



MEASURE TECHNO LAB

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



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CALIBRATION CERTIFICATE OF MICRO PIPETTE

NABL ACCREDITED LABORATORY
Certificate No. CC - 2545

CALIBRATION CERTIFICATE NO.: MTL / MRBHICTC / R05 / 02 - 23

ULR - CC254523000004354F

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1.0 Service Request No.: MTL / 16E / 02 / 22 - 23

1.1 Issued to: Government of West Bengal,
Office of the M R Bangur Hospital ICTC
241, D.P.S. Road, Tollygunge, Kolkata - 33.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	MRBH / ICTC / MP - 01
	c) Sl. No.:	05111767	d) Make:	Microliit
	e) Model / Type:	Proline Plus	f) Range:	40 μ l to 200 μ l
	g) Sensor:	N.A.	h) Resolution:	0.4 μ l
	i) End User:	ICTC	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / <input checked="" type="checkbox"/> In House		

1.3 Date of receipt of item : 24-04-23

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 27-04-23

1.6 Recommended date of next calibration : 26-10-23

1.7 Date of Issue : 29-04-23

1.8 Environmental Conditions During Calibration:

Temperature: 23 °C \pm 2 °C

Humidity: 50 % RH \pm 10 % RH

Pressure: 1012.3 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 μ l	Mass of Water mg	Volume of Water at 20 °C μ l	Error μ l	Measurement Expanded Uncertainty $\pm \mu$ l
1.	Volume	40	40.6856	40.7683	0.7683	0.49
2.	40 μ l to 200 μ l	100	100.4835	100.8854	0.8854	
3.		200	200.1953	200.9961	0.9961	

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

Calibrated by:

K. Barot
Calibration Engineer
Measure Techno Lab

Kolkata

Checked/ Approved by:

Quality & Technical Manager

S. Pandey