

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. SRI BABA DIAGNOSTICS CENTRE (TPM 835),
NO.6 VELAI CHETTI STREET,
UTHIRAMERUR,
KANCHIPURAM,
CHENNAI 603406
Phone No.: 044-27272752, 9585318761

UNIQUE LAB REPORT NUMBER : ULR-CC231720000003532F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201044039	DATE OF ISSUE : 21-10-2020
RECEIPT NO : 9453	TEMPERATURE : 23.2 °C
RECEIPT DATE : 17-10-2020	HUMIDITY : 52 %
JOB CARD NO : TPM859102042462	AIR PRESSURE : 961 hpa
JOB CARD DATE : 17-10-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : FINNPIPETTE- F3	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 1000 µl - Fixed Volume	DENSITY CORRECTION FACTOR [Z] : 1.0033 µl/mg
SERIAL NO : RW04082	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

Page 1 Of 2

NO. 22, FIRST FLOOR, PRASHANTHI NAGAR, K.R. PURAM, AVARAMPALAYAM ROAD, COIMBATORE - 641 006, TAMIL NADU, INDIA.
PHONE : 91-422-2568182 / 2568183 MOBILE : 91-98430 59043 / 98949 55733 E-mail : thepipettemann@gmail.com Website : www.pipettemann.in

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CERT. NO. CC - 2317

CERTIFICATE NO: TPMCC201044039

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) NOMINAL VOLUME : 1000 μ l

999.99 μ l	1000.1 μ l	1000.04 μ l	1000.1 μ l	999.99 μ l	1000.1 μ l	999.99 μ l	1000.1 μ l	1000.08 μ l	1000.1 μ l
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MEAN VALUE : 1000.06 μ l

SYSTEMATIC ERROR(es) : 0.06 μ l

RANDOM ERROR (Sr) : 0.05 μ l

Standard Limit Value

(\pm 8.0 μ l)

(\pm 3.0 μ l)

CALIBRATED ON : 21-10-2020

CALIBRATION DUE ON : 20-10-2021

RESULTS :

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

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

CALIBRATED BY :

APPROVED BY :

(S.LOGANATHAN)

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
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CALIBRATION CERTIFICATE

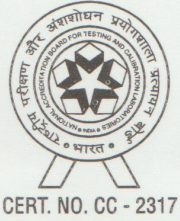
CUSTOMER ADDRESS : M/s. SRI BABA DIAGNOSTICS CENTRE (TPM 835), NO.6 VELAI CHETTI STREET, UTHIRAMERUR, KANCHIPURAM, CHENNAI 603406 Phone No.: 044-27272752, 9585318761	
UNIQUE LAB REPORT NUMBER : ULR-CC231720000003510F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201044017	DATE OF ISSUE : 21-10-2020
RECEIPT NO : 9453	TEMPERATURE : 23.2 °C
RECEIPT DATE : 17-10-2020	HUMIDITY : 52 %
JOB CARD NO : TPM859102042440	AIR PRESSURE : 961 hpa
JOB CARD DATE : 17-10-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : FINNPIPETTE- F3	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 10 µl - Fixed Volume	DENSITY CORRECTION FACTOR [Z] : 1.0033 µl/mg
SERIAL NO : QW15109	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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CERTIFICATE NO: TPMCC201044017

CALIBRATED PARAMETER : VOLUME
NO.OF MEASUREMENTS : 10

I) NOMINAL VOLUME : 10 μ l

10 μ l	9.98 μ l	10 μ l	10 μ l	10 μ l	10 μ l	10 μ l	10 μ l	10 μ l	10.01 μ l
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MEAN VALUE : 10.00 μ l
SYSTEMATIC ERROR(es) : 0 μ l
RANDOM ERROR (Sr) : 0.01 μ l

Standard Limit Value
(± 0.12 μ l)
(± 0.08 μ l)

CALIBRATED ON : 21-10-2020

CALIBRATION DUE ON : 20-10-2021

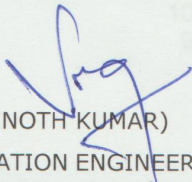
RESULTS :

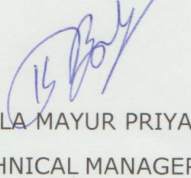
RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)
10 μ l	0.01 μ l	0.01 μ l

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

CALIBRATED BY :

APPROVED BY :


(M.VINOTH KUMAR)
CALIBRATION ENGINEER


(K. BALA MAYUR PRIYAN)
TECHNICAL MANAGER

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CERT. NO. CC - 2317

CALIBRATION CERTIFICATE

CUSTOMER ADDRESS : M/s. SRI BABA DIAGNOSTICS CENTRE (TPM 835), NO.6 VELAI CHETTI STREET, UTHIRAMERUR, KANCHIPURAM, CHENNAI 603406 Phone No.: 044-27272752, 9585318761	
UNIQUE LAB REPORT NUMBER : ULR-CC231720000003489F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201043996	DATE OF ISSUE : 16-10-2020
RECEIPT NO : 9449	TEMPERATURE : 23.6 °C
RECEIPT DATE : 16-10-2020	HUMIDITY : 52 %
JOB CARD NO : TPM859102042419	AIR PRESSURE : 957 hpa
JOB CARD DATE : 16-10-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : PIPETEMANN	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 5 - 50 µl	DENSITY CORRECTION FACTOR [Z] : 1.0032 µl/mg
SERIAL NO : YE19BAL0612503	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. CC - 2317

CERTIFICATE NO : TPMCC201043996

CALIBRATED PARAMETER : VOLUME

NO.OF MEASUREMENTS : 10

I) SELECTED VOLUME : 50 μ l

49.92 μ l	49.93 μ l	49.94 μ l	49.92 μ l	49.92 μ l	49.92 μ l	49.94 μ l	49.95 μ l	49.95 μ l	49.95 μ l
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MEAN VALUE : 49.93 μ l
SYSTEMATIC ERROR(es) : -0.07 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

24.95 μ l	24.94 μ l	24.95 μ l	24.95 μ l	24.95 μ l	24.94 μ l	24.94 μ l	24.94 μ l	24.95 μ l	24.94 μ l
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MEAN VALUE : 24.94 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)

III) SELECTED VOLUME : 5 μ l

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

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

CALIBRATED ON : 16-10-2020

CALIBRATION DUE ON : 15-10-2021

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 :

(K. BALA MAYUR PRIYAN)
TECHNICAL MANAGER

APPROVED BY :

(M.PALANISELVAN)
TECHNICAL DIRECTOR

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UNIQUE LAB REPORT NUMBER : ULR-CC231720000003490F	DISCIPLINE : MECHANICAL CALIBRATION
NAME OF EQUIPMENT : MICROPIPETTE	PARAMETER : VOLUME
CERTIFICATE NO : TPMCC201043997	DATE OF ISSUE : 16-10-2020
RECEIPT NO : 9449	TEMPERATURE : 23.6 °C
RECEIPT DATE : 16-10-2020	HUMIDITY : 52 %
JOB CARD NO : TPM859102042420	AIR PRESSURE : 957 hpa
JOB CARD DATE : 16-10-2020	MEDIUM OF WEIGHING : GRADE III WATER
BRAND : VISION PLUS	DENSITY OF MEDIUM : APPROXIMATELY 1
RANGE : 100 - 1000 µl	DENSITY CORRECTION FACTOR [Z] : 1.0032 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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CERT. NO. CC - 2317

CERTIFICATE NO : TPMCC201043997

CALIBRATED PARAMETER : VOLUME													
NO.OF MEASUREMENTS : 10													
I) SELECTED VOLUME : 1000 µl													
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">1001.6 µl</td> <td style="padding: 2px;">1001.85 µl</td> <td style="padding: 2px;">1002.12 µl</td> <td style="padding: 2px;">1001.85 µl</td> <td style="padding: 2px;">1001.91 µl</td> <td style="padding: 2px;">1001.75 µl</td> <td style="padding: 2px;">1002.11 µl</td> <td style="padding: 2px;">1002.15 µl</td> <td style="padding: 2px;">1002.17 µl</td> <td style="padding: 2px;">1002.19 µl</td> </tr> </table>	1001.6 µl	1001.85 µl	1002.12 µl	1001.85 µl	1001.91 µl	1001.75 µl	1002.11 µl	1002.15 µl	1002.17 µl	1002.19 µl			
1001.6 µl	1001.85 µl	1002.12 µl	1001.85 µl	1001.91 µl	1001.75 µl	1002.11 µl	1002.15 µl	1002.17 µl	1002.19 µl				
MEAN VALUE : 1001.97 µl	Standard Limit Value												
SYSTEMATIC ERROR(es) : 1.97 µl	(±8.0 µl)												
RANDOM ERROR (Sr) : 0.21 µl	(±3.0 µl)												
II) SELECTED VOLUME : 500 µl													
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">499.4 µl</td> <td style="padding: 2px;">499.44 µl</td> <td style="padding: 2px;">499.46 µl</td> <td style="padding: 2px;">499.5 µl</td> <td style="padding: 2px;">499.54 µl</td> <td style="padding: 2px;">499.57 µl</td> <td style="padding: 2px;">499.5 µl</td> <td style="padding: 2px;">499.53 µl</td> <td style="padding: 2px;">499.56 µl</td> <td style="padding: 2px;">499.57 µl</td> </tr> </table>	499.4 µl	499.44 µl	499.46 µl	499.5 µl	499.54 µl	499.57 µl	499.5 µl	499.53 µl	499.56 µl	499.57 µl			
499.4 µl	499.44 µl	499.46 µl	499.5 µl	499.54 µl	499.57 µl	499.5 µl	499.53 µl	499.56 µl	499.57 µl				
MEAN VALUE : 499.51 µl	Standard Limit Value												
SYSTEMATIC ERROR(es) : -0.49 µl	(±4.0 µl)												
RANDOM ERROR (Sr) : 0.06 µl	(±1.5 µl)												
III) SELECTED VOLUME : 100 µl													
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">100.03 µl</td> <td style="padding: 2px;">100.05 µl</td> <td style="padding: 2px;">100.07 µl</td> <td style="padding: 2px;">100.1 µl</td> <td style="padding: 2px;">100.13 µl</td> <td style="padding: 2px;">100.15 µl</td> <td style="padding: 2px;">100.17 µl</td> <td style="padding: 2px;">100.19 µl</td> <td style="padding: 2px;">100.23 µl</td> <td style="padding: 2px;">100.19 µl</td> </tr> </table>	100.03 µl	100.05 µl	100.07 µl	100.1 µl	100.13 µl	100.15 µl	100.17 µl	100.19 µl	100.23 µl	100.19 µl			
100.03 µl	100.05 µl	100.07 µl	100.1 µl	100.13 µl	100.15 µl	100.17 µl	100.19 µl	100.23 µl	100.19 µl				
MEAN VALUE : 100.13 µl	Standard Limit Value												
SYSTEMATIC ERROR(es) : 0.13 µl	(±0.8 µl)												
RANDOM ERROR (Sr) : 0.07µl	(±0.3 µl)												
CALIBRATED ON : 16-10-2020	CALIBRATION DUE ON : 15-10-2021												
RESULTS :													
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>RANGE</th> <th>MEASUREMENT UNCERTAINTY</th> <th>CMC (approved by NABL)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1000 µl</td> <td style="text-align: center;">0.14 µl</td> <td style="text-align: center;">0.07 µl</td> </tr> <tr> <td style="text-align: center;">500 µl</td> <td style="text-align: center;">0.10 µl</td> <td style="text-align: center;">0.10 µl</td> </tr> <tr> <td style="text-align: center;">100 µl</td> <td style="text-align: center;">0.04 µl</td> <td style="text-align: center;">0.04 µl</td> </tr> </tbody> </table>	RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)	1000 µl	0.14 µl	0.07 µl	500 µl	0.10 µl	0.10 µl	100 µl	0.04 µl	0.04 µl	
RANGE	MEASUREMENT UNCERTAINTY	CMC (approved by NABL)											
1000 µl	0.14 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 degress of freedom is ∞ and the confidence level is 95%													
CALIBRATED BY : (K. BALA MAYUR PRIYAN) TECHNICAL MANAGER	APPROVED BY : (M. PALANISELVAN) TECHNICAL DIRECTOR												
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													