



Acumen Measurements & Consultancy Pvt. Ltd.

(Calibration Division)

D-10/6, First Floor, Okhla Industrial Area, Phase-1, New Delhi - 110020
 Ph.: 011-42701221, 42701222, 42701223 Mobile: 8585965526, 9350380535
 E: info@acumendelhi.com, calibration@acumendelhi.com W: www.acumendelhi.com



CC-2364

CALIBRATION CERTIFICATE

Format No.: 7.8F-01

Page 1 of

ULR No. : CC23642300000264F	Certificate No. : AMC/00000264
CUSTOMER NAME & ADDRESS:- M/s. Bio-Rad Laboratories (India) Pvt Ltd Emaar Digital Greens, 9th Floor, Tower A, Golf Course Extension Road, Sec. - 61, Gurgaon - 122102	Service Request No.&Date : 230050 & 22-02-2023 Date of Calibration : 24-02-2023 Sug. Cal. Due Date : 23-02-2024 Issue Date : 27-02-2023

ITEM'S DESCRIPTION & IDENTIFICATION

Instrument Name : DIGITAL MULTIMETER	Range / Size : Refer to Result
Make : Fluke	Least Count : As per Range
Model No. : 179	Visual Inspection : OK
Serial No. : 25170411	Location : N/A
Party ID Mark : N/A	

ENVIRONMENTAL CONDITIONS	Calibration Procedure : ECP-02,03,04,13,14 & TCP-03
Temperature : (25 ± 2)°C	Reference Standard : IS: 13875 (Part 1 & 2)
Relative Humidity : (60 ± 15)%	Calibration Performed at : Laboratory

MAJOR EQUIPMENT USED

Nomenclature	Ident. No.	Traceability Certificate No.	Valid upto
Multi Products Calibrator (Fluke 5502A)	4451802 (MEI/26)	TSC/22-23/2023-2	25-04-23
Univarsal Calibrator (Fluke 9100)	958756002(MEI/01)	TSC/22-23/2023-1	25-04-23
SSPRT Sensor With DAQ	MTI/19	TSC/22-23/4380-1	15-06-23

CALIBRATION RESULT

Standard Reading	*DUC Reading	Error (±)	Uncertainty of Measurement (±)(%)
DC Voltage Measurement			
1.000 mV	1.0 mV	0.0 mV	5.80
10.000 mV	10.0 mV	0.0 mV	0.60
100.000 mV	100.0 mV	0.0 mV	0.06
1.00000 V	1.000 V	0.000 V	0.06
10.0000 V	10.00 V	0.00 V	0.06
100.000 V	100.0 V	0.0 V	0.06
600.00 V	600.1 V	0.1 V	0.06
1000.00 V	1000 V	0 V	0.06
AC Voltage Measurement (at 50 Hz.)			
10.000 mV.	10.1 mV	0.1 mV	1.15
100.000 mV	100.3 mV	0.3 mV	0.12
1.00000 V	1.003 V	0.003 V	0.07
10.0000 V	10.03 V	0.03 V	0.07
100.000 V	100.3 V	0.3 V	0.08
600.00 V	600.2 V	0.2 V	0.10
1000.00 V	999 V	-1 V	0.10

Issued & Authorised By

Munesh Jadaun
(Calibrated By)



U C Sutar
(TM / QM)



Acumen Measurements & Consultancy Pvt. Ltd. (Calibration Division)

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CALIBRATION CERTIFICATE

Format No.: 7.8F-01

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ULR No. : CC236423000000264F	Certificate No : AMC/00000264
CUSTOMER NAME & ADDRESS:-	Service Request No.&Date : 230050 & 22-02-2023
M/s. Bio-Rad Laboratories (India) Pvt Ltd	Date of Calibration : 24-02-2023
Emaar Digital Greens, 9th Floor, Tower A, Golf Course	Sug. Cal. Due Date : 23-02-2024
Extension Road, Sec. - 61, Gurgaon - 122102	Issue Date : 27-02-2023

Standard Reading	*DUC Reading	Error (±)	Uncertainty of Measurement (±)(%)
DC Current Measurement			
1.00000 mA	1.01 mA	0.01 mA	0.58
10.0000 mA	10.00 mA	0.00 mA	0.06
100.000 mA	100.1 mA	0.10 mA	0.06
1.00000 A	1.000 A	0.000 A	0.08
10.0000 A	10.01 A	0.01 A	0.10
AC Current Measurement (at 50 Hz.)			
1.00000 mA	1.01 mA	0.01 mA	0.60
10.0000 mA	10.01 mA	0.01 mA	0.30
100.000 mA	100.2 mA	0.2 mA	0.30
1.00000 A	0.999 A	-0.001 A	0.50
10.0000 A	9.98 A	-0.02 A	3.50
Resistance Measurement			
1.0000 Ω	1.1 Ω	0.1 Ω	5.80
10.0000 Ω	10.1 Ω	0.1 Ω	0.60
100.000 Ω	100.1 Ω	0.1 Ω	0.06
1.00000 kΩ	1.001 kΩ	0.001 kΩ	0.06
10.0000 kΩ	10.00 kΩ	0.00 kΩ	0.06
100.000 kΩ	100.0 kΩ	0.0 kΩ	0.06
1.00000 MΩ	1.000 MΩ	0.000 MΩ	0.06
10.0000 MΩ	10.01 MΩ	0.01 MΩ	0.06
30.0000 MΩ	30.08 MΩ	0.08 MΩ	0.07

Issued & Authorised B

Munesh Jadaun
(Calibrated By)



U C Sutar
(TM / QM)



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CALIBRATION CERTIFICATE

Format No.:7.8F-01

Page 3 of

ULR No. : CC236423000000264F	Certificate No. : AMC/00000264
CUSTOMER NAME & ADDRESS:- M/s. Bio-Rad Laboratories (India) Pvt Ltd Emaar Digital Greens, 9th Floor, Tower A, Golf Course Extension Road, Sec. - 61, Gurgaon - 122102	Service Request No.&Date : 230050 & 22-02-2023
	Date of Calibration : 24-02-2023
	Sug. Cal. Due Date : 23-02-2024
	Issue Date : 27-02-2023

Standard Reading	*DUC Reading	Error (±)	Uncertainty of Measurement
Temperature Probe Measurement			(±) (%)
(°C)	(°C)	(°C)	(°C)
0.117	0.1	0.017	0.49
49.813	49.7	0.113	0.49
100.636	100.4	0.236	0.75
151.742	150.5	1.242	0.75
199.942	198.4	1.542	0.75

REMARKS :

1. DUC = Device Under Calibration, UUC=Unit Under Calibration i.e.
2. Expanded uncertainty of measurement at approx 95% confidence level for coverage factor(k)=2
3. This result of Calibration refer to only to the particular item submitted for calibration.
4. Suggested next due date of calibration is given as requested by customer.
5. DUC has been calibrated against lab standards are traceable to national & international standards.
6. The result reported in this certificate are valid at the time of and under the stated conditions of Measurement.
7. This certificate shall not be reproduced, except in full, unless a written permission for the publication of an approved abstract has been obtained from the CEO, Acumen Measurements & Consultancy Pvt, Ltd., New Delhl.

Issued & Authorised B

Munesh Jadaun
(Calibrated By)

End of Report

U C Sutar
(TM / QM)



TransCal

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. Acumen-Measurements & Consultancy Pvt. Ltd.,
D - 10/6, First floor, Okhla Industrial Area, Phase - I, New Delhi IND 110020

Customer's Reference : SRF No. : TSC/22-23/2023 Dated : 25 Apr 2022
U.L.R.NO CC22312200044998F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/2023-2	25 Apr 2022	25 Apr 2023	1 of 16

Details of device under calibration		Transcal ID : TSC226781	
Nomenclature	: Multiproduct calibrator	No. of Pages	: 16
Make	: Fluke	Cal Procedure No.	: TSC/CAL/323
Model/Range	: 5502A	DUC Received	: 25 Apr 2022
SI No.	: 4451802	DUC Condition on Receipt	: Satisfactory
ID No.	: MBI/26	Cal At	: Electro Technical Lab

Environmental Conditions : Temperature in °C : 25±4 Humidity in RH % : 30-75

Standards used :

SI No.	Nomenclature	Make	Model	SI No./ID.No.	Certificate No.	Validity
1	Digital Multimeter	Keysight	34461A	MY57206241	TSC/21-22/INH/ECAL-165-1	06 Nov 2022
2	Digital Multimeter	Fluke	8508A	301069380	CR/PCAL/51956/2	26 Apr 2023
3	Universal Frequency Counter	Philips	PM6669	BQ1442	TSC/22-23/INH/ECAL-248-1	02 Apr 2023
4	Multi-Product Calibrator	Fluke	5520A	8130001	TSC/21-22/INH/ECAL-01-1	22 Sep 2022
5	Digital Power Meter	Yokogawa	WT-210	27D514141E	CC/ECL/0093/22-23	25 Apr 2023
6	Calibrator	Fluke	5700A	7395603	CR/PCAL/51956/1	19 Apr 2023
7	LCR Meter	Sourcetric	ST2830	QK-616-00715	CR/ECAL/51943	01 Apr 2023

Calibrated By
Rakshit Shetty
Rakshit Shetty
(Sr. Calibration Engineer)

Checked By
Jayanti V
Jayanti V
(Sr. Calibration Engineer)



Authorised By
Vijayakumar V
Vijayakumar V
(Technical Director)



TransCal

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. Acumen Measurements & Consultancy Pvt. Ltd.,
D - 10/6, First floor, Okhla Industrial Area, Phase - I, New Delhi IND 110020

Customer's Reference : SRF No. : TSC/22-23/2023 Dated : 25 Apr 2022
ILR.NO CC223122000044999F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/2023-1	25 Apr 2022	25 Apr 2023	1 of 8

Details of device under calibration		Transcal ID : TSC118442	
Nomenclature	: Universal Calibrator	No. of Pages	: 8
Make	: Fluke	Cal Procedure No.	: TSC/CAL/323
Model/Range	: 9100	DUC Received	: 25 Apr 2022
SI No.	: 958756002	DUC Condition on Receipt	: Satisfactory
ID No.	: MEI/01	Cal At	: Electro Technical Lab

Environmental Conditions : Temperature in °C : 25±4 Humidity in RH % : 30-75

Standards used :

SI No.	Nomenclature	Make	Model	SI No/ID.No.	Certificate No.	Validity
1	Digital Multimeter	Keysight	34461A	MY57206241	TSC/21-22/INH/ECAL-165-1	06 Nov 2022
2	Digital Multimeter	Fluke	8508A	301069380	CR/PCAL/51956/2	26 Apr 2023
3	Multi-Product Calibrator	Fluke	5520A	8130001	TSC/21-22/INH/ECAL-01-1	22 Sep 2022
4	Shunt	Agilent	34330A	0822	TSC/21-22/INH/ECAL-31-1	05 Mar 2023
5	Calibrator	Fluke	5700A	7395603	CR/PCAL/51956/1	19 Apr 2023

Calibrated By
Rakshith Shetty
Rakshith Shetty
(Sr. Calibration Engineer)

Checked By
Jahani V
Jahani V
(Sr. Calibration Engineer)



Authorised By
Vijayakumar V
Vijayakumar V
(Technical Director)



TransCal

Measurement to Perfection...

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



CC-2231

CALIBRATION CERTIFICATE

Customer Name & Add. : M/s. Acumen Measurements & Consultancy Pvt. Ltd.,
D - 10/6, First floor, Okhla Industrial Area, Phase - I, New Delhi IND 110020

Customer's Reference : SRF No. : TSC/22-23/4380 Dated : 15 Jun 2022
ULR.NO CC223122000058554F

Calibration Certificate Number	Calibrated On	Recommended Calibration Due	Page Number
TSC/22-23/4380-1	15 Jun 2022	15 Jun 2023	1 of 2

Details of device under calibration		Transcal ID : TSC182664	
Nomenclature	: SSPRT Sensor with DAQ	No. of Pages	: 2
Make	: Fluke	Cal Procedure No.	: TSC/CAL/503
Model/Range	: 5609-20G & 1586A	DUC Received	: 15 Jun 2022
SI No.	: 06012 & 44070039	DUC Condition on Receipt	: Satisfactory
ID No.	: MTI/19	Cal At	: Thermal Lab

Environmental Conditions : Temperature in °C : 25 Humidity in RH % : 69

Standards used :

SI No.	Nomenclature	Make	Model	SI No./ID.No.	Certificate No.	Validity
1	SPRT Sensor with Readout	Fluke	5609/1524	01161 / 2024133	TL/022/186.1.1	13 Feb 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 are out 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

Anitha P
(Calibration Engineer)

Checked By

V Shashidhar
(Lab Incharge)



Authorised By

V Shashidhar
(Lab Incharge)



BIO-RAD LABORATORIES (INDIA) PRIVATE LIMITED

Site name:	REDCLIFFE LIFETECH Pvt Ltd
Address:	Old Alwal, Hyderabad
Province-Postal code	500010
Contact Name	Mr.MD Azhar

Calibration Certificate

Date	15 July, 2023 <small>(dd mmmm, yyyy)</small>	Sampling Station Serial Number	16442
Instrument Model	VARIANT II TURBO	Chromatography Station Serial Number	16442

We hereby certify that the Bio-Rad instrument specified above and installed in your lab is calibrated today as under and the performance was found satisfactory.

High Pressure Pump-A Flow Rate Reference: Field Bulletin CSD-012 Section 6

Measured with <small>(Device manufacturer and model)</small>	Serial Number	Calibration date <small>(dd mmmm, yyyy)</small>
Glassco Measuring Cylinder Hex Base : 10 ml		
Specified Range @ 2 ml/minute	Measured Value	
1.96 – 2.04 mL/minute		

High Pressure Pump-B Flow Rate Reference: Field Bulletin CSD-012 Section 6

Measured with <small>(Device manufacturer and model)</small>	Serial Number	Calibration date <small>(dd mmmm, yyyy)</small>
Glassco Measuring Cylinder Hex Base : 10 ml		
Specified Range @ 2 ml/minute	Measured Value	
1.96 – 2.04 mL/minute		

Detector Baseline Reference Field Bulletin CSD-008

Measured with	Specified Range @ "zero 20 mV	Measured Value
CDM software: Maintain > Instrument	0.018 - 0.022mV	



BIO-RAD LABORATORIES (INDIA) PRIVATE LIMITED

Column Holder temperature Reference: Field Bulletin CSD-012 Section 7

Measured with (Device manufacturer and model)	Serial Number	Calibration date (dd mmmm, yyyy)
Specified Range @ 35°C	Measured Value	CDM Display Value
Measured value of 34.5 – 35.5 °C and within ± 0.2°C of the CDM display value		

The next calibration is due on	(dd mmmm, yyyy)
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For Bio-Rad Laboratories India Pvt Limited

Authorized Signatory

15 July, 2023	VARIANT II TURBO ▼	16442	16442
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Glassco Laboratory Equipments Pvt. Ltd

CALIBRATION CERTIFICATE

(Glassco Calibration Laboratory)

(ISO 17025:2017 Certified laboratory)

CERTIFICATE NO	GLASSCO/20/11-293/2118		
CRF	29320112020	CAL. REPORT NO	20/11-293
CUSTOMER	LCP-STOCK		
TEST METHOD	GRAVIMETRIC METHOD		
ITEM CALIBRATED	MEASURING CYLINDER HEX BASE : 10 ml		
CATALOGUE NUMBER	139.523.01A		
BATCH NO. & SERIAL NO.	11.20/2118		
ITEM CALIBRATED ON	21/11/2020		

CALIBRATION RESULT:

The product was found to contain the following volume at 27°C

VOLUME CONTAINED	9.990 ml
TOLERANCE	± 0.100 ml
CORRECTION	0.010 ml

Expanded uncertainty (at 95% C.L.k=2) is ± 0.001 ml

The product has been calibrated with the following devices:

Standard weights	10 g
Weighing Balance	ABAL-30,1020g/0.001 g(METTLER)
Thermometer	DM-35:-50°C to 300°C/0.1°C

All the above devices have valid calibrations traceable to NPL India; traceable to international standards.

The above product has been examined for compliance to ISO 4788:2005 Class-A. It has been found to satisfy the specified requirements. The above item has been calibrated at (25±3)°C at RH (60±25)%.

The above calibration result is valid at the time of calibration under lab conditions. This report shall not be reproduced, except in full, unless with written permission from Glassco Laboratory Equipments Pvt. Ltd.

Authorised Signatory

Manager Technical
(Yogendra Panwar)

Date of issue: 21/11/2020

This is an electronically generated certificate.

Page 1 of 1



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भारतीय मानक ब्यूरो (BIS) द्वारा प्रमाणित

Harmonizing Hemoglobin A1c Testing



A better A1C Test means better diabetes care

Certificate of Traceability

Manufacturer Certification


This certifies that Bio-Rad Laboratories, Inc., using Variant II Turbo HbA1c Kit – 2.0 (12000447) has participated in and successfully completed the NGSF certification for manufacturers and is traceable to the **Diabetes Control and Complications Trial Reference method**. The comparison was performed with: University of Missouri SRL#9

The system evaluated was:


Instrument: Variant II Turbo HbA1c 2.0	Calibrator Lot: 64495999, 64496001	Column Lot: 90072AE
Reagent Lot: 64498464, 64488747, 64499842	Calibrator Assigned Values: 5.2%, 10.3%	

Date of Certification: January 1, 2023

Certification Expires: January 1, 2024


NGSP Steering Committee Chair


NGSP Network Coordinator


SRL director/ supervisor

Low Control Data

Lot Number: 85851
Expiration Date: 10/24/2024

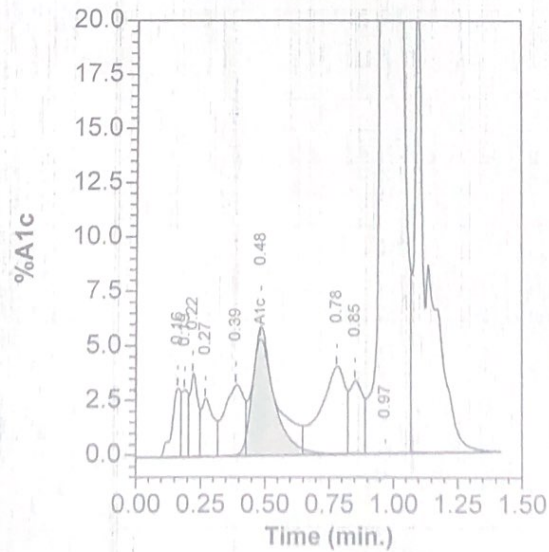
Analysis Data

Analysis Performed: 07/17/2023 13:48:59
Injection Number: 2294
Run Number: 50
Rack ID: 0002
Tube Number: 2
Report Generated: 07/17/2023 16:21:18
Operator ID:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	1.0	0.160	20903
A1b	---	1.1	0.220	23007
F	---	1.1	0.269	23964
LA1c	---	1.9	0.386	40197
A1c	5.3	---	0.483	92482
P3	---	3.6	0.779	76624
P4	---	1.6	0.850	33878
Ao	---	84.8	0.969	1811479

Total Area: 2,137,050

HbA1c (NGSP) = 5.3 %



*Performed by
Gopal
10/17/23*

Bio-Rad CDM System
VII Inst. #1. SN-16442

HIGH CONTROL REPORT
V2TURBO_A1c_2.0

High Control Data

Lot Number: 85852
Expiration Date: 10/31/2024

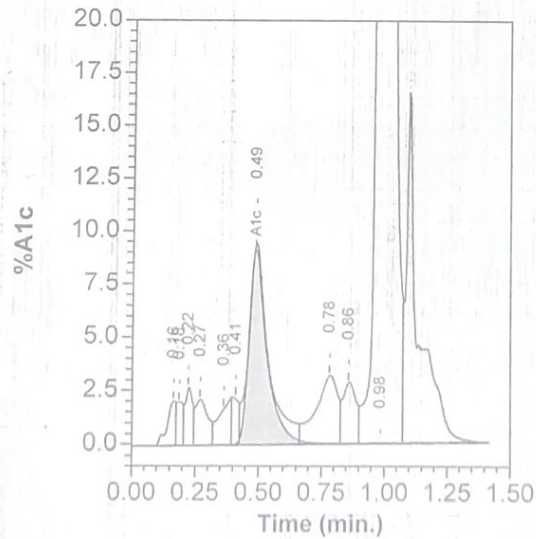
Analysis Data

Analysis Performed: 07/17/2023 13:50:34
Injection Number: 2295
Run Number: 50
Rack ID: 0002
Tube Number: 3
Report Generated: 07/17/2023 16:21:28
Operator ID:

Peak Name	NGSP %	Area %	Retention Time (min)	Peak Area
A1a	---	0.9	0.162	16560
A1b	---	1.0	0.221	18367
F	---	1.3	0.268	24401
LA1c	---	1.4	0.407	25914
A1c	9.1	---	0.486	151310
P3	---	3.4	0.782	64182
P4	---	1.8	0.858	34033
Ao	---	80.6	0.984	1533080

Total Area: 1,902,328

HbA1c (NGSP) = 9.1 %



Performed by
Gopal