



Conseil canadien des normes
Standards Council of Canada

SCOPE OF ACCREDITATION

Element Materials Technology Canada Inc.
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Accredited Laboratory No. 188
(Conforms with requirements of ISO/IEC 17025:2005)

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CLIENTS SERVED: All interested parties

FIELDS OF TESTING: Chemical/Physical

PROGRAM SPECIALTY AREA: Environmental

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ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Environmental

Air

(Dustfall)

TM AIR 001-60 Dustfall, Total and Fixed: Gravimetric (Alberta Environment Method No. AEC 32020 modified)
Fixed Dustfall
Total Dustfall

(Mercury - Air Impingers)

TM INS 002-60 Mercury: Cold Vapour UV (EPA 7470A modified)
Mercury

(Metals - Air Impingers)

TM INS 003-60 Metals - ICP - OES (EPA Method 29 modified)
Cadmium
Chromium
Lead
Zinc

(Nitrogen Dioxide)

TM AIR 003-60 Nitrogen Dioxide: Triethanolamine Method (Alberta Environment Method No. AEC 13536 modified)
Nitrogen Dioxide

(VOCs – Soil Vapour)

TM ENV 006-60 Volatile Organic Compounds in Air by Thermal Desorption (B.C. Environmental Lab Manual, VOCs in Air by Thermal Desorption Tube modified)
1,1,1,2-tetrachloroethane
1,1,1-trichloroethane
1,1,2,2-tetrachloroethane
1,1,2-trichloro-1,2,2-trifluoroethane

1,1,2-trichloroethane
1,1-dichloroethane
1,1-dichloroethene
1,1-dichloropropene
1,2,3-trichlorobenzene
1,2,3-trichloropropane
1,2,4-trichlorobenzene
1,2-dibromo-3-chloropropane
1,2-dibromoethane
1,2-dichlorobenzene
1,2-dichloroethane
1,2-dichloropropane
1,3-butadiene
1,3-dichlorobenzene
1,3-dichloropropane
1,4-dichlorobenzene
1,4-dioxane
1,2,4-trimethylbenzene
1,3,5-trimethylbenzene
2,2-dichloropropane
2-butanone
2-chlorotoluene
2-hexanone
4-chlorotoluene
4-methyl-2-pentanone
Acetone
Acetonitrile
Acrylonitrile
Allyl chloride
Benzene
Bromobenzene
Bromochloromethane
Bromodichloromethane
Bromoform
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloroprene

cis-1,2-dichloroethene
cis-1,3-dichloropropene
cis-1,4-dichloro-2-butene
Dibromochloromethane
Dibromomethane
Dichlorodifluoromethane
Dichloromethane
Diethyl ether
Ethyl acetate
Ethyl methacrylate
Ethylbenzene
Hexachlorobutadiene
Isopropylbenzene
m,p-Xylene
Methacrylonitrile
Methyl acrylate
Methyl methacrylate
Methyl t-butyl ether
Methylcyclohexane
Naphthalene
n-butylbenzene
n-decane
n-dodecane
n-hexane
n-propylbenzene
n-tridecane
o-Xylene
Pentachloroethane
p-isopropyltoluene
Propionitrile
sec-butylbenzene
Styrene
tert-butylbenzene
Tetrachloroethene
Tetrahydrofuran
Toluene
trans-1,2-dichloroethene
trans-1,3-dichloropropene
trans-1,4-dichloro-2-butene
Trichloroethene

Trichlorofluoromethane
VHv
Vinyl chloride
VPHv

Tissue

(Mercury - Tissue)

TM INS 002-60 Mercury: Cold Vapour UV (EPA 7470A modified)
Mercury

(Metals - Tissue)

TM INS 003-60 Metals - ICP-OES ((EPA 3050B/6010B modified)
Antimony
Barium
Beryllium
Calcium
Chromium
Cobalt
Copper
Iron
Molybdenum
Nickel
Phosphorus
Potassium
Selenium
Silver
Sodium
Thallium
Vanadium
Zinc

TM INS 005-60 Metals - ICP-MS (EPA 3050B/6020A modified)
Arsenic
Cadmium
Lead

(Non-Metallic Parameters - Tissue)

TM TIS 003-60 Carbon, Nitrogen in Tissue by Combustion ((AOAC 990.03 modified)
Crude Protein (calculated)
Total Carbon
Total Nitrogen

Soil/Sediment

(Barium (Soluble) - Soil)

TM INS 003-60 Prep: WI Metals by ICP-OES (EPA 6010B modified) and Soluble Barium
DIG 021-60 by Calcium Chloride
Soluble Barium

(Boron - Soil)

TM INS 003-60 Prep: WI Metals by ICP-OES (EPA 6010B modified) and Water Soluble
DIG 006-60 Digestion (B.C. Environmental Lab)
Boron

(BTEX/VPH - Soil)

TM ENV 002-60 BTEX/VPH/F1 in Soil and Water (B.C. Environmental Lab
Manual, VH Solids modified)
Benzene
Ethylbenzene
m/p-xylene
Methyl tert butyl ether (MTBE)
o-xylene
Styrene
Toluene
Volatile Petroleum Hydrocarbons

(Extractable Petroleum Hydrocarbons - Soil)

TM ENV 012-60 Extractable Petroleum Hydrocarbons in Soil (BC
Environmental Lab Manual, EPH in Solids modified)
EPH C10-C19
EPH C19-C32
Heavy Extractable Petroleum Hydrocarbons (HEPH)
Light Extractable Petroleum Hydrocarbons (LEPH)

(Major Ions - Soil)

TM INS 001-60 Anions (ICRW) - Ion Exchange Chromatography (APHA 4110 modified)
Chloride
Fluoride
Nitrate
Nitrate plus Nitrite
Nitrite
Sulfate

(Mercury - Soil)

TM INS 002-60 Mercury: Cold Vapour UV (EPA 7471B, BCSALM, modified)
Mercury

(Metals - Soil)

TM INS 005-60 Metals - ICP-MS (EPA 6020A, BCSALM modified)
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Copper
Lead
Molybdenum
Nickel
Selenium
Silver
Thallium
Tin
Vanadium
Zinc

(Non-Metallic Parameters - Soil)

TM SOIL 008-60 Total Nitrogen, Total Carbon, Inorganic Carbon by Combustion
(Methods of Soil Analysis Part 3, Chapter 34, 37 modified)
Total Carbon
Total Inorganic Carbon
Total Nitrogen

(Organic Matter (LOI) - Soil)

TM SOIL 007-60 Organic Matter, Loss on Ignition, Volatile Solids (Method 3.8,
modified)
Organic Matter by LOI

(pH - Soil)

TM SOIL 003-60 pH and Conductivity in Soil (Chapter 16.2)
pH (1:2 Soil/Water)

(PHC/BTEX - Soil)

(Polycyclic Aromatic Hydrocarbons (PAH) - Soil)

TM ENV 004-60 Polycyclic Aromatic Hydrocarbons in Soil and Water (B.C.
Environmental Lab Manual, PAH Solids modified)
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Chrysene
Dibenzo (a,h) anthracene
Fluoranthene
Fluorene
Indeno (1,2,3 - cd) pyrene
Naphthalene
Phenanthrene
Pyrene

Water (Inorganic)

(Ammonium - Water)

TM WAT 027-60 Ammonia - N in water (APHA 4500 NH₃-C modified)
 Ammonium
 Un-ionized Ammonia

(Anionic Surfactants - Water)

TM WAT 013-60 Anionic Surfactants as MBAS (APHA 5540-C modified)
 Anionic Surfactants as MBAS

(Biochemical Oxygen Demand (BOD) - Water)

TM WAT 003-60 Biochemical Oxygen Demand (APHA 5210 B modified)
 BOD (5 day)
 cBOD

(Chemical Oxygen Demand (COD) - Water)

TM WAT 005-60 Chemical Oxygen Demand (APHA 5220D modified)
 COD

(Chlorine - Water)

TM WAT 023-60 Residual and Total Chlorine (APHA 4500 Cl - G modified)
 Free Chlorine
 Total Chlorine

(Chromium-Hexavalent - Water)

TM INS007-60 Hexavalent Chromium by Smartchem Discrete Analyzer (APHA
 3500 Cr-D modified)
 Hexavalent Chromium

(Inorganic - Water)

TM WAT 024-60 pH, EC, Alkalinity, Turbidity and Color (APHA 2510 B
 (automated) modified)

Alkalinity (pH 4.5)
Colour - True
Conductivity (25 °C)
pH

(Major Ions - Water)

TM INS 001-60 Anions - Ion Exchange Chromatography (APHA 4110 modified)
Bromide
Chloride
Fluoride
Nitrate
Nitrate plus Nitrite
Nitrite
Orthophosphate
Sulfate

(Mercury - Water)

TM WAT 021-60 Mercury in Water (EPA 245.7 modified)
Mercury

(Metals (Dissolved) - Water)

TM INS 003-60 Metals - ICP-OES (EPA 6010B modified)
Dissolved Calcium
Dissolved Iron
Dissolved Magnesium
Dissolved Potassium
Dissolved Sodium

TM INS 005-60 Metals - ICP-MS (EPA 200.8 modified)
Dissolved Aluminum
Dissolved Antimony
Dissolved Arsenic
Dissolved Barium
Dissolved Beryllium
Dissolved Boron
Dissolved Cadmium
Dissolved Chromium
Dissolved Cobalt

Dissolved Copper
Dissolved Lead
Dissolved Molybdenum
Dissolved Nickel
Dissolved Selenium
Dissolved Thallium
Dissolved Uranium
Dissolved Vanadium
Dissolved Zinc

(Metals (Extractable) - Water)

TM INS 003-60 Metals - ICP-OES (EPA 6010B modified)
Extractable Calcium
Extractable Iron
Extractable Magnesium
Extractable Potassium
Extractable Sodium

TM INS 005-60 Metals - ICP-MS (EPA 200.8 modified)
Extractable Aluminum
Extractable Antimony
Extractable Arsenic
Extractable Barium
Extractable Beryllium
Extractable Boron
Extractable Cadmium
Extractable Chromium
Extractable Cobalt
Extractable Copper
Extractable Lead
Extractable Molybdenum
Extractable Nickel
Extractable Selenium
Extractable Thallium
Extractable Uranium
Extractable Vanadium
Extractable Zinc

(Metals (Total) - Water)

TM INS 003-60

Metals - ICP-OES (EPA 6010B modified)

Total Calcium

Total Iron

Total Magnesium

Total Manganese

Total Phosphorus

Total Potassium

Total Sodium

(Metals (Total) - Water)

TM INS 005-60

Metals - ICP-MS (EPA 200.8 modified)

Total Aluminum

Total Antimony

Total Arsenic

Total Barium

Total Beryllium

Total Boron

Total Cadmium

Total Chromium

Total Cobalt

Total Copper

Total Iron

Total Lead

Total Molybdenum

Total Nickel

Total Selenium

Total Thallium

Total Uranium

Total Vanadium

Total Zinc

(Nitrates - Water)

TM INS 008-60

Nitrite and Nitrate By Smartchem Discrete Analyzer
(APHA 4500-NO3F (manual) modified)

Nitrate plus Nitrite

Nitrate

Nitrite

(pH - Water and Wastewater)

TM WAT 015-60 pH - Potentiometric (APHA 4500-H+ (manual) modified)
pH

(Total Phosphorus - Water)

TM INS-006-60 Phosphorus by Smartchem Discrete Analyzer (APHA 4500-P
B&E modified
Orthophosphate
Total Dissolved Phosphorus
Total Phosphorus

(Total Suspended Solids (TSS) - Water)

TM WAT 017-60 Solids - Dissolved, Suspended, Total (APHA 2540 D modified)
Fixed Suspended Solids
Total Dissolved Solids
Total Solids
Total Suspended Solids
Volatile Suspended Solids

(Turbidity - Water)

TM WAT 019-60 Turbidity in Water (APHA 2130 modified)

Water (Microbiology)

(Coliforms - Water)

APHA 9215E Heterotrophic Plate Count Test by IDEXX SimPlate Method (TM
MICR 002-60)

APHA 9222 B, D, G Heterotrophic Plate Count (HPC)
Total Coliforms, Fecal (Thermotolerant) Coliforms and E. coli -
Membrane Filtration (TM MICR 092-60)
Escherichia coli (E. coli)
Fecal (Thermotolerant) Coliforms
Total Coliforms

APHA 9223B Total Coliforms and Escherichia coli Test by Colilert Method (TM
MICR 001-60)
Escherichia coli (E. coli)

Total Coliforms

Water (Organic)

(Extractable Petroleum Hydrocarbons - Water)

TM ENV 001-60 Extractable Petroleum Hydrocarbons in Soil and Water (BC Environmental Lab Manual, EPH in Water modified)
EPH C10-C19
EPH C19-C32
Heavy Extractable Petroleum Hydrocarbons (HEPH)
Light Extractable Petroleum Hydrocarbons (LEPH)

(Oil & Grease - Water (Hexane Extraction))

TM ENV 005-60 Oil and Grease in Soil and Water (Total and Mineral) (B.C. Environmental Lab Manual and APHA 5520B,F modified)
Mineral Oil and Grease
Total Oil and Grease

(Petroleum Hydrocarbons (PHC)/BTEX - Water)

TM ENV 002-60 BTEX/VPH/F1 in Soil and Water (BC Environmental Lab Manual, VH Water modified)
Benzene
Ethylbenzene
m/p-xylene
Methyl tert Butyl Ether
o-xylene
Styrene
Toluene
Volatile Petroleum Hydrocarbons

(Polycyclic Aromatic Hydrocarbons (PAH) - Water)

TM ENV 004-60 Polycyclic Aromatic Hydrocarbons in Soil and Water (BC Environmental Lab Manual PAH Water modified)
2-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
Phenanthrene
Pyrene
Quinoline

Notes:

ISO/IEC 17025: 2005: General Requirements for the Competence of Testing and Calibration Laboratories

APHA: American Public Health Association, Standard Methods for the Examination of Water and Wastewater, 20th Ed.

AEC: Methods Manual for Chemical Analysis of Atmospheric Pollutants, 4th Edition. 1993. Alberta Environmental Centre, Vegreville, AB.

Elias Rafoul, Vice President
Accreditation Services

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