CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Transcat Biomedical

1228 State Route 487
Paxinos, PA 17860

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

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.

Jason Stine, Vice President

Expiry Date: 07 September 2025
Certificate Number: AC-2489.19

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
AND
ANSI/NCSL Z540-1-1994 (R2002)

Transcat Biomedical
1228 State Route 487
Paxinos, PA 17860
Lance Hopkins 570-509-2910 ext. 6843
lance.hopkins@transcat.com

CALIBRATION

Valid to: **September 7, 2025** Certificate Number: **AC-2489.19**

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Source [1]	(30 to 330) µA		Fluke 5500A Multiproduct Calibrator
	(10 to 20) Hz	0.25 % of reading + 0.12 µA	
	(20 to 45) Hz	0.098 %% of reading + 0.12 µA	
	45 Hz to 1 kHz	0.097 %% of reading + 0.12 µA	
	(1 to 5) kHz	0.31 %% of reading + 0.12 µA	
	(0.33 to 3.3) mA		
	(10 to 20) Hz	0.16 %% of reading + 0.23 µA	
	(20 to 45) Hz	0.16 %% of reading + 0.23 µA	
	45 Hz to 1 kHz	0.078 %% of reading + 0.23 µA	
	(1 to 5) kHz	0.16 %% of reading + 0.23 µA	
	(5 to 10) kHz	0.47 %% of reading + 0.23 µA	
	(3.3 to 33) mA		
	(10 to 20) Hz	0.16 %% of reading + 2.3 µA	
	(20 to 45) Hz	0.079 %% of reading + 2.3 µA	
	45 Hz to 1 kHz	0.07 %% of reading + 2.3 µA	
	(1 to 5) kHz	0.16 % % of reading + 2.3 µA	
	(5 to 10) kHz	0.47 % of reading + 2.3 µA	
	(33 to 330) mA		
	(10 to 20) Hz	0.16 % of reading + 23 µA	
	(20 to 45) Hz	0.078 % of reading + 23 µA	
	45 Hz to 1 kHz	0.07 % of reading + 23 µA	
	(1 to 5) kHz	0.16 % of reading + 23 µA	
	(5 to 10) kHz	0.47 % of reading +23 µA	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Current – Source [1]	(0.33 to 2.2) A (10 to 45) Hz 45 Hz to 1 kHz (1 to 5) kHz (2.2 to 10) A (10 to 65) Hz (65 to 500) Hz 500 Hz to 1 kHz	 0.16 % of reading + 0.23 mA 0.078 % of reading + 0.23 mA 0.58 % of reading + 0.23 mA 0.047 % of reading + 1.6 mA 0.078 % of reading + 1.6 mA 0.26 % of reading + 1.6 mA	Fluke 5500A Multiproduct Calibrator
DC Current – Source [1]	(0 to 3.3) mA (3.3 to 33) mA (33 to 330) mA (0.33 to 2.2) A (2.2 to 11) A	0.01 % of reading + 40 nA 0.01 % of reading + 0.19 µA 0.008 % of reading + 2.5 µA 0.025 % of reading + 34 µA 0.047 % of reading + 0.26 mA	Fluke 5500A Multiproduct Calibrator
Capacitance – Source [1]	(0.33 to 11) nF (50 to 1 000) Hz (11 to 110) nF (50 to 1 000) Hz (110 to 330) nF (50 to 1 000) Hz (0.33 to 1.1) µf (50 to 1 000) Hz (1.1 to 3.3) µf (50 to 1 000) Hz (3.3 to 11) µf (50 to 400) Hz (11 to 33) µf (50 to 400) Hz (33 to 110) µf (50 to 200) Hz (110 to 330) µf (50 to 100) Hz (0.33 to 1.1) mf (50 to 100) Hz	 0.41 % of reading + 7.8 pF 0.22 % of reading + 7.8 pF 0.22 % of reading + 0.23 nF 0.22 % of reading + 0.77 nF 0.22 % of reading + 2.3 nF 0.22 % of reading + 7.8 nF 0.33 % of reading + 23 nF 0.45 % of reading + 78 nF 0.59 % of reading + 0.23 µF 0.85 % of reading + 0.23 µF	Fluke 5500A Multiproduct Calibrator
Resistance – Source [1]	(0 to 11) Ω (11 to 33) Ω (33 to 110) Ω (110 to 330) Ω (0.33 to 1.1) kΩ (1.1 to 3.3) kΩ (3.3 to 11) kΩ (11 to 33) kΩ	0.009 % of reading + 4.6 mΩ 0.009 % of reading + 7.7 mΩ 0.007 % of reading + 7.7 mΩ 0.007 % of reading + 7.7 mΩ 0.007 % of reading + 47 mΩ 0.007 % of reading + 47 mΩ 0.007 % of reading + 0.47 Ω 0.007 % of reading + 0.47 Ω	Fluke 5500A Multiproduct Calibrator

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Resistance – Source [1]	(33 to 110) kΩ	0.009 % of reading + 4.7 Ω	Fluke 5500A Multiproduct Calibrator
	(110 to 330) kΩ	0.009 % of reading + 4.7 Ω	
	(0.33 to 1.1) MΩ	0.012 % of reading + 43 Ω	
	(1.1 to 3.3) MΩ	0.013 % of reading + 43 Ω	
	(3.3 to 11) MΩ	0.047 % of reading + 0.43 kΩ	
	(11 to 33) MΩ	0.086 % of reading + 0.43 kΩ	
	(33 to 110) MΩ	0.4 % of reading + 4.3 kΩ	
	(110 to 330) MΩ	0.54 % of reading + 4.3 kΩ	
AC Voltage – Source [1]	(1 to 33) mV		Fluke 5500A Multiproduct Calibrator
	(10 to 45) Hz	0.27 % of reading + 16 µV	
	45 Hz to 10 kHz	0.12 % of reading + 16 µV	
	(10 to 20) kHz	0.16 % of reading + 16 µV	
	(20 to 50) kHz	0.19 % of reading + 16 µV	
	(50 to 100) kHz	0.27 % of reading + 26 µV	
	(100 to 500) kHz	0.78 % of reading + 47 µV	
	(33 to 330) mV		
	(10 to 45) Hz	0.19 % of reading + 39 µV	
	45 Hz to 10 kHz	0.039 % of reading + 16 µV	
	(10 to 20) kHz	0.078 % of reading + 16 µV	
	(20 to 50) kHz	0.12 % of reading + 31 µV	
	(50 to 100) kHz	0.19 % of reading + 0.13 mV	
	(100 to 500) kHz	0.54 % of reading + 0.26 mV	
	(0.33 to 3.3) V		
	(10 to 45) Hz	0.12 % of reading + 0.19 mV	
	45 Hz to 10 kHz	0.023 % of reading + 46 µV	
	(10 to 20) kHz	0.062 % of reading + 47 µV	
	(20 to 50) kHz	0.11 % of reading + 0.23 mV	
	(50 to 100) kHz	0.19 % of reading + 1.3 mV	
	(100 to 500) kHz	0.39 % of reading + 2.6 mV	
	(3.3 to 33) V		
	(10 to 45) Hz	0.12 % of reading + 1.9 mV	
	45 Hz to 10 kHz	0.031 % of reading + 0.47 mV	
	(10 to 20) kHz	0.062 % of reading + 2 mV	
	(20 to 50) kHz	0.15 % of reading + 3.9 mV	
	(50 to 100) kHz	0.19 % of reading + 13 mV	
	(33 to 330) V		
	45 Hz to 1 kHz	0.039 % of reading + 5.1 mV	
	(1 to 10) kHz	0.062 % of reading + 12 mV	
	(10 to 20) kHz	0.07 % of reading + 26 mV	

Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
AC Voltage – Source [1]	(330 to 1 020) V 45 Hz to 1 kHz (1 to 5) kHz (5 to 10) kHz	 0.039 % of reading + 62 mV 0.16 % of reading + 78 mV 0.16 % of reading + 0.39 V	Fluke 5500A Multiproduct Calibrator
DC Voltage – Source [1]	(0 to 330) mV (0.33 to 3.3) V (3.3 to 33) V (33 to 330) V (330 to 1 000) V	0.005 % of reading + 2.3 µV 0.004 % of reading + 3.9 µV 0.004 % of reading + 39 µV 0.004 % of reading + 0.39 mV 0.004 % of reading + 1.2 mV	Fluke 5500A Multiproduct Calibrator

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Frequency – Source [1]	10 mHz to 2 MHz	19 µHz/Hz + 0.78 mHz	Fluke 5500A Multiproduct Calibrator

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. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope. CMC is for a controlled laboratory environment of 18 °C to 28 °C (65 °F to 82 °F), when outside of this environment, larger measurement uncertainties are expected than what is reported on the accredited scope.
2. The legal entity of this location is Transcat, Inc.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-2489.19.

Jason Stine, Vice President