



Food Safety - A Guide to using Thermometers with Potentially Hazardous Food

Who needs a thermometer?

If your food business stores, transports, prepares, cooks or sells potentially hazardous food, then you must have a thermometer in order to measure the temperature of this food. Potentially hazardous food includes that which contains meat, fish, dairy products and eggs. It also includes cooked rice and pasta.

The thermometer must be kept at your food premises. If you have several premises, you will need a thermometer at each.

Why do I need a thermometer?

A thermometer will let you check that potentially hazardous food has been cooked sufficiently well, is being kept at the correct temperatures in a refrigerator or display unit, and is being cooled and re-heated safely. A thermometer will also let you check that potentially hazardous food is at the correct temperature when it arrives at your business. This is a requirement of Chapter 3 – Food Safety Standards of the Food Standards Code.

The standards also require that potentially hazardous food be maintained at either 5°C or below or 60°C or above when it is being stored, displayed and transported, unless you have safe alternative arrangements in place. Other temperature requirements also apply to the cooling and reheating of cooked potentially hazardous food. See the fact sheet Food Safety – Temperature Control for more information on the temperature requirements in the standards.

What sort of thermometer will I need?

You need a thermometer that can be inserted into the food. This means it must have a probe. The thermometer must also be accurate to $\pm 1^\circ\text{C}$. This means that when the thermometer shows that food is at a temperature of 5°C, the actual temperature of the food will be between 4°C and 6°C.

I already have a thermometer. Will it meet the requirements?

If you already have a thermometer with a probe it may be adequate,

provided it can measure to within at least 1°C accuracy. The accuracy of the thermometer should be indicated in the documents that came with the thermometer. If you do not have any documents you will need to contact the company that supplied the thermometer and ask about its accuracy.

Facilities and equipment that are used to store and display food, such as cool rooms, bain-marie units, and sandwich display units may have fixed thermometers. This thermometer will measure the operational temperature of the unit. While these thermometers are useful, they do not measure the actual temperature of the food and you will still need to buy a separate probe thermometer to check the actual temperature of the food.

Some food businesses use infrared thermometers (similar in appearance to a police speed gun). These thermometers are not inserted into the food but can be pointed at a food to measure its temperature.

These thermometers can be very useful for quick checks on the temperature of food, but they are not accurate enough to comply with the standard requirements as the surface temperature of the food may differ from its core temperature. Accordingly, if you have an infrared thermometer you will still need to buy a probe thermometer accurate to $\pm 1^\circ\text{C}$, or buy an infrared thermometer with a probe attachment.

Where do I buy a thermometer and how much do they cost?

Companies that supply electronic testing equipment or catering equipment also sell thermometers.

A probe thermometer that is accurate to within 1°C can usually be bought for about \$40-\$50. If you cannot locate a supplier of food thermometers in your area, contact Council for advice.

How do I use the thermometer to measure the temperature of food?

You may find the following tips useful, when using your thermometer:

- Make sure that the thermometer is sanitised clean and dry;

- Place the probe into the food and wait until the temperature reading has stabilised before reading the temperature;
- Measure different parts of a food as the temperature may not be the same, e.g. if food is being cooled in a refrigerator the top of the food may be cooler than the middle of the food;
- Clean and sanitise the thermometer after measuring the temperature of one food and before measuring the temperature of another food;
- 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 colder and hotter spots within the refrigerator or unit; and
- Measure the temperature of packaged chilled food by placing the length of the thermometer between two packages – the temperature will be approximate but the package remains intact.

How do I clean and sanitise the thermometer?

As the probe of the thermometer will be inserted into the food, the probe must be cleaned and sanitised before it is used to measure the temperature of a different food. 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, e.g. a raw hamburger patty and a cooked hamburger patty.

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

- Washing the probe with warm water and detergent;
- Sanitising the probe in an appropriate way for your thermometer (alcoholic swabs are often used);

- Rinsing the sanitiser away if necessary (refer to the instructions on the sanitiser); and
- Allowing the probe to air dry or thoroughly drying it with a disposal towel.

Do I need to maintain the thermometer?

You will need to maintain the thermometer in good working order. This means that you must replace batteries if they are flat and repair or replace the thermometer if it breaks.

You will also need to maintain the accuracy of the thermometer. This means that you should make sure it is calibrated correctly on a regular basis. You could do this by following the instructions that come with the thermometer or by asking the business you bought it from for advice on when it should be calibrated, how this should be done and who should do it.

For more information phone Council's Environmental Health Unit on 4977 6821.

How can you contact us?



(07) 4970 0700

STD CALLS: 1300 733 343

For those residents who currently incur STD call rates when contacting their local customer service centre



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