Food Safety (General Food Hygiene) Regulations 1995 Industry
Guide to
Good
Hygiene
Practice:

Food Safety
(Temperature
Control)
Regulations
1995

Baking Guide



Chadwick House Group Ltd.

Food Safety (General Food Hygiene) Regulations 1995 Industry
Guide to
Good
Hygiene
Practice:

Food Safety (Temperature Control) Regulations 1995 **Baking Guide**



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Preface

This Industry Guide to good hygiene practice gives advice to bakery businesses on how to comply with the Food Safety (General Food Hygiene) Regulations 1995 and the corresponding regulations in Northern Ireland.

This is an official guide to the Regulations which has been developed in accordance with Article 5 of the EC Directive on the Hygiene of Foodstuffs (93/43/EEC).

The Guide also contains advice on how to comply with the Food Safety (Temperature Control) Regulations 1995.

Whilst this Guide is not legally binding, Food Authorities must give it due consideration when enforcing the Regulations.

It is hoped that the information which this Guide contains will help bakers both to meet their legal obligations and to ensure food safety.

Acknowledgements

Thanks are due to the following organisations and their representatives who formed the working party responsible for the development of this Guide:

National Association of Master Bakers

Janet Carr (Chairman of the working party) - Warings Master Bakers Ltd Chris Dabner (Secretary to the working party) - Hygiene & Safety Officer

Biscuit, Cake, Chocolate and Confectionery Alliance

Nigel Shipman - Lyons Cakes Ltd

Federation of Bakers

Tony Casdagli - Director Kate Hodgetts - Three Cooks Ltd

Scottish Association of Master Bakers

Ian Hay - Chief Executive David Clark - Aulds (Foods) Ltd

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Finally the working party would like to express their thanks to Gillian Smith of the NAMB for her keyboard skills.

FOR INFORMATION:

If you need help to understand the guidance in this booklet contact your local environmental health department.

'अरे पृक्तिकार किर्यमानकी पृक्तिक वर्षि व्यागनात माराहरूत करकार रहा काराज व्यागनात पानीत गक्तियम चाक्त विकास (Environmental Health Department)-वर्ष वरण (Ainterial करका) (Bengali)

આ નાની પુસ્તિકામાં આપેલ માર્ગદર્શન સમજવામાં તમને જો મદદની જરૂર હોય તો મહેરબાની કરીને તમારા સ્થાનિક એનવાઇરનમન્ટલ હેલા ડિપાર્ટમન્ટને (પર્શાવસ્થજન્ય આરોગ્ય ખાતાનો) સંપર્ક સાધશો। (Gujarati)

"ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਕਿਤਾਬਰੇ ਦੀ ਰਹਿਨੁਮਾਈ ਸਮਝਣ ਵਿਚ ਮੱਦਦ ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਆਪਣੇ ਸਥਾਨਕ ਐਨਵਾਇਰਨਮੈਂਟਲ ਹੈਲਬ ਡਿਪਾਰਟਮੈਂਟ (Environmental Health Department) ਨਾਲ ਸੰਪਰਕ ਕਰੋ।" (Punjabi)

" اگر آپ کو اِس کا بچہ میں وی تمی رہشمائی کو سمجھے میں سرو کی شرورت ہے تو ا بینہ مثای افوائٹرمینٹل پیلنے ڈیارفمنٹ سے رلائدہائم کچکا"۔ (Urdu)

如果您想瞭解關於本手冊的詳細指引,請向您當地的環保處洽詢。 (Chinese)

«Αν χρειαστείτε βοήθεια στην κατανόηση των οδηγιών που περιέχονται σε αυτό το βιβλιαράκι, επικοινωνήστε με τη Διεύθυνση Περιβαλλοντικής Υγιεινής της περιοχής σας». (Greek)

Eğer bu elkitabındaki açıklamaları anlayabilmek için yardıma ihtiyaç duyuyorsanız, yerel Çevre Sağlığı Dairenize başvurunuz.

(Turkish)

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Part 1 INTRODUCTION

The purpose of this Guide is to provide bakers with guidance on how to comply with the requirements of the Food Safety (General Food Hygiene) Regulations 1995 and the Food Safety (Temperature Control) Regulations 1995, and with the corresponding Regulations in Northern Ireland.

In particular, the Guide will:-

- give clear guidance on what is required to comply with the requirements of the Regulations;
- in relation to the baking industry to clarify and explain the terms "where necessary" and "where appropriate" where these appear in the Regulations;
- to provide more specific guidance on practices specific to the baking industry to ensure the safety of the food produced;
- to give clear advice relating to various aspects of good manufacturing practice.

The Guide was produced by a Working Party consisting of members/representatives from the National Association of Master Bakers, the Scottish Association of Master Bakers, the Federation of Bakers and the Biscuit, Cake, Chocolate and Confectionery Alliance, with assistance from representatives from the Department of Health and LACOTS (see Acknowledgements page for further details).

The Guide has been developed in accordance with Article 5 of the Directive 93/43/EEC on the Hygiene of Foodstuffs and the Department of Health's guidance booklet - A Template Advice on the Compilation of UK Industry Guides to Good Hygiene Practice. It has undergone the required three month period of public consultation.

The Guide has the status implied by regulation 8(2)(c) of the Food Safety (General Food Hygiene) Regulations 1995, regulation 19(2)(c) of the Food Safety (Temperature Control) Regulations 1995 and the corresponding Regulations in Northern Ireland. Enforcement Officers must give "due consideration" to what the Guide says when assessing whether bakers are complying with the requirements of these Regulations.

Whilst this Guide sets out a recommended way by which bakers can comply with the General Food Hygiene and Temperature Control Regulations, there is no legal requirement for bakers to follow the advice. Bakers may be able to find alternative ways of complying with the Regulations. In that event, it is up to the proprietor of the business to demonstrate to the enforcement authority that he/she has complied with the requirements of the Regulations.

This Guide only deals with the Food Safety (General Food Hygiene) Regulations 1995 and the Food Safety (Temperature Control) Regulations 1995 and their Northern Ireland equivalents. There are other Acts (Food Safety Act 1990) and Regulations which can or do govern the production and sale of food by bakers. Some may impinge on general issues of food hygiene. For example, there are various Health and Safety regulations dealing with the provision of toilets, wash hand basins, accommodation for outdoor clothing, the safety and use of cleaning materials etc; date marking of food is governed by the Food Labelling Regulations 1996; the disposal of waste (Schedule 1, Chapter VI) is regulated by the Environmental Protection Act 1990. In a few instances specific cross references to other pieces of legislation have been made for the sake of clarity. In general it was deemed impractical to include cross references to all the other associated legislation.

1: Introduction

However, whilst not dealt with in this Guide, the bakery business must be aware of all the other legislation governing its operation, take account of the various legal requirements and take action where necessary to ensure that their business complies with all the legal duties imposed on it.

Good Practice: The Guide also provides advice and information on good practice. These are clearly differentiated from the guidance on compliance and for Schedule 1 Chapters I to IX they appear in a separate column on the right hand side of the page headed "Advice on Good Practice". It is NOT a legal requirement to follow the advice on good practice. It is entirely up to individual businesses whether they wish to heed and implement the advice given, and it has no legal standing with regard to enforcement of and compliance with the Regulations. The sections on good practice are not comprehensive.

Documentation and Records: There is NO explicit requirement in the General Food Hygiene or Temperature Control Regulations for bakers to document policies, procedures and systems or to keep records. In a number of instances, the keeping of written records, eg for hygiene training may assist in demonstrating compliance with the Regulations. In the event of enforcement action under these Regulations, documented procedures and records of routine checks may be of use in the establishment of a "due diligence" defence as described in the Food Safety Act 1990.

SCOPE

The sectors of the Baking Industry covered by this Guide are :-

- Retail Craft Bakeries
- Wholesale Craft Bakeries

These can vary in size from a small unit behind a shop to a very large bakery supplying a large number of either their own branch shops or wholesale outlets, including catering establishments, with a wide range of bakery goods including bread, rolls, cakes, other flour confectionery and savouries, the majority of which are unwrapped. Occasionally, the bakery business may be more highly specialised producing a much more limited range which may be packaged.

Instore Bakeries The guidance on compliance given in the Retail Industry

Guide is consistent with that given in this Guide. Therefore, whilst either Guide could be used, it is recommended for simplicity that the Retail Industry Guide is used. In the circumstances, instore bakeries should be considered outside the formal scope of this Guide for the purposes of the requirements in the legislation that the Guide be given "due

consideration" by enforcement officers.

Bakery Shops Bakery shops should also be considered outside the formal scope

of this Guide for the purposes of the requirements in the legislation that the Guide be given "due consideration" by

enforcement officers.

The Guide does NOT cover:- Plant Bakeries

Plant bakeries are usually large highly automated units producing a limited range of bread products (mainly sliced and wrapped loaves) or biscuits or cakes for wholesale, the majority of which are packaged and have a well known brand name. These bakeries are often part of a larger bakery group and are owned by a national or international bakery or food group.

Part 2 THE FOOD SAFETY (GENERAL FOOD HYGIENE) REGULATIONS 1995

HAZARD ANALYSIS SYSTEM

(Identification of Steps Critical to Food Safety)

Regulation 4(3) requires that:-

A proprietor of a food business shall identify any step in the activities of the food business which is critical to ensuring food safety and ensure that adequate safety procedures are identified, implemented, maintained and reviewed on the basis of the following principles -

- (a) analysis of the potential food hazards in a food business operation;
- (b) identification of the points in those operations where food hazards may occur;
- (c) deciding which of the points identified are critical to ensuring food safety ("critical points");
- (d) identification and implementation of effective control and monitoring procedures at those critical points; and
- (e) review of the analysis of food hazards, the critical points and the control and monitoring procedures periodically, and whenever the food business's operations change.

This new legal requirement is the key to the new General Food Hygiene Regulations and reflects a fundamental change in the approach to food hygiene compared to previous regulations.

Its purpose is to get the proprietors of food businesses to:

- (a) think about the way they handle, prepare and store food in a structured way,
- (b) to get them to identify and assess the hazards to the safety of the food at the various stages of manufacture,
- (c) to devise and implement ways of controlling or eliminating these hazards where necessary so as to ensure the safety of the food produced.

This section gives practical advice about how to carry out a hazard analysis, with examples of what the hazards could be, various options for controlling these hazards and on how to monitor these controls, plus an example of a form which could be used, if the proprietor so wishes to document the hazard analysis.

However, the examples of the types of hazards and possible control and monitoring options are just that, examples. They are not by any means a complete and exhaustive list, they may not be applicable to the way you make the product and there may be other ways in which you could control the hazard.

Every bakery business is different for a variety of reasons, including:-

- (a) the products they produce;
- (b) the recipes and methods of production eg is puff pastry made or bought in;
- (c) the equipment used;
- (d) the layout and physical condition of the bakery;
- (e) the experience, knowledge, understanding and capability of the staff and managers.

2: Hazard Analysis System 3

Therefore every proprietor of a bakery must carry out a hazard analysis of their own bakery operation following the five basic principles laid out in Regulation 4(3) and explained in more detail below.

The legal obligation to carry out hazard analysis rests with the proprietor although it is expected that he/she will use the advice and assistance from staff, appropriate individuals or organisations, eg external consultants, the local Environmental Health Department. In practice only the proprietor and the staff truly understand how the bakery operates, and how the products are produced.

The hazard analysis is relatively straightforward. In simple terms you have to go through how you produce your products from the purchase/arrival of the ingredients through to the dispatch of the finished product. At each stage/step in the process you need to identify if there are any hazards to the safety of the product. If there are, to assess what measures/controls you already have in place, if any. If there are no controls in place already, you need to decide what controls, or further controls, may be necessary to eliminate or reduce the hazard to a safe level. You have probably carried out a very similar process already over the years and have put in various simple commonsense, practical measures to control a variety of perceived hazards (eg cleaning of equipment and the fabric of the bakery, good house-keeping, pest control, refrigeration of perishable products, segregation of certain raw and cooked items, protective clothing). Many, if not all of the suggested examples of control and monitoring procedures will be familiar to you and may already be in place. All that is initially required now is that you go back and do this assessment in a more structured, formal and disciplined way.

Before describing how to carry out an assessment, it is necessary to understand what some of the terms mean.

Hazard: is anything that could potentially cause harm to a consumer (injury, sickness, general ill-health).

Critical Control Points: are the steps or points in the process where the hazards can and must be controlled to ensure that the hazards are eliminated or reduced to a safe level. NB The term "critical points" is used in the Regulations.

Food Hazards

There are three main types of hazards which are likely to occur in a bakery and could result in contamination of the food:-

- (a) Microbiological pathogenic micro-organisms and their toxins, including bacteria such as Salmonella spp, Staphylococcus aureus.
- (b) Physical foreign bodies such as paper, string, wood, plastic, metal, stone, hair, glass, mouse droppings.
- (c) Chemicals such as cleaning chemicals, lubricating oils.

More specific examples are given in the tables at the end of this section.

(a) Analysis of the Potential Food Hazards in a Food Business Operation

Initially you need to think in general terms about the type of products you produce, eg bread, flour confectionery, cream cakes, savouries and which of the three types of hazards need to be considered.

The first step in actually carrying out a hazard analysis is to then work out/run through the various steps/stages of how the product is made. To make this easier, it is recommended that the various stages in the production are written down. The format which is normally used is a flow diagram or chart (see pages 10, 13 & 16 for examples).

It is not necessary to produce a flow chart and a Hazard Analysis for each product, as this would be impractical for a craft bakery producing many hundreds of different products. The production processes are very similar, the only difference between one product and another may be a change in the principal ingredient eg white flour to wholemeal flour or the use of a different piece of equipment eg roll moulder to french stick moulder. Therefore, irrespective of the products being produced, the hazards may be the same.

For simplicity, products should be grouped together, for a typical craft bakery the groupings could be:

bread and rolls flour confectionery fresh cream filling egg custards meat products - raw and cooked sandwiches (if made centrally in the bakery).

(b) <u>Identification of the Points in the Operation where Food Hazards</u> <u>may Occur</u>

At each generic stage in the process the various possible hazards need to be identified. Your existing control measures, if any, need to be reviewed to ensure they are adequate. If no controls are in place then consideration needs to be given to how the hazard identified can be controlled. It will then be possible to identify which are the critical control points.

Hazard Analysis is not an end itself, it can be a tool for producing a detailed set of operating procedures based on good manufacturing practice which will ensure the safety of the products produced.

Examples of the various hazards to be considered and possible control methods for the production of bread and rolls, the filling of fresh cream cakes and the production of meat pies are contained at the back of this section (pages 9 to 19).

(c) <u>Identifying Critical Control Points</u>

To decide whether a step in the process is a critical control point, you have to ask the question: Is it necessary to control the hazard at this stage, or will a subsequent step reduce or eliminate the hazard?

Example One

Raw ingredients such as meat may contain food poisoning bacteria, but if the raw ingredients are stored and handled correctly, the baking of the final product (if done properly) will eliminate or reduce these to a safe level.

Therefore in this instance the delivery, storage and preparation prior to baking are not Critical Control Points, as baking will control the hazard. Therefore in this instance, baking is the Critical Control Point.

Nevertheless, at all the previous stages in production to minimise the growth of any food poisoning bacteria and in particular any toxins they may produce, the raw ingredients should be kept refrigerated.

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Example Two

Opening of a flour bag could result in a piece of the stitching from the neck of the bag or a piece of flour bag becoming detached and falling on to the top of the flour.

In this instance, the visual inspection of the flour prior to tipping into the mixing bowl and the removal of any contamination present is the Critical Control Point. There is no other stage in the process where this contamination could be seen and removed.

(d) Monitoring of Critical Control Points

Critical Control Points must be monitored. However, the type of monitoring will depend on the nature of the control, and size of the bakery.

To be able to monitor a Critical Control Point, there must be some measure/standard/target against which the control measure at the Critical Control Point can be assessed.

The measure (standard/target) may be very simple eg visual assessment, to check such things as:-

in code or out of code clean or dirty damaged or satisfactory satisfactory or unsatisfactory standard of dress.

In these instances, it is either right or wrong.

However, other measures (standards/targets) may require a physical measurement to take place such as monitoring or taking a temperature eg temperature of refrigerator.

In some instances, there may be a tolerance or allowance permissible before corrective action must be taken

- eg temperature of fresh cream on delivery target temperature 8 ° C (2 ° C allowance to allow for handling during delivery)
 - accept up to a maximum of 10 ° C.
 - reject delivery above 10 ° C.

Monitoring should be kept as simple as possible, provided it is effective. For example -

- (i) A visual check of a delivery of ingredients to ensure the packaging is not damaged or dirty, there is no sign of infestation and the products are in code.
- (ii) A visual check on the cleanliness of the equipment.
- (iii) Monitoring or measuring the temperature of a chiller.

Where a monitoring procedure shows that the control has not been effective, it is important that **Corrective Action** is taken to ensure the safety of the food. For example -

Poor cleaning of food contact Do not use. Take out of use,

equipment - reclean, use alternative clean

equipment. Find out why the equipment was not cleaned

properly.

Contamination of an ingredient by its Do not us

packaging -

Do not use. Where possible remove the contamination, reinspect before use. If the contamination cannot be removed, dispose of the

ingredient.

Refrigerator/chiller too warm - Check unit is not on defrost -

recheck; if still too warm - adjust or repair. Check condition/temperature of the food. If satisfactory, move food to another refrigerator/chiller. If you are not certain the food is safe, dispose of the food.

Staff must be aware that if a control is ineffective:

(i) Corrective action must be taken.

(ii) What the corrective action should be.

(iii) Who should take the corrective action (if it is not themselves) and to notify them accordingly.

Where appropriate, report to the supervisor/manager/proprietor that the control was ineffective and corrective action has been taken. This allows, if necessary, the control procedure to be reviewed.

(e) Review

Hazard Analysis is not a once and for all process. It must be reviewed periodically to ensure it is still valid as new hazards may have been identified. Also, control measures or monitoring procedures may have been altered because they were ineffective, impracticable or even unnecessary.

It must also be reviewed when there is a change in the operation of the business, which may introduce new hazards or will require new/different controls and monitoring procedures. For example -

- new lines are introduced with new ingredients,
- equipment is replaced, so cleaning procedures may need modifying,
- a new oven is installed, the baking times and temperature may be different,
- the packaging of an ingredient alters from glued/easy to open to string stitched bags,
- new equipment is introduced, like a cream machine to replace savoy bags so new cleaning procedures will be required.

Establishing a System

As stated in section (e) above, hazard analysis is not a one-off analysis of the production processes (an analysis of hazards). Rather it is the creation, establishment of a continuing system of effective controls and monitoring procedures which can evolve over time and which will require periodic review.

Records

There is no legal requirement to fill in and keep records of checks and monitoring procedures carried out. However, they can be useful in allowing a manager or supervisor to check a procedure is being followed. They are often invaluable in the event of an enquiry or investigation by an Environmental Health Officer and in helping to substantiate a "Due Diligence" defence.

It is good practice to keep records. These may involve the use of special reporting or recording sheets eg cleaning checklists, temperature check logs.

In some instances, existing documentation can be utilised, eg the results of a visual check on a delivery of ingredients can be recorded on the delivery note:-

i.e. delivery checked and satisfactory four bags of X damaged and rejected.

Records should be kept as simple as possible and the staff involved must be instructed and/or trained to ensure any measurements/assessments are completed correctly.

Documentation of Hazard Analysis

Although there is no legal requirement to document your Hazard Analysis system, a brief written explanation of the Hazard Analysis carried out would be helpful in

- (a) showing the Environmental Health Officer that this regulation has been complied with;
- (b) ensuring that all steps/stages in the process have been covered; and
- (c) reviewing the system.

It is good practice to document the Hazard Analysis.

For some companies operating more than one production unit, bakeries or bake-off operations, the full Hazard Analysis may not be present on site, but held at a central location where the decisions are made eg Head Office.

However, various written procedures, instructions, forms and check sheets arising from the Hazard Analysis may be present.

Further Information

Further guidance on applying the principles of Hazard Analysis are available in:-

- Assured Safe Catering (ASC) Department of Health

- SAFE (Systematic Assessment of Food Environment)

British Hospitality
Association

Both of these booklets, whilst prepared for the catering industry, contain a lot of useful advice on food poisoning organisms and the hazards that may occur.

- A Guide to Food Hazards and Your Business Department of Health

(See References in Part 6 for further details).

GOOD PRACTICE

The three following examples of possible hazard control and monitoring procedures are for:-

- (a) Bread and Rolls
- (b) Fresh Cream Filling and the Finished Cake
- (c) Meat Pies

The examples are for illustrative purposes only. They do not form part of the compliance with the legal requirement.

They are not a comprehensive list of all the possible hazards and all the possible control and monitoring procedures.

Their purpose is to assist bakers in thinking about the types of hazards there are, where in the process these hazards can occur and some of the control and monitoring procedures which can be used.

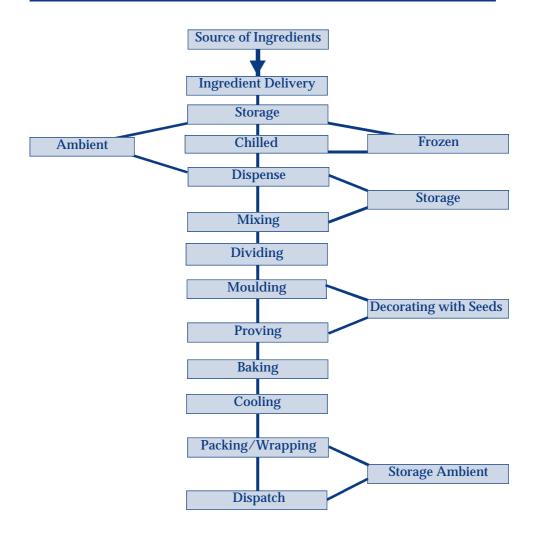
The controls and monitoring procedures which you as the proprietor decide to put in place to control a particular hazard may be one, several, all or none of the controls listed against that hazard in the accompanying tables.

If a hazard exists there must be an effective means of controlling it. The control is up to you, as the proprietor of the business, to decide.

2: Hazard Analysis System

GOOD PRACTICE

EXAMPLE OF A PRODUCTION FLOW CHART FOR BREAD AND ROLLS



Dispense
Possible Hazards
Contamination with Pesticides, Herbicides, other chemicals. Contamination with foreign bodies.
Infestation.
Packaging Damaged/Dirty. Contaminated by Other Products carried, eg Chemicals.
Infestation.
Deterioration of Ingredients, (out of code).
Contamination of outer packaging.
Contamination of opened part-used products.
Infestation.
Deterioration of Ingredients stored too long (out of code).
Contamination of Ingredients by packaging.
Foreign bodies in ingredients.
Possible Control and Monitoring Procedures
Reputable Suppliers.
Reputable Supplier Ingredients screened (sieved, filtered, metal detected) by supplier. Written confirmation of screening, pest control procedures. (Supplier Audits).
Direct Delivery from Supplier. Delivery via General Bakery Ingredient Supplier.
Visual check.
Visual Check. Agreed Code Life on delivery.
Store covered. Store in clean, well maintained area. Reseal boxes or bags. Turn the tops of bags or polythene liners over. Transfer to clean lidded containers. Regular cleaning, pest control measures. Ensure ingredients are date-coded. Use on first-in-first-out basis. Rotate stock. Use by recommended date.

Opening procedure for ingredient packaging. Do not open over mixing bowl. Visual check.

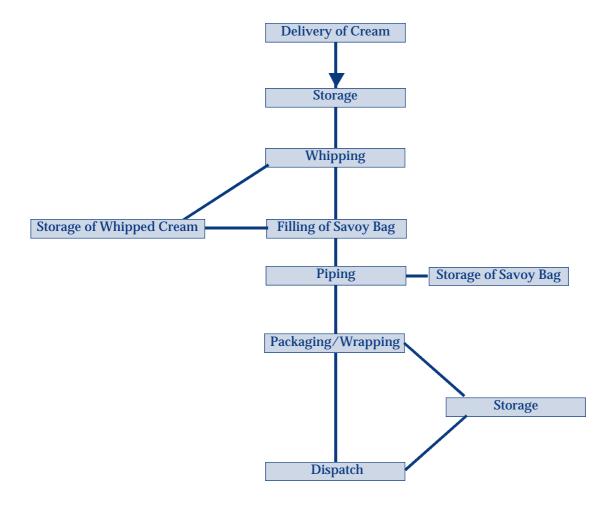
Possible Hazards and Controls for Bread and Rolls

Stages on Flow Chart	Possible Hazards	Possible Control and Monitoring Procedures	
Source of Ingredients	Contamination with Pesticides, Herbicides, other chemicals.	Reputable Suppliers.	
	Contamination with foreign bodies.	Reputable Suppliers Ingredients screened (sieved, filtered, metal detected) by supplier.	
	Infestation.	Written confirmation of screening, pest control procedures. (Supplier Audits).	
Delivery of Ingredients	Packaging Damaged/Dirty. Contaminated by Other Products carried, eg Chemicals.	Direct Delivery from Supplier. Delivery via General Bakery Ingredient Supplier.	
	Infestation.	Visual check.	
	Deterioration of Ingredients, (out of code).	Visual Check. Agreed Code Life on delivery.	
Storage Ingredients	Contamination of outer packaging.	Store covered. Store in clean, well maintained area.	
	Contamination of opened part-used products.	Reseal boxes or bags. Turn the tops of bags or polythene liners over. Transfer to clean lidded containers. Regular cleaning, pest control measures.	
	Infestation.		
	Deterioration of Ingredients stored too long (out of code).	Ensure ingredients are date-coded. Use on first-in-first-out basis. Rotate stock. Use by recommended date.	
Dispense	Contamination by ingredient packaging, eg paper, string stitching, plastic film, yeast wrapper.	Opening procedure for ingredient packaging. Do not open over mixing bowl. Visual check.	
	Contamination by other ingredients.	Clean dispensing equipment between batches of ingredients for different products. Use separate utensils, scales, equipment.	
	Contamination of dispensed ingredient.	Keep covered when not in use. Keep in lidded containers.	

Stages on Flow Chart Possible Hazards		Possible Control and Monitoring Procedures
Intermediate Storage	Contamination by/from dirty damaged containers.	Use clean containers, in good condition. Cleaning in accordance with cleaning checklist/schedule.
	Contamination from dirty equipment.	Use of clean equipment and utensils. Cleaning checklists or schedules.
Mixing/Processing	Contamination from damaged broken utensils or equipment.	Regular inspection, maintenance, repair, replacement of damaged items. Formal procedures to report damage.
	Metallic contamination at some stage.	Regular inspection, maintenance,replacement/ repair of damaged equipment. Procedure for reporting damage. Procedures for in- house or contract engineers detailing precautions to be taken. Thorough cleaning after maintenance. Inspection prior to production.
	Contamination by foreign bodies.	Staff awareness/training in basic hygiene procedures. Personal hygiene rules. Good house-keeping. Control of maintenance engineering contractors.
Baking	Survival of spores which can cause mould or rope.	Good quality flour, stored in a cool place, turned over quickly. Use of preservatives. Set baking times and temperatures.
Cooling	Contamination from dirty equipment, cooling racks.	Regular cleaning. Cleaning checklists or schedules.
Packing/Wrapping	Contamination by fragments of packaging.	Ensure inserts are free of debris. Remove debris, packaging waste regularly.
	Contamination from dirty baskets/trays.	Use of clean baskets or trays. Store in clean area.
Storage	Contamination by dust/debris.	Pre-dispatch check.
Dispatch	Outside of product contaminated, packaging damaged or dirty.	Tre-dispatch check.

GOOD PRACTICE

EXAMPLE OF A PRODUCTION FLOW CHART FOR A FRESH CREAM FILLING AND THE FINISHED CAKE



2: Hazard Analysis System

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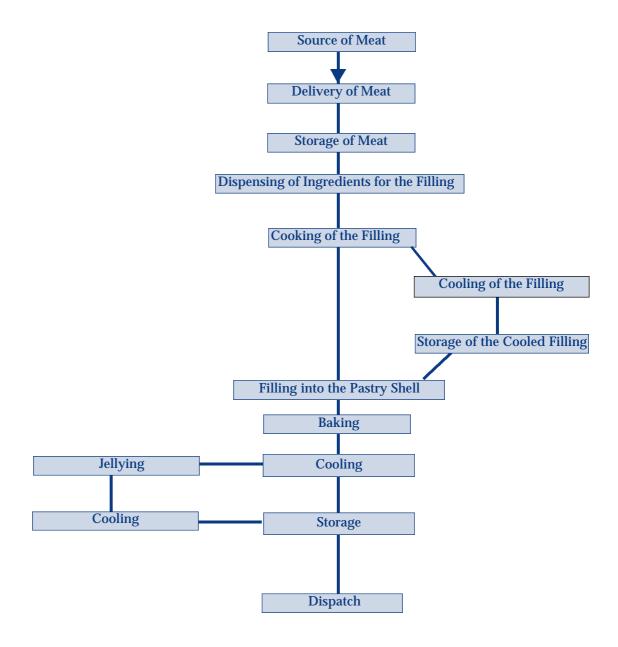
Possible Hazards and Controls For Fresh Cream Filling and Finished Cake

Stages on Flow Chart	Possible Hazards	Possible Control and Monitoring Procedures		
Source of Cream	Contaminated with food poisoning bacteria and/or high levels of other bacteria. Contaminated with foreign bodies	Reputable Dairy. Copies of Dairy's Bacteriological Results. (Audit Dairy).		
Delivery of Cream	Dirt on outside of containers. Containers damaged, leaking.	Direct delivery from Dairy in enclosed vehicle. Visual check.		
	Microbiological growth caused by the wrong temperatures due to non- refrigerated vehicle, refrigerator malfunction, product left outside bakery.	Direct delivery from Dairy in refrigerated vehicle. Agreed delivery temperature for the cream of less than 8 °C. Delivered when bakery open. Check Temperature of Vehicle, between pack temperature, temperature of the cream.		
Storage	Growth of bacteria due to poor temperature control.	Store refrigerated/cool (below 8 ° C). Monitor temperatures of the refrigerator daily.		
	Cross-contamination.	Store containers away from raw food. Store on separate shelves. Store above raw food. Separate chillers for raw food.		
	Deterioration, growth of bacteria because stored too long, (out of code).	Ensure cream is date-coded. Use on first-in-first-out basis. Rotate stock. Observe "use by" dates. Opening procedure, ensure any sealing strips are removed and disposed of.		
	Foreign body contamination from			
	container.	Use clean and sanitised equipment and utensils. Rinse equipment after cleaning. Cleaning checklists or schedules.		
Whipping	Bacterial, physical or chemical contamination eg by cleaning			
	chemical residues during whipping.	Whip in a cool area of the bakery. Whip only what is required at that time. Use a refrigerated whipping machine.		
	Bacterial growth during whipping.	Staff awareness, training in basic		
	Bacterial contamination from staff.	hygiene procedures. Hand washing. Covering of cuts. Reporting of any diarrhoeal illness, vomiting or infected cuts etc. Strict personal hygiene rules.		
	Foreign body contamination from staff, environment or equipment.	Strict personal hygiene rules, protective clothing, good house-keeping. Regular inspection and maintenance of equipment and utensils.		

Stages on Flow Chart	Possible Hazards	Possible Control and Monitoring Procedures	
Storage of Whipped Cream Bacterial Cross-Contamination		Segregation. Store covered. Store on separate shelves, store cream above raw food including shell eggs. Store in separate chiller to raw food.	
	Contamination with foreign bodies.	Store covered.	
	Growth of Bacteria.	Store refrigerated or in a cool place (below 8 ° C).	
		Monitor temperatures of the refrigerator daily.	
Filling Savoy Bag	Bacterial and/or physical contamination.	Use new disposable savoy bags. Use clean and sanitised savoy bags.	
		Cleaning checklists or schedules.	
	Foreign body contamination.	Ensure savoy bags and equipment are undamaged.	
	Bacterial contamination from staff.	As previous (Whipping).	
	Bacterial growth in bulk cream.	Minimise time out of refrigerator. Return to refrigerator after filling savoy bag.	
Piping	Bacterial growth due to continual use of same savoy bag.	For long periods of creaming, change savoy bags regularly. Chilled preparation area.	
	Bacterial contamination from staff.	As previous (Whipping).	
Storage of Savoy Bag	See Storage of Whipped Cream.		
Packing/Wrapping	Bacterial growth.	Minimise time out of refrigeration after piping.	
	Contamination from dirty trays.	Use clean trays. Line with clean food grade paper (unwrapped goods).	
	Contamination by fragments of packaging.	Ensure inserts/trays are free of debris, remove packaging waste regularly.	
	Contamination from residues of previous products on equipment.	Ensure equipment is clean and sanitised regularly. Cleaning checklist or schedules.	
Storage	See Storage of Whipped Cream.		
Dispatch	Cross-Contamination.	Segregation of raw and ready-to-eat products. Dispatch in separate trays, cover or stack the trays, store ready-to-eat above raw products. Use separate racks.	
	Bacterial growth.	Minimise time out of temperature control. Pre-cool the cream cakes prior to dispatch. Dispatch in insulated boxes. Use a refrigerated vehicle.	

GOOD PRACTICE

EXAMPLE OF A PRODUCTION FLOW CHART FOR MEAT PIES (NB THIS DOES INCLUDE THE PRODUCTION OF THE PASTRY)



NB Time related exemptions from temperature control for certain types of meat pies, pasties and sausage rolls are detailed. See on page 65.

Possible Hazards and Controls for Meat Pies

Stages on Flow Chart	Possible Hazards	
Source of Meat	Contaminated with very high levels of bacteria. Contaminated with foreign bodies, eg bone, plastic, metal.	Reputable Supplier. If small local butcher, visit annually. Ensure clean, well managed, free from pests.
Delivery of Meat	Contamination by general debris (open trays). Contamination from dirty trays. Microbial growth, high levels of bacteria possibly causing sliminess or sourness (due to poor temperature control, non-refrigerated vehicle, chiller unit	Deliver cover ed or wrapped in plastic or in plastic bags. Deliver in clean tray. Agree a delivery temperature for the
Storage	malfunction.) Growth of bacteria due to poor temperature control.	meat, (preferably 5 °C or less). Take temperature of the vehicle. Probe between packs or probe the meat on delivery.
Dispense of the Ingredients for the Filling.	Contaminated with piece of plastic from delivery tray broken off in storage. Contaminated by piece of plastic film/bag from meat wrapping. Contaminated by plastic or metal tie on bag.	Store refriger ated (preferably below 5°C). Monitor temperatures of the refrigerator daily. Record temperatures. Process immediately on arrival. Check trays undamaged.
Cooking of the Filling	Contaminated by piece of film when cutting/tearing open knotted bag. Contamination by paper string from dry ingredient packaging. Inadequate cooking, bacteria not destroyed.	Check film in one piece, no fr agments missing. Meat deliver ed in highly colour ed plastic film. Do not accept bags with plastic or metal ties.
		Do not accept knotted bags, fold film over meat. Cut bag cleanly below the knot, account

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Stages on Flow Chart	Possible Hazards	
Cooling of Filling	Growth of bacteria not killed in cooking.	Pour filling into shallow metal trays. Allow to cool in bakery for two hours then
	Contamination from dirty trays.	refrigerate at 8 °C or less.
	Contamination by raw meat from trays.	Use clean trays.
	Contamination by foreign bodies.	Use different trays for cooked fillings.
Storage of Filling	Cross contamination of cooked filling from raw food.	Put trays on racks with small gap between each tray. Once cool, lid, cover trays.
	Growth of bacteria.	Store cooked filling away from raw food, particularly meat and vegetables. Store cover ed. Store on separate shelves cooked above raw. Store in separate areas of the chiller. Use
Filling into Pastry Shell	Contamination by dirt.	different chillers for cooked and raw.
	Contamination by previous raw filling.	Store refrigerated at 8 ° C or less. Monitor temperatures of refrigerator daily. Record temperatures. Equipment cleaned and disinfected after use. Visual Check. Cleaning Checklists. Cleaning Schedules. Staff trained how to clean, importance of cleaning.
	Contamination by food poisoning bacteria from staff. Contamination by foreign bodies from staff (hair, jewellery).	Equipment thor oughly cleaned and disinfected after use. Product made at different time (adequate time for cleaning). Product made on different day.
	, , , , , , , , , , , , , , , , , , ,	Differ ent equipment used for raw meat filling.
Baking	Bacteria not killed, cooking time inadequate.	Visual check. Cleaning Checklist. Cleaning Schedules. Staff training, aware of hazards.
		Staff wash hands after going to the toilet. Aware of need to report illness, not to

Stages on Flow Chart	Possible Hazards	
Cooling	Growth of bacteria not killed by cooking.	Transfer/slide meat pies on to cold trays or cooling wires.
Jellying	Contamination by dirt or foreign bodies on the trays or cooling wire.	Allow to cool in bakery for 2 hours then refrigerate at 8 °C or less.
	Contamination of gelatine powder by paper/string from ingredient packaging.	Use clean trays or cooling wires. Visual check.
	Contamination from dirty equipment. Growth of bacteria in gelatine due to	Opening procedure for ingredient packaging. Visual check of ingredients.
	inadequate heating.	Use clean equipment. Visual check.
	Contamination of the gelatine by dirt or bacteria from dirty jellying equipment. Contamination of the gelatine by foreign bodies from the staff. Bacterial contamination from staff.	Ensure gelatine is visually boiling immediately before use. NB For Scotland, there is a specific regulation in the Food Safety (Temperature Control) Regulations 1995 regarding the handling of gelatine (see page 76).
Cooling	Growth of bacteria through slow or inadequate cooling.	Use clean and sanitised jellying equipment.
Storage	Cross contamination from raw food.	Strict per sonal hygiene rules, protective clothing.
Dispatch	Growth of bacteria. Cross Contamination	Staff awar eness, training in basic hygiene procedures. Hand washing. Covering of cuts. Reporting of any diarrhoeal illness, vomiting or infected cuts. Strict per sonal hygiene rules.
	Contamination from dirty trays	Refriger ate immediately after jellying at 8 °C or less.
	Growth of Bacteria	Store away from raw food, particularly meat and vegetables. Store covered. Store on separate shelves above raw food. Store

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GUIDANCE ON GOOD PRACTICE HAZARD ANALYSIS FORM

A blank suggested Hazard Analysis form is provided, as are a few examples of how to do a Hazard Analysis.

The following phrases may help when deciding what to write:-

Hazard: What can go wrong?

Control: What can I do about it, can I eliminate the

hazard or reduce it to a safe level, what

preventative measures are there?

Monitoring: How can I check?

Corrective Action: What if it's not right?

Additional columns can be added to the form if you wish. These could include the person responsible or what records are to be kept.

EXAMPLE OF A HAZARD ANALYSIS FORM

Product_____

Corrective Action		
Monitoring Procedure		
Control (underline Critical Control Points)		
Hazard		
Stage in Process		

EXAMPLE OF A PARTIALLY COMPLETED HAZARD ANALYSIS FORM

Stage in Process	Hazard	Control (underline Critical Control Points)	Monitoring Procedure	Corrective Action
Delivery of ingredients	Packaging contaminated or damaged. Infested.	Reputable Supplier. Agreed method of delivery, clean pallets, lined with cardboard, pallet film wrapped, delivered on enclosed lorry.	Visual check on arrival, record findings.	Reject unsatisfactory stock.
Ingredients covered by statutory temperature controls	Bacterial growth due to storage at the wrong temperature.	Agreed delivery temperature, eg below 8 ° C.	Check temperature on arrival and record.	If above 8 ° C seek advice, reject.
Dispensing	Contamination of flour by packaging.	Use easy open bags, <u>follow</u> procedure on the bag.	Visual check of surface of the flour prior to tipping.	Remove pieces of packaging, string.
		Remove string stitching cleanly and dispose of in waste bin.		Instruct staff to follow procedure.
	Contamination of mix by flour bag packaging.	Do not open over the mixing bowl.	Visual check. Staff following procedure.	Instruct staff to follow procedure.
Mixing	Contamination by dirty equipment.	<u>Use clean</u> equipment.	Visual check. Cleaning checklist. Cleaning schedules.	Reclean.

Part 3 THE FOOD SAFETY (GENERAL FOOD HYGIENE) REGULATIONS 1995

THE RULES OF HYGIENE

This section provides guidance on the ten Chapters comprising Schedule One of the Food Safety (General Food Hygiene) Regulations 1995, with the exception of Chapter III which is not applicable to the baking industry.

Apart from Chapter X, the guidance is laid out in three columns:-

Column One

This quotes the provisions of each Chapter comprising Schedule 1 and lists the legal requirements.

Column Two

This provides guidance on the legal requirement in Column One and sets out what practical measures can be taken to comply with it.

Column Two must be read in conjunction with Column One.

Whilst the guidance provides a recommended way of complying with the legal requirement, it may be possible to comply with the Regulations by an alternative means. You do not have to follow the recommendations in this Guide.

Column Three

This gives examples of good practice. It is NOT a legal requirement to follow the advice on good practice.

In some instances, the advice in the good practice column will further explain and/or illustrate by examples the recommendation on compliance given in Column Two.

The advice in the good practice column is not comprehensive.

It is up to the proprietor of the bakery whether they wish to heed and implement the advice given or not. The advice has no legal standing with regard to enforcement or compliance with the Regulations.

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Schedule 1

Rules of Hygiene

Chapter I

General requirements for food premises (other than moveable and/or temporary premises such as marquees, market stalls, mobile sales vehicles)

Legal requirement

Guide to compliance

Advice on good practice

1. Food premises must be kept clean

Food premises must be cleaned regularly. The production of bakery products will inevitably lead to flour dust entering the atmosphere and settling on to surfaces. A film of flour dust on such surfaces is acceptable during production, even if production is not currently taking place in that area. Similarly there will also be a build up of working dirt and debris on the floor and other surfaces. These must be removed once the shift has finished. In some bakeries, depending on who does the cleaning and because of the variation in the shift ending times, there will be a gap between the shift ending and the cleaning beginning.

It is good practice to 'clean as you go'. The standard of cleaning should be checked by a nominated person/ manager/proprietor. Cleaning checklists and/or cleaning schedules should be used to ensure that all areas and items of equipment are cleaned regularly and nothing is overlooked. (See Appendix 1, 2, 3). The structure and services eg store rooms extract ventilation should be cleaned periodically. The frequency will depend on the speed of soiling and potential for infestation.

In flour stores and lofts, depending on the build up of flour dust, walls should be cleaned at least weekly and ceilings, rafters and roofs at least monthly.

The standard of cleaning necessary will also vary between parts of the premises eg production areas and the warehouse or store room, particularly where areas are only cleaned on a periodic basis eg weekly, monthly, 3-monthly. Providing there is no evidence that cleaning is being neglected, small amounts of dust and debris are to be expected and are acceptable. Major ingredient spillages must be cleaned up as soon as practicable. However, very light seepage from the end of the bag does not justify the stripping down of a pallet and cleaning of all the stock and the pallet. In flour stores and flour lofts, particularly where flour tipping is taking place, there will be flour dust present on most surfaces. All spillages must be removed daily.

It is good practice that the periodic clean for more complex plant and extract and ventilation systems is a deep clean involving varying amounts of dismantling of the equipment or provision of access panels to allow all areas to be cleaned. This deep clean will in many instances be part of the routine servicing and maintenance of the equipment and may only take place once or twice a year. Often the work will be done by specialist contractors. In this instance a clear schedule of works should be drawn up and agreed.

It is preferable to vacuum up spillages.

and maintained in good repair and condition.

Food premises must be maintained to a standard that will facilitate cleaning, bearing in mind what that part of the premises is being used for. Damage can occur at any time to structural surfaces. Minor wear and tear such as small areas of worn or chipped paintwork or plaster, cracked floor and wall tiles, must be attended to on a regular basis. If the damage is in a place which could result in product contamination eg on a roof beam above a preparation area, any loose material should be removed immediately and the area made good as soon as possible.

There should be a regular inspection of the premises, preferably documented, to identify areas requiring repair or refurbishment.

Repairs should be carried out regularly, eg monthly.

Legal requirement

Guide to compliance

Advice on good practice

2. The layout, design, construction and size of food premises shall -

(a) permit adequate cleaning and/or disinfection;

(b) be such as to

materials,

the shedding of particles into food

protect against the

accumulation of dirt, contact with toxic

The size of the bakery and the equipment layout must either allow access for cleaning around the equipment or the equipment must be moveable. Materials used in construction will depend in some instances on the use to which an area or room is to be put and the type and frequency of cleaning which will be required in that area. For areas where no open food is stored or handled eg store room, warehouses, bare brick or breeze block walls are acceptable, the floor can be of concrete and the inner surface of the roof can be precast concrete, metal decking, wood. In flour lofts, a wooden floor, and roof with exposed wooden rafters and beams is acceptable. (See Appendix 4,

Ledges and inaccessible areas should be kept to a minimum.

All building materials must be safe for use near food. They must not release toxic vapours or toxic materials through contact.

The use of materials for ceilings/roofs which because of the environmental conditions are likely to shed particles of paint, plastic, plaster, fibres must be avoided.

Where such problems arise, the loose material must be removed and the affected area made good or covered in as soon as possible.

and the formation of condensation or undesirable mould on surfaces; Where steam or excessive humidity occurs some form of natural or mechanical ventilation/extraction should be provided. Alternatively, the provision of additional heat or better insulation may prevent condensation.

Where condensation is still occurring due to a particular process and/or an inherent problem with the design/construction of the building and additional ventilation is impractical the affected areas must be cleaned and/or redecorated regularly.

Bare brick or breeze block walls should be painted, preferably with an epoxy resin based paint.

Concrete floors should be sealed. Wooden floors should be sealed.

Wall, floor junctions should be coved. Overhead services such as cable trays, pipe runs should be kept to minimum and, if possible, a suspended ceiling installed beneath. Pipe and cable runs should have a smooth cleanable finish, U section fitments should be avoided or installed upside down to prevent dust and dirt collecting. Services, light units should be mounted flush to ceilings/roofs or on rods or cables and preferably not chains. Pipework should not be boxed in because of the risk of infestation.

Any extract or ventilation system should be cleaned and serviced regularly to ensure it is operating at optimum efficiency.

3: The Rules of Hygiene

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Legal requirement

Guide to compliance

Advice on good practice

(c) permit good food hygiene practices, including protection against cross contamination between and during operations, by foodstuffs,

equipment,

materials,

air supply

or personnel

water.

The layout must provide sufficient space to allow high risk foods to be prepared safely. Where the same equipment and work surface is used, the preparation must take place at different times and the work surfaces and equipment cleaned and disinfected in between.

Where the same temperature controlled storage facility has to be used, raw foods must be stored away from or below cooked/ready to eat foods.

Equipment requirements are detailed in Chapter V.

Materials must not present a risk of contamination and must be cleanable.

Water must be potable. See Chapter VII. See provisions 5, 6 and 8 of this Chapter and Chapter II 1(d).

Facilities for personal hygiene must be provided.

See provisions 3 and 9 of this Chapter.

and external sources of contamination such as pests; and

Premises must be constructed and maintained so as to deny access and harbourage to pests.

See Chapter II(d), Chapter VI 3 and Chapter IX 3.

High risk foods should be prepared in segregated areas or rooms in the bakery.

Possible entry points for pests should be proofed. Holes in the external fabric which could allow pests in should be sealed eg with concrete or cement and if necessary mixed with wire wool. Where pipes, cables, trunking or ducting pass through internal or external walls, all holes and gaps should be filled. External doors should be rodent-proof (eg bristle strips, rubber compression seals for roller shutters, metal kickplates). Windows in other parts of the bakery and ventilation systems may require insect-proofing. External

openings or doors may require proofing against insects (eg insect-proof screen doors, plastic strip curtains, rapid rise doors). The perimeter of the building should be kept clean and tidy. Any such external storage should be kept to a minimum as this will provide a harbourage for pests. The areas should be inspected regularly and unnecessary items removed. The perimeter should be free of vegetation with a hard stand or gravel border where possible.

Legal requirement

Guide to compliance

Advice on good practice

(d) provide, where necessary, suitable temperature conditions for the hygienic processing and storage of products.

Provided the preparation can be carried out safely, eg by limiting the preparation time, temperature controlled (chilled) preparation areas or rooms for high risk products are not required. Temperature controlled storage facilities must be provided for those ingredients and finished products which are required to be kept refrigerated. These must be capable of keeping the food at the required temperature. Raw ingredients and cooked, ready to eat products must be kept segregated by storing in separate areas of the refrigerator or on separate shelves with cooked above raw. (See Chapter IX (2)).

The performance of the refrigeration equipment should be checked by monitoring their temperature. It is good practice to record the checks. (See Appendix 6).

The equipment should be serviced regularly.

When preparing high risk ready to eat foods, it is good practice to either chill the food eg refrigerated cream machine or chill the environment eg chilled preparation room, or carry out the preparation at a cool time of the day eg early morning. See provision 5 of this Chapter for more details and Part 4 on the Food Safety (Temperature Control) Regulations 1995. Separate refrigerated facilities should be provided for raw and cooked/ready to eat products.

Commercial/industrial refrigerators and freezers should be used. Separate storage facilites should be provided for the storage of ingredients and unbaked partly-finished products to those for baked and/or ready to eat finished products.

3. An adequate number of wash basins must be available, suitably located and designated for cleaning hands.

The number of wash hand basins required will depend on a number of factors, including:-

- (a) The nature of the products being produced i.e. high risk, medium or low risk.
- (b) The amount of automation, or is there a lot of hand work.
- (c) The frequency of handwashing needed.
- (d) The number of staff.
- (e) The size and layout of the bakery.

Utensils, equipment or clothes must not be stored or washed in wash hand basins, which must be kept free at all times and designated for cleaning hands.

There must be a wash basin situated close to or within the toilet area. Hand washing facilities must be provided at strategic places in the production area. Wash hand basins should be provided in areas, rooms where high risk foods are prepared/produced. Where possible wash hand basins or troughs should be situated at the entrance to production areas.

Glazed earthenware basins are acceptable, but are prone to discolouration, cracking and wearing of the glaze over time and to damage. Stainless steel wash hand basins are preferred.

Access to the wash hand basins should not be obstructed.

Wash hand basins should be suitably marked, eg hand washing only.

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Legal requirement	Guide to compliance	Advice on good practice		
An adequate number of flush lavatories must be available and connected to an effective drainage system.	The Workplace (Health, Safety and Welfare) Regulations 1992 apply (See Appendix 7). For existing bakeries, Schedule 1 applies and the minimum requirement is one lavatory for up to 25 persons, but separate male and female lavatories must be provided.	Toilet facilities should be within the main bakery building. Where external toilets have to be used the walk-way to them should be covered.		
	For new premises or any major conversions, Regulation 20 applies. The minimum requirement where only men are employed is one lavatory for up to 15 men. Where males and females are employed, the minimum requirement is one toilet for up to 5 persons.			
	The lavatories must be connected to an effective drainage system via a water trap.			
Lavatories must not lead directly into rooms in which food is handled.	There must be an intervening space between the toilet and a room where open food is handled. No food or ingredients should be stored in this	Where open food is handled, the intervening space should be ventilated by natural or mechanical means.		
	intervening space. Where there is no demonstrable risk because food is wrapped or packaged eg store room, warehouse, dispatch area, the amount of intervening space necessary will depend upon what is necessary to permit good hygiene practices in the particular circumstances of the case.	A sign saying "Now Wash Your Hands" should be displayed on the back of the cubicle doors and/or in close proximity to the wash hand basins in the lavatories.		
4. Wash basins for cleaning hands must be provided with hot and cold (or appropriately mixed) running water,	Hand operated taps and mixer taps are acceptable. Hot water can be piped from a hot water tank or from a water heater situated close to or above the wash hand basin. The water heater can supply both a wash hand basin and a washing up	Non hand operated taps eg knee operated, photo cell controlled are preferable, particularly where high risk foods are handled. Water should be supplied at a regulated temperature.		
	sink.	However, where the water is not at a controlled temperature a plug should be provided.		
materials for cleaning hands	A supply of soap (liquid or tablet) or hand cleansing detergent or other materials for cleaning hands must be provided.	A liquid bactericidal soap from a dispenser is recommended, particularly in areas where high risk foods are produced.		
and for hygienic drying.	Hand drying facilities must be available at all times and may include:- disposable paper towels, fabric roller towels in cabinets, paper roller towels in cabinets,	Where warm air dryers are provided in toilets there should be sufficient so that staff are not kept waiting. The use of toilet paper for drying hands should be prohibited.		
	 clean washable fabric towels (changed frequently), warm air dryers. 	Bins for used paper towels should be provided and emptied regularly. There should be a system for ensuring clean towels are always available.		
		Individual washable fabric towels should not be used in high risk areas.		
Where necessary, the provisions for washing food must be separate from the hand-washing facility.	The sink used for washing food must not be used for handwashing. Where food is washed, a separate wash hand basin should be provided			
V				

Guide to compliance

Advice on good practice

5. There must be suitable and sufficient means of natural or mechanical ventilation.

Ventilation either natural or mechanical must be provided to ensure an excessive build up of heat and/or humidity which could compromise the safety of the food does not occur. In areas such as toilets, store rooms and other areas where there is no large heat source air bricks, louvres, open windows or small mechanical extractors are sufficient. For production areas in small bakeries openable windows can be sufficient and any mechanical extraction will normally be localised to the heat source. The Regulations do not require a set number of air changes per hour.

External openable windows should be insect screened. The screens should be kept clean.

Localised ventilation via extract canopies or hoods ducted to outside should be fitted above ovens, doughnut fryers and other sources of heat and/or steam to remove the heat and fumes. Where possible filters should be installed in the canopy or system to prevent grease and dust collecting in the ducting. Normally the extraction should be fan assisted. The filters should be cleaned regularly. The fans should be serviced regularly.

Further information is contained in the Chartered Institute of Building Services Engineers Code (CIBSE).

Mechanical air flow from a contaminated area to a clean area must be avoided.

Inlet ducts for the air supply for production areas must be located away from extract vents from such areas as toilets, van sheds, wash up areas, raw meat preparation areas and waste storage areas, so as to prevent air being mechanically drawn from a contaminated area to a clean area.

> Filters should be fitted and should be removable. Fans should be installed on external walls or roofs where they are accessible for cleaning or removal to allow access to the trunking/ducting.

Ventilation systems must be so constructed as to enable filters and other parts requiring cleaning or replacement to be readily accessible.

Filters and any other parts of the system that require cleaning must be accessible. This may require the fitting of access panels.

> The ventilation system should be adequately screened against pests.

6. All sanitary conveniences within food premises shall be provided with adequate natural or mechanical ventilation.

louvres or openable windows. Mechanical ventilation can be of integral extract fan or part of a ventilation system. The ventilation provided must be adequate to prevent as far as possible aerosols or offensive odours permeating food rooms.

Natural ventilation can be by air bricks,

Uneven lighting, shadows or glare should be avoided. Lights should be enclosed where possible, particularly if there is a risk of breakage or open food is being handled eg diffusers, plastic sleeves or plastic coated fluorescent tubes. Lights used in extremes of temperature eg in freezers or ovens, should be capable of withstanding the conditions.

7. Food premises must have adequate natural and/or artificial lighting.

Light fittings should be located so as to minimise the risk of contact and damage. Light fittings should be flush fitting to assist in cleaning. All walk-in chillers and freezers irrespective of size should have lights which operate independent of the door.

Suggested light levels are contained in the Chartered Institute of Building Services Engineers (CIBSE) codes.

Light levels must be sufficient to allow safe food handling, effective cleaning and pest control to take place.

Guide to compliance

Advice on good practice

8. Drainage facilities must be adequate for the purpose intended; they must be designed and constructed to avoid the risk of contamination of foodstuffs.

There must be sufficient fall to allow all solid and liquid waste to drain away. Inspection points must be adequately sealed. Where sumps and sump pumps are used and there is a risk of contamination of foodstuffs, the sump must have a sealed, air-tight double cover. All waste pipes entering the system must be water trapped. Fresh air inlets or stack ventilation pipes must terminate outside the building, or have non-return breather valves fitted.

Fat traps should be cleaned out regularly outside of production.

Sump pumps should be serviced periodically. There should be an indicator light to show the pump is working. The sumps should be cleaned out regularly outside of production hours.

Drains should be laid so that the flow is from clean to dirty areas. Gulley drains must have a water trap.

Grids on open floor drains and drainage gulleys should be cleaned regularly to a set schedule.

9. Adequate changing facilities for personnel must be provided where necessary.

Staff must be able to change out of their outdoor clothing away from open food. Depending on the size of the operation and the number of employees, the provision of lockers or cupboards may be adequate. Any additional protective clothing eg freezer coat should be stored away from open food.

A changing room with facilities for storing outdoor clothing and other belongings should be provided with hanging facilities for outdoor clothing to dry. It is good practice to provide individual lockers. There should be separate changing rooms for each sex. Surfaces should be easy to clean. A receptacle for dirty work wear should be provided.

Chapter II

Specific requirements in rooms where foodstuffs are prepared, treated or processed (excluding dining areas and those premises specified in Chapter III)

This Chapter only applies to rooms where food is processed. It does not apply to storage areas, dispatch areas or other ancillary areas such as toilets or changing rooms.

Legal requirement	Guide to compliance	Advice on good practice
1. In rooms where food is prepared, treated or processed (excluding dining areas) -		
(a) floor surfaces must be maintained in a sound condition and they must be easy to clean and, where necessary, disinfect. This will require the use of impervious, nonabsorbent, washable and non-toxic materials, unless the	Floors must be kept in a good state of repair to enable them to be cleaned. The floor does not have to be completely smooth, but it must be cleanable. Floors in a bakery are unlikely to need disinfecting, provided they are kept clean.	Any damage should be repaired as soon as practicable, even if it is only a temporary repair using a filler to provide a cleanable surface.
proprietor of the food business can satisfy the food authority that other materials used	The floor must be sufficiently hard and durable to remain intact and easy to clean. Suitable materials include:	
are appropriate.	 ceramic tiles; terrazzo tiles; concrete suitably sealed or treated with a waterproof epoxy resin based floor paint or sealed with a fluorosilicate; epoxy resins; metal plate; natural minerals (slate marble). 	
	Also acceptable, but not as hard wearing, as resistant to physical/chemical damage or the egress of water are:	
	vinyl tiles;vinyl sheet;	
	(See Appendix 5).	
Where appropriate, floors must allow adequate surface drainage;	The provision of floor drains or gulleys is not generally necessary, where water can be removed by manual or mechanical means.	Water can be removed by mops, squeeges, wet vacuum cleanes, scrubber driers. Where drains or gulleys are provided, the floor
	Where considerable quantities of water are used eg hosing down the floor or in specialist wash up areas, floor drains or drainage gulleys must be provided.	should slope tow ards them.

b) wall surfaces must be maintained in a sound condition and they must be easy to clean and, where necessary, disinfect. This will require the use of impervious, nonabsorbent, washable and non-toxic materials and require a smooth surface up to a height appropriate for the operations, unless the proprietor of the food business can satisfy the food authority that other materials used are appropriate;

(c) ceilings and overhead fixtures must be designed, constructed and finished to prevent the accumulation of dirt

and reduce condensation, the growth of undesirable moulds and the shedding of particles;

(d) windows and other openings must be constructed to prevent the accumulation of dirt.

Guide to compliance

Walls must be kept in a good state of repair. Wall surfaces do not have to be of one material or type, eg tiles with painted plaster above or coated brickwork with washable panels above, are acceptable. Any loose, flaky, powdery material caused by damage or general deterioration of the wall surface or coating which could become a contamination risk to product, should be removed immediately and the wall refurbished as soon as practical. Suitable finishes include:

- ceramic tiles:
- washable painted plaster or rendering;
- epoxy resin and similar coatings;
- fibre glass;
- plastic cladding;
- plastic coated fibre board or chipboard;
- refrigeration panelling;
- metal sheeting.

In high risk areas where food could come into contact with the wall, the surface must be disinfected periodically. (See Appendix 4).

Ceilings and overhead fixtures must be so constructed and finished as to prevent the accumulation of dirt and should be cleanable. Suitable materials include:

- metal decking;
- painted plaster or plasterboard;
- plastic panelling;
- suspended ceilings where the panels have a washable surface and normally can be removed for cleaning;
- sealed (varnished) or painted wood.

Ceiling design and/or ventilation or additional heat can help to prevent condensation. Where mould growth does occur the area must be cleaned and disinfected regularly and/or redecorated.

The window openings, skylights and doors should have as few ledges, ridges, decorative fixtures as possible.

Advice on good practice

Where there is a likelihood of damage eg wall corners or behind moveable equipment, protection should be fitted either to the wall eg metal sheeting or to the floor eg barrier rail.

Ledges, ridges, recesses should be avoided as these will harbour dirt and provide a dumping ground for odds and ends. Wall floor junctions should be coved to facilitate cleaning.

Ceilings should be light in colour. Overhead services and fixtures. such as cable trays, pipe runs, should be kept to a minimum. Where suspended ceilings are used services can be installed above. Services should not be boxed in (wiring in metal trunking is acceptable) as this could provide har bour age for pests. Where there is open food, any lagging should have a washable surface. Light fitments should be flush fitting or if not possible, suspended on rods or cables. Ceilings should be cleaned regularly to try and prevent permanent staining or discolor ation.

Suspended ceilings may help to reduce condensation, as will insulation between the ceiling lining and the roof. Localised extract ventilation would be advantageous in specific areas to remove excess heat (eg above ovens, doughnut fryers, hotplates) or moisture/steam (eg steamers,

Those which can be opened to the outside environment must where necessary be fitted with insect-proof screens which can be easily removed for cleaning. Where open windows would result in contamination of foodstuffs, windows must remain closed and fixed during production;

(e) doors must be easy to clean and, where necessary, disinfect. This will require the use of smooth and nonabsorbent surfaces, unless the proprietor of the food business can satisfy the food authority that other materials used are appropriate;

(f) surfaces (including surfaces of equipment) in contact with food must be maintained in a sound condition and be easy to clean and, where necessary, disinfect. This will require the use of smooth, washable and non-toxic materials. unless the proprietor of the food business can satisfy the food authority that other materials used are appropriate.

Guide to compliance

External windows must be screened if:

- (a) they open directly on to production areas and
- (b) they are open production and
- (c) screening is necessary to prevent a risk of infestation and/or contamination.

Door surfaces and door furniture may be a source of contamination through contact with unwashed hands, therefore door surfaces and door handles must be capable of being disinfected.

Doors can be made of a variety of materials including metal, wood suitably sealed (varnished or painted to produce a non-absorbent washable surface) plastic, rubber or refrigeration panelling.

This covers all food preparation surfaces that might come into contact with food eg preparation tables, cutting boards, worktops. Also surfaces of equipment in contact with food eg mixing bowls, divider hoppers.

Surfaces which do not normally come into contact with food, but which are in close proximity and could be a source of contamination, eg table legs, door seals on refrigerators, outsides of equipment, bakery plant, should also comply. Surfaces that come into contact with high risk foods must be able to be disinfected.

The surfaces should be durable and resistant to corrosion so that they can withstand daily wear and tear and repeated cleaning and if in contact with high risk food, disinfection. The materials used should be non-toxic and must not give off an odour, taste or toxic substance. They must be maintained in a good condition.

Advice on good practice

All openable external windows where food is handled should be screened.

Internal windows do not require screening. Where a build up of dirt on the screens may present a risk of food contamination, the screens should be removable for cleaning, kept clean and in good repair and included in any cleaning schedule.

Where there is a risk of damage to the base of the door protective kick plates or buffer bars should be fitted. Other parts of the door at risk of being damaged should also be protected. Adjacent wall surfaces should be protected from damage caused by handles. Doors should be plain without angles or moulding on which dirt can accumulate.

External doors opening into production areas should be screened either with plastic strip curtains, chain link curtains, fly screen doors or moveable fly screens.

Resin/ plastic faced worktops are prone to damage. Edges and corners should be protected eg metal corner or edge strips. Frequent cutting over a prolonged period can result in damage to the surface. The use of cutting boards to protect the surface should be considered.

Where cutting boards are used the surfaces will become worn and scored over time, making them uncleanable and in need of replacing.

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Guide to compliance

Advice on good practice

Surfaces in constant or frequent use will over time become scratched, abraded or even damaged. When assessing whether the surface still complies, a judgement must be made on whether it can still be cleaned and where necessary disinfected.

Acceptable preparation surfaces include:

- stainless steel;
- resin/plastic faced board eg formica, melamine;
- food grade plastics;
- ceramics;
- annealed glass;
- resin-based composites;
- marble.

Acceptable surfaces of equipment would include stainless steel, aluminium, painted or enamelled steel, plastics and natural or synthetic fabrics eg for conveyor-belts.

The use of wood is acceptable, provided it is in good condition, can be cleaned and is not a potential source of foreign body contamination eg splinters, or a potential source of microbial contamination. Wood can be used for pastry tables, cutting boards for non high risk food, flour hoppers in flour lofts. Wooden cutting boards are inappropriate for cutting high risk foods.

2. Where necessary, adequate facilities must be provided for the cleaning and disinfecting of work tools and equipment. These facilities must be constructed of materials resistant to corrosion and must be easy to clean and have an adequate supply of hot and cold water.

In addition to the hand washing facilities, separate facilities for the washing and where necessary disinfecting of equipment and utensils must be provided. Hot and cold water must be provided. Mixer taps can be used. The hot water can be from a piped system or a direct water heater. Depending on the type and size of equipment to be washed, a variety of equipment is available, including:

- pot or utensil washers;
- pressure washers;
- steam cleaners.

The bakery should decide which is/are the most appropriate.

Facilities for draining or drying of equipment should be provided. Disinfection can be carried out using wet heat in a mechanical washing system eg utensil washer where the water should be at 77-82°C for 2 minutes or its equivalent or by steam. Equipment can also be disinfected by the use of a combined detergent/sanitiser.

Large bakeries should have specific wash up areas with adequate ventilation, suitable flooring, drainage and water supplies. Detergents should be automatically dispensed or dosed into the machines.

Where pressure washers or steam cleaners are being used, care should be taken to avoid contamination of other clean equipment and surfaces.

Guide to compliance

Advice on good practice

Stainless steel sinks are prefer-

Sinks/troughs and other equipment in which equipment is washed must be durable and resistant to corrosion by the cleaning chemicals used, eg stainless steel, galvanised steel or plastic. Glazed earthenware sinks are acceptable, provided they are not chipped or cracked.

Detergents should always be available. Work tools, equipment used for high risk products must be cleaned and disinfected.

In areas where a lot of flour is used, removal by dry cleaning methods is recommended.

Dry sweeping or brushing is not recommended because of the dust it creates. An industrial vacuum cleaner suitable for use in a dust environment should be used. The use of air lines should be minimised and should only be used where there is no other easy way of reaching the area to be cleaned.

If a very large volume of salad is to be washed, it may be more practical to have a salad washer. Dried fruits, eg currants, sultanas, would normally be bought pre-washed or double-washed.

Containers for holding food whilst being washed eg colanders, sieves, bowls, should be clean and in good condition, preferably made of stainless steel or plastic.

Where the same sink is used for washing food and utensils, it is good practice to display a notice reminding staff to wash/ clean the sink before and after washing food.

Where a separate sink is provided for washing food, this should be clearly labelled eg "For Washing Food Only".

3. Where appropriate, adequate provision must be made for any necessary washing of the food. Every sink or other such facility provided for the washing of food must have an adequate supply of hot and/or cold potable water as required, and be kept clean.

Food can be washed in the utensil washing sink, provided the sink is cleaned and rinsed before and after it is used for washing food.

Separate dedicated sinks for washing food will be required if the volume of food to be washed is very large and/or the timing of the preparation is such that it will restrict access for utensil washing.

A single mixer tap is acceptable.

If the sink is to be used only for washing food, a supply of hot water is not essential.

Chapter III

Requirements for moveable and/or temporary premises

(such as Marquees, Market stalls, Mobile Sale Vehicles), premises used primarily as a private dwelling house, premises used occasionally for catering purposes and vending machines

Guidance on the requirements detailed in Chapter III of Schedule 1 of the Food Safety (General Food Hygiene) Regulations 1995 for the above type of premises has not been included in this Guide, as it is considered that these premises are outside the Scope of this Guide.

Bakeries are rarely established in moveable or temporary premises, apart from very occasionally at Agricultural Shows or Trade Exhibitions. This Guide does not cover any form of retail premises, including the types described above, apart from the provision of guidance on the interpretation of the requirements of the Food Safety (Temperature Control) Regulations 1995 with respect to certain specific bakery products.

Information and Guidance on compliance with the requirements of Chapter III Schedule 1 of the Regulations for the types of premises listed above can be found, as appropriate, in:

The Industry Guide to Good Hygiene Practice : Catering Guide. Available from Chadwick House

Group Ltd.

The Industry Guide to Good Hygiene Practice : Retail Guide. Available from Chadwick House

Group Ltd.

The Industry Guide to Good Hygiene Practice : Markets and Fairs Guide (In preparation

(when this Guide was

The Industry Guide to Good Hygiene Practice : Vending Machines Guide (published.

Contact your local Environmental Health Department for further information.

Chapter IV

Transport

Legal requirement

1. Conveyances and/or containers used for transporting foodstuffs must be kept clean and maintained in good repair and condition in order to protect foodstuffs from contamination, and must, where necessary, be designed and constructed to permit adequate cleaning and/or disinfection.

2(1) Receptacles in vehicles and/or containers must not be used for transporting anything other than foodstuffs where this may result in contamination of foodstuffs.

2(2) Bulk foodstuffs in liquid, granulate or powder form must be transported in receptacles and/or containers/tankers reserved for the transport of foodstuffs if otherwise there is a risk of contamination. **Such containers must** be marked in a clearly visible and indelible fashion, in one or more Community languages, to show that they ar e used for the transport of foodstuffs, or must be marked "for foodstuffs only".

Guide to compliance

Containers can include wooden wire or plastic trays, plastic or wire baskets or for perishable goods insulated containers lined with plastic or metal. All containers should be cleaned regularly and if they come into direct contact with high risk foods, disinfected. Containers must be kept in good condition.

Provided the foodstuffs are protected from contamination eg wrapped, covered, any conveyance can be used so long as it is clean and well maintained.

The painted metal walls of the vehicle, in good condition, are a suitable surface. The vehicle does not need to be lined internally. The load space should be cleaned and/or swept regularly.

Cardboard trays, if used for unwrapped products, must only be used once.

Cleaning materials may be carried with food, provided precautions are taken to avoid the possibility of any contamination.

As part of their incoming delivery check, bakeries should ensure that the receptacles/containers/ tankers are marked as described in the regulation.

Advice on goodpractice

Any internal lining panels should be smooth and washable.

Interiors should be brushed out daily and washed at least weekly.

The cab should also be kept clean and free of debris.

The exterior of the vehicle should be cleaned regularly.

Wooden trays should not be used for

perishable products such as fresh cream cakes, egg custards or pies.

Wooden trays used for unwrapped confectionery should be lined with food grade paper.

Wooden trays should be progressively phased out. Those in use should be inspected and cleaned regularly.

The receptacles and/ or containers should only be used for transporting foodstuffs. There should be separate designated receptacles and/ or containers for other items.

Those businesses receiving ingredients in bulk eg flour should get written assurances from the suppliers that they will comply with this regulation.

- 3 Where conveyances and/or containers are used for transporting anything in addition to foodstuffs or for transporting different foodstuffs at the same time, there must be effective separation of products, where necessary, to protect against the risk of contamination.
- 4 Where conveyances and/or containers have been used for transporting anything other than foodstuffs or for transporting different foodstuffs, there must be effective cleaning between loads to avoid the risk of contamination.
- 5 Foodstuffs in conveyances and/or containers must be so placed and protected as to minimise the risk of contamination.

Guide to compliance

All non-food items eg equipment, packaging material, cleaning chemicals should be clean or wrapped in clean outer packaging or packed in containers, the outsides of which are clean.

Cleaning chemicals and any other substance which could contaminate food must be kept separate from foodstuffs.

Raw food must be segregated from cooked ready to eat food such that there is no risk of contamination.

Where any contamination has or could have occurred due to the carriage of non food items or different foodstuffs then the conveyances or containers must be thoroughly cleaned and depending on the nature of the contamination, disinfected between the various loads.

To minimise the risk of contamination, raw meat and poultry and products containing them must be kept segregated from cooked/ready to eat foods. Raw unwashed vegetables must be kept segregated from cooked/ready to eat foods.

Care must be taken to ensure that the bottoms of trays which may have been in contact with the floor do not contaminate any products when the trays are stacked.

Unwrapped or loosely covered products should not be left outside a shop, cafe, restaurant. Any unwrapped or wrapped product in trays and/or baskets being unloaded in a delivery yard or street must not be placed directly on the ground.

Advice on good practice

Where possible, food and non-food items and in particular cleaning chemicals and materials should be transported at different times.

Cleaning chemicals should be secured so that no spillage can occur. Cleaning chemicals should also be carried on the floor of the conveyance or bottom of a rack.

Unwrapped confectionery, pies, buns should be carried in plastic or wooden trays stacked on top of each other effectively covering the food. product in the top tray should be covered with suitable food grade paper or the top tray left empty. If the trays have perforated or open lattice bases the trays should be lined with suitable food grade paper. Where trays with perforated or open lattice bases are used, the bottom tray should be left empty. Bread and rolls can be carried in open trays or baskets.

Where wrapped products are left outside a premises, there should be a secure covered area where they can be placed.

Loading of vehicles should take place under an awning or an enclosed area. Alternatively, goods should be covered/protected during loading eg with an empty tray on the top of the stack or the goods in the top tray covered by clean food grade

6 Where necessary, conveyances and/or containers used for transporting foodstuffs, must be capable of maintaining foodstuffs at appropriate temperatures and, where necessary, designed to allow those temperatures to be monitored.

Guide to compliance

Most bakery products eg bread, rolls, buns, flour confectionery and biscuits, do not need temperature control.

All food subject to statutory temperature controls must be delivered so that the product temperature does not rise above the statutory temperature or any other temperature applicable by virtue of the Food Safety (Temperature Control) Regulations 1995. See Part 4 on Temperature Control Regulations.

Various means of maintaining foodstuffs at an appropriate temperature exist, including:-

- simple plastic insulated boxes or trays
- insulated boxes with cool plates or ice packs
- refrigerated vehicles using mechanical or cryogenic cooling.

The method chosen will depend on the length of the journey, the quantity and volume of the food requiring temperature control and whether more than one delivery drop is made.

Advice on good practice

The products and insulated boxes, where possible, should be cooled/ chilled before dispatch.

Where insulated boxes are used, and no data from the manufacturer or supplier exists, tests should be carried out initially to ensure during the normal delivery cycle they maintain the food at the correct temperature.

Routine temperature monitoring on local deliveries should not be necessary, but periodic checks should be made to ensure the products are being kept at the correct temperature.

Chapter V

Equipment Requirements

Legal requirement

1. All articles, fittings and equipment with which food comes into contact shall be kept clean and -

Guide to compliance

This includes the work surfaces of all food processing equipment and any other articles and fittings which may come into contact with food, eg racks, refrigerators, freezers and utensils.

Cleaning can include:-

- washing
- vacuuming
- scraping down.

The frequency and degree of cleaning will depend on:-

- (a) The type of food.
- (b) The risk of contamination.
- (c) Whether food comes into direct contact

Non-food contact surfaces outside or inside complex plant and equipment eg provers, walk-in chillers, ovens, coolers as well as racks may require periodic cleaning, depending on the speed of soiling and the risk to the safety of the food.

The basic criteria for articles, fittings and equipment is that:-

- (a) Food should not come into contact with motors, drive mechanisms.
- (b) Drive mechanisms and motors should be encased or situated so that lubricants cannot come into contact with the food. Where this is not possible, drip trays should be fitted to prevent food being contaminated.
- (c) All nuts, bolts, washers, split pins, screws and fastenings for covers, inspection panels should be secure.
- (d) Materials used must be suitable for the purposes, durable, resistant to corrosion in normal use and not likely to break, crack or fracture with normal use.

All articles, fittings and equipment must be made of materials which are nontoxic and will not transfer any odour or taste to the food.

Advice on good practice

It is good practice to clean as you go. The standard of cleaning should be checked by a nominated person/

manager/proprietor. Cleaning checklists or cleaning schedules should be used to ensure all items are cleaned regularly and nothing is overlooked. (See Appendix 1, 2 and 3).

Where equipment or work surfaces have been used for raw meats, vegetables, raw egg, or will be used for fresh cream, cooked/ready to eat products, they should be disinfected after cleaning or cleaned with a combined detergent sanitiser.

Baking trays should be scraped either after or before use. Baking tins and trays should be decarbonised when the layer of carbon poses a risk of contamination.

Small amounts of crumb or debris are acceptable, provided they are removed regularly.

In a dough divider, the food contact surfaces are lubricated with a food safe/ compatible oil.

The use of glass for inspection panels/ windows and covers for dials, gauges should be avoided. If it has to be used it should be laminated and protected.

Where illumination is required eg for decks on deck ovens, light bulbs should be protected from breakage.

The use of glass or earthenware should be avoided wherever possible because of the risk of breakage.

(a) be so constructed, be of such materials, and be kept in such good order, repair and condition, as to minimise any risk of contamination of the food;

Guide to compliance

Advice on good practice

Suitable materials include:

- Stainless steel
- Steel
- Galvanised steel and painted or enamelled steel (not normally for food contact surfaces)
- Aluminium
- Tinned copper
- Food grade plastics and laminates
- Natural or synthetic fabrics for conveyor belts, savoy bags, prover pockets
- Wood, provided it is in good condition and is not a potential source of foreign body contamination eg splinters or, where relevant, microbial contamination. Wood can be used for cake cupboards, peels, rolling pins, spoons, moulding baskets for rye bread.

There are certain instances in the bakery trade where there is no substitute for wood eg wooden formers for large slab fruit cakes, wooden setters for batch bread. In both instances, these are repeatedly placed in the oven and will become discoloured and even charred. Provided no contamination of the product is occurring, this is acceptable. When they become heavily charred, they must be replaced.

(See also Chapter II 1 (f).)

Any damaged or defective equipment which because of the damage could contaminate the food (eg with fragments of paint, plastic, metal, wood, fibres) must not be used and must be repaired or replaced.

Conveyor belts will for a variety of reasons sustain minor damage to their edges, causing fibres to stick out. Where these fibres might contaminate the food they must be removed.

Wooden delivery trays should be phased out.

Wooden utensils, eg rolling pins and spoons should be phased out.

Regular checks for damage (preferably documented) should be carried out by

management on the equipment and utensils. In addition there should be a system for reporting any damage to equipment and utensils.

A register of any glass or earthenware in the bakery should be kept and the items checked regularly.

Unused equipment and machinery should be kept to a minimum and cleaned prior to storage in a non-production area, kept covered and checked at least monthly for pests.

Machinery and equipment only used occasionally for production should be cleaned after use, covered and regularly checked for pests. The machinery must be cleaned thoroughly before being brought back

(b) with the exception of non-returnable containers and packaging, be so constructed, be of such materials, and be kept in such good order, repair and condition, as to enable them to be kept thoroughly cleaned and, where necessary, disinfected, sufficient for the purposes intended;

Guide to compliance

The basic criteria for articles, fittings and equipment so as to facilitate cleaning are:-

- (a) Surfaces should normally be smooth.
- (b) Ledges and crevices should be kept to a minimum.
- (c) Materials used should preferably be non-absorbent. However, in the instances described above and in Chapter II 1(f), synthetic and natural fabrics and wood will be used.
- (d) Where the paintwork, enamelling on a piece of equipment has become heavily abraded or chipped, the item should be repainted or re-enamelled.
- (e) The materials used must be suitable for the intended method of cleaning the equipment. Where necessary they must be capable of withstanding repeated cleaning and disinfection and resist corrosion by any chemicals used.
- (f) They must be capable of being stripped down or dismantled where necessary to facilitate effective cleaning.

Old machinery and well used surfaces will continue to comply with this requirement, providing they can be cleaned and where necessary disinfected.

(c) be installed in such a manner as to allow adequate cleaning of the surrounding area. The area surrounding any machine should be accessible for cleaning. Alternatively, the machine/ equipment should be mobile or be capable of being moved. When assessing the suitability of an installation, consideration must be given to the degree and type of soiling and the nature and frequency of cleaning required.

Advice on good practice

All articles, pieces of equipment and fittings should be on a cleaning schedule or cleaning checklist. More complex machines should have a detailed cleaning schedule, describing how it should be dismantled and cleaned.

Where space allows, large fixed items of equipment (such as ovens, provers, retarders, refrigerators, freezers) should be installed away from walls. Where this is not possible, care should be taken to avoid creating dirt traps. Any small gaps between walls and equipment should be sealed or covered. There should still be access to the area to enable inspection for pests.

Where equipment is moveable, any services to it must be installed/ fitted so as to allow the equipment to be moved. Flexible hoses for gas, water or waste and any cables or flexes should be of sufficient length, and checked regularly for signs of damage.

Chapter VI Food Waste

Legal requirement

1. Food waste and other refuse must not be allowed to accumulate in food rooms, except so far as is unavoidable for the proper functioning of the business.

2. Food waste and other refuse must be deposited in closable containers, unless the proprietor of the food business can satisfy the food authority that other types of containers used are appropriate. These containers must be of an appropriate construction, kept in sound condition, and where necessary be easy to clean and disinfect.

Guide to compliance

Waste bins must be emptied regularly and must not be allowed to overflow. Sealed bags, sacks of waste in a food room awaiting removal to the waste storage during busy periods must not remain for longer than is necessary.

The nature of the processes will inevitably result in working debris eg flour dust, fragments of dough, cake crumb, seeds. These must be removed at the end of the shift or more regularly if there is a significant build up.

(see Chapter I para 1.)

Waste bins used for the short term storage of waste in production areas need not be lidded.

The use of flour sacks or large cardboard boxes in which ingredients have been delivered as internal rubbish/waste containers are acceptable in non high risk areas where there is little or no liquid waste and no risk of leakage or risk to food safety.

For bulky waste in production areas (such as flour sacks, cardboard boxes, plastic tubs, buckets and cans), normal waste bins are impractical. Wheeled cages, trolleys, plastic drums, "wheelie" type bins, are acceptable.

Apart from disposable waste containers eg plastic bags/waste containers should be durable, resistant to corrosion in normal use and resistant to any cleaning chemicals or cleaning methods used. Waste containers should be cleanable and kept in good repair.

External waste containers used for the storage of waste prior to collection and removal from site must be lidded. They must be made of durable materials eg metal/high density plastic, and maintained in a cleanable condition.

Advice on goodpractice

There should be a procedure to ensure that bins are emptied when full, and the waste removed from the food room. The frequency will be determined by production and the volumes of waste produced.

All waste should be removed from food rooms at the end of the day.

Car dboar d box es and cans should be

flattened, and tubs/ buckets nested. Ideally these should be rinsed prior to disposal to deter pests.

Where an open mesh container like a cage is used, it should be stored away from food processing equipment or ingredients, so that if any debris falls out there is no risk of contaminating the products. Alternatively it should be lined to contain the rubbish. As far as possible waste containers should be easy to move, or mobile.

Where possible, smaller containers should be lined with either plastic bags or flour bags.

Waste containers should be smooth with the minimum possible number of ledges, grooves, nooks and crannies. Waste containers in food production areas should be cleaned daily and disinfected periodically.

The size of container used should be capable of being emptied easily and cleaned. The use of large drums without any means of lifting, and tipping or cleaning (eg pressure washer) would be inappropriate.

Lids should be tight fitting to discourage pests, particularly

Guide to compliance

Advice on good practice

Any waste stored prior to collection in plastic bags, flour sacks or boxes should be stored in bins or in an enclosed area proofed against pests.

Clean plastic tubs or buckets and stacks of clean, flattened cardboard boxes can be stored separately.

Food waste should be removed at least weekly from the premises by an approved contractor or the local council. Refuse can be stored in lidded wheeled bins, "wheelie" type bins, skips, compactor bins or in waste store rooms. Waste store rooms can be within the main building, but preferably on an outside wall and away from doors or openable windows or separate from the building. They must be proofed against pests.

Internal and external waste store rooms must have cleanable walls, floors, ceilings and doors, and proofed against pests. Bare brick or block walls are acceptable, provided the nature of the waste is such that it will not render the walls uncleanable or it is suitably contained. Refuse stores must be emptied and cleaned regularly.

The burning of rubbish is not recommended. Unauthorised burning may be an offence under the Environmental Protection Act 1995.

Large quantities of waste dough should be baked off prior to disposal.

Food waste awaiting collection by the contractor should not be stored within the production or dispatch areas.

Refuse stores should be ventilated. It is good practice for external mobile bins, skips, compactors to be stored/ located in clearly designated areas, preferably on a concrete hard stand. If in use outside daylight hours the areas should be well lit and protected against vandalism. If necessary the bins, skips, compactors should be locked.

There should be a means of cleaning the hard stand, such as a pressure washer or hose. There should be adequate foul drainage. Any spillage should be removed immediately and any seepage washed away to deter pests.

Large quantities of liquid waste eg frying oil or neat cleaning chemicals such as old unwanted stock, or the residue and contents of soak tanks, must not be flushed down the drain. Arrangements should be made for collection by the local council or a specialist contractor.

3. Adequate provision must be made for the removal and storage of food waste and other refuse. Refuse stores must be designed and managed in such a way as to enable them to be kept clean, and to protect against access by pests, and against contamination of food, drinking water, equipment or premises.

Chapter VIIWater Supply

Legal requirement

Guide to compliance

Advice on goodpractice

1. There must be an adequate supply of potable water.

Bakeries should normally be able to rely on the quality of water supplied by the Water Companies and that water from a mains supply will be potable. In general sampling by the bakery is not necessary. If water is obtained from a private water supply eg boreholes, wells, springs, the water must be potable and the Private Water Supplies Regulations 1991, the **Private Water Supplies Regulations** (Northern Ireland) 1994, or the Private Water Supplies (Scotland) Regulations 1992 will apply. The bakery should check that any private water supply is being sampled regularly. If the bakery owns the supply, they should arrange for it to be sampled.

Where there are temporary interruptions or problems with the mains supply, any instructions issued by the water company concerned regarding the water must be complied with eg boiling.

It will be necessary to use potable water when:-

- producing food
- cleaning/rinsing of food equipment and surfaces
- hand washing
- washing food
- supplying pressure washers and steam cleaners

2. Where appropriate, ice must be made from potable water. This ice must be used whenever necessary to ensure foodstuffs are not contaminated. It must be made, handled and stored under conditions which protect it from all contamination.

This potable water

necessary to ensure

foodstuffs are not

contaminated.

must be used whenever

Any ice used in the preparation of food or used to cool containers of open food must be made from potable water. Ice machines must be situated away from sources of contamination.

Ice machines and any containers or utensils which come into contact with the ice must be cleaned regularly and disinfected periodically. Water softeners and water filters should be operated and maintained in

accordance with the manufacturer's instructions, so as to avoid them

becoming a source of contamina-

The bakery should have any private water supply they use independently sampled periodically.

In areas where interruptions in supply do occur, the bakery should have a procedure, preferably written, on the action to be taken.

If used for production, any cold water storage tanks should be lid-

All other cold water storage tanks should be lidded. The tanks should be visually checked at least annually and if necessary cleaned out and disinfected by a competent person.

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Guide to compliance

Advice on good practice

- 3. Steam used directly in contact with food must not contain any substance which presents a hazard to health, or is likely to contaminate the product.
- 4. Water unfit for drinking used for the generation of steam, refrigeration, fire control and other similar purposes not relating to food, must be conducted in separate systems, readily identifiable and having no connection with, nor any possibility of reflux into, potable water systems.

Steam produced in provers and ovens should be generated from potable water.

Any non-potable water in a bakery must be distributed in a completely separate distribution system with no connections to the potable water distribution system. The non-potable water distribution system and any outlets must be clearly marked. In some instances fire hoses may be linked to a non-potable water supply. If this is the case then the fire hoses should be clearly marked "nonpotable water, not to be used for cleaning, for fire-fighting only".

In hard water areas softened water should be supplied to provers and steam injectors in ovens to prevent furring of the pipes.

To prevent confusion, non-potable water should not be provided in food production areas.

Fire hoses should not be used for cleaning down.

Chapter VIII Personal Hygiene

Legal requirement

1. Every person working in a food handling area shall maintain a high degree of personal cleanliness and shall wear suitable, clean and, where appropriate, protective clothing.

Guide to compliance

This applies to everybody working in a food handling area, not just food handlers. Everybody must wash their hands regularly, in particular

- after visiting the toilet
- before starting work
- on returning to work
- before handling open food
- after handling raw food
- after handling rubbish

All staff must be aware of the above requirements concerning hand washing.

Everybody working in food handling areas should wear clean protective clothing. For those staff handling open food within the bakery, suitable protective clothing could include:-overall, boiler suit, bakers smock and trousers, a clean T-shirt, a large apron.

For people in non-production areas and not handling open food eg store man, suitable protective clothing could be a clean shirt and trousers, an apron, an overall.

Protective clothing must be maintained in good condition so as to prevent contamination of the products.

Protective clothing must be cleaned regularly.

Advice on good practice

All non-production staff and visitors should wash their hands after going to the toilet and on entering production areas.

All non-food handling staff (eg managers, office staff), and visitors should wear clean protective clothing when visiting food production areas. Larger bakeries should have the facility to provide protective clothing for visitors. This can be of a different style and quality to those for production staff eg disposable paper coats and hats. All other bakeries should inform those likely to visit them eg co - n tractors that they should wear clean pr - cettive clothing.

Protective clothing should be changed as often as necessary. Spare sets should always be available. For messy, dirty jobs, aprons should be provided. These should be either changed daily, plastic faced and washable or disposable.

Protective clothing for staff handling open food should have no external pockets and should be fastened with press studs or velcro strips. Buttons should not be used.

Ideally for staff handling high risk food, their protective clothing should be cleaned in-house or commercially laundered by the bakery. Staff handling food, particularly open food, should not wear their protective clothing to and from work.

For staff working with open food, hair should be tidy and preferably short.

Staff, particularly those with long hai, r handling open food, and visitors to production areas should wear a hat and preferably a hairnet as well. Long hair should be tied back and any fringes should be contained by a hat and/or hairnet.

Guide to compliance

Advice on good practice

All staff working within food handling areas in the bakery must also observe the following personal hygiene rules:-

- Not to smoke or spit.
- Not to eat whilst handling food. It is acceptable to taste products during preparation, provided this does not contaminate food. A clean utensil must be used each time.
- Any wounds or cuts on exposed parts of the skin, particularly the hands, must be suitably covered with a waterproof dressing.
- Nail varnish and false nails must not be worn.
- Jewellery must not present a risk of contamination. Sleeper earrings in pierced ears and plain unstoned rings are acceptable.

These personal hygiene rules and the rules concerning protective clothing must be explained fully to all staff on induction.

(See Chapter X on Training and Appendix 8).

Once the proprietor is aware that one of the staff is suffering from one of the conditions listed in the Regulations, they have a legal responsibility to take action to prevent the person contaminating food with pathogenic micro-organisms. This may mean excluding the person from work or transferring them to another job. No one suffering with diarrhoea or vomiting should be allowed to work in any activity which involves direct contact with open food or with surfaces and equipment in areas where open food is stored or processed.

Smoking should be restricted to specifically designated areas eg canteen, smoking room, or banned altogether.

Dressings should be brightly coloured (usually blue) to aid discovery if lost.

Finger nails should be kept short.

Watches should not be worn.
Jewelled rings and chains should not be worn, or should be covered.
Studs on exposed parts of the body should be covered or removed.

Ideally these rules should be:

- included in the contract of employment
- displayed in the changing rooms
- included in their staff training programme
- included in a staff handbook.

Staff should sign to say they have understood and, where appropriate, read the rules. Notices emphasising the key points eg wearing of protective clothing and hats, no eating or smoking, should be displayed on doors to food handling areas. All visitors to the bakery should be made aware of these rules and should comply.

(See Chapter X on Training.)

Any staff returning to work who may have been suffering from a food borne disease should be reminded of the need for regular hand washing and further investigation. Referral to a medical practitioner may be required.

Some bakeries may wish staff to fill in a medical questionnaire so that potential health problems can be investigated prior to appointment (Appendix 9).

2. No person, known or suspected to be suffering from, or to be a carrier of, a disease likely to be transmitted through food or while afflicted, for example with infected wounds, skin infections, sores or with diarrhoea, shall be permitted to work in any food handling area in any capacity in which there is any likelihood of directly or indirectly contaminating food with pathogenic microorganisms.

Guide to compliance

Staff are required by law to report to the proprietor or manager of the bakery if they are suffering from any of the medical conditions listed in Regulation 5 below. Failure to report is an offence.

Regulation 5 requires any person working in a food handling area who:

- (a) knows or suspects that they are suffering from or that they are a carrier of a disease likely to be transmitted through food; or
- (b) is afflicted with an infected wound, a skin infection, sores, diarrhoea or with any analogous medical condition

that where there is any likelihood of them directly or indirectly contaminating any food with pathogenic micro-organisms, to report that knowledge, suspicion or affliction to the proprietor/manager of the food business.

Advice on good practice

More detailed guidance is available in the two publications "Food Handlers: Fitness to Work" and "Food Handlers: Fitness to Work Guidance for Food Business Managers", available from Department of Health, PO Box 410, Wetherby, LS23 nevertheless good practice, especially if the proprietor/manager is unsure, to consult a medical practitioner or EHO for further advice, clarification. Bakeries can, if they wish, impose more stringent controls than those recommended. In view of the importance of this requirement in preventing food poisoning, the instruction to staff concerning notifying illness or disease should be:

- included in the contract of employment
- displayed in the changing room
- included in the staff training programme
- be included in a staff handbook.

The person should notify the proprietor/manager before starting work.

Chapter IX

Provisions Applicable to Foodstuffs

Legal requirement

1. No raw materials or ingredients shall be accepted by a food business if they are known to be, or might reasonably be expected to be, so contaminated with parasites, pathogenic microorganisms, or toxic, decomposed or foreign substances, that after normal sorting and/or preparatory or processing procedures hygienically applied by food businesses, they would still be unfit for human consumption.

Guide to compliance

Whilst the source of raw materials and ingredients should be considered as part of any Hazard Analysis, most bakeries will have to rely on buying from reputable, well known suppliers of ingredients or recognised buying groups. Where a local supplier is used eg butcher, the Hazard Analysis may indicate that the supplier should be visited to check on standards of hygiene or how the ingredient is to be packaged and/or delivered. Checks on raw materials and ingredients on arrival would include checks for

- contamination of the packaging
- damage to the packaging
- infestation
- date code and code life
- temperature (where appropriate).

These checks do not have to be documented. Any unfit food should be rejected and be taken away immediately by the supplier or carrier. If this is not possible, it should be clearly marked "not for use", kept segregated from any other food and disposed of as waste as soon as possible.

A similar procedure should be adopted for food failing any other aspect of a delivery check.

This provision does not require testing, specifications, certificates of conformity or other test data for raw materials or ingredients.

2. Raw materials and ingredients stored in the establishment shall be kept in appropriate conditions designed to prevent harmful deterioration and to protect them from contamination.

Non temperature controlled raw materials and ingredients can be stored in production areas, separate store rooms or warehouses.

Storage of raw materials in production areas in small bakeries may be necessary.

Areas used should be well maintained, dry, proofed against rodents, and kept clean and tidy so as to discourage the harbourage and breeding of pests.

(See also Chapter I para 1.)

Advice on goodpractice

Bakeries may wish to obtain warranty statements from their suppliers (both food and non-food) confirming that the products comply with all relevant UK and EU legislation. As part of a Quality Assurance or Due Diligence System, bakeries may want details of:-

- (a) Any screening procedures (size of sieve meshes) prior to filling.
- (b) Metal detection procedures before and/ or after filling.

There should be a brief set of instructions/ procedures on how and what to check deliveries for. (See Appendix 10). The checks should be documented if only by a notation on the delivery note.

For temperature controlled ingredients, a delivery temperature should be agreed in writing.

Packaging and other non-food items should also be checked on delivery and the checks documented.

Bakeries, as part of their quality assurance procedures, may require such information, particularly for non standard ingredients.

Sampling of incoming ingredients to detect possible for eign body contamination is impractical.

As far as possible, storage in production areas should be kept to a minimum and preferably restricted to raw materials and ingredients to be used that day or on that shift. Where possible, ingredients should be transferred to silos, holding bins or tanks, ingredient chutes, bins, or other suitable lidded containers and fed/ dispensed from them. Where

Guide to compliance

Ingredients requiring temperature control for safety must be transferred to the appropriate temperature controlled environment (e.g. chill, frozen) as soon as possible after receipt.

Raw materials and ingredients must be used by their "use by" date.

Food and non food items can be stored in the same store room or warehouse, provided there is no risk of contamination. Packaging and wrapping materials and any other items which will come into contact with food must be kept in clean, dry storage conditions.

Bacteria and other micro-organisms will be present on or in raw materials such as raw meat, poultry, vegetables. To prevent contamination of other raw materials and ingredients, these should be

- (a) Stored in separate areas, or refrigerators; or
- (b) stored beneath other raw materials and ingredients.

Advice on good practice

The temperature of refrigerators/ chillers/freezers should be checked at least daily and preferably recorded.

In the event of high storage temperatures, stock levels may have to be reduced at certain times of the year, thus reducing the time the product is stored to compensate for high storage temperatures.

All ingredients should be used on a first-in-first-out basis. Stock should be rotated and codes checked regularly. Out of code stock should not be used. To assist stock rotation, all food packaging should be clearly marked (eg with a marker pen) with its date of delivery.

Where possible, cleaning chemicals and similar potentially hazar dous substances should be stored in a separate room or part of the warehouse. The tops of open part-used bags and boxes should be folded over after use to prevent possible contamination, or the contents transferred to clean lidded ingredient containers, tubs or bins. Ingredients in cans should not be stored in the can once it is opened, but transferred to a clean lidded container. For slow moving ingredients, the date code and date of transfer should be marked on the container.

To protect the quality of the food, freezers should be maintained at a consistent temperature and for prolonged storage a temperature of

-18 °C or lower is recommended. All goods, particularly partly finished or

finished goods stored in freezers, should be coded to assist in stock rotation.

There are a variety of ingredients which for quality reasons should be kept chilled, eg yeast, margarines, fats, milk. Failure to do so is not an offence unless the "temperature abuse" has caused the ingredient to become unfit as

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3. All food which is handled, stored, packaged, displayed and transported, shall be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state. In particular, food must be

so placed and/or

minimise any risk of

protected as to

contamination.

Guide to compliance

This covers all partly prepared, finished and unfinished products.

Food would be unfit for human consumption if it was:-

 Putrid or toxic or had been contaminated by such food.

Food would be injurious to health if it was contaminated with:-

- Toxic (poisonous) substances.
- Micro-organisms at levels which could be a hazard to a substantial part of the population, including if the effect was cumulative and took a long time to appear.

Protection against these hazards will involve:-

- protection from initial contamination
- storage such that multiplication of pathogenic micro-organisms is minimised.

Food would be contaminated in such a way that it would be unreasonable to expect it to be consumed in that state if it had been contaminated with cleaning materials, tainted by strong odours or grossly contaminated with foreign material. Bulk containers of cleaning materials should be kept sealed and stored away from food except those plumbed to a dispensing system. Measures should be taken to prevent spillage and accidental contamination of food by cleaning materials.

Advice on good practice

Stock should be rotated and date codes checked. The procedure could be documented. Any partly prepared or

finished products should be coded to assist stock rotation.

All mixes, partly finished or finished products should either be removed or covered, protected before and during cleaning. Cleaning down should take place after production

Where potentially (toxic) tainting materials are used during construction or refurbishment (eg epoxy resins or oil-based paints), open foods and foods susceptible to taint, should be removed. Before food is brought back the area should be well ventilated and be odour-free.

For eign material in the baking industry tends to be pieces of ingredient packaging, pieces of conveyor belt, for eign or dirty dough and occasionally plastic, metal or glass. There should be systems/instructions (not necessarily documented) that ensure staff are aware of these hazards and take precautions. Sieving and/or metal detection can

Legal requirement	Guide to compliance	Advice on good practice
		Good house-keeping procedures/instructions, preferably documented, are the most effective way of minimising for eign body contamination. These should include:-
		 (a) How to open and dispose of ingredient packaging. (b) Dispensing ingredients so as to avoid possible contamination. (c) Cleaning procedures and checking of standards. (d) Regular inspection of utensils and equipment for signs of damage or defects. (e) Keeping ingredients, mixes covered where practicable. (f) Ensuring (for engineers and contractors) that any equipment or
Adequate procedures must be in place to ensure pests are controlled.	Pest control must be carried out by competent personnel, either "in house" or by a professional pest control contractor.	building maintenance/ repair does not result in contamination.
	(See also Chapter I, para 2 (c)).	Any in-house scheme should be documented. (See Appendix 11 and 12). Bakeries should consider having a contract with a reputable Pest Control Contractor.
		Procedures to control pests could include: - proofing - insect screens - electronic fly killers - inspection of the premises - baiting with pesticides - regular cleaning - proper containment and disposal of waste - good stock rotation.
4. Hazardous and/or inedible substances, including animal feedstuffs, shall be adequately labelled and stored in separate and secure containers.	Hazardous toxic chemicals, including fuels and bulk cleaning materials, must be stored in sealed containers which are clearly labelled with the contents. These must be stored separately from food. If decanted into smaller containers for use within the bakery, the containers must be clearly labelled with the contents.	Any Pest Control Contractor should provide full details of the service offered. Records of inspections and any corrective action required should be kept. (See Appendix 13).
	Unfit and/or spoiled food or food past its use by date should be clearly marked "not for use", stored in sealed containers and bags, kept away from other food and disposed of as soon as is practical.	

Chapter X

Training

Legal Requirement

The proprietor of a food business shall ensure that food handlers engaged in the food business are supervised and instructed and/or trained in food hygiene matters commensurate with their work activities.

Introduction

The purpose of instructing and/or training staff and managers in food hygiene is to increase their level of knowledge and understanding of food hygiene. This will help them understand why certain practices and procedures are in place, their relevance to food safety and the importance of adhering to them.

Before carrying out any training, the business should:-

- 1. Decide on an individual basis what level of instruction and/or training each individual member of staff requires for their job.
- 2. Find out what training and/or instruction staff have already had and when.
- 3. Decide what additional training, refresher training, further instruction if any, each member of sta f requires.
- 4. What are the priorities, and who should be trained first?
- 5. Where is the training to be carried out and by whom, eg in-house, external courses, consultant?
- 6. When is the training to be carried out?

Bakeries may decide for simplicity, or where there is multi-skilling, to instruct and/or train all staff to the same level.

This guide provides a model system for implementing the legal requirement in Chapter X. Not all of what is said will apply equally to all businesses, but the overall approach is recommended as a guide.

Food Handler

The legal requirement only applies to food handlers. There is no definition of food handler in these or any other UK Regulations or EC Directive. For the purposes of this Guide a food handler is any person in the bakery who directly handles or prepares food, irrespective of whether it is open (unwrapped) or packaged. Food includes all ingredients, partly finished and finished bakery goods.

Non-Food Handlers

Cleaners, maintenance staff including builders, painters, plumbers, electricians and engineers, whether employed by the bakery or contractors, are not deemed to be food handlers. However, their actions can affect the safety of the product. Similarly, managers not directly involved in the day-to-day production of the bakery will nevertheless be making decisions which can and will affect the operation of the bakery and food safety. It is good practice for these groups of people to receive a degree of hygiene instruction and/or training. A suggested training plan is given on page 56.

Instruction or Training?

It is up to business to choose whether to instruct or train their staff, and to choose the level of instruction or training required. Instruction accompanied by supervision could be more appropriate, particularly for smaller bakeries, for:-

store man cleaners packers delivery drivers.

Again, it is for the business to choose whether the instructions are verbal or written. Written instructions are preferable as there is then a record of what instructions were given.

Temporary/Seasonal Staff

Staff employed to cover seasonal periods, particularly Christmas, and temporary staff covering for absence or sickness will normally be employed for only very short periods of time eg a few weeks. It may not be possible within that period of time to put them through a full hygiene training programme. In such cases the business should:-

- instruct all staff in Good Hygiene Practice ie Stage One as defined on page 57, and either,
- ensure that the food handler has already been trained to the stage appropriate to the job,
- or instruct the food handler accordingly, either verbally or in writing,
- or where possible allow them to only handle or prepare low risk food and ensure they are supervised.

Food Handlers can be split into three main categories:-

Category of Food Handler	General Description of Work	Example of Food Handlers in this Category	
A	Handles and prepares open high risk food and has direct supervisory or management responsibility for staff preparing food.	Proprietor/Manager of craft bakery.	
В	Handles and prepares open high risk food.	Baker preparing/finishing high risk foods including fresh cream, custards, vanillas, egg custards, quiche, meat products and sandwiches.	
C	Handles packaged food including ingredients and/or prepares low risk food only or delivers low and high risk food.	Store man, delivery driver, slicing and wrapping machine operator, packer, bread baker, confectioner handling no high risk products such as fresh cream, vanilla or egg custards.	

3: The Rules of Hygiene

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Suggested Training Plan for Various Stages of Instruction and/or Training for the Different Categories of Food Handlers. The Timescales indicated are Good Practice.

	Stage 1	Stage 2	Stage 3	
Category of Staff	Good Hygiene Practice	Hygiene Awareness	Further Training Level One	Further Training Level Two Level Three
Category A Food handler who handles or prepares high risk food and has a direct supervisory or management responsibility for staff preparing food	First Day or prior to starting food handling	Within 4 weeks of starting work	Within 3 months of starting work	Good Practice to responsi- bilities
Category B Food handlers who prepare open high risk food	First Day or prior to starting food handling	Within 4 weeks of starting work	Within 3 months of starting work	
Category C Food handlers handling packaged food including ingredients and/or preparing low risk food only or delivering low and high risk foods	First Day or prior to starting food handling	Within 4 weeks of starting work		

Guide to Compliance

All food handlers either on their first day or prior to commencing food handling must receive written or verbal instruction in Good Hygiene Practice.

Good Practice

This should form part of a wider induction programme. All other staff including management and any visitors including contractors who will enter any part of the bakery should also be instructed in Good Hygiene Practice.

GOOD HYGIENE PRACTICE FOR FOOD HANDLERS

- 1. Wash and dry your hands:
 - before and after handling food; and
 - after going to the toilet.
- 2. Report any illness to management.
- 3. Do not work if you are suffering from diarrhoea and/or vomiting.
- 4. Do not handle food if you have scaly or infected lesions on your skin which cannot be totally covered during food handling.
- 5. Ensure cuts and abrasions on exposed areas are totally covered with a distinctively coloured waterproof dressing.
- 6. Do not spit in food handling areas.
- 7. Do not smoke in food handling areas.
- 8. Do not eat or chew gum in food handling areas.
- 9. Wear clean protective clothing, including adequate hair covering.
- 10. Ensure work surfaces and utensils are clean.

Table from Food Handlers: Fitness to Work Guidance for Food Businesses, Enforcement Officers and Health Professionals published by Department of Health 1995. (See Appendix 8).

Supervisors/Managers/Proprietors must check that staff have understood and are complying with Good Hygiene Practice.

Guide to Compliance

All food handlers within 4 weeks of starting work should receive written or verbal instruction and/or training in those areas of the Hygiene Awareness Programme relevant to their job.

Good Practice

Contractors should be instructed on the key points relevant to the work they are doing on arrival at the bakery.

Maintenance staff employed by the bakery and managers not involved in day to day production should be instructed and/or trained in those areas of the Hygiene Awareness Programme relevant to their job.

Hygiene Awareness Programme

An outline of the topics which may need to be covered in the Hygiene Awareness Programme is detailed below:-

- Good Hygiene Practice : re emphasise/expand on hand washing, standards of dress, reporting of illnesses, rules on smoking.
- Hazard Analysis: what are hazards, how to control them, Critical Control Points.
- 'Foreign Body' contamination: ingredient packaging, plastic, paper, string, metal, insects, grease, foreign dough.
- Food Storage: protection, segregation of cooked and raw.
- Date Codes and Stock Rotation.
- Cleaning: importance, materials, methods, frequency, possibility of taint.
- Waste: separation, regular removal and disposal.
- Pest Awareness: recognising and reporting the signs of infestation, the risks infestation poses to health, house-keeping.
- Temperature Control where relevant to the job eg store man, delivery driver, order picker.

The depth and breadth to which each topic is covered and the length of the instruction/training will depend on the particular job, the degree of risk involved and also the ability and previous experience of the job holder. Any relevant control or monitoring points identified by the Hazard Analysis should be clearly explained to the job holder and his/her responsibility with regard to them.

Guide to Compliance

Food handlers handling open high risk food and/or having direct supervisory or management responsibility for staff preparing food should receive instruction or training covering the topics listed in Level One below within 3 months of starting work or as soon after as possible.

Good Practice

In general, managers not involved in the day to day production should receive instruction and/or training covering the topics listed in Level One below within 6 months of starting work. See Suggested Training Plans for Food Handlers and Non-Food Handlers.

Level One

The aim is to develop a basic understanding of the principles of food hygiene. Any training should cover the following topics:-

- Basic microbiology bacteria, yeast, moulds, spores, growth requirements.
- Food poisoning symptoms and causes, bacterial and chemical toxins.
- Food poisoning bacteria growth requirement and symptoms caused.
- Food borne infections.
- Personal Hygiene.
- Preventing food contamination including cross contamination.
- Foreign Body prevention and control.
- Food Preservation including all aspects of temperature control.
- Cleaning and disinfection.
- Pest Control.
- Premises and Equipment.
- Legal obligations.

There is no requirement for staff to attend a formal accredited course. Although a range of standard courses are available, in many instances, training will be carried out "in-house" to impart the required level of information, knowledge and skills. As a guide, any such course will probably be about six hours in duration. The course can be phased over a number of days, or even weeks.

Explanatory Notes

Formal Courses

Level One

There is a range of off the shelf, standard accredited food hygiene courses covering the topics listed in Stage 3. These are produced by several organisations, including:-

The Chartered Institute of Environmental Health (CIEH)
The Royal Institute of Public Health and Hygiene (RIPHH)
The Royal Society of Health (RSH)

The Royal Environmental Health Institute of Scotland (REHIS) Society of Food Hygiene Technology (SOFHT)

- Basic Food Hygiene Certificate

- First Certificate in Food Safety

- Essential Food Hygiene Certificate

- Elementary Food Hygiene Certificate

Probably the most familiar is the Basic/Elementary Food Hygiene Certificate run by most Environmental Health Departments. All these courses are widely available from a number of colleges, further education establishments and other training providers (consultants). Distance/open learning packages are also available for some of the courses listed above. A certificated distance learning package covering all the topics listed in Level One is also available from the Craft Bakery Training Organisation (Scotland). Details about the various courses and the nearest accredited centre providing the course can be obtained from the Head Offices of the various organisations (see Appendix 14 for addresses and telephone numbers). However, it is <u>not</u> a legal requirement to have a food hygiene certificate from one of these organisations.

Levels 2 and 3

Apart from the basic food hygiene courses, there are also more advanced courses available, often described as Certificate or Intermediate (ie Level 2) Advanced or Diploma (ie Level 3) courses in food hygiene. These food hygiene courses deal with the subject in much greater detail and depth and also include aspects of food hygiene management and systems. A variety of such courses are available from the organisations previously mentioned. It is good practice that those food handlers who are not only preparing high risk food but also have supervisory or management responsibilities should be trained to at least Level 2. Training courses leading to recognised baking industry qualifications may in part overlap or cover similar areas of syllabus to that of food hygiene courses at Levels 2 and 3. Examples include Craft Baking N/SVQs Level 3, Food and Drink Manufacturing N/SVQs Level 3. Management, who are not directly involved in making products but are nevertheless responsible for the operation of the bakery eg General Manager should also have an awareness of food hygiene. In the absence of a suitable bakery qualification, it is good practice that they are trained to at least Level 2.

In-house Courses

In-house training can and will be used by many bakeries to deliver the required level of training. In-house training of an appropriate content and standard will fulfil the legal requirement, even though the in-house course is not formally accredited by one of the organisations mentioned previously. There is no legal requirement to have any in-house course accredited. Alternatively, consultants can be used to either train all employees within the business (either in an accredited course or one tailor-made for the business), or the consultant can design the course and the business can then deliver it.

Vocational Courses

Food hygiene training does not have to be conducted separately from any other training. Vocational courses such as those leading to a recognised baking industry qualification eg Craft Baking N/SVQ at Level 2 or Food and Drink Manufacturing N/SVQ at Level 2, include a module on food hygiene.

Food handlers do not have to take additional hygiene training if their vocational qualification has provided hygiene training to an appropriate level.

Trainers

Any trainer, either in-house or external, should have sufficient occupational competence in terms of knowledge, experience, training and qualifications. An in-house instructor providing instruction to a level 1 standard should be trained in food hygiene to at least level 1. It would be good practice for them to be trained to a higher level and also to be trained in trainer skills or to demonstrate previous experience and competence. Recognised trainers from external companies should be trained to a higher level.

Testing of Knowledge

There is no legal requirement for any form of testing to be carried out to ensure that staff have understood the knowledge delivered in a food hygiene course. However, it is good practice that food handlers should be tested to establish their level of understanding. The courses detailed previously all use multiple choice written test papers for this purpose. Businesses using their own in-house courses should use a written or verbal test paper and formally record the results. In the event of there being no knowledge testing, EHOs will probably wish to question food handlers to verify they have received and understood any training delivered.

Assessment of Workplace Competence

There is no legal requirement for any form of assessment of competence to be carried out to ensure that staff are competent in their performance in the workplace. However, it is good practice that food handlers should be formally assessed using accredited occupational standards. National or Scottish Vocational Qualifications (N/SVQs) provide assessment by qualified assessors to determine competence to these standards, in accordance with legal and operational requirements. Assessment of competence includes workplace observation and questioning and ensures that knowledge and instruction delivered in training courses are actually applied and practised consistently to the required standards in the bakery. In the event of there being no assessment of competence, EHOs will probably wish to observe and question food handlers to verify they have received and understood any training delivered.

Certificates

There is no legal requirement to have a certificate stating that the food handler has received hygiene training to an appropriate level. Successful completion of all the accredited courses detailed previously including the test or assessment will lead to the award of an appropriate certificate.

Training Records

There is no legal requirement, although it is good practice, to have records of training. Without documented evidence of hygiene training, it will be more difficult to prove compliance or establish a due diligence defence in proving compliance with the legal requirement.

Training records can be in a variety of forms, eg

- a specific hygiene training record detailing all food handlers and when they were trained.
- a master training record detailing all food handlers and all the various topics, including hygiene, that they have been trained in or may need to be trained in.
- individual training records for each food handler detailing the training they have received.

Any training records should include:-

the name of the person
their starting date
the training received
the date of training
the outcome of the training where appropriate (eg qualification, certificate, unit record)

The training record should be initialled by the trainee and trainer after each training session. If an external organisation is used, the name of the organisation and the trainer should be recorded. (See Appendix 15, 16, 17).

Training Plan

It is good practice to have a training plan to identify the training needs for each member of staff and which can also highlight dates by which specific training such as hygiene must be carried out.

Previous Training

New food handlers may claim they have already been trained. They should be able to provide documentary evidence of this eg an accredited food certificate or a letter from a previous employer detailing the hygiene training they have received and when. The latter would be acceptable if the employer is either familiar with the previous company and its hygiene training and is satisfied with the content and level of training. Alternatively it may be reasonable to assume, because of the size and reputation of the previous company, that hygiene training to an appropriate standard had been carried out. In the absence of such information the employer should assume the food handler has not been trained. It is good practice to carry out refresher training anyway so that the new staff become aware of your own company's standards, practices and procedures which may well differ from their previous employers.

Suggested Instruction/Training Plan for Different Categories of Non-Food Handlers

The suggested levels of instruction and/or training and timescales for Non-Food Handlers, whilst Good Practice, are only advisory. It is up to individual bakeries to decide whether they wish to follow the suggested plan, modify it or to devise their own system to suit their particular needs and circumstances.

Category of Non-Food Handler	Good Hygiene Practice	Hygiene Awareness	Further Training Level One	Further Training Level Two and Three
Visitors who enter production areas eg EHOs,TSOs, Consultants, Representatives (1)	On arrival at the Bakery	_	_	_
Contractors carrying out work in production and storage areas eg Engineers, Electricians, Builders, Painters	On arrival at the Bakery	Key points relevant to the work they are doing (2)	_	_
Maintenance staff employed by the Bakery eg Engineers, Electricians, Cleaners	First Day or prior to entering the production area to work	Within 4 weeks of starting work	Within 4-6 months of starting work if their job requires it	_
Management who are not directly involved in day-to-day production	During the first week of their induction	Within 6 weeks of joining	Within 6 months, depending on their responsibilities (3)	Depending on their responsibilities

Explanatory Notes for Non-Food Handlers

- (1) Representatives/Demonstrators who will be demonstrating equipment, products eg cleaning chemicals, or ingredients should be classed as contractors.
- (2) Depending on what they are doing certain key points in the Hygiene Awareness Programme should be discussed prior to the demonstration/maintenance work beginning eg prevention of foreign body contamination, protection of food and ingredients, cleaning, disposal of waste.
- (3) Management not involved in day-to-day production could include Production Managers/Directors, Factory or General Managers, Accountant/Finance Directors, Engineering/Maintenance Managers and Managing Directors. These people should have an understanding of food hygiene and safety issues. It is for the individual businesses to decide which of their Management Team should receive instruction/training in food hygiene and also the level of training. At least one member of the management team with key decision-making responsibility should be trained to at least Level One and preferably Level Two and/or Level Three.

REGULATIONS 1995

TEMPERATURE CONTROL REQUIREMENTS FOR ENGLAND AND WALES

Legal requirement

Chill Holding Requirements

- 4(1) Subject to paragraph (2) and regulation 5, no person shall keep any food-
- (a) which is likely to support the growth of pathogenic microorganisms or the formation of toxins; and
- (b) with respect to which any commercial operation is being carried out,

at or in food premises at a temperature above 8 °C.

(2) Paragraph (1) shall not apply to any food which, as part of a mail order transaction, is being conveyed by post or by a private or common carrier to an ultimate consumer.

Guide to compliance

This only applies to food which is likely to support the growth of microorganisms or the formation of toxins.

The 8 ° C requirement refers to the temperature of the food. Foods which need to be kept at 8 ° C or below include:-

- soft or semi-hard cheeses ripened by moulds and/or bacteria.
- dairy-based desserts (including milk substitutes). Some artificial creams may be ambient stable and will not support the growth of pathogenic micro-organisms. These do not have to be refrigerated advice from the suppliers should be sought.
- cooked products comprising or containing cooked products such as meat, fish, eggs (or substitutes for meat, fish or eggs), hard or soft cheese, cereals (including rice), pulses and vegetables whether or not they are intended to be eaten without further cooking. This will also include sandwiches containing any of the above.
- smoked or cured fish.
- smoked or cured ready to eat meats which are not ambient stable.
- prepared ready to eat foods such as cream cakes, vanilla slices, prepared vegetables, vegetable salads containing fruit, prepared salads eg coleslaw, products prepared with mayonnaise.
- uncooked or partly cooked pastry products and dough products such as pizzas, unbaked sausage rolls, fresh pasta containing meat, fish, vegetables.

Bakery products likely to be supplied mail order will be ambient stable and not covered by paragraph 1.

Advice on good practice

It is good practice to keep some other food types below 8 °C. See also regulation 10(1) and (3).

It is good practice to set refrigerators and chillers to run at a

temperature eg 5 °C to allow for temperature fluctuations caused by use eg opening the doors, putting in new stock.

It is good practice to refrigerate all prepared foods containing may onnaise or a dressing product.

The acidity of the mayonnaise or dressings may be sufficient to prevent the growth of pathogens.

- (3) Subject to regulation 5, no person shall supply by mail order any food which-
- (a) is likely to support the growth of pathogenic micro-organisms or the formation of toxins; and
- (b) is being or has been conveyed by post or by a private or common carrier to an ultimate consumer,

at a temperature which has given rise to or is likely to give rise to a risk to health.

General Exemptions from the Chill Holding Requirements

- 5. Regulation 4 shall not apply to-
- (a) food which-
- (i) has been cooked or reheated.
- (ii) is for service or on display for sale, and (iii) needs to be kept hot in order to control the growth of pathogenic micro-organisms or the formation of toxins;
- (b) food which, for the duration of its shelf life, may be kept at ambient temperatures with no risk to health:

Guide to compliance

The only bakery products likely to be supplied mail order are Christmas puddings and cakes, fruit cakes, other ambient stable cakes and biscuits.

This regulation provides exemptions from the $8\,^{\circ}$ C requirement.

This provides an exemption for food intended to be sold hot. This is covered by regulation 8.

Exemptions from temperature control are considered acceptable for certain bakery products. These are:-

- (a) Uncut baked egg and milk pastry products, eg custard tarts and Yorkshire curd tarts intended for sale within 24 hours of production.
- (b) Cooked pies and pasties containing meat, fish or any substitute for meat or fish or vegetables or any combination of these encased in pastry to which nothing has been added after baking and sausage rolls, which are intended to be sold on the day of production or the next day.

NB The use of such exemptions must be consistent with food safety. See regulation 10(1).

After the expiry of the permitted time periods, the products must be disposed of. They cannot then be chilled to 8 ° C or below and given an additional shelf life

Products such as sandwiches and cream cakes may be stored or displayed for up to 4 hours at ambient temperatures.

(See regulation 7(1)).

Advice on good practice

The products should be well packaged to avoid possible damage in transit. The formulation of the product should be such that exposure to high and possible fluctuating temperatures will not cause weeping of liquor from the product.

Egg custards and curd tarts displayed at ambient should be sold on the day of production only and disposed of at the end of the trading day.

For quality reasons and to assist in stock rotation and stock control, pies and pasties to which nothing has been added after baking and sausage rolls should be displayed for sale on the day of production only.

A system should be devised so that

products are not displayed for more than 4 hours after production eg coloured dots to indicate a time of production. This system should be documented.

- (c) food which is being or has been subjected to a process such as dehydration or canning intended to prevent the growth of pathogenic micro-organisms at ambient temperatures, but this paragraph shall cease to apply in circumstances where-
- (i) after or by virtue of that process the food was contained in a hermetically sealed container, and(ii) that container has been opened;
- (d) food which must be ripened or matured at ambient temperatures, but this paragraph shall cease to apply once the process of ripening or maturation is completed;
- e) raw food intended for further processing (which includes cooking) before human consumption, but only if that processing, if undertaken correctly, will render that food fit for human consumption;
- (f) food to which Council Regulation (EEC) No 1906/90 on certain marketing standards for poultry, as amended, applies;
- (g) food to which Council Regulation (EEC) No 1907/90 on certain marketing standards for eggs, as amended, applies.

<u>Upward Variation of the</u>
8 ° C Temperature by
<u>Manufacturers etc</u>

6. (1) In any proceedings for an offence of contravening regulation 4(1), it shall be a defence for a person charged (for the purposes of this regulation called "the defendant") to prove that-

Guide to compliance

Most canned foods are ambient stable. However, a few canned meats such as large cans of ham or cured pork may only have been pasteurised and will need to be kept refrigerated. This will be indicated on the label. Perishable foods such as canned fish, cooked meats, beans etc will require refrigeration once the can has been opened.

Dehydrated foods containing protein eg pasta, pulses and beans, once rehydrated, will require refrigeration.

Mould ripened cheeses eg Brie, Camembert, Stilton, once ripe, must be kept at 8 ° C or below. (Normally the supplier will have ripened the cheeses prior to delivery).

Raw food intended for further processing (cooking/baking) including meat, poultry and fish does not have to be kept refrigerated at 8 ° C or below, provided the further processing will render it fit for consumption.

This regulation does not apply to the baking industry.

Liquid egg produced in the bakery from shell eggs must be used immediately or stored at 10 $^{\circ}$ C or less and used within 24 hours.

This regulation permits a manufacturer to specify that a food covered by regulation 4(1) can be stored/displayed above 8 ° C for a set period of time. The manufacturer must be able to prove by means of a scientific assessment that under the time/temperature combination specified, the food will be safe. The use of a generic recommendation, made for example by a trade association and included in an Industry Guide, is permissible.

Advice on good practice

Once a can is opened, the contents should be used immediately. If not, the contents should be transferred to a clean lidded container. High acid canned foods (eg fruit, tomatoes) do not have to be refrigerated after opening - it is good practice to do so.

The container should be covered or

lidded. The container should be marked with the contents and date of opening. High acid canned foods (eg fruit,

tomatoes) do not have to be refrigerated after opening - it is good practice to do so.

It is good practice to keep raw meat, poultry and fish refrigerated, preferably at 5 °C or below.

Shell eggs should be used before their best before date and kept cool, preferably below 20 °C.

- (a) a food business responsible for manufacturing, preparing or processing the food has recommended that it is kept-
- (i) at or below a specified temperature between 8 ° C and ambient temperatures, and
- (ii) for a period not exceeding a specified shelf life;
- (b) that recommendation has, unless the defendant is that food business, been communicated to the defendant either by means of a label on the packaging of the food or by means of some other appropriate form of written instruction;
- (c) the food was not kept by the defendant at a temperature above the specified temperature; and
- (d) at the time of the commission of the alleged offence, the specified shelf life had not been exceeded.
- (2) Afood business responsible for manufacturing, preparing or processing food shall not recommend that any food is kept-
- (a) at or below a specified temperature between 8 ° C and ambient temperatures; and

Guide to compliance

Further information is contained in the Guidance on the Food Safety (Temperature Control) Regulations 1995. (Available from the Department of Health see references).

If the food is supplied wholesale, details of the variation must be included on any label on the packaging or detailed in the documentation supplied to the wholesaler. For unwrapped food, the information must be provided in writing prior to supply.

The food must be kept at or below the temperature specified by the manufacturer.

The food must not be kept/displayed for longer than shelf life stated by the manufacturer. At the end of the stated shelf life, any food remaining must be disposed of as waste.

Fresh Cream Cakes can be kept at a maximum of 12 °C for one continuous period of up to 16 hours. (See Annex 1 at the end of this part for more details). This single and continuous 16 hour period at 12 ° C commences immediately after the conclusion of preparation. Where this 12 °C for 16 hours variation is being used, any period of time below 8 ° C which may occur for practical or operational reasons is deemed to be part of the single continuous 16 hour period. At the end of the 16 hour period, any cream cakes remaining must be disposed of. In practice this means the cream cakes will usually be produced and sold on the same day. In some instances, preparation may be completed just prior to midnight.

Advice on good practice

It is recommended that any upward variation of the storage temperature is limited to products sold through the bakeries' own retail shops and not used for products supplied to wholesale customers.

The food business's staff should be aware of the details of the variation in the chill storage requirement so as to allow them to handle and stock rotate the food correctly.

Wherever possible, cream cakes should be stored at or below 8 $^{\circ}$ C.

The bakery should be able to prove by daily temperature checks on the display cabinets that the cakes are being held at 12 °C.

These temperature checks should be recorded and kept for inspection by the enforcement authorities.

Guide to compliance

Advice on good practice

(b) for a period not exceeding a specified shelf life, unless that recommendation is supported by a well-founded scientific assessment of the safety of the food at the specified temperature.

One continuous period of 4 hours or less at ambient is allowed to allow for service or display of the food. The food must not have previously been kept above 8 ° C or the recommended temperature. This "four hour rule" is typically used for the display and sale of sandwiches and filled rolls. At the conclusion of the four hour period the food can either be disposed of or chilled to 8 ° C or below and continue to be sold. This must be consistent with food safety. See regulation 10(1).

There should be a system whereby the bakery can prove the products have been on display for no more than 4 hours. The system should be documented.

Periods 7. (1) In any proceedings for an offence of

Chill Holding Tolerance

for an offence of contravening regulation 4(1), it shall be a defence for a person charged to prove that the food-

- (a) was for service or on display for sale;
 (b) had not previously been kept for service or on display for sale at a temperature above 8 °C or, in appropriate circumstances, the recommended temperature; and (c) had been kept for
- sale for a period of less than four hours. (2) In any proceedings for an offence of

service or on display for

- (2) In any proceedings for an offence of contravening regulation 4(1), it shall be a defence for the person charged to prove that the food-
- (a) was being transferred-(i) to a vehicle used for the purposes of the activities of a food business from, or (ii) from a vehicle used for the purposes of the activities of a food business to. premises (which includes vehicles) at which the food was going to be kept at or at below 8 °C or, in appropriate circumstances, the

recommended temperature; or

This regulation recognises that foods covered by the statutory temperature control requirements in regulation 4(1) eg cream cakes, vanilla slices, pork pies, cooked meats may rise above 8 ° C for limited periods of time due to avoidable circumstances such as:-

- (a) loading and unloading of vehicles;
- (b) delivery at retail outlets;
- (c) delivery at wholesale outlets or distribution depots.

If after the 4 hour period the food is chilled to below 8 °C, it is recommended that the food is sold within 8 hours of preparation, this includes the 4 hours at ambient temperature.

All food at the end of the four hour period out of temperature control should be disposed of.

The period of time outside refrigeration should be kept to a minimum.

Guide to compliance

Advice on good practice

(b) was kept at a temperature above 8 ° C or, in appropriate circumstances, the recommended temperature for an unavoidable reason, such as-

(i) to accommodate the practicalities of handling during and after processing or preparation,
(ii) the defrosting of equipment, or
(iii) temporary
breakdown of equipment,

and was kept at a temperature above 8 ° C or, in appropriate circumstances, the recommended temperature for a limited period only and that period was consistent with food safety.

Hot Holding Requirements

- 8. No person shall in the course of the activities of a food business keep any food which-
- (a) has been cooked or reheated:
- (b) is for service or on display for sale; and
- (c) needs to be kept hot in order to control the growth of pathogenic micro-organisms or the formation of toxins,

at or in food premises at a temperature below 63 ° C. or due to:-

- (a) handling during and after processing or preparation;
- (b) collation of orders;
- (c) the defrosting of equipment;
- (d) temporary breakdown of equipment.

The "limited periods" and permitted rises in the temperature of the food are not specified in the Regulations, but must be consistent with food safety. Under normal circumstances, a single limited period of up to 2 hours outside temperature control is unlikely to be questioned.

Cooked or reheated food which is to be served or displayed for sale hot must be kept at or above 63 ° C. This applies to any hot bakery product which could support the growth of pathogens. It does not apply to products being processed in the bakery.

Exemptions from this requirement are detailed in regulation 9(a).

The temperature of any equipment used for keeping food above 63 °C should be checked daily and recorded. Periodically the temperature of a product should be checked. Any dial settings should be calibrated to the actual temperature of the equipment.

4: Temperature Controls

Guide to compliance

Advice on good practice

Hot Holding Defences

- 9. (1) In any proceedings for an offence of contravening regulation 8, it shall be a defence for a person charged to prove that-
- (a) a well-founded scientific assessment of the safety of the food at temperatures below 63 ° C has concluded that there is no risk to health if, after cooking or reheating, the food is held for service or on display for sale-
- (i) at a holding temperature which is below 63 ° C, and(ii) for a period not exceeding a specified period of time; and
- (b) at the time of the commission of the alleged offence, the food was held in a manner which is justified in the light of that scientific assessment.
- (2) In any proceedings for an offence of contravening regulation 8, it shall be a defence for a person charged to prove that the food-
- (a) had been kept for service or on display for sale for a period of less than two hours; and
- (b) had not previously been kept for service or on display for sale by that person.

This regulation permits a manufacturer to specify that food that has been cooked or reheated and is covered by regulation 8 can be stored/displayed below 63 ° C for a set period of time. This variation must be backed by a similar scientific assessment to that required in regulation 6 or by a generic assessment.

Hot food can be held for service or displayed for sale below 63 ° C for a single period of up to 2 hours.

The hot food must not previously have been kept for service or on display at a temperature below $63\,^{\circ}$ C.

After the period of holding below 63 °C the food should be cooled as quickly as possible to below 8 °C and kept refrigerated, preferably for no more than 24 hours.

It is recommended that any hot food kept between 8 and 63 °C for up to 2 hours should be discarded at the end of this period of time.

Guide to compliance

Advice on good practice

General Requirement for Food which is a Risk to Health

10. (1) Subject to paragraph (2), no person shall in the course of the activities of a food business keep foodstuffs which are-

- (a) raw materials, ingredients, intermediate products or finished products; and
- (b) likely to support the growth of pathogenic micro-organism or the formation of toxins,

at temperatures which would result in a risk to health.

- (2) Consistent with food safety, limited periods outside temperature control are permitted where necessary to accommodate the practicalities of handling during preparation, transport, storage, display and service of food.
- (3) Aperson may contravene paragraph (1) notwithstanding that he complies with the requirements of regulations 4 and 8, and in particular the keeping of perishable foodstuffs at above a maximum storage temperature recommended in any special storage conditions for them may be in contravention of paragraph (1) notwithstanding that they are kept at a temperature of 8 ° C or below.

This regulation details an overriding general requirement to keep all food which can support the growth of pathogenic micro-organisms or the formation of toxins at a "safe" temperature. No temperature is actually specified. Bakeries keeping food at 8 ° C or below or at or above 63 °C should normally fulfil this requirement. More specific requirements for temperature controls are detailed in regulations 4 to 9. Food includes all raw materials, ingredients, intermediate or finished products. Raw materials such as fresh meat or poultry must be kept at "safe" temperatures.

Limited periods outside temperature control are permitted where necessary to accommodate the practicalities of handling during preparation, transport, storage, display and service of the food, provided the time period outside temperature control does not result in the food becoming unsafe.

This will not normally apply in bakeries. It would be possible in certain specific instances for a food business to keep food below 8 ° C and yet contravene regulation 10(1) ie to keep food at a safe temperature. Where it is necessary to keep food below 8 ° C to ensure its safety, this must be specified by the manufacturer/supplier on the label or in the accompanying documentation.

There may be instances where a storage temperature of below 8 ° C is specified on the label. However, this may be for quality reasons and as such, this storage temperature on the label will not be a legal requirement.

Raw meat and poultry should be kept refrigerated.

The time out of temperature control should be kept to a minimum.

Where a storage temperature below 8 °C is recommended, the baker should seek clarification from the supplier as to whether it is for food safety or quality reasons. Any such products should be used as soon as possible before their "Use By" date.

Cooling of Food

- 11. Afood business responsible for cooling any food which must, by virtue of this Part, be kept at a temperature below ambient temperatures shall cool that food as quickly as possible following-
- (a) the final heat processing stage; or
- (b) if no heat process is applied, the final preparation stage,

to the temperature at which, by virtue of this Part, it must be kept.

Guides to Good Hygiene Practice

- 12. For the purposes of regulations 6(2) and 9(1), the presence of a scientific assessment of the safety of any food in a guide to good hygiene practice which has been-
- (a) forwarded by the Secretary of State to the Commission pursuant to article 5.5 of the Directive, unless the Secretary of State has announced that the guide no longer complies with article 3 of the Directive;
- (b) developed in accordance with article 5.6 and 7 of the Directive and published in accordance with article 5.8 of the Directive.

shall, until the contrary is proved, be considered sufficient evidence that the scientific assessment in question is well-founded.

Guide to compliance

This only applies to foods which must be kept below ambient temperatures for food safety reasons after baking and/or final preparation and would include gelatined pork pies, vanilla slices, cream cakes. This provision does not apply to ingredients or partly finished products or fillings.

The requirement to cool food as quickly as possible does not imply that a blast chiller must or should be used.

The scientific evidence and assessment to support the variation between 8 ° C and 63 ° C which appears in this guide shall, until the contrary is proved, be considered sufficient evidence that the scientific assessment in question is well founded.

(See Annex 1).

Advice on good practice

Baked food should be allowed to cool initially in the bakery before being refrigerated.

It is good practice to cool hot food to 10 °C in less than 4 hours. To assist cooling:-

- food should be transferred from hot racks and/ or trays to cool racks and/ or trays.
- large items or batches of food should be trans-

fer red to cool containers and if possible split into smaller pieces or

 food should be stored so as to allow air to circulate around it.

Other food following final preparation should be refrigerated.

The use of blast chillers for unwrapped products including cream cakes and sandwiches can cause drying out, accelerate staling and adversely affect the quality of the products.

FOOD SAFETY (TEMPERATURE CONTROL) REGULATIONS 1995

Regulation 7 (2) - Upward Variation in Temperature for Cream Cakes

The upward variation in the statutory temperature for cream cakes from 8 to 12 °C provided the cream cakes are stored and/or displayed for no longer than one continuous period of 16 hours, is included in this Guide on the basis of the generic scientific assessment outlined below:

Challenge testing of fresh cream cakes stored at 12 °C with high levels of Staphylococcus aureus, Salmonella arizonae and Listeria monocytogenes has shown that there is no significant growth of Staphylococcus aureus and Salmonella arizonae for 24 hours and for Listeria monocytogenes for 20 hours. Therefore fresh cream cakes can be stored at 12 °C for one single continuous period of 16 hours.

The research was conducted in 1992 by Weston Research Laboratories Ltd (NAMAS accreditation No 1033). The data has been reviewed and verified using the MAFF Food Micro Model and accepted by Department of Health and LACOTS, who have copies of the data.

TEMPERATURE CONTROL REQUIREMENTS IN SCOTLAND

Legal Requirement

<u>Chill and Hot Holding</u> <u>Requirements</u>

- 13. (1) Subject to paragraph (2), no person shall keep food with respect to which any commercial operation is being carried out at or in food premises otherwise than-
- (a) in a refrigerator or refrigerating chamber or in a cool ventilated place; or
- (b) at a temperature above 63 ° C.
- (2) Paragraph (1) shall not apply to any food-
- (a) which is undergoing preparation for sale;
- (b) which is exposed for sale or has been sold to a consumer whether for immediate consumption or otherwise:
- (c) which, immediately following any process of cooking to which it is subjected or the final processing stage if no cooking process is applied, is being cooled under hygienic conditions as quickly as possible to a temperature which would not result in a risk to health;

Guide to Compliance

This only applies to food which is likely to support the growth of pathogenic micro-organisms or the formation of toxins. Such food must be kept in a refrigerator, or refrigerating chamber or cool ventilated place but no temperature is specified in law, or at a temperature above 63 ° C.

The requirement in paragraph one above does not apply if the food:-

- is being prepared for sale;
- is exposed for sale;
- is exposed for sale or has been sold to a consumer;
- is being cooled. See regulation 16(3).

Advice on good practice

The food should be kept at 8 ° C or less

The food should be cooled to 8 $\,^{\circ}$ C or less.

Guide to Compliance

Advice on good practice

(d) which, in order that it may be conveniently available for sale on the premises to consumers, it is reasonable to keep otherwise than as referred to in paragraph (1);

replenishing displays.
e on the

baking industry.

The amount of any such stock should be kept to a minimum.

(e) which, for the duration of its shelf life, may be kept at ambient temperatures with no risk to health; Foods may be kept for up to four hours at ambient temperatures. This "four hour rule" is normally used for such items as cream cakes and sandwiches.

A system should be devised so that products are not displayed for more than 4 hours after production eg coloured dots to indicate a time of production. This system should be documented.

(f) to which Council Regulation (EEC) No 1906/90 on certain marketing standards for poultry, as amended, applies;

This regulation does not apply to the

Shell eggs should be used before their best before date and kept cool, preferably below 20 °C.

(g) to which Council Regulation (EEC) No 1907/90 on certain marketing standards for eggs, as amended, applies. Liquid egg produced in the bakery from shell eggs must be used immediately or stored at 10 $^{\circ}$ C or less and used within 24 hours.

Reheating of Food

14. (1) Food which in the course of a commercial operation has been heated and which is thereafter reheated before being served for immediate consumption or exposed for sale shall, on being reheated, be raised to a temperature of not less than 82 °C.

This applies to all foods irrespective of whether they can support the growth of pathogenic micro-organisms or the formation of toxins and thereby be a food safety hazard.

A predetermined time/temperature combination which will achieve a minimum temperature of 82 ° C must be used, or the temperature verified by probing for those bakery products likely to support the growth of pathogenic micro-organisms or the formation of toxins eg pies, sausage rolls, quiches etc.

Where a known time/ temper ature combination is used, products should be probed periodically to ensure they are achieving the required temperature.

Guide to Compliance

Advice on good practice

(2) In any proceedings for an offence under paragraph (1), it shall be a defence for the person charged to prove that he could not have raised the food to a temperature of not less than 82 ° C without a deterioration of its qualities.

In certain circumstances, raising the product to not less than 82 °C will cause the product to deteriorate and render it unacceptable. In these instances, a lower temperature could be used. However, this must be consistent with food safety.

It is good practice to reheat food to a core temperature of at least 70 ° C for 2 minutes or to a minimum of 75 ° C, if there is no holding time.

Treatment of Gelatine

15. (1) Gelatine intended for use in the preparation of bakers' confectionery filling, meat products or fish products in the course of the activities of a food business shall, immediately before use, be brought to the boil or brought to and kept at a temperature of not less than 71 ° C for 30 minutes.

Gelatine should be visually boiling before use. If the gelatine is to be kept at 71 ° C for 30 minutes, the method used eg bain marie must have been checked to ensure it keeps the gelatine above 71 ° C.

The temperature of the gelatine should be checked each time to ensure it is maintained above 71 °C.

(2) Any gelatine left over after the completion of the process shall, if not treated as waste, be cooled under hygienic conditions as quickly as is reasonably practicable and when cold shall be kept in a refrigerator or a refrigerating chamber or a cool ventilated place.

Any gelatine left over must be cooled under hygienic conditions as quickly as possible and when cold stored in a refrigerated chamber or cool ventilated place. Before re-use, it must be prepared as described in 15(1) above.

It is recommended that any gelatine left over is disposed of as waste. If not it should be cooled quickly, then contained, lidded and put in a refrigerator operating at 8 °C or less, and a date code applied.

Food which is a Risk to Health

16. (1) Subject to paragraphs (2) and (3), no person shall in the course of the activities of a food business keep any products which are-

- (a) raw materials, ingredients, intermediate products or finished products; and
- (b) likely to support the growth of pathogenic micro-organisms or the formation of toxins,

at temperatures which would result in a risk to health. This regulation details an overriding general requirement to keep all food which can support the growth of pathogenic micro-organisms or the formation of toxins at a "safe" temperature. No temperature is actually specified. Regulations 13 to 15 detail more specific requirements for temperature controls. There could be instances where the general requirement could imply a stricter level of control, or cover a wider range of foods. Food includes all raw materials, ingredients, intermediate or finished products. Raw meat and poultry must be kept at "safe" temperatures.

It is good practice to store all perishable food at 8 °C or below.

Raw meat and poultry should be stored at 5 °C or below.

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Guide to Compliance

Advice on good practice

(2) Consistent with food safety, limited periods outside temperature control are permitted where necessary to accommodate the practicalities of handling during preparation, transport, storage, display and service of food.

Limited periods outside temperature control are permitted where necessary to accommodate the practicalities of handling during preparation, transport, storage, display and service of the food, provided the period outside temperature control does not result in the food becoming unsafe.

The time out of temperature control should be kept to a minimum.

(3) Paragraph (1) shall not apply to any food which immediately following a final heat processing stage, or a final preparation stage if no heat process is applied, is being cooled as quickly as possible to a temperature which would not result in a risk to health.

This only applies to foods which must be kept below ambient temperatures after baking and/or final preparation and includes cream cakes, vanilla slices. This does not apply to ingredients or partly-finished products or fillings.

The requirement to cool food as quickly as possible does not imply that a blast chiller must or should be used.

Baked food should be allowed to cool initially in the bakery before being refrigerated.

It is good practice to cool hot food to 10 °C in less than 4 hours.

To assist cooling: -

- food should be transferred
 from hot racks and/ or trays
 to cool racks and/ or trays.
- large items or batches of food should be trans-

ferred to cool

containers and if possible split into smaller pieces or batches.

 food should be stored so as to allow air to circulate around it.

Other food following final preparation should be refrigerated.

The use of blast chillers for unwrapped products including cream cakes and sandwiches can cause drying out, accelerate staling and adversely affect the quality of the products.

Part 5 LIST OF APPENDICES

The following appendices contain background information and examples of various forms, record sheets which can be used. They do not form part of the recommended means of compliance with the legal requirement. Where appropriate they have the status of examples of good practice. The forms, record sheets do not have to be used or they can be used as ideas for or the basis of your own forms. If the various forms and record sheets are used, it is recommended that they are kept all together in a folder or binder.

- 1. Daily cleaning checklist.
- 2. Example of a pictorial cleaning schedule.
- 3. Cleaning schedule.
- 4. Information on wall surfaces.
- 5. Information on flooring materials.
- 6. Temperature check record.
- 7. Extract from Workplace (Health, Safety and Welfare) Regulations 1992 on sanitary conveniences and washing stations.
- 8. Good hygiene practice table.
- 9. Pre-employment questionnaire.

- 10. Delivery check record.
- 11. Example of a pest control inspection form.
- 12. Example of a pest control summary sheet.
- 13. Pest control services.
- 14. List of organisations providing formal training courses.
- 15. Training record.
- 16. Personal training record.
- 17. Staff training record.

Example Of A Pictorial Cleaning Schedule

Fridge Interior	Weekly Defrost every 2 months	Bucket & Cloth Hot water Detergent	Wipe up spillages promptly Remove contents Wipe surfaces
Utensil Racks	Weekdy	Bucket & Cloth	Remove utensils Wipe frame thoroughly
Table Legs & Drawers	Weekly	Bucket & Cloth Cloth Salitiser	Empty drawers Wipe surfaces including containers thoroughly
Hoors	Daily	Scraper, Mop-bucket & Mop Botesgent 3 Chlorine tablets	Scrape Mop Remove spillages promptly
Waste	Offen	Hands	Place waste in bins provided promptly
Cloths	Daily	Bucket Hot water 3 Chlorine tablets	Sterilise in chlorinated water overnight Discard when worn
Simks	Daily	Cloth Hot water Detergent Sanitiser	Wash Rinse Sanitise
Fridge Doors & Handlers	Daily	Bucket & Cloth	Wash
Bread Slicer	Daily	Brushes Cleaning is day	Brush away crumbs Empty tray Use small brush for sides
Vegetable Slicer	After shredding lettuce and at the end of each day	Bucket & Cloth Cloth Hot Water Detergent Sanitiser	Disassemble Wash Rinse Sanitise Rinse after each vegetable
Table Tops & Surfaces	After each sandwich batch and at the end of each day	Scraper, Bucket & Cloth Cloth Scraper Sanitiser Sanitiser	Scrape Wash Rinse Sanitise
Utensils	Before and after use	Equipment sink Cloth & Scourer Scourer Detergent	Wash Rinse Special attention to colander
Hands	Often. Always before handling food	Hand sink & Nail brush Hot water Soap Hand-Sanitiser	Wash Rinse Dry Sanitise
What's being cleaned?	When?	What to use?	How?

How to complete the cleaning schedule

Frequency: Daily/End of Shift After Use **Before Use** Between different colour of dough or of mixes Responsibility: **Operative** (actual name of the person) Cleaner **Contract Cleaner Cleaning Materials:** Cleaning chemical and its dilution. Method of Cleaning: Brief description of what parts of the machine are to be cleaned and how. **Personal Protective Equipment:** Gloves, aprons, goggles etc. Area/Item of **Equipment:** The areas or items of equipment should be listed. These can either be in broad terms, eg. The Spiral Mixer, or in more detail eg. - inside the mixing bowl and the spiral and underside of the lid

- the outside of the mixing bowl and lid

- the outside of the mixer.

FLOORING MATERIALS

1. **Ceramic Tiles**: The main types of tile are glazed which has a glass-like (vitreous) surface, and quarry tiles. The tiles can vary considerably in size between 6" to one foot square. A larger tile means there is less grouting to clean, however, unless it is a thick tile it will be more prone to cracking if a heavy load is dropped on it or a fixture/racking foot is placed on it. Tiles should be laid flat on screed, waterproof grout should be used. The grout should be brought near to level with the top of the tile to provide a smooth surface. Any slight change in floor level should be accommodated by a gentle slope in the floor, lips or ridges in the floor should be avoided.

The edge of any tile floor should fit flush against any other type of flooring material and be level with it. Where a lip or ridge is created, an angled metal strip should be fitted to prevent the edge of the tile being chipped and to allow any wheeled unit to move across the floor smoothly.

Tiles are suitable for all areas. Any damaged or cracked tiles can be easily replaced. The presence of liquids including water on them may make them slippery so attention is required to remove liquid spillages or water from cleaning. Where heavy mechanical handling equipment is used this can crack the tiles.

2. **Terrazzo Tiles**: These consist of marble chips embedded in cement. The top of the tile is polished smooth. The grout comes level with the top of the tile to produce a completely smooth floor, thus avoiding the grooves where the grouting is on other tiled floors.

Being a polished tile, they may be slippery, and even more so when wet. They are easily attacked by acids and alkali detergents and must be cleaned using a neutral detergent. Spillages of alkali or acid products should be removed as soon as possible, as prolonged contact will discolour/bleach and then damage the surface of the floor. Continuous running water, mixtures of heat and water, water left for a very long time will damage the surface of the tile. Their use in very wet, humid areas is not recommended. The resistance of the floor to attack can be increased by treating with a chemical hardener or sealant after laying.

Can be used in preparation rooms because of their attractive appearance, range of colours and smooth easy to clean surface. This is despite being slippery when wet and prone to bleaching by acid spillages and damage by alkaline cleaning chemicals. Occasionally used in store rooms, warehouses. Where heavy mechanical handling equipment is used, this can cause significant wear and the tiles to crack.

3. **Vinyl Tiles**: Cheap, easy to lay, relatively hard wearing, easy to replace, easy to clean. The appearance and life of the floor can be enhanced by sealing with a polish or sealant (this should be done by a contract cleaning company - periodically the polish or sealant will need removing and replacing).

The surface can be dented or scored by heavy weights. In heavy traffic areas, particularly where trolleys or wheeled cages are used, the surface can be damaged. Very hot items will damage the surface.

Vinyl tiles are suitable for use in most areas, they are not recommended for very heavy traffic areas, particularly where mechanical handling equipment is used, as the surface will rapidly wear away.

4. Vinyl Sheeting: More expensive than vinyl tiles, normally has to be laid by a contractor. Any joins between sheets can be heat welded to form a continuous easy to clean surface. Any damaged areas can be cut out and a patch inserted and the edges heat welded. Can be supplied with a non-slip surface, although this does inhibit cleaning. Very hot items will damage the surface. Can tear or rip if items of equipment are dragged across the surface in this particular instance it is not as durable as vinyl tiles. Any sub floor must be smooth without ridges or depressions, otherwise the sheeting will split or become holed.

Although suitable for most areas except where mechanical handling equipment is used. Normally only used for areas where open food is prepared or handled.

5. **Concrete**: Cheap and easy to lay. Provided the surface is sealed with a concrete hardener or an epoxy resin floor paint, a hard, durable, smooth, continuous, easy cleanable surface is produced.

If the surface of the concrete is not sealed it will dust, stain easily and be attacked by acids and alkalis and running water, and in these conditions the surface will in time break up. The appearance of a bare concrete floor is dark and not particularly attractive.

Used normally for warehouses and corridors. Not normally used for open food preparation or handling areas, unless sealed with a light colour epoxy resin floor paint to produce a finish more associated with a food preparation room.

6. **Epoxy Resin**: This provides a smooth, continuous attractive easy to clean surface, which is resistant to impact damage, water, acid and alkalis.

They are expensive and normally have to be laid by contractors. The area has to be well ventilated whilst the floor drys and cures. The fumes given off can taint the food. The sub floor has to be well prepared, otherwise the epoxy resin will not bond to it and will lift and eventually break up. The uniform colour may not be particularly attractive.

Although suitable for all areas it is rarely used for storage areas as there are cheaper alternatives which are almost as good. Normally only used where open food is handled or prepared.

- 7. **Natural Minerals**: Although rarely, if ever, used today in the past slate, granite and marble slabs have been used for floors. Provided they can still be cleaned and are in a sound condition, it can still satisfy the legal requirement.
- 8. **Wood**: Often used in older premises, especially in store rooms, provided the floor is smooth and in good condition and can be cleaned, it can still satisfy the legal requirement. In store rooms where spillages could occur which could soak into or stick to the floor, the wood should be sealed eg varnish. When the wood becomes exposed through wear or damage, the affected area should be resealed. Where open food is handled, prepared or displayed, any wooden floor must be sealed.
- 9. **Metal**: Metal sheeting or plating is hardly ever used, except in refrigerators, walk-in chillers and freezers. Although extremely hard, durable and resistant, it can be slippery. If the sheeting is not thick enough or properly fixed it can buckle or turn up at the edges or corners. The raised metal can be a trip hazard, as well as being very sharp. Normally metal in the form of checker plate is only used in corridors where the floor is sloping and the extra grip provided by a checker plate surface is required.

Suggested Flooring Materials for various areas of the Bakery

Floors	Concrete, Professity Seeled	Cecamic Time	Terrumo Tibo	Wayi The	Vinyl Shart	Epony Nasin
Store Room	Yes	Yes	Yes	Yes	Yes	Yes
Warehouse	Y		Υm			Yes
Dispense Area		Yes	Yes	Yes	Ye :	Yes
Bakery Production Area		Yea	Yes	Yes	Yes	Yes
Dispatch Area	Ym	Yes	Ym	Yes	Yes	Yes
Toilet	Ym	Yes	Yes	Yas	Yes	Yes
Reture Store	Yes			Yes		

TEMPERATURE CHECK RECORD

Name of Checker	

Date	Location/ Type of Unit	Tempe	erature	Comments/ Action Taken	
	J 1		Target	Actual	
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Notes

- (a) Thermometer probe to be placed in front of fans on the evaporator unit where applicable, or in the same place each day eg. middle shelf.
- (b) If the temperature of the unit is above the target temperature, check the unit:
 - (i) is not on defrost;
 - (ii) has not been in constant use;
 - (iii) the door has not been left open.

Re-check in 30 minutes (60 minutes if on defrost). If still high, notify the Supervisor/Manager. If the unit is broken down, check the condition of the products.

WORKPLACE (HEALTH, SAFETY AND WELFARE) REGULATIONS 1992 SANITARY CONVENIENCES AND WASHING STATIONS

For existing bakeries in use prior to 1 January 1993, schedule one applies.

Schedule One

Provisions applicable to factories which are not new workplaces, extensions or conversions.

Part II - Number of sanitary conveniences

- (a) In workplaces where females work, there shall be at least one suitable water closet for use by females only for every 25 females.
- (b) In workplaces where males work, there shall be at least one suitable water closet for use by males only for every 25 males.
- (c) In calculating the number of males or females who work in any workplace for the purposes of this Part of this Schedule, any number not itself divisible by 25 without fraction or remainder shall be treated as the next number higher than it which is so divisible.

For bakeries built/occupied after 1 January 1993 or any bakeries who have had major extensions or conversions, Regulation 20 applies.

Regulation 20 - Sanitary conveniences

- (1) Suitable and sufficient sanitary conveniences shall be provided at readily accessible places.
- (2) Without prejudice to the generality of paragraph (1), sanitary conveniences shall not be suitable unless -
- (a) the rooms containing them are adequately ventilated and lit;
- (b) they and the rooms containing them are kept in a clean and orderly condition; and
- (c) separate rooms containing conveniences are provided for men and women except where and so far as each convenience is in a separate room the door of which is capable of being secured from inside.
- (3) It shall be sufficient compliance with the requirement in paragraph (1) to provide sufficient sanitary conveniences in a workplace which is not a new workplace, a modification, an extension or a conversion and which, immediately before this regulation came into force in respect of it, was subject to the provisions of the Factories Act 1961, if sanitary conveniences are provided in accordance with the provisions of Part II of Schedule 1. (See above).

Regulation 21 - Washing facilities

- (1) Suitable and sufficient washing facilities, including showers if required by the nature of the work or for health reasons, shall be provided at readily accessible places.
- (2) Without prejudice to the generality of paragraph (1), washing facilities shall not be suitable unless -

- (a) they are provided in the immediate vicinity of every sanitary convenience, whether or not provided elsewhere as well;
- (b) they are provided in the vicinity of any changing rooms required by these regulations, whether or not provided elsewhere as well;
- (c) they include a supply of clean hot and cold, or warm, water (which shall be running water so far as is practicable);
- (d) they include soap or other suitable means of cleaning;
- (e) they include towels or other suitable means of drying;
- (f) the rooms containing them are sufficiently ventilated and lit;
- (g) they and the rooms containing them are kept in a clean and orderly condition; and
- (h) separate facilities are provided for men and women, except where and so far as they are provided in a room the door of which is capable of being secured from inside and the facilities in each such room are intended to be used by only one person at a time.
- (3) Paragraph (2)(h) shall not apply to facilities which are provided for washing the hands, forearms and face only.

Minimum numbers of facilities

Table 1 shows the minimum number of sanitary conveniences and washing stations which should be provided. The number of people at work shown in column 1 refers to the maximum number likely to be in the workplace at any one time. Where separate sanitary accommodation is provided for a group of workers, for example men, women, office workers or manual workers, a separate calculation should be made for each group.

Table 1

Number of people	Number of water	Number of
at work	closets	wash stations
1 to 5	1	1
6 to 25	2	2
26 to 50	3	3
51 to 75	4	4
76 to 100	5	5

In the case of sanitary accommodation used only by men, Table 2 may be followed if desired, as an alternative to column 2 of Table 1. A urinal may either be an individual urinal or a section of urinal space which is at least 600 mm long.

Table 2

Number of men	Number of water	Number of
at work	closets	urinals
1 to 15	1	1
16 to 30	2	1
31 to 45	2	2
46 to 60	3	2
61 to 75	3	3
76 to 90	4	3
91 to 100	4	4

An additional water closet, and one additional washing station should be provided for every 25 people above 100 (or fraction of 25). In the case of water closets used only by men, an additional water closet for every 50 men (or fraction of 50) above 100 is sufficient, provided at least an equal number of additional urinals are provided.

Appendix 8

GOOD HYGIENE PRACTICE FOR PEOPLE WORKING IN AREAS WHERE FOOD IS HANDLED

- 1. Wash and dry your hands:
 - before and after handling food; and
 - after going to the toilet.
- 2. Report any illness to management.
- 3. Do not work if you are suffering from diarrhoea and/or vomiting.
- 4. Do not handle food if you have scaly or infected lesions on your skin which cannot be totally covered during food handling.
- 5. Ensure cuts and abrasions on exposed areas are totally covered with a distinctively coloured waterproof dressing.
- 6. Do not spit in food handling areas.
- 7. Do not smoke in food handling areas.
- 8. Do not eat or chew gum in food handling areas.
- 9. Wear clean protective clothing, including adequate hair covering.
- 10. Ensure work surfaces and utensils are clean.

Table from Food Handlers: Fitness to Work

Guidance for Food Businesses, Enforcement Officers and Health

Professional published by Department of Health 1995.

(See Part 6-references).

Example Of A Pest Control Summary Sheet

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STAFF TRAINING RECORD

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Record the date of the training in the relevant box.

Part 6 Glossary, References, Contacts Glossary: (for terms used in this Industry Guide)

Glossary	
Ambient Temperature	The temperature of the surrounding environment. Commonly used to mean room temperature.
Bacteria	Single celled living organisms. Some may spoil food or cause illness.
Bactericidal Soap	Liquid soap containing a chemical which kills bacteria.
Bakers Smock	Short or long sleeved fabric garment similar to a t-shirt.
Batch Bread	Bread baked without the use of baking tins by placing dough pieces next to each other in rows on the metal base plate of the oven (oven bottom).
Best Before Date	Date mark required on longer life foods that are not subject to rapid microbiological spoilage. The date mark relates to food quality, not food safety.
Blast Chiller	Equipment designed to cool food rapidly after baking. Usually employs a combination of cooled air and rapid air circulation (movement) over the products.
BCCCA	Biscuit, Cake, Chocolate and Confectionery Alliance. Trade Association representing producers of biscuits, cakes, chocolate and confectionery.
Buffer Bars	Strips of metal, rubber, plastic or wood normally fitted to walls or doors to protect them against damage.
Bristle Strips	Large number of thin synthetic or natural fibres bunched vertically to form a strip. Used to proof the base of doors against the entry of mice.
Cable Trays	Shallow u-shaped flat bottomed metal sections normally mounted overhead in which electrical cables are laid/carried.
Centre Temperature	The temperature at the centre of a piece of food.
Certificate of Conformity	Certificate confirming that the product has been tested/analysed and meets the criteria/specifications for the product.
Chillers/Refrigerators	Equipment to keep food cool normally between 0 and 8 °C.
Cleaning	The removal of food residues, dirt, grease and other unwanted debris or materials.
Compliance	Measures, actions that satisfy the legal requirement.
Contamination	The introduction (into food) of unwanted, undesirable materials including microorganisms.
Cool Box	Insulated lidded container or box used for keeping foods cool.
Coved	Rounded finish to the junction between walls and floors, or between two walls to make cleaning easier.
Critical Control Points	Points in the production process where it is critical to the safety of the food that the control measure is carried out correctly, thereby eliminating or reducing the hazard to a safe level.
Cross Contamination	The transfer of bacteria from contaminated (normally raw) food to other foods. This may be by:- Direct contact foods stored next to each other; Drip from contaminated food stored above other food; Food handlers who handle contaminated food and then other food; Equipment and work surfaces used first for contaminated food and then other food.
Crumbs	Small pieces of bread or flour confectionery.

Glossary	
Cryogenic	System of cooling and/or refrigeration using liquified gas injected into cooling or storage chambers.
Defrost of Equipment	Periodic switching off of the refrigeration plant, which can be accompanied by hot refrigerant gas bypassing the compressor and passing back through the evaporator, or electric heating units switching on, to thaw the ice build-up on the evaporator. On most commercial equipment the defrost cycle is automatically programmed.
Dermatitis	Infection of the skin resulting from damage and/or drying out of the skin caused by exposure to a variety of substances and/or chemicals.
Detergent	Chemical cleaning agent which removes dirt, grease and food residues. It does not kill bacteria.
Detergent Sanitiser	A blend of detergent and a sanitiser which can clean and disinfect at the same time.
Diffuser	Opaque square section or curved plastic cover fitted over fluorescent tubes to reduce the glare and provide a more even and softer light.
Disinfection	Process resulting in the reduction of the number of micro-organisms (usually bacteria) on a surface or piece of equipment. Normally achieved by the use of chemicals or occasionally heat (hot water above 82 °C) to kill the micro-organisms.
Disinfectants	Chemicals which kill micro-organisms. Disinfectants used must be suitable for use in food premises.
Due Diligence	The legal defence, available in Section 21 of the Food Safety Act, that a business took all reasonable precautions and exercised all due diligence.
ЕНО	Environmental Health Officer. Employed by the local authority to enforce food safety legislation.
Electronic Fly Killers	Equipment to control flies and other flying insects. Insects are attracted by UV tube and destroyed on a high voltage grid.
Eutectic Plates	Thin plates or packs usually made of metal or plastic containing a refrigerant liquid designed to be cooled in a refrigerator or frozen in a freezer and then used to help keep food cool when it is being held or transported in insulated containers (cool boxes).
Evaporator	The part of the refrigeration equipment which becomes cold and which cools the air in the chilled or frozen storage area.
Fat Traps	Brick built chambers in drainage system which allow the separation and collection of fat from the waste water.
Food	Defined in Section 1 of the Food Safety Act 1990 and includes all ingredients and drink, including water.
Food Handler	Anyone who directly handles or prepares food, irrespective of whether it is open (unwrapped) or packaged.
Food Poisoning	Illness transmitted by food usually caused by bacteria, either through infection or toxins. Symptoms commonly include diarrhoea and/or vomiting.
Foreign Body	Materials, objects from the building, equipment, people, environment or previous production run which may contaminate the food.
Formers (Wooden)	Blocks of wood fastened together to form a square or rectangular shape in which large fruit cakes are baked.
Freezers	Equipment to keep food frozen. Usually set to operate at -18 °C or below.

Glossary	
Harbourage	An area, normally inaccessible to cleaning or inspection, where pests can hide or nest.
Hard Stand	Solid, hard, durable, impervious area on which equipment can be stored.
Hazard	Anything that can potentially cause harm (injury, sickness, ill-health).
Hazard (Food)	Any food that may cause harm to the person who eats it.
Hazard Analysis	The term used to describe the review of a production process involving the identification of the hazards to the food, at what step in the process they could occur, and the identification and introduction of measures to control them.
High Risk Foods	Ready to eat foods which will support the growth of food poisoning bacteria. Also, foods which have undergone most or all of their steps in production and if contaminated with food poisoning bacteria there is no further step in the process which will control the hazard.
Hygiene (Food)	Measures to ensure the safety and wholesomeness of food.
Hygiene Awareness	Knowledge gained by a food handler regarding personal hygiene, cleaning, food hazard, pest control, stock rotation, waste and temperature control.
Hermetically Sealed	Sealed so that air and other contaminants cannot enter the pack in which the product is contained, eg. a can, thereby preventing deterioration.
Insect Proof Screens	Fine mesh screens fitted to windows and occasionally other openings to prevent the entry of flying insects such as flies into buildings.
LACOTS	Local Authority Co-ordinating Body for Food and Trading Standards.
Listeria Monocytogenes	Bacteria which can grow at low temperatures and can cause food poisoning.
Louvres	Narrow strips of (normally) glass, plastic, or metal which can be angled to allow the passage of air for ventilation.
Micro-organisms	Any small living organism especially bacteria, moulds, yeasts and viruses.
Moulding Baskets	Oval or circular baskets with tapering sides made of rounded lengths of wood used for moulding/shaping dough pieces for continental breads.
Mould	Micro-organism that can grow at low or high temperatures in damp conditions and in the presence of high levels of salt or sugar.
N/SVQ	National/Scottish Vocational Qualification.
Open Food	Food which is unwrapped or partially wrapped (therefore exposed potentially to the risk of contamination).
Pathogenic Micro-organisms	Micro-organisms which can cause illness or harm.
Pest	Any unwanted animal that can or does enter a food premises and may live in the premises or the food, eg. rats, mice, insects, birds.
Potable Water	Water which is fit to drink or use in food preparation.
Private Water Supply	Water from a private well or spring rather than from the public water mains.

Glossary	
Probe	Part of the temperature measuring equipment that is affected (heated or cooled) by the temperature of the surroundings. This then produces an electrical signal which is converted by the thermometer into a numerical figure for the temperature of the surroundings.
Probing	Placing the probe into the surroundings to take its temperature, normally only used to mean when the probe is inserted between items of food or directly into the food.
Proofing	Physical measures taken to restrict or prevent the access/entry of pests into a building.
Protective Clothing	Clothing worn by food handlers to prevent contamination of food by foreign bodies and/or micro-organisms from the person, eg. coats, smocks, hats, aprons.
Refrigeration	General term for all equipment used to keep food cool.
Refrigerator/Chiller	Item of equipment used to keep food cool, usually operates between 0 and 8 $^{\rm o}{\rm C}.$
Salmonella spp	Type of bacteria that can cause food poisoning.
Sanitiser	Same as disinfectant. A chemical which can kill micro-organisms.
Scrubber Drier	Electrically powered machine with rotating pads or brushes for scrubbing and a vacuum system attached to a squeegee for sucking up the water used for cleaning floors.
Services	General term for electrical cabling, gas and water pipework.
Setters	Narrow, short, thick wooden boards which are placed at the ends of the rows of dough pieces for batch bread and pass through the oven with the dough.
Soap	Chemical for removing dirt and grease (normally used to describe chemicals used for washing hands). Differ in their composition to detergents, but have a similar action. They do not kill micro-organisms (see Disinfectants).
Spores	Cells formed by certain bacteria and many moulds to allow them to withstand adverse conditions such as drying and high temperatures.
Staphylococcus Aureus	Bacteria which can cause food poisoning.
Stock Rotation	Practice of moving (rotating) stock so that the oldest is used first and the newest last.
Sump	Underground/beneath floor level enclosed chamber for the collection and temporary storage of waste liquid, normally water from refrigeration units or sinks.
Supplier Audit	Visit to a suppliers premises to carry out a critical examination of their systems and procedures in relation to food hygiene and food safety.
Suspended Ceiling	Ceiling hung on wires, cables, girders beneath the roof or floor of a building.
Taint	Contamination of food with undesirable odours or flavours.
Toxins	Poisonous substances. Can be produced by growing micro-organisms.
Toxic	Poisonous, harmful to health.

Glossary	
Use By Date	Date mark required on microbiologically perishable pre-packed food. It is an offence to sell food after its use by date.
Virus	Microscopic organism. Some are transmitted by food and may cause illness. Viruses cannot grow or (multiply) in food.
Wholesome	In relation to food - means fit to eat.

References: Details of Other Regulations and Documents mentioned in this Guide

References

Council Directive on the Hygiene of Foodstuffs (93/43/EEC)
Official Journal of the European Communities No L 175/1 18 July 1993
(from The Stationery Office Publications and book shops)

A Template - Industry Guides to Good Hygiene Practice (from Department of Health, P O Box 410, Wetherby, LS23 7LN) (FREE)

The Food Safety (General Food Hygiene) Regulations 1995 SI No. 1763 (from The Stationery Office Publications and book shops) £3.20

The Food Safety (Temperature Control) Regulations 1995 SI No 2200 (from The Stationery Office Publications and book shops) £2.35

- * A Guide to the General Food Hygiene Regulations 1995 (FREE)
- * A Guide to Food Hazards and Your Business (FREE)
- * A Guide to the General Temperature Control Regulations 1995 (FREE)
- * Food Handlers Fitness to Work Guidance for Food Businesses, Enforcement Officers and Health Professionals £2.50
- * Food Handlers Fitness to Work Guidelines for Food Business Managers (FREE)
- * All of the five booklets listed above are published by the Department of Health and are available from Department of Health, P O Box 410, Wetherby LS23 7LN

Guidance on the Food Safety (Temperature Control) Regulations 1995 (available from Department of Health, Room 501A, Skipton House, 80 London Road, London SE1 6LH)

Food Safety Act 1990 £6.45 (from The Stationery Office Publications and book shops)

Assured Safe Catering £8.50 (Department of Health publication available from The Stationery Office Publications and book shops)

SAFE (Systematic Assessment of the Food Environment) £5.50 (from the British Hospitality Association)

Food Labelling Regulations 1996 SI No 1499 £7.35 (from The Stationery Office Publications and book shops)

Workplace (Health, Safety and Welfare) Regulations 1992 Approved Code of Practice and Guidance L24 £5.00 (from The Stationery Office Publications and book shops)

Private Water Supplies Regulations 1991 SI No 2790 (from The Stationery Office Publications and book shops)

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