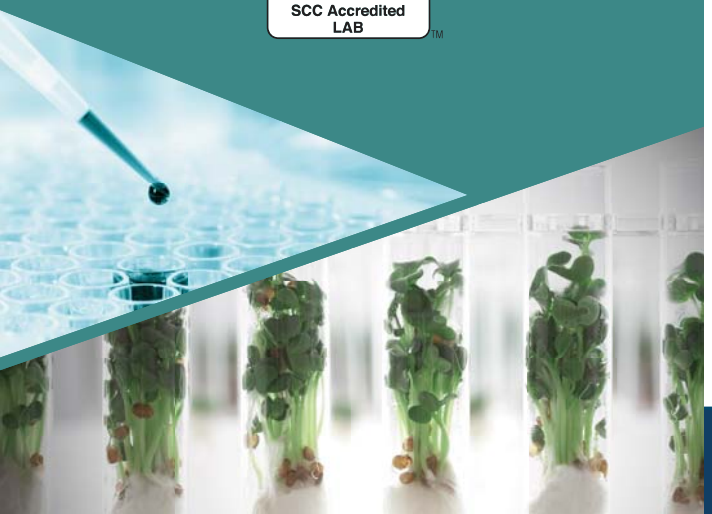
QUALITY MANAGEMENT

All CFIA laboratories have demonstrated conformance to ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*. The Standards Council of Canada evaluates our laboratories against this international standard, as a formal verification of the CFIA's capability to produce accurate and reliable results, within our accredited scope of testing. The results are supported by the development, validation and implementation of scientific methods, conducted by highly qualified personnel, using reliable products, services, and equipment, in a quality controlled environment. Participation in international proficiency testing programs further demonstrates that our testing is comparable to laboratories across Canada and around the world.

SCC Accredited LAB™



FOR FURTHER INFORMATION

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Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Sidney Laboratory

Safeguarding with Science

Canada

CANADIAN FOOD INSPECTION AGENCY

The Canadian Food Inspection Agency (CFIA) is responsible for delivering federally mandated programs for food inspection, plant and animal health. The Agency relies on high-quality, timely and relevant science as the basis of its program design and regulatory decision-making. Scientific activities inform the Agency's understanding of risks, provide evidence for developing mitigation measures, and confirm the effectiveness of these measures.

CFIA scientific activities include laboratory testing, research, surveillance, test method development, risk assessments and expert scientific advice. Agency scientists maintain strong partnerships with universities, industry, and federal, provincial and international counterparts to effectively carry out the CFIA's mandate.

THE SIDNEY LABORATORY

The Sidney Laboratory, also known as the Centre for Plant Health, is Canada's only post-entry quarantine, research and diagnostic facility for imported plant material. The laboratory is responsible for virus testing of all fruit-bearing trees, grapevines and small fruit (e.g. berries), in order to ensure the safe introduction of foreign plant material into Canada.

The Sidney Laboratory is being replaced over the next five years by a world-class plant health diagnostic and research facility that will provide CFIA scientists and partners with state-of-the-art amenities to advance plant science. Having the right tools is essential to help develop and partner on new ideas and opportunities to protect Canada's plant resources and to grow the agriculture and agri-food sector.

WHAT WE DO

Services

- Pathogen testing of imported tree fruits, small fruits and grapevine (i.e. bacteria, virus and virus-like organisms)
- Export certification for the trade of tree fruits, small fruits, and grapevine
- Elimination of virus infections from valuable fruit and grape varieties
- Maintenance of the national repository of Generation 1, virus-tested tree fruit and grapevine varieties for Canadian export certification and domestic distribution
- Support trade through participation on international panels to develop harmonized standards for the movement and testing of plant materials

Plant-related research

- Develop and validate methods for supporting quarantine and virus testing activities
- Validate and apply new technologies such as Next Generation Sequencing
- Identify and characterize new viruses and virus-like diseases
- Develop rapid, sensitive, molecular diagnostic tests to support the implementation of the *Plant Protection Act*

Scientific techniques

Enzyme-Linked Immunosorbent Assay (ELISA)

- ELISA determines the presence of a particular substance (e.g. food allergens, toxins, or pathogens) using antibodies that bind to specific target protein(s). A subsequent reaction producing a detectable signal such as colour change shows the presence of the target substance. The strength of the signal gives an indication of the amount present in the sample.

Polymerase Chain Reaction assay (PCR)

- PCR is a technique that can detect a pathogen in a plant sample by targeting nucleic acid (e.g. DNA or RNA) that is specific to the pathogen of interest. It then amplifies the target until it is detectable. The presence of the amplified nucleic acid indicates the presence of the pathogen in the original sample.

Woody-host bioassays

- Bioassay of a woody-host (i.e. plant that produces wood as its structural tissue) starts with an indicator plant that is disease-free and is then inoculated with a sample from a plant with an unknown health status. The indicator plant is then monitored for any symptoms of disease. If symptoms are observed, then the original plant that was used for the inoculation harbours a pathogen.

Herbaceous-host bioassays

- Bioassay of an herbaceous (i.e. non- woody) disease-free indicator plant is inoculated with sap from a plant with an unknown health status. The indicator plant is then monitored for any symptoms of disease. If symptoms are observed, then the original plant that was used for the inoculation harbours a pathogen.