# Thermometers – Requirements of Food Safety Standards

In a food business, monitoring temperatures is necessary to show that you are keeping the food you sell, safe. If your business stores, transports, prepares, cooks or sell High Risk Foods – meat, seafood, eggs, dairy products, smallgoods, or foods which contain these foods (sandwiches, quiches and prepared salads), then you must have a thermometer so that you can measure the temperature of these foods.

From January 1 2002, all food businesses are required, as a condition of registration, to have a food safety program. A major part of this is temperature control; therefore all food businesses and temporary food stalls are required to have at least one thermometer available. It is important that all staff/volunteers understand how to use and calibrate the thermometer/s, and the importance of conducting temperature checks.

A thermometer will let you check if High Risk Foods have been cooked well enough, are being kept at the correct temperatures in a refrigerator or display unit, or are being cooled and reheated safely. You should also be checking the food that arrives at your business to ensure that it has been transported safely.

**Requirements**

The Food Safety Standards require you to keep High Risk Foods out of the Temperature Danger Zone – at 5°C and below OR 60°C or hotter – when being stored, displayed and transported. There are other temperature requirements that apply to the cooling and reheating of cooked high-risk food. Time/Temperature rules may also apply.

To test the temperature you are required to test the temperature of the food, not just the unit that it is stored in. This can be done by inserting a clean, sanitised probe into the food to measure the temperature at its core (in the middle).

**Types of Thermometer**

The food safety standards state that the following is required:

- The thermometer must have a metal probe that can be inserted into food to check the internal temperature of the product.
- The thermometer must be accurate to within 1°C – digital or infrared are the only types which can achieve this level of accuracy.

The accuracy of the thermometer will be shown in the documents that came with it. If you do not have any documents, you will need to contact the thermometer's manufacturer and ask about the accuracy.

Infrared thermometers take the surface temperature of the food and can be useful for quick checks on deliveries etc. However, infrared thermometers are not accurate enough, as the temperature on the outside of the food can be different from the temperature in the middle. If you already have an infrared thermometer you will also need to buy a probe thermometer or a probe attachment for your infrared thermometer.

You must make sure that flat batteries are replaced, thermometers are fixed or replaced if they break, and that each is maintained to an accuracy of at least ±1°C

**Calibration**

Your thermometer/s will need to be calibrated regularly to ensure that you are recording accurate temperatures. You can test your thermometer/s using the following methods

***Cold Temperature Testing***

- Pour a mixture of 50% crushed ice and 50% water into a suitable container.
- Let the mixture stand for a period of 5 minutes to allow the temperature of the mixture to become evenly distributed.
- Place the probe of the thermometer into the mixture.
- Wait for approximately 2 minutes.
- Write down the reading of the thermometer. It should read 0°C.

If the thermometer reads more than ±1°C it will need to be recalibrated or replaced.

***Hot Temperature Testing***

- Boil tap water and place the thermometer temperature probe into the boiling water.
- Wait for a few minutes to allow the temperature to stabilise.
- Write down the temperature of the thermometer. It should read 100°C.

If the thermometer differs more than ±1°C it will need to be recalibrated, serviced or replaced.

An external contractor, the manufacturer or distributor will be able to calibrate this equipment at least once

each year. A record of all testing and calibration is to be kept.

For further information on these requirements a fact sheet is available by the Environmental Health Officer or alternatively it can be downloaded from the FSANZ website at http://www.foodstandards.gov.au

**Where to purchase**

You can buy thermometers from companies that supply electronic testing equipment or catering equipment. These companies are listed under "Thermometers" or "Catering Suppliers" in the Yellow Pages.

Below is a list of some thermometer suppliers. Some of these companies also provide calibration services:

| **Supplier** | **Contact Details** |
|---|---|
| Civilab Southern | 2/5 Dowsett St, South Geelong<br>Ph: (03) 5223 1811 |
| Graeme Beaumont | 256 Myers St, Geelong<br>Ph: (03) 5221 6240 |
| Scof Catering Services | 24 Ryrie St, Geelong<br>Ph: (03) 5221 8093 |
| Dick Smith Electronics | Market Square Shopping Centre<br>Malop St, Geelong<br>Ph: 5223 2711<br>North Geelong Powerhouse<br>312 Melbourne Rd, North Geelong<br>Ph: 5277 3033<br>Grovedale Waurn Ponds Shopping Centre,<br>Tenancy 801b, 173 -199 Pioneer Rd (cnr Colac)<br>Ph: (03) 5243 9633 |
| Start Food Tech | 177 Station St, Corio<br>Ph: (03) 5274 9990 |
| EBF Distributors | 38 Leather St, Breakwater<br>Ph: (03) 5222 3322 |
| National Catering Smallwares | 19/147 Marshalltown Rd, Grovedale<br>Ph: (03) 5241 3884 |
| Chef's Essentials | 117 Ryrie St, Geelong<br>Ph: (03) 5229 9923 |