



MEASURE TECHNO LAB
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CC - 2545

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CALIBRATION CERTIFICATE OF MICRO PIPETTE

LABORATION CERTIFICATE NO.: MTL / D / R09 / 06 - 24
 Service Request No.: MTL / 14G / 06 / 25 - 26

ULR - CC254524000029524F

1.1 Issued to: M/s. Diagnostics,
 190B, Rashbehari Avenue,
 Kolkata - 700029.

1.2 Description & Identification of item to be Calibrated:
 a) Name: Micro Pipette
 b) Code No.: DIA / BIO / MP / 5 - 50 / 01
 c) Sl. No.: 00080953
 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: Biochemistry
 j) Accuracy: N.S.
 k) Calibration done at: On Site / In House

1.3 Date of receipt of Item : 25-06-24
 1.4 Physical Condition of DUC : OK
 1.5 Date of calibration : 26-06-24
 1.6 Recommended date of next calibration : 26-06-25
 1.7 Date of Issue : 29-06-24

1.8 Environmental Conditions During Calibration:
 Temperature: 20 °C ± 2 °C
 Humidity: 30 % RH to 75 % RH
 Pressure: 998.2 mbar

1.9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 - 6 : 2022)

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) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)
 - ii) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

2.1 Result:

Mechanical Calibration: (Mass & Volume)

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	5.0900	5.1104	0.1104	0.04
2.	5 µl to 50 µl	25	24.7611	24.8601	-0.1399	0.36
3.		50	49.9813	50.1812	0.1812	0.38

- 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.
 iv) Calibrations are carried out without any adjustment or repair.

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

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

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

Checked / Approved by:

 Quality / Technical Manager
 S. Pandey