



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Accurate Quality Service

Calle Teatro Nacional, #152, El Millon, DN, Dominican Republic

*(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):

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

March 29, 2022

Issue Date:

April 12, 2024

Expiration Date:

July 31, 2026

Accreditation No.:

117853

Certificate No.:

L24-336

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

Accurate Quality Service

Calle Teatro Nacional, #152, El Millon, DN, Dominican Republic
Contact Name: Ms. Camila Hernandez Phone: 809-378-3000

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

Acoustic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Sound Level Meter ^{FO}	35 dB to 130 dB	0.32 dB	Sound Level Meter	OEM/P-111
Sound Level Calibrator ^{FO}	35 dB to 130 dB	0.32 dB	Reference Standard	OEM/P-111v

Chemical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
pH Meters, Fixed points ^{FO}	4.00 pH	0.059 pH	pH Buffers	OEM/P-102
	7.00 pH			
	10.00 pH			
pH (mV simulation) ^{FO}	4.00 to 10.00 pH	0.082 pH	Process meter Standard Solutions	P-110
Conductivity Meters ^{FO}	25 μ S/ cm	0.71 μ S/cm		
	50 μ S/ cm	0.98 μ S/cm		
	147 μ S/ cm	2.8 μ S/cm		
	1410 μ S/ cm	21 μ S/cm		
	4.45 μ S/ cm	0.35 μ S/cm		
	999 μ S/ cm	5.3 μ S/cm		
	150 mS/ cm	0.74 mS/ cm		
	200 mS/ cm	0.91 mS/ cm		
TDS (Total Dissolved Solid) ^{FO}	3 ppm	0.31 ppm		
	666 ppm	3.2 ppm		
	100 000 ppm	590 ppm		
	133 000 ppm	790 ppm		

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Gage Blocks ^{FO}	Up to 12 in	7.4 μ in + 0.013 μ in/in	Comparator/Master Blocks	P-156
Calipers-Outside - Inside - Step - Depth ^{FO}	Up to 24 in	508 μ in + 0.017 μ in/in	Gage Blocks	P-107
Micrometers- Outside - Inside - Step - Depth - Three Point Inside ^{FO}	Up to 24 in	66.04 μ in + 0.28 μ in/in	Gage Blocks	P-108
Dial Indicators ^{FO}	Up to 8 in	93.98 μ in + 0.066 μ in/in	Gage Blocks	P112
Pin Gage ^{FO}	0.011 in to 1 in	32 μ in + 0.001 5 μ in/in	Mahr Micrometer	P-113



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Rulers & Tapes ^{FO}	Up to 48 in	0.007 1 μ in + 8.2 μ in/in	Gage Blocks	P-143/P-144
	2 to 130 ft	0.029 in + 0.004 4 %		
Height Gages ^{FO}	Up to 24 in	508 μ in + 0.017 μ in/in		P-115
Laser Micrometer ^{FO}	0.01 in to 1 in	32 μ in + 0.001 5 μ in/in	Class XX Pin Gages P-133	P-133
Microscopes ^{FO}	Up to 25.4 mm	0.005 9 mm	Stage Micrometer Calibration Slide	P-117
Precision Levels ^{FO}	Up to 15 in	0.000 99 in/ft	Gage blocks	P-157
Optical Comparator ^{FO}	100 mm x 100 mm Up to 180 °	0.001 8 mm 0.1 °	Gage blocks	P-155
Dimensional Measurement - Straight Bar ^{FO}	Up to 4 in	93 μ in	Microscope Gage Block Ruler	P-117
	4 to 8 in	830 μ in		
	8 to 24 in	2200 μ in		

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Equipment to Output DC Voltage ^{FO}	Up to 20 mV	5.36 μ V + 11.56 μ V/mV	Fluke 5100	OEM/P-118, P-119, P-120
	20 mV to 200 mV	8.1 μ V + 99.9 μ V/mV		
	200 mV to 2 V	18 μ V + 68.5 μ V/mV		
	2 V to 20 V	419 μ V + 67 μ V/ mV		
	20 V to 200 V	1.6 μ V + 0.06 mV/ V		
	200 V to 1 000 V	35 μ V + 0.09 mV/ V		
Equipment to Measure DC Voltage ^{FO}	1 mV to 330 mV	0.006 % of reading + 3 μ V	DMM Fluke 8842 A	OEM
	330 mV to 3.3 V	0.005 % of reading + 5 μ V		
	3.3 V to 33 V	0.005 % of reading + 50 μ V		
	50 V to 300 V	0.005 % of reading + 500 μ V		
	100 V to 1 000 V	0.005 % of reading + 1 500 μ V		
Equipment to Output DC Current ^{FO}	1 mA to 10 mA	47 μ A + 840 μ A/A	Fluke 5100	
	10 mA to 200 mA	48 μ A + 909 μ A/A		
	200 mA to 2 A	41 μ A + 1.1 mA/A		
	2 A to 10 A	0.42 mA + 16 mA/A		



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Equipment to Measure DC Current ^{FO}	15 µA to 200 µA	5.1 µA	DMM Fluke 8842 A	OEM
	0.2 mA to 2 mA	0.041 mA		
	2 mA to 20 mA	0.41 mA		
	20 mA to 200 mA	4.1 mA		
	0.2 A to 2 A	41 mA		
	2 A to 10 Av	41 mA		
Equipment to Output DC Resistance ^{FO}	5 Ω to 200 Ω	0.048 mΩ + 0.170 mΩ/Ω		
	200 Ω to 2 kΩ	0.048 mΩ + 0.170 mΩ/Ω		
	2 kΩ to 20 kΩ	0.048 mΩ + 0.170 mΩ/Ω		
	20 kΩ to 200 kΩ	376 mΩ + 0.115 mΩ/Ω		
	200 kΩ to 2 MΩ	3.7 Ω + 14 µΩ/Ω		
	2 MΩ to 20 MΩ	"39.7 Ω + 0.345 mΩ/Ω		
Equipment to Measure AC Voltage At the listed frequencies ^{FO}			Fluke 5100	
50 Hz to 10 kHz	1 mV to 20 mV	0.07 % of reading + 0.120		
	20 mV to 200 mV	5 mV		
	0.2 V to 2 Vv	0.07 % of reading + 1.205 mV		
		0.07 % of reading + 0.012 05 V		
Equipment to Measure AC Voltage At the listed frequencies ^{FO}				
50 Hz to 10 kHz	2 V to 20 V	0.05 % of reading + 0.100 5 V		
	20 V to 200 V	0.05 % of reading + 1.005 V		
	200 V to 1 000 V	0.05 % of reading + 5.500 5 Vv		
Equipment to Measure AC Current At the listed frequencies ^{FO}				
50 Hz to 1 kHz	20 µA to 200 µA	0.25 % of reading + 0.5 µA		
	0.2 mA to 2 mA	0.25 % of reading + 0.005 mA		
	2 mA to 20 mA	0.25 % of reading + 0.05 mA		
	20 mA to 200 mA	0.25 % of reading + 0.5 mA		
	0.2 A to 2 A	0.25 % of reading + 0.005 A		
	2 A to 10 A	0.25 % of reading + 0.005 A		



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Equipment to Output AC Current At the listed frequencies ^{FO}			DMM Fluke 8842A	OEM
3 Hz to 5 Hz	0.07 A to 1 A	3.2 µA+ 0.03 mA/A		
5 Hz to 10 Hz	0.07 A to 1 A	3.6 µA+ 0.008 mA/A		
10 Hz to 5 kHz	0.07 A to 1 A	3.7 µA+ 0.007 mA/A		
Equipment to Output AC Current At the listed frequencies ^{FO}				
3 Hz to 5 Hz	1 A to 3 A	27 µA + 0.007 mA/A		
5 Hz to 10 Hz	1 A to 3 A	7.1 mA + 2.3 mA/A		
10 Hz to 5 kHz	1 A to 3 A	6.7 mA + 1.9 mA/A		
Equipment to Output AC Current At the listed frequencies ^{FO}				
3 Hz to 5 Hz	3 A to 10 A	19.5 mA + 3.9 mA/A	Fluke 5500A	
5 Hz to 10 Hz	3 A to 10 A	19.5 mA + 3.9 mA/A		
10 Hz to 5 kHz	3 A to 10 A	19.5 mA + 3.9 mA/A		
Equipment to Output AC Voltage At the listed frequencies ^{FO}				
10 Hz to 45 Hz	1 mV to 33 mV	0.35 % of reading + 20 µV		
45 Hz to 10 kHz	1 mV to 33 mV	0.15 % of reading + 20 µV		
10 kHz to 20 kHz	1 mV to 33 mV	0.2 % of reading + 20 µV		
20 kHz to 50 kHz	1 mV to 33 mV	0.25 % of reading + 20 µV		
50 kHz to 100 kHz	1 mV to 33 mV	0.35 % of reading + 33 µV		
100 kHz to 500 kHz	1 mV to 33 mV	1 % of reading + 60 µV		
Equipment to Output AC Voltage At the listed frequencies ^{FO}				
10 Hz to 45 Hz	33 mV to 330 mV	0.25 % of reading + 50 µV		
45 Hz to 10 kHz	33 mV to 330 mV	0.05 % of reading + 20 µV		
10 kHz to 20 kHz	33 mV to 330 mV	0.1 % of reading + 20 µV		
20 kHz to 50 kHz	33 mV to 330 mV	0.16 % of reading + 40 µV		
50 kHz to 100 kHz	33 mV to 330 mV	0.24 % of reading + 170 µV		
100 kHz to 500 kHz	33 mV to 330 mV	0.7 % of reading + 330 µV		



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Equipment to Output AC Voltage At the listed frequencies ^{FO}			Fluke 5500A	OEM
10 Hz to 45 Hz	330 mV to 3.3 V	0.15 % of reading + 250 µV		
45 Hz to 10 kHz	330 mV to 3.3 V	0.03 % of reading + 60 µV		
10 kHz to 20 kHz	330 mV to 3.3 V	0.08 % of reading + 60 µV		
20 kHz to 50 kHz	330 mV to 3.3 V	0.14 % of reading + 300 µV		
50 kHz to 100 kHz	330 mV to 3.3 V	0.24 % of reading + 1 700 µV		
100 kHz to 500 kHz	330 mV to 3.3 V	0.5 % of reading + 3 300 µV		
Equipment to Output AC Voltage At the listed frequencies ^{FO}				
10 Hz to 45 Hz	3.3 V to 33 V	0.15 % of reading + 2 500 µV		
45 Hz to 10 kHz	3.3 V to 33 V	0.04 % of reading + 600 µV		
10 kHz to 20 kHz	3.3 V to 33 V	0.08 % of reading + 2 600 µV		
20 kHz to 50 kHz	3.3 V to 33 V	0.19 % of reading + 5 000 µV		
20 kHz to 50 kHz	3.3 V to 33 V	0.19 % of reading + 5 000 µV		
50 kHz to 100 kHz	3.3 V to 33 V	0.24 % of reading + 17 000 µV		
Equipment to Output AC Voltage At the listed frequencies ^{FO}				
45 Hz to 1 kHz	33 V to 330 V	0.05 % of reading + 6.6 mV		
1 kHz to 10 kHz	33 V to 330 V	0.08 % of reading + 15 mV		
10 kHz to 20 kHz	33 V to 330 V	0.09 % of reading + 33 mV		
Equipment to Output AC Voltage At the listed frequencies ^{FO}				
45 Hz to 1 kHz	33 V to 330 V	0.05 % of reading + 80 mV		
1 kHz to 5 kHz	33 V to 330 V	0.2 % of reading + 100 mV		
5 kHz to 10 kHz	33 V to 330 V	0.2 % of reading + 500 mV		
Equipment to Measure Capacitance ^{FO} 50 Hz to 1 000 Hz	0.33 nF to 0.5 nF	0.5 % of reading + 0.01 nF		
	0.5 nF to 1.1 nF	0.5 % of reading + 0.01 nF		
	1.1 nF to 3.3 nF	0.5 % of reading + 0.01 nF		
	3.3 nF to 11 nF	0.5 % of reading + 0.01 nF		
	11 nF to 33 nF	0.25 % of reading + 0.1 nF		
	33 nF to 110 nF	0.25 % of reading + 0.1 nF		
	110 nF to 330 nF	0.25 % of reading + 0.3 nF		
	0.33 µF to 1.1 µF	0.25 % of reading + 1 nF		
	1.1 µF to 3.3 µF	0.35 % of reading + 3 nF		
	3.3 µF to 11 µF	0.35 % of reading + 10 nF		



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Equipment to Measure Capacitance ^{FO} 50 Hz to 1 000 Hz	11 μ F to 33 μ F	0.4 % of reading + 30 nF	Fluke 5500A	OEM
	33 μ F to 110 μ F	0.5 % of reading + 100 nF		
	110 μ F to 330 μ F	0.7 % of reading + 300 nF		
	330 μ F to 1.1 mF	1 % of reading + 300 nF		
Equipment to Measure Resistance ^{FO}	1 Ω to 11 Ω	0.012 % of reading + 0.008 Ω		
	11 Ω to 33 Ω	0.012 % of reading + 0.015 Ω		
	33 Ω to 330 Ω	0.009 % of reading + 0.015 Ω		
	330 Ω to 3.3 k Ω	0.009 % of reading + 0.006 Ω		
	3.3 k Ω to 33 k Ω	0.009 % of reading + 0.006 Ω		
	33 k Ω to 110 k Ω	0.009 % of reading + 0.6 Ω		
	110 k Ω to 330 k Ω	0.011 % of reading + 6 Ω		
	330 k Ω to 3.3 M Ω	0.011 % of reading + 6 Ω		
	3.3 M Ω to 11 M Ω	0.012 % of reading + 6 Ω		
	11 M Ω to 33 M Ω	0.012 % of reading + 6 Ω		
	33 M Ω to 110 M Ω	0.012 % of reading + 55 Ω		
	110 M Ω to 330 M Ω	0.006 % of reading + 550 Ω		
Temperature Calibration, Indication, and Control Equipment use with Thermocouple Type J ^{FO}	-210 °C to -100 °C	0.23 °C	Electrical Simulation of Thermocouple Output Using Fluke 5500 to provide mV signals	NIST Monograph 175 revised to ITS-90/OEM
	-100 °C to -30 °C	0.21 °C		
	-30 °C to 150 °C	0.16 °C		
	150 °C to 760 °C	0.16 °C		
	760 °C to 1 200 °C	0.19 °C		
Equipment use with Thermocouple Type K ^{FO}	-200 °C to -100 °C	0.26 °C		
	-100 °C to -25 °C	0.19 °C		
	-25 °C to 120 °C	0.17 °C		
	120 °C to 1 000 °C	0.17 °C		
	1 000 °C to 1 372 °C	0.18 °C		
Equipment use with Thermocouple Type T ^{FO}	-250 °C to -150 °C	0.73 °C		
	-150 °C to 0 °C	0.28 °C		
	Up to 120 °C	0.19 °C		
	120 °C to 400 °C	0.17 °C		
	1 000 °C to 1 372 °C	0.41 °C		



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Temperature Calibration, Indication, and Control Equipment used with RTD Pt 395 ^{FO}	-200 °C to -80 °C	0.012 °C	Electrical Simulation of Thermocouple Output Using Fluke 5500 to provide mV signals	NIST Monograph 175 revised to ITS-90/OEM
	-80 °C to 0 °C	0.044 °C		
	Up to 100 °C	0.041 °C		
	100 °C to 300 °C	0.043 °C		
	300 °C to 400 °C	0.046 °C		
	400 °C to 630 °C	0.049 °C		
	630 °C to 800 °C	0.053 °C		
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 3926 ^{FO}	-200 °C to -80 °C	0.0045 °C	Electrical Simulation of Thermocouple Output Using Fluke 5500 to provide mV signals	NIST Monograph 175 revised to ITS-90/OEM
	-80 °C to 0 °C	0.0046 °C		
	Up to 100 °C	0.040 °C		
	100 °C to 300 °C	0.040 °C		
	300 °C to 400 °C	0.045 °C		
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 3916 ^{FO}	400 °C to 630 °C	0.048 °C		
	-200 °C to -190 °C	0.044 °C		
	-190 °C to -80 °C	0.044 °C		
	-80 °C to 0 °C	0.047 °C		
	Up to 100 °C	0.040 °C		
	100 °C to 260 °C	0.043 °C		
	260 °C to 300 °C	0.043 °C		
	300 °C to 400 °C	0.045 °C		
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 200 ^{FO}	400 °C to 600 °C	0.047 °C		
	600 °C to 630 °C	0.048 °C		
	-200 °C to -80 °C	0.024 °C		
	-80 °C to 0 °C	0.028 °C		
	Up to 100 °C	0.025 °C		
	100 °C to 260 °C	0.027 °C		
	260 °C to 300 °C	0.027 °C		
	300 °C to 400 °C	0.028 °C		
	400 °C to 630 °C	0.031 °C		



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Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 500 ^{FO}	-200 °C to -80 °C	0.023 °C	Electrical Simulation of Thermocouple Output Using Fluke 5500 to provide mV signals	NIST Monograph 175 revised to ITS-90/OEM
	-80 °C to 0 °C	0.024 °C		
	Up to 100 °C	0.025 °C		
	100 °C to 260 °C	0.025 °C		
	260 °C to 300 °C	0.035 °C		
	300 °C to 400 °C	0.036 °C		
	400 °C to 630 °C	0.038 °C		
Temperature Calibration, Indication, and Control Equipment used with RTD Pt 385, 1000 ^{FO}	-200 °C to -80 °C	0.012 °C		
	-80 °C to 0 °C	0.016 °C		
	Up to 100 °C	0.016 °C		
	100 °C to 260 °C	0.017 °C		
	260 °C to 300 °C	0.018 °C		
	300 °C to 400 °C	0.018 °C		
	400 °C to 630 °C	0.019 °C		
Temperature Calibration, Indication, and Control Equipment used with RTD PtNi 385 ^{FO}	-80 °C to 0 °C	0.012 °C		
	Up to 100 °C	0.013 °C		
	100 °C to 260 °C	0.012 °C		
Fluid Characteristics:			Weight Standards with Timer	OEM
Equipment to Measure Volumetric Flow ^{FO}	100 mL/min to 7L/min	1.5 mL/min + 1.2 %		
	0.001 L/min to 500 L/min	150 mL/min + 1.2 %		
Measuring Devices, Liquid - Pipettes and Burettes ^{FO}	1 µL to 10 µL	0.16 µL	Analytical Mass Balances and Mass Standards	NIST SOP 14 gravimetric method ISO 8655-6:2022
	10 µL to 100 µL	0.19 µL		
	100 µL to 1 000 µL	0.82 µL		
	1 000 µL to 10 000 µL	8.1 µL		
	0.1 mL to 20 mL	160 µL + 39 nL/L		
	20 mL to 200 mL	170 µL + 37 µL/L		
	200 mL to 1 000 mL	200 µL + 1.6 µL/L		



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Volumetric Ware / Equipment ^{FO}	0.1 mL to 20 mL	110 μ L + 0.057 μ L/L	Analytical mass balances and mass standards	NIST SOP 14: gravimetric method
	20 mL to 200 mL	150 μ L + 0.42 μ L/L		
	200 mL to 1000 mL	190 μ L + 1.6 μ L/L		
	1 000 mL to 10 000 mL	250 μ L + 10 μ L/L		
	1 L to 30 L	44 mL + 0.21 μ L/L		
	30 L to 500 L	230 mL + 0.68 μ L/L		
	500 L to 75 000 L	47 L + 2.7 mL/L	Analytical mass balances and mass standards	Euramet Guide 21
Hydrometers ^{FO}	0.600 SG to 0.700 SG	0.001 7 SG	Standard Hydrometer	ASTM E126-19
	0.700 SG to 0.810 SG	0.001 7 SG		
	0.800 SG to 0.910 SG	0.001 8 SG		
	0.900 SG to 1.000 SG	0.001 8 SG		
	1.000 SG to 1.200 SG	0.001 8 SG		
	1.200 SG to 1.420 SG	0.001 8 SG		
	1.400 SG to 1.620 SG	0.002 1 SG		
	1.600 SG to 1.820 SG	0.002 2 SG		
	1.800 SG to 2.000 SG	0.002 2 SG		
Turbidity Meters ^{FO}	10 NTU	0.26 NTU	Turbidity standards	/P-122
	20 NTU	0.31 NTU		
	100 NTU	2.5 NTU		
	500 NTU	5.6 NTU		
	1000 NTU	11 NTU		
	4000 NTU	58 NTU		
Viscosity Meters ^{FO}	83 cP to 286 cP	0.61 cP + 0.62%	Viscosity standard fluid Temperature 20 to 40 °C	ASTM D341
	208 cP to 653.8 cP	0.64 cP + 0.71%		
	367 cP to 547 cP	0.67 cP + 0.69%		
	2040 cP to 9029 cP	5 cP + 0.98%		
	2989 cP to 16750 cP	7.4 cP + 0.99%		
	8907 cP to 49860 cP	23 cP + 0.99%		
	15800 cP to 88800 cP	29 cP + 1%		
Viscosity Cup (ASTM, Ford, Zahn, Shell) ^{FO}	7 to 520 cP at 22 °C	2.4 cP + 0.25%	Viscosity standard solutions, timer	P-159



Certificate of Accreditation: Supplement

Accurate Quality Service

Calle Teatro Nacional, #152, El Millon, DN, Dominican Republic
Contact Name: Ms. Camila Hernandez Phone: 809-378-3000

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

Mass, Force and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Weights ^{FO}	1 mg to 500 mg	0.002 1 mg	Standard Weights OIML E2	NISTIR 6969 SOP # 4, 5 and 8
	1 g to 5 g	0.000 012 g		
	10 g	0.000 015 g		
	20 g	0.000 016 g		
	50 g	0.000 042 g		
	100 g	0.000 054 g		
	200 g	0.000 086 g		
	500 g	0.000 36 g		
	1 kg	0.000 7 g		
	2 kg	0.004 9 g		
	5 kg	0.008 2 g		
	10 kg	0.046 g		
	20 kg	0.06 g		
	25 kg	0.37 g		
	25 kg to 500 kg	7.4 g		
Balances ^{FO}	1 mg to 500 mg	0.005 1 mg	Electrical simulation procedure	substitution method Euramet CG.18 P-101
	1 g to 5 g	0.006 4 mg		
	10 g to 50 g	0.02 mg		
	100 g to 500 g	0.026 mg		
Scales ^{FO}	500 g to 2000 g	1.3 mg		
	2 000 g to 10 000 g	4.0 mg		
	10 kg to 25 kg	41 mg		
	25 kg to 500 kg	7.4 g		
	500 kg to 15 000 kg	2.3 kg		
	15 000 kg to 50 000 kg	7.1 kg		
Electrical Simulation of Scale Display FO	Up kg to 100 000 kg	15 kg	Electrical simulation procedure	Process meter



Certificate of Accreditation: Supplement

Accurate Quality Service

Calle Teatro Nacional, #152, El Millon, DN, Dominican Republic
Contact Name: Ms. Camila Hernandez Phone: 809-378-3000

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

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Durometer ^{FO}	Up to 100 DP	0.15 DP	Standard Weights OIML E2 ASTM D2240	ASTM D2240
Indirect Verification of Rockwell Hardness Testers ^{FO}	73 HRA	0.98 HRA	Rockwell Hardness Test Blocks	ASTM E18
	50 HRB	0.94 HRB		
	80 HRB	0.95 HRB		
	95 HRB	0.97 HRB		
	30 HRC	0.92 HRC		
	60 HRC	0.96 HRC		
	55 HR30N	0.93 HR30N		
Force Equipment Tension Testing ^{FO}	1 lbf to 100 lbf	1.2R + 0.77 %	Standards Load Cell Machines	ASTM E4
	100 lbf to 1 000 lbf	1.2R + 0.83 %		
	1 000 lbf to 10 000 lbf	1.2R + 0.87 %		
Compression Testing Machines ^{FO}	1 lbf to 100 lbf	1.2R + 0.77 %		
	100 lbf to 1 000 lbf	1.2R + 0.83 %		
	1 000 lbf to 10 000 lbf	1.2R + 0.87 %		
	10 000 lbf to 100 000 lbf	1.2R + 0.91 %		
	100 000 lbf to 500 000 lbf	64 lbf + 1.1 %		
Tension - Compression Gauge ^{FO}	Up to 100 lbf	0.000 82 lbf + 0.033%	Standard Weights OIML E2	OEM/P132
	100 lbf to 1 000 lbf	0.000 82 lbf + 0.045%		
	1 000 lbf to 10 000 lbf	0.000 82 lbf + 0.054%		
	10 000 lbf to 30 000 lbf	0.000 82 lbf + 0.054%		
Rotational Velocity Equipment Tachometers ^{FO}	5 rpm to 1000 rpm	0.34 rpm	Optical/contact Tachometer	OEM, P123
	1 000 rpm to 10 000 rpm	1.4 rpm		
	10 000 rpm to 50 000 rpm	1.8 rpm		
Rotational Velocity Non-Contact Tachometers ^{FO}	Up to 1 000 rpm	0.037 rpm	Standard Stroboscope	
	1 000 rpm to 10 000 rpm	0.042 rpm		
	10 000 rpm to 50 000 rpm	1.5 rpm		
	50 000 rpm to 100 000 rpm	1.8 rpm		
Vacuum Gauges ^{FO}	-14 psig to 0 psig	0.009 7 psig	Digital Pressure Gage	Euramet Calibration Guide 17
Pneumatic Pressure Gauge ^{FO}	Up to 36 psig	0.009 7 psig		
	36 psig to 300 psig	0.024 psig + 0.056 %		
	300 psig to 1 000 psig	0.076 psig + 0.11 %		
	1 000 psig to 3 000 psig	0.11 psig + 0.11 %		
	3 000 psig to 5 000 psig	0.18 psig + 0.11%		



Certificate of Accreditation: Supplement

Accurate Quality Service

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Contact Name: Ms. Camila Hernandez Phone: 809-378-3000

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

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Hydraulic Pressure Gauge ^{FO}	5 000 psig to 10 000 psig	0.9 psig + 0.049 %	Digital Pressure Gage	Euramet Calibration Guide 17
	10 000 psig to 36 000 psig	14 psig + 0.0017 %		
Differential Pressure Gauge ^{FO}	-13.85 inH ₂ O to 13.85 inH ₂ O	0.0079 inH ₂ O + 0.2 μ inH ₂ O	Standards Weights OIML E2	ASTM E2624-17 P-148
	-5 psig to 5 psig	0.0092 psig		
Torque Analyzers and Testers ^{FO}	Up lbf·in to 6 lbf·in	0.022 lbf·in + 0.018 %	Torque Analyzers	P134
	6 lbf·in to 50 lbf·in	0.046 lbf·in + 0.056 %		
	50 lbf·in to 300 lbf·in	0.23 lbf·in + 0.007 4 %		
	300 lbf·in to 12 000 lbf·in	1.3 lbf·in + 0.22 %		
Torque Tools ^{FO}	1 lbf·in to 50 lbf·in	0.046 lbf·in + 1.1 %	Standard Anemometer	P-149
	50 lbf·in to 300 lbf·in	0.12 lbf·in + 1.1 %		
	300 lbf·in to 12 000 lbf·in	0.92 lbf·in + 1.2 %		
Air Velocity Measure ^{FO}	Up to 30 m/s	1.9 m/s		

Optical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Colorimeters ^{FO}	Up to 0.15 mg/L	0.052 mg/L	Ozone Color Standards DPD Chlorine HR Color Standards	OEM
	0.15 to 0.45 mg/L	0.062 mg/L		
	0.45 to 0.65 mg/L	0.072 mg/L		
	0.65 to 2.3 mg/L	0.25 mg/L		
	2.3 to 3.9 mg/L	0.34 mg/L		
	3.9 to 6.8 mg/L	0.62 mg/L		
Polarimeter Optical Rotation ^{FO}	10.320° to 44.583°	0.006 9°	Quartz Control Plate Standard	P-150
Transmittance - Absorbance Spectrophotometer ^{FO}	90 % T - 0.046 A	0.003 4 A	Transmission & Absorbance Glass Filter Certified Reference Materials	P-151
	30 % T - 0.523 A	0.004 7 A		
	10 % T - 1.000 A	0.004 9 A		
Wavelength Spectrophotometers ^{FO}	240 nm to 642 nm	0.17 nm	Holmium Oxide Solution Wavelength Certified Reference Material	P-151
Illuminance- Light meter ^{FO}	50 lx to 5 400 lx	0.37 lx + 0.37 %	Reference light meter/	OEM/P-128



Certificate of Accreditation: Supplement

Accurate Quality Service

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

Optical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Refraction Index Meters ^{FO}	Up to 2.5° Brix	0.027° Brix	Refractive index calibration standards	P-128
	2.5° Brix to 5° Brix	0.027° Brix		
	5° Brix to 10° Brix	0.027° Brix		
	10° Brix to 15° Brix	0.027° Brix		
	15° Brix to 40° Brix	0.029° Brix		
	40° Brix to 70° Brix	0.034° Brix		
	70° Brix to 98° Brix	0.038° Brix		

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Temperature Digital & Mechanical Thermometers and Temperature Probes ^{FO}	-50 °C to 0 °C	0.051 °C	Digital indicator with PRT	OEM/P-103
	Up to 50 °C	0.053 °C		
	50 °C to 100 °C	0.065 °C		
	100 °C to 200 °C	0.074 °C		
	200 °C to 500 °C	0.088 °C		
Temperature - Liquid-in-Glass Thermometers ^{FO}	-50 °C to 0 °C	0.051 °C	Digital indicator with	PRT OEM/P-103
	Up to 50 °C	0.053 °C		
	50 °C to 100 °C	0.065 °C		
	100 °C to 200 °C	0.074 °C		
	200 °C to 500 °C	0.088 °C		
Temperature - Measure Temperature Chambers, Ovens, Freezers ^{FO}	-50 °C to 0 °C	0.051 °C	Digital indicator with PRT	OEM/P-103
	Up to 50 °C	0.053 °C		
	50 °C to 100 °C	0.065 °C		
	100 °C to 200 °C	0.074 °C		
	200 °C to 500 °C	0.088 °C		
Temperature Blocks ^{FO}	-50 °C to 0 °C	0.051 °C	Digital indicator with temperature sensor	Euramet Cal. Guide 13/P-106
	Up to 50 °C	0.053 °C		
	50 °C to 100 °C	0.065 °C		
	100 °C to 200 °C	0.074 °C		
	200 °C to 500 °C	0.088 °C		



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

Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Temperature - Infrared Thermometer ^F	-20 °C to 0 °C	2.1 °C	Digital indicator with PRT	OEM/P130
Temperature - Infrared Thermometer ^O	Up to 50 °C	2.2 °C		
Temperature - Infrared Thermometer ^F	50 °C to 100 °C	2.2 °C		
Temperature - Infrared Thermometer ^O	100 °C to 200 °C	2.2 °C		
	200 °C to 500 °C	2.5 °C		
Relative Humidity – Measure ^{FO}	200 °C to 500 °C	0.1 °C		
	15 % RH to 30 % RH	1.2 % RH		
	30 % RH to 50 % RH	1.2 % RH		
	50 % RH to 75 % RH	1.2 % RH		
	75 % RH to 90 % RH	1.3 % RH		

Time & Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION OR MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ($\pm$)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Measure Timer – Stopwatch ^{FO}	Up to 3 600 s	33 ms + 0.037 μ s/s	Timer	NIST Publication 960-12/P-105
	3 600 s to 86 400 s	39 ms + 0.029 μ s/s		

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.
4. The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations.



Certificate of Accreditation: Supplement

Accurate Quality Service

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

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.

