



# Perfect Calibration Centre Pvt. Ltd.

No. 84, "Times Corner", Gengu Reddy Road, Egmore, Chennai - 600 008.  
Ph : (044) 28192530, 28192930, 28193130 www.perfectcallab.in  
Email : perfectcallab.info@gmail.com / info@perfectcallab.in



CC - 2207

**NABL LAB FOR : MECHANICAL • THERMAL • ET • AIR / FLUID FLOW • FORCE • MASS • OPTICAL**

## CERTIFICATE OF CALIBRATION

ULR-CC220722000060187F  
ISSUE DATE:29/11/2022

**CUSTOMER :** M/s. GREEN LABS & DIAGNOSTICS  
**ADDRESS :** No. 3/199, 1st MAIN ROAD, PERUMBAKKAM.  
CHENNAI-600100.  
**CUST REF :** SRF.NO:5076,DATE:28/11/2022  
**DEPT :** AT LAB

**CERTIFICATE NO. :** PC - 11 - 22 / ATL / 5076 - 01  
**CAL DATE :** 29/11/2022  
**DUE DATE :** 28/11/2023  
**PAGE NO. :** 1/1  
**DISCIPLINE :** MECHANICAL

### MICRO PIPETTE

**DATE OF RECEIPT :** 28/11/2022  
**PHYSICAL CONDITION :** SATISFACTORY

**TEMPERATURE :** 26.4°C  
**HUMIDITY :** 48%RH

**ATMOSPHERIC PRESSURE :** 1002.2

**Z FACTOR :** 1.0029 µL/mg

### PIPETTE DETAILS :

**MAKE :** LABMATE  
**TYPE :** VARIABLE  
**ID. NO. :** ----  
**SL NO. :** 388799

**MODEL :** ----  
**RANGE :** 100 - 1000 µL  
**L.C. :** 1 µL

STANDARD USED	SL.NO/ID.NO	CERT. NO.	VALIDITY
ELECTRONIC BALANCE	37014 / PCCPL/EB - 01	PC - 09 - 22 / ATL / 3765 - 01	04/09/2023
ELECTRONIC BALANCE	1125510540 / PCCPL/EB - 02	PC - 09 - 22 / ATL / 3765 - 02	04/09/2023

**CALIBRATION PROCEDURE :** WI-M-MP-44(L)

**REFERENCE STANDARD :** ISO 8655-6 & ISO/ TR 20461

### CALIBRATION RESULTS

#### 1. LOWER VOLUME

**100**

**µl**

**NO. OF MEASUREMENT : 10**

99.367	99.397	99.538	98.996	99.217	99.327	99.036	98.906	98.996	99.227
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

**MEAN VOLUME:** 99.201

**ERROR LIMIT**

**ERROR LIMIT**

**SYSTEMATIC ERROR (e<sub>s</sub>) µl :** 0.799 (± 0.8µL)

**RANDOM ERROR (Sr) µl :** 0.2094 (± 0.3µL)

**SYSTEMATIC ERROR (e<sub>s</sub>) in % :** 0.799 (± 0.8%)

**RANDOM ERROR (Cv) % :** 0.2111 (± 0.3%)

#### 2. MIDDLE VOLUME

**500**

**µl**

**NO. OF MEASUREMENT : 10**

499.304	499.354	499.153	499.133	499.073	499.294	499.153	499.324	499.153	499.123
---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

**MEAN VOLUME:** 499.207

**ERROR LIMIT**

**ERROR LIMIT**

**SYSTEMATIC ERROR (e<sub>s</sub>) µl :** 0.793 (± 0.8µL)

**RANDOM ERROR (Sr) µl :** 0.101 (± 0.3µL)

**SYSTEMATIC ERROR (e<sub>s</sub>) in % :** 0.159 (± 4.0%)

**RANDOM ERROR (Cv) % :** 0.020 (± 1.5%)

#### 3. UPPER VOLUME

**1000**

**µl**

**NO. OF MEASUREMENT : 10**

999.510	999.450	999.500	999.701	999.510	999.500	999.480	999.099	999.520	999.711
---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

**MEAN VOLUME:** 999.498

**ERROR LIMIT**

**ERROR LIMIT**

**SYSTEMATIC ERROR (e<sub>s</sub>) µl :** 0.502 (± 0.8µL)

**RANDOM ERROR (Sr) µl :** 0.166 (± 0.3µL)

**SYSTEMATIC ERROR (e<sub>s</sub>) in % :** 0.050 (± 8.0%)

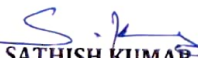
**RANDOM ERROR (Cv) % :** 0.017 (± 3.0%)

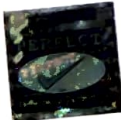
UNCERTAINTY OF MEASUREMENTS = ±0.27µl

UNCERTAINTY MULTIPLIED BY THE COVERAGE FACTOR K=2 SUCH THAT THE COVERAGE PROBABILITY CORRESPONDS TO APPROXIMATELY 95%.

NOTE : THIS CALIBRATION CERTIFICATE IS VALID FOR SCIENTIFIC & INDUSTRIAL PURPOSE ONLY AND NOT APPLICABLE FOR COMMERCIAL PURPOSE


\*\*\* END OF CERTIFICATE \*\*\*

  
**SATHISH KUMAR S**  
ENGINEER



  
**SATHISH KUMAR S**



  
**B. MURALI KISHORE**  
DEPUTY QUALITY MANAGER

Calibrated / Checked by

Prepared by

Authorised Signatory



THIS REPORT RELATES ONLY TO THE ITEM(S) SUBMITTED. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF M/s. PERFECT CALIBRATION CENTRE PVT. LTD. ALL REFERENCE STANDARDS USED ARE TRACEABLE TO NATIONAL / INTERNATIONAL STANDARDS AS PER ISO / IEC 17025 - 2017. THE RESULTS REPORTED ARE VALID AT THE TIME AND UNDER STATED CONDITIONS OF MEASUREMENTS. THE CALIBRATION INTERVAL IS TO BE DECIDED BY THE "USER" QF/7.8/01

CHE 88300