

MEASURE TECHNO LAB

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

Form No. - MTL/22/2006

**CALIBRATION CERTIFICATE OF
MICRO PIPETTE**



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CALIBRATION CERTIFICATE NO.: MTL / SRLDSL / R02 / 01 - 22

ULR - CC254522000000370F

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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 / 002
c) Sl. No.:	17546256	d) Make:	Sartorius
e) Model / Type:	N.S.	f) Range:	20 µl to 200 µl
g) Sensor:	N.A.	h) Resolution:	0.2 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:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	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	20	20.5419	20.6241	0.6241	0.39
2.	20 µl to 200 µl	100	100.4953	100.8973	0.8973	
3.		200	200.2153	201.0162	1.0162	

Remarks: i) Cubical Expansion co - efficient of pipette material taken as 10⁻⁵ 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
S. Manjappa
Testing Engineer

S.M
06/01/22

Checked / Approved by

Quality & Technical Manager
S. Pandey

