

TECHNICAL BRIEF

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Food Safety – Temperature Control

1. Introduction

Inadequate food temperature control is one of the most common causes of food borne illness and food spoilage. Controls include time and temperature of cooking, processing and storage. Systems should be in place to ensure that temperature is controlled effectively where it is critical to the safety and suitability of the food.

Depending on the nature of the food operations undertaken, adequate facilities should be available for heating, cooling, cooking, refrigerating and freezing food, for storing refrigerated or frozen foods, monitoring food temperatures and, when necessary, controlling ambient temperatures to ensure the safety and suitability of food.

Equipment used to cook, heat treat, cool, store or freeze food should be designed to achieve the required temperatures as rapidly as necessary in the interests of food safety and suitability, and maintain them effectively. Equipment should also be designed to allow temperatures to be monitored and controlled.

The Food Safety (Temperature Control) Regulations 1995

These provisions replace the previous two-tier chill temperature control system in England and Wales with a single control temperature 8°C. They also replace the prescribed list of foods requiring temperature control in previous Regulations with a more general requirement covering any food likely to support the growth of harmful bacteria. The Regulations also allow some flexibility consistent with Food Safety to take into account practical handling issues.

2. Who is affected?

The Regulations apply to all types of catering and retail food businesses, whether the food is sold publicly or privately for profit or for fund raising. The Regulations do not apply to food cooked at home for private consumption.

3. The basic temperature requirement

The Regulations state that foods which need temperature control for safety must be held either:

- Hot - at a temperature at or above a minimum temperature of **63°C**
- Chilled - at or below a maximum temperature of **8°C**

4. Foods which need temperature control

Whilst the Regulations do not list specific foods they are likely to fall into a number of categories:

- a. Dairy products such as soft or semi-hard cheeses, dairy based desserts, or products containing whipped cream.
- b. Cooked products such as food containing eggs, meat, fish, milk, cereals, pulses and vegetables.
- c. Smoked or cured ready-to-eat meat or fish - unless the curing method leaves the product shelf stable at ambient temperatures.
- d. Uncooked protein foods such as meat, fish and eggs.

- e. Prepared ready to eat foods such as prepared vegetables, vegetable salads or prepared products containing mayonnaise.
- f. Uncooked or partly cooked pastry and dough products.

5. The General requirement

The Regulations contain a general requirement prohibiting the keeping of any raw materials, ingredients, intermediate products and finished products likely to support the growth of harmful bacteria or the formation of toxins, at temperatures which would result in a risk to health.

In most circumstances maintaining food temperatures at 8°C or below or at 63°C or above will satisfy this requirement.

However there may be situations where it is appropriate to keep foods at chill temperatures lower than 8°C such as certain cook-chill foods or sous-vide products.

6. Foods which are exempt from temperature control

In specific circumstances some types of food are exempt from temperature control. These include:

- a. foods which can be kept at ambient temperature throughout their shelf life e.g. some cured or smoked products or certain bakery products which were to be sold quickly.
- b. canned, dehydrated or other preserved foods.
- c. food which must be ripened or matured at ambient temperature. Once fully ripened or matured the food must be stored and/or displayed at or below 8°C.
- d. raw food intended for further processing (including cooking) which will ensure the food is fit for human consumption.
- e. mail order food-although exempt from the 8°C control mail order foods must be supplied at temperatures which will not present a health risk.

7. Service or display

Food to be served cold and which would normally require holding at 8°C or below may be displayed above 8°C for a maximum period of 4 hours. Only one tolerance period of service or display is allowed. After this remaining food stuffs should be either replaced under chill control until final use, or discarded.

Food to be served hot may be kept for service or display out of temperature control (63°C or above) for a period of 2 hours. After this time the food should either be discarded or cooled as quickly as possible to 8°C or below until final use.

8. Handling and unloading

Consistent with food safety, limited periods outside chill control are allowed where:

- food is being loaded or unloaded from a refrigerated vehicle
- there are unavoidable circumstances e.g. when food has to be handled during and after processing or if equipment temporarily breaks down

9. Further reading

1. The Food Safety (General Food Hygiene) Regulations 1995
Ref S1 1763
Industry Guide to Food Hygiene Practice: Catering Guide
ISBN 0-11-321899-0 HMSO Publication Centre
2. A Guide to the General Temperature Control Regulations
D.O.H. PO Box 410, Wetherby
LS237LN Free
3. Food Service Booklet: Keeping Food Cool and Safe
MAFF Food Sense tel:0645 556000 Free

This technical brief has been compiled using material produced by the Department of Health.