

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

CALIBRATION CERTIFICATE OF MICRO PIPETTE

LABORATORY CERTIFICATE NO.: MTL / BMC / R07 / 11 - 23

ULR - CC254523000038276F

CC - 2545

Page: 1 of 1

Service Request No.: MTL / 10A / 11 / 23 - 24

Issued to: MOIC, ICTC (ANC),
Department of Gynae & Obstetrics,
Burdwan Medical College,
Purba Burdwan - 713104.

Description & Specification of item calibrated:	a) Name:	Micro Pipette	b) Code No.:	ICTC / ANC / BMCH / MP - 01
	c) Sl. No.:	19411483	d) Make:	Microlit
	e) Model / Type:	N.S.	f) Range:	100 µl (Fixed)
	g) Sensor:	N.A.	h) Resolution:	N.A.
	i) End User:	ICTC ANC	j) Accuracy:	N.S.
	k) Calibration done at:	On Site / √ In House		

Date of receipt of item :	09-11-23	1.4 Physical Condition of DUC :	OK
Date of calibration :	10-11-23	1.6 Recommended date of next calibration :	10-11-24
Date of Issue :	11-11-23		

Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	1010 mbar

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

Traceability :

Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

The following standards / Equipment have been used.

Thermometer Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)
Thermometer With Sensor Cal. Certificate No. MTL / TH / DTM / R01 / 09 - 23 (MTL, Barrackpore) (Cal. Date: 15/09/23, Due Date: 15/09/24)

Result:
Volumetric Calibration: (Mass & Volume)

Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
Volume 100 µl (Fixed)	100	99.2461	99.6431	-0.3569	0.32

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

C - Device Under Calibration N.S. - Not Specified N.A. - Not Applicable

Conclusions and Interpretations	
Calibrated	√ Accepted / Valid for use
Not for Use	Rejected / Out of use

Calibrated by Engineer
Measure Techno Lab.
K. Banat
Kolkata
Calibration Engineer

Checked / Approved by:

S. Pandey

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CC - 2545

CALIBRATION CERTIFICATE OF MICRO PIPETTE

Calibration Certificate No.: MTL / BMC / R08 / 11 - 23

ULR - CC254523000038277F

Page: 1 of 1

Service Request No.: MTL / 10A / 11 / 23 - 24

Issued to: MOIC, ICTC (ANC),
Department of Gynae & Obstetrics,
Burdwan Medical College,
Purba Burdwan - 713104.

Description & Identification of item to be Calibrated:

a) Name:	Micro Pipette	b) Code No.:	ICTC / ANC / BMCH / MP - 02
c) Sl. No.:	217794	d) Make:	P'fact
e) Model / Type:	N.S.	f) Range:	10 µl to 100 µl
g) Sensor:	N.A.	h) Resolution:	0.5 µl
i) End User:	ICTC ANC	j) Accuracy:	N.S.
k) Calibration done at:	On Site / √ In House		

Date of receipt of item : 09-11-23
Date of calibration : 10-11-23
Date of Issue : 11-11-23

1.4 Physical Condition of DUC : OK
1.6 Recommended date of next calibration : 10-11-24

Environmental Conditions During Calibration:

Temperature:	20 °C ± 2 °C
Humidity:	30 % RH to 75 % RH
Pressure:	1010 mbar

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

Traceability :

Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

The following standards / Equipment have been used.

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

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	10.0780	10.1183	0.1183	0.31
2.	10 µl to 100 µl	50	50.0751	50.2754	0.2754	0.32
3.		100	99.9823	100.3822	0.3822	0.33

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.

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

Calibration Engineer
Measure Techno Lab,
Kolkata
K. Barak
Calibration Engineer

Checked / Approved by:
S. Pandey
Quality / Technical Manager

No. - MTL/22/2006

Issue No. : 2 Issue Date : 10.11.06

Rev. No. : 04 Rev. Date : 01.04.22

MEASURE TECHNO LAB

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CC - 2545

CALIBRATION CERTIFICATE OF MICRO PIPETTE

Calibration Certificate No.: MTL / BMC / R09 / 11 - 23

ULR - CC254523000038278F

Page: 1 of 1

Service Request No.: MTL / 10A / 11 / 23 - 24

Issued to: MOIC, ICTC (ANC),
Department of Gynae & Obstetrics,
Burdwan Medical College,
Purba Burdwan - 713104.

Description & Identification of item: a) Name: Micro Pipette b) Code No.: ICTC / ANC / BMCH / MP - 03
c) Sl. No.: 205071 d) Make: P'fact
To be Calibrated: e) Model / Type: N.S. f) Range: 5 µl to 50 µl
g) Sensor: N.A. h) Resolution: 0.5 µl
i) End User: ICTC ANC j) Accuracy: N.S.
k) Calibration done at: On Site / √ In House

Date of receipt of item : 09-11-23 1.4 Physical Condition of DUC : OK
Date of calibration : 10-11-23 1.6 Recommended date of next calibration : 10-11-24
Date of Issue : 11-11-23

Environmental Conditions During Calibration: Temperature: 20 °C ± 2 °C
Humidity: 30 % RH to 75 % RH
Pressure: 1012 mbar

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

Traceability :

a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
b) The following standards / Equipment have been used.

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

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	5.0626	5.0829	0.0829	0.031
2.	5 µl to 50 µl	25	25.0535	25.1537	0.1537	0.32
3.		50	50.0818	50.2821	0.2821	0.34

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.
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

Calibration Engineer
Measure Techno Lab.
Kolkata
K. Barot
Calibration Engineer

Checked / Approved by
S. Pandey
Quality / Technical Manager

MEASURE TECHNO LAB
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 KOLKATA - 700120, W.B.

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 LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in



CALIBRATION CERTIFICATE OF MICRO PIPETTE

LABORATION CERTIFICATE NO.: MTL / BMC / R10 / 11 - 23

Service Request No.: MTL / 10A / 11 / 23 - 24

ULR - CC254523000038279F

CC - 2545

Page: 1 of 1

1.1 Issued to: MOIC, ICTC (ANC),
 Department of Gynae & Obstetrics,
 Burdwan Medical College,
 Purba Burdwan - 713104.

1.2 Description & Identification of item to be Calibrated:
 a) Name: Micro Pipette
 b) Code No.: ICTC / ANC / BMCH / MP - 04
 c) Sl. No.: 215400
 d) Make: P'fact
 e) Model / Type: N.S.
 f) Range: 20 µl to 200 µl
 g) Sensor: N.A.
 h) Resolution: 1 µl
 i) End User: ICTC ANC
 j) Accuracy: N.S.
 k) Calibration done at: On Site / In House

1.3 Date of receipt of item : 09-11-23
 1.4 Physical Condition of DUC : OK
 1.5 Date of calibration : 10-11-23
 1.6 Recommended date of next calibration : 10-11-24
 1.7 Date of Issue : 11-11-23

1.8 Environmental Conditions During Calibration:
 Temperature: 20 °C ± 2 °C
 Humidity: 30 % RH to 75 % RH
 Pressure: 1012 mbar

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

1.10 Traceability :
 a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
 b) The following standards / Equipment have been used.
 1) Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)
 2) 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)

1.11 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	19.7018	19.7806	-0.2194	0.33
2.	20 µl to 200 µl	100	99.1770	99.5737	-0.4263	0.34
3.		200	199.7188	200.5177	0.5177	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

Calibration Engineer
 Measure Techno Lab.
 Kolkata
 K. Barat
 Calibration Engineer

Checked / Approved by

 Quality / Technical Manager
 S. Pandey

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CALIBRATION CERTIFICATE OF MICRO PIPETTE

LABORATION CERTIFICATE NO.: MTL / BMC / R11 / 11 - 23

ULR - CC254523000038280F

Service Request No.: MTL / 10A / 11 / 23 - 24

1 Issued to: MOIC, ICTC (ANC),
Department of Gynae & Obstetrics,
Burdwan Medical College,
Purba Burdwan - 713104.

2 Description & Identification of item
a) Name: Micro Pipette
b) Code No.: ICTC / ANC / BMCH / MP - 05
c) Sl. No.: V50168
d) Make: Accupipet
e) Model / Type: N.S.
f) Range: 20 µl to 200 µl
g) Sensor: N.A.
h) Resolution: 0.2 µl
i) End User: ICTC ANC
j) Accuracy: N.S.
k) Calibration done at: On Site / √ In House

3 Date of receipt of item : 09-11-23
4 Date of calibration : 10-11-23
5 Date of Issue : 11-11-23
1.4 Physical Condition of DUC : OK
1.6 Recommended date of next calibration : 10-11-24

6 Environmental Conditions During Calibration:
Temperature: 20 °C ± 2 °C
Humidity: 30 % RH to 75 % RH
Pressure: 1012 mbar

9 Method of Calibration: SOP / MASS / 02 (As Per ISO : 8655 - 6 : 2022)

10 Traceability :
a) Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
b) The following standards / Equipment have been used.
Weights Cal. Certificate No. NC-210 (NSTAR, Ahmedabad) (Cal. Date: 16/05/22, Due Date: 15/05/25)
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)

11 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	19.6868	19.7655	-0.2345	0.35
2.	20 µl to 200 µl	100	99.2245	99.6214	-0.3786	0.38
3.		200	198.7090	199.5038	-0.4962	0.42

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) Callbrations 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	Rejected / Out of use
Calibrated	√	
Limited Use		

Calibration Engineer
Measure Techno Lab.
Kolkata
K. Barat
Calibration Engineer

Checked / Approved by:

Quality / Technical Manager
S. Pandey



accubet
MEASURE TECHNO LAB
2, B. T. Road, Barrackpore, Kol-120
Nomenclature *Micro Pipette*

20 - 200 µl
200
P'fact
MEASURE TECHNO LAB
2, B. T. Road, Barrackpore, Kol-120
Nomenclature *Micro Pipette*
Code No. *JCTC/ANCL/BMCH/SL No. 19411433*

5 - 50 µl
50.0
P'fact
MEASURE TECHNO LAB
2, B. T. Road, Barrackpore, Kol-120
Nomenclature *Micro Pipette*

10 - 100 µl
100.0
P'fact
Cal Dt. *10.11.23*
MP-02 Sign *[Signature]*
Recommended date of next calibration: *10.11.24*

19411433
MEASURE TECHNO LAB
2, B. T. Road, Barrackpore, Kol-120
Nomenclature *Micro Pipette*
Code No. *JCTC/ANCL/BMCH/SL No. 19411433*
Cal Dt. *10.11.23* Sign *[Signature]*
Recommended date of next calibration: *10.11.24*