



MEASURE TECHNO LAB
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NABL ACCREDITED LABORATORY
Certificate No. CC - 2515

CALIBRATION CERTIFICATE OF MICRO PIPETTE

CALIBRATION CERTIFICATE NO.: MTL / SRL(DGP) / R03 / 08 - 22

ULR - CC254522000023607F

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1.0 Service Request No.: MTL / 25E / 08 / 22 - 23

1.1 Issued to: M/s. SRL Limited,
Ambedkar Sarani, City Centre, CA - 11,
Urvashi Phase II, City: Durgapur - 713216.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Micro Pipette	b) Code No.:	SRL / MP - 01
c) Sl. No.:	17521718	d) Make:	Sartorius
e) Model / Type:	Proline Plus	f) Range:	2 µl to 20 µl
g) Sensor:	N.A.	h) Resolution:	0.02 µl
i) End User:	Lab	j) Accuracy:	N.S.
k) Calibration done at:	On Site / √ In House		

1.3 Date of receipt of item : 24-08-22

1.5 Date of calibration : 25-08-22

1.7 Date of Issue : 27-08-22

1.4 Physical Condition of DUC : OK

1.6 Recommended date of next calibration : 25-08-23

1.8 Environmental Conditions During Calibration:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	1003 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 - 21 (MTL, Barrackpore) (Cal. Date: 18/09/21, Due Date: 18/09/22)
- 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	2	2.0487	2.0569	0.0569	0.039
2.	2 µl to 20 µl	10	10.0234	10.0635	0.0635	0.039
3.		20	19.9982	20.0782	0.0782	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

Calibrated by:

K. Barati Engineer
Measure Techno Lab
Kolkata

Checked / Approved by:

Quality & Technical Manager
S. Pandey

