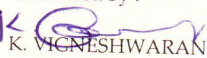
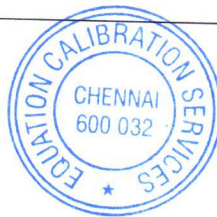
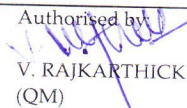


CALIBRATION CERTIFICATE

EQN/FT/7.8/01		Page 1 of 2	
CRF No.	: EQN/CRF/2112007	Date of Calibration	: 01-Dec-21
Certificate No	: 2021-22/EQN/ 2112007-01	Recom. Due Date	: 30-May-22
ULR No.	: CC276021000011424F		
Customer Details		Calibrated at	: Lab
M/s. BIOLINE LABORATORY		Date of Receipt	: 29-Nov-21
CKS Building 2nd Floor,		Cond. On Receipt	: Satisfactory
No. 21/829 Kallai Main Road,		Date of Issue	: 03-Dec-21
Calicut - 673 003, Kerala			
Details of Test Instrument:			
Description	: Micropipette	Model No.	: Finnpipette F3
Range	: 100 - 1000µl	Serial No	: PW00867
Least Count	: 1µl	Identification No.	: BL/KALLAI/BC/PIP-03
Make	: Thermoscientific	Accuracy	: As per Manual
Working range:	: --	Location	: Biochemistry
Details of Standard Used			
Name	Certificate No.	Valid upto	Traceability
Electronic Semi Micro Balance	2021-22/EQN/MASTER-256	07-May-22	EQN, Chennai.
CP No	: EQN/CP/MS-03		
Environmental Details	: Temperature : 25±2°C	Relative Humidity : 50±10 % RH	
MECHANICAL CALIBRATION			
(Volume)			
Calibration Results			
I. Lower Volume :	100	µl	No. of Measurements : 10
100.08	100.47	100.18	100.39
100.40	100.16	100.02	100.07
100.52	100.31		
Mean Value :	100.26	µl	
Error Limits(±)			
Systematic Error :	0.26	µl	0.80
Systematic Error :	0.26	%	0.80
Random Error :	0.18	µl	0.30
Random Error :	0.18	%	0.30
Measurement Uncertainty :	±		0.36 µl

Calibrated by :

K. VIGNESHWARAN
 (Calibration Engineer)



Authorised by

V. RAJKARTHICK
 (QM)

CALIBRATION CERTIFICATE

Certificate No : 2021-22/EQN/2112007-03
 ULR No. : CC276021000011426F

Page 2 of 2

Calibration Results					
2. Middle Volume :		25 μ l		No. of Measurements : 10	
25.07	25.03	25.04	24.98		
25.03	24.93	24.97	25.03		
24.92	25.08				
Mean Value :	25.01 μ l				
Error Limits(\pm)					
Systematic Error :	0.01 μ l	0.20 μ l			
Systematic Error :	0.02 %	1.00 %			
Random Error :	0.06 μ l	0.10 μ l			
Random Error :	0.22 %	0.50 %			
Measurement Uncertainty :	\pm 0.36 μ l				
3. Nominal Volume :		50 μ l		No. of Measurements : 10	
50.18	50.19	50.25	50.21		
50.09	50.06	50.23	50.12		
50.13	50.07				
Mean Value :	50.15 μ l				
Error Limits(\pm)					
Systematic Error :	0.15 μ l	0.50 μ l			
Systematic Error :	0.30 %	1.00 %			
Random Error :	0.07 μ l	0.20 μ l			
Random Error :	0.14 %	0.40 %			
Measurement Uncertainty :	\pm 0.36 μ l				

Remarks

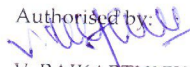
1. The reported Expanded Uncertainty is calculated at 95.45 % C.L with coverage factor $k=2$
2. The Above Results are within the maximum permissible Error

End of certificate

Calibrated by :

 K. VIGNESHWARAN
 (Calibration Engineer)



Authorised by:

 V. RAJKARTHICK
 (QM)