





Main Bld . Premises : Centenary Building (G . Flr), Door No . At : 100 W.Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

#### **CALIBRATION CERTIFICATE**

Customer Name & Add. : M/s.

**Clinical Laboratory** 

CARI,GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

ULR.NO CC223122000080847F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number	
TSC/22-23/7590-7	11 Aug 2022	11 Aug 2023	1 of 2	

Details of device under calibration : TSC365914 Transcal ID Nomenclature : pipette[Variable Volume pipette] No. of Pages : 2 Make : Precise XX Cal Procedure No. : TSC/CAL/610 : 11 Aug 2022 Model/Range : NA **DUC Received** SI No. : CARI-II **DUC Condition on Receipt** : Satisfactory ID No. : NA Cal At : Mechanical Lab

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used :

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

#### Note:

- 1. This Calibration Certificate relates only to the above DUC & Reported results are valid at the time of and under the stated conditions of
- 2. Partial Publication/ reproduction of this Certificate in any form is not permitted without the written consent of Transcal.
- 3. Errors if any, in this Certificate shall be brought to notice within 45 days from the date of this Certificate
- 4. Measurement Uncertainty reported is at approximately 95 % confidence level with k=2; Units of Measurement results & Measurement Uncertainty are same as that of range selected - Unless otherwise indicated.
- 5. Calibration of the DUC are traceable to National/International Standards
- 6. Corrections/erasing, invalidate the Calibration Certificate- exception to the 'Final Page or Part of this Report- provided for incorporation of additional data( To be filled by customer authorized signatory and not under calibration laboratory control).
- 7. In Result Sheets, 'Pass' indicates measured readings are within specification limit, 'Fail' Indicates measured readings areout of specification limit & ' ' indicates no specification limit furnished.
- 8, Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .
- 9. Consider Model or Range whichever is applicable.
- 10. Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

ે (Calibration Engineer)

ement 10

Shiva P (Calibration Engineer) Authorised By

Manjunath D J (Lab In charge)

Tel: +91 80 4368 8889, 2334 4723 Telefax: 2344 0676 E-mail: info@transcaal.com





ULR.NO: CC223122000080847F

Page: 2 of 2

Range

100-1000

Increment

10

Atmospheric Pressure :	9
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Micropipette Set Volume in µl	Standard Balance Reading in g 0.10010 0.10011 0.10009 0.10012 0.10015	Actual Calculated Volume @ 20°C in μl 100.21 100.22 100.20 100.23	Average Volume in µI	Systematic Error, ± in %	Random Error in ± in %
100	0.10011 0.10009 0.10012	100.22 100.20			
100	0.10009 0.10012	100.20			1
100	0.10012	VVV/EDV/-EV			
100	The Augustian Profit Community	100.23			
100	0.10015	100.23		· ·	
100		100.26	100.21	0.21	0.05
	0.10021	100.32	100.21	0.21	
	0.10007	100.18			
	0.10006	100.17			
	0.10005	100.16			
	0.10004	100.15			
	0.50049	501.02			
	0.50048	501.01		9	0.02
	0.50053	501.06			
	0.50041	500.94		0.19	
	0.50039	500.92	500.93		
500	0.50035	500.88			
		500.87			
		500.74			
	0.50036	500.89			
	0.50037	500.90			
10.00	1.00137	1002.44			
N.	1.00136	1002.43			
		1002.42			ı
		1002.40			
		1002.40	1002.40	0.24	0.00
1000		1002.41	1002.40	0.24	0.00
	500 1000	0.10006 0.10005 0.10004 0.50049 0.50048 0.50053 0.50041 0.50039 0.50035 0.50034 0.50021 0.50036 0.50037 1.00137 1.00136 1.00133 1.00133 1.00134 1.00136 1.00131 1.00129 1.00126	0.10006 100.17 0.10005 100.16 0.10004 100.15 0.50049 501.02 0.50048 501.01 0.50053 501.06 0.50034 500.92 0.50034 500.87 0.50034 500.87 0.50021 500.74 0.50036 500.89 0.50037 500.90 1.00137 1002.44 1.00136 1002.43 1.00135 1002.40 1.00134 1002.40 1.00134 1002.41 1.00136 1002.43 1.00136 1002.43 1.00137 1002.40 1.00138 1002.40 1.00139 1002.40 1.00130 1002.43 1.00131 1002.38 1.00129 1002.36 1.00126 1002.33	0.10006 100.17 0.10005 100.16 0.10004 100.15 0.50049 501.02 0.50048 501.01 0.50053 501.06 0.50041 500.94 0.50039 500.92 500.92 0.50035 500.88 500.87 0.50021 500.74 0.50036 500.89 0.50037 500.90 1.00137 1002.44 1.00136 1002.43 1.00133 1002.40 1.00134 1002.41 1.00136 1002.41 1.00136 1002.43 1.00131 1002.43 1.00136 1002.41 1.00136 1002.43 1.00137 1002.40 1.00138 1002.40 1.00139 1002.38 1.00129 1002.36 1.00126 1002.33	0.10006       100.17         0.10005       100.16         0.10004       100.15         0.50049       501.02         0.50048       501.01         0.50053       501.06         0.50041       500.94         0.50039       500.92         0.50035       500.88         0.50034       500.87         0.50021       500.74         0.50036       500.89         0.50037       500.90         1.00136       1002.43         1.00135       1002.42         1.00136       1002.40         1.00133       1002.40         1.00134       1002.41         1.00136       1002.43         1.00131       1002.38         1.00129       1002.36         1.00126       1002.33

Conclusion / Remarks:

- Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor of k = 2.00
- Calibration is performed as per ISO 8655 6 : 2002 ( E )

3 Gravimetric Method is adopted for calibration

Calibrated By

Janardhan S (Calibration Engineer)

Shiva P (Calibration Engineer)



**Authorised By** 







Main Bld. Premises: Centenary Building (G. Flr), Door No. At: 100 W. Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

#### **CALIBRATION CERTIFICATE**

Customer Name & Add. : M/s.

**Clinical Laboratory** 

CARI, GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

ULR.NO CC223122000080857F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/7590-8	11 Aug 2022	11 Aug 2023	1 of 2

Details of device	e under calibration	Transcal ID	: TSC365928	
Nomenclature	: pipette[Fixed Volume Pipette]	No. of Pages	: 2	
Make	: Hi-Pette	Cal Procedure No.	: TSC/CAL/610	
Model/Range	: NA	DUC Received	: 11 Aug 2022	
SI No.	: CARI-I	DUC Condition on Receipt	: Satisfactory	
ID No.	: NA	Cal At	: Mechanical Lab	

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used :

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing , Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

#### Note:

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- 3. Errors if any, in this Certificate shall be brought to notice within 45 days from the date of this Certificate
- 4. Measurement Uncertainty reported is at approximately 95 % confidence level with k=2; Units of Measurement results & Measurement Uncertainty are same as that of range selected Unless otherwise indicated.
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- 8. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .
- 9. Consider Model or Range whichever is applicable.
- 10. Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

Janardhan S

(Calibration Engineer)

Shiva P (Calibration Engineer)

Checked By

**Authorised By** 

Manjunath D J (Lab In charge)

Tel: +91 80 4368 8889, 2334 4723 Telefax: 2344 0676 E-mail: info@transcaal.com Website: www.transcaal.com

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ULR.NO: CC223122000080857F

Page: 2 of 2

Range

1000

		Au	iospheric Flessule .	907.5 IIIDAI		
SI. No.	Micropipette Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume @ 20°C in µl	Average Volume in µI	Systematic Error, ± in %	Random Error, in ± in %
1		1.00010	1001.17			
2		1.00011	1001.18	4.		
3		1.00012	1001.19	1001.21	0.12	0.00
4		1.00013	1001.20			
5	1000	1.00014	1001.21			
6	1000	1.00015	1001.22			
7		1.00016	1001.23			
8		1.00017	1001.24			
9	1	1.00018	1001.25			
10		1.00013	1001.20			(A

Measurement Uncertainty: ±

0.11

#### Conclusion / Remarks:

- Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor
- Calibration is performed as per ISO 8655 6: 2002 (E)
- Gravimetric Method is adopted for calibration

Calibrated By

danardhan S (Calibration Engineer) Checked By

Shiva P

(Calibration Engineer)

BANGALORE Pt. 43688889 Measurement to

**Authorised By** 







Main Bld. Premises: Centenary Building (G.Flr), Door No. At: 100 W.Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

### **CALIBRATION CERTIFICATE**

Customer Name & Add.: M/s.

Clinical Laboratory

CARI, GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

ULR.NO CC223122000080859F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/7590-9	11 Aug 2022	11 Aug 2023	1 of 2

Details of device under calibration

Transcal ID

: TSC365930

Nomenclature	: pipette[Variable Volume pipette]	No. of Pages	: 2
Make	: Erba	Cal Procedure No.	: TSC/CAL/610
Model/Range	In the second second	DUC Received	: 11 Aug 2022
SI No.	: AB152401	DUC Condition on Receipt	: Satisfactory
ID No.	: NA	Cal At	: Mechanical Lab
	* 1.77 1	- July 12	. Wiccharlical Lab

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used :

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

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8. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .

9. Consider Model or Range whichever is applicable.

10. Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

Janardhan S (Calibration Engineer) Checked By

Shiva P (Calibration Engineer)

BANGALORE Ph 43688889

**Authorised ByJ** 

Manjunath D J (Lab In charge)

Tel : +91 80 4368 8889, 2334 4723 Telefax : 2344 0676 E-mail : info@transcaal.com V



ULR.NO: CC223122000080859F

Page: 2 of 2

Range

100-1000

iciein		Atm	ospheric Pressure :	907.5 mbar		
SI. No.	Micropipette Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume @ 20°C in µl	Average Volume in µI	Systematic Error, ± in %	Random Erro in ± in %
1		0.10001	100.12			
2	1	0.10002	100.13			
3		0.10003	100.14			
4		0.10004	100.15			
5		0.10005	100.16	100.16	0.16	0.03
6	100	0.10006	100.17	] 100.10	0.10	-
7	1	0.10007	100.18			
8	1	0.10008	100.19			907
9	1	0.10009	100.20			
10		0.10004	100.15		(5.14)	
11		0.50049	501.03			
12		0.50048	501.01	500.93	51.	
13		0.50053	501.07			
14	1	0.50041	500.94			0.02
15	7	0.50039	500,92		0.19	
16	500	0.50035	500.88			
17	<del>-</del>	0.50034	500.87			
18	1	0.50021	500.74			
19		0.50036	500.89			
20		0.50037	500.90			
21		1.00001	1001.08			
22	7	1.00002	1001.09			
23		1.00003	1001.10			
24	1	1.00004	1001.11			}
25	1000	1.00005	1001.12	1001.12	0.11	0.00
26	1000	1.00006	1001.13	1001.12	<b>9.1.</b> 1	0.00
27		1.00007	1001.14			
28		1.00008	1001.15			
29		1.00009	1001.16			
30	7	1.00010	1001.17			

Measurement Uncertainty: ±

0.11

#### Conclusion / Remarks:

- Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor
- Calibration is performed as per ISO 8655 6 : 2002 ( E )
- Gravimetric Method is adopted for calibration

Calibrated By

Janardhan S (Calibration Engineer)

Measurement to Shiva P (Calibration Engineer)

**Authorised By** 

(Lab In charge)







Main Bld. Premises: Centenary Building (G. Flr), Door No. At: 100 W. Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

#### **CALIBRATION CERTIFICATE**

Customer Name & Add.: M/s.

**Clinical Laboratory** 

CARI, GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

ULR.NO CC223122000080848F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/7590-10	11 Aug 2022	11 Aug 2023	1 of 2

Details of device under calibration Transcal ID : TSC365931 Nomenclature : pipette[Variable Volume pipette] No. of Pages : 2 Make : Precise Cal Procedure No. : TSC/CAL/610 Model/Range : NA **DUC Received** : 11 Aug 2022 SI No. : CARI-IV **DUC Condition on Receipt** : Satisfactory ID No. : NA Cal At : Mechanical Lab

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used:

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

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- 9. Consider Model or Range whichever is applicable.
- 10. Nabl-133 guidelines are adopted for use of NABL symbol.

**Calibrated By** 

Janardhan S d(Calibration Engineer) Checked By

Shiva P

(Calibration Engineer)

**Authorised By** 

Manjunath D J (Lab In charge)

Tel : +91 80 4368 8889, 2334 4723 Telefax : 2344 0676 E-mail : info@transcast.com





ULR.NO: CC223122000080848F CAL CERT. NO : TSC/22-23/7590-10

Page: 2 of 2

Range

10-100

μl

Increment

μl

906.2 mbar

		Atn	nospheric Pressure :	906.2 Mbai		
SI. No.	Micropipette Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume @ 20°C in µl	Average Volume in µl	Systematic Error, ± in %	Random Error, in ± in %
1		0.01001	10.02			
2	1	0.01002	10.03			
3	1	0.01003	10.04			
4	1	0.01004	10.05			
5	1 40	0.01005	10.06	10.04	0.41	0.25
6	10	0.01006	10.07	10.04	0. , .	
7	1	0.01007	10.08			
8	1	0.01003	10.04			
9	1	0.01001	10.02	-		21 7
10		0.00999	10.00			
11		0.04999	50.04			
12		0.04999	50.04			
13		0.04998	50.03			
14		0.04999	50.04	50.03		
15	50	0.04998	50.03		0.07	0.02
16	] 50	0.04997	50.02		0.07	0.02
17	1	0.04999	50.04			
18		0.04997	50.02			
19		0.04997	50.02			
20		0.04998	50.03			
21		0.10003	100.14			
22	- 11.6	0.10003	100.14		F -	
23	L	0.10004	100.15			
24		0.10005	100.16			
25	100	0.09998	100.09	100.12	0.40	0.00
26	100	0.09999	100.10	100.12	0.12	0.02
27		0.10000	100.11			
28		0.10001	100.12			-
29		0.10003	100.14			
30		0.10002	100.13			

Measurement Uncertainty: ±

Conclusion / Remarks:

Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor

0.04

Calibration is performed as per ISO 8655 - 6: 2002 (E) 2

3 Gravimetric Method is adopted for calibration

**Calibrated By** 

Janardhan S (Calibration Engineer)

Checked By

Shiva P

Measurement 10 (Calibration Engineer)

BANGALORE Ph 43688889

**Authorised By** 



# Measurement to Perfection...

Main Bld . Premises : Centenary Building (G . Fir), Door No . At : 100 W.Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

#### **CALIBRATION CERTIFICATE**

Customer Name & Add.: M/s.

**Clinical Laboratory** 

CARI.GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

ULR.NO CC223122000080845F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/7590-11	11 Aug 2022	11 Aug 2023	1 of 2

Details of device	under calibration	Transcal ID	: TSC365941	
Nomenclature	: pipette[Variable Volume pipette]	No. of Pages	∶ 2	
Make	:	Cal Procedure No.	: TSC/CAL/610	
Model/Range	: NA	DUC Received	: 11 Aug 2022	
SI No.	: CARI-VII	DUC Condition on Receipt	: Satisfactory	
ID No.	: NA	Cal At	: Mechanical Lab	

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used :

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

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8. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .

9. Consider Model or Range whichever is applicable.

10. Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

Janardhan S (Calibration Engineer) Checked By

asurement 10 Shiva P (Calibration Engineer)

**Authorised By** 

Manjunath D J (Lab In charge)

Tel: +91 80 4368 8889, 2334 4723 Telefax: 2344 0676 E-mail: info@transcaal.com Wabaile



ULR.NO: CC223122000080845F

Page: 2 of 2

Range

10-100

μΙ

Increment

μΙ

		Atm	ospheric Pressure:	906.3 mbar		<del></del>
SI. No.	Micropipette Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume @ 20°C in μl	Average Volume in µI	Systematic Error, ± in %	Random Error in ± in %
.1		0.01001	10.02	4		
2		0.01004	10.05			
3		0.01003	10.04		-	Ĩ.
4		0.01002	10.03	i	_	
5	10	0.01001	10.02	10.02	0.20	0.24
6	1 10	0.01002	10.03	10.02	0.20	0.2.
7		0.01000	10.01			
8		0.01001	10.02			
9		0.01001	10.02	]		
10		0.00995	9.96			
11		0.04999	50.04			
12	1	0.05000	50.05	]		
13		0.05001	50.06			
14		0.05002	50.07			
15	50	0.05003	50.08	50.06	0.12	0.06
16	50	0.05004	50.09	00.00		
17	7.	0.05006	50.11			
18		0.04997	50.02			
19	7	0.04997	50.02			
20		0.04998	50.03			
21		0.10002	100.13			
22		0.10001	100.12	_		
23		0.10000	100.11			_
24		0.10002	100.13			
25	100	0.09998	100.09	100.11	0.11	0.01
26	100	0.09999	100.10	_	J.,,	
27		0.10000	100.11			
28		0.10001	100.12			
29		0.10000	100.11			
30	-	0.10002	100.13			

Measurement Uncertainty: ±

0.04 μl

Conclusion / Remarks:

- Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor
- 2 Calibration is performed as per ISO 8655 6: 2002 (E)
- 3 Gravimetric Method is adopted for calibration

**Calibrated By** 

Janardhan S (Calibration Engineer)

Measurement to Shiva P (Calibration Engineer)

**Authorised By** 

BANGALORE Ph 43688889







Main Bld. Premises: Centenary Building (G.Flr), Door No. At: 100 W.Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin – 560003

#### **CALIBRATION CERTIFICATE**

Customer Name & Add. : M/s.

**Clinical Laboratory** 

CARI, GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

ULR.NO CC223122000080854F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/7590-12	11 Aug 2022	11 Aug 2023	1 of 2

Details of device	under calibration	Transcal ID	: TSC365959	
Nomenclature	: pipette[Variable Volume pipette]	No. of Pages	: 2	
Make	: Thermo Scientific	Cal Procedure No.	: TSC/CAL/610	
Model/Range	: Finnpipette-F2	DUC Received	: 11 Aug 2022	
SI No.	: PW12763	DUC Condition on Receipt	: Satisfactory	
ID No.	: NA	Cal At	: Mechanical Lab	

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used :

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

#### Note:

- 1. This Calibration Certificate relates only to the above DUC & Reported results are valid at the time of and under the stated conditions of measurements.
- 2. Partial Publication/ reproduction of this Certificate in any form is not permitted without the written consent of Transcal.

3. Errors if any, in this Certificate shall be brought to notice within 45 days from the date of this Certificate

4. Measurement Uncertainty reported is at approximately 95 % confidence level with k=2; Units of Measurement results & Measurement Uncertainty are same as that of range selected - Unless otherwise indicated.

5. Calibration of the DUC are traceable to National/International Standards

6. Corrections/erasing, invalidate the Calibration Certificate- exception to the 'Final Page or Part of this Report- provided for incorporation of additional data( To be filled by customer authorized signatory and not under calibration laboratory control).

7. In Result Sheets, 'Pass' indicates measured readings are within specification limit, 'Fail' Indicates measured readings areout of specification limit & ' - ' indicates no specification limit furnished.

8. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .

9. Consider Model or Range whichever is applicable.

10. Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

Janardhan S (Calibration Engineer) Checked By

Shiva P (Calibration Engineer)

BANGALORE PH 43688889

**Authorised By** 

Manjunath D J (Lab In charge)

Tel: +91 80 4368 8889, 2334 4723 Telefax: 2344 0676 E-mail: info@transcaal.com Website: www.transcaal.com





ULR.NO: CC223122000080854F CAL CERT. NO : TSC/22-23/7590-12

Page : 2 of 2

Range

100-1000

Increment

	·	Atm	nospheric Pressure :	906.2 mbar	1	Ι
SI. No.	Micropipette Set Volume in µI	Standard Balance Reading in g	Actual Calculated Volume @ 20°C in µl	Average Volume in µI	Systematic Error, ± in %	Random Erro in ± in %
1		0.10010	100.21			-
2		0.10011	100.22	1	,	
3		0.10009	100.20			
4		0.10012	100.23			
5	100	0.10015	100.26	400.04	0.04	0.05
6	100	0.10021	100.32	100.21	0.21	0.05
7		0.10007	100.18			
8		0.10006	100.17			
9		0.10005	100.16			
10		0.10004	100.15			
11		0.50049	501.02			
12		0.50048	501.01			
13		0.50053	501.06			
14		0.50041	500.94	500.93		
15	500	0.50039	500.92		2 22	
16	300	0.50035	500.88		0.19	0.02
17		0.50034	500.87	_	2.2	
18		0.50021	500.74			
19		0.50036	500.89		1	
20		0.50037	500.90			
21		1.00137	1002.44			
22		1.00136	1002.43			
23	1	1.00135	1002.42	F1,		
24		1.00133	1002.40			
25	1000	1.00133	1002.40	1000 10		
26	1000	1.00134	1002.41	1002.40	0.24	0.00
27	"61	1.00136	1002.43		- 1	
28		1.00131	1002.38			
29		1.00129	1002.36			
30		1.00126	1002.33			

Conclusion / Remarks:

- Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor
- Calibration is performed as per ISO 8655 6: 2002 (E)

3 Gravimetric Method is adopted for calibration

Calibrated By

Janardhan S (Calibration Engineer)

Checked By

(Calibration Engineer)

Measurement to BANGALORE Ph 43688889

**Authorised By** 







Main Bld. Premises: Centenary Building (G.Flr), Door No. At: 100 W.Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

### **CALIBRATION CERTIFICATE**

Customer Name & Add.: M/s.

Clinical Laboratory

CARI, GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

ULR.NO CC223122000080851F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/7590-13	11 Aug 2022	11 Aug 2023	1 of 2

Details of device under calibration		Transcal ID	: TSC365966	
Nomenclature	: pipette[Fixed Volume Pipette]	No. of Pages	: 2	
Make	: Vertex	Cal Procedure No.	: TSC/CAL/610	
Model/Range	: NA	DUC Received	: 11 Aug 2022	
SI No.	: CARI-III	DUC Condition on Receipt	: Satisfactory	
ID No.	:NA	Cal At	: Mechanical Lab	

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used:

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

#### Note:

- 1. This Calibration Certificate relates only to the above DUC & Reported results are valid at the time of and under the stated conditions of measurements.
- 2. Partial Publication/ reproduction of this Certificate in any form is not permitted without the written consent of Transcal.

3. Errors if any, in this Certificate shall be brought to notice within 45 days from the date of this Certificate

4. Measurement Uncertainty reported is at approximately 95 % confidence level with k=2; Units of Measurement results & Measurement Uncertainty are same as that of range selected - Unless otherwise indicated.

Calibration of the DUC are traceable to National/International Standards

- 6. Corrections/erasing, invalidate the Calibration Certificate- exception to the 'Final Page or Part of this Report- provided for incorporation of additional data( To be filled by customer authorized signatory and not under calibration laboratory control).
- 7. In Result Sheets, 'Pass' indicates measured readings are within specification limit, 'Fail' Indicates measured readings areout of specification limit & ' ' indicates no specification limit furnished.

8. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .

9. Consider Model or Range whichever is applicable.

10. Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

Janardhan S **♦**(Calibration Engineer) Checked By

Shiva P

ment 10 (Calibration Engineer)

**Authorised By** 

Manjunath D J (Lab In charge)

Tel: +91 80 4368 8889, 2334 4723 Telefax: 2344 0676 E-mail: info@transcaal.com Webs





ULR.NO: CC223122000080851F

Page: 2 of 2

Range

8

9

100

μΙ

905.3 mbar Atmospheric Pressure: Systematic Error, Random Error, Average Volume in **Actual Calculated** Standard Balance Micropipette Set in ± in % SI. ± in % Volume @ 20°C in µl μΙ Volume in µl Reading in g No. 100.12 0.10001 1 0.10002 100.13 2 100.14 0.10003 3 100.15 0.10004 4 0.10005 100.16 0.02 5 0.15 100.15 100 0.10006 100.17 6 100.18 0.10007 7 100.19 0.10008

10 Measurement Uncertainty: ± 100.14 μl

100.13

#### Conclusion / Remarks:

- Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor
- Calibration is performed as per ISO 8655 6 : 2002 ( E )

0.10002

0.10003

Gravimetric Method is adopted for calibration

Calibrated By

Janardhan S Janaronan 3 (Calibration Engineer) Checked By

Shiva P (Calibration Engineer)



**Authorised By** 



# Measurement to Perfection...



Main Bld. Premises: Centenary Building (G.Flr), Door No. At: 100 W.Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

#### CALIBRATION CERTIFICATE

Customer Name & Add. : M/s.

**Clinical Laboratory** 

CARI, GHY-781028

Customer's Reference:

SRF No.: TSC/22-23/7590

Dated: 11 Aug 2022

TCC265067

ULR.NO CC223122000080846F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number	
		44 4 2022	1 of 2	
TSC/22-23/7590-14	11 Aug 2022	11 Aug 2023	1012	

Details of device under calibration		Transcal ID	: 150363907	
Nomenclature	: pipette[Fixed Volume Pipette]	No. of Pages	: 2	
Make	: Vertex	Cal Procedure No.	: TSC/CAL/610	
Model/Range	: NA	DUC Received	: 11 Aug 2022	
SI No.	: CARI-V	DUC Condition on Receipt	: Satisfactory	
ID No.	: NA	Cal At	: Mechanical Lab	

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

#### Note:

- 1. This Calibration Certificate relates only to the above DUC & Reported results are valid at the time of and under the stated conditions of measurements.
- 2. Partial Publication/ reproduction of this Certificate in any form is not permitted without the written consent of Transcal.

3. Errors if any, in this Certificate shall be brought to notice within 45 days from the date of this Certificate

4. Measurement Uncertainty reported is at approximately 95 % confidence level with k=2; Units of Measurement results & Measurement Uncertainty are same as that of range selected - Unless otherwise indicated.

5. Calibration of the DUC are traceable to National/International Standards

- 6. Corrections/erasing, invalidate the Calibration Certificate- exception to the 'Final Page or Part of this Report- provided for incorporation of additional data( To be filled by customer authorized signatory and not under calibration laboratory control).
- 7. In Result Sheets, 'Pass' indicates measured readings are within specification limit, 'Fail' Indicates measured readings areout of specification limit & ' - ' indicates no specification limit furnished.
- 8. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .

9. Consider Model or Range whichever is applicable.

Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

(Calibration Engineer)

Checked By

(Calibration Engineer)

BANGALORE ement 10

**Authorised By** 

Manjunath D J (Lab In charge)

Tel : +91 80 4368 8889, 2334 4723 Telefax : 2344 0676 E-mail : info@transcaal.com





ULR.NO: CC223122000080846F CAL CERT. NO: TSC/22-23/7590-14

Page: 2 of 2

Range

10

μΙ

mbar

SI. No.	Micropipette Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume @ 20°C in μl	Average Volume in µl	Systematic Error, ± in %	Random Error, in ± in %
1		0.01001	10.02			E STATE OF RE
2	+	0.01002	10.03			
3		0.01003	10.04	10.05	0.50	0.25
4		0.01004	10.05			
5	1 40	0.01005	10.06			
6	10	0.01006	10.07	10.03		
7		0.01007	10.08			
8	-	0.01008	10.09	l l		
9		0.01001	10.02			
10	0	0.01002	10.03			

Conclusion / Remarks:

Measurement uncertainty is at confidence level 95% which corresponds to a coverage factor of k = 2.00

Calibration is performed as per ISO 8655 - 6 : 2002 ( E )

Gravimetric Method is adopted for calibration

**Calibrated By** 

Janardhan S (Calibration Engineer) Checked By

(Calibration Engineer)

BANGALORE Ph 43688889

**Authorised By** 







Main Bld. Premises: Centenary Building (G. Flr), Door No. At: 100 W.Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin – 560003

#### CALIBRATION CERTIFICATE

Customer Name & Add. : M/s.

**Clinical Laboratory** 

**CARI, GHY-781028** 

**Customer's Reference:** 

SRF No.: TSC/22-23/7590

11 Aug 2022 Dated:

ULR.NO CC223122000080849F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/7590-15	11 Aug 2022	11 Aug 2023	1 of 2

: TSC365968 Transcal ID Details of device under calibration No. of Pages : Pipette[ Variable Volume pipette] Nomenclature : TSC/CAL/610 Cal Procedure No. Make : Accupipette : 11 Aug 2022 **DUC Received** Model/Range : NA : Satisfactory **DUC Condition on Receipt** : V28328 SI No. : Mechanical Lab Cal At :NA ID No.

Environmental Conditions: Temperature in °C: 21.2

Humidity in RH %: 52.1

#### Standards used:

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Electronic Weighing Balance	Mettler Toledo	AG 285	1120102251	TSC/21-22/INH/MECH-19- 1	25 Jan 2023

#### Note:

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- 3. Errors if any, in this Certificate shall be brought to notice within 45 days from the date of this Certificate
- 4. Measurement Uncertainty reported is at approximately 95 % confidence level with k=2; Units of Measurement results & Measurement Uncertainty are same as that of range selected - Unless otherwise indicated.
- 5. Calibration of the DUC are traceable to National/International Standards
- 6. Corrections/erasing, invalidate the Calibration Certificate- exception to the 'Final Page or Part of this Report- provided for incorporation of additional data( To be filled by customer authorized signatory and not under calibration laboratory control).
- 7. In Result Sheets, 'Pass' indicates measured readings are within specification limit, 'Fail' Indicates measured readings areout of specification limit & ' - ' indicates no specification limit furnished.
- 8. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .
- 9. Consider Model or Range whichever is applicable.
- 10. Nabl-133 guidelines are adopted for use of NABL symbol.

Janardhan S

Calibrated B

(Calibration Engineer)

(Calibration Engineer)



Authorised By Manjunath D J

(Lab In charge)

Tel: +91 80 4368 8889, 2334 4723 Telefax: 2344 0676 E-mail: info@transcaal.com Web





Page: 2 of 2

CAL CERT. NO: TSC/22-23/7590-11

ULR.NO: CC223122000080845F

Range

10-100

μΙ

Increment

0.2

μΙ

Increm	ienc ,	Atmost	heric Pressure :	906.3 mbar		
SI. No.	Micropipette Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume @ 20°C in μl	Average Volume in µl	Systematic Error, ± in %	Random Error, in ± in %
		0.01001	10.02			
1		0.01001	10.05			
2		0.01004	10.04			
3	2 *	0.1002	10.03			
5		0.1002	10.01	40.00	0.15	0.24
6	10	0.00998	9.99	10.02	. 0.10	
7		0.01000	10.01		6	
8		0.1001	10.02			
9		0.01001	10.02			
10	*	0.00995	9.96			
11		0.04999	50.04	Λ.		
12		0.05000	50.05			
13		0.05001	50.06	_	. *	
14		0.05002	50.07		- '	
15	50	0.05003	50.08	50.06	0.12	0.06
. 16	50	0.05004	50.09	00.00	0.12	0.00
- 17 -		0.05006	50.11	1 2 H 9%	Fig. 1	1 , 1
18		0.04997	50.02			
19		0.04997	50.02			
20		0.04998	50.03			
- 21	11	0.10002	100.13	-1	-	
22		0.10001	100.12			+
23		0.10000	100.11			
24		0.10002	100.13			
25	100	0.09998	100.09	100.11	0.11	0.01
26	100	0.09999	100.10	.00	<b>5</b> .,,	<b>5.5</b> .
27		0.10000	100.11	5 S		
28		0.10001	100.12			
29	-	0.10000	100.11			
30		0.10002	100.13			

Measurement Uncertainty: ±

0.04 µl

Conclusion/ Remarks:

1. Measurement uncertainty is at 95% Confidence level which corresponds to a coverage factor k= 2

2. Calibration is performed as per ISO 8655 - 6: 2002 (E)

3. Gravimetric Method is adopted for calibration.

Calibrated By

Janardhan S (Calibration Engineer) Checked By

Shiva P

Measurement to (Calibration Engineer)

BANGALORE PH: 43688889

Authorised By



## rar Measurement to Perfection...



Main Bld. Premises: Centenary Building (G.Flr), Door No. At: 100 W . Park Rd., Between Sampighe Road And Margosa Rd., 10th Crs., Malleswaram, Bangalore City, Pin-560003

#### CALIBRATION CERTIFICATE

Customer Name & Add. : M/s.

Transcal

Centenary Building, Door No. 100, 10th Cross, W. Park Rd, Malleshwaram Bangalore

Karnataka IND 560003

Customer's Reference:

SRF No.: TSC/21-22/INH/MECH-19 Dated: 24 Jan 2022

ULR.NO CC223122000008885F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number	
TSC/21-22/INH/MECH-19-1	25 Jan 2022	25 Jan 2023	1 of 3	

Details of device under calibration		Transcal ID	:TSC107388	
Vomenclature	: Electronic Balance	No. of Pages	<b>்3</b>	
Vake	: Metler Toledo	Cal Procedure No.	: TSC/CAL/606	
Model/Range	: AG 285	DUC Received	: 24 Jan 2022	
31 No.	: 1120102251	DUC Condition on Receipt	: Satisfactory	
D No.	: TSC/Mech-19	Cal At	: Mechanical Lab	

Environmental Conditions: Temperature in °C: 20.6

Humidity in RH %: 51.8

Standar SI No.	rds used : Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	E1 Class Weights	Weigh India		TSC/MECH-	WI/Sept/21/006	24 Sep 2024

#### Note:

- 1. This Calibration Certificate relates only to the above DUC & Reported results are valid at the time of and under the stated conditions of measurements.
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- 3. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment .
- 3. Consider Model or Range whichever is applicable.
- 10. Nabl-133 guidelines are adopted for use of NABL symbol.

Calibrated By

(Calibration Engineer)

**Checked By** 

Manjunath D J (Lab In charge)



**Authorised By**