



Hot Probe on Food Thermometers

Do you make use of a food thermometer in your kitchen? Each kitchen should have this tool, an inexpensive thing to keep your family safe from food borne illness. Use your tool to check the temperatures of meat, fish, poultry and egg dishes to ensure high enough heat to kill harmful bacteria.

How do I select the correct thermometer for my kitchen? There are a number of food thermometers, each with positive points and drawbacks, in terms of ease of use, accuracy, or cost.

Dial Instant-Read (Bimetal)

The dial instant-read (bimetallic stem) thermometer is the most commonly used thermometer, since it is readily available in hardware, department and kitchen stores; can be calibrated to the correct temperature; and is inexpensive. Place the thermometer 2-2 ½ deep in the thickest part of the food, since temperature is averaged along the probe. It can be read in 15-20 seconds. It can be difficult to measure the temperature in thin foods, like a hamburger, unless the thermometer is inserted sideways. It is versatile but not designed to remain in cooking food.



Dial Oven-Safe (bimetal)

The dial oven-safe thermometer, including the “meat thermometer”, provides a temperature reading in 1-2 minutes. It is not appropriate for watery foods, bouillon or thin soup. It can actually remain in food while the food is cooking. Some models can be calibrated. Check the manufacturer’s instructions for more information. These are available in hardware, department or kitchen stores.



Digital Instant-Read (Thermistor)

The digital instant-read thermometer can be quickly read in 10 seconds. It must be placed at least ½ inch into the food for an accurate reading. It can measure temperatures in thin and thick foods but is not designed to remain in cooking food. Check the internal temperature of foods, near the end of cooking time. Most digital



thermometers cannot be calibrated at home; however, a battery change will often correct the reading. These may be available in kitchen stores.

Thermometer-Fork Combinations

The thermometer fork can be read in 2-10 seconds. It must be placed at least ¼ inch deep in the thickest part of the food. The sensor in the tine of the fork must be fully immersed to give an accurate reading. It is not designed to remain in cooking food, but can be used in most foods. Check the internal temperature of foods near the end of cooking time. The thermometer fork cannot be calibrated but a new battery may correct the reading. Thermometer forks are handy for grilling.



Disposable Temperature Indicators (Single-use)

The disposable temperature indicators are designed to change color when the desired temperature is reached. They should only be used for the intended foods. Follow the manufacturers instruction. Place the indicator into the food, ½ inch deep. Reads in 5-10 seconds.



Pop-up

Pop-up indicators are commonly found in poultry, but may also be found in other meats. The stem pops up when the temperature reaches a safe level. These are not necessarily accurate. A bimetallic stem thermometer is a better choice for accuracy.



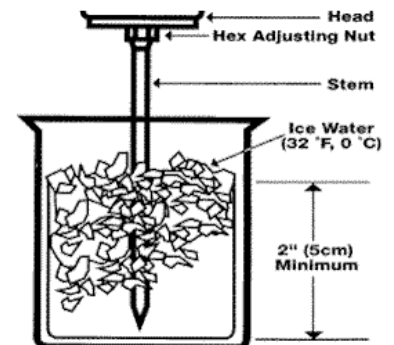
Cost

The cost of food thermometers varies from very little for the disposable temperature indicators to quite expensive for an infrared sensor thermometer.

The most cost-effective, available choice may be the bimetallic stem thermometer. Usually you can find this thermometer for about \$10 in a hardware or department store. This thermometer can be easily adjusted for accuracy.

Calibration directions

Check your food thermometer by immersing the stem at least 2 inches into a mixture of ice and water. The thermometer should read 32° after 30 seconds. If it doesn't, change the battery and try again, for digital thermometers. For bimetallic stem thermometers, find the hex nut at the base of the dial. While holding the thermometer in the ice water, adjust the nut with your pliers or wrench to 32°. Take the thermometer out and then test it again. If you are not successful after



several attempts, you may need to replace your thermometer.

Using your Thermometer at Home

Here are some tips for using thermometers in the home:

- ⇒ Wash your thermometer in hot soapy water and hot rinse water before and after each use. Check the manufacturer's directions to see if your thermometers should be immersed in water; most should not.
- ⇒ Prevent overcooking by checking the temperature toward the end of cooking before the food is expected to be “done”.
- ⇒ Bacteria are normally found only on external surfaces of larger cuts of meat like beef roasts and steaks. They are considered safe if cooked to 145°F in the center since the outside temperature will be hot enough to kill surface bacteria. Ground meat incorporates bacteria and so must be cooked to a higher internal temperature to cook all of the incorporated external surfaces.

Millions of people get sick from food-borne illness every year. Don't add to this number. Select a food thermometer for your kitchen—and then use it! Foods are not necessarily safe when the juices run clear!

The Wyoming Food Safety Coalition (WFSC) is dedicated to preventing food borne illness. This collaborative program is sponsored by the University of Wyoming Cooperative Extension Service, Wyoming Beef Council, Department of Agriculture (WDA), Department of Health, Environmental Health Association, and Lodging and Restaurant Association. For information about food safety or the WFSC, please contact your local county Extension office; WDA Consumer Health Specialist; or City-County Health Department.

Source: Christine Pasley, University of Wyoming Extension Educator, Southeast Wyoming.

Types of Food Thermometers, United States Department of Agriculture Food Safety and Inspection Service, www.fsis.usda.gov, December 2008.

