MEASURE TECHNO LAB

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CC - 2545

CALIBRATION CERTIFICATE OF MICRO PIPETTE

CERTIFICATE NO.:MTL / KSDH / R03 / 04 - 23 | ULR - CC254523000008968F | Page: 1 of 1

Request No.: MTL / 05 / 04 / 23 - 24

HIV Testing Laboratory,
ICTC Unit,
Kharagpur Sub Division Hospital,
Kharagpur, Paschim Medinipur,
Pin - 721301.

Description & Identification of item Calibrated:

a) Name:	Micro Pipette	b) Code No.:	KSDH / ICTC / MP - 02
c) Sl. No.:	19227538	d) Make:	Microlit
e) Model / Type:	N.S.	f) Range:	5 µl to 50 µl
g) Sensor:	N.A.	h) Resolution:	1 µl
i) End User:	Laboratory	j) Accuracy:	N.S.

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

Date of receipt of item : 04-04-23
Date of calibration : 05-04-23
Date of Issue : 07-04-23

1.4 Physical Condition of DUC : OK
1.6 Recommended date of next calibration : 05-04-24

Environmental Conditions During Calibration:

Temperature: 20 °C ± 2 °C
Humidity: 30 % RH to 75 % RH
Pressure: 1005.3 mbar

Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 – 6 : 2002)
Traceability :

Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
The following standards / Equipment have been used.

Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 22 (MTL, Barrackpore) (Cal. Date: 16/09/22, Due Date: 16/09/23)
Bal. Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

Result:
Physical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume 5 µl to 50 µl	5	5.1002	5.1206	0.1206	0.039
2.		25	25.1586	25.2592	0.2592	0.39
3.		50	50.1809	50.3816	0.3816	0.39

Remarks: i) Cubical Expansion co - efficient of pipette material taken as 10^{-5} µl / °k.
ii) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

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

Observations and Interpretations

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

Calibration Engineer
Calibrated by:
Measure Techno Lab
Kolkata
K.Barat
Calibration Engineer

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