



## **SCOPE OF ACCREDITATION**

**CENTRE DES TECHNOLOGIES DU GAZ NATUREL (Québec) Inc.**  
**1350 Nobel Boulevard, Suite 150**  
**Boucherville, QC**  
**J4B 5H3**

Accredited Laboratory No. 885

(Conforms with requirements of **ISO/IEC 17025:2017** and with requirements specific to method development)

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CLIENTS SERVED: All Interested Parties

### **SCOPE OF ACCREDITATION**

- 1.0 Functionality and Security Testing
- 2.0 Energy
- 3.0 Mechanical Testing
- 4.0 Comfort Testing
- 5.0 Natural Gas Analysis

### **DETAILS OF THE SCOPE OF ACCREDITATION**

Developing and validating testing protocols, conducting tests in thermal energy sectors (natural gas, electricity, renewables)

#### **1.0 Functionality and Security Testing**

- Testing for product certification
- Product evaluation (eg: components, equipment, tools, instruments)
- 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)

## **2.0 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)

## **3.0 Mechanical Testing**

- Tooling
- Ensuring appropriateness of components and materials
- Common parameters analyzed:
  - Force couple
  - Force
  - Deformation
  - Integrity (seal)
  - Pressure

## **4.0 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*

## **5.0 Natural Gas Analysis**



- **Gas chromatography** (*CH<sub>4</sub>, C<sub>2</sub>H<sub>6</sub>, C<sub>3</sub>H<sub>8</sub>, i-C<sub>4</sub>H<sub>10</sub>, n-C<sub>4</sub>H<sub>10</sub>, i-C<sub>5</sub>H<sub>12</sub>, n-C<sub>5</sub>H<sub>12</sub>, n-C<sub>6</sub>H<sub>14</sub>, N<sub>2</sub>, CO<sub>2</sub>, including gross calorific value [GCF], density, methane number, Wobbe index*)

SCOPE ISSUED ON: 2019-04-02

ACCREDITATION VALID TO: 2023-04-02

INITIAL ACCREDITATION DATE: 2019-04-02

**Note:** This scope of accreditation is also available in English as a separately issued document.

**Remarque:** La présente portée d'accréditation existe également en anglais, en tant que document distinct.

**Notes:**

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Elias Rafoul, Vice-President, Accreditation Services

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