



# MEASURE TECHNO LAB

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



CC - 2545

Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974,  
LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in

## CALIBRATION CERTIFICATE OF MICRO PIPETTE

CALIBRATION CERTIFICATE NO.: MTL / SMCH(PPTCT) / R05 / 03 - 23 ULR - CC254523000005252F

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1.0 Service Request No.: MTL / 02F / 03 / 22 - 23

1.1 Issued to: Office of The PPTCT,  
Department of O&G,  
Silchar Medical College & Hospital,  
Silchar, Cachar, Assam - 788014.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	PPTCT / SMCH / O & G / MP - 01
	c) Sl. No.:	N.S.	d) Make:	UDS
	e) Model / Type:	N.S.	f) Range:	10 µl to 100 µl
	g) Sensor:	N.A.	h) Resolution:	1 µl
	i) End User:	PPTCT	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / <input checked="" type="checkbox"/> In House		

1.3 Date of receipt of item : 28-02-23

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 02-03-23

1.6 Recommended date of next calibration : 02-03-24

1.7 Date of Issue : 04-03-23

1.8 Environmental Conditions During Calibration:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	1011.2 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 µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	10	9.8368	9.8761	-0.1239	0.39
2.	10 µl to 100 µl	50	49.5457	49.7439	-0.2561	
3.		100	99.2087	99.6055	-0.3945	

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

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	√	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