



Did you know that to ensure an accurate temperature reading of your food you need to regularly calibrate your thermometer? Regular calibration is highly recommended to ensure the most accurate reading possible. We recommend using a digital probe thermometer to test the food. These can be ordered from our pantry. Below is the Food Authority Guide to calibrating a thermometer.

## Thermometer Calibration

Thermometers must be accurate to  $\pm 1^{\circ}\text{C}$ . Temperature measuring devices should be calibrated every six months by a nominated person (eg cook, director, afternoon shift) and results recorded.

### Calibrating a hand-held probe thermometer

Hand-held thermometers can be calibrated using the ice point check and boiling point check.

#### Ice point ( $0^{\circ}\text{C}$ )

1. Fill a cup with crushed ice or small ice cubes and add a little water (no more than  $\frac{1}{3}$  of the ice quantity) to make ice slurry
2. Place thermometer probe in the centre of the cup so it touches the ice and water, but does not touch the base of the cup
3. Leave for 5-10 minutes, then stir
4. Take the reading. If the thermometer is accurate it should read  $0^{\circ}\text{C}$ .

#### Boiling point ( $100^{\circ}\text{C}$ )

1. Boil some water in a pot
2. Place thermometer probe in the centre of the pot so it does not touch the bottom
3. Leave until a steady reading can be taken (a few minutes)
4. Take the reading. If the thermometer is accurate it should read  $100^{\circ}\text{C}$ .

### Acceptable margin of error (tolerance)

If thermometers are less than  $1^{\circ}\text{C}$  over or under the correct reading (eg  $\pm 0.5^{\circ}\text{C}$ ,  $\pm 1^{\circ}\text{C}$ ), the temperature difference should be noted and allowed for when reading the temperature for monitoring purposes.

### Corrective action for being outside margin of error (non-compliant with tolerance)

If thermometers are more than  $1^{\circ}\text{C}$  over or under the correct reading (eg  $\pm 2^{\circ}\text{C}$ ), they should be replaced or repaired.

The table below shows examples for margins of error:

DATE	ICE POINT CHECK			BOILING POINT CHECK			ACCEPTABLE (YES/NO)	SIGNED
	TEMP READING	EXPECTED READING	DIFFERENCE ( $\pm 1^{\circ}\text{C}$ )	TEMP READING	EXPECTED READING	DIFFERENCE ( $\pm 1^{\circ}\text{C}$ )		
1/1/18	$0.5^{\circ}\text{C}$	$0.00^{\circ}\text{C}$	$0.5^{\circ}\text{C}$	$100.5^{\circ}\text{C}$	$100^{\circ}\text{C}$	$0.5^{\circ}\text{C}$	YES	
1/1/18	$1.0^{\circ}\text{C}$	$0.00^{\circ}\text{C}$	$1.0^{\circ}\text{C}$	$101.5^{\circ}\text{C}$	$100^{\circ}\text{C}$	$1.5^{\circ}\text{C}$	NO	

For more information on using a thermometer visit the Food Standards website at:  
<https://www.foodstandards.gov.au/business/food-safety/thermometers>