



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Ingintegral Precision Services S.A. de C.V.
Av. Independencia # 1906 Int. 101, Col. Villas de San Nicolas
Aguascalientes, Aguascalientes, México. C.P. 20115

*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:

Mechanical and Dimensional 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:

August 04, 2017

August 19, 2025

November 30, 2027

Accreditation No.:

Certificate No.:

93635

L25-678

Tracy Szerszen
President

*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*

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



Certificate of Accreditation: Supplement

Ingintegral Precision Services S.A. de C.V.

Av. Independencia # 1906 Int. 101, Col. Villas de San Nicolas,
Aguascalientes, Aguascalientes, México. C.P. 20115
Contact Name: Paulo Cesar Ibañez Hernandez Phone: 449-972-3333

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 REFERENCE STANDARDS USED | CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED | FLEX CODE | LOCATION OF ACTIVITY |
|----------------------|---------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|-----------|----------------------|
| Mechanical | Indirect Verification of Micro Hardness Tester (Vickers HV 0.5 kg) | 100 HV to 900 HV | 1.5 HV | Hardness Test Blocks | ASTM-E384 | F1, F2 | O |
| Mechanical | Indirect Verification of Micro Hardness Tester (Vickers HV 0.05 kg) | 140 HV to 331 HV | 12 HV | Hardness Test Blocks | ASTM-E384 | F1, F2 | O |
| Mechanical | Indirect Verification of Micro Hardness Tester (Vickers HV 0.1 kg) | 148 HV to 338 HV | 11 HV | Hardness Test Blocks | ASTM-E384 | F1, F2 | O |
| Mechanical | Indirect Verification of Micro Hardness Tester (Vickers HV 1 kg) | 151 HV to 529 HV | 4 HV | Hardness Test Blocks | ASTM-E384 ASTM-E92 | F1, F2 | O |
| Mechanical | Indirect Verification of Micro Hardness Tester (Vickers HV 5 kg) | 150 HV to 550 HV | 1.4 HV | Hardness Test Blocks | ASTM-E384 ASTM-E92 | F1, F2 | O |
| Mechanical | Indirect Verification of Micro Hardness Tester (Vickers HV 10 kg) | 157 HV to 549 HV | 2.4 HV | Hardness Test Blocks | ASTM-E384 ASTM-E92 | F1, F2 | O |
| Mechanical | Indirect Verification of Vickers Hardness Tester (HV 30 kg) | 350 HV to 750 HV | 3 HV | Hardness Test Blocks | ASTM-E384 ASTM-E92 | F1, F2 | O |
| Mechanical | Indirect Verification of Micro Hardness Tester (Knoop HK 0.5 kg) | 100 HK to 900 HK | 13 HK | Hardness Test Blocks | ASTM-E384 | F1, F2 | O |



Certificate of Accreditation: Supplement

Ingintegral Precision Services S.A. de C.V.

Av. Independencia # 1906 Int. 101, Col. Villas de San Nicolas,
Aguascalientes, Aguascalientes, México. C.P. 20115
Contact Name: Paulo Cesar Ibañez Hernandez Phone: 449-972-3333

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 REFERENCE STANDARDS USED | CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED | FLEX CODE | LOCATION OF ACTIVITY |
|----------------------|--------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|-----------|----------------------|
| Mechanical | Indirect Verification of Micro Hardness Tester (Vickers HV 0.3 kg) | 300 HV to 750 HV | 11 HV | Hardness Test Blocks | ASTM-E384 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HRA) | 20 HRA to 40 HRA | 0.22 HRA | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HRA) | 45 HRA to 75 HRA | 0.22 HRA | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HRA) | 80 HRA to 95 HRA | 0.22 HRA | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HRC) | 20 HRC to 70 HRC | 0.31 HRC | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HRBW) | 30 HRBW to 100 HRBW | 0.26 HRBW | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HR 15N) | 70 HR to 95 HR | 0.41 HR | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HR 30N) | 40 HR to 80 HR | 0.28 HR | Hardness Test Blocks | ASTM E18 | F1, F2 | O |



Certificate of Accreditation: Supplement

Ingintegral Precision Services S.A. de C.V.

Av. Independencia # 1906 Int. 101, Col. Villas de San Nicolas,
Aguascalientes, Aguascalientes, México. C.P. 20115
Contact Name: Paulo Cesar Ibañez Hernandez Phone: 449-972-3333

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 REFERENCE STANDARDS USED | CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED | FLEX CODE | LOCATION OF ACTIVITY |
|----------------------|------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|-----------|----------------------|
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HR 45N) | 20 HR to 80 HR | 0.22 HR | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HR 15T) | 70 HR to 95 HR | 0.25 HR | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HR 30T) | 42 HR to 80 HR | 0.21 HR | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Rockwell Hardness Tester (HR 45T) | 20 HR to 70 HR | 0.4 HR | Hardness Test Blocks | ASTM E18 | F1, F2 | O |
| Mechanical | Indirect Verification of Brinell Hardness Tester (HBW 10/3 000) | 92 HBW to 650 HBW | 1.2 HBW | Hardness Test Blocks | ASTM-E10 | F1, F2 | O |
| Mechanical | Indirect Verification of Brinell Hardness Tester (HBW 10/500) | 30 HBW to 125 HBW | 0.35 HBW | Hardness Test Blocks | ASTM-E10 | F1, F2 | O |
| Dimensional | Microscopes with Digital Camera and Software Linearity (X and Y) | 0.01 mm to 25 mm | $(4.08 \times 10^{-3} + 2 \times 10^{-6}L)$ mm | Stage Micrometer Clemex | ASTM E1951 | F1, F2 | O |
| Dimensional | Microscopes with Digital Camera and Software Linearity (X and Y) | 25 μ m to 3 000 μ m | $(2.21 \times 10^{-2} + 2.6 \times 10^{-4}L)$ μ m | Stage Micrometer Clemex | ASTM E1951 | F1, F2 | O |



Certificate of Accreditation: Supplement

Ingintegral Precision Services S.A. de C.V.

Av. Independencia # 1906 Int. 101, Col. Villas de San Nicolas,
Aguascalientes, Aguascalientes, México. C.P. 20115
Contact Name: Paulo Cesar Ibañez Hernandez Phone: 449-972-3333

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

//

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.

2. The laboratory's range of calibration capability for all disciplines for which it is 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. Location of activity:

**Location
Code**

Location

O

Conformity assessment activity is performed onsite at the CAB's customer location

4. 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.

5. 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.