

IN-HOUSE PROCEDURE # _____

PROCEDURE FOR VERIFYING LABORATORY THERMOMETERS

Item:

Laboratory Thermometer

Purpose:

This method provides instructions for verifying the temperature readings of a laboratory thermometer.

Inspection Equipment Required:

1. Reference Thermometer – NIST traceable.
2. Water bath for temperatures 200 °F (100 °C) or below
3. Oil bath for temperatures above 200 °F (100 °C)
(*Baths shall have continuous circulation*)

Tolerance:

Equipment shall meet the tolerances specified in the applicable test method. If no tolerance is specified, then the thermometer shall be accurate to ± 1 °C (2 °F) or better.

Procedure:

1. Select at least three temperatures covering the range of the thermometer to be tested.
2. Prepare a suitable bath at the selected temperatures.
3. Place the reference thermometer and the laboratory thermometer to be tested in the bath and allow at least 5 minutes for stabilization.
4. Record the temperature of both thermometers.
5. Repeat the procedure for the additional temperatures.

Note: It may be necessary to prepare both a water bath and an oil bath in order to test the range of the thermometer.