

How to Calibrate a Thermometer Using the AutoCal Function

Purpose

An accurately calibrated thermometer is essential for ensuring food safety and quality. This document explains how to calibrate a thermometer using the AutoCal function, a patented automatic calibration feature built into DeltaTrak thermometers. This feature eliminates the need to send your thermometer to a lab for calibration.

Scope

This procedure applies to DeltaTrak thermometers equipped with the AutoCal function. Follow these steps whenever your thermometer requires calibration verification against the known freezing point of water (32.0°F / 0°C).

Required materials

- Cup
- Crushed ice (enough to fill the cup to the top)
- Cold water

Do not use cubed ice, as it will result in higher temperature readings.



Illustration showing a checklist of required materials: cup, crushed ice, and cold water, with a simple cup graphic

Step 1: Prepare the ice bath

Fill the cup to the top with crushed ice. Slowly add cold water until the water line is about half an inch below the surface of the ice. Make sure the ice is touching the bottom of the cup and is not floating. If the ice starts to float, pour out some water to help achieve the correct freezing point.



Illustration showing a cup filled with crushed ice as water is poured in

Step 2: Verify the ice bath setup

Confirm that the ice is in contact with the bottom of the cup and is not floating in the water. This contact is necessary to reach the correct freezing point for calibration.



Illustration of a cup with ice touching the bottom and the text "Ice should touch bottom"

Step 3: Stabilize the ice bath

Gently stir the mixture using the probe of the thermometer you are calibrating. Allow the ice bath to sit for about two minutes to let the temperature stabilize before proceeding.



Illustration of a cup of ice water with the instruction "Wait 2 minutes"

Step 4: Power on the thermometer and insert the probe

Press the power button to turn on your DeltaTrak thermometer. Position the probe in the middle of the ice bath, ensuring the tip is at least 2 inches below the surface of the ice bath.

Step 5: Locate the calibration button

Find the Cal button on your thermometer. If the ice bath is prepared correctly, the display should read close to 32.0°F at this point.

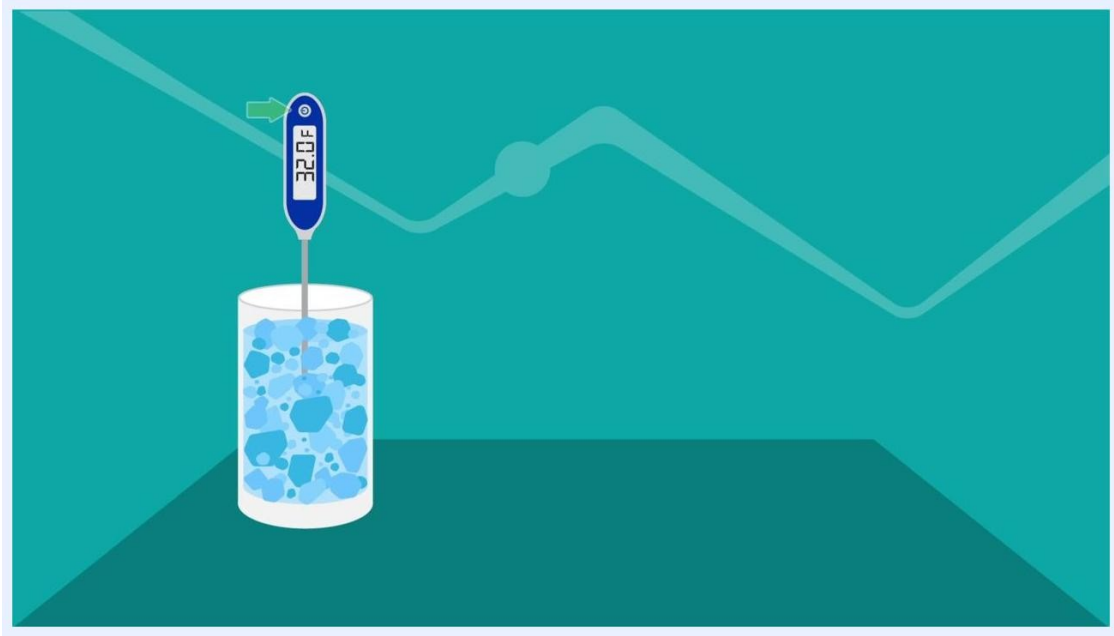
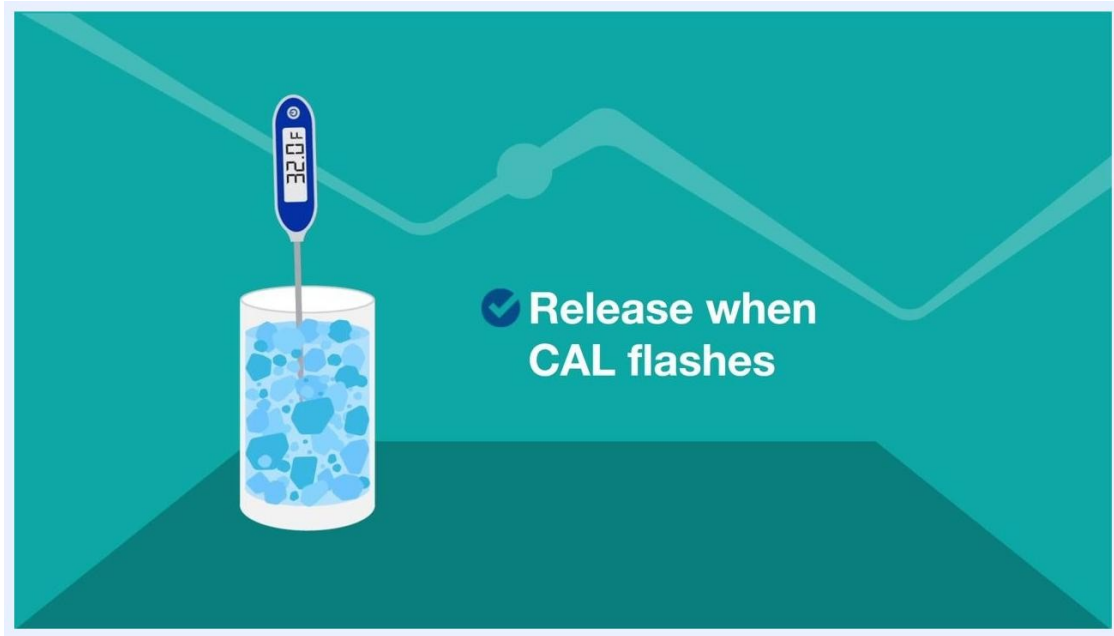


Illustration of a thermometer in an ice bath with a display reading 32.0°F and an arrow pointing to the Cal button

Step 6: Stir the ice bath before calibrating

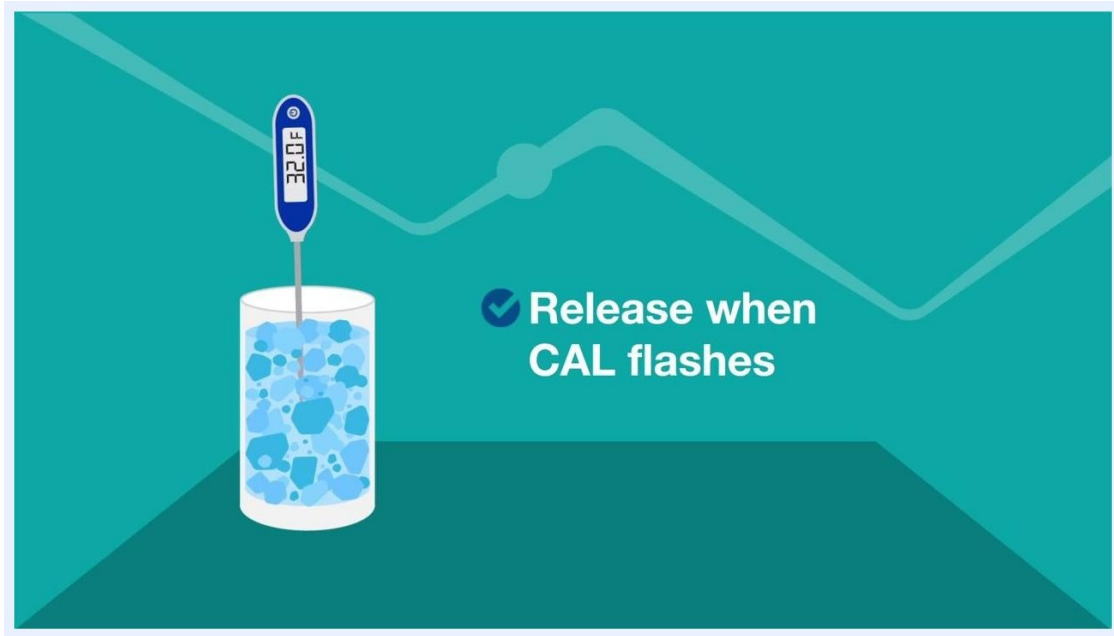
Gently stir the probe in the middle of the cup for 15 seconds. Keep the probe tip submerged, and ensure it does not touch the sides or bottom of the cup.



A digital thermometer inserted into a cup of crushed ice and water, with the display reading 32.0°F; the probe is centered and not touching the sides or bottom

Step 7: Activate AutoCal mode

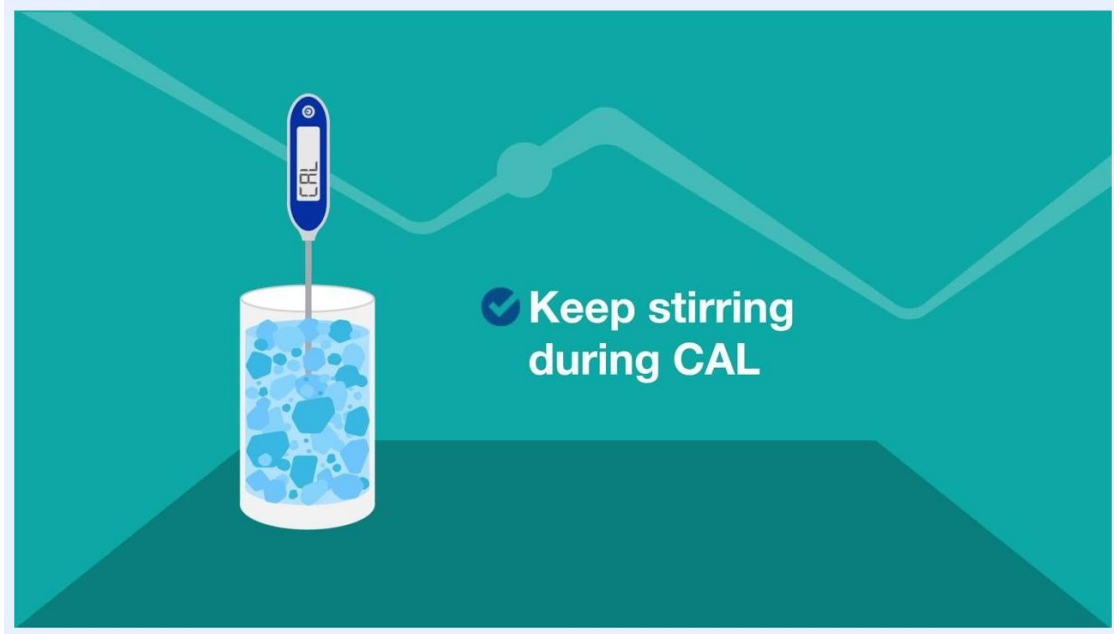
Press and hold the CAL button on the thermometer for about two seconds.
Release the button as soon as the word "CAL" appears flashing on the display.



A digital thermometer in an ice bath with a display reading 32.0°F and on-screen text "Release when CAL flashes" with a checkmark

Step 8: Allow the thermometer to calibrate

The thermometer will enter auto-calibration mode. Continue gently stirring the probe in the ice bath while "CAL" is flashing on the display. The thermometer will take temperature readings until it records a stable set of three readings.



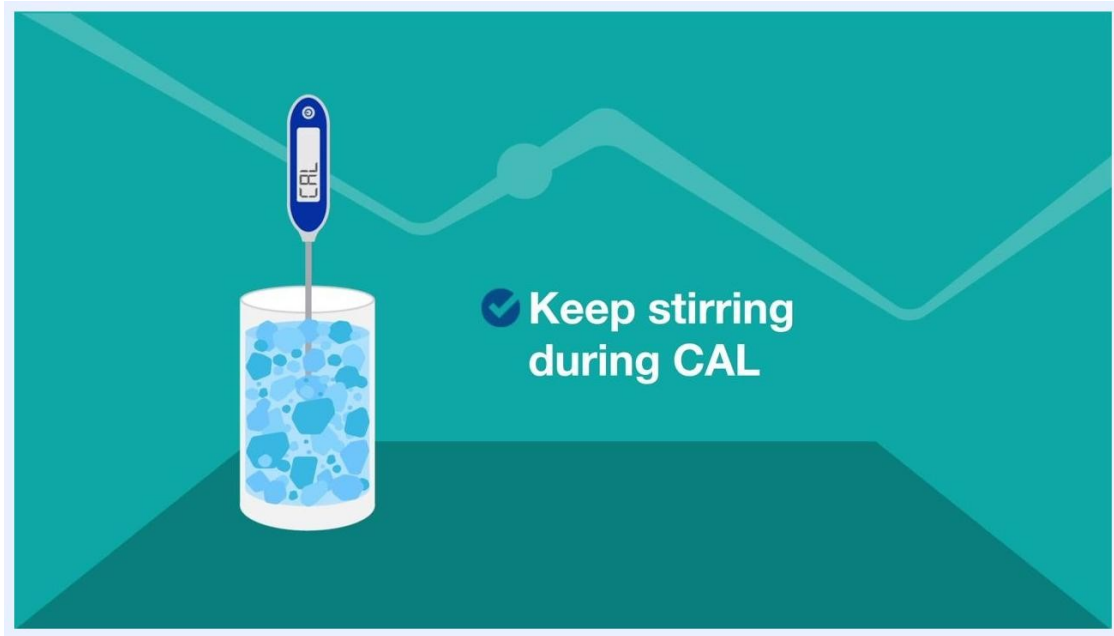
A digital thermometer in an ice bath with the display showing "CAL" and on-screen text "Keep stirring during CAL" with a checkmark

Step 9: Wait for calibration confirmation

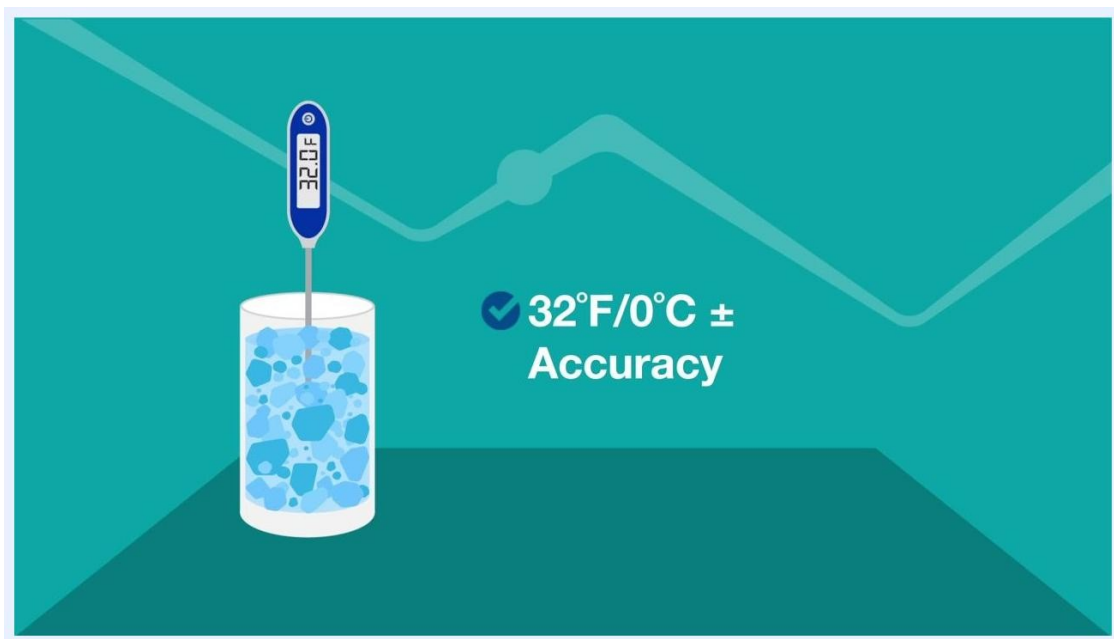
Once the thermometer locks onto the three stable readings, the display will flash three times, showing the letter "C" in front of the numbers. This indicates that calibration is complete. The thermometer will then automatically return to regular operating mode.

Step 10: Verify calibration

Check that the display now reads 32°F (0°C). The reading may be slightly above or below 32°F/0°C depending on the accuracy of your unit.



A digital thermometer in an ice bath with the display reading 32.0°F and on-screen text "Done!" with a checkmark



A digital thermometer in an ice bath with the display reading 32.0°F and on-screen text "32°F/0°C ± Accuracy" with a checkmark

Additional information

For more details on product specifications and troubleshooting, visit the DeltaTrak website at .



DeltaTrak logo with the website address www.deltatrak.com

Summary

You have now successfully completed how to calibrate a thermometer using the AutoCal function. Your DeltaTrak thermometer is calibrated and ready for accurate temperature readings.