



Bite-Sized Food Safety



*September
2024*

**Food safety resources
for front-line managers
to train food workers**

Cooking to Kill

Q: Why do we cook foods?

A: Cooking foods properly kills norovirus and bacteria that can cause foodborne illness. Cooking can also improve the taste and appearance of foods.

Q: To what temperatures should foods be cooked?

A: Different foods require different cooking temperatures. The chart below tells you what internal temperature to cook different food products to:

Food Product	Cook to At Least
Whole Seafood, Beef, Pork, Veal, & Lamb	145°F
Raw Shell Eggs & Ground, Injected, Marinated, or Tenderized Meats	155°F
Poultry (chicken, turkey, duck) & Stuffed Fish, Meat, Pasta, or Poultry	165°F

Q: Why is it important that the temperatures we cook foods to are measured?

A: Measuring the final cooking temperature of a food assures that the food has reached a temperature throughout that is high enough to kill harmful bacteria and norovirus. It is impossible to tell the internal temperature of a food product just by looking at it.



Photo Credit: Thermapen

Q: How should the internal temperature of a food be measured?

A: The temperature should be measured with a food thermometer in the center or thickest part of the food. It is a good idea to measure the food temperature at several locations near the center to be sure all parts of the food have been adequately cooked.

Q: Should liquid food products like soups or gravies be stirred before you take their temperature?

A: Yes, when measuring cooking temperatures, stir the food before you take the temperature. This will create a more uniform temperature throughout the product.

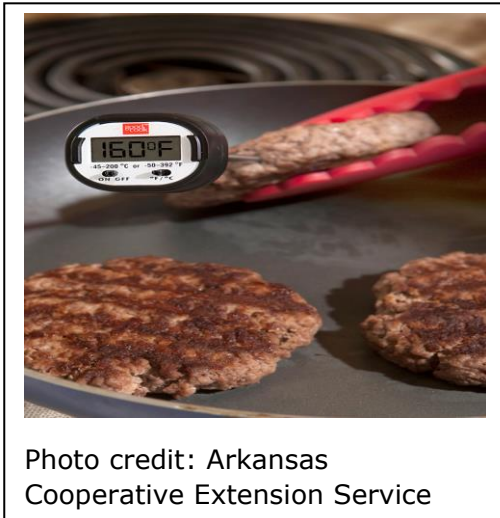


Photo credit: Arkansas Cooperative Extension Service

Q: How should you take the temperature of a thin product like a hamburger patty?

A: Insert the thermometer probe into the thin edge of the food so that the probe penetrates to the center of the food.

Q: How do you know if your thermometer is accurate enough?

A: A thermometer should be calibrated to assure that it is reading accurately to within $\pm 2^\circ\text{F}$.

Q: How often should your thermometer be calibrated?

A: We recommend that bimetal thermometers be calibrated daily and digital (thermocouple or thermistor) thermometers be calibrated weekly.

Q: How can you calibrate a thermometer?

A: A thermometer used for measuring cooking temperatures should be calibrated using the boiling point method. A thermometer used for measuring cold temperatures should be calibrated using the freezing point method.

Boiling Point Method

To use this method, you need to know the boiling point of water in your area. At sea level, water boils at 212°F. However, as one goes to higher elevations, the boiling point of water falls by about 1°F for every 500' increase in elevation. At West Virginia's lowest point (river level at Harper's Ferry = 240" elevation) water boils at 211.6°F. At West Virginia's highest point (summit of Spruce Knob = 4,863') water boils at 203.2°F.

For safety, it is recommended that you use tongs or some other utensil to hold the thermometer probe in the boiling water so that you don't burn yourself.



Photo credit: Restaurant 365

In Jefferson County, use 211.0°F as your boiling point. All the restaurants in the county have a boiling point for water within 0.5°F of that temperature. The highest elevation restaurant in Jefferson County is Torlone's Pizza at Key's Gap at 855' (210.5°F) and the lowest elevation restaurant in Jefferson County is Almost Heaven Pub & Grill in Harper's Ferry at 286' (211.5°F). The average elevation in Jefferson County is about 500'.

When you know the boiling point in your area, heat a pot of water. Once it has reached a rolling boil, insert a thermometer into the water. Make sure the entire sensing area of the thermometer (2"-4") is submerged, but don't touch the pot with the thermometer. Wait for the temperature reading to stop changing and then record the temperature. If the temperature is not the correct temperature for boiling water in your area (at your elevation), the thermometer should be recalibrated, if possible.



Photo Credit: Webstaurant Store

Freezing Point Method

Start by filling a glass with crushed ice. Then add cold water until the ice is just saturated and forms an ice slurry. Let the water sit for 2-3 minutes so the temperature reaches 32°F (0°C) throughout. Then immerse the stem of your thermometer 2"-4" into the ice slurry. Don't let the thermometer touch the side of the glass. Wait for the temperature reading to stabilize, then record the temperature. It should be 32°F. If not, the thermometer should be recalibrated, if possible.

Q: What if the thermometer is not reading accurately?

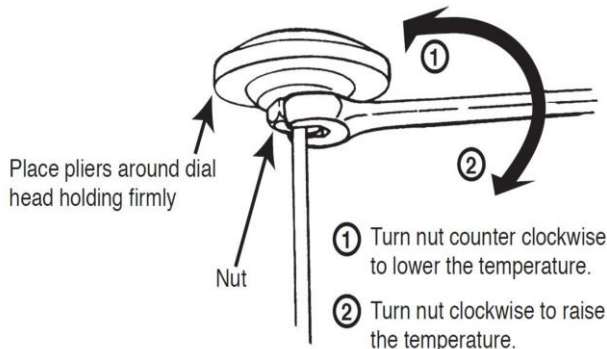


Photo Credit: Comark Instruments

A: Some thermometers can be adjusted if they are not reading accurately. If you have a bimetal thermometer, look for a calibration nut beneath the display dial. You may need a wrench or pliers to turn the nut. To calibrate a digital thermometer, look for the reset button. If the thermometer does not have a reset button, you may not be able to recalibrate it and it must be replaced. In all cases, follow the instructions from the thermometer's manufacturer.

We have had some staffing changes. Our awesome team of sanitarians is pictured at right. They look forward to working with you.



Jefferson County Sanitarians (L to R): Lexi Wasson, Savannah Hare, Mason Weikle, Alexis Davy (supervisor), & Alex Stotler