

IR Thermometer User Guide

Tools Needed

- Infrared Thermometer
- Digital thermometer log or paper log and pen
- Probe thermometer



Basic Steps

1. Turn on and verify working (if battery indicating low, change battery).
2. Hold IR thermometer close to the cold item (2" – 6" away).
3. Aim at a thick part of the food item, pull trigger, and hold for 5 – 8 seconds.
4. Read the temp (threshold for Cooler/Freezer)
 - a. If under 41°F/32°F, record on log.
 - b. If over 41°F/32°F, check 2 more items within the same bin/cooler area or use a probe thermometer to verify.
5. Reject the donation when >5 items measure over 41°F/32°F because the food is unsafe to eat.
6. Repeat IR temping of food item back at agency, and record.

Verify calibration by measuring ice water weekly

Get an accurate temp by aiming at a straw or similar object just under the surface of the ice water.

Calibrated = 32°F ± 2°F

Replace out of calibration IR thermometers.



Food Safety Considerations

Verify Calibration Weekly

Signs of Danger Zone:

>41°F or

Soft frozen food

Next steps: Recheck multiple items, or use stem thermometer.

Tips

- Precision will vary by instrument, generally readings will be plus or minus 2°F (Ice water can be 30°F - 34°F).
- Never hold the item you are measuring with your warm hand
- Highly reflective surfaces (foil) and cardboard wrappers will give bad numbers. Instead temp on bottom of yogurt cup.
- Good surfaces: bottom of yogurt cup, food in clear plastic bags, eggs, milk carton, or frozen meat wrapped in clear plastic.
- When in doubt, double check with a probe thermometer; cold conditions only slow food spoilage if kept cold enough.

Science behind IR: Emissivity and Infrared

Temperature is a measure of heat energy of an object. That energy is given off as infrared radiation (IR), similar to light energy. An IR thermometer measures IR waves that are emitted (emissivity) and convert it to the Fahrenheit scale. Some surfaces reflect more IR than they emit, which cannot be accounted for with our instrument. If we avoid taking IR temps from very reflective surfaces, and less dense packaging like cardboard, our measurements will be reproducible and accurate.