

TENNESSEE BUREAU OF INVESTIGATION

Forensic Services Division

Toxicology Quality Assurance and Procedures Manual

6.10 Thermometers



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Thermometers are used in the Toxicology Unit to measure the operating temperatures of refrigerators, freezers, and temperature dependent solutions and to determine the appropriate temperature for density determinations.

6.10.1 Thermometers shall be NIST certified or traceable. A certificate of calibration shall be obtained from the manufacturer and placed in the thermometer logbook. Use of these thermometers will be discontinued according to the manufacture expiration date.

6.10.2 If a thermometer is used that is not NIST certified or traceable (“general thermometer”), it shall be verified against a NIST certified or traceable thermometer using the following guidelines:

6.10.2.1 The general thermometer being verified should be uniquely identified.

6.10.2.2 The general thermometer should be checked by comparison to a NIST thermometer at three different temperatures determined by the range of their intended use (e.g., room, refrigerator, and freezer). This shall be done by placing the NIST thermometer in the unit for approximately 10 minutes and recording both temperatures in the temperature logbook. This shall be performed annually.

6.10.2.3 The general thermometer should read within $\pm 2^{\circ}\text{C}$ of the NIST thermometer reading. If the general thermometer does not meet this criterion, it shall not be used.