PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Asesoria Industrial en Mantenimiento y Calibracion TLX. (AIMEC) / Ignacio Grande Morales

Calle Adolfo López Mateos # 1-A, Col. Ocotlán
Tlaxcala, Tlaxcala. México. C.P. 90100

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, Mechanical, Electrical, Dimensional, Time and Frequency and 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:

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:*
April 12, 2013	May 02, 2025	June 30, 2027

Accreditation No.:	*Certificate No.:*
75284	L25-339

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

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Calle Adolfo López Mateos # 1-A, Col. Ocotlán
Tlaxcala, Tlaxcala. México. C.P. 90100
Contact Name: Ignacio Grande Morales Phone: (52) 246-462-3510

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)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	LOCATION OF ACTIVITY
Thermodynamic	Liquids in Glass Thermometers	0 °C to 250 °C	0.24 °C	A Stirred Liquid Bath Thermometer Digital Luff C110 Thermometer Digital ΑΣΛ T100-250	Internal Procedure ITS-90	F, O
Thermodynamic	Liquids in Glass Thermometers	-10 °C to 250 °C	0.12 °C	A Stirred Liquid Bath Thermometer Digital ΑΣΛ T100-250	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Industrial Thermometer Indicator and Sensor RTD Pt 385, 100	-5 °C to 250 °C	0.29 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Thermometer Digital ΑΣΛ	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Industrial Thermometer Indicator and Sensor RTD Pt 385, 100	200 °C to 250 °C	0.36 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Thermometer Digital ΑΣΛ	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Industrial Thermometer Indicator and Thermocouple Type J	0 °C to 400 °C	0.33 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Process Calibrator 701 / 725 Muffle Controller Eurotherm 3216i	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Industrial Thermometer Indicator and Thermocouple Type J	400 °C to 700 °C	0.54 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Process Calibrator 701 / 725 Muffle Controller Eurotherm 3216i	CENAM Technical Guide and Internal Procedure ITS-90	F, O

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Thermodynamic	Industrial Thermometer Indicator and Thermocouple Type K	0 °C to 300 °C	0.41 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Process Calibrator 701 / 725 Muffle Controller Eurotherm 3216i	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Industrial Thermometer Indicator and Thermocouple Type K	300 °C to 700 °C	0.58 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Process Calibrator 701 / 725 Muffle Controller Eurotherm 3216i	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Industrial Thermometer Indicator and Thermocouple Type K	700 °C to 1 200 °C	0.58 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Process Calibrator 701 / 725 Muffle Controller Eurotherm 3216i	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Industrial Thermometer Indicator and Thermocouple Type T	0 °C to 400 °C	0.68 °C	Dry Well ΑΣΛ B125X Dry Well Ametek ETC 400A / Process Calibrator 701 / 725 Muffle Controller Eurotherm 3216i	CENAM Technical Guide and Internal Procedure ITS-90	F, O
Thermodynamic	Bi-Metal Thermometers	-5 °C to 250 °C	0.35 °C	Dry Well ΑΣΛ B125X A Stirred Liquid Bath Thermometer Digital Luff C110	CENAM Technical Guide and Internal Procedure ITS-90 NMX-CH-140-IMNC	F, O

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Thermodynamic	Bi-Metal Thermometers	200 °C to 250 °C	0.46 °C	Dry Well AΣΛ B125X A Stirred Liquid Bath Thermometer Digital Luff C110	CENAM Technical Guide and Internal Procedure ITS-90 NMX-CH-140-IMNC	F, O
Thermodynamic	Hygrometers	10 % RH to 90 % RH	1.2 % RH	Capacitance Hygrometers Vaisala MI70 Delta Ohm HD11 Standard Salts Cal, Kit Extech Rh300 Standard Salts Cal, Humidity Chamber	ASTM 104-85	F
Mass, Force and Weighing Devices	Balance	1 g to 200 g (Res.= 0.2 mg)	0.63 mg	Mass Weights Class F1 and Mass Class E2	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 g to 10 g (Res.= 0.1 mg)	0.36 mg	Mass Weights Class F1 and Mass Class E2	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 g to 100 g (Res.= 0.2 mg)	0.73 mg	Mass Weights Class F1 and Mass Class E2	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 g to 500 g (Res.= 0.5 mg)	1.8 mg	Mass Weights Class F1	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 g to 1 000 g (Res.= 2 mg)	5.2 mg	Mass Weights Class F1	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 g to 2 000 g (Res.= 5 mg)	12 mg	Mass Weights Class F1	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 g to 5 000 g (Res.= 10 mg)	26 mg	Mass Weights Class F1	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 000 g to 20 000 g (Res.= 500 mg)	0.12 g	Mass Weights Class F1	OIML R-76	O
Mass, Force and Weighing Devices	Balance	200 g to 1 000 g (Res.= 2 mg)	5.2 mg	Mass Weights Class F1	OIML R-76	O

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Mass, Force and Weighing Devices	Balance	200 g to 1 000 g (Res.= 2 mg)	5.2 mg	Mass Weights Class F1	OIML R-76	O
Mass, Force and Weighing Devices	Balance	1 000 g to 10 000 g (Res.= 0.1 mg)	52 mg	Mass Weights Class F2	OIML R-76	O
Mass, Force and Weighing Devices	Scales	5 kg to 150 kg (Res.= 5 g)	5.3 g	Mass Weights Class M1	OIML R-76	O
Mass, Force and Weighing Devices	Scales	5 kg to 200 kg (Res.= 10 g)	16 g	Mass Weights Class M1	OIML R-76	O
Mass, Force and Weighing Devices	Scales	5 kg to 500 Kg (Res.= 20 g)	22 g	Mass Weights Class M1	OIML R-76	O
Mass, Force and Weighing Devices	Scales	5 kg to 1 000 Kg (Res.= 50 g)	80 g	Mass Weights Class M1	OIML R-76	O
Mass, Force and Weighing Devices	Scales	200 kg to 1 000 Kg (Res.= 50 g)	70 g	Mass Weights Class M1	OIML R-76	O
Mass, Force and Weighing Devices	Dynamometer, Universal Machine	20 N to 200 N (Res.= 0.02 N)	0.2 % of reading	Load Cells Omega Dyne Inc. Mod: LC-101-25 Mass F1	NMX-CH-7500-1-IMNC	O
Mass, Force and Weighing Devices	Dynamometer, Universal Machine	200 N to 2 000 N (Res.= 0.1 N)	0.2 % of reading	Load Cells Cell: H3G 500 kg Brand: Imada Model: DPZS Cells: H3G 1 000 kg	NMX-CH-7500-1-IMNC	O
Mass, Force and Weighing Devices	Dynamometer, Universal Machine	2 000 N to 10 000 N (Res.= 10 N)	0.5 % of reading	Load Cells Cell: H3G 500 kg Brand: Imada Model: DPZS Cells: H3G 1 000 kg	NMX-CH-7500-1-IMNC	O

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Mass, Force and Weighing Devices	Dynamometer, Universal Machine	0.2 N to 10 N	0.2 % of reading	Mass F1	NMX-CH-7500-1-IMNC CENAM Technical Guide	O
Mass, Force and Weighing Devices	Dynamometer, Universal Machine	9.8 N to 98.1 N	0.3 % of reading	Mass F1	NMX-CH-7500-1-IMNC CENAM Technical Guide	O
Mass, Force and Weighing Devices	Dynamometer, Universal Machine	49 N to 5 000 N	0.4 % of reading	Mass M1 Load Cells Model: H3G 500 kg Indicator Brand: Radwag Model: PUE C731	NMX-CH-7500-1-IMNC CENAM Technical Guide	O
Mass, Force and Weighing Devices	Weights F1, F2, M1	2 mg	0.006 6 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	10 mg	0.008 3 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	20 mg	0.01 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	50 mg	0.013 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	100 mg	0.016 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	200 mg	0.02 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	500 mg	0.026 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	1 g	0.033 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	2 g	0.04 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F

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Mass, Force and Weighing Devices	Weights F1, F2, M1	5 g	0.053 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	10 g	0.066 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	20 g	0.083 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	50 g	0.1 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	100 g	0.16 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	200 g	0.33 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	500 g	0.83 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F1, F2, M1	1 000 g	1.6 mg	OIML R 111 Class E2 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F2, M1	2 kg	10 mg	OIML R 111 Class F1 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F2, M1	5 kg	27 mg	OIML R 111 Class F1 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F2, M1	10 kg	54 mg	OIML R 111 Class F1 Mass Weights	NOM-038-SCFI	F
Mass, Force and Weighing Devices	Weights F2, M1	20 kg	100 mg	OIML R 111 Class F1 Mass Weights	NOM-038-SCFI	F
Mechanical	Pressures Gauges	3 435.86 kPa to 34 374.87 kPa	0.3 % of reading	Fluke700P30 / Fluke 701	CENAM Technical Guide NMX-CH-013-SCFI	O

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Mechanical	Pressures Gauges	688.79 kPa to 6 894.07 kPa	4.9 kPa	Pressure Gage Veris	CENAM Technical Guide NMX-CH-013-SCFI	O
Mechanical	Pressures Gauges	206.84 kPa to 2 068.84 KPa	0.3 % of reading	Crystal XP2i	CENAM Technical Guide NMX-CH-013-SCFI	O
Mechanical	Pressures Gauges	20.68 kPa to 206.84 KPa	0.4 % of reading	Fluke700P0 / Fluke 701	CENAM Technical Guide NMX-CH-013-SCFI	O
Mechanical	Vacuum Meters (Manovacuum Meters)	76.2 mmHg to 762 mmHg	0.6 % of reading	Fluke700P05 / Fluke 701	CENAM Technical Guide NMX-CH-013-SCFI	O
Mechanical	Vacuum Meters (Manovacuum Meters)	-68.95 KPa to -6.89 kPa	0.6 % of reading	Crystal XP2i	CENAM Technical Guide NMX-CH-013-SCFI	
Mechanical	Piston-Operated Pipettes and Dispensers Micropipettes	10 µL to 1 000 µL	0.4 % of reading	Analytical Balance Sartorius (Res.= 0.1 mg) Thermometer Fluke 51 II	NMX-CH-20461 ISO 4787	F
Mechanical	Volumetric Instruments (Pipettes, Burettes)	0.1 mL to 10 mL	0.3 % of reading	Analytical Balance Sartorius (Res.= 0.1 mg) Thermometer Fluke 51 II	NMX-CH-20461 ISO 4787	F
Mechanical	Volumetric Instruments (Pipettes, Burettes)	10 mL to 100 mL	0.3 % of reading	Analytical Balance Sartorius (Res.= 0.1 mg) Thermometer Fluke 51 II	NMX-CH-20461 ISO 4787	F

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Mechanical	Volumetric Instruments (Volumetric Flasks, Graduated Cylinders)	1 mL to 100 mL	0.3 % of reading	Analytical Balance Sartorius (Res.= 0.1 mg) Analytical Balance and (Res.= 1 mg) Analytical Balance Shimadzu (Res.= 0.01 g) Thermometer Fluke 51 II	NMX-CH-20461 ISO 4787	F
Mechanical	Volumetric Instruments (Volumetric Flasks, Graduated Cylinders)	100 mL to 5 000 mL	0.7 % of reading	Analytical Balance Sartorius (Res.= 0.1 mg) Analytical Balance and (Res.= 1 mg) Analytical Balance Shimadzu (Res.= 0.01 g) Thermometer Fluke 51 II	NMX-CH-20461 ISO 4787	F
Mechanical	Volumetric Measurement (Metallic Graduated Neck for Liquids)	1 000 mL to 20 000 mL	0.7 % of reading	Balance Radwag Balance Shimadzu (Res.= 0.1 mg) Thermometer Fluke 51 II	NOM-042-SCFI ISO 4787	F
Mechanical	Security Valves Relief Point	3 psi to 300 psi	0.28 psi	Digital Pressure Gage Crystal XP2i	NOM-093-SCFI	F, O
Mechanical	Torsional Torque Tools (Clockwise and Counterclockwise)	0.2 N·m to 1.9 N·m	0.003 N·m	Torque Transducer Mountz 0500 /	NMX-CH-6789-IMNC	F
Mechanical	Torsional Torque Tools (Clockwise and Counterclockwise)	10 N·m to 50 N·m	0.18 N·m	Torque Tools: Tohnichi CEM50N3X12D-G	NMX-CH-6789-IMNC	F

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Mechanical	Torsional Torque Tools (Clockwise and Counterclockwise)	30 N·m to 150 N·m	0.6 N·m	Torque Transducer	NMX-CH-6789-IMNC	F
Mechanical	Torsional Torque Tools (Clockwise and Counterclockwise)	135 N·m to 1 100 N·m	2.2 N·m	Torque Transducer Mountz BTSX1000F /	NMX-CH-6789-IMNC	F
Electrical	Temperature Calibration Indication and Control Equipment used with Thermocouple Type J	-200 °C to 0 °C	0.46 °C	Calibrator 701 / 725 Electrical Simulation of Thermocouple Output	CENAM Technical Guide	O
Electrical	Temperature Calibration Indication and Control Equipment used with Thermocouple Type J	0 °C to 800 °C	0.43 °C	Calibrator 701 / 725 Electrical Simulation of Thermocouple Output	CENAM Technical Guide	O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K	-200 °C to 0 °C	0.58 °C	Calibrator 701 / 725 Electrical Simulation of Thermocouple Output	CENAM Technical Guide	O
Electrical	Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K	0 °C to 1 200 °C	0.48 °C	Calibrator 701 / 725 Electrical Simulation of Thermocouple Output	CENAM Technical Guide	O
Electrical	Temperature Calibration Indication and Control Equipment used with RTD Type Pt 385 Ω	1 °C to 300 °C	0.62 °C	Calibrator 701 / 725 Electrical Simulation of RTD Output Process	CENAM Technical Guide	O

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Electrical	Temperature Calibration Indication and Control Equipment used with RTD Type Pt 385 Ω	300 °C to 700 °C	0.72 °C	Calibrator 701 / 725 Electrical Simulation of RTD Output Process	CENAM Technical Guide	O
Electrical	Equipment to Measure DC Voltage	1 mV to 100 mV	0.16 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Voltage	0.2 V to 1 V	0.003 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Voltage	2 V to 10 V	0.002 6 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Voltage	20 V to 100 V	0.002 6 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Voltage	200 V to 1 000 V	0.004 6 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure AC Voltage (@ 50 Hz to 10 kHz)	5 mV to 100 mV	0.14 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure AC Voltage (@ 50 Hz to 1 kHz)	0.2 V to 1 V	0.044 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure AC Voltage (@ 50 Hz to 1 kHz)	2 V to 10 V	0.08 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure AC Voltage (@ 50 Hz to 1 kHz)	20 V to 100 V	0.06 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F

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Electrical	Equipment to Measure AC Voltage (@ 50 Hz to 1 kHz)	200 V to 700 V	0.08 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure Resistance	1 Ω to 100 Ω	0.044 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure Resistance	0.2 kΩ to 1 kΩ	0.005 6 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure Resistance	2 kΩ to 10 kΩ	0.003 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure Resistance	20 kΩ to 100 kΩ	0.003 7 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure Resistance	0.2 MΩ to 1 MΩ	0.011 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure Resistance	2 MΩ to 10 MΩ	0.044 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure Resistance	20 MΩ to 100 MΩ	0.24 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Current	1 mA to 10 mA	0.011 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Current	20 mA to 100 mA	0.032 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Current	1 A to 2.7 A	0.42 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Measure AC Current (@ 50 Hz to 1 kHz)	0.2 A to 2.7 A	0.03 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F

Asesoria Industrial en Mantenimiento y Calibracion TLX. (AIMEC) / Ignacio Grande Morales

Calle Adolfo López Mateos # 1-A, Col. Ocotlán
Tlaxcala, Tlaxcala. México. C.P. 90100
Contact Name: Ignacio Grande Morales Phone: (52) 246-462-3510

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)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED	LOCATION OF ACTIVITY
Electrical	Equipment to Output Resistance	2 kΩ to 100 kΩ	0.0037 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Output Resistance	0.2 MΩ to 1 MΩ	0.044 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Output Resistance	20 MΩ to 100 MΩ	0.24 % of reading	Digital Multimeter Keysight 34401A	CENAM Technical Guide	F
Electrical	Equipment to Output DC Voltage	1 V to 20 V	0.24 % of reading	Digital multimeter Keysight 34401A, Power Supply Keysight E3644A	CENAM Technical Guide	F
Electrical	Equipment to Output DC Voltage	10 V to 1 000 V	0.26 % of reading	Digital multimeter Keysight 34401A, Power Supply Keysight E3644A	CENAM Technical Guide	F
Electrical	Equipment to output AC Voltage (@ 50 Hz to 10 kHz)	1 V to 20 V	0.24 % of reading	Digital multimeter Keysight 34401A, Power Supply Keysight E3644A, Function Generator Hewlett Packard 33120A	CENAM Technical Guide	F
Electrical	Equipment to Output AC Voltage (@ 50 Hz to 1 kHz)	10 V to 700 V	0.26 % of reading	Digital Multimeter Keysight 34401A, Power Supply Keysight E3644A, Function Generator Hewlett Packard 33120A	CENAM Technical Guide	F
Electrical	Equipment to Output Resistance	80 Ω to 360 Ω	0.044 % of reading	Digital Multimeter Keysight 34401A, Process Calibrator Beamex MC2	CENAM Technical Guide	F
Electrical	Equipment to Output Resistance	1 kΩ to 4 kΩ	0.005 6 % of reading	Digital Multimeter Keysight 34401A, Process Calibrator Beamex MC2	CENAM Technical Guide	F

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Electrical	Equipment to Output DC Voltage	0.05 V to 0.23 V	0.16 % of reading	Process Calibrator Beamex MC2	CENAM Technical Guide	F
Electrical	Equipment to Output DC Voltage	2.6 V to 10.8 V	0.003 % of reading	Process Calibrator Beamex MC2	CENAM Technical Guide	F
Electrical	Equipment to Output DC Current	4 mA to 25 mA	0.014 % of reading	Digital Multimeter Keysight 34401A, Process Calibrator Beamex MC2	CENAM Technical Guide	F
Electrical	Equipment to Output DC Current	0.5 A to 4 A	0.26 % of reading	Digital Multimeter Keysight 34401A, Power supply Keysight E3644A	CENAM Technical Guide	F
Electrical	Equipment to Output DC Current	2 A to 30 A	0.42 % of reading	Digital Multimeter Keysight 34401A, Power supply Keysight E3644A, Function Generator Hewlett Packard 33120A	CENAM Technical Guide	F
Electrical	Equipment to Measure DC Current	1 A to 18 A	0.024 % of reading	Multimeter Fluke 287	CENAM Technical Guide	F
Electrical	Equipment to Measure AC Current (@ 50 Hz to 1 kHz)	1 A to 9 A	0.42 % of reading	Multimeter Fluke 287	CENAM Technical Guide	F
Electrical	Equipment to Output AC Current (@ 50 Hz to 1 kHz)	2 A to 700 A	0.45 % of reading	EDC 520A Current Voltage Calibrator & Transconductance Amplifier Fluke 5220A & Function Generator Hewlett Packard 33120A	CENAM Technical Guide	F

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Dimensional	Caliper	2.5 mm to 450 mm	$(10.1 + 9 \times 10^{-3}L)$ µm	Master Block Grade "1"	NMX-CH-002-IMNC	F
Dimensional	Micrometer	2.5 mm to 300 mm	$(0.9 + 6 \times 10^{-3}L)$ µm	Master Block Grade "1"	NMX-CH-099-IMNC	F
Dimensional	Height Gauges	0.1 mm to 600 mm	$(8.1 + 8 X 10^{-4}8L)$ µm	Gauge and Vision Master Block Grade "1"	NMX-CH-141-IMNC	F
Dimensional	Indicator	0.1 mm to 50 mm	$(0.75 + 1.8 X 10^{-3}L)$ µm	Master Block Grade "1"	NMX-CH-463-IMNC	F
Dimensional	Graduate Ruler	5 mm to 3 000 mm	(123 + 0.2L) µm	Gauge and Vision	NMX-CH-148-IMNC	F
Dimensional	Measurement Tape	5 mm to 20 000 mm	(254.7 + 0.2L) µm	Gauge and Vision	NMX-CH-148-IMNC	F
Time and Frequency	Tachometers Meters	90 000 r/min	0.2 r/min	Digital Tachometer Amprobe Tach 200.1 r/min	CENAM Technical Guide	F, O
Chemical	pH Meters	4 pH	0.02 pH	pH buffer Solutions: NMX-CH-166-IMNC	CENAM Technical Guide	O
Chemical	pH Meters	7 pH	0.02 pH	pH buffer Solutions: NMX-CH-166-IMNC	CENAM Technical Guide	O
Chemical	pH Meters	10 pH	0.02 pH	pH buffer Solutions: NMX-CH-166-IMNC	CENAM Technical Guide	O
Chemical	Conductivity Meters	1 413 µS/cm	17 µS/cm	Conductivity Solutions Hanna	CENAM Technical Guide	O

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 conformity assessment activities:

3. Location of activity:

Location Code	Location
F	Conformity assessment activity is performed at the CABs fixed facility
O	Conformity assessment activity is performed onsite at the CABs 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 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.

5. The term L represents length in inches or millimeters as appropriate to the uncertainty statement.

6. The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.