CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Greenwich Instrument Co. Inc.,
a division of Parker Medical Inc.
137 New Milford Road East
Bridgewater, CT 06752

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 20 August 2021
Certificate Number: AC-1406

This laboratory 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 (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Greenwich Instrument Co. Inc., a division of Parker Medical Inc.

137 New Milford Road East
Bridgewater, CT 06752
Timothy Holland 860-350-4304
t.holland@parkermed.com

CALIBRATION

Valid to: **August 20, 2021** Certificate Number: **AC-1406**

Electrical – DC/Low Frequency

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
Dynalyzers and High Voltage Dividers DC High Voltage (kVp)	Nominal Voltage Ratio: 1 k, 10 k, 100 k (10 to 75) kV	 0.22 % of Voltage Ratio	Spellman HVD-200 Voltage Divider, Spellman SL 300 Voltmeter
Dynalyzers and High Voltage Dividers DC High Voltage (kVp)	Nominal Voltage Ratio: 1 k, 10 k, 100 k (10 to 150) kV	 0.2 % of Voltage Ratio	Spellman HVD-200 Voltage Divider, Fluke 8845A Multimeter
Dynalyzers and High Voltage Dividers Voltage Divider Frequency Response at 600 V Anode Current Sensor	Nominal Voltage Ratio: 1 k, 10 k, 100 k DC to 500 Hz 500 Hz to 30 kHz (1 to 500) mA	 0.6 % of Voltage Ratio 2 % of Voltage Ratio 0.1 % of Voltage Ratio	Fluke 8845A Multimeter
Dynalyzers and High Voltage Dividers Filament AC Current Sensor	Nominal Voltage Ratio: 1 k, 10 k, 100 k (1 to 8) A (1 to 10) kHz	 0.3 % of Voltage Ratio	Fluke 8842A Multimeter, Fluke 80J-10 shunt
Dynalyzer Digital Displays Peak Voltage Anode DC Current Filament AC Current	 (20 to 150) kV 1 mA to 1 A (1 to 10) A 60 Hz	 0.1 % of reading 0.1 % of reading 0.2 % of reading	Fluke 8845A Multimeter Fluke 80J-10 shunt

Electrical – DC/Low Frequency

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
DC Voltage - Source	Up to 330 mV 330 mV to 3.3 V (3.3 to 33) V (33 to 330) V 330 V to 1.02 kV	60 µV/V + 3 µV 50 µV/V + 5 µV 50 µV/V + 50 µV 55 µV/V + 500 µV 55 µV/V + 1.5 mV	Fluke 5500A SC600 Multiproduct Calibrator
Resistance - Source	Up to 11 Ω (11 to 33) Ω (33 to 110) Ω (110 to 330) Ω 330 Ω to 1.1 kΩ (1.1 to 3.3) kΩ (3.3 to 11) kΩ (11 to 33) kΩ (33 to 110) kΩ (110 to 330) kΩ 330 k Ω to 1.1 MΩ (1.1 to 3.3) MΩ (3.3 to 11) MΩ (11 to 33) MΩ (33 to 110) MΩ (110 to 330) MΩ	120 µΩ/Ω + 8 mΩ 120 µΩ/Ω + 15 mΩ 90 µΩ/Ω + 15 mΩ 90 µΩ/Ω + 15 mΩ 90 µΩ/Ω + 60 mΩ 90 µΩ/Ω + 60 mΩ 90 µΩ/Ω + 600 mΩ 90 µΩ/Ω + 600 mΩ 110 µΩ/Ω + 6 Ω 120 µΩ/Ω + 6 Ω 150 µΩ/Ω + 55 Ω 150 µΩ/Ω + 55 Ω 600 µ/Ω + 550 Ω 1 mΩ/Ω + 550 Ω 5 mΩ/Ω + 5.5 kΩ 5 mΩ/Ω + 16.5 kΩ	Fluke 5500A SC600 Multiproduct Calibrator
DC Current-Source	Up to 3.3 mA (3.3 to 33) mA (33 to 330) mA 330 mA to 2.2 A (2.2 to 11) A	130 µA/A + 50 nA 100 µA/A + 250 nA 100 µA/A + 3.3 µA 300 µA/A + 44 µA 600 µA/A + 330 µA	Fluke 5500A SC600 Multiproduct Calibrator
AC Voltage-Source	(1 to 33) mV (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz (33 to 330) mV (10 to 45) Hz 45 Hz to 10 kHz (10 to 20) kHz (20 to 50) kHz (50 to 100) kHz (100 to 500) kHz	 3.5 mV/V + 20 µV 1.5 mV/V + 20 µV 2 mV/V + 20 µV 2.5 mV/V + 20 µV 3.5 mV/V + 33 µV 10 mV/V + 60 µV 2.5 mV/V + 50 µV 500 µV/V + 20 µV 1 mV/V + 20 µV 1.6 mV/V + 40 µV 2.4 mV/V + 170 µV 37 mV/V + 330 µV	Fluke 5500A SC600 Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
AC Voltage-Source	330 mV to 3.3 V		Fluke 5500A SC600 Multiproduct Calibrator
	(10 to 45) Hz	1.5 mV/V + 250 µV	
	45 Hz to 10 kHz	300 µV/V + 60 µV	
	(10 to 20) kHz	800 µV/V + 60 µV	
	(20 to 50) kHz	1.4 mV/V + 300 µV	
	(50 to 100) kHz	2.4 mV/V + 1.7 mV	
	(100 to 500) kHz	5 mV/V + 3.3 mV	
	(3.3 to 33) V		
	(10 to 45) Hz	1.5 mV/V + 2.5 mV	
	45 Hz to 10 kHz	400 µV/V + 600 µV	
	(10 to 20) kHz	800 µV/V + 2.6 mV	
	(20 to 50) kHz	1.9 mV/V + 5 mV	
	(50 to 100) kHz	2.4 mV/V + 17 mV	
	(33 to 330) V		
	45 Hz to 1 kHz	500 µV/V + 6.6 mV	
	(1 to 10) kHz	800 µV/V + 15 mV	
	(10 to 20) kHz	900 µV/V + 33 mV	
	330 V to 1.02 kV		
	45 Hz to 1 kHz	500 µV/V + 80 mV	
	(1 to 5) kHz	2 mV/V + 100 mV	
	(5 to 10) kHz	2 mV/V + 500 mV	
AC Current-Source	(29 to 330) µA		Fluke 5500A SC600 Multiproduct Calibrator
	(10 to 20) Hz	2.5 mA/A + 150 nA	
	(20 to 45) Hz	1.25 mA/A + 150 nA	
	45 Hz to 1 kHz	1.25 mA/A + 250 nA	
	(1 to 5) kHz	4 mA/A + 150 nA	
	(5 to 10) kHz	12.5 mA/A + 150 nA	
	330 µA to 3.3 mA		
	(10 to 20) Hz	2 mA/A + 300 nA	
	(20 to 45) Hz	1 mA/A + 300 nA	
	45 Hz to 1 kHz	1 mA/A + 300 nA	
	(1 to 5) kHz	2 mA/A + 300 nA	
	(5 to 10) kHz	6 mA/A + 300 nA	
	(3.3 to 33) mA		
	(10 to 20) Hz	2 mA/A + 3 µA	
	(20 to 45) Hz	1 mA/A + 3 µA	
	45 Hz to 1 kHz	900 µA/A + 3 µA	
	(1 to 5) kHz	2 mA/A + 3 µA	
	(5 to 10) kHz	6 mA/A + 3 µA	

Electrical – DC/Low Frequency

Parameter / Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method and/or Equipment
AC Current-Source	(33 to 330) mA (10 to 20) Hz (20 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz 330 mA to 2.2 A (10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (2.2 to 11) A (45 to 65) Hz (65 to 500) Hz 500 Hz to 1 kHz	 2 mA/A + 30 µA 1 mA/A + 30 µA 900 µA/A + 30 µA 2 mA/A + 30 µA 6 mA/A + 30 µA 2 mA/A + 300 µA 1 mA/A + 300 µA 7.5 mA/A + 300 µA 600 µA/A + 2 mA 1 mA/A + 2 mA 3.3 mA/A + 2 mA	Fluke 5500A SC600 Multiproduct Calibrator

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Dynalyzer Digital Displays Exposure time	50 ms to 1.5 s	1 ms ± 0.01 % of reading	HP5316B Counter
mAs Meters	(0 to 200) mAs (0 to 2 000) mAs	0.07 % of reading 0.07 % of reading	Fluke 8845A Multimeter HP5316B Counter

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 (k=2), corresponding to a confidence level of approximately 95%.

Notes:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1406.

R. Douglas Leonard Jr., VP, PILR SBU