



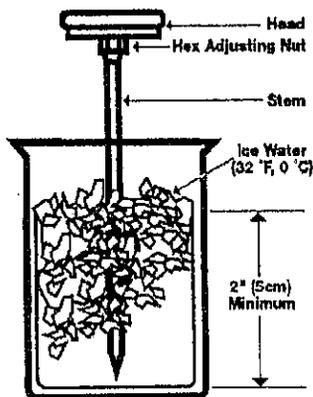
Module 6 Activity:

Thermometer Calibration

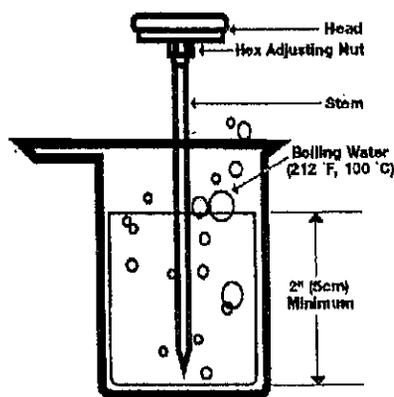


TRAINER: Give participants copies of activity sheet and corresponding fact sheet(s). Have participants complete individually or as a group.

- Review and discuss the Types of Thermometers fact sheet (p. M6-5).
- When using thermometers to ensure food safety, make sure your thermometer readings are accurate. The accuracy of the thermometer can be checked using the CALIBRATION procedure below. CALIBRATE new thermometers and then at least quarterly.
- Procedure (for dial thermometers):
 1. Place thermometers in a cup of ice and water mixture or boiling water.
 2. Immerse the stem a minimum of 2 inches into the mixture, being careful not to touch the sides or bottom of the container.
 3. Wait until needle stops moving.
 4. The thermometer should read 32°F in the ice and water mixture or 212°F in the boiling water.
 5. Use the wrench/pliers to turn the calibration nut until it reads 32°F or 212°F.



Ice Point Method



Boiling Point Method

Graphics Courtesy of USDA Food Safety and Inspection Service

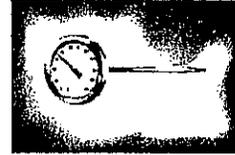


Fact Sheet:

TYPES OF THERMOMETERS

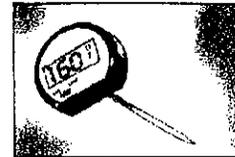
DIAL INSTANT-READ:

- Reads in 15-20 seconds
- Place 2 to 3" deep in thickest part of the food
- Temperature is averaged along the probe, from tip to 2 to 3" up the stem
- Insert sideways for thin foods
- Some models can be calibrated; check manufacturer's instructions
- Not designed to be left in the food while it is cooking



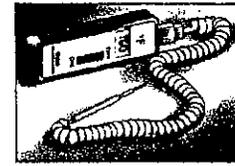
DIGITAL INSTANT-READ:

- Reads in 10 seconds
- Place at least 1/2" deep
- Can measure thick and thin foods
- Some models can be calibrated; check manufacturer's instructions
- Not designed to be left in the food while it is cooking



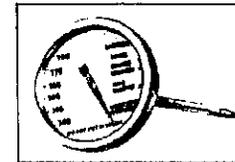
THERMOCOUPLE:

- Reads in 2-5 seconds - fastest reading of all thermometers
- Place 1/4" or deeper
- Can measure thick and thin foods
- Can be calibrated; check manufacturer's instructions
- Not designed to be left in the food while it is cooking
- More expensive than instant-read thermometers



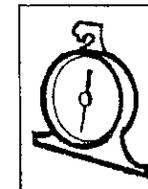
OVEN-SAFE:

- Reads in 1-2 minutes
- Place 2 to 2-1/2" deep in the thickest part of the food
- Best for roasts, soups, or casseroles
- Can remain in the food while it is cooking in the oven
- Heat conduction of metal stem can cause false high readings
- Some models can be calibrated; check manufacturer's instructions



INDICATING THERMOMETERS:

- Can be kept in the refrigerator and freezer
- Can be used to check the accuracy of built-in thermometers



INFRARED:

- Fast read out
- Can read the temperature of the food without touching it
- Only measures surface temperature, not for internal food temperatures



Information and Graphics Courtesy of USDA Food Safety and Inspection Service

Madison Department of Public Health (06/04)



Fact Sheet:

THERMOMETER PLACEMENT

Ham

Insert the thermometer in the **thickest area**, away from bone & fat.

Check the temperature of **irregularly shaped foods** in several places.



Hamburger Patty



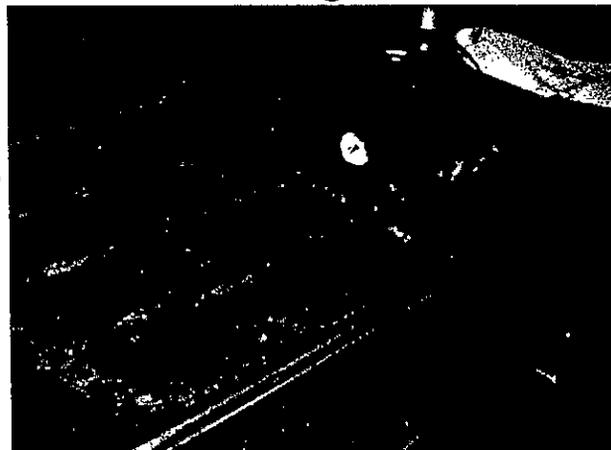
For **thin foods** like a hamburger patty, a digital thermometer or thermocouple is best.

Lasagna

Combination Dishes/Casseroles

Check in the center or thickest part.

Check in several places, especially for dishes containing eggs or ground meat and/or poultry.



Madison Department of Public Health (06/04)