

# THE PIPETEMANN

NABL ACCREDITED CALIBRATION LABORATORY

ADDING ACCURACY TO YOUR EQUIPMENT

MASS - VOLUME - THERMAL - SPEED - PRESSURE - TIMER - ELECTRO TECHNICAL



## CALIBRATION CERTIFICATE

CUSTOMER ADDRESS : M/s. ANJU DIAGNOSTIC CENTRE, NO.3, RAJAMANGALAM MAIN ROAD, VILLIVAKKAM, CHENNAI-600049.	
UNIQUE LAB REPORT NUMBER : ULR-CC231722000000652F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC220250721	DATE OF ISSUE : 16-02-2022
RECEIPT NO : 10631	TEMPERATURE : 25.8 °C
RECEIPT DATE : 15-02-2022	HUMIDITY : 62 %
JOB CARD NO : TPM603022249144	AIR PRESSURE : 962 hpa
JOB CARD DATE : 15-02-2022	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : LABMATE	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 100 - 1000 µl	DENSITY CORRECTION FACTOR [Z] : 1.0033 µl/mg
SERIAL NO : 358426	CALIBRATION METHOD : ISO 8655:2002 PART - 6
TIPS USED : 1000 µl	WEIGHING BALANCE : SEMI MICRO BALANCE
SCOPE OF ACCREDITATION : VOLUME - MICROPIPETTE ( 1 µl - 10000 µl )	

### DETAILS OF MASTER EQUIPMENTS USED FOR CALIBRATION

MASTER EQUIPMENT	: SARTORIUS
SL.NO	: 19402655
RESOLUTION	: 0.00001g upto 80 g & above is 0.0001g
CALIBRATED BY	: THE PIPETEMANN (MASS), COIMBATORE
CERTIFICATE NUMBER	: TPMCCM21050303
CALIBRATION VALIDITY	: 05-05-2022
TRACEABILITY	: NATIONAL STANDARDS



CERTIFICATE NO : TPMCC220250721

**CALIBRATED PARAMETER** : VOLUME  
**NO.OF MEASUREMENTS** : 10

I) **SELECTED VOLUME** : 1000 µl

1001.91 µl	1001.88 µl	1001.55 µl	1001.90 µl	1001.99 µl	1002.01 µl	1001.99 µl	1001.90 µl	1001.93 µl	100 µl
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**MEAN VALUE** : 1001.93 µl  
**SYSTEMATIC ERROR(es)** : 1.93 µl  
**RANDOM ERROR (Sr)** : 0.05 µl

**Standard Limit Value**  
 (±8.0 µl)  
 (±3.0 µl)

II) **SELECTED VOLUME** : 500 µl

500.66 µl	500.75 µl	500.77 µl	500.80 µl	500.83 µl	500.80 µl	500.78 µl	500.75 µl	500.85 µl	501.00 µl
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**MEAN VALUE** : 500.80 µl  
**SYSTEMATIC ERROR(es)** : 0.80 µl  
**RANDOM ERROR (Sr)** : 0.09 µl

**Standard Limit Value**  
 (±4.0 µl)  
 (±1.5 µl)

III) **SELECTED VOLUME** : 100 µl

99.93 µl	99.98 µl	99.99 µl	99.93 µl	100.01 µl	99.99 µl	99.94 µl	100.02 µl	100.02 µl	100.04 µl
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**MEAN VALUE** : 99.98 µl  
**SYSTEMATIC ERROR(es)** : -0.02 µl  
**RANDOM ERROR (Sr)** : 0.04 µl

**Standard Limit Value**  
 (±0.8 µl)  
 (±0.3 µl)

**CALIBRATED ON** : 16-02-2022

**CALIBRATION DUE ON** : 15-08-2022

**RESULTS :**

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
1000 µl	0.07 µl	0.07 µl
500 µl	0.10 µl	0.10 µl
100 µl	0.04 µl	0.04 µl

With coverage factor k is 2 for effective degrees of freedom is ∞ and the confidence level is 95%

**CALIBRATED BY :**

(M.VINOTH KUMAR)  
 CALIBRATION ENGINEER

**APPROVED BY :**

(K.BALA MAYUR PRIYAN )  
 TECHNICAL MANAGER

**NOTE :** 1.Master equipments used for calibration are traceable to National standards  
 2.The calibration reported are valid at the time of and under the stated conditions of the measurement  
 3.Results presented in this certificate relate only to the item mentioned & calibrated at

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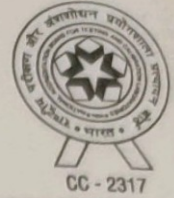
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CC - 2317

## CALIBRATION CERTIFICATE

CUSTOMER ADDRESS : M/s. ANJU DIAGNOSTIC CENTRE,  
NO.3, RAJAMANGALAM MAIN ROAD,  
VILLIVAKKAM,  
CHENNAI-600049.

UNIQUE LAB REPORT NUMBER : ULR-CC231722000000582F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC220250651	DATE OF ISSUE : 10-02-2022
RECEIPT NO : 10615	TEMPERATURE : 26.5 °C
RECEIPT DATE : 09-02-2022	HUMIDITY : 65 %
JOB CARD NO : TPM603022249074	AIR PRESSURE : 962 hpa
JOB CARD DATE : 09-02-2022	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : DRAGON LAB	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 100 - 1000 µl	DENSITY CORRECTION FACTOR [Z] : 1.0033 µl/mg
SERIAL NO : YE198AL0524144	CALIBRATION METHOD : ISO 8655:2002 PART - 6
TIPS USED : 1000 µl	WEIGHING BALANCE : SEMI MICRO BALANCE
SCOPE OF ACCREDITATION : VOLUME - MICROPIPETTE ( 1 µl - 10000 µl )	

## DETAILS OF MASTER EQUIPMENTS USED FOR CALIBRATION

MASTER EQUIPMENT : SARTORIUS  
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TRACEABILITY : NATIONAL STANDARDS

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CC - 2317

CERTIFICATE NO : TPMCC220250651

CALIBRATED PARAMETER : VOLUME  
 NO.OF MEASUREMENTS : 10

I) SELECTED VOLUME : 1000 µl

998.90 µl	998.84 µl	998.71 µl	998.79 µl	998.89 µl	998.91 µl	999.04 µl	998.04 µl	998.89 µl	998.98 µl
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MEAN VALUE : 998.89 µl  
 SYSTEMATIC ERROR(es) : -1.11 µl  
 RANDOM ERROR (Sr) : 0.09 µl

Standard Limit Value  
 (±8.0 µl)  
 (±3.0 µl)

II) SELECTED VOLUME : 500 µl

499.65 µl	499.96 µl	500.05 µl	500.04 µl	500.18 µl	500.25 µl	500.05 µl	500.25 µl	499.96 µl	500.28 µl
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MEAN VALUE : 500.07 µl  
 SYSTEMATIC ERROR(es) : 0.07 µl  
 RANDOM ERROR (Sr) : 0.19 µl

Standard Limit Value  
 (±4.0 µl)  
 (±1.5 µl)

III) SELECTED VOLUME : 100 µl

99.93 µl	99.95 µl	99.98 µl	99.92 µl	99.91 µl	99.95 µl	100.01 µl	99.96 µl	99.98 µl	100.02 µl
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MEAN VALUE : 99.96 µl  
 SYSTEMATIC ERROR(es) : -0.04 µl  
 RANDOM ERROR (Sr) : 0.04 µl

Standard Limit Value  
 (±0.8 µl)  
 (±0.3 µl)

CALIBRATION DUE ON : 09-08-2022

CALIBRATED ON : 10-02-2022

**RESULTS :**

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
1000 µl	0.07 µl	0.07 µl
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