

Calibrating Thermometers

Thermometers must be calibrated regularly to ensure that product temperatures are correct. If thermometers are used on a continual basis, they should be calibrated at least once a day. They should also be calibrated whenever the thermometer is dropped, before it is first used, and when going from one temperature to another.

There are two methods of calibrating thermometers: the ice point method and the boiling point method. Note to remember: the ice point method is more accurate and easier to do.

Ice Point Method

Fill a large glass with crushed ice. Add clean tap water until the glass is full and stir well.

Put the thermometer stem or probe in the ice water mixture so that the entire sensing area is submerged. Do not let the stem of the thermometer or probe touch the sides or bottom of the glass. Wait at least 30 seconds or until indicator stops moving.

With the stem of the thermometer or probe still in the ice water mixture, use a wrench to turn the adjusting nut until the thermometer reads 32°F (0°C). If calibrating a digital thermometer, press the reset button to automatically calibrate the thermometer.

Boiling Point Method

Bring clean tap water to a boil in a deep pan.

Put the thermometer stem or probe into the boiling water so that the sensing area is completely submerged. Do not let the stem or probe touch the bottom or sides of the pan. Wait at least 30 seconds or until indicator stops moving.

With the thermometer stem or probe still in the water, use a wrench to turn the adjusting nut until the thermometer reads 212°F (100°C) at sea level. If calibrating a digital thermometer, press the reset button to automatically calibrate the thermometer.

Points to Remember

The boiling point of water decreases as elevation increases.

<u>Altitude (elevation above sea level)</u>	<u>Water Boiling Point</u>
0 (sea level)	212°F (100°C)
1000 feet (305 meters)	210°F (98.9°C)
2000 feet (610 meters)	208°F (97.8°C)
3000 feet (914 meters)	206.4°F (96.9°C)
4000 feet (1219 meters)	204.5°F (95.8°C)
5000 feet (1524 meters)	202.75°F (94.9°C)
8000 feet (2438 meters)	197.5°F (91.9°C)