

Pinnacle Safety Engineers

(Expert in Healthcare Safety Solutions)

CALIBRATION CERTIFICATE OF HAEMATOLOGY ANALYSER

Issued to : RNC Hospital, Hyderabad
Certificate No. : PSE/CAL/RNC/23/08
Asset No. : RNC/BME/HC/FA/01 Serial No : 0153670
Model No : MEK-6420P 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

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

Electrical safety test passed as per IEC Stand 60601.1

Calibration Passed: Yes No

Calibration Done Date: 14.11.2023

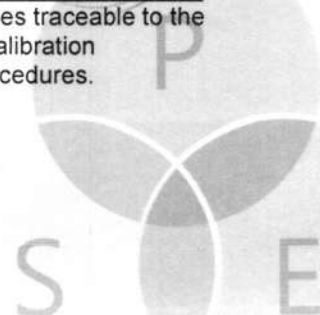
Calibration Due Date: 13.11.2024

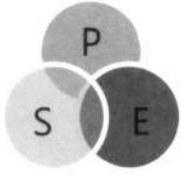
Calibrated By: Mr. D. Utpalendu, Engineer

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 test procedures.





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CALIBRATION CERTIFICATE OF CENTRIFUGE

Issued to : RNC Hospital, Hyderabad
Certificate No. : PSE/CAL/RNC/23/13
Asset No. : RNC/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	Standard Reading RPM	CALIBRATION RESULT		Uncertainty RPM (±)
		Test Reading RPM	Error 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:

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

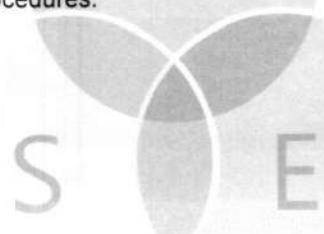
Approved By:

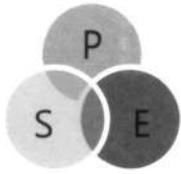

Engineering Manager

The above mentioned instrument has been certified using standards with accuracy guidelines 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.

#201, Bombay House, Care Hospital lane, Banjara Hills, Hyd – 34, Telangana

Email: pinnaclesafetyengineers@gmail.com | www.pinnaclesafetyengineers.in





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CALIBRATION CERTIFICATE OF REFRIGERATOR PROBE

Issued to : RNC Hospital, Hyderabad
Certificate No. : PSE/CAL/RNC/23/09
Asset No. : RNC/BME/REF/PROBE/01 Serial No : NA
Model No : NA Date : 14.11.2023

METHOD OF CALIBRATION

The calibration certificate was produced in accordance to the instrument was calibrated for the points specified in the relevant in house technical procedure PSE –CP – T01 – 2021 as defined for the equipment. The designed instrument has been calibrated at PSE calibration laboratory under the ambient conditions.

RESULT OF CALIBRATION

1. The measured values are average of 3 readings
2. The result stated in the certificate relate only to the item calibrated.
3. The report expanded uncertainty is calculated at 95.45% confidence levels with a coverage factor of $k = 2$

REMARKS

- The result of the calibration are given on the attached following pages
- No adjacement was done unless otherwise stated.
- Corrections / erasing, invalidate the calibration certificate
- The user should determine the suitability of the instrument for its intended use
- The report shall not be reproduced except in full, unless the management representative of PSE Calibration has given approval in writing and comply with the requirements specified in ISO/IEC 17025

CALIBRATION ESULTS

STANDARD READINGS (REF)	TEST READINGS (UUT)	ERROR	UNCERTAINTY (+/-)
$^{\circ}\text{C}$	$^{\circ}\text{C}$	$^{\circ}\text{C}$	$^{\circ}\text{C}$
4.37	4	- 0.37	0.98


Calibration Passed: Yes No

Calibration Done Date: 14.11.2023

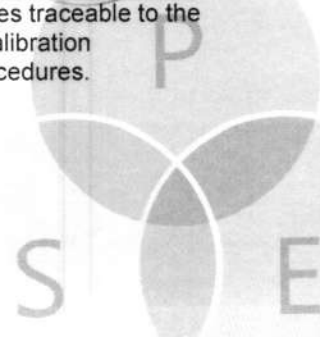
Calibration Due Date: 13.11.2024

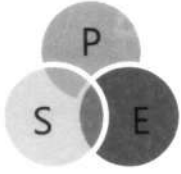
Calibrated By: Mr. D. Utpalendu, Engineer

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 test procedures.





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CALIBRATION CERTIFICATE OF WEIGHING MACHINE

Issued to : RNC Hospital, Hyderabad
Certificate No. : PSE/CAL/RNC/23/10
Asset No. : RNC/BME/SWM/MM/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 / SW / 03	STD WEIGHTS	NA	DS30	19.09.2023	18.09.2024

TEST REPORT

S NO	SET VALUE in gms	MEASURED VALUE in gms	ACCEPTABLE RANGE	RAMARKS
01	1	1.003	+/-5%	Satisfactory
02	5	4.038	+/-5%	Satisfactory
03	10	10.043	+/-5%	Satisfactory
04	50	51.021	+/-5%	Satisfactory
05	150	150.032	+/-5%	Satisfactory

Calibration Passed: Yes No

Calibration Done Date: 14.11.2023

Calibration Due Date: 13.11.2024

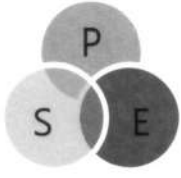
Calibrated By: Mr. D. Utpalendu, Engineer

Approved By:


Engineering Manager

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CALIBRATION CERTIFICATE OF HYGROMETER

Issued to : RNC Hospital, Hyderabad
 Certificate No. : PSE/CAL/RNC/23/12
 Asset No. : RNC/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 °C	Test Reading °C	Error (±) °C	Uncertainty (±) °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 %RH	Test Reading %RH	Error %RH	Uncertainty (±) %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 F 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:



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 test procedures.

