



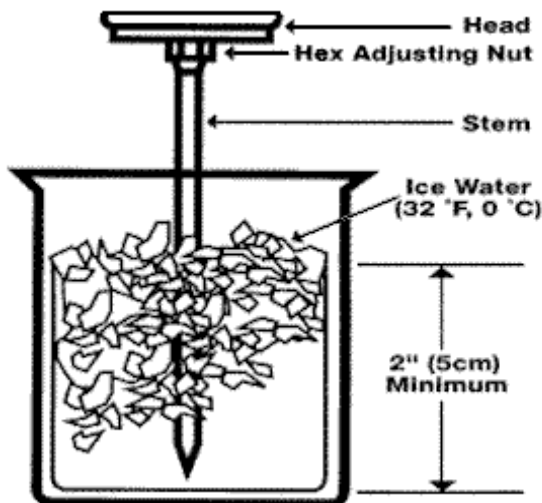
# Mecklenburg County Health Department

## Thermometer Calibration

### Step 1:

#### Ice Point Method

- Fill an insulated container, such as a wide mouth “thermos” bottle with a mixture of potable crushed ice and water.
- The container must have crushed ice throughout to provide an environment of 32°F, so you may have to pack more ice into the container during the process.
- When the mixture of the water has stabilized after four or five minutes, insert the thermometer to be calibrated to the appropriate immersion depth. (Note: from tip of thermometer to the dimple on stem is the sensing portion)
- Be sure to hold the stem of the instrument away from the bottom and sides of the container (preferably one inch) to avoid error. Wait until the thermometer stabilizes before adjusting the thermometer.
- If your thermometer is not accurate within +/- 2°F of 32°F, your thermometer must be adjusted.
- Adjust the thermometer, while holding it in the water, accordingly by holding the adjusting nut below the dial (with pliers) and turning the dial until the arrow on the dial is pointing at 32 F.
- If you are using a digital thermometer, follow the instructions issued with the thermometer. Note: Some digital thermometers are not designed to be calibrated. Follow the procedure described above. However, if the thermometer is not designed to be calibrated, the thermometer will need to be discarded and replaced if it is not within +/- 2°F of 32°F.

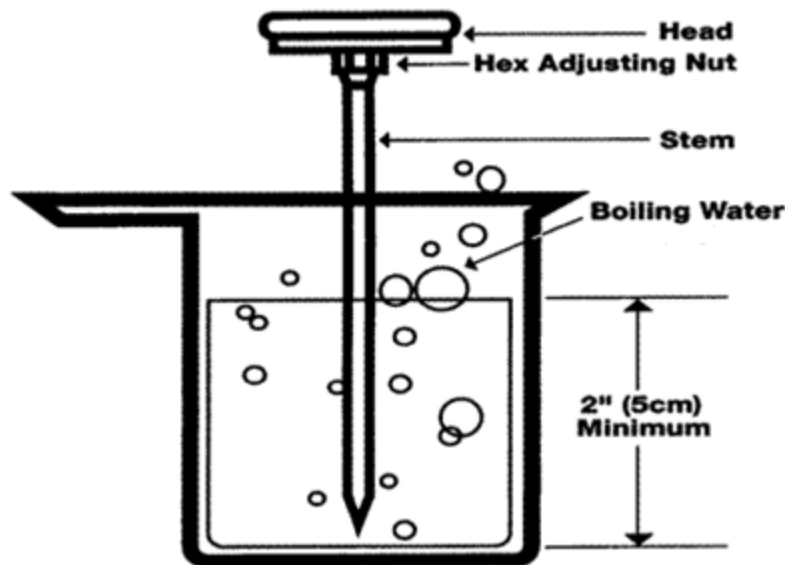


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## Step 2:

### Boiling Point Method

- After the water in the container has reached a complete “rolling” boil, insert the instrument to the appropriate immersion depth. The boiling point in Charlotte, N.C is 211°F.
- Be sure there is at least a two-inch clearance between the stem or sensing element and the bottom and sides of the container.
- If your thermometer is not accurate within  $\pm 2^\circ\text{F}$  of 211°F., adjust thermometer accordingly by holding the adjusting nut below the dial (with pliers) and turning the dial until the arrow on the dial is pointing at 211 F. Note: If you adjust the thermometer at the boiling point, you will need to recheck the thermometer in the ice water to verify that the thermometer is still within  $\pm 2$  degrees of 32 F. If the thermometer is not within  $\pm 2$  degrees of 32 F the thermometer should be discarded and replaced.
- Note: Some digital thermometers are not designed to be calibrated at 211°F. If the digital thermometer is not within  $\pm 2^\circ\text{F}$  of 211°F when it is tested in the boiling water, the thermometer should be discarded and replaced.



### *Remember:*

***Sanitize thermometers before use and in between uses, and calibrate thermometers frequently!***