



CALA

Canadian Association for
Laboratory Accreditation Inc.

CALA Directory of Laboratories

Membership Number: 2644

Laboratory Name: Caduceon Environmental Laboratories (Ottawa)

Parent Institution: Caduceon Enterprises Inc.

Address: 2378 Holly Lane Ottawa ON K1V 7P1

Contact: Mr. Greg Clarkin

Phone: (613) 526-0123

Fax: (613) 526-1244

Email: gclarkin@caduceonlabs.com; sburrows@caduceonlabs.com

Standard: Conforms with requirements of ISO/IEC 17025

Clients Served:

Revised On: February 25, 2019

Valid To: August 1, 2021

Scope of Accreditation

Air (Inorganic)

Metals - Air [Filter] (012)

D-ICP-02; modified from NIOSH 7303 and SM 3120 B

ICP - DIGESTION

Cadmium

Copper

Lead

Zinc

Air (Inorganic)

Total Suspended Particulates - Air [Filter, Particulate] (018)

A-TSP-01; modified from ON MOECC E3288A

GRAVIMETRIC

Total Suspended Particulates

Dustfall

Dustfall - Dustfall (020)

A-DF-01; modified from ON MOECC E3043A

FILTRATION - GRAVIMETRIC

Insoluble Dustfall

Total Dustfall

Fluoride Candles

Fluoride - Fluoride Candles (019)

A-FISE-01; modified from ON MOECC FSIE-1983D

DIGESTION - ISE

Fluoride

† "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).

Solids (Inorganic)

Anions - Solids [Biosolid, Soil] (069)

A-IC-01; modified from SM 4110 C

ION CHROMATOGRAPHY - EXTRACTION

Chloride

Nitrate

Nitrite

Sulphate

Solids (Inorganic)

Boron (Hot Water Soluble) - Solids [Soil] (098)

D-ICP-02; ON MOECC E3470

ICP/AES - EXTRACTION

Boron

Solids (Inorganic)

Conductivity - Solids [Sediment, Soil] (099)

A-COND-03; modified from ON MOECC E3530 and SM 2510 B

CONDUCTIVITY METER - EXTRACTION

Conductivity

Solids (Inorganic)

Extractable Anions - Solids (090)

A-IC-01; modified from EPA 1311 (PREPARATION) and SM 4110 C (ANALYSIS)

ION CHROMATOGRAPHY - TCLP

Nitrate

Nitrite

Solids (Inorganic)

Extractable Metals - Solids (091)

D-ICP-01; modified from EPA 1311 (PREPARATION) and SM 3120 B (ANALYSIS)

ICP/AES - TCLP

Arsenic

Barium

Beryllium

Boron

Cadmium

Chromium

Lead

Nickel

Silver

Zinc

Solids (Inorganic)

Extractable Metals - Solids (092)

D-ICPMS-01; modified from EPA 1311 (PREPARATION) and EPA 200.8 (ANALYSIS)

ICP/MS - TCLP

Antimony

Arsenic

Selenium

Uranium

Solids (Inorganic)

Extractable Metals - Solids (093)

D-HG-02; modified from EPA 1311 (PREPARATION) and SM 3112 B (ANALYSIS)

COLD VAPOUR AA - TCLP

Mercury

† "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).

Solids (Inorganic)

Flashpoint - Solids [Ash, Soil] (096)

C-FPCC-01; modified from ASTM D93

CLOSED CUP FLASH POINT TESTER

Flashpoint

Solids (Inorganic)

Hexavalent Chromium - Solids [Soil] (094)

D-CRVI-02; modified from EPA 3060A and EPA 7196A

COLORIMETRIC - MANUAL

Chromium VI

Solids (Inorganic)

Mercury - Solids [Biosolid, Soil] (017)

D-HG-01; modified from EPA 7471A

COLD VAPOUR AA - DIGESTION

Mercury

Solids (Inorganic)

Metals - Solids [Biosolid, Soil] (015)

D-ICP-02; modified from EPA 6010

ICP/OES - DIGESTION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Molybdenum

Nickel

Potassium

Silver

Sodium

Strontium

Tin

Titanium

Tungsten

Vanadium

Zinc

Solids (Inorganic)

pH - Solids [Sediment, Sludge, Soil] (100)

A-pH-03; modified from ON MOECC E3530 and SM 4500-H+

pH METER - EXTRACTION

pH

† "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).

Solids (Inorganic)

Total Metals - Solids [Biosolid, Soil] (070)

D-ICPMS-01; modified from EPA 6020

ICP/MS - DIGESTION

Antimony

Arsenic

Selenium

Silver

Thallium

Uranium

Solids (Organic)

Extractable Volatile Organic Compounds (VOC) - Solids (089)

C-VOC-02, C-VOC-01; modified from EPA 1311 (PREPARATION) and EPA 5030 (ANALYSIS) and EPA 8260 (ANALYSIS)

GC/MS - PURGE AND TRAP - TCLP

1,1-Dichloroethylene

1,2-Dichlorobenzene

1,2-Dichloroethane

1,4-Dichlorobenzene

Benzene

Carbon tetrachloride

Chlorobenzene

Chloroform

Dichloromethane

Methyl ethyl ketone

Tetrachloroethylene

Trichloroethylene

Vinyl chloride

Water (Inorganic)

OSDWA †

Alkalinity - Water (088)

A-ALK-03; modified from SM 2320 B

AUTO TITRIMETRIC

Alkalinity (pH 4.5)

Water (Inorganic)

OSDWA †

Anions - Water [Liquid Biosolid, Wastewater] (002)

A-IC-01; modified from SM 4110 C

ION CHROMATOGRAPHY

Bromide

Chloride

Fluoride

Nitrate

Nitrite

Sulfate

Water (Inorganic)

OSDWA †

Carbon - Water (054)

C-OC-01; modified from EPA 415.2 and SM 5310 C

IR-UV-PERSULFATE

Organic Carbon

Water (Inorganic)

OSDWA †

Chemical Oxygen Demand (COD) - Water (083)

C-COD-01; modified from SM 5220 D

COLORIMETRIC

COD

† "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).

The list of tests and measurement capabilities for which a laboratory is accredited can change at any time due to circumstances such as scope extensions, voluntary withdrawal of tests by the laboratory and suspension. Scopes are published by the CALA via the Internet at http://www.cala.ca/cala_directories.html

Water (Inorganic) Colour - Water (027) A-COL-01; modified from SM 2120 C SPECTROPHOTOMETRIC True Colour	OSDWA †
Water (Inorganic) Conductivity - Water (003) A-COND-01; modified from SM 2510 B CONDUCTIVITY METER Conductivity (25°C)	OSDWA †
Water (Inorganic) Conductivity - Water (087) A-COND-02; modified from SM 2510 B AUTO CONDUCTIVITY METER Conductivity (25°C)	OSDWA †
Water (Inorganic) Dissolved and Extractable Metals - Water (004) D-ICP-01; modified from SM 3120 B ICP Aluminum Barium Beryllium Bismuth Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Molybdenum Nickel Potassium Silicon Silver Sodium Strontium Tin Titanium Tungsten Vanadium Yttrium Zinc Zirconium	OSDWA †
Water (Inorganic) Dissolved Metals - Water (049) D-ICPMS-01; modified from EPA 200.8 ICP/MS Antimony	OSDWA †

† "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).

The list of tests and measurement capabilities for which a laboratory is accredited can change at any time due to circumstances such as scope extensions, voluntary withdrawal of tests by the laboratory and suspension. Scopes are published by the CALA via the Internet at http://www.cala.ca/cala_directories.html

Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Copper
Lead
Molybdenum
Selenium
Silver
Thallium
Uranium
Vanadium

Water (Inorganic)

Hexavalent Chromium - Water (095)
D-CRVI-01; modified from ON MOECC E3056
COLORIMETRIC - MANUAL
Hexavalent Chromium

Water (Inorganic)

Mercury - Water [Wastewater] (025)
D-HG-02; modified from SM 3112 B
COLD VAPOUR AA - DIGESTION
Mercury

OSDWA †

Water (Inorganic)

pH - Water (086)
A-pH-02; modified from SM 4500-H+ B
AUTO - pH METER
pH

OSDWA †

Water (Inorganic)

pH - Water [Liquid Biosolid, Wastewater] (005)
A-pH-01; modified from SM 4500-H+
pH METER
pH

OSDWA †

Water (Inorganic)

Total Metals - Water [Liquid Biosolid, Wastewater] (067)
D-ICP-01; modified from SM 3120 B
ICP/AES - DIGESTION
Aluminum
Antimony
Arsenic
Barium
Beryllium
Bismuth
Boron
Cadmium
Calcium
Chromium
Cobalt
Copper
Iron
Lead
Lithium

† "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).

The list of tests and measurement capabilities for which a laboratory is accredited can change at any time due to circumstances such as scope extensions, voluntary withdrawal of tests by the laboratory and suspension. Scopes are published by the CALA via the Internet at http://www.cala.ca/cala_directories.html

Magnesium
 Manganese
 Molybdenum
 Nickel
 Potassium
 Silver
 Sodium
 Strontium
 Tin
 Titanium
 Tungsten
 Vanadium
 Yttrium
 Zinc
 Zirconium

Water (Inorganic)

Total Metals - Water [Liquid Biosolid, Wastewater] (071)

D-ICPMS-01; modified from EPA 6020

ICP/MS - DIGESTION

Antimony
 Arsenic
 Barium
 Beryllium
 Cadmium
 Chromium
 Cobalt
 Copper
 Lead
 Molybdenum
 Selenium
 Silver
 Vanadium

Water (Inorganic)

Turbidity - Water (026)

A-TURB-01; modified from SM 2130 B

NEPHELOMETRY

Turbidity

OSDWA †

Water (Microbiology)

Coliforms - Water (050)

B-ECTC-01; modified from ON MOECC E3407

MEMBRANE FILTRATION (DC)

Background Bacteria
 Escherichia coli (E. coli)
 Total Coliforms

OSDWA †

Water (Microbiology)

Escherichia coli (E. coli) - Water (010)

B-MFEC-01; modified from ON MOECC E3371

MEMBRANE FILTRATION (EC)

Escherichia coli (E. coli)

OSDWA †

† "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).

The list of tests and measurement capabilities for which a laboratory is accredited can change at any time due to circumstances such as scope extensions, voluntary withdrawal of tests by the laboratory and suspension. Scopes are published by the CALA via the Internet at http://www.cala.ca/cala_directories.html

Water (Microbiology) Fecal (Thermotolerant) Coliforms - Water (065) B-MFFC-01; modified from ON MOECC E3371 MEMBRANE FILTRATION (mFC) Fecal (Thermotolerant) Coliforms	OSDWA †
Water (Microbiology) Heterotrophic Plate Count (HPC) - Water (021) B-HPC-01; modified from SM 9215 C SPREAD PLATE Heterotrophic Plate Count (HPC)	OSDWA †
Water (Microbiology) Total Coliforms - Water (066) B-MFTC-01; modified from ON MOECC E3371 MEMBRANE FILTRATION (mENDO) Background Counts Total Coliforms	OSDWA †
Water (Organic) Volatile Organic Compounds (VOC) - Water (041) C-VOC-01, C-VOC-02; modified from EPA 5030 and EPA 8260 GC/MS - PURGE AND TRAP 1,1-Dichloroethane 1,1-dichloroethylene 1,1-Dichloropropene 1,1,1-Trichloroethane 1,1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane 1,2-Dibromo-3-chloropropane (DBCP) 1,2-dichlorobenzene 1,2-dichloroethane 1,2-Dichloropropane 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene 1,3-Dichlorobenzene 1,3-Dichloropropane 1,3,5-Trimethylbenzene 1,4-dichlorobenzene 2-Chlorotoluene 2-Hexanone (MBK) 2,2-Dichloropropane 4-Chlorotoluene 4-Isopropyltoluene Acetone (2-Propanone) Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chlorodibromomethane	OSDWA †

† "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).

The list of tests and measurement capabilities for which a laboratory is accredited can change at any time due to circumstances such as scope extensions, voluntary withdrawal of tests by the laboratory and suspension. Scopes are published by the CALA via the Internet at http://www.cala.ca/cala_directories.html

Chloroform
Chloromethane
cis-1,2-Dichloroethylene
cis-1,3-Dichloropropene
Dibromomethane
Dichlorodifluoromethane
Dichloromethane
Ethylbenzene
Ethylene Dibromide
Hexachlorobutadiene
Hexane
Isopropylbenzene
m/p-xylene
Methyl Ethyl Ketone
Methyl isobutyl Ketone
Methyl t-butyl ether
n-Butylbenzene
n-Propylbenzene
Naphthalene
o-xylene
sec-Butylbenzene
Styrene
tert-Butylbenzene
Tetrachloroethylene
Toluene
trans-1,2-Dichloroethylene
trans-1,3-Dichloropropene
Trichloroethylene
Trichlorofluoromethane
Vinyl Chloride

† "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).

The list of tests and measurement capabilities for which a laboratory is accredited can change at any time due to circumstances such as scope extensions, voluntary withdrawal of tests by the laboratory and suspension. Scopes are published by the CALA via the Internet at http://www.cala.ca/cala_directories.html