

## TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

### Scope of Accreditation

**Legal Name of Accredited Laboratory:** **Natural Gas Technologies Centre (Québec) Inc.**

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<b>SCC File Number:</b>	151090
<b>Provider:</b>	BNQ-EL
<b>Provider File Number:</b>	55499-1
<b>Accreditation Standard(s):</b>	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
<b>Fields of Testing:</b>	Chemical/Physical Mechanical/Physical
<b>Program Specialty Area:</b>	Test Method Development and Evaluation and Non-routine Testing (TMDNRT)
<b>Initial Accreditation:</b>	2019-04-02
<b>Most Recent Accreditation:</b>	2024-07-30
<b>Accreditation Valid to:</b>	2027-04-02

*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.*

Note: The laboratory accredited under this PSA has demonstrated that it meets ISO/IEC 17025 requirements for non-routine testing under the following product classification.

## DEVELOPING AND VALIDATING TESTING PROTOCOLS, CONDUCTING TESTS IN THERMAL ENERGY SECTORS (NATURAL GAS, ELECTRICITY, RENEWABLES)

### Functionality and Security Testing

- Testing for product certification
- Product evaluation (eg: components, equipment, tools, instruments)
- Common parameters analyzed:
  - Flow rates (gas, air, liquids)
  - Temperatures (gas, air, liquids)
  - Pressures
  - Wattage
  - Amperage
  - Consumption of thermal energy
  - Consumption of electrical energy
  - Efficiency
  - Composition of combustion fumes (O<sub>2</sub>, CO<sub>2</sub>, CO)

### Energy

- Energy efficiency
- Combustion testing
- Energy balance
- Performance testing
- Testing for product certification
- Common parameters analyzed:
  - Flow rates (gas, air, liquids)
  - Temperature (gas, air, liquids)
  - Pressure
  - Wattage
  - Amperage
  - Consumption of thermal energy
  - Consumption of electrical energy
  - Efficiency
  - Composition of combustion fumes (O<sub>2</sub>, CO<sub>2</sub>, CO)

### Mechanical Testing

- Tooling
- Ensuring appropriateness of components and materials
- Common parameters analyzed:
  - Force couple
  - Force
  - Deformation

- Integrity (seal)
- Pressure

### Comfort Testing

- Characterization of thermal comfort
- Common parameters analyzed:
  - *Operating temperature*
  - *Local comfort:*
    - *Air speed*
    - *Floor temperature*
    - *Temperature difference between head and ankle level*
    - *Radiant temperature*
  - *Temperature variation over time*

### Natural Gas Analysis, renewable natural gas, and biogas or “and similar”

- Gas chromatography ( $CH_4$ ,  $C_2H_6$ ,  $C_3H_8$ ,  $i-C_4H_{10}$ ,  $n-C_4H_{10}$ ,  $i-C_5H_{12}$ ,  $n-C_5H_{12}$ ,  $n-C_6H_{14}$ ,  $N_2$ ,  $CO_2$ ,  $H_2$ ,  $He$ , including gross calorific value [GCV], density, methane number, Wobbe index)

### Notes:

**ISO/IEC 17025:2017:** General Requirements for the Competence of Testing and Calibration 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](http://www.scc.ca).

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Elias Rafoul  
 Vice-President, Accreditation Services  
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