

# CALIBRATION CERTIFICATE

8 march

EQN/FT/7.8/01		Page 1 of 2	
CRF No.	: EQN/CRF/2202124	Date of Calibration	: 08-Mar-22
Certificate No	: 2021-22/EQN/2202124-37	Recom. Due Date	: 07-Mar-23
ULR No.	: CC276022000003056F		
<b>Customer Details:</b>			
THE CHIEF MEDICAL OFFICER Government Primary Health Centre V. Chandrapuram, Sultanpet BK, Sulur TK, Coimbatore - 69.		Calibrated at	: Lab
		Date of Receipt	: 08-Mar-22
		Cond. On Receipt	: Satisfactory
		Date of Issue	: 11-Mar-22
<b>Details of Test Instrument:</b>			
Description	: Micropipette	Model No.	: FinnpiPETTE F3
Range	: 10 - 100 µl	Serial No	: RW01644
Least Count	: 1µl	Identification No.	: --
Make	: ThermoScientific	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
		Valid upto	: 07-May-22
		Traceability	: EQN,CHENNAI
CP No	: EQN/CP/MS-03	(Reference Standard ISO 8655-6)	
<b>Environmental Details</b>			
	: Temperature : 25±2°C	Relative Humidity : 50±10 % RH	
<b>MECHANICAL CALIBRATION</b>			
(Volume)			
<b>Calibration Results</b>			
1. Lower Volume :	10 µl	No. of Measurements	10
<input type="text" value="10.01"/>	<input type="text" value="9.96"/>	<input type="text" value="10.03"/>	<input type="text" value="10.01"/>
<input type="text" value="9.98"/>	<input type="text" value="10.05"/>	<input type="text" value="10.07"/>	<input type="text" value="10.08"/>
<input type="text" value="10.03"/>	<input type="text" value="10.06"/>		
Mean Value :	10.0 µl		
<b>Error Limits(±)</b>			
Systematic Error :	0.02 µl	0.12 µl	
Systematic Error :	0.25 %	1.20 %	
Random Error :	0.04 µl	0.08 µl	
Random Error :	0.39 %	0.80 %	
Measurement Uncertainty :	± 0.36 µl		

Calibrated by :  
*SANGEER H K P*  
SANGEER H K P  
(Calibration Engineer)

Authorized by:  
*V. RAJKARTHICK*  
V. RAJKARTHICK  
(QM)



## CALIBRATION CERTIFICATE

CRF No. :	EQN/CR/2202124	Page 2 of 2
UIR No. :	CC276022000030561	
<b>MECHANICAL CALIBRATION</b> (Volume)		
<b>Calibration Results</b>		
2. Middle Volume :	50 $\mu$ l	No. of Measurements 10
50.16	50.15	50.14
50.15	50.14	50.19
50.22	50.17	50.17
50.18		50.18
Mean Value :	50.2 $\mu$ l	
Error Limits( $\pm$ )		
Systematic Error :	0.17 $\mu$ l	0.50 $\mu$ l
Systematic Error :	0.34 %	1.00 %
Random Error :	0.03 $\mu$ l	0.20 $\mu$ l
Random Error :	0.05 %	0.40 %
Measurement Uncertainty :	$\pm$ 0.36 $\mu$ l	
3. Nominal Volume :	100 $\mu$ l	No. of Measurements 10
100.23	100.29	100.40
100.09	100.06	100.09
100.26	100.28	100.13
Mean Value :	100.2 $\mu$ l	
Error Limits( $\pm$ )		
Systematic Error :	0.21 $\mu$ l	0.80 $\mu$ l
Systematic Error :	0.21 %	0.80 %
Random Error :	0.11 $\mu$ l	0.30 $\mu$ l
Random Error :	0.11 %	0.30 %
Measurement Uncertainty :	$\pm$ 0.36 $\mu$ l	

**Remarks**

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

\*End of certificate\*

Calibrated by :  
*Sangeetha K P*  
SANGEETHA K P  
(Calibration Engineer)

Authorised by:  
*V. Rajkirthick*  
V. RAJKIRTHICK  
(QM)

