

THE PIPETEMANN

NABL ACCREDITED CALIBRATION LABORATORY
ADDING ACCURACY TO YOUR EQUIPMENT
MASS - VOLUME - THERMAL - SPEED - PRESSURE - TIMER - ELECTRO TECHNICAL



CERT. NO. CC - 2317

CERTIFICATE NO : TPMCC201043868

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) **SELECTED VOLUME** : 1000 μ l

998.48 μ l	998.38 μ l	998.61 μ l	998.37 μ l	998.45 μ l	998.48 μ l	998.53 μ l	998.48 μ l	998.38 μ l	998.28 μ l
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MEAN VALUE : 998.44 μ l

SYSTEMATIC ERROR(es) : -1.56 μ l

RANDOM ERROR (Sr) : 0.09 μ l

Standard Limit Value

(\pm 8.0 μ l)

(\pm 3.0 μ l)

II) **SELECTED VOLUME** : 500 μ l

501.45 μ l	501.4 μ l	501.45 μ l	501.63 μ l	501.71 μ l	501.65 μ l	501.64 μ l	501.45 μ l	501.44 μ l	501.54 μ l
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MEAN VALUE : 501.54 μ l

SYSTEMATIC ERROR(es) : 1.54 μ l

RANDOM ERROR (Sr) : 0.11 μ l

Standard Limit Value

(\pm 4.0 μ l)

(\pm 1.5 μ l)

III) **SELECTED VOLUME** : 100 μ l

100.27 μ l	100.23 μ l	100.12 μ l	100.17 μ l	100.26 μ l	100.12 μ l	100.26 μ l	100.17 μ l	100.06 μ l	100.15 μ l
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MEAN VALUE : 100.18 μ l

SYSTEMATIC ERROR(es) : 0.18 μ l

RANDOM ERROR (Sr) : 0.07 μ l

Standard Limit Value

(\pm 0.8 μ l)

(\pm 0.3 μ l)

CALIBRATED ON : 10-10-2020

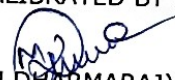
CALIBRATION DUE ON : 09-10-2021

RESULTS :

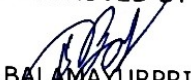
RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
1000 μ l	0.07 μ l	0.07 μ l
500 μ l	0.10 μ l	0.10 μ l
100 μ l	0.04 μ l	0.04 μ l

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

CALIBRATED BY :


(M. DHARMARAJ)
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**

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**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. ALPHA CLINICAL LABORATORY & ECG CENTRE, NO:17/1,BAZAAR STREET, MUTHAPUDUPET, I A F, AVADI , CHENNAI 600055 Phone No.: 9941500551	
UNIQUE LAB REPORT NUMBER : ULR-CC231720000003361F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201043868	DATE OF ISSUE : 10-10-2020
RECEIPT NO : 9426	TEMPERATURE : 24.5 °C
RECEIPT DATE : 10-10-2020	HUMIDITY : 54 %
JOB CARD NO : TPM856102042291	AIR PRESSURE : 959 hpa
JOB CARD DATE : 10-10-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : LABMATE	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 100-1000 µl	DENSITY CORRECTION FACTOR [Z] : 1.0037 µl/mg
SERIAL NO : OH518256	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 : TPMCC201043867

CALIBRATED PARAMETER : VOLUME
NO.OF MEASUREMENTS : 10

I) **SELECTED VOLUME** : 50 μ l

50.08 μ l	50.05 μ l	50.08 μ l	50.06 μ l	50.07 μ l	50.05 μ l	50.06 μ l	50.05 μ l	50.06 μ l	50.07 μ l
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MEAN VALUE : 50.06 μ l
SYSTEMATIC ERROR(es) : 0.06 μ l
RANDOM ERROR (Sr) : 0.01 μ l

Standard Limit Value
($\pm 0.5 \mu$ l)
($\pm 0.2 \mu$ l)

II) **SELECTED VOLUME** : 25 μ l

24.99 μ l	24.96 μ l	24.98 μ l	24.96 μ l	24.97 μ l	24.96 μ l	24.96 μ l	24.97 μ l	24.96 μ l	24.99 μ l
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MEAN VALUE : 24.97 μ l
SYSTEMATIC ERROR(es) : -0.03 μ l
RANDOM ERROR (Sr) : 0.01 μ l

Standard Limit Value
($\pm 0.5 \mu$ l)
($\pm 0.2 \mu$ l)

III) **SELECTED VOLUME** : 5 μ l

5 μ l	5 μ l	5.01 μ l	4.99 μ l	5 μ l	4.98 μ l	5 μ l	5.01 μ l	4.98 μ l	5 μ l
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MEAN VALUE : 5.00 μ l
SYSTEMATIC ERROR(es) : -
RANDOM ERROR (Sr) : 0.01 μ l

Standard Limit Value
($\pm 0.125 \mu$ l)
($\pm 0.075 \mu$ l)

CALIBRATED ON : 10-10-2020

CALIBRATION DUE ON : 09-10-2021

RESULTS :

RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
50 μ l	0.01 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.DHARMARAJ)
CALIBRATION ENGINEER

APPROVED BY :

(K.BALAMAYURPRIYAN)
TECHNICAL MANAGER.

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CERT. NO. CC - 2317

CALIBRATION CERTIFICATE

CUSTOMER ADDRESS : M/s. ALPHA CLINICAL LABORATORY & ECG CENTRE, NO:17/1,BAZAAR STREET, MUTHAPUDUPET, I A F, AVADI, CHENNAI 600055 Phone No.: 9941500551	
UNIQUE LAB REPORT NUMBER : ULR-CC231720000003360F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201043867	DATE OF ISSUE : 10-10-2020
RECEIPT NO : 9426	TEMPERATURE : 24.5 °C
RECEIPT DATE : 10-10-2020	HUMIDITY : 53 %
JOB CARD NO : TPM856102042290	AIR PRESSURE : 959 hpa
JOB CARD DATE : 10-10-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : LABMATE	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 5-50 µl	DENSITY CORRECTION FACTOR [Z] : 1.0037 µl/mg
SERIAL NO : 0E504386	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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Cert. No. TPMCC201043867
 Cali.Date 10-10-2020
 Due Date 09-10-2021
THE PIPETEMANN CBE - 6
 0422 - 2568182 91 98430 59043
 CE504386



Cert. No. TPMCC201043868
 Cali.Date 10-10-2020
 Due Date 09-04-2021
THE PIPETEMANN CBE - 6
 0422 - 2568182 91 98430 59043
 CH518256