

TEMPERATURE CALIBRATION REPORT

Asset Details - General				
DEPARTMENT	INSTRUMENT NAME	INSTRUMENT ID	THERMOMETER /MODULE ID	REPORT NO
Biochemistry	Refrigerator	BIO/003	TH/003	CAL/TH01-22/01
Cal Done Date	22/09/2020	22	Cal Due Date	22/07/2022
Ownership	SRL <input checked="" type="checkbox"/>	LOAN	<input type="checkbox"/>	RR <input type="checkbox"/>
		Operating Point of equipment	-15 ^o to -23 ^o °c	
Acceptable temperature limit	± 1 °c	Thermometer/Module Range	From -50 ^o °c To +50 ^o °c	

TEST VALUE TABLE

Sr. No.	Set Value °c	Measured Value °c (Avg. of 5 reading)	SD	± Error	Exp. Uncert.
1	-19	-18.8	0.45	0.55	0.59
2	-17	-16.8	0.45	0.55	0.59
3	-15	-14.8	0.45	0.55	0.59

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing the level of confidence of approx. 95%.

Environmental Conditions: Temperature 22 ± 0.2°C, Humidity 50 to 75%.

Calibration status	Passed <input checked="" type="checkbox"/>	Failed <input type="checkbox"/>
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CALIBRATION STANDARD USED

Test equipment Name	Test equipment ID	Traceable Report No
THERMOMETER	SRL/DT-01	MTL/SRL/RO5/01-22

The above mentioned instrument has been calibrated using standards with accuracy guidelines traceable to the National Institute of Standards & Technology (NIST).

Engineer's Name	Khokan Mondal	Report Reviewed by	
Signature/Date	 22/11/22	Signature/Date	

SECTION HEAD SIGN:

Doc No.: ENG QC16 (292)	Temperature Calibration Report			Page 1 of 1
Issue No.: 01	Issue Date: 01.09.2020	Amend No.: 00	Amend Date: 00	
Issued By: Mr. Surendra Kumar Gupta (DGM-QA)				

MEASURE TECHNO LAB
2, B.T. ROAD (JAYANTI CINEMA COMPLEX)
BARRACKPORE, KOLKATA - 700120, W.B.

Form No. - MTL/22/2006



CALIBRATION CERTIFICATE OF
DIGITAL THERMOMETER

Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519,
 Mobile: 9831190974, LAB: 8100143376,
 E-mail: measuretechno@yahoo.co.in

CALIBRATION CERTIFICATE NO.: MTL / SRL / ROS / 01 - 22

ULR - CC254522000000787F

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1.0 Service Request No.: MTL / 10G / 01 / 21 - 22

1.1 Issued to: M/s. SRL Limited,
 P.S. Srijan Tech Park, Ground Floor,
 DN - 52, Sector V, Salt Lake,
 Kolkata - 700091, W.B.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Digital Thermometer	b) Code No.:	SRL / DT - 01
c) Sl. No.:	717329	d) Make:	Alpha Technics
e) Model / Type:	3000 I	f) Range:	(-) 20 °C to 125 °C
g) Sensor:	N.A.	h) Resolution:	0.1 °C
i) End User:	Engineering Department	j) Accuracy:	N.S.
k) Calibration done at:	On Site / ✓ In House		

1.3 Date of receipt of item : 08-01-22

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 10-01-22

1.6 Recommended date of next calibration : 10-01-23

1.7 Date of Issue : 12-01-22

1.8 Environmental Conditions During Calibration: Temperature: 24.5 °C
 Humidity: 56.8 % RH

1.9 Method of Calibration: SOP / TH / 01

2.0 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
 b) The following standards / Equipment have been used.
- | | |
|---|---|
| i) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2021 - 1227 (JRPM, Chennai) | (Cal. Date: 26/08/21, Due Date: 25/08/22) |
| ii) RTD (PT - 100) Cal. Certificate No. TL / 021 / 1091.2.1 (TEMPESENS, Udaipur) | (Cal. Date: 25/10/21, Due Date: 24/10/22) |

2.1 Result :

Thermal Calibration

Sl. No.	Parameter/ Range	Measured Value on DUC °C	Corrected Std. Value °C	Error °C	Measurement Expanded Uncertainty ± °C
1.	Temperature (-) 20 °C to 125 °C	-19.6	-19.941	0.341	0.18
2.		0.3	-0.112	0.412	0.18
3.		50.3	49.797	0.503	0.18
4.		80.9	80.311	0.589	0.27
5.		124.8	124.109	0.691	0.27

- Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
 ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
 iii) Error = DUC Reading - Standard Reading.

DUC - Device Under Calibration: N.S. - Not Specified Std. - Standard N.A. - Not Applicable

Opinions and Interpretations	
Calibrated	✓ Accepted / Valid for use
Limited Use	Rejected / Out of use

Calibrated by:
 Testing Engineer
 A. Bera
 Measure Techno
 Testing Engineer
 Kolkata
 12/01/22

Checked / Approved by:

 Quality & Technical Manager
 S. Pandey