

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. Race Diagnostics, 232/190, South Marret Street, Madurai - 625001	Certificate No:	AMS/LAB/2888459
		Issuing Date:	24/10/2020
		Page No:	1 of 2

Details of Device under Calibration (DUC):

DUC:	Bio Chemistry Analyser	Id. No:	RD/LAB/BCA/001
Make:	ERBA Mannheim	Department:	Laboratory
Model:	Chem - 5 plus	Calibrated On:	23/10/2020
Sl. No:	---	Calibration Due Suggested:	22/10/2021
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/4424/2020	19/01/2021
2	Thermo Hygrometer	HTC	QC/AMS-DTI-004	22/02/2021

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	382	mA	1	Normal
2	Frequency	49.98	Hz	49 -50	Normal
3	Mains Voltage Line - Neutral	225.8	Volts	220 - 240	Normal
4	Mains Voltage Line - Earth	225.7	Volts	220 - 240	Normal
5	Mains Voltage Neutral - Earth	4.1	Volts	< 7	Normal

*Electrical Safety: Please check the attached log sheet

SL.No	Parameter	Measured	Standard	Correction	Unit
1	Lamp Voltage	11.78	12.00	-0.22	Volts
2	Detector Sensitivity	-0.00	0.0	0.0	% Absorbance
3	Sipper Volume	330	400	-70	ml
4	Peristaltic Pump pressure	12.375	15	-2.625	cmH ₂ O

Allowable Tolerance: set by Customer

Note:

1. Calibration Points were selected as per customer request.
2. Each reading were 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)

B. S. S.



Approved by:
(Technical Manager)

B. S. S.

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	0.14555	Ω	Normal	Closed	Closed	All

2	IEC60501	Leakage: Earth	Normal	AC+DC	118.18	μA	Normal	Closed	Closed	All
3		Leakage: Earth	Normal	AC+DC	110.80	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	229.09	μA	Normal	Open	Closed	All
7		Leakage: Earth	SFC	AC+DC	219.15	μA	Reversed	Open	Closed	All
8		Leakage: Enclosure	SFC	AC+DC	119.62	μA	Normal	Closed	Open	All
9		Leakage: Enclosure	SFC	AC+DC	124.33	μA	Reversed	Closed	Open	All
10		Current	Normal	AC+DC	0.23	Amps	Normal	Closed	Closed	All
11		Frequency	Normal	AC+DC	49.9	Hz	Normal	Closed	Closed	All
12		Mains Voltage: Live to Neutral	Normal	AC+DC	231.2	V	Normal	Closed	Closed	All
13		Mains Voltage: Live to Earth	Normal	AC+DC	235.9	V	Normal	Closed	Closed	All
14		Mains Voltage: Neutral to Earth	Normal	AC+DC	4.1	V	Normal	Closed	Closed	All

15	IEC62353	Equipment Leakage	Direct Method	AC+DC	141.45	μA	Normal	Closed	Open	All
16		Equipment Leakage	Direct Method	AC+DC	141.14	μA	Reversed	Closed	Open	All

17	NFPA-99	Ground Leakage	Normal	AC+DC	120.23	μA	Normal	Closed	Closed	All
18		Ground Leakage	Normal	AC+DC	117.06	μA	Reversed	Closed	Closed	All
19		Ground Leakage	SFC	AC+DC	231.14	μA	Normal	Open	Closed	All
20		Ground Leakage	SFC	AC+DC	231.34	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	122.28	μA	Normal	Closed	Open	All
24		Chassis Leakage	SFC	AC+DC	117.77	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	2.35	V	Normal	Closed	Closed	All
28		Touch Voltage	Normal	AC+DC	2.35	V	Reversed	Closed	Closed	All
29		Touch Leakage	SFC	AC+DC	113.84	μA	Normal	Closed	Open	All
30		Touch Leakage	SFC	AC+DC	113.06	μA	Reversed	Closed	Open	All
31		Touch Voltage	SFC	AC+DC	2.35	V	Normal	Closed	Open	All
32		Touch Voltage	SFC	AC+DC	2.35	V	Reversed	Closed	Open	All

33	Insulation Testing	Insulation Resistance	Normal	AC+DC	>20	MΩ	Normal	Closed	Closed	All
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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	1/10/2020	Tested By	B. Suresh
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