TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Legal Name of Accredited Laboratory:	**AGAT Laboratories LTD.**
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To ensure compliance with the *Official Languages Act*, the Standards Council of Canada (SCC) translated proprietary content from English to French when it was not available in French. In case of discrepancies between the English and French versions, the original version of the method prevails.

SCC File Number:	15806
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Biological Chemical/Physical
Program Specialty Area:	Agriculture Inputs, Food, Animal Health and Plant Protection (AFAP) Environmental Testing (ET) Test Method Development and Non-routine Testing (TMDNRT)
Initial Accreditation:	2009-01-12
Most Recent Accreditation:	2024-06-25
Accreditation Valid to:	2029-01-12

TEST METHOD DEVELOPMENT AND NON-ROUTINE TESTING

Description of activities – Chemical Analysis:

Food samples: Food and edible products: edible animal fat, dairy products, eggs.

For verification and use new matrices for commercially available 3M and Neogen test kits used for the screening and determination of food allergens in food samples.

Description of techniques – Chemical Analysis:

1. Sample preparation/extraction techniques including homogenization and extraction for ELISA methods
2. Enzyme linked immunosorbent assay (ELISA.) via commercial Neogen and 3M kits.

A current list of all food matrices and allergen testing kits is maintained by the laboratory.

ANIMAL AND PLANTS (AGRICULTURE)

Foods and Edible Products (Human and Animal Consumption):

(Chemicals Tests)

FC-102-15001F	Determination of ash Applicable matrix: Food products Device/Technique: Gravimetry
FC-102-15002F	Determination of total dietary fibres Applicable matrix: Food products Device/Technique: Enzymatic hydrolysis
FC-102-15003F	Determination of carbohydrates, caloric value, and energy content Applicable matrix: Food products Device/Technique: N/A Calculation
FC-102-15005F	Determination of moisture and total solids Applicable matrix: Food products Device/Technique: Gravimetry
FC-102-15006F	Determination of total fat Applicable matrices: Meat and derivatives Device/Technique: Extraction on Soxhlet
FC-102-15007F	Determination of protein/nitrogen Applicable matrix: Food products Device/Technique: Digestion and Kjeldahl Distillation
FC-102-15008F	Determination of cholesterol Applicable matrix: Food products Device/Technique: GC-FID

FC-102-15009F	Determination of total fat content Applicable matrices: Food products containing: Flour and derivatives, Fish and derivatives, Eggs, Cheese, Salad dressings; Mixed food products containing meat and vegetables and/or pasta; Sweet products. Device/Technique: Acid hydrolysis/Gravimetry
FC-102-15010F	Determination of total fat content Applicable matrices: Milk and milk products excluding cheese Device/Technique: Mojonnier/Gravimetry
FC-102-15011F	Determination of fatty acid, saturated and unsaturated Applicable matrix: Food products Device/Technique: GC-FID
FC-102-15012F	Determination of metals Applicable matrix: Food products Device/Technique: ICP-OES (Emission Espctrometry inductively coupled plasma optics) Note: This method is also applicable for MET-101-6107F (see the Environmental section) Metals : As, Cd, Pb, Ca, Cu, Fe, Mg, Mn, K, Na, Zn, P, Se
FC-102-15014F	Determination of total fat Applicable matrices: Cocoa and chocolate products excluding white chocolate Device/Technique: Gravimetry
FC-102-15016F	Determination of salt Applicable matrix: Food products Device/Technique: Color titration
FC-102-15029F	Determination of sugars (fructose, glucose, galactose, sucrose, maltose, lactose) Applicable matrix: Food products Device/Technique: HPLC with RID detector
FC-102-15050F	Quantitative determination of allergens by the Elisa method with Neogen Applicable matrix: Food Products Device/Technique: ELISA

(Microbiological Tests)

MFHPB-10	Isolation of *Escherichia coli* O157:H7/NM from foods and environmental surface samples Applicable matrices: Food products and environmental samples (surfaces) Device/Technique: Selective Enrichment / Isolation
MFHPB-18	Determination of the Aerobic Colony Counts in Foods Applicable matrices: Food products Device/Technique: Incorporation
MFHPB-19	Enumeration of Coliforms, Faecal Coliforms and of *E. coli* in foods using the MPN Method Applicable matrices: Food products and water,

	Device /Technique: Multiple Tubes / Most Probable Number
MFHPB-20	Isolation and Identification of *Salmonella* from food and environmental samples Applicable matrices: Food and environmental products Device /Technique: Selective Enrichment / Isolation
MFHPB-21	Enumeration of *Staphylococcus aureus* in foods Applicable matrices: Food and environmental products Device/Technique: Spreading/Isolation
MFHPB-22	Enumeration of Yeasts and Moulds in foods Applicable matrices: Food Device/Technique: Spreading
MFHPB-23	Enumeration of *Clostridium perfringens* in foods Applicable matrices: Food products Device/Technique: Incorporation/Isolation
MFHPB-30	Isolation of *Listeria monocytogenes* and other *Listeria spp*. from foods and environmental samples Applicable matrices: Food and environmental products Apparatus/Technique: Selective Enrichment / Isolation
MFHPB-32	Enumeration of Yeast and Mold in Food Products and Food Ingredients Using 3M™ Petrifilm™ Yeast and Mold Count Plates Applicable matrices: Food products (except dark colored products) and environmental products Apparatus/Technique: PetrifilmTM Plates
MFHPB-33	Enumeration of Total Aerobic Bacteria in Food Products and Food Ingredients Using 3M™ Petrifilm™ Aerobic Count Plates Applicable matrices: Food products (except dark colored products) and environmental products Apparatus/Technique: PetrifilmTM Plates
MFHPB-34	Enumeration of *Escherichia coli* and Coliforms in Food Products and Food Ingredients Using 3M™ Petrifilm™ *E. coli* Count Plates Applicable matrices: Food products (except dark colored products) and environmental products Apparatus/Technique: PetrifilmTM Plates
MFLP-09	Enumeration of *Enterobacteriaceae* species in Food and Environmental Samples Using 3M™ Petrifilm™ *Enterobacteriaceae* Count Plates Applicable matrices: the following foods (cheddar cheese, milk, flour, frozen broccoli, frozen prepared meals, nuts, and sprouted seeds (soy, alfalfa, and Other germs) and environmental samples. Apparatus/Technique: PetrifilmTM Plates
MFLP-21	Enumeration of *Staphylococcus aureus* in Foods and Environmental Samples Using 3MT PetrifilmT Staph Express Count (STX) Plates Applicable matrices: Food products (except dark colored products) and environmental products Apparatus/Technique: PetrifilmTM Plates

MFLP-28	Detection of *Listeria monocytogenes* in a Variety of Foods and Environmental Surfaces Using the Bax® System *L.monocytogenes* Assay Applicable matrices: All foods and on a variety of environmental surfaces Device/Technique: Selective enrichment/Q7 or X5 instruments of the BAX® system. (PCR)/Isolation
MFLP-29	Detection of *Salmonella* in Foods and Environmental Surface Samples Using the BAX® System *Salmonella* Assay Applicable matrices: All foods and on a variety of environmental surface samples Device/Technique: Selective enrichment/Q7 or X5 instruments of the BAX® system. (PCR)/Isolation
MFLP-30	Detection of *Escherichia coli* O157:H7 in Select Foods using the BAX® System PCR Assay for *E. coli* O157:H7 MP Applicable matrices: Dairy products, raw meats, ready-to-eat meat and poultry products, fruit and vegetable products and dry cereals and dry feeds in the miscellaneous foods category Device/Technique: Selective enrichment/Q7 or X5 instruments of the BAX® system. (PCR)/Isolation
MFLP-38	Detection of *Salmonella spp*. from all foods and selected environmental surfaces using iQ-Check™ Salmonella Real-Time PCR Test Kit Applicable matrices: All foods and on a variety of environmental surfaces. Device/Technique: Selective enrichment/ The iQ-Check kit (PCR)/ Isolation
MFLP-39	Detection of *Listeria spp*. from Environmental Surfaces and Heat Processed Ready to Eat Meat and Poultry Using iQ-Check™ *Listeria spp*. Real-Time PCR Test Kit Applicable matrices: various environmental surfaces and on heat-treated foods in the ready-to-eat meat and poultry category. Device/Technique: Selective enrichment/ The iQ-Check kit (PCR)/ Isolation
MFLP-42	Isolation and Enumeration of the *Bacillus cereus* Group in Foods Applicable matrices: Naturally contaminated foods such as meats, vegetables, dairy products, grains and dehydrated foods Device/Technique: Sprawling/Isolation
MFLP-43	Determination of *Enterobacteriaceae* Applicable matrices: Naturally contaminated foods Device/Technique: Incorporation/Isolation
MFLP-54	Detection of *Listeria monocytogenes* from selected foods using iQ-Check™ *Listeria monocytogenes* Real-Time PCR Test Kit Applicable matrices: Ready-to-eat meat and poultry, fruit and vegetable products (except raw processed vegetables), fish and seafood products (except smoked fish), and frozen and frozen dairy products fermented. Device/Technique: Selective enrichment/ The iQ-Check kit (PCR)/ Isolation
MFLP-74	Enumeration of *Listeria monocytogenes* in foods Applicable matrices: all foods.

	Device/Technique: Spreading/Isolation
MFLP-100	Detection of *Salmonella spp*. in Foods Using the 3M™ Molecular Detection System Test Kit Version 2 Applicable matrices: All foods except chocolate products, spices, powdered dairy products and whole nuts. Device/Technique: Selective enrichment/Molecular detection assays (MDS)/Isolation
MFLP-101	Detection of *Listeria spp*. in Environmental Surface Samples Using the 3M™ Molecular Detection System Test Kit Version 2 Applicable matrices: samples taken from a variety of environmental surfaces. Device/Technique: Selective enrichment/Molecular detection assays (MDS)/Isolation
MFLP-111	Detection of *Listeria monocytogenes* in Foods Using the 3M™ Molecular Detection System Test Kit Version 2 Applicable matrices: The categories of raw meat products, fruit and vegetable products, for the types of “other” foods in the ready-to-eat meat and poultry category, the types of “raw” foods and the types of “frozen” foods in the dairy products category and the “raw fish and shellfish” food types and the “frozen” food types in the fish and seafood category. Device/Technique: Selective enrichment/Molecular detection assays (MDS)/Isolation
MIC-102-7076F	Enumeration of lactic acid bacteria by 3M™ Petrifilm Applicable matrices: Food Products Device/Technique: 3M™ Petrifilm
MLG 4.14	Isolation and Identification of *Salmonella* from Meat, Poultry, Pasteurized Egg, and Siluriformes (Fish) Products and Carcass and Environmental Sponges Applicable matrices: Various samples of meat, poultry, egg, Fermented products, Dried products, Ready-to-eat products made from meat, poultry and siluriformes (fish), sponge and rinse, Device/Technique: Selective enrichment/Molecular detection assays (MDS)/Isolation
MLG 41.07	Isolating and Identifying *Campylobacter jejuni/coli/lari* from Poultry Rinse, Sponge and Raw Product Samples Applicable matrices: samples of poultry rinses, poultry carcasses, environmental sponges and raw poultry products. Device/Technique: Selective enrichment/Molecular detection assays (MDS)/Isolation

ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Environmental

HR-151-5400F	Determination of Dioxins and Furans by GC-MS/MS (Reference methods: Environment Canada ESP1/RM/19, US-EPA 1613, CEAEQ MA 400-D. F. 1.0, US-EPA 23, US-EPA TO-9A) Applicable matrices: Water, soil, sediment, leachates, tissue and air. Device/Technique: APGC (Waters Atmospheric Pressure Gas Chromatography) Compounds: 2,3,7,8-Tetra CDD 1,2,3,7,8-Penta CDD 1,2,3,4,7,8-Hexa CDD 1,2,3,6,7,8-Hexa CDD 1,2,3,7,8,9-Hexa CDD 1,2,3,4,6,7,8-Hepta CDD Octa CDD 2,3,7,8-Tetra CDF 1,2,3,7,8-Penta CDF 2,3,4,7,8-Penta CDF 1,2,3,4,7,8-Hexa CDF 1,2,3,6,7,8-Hexa CDF 2,3,4,6,7,8-Hexa CDF 1,2,3,7,8,9-Hexa CDF 1,2,3,4,6,7,8-Hepta CDF 1,2,3,4,7,8,9-Hepta CDF OctaCDF Sum of Tetra CDDs Summation of Penta CDDs Summation of Hexa CDD Summation of CDD Hepta Summation of PCDDs Summation of Tetra CDFs Summation of Penta CDFs Summation of Hexa CDFs Summation of Hepta CDFs Summation of PCDFs

HR-151-5401F	Determination of PCB congeners Applicable matrices: Waters, soils. Device/Technique: APGC (Waters Atmospheric Pressure Gas Chromatography) Compounds: Cl-3 IUPAC 31+28 Cl-3 IUPAC 33 Cl-4 IUPAC 52 Cl-4 IUPAC 49 Cl-4 IUPAC 44 Cl-4 IUPAC 74 Cl-4 and Cl-5 IUPAC 70+95 Cl-5 IUPAC 101 Cl-5 IUPAC 99 Cl-5 IUPAC 87 Cl-5 IUPAC 110Cl-5 and Cl-6 IUPAC 82+151 Cl-5 IUPAC 118 Cl-5 IUPAC 105 Cl-6 IUPAC 149 Cl-6 IUPAC 153 Cl-6 IUPAC 132 Cl-6 IUPAC 138-158 Cl-6 IUPAC 128 Cl-6 IUPAC 156 Cl-6 IUPAC 169 Cl-7 IUPAC 187 Cl-7 IUPAC 183 Cl-7 IUPAC 177 Cl-7 IUPAC 171 Cl-7 IUPAC 180 Cl-7 IUPAC 191 Cl-7 IUPAC 170 Cl-8 IUPAC 199 Cl-8 IUPAC 195 Cl-8 IUPAC 194 Cl-8 IUPAC 205 Cl-9 IUPAC 208 Cl-9 IUPAC 206 Cl-10 IUPAC 209
INOR-101-6000F	Determination of alkalinity, soluble carbonates and bicarbonates Applicable matrix: Water Device/Technique: PC-Titrate
INOR-101-6004F	Determination of anions Anions: Chlorides, Fluorides, Nitrite, Nitrates, Sulfates, Bromides Applicable matrices: Water (all), soil (all), leachate (nitrites and nitrates only) Device/Technique: Ion chromatography
INOR-101-6006F	Determination of biological oxygen demand (BOD in 5 days) Applicable matrix: Water Device/Technique: Automated Analyzer
INOR-101-6016F	Determination of conductivity Applicable matrices: Waters, soils. Device/Technique: PC-Titrate, Manual conductivity meter
INOR-101-6021F	Determination of pH Applicable matrices: Waters, soils. Device/Technique: PC-Titrate and Manual pH-Meter
INOR-101-6028F	Gravimetric determination of total suspended solids and volatile suspended solids (TSS, VSS) Applicable matrix: Water Device/Technique: Gravimetry

INOR-101-6042F	Determination of chemical oxygen demand (COD) Applicable matrix: Water Device/Technique: Automated Analyzer
INOR-101-6044F	Determination of turbidity Applicable matrix: Water Device/Technique: Turbidimeter (nephelometry)
INOR-101-6048F	Determination of total Kjeldahl nitrogen and total phosphorous Applicable matrices: Water, Soil, Sediment and Mud Device/Technique: Automated colorimetric analyzer
INOR-101-6051F	Determination of ammonia nitrogen Applicable matrices: Water, Soil, Sediment and Mud Device/Technique: Automated colorimetric analyzer (Discrete analyser)
INOR-101-6056F	Determination of Carbon and sulfur Applicable matrices: Soil, Sediment and Mud Device/Technique: Infrared Spectrometry
INOR-101-6061F	Determination of total cyanide and total and free cyanide Applicable matrices: Water (total, oxidizable and available cyanides), soil (total and available cyanides) Device/Technique: Automated colorimetric analyzer (continuous flow analyzer).
INOR-101-6062F	Determination of total phenols in water and leachate Applicable matrices: Water, leachate Device/Technique: Automated colorimetric analyzer (continuous flow analyzer)
INOR-101-6068F	Determination of particles in air samples Applicable matrix: Air (filters, rinsing solvent and falling dust) Device/Technique: Gravimetry
MET-101-6102F	Determination of mercury, total dissolved mercury Applicable matrices: Water, soil/mud/sediment, air, leachate, smear, fish, fluorescent bulbs Device/Technique: CVAAS (Cold vapor atomic absorption spectroscopy) and CVAAF (Cold vapor atomic fluorescence)
MET-101-6105F	Determination of metals, Dissolved metals, Total extractable and acid-soluble metals Applicable matrices: Water, soil, mud, sediment, air, leachate, smear, fish and fluorescent bulbs Device/Technique: ICP-MS Metals: Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Rb, S, Sb, Se, Si, Sn, Sr, Ti, U, V, Zn, Zr, Te .
MET-101-6107F	Determination of metals, Dissolved metals, Total extractable and acid-soluble metals Applicable matrices: Water, soil/mud/sediment, air, leachate, smear, fish, fluorescent bulbs Device/Technique: ICP-OES (Inductively Coupled Plasma Optical Emission Spectrometry) Metals:,Ag,Al,As,B,Ba,Be,Bi,Ca,Cd,Co,Cr,Cu,Fe,K,Li,Mg,Mn,Mo,Na,Ni,P,Pb,Rb,S, Sb,Se,Si, Sn, Sr, Ti, U, V, Zn, Zr, Th, W, La, Nb, Te, Rb, SC, Ga, Cs, Ce, Mercury.

ORG-100-5101F	Determination of volatile organic compounds in water and soils (Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC. Determination of volatile organic compounds in water and soil: dosage by "Purge and Trap" coupled with a gas chromatograph and a mass Spectrometer, MA 400 – COV 2.0, Rev. 4, Quebec Ministry of Sustainable Development, Environment and the Fight against Climate Change, 2015-02-03, 13 p). Applicable matrices: Water, soil/mud/sediment, leachate, swab Device/Technique: GC/MS coupled to a HeadSpace Compounds: Dichlorofluoromethane, Chloromethane, Vinyl Chloride, Bromomethane, Chloroethane, Trichlorofluoromethane, 1,1-Dichloroethane, Dichloromethane, Acrylonitrile, Trans-1,2-Dichloroethane, Methyl-t-Butyl Ether (MTBE), 1,1-Dichloroethane, Cis-1,2-Dichloroethane, Chloroforme, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, Benzene, Toluene, 1,3- Dichloropropane, Dibromochloromethane, 1,2-Dibromoethane, Tetrachloroethane, 1,1,1,2-Tetrachloroethane, Chlorobenzene, Ethylbenzene, m+p-xylenes, Bromoforme, Styrene, 1,1,2,2-tetrachloroethane, o-xylene, Isopropylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene, Tert-butylbenzene, 1,2,4-trimethylbenzene, 1,2-Dichloropropane, Trichloroethane, Bromodichloromethane, 2-chloroethylvinyle-ether, Cis-1,3-Dichloropropene, Trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, Acroleine, Acetone, Methyl Ethyl Cetone (MEK), Methyl Isobutyl Cetone (MIBK), 2-Hexanone, T-Butanol, Disulfure de carbone, Bromochloromethane, 2,2-dichloropropane, 1,1-dichloropropene, Dibromomethane, Sec-butylbenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2,3-trimethylbenzène, 1,2-Dichlorobenzène, n-butylbenzene, 1,2,4-Trichlorobenzene, Hexachlorobutadiene, T-Butanol, Terta-butyl ethyl ether (TBE), Tert-Amyl ethyl ether (TAE), 1,2,3-trichloropropane, Bromobenzene, 2-chlorotoluene, 4-chlorotoluene, α–metyl styrene, p-isopropyltoluene, 1,2-dibromo-3-chloropropane

ORG-100-5102F	Determination of polycyclic aromatic hydrocarbons in water soil/mud/sediment, leachate and swab. (Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC. Determination of polycyclic aromatic hydrocarbons: determination by gas chromatography coupled with a mass ESPctrometer. MA. 400 – HAP 1.1,Rev.4,Ministry of Sustainable Development, of the Environment and the Fight against Climate Change, 2016, 21 p) Applicable matrices: Water, soil/mud/sediment, leachate, swab Device/Technique: GC/MS Compounds: Acenaphtene Aenaphtylene Anthracene Benzo (a) anthracène Benzo (a) pyrene Benzo (b) fluoranthene Benzo (j) fluoranthene Benzo (k) fluoranthene Benzo (c) phenanthrene Benzo (g,h,i) perylene Methyl-1 naphtalene Methyl-2 naphtalene Dimethyl-1,3 naphtalene 2,3,5-trimethylnapthalene Chrysène Dibenzo (a,h) anthracene Dibenzo (a,i) pyrene Dibenzo (a,h) pyrene Dibenzo (a,l) pyrene Fluoranthene Dimethyl-7,12 benzo (a) anthracene Fluorene Indeno (1,2,3-cd) pyrene Naphtalene Phenanthrene Pyrene 3-Methylcholanthrene

ORG-100-5103F	Determination of phenols in soil and sediment (Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC, Determination of phenolic compounds: determination by gas phase chromatography coupled with a mass Spectrometer after derivation with acetic anhydride. MY. 400– Phe1.0, Rev. 3, Ministry of Sustainable Development, Environment, Wildlife and Parks of Quebec, 2013, 20 p). Applicable matrices: Soil, sediment Device/Technique: GC/MS Compounds: Phenol o-Cresol m-Cresol p-Cresol Dimethyl-2,4 phenol Nitro-2 phenol Nitro-4 phenol Chloro-2 phenol Chloro-3 phenol Chloro-4 phenol 2,6-dichlorophenol 2,4 + 2,5-dichlorophenol 3,5-dichlorophenol Dichloro-2,3 phenol Dichloro-3,4 phenol Trichloro-2,4,6 phenol Trichloro-2,3,6 phenol Trichloro-2,3,5 phenol Trichloro-2,4,5 phenol Trichloro-2,3,4 phenol Trichloro-3,4,5 phenol Tetrachloro-2,3,5,6 phenol Tetrachloro-2,3,4,6 phenol Tetrachloro-2,3,4,5 phenol Pentachlorophenol

<table>
<tr><td>ORG-100-5107F</td><td>Determination of PCB Congeners. (Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC. Determination of polychlorinated biphenyls: determination by gas chromatography coupled with a mass Spectrometer or an electron capture detector – method by congener and homologous group, MA. 400 – BPC 1.0, rev. 5, Quebec Ministry of Sustainable Development, Environment and the Fight against Climate Change, 2014, 35 p).
Applicable matrices: Water,soil/mud/sediment, oil, solvent, leachate
Device/Technique: GC/MS

Compounds:
Cl-3 IUPAC #17+18
Cl-3 IUPAC #28+31
Cl-3 IUPAC #33
Cl-4 IUPAC #52
Cl-4 IUPAC #49
Cl-4 IUPAC #44
Cl-4 IUPAC #74
Cl-4 IUPAC #70
Cl-5 IUPAC #95
Cl-5 IUPAC #101
Cl-5 IUPAC #99
Cl-5 IUPAC #87
Cl-5 IUPAC #110
Cl-5 IUPAC #82
Cl-6 IUPAC #151
Cl-6 IUPAC #149
Cl-5 IUPAC #118
Cl-6 IUPAC #153
Cl-6 IUPAC #132
Cl-5 IUPAC #105
Cl-6 IUPAC #158+138
Cl-7 IUPAC #187
Cl-7 IUPAC #183
Cl-6 IUPAC #128
Cl-7 IUPAC #177
Cl-7 IUPAC #171
Cl-6 IUPAC #156
Cl-7 IUPAC #180
Cl-7 IUPAC #191
Cl-6 IUPAC #169
Cl-7 IUPAC #170
Cl-8 IUPAC #199
Cl-9 IUPAC #208
Cl-8 IUPAC #195
Cl-8 IUPAC #194
Cl-8 IUPAC #205
Cl-9 IUPAC #206
Cl-10 IUPAC #209
PCB congener summation (targeted and non-targeted)</td></tr>
<tr><td>ORG-100-5108F</td><td>Determination of Aroclor in water, soil/mud/sediment, oil, solvent and leachate by GC/ECD.
(Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC. Determination of polychlorinated biphenyls: determination by gas chromatography coupled with a mass Spectrometer or an electron capture detector – method by congener and homologous group, MA.400 – BPC 1.0, rev.5, Ministry of Sustainable Development, Environment and Quebec's fight against climate change, 2014, 35 p).
Applicable matrices: Water, soil/mud/sediment, oil, solvent, leachate
Device: GC/ECD

Compounds:
Aroclor 1242, Aroclor 1248, Aroclor 1254, Aroclor 1260</td></tr>
</table>

ORG-100-5109F	Determination of chlorobenzenes in water and soil by GC/MS (Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC. Determination of chlorobenzenes: determination by gas chromatography coupled with a mass ESPctrometer, MA. 400 – Clbz 1.0, Rev. 4, Ministry of Sustainable Development, Environment, Wildlife and Parks of Quebec, 2013, 20 p). Applicable matrices: Water, soil Device: GC/MS Compounds: Hexachlorobenzene Pentachlorobenzene Tetrachloro-1,2,3,4 benzene Tetrachloro-1,2,3,5 benzene Tetrachloro-1,2,4,5 benzene Trichloro-1,2,3 benzene Trichloro-1,2,4 benzene Trichloro-1,3,5 benzene
ORG-100-5112F	Determination of fatty and resin acids in soil and water by GC/MS (Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC. Determination of fatty and resin acids: determination by gas phase chromatography coupled with a mass Spectrometer after derivation at the BSTFA, MA 414 – Aci-g-r- 1.0, Rev. 3, Ministry of Sustainable Development, Environment, Wildlife and Parks of Quebec, 2013, 18 p). Applicable matrices: Water, soil Device: GC/MS Compounds: Linoleic acid Linolenic acid oleic acid 9,10-dichlorostearic acid Stearic acid pimaric acid Sandaracopimaric acid Isopimaric acid palustric acid Levopimaric acid Dehydroabietic acid Abietic acid Neoabietic acid 14-chlorodehydroabietic acid 12-chlorodehydroabietic acid 12,14-dichlorodehydroabietic acid

<table>
<tr><td>ORG-100-5113F</td><td>Determination of phenolic compounds in water and leachate by GC/MS by acetic anhydride derivatization.
(Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC. Determination of phenolic compounds: determination by gas phase chromatography coupled with a mass Spectrometer after derivation with acetic anhydride MA.400 – Phé 1.0, Rev. 3, Quebec Ministry of Sustainable Development, Environment, Wildlife and Parks, 2013, 20 p).
Applicable matrices : Water, leachate
Device: GC/MS

Compounds:
Phenol
ortho-Cresol
m-Cresol
para-Cresol
2-chlorophenol
3-chlorophenol
4-chlorophenol
2,4-dimethylphenol
Guaiacol
2,6-dichlorophenol
2,4 + 2,5-dichlorophenol
3,5-dichlorophenol
Catechol
2,3-dichlorophenol
2-nitrophenol
3,4-dichlorophenol
4-chloroguaiacol
2,4,6-trichlorophenol
4-nitrophenol
2,3,6-trichlorophenol
2,3,5-trichlorophenol
2,4,5-trichlorophenol
4,5-dichloroveratrol
Eugenol
4-chlorocatechol
4,6-dichloroguaiacol
2,3,4-trichlorophenol
3,4,5-trichlorophenol
4,5-dichloroguaiacol
Iso-eugenol
2,3,5,6-tetrachlorophenol
3,5-dichlorocatechol
2,3,4,6-tetrachlorophenol
3,4,5-trichloroveratrol
6-chlorovanillin
2,3,4,5-tetrachlorophenol
4,5-dichlorocatechol
3,4,5-trichloroguaiacol
Tetrachloroveratrol
4,5,6-trichloroguaiacol
5,6-dichlorovanillin
Pentachlorophenol
3,4,5-trichlorocatechol
Tetrachloroguaiacol
3,4,5-trichlorosyringol
Tetrachlorocatechol</td></tr>
<tr><td>ORG-100-5115F</td><td>Determination of glyphosate and AMPA in water by HPLC/FLD.
(Reference method: CENTRE D'EXPERTISE EN ANALYSE ENVIRONNEMENTALE DU QUÉBEC, Determination of glyphosate and AMPA in water: determination by chromatography in liquid phase, post-column derivation and fluorescence detection MA. 403 - GlyAmp 1.0, Rev. 4, Ministry of Sustainable Development, Environment and Parks of Quebec, 2011, 12 p).
Applicable matrix: Water
Device: HPLC-FLD detector

Compounds:
Glyphosate, AMPA</td></tr>
</table>

ORG-100-5125F	Determination of haloacetic acids in water by GC/MS (Reference method: Determination of haloacetic acids and Dalapon in Drinking Water by Liquid-Liquid microextraction, derivatization and gaz chromatography with electron capture; US-EPA Method 552.3-1). Applicable matrix: Water Device: GC/MS Compounds: Chloroacetic acid Dichloroacetic acid Trichloroacetic acid Bromoacetic acid Dibromoacetic acid
ORG-100-5126F	Determination of aldehydes in water and soil by GC/MS (Reference method: Disinfection by-by-products: Aldehydes, PFBHA Liquid-Liquid Extraction Gas Chromatographic Method, 6252 B., Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, pp. 6-58). Applicable matrices: Water, soil Device: GC/MS Compounds: Formaldehyde
TOX-151-19000F	Determination of perchlorate Applicable matrices: Water, soil Device/Technique: UPLC-MS (Ultra-performance Liquid Chromatography/Mass spectrometer)
TOX-151-19002F	Determination of nitroaromatics, nitramines and nitrate esters (Reference method: Determination of nitroaromatics, nitramines and nitrate esters by UPLC-MS/MS: US-EPA 8330B) Applicable matrices: Water, soil and sediment Device/Technique: UPLC- MSMS / UV Ultra-performance Liquid Chromatography-tandem Mass Spectrometry/UV) Compounds: HMX RDX 1,3,5-TNB Tetryl 1,3-DNB NB 4-Am-DNT 2,4-DNT 2-NT 2-Am-DNT 2,6-DNT 3-NT 4-NT TNG PETN 3,5-DNA

TOX-151-19003F	Determination of nonylphenols and nonylphenols polyethoxylates (Reference method: ASTM D7485, ASTM D7742) Applicable matrix: Water Device/Technique: UPLC-MS Compounds: p-n-Nonylphenol Nonylphenol technical grade Bisphenol A (BPA) Nonylphenol monoethoxylate (NP_1EO) Nonylphenol diethoxylate (NP_2EO) Nonylphenol triethoxylate (NP_3EO) Nonylphenol tetraethoxylate (NP_4EO) Nonylphenol pentaethoxylate (NP_5EO) Nonylphenol hexaethoxylate (NP_6EO) Nonylphenol heptaethoxylate (NP_7EO) Nonylphenol octaethoxylate (NP_8EO) Nonylphenol nonaethoxylate (NP_9EO) Nonylphenol decaethoxylate ($NP_{10}EO$) Nonylphenol undecaethoxylate ($NP_{11}EO$) Nonylphenol dodecaethoxylate ($NP_{12}EO$) Nonylphenol tridecaethoxylate ($NP_{13}EO$) Nonylphenol tetradecaethoxylate ($NP_{14}EO$) Nonylphenol pentadecaethoxylate ($NP_{15}EO$) Nonylphenol hexadecaethoxylate ($NP_{16}EO$) Nonylphenol heptadecaethoxylate ($NP_{17}EO$)
TOX-151-19005F	Determination of polycyclic aromatic hydrocarbons (PAH) Applicable matrix: Air Device/Technique: GC/MS

TOX-151-19012F	Determination of perfluorinated alkyl substances (PFAS) in water and soil by SPE-LC-MS/MS (Reference methods: US-EPA 533, EPA1633) Applicable matrices: Water, soil Device/Technique: SPE-LC-MS/MS Compounds: Perfluorobutanoic acid (PFBA) Perfluoropentanoic acid (PFPeA) Perfluorohexanoic acid (PFHxA) Perfluoroheptanoic acid (PFHpA) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorodecanoic acid (PFDA) Perfluoroundecanoic acid (PFUnA) Perfluorododecanoic acid (PFDoA) Perfluorotridecanoic acid (PFTrDA) Perfluorotetradecanoic acid (PFTeDA) Perfluorobutanesulfonic acid (PFBS) Perfluorohexasulfonic acid (PFHxS) Perfluoroheptanesulfonic acid (PFHpS) Perfluorooctasulfonic acid (PFOS) Perfluorooctane sulfonamide (PFOSA) Perfluorodecanesulfonic acid (PFDS) Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) Perfluoro-3-methoxypropanoic acid (PFMPA) Perfluoro-4-methoxybutanoic acid (PFMBA) Perfluorododecanesulfonic acid (PFDoS) Perfluorononanesulfonic acid (PFNS) Perfluoropentansulfonic acid (PFPeS) 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) 11-Chloro-eicosa-fluoro-3-oxaundecane-1-sulfonate Hexafluoropropylene Oxide dimer Acid (HFPO-DA) 2H-perfluoro-octenoic acid (FHUEA) 3:3 Fluorotelomer carboxylic acid (3:3FTCA) 2H-perfluoro-decenoic acid (FOUEA) 2H-Perfluoro-dodecanoic acid (FDUEA) F-53B Major (9Cl-PF3ONS) 4:2 Fluorotelomer Sulfonic Acid (4:2-FTS) 5:3 Fluorotelomer carboxylic acid (5:3FTCA) 6:2 Fluorotelomer Sulfonic Acid (6:2-FTS) 7:3 Fluorotelomer carboxylic acid (7:3FTCA) 8:2 Fluorotelomer Sulfonic Acid (8:2-FTS)

	N-Methyl perfluorooctane sulfonamide (NMeFOSA) N-ethyl perfluorooctane sulfonamide (NEtFOSA) N-ethyl perfluorooctanesulfonamidoac. (NEtFOSAA) N-Methylperfluorooctanesulfonamide ethanol NMeFOSE N-ethylperfluorooctane sulfonamide ethanol NEtFOSE N-methyl perfluorooctanesulfonamidoac. (NMeFOSAA) Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)

Water (Toxicology)

ECO-152-20000F	Acute Rainbow Trout (*Oncorhynchus mykiss*) EPS Test 1/RM/9 (wide range of substances) ESP1/RM/13 (effluents) and ESP1/RM/50; DGST1/RM/59 (pH stabilization) Applicable matrices: water, effluents, Chemicals Device/Technique: NA Compounds/Parameters: LC50-96h
ECO-152-20004F	Determination of acute toxicity in *Daphnia magna* ESP 1/RM/11, ESP 1/RM/14 and MA. 500 – D.mag 1.1 Applicable matrices: water, chemicals Device/Technique: N/A Compounds/Parameters: LC50-48h
ECO-152-20017F	Acute Toxicity Test with Fathead Minnow Larvae (Lethality Test) (Pimephales promelas) US-EPA-821-R-02-012 Applicable matrices: water, chemicals Device/Technique: N/A Compounds/Parameters: LC50-96h
ECO-152-20019F	Determination of growth inhibition in the alga *Raphidocelis subcapitata* (*Pseudokirchneriella subcapitata*) ESP 1/RM/25 Applicable matrices: water, chemicals Device/Technique: Particle Counter Compounds/Parameters: IC50; IC25-72h (growth)
ECO-152-20021F	Determination of growth inhibition in the alga *Raphidocelis subcapitata* MA. 500-P.sub 1.0 Applicable matrices: water, chemicals Device/Technique: Particle Counter Compounds/Parameters: IC50; IC25-96h (growth)

ECO-152-20022F	Larval fathead minnow growth and survival test (chronic test) (*Pimephales promelas*) ESP 1/RM/22 Applicable matrices: water, chemicals Device/Technique: Gravimetry Compounds/Parameters: LC50; CI25 (growth)-7 days
ECO-152-20023F	Determination of the toxicity of samples using the luminescent bacterium *Vibrio fisheri* (microtox) based on ESP 1/RM/24 Applicable matrices: water, chemicals Device/Technique: Microtox analyzer Compounds/Parameters: IC50 (bioluminescence)
ECO-152-20027F	Survival and reproduction test in *Ceriodaphnia dubia (*ESP 1/RM/21) Applicable matrices: water, chemicals Device/Technique: N/A Compounds/Parameters: LC50; CI25 (breeding) 5 to 8 days
ECO-152-20029F	Measurement of growth inhibition of the freshwater macrophyte *Lemna minor* (ESP1/RM/37) Applicable matrices: water, chemicals Device/Technique: Gravimetry Compounds/Parameters: IC25-7d (growth: number of fronds, dry weight)

Number of Scope Listings: 87

Number of TMDNRT Techniques: 2

Notes:

ASTM: ASTM International, formerly American Society for Testing and Materials
US-EPA: United States Environmental Protection Agency
USDA: United States Department of Agriculture
MFHPB: Method Food Health Protection Branch-HPB Methods for the Microbiological Analysis of Foods, Health Canada
MFLP: Microbiology Food Laboratory Procedure-Laboratory Procedures for the Microbiological Analysis of Foods, Health Canada
MLG: United States Department of Agriculture Food Safety And Inspection Service, Office of Public Health Science
FC: Internal Laboratory Method (Food Chemistry)
HR: Internal Laboratory Method (Environmental)
INOR: Internal Laboratory Method (Inorganic)
ORG: Internal Laboratory Method (Organic)
MET: Internal Laboratory Method (Metals)

TOX: Internal Laboratory Method (Toxicology)
ECO: Internal Laboratory Method (Ecotoxicology)

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