

# How to Run a Healthy Business

## Using Thermometers in Your Business

Every business that sells high risk foods must have a thermometer that is readily accessible and is in a good working order.

You must have a thermometer that can be inserted into food to measure its core temperature. These are called probe thermometers. Infrared thermometers can be useful to measure the surface temperature of the food, a probe thermometer is still required to measure the internal (core) temperature.

Some coolrooms, bain-marie units and sandwich display units may have thermometers attached to them. These are called fixed thermometers and measure the operating temperature of the unit but NOT the actual temperature of the food.

You can buy a probe thermometer from companies that supply electronic testing equipment or catering equipment.

Glass thermometers are not permitted in food businesses.

### How to use a thermometer to take the temperature of food

1. Rinse the probe under hot running water (80°C) for about 6 seconds.
2. Wash in sanitising solution or use sanitising wipes before placing the probe into food (Alcohol wipes from the chemist can be used to sanitise the probe).
3. Take the core temperature by inserting the probe into the thickest part of the food.
4. Take the reading at least 10 seconds after insertion to be sure that reading has stabilised.
5. Make sure the probe is washed and sanitised between every reading with particular care taken between raw and cooked foods.

Remember: Liquids (eg. soups, sauces) should be stirred before readings are taken.

Surface temperatures are taken for packaged, frozen foods and vacuum packaged products. These are measured by inserting the probe between two packets of food.

### Maintaining Thermometers

You must make sure that batteries are regularly replaced as the thermometer will not operate correctly with flat batteries.

Thermometers are very sensitive and will break, or lose their accuracy if they are dropped or handled roughly. You must make sure that the thermometer is fixed or replaced if it breaks.

### Calibrating Thermometers

Thermometers must be maintained to an accuracy of at least plus or minus 1°C. An external contractor, manufacturer or distributor will be able to calibrate the thermometer at least once a year. You can also calibrate thermometers using the following methods.

#### 1. Ice Water Slurry Method

- Crush several pieces of ice (about 50-100g) and place in a small container such as a drinking glass.
- Add enough cold water to produce a slurry but not so much that the ice floats.
- Stir the ice slurry vigorously and let stand for approx 5 minutes.
- Insert the thermometer into the slurry and wait at least one to two minutes for the reading to stabilise.
- Record the temperature.

**Please Turn Over**



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- Take three further readings at least one minute apart.
- If consecutive readings are not within 0.5°C replace or service the thermometer.
- If the temperature readings are higher than +1°C or lower than -1°C attach a label to the thermometer showing the date the calibration check was made and the variation from 0°C. Alternatively purchase a new thermometer.
- Wait for the reading to stabilise.
- Record the temperature.
- The fixed and hand held thermometers should read to within 0.5°C of each other.
- If the variation is greater than 1°C place a label near the fixed thermometer to indicate its error.

Calibration checks should be conducted and documented as per the instructions of your Food Safety Program.

## 2. Boiling Water method

- Bring a container of water to the boil.
- Insert the thermometer probe into the boiling water and wait for the reading to stabilise.
- Record the temperature.
- Take 3 further readings at least 1 minute apart.
- The reading should be 100°C.
- If the temperature reads higher than 101°C or lower than 99°C attach a label to the thermometer showing the date the calibration check was made and the variation from 100°C. Alternatively purchase a new thermometer.

For more information on thermometers in your food business contact your Environmental Health Officer at the Health Services Branch on 9658 8831 / 8815.

## How to calibrate check a fixed thermometer

Fixed thermometers (those fixed inside cool rooms, refrigerators and display cabinets) are calibrated against hand held thermometers (which have themselves undergone a recent calibration check).

- Keep a container of water in the fridge or coolroom for the purpose of checking temperatures. (Don't forget to regularly change the water).
- Place a hand held thermometer into the container of water.