



Pinnacle Safety Engineers

(Expert in Healthcare Safety Solutions)

CALIBRATION CERTIFICATE OF BIOCHEMISTRY ANALYSER

Issued to : Medilife Multi Speciality Hospitals, Mancherial
Certificate No. : PSE/CAL/MMSH/23/03
Asset No. : MMSH/BME/BIOC/BTS/01 Serial No : ES1012201CN176
Model No : TURBOSTAT PLUS Date : 14.11.2023

CALIBRATION STANDARD USED

S NO	ASSET NO	TEST EQUIPMENT	MODEL NO	SERIAL NO	CAL DATE	CAL DUE DATE
1	PSE / NIBPA / 01	ELECTRICAL SAFETY ANALYSER	ESA - 612	2111026	15.05.2023	14.05.2024

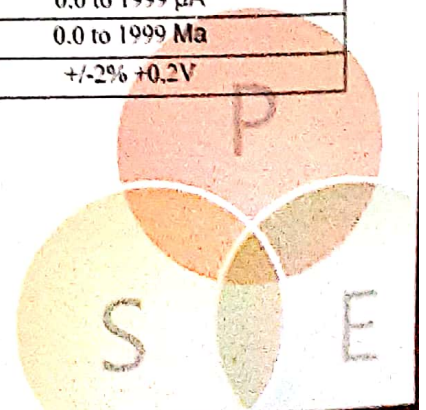
TEST REPORT

S.NO	TEST PARAMETERS	MEASURED/CALIBRATED	REMARKS
1.	INPUT VOLTAGE	230VAC	OK
2.	POWER CONSUMPTION	900 WATTS	OK
3.	INPUT FREQUENCY	50Hz	OK
4.	OPERATING TEMPERATURE	15-30 Deg. CELSIUS	OK

ELECTRICAL SAFETY ANALYZER TEST RESULTS

TEST	RESULTS	LIMITS
Line(Mains)Voltage	233.5	0.0 to 300.0V ac rms
Ground Wire Resistance	0.003Ω	0.000 to 2.000 Ω
Equipment current	1.4A	0 to 20.0 A ac rms
Insulation resistance	2 M Ω	+/-2% +0.2 M Ω
Ground(Earth) Leakage	12 μA(AC+DC)	10 to 199 Ma
Chassis(Enclosure)Leakage	0.6Ma	0.0 to 199.9 μA
Lead to Ground and Lead to lead	0.4 μA(AC+DC)	0.0 to 1999 μA
Lead isolation	0.4Ma	0.0 to 1999 μA
Differential Leakage	0.1Ma	0.0 to 1999 μA
Direct Equipment Leakage	0.3μA	0.0 to 1999 μA
Direct applied part Leakage	0.7Ma	0.0 to 1999 μA
Alternative applied part patient leakage	0.01Ω	0.0 to 1999 Ma
Point to point leakage, Voltage and Resistance	0.2μA,0.2v&OLΩ	+/-2% +0.2V

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Electrical safety test passed as per IEC Stand 60601.1

Calibration Passed: Yes No

Calibration Done Date: 14.11.2023

Calibration Due Date: 13.11.2024

Calibrated By: Mr. D. Utpalendu, Engineer

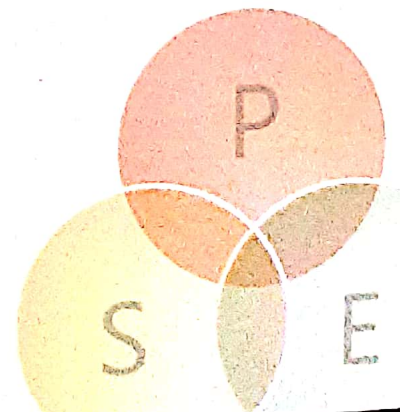
Approved By:



Engineering Manager

The above mentioned instrument has been certified using standards with accuracy guidelines traceable to the national institute of standards & technology (NIST). Devices, for which there are no NIST calibration standards, were measured against in-house performance standard using accepted procedures.

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CALIBRATION CERTIFICATE OF BIOCHEMISTRY ANALYSER

Issued to : Medilife Multi Speciality Hospitals, Mancherial
Certificate No. : PSE/CAL/MMSH/23/02
Asset No. : MMSH/BME/BIOC/THY/01 Serial No : 21074
Model No : TURBOCHEM PRIME Date : 14.11.2023

CALIBRATION STANDARD USED

S NO	ASSET NO	TEST EQUIPMENT	MODEL NO	SERIAL NO	CAL DATE	CAL DUE DATE
1	PSE / NIBPA / 01	ELECTRICAL SAFETY ANALYSER	ESA - 612	2111026	15.05.2023	14.05.2024

TEST REPORT

S.NO	TEST PARAMETERS	MEASURED/CALIBRATED	REMARKS
1.	INPUT VOLTAGE	230VAC	OK
2.	POWER CONSUMPTION	900 WATTS	OK
3.	INPUT FREQUENCY	50Hz	OK
4.	OPERATING TEMPERATURE	15-30 Deg. CELSIUS	OK

ELECTRICAL SAFETY ANALYZER TEST RESULTS

TEST	RESULTS	LIMITS
Line(Mains)Voltage	233.5	0.0 to 300.0V ac rms
Ground Wire Resistance	0.003Ω	0.000 to 2.000 Ω
Equipment current	1.4A	0 to 20.0 A ac rms
Insulation resistance	2 M Ω	+/-2% +0.2 M Ω
Ground(Earth) Leakage	12 μA(AC+DC)	10 to 199 Ma
Chassis(Enclosure)Leakage	0.6Ma	0.0 to 199.9 μA
Lead to Ground and Lead to lead	0.4 μA(AC+DC)	0.0 to 1999 μA
Lead isolation	0.4Ma	0.0 to 1999 μA
Differential Leakage	0.1Ma	0.0 to 1999 μA
Direct Equipment Leakage	0.3μA	0.0 to 1999 μA
Direct applied part Leakage	0.7Ma	0.0 to 1999 μA
Alternative applied part patient leakage	0.01Ω	0.0 to 1999 Ma
Point to point leakage, Voltage and Resistance	0.2μA,0.2v&OLΩ	+/-2% +0.2V

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Electrical safety test passed as per IEC Stand 60601.1



Calibration Passed: Yes

No

Calibration Done Date: 14.11.2023

Calibration Due Date: 13.11.2024

Calibrated By: Mr. D. Utpalendu, Engineer

Approved By:



Engineering Manager

The above mentioned instrument has been certified using standards with acceptance guidelines traceable to the national institute of standards & technology (NIST). Devices, for which there are no NIST calibration standards, were measured against in-house performance standard using accepted test procedures.

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CALIBRATION CERTIFICATE OF CENTRIFUGE

Issued to : Medilife Multi Speciality Hospitals, Mancherial
Certificate No. : PSE/CAL/MMSH/23/13
Asset No. : MMSH/BME/HM/CENTRIFUGE/01 Serial No : NA
Model No : NA Date : 14.11.2023

CALIBRATION STANDARD USED

S NO	ASSET NO	TEST EQUIPMENT	MODEL NO	SERIAL NO	CAL DATE	CAL DUE DATE
1	PSE/DT-01	Digital Tachometer	PSE/RPM/011	NA	10.10.2023	10.10.2024

Sr. No	CALIBRATION RESULT		Error RPM(±)	Uncertainty RPM (±)
	Standard Reading RPM	Test Reading RPM		
1	101.5	100	1.5	6.5
2	203.2	200	3.2	6.5
3	503.3	500	3.3	6.5
4	1002.4	1000	2.4	6.5
5	3004	3000	4	6.5
6	4004	4000	4	6.5

Note:

1. The above UUC/DUC was Calibrated at Lab.
2. Definition of UUC / DUC : Unit under Calibration / Device under Calibration.
3. The reported Expanded Uncertainty is calculated at 95.45 % with covarger factor k = 2.
4. Test reading given was the average of 5 Measurements.
5. The report shall not be reproduced in full/part without prior permission of PSE.
6. The report refers only to particular item(s) submitted for calibration.
7. The calibration results reported are valid at the time of and under the stated conditions of the measurements.
8. The Equipment was Calibrated without any adjustment.
9. The above Expanded Uncertainty includes Repeatability, Stability, Resolution & Uncertainty of Measurements.
10. PSE is not liable for any change in calibration data & performance specifications on account of malfunctioning of Standard / Instrument / Equipments covered by this report due to damage caused to it after issuance of this report.
11. All Precautions have been taken for any error or omission while calibrating the instruments and issuing this certificate. However PSE shall not be liable for any loss or liability that may be arised to any party in this regards.
12. The Equipments user for Calibration were Calibrated and traceable to National / International Standards.

Calibration Passed: Yes No
Calibration Done Date: 14.11.2023
Calibrated By: Mr. D. Utpalendu, Engineer

Calibration Due Date: 13.11.2024
Approved By:


Engineering Manager

The above mentioned instrument has been certified using standards with accuracy guidelines of the national institute of standards & technology (NIST). Devices, for which there are no NIST standards, were measured against in-house performance standard using accepted test procedures.
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CALIBRATION CERTIFICATE OF HYGROMETER

Issued to : Medilife Multi Speciality Hospitals, Mancherial
Certificate No. : PSE/CAL/MMSH/23/12
Asset No. : MMSH/BME/HYGROMETER/HM/01 Serial No : NA
Model No : NA Date : 14.11.2023

CALIBRATION STANDARD USED

S NO	ASSET NO	TEST EQUIPMENT	MODEL NO	SERIAL NO	CAL DATE	CAL DUE DATE
1	PSE/DTHM-01	Digital Temperature Humidity meter	HTC-01	4510	10.10.2023	10.10.2024

CALIBRATION RESULT				
Temperature Calibration				
Sr. No	Standard Reading	Test Reading	Error (±)	Uncertainty
	°C	°C	°C	(±) °C
1	15.2	15.5	0.3	2.6
2	25.3	25.1	0.2	2.6
3	40.4	40.7	0.3	2.6
4	49.5	49.7	0.2	2.6
Humidity Calibration @ ambient Temperature				
Sr. No	Standard Reading	Test Reading	Error	Uncertainty
	%RH	%RH	%RH	(±) %RH
1	30.4	31	0.6	6.6
2	50.4	51	0.6	6.6
3	75.1	74	1.1	6.6
4	85.1	84	1.1	6.6
5	90.2	92	1.8	6.6

Note:

1. The above UUC/DUC was Calibrated at Lab.
2. Definition of UUC / DUC : Unit under Calibration / Device under Calibration.
3. The reported Expanded Uncertainty is calculated at 95.45 % with covarger factor k = 2.
4. Test reading given was the average of 5 Measurements.
5. The report shall not be reproduced in full/part without prior permission of S.M Enterprises.
6. The report refers only to particular item(s) submitted for calibration.
7. The calibration results reported are valid at the time of and under the stated conditions of the measurements.
8. The Equipment was Calibrated without any adjustment.
9. The above Expanded Uncertainty includes Repeatability, Stability, Resolution & Uncertainty of Measurements.

Calibration Passed: Yes No
Calibration Done Date: 14.11.2023
Calibrated By: Mr. D. Utpalendu, Engineer

Calibration Due Date: 13.11.2024
Approved By:


Engineer/Manager

The above mentioned instrument has been certified using standards with accuracy guide was traceable to the national institute of standards & technology (NIST). Devices, for which there are no NIST calibration standards, were measured against in-house performance standard using accepted test procedures.

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CALIBRATION CERTIFICATE OF PIPETTE

Issued to : Medilife Multi Speciality Hospitals, Mancherial
Certificate No. : PSE/CAL/MMSH/23/04
Asset No. : MMSH/BME/BIOC/PIP/01 Serial No : SF694975
Model No : PIPETTIES EXPET (100-1000 μ l) Date : 14.11.2023

Description: Pipette

Range: 100 to 1000 μ l

LC: 0.1 μ l

Accuracy: As per manual

Details of Master Equipments:

S/No.: NA, ID No.:MCLES-M-ID-002, Valid upto: 11-Sept-2024, Traceability: PSE Cal. Lab.

Work Instruction: WI-M-03

Reference standards: NABL NEWS ISSUE NO. 40 OCT 2005, IS 878, IS 915, IS 1117, IS 1997, IS 8897, OIML R40, OIML R41, OIML R43, OIML R4.

Environmental details: Temperature: 23 \pm 2 $^{\circ}$ c, Relative Humidity: 40-60 %RH

TEST REPORT

Measured Value (UUC) μ l	Actual Value μ l	Deviation μ l	Uncertainty (+-) MI
100	100.02	-0.02	0.275
500	500.07	-0.07	
1000	1000.10	-0.10	

Calibration Passed: Yes No

Calibration Done Date: 14.11.2023

Calibration Due Date: 13.11.2024

Calibrated By: Mr. D. Utpalendu, Engineer

Approved By:


Engineer in Charge

The above mentioned instrument has been certified using standards with accuracy guidelines available to the national institute of standards & technology (NIST). Devices, for which there are no NIST calibration standards, were measured against in-house performance standard using accepted test procedures.

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CALIBRATION CERTIFICATE OF PIPETTE

Issued to : Medilife Multi Speciality Hospitals, Mancherial
Certificate No. : PSE/CAL/MMSH/23/05
Asset No. : MMSH/BME/BIOC/PIP/02 Serial No : YE6F697377
Model No : PIPETTIES (ERBA) Date : 14.11.2023

Description: Pipette Range: 100 to 1000 μ l LC: 0.1 μ l Accuracy: As per manual
Details of Master Equipments: S/No.: NA, ID No.:MCLES-M-ID-002, Valid upto: 11-Sept-2024, Traceability: PSE Cal. Lab.
Work Instruction: WI-M-03
Reference standards: NABL NEWS ISSUE NO. 40 OCT 2005, IS 878, IS 915, IS 1117, IS 1997, IS 8897, OIML R40, OIML R41, OIML R43, OIML R4.
Environmental details: Temperature: 23 \pm 2 ⁰ c, Relative Humidity: 40-60 %RH

TEST REPORT

Measured Value (UUC) μ l	Actual Value μ l	Deviation μ l	Uncertainty (+-) MI
100	100.02	-0.02	0.275
150	150.09	-0.09	
200	200.04	-0.04	

Calibration Passed: Yes No

Calibration Done Date: 14.11.2023

Calibration Due Date: 13.11.2024

Calibrated By: Mr. D. Utpalendu, Engineer

Approved By:

Engineering

The above mentioned instrument has been certified using standards with accuracy guidelines traceable to the national institute of standards & technology (NIST). Devices, for which there are no NIST calibration standards, were measured against in-house performance standard using accepted test procedures.

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CALIBRATION CERTIFICATE OF PIPETTE

Issued to : Medllife Multi Speciality Hospitals, Mancherial
Certificate No. : PSE/CAL/MMSH/23/06
Asset No. : MMSH/BME/BIOC/PIP/03 Serial No : YE168AA0027654
Model No : (10 - 100 μ l) Date : 14.11.2023

Description: Pipette

Range: 10 to 100 μ l

LC: 0.1 μ l

Accuracy: As per manual

Details of Master Equipments:

S/No.: NA, ID No.:MCLES-M-ID-002, Valid upto: 11-Sept-2024, Traceability: PSE Cal. Lab.

Work Instruction: WI-M-03

Reference standards: NABL NEWS ISSUE NO. 40 OCT 2005, IS 878, IS 915, IS 1117, IS 1997, IS 8897, OIML R40, OIML R41, OIML R43, OIML R4.

Environmental details: Temperature: 23 \pm 2 $^{\circ}$ c, **Relative Humidity:** 40-60 %RH

TEST REPORT

Measured Value (UUC) μ l	Actual Value μ l	Deviation μ l	Uncertainty (+-) MI
10	10.05	-0.05	0.275
50	50.06	-0.06	
100	100.08	-0.08	

Calibration Passed: Yes No

Calibration Done Date: 14.11.2023

Calibration Due Date: 13.11.2024

Calibrated By: Mr. D. Utpalendu, Engineer

Approved By:

Engineer

The above mentioned instrument has been certified using standards with accuracy guidelines traceable to the national institute of standards & technology (NIST). Devices, for which there are no NIST calibration standards, were measured against in-house performance standard using accepted test procedures.

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