Checking Food Thermometers for Accuracy and Calibration

Standard Operating Procedure and Log

It is essential to use a food thermometer when cooking to verify that food has reached a safe minimum internal temperature, and consequently, prevent foodborne illness. School Nutrition Program operators must check all food thermometers for accuracy at least one time per month. Even if you use a digital thermometer that cannot be calibrated, it must be tested for accuracy. Staff should record the monthly food thermometer test for accuracy/calibration on a log for supporting documentation. A template log is available on page two of this resource.

Method for Testing Accuracy

Due to varied boiling points of water in Minnesota, the preferred method to test food thermometers for accuracy is the ice water slurry method. Many food thermometers have a calibration nut under the dial that can be adjusted. Check the package for instructions. If the food thermometer cannot be calibrated, it should still be checked for accuracy. If the thermometer is inaccurate and it cannot be calibrated, it should be replaced.

Ice water slurry accuracy test procedure:

1. Allow the food thermometer to acclimate to normal room temperature prior to testing.
2. Fill a container with cubed or crushed ice so it is at least 8 inches deep.
3. Add clean, cold tap water to the ice to make an ice water slurry (50% ice, 50% water).
4. Let the ice water slurry sit so that the temperature equilibrates.
5. Insert the food thermometer so that the tip of the probe is 4 to 6 inches below the surface of the water. The thermometer should not touch the sides or bottom of the glass.
6. Stir the ice water solution with the probe of the thermometer to stabilize.
7. Record the stabilized reading.
8. If the thermometer does not read between 31.1°F and 32.9°F, then it should be calibrated (or replaced if the thermometer cannot be calibrated).
9. The calibrate the thermometer, without removing the stem from ice, hold the adjusting nut under the head of the thermometer with a suitable tool and turn the head so the pointer reads 32°F; or follow the instructions found on the thermometer's package.

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Thermometer Accuracy Log

Staff will use the ice water slurry method (see page one) to verify the accuracy of food thermometers:

1. Prior to initial use.
2. On a monthly basis.
3. After high impacts/if dropped.
4. If used to measure extreme temperatures.
5. Whenever accuracy is in question.

Temperature reading should be between 31.1°F and 32.9°F when using the ice water slurry method. If not, adjust according to manufacturer's instructions or replace thermometer.

Date	Name of Thermometer Tested	Temperature Reading	Corrective Action if Applicable	Employee Initials

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