



THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION
ACCREDITED PROFICIENCY TESTING PROVIDER

A2LA has accredited

**INFORMATION AND QUALITY MANAGEMENT
EMERGENCIES, OPERATIONAL ANALYTICAL LABORATORIES & RESEARCH SUPPORT
ENVIRONMENT CANADA
Burlington, ON, CANADA**

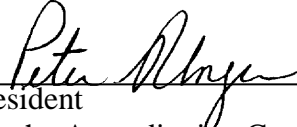
for technical competence as a

Proficiency Testing Provider

This accreditation covers the specific proficiency testing samples listed on the agreed upon Scope of Accreditation. This provider meets the ILAC G-13:2007 Guidelines for the Requirements for the Competence of Providers of Proficiency Testing (comprising ISO Guide 43-1:1997, as well as relevant elements of ISO/IEC 17025:2005 applicable to characterization, homogeneity and stability testing of proficiency testing materials), and the management system requirements of ISO/IEC 17025:2005, which includes the principles of ISO 9000:2005



Presented this 29th day of May 2009.



President
For the Accreditation Council
Certificate Number 2867.01
Valid to July 31, 2013

For the proficiency testing schemes to which this accreditation applies, please refer to the provider's Scope of Accreditation.

SCOPE OF ACCREDITATION TO ILAC G-13: 2007

INFORMATION AND QUALITY MANAGEMENT
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PROFICIENCY TESTING PROVIDER

Valid To: July 31, 2013

Certificate Number: 2867.01

In recognition of the successful completion of the A2LA evaluation process, this Proficiency Testing Provider (PTP) has been found to meet the ILAC G-13: 2007 for the Requirements for the Competence of Providers of Proficiency Testing Schemes (Based upon the ISO Guide 43-1:1997, relevant elements of ISO/IEC 17025:2005, and relevant ISO 9000-2005 requirements). Accreditation is granted to this provider to provide proficiency-testing samples in the following analyte/matrix combinations:

| Program Name | Frequency of Program | Detailed description of sample/artifact types |
|--|-----------------------------|--|
| Rain and Soft Waters Acidity to pH 8.3 (mg/L CaCO ₃) Alkalinity Fixed End Pt pH 4.5 (mg/L CaCO ₃) Alkalinity, Gran Titn (mg/L CaCO ₃) Aluminum (mg/L Al) Ammonia (mg/L N) Calcium (mg/L Ca) Chloride (mg/L Cl) Colour (Units) Conductivity @ 25°C (µS/cm) Diss Inorganic Carbon (mg/L C) Diss Organic Carbon (mg/L C) Fluoride (mg/L F) Magnesium (mg/L Mg) Nitrate + Nitrite (mg/L N) pH (pH units) Potassium (mg/L K) Silica (mg/L Si) Sodium (mg/L Na) Sulfate (mg/L SO ₄) Total Hardness (mg/L CaCO ₃) Total Kjeldahl N (mg/L N) Total Nitrogen (mg/L N) Turbidity (NTU/JTU) | 6 months | Natural waters |
| Major Ions and Nutrients Ammonia (mg/L N) Boron (mg/L B) | 6 months | Natural waters |

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| Calcium (mg/L Ca) Chloride (mg/L Cl) Colour (Units) Conductivity @ 25°C (µS/cm) Diss Inorganic Carbon (mg/L C) Diss Organic Carbon (mg/L C) Fluoride (mg/L F) Magnesium (mg/L Mg) Nitrate + Nitrite (mg/L N) pH (pH units) Potassium (mg/L K) Silicates (mg/L SiO2) Sodium (mg/L Na) Sulfate (mg/L SO4) Total Alkalinity (mg/L CaCO3) Total Hardness (mg/L CaCO3) Total Kjeldahl N (mg/L N) Total Nitrogen (mg/L N) Turbidity (NTU/JTU) | | |
| Trace Elements in Water Aluminum (µg/L Al) Antimony (µg/L Sb) Arsenic (µg/L As) Barium (µg/L Ba) Beryllium (µg/L Be) Bismuth (µg/L Bi) Boron (µg/L B) Cadmium (µg/L Cd) Chromium (µg/L Cr) Cobalt (µg/L Co) Copper (µg/L Cu) Gallium (µg/L Ga) Iron (µg/L Fe) Lead (µg/L Pb) Lithium (µg/L Li) Manganese (µg/L Mn) Molybdenum (µg/L Mo) Nickel (µg/L Ni) Rubidium (µg/L Rb) Selenium (µg/L Se) Silver (µg/L Ag) Strontium (µg/L Sr) Thallium (µg/L Tl) Tin (µg/L) Titanium (µg/L) Tungsten (µg/L) Uranium (µg/L) Vanadium (µg/L) Zinc (µg/L) | 6 months | Natural and fortified waters |
| Total Phosphorus in Water Phosphorus (mg/L) | 6 months | Natural and fortified waters |
| Turbidity in Water Turbidity (NTU/JTU) | 6 months | Natural and fortified waters |
| Mercury in Water Mercury (µg/L Hg) | 12 months | Natural and fortified waters |

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| <p>Trace Elements in Sediment</p> <p>Aluminum (% Al) Antimony (µg/g Sb) Arsenic (µg/g As) Barium (µg/g Ba) Beryllium (µg/g Be) Bismuth (µg/g Bi) Boron (µg/g B) Cadmium (µg/g Cd) Calcium (%Ca) Chromium (µg/g Cr) Cobalt (µg/g Co) Copper (µg/g Cu) Gallium (µg/g Ga) Iron (%Fe) Lead (µg/g Pb) Lithium (µg/g Li) Magnesium (%Mg) Manganese (µg/g Mn) Mercury (µg/g Hg) Molybdenum (µg/g Mo) Nickel (µg/g Ni) Potassium (%K) Selenium (µg/g Se) Silica (%Si) Silver (µg/g Ag) Sodium (µg/g Na) Strontium (µg/L Sr) Thallium (µg/L Tl) Tin (µg/g Sn) Titanium (µg/g Ti) Tungsten (µg/g W) Uranium (µg/g U) Vanadium (µg/g V) Zinc (µg/g Zn)</p> | 12 months | Natural sediments and soils |
| <p>CUSTOM-1A (Major Ions)</p> <p>Alkalinity (pH 4.5) (mg/L) Chloride (mg/L) Conductivity (25oC) (µs/cm) Calcium (mg/L) Magnesium (mg/L) Fluoride (mg/L) Hardness (as CaCO3) (mg/L) Nitrate (mg/L) Nitrate plus Nitrite (mg/L) Potassium (mg/L) Reactive Silica (mg/L) Sodium (mg/L) Sulfate (mg/L)</p> | Negotiated | Water |
| <p>CUSTOM-1B (NH3/DOC/PO4/Br/NO2)</p> <p>Ammonia (mg/L) DOC (mg/L) Phosphate (mg/L) Bromide (mg/L) Nitrite (mg/L)</p> | Negotiated | Water |

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| CUSTOM-2A (Full Range Metals) Aluminum (mg/L) Antimony (µg/L) Arsenic (µg/L) Barium (mg/L) Beryllium (mg/L) Boron (mg/L) Cadmium (mg/L) Chromium (mg/L) Cobalt (mg/L) Copper (mg/L) Iron (mg/L) Lead (mg/L) Manganese (mg/L) Molybdenum (mg/L) Nickel (mg/L) Selenium (µg/L) Silver (mg/L) Strontium (mg/L) Thallium (mg/L) Tin (mg/L) Titanium (mg/L) Uranium (mg/L) Vanadium (mg/L) Zinc (mg/L) | Negotiated | Water |
| CUSTOM-2B (High range metals) CUSTOM-2C (Total metals) Aluminum (mg/L) Barium (mg/L) Boron (mg/L) Chromium (mg/L) Cobalt (mg/L) Copper (mg/L) Iron (mg/L) Lead (mg/L) Manganese (mg/L) Molybdenum (mg/L) Nickel (mg/L) Strontium (mg/L) Thallium (mg/L) Titanium (mg/L) Vanadium (mg/L) Zinc (mg/L) | Negotiated | Water |
| CUSTOM-3 (TKN/TP) Total Kjeldahl Nitrogen (mg/L) Total Phosphorus (mg/L) | Negotiated | Water |
| CUSTOM-4A(TSS/TDS/VSS) Total Suspended Solids (mg/L) Volatile Suspended Solids (mg/L) Total Dissolved Solids (mg/L) | Negotiated | Water |
| CUSTOM-4B (BOD) BOD (5 day) (mg/L) CBOD (5 day) (mg/L) | Negotiated | Water |

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| CUSTOM-4C (Turbidity) Turbidity NTU | Negotiated | Water |
| CUSTOM-4D (COD) COD (mg/L) | Negotiated | Water |
| CUSTOM-6A (OC Pesticides) Alpha-BHC (µg/L) Endosulfan I (µg/L) Endosulfan II (µg/L) Endrin (µg/L) Heptachlor Epoxide (µg/L) Lindane (gamma-BHC) (µg/L) Mirex (µg/L) o,p'-DDT (µg/L) p,p'-DDT (µg/L) p,p'-Methoxychlor (µg/L) Aldrin (µg/L) Dieldrin (µg/L) Heptachlor (µg/L) a-Chlordane (µg/L) g-Chlordane (µg/L) | Negotiated | Water |
| CUSTOM-6B Total PCB Total PCB (µg/L) | Negotiated | Water |
| CUSTOM-7 PAH Naphthalene (µg/L) Acenaphthylene (µg/L) Acenaphthene (µg/L) Fluorene (µg/L) Phenanthrene (µg/L) Anthracene (µg/L) Fluoranthene (µg/L) Pyrene (µg/L) Benzo(a)anthracene (µg/L) Chrysene (µg/L) Benzo(b)fluoranthene (µg/L) Benzo(k)fluoranthene (µg/L) Benzo(a)pyrene (µg/L) Perylene (µg/L) Indeno(1,2,3-cd) pyrene (µg/L) Dibenzo(a,h) anthracene (µg/L) Benzo(g,h,i) perylene (µg/L) | Negotiated | Water |
| CUSTOM-8 Total PCB Total PCB (µg/g) | Negotiated | Oil |
| CUSTOM-9-Metals on Air Filters Cadmium (µg/HVF) Copper (µg/HVF) Lead (µg/HVF) Zinc (µg/HVF) | Negotiated | 47 mmx2 (quartz air Filter) |
| CUSTOM-10-Major Ions on Air Filters Chloride (µg/HVF) Fluoride (µg/HVF) | Negotiated | 47 mmx2 (quartz air Filter) |

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| Nitrate (µg/HVF) Sulfate (µg/HVF) | | |
| CUSTOM-11 (Trout)-Toxicity Trout LC50 (96 h) (ml/L) | Negotiated | Water |
| CUSTOM-12 (Daphnia)-Toxicity Daphnia LC50 (48 h) (ml/L) | Negotiated | Water |
| CUSTOM-13 (Microtox)-Toxicity Microtox IC50 (15 min) (ml/L) | Negotiated | Water |
| CUSTOM-14 (Cyanide) (Strong Acid Dissociable) Cyanide (mg/L) | Negotiated | Water |
| CUSTOM-15 (pH) pH (pH units) | Negotiated | Water |
| CUSTOM-16 (BTEX/THM/VOC) 1,1,1-Trichloroethane (µg/L) 1,1,2,2-Tetrachloroethane (µg/L) 1,1,2-Trichloroethane (µg/L) 1,1-Dichloroethane (µg/L) 1,1-dichloroethylene (µg/L) 1,2-dichlorobenzene (µg/L) 1,2-dichloroethane (µg/L) 1,2-Dichloropropane (µg/L) 1,3-Dichlorobenzene (µg/L) 1,4-dichlorobenzene (µg/L) Acetone (2-Propanone) (µg/L) Benzene (µg/L) Bromodichloromethane (µg/L) Bromoform (µg/L) Carbon Tetrachloride (µg/L) Chlorobenzene (µg/L) Chlorodibromomethane (µg/L) Chloroform (µg/L) cis-1,2-Dichloroethylene (µg/L) cis-1,3-Dichloropropene (µg/L) Dichloromethane (µg/L) Ethylbenzene (µg/L) Ethylene Dibromide (µg/L) m/p-xylene (µg/L) Methyl Ethyl Ketone (µg/L) Methyl t-butyl ether (MTBE) (µg/L) Methyl isobutyl Ketone (MIBK) (µg/L) o-xylene (µg/L) Styrene (µg/L) Tetrachloroethylene (µg/L) Toluene (µg/L) trans-1,2-Dichloroethylene (µg/L) trans-1,3-Dichloropropene (µg/L) Trichloroethylene (µg/L) Trichlorofluoromethane (µg/L) Vinyl Chloride (µg/L) | Negotiated | Water |

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| CUSTOM-17 (Metals in Soil) (all µg/g) Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Chromium Cobalt Copper Iron Manganese Mercury Nickel Lead Strontium Tin Titanium Uranium Vanadium Zinc | Negotiated | Soil/Sediment |
| CUSTOM-18 (PAH in Soil) (all µg/g) Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (A) pyrene Benzo (a) 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 | Negotiated | Soil/Sediment |
| CUSTOM-19 (Mercury) Mercury (µg/L) | Negotiated | Water |
| CUSTOM-21- Metals on Air Filters Cadmium (µg/HVF) Chromium (µg/HVF) Lead (µg/HVF) Zinc (µg/HVF) | Negotiated | 37mm (cellulose ester Air Filter) |
| CUSTOM-28 Aromatic Organics in Air Benzene (µg/tube) Toluene (µg/tube) | Negotiated | Charcoal Tubes |
| CUSTOM-31A (PHC-BTEX/F1) (all mg/kg) F1: C6-C10 Benzene Ethylbenzene | Negotiated | Soil |

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| m/p-xylene o-xylene Toluene | | |
| CUSTOM-31B (PHC-F2,F3,F4) (all mg/kg) F2: C10-C16 F3: C16-C34 F4: C34-C50 F4 Gravimetric | Negotiated | Soil |
| CUSTOM-32 (Residual Chlorine) Residual Chlorine (mg/L) | Negotiated | Water |
| CUSTOM-33 (Low Level Phenol) Total Phenolics (mg/L) | Negotiated | Water |
| CUSTOM-35(PCB's in soil) Total PCBs (µg/g) | Negotiated | Soil/ Sediment |
| CUSTOM-36 (VOCs in Soil) 1,1,1-Trichloroethane (µg/g) 1,1,2,2-Tetrachloroethane (µg/g) 1,1,2-Trichloroethane (µg/g) 1,1-Dichloroethane (µg/g) 1,1-dichloroethylene (µg/g) 1,2-dichlorobenzene (µg/g) 1,2-dichloroethane (µg/g) 1,2-Dichloropropane (µg/g) 1,3-Dichlorobenzene (µg/g) 1,4-dichlorobenzene (µg/g) Acetone (2-Propanone) (µg/g) Benzene (µg/g) Bromodichloromethane (µg/g) Bromoform (µg/g) Carbon Tetrachloride (µg/g) Chlorobenzene (µg/g) Chlorodibromomethane (µg/g) Chloroform (µg/g) cis-1,2-Dichloroethylene (µg/g) cis-1,3-Dichloropropene (µg/g) Dichloromethane (µg/g) Ethylbenzene (µg/g) Ethylene Dibromide (µg/g) m/p-xylene (µg/g) Methyl Ethyl Ketone (µg/g) Methyl t-butyl ether (MTBE) (µg/g) Methyl isobutyl Ketone (MIBK) (µg/g) o-xylene (µg/g) Styrene (µg/g) Tetrachloroethylene (µg/g) Toluene (µg/g) trans-1,2-Dichloroethylene (µg/g) trans-1,3-Dichloropropene (µg/g) Trichloroethylene (µg/g) Trichlorofluoromethane (µg/g) Vinyl Chloride (µg/g) | Negotiated | Soil/Sediment |