



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Spec Air Specialty Gases
22 Albiston Way, Auburn, ME 04210

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Chemical Calibration
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Initial Accreditation Date:

October 7, 2006

Issue Date:

April 14, 2019

Expiration Date:

May 31, 2021

Accreditation No.:

59406

Certificate No.:

L19-222

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjilabs.com



Certificate of Accreditation: Supplement

Spec Air Specialty Gases

22 Albiston Way, Auburn, ME 04210

Contact Name: Jason Goldrup Phone: 207-777-6218

Accreditation is granted to the facility to perform the following calibration:

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Trace Moisture Calibration Gas Cylinder ^F	0.1 $\mu\text{mol/mol}$ to 20 $\mu\text{mol/mol}$	$(1.33 \times 10^{-1} + 1.52 \times 10^{-7}C) \mu\text{mol/mol}$	Electrolyte and/or Gravimetric Method
Trace Hydrocarbon Calibration Gas Cylinder ^F	0.1 $\mu\text{mol/mol}$ to 20 000 $\mu\text{mol/mol}$	$(1.05 \times 10^{-1} + 3 \times 10^{-2}C) \mu\text{mol/mol}$	Flame Ionization Detector and/or Gravimetric Method
Trace Oxygen Calibration Gas Cylinder ^F	0.2 $\mu\text{mol/mol}$ to 250 000 $\mu\text{mol/mol}$	$(2.79 \times 10^{-2} + 1.85 \times 10^{-2}C) \mu\text{mol/mol}$	Electrochemical/Potentiostat and/or Gravimetric Method
Gas Mixture Concentration ^F	40 $\mu\text{mol/mol}$ to 100 000 $\mu\text{mol/mol}$	$(125.4 \times 10^{-1} + 1.98 \times 10^{-2}C) \mu\text{mol/mol}$	GC with TCD and/or Gravimetric Method Calibration Gas Cylinder

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represent the smallest measurement uncertainties attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is expressed at a confidence level of 95 % using a coverage factor k (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
3. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this testing at its fixed location.
4. The term C represents concentration in moles or micromoles appropriate to the uncertainty statement.



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Chemical Testing
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

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Certificate of Accreditation: Supplement

Spec Air Specialty Gases

22 Albiston Way, Auburn, ME 04210

Contact name: Jason Goldrup Phone: 207-777-6218

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Chemical ^F	Compressed Gas Mixture	Amount of Carbon Monoxide in Nitrogen	Thermal Conductivity Detector (TCD)	0.001 % mol fraction to 0.3 % mol fraction (10 ppm to 3 000 ppm)
		Amount of Methane in Air	Flame Ionization Detector (FID)	0.01 % mol fraction to 2.5 % mol fraction (100 ppm to 25 000 ppm)
		Amount of Methane in Nitrogen	Flame Ionization Detector (FID)	0.001 % mol fraction to 3 % mol fraction (10 ppm to 30 000 ppm)
		Amount of Carbon Dioxide in Nitrogen	Thermal Conductivity Detector (TCD)	1 % mol fraction to 20 % mol fraction (10 000 ppm to 200 000 ppm)
		Amount of Carbon Dioxide in Air	Thermal Conductivity Detector (TCD)	1 % mol fraction to 20 % mol fraction (10 000 ppm to 200 000 ppm)
		Trace Oxygen	Electrochemical Transducer	0.000 001 % mol fraction to 1 % mol fraction (0.01 ppm to 10 000 ppm)
		Oxygen in Nitrogen	Paramagnetic	1 % mol fraction to 99 % mol fraction (10 000 ppm to 990 000 ppm)
		Moisture Level	Electrolytic Cell	0.000 01 % mol fraction to 0.002 % mol fraction (0.1 ppm to 20 ppm)
		Amount of Hydrocarbon in Gas	Flame Ionization Detector (FID)	0.000 01 % mol fraction to 20 % mol fraction (0.1 ppm to 200 000 ppm)
		Amount of Nitrogen in Argon	Plasma Cell	0.000 01 % mol fraction to 20 % mol fraction (0.1 ppm to 100 ppm)
		Gravimetric Balance Gas Mixture Concentration	Gravimetric Balance	0.000 01 % mol fraction to 100 % mol fraction (0.1 ppm to 1 000 000 ppm)

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