



Format No.: F-48	3/15		Issue/Rev.: 01/01
Certificate No. ULR No. Discipline Group Name & Address M/s. Shilp Patho Near, SF/9-:	: MCS/22000001097 : CC313322000001097F : Mechanical : Volume	Date of Calibration Recommended Due Date Certificate Issue Date Condition On Receipt Receipt No. Receipt Date Location of Calibration	Issue/Rev.: 01/01 : 21/07/2022 : 20/07/2023 : 22/07/2022 : Satisfactory : MCS/161-02 : 21/07/2022 : Lab
Ahmedabad Details Of Unit U	nder Calibration:		
Nomenclature	: Micropipette	Serial No. : HW00090	
Make/Model	: Labserv	ID No. :	
Range	: 20 to 200 μl	the state of the s	
L.C.	: 1 µl		
Details of standa	rd Used :		
Nomenclature	: Digital Weighing Balance	Certificate No. : MCS/21	1000002073
ld.No.	: MCS/DWB/01	Valid Up to : 07/11/2	2022
Т	he Standards used for Calibration is	traceble to national /International	onal Standard.
Work Instruction No : MCS/CP/15 Standard Used : IS/ISO 4787 / ISO 8655			1787 / ISO 8655-2 & 6
Method Used	: By Gravimetric method.	: ISO/TR	20461
Environment Det	ails		
Temperature :	25.8 °C	Relative Hum	nidity: 51 % RH
Atmospheric Pres	ssure: 1005.7 hpa		

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Page 1 of 2





Certificate No. : MCS/22000001097 ULR No. : CC313322000001097F

Calibration Result

All Reading are in ul

Nominal Value	Avg.Observed Value @ 27°C	± MPE (Systematic)	Systematic error	± MPE (Random)	Random Error	(±) Expanded Uncertainty
20	20.15	0.20	0.15	0.08	0.02	1.4
100	100.47	0.50	0.47	0.20	0.06	1.4
200	200.71	0.80	0.71	0.30	0.08	1.5

Remarks: All Observed Reading are Within Accuracy Limit as per ISO 8655-2

UUC: Unit Under Calibration

*All Readings are Average of ten Readings.

*MPE:Maximum permissible errors

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Note - (1) The uncertainty of measurement is expressed at a confidence level 95.45% with coverage factor k=2.

- (2) The Value has been rounded -off as per IS 2: 1960 wherever applicable.
- (3) The certificate pertains only to the items calibrated.
- (4) This certificate should not be reproduced except in full without a written permission of the laboratory.
- (5) The reported results are valid at the time of performance of calibration under specified conditions only
- (6) Calibration is performed without doing any adjustment/Repairing in its original Condition.
- (7) Coefficient of cubical thermal expansion for Piston Pipette = 0.000045 /°C.

-End Of Certificate-

Page 2 of 2





Format No.: F-48	/15	r	Issue/Rev.: 01/
Certificate No. ULR No. Discipline Group	: MCS/22000001096 : CC313322000001096F : Mechanical : Volume	Date of Calibration Recommended Due Date Certificate Issue Date	: 21/07/2022 : 20/07/2023 : 22/07/2022
Nagar, Akhba		Condition On Receipt Receipt No. Receipt Date Location of Calibration	: Satisfactory : MCS/161-01 : 21/07/2022 : Lab
Details Of Unit Unit Unit Unit Unit Unit Unit Unit	nder Calibration: : Micropipette : : 100 to 1000 μl : 5 μl	Serial No. : 397072 ID No. :	
Details of standa Nomenclature Id.No.	rd Used: : Digital Weighing Balance : MCS/DWB/01	Certificate No. : MCS/2 Valid Up to : 07/11/	1000002073 2022
T Work Instruction Method Used Environment Det	: By Gravimetric method.		4787 / ISO 8655-2 & 6
Temperature : Atmospheric Pres	25.8 °C	Relative Hur	midity: 51 % RH

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Page 1 of 2





Certificate No.

: MCS/22000001096

ULR No.

: CC313322000001096F

Calibration Result

2 000A24 533				All Reading are in μl		
Avg.Observed Value @ 27°C	± MPE (Systematic)	Systematic error	± MPE (Random)	Random Error	(±) Expanded Uncertainty	
100.75	0.80	0.75	0.30	0.03	1.5	
501.52	4.00	1.52	TOTAL TO		1.5	
1004.88	8.00	4.88		200000000	5.5	
	100.75 501.52 1004.88	Value @ 27°C (Systematic) 100.75	Value @ 27°C (Systematic) error 100.75 0.80 0.75 501.52 4.00 1.52 1004.88 8.00 4.88	Value @ 27°C (Systematic) error (Random) 100.75 0.80 0.75 0.30 501.52 4.00 1.52 1.50 1004.88 8.00 4.88 3.00	Value @ 27°C (Systematic) error ENPE (Random) Random Error 100.75 0.80 0.75 0.30 0.03 501.52 4.00 1.52 1.50 0.04	

Remarks: All Observed Reading are Within Accuracy Limit as per ISO 8655-2

UUC: Unit Under Calibration

*All Readings are Average of ten Readings.

*MPE :Maximum permissible errors

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-End Of Certificate-

Page 2 of 2