TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

La présente portée d'accréditation existe également en français et est publiée séparément.

Legal Name of Accredited Laboratory:	**RCMP Forensic Science & Identification Services**
Location Name or Operating as (if applicable):	National Forensic Laboratory Services – Edmonton
Contact Name:	Nathalia Biernat
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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 prevails.

SCC File Number:	15405
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Biological Chemical/Physical Forensic
Program Specialty Area:	Forensic: Biology / DNA Chemistry / Trace Evidence Toxicology
Initial Accreditation:	2000-06-08
Most Recent Accreditation:	2025-03-28
Accreditation Valid to:	2028-06-08

SCC Group Accreditation:

Canada

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 - OTTAWA, 15539;
- RCMP Forensic Science & Identification Services - NATIONAL FORENSIC LABORATORY SERVICES - SURREY, 15489; and
- RCMP Forensic Science & Identification Services - NATIONAL DNA DATA BANK, 15654.

FORENSICS

Forensic Biology / DNA

Description of Activities

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

- Examination of forensic evidentiary material for the presence of biological material.
- Testing of body fluids using biochemical, immunological and/or microscopic procedures as both confirmatory and presumptive tests for the following: semen (confirmatory & presumptive), blood (confirmatory & presumptive), and saliva (presumptive).
- Using microscopic procedures to conduct human hair identification and determine suitability for DNA analysis.
- Autosomal STR DNA analysis of biological material recovered from evidentiary material, which includes 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 Autosomal STR and Y-STR DNA typing results to establish associations between individuals and crime scene samples.

Techniques for which laboratory is accredited:

a. Examination of exhibits for biological material, possible biological material and non-biological material using macroscopic and microscopic techniques;
b. Body fluid testing (i.e. semen, blood and saliva) using biochemical, immunological and/or microscopic procedures;
c. Hair identification and determination of suitability for autosomal STR DNA typing;
d. DNA extraction, purification, quantification, Polymerase Chain Reaction (PCR) amplification using autosomal STR and Y-STR Amplification Kits, and capillary electrophoresis;
e. Interpretation of Autosomal STR and Y-STR DNA typing profiles;
f.

Forensic Chemistry / Trace Evidence Analysis

Description of Activities

The Trace Evidence Services Section carries out the following examination/analyses:

- Recognition, examination and analysis of trace evidence material (non-biological) in questioned samples to identify: paint (automotive and architectural), ignitable liquids/ ignitable liquid residues, unknown chemical substances, tapes, polymers, and 1-(Methylamino)anthraquinone (MAAQ)
- Comparison of questioned trace evidence materials to known samples in order to determine likelihood of common origin within context of paint, tapes and polymers examinations.

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 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. Sample preparation, extraction and general chemical and physical tests
c. Ultra/High-performance liquid chromatography coupled with tandem mass spectrometry detection
d. Gas chromatography coupled with flame ionization detection
e. Gas chromatography coupled with mass spectrometry detection
f. Ultra/High-performance liquid chromatography coupled with quadrupole time-of-flight mass spectrometry detection
g. Ultraviolet/visible spectrophotometry

Number of Techniques: 17

Notes:

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

SCC RG-LAB: SCC Requirements and Guidance for the Accreditation of Testing 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-ccn.ca

Elias Rafoul
Vice-President, Accreditation Services
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