

TEST METHOD.

The following method is a compilation of techniques which Bellsouth has used and developed after discussion with manufacturers. As far as we can determine this is the most consistent method we have available, although I am not able to refer to an Australian Standard to support the technique.

a/ In order to allow a comparison with maximum consistency, we use a glass jar filled with light grade SAE 10 mineral oil. Once heated the oil has very uniform heat characteristics and very few thermal currents. This means that two or more thermometers immersed in the bath of oil will, after a time of stabilisation, be subject to the same temperature. Any difference now apparent in the actual reading can be attributed to the differences in the actual thermometers.

b/ In the case of the MICA a separate incubator specifically set up for this reference work is ideal but not essential.

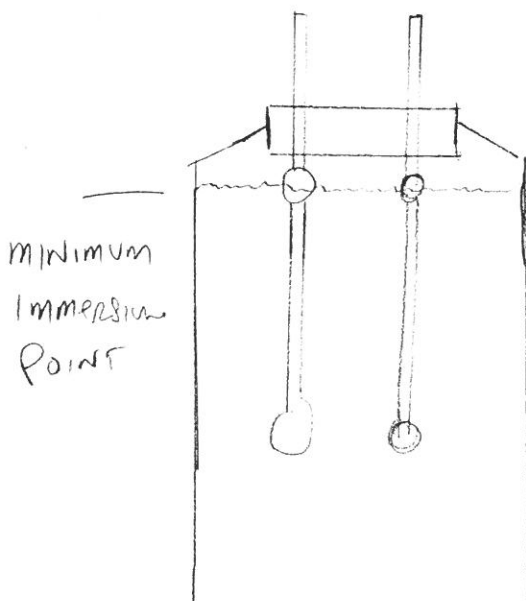
c/ In the case of LRL, where the responsible person may be required to test 50 thermometers bimonthly, a separate incubator station will be a great labour saving device. The incubator need not be fancy as variations will be corrected by the oil bath.

d/ To ensure proper comparisons the types of thermometers being tested, a decision needs to be made about the immersion method for each style. ie if angle thermometers are to be tested the same as full immersion thermometers then the angle thermometers will read slightly higher than actual.

e/ The key to the system is consistency of test method.

- 1/ Examine the reference thermometer to ensure that there is no imperfection in the column.
- 2/ Turn on the incubator, and place the oil bath in the incubator. Check the oil bath level.
- 3/ Allow the minimum warm up time (suggest 2 hours.), and check to ensure the incubator is at the correct temperature.
- 4/ Place the reference thermometer and thermometers to be tested in the bath, ensuring the immersion method required is followed and that the oil bath is at the correct level.
- 5/ Using a timer, ensure the thermometers are immersed for a minimum of 30 minutes before making the comparison.
- 6/ The oil bath can be removed from the incubator for a short time say up to 1 minute to allow close examination of the graduations. Use a magnifying glass if needed.
- 7/ Record the differences on the local certificate / or ledger.
- 8/ Repeat.

Sketches of different jar systems.



OR WHOLE JAR IN INCUBATOR.

