

**CALIBRATION CERTIFICATE**

CUSTOMER : M/s. CHRISTY FRIEDGRAM INDUSTRY PRIVATE LIMITED,  
ADDRESS  
A-2,A-3,SIDCO INDUSTRIAL ESTATE,  
ANDIPALAYAM(PO),  
TIRUCHENGODE,  
NAMAKKAL 637214  
**LOCATION: CHEMICAL LAB**

|                                                                                                                                                      |                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| UNIQUE LAB REPORT NUMBER : ULR- CC231726000000811F                                                                                                   | DISCIPLINE : MECHANICAL CALIBRATION<br>PARAMETER : VOLUME  |
| NAME OF EQUIPMENT : MICROPIPETTE                                                                                                                     | RELEVANT SECTION : ISO 17025:2017<br>Section 7.8.2 & 7.8.4 |
| CERTIFICATE NUMBER : PCLCC260305709                                                                                                                  | DATE OF ISSUE : 05-03-2026                                 |
| C.C.F NUMBER : PCL/25-26/00937                                                                                                                       | TEMPERATURE : 20.1 °C                                      |
| DATE OF RECEIPT : 02-03-2026                                                                                                                         | HUMIDITY : 72 %                                            |
| JOB CARD NUMBER : PCL302032605709                                                                                                                    | AIR PRESSURE : 966 hpa                                     |
| JOB CARD DATE : 02-03-2026                                                                                                                           | MEDIUM OF WEIGHING : GRADE III WATER                       |
| BRAND : EPPENDORF RP                                                                                                                                 | DENSITY OF MEDIUM : APPROXIMATELY 1                        |
| RANGE : 10 - 100 µl                                                                                                                                  | DENSITY CORRECTION FACTOR [Z] : 1.0028 µl/mg               |
| SERIAL NUMBER : H15264F (MP-CH-01)                                                                                                                   | WEIGHING BALANCE : SEMI MICRO BALANCE                      |
| TIPS USED : 200 µl                                                                                                                                   | CALIBRATION PROCEDURE NUMBER : MSP 7.2.1.1-1               |
| CALIBRATION LOCATION : AT LAB                                                                                                                        | CONDITION OF DUC RECEIVED : GOOD                           |
| METHOD OF CALIBRATION : Based on ISO 8655:2022 PART - 6 standards our calibration procedure : MSP 7.2.1.1-1 is applied for micropipette calibration. |                                                            |
| SCOPE OF ACCREDITATION : VOLUME - MICROPIPETTE ( 0.2 µl - 10000 µl )                                                                                 |                                                            |

**DETAILS OF MASTER EQUIPMENTS USED FOR CALIBRATION**

| MASTER EQUIPMENT | SL.NO      | CALIBRATED BY                                             | CERTIFICATE NUMBER | EQUIPMENT CALIBRATION VALIDITY | TRACEABILITY      |
|------------------|------------|-----------------------------------------------------------|--------------------|--------------------------------|-------------------|
| SHIMADZU -1      | D316301053 | PIPETTEMANN CALIBRATION LABORATORY LLP (MASS), COIMBATORE | PCLCCM2602069      | 20-02-2027                     | NATIONAL STANDARD |



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| <b>CALIBRATED PARAMETER</b> : VOLUME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Note: All Volumes are converted and reported @27 °C                                                                                                                                                                                                                                                                                             |       |                         |        |         |       |         |       |         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------|--------|---------|-------|---------|-------|---------|
| <b>NO.OF MEASUREMENTS</b> : 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| I) SELECTED VOLUME : 100 µl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <span>100 µl</span> <span>99.97 µl</span> <span>99.78 µl</span> <span>99.89 µl</span> <span>99.78 µl</span> <span>99.89 µl</span> <span>99.69 µl</span> <span>99.78 µl</span> <span>99.89 µl</span> <span>100 µl</span> </div> <div style="display: flex; justify-content: space-between;"> <div> MEAN VALUE : 99.87 µl<br/> SYSTEMATIC ERROR(es) : -0.13 µl<br/> RANDOM ERROR (Sr) : 0.11 µl </div> <div style="text-align: right;"> Standard Limit Value<br/> (±0.80 µl)<br/> (±0.30 µl) </div> </div>                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| II) SELECTED VOLUME : 50 µl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <span>49.86 µl</span> <span>49.83 µl</span> <span>49.85 µl</span> <span>49.74 µl</span> <span>49.85 µl</span> <span>49.83 µl</span> <span>49.86 µl</span> <span>49.75 µl</span> <span>49.64 µl</span> <span>49.86 µl</span> </div> <div style="display: flex; justify-content: space-between;"> <div> MEAN VALUE : 49.81 µl<br/> SYSTEMATIC ERROR(es) : -0.19 µl<br/> RANDOM ERROR (Sr) : 0.07 µl </div> <div style="text-align: right;"> Standard Limit Value<br/> (±0.80 µl)<br/> (±0.30 µl) </div> </div>                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| III) SELECTED VOLUME : 10 µl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <span>9.93 µl</span> <span>9.98 µl</span> <span>9.94 µl</span> <span>9.94 µl</span> <span>9.99 µl</span> <span>9.9 µl</span> <span>9.95 µl</span> <span>9.99 µl</span> <span>9.98 µl</span> <span>9.99 µl</span> </div> <div style="display: flex; justify-content: space-between;"> <div> MEAN VALUE : 9.96 µl<br/> SYSTEMATIC ERROR(es) : -0.04 µl<br/> RANDOM ERROR (Sr) : 0.03 µl </div> <div style="text-align: right;"> Standard Limit Value<br/> (±0.80 µl)<br/> (±0.30 µl) </div> </div>                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| CALIBRATED ON : 05-03-2026 <div style="float: right;">CALIBRATION DUE ON : 04-03-2027</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| <b>RESULTS :</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">RANGE</th> <th style="width:50%;">MEASUREMENT UNCERTAINTY</th> </tr> </thead> <tbody> <tr> <td>100 µl</td> <td>0.11 µl</td> </tr> <tr> <td>50 µl</td> <td>0.03 µl</td> </tr> <tr> <td>10 µl</td> <td>0.03 µl</td> </tr> </tbody> </table> | RANGE | MEASUREMENT UNCERTAINTY | 100 µl | 0.11 µl | 50 µl | 0.03 µl | 10 µl | 0.03 µl |
| RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MEASUREMENT UNCERTAINTY                                                                                                                                                                                                                                                                                                                         |       |                         |        |         |       |         |       |         |
| 100 µl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.11 µl                                                                                                                                                                                                                                                                                                                                         |       |                         |        |         |       |         |       |         |
| 50 µl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.03 µl                                                                                                                                                                                                                                                                                                                                         |       |                         |        |         |       |         |       |         |
| 10 µl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.03 µl                                                                                                                                                                                                                                                                                                                                         |       |                         |        |         |       |         |       |         |
| With coverage factor k is 2 for effective degrees of freedom is ∞ and the confidence level is 95%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |
| CALIBRATED BY :<br><br><div style="text-align: center;"> <br/> (M.VINOTH KUMAR)<br/> DEPUTY TECHNICAL MANAGER </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | AUTHORIZED SIGNATORY :<br><br><div style="text-align: center;"> <br/> (K.BALA MAYUR PRIYAN)<br/> TECHNICAL MANAGER </div>                                                                                                                                                                                                                       |       |                         |        |         |       |         |       |         |
| NOTE : 1.The recalibration interval should be determined on the user requirement<br>2.Master equipments used for calibration are traceable to National standards<br>3.The calibration reported are valid at the time of and under the stated conditions of the measurement<br>4.Results presented in this certificate relate only to the item mentioned & calibrated at <b>PIPETTEMANN CALIBRATION LABORATORY LLP</b><br>5.This certificate shall not be reproduced except in full without written approval of <b>PIPETTEMANN CALIBRATION LABORATORY LLP</b><br>6.All precautions have been taken to avoid any error or omission while calibrating the DUC and issuing this certificate<br>7.The volume measurements are recorded as observed.Hence the results are reported without any adjustment. |                                                                                                                                                                                                                                                                                                                                                 |       |                         |        |         |       |         |       |         |

