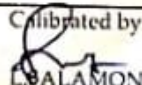



## CALIBRATION CERTIFICATE

EQN/FT/7.8/01		Page 1 of 2	
CRF No.	: EQN/CRF/2203134	Date of Calibration	: 25-Mar-22
Certificate No	: 2021-22/EQN/2203134-14	Recom. Due Date	: 24-Mar-23
ULR No.	: CC276022000005128F		
<b>Customer Details</b>		<b>Calibrated at</b>	
THE CHIEF MEDICAL OFFICER		: Lab	
SLM Home, UPHC Brook Bond Road,		Date of Receipt : 25-Mar-22	
Coimbatore.		Cond. On Receipt : Satisfactory	
		Date of Issue : 28-Mar-22	
<b>Details of Test Instrument:</b>			
Description	: Micropipette	Model	: --
Range	: 10 - 100 $\mu$ l	Serial No	: --
Least Count	: 1 $\mu$ l	Identification No	: --
Make	: --	Accuracy	: As Per Manual
Working range	: --	Location	: ICTC
<b>Details of Standard Used</b>			
Name	: Electronic SemiMicro Balance	Certificate No.	: 2021-22/EQN/MASTER-256
CP No	: EQN/CP/MS-03	Valid upto	: 07-May-22
Environmental Details		Reference Standard	: ISO 8655-6
: Temperature : 25 $\pm$ 2 $^{\circ}$ C		Relative Humidity : 50 $\pm$ 10 % RH	
<b>MECHANICAL CALIBRATION</b>			
(Volume)			
<b>Calibration Results</b>			
1. Lower Volume :		10 $\mu$ l	
No. of Measurements		10	
10.08	10.05	10.08	10.04
10.02	10.00	10.05	10.10
10.03	10.04		
Mean Value :	10.0 $\mu$ l		
<b>Error Limits(<math>\pm</math>)</b>			
Systematic Error :	0.05 $\mu$ l	0.12 $\mu$ l	
Systematic Error :	0.46 %	1.20 %	
Random Error :	0.03 $\mu$ l	0.08 $\mu$ l	
Random Error :	0.31 %	0.80 %	
Measurement Uncertainty :	$\pm$ 0.36 $\mu$ l		

 Calibrated by :  
  
**L. SALAMON**  
 (Calibration Engineer)

 Authenticated by:  
  
**V. RAIKARTHICK**  
 (QM)

## CALIBRATION CERTIFICATE

CRF No. : EQN/CRF/2203134  
 UIR No : CC276022000005128F

**MECHANICAL CALIBRATION**  
 (Volume)

**Calibration Results**

2. Middle Volume: 50  $\mu$ l No. of Measurements 10

50.12	50.03	50.09	50.10
50.12	49.94	49.85	49.90
50.01	49.93		

Mean Value : 50.0  $\mu$ l

**Error Limits( $\pm$ )**

Systematic Error :	0.01	$\mu$ l	0.50	$\mu$ l
Systematic Error :	0.02	%	1.00	%
Random Error :	0.10	$\mu$ l	0.20	$\mu$ l
Random Error :	0.20	%	0.40	%

Measurement Uncertainty :  $\pm$  0.36  $\mu$ l

3. Nominal Volume: 100  $\mu$ l No. of Measurements 10

100.09	100.11	100.16	100.24
100.19	100.07	99.98	100.13
100.09	100.14		

Mean Value : 100.1  $\mu$ l

**Error Limits( $\pm$ )**

Systematic Error :	0.12	$\mu$ l	0.80	$\mu$ l
Systematic Error :	0.12	%	0.80	%
Random Error :	0.07	$\mu$ l	0.30	$\mu$ l
Random Error :	0.07	%	0.30	%

Measurement Uncertainty :  $\pm$  0.36  $\mu$ l

**Remarks**

1. The reported Expanded Uncertainty is calculated at 95.45 % C.L. with coverage factor  $k=2$
2. The Above Results are within the maximum permissible Error

*\*End of certificate\**

Calibrated by :  
  
 L. SALAMON  
 (Calibration Engineer)



Authorised by:  
  
 V. RAJKARTHICK  
 (QM)