

Thermometer Calibration

Lab Guide

Task

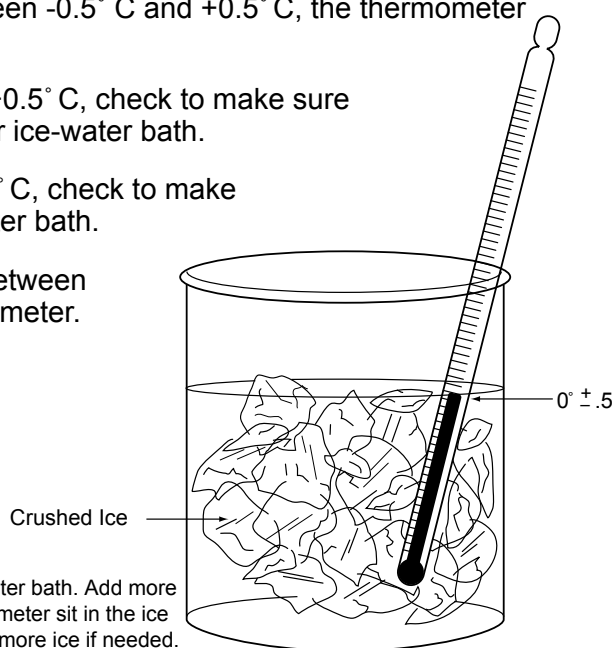
Check the calibration of the calibration thermometer.

What You Need

- ☐ Calibration thermometer
- ☐ Crushed ice
- ☐ Clean container at least 250 mL in size
- ☐ 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.



Thermometer placed in an ice water bath. Add more ice than water and let the thermometer sit in the ice bath for at least 10 minutes. Add more ice if needed.