

Calibration Certificate

Certificate No.: YEA(C)/ 231223A/1964/001  
 ULR No. : CC222123000082844F

Dated : 30.12.2023

Calibrated for : ICTC, District Hospital Mamit  
 Dist.: Mamit, Mizoram,  
 Pin - 796441.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
26.12.2023	26.12.2024	1	3

**Description of Instrument**

*Name* : Micro Pipette  
*Identification* : ICTC/MMT/MP-01  
*Range* : 100 - 1000 µl  
*Least Count* : 5 µl  
*Make* : Erba Biohit (Sl. No. : 8018506)

**Service Request No. / Order Reference** : 231223A/1964/001-002

**Receipt of Instrument** : 23.12.2023

**Location where calibration performed** : At permanent laboratory

**Applicable Specification of Instrument to be Calibrated** : Not Specified

**Condition of Instrument to be Calibrated** : Satisfactory

**Basis of Calibration** : Comparison method with reference to YEA/WI/M-47

**Environmental Condition during Calibration** : **Temp.** : (23±4)°C      **RH** : (50±10)%

**Equipment used for Calibration** : Standard Electronic Balance & Distilled Water

**Traceability** : To National Standard vide Certificate No:  
 YEA(C)/230925/Y001/001 valid till 24.09.2024  
 YEA(C)/231216/Y001/001 valid till 15.12.2024

**Measurement Uncertainty** : The figures are stated in the result at coverage factor  
 $k = 2$  corresponding to confidence probability of  
 95% for normal distribution.

**Laboratory Identification** : Sticker is affixed for authentication of calibration.

The above Instrument/Equipment/Machine has been calibrated  
 The results are given in the page 2 to ..... 3 ...of the certificate.



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### Calibration Results

#### Mechanical Calibration

##### A) Calibration Result of Micro Pipette :

Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (cv)	Measurement Uncertainty
	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\pm \mu$ l)
1	100	99.970	99.999	0.001	0.025	0.019
2		100.015				
3		99.979				
4		99.988				
5		99.997				
6		100.032				
7		100.018				
8		100.022				
9		99.956				
10		100.016				
				Standard Limit Value as Per ISO 8655 - 2 : 2002 ( $\pm \mu$ l)		
				0.800	0.300	

Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (cv)	Measurement Uncertainty
	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\pm \mu$ l)
1	500	499.944	499.893	0.107	0.028	0.023
2		499.888				
3		499.880				
4		499.941				
5		499.880				
6		499.893				
7		499.866				
8		499.893				
9		499.860				
10		499.888				
				Standard Limit Value as Per ISO 8655 - 2 : 2002 ( $\pm \mu$ l)		
				4.000	1.500	

cont...3





# YEA

☎ : 033 2677 1411/1412, 2667 1909

## YOUNG ENGG. & CALIBRATION SERVICES PVT. LTD.

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Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (cv)	Measurement Uncertainty
	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\mu$ l)	( $\pm \mu$ l)
1	1000	999.911	999.940	0.060	0.029	0.023
2		999.967				
3		999.947				
4		999.915		Standard Limit Value as Per ISO 8655 - 2 : 2002 ( $\pm \mu$ l)		
5		999.978				
6		999.927		8.000	3.000	
7		999.979				
8		999.943				
9		999.933				
10		999.894				

DUC : Device Under Calibration

REMARKS : The above Micro Pipette has been calibrated and the readings are tabulated above.

NOTES : This certificate refers to the results tabulated at the time of calibration only for the above mentioned item submitted for calibration and this should not be reproduced, other than in full except with prior written approval from the head of calibration laboratory.

Authorised By

A. Das

Manager Calibration

\*\*\* End of the Calibration Certificate \*\*\*

