

Title: Calibration Of Kane-May 3000 Digital Thermometer

Scope

Work Instruction for the internal calibration of Kane-May 3000 Digital Thermometer. To be used in the absence of a manufacturers calibration instruction.

Preparation

Calibration must be carried out using Category A Master instruments as required.

Equipment required;

- 1.1 Datron 9100 Calibrator.
- 1.2 Glass Thermometer.
- 1.3 Haven OTB-7D Bath Heater System.
- 1.4 Techne Fridge Unit.

Method

- 2.1 All calibration results must be entered on the results sheets (see appendix A).
- 2.2 Note the lab temp / relative humidity and enter on calibration results sheet.
- 2.3 Carry out tests 1 to 16 using item 1.1.
- 2.4 Carry out tests 17 to 26 using items 1.2, 1.3 and 1.4.
- 2.5 Complete the results sheet header and enter Pass / Fail.

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Kane-May 3000 Digital Thermometer

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Appendix A

Calibration Results for Kane-May 3000 Digital Thermometer

Model Serial No
Date Result
Lab Temp / RH Operator
User Location Certificate No

Accuracies quoted are from the manufacturer's specification or relevant British Standard.

Digital Thermometer ($^{\circ}\text{C}$) : Instrument Only

Accuracy specification: $\pm (0.5\% \text{ Rdg} + 0.5^{\circ}\text{C})$

Test No	Simulator Equivalent Temperature $^{\circ}\text{C}$	UUT Reading $^{\circ}\text{C}$	Allowed Limits $^{\circ}\text{C}$	Result
1	- 25		- 25.6 to - 24.3	Pass / Fail
2	- 3		- 3.5 to - 2.5	Pass / Fail
3	0		- 0.5 to + 0.5	Pass / Fail
4	3		3.5 to 3.5	Pass / Fail
5	8		7.4 to 8.5	Pass / Fail
6	63		62.1 to 63.8	Pass / Fail
7	100		99 to 101	Pass / Fail
8	199		197.5 to 200.5	Pass / Fail

Digital Thermometer ($^{\circ}\text{F}$) : Instrument Only

Accuracy specification: $\pm (0.5\% \text{ Rdg} + 0.5^{\circ}\text{F})$

Test No	Simulator Equivalent Temperature $^{\circ}\text{F}$	UUT Reading $^{\circ}\text{F}$	Allowed Limits $^{\circ}\text{F}$	Result
9	- 13		- 13.5 to - 12.4	Pass / Fail
10	26.6		25.9 to 27.2	Pass / Fail
11	32		31.3 to 32.6	Pass / Fail
12	37.4		36.7 to 38.0	Pass / Fail
13	46.4		45.6 to 47.1	Pass / Fail
14	145.4		144.1 to 146.6	Pass / Fail
15	212		210.4 to 213.5	Pass / Fail
16	390.2		387.7 to 392.6	Pass / Fail

Digital Thermometer and Probe ($^{\circ}\text{C}$)

Accuracy Specification: $\pm (0.5\% \text{ Rdg} + 0.5^{\circ}\text{C} + 1.5^{\circ}\text{C})$

Test No	Bath Temperature $^{\circ}\text{C}$	Digital Thermometer and Probe Reading $^{\circ}\text{C}$	Allowed Limits $^{\circ}\text{C}$	Result
17	- 10		- 12 to - 7.9	Pass / Fail
18	- 5		- 7 to - 2.9	Pass / Fail
19	0		- 2 to + 2	Pass / Fail
20	25.0		22.8 to 27.1	Pass / Fail
21	50.0		47.7 to 52.2	Pass / Fail