

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. NAVANI DIAGNOSTIC CENTRE,
No.24, KOTTAI MAIN ROAD,

NAMAKKAL 637001
Phone No.:

UNIQUE LAB REPORT NUMBER : ULR-CC23172200005312F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC221255381	DATE OF ISSUE : 09-12-2022
RECEIPT NO : 11410	TEMPERATURE : 23.3 °C
RECEIPT DATE : 08-12-2022	HUMIDITY : 64 %
JOB CARD NO : TPM1013122253804	AIR PRESSURE : 961 hpa
JOB CARD DATE : 08-12-2022	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : FINNPIPETTE - F3	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 10 - 100 µl	DENSITY CORRECTION FACTOR [Z] : 1.0035 µl/mg
SERIAL NO : EJ16115	CALIBRATION METHOD : ISO 8655:2002 PART - 6
TIPS USED : 200 µl	WEIGHING BALANCE : SEMI MICRO BALANCE
SCOPE OF ACCREDITATION : VOLUME - MICROPIPETTE (1 µl - 10000 µl)	

DETAILS OF MASTER EQUIPMENTS USED FOR CALIBRATION

MASTER EQUIPMENT : SHIMADZU
SL.NO : D450020184
RESOLUTION : 0.00001g upto 82g & above is 0.0001g
CALIBRATED BY : THE PIPETEMANN (MASS), COIMBATORE
CERTIFICATE NUMBER : TPMCCM22020355
CALIBRATION VALIDITY : 03-02-2023
TRACEABILITY : NATIONAL STANDARDS

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CERTIFICATE NO : TPMCC221255381

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) **SELECTED VOLUME** : 100 μ l

100.08 μ l	100.09 μ l	100.07 μ l	100.11 μ l	100.08 μ l	100.08 μ l	100.07 μ l	100.08 μ l	100.11 μ l	100.07 μ l
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MEAN VALUE : 100.08 μ l

SYSTEMATIC ERROR(es) : 0.08 μ l

RANDOM ERROR (Sr) : 0.02 μ l

Standard Limit Value

($\pm 0.8 \mu$ l)

($\pm 0.3 \mu$ l)

II) **SELECTED VOLUME** : 50 μ l

49.8 μ l	49.8 μ l	49.79 μ l	49.84 μ l	49.83 μ l	49.8 μ l	49.82 μ l	49.79 μ l	49.8 μ l	49.81 μ l
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MEAN VALUE : 49.81 μ l

SYSTEMATIC ERROR(es) : -0.19 μ l

RANDOM ERROR (Sr) : 0.02 μ l

Standard Limit Value

($\pm 0.5 \mu$ l)

($\pm 0.2 \mu$ l)

III) **SELECTED VOLUME** : 10 μ l

9.97 μ l	10.01 μ l	10 μ l	9.99 μ l	10.01 μ l	10 μ l	9.99 μ l	9.96 μ l	10 μ l	10.01 μ l
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MEAN VALUE : 9.99 μ l

SYSTEMATIC ERROR(es) : -0.01 μ l

RANDOM ERROR (Sr) : 0.02 μ l

Standard Limit Value

($\pm 0.12 \mu$ l)

($\pm 0.08 \mu$ l)

CALIBRATED ON : 09-12-2022

CALIBRATION DUE ON : 08-06-2023

RESULTS :

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
100 μ l	0.04 μ l	0.04 μ l
50 μ l	0.03 μ l	0.03 μ l
10 μ l	0.03 μ l	0.03 μ l

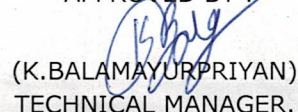
With coverage factor k is 2 for effective degrees of freedom is ∞ and the confidence level is 95%

CALIBRATED BY :


(P.VIGNESH)

CALIBRATION ENGINEER

APPROVED BY :


(K.BALAMAYURPRIYAN)
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 **THE PIPETEMANN**

4.This certificate shall not be reproduced except in full without written approval of **THE PIPETEMANN**

CALIBRATION CERTIFICATE

CUSTOMER ADDRESS : M/s. NAVANI DIAGNOSTIC CENTRE, No.24, KOTTAI MAIN ROAD, NAMAKKAL 637001 Phone No.:	
UNIQUE LAB REPORT NUMBER : ULR-CC231722000005313F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC221255382	DATE OF ISSUE : 09-12-2022
RECEIPT NO : 11410	TEMPERATURE : 23.2 °C
RECEIPT DATE : 08-12-2022	HUMIDITY : 58 %
JOB CARD NO : TPM1013122253805	AIR PRESSURE : 961 hpa
JOB CARD DATE : 08-12-2022	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : FINNPIPETTE - F3	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 100 - 1000 µl	DENSITY CORRECTION FACTOR [Z] : 1.0036 µl/mg
SERIAL NO : NW08509	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	: SHIMADZU
SL.NO	: D450020184
RESOLUTION	: 0.00001g upto 82g & above is 0.0001g
CALIBRATED BY	: THE PIPETEMANN (MASS), COIMBATORE
CERTIFICATE NUMBER	: TPMCCM22020355
CALIBRATION VALIDITY	: 03-02-2023
TRACEABILITY	: NATIONAL STANDARDS

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



CERTIFICATE NO : TPMCC221255382

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) SELECTED VOLUME : 1000 μ l

1003.16 μ l	1003.08 μ l	1003.18 μ l	1002.98 μ l	1003.04 μ l	1003.09 μ l	1003.14 μ l	1002.99 μ l	1003.06 μ l	1003.1 μ l
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MEAN VALUE : 1003.08 μ l
SYSTEMATIC ERROR(es) : 3.08 μ l
RANDOM ERROR (Sr) : 0.07 μ l

Standard Limit Value
($\pm 8.0 \mu$ l)
($\pm 3.0 \mu$ l)

II) SELECTED VOLUME : 500 μ l

501.74 μ l	501.68 μ l	501.6 μ l	501.65 μ l	501.71 μ l	501.77 μ l	501.69 μ l	501.75 μ l	501.7 μ l	501.78 μ l
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MEAN VALUE : 501.71 μ l
SYSTEMATIC ERROR(es) : 1.71 μ l
RANDOM ERROR (Sr) : 0.06 μ l

Standard Limit Value
($\pm 4.0 \mu$ l)
($\pm 1.5 \mu$ l)

III) SELECTED VOLUME : 100 μ l

100.24 μ l	100.3 μ l	100.26 μ l	100.31 μ l	100.27 μ l	100.34 μ l	100.28 μ l	100.31 μ l	100.26 μ l	100.23 μ l
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MEAN VALUE : 100.28 μ l
SYSTEMATIC ERROR(es) : 0.28 μ l
RANDOM ERROR (Sr) : 0.03 μ l

Standard Limit Value
($\pm 0.8 \mu$ l)
($\pm 0.3 \mu$ l)

CALIBRATED ON : 09-12-2022

CALIBRATION DUE ON : 08-06-2023

RESULTS :

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
1000 μ l	0.50 μ l	0.50 μ l
500 μ l	0.50 μ l	0.50 μ l
100 μ l	0.04 μ l	0.04 μ l

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

CALIBRATED BY :

APPROVED BY :

(M.VINOTH KUMAR)
DEPUTY TECHNICAL MANAGER

(K.BALAMAYURPRIYAN)
TECHNICAL MANAGER.

- NOTE : 1.Master equipments used for calibration are traceable to National standards
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