

**Standards Council of Canada**

600-55 Metcalfe Street  
Ottawa, ON K1P 6L5  
Canada

**Conseil canadien des normes**

55, rue Metcalfe, bureau 600  
Ottawa, ON K1P 6L5  
Canada

**SCOPE OF ACCREDITATION**

**RPC  
921 College Hill Road  
Fredericton, NB  
E3B 6Z9**

Accredited Laboratory No. 144

(Conforms with requirements of CAN-P-1578 , CAN-P-1585, CAN-P-1587 , ISO/IEC 17025:2005)

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URL: <http://rpcgenetics.com>

CLIENTS SERVED: All interested parties

FIELDS OF TESTING: Biological, Chemical/Physical, DNA Relationship, Forensic

FORENSICS Forensic Biology / DNA  
DISCIPLINE(S):

PROGRAM SPECIALTY Agriculture Inputs, Food, Animal Health and Plant Protection  
AREA: (PSA-AFAP) , Environmental, Forensic

SCOPE ISSUED ON: 2017-10-16

ACCREDITATION 2018-02-01  
VALID TO:

Note: Dairy tests are performed at Bldg. 700B, Top Floor 850 Lincoln Road, Fredericton, NB, E3B 8B7

**ANIMAL AND PLANTS (AGRICULTURE)**

**Foods and Edible Products: (Human and Animal Consumption)**

**(Food General)**

4.M26	MICROWAVE ASSISTED DIGESTION OF PLANT & ANIMAL TISSUE AND DERIVED MATERIALS Total Mercury Trace Elements
4.M29/4.M41	ANALYSIS OF MINERALS IN FOOD
AOAC 961.07	FREEZING POINT DETERMINATION FOR ADDED WATER
AOAC 978.26	SOMATIC CELL COUNTS IN MILK (INSTRUMENTAL METHOD)
AOAC 980.15	FREEZING POINT DETERMINATION FOR ADDED WATER
DX08/DX09	ANALYSIS OF PCDDs, PCDFs, PCBs & PBDEs By GC/HRMS
ISO 9622:2013	MILK AND LIQUID MILK PRODUCTS GUIDELINES FOR THE APPLICATION OF MID INFRARED SPECTROMETRY
OAS-FC01	DETERMINATION OF MOISTURE IN FOODS
OAS-FC02	DETERMINATION OF ASH IN FOODS
OAS-FC03	DETERMINATION OF FAT IN FOODS BY SOXTEC EXTRACTION
OAS-FC04	DETERMINATION OF PROTEIN IN FOODS
OAS-FC06	DETERMINATION OF FAT IN FOODS BY ACID HYDROLYSIS
OAS-FC07	DETERMINATION OF FATTY ACIDS IN FOODS EPA, DHA Monounsaturates Polyunsaturates Saturates Total Fat Trans Fatty Acids
OAS-FC08	THE DETERMINATION OF CHOLESTEROL IN FOODS
OAS-FC09	DETERMINATION OF SUGARS IN FOODS Fructose Glucose Lactose Maltose Sucrose
OAS-FC10	THE DETERMINATION OF TOTAL DIETARY FIBRE
OAS-FC11	DETERMINATION OF $\beta$ CAROTENE IN FOODS
OAS-FC12	DETERMINATION OF VITAMIN A (RETINOL) IN FOODS

**(Microbiology)**

AOAC 977.27	Standard Plate Count (Spiral plate method)
AOAC Performance Tested	Certificate No. 071002 Charm 3 SL3 $\beta$ -lactam Test for Drug Residue
FFA05	The Analysis of Coliforms, Faecal Coliforms and <i>E.coli</i> in Foods Only for: Meat and Edible Meat Offal, Dairy Produce
MFHPB-18	Determination of the Aerobic Colony Count in Foods (FFA04) Only for: Meat and Edible Meat Offal
MFHPB-20	Isolation and Identification of <i>Salmonella</i> from Foods and Environmental Samples (FFA06)
MFHPB-21	<i>Enumeration of Staphylococcus aureus</i> in Foods (FFA07) Only for: Meat and Edible Meat Offal, Dairy Produce
MFHPB-30	Isolation of <i>Listeria monocytogenes</i> and other <i>Listeria</i> spp from Foods and Environmental Samples (FFA08) Only for: Meat and Edible Meat Offal, Dairy Produce
MFLP-74	Enumeration of <i>Listeria monocytogenes</i> in Food (FFA08) Only for: Meat and Edible Meat Offal
MLG 4	Isolation and Identification of <i>Salmonella</i> from meat, Poultry, Pasteurized Egg and Catfish Products (FFA12) Only for: Meat, Poultry and Egg Products
MLG41	Isolation, Identification, and Enumeration of <i>Campylobacter jejuni/coli/lari</i> from Poultry Rinse and Sponge Samples (FFA27)
US FDA BAM Chapter 5	Microbiological Method for Performing Salmonella Analysis US Food and Drug Administration - Bacteriological Analytical Manual Chapter 5 (FFA25)

**ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY**

**Environmental**

**Air**

**(Mould - Air)**

AQS85	PROCEDURE FOR THE COLLECTION AND IDENTIFICATION OF SPORES IN AIR USING SPORE TRAP Fungal Spore ID-GENUS
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**(Petroleum Hydrocarbons - Air)**

OAS-HC01	THE DETERMINATION OF AIR-PHASE PETROLEUM HYDROCARBONS ON SORBENT TUBES Benzene EPH >C10-C21 Ethylbenzene m,p-xylene o-xylene Toluene VPH C6-C10 (less BTEX)
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**Air (Occupational Health)**

**(Asbestos by PCM Fibre Counting - Air)**

AQS32	PROCEDURE FOR THE COLLECTION AND FIBER COUNTING OF AIR SAMPLES FOR TOTAL FIBERS Asbestos-Ms. Karla McLellan Asbestos-Mr. Darren Tarr
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**Oil**

**(Total PCBs - Oil)**

OAS-SV03	THE DETERMINATION OF POLYCHLORINATED BIPHENYLS IN OIL Total PCB (as aroclor)
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**Soil/Sediment**

**(Dioxins/Furans (PCDD/PCDF) - Ash, Sludge and Soil/Sediment)**

DX06	EXTRACTION AND CONCENTRATION OF PCDDs, PCDFs, PCBs & PBDEs FROM ASH, SLUDGE, SOIL, AND SEDIMENT SAMPLES
DX08	ANALYSIS OF PCDDs, PCDFs, PCBs & PBDEs By GC/HRMS

**(Mercury - Soil)**

4.M52	TOTAL MERCURY ANALYSIS BY COLD VAPOUR ATOMIC ABSORPTION SPECTROMETRY
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**(Metals - Soil)**

4.M19 / 4.M29

ANALYSIS OF TRACE ELEMENTS BY INDUCTIVELY  
COUPLED PLASMA EMISSION SPECTROMETRY

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Lithium  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Potassium  
Rubidium  
Selenium  
Silver  
Sodium  
Strontium  
Tellurium  
Thallium  
Uranium  
Vanadium  
Zinc

4.M19, 4.M01

ANALYSIS OF TRACE ELEMENTS BY INDUCTIVELY  
COUPLED PLASMA-MASS SPECTROMETRY

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium

Chromium  
Cobalt  
Copper  
Iron  
Lead  
Lithium  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Potassium  
Rubidium  
Selenium  
Silver  
Sodium  
Strontium  
Tellurium  
Thallium  
Uranium  
Vanadium  
Zinc

**(Petroleum Hydrocarbons - Soil)**

OAS-HC03

THE DETERMINATION OF PETROLEUM  
HYDROCARBONS (ATLANTIC MUST) IN SOIL  
Aliphatic > C8-C10  
Aliphatic >C10-C12  
Aliphatic >C12-C16  
Aliphatic >C16-C21  
Aliphatic >C21-32  
Aliphatic C6-C8  
Aromatic > C10-C12  
Aromatic > C12-C16  
Aromatic > C16-C21  
Aromatic > C21-C32  
Aromatic > C8-C10  
Benzene  
Ethylbenzene  
Extractable Petroleum Hydrocarbons (>C10-C16)  
Extractable Petroleum Hydrocarbons (>C16-C21)  
Extractable Petroleum Hydrocarbons (>C21-C32)  
F1: C6-C10  
F2: C10-C16

F3: C16-C34  
m/p-xylene  
Methyl Tert butyl Ether (MTBE)  
o-xylene  
Toluene  
Volatile Petroleum hydrocarbons (C6-C10) (less BTEX)

**(Polycyclic Aromatic Hydrocarbons (PAH) - Soil)**

OAS-SV01 THE DETERMINATION OF POLYNUCLEAR  
AROMATIC HYDROCARBONS IN SOIL  
Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo (a) anthracene  
Benzo (a) pyrene  
Benzo (b) fluoranthene  
Benzo (g,h,i) perylene  
Benzo (k) fluoranthene  
Benzo(e)pyrene  
Chrysene  
Dibenzo (a,h) anthracene  
Fluoranthene  
Fluorene  
Indeno (1,2,3 - cd) pyrene  
Naphthalene  
Phenanthrene  
Pyrene

**Water (Inorganic)**

**(Alkalinity - Water)**

4.M43 THE MEASUREMENT OF ALKALINITY USING THE  
AQUAKEM 250  
Alkalinity (pH 4.5)

**(Ammonia - Water)**

4.M47 THE MEASUREMENT OF AMMONIA USING THE  
AQUAKEM 250  
Ammonia

**(Biochemical Oxygen Demand (BOD) - Water)**

4.M07 THE MEASUREMENT OF BIOCHEMICAL OXYGEN DEMAND (BOD-5 day, BOD<sub>5</sub>)

**(Chemical Oxygen Demand (COD) - Water)**

4.M40 THE MEASUREMENT OF CHEMICAL OXYGEN DEMAND BY CLOSED REFLUX COLORIMETRIC METHOD

**(Chloride - Water)**

4.M44 THE MEASUREMENT OF CHLORIDE USING THE AQUAKEM 250

**(Colour - Water)**

4.M55 THE MEASUREMENT OF COLOR USING THE AQUAKEM

**(Conductivity - Water)**

4.M04 THE MEASUREMENT OF CONDUCTIVITY OF AQUEOUS SAMPLES Conductivity (25°C)  
Conductivity (25°C)

**(Dissolved and Extractable Metals - Water)**

4.M01 ANALYSIS OF TRACE ELEMENTS BY INDUCTIVELY COUPLED PLASMA-MASS SPECTROMETRY  
Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Lithium



Magnesium  
Manganese  
Molybdenum  
Nickel  
Potassium  
Rubidium  
Selenium  
Silver  
Sodium  
Strontium  
Tellurium  
Thallium  
Uranium  
Vanadium  
Zinc

4.M29

ANALYSIS OF TRACE ELEMENTS BY INDUCTIVELY  
COUPLED PLASMA EMISSION SPECTROMETRY

Aluminum  
Antimony  
Arsenic  
Barium  
Beryllium  
Bismuth  
Boron  
Cadmium  
Calcium  
Chromium  
Cobalt  
Copper  
Iron  
Lead  
Lithium  
Magnesium  
Manganese  
Molybdenum  
Nickel  
Potassium  
Rubidium  
Selenium  
Silicon  
Sodium  
Strontium  
Sulphur  
Tellurium

Thallium  
Tin  
Titanium  
Vanadium  
Zinc

**(Fluoride - Water)**

4.M30 THE MEASUREMENT OF FLUORIDE BY  
COLORIMETRIC DETERMINATION

**(Major Ions - Water)**

4.M39 THE ANALYSIS OF ANIONS BY ION  
CHROMATOGRAPHY  
Bromide  
Chloride  
Fluoride  
Nitrate  
Nitrite  
Sulfate

**(Mercury - Water)**

4.M52 TOTAL MERCURY ANALYSIS BY COLD VAPOUR  
ATOMIC ABSORPTION SPECTROMETRY

**(Nitrate plus Nitrite - Water)**

4.M48 THE MEASUREMENT OF NITRATE + NITRITE USING  
THE AQUAKEM 250

**(Nitrite - Water)**

4.M49 THE MEASUREMENT OF NITRITE USING THE  
AQUAKEM 250

**(Organic Carbon - Water)**

4.M38 THE MEASUREMENT OF TOTAL ORGANIC CARBON  
USING THE DOHRMANN PHOENIX 8000 TOC  
ANALYZER  
DOC  
Total Organic Carbon (TOC)

**(pH - Water)**

4.M03 THE MEASUREMENT OF pH OF AQUEOUS SAMPLES

**(Phosphate - Water)**

4.M50 THE MEASUREMENT OF PHOSPHATE USING THE  
AQUAKEM 250

**(Silica (Reactive) - Water)**

4.M46 THE MEASUREMENT OF SILICA USING THE  
AQUAKEM 250

**(Sulfate - Water)**

4.M45 THE MEASUREMENT OF SULFATE USING THE  
AQUAKEM 250

**(Total Kjeldahl Nitrogen (TKN) - Water)**

4.M16 THE MEASUREMENT OF TOTAL KJELDAHL  
NITROGEN

**(Total Phosphorus - Water)**

4.M17 THE MEASUREMENT OF TOTAL PHOSPHORUS IN  
AQUEOUS SAMPLES

**(Total Suspended Solids (TSS) - Water)**

4.M05 THE DETERMINATION OF TOTAL SUSPENDED  
SOLIDS IN AQUEOUS SAMPLES

**(Turbidity - Water)**

4.M06 THE MEASUREMENT OF TURBIDITY BY  
NEPHELOMETRY

**Water (Microbiology)**

**(Coliforms - Water)**

FFA01 ANALYSIS OF COLIFORMS IN WATER  
Escherichia coli (E. coli)

Total Coliforms

**(Coliforms - Water)**

FFA10	DETERMINATION OF COLIFORMS AND E. COLI IN WATER BY THE IDEXX COLILERT-18 METHOD Escherichia coli (E. coli) Total Coliforms
FFA10	DETERMINATION OF COLIFORMS AND E. COLI IN WATER BY THE IDEXX COLILERT-18 METHOD <i>Presence/Absence</i>

**(Enterococci - Water)**

FFA35	DETERMINATION OF ENTEROCOCCI IN WATER BY THE IDEXX ENTEROLERT METHOD Enterococci
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**(Fecal Coliforms - Water)**

FFA01	ANALYSIS OF COLIFORMS IN WATER
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**(Heterotrophic Plate Count - Water)**

FFA11	PERFORMING HETEROTROPHIC PLATE COUNT IN WATER Heterotrophic Plate Count (HPC)
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**Water (Organic)**

**(BAP & Pentachlorophenol - Water)**

OAS-SV09	THE DETERMINATION OF BENZO (a) PYRENE AND PENTACHLOROPHENOL IN WATER
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**(Dioxins/Furans (PCDD/PCDF) - Water)**

DX08	ANALYSIS OF PCDDs, PCDFs, PCBs & PBDEs By GC/HRMS
DX10	EXTRACTION AND CONCENTRATION OF PCDDs AND PCDFs FROM WATER SAMPLES

**(Dissolved Methane/Ethane/Propane - Water)**

AQS90

DETERMINATION OF DISSOLVED METHANE AND/OR  
ETHANE AND/OR PROPANE IN WATER BY GC/FID

**(Haloacetic Acids - Water)**

OAS-SV06 THE DETERMINATION OF HALOACETIC ACIDS IN  
DRINKING WATER  
Bromoacetic acid  
Bromochloroacetic acid  
Chloroacetic acid  
Dibromoacetic acid  
Dichloroacetic acid  
Trichloroacetic acid

**(N-Nitrosodimethylamine (NDMA) - Water)**

NDMA01 ANALYSIS OF N-NITROSODIMETHYLAMINE (NDMA)  
IN WATER BY GC/HRMS  
N-Nitrosodimethylamine (NDMA)

**(OC Pesticides/PCB - Water)**

OAS-SV05 / OAS-SV04 THE DETERMINATION OF ORGANOCHLORINE  
PESTICIDES IN WATER / DETERMINATION OF  
POLYCHLORINATED BIPHENYLS IN WATER  
A -BHC  
Endosulfan I  
Endosulfan II  
Endrin  
Heptachlor Epoxide  
Lindane (gamme-BHC)  
Mirex  
o,p' - DDT  
p,p' - DDT  
p,p' Methoxychlor  
Total PCB (as aroclor)

**(Petroleum Hydrocarbons-Water)**

OAS-HC04 DETERMINATION OF PETROLEUM HYDROCARBONS  
(ATLANTC MUST) IN WATER SAMPLES  
Aliphatic > C8-C10  
Aliphatic >C10-C12  
Aliphatic >C12-C16  
Aliphatic >C16-C21

Aliphatic >C21-C32  
Aliphatic C6-C8  
Aromatic > C8-C10  
Aromatic >C10-C12  
Aromatic >C12-C16  
Aromatic >C16-C21  
Aromatic >C21-C32  
Benzene  
Ethylbenzene  
Extractable Petroleum Hydrocarbons (>C10-C16)  
Extractable Petroleum Hydrocarbons (>C16-C21)  
Extractable Petroleum Hydrocarbons (>C21-C32)  
m/p-xylene  
Methyl Tert butyl Ether (MTBE)  
o-xylene  
Toluene  
Volatile Petroleum hydrocarbons (C6-C10) (less BTEX)

**(Polycyclic Aromatic Hydrocarbons (PAH) - Water)**

OAS-SV02 THE DETERMINATION OF POLYNUCLEAR  
AROMATIC HYDROCARBONS IN WATER  
Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo (a) pyrene  
Benzo (a)-anthracene  
Benzo (b) fluoranthene  
Benzo (g,h,i) perylene  
Benzo (k) fluoranthene  
Benzo(e)pyrene  
Chrysene  
Dibenzo (a,h) anthracene  
Fluoranthene  
Fluorene  
Indeno (1,2,3 - cd) pyrene  
Naphthalene  
Phenanthrene  
Pyrene

**(Volatile Organic Compounds (VOC) - Water)**

OAS-HC02 THE DETERMINATION OF VOLATILE ORGANIC  
COMPOUNDS IN WATER

1,1,1-Trichloroethane  
1,1,2,2-Tetrachloroethane  
1,1,2-Trichloroethane  
1,1-Dichloroethane  
1,1-dichloroethylene  
1,2-dichlorobenzene  
1,2-dichloroethane  
1,2-Dichloroethylene (E)  
1,2-Dichloroethylene (Z)  
1,2-Dichloropropane  
1,3-Dichlorobenzene  
1,3-Dichloropropylene (E)  
1,3-Dichloropropylene (Z)  
1,4-dichlorobenzene  
Benzene  
Bromochloromethane  
Bromodichloromethane  
Bromoform  
Bromomethane  
Carbon Tetrachloride  
Chlorobenzene  
Chlorodibromomethane  
Chloroethane  
Chloroform  
Chloromethane  
Dichloromethane  
Ethylbenzene  
Ethylene Dibromide  
m/p-xylene  
o-xylene  
Styrene  
Tetrachloroethylene  
Toluene  
Trichloroethylene  
Trichlorofluoromethane  
Vinyl Chloride

**Water (Toxicology)**

FFA-TOX4.1

ACUTE LETHALITY TOXICITY TESTING WITH  
RAINBOW TROUT

Trout LC50 (96 h)

Trout Single Concentration (96 h)

FFA-TOX4.2

	ACUTE LETHALITY TESTING WITH DAPHNIA MAGNA Daphnia LC50 (48 h) Daphnia Single Concentration (48 h)
FFA-TOX4.5	TOXICITY TESTING WITH CERIODAPHNIA DUBIA Ceriodaphnia dubia IC25 Ceriodaphnia dubia LC50
FFA-TOX4.6	FOR pH STABILIZED ACUTE LETHALITY TOXICITY TESTING WITH RAINBOW TROUT Trout LC 50 (96 h) pH Stabilization Trout single concentration (96 h) pH Stabilization

**Occupational Health and Safety:**

**Asbestos**

**(Asbestos Identification - Bulk Samples)**

AQS16	PROCEDURE FOR THE IDENTIFICATION OF ASBESTOS IN BULK SAMPLES
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**MEDICAL**

**(Compressed Breathing Air Analysis: CAN/CSA Z180.1-13, CAN/CSA Z275.2-15)  
(Medical Gas Analysis: CAN/CSA Z7396.1-06 & CAN/CSA Z7396.1-09 CAN/CSA  
Z7396.1-12))**

AQS02	Procedure for the Measurement of Dewpoint in Breathing Air and Medical Gases
AQS03	Procedure for Measuring Nitrogen Dioxide in Breathing Air Samples
AQS04	Procedure for the Measurement of Oil, Particulate, and Condensates in Breathing Air and Medical Gases
AQS80	Procedure for Measuring Odour in Compressed Breathing Air and Medical Gas Samples
AQS82	Determination of Nitrogen, Oxygen, Methane, Carbon Monoxide, Carbon Dioxide, Nitrous Oxide, Halogenated Hydrocarbons and Non-methane Hydrocarbons in Compressed Breathing Air and Medical Gases by GC with TCD, ECD and FID Detectors
AQS92	Determination of Nitrogen, Oxygen, Helium, Methane, Carbon Monoxide, Carbon Dioxide, Nitrous Oxide, Halogenated Hydrocarbons and Non-methane Hydrocarbons in Compressed Mixed Diving Gases by Gas Chromatography



## **FORENSICS**

### **Forensic Biology / DNA**

#### **Techniques for which laboratory is accredited:**

- a. Forensic Testing of Human Samples by:
  - 1. FFA-FBL07 Human DNA Genotyping
  - 2. FFA-FBL08 Human Relationship Probability Calculations
  - 3. FFA-FBL09 Presumptive Testing of Human Blood & Semen
- b. Forensic Testing Of Wildlife Samples by:
  - 1. FFA-FBL03 Species Identification Using Mt-DNA Sequencing
  - 2. FFA-FBL04 DNA Genotyping of Moose
  - 3. FFA-FBL05 Gender Typing of Mammals
  - 4. FFA-FBL06 DNA Genotyping of Deer

The following techniques are incorporated: sample handling, sample preparation, DNA purification, DNA extraction, PCR amplification, gel/capillary electrophoresis, sequencing (mtDNA), genotyping (STRs), interpretation (mtDNA and STRs) and reporting.

#### **Notes:**

##### **(Medical Gas Piping Systems)**

**The Medical Gas Piping System inspection portion of RPC's scope of accreditation has recently been transferred to SCC's Inspection Body program. A scope listing may be found at:**

**[http://www.scc.ca/en/programs/inspec\\_bodies/accredited\\_clients.shtml](http://www.scc.ca/en/programs/inspec_bodies/accredited_clients.shtml)**

**CAN-P-4E (ISO/IEC 17025):** General Requirements for the Competence of Testing and Calibration Laboratories (ISO/IEC 17025-2005)

**CAN-P-1587:** Requirements for the Accreditation of Agriculture Inputs, Food, Animal Health and Plant Protection Testing Laboratories

**CAN-P-1585:** Guidelines for Accreditation of Environmental Testing Laboratories

**CANP-1578:** Guidelines for the Accreditation of Forensic Testing Laboratories

**MFHPB:** Health Protection Branch Method

**AOAC:** Official Methods of Analysis of the Association of Official Analytical Chemists (USA), 17th Edition, 2002

Chantal Guay, ing., P.  
Eng, Accreditation  
Services

Date: 2017-10-16

Number of Scope Listings: 90  
Number of Forensic Techniques: 7  
SCC 1003-15/213  
Partner File #0  
Partner: None