



YEA

YOUNG ENGG. & CALIBRATION SERVICES PVT. LTD.

☎ : 033 2677 1412, 2667 1909, 82329 85881
Tele Fax : 033 2677 1411

Admn. Office & Lab : 44, Shahid Khudiram Bose Sarani, (formerly Kamardanga Road), 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

Dated : 17.02.2022

Certificate No.: YEA(C)/ 220212A/O995/006
ULR No. : CC222122000008462F

Calibrated for : Olive Heart and Diagnostics
SCO - 210, Sector - 117, TDI City
Airport Road, Mohali.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
14.02.2022	14.02.2023	1	3

Description of Instrument

Name : Micro Pipette
 Identification : MP - 03
 Range : 5 - 50 µl
 Least Count : 0.1 µl
 Make : Dragon Lab (Sl. No. : YE197AL0489452)

Service Request No. / Order Reference

: 220212A/O995/001-006

Receipt of Instrument

: 12.02.2022

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-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.

Cont.

YEA(C)/F-08



CC-2221

Certificate No.: YEA(C)/ 220212A/O995/006
 ULR No. : CC222122000008462F
 Calibrated By : M. Gayan

Date: 17.02.2022
 Page 2 of 3 Pages

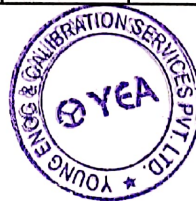
Calibration Results

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	5.0	4.929	4.978	0.022	0.039	0.029
2		4.942				
3		4.955				
4		4.966		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
5		4.970				
6		5.019				
7		5.034				
8		4.966		0.125	0.075	
9		4.957				
10		5.042				

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	25.0	24.952	24.955	0.045	0.023	0.017
2		24.925				
3		24.936				
4		24.945		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
5		24.979				
6		24.954				
7		24.925				
8		24.994		0.500	0.200	
9		24.966				
10		24.971				



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Certificate No.: YEA(C)/ 220212A/O995/006

Date: 17.02.2022

ULR No. : CC222122000008462F

Page 3 of 3 Pages

Calibrated By : M. Gayan

Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (cv)	Measurement Uncertainty
	(μl)	(μl)	(μl)	(μl)	(μl)	($\pm \mu\text{l}$)
1	50.0	49.975	49.986	0.014	0.077	0.056
2		49.903				
3		49.939				
4		49.933				
5		49.891		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu\text{l}$)		
6		49.940				
7		50.040				
8		50.049				
9		50.091		0.500	0.200	
10		50.094				

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 ***





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Calibration Certificate

Certificate No.: YEA(C)/ 220212A/O995/005
ULR No. : CC222122000008461F

Dated : 17.02.2022

Calibrated for : **Olive Heart and Diagnostics**
SCO - 210, Sector - 117, TDI City
Airport Road, Mohali.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
14.02.2022	14.02.2023	1	3

Description of Instrument

Name : Micro Pipette
Identification : MP - 02
Range : 20 - 200 µl
Least Count : 0.2 µl
Make : Mispa - i (Sl. No. : NW01024)

Service Request No. / Order Reference : 220212A/O995/001-006

Receipt of Instrument : 12.02.2022

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-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.



Cont.

YEA(C)/F-08





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ULR No. : CC222122000008461F

Calibrated By : M. Gayan

Date: 17.02.2022

Page 2 of 3 Pages

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	20.0	19.922	19.943	0.057	0.034	0.025
2		19.907				
3		19.934				
4		19.888				
5		19.962				
6		19.981				
7		19.934				
8		19.971				
9		19.934				
10		19.995				
				Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
				0.200	0.100	

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	100.0	99.976	99.996	0.004	0.026	0.019
2		100.009				
3		99.991				
4		99.998				
5		100.003				
6		99.985				
7		100.046				
8		99.957				
9		99.970				
10		100.021				
				Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
				0.800	0.300	

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Certificate No.: YEA(C)/ 220212A/O995/005

ULR No. : CC222122000008461F

Calibrated By : M. Gayan

Date: 17.02.2022

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Sl. No.	DUC Value	Standard Value	Mean Value	Systematic Error (es)	Random Error (cv)	Measurement Uncertainty
	(μl)	(μl)	(μl)	(μl)	(μl)	($\pm \mu\text{l}$)
1	200.0	199.687	199.677	0.323	0.028	0.021
2		199.617				
3		199.639				
4		199.671		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu\text{l}$)		
5		199.707				
6		199.691		1.600	0.600	
7		199.690				
8		199.692				
9		199.704				
10		199.678				

DUC : Device Under Calibration

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

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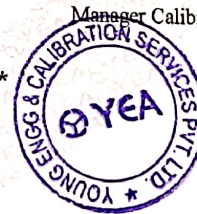
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A. Das

Manager Calibration

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Calibration Certificate

Certificate No.: YEA(C)/ 220212A/O995/004
ULR No. : CC222122000008460F

Dated : 17.02.2022

Calibrated for : **Olive Heart and Diagnostics**
SCO - 210, Sector - 117, TDI City
Airport Road, Mohali.

Calibrated on.	Next Calibration Due On.	Page No.	No. of Pages
14.02.2022	14.02.2023	1	3

Description of Instrument

Name : Micro Pipette
Identification : MP - 01
Range : 100 - 1000 µl
Least Count : 1 µl
Make : Merillette (Sl. No. : MK432360)



CC-2221

Service Request No. / Order Reference : 220212A/O995/001-006

Receipt of Instrument : 12.02.2022

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-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
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.

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Cont... 2



Certificate No.: YEA(C)/ 220212A/O995/004
 ULR No. : CC222122000008460F
 Calibrated By : M. Gayan

Date: 17.02.2022
 Page 2 of 3 Pages

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	99.264	99.303	0.697	0.032	0.023
2		99.291				
3		99.288				
4		99.337				
5		99.310		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
6		99.251				
7		99.356				
8		99.321				
9		99.295		0.800	0.300	
10		99.318				

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	499.03	499.296	0.70	0.28	0.336
2		498.90				
3		499.09				
4		499.45				
5		499.00		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
6		499.40				
7		499.58				
8		499.71				
9		499.53		4.00	1.50	
10		499.30				

cont. 3



Certificate No.: YEA(C)/ 220212A/O995/004

Date: 17.02.2022

ULR No. : CC222122000008460F

Page 3 of 3 Pages

Calibrated By : M. Gayan

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	998.69	999.07	0.93	0.23	0.321
2		999.27				
3		999.33				
4		998.86		Standard Limit Value as Per ISO 8655 - 2 : 2002 ($\pm \mu$ l)		
5		999.03				
6		998.97		8.00	3.00	
7		998.84				
8		999.36				
9		999.27				
10		999.08				

DUC : Device Under Calibration

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

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