Handout 4: **How to Calibrate a Bimetallic Stemmed Thermometer**

To ensure accurate temperature readings, thermometers must be calibrated regularly. Ideally, calibration should be done at or near the temperature range where the thermometer will be used.

There are two common methods for calibrating a food thermometer:

Method 1: Ice Water (Best for Most Thermometers):

1. Fill a large glass with ice cubes and add cold drinking water. Stir well.
2. Immerse the thermometer stem at least 2 inches into the mixture, making sure it does not touch the sides or bottom of the glass.
3. Wait at least 30 seconds for the reading to stabilize.
4. The thermometer should read 32 °F. If it does, it is properly calibrated.

Method 2: Boiling Point Method (For Higher Temperatures):

1. Bring a pot of clean water to a rolling boil.
2. Insert the thermometer stem at least 2 inches deep, avoiding contact with the sides or bottom of the pot.
3. Wait at least 30 seconds for the reading to stabilize, at sea level, the thermometer should read 212 °F.
4. If the reading is off, adjust according to the manufacturer's instructions (many thermometers have a calibration nut or dial). If adjustment is not possible, replace the thermometer.

Important:

- Use distilled water for best accuracy.
- At high altitudes, water boils at a lower temperature, typically 2 °F to 5 °F below 212 °F.
- Contact your local Cooperative Extension office or health department for the exact boiling point in your area

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