

# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

# Certificate of Accreditation

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

### René Carmelo Mota Saldaña / Laboratorio de Calibración Puebla

15 Norte #2208, Colonia Lázaro Cárdenas Puebla, Puebla. México. C.P. 72080

(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 2017):

# Chemical, Mechanical, Thermodynamic and Electrical 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:

Issue Date:

Expiration Date:

May 31, 2024

May 31, 2024

August 31, 2026

Tracy Szerszen
President

Acc

Accreditation No.:

117824

Certificate No.: L24-412

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

VIDEN Sources

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: <a href="www.pjlabs.com">www.pjlabs.com</a>



# Certificate of Accreditation: Supplement

### René Carmelo Mota Saldaña / Laboratorio de Calibración Puebla

15 Norte #2208, Colonia Lázaro Cárdenas Puebla, Puebla. México. C.P. 72080 Contact Name René Carmelo Mota Phone: 222-242-3210

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

#### Chemical

Chemical				
MEASURED	RANGE	CALIBRATION	CALIBRATION	CALIBRATION
INSTRUMENT,	(AND SPECIFICATION	AND MEASUREMENT	EQUIPMENT AND	MEASUREMENT METHOD
QUANTITY OR GAUGE	WHERE APPROPRIATE)	CAPABILITY	REFERENCE	OR PROCEDURES USED
		EXPRESSED	STANDARDS USED	
		AS AN UNCERTAINTY (±)		
pH Meters <sup>FO</sup>	4 pH	0.02 pH	pH Buffer Solutions,	QU-003 CEM
	7 pH	0.02 pH		
	10 pH	0.02 pH		
Conductivity Meter <sup>FO</sup>	1 413 μS/cm	6 μS/cm	Conductivity	CENAM Technical
			Solutions,	Guide

#### **Mechanical**

Wicchainear				
MEASURED	RANGE	CALIBRATION	CALIBRATION	CALIBRATION
INSTRUMENT,	(AND SPECIFICATION WHERE APPROPRIATE)	AND MEASUREMENT	EQUIPMENT AND	MEASUREMENT METHOD
QUANTITY OR GAUGE	WHERE APPROPRIATE)	CAPABILITY EXPRESSED	REFERENCE STANDARDS USED	OR PROCEDURES USED
		AS AN UNCERTAINTY (±)	STANDARDS USED	
Pressure Gauges-Direct	Up to 2 585 kPa	2.3 kPa	Fluke 743 Pressure	ME-003 CEM
Comparison <sup>FO</sup>			Modul Fluke 700P08	ME-017 CEM
Pressure Transducers	Up to 0.689 kPa	1.1 kPa	Fluke 743 Pressure	
(mA)-Direct	/		Modul Fluke 700P07	
Comparison <sup>FO</sup>				
Vacuum Meters- Direct	Up kPa to 689 kPa	0.24 kPa	Fluke 743 Pressure	
Comparison <sup>FO</sup>	/		Modul Fluke 700P07	
Vacuum Transducers-	0.1 kPa to 70 kPa	0.022 kPa	Fluke 743 Pressure	
Direct Comparison <sup>FO</sup>			Modul Fluke 700P07	
Safety and Light Valves <sup>FO</sup>	Up kPa to 2 585 kPa	5.4 kPa	Fluke 743 Pressure	NMX-093-SCFI-2020
<u>-</u>			Modul Fluke 700P08	

#### Thermodynamic

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Thermodynamic				
MEASURED	RANGE	CALIBRATION	CALIBRATION	CALIBRATION
INSTRUMENT,	(AND SPECIFICATION	AND MEASUREMENT	EQUIPMENT AND	MEASUREMENT METHOD
QUANTITY OR GAUGE	WHERE APPROPRIATE)	CAPABILITY	REFERENCE	OR PROCEDURES USED
		EXPRESSED	STANDARDS USED	
		AS AN UNCERTAINTY (±)		
Industrial Thermometer	-16 °C to 200 °C	0.28 °C	Fluke 743 RTD	TH-005 CEM
Indicator and Sensor			Measure	
RTD Pt 385, $100 \Omega^{O}$				
Industrial Thermometer	-16 °C to 210 °C	0.35 °C	Fluke 743	TH-003 CEM
Indicator and			Thermocouple	
Thermocouple Type K <sup>O</sup>			Measure	



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

Thermodynamic

Thermodynamic		1		
MEASURED	RANGE	CALIBRATION	CALIBRATION	CALIBRATION
INSTRUMENT,	(AND SPECIFICATION	AND MEASUREMENT	EQUIPMENT AND	MEASUREMENT METHOD
QUANTITY OR GAUGE	WHERE APPROPRIATE)	CAPABILITY	REFERENCE	OR PROCEDURES USED
		EXPRESSED	STANDARDS USED	
		AS AN UNCERTAINTY		
		(±)		
Sterilizer, Ovens,	20 °C to 200 °C	0.31 °C	Fluke 743 Measurement	CENAM Technical
Incubators <sup>O</sup>				Guide and TH-003
Water Baths,	-16 °C to 90 °C	0.35 °C	Fluke 743 Measurement	CEM, TH-005 CEM
Temperature Controls and				
Bain-Marie <sup>O</sup>				
Bi-metal Thermometers	0 °C to 210 °C	0.6 °C	Fluke 743 Measurement	
Humidity Meters <sup>O</sup>	10 % RH to 90 % RH	1.3 % RH	Rotronic A2 Measurement	TH-007 CEM
			with Humidity Chamber	

### Electrical

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MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Equipment to Measure	10 mV to 110 mV	19 μV	Fluke 743 Manual Specs	CENAM Technical Guide
DC Voltage <sup>O</sup>	0.15 V to 1 V	110 μV		
	1.5 V to 15 V	970 μV		
Equipment to Measure DC Current <sup>O</sup>	2 mA to 22 mA	1.7 μΑ		
Equipment to Output	20 mV to 100 mV	26 μV	Fluke 743B Manual Specs	EL-023 CEM
DC Voltage <sup>O</sup>	0.1 V to 1 V	110 μV		
	1 V to 10 V	490 μV		
	10 V to 100 V	6 mV		
	150 V to 300 V	20 mV		
Equipment to Output DC Current <sup>O</sup>	4 mA to 30 mA	3 μΑ		
	50 mA to 110 mA	25 μΑ		
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type E <sup>O</sup>	-50 °C to 990 °C	0.24 °C	Fluke 743B Electrical Simulation of Thermocouple Output	CENAM Technical Guide



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

#### Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J <sup>O</sup>	-100 °C to 1 200 °C	0.27 °C	Fluke 743B Electrical Simulation of Thermocouple Output	CENAM Technical Guide
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K <sup>O</sup>	-100 °C to 1 300 °C	0.32 °C		
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T <sup>O</sup>	-50 °C to 400 °C	0.24 °C		
Temperature Calibration, Indication and Control Equipment used with RTD Sensor Pt 385, 100 Ω	0 °C to 790 °C	0.19 °C	Fluke 743 Electrical Simulation of RTD Output	
Equipment to Measure pH Simulation <sup>FO</sup>	0.01 pH to 14 pH	0.001 pH	Fluke 743, Manual Specs	
Equipment to Measure Conductivity Simulation <sup>FO</sup>	0.1 μS/cm to 20 μS/cm	0.5 % of reading	Resistance Decade Yokogawa Hokushin Electric Type 2786	

- 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.
- 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.



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

- 3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location.
- 4. The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations.
- 5. 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.

