



TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Accredited Laboratory No. 604

Legal Name of Accredited Laboratory: **Element Materials Technology Canada Inc.**

Location Name: FORT ST. JOHN LABORATORY

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SCC File Number:	15741
Accreditation Standard(s):	ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Chemical/Physical
Program Specialty Area:	Environmental Testing (ET)
Initial Accreditation:	2006-07-05
Most Recent Accreditation:	2020-06-05
Accreditation Valid to:	2022-07-05

SCC Group Accreditation:

This laboratory is a part of a Group Accreditation with the following facilities in accordance with SCC's policy on Group Accreditation documented in the Accreditation Services Accreditation Program Overview.

- **Element Materials Technology Canada Inc.**, Edmonton Laboratory, SCC File # 15031
- **Element Materials Technology Canada Inc.**, Surrey Laboratory, SCC File # 15258
- **Element Materials Technology Canada Inc.**, Calgary Laboratory, SCC File # 15352



ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Environmental

Soil

Soil (Organic)

(Barium -Soil)

B.C. Environmental Lab Manual, Section C: Metals DW 007-93 Soluble Barium by Calcium Chloride Extraction (Prescriptive) (TM DW 007-93)
Soluble Barium
Barium in Soil by ICP-MS
(Alberta Environment Soil Remediation Guidelines for Barite Modified)
Extractable Barium

(Organic Matter by Loss of Ignition)

TM AG 002-93 Organic Matter in Soil by Loss on Ignition (MSS Method 3.8 Modified)
% Organic Matter

Soil/Sediment

(BTEX/VPH - Soil)

TM ORG 001-93 BTEX/VPH in Soil & Water by GC FID/MSD (B.C. Environmental Lab Manual, Monocyclic Aromatic Hydrocarbons /Volatile Hydrocarbons in Solids Modified)
Benzene
Ethylbenzene
m/p - Xylene
Methyl tert butyl ether (MTBE)
O - Xylene
Styrene
Toluene
Volatile Hydrocarbons (C6-C10)
Volatile Petroleum Hydrocarbons (C6-C10 - BTEX)

(Extractable Petroleum Hydrocarbons-Soil)



TM TEH 001-93 Extractable Petroleum Hydrocarbons in Soil and Water by GC FID
(BC Environmental Lab Manual, Extractable Petroleum
Hydrocarbons in Solids Modified)
EPH 10-19
EPH 19-32

(Metals - Soil)

B.C. Environmental Lab Strong Acid Leachable Metals (SALM) in Soil – Prescriptive (TM
Manual, Section C: Metals MET 001-93)

Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Lithium
Manganese
Mercury
Molybdenum
Nickel
Selenium
Silver
Strontium
Thallium
Tin
Uranium
Vanadium
Zinc

B.C. Environmental Lab Boron, Hot Water Soluble (Prescriptive) (TM MET 001-93)
Manual, Section C: Metals

Boron

(pH - Soil)

TM AG 004-93 pH in Soil by 0.01M Calcium Chloride (MSS 3.11 Modified)
pH



(Polycyclic Aromatic Hydrocarbons (PAH) - Soil)

TM ORG 002-93	Polycyclic Aromatic Hydrocarbons in Soil and Water by GC MSD (B.C. Environmental Lab Manual, PAH Solids Modified) 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene 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
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Waste

(Bulk Density - Waste and Soil)

TM DW 001-93	Bulk Density and Specific Gravity in Drilling Waste and Soil (American Society of Agronomy No.9. Method 13-2, AER Directive 050 and SSMA 57.1 Modified) Bulk Density Specific Gravity
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(Flash Point - Waste)

TM LAND 007-93	Flash Point in Liquid and Soil by Pensky-Martens Closed Cup Tester (ASTM D93 Modified) Flash Point
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(Free Liquids - Waste)



TM LAND 009-93 Paint Filter Test (EPA 9095B Modified)
Free Liquids - Waste

(Leachable BTEX - Waste)

EPA 1311 Toxicity Characteristic Leachate Procedure
Benzene
Ethylbenzene
m/p-xylene
o-xylene
Toluene

TM LAND 001-93 Leachable BTEX in Solids and Waste by GC FID/MSD (EPA 1311,
5021A/8260C Modified)
Benzene
Ethylbenzene
m/p-xylene
o-xylene
Toluene

(Leachate - Waste)

TM LAND 002-93 Cyanide in Soil and Solid Waste Extract by Spectrophotometry
(HACH Method 8027 Cyanide: Pyridine-Pyrazalone Method,
SmartChem EPA 335.4 Modified), Colorimetric analysis
Cyanide

TM LAND 003-93 Fluoride in Soil and Solid Waste Extract (APHA 4500-F- C Ion-
Selective Electrode Method Modified), Selective ion electrode
analysis
Fluoride

TM LAND 004-93 Nitrate + Nitrite in Drilling Waste and Solid Waste Extract by
Spectrophotometry (HACH Method 10020/ 8153, SmartChem EPA
353.2 Modified)
(also for Salinity Analysis)
Nitrate + Nitrite

(pH - Waste and Soil)

TM LAND 010-93 pH, Electrical Conductivity, Total and Phenolphthalein Alkalinity in
Water and Soil (MSS 4.12 Modified)
EC
pH



(Salinity - Waste and Soil)

TM DW 004-93	Salinity, pH and EC in Water and in Soil & Waste by Saturated Paste (SSMA Ch 15, EPA 3005A Modified) % Saturation Calcium EC Magnesium pH Potassium SAR Sodium Sulfate
TM DW 005-93	Chloride in Aqueous Samples by Spectrophotometry (APHA 4500-Cl E., BCMOE Chloride, Colorimetric, HgSCN Modified) Chloride
TM DW 008-93	Soluble Ammonia-N in Aqueous Extracts by Spectrophotometry (HACH 10031 Nitrogen, Ammonia Salicylate Method, SmartChem Standard Methods 4500-NH3 G Modified)

(Special Waste Oil & Grease - Waste)

TM LAND 011-93	Special Waste Oil Determination by Petroleum Ether Extraction (Special Waste Regulations Act, BCMOE Determination of Waste Oil Content Modified) Oil and Grease Dried Basis Oil as Received
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(SWEP Modified Leachate -Waste)

TM LAND 012-93	Metals by ICP-MS as prepared by SWEP (Modified SWEP) (Hazardous Waste Regulation, Reg 63/88, Modified Leachate Extraction Procedure Modified, APHA 3120 B Modified), ICP analysis Arsenic Barium Boron Cadmium Chromium Copper Lead Mercury
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Selenium
Silver
Uranium
Zinc

(TCLP Leachate - Waste)

EPA 1311	Toxicity Characteristic Leachate Procedure Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Copper Iron Lead Mercury Nickel Selenium Silver Thallium Uranium Vanadium Zinc Zirconium
TM LAND 013-93	Metals by ICP-MS as prepared by TCLP in Liquid, Solid and Waste Samples (EPA 1311 Toxicity Characteristic Leachate Procedure Modified), ICP analysis Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Copper Iron Lead



Mercury
Nickel
Selenium
Silver
Thallium
Uranium
Vanadium
Zinc
Zirconium

Water (Inorganic)

(pH - Water)

TM LAND 010-93 pH and Electrical Conductivity, Total and Phenolphthalein Alkalinity
in Water and Soil (APHA 4500-H⁺ B, APHA 2510 B, BCMOE
Alkalinity, Total, Titrimetric pH 4.5 Modified)
Alkalinity
EC
pH

(Salinity - Water)

TM DW 004-93 Salinity, pH and EC in Water and in Soil & Waste by Saturated
Paste (SSMA Ch 15, EPA 3005A Modified)
% Saturation
Calcium
EC
Magnesium
pH
Potassium
SAR
Sodium
Sulfate

Water (Organic)

(Extractable Petroleum Hydrocarbons - Water)

TM TEH001-93 Extractable Petroleum Hydrocarbons in Soil and Water by GC FID
(BC Environmental Lab Manual, Extractable Petroleum
Hydrocarbons in Water Modified)
EPH 10-19



EPH 19-32

(Petroleum Hydrocarbon (PHC/BTEX) - Water)

TM ORG 001-93 BTEX/VPH in Soil & Water by GC FID/MSD (B.C. Environmental Lab Manual, Monocyclic Aromatic Hydrocarbons /Volatile Hydrocarbons in Water, Modified)

- Benzene
- Ethylbenzene
- m/p - Xylene
- Methyl tert butyl Ether (MTBE)
- o - Xylene
- Styrene
- Toluene
- Volatile Hydrocarbons (C6-C10)
- Volatile Petroleum Hydrocarbons (C6-C10 - BTEX)

(Polycyclic Hydrocarbons (PAH) - Water)

TM ORG 002-93 Polycyclic Aromatic Hydrocarbons in Soil and Water by GC MS (B.C. Environmental Lab Manual, PAH in Water, Modified)

- 1-Methylnaphthalene
- Acenaphthalene
- 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
- Napthalene
- Phenanthrene
- Pyrene
- Quinoline

Number of Scope Listings: 29



Notes:

ASTM: American Society of Testing and Materials

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

TM XXXX #: Exova in-house Test Methods.

MSA: Methods of Soil Analysis, SSSA Book Series no. 5, 1996

MSS: Manual on Soil Sampling and Methods of Analysis - J.A. McKeague, 1978

SSMA: Soil Sampling and Methods of Analysis, Martin R. Carter, 2008

EPA: Environmental Protection Agency

BCMOE: British Columbia Ministry of Environment

EPS: Environmental Protection Series

APHA: American Public Health Association

AER: Alberta Energy Regulator

This document forms part of the Certificate of Accreditation issued by the Standards Council of Canada (SCC). The original version is available in the Directory of Accredited Laboratories on the SCC website at www.scc.ca.

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Publication on: 2020-06-16