



MEASURE TECHNO LAB

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CC - 2546

CALIBRATION CERTIFICATE OF MICRO PIPETTE

LABORATION CERTIFICATE NO.: MTL / D / R07 / 06 - 23

ULR - CC254523000018171F

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0 Service Request No.: MTL / 14F / 06 / 22 - 23

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

2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	DIA / BIO / MP - 02
	c) Sl. No.:	N.S.	d) Make:	Handypette
	e) Model / Type:	N.S.	f) Range:	100 µl to 1000 µl
	g) Sensor:	N.A.	h) Resolution:	10 µl
	i) End User:	Biochemistry	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / <input checked="" type="checkbox"/> In House		

3 Date of receipt of item :	24-06-23	1.4 Physical Condition of DUC :	OK
5 Date of calibration :	26-06-23	1.6 Recommended date of next calibration :	26-06-24
7 Date of Issue :	28-06-23		

8 Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	998.1 mbar

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

10 Traceability :

- a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
- b) The following standards / Equipment have been used.
 - Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)
 - 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)

11 Result :

Mechanical Calibration : (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	100	104.0250	104.4411	4.4411	0.39
2.	100 µl to 1000	500	504.0078	506.0238	6.0238	0.44
3.	µl	1000	1003.7270	1007.7419	7.7419	0.44

- 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:
Calibration Engineer
 Measure Techno Lab
 Kolkata
 Calibration Engineer

Checked / Approved by:

 Quality & Technical Manager

S. Pandey

Form No. - MTL/22/2006

Issue No. : 2 Issue Date : 10.11.06

Rev. No. : 04 Rev. Date : 01.04.22