

Title: Calibration Of Kane-May Digital Thermometers

Scope

Work Instruction for the internal calibration of Kane-May Digital Thermometers. 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 Haven OTB – 7D Bath Heater System
- 1.3 Techne Fridge Unit
- 1.4 Glass Thermometer

Method

- 2.1 All calibration results must be entered on the results sheets (see appendix A)
- 2.2 Note the lab. temperature / R.H. and enter onto the results sheet.
- 2.3 Carry out test 1 to 8 using item 3.1.1
- 2.4 Carry out tests 9 to 13 using items 1.2, 1.3 and 1.4.
- 2.5 Complete results sheet header and enter Pass / Fail

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Kane-May Digital Thermometers

Title: Calibration Of Kane-May Digital Thermometers

Appendix A

Calibration Results for Kane-May Digital Thermometers

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

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

Digital Thermometer : Instrument only

Accuracy specification: $0.4\% \text{ Reading} \pm 1^{\circ}\text{C}$

Test No	Simulator Equivalent Temperature $^{\circ}\text{C}$	UUT Reading $^{\circ}\text{C}$	Allowed Limits $^{\circ}\text{C}$	Result
1	- 25		- 26.1 to - 23.9	Pass / Fail
2	- 3		- 4 to - 2	Pass / Fail
3	0		- 1 to + 1	Pass / Fail
4	3		2 to 4	Pass / Fail
5	8		7 to 9	Pass / Fail
6	63		61.7 to 64.2	Pass / Fail
7	100		98.6 to 101.4	Pass / Fail
8	199		197.2 to 200.8	Pass / Fail

Digital Thermometer & Probe

Accuracy specification: $\pm (0.4\% \text{ Rdg} + 1^{\circ}\text{C} + 1.5^{\circ}\text{C})$

Test No	Bath Temperature $^{\circ}\text{C}$	Digital Thermometer & Probe Reading $^{\circ}\text{C}$	Allowed Limits $^{\circ}\text{C}$	Result
9	- 10		- 12.5 to - 7.4	Pass / Fail
10	- 5		- 7.5 to - 2.4	Pass / Fail
11	0		- 2.5 to + 2.5	Pass / Fail
12	25.0		22.4 to 27.6	Pass / Fail
13	50.0		47.3 to 52.7	Pass / Fail

The UUT was calibrated using the following equipment:

1. Datron 9100 Calibrator S/N _____
2. Glass Thermometer S/N _____
3. Haven OTB – 7D Bath Heater System S/N _____
4. Techne Fridge Unit S/N _____

The uncertainty in the applied value is estimated not to exceed:
Temperature: $\pm 0.5^{\circ}\text{C}$

The uncertainty limits quoted refer to the applied values only and do not relate to the stability of the UUT.