

# Ace Medical Solutions (India) Pvt. Ltd.

An ISO 9001-2015 Certified Company

No : 3/751, 1st Cross Street, Surveyor Colony, K.Pudur, Madurai - 625 007.

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GSTIN: 33AAHCA8053H1ZR • DL No. MDU/4205/20B, MDU/3971/21B • CIN : U33110TN2009PTC072140

## CALIBRATION CERTIFICATE

Customer Name & Address:	M/S.BETHEL CLINICAL LABORATORY, 96-B, Kanthan Colony Entrance, Palayam Kottai road, 3 <sup>rd</sup> Mile , Tuticorin-8	Certificate No:	AMS/LAB/289/1517
		Issuing Date:	10/06/2022
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### Details of Device under Calibration (DUC):

DUC:	Bio Chemistry Analyser	Id. No:	BET/LAB/BCA/001
Make:	ERBA	Department:	Laboratory
Model:	CHEM-5 PLUS-V2	Calibrated On:	08/06/2022
Sl. No:	N140807	Calibration Due Suggested:	07/06/2022
Type:	Semi Auto	DUC Condition on Receipt:	OK
Range & Least Count:	---		

### Traceability Details:

Sl.No.	Test Equipment	Make	Certificate Number	Valid Up to
1	Electrical Safety Analyser	RigelSafeTest60	PSG/CIRD/BMCC/6908/2022	31/01/2023
2	Manometer	Lutron/PM9100	PC/01/22/ATL/0432-05	30/01/2023
3	Electronic Weighing Scale	EWC/SF400C	PC/01/22/ATL/0432-02	30/01/2023
4	Thermo Hygrometer	Beetech/088	PC/01/22/ATL/0265-01	30/01/2023

Room Temperature: 25°C±2 Room Humidity: 30-60% (At the time of Calibration)

### ESA Test Results:

SL.No	Parameter	ESA Reading	Unit	Normal Range	Condition
1	Current	278	mA	500	Normal
2	Frequency	49.9	Hz	49 -50	Normal
3	Mains Voltage Line - Neutral	236.1	Volts	220 - 240	Normal
4	Mains Voltage Line - Earth	235.5	Volts	220 - 240	Normal
5	Mains Voltage Neutral - Earth	4.9	Volts	< 7	Normal

\*Electrical Safety: Please check the attached log sheet

SL.No	Parameter	Measured	Standard	Correction	Unit
1	Lamp Voltage	11.78	12.0	-0.22	Volts
2	Detector Sensitivity	0.0	0.0	0.0	% Absorbance
3	Sipper Volume	432.5	450	-17.5	µl
4	Peristaltic Pump pressure	-14.42	-15.0	-0.58	cmH2O

Allowable Tolerance: set by Customer

Note:

1. Calibration Points were selected as per customer request.
2. Each reading was taken by Repeatability Test (i.e.) each reading in a row is a mean of 10 readings.
3. Results Reported are valid at the time of and under the stated conditions of measurements.

Calibrated By:  
(Calibration Engineer)



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Approved by:  
(Technical Manager)

93455 56140, 93455 56148

ESA Results:

Test Number	Test Standard	Test	Condition	Filter Selection	Reading Value	Reading Unit	Polarity	Neutral	Earth	Applied Parts
1	Earth Bonding	Earth Bond Voltage	Normal	AC+DC	0.2414	Ω	Normal	Closed	Closed	All
2	IEC60601	Leakage: Earth	Normal	AC+DC	196.01	µA	Normal	Closed	Closed	All
3		Leakage: Earth	Normal	AC+DC	183.78	µA	Reversed	Closed	Closed	All
4		Leakage: Enclosure	Normal	AC+DC	0.00	µA	Normal	Closed	Open	All
5		Leakage: Enclosure	Normal	AC+DC	0.00	µA	Reversed	Closed	Closed	All
6		Leakage: Earth	SFC	AC+DC	379.95	µA	Normal	Open	Closed	All
7		Leakage: Earth	SFC	AC+DC	363.47	µA	Reversed	Open	Closed	All
8		Leakage: Enclosure	SFC	AC+DC	198.39	µA	Normal	Closed	Open	All
9		Leakage: Enclosure	SFC	AC+DC	206.21	µA	Reversed	Closed	Open	All
10		Current	Normal	AC+DC	0.123	Amps	Normal	Closed	Closed	All
11		Frequency	Normal	AC+DC	50	Hz	Normal	Closed	Closed	All
12		Mains Voltage: Live to Neutral	Normal	AC+DC	228.1	V	Normal	Closed	Closed	All
13		Mains Voltage: Live to Earth	Normal	AC+DC	227.7	V	Normal	Closed	Closed	All
14		Mains Voltage: Neutral to Earth	Normal	AC+DC	6.8	V	Normal	Closed	Closed	All
15		IEC62353	Equipment Leakage	Direct Method	AC+DC	234.60	µA	Normal	Closed	Open
16	Equipment Leakage		Direct Method	AC+DC	234.09	µA	Reversed	Closed	Open	All
17	NFPA-99	Ground Leakage	Normal	AC+DC	199.41	µA	Normal	Closed	Closed	All
18		Ground Leakage	Normal	AC+DC	194.14	µA	Reversed	Closed	Closed	All
19		Ground Leakage	SFC	AC+DC	383.35	µA	Normal	Open	Closed	All
20		Ground Leakage	SFC	AC+DC	383.69	µA	Reversed	Open	Closed	All
21		Chassis Leakage	Normal	AC+DC	0.00	µA	Normal	Closed	Closed	All
22		Chassis Leakage	Normal	AC+DC	0.00	µA	Reversed	Closed	Closed	All
23		Chassis Leakage	SFC	AC+DC	202.81	µA	Normal	Closed	Open	All
24		Chassis Leakage	SFC	AC+DC	195.33	µA	Reversed	Closed	Open	All
25	IEC61010	Touch Leakage	Normal	AC+DC	0.00	µA	Normal	Closed	Closed	All
26		Touch Leakage	Normal	AC+DC	0.00	µA	Reversed	Closed	Closed	All
27		Touch Voltage	Normal	AC+DC	3.89	V	Normal	Closed	Closed	All
28		Touch Voltage	Normal	AC+DC	3.89	V	Reversed	Closed	Closed	All
29		Touch Leakage	SFC	AC+DC	188.80	µA	Normal	Closed	Open	All
30		Touch Leakage	SFC	AC+DC	187.52	µA	Reversed	Closed	Open	All
31		Touch Voltage	SFC	AC+DC	3.89	V	Normal	Closed	Open	All
32		Touch Voltage	SFC	AC+DC	3.89	V	Reversed	Closed	Open	All
33	Insulation Testing	Insulation Resistance	Normal	AC+DC	>20	MΩ	Normal	Closed	Closed	All
34	Point to Point Testing	Point to Point Earth Bond Test	Normal	AC+DC	>19.9	Ω	Normal	Closed	Closed	All
35		Point To Point Leakage Test	Normal	AC+DC	0	mA	Normal	Closed	Closed	All
36		Standard Insulation Test	Normal	AC+DC	>20	MΩ	Normal	Closed	Closed	All
Test Passed	Yes	Tested On	08-06-2022	Tested By	N. S. J. a					

