



# MEASURE TECHNO LAB

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CC - 2545

## CALIBRATION CERTIFICATE OF MICRO PIPETTE

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CALIBRATION CERTIFICATE NO.: MTL / MMCH / R06 / 04 - 23

ULR - CC25452300009278F

1.0 Service Request No.: MTL / 05A / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,  
ICTC (ANC) Unit,  
Midnapore Medical College & Hospital,  
Paschim Medinipur.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	MMCH / ICTC / ANC / MP - 02
	c) Sl. No.:	19303190	d) Make:	Microlit
	e) Model / Type:	N.S.	f) Range:	50 µl (Fixed)
	g) Sensor:	N.A.	h) Resolution:	N.A.
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / <input checked="" type="checkbox"/> In House		

1.3 Date of receipt of item : 05-04-23

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 07-04-23

1.6 Recommended date of next calibration : 07-04-24

1.7 Date of Issue : 10-04-23

1.8 Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	1010.4 mbar

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

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

### 2.1 Result :

#### Mechanical 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 50 µl (Fixed)	50	49.5843	49.7826	-0.2174	0.39

Remarks: i) Cubical Expansion co - efficient of pipette material taken as  $10^{-5} \mu\text{l} / ^\circ\text{k}$ .

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

#### Opinions and Interpretations

Calibrated	<input checked="" type="checkbox"/>	Accepted / Valid for use
Limited Use	<input type="checkbox"/>	Rejected / Out of use

Calibration Engineer  
 Measure Techno Lab  
 Kolkata  
 Calibration Engineer

Checked / Approved by:  
  
 Quality & Technical Manager  
 S. Pande