

TOOLS, TIPS & INFORMATION FOR THE KITCHEN ~

Using and Calibrating Stem Thermometers

Foods need to be cooked and served to specific temperatures to prevent children and other consumers from becoming sick. All foods need to be kept out of the danger zone – temperatures between 41 and 135 degrees – to be safe to eat. A metal stem thermometer is an important kitchen tool for monitoring food temperatures during cooking, cooling, reheating, cold holding, and hot holding of foods.

Methods for Taking Accurate Internal Temperatures of Specific Foods Using a Metal Stem Thermometer

METHOD	FOOD TYPE
A. Insert metal stem into the side of the product	Hamburger, Chicken, or other Meat Patties
B. Insert the metal stem between the crust and the topping	Pizza
C. Insert the metal stem into the end of the product	Hot Dogs, Egg Rolls, or Mini Corn Dogs
D. Stack several pieces together and insert metal stem through center of stack	Chicken or Beef Nuggets
E. Insert the metal stem into several thick areas of the product, being careful not to touch the bottom of the pan with the stem	Taco Meat, Casseroles (like Macaroni & Cheese, Lasagna, Mashed Potatoes, Rice, Spaghetti Sauce, Pasta)
F. Insert the metal stem into the thickest part of the product (avoiding bone and fat if applicable)	Turkeys (whole or roasts), Beef Roasts, or Chicken Pieces

STEPS TO ACHIEVE ACCURATE FOOD TEMPERATURES WITH A METAL STEM THERMOMETER

SEQUENCE	STEPS
1	Remove the thermometer from the protective storage sleeve.
2	Clean and sanitize the thermometer stem if it is not certain it was cleaned and sanitized after its previous use.
3	Hold the thermometer by the dial with the point facing away.
4	Locate the sensing dimple on the lower part of the stem. The thermometer must be inserted into foods just past the dimple (approximately 2 inches).
5	Insert the stem, point first, into the thickest part of the food being careful not to touch the bottom of the pan. Also, avoid bones or fat in the food, if applicable. For thin foods, insert sideways or stack several pieces together for the dimple to be covered and the thermometer to accurately record the temperature.
6	Wait until the thermometer reading has stabilized (stopped changing) and then read the temperature.
7	Check the temperature in more than one thick area of the food.
8	Record the temperature according to kitchen procedures.
9	Clean and sanitize the thermometer stem after each use, according to kitchen procedures. Clean the metal stem with water and soap or with an individual alcohol wipe. Do not completely immerse the thermometer. Air dry and replace the thermometer in the protective storage sleeve.

Food temperatures must be checked throughout the food preparation process, and thermometers used must be accurate. The child nutrition program staff is responsible for checking the accuracy of the thermometers and calibrating them if they are not accurate.

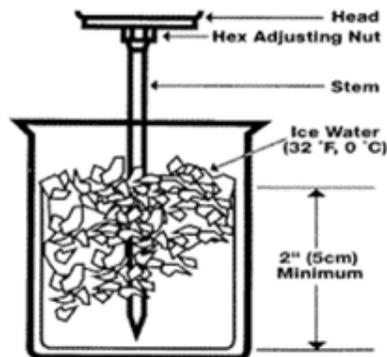
Thermometers are sensitive and can lose calibration. It is important to calibrate them:

- At least weekly
- When dropped
- More often if specified by local policy

TWO METHODS FOR CALIBRATING A STEM THERMOMETER

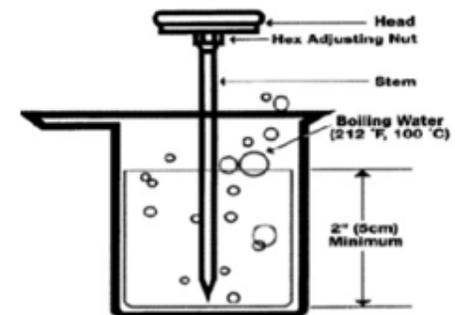
ICE WATER METHOD

1. Fill a 2 quart measuring cup with ice.
2. Add water to within 1 inch of top of container.
3. Stir mixture well.
4. Let sit for 1 minute.
5. Place thermometer in container so that the sensing area of stem is completely submerged over the dimple.
6. Keep the thermometer from touching sides or bottom of container.
7. Let thermometer stay in ice water for 30 seconds or until the dial stops moving.
8. Place the calibration tool on the hex adjusting nut and rotate until the dial reads 32°F, while in ice water.



BOILING WATER METHOD

1. Fill a saucepan or stockpot with water.
2. Bring water to a rolling boil.
3. Place thermometer in the container so that the sensing area of the stem is completely submerged over the dimple.
4. Do NOT let the thermometer stem touch sides or bottom of container.
5. Let thermometer stay in the boiling water for 30 seconds or until the dial stops moving.
6. Place the calibration tool on the hex adjusting nut and rotate until the thermometer dial reads 212°F, while in boiling water.



Note: The boiling point of water is about 1°F lower for every 550 feet above sea level. If you are in high altitude areas, the temperature for calibration should be adjusted.

DOCUMENTING CALIBRATION

Each time thermometers are calibrated, the process should be documented. The food safety program should include a form for documenting the calibration process of each thermometer.