


<b>MEASURE TECHNO LAB</b> <b>2, B.T. ROAD (JAYANTI CINEMA COMPLEX)</b> <b>BARRACKPORE, KOLKATA - 700120, W.B.</b>	Form No. - MTL/22/2006	 NABL ACCREDITED LABORATORY Certificate No. CC - 2545
	<b>CALIBRATION CERTIFICATE OF</b> <b>MICRO PIPETTE</b>	
Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974 , LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in		
<b>CALIBRATION CERTIFICATE NO.:</b> MTL / SRLDSL / R04 / 01 - 22	<b>ULR - CC254522000000372F</b>	<b>Page: 1 of 1</b>

**1.0 Service Request No.:** MTL / 05C / 01 / 21 - 22

**1.1 Issued to:** M/s. SRL Dankuni Stat Lab,  
Prabhat Sandhya Appt., Ground Floor,  
Mouza - Marigala, Ward No. - 13,  
Dankuni, Hooghly, Pin - 712311.

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

a) Name:	Micro Pipette	b) Code No.:	PT / 004
c) Sl. No.:	YL183AE0027332	d) Make:	Sartorius
e) Model / Type:	N.S.	f) Range:	100 µl to 1000 µl
g) Sensor:	N.A.	h) Resolution:	5 µl
i) End User:	Lab General	j) Accuracy:	N.S.

k) Calibration done at: On Site / √ In House

**1.3 Date of receipt of item :** 04-01-22      **1.4 Physical Condition of DUC :** OK  
**1.5 Date of calibration :** 05-01-22      **1.6 Recommended date of next calibration :** 05-01-23  
**1.7 Date of Issue :** 06-01-22

**1.8 Environmental Conditions During Calibration:**

<b>Temperature:</b>	23 °C ± 2 °C
<b>Humidity:</b>	50 % RH ± 10 % RH
<b>Pressure:</b>	1014.8 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) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2021 - 1227 (JRPM, Chennai) (Cal. Date: 26/08/21, Due Date: 25/08/22)
  - ii) RTD (PT - 100) Cal. Certificate No. TL / 021 / 1091.2.1 (TEMPSENS, Udaipur) (Cal. Date: 25/10/21, Due Date: 24/10/22)
  - iii) Weight Box (E1) Cal. Certificate No. WI / May / 19 / 010 (WEIGH INDIA, New Delhi) (Cal. Date: 17/05/19, Due Date: 17/05/22)

**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	100	95.0079	95.3879	-4.6121	0.39
2.	100 µl to 1000	500	493.2329	495.2058	-4.7942	
3.	µl	1000	991.2013	995.1661	-4.8339	

- 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

**Testing Engineer**  
 Calibrated by:  
**Measure Techno Lab**  
 Kolkata  
 S. Manjapati  
 Testing Engineer

S.H  
 08/07/22

Checked / Approved by

Quality & Technical Manager  
**S. Pandey**

