

Thermometer Calibration

Lab Guide

Task

Check the calibration of the calibration thermometer.

What You Need

- Calibration thermometer
- Clean container at least 250 mL in size
- Crushed ice
- Water (distilled is ideal, but the key is that the water is not salty)

In the Lab

1. Prepare a mixture of fresh water and crushed ice with more ice than water in your container.
2. Put the calibration thermometer into the ice-water bath. The bulb of the thermometer must be in the water.
3. Allow the ice-water bath and thermometer to sit for 10 to 15 minutes.
4. Gently move the thermometer around in the ice-water bath so that it will be thoroughly cooled.
5. Read the thermometer. If it reads between -0.5°C and $+0.5^{\circ}\text{C}$, the thermometer is fine.
6. If the thermometer reads greater than $+0.5^{\circ}\text{C}$, check to make sure that there is more ice than water in your ice-water bath.
7. If the thermometer reads less than -0.5°C , check to make sure that there is no salt in your ice-water bath.
8. If the thermometer still does not read between -0.5°C and $+0.5^{\circ}\text{C}$, replace the thermometer. If you have used this thermometer for measurements report this to GLOBE.

