PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Central Welding Supply

13305 38th Ave NE, Marysville, WA 98271

(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):

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:

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:*
December 20, 2020	February 16, 2023	May 31, 2025

Accreditation No.:	*Certificate No.:*
112792	L23-127

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

Central Welding Supply
13305 38th Ave NE, Marysville, WA 98271
Contact Name: Gary Emerson Phone: 360-454-5550

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
Binary Gas Analyzer, Thermal Conductivity Detector [F]	2 cmol/mol (%) to 75 cmol/mol (%)	$(1.24 \times 10^{-1} + 5.30 \times 10^{-2}$ C) cmol/mol (%)	NIST Traceable Certified Calibration Gases Local Work Instructions: Equipment Specifications/LWIs Cylinder Filling LWIs Analytical LWIs
Carbon Dioxide in Gas - NDIR - Horiba GA-360E KMYXWRLW [F]	0.9 µmol/mol (ppm) to 7.3 µmol/mol (ppm)	$(2.00 \times 10^{-2} + 1.00 \times 10^{-1}$ C) µmol/mol (ppm)	
Carbon Monoxide in Gas - NDIR - Horiba GA-360E KMYXWRLW [F]	0.9 µmol/mol (ppm) to 7.85 µmol/mol (ppm)	$(1.94 \times 10^{-2} + 1.01$ C $\times 10^{-1}$ C) µmol/mol (ppm)	
Trace Moisture Analysis - Meeco, AquaVolt, SN 17131-41-2 [F]	5.8 µmol/mol (ppm) to 101 µmol/mol (ppm)	$(4.94 \times 10^{-2} + 7.08 \times 10^{-2}$ C) µmol/mol (ppm)	
Trace Oxygen - Teledyne, 3 000TA-XL, 324 868 [F]	0.2 µmol/mol (ppm) to 2.9 µmol/mol (ppm)	$(1.10 \times 10^{-2} + 2.52 \times 10^{-2}$ C) µmol/mol (ppm)	
Total Hydrocarbons - Baseline, Series 9 000, 0915DN0844 [F]	0.25 µmol/mol (ppm) to 8.5 µmol/mol (ppm)	$(6.10 \times 10^{-5} + 5.18 \times 10^{-2}$ C) µmol/mol (ppm)	
Paramagnetic Oxygen Analysis – Servomex [F]	1 cmol/mol (%) to 99.99 cmol/mol (%)	$(2.47 \times 10^{-2} + 1.25 \times 10^{-3}$ C) cmol/mol (%)	
GC – TCD [F]	0.144 cmol/mol (%) to 17.5 cmol/mol (%)	$(-8.99 \times 10^{-4} + 2.29 \times 10^{-2}$ C) cmol/mol (%)	
GC – DID Gow-Mac Series 580 DID, S139405 [F]	7.5 µmol/mol (ppm) to 500 µmol/mol (ppm)	$(-6.63 \times 10^{-1} + 1.29 \times 10^{-2}$C) µmol/mol (ppm)	
Scale - KCC-150, Sartorius, 27559057 [F]	1 µmol/mol to 1 000 000 µmol/mol	$2.70 \times 10^{-1} + 3.90 \times 10^{-5}$ C) µmol/mol	
Bench Top Scale - Precisa, 7202666 [F]	1 µmol/mol to 1 000 000 µmol/mol	$(1.28 \times 10^{-2} + 2.20 \times 10^{-4}$ C) µmol/mol	
Scale - Minebea, 37966507 [F]	1 µmol/mol to 1 000 000 µmol/mol	$(1.60 \times 10^{-1} + 2.60 \times 10^{-5}$ C) µmol/mol	

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically 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.

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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. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.