

GRAB AND GO LESSON

Calibrating Food Thermometers

Topic Area: Health and Safety
Subtopic Area: Food Safety

Objective: Recall two ways to calibrate a food thermometer.

Calibration is an important part of taking accurate temperatures with food thermometers. A calibrated thermometer means it is adjusted to the manufacturer's standard for an accurate reading. When a thermometer is not accurate, it can cause children and staff to become sick because foods are not cooked or held at safe temperatures. Therefore, knowing when and how to calibrate foods can help to keep everyone safe in your child care setting.

When to calibrate a thermometer?

It is best practice to calibrate thermometers at the following times:

- Daily
- When first purchased
- After dropped or roughly handled
- When switching from cold to hot temperatures

How do you calibrate a thermometer?

There are two ways to calibrate a thermometer. One method uses ice water and the other uses boiling water. Here are some basic steps for both methods.

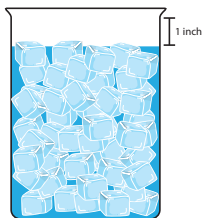
Ice-Water Method

Step 1: Fill a glass with crushed ice. Add clean water until it is full and stir well. Let it sit for one minute.

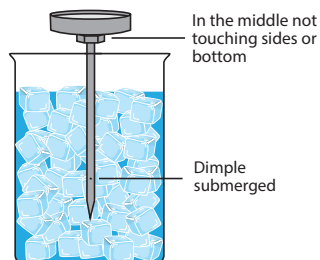
Step 2: Place the thermometer stem a minimum of 2 inches into the center of the glass, avoiding the bottom or sides of the glass.

Step 3: Agitate the glass of ice water to assure even temperature distribution throughout. Wait a minimum of 30 seconds before adjusting.

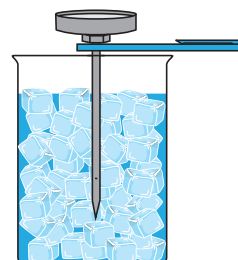
Step 4: The temperature should read 32 °F. If it does not, adjust the calibration nut by holding it with a suitable tool, turning the face of the thermometer to read 32 °F. If using a digital thermometer with a reset button, adjust the thermometer to read 32 °F while the metal probe is in the ice water, or replace the battery. Retest the thermometer to confirm it reads 32 °F.



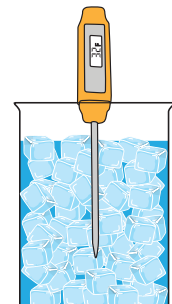
1. Add ice
2. Add water
3. Sit 1 minute



4. Insert thermometer



5. Hold for 30 seconds or until dial stops
6. Adjust dial to 32 °F



- For digital thermometers, press the reset button if available

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Boiling-Point Method

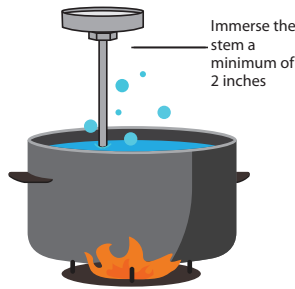
Step 1: Bring a pot of clean tap water to a full rolling boil.

Step 2: Immerse the stem of a food thermometer in boiling water a minimum of 2 inches and wait at least 30 seconds.

Step 3: Without removing the stem from the pan, adjust the calibration nut by holding it with a suitable tool, turning the face of the thermometer to read 212 °F. If using a digital thermometer with a reset button, adjust the thermometer to read 212 °F while the metal probe is in the boiling water, or replace the battery. Retest the thermometer to confirm it reads 212 °F.



1. Add water
2. Bring water to rolling boil



3. Insert thermometer



4. Hold for 30 seconds or until dial stops.
5. Adjust dial to 212 °F



- For digital thermometers, press the reset button if available

Remember, using a calibrated thermometer is the most reliable way to make sure foods reach the proper temperatures. Always check the manufacturer's instructions for properly calibrating your food thermometers. For additional information on using food thermometers, refer to the *Kitchen Thermometers* handout at https://extension.umd.edu/sites/extension.umd.edu/files/_images/programs/FOODSAFETY/Kitchen_Thermometers.pdf.

References:

U.S. Department of Agriculture. (2018). *Kitchen thermometers*. Retrieved from https://extension.umd.edu/sites/extension.umd.edu/files/_images/programs/FOODSAFETY/Kitchen_Thermometers.pdf

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