



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

**Heraeus Electro-Nite Co., LLC**  
**541 S. Industrial Drive**  
**Hartland, WI 53029**

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](http://www.anab.org).

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 27 May 2022

Certificate Number: AC-1294



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

### Heraeus Electro-Nite Co., LLC

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Hartland, WI 53029  
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### CALIBRATION

Valid to: **May 27, 2022**

Certificate Number: **AC-1294**

#### Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Voltage - Measure	Up to 1 V	6.9 $\mu$ V	Keysight 3458A Multimeter
DC Voltage – Measure <sup>1</sup>	Up to 200 mV	0.2 mV	Checkmate IV CX Calibrator
DC Current - Measure	Up to 20 mA	3.1 $\mu$ A	Fluke 753 Multifunction Calibrator
Electrical Simulation of Temperature Measuring Systems Type B	(1 800 to 3 050) °F IPTS 48 (1 800 to 3 050) °F IPTS 68 (2 450 to 3 050) °F ITS 90 (1 350 to 1 650) °C IPTS 48 (1 260 to 1 160) °C IPTS 68 (1 350 to 1 650) °C ITS 90	0.5 °F 0.5 °F 0.5 °F 0.3 °C 0.3 °C 0.3 °C	Omega HH41 Digital Thermometer, Agilent 34420A Multimeter
Electrical Simulation of Temperature Measuring Systems <sup>1</sup> Type B	(2 450 to 3 050) °F IPTS 48 (2 450 to 3 050) °F IPTS 68 (2 450 to 3 050) °F ITS 90 (1 350 to 1 650) °C IPTS 48 (1 350 to 1 650) °C IPTS 68 (1 350 to 1 650) °C ITS 90	3.4 °F 3.4 °F 3.4 °F 1.9 °C 1.9 °C 1.9 °C	Checkmate IV CX Simulator
Electrical Simulation of Temperature Measuring Systems Type K	(800 to 2 250) °F IPTS 48 (800 to 2 250) °F IPTS 68 (800 to 2 250) °F ITS 90 (450 to 1 225) °C IPTS 48 (450 to 1 225) °C IPTS 68 (450 to 1 225) °C ITS 90	2.5 °F 2.5 °F 2.5 °F 1.4 °C 1.4 °C 1.4 °C	Omega HH41 Digital Thermometer, Agilent 34420A Multimeter



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**Electrical – DC/Low Frequency**

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electrical Simulation of Temperature Measuring Systems <sup>1</sup> Type K	(800 to 2 250) °F IPTS 48 (800 to 2 250) °F IPTS 68 (800 to 2 250) °F ITS 90 (450 to 1 225) °C IPTS 48 (450 to 1 225) °C IPTS 68 (450 to 1 225) °C ITS 90	3.1 °F 3.1 °F 2.8 °F 1.6 °C 1.5 °C 1.6 °C	Checkmate IV K Simulator
Electrical Simulation of Temperature Measuring Systems Type R	(2 450 to 3 050) °F IPTS 48 (2 450 to 3 050) °F IPTS 68 (2 450 to 3 050) °F ITS 90 (1 350 to 1 650) °C IPTS 48 (1 350 to 1 650) °C IPTS 68 (1 350 to 1 650) °C ITS 90	1.6 °F 1.6 °F 1.6 °F 0.9 °C 0.9 °C 0.9 °C	Omega HH41 Digital Thermometer, Agilent 34420A Multimeter
Electrical Simulation of Temperature Measuring Systems <sup>1</sup> Type R	(2 450 to 3 050) °F IPTS 48 (2 450 to 3 050) °F IPTS 68 (2 450 to 3 050) °F ITS 90 (1 350 to 1 650) °C IPTS 48 (1 350 to 1 650) °C IPTS 68 (1 350 to 1 650) °C ITS 90	3.2 °F 3.2 °F 3.2 °F 1.7 °C 1.8 °C 1.8 °C	Checkmate IV CX Simulator
Electrical Simulation of Temperature Measuring Systems Type S	(1 950 to 3 050) °F IPTS 48 (2 450 to 3 050) °F IPTS 68 (2 450 to 3 050) °F ITS 90 (1 260 to 1 650) °C IPTS 48 (1 350 to 1 650) °C IPTS 68 (1 350 to 1 650) °C ITS 90	1.8 °F 1.8 °F 1.8 °F 1.1 °C 1 °C 1.1 °C	Omega HH41 Digital Thermometer, Agilent 34420A Multimeter
Electrical Simulation of Temperature Measuring Systems <sup>1</sup> Type S	(2 450 to 3 050) °F IPTS 48 (2 450 to 3 050) °F IPTS 68 (2 450 to 3 050) °F ITS 90 (1 350 to 1 650) °C IPTS 48 (1 350 to 1 650) °C IPTS 68 (1 350 to 1 650) °C ITS 90	3.2 °F 3.3 °F 3.3 °F 1.9 °C 1.8 °C 1.8 °C	Checkmate IV CX Simulator

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.
2. Calibration services are provided for equipment manufactured by Hereaus Electro-Nite only.
3. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1294.



R. Douglas Leonard Jr., VP, PILR SBU

