

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. MEDITECH DIAGNOSTIC CENTRE, (ADVANCED CLINICAL LAB), NEW No.208, OLD No.99/1, LAKE VIEW ROAD, WEST MAMBALAM, CHENNAI 600023. Phone No.: 044 23712378/48638586/9790964478/79.	
UNIQUE LAB REPORT NUMBER : ULR-CC231720000002893F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC200943400	DATE OF ISSUE : 07-09-2020
RECEIPT NO : 9343	TEMPERATURE : 24.9 °C
RECEIPT DATE : 05-09-2020	HUMIDITY : 53 %
JOB CARD NO : TPM847092041823	AIR PRESSURE : 963 hpa
JOB CARD DATE : 05-09-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : ERBA BIOHIT	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 100 - 1000 µl	DENSITY CORRECTION FACTOR [Z] : 1.0037 µl/mg
SERIAL NO : 7049116	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	: TPMCCM20020237
CALIBRATION VALIDITY	: 07-02-2021
TRACEABILITY	: NATIONAL STANDARDS

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CERT. NO. CC - 2317

CERTIFICATE NO : TPMCC200943400

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) SELECTED VOLUME : 1000 μ l

993.78 μ l 993.83 μ l 993.87 μ l 993.9 μ l 993.95 μ l 993.98 μ l 993.95 μ l 993.92 μ l 993.88 μ l 993.97 μ l

MEAN VALUE : 993.90 μ l

SYSTEMATIC ERROR(es) : -6.1 μ l

RANDOM ERROR (Sr) : 0.06 μ l

Standard Limit Value

(\pm 8.0 μ l)

(\pm 3.0 μ l)

II) SELECTED VOLUME : 500 μ l

497.02 μ l 497.06 μ l 497.1 μ l 497.04 μ l 497.07 μ l 497.12 μ l 497.14 μ l 497.2 μ l 497.23 μ l 497.3 μ l

MEAN VALUE : 497.13 μ l

SYSTEMATIC ERROR(es) : -2.87 μ l

RANDOM ERROR (Sr) : 0.09 μ l

Standard Limit Value

(\pm 4.0 μ l)

(\pm 1.5 μ l)

III) SELECTED VOLUME : 100 μ l

99.66 μ l 99.71 μ l 99.68 μ l 99.71 μ l 99.74 μ l 99.73 μ l 99.76 μ l 99.78 μ l 99.79 μ l 99.83 μ l

MEAN VALUE : 99.74 μ l

SYSTEMATIC ERROR(es) : -0.26 μ l

RANDOM ERROR (Sr) : 0.05 μ l

Standard Limit Value

(\pm 0.8 μ l)

(\pm 0.3 μ l)

CALIBRATED ON : 07-09-2020

CALIBRATION DUE ON : 06-09-2021

RESULTS :

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
1000 μ l	0.07 μ l	0.07 μ l
500 μ l	0.10 μ l	0.10 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 :

S. Loganathan
(S. LOGANATHAN)

CALIBRATION ENGINEER

APPROVED BY :

K. Bala Mayur Priyan
(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**