Diagnostics

QA Function

Ambedkar Sarani, City Centre, Durgapur, Bardhaman, WestBengal, 716216

CALIBRATION OF THERMOMETER

CALIBRATION DATE: 18-01-2023 **NEXT CAL DUE ON:** 18-07-2023

Report No: CAL/TH/Jan-23/05

Acceptable limit for variation in temperature: +/- 1°C

Master's Sr. no/ID Used for Calibration: ENG/TH-05

Traceable to NABL ACCREDITED LAB Report No/Date: MTL/SRLL/R03/01-23

Department: Hematology **Instrument ID:** HEM/006

Instrument Name: Refrigerator **Thermometer ID:** TH-002

Calibration Observation:

Sr. No.	Set temperature for the calibrated value	Actual value as per the master report	Avg. of 5 Reading on master thermometer	Standard deviation	Error	Expanded Uncertainty in °C(+/-)
1	4	3.59	3.6	0.547	0.005	0.82
2	5	4.59	4.6	0.547	0.007	0.82
3	6	5.58	5.6	0.547	0.010	0.82

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

Calibration status : Cal OK

Calibration Done By: Mirajul Islam

Name :

Signature with Date : 18/1/23

Report Reviewed By:

Name :

Signature with Date : D. Sah

SECTION HEAD SIGN:

MEASURE TECHNO LAB

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

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

NABL ACCREDITED LABORATORY
Certificate No. CC - 3545

CALIBRATION CERTIFICATE OF DIGITAL THERMOMETER

CALIBRATION CERTIFICATE NO.:MTL / SRLL / R03 / 01 - 23 | ULR - CC254523000001408F |

1.0 Service Request No.: MTL / 14 / 01 / 22 - 23

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.:	ENG / TH / 05
c) Sl. No.:	N.S.	d) Make:	N.S.
e) Model / Type:	ST - 9283B	f) Range:	(-) 50 °C to 200 °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 : 13-01-23
1.4 Physical Condition of DUC : OK
1.5 Date of calibration : 14-01-23
1.6 Recommended date of next calibration : 14-01-24
1.7 Date of Issue : 16-01-23
1.8 Environmental Conditions During Calibration: Temperature: 23.2 °C, Humidity: 58.7 % 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 - 2022 - 1498 (JRPM, Chennai) (Cal. Date: 25/08/22, Due Date: 24/08/23)

ii) RTD (PT - 100) Cal. Certificate No. TL / 022 / 1166.2.1 (TEMPSENS, Udaipur) (Cal. Date: 19/10/22, Due Date: 18/10/23)

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 (-) 50 °C to 200 °C	-48.5	-48.179	-0.321	0.40
2.		0.4	0.864	-0.464	0.18
3.		99.4	99.977	-0.577	0.23
4.		199.2	199.882	-0.682	0.23
5.		297.2	297.989	-0.789	0.52

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 N.A. - Not Applicable Std. - Standard

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

Calibrated by:
Calibration Engineer
Measure Techno Lab
Kolkata
Calibration Engineer

Checked / Approved by:
Measure Techno Lab KOLKATA
Quality & Technical Manager
S. Pandey