



# MEASURE TECHNO LAB

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KOLKATA - 700120, W.B.



CC - 2545

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## CALIBRATION CERTIFICATE OF MICRO PIPETTE

CALIBRATION CERTIFICATE NO.: MTL / KSDH / R02 / 04 - 23

ULR - CC254523000008967F

Page: 1 of 1

1.0 Service Request No.: MTL / 05 / 04 / 23 - 24

1.1 Issued to: HIV Testing Laboratory,  
ICTC Unit,  
Kharagpur Sub Division Hospital,  
Kharagpur, Paschim Medinipur,  
Pin - 721301.

1.2 Description & Identification of item to be Calibrated:	a) Name:	Micro Pipette	b) Code No.:	KSDH / ICTC / MP - 01
	c) Sl. No.:	N.S.	d) Make:	Micropet
	e) Model / Type:	N.S.	f) Range:	1000 µl (Fixed)
	g) Sensor:	N.A.	h) Resolution:	N.A.
	i) End User:	Laboratory	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / <input checked="" type="checkbox"/> In House		

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

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 05-04-23

1.6 Recommended date of next calibration : 05-04-24

1.7 Date of Issue : 07-04-23

1.8 Environmental Conditions During Calibration:

Temperature: 20 °C ± 2 °C

Humidity: 30 % RH to 75 % RH

Pressure: 1005.3 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 µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume 1000 µl (Fixed)	1000	1002.2865	1006.2956	6.2956	0.39

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.

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

Calibration Engineer

Measure Techno Lab

Kolkata  
K.Barat

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