

Title: Calibration Of Kane-May 451 Digital Thermometers

Scope

Work Instruction for the internal calibration of Kane-May 451 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 Glass Thermometer.
- 1.3 Haven OTB-7D Bath and 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. temperature / R.H. and enter onto the results sheet.
 - 2.3 Carry out tests 1 to 8 using item 1.1.
 - 2.4 Carry out tests 9 to 13 using items 1.2, 1.3 and 1.4.
 - 2.5 Carry out test 14.
 - 2.6 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 451 Digital Thermometer

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Appendix A

Calibration Results for Kane-May 451 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: $\pm (0.7\% \text{ Rdg} + 1^{\circ}\text{C})$

Test No	Simulator Equivalent Temperature	UUT Reading $^{\circ}\text{C}$	Allowed Limits $^{\circ}\text{C}$	Result
1	- 25		- 26.1 to - 23.8	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		7.9 to 9	Pass / Fail
6	63		62.5 to 64.4	Pass / Fail
7	100		98.3 to 101.7	Pass / Fail
8	199		196.6 to 201.4	Pass / Fail

Digital Thermometer and Probe

Accuracy Specification: $\pm (0.7\% \text{ Rdg} + 1^{\circ}\text{C} + 1.5^{\circ}\text{C})$

Test No	Bath Temperature $^{\circ}\text{C}$	Digital Thermometer & Probe Reading $^{\circ}\text{C}$	Allowed Limits $^{\circ}\text{C}$	Result
14	- 10		- 12.5 to - 7.4	Pass / Fail
15	- 5		- 7.5 to - 2.4	Pass / Fail
16	0		- 2.5 to + 2.5	Pass / Fail
17	25		22.3 to 27.6	Pass / Fail
18	50		47.1 to 52.8	Pass / Fail
19	Differential Check Both Probes			Pass / Fail