MEASURE TECHNO LAB
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Form No. - MTL/22/2006

CALIBRATION CERTIFICATE OF DEEP FREEZER

NABL ACCREDITED LABORATORY
Certificate No. CC - 2545

CALIBRATION CERTIFICATE NO.:MTL / MMC&H(SL) / R03 / 02 - 22

ULR - CC254522000006615F

1.0 Service Request No.: MTL / 23C / 02 / 21 - 22

1.1 Issued to:
Prof. & HOD,
Department of Microbiology (Serology Lab)
Midnapore Medical College & Hospital,
Paschim Medinipur, West Bengal – 721101.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Deep Freezer	**b) Code No.:**	MMC / MICRO / SERO / DF - 01
c) Sl No.:	201904145	**d) Make:**	Terumo Penpol
e) Model / Type:	DF 80U	**f) Range:**	(-) 80 °C
g) Sensor:	N.A.	**h) Resolution:**	0.1 °C
i) End User:	Serology Lab	**j) Accuracy:**	N.S.

k) Calibration done at: √ On Site / In House

1.3 Date of receipt of item : 23-02-22
1.4 Physical Condition of DUC : OK
1.5 Date of calibration : 23-02-22
1.6 Recommended date of next calibration : 23-02-23
1.7 Date of Issue : 26-02-22
1.8 Environmental Conditions During Calibration: **Temperature:** 25.3 °C
Humidity: 64.7 % RH
1.9 Method of Calibration: **SOP / TH / 05**

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 (TEMPSENS, Udaipur) (Cal. Date: 25/10/21, Due Date: 24/10/22)

2.1 Result :

Thermal Calibration

Sl. No.	Parameter/ Range	Temperature Set at °C	Measured Value on DUC °C			Corrected Std. Value °C			Error °C	Rack	Measurement Expanded Uncertainty ± °C
			Min.	Max.	Average	Min.	Max.	Average			
1.	Temperature (-) 80 °C	-80.0	-80.0	-80.0	-80.00	-80.28	-80.24	-80.249	0.249	1	0.83
						-80.31	-80.29	-80.288	0.288	2	0.83
						-80.40	-80.37	-80.371	0.371	3	0.83
						-80.56	-80.45	-80.492	0.492	4	0.83

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) Average Reading obtained by 10 Readings.
iv) Error = Average DUC Reading - Average Standard Reading.

DUC - Device Under Calibration **N.S. - Not Specified** **N.A. - Not Applicable** **Std. - Standard** **Min. - Minimum** **Max. - Maximum**

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

Testing Engineer
Measure Techno Lab
Kolkata

Calibrated by:
J.Dey
26/02/22
Testing Engineer

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