# 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


CC - 2545

## CALIBRATION CERTIFICATE OF MICRO PIPETTE

CALIBRATION CERTIFICATE NO.:MTL / RPL / R06 / 07 - 24 | ULR - CC254524000033797F | 

**1.0 Service Request No.:** MTL / 25C / 07 / 24 - 25

**1.1 Issued to:** M/s. Recover Pathology Laboratory,
1360, Survey Park, A-1, Sammilani Park,
East Rajapur, Kolkata - 700075.

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

| | | | |
|---|---|---|---|
| **a) Name:** | Micro Pipette | **b) Code No.:** | RPL / MP - 01 |
| **c) Sl. No.:** | YE231BD0021383 | **d) Make:** | Dragon Lab |
| **e) Model / Type:** | N.S. | **f) Range:** | 10 µl to 100 µl |
| **g) Sensor:** | N.A. | **h) Resolution:** | 1 µl |
| **i) End User:** | Lab | **j) Accuracy:** | N.S. |

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

**1.3 Date of receipt of item :** 24-07-24
**1.4 Physical Condition of DUC :** OK
**1.5 Date of calibration :** 25-07-24
**1.6 Recommended date of next calibration :** 25-07-25
**1.7 Date of Issue :** 26-07-24

**1.8 Environmental Conditions During Calibration:**

| | |
|---|---|
| **Temperature:** | 20 °C ± 2 °C |
| **Humidity:** | 30 % RH to 75 % RH |
| **Pressure:** | 998.9 mbar |

**1.9 Method of Calibration:** SOP / MASS / 02 ( As Per ISO : 8655 – 6 : 2022)

**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) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

ii) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

**2.1 Result :**

**Mechanical Calibration: (Mass & Volume)**

| 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 10 µl to 100 µl | 10 | 10.0135 | 10.0536 | 0.0536 | 0.35 |
| 2. | | 50 | 49.9250 | 50.1247 | 0.1247 | 0.36 |
| 3. | | 100 | 99.7960 | 100.1952 | 0.1952 | 0.36 |

**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.**
**iv) Calibrations are carried out without any adjustment or repair.**

**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:
Calibration Engineer
Measure Techno Lab
K.Barat
Calibration Engineer

Checked / Approved by:
Measure Techno Lab Kolkata
Quality / Technical Manager
S Pandey

**MEASURE TECHNO LAB**
**2, B.T. ROAD (JAYANTI CINEMA COMPLEX), BARRACKPORE,**
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CC - 2545

# CALIBRATION CERTIFICATE OF MICRO PIPETTE

**CALIBRATION CERTIFICATE NO.:MTL / RPL / R07 / 07 - 24** | **ULR - CC254524000033798F** | 

**1.0 Service Request No.:** MTL / 25C / 07 / 24 - 25

**1.1 Issued to:** M/s. Recover Pathology Laboratory,
1360, Survey Park, A-1, Sammilani Park,
East Rajapur, Kolkata - 700075.

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

| | | | |
|---|---|---|---|
| **a) Name:** | Micro Pipette | **b) Code No.:** | RPL / MP - 02 |
| **c) Sl. No.:** | YE239BG0022567 | **d) Make:** | Dragon Lab |
| **e) Model / Type:** | N.S. | **f) Range:** | 100 µl to 1000 µl |
| **g) Sensor:** | N.A. | **h) Resolution:** | 5 µl |
| **i) End User:** | Lab | **j) Accuracy:** | N.S. |

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

**1.3 Date of receipt of item :** 24-07-24
**1.4 Physical Condition of DUC :** OK
**1.5 Date of calibration :** 25-07-24
**1.6 Recommended date of next calibration :** 25-07-25
**1.7 Date of Issue :** 26-07-24

**1.8 Environmental Conditions During Calibration:**

| | |
|---|---|
| **Temperature:** | 20 °C ± 2 °C |
| **Humidity:** | 30 % RH to 75 % RH |
| **Pressure:** | 998.9 mbar |

**1.9 Method of Calibration:** **SOP / MASS / 02 ( As Per ISO : 8655 – 6 : 2022)**

**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) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

ii) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

**2.1 Result :**

**Mechanical Calibration: (Mass & Volume)**

| 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 | 96.3433 | 96.7287 | -3.2713 | 0.35 |
| 2. | 100 µl to 1000 | 500 | 492.7501 | 494.7211 | -5.2789 | 0.36 |
| 3. | µl | 1000 | 989.0334 | 992.9895 | -7.0105 | 0.37 |

**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.**

**iv) Calibrations are carried out without any adjustment or repair.**

**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:**
*Calibration Engineer*
K Barat
Measure Techno Lab
Calibration Engineer
Kolkata

**Checked / Approved by:**
Measure Techno Lab KOLKATA
Quality / Technical Manager
S Pandey

# MEASURE TECHNO LAB

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## CALIBRATION CERTIFICATE OF MICRO PIPETTE

CALIBRATION CERTIFICATE NO.:MTL / RPL / R08 / 07 - 24 | ULR - CC254524000033799F | Page: 1 of 1

**1.0 Service Request No.:** MTL / 25C / 07 / 24 - 25

**1.1 Issued to:** M/s. Recover Pathology Laboratory,
1360, Survey Park, A-1, Sammilani Park,
East Rajapur, Kolkata - 700075.

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

| | | | |
|---|---|---|---|
| **a) Name:** | Micro Pipette | **b) Code No.:** | RPL / MP - 03 |
| **c) Sl. No.:** | YE231BD0016456 | **d) Make:** | Dragon Lab |
| **e) Model / Type:** | N.S. | **f) Range:** | 500 µl (Fixed) |
| **g) Sensor:** | N.A. | **h) Resolution:** | N.A. |
| **i) End User:** | Lab | **j) Accuracy:** | N.S. |

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

**1.3 Date of receipt of item :** 24-07-24
**1.4 Physical Condition of DUC :** OK
**1.5 Date of calibration :** 25-07-24
**1.6 Recommended date of next calibration :** 25-07-25
**1.7 Date of Issue :** 26-07-24

**1.8 Environmental Conditions During Calibration:**

| | |
|---|---|
| **Temperature:** | 20 °C ± 2 °C |
| **Humidity:** | 30 % RH to 75 % RH |
| **Pressure:** | 998.9 mbar |

**1.9 Method of Calibration:** SOP / MASS / 02 ( As Per ISO : 8655 – 6 : 2022)

**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) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

ii) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

**2.1 Result :**

**Mechanical Calibration: (Mass & Volume)**

| 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 500 µl (Fixed) | 500 | 496.2056 | 498.1904 | -1.8096 | 0.35 |

**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.
iv) Calibrations are carried out without any adjustment or repair.

**DUC - Device Under Calibration** **N.S. - Not Specified** **N.A. - Not Applicable**

| | | | |
|---|---|---|---|
| Opinions and Interpretations | | Accepted / Valid for use | |
| Calibrated | √ | Rejected / Out of use | |
| Limited Use | | | |

Calibrated by:
Calibration Engineer
Measure Techno Lab
K.Barat
Kolkata
K. Barat
Calibration Engineer

Checked / Approved by:
Measure Techno Lab KOLKATA
Quality / Technical Manager
S Pandey

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CC - 2545

# CALIBRATION CERTIFICATE OF MICRO PIPETTE

**CALIBRATION CERTIFICATE NO.:MTL / RPL / R09 / 07 - 24** | **ULR - CC254524000033800F** | 

**1.0 Service Request No.:** MTL / 25C / 07 / 24 - 25

**1.1 Issued to:** M/s. Recover Pathology Laboratory,
1360, Survey Park, A-1, Sammilani Park,
East Rajapur, Kolkata - 700075.

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

| | | | |
|---|---|---|---|
| **a) Name:** | Micro Pipette | **b) Code No.:** | RPL / MP - 04 |
| **c) Sl. No.:** | YE231BD0004352 | **d) Make:** | Dragon Lab |
| **e) Model / Type:** | N.S. | **f) Range:** | 5 µl to 50 µl |
| **g) Sensor:** | N.A. | **h) Resolution:** | 0.5 µl |
| **i) End User:** | Lab | **j) Accuracy:** | N.S. |

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

**1.3 Date of receipt of item :** 24-07-24
**1.4 Physical Condition of DUC :** OK
**1.5 Date of calibration :** 25-07-24
**1.6 Recommended date of next calibration :** 25-07-25
**1.7 Date of Issue :** 26-07-24

**1.8 Environmental Conditions During Calibration:**

| | |
|---|---|
| **Temperature:** | 20 °C ± 2 °C |
| **Humidity:** | 30 % RH to 75 % RH |
| **Pressure:** | 998.9 mbar |

**1.9 Method of Calibration:** **SOP / MASS / 02 ( As Per ISO : 8655 – 6 : 2022)**

**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) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

ii) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

**2.1 Result :**

**Mechanical Calibration: (Mass & Volume)**

| 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 | 4.9443 | 4.9641 | -0.0359 | 0.032 |
| 2. | 5 µl to 50 µl | 25 | 25.0747 | 25.1750 | 0.1750 | 0.36 |
| 3. | | 50 | 50.1133 | 50.3138 | 0.3138 | 0.37 |

**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.**

**iv) Calibrations are carried out without any adjustment or repair.**

**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:**
*Calibration Engineer*
Measure Techno Lab
Calibration Engineer
K Barat

**Checked / Approved by:**
Measure Techno KOLKATA
Quality / Technical Manager
S Pandey

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CC - 2545

## CALIBRATION CERTIFICATE OF MICRO PIPETTE

CALIBRATION CERTIFICATE NO.:MTL / RPL / R10 / 07 - 24 | ULR - CC254524000033801F | 

**1.0 Service Request No.:** MTL / 25C / 07 / 24 - 25

**1.1 Issued to:** M/s. Recover Pathology Laboratory,
1360, Survey Park, A-1, Sammilani Park,
East Rajapur, Kolkata - 700075.

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

| | | | |
|---|---|---|---|
| **a) Name:** | Micro Pipette | **b) Code No.:** | RPL / MP - 05 |
| **c) Sl. No.:** | YE231BD0017847 | **d) Make:** | Dragon Lab |
| **e) Model / Type:** | N.S. | **f) Range:** | 20 µl to 200 µl |
| **g) Sensor:** | N.A. | **h) Resolution:** | 1 µl |
| **i) End User:** | Lab | **j) Accuracy:** | N.S. |

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

**1.3 Date of receipt of item :** 24-07-24
**1.4 Physical Condition of DUC :** OK
**1.5 Date of calibration :** 25-07-24
**1.6 Recommended date of next calibration :** 25-07-25
**1.7 Date of Issue :** 26-07-24

**1.8 Environmental Conditions During Calibration:**

| | |
|---|---|
| **Temperature:** | 20 °C ± 2 °C |
| **Humidity:** | 30 % RH to 75 % RH |
| **Pressure:** | 998.9 mbar |

**1.9 Method of Calibration:** **SOP / MASS / 02 ( As Per ISO : 8655 – 6 : 2022)**

**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) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)

ii) Digital Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

**2.1 Result :**

**Mechanical Calibration: (Mass & Volume)**

| 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 µl to 200 µl | 20 | 19.4442 | 19.5220 | -0.4780 | 0.32 |
| 2. | | 100 | 98.7427 | 99.1377 | -0.8623 | 0.32 |
| 3. | | 200 | 200.4827 | 201.2846 | 1.2846 | 0.35 |

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.
iv) Calibrations are carried out without any adjustment or repair.

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:
Calibration Engineer
Measure Techno Lab
Calibration Engineer

Checked / Approved by:
Measure Techno KOLKATA
Quality / Technical Manager
S Pandey