



UNIQUE CALIBRATION SOLUTIONS LLP

An ISO/IEC-17025:2017 / ACCREDITED BY NABL

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CALIBRATION CERTIFICATE											
UNIQUE LAB REPORT NO(ULR NO) : 062						CC310223000000827F					
SRF No. : 062			CERTIFICATE No. : UCSSL/02-23/062_03			Instrument receipt Date : 25.02.2023			Calibration Date : 27.02.2023		
Customer Name & Address: M/s. ICTC TALUK HOSPITAL KATTAPANNA, IDUKKI, KERALA, INDIA						Next calibration due (As per customer request) : 27.02.2024			Certificate Issue date : 02.03.2023		
						Identification on DUC (Device Under Calibration)					
						Instrument Name : MICROPIPETTE		Range : 5-50 µl		Least count : 1 µl	
Model : --		Instrument Condition : OK		Calibration Performed at : Mass & Volume Lab		Location : LAB		Avg. Temperature (°C) : 23.4		Avg. RH (%) : 55	
Environmental Condition		Avg. Atmospheric Pressure (hpa) : 1009		Equipment & Master Used For calibration							
Instrument Used : Weighing Balance		Calibrated : UCSSL		ID No. : UCSSL-WB-01		Certificate No. : UCSSL/10-22/329_01		Valid Upto : 18.10.2023		Sr No. : 0037905909	
Method Used : Gravimetric method		Discipline & Category : Mechanical - Volume		Calibration Reference Standard : ISO-8655-6 & ISO /TR 20461		Calibration Procedure : UCSSL/SOP/01-MPT		Accreditation No : CC-3102			
CALIBRATION RESULTS @ 27 °C :-											
1. Lower Volume 10 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
9.97	10.11	10.26	10.19	10.22	10.34	10.08	10.16	10.21	10.36	10.19	
Systematic Error es µl : -0.19				Error Limits (± 0.5 µl)		Random Error in sr µl : 0.12				Error Limits (± 0.2 µl)	
Systematic Error es in % : -1.92				(± 5.0 %)		Random Error in Cv in % : 1.13				(± 2.0 %)	
2. Middle Volume 25 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
25.24	25.56	25.28	25.45	25.30	25.37	25.07	25.43	24.98	25.33	25.30	
Systematic Error es µl : -0.30				Error Limits (± 0.5 µl)		Random Error in sr µl : 0.17				Error Limits (± 0.2 µl)	
Systematic Error es in % : -1.21				(± 2.0 %)		Random Error in Cv in % : 0.69				(± 0.8 %)	
3. Nominal Volume 50 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
50.18	50.29	50.10	50.46	50.58	50.35	50.50	50.35	50.31	50.48	50.36	
Systematic Error es µl : -0.36				Error Limits (± 0.5 µl)		Random Error in sr µl : 0.15				Error Limits (± 0.2 µl)	
Systematic Error es in % : -0.72				(± 1.0 %)		Random Error in Cv in % : 0.30				(± 0.4 %)	
Decision Rule is Applied or Not										Yes	
										No	
Conclusion /Remarks:											
The Reported Uncertainty from 10 to 50 µl is 0.32 µl at , Coverage Factor K=2, which corresponds to a confidence level at approximately 95 %											
1. The calibration results reported in this certificate are valid at the time of and the stated condition of measurement.											
2. This report is valid for Scientific & Industrial Purpose Only											
3. This report should not be reproduced except in full without our prior permission in writing.											
4. Calibration certificate without signature are not valid.											
5. This Calibration Certificate relates only to the above DUC											
6. DUC : Device under calibration											
7. All the measurements are traceable to SI units through unbroken chain of calibration from the competent laboratories as per ISO/IEC/17025 standard requirements.											
Calibrated by						Issued / Approved By (APPU K MANI) (Technical Director)					

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