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| MEASURE TECHNO LAB 2, B.T. ROAD (JAYANTI CINEMA COMPLEX) BARRACKPORE, KOLKATA - 700120, W.B. Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974 , LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in | Form No. - MTL/22/2006 |  NABL ACCREDITED LABORATORY <small>Certificate No. CC - 2545</small> |
| | CALIBRATION CERTIFICATE OF MICRO PIPETTE | |
| CALIBRATION CERTIFICATE NO.: MTL / SDC / R06 / 05 - 21 | | ULR - CC254521000009553F |
| | | Page: 1 of 1 |

1.0 Service Request No.: MTL / 11 / 05 / 21- 22

1.1 Issued to: M/s. Sun Diagnostic Centre,
IMA Building, Ranihat, Near SCB Medical College,
Cuttack, Odisha - 753007.

1.2 Description & Identification of item to be Calibrated:

| | | | |
|-------------------------|----------------------|----------------|--------------------------|
| a) Name: | Micro Pipette | b) Code No.: | SDC / LAB / PIPETTE / 04 |
| c) Sl. No.: | V58804 | d) Make: | Accupipet |
| e) Model / Type: | Micropette | f) Range: | 1 µl to 100 µl |
| g) Sensor: | N.A. | h) Resolution: | 1 µl |
| i) End User: | Pathology | j) Accuracy: | N.S. |
| k) Calibration done at: | On Site / √ In House | | |

1.3 Date of receipt of item : 10-05-21

1.4 Physical Condition of DUC : OK

1.5 Date of calibration : 11-05-21

1.6 Recommended date of next calibration : 11-05-22

1.7 Date of Issue : 12-05-21

1.8 Environmental Conditions During Calibration:

| | |
|---------------------|-------------------|
| Temperature: | 23 °C ± 2 °C |
| Humidity: | 50 % RH ± 10 % RH |
| Pressure: | 1012.5 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) 1 mg to 200 g 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 - 2020 - 0795 (JRPM, Chennai) (Cal. Date: 01/09/20, Due Date: 31/08/21)
- iii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMPSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

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 | 1 | 0.9921 | 0.9961 | -0.0039 | 0.039 |
| 2. | 1 µl to 100 µl | 50 | 49.7847 | 49.9838 | -0.0162 | 0.39 |
| 3. | | 100 | 99.5826 | 99.9809 | -0.0191 | 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: **Testing Engineer**
Measure Techno Lab
S. Manapatra
Testing Engineer
Kolkata
12/05/21

Checked & Approved By:

Quality & Technical Manager
S. Pandey



MEASURE TECHNO LAB
2, B. T. Road, Barrackpore, Kol-120
Nomenclature: Micro Pipette
Code No. 232/LAB/PIPETTE/04
Cal Dt. 11/05/2021
SL. No. VRS04
Sign. 43
Recommended date of next calibration: 11/05/2022