

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Legal Name of Accredited Laboratory: **Laboratoire de Sciences Judiciaires et de Médecine Légale**

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SCC File Number:	15786
Provider:	BNQ-EL
Provider File Number:	40055-1
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories; RG-FORENSIC
Fields of Testing:	Forensic
Program Specialty Area:	Forensic
Initial Accreditation:	2010-11-24
Most Recent Accreditation:	2024-03-13
Accreditation Valid to:	2028-11-24

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 separately issued document.

FORENSIC SCIENCE

Firearms / Tool Marks

Description of activities

Firearms:

- Identification, mechanical evaluation and legal classification of firearms, firearms parts, ammunition and other prohibited devices
- Comparison and identification of marks left by a firearm on casings and projectiles
- Restoration of serial numbers
- Legal classification of prohibited weapons (throwing weapons, impact weapons, stun guns and cold weapons)
- Certification of conducted electrical weapons TASER X26/X26P/X2/T7 according to the manufacturer's specifications
- Muzzle to target distance or range determination
- Evaluation of accidental discharges
- Acquisition, analysis and correlation of marks left by a firearm on projectiles and casings using an Integrated Ballistics Identification System (IBIS), and participation in the Canadian Integrated Ballistic Identification (CIBIN)

Toolmarks:

- Comparison and identification of toolmarks

Techniques covered by the accreditation of this laboratory:

- a. Chemical etching and magnetic particles inspection
- b. Chronography
- c. Microscopic examination, comparison and identification
- d. Measurements; linear (micro and macro), mass, force, velocity
- e. General microscopy
- f. Sound level measurement
- g. Chemical spot test for gunshot residue (propellant powder and soot)

Forensic Biology / DNA

Description of activities

Exhibit examination and sampling:

- Searching and identification of biological fluids: blood, sperm, saliva, urine
- Bloodstain pattern analysis
- DNA analyses and interpretation of autosomal genetic profiles
- DNA analyses and interpretation of Y chromosome genetic profiles
- Management of genetic profile databanking and DNA matches (NDDB)

Techniques covered by the accreditation of this laboratory:

- a. DNA amplification and electrophoresis (autosomal and Y chromosome)
- b. DNA extraction, purification and quantification
- c. Immunochromatography (test cards), fluorescence detection, microscopy and colorimetry
- d. Interpretation and comparison of genetic profiles

Forensic Chemistry / Trace Analysis

Description of activities
(Including Fires and Explosions)

Trace evidence:

- Fuel and fire debris
- Pyrotechnic devices
- Glass
- Paint
- Metals and alloys
- Fibers (clothing, dyed hair, dyes and specific pigments etc.)
- Oils and fats
- Analysis of tear gas irritants
- Explosives and explosion debris
- Paints and polymers (including adhesives, glues, dyes, etc.)
- Search for the presence of cannabinoids: delta-9-THC (cannabis) and/or its derivatives by GC/MS

Techniques covered by the accreditation of this laboratory:

- a. Glass refractive index analysis
- b. High temperature gas chromatography coupled to flame ionization detector (GC-HT/FID)
- c. Gas chromatography coupled to a mass spectrometer (GC-MS)
- d. Thin layer chromatography
- e. Macroscopic visual comparison
- f. X-ray diffraction
- g. Extraction with a solvent
- h. Micro-X-ray fluorescence
- i. Micro spectrophotometry (MSP)
- j. Infrared spectroscopy (FTIR)
- k. Micro Raman spectroscopy
- l. Stereo microscopy

Forensic Medicine and Pathology

Description of activities:

- Histology
 - Staining (Hematoxylin-Eosin-Saffron) and interpretation of histological slides
- Forensic Odontology
 - Analysis of human and animal bites
 - Estimated dental age
 - Identification
- Forensic Pathology
 - Autopsy

Forensic Toxicology

Description of activities:

- Screening of volatile substances using “Headspace” GC-MS
- Quantitation of ethanol, methanol, isopropanol, acetone and n-propanol by GC-HS-FID
- Quantitation of carboxyhemoglobin using spectrophotometry

- Certification of alcohol screening devices
- Sampling, quantitation and certification of alcohol solution standards
- Calculations for blood alcohol concentration
- General screening by protein precipitation using LC-MS/MS
- Screening of novel psychoactive substances by protein precipitation using LC-MS/MS
- Screening of drugs, medications and other substances by SPE using GC-MS
- Screening for compounds characteristic of tobacco by LC-MS/MS

Accredited techniques:

- a. Gas (GC) and liquid (HPLC) chromatography
- b. Colorimetry
- c. Flame ionization (FID)
- d. Extraction of biological matrices (protein precipitation, solid phase extraction (SPE))
- e. Mass spectrometry (MS, MS/MS)
- f. Spectrophotometry

Questioned Documents Examination

Description of activities

Comparative examination of handwriting and documents:

- Handwriting (cursive, script style, Hand printing, block letters, numerals)
- Signature
- Paper
- Rubber stamps
- Printers and printed documents
- Inks and printing processes
- Photocopiers and reproduced documents
- Typewriters and typewritten documents
- Engravings and engraved documents
- Altered documents
- Forged documents
- Recovery of indented writings
- Recovery of altered writings (by fire, water or any other substances)

Techniques for which the laboratory is accredited:

- a. Forensic Handwriting and Signature Analysis
- b. Detection of indented writings
- c. Thin Layer Chromatography
- d. Macroscopic examination
- e. Microscopic examination
- f. Special lighting techniques

Notes

Accreditation is under a flexible scope. The list of methods covered by accreditation is available on request.

RG-FORENSIC: SCC Requirements and Guidance for the Accreditation of 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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