

# FOOD SAFETY DURING THAWING, COOLING, REHEATING, STORAGE AND DISPLAY

ANZFS Food Safety Standards

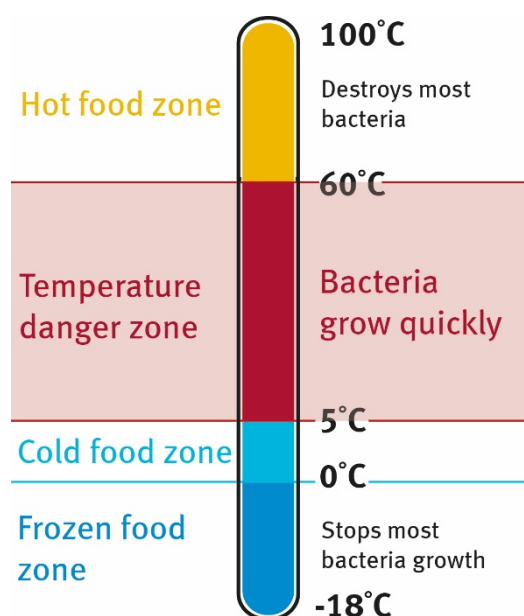


This information sheet describes the main processes in food handling and the controls that can be established to ensure that only safe and suitable food is sold from a food business.

## TEMPERATURE DANGER ZONE

The temperature range between 5°C and 60°C is often referred to as the 'Temperature Danger Zone' because food poisoning bacteria can grow rapidly in this range.

The less time that potentially hazardous food remains at temperatures between 5°C and 60°C during the cooling process, the less opportunity there will be for the pathogenic bacteria to grow.



## Thawing food

Freezing is an excellent way of extending the life of foods. However, thawing potentially hazardous food such as raw meat, poultry and seafood can easily cause outbreaks of food poisoning if some simple rules are not followed.

The safest place to thaw food is in the refrigerator. Ensure that juices resulting from thawing do not contaminate other foods while food is defrosting.

Defrosting frozen potentially hazardous food may pose a food safety risk if the time the food is within the temperature danger zone is prolonged.

Methods of thawing food include:

- » Refrigerator  
This is the preferred method for thawing food as the food will be maintained at or below 5°C. Always place food in a container to catch excess liquid as it thaws.
- » Microwave  
This is the fastest option so food will be in the temperature danger zone for a limited time. There may be a reduction in food quality due to partial cooking of food.
- » Running water  
Not recommended due to possible contamination of food during the thawing process. It is important to monitor the food and remove it as soon as it is thawed to ensure it is not kept at temperatures above 5°C.
- » Room temperature  
Not recommended as there is a greater likelihood that the thawed portion of the food will reach temperatures greater than 5°C.

Your Environmental Health Officer may ask for documentation and supporting evidence so that you can demonstrate that the method used is safe.

Once food has been thawed it should never be frozen again.

## Cooling food after cooking

When cooling potentially hazardous foods, cool the food:

- » Within two hours – from 60°C to 21°C
- » Within a further four hours – from 21°C to 5°C.

## REHEATING

Reheating food for hot holding should be carried out as quickly as possible. Reheat food to an internal temperature of at least 60°C before transferring to the hot holding equipment.

Slow cooking and slow reheating methods such as crock pots are very dangerous as this holds food in the temperature danger zone for long periods of time.

Potentially hazardous food that has already been reheated should not be cooled and reheated a second time. This avoids the food being at temperatures that support the growth of pathogenic bacteria four times (from cooling, heating, cooling again and reheating again). If pathogens were present in the food, they could multiply to dangerous levels.

# FOOD SAFETY DURING THAWING, COOLING, REHEATING, STORAGE AND DISPLAY

ANZFS Food Safety Standards



## STORAGE AND DISPLAY

The *Food Safety Standards* requires potentially hazardous food to be kept under temperature control at all times unless the food business can demonstrate another safe alternative (and it is fully documented).

There are a few simple things you can do to make your refrigerator, cold or hot display cabinet perform more efficiently and keep food safe.

- » Check that your refrigerator or display is operating correctly. To do this, you should use a probe thermometer.
- » Ensure the door seals are in good condition and the equipment is serviced regularly.
- » Minimise the amount of time doors are open.
- » Avoid crowding stored products in the refrigerator to ensure good air circulation around each item.
- » Make sure food is clearly labelled and dated to allow for stock rotation.
- » Ensure food is covered and protected from contamination.

## Cross contamination

Raw food items such as poultry, meat and seafood are likely to be contaminated with pathogenic microorganisms such as *Campylobacter* and *Salmonella* and must be handled carefully to prevent foodborne illness.

To prevent cross contamination:

- » Raw foods need to be stored separately from ready-to-eat ingredients.
- » If room is limited, place raw items on the bottom shelf in the fridge to stop juices from dripping onto other foods.
- » Store food in sealed containers.
- » Equipment and work surfaces are to be cleaned and sanitised between tasks.
- » Hand washing or correct use of gloves (changing between tasks) reduces the potential for cross contamination.

## MEASURING THE TEMPERATURE OF FOOD

A food business that stores, transports, prepares, cooks or sells potentially hazardous food must have a temperature measuring device on the premises. A thermometer allows food handlers to check that potentially hazardous food has been cooked sufficiently, or is being kept at the correct

temperatures in a refrigerator or display unit; or is being cooled and re-heated safely.

### What sort of thermometer will I need?

A thermometer which can be inserted into the food i.e. a probe thermometer. The thermometer must be accurate to  $\pm 1^{\circ}\text{C}$ . A digital display is recommended.

Gauges on the outside of bain maries, fridges, cold rooms or display cases are not sufficient as they may not accurately represent the temperature of the food.

### How do I clean and sanitise the thermometer?

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 preferably with a food grade sanitiser (alcohol swabs are often used),
3. Rinse the sanitiser away if necessary (refer to the instructions on the sanitiser),
4. Allow the probe to air dry or thoroughly drying it with a disposable towel.

### Do I need to maintain or calibrate the thermometer?

The thermometer must be maintained so that it is in good working order at all times and has an accuracy of  $\pm 1^{\circ}\text{C}$ . The thermometer must therefore be checked on a regular basis.

To perform a cold calibration check, place your thermometer in a glass of ice with a small amount of water to create an ice slurry. The temperature should be either  $1^{\circ}\text{C}$ ,  $0^{\circ}\text{C}$  or  $-1^{\circ}\text{C}$ .

To perform a hot calibration check, place the thermometer in a glass of boiling water. The temperature should be either  $99^{\circ}\text{C}$ ,  $100^{\circ}\text{C}$  or  $101^{\circ}\text{C}$ .

Replace batteries if they are flat and repair or replace the thermometer if it does not read within the above temperatures during the calibration checks.

## MORE INFORMATION

If you require further information, visit Council's website [townsville.qld.gov.au](http://townsville.qld.gov.au), or call Council's Customer Service Centre on 13 48 10.