



CERTIFICATE OF CALIBRATION

FT-Q-25		Page 1 of 2	
ULR No.	: CC293721000000024P	Date of Issue	: 18-Jan-21
Certificate No	: TVCS 21/01/010 - 01	Recom. Due Date	: 12-Jul-21
Date of Calibration	: 13-Jan-21	SRF No.	: 010
Customer Details		Calibrated at	: Lab
M/s. LIFE CARE		Date of Receipt	: 13-Jan-21
Diagnostic Centre & Reference Laboratory		Cond. On Receipt	: Satisfactory
#5, Siddha Veerappa Chetty Street,			
Opp. Rajagopal Gounder Park, Dharmapuri - 636701.			
Details of Test Instrument:			
Description	: Micropipette	Model No.	: --
Range	: 5-50 µl	Serial No	: MJ428599
Least Count	: 0.5 µl	Identification No.	: --
Make	: Flexipet	Accuracy	: As per Manual
Working range	: --	Location	: Lab
Details of Standard Used			
Name	Certificate No.	Valid upto	Traceability
Electronic SemiMicro Balance	TVCSPL 20/05/364-01	12-May-21	TVCSPL, Chennai.
Work Instruction	: WI-M-03 (Reference Standard ISO 8655-6)		
Environmental Details	: Temperature : 25±2°C Relative Humidity : 50±10 % RH		
MECHANICAL CALIBRATION			
(Volume)			
Calibration Results			
1. Lower Volume :	5 µl	No. of Measurements :	10
<input type="text" value="5.09"/>	<input type="text" value="5.05"/>	<input type="text" value="5.10"/>	<input type="text" value="5.08"/>
<input type="text" value="5.10"/>	<input type="text" value="5.06"/>	<input type="text" value="5.09"/>	<input type="text" value="5.05"/>
<input type="text" value="5.11"/>	<input type="text" value="5.07"/>		
Mean Value :	<input type="text" value="5.08"/> µl		
Error Limits(±)			
Systematic Error :	<input type="text" value="0.08"/> µl	<input type="text" value="0.13"/> µl	
Systematic Error :	<input type="text" value="1.50"/> %	<input type="text" value="2.50"/> %	
Random Error :	<input type="text" value="0.02"/> µl	<input type="text" value="0.08"/> µl	
Random Error :	<input type="text" value="0.43"/> %	<input type="text" value="1.50"/> %	
Measurement Uncertainty :	<input type="text" value="±"/> <input type="text" value="0.14"/> µl		

Calibrated by :
S. Mani
Ms. S. Manikala
(Calibration Engineer)

Authorised by:
G. John
Mr. G. John
(The Head)

...redefining the true value



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MECHANICAL CALIBRATION				
(Volume)				
Calibration Results				
2. Middle Volume :	25	μl	No. of Measurements :	10
24.91	25.03		25.05	24.90
25.00	24.95		25.09	25.00
24.94	24.99			
Mean Value :	24.99	μl		
Error Limits(\pm)				
Systematic Error :	-0.01	μl	0.20	μl
Systematic Error :	-0.05	%	1.00	%
Random Error :	0.06	μl	0.10	μl
Random Error :	0.25	%	0.50	%
Measurement Uncertainty :	\pm		0.14 μl	
3. Nominal Volume :	50	μl	No. of Measurements :	10
50.15	50.10		50.14	50.17
50.15	50.07		50.11	50.19
50.27	50.25			
Mean Value :	50.16	μl		
Error Limits(\pm)				
Systematic Error :	0.16	μl	0.50	μl
Systematic Error :	0.32	%	1.00	%
Random Error :	0.06	μl	0.20	μl
Random Error :	0.13	%	0.40	%
Measurement Uncertainty :	\pm		0.14 μl	

Remarks

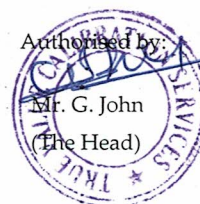
1. The reported Expanded Uncertainty is calculated at 95.45 % C.L with coverage factor $k=2$
2. The Above Results are within the maximum permissible Error

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