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CALIBRATION CERTIFICATE OF **AUTO PIPETTE**

Form No. - MTL/22/2006



CALIBRATION CERTIFICATE NO.:MTL / UWC / R08 / 02 - 22

ULR - CC254522000006597F

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23-02-25

1.0 Service Request No.: MTL / 23A / 02 / 21 - 22

1.1 Issued to:

M/s. Unique Wellness Care,

Plot No. 19, Street No. 5/12, Guru Nanak Dev Colony,

New Delhi - 110042.

1.2 Description &

a) Name:

Auto Pipette

b) Code No.:

N.S.

Identification of item

c) Sl. No.:

MJ428692

d) Make:

Flexipet

to be Calibrated:

e) Model / Type:

f) Range:

5 μl to 50 μl

g) Sensor:

N.A. N.A.

h) Resolution:

 $0.5 \mu l$

i) End User:

Lab

i) Accuracy:

 $\pm 0.50 \mu$ l

k) Calibration done at:

On Site / √ In House

1.3 Date of receipt of item:

21-02-24

1.4 Physical Condition of DUC:

OK

1.5 Date of calibration:

23-02-24

1.6 Recommended date of next calibration:

1.7 Date of Issue:

25-02-24

Temperature:

23 °C ± 2 °C

Humidity:

50 % RH ± 10 % RH

Pressure:

1010.3 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)

1.8 Environmental Conditions During Calibration:

(Cal. Date: 26/08/21, Due Date: 25/08/22)

iii) RTD (PT - 100) Cal. Certificate No. TL / 021 / 1091.2.1

(TEMPSENS, Udaipur)

(Cal. Date: 25/10/21, Due Date: 24/10/22)

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	5	5.1133	5.1342	0.1342	0.039
2.	5 µl to 50 µl	20	20.1164	20.1987	0.1987	0.39
3.		50	50.0625	50.2673	0.2673	0.40

Remarks: i) Cubical Expansion co - efficient of pipette material taken as 10^{-5} μ l / °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	
Elimited osc	// 2	60%

Calibrated by:

Measing Engineerhno Lab Kolkata