

TEMPERATURE MEASURING DEVICE

Food Act 2006

FSANZ Food Safety Standards

LEGAL REQUIREMENTS

Division 6 Section 22 of the Food Safety Standard 3.2.2 requires that a food business must, at food premises where potentially hazardous food is handled, have a temperature measuring device that:

- » is readily accessible; and
- » can accurately measure the temperature of potentially hazardous food to +/- 1°C.

Potentially hazardous food must be kept at a particular temperature to minimise the growth of pathogenic micro-organisms that may be in food and to stop the formation of toxins in the food.

WHY DO I NEED A THERMOMETER?

A thermometer allows food handlers to check that potentially hazardous food:

- » is at the correct temperatures when it is received by the business
- » is kept at the correct temperature in a refrigerator, below 5°C, or hot display unit, above 60°C.
- » is cooked sufficiently, usually above 75°C.
- » is cooled and re-heated safely.

WHAT SORT OF THERMOMETER WILL I NEED?

The table below from [Safe Food Australia: A guide to the Food Safety Standards](#) (3rd Edition, 2016), comments on the different types of thermometers.

Thermometer type	Comments
Probe thermometers	<ul style="list-style-type: none"> • recommended for measuring food temperatures • inexpensive, simple to use and ideal for measuring the internal temperature of food • internal food temperature measured by inserting the probe into the food, usually at or near the centre of the food • can also measure surface food temperature, for example of packaged food
Infra-red (or 'laser') thermometers	<ul style="list-style-type: none"> • useful for measuring the surface temperature of food and utensils • not able to measure the temperature within food
Fixed thermometers on equipment (e.g. on bain maries and refrigerator units)	<ul style="list-style-type: none"> • useful for measuring the operating temperature of the equipment but not the actual food • not considered sufficient for measuring food temperatures — should be used in conjunction with another thermometer that directly measures food temperatures, such as a probe
Mercury and glass thermometers	<ul style="list-style-type: none"> • not generally recommended for use with food due to risks associated with breakages inside food — if used they should be encased in a shatterproof protector
Digital versus analogue thermometers	<ul style="list-style-type: none"> • either type may be used to measure food temperature, but digital is generally preferred for ease of reading

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USING A PROBE THERMOMETER

When measuring the temperature of food, the food business should be aware of the following:

- » Make sure that the thermometer is clean, sanitised and dry.
- » Temperature readings are not instant – when taking a measurement, the operator should wait until the temperature has stabilised before noting the temperature.
- » Measure the centre of food, as the temperature may vary. For example, if food is being cooled in a refrigerator, the surface of the food may be cooler than the centre of the food.
- » Clean and sanitise the thermometer after measuring the temperature of one food and before measuring the temperature of another food (this will prevent cross contamination).
- » If using the thermometer to measure hot and cold food, wait for the thermometer to return to room temperature between measurements.
- » Measure the temperature of different foods in a refrigerator or display unit, as there will be cold and hot spots within the refrigerator or unit.
- » Measure the temperature of packaged chilled food or frozen food, by placing the length of the thermometer probe between two packages – the temperature will be approximate, but the package remains intact.

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CLEANING AND SANITISING THE THERMOMETER

As the probe of the thermometer will be inserted into food the probe must be cleaned and sanitised before use and between measuring the temperature of different foods. If the probe is not cleaned and sanitised, food poisoning bacteria may be transferred from one food to another food.

This is especially important when the thermometer will be used to measure the temperature of raw food and then cooked food. For example a raw hamburger patty followed by a cooked hamburger patty.

The probe of a thermometer can be cleaned and sanitised by using the following steps:

- 1) Wash the probe with warm water and detergent (rinse with warm water after detergent).
- 2) Sanitise the probe in an appropriate way for your thermometer (alcohol swabs are often used).
- 3) Rinse off the sanitiser if necessary (refer to the instructions on the sanitiser).
- 4) Allow the probe to air dry or thoroughly dry with a single use towel.

MAINTAINING AND CALIBRATING THE THERMOMETER

The thermometer must be maintained in working order at all times. Flat batteries must be replaced, the thermometer fixed or replaced if it breaks, and it must maintain an accuracy of +/- 1°C.

The thermometer must be regularly calibrated as it can lose accuracy over time or if it is dropped or bumped. Follow the thermometer supplier's advice when calibrating, it is recommended that thermometers are calibrated at least once every 12 months.

To check a probe thermometer is operating to the correct temperature, place the probe of the thermometer into a glass of ice and a small amount of water (an ice slurry). The temperature should be 0°C. If the thermometer reading is inaccurate by more than 1°C, then the thermometer should be replaced or professionally adjusted.

MORE INFORMATION

If you require further information, visit Council's website townsville.qld.gov.au, or call Council's Customer Service Centre on 13 48 10.