



YEA

☎ : 033 2677 1411/1412, 2667 1909

YOUNG ENGG. & CALIBRATION SERVICES PVT. LTD.

Admn. Office & Lab : Kamardanga Road (Opp. Tarama Ashram), Ichapur, Howrah - 711 104
E-mail : calibration@yeagroup.org ★ Visit us at : www.yeagroup.org
CIN : U74140WB2005PTC106389 ★ Toll Free Help Desk : 1800 345 9001

Calibration Certificate

Certificate No.: YEA(C)/ 231223A/1967/001
ULR No. : CC222123000082852F

Dated : 30.12.2023

Calibrated for : ICTC, Distruct Hospital Siaha
Dist.: Siaha, Mizoram,
Pin - 796901.

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/SHA/MP-01
Range : 100 - 1000 µl
Least Count : 10 µl
Make : Electra (Sl. No. : 051204497)

Service Request No. / Order Reference

: 231223A/1967/001-003

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.

Con.....2



YEA(C)/F-08





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ULR No. : CC222123000082852F

Calibrated By : S. Das

Date: 30.12.2023

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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
	(μ l)	(μ l)	(μ l)	(μ l)	(μ l)	($\pm \mu$ l)
1	100	99.970	100.004	-0.004	0.031	0.023
2		100.029				
3		100.042				
4		100.015		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
5		99.963				
6		100.018				
7		99.979		0.800	0.300	
8		99.968				
9		100.042				
10		100.018				

Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (cv)	Measurement Uncertainty
	(μ l)	(μ l)	(μ l)	(μ l)	(μ l)	($\pm \mu$ l)
1	500	500.175	500.102	-0.102	0.033	0.026
2		500.097				
3		500.111				
4		500.134		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
5		500.078				
6		500.087				
7		500.110		4.000	1.500	
8		500.082				
9		500.058				
10		500.093				

cont. 3





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Certificate No.: YEA(C)/ 231223A/I967/001

ULR No. : CC222123000082852F

Calibrated By : S. Das

Date: 30.12.2023

Page 3 of 3 Pages

Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (cv)	Measurement Uncertainty
	(μ l)	(μ l)	(μ l)	(μ l)	(μ l)	($\pm \mu$ l)
1	1000	999.947	1000.031	-0.031	0.039	0.030
2		1000.016				
3		1000.079				
4		1000.087		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
5		1000.036				
6		1000.012		8.000	3.000	
7		1000.047				
8		1000.033				
9		1000.014				
10		1000.037				

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 ***



Calibration Certificate

 Certificate No.: YEA(C)/ 231223A/1967/002
 ULR No. : CC22212300082853F

Dated : 30.12.2023

 Calibrated for : ICTC, Distruct Hospital Siaha
 Dist.: Siaha, Mizoram,
 Pin - 796901.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
26.12.2023	26.12.2024	1	2

Description of Instrument

<i>Name</i>	: Micro Pipette
<i>Identification</i>	: ICTC/SHA/MP-02
<i>Capacity</i>	: 100 µl
<i>Make</i>	: N/F

Service Request No. / Order Reference

: 231223A/1967/001-003

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

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Cont.....2

YEA(C)/F-08



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ULR No. : CC222123000082853F

Calibrated By : S. Das

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Calibration Results

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	(μ l)	(μ l)	(μ l)	(μ l)	(μ l)	($\pm \mu$ l)
1	100	100.022	99.992	0.008	0.028	0.020
2		100.015				
3		99.977				
4		99.955		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
5		99.988				
6		99.997				
7		99.955				
8		100.029		0.800	0.300	
9		99.967				
10		100.018				

DUC : Device Under Calibration

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

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