 11, 2021

Scope of Accreditation

Oil (Organic)

Polychlorinated Biphenyls (PCB) - Oil (081)
PCB-002; modified from EPA 8082A
GC/ECD - EXTRACTION
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Total PCB

Solids (Inorganic)

Conductivity - Solids (077)
COND-003; modified from ON MOECC E3138
CONDUCTIVITY METER
Conductivity

Solids (Inorganic)

Cyanide - Solids [Soil] (074)
CN-001; modified from EPA 9012B
COLORIMETRIC - WATER EXTRACTION
Cyanide, Total
Free Cyanide

Solids (Inorganic)

Extractable Cyanide - Solids (061)
CN-001; modified from EPA 1311 (PREPARATION) and SM 4500-CN- E (ANALYSIS)
COLORIMETRIC - TCLP
Cyanide (WAD)

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Solids (Inorganic)

Extractable Fluoride - Solids (062)

F-001; modified from EPA 1311 (PREPARATION) and SM 4500-F- D (ANALYSIS)

COLORIMETRIC - TCLP

Fluoride

Solids (Inorganic)

Oil and Grease - Solids [Soil] (049)

O & G-001; modified from SM 5520 B and SM 5520 F

GRAVIMETRIC

Animal/Vegetable Oil and Grease

Mineral Oil and Grease

Total Oil and Grease

Solids (Inorganic)

pH - Solids [Soil] (056)

pH-001/pH-003; modified from ON MOECC E3137

pH METER

pH

Solids (Inorganic)

Total Ammonia - Solids [Biosolid, Soil] (083)

NH3-001; modified from ON MOECC E3116

AUTO COLOR

Total Ammonia

Solids (Inorganic)

Total Kjeldahl Nitrogen (TKN) - Solids [Biosolid, Soil] (078)

TPTKN-001; modified from ON MOECC E3116

AUTO COLOR - DIGESTION

Total Kjeldahl Nitrogen (TKN)

Solids (Inorganic)

Total Phosphorus - Solids [Biosolid, Soil] (079)

TPTKN-001; modified from ON MOECC E3116

AUTO COLOR - DIGESTION

Total Phosphorus

Solids (Organic)

Base Neutral Acid Extractables (BNA) - Solids (060)

NAB-W-001; modified from EPA 1311 (PREPARATION) and EPA 8270D (ANALYSIS)

GC/MS - TCLP

2,3,4,6-Tetrachlorophenol

2,4-Dichlorophenol

2,4-Dinitrotoluene

2,4,5-Trichlorophenol

2,4,6-Trichlorophenol

3/4-Methylphenol

Benzo(a)pyrene

Cresols (total)

Hexachlorobenzene

Hexachlorobutadiene

Hexachloroethane

Nitrobenzene

Pentachlorophenol

Pyridine

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Solids (Organic)

Base Neutral Acid Extractables (BNA) - Solids [Soil] (048)

NAB-S-001; modified from EPA 525.2 and EPA 8270D

GC/MS - EXTRACTION

1+2-Methylnaphthalene (Calculation)

1-Methylnaphthalene

1,1-Biphenyl

1,2,4-Trichlorobenzene

2-Chlorophenol

2-Methylnaphthalene

2,4+2,6-Dinitrotoluene (Calculation)

2,4-Dimethylphenol

2,4-Dinitrophenol

2,4-Dinitrotoluene

2,4,5-Trichlorophenol

2,6-Dinitrotoluene

3,3'-Dichlorobenzidine

Acenaphthene

Acenaphthylene

Alachlor

Aldicarb

Anthracene

Atrazine

Atrazine, desethyl

Azinphos-methyl

Bendiocarb

Benzo (a) anthracene

Benzo (a) pyrene

Benzo (b) fluoranthene

Benzo (g,h,i) perylene

Benzo (k) fluoranthene

Bis(2-chloroethyl) ether

Bis(2-chloroisopropyl) ether

Bis(2-ethylhexyl) phthalate

Bromoxynil

Carbaryl

Carbofuran

Chlorpyrifos ethyl

Chrysene

Cyanazine

Di-n-butyl phthalate

Diazinon

Dibenzo (a,h) anthracene

Dicamba

Dichlorophenol, 2,4-

Dichlorophenoxy acetic acid, 2,4-

Diclofop-methyl

Diethyl phthalate

Dimethoate

Dimethyl phthalate

Dinoseb

Diuron

Fluoranthene

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Fluorene
Hexachloroethane
Indeno (1,2,3 - cd) pyrene
Malathion
Metolachlor
Metribuzin
Naphthalene
p-Chloroaniline
Parathion-ethyl
Pentachlorophenol
Phenanthrene
Phenol
Phorate
Picloram
Prometryne
Pyrene
Simazine
Temephos
Terbufos
Tetrachlorophenol, 2,4,5,6-
Total PAHs (Calculation)
Triallate
Trichlorophenol, 2,4,6-
Trichlorophenoxy acetic acid, 2,4,5-
Trifluralin

Solids (Organic)

Chlorinated Pesticides - Solids [Soil] (076)
PESTCL-002; modified from EPA 8081B and EPA 8082A
GC/ECD - EXTRACTION

Aldrin
Aldrin + Dieldrin (Calculation)
alpha-BHC
alpha-Chlordane
beta-BHC
DDT + metabolites
Dieldrin
Endosulfan I
Endosulfan I + Endosulfan II (Calculation)
Endosulfan II
Endosulfan Sulfate
Endrin
gamma-BHC (Lindane)
gamma-Chlordane
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorobutadiene
Hexachloroethane
Methoxychlor
Mirex
o,p'-DDD
o,p'-DDE
o,p'-DDT

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Oxychlorane
p,p'-DDD
p,p'-DDE
pp'-DDT
Total DDD (Calculation)
Total DDE (Calculation)
Total DDT (Calculation)

Solids (Organic)

Petroleum Hydrocarbons (PHC) - Solids [Soil] (046)
PHC-S-001; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD and ON MOECC E3398
GC/FID - EXTRACTION
Diesel Range Organics C10-C24
F2: C10-C16
F3: C16-C34
F4: C34-C50
Heavy Oils: C24-C50
TPH (C10-C50)

Solids (Organic)

Petroleum Hydrocarbons (PHC) - Solids [Soil] (058)
PHC-S-001; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD
GRAVIMETRIC
F4: Gravimetric

Solids (Organic)

Polychlorinated Biphenyls (PCB) - Solids [Soil] (080)
PCB-003; modified from EPA 8082A
GC/ECD - EXTRACTION
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Total PCB

Water (Inorganic)

Alkalinity - Water (008)
ALK 001; modified from SM 2320 B
TITRIMETRIC
Alkalinity (pH 4.5)
Bicarbonate Alkalinity (calculation)
Carbonate Alkalinity (calculation)

OSDWA †

Water (Inorganic)

Ammonia + Ammonium - Water [Liquid Biosolid, Wastewater] (025)
NH3-001; modified from SM 4500-NH3 H
AUTO COLOR
Ammonia
Unionized Ammonia (Calculation)

OSDWA †

Water (Inorganic)

Biochemical Oxygen Demand (BOD) - Water (054)
BOD-001; modified from SM 5210 B
D.O. METER
BOD (5 day)
CBOD (5 day)

OSDWA †

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Water (Inorganic) Colour - Water (013) COL 001; modified from SM 2120 C COLORIMETRIC True Colour	OSDWA †
Water (Inorganic) Conductivity - Water (010) COND 001; modified from SM 2510 B CONDUCTIVITY METER Conductivity (25°C)	OSDWA †
Water (Inorganic) Cyanide - Water (006) CN 001; modified from SM 4500-CN- E AUTO COLOR - DISTILLATION Cyanide (SAD) Free Cyanide	OSDWA †
Water (Inorganic) Oil and Grease - Water (047) O & G-001; modified from SM 5520 B and SM 5520 F GRAVIMETRIC Animal/Vegetable Oil and Grease Mineral Oil and Grease Total Oil and Grease	OSDWA †
Water (Inorganic) pH - Water (009) PH 001; modified from SM 4500-H+ B pH METER pH	OSDWA †
Water (Inorganic) Phenols - Water (086) PHEN-01; modified from ON MOECC E3179 AUTO COLOR Total Phenolics	OSDWA †
Water (Inorganic) Phosphate - Water (033) DRP-001; modified from SM 4500-P E COLOR Phosphate	OSDWA †
Water (Inorganic) Phosphate - Water (088) DRP-002; modified from EPA 365.2 and ON MOECC E3364 AUTO COLOR Phosphate	OSDWA †
Water (Inorganic) Solids - Water (026) TSS-001/TS-001; modified from SM 2540 B and SM 2540 D and SM 2540 E GRAVIMETRIC Total Solids Total Suspended Solids Total Volatile Solids Volatile Suspended Solids	OSDWA †

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Water (Inorganic) Sulphide - Water (036) H2S-001; modified from SM 4500-S2- D COLORIMETRIC Sulphide	OSDWA †
Water (Inorganic) Tannin and Lignin - Water (085) TAN-001; SM 5550 AUTO COLOR Tannin and Lignin	OSDWA †
Water (Inorganic) Total Kjeldahl Nitrogen (TKN) - Water [Liquid Biosolid, Wastewater] (016) TPTKN 001; modified from ON MOECC E3199A.1 AUTO COLOR - DIGESTION Organic Nitrogen Total Kjeldahl Nitrogen	OSDWA †
Water (Inorganic) Total Phosphorus - Water [Liquid Biosolid, Wastewater] (042) TPTKN 001; modified from ON MOECC E3199A.1 AUTO COLOR - DIGESTION Total Phosphorus	OSDWA †
Water (Inorganic) Turbidity - Water (014) TURB 001; modified from SM 2130 B TURBIDIMETRIC Turbidity	OSDWA †
Water (Microbiology) Coliforms - Water (035) ECTC-001; modified from ON MOECC E3407 MEMBRANE FILTRATION (DC) Background Counts Escherichia coli (E. coli) Total Coliforms	OSDWA †
Water (Microbiology) Escherichia coli (E. coli) - Water (002) EC 001; modified from SM 9222 D MEMBRANE FILTRATION (mTEC-XGLUC) Escherichia coli (E. coli)	OSDWA †
Water (Microbiology) Fecal (Thermotolerant) Coliforms - Water (044) FC-001; modified from SM 9222 D MEMBRANE FILTRATION (mTEC) WITH INDICATOR Fecal (Thermotolerant) Coliforms	OSDWA †
Water (Microbiology) Fecal Streptococci - Water (003) FS 001; modified from SM 9230 C MEMBRANE FILTRATION Fecal streptococci	OSDWA †

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Water (Microbiology) Heterotrophic Plate Count (HPC) - Water (001) HPC 001; modified from SM 9215 D MEMBRANE FILTRATION Heterotrophic Plate Count (HPC)	OSDWA †
Water (Microbiology) Total Coliforms - Water (043) TC 001; modified from SM 9222 B MEMBRANE FILTRATION (mENDO) Background Counts Total Coliforms	OSDWA †
Water (Organic) 2-methyl-4-chlorophenoxyacetic acid (MCPA) - Water (084) HERB-W-001; modified from EPA 8151A GC/MS MCPA	OSDWA †
Water (Organic) Base Neutral Acid Extractables (BNA) - Water (030) NAB-W-001; modified from EPA 8270D GC/MS 1+2-Methylnaphthalene (Calculation) 1-Methylnaphthalene 1,1-Biphenyl 1,2-Dichlorobenzene 1,2,4-Trichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2-Chloronaphthalene 2-Chlorophenol 2-Methylnaphthalene 2-Methylphenol (o-Cresol) 2-Nitrophenol 2,3,4,6-tetrachlorophenol 2,4+2,6-Dinitrotoluene (Calculation) 2,4-dichlorophenol 2,4-dichlorophenoxyacetic acid 2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,4,5-Trichlorophenol 2,4,5-trichlorophenoxyacetic acid 2,4,6-trichlorophenol 2,6-Dinitrotoluene 3,3-Dichlorobenzidine 4-Bromophenyl phenyl ether 4-Chloro-3-methyl phenol 4-Chloroaniline 4-Chlorophenyl phenyl ether 4-Methylphenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Acenaphthene Acenaphthylene	OSDWA †

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Alachlor
Aldicarb
Anthracene
Atrazine
Azinphos-methyl
Azobenzene
Bendiocarb
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl) ether
Bis(2-chloroisopropyl) ether
Bis(2-ethylhexyl) phthalate
Bromoxynil
Butylbenzyl phthalate
Carbaryl
Carbazole
Carbofuran
Chlorpyrifos (ethyl)
Chrysene
Cyanazine
Desethyl atrazine
Di-n-butyl phthalate
Di-n-octyl phthalate
Diazinon
Dibenzo (a,h) anthracene
Dibenzofuran
Dicamba
Diclofop-methyl (as free acid)
Diethyl phthalate
Dimethoate
Dimethyl phthalate
Dinoseb
Diuron
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno (1,2,3 - cd) pyrene
Isophorone
Malathion
Metolachlor
Metribuzin
N-Nitrosodi-n-propylamine
N-Nitrosodiphenylamine
Naphthalene
Nitrobenzene
Parathion (ethyl)

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Pentachlorophenol
Phenanthrene
Phenol
Phorate
Picloram
Prometryne
Pyrene
Simazine
Temephos
Terbufos
Total PAHs (Calculation)
Triallate
Trifluralin

Water (Organic)

OSDWA †

Diquat and Paraquat - Water (028)
HPLCDIQ-001; modified from EPA 549.2
HPLC
Diquat
Paraquat

Water (Organic)

OSDWA †

Glycols - Water (087)
GLYCOL-01; modified from EPA 8015C
GC/FID
Diethylene glycol
Ethylene glycol
Propylene glycol

Water (Organic)

OSDWA †

Glyphosate - Water (031)
GLYPH-002; modified from EPA 547
DIRECT INJECTION HPLC
Glyphosate

Water (Organic)

OSDWA †

Pesticides and Polychlorinated Biphenyls (PCB) - Water (027)
PESTCL-001/PCB-001; modified from EPA 8081 and EPA 8082A
GC/ECD - EXTRACTION
A -BHC
a - Chlordane
Aldrin
Aldrin + Dieldrin (Calculation)
beta-BHC
DDT + metabolites (Calculation)
delta-BHC
Dieldrin
Endosulfan I
Endosulfan I + Endosulfan II (Calculation)
Endosulfan II
Endosulfan Sulfate
Endrin
Endrin Aldehyde
g - Chlordane
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene

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Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Lindane (gamma-BHC)
Mirex
o,p' - DDT
o,p'-DDD
o,p'-DDE
Oxychlorane
p,p' - DDT
p,p' Methoxychlor
p,p'-DDD
p,p'-DDE
Total DDD (Calculation)
Total DDE (Calculation)
Total DDT (Calculation)
Total PCB

Water (Organic)

OSDWA †

Petroleum Hydrocarbons (PHC) - Water (050)
PHC-W-001; modified from ON MOECC E3398 and ON MOECC E3421
GC/FID - EXTRACTION
Diesel Range Organics C10-C24
F2: C10-C16
F3: C16-C34
F4: C34-C50
Heavy Oils: C24-C50
TPH (C10-C50)

Water (Organic)

OSDWA †

Petroleum Hydrocarbons (PHC) - Water (059)
PHC-W-001; ON MOECC E3421
GRAVIMETRIC
F4: Gravimetric

Water (Organic)

Polychlorinated Biphenyls (PCB) - Water (082)
PCB-001, PESTCL-001; modified from EPA 8081 and EPA 8082A
GC/ECD - EXTRACTION
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Total PCB

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