

THE PIPETEMANN

NABL ACCREDITED CALIBRATION LABORATORY

ADDING ACCURACY TO YOUR EQUIPMENT

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



CC - 2317

CALIBRATION CERTIFICATE

CUSTOMER ADDRESS : M/s. DOCTORS LABORATORY, 14Q-2, NETHAJI BY-PASS ROAD, OPP. GOVT HOSPITAL, DHARMAPURI 636701 Phone No.: 9786084415	
UNIQUE LAB REPORT NUMBER : ULR-CC231722000000722F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC220250791	DATE OF ISSUE : 22-02-2022
RECEIPT NO : 10642	TEMPERATURE : 23.5 °C
RECEIPT DATE : 18-02-2022	HUMIDITY : 55 %
JOB CARD NO : TPM838022249214	AIR PRESSURE : 962 hpa
JOB CARD DATE : 18-02-2022	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : PIPETEMANN	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 100 - 1000 µl	DENSITY CORRECTION FACTOR [Z] : 1.0036 µl/mg
SERIAL NO : YE19AAM0049179	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	: 0.00001 g upto 80 g & above is 0.0001 g
CALIBRATED BY	: THE PIPETEMANN(MASS),COIMBATORE
CERTIFICATE NUMBER	: TPMCCM21050303
CALIBRATION VALIDITY	: 05-05-2022
TRACEABILITY	: NATIONAL STANDARDS

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CERTIFICATE NO : TPMCC220250791

CALIBRATED PARAMETER : VOLUME
NO.OF MEASUREMENTS : 10

I) SELECTED VOLUME : 1000 µl

994.25 µl	994.34 µl	994.27 µl	994.31 µl	994.22 µl	994.25 µl	994.29 µl	994.31 µl	994.27 µl	994.21 µl
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MEAN VALUE : 994.27 µl
 SYSTEMATIC ERROR(es) : -5.73 µl
 RANDOM ERROR (Sr) : 0.04 µl

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

II) SELECTED VOLUME : 500 µl

497.56 µl	497.6 µl	497.58 µl	497.46 µl	497.53 µl	497.56 µl	497.6 µl	497.46 µl	497.48 µl	497.5 µl
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MEAN VALUE : 497.53 µl
 SYSTEMATIC ERROR(es) : -2.47 µl
 RANDOM ERROR (Sr) : 0.06 µl

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

III) SELECTED VOLUME : 100 µl

100.17 µl	100.14 µl	100.2 µl	100.16 µl	100.18 µl	100.2 µl	100.19 µl	100.2 µl	100.17 µl	100.18 µl
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MEAN VALUE : 100.18 µl
 SYSTEMATIC ERROR(es) : 0.18 µl
 RANDOM ERROR (Sr) : 0.02 µl

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

CALIBRATED ON : 22-02-2022

CALIBRATION DUE ON : 21-02-2023

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 :

APPROVED BY :

(M.VINOTH KUMAR)
 DEPUTY TECHNICAL MANAGER

(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**