



# UNIQUE CALIBRATION SOLUTIONS LLP

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

Tel: 0484-4858563, 0484 - 7966984, 9971328563, 9061728563, 9778197603

E-mail: info@uniquecalibration.co.in, website: www.uniquecalibration.co.in



CALIBRATION CERTIFICATE											
ULR NO :		CC31022400001065F				CERTIFICATE No. :		UCSL/04-24/091_05			
Customer Name & Address:						Instrument receipt Date		16.04.2024			
M/s. MICRO HEALTH LABORATORIES						SRF No.		091			
MP TOWER, NEXT TO LAVANYA PLAZA, NEAR THALUK HOSPITAL, THAMARASSERY, KERALA - 673 573						Calibration Date		17.04.2024			
						Next calibration date (As per customer request)		17.04.2025			
						Certificate Issue date		23.04.2024			
Identification on DUC (Device Under Calibration)											
Instrument Name		MICROPIPETTE				Make		THERMO SCIENTIFIC			
Range		2 - 20 µl				Model		FINN PIPETTE F3			
Least count		0.02 µl				Instrument Condition		OK			
Serial No.		KW03951				Calibration Performed at		Mass & Volume Lab			
ID No.		MHL/TSY/14				Location		---			
Environmental Condition			Avg. Temperature (°C)			Avg. RH (%)			Avg. Atmospheric Pressure (hpa)		
			24.1			55			1010		
Equipment & Master Used For calibration											
Instrument Used		Calibrated By		ID No:		Certificate No		Valid Upto		Sr No.	
Weighing Balance		EIE		---		EIE/M/231046		30.07.2024		T1004465	
Method Used :						Gravimetric method			Discipline & Category : Mechanical - Volume		
Calibration Reference Standard						Calibration Procedure					
ISO-8655-6 & ISO /TR 20461						UCSL/SOP/01-MPT					
CALIBRATION RESULTS @ 27 °C :-											
1. Lower Volume 2 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
2.009	2.024	2.001	2.009	2.032	2.017	2.015	2.005	2.050	2.016	2.018	
Systematic Error es µl :				-0.02		Error Limits (± 0.20 µl)		Random Error in sr µl :		0.01	
Systematic Error es in % :				-0.88		(±10.0%)		Random Error in Cv in % :		0.72	
2. Middle Volume		10 µl									
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
10.043	10.028	10.016	10.042	10.069	10.051	10.045	10.054	10.019	10.035	10.041	
Systematic Error es µl :				-0.04		Error Limits (± 0.20 µl)		Random Error in sr µl :		0.02	
Systematic Error es in % :				-0.41		(± 2.0 %)		Random Error in Cv in % :		0.16	
3. Nominal Volume		20 µl									
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
20.187	20.168	20.186	20.106	20.171	20.176	20.101	20.187	20.178	20.194	20.165	
Systematic Error es µl :				-0.17		Error Limits (± 0.20 µl)		Random Error in sr µl :		0.03	
Systematic Error es in % :				-0.83		(± 1.0 %)		Random Error in Cv in % :		0.17	
Decision Rule is Applied or Not										Yes	
										No	
Conclusion /Remarks:											
The Reported Uncertainty from 0.5 to 10 µl is 0.06 µl and 20 µl is 0.12 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. All the measurements are traceable to SI units through unbroken chain of calibration from the competent laboratories as per ISO/IEC 17025 standard requirements.											
7. DUC : Device under calibration											
Calibrated by				Checked by				Issued / Approved By			
								(APPU K MANI)			
								(Technical Director)			

--- End of Certificate ---

Page 1 of 1

