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This national standard has been drafted by a specialist working group of the Food Industry Consultative Committee of the National Standards Authority of Ireland. The standard is intended to be used as a guide to Regulation (EC) No 852/2004 of the European Parliament and of the Council on the hygiene of foodstuffs.

All food business operators, including those in the food service sector, are obliged to ensure that the food they produce is safe and that they are in compliance with Regulation (EC) 852/2004.

INTRODUCTION

Article 4 and Annex II of Regulation (EC) 852/2004 specifies the hygiene requirements for food businesses. Guidance on compliance with the Regulation is given in this guide in Section 1 and includes structural operational and personal hygiene requirements.

Article 4 of Regulation (EC) 852/2004 specifies maintenance of the cold chain in food businesses guidance on compliance with this requirement is given in the guide in Section 1.


Regulation (EC) 2073/2005 microbiological criteria for foodstuffs is referenced by Regulation (EC) 852/2004. Guidance on the requirements for the microbiological criteria for foodstuffs and how they apply to businesses in the food service sector will be available from the Food Safety Authority of Ireland in 2006.

Article 5 of Regulation (EC) 852/2004 requires food business operators to put in place, implement and maintain a food safety control system based on the principles of Hazard Analysis and Critical Control Point (HACCP). Recital (15) states that a flexible approach may be taken to this application of HACCP for some food businesses. Guidance on compliance with the requirement to implement HACCP and the flexible application of HACCP is given in Section 2 of this guide.

In this Standard the word “shall” indicates that compliance with the guidance is mandatory, the guidance relates to a specific requirement of Regulation (EC) 852/2004.

In this standard the word “should” is used where compliance with the guidance is “best practice” and does not relate to a specific requirement of the Regulation (EC) 852/2004.
SCOPE AND FIELD OF APPLICATION OF I.S. 340

This Irish Standard specifies guidance to compliance with the requirements of Regulation (EC) No. 852/2004 on Hygiene of Foodstuffs.

This Irish Standard applies to all food businesses where food is prepared and served to consumers and includes restaurants, hotels, casual dining outlets and licensed premises.
TERMS AND DEFINITIONS

Chemical Contamination:

**Control (verb):** To take all necessary actions to ensure and maintain compliance with criteria established in the HACCP plan.

**Control (noun):** The state wherein correct procedures are being followed and criteria are being met.

**Control measure:** Any action and activity that can be used to prevent or eliminate a Food Safety hazard or reduce it to an acceptable level.

**Corrective action:** Any action to be taken when the results of monitoring at the CCP indicate a loss of control.

**Critical Control Point (CCP):** A step at which control can be applied and is necessary to prevent or eliminate a Food Safety hazard or reduce it to an acceptable level.

**Critical limit:** A criterion, which separates acceptability from unacceptability.

**Deviation:** Failure to meet a Critical Limit.

**Document:** Meaningful data or information and its supporting medium.

**End Product:** Product that will undergo no further food processing by the food business.

**Flow diagram:** A systematic representation of the sequence of steps or activities used in the production of a particular item.

**Food Safety:** Concept that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use.

**HACCP:** A system that identifies, evaluates, and controls hazards that are significant for Food Safety.

**HACCP Plan:** A document prepared in accordance with the principles of HACCP to ensure control of hazards, which are significant for food Safety in a particular food business.

**Hazard:** A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect.

**Hazard Analysis:** The process of collecting and evaluating information on hazards and conditions leading to their presence to decide which are significant for Food Safety and therefore should be addressed in the HACCP Plan.
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Individual Quick Frozen: A process used to freeze products where the each unit is frozen individually.

Microbiological Contamination: The presence of micro-organisms not usually associated with a food, or numbers of micro-organisms greater than would be expected in a particular food.

Monitor: The act of conducting a planned sequence of observations or measurements of control parameters to assess whether a CCP is under control.

Occasional Buffet: A method of serving food not used regularly.

Pre-Requisite Programme (PRP): Basic conditions and activities that is necessary to maintain hygienic environment throughout the food business suitable for the production, handling and provision of safe end products.

Physical Contamination: The presence in food of foreign objects not usually associated with the food.

Quick Frozen: A freezing process used to freeze food in a short time.

Ready to Eat: Food that is intended to be consumed without any further processing.

Record: A document stating results achieved or providing evidence of activities performed.

Risk: The probability of a hazard occurring.

Shall: This term is used where the requirements are in Regulation (EC) 852/2004 and the food business operator is required to comply with the guidance.

Should: This term is used where there is no direct relationship between the requirements of Regulation (EC) 852/2004 but where there is guidance is given in order to assist the food business operator.

Step: A point, procedure, operation or stage in the food business.

Updating: Immediate and/or planned activity to ensure application of the most recent information.

Validation: Objective evidence that the elements of the HACCP Plan are effective

Verification: The application of methods, procedures, tests or other evaluations, in addition to monitoring to determine compliance with the HACCP Plan.

Other Definitions

Audit – Internal: The systematic examination including inspection and verification to determine whether activities and related results comply with planned arrangements
and whether these arrangements are implemented effectively and are suitable to achieve objectives.

**Calibration:** The set of operations which, when carried out under specified conditions, show the relationship between values indicated by a measuring instrument or measuring system and the corresponding values realised by a reference standard.

**Cross Contamination:** The direct or indirect transfer of biological, chemical or other contaminants from raw food to the food that may cause the food to be unsafe for human consumption.

**Standard Operating Procedure:** A document, which defines all the necessary actions that shall be followed to ensure that an activity is carried out in a controlled manner.
Section 1 Hygiene Requirements for the Food Service Sector – Pre-Requisite Requirements (PRP)

General

In this section of the guide, advice is given on compliance with the requirements of ANNEX II of Regulation (EC) 852/2004 “General Hygiene Requirements for all Food Business Operators”. The Annex contains 12 Chapters, advice is not given with regard to the implementation of Chapter III, which contains requirements specifically for food sold to consumers from Moveable and/or Temporary Premises, Domestic Dwellings and Vending Machines. Where possible specific advice is given, however, the Regulation (EC 0852/2004) is written in very general terms and therefore advice for all possible conditions may not be included.

In the introduction to the guide it states “the foundation of an effective HACCP system is the correct implementation of Hygiene requirements”. This section of the guide is intended to provide assistance to food business operators who are implementing a HACCP system based on a correctly implemented Hygiene Programme or Prerequisite Programme (PRP).
Clause 1.0 Premses & Structures

General Requirements

1.1 The premises shall be of adequate size for the intended volume of foodstuffs produced and catered for by the food business in order to allow safe practice in the delivery, storage, handling, preparation and service of food.

1.1.2 There shall be sufficient space for all food handling activities, refrigeration, equipment, storage, waste management, staff changing and sanitary facilities etc.

1.1.3 When planning a new premises or refurbishing an existing premises consideration should be given to the following:

- volume of meals
- size and complexity of menu
- style of service
- number of dining facilities serviced by the same kitchen
- number of different styles of dining facilities serviced by the same kitchen.

1.1.4 The design and layout of rooms where food is prepared, processed or stored shall ensure that

a) good hygiene practices can be maintained at all times
b) food is protected from the risk of contamination

1.1.5 Temperature-controlled handling and storage facilities such as fridges, freezers and cold rooms, where used shall be:

a) of sufficient capacity for maintaining foodstuffs at appropriate temperatures
b) designed to allow those temperatures to be monitored and recorded, as required.

1.1.6 The layout, design, construction, location and size of the food premises shall:

a) permit good food hygiene practices,
b) permit adequate maintenance, cleaning and/or disinfection,
c) minimise air-borne contamination,
d) provide adequate working space to allow for the hygienic performance of all operations,
e) protect against the accumulation of dirt
f) protect against contact with potentially hazardous materials e.g. cleaning chemicals/pesticides
g) protect against the shedding of particles into food
h) protect against the formation of condensation or undesirable mould on surfaces
i) protect against contamination and in particular, pest infestation and access

1.2 Grounds

1.2.1 Where the food business has control over the grounds, they shall be maintained and kept free from litter, uncult weeds and grass, waste and other materials. The yards, roadway etc. that are in close proximity to the kitchen or food storage areas shall be surfaced to prevent excessive dust. The grounds shall be kept free from conditions that could permit

a) contamination of food e.g. badly maintained yards or exterior of premises could result in to foot-borne contamination being carried into the premises
b) establishments of sites for the breeding and/or harbourage of micro-organisms, insects, rodents and/or birds.

1.2.2 An external water tap or taps should be located in the yard or yards to aid cleaning, particularly of waste storage areas and the personnel access point to the premises

1.3 Structures

1.3.1 Floors

1.3.1.1 Floors shall be smooth, durable, impervious, and easy to clean. Examples of floor finishes acceptable in food areas are

a) polymers
b) heavy duty vinyl sheeting
c) tiles and ceramic or quarry tiles

1.3.1.2 Floors shall be maintained in good condition, free from cracks, holes or corrosion, and repaired as soon as is practical in order to maintain cleanliness

1.3.1.3 Mats if provided, shall be made of materials that are easily cleanable.

1.3.1.4 Floors drainage if provided shall be effective at preventing the accumulation of water and debris i.e. the gradient shall provide suitable drainage.

1.3.1.5 Floors should be coved to the wall to eliminate corners where dirt can accumulate and to facilitate cleaning.
1.3.2  Walls

1.3.2.1 Wall surfaces shall be durable, smooth, non absorbent and easy to clean.

1.3.2.2 Walls in the food premises shall be maintained in a sound condition and kept free from flaking paint dampness, condensation or mould.

1.3.2.3 Damaged walls shall be repaired as soon as is practical in order to maintain cleanliness.

1.3.2.4 All wall, floor and ceiling joints shall be sealed.

1.3.2.5 Wall finishes above working surfaces shall be scratch-proof and impact resistant to a minimum height of 450mm.

1.3.2.6 Where necessary walls shall be protected from impact damage e.g. corner protection.

1.3.2.7 Wall surfaces behind heat emitting appliances shall be heat resistant.

1.3.2.8 Openings around pipework shall be sealed to prevent pest infestation.

1.3.2.9 Ceramic tiles, stainless steel or polypropylene sheets if used shall be fixed directly onto the wall and properly sealed.

1.3.2.10 Gas piping and electrical conduits shall be installed so as not to cause any damage to the smooth wall finish and their installation should not hinder adequate cleaning.

1.3.2.11 All food storage and handling areas shall be cleanable.

1.3.2.12 All wall/floor junctions and wall/ceiling junctions shall be sealed.

1.3.2.13 All paints used should be washable and non-toxic.

1.3.3  Ceilings

1.3.3.1 Ceilings shall be durable, smooth, non absorbent and easy to clean.

1.3.3.2 Ceilings and overhead fixtures shall be constructed and maintained to prevent the accumulation of dirt, condensation, mould growth and particle shedding.

1.3.3.3 Suspended ceilings when used shall be smooth, durable, non absorbent and easy to clean. Where suspended ceilings are installed ready access to the space above should be provided in order to facilitate pest infestation control.

1.3.3.4 Canopies over equipment, air vents and air vent covers and screens shall be installed and designed in manner that facilitates cleaning and maintenance.
1.3.3.5 The paint used in all food storage and handling areas shall be washable and non toxic.

1.3.3.6 The floor to ceiling height should be a minimum of 2.4 meters in food preparation and cooking areas.

1.3.4 **Windows**

1.3.4.1 Windows and other openings shall be constructed of non corrosive materials and be easy to clean and maintain.

1.3.4.2 Opening windows including skylights that open directly into food handling and storage areas shall be fitted with pest proof screens. The screens shall be cleanable and should be of mesh size 16 or 1.2mm.

1.3.5 **Doors**

1.3.5.1 Doors shall be smooth durable non absorbent and easy to clean and maintain.

1.3.5.2 External doors shall be waterproof, pest proofed and if left open shall be fitted with a pest proof screen that can be cleaned.

1.3.5.3 Doorways should be of adequate size to permit the movement of mobile equipment.

1.3.6 **Surfaces**

1.3.6.1 Surfaces (including surfaces of equipment) in areas where food is handled and in particular those in contact with food shall be maintained in sound condition, be smooth, durable, non-absorbent easily clean and, where necessary, disinfect.

1.3.7 **Zoning**

1.3.7.1 When designing or refurbishing a food premises the zoning requirements shall be included in the design plans for the food business and follow the logical sequence of activities in the food operations.

1.3.7.2 The zoning of the facilities shall provide maximum protection against contamination during all food operations including delivery, storage, preparation, cooking, cooling, reheating, plating, wash-up, waste disposal etc.

1.3.7.3 Where physical separation of the food preparation areas is not possible preparation of the food types shall be carried out at different times with
thorough cleaning and disinfecting occurring in between the different operations.

1.3.7.4 A separate raw meat preparation area should be provided.

1.3.8. **Staff Facilities**

1.3.8.1 Staff facilities shall not be located in food storage, preparation or waste handling areas.

1.3.8.2 Staff facilities shall be adequately maintained, cleaned and ventilated.

1.3.8.3 Staff facilities should not be accessed through food preparation/handling areas.
Clause 2.0 Cleaning & Sanitation

2.1 General

2.0.1 Equipment, utensils, cutlery, crockery, work surfaces which come into contact with food, the environment in which food is stored, handled, prepared, served and consumed, internal drains, staff and public facilities and the external environment shall be cleaned and where necessary disinfected, at regular intervals to prevent the possible contamination of food.

2.0.2 All chemicals shall be used in accordance with manufacturer’s instructions.

2.0.3 Where high pressure hoses are used for cleaning, the cleaning programme shall ensure that foodstuffs are not contaminated by the aerosolizing of micro-organisms in the air.

2.2 Storage and use of cleaning materials

2.1.1 Bulk cleaning agents and disinfectants shall not be stored in areas where food is prepared, treated, and/or stored. Cleaning agents and disinfectants in use shall be clearly labelled or marked.

2.1.2 The cleaning agents and equipment used for cleaning shall be suitable for use in a food operation and shall not be a source of contamination.

2.1.3 A suitable separate storage facility shall be provided for all cleaning materials and equipment and shall have smooth, durable non-absorbent surface finishes and be easy to clean, ventilated and have a source of light.

2.1.4 Mop buckets shall not be filled or emptied in a sink used for the preparation of food or for washing of containers or equipment used for food.

2.1.5 To ensure that they are not a source of contamination, where used cleaning cloths, put scrubs etc shall be cleaned and disinfected or disposed or regularly.

2.1.6 Cleaning equipment for use in toilets, public areas and external areas should not be used in food operations areas.

2.1.7 Facilities suitable for the preparation of cleaning solutions, the cleaning and drying of equipment should be provided.

2.3 Cleaning Programme

2.2.1 A detailed cleaning programme defining the following shall be in place:

a) Item/area to be cleaned
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b) Frequency of cleaning
c) Person responsible for cleaning
d) Cleaning agent to be used and its concentration
e) Equipment to be used and its method of operation
f) Person responsible for checking that cleaning carried out has been effective.

2.2.2 Staff whose responsibilities include cleaning shall receive appropriate instructing for cleaning activities.

2.2.3 A Clean as You Go policy should be in place in food operations.
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Clause 3.0 Services

3.1 General

3.1.1 The services provided in all food business operations shall be designed, installed, maintained and monitored or controlled so as to prevent any risk of contamination of food.

3.2 Washing Facilities

3.2.1 Food Washing

3.2.1.1 The facilities for washing food shall be suitable for the intended purpose easy to clean and maintain and provided with an adequate supply of potable water. They shall be separate from the hand-washing facility.

3.2.1.2 In food operations where raw meat or poultry products are being prepared a separate sink should be provided for this activity.

3.2.2 Equipment Washing

3.2.2.1 A double deep sink unit or mechanical dishwasher and single deep sink shall be provided for the washing of utensils, crockery and cutlery in a suitable location and be of appropriate size for the operation.

3.2.2.2 A drops area should be provided for equipment to be washed and a drainage area shall be provided for equipment to be washed using the sink method.

3.2.3 Hand Washing

3.2.3.1 Separate hand washing facilities shall be

a) available in food preparation areas for food handlers
b) designated as such
c) easily accessible and not likely to be obstructed
d) located close to the working area

3.2.3.2 In large kitchens or kitchens that are sub-divided into different work areas more than one hand wash unit shall be provided.

3.2.3.3 The hand washing facilities shall have

a) constant and adequate supply of hot and cold water
b) liquid soap in appropriate dispensers
c) a suitable method of hand drying available at each hand wash unit e.g. paper towels from a dispenser with an easy to clean waste receptacle or cabinet roller towels. Air hand dryers shall not be used in food operation areas.
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3.2.3.4 The hand washing facilities should operate in a manner that will not re-contaminate cleaned hands e.g. knee, foot, elbow or electronically operate taps. Mixer units should replace units with single hot and cold taps.

3.2.3.5 Hand wash facilities shall be provided, in suitable locations for staff not directly involved in food preparation e.g. service and bar staff.

Note: See Annex II for additional information of hand washing.

3.3 Water Supply

3.3.1 General

3.3.2 The food business operator shall ensure that an adequate supply of potable water is available at all times (as defined by EU directive 98/83/EC and transposed into Irish law as S.I. No. 439 of 2000).

3.3.3 Vacuum breakers shall be included in the water distribution system at all locations where back-siphoning could occur.

Note 1. Water taken directly from a public can be regarded as potable unless there is a warning from the sanitary authority that the water is not suitable for human consumption.

Note 2: Water taken from group schemes shall only be regarded as potable if it has been tested at point of use (same as Note ).

Note 3: Water taken from a private well or storage tank shall only be regarded as potable if it has been tested at the point of use and at the frequency required by S.I. 439 of 2000 and found to comply with these regulations.

3.3.4 Private Supply

3.3.4.1 Where a well or private supply is being used as a source of water it is the responsibility of the food business operator to ensure it meets potable water standards.

3.3.4.2 Water from a private supply shall where necessary, be chlorinated to 0.1-0.5 ppm or otherwise treated to ensure its safety e.g. ultra violet lamp treatment.

3.3.5 Water Testing

3.3.5.1 The food business operator shall have the water analysed based on a risk assessment or other known factors.

3.3.5.2 If at time of testing the water is contaminated, the food business operator shall take immediate action to ensure there is no risk to public health and shall ensure that water provided for the food business is of potable quality.
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The food business shall not commence to use the supply again until a retest confirms that it is of potable quality.

3.3.5.3 If the food business operator changes the source of water it shall be tested prior to use to ensure it is of suitable quality.

3.3.5.4 The local Health Services Executive and Local Authority shall be notified by the food business operator of results of water analysis that are not satisfactory in order to ensure that adequate remedial action is taken.

Note: for information on water sampling and testing see Annex II Section 5

3.3.6 Drinking Water

3.3.6.1 Taps for drinking water purposes shall be maintained in a clean and hygienic condition and designated as such.

3.3.6.2 Non potable Water

3.3.6.3 Where non-potable water is used for non-food purposes, e.g. fire control, there shall be a suitable method of identification of potable from non-portable supplies.

3.3.6.4 Systems shall be in place to ensure that there is no cross contamination of supplies.

3.3.6.5 Ice/Ice making facilities

3.3.6.5.1 Ice that comes into contact with food or is to be otherwise consumed shall be made with potable water.

3.3.6.5.2 The facilities used to make and store ice shall be suitable to prevent contamination and shall be cleaned disinfected and maintained in accordance with the manufacturer’s instructions.

3.3.6.5.3 The lids and doors on ice making machines shall be kept closed.

3.3.6.5.4 The ice scoop shall be stored in a hygienic condition and in such a manner so as not to contaminate the ice. The ice scoo9p shall not be left in the machine in contact with the ice. Glassware shall not be used to scoop ice, and items for cooling for example bottles or other containers of beverages shall not be placed in the ice making machine to cool.

3.3.6.5.5 Ice making machines should be connected upstream of final draw points, this will prevent stagnation within the pipework in systems which may not be in constant use. In order to reduce the danger from water stagnation even further the pipework connecting the mains to the machine should be as short as possible.
3.3.6.5.6 Water for cooling of food.

3.3.6.5.7 Water used to cool sealed containers of food shall be of potable quality and shall not be a source of contamination.

3.3.6.5.8 **Storage Tanks**

3.3.6.5.9 Water storage tanks shall be:

   a) covered so as to prevent contamination
   b) fitted with secured inspection doors if located externally

3.3.6.5.10 Water storage tanks should be inspected for evidence of contamination annually.

Note: These requirements do not apply to water stored for fire fighting purposes.

3.4 **Sanitary Accommodation**

3.4.1 Sanitary accommodation provided for staff and patrons by the food business shall be connected to an adequate drainage system and be ventilated.

3.4.2 Sanitary accommodation areas shall not open/connect directly into rooms/areas where food is prepared, treated, processed or stored.

3.4.3 Sanitary accommodation shall be constructed with an external lobby and both toilet area and external lobby shall be separately and adequately ventilated with extraction ventilation in toilet and intake ventilation from an external air source in the lobby area (see Annex I Table 3 for recommended ventilations rates).

3.4.4 The doors to the sanitary accommodation area/lobby area shall be self closing with the exception of facilities for wheelchair users.

3.4.5 Designated sanitary accommodation shall be provided for food workers within the premises. The number of flush toilets and associated wash-hand basins that shall be provided is 1:15 for staff based on normal staffing levels.

3.4.6 Where seating is provided sanitary accommodation shall be provided for patrons. The number of flush toilets and associated wash-hand basins that shall be provided is 1:25 patrons based on the number of patrons that can be accommodated at any one time.

3.4.7 A supply of hot and cold water and liquid soap in appropriate dispensers shall be provided at wash hand basins in sanitary accommodation. Paper towels with easy to clean waste receptacles, cabinet roller towels or air hand dryers shall be provided adjacent to wash hand basins.
3.5 Drainage

3.5.1 The sewerage system shall be of adequate size to handle all requirements for liquid waste disposal.

3.5.2 Adequate drainage facilities shall be provided for the activity being undertaken.

3.5.3 Drainage facilities shall be designed and constructed to avoid the risk of contamination of foodstuffs.

3.5.4 Where drains are fully or partially open they shall flow from clean to dirty areas.

3.5.5 Floor drains/gullies shall be fitted with an effective water trap, accessible for cleaning and be covered with removable grids.

3.5.6 There shall be no interconnection within the premises of floor drainage system and sewerage system.

3.5.7 Grease traps shall be provided in suitable locations where they will not cause contamination of food, be kept clean and maintained in good condition.

Note: Some local authorities have specific requirements relating to grease traps and their operation.

3.5.8 There shall be a water seal on all drains and all drains shall discharge directly into a piped sewer which itself shall be water sealed.

3.5.9 Manholes within the premises should be avoided but, if present they shall be doubly sealed and secured to prevent overflow from the manhole in the event of a blockage or excessive flow in the sewer.

3.6 Waste Management

3.6.1 General

3.6.1.1 Waste shall be managed at all stages of a food business in a manner appropriate to the risk associated with the type of waste generated.

3.6.1.2 A designated area shall be available for all waste generated.

3.6.2.3 Animal and pest control measures shall be in place in all waste handling and storage areas.

3.6.1.4 Outer food packaging that has become soiled or contaminated shall be treated as food waste and not recycle.

3.6.2 Operational Waste/Waste Holding
3.6.2.1 All waste shall be removed from the operational areas as frequently as necessary but at least daily.

3.6.2.2 Waste storage containers shall be smooth, durable, easy to clean and disinfect, well maintained and closable.

3.6.2.3 Suitable bins shall be provided at appropriate locations within the food premises for the storage of waste.

3.6.2.4 In food preparation areas where lidded bins are provided they shall be foot pedal operated.

3.6.2.5 Where waste is stored in plastic bags these shall be removed frequently, closed securely and stored in a manner that does not pose any risk to the food business.

3.6.3 Internal Waste Storage

3.6.3.1 Where waste is stored internally a separate designed room of correct size to accommodate all waste shall be provided and shall be suitably constructed, ventilated and maintained.

3.6.4 External Waste Storage

3.6.4.1 External waste storage units shall be closed at all times and placed on suitable surfaces.

3.6.4.2 External waste storage and handling areas shall be suitably constructed and finished, maintained in a hygienic manner and cleaned on a regular basis.

3.6.4.3 A supply of water should be available to clean down external waste storage areas.

3.6.4.4 All waste storage units shall be emptied as required.

3.7 Pest Control

3.7.1 General

3.7.1.1 Rodents, insects, birds, domestic and other animals shall be prevented from having access to food premises and surrounding grounds with the exception of assistance dogs e.g. guide dogs.

3.7.1.2 A system of pest control developed by a competent person shall be in place.

3.7.1.3 Detailed inspections of the food premises shall be carried out and recorded at least every three months for evidence of infestation by insects or rodents by a competent person.
3.7.1.4 If evidence of infestation is found in or around the premises immediate action shall be taken to eliminate the infestation.

3.7.1.5 Staff shall report to the business manager any evidence of suspected or actual infestation immediately, in order to ensure remedial action is taken promptly.

3.7.1.6 Pesticides shall only be used by suitably trained personnel and in accordance with the instructions provided by the manufacturer.

3.7.1.7 Pesticides shall not cause any threat of contamination of food and shall be stored in a secure facility.

3.7.1.8 The following items shall not be used:
   a) pesticides that look like food
   b) food container for pesticides
   c) grain baits
   d) cardboard baiting traps in wet areas
   e) fly or insect sprays in food areas
   f) glued fly papers

3.7.1.9 A location map should be available showing the location of each bait point.

3.7.1.10 Access to space above suspended ceilings should be provided in order to allow pest control measures.

3.7.2 Electric Fly Killers

3.7.2.1 Electric fly killer (EFK) units when used shall be located in an area free from draughts, away from natural light and not directly above an area where food or materials that come into contact with food are located.

3.7.2.2 The EFK units shall be left on at all times and have shatter proof sleeves. The ultraviolet (uv) light tubes shall be replaced at least annually and records of replacements should be retained.

Note: UV tubes are no longer effective after one year in use.

3.7.2.3 The EFK’s shall be fitted with catch tray and emptied as required.

3.8 Lighting

3.8.1 Adequate natural or artificial lighting shall be provided and shall be sufficient to allow safe handling and preparation of food.

3.8.2 Adequate lighting shall be provided to ensure that all cleaning operations can be carried out effectively.
3.8.3 In food storage and preparation areas all light fittings shall be fitted with shatter proof diffusers

3.8.4 All light fittings should be designed and installed to facilitate cleaning.

3.9  Ventilation

3.9.1 A suitable means of natural or mechanical ventilation shall be provided in food storage and preparation areas.

3.9.2 Ventilation systems shall be installed and designed to facilitate cleaning and maintenance and the cleaning or changing of filters.

3.9.3 Mechanical ventilation systems where used shall be installed so that the intake of air to the system is from clean fresh air, i.e. airflows are from clean to dirty areas.

3.9.4 Air intake points shall be located to prevent the intake of air contaminated with fumes or dust into the premises. Air intake point shall be located away from air extraction point.

3.9.5 Air intake and extension points shall be screened to prevent the entry of pests.

3.9.6 Ventilation shall be provided for all cooking and steam emitting equipment. Where an overhead extraction canopy is being used it should extend 150mm beyond the cooking equipment on front and sides, except where the extraction unit is part of an integrated design.

3.9.7 The ventilation provided in food storage and preparation areas shall be sufficient to prevent condensation on walls, ceilings and overhead structures during normal operations.

3.9.8 Suitable ventilation should be provided in all food storage areas. Very low humidity levels and excessive ventilation may not be ideal for all products e.g. fruit and vegetables.

Note: See Tables Annex 1, 3 & 4 for Recommended Ventilation Rates.
Clause 4.0  Food Handling

4.1  Food Packaging

4.1.1 Packaging operations shall be carried out in a manner that will not cause contamination of food.

4.1.2 The food business operator shall ensure that packaging materials are not a source of contamination and are food grade.

4.1.3 Packaging materials shall be stored in suitable conditions to prevent contamination.

4.1.4 Units of packaging materials opened and partially used shall be re-sealed to prevent contamination while in storage.

4.1.5 Food packaging units shall only be re-used where they are intact, easy to clean and disinfect.

4.1.6 Packaging used for non food materials shall not be reused for storage of food materials e.g. chemical containers.

4.1.7 Specific controls shall be in place when using glass containers as packaging e.g. regular monitoring to ensure the integrity of the glass.

4.2  Food Transport

4.2.1 General

4.2.1.2 Food to be distributed internally or externally prior to service shall be suitably stored and maintained at the required temperatures where necessary.

4.2.1.2 Containers and other methods of movement of foodstuffs shall be

a) clean
b) in good repair
c) suitable for the intended use
d) easy to clean and disinfect
e) used only to transport foodstuffs or food contact materials

4.2.1.3 Food shall be kept covered during distribution to avoid contamination.

4.2.1.4 Raw and cooked or ready to eat foods shall be segregated during distribution.

4.2.1.5 Where containers are used to transport materials other than foodstuffs and/or different types of foodstuffs there shall be suitable system of cleaning and disinfection.
4.2.1.6 Where foods of different types and non-foods are transported in the same containers there shall be

a) effective separation of the products
b) no risk of contamination of the foods

4.2.2 External Transport

4.2.2.1 All vehicles used for the transportation of food shall be inspected before loading, to ensure that they are clean and weatherproof.

4.2.2.2 Both external and internal surfaces of the vehicle body and insulated containers shall be impervious, easy to clean and the vehicle shall be sealed to prevent the entry of pests, exhaust fumes and other possible sources of contamination.

4.2.2.3 The refrigeration or heating unit on the vehicle should be inspected prior to loading to ensure that it is functioning correctly. The transport unit should be packed in a manner that allows air to circulate freely around the foodstuffs.

4.2.2.4 Suitable evidence shall be provided to demonstrate that temperature requirements were achieved during transport of foodstuffs.

4.3 Food Storage

4.3.1 The food business operator shall ensure that product traceability is maintained while the product is in storage. Stock shall be rotated on a first in/first out basis taking into account the “best before”/”use by” date as appropriate.

4.3.2 A system for the management of damaged or unfit foods to be returned to suppliers shall be in place.

4.3.3 All foods from raw materials to finished goods shall be stored in suitable conditions to prevent contamination. Food, which is labelled with storage instructions, shall be maintained in accordance with these instructions.

4.3.4 Food stores shall be dry, free from contamination and shall be maintained in a hygienic condition.

4.3.5 The doors to all food storage areas shall be kept closed except when they are being filled, emptied or cleaned.

4.3.6 Foodstuffs shall be stored at a sufficient height above the floor on cleanable pallets, racks or shelving to allow cleaning to occur.

4.3.7 Containers used to store foods shall be made of food grade materials, be in good condition, easy to clean and disinfect.
4.3.8 All products should be decanted from outer packaging prior to storage except where to do so would have an adverse affect on the product integrity.

4.3.9 Flour, cereals, sugar etc shall be stored in a dry environment and when opened stored in covered containers.

4.3.10 High-risk foods and prepared vegetables shall be stored in suitable temperature controlled conditions.

4.3.11 Cooked or ready to eat food shall not be stored in the same refrigerator as raw foods unless they are covered and segregated to prevent cross-contamination.

4.3.12 Raw food shall not be stored above cooked or ready to eat foods.

4.3.13 Unopened canned foods shall be stored in a dry area to prevent rusting.

4.3.14 Food shall not be stored in opened cans unless the cans are specifically designed for this purpose.

4.3.15 The food business operator shall ensure that when opened vacuum packs of food are used quickly.

4.4 Maintenance of Gold Chain – Fridge/Freezers

4.4.1 Fridges, freezers and blast chillers used for storage and temperature reduction shall have sufficient capacity to achieve and maintain the required temperatures.

4.4.2 There shall be a sufficient number refrigerated and freezer storage facilities to ensure that different types of foodstuffs can be segregated to prevent cross-contamination.

4.4.3 The food business operator shall demonstrate that the temperature control units are working effectively, this may be achieved by monitoring the temperature of food stored in the units.

4.4.4 The food business operator shall remove from use, repair and/or replace any unit that is not achieving and maintaining the required temperatures.

4.4.5 The temperatures of Fridges, freezers, cold rooms and chill cabinets shall be capable of maintaining the temperature of foodstuffs, see Table 4.

4.4.6 Ice cream display units can operate at -12°C as long as it can be demonstrated that the product has been held at this temperature for less than 7 days.
Clause 5.0 Food Processing

5.1 General

5.1.1 All stages of production, processing and distribution shall be controlled to ensure that the food is not contaminated in any way and continues to be fit for the intended purpose.

5.2 Thawing

5.2.1 All food with the exception of frozen vegetables, small portions of frozen food and frozen food designed to be cooked from frozen, shall be thawed prior to cooking or serving.

5.2.2 The thawing of food shall be carried out under appropriate conditions to minimise the growth of micro-organisms, such as in a thawing unit, a microwave oven with thawing cycle or in a fridge. See Table 5.

Note: Specialist food items such as IQF (individual quick frozen) products e.g. prawns, may be thawed using running cold potable water in a sink designed for the purpose.

5.2.3 All thawed food shall be checked to ensure that the thawing is complete. When thawing foods, care shall be taken to ensure that parts of the food which thaw the fastest are not exposed to temperatures that will allow the growth of micro-organisms.

5.2.4 Run off liquid from the thawing process shall be collected and discarded as frequently as necessary. When thawing foods care shall be taken to ensure that liquid drained from the food does not contaminate other foods e.g. cooked or ready to eat foods.

5.2.5 Thawed food shall not be re-frozen except where it is used as an ingredient in a food product that is either cooked or baked and then frozen.

5.3 Food preparation

5.3.1 Cleaned and disinfected work surfaces, equipment and utensils shall be provided for preparing ready to eat foods and foods to be cooked to prevent and the risk of contamination (see Table 6 for recommended colours for surfaces).

5.3.2 Fresh fruit, vegetables or salad items shall be washed in potable water prior to use with the exception of pre-washed and pre-packed ready to eat products.
5.3.3 Food utensils, crockery, glassware, cutlery which is used in the preparation, serving or consumption of the food shall be managed so as to prevent the risk of cross contamination.

5.3.4 Separate work surfaces, equipment and utensils should be provided to prevent the risk of cross contamination between different types of food.

5.3.5 When preparing ready to eat or other high risk products, the food business operates should limit the time the products are held above 5°C. See table 7.

5.4 Food Cooking

5.4.1 All foods shall be cooked to a temperature to ensure that the products are safe for consumption (see Annex I Table 8 for cooking temperatures). The core temperature of the food shall be assessed at the thickest point of the food and should reach 75°C or equivalent which is 70°C for 2 minutes.

5.4.2 Foods not cooked to core temperatures as in 1 above shall meet the following criteria.

Products such as fish and shellfish, whole joints, birds (game and duck) or cuts/ portions of lamb, beef or venison shall be cooked to a customer’s preference provided that:

a) the chef is fully trained and experienced
b) the food is seared/cooked on the outside
c) the food is served as soon as possible (30 mins)
d) the products used in preparation of cook to order products are purchased from selected suppliers

5.4.3 Foods that shall achieve a core temperature of > 75°C (or equivalent that is 70°C for 2 min) by the cooking process are:

a) port, chicken, and turkey
b) minced meat, minced meat products, rolled or pre-formed meats and stuffed meat products.

Therefore it is not possible to cook these products to a stated customer preference, except for beef burgers where the burger has been prepared (minced) and cooked to order as requested by the customer.
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5.5 **Food Cooling**

5.5.1 Food shall be cooled using appropriate means to ensure there is no risk of microbial growth following cooking (see Table 9).

5.5.2 Foods shall be cooled using a blast chiller, or by placing it in a cool designated area, or other suitable means.

5.5.3 Food shall be protected from all forms of contamination particularly microbial following cooking.

5.5.4 Foods prepared using cook chill systems shall comply with the cook/chill guidelines.

5.6 **Food Holding**

5.6.1 Food may for limited periods be held outside temperature control to permit the practicalities of handling during preparation, transport, storage, display and service of food provided it does not result in a risk to food safety.

5.6.2 Food shall be stored at the appropriate temperatures and be held at ambient temperature for as short a time as possible and not more than 90 minutes.

5.7 **Food Service**

5.7.1 Food shall be maintained at the correct temperatures during food service see Table 10.

5.7.2 Food shall only be reheated once following cooking.

5.7.3 The food business operation shall ensure that all food utensils, crockery, glassware etc. used at food service are clean and disinfected prior to use.

5.7.4 For self-service to operate efficiently, equipment shall be provided for use by customer’s e.g. special tongs etc.
Clause 6  Plant & Equipment/Measuring Instruments

6.1  Plant & Equipment

6.1.1 All fixtures, fittings and equipment shall be designed, installed and maintained to facilitate effective cleaning, disinfection and inspection.

6.1.2 All fixtures, fittings and equipment shall be maintained in good order repair and condition, be kept clean and where necessary disinfected.

6.1.3 Equipment and food contact surfaces shall be constructed of non-toxic, food grade materials suitable for contact with foods.

6.1.4 Cleaning and disinfection of all fixtures, fittings, equipment and food contact surfaces shall take place in accordance with cleaning procedures/schedules and as required thereafter in order to keep them clean.

6.1.5 Fixtures, fittings, plant and equipment shall be easy to clean. This necessitates that all parts of the plant and equipment unless properly sealed shall be accessible for cleaning.

6.1.6 All fixtures, fittings, plant and equipment shall be correctly installed safely to use and suitable for the intended purpose and where possible mobile.

6.1.7 Maintenance schedules should be in place for cooking and other equipment.

6.1.8 The maintenance of equipment should be carried out when there are no food preparation, cooking or service activities in operation.

6.1.9 All equipment should be cleaned and disinfected following maintenance before it is brought back into service.

6.1.10 The food business operator shall ensure that maintenance contractors do not pose a risk of contamination to food while working in food areas.

6.2  Measuring Instruments

6.2.1 All temperature probes shall be calibrated annually.

6.2.2 To check accuracy of a temperature probe immerse the probe in mixture of ice and water which has been standing for 10 minutes to see if it reads zero and immerse in water that has been boiling for 10 minutes to see if it reads 100°C. The latter check will identify any drift in the thermometer at the two ends of the scale. In the event that this check establishes the problem is no longer accurate, it shall be removed from use and the food business manager shall assess if there is any risk of a food safety incident as a result of using a faulty probe.
6.2.3 Mercury thermometers shall not be used

6.2.4 Suitable precautions shall be taken when using glass thermometers for cooking purposes e.g. sugar work.

6.2.5 The plant and equipment in use should be fitted with effective controls or devices in order to allow monitoring by the food business operator.

6.2.6 The food business operator should document the procedures used to control, calibrate and maintain inspection, measuring and test equipment used to demonstrate compliance with the HACCP Plan.
Clause 7  Training

7.1 The food business operator shall ensure that personnel working in food areas have sufficient knowledge to enable them to carry out their activities in a safe and hygienic manner.

Note: For guidance on the level of training required see FSAI Training Guides.

7.2 The food business operator shall ensure that all food handlers are supervised, instructed and/or trained in food hygiene commensurate with their work activity.

7.3 The individuals with the responsibility for the development implementation and maintenance of HACCP shall receive adequate training in HACCP.

7.4 Training of staff should include awareness of the responsibility of each person in the food chain for the safety of food.

7.5 Refresher courses should be given to staff when changes in work practises occur e.g. when new equipment or change in type of cleaning chemicals for cleaning are introduced.

7.6 Records should be retained for all food safety/hygiene training given to staff.

Note: Additional information on the type of training suitable for personnel employed in a food operation is included in Annex II – Section 1.
Clause 8  Personal Requirements

8.1  Personal Hygiene

8.1.1. The food business operator shall ensure that all staff are trained in good hygiene practises and behave in a manner that will not contaminate food.

Note: See Annex II Section 2 for information on good hygiene practices.

8.1.2 Staff employed in food operations shall maintain a high degree of personal cleanliness and wear clean and where necessary protective clothing.

8.1.3 All personnel employed in food storage or preparation areas shall wear clean protective clothing or uniforms. The protective clothing or uniforms provided for personnel shall be adequate to cover all outdoor clothing at least to below the waist.

8.1.4. Protective clothing or uniforms shall be maintained in a clean condition and shall not be worn outside the food premises. Personal clothing shall not be worn over uniforms or protective clothing.

8.1.5 Cuts, sores and grazes shall be covered after treatment with suitable dressing that will not pose a risk of physical contamination to food.

8.1.6 Staff should be made aware that gloves are a potential cause of food contamination as they can provide the ideal environment for multiplication of micro-organisms. The food business operator shall ensure that where gloves are used staff wash hands before and after using gloves. The use of gloves shall not be substituted for hand washing by food handlers.

8.2  Protective Clothing

8.2.1 Staff shall be provided with changing facilities and include the provision of storage for outdoor clothing and other personal items.

8.2.2 There shall be separate segregated areas or containers for both clean and used protective clothing.

8.2.3 External clothing and personal items should be adequately segregated from protective clothing.

8.2.4 Staff changing facilities should not be located in toilet areas (WG2 to check)

8.3  Medical Assessment

8.3.1 The food business operator shall ensure that all staff are medically fit, to work in a food area.
8.3.2 Staff shall not be permitted to work in food preparation areas if they are suffering from boils, infected wounds, flue, infectious skin disorders on the face, hands or forearms and/or infections of the mouth, throat, nose, ears or eyes.

8.3.3 Any person employed as a food worker and who is likely to come into contact with food shall report immediately any illness or symptoms, and if possible their causes, to the food business operator. Examples of conditions that shall be reported are:
- skin disorders such as boils, infected wounds
- infection/skin disorders of the face, hands or forearms
- flue, coughing, infections of mouth, throat, ears or eyes vomiting and/or diarrhoea

8.3.4 Staff who have been off work for more than three days due to persistent cough, diarrhoea, vomiting, infection of the mouth, throat, nose, ears or eyes, hepatitis, typhoid and/or paratyphoid shall not be permitted to return to work without certificate from their doctor indicating their fitness to return to work as a food worker.

Note: see Annex II Section 4 for further information on work exclusion/restriction of staff.

8.3.5 A medical questionnaire should be completed by all new staff, including temporary staff, prior to employment.

Note: See Annex II Section 3 for additional information on health questionnaires.

8.3.6 A first aid box should be provided, it shall be regularly checked to ensure that it contains a supply of the following items

a) treatment for cuts and grazes
b) suitable dressings
c) eye wash solution
Clause 9 Approval of Suppliers

9.1 General

Regulation (EC) 852/2004 requires a food business operator to ensure that raw materials or ingredients used in the processing of products are not contaminated with parasites, pathogenic micro-organisms or toxic, decomposed or foreign substances that would result in products that are unfit for human consumption.

In order to comply with this requirement the food business operator shall be able to demonstrate that all supplies of raw materials or ingredients to the business are obtained from reputable and reliable sources.

The food business operator should have a list of suppliers by product type from whom products are to be purchased i.e. an approved suppliers list. A supplier should be deleted from this list immediately if the food business operator is not satisfied with the safety for human consumption of the products being delivered. Supplier should be added to the list if the food business operator is satisfied that only products fit for human consumption will be delivered by the supplier. The list should be reviewed annually by the food business operator to ensure it continues to be valid for the products being used in the food business.

9.2 Control of Food Purchases

The food business operator should monitor deliveries of food at time of receipt as follows:

Delivery unit and/or vehicle used is in a hygienic condition.
If required, the delivery unit has the necessary temperature control
Delivery personnel act in a hygienic manner

The food received should be monitored as follows:

Appearance is normal for the product
No contamination visible
Packaging and tamper proof devices are intact, where applicable
Canned products are not blown or damaged
All products carry the required identification e.g. health marks, producer name and address
All products where necessary have “use by” information.

9.3 Food Traceability

9.3.1 General

Regulation (EC) 852/2004 refers to Regulation (EC) 178/2002. Article 18 of this regulation requires a food business operator to be able to identify any person from whom they have been supplied with a food, or any substance intended to be incorporated into a food.
The food business operator should ensure that a method of identifying the source of all raw materials, ingredients or ready to eat food is in place. The food business operator should ensure that all food has a method of identification that will permit the source of the food to be established.

The food business operator should be able to trace suspect food at any time and therefore should have a method of identifying materials at all stages of the food operations.

The food business operator should retain information on raw materials and other food products used in the event of a food safety incident.
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### Table 1 Lighting Intensity

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<thead>
<tr>
<th>Area</th>
<th>Lux</th>
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<tr>
<td>Food Plating</td>
<td>540</td>
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<tr>
<td>General</td>
<td>220</td>
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<td>Other</td>
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### Table 2 General Ventilation

<table>
<thead>
<tr>
<th>Area</th>
<th>Rates/Hr M3/HR</th>
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<tbody>
<tr>
<td>Cooking (see Table 4 also)</td>
<td>20</td>
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<tr>
<td>Food Preparation</td>
<td>6</td>
</tr>
<tr>
<td>Wash Up</td>
<td>10</td>
</tr>
<tr>
<td>Serving area with Heat emitting appliances</td>
<td>10</td>
</tr>
<tr>
<td>Dry Goods</td>
<td>6</td>
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<tr>
<td>Cleaning Store</td>
<td>6</td>
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<tr>
<td>Staff Facilities</td>
<td>5</td>
</tr>
<tr>
<td>Toilets</td>
<td>3 (extract)</td>
</tr>
<tr>
<td>Toilet Lobby</td>
<td>2 (intake)</td>
</tr>
</tbody>
</table>
### Table 3 Ventilation Rate of Cooking Areas/Equipment

<table>
<thead>
<tr>
<th>Type of Equipment</th>
<th>Rates m/s (measured at hood face)</th>
<th>Rate M3/Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convention ovens</td>
<td>0.10 – 0.25#</td>
<td>900</td>
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<tr>
<td>Regeneration ovens</td>
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<tr>
<td>Low volume steam ovens</td>
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<tr>
<td>Steam ovens</td>
<td>0.25 – 0.40#</td>
<td>1440</td>
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<tr>
<td>Forced convection ovens</td>
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<tr>
<td>Open griddles used for non fatty foods e.g. breads</td>
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<td></td>
</tr>
<tr>
<td>Heavy duty Fryers, Griddles</td>
<td>0.25 – 0.50#</td>
<td>1800</td>
</tr>
</tbody>
</table>

# Based on measurements from ventilation systems fitted with grease filters and taken 100 to 150mm from filter face.

It is acknowledged that flow rates may vary significantly over measurement time however variation should be within above ranges.

### Table 4 Temperature Requirements for Food in Fridges/Freezers

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fridges</td>
<td>-1 to 5°C</td>
</tr>
<tr>
<td>Freezers</td>
<td>-18 to -25°C</td>
</tr>
<tr>
<td>Display Units</td>
<td>&lt; 5°C</td>
</tr>
</tbody>
</table>
### Table 5  Colour Coding of Work Surfaces, Equipment and Utensils

<table>
<thead>
<tr>
<th>Colour</th>
<th>Intended Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Raw Fish</td>
</tr>
<tr>
<td>Red</td>
<td>Raw Meat</td>
</tr>
<tr>
<td>Green</td>
<td>Salad &amp; Fruit</td>
</tr>
<tr>
<td>White</td>
<td>Dairy &amp; Bakery Products</td>
</tr>
<tr>
<td>Yellow</td>
<td>Cooked Meat</td>
</tr>
<tr>
<td>Brown</td>
<td>Vegetables</td>
</tr>
</tbody>
</table>

### Table 6  Temperature Requirements when Thawing Food

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature of area where frozen food is thawed (not applicable if microwave ovens are used)</td>
<td>≤5°C</td>
</tr>
<tr>
<td>Core temperature of food after thawing</td>
<td>≥ 2°C</td>
</tr>
<tr>
<td>Time between thawing and cooking</td>
<td>≤ 24 hrs</td>
</tr>
<tr>
<td>Time of thawing for units of 2.0kg to 2.5kg</td>
<td>≥ 24 hrs</td>
</tr>
</tbody>
</table>
### Table 7 Preparation of High Risk Foods

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time between mincing and cooking of raw meats (not applicable if mince is frozen)</td>
<td>≤ 24 hrs</td>
</tr>
<tr>
<td>Temperature of high risk filling when it is added to bakery products</td>
<td>≤ 5°C, or ≥ 63°C</td>
</tr>
<tr>
<td>Temperature on serving bakery products which contain high risk filling OR time between preparation and serving</td>
<td>≤ 5°C</td>
</tr>
<tr>
<td></td>
<td>≤ 90 mins</td>
</tr>
<tr>
<td>Time between plating and consumption of cold high risk foods, if not stored under refrigerated conditions</td>
<td>≤ 90 mins</td>
</tr>
</tbody>
</table>
### Table 8 Temperature for food when cooked, held or reheated

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core temperature of cooked foods</td>
<td>&gt; 75°C instantaneous</td>
</tr>
<tr>
<td>Holding temperature of hot food</td>
<td>&gt; 63°C</td>
</tr>
<tr>
<td>Temperature of reheated food</td>
<td>&gt; 70°C</td>
</tr>
</tbody>
</table>

### Table 9 Cooling Times for Cooked Food

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time between completion of cooking and placing food in refrigerator</td>
<td>&lt; 90 mins</td>
</tr>
<tr>
<td>Core temperature of food which is being cooled 150 mins after cooking</td>
<td>&lt; 10°C</td>
</tr>
<tr>
<td>Cooling times for whole meats units of 2.5kg and for thickness of 100m</td>
<td></td>
</tr>
<tr>
<td>temperature range</td>
<td></td>
</tr>
<tr>
<td>70-55°C</td>
<td>≤ 50 mins</td>
</tr>
<tr>
<td>55-12°C</td>
<td>≤ 240 mins</td>
</tr>
<tr>
<td>14 - ≤ 5°C</td>
<td>≤ 60 mins</td>
</tr>
<tr>
<td>Total</td>
<td>≤ 360 mins</td>
</tr>
</tbody>
</table>
### Table 10  Requirements for food during Food Service

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature of food displayed or dispensed using a buffet system of service</td>
<td>&gt; 63°C or &lt; 5°C</td>
</tr>
<tr>
<td>Exposure time to ambient temperatures of high risk foods for occasional buffets</td>
<td>&lt; 90 mins</td>
</tr>
<tr>
<td>Maximum storage time for food left over from occasional buffets if held under refrigeration</td>
<td>1 day</td>
</tr>
<tr>
<td>Exposure time of high risk desserts to temperatures greater than 5°C</td>
<td>&lt; 90 mins</td>
</tr>
<tr>
<td>Exposure time of high risk sauces to temperatures greater than 5°C</td>
<td>&lt; 150 mins</td>
</tr>
<tr>
<td>Maximum Temperature of chilled food at service</td>
<td>&lt; 5°C</td>
</tr>
</tbody>
</table>

### Table 11  Temperatures of food on delivery

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chilled food</td>
<td>-1°C to 5°C</td>
</tr>
<tr>
<td>Frozen food</td>
<td>≤ -18°C to ≤ -12°C</td>
</tr>
</tbody>
</table>
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**I.S.340**

**Section 2**

**Clause 1.0 Application of HACCP to Food Service Operations**

**Introduction**

Food business operators are legally obliged to put in place, implement and maintain a permanent food safety system based on the Hazard Analysis and Critical Control Point (HACCP) principles. Regulation (EC) 852/2004 on the hygiene of foodstuffs requires food businesses to utilise the Codex Principles of HACCP to identify and control the food safety hazards of their food activities. The Codex Principles of HACCP are referred to as the Seven Principles of HACCP.

HACCP is science based and systematic, HACCP is intended to prevent the production of unsafe food by establishing control system to eliminate or reduce to an acceptable level the identified hazards. HACCP is a tool for identifying what can go wrong that may result in food that is not safe for consumption, when the hazards (what can go wrong), have been identified the controls are implemented to prevent them from occurring.

In order to implement the principles of HACCP to a food business it is essential to have the full commitment and involvement of management and staff. When establishing a food safety system based on HACCP principles, the necessary prerequisite food hygiene requirements for the food activities should already be in operation.

A food safety system based on the HACCP principles is a pro-active hazard management system. The purpose of a system based on HACCP is to keep the contamination of food with micro-organisms, chemical substances or physical contaminants (such as glass particles) under control in order to produce safe food.

The foundation of any effective HACCP system is the correct implementation of prerequisite hygiene requirements and these should be in place before a HACCP system is established.

**Clause 2.0 Flexible approach to application of HACCP**

The EU food hygiene regulation states that where necessary and given the size and nature of the food business the application of HACCP should be flexible. This guide specifies the requirements for food businesses that adopt a flexible approach to the application of HACCP principles and development of HACCP plans. This guide also specifies the requirements for food businesses that apply HACCP principles to their activities to control identified hazards.

All food businesses are required to implement a HACCP based food safety system, if a food business operator decides to use this guide there are three methods of
complying with the requirement to implement a HACCP based food safety system. The food business operator should select a method that is appropriate for the food activities. The first two methods are suitable for food businesses that are eligible for the implementation of a simplified HACCP system or the so-called flexible approach to the application of HACCP Principles.

Clause 2.1 Management of Chill Chain in a Food Business

A food business involved in the storage of chilled food, including those using the flexible approach to HACCP, shall ensure that the correct product temperatures are maintained. The monitoring of temperature, checking and verification that refrigeration equipment is operating correctly shall be carried out, when safe food is dependent on the maintenance of the cold chain. Records of monitoring and verification activities of the cold chain should be maintained by the food business.

Clause 3.0 Method 1 Implementation of pre-requisite hygiene requirements to control all hazards

Food businesses not be required to have a HACCP plan, may control all hazards by implementation of the PRP’s in this guide. These food businesses would have applied the first principle of HACCP to their activities and would be controlling all hazards in accordance with sections 1 of this guide.

The food business shall/should be able to demonstrate or provide evidence that all activities are being carried out safely by the correct application of pre-requisite hygiene requirements. The food business shall/should verify that the hazards are under control through the pre-requisite hygiene requirements.

Examples of food businesses that may control all hazards by implementation of the PRP’s in this guide include:

The service of pre-wrapped or pre-packaged food, without further preparation or handling directly to consumers
Marquees, market stalls and mobile sales vehicles
Businesses mainly serving beverages (bars, coffee shops)
Small retail outlets
Transport and storage of pre-packed food or non perishable food.
Clause 4.0 Method 2 Use the sample HACCP plan from this guide to control hazards

Food businesses carrying out simple food preparation operations may be able to use a flexible approach to HACCP and would not be required to systematically apply the principles of HACCP. The sample plan in this guide would be accepted as evidence of a HACCP system for a food business if formally adopted by the operator of the food business.

In order to adopt the sample HACCP plan the food business operator should compare the food activities with those in the plan and if satisfied that all possible hazards are included, the operator can adopt the plan by signing and dating plan in this guide.

If the food business operator identifies activities on the sample plan that are not applicable to the food operation, these should be clearly deleted before adopting, signing and dating the plan in this guide.

If the food business operator identifies activities in the food business not included in the sample plan in this guide then the food business operator shall follow the HACCP principles to identify hazards for the activities not included in the sample plan. The food business operator may then adopt the plan by signing and dating plan in this guide with the additional information for the activities not included in the sample plan for which CCP’s have been established using Methods.

Where a food business implements a HACCP system based on the requirements of this guide the documentation available for inspection should include:

This guide
Approved HACCP plan
Monitoring and verification records.
Clause 5.0 Method 3 Use the Application HACCP Principles to control hazards

The food business operator shall provide adequate resources, including training, to develop and ensure implementation of a system based on the HACCP principles.

The food business operator shall develop, implement and maintain a permanent system based on the seven principles of HACCP.

Identify any hazards that shall be prevented, eliminated or reduced to acceptable levels. Identify the critical control points at the step or steps at which control is essential to prevent or eliminate a hazard or reduce it to acceptable levels.

Establish critical limits at critical control points, which separate acceptability from unacceptability for the prevention, elimination or reduction of identified hazards.

Establish and implement effective monitoring procedures at critical control points.

Establish corrective actions when monitoring indicates that a critical control point is not under control.

Establish procedures, which shall be carried out regularly, to verify that the measures outlined above are working effectively.

Establish documents and records commensurate with the nature and size of the food business to demonstrate the effective application of the measures outlined above.

The food business should follow the steps outlined in order to develop a permanent system or procedure(s) based on the HACCP principles; an explanation of each of the seven principles of HACCP is given below.

5.1 Stage 1. First Principle

Identify any hazards that shall be prevented, eliminated or reduced to acceptable levels.

The first step when implementing HACCP system is to identify the potential food safety hazards in the food service operation i.e. what can cause food to be unsafe for the consumer.

A hazard is defined in EU 178/2002 as a biological, chemical or physical agent in, or condition of, food or feed with the potential to cause adverse health effects.

Hazards are divided into three groups:

Biological: Biological contamination may occur when microorganisms or their toxins contaminate food. Microorganisms include viruses, bacteria, yeast and moulds. In some cases the numbers of microorganisms present causes food
poisoning but it may also occur as a result of the production of toxins by the microorganisms.

Chemical: Chemical contamination may occur when cleaning chemicals; pesticides or other contaminants come into contact with food. Allergens are chemicals and when known allergens are incorporated into food, the food business operator should be able to inform the consumer accordingly e.g. nuts.

Physical: Physical contamination may occur when foreign objects get into food, foreign objects are usually things that can be seen, felt or touched, examples include bone, hair, packaging, pieces of equipment, glass.

In order to ensure effective identification of potential hazards, the following should be completed:

Assemble a team with knowledge of all the activities of the business and all the hazards associated with them. In some food businesses, the team may only be one person. This person should have a thorough knowledge of the food service operation and of food safety.

The team should develop a flow diagram or a process description showing all the stages of the food service operation. A sample flow diagram is shown on page XX. When the flow diagram for the food business has been completed it should be checked to ensure that it includes all the activities of the business, i.e. all the steps. The team should then review each step of the food business to identify what could go wrong i.e. the potential food safety hazards at each step.

At this stage the team may consider what measures should be applied to control the identified hazards i.e. the control measures.

Examples of hazards and control measures are:

Hazard = Microbiological caused by cross contamination during product storage
Control Measure = segregation of raw and cooked foods to prevent cross contamination

Hazard: Chemical caused by contamination of food with cleaning agents.
Control Measure = Store cleaning agents in a separate storage area.

At the end of this stage the following elements of the HACCP plan will be completed.

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sample Process Flow Chart Identifying Steps in the Operation

PURCHASING

DELIVERY

FROZEN STORAGE

STORAGE

THAWING

PREPARATION

COOKING

SERVICE

COOLING

HOT

REHEATING

SERVICE
5.2 Stage 2  Second Principle

Identify the critical control points at the step or steps at which control is essential to prevent or eliminate a hazard or reduce it to acceptable levels.

When Stage 1 has been completed and the potential hazards identified, the next stage is to identify the points in the processes where hazards need to be controlled in order to ensure the safe food. These are known as Critical Control Points (CCP’s). A CCP is the last chance to control an identified hazard before the food is served to the consumer.

The identification of CCP’s is a very important stage in a HACCP system as the failure to control or reduce a hazard may compromise the safety of the food and result in harm to the consumer.

A method of establishing which step in the process is a critical control point (CCP) is given below, however other risk based methods maybe used by the food business operator. If the answer is “YES” to all the questions then this step in the process is a CCP.

1.  Does the control measure relate to food safety?
2.  Does the control measure actually eliminate or reduce the hazard to an acceptable level?
3.  Is the control measure the last chance in the process to control this hazard or is the control measure vital for the success of a later critical control point?
4.  Can the control measure be monitored?

Example of a CCP

In a food service operation the storage of ready to eat foods is a critical control point and maintenance of the cold chain is the method of ensuring that ready to eat food continues to be safe.

Step:  Storage of ready to eat food

Hazard:  Growth of pathogenic micro organisms

Control Measure:  Maintain food at correct temperature

Critical Control Point:  Yes

At the end of this stage the following elements of the HACCP plan will be completed

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.3 State 3  Third Principle

Establish critical limits at critical control points, which separate acceptability from unacceptability for the prevention, elimination or reduction of identified hazards.

A critical limit is the dividing line between what is acceptable and what is unacceptable, failure to meet a critical limit may compromise the safety of food and cause harm to the consumer. The critical limits selected should be scientifically based e.g. selected from recognised guidelines or other sources of reference.

When Stage 2 has been completed and the steps at which hazards are to be controlled are determined (CCPs), stage 3 is to establish critical limits for each critical control point. A critical limit shall be defined for any step that is a CCP.

Example of a critical limit:

Cold service and display of ready-to-eat food:

Critical Limits: Maintain temperature of the food at less than or equal to 5°C

Validation of Critical Limits:

The food business operator is responsible for ensuring that the critical limits in use are valid for the particular activity. If the values for cooking/cooling in this guide are used as the critical limits in the food business these have been validated i.e. selected on the basis of capability to ensure the safety of food.

If the food business operator selects and uses other values for critical limits the basis for their selection should be available to the regulatory authorities.

At the end of this stage the following elements of the HACCP plan should be completed:

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP</th>
<th>CCP CRITICAL LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.4 Stage 4  Fourth Principle

Establish and implement effective monitoring procedures at critical control points. When the critical control points of the service operation at which hazards are to be controlled have been identified and critical limits established for these CCP’s, stage 4 is where the team decide how CCP’s will be monitored. Monitoring demonstrates that the identified food safety hazard is being controlled.

The food business operator/team shall define for each CCP:

- Method of monitoring – HOW
- Frequency of monitoring – WHEN
- Responsibility for monitoring and recording – WHO

Monitoring activities may be visual assessment that a critical limit has been achieved or visual checks that a standard cooking method has been carried out correctly. The food business operator shall/should ensure that when a visual method of monitoring is used to assess control of a CCP, the method used shall/should be verified.

The food businesses operator shall ensure that when using a visual method to assess control of a CCP that the same level of health protection shall be achieved as the equivalent numerical critical limit.

Examples of visual methods of monitoring are:

- Cooking of raw foods; physical change that occurs as a result of cooking the foods.

Examples of methods of verification of visual methods of monitoring:

Cooking:

- The temperature of cooked food should be checked using a calibrated temperature probe to confirm that the visual assessment i.e., was the equivalent of achieving a temperature at the centre of 75ºC when using a standard method of cooking.

At the end of this stage the following elements of the HACCP plan should be completed.

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP</th>
<th>CCP CRITICAL LIMIT</th>
<th>HOW</th>
<th>WHEN</th>
<th>WHO</th>
</tr>
</thead>
</table>

| | | | | | | | |

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5.5 Stage 5      Fifth Principle

Establish corrective actions when monitoring indicates that a critical control point is not under control.

At this stage the food business operator/team are required to establish corrective action for each CCP. Corrective action shall be taken when monitoring shows that a critical limit is not being achieved. The purpose of corrective action is to prevent unsafe food from reaching the consumer.

The corrective action to be taken should be defined by the food business operator/team and include:

Responsibility for the action – WHO
Action to be taken to make the food safe and prevent recurrence – HOW
Record to be retained to show action taken – WHEN

Example of corrective action:

When cooking of food is completed, if the core temperature is not 75°C continues to cook, until the required temperature is achieved, the cooking temperature may need to be increased.

At the end of this stage the following elements of the HACCP plan should be completed.

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARD</th>
<th>CONTROL MEASURES</th>
<th>CCP</th>
<th>CCP CRITICAL LIMIT</th>
<th>MONITORING</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HOW</td>
<td>WHEN</td>
</tr>
</tbody>
</table>
5.6 Stage 6  Sixth Principle

Establish procedures, which shall be carried out regularly, to verify that the measures outlined above are working effectively.

At this stage the food business operator/team are required to establish and implement methods to verify, that the HACCP system is working, and that food hazards are being controlled, verification demonstrates that the HACCP system has been implemented as planned.

The team should define a method of verification of the HACCP plan, by whom and when.

Frequent verification HACCP of activities e.g. monthly should include but are not limited to the following:

- Is monitoring of CCP’s being carried out as defined in HACCP Plan?
- Is corrective action being taken when critical limits are exceeded?
- Are visual methods of monitoring being carried out correctly?
- Where used are visual methods of monitoring being verified?
- Are the required records being completed correctly?

Annual verification of HACCP plan should be carried out and include but no limited to the following:

- Is the plan correct for the food activities?
- Is the equipment used for monitoring calibrated?
- Are PRP’s implemented and correct for the food activities?
- Are the records of training, pest control etc. satisfaction?
- Have all audit findings been actioned and/or resolved?

Where possible, verification activities should be carried by a person who is not responsible for monitoring in the particular area or activity within a food operation.

The food business operator should ensure that all verification activities are carried out as defined and demonstrated that the HACCP plan continues to be valid.

Review of HACCP Plan

A review of the HACCP plan should be undertaken:
If there is a change in the food business operation e.g. new equipment or new activity
Where there is a recurring failure in the system, with the same corrective action.
When a food safety incident occurs in a similar food business.
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At the end of this stage the HACCP plan should be fully completed.

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARD</th>
<th>CONTROL MEASURES</th>
<th>CCP</th>
<th>CCP CRITICAL LIMIT</th>
<th>MONITORING</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HOW</td>
<td>WHEN</td>
<td>WHO</td>
</tr>
</tbody>
</table>
5.7 Stage 7 Seventh Principle

Establish documents and records commensurate with the nature and size of the food business to demonstrate the effective application of the measures outlined above.

The food business should maintain sufficient documentation and records to demonstrate compliance with HACCP requirements. HACCP documentation shall be available for inspection by regulatory authorities.

Documentation.

The HACCP system should be documented and all documentation relating to the HACCP system should be retained. Examples of documents to be retained should include but are not limited to: HACCP plan Hazard analysis, CCP identification and critical limit determination Modification to the HACCP system.

Food businesses using this standard should be considered to have conducted a hazard analysis and the standard should be accepted as documentary evidence of this activity.

A sample of a HACCP plan is given on page 53.

Records.

The S.I. transposing Regulation (EC) 852/2004 into Irish Law is expected to prescribe requirements for food business operators in relation to records and their retention time.

A record keeping system appropriate to the size and nature of the food business should be implemented and retained, electronic system are acceptable. The food business operator should maintain a record-keeping system integrated into existing paperwork where possible, for examples daily diary, delivery notes or invoices may be used as records.

Examples of records include but are not limited to:

Monitoring e.g. temperature
Corrective action
Verification

Records demonstrating that the requirements of this standard have been complied with should be retained, be legible, clearly identified, signed and dated.

Records should be kept for an appropriate time and the retention time should be adequate to ensure that information will be available in case of a problem and the food is traceable.

Samples of documents and records suitable for a food service business are in Annex 1.
EXAMPLE of a HACCP Plan For a Typical Food Service Operation
NOTE: If this example plan is adopted, it shall be adapted by the business to ensure it is appropriate

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>Biological Contamination and/or growth</td>
<td>Temperature control</td>
<td>Yes</td>
<td>Frozen food -12 to -18C Chilled food less than 5C</td>
<td>Visual and/or probe using a sterile probe</td>
<td>Twice/Daily</td>
<td>Trained Operator</td>
<td>Use immediately if &gt; -12 or discard. Discard food if &gt; 5C</td>
<td>Store record</td>
<td>Owner/Team</td>
</tr>
</tbody>
</table>

Chemical and/or Physical contamination

Temperature control

Comply with Hygiene Requirements

Visual and/or probe using a sterile probe

Verify using a sterile probe

Visual and/or probe using a sterile probe

Twice/Daily

Daily

Trained Operator

Use immediately if > -12 or discard. Discard food if > 5C

Store record

Owner/Team

The frequency of monitoring will depend on the nature and extent of the business. Businesses are strongly advised to review these frequencies to ensure they are appropriate to the food business operation.
EXAMPLE of a HACCP Plan For a Typical Food Service Operation

NOTE: If this example plan is adopted, it shall be adapted by the business to ensure it is appropriate

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase &amp; Delivery</td>
<td>Biological Contamination and/or Growth</td>
<td>Temperature control</td>
<td>Yes</td>
<td>Chilled food not greater than 5C</td>
<td>Visual and/or probe using a sterile probe verify using a sterile probe</td>
<td>Each Delivery As required</td>
<td>Trained Operator</td>
<td>Chilled food: Reject if greater than 5C</td>
<td>Goods in</td>
<td>Comply with Sixth Principle of HACCP</td>
</tr>
<tr>
<td></td>
<td>Chemicals or Physical contamination</td>
<td>Approved Suppliers &amp; Compliance with Hygiene Requirements</td>
<td></td>
<td>Frozen food: -12C or for Quick Frozen - 15C</td>
<td></td>
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<td></td>
<td>Frozen food: Reject if showing signs of thawing or if temperature is greater than 12C</td>
<td></td>
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</tr>
</tbody>
</table>

2 The frequency of monitoring will depend on the nature and extent of the business. Businesses are strongly advised to review these frequencies to ensure they are appropriate to the food business operation.
**EXAMPLE of a HACCP Plan For a Typical Food Service Operation**

NOTE: If this example plan is adopted, it shall be adapted by the business to ensure it is appropriate

<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preparation of ready to eat foods</td>
<td>Biological contamination and/or growth</td>
<td>Temperature control</td>
<td>Yes</td>
<td>Temperature of food not greater than 5C</td>
<td>Visual and/or probe using a sterile probe Verify using a sterile probe</td>
<td>Each Batch Daily</td>
<td>Discard if food temperature &gt; 5C for &gt; 2 hrs</td>
</tr>
<tr>
<td></td>
<td>Chemical and/or physical contamination</td>
<td>Comply with Hygiene Requirements</td>
<td></td>
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</tr>
</tbody>
</table>

3 The frequency of monitoring will depend on the nature and extent of the business. Businesses are strongly advised to review these frequencies to ensure they are appropriate to the food business operation.
### EXAMPLE of a HACCP Plan For a Typical Food Service Operation

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<table>
<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thawing of ready to eat food</td>
<td>Biological contamination and/or growth</td>
<td>Temperature control</td>
<td>Yes</td>
<td>Thaw at no greater than 5°C</td>
<td>Visual and/or probe using a sterile probe</td>
<td>Twice/day Daily</td>
<td>Trained Operator</td>
<td>If food is ready to eat discard if temp &gt; 5°C. If food is raw, cook immediately</td>
</tr>
<tr>
<td></td>
<td>Chemical and/or physical contamination</td>
<td>Comply with Hygiene Requirements</td>
<td>No</td>
<td></td>
<td>Verify using a sterile probe</td>
<td></td>
<td></td>
<td>Fridge record</td>
</tr>
</tbody>
</table>

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EXAMPLE of a HACCP Plan For a Typical Food Service Operation

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<tr>
<th>STEP</th>
<th>HAZARDS</th>
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<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooking</td>
<td>Biological contamination and/or growth</td>
<td>Cook to a known standard</td>
<td>Yes</td>
<td>Temperature at core of food ≥ or equal to 75°C</td>
<td>Visual Verify using a sterile probe</td>
<td>Each Batch Daily</td>
<td>Trained Operator</td>
<td>Extend cooking time and/or increase cooking temperature</td>
<td>Cooking record</td>
<td>Comply with Sixth Principle of HACCP</td>
</tr>
<tr>
<td></td>
<td>Chemical and/or physical contamination</td>
<td>Comply with Hygiene Requirements</td>
<td>No</td>
<td></td>
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</tbody>
</table>

5 The frequency of monitoring will depend on the nature and extent of the business. Businesses are strongly advised to review these frequencies to ensure they are appropriate to the food business operation.
### EXAMPLE of a HACCP Plan For a Typical Food Service Operation

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<th>STEP</th>
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<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling</td>
<td>Biological contamination and/or growth</td>
<td>Cool food rapidly</td>
<td>Yes</td>
<td>Cool to less than or equal to 10°C within 150 mins</td>
<td>Visual Verify</td>
<td>Ongoing each batch</td>
<td>Trained Operator</td>
<td>If food is &gt; 10°C after 150 mins discard</td>
<td>Cooking/cooling record</td>
<td>Comply with Sixth Principle of HACCP</td>
</tr>
<tr>
<td></td>
<td>Chemical and/or physical contamination</td>
<td>Comply with Hygiene Requirements</td>
<td>No</td>
<td>Verify using a sterile probe</td>
<td></td>
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</tbody>
</table>

6 The frequency of monitoring will depend on the nature and extent of the business. Businesses are strongly advised to review these frequencies to ensure they are appropriate to the food business operation.
### EXAMPLE of a HACCP Plan For a Typical Food Service Operation

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<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reheating</td>
<td>Biological contamination and/or growth</td>
<td>Temperature control</td>
<td>Yes</td>
<td>Heat food to a core temperature of &gt; or equal to 70C</td>
<td>Sterile Probe</td>
<td>Extend heating time and or increase heating temperature until core temperature is &gt; or equal to 70C</td>
<td>Service Record</td>
<td>Comply with Sixth Principle of HACCP</td>
</tr>
<tr>
<td></td>
<td>Chemical and/or physical contamination</td>
<td>Comply with Hygiene Requirements</td>
<td>No</td>
<td></td>
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</tbody>
</table>

7 The frequency of monitoring will depend on the nature and extent of the business. Businesses are strongly advised to review these frequencies to ensure they are appropriate to the food business operation.
EXAMPLE of a HACCP Plan For a Typical Food Service Operation

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<th>STEP</th>
<th>HAZARDS</th>
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<th>CCP</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Holding/Service</td>
<td>Biological contamination and/or growth</td>
<td>Temperature control</td>
<td>Yes</td>
<td>Food temperature of &gt; 63°C</td>
<td>Use Sterile Probe</td>
<td>Hourly</td>
<td>Trained Operator</td>
<td>Discard if food temperature is &lt; 63°C</td>
<td>Service Record</td>
<td>Comply with Sixth Principle of HACCP</td>
</tr>
<tr>
<td></td>
<td>Chemical and/or physical contamination</td>
<td>Comply with Hygiene Requirements</td>
<td>No</td>
<td></td>
<td>Visual</td>
<td>On going</td>
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</tbody>
</table>

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EXAMPLE of a HACCP Plan For a Typical Food Service Operation

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<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold Service &amp; Display</td>
<td>Biological contamination and/or growth</td>
<td>Temperature control</td>
<td>Yes</td>
<td>Temperature of food not &gt; 5°C</td>
<td>Use Sterile Probe</td>
<td>Every Hours</td>
<td>Trained Operator</td>
<td>Discard if food temperature is &gt; 5°C</td>
<td>Food Service</td>
<td>Comply with Sixth Principle of HACCP</td>
</tr>
<tr>
<td>Chemical and/or physical contamination</td>
<td>Comply with Hygiene Requirements</td>
<td>No</td>
<td></td>
<td>Visual</td>
<td>Ongoing</td>
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</table>

9 The frequency of monitoring will depend on the nature and extent of the business. Businesses are strongly advised to review these frequencies to ensure they are appropriate to the food business operation.
SAMPLE HACCP Plan

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<thead>
<tr>
<th>STEP</th>
<th>HAZARDS</th>
<th>CONTROL MEASURES</th>
<th>CCP YES/NO</th>
<th>CRITICAL LIMIT</th>
<th>MONITORING HOW</th>
<th>WHEN Suggested</th>
<th>WHO</th>
<th>CORRECTIVE ACTION</th>
<th>RECORD Type</th>
<th>VERIFIC</th>
</tr>
</thead>
</table>

Prepared by:  

Approved by:  

Date:
Annex 1 Sample Records

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Food Cooling Record 76
Food Hot Holding 77
**Staff Training Record**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date of Employment</th>
<th>Position Held</th>
<th>Induction Training</th>
<th>Basic Hygiene</th>
<th>Advanced Hygiene</th>
<th>Refresher Course</th>
<th>Other Course</th>
<th>Signed</th>
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</table>

Date of training to be inserted in appropriate box
All staff to be trained in food hygiene to a level appropriate to their responsibilities
# Weekly Cleaning Programme

<table>
<thead>
<tr>
<th>Area/Item to be Cleaned</th>
<th>Frequency of Cleaning</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
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</tbody>
</table>

Verified by ________________________  Date:  __________________
Comments: ________________________
## Cleaning Schedule

<table>
<thead>
<tr>
<th>Area/Item to be Cleaned</th>
<th>Method/Procedure</th>
<th>Chemical to be used</th>
<th>Frequency of Cleaning</th>
<th>Person Responsible</th>
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</table>
**Delivery Inspection Records**

Date: ______________________

<table>
<thead>
<tr>
<th>Suppliers Name</th>
<th>Food</th>
<th>B/B Date of Use-by-Date</th>
<th>Temp. of Vehicle</th>
<th>Temp. of Food</th>
<th>Condition of Packaging</th>
<th>Condition of Vehicle</th>
<th>Condition of Delivery Person</th>
<th>Corrective Action</th>
<th>Signed</th>
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</thead>
<tbody>
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</tbody>
</table>
## Temperature Control Record for Freezers

<table>
<thead>
<tr>
<th>Week Beginning Unit</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
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<tbody>
<tr>
<td></td>
<td>AM</td>
<td>PM</td>
<td>AM</td>
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<td>AM</td>
<td>PM</td>
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</table>

Signed

Corrective Action
## Temperature Control Record for Refrigerators

<table>
<thead>
<tr>
<th>Week Beginning Unit</th>
<th>Monday AM</th>
<th>Monday PM</th>
<th>Tuesday AM</th>
<th>Tuesday PM</th>
<th>Wednesday AM</th>
<th>Wednesday PM</th>
<th>Thursday AM</th>
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</table>

Signed

Corrective Action
**Food Cooking Temperature Record**

<table>
<thead>
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<th>Date</th>
<th>Product</th>
<th>Time</th>
<th>Temperature</th>
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### Food Cooling Record

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**Food Hot Holding Record**

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## Annex II – Additional Information

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Section 1 Information on Training

1.1 General

A training course on hygiene should be organised into a number of sections or modules.

1.2 Training Course

The following is an example of the content and structure of a hygiene training course

Module 1 Reasons for good hygiene practices
- Identify the consequences of poor food hygiene
- Identify the benefits of good food hygiene
- Identify factors affecting bacterial growth
- Identify the relevant legislation and its implications

Module 2 Causes and prevention of food poisoning and food spoilage
- State the causes of food poisoning and food spoilage
- State the methods of prevention
- Identify the chain of infection
- List the symptoms of food poisoning
- Identify the characteristics of food borne micro organisms which cause food poisoning

Module 3 Personal Hygiene
- State the reasons for good personal hygiene practices
- Identify good personal hygiene practices
- Identify unhygienic habits
- Describe proper hand washing methodology

Module 4 Cleaning
- Specify the importance of cleaning
- Outline the methods used for cleaning
- State the difference between detergent and disinfectant
- List important considerations when developing a cleaning programme
- List structural hygiene requirements and the reason for such requirements
- List hygiene requirements for plant and equipment
Module 5 Pest and Pest Control

- Identify the problems associated with pests
- List types of pests
- Outline pest control and prevention procedures
- State the food handlers role in pest prevention

1.3 Training Evaluation

Following training of personnel in hygiene, the effectiveness of the training should be evaluated by means of an examination and food handlers should be observed on the job to ensure that their training has been understood and is being put into practice.

1.4 Training Records

The food business operator should ensure that records of all hygiene training given to personnel are retained.

1.5 Refresher Training

Refresher courses on hygiene should be given as required to all staff.

1.6 Training Course Selection

The food business operator should ensure that the training course selected for delivery to personnel will meet the requirements of the appropriate authorities.
Section 2 Personnel Hygiene

2.1 Staff Presentation

All staff employed in food storage, preparation and service areas should comply with the following:

- No jewellery except plain wedding ring and/or sleeper earrings
- Finger nails shall be kept clean, short and free from nail varnish
- Refrain from the use of excessive aftershave or perfumes
- Wear clean protective clothing as provided

2.2 Hand Washing

Hand-washing is very important in the prevention of contamination of food. All staff should wash their hands including forearms when exposed using a liquid soap. Hand washing should be carried out as necessary and always:

- Before starting work
- Prior to handling cooked or ready to eat food
- After handling or preparing raw food
- After handling waste
- After cleaning duties
- After using toilet
- After blowing nose, sneezing or coughing
- After eating, drinking or smoking
- After using disposable or other gloves.
Section 3 Health Questionnaires

3.1 General

The use of pre-employment health questionnaires is supported as an adjunct to appropriate training in good hygiene practice and safe food handling and the reporting of relevant conditions by food handlers.

3.2 Health Questionnaires

Where health questionnaires are used they should contain the following:

Have you been passed fit for work with food by a doctor, within the last 12 months?

Since you have been passed fit for work with food have you suffered from

- Any illness, which required hospitalisation or medical treatment?
- Diarrhoea or vomiting, which lasted for more than 24 hours?
- A persistent cough?
- A skin ailment?
- Been in contact with a confirmed case of food poisoning?

In the event that the person to be employed has not been passed as fit to work with food within the last 12 months or has answered yes to any of the above questions, then a new medical certificate should be sought prior to employment.
Section 4 Work exclusion/restriction of personnel

4.1 General

The overriding prerequisite for fitness to return to food handling duties following illness is strict adherence to good personal hygiene.

No food handler with gastroenteritis should work while symptomatic. A food handler who has suffered from confirmed gastroenteritis should be certified fit to return to work by a doctor.

4.2 Specific Exclusions

The decision to exclude any food handler should be based on individual risk assessment.

Persons should be excluded from food handling activities where the following pathogens have been identified.

Vercytotoxin-producing E.coli (VTEC)
Typhoid/Paratyphoid
Shingella dysenteriae

A food handler infected with Hepatitis A should be excluded from food handling duties for seven days after the onset of jaundice and/or symptoms.

Infected skin lesions on exposed parts (especially hands and forearms) should be adequately covered with a distinctively coloured waterproof dressing until healed. If not adequately covered exclusion/restriction may need to be considered depending on the food handling activity.

Those with purulent discharges (from the eye, ear, nose or mouth) should not work near open food; this may require exclusion/restriction to non-food handling activities until recovery.
Section 5 – Guidance on Water Sampling and Analysis

The food business operator should seek the advice of the selected test laboratory in advance of submitting any samples for analysis.

The samples should only be taken in containers supplied by the test laboratory or the environmental health officer.

The samples should be delivered to the test laboratory as close as possible to the agreed time and within six hours of collection.

The samples should be stored in a cool place (not frozen) and protected from daylight prior to delivery to the test laboratory.

Sample Taking

The tap from which the sample is to be taken should be:

Free from all attachments and in good repair
Cleaned inside and out with a swab that has disinfecting fluid applied to it
Allowed to run to waste at a steady rate for 2-3 minutes
Prior to filling the sample container

The sample container should be:

Clearly labelled with the information required by test laboratory
Filled to within 2-3 cm of top of container
Filled and resealed as quickly as possible

Sample containers for microbiological analysis should:

Not be rinsed prior to filling
Opened immediately prior to filling only
Handled carefully to avoid contaminating the container or inside of the lid of the container
Sample volume should be approximately 500ml

Sample containers for chemical analysis should be

Rinsed 2 or 3 times with the water to be tested
Sample volume should be approximately 2.5 litres.