



# CALA

Canadian Association for  
Laboratory Accreditation Inc.

## CALA Directory of Laboratories

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**Membership Number:** 3990  
**Laboratory Name:** Paracel Laboratories Ltd. (Calgary)  
**Parent Institution:** Paracel Laboratories Ltd.  
**Address:** 1423 45 Avenue NE, Unit F Calgary AB T2E 2P3  
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**Standard:** Conforms with requirements of ISO/IEC 17025  
**Clients Served:** All Interested Parties  
**Revised On:** May 9, 2017  
**Valid To:** January 27, 2019

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### Scope of Accreditation

#### Air

Asbestos and Other Fibres - Air (001)  
PM-003; modified from NIOSH 7400  
PCM FIBRE COUNTING  
Asbestos

#### Air

Fungi - Air (002)  
PM-002; modified from ASTM D7391  
MICROSCOPIC  
Fungal Propagule ID - Genus (Air-O-Cell)

#### Paint (Inorganic)

Metals - Paint (038)  
PI-020; modified from EPA 6020 A  
ICP/MS - DIGESTION  
Lead

#### Soil (Inorganic)

Conductivity - Soil (008)  
PI-006; modified from MOE E3138 AND EPA 120.1  
CONDUCTIVITY METER  
Conductivity (saturated paste)

#### Soil (Inorganic)

Hot Water Soluble Boron - Soils (031)  
PI-025; modified from EPA 6020 A  
ICP/MS - HOT WATER EXTRACTION  
Boron (hot water soluble)

† "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)**

Metals - Soils (028)

PI-020; modified from EPA 6020 A

ICP/MS - DIGESTION

Antimony

Arsenic

Barium

Beryllium

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Nickel

Potassium

Selenium

Sodium

Strontium

Thallium

Tin

Uranium

Vanadium

Zinc

**Soil (Inorganic)**

Particle Size - Soil (019)

PI-036; modified from CARTER METHOD

HYDROMETER

Clay

Sand

Silt

**Soil (Inorganic)**

pH - Soil (020)

PI-010; modified from MOE E3137 AND EPA 150.1

pH METER

pH

**Soil (Organic)**

Petroleum Hydrocarbons (PHC) - Soil (013)

PO-007; CCME PHC TIER 1

GC/FID - EXTRACTION

F2: C10-C16

F3: C16-C34

F4: C34-C50

**Soil (Organic)**

PHC Heavy Oil - Soil (015)

PO-009; CCME PHC TIER 1

GRAVIMETRIC - EXTRACTION

F4: Gravimetric

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**Soil (Organic)**

Volatile Organic Compounds (VOC) - Soil (024)

PO-001; modified from EPA 8260 C

GC/MS - HEADSPACE

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  
1,3-Dichlorobenzene  
1,3,5-Trimethylbenzene  
1,4-Dichlorobenzene  
Acetone (2-Propanone)  
Benzene  
Bromodichloromethane  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroethane  
Chloroform  
Chloromethane  
cis-1,2-Dichloroethylene  
cis-1,3-Dichloropropene  
Dichlorodifluoromethane  
Dichloromethane  
Ethylbenzene  
Ethylene Dibromide  
Hexane  
m/p-xylene  
Methyl isobutyl ketone  
Methyl t-butyl ether  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl Chloride

**Soil (Organic)**

Volatile Petroleum Hydrocarbons (VPH) - Soil (011)

PO-006; CCME PHC TIER 1

GC/FID - HEADSPACE

F1: C6-C10

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**Solids**

Fungi - Solids (003)  
PM-002; modified from ASTM D7391  
MICROSCOPIC  
Fungal Propagule - Genus

**Water (Inorganic)**

Alkalinity - Water (004)  
PI-003; modified from EPA 310.1  
TITRIMETRIC  
Alkalinity (pH 4.5)

**Water (Inorganic)**

Biochemical Oxygen Demand (BOD) - Water (005)  
PI-014; modified from SM 5210 B  
D.O. METER  
BOD (5 day)  
CBOD (5 day)

**Water (Inorganic)**

Chloride - Water (037)  
PI-040; SM 4500-Cl- B  
TITRATION  
Chloride

**Water (Inorganic)**

Chlorine - Water (006)  
PI-005; modified from SM 4500-CL G  
COLORIMETRIC  
Free Chlorine  
Total Chlorine

**Water (Inorganic)**

Colour - Water (026)  
PI-019; modified from HACH 8025  
SPECTROPHOTOMETRIC  
True Colour

**Water (Inorganic)**

Conductivity - Water (009)  
PI-006; modified from SM 2510 B  
CONDUCTIVITY METER  
Conductivity (25°C)

**Water (Inorganic)**

Dissolved and Extractable Metals - Water (029)  
PI-020; modified from EPA 200.8  
ICP/MS  
Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper

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Iron  
Lead  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Potassium  
Selenium  
Silver  
Sodium  
Thallium  
Tin  
Uranium  
Vanadium  
Zinc

**Water (Inorganic)**

Dissolved Oxygen (DO) - Water (010)  
PI-037; modified from SM 4500-O C  
TITRATION  
Dissolved Oxygen (DO)

**Water (Inorganic)**

Fluoride - Water (034)  
PI-007; modified from EPA 340.2  
ION SELECTIVE ELECTRODE  
Fluoride

**Water (Inorganic)**

Hexavalent Chromium - Water (007)  
PI-013; modified from MOE E3056A.1  
COLORIMETRIC  
Hexavalent Chromium

**Water (Inorganic)**

Nitrate & Nitrite Nitrogen - Water (036)  
PI-039; modified from HACH 8171 & 8507  
COLORIMETRIC  
Nitrate  
Nitrate plus Nitrite

**Water (Inorganic)**

pH - Water (021)  
PI-010; modified from EPA 150.1  
pH METER  
pH

**Water (Inorganic)**

Solids - Water (022)  
PI-012; modified from SM 2450 C, D  
GRAVIMETRIC  
Total Dissolved Solids  
Total Suspended Solids

**Water (Inorganic)**

Sulphate - Water (035)  
PI-041; modified from HACH 8051  
TURBIDIMETRIC  
Sulfate

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**Water (Inorganic)**

Sulphide - Water (023)

PI-001; modified from SM 4500-S2D

COLORIMETRIC (METHYLENE BLUE)

Sulphide

**Water (Inorganic)**

Total Metals - Water (033)

PI-020; modified from EPA 200.8

ICP/MS - DIGESTION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Strontium

Thallium

Tl

Uranium

Vanadium

Zinc

**Water (Inorganic)**

Turbidity - Water (027)

PI-017; modified from SM 2130 B

NEPHELOMETRY

Turbidity

**Water (Microbiology)**

Coliforms - Water (018)

PW-005; modified from HACH 10029

MEMBRANE FILTRATION (mCOLIBLUE)

Background Counts

Escherichia coli (E. coli)

Total Coliforms

**Water (Microbiology)**

Fecal (Thermotolerant) Coliforms - Water (016)

PW-006; modified from SM 9222 D

MEMBRANE FILTRATION (mFC)

Fecal (Thermotolerant) Coliforms

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**Water (Microbiology)**

Heterotrophic Plate Count (HPC) - Water (017)

PW-007; modified from SM 9215 E

IDEXX (SIMPLATE)

Heterotrophic Plate Count (HPC)

**Water (Organic)**

Petroleum Hydrocarbons (PHC) - Water (014)

PO-007; PREP: modified from MOE E3421 AND QUANT: CCME PHC TIER 1

GC/FID - EXTRACTION

F2: C10-C16

F3: C16-C34

F4: C34-C50

**Water (Organic)**

Volatile Organic Compounds (VOC) - Water (025)

PO-001; modified from EPA 624

GC/MS - HEADSPACE

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

1,3-Dichlorobenzene

1,3,5-Trimethylbenzene

1,4-Dichlorobenzene

Acetone (2-Propanone)

Benzene

Bromodichloromethane

Bromoform

Bromomethane

Carbon Tetrachloride

Chlorobenzene

Chlorodibromomethane

Chloroethane

Chloroform

Chloromethane

cis-1,2-Dichloroethylene

cis-1,3-Dichloropropene

Dichlorodifluoromethane

Dichloromethane

Ethylbenzene

Ethylene Dibromide

Hexane

m/p-xylene

Methyl isobutyl ketone

Methyl t-butyl ether

o-xylene

Styrene

Tetrachloroethylene

Toluene

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trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl Chloride

**Water (Organic)**

Volatile Petroleum Hydrocarbons (VPH) - Water (012)

PO-006; PREP: modified from MOE E3421 AND QUANT: CCME PHC TIER 1  
GC/FID - HEADSPACE

F1: C6-C10

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