

# 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-CC231720000004144F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201244651	DATE OF ISSUE : 07-12-2020
RECEIPT NO : 9572	TEMPERATURE : 23.6 °C
RECEIPT DATE : 05-12-2020	HUMIDITY : 59 %
JOB CARD NO : TPM175122043074	AIR PRESSURE : 966 hpa
JOB CARD DATE : 05-12-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : HANDYPETTE	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 500 µl - Fixed Volume	DENSITY CORRECTION FACTOR [Z] : 1.0033 µl/mg
SERIAL NO : NIL	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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NO. 22, FIRST FLOOR, PRASHANTHI NAGAR, K.R. PURAM, AVARAMPALAYAM ROAD, COIMBATORE - 641 006, TAMIL NADU, INDIA.  
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BY NOTARY

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CERT. NO. CC - 2317

CERTIFICATE NO: TPMCC201244651

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) NOMINAL VOLUME : 500  $\mu$ l

499.29 $\mu$ l	499.34 $\mu$ l	499.29 $\mu$ l	499.33 $\mu$ l	499.25 $\mu$ l	499.35 $\mu$ l	499.33 $\mu$ l	499.35 $\mu$ l	499.29 $\mu$ l	499.25 $\mu$ l
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MEAN VALUE : 499.31  $\mu$ l

Standard Limit Value

SYSTEMATIC ERROR(es) : -0.69  $\mu$ l

( $\pm$ 4.0  $\mu$ l)

RANDOM ERROR (Sr) : 0.04  $\mu$ l

( $\pm$ 1.5  $\mu$ l)

CALIBRATED ON : 07-12-2020

CALIBRATION DUE ON : 06-06-2021

## RESULTS :

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
500 $\mu$ l	0.10 $\mu$ l	0.10 $\mu$ l

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

CALIBRATED BY :

APPROVED BY :

(M.VINOTH KUNAR)

CALIBRATION ENGINEER

(K.BALA MAYUR PRIYAN)

TECHNICAL MANAGER

- NOTE :
- 1.Master equipments used for calibration are traceable to National standards
  - 2.The calibration results reported are valid at the time of and under the stated condition of the measurement
  - 3.Results presented in this certificate relate only to the item mentioned & calibrated at
  - 4.This certificate shall not be reproduced except in full without written approval of

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