


<b>MEASURE TECHNO LAB</b> <b>2, B.T. ROAD (JAYANTI CINEMA COMPLEX)</b> <b>BARRACKPORE, KOLKATA - 700120, W.B.</b>	<b>Form No. - MTL/22/2006</b>	 <b>NABL ACCREDITED LABORATORY</b> <small>Certificate No. CC - 2545</small>
<b>Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519,</b> <b>Mobile: 9831190974 , LAB:- 8100143376,</b> <b>E-mail: measuretechno@yahoo.co.in</b>	<b>CALIBRATION CERTIFICATE OF</b> <b>MICRO PIPETTE</b>	
<b>CALIBRATION CERTIFICATE NO.:</b> MTL / MMC&H(HIV) / R07 / 02 - 22	<b>ULR - CC254522000006781F</b>	<b>Page: 1 of 1</b>

**1.0 Service Request No.:** MTL / 23B / 02 / 21 - 22

**1.1 Issued to:** In - Charge HIV Testing Laboratory,  
 Department of Microbiology,  
 Midnapore Medical College & Hospital,  
 Paschim Medinipur, West Bengal – 721101.

**1.2 Description & Identification of item to be Calibrated:**

<b>a) Name:</b>	Micro Pipette	<b>b) Code No.:</b>	MMC / MICRO / SERO / MP - 03
<b>c) Sl. No.:</b>	YE169AA0037088	<b>d) Make:</b>	N.S.
<b>e) Model / Type:</b>	N.S.	<b>f) Range:</b>	5 µl to 50 µl
<b>g) Sensor:</b>	N.A.	<b>h) Resolution:</b>	0.5 µl
<b>i) End User:</b>	Serology	<b>j) Accuracy:</b>	N.S.
<b>k) Calibration done at:</b>	On Site / √ In House		

**1.3 Date of receipt of item :** 23-02-22      **1.4 Physical Condition of DUC :** OK  
**1.5 Date of calibration :** 24-02-22      **1.6 Recommended date of next calibration :** 24-02-23  
**1.7 Date of Issue :** 26-02-22

**1.8 Environmental Conditions During Calibration:**

<b>Temperature:</b>	23 °C ± 2 °C
<b>Humidity:</b>	50 % RH ± 10 % RH
<b>Pressure:</b>	1013.3 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) Weight Box (E1) Cal. Certificate No. WI / May / 19 / 010 (WEIGH INDIA, New Delhi) (Cal. Date: 17/05/19, Due Date: 17/05/22)
- ii) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2021 - 1227 (JRPM, Chennai) (Cal. Date: 26/08/21, Due Date: 25/08/22)
- iii) RTD (PT - 100) Cal. Certificate No. TL / 021 / 1091.2.1 (TEMPSENS, Udaipur) (Cal. Date: 25/10/21, Due Date: 24/10/22)

**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	5	5.1044	5.1248	0.1248	0.039
2.	5 µl to 50 µl	25	25.1130	25.2135	0.2135	0.39
3.		50	50.0686	50.2689	0.2689	0.39

**Remarks:** i) Cubical Expansion co - efficient of pipette material taken as 10<sup>-5</sup> µl / °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:  
**Measure Techno Lab**  
 K. Barata  
 Kolkata  
 Testing Engineer  
*26/02/22*

Checked / Approved by:  
  
 Quality & Technical Manager  
 S. Pandey