



YEA

☎ : 033 2677 1412, 2667 1909, 82329 85881

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YOUNG ENGG. & CALIBRATION SERVICES PVT. LTD.

Admn. Office & Lab : 44, Shahid Khudiram Bose Sarani, (formerly Kamardanga Road), Ichapur, Howrah - 711 104

E-mail : calbratlon@yeagroup.org ★ Visit us at : www.yeagroup.org

CIN : U74140WB2005PTC106389 ★ Toll Free Help Desk : 1800 345 9001

Calibration Certificate

Certificate No.: YEA(C)/ 220203A/K652/001
ULR No. : CC222122000006467F

Dated : 08.02.2022

Calibrated for : **Kulikawn Hospital, ICTC**
Kulikawn,
Aizawl, Pin - 796005.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
04.02.2022	04.02.2023	1	2

Description of Instrument

Name : Micro Pipette
 Identification : KH/ICTC/MP-01
 Range : 100 - 1000 µl
 Least Count : 5 µl
 Make : Erba (Sl. No. : ME415449)

Service Request No. / Order Reference

: 220203A/K652/001-003

Receipt of Instrument

: 03.02.2022

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-17

Environmental Condition during Calibration

: Temp. : (23±2)°C RH : (50±10)%

Equipment used for Calibration

: Standard Electronic Balance & Distilled Water

Traceability

: To National Standard vide Certificate No:
YEA(C)/210911/Y001/001 valid till 10.09.2022
YEA(C)/210723/Y001/003 valid till 22.07.2022

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 up to its range

The results are given in the page 2 to 3 ... of the Certificate.

YEA(C)/F-08

CC-2221





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Calibrated By : M. Gayan

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	100.505	100.515	-0.515	0.045	0.012
2		100.496				
3		100.493				
4		100.461				
5		100.543				
6		100.526				
7		100.582				
8		100.589				
9		100.498				
10		100.461				
				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
	(μ l)	(μ l)	(μ l)	(μ l)	(μ l)	($\pm \mu$ l)
1	500	500.45	500.07	-0.07	0.36	0.256
2		500.69				
3		500.03				
4		500.29				
5		499.86				
6		500.07				
7		499.71				
8		499.83				
9		499.52				
10		500.21				
				Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
				4.00	1.50	

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Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (ev)	Measurement Uncertainty
	(μ l)	(μ l)	(μ l)	(μ l)	(μ l)	($\pm \mu$ l)
1	1000	1001.14	1001.10	-1.10	0.41	0.260
2		1000.64				
3		1001.00				
4		1001.15		Standard Limit Value as Per ISO 8655 - 2 2002 ($\pm \mu$ l)		
5		1000.67				
6		1001.34		8.00	3.00	
7		1001.60				
8		1000.93				
9		1001.87				
10		1000.69				

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 ***

