



# CALA

Canadian Association for  
Laboratory Accreditation Inc.

## CALA Directory of Laboratories

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**Membership Number:** 3751  
**Laboratory Name:** Testmark Laboratories Ltd.  
**Parent Institution:** Testmark Laboratories Ltd.  
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**Standard:** Conforms with requirements of ISO/IEC 17025  
**Clients Served:**  
**Revised On:** June 5, 2018  
**Valid To:** May 15, 2019

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### Scope of Accreditation

#### Oil (Inorganic)

Acid Number - Oil (078)  
O100.12; ASTM D974-14E2  
TITRIMETRIC  
Acid Number

#### Oil (Inorganic)

Colour - Oil (079)  
O100.12; ASTM D1500-12  
COLOR - COMPARATOR  
Color

#### Oil (Inorganic)

Moisture - Oil (080)  
O100.02; ASTM D1533-12  
COULOMETRIC KARL FISHER TITRATION  
Water

#### Oil (Inorganic)

Relative Density - Oil (077)  
O100.12; ASTM D1298-12B  
HYDROMETER  
Relative Density

#### Oil (Organic)

Polychlorinated Biphenyls (PCB) - Oil (023)  
T19; modified from EPA 8082A  
GC/ECD  
Aroclor 1242  
Aroclor 1248

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Aroclor 1254  
Aroclor 1260  
Total PCB

**Solids (Inorganic)**

Anions - Solids (003)  
A5; modified from EPA 1311 (PREPARATION) and EPA 9056A (ANALYSIS)  
IC - EXTRACTION  
Fluoride  
Nitrate  
Nitrite

**Solids (Inorganic)**

Anions - Solids [Soil] (004)  
A5; modified from EPA 9056A  
ION CHROMATOGRAPHY  
Bromide  
Chloride  
Fluoride  
Nitrate-N  
Nitrite  
Phosphate  
Sulphate

**Solids (Inorganic)**

Conductivity - Solids [Soil] (011)  
T12; modified from SM 2510 B  
CONDUCTIVITY METER (MANUAL)  
Conductivity

**Solids (Inorganic)**

Cyanide - Solids (013)  
T43; modified from SM 4500 CN E  
COLORIMETRIC - DISTILLATION  
Cyanide (Total)  
Free Cyanide

**Solids (Inorganic)**

Cyanide - Solids (053)  
T43; modified from EPA 1311 (PREPARATION) and SM 4500-CN- E (ANALYSIS)  
COLORIMETRIC - EXTRACTION  
Cyanide (WAD)

**Solids (Inorganic)**

Hexavalent Chromium - Solids (016)  
A83; EPA 3060A and SM 3500-CR B  
COLORIMETRIC  
Hexavalent chromium

**Solids (Inorganic)**

Hot Water Extractable Boron - Solids [Soil] (051)  
A13, A52; GUPTA, 1967, SOIL SCIENCE 103: 424-428  
ICP/MS - EXTRACTION  
Hot Water Extractable Boron

**Solids (Inorganic)**

Metals - Solids (019)  
A13, A79; modified from EPA 1311 (PREPARATION) and EPA 6020B (ANALYSIS)  
ICP/MS - EXTRACTION  
Antimony

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Arsenic  
Barium  
Beryllium  
Boron  
Cadmium  
Chromium  
Cobalt  
Copper  
Lead  
Mercury  
Nickel  
Selenium  
Silver  
Thallium  
Uranium  
Zinc

**Solids (Inorganic)**

Metals - Solids [Soil] (020)

A13, A52; modified from BC MOE LABORATORY MANUAL, SALM (PREPARATION) and EPA 6020B (ANALYSIS)

ICP/MS - DIGESTION

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lanthanum  
Lead  
Magnesium  
Manganese  
Mercury  
Molybdenum  
Nickel  
Selenium  
Silver  
Strontium  
Thallium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

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**Solids (Inorganic)**

pH - Solids (026)  
T02; modified from EPA 9045D and O.REG. 153/04  
pH METER  
pH

**Solids (Inorganic)**

Redox Potential (ORP) - Solids [Soil] (047)  
T06; modified from SM 2580  
ION ELECTRODE - EXTRACTION  
Redox Potential

**Solids (Organic)**

BTEX - Solids [Soil] (066)  
A127; modified from EPA 524.3 and EPA 624  
GC/MS - STATIC HEADSPACE  
Benzene  
Ethylbenzene  
m/p-xylene  
o-xylene  
Toluene

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (028)  
A59; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD, PUBLICATION #1310  
GC/FID - EXTRACTION  
F2: C10-C16  
F3: C16-C34  
F4: C34-C50

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (029)  
A59; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD, PUBLICATION #1310  
GRAVIMETRIC  
F4: Gravimetric

**Solids (Organic)**

Petroleum Hydrocarbons (PHC) - Solids [Soil] (067)  
A127; CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD, PUBLICATION #1310  
GC/FID - STATIC HEADSPACE  
F1: C6-C10

**Solids (Organic)**

Polychlorinated Biphenyls (PCB) - Solids (024)  
T19; modified from EPA 8082A  
GC/ECD - EXTRACTION  
Aroclor 1242  
Aroclor 1248  
Aroclor 1254  
Aroclor 1260  
Total PCB

**Solids (Organic)**

Volatile Organic Compounds (VOC) - Solids (039)  
A14; modified from EPA 1311 (PREPARATION) and EPA 524.3 (ANALYSIS)  
GC/MS - PURGE AND TRAP/EXTRACTION  
1,1-Dichloroethylene  
1,2-Dichlorobenzene  
1,2-Dichloroethane

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1,4-Dichlorobenzene  
Benzene  
Carbon tetrachloride  
Chlorobenzene  
Chloroform  
Dichloromethane  
Methyl ethyl ketone  
Methyl isobutyl ketone (MIBK)  
Tetrachloroethylene  
Trichloroethylene  
Vinyl chloride

**Solids (Organic)**

Volatile Organic Compounds (VOC) - Solids [Soil] (040)

A14; modified from EPA 8260B

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  
Acetone (2-Propanone)  
Benzene  
Bromodichloromethane  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroform  
cis-1,2-Dichloroethylene  
cis-1,3-Dichloropropene  
Dichlorodifluoromethane  
Dichloromethane  
Ethylbenzene  
Ethylene Dibromide  
m/p-xylene  
Methyl Ethyl Ketone  
Methyl isobutyl Ketone  
Methyl t-butyl ether  
n-Hexane  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene

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Trichloroethylene  
Trichlorofluoromethane  
Vinyl chloride

**Solids(Organic)**

Polychlorinated Biphenyls (PCB) - Solids (043)  
T19; modified from EPA 1311 (PREPARATION) and EPA 8082A (ANALYSIS)  
GC/ECD - EXTRACTION  
Aroclor 1242  
Aroclor 1248  
Aroclor 1254  
Aroclor 1260  
Total PCB

**Water (Inorganic)**

Acidity - Water (001)  
A24.0; modified from SM 2310 B  
TITRIMETRIC  
Acidity

**Water (Inorganic)**

Alkalinity - Water (062)  
A1.0; modified from SM 2320 B  
TITRIMETRIC (AUTOMATED)  
Alkalinity (pH 4.5)

**Water (Inorganic)**

Alkalinity - Water (070)  
A1.1; modified from EPA 310.2  
COLORIMETRIC  
Alkalinity (pH 4.5)

**Water (Inorganic)**

Ammonia - Water (071)  
A42; modified from EPA 350.1  
COLORIMETRIC  
Ammonia

**Water (Inorganic)**

Anions - Water (005) OSDWA †  
A5; modified from EPA 9056A  
ION CHROMATOGRAPHY  
Bromide  
Chloride  
Fluoride  
Nitrate  
Nitrite  
Sulfate

**Water (Inorganic)**

Biochemical Oxygen Demand (BOD) - Water (006)  
A3; modified from SM 5210 B  
D.O. METER  
BOD (5 day)  
CBOD (5 day)  
Dissolved Oxygen

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<b>Water (Inorganic)</b> Carbon - Water (007) A55; modified from SM 5310 C IR/UV-DIGESTION Organic Carbon	OSDWA †
<b>Water (Inorganic)</b> Chemical Oxygen Demand (COD) - Water (008) T04; modified from SM 5220 C TITRIMETRIC COD	
<b>Water (Inorganic)</b> Colour - Water (010) A26; modified from SM 2120 C COLORIMETRIC True Colour	OSDWA †
<b>Water (Inorganic)</b> Conductivity - Water (012) T12; modified from SM 2510 B CONDUCTIVITY METER (MANUAL) Conductivity (25°C)	OSDWA †
<b>Water (Inorganic)</b> Conductivity - Water (054) A12; modified from SM 2510 B CONDUCTIVITY METER (AUTOMATED) Conductivity (25°C)	
<b>Water (Inorganic)</b> Cyanide - Water (014) T43; modified from SM 4500-CN- E COLORIMETRIC - DISTILLATION Cyanide (SAD) Cyanide (Total) Cyanide (WAD) Free Cyanide	OSDWA †
<b>Water (Inorganic)</b> Dissolved and Total Metals - Water (015) A13; modified from EPA 6020B ICP/MS Aluminum Antimony Arsenic Barium Beryllium Bismuth Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium	OSDWA †

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Manganese  
Mercury  
Molybdenum  
Nickel  
Potassium  
Selenium  
Silver  
Sodium  
Strontium  
Thallium  
Tin  
Titanium  
Uranium  
Vanadium  
Zinc

**Water (Inorganic)**

Hexavalent Chromium - Water (017)  
A83; modified from SM 3500-CR B  
COLORIMETRIC  
Hexavalent Chromium

**Water (Inorganic)**

Nitrate plus Nitrite and Nitrite - Water (073)  
A126; modified from EPA 353.1 and EPA 354.1  
COLORIMETRIC  
Nitrate plus Nitrite  
Nitrite

**Water (Inorganic)**

pH - Water (027)  
T02; modified from SM 4500-H+ B  
pH METER (MANUAL)  
pH

OSDWA †

**Water (Inorganic)**

pH - Water (056)  
A2.0; modified from SM 4500-H+ B  
pH METER (AUTOMATED)  
pH

**Water (Inorganic)**

Phenols - Water (030)  
T38; modified from SM 5530  
COLOR - DISTILLATION  
Total Phenolics

OSDWA †

**Water (Inorganic)**

Phosphate - Water (076)  
A23; modified from EPA 365.3 and ESS 310.2  
COLORIMETRIC - DIGESTION  
Phosphate  
Total Phosphorus

**Water (Inorganic)**

Reactive Silica - Water (033)  
A7; modified from EPA 366.0  
COLORIMETRIC (AUTOMATED)  
Reactive Silica

OSDWA †

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**Water (Inorganic)**

Redox Potential (ORP) - Water (048)

T06; modified from SM 2580

ION ELECTRODE

Redox Potential

**Water (Inorganic)**

Solids - Water (034)

A27; modified from SM 2540 C and SM 2540 D and SM 2540 G

GRAVIMETRIC

Total Dissolved Solids

Total Solids (Calculation)

Total Suspended Solids

Volatile Suspended Solids

OSDWA †

**Water (Inorganic)**

Sulphate - Water (074)

A5.4; modified from EPA 375.4

TURBIDIMETRIC

Sulfate

**Water (Inorganic)**

Total Kjeldahl Nitrogen (TKN) - Water (075)

A58; EPA 351.2 and SM 4500-NORG D

COLORIMETRIC - DIGESTION

Total Kjeldahl Nitrogen

OSDWA †

**Water (Inorganic)**

Total Metals - Water (049)

A13, A52; modified from EPA 6020B

ICP/MS - DIGESTION

Aluminum

Antimony

Arsenic

Barium

Beryllium

Bismuth

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Strontium

Thallium

Tin

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Titanium  
Uranium  
Vanadium  
Zinc

**Water (Inorganic)** OSDWA †

Turbidity - Water (038)  
A21; modified from SM 2130 B  
NEPHELOMETRY  
Turbidity

**Water (Microbiology)** OSDWA †

Coliforms - Water (009)  
A10; modified from ON MOECC E3407  
MEMBRANE FILTRATION (DC-AGAR)  
Background Counts  
Escherichia coli (E. coli)  
Total Coliforms

**Water (Microbiology)**

Fecal (Thermotolerant) Coliforms - Water (072)  
A10; modified from SM 9222 D  
MEMBRANE FILTRATION (mFC) WITH ROSALIC ACID  
Fecal (Thermotolerant) Coliforms

**Water (Microbiology)**

Heterotrophic Plate Count (HPC) - Water (018)  
A68; modified from SM 9215 C  
SPREAD PLATE  
Heterotrophic Plate Count (HPC)

OSDWA †

**Water (Organic)**

BTEX - Water (058)  
A127; modified from ON MOECC E3421  
GC/MS - STATIC HEADSPACE  
Benzene  
Ethylbenzene  
m/p-xylene  
o-xylene  
Toluene

**Water (Organic)**

Petroleum Hydrocarbons (PHC) - Water (045)  
A59; ON MOECC E3421  
GC/FID - EXTRACTION  
F2: C10-C16  
F3: C16-C34  
F4: C34-C50

**Water (Organic)**

Petroleum Hydrocarbons (PHC) - Water (046)  
A59; ON MOECC E3421  
GRAVIMETRIC  
F4G: Gravimetric

**Water (Organic)**

Petroleum Hydrocarbons (PHC) - Water (059)  
A127; modified from ON MOECC E3421  
GC/FID - STATIC HEADSPACE  
F1: C6-C10

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**Water (Organic)**

OSDWA †

Polychlorinated Biphenyls (PCB) - Water (025)

T19; modified from EPA 8082A  
GC/ECD - EXTRACTIONAroclor 1242  
Aroclor 1248  
Aroclor 1254  
Aroclor 1260  
Total PCB**Water (Organic)**

OSDWA †

Volatile Organic Compounds (VOC) - Water (041)

A14; modified from EPA 524.3  
GC/MS - PURGE AND TRAP1,1-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  
Acetone (2-Propanone)  
Benzene  
Bromodichloromethane  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroform  
cis-1,2-Dichloroethylene  
cis-1,3-Dichloropropene  
Dichlorodifluoromethane  
Dichloromethane  
Ethylbenzene  
Ethylene Dibromide  
m/p-xylene  
Methyl Ethyl Ketone  
Methyl isobutyl Ketone  
Methyl t-butyl ether  
n-Hexane  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
trans-1,2-Dichloroethylene  
trans-1,3-Dichloropropene  
Trichloroethylene  
Trichlorofluoromethane

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