



# YEA

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

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

### Calibration Certificate

Certificate No.: YEA(C)/ 220620A/S3087/010  
ULR No. : CC222122000029128F

Dated : 22.06.2022

Calibrated for : **Sanguine Diagnostics**

H - I/10, Durga Bhawan, VIP Road, Joramandir,  
Baguiati (Near Calcutta Public School), Kolkata - 700159.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
21.06.2022	21.06.2023	1	3

#### Description of Instrument

*Name* : Micro Pipette  
*Identification* : Sl. No. : AB04792  
*Range* : 5 - 50 µl  
*Least Count* : 0.5 µl  
*Make* : Erba



CC-2221

Service Request No. / Order Reference : 220620A/S3087/001-010

Receipt of Instrument : 20.06.2022

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-47

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

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.

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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	5.0	4.960	4.967	0.033	0.014	0.011
2		4.957				
3		4.975				
4		4.973				
5		4.968		Standard Limit Value as Per ISO 8655 - 2 : 2002 ( $\pm \mu$ l)		
6		4.954				
7		4.975		0.125	0.075	
8		4.999				
9		4.960				
10		4.951				

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	25.0	24.956	24.924	0.076	0.014	0.011
2		24.934				
3		24.920				
4		24.907		Standard Limit Value as Per ISO 8655 - 2 : 2002 ( $\pm \mu$ l)		
5		24.915				
6		24.932				
7		24.920		0.500	0.200	
8		24.915				
9		24.924				
10		24.914				

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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	50.0	50.000	49.993	0.007	0.015	0.012
2		49.975				
3		49.981				
4		50.003		Standard Limit Value as Per ISO 8655 - 2 : 2002 ( $\pm \mu$ l)		
5		50.012				
6		49.978				
7		49.970				
8		50.002		0.500	0.200	
9		50.003				
10		50.007				

**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 \*\*\*

