



**Food Safety
and Inspection
Service**

Cook It SAFELY Use a Food Thermometer



September 1999

Do you know where your food thermometer is?

For a long time, consumers have been advised to use a food thermometer when cooking meat and poultry to ensure that a temperature sufficient to destroy foodborne bacteria is reached. However, according to a 1998 FDA and USDA consumer food safety survey, less than half of the population owns a food thermometer, with only 3 percent using one often when cooking hamburgers.

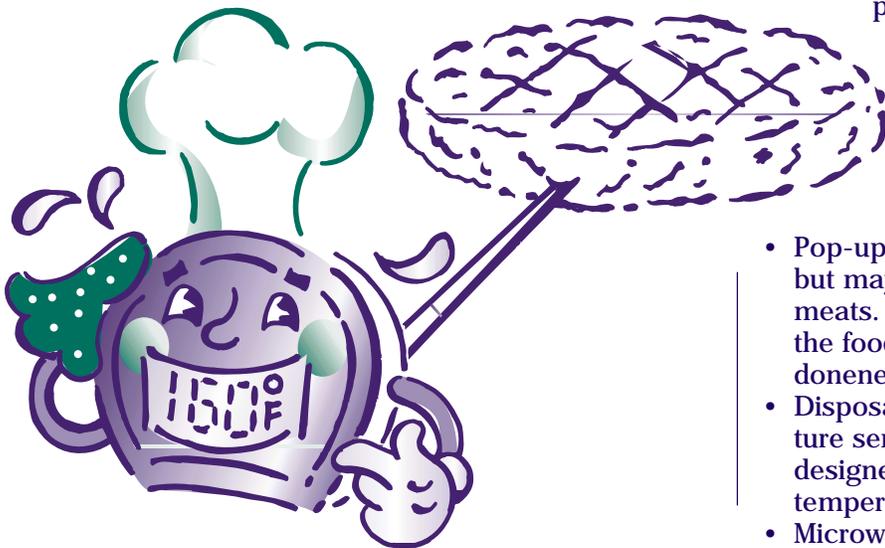
Get it out and use it, or buy one!

A food thermometer helps you:

- cook food to a safe temperature
- prevent overcooking and get the best flavor
- take the guesswork out of cooking

A food thermometer is used to measure the internal temperature of foods, such as meat, poultry, and any combination dishes to ensure that a safe temperature is reached and that harmful bacteria like *Salmonella* and *Escherichia coli* O157:H7 are destroyed.

Use a food thermometer every time you prepare hamburgers, poultry, roasts, chops, egg casseroles, meat loaves, and other combination dishes.



What types of food thermometers are available?

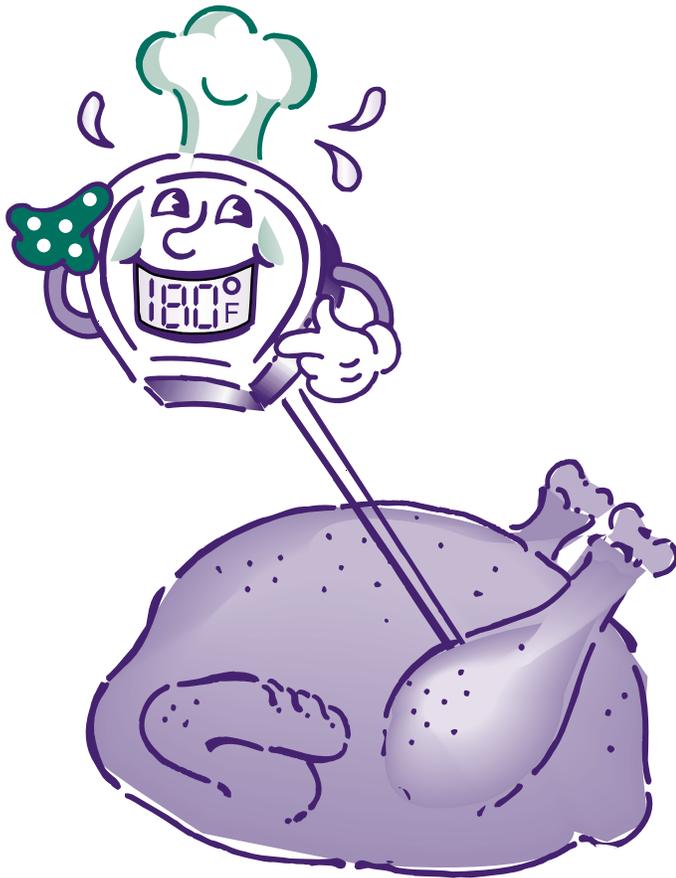
- **Digital thermometers** are available in kitchen and grocery stores. Digital thermometers provide a digital readout of a specific temperature on top of a long metal stem. Battery powered, they need to be turned on and off. Temperature is registered in less than 5 seconds. Digital thermometers are designed to be placed in food at the end of the cooking time to check for final cooking temperatures. The sensor is located in the tip of the probe, making digital thermometers ideal for measuring temperature in thin foods, such as hamburgers and chicken breasts. Digital thermometers, also known as thermistors, are not oven-safe and should not be immersed in water. Batteries need to be replaced according to manufacturer's instructions.
- **Dial thermometers** are found in most kitchen and grocery stores. Dial thermometers have a range of temperatures featured on a round dial on top of a long metal stem. Large dial thermometers are oven-safe and good for large roasts and whole poultry. Smaller instant-read dial thermometers are not designed to stay in an oven, but are used to spot-test food during and at the end of the cooking time. The thermometer senses the temperature along the stem from the tip to about 2 inches up the stem. The resulting temperature is an average of the temperatures along the sensing area. Most dial thermometers can be checked for accuracy.

Other types of temperature indicators:

- **Pop-up indicators** are commonly found in poultry, but may be purchased for roasts or other types of meats. The stem is released, and "pops up" when the food reaches the temperature for safety and doneness.
- **Disposable probes or sticks** contain a temperature sensor at the end of the stick. They are designed to turn color when the food reaches the temperature for safety and doneness.
- **Microwave-safe temperature probes** are especially designed for use in microwave ovens. Follow the manufacturer's instructions.

How do I use a food thermometer?

- Large oven-proof dial thermometers – may be inserted into turkeys, whole poultry, and roasts at the beginning of the cooking time and remain there throughout cooking. Insert the thermometer in the center of the thickest portion without touching fat or bone. Be careful removing the thermometer as it will be hot to touch.
- Instant-read dial or digital thermometers – are designed for a quick temperature reading.
 - **Dial thermometers** - Insert the stem straight into the food or at an angle, about 2 inches into the thickest part of the food without touching fat or bone. The temperature should register in about 10 to 15 seconds. Thin foods such as hamburgers, chicken breasts or pork chops may require insertion in the side.
 - **Digital thermometers** - Insert stem about 1/2 inch or less straight into the center of the thickest part of the food or at an angle without touching fat or bone. The temperature will take less than 5 seconds to register. These are ideal for thin hamburgers, chicken breasts, and smaller pieces of meat or poultry.



How accurate are food thermometers?

Most dial or digital food thermometers are accurate to within plus or minus 1 to 2 °F. Pop-up temperature indicators if accurately placed in the product are reliable to within plus or minus 1 to 2 °F. It is also suggested that the temperature be checked with a conventional thermometer in several places.

How do I check the accuracy of a food thermometer?

There are two ways to check the accuracy of a food thermometer.

Ice Water Method - Fill a large glass with finely crushed ice. Add clean water to the top of the ice and stir well. Immerse the thermometer stem a minimum of 2 inches into the mixture. The thermometer should read 32 °F after 30 seconds.

Boiling Water Method - Bring water in a deep pan to a full rolling boil. Immerse the stem of a thermometer 2 inches into the boiling water. The thermometer should read 212 °F after 30 seconds.

Thermometers should be checked periodically. Follow manufacturer's recommendations. Some dial thermometers have a calibration nut under the dial that can be adjusted. Check the package for instructions.

For More Information

USDA Meat and Poultry Hotline:

1 (800) 535-4555

Washington, DC:

(202) 720-3333

TTY: 1 (800) 256-7072

FSIS Web site: www.fsis.usda.gov

FDA Food Information Line:

1 (888) SAFE FOOD

FDA Web site: www.cfsan.fda.gov