PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Alpha & Omega Calibration Services LLC

2400 West 80 St Unit 6, Hialeah, FL 33016

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:

Dimensional, Electrical, Mechanical, Mass Force & Weighing, and Thermodynamic 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:*
February 25, 2013	April 15, 2025	April 30, 2027

Accreditation No.:	*Certificate No.:*
74069	L25-296

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

Alpha & Omega Calibration Services LLC

2400 West 80 St Unit 6, Hialeah, FL 33016
Contact Name: Liz Lago Phone: 305-556-3155

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
Chemical	pH Meter (Fixed Points)	4 pH	0.024 pH	pH standard Buffer Solutions	AOP-CAL-pH	F, O
Chemical	pH Meter (Fixed Points)	7 pH	0.024 pH	pH standard Buffer Solutions	AOP-CAL-pH	F, O
Chemical	pH Meter (Fixed Points)	10 pH	0.031 pH	pH standard Buffer Solutions	AOP-CAL-pH	F, O
Chemical	Viscometer (@ < 15 ºC)	10 mm2/s	0.27 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ < 15 ºC)	10 mm2/s to 100 mm2/s	0.31 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ < 15 ºC)	100 mm2/s to 1000 mm2/s	0.34 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ < 15 ºC)	1000 mm2/s to 10 000 mm2/s	0.49 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ < 15 ºC)	10 000 mm2/s to 150 000 mm2/s	0.55 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ 15 ºC to 45 ºC)	Up to 10 mm2/s	0.27 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ 15 ºC to 45 ºC)	10 mm2/s to 100 mm2/s	0.31 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ 15 ºC to 45 ºC)	100 mm2/s to 1000 mm2/s	0.34 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ 15 ºC to 45 ºC)	1000 mm2/s to 10 000 mm2/s	0.49 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ 15 ºC to 45 ºC)	10 000 mm2/s to 150 000 mm2/s	0.55 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ > 45 ºC)	Up to 10 mm2/s	0.27 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ > 45 ºC)	10 mm2/s to 100 mm2/s	0.31 %	Solutions Standards	AOP-CAL-VISCOM	F, O

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Chemical	Viscometer (@ > 45 ºC)	100 mm2/s to 1000 mm2/s	0.34 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ > 45 ºC)	1000 mm2/s to 10 000 mm2/s	0.49 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Chemical	Viscometer (@ > 45 ºC)	10 000 mm2/s to 150 000 mm2/s	0.55 %	Solutions Standards	AOP-CAL-VISCOM	F, O
Dimensional	Ruler and Tapes	Up to 36 in	(86 + 25L) µin	Gauge Block sets and Standard Steel Rule	AOP-SST-100	F, O
Dimensional	Micrometers	Up to 24 in	(97 + 25L) µin	Gage Blocks	AOP-MIC-100 AOP-CAL-100 AOP-DIA-100	F, O
Dimensional	Calipers	Up to 24 in	(860 + 25L) µin	Gage Blocks	AOP-MIC-100 AOP-CAL-100 AOP-DIA-100	F, O
Dimensional	Indicators	Up to 12 in	(84 + 25L) µin	Gage Blocks	AOP-MIC-100 AOP-CAL-100 AOP-DIA-100	F, O
Dimensional	Sieve	38 µm to 12 500 µm	80 µm	59281 Reticle Calibration Standard	ASTM E11 AOP-CAL-SIEVE	F
Electrical	Equipment to Output DC Voltage	Up to 100 mV	50 µV/V + 35 µV/V	HP34401A	Euramet cg-15	F, O
Electrical	Equipment to Output DC Voltage	100 mV to 1 V	40 µV/V + 7 µV/V	HP34401A	Euramet cg-15	F, O
Electrical	Equipment to Output DC Voltage	1 V to 10 V	35 µV/V + 5 µV/V	HP34401A	Euramet cg-15	F, O
Electrical	Equipment to Output DC Voltage	10 V to 100 V	45 µV/V + 6 µV/V	HP34401A	Euramet cg-15	F, O
Electrical	Equipment to Output DC Voltage	100 V to 1 000 V	45 µV/V + 10 µV/V	HP34401A	Euramet cg-15	F, O
Electrical	Equipment to Output DC Voltage	100 mV to 1 V	40 µV/V + 7 µV/V	HP34401A	Euramet cg-15	F, O
Electrical	DC Current Clamp Meters	3.2 A to 32 A	0.6 mA/A + 1.18 mA	Fluke 5522A with 10 Turn Coil	Euramet cg-15	F, O
Electrical	DC Current Clamp Meters	32 A to 105 A	0.55 mA/A + 9.4 mA	Fluke 5522A with 10 Turn Coil	Euramet cg-15	F, O

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Electrical	DC Current Clamp Meters	105 A to 200 A	0.55 mA/A + 45 mA	Fluke 5522A with 10 Turn Coil	Euramet cg-15	F, O
Electrical	DC Current Clamp Meters	16 A to 160 A	0.60 mA/A + 5.9 mA	Fluke 5522A with 50 Turn Coil	Euramet cg-15	F, O
Electrical	DC Current Clamp Meters	160 A to 525 A	0.055 mA/A + 47 mA	Fluke 5522A with 50 Turn Coil	Euramet cg-15	F, O
Electrical	DC Current Clamp Meters	525 mA to 1 000 A	0.055 mA/A + 225 mA	Fluke 5522A with 50 Turn Coil	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Voltage	Up to 30 mV	20 µV/V + 1 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Voltage	330 mV to 3.3 V	11 µV/V + 2 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Voltage	3.3 mV to 33 V	12 µV/V + 20 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Voltage	33 V to 330 V	18 µV/V + 150 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Voltage	330 V to 1 000 V	18 µV/V + 1 500 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	Up to 330 µA	150 µA/A + 0.02 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	330 µA to 3.3 mA	100 µA/A + 0.05 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	3.3 mA to 33 mA	100 µA/A + 0.25 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	33 mA to 330 mA	100 µA/A + 2.5 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	330 mA to 1.1 A	200 µA/A + 40 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	1.1 A to 3 A	380 µA/A + 40 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	3 A to 11 A	500 µA/A + 500 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure DC Current	11 A to 20 A	1 000 µA/A + 750 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	Up to 11 Ω	40 µΩ/Ω + 670 µΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	11 Ω to 33 Ω	30 µΩ/Ω + 1 mΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	33 Ω to 110 Ω	28 µΩ/Ω + 1 mΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	110 Ω to 330 Ω	28 µΩ/Ω + 1.3 mΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	330 Ω to 1.1 kΩ	28 µΩ/Ω + 1.3 mΩ	Fluke 5522A	Euramet cg-15	F, O

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Electrical	Equipment to Measure Resistance	1.1 kΩ to 3.3 kΩ	28 μΩ/Ω + 13 mΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	3.3 kΩ to 11 kΩ	28 μΩ/Ω + 13 mΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	11 kΩ to 33 kΩ	28 μΩ/Ω + 130 mΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	33 kΩ to 110 kΩ	28 μΩ/Ω + 130 mΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	110 kΩ to 330 kΩ	32 μΩ/Ω + 1.3 Ω	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	330 kΩ to 1.1 MΩ	32 μΩ/Ω + 1.3 Ω	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	1.1 MΩ to 3.3 MΩ	60 μΩ/Ω + 20 Ω	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	3.3 MΩ to 11 MΩ	87 μΩ/Ω + 33 Ω	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	11 MΩ to 33 MΩ	170 μΩ/Ω + 1.7 kΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	33 MΩ to 110 MΩ	330 μΩ/Ω + 2 kΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	110 MΩ to 330 MΩ	3.8 mΩ/Ω + 67 kΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Resistance	330 MΩ to 1 100 MΩ	10 mΩ/Ω + 330 kΩ	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	220 pF to 400 pF	5 mF/F + 10 pF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	0.4 nF to 1.1 nF	5 mF/F + 0.01 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	1.1 nF to 3.3 nF	5 mF/F + 0.01 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	3.3 nF to 11 nF	2.5 mF/F + 0.01 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	11 nF to 33 nF	2.5 mF/F + 0.01 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	33 nF to 110 nF	2.5 mF/F + 0.01 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	110 nF to 330 nF	2.5 mF/F + 0.03 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	0.33 μF to 1.1 μF	2.5 mF/F + 1 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	1.1 μF to 3.3 μF	2.5 mF/F + 3 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	3.3 μF to 11 μF	2.5 mF/F + 10 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	11 μF to 33 μF	4 mF/F + 30 nF	Fluke 5522A	Euramet cg-15	F, O

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Electrical	Equipment to Measure Capacitance	33 µF to 110 µF	4.5 mF/F + 100 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	110 µF to 330 µF	4.5 mF/F + 300 nF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	0.33 mF to 1.1 mF	4.5 mF/F + 1 µF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	1.1 mF to 3.3 mF	4.5 mF/F + 3 µF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	3.3 mF to 11 mF	4.5 mF/F + 10 µF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	11 mF to 33 mF	7.5 mF/F + 30 µF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure Capacitance	33 mF to 110 mF	11 mF/F + 100 µF	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 Hz to 45 Hz)	1 mV to 33 mV	800 µV/V + 6 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 45 Hz to 10 kHz)	1 mV to 33 mV	150 µV/V + 6 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 kHz to 20 kHz)	1 mV to 33 mV	200 µV/V + 6 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 20 kHz to 50 kHz)	1 mV to 33 mV	1 000 µV/V + 6 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 50 kHz to 100 kHz)	1 mV to 33 mV	3 500 µV/V + 12 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 100 kHz to 500 kHz)	1 mV to 33 mV	8 000 µV/V + 50 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 Hz to 45 Hz)	33 mV to 330 mV	300 µV/V + 8 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 45 Hz to 10 kHz)	33 mV to 330 mV	145 µV/V + 8 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 kHz to 20 kHz)	33 mV to 330 mV	160 µV/V + 8 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 20 kHz to 50 kHz)	33 mV to 330 mV	350 µV/V + 8 µV	Fluke 5522A	Euramet cg-15	F, O

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Electrical	Equipment to Measure AC Voltage (@ 50 kHz to 100 kHz)	33 mV to 330 mV	800 µV/V + 32 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 100 kHz to 500 kHz)	33 mV to 330 mV	2 000 µV/V + 70 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 Hz to 45 Hz)	0.33 V to 3.3 V	300 µV/V + 50 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 45 Hz to 10 kHz)	0.33 V to 3.3 V	150 µV/V + 60 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 kHz to 20 kHz)	0.33 V to 3.3 V	190 µV/V + 60 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 20 kHz to 50 kHz)	0.33 V to 3.3 V	300 µV/V + 50 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 50 kHz to 100 kHz)	0.33 V to 3.3 V	700 µV/V + 125 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 100 kHz to 500 kHz)	0.33 V to 3.3 V	2 400 µV/V + 600 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 Hz to 45 Hz)	3.3 V to 33 V	300 µV/V + 650 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 45 Hz to 10 kHz)	3.3 V to 33 V	150 µV/V + 600 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 10 kHz to 20 kHz)	3.3 V to 33 V	240 µV/V + 600 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 20 kHz to 50 kHz)	3.3 V to 33 V	350 µV/V + 600 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 50 kHz to 100 kHz)	3.3 V to 33 V	900 µV/V + 1 600 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 45 Hz to 1 kHz)	330 V to 1 020 V	190 µV/V + 2 000 µV	Fluke 5522A	Euramet cg-15	F, O

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Electrical	Equipment to Measure AC Voltage (@ 1 kHz to 5 kHz)	330 V to 1 020 V	200 µV/V + 6 000 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Voltage (@ 5 kHz to 10 kHz)	330 V to 1 020 V	250 µV/V + 6 000 µV	Fluke 5522A	Euramet cg-15	F, O
Electrical	AC Current Clamp Meters (@ 10 Hz 100 Hz)	3.2 A to 32 A	0.2 mA/A ± 5.5 mA	Fluke 5522A with 10 Turn Coil	Euramet cg-15	F, O
Electrical	AC Current Clamp Meters (@ 100 Hz to 440 Hz)	3.2 A to 32 A	0.78 mA/A ± 27 mA	Fluke 5522A with 10 Turn Coil	Euramet cg-15	F, O
Electrical	AC Current Clamp Meters (@ 10 Hz to 100 Hz)	16 A to 160 A	0.2 mA/A ± 28 mA	Fluke 5522A with 50 Turn Coil	Euramet cg-15	F, O
Electrical	AC Current Clamp Meters (@ 10 Hz to 100 Hz)	160 A to 1 000 A	0.21 mA/A ± 0.45 A	Fluke 5522A with 50 Turn Coil	Euramet cg-15	F, O
Electrical	AC Current Clamp Meters (@ 100 Hz to 3 kHz)	160 A to 1 000 A	0.5 mA/A ± 23 mA/A	Fluke 5522A with 50 Turn Coil	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 Hz to 20 Hz)	29 µA to 330 µA	2 mA/A + 0.1 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 20 Hz to 45 Hz)	29 µA to 330 µA	1.5 mA/A + 0.1 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 45 Hz to 1 kHz)	29 µA to 330 µA	1.25 mA/A + 0.1 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	29 µA to 330 µA	3 mA/A + 0.15 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 5 kHz to 10 kHz)	29 µA to 330 µA	8 mA/A + 0.2 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 kHz to 30 kHz)	29 µA to 330 µA	16 mA/A + 0.4 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 Hz to 20 Hz)	0.33 mA to 3.3 mA	2 mA/A + 0.15 µA	Fluke 5522A	Euramet cg-15	F, O

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Electrical	Equipment to Measure AC Current (@ 20 Hz to 45 Hz)	0.33 mA to 3.3 mA	1.25 mA/A + 0.15 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 45 Hz to 1 kHz)	0.33 mA to 3.3 mA	1 mA/A + 0.15 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	0.33 mA to 3.3 mA	2 mA/A + 0.2 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 5 kHz to 10 kHz)	0.33 mA to 3.3 mA	5 mA/A + 0.3 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 kHz to 30 kHz)	0.33 mA to 3.3 mA	1 mA/A + 0.6 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 Hz to 20 Hz)	3.3 mA to 33 mA	1.8 mA/A + 2 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 20 Hz to 45 Hz)	3.3 mA to 33 mA	0.9 mA/A + 2 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 45 Hz to 1 kHz)	3.3 mA to 33 mA	0.4 mA/A + 2 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	3.3 mA to 33 mA	0.8 mA/A + 2 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 5 kHz to 10 kHz)	3.3 mA to 33 mA	2 mA/A + 3 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 kHz to 30 kHz)	3.3 mA to 33 mA	4 mA/A + 4 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 Hz to 20 Hz)	33 mA to 330 mA	1.8 mA/A + 20 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 20 Hz to 45 Hz)	33 mA to 330 mA	0.9 mA/A + 20 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 45 Hz to 1 kHz)	33 mA to 330 mA	0.4 mA/A + 20 µA	Fluke 5522A	Euramet cg-15	F, O

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Alpha & Omega Calibration Services LLC

2400 West 80 St Unit 6, Hialeah, FL 33016
Contact Name: Liz Lago Phone: 305-556-3155

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Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	33 mA to 330 mA	1 mA/A + 50 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 5 kHz to 10 kHz)	33 mA to 330 mA	2 mA/A + 100 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 kHz to 30 kHz)	33 mA to 330 mA	4 mA/A + 200 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 Hz to 45 Hz)	0.33 A to 1.1 A	1.8 mA/A + 100 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 45 Hz to 1 kHz)	0.33 A to 1.1 A	0.5 mA/A + 100 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	0.33 A to 1.1 A	6 mA/A + 1 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 5 kHz to 10 kHz)	0.33 A to 1.1 A	25 mA/A + 5 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 10 Hz to 45 Hz)	1.1 A to 3 A	1.8 mA/A + 100 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 45 Hz to 1 kHz)	1.1 A to 3 A	0.6 mA/A + 100 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	1.1 A to 3 A	6 mA/A + 1 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 5 kHz to 10 kHz)	1.1 A to 3 A	25 mA/A + 5 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 45 Hz to 100 Hz)	3 A to 11 A	0.6 mA/A + 2 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 100 Hz to 1 kHz)	3 A to 11 A	1 mA/A + 2 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	3 A to 11 A	30 mA/A + 2 000 µA	Fluke 5522A	Euramet cg-15	F, O

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Electrical	Equipment to Measure AC Current (@ 45 Hz to 100 Hz)	11 A to 20.5 A	1.2 mA/A + 5 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 100 Hz to 1 kHz)	11 A to 20.5 A	1.5 mA/A + 5 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Equipment to Measure AC Current (@ 1 kHz to 5 kHz)	11 A to 20.5 A	30 mA/A + 5 000 µA	Fluke 5522A	Euramet cg-15	F, O
Electrical	Leveled Sine Amplitude (@ 50 kHz)	5 mV to 5.5 Vp-p	2 % of reading + 300 µV	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Leveled Sine Wave Flatness (Amplitude)	50 kHz to 100 MHz	1.5 % of reading + 100 µV	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Leveled Sine Wave Flatness (Amplitude)	100 MHz to 300 MHz	2 % of reading + 100 µV	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Leveled Sine Wave Flatness (Amplitude)	300 to 600 MHz	4 % of reading + 100 µV	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Square Wave (50 Ω @ 10 kHz Source)	1.8 mV to 2.5 Vp-p	0.25 % of reading + 40 µV	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Square wave (1 MΩ @ 10 kHz Source)	1 mV to 55 Vp-p	0.1 % of reading + 40 µV	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Time Marker Output	2 ns to 20 ms	3 µs/s	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Pulse Rise Time (@ 1 kHz to 2 MHz)	5 mV to 3 V	27 ps	Fluke 5522A/ SC600	Euramet cg-7	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type E)	-250 °C to -100 °C	0.27 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type E)	-100 °C to -25 °C	0.16 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type E)	-25 °C to 350 °C	0.14 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type E)	350 °C to 650 °C	0.16 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type E)	650 °C to 1 000 °C	0.16 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type J)	-210 °C to -100 °C	0.27 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type J)	-100 °C to -30 °C	0.16 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type J)	-30 °C to 150 °C	0.14 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type J)	150 °C to 760 °C	0.17 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type J)	760 °C to 1 200 °C	0.23 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type K)	-200 °C to -100 °C	0.33 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type K)	-100 °C to -25 °C	0.18 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type K)	-25 °C to 120 °C	0.16 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type K)	120 °C to 1 000 °C	0.26 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type K)	1 000 °C to 1 372 °C	0.4 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type T)	-250 °C to -150 °C	0.63 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type T)	-150 °C to 0 °C	0.24 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type T)	0 °C to 120 °C	0.16 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for Thermocouples (Type T)	120 °C to 400 °C	0.14 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (Pt 385, 100 Ω)	-200 °C to -80 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (Pt 385, 100 Ω)	-80 °C to 0 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (Pt 385, 100 Ω)	0 °C to 100 °C	0.07ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (Pt 385, 100 Ω)	100 °C to 300 °C	0.09 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (Pt 385, 100 Ω)	300 °C to 400 °C	0.1 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (Pt 385, 100 Ω)	400 °C to 630 °C	0.12 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (Pt 385, 100 Ω)	630 °C to 800 °C	0.23 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3926, 100 Ω)	-200 °C to -80 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3926, 100 Ω)	-80 °C to 0 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3926, 100 Ω)	0 °C to 100 °C	0.07 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3926, 100 Ω)	100 °C to 300 °C	0.09 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3926, 100 Ω)	300 °C to 400 °C	0.1 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3926, 100 Ω)	400 °C to 630 °C	0.12 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	-200 °C to -190 °C	0.25 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	-190 °C to -80 °C	0.04 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	-80 °C to 0 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	0 °C to 100 °C	0.06 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	100 °C to 260 °C	0.07 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	260 °C to 300 °C	0.08 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	300 °C to 400 °C	0.09 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	400 °C to 600 °C	0.1 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 3916, 100 Ω)	600 °C to 630 °C	0.23 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	-200 °C to -80 °C	0.04 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	-80 °C to 0 °C	0.04 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	0 °C to 100 °C	0.04 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	100 °C to 260 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	260 °C to 300 °C	0.12 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	300 °C to 400 °C	0.13 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	400 °C to 600 °C	0.14 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 200 Ω)	600 °C to 630 °C	0.16 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	-200 °C to -80 °C	0.04 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	-80 °C to 0 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	0 °C to 100 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	100 °C to 260 °C	0.06 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	260 °C to 300 °C	0.08 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	300 °C to 400 °C	0.08 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	400 °C to 600 °C	0.09 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385 500 Ω)	600 °C to 630 °C	0.11 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	-200 °C to -80 °C	0.03 ºC	Fluke 5522A	Euramet cg-11	F, O

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	-80 °C to 0 °C	0.03 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	0 °C to 100 °C	0.04 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	100 °C to 260 °C	0.05 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	260 °C to 300 °C	0.06 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	300 °C to 400 °C	0.07 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	400 °C to 600 °C	0.07 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Pt 385, 1 000 Ω)	600 °C to 630 °C	0.23 ºC	Fluke 5522A	Euramet cg-11	F, O

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Alpha & Omega Calibration Services LLC

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Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD PtNi 385, 120 Ω)	-80 °C to 0 °C	0.08 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD PtNi 385, 120 Ω)	0 °C to 100 °C	0.08 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD PtNi 385, 120 Ω)	100 °C to 260 °C	0.14 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Temperature Calibration, Indication, and Control Equipment by Electrical Simulation for RTD's (RTD Cu 427, 10 Ω)	-100 °C to 260 °C	0.30 ºC	Fluke 5522A	Euramet cg-11	F, O
Electrical	Magnetometer	1 kG to 10 kG	0.76 kG	Helmholtz calibration System HPS1-3059A Gaussmeter 475DSP	AOP-CAL-GAUSS	F, O
Electrical	Gauss Meter (Magnetic Flux Density)	1 kG to 10 kG	0.21 kG	Gaussmeter 475DSP	AOP-CAL-GAUSS	F, O
Mass, Force, and Weighing Devices	Analytical Balances	1 mg to 100 mg	0.009 4 mg	Troemner Ultra Class 0 Weights	AOP-SCA-105	F, O
Mass, Force, and Weighing Devices	Analytical Balances	100 mg to 20 g	0.007 2 mg	Troemner Ultra Class 0 Weights	AOP-SCA-105	F, O
Mass, Force, and Weighing Devices	Analytical Balances	20 g to 1 kg	0.075 mg	Troemner Ultra Class 0 Weights	AOP-SCA-105	F, O

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Mass, Force, and Weighing Devices	Bench Scales	1 kg to 20 kg	1.4 mg	INSCO Class ASTM 1 Weights	AOP-SCA-105	F, O
Mass, Force, and Weighing Devices	Bench Scales	25 kg to 125 kg	35 mg	INSCO Class ASTM 1 Weights	AOP-SCA-105	F, O
Mass, Force, and Weighing Devices	Force (Tension/ Compression)	Up to 51 000 lbf	0.034 % of reading + 0.0044 lbf	Morehouse Load Cell No. P8325 Model Precision With Hydraulic Press	AOP-LOA-112 AOP-FOR-112	F, O
Mass, Force, and Weighing Devices	Force (Tension/ Compression)	5 000 lbf to 50 000 lbf	0.1 % of reading + 0.002 lbf	Morehouse Load Cell No. P8325 Model Precision With Hydraulic Press	AOP-LOA-112 AOP-FOR-112	F, O
Mass, Force, and Weighing Devices	Force (Tension/ Compression)	2 000 lbf to 20 000 lbf	0.05 % of reading + 0.024 lbf	Morehouse Load Cell No. P8325 Model Precision With Hydraulic Press	AOP-LOA-112 AOP-FOR-112	F, O
Mass, Force, and Weighing Devices	Mass	0.1 g to 210 g	0.006 6 mg	Standard Weights, WLC 20/A2 with Comparator	AOP-CAL-Weight	F, O
Mass, Force, and Weighing Devices	Mass and Weight Sets	5 kg to 32 kg	1 mg	Weights, WLC 20/A2 Balance	AOP-CAL-Weight	F, O
Optical	Measure UV Irradiance (@360 nm)	50 µW/cm^2 to 100 000 µW/cm^2	7.6 %	UV Light Radiometer	AOP-DLM-136	F, O
Optical	Visible Measure Photometric Illuminance	0 fc to 2 000 fc	6.9 %	Standard Light Source	AOP-DLM-136	F, O

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Mechanical	Pipettes	Up to 20 µL	0.12 µL	A&D AD-421B-PT	AOP-PIP-135	F, O
Mechanical	Pipettes	Up to 200 µL	0.48 µL	A&D AD-421B-PT	AOP-PIP-135	F, O
Mechanical	Pipettes	Up to 10 000 µL	3.3 µL	A&D AD-421B-PT	AOP-PIP-135	F, O
Mechanical	Torque Wrench	5 ozf•in to 50 ozf•in	0.2 ozf•in	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Torque Wrench	15 ozf•in to 200 ozf•in	0.8 ozf•in	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Torque Wrench	4 lbf•in to 50 lbf•in	0.2 ozf•in	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Torque Wrench	30 lbf•in to 400 lbf•in	1.6 lbf•in	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Torque Wrench	80 lbf•in to 1000 lbf•in	4 lbf•in	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Torque Wrench	20 lbf•ft to 250 lbf•ft	1 lbf•ft	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Torque Wrench	60 lbf•ft to 600 lbf•ft	2.4 lbf•ft	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Torque Wrench	200 lbf•ft to 2000 lbf•ft	2.4 lbf•ft	CDI TDS1250	AOP-TOR-104	F, O
Mechanical	Pressure Gauge and Transducer	Up to 5 psi	0.058 psi	Omega, DPG1001B-05G	AOP-PRE-102	F, O
Mechanical	Pressure Gauge and Transducer	Up to 100 psi	0.082 psi	Omega, DPG1001B-05G	AOP-PRE-102	F, O
Mechanical	Pressure Gauge and Transducer	Up to 300 psi	0.096 psi	Druck, DPI104-2-100PSI	AOP-PRE-102	F, O
Mechanical	Pressure Gauge and Transducer	Up to 1 000 psi	0.58 psi	Druck, DPI104-2-1000PSI	AOP-PRE-102	F, O
Mechanical	Pressure Gauge and Transducer	Up to 5 000 psi	2.9 psi	Druck, DPI104-2-5000PSI	AOP-PRE-102	F, O
Mechanical	Pressure Gauge and Transducer	Up to 10 000 psi	5.8 psi	Druck, DPI104-2-10000PSI	AOP-PRE-102	F, O
Mechanical	Vacuum Gauge and Transducer	Up to 30 in.H2O	0.000 68 in.H2O	Additel ADT760-LLP	AOP-PRE-102	F, O
Mechanical	Vacuum Gauge and Transducer	Up to 30 in Hg	0.033 in.Hg	FLUKE 2700G-G35M	AOP-PRE-102	F, O
Thermodynamic	Temperature -Measurement	-196 °C to 400 °C	0.041 °C	Amphenol M2801/RTD-400 Intelligent RTD Temp Std. Temperature Chamber with Liquid Nitrogen for Cooling	AOP-THE-108	F, O

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Thermodynamic	Temperature - Source	-40 °C to 140 °C	0.041 °C	Fluke 9103 Dry-Well Amphenol CTR-40 Bath Calibrator / Amphenol M2801/RTD-400 Intelligent RTD Temp Std.	AOP-THE-108	F, O
Thermodynamic	Equipment to Measure Humidity	5 % RH to 95 % RH	0.99 % R.H	Vaisala MI70/HMP76	AOP-HYG-108	F, O
Thermodynamic	Equipment to Output Humidity	5 % RH to 95 % RH	1.50 % R.H	Folyon Technologies H300 Temperature & Humidity Chamber Vaisala HMP76	AOP-HYG-108	F
Thermodynamic	IR Thermometers	-15 °C to 500 °C	0.42 ºC	Fluke 4080 and 4081 IR calibrator	ASTM E2847-21 AOP-IR-108	F
Thermodynamic	IR Thermometers	120 º to 200 ºC	0.51 ºC	Fluke 4080 and 4081 IR calibrator	ASTM E2847-21 AOP-IR-108	F
Thermodynamic	IR Thermometers	200 ºC to 500 ºC	1.6 ºC	Fluke 4080 and 4081 IR calibrator	ASTM E2847-21 AOP-IR-108	F
Time and Frequency	Stopwatch and Timer	Up to 24 Hr	910 ms	Standard stopwatch	NIST SP-960-12 AOP-CAL-Timer	F, O

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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. 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.