



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

DRL & Asociados, S.R.L.

***Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
Santo Domingo DN, Republica Dominicana. C.P. 10601***

*(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):

***Mass, Force and Weighing Devices, Thermodynamic, Optical, Mechanical,
Chemical, Electrical, Dimensional, Time and Frequency and Acoustic
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:

May 06, 2021

Issue Date:

June 21, 2023

Expiration Date:

September 30, 2025

Accreditation No.:

109973

Certificate No.:

L23-483

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*



Certificate of Accreditation: Supplement

DRL & Asociados, S.R.L.

Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
Santo Domingo DN, Republica Dominicana. C.P. 10601
Contact Name: Walter de la Rosa Phone: 809-216-3938

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

Mass, Force and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Balances ^O	1 mg to 500 mg	1.6 μ g	Class F1 Standards Met-001 Ref. Euramet_cg-18
	500 mg to 5 g	0.6 mg	
	5 g to 1 000 g	3.9 mg	
	1 kg to 25 kg	60 mg	
Balances & Scales ^O	25 kg to 500 kg	$(1.48 \times 10^{-2} + 5.74 \times 10^{-3}Wt)$ kg	Class M1 Weights Euramet_cg-18
	500 kg to 1 000 kg	$(2.39 \times 10^{-2} + 2.86 \times 10^{-3}Wt)$ kg	
	1 000 kg to 5 000 kg	$(9.69 \times 10^{-2} + 5.58 \times 10^{-4}Wt)$ kg	
	5 000 kg to 10 000 kg	$(4.72 \times 10^{-1} + 5.32 \times 10^{-4}Wt)$ kg	
Weights F2, M1, M2, M3	1 g to 5 g	0.05 mg	Class E2 weights CEM E-012 using Mass Comparator
	10 g	0.06 mg	
	20 g	0.079 mg	
	50 g	0.099 mg	
	100 g	0.16 mg	
	200 g	0.3 mg	
	1 kg	1.6 mg	
	2 kg	3 mg	
	5 kg	8 mg	
	10 kg	16 mg	
25 kg	30 mg		

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Humidity Meters ^F	10 % RH to 90 % RH	0.9 % RH	Opto Instruments/AS847 with Thermocouple Type K and Humidity Sensor, Procedure CEM Ref.:TH007
Digital Temperature Meter ^F	10 °C to 80 °C	0.15 °C	

Optical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Photometric Accuracy – Spectrophotometers ^{FO}	270 n·m to 340 n·m	0.004 2 n·m	Didymium Glass WAV-7 Calibration Standard/ Met-015 Internal Procedure
Wavelength – Spectrophotometer ^{lFO}	230 n·m to 660 n·m	0.15 n·m	



Certificate of Accreditation: Supplement

DRL & Asociados, S.R.L.

Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
 Santo Domingo DN, Republica Dominicana. C.P. 10601
 Contact Name: Walter de la Rosa Phone: 809-216-3938

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

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Differential Pressure Gauge ^{FO}	-125 Pa to 125 Pa	0.06 Pa	Simulation of Pressure using a Pressure Gauge Standard Generator and Meokon Differential Pressure Gauge CEM ME-020
Pressure Gauges ^{FO}	-12 psig to 870 psig	0.06 psig	Digital Gauge /Simulation of Pressure using a Pressure Gauge Standard Generator and Yunyi Pressure Gauge CEM ME-003
Torque tools ^{FO}	4 in·lbf to 50 in·lbf	0.051 in·lbf	Static Torque Sensor and Handhold Indicator ASMT E2624, CEM M19
	50 in·lbf to 1 000 in·lbf	0.51 in·lbf	
	1 000 in·lbf to 3 000 in·lbf	5.1 in·lbf	
Pipettes and Burettes ^{FO}	10 μ L to 100 μ L	0.1 μ L	Gravimetric Method using Analytical Mass Balances and Mass Standards/ ASTM E542-22
	100 μ L to 1 000 μ L	0.4 μ L	
	1 mL to 1 000 mL	0.04 mL	

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
pH Meters ^{FO}	4 pH	0.01 pH	Standard Solutions Buffer SOP EQ-01
	7 pH	0.01 pH	
	10 pH	0.01 pH	
Conductivity Meter ^{FO}	0 μ S/cm	0.01 μ S/cm	Standard Solution Buffers/ ASTM D 1125
	84 μ S/cm	0.6 μ S/cm	
	1 413 μ S/cm	9.3 μ S/cm	
	12 888 μ S/cm	20 μ S/cm	
Turbidity Meter ^{FO}	0.5 NTU	0.1 NTU	Standard Solution Buffer/ Turbidity Nephelometry (MET-013)
	100 NTU	2.2 NTU	
	200 NTU	4.2 NTU	
	1 000 NTU	8.9 NTU	
	4 000 NTU	18 NTU	



Certificate of Accreditation: Supplement

DRL & Asociados, S.R.L.

Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
 Santo Domingo DN, Republica Dominicana. C.P. 10601
 Contact Name: Walter de la Rosa Phone: 809-216-3938

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type E ^{FO}	-250 °C to -200 °C	0.72 °C	Fluke 754 Electrical Simulation of Thermocouple Output Euramet_cg-11
	-200 °C to -100 °C	0.4 °C	
	-100 °C to 600 °C	0.42 °C	
	600 °C to 1 000 °C	0.32 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type J ^{FO}	-210 °C to 800 °C	0.31 °C	
	800 °C to 1 200 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type K ^{FO}	-200 °C to -100 °C	0.5 °C	
	-100 to 1 372 °C	0.4 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type S ^{FO}	-20 °C to 0 °C	1.4 °C	
	0 °C to 200 °C	1.3 °C	
	200 °C to 1 400 °C	1.1 °C	
	1 400 °C to 1 767 °C	1.2 °C	
Temperature Calibration, Indication and Control Equipment used with Thermocouple Type T ^{FO}	-250 °C to -200 °C	1.1 °C	
	-200 °C to 0 °C	0.5 °C	
	0 °C to 400 °C	0.4 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Type Pt 385, 100 Ω ^{FO}	-200 °C to 100 °C	0.22 °C	Fluke 754 Electrical Simulation of RTD Output Euramet_cg-11
	100 °C to 800 °C	0.26 °C	
Temperature Calibration, Indication, and Control Equipment used with RTD Type Pt 385, 1 000 Ω ^{FO}	-200 °C to 100 °C	0.22 °C	
	100 °C to 800 °C	0.26 °C	
Equipment to Output DC Voltage ^{FO}	1 mV to 99.99 mV	0.006 mV	Hewlett Packard 34401A Multimeter AC/DC Generator CENAM Technical Guide
	100 mV to 0.99 V	4.7 mV	
	1 V to 9.99 V	5.1 mV	
	10 V to 99.99 V	5.8 mV	
	100 V to 1 000 V	22 mV	
Equipment to Output AC Voltage At the listed frequencies ^{FO}			
3 Hz to 5 Hz	10 mV to 100 mV	1.1 mV	



Certificate of Accreditation: Supplement

DRL & Asociados, S.R.L.

Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
 Santo Domingo DN, Republica Dominicana. C.P. 10601
 Contact Name: Walter de la Rosa Phone: 809-216-3938

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Output AC Voltage At the listed frequencies ^{FO}			Hewlett Packard 34401A Multimeter AC/DC Generator CENAM Technical Guide
5 Hz to 10 Hz	10 mV to 100 mV	0.39 mV	
10 Hz to 20 kHz	10 mV to 100 mV	0.1 mV	
20 kHz to 50 kHz	10 mV to 100 mV	0.16 mV	
50 kHz to 100 kHz	10 mV to 100 mV	0.68 mV	
100 kHz to 300 kHz	10 mV to 100 mV	4.5 mV	
Equipment to Output AC Voltage At the listed frequencies ^{FO}			Hewlett Packard 34401A Multimeter AC/DC Generator Decade Resistance Box CENAM Technical Guide
3 Hz to 5 Hz	100 mV to 1 V	0.011 V	
5 Hz to 10 Hz	100 mV to 1 V	0.003 8 V	
10 Hz to 20 kHz	100 mV to 1 V	0.000 9 V	
20 kHz to 50 kHz	100 mV to 1 V	0.001 6 V	
50 kHz to 100 kHz	100 mV to 1 V	0.006 8 V	
Equipment to Output AC Voltage At the listed frequencies ^{FO}			
3 Hz to 5 Hz	1 V to 750 V	7.8 V	
5 Hz to 10 Hz	1 V to 750 V	2.9 V	
10 Hz to 20 kHz	1 V to 750 V	0.68 V	
20 kHz to 50 kHz	1 V to 750 V	1.2 V	
50 kHz to 100 kHz	1 V to 750 V	5.1 V	
Equipment to Output Resistance ^{FO}			
	Up to 100 Ω	16 m Ω	
	100 Ω to 1 000 Ω	130 m Ω	
	1 k Ω to 10 k Ω	1.3 Ω	
	10 k Ω to 100 k Ω	13 Ω	
	100 k Ω to 1 M Ω	130 Ω	
	1 M Ω to 10 M Ω	4.8 Ω /k Ω	
	10 M Ω to 100 M Ω	0.93 k Ω /M Ω	



Certificate of Accreditation: Supplement

DRL & Asociados, S.R.L.

Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
Santo Domingo DN, Republica Dominicana. C.P. 10601
Contact Name: Walter de la Rosa Phone: 809-216-3938

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Equipment to Output Capacitance ^{FO}	1 μ F to 1 000 pF	0.000 1 μ F	Hewlett Packard 34401A Multimeter Decade Capacitance Box CENAM Technical Guide
Equipment to Measure DC Voltage ^{FO}	1 mV to 99.99 mV	0.006 mV	Hewlett Packard 34401A Multimeter AC/DC Generator CENAM Technical Guide
	100 mV to 0.99 V	4.6 mV	
	1 V to 9.99 V	5.1 mV	
	10 V to 99.99 V	5.8 mV	
	100 V to 1 000 V	22 mV	
Equipment to Measure AC Voltage @ 60 Hz ^{FO}	110 V	8.9 mV	Hewlett Packard 34401A Multimeter AC/DC Generator CENAM Technical Guide
	220 V	14 V	
	500 V	17 mV	
	750 V	19 mV	
	1 000 V	150 mV	
Equipment to Measure Resistance ^{FO}	1 Ω to 10 M Ω	0.01 % of reading	Hewlett Packard 34401A Multimeter
Equipment to Measure Capacitance ^{FO}	1 μ F to 1 000 pF	0.01 % of reading	Decade Box Euramet_cg-11
Equipment to Measure DC Current ^{FO}	0.1 mA to 24 mA	0.01 % of reading	Hewlett Packard 34401A Multimeter
Equipment to Measure AC Current ^{FO}	0.1 mA to 24 mA	0.01 % of reading	Euramet_cg-11

Time and Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Rotational Velocity	2.5 rpm to 1 000 rpm	0.4 rpm	Optical/Contact Tachometer/ Met-011 Internal Procedure
	1 000 rpm to 10 000 rpm	0.5 rpm	
	10 000 rpm to 100 000 rpm	0.8 rpm	
Stopwatch ^{FO}	Up to 86 400 s	0.1 ms	Stopwatch Special Publication 960-12



Certificate of Accreditation: Supplement

DRL & Asociados, S.R.L.

Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
Santo Domingo DN, Republica Dominicana. C.P. 10601
Contact Name: Walter de la Rosa Phone: 809-216-3938

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

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Caliper ^F	Up to 24 in	0.000 3 in	Gage Blocks Grade 0, Grade AS-2 Procedure CEM-DI-008
Rule & Tapes ^F	0.05 in to 24 in	0.002 in	Master Rule and Graduated Reticle SOP10 & SOP12

Acoustic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Sound Level Meter ^{FO}	74 dB to 114 dB	0.31 dB	Sound Level Calibrator/ Met-012 Internal Procedure

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.
3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this calibration 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. Example: Outside Micrometer^O would mean that the laboratory performs this calibration onsite at the customer's location.
5. 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^{FO} would mean that the laboratory performs this calibration at its fixed location and onsite at customer locations.



Certificate of Accreditation: Supplement

DRL & Asociados, S.R.L.

Plaza ABBA, Avenida de los Proceres No. 20, Urbanización Las Avenidas
Santo Domingo DN, Republica Dominicana. C.P. 10601
Contact Name: Walter de la Rosa Phone: 809-216-3938

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

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

