



UNIQUE CALIBRATION SOLUTIONS LLP


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

E-mail: sales@uniquecalibration.com, website: www.uniquecalibration.com



NABL
C.No.: CC-3102

CALIBRATION CERTIFICATE											
ULR No :		CC31022000001055F				CERTIFICATE No. :		UCSL/11-20/092_01			
Customer Name & Address:					Instrument receipt Date			24.11.2020			
M/s MORRIS MATHIAS HOSPITAL 355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL, TAMIL NADU-629001					SRF No.			092			
					Calibration Date			25.11.2020			
					Next calibration date (Suggested By Customer)			25.11.2021			
					Certificate Issue date			25.11.2020			
Identification on UUC (Unit Under Calibration)											
Instrument Name		Micropipette			Make		BIOHIT				
Range		500 µl			Model		--				
Least count					Instrument Condition		OK				
Serial No.		17579636			Calibration Performed at		Mass & Volume Lab				
ID No.		MMH/LAB/PIP/3-006			Location		Lab				
Environmental Condition		Avg.Temperature (°C)			Avg.RH (%)		Avg.Atmospheric Pressure (hpa)				
		24.4			53		1010				
Equipment & Master Used For calibration											
Instrument Used		Traceability	ID No:	Certificate No		Valid Upto	Sr No.		Accreditation No		
Weighing Balance		UCSL	UCSL-WB-01	UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102		
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :					Gravimetric method						
Calibration Reference Standard					Calibration Procedure						
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT						
CALIBRATION RESULTS :-											
Nominal Volume		500 µl									
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
498.83	496.00	496.39	499.07	498.90	499.72	499.22	498.33	499.55	499.78	498.58	
Systematic Error es µl :			1.42		Error Limits (± 4.0 µl)		Random Error in sr µl :		1.33		Error Limits (± 1.5 µl)
Systematic Error es in % :			0.28		Error Limits (± 0.8 %)		Random Error in Cv in % :		0.27		Error Limits (± 0.3 %)
Conclusion /Remarks:											
The Reported Uncertainty of <u>5.00 µl</u> is <u>1.05 µl</u> at ,Coverage Factor K=2,which corresponds to a confidence level at 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. UUC : Unit under calibration											
Calibrated by 					Issued / Approved By (MANU MATHEW) (Technical Manager)						

CALIBRATION CERTIFICATE											
ULR No :		CC310220000001056F				CERTIFICATE No. :		UCSL/11-20/092_02			
Customer Name & Address:					Instrument receipt Date			24.11.2020			
M/s MORRIS MATHIAS HOSPITAL 355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL, TAMIL NADU-629001					SRF No.			092			
					Calibration Date			25.11.2020			
					Next calibration date (Suggested By Customer)			25.11.2021			
					Certificate Issue date			25.11.2020			
Identification on UUC (Unit Under Calibration)											
Instrument Name		Micropipette			Make		BIOHIT				
Range		200 µl			Model		--				
Least count					Instrument Condition		OK				
Serial No.		12567664			Calibration Performed at		Mass & Volume Lab				
ID No.		MMH/LAB/PIP/2-005			Location		Lab				
Environmental Condition			Avg. Temperature (°C)			Avg. RH (%)		Avg. Atmospheric Pressure (hpa)			
			24.4			52		1010			
Equipment & Master Used For calibration											
Instrument Used		Traceability	ID No:	Certificate No		Valid Upto	Sr No.		Accreditation No		
Weighing Balance		UCSL	UCSL-WB-01	UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102		
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :					Gravimetric method						
Calibration Reference Standard					Calibration Procedure						
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT						
CALIBRATION RESULTS :-											
Nominal Volume		200 µl									
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
201.04	200.60	200.88	200.98	201.59	200.81	200.94	200.76	200.90	200.66	200.92	
Systematic Error es µl :			-0.92		Error Limits (± 1.6 µl)		Random Error in sr µl :		0.27		Error Limits (± 0.6 µl)
Systematic Error es in % :			-0.46		Error Limits (± 0.8 %)		Random Error in Cv in % :		0.14		Error Limits (± 0.3 %)
Conclusion /Remarks:											
The Reported Uncertainty of <u>200 µl</u> is <u>1.05 µl</u> at ,Coverage Factor K=2,which corresponds to a confidence level at 95 %											
1. The calibration results reported in this certificate are valid at the time of and the stated condition of measurement.											
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5. UUC : Unit under calibration											
Calibrated by 					 Issued / Approved By (MANU MATHEW) (Technical Manager)						



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NABL
C.No.: CC-3102

CALIBRATION CERTIFICATE											
ULR No :		CC31022000001057F				CERTIFICATE No. :		UCSL/11-20/092_03			
Customer Name & Address:					Instrument receipt Date			24.11.2020			
M/s MORRIS MATHIAS HOSPITAL 355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL, TAMIL NADU-629001					SRF No.			092			
					Calibration Date			25.11.2020			
					Next calibration date (Suggested By Customer)			25.11.2021			
					Certificate Issue date			25.11.2020			
					Identification on UUC (Unit Under Calibration)						
Instrument Name		Micropipette			Make		BIOHIT				
Range		100 µl			Model		--				
Least count					Instrument Condition		OK				
Serial No.		12648969			Calibration Performed at		Mass & Volume Lab				
ID No.		MMH/LAB/PIP/1-004			Location		Lab				
Environmental Condition				Avg.Temperature (°C)		Avg.RH (%)		Avg.Atmospheric Pressure (hpa)			
				24.3		52		1010			
Equipment & Master Used For calibration											
Instrument Used		Traceability	ID No:	Certificate No		Valid Upto	Sr No.		Accreditation No		
Weighing Balance		UCSL	UCSL-WB-01	UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102		
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :					Gravimetric method						
Calibration Reference Standard					Calibration Procedure						
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT						
CALIBRATION RESULTS :-											
Nominal Volume		100 µl									
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
99.91	100.20	99.70	99.94	99.78	99.73	99.97	99.84	99.92	99.99	99.89	
Systematic Error es µl :				0.11		Error Limits (± 0.8 µl)		Random Error in sr µl :		0.15	
Systematic Error es in % :				0.11		Error Limits (± 0.8 %)		Random Error in Cv in % :		0.15	
Conclusion /Remarks:											
The Reported Uncertainty of <u>100 µl</u> is <u>0.32 µl</u> at ,Coverage Factor K=2,which corresponds to a confidence level at 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. UUC : Unit under calibration											
Calibrated by 					 Issued / Approved By (MANU MATHEW) (Technical Manager)						



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NABL

C.No.: CC-3102

CALIBRATION CERTIFICATE											
ULR No :		CC31022000001058F				CERTIFICATE No. :		UCSL/11-20/092_04			
Customer Name & Address:						Instrument receipt Date		24.11.2020			
M/s MORRIS MATHIAS HOSPITAL 355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL, TAMIL NADU-629001						SRF No.		092			
						Calibration Date		25.11.2020			
						Next calibration date (Suggested By Customer)		25.11.2021			
						Certificate Issue date		25.11.2020			
Identification on UUC (Unit Under Calibration)											
Instrument Name		Micropipette				Make		DRAGON LAB			
Range		10 µl				Model		--			
Least count						Instrument Condition		OK			
Serial No.		YE175AB0091205				Calibration Performed at		Mass & Volume Lab			
ID No.		MMH/LAB/PIP/1-002				Location		Lab			
Environmental Condition			Avg.Temperature (°C)			Avg.RH (%)			Avg.Atmospheric Pressure (hpa)		
			24.3			52			1010		
Equipment & Master Used For calibration											
Instrument Used		Traceability	ID No:	Certificate No		Valid Upto	Sr No.		Accreditation No		
Weighing Balance		UCSL	UCSL-WB-01	UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102		
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :						Gravimetric method					
Calibration Reference Standard						Calibration Procedure					
ISO-8655-6 & ISO /TR 20461						UCSL/SOP/01-MPT					
CALIBRATION RESULTS :-											
Nominal Volume		10 µl									
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
10.02	10.20	10.12	10.17	10.10	10.14	10.19	10.00	10.13	9.98	10.11	
Systematic Error es µl :				-0.11		Error Limits (± 0.12 µl)		Random Error in sr µl :		0.08 (± 0.08µl)	
Systematic Error es in % :				-1.09		Error Limits (± 1.2 %)		Random Error in Cv in % :		0.79 (± 0.8 %)	
Conclusion /Remarks:											
The Reported Uncertainty of <u>10 µl</u> is <u>0.32 µl</u> at ,Coverage Factor K=2,which corresponds to a confidence level at 95 %											
1. The calibration results reported in this certificate are valid at the time of and the stated condition of measurement.											
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5. UUC : Unit under calibration											
Calibrated by						Issued / Approved By (MANU MATHEW) (Technical Manager)					



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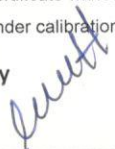

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NABL
C.No.: CC-3102

CALIBRATION CERTIFICATE											
ULR No :		CC31022000001059F				CERTIFICATE No. :		UCSL/11-20/092_05			
Customer Name & Address:					Instrument receipt Date		24.11.2020				
M/s MORRIS MATHIAS HOSPITAL 355, KP ROAD, Dr MATHIAS NAGER, NAAGERCOIL, TAMIL NADU-629001					SRF No.		092				
					Calibration Date		25.11.2020				
					Next calibration date (Suggested By Customer)		25.11.2021				
					Certificate Issue date		25.11.2020				
Identification on UUC (Unit Under Calibration)											
Instrument Name		Micropipette			Make		DRAGON LAB				
Range		10-100 µl			Model		--				
Least count		1 µl			Instrument Condition		OK				
Serial No.		YE198ALO497701			Calibration Performed at		Mass & Volume Lab				
ID No.		MMH/LAB/PIP/2-003			Location		Lab				
Environmental Condition			Avg. Temperature (°C)			Avg. RH (%)		Avg. Atmospheric Pressure (hpa)			
			24.2			50		1010			
Equipment & Master Used For calibration											
Instrument Used		Traceability	ID No:	Certificate No		Valid Upto	Sr No.	Accreditation No			
Weighing Balance		UCSL	UCSL-WB-01	UCSL/10-20/085_01		30.10.2021	0037905909	CC-3102			
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :					Gravimetric method						
Calibration Reference Standard					Calibration Procedure						
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT						
CALIBRATION RESULTS :-											
1. Lower Volume 10 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
10.17	10.51	10.43	10.07	10.45	10.26	10.18	10.11	10.21	10.08	10.25	
Systematic Error es µl :			-0.25		Error Limits (± 0.8 µl)		Random Error in sr µl :		0.16		Error Limits (± 0.3 µl)
Systematic Error es in % :			-2.45		(± 8.0 %)		Random Error in Cv in % :		1.55		(± 3.0 %)
2. Middle Volume 50 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
50.02	50.29	50.42	50.63	50.55	50.51	50.56	50.14	50.08	50.12	50.33	
Systematic Error es µl :			-0.33		Error Limits (± 0.8 µl)		Random Error in sr µl :		0.23		Error Limits (± 0.3 µl)
Systematic Error es in % :			-0.67		(± 1.6 %)		Random Error in Cv in % :		0.46		(± 0.6 %)
3. Nominal Volume 100 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume √	
100.19	100.88	100.21	100.54	100.69	100.58	100.40	100.34	100.74	100.80	100.54	
Systematic Error es µl :			-0.54		Error Limits (± 0.8 µl)		Random Error in sr µl :		0.25		Error Limits (± 0.3 µl)
Systematic Error es in % :			-0.54		(± 0.8 %)		Random Error in Cv in % :		0.24		(± 0.3 %)
Conclusion /Remarks:											
The Reported Uncertainty from 10µl to 100 µl is 0.32µl at ,Coverage Factor K=2, which corresponds to a confidence level at 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											
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4. Calibration certificate without signature are not valid.											
5. UUC : Unit under calibration											
Calibrated by					Issued / Approved By (MANU MATHEW) (Technical Manager)						

CALIBRATION CERTIFICATE											
ULR No :		CC31022000001037F				CERTIFICATE No. :		UCSL/11-20/088_01			
Customer Name & Address:					Instrument receipt Date			09.11.2020			
M/s MORRIS MATHIAS HOSPITAL					SRF No.			088			
355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL,					Calibration Date			10.11.2020			
TAMIL NADU-629001					Next calibration date			(Suggested By Customer)			
					Certificate Issue date			14.11.2020			
Identification on UUC (Unit Under Calibration)											
Instrument Name		Micropipette			Make		Biohit				
Range		5-50 µl			Model		--				
Least count		0.5 µl			Instrument Condition		OK				
Serial No.		14627916			Calibration Performed at		Mass & Volume Lab				
ID No.		MMH/LAB/PIP/5-008			Location		Lab				
Environmental Condition			Avg.Temperature (°C)			Avg.RH (%)		Avg.Atmospheric Pressure (hpa)			
			24.3			51		1010			
Equipment & Master Used For calibration											
Instrument Used		Traceability	ID No:		Certificate No		Valid Upto	Sr No.	Accreditation No		
Weighing Balance		UCSL	UCSL-WB-01		UCSL/10-20/085_01		30.10.2021	0037905909	CC-3102		
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :					Gravimetric method						
Calibration Reference Standard					Calibration Procedure						
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT						
CALIBRATION RESULTS :-											
1. Lower Volume 10 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
9.46	9.55	9.50	9.47	9.61	9.73	9.64	9.49	9.61	9.56	9.56	
Systematic Error es µl :			0.44		Error Limits (± 0.5 µl)		Random Error in sr µl :		0.09		Error Limits (± 0.2 µl)
Systematic Error es in % :			4.36		(± 5.0 %)		Random Error in Cv in % :		0.91		(± 2.0 %)
2. Middle Volume 25 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
24.63	24.58	24.61	24.57	24.64	24.72	24.63	24.54	24.60	24.66	24.62	
Systematic Error es µl :			0.38		Error Limits (± 0.5 µl)		Random Error in sr µl :		0.05		Error Limits (± 0.2 µl)
Systematic Error es in % :			1.53		(± 2.0 %)		Random Error in Cv in % :		0.21		(± 0.8 %)
3. Nominal Volume 50 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
49.88	49.59	49.66	50.02	50.21	49.83	49.84	49.89	50.05	49.70	49.87	
Systematic Error es µl :			0.13		Error Limits (± 0.5 µl)		Random Error in sr µl :		0.19		Error Limits (± 0.2 µl)
Systematic Error es in % :			0.26		(± 1.0 %)		Random Error in Cv in % :		0.38		(± 0.4 %)
Conclusion /Remarks:											
The Reported Uncertainty from 10µl to 50 µl is 0.32µl at ,Coverage Factor K=2,which corresponds to a confidence level at 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											
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5. UUC : Unit under calibration											
Calibrated by					Issued / Approved By						
											
					(MANU MATHEW)						
					(Technical Manager)						



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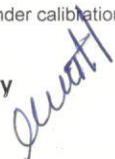

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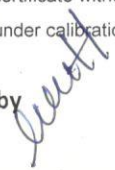

E-mail: sales@uniquecalibration.com, website: www.uniquecalibration.com



NABL

C.No.: CC-3102

CALIBRATION CERTIFICATE										
ULR No :		CC310220000001038F				CERTIFICATE No. :		UCSL/11-20/088_02		
Customer Name & Address:					Instrument receipt Date			09.11.2020		
M/s MORRIS MATHIAS HOSPITAL 355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL, TAMIL NADU-629001					SRF No.			088		
					Calibration Date			10.11.2020		
					Next calibration date (Suggested By Customer)			10.11.2021		
					Certificate Issue date			14.11.2020		
Identification on UUC (Unit Under Calibration)										
Instrument Name		Micropipette			Make		MICROPET			
Range		1000 µl			Model		--			
Least count					Instrument Condition		OK			
Serial No.		--			Calibration Performed at		Mass & Volume Lab			
ID No.		MMH/LAB/PIP/1-009			Location		Lab			
Environmental Condition			Avg. Temperature (°C)		Avg. RH (%)		Avg. Atmospheric Pressure (hpa)			
			24.1		51		1010			
Equipment & Master Used For calibration										
Instrument Used	Traceability	ID No:		Certificate No		Valid Upto	Sr No.		Accreditation No	
Weighing Balance	UCSL	UCSL-WB-01		UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102	
Note: All Master instruments used for calibration are traceable to National /International Standard										
Method Used :					Gravimetric method					
Calibration Reference Standard					Calibration Procedure					
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT					
CALIBRATION RESULTS :-										
Nominal Volume		1000 µl								
1	2	3	4	5	6	7	8	9	10	Mean Volume \bar{V}
1007.93	1006.93	1006.23	1008.74	1008.24	1006.53	1007.33	1007.63	1006.83	1006.33	1007.27
Systematic Error es µl :			-7.27		Error Limits (± 8.0 µl)		Random Error in sr µl :		0.85	
Systematic Error es in % :			-0.73		Error Limits (± 0.8 %)		Random Error in Cv in % :		0.08	
Error Limits (± 3.0 µl)										
Error Limits (± 0.3 %)										
Conclusion /Remarks:										
The Reported Uncertainty of <u>1000 µl</u> is <u>1.05 µl</u> at ,Coverage Factor K=2,which corresponds to a confidence level at 95 %										
1. The calibration results reported in this certificate are valid at the time of and the stated condition of measurement.										
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5. UUC : Unit under calibration										
Calibrated by					  Issued / Approved By (MANU MATHEW) (Technical Manager)					

CALIBRATION CERTIFICATE											
ULR No :		CC31022000001039F				CERTIFICATE No. :		UCSL/11-20/088_03			
Customer Name & Address:					Instrument receipt Date			09.11.2020			
M/s MORRIS MATHIAS HOSPITAL					SRF No.			087			
355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL,					Calibration Date			10.11.2020			
TAMIL NADU-629001					Next calibration date (Suggested By Customer)			10.11.2021			
					Certificate Issue date			14.11.2020			
Identification on UUC (Unit Under Calibration)											
Instrument Name		Micropipette			Make		SARTORIUS				
Range		1000 µl			Model		--				
Least count					Instrument Condition		OK				
Serial No.		16589482			Calibration Performed at		Mass & Volume Lab				
ID No.		MMH/LAB/PIP/1-001			Location		Lab				
Environmental Condition				Avg.Temperature (°C)		Avg.RH (%)		Avg.Atmospheric Pressure (hpa)			
				24.0		53		1010			
Equipment & Master Used For calibration											
Instrument Used		Traceability	ID No:	Certificate No		Valid Upto	Sr No.		Accreditation No		
Weighing Balance		UCSL	UCSL-WB-01	UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102		
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :					Gravimetric method						
Calibration Reference Standard					Calibration Procedure						
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT						
CALIBRATION RESULTS :-											
Nominal Volume		1000 µl									
1	2	3	4	5	6	7	8	9	10	Mean Volume ∇	
1005.35	1009.06	1008.36	1009.57	1006.25	1006.55	1005.45	1008.46	1006.75	1005.15	1007.10	
Systematic Error es µl :				-7.10		Error Limits (± 8.0 µl)		Random Error in sr µl :		1.64 (± 3.0 µl)	
Systematic Error es in % :				-0.71		Error Limits (± 0.8 %)		Random Error in Cv in % :		0.16 (± 0.3 %)	
Conclusion /Remarks:											
The Reported Uncertainty of 1000 µl is 1.05 µl at ,Coverage Factor K=2,which corresponds to a confidence level at 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. UUC : Unit under calibration											
Calibrated by					  Issued / Approved By (MANU MATHEW) (Technical Manager)						



UNIQUE CALIBRATION SOLUTIONS LLP

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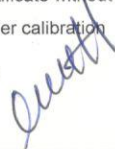
Tel: 0484-4858563, 0484 - 7966984, 9971328563, 9061728563


E-mail: sales@uniquecalibration.com, website: www.uniquecalibration.com



NABL

C.No.: CC-3102

CALIBRATION CERTIFICATE											
ULR No :		CC31022000001040F				CERTIFICATE No. :		UCSL/11-20/88_04			
Customer Name & Address:					Instrument receipt Date		09.11.2020				
M/s MORRIS MATHIAS HOSPITAL					SRF No.		088				
355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL,					Calibration Date		10.11.2020				
TAMIL NADU-629001					Next calibration date (Suggested By Customer)		10.11.2021				
					Certificate Issue date		14.11.2020				
Identification on UUC (Unit Under Calibration)											
Instrument Name		Micropipette			Make		Vertex				
Range		20 -200 µl			Model		---				
Least count		1 µl			Instrument Condition		OK				
Serial No.		021500899			Calibration Performed at		Mass & Volume Lab				
ID No.		MMH/LAB/PIP/1-010			Location		Lab				
Environmental Condition			Avg.Temperature (°C)		Avg.RH (%)		Avg.Atmospheric Pressure (hpa)				
			23.9		53		1010				
Equipment & Master Used For calibration											
Instrument Used	Traceability	ID No:		Certificate No		Valid Upto	Sr No.		Accreditation No		
Weighing Balance	UCSL	UCSL-WB-01		UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102		
Note: All Master instruments used for calibration are traceable to National /International Standard											
Method Used :					Gravimetric method						
Calibration Reference Standard					Calibration Procedure						
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT						
CALIBRATION RESULTS :-											
1. Lower Volume 20 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
20.76	20.78	20.36	20.89	20.64	20.48	20.50	20.72	20.58	20.64	20.64	
Systematic Error es µl :			-0.64		Error Limits (± 1.6µl)		Random Error in sr µl :		0.16		Error Limits (± 0.6µl)
Systematic Error es in % :			-3.18		(± 8.0 %)		Random Error in Cv in % :		0.78		(± 3.0 %)
2. Middle Volume 100 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
100.51	100.40	100.40	100.01	99.68	100.44	99.77	100.25	100.31	99.72	100.15	
Systematic Error es µl :			-0.15		Error Limits (± 1.6µl)		Random Error in sr µl :		0.33		Error Limits (± 0.6 µl)
Systematic Error es in % :			-0.15		(± 1.6 %)		Random Error in Cv in % :		0.32		(± 0.6 %)
3. Nominal Volume 200 µl											
1	2	3	4	5	6	7	8	9	10	Mean Volume V	
200.73	200.02	199.85	199.96	201.13	200.59	200.98	200.89	200.09	200.26	200.45	
Systematic Error es µl :			-0.45		Error Limits (± 1.6 µl)		Random Error in sr µl :		0.47		Error Limits (± 0.6 µl)
Systematic Error es in % :			-0.23		(± 0.8 %)		Random Error in Cv in % :		0.23		(± 0.3 %)
Conclusion /Remarks:											
The Reported Uncertainty from 20µl to 100 µl is ± 0.32µl & from 100µl to 200µl is 1.05 µl at ,Coverage Factor K=2,which corresponds to a confidence level at 95 %											
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. UUC : Unit under calibration											
Calibrated by					 Issued / Approved By (MANU MATHEW) (Technical Manager)						

CALIBRATION CERTIFICATE										
ULR No :		CC31022000001041F				CERTIFICATE No. :		UCSL/11-20/088_05		
Customer Name & Address:					Instrument receipt Date			09.11.2020		
M/s MORRIS MATHIAS HOSPITAL 355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL, TAMIL NADU-629001					SRF No.			088		
					Calibration Date			10.11.2020		
					Next calibration date (Suggested By Customer)			10.11.2021		
					Certificate Issue date			14.11.2020		
Identification on UUC (Unit Under Calibration)										
Instrument Name		Micropipette			Make		BIOHIT			
Range		20 µl			Model		PROLINE			
Least count		--			Instrument Condition		OK			
Serial No.		12547303			Calibration Performed at		Mass & Volume Lab			
ID No.		MMH/LAB/PIP/4-007			Location		Lab			
Environmental Condition				Avg.Temperature (°C)		Avg.RH (%)		Avg.Atmospheric Pressure (hpa)		
				23.8		51		1010		
Equipment & Master Used For calibration										
Instrument Used	Traceability	ID No:		Certificate No		Valid Upto	Sr No.		Accreditation No	
Weighing Balance	UCSL	UCSL-WB-01		UCSL/10-20/085_01		30.10.2021	0037905909		CC-3102	
Note: All Master instruments used for calibration are traceable to National /International Standard										
Method Used :					Gravimetric method					
Calibration Reference Standard					Calibration Procedure					
ISO-8655-6 & ISO /TR 20461					UCSL/SOP/01-MPT					
CALIBRATION RESULTS :-										
1. Lower Volume 20 µl										
1	2	3	4	5	6	7	8	9	10	Mean Volume ∇
20.29	20.17	20.12	20.10	20.04	20.30	20.23	20.29	20.10	20.09	20.17
Error Limits										
Systematic Error es µl :				-0.17 (± 0.2 µl)		Random Error in sr µl :				0.10 (± 0.1 µl)
Systematic Error es in % :				-0.86 (± 1.0 %)		Random Error in Cv in % :				0.48 (± 0.5 %)
Conclusion /Remarks:										
The Reported Uncertainty of 2 0µl 0.32µl at ,Coverage Factor K=2,which corresponds to a confidence level at 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. UUC : Unit under calibration										
Calibrated by					 Issued / Approved By (MANU.MATHEW) (Technical Manager)					

CALIBRATION CERTIFICATE

UNIQUE LAB REORT NO(ULR NO) :	CC31022000001042F
SRF No. :	088
Certificate No :	UCSL/11-20/088_06

User Name : M/s MORRIS MATHIAS HOSPITAL
355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL,
TAMIL NADU-629001

Gauge For Calibration	CENTRIFUGE(RPM)	Equipment & Master Used For calibration 01. DIGITAL TACHO METER (NON-CONTACT) Make : LUTRON Model No. : DT -2234 C Certificate No. : PPL/M/1352/1 Next Due Date : 23.11.2020 Traceability : Pascal Accreditation No : CC-2899
Make / Model No.	REMI	
Range	0 to 3500 rpm	
Least Count	--	
Instrument Id. No.	MMH/BCF-1/014	
Instrument Sr. No.	--	
Location	PARAPSYCHOLOGY	
Visual Inspection	OK	
Material Receipt Date	--	
Calibration Performed at	ONSITE	
Date of Calibration	09.11.2020	
Suggested Due Date of Calibration	09.11.2021	
Calibration Certificate Issue Date	14.11.2020	
ENVIRONMENTAL CONDITION		
Temperature	(25 ± 2)°C	
Relative Humidity	(50 ± 20)%RH	

Condition Of Equipment : Un-Loaded

OBSERVATION RESULTS

SL. NO.	Nominal Value on UUC (rpm)	Observed Mean Value on MASTER (rpm)	% Error of Reading (±)	± Expanded Uncertainty At 95% Confidence Level (k=2)
1.	700	700.6	0.09	0.46 % rdg
2.	1400	1400.6	0.04	0.46 % rdg
3.	2100	2101.2	0.06	0.46 % rdg
4.	2800	2801.4	0.05	0.46 % rdg
5.	3500	3501.6	0.05	0.46 % rdg

Calibration Procedure Based On : UCSL/SOP/01-RPM

NOTE :-

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- All our certificates are Traceable to National standard..
- UUC : Unit under calibration , GUT : Gauge under testing .

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(MANU MATHEW)
Technical Manager



CALIBRATION CERTIFICATE

UNIQUE LAB REORT NO(ULR NO) :	CC310220000001043F
SRF No. :	088
Certificate No :	UCSL/11-20/088_07

User Name : M/s MORRIS MATHIAS HOSPITAL
355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL,
TAMIL NADU-629001

Gauge For Calibration	CENTRIFUGE(RPM)	Equipment & Master Used For calibration 01. DIGITAL TACHO METER (NON-CONTACT) Make : LUTRON Model No. : DT -2234 C Certificate No. : PPL/M/1352/1 Next Due Date : 23.11.2020 Traceability : Pascal Accreditation No : CC-2899
Make / Model No.	ELECTRA	
Range	100 to 4000 rpm	
Least Count	1rpm	
Instrument Id. No.	MMH/LAB CEN-2/022	
Instrument Sr. No.	2015	
Location	BIOCHEMISTRY	
Visual Inspection	OK	
Material Receipt Date	--	
Calibration Performed at	ONSITE	
Date of Calibration	09.11.2020	
Suggested Due Date of Calibration	09.11.2021	
Calibration Certificate Issue Date	14.11.2020	
ENVIRONMENTAL CONDITION		
Temperature	(25 ± 2)°C	
Relative Humidity	(50 ± 20)%RH	

Condition Of Equipment : Un-Loaded

OBSERVATION RESULTS

SL. NO.	Nominal Value on UUC (rpm)	Observed Mean Value on MASTER (rpm)	% Error of Reading (±)	± Expanded Uncertainty At 95% Confidence Level (k=2)
1.	100	100.1	0.12	1.35 % rdg
2.	500	500.4	0.08	0.46 % rdg
3.	1000	1000.8	0.08	0.46 % rdg
4.	2500	2502.6	0.10	0.46 % rdg
5.	4000	4003.8	0.10	0.46 % rdg

Calibration Procedure Based On : UCSL/SOP/01-RPM

NOTE :-

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4. All our certificates are Traceable to National standard..
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Technical Manager



CALIBRATION CERTIFICATE

UNIQUE LAB REORT NO(ULR NO)	:	CC310220000001044F
SRF No.	:	088
Certificate No	:	UCSL/11-20/088_08

User Name : M/s MORRIS MATHIAS HOSPITAL
355,KP ROAD,Dr MATHIAS NAGER ,NAAGERCOIL,
TAMIL NADU-629001

Gauge For Calibration	CENTRIFUGE(RPM)	Equipment & Master Used For calibration 01. DIGITAL TACHO METER (NON-CONTACT) Make : LUTRON Model No. : DT -2234 C Certificate No. : PPL/M/1352/1 Next Due Date : 23.11.2020 Traceability : Pascal Accreditation No : CC-2899
Make / Model No.	EURO	
Range	100 to 4000 rpm	
Least Count	1rpm	
Instrument Id. No.	MMH/LAB CEN-3/005	
Instrument Sr. No.	201908113-12	
Location	BIOCHEMISTRY	
Visual Inspection	OK	
Material Receipt Date	--	
Calibration Performed at	ONSITE	
Date of Calibration	09.11.2020	
Suggested Due Date of Calibration	09.11.2021	
Calibration Certificate Issue Date	14.11.2020	
ENVIRONMENTAL CONDITION		
Temperature	(25 ± 2)°C	
Relative Humidity	(50 ± 20)%RH	

Condition Of Equipment : Un-Loaded

OBSERVATION RESULTS

SL. NO.	Nominal Value on UUC (rpm)	Observed Mean Value on MASTER (rpm)	% Error of Reading (±)	± Expanded Uncertainty At 95% Confidence Level (k=2)
1.	100	100.0	0.04	1.35 % rdg
2.	500	500.6	0.13	0.46 % rdg
3.	1000	1001.2	0.12	0.46 % rdg
4.	2500	2502.8	0.11	0.46 % rdg
5.	4000	4004.4	0.11	0.46 % rdg

Calibration Procedure Based On : UCSL/SOP/01-RPM

NOTE :-

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4. All our certificates are Traceable to National standard..
5. UUC : Unit under calibration , GUT : Gauge under testing .

Calibrated By



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(MANU MATHEW)
Technical Manager



CALIBRATION CERTIFICATE

UNIQUE LAB REPORT NO(ULR NO) : CC31022000001045F	
SRF NO. : 088	Certificate No : UCSSL/11-20/088_09

User Name : M/s MORRIS MATHIAS HOSPITAL
355, KP ROAD, Dr MATHIAS NAGER, NAAGERCOIL,
TAMIL NADU-629001

Nomenclature	TEMPERATURE INDICATOR OF REFRIGERATOR
Make/Model	WHIRLPOOL
Range	0 to 8 °C
Least Count	0.1 °C
Instrument Id. No.	MMH/REF/002
Instrument Sr. No.	--
Location	BIOCHEMISTRY LAB
Visual Inspection	OK
Material Receipt Date	--
Calibration Performed at	ON SITE
Date of Calibration	09.11.2020
Suggested Due Date of Calibration	09.11.2021
Certificate Issue Date	14.11.2020
ENVIRONMENTAL CONDITION	
Temperature	(25 ± 5)°C
Relative Humidity	(60 ± 15)%RH

Equipment & Master Used For Calibration

01. RTD sensor 4 WIRE	
Make	: KELVIN INSTRUMENTS&DEVICES
Sr. No.	: 20021703
ULR No.	: CC23262000001578F
Next Due Date	: 10-07-2021
Traceability	: STIC
02. 6.5 DIGITAL MULTIMETER	
Make	: FLUKE
Serial No.	: 8845A
Certificate No.	: TSC/20-21/2211-1
Next Due Date	: 09-07-2021
Traceability	: TRANSCAL

OBSERVATION RESULTS

SL NO.	NOMINAL VALUE (UUC) (°C)	OBSERVED VALUE (MASTER)		(±) ERROR (°C)	± Expanded Uncertainty At 95% Confidence Level (k=2) (°C)
		(°C)	(Ω)		
1	1.0	1.05	100.390	-0.05	0.60
2	2.0	2.09	100.780	-0.09	0.60
3	5.0	5.11	101.989	-0.11	0.60
4	6.0	6.10	102.379	-0.10	0.60
5	8.0	8.15	103.159	-0.15	0.60

Calibration Procedure Based On : UCSSL/SOP/01 -T (ITS-90)

NOTE :-

1. The Calibration results reported in this certificate are valid at the time of and the stated condition of measurement.
2. This report should not be reproduced except in full without our prior permission in writing.
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4. All our certificates are Traceable to National standard..
5. UUC : Unit under consideration , GUT : Gauge under testing .

Calibrated By
F02(5.10/01-T)

Issued / Approved By
(MANU MATHEW)
Technical Manager

CALIBRATION CERTIFICATE

UNIQUE LAB REPORT NO(ULR NO)	: CC31022000001046F
SRF NO. :	088 Certificate No : UC SL/11-20/088_10

User Name : M/s MORRIS MATHIAS HOSPITAL
355, KP ROAD, Dr MATHIAS NAGER , NAAGERCOIL,
TAMIL NADU-629001

Nomenclature	TEMPERATURE INDICATOR OF REFRIGERATOR	Equipment & Master Used For Calibration 01. RTD sensor 4 WIRE Make : KELVIN INSTRUMENTS&DEVICES Sr. No. : 20021703 ULR No. : CC232620000001578F Next Due Date : 10-07-2021 Traceability : STIC 02. 6.5 DIGITAL MULTIMETER Make : FLUKE Serial No. : 8845A Certificate No. : TSC/20-21/2211-1 Next Due Date : 09-07-2021 Traceability : TRANSCAL
Make/Model	WHIRLPOOL	
Range	0 to 8 °C	
Least Count	0.1 °C	
Instrument Id. No.	MMH/REF/001	
Instrument Sr. No.	--	
Location	BIOCHEMISTRY LAB	
Visual Inspection	OK	
Material Receipt Date	--	
Calibration Performed at	ON SITE	
Date of Calibration	09.11.2020	
Suggested Due Date of Calibration	09.11.2021	
Certificate Issue Date	14.11.2020	
ENVIRONMENTAL CONDITION		
Temperature	(25 ± 5)°C	
Relative Humidity	(60 ± 15)%RH	

OBSERVATION RESULTS

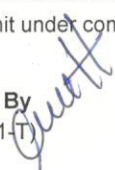
SL NO.	NOMINAL VALUE (UUC)	OBSERVED VALUE (MASTER)	(±) ERROR (°C)	± Expanded Uncertainty At 95% Confidence Level (k=2) (°C)
	(°C)	(°C) / (Ω)		
1	1.0	1.08 / 100.390	-0.08	0.60
2	2.0	2.06 / 100.780	-0.06	0.60
3	5.0	5.10 / 101.989	-0.10	0.60
4	6.0	6.13 / 102.379	-0.13	0.60
5	8.0	8.17 / 103.159	-0.17	0.60

Calibration Procedure Based On : UC SL/SOP/01 -T (ITS-90)

NOTE :-

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Calibrated By
F02(5.10/01-T)



Issued / Approved By
(MANU.MATHEW)
Technical Manager



CALIBRATION CERTIFICATE

UNIQUE LAB REPORT NO(ULR NO) : CC310220000001047F	
SRF NO. : 088	Certificate No : UCSL/11-20/088_11

User Name : M/s MORRIS MATHIAS HOSPITAL
355, KP ROAD, Dr MATHIAS NAGER, NAAGERCOIL,
TAMIL NADU-629001

Nomenclature	TEMPERATURE INDICATOR OF REFRIGERATOR	Equipment & Master Used For Calibration
Make/Model	PENPOL	01. RTD sensor 4 WIRE Make : KELVIN INSTRUMENTS&DEVICES Sr. No. : 20021703 ULR No. : CC232620000001578F Next Due Date : 10-07-2021 Traceability : STIC 02. 6.5 DIGITAL MULTIMETER Make : FLUKE Serial No. : 8845A Certificate No. : TSC/20-21/2211-1 Next Due Date : 09-07-2021 Traceability : TRANSCAL
Range	0 to 6°C	
Least Count	1 °C	
Instrument Id. No.	MMH/REF/003	
Instrument Sr. No.	--	
Location	BIOCHEMISTRY LAB	
Visual Inspection	OK	
Material Receipt Date	--	
Calibration Performed at	ON SITE	
Date of Calibration	09.11.2020	
Suggested Due Date of Calibration	09.11.2021	
Certificate Issue Date	14.11.2020	
ENVIRONMENTAL CONDITION		
Temperature	(25 ± 5)°C	
Relative Humidity	(60 ± 15)%RH	

OBSERVATION RESULTS


SL NO.	NOMINAL VALUE (UUC) (°C)	OBSERVED VALUE (MASTER) (°C) / (Ω)	(±) ERROR (°C)	± Expanded Uncertainty At 95% Confidence Level (k=2) (°C)
1	1.0	1.04 / 100.390	-0.04	0.60
2	2.0	2.07 / 100.780	-0.07	0.60
3	3.0	5.11 / 101.989	-2.11	0.60
4	4.0	6.14 / 102.379	-2.14	0.60
5	6.0	6.19 / 102.379	-0.19	0.60

Calibration Procedure Based On : UCSL/SOP/01 -T (ITS-90)

NOTE :-

- The Calibration results reported in this certificate are valid at the time of and the stated condition of measurement.
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- All our certificates are Traceable to National standard..
- UUC : Unit under consideration , GUT : Gauge under testing .

Calibrated By
F02(5.10/01-T)



Issued / Approved By
(MANU MATHEW)
Technical Manager



CALIBRATION CERTIFICATE

UNIQUE LAB REPORT NO(ULR NO) : CC310220000001048F	
SRF NO. : 088	Certificate No : UCSSL/11-20/088_12

User Name : M/s MORRIS MATHIAS HOSPITAL
355, KP ROAD, Dr MATHIAS NAGER, NAAGERCOIL,
TAMIL NADU-629001

Nomenclature	TEMPERATURE INDICATOR OF INCUBATOR
Make/Model	ADCO
Range	37 to 80°C
Least Count	0.1 °C
Instrument Id. No.	MMH/LAB/INC-1/019
Instrument Sr. No.	--
Location	MICROBIOLOGY
Visual Inspection	OK
Material Receipt Date	--
Calibration Performed at	ON SITE
Date of Calibration	09.11.2020
Suggested Due Date of Calibration	09.11.2021
Certificate Issue Date	14.11.2020
ENVIRONMENTAL CONDITION	
Temperature	(25 ± 5)°C
Relative Humidity	(60 ± 15)%RH

Equipment & Master Used For Calibration

01. RTD sensor 4 WIRE	
Make	: KELVIN INSTRUMENTS&DEVICES
Sr. No.	: 20021703
ULR No.	: CC232620000001578F
Next Due Date	: 10-07-2021
Traceability	: STIC
02. 6.5 DIGITAL MULTIMETER	
Make	: FLUKE
Serial No.	: 8845A
Certificate No.	: TSC/20-21/2211-1
Next Due Date	: 09-07-2021
Traceability	: TRANSCAL

OBSERVATION RESULTS

SL NO.	NOMINAL VALUE (UUC)	OBSERVED VALUE (MASTER)		(±) ERROR (°C)	± Expanded Uncertainty At 95% Confidence Level (k=2) (°C)
	(°C)	(°C)	(Ω)		
1	37.0	37.15	114.419	-0.15	0.60
2	40.0	40.20	115.618	-0.20	0.60
3	50.0	50.23	119.466	-0.23	0.60
4	60.0	60.29	123.316	-0.29	0.60
5	80.0	80.33	131.004	-0.33	0.60

Calibration Procedure Based On : UCSSL/SOP/01 -T (ITS-90)

NOTE : -

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- All our certificates are Traceable to National standard..
- UUC : Unit under consideration , GUT : Gauge under testing .

Calibrated By
F02(5.10/01-T)



Issued / Approved By
(MANU MATHEW)
Technical Manager

