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# CALIBRATING AND USING AN INFRARED THERMOMETER

## How does it work?

An infrared thermometer is actually reading the temperature above, below or around where you see the laser, and “shoots out” in a cone shape. The farther away you are from your target object, the larger the spot you will be measuring. Common infrared thermometers have a Distance to Spot ratio (D:S) of 12:1, meaning at 12 inches away, you are measuring a spot that is 1 inch in diameter.

When taking the temperature inside a refrigerator or freezer, hold the thermometer a distance of 12 inches to give a consistent reading of the frozen food. The reading is a surface temperature only, and cannot be used to establish the internal temperature (hot or cold) of food.

## How do I use it?

Depress the trigger and release quickly. The thermometer measures temperature instantaneously and keeps the temp displayed when you release the trigger.

## How do I calibrate the thermometer?

The word "calibrate" is often misunderstood to mean necessarily making some kind of adjustment to a thermometer for accuracy. This infrared thermometer is not able to be adjusted, therefore "calibrating" simply means testing its accuracy against a verifiable standard. An ice bath is the most widely used test in the food industry and is recommended by the USDA and other agencies. If an infrared thermometer does not read appropriate temperatures during the calibration process, review the manufacturers suggestions for disposal.

### Cold water calibration using an ice bath

1. Fill a large glass or jug with ice.
2. Add enough water to ½” **below** the ice level. The ice should be all the way to the bottom of the container and does not float. Pour off excess water if needed.
3. Stir the ice and water and leave to sit or 1—2 minutes.
4. Point the laser into the ice mixture to take the temperature.
5. Temperature should read between 30.2°F and 33.8°F.

### Hot water calibration using boiling water

1. Fill a saucepan halfway with water.
2. Place the saucepan on the stove until it is boiling.
3. Point the laser into the ice mixture to take the temperature.
4. Temperature should read around 210°F to 212°F (201 at 6,000 feet).

Record your temperatures on the monthly [Calibration Record](#).