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
3001 E. Miraloma Ave., Anaheim, CA 92806

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

ISO/IEC 17025:2017

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):

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:

Tracy Szerszen
President

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
July 19, 2012	March 20, 2023	May 31, 2025

Accreditation No.:	*Certificate No.:*
74047	L23-229

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

Certificate of Accreditation: Supplement

WestAir Gases and Equipment, Inc.
2300 Haffley Avenue, National City, CA 91950
3001 E. Miraloma Ave., Anaheim, CA 92806
Contact Names: Keith Martinez, Austin Romesberg Phone: 559-486-8111

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

WestAir, 2300 Haffley Avenue, National City, CA 91950

Chemical

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	$(1.18 \times 10^{-1} + 2.38 \times 10^{-2} C)$ µmol/mol	7.09 Meeco Aquavolt Moisture Analyzer Work Instruction Electrolytic Cell Moisture Analyzer
Calibration Gas Cylinder – Percent oxygen concentration [F]	1 mmol/mol to 1 000 mmol/mol	$(1.2 \times 10^{-1} + 1.51 \times 10^{-4} C)$ mmol/mol	7.06 Servomex 5200 Oxygen Analyzer Work Instruction Paramagnetic Oxygen Analyzer
Calibration Gas Cylinder – Trace oxygen concentration [F]	0.5 µmol/mol to 500 µmol/mol	$(2.1 \times 10^{-2} + 3 \times 10^{-2} C)$ µmol/mol	7.07 Teledyne Trace Oxygen Analyzer Work Instruction Electrochemical Oxygen Analyzer
Calibration Gas Cylinder – Total hydrocarbon concentration [F]	0.5 µmol/mol to 2 500 µmol/mol	$(9.4 \times 10^{-2} + 5.2 \times 10^{-2} C)$ µmol/mol	7.08 Rosemount Hydrocarbon Analyzer Work Instruction Total Hydrocarbon Analyzer (FID)
Calibration Gas Cylinder – Gas mixture composition [F]	100 µmol/mol to 1 000 000 µmol/mol	$(18.51 + 2.5 \times 10^{-2} C)$ µmol/mol	7.26 Shimadzu GC-8AIT Work Instructions Gas Chromatograph with Thermal Conductivity Detector
Calibration Gas Cylinder – Carbon dioxide concentration in gases [F]	1 mmol/mol to 300 mmol/mol	$(1.03 \times 10^{-1} + 1.7 \times 10^{-2} C)$ mmol/mol	7.26 Shimadzu GC-8AIT Work Instructions Carbon Dioxide Analysis using NDIR
Calibration Gas Cylinder – Gas mixture concentration [F]	0.05 mmol/mol to 1 000 mmol/mol	2.7×10^{-2} mmol/mol	Gravimetric Balance

Certificate of Accreditation: Supplement

WestAir Gases and Equipment, Inc.
2300 Haffley Avenue, National City, CA 91950
3001 E. Miraloma Ave., Anaheim, CA 92806
Contact Names: Keith Martinez, Austin Romesberg Phone: 559-486-8111

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

WestAir, 3001 E. Miraloma Ave., Anaheim CA 92806

Chemical

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
Binary Gas Analyzer - Thermal Conductivity Detector [F]	0.1 cmol/mol to 30 cmol/mol	$(1.13 \times 10^{-1} + 6.96 \times 10^{-2} C)$ cmol/mol	7.14 Thermco 6900 Gas Analyzer Work Instruction Binary Gas Analyzer TCD
Carbon Dioxide in Gas – NDIR [F]	0.5 cmol/mol to 2.5 cmol/mol	$(-2.13 \times 10^{-3} + 9.65 \times 10^{-3} C)$ cmol/mol	7.23 Horiba VA-5000 Work Instructions Carbon Dioxide Analysis using NDIR
Carbon Monoxide in Gas – NDIR [F]	25 µmol/mol to 500 µmol/mol	$(7.37 \times 10^{-2} + 5.05 \times 10^{-3} C)$ µmol/mol	7.23 Horiba VA-5000 Work Instructions Carbon Monoxide Analysis using NDIR
Electrolytic Moisture Analysis in Gas and Dewpoint [F]	0.4 µmol/mol to 8.5 µmol/mol	$(7.22 \times 10^{-2} + 1.44 \times 10^{-1} C)$ µmol/mol	7.09 Meeco Aquavolt Moisture Analyzer Work Instruction Electrolytic Cell Moisture Analyzer
Gas Chromatography with Discharge Ionization Detector [F]	0.6 µmol/mol to 7.3 µmol/mol	$(1.95 \times 10^{-1} + 5.14 \times 10^{-2} C)$ µmol/mol	7.29 Gow-Mac 590 Gas Chromatography DID Work Instructions Gas Chromatography DID
Gas Chromatography with Flame Ionization Detector [F]	5 µmol/mol to 100 µmol/mol	$(1.08 + 5.26 \times 10^{-3} C)$ µmol/mol	7.36 Agilent Gas Chromatography Work Instruction Gas Chromatography FID
Gas Chromatography with Thermal Conductivity Detector [F]	0.6 µmol/mol to 500 µmol/mol	$(1.64 \times 10^{-1} + 1.03 \times 10^{-2} C)$ µmol/mol	7.26 Shimadzu GC-8AIT Work Instructions Gas Chromatography TCD 7.32 Inficon Micro GC Work Instruction Gas Chromatography TCD
Gravimetric Mixture Analysis [F]	1 µmol/mol to 1 000 000 µmol/mol	0.3 µmol/mol	Gravimetric Analysis

Certificate of Accreditation: Supplement

WestAir Gases and Equipment, Inc.
2300 Haffley Avenue, National City, CA 91950
3001 E. Miraloma Ave., Anaheim, CA 92806
Contact Names: Keith Martinez, Austin Romesberg Phone: 559-486-8111

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

Chemical

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
Nitric Oxide in Gas – Chemiluminescence (Low Range) [F]	5 µmol/mol to 50 µmol/mol	$(3.33 \times 10^{-3} + 1.41 \times 10^{-2}C)$ µmol/mol	7.33 Thermo Chemiluminescence Work Instruction Chemiluminescence Detector
Nitric Oxide in Gas – Chemiluminescence (High Range) [F]	100 µmol/mol to 1 000 µmol/mol	$(4.44 \times 10^{-1} + 1.46 \times 10^{-2}C)$ µmol/mol	7.33 Thermo Chemiluminescence Work Instruction Chemiluminescence Detector
Nitrogen Dioxide in Gas - Electrochemical Detector [F]	0.5 µmol/mol to 40 µmol/mol	$(1.15 \times 10^{-1} + 9.11 \times 10^{-3}C)$ µmol/mol	7.25 Interscan NO2 Work Instruction Electrochemical
Oxygen in Gas - Electrolytic Cell [F]	1 µmol/mol to 7.4 µmol/mol	$(5.31x\ 10^{-2} + 2.39 \times 10^{-2}C)$ µmol/mol	7.13 Servomex 4100 Oxygen Analyzer Work Instruction Electrolytic Oxygen Analyzer
Oxygen in Gas - Paramagnetic Analyzer [F]	1 cmol/mol to 21 cmol/mol	$(-6.45 \times 10^{-4} + 5.75 \times 10^{-3}C)$ cmol/mol	7.06 Servomex 5200 Oxygen Analyzer Work Instruction Paramagnetic Oxygen Analyzer
Sulfur Dioxide in Gas – NDIR [F]	50 µmol/mol to 500 µmol/mol	$(2.22 \times 10^{-2} + 4.96 \times 10^{-3}C)$ µmol/mol	7.23 Horiba VA-5000 Work Instructions NDIR
Total Hydrocarbon Analysis in Gas (FID) [F]	0.4 µmol/mol to 5 µmol/mol	$(1.05 \times 10^{-1} + 3.66 \times 10^{-2}C)$ µmol/mol	7.08 Rosemount Hydrocarbon Analyzer Work Instruction Total Hydrocarbon Analyzer (FID)

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 somedegree.

Certificate of Accreditation: Supplement

WestAir Gases and Equipment, Inc.
2300 Haffley Avenue, National City, CA 91950
3001 E. Miraloma Ave., Anaheim, CA 92806
Contact Names: Keith Martinez, Austin Romesberg Phone: 559-486-8111

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

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.