



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Tecmelab Monterrey, S.A. de C.V.
15 de Mayo # 1012 Pte., Col. Centro, entre P. Díaz y Vallarta
Monterrey, Nuevo Leon, Mexico. C.P. 64000

*and hereby declares that the Organization is accredited in accordance with
the recognized International Standard:*

ISO/IEC 17025:2017

Whereby, technical competence has been confirmed for the associated scope supplement, in the fields of:

***Thermodynamic, Mass, Force and Weighing Devices, Electrical, Time and
Frequency, Chemical Calibration***
(As detailed in the supplement)

Accreditation claims for conformity assessment activities shall only be made from the addresses referenced within this certificate and shall apply solely to those activities identified in the related scope. This Accreditation is granted subject to the Accreditation Body rules governing the Accreditation referred to above, and the Organization hereby commits to observing and complying with those rules in their entirety.

For PJLA:

Initial Accreditation Date:

Issue Date:

Expiration Date:

April 09, 2020

March 23, 2026

May 31, 2028

Accreditation No.:

Certificate No.:

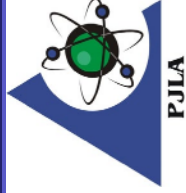
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Tracy Szerszen
President

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.pjllabs.com*



Certificate of Accreditation: Supplement

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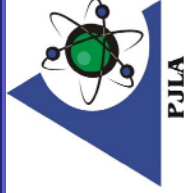
15 de Mayo # 1012 Pte., Col. Centro, entre P. Díaz y Vallarta

Monterrey, Nuevo Leon, Mexico. C.P. 64000

Contact Name: Jose Mauricio Gómez. Phone: 818-252-4286

Accreditation is granted to the facility to perform the following conformity assessment activities:

FIELD OF CALIBRATION	MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	EXPANDED MEASUREMENT UNCERTAINTY ($\pm$) ¹	CALIBRATION EQUIPMENT AND STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	FLEX CODE	LOCATION OF ACTIVITY
Thermodynamic	Freezer, Dry Block, Baths Circulators, Climatic Chambers, Incubators, Oven, Sterilizer	-70 °C to 200 °C	0.15 °C	Resistance Thermometer	PST-06 Internal Procedure	F1, F3	O
Thermodynamic	Bath Circulators, Dry Block, Oven, Sterilizer, Furnaces	200 °C to 1 200 °C	1.4 °C	Thermocouple Type K	PST-06 Internal Procedure	F1, F3	O
Thermodynamic	Thermocouple and RTD Probes and Systems and Bi-Metallic Thermometers	0 °C	0.08 °C	Ice Point Bath	PST-21 Internal Procedure	F1, F3	F, O
Thermodynamic	Thermocouple and RTD Probes and Systems and Bi-Metallic Thermometers	30 °C to 100 °C	0.1 °C	Thermometric Bath	PST-21 Internal Procedure	F1, F3	F, O
Thermodynamic	Thermocouple and RTD Probes and Systems and Bi-Metallic Thermometers	50 °C to 100 °C	0.13 °C	Dry well Block Calibrator	PST-21 Internal Procedure	F1, F3	F, O
Thermodynamic	Thermocouple and RTD Probes and Systems and Bi-Metallic Thermometers	100 °C to 200 °C	0.24 °C	Dry well Block Calibrator	PST-21 Internal Procedure	F1, F3	F, O



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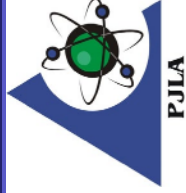
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Thermodynamic	Thermocouple and RTD Probes and Systems and Bi-Metallic Thermometers	200 °C to 300 °C	0.47 °C	Dry well Block Calibrator	PST-21 Internal Procedure	F1, F3	F, O
Thermodynamic	Liquid-in-Glass Thermometers	0 °C	0.06 °C	Ice Point Bath	PST-03 Internal Procedure	F1, F3	F, O
Thermodynamic	Liquid-in-Glass Thermometers	30 °C to 100 °C	0.1 °C	Thermometric Bath	PST-03 Internal Procedure	F1, F3	F, O
Thermodynamic	Thermo-Hygrometer (Temperature)	10 °C to 60 °C	1.2 °C	Incubator CH-150	PST-12 Internal Procedure	F1, F3	F
Thermodynamic	Thermo-Hygrometer (Humidity)	45 % RH to 70 % RH	1.6 % RH	Incubator CH-150	PST-12 Internal Procedure	F1, F3	F
Thermodynamic	Thermo-Hygrometer (Humidity)	70 % RH to 90 % RH	2.2 % RH	Incubator CH-150	PST-12 Internal Procedure	F1, F3	F
Mass, Force and Weighing Devices	Balance	1 mg to 500 g (Res.= 0.1 mg)	(8.17 x 10 ⁻² + 1.87 x 10 ⁻⁴ Wt) mg	Class E2	PST-02 Internal Procedure	F1, F3	O
Mass, Force and Weighing Devices	Balance	1 g to 5 000 g (Res. 1 mg)	(8.16 x 10 ⁻¹ + 1.51 x 10 ⁻³ Wt) mg	Class F1	PST-02 Internal Procedure	F1, F3	O
Mass, Force and Weighing Devices	Balance	1 g to 15 000 g (Res.= 0.01 g)	(8.16 x 10 ⁻³ + 8.14 x 10 ⁻⁷ Wt) g	Class F1	PST-02 Internal Procedure	F1, F3	O
Mass, Force and Weighing Devices	Balance	1 g to 50 000 g (Res.= 0.1 g)	(8.16 x 10 ⁻² + 3.54 x 10 ⁻⁸ Wt) g	Class F1	PST-02 Internal Procedure	F1, F3	O



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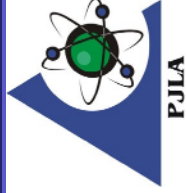
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Mass, Force and Weighing Devices	Balance	1 g to 5 000 g (Res.= 0.01 g)	$(8.16 \times 10^{-3} + 1.64 \times 10^{-7} \text{Wt})$ g	Class F2	PST-02 Internal Procedure	F1, F3	O
Mass, Force and Weighing Devices	Balance	1 g to 15 000 g (Res.= 0.1 g)	$(8.16 \times 10^{-2} + 6.27 \times 10^{-7} \text{Wt})$ g	Class F2	PST-02 Internal Procedure	F1, F3	O
Mass, Force and Weighing Devices	Balance	1 g to 5 000 g (Res.= 1 g)	$(8.16 \times 10^{-1} + 8.48 \times 10^{-7} \text{Wt})$ g	Class M1	PST-02 Internal Procedure	F1, F3	O
Mass, Force and Weighing Devices	Balance	1 g to 10 000 g (Res.= 10 g)	$(8.16 + 8.51 \times 10^{-8} \text{Wt})$ g	Class M1	PST-02 Internal Procedure	F1, F3	O
Mass, Force and Weighing Devices	Balance	1 kg to 1 000 kg (Res.= 100 g)	$(81.6 + 3.06 \times 10^{-7} \text{Wt})$ g	Class M1	PST-02 Internal Procedure	F1, F3	O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K	-200 °C to -100 °C	0.27 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K	-100 °C to 400 °C	0.21 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O



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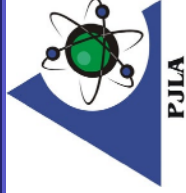
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Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K	400 °C to 1 200 °C	0.27 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K	1 200 °C to 1 370 °C	0.35 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J	-200 °C to -100 °C	0.21 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J	-100 °C to 800 °C	0.17 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J	800 °C to 1 200 °C	0.27 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O



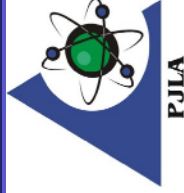
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Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T	-200 °C to 400 °C	0.17 °C	Process Instrument MMB3.0 Electric Simulation of Thermocouple Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 3 916, Pt 3 926, 100 Ω	-200 °C to 0 °C	0.14 °C	Process Instrument MMB3.0 Electric Simulation of RTD Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 3 916, Pt 3 926, 100 Ω	0 °C to 400 °C	0.17 °C	Process Instrument MMB3.0 Electric Simulation of RTD Output	PST-17 Internal Procedure	F1, F3	F, O
Electrical	Temperature Calibration, Indication and Control Equipment used with RTD Type Pt 3 916, Pt 3 926, 100 Ω	400 °C to 850 °C	0.21 °C	Process Instrument MMB3.0 Electric Simulation of TD Output	PST-17 Internal Procedure	F1, F3	F, O
Time and Frequency	Noncontact Measurement Centrifuge (Rotational Speed)	10 rpm to 999 rpm	(0.56 + 0.001 6ω) rpm	Photo Tachometer 461 700	PST-24 Internal Procedure	F1, F3	F, O
Time and Frequency	Noncontact Measurement Centrifuge (Rotational Speed)	1 000 rpm to 9 999 rpm	(0.13 + 0.002ω) rpm	Photo Tachometer 461 700	PST-24 Internal Procedure	F1, F3	F, O



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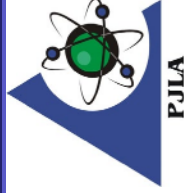
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Time and Frequency	Noncontact Measurement Centrifuge (Rotational Speed)	10 000 rpm to 99 999 rpm	(0.05 + 0.002 ω) rpm	Photo Tachometer 461700	PST-24 Internal Procedure	F1, F3	F, O
Chemical	pH Meter (Fixed Point)	4 pH	0.017 pH	Buffer Solutions	PST-01 Internal Procedure	F1, F3	F, O
Chemical	pH Meter (Fixed Point)	7 pH	0.017 pH	Buffer Solutions	PST-01 Internal Procedure	F1, F3	F, O
Chemical	pH Meter (Fixed Point)	10 pH	0.017 pH	Buffer Solutions	PST-01 Internal Procedure	F1, F3	F, O
Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	100 mPa•s	0.52 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O
Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	500 mPa•s	0.57 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O
Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	1 000 mPa•s	0.55 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O
Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	5 000 mPa•s	0.6 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O



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Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	12 500 mPa•s	0.62 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O
Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	30 000 mPa•s	0.63 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O
Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	60 000 mPa•s	0.63 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O
Chemical	Dynamic Viscosity Meter (@ 15 °C to 45 °C) (25 °C)	100 000 mPa•s	0.63 % of reading	Cannon Certified Viscosity Reference Standard	PST-04 Internal Procedure	F1, F3	F, O

1. The CMC (Calibration and Measurement Capability) is expressed in terms of measurement instrument/aspect being calibrated, range, expanded measurement uncertainty, equipment, and method/procedure. The expanded measurement uncertainty 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 measurement uncertainty included on this scope 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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- The laboratory's range of calibration capability for all disciplines for which it is accredited is the interval from the smallest 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.
- | Location of activity: | Location |
|-----------------------|---|
| Code | |
| F | Conformity assessment activity is performed at the CAB's fixed facility |
| O | Conformity assessment activity is performed onsite at the CAB's customer location |
- Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratory's 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 laboratory's fixed location.
- The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.
- The term ω represents rotational speed in radian per second (including SI multiple and submultiple units) as appropriate to the uncertainty statement.

7. Flex Codes

F0: When no flexibility is identified. There are no changes to items calibrated, characteristics identified or versions of methods except for updating to the most recent version of a standard method after verification.
F1: The laboratory has the capability to introduce a new instrument, quantity, or gauge for an accredited calibration method.
F2: The laboratory has the capability to introduce the newest revision of an accredited authoritative standard method (with no modifications) identified on the scope
F3: The laboratory has the capability to introduce a new revision of an accredited non-standard method using the same technology or technique identified on the scope
F4: The laboratory has the capability to introduce a validated method that is equivalent to an accredited method (using the same Calibration Equipment or Reference Standards identified on the scope for the same parameter, component, or analyte identified on the line item of the scope).