SP Bel-Art
H-B Instrument
ISO 9001:2015 Registered

Certificate of Calibration
Electronic Verification Thermometer

Calibration Cert **#2448.01**
ISO17025:2017

Calibration Date: 07-Dec-2023 Report No. 57593018

Manufactured for and distributed by VWR International

Serial #: L2316911 Description: Electronic Thermometer Range: -50/200°C (-58/392°F) .1 Resolution Accuracy: ±1°C; ±.5°C between -20/70°C, ±2°C below -20C & above 120°C	Customer: VWR International Catalog #: 82020-744 EU620-0916 Lot: HB07603
Calibration Range: Full As Found: New As Left: In Tolerance Procedure: Lab-20 Calibration Due Date: 07-Dec-2025	Test Condition: Temperature: 19 °C Humidity: 50 %

The above referenced instrument was calibrated by direct measurement of generated temperatures using the reference standards listed in the "Test Equipment" table at the bottom of this report, as required or as necessary. A Test Uncertainty Ratio (TUR) of at least 4:1 was maintained unless otherwise indicated. This calibration is traceable to NIST and is in compliance with ANSI/NCSL Z540-1. Uncertainty has been calculated using our Work Instruction WI-19-22 based upon methods found in NIST Technical Note 1297. The reported uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Nominal (Set-point) (°C)	Average Value (Reference) (°C)	Unit Under Test Minimum Error (°C)	Unit Under Test Maximum Error (°C)	Measurement Uncertainty (°C)	PASS/ FAIL
0.0	-0.3	-0.5	0.5	0.03	PASS
100.0	100.0	99.0	101.0	0.03	PASS

Test Equipment

Manufacturer	Model	Description	Serial Number	NIST/DKD Reference	Recal Date
Burns Engineering	5614	Probe, Secondary Standard	740318	CAL249256	12/11/2024
Hart Scientific, Inc	1502A	Digital Thermometer	A52864	CAL249255	12/11/2024

Calibrated by Rich Perrotta, Calibration Lead

Checked by Amelia Miranda, Production Supervisor

Notes: This test was performed in accordance with the test procedure indicated above. In our opinion once calibrated and used with proper care, your digital thermometer should maintain its accuracy. Due to use in diverse applications and handling there is no precise way to predict how long calibration will be maintained. Accuracy can be affected by shock, aging, temperature and contamination. It's the user's responsibility to maintain traceability through periodic recalibrations or verifications.

Manufactured and Calibrated by SP H-B Instrument® Calibration Lab 1002 Harding Highway, Buena, NJ 08310 USA
Telephone: 1-800-443-4926 • email: hbcal@belart.com

NIST traceable re-certification is available from SP H-B Instrument®

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Certificate of Calibration
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Calibration Cert **#2448.01**
ISO17025:2017

Calibration Date: 07-Dec-2023

Report No. 57593118

Manufactured for and distributed by VWR International

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Serial #: L2316991 Description: Electronic Thermometer Range: -50/200°C (-58/392°F) .1 Resolution Accuracy: ±1°C; ±.5°C between -20/70°C, ±2°C below -20C & above 120°C	Customer: VWR International Catalog #: 82020-744 EU620-0916 Lot: HB07603
Calibration Range: Full As Found: New As Left: In Tolerance Procedure: Lab-20 Calibration Due Date: 07-Dec-2025	Test Condition: Temperature: 19°C Humidity: 50%

The above referenced instrument was calibrated by direct measurement of generated temperatures using the reference standards listed in the "Test Equipment" table at the bottom of this report, as required or as necessary. A Test Uncertainty Ratio (TUR) of at least 4:1 was maintained unless otherwise indicated. This calibration is traceable to NIST and is in compliance with ANSI/NCSL Z540-1. Uncertainty has been calculated using our Work Instruction WI-19-22 based upon methods found in NIST Technical Note 1297. The reported uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Nominal (Set-point) (°C)	Average Value (Reference) (°C)	Unit Under Test Minimum Error (°C)	Unit Under Test Maximum Error (°C)	Measurement Uncertainty (°C)	PASS/ FAIL
0.0	-0.3	-0.5	0.5	0.03	PASS
100.0	100.0	99.0	101.0	0.03	PASS

Test Equipment

Manufacturer	Model	Description	Serial Number	NIST/DKD Reference	Recal Date
Burns Engineering	5614	Probe, Secondary Standard	740318	CAL249256	12/11/2024
Hart Scientific, Inc	1502A	Digital Thermometer	A52864	CAL249255	12/11/2024

Calibrated by Rich Perrotta, Calibration Lead

Checked by Amelia Miranda, Production Supervisor

Notes: This test was performed in accordance with the test procedure indicated above. In our opinion once calibrated and used with proper care, your digital thermometer should maintain its accuracy. Due to use in diverse applications and handling there is no precise way to predict how long calibration will be maintained. Accuracy can be affected by shock, aging, temperature and contamination. It's the user's responsibility to maintain traceability through periodic recalibrations or verifications.

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Calibration Cert **#2448.01**
ISO17025:2017

Calibration Date: 07-Dec-2023 Report No. 57593082

Manufactured for and distributed by VWR International

Serial #: L2316955 Description: Electronic Thermometer Range: -50/200°C (-58/392°F) .1 Resolution Accuracy: ±1°C; ±.5°C between -20/70°C, ±2°C below -20C & above 120°C	Customer: VWR International Catalog #: 82020-744 EU620-0916 Lot: HB07603
Calibration Range: Full As Found: New As Left: In Tolerance Procedure: Lab-20 Calibration Due Date: 07-Dec-2025	Test Condition: Temperature: 19 ° C Humidity: 50 %

The above referenced instrument was calibrated by direct measurement of generated temperatures using the reference standards listed in the "Test Equipment" table at the bottom of this report, as required or as necessary. A Test Uncertainty Ratio (TUR) of at least 4:1 was maintained unless otherwise indicated. This calibration is traceable to NIST and is in compliance with ANSI/NCSL Z540-1. Uncertainty has been calculated using our Work Instruction WI-19-22 based upon methods found in NIST Technical Note 1297. The reported uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Nominal (Set-point) (°C)	Average Value (Reference) (°C)	Unit Under Test Minimum Error (°C)	Unit Under Test Maximum Error (°C)	Measurement Uncertainty (°C)	PASS/ FAIL
0.0	-0.3	-0.5	0.5	0.03	PASS
100.0	100.0	99.0	101.0	0.03	PASS

Test Equipment

Manufacturer	Model	Description	Serial Number	NIST/DKD Reference	Recal Date
Burns Engineering	5614	Probe, Secondary Standard	740318	CAL249256	12/11/2024
Hart Scientific, Inc	1502A	Digital Thermometer	A52864	CAL249255	12/11/2024

Calibrated by Rich Perrotta, Calibration Lead

Checked by Amelia Miranda, Production Supervisor

Notes: This test was performed in accordance with the test procedure indicated above. In our opinion once calibrated and used with proper care, your digital thermometer should maintain its accuracy. Due to use in diverse applications and handling there is no precise way to predict how long calibration will be maintained. Accuracy can be affected by shock, aging, temperature and contamination. It's the user's responsibility to maintain traceability through periodic recalibrations or verifications.

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