



NSAI
Standards

Irish Standard
I.S. 340:2007

Hygiene in the Catering Sector

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I.S. 340:2007

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I.S. 340:2007, Hygiene in the Catering Sector

Please apply the following corrigendum to page 12, Section 3, subclause 3.1, point 3.

Chilled Foods

Temperature of food /Time	Corrective Action
Temperature >5 °C for <2 hrs	use immediately or restore temperature.
Temperature >5 °C for >2 hrs and <4 hrs	use immediately or discard.
Temperature >5 °C for >4 hrs	discard.

Frozen Foods

Temperature of food	Corrective Action
Temperature \geq -12°C	use immediately or risk assess, or discard.

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DECLARATION

OF

SPECIFICATION

ENTITLED

HYGIENE IN THE CATERING SECTOR

AS

THE IRISH STANDARD SPECIFICATION FOR

HYGIENE IN THE CATERING SECTOR

NSAI in exercise of the power conferred by section 16 (5) of the National Standards Authority of Ireland Act, 1996 (No. 28 of 1996) and with the consent of the Minister for Enterprise, Trade and Employment, hereby declare as follows:

1. This instrument may be cited as the Standard Specification (Hygiene in the catering sector) Declaration, 2007.
2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Hygiene in the catering sector.
(2) The said standard specification may be cited as Irish Standard 340:2007 or as I.S. 340:2007.
3. (1) The Standard Specification (Hygiene in the catering sector) Declaration 1994, is hereby revoked.
(2) Reference in any other standard specification to the Instrument hereby revoked and to Irish Standard 340:1994 thereby prescribed, shall be construed, respectively, as references to this instrument and to Irish Standard 340:2007.

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Foreword

This national standard has been drafted by a specialist working group of the Food Industry Consultative Committee of the National Standards Authority of Ireland. This standard is a voluntary standard and food businesses may use it as a guide to Regulation (EC) No. 852/2004 of the European Parliament and of the Council on the hygiene of foodstuffs. S.I. 369 of 2006 European Communities (Hygiene of Foodstuffs) Regulations 2006 gives effect in Irish law to Regulation (EC) No. 852/2004.

A food business operator is required under S.I. 369 of 2006 to notify the official agency of each food establishment under his/her control. In Section 1 of this standard guidance is given on how food business operators shall comply with this requirement.

All food business operators, including those in the food catering sector, are obliged to ensure that the food they produce is safe and that their food operations are in compliance with Regulation (EC) No. 852/2004. Regulation (EC) No. 852/2004 is written in very general terms and where possible specific advice is given, however, advice for all possible conditions is not included.

Recital (20) of Regulation (EC) No. 852/2004 refers to Regulation (EC) No. 178/2002 and the requirement for traceability as an element for ensuring safe food. Guidance to compliance with this requirement is given in Section 2 of this standard.

Article 4 of Regulation (EC) No.852/2004 states specific requirements for the maintenance of the cold chain and temperature control of foodstuffs. Guidance to compliance with these requirements is given in Section 3 of this standard.

A food business operator is required to manage the cold chain in order to maintain food at the correct temperatures and this may be achieved by complying with the guidance in Section 3 of this standard, or by defining the cold chain as a Critical Control Point.

Article 4 of Regulation (EC) No. 852/2004 refers to microbiological criteria for foodstuffs which are contained in Regulation (EC) No. 2073/2005. Guidance on the requirements for the microbiological criteria for foodstuffs and how they apply to businesses in the food catering sector is available from the Food Safety Authority of Ireland (FSAI).

Article 4 of Regulation (EC) No. 852/2004 requires food businesses to comply with hygiene requirements and guidance is given in Section 4 of this standard.

Article 5 of Regulation (EC) No. 852/2004 requires food business operators to put in place, implement and maintain a permanent procedure or procedures based on the principles of Hazard Analysis and Critical Control Point (HACCP). Guidance on the application of HACCP principles to a food catering business is given in Section 5 of this standard. The EU Commission has stated that some food businesses will be able to adopt a flexible approach to the application of HACCP principles and guidance for these businesses is given in Section 5 also.

The implementation of a food safety system based on the principles of HACCP requires the full commitment of the management and staff of the food business.

The foundation of an effective HACCP system is the correct implementation of food hygiene requirements by the food business operator. A food safety management system consists of two elements i.e. the implementation of the food hygiene requirements and the HACCP system.

In this Standard the word “shall” indicates guidance to compliance with the requirements of Regulation (EC) No 852/2004 and in order to comply with food hygiene requirements the food business operator shall implement the guidance as appropriate for the food business. Where the food business operator uses an alternative to the guidance in this standard he/she shall be able to demonstrate to the competent authority that the same level of food safety is provided.

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 Regulation (EC) No. 852/2004. The food business operator is not required by law to comply with best practice. However, it is recommended that the food business operator give consideration to the guidance to assist with ensuring food safety.

SCHEDULE

HYGIENE IN THE CATERING SECTOR

Scope and Field of Application

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 food businesses where food is prepared and served to consumers and for example includes restaurants, hotels, fast food outlets, cafes, catering facilities and licensed premises.

Terms and Definitions

Audit: 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 process of comparing an instrument's accuracy to a known standard

Cleaning agents : include detergents, disinfectants, sanitisers

Control: to take all necessary actions to ensure and maintain compliance with criteria established in the HACCP plan

Control measure: any action and/or activity that can be used to prevent, reduce or eliminate a food safety hazard 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 to reduce it to an acceptable level

Critical limit: a criterion, which separates acceptability from unacceptability

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

Detergent : A synthetic cleaning agent used to remove soils

Disinfectant: a chemical or blend of chemicals that has the capacity to reduce the numbers of micro-organisms present

Document: a formal collection of meaningful data and/or information

End Product: product that will not undergo any further food processing by the food business

Flow diagram: a schematic representation of the sequence of steps or activities in a food business

Food Business Operator: the natural or legal person(s) responsible for ensuring that the requirements of food law are met within the food business under their control

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

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

Hazard - Biological: the presence in food of living organisms e.g. bacteria, viruses, yeasts and moulds which may cause harm if they or their products are consumed in the food

Hazard - Chemical: the presence in a food of an unacceptable level of a chemical substance

Hazard- Physical: the presence in food of foreign objects that may cause harm if consumed

Hazard Analysis: the collection of information to identify hazards in the food business and the evaluation of the controls to be put in place where necessary

Hazard Analysis and Critical Control Point (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

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Monitor: the act of conducting a planned sequence of observations or measurements

Quick Frozen: a freezing process used to freeze food as defined in Council Directive 89/108/EEC e.g. IQF (individual quick frozen) products

Ready-to-Eat: food that is intended to be consumed without any further processing

Recall: The removal of unsafe food from the food distribution chain including food sold to consumers.

Record: a special type of document stating results achieved or providing evidence of activities performed in electronic or paper format

Risk: the combination of the probability of a hazard occurring and the severity of the effect

Sanitiser: a chemical or blend of chemicals which has the capability of removing soil and reducing the number of micro-organisms

Shall: this term indicates guidance to compliance with the requirements of Regulation (EC) No 852/2004 or where an alternative is used the food business operator shall be able to demonstrate to the competent authority that the same level of food safety is provided

Should: this term is used where the guidance given in this standard is best practice and does not relate to a specific requirement of Regulation (EC) No 852/2004

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

Traceability: means the ability to trace and follow a food, feed, food-producing animal or substance intended to be, or expected to be incorporated into a food or feed, through all stages of production, processing and distribution

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

Section 1 Registration of a Food Business

1.1 General

A food business operator is required by S.I. No. 369 of 2006 European Communities (Hygiene of Foodstuffs) Regulations 2006 to register all food establishments under their control with the Health Service Executive (HSE) with responsibility for the area where the establishments are located.

The food business operator shall notify the local HSE – Environmental Health office of the following:

- a) a food business is in operation
- b) any significant changes in the food business
- c) the closure of a food business.

A food business operator should notify the local HSE-Environmental Health office of any change of ownership of the food business.

Section 2 Food Traceability, Recall and Labelling

2.1 General

Recital (20) of Regulation (EC) No. 853/2004 refers to Regulation (EC) No. 178/2002 –“Laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety”. Article 18 of Regulation (EC) No 178/2002 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. Article 19 of Regulation (EC) No 178/2002 requires a food business operator to be able to withdraw/recall food.

A food business operator shall establish and maintain a method of tracing food used by the business.

2.2 Food Traceability

Food business operators shall be able to trace food one step back, to the supplier and one step forward to the customer.

A food business is not required to identify customers if they are the final consumers of the food.

2.2.1 Traceability of incoming foods

All foodstuffs and packaging (if applicable), entering a food premises shall be traceable to the supplier.

In order to comply with this requirement, the food business operator shall retain records of:

- Supplier name and address
- Delivery dates
- Food type.

The food business operator shall retain traceability records and may comply with this requirement by retaining the following documents as records of goods used in the business.

- Supplier Invoices
- Goods Received Notes
- Goods In records
- Sales Notes for Fish and Shellfish.

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The food business operator should retain records of:

- Quantity or volume of foodstuffs
- Batch Number
- Identification Mark
- Detailed description of the product e.g. pre-packed or bulk, variety of fruit/vegetables, raw or processed product.

A food business operator should be able to trace ingredients used in the food business

2.2.2. Traceability of foods supplied to another business

Where the food business supplies foods for sale in another business, the food business operator shall maintain traceability of these foods and shall retain records of:

- Customer name and address
- Food types
- Delivery dates

The food business operator should retain records of:

- Quantity or volume of foodstuffs
- Batch Number
- Detailed description of the product e.g. fresh or frozen, pre-packed or loose.

2.2.3 Traceability of food - Record Retention

The food business operator shall retain traceability records as follows:

- Perishable foods with a shelf-life of less than three months: 6 months
- Foods with a shelf-life in excess of three months: 5 years.

2.3. Product recall

The food business operator shall have a method of recalling or withdrawing product in the event of a potential food safety incident.

The Health Service Executive shall be informed of product recall.

The traceability system in a food business should be reviewed annually and in the event of a recall to ensure that it was effective when used.

2.4 Labelling Requirements

2.4.1 General

Food businesses who prepare for sale pre-packaged food items are required by EU Food labelling Regulations and the European Communities (Labelling, Presentation and advertising of Foodstuffs) Regulations, 2002 (S.I. No. 483 of 2002) as amended to provide product information on the packaging.

The information on the label shall be visible, legible, understandable, indelible, clear and unambiguous and shall not mislead the consumer in any way.

The information shall be in English, or Irish and English, a food business operator may include any other language that they consider to be necessary.

The name of food products sold at serve over counters shall be available either as a label or on a sign displayed nearby.

The following information should be given for products sold at serve over counters:

- Name and address of manufacturer or packer
- Use by or best before date
- Storage instructions

The following information shall be available on all pre-packaged products:

- Name under which the product is sold
- Name and address of manufacturer, packer or seller within the EU
- Date of minimum durability-Use by or best before date
- Storage instructions or conditions of use
- Instructions for use e.g. preparation, cooking, reheating, freezing
- List of ingredients including allergens
- Quantity of certain ingredients (QUID- Quantitative Ingredients Declaration)
- Net quantity of product- excluding packaging material
- Place of origin where its absence would mislead the consumer to a material degree
- Alcoholic strength of beverages with more than 1.2% alcohol.

2.4.2 Specific Labelling Requirements

In addition to general labelling requirements, there are specific labelling requirements for fish, beef, poultry, other meat and dairy products. The food business operator shall ensure that this labelling information is available when these products are accepted into the food premises and that the information is made available to customers as required.

Note: For information on the labelling of all foods as well as labelling requirements for specific food products consult the Food Safety Authority of Ireland publication "The Labelling of Food in Ireland".
www.fsai.ie

Section 3 Maintenance of the Cold Chain

3.1 General

- Article 4 of Regulation (EC) No 852/2004 requires food business operators to comply with temperature control requirements for foodstuffs and to maintain the cold chain at all stages of the food business.
- The temperatures of cold storage facilities shall be capable of maintaining the temperature of food at:

Food Type	Food Temperature
Chilled foods	0°C to 5°C
Frozen foods	≤ -18°C

- The following corrective action shall be taken by the food business operator where the temperature of the food has not been maintained as specified above.

Chilled Foods

Temperature of food /Time	Corrective Action
Temperature >5°C for <2 hrs	use immediately or risk assess, or discard.
Temperature >5°C for >2 hrs and <4 hrs	use immediately or discard.
Temperature >5°C for >4 hrs	discard.

Frozen Foods

Temperature of food	Corrective Action
Temperature ≥ -12°C	use immediately or restore temperature.

- The food business operator shall maintain records of any corrective action taken and shall verify the record to ensure the action taken was effective and prevented any risk to food safety.
- The food business operator shall ensure that monitoring and verification of cold storage facilities is carried out to demonstrate that the food is being maintained at the correct temperature.
- The food business operator should maintain records of temperature of food in the cold chain.

Note: Sample cold chain units temperature record is available in Annex I.

Note: Sample corrective action record is available in Annex I.

Note: Ice cream storage units may operate at -12°C in service areas.

3.2 Food Deliveries

- Chilled foods shall be delivered at a temperature of 0°C to 5°C.

2. If at time of delivery the temperature of chilled foods is not 0°C to 5°C, the following corrective action shall be taken:

Surface Temperature of Food	Corrective Action
If > 5°C and <8°C	restore food temperature to <5°C.
If > 8°C	the food shall be rejected, or risk assessed

3. Frozen foods shall be delivered at $\leq -18^{\circ}\text{C}$.
4. If at time of delivery the temperature of frozen foods is not at -18°C , the following corrective action shall be taken:

Surface Temperature of Food	Corrective Action
If > -12°C or shows signs of thawing	used immediately or risk assess or reject /return to the supplier

Note : Sample goods in record available in Annex I

3.3 Cold Food Storage Facilities

1. Cold storage facilities for example, refrigerators, freezers, blast chillers, cold rooms, refrigerated and freezer display units used for storage and temperature reduction of foods shall have sufficient storage capacity to achieve and maintain the required temperatures of the foods.
2. There shall be a sufficient number of cold storage facilities to ensure that different types of foodstuffs can be segregated to prevent cross contamination during storage.
3. The food business operator shall demonstrate that the cold storage facilities are working effectively. This shall be achieved by checking the temperature of food stored in the cold storage facilities.
4. The food business operator shall remove from use, repair and/or replace any cold storage unit that is not capable of maintaining the foods at the required temperatures.
5. The food business operator should maintain monitoring records for goods stored on the premises.

Note : Sample temperature record for Cold Chain Units available in Annex I

3.4 Temperature Measuring Equipment

3.4.1 General

The food business operator shall have available at all times a method of verifying temperatures i.e. temperature probe or equivalent.

The equipment used to maintain food temperatures should be fitted with effective controls or devices to allow monitoring of temperatures by the food business operator.

3.4.2 Temperature Probes

1. The food business operator shall select a method of demonstrating that the temperature probes in use are accurate either by using an external calibration service or completing internal accuracy checks.
2. Temperature probes shall have an accuracy of at least $\pm 0.5^{\circ}\text{C}$.
3. Mercury thermometers shall not be used.
4. When using glass thermometers for specialist cooking purposes e.g. sugar work suitable precautions shall be taken and the thermometer shall be enclosed in a suitable casing.

Note: If the temperature reading is 5°C then the actual temperature is between 4.5°C and 5.5°C .

3.4.3 Internal Calibration/Accuracy Check of Temperature Probes

1. The food business operator should check the accuracy of the temperature probes in use on a regular basis, e.g. quarterly, to ensure that the information is correct.
2. An accuracy check should also be carried out in the event that the food business operator suspects that a reading is not correct or if the temperature probe has been damaged in any way.
3. To check accuracy of a temperature probe:
 - Prepare a mixture of ice slush
 - Immerse the probe in the mixture
 - Take the reading when stabilised
 - The reading should be 0°C
 - Immerse the probe in boiling water
 - Take the reading when stabilised
 - The reading should be 100°C

These checks will identify any drift in the thermometer at the two ends of the scale.

4. Records of all accuracy checks/internal calibrations should be maintained by the food business operator.
5. In the event that the accuracy checks identify that the temperature probe is no longer correct, it shall be removed from use and replaced by a calibrated probe. The food business operator shall assess the risk to safety of all food produced while using the faulty temperature probe, and implement corrective action if necessary.

Note: 100°C = boiling point, 0°C = freezing point

Note: Sample corrective action record is available in Annex I

3.4.4 External Calibration

1. Where the food business operator sends the temperature probe off site for external calibration a suitable replacement temperature probe shall be provided for temperature measurements.
2. The food business operator shall ensure that the calibration provider's standard equipment has been certified by INAB or UKAS accredited test house.

Note: A food business operator may choose to replace a temperature probe with a new calibrated probe instead of sending the existing temperature probe for external calibration.

3.4.5 Measuring the Temperature of Food

1. The temperature probe to be used to check the temperature of food shall be sanitised (e.g. using sanitising wipes) before and after use.
2. The food business operator should ensure that monitoring the temperatures of foods is carried out at the core of the food except for vacuum packed and frozen foods.
3. The temperatures of vacuum packed and frozen foods should be assessed between packs and in the case of frozen foods the foods should also be assessed visually for signs of thawing.
4. The temperature readings should be recorded to demonstrate maintenance of the cold chain and compliance with temperature control requirements for foodstuffs.

Note : Sample temperature record for Cold Chain Units available in Annex I

Section 4 Food Hygiene Requirements for Food Catering Operations

4.0 General

Food business operators are legally obliged to comply with the general and specific food hygiene requirements of Regulation (EC) No. 852/2004. This section of this standard gives guidance on compliance with these requirements.

The foreword to this standard states that the foundation of an effective HACCP system is the correct implementation of food hygiene requirements. In food businesses a number of the identified hazards are controlled by the correct implementation of hygiene requirements. In this standard the term food hygiene requirements is used. However, in some food businesses the term Prerequisite Programmes or PRP's is used to describe hygiene controls.

4.A Training

1. The food business operator shall ensure that all staff working in food areas have sufficient knowledge to enable them to carry out their activities in a safe and hygienic manner.
2. The food business operator shall ensure that all staff are supervised, instructed and/or trained in food hygiene commensurate with their work activity.
3. Additional instruction and/or training shall be given to staff when there are changes in the food business e.g.,
 - Work practices
 - Equipment
 - Cleaning chemicals /methods
 - Food menus
4. Staff responsible for the development implementation and maintenance of HACCP based procedures shall receive adequate training in HACCP.
5. Refresher food hygiene training should be provided for all staff.
6. Training of staff should include awareness of the responsibility of each person in the food business for the safety of food.
7. Records should be maintained for all food safety/hygiene training given to staff and retained for the duration of employment.

Note: For guidance on training required see Food Safety Authority of Ireland (FSAI) Training Guides. www.fsai.ie

Note: Sample staff training record is available in Annex I

4.B Personal Requirements

4.B.1 Personal Hygiene

1. The food business operator shall ensure that all staff are trained in good hygiene practices and behave in a manner that will not contaminate food.
2. Staff employed in food operations shall maintain a high degree of personal cleanliness and wear clean protective clothing.

3. Staff employed in food storage and preparation areas shall comply with the following:
 - No jewellery except plain wedding band and sleeper earrings
 - Finger nails clean, short and free from nail polish or false nails
 - Refrain from the use of highly perfumed products.
4. Hair shall be maintained in a clean and tidy condition. Hair covering shall be worn where there is a risk of contamination of food.
5. Cuts, sores, burns and grazes shall be covered after treatment with a suitable dressing that will not pose a risk of physical contamination to food.
6. Staff shall wash their hands including forearms when exposed using a non perfumed soap.
7. Alcohol hand disinfectants are only effective if used on physically clean hands and therefore they shall not be used as a method of hand disinfection unless hands have been thoroughly washed.
8. Hands should be washed as follows:
 - Wet hands under warm running water
 - Use sufficient soap to form a good lather
 - Systematically rub all parts of hands with soap and water
 - Lather for 10-15 seconds minimum, vigorously and thoroughly rubbing all hand surfaces, including the fingertips and thumbs
 - Rinse hands thoroughly with running water
 - Dry hands thoroughly
9. Hands shall be washed as frequently as necessary and always:
 - Before starting work
 - Before handling cooked or ready to eat food
 - After handling or preparing raw food
 - After handling waste
 - After cleaning duties
 - After using the toilet
 - After blowing nose, sneezing or coughing
 - After eating, drinking or smoking
 - After handling money
10. 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.
11. The use of disposable gloves shall not be substituted for hand washing by food handlers. Disposable gloves shall only be worn for short periods. Hands shall be washed before and where necessary after using disposable gloves.
12. The food business operator shall ensure that where disposable gloves are used they are disposed of frequently and always after:
 - Cleaning duties
 - Handling refuse
 - Handling or preparing raw food
 - Handling money

Note: For further information see National Disease Surveillance Centre publication "Preventing Foodborne Disease: A focus on the Infected Food Handler" (April 2004). www.hpsc.ie

4.B.2 Protective Clothing

1. Staff shall be provided with changing facilities which shall not be located in the toilet cubicle or food preparation and storage areas.
2. Storage facilities shall be provided for staff's outdoor clothing and other personal items.

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3. Protective clothing or uniforms shall be maintained in a clean condition and shall not be worn outside the food premises.
4. Personal clothing shall not be worn over uniforms or protective clothing, where this would pose a risk to food safety.
5. There shall be separate segregated areas or containers for both clean and used protective clothing.
6. External clothing and personal items should be segregated from protective clothing.
7. Staff uniforms should be designed and worn so that they do not present a risk of contamination to food.

4.B.3 Fitness to Handle Food

4.B.3.1 General

1. Staff suffering from or being a carrier of a disease likely to be transmitted through food shall not be permitted to handle food or enter any food handling area.
2. Any person employed as a food worker shall report immediately any illness or symptoms that may pose a risk to food safety to the food business operator or person in charge.
3. Conditions that should be reported by food workers are:
 - vomiting and/or diarrhoea
 - skin disorders such as boils, infected wounds
 - infection/skin disorders of the face, hands or forearms
 - flu, coughing, infections of mouth, throat, ears or eyes
 - pus-containing discharges from the eyes, ears, nose or mouth/gums
 - jaundice
4. Staff should be requested to report on return to work any gastrointestinal illness (vomiting and diarrhoea) while on holidays.
5. A medical questionnaire should be completed by all new staff, including temporary staff, prior to employment.
6. A first aid box should be provided, and be regularly checked to ensure that it contains a supply of suitable items.

4.B.3.2 Exclusion of Staff from Food Handling

1. The decision to exclude any food handler should be based on individual risk assessment by the food business operator.
2. A food handler with gastroenteritis shall not work while symptomatic.
3. A food handler with symptoms of gastrointestinal infection (with diarrhoea and/or vomiting) should be advised to remain off work until 48 hours after clinical recovery and stools have returned to normal (where the causative pathogen has not been identified).
4. Staff who have been diagnosed with Verocytotoxin-producing *E. coli* (VTEC), typhoid, Paratyphoid and *Shigella dysenteriae*, shall be excluded from food handling activities until microbiological stool clearance has been established.
5. Any food handler infected with Hepatitis A shall be excluded from food handling duties for seven days after the onset of jaundice and/or symptoms.
6. Infected skin lesions on exposed body parts (especially hands and forearms) should be adequately covered with a distinctively coloured waterproof dressing until healed. If not adequately covered, exclusion/restriction should be considered depending on the work being undertaken by the employee.

7. Staff with purulent discharges (from the eye, ear, nose or mouth) should not work near open food and should be excluded/restricted to non-food handling duties until recovered.

Note: For further information see National Disease Surveillance Centre publication "Preventing Foodborne Disease: A Focus on the Infected Food Handler" (April 2004). www.hpsc.ie

4.C Supplier Control

4.C.1 General

Annex II of Regulation (EC) No. 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.

4.C.2 Control of Suppliers

1. 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 and comply with the necessary requirements in Section 2 – Food identification, traceability, and labelling and Section 3 – Maintenance of the cold chain, of this standard.
2. The food business operator should have a list of suppliers by product type from whom products are to be purchased i.e. a suppliers list. A supplier should be deleted from this list if the food business operator is not satisfied with food or other requirements e.g. labelling information not provided.
3. The list should be reviewed at least annually by the food business operator to ensure it continues to be valid for the products used in the food business.

4.C.3 Control of Food Deliveries

1. The goods received by the food business shall be monitored to ensure that:
 - The appearance of the food is normal
 - There is no evidence of contamination
 - Packaging and tamper proof devices are intact
 - Canned foods are not blown or damaged
 - Foods that are chilled are at the correct temperatures
 - Foods that are frozen are at the correct temperatures
 - Foods are within their use by or best before dates
 - Foods are adequately labelled
2. To ensure that there is no risk of contamination of foods, the food business operator should assess the hygiene of the delivery unit and delivery personnel.
3. There are specific requirements relating to information to be provided for foods of animal origin and food business operators shall ensure that these are provided by the supplier.
4. Meat, poultry, fish and dairy products shall carry a identification number which shows country of origin and indicates that the products have been produced under the control of the competent authority in that country.
5. All fish sold in the EU is required to carry the following information:
 - The species of the fish
 - Where the fish was harvested
 - The method of production
6. All raw meat and poultry shall carry information on country of origin. All meat products shall carry the identification number of the final processing plant. All milk based products shall carry the identification number of the final processing plant.

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7. There are specific EU regulations for labelling of beef and beef products. All beef and beef products are required to carry the following information:
 - Country of birth of the animal
 - Country where the animal was reared
 - Plant number of where the animal was slaughtered
 - Plant number(s) where the beef was boned, processed and/or packed

Note : Sample goods in record available in Annex I

4.C.4 Food Returns

1. The food business operator shall ensure that food that does not comply with the requirements in 4.C.3 is rejected.
2. A system for the management of damaged or unfit foods for return to suppliers shall be in place.
3. A designated clearly identified area(s) shall be provided for products to be returned to suppliers.

4.D Premises and Structures

4.D.1 General Requirements

1. The premises shall be of adequate size for the intended volume and range 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.
2. There shall be sufficient space for all food handling activities, refrigeration, equipment, storage, waste management, staff changing and sanitary facilities etc.
3. When planning a new premises or refurbishing an existing premises a detailed plan of the premises should be prepared. Consideration should be given but not limited to the following:
 - volume of food
 - size and complexity of menu
 - method of service e.g. carvery, self service
 - number of dining facilities serviced by the same kitchen
 - numbers of staff
 - cold chain requirements.
4. When planning or redesigning a food premises the food business operator should contact the local environmental health office of the HSE for guidance.
5. The layout, design, construction, location and size of the food premises shall:
 - permit good food hygiene practices,
 - permit adequate maintenance, cleaning and sanitisation
 - minimise air-borne contamination,
 - provide adequate working space to allow for the hygienic performance of all operations,
 - prevent the accumulation of dirt,
 - prevent contact with potentially hazardous materials e.g. cleaning materials/pesticides,
 - prevent the shedding of particles into food,
 - protect the formation of condensation or mould on surfaces,
 - protect against contamination and in particular, pest access or infestation.
6. 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.
7. The zoning of the facilities shall minimise the risk of contamination during all food operations including delivery, storage, preparation, cooking, cooling, reheating, plating, wash-up, waste disposal etc.

8. The layout of all rooms where food is prepared, processed or stored shall be such to ensure that
 - a) good hygiene practices can be maintained at all times,
 - b) food is protected from the risk of contamination.
9. Temperature-controlled handling and storage facilities such as refrigerators, freezers and cold rooms, where used shall be:
 - a) of sufficient capacity to maintain foodstuffs at appropriate temperatures,
 - b) designed to allow those temperatures to be monitored and recorded, as required.

4.D.2 Surfaces

1. Surfaces (including surfaces of equipment) in rooms where food is handled prepared, treated, processed or stored, shall be maintained in good condition be smooth, durable, non-absorbent easy to clean and sanitised.

4.D.3 Grounds

1. Where the food business has control over the grounds, they shall be maintained and kept free from litter, uncut weeds and grass, waste and other materials to prevent harbourage of pests.
2. 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 foot-borne contamination being carried into the premises.
 - b) the establishment of sites for the breeding and/or harbourage of micro-organisms, insects, rodents and/or birds.
3. An external water supply or tap should be located in the yard or yards to aid cleaning.
4. The yards, roadway etc. that are in close proximity to the kitchen or food storage areas shall be suitably surfaced, sloped and effectively drained.

4.D.4 Structures

4.D.4.1 Floors

1. Floors shall be smooth, durable, non-absorbent, and easy to clean. Examples of floor finishes acceptable in food areas are:
 - a) vinyl tiles (minimum thickness 3.2mm)
 - b) heavy duty vinyl sheeting (aluminium oxide filler incorporated as non-slip surface with a minimum thickness of 3.2mm)
 - c) non-slip tiles
 - d) ceramic or quarry tiles.
2. Floors shall be maintained in good condition, free from cracks, holes and corrosion.
3. Mats if provided shall be made of materials that are easy to clean.
4. Floor drainage if provided shall be effective at preventing the accumulation of water and debris i.e. the gradient shall provide suitable drainage.
5. Floors should be coved to the wall to eliminate corners where dirt could accumulate and to facilitate cleaning.

4.D.4.2 Walls

1. Wall surfaces shall be smooth, durable, non-absorbent and easy to clean.
2. Acceptable wall finishes include but are not limited to:
 - a) ceramic wall tiles with a suitable water proof, easily cleanable, flush grouting
 - b) stainless steel sheeting or panels bedded directly into a sound wall surface
 - c) pvc sheeting/cladding – applied directly to surface with suitable adhesive
 - b) polymers – derivatives of polyester epoxy and acrylic resin finishes

The above materials if used shall be fixed directly onto the wall and be properly sealed.

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3. Walls in the food premises shall be maintained in a sound condition and kept free from flaking paint, dampness, condensation or mould.
4. All wall, floor, ceiling joints or junctions shall be sealed.
5. Wall finishes above working surfaces should be scratch-proof and impact resistant to a minimum height of 450mm.
6. Walls should be protected from impact damage e.g. provided with corner protection.
7. Wall surfaces behind heat emitting appliances shall be heat resistant.
8. Gas, water and electrical piping shall be installed so as not to cause damage to the smooth wall finish, sealed to prevent pest infestation and their installation shall not hinder adequate cleaning.
9. All paints used shall be washable and non-toxic.

4.D.4.3 Ceilings

1. Ceilings shall be smooth, durable, non- absorbent and easy to clean. Plaster ceiling boards finished with a skin coat of plaster and painted is an acceptable ceiling finish.
2. Ceilings and overhead fixtures shall be constructed and maintained to prevent the accumulation of dirt, condensation, mould growth and particle shedding.
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 inspection and maintenance of the area.
4. Canopies over equipment, air vents and air vent covers and screens shall be installed and designed in a manner that facilitates cleaning and maintenance.
5. The paint used on ceilings in all food storage and handling areas shall be washable and non-toxic.
6. The floor to ceiling height should be a minimum of 2.4 meters in food preparation and cooking areas.

4.D.4.4 Windows

1. Windows and other openings shall be constructed of non-corrosive materials and be easy to clean and maintain.
2. Openable 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.

4.D.4.5 Doors

1. Doors shall be smooth, durable, non-absorbent and easy to clean and maintain.
2. External doors shall be waterproof, pest proof and any gaps shall be less than 6mm.
3. External doors opening into food areas shall be kept closed unless fitted with a cleanable pest proof screen door of mesh size number 16 or 1.2mm.
4. Doorways should be of adequate size to permit the movement of mobile equipment.

4.D.5 Equipment

1. All fixtures, fittings and equipment shall be designed, installed and maintained to facilitate effective cleaning, sanitisation and inspection.
2. All fixtures, fittings and equipment shall be maintained in good order, repair and condition, be kept clean and sanitised.

3. Equipment and food contact surfaces shall be constructed of non-toxic, food grade materials suitable for contact with foods.
4. Cleaning and sanitisation 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.
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. All fixtures, fittings, plant and equipment shall be correctly installed, safe to use, suitable for the intended purpose and where possible mobile.
7. Planned preventative maintenance schedules should be in place for cooking and other equipment.
8. Where possible, the maintenance of equipment should be carried out when there are no food preparation, cooking or service activities in operation. When maintenance is carried out while food activities are in operation, care shall be taken to ensure food does not become contaminated.
9. All equipment shall be cleaned and sanitised following maintenance before it is brought back into service.
10. The food business operator shall ensure that maintenance contractors do not pose a risk of contamination to food while working in food areas.

4.D.6 Staff Facilities (designated sanitary accommodation, changing and storage facilities for staff)

1. Staff facilities shall not be located in food storage, preparation or waste handling areas.
2. Staff facilities shall be adequately maintained, cleaned and ventilated.
3. Staff facilities should not be accessed through food preparation/handling areas.

4.D.7 Sanitary Accommodation

1. Sanitary accommodation shall be provided for staff and patrons by the food business.
2. The number of flush toilets and associated wash-hand basins that shall be provided is 1:15 based on the maximum number of staff present at one time.
3. Separate designated sanitary accommodation shall be provided for food workers.
4. Where seating is provided separate sanitary accommodation shall be provided for patrons. The number of flush toilets and associated wash-hand basins that should be provided is 1:25 patrons based on seating numbers.
5. Sanitary accommodation shall be connected to an adequate drainage system and be ventilated to external air.
6. Sanitary accommodation shall not open/connect directly into rooms/areas where food is prepared, treated, processed or stored.
7. The doors to the lobby area of sanitary accommodation lobby area shall be self closing with the exception of facilities for wheelchair users.
8. A supply of hot and cold water and non-perfumed 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.

4.E Building Services and Utilities

4.E.1 General

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

4.E.2 Water Supply

1. The food business operator shall ensure that an adequate supply of potable water is available at all times to all food preparation sinks, ice makers and drinking water taps (as defined by EU directive 98/83/EC and transposed into Irish law as S.I. No.106 of 2007).
2. Taps for drinking water purposes shall be designated as such and maintained in a clean and hygienic condition.
3. The drinking water point should not be located at the wash-hand basin.
4. Vacuum breakers shall be included in the water distribution system at all locations where back-siphoning could occur.

4.E.2.1 Public Water Supply

1. Water taken directly from a public supply i.e. a supply under the control of the local authority, shall be regarded as potable unless there is a warning from the local authority that the water is not suitable for human consumption.
2. In the event that the food business is notified that the water supply is not of potable quality the food business operator shall provide an alternative source of potable water for use in the food business.

4.E.2.2 Private Water Supply

1. Water taken from a private group water scheme, a private well or storage tanks shall only be regarded as potable if it has been tested at the point of use and at the frequency required by S.I. 278 of 2007 and found to comply with these regulations by the food business operator.
2. Where a private supply is in use measures shall be taken to prevent contamination of the supply from surrounding activities.
3. Water from a private supply shall where necessary, be treated to ensure it is suitable for use in a food business.

4.E.3 Water Sampling and Testing

4.E.3.1 Water Testing

1. The food business operator shall have the water tested based on a risk assessment or other known factors.
2. If at the time of testing the water is contaminated, the food business operator shall take immediate action to ensure that there is no risk to public health. The food business operator shall not commence to use the supply again until the source of contamination has been identified and eliminated and a retest confirms that the water is of potable quality.
3. If the food business operator changes the source of water it shall be tested prior to use to ensure it is of potable quality.
4. The local environmental health office of the Health Service Executive and the Local Authority shall be notified by the food business operator of results of water tests that are not satisfactory in order to ensure that adequate remedial action is taken.

Note: Water stored for fire fighting purposes is not required to be tested.

4.E.3.2 Water Sampling

1. The food business operator should seek the advice of the selected test laboratory in advance of submitting any sample for testing. The laboratory selected shall be accredited for carrying out water analysis.
2. The samples should only be taken in containers supplied by the test laboratory or the environmental health officer.
3. The samples should be delivered to the test laboratory as close as possible to the agreed time and within six hours of collection.
4. The samples should be stored in a cool place (not frozen) and protected from daylight prior to delivery to the test laboratory.

4.E.3.3 Sample Taking

1. The tap from which the water sample is to be taken should be:
 - Free from all attachments and in good repair
 - Cleaned inside and out with an alcohol wipe
 - Allowed to run to waste at a steady rate for 2-3 minutes
2. Prior to filling the sample container with water, the container should be:
 - Clearly labelled with the information required by the test laboratory
3. Sample containers for microbiological testing of water should:
 - Not be rinsed prior to filling
 - Only be opened immediately prior to filling
 - Handled carefully to avoid contaminating the container or lid
 - Hold a volume of 500 mls approximately
 - Filled to within 2-3 cm of top of container
 - Filled and resealed as quickly as possible
4. Sample containers for chemical testing of water should be:
 - Rinsed 2 or 3 times with the water to be tested
 - Capable of holding a volume of 2.5 litres
 - Filled and resealed as quickly as possible

4.E.4 Ice/ice making facilities

1. Ice shall be made with potable water.
2. The facilities used to make and store ice shall be suitable to prevent contamination and shall be cleaned, sanitised and maintained in accordance with the manufacturer's instructions.
3. The lids and doors on ice making machines shall be kept closed.
4. The ice scoop shall be stored in a hygienic manner so as not to contaminate the ice e.g. in a covered container. The ice scoop shall not be left in the machine in contact with the ice. Glassware shall not be used to scoop ice from the ice storage compartment.
5. Bottles or other beverage containers shall not be placed inside the ice making / ice storage compartment to cool.
6. Ice making machines should be connected to the water supply main upstream of final draw off points. The pipe work connecting the water main to the ice making machine should be as short as possible in order to reduce the danger of stagnation.

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4.E.5 Water Storage Tanks

1. Water storage tanks shall be:
 - a) covered so as to prevent contamination,
 - b) fitted with secured inspection doors if located externally.
2. Water storage tanks should be inspected regularly but at least annually.

4.E.6 Non-potable Water

1. 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-potable supplies.
2. Systems shall be in place to ensure that there is no cross contamination of the potable water.

4.E.7 Washing Facilities

4.E.7.1 Food Washing

1. A designated sink(s) shall be provided in a food business where foodstuffs are washed. It shall be suitable for the intended purpose, easy to clean and maintain and provided with an adequate supply of potable water.
2. The washing of raw food items e.g. raw meat, poultry, fish, soiled/sandy vegetables etc shall be managed in a manner that will prevent contamination. This may be achieved by providing an additional sink. Where a separate sink cannot be provided, the preparation of the food types shall be carried out at different times with thorough sanitisation of the washing area occurring between the different operations.

4.E.7.2 Equipment Washing

1. The equipment washing facilities shall be located in a suitable area and be of appropriate size for the operation.
2. The method selected for equipment washing by the food business operator shall be adequate to ensure clean sanitised equipment.
3. The following equipment washing facilities should be provided:
 - a) a mechanical dishwasher and a single deep sink with a drainer
 - or
 - b) a double deep sink unit with a drainer.
4. A drops area should be provided for the scraping, stacking and storing of utensils, crockery, cutlery and equipment prior to washing.
5. A drainage area shall be provided for the drainage and air drying of utensils, crockery, cutlery and equipment post washing.
6. There shall be no cross over between cleaning and dirty utensils, crockery, cutlery and equipment in order to avoid contamination of clean items.

4.E.7.3 Hand Washing

1. Separate hand washing facilities shall be
 - available in food preparation areas for food handlers
 - designated as such
 - easily accessible and not likely to be obstructed
 - located close to the working area.
2. In large kitchens or kitchens that are sub-divided into different work areas more than one hand-wash basin shall be provided.
3. Hand wash facilities shall be provided, in suitable locations for food service and bar staff.

4. The hand washing facilities shall be provided with:
 - constant and adequate supply of hot and cold water
 - non-perfumed soap in appropriate dispensers
 - a suitable method of hand drying available at each wash-hand basin e.g. paper towels from a dispenser with an easy to clean waste receptacle or cabinet roller towels.
5. The hand washing facilities should be:
 - knee, foot, elbow or electronically operated
 - provided with mixer units instead of single hot and cold taps.
6. In food preparation areas the following should not be used:
 - air hand driers
 - bars of soap.

4.E.8 Drainage

1. The sewage system shall be of adequate size to handle all requirements for liquid waste disposal.
2. Adequate drainage facilities shall be provided for the activities being undertaken.
3. Drainage facilities shall be designed and constructed to avoid the risk of contamination of foodstuffs.
4. Floor drains/gullies shall be fitted with an effective water trap, accessible for cleaning and be covered with removable grids.
5. There shall be no interconnection within the premises of floor drainage system and sewerage system.
6. Grease traps shall be provided in suitable locations where they will not cause contamination of food, be kept clean and maintained in good condition.
7. There shall be a water seal on all drains and all drains shall discharge directly into a piped sewer or other approved sewage disposal systems which itself shall be water sealed.
8. Manholes and Armstrong Junctions (AJ's) within the premises should be avoided but, if present they shall be doubly sealed and secured to prevent overflow from the drains servicing the premises in the event of a blockage or excessive flow from the drains.
9. Some local authorities have specific requirements relating to grease traps the food business operator should seek advice when installing or replacing grease traps.

4.E.9 Waste Management

4.E.9.1 General

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.
2. A designated area shall be provided for all waste generated.
3. Pest control measures shall be in place in all waste handling and storage areas.
4. Outer food packaging that has become soiled or contaminated shall be treated as food waste and not recycled.

4.E.9.2 Operational Waste/Waste Holding

1. All waste shall be removed from the operational areas as frequently as necessary but at least daily.
2. Waste storage containers shall be smooth, durable, easy to clean and sanitise, well maintained and closable.

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3. Suitable bins shall be provided at appropriate locations within the food premises for the storage of waste.
4. In food preparation areas where lidded bins are provided they shall be foot pedal operated or a suitable alternative.
5. Where waste is stored in plastic bags they shall be closed securely, removed frequently, stored and transported in a manner that does not pose a risk to food safety.

4.E.9.3 Internal Waste Storage

1. Where waste is stored internally a separate designed room of adequate size to accommodate all waste shall be provided and shall be suitably constructed, ventilated and maintained. This waste store shall not open directly to a food room.

4.E.9.4 External Waste Storage

1. Refuse shall be deposited in closable containers which are pest proofed and kept closed.
2. External waste storage and handling areas shall be suitably constructed and finished, easy to clean and maintained in a hygienic manner.
3. The waste storage area should be suitably drained and connected to a drainage system serving the premises.
4. A supply of water should be available to clean the external waste storage areas.
5. The waste storage units used for external storage of waste shall not be accessible to pests and shall be emptied as required.
6. External waste storage units shall be closed at all times and placed on suitable solid surfaces that are easy to clean.

4.E.10 Lighting

1. Adequate lighting shall be provided and shall be sufficient to allow safe handling and preparation of food.
2. Adequate lighting shall be provided to ensure that all cleaning operations can be carried out effectively.
3. Lighting of 540 lux in food processing areas and 220 lux in general areas should be provided
4. In areas where food is exposed all light fittings shall be fitted with shatter proof diffusers.
5. All light fittings should be designed and installed to facilitate cleaning.

4.E.11 Ventilation

4.E.11.1 General

1. Ventilation systems shall be installed and designed to facilitate cleaning, maintenance and the cleaning or changing of filters.
2. 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. Air intake points shall be located so as to prevent the intake of air contaminated with fumes or dust into the premises.
4. Air intake points shall be located away from air extraction points to allow for proper air circulation.
5. Air intake and extraction points shall be screened to prevent the entry of pests.

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

General Ventilation Requirements

Area	min. Air changes/hour
kitchen area	20
wash up areas	10
service areas with heat emitting appliance	10
dining areas & other public areas	6
food preparation rooms	6
dry goods stores	6
cleaning materials store	6
staff facilities	6
toilet cubicle	3 (extraction)
toilet lobby	2 (intake)

4.E.11.2 Cooking Areas

1. Localised mechanical extract ventilation directly to the outer air shall be provided over all cooking and steam emitting appliances. Where an overhead extraction canopy is provided it shall extend 150mm beyond the cooking equipment on all sides, except where the extraction unit is part of an integrated design.
2. A minimum of 20 air changes per hour shall be achieved in the kitchen area by mechanical extract and intake ventilation. Canopy extraction rates are usually specified as air velocities and the following ventilation should be provided in cooking areas.

Cooking Equipment Ventilation Requirements

Equipment	Rates m/s *	m ³ / Hour
Convection Ovens Regeneration Ovens Low volume steam ovens	0.10 - 0.25	900
Steam Ovens Forced convection ovens Open griddles used for non fatty foods e.g. breads	0.25 – 0.40	1440
Heavy duty fryers, griddles	0.25 – 0.50	1800

**Based on measurements from ventilation systems fitted with grease filters and taken 100 to 150 mm from filter face. Flow rates may vary significantly over measurement time however the variation should be within above ranges.*

4.E.11.3 Sanitary Accommodation

1. Sanitary accommodation shall be constructed with an intervening lobby and both the toilet area and intervening lobby shall be separately and independently ventilated to the external air by either natural or mechanical ventilation.
2. Where natural ventilation is used, an opening to the external air of 5% of the floor area or 0.1m² (whichever is the greater) or a permanent ventilation opening shall have a cross sectional area of not less than 650mm², is required.
3. Where mechanical ventilation is provided in the toilet area it should be extract ventilation providing a minimum of 3 air changes per hour.

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4. Where mechanical ventilation is provided in the lobby area it should be intake ventilation providing a minimum of 2 air changes per hour.

4.F Pest Control

4.F.1 General

1. Rodents, insects, birds, domestic and other animals as far as practicable shall be prevented from having access to food premises and surrounding grounds with the exception of assistance dogs, e.g. guide dogs.
2. A system of pest control developed by a competent person shall be in place.
3. Detailed pest inspections of the food premises shall be carried out by a competent person. This should be carried out at least every three months
4. Records of inspection for pests should be retained by the food business.
5. If evidence of infestation is found, immediate action shall be taken to eliminate the infestation.
6. Staff shall be trained to identify the signs of pest infestation, and shall report to the food business operator/or manager any evidence of infestation immediately, in order to ensure remedial action is taken promptly.
7. Pesticides shall only be used by suitably trained personnel and in accordance with the instructions provided by the manufacturer.
8. Pesticides shall be stored in a secure facility and not pose any risk of contamination of food.
9. The following items shall not be used as bait or bait containers:
 - food container
 - grain baits
 - cardboard baiting traps in wet areas
 - fly or insect sprays in food areas
 - glued fly papers
 - sticky boards for rodents
10. Rodent baits should be in tamper resistant containers and be clearly labelled.
11. A location map should be available showing the location of each bait point and each bait point in the premises should be labelled.
12. Access to space above suspended ceilings shall be provided in order to allow inspection for pests.

4.F.2 Electric Fly Killers

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.
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.
3. The EFK's shall be fitted with a catch tray and emptied as required but particularly during summer months.

Note: UV tubes are not effective after one year in use.

4.G Cleaning and Sanitation

4.G.1 General

1. Equipment, utensils, cutlery, crockery and 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 sanitised, at regular intervals to prevent the possible contamination of food.
2. All chemicals shall be used in accordance with manufacturer's instructions.
3. Where high pressure hoses are used for cleaning, food business operator shall ensure that foodstuffs are not contaminated by aerosolising of micro-organisms.
4. Separate cleaning equipment shall be provided for use in toilets, public areas and external areas.
5. Where used cleaning cloths, pot scrubs etc shall be cleaned and sanitised or they shall be disposed of after use in order to ensure that they are not a source of contamination.

4.G.2 Storage and use of cleaning materials

1. Bulk cleaning agents shall not be stored in areas where food is prepared, processed, and/or stored.
2. Cleaning agents in use shall be clearly labelled or marked.
3. The cleaning agents and equipment used shall be suitable for use in a food operation and shall not be a source of contamination.
4. Cleaning agents and equipment shall be stored in a separate designated area that poses no risk to food or personnel.
5. The area used to store cleaning equipment shall not pose a risk of contamination to the equipment.
6. Mop buckets shall not be filled or emptied in a sink used for the preparation of food or for washing of food equipment.
7. A low level sluice sink should be provided in a cleaning store which is serviced with hot and cold water.
8. Mops should be rung out after use and hung up head down to dry using hooks or suitable other method.
9. Colour coded or otherwise designated cleaning equipment should be provided for use within each food risk area to reduce the risk of cross contamination.

4.G.3 Cleaning Schedule

1. A detailed cleaning schedule defining the following should be in place:
 - a) Item/area to be cleaned
 - b) Equipment to be used and its method of operation
 - c) Cleaning agent to be used and its concentration and contact time
 - d) Frequency of cleaning
 - e) Person responsible for cleaning

A suitably trained and/or qualified person should be responsible for checking that cleaning has been carried out to the required standard.

2. Staff whose responsibilities include cleaning shall receive appropriate training for cleaning activities.
3. A "Clean as You Go" policy should be in place in food operations.

Note: Sample Cleaning Schedule and Sample Weekly Cleaning Record are included in Annex I.

4.H Food Handling and Processing

4.H.1 General

1. All stages of food handling, 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.

4.H.2 Food Packaging

1. Packaging operations shall be carried out in a manner that will not cause contamination of food.
2. The food business operator shall ensure that packaging materials are food grade, and not a source of contamination.
3. Packaging materials shall be stored in suitable conditions to prevent contamination.
4. Packaging materials that are opened and partially used shall be re-sealed to prevent contamination while in storage.
5. Food packaging shall only be re-used where it is intact, easy to clean and disinfect.
6. Packaging used for non-food materials shall not be re-used for storage of food materials e.g. chemical containers.
7. Specific controls shall be in place when using glass containers as packaging materials e.g. regular monitoring to ensure the integrity of the glass.

4.H.3 Food Transport

1. Food to be distributed internally or externally prior to service shall be suitably stored and where necessary maintained at the required temperatures.
2. Vehicles, containers, conveyances and other means of transport of foodstuffs e.g. trolleys, insulated containers, push carts shall be:
 - clean
 - in good repair
 - suitable for the intended use
 - easy to clean and sanitise
 - pest proof.
3. Food shall be kept covered during distribution to reduce the risk of contamination.
4. Cooked and/or ready-to-eat foods shall be adequately segregated from other foods during distribution.
5. Where foods of different types and non-foods are transported in the same containers there shall be:
 - effective separation of the products
 - no risk of contamination of the foods.
6. All vehicles used for the transportation of food shall be inspected before loading, to ensure that they are clean and weatherproof.
7. 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.H.3.1 Temperature Control

1. Foods shall be maintained at the correct temperature during transport

Food Type	Food temperature
Hot foods	> 63°C
Chilled foods	0°C to 5°C
Frozen foods	- 18°C

2. The refrigeration or heating equipment on the transport unit should be turned on prior to loading and inspected 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.
3. Evidence should be available to demonstrate that foods are maintained at the correct temperatures during transport.

4.H.4 Food Storage

1. The food business operator shall ensure that product traceability is maintained while the product is in storage.
2. Food, including food prepared as part of the food operations, shall be rotated and used on a first in/first out basis taking into account the shelf life and any other information as appropriate for example, the “best before”/“use by” date.
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. Food stores shall be dry, free from contamination and shall be maintained in a hygienic condition.
5. The doors to all food storage areas shall be kept closed except when they are being filled, emptied or cleaned.
6. Foodstuffs shall be stored off the floor on cleanable pallets, racks or shelving at a height which permits cleaning
7. Containers used to store foods shall be made of food grade materials, be in good condition, easy to clean and sanitise.
8. All products that will enter food production areas should be decanted from outer packaging prior to storage except where to do so would have an adverse affect on the product integrity.
9. The labelling information from the outer packaging should be retained for all decanted products.
10. Flour, cereals, sugar etc shall be stored in a dry environment and when opened stored in covered containers.
11. Unopened canned foods shall be stored in a dry area to prevent rusting.
12. Food shall not be stored in opened cans unless the cans are specifically designed for this purpose.
13. The food business operator shall ensure that when opened, vacuum packs of food are used quickly or as specified by the manufacturer.
14. Product to be returned to a supplier shall be managed as per Food Returns refer to 4.C.4

Note: The best before/use by date on vacuum packs only refers to the unopened product.

Note: Beverages packaged in plastic crates and/or cardboard cartons may be stored directly on a dry clean floor for limited periods of time.

4.H.4.1 Temperature Control

1. Foods shall be maintained at the correct temperature during storage:

Food Type	Food temperature
Hot foods	> 63 °C
Chilled foods	0 °C to 5 °C
Frozen foods	- 18 °C

2. High-risk foods and prepared vegetables shall be stored in suitable temperature controlled conditions.
3. 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. Raw food shall not be stored above cooked or ready to eat foods.

Note: Refer to Section 3 for management of chill chain and 4.H.10 for management of hot food.

4.H.5 Thawing

1. The food business operator shall ensure that the core temperature of the food is 0°C to 5°C after thawing.
2. All frozen foods shall be thawed prior to cooking or serving, except foods where the manufacturer's instructions state otherwise.
3. All foods that are being thawed shall be protected from physical and chemical contamination.
4. The thawing of food shall be carried out under appropriate conditions to minimise the growth of micro-organisms and these include:
 - In a thawing unit
 - In a microwave oven with thawing cycle
 - In a refrigerator
 - Under cold running water
5. If food is thawed using cold running water the food shall be placed in a container which does not retain water, for example a colander.
6. All thawed food shall be checked to ensure that the thawing is complete. If the food is not at the correct temperature continue to thaw the food until the temperature is between 0°C and 5°C.
7. The food business operator shall ensure that parts of the food which thaw the fastest are not exposed to temperatures that will promote the growth of micro-organisms.
8. If using a microwave oven for thawing the thawed food shall be cooked immediately as the cooking process will have started in the microwave.
9. Run off liquid from the thawing process shall be collected and discarded as frequently as necessary and care shall be taken to ensure that liquid drained from the food does not contaminate other foods particularly ready-to-eat products.
10. The food business operator shall ensure that adequate precautions are taken to ensure that the thawing process does not result in cross contamination of products and/or work surfaces. For example keep meat/poultry segregated from other food when it is defrosting.
11. 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.
12. A limited range of IQF (Individual Quick Frozen) products should not be thawed in accordance with the above but should be thawed in accordance with manufacturer's instructions.

13. If the food business operator is applying a shelf life to thawed food, consideration should be given to the following:
- The shelf life of the food prior to freezing
 - The time taken to thaw the food

Note: Sample thawing record is available in Annex I.

Note: Foods of 2.0kg to 2.5kg in weight will require a thawing time of approximately 24 hours and pro rata for larger units e.g. frozen turkeys

4.H.6 Food Preparation

1. Sufficient space, cleaned and sanitised work surfaces, equipment and utensils shall be provided for preparing foods to prevent the risk of contamination
2. Separate work surfaces, equipment and utensils should be provided to prevent the risk of cross contamination between different types of food.

Recommended colour coding system for work surfaces, equipment and utensils

Colour	Intended use
Red	Raw Meat & Poultry
Blue	Raw Fish & Seafood
Brown	Raw Unwashed Vegetables
White	Dairy & Bakery Products
Yellow	Cooked Meat
Green	Salad & Fruit

3. Fresh fruit, vegetables or salad items shall be washed in potable water prior to use with the exception of packaged, pre-washed and ready to eat products.
4. When preparing ready to eat or other high risk foods, the food business operators shall limit the time the food is held above 5°C.
5. 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 sanitisation occurring in between the different operations.
6. A separate raw meat /poultry and/or fish preparation area should be provided.

4.H.7 Food Cooking

4.H.7.1 General

1. Foods shall be cooked to a core temperature of 75°C, instantaneously or an equivalent time temperature combination, for example, 70°C for 2 minutes, which ensures that the food is safe for consumption.
2. The temperature of cooked foods shall be monitored by probing or visual assessment to ensure the products has received the required heat treatment.
3. Foods that shall achieve a core temperature of $\geq 75^{\circ}\text{C}$ by the cooking process are:
 - pork, chicken, and turkey,
 - minced meat, minced meat products, rolled or pre-formed meats and stuffed meat products

In the event that the food has not achieved the required temperature the following corrective action shall be taken:

- Extend the cooking time an/or increase the cooking temperature
- Service and/or review the reliability of the equipment used.

Note: Sample cooking record is available in Annex I.

Cook to order

1. Foods that maybe cooked to order (customer's preference) are fish and shellfish, whole joints, birds (game and duck), cuts/portions of lamb, beef or venison. When cooking food to order the food business operator shall comply with the following criteria:
 - the chef is fully trained and experienced
 - the food is seared/cooked on the outside
 - the food is served as soon as possible (within 30 mins)
 - the products used are purchased from selected suppliers.

4.H.8 Food Cooling

1. The food business operator shall establish a cooling process that will allow the rapid cooling foods and facilitate refrigeration of the foods within 2 hours of cooking or hot holding.

Recommended methods of cooling foods include:

- Blast Chilling
 - Storing the food in a cool designated area
 - Slicing and/or decanting into smaller portions
 - Placing the food in cold containers
 - Cooling the container of food in ice baths
 - Cooling under running cold potable water
 - Stirring to disperse heat
2. The time of cooling should be monitored to ensure that the cooling method in use is adequate for the food products.
 3. If the food temperature is greater than 10 °C after 2.5 hours of cooling the food shall be served immediately or discarded food. The food business operator shall review the cooling system in use and consider the use of other more efficient methods of cooling.
 4. Foods shall not be placed in a cold storage units while still warm as this will increase the temperature inside the unit and cause an increase in the temperatures of other foods stored in the same unit.
 5. A longer initial cooling time (i.e. > 2 hours) may be required for large whole joints to ensure that when refrigerated they do not increase the temperature of the cold storage unit. Large whole joints shall be cooled to ≤ 5 °C within 6 hours of completion of cooking.
 6. Foods shall be protected from all forms of contamination during the cooling process.
 7. Foods prepared using cook chill systems shall comply with the cook/chill guidelines.

Note: A large joint is greater than 2.5kg in weight.

Note: Sample cooling record is available in Annex I.

Note: For cook chill foods consult the cook chill guidelines see the Food Safety Authority of Ireland Guidance Note No 15.

Note: For information on use of blast chillers see manufacturer's instructions.

4.H.9 Reheated food

1. Foods shall only be reheated once following cooking or hot holding.
2. The core temperature of reheated food shall be ≥ 70°C.
3. The following corrective action shall be taken in the event that the reheating process is not achieving a core temperature of ≥ 70°C:
 - Increase heating time and/or heating temperature
 - Service /review the effectiveness of equipment in use.
4. The temperature of foods shall be monitored during reheating and records should be retained.

Note: Sample cooking/ reheating record is available in Annex I.

4.H.10 Food Holding and Service

1. Food shall be maintained at the following core temperatures during food holding and service:

Food type	Temperature of Food
Hot Food	≥ 63°C
Cold Food	0 °C to 5°C

2. The temperatures of hot and cold foods shall be monitored during food holding and service to ensure that the foods are held at the correct temperatures, and records should be maintained.
3. If during the preparation, holding or service the temperature of cold, freshly cooked or reheated foods have not been maintained at the required temperature the following corrective action shall be taken:

Cold Food

Food temperature/time	Corrective Action
Food > 5°C for ≤ 2 hours	Use food immediately or refrigerate
Food >5°C for ≥ 2 hours but ≤ 4 hours	Use food immediately or discard
Food >5°C for > 4 hours	Discard the food.

Freshly Cooked Food

Food temperature/time	Corrective Action
Food < 63°C for ≤ 2 hours	Reheat to ≥ 70°C, serve immediately Discard any remaining food or Cool to ≤ 5°C and refrigerate or Reheat to ≥ 70°C, maintain at ≥ 63°C during service Discard any remaining food

Reheated Food

Food temperature/time	Corrective Action
Food < 63°C for > 2 hours	Discard the food.

4. The food business operator shall ensure that all food utensils, crockery, glassware etc. used at food service are clean and sanitised prior to use.
5. Adequate supplies of suitable equipment shall be provided for use by customers at self service units e.g. tongs/slices etc.

Note: Sample cold/hot display temperature record is available in Annex I.

Section 5 - Application of HACCP Principles

5.1 General

Food business operators are legally obliged to put in place, implement and maintain a permanent procedure(s) based on Hazard Analysis and Critical Control Point (HACCP) principles. This standard provides guidance to a food business operator on compliance with the HACCP requirements of the food hygiene regulations.

HACCP is a tool for identifying what can go wrong, and if it is not controlled, the food would not be safe for consumption. When the hazards (i.e. what can go wrong), have been identified, controls shall be implemented to prevent, eliminate or reduce the hazard to an acceptable level.

All food businesses are required to demonstrate compliance with HACCP requirements and this may be achieved by:

- The implementation of hygiene requirements and controlling hazards as specified in this standard (see 5.2)
or
- The development of a food safety management system by applying the principles of HACCP (see 5.3).

The food business operator shall ensure that the management and staff of the food business are fully committed to the implementation and operation of a food safety system based on HACCP principles.

In order to establish a food safety management system based on HACCP principles the food business operator shall ensure that the necessary food hygiene requirements as described in Section 3 and 4 of this standard are implemented.

Food businesses maybe able to demonstrate compliance with the requirement to apply the principles of HACCP by using this standard and this is known as the flexible application of HACCP principles.

5.2 Compliance with HACCP Principles by using this standard

5.2.1 General

Regulation (EC) No 852/2004 states that where necessary and with due consideration to the size and nature of the food business the application of HACCP principles to the food business should be flexible.

If a food business operator uses this standard to control all hazards by the implementation of the guidance in Section 3 and 4, it will be accepted that he/she is in compliance with the requirement to apply the principles of HACCP to the food business, on a flexible basis.

The food business operator shall be able to demonstrate or provide evidence that all activities are being carried out safely by compliance with the guidance in this standard.

If the food business includes activities for which no guidance is provided in this standard the food business operator shall apply the principles of HACCP to those activities.

In the event that the food business operator identifies the loss of control of a hazard, the action taken to restore control of the hazard shall be recorded and verified to ensure that it was appropriate and effective.

Note: Sample corrective action record is available in Annex I.

5.2.2 Verification

Verification means checking that the requirements necessary to control all food hazards are being implemented as planned. The food business operator shall verify the method used to control food hazards.

Where the food business operator is using the guidance in sections 3 and 4 of this standard to control all food hazards this shall be verified on a regular basis by a trained member of staff.

Verification shall include, but is not limited to, confirming the following:

- Is monitoring being carried out as defined?
- Is corrective action being taken when something goes wrong?
- Are all the activities of the food business addressed in this standard?

If verification activities indicate that hazards are not controlled the food business operator shall take immediate action to correct the problem.

The corrective action taken shall be recorded and the effectiveness of the action verified to ensure that there is no recurrence of the problem.

Note: Sample corrective action record is available in Annex I.

5.2.3 Documents and Records

The food business operator shall retain a copy of this standard if it used to comply with the food hygiene regulations or used to adopt the flexible approach to the application of HACCP Principles.

Records shall be retained for 3 months after the sale of the foodstuffs intended for immediate consumption.

The food business operator should retain records for 2 years to demonstrate control of hazards particularly those controlled by management of the cold chain.

Note: A food business may decide to maintain records by exception, that is, complete a record only when the hazard has not been controlled.

Note : Sample documents and records suitable for a food catering business area in Annex I.

5.3 Application of HACCP Principles

5.3.1 General

A hazard is defined in Regulation (EC) No. 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: The presence in food of living organisms e.g. bacteria, viruses, yeasts and moulds which may cause harm if they or their products are consumed in food.

Chemical: The presence in food of an unacceptable level of a chemical substance.

Physical: The presence in food of foreign objects that may cause harm if consumed.

When a food business is developing a HACCP system using the principles of HACCP the following actions shall be taken.

i) Identification of hazards

The first action when developing and implementing a HACCP system is to identify the potential food safety hazards in the food business operation i.e. what can cause food to be unsafe for the consumer.

In order to ensure effective identification of potential hazards, the food business operator shall:

- 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 maybe one person who has a thorough knowledge of the food catering operation and of food safety.
- The team shall develop a flow diagram or a process description showing all the steps of the food catering operation. A sample flow diagram is shown on page 45. 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. each step.
- The team shall then review each step of the food business to identify the potential food safety hazards at each step.

While identifying the hazards the team should consider what measures could be applied to control the identified hazards i.e. the control measures.

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

STEP	HAZARDS	CONTROL MEASURES
Example :Cooking	Biological growth/survival	Temperature Control

ii) Identification of CCP's

The identification of CCPs is a very important stage in a HACCP system as the failure to control or reduce a hazard will compromise the safety of the food and may cause harm to the consumer.

When the hazards have been identified, the next action is to identify the steps in the process where hazards need to be controlled in order to ensure the safety of the food. These are known as Critical Control Points (CCPs). A CCP is the last chance to control an identified hazard before the food is served to the consumer.

A method of establishing which step in the process is a critical control point (CCP) is given below. 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 prevent 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?

At this point the following elements of the HACCP plan should be completed

STEP	HAZARD	CONTROL MEASURES	CCP
Example: Cooking	Biological growth/survival	Temperature Control	Yes

Where the step is not a CCP, i.e. the answers to the above questions are no, the food business operator is not required to apply the other HACCP principles.

Note: The food business operator may use other risk based methods to identify CCP's.

iii) Establish Critical Limits

A critical limit is the dividing line between what is acceptable and what is unacceptable. Failure to comply with a critical limit will compromise the safety of food and may cause harm to the consumer.

The team shall define a critical limit for each CCP and shall ensure that these critical limits are valid for the activity. The values given in this standard are suitable for use as the critical limits in food catering businesses.

If other values for critical limits are selected and used by the food business the basis for their selection shall be available for review by the regulatory authorities.

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

STEP	HAZARDS	CONTROL MEASURES	CCP	CCP CRITICAL LIMIT
Example: Cooking	Biological growth /survival	Temperature Control	Yes	Core temperature of food $\geq 75^{\circ}\text{C}$

iv) Monitoring

Monitoring is used to demonstrate that the identified food safety hazards are being controlled, and monitoring records are used to verify that the HACCP system is being implemented correctly.

The team shall define a method of monitoring for each CCP identified as follows:

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

Monitoring activities shall be an assessment of a numerical value or a visual check that a critical limit has been achieved.

If the food business operator is using a visual method of monitoring to assess control of a CCP he shall ensure that the method used is verified and that the same level of health protection is achieved as if using numerical value.

At this point the following elements of the HACCP plan should be completed

STEP	HAZARDS	CONTROL MEASURES	CCP	CCP CRITICAL LIMIT	MONITORING		
					HOW	WHEN	WHO
Example: Cooking	Biological growth /survival	Temperature control	Yes	Core temperature of food $\geq 75^{\circ}\text{C}$	Use sanitised probe and/or visual assessment	Each batch	Trained staff

v) Corrective Action

The purpose of corrective action is to prevent food that may cause harm from reaching the consumer.

The team shall establish corrective action for each CCP. Corrective action shall be taken when monitoring shows that a critical limit has been exceeded. The team shall define the action to be taken:

- in the event that CCP control is lost
- to prevent recurrence of loss of control.

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

STEP	HAZARD	CONTROL MEASURES	CCP	CCP CRITICAL LIMIT	MONITORING			CORRECTIVE ACTION
					HOW	WHEN	WHO	
Example Cooking	Biological growth or survival	Temperature control	Yes	Core temperature of food $\geq 75^{\circ}\text{C}$.	Use sanitised probe and/or visual assessment	Each batch	Trained staff	Extend cooking time and/or increase temperature Service or replace equipment

vi) Verification

Verification demonstrates that the HACCP system has been implemented as planned and that food hazards are being controlled.

Verification is a means of ensuring that the food safety management system is being implemented as planned, and that all the activities carried out are being completed correctly and at the required frequency.

The team shall

- establish and implement methods to verify the HACCP system
- define the responsibility and frequency of verification

Verification activities should be carried out by a person who is not responsible for monitoring the activities of the food operation.

Verification maybe carried out by using a two step approach whereby some of the activities are verified frequently and other are verified on a less frequent basis or even annually.

Frequent verification shall include but is not limited to confirming the following:

- Are food hygiene requirements correctly implemented?
- Is monitoring of CCPs 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?

Infrequent verification shall include but is not limited to confirming the following:

- Are all the food activities included in the plan?
- Is the equipment used for monitoring calibrated?
- Are the records of training, pest control etc. satisfactory?
- Have all audit findings been acted upon and/or resolved?

The food business operator shall ensure that all verification activities are carried out as defined in order to demonstrate that the HACCP plan is being implemented as planned.

At the end of this point the HACCP plan should be fully completed - see completed sample on page 46.

vii) Review of HACCP System

A review of the HACCP system shall be undertaken when there is a change that may affect food safety to ensure that the system continues to be valid for the food business. Changes to the food business that would require a review of the HACCP system would include but are not limited to the following:

- change in the food business operation e.g. a new product or process.
- a recurring failure in the system, with the same corrective action.
- a food safety incident occurs in a similar food business.

The team shall amend the food safety management system if the review demonstrates that changes are required.

A review of the HACCP system should be undertaken at least annually as part of the verification activities.

5.3.2 Documentation and Records

The food business shall maintain documentation and records to demonstrate compliance with guidance in this standard. HACCP documentation and records shall be available for inspection by regulatory authorities.

i) Documentation

The HACCP system shall be documented and all documentation relating to the HACCP system shall be retained.

Examples of documents to be retained shall include but are not limited to the:

- HACCP plan
- Hazard analysis
- CCP identification
- Critical limit determination
- Modification to the HACCP system.
- Standard operating procedures/Work instructions

ii) Records

The food business operator shall maintain records demonstrating compliance with the requirements of this standard.

Records shall be retained for a minimum of 3 months after the sale of the foodstuffs where the food is intended for immediate consumption.

The food business operator shall implement a record keeping system appropriate to the size and nature of the food business.

Records should be legible, clearly identified, signed and dated and where possible integrated into existing paperwork, for example daily diary, delivery notes or invoices, electronic record systems are acceptable.

Examples of records to be maintained include but are not limited to:

- Temperature monitoring records
- Corrective action taken

Note: Sample documents and records suitable for a food catering business are in Annex I.

5.3.3 Centrally developed HACCP systems

In some food business the HACCP plans are developed by central support functions for use in individual food operations.

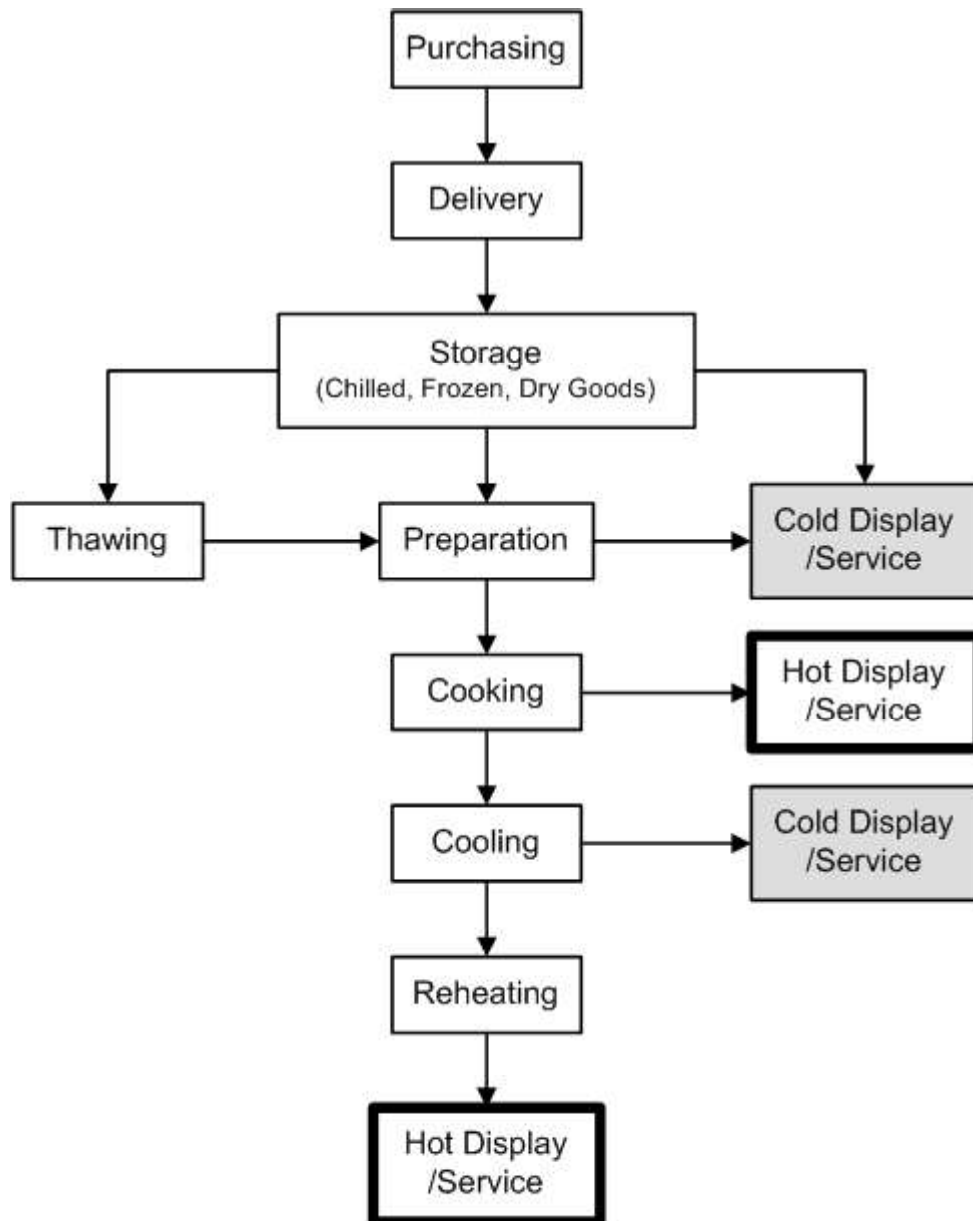
I.S. 340:2007

Where a food business is using a HACCP plan developed by a central support function the food business operator shall ensure that:

- The HACCP plan is suitable for the food business at the premises
- Instructions for the monitoring and control of each CCP are available on the premises
- Monitoring and corrective action records are available for the activities of the business
- Evidence is available to demonstrate that the HACCP plan is verified.

The food business operator shall also ensure that there is:

- An understanding and ownership of the HACCP system at the premises
- A trained team or individual with responsibility for HACCP in the food business at the premises.

Flow diagram of the steps in a typical food catering operation

COMPLETED HACCP PLAN FOR COOKING STEP

STEP	HAZARD	CONTROL MEASURES	CCP	CCP CRITICAL LIMIT	MONITORING			CORRECTIVE ACTION	RECORD	METHOD OF VERIFICATION
					HOW	WHEN	WHO			
Example Cooking	Biological growth or survival	Temperature control	Yes	Core temperature of food ≥ 75 °C.	Use sanitised probe and/or visual assessment	Each batch	Trained staff	Extend cooking time and/or increase temperature Service or replace equipment	Cooking/ Reheating	Review cooking and calibration records

Annex I– Sample Documents and Records for a Food catering Business.

Individual Staff Training Record

Cleaning Schedule

Weekly Cleaning Record

Goods In/Delivery Record

Temperature Record for Cold Chain Units

Temperature Record for Food Thawed in Chilled Conditions

Temperatures Record for Food Cooking & Reheating

Temperature Record for Food Cooling

Temperature Record for Cold/Hot Food Display

Record for Corrective Action

HACCP Plan

These sample documents and records can be downloaded from the NSAI web-site, at www.nsai.ie

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Individual Staff Training Record

Name: Joe Bloggs

Position held: Commis Chef

Date of employment: 1/06/05

Date of training	Course Title	Trainees signature	Management signature
2/06/05	Induction to premises Hygiene refresher.		
2/02/06	Cooking Course - ethnic food.		

Cleaning Schedule

Area/Item to be Cleaned	Method / Procedure	Chemical to be used	Frequency of Cleaning	Person Responsible
Kitchen Floor	Clean with fresh solution applied by mop. Renew solution when dirty or after 20 minutes. Rinse with clean water. Rinse mop and bucket, allow to air dry.	Degreaser Two scoops per bucket of hot water	Daily or as required	Kitchen Porter

Valid from: _____

Weekly Cleaning Record

_____ Week Commencing _____

Area/Item to be Cleaned	Frequency of Cleaning	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Kitchen Floor	Daily							
Extractor canopy	Weekly							

Insert initials of person who completed the task in the box provided.

Verified by _____ Date: _____

Goods In/Delivery Record

Chilled food temperature: 0 °C -5°C
 Frozen foods: ≤-18 °C

Date	Supplier	Food	Batch code	Best before or use by date	Condition of packaging	Temp of Food	Corrective Action taken	Signature
1 January	GoodFood Co.	Cooked Ham slices	EU 123 - 001.	7/01/07	Good	4 C		JB

Verified by: _____ Date: _____

Temperature Record Cold Chain Units

Week Commencing
 Temperature of food in Fridges: 0°C -5°C
 Temperature of food in Freezers: ≤ -18°

Unit	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Fridge 1	4.1 °C	4.5 °C												
Signed														
Corrective Action taken														

Verified by: _____ Date: _____

Temperature Record for Food Thawed in Chilled Conditions

Core Temperature of thawed foods: 0°C to 5°C

Date	Product	Approx Weight	Start Time	Finish Time	Core Temp	Corrective action taken	Signed
1/01/07	Chicken filets	1.0 kg	10.00 am	am 2/01/07	2 C		

Verified by: _____ Date: _____

Temperature Record for Food Cooling

Food Refrigerated: \leq 2.0 hours after cooking.

Date	Product	Time Finished Cooking	Time into Refrigerator	Signed	Corrective Action taken

Verified by: _____ Date: _____

Record for Corrective Action

Date	Issue	Action Taken	Verified By

HACCP Plan

Activity	HAZARDS	CONTROL MEASURES	CCP YES/NO	CRITICAL LIMIT	MONITORING			CORRECTIVE ACTION	RECORD	VERIFICATION
					HOW	WHEN Suggested	WHO			

Prepared by: _____

Approved by: _____

Date: _____

Acknowledgements

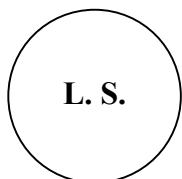
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Larry Byrne	Irish Hotels Federation
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Jeffery Moon	Food Safety Authority of Ireland
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Lisa O'Connor	Food Safety Authority of Ireland
Donncha Walsh	Wheatfield Prison

GIVEN under the seal of the National Standards Authority of Ireland

This 26th day of June, 2007



Enda McDonnell
Director of Standards

Maurice Buckley
Chief Executive

The Minister for Enterprise, Trade and Employment hereby gives his consent under Section 16 of the National Standards Authority of Ireland Act, 1996 to the above declaration.

Paul Bennett

26-6-2007

An Officer of the Department of Enterprise, Trade and Employment duly authorised under Section 15 (4) of the Ministers and Secretaries Act, 1924, to authenticate instruments (under the National Standards Authority of Ireland Act, 1996) made by the Minister for Enterprise, Trade and Employment.