



# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## *Certificate of Accreditation*

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

***Datum Servicios Integrales de Medición, S.A. de C.V.***  
***Carr. Celaya–Apaseo Km. 40 + 41 La Labor***  
***Conjunto Industrial Shinjuku Bodega Int. 32,***  
***Apaseo el Grande, Guanajuato, México. C.P. 38196***

*(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):

***Dimensional, Mass, Force and Weighing Devices, Thermodynamic, Chemical,  
Electrical and Time and Frequency 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

*Initial Accreditation Date:*

November 21, 2017

*Issue Date:*

January 29, 2024

*Expiration Date:*

March 31, 2026

*Accreditation No.:*

89597

*Certificate No.:*

L24-91

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](http://www.pjlabs.com)*



# Certificate of Accreditation: Supplement

## Datum Servicios Integrales de Medición, S.A. de C.V.

Conjunto Industrial Shinjuku Int. 32, Carr. Celaya–Apaseo Km. 40 + 41 La Labor  
 Apaseo el Grande, Guanajuato, México. C.P. 38196  
 Contact Name: Sergio Merlin Phone: 461-141-4332

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

### Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Caliper <sup>FO</sup>	0.05 in to 40 in	$(3.52 \times 10^{-4} + 1 \times 10^{-6}L)$ in	Gage Blocks Grade 1	JIS B 7507
Micrometer <sup>FO</sup>	0.05 in to 24 in	$(3.5 \times 10^{-4} + 3.8 \times 10^{-5}L)$ in	Gage Blocks Grade 1	JIS B 7502
Inside Micrometer <sup>FO</sup>	0.05 in to 12 in	$(3.5 \times 10^{-4} + 3.8 \times 10^{-5}L)$ in		
Inside Micrometer Three Contacts <sup>FO</sup>	14 mm	0.7 $\mu$ m	Standard Ring	JIS B 7502 CENAM Technical Guide
	45 mm	1 $\mu$ m		
	75 mm	1 $\mu$ m		
Height Gage <sup>FO</sup>	0.05 in to 40 in	$(7.07 \times 10^{-4} + 5 \times 10^{-6}L)$ in	Gage Blocks Grade 1	JIS B 7517
Test Indicators <sup>FO</sup>	0.005 in to 0.05 in	0.000 2 in	Gage Blocks Grade 1	JIS B 7533
Dial and Digital Indicator <sup>FO</sup>	0.005 in to 2 in	$(3.9 \times 10^{-4} + 3.6 \times 10^{-5}L)$ in	Gage Blocks Grade 1	JIS B 7503
Pin Gages <sup>FO</sup>	0.000 5 in to 1 in	0.000 043 in	Digital Micrometer	Euramet cg-6
Thickness Gage <sup>FO</sup>	0.001 mm to 25 mm	0.001 mm	Gage Block, Gages Foils	JIS B 7503
Protactor <sup>FO</sup>	1° to 90°	0.06°	Gage Block Angle	NMX-CH-151
Flexmeter Rule <sup>FO</sup>	1 mm to 1 000 mm	$(5.8 \times 10^{-1} + 1.3 \times 10^{-4})$ mm	Reticule, Flex Rule	JIS B 7512
Optical Comparator X Axis Linearity Y Axis Linearity <sup>O</sup>	5 mm to 200 mm	$(6 \times 10^{-3} + 5 \times 10^{-6}L)$ mm	Glass Scales Mitutoyo	JIS B 7184
	5 mm to 200 mm	$(6 \times 10^{-3} + 5 \times 10^{-6}L)$ mm		
Optical Comparator Magnification <sup>O</sup>	10X	1 %		
Optical Comparator Angularity <sup>O</sup>	1° to 360°	0.1°	Angle Block, Square	
Optical Comparator Squareness X and Y Axis <sup>O</sup>	90°	0.12°		
Digital Microscope, Vision System X Axis Linearity Y Axis Linearity <sup>O</sup>	Up to 200 mm	0.001 mm	Glass Scales Angle Block, Crystal Reticule	
	Up to 200 mm	0.001 mm		
Digital Microscope, Vision System Angularity <sup>O</sup>	1° to 360°	0.1°	Angle Block, Crystal Reticule Angle	



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Contact Name: Sergio Merlin Phone: 461-141-4332

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

#### Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Coating Thickness Gauge Ferrous Base <sup>FO</sup>	0.022 mm to 12.255 mm	1.4 $\mu$ m	Foil Thickness Standards	ASTM D7091 ASTM E376
Coating Thickness Gauge Base <sup>FO</sup>	0.022 mm to 12.255 mm	1.4 $\mu$ m		
Surface Plates <sup>O</sup>	Up to 0.002 in Diagonal	(57.87 + 2.57L) $\mu$ in	Repeat Reading Gage	ASME B89.3.7

#### Mass, Force and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Scale <sup>O</sup>	1 kg to 200 kg (Res.= 0.01 kg)	(1.6 x 10 <sup>-2</sup> + 3 x 10 <sup>-6</sup> Wt) kg	Mass Class M1	Euramet-cg-18 NOM-010-SCFI
Analytical Balance <sup>O</sup>	1 g to 200 g (Res.= 0.001 g)	(1.2 x 10 <sup>-3</sup> + 2.37 x 10 <sup>-6</sup> Wt) g	Mass F1	
Balance <sup>O</sup>	200 g to 10 000 g (Res.= 0.001 g)	(5 x 10 <sup>-4</sup> + 5.73 x 10 <sup>-6</sup> Wt) g		

#### Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Ovens, Muffles, Freezer System Accuracy <sup>O</sup>	-10 °C to 1 200 °C	1.2 °C	Fluke 724 Thermometer with Thermocouple Type K	CENAM Technical Guide Euramet cg-11
Thermohygrometers <sup>F</sup>	20 °C to 40 °C	0.7 °C	Thermohygrometer Chamber	CENAM Technical Guide
	30 % RH to 75 % RH	1.7 % RH		
IR Thermometer <sup>FO</sup>	50 °C to 450 °C	0.9 °C	Fluke 724 Thermometer with RTD, Dry Black Body	
Digital Thermometers, Indicators, Thermo-Hygrometer Recorders with Sensor Type J, K, T & RTD <sup>FO</sup>	20 °C to 500 °C	0.7 °C	Fluke 724 Thermometer with RTD, Dry Block	Euramet cg-11



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

### Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Temperature System Accuracy Test (SAT) Furnace, Autoclave, Freezer, and Isothermal Sources with Thermocouple Types K, J, T, RTD (pt100) <sup>F</sup>	30 °C to 500 °C	0.6 °C	Elcometer 215, Fluke 51 Series TC Temperature Indicators with Reference Thermocouple Wire	SAE/AMS 2750, NT 04, CQI-12
Temperature Uniformity Surveys (TUS) Furnace, Autoclave, Freezer, and Isothermal Sources with Thermocouple Types K, J, T, RTD (pt100) <sup>F</sup>	30 °C to 500 °C	0.6 °C	Elcometer 215, Fluke 51 series TC Temperature Indicators with Reference Thermocouple Wire	SAE/AMS 2750, NT 04, CQI-12

### Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Indicators, Controllers, Thermo-hygrometer Recorders, Thermal Chamber and Freezer used with Thermocouple Type J, K, T, E & RTDs <sup>FO</sup>	-180 °C to 1 000 °C	0.8 °C	Fluke 724 Electrical Simulation of output	Euramet cg-11

### Time and Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Stopwatch and Timers <sup>FO</sup>	60 s to 86 400 s	0.8 s/h	Stopwatch Extech HW30	NIST 960-12 Guide
Contact Tachometer/ Photo Tachometer <sup>O</sup>	25.13 rad/s to 2 094.19 rad/s	0.12 rad/s	Tachometer Extech	Guide Metas



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### Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
pH Meter <sup>FO</sup>	4 pH	0.012 pH	Buffer Solutions	CENAM Technical Guide
	7 pH	0.012 pH		
	10 pH	0.012 pH		
Conductivity Meters <sup>FO</sup>	100 $\mu$ S/cm	2.1 $\mu$ S/cm	Conductivity Standard Solutions	
	1 000 $\mu$ S/cm	4.7 $\mu$ S/cm		
	1 413 $\mu$ S/cm	4.7 $\mu$ S/cm		

- 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.
- 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.
- The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer<sup>F</sup> would mean that the laboratory performs this calibration at its fixed location.
- The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations. Example: Outside Micrometer<sup>O</sup> would mean that the laboratory performs this calibration onsite at the customer's location.
- The presence of a superscript FO means that the laboratory performs calibration of the indicated parameter both at its fixed location and onsite at customer locations. Example: Outside Micrometer<sup>FO</sup> would mean that the laboratory performs this calibration at its fixed location and onsite at customer locations.
- 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.
- The term L represents length in inches or millimeters as appropriate to the uncertainty statement.
- The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.