

# 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 - FALLOWFIELD         |
| Contact Name:                                  | Thomas Niederberger                     |
| Address:                                       | 3851 Fallowfield Rd, Ottawa, ON K2H 8P9 |
| Telephone:                                     | +1 250-888-9221                         |
| Email:   | Thomas.Niederberger@inspection.gc.ca    |

| SCC File Number:           | 15367  |
|----------------------------|--|
| Accreditation Standard(s): | ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories                                 |
| Fields of Testing:         | Biological   |
| Program Specialty Area:    | Agriculture Inputs, Food, Animal Health and Plant Protection<br>(AFAP)<br>Test Method Development and Non-routine Testing (TMDNRT) |
| Initial Accreditation:     | 1999-12-17   |
| Most Recent Accreditation: | 2024-07-05   |
| Accreditation Valid to:    | 2027-12-17   |

## **TEST METHOD DEVELOPMENT & NON-ROUTINE TESTING:**

**Note**: Laboratories accredited under this Program Specialty Area have demonstrated that they meet ISO/IEC 17025 requirements for routine testing under the same product classification as described above.

### Description of activities: Ottawa Plant Laboratory





To develop and/or validate new methods for the detection and/or identification of plant quarantine pests, invasive alien species, plant species and/or cultivars (including genetically modified) using DNA-based, biochemical, serological, and other techniques and through the collection of reference sequence and fingerprints.

#### **Description of techniques:** Ottawa Plant Laboratory

- 1. Isolation and culture of fungi, bacteria and nematodes
- 2. Microscopic examination, morphological and morphometric identification
- 3. Moist chambers/blotter boxes for plant material and seeds, filtration of water, soil baiting, selective size sieving
- 4. GC-FAME and BIOLOG carbohydrate utilization assays for bacterial identification
- 5. ELISA for seedborne virus identification
- DNA based methodologies including DNA extraction, Agarose Gel Electrophoresis, PCR (end-point PCR, qPCR, conventional PCR) SNP genotyping, Capillary DNA genetic analyser for Sanger sequencing and microsatellite analysis, next generation sequencing and isothermal amplification.

#### **Description of activities:** Ottawa Animal Health Laboratory (OAHL)

To develop, optimize, validate and transfer new methods for improving the diagnosis and control of diseases in animals in support of Program activities related to disease detection and surveillance.

#### **Description of techniques:** Ottawa Animal Health Laboratory (OAHL)

- 1. Conventional culture methods of bacterial agents,
- 2. Virus cell culture, titration, isolation, growth, purification of whole virus and components and virus neutralization assays
- 3. Antibody purification (affinity columns), antibody labelling (FITC and enzymes),
- 4. Enzyme linked immunosorbent assays (ELISAs) indirect and competitive and ligand based EIAs, fluorescence polarization assay (FPA)
- 5. Histopathology, immunofluorescence staining of infected cells and tissues (direct and indirect)
- Protein based techniques including protein concentration estimation assays, polyacrylamide gel electrophoresis (SDS-PAGE), Western blot, Immunblot, protein misfolding cyclic amplification (PMCA), real-time quaking induced conversion assay (RT-QuIC)
- RNA/DNA based methods including extraction, nucleic acid measurement (spectrophotometric or fluorescent methods), RT-PCR (reverse transcription PCR), qPCR (real-time PCR), RT-qPCR, multi-locus variable-number tandem repeat analysis, DNA sequencing including Sanger and Illumina technologies
- 8. Mouse bioassay

#### Description of activities: Food Safety Research

To develop and evaluate new testing methodologies for the isolation, characterization and detection of microbial pathogens in foods.





#### Description of techniques: Food Safety Research

- 1. Bacterial culture, isolation and identification tools including conventional culture methods, immunomagnetic separation and biochemical procedures
- 2. Molecular cloning of bacterial genes
- 3. Expression and purification of recombinant proteins
- 4. Identification of bacterial proteins using mass spectrometry
- 5. Techniques for extraction, purification and quantitation of DNA/RNA and proteins including gel and capillary electrophoresis and sequencing
- 6. Immunological tools (agglutination, ELISA and Western blotting)
- DNA/RNA based techniques including: PCR (conventional, multiplex and real-time) SNP analysis, loop-mediated isothermal nucleic acids amplification, whole genome sequencing and bioinformatics tools

#### ANIMAL AND PLANTS (AGRICULTURE)

#### Ottawa Plant Laboratory - Entomological Examinations\*

| SOP# OPL-PR012  | Identification of Insects, Mites and Terrestrial Molluscs |
|-----------------|---|
| SOP# OPL-PR-128 | Gypsy Moth Identification using TaqMan PCR Assay          |

#### **Ottawa Plant Laboratory - Genotyping/Botanical Examinations\***

| SOP# OPL-PR084 | Diagnostic Testing for LMOs                            |
|----------------|--|
| SOP# OPL-PR085 | Genotyping of Plant Varieties using Amplified Fragment |
|                | Length Polymorphism (AFLP)                             |
| SOP# OPL-PR109 | Botanical Identification of Plant Species              |
| SOP# OPL-PR126 | Genotyping of Plant Varieties using SSRs               |

#### **Ottawa Plant Laboratory - Nematological Examinations\***

| LDP# PQ-LD003 | The Extraction, Recovery, Mounting and Identification of Plant |
|---------------|--|
|               | Parasitic Nematodes from Soil, Plant Medium and Plant          |
|               | Material.  |

#### Ottawa Plant Laboratory-Phytopathological - Examinations\*

| SOP# OPL-PR028 | Seed Wash Extraction for all Ustilaginales and other Fungal |
|----------------|---|
|                | Spores Transported by Grain and Straw                       |
| SOP# OPL-PR037 | Detection of Curtobacterium flaccumfaciens                  |
|                | pv.flaccumfaciens in seed                                   |
| SOP# OPL-PR038 | Detection of Xanthomonas translucens pathovarsin seed       |
| SOP# OPL-PR041 | Detection of Pseudomonas syringae, pv. atrofacians,         |
|                | striafaciens and coronafaciens in seed                      |
| SOP# OPL-PR098 | Detection of Phytophthora ramorum by TaqMan Real Time       |
|                | PCR using a Liquid Handling Robotic System                  |
| SOP# OPL-PR100 | General Diagnostic Procedures for Plant, Seed, Soil and     |
|                | Water Samples Submitted for the Routine Diagnosis of Plant  |
|                | Diseases and for the Identification of Plant Pathogens      |





#### Veterinary-OAHL-Anatomic Pathology – Histopathology, Mycobacterial Diseases

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|---------------|--|
| SOP# MY-PR036 | Histopathological Interpretation of Tissues Submitted from |
|               | Animals Suspected of Tuberculosis                          |
| SOP# MY-PR099 | Detection of Mycobacterium tuberculosis Complex Organisms  |
|               | in Formalin-fixed, Paraffin-embedded Tissues by PCR        |
|               | Amplification of an IS6110 Insertion Sequence              |

#### Veterinary-OAHL-Anatomic Pathology - Rabies

| LDP# RA-LD001 | Fluorescent Antibody Test (FAT) for the Detection of Rabies |
|---------------|---|
|               | Virus Antigen   |

#### Veterinary-OAHL-Anatomic Pathology-Transmissible Spongiform Encephalopathy

| Detection of Central Nervous System Tissue in Beef by         |
|---|
| Histological Examination of Hematoxylin and Eosin Staining    |
| and GFAP Immunohistochemistry                                 |
| Detection of Prion Protein Associated with BSE, Scrapie and   |
| CWD using the Bio-Rad TeSeE™ SAP Assay                        |
| Genotyping Sheep for Scrapie Susceptibility/Resistance by     |
| Real-Time PCR   |
| Confirmation of Prion Protein Specific for Scrapie and CWD    |
| Using BioRad's TeSeE <sup>™</sup> Western Blot Kit            |
| Immunohistochemical Detection of Prion Protein in Animal      |
| Transmissible Spongiform Encephalopathies: Scrapie in         |
| Sheep and Goats   |
| Immunohistochemical Detection of Prion Protein in Animal      |
| Transmissible Spongiform Encephalopathies: Chronic Wasting    |
| Disease (CWD) in Deer and Elk                                 |
| Allelic Determination for Elk Codon 132 and White-Tailed Deer |
| Codon 96 by Real-Time PCR                                     |
|   |

#### Veterinary-OAHL-Microbiology-Animal Health Microbiology

| LDP# AHML-LD001 | Bovine Genital Campylobacteriosis - Procedure for the              |
|-----------------|--|
|                 | Isolation and Identification of Campylobacter fetus                |
| LDP# AHML-LD004 | Contagious Equine Metritis: Procedure for the Isolation and        |
|                 | Identification of Taylorella equigenitalis                         |
| LDP# AHML-LD005 | Salmonellosis: Procedure for the Isolation and Identification of   |
|                 | Salmonella Serovars  |
| SOP# AHML-PR007 | Detection of Campylobacter fetus ssp. in Clark's TEM               |
|                 | samples, and identification of suspect C.fetus ssp. pure           |
|                 | culture isolates, using an antigen capture Monoclonal antibody     |
|                 | based ELISA procedure  |
| SOP# AHML-PR013 | Detection of <i>Taylorella equigenitalis</i> from submitted sample |
|                 | swabs from horses and proficiency panel samples, and to help       |
|                 | confirm the accurate identification of pure culture suspect        |





| isolates as T.equigenitalis, including discrimination from          |
|---|
| <i>Taylorella asinigenitalis</i> using a Quantitative Real-Time PCR |
| (qPCR)  |

## Veterinary-OAHL-Microbiology-Mycobacterial Diseases

| SOP# MY-PR022 | Differentiation of mycobacterial isolates on the basis of growth |
|---------------|--|
|               | characteristics and preparation of inoculum for identification   |
| SOP# MY-PR032 | The Processing of Specimens for Mycobacterial Isolation          |

#### Veterinary-OAHL-Serological Diagnosis, Brucellosis

| SOP# SDU-PR013  | Protocol for the Agar Gel Immunodiffusion Test for the         |
|-----------------|--|
|                 | detection of antibodies to Paratuberculosis in animal serum    |
| SOP# SDU-PR009  | Protocol for the Brucella Buffered Plate Agglutination Test    |
|                 | (BPAT) for the detection of antibodies to Brucella abortus,    |
|                 | melitensis and suis  |
| SOP# SDU-PR-014 | Protocol for the Brucella EDTA modified Tube Agglutination     |
|                 | Test (BRUC-TAT) for the detection of antibodies to Brucella    |
|                 | abortus, B. melitensis and B. suis                             |
| SOP# BR-PR005   | Micro Complement Fixation Test                                 |
| SOP# BR-PR007   | Macro Complement Fixation Test                                 |
| SOP# BR-PR038   | Use of the Mycobacterium paratuberculosis Antibody Test kit    |
|                 | (ELISA) for the Diagnosis of Mycobacterium paratuberculosis    |
|                 | infections in cattle   |
| SOP# BR-PR040   | Fluorescence Polarization Assay (FPA) (single                  |
|                 | tube) for detection of serum antibody to Brucella spp:         |
|                 | Presumptive serological diagnosis in bison, cervids, sheep     |
|                 | and goats  |
| SOP# BR-PR041   | Competitive Enzyme Linked Immunosorbent assay (C               |
|                 | ELISA) for Detection of Serum Antibodies to Brucella spp.:     |
|                 | Presumptive serological diagnosis in cattle, bison and cervids |
| SOP# BR-PR042   | Indirect Enzyme Immunosorbent Assay (I-ELISA) for Detection    |
|                 | of Serum Antibodies to Brucella spp.: Presumptive serological  |
|                 | diagnosis in goats, pigs and sheep                             |
| SOP# BR-PR048   | High Throughput 96 Well Fluorescence Polarization Assay        |
|                 | (FPA) for detection of porcine antibody to Brucella spp.       |
| SOP# BR-PR047   | High Throughput 96 Well Fluorescence Polarization Assay        |
|                 | (FPA) for detection of bovine antibody to Brucella spp.        |
| SOP#SDU-PR004   | Use of the Mycobacterium Bovis Antibody Test kit (ELISA) for   |
|                 | the diagnosis of Mycobacterium bovis infections in cattle      |
| SOP#SDU-PR008   | Use of the BOVIGAM® Mycobacterium bovis Gamma                  |
|                 | Interferon Test Kit (Phase 2) for the in vitro diagnosis of    |
|                 | bovine tuberculosis in cattle                                  |
| SOP# SDU-PR015  | Dual Path Platform (DPP) VetTB Assay for Detection of          |
|                 | Serum Antibodies tp Mycobacterium bovis in Cervids             |





Number of Scope Listings: 44

Number of Techniques: 21

## Notes:

This laboratory's scope of accreditation is granted under a flexible type. The list of methods subject to this type of scope are already present under fixed portion for Ottawa Plant Laboratory and Ottawa Animal Health Laboratory (OAHL).

| CLIENTS SERVED: | Normally Reserved for Internal Clients  |
|-----------------|---|
| LDP, SOP:       | Subject Laboratory's Internal Procedures  |
| ISO/IEC 17025:  | General Requirements for the Competence of Testing and Calibration Laboratories   |
| RG-TMDNRT:      | SCC Requirements and Guidance for Accreditation of Laboratories Engaged in<br>Test Method Development and Non-Routine Testing |

Ottawa Plant Laboratory - Entomological Examinations Testing conducted at the following address: Canadian Food Inspection Agency (CFIA) Ottawa Plant Laboratory (Central Experimental Farm) - Entomology 960 CARLING AVENUE, BUILDING 18 and K. W. Neatby Building Ottawa, Ontario K1A 0C6 Canada

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 <u>www.scc-ccn.ca</u>.

Elias Rafoul Vice-President, Accreditation Services Publication on: 2024-07-08

