
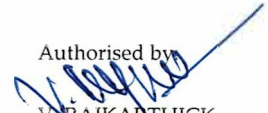


## CALIBRATION CERTIFICATE

EQN/FT/7.8/01		Page 1 of 2	
ULR No. :	CC276021000007804F	Date of Issue :	20-Feb-22
Certificate No :	2022-23/EQN/210012-01	Recom. Due Date :	17-Feb-23
Date of Calibration :	17-Feb-22		
<b>Customer Details</b>		<b>Calibrated at</b> :	
M/s. COMPUTER DIAGNOSTIC CENTER ( VIJAY POLY CLINIC)		Lab	
#78, Chekkumettu Street, Kallakurichi- 606202.		Date of Receipt :	
		17-Feb-22	
		Cond. On Receipt :	
		Satisfactory	
<b>Details of Test Instrument:</b>			
Description :	Micropipette	Model No. :	-
Range :	0.5- 10 $\mu$ l	Serial No :	-
Least Count :	0.1 $\mu$ l	Identification No. :	CDC/005
Make :	Borosil	Accuracy :	As Per Manual
Working range :	--	Location :	LAB
<b>Details of Standard Used</b>			
Name	Certificate No.	Valid upto	Traceability
MASS Comparator	2021-22/EQN/MASTER/188	24-Sep-22	EQN,CHENNAI
CP No :	EQN/CP/MS-03		
Environmental Details :	Temperature : 25 $\pm$ 2 $^{\circ}$ C		Relative Humidity : 50 $\pm$ 10 % RH
<b>MECHANICAL CALIBRATION</b>			
(Volume)			
<b>Calibration Results</b>			
1. Lower Volume :	1 $\mu$ l	No. of Measurements :	10
<input type="text" value="1.00"/>	<input type="text" value="1.00"/>	<input type="text" value="0.99"/>	<input type="text" value="1.00"/>
<input type="text" value="1.00"/>	<input type="text" value="1.00"/>	<input type="text" value="1.00"/>	<input type="text" value="1.00"/>
<input type="text" value="0.99"/>	<input type="text" value="1.00"/>		
Mean Value :	0.998 $\mu$ l		
<b>Error Limits(<math>\pm</math>)</b>			
Systematic Error :	-0.002 $\mu$ l	0.05 $\mu$ l	
Systematic Error :	-0.243 %	5.00 %	
Random Error :	0.003 $\mu$ l	0.05 $\mu$ l	
Random Error :	0.291 %	5.00 %	
Measurement Uncertainty :	$\pm$ 0.076 $\mu$ l		

Calibrated by  
  
 K. VIGNESHWARAN  
 (Calibration Engineer)



Authorised by  
  
 V. RAJKARTHICK  
 (QM)

# CALIBRATION CERTIFICATE

ULR No. :	CC276021000007804F	Channel No. :	1
Certificate No :	2022-23/EQN/210012-01	Page 2 of 2	
<b>MECHANICAL CALIBRATION</b>			
(Volume)			
<b>Calibration Results</b>			
Middle Volume :	5	$\mu\text{l}$	No. of Measurements : 10
<input type="text" value="5.02"/>	<input type="text" value="5.01"/>	<input type="text" value="5.01"/>	<input type="text" value="5.01"/>
<input type="text" value="5.02"/>	<input type="text" value="5.01"/>	<input type="text" value="5.01"/>	<input type="text" value="5.02"/>
<input type="text" value="5.02"/>	<input type="text" value="5.02"/>		
Mean Value :	5.015	$\mu\text{l}$	
<b>Error Limits(<math>\pm</math>)</b>			
Systematic Error :	0.015	$\mu\text{l}$	0.125 $\mu\text{l}$
Systematic Error :	0.303	%	2.5 %
Random Error :	0.003	$\mu\text{l}$	0.075 $\mu\text{l}$
Random Error :	0.056	%	1.5 %
Measurement Uncertainty :		$\pm$	0.076 $\mu\text{l}$
Nominal Volume :	10	$\mu\text{l}$	No. of Measurements : 10
<input type="text" value="100.10"/>	<input type="text" value="100.20"/>	<input type="text" value="100.07"/>	<input type="text" value="100.09"/>
<input type="text" value="100.27"/>	<input type="text" value="100.30"/>	<input type="text" value="100.10"/>	<input type="text" value="100.10"/>
<input type="text" value="100.00"/>	<input type="text" value="100.10"/>		
Mean Value :	100.133	$\mu\text{l}$	
<b>Error Limits(<math>\pm</math>)</b>			
Systematic Error :	90.133	$\mu\text{l}$	0.12 $\mu\text{l}$
Systematic Error :	901.326	%	1.2 %
Random Error :	0.094	$\mu\text{l}$	0.08 $\mu\text{l}$
Random Error :	0.941	%	0.8 %
Measurement Uncertainty :		$\pm$	0.076 $\mu\text{l}$

**Remarks**

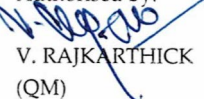
1. The reported Expanded Uncertainty is calculated at 95.45 % C.L with coverage factor  $k=2$
2. The Above Results are within the maximum permissible Error

*\*End of certificate\**

Calibrated by :

  
**K. VIGNESHWARAN**  
 (Calibration Engineer)


Authorised by:

  
**V. RAJKARTHICK**  
 (QM)