

Thermometer Calibration

1. Heat distilled water to a specific reference temperature. This reference temperature can be 212°F (100°C) described as a “rolling boil” at sea level altitude. The boiling point of water changes with altitude.

10,000 ft	194°F / 90.0°C
8,000 ft	197°F / 91.7°C
6,000 ft	201°F / 93.9°C
4,000 ft	204°F / 95.6°C
2,000 ft	208°F / 97.8°C
Sea Level	212°F / 100.0°C

2. Once the distilled water has reached the reference temperature, place the thermometer in the boiling water. Immerse the stem or probe to a minimum depth of 2 ½ inches (6.4 cm). Make sure that the thermometer does not come in direct contact with the bottom of the heated container or the sides.
3. After one minute, compare the thermometer reading to the known boiling point of distilled water at your listed altitude.
4. Correct the indicator needle of the bi-metal coil thermometer. Adjust the spring on the coil by turning the hex nut directly behind the faceplate of the thermometer. Digital instant read thermometers may have a calibration button to adjust the temperature reading. If the thermometer cannot be physically calibrated and the accuracy of the unit is more than $\pm 2^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) at the reference temperature, then the unit should not be used. Contact the thermometer manufacturer for further instructions.
5. Recheck the temperature reading on the thermometer after making any calibration adjustments. This is accomplished by repeating steps 1 through 3.