

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Accredited Laboratory No. 337

Legal Name of Accredited Laboratory: **RCMP Forensic Science & Identification Services**

Location Name or Operating as (if applicable): National Forensic Laboratory Services - Edmonton

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SCC File Number:	15405
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories SCC RG-FORENSIC
Fields of Testing:	Biological Chemical/Physical
Program Specialty Area:	Forensic: (Forensic Biology / DNA, Forensic Chemistry / Trace Evidence, Forensic Toxicology)
Initial Accreditation:	2000-06-08
Most Recent Accreditation:	2021-05-06
Accreditation Valid to:	2024-06-08

SCC Group Accreditation:

This laboratory is a part of a Group Accreditation with the following facilities in accordance with SCC's policy on Group Accreditation documented in the Accreditation Services Accreditation Program Overview.

- RCMP Forensic Science & Identification Services - NATIONAL FORENSIC LABORATORY SERVICES - SURREY, Accredited Laboratory No. 395;
- RCMP Forensic Science & Identification Services - NATIONAL FORENSIC LABORATORY SERVICES - OTTAWA, Accredited Laboratory No. 435; and
- RCMP Forensic Science & Identification Services - NATIONAL DNA DATA BANK, Accredited Laboratory No. 531.

FORENSICS

Forensic Biology / DNA

Description of Activities

The Biology Services Section carries out the following examinations/analyses:

- Examination of evidentiary material for the presence of biological material, possible biological material and non-biological material;
- Autosomal STR and Y-STR DNA analysis of biological material recovered from evidentiary material, which included the extraction, purification and quantification of human and male DNA, the amplification of DNA and the resolution of DNA typing profiles using capillary electrophoresis;
- Interpretation of DNA typing results to establish associations between individuals and crime scene samples, as well as paternity/parentage and other relatedness relationships

Techniques for which laboratory is accredited:

- a. Body fluid examination and identification using biochemical and/or microscopic procedures;
- b. DNA extraction, purification, quantification, Polymerase Chain Reaction (PCR) amplification using autosomal STR and Y-STR Amplification Kits, and capillary electrophoresis;
- c. Interpretation of DNA typing profiles;
- d. Hair identification and determination of suitability for autosomal STR DNA typing
- e. Macroscopic and microscopic examination

Forensic Chemistry / Trace Analysis

Description of Activities

- Examination and analysis of trace evidence (generally non-biological) material in questioned samples and comparison to known samples in order to:
 - identify the questioned material and/or
 - determine the likelihood of common origin with the known sample.
- Recognition, detection and identification of trace evidence (generally non-biological) such that the information can be used to aid in the investigation or reconstruction of events at a crime or accident scene.

Techniques for which laboratory is accredited:

- a. Sample preparation, extraction and/or separation and general chemical and physical tests
- b. Optical microscopy (microspectrophotometry, polarized light microscopy stereomicroscopy, and comparison light microscopy) and scanning electron microscopy with energy dispersive X-ray spectroscopy
- c. Gas chromatography and Pyrolysis gas chromatography coupled with mass spectrometry
- d. X-ray diffraction
- e. Fourier transformed infrared, Raman, and visible spectroscopy

Forensic Toxicology

Description of Activities

The Toxicology Section carries out the following examinations/analyses:

- Body fluid and tissue screen and quantification for volatile substances including ethanol
- Measurement of carboxyhemoglobin saturation in blood
- Body fluid and tissue screen and quantification for drugs and poisons
- Analysis of drugs, poisons and other toxic materials in or on clothing, food pharmaceuticals and miscellaneous exhibits
- Verifies the ethanol concentration of alcohol standard used in breath testing

Techniques for which laboratory is accredited:

- a. Immunoassay
- b. Macroscopic examination
- c. Sample preparation, extraction and general chemical and physical tests
- d. Ultra/High-performance liquid chromatography coupled with tandem mass spectrometry detection
- e. Gas chromatography coupled with nitrogen & phosphorus detection
- f. Gas chromatography coupled with flame ionization detection
- g. Gas chromatography coupled with mass spectrometry detection
- h. Ultra/High-performance liquid chromatography coupled with quadrupole time-of-flight mass spectrometry detection
- i. Ultra/High performance liquid chromatography coupled with diode array detection
- j. Ultraviolet/visible spectrophotometry

Number of Forensic Techniques: 20

Notes:

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

SCC RG-FORENSIC: SCC Requirements and Guidance for the Accreditation for Forensic Testing Laboratories

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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Vice-President, Accreditation Services
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