# Title: Calibration Of B.E.H.A. Digital Thermometer

## Scope

Work Instruction for the internal calibration of This document applies to the calibrating of B.E.H.A. 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 temp / relative humidity and enter on calibration results sheet.

2.3 Carry out tests 1 to 13 using item 1.1. and note the results.

2.4 Carry out tests 14 to 18 using items 1.2, 1.3 and 1.4 and note the results.

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 B.E.H.A. Digital Thermometers

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**Appendix A**

**Calibration Results for B.E.H.A. Digital Thermometers**

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 ($^0$C): Instrument Only**

Accuracy specifications : - 50$^0$ C to 0$^0$ C; ± 3$^0$ C
0$^0$ C to 500$^0$ C; ± (1% Rdg + 1$^0$ C)

| Test No | Simulator Equivalent Temperature $^0$ C | UUT Reading $^0$ C | Allowed Limits $^0$ C | Result |
|---|---|---|---|---|
| 1 | - 25 | | - 28 to - 22 | Pass / Fail |
| 2 | - 3 | | - 6 to 0 | Pass / Fail |
| 3 | 0 | | - 3 to + 3 | Pass / Fail |
| 4 | 3 | | 2 to 4 | Pass / Fail |
| 5 | 8 | | 6.9 to 9 | Pass / Fail |
| 6 | 63 | | 61.3 to 64.6 | Pass / Fail |
| 7 | 100 | | 98 to 102 | Pass / Fail |
| 8 | 199 | | 196 to 202 | Pass / Fail |

**Digital Thermometer ($^0$ F) : Instrument only**

Accuracy specification: - 58$^0$F to 32$^0$ F; ± 5$^0$ F
32$^0$ F to 900$^0$ F; 6 (1% Rdg + 1$^0$ F)

| Test No | Simulator Equivalent Temperature $^0$ F | UUT Reading $^0$ F | Allowed Limits $^0$ F | Result |
|---|---|---|---|---|
| 9 | - 40 | | - 45 to – 35 | Pass / Fail |
| 10 | - 13 | | - 18 to – 8 | Pass / Fail |
| 1 | 32 | | 27 to 37 | Pass / Fail |
| 12 | 41 | | 39.5 to 42.4 | Pass / Fail |
| 13 | 212 | | 209.8 to 215.1 | Pass / Fail |

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