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SPHM
HOSPITALITY

SPHM – FOOD & WATER HYGIENE MANUAL



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Food & Water Hygiene Manual

**Guide to Good Practice
For
Food Hygiene
In
Sun Paradise Hotels Management

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FOREWORD

In 2011, Sun Paradise Hospitality Management, are trying to prepared a guidance on the hygiene of foodstuffs, as a Guide to Good Practice for Food Hygiene in the independent hotel sector to compete with Chain Hotels Sector in term of managing hotel operation being prepared by Agustinus Agus Purwanto, SE MM a Chief Executive Officer Sun Paradise Hospitality Management Indonesia. This guide served for a training manual on food hygiene, with the support of the internal Human Resources Department.

Sun Paradise Hospitality Management decided in November 2011 to proceed with the updating of its on next year while to observe the implementation, in order to bring it in accordance with the new hygiene rules and more especially those concerning HACCP. It was also decided to follow the procedure leading to the recognition of Community Guides to good practice for food hygiene as led down in article 9 of the Regulation¹ on the hygiene of foodstuffs.

The Guide takes due account of the requirements of the framework Regulations on food hygiene and Guidelines documents, as well as the general and specific principles of the Codex Alimentarius². It is based on the **“Hygiene code for Food service”** (2007) developed by VENECA, the Dutch national Food service organisation, with the approval of VENECA instances. It is also based on the practical experience of some hotels regarding good food hygiene practice and HACCP.

This manual only can be used by all hotels under managed by Sun Paradise Hospitality Management

¹ See annex IX

² See annex IX

Food and Water Hygiene

All Hotel's Managed by Sun Paradise Hospitality Management
Member of Training & Development:

_____ (Chief Executive Office
Corporate)
_____ (General Manager)
_____ (Hotel Human Resources Manger)
_____ (Hotel Executive Chef)
_____ (Hotel Food & Beverage
Manager)

The Guide is available in Executive Office Hotel & Head Office

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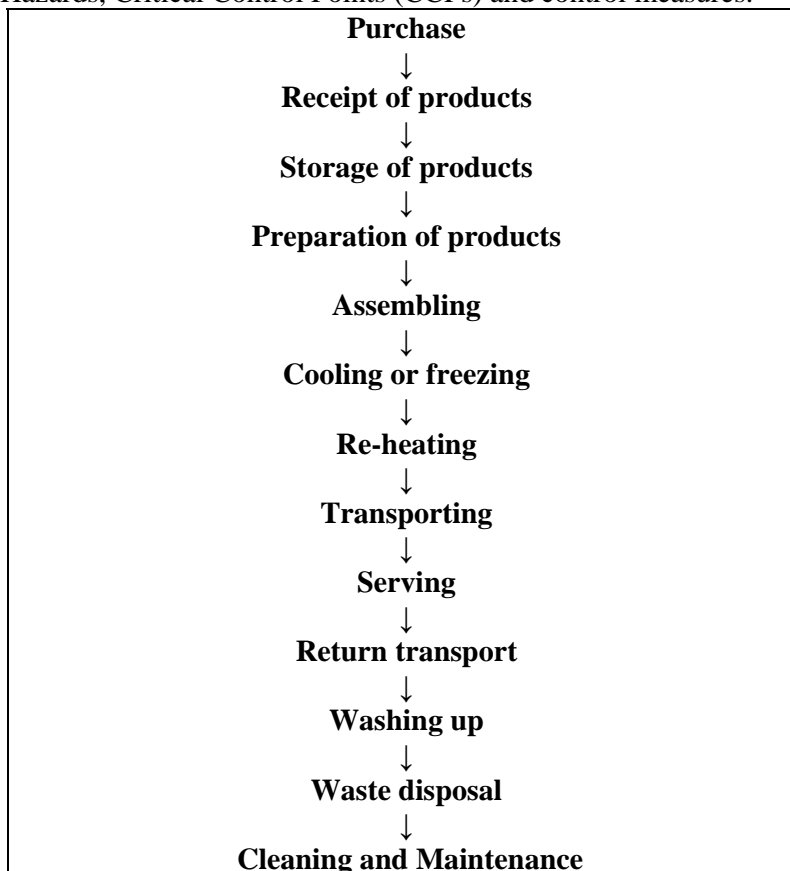
Part I

GENERAL CONSIDERATIONS

This Guide provides general and specific guidelines and standards in the area of food hygiene and the necessary control of it, in order to help contract caterers to comply with their legal obligation in terms of food safety.

The Hygiene and HACCP standards as well as the control frequencies described in the Guide shall be seen as common acceptable standards in order to guarantee safety in food service activities. They are means aiming at eliminating as far as possible all microbiological risks linked to the consumption of foodstuffs as well as ensuring their safety.

Article 5 of the General Hygiene Regulation³ requires food business operators to put in place, implement and maintain a permanent procedure based on Hazard Analysis and Critical Control Points (HACCP) in order to guarantee the safety of the food throughout the processing. Therefore, the structure of the Guide follows the different steps of the food processing and describes for each step as well as for buildings, food premises and staff, general hygiene requirements and best practice. When appropriate, it identifies the number and type of Hazards, Critical Control Points (CCPs) and control measures.



³ see annex IX

A. SCOPE

This Guide covers **a food and water hygiene activity**.

Food and Water Hygiene consists in the outsourcing, by a private or public organisation or firm, of its restaurant, canteen or food service to a hotel industry, on the basis of a written contract.

Known forms of hotel industry include the provision of staff hotel facilities (company restaurants), facility kitchen and food provision in care institutions and catering in hotel.

The following characteristics differentiate the catering from other forms of restaurant and food services:

1. a contractual relationship between the client organisation and the food service provider;
2. a clearly defined clientele, captive or semi-captive : employees, officials, students, school children, patients in hospital, ...who have access to the organisation's canteen or food service;
3. a service conducted on the premises of the client organisation, with its equipment;
4. meals are supplied at a preferential or "social" price.

The Guide applies to all food processes taking place in the Food service business. No distinction is to be made as far as size and type of business are concerned.

The Guide can of course, as far as it applies, be used in in-house situation.

B. H.A.C.C.P

B.1. What is HACCP?

HACCP stands for Hazard Analysis and Critical Control Points. It is a systematic approach to the localisation, assessment and controlling of potential risks linked to the safety of food commodities in the food chain. The key idea is to identify specific hazards, to determine control points for these hazards and to define the preventative measures which should be adopted in order to control them.

This means that a business involved with foodstuffs must identify all the activities relating to the foodstuffs that take place within the organisation.

B.2. How to set up a HACCP system?

The following steps should be used to set up a HACCP system:

1. Conduct a Hazard Analysis

A hazard analysis aims at:

- identifying all possible **hazards associated with food production at all the stages of the processes** carried out in a catering business;
- **determining the possible effect** of these hazards on the health of the consumers;
- evaluating the **probability of appearance** of each identified hazard;
- identifying the **necessary preventive measures**.

What is a Hazard?

A hazard is something that could be present in food and could be harmful to the health of the consumer. This includes:

- biological hazards: micro organisms: yeast's, fungi, bacteria;
- physical hazards: small stones, small bones, hair, etc;
- chemical hazards: pesticides, cleaning agents and disinfectants, etc.

2. Determine the Critical Control Points (CCPs)

These are the points that have to be checked to preclude or to minimise all the risk situations. In other words, a critical control point is where the controlling action is deemed necessary and effectively carried out.

3. Establish critical limit(s)

Critical limits are the requirements and permitted non-conformities that must be met at each Critical Control Point to ensure effective control of them.

4. Establish a permanent system to monitor control of the CCPs

A monitoring system provides evidence of real and effective control of the CCPs.

5. Take corrective action

Corrective action is taken when monitoring indicates that a particular CCP is not under control.

6. Establish procedures

Procedures are put in place to verify and check whether the HACCP system is performing effectively.

7. Establish documentation

Documentation concerns all procedures and records appropriate to these principles and their application.

Restaurant businesses implementing this Guide and complying with all instructions, standards, control frequencies, documentation system, are fulfilling their legal obligation of setting up a HACCP system as steps 1 to 7 of HACCP are included in this Hygiene Guide.

If a food service business carries out processes that are not described in this Hygiene Guide, they must apply steps 1 to 7 to the processes concerned.

B.3. How to use this Guide for implementing a HACCP system?

The Guide describes each process followed in a catering business.

1. For each process or sub-process, the Guide provides information on **legal requirements** as well as **best practice** for hygiene and when appropriate, Critical Control Points (CCPs) and control measures.
2. Each step of a process is then represented in a flow chart indicating for each activity to be carried on (in blue) the **Critical Control Points** (in red). An explanation of the critical control points is given in the “Critical Control Points summary”. The end of a process is followed by the indication of the following process (in italic blue).
3. Existing Critical Control Points shown in the flow chart, are thereafter explained in a **hazard summary** that gives for each hazard:
 - how to control the critical control point;
 - how often the control must be carried out;

- statutory requirement and permitted non conformities to be met;
- corrective action to be taken in case a control reveals non-conformity to the statutory requirements or to the permitted non conformities.

Annexe III proposes examples intended to a catering business in order to meet the hygiene requirements set up in the Guide and introduce an appropriate HACCP system.

B.4. Records

The General Hygiene Regulation⁴ foresees that if a food poisoning does happen, it is up to the Food service business to demonstrate that everything has been done to prevent it. This can only be proven by recording the results of the regular controls and of the actions taken in case of non-conformity. Records must be kept according to EU and national requirements.

B.5. Testing of the HACCP system

At least once a year, food service operators must use internal testing to verify whether:

1. work is done hygienically;
2. checkings are actually carried out and results are recorded.

In addition, the working of the system as regards hygiene must be assessed and adapted where necessary. An example of an internal hygiene testing list is provided in annex. The results of the internal testing must be recorded in writing. If there is any non conformity, a note must be made of the actions that have been or must be taken to rectify the non-conformity.

⁴ SEE ANNEX VIII

C. DEFINITIONS

For the purposes of this Guide, the following expressions have the meaning stated:

Ambient/ Room temperature: temperature of the surrounding environment.

Assembling: dishes prepared in bulk by a central kitchen or supplied by specialist producers that are assembled.

“Best Before” and “Use by” date: The date of minimum durability of a foodstuff shall be the date until which the foodstuff retains its specific properties when properly stored. The date shall be preceded by the words: ‘Best before ...’ when the date includes an indication of the day, or ‘Best before end ...’ in other cases. In the case of highly perishable foodstuffs the date of minimum durability shall be replaced by the ‘use by’ date.

Catering: the preparation, storage, distribution, service and, where appropriate, delivery of food for consumption by the consumer at the place of preparation or at a satellite unit.

Catering kitchen: place where foodstuffs are prepared, cooked or packed to be consumed as meals by several consumers forming a homogeneous group.

Catering staff: staff of a Food service business, who processes foodstuffs, using kitchen utensils and/or equipment, etc, or comes into contact with them.

Cleaning: the removal of soil, food residue, dirt, grease or other objectionable matter.

Contamination: the presence or introduction of a hazard.

Food service: provision of catering services at a variety of establishments by a professional caterer on the basis of a continuing performance contract.

Core temperature: temperature in the middle – or the thickest part – of a product.

Cold/Cool/cooling chain: process to maintain good temperature control, chilled or frozen, through all stages of storage and distribution of food to ensure safety and storage life.

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

Critical control point: a step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Critical limit: criterion which separates acceptability from unacceptability.

Cross contamination: transfer of a hazard from one foodstuff to another, for example by the failure to wash hands, chopping boards and knives.

Defective product: unsatisfactory product.

Disinfection: the reduction, by means of chemical agents and/or physical methods, of the number of micro-organisms in the environment, to a level that does not compromise food safety or suitability.

Establishment: any unit of a food business.

Flow diagram/Chart: systematic representation of the sequence of steps or operations used in the production or manufacture of a particular food item.

Food business: any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of production, processing and distribution of food.

Food business operator: the natural or legal persons responsible for ensuring that the requirements of food law are met within the food business under their control.

Food Hygiene: all measures and conditions necessary to control hazards and to ensure fitness for human consumption of a foodstuff taking into account its intended use.

Food Handling: any operation in the preparation, processing, cooking, packaging, storage, transport, distribution and service of food.

Food Handler: any person, who directly handles packaged or unpackaged food, food equipment and utensils, or food contact surfaces and is therefore expected to comply with food hygiene requirements.

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

Food poisoning: illness transmitted by food. Caused either by infection (development of micro-organisms) or intoxication (effect on toxins produce by micro-organisms).

Frozen food: product maintained at a temperature equal to or below -18C in any part of the product.

Germs: popular term for micro-organisms.

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

HACCP: Hazard Analysis and Critical Control Points: a system which identifies, evaluates, and controls hazards which are significant for food safety.

HACCP verification: The application of methods, procedures, tests and other evaluations, in addition to monitoring to determine compliance with the HACCP plan.

High-risk products: foodstuffs that perish quickly, such as meat products or vegetables salads.

Meals prepared in advance: prepared meals consumption of which may be postponed to at least the day following their preparation.

Micro-organisms: bacteria, viruses, yeasts, moulds, algae, parasitic protozoa, microscopic parasitic helminths, and their toxins and metabolites.

Packaging: the placing of one or more wrapped foodstuffs in a second container, and the latter container itself.

Pests: insects, birds, rodents or any other animals capable of directly or indirectly contaminating food.

Prepared meals: culinary preparations composed of prepared food whether raw, cooked or precooked.

Portioning: division of food, before or after cooking, into single or multiple portions.

Potable water: water meeting the requirements laid down in Council Directive on the quality of water intended for human consumption.

Potentially Hazardous Food: food capable of being contaminated and/or supporting rapid growth of infectious or toxigenic micro-organisms.

Processing: any action that substantially alters the initial product, including heating, smoking, curing, maturing, drying, marinating, extraction, extrusion or a combination of those processes.

Processed products: foodstuffs resulting from the processing of un-processed products. These products may contain ingredients that are necessary for their manufacture or to give them specific characteristics.

Ready-to-use vegetable dishes: fruit, vegetables and herbs, packed, raw, chilled, and ready for use and human consumption, which have been peeled, cut or subject to any other preparation which modifies their original state.

Ready-to-eat food: food intended by the producer or the manufacturer for direct human consumption without the need for cooking or other processing effective to eliminate or reduce to an acceptable level micro-organism of concern.

Recontamination: the recontamination of a foodstuff with a bacterium.

Regeneration: the reheating of products that have previously been heated and then cooled.

Recording: setting down of documentation both written and digital on site.

Cooling: reduction of the core temperature of a heated product within a number of hours; this is used if the points in time of preparation and consumption do not immediately follow one another.

Risk: a function of the probability of an adverse health effect and the severity of that effect, consequential to a hazard.

Specification: a statement of requirements that a product, ingredient or a process must meet.

Self-prepared products: products assembled, prepared, portioned or supplied in a different packaging at the location itself, such as self-assembled and/or portioned ready salads and uncooked food, self-assembled and/or portioned ready desserts, milk/buttermilk and juices in a jug or a glass, meat products.

Unprocessed products: foodstuffs that have not undergone processing, and includes products that have been divided, parted, severed, sliced, boned, minced, skinned, ground, cut, cleaned, trimmed, husked, milled, chilled, frozen, deep-frozen or thawed.

Vermin: cfr. Pest

Virus: A non-cellular, microscopic infectious agent that relies upon a host cell to reproduce. Some are transmitted by food and may cause illness including gastro-enteritis.

Wrapping: the placing of a foodstuff in a wrapper or container in direct contact with the foodstuff concerned, and the wrapper or container itself.

D. FOOD CRISIS MANAGEMENT

According to the Regulation of the common practice laying down the general principles and requirements of food law, establishing the Food Safety Authority and laying down procedures in matters of food safety⁵, the primary responsibility for ensuring compliance with food law, and in particular the safety of the food, rests with the food business.

The **key obligations of the food business operators** are:

In terms of Safety :	Operators shall not place on the market unsafe food.
In terms of Responsibility :	Operators are responsible for the safety of the food which they produce, transport, store or sell.
In terms of Traceability :	Operators shall be able to rapidly identify any supplier or consignee.
In terms of Transparency :	Operators shall immediately inform the competent authorities if they have a reason to believe that their food is not safe.
In terms of Emergency :	Operators shall immediately withdraw food from the market if they have a reason to believe that it is not safe.
In terms of Prevention :	Operators shall identify and regularly review the critical points in their processes and ensure that controls are applied at these points.
In terms of Co-operation :	Operators shall co-operate with the competent authorities in actions taken to reduce risks.

Consequently, when a food business operator has some reasons to believe that the food he has produced, bought, transformed or distributed is likely to constitute a serious risk to human health or the environment, and the risk cannot be controlled by appropriate measures taken, he must withdraw the concerned product and immediately inform his national competent authorities.

Within the framework of the Rapid Alert System set up by the Regulation, each Member State must have foreseen a national procedure of transmission of information concerning a food-related risk.

⁵ SEE ANNEX VIII

When must a food operator notify?

Notification shall not be done:

1. before a risk assessment has been done;
2. if the product has not yet been consumed and if the stock of the product is under control;
3. if the risk may be eliminated or reduced to an acceptable threshold through the implementation by the food business operator of some corrective action.

If the risk concerns an ingredient or a product from a supplier, food business operator must inform the concerned supplier and notify the risk to the competent authorities.

A notification must be done:

1. when existing legal food safety microbiological criteria are exceeded;
2. when prohibited chemical contaminants (forbidden additives or pesticides, PCB, dioxin, heavy metal,..) or non authorised GMO are found in the products;
3. when a physical contaminant representing a risk to the consumer health is present in a foodstuff.

Part II

GENERAL HYGIENE RECOMMENDATIONS AND REQUIREMENTS RELATING TO BUILDINGS, PREMISES AND EQUIPMENT

PRELIMINARY REMARKS

A food service business carries out various activities in relation to the preparation and the supply of meals to people working and/or living in communities.

The characteristic of a food service business is that, in most of the cases, it performs its services **on the client's premises, using equipment and utensils put at their disposal by their clients.**

Therefore, in most cases, the layout, design, construction, sitting and size of food premises together with the equipment, and utensils of the locations are for the most part not determined by the catering business. Consequently, **the food service company has no control over the setting up of the site and cannot be held responsible by the consumer for consequences of the non-fulfilment of the obligations in respect of the location.**

However, to contribute actively to the improvement of the locations and their equipment, food service companies commit themselves to:

- **making, in so far as this is possible, an inventory of production units at the beginning of the contract and, throughout its execution, and informing the client of the state of the premises, equipment and utensils;**
- **supervising correct and quick performance of maintenance operations to equipment and premises;**
- **helping the client, if so requires, through their experience and know-how, with improvement works to the premises and equipment;**
- **helping in the drawing up of specifications, if the client so desires.**

It goes without saying that a caterer never signs a contract in case the client's premises or equipments and utensils do not allow to control food safety and that the recommendations contained in the chapter "Hygiene of premises" are likewise applicable to catering businesses if they are responsible for the management of the location, the equipment and the material.

A. GENERAL REQUIREMENTS FOR FOOD PREMISES
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Food Premises are to be kept clean, be of **sound construction and maintained in good repair and condition**. (General Hygiene Regulation Annex II, Chapter I).

A.1. Layout, design, construction, sitting and size of food premises must:

- ✓ Allow **adequate maintenance**, cleaning and/or disinfection
- ✓ **Avoid or minimise air-borne contamination** (dust, smoke...)
- ✓ Provide **adequate working space** to allow for the hygienic performance of all operations
- ✓ Be such as to **protect against the accumulation of dirt**, contact with toxic materials, the shedding of particles into food and the formation of condensation or undesirable mould on surfaces
- ✓ **Facilitate hygienic operations** enabling a controlled and regulated flow of operations from the arrival of the raw material to the consumption of the final product, including protection against contamination and, in particular **prevent the entrance and harbouring of pests/vermin**
- ✓ Provide, where necessary, suitable **temperature-controlled processing/ handling and preserving/storage conditions of sufficient capacity** for maintaining foodstuffs at appropriate temperatures and designed to allow those temperatures to be monitored and, where necessary, recorded
(General Hygiene Regulation Annex II, Chapter I)

Recommended good hygienic practice:

- **The store rooms** should be of sufficient capacity for the storing of the dry foodstuffs at room temperature.
- **Cold rooms** (chilled and deep-freeze conditions) should be sufficient in number to enable separate storage of foodstuffs requiring different hygienic handling.
- The volume of the **refrigerated rooms** should be sufficient to enable storage (chilled and deep-freeze conditions) of the maximum daily production plus raw materials.
- It is recommended to equip cold and refrigerated rooms with an easily read **thermometer**, accurate to within a degree, or with a temperature-recording device. The recording and measuring devices should be monitored regularly.
- **Facilities for storage of waste and inedible material** should be provided. These facilities should be designed to prevent access to waste or inedible

material by pests and to avoid contamination of food, potable water, equipment, building or roadways on the premises.

A.2. Sanitary facilities

An adequate number of flush lavatories are to be available and connected to an effective drainage system. Lavatories are not to open directly into rooms in which food is handled. (General Hygiene Regulation Annex II, Chapter I)

A.3. Hand washing facilities

An adequate number of washbasins suitably located and designated for cleaning hands with warm and cold running water, materials for cleaning hands and for hygienic drying should be provided. Where necessary, the facilities for washing food are to be separate from the hand-washing facility. (General Hygiene Regulation Annex II, Chapter I)

Recommended good hygienic practice:

- Taps of a non-hand operable type are desirable.
- Where hot and cold water are available mixing tap should be provided.
- Where paper towels are used, it is recommended to provide a sufficient number of dispensers and receptacles located adjacent to each washing facility.
- Hand washing facilities should be placed adjacent to toilets and in such a position that the employee must pass them when returning to the processing area.
- Notices should be posted directing personnel to wash their hands after using the toilet.

A.4. Changing facilities

Adequate, suitable and conveniently located changing facilities should be provided in all establishments. (General Hygiene Regulation Annex II, Chapter I).

Recommended good hygienic practice:

- These areas should be well lit, ventilated and appropriately heated.
- Where necessary adequate changing facilities for personnel separated by sex should be provided. Where national legislations allow it, the separation by sex in locations with fewer than 10 catering staff can take place “in time”.

A.5. Ventilation

Suitable and sufficient means of natural or mechanical ventilation should be provided to prevent excessive build-up of heat, steam condensation and dust and to remove contaminated air. The direction of the air flow should never be from a dirty area to a clean area. Ventilation systems are to be so constructed as to enable filters and other parts requiring cleaning or replacement to be readily accessible. Sanitary conveniences are to have adequate natural or mechanical ventilation. (General Hygiene Regulation Annex II, Chapter I)

Recommended good hygienic practice:

- Ventilation openings should be provided with an easily removable screen or other protecting enclosure of non-corrodible material.
- A device for effectively removing cooking steam and vapours should be installed above cooking units.

A.6. Light

Adequate natural and/or artificial light should be provided throughout the establishment. (General Hygiene Regulation Annex II, Chapter I)

Recommended good hygienic practice:

- Light bulbs and fixtures suspended over food materials in any stage of production should be of a safety type and protected to prevent contamination of food in case of breakage.

A.7. Drainage facilities

Drainage facilities are to be adequate for the intended purpose. They are to be designed and constructed to avoid the risk of contamination. Where drainage channels are fully or partially open, they are to be so designed as to ensure that waste does not flow from a contaminated area towards or into a clean area, in particular an area where foods likely to present a high risk to the final consumer are handled. All drain pipes must be correctly connected and lead to a drain. (General Hygiene Regulation Annex II, Chapter I).

Recommended good hygienic practice:

- Establishments should have efficient and adequate effluent (waste water) and waste disposal system maintained in good order and repaired at all times.
- All effluent pipes should be laid so to prevent any contamination of drinking water pipe.
- All waste pipes should be properly trapped and lead to a drain.

B. SPECIFIC REQUIREMENTS IN ROOMS WHERE FOODSTUFFS ARE PREPARED, TREATED OR PROCESSED (EXCLUDING DINING AREAS)

B.1. Straightforward process

In room where food is prepared, treated or processed (excluding dining areas) the design and layout must allow good food hygiene practices, including protection against contamination between and during operations. (General Hygiene Regulation, Annex II, Chapter II).

It is good hygienic practice to organise activities, spatially or temporally, in a "**straightforward**" manner. Consequently, if the layout of the food premises does not allow the various activities to take place in physically separated areas, the food activities should be separated in time. The purpose is to guarantee good food hygiene practice during processing by good routing from the arrival of the raw material through to consumption of the final product to avoid any cross-contamination. Food can be contaminated with harmful organisms after cooking sometimes from a food handler, and directly or indirectly from raw food.

B.2. Specific requirements

- √ **Floor surfaces** are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of impervious, non-absorbent, washable and non-toxic materials unless food business operators can demonstrate that other materials used are appropriate. Where appropriate, floors are to allow adequate surface drainage. (General Hygiene Regulation, Annex II, Chapter II).

Recommended good hygienic practice:

- Waste water should not flow through.
- If necessary, floors should slope at such an angle to allow liquids to flow away into gullies. Gullies must be equipped with a sink trap and must be easy to clean.
- It may be advisable to use non-slip materials.

- √ **Wall surfaces** are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of impervious, non-absorbent, washable and non-toxic materials and require a smooth surface up to a height appropriate for the operations unless food business operators can demonstrate that other materials used are appropriate. (General Hygiene Regulation, Annex II, Chapter II)

Recommended good hygienic practice:

- Angles between walls and floors and between walls and ceilings should be sealed and coved to facilitate cleaning.
- Drain pipes and other pipes are preferably concealed behind the walls. For

pipes that nonetheless would have to be fitted on the wall, it is recommended to construct them so that cleaning is allowed and to avoid any openings in which vermin can nest.

- ✓ **Ceilings** (or, where there are no ceilings, the interior surface of the roof) and overhead fixtures are to be constructed and finished so as to prevent the accumulation of dirt and to reduce condensation, the growth of undesirable mould and the shedding of particles. (General Hygiene Regulation, Annex II, Chapter II)
- ✓ **Windows and other openings** are to be constructed to prevent the accumulation of dirt. Those which can be opened to the outside environment are, where necessary, to be fitted with insect-proof screens which can be easily removed for cleaning. Where open windows would result in contamination, windows are to remain closed and fixed during production. (General Hygiene Regulation, Annex II, Chapter II)
- ✓ **Doors** are to be easy to clean and, where necessary, to disinfect. This will require the use of smooth and non-absorbent surfaces unless food business operators can demonstrate that other materials used are appropriate. (General Hygiene Regulation, Annex II, Chapter II).

Recommended good hygienic practice:

- Doors should be self-closing.
 - Open doors leading to direct contact of the premises with the outside environment remain as far as possible closed.
 - If doors are open for any length of time, it is recommended to fit a screen.
- ✓ **Surfaces** (including surfaces of equipment) in areas where foods are handled and in particular those in contact with food are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of smooth, washable corrosion-resistant and non-toxic materials, unless food business operators can demonstrate that other materials used are appropriate. (General Hygiene Regulation, Annex II, Chapter II)

B.3. Utensils cleaning facilities in processing areas

Adequate facilities are to be provided, where necessary, for the cleaning, disinfecting and storage of working utensils and equipment. These facilities are to be constructed of corrosion-resistant materials, be easy to clean and have an adequate supply of hot and cold water.

(General Hygiene Regulation, Annex II, Chapter II)

B.4. Food washing facilities in processing areas

Adequate provision is to be made, where necessary, for washing food. Every sink or other such facility provided for the washing of food is to have an adequate supply of hot and/or cold potable water and be kept clean and, where necessary, disinfected. (General Hygiene

Regulation, Annex II, Chapter II).

It is recommended that living quarters and toilets be completely separated from and should not open directly into food handling areas.

C. WORKING PLANS, KITCHEN EQUIPMENT AND UTENSILS

All articles, fittings and equipment with which food comes into contact are to:

- ✓ Be effectively cleaned and, where necessary, disinfected. Cleaning and disinfection are to take place at a frequency sufficient to avoid any risk of contamination
- ✓ Be so constructed, be of such materials and be kept in such good order, repair and condition as to minimise any risk of contamination
- ✓ With the exception of non-returnable containers and packaging, be so constructed, be of such materials and be kept in such good order, repair and condition as to enable them to be kept clean and, where necessary, to be disinfected
- ✓ Be installed in such a manner as to allow adequate cleaning of the equipment and the surrounding area.

Where necessary, equipment is to be fitted with any appropriate control device. Where chemical additives have to be used to prevent corrosion of equipment and containers, they are to be used in accordance with good practice. (General Hygiene Regulation, Annex II, Chapter V)

Recommended good hygienic practice:

- The **capacity** of the equipment available must be sufficient to produce the foodstuffs under satisfactory hygiene conditions.
- **Containers for inedible material and waste** should be leak proof, constructed of metal or other impervious material. They should be easy to clean or else disposable and able to be closed securely. These equipment and utensils used for inedible materials or waste should be so identified and should not be used for edible products.
- **Portable equipment** such as spoons, beaters, pots, pans etc. should be protected from any contamination.
- The equipment and utensils must support frequent **cleaning and disinfecting** without damage and should not transfer any toxic substances, odours or tastes to the products. Surfaces should be smooth and should not show any signs of holes, cracks or splits. The use of wood and other materials which cannot be adequately cleaned and disinfected should be avoided except when their use would clearly not be source of contamination.
- Equipment and kitchen utensils are a potential **source of cross contamination**. It is very important that, in addition to the usual cleaning, equipment and kitchen utensils that come into contact with 'raw products' are cleaned before they are used for the processing of prepared products. If possible, separate utensils should

be used for raw and cooked products. If not, thorough cleaning and disinfection is necessary.

D. WATER SUPPLY AND STEAM

There is to be an adequate supply of potable water, which is to be used whenever necessary to ensure that foodstuffs are not contaminated.

- √ **Clean water may be used with whole fishery products.** Clean seawater may be used with live bivalve molluscs, echinoderms, tunicates and marine gastropods; clean water may also be used for external washing. When such water is used, adequate facilities are to be available for its supply.
- √ **Recycled water** used in processing or as an ingredient is not to present a risk of contamination. It is to be of the same standard as potable water, unless the competent authority is satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.
- √ Where **non-potable water** is used, for example for fire control, steam production, refrigeration and other similar purposes, it is to circulate in a separate duly identified system. Non-potable water is not to connect with, or allow reflux into, potable water systems.

It is recommended to identify the separate pipe system by a special colour and to make sure that no cross-connection with or back- siphonage into the system carrying potable water exists.

Where heat treatment is applied to foodstuffs in hermetically sealed containers, it is to be ensured that **water used to cool the containers** after heat treatment is not a source of contamination for the foodstuff.

- √ **Ice** which comes into contact with food or which may contaminate food should be made from potable water; or, when used to chill whole fishery products, clean water. It is to be made, handled and stored under conditions that protect it from contamination.
- √ **Steam** used in direct contact with food should not contain any substance that can give rise to a hazard to health or that can contaminate the product.

(General Hygiene Regulation, Annex II, Chapter VII)

Recommended good hygienic practice: to use potable water for steam production. The upkeep and disinfecting of the premises should be formalised in a planned, written programme, indicating the products to be used and the dilutions.

PART III
GENERAL HYGIENE RECOMMENDATIONS
AND
REQUIREMENTS
RELATING TO
FOOD PRODUCTION

The following chapters concern hygiene requirements prevailing at each phase in the preparation of food.

Important preliminary remarks

The Critical Control Points (CCPs) identified in this Guide should be considered as general guidelines for the food service sector. However, it is important to remind that companies are developing their own internal method for the risk analysis of their production process. Such methods might be based on a different set of CCPs.

The temperature requirements stated in the Guide prevail, unless otherwise stated on the label of the foodstuff (storage instructions and/or directions) or otherwise stated by European or national law. In the following pages, some texts are punctuated with mark*. This means that temperatures or product composition mentioned should be compared with national specifications as far as different requirements subsist in the respective national laws.

A. PURCHASING

Products and services must be purchased from pre-selected suppliers. The selection of suppliers is of utmost importance as the quality and hygiene level of the delivered product will influence the processing of the final product intended for the consumer. Therefore, in **selecting their suppliers**, food service operators should not only take price into consideration. They should also consider quality and the condition of delivery (frequencies, time schedule, hygiene standards applied by the suppliers...).

It is recommended when drawing up the terms and conditions of purchase to clearly indicate:

- the expected quality of the products especially as far as highly perishable and refrigerated products are concerned;
- the conditions of delivery;
- the product temperature on delivery;
- the way in which the product must be packed on delivery;
- the mandatory information to be transmitted (composition, date of minimum durability...)
- the hygiene standards to which suppliers must comply.

A procedure must be drawn up describing how the performance of the suppliers will be assessed and which control points will be used to that end.

B. RECEIPT OF MERCHANDISES

No raw material or ingredient used in processing products should be accepted if known or if it might reasonably be expected to contain parasites, micro organisms or toxic, decomposed or extraneous substances which will not be reduced to acceptable levels by normal plant procedures of sorting and/or preparation or processing.

(General Hygiene Regulation, Annex II, Chapter IX, par.1)

When taking delivery of foodstuffs, steps must be taken to ensure that every accepted product is in accordance with the required quality and safety as well as to store received product at the adequate, fixed and monitored temperatures.

Recommended good hygienic practice:

- Deliveries should be made according to **defined timetables** during the opening hours of the premises, in order to ensure that staff will be there to check the delivery on arrival in the establishment. This will prevent the product to be left unattended and will avoid breaking the cold chain.
- Staff should verify whether the delivery comes from the approved supplier and if the products delivered correspond to the order. It could be useful to draft a **delivery checklist** to ensure that no checks are forgotten. The delivery note will be signed only if the delivery and product are conformed.
- **Removing outer packaging** eases the identification of defective products and ensures that no contamination is brought into storage areas. Information appearing on the labels found on outer packaging must be kept or re-transcribed on another label in order to allow the control of raw materials.
- **Initial inspection of the delivery conditions of the products:** every product must be checked before being accepted. The staff designated to check the delivery must verify:
 1. **The label:** information appearing on the label must be verify, especially the “use by” or “best before” date.
 2. **The temperature:** one of the major causes of food poisoning is the interruption of the temperature chain required by a product. This is the reason why the control of the temperature of both products and delivery vehicle is of utmost importance. The delivery of products under non appropriate temperature must be rejected. If external temperature is not conformed, core temperature must be checked with temperature gauge. (See annex I for appropriate process to be followed to correctly take core temperature.)
 3. Packaging protects the product from contamination. **The delivery of any product of which the packaging is damaged or unsuitable must be rejected.**

- 4. Monitoring of quality:** It is important that the quality of the delivered product comply with the one expected. Monitoring quality calls for common sense and experience of the Staff. (Appearance, smelling and if necessary tasting).

The scope of checks will of course vary in function of the nature of the product. For instance, un-labelled products such as unprocessed potatoes, vegetables and fruit need only to be controlled for quality. For other products such as dry groceries, the check must focus on packaging, labelling and “BB date” on receipt.

- Every defective product should be **discarded** especially if they contain substances that do not belong in them (parasites, micro organisms or toxic, decomposed or extraneous substances). Discarding defective product will reduce the danger of cross contamination of sound product and reduce the risk of food poisoning.

Defective products that cannot be handed back immediately to the supplier should be thrown away or correctly identified with a clear sign, such as the text ‘DO NOT USE’ and keep separate from the accepted products.

- Staff must **sort** raw products from deep-frozen products, dry products to be stored at room temperature and cleaning products.
- After control, products are **removed to the appropriate storerooms** as quickly as possible, in order to be protected against any form of contamination, by maintaining the required temperature. A date of minimum durability must be present on each pre-packed product entering store rooms.

The results of the control must be recorded for each supplier at least once a week. The form from Appendix IV, ‘HACCP Weekly Form’ can be used to this end. In cases of non-conformity action will be taken as described in the Critical Control Points summary.

Receipt of Products



Controlling Products →→→→

CCP 1: Core Temperature of products

CCP 2: Packaging, Labelling, Date of Minimum durability, Quality



Storage –Preparation

CRITICAL CONTROL POINTS SUMMARY				
HOW	HOW OFTEN	LEGAL REQUIREMENTS or AGREED LIMIT	Critical Limit	CORRECTIVE ACTION
Critical control point 1 - (Core) temperature of products				
Use core temperature gauge to measure (core) temperature of product (See Annex I)	At random on every receipt. Record the temperature of a product from each supplier once a week (see Annex IV – HACCP Weekly Form)	Temperature of dairy, meat products, cut fruit and vegetables, fish, crustaceans, shellfish and molluscs, game and fowl : 7°C* Temperature of chicken: 4°C * Temperature of pastry : 7°C* Temperature of deepfreeze products: min. -18°C*	Max. 9°C* Max. 4°C* Max. 10°C* Max. -15°C* Product with a temperature above -10°C should be used as refrigerated stock or throw away	1. Submit complaint on supply of refrigerated products with a temperature between 7 and 9°C, delivery may be accepted provided that products are immediately placed in the refrigerator to cool again. ⁶ 2. Immediately forward products with a temperature between -10°C and -15°C* to the appropriate storeroom. If temperature between -10°C* and 7°C*, use products as refrigerated stock, otherwise throw products away. This is non applicable for Ice cream products 3. Contact supplier for return of products and/or throw products away. 4. If products cannot be returned to the supplier immediately, throw products away or label with a clear sign, such as 'DO NOT USE' 5. Place new order 6. Record action taken

⁶ If the temperature of the product lies between 7 and 9°C, you may still accept and store the products, but remember that during the re-cooling you are in breach of the law because the products do not conform to the statutory requirement of maximum 7°C.

Critical control point 2 – Packaging, labelling, BB date, freshness				
Look.	At random on every receipt. Record results for each supplier at least once a week (see Annex IV – HACCP Weekly form)	Packaging is clean, undamaged and completely covers the product. BB date has not elapsed. Visual quality (visible with naked eye) of products is good		1. Contact supplier for return of products 2. If products cannot be returned to the supplier immediately throw products away or label with a clear sign, such as 'DO NOT USE' 3. Place new order

C. STORAGE OF PRODUCTS

Raw materials and all ingredients stored in a food business are to be kept in appropriate conditions designed to prevent harmful deterioration and protect them from contamination.

(General Hygiene Regulation, Annex II, Chapter IX, par.2)

Recommended good hygienic practice:

- Stock of products may never exceed **the storage capacity of the premises.**
- Products especially chilled, frozen and deep-frozen food must **be placed into the appropriate store as quickly as possible.** Staff must **check the labels** of the product for recommended storage instructions.
- Store, shelves, fridge or deep freezer should **be kept clean and free from debris**
- **Out of date food must never be kept.** To this end, good stock rotation according to the **“First in –First out”** (FIFO) principle must be carried out. This means that in each product group, the products with the most distant “Use by” /“best before date” go to the back, whilst the products with the earliest “Use by” /“best before date” come to the front so that they are used first. It is of utmost important to check on a regular basis the “Use by”, and “Best before” dates in order to be in a position to throw away any product before it could be out of date.
- The products must be covered to be **protected from any form of contamination.**
- In order to avoid cross contamination, products having identical microbiological level should be **sorted and stored separated from the others.** Consequently, raw products must be separated from prepared/cooked products, clean products from dirty ones.

C.1. Storing of products at room temperature

Premises used to store non-perishable foodstuffs such as canned food, grocery products, rice, bread, flour and so on, should be cool and dry. In order to ensure proper storage of food, steps must be taken to avoid too important variation in temperature in the store.

Recommended good hygienic practice:

- No product should be stored on the floor. Product should be kept at least 10 centimetres above the floor. This allows the floor to be easily cleaned.
- Doors and windows of dry stores must be proofed against pest access and kept closed.
- Cleaning materials must be kept strictly apart from food.

C.2. Storing of products in chilled and/or frozen stores

Chilled, frozen and deep-frozen products must be stored as quickly as possible in appropriate stores kept at the appropriate temperature. Bacteria will grow if the cold chain is broken which may lead to food poisoning.

Recommended good hygienic practice:

- Ensure a good circulation of cold air
- Ensure a good airflow around products by not piling them on top of each other
- Keep the doors of fridge closed
- Regularly control fridge temperature
- Establish a fridge storage plan to avoid all risk of cross-contamination
- Products should always be packed or covered and dated

C.2.1. Chilled stores

Products: perishable products such as dairy products, cold meats and delicatessen.

Recommended temperature: 7°C* or cooler, preferably, between 1 and 4°C*.

Particulars:

- Raw and cooked food of animal origin, ready-to-use, "fourth category" vegetables should be stored at a temperature between +1 and +4C*.
- Other food to be refrigerated should be kept at a temperature lower than +6C* and if possible, in the case of untreated vegetables, in an area used for them only.
- Where there is only one area for chill-storing, the temperature should range from between +1 and +4C*, and in order to prevent cross contamination clean products must be stored above dirty products and prepared products above raw products.

- Refrigerated products with a temperature between 7 and 9°C* should be immediately placed in a refrigerator to cool down again.

Check and corrective action:

- Check the fridge temperature at least twice a day and record once a week through the display/indicator. The form from Appendix IV, 'HACCP Weekly Form' can be used for this purpose.
- In case of non-conformity (temperature is over the critical limit), the core temperature of the stored products should be checked. Corrective action is taken as described in the Critical Control Points summary and recorded

C.2.2. Frozen and deep-frozen stores

Products: Frozen and/or deep-frozen food, ice and ice-cream

Required temperature: -18°C or lower*

Particulars:

- Immediately restore deepfreeze products with a temperature to -10°C* to a temperature colder than -18°C*.
- Deepfreeze products with a temperature warmer than -10°C* can only be used as working stock, provided that their temperature is below 7°C*. The product can be stored for a short time in the refrigerator.

These particulars do not apply to ice and ice-cream products **except** if otherwise stated by national laws.

- A registration of temperature is compulsory for deep-frozen stores.

Check and corrective action:

- Control of the fridge temperature at least once a week through the display/indicator. The form from Appendix IV, 'HACCP Weekly Form' can be used for this purpose.
- In case of non-conformity (temperature is over the critical limit), the core temperature of the stored products should be checked. Corrective action is taken as described in the Critical Control Points summary and recorded.

Storage
Of

Products →→→

CCP 3 Temperature of Product in Storage premises



Preparation – Assembling – Regenerating –Transporting – Serving

CRITICAL CONTROL POINTS SUMMARY				
How	How often	Requirement	Critical Limit	Corrective Action
Critical control point 3 - Temperature of product in storage place				
Measure and record (core) temperature of the refrigerated storage place/equipment	• Refrigerated storage place: check and record at least once a week, (see Annex IV 'HACCP Weekly	• Refrigerated space: 7°C*, preferably 1-4 °C*.	max 9°C*	1. Discover cause and rectify. 2. Place refrigerated products with a temperature between 7* and 9°C* in another

	Form').			refrigerator to cool down again.
	<p>• Deepfreeze space: check and record at least once a month (see Annex V 'HACCP Monthly Form')</p>	<p>• Deepfreeze space: -18°C*</p>	<p>max-15°C* >-10°C* then product should be used as refrigerated stock</p>	<p>3. Forward immediately deepfreeze products with a temperature between - 10°C *and -15°C* to appropriate storeroom. If warmer than -10°C, use products as refrigerated stock at 7°C*.</p> <p>4. If the temperature requirement can no longer be met, throw the products away.</p> <p>5. Record action taken</p>

D. PREPARATION OF FOOD

At all stages of production, processing and distribution, food is to be protected against any contamination likely to render the food unfit for human consumption, injurious to health or contaminated in such a way that it would be unreasonable to expect it to be consumed in that state. (General Hygiene Regulation, Annex II, Chapter IX, par.3)

Effective measures must be taken to avoid cross-contamination of cooked and precooked foods through direct or indirect contact with staff or ingredients or any other materials such as packaging, at an earlier stage of the process.

Good hygiene practice includes at least that:

- The activities must be organised, spatially or temporally, in a "**straightforward**" manner.
- **Transport packing** should be removed from merchandise before it enters the processing area. When possible, transfer into clean and washable receptacles is recommended.
- **Personnel** handling outside packaging, potentially contaminated objects, raw foodstuffs or semi-processed products should take suitable precautions to prevent cross-contamination, such as:
 - washing their hands carefully after each such operation;
 - wearing clothing suitable for the work and operations to be carried out.

D.1. Defrosting of products

The thawing of foodstuffs is to be undertaken in such a way as to minimise the risk of growth of pathogenic micro-organisms or the formation of toxins in the foods. During thawing, foods are to be subject to temperatures that would not result in a risk to health. Where run-off liquid from the thawing process may present a risk to health it is to be adequately drained. Following thawing, food is to be handled in such a manner as to minimise the risk of growth of pathogenic micro-organisms or the formation of toxins. (General Hygiene Regulation, Annex II, Chapter IX, par.7)

It is recommended to cook frozen products immediately.

If products must be defrosted before further processing or cooking, **it is recommended that:**

1. Defrosting of products occurs in a refrigerated storage place at a maximum temperature of +4C *.
2. Defrosting with warm water or at room temperature is strictly forbidden. Nevertheless, if the products to be defrosted have a short defrosting time

(maximum two hours), defrosting can take place in the processing place, provided that the defrosted product is prepared immediately.

3. Products are processed within 48 hours of defrosting, unless the label on packaging states otherwise.
4. The cooling chain must never be interrupted.
5. Refreezing of defrosted products is expressly forbidden.

Defrosted product must never remain in contact with defrost water that represents a source of contamination. The defrost water must be drained off immediately and the container used for the defrosting should be rinsed immediately with hot running water.

D.2. Raw/fresh products

1. Raw products of animal or vegetable origin shall preferably **not be processed** (peeling, trimming, washing, cutting, slicing...) **in the same place as prepared products**. Where the layout of the premises does not permit it, these operations must be separated in time by a cleaning and disinfecting stage. Waste must be put into bags or bins, sealed and removed from the working area in order to avoid the contamination of the kitchen environment.
2. Raw fruit and vegetables must be carefully **washed in plenty of clean, potable water** beforehand. If disinfection of salad or vegetables to be eaten raw is legally requested according to the national legislation, **it is recommended** to use a mild chlorine solution.
3. **Equipment and work surfaces** that have been in contact with raw products or other potentially contaminated food should be cleaned and disinfected to avoid any re-contamination of the food.
4. Staff must have **clean hand** or wear clean disposal gloves.
5. **Receptacles** used, especially those for dividing into portions, should be properly cleaned, disinfected and rinsed.
6. Following processing, food must **be protected** from any kind of contamination. Therefore products must be put into clean containers, cover with cling film if necessary, and **be stored in refrigerated spaces with a temperature not exceeding 7°C, preferably between 1 and 4°C***, unless immediately needed for cooking or serving cold without further process.

D.3. Products to be eaten cold

Products intended to be eaten cold, without any further treatment that could reduce contamination sources are “high risk” products. Consequently, the preparation of cold products requires strict hygienic conditions, the cooling chain remaining as far as possible uninterrupted or interrupted for as short a time as possible.

1. Preparation must be carried out in **chilled environment**. If the layout of the food premises does not allow achieving preparation in a chilled environment, steps must be taken to ensure that the perishable products are exposed to the room temperature for as short a time as possible during preparation and handling. This implies that the preparation is achieved in maximum 30 minutes.
2. The **ingredients** to be used should be brought out of the cold rooms only as they are needed so that the temperature is better controlled.
3. Before preparing cold dishes, **staff** handling the products should wash their hands carefully. The use of disposable gloves should be recommended but does not exclude normal precautions.
4. The preparation of products takes place on **clean worktops**, preferably free of other products, kitchen utensils or objects capable of contaminating the products. Receptacles, equipment and crockery used in preparation should be cleaned and disinfected effectively.
5. When **egg products** are used for decoration or as an ingredient of a cold product, pasteurised egg must be privileged.
If fresh eggs are used, one should:
 - Store the eggs in refrigerator
 - Use fresh egg (check laying date and packaging date). Out dated eggs should be immediately thrown away
 - Eggshell must be thrown away
 - Staff who has been in contact with eggshell must clean and disinfect hands
6. Dishes must **not be prepared in large batches** that may be held for too long. It is better to replenish batches frequently
7. When the preparation/assembly has been completed, products must be **covered and stored under chilled conditions at a maximum temperature of +4°C***, until distribution to the consumer
8. If the preparation are **not consumed on the same day of their production**, the information of the date of production and the date of minimum durability taking due consideration of the ingredient with the shortest shelf live, should be controlled.
9. The maximum storage time at a maximum temperature of 4°C* in the storage refrigerator is three days, not counting the day of production. The storage time at a

maximum temperature of 7°C* in the storage refrigerator is a maximum of two days, not counting the day of production.

D.4. Hot products

1. The heating/cooking of products must take place **as closely as possible to serving** in order to maintain organoleptic and nutritive qualities.
2. The **combination time/ temperature** of the heating/cooking should be sufficient to ensure the safety of the products.
Heating must take place quickly (never in the bain-marie). The core temperature of the product should not be less than 75°C* in the centre of the food within one hour of removing the food from refrigeration. Heat kills micro-organisms if temperature is high enough and kept for long enough. As micro-organisms do grow most rapidly in between 10 and 45°C, it is recommended to go from 10°C to 75°C* in minimum of time needed (1 hour).

Particulars

- **Lower temperatures for heating** may only be used in so far as the time/temperature combination is determined by a particular production method that has been worked out. Staff must adopt very strict hygiene rules for preparations such as meat cooked very rare, rare and medium meat, roast beef, béarnaise or hollandaise sauce, sabayon which for culinary reasons cannot reach so high core temperature. For meat product with raw core, staff must insure that the outside is fully browned.
- **Do not use any raw products such as chicken, pork or eggs in dishes that are not heated to 75°C* or more.** An exception is made for fried eggs and soft-boiled eggs. The use of raw eggs in the preparation of products that will not be heated any more or not sufficiently heated is prohibited.

The core temperature of a product at the end of preparation is checked at least once a week using a core temperature gauge. The measured temperature is recorded. The form from Appendix IV, 'HACCP Weekly Form', can be used for this purpose. In case of non-conformity, action is taken as described in the Critical Control Point's summary.

3. The temperature of **frying fat** and oil should be of at least 175°C* and may not exceed 180°C*. If high temperature kills micro-organisms, too high temperature may results in the forming of harmful chemical substances. Frying fat and oil must be changed regularly.
4. When the cooking/heating of the products is completed, products could either:
 - be kept hot, in a bain-marie or on a hot plate, at a minimum temperature of + 65°C*, until they are distributed to the consumer;
 - be cooled quickly and kept chilled until needed.

Preparation





Storage — Re-cooling and Refreezing — Transporting — Serving

CRITICAL CONTROL POINTS SUMMARY				
How	How Often	Requirements	Critical Limit	Corrective Action
Critical control point 4 - Core temperature of product at the end of the preparation				
Use a core temperature gauge to measure the core temperature of the product at the end of the preparation	Check and record at least once a week (see Annex IV – ‘HACCP Weekly Form’).	Hot products: core temperature min. 75°C , with the exception of products that are intended for raw/semi-raw consumption, preheated products, soft-boiled eggs and fried eggs, and raw meat products: core temperature min. 55°C*	min 75°C	1. Heat the product for longer and keep measuring the temperature until the core temperature is > 75°C. 2. Throw the product away if longer heating proves not to be possible. 3. Record action taken
		Meat product with raw core	min. 50°C Outside must be fully browned	
		Frying fat and oil: min 175°C*.	Max 180°C*	

Critical control point 5 - Temperature after assembling

Use core temperature gauge to measure core temperature of cold and hot product after assembling.	<p>• Refrigerated product: check and record at least once a week (see Annex IV – ‘HACCP Weekly Form’).</p> <p>• Hot product: check and record at least once a week (see Annex IV ‘HACCP Weekly Form’).</p>	<p>+4°C*. Product stored at max +4°C* may be kept for not more than 3 days. Their t° on day 3 (day of serving) may be of max 7°C*</p> <p>Hot product: above +65°C</p>	Max 7°C*	<p>1. Discover cause in process and rectify.</p> <p>2. Meal components whose temperature has risen above 7°C* may no longer be stored, but must be regenerated to 60°C* in the core within one hour.</p> <p>3. Meal components whose temperature rises above 7°C* on the third day must be thrown away.</p> <p>4. Have cold dishes consumed within two hours of removal from the refrigerator.</p> <p>5. Destroy hot products with a t° below +65°C*</p> <p>6. Record action taken.</p> <p>7. Next time work in batches</p>
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D.5. Cooling of prepared products

Where foodstuffs are to be held or served at chilled temperatures, meaning that the consumption does not follow on immediately the moment of preparation, the products are to be cooled as quickly as possible following the heat-processing stage or final preparation stage if no heat process is applied, to a temperature which does not result in a risk to health.

(General Hygiene Regulation, Annex II, Chapter IX, par.6)

Recommended good hygienic practice:

- The parameters for complete cooling (time, temperature) and life (length of storage) of the product should be defined.
- Preparations should be divided in small portion before the cooling process.
- As soon as the cooling is complete, the products should be stored at a temperature between +1* and +4C* until further processing or final consumption.

D.5.1. Cooling of cold prepared products

For products prepared at room temperature, the cooling can take place in refrigerator. There must be a temperature difference between air, (contact) plate or other cooling medium and the product to effect cooling to below 7°C*. After serving, the self-prepared cold products are immediately thrown away.

D.5.2 Cooling of hot prepared products

Cooling must preferably be done with professional fast-cooling equipment (chiller). If cold running water is used, the cooling must be clearly separated from other activities.

Cooling from the preparation temperature to approximately 5°C* above the ambient temperature is allowed in a clean preparation space. Product temperature should go from 65°C to 10°C* in less than two hours. After cooling, preparation must be covered and stored in a chilled store. If the storage time is more than 72 hours, the products must have undergone an appropriate operation to this end and the caterer must prepare its own risk analysis. Then cool in a suitable cold store or a cupboard with forced air circulation.

At least once a week the cooling of the core temperature of the product after two or five hours (after two hours to max. 10°C* or after five hours to max. 7°C*) is checked using a core temperature gauge. The result is recorded. The form from Appendix IV, 'HACCP Weekly Form' can be used for this purpose. In case of non-conformity, action is taken as described in the Critical Control Points summary.



CRITICAL CONTROL POINTS SUMMARY			
How	How Often	Requirements	Corrective Action
Critical control point 6 – cooling time and cooling temperature			
Use core temperature gauge to measure cooling core temperature of product.	Check and record at least once a week (see Annex IV 'HACCP Weekly Form').	<p>Once a week check that the core temperature is 10°C within two hours</p> <p>OR</p> <p>Once a week check that the core temperature is less than or equal to 7°C* within five hours.</p> <p>If the product is stored for three days, the temperature must have cooled to max. 4°C* within 24 hours.</p>	<p>1. Throw products away.</p> <p>2. Next time: distribute products in smaller portions and cool using cold running water, re-cooling vessel or blast-chiller.</p> <p>3. Record action taken</p>

D.6. Self-freezing of products

Provided legislation permits it, 'self-freezing' of certain products may be carried out if the following procedures are respected:

1. The parameters for complete cooling (time, temperature) and the life (length of storage) of the product should be defined.
2. The procedures used for 'self-freezing' must be set down in writing, especially with regard to the quality of the product, the operations to be performed and the equipment to be used.
3. A list of products of which freezing is forbidden should be established.
4. The product must carry a label mentioning the name of the product, the date of freezing, the shelf live and the mention "No refrozen after defrosting".
5. The products should be kept at a temperature equal to or below -18C*. The maximum storage time of self-frozen products is two months. If necessary, a work instruction which must be drawn up by the headquarters or the owner (if under own management), can be used in the same context.
6. Storage temperatures should be regularly monitored and there should be a rapid response to any anomaly or dysfunction.
7. Once defrosted and/or displayed, products may never be refrozen.

D.7. Regenerating

1. Products must be reheated as quickly as possible. Preferably meal components must go from 10 to 65°C* core temperature in less than one hour. If heating lasts more than one hour, a final temperature of 75°C* must apply for all products
2. Regenerating must happen as close to service as possible.
3. Reheated products may not be re-cooled and regenerated again. These products must be thrown away.

In cases of non-conformity action is taken as described in the Critical Control Points summary.

At least once a week a core temperature gauge is used to check the core temperature of a few products at the end of regeneration. The measured temperature is recorded. The form from Appendix IV, 'HACCP Weekly Form', can be used for this purpose.

Heating of Products -----

CCP7: Core temperature at the end of regenerating



Assembling of Meal

CRITICAL CONTROL POINTS SUMMARY			
How	How Often	Requirements	Corrective Action
Critical control point 7:– Core temperature of product at end of regeneration			
Use core temperature gauge to measure cooling core temperature of product.	Check and record at least once a week (see Annex IV ‘HACCP Weekly Form’).	In one hour’s time, the temperature of the meal components must be at least 65°C* in the core. If more than one hour, a final temperature of 75°C* applies for all products.	1. Continue heating product until core temperature is higher than or equal to 75°C*. Try to do this as quickly as possible. 2. Discover cause (for example by making additional measurements) and rectify. 3. Record action taken.

E. PRODUCTION SAMPLING

If a production sample is required, **it is recommended as good hygienic practice** to follow the following procedure:

- Samples may be set aside every day from batches of food and retained for a few days in the event of a complaint. These samples are reference samples available to check the hygienic condition of the food meaning that they will be tested if and only if a complaint is made. This is not the same as a routing micro-biological test procedure (see next chapter).
- These samples should be representative of what is offered to the customer.
- Following procedure is designed for staff responsible for taking food samples.

What

Samples may be chosen carefully to give a cross section of the food offer that may present a microbiological risk to consumers, such as:

1. Cold food: Meat
Poultry
Eggs
Fish and shellfish
Canapé and other starters
Open food
2. Hot food: Poultry, fish and shellfish
Meat in sauce
Minced meat dishes
Meatballs, sausages and hamburgers
Liver and other offal
Dessert based on cream.

When

Samples of food that are ready to be eaten that have gone through the full preparation process with the rest of the batch.

How

1. Wash hands
2. Use clean spoon. Take about 60 grams of food
3. Put into clean plastic bag (bag must be new and used once only)
4. Disposal containers may be used in place of bags, especially for liquids, soaps and sauces
5. Identify the sample: name of the food, date, number on a label and in a log book.
6. Freeze the sample and store in deep freezer for at least 72 hours⁷
7. Every day, throw out of date samples.

⁷ Duration might change according to national legislations

F. MICROBIOLOGICAL CONTROL OF PRODUCTION

While taking into account the requirements foreseen by the EU Regulation on food safety and process hygiene microbiological criteria⁸, catering businesses can use microbiological control to evaluate their own processes. In order to verify whether a process is under control, microbiological guidance values included in Annex III can be used.

Bacteriological testing could be carried out regularly or periodically and concern untreated raw materials as well as finished products ready for consumption. In any circumstances, microbiological testing should be carried out **at least once a year** by a specialised company.

Guidance values are subdivided into two categories:

- category 1: controlled process
- category 2: uncontrolled process, take action

If the microbiological control shows that the measured values are lower than or equal to the orientation values given in category 1, this can be interpreted as confirmation that the process is controlled.

If the values are in category 2, then the cause must be determined and action must be taken. Once action has been taken, the product group concerned must be tested again. Measurements and any action taken must be recorded.

If products (whether prepared or not) are supplied by third parties, the guidance values given in Appendix III remain fully applicable. It is preferable to include guidance values in the purchasing specifications or to refer generically to the Hygiene Guide in the terms and conditions of purchase.

⁸ SEE ANNEX VIII

PART IV
GENERAL HYGIENE RECOMMENDATIONS
AND
REQUIREMENTS
RELATING TO
FOOD DISTRIBUTION

A. Transport of food

1. Food transport must take place **in vehicles and/or containers used for this purpose** and designed in such a way that the legal requirements concerning temperature are complied with.
2. Transport means must insure to maintain **cold food** at 7°C* or less and **hot food** at 65°C or more*.
3. These vehicles and/or containers should be **easy to clean** and maintained in good condition - free from odours, shock-resistant and watertight.
4. If prepared and raw foodstuffs are transported simultaneously, they should be **physically separated** to avoid any risk of contamination. It is forbidden to transport materials which could cause contamination in the same vehicle or container as food commodities.
5. The containers must be used **exclusively** for the transport of foodstuffs.
6. After each use, all containers should be properly **cleaned**.

Food commodities should be properly protected against all risk of contamination.
(General Hygiene Regulation, Annex II, Chapter IV)

CRITICAL CONTROL POINTS SUMMARY				
How	How often	Requirement	Critical limit	Corrective action
Critical control point 10 – Core temperature of product during transportation (cold and hot)				
Use core temperature gauge to measure core temperature of product.*	Check and record at least once a week (see Annex IV – ‘HACCP Weekly Form’).			
	Cold Product	< 7°C* during 2 to 3 H	+10°C*	1. Check equipment, discover cause, rectify or throw product away
	Hot Product	+65°C* during 4 H max	+60°C*	3. Record action taken.

B. Serving

A core temperature gauge is used at least once a week to check the core temperature of a cold packed product during serving and of its container in case the serving could exceed two hours.

The measured temperature is recorded. The form from Appendix IV, 'HACCP Weekly Form', can be used for this purpose. If serving takes place immediately after preparation/regeneration, the serving temperature does not need to be recorded. In case of non-conformity, action is taken as described in the Critical Control Points summary.

B.1. Self Service

It is very important to make sure that:

- √ Food commodities are always maintained at the legally required temperatures.
- √ Only the necessary quantities of food are set out and for the shortest time possible.
- √ Serving utensils are always available for the serving of unpacked products.
- √ Personnel are cleanly clothed. Personal effects belonging to the staff should be kept in a separate area.
- √ The working stock is thrown away at the end of serving.

B.2. Cold Food

Cold food may be displayed in a refrigerated counter keeping the food at chilled temperature- maximum product temperature of 7°C*.

If displays do not keep food at a suitable chilled temperature:

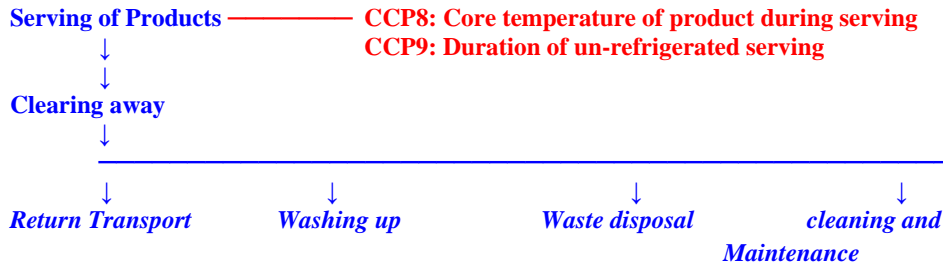
- Food must be removed from the refrigerated space as close to consumption as possible
- Display takes place not more than 24 hours after preparation
- Cold preparations should not be left longer than 2 hours at room temperature
- After two hours of un-refrigerated display, the products must be destroyed

B.3. Hot food

- √ Hot products are served at a temperature of at least 65°C*.
- √ Hot products to be eaten hot may be left at room temperature for no more than two hours. After two hours at room temperature, products are destroyed.
- √ Hot products may be displayed in the bain-marie for no more than 4 hours. Bain-marie shall not be used to re-heat product. Product placed in a bain-marie must already be at a temperature of at least 65°C. The water of the bain-marie must be clean.

B.4. Dining-room service

- ✓ Seating and sanitary arrangements (accessory items: soap, hand drying equipment...) should be supplied in sufficient quantities.
- ✓ The tables should be completely cleared and cleaned between two sittings.



CRITICAL CONTROL POINTS SUMMARY				
How	How often	Requirement	Critical limit	Corrective action
Critical control point 8 – Core temperature of product during serving (cold and Hot)				
Use core temperature gauge to measure the temperature of the cooling equipment or the core temperature of the product. ⁹	Check and record at least once a week (see Annex IV – ‘HACCP Weekly Form’). Cold Product Hot product	Core temperature of the cooling equipment or the product: + 4°C*. Core temperature of the equipment or the product: + 65°C*	+10°C* +/-60°C*	1. Throw product away after two hours at room temperature. 2. Check equipment. 3. Record taken action
Critical control point 9 – Duration of un-refrigerated serving				
Keep an eye on the time	Update the assurance daily	Maximum two hours		1. Throw product away. 2. Maintain more adequate time recording.

⁹ If serving immediately follows preparation/regeneration, the serving temperature does not need to be recorded.

C. Return Transport

During return transport of dirty crockery, provision is made for proper separation between clean and dirty washing-up and between clean and dirty surfaces. No contamination of products takes place during return transport.

D. Leftovers

Leftovers present high risks of being contaminated as they most probably haven't been maintaining at the required temperature and have been manipulated.

Consequently, must be thrown away:

- Food that has been on display
- Food that has been reheated for service, even if not displayed (It may under no circumstances be again reheated nor returned to chilled or frozen storage.)
- Any food removed from the cold chain

Following food may be stored for further consumption:

- Assembled cold dishes, not put on sale and immediately stored in chilled conditions at a temperature between +1 and +4°C * can be stored for 48 hours, except high-risk products such as steak tartar and vegetable salads.
- Prepared or delivered desserts, not put on sale and immediately stored in chilled conditions at a temperature between +1 and +4°C* may be kept for further consumption.
- Cooked dishes which are immediately cooled after preparation, not put on sale but immediately stored in chilled conditions at a temperature between +1 and +4°C * may be kept for further consumption.

PART V
GENERAL HYGIENE RECOMMENDATIONS
AND
REQUIREMENTS
RELATING TO
CLEANING AND MAINTENANCE

A. Washing up

It is recommended to privileged washing-up with machine as it reduced possible contamination sources through:

- Hot water
- More efficient washing and rinsing products
- No clothes towels, sponge or brush is needed
- Pre-washing
- Dishes remain in contact with water for a longer period of time.

Hand washing up should be reserved to equipment that cannot be machine washed.

Containers, materials and kitchenware must be cleaned and disinfected after every use.

A.1. Washing up by machine

To achieve spotless dishes free from contamination, staff must ensure that:

- The equipment is in good working order, especially the rinse aid spray nozzles, hard water softener, waste and scrap filter.
- Dishwasher is clean, especially the baskets and racks.
- A recommended detergent suitable for the hardness of water in the premises is used in the right quantities.
- The temperature of water used is correct at each stage of the cycle:
 - Pre-wash water must be a minimum of 20°C and a maximum of 45°C.
 - Wash water must match the temperature indicated on the label of the main detergent. Temperature should be in between 60 to 65°C
 - Rinse water temperature must be a minimum of 85°C.
- Before washing up, **dishes must be sorted and all waste scraps removed** from the dirty washing-up. Ideally, the dishes should be rinsed in warm water before loading into dishwasher.
- Very **dirty equipment must be soaked** with a suitable detergent if necessary.
- **Dishwasher must be loaded correctly:**
 - Separate different types of dishes, cutlery and other equipment
 - Follow the supplier's instructions for loading the machine
 - Do not overload
 - Do not pile dishes on top of another
 - Do respect the full washing time and drying time of the machine.
- At the end of the cycle, the load must be **checked** and any dishes not spotless must be washed again. Clean dishes must be unloaded and store in clean and dry premises.

- Contamination of clean washing-up must be prevented by, if possible, washing up with a minimum of two employees. Another option is to disinfect the hands when going from the dirty 'side' to the clean 'side'.
- The clean washing-up must be completely clean once the washing-up has been done or once it comes out of the dishwasher. If this is not the case, then the washing-up must be done again.
- **Dishwasher must be cleaned** regularly following the manufacturer' instruction.
- The clean washing-up must be dry before it is put away.

A.2. Washing up by hand

For spotless equipment, following steps must be followed:

Pot wash area must be separated from food preparation areas if the layout of the premises allows it. Steps must be taken to ensure there is a proper separation between clean and dirty washing-up and between clean and dirty surfaces. The principle of "clean as you go" must be followed. This will ease the process as dried debris onto equipment will be more difficult to remove.

- **Temperature of water** should be as hot as possible for washing and rinsing. Water must be changed as often as necessary.
- Use a good detergent for commercial use. Follow supplier's instructions on the concentration.
- Washing material such as sponges or brush must be changed regularly.
- It is recommended to leave dishes to air **dry** because cloth towels are becoming contaminated with repeated use. If cloths towels are used, they must be changed regularly, so that the clean washing-up dries properly.
- Clean and dry equipment should be **stored** upside down in a separate area.

B. Cleaning/Disinfection and Maintenance

B.1. Cleaning and/or disinfection

Adequate precautions should be taken during the cleaning and/or disinfecting of premises, equipment and utensils to **prevent contamination of foodstuffs** by wash water, detergents and/or disinfectants. This can be done by covering products for example or storing them in the appropriate storage place.

Detergents and disinfectants, preferably as environmentally friendly as possible, should be suitable for those activities for which they are intended according to the product information. Cleaning agents and disinfectants are not to be stored in areas where food is handled.

Any residues remaining behind on the cleaned surfaces that can come into contact with the foodstuffs must be adequately rinsed off with (potable) water. This must happen before area and kitchen utensils may be used again for the processing of products.

To prevent contamination of products, all equipment and utensils must be cleaned and/or disinfected as frequently as circumstances require. To clean certain utensils, it is necessary to dismantle them at frequent intervals throughout the day: at least after every break, when changing from one food product to another and in all cases at the end of the working day.

Monitoring of the efficiency of these techniques should be done by regular inspection.

B.2. Maintenance

The buildings, premises, equipment, kitchen utensils and all other physical facilities of the establishment, including drains, must be maintained in good repair and in an orderly condition. As far as practicable, rooms should be kept free from steam, fumes and waste water.

Changing facilities and toilets should be kept clean at all times.

Access ways and yards in the immediate vicinity of the premises and leading to them should be kept clean.

B.3. Programme for cleaning and maintenance

The maintenance and cleaning/ disinfecting of buildings, premises, equipment, kitchen utensils and all other physical facilities of the premises must be the subject of a **planned written programme** describing all cleaning and disinfecting activities.(see example in annex)

The cleaning plan should at least describe:

- The equipment, premises... to be cleaned or disinfected
- How the job must be done

- The frequency
- The equipment and cleaning materials to be used. A disinfectant must form part of the pack of cleansing agents
- Recommended concentration

A single individual who should preferably be a permanent member of the staff of the establishment should be appointed as responsible for cleanliness and maintenance. He/she should have a thorough understanding of the significance of contamination and the hazards involved. All cleaning personnel should be well-trained in cleaning techniques.

B.4. Storage of materials

Maintenance and cleaning tools, including cleaning chemicals, such as brooms, mops, wipers, detergents etc., should be kept clean and dry. The cleaning equipment must be stored in such a way it cannot contaminate food products, equipment, kitchen utensils or linen.

B.5. Storing of hazardous substances

Cleaning products or other substances that cannot be counted amongst foodstuffs which may represent a hazard to health must be suitably labelled with a warning about their toxicity, composition and use. They should be stored in locked rooms or cupboards used only for that purpose. (General Hygiene Regulation, Annex II, Chapter IX, par.8)

It is good Hygienic practice that hazardous/dangerous or inedible substances be only handed out and used by staff that is so authorised and have been properly informed to this end. All possible precautions must be taken to avoid food coming into contact with them. Food containers or containers which are used to handle food, should not be used to measure, dilute, dispense or store pesticides or other substances.

Except when necessary for hygienic or processing purposes, no substance which could contaminate food should be used or stored in food handling areas.

C. Waste Disposal

All waste is to be eliminated in a hygienic and environmentally friendly way in accordance with the EU legislation, and is not to constitute a direct or indirect source of contamination. (General Hygiene Regulation, Annex II, Chapter VI, par.4) It is recommended to use the most environmentally friendly solution to separate waste at source, to make it either recyclable or reusable.

C.1. Collect

Food waste, non-edible by-products and other refuse are to be:

- removed from rooms where food is present as quickly as possible.
- deposited in closable containers, unless food business operators can demonstrate that other types of containers or evacuation systems used are appropriate. These containers are to be of an appropriate construction, kept in sound condition, be easy to clean and, where necessary, to disinfect.

(General Hygiene Regulation, Annex II, Chapter VI, par.1. and 2)

Recommended good hygienic practice:

- To collect separately the following types of waste:
 - Dry waste such as paper, cardboard, metals (tin)
 - Glass
 - Food leftovers
 - Fats and oilsusing a colour-marked system (one colour for each kind of waste) or posting up clear examples of what goes in each container.
- To use watertight waste bins made from impervious material, and preferably suitable for use without hand contact. They must be easy to clean and closable.
- To clean and disinfect reusable containers each time they are brought back to the kitchen and/or at least once a day.
- To put waste in a watertight disposal bag for single use. It is advisable to put the disposal bag in the waste bin beforehand. Waste bags must be tied up and then placed in the refuse container for transport. Fit the lid on waste bins for transport. Then put the waste bins in the refuse container. Waste bins that are re-used again must be cleaned whenever they return to the kitchen or at least once a day. Refuse containers may never be brought into the kitchen.
- To remove regularly waste from work areas, at least when the bags or containers used are full, and after each working period.

C.2. Storage

Adequate provision is to be made for the storage and disposal of food waste, non-edible by-products and other refuse. Refuse stores are to be designed and managed in such a way as to enable them to be kept clean and, where necessary, free of animals and pests.

(General Hygiene Regulation, Annex II, Chapter VI, par.3)

Recommended good hygienic practice:

- Until the waste is collected, it must be stored in a separate space or central container. This to avoid any form of cross contamination. The temperature in the space where the refuse containers go must be kept as low as possible. There must be good ventilation and protection from vermin. The space must be easy to clean. The containers may not be placed in food storage and preparation places.
- Waste compressing equipment should be separated from any food handling area. If a waste system using chutes has been installed, it is very important that meat waste, leftover food and other waste is put into sealed disposable bags. The opening of the chute must be cleaned every day.



D. Exclusion of Animals and Pest Control

Adequate procedures are to be in place to control pests and to prevent domestic animals from having access to places where food is prepared, handled or stored (or, where the competent authority so permits in special cases, to prevent such access from resulting in contamination). (General Hygiene Regulation, Annex II, Chapter IX, par.4)

Insects and rodents are known carriers of pathogenic bacteria from areas of contamination (polluted areas, waste storing, etc ...) to prepared foods and food contact surfaces. Therefore their presence in food preparation areas should be prevented.

Recommended good hygienic practice:

- All animals, including domestic pets, must be kept out of the location. Guide dogs are excluded from this rule as far as the front of the counter.
- Establishments and surrounding areas should be regularly examined for evidence of infestation.
- Should pests gain entrance, steps must be taken to have them exterminated professionally. Control measures involving treatment with chemical, physical or biological agents should only be undertaken under direct supervision of personnel who have a thorough understanding of the potential hazards to health resulting from the use of these agents including those hazards which may arise from residues remaining in the product. Such measures should only be carried out in accordance with the recommendations of the official agency having jurisdiction.
- Appropriate records of pesticide usage should be maintained.

PART V
GENERAL HYGIENE RECOMMENDATIONS
AND
REQUIREMENTS
RELATING TO
PERSONAL HYGIENE AND HEALTH

General considerations

Every person working in a food-handling area must maintain a high degree of personal cleanliness and is to wear suitable, clean and, where necessary, protective clothing. (General Hygiene Regulation, Annex II, Chapter VIII, Par.1)

Staff is one of the possible carriers of diseases caused by pathogenic micro-organisms which live and develop on certain parts of the body, mainly the hair, nose, mouth, throat, intestines and on wounds on skin.

Hygiene must be such that the contamination risk is minimal in all cases.

The contamination risk must be known to everyone who handles foodstuffs. Companies must provide appropriate training to all their personnel including proper instruction about the following:

- importance of medical examinations and testing;
- possibility of being a carrier, as well as the transmission mechanisms, of pathogenic microbes;
- conditions that increase the risk of food poisoning;
- Risk prevention measures.

It is recommended to keep a record demonstrating that appropriate instructions and training have been provided.

A. Working clothes

Clothes may contain germs which might contaminate food. During working hours, all staff members who come into contact with foodstuffs, including temporary staff, must always wear protective clothing appropriate to the activities, which must be washable or be thrown away following use. Persons who do not belong in the kitchen must be kept out of the kitchen.

Recommended good hygienic practice:

- **Before starting work**, staff must change into protective clothing appropriate to the job they will be doing.
- Any **person entering the production area** (including subcontractors, maintenance personnel and visitors) should wear clean protective clothing.
- Street clothes and personal effects must be **stored in a separate place** where they do not come into contact either with food or working clothes. Therefore, changing facilities for the personnel should be installed outside the production area and permit the total separation of everyday clothes from working clothes.
- Staff must wear all of the **uniform** needed for their job. Hair covering and overshoes will be specified for some jobs.
- **Working shoes** should be clean and preferably distinct from everyday shoes.
- **Washing and drying of clothing** and other accessories (such as aprons, caps...) must take place outside the area where foodstuffs are processed.

B. Hand hygiene

Hands (even of persons without any apparent infection) are the main carriers of microbiological contamination. As a matter of fact, hands are contaminated with micro-organisms especially after they have handled raw food. It is important to keep hands clean to stop contamination of food.

To avoid all risk, staff must be informed and adopt the following preventative measures:

1. The wearing of jewellery (rings and bracelets) must be forbidden, with the exception of wedding rings.
2. Hands and nails must be kept clean, with nails cut short and without varnish.
3. Hands and forearms (when they are bare) must be washed:

When?

- each time before starting work;
- after working with raw products;
- between the handling of different basic materials when changing activity, such as the cutting of meat and then the cutting or washing of vegetables or the cutting of beef and then the cutting of chicken;
- after going to the toilet, after hair care, nose blowing, coughing and sneezing;
- after the handling of any dirty equipment;
- after touching money and/or telephone.

How?

- Hands should be washed in hot, running, potable water.
- The use of liquid soap from a dispenser must be prescribed.
- Hands must be dried properly. The use of disposable paper towels is prescribed for hand drying. The use of electric dryers should be forbidden in areas where food commodities are handled.
- Some method of disinfecting is recommended.
- If disposal gloves are worn during the handling of foodstuffs, they must be completely clean and regularly changed. The wearing of gloves does not exempt the operator from regular hand washing. Torn or punctured gloves should be discarded to avoid leakage of any accumulated perspiration.

4. Protection of wounds

Cuts, wounds and grazes should be protected after treatment with a waterproof dressing. The bandage must fit very tightly, stick fast and be clearly visible. For minor injuries on the hands, also use a finger condom or disposable glove. Appropriate means must be permanently at the disposal of the staff. This prevents the food from being contaminated through infected wounds with bacteria causing food poisoning, as well as protects the wound from picking up infection especially from raw foods, packaging or waste.

5. Permanent notice

It is recommended to put up permanent notices reminding the personnel of obligatory hand-washing. The management should always make sure that regulations are complied with.

C. Personal cleanliness

Staff must keep themselves neat and tidy and have good standards of personal cleanliness, especially if they handle ready to eat foods.

Recommended good hygienic practice:

- Clothes must be changed when they are dirty.
- It is recommended to cover completely the hair (cap, chef's hat, and hairnet) during the handling of food. Long hair must be tied up. It is recommended to cover beards and moustaches.

Any behaviour that can contaminate products, such as eating, smoking, chewing gum and spitting, is prohibited in food handling or storage areas. The mouth contains many germs. Eating and smoking may transfer these to food via fingers. Coughing after smoking or even the blowing out of smoke may cause airborne contamination. Cigarette butts or tobacco ash may drop into food.

D. Duty of Disclosure

No person suffering from, or being a carrier of a disease likely to be transmitted through food or afflicted, for example, with infected wounds, skin infections, sores or diarrhoea is to be permitted to handle food or enter any food-handling area in any capacity if there is any likelihood of direct or indirect contamination. Any person so affected and employed in a food business and who is likely to come into contact with food is to report immediately the illness or symptoms, and if possible their causes, to the food business operator. (General Hygiene Regulation, Annex II, Chapter VIII, par.2)

Recommended good hygienic practice:

- Before starting work, the personnel must notify the management of any illness or injury that might be a source of contamination of foodstuffs.
In particular:
 - Sore throat, mouth or nose
 - Eye infection
 - Tooth infection
 - Infection of skin wounds, particularly on the hands and forearms
 - Gastro-intestinal infections such as diarrhoea and vomiting
-
- Members of staff suffering from respiratory infections or other infectious diseases (in particular open wounds or skin diseases on head, neck, arms or hands, vomiting, diarrhea) shall not be involved with the preparation, handling or packing of food or drinks and ingredients, in so far as food and drinks can be contaminated. If possible, these persons should be offered replacement work. They should not be authorized to restart work in food production or sale areas until they provide a medical certificate of fitness for work.
- All personnel, including managerial staff, should be informed about these requirements and should comply with them.

E. Training

Food business operators are to ensure that:

- **Food handlers** are supervised and instructed and/or trained in food hygiene matters commensurate with their work activity.
- **Employees responsible** for the development and maintenance of permanent procedures based on the **HACCP** principles, have received adequate training in the application of the HACCP principles.

(General Hygiene Regulation, Annex II, Chapter XII)

Recommended good hygienic practice:

- The personnel should be informed about the conditions which increase the risk of infection by food toxins and the preventative measures.
- Training should be carried out at the time of recruitment and subsequently as often as necessary. Proof of this training should be retained.
- The food business operator should set up a well-documented system and procedures for the organisation of prevention and verification. These documentation and procedures, which are discussed in the chapters on "hygiene in production and hygiene of premises", should cover:
 - Prevention of (cross-) contamination
 - Use of water in the processing of food
 - Thawing
 - Cooking
 - Portioning
 - The storage and disposal of waste
 - The exclusion of domestic animals
 - Pest control
 - Storage of hazardous substances.

The personnel should be adequately informed about the presence of these documents in their place of work.

ANNEXES

ANNEX I

TEMPERATURE TIPS

Process to follow when checking temperature:

1. Ensure that the sensor of the core temperature gauge is not stuck through packaging. This can contaminate the products and could damage the sensor and result in the gauge ceasing to indicate the correct temperature.
2. Disinfect the sensor before and after measuring products. This can be done with special disinfecting cloths or by holding the sensor in boiling water and wiping with clean, disposable paper.
3. Insert the sensor between two packs when they are still in the delivery truck Read results after one minute

PROCESS	SUBJECT	TIP
Receipt of products	Core temperature of vacuum packed products.	Place the sensor of the core temperature gauge between two packs. Should the product be used on the same day, open the pack.
	Core temperature of deep-frozen products.	Place the sensor between the deep-frozen products.
	Core temperature of cut meat products, cheese, etc.	Place the sensor in the middle of the stock of products between two packs.
	Bread, uncut fruit, vegetables and potatoes	No control of core temperature needed.
Storage of products	Freezing in-house	Pack the products carefully. Put the production and freezing date and the product name on the packaging. Freezing when fresh is better than leaving in the refrigerator for a long time.
	Shelf life	The shelf life is increased to a limited degree by vacuum packing – with or without gas mixture.
Preparation	Products whose core temperature does not exceed 75°C in preparation	Examples: <ul style="list-style-type: none"> • Beef: steak, roast beef, fillet steak • Veal: steak, roast beef, escalope • Pork: tenderloin, fricandeau, escalope • Lamb: steak, escalope • Game: steak, fillet steak • Dairy: grilled goat's cheese.
	Sous-vide preparation	Sous-vide preparation improves quality and shelf life. Vacuum packing does not guarantee a longer shelf life, because shelf life is determined by preparation temperature and time. Write the name of the product and the production date on the packaging.
Re-cooling	How to re-cool?	In a re-cooler, re-cool liquid products in this cooler. In all other cases, divide the product into small portions. Put the container with the product inside under cold running water or regularly change the water
Serving	Displaying heated products	By displaying meat or fish in stock, heated meat and fish remain hotter and more tender.
	Displaying un-refrigerated cold products	For conditions see chapter.

ANNEX II
Hygiene Testing List

	date	date	date	date	
1. General	Performance P (passed).F(Failed) or N/A(non applicable)				Action to be taken if fail
Functions					
Instructions					
Domestic(animals)					

2. Personal Hygiene	Performance P.F or N/A				Action to be taken if fail
Hand washing					
Work clothing					
Jewellery					
Nails					
Hair					
Minor injuries					
Care					
Activities					
Serving					

3.Receipt of products	Performance P.F or N/A				Action to be taken if fail
Functions					
Instructions					
Domestic(animals)					

4. Storage of products	Performance P.F or N/A				Action to be taken if fail
General					
Temperature of storage places					
Dating					

5. (Pre-) preparation	Performance P.F or N/A				Action to be taken if fail
General					
Defrosting					
Heating					
Cold products					
Heating in oil or fat					

6.Assembling	Performance				Action to be taken if fail
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	P.F or N/A				
Cold portioning					
Warm portioning					

7. Cooling and freezing	Performance P.F or N/A				Action to be taken if fail
Cooling					
Freezing					

8. Regeneration	Performance P.F or N/A				Action to be taken if fail
Regeneration					

9. Transporting	Performance P.F or N/A				Action to be taken if fail
Transporting					

10.Serving	Performance P.F or N/A				Action to be taken if fail
Decoration					
Serving					
Un-refrigerated serving					
Refrigerated display case					
Food vending machine					

11. Distribution and serving	Performance P.F or N/A				Action to be taken if fail
General					
Control					

12. Washing up	Performance P.F or N/A				Action to be taken if fail
Mechanical washing up					
Manual washing up					
Washing up result					
Separation					

13. Waste disposal	Performance P.F or N/A				Action to be taken if fail
Processing waste stream					

14. Cleaning and maintenance	Performance P.F or N/A				Action to be taken if fail
Drawing up cleaning plan					
General					
Vermin control					

ANNEX III

MICROBIOLOGICAL GUIDANCE VALUES

While taking into account the requirements foreseen by the EU Regulation on microbiological criteria¹⁰, catering businesses can use microbiological control to evaluate their own processes. In order to verify whether a process is under control, the following microbiological guidance values can be used:

As an example:

Microbiological standards/guidance values per gram of product for finished products and/or supplied finished products such as:

- Group 1. Heated meat and heated fish
- Group 2. Soups and sauces
- Group 3. Heated meals and eggs¹¹
- Group 4. Desserts with a heating step
- Group 5. Un-refrigerated display under two hours assurance

Guidance values are subdivided into two categories:

- Category I: controlled process
- Category II: uncontrolled process, take action

If the microbiological control shows that the measured values are less than or equal to the standards values given in category 1, this can be interpreted as confirmation that the process is controlled.

If the values are in category 2, then the cause must be discovered and targeted action must be taken. Once action has been taken, the product group concerned must be tested again. Measurements and any action taken must be recorded. The said guidance values “just before serving” apply also to all the preceding process steps.

If products (whether prepared or not) are supplied by third parties, it is preferable to include guidance values in the purchasing specifications or to refer generically to the Hygiene Guide in the terms and conditions of purchase.

		Cat. I	Cat. II
Just before serving	Total germ number	< 1.000,000	< 100.000
	Enterobacteriaceae	< 1.000	< 1.000

¹⁰ SEE ANNEX VIII

¹¹ If eggs in the shell or peeled eggs are not consumed immediately, the rules of section 13.1 of the Hygiene Guide must be applied that is: store refrigerated and consume within two days.

**ANNEX IV
HACCP WEEKLY FORM**

RECEIPT per supplier	Date of control	Product	(Core) Temp. in C°	Packaging : whole	Label: good
				Yes/no	Yes/no
				Yes/no	Yes/no
				Yes/no	Yes/no
				Yes/no	Yes/no

RECEIPT per supplier (continue)	Quality: good	BB date	Initials	Action taken in case of non-conformity
	Yes/no	Yes/no		
	Yes/no	Yes/no		
	Yes/no	Yes/no		
	Yes/no	Yes/no		

STORAGE	Date of control	(Core) temp. product/deepfreeze gauge in C°	Initials	Action taken in case of non-conformity
Refrigerator 1 Max. 7 C°				
Refrigerator 2 Max. 7 C°				
Refrigerator 3 Max. 7 C°				
Refrigerator 4 Max. 7 C°				
Refrigerator 1 Max. 7 C°				
Refrigerator 2 Max. 7 C°				
Refrigeration furniture Max. 7 C°				
Food vending machine Max. 7 C°				

PREPARATION	Date of control	Product	Core temp. in °C	Initials	Action taken in case of non-conformity
Hot products at the end of heating: Hotter than 75°C.					
ASSEMBLING	Date of control	Product	Core temp.	Initials	Action taken in case of non-conformity

			in °C		
Cold products: max.4°C/ storage time: 3 days or max.7°C/ storage time: 2 days. Hot products: min 65 °C.					

COOLING	Date of control	Product	Core temp. in °C	Initials	Action taken in case of non-conformity
After 5 hours' cooling: max. 7°C.					
OR after 2 hours' cooling: max.10°C.					

REGENERATION	Date of control	Product	Core temp. in °C	Initials	Action taken in case of non-conformity
At the end of regeneration: hotter than 65°C or 75°C.					

SERVING	Date of control	Product	Core temp. in °C	Initials	Action taken in case of non-conformity
Refrigerated serving: max. 7°C.					
Heated serving: hotter than 65°C *					

DISTRIBUTION AND SERVING	Date of control	Product	Core temp. In °C	Initials	Action taken in case of non-conformity
Refrigerated serving: max.7°C.					
Hot products: minimum 65 ° *					

* If serving follows on immediately from preparation/regeneration, the temperature does not need to be recorded.

ANNEX V
HACCP MONTHLY FORM

STORAGE	Date of control	(Core) temperature product/ deepfreeze gauge in °C	Initials	Action taken in case of non-conformity
Deepfreeze 1 -18 °C or below				
Deepfreeze 2 -18 °C or below				

ANNEX VI
CLEANING PLAN

A cleaning plan must be drawn up for the kitchen, the scullery, the serving counter and the restaurant. This plan must contain the following points:

- The object to be cleaned or disinfected
- How often the object is cleaned
- How the object is cleaned

The examples below can be used when drawing up the cleaning plan.

Object	After use	Daily	Weekly	As required
Space				
Floor		X		
Walls				X
Cupboards				X
Equipment				
Cooker		X		
Bain-marie		X		
Fryer				X
Microwave		X		
Refrigerator			X	
Tools				
Chopping board	X			
Small kitchen tools	X			

Object	After use	Daily	Weekly	As required
Space				
Floor cleaner Floor scrubber Floor squeegee	X			X
All-purpose cleaner, brush, cloth	X			X
Equipment				
All-purpose cleaner, brush, cloth	X	X		X
Tools				
All-purpose cleaner and disinfectant brush, cloth	X	X	X	X

Cleaning plan for kitchen/scullery/serving counter/ restaurant*
 (* Delete whichever does not apply)

Object	After use	Daily	Weekly	As required
Space				
Equipment				
Tools				

Object	After use	Daily	Weekly	As required
Space				
Equipment				
Tools				

ANNEX X

Summary of CCP

Etape du Processus	Description
Receipt of merchandises	CCP 1: Core Temperature of products CCP 2: Packaging, Labelling, Date of minimum durability, Quality
Storage of products	CCP3: Temperature of product in storage premises
Preparation of food	CCP 4: Core temperature of products at the end of the preparation CCP 5: Core temperature of products after assembling CCP6: cooling time and temperature CCP7: Core temperature at the end of regenerating
Distribution	CCP8: Core temperature of product during serving CCP9: Duration of un-refrigerated serving
Transport	CCP 10: Core temperature of product during transport