

THE PIPETEMANN

NABL ACCREDITED CALIBRATION LABORATORY
ADDING ACCURACY TO YOUR EQUIPMENT

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



CERT. NO. CC - 2317

CALIBRATION CERTIFICATE

CUSTOMER ADDRESS : M/s. CRISTAL LAB, OPP NEW BUS STAND, 11/2, ARTHANARI NAGAR, 2ND CROSS, SALEM 636004 Phone No.: 9500476699	
UNIQUE LAB REPORT NUMBER : ULR-CC231720000004145F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201244652	DATE OF ISSUE : 07-12-2020
RECEIPT NO : 9572	TEMPERATURE : 23.6 °C
RECEIPT DATE : 05-12-2020	HUMIDITY : 52 %
JOB CARD NO : TPM175122043075	AIR PRESSURE : 966 hpa
JOB CARD DATE : 05-12-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : HANDYPETTE	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 5 - 50 µl	DENSITY CORRECTION FACTOR [Z] : 1.0033 µl/mg
SERIAL NO : 031300505	CALIBRATION METHOD : ISO 8655:2002 PART - 6
TIPS USED : 200 µl	WEIGHING BALANCE : MICRO BALANCE
SCOPE OF ACCREDITATION : VOLUME - MICROPIPETTE (1 µl - 10000 µl)	

DETAILS OF MASTER EQUIPMENTS USED FOR CALIBRATION

MASTER EQUIPMENT	: SARTORIUS MICRO BALANCE
SL.NO	: 28001417
RESOLUTION	: 0.000001g upto 6.1g
CALIBRATED BY	: THE PIPETEMANN(MASS),COIMBATORE
CERTIFICATE NUMBER	: TPMCCM20030243
CALIBRATION VALIDITY	: 04-03-2021
TRACEABILITY	: NATIONAL STANDARDS

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BY NOTARY

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CERT. NO. CC - 2317

CERTIFICATE NO : TPMCC201244652

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) SELECTED VOLUME : 50 μ l

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

SYSTEMATIC ERROR(es) : -0.17 μ l

RANDOM ERROR (Sr) : 0.01 μ l

Standard Limit Value

(± 0.5 μ l)

(± 0.2 μ l)

II) SELECTED VOLUME : 25 μ l

24.76 μ l	24.77 μ l	24.76 μ l	24.77 μ l	24.77 μ l	24.77 μ l	24.77 μ l	24.77 μ l	24.77 μ l	24.77 μ l
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MEAN VALUE : 24.77 μ l

SYSTEMATIC ERROR(es) : -0.23 μ l

RANDOM ERROR (Sr) : 0 μ l

Standard Limit Value

(± 0.5 μ l)

(± 0.2 μ l)

III) SELECTED VOLUME : 5 μ l

4.98 μ l	4.99 μ l	4.98 μ l	4.98 μ l	4.99 μ l	4.99 μ l	4.98 μ l	4.99 μ l	4.99 μ l	4.98 μ l
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MEAN VALUE : 4.98 μ l

SYSTEMATIC ERROR(es) : -0.02 μ l

RANDOM ERROR (Sr) : 0.01 μ l

Standard Limit Value

(± 0.125 μ l)

(± 0.075 μ l)

CALIBRATED ON : 07-12-2020

CALIBRATION DUE ON : 06-06-2021

RESULTS :

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
50 μ l	0.02 μ l	0.01 μ l
25 μ l	0.01 μ l	0.01 μ l
5 μ l	0.01 μ l	0.01 μ l

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