



ELEMENT MATERIALS TECHNOLOGY CANADA INC.

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CHEMICAL

Valid To: January 31, 2028

Certificate Number: 6206.03

In recognition of the successful completion of the A2LA evaluation process accreditation is granted to this laboratory to perform the following chemical tests identified on the analytes noted below:

Air:

<u>Analyte</u>	<u>Test Method(s)</u>	<u>Reference Method(s)</u>
Anions by Ion Exchange Chromatography Chloride Fluoride Nitrate-N Nitrate-N plus Nitrite-N Nitrite-N Sulfate	TM INS 001-60	APHA 4110, modified
Mercury: Cold Vapor AA Mercury	TM INS 002-60	EPA 7470A, modified
Metals by ICP-OES Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Molybdenum Nickel	TM INS 003-60	EPA Method 29, modified

Phosphorus Potassium Silicon Silver Sodium Strontium Sulfur Thallium Tin Titanium Vanadium Zinc Zirconium		
Volatile Organic Compounds in Air by Thermal Desorption 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 1,2,4-Trimethylbenzene 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dibromomethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3,5-Trimethylbenzene 1,3-Butadiene 1,3-Dichlorobenzene 1,3-Dichloropropane 1,4-Dichlorobenzene 1,4-Dioxane 2,2-Dichloropropane 2-Butanone 2-chlorotoluene 2-Hexanone 4-chlorotoluene 4-Methyl-2-pentanone Acetone Acetonitrile Acrylonitrile Allyl Chloride	TM ENV 006-60	B.C. Environmental Lab Manual, VOCs in Air by Thermal Desorption Tube, modified

Benzene		
Bromobenzene		
Bromochloromethane		
Bromodichloromethane		
Bromoform		
Bromomethane		
Carbon disulfide		
Carbon tetrachloride		
Chlorobenzene		
Chloroethane		
Chloroform		
Chloromethane		
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		
Iodomethane		
Isobutanol		
Isopropylbenzene		
m,p-Xylene		
Methacrylonitrile		
Methyl acrylate		
Methyl methacrylate		
Methyl t-butyl ether		
Methylcyclohexane		
Naphthalene		
n-butylbenzene		
n-Decane		
n-Dodecane		
n-Hexane		
Nitrobenzene		
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		
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Tissue:

<u>Analyte</u>	<u>Test Method(s)</u>	<u>Reference Method(s)</u>
Carbon, Nitrogen in Tissue by Combustion Crude Protein (calculated) Total Nitrogen Total Carbon	TM TIS 003-60	AOAC 990.03, modified
Mercury: Cold Vapor AA Mercury	TM INS 002-60	EPA 7470A, modified
Metals by ICP-MS (6020A, modified) and Metals in Biota Digestion Antimony Bismuth Selenium Tellurium Uranium	TM INS 005-60	BC Environmental Lab Manual, modified
Metals by ICP-OES and Metals in Biota Digestion Aluminum Arsenic Barium Beryllium Boron Calcium Cadmium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Molybdenum Nickel	TM INS 003-60	EPA 6010C/BC Environmental Lab Manual, modified

Phosphorus Potassium Silicon Silver Sodium Sulfur Thallium Tin Titanium Vanadium Zinc Zirconium		
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Soil:

Analyte	Test Method(s)	Reference Method(s)
Anions by Ion Exchange Chromatography Chloride Fluoride Nitrate-N Nitrate-N plus Nitrite-N Nitrite-N Sulfate	TM INS 001-60	APHA 4110, modified
BTEX/VPH in Soil and Water Benzene Ethylbenzene F1: C6-C10 F2: C10-C16 m/p-Xylene Methyl Tert-Butyl Ether (MTBE) n-Decane n-Hexane n-Nonane o-Xylene Styrene Toluene Volatile Petroleum Hydrocarbons (C6-10 – BTEX) Volatile Hydrocarbons (C6 - C10)	TM ENV 002-60	B.C. Environmental Lab Manual, VH Solids, modified EPA 5021/8260/CCME-CWS-PHCS-TIER 1, modified

Analyte	Test Method(s)	Reference Method(s)
Extractable Petroleum Hydrocarbons in Soil EPH C10-C19 EPH C19-C32 EPH C10-C19-SG Cleaned EPH C19-C32-SG Cleaned F3: C16-C34 F4: C34-C50 F4G: Gravimetric Heavy Hydrocarbons F4HTGC: C34+ Hydrocarbons Heavy Extractable Petroleum Hydrocarbons (HEPH) Light Extractable Petroleum Hydrocarbons (LEPH)	TM ENV 012-60	BC Environmental Lab Manual, EPH in Solids, modified EPA 5021/8260/CCME-CWS-PHCS-TIER 1, modified
Mercury: Cold Vapor AA Mercury	TM INS 002-60	EPA 7471B, BCSALM, modified
Metals by ICP-MS Antimony Arsenic Barium Beryllium Bismuth Boron Cadmium Cesium Chromium Cobalt Copper Lead Lithium Manganese Mercury Molybdenum Nickel Palladium Platinum Rhodium Rubidium Ruthenium Selenium Silver Strontium Tellurium Thallium	TM INS 005-60	EPA 6020A, BCSALM, modified

Analyte	Test Method(s)	Reference Method(s)
Thorium Tin Tungsten Titanium Uranium Vanadium Zinc Zirconium		
Metals by ICP-OES Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Lithium Magnesium Manganese Molybdenum Nickel Phosphorus Potassium Silicon Silver Sodium Sulfur Thallium Tin Titanium Vanadium Zinc Zirconium	TM INS 003-60	EPA 6010C, BCSALM, modified
Metals by ICP-OES (EPA 6010C, modified) and Water-Soluble Extraction Boron – hot water soluble	TM INS 003-60	B.C. Environmental Lab Manual
Organic Matter, Loss on Ignition, Volatile Solids Organic Matter by LOI	TM SOIL 007-60	MSS Method 3.8, modified

Analyte	Test Method(s)	Reference Method(s)
pH and Conductivity in Soil pH (1:2 Soil/Water) Conductivity (1:2 Soil/Water)	TM SOIL 003-60	SSMA Chapter 16.2, 15.3.1
Polycyclic Aromatic Hydrocarbons in Soil 1-Methylnaphthalene 2-Chloronaphthalene 2-Methylnaphthalene 3-Methylcholanthrene 4-Nitropyrene 7,12-Dimethylbenz(a)anthracene Acenaphthene Acenaphthylene Anthracene Benzo (a) Anthracene Benzo (a) Pyrene Benzo (b) Fluoranthene Benzo (b+j) Fluoranthene Benzo (g,h,i) Perylene Benzo (k) Fluoranthene Chrysene Dibenzo (a,h) Anthracene Dibenzothiophene Fluoranthene Fluorene Indeno (1,2,3 - cd) Pyrene Naphthalene Phenanthrene Pyrene Quinoline	TM ENV 013-60	B.C. Environmental Lab Manual, PAH Solids, modified
Sodium Adsorption ratio (SAR), pH, and EC in Soil by Saturated Paste Calcium Chloride EC Magnesium Nitrate Nitrite Potassium Saturation percentage Sodium Sulfur	TM SOIL 011-60	SSMA CH15, modified
Total Nitrogen, Total Carbon, Inorganic Carbon by Combustion Total Carbon	TM SOIL 008-60	SSSA Methods of Soil Analysis Part 3, Chapter 34, 37, modified

Analyte	Test Method(s)	Reference Method(s)
Total Inorganic Carbon Total Nitrogen Total Organic Carbon		
Volatile Organic Compounds by GC/MS in Soil 1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethylene 1,2,3-Trichloropropane 1,2,4-Trimethylbenzene 1,2-dibromo-3-chloropropane 1,2-dibromoethane 1,2-dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethylene-cis 1,2-Dichloroethylene-trans 1,2-Dichloropropane 1,3,5-Trimethylbenzene 1,3-Butadiene 1,3-dichlorobenzene 1,3-Dichloropropane 1,3-Dichloropropene-cis 1,3-Dichloropropene-trans 1,4-dichlorobenzene 1-Propylbenzene 2-Chloroethylvinyl ether 2-Chlorotoluene 2-Hexanone (MBK) 4-Chlorotoluene 4-methyl-2-pentanone (MIBK) Acetone Acrylonitrile Allyl chloride Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane Dibromochloromethane	TM ENV 007-60	BC Environmental Lab Manual, VOCs in Soil, modified

Analyte	Test Method(s)	Reference Method(s)
Dichlorodifluoromethane Dichloromethane Ethylbenzene Hexachlorobutadiene Hexachloroethane Isopropylbenzene Methacrylonitrile Methyl ethyl ketone (MEK) Methyl methacrylate Methyl tert-butyl ether (MTBE) Methylcyclohexane n-Butylbenzene sec-Butylbenzene Styrene tert-Butylbenzene Tetrachloroethylene Toluene Trichloroethylene Trichlorofluoromethane Vinyl acetate Vinyl chloride Xylene, total Xylene-m+p Xylene-o		

Water:

Analyte	Test Method(s)	Reference Method(s)
Anionic Surfactants as MBAS	TM WAT 013-60	APHA 5540-C, modified
Anions by Ion Exchange Chromatography Bromide Chloride Fluoride Nitrate-N Nitrate-N plus Nitrite-N Nitrite-N Sulfate	TM INS 001-60	APHA 4110, modified
Biochemical Oxygen Demand BOD (5 day) CBOD	TM WAT 003-60	APHA 5210B, modified
BTEX/VPH – Soil and Water Benzene Ethylbenzene F1: C6-C10 F2: C10-C16 m/p-Xylene	TM ENV 002-60	BC Environmental Lab Manual, VH Water, modified EPA 5021/8260/CCME-CWS- PHCS-TIER 1, modified

Analyte	Test Method(s)	Reference Method(s)
Methyl Tert-Butyl Ether n-Decane n-Hexane n-Nonane o-Xylene Styrene Toluene Volatile Petroleum Hydrocarbons (C6-10 – BTEX) Volatile Hydrocarbons (C6 - C10)		
Chemical Oxygen Demand COD	TM WAT 005-60	APHA 5220D, modified
Extractable Petroleum Hydrocarbons in Water EPH C10-C19 EPH C19-C32 Heavy Extractable Petroleum Hydrocarbons (HEPH) Light Extractable Petroleum Hydrocarbons (LEPH) EPH C10-C19 – SG Cleaned EPH C19-C32 – SG Cleaned F3: C16-C34 F4: C34-C50 F4G: Gravimetric Heavy Hydrocarbons F4HTGC: C34+ Hydrocarbons HEPH (SG) LEPH (SG)	TM ENV 001-60	BC Environmental Lab Manual, EPH in Water, modified EPA 3510/CCME-CWS-PHCS-TIER 1, modified
Mercury Water: Cold Vapor AA Mercury	TM WAT 021-60	EPA 245.7, APHA 3112B, modified
Metals by ICP-OES Dissolved Calcium Dissolved Iron Dissolved Magnesium Dissolved Manganese Dissolved Potassium Dissolved Silicon Dissolved Sodium Hardness	TM INS 003-60	EPA 6010C, modified
Metals by ICP-OES Extractable Calcium Extractable Iron Extractable Magnesium	TM INS 003-60	EPA 6010C, modified

Analyte	Test Method(s)	Reference Method(s)
Extractable Manganese Extractable Potassium Extractable Silicon Extractable Sodium Hardness		
Metals by ICP-OES Hardness Total Calcium Total Iron Total Magnesium Total Manganese Total Phosphorus Total Potassium Total Silicon Total Sodium Total Titanium	TM INS 003-60	EPA 6010C, modified
Metals by ICP-MS Dissolved Aluminum Dissolved Antimony Dissolved Arsenic Dissolved Barium Dissolved Beryllium Dissolved Bismuth Dissolved Boron Dissolved Cadmium Dissolved Cesium Dissolved Chromium Dissolved Cobalt Dissolved Copper Dissolved Iron Dissolved Lead Dissolved Lithium Dissolved Manganese Dissolved Molybdenum Dissolved Nickel Dissolved Palladium Dissolved Platinum Dissolved Rhodium Dissolved Rubidium Dissolved Ruthenium Dissolved Selenium Dissolved Silver Dissolved Strontium Dissolved Tellurium Dissolved Thallium Dissolved Thorium Dissolved Tin	TM INS 005-60	EPA 200.8, modified

Analyte	Test Method(s)	Reference Method(s)
Dissolved Titanium Dissolved Tungsten Dissolved Uranium Dissolved Vanadium Dissolved Zinc Dissolved Zirconium		
Metals by ICP-MS Extractable Aluminum Extractable Antimony Extractable Arsenic Extractable Barium Extractable Beryllium Extractable Boron Extractable Cadmium Extractable Cesium Extractable Chromium Extractable Cobalt Extractable Copper Extractable Iron Extractable Lead Extractable Manganese Extractable Molybdenum Extractable Nickel Extractable Palladium Extractable Platinum Extractable Rhodium Extractable Rubidium Extractable Ruthenium Extractable Selenium Extractable Strontium Extractable Tellurium Extractable Thallium Extractable Thorium Extractable Tin Extractable Titanium Extractable Tungsten Extractable Uranium Extractable Vanadium Extractable Zinc	TM INS 005-60	EPA 200.8, modified
Metals by ICP-MS Total Aluminum Total Antimony Total Arsenic Total Barium Total Beryllium Total Bismuth Total Boron	TM INS 005-60	EPA 200.8, modified

Analyte	Test Method(s)	Reference Method(s)
Total Cadmium Total Cesium Total Chromium Total Cobalt Total Copper Total Iron Total Lead Total Lithium Total Manganese Total Molybdenum Total Nickel Total Palladium Total Platinum Total Rhodium Total Rubidium Total Ruthenium Total Selenium Total Silver Total Strontium Total Tellurium Total Thallium Total Thorium Total Tin Total Titanium Total Tungsten Total Uranium Total Vanadium Total Zinc Total Zirconium		
Oil and Grease in Water (Total and Mineral) Mineral Oil and Grease Total Oil and Grease	TM ENV 005-60	B.C. Environmental Lab Manual and APHA 5520B, F, modified
pH (Potentiometric) pH	TM WAT 015-60	APHA 4500-H+B, modified
pH, EC, Alkalinity, Acidity and Color Alkalinity (pH 4.5) Color – True Conductivity (25 °C) pH	TM WAT 024-60	APHA 2320B, 2120C, 2510 B, 4500-H+ B, modified
Polycyclic Aromatic Hydrocarbons in Water 1-Methylnaphthalene 2-Chloronaphthalene 2-Methylnaphthalene	TM ENV 004-60	BC Environmental Lab Manual, PAH Water, modified

Analyte	Test Method(s)	Reference Method(s)
3-Methylcholantrene 4-Nitropyrene 7,12-Dimethylbenz(a)anthracene Acenaphthene Acenaphthylene Acridine Anthracene Benzo (a) Anthracene Benzo (a) Pyrene Benzo (b) Fluoranthene Benzo (b+j) Fluoranthene Benzo (g,h,i) Perylene Benzo (k) Fluoranthene Chrysene Dibenzo (a,h) Anthracene Dibenzothiophene Fluoranthene Fluorene Indeno (1,2,3 - cd) Pyrene Naphthalene Phenanthrene Pyrene Quinoline		
Residual and Total Chlorine	TM WAT 023-60	APHA 4500 Cl - G, modified
Free Chlorine Total Chlorine		
Solids – Dissolved, Suspended, Total	TM WAT 017-60	APHA 2540, modified
Fixed Dissolved Solids Fixed Suspended Solids Total Fixed Solids Total Dissolved Solids Total Solids Total Suspended Solids Volatile Dissolved Solids Volatile Suspended Solids		
Turbidity in Water	TM WAT 019-60	APHA 2130, modified
Turbidity		
Volatile Organic Compounds by GC/MS in Water 1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethylene	TM ENV 007-60	BC Environmental Lab Manual, VOCs in Water, modified

Analyte	Test Method(s)	Reference Method(s)
1,2,3-Trichloropropane 1,2,4-Trimethylbenzene 1,2-dibromo-3-chloropropane 1,2-dibromoethane 1,2-dichlorobenzene 1,2-Dichloroethane 1,2-Dichloroethylene-cis 1,2-Dichloroethylene-trans 1,2-Dichloropropane 1,3,5-Trimethylbenzene 1,3-Butadiene 1,3-dichlorobenzene 1,3-Dichloropropane 1,3-Dichloropropene-cis 1,3-Dichloropropene-trans 1,4-dichlorobenzene 1-Propylbenzene 2-Chloroethylvinyl ether 2-Chlorotoluene 2-Hexanone (MBK) 4-Chlorotoluene 4-Methyl-2-pentanone (MIBK) Acetone Acrylonitrile Allyl chloride Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane Dibromochloromethane Dichlorodifluoromethane Dichloromethane Ethylbenzene Hexachlorobutadiene Hexachloroethane Isopropylbenzene Methacrylonitrile Methyl ethyl ketone (MEK) Methyl methacrylate Methyl tert- butyl ether (MTBE) Methylcyclohexane n-Butylbenzene		

Analyte	Test Method(s)	Reference Method(s)
sec-Butylbenzene Styrene tert-Butylbenzene Tetrachloroethylene Toluene Trichloroethylene Trichlorofluoromethane Vinyl acetate Vinyl chloride Xylene, total Xylene-m+p Xylene-o		

Key: **APHA:** American Public Health Association (standard Methods for the Examination of Water and Wastewater)
AEC: Methods Manual for Chemical Analysis of Atmospheric Pollutants, 4th Edition. 1993. Alberta
Environmental Centre, Vegreville, AB
AOAC: Association of Official Analytical Collaboration
EPA: Environmental Protection Agency
BCSALM: British Columbia Strong Acid Leachable Method
MSS: Manual on Soil Sampling and Methods of Analysis – J.A. McKeague 1978
SSMA: Soil Sampling and Methods of Analysis, Martin R. Carter, 2008
SSSA: Soil Science Society of America



Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY CANADA INC.

Surrey, BC, CANADA

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 4th day of November 2025.

A blue ink signature of Mr. Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 6206.03
Valid to January 31, 2028

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.



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BIOLOGICAL

Valid To: January 31, 2028

Certificate Number: 6206.06

In recognition of the successful completion of the A2LA evaluation process accreditation is granted to this laboratory to perform the following biological tests identified on the analytes noted below:

Analyte	Test Method(s)	Reference Method(s)
Heterotrophic Plate Count Test by IDEXX SimPlate Method Heterotrophic Plate Count (HPC)	TM MICR 002-60	APHA 9215E
Iron Related Bacteria – BART Method Iron Related Bacteria (IRB)	TM MICR 095-60	IRB-BART Biodetection Kit; Droycon Bioconcepts Inc.
Slime Forming Bacteria – BART Method Slime Forming Bacteria	TM MICR 097-60	SLYM-BART Biodetection Kit; Droycon Bioconcepts Inc.
Sulfate Reducing Bacteria – BART Method Sulfate Reducing Bacteria (SRB)	TM MICR 096-60	SRB-BART Biodetection Kit; Droycon Bioconcepts Inc.
Total Coliforms and <i>Escherichia coli</i> Test by Colilert Method <i>Escherichia coli</i> (<i>E. coli</i>) Total Coliforms	TM MICR 001-60	APHA 9223B
Total Coliforms, Fecal (Thermotolerant) Coliforms and <i>E. coli</i> by Membrane Filtration <i>Escherichia coli</i> (<i>E. coli</i>) Fecal (Thermotolerant) Coliforms Total Coliforms	TM MICR 092-60	APHA 9222 B,D,G
<i>Pseudomonas aeruginosa</i> Test by Pseudalert <i>P. aeruginosa</i>	TM MICR 101-60	APHA 9213 G

Key: APHA: American Public Health Association (Standard Methods for the Examination of Water and Wastewater)



Accredited Laboratory

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ELEMENT MATERIALS TECHNOLOGY CANADA INC.

Surrey, BC, CANADA

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Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 6206.06
Valid to January 31, 2028

For the tests to which this accreditation applies, please refer to the laboratory's Biological Scope of Accreditation.