

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Legal Name of Accredited Laboratory: Canadian Food Inspection Agency

Location Name or Operating as (if applicable): OTTAWA LABORATORY (CARLING)

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| SCC File Number: | 15342 |
| 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) Test Method Development and Evaluation and Non-routine Testing (TMDNRT) |
| Initial Accreditation: | 1997-10-08 |
| Most Recent Accreditation: | 2023-10-18 |
| Accreditation Valid to: | 2025-10-08 |

Remarque: La présente portée d'accréditation existe également en français, sous la forme d'un document distinct.

Note: This scope of accreditation is also available in French as a document issued separately.

TEST METHOD DEVELOPMENT & EVALUTATION AND NON-ROUTINE TESTING

Note: Laboratories accredited under this Program Specialty Area (PSA) have demonstrated that they meet ISO/IEC 17025 requirements for non-routine testing under the following product classification.

Description of activities under TMDNRT:

1. Development, evaluation, validation and verification of new testing methodology for the detection and/or quantification of microbial pathogens in foods, feeds, and fertilizers.
2. Modification, improvement, validation and verification of published or existing methodology for:
 - a) the detection of chemical residues and trace elements in foods, feeds and fertilizers;
 - b) the determination of food authenticity;
 - c) the detection of microbial pathogens in foods, feeds and fertilizers; and
 - d) the verification of antibiotic guarantee levels in animal feeds.

Description of techniques under TMDNRT:

1. Polymerase Chain Reaction techniques including but not limited to, conventional PCR and gel visualization, conventional PCR followed by melting curve analysis (BAX), real-time (IQ-check or BAX, some BAX kits are real time);
2. Sequencing DNA techniques: whole genome sequencing (WGS);
3. Cultural methods using selective and differential media and reagents to detect, characterize and identify bacteria including but not limited to, enrichment methods, biochemical and colorimetric reactions (VITEK), immunological and fluorescent assays (VIDAS), immunomagnetic separation;
4. Cultural methods using selective and differential media to quantify bacteria including but not limited to: Petrifilm, MPN, SPC, Compact Dry, spread plates;
5. DNA hybridisation techniques: CHAS (cloth hybridisation);
6. DNA quantification (Maxwell);
7. Liquid chromatography with various detection methods including, but not limited to, mass spectrometer detection (LCMS), tandem mass spectrometer detection (LCMSMS), and post-column derivatization (LC-PCD);
8. High performance liquid chromatography (HPLC) with various detection methods including but not limited to photodiode array detection (HPLC-PDA), UV-VIS detection (HPLC-UV-VIS), and fluorescence detection (HPLC-FL);
9. Ion Chromatography (IC);
10. Gas chromatography with various detection methods including but not limited to mass selective detection (GC-MSD), and flame ionization detection (GC-FID);
11. Inductively coupled plasma optical emission spectrometry (ICP-OES), inductively coupled plasma with mass spectrometer detection (ICP-MS) with microwave digestions and automated dilutions;
12. Ultra-performance liquid chromatography with various detection methods including but not limited to photodiode array detection (UPLC-PDA), UV-VIS detection (UPLC-UV-VIS), mass spectrometer detection (UPLC-MS), refractive index detection (UPLC-RI);

13. Mercury analysis using thermal decomposition followed by amalgamation and atomic absorption;
14. Wet chemistry techniques including but not limited to titration, filtration, distillation, precipitation, enzymatic assay;
15. pH and ion selective electrode analysis;
16. Extraction techniques including but not limited to automated solvent extraction, Soxhlet extraction, column chromatography, liquid-liquid extraction, solid phase extraction;
17. Gravimetric analysis using drying oven or muffle furnace;
18. UV-VIS spectrophotometry, photometry, refractometry;
19. Spectroscopy methods including but not limited to cavity ring-down spectroscopy (CRDS);
20. Agar plate diffusion bioassays;
21. Microscopic examination of feed and fertilizers for detection of ingredients, contaminants or adulterants
22. Characterization of nanoparticles by; single particle-ICP-MS, centrifugal field flow fractionation (CFFF), Multi-Angle Light Scattering (MALS), Dynamic Light Scattering (DLS), UV-VIS;

ANIMAL AND PLANTS (AGRICULTURE)

Foods and Edible Products (Human and Animal Consumption):

Animal or Vegetable Fats and Oils and their Cleavage Products, prepared edible fats, animal or vegetable waxes

Beverages, Spirits and Vinegar

Dairy Products

Eggs and Processed Egg Products

Meat and Edible Meat Offal

Sugars and Sugar Confectionery (honey, maple products)

(Food-Chemical)

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| FLS-1994-018 | Determination of Minerals in Food Using ICP Spectrometry |
| FLS-1996-016 | Soluble Solids Determination by Refractometer |
| FLS-1998-005 | Detection of Irradiated Food Containing Fat by GC-MSD Analysis of Hydrocarbons |
| FLS-1998-012 | Determination of Peroxide Value in Fats and Oils by Titration |
| FLS-1998-013 | Spectrophotometric Evaluation of Fats in the Ultraviolet |
| FLS-1998-014 | Determination of the Content of Waxes, Fatty Acid Methyl Ethyl Esters and Fatty Acid Ethyl Esters by Capillary Gas Chromatography |
| FLS-1998-016 | Determination of the Composition and Content of Sterols by Capillary-Column Gas Chromatography |
| FLS-1998-017 | Determination of Free Fatty Acids in Fats and Oils by Titration |

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| FLS-1998-019 | Determination of Stigmastadienes in Fats and Oils by Gas Chromatography (GC-FID) |
| FLS-1998-020 | Determination of Sterenes in Refined Fats and Oils by GC-FID |
| FLS-1998-021 | Calculation of Theoretical ECN42 Triglycerides and Difference Between Actual ECN42 and Theoretical ECN42 Triglycerides in Olive and Olive-Pomace Oils |
| FLS-1998-022 | Preparation and Analysis of Fatty Acid Methyl Esters by Capillary-Column Gas Chromatography |
| FLS-1998-034 | Determination of Ash in Food |
| FLS-1999-012 | Determination of Organic Acids in Juices and Beverages by HPLC |
| FLS-1999-013 | Nitrites and Nitrates in Meat and Meat Products by HPLC |
| FLS-2004-002 | Determination of Tocopherols in Oils by High Performance Liquid Chromatography |
| FLS-2006-002 | Hydroxymethylfurfural (HMF) in Honey (HPLC Method) |
| FLS-2006-003 | Water Insoluble Solids in Honey by Filtration |
| FLS-2006-004 | Diastase Activity in Honey |
| FLS-2006-006 | Moisture in Honey by Refractive Index |
| FLS-2006-007 | Acidity in Honey by Titration |
| FLS-2006-008 | PFund Colour of Honey |
| FLS-2010-001 | Determination of the Percentage of 2-Glyceryl Monopalmitate by Gas Chromatography |
| FLS-2015-001 | Determination of Sugars in Food by UPLC-RI |
| FLS-2015-003 | Determination Of Delta Carbon-13 Value By Cavity Ring-Down Spectroscopy |

(Food-Microbiological)

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| MFLP-113 | Enumeration of <i>Escherichia coli</i> Using Compact Dry EC Medium Count Plates |
| MFHPB-03 | Determination of the pH of Foods Including Foods in Hermetically Sealed Containers |
| MFHPB-10 | Isolation of <i>E.coli</i> O157:H7/NM from foods and environmental surface samples |
| MFHPB-19 | Enumeration of Coliforms, Faecal Coliforms and of <i>E. coli</i> in Foods Using the MPN Method |
| MFHPB-20 | Isolation and Identification of <i>Salmonella</i> from Food and Environmental Samples |
| MFHPB-21 | Enumeration of <i>Staphylococcus aureus</i> in Foods |
| MFHPB-30 | Isolation of <i>Listeria monocytogenes</i> and other <i>Listeria</i> spp. from Foods and Environmental Samples |
| MFHPB-33 | Enumeration of Total Aerobic Bacteria in Food Products and Food Ingredients Using 3M™ Petrifilm™ Aerobic Count Plates |

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| MFHPB-34 | Enumeration of <i>Escherichia coli</i> and Coliforms in Food Products and Food Ingredients Using 3M™ Petrifilm™ <i>E. coli</i> Count Plates |
| MFLP-15 | The Detection of <i>Listeria</i> Species from Environmental Surfaces Using the Dupont Qualicon BAX® System Method and Direct Plating |
| MFLP-22 | Characterization of verotoxigenic <i>Escherichia coli</i> O157:H7 colonies by polymerase chain reaction (PCR) and cloth-based hybridization array system (CHAS) |
| MFLP-28 | The Qualicon BAX® System Method for the Detection of <i>Listeria monocytogenes</i> in a Variety of Food |
| MFLP-29 | The Qualicon BAX® System Method for the Detection of <i>Salmonella</i> in a Variety of Food and Environmental Samples |
| MFLP-30 | Detection of <i>Escherichia coli</i> O157:H7 in select foods using the BAX® System <i>E. coli</i> O157:H7 MP |
| MFLP-52 | Isolation and identification of priority verotoxigenic <i>Escherichia coli</i> (VTEC) in foods |
| MFLP-53 | Identification of <i>Listeria monocytogenes</i> colonies by polymerase chain reaction (PCR) and cloth-based hybridization array system (CHAS) |
| MFLP-66 | Determination of Water Activity Using the Decagon Aqualab |
| MFLP-70 | Characterization of Verotoxigenic <i>Escherichia coli</i> (VTEC) Colonies by Polymerase Chain Reaction (PCR) and Cloth-Based Hybridization Array System (CHAS) for Virulence Markers and Seven O Serogroups |
| MFLP-74 | Enumeration of <i>Listeria monocytogenes</i> in Food |
| MFLP-75 | Procedure for the Isolation of <i>Salmonella</i> species by the Modified Semi-Solid Rappaport Vassiliadis (MSRV) Method |
| MFLP-77 | Detection of <i>Listeria monocytogenes</i> and other <i>Listeria</i> spp. in food products and environmental samples by the VIDAS® <i>Listeria</i> species Xpress (LSX) method |

Feeds:

Inorganic: Refer to Fertilizers

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| FFIC-INSOL-FAT | Insoluble Solids in Fat by Gravimetry |
| FFIC-MULTI-ICP-MS | Quantitative Multi-element Analysis of Feed and Fertilizer by Inductively Coupled Plasma Mass Spectrometry |

Microscopy

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| FD-BIO-MCR | Feed and Fertilizer Microscopy |
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Organic - Drugs and Antibiotics

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| FD-BIO-CTC | Determination of Chlortetracycline in Animal Feeds by Agar Plate Diffusion Bioassay |
| FD-BIO-LINC | Determination of Lincomycin in Animal Feeds by Agar Plate Diffusion Bioassay |
| FD-BIO-PEN | Determination of Penicillin G in Animal Feeds by Agar Plate Diffusion Bioassay |
| FD-BIO-TYL | Determination of Tylosin in Animal Feeds by Agar Plate Diffusion Bioassay |
| FD-BIO-VMY | Determination of Virginiamycin in Animal Feeds by Agar Plate Diffusion Bioassay. |
| FD-DRUGS-AMP | Determination of Amprolium in Feeds by Liquid Chromatography |
| FD-DRUGS-DEC | Determination of Decoquinatate in Feeds by Liquid Chromatography |
| FD-DRUGS-IONO4 | Liquid Chromatographic Determination of Monensin, Narasin and Salinomycin in Feeds using Post-Column Derivatization. |
| FD-DRUGS-LAS-RP | Determination of Lasalocid Sodium in Animal Feeds and Premixes by Reversed Phase Liquid Chromatography |
| FD-DRUGS-LCMSMS1 | Liquid Chromatographic Determination of Low Level Feed Drugs by ESI LC/MS/MS |
| FD-DRUGS-LCMSMS2 | Liquid Chromatographic Determination of Tylosin, Lincomycin, Virginiamycin, Erythromycin and Novobiocin at Low Levels in Animal Feed by ESI LC/MS/MS |
| FD-DRUGS-NIC-LC | Liquid Chromatographic Determination of Nicarbazine in Feeds and Premixes |
| FD-DRUGS-OTC-LC | Determination of Oxytetracycline in Feeds by Liquid Chromatography |
| FD-DRUGS-SQN | Determination of Sulfamethazine in Medicated Feeds by LC with Post-Column Derivatization |
| FD-DRUGS-SQNR | Determination of Trace Levels of Sulfamethazine in Animal Feeds by LC with Post-Column Derivatization |
| FD-DRUGS-TIA | Determination of Tiamulin in Feeds and Drug Premixes |
| FD-DRUGS-TIL | Determination of Tilmicosin in Feeds by Liquid Chromatography |

Toxins

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| FD-TOXINS-ERG | Determination of Ergot alkaloids in Feeds and Feed Ingredients by Liquid Chromatography Tandem Mass Spectrometry |
| FD-TOXINS-FUM-LCMS | Liquid Chromatographic Determination of Total Fumonisin (B1 and B2) in Animal Feed by ESI LC/MS/MS |
| FD-TOXINS-MULTITOX | Determination of Mycotoxins in Feed and Feed Ingredients by Liquid Chromatography with Tandem Mass Spectrometer Detection |

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| FD-TOXINS-TRICO-LCMS | Determination of Trichothecenes in Feed by ESI LC/MS/MS |
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CHEMICALS AND CHEMICAL PRODUCTS

Chemicals for Agricultural Industry:

Fertilizers

Refer to Feeds (Inorganic)

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| FFIC-Hg-DMA | Total Mercury in Feed and Fertilizer by Direct Mercury Analyser |
| FFIC-Hg-ICP-MS | Determination of Mercury in Feed and Fertilizer by Inductively Coupled Plasma Mass Spectrometry |
| FFIC-Moisture-105C | Loss on Drying by Regulate Air Oven (105°C for 16 Hours) |
| FFIC-23-ICP-OES | 23 Major, Minor, and Trace Elements in Feeds, Fertilizer and Compost by ICP-OES after Microwave Assisted Acid Digestion |
| FT-MIN-P ₂ O ₅ -QMP | Available Phosphoric Acid in Fertilizer Gravimetric Quinolinium Molybdophosphate Method |

Number of Scope Listings: 74

Number of Technique Listings: 22

Notes:

ISO/IEC 17025:2017: General Requirements for the Competence of Testing and Calibration Laboratories

RG-TMDNRT: SCC Requirements and Guidance for Accreditation of laboratories Engaged in Test

Method Development and Non-Routine Testing

CFIA: Canadian Food Inspection Agency

FD-BIO: Feed Microscopy and Bioanalysis Section

FD-DRUGS: Feed - Organic Chemistry Section

FFIC: Feed and Fertilizer Chemistry Section – Inorganic

FLS: Food Laboratory Services

FMWG: Food Microbiology Working Group

FT-MIN: Fertilizer - Inorganic Chemistry Section

MFHPB: HPB Methods of Microbiological Analysis for Foods

MFLP: Laboratory Procedures of Microbiological Analysis for Foods

OLC: Ottawa Laboratory Carling



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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