

## **Guidance on Temperature Control in Food Premises**

The Food Safety and Hygiene (England) Regs 2013, Regulation 32 and Schedule 4 set down the temperature control requirements for most food premises. The regulations have been written to comply with Regulation (EC) No 852/2004 on the hygiene of foodstuffs, but they are very similar in detail to the Food Safety (Temperature Control) Regulations 1995, which were previously in force. For example, the chilled holding temperature of 8°C, the hot holding temperature of 63°C and the tolerance periods for holding foods outside the specified temperature all remain the same. Also there is still a general requirement to hold any food likely to support the growth of micro-organisms or toxins under temperature control.


Please note that the regulations do not apply to any activity covered by Regulation (EC) No 853/2004 (approved premises) or any food business carried out in a ship or aeroplane. However, also note that Regulation (EC) No 852/2004 does contain a general requirement for temperature control, which states that raw materials, ingredients, intermediate products and finished products likely to support the reproduction of pathogenic micro-organisms or the formation of toxins must not to be kept at temperatures that might result in a risk to health. Approved premises must comply with this general requirement. This is different from the previous regulations where the temperature control regulations did not apply to approved premises.

For further details on the temperature control requirements for approved premises, contact the Food, Health and Safety Team. See contact details at the end of this guidance.

### **Food Safety Management System**

In most cases, temperature control will be an integral part of the food safety management system based on the hazard analysis and critical control points (HACCP) principle which food business operators are required to produce under the Food Safety and Hygiene (England) Regs 2013. For further information on food safety management systems see the guidance listed below:

- Catering and Other Food Preparation Facilities
- Retail Shops
- Food Vending Vehicles

- 
- Food Stalls and Marquees (including Food Stalls at Farmers' Markets)
  - Bed and Breakfast Establishments and Guest Houses
  - Childminders and Nurseries
  - Village, Community and Church Halls
  - Community Buildings
  - Guidance on HACCP for Larger Caterers and Retailers
  - HACCP Options for Food Businesses
  - Producing a HACCP System
  - Guidance on HACCP for Food Manufacturers
  - Guidance on Safer Cooked Meat Production
  - Guidance on Fitness for Work for Food Handlers

The written food safety management procedures have an important role to play in helping to ensure that food is produced safely. Chill control in particular, as well as hot holding is very often critical to food safety. Food businesses must understand which foods need to be temperature controlled, be aware of the relationship between temperature and the shelf life of food and be sure that, if food is kept out of temperature control, as allowed by the regulations, that the safety of the food is not put at risk.


Temperature monitoring and logging is recommended as part of food safety management procedures, to check that all equipment is working efficiently and food is kept at safe temperatures.

In addition an understanding of the importance of temperature control should form part of the supervision and instruction/training of people involved in food handling.

It is also important to remember that changes in food processing practices, for example decreasing the use of preservatives may mean that some products will no longer be safe when kept at ambient temperatures. It is essential therefore to follow the manufacturers' instructions on use and storage.

## **Chill Holding Requirement**

Any food which is likely to support the growth of pathogenic micro-organisms or the formation of toxins must not be kept above 8°C, at or in food premises where any commercial operation is being carried out.



This only applies to products which have to be held under temperature control so as to prevent them becoming a risk to health. For example, it is not necessary to keep canned food at chilled temperatures because the food has been processed in such a way that the growth of pathogenic micro-organisms or the formation of toxins is prevented, as long as the can remains unopened and undamaged. It isn't necessary for raw meat either, because raw meat will be cooked, which will kill off the micro-organisms which may be on it.

The Regulations do not list specific foods that require temperature control. Food businesses themselves need to consider which foods should be held under refrigeration, however, the following products will require temperature control.

## 1) Dairy Products

### i) Soft or semi-hard cheeses ripened by moulds and/or bacteria.


The important safety factors for cheese are its acidity and water activity. During the ripening process acidity declines until a point is reached where growth of pathogens, such as *Listeria*, will no longer be inhibited. It is important that, from this point on, such cheeses are kept at chilled temperatures. This means that such cheeses, when ready for distribution for sale, stored prior to use or on retail display for example, will need to be refrigerated.

### ii) Dairy-based desserts (including milk substitutes), including: fromage frais, mousses, crème caramels and products containing whipped cream.

These products will require refrigeration. Where, however, the pH of these products would prevent the growth of pathogenic micro-organisms or the formation of toxins (eg yoghurt with a pH below 4.5), or other effective preservative mechanisms are present, the food would not need to be subject to temperature control.

## 2) Cooked Products

There will be a need for chill control of foods comprising or containing cooked products such as meat, fish, eggs (or substitutes for meat, fish, or eggs), milk, hard and soft cheese, cereals (including rice), pulses and vegetables (whether or not they are intended to be eaten without further re-heating). This will include ready-to-eat products such as sandwiches containing fillings, toppings, etc. prepared with the foods mentioned above.



3) Smoked or Cured Fish

There is a need for chill control whether the fish is whole or sliced. In the case of fresh fish, spoilage organisms (which are obviously detectable through appearance or smell) would render the product unfit for consumption before it became unsafe. Because the preservative action of smoking or curing inhibits the growth of spoilage organisms, chill control is necessary for smoked or cured fish to ensure its safety.

4) Smoked or Cured Ready-to-Eat Meat which is not ambient shelf-stable

Examples which need chill control may include sliced cured cooked meats such as hams, some salamis and other fermented sausages, depending on the method of curing. Whole hams, salamis etc may be able to be stored and displayed without refrigeration.

5) Prepared Ready-to-Eat Foods

Including prepared vegetables or salads containing other products (such as coleslaw), vegetable salads containing fruit and, prepared products such as mayonnaise.


6) Uncooked or Partly Cooked Pastry and Dough Products

Products such as pizzas, sausage rolls, or fresh pasta etc containing meat, fish (or substitutes for meat or fish) or vegetables will require refrigeration. These products often contain pre-cooked meat, fish or vegetables mixed or prepared with raw materials. The subsequent cooking process may be insufficient in some cases to ensure food safety, so temperature control will be necessary. Fresh pasta should normally be temperature controlled, whether or not it contains meat, fish or vegetables.

## Chill Holding Exemptions

The chill holding requirements do not apply to:

- a) Food which:
  - i) has been cooked or re-heated;
  - ii) is for service or on display for sale; **and**
  - iii) needs to be kept hot to control the growth of micro-organisms or toxins.




So food intended to be served hot doesn't have to be held at 8°C or less! But see Hot Holding Requirement below.

- b) Food which can be kept safely at ambient (room) temperatures

So for example, certain pickles or jams, which may be safely kept at ambient temperatures, provided that their packaging remains intact and they are within their shelf life don't have to be kept chilled. Some cured or smoked products, such as air-dried, cured hams with low water activity, may be safely kept at ambient temperatures under defined conditions and within their shelf life.

Other foods might not have to be kept at chill temperatures if they are normally sold to consumers within a short shelf life, because the quality of the product is not acceptable at a later stage. This would include certain bakery products and sandwiches, which are usually produced, or prepared, and sold on the same premises within a short period. For the food types mentioned above under Chill Holding Requirement, products should not be kept at ambient temperatures for more than four hours after preparation, in line with the Chill Holding Tolerance Periods detailed below. If this time period is strictly followed, such products can be safely sold to consumers without any need for chill control, even though they are not ambient shelf stable. Other examples of products which might be sold at ambient temperatures within the specified time limits might include certain types of cake and products that have already undergone a treatment, such as pasteurised milk (including both shop bought and doorstep deliveries).

- c) Food which has been subjected to a process intended to prevent the growth of micro organisms or toxins (eg canning, dehydration) and placed in a hermetically sealed container. Once the container is opened it may be necessary to keep the contents chilled, depending on what it is.
- d) Food which must be matured or ripened at ambient temperatures but only until the maturing process is completed.
- e) Raw food intended for further processing (eg cooking) which will render the food fit for human consumption.
- f) Pre-packed poultry should be labelled with the temperature at which it should be kept, which is -2°C to +4°C.
- g) Eggs should be stored and transported at a constant temperature which in the UK is usually ambient or room temperature. This is current practice in the UK egg industry and the reason why the majority of retail outlets' egg displays are not refrigerated. Changes in storage temperature and humidity can lead to condensation forming on the egg shell which can cause mould growth together with the possibility that any bacteria may infect the eggs as a result. After purchase, the



consumer is advised to refrigerate the eggs to maintain freshness and reduce the possibility of bacteria growth resulting from exposure to the temperature and humidity variations of the domestic kitchen. Further information:

Keeping eggs safe (on the Food Standards Agency website).

## **Chill Holding Tolerance Periods**

Food may be kept outside temperature control in the following circumstances:


- a) The food:
  - i) was for service or on display for sale;
  - ii) had not previously been kept for service or display for sale outside temperature control;
  - iii) had been kept for service or on display for sale for a period of less than four hours.

This tolerance would allow, for example, self-service food, buffets, cheese boards to be displayed outside chill control in catering premises and for service and display in retail premises.

Any food displayed outside chill control should subsequently be placed back under refrigeration until served, sold, or discarded. Alternatively, they should be discarded immediately at the end of the four hours.

- b) The food was being transferred to or from a vehicle being used to transfer food from or to another premises, where it will be kept at 8°C.
- c) For unavoidable reasons, such as:
  - i) to allow the practicalities of preparation and handling;
  - ii) defrosting cycle;
  - iii) temporary breakdown.

For b) and c), food may be kept above 8°C for a limited period which must not compromise food safety. The regulations do not specify how long the limited periods or how large the permitted rises in temperature mentioned above are, but it has to be consistent with food safety. As a rule of thumb, under normal circumstances, a single



limited period of up to two hours outside temperature control is unlikely to cause a problem but for longer periods, some justification and a hazard analysis based on the HACCP principles would probably be needed.

## **Hot Holding Requirement**

Food which:

- a) has been cooked or re-heated;
- b) is for service or on display for sale;
- c) needs to be kept hot to control the growth of pathogenic micro-organisms or the formation of toxins;

must be kept at or above temperature of 63°C.

## **Hot Holding Tolerances/Exemptions**

Food may be kept below 63°C if for service or on display for sale for less than two hours. At the end of the period of up to two hours the food should be as quickly as possible cooled to a temperature of 8°C or below, and then refrigerated, or it should be discarded.

Food may also be kept at a lower temperature if a well-founded scientific assessment concludes that there is no risk to health.

## **Cooling**

Food which must be kept at or below 8°C must be cooled to that temperature as quickly as possible after the final preparation.

## **Manufacturer's Variation**

Some foods may be kept at higher temperatures for a specified shelf-life if recommended by the manufacturer or processor, in writing or by suitable labelling.

However, the manufacturer must support the recommendation by a well founded scientific assessment of food safety.



**The following point is a Recommendation consistent with Good Practice:**

The new regulations require food to be kept at or below 8°C. As the air temperatures of refrigerators are often a few degrees lower than product temperatures, it is important to keep fridge temperatures at or lower than 5-6°C to ensure that the temperature of the food does not exceed 8°C.

**For further information:**

- **Contact:** Food, Health and Safety Team
- **Address:** Environmental Services Section, Eden District Council, Mansion House, Penrith, Cumbria CA11 7YG
- **Email:** [env.health@eden.gov.uk](mailto:env.health@eden.gov.uk)
- **Telephone:** 01768 212491