

**MEASURE TECHNO LAB**  
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**CALIBRATION CERTIFICATE OF MICRO PIPETTE**

CALIBRATION CERTIFICATE NO.: MTL / D / R11 / 06 - 24

ULR - CC254524000029526F

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Service Request No.: MTL / 14G / 06 / 25 - 26

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

Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	DIA / BIO / MP - 03
	c) Sl. No.:	N.S.	d) Make:	Precica
	e) Model / Type:	N.S.	f) Range:	20 µl to 200 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		

Date of receipt of item : 25-06-24  
Date of calibration : 26-06-24  
Date of Issue : 29-06-24

1.4 Physical Condition of DUC : OK

1.6 Recommended date of next calibration : 26-06-25

Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	998.2 mbar

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

**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 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

**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	20	20.6309	20.7134	0.7134	0.36
2.	20 µl to 200 µl	100	100.5662	100.9685	0.9685	0.37
3.		200	200.4936	201.2956	1.2956	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:

*S. Banerjee*  
Calibration Engineer  
Measure Techno Lab.  
Kolkata



Checked / Approved by:

*S. Parulekar*  
Quality Technical Manager

Form No. - MTL/22/2006

Issue No. : 2 Issue Date : 10.11.06

Rev. No. : 04 Rev. Date : 01.04.22