



MEASURE TECHNO LAB

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CC - 2545

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CALIBRATION CERTIFICATE OF MICRO PIPETTE

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CALIBRATION CERTIFICATE NO.: MTL / D / R00 / 06 - 23

ULR - CC254523000018172F

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

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 - 04
	c) Sl. No.:	S52906H	d) Make:	Gilson
	e) Model / Type:	P200	f) Range:	10 µl to 100 µl
	g) Sensor:	N.A.	h) Resolution:	0.2 µl
	i) End User:	Biochemistry	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / <input checked="" type="checkbox"/> In House		

1.3 Date of receipt of item : 24-06-23 1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 26-06-23 1.6 Recommended date of next calibration : 26-06-24

1.7 Date of Issue : 28-06-23

1.8 Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	998.1 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 - 22 (MTL, Barrackpore) (Cal. Date: 16/09/22, Due Date: 16/09/23)

2.1 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	10	9.6125	9.6509	-0.3491	0.39
2.	10 µl to 100 µl	50	50.2562	50.4572	0.4572	
3.		100	100.3383	100.7397	0.7397	

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
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