

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

WestAir Gases and Equipment, Inc.

2300 Haffley Avenue, National City, CA 91950

(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 January 2009):

Calibration of Specialty Gases (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:

Issue Date:

Expiration Date:

July 19, 2012

January 15, 2015

December 31, 2017

Accreditation No.:

Certificate No.:

74047

L15-13

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.pjlabs.com



Issue: 1/2015



Certificate of Accreditation: Supplement

WestAir Gases and Equipment, Inc.

2300 Haffley Avenue, National City, CA 91950 David Hosted Phone: 619-239-7571

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

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Calibration Gas Cylinder - Trace moisture concentration ^F	0.5 µmol/mol to 500 µmol/mol	(1.18 x 10 ⁻¹ + 2.38 x 10 ⁻² C) µmol/mol	Electrolytic Moisture Analyzer
Calibration Gas Cylinder - Percent oxygen concentration ^F	1 mmol/mol to 1 000 mmol/mol	(1.20 x 10 ⁻¹ + 1.51 x 10 ⁻⁴ C) mmol/mol	Paramagnetic Oxygen Analyzer
Calibration Gas Cylinder - Trace oxygen concentration ^F Calibration Gas Cylinder - Total hydrocarbon concentration ^F	0.5 μmol/mol to 500 μmol/mol 0.5 μmol/mol to 2 500 μmol/mol	(2.10 x 10 ⁻² + 3.00 x 10 ⁻² C) μmol/mol (9.40 x 10 ⁻² + 5.20 x 10 ⁻² C) μmol/mol	Electrochemical Oxygen Analyzer Total Hydrocarbon Analyzer (FID)
Calibration Gas Cylinder – Gas mixture composition ^F	100 μmol/mol to 1 000 000 μmol/mol	(18.51 + 2.50 x 10 ⁻² C) µmol/mol	Gas Chromatograph with Thermal Conductivity Detector
Calibration Gas Cylinder – Carbon dioxide concentration in gases ^F	1 mmol/mol to 300 mmol/mol	(1.03 x 10 ⁻¹ + 1.70 x 10 ⁻² C) mmol/mol	Carbon Dioxide Analysis using NDIR
Calibration Gas Cylinder - Gas mixture concentration ^F	0.05 mmol/mol to 1 000 mmol/mol	2.70 x 10 ⁻² mmol/mol	Gravimetric Balance

- 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 calibration of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this calibration at its fixed location.
- 4. The term C represents concentration in moles or micromoles appropriate to the uncertainty statement.