

Thermometer Calibration

Food safety programs require accurate record keeping of temperatures to be successful. Calibration of thermometers is essential. The majority of thermometers can be calibrated following a few basic procedures.

Thermometers intended for measuring higher temperature items, such as cooked product, should be calibrated in boiling water while those used for taking lower temperatures should be calibrated in ice water. In either case care should be taken to prevent the thermometer from contacting the container being used as this could result in erroneous temperature readings.



Calibration in Ice Water

1. Add crushed ice and water to a clean container to form a watery slush.
2. Place the thermometer probe into slush for at least one minute taking care to not let the probe contact the container.
3. If the thermometer does not read between 30° and 34°F adjust to 32°F. Non-adjustable thermometers should be removed from use until they have been professionally serviced.

Calibration in Boiling Water

1. Bring a clean container of water to a rolling boil.
2. Place the thermometer probe into boiling water for at least one minute taking care not to let the probe contact the container.
3. If the thermometer does not read between 210° and 214°F adjust to 212°F. Non-adjustable thermometers should be removed from use until they have been professionally serviced.

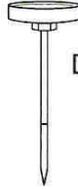
Thermometers that are found to be inaccurate (i.e. do not measure within +/- 2°F of the actual temperature) should either be manually adjusted or serviced by a professional. Thermometers that have a history of deviating from actual temperature measurements should be discarded and replaced.

Recording of calibration is also important, using the log provided with this form.

NIST Reference
Thermometer



Dial Bimetal Coil
Thermometer†



Calibration for cold process use ice water method

Calibration for hot process use boiling water method

