MEASURE TECHNO LAB
2, B.T. ROAD (JAYANTI CINEMA COMPLEX)
BARRACKPORE, KOLKATA - 700120, W.B.
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Form No. - MTL/22/2006

CALIBRATION CERTIFICATE OF AUTO PIPETTE

NABL ACCREDITED LABORATORY
Certificate No. CC - 2515

CALIBRATION CERTIFICATE NO.:MTL / HOP(LN-II) / R03 / 09 - 21 | **ULR - CC254521000018555F** |

1.0 Service Request No.: MTL / 14E / 09 / 21 - 22

1.1 Issued to: House of Pathology Labs Pvt. Ltd.
L - 113, Lajpat Nagar - 2,
New Delhi - 24.

1.2 Description & Identification of item to be Calibrated:

a) Name:	Auto Pipette	**b) Code No.:**	N.A.
c) Sl. No.:	YE20CAS0090170	**d) Make:**	Dragon Lab
e) Model / Type:	N.A.	**f) Range:**	10 µl to 100 µl
g) Sensor:	N.A.	**h) Resolution:**	1 µl
i) End User:	Lab	**j) Accuracy:**	± 0.80 µl

k) Calibration done at: On Site / √ In House

1.3 Date of receipt of item : 09-09-21 **1.4 Physical Condition of DUC :** OK

1.5 Date of calibration : 14-09-21 **1.6 Recommended date of next calibration :** 14-09-22

1.7 Date of Issue : 16-09-21

1.8 Environmental Conditions During Calibration:

Temperature:	23 °C ± 2 °C
Humidity:	50 % RH ± 10 % RH
Pressure:	1005.6 mbar

1.9 Method of Calibration: **SOP / MASS / 02 (As Per ISO : 8655 – 6 : 2002)**

2.0 Traceability :

a)Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.

b)The following standards / Equipment have been used.

i) Weight Box (E1) Cal. Certificate No. WI / May / 19 / 010 (WEIGH INDIA, New Delhi) (Cal. Date: 17/05/19, Due Date: 17/05/22)

ii) Data Acquisition Switch Unit Cal. Certificate No. JRPM - CCTR - ET - 2021 - 1227 (JRPM, Chennai) (Cal. Date: 26/08/21, Due Date: 25/08/22)

iii) RTD (PT - 100) Cal. Certificate No. TL / 020 / 891.2.1 (TEMPSENS, Udaipur) (Cal. Date: 27/10/20, Due Date: 26/10/21)

2.1 Result :

Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value µl	Mass of Water mg	Volume of Water at 20 °C µl	Error µl	Measurement Expanded Uncertainty ± µl
1.	Volume	10	10.2324	10.2743	0.2743	
2.	10 µl to 100 µl	50	50.1631	50.3683	0.3683	0.39
3.		100	100.1099	100.5193	0.5193	

Remarks: i) Cubical Expansion co - efficient of pipette material taken as 10^{-5} µl / °k.
ii) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
iii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.

DUC - Device Under Calibration **N.S. - Not Specified** **N.A. - Not Applicable**

Opinions and Interpretations			
Calibrated	√	Accepted / Valid for use	√
Limited Use		Rejected / Out of use	

Calibrated by:
K. Barat
K. Barat
Testing Engineer
Testing Engineer
Measure Techno Lab
Kolkata

Measure Techno Lab KOLKATA SKP

Checked / Approved by:
Quality & Technical Manager
S. Pandey