

# GUIDE TO GOOD HYGIENE PRACTICES

FOR BUSINESSES IN THE HORECA SECTOR





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# GUIDE TO GOOD HYGIENE PRACTICES

FOR BUSINESSES IN THE HORECA SECTOR



The guide can be downloaded in 3 languages at [www.horesca.lu](http://www.horesca.lu)

The French version of the Guide to Good Hygiene Practice is the official guide for Luxembourg.

In case of contradiction with other language versions, only the French version is valid.



# PREFACE



It is with great satisfaction that I have taken note of the initiative of the leaders of the Federation of Hoteliers, Restaurateurs and Coffee House Proprietors of the Grand-Duchy of Luxembourg to update their Guide to Good Hygiene Practices for businesses in the HORECA sector.

The first version of this guide was developed in 2014 and has quickly become the benchmark for food safety assurance in the sector.

Indeed, the HORECA sector is a particularly dynamic one, characterised by frequent new business creations and by a continuous evolution of manufacturing and distribution methods.

Food regulations are also constantly evolving to keep pace with technical and scientific progress in food safety.

This update of the HORESCA guide takes account of these developments and allows the sector to adjust its working methods to the current level of knowledge in order to ensure the highest possible level of food safety protection for consumers.

EC Regulation 852/2004 lays down general rules on food hygiene for food business operators. In particular, it requires the widespread application of procedures based on HACCP (hazard analysis - critical control points) principles, combined with the implementation of good hygiene practices in all businesses in the food chain.

The same regulation encourages the food industry to develop and diffuse national guides to good practices to facilitate the application of the regulatory requirements in the field.

These guides are particularly useful for businesses, and especially for small-scale businesses, as they allow professionals to share the first steps of the HACCP method by developing concrete control elements, specific to the HORECA sector and adapted to their business structure.

With this update, the HORESCA federation once again underlines its willingness to take responsibility for food safety and to support businesses in the sector in the implementation of regulatory requirements.

It has done a quality job and adapted to the range of activities of catering businesses in Luxembourg.

With the favourable advice of my services, I am able to validate this second version of the **"Guide to Good Hygiene Practices for Businesses in the Horeca Sector"**, and I strongly encourage all business owners in the sector to apply it, as this will allow customers of catering businesses to have full confidence in the services offered.

I would particularly like to congratulate the initiators of this project, thank them for their excellent work and encourage them to adapt their guide to technological and scientific developments regarding food safety in the future.

Madame P. LENERT  
Minister for Consumer Protection



Dear Members,

It gives me great pleasure to announce the release of our new "Guide to Good Hygiene Practices" in the Horeca sector.

This is the second edition of our guide, which has been adapted to market trends and, above all, to current legislation. It is aimed at the various branches of our sector and at the entire hospitality sector.

New chapters have been developed to better inform and prepare you for the challenges of the sector.

The easy-to-use guide goes from the mandatory registration of your business with the food hygiene authority, through labelling, allergens, hazards, and general information including QR codes to scan with your mobile phone.

We aim to provide you with a user-friendly guide to help you find the answers to your questions.

This new practical hygiene guide is part of our ongoing mission to support you in the day-to-day management of your food safety legal obligations in Luxembourg

I join the Minister in congratulating the authors and professionals who have contributed to this new edition of our guide.

Many thanks!

François KOEPP  
HORESCA Secretary General

# THE MISSION

Any company involved in the production, processing and distribution of foodstuffs is obliged to be aware of and comply with the legal and regulatory provisions.

The objective of this guide is to avoid unacceptable danger to the product, the user, and the consumer. The aim is to ensure good control of food safety by establishing the good hygiene and manufacturing practices that must be respected in HORECA businesses in accordance with food hygiene regulations.

The causes of contamination are divided into 5 groups (5M rules):

- Material & equipment-related contamination.
- Labour-related contamination.
- Method-related contaminations.
- Material-related contaminations.
- Environment-related contaminations.

The premises, equipment and working utensils must be in an impeccable condition. Also, staff must be aware of the rules concerning personal hygiene and the hygiene of foodstuffs and their preparation and must apply them on a daily basis. To this end, staff must be instructed in the rules of food hygiene to be applied, i.e., they must regularly participate in training courses on food safety.

Good food hygiene practices are included in the pre-requisite programmes which include:

- The infrastructures.
- Effective cleaning and disinfection of infrastructure.
- Preventive pest control.
- Prevention of contamination (physical, chemical, biological and allergenic).
- The impeccable hygiene and behaviour of the staff.
- Control of the cold and hot chain.
- Clear procedures in production.
- Traceability of foodstuffs.
- The documentation.
- Maintenance and calibration.
- Waste management.
- Air and water control.
- Choice of raw materials.

By faithfully following this government-approved guide to good hygiene practices, small businesses in the sector are exempt from having to set up a complete HACCP system.

In addition, the Guide can be used as a model for self-assessment and can help operators prepare for inspections by food control authorities.

Horesca has developed a self-checking system that you can use systematically in digital form.



horesca.lu

With regular monitoring procedures built into the self-checking system, you will be able to detect potential problems early and reduce the costs associated with food waste.

#### **NOTICE TO THE USER OF THE GUIDE**

The writers of this guide have tried, as far as possible, to take account of all applicable regulations. However, these regulations may change. It is therefore important that the user of this guide follows these developments and respects the amended regulations. In the event of a discussion on points in the guide that are open to interpretation, the regulations take precedence.





# A. LEGAL FRAMEWORK

## A.1 LEGAL PROVISIONS

The food crises of the 1990s led the European Union and its Member States to define a set of Community rules in the field of food safety.

Thus, from the year 2000 onwards, several regulations came into force to amend the existing food legislation.

### **Regulation (EC) No 178/2002:**

This is a Basic Food Law regulation which is intended to ensure a high level of health protection at all stages of the food production chain.

This basic regulation contains:

- The general requirements and provisions of food law
- The establishment of the European Food Safety Authority
- The establishment of food safety procedures

The hygiene package summarises the following regulations:

### **Regulation (EC) No 852/2004:**

Provisions on the hygiene of foodstuffs

### **Regulation (EC) No 853/2004:**

Specific hygiene rules for foodstuffs of animal origin

### **Regulation (EC) No 1831/2003:**

Regulation laying down requirements for the hygiene of animal feed

### **Regulation (EC) No 2073/2005:**

Regulation on microbiological criteria for foodstuffs

### **Regulation (EC) No 1169/2011:**

Provisions on food information for consumers

As of December 2014, it is mandatory to indicate ingredients that may cause allergies and intolerances.

More information on specific legal provisions such as products of animal origin, additives, contaminants, food contact materials is available on the website of the Food Safety of the Grand Duchy of Luxembourg



[www.securite-alimentaire.public.lu](http://www.securite-alimentaire.public.lu) :

<https://securite-alimentaire.public.lu/fr/legislation/nationale.html>

All applicable texts are published on the following websites:



EURLEX: which includes all applicable European regulations

<https://eur-lex.europa.eu/homepage.html>



LEGILIX: which includes all Luxembourg legislation.

<https://legilux.public.lu/>

## A.2 REGULATION (EC) NO 852/2004 ON FOOD HYGIENE

Regulation (EC) No 852/2004, in force since 2004, is essential for this guide. It contains the general hygiene requirements that food business operators must meet at all stages of the food chain. The primary aim is to ensure a high level of consumer protection.

This regulation emphasises the importance of the responsibility of food business operators. They must take appropriate safety measures to ensure safe and wholesome products and properly implement all provisions to ensure food safety.

Articles 7 to 9 of the Regulation concern the development of guidelines for good hygiene practices and for the application of the HACCP principles. These guidelines provide more detail on how food business operators can meet the legal requirements that are expressed more generally in the Regulation.

### **Regulation (EC) No 852/2004:**

- regulates the correct handling of foodstuffs.
- contains the general rules on food hygiene.
- applies to all stages of production, handling, distribution and export of foodstuffs.

### **Key words of the regulation:**

- Food hygiene: all necessary measures and provisions used to control food hazards for humans and to ensure that a food is safe for consumption.
- Food safety: the guarantee that a food does not harm the health of the final consumer when it is prepared and/or consumed.

## A.3 THE HACCP SYSTEM

The implementation of and compliance with Regulation (EC) No 852/2004 is based on the HACCP system (Hazard Analysis Critical Control Points). This self-control system is part of the "Codex Alimentarius" (WHO and FAO) collection of food safety rules and serves to identify, assess, understand, and control hazards in foodstuffs at the various stages of the process. The term "hazard" refers to all unwanted events that occur during the manufacture of food and that may cause a health hazard to the consumer.

However, according to the European Regulation on the hygiene of foodstuffs, it is not necessary to develop a complete company-specific HACCP system if there is a sector-specific guide containing elements based on the HACCP principles and validated by the competent authorities.

This guide provides the basis for the HoReCa sector to implement good hygiene practices and is based on the HACCP principles: it describes potential hazards and critical hygiene points, defines the most important control points, from goods acceptance up to cleaning, and establishes appropriate procedures to ensure food safety.

The guide has been validated by the Minister for Consumer Protection as the competent minister for food safety.



## B. LEGAL OBLIGATIONS REGARDING FOOD SAFETY IN LUXEMBOURG

In 2018 the Luxembourg Government implemented a new legislation on foodstuffs control.

Indeed, the law of 28 July 2018 provides for the implementation of European regulations on food safety in Luxembourg by defining the control authorities and the sanctions in case of infringement.



<https://legilux.public.lu/eli/etat/leg/loi/2018/07/28/a675/jo>

This law implements a number of obligations for food businesses, including those in the HORESCA sector.

### B.1 MANDATORY REGISTRATION OF FOOD BUSINESSES

Indeed, according to Regulation 852/2004/EC in force since 1 January 2006, and EU Regulation N° 2017/625, any company or business in the food chain in Luxembourg must be known to the competent authorities.

To this end, each food business owner shall notify the appropriate competent authority of each business for which it is responsible and which carries out any of the stages of production, processing and distribution of food with a view to registering such a business.

In Luxembourg, the modalities of this registration are defined in the Grand Ducal Regulation of 15 January 2021 laying down the modalities of registration of the establishments of food business operators.



<https://legilux.public.lu/eli/etat/leg/rgd/2021/01/15/a51/jo>

The registration process is done via an online form on guichet.lu available at :



<https://guichet.public.lu/en/entreprises/commerce/securite-alimentaire/securite-alimentaire/enregistrement.html>

## B.2 OBLIGATION TO NOTIFY RECALLS AND WITHDRAWALS OF HAZARDOUS FOODSTUFFS

Similarly, the Act requires food businesses to notify recalls and withdrawals of dangerous products. A form available on [guichet.lu](https://guichet.public.lu) must be used for this purpose.



<https://guichet.public.lu/en/entreprises/commerce/securete-alimentaire/securete-alimentaire/notification.html>





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# 1. FOOD HAZARDS

1.1 CHEMICAL HAZARDS

1.2 PHYSICAL HAZARDS

1.3 BIOLOGICAL HAZARDS

1.4 ALLERGENIC INGREDIENTS







**In order to achieve good food hygiene, it is important to be aware of the hazards that can be caused by food. There are four types of hazards or negative influences that can affect the quality of food such that it becomes unsafe for consumption.**

## **1.1 CHEMICAL HAZARDS**

Chemical contamination of food can occur at any stage of production, from the production of raw materials to the consumption of the final product.

Chemical hazards can be caused by the presence of the following substances: cleaning or disinfecting agents, histamine, acrylamides, pesticides, bisphenol A (BPA), heavy metals, nitrites and nitrates, sulphites, dioxins, animal medicine residues etc.

### **HOW TO LIMIT CHEMICAL RISKS IN THE HORECA SECTOR?**

- Purchase quality raw materials and ensure adequate storage.
- Respect the cleaning and disinfection procedures of the premises, machines and equipment.
- Ensure regular maintenance of premises, machinery and equipment.
- Raise staff awareness.
- Do not store chemicals with food products.
- Respect the manufacturing instructions (Acrylamide, nitrosamines, etc.)
- Etc.

## 1.2 PHYSICAL HAZARDS

Physical hazards occur when food contains foreign, dangerous or undesirable bodies such as glass, wood, metal, stones, insects, hair, pieces of bone, etc. Indeed, some of these bodies can injure the consumer in the mouth or digestive system (sharp or hard objects: cuts, injuries in the digestive organs, broken teeth etc.).

### HOW TO LIMIT PHYSICAL RISKS?

- Ensure regular maintenance of premises, machinery, equipment and utensils.
- Control and monitor foodstuffs at reception, during production and during distribution.
- Raise staff awareness.
- Insect control.
- Preventing breakage of glass bodies  
e.g. Shatterproof covers  
e.g. Protocol in case of glass breakage (what to do in case of ...)

## 1.3 BIOLOGICAL HAZARDS



Biological hazards such as bacteria, viruses, parasites and moulds may be present in raw materials or arise during storage and food preparation. They are caused by pathogenic or harmful micro-organisms that can cause food poisoning in humans or have other dangerous consequences. In order to be able to reproduce, micro-organisms need certain conditions such as heat, food and moisture. Examples of biological hazards include: salmonella, moulds, streptococci, *E. coli*, *Listeria*, *Staphylococcus aureus*, etc.

**Biological hazard** → by bacterial contamination  
 → by bacterial multiplication  
 → by survival of germs  
 → by toxins produced by micro-organisms  
 (two kinds: heat-sensitive (= destroyed by heat)  
 or thermotolerant not destroyed by heat)

### HOW TO LIMIT BIOLOGICAL RISKS?

- Adhere to good hygienic practices procedures; at reception, during storage, in production and during distribution.
- Monitor temperatures from receipt to distribution.
- Ensure the cold chain.
- Master the cleaning plan.
- Avoiding mould problems in infrastructure and facilities.
- Educate staff on good personal hygiene practices.
- Preventive pest control.
- Etc.



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## 1.4 ALLERGENIC INGREDIENTS

Allergens in food are substances that can cause intolerance and allergic reactions. For allergic reactions, in the worst-case scenario, anaphylactic shocks can occur. Since 14 December 2014, allergens must also be indicated on bulk products.

(Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers).  
In Luxembourg:

Grand-Ducal Regulation of 25 August 2015 on consumer information on foodstuffs, nutrition and health claims and lot number marking.



<https://legilux.public.lu/eli/etat/leg/rgd/2015/08/25/n9/jo>

The most well-known allergens regulated by the European regulations are: cereals containing **gluten** with the generic name (wheat, barley, oats, etc.), **eggs, fish, peanuts, soya, milk** (including lactose), **nuts** with the generic name (walnuts, hazelnuts, almonds, etc.), **celery, mustard, sesame seeds, sulphite, lupine, crustaceans, molluscs**.

If the food contains declarable allergenic ingredients, these must be indicated in writing in an official language of the country.

### HOW TO LIMIT ALLERGIC RISKS?

- Purchase quality raw materials and ensure proper storage.
- Control ingredients.
- Controlling cross-contamination.
- Raise staff awareness and knowledge of notifiable allergens.
- Communicate accurate and reliable information to the consumer and ensure the presence of the 14 regulated allergenic ingredients.



## 2. INFRASTRUCTURE AND MAINTENANCE

2.1 ORGANISATION OF THE PREMISES

2.2 LAYOUT AND EQUIPMENT OF THE PREMISES

2.3 FOOD PACKAGING AND FOOD EQUIPMENT

2.4 HYGIENE AND CLEANLINESS



## 2.1 ORGANISATION OF THE PREMISES

Premises and equipment must not, by their nature or design, be sources of contamination for foodstuffs or encourage the multiplication of germs. Premises must be large enough to carry out the tasks for which they are intended. Access must be strictly limited to competent persons.

Premises should be easy to clean and disinfect.

Define rules for visitors.

### 2.1.1 Follow the forward march and avoid cross-contamination

Forward march is the path that food, equipment, personnel, waste, etc. must follow in order to avoid any crossing between "clean" and "contaminated" flows and thus guarantee the non-contamination of foodstuffs from reception to distribution. Ideally, this principle translates into a layout of locations or premises that ensures the progression of products, avoiding any backtracking.

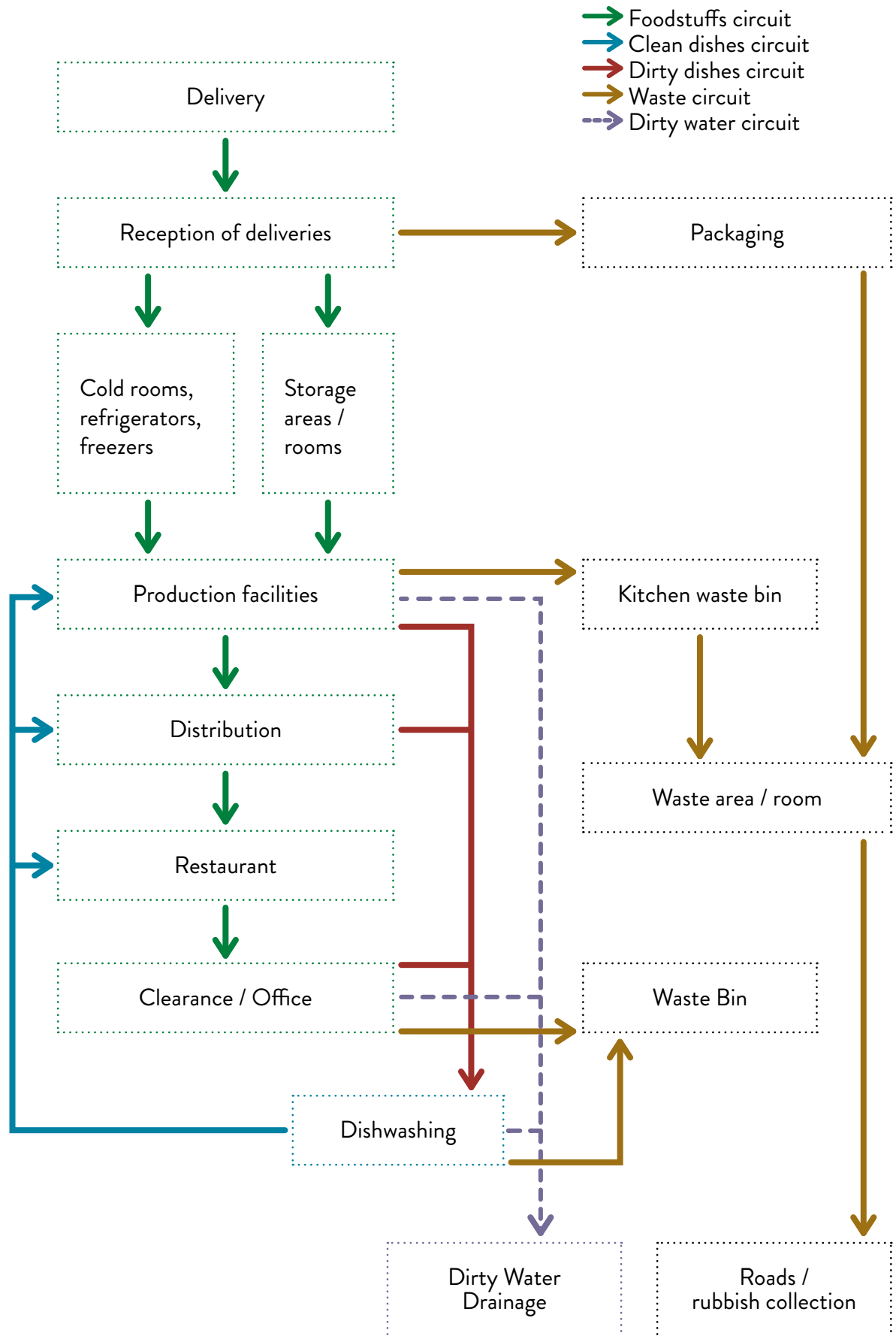
For example: forward march without contamination by crossing other dirty or possibly contaminated food, people, waste. If this principle cannot be respected in space, it must be respected in time.

For example, preparing vegetables in the same area where you are cutting up poultry is possible provided that the handling of the vegetables is not done at the same time as the cutting of the poultry. Cleaning and disinfection must be carried out between the various operations.



# FORWARD MARCH

## EXAMPLE OF THE MAIN KITCHEN CIRCUITS



## 2.1.2 Provide a receiving and storage area for goods

Goods should preferably be delivered through a separate entrance to allow forward marching and proper stowage in the storage rooms/areas. These rooms must allow the goods to be stored at appropriate temperatures. The business must have sufficient separate refrigeration facilities and/or separate storage solutions for raw materials on the one hand and prepared foods on the other.

Required storage solutions:

- Reserve for non-perishable goods (pasta, flour, canned food, etc.)
- Storage solutions for fruit and vegetables
- Refrigerators and freezers

Storage rooms should be easy to clean, dry and clearly structured.

## 2.1.3 Differentiate between hot and cold areas, wherever possible

Infrastructure that separates the hot production area from the cold production area, facilitates the maintenance of temperatures and limits the risk of cross-contamination.

## 2.1.4 Separate areas (clean and soiled areas)

The aim is to avoid contamination of a clean product by sufficient separation between clean and soiled areas.

**Clean areas:** production area with its work surfaces, refrigerators, freezers, cold rooms, etc.

**Soiled areas:** delivery reception area, recycling, waste storage, sanitary facilities, dishwashing, cleaning of vegetables and fruits, handling of raw foodstuffs at risk (poultry, fish, shellfish, etc.), etc.

## 2.1.5 Provide facilities for staff use (changing rooms, toilets, refectory)

This includes areas where kitchen and restaurant staff dress, eat or use the sanitary facilities. Adequate changing facilities should be provided for staff. They shall be located as close as possible to the entrance through which staff arrive and preferably reach the kitchen without going back outside. Under no circumstances may the sanitary facilities be directly accessible from rooms in which food is handled.

Staff must have a cloakroom (cupboard or room) where they can put on their work clothes, leave their street clothes and personal belongings:

- To put on their work clothes, to leave their street clothes and their personal effects.
- Dirty and clean linen must not be mixed.
- Similarly, street clothes and work clothes must be stored in separate areas.

## 2.1.6 Protect the storage of cleaning products and equipment

A suitable space, area or room must be provided for the storage of cleaning materials and equipment. This storage (reserve) of products should be separate from foodstuffs and enclosed as far as possible. Ideally, this area should be equipped with a sink and drain.

**Note:** The presence of a used cleaning product is tolerable in production, provided that it does not constitute a source of contamination by direct or indirect contact with foodstuffs.

## 2.1.7 Separate storage of waste and packaging (recyclables and deposits)

This location should be outside the production area.

The storage area or room should not attract pests. This area should be ventilated.

Keep food waste as cool as possible, which does not mean that refrigerated bins are a must but may make sense in special cases. What is important is that the waste is not exposed to sunlight or a heat source...

Containers should be kept closed so as not to attract pests.

The size of the room or space should allow for proper sorting and processing of the packaging to be recycled.

Returnable packaging also deserves special attention. Store returnable packaging in a separate area that suppliers can access without having to cross the kitchen.



→ Rinse returnable packaging so that it does not attract pests, emit bad odours or provide a breeding ground for bacteria and mould.



## 2.2 LAYOUT AND EQUIPMENT OF THE PREMISES

The requirements for premises and their equipment cover all production rooms and all annexed rooms used for the reception and storage of goods, as well as staff rooms. Floors, tiles, walls, doors, ceilings, stairs, windows, heating elements, pipes, etc. can be a source of contamination if they are made of unsuitable materials or if they are poorly maintained. The areas should facilitate the application of good hygiene practices.

### 2.2.1 Facilitate maintenance of surfaces (floors, walls, ceilings and doors)

Walls, ceilings, floors and worktops should be easy to clean and, if necessary, disinfect. Ensure that surfaces are smooth and non-absorbent. When designing, avoid niches, corners or places that are difficult to clean.

Doors are intact and well maintained.

Floors are sufficiently sloped to allow easy drainage. Drainage grates are functional and clean.

#### ADVICE:

- Ensure that the silicone in the joints is in good condition
- Replace broken tiles and repair holes
- Repair or replace damaged material
- Use suitable materials and avoid wood, etc.

### 2.2.2 Lighting, ventilation and windows

Work areas are adequately illuminated with artificial light or natural light. Light bulbs and neon lights are protected by waterproof covers. If the bulbs are fitted with a protective tube, for example, a cover is not necessary.

#### DO NOT FORGET:

- replace bulbs that no longer work
- regularly clean the light covers
- check that the covers are not broken

The ventilation system (natural or mechanical) should avoid any flow of pulsed air from a likely contaminated area to a clean area. Rooms should be designed to limit condensation. This is especially important in wet areas ( dishwashing, vegetable cleaning, etc.) in the hot kitchen and in the waste room. The hoods must be sized according to the nature and volume of activity in the business. In addition, they must be properly maintained and serviced. They should be designed to allow easy access to the filters.

The windows that open are fitted with removable, easy-to-clean mosquito nets.

### 2.2.3 Provide sufficient washbasins and ensure the quality of drinking water

- Hot and cold-water washbasin with a tap that is not manually operated (knee, foot, articulated arm or presence sensor control).

Dispensers for :

- disinfectant soap
- paper towels
- disinfectant (optional)
- with protective cream or lotion (recommended)
- a non-hand-operated waste bin for used paper towels

**Note:** The hand-washing facility(ies) should be easily accessible, close to an area of high use and so-called 'dirty' activities.

- Hot and cold-water overflow sink for surface cleaning only. The installation does not have to be located in the production area, but preferably in the storage area for cleaning materials and products.
- Sinks preferably with double basins reserved for washing foodstuffs. If there are not enough sinks, provide for the separation of the various operations over time, of course with intermediate cleaning/disinfection.
- Preferably double sinks for washing glasses, behind the bar-counter.

Ensure the quality of drinking water.

#### ADVICE:

Maintain the installations well, preferably by professional maintenance. Avoid stagnant water. After a period of inactivity, flush the cold-water pipes for at least 5 minutes. The temperature of the hot water should be at the least favourable place of 55°C (legionella prevention action). Clean and decalcify the taps thoroughly. If ice cubes are produced, ensure proper and regular cleaning of the machine, scoop and storage container. For flow systems using drinking water, ensure that filters are changed regularly.

#### RESPONSIBILITES:

The water used in the premises to clean food and prepare dishes must be of drinking water quality and meet the minimum requirements of the amended Grand Ducal Regulation of 7 October 2002 on the quality of water intended for human consumption.

<https://legilux.public.lu/eli/etat/leg/rgd/2002/10/07/n1/jo>

The quality of drinking water is monitored by the municipal authorities. The water supplier (i.e. the local authority) is obliged to publish an analysis of the drinking water at least once a year and, upon request, to provide information on its quality.

However, the municipality is only responsible for the quality of the water up to the business!

If necessary, request an analysis from the Water Management Administration "AGE".



## 2.2.4 Worktops, kitchen utensils and appliances

All surfaces (worktops, cold rooms, baking trays, etc.) that come into contact with food must always be in perfect condition and easy to clean and disinfect. They must be made of smooth/slick, wear-resistant, corrosion-resistant and non-toxic material.

All appliances and machines should be in good condition and included in the hygiene and cleaning plan. Kitchen appliances that are rarely used should be covered to keep them free from dust or other possible contamination.

The working utensils, containers, pots and pans are suitable for the food industry and do not cause damage, e.g. scratches in a Teflon pan.

## 2.3 FOOD PACKAGING AND FOOD EQUIPMENT

Packaging materials should provide adequate protection for the products to minimise contamination, prevent damage and allow for proper labelling. Packaging materials should be clean, not harmful to the organism and should be stored away from possible contamination.

**Note:** Food contact materials and articles are defined as not only packaging and wrappings, but also containers and kitchen utensils, materials, machinery and equipment used in the production, storage or transport of food.

In general, pictograms indicate the purpose of the packaging. For example, certain materials must not be heated.

### 2.3.1 Disposable and recyclable packaging

Old chemical containers should not be recycled for food use. In general, the reuse of single-use packaging (bottles, etc.) should be avoided.

#### **ADVICE:**

Do not use supermarket bags or garbage bags for food storage. Under normal conditions of use (no overheating or contact with toxic products), there is no migration of material between the container and the product whether it is aqueous, fatty, acidic or even alcoholic.

### 2.3.2 Reusable or returnable packaging and equipment

Reusable packaging must be sufficiently durable, easy to clean and, if necessary, to disinfect according to the manufacturer's instructions.

#### PLEASE NOTE:



This pictogram can appear not only on food containers but also on kitchen utensils and gloves.

In order to use gloves for food preparation, the gloves must be intended for food contact. For this reason, the pictogram or a mention indicating food contact must be present on the glove packaging.

It is important to check the manufacturer's instructions (label or packaging, declaration of conformity, data sheet), keep them and follow them.

This obligation does not only apply to packaging, but to all materials and objects that may come into contact with foodstuffs, e.g. pots and pans, dishes, lubricants for food appliances.

Objects that are not intended for food contact should not be used, especially for decoration, e.g. figurines that are not intended for food contact.

In addition, damaged items should be replaced as they may present a health hazard and/or may result in an unacceptable change in the composition of the food, e.g. a pan with a cracked non-stick coating or boards with massive cracks or broken plastic containers.



Further details on e.g. aluminium, melamine or bamboo fibres are available under the following link:

<http://www.securite-alimentaire.public.lu>



## 2.4 HYGIENE AND CLEANLINESS

A well-maintained infrastructure is a guarantee against disease- and spoilage-causing microorganisms. Order and cleanliness are also the business card of the business.

### 2.4.1 Cleaning and disinfection

Act with method!  
Clean before you disinfect!

Eliminate dirt, ensure impeccable cleanliness to avoid the multiplication of germs.

*Cleaning or producing, you have to choose!*  
*Cleaning is good, making less dirt is better!*

#### SOME REFLECTIONS:

- Define a responsible person or a cleaning team.
- Respect cleaning procedures, instructions for the use of products and materials, and safety rules.
- For areas that are difficult to clean, do not neglect manual brushing.
- Poor cleaning results in an increase in germs due to protein and grease residues.
- After cleaning, leave equipment and surfaces dry.

#### BEWARE OF WASHING WITH LARGE AMOUNTS OF WATER!

- Avoid washing the floor with large amounts of water unless precautions are taken and there is a floor drain.
- Avoid high pressure, which can splash dirt on work surfaces, walls, furniture and ceilings.

Before developing the cleaning plan, the following concepts should be known:

- **Cleaning** is the action of removing physical and chemical contamination.
- **Disinfection** is the action of reducing microorganisms to a level that is no longer a health concern. There is no proper disinfection without prior cleaning. Regular and effective cleaning and disinfection of all surfaces is necessary.

It is essential to obtain from the supplier of the cleaning and disinfecting products, the technical and safety data sheets of the products used. The product data sheet describes the procedure for using the product: for which material is the product effective, what concentration is needed, etc.?

The safety data sheet defines, among other things, the procedure to follow in the event of an accident: product in the eyes. Be aware that the cleaning plans drawn up by a supplier of cleaning products are rarely adapted to the establishment! In any case, they should be checked, or even adapted.

## Cleaning plan

A cleaning plan is highly recommended (in some very small family-run businesses where there are no staff, a cleaning schedule may not be necessary...). The plan helps to maintain cleanliness in all places and at all times and, above all, to ensure that nothing is forgotten! This plan can be made in the form of a table.

A cleaning plan must be available to staff in each room.

### DEVELOPMENT OF THE CLEANING PLAN

Surfaces and objects	Everything that needs to be cleaned should be in the cleaning plan
Cleaning products	Product name, use concentration
Cleaning frequency	When and how often should you clean?
Cleaning procedure	What equipment is used to clean? How is it cleaned? Time of action of the cleaning product
Responsibility	Who cleans? Who is responsible for cleaning?
Validation	Date and signature of the person in charge of the cleaning to confirm his/her action

#### DEFINITION OF SURFACES AND OBJECTS TO BE CLEANED :

<b>Premises</b>	Floors, walls, doors and handles, ceilings, drains, sewers...
<b>Equipment</b>	Small utensils, manufacturing moulds, waste bins...
<b>Machinery</b>	Production machinery, fans, air conditioners, seals...
<b>Structures</b>	Tables, drawers, worktops, trolleys...
<b>Sanitary facilities</b>	Washbasin, toilet seat, toilet flush...

#### THE MAIN PRODUCTS FOR CORRECT CLEANING :

- 1. Dishwashing liquid (by hand)**  
Dishwashing liquid for manual washing  
*Pots and pans, small equipment, kitchen utensils...*
- 2. Degreaser**  
Liquid degreaser for cleaning of kitchens  
*Kitchen floor and walls, extractor hood, oven, deep fryer...*
- 3. Cleaner**  
Cleaner for cleaning all surfaces  
*Rinse with water! Respect the time of action!*
- 4. Disinfectant**  
e.g. disinfectant disposable cloths, disinfectant foam  
*For surfaces in direct contact with foodstuffs, such as work surfaces, slicers, cutting boards, etc.*
- 5. Acid cleaner**  
Powerful cleaner for encrusted surfaces  
*Oven, grill, salamander, baking trays and racks...*
- 6. Descaling agent**  
Acidic cleaner to remove limescale deposits  
*Dishwasher, bain-marie, steamer...*
- 7. Glass cleaner**  
Cleaner for glass surfaces  
*Windows, mirrors, etc.*

## Frequency of cleaning

The frequency is to be determined by the person responsible or by the company. The frequency is also defined by the day of the week (e.g. quieter day), by the type of equipment or premises and by the availability of staff.

**When?** after use, per day, per week, per month, per quarter or annually. Tip: For the frequency of more than one day it is advisable to fix the cleaning day. For example: every Monday for a weekly cleaning.

**What?** depending on the premises and equipment

a) Direct contact: work surfaces, recipients, small equipment, machines, etc.

b) Indirect contact: fans, door seals, filters, etc.

**Who?** Define the people, if there are several people. Staff should know how to use the cleaning products and the cleaning technique.

### EXAMPLE :

Door handles should be cleaned and disinfected, preferably daily. For doors and windows, monthly cleaning is sufficient. Except for visible dirt.



### The product data sheet describes :

- The concentration of the product.
- How to use the product.
- The temperature of the water to be used.
- The time of action of the chemical.
- Whether the surface or equipment needs to be rinsed.
- Safety measures.

#### WARNING!

- Do not mix products.
- Respect the dosage recommended by the producer.
- Buy products that are suitable for the food sector.
- Keep the products in the producer's packaging in order to keep the label.

### Provide the necessary and compliant equipment

Brush, squeegee, shovel, broom, mop, etc.

Cleaning materials should be suitable for the food sector. Use smooth handles and plastic brushes etc.

Avoid wood, coconut fibre, etc.

Dirty cleaning equipment does not give a clean result!

After use, the equipment can be heavily contaminated. It should be cleaned and stored away from foodstuffs.

#### ADVICE:

- Avoid using tea towels ("Kichendicher") for cleaning.
- Single-use paper is more hygienic.
- Provide cleaning materials that are easy to maintain.

### Colour-coded identification of cleaning materials

Adopting a colour code helps to identify the use of the material or product. The aim is to limit the risk of contamination by avoiding the use of the same material for different operations. In a cleaning plan, colour coding makes it easier to define materials and tasks. Colour coding is a possibility, but you should not multiply the colours too much... often you can be satisfied with 2 colours, - one specific colour for all the worktops and production equipment and - another for the rest...



#### EXAMPLE OF COLOUR CODING IN A BUSINESS:

**Blue** (cleaning of surfaces)

Doors, lamps, cabinets, chairs, windowsills, radiators, office and furniture

**Yellow** (cleaning of sanitary facilities)

Washbasin, shower, bath, tiles, taps, shelves

**Red** (cleaning of toilets)

Toilet bowls, urinals, tiles adjacent to the "splash zone"

**Green** (kitchen cleaning)

Kitchen surfaces and appliances

**White** (disinfection)

Surfaces and appliances, where necessary and desired

## Details of the cleaning procedure

### Tidy up the room, workstation, instruments

Eliminate organic material (collect waste, don't forget the siphons).

### Scraping off dirt

Spray surfaces with water and scrape off coarse soiling.

### Cleaning

Use of a detergent

- choice according to type of soiling, quality of water, type of cleaning, type of surface,
- use varies according to temperature, mechanical action, concentration, contact time.

### Disinfection

- Eliminate microbes present on a surface: bactericidal and fungicidal action.
- Prevent the multiplication of microbes: bacteriostatic action.

### Rinsing

Rinsing with drinking water to remove residues of the cleaning agents used. Depending on the product, rinsing can take place after cleaning or after disinfection!

### Drying

Limit the amount of chemicals on the surface.

## Why do we need disinfection?

Proper disinfection results in a further reduction of microorganisms on surfaces and equipment.

Disinfection is recommended :

- for work surfaces that come into direct contact with foodstuffs (work surfaces, cutting boards, etc.),
- for equipment not used for heat treatment (meat mincer, slicer, cutter, mixer, scales, etc.)
- for toilets.

### ADVICE:

- Use a disinfectant foam that has the advantage of sticking to vertical surfaces.
- Use a disinfectant that does not require rinsing, but only if it is an alimentary disinfectant!
- Disinfection after a bad cleaning is useless.
- Effective cleaning can eliminate a large proportion of germs. In some cases, disinfection is no longer necessary.

### FACILITATE CLEANING :

- Limit bulky materials on worktables, shelves and the floor.
- Make sure that every corner to be cleaned is accessible.
- Choose equipment that is easy to dismantle and maintain.
- Do not store (products, food, packaging etc.) on the floor.

## 2.4.2 Dishes

### Removal of dishes that come from the customer

The risk of cross-contamination during clearing is to be avoided. The area in the kitchen where the dishes to be served are "passed on" (table, work surface, pass-through, ...) is physically separated from the area where everything that is served from the restaurant is deposited. The food leftovers from the customer's plates and other waste are immediately removed and disposed of. If washing up cannot be done immediately, the dishes should preferably be rinsed.

### Prefer the dishwasher to washing up by hand

The water temperature for the dishwasher is higher than the water temperature for manual washing. Contact with a towel or sponge is limited when using the dishwasher. The contact time of the material with the water is longer and rinsing with clean water is generally more effective.

#### Automatic dishwashing

Precautionary measures:

- Always check the temperature of the wash and rinse water in the machine.

Dishwasher water temperatures:

Pre-rinse zone: 35 to 40°C

Wash zone: 55-60°C

Rinse zone: 85-90°C

One reason for unclean dishes could be that the pre-rinse temperature is too high, while wet dishes could be the result of a low rinse temperature.

- Check the automatic detergent dosing system regularly (monthly).
- Check the jets regularly for proper operation and remove any traces of limescale regularly.
- Avoid dirty objects coming into contact with clean objects.
- Ensure that kitchen utensils and small equipment are rinsed thoroughly.
- Allow sufficient time for cooking utensils and small equipment to drain and for the rinse water to evaporate. Keep the use of towels to a minimum.
- Remove any dirt from the filter after each service and clean the filter with hot water.

### Use of wipes

If necessary, always use clean towels and change them after each service. Preferably avoid reusing towels that have dried out after use.



#### SEPARATE CLEAN AND DIRTY TASKS

- Sort out dirty dishes and put them in the dishwasher.
- Take out clean dishes and put them away.

Always wash your hands before handling clean utensils and equipment.

Immediately store clean cooking utensils and equipment in a dust-free and, if possible, cool place, away from fumes.



### Manual dishwashing

Precautionary measures:

- Use the warmest possible wash water, i.e. the maximum temperature tolerable for the hands.
- Replace wash and rinse water as often as necessary.
- Dose detergents correctly.
- Change sponges and other utensils used for washing dishes frequently.
- Arrange kitchen utensils and small equipment in such a way as to facilitate their draining and to limit the use of towels.

### Dishwashing of large equipment

The recommendations for washing large equipment are largely comparable to those for washing kitchen utensils and small equipment. The only difference is that the large equipment was generally kept in the kitchen and was not in contact with a customer.

## 2.4.3 Clean and dirty linen

### Disposal of dishes from the customer

Kitchen clothes, towels, dishcloths and table linen should preferably be stored in a central location away from kitchen production. The laundry should be located in a separate area. Clean linen should not come into contact with dirty linen.



→ Provide sufficient clean linen, especially work clothes, to allow immediate replacement when soiled.

## 2.4.4 Pest prevention and control

A pest control plan is the first step in detecting the presence of pests and the second step in eliminating them. Premises and equipment should be kept in good repair and properly and regularly cleaned to prevent access by pests and to eliminate potential breeding sites.

### Pests

*Rodents* (rats, mice, etc.) can transmit micro-organisms that can cause serious diseases through their droppings and contact. These infections come from indirect contact with sewage, excrement or directly by touching the rodent. Bites can cause damage and contaminate foodstuffs.

*Flying insects* (wasps, flies, mosquitoes, etc.) and *crawling insects* (cafards, cockroaches, ants, etc.) are a permanent source of contamination.

### The best way is prevention to keep pests out

- Openings (doors, windows) should be kept as tightly closed as possible. However, windows may be left open provided they are fitted with appropriate protection (e.g. mosquito netting or screens).
- Holes (for cables, pipes or ducts) should be plugged or sealed.
- Drain baskets for drain grates should be in place and kept clean. Ensure that drain traps are always filled with water. Dry drains make it easier for cockroaches to enter the premises.
- Limit sources of moisture (stagnant water, etc.) in the premises.
- Avoid dirty transport packaging such as cardboard boxes, pallets and wooden crates in production or storage rooms.
- Keep foodstuffs in storage always covered or locked up.
- Keep waste bins closed and clean.

#### THE PEST CONTROL PLAN :

A complete file includes :  
 A contract with a specialised firm.  
 A plan with bait positioning.  
 Technical data sheets of the products used.  
 Regular control reports.

### 2.4.5 Waste management and bins

- Waste prevention.
- Our aim will be to reduce waste as much as possible.
- Respect for the environment.
- Recycling is a legal requirement and sorting waste takes time.
- The more waste you avoid, the less it will cost you.

#### PRECAUTIONARY MEASURES :

- Regularly remove waste, avoiding contact with foodstuffs.
- Food waste and other waste should be removed as quickly as possible from the production and distribution premises. Certainly, dispose of it daily or after each service.
- Make sure that waste does not cross the clean areas in the kitchen.

#### WASTE BINS :

- Use easily washable and disinfectable bins or strong, waterproof disposable bags. The lid of the bin should open with a foot pedal. Waste bins should be placed in a strategically ideal and safe location. Make sure that the bins are cleaned regularly, especially those in the production area.

### Separate storage of waste and packaging

See Chapter 2.1.7



## **3. STAFF HYGIENE**

**3.1 STAFF HEALTH**

**3.2 APPROPRIATE HYGIENIC BEHAVIOUR**

**3.3 TRAINING AND INSTRUCTIONS**



**Any person working in a food handling area should ensure that they do not contaminate food by maintaining a high standard of personal cleanliness and by wearing suitable and clean clothing to protect themselves where necessary.**

### Case of outside persons

People from outside the company (maintenance, deliveries, etc.) are likely to circulate on the premises. To this end, specific measures must be taken to avoid any risk of contamination of the working environment and the products: provision of protective clothing, traffic circuit, intervention times (for example intervention outside of production hours), etc.

## 3.1 STAFF HEALTH

Staff should be in a state of health that is not likely to affect food safety. The operator of the business must provide for a health check-up suitable for employment in the food sector on recruitment or after a long illness. Medical examinations (occupational medicine) must be carried out in accordance with the regulations in force and all certificates of health must be archived and available for inspection.

If you have a cough or cold, wear a mask if necessary and strictly observe hand washing.

Report any serious illness involving a risk of food contamination (e.g. viral hepatitis A, diarrhoea, vomiting, etc.) to your supervisor.

In the event of a wound, the wound must be treated correctly (disinfection, dressing, etc.). The presence of a first aid kit is recommended.

## 3.2 APPROPRIATE HYGIENIC BEHAVIOUR

The systematic awareness-raising of staff on good hygiene practices is a necessity in order to ensure that work is carried out in the most hygienic way possible and to prevent people from developing bad habits.

### **SOME EXAMPLES OF GOOD HYGIENIC BEHAVIOUR :**

- It is elementary to take care of personal hygiene before going to work.
- Do not wear civilian clothes or jewellery (watches, rings, bracelets, earrings, piercings, etc.) while at work.
- When leaving the workplace to go to the toilet or to take a break (smoking, shopping, relaxing, etc.), remove or protect work clothes if possible.
- Do not bring personal items (e.g. mobile phones) into production areas.
- Ensure safe hand hygiene at all times (frequent washing and after any dirty operation).
- Avoid food contact with sweat.
- Do not eat in the kitchen or behind the counter during service hours.
- Taste food only with a clean spoon intended for that purpose and dispose of it in the washing-up area after tasting.
- Do not blow your nose, cough or sneeze on the food.
- Respect the ban on smoking in the business.

### 3.2.1 Appropriate clothing

#### The hair

- Hair should be kept short or tied up.
- Keep hair clean.
- Cover all hair with a cap (cap, disposable cap, cap washed daily, ...).
- If there is no hair, it is still advisable to wear a cap.
- Long beards should be avoided or covered.
- Do not put your hands on your head during production or service.

Staff should be provided with clean, complete and frequently changed clothing for use during working hours only.

#### IN THE KITCHEN, THE OUTFIT CONSISTS OF:

- trousers,
- a jacket and possibly an apron,
- a headdress and
- specific/adapted shoes.

#### TO BE RESPECTED:

- Keep clean work clothes in a clean and protected place.
- Do not use the clothing as a hand towel.
- Keep dirty laundry out of production.

**Particular importance!** After handling waste and before moving on to production, personal hygiene must be observed, especially the instructions for hygienic hand washing.





### 3.2.2 Hygienic hand washing

Hands, which are most often in direct contact with foodstuffs, must be considered the first tool in the catering industry. Hand hygiene is the essential measure to be applied to prevent the transmission of germs. This explains why special attention must be paid to their cleanliness.

#### PRECAUTIONARY MEASURES :

- Wear short nails.
  - Do not apply nail polish.
  - Avoid artificial nails.
  - Do not wear jewellery.
- Exception: wedding rings, which are allowed if they have a smooth surface and are easy to clean and in a perfect state of cleanliness.

#### Hand washing frequency

Thorough hand washing is a time-consuming process. It is necessary to define the frequency and the situations in which it should be performed. It is important to wash hands in situations where it is almost certain that hands have been soiled. This immediate washing after dirty handling will not only bring the hands back to a satisfactory sanitary condition, but will also prevent re-contamination of contact surfaces.

#### Notes:

- Preventive hand moisturising is recommended outside working hours to avoid dry and damaged skin. During work, it should be avoided because the cream may contaminate the food.
- If the contact surfaces (handles, tools, ...) are massively contaminated, hand hygiene is not possible, because immediate recontamination is possible as soon as the activity resumes.

#### Hand washing after handling or in unclean situations

##### A FEW EXAMPLES:

- Upon arrival at the workplace.
- After going to the toilet or changing room.
- After blowing your nose.
- After touching a telephone.
- After handling waste bins.
- After handling delivery packaging (delivery boxes, etc.). After handling risky or contaminated food (eggs in shell, earthy vegetables, poultry, game meat, fish, etc.).
- When switching from handling raw foodstuffs to handling cooked foodstuffs.

#### HOW TO WASH YOUR HANDS?

Rinse hands with warm water

to remove surface soiling.

Apply enough soap

A disinfectant liquid soap is recommended, otherwise adequate disinfection should be provided after hand washing.

Scrub hands thoroughly

with emphasis on the critical areas of the hand up to the forearm.

Rinse well with clean warm water

Dry with single-use (paper) towels.

### Wearing gloves

If gloves are worn, the user should wash his hands before putting them on. Gloves should be changed as often as necessary. Do not pick up clean or finished food with the same gloves as raw or dirty food.

Wearing gloves is not a legal requirement. For grilling operations, where there is no direct contact with foodstuffs due to the use of utensils (e.g. tongs), gloves are not recommended due to the danger of burns.

To ensure a correct level of hand hygiene, it is preferable to wash your hands after dirty operations and before handling food.

The use of single-use gloves may be recommended for certain delicate operations such as the final dressing of foodstuffs that no longer undergo a reheating stage

### Hand wash basins - Provide sufficient wash basins

See Chapter 2.2.3

## 3.3 TRAINING AND INSTRUCTIONS

Food business operators must ensure that :

- staff are supervised and have instructions and/or training in food hygiene appropriate to their work,
- those responsible for implementing the recommendations of the guide have received appropriate training in the application of the HACCP principles.


The company must keep all certificates or attendance lists (with title, content, date, name of trainer, names of participants and signatures) and repeat the training as necessary.

Support is provided by Horesca, the federation of the industry.



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- 4.1 RECEPTION OF GOODS
  - 4.2 FOOD AND NON-FOOD STORAGE
  - 4.3 DE-STOCKING AND DECONDITIONING
  - 4.4 PEELING AND WASHING VEGETABLES
  - 4.5 SLICING AND PORTIONING
  - 4.6 SPECIFIC PREPARATION TECHNIQUES
  - 4.7 CONSERVATION OF FOODSTUFFS
  - 4.8 COLD CHAIN
  - 4.9 HEAT TREATMENTS
  - 4.10 SERVICE

## 4. RECEPTION, PRODUCTION AND DISTRIBUTION OF FOODSTUFFS

- 
- 4.11 PRESENTATION OF A BUFFET
  - 4.12 TAKEAWAY
  - 4.13 VENDING MACHINE SALES
  - 4.14 OVERPRODUCTION AND LEFTOVERS
  - 4.15 LEFTOVERS FOR TAKEAWAY
  - 4.16 DONATIONS



It is important to carefully select suppliers who follow good hygiene practices or who have an HACCP system. The quality of the finished product depends to a large extent on the quality of the raw materials. The price of raw materials cannot be the only selection criterion. There is a clear trend towards regional and quality products.

A good collaboration with suppliers is essential to facilitate communication and to be able to :

- Ensure product traceability.
- Feedback on complaints.
- Obtain technical data sheets on the products being delivered.
- Obtain a correct declaration of allergens.

## 4.1 RECEPTION OF GOODS

The main principles of these approaches are:

- Cleanliness of trucks.
- Cleanliness of the protective clothing and hygienic behaviour of the delivery driver.
- Separation of the different product categories delivered.

Respect for the goods with regard to:

- quality,
- quantity,
- temperature,
- cleanliness of the packaging,
- intact condition of the packaging,
- labelling.

### UPON RECEPTION :

- Check that the delivery corresponds to the order.
- Respect the cold chain.
- Ensure regular monitoring of temperatures.
- Record the controls.
- Checking :
  - appearance and texture,
  - colour,
  - odour,
  - the use-by date (expiration date) of the foodstuffs,
  - the best before date of foodstuffs.

Obligation to dispose of or return :

- Any food that has been altered (odour, colour or texture change) or that has expired and is no longer fit for consumption (beyond the use-by date). Thoroughly check food with an expired best before date, taste and smell.
- Any food that is not at the correct temperature.





- Any food that may have been contaminated, for example:
  - Food with open or damaged packaging.
  - Leaking recipients.
  - Broken plastic packaging.
  - Eggs with broken or dirty shells.
  - Fruit or vegetables that are rotten, blackened or split.
  - Meat or fish with an unusual colour or smell.
  - Potatoes with green flesh.
  - Bulging or cracked cans...

#### PRECAUTIONARY MEASURES :

- Document the control of the delivery (e.g. by stamping the delivery note).
- Put away foodstuffs immediately upon receipt. Sensitive products should be put away first.
- Define delivery times to avoid delivery during peak hours or when there are no staff present at the reception.
- Do not accept a delivery of incorrect goods and report this to the supplier if necessary.
- Do not accept food deliveries without proper reception (e.g. deliveries lying in the corridors or in front of the company's door).
- Remove any contaminated transport packaging before storing the goods (plastic, corrugated cardboard, wooden pallets, etc.)

#### DATE MARKING ON PRE-PACKAGED FOODSTUFFS

Several types of date marking exist for foodstuffs.

This type of marking is only mandatory for pre-packaged foodstuffs.

##### Best Before date (BBD)

Their labelling includes the words "best before..." or "best before the end of...". This type of date is reserved for foodstuffs that are not highly perishable.

The BBD mainly concerns :

- Dry foods (pasta, biscuits, coffee, etc.).
- Sterilised products (canned food, UHT milk).
- Frozen products or drinks for example.

These products are perfectly edible after the expiry date.

##### Use-By Date (UBD) (Expiration Date)

This type of date is reserved for foodstuffs that are microbiologically highly perishable.

These foods must not be consumed after the date has passed.

#### DEROGATION: FOODS WITHOUT DATE MARKING

There are some foods for which no date marking is required by the regulations. These are very stable foods (cooking salt, vinegars, solid sugars, etc.) which keep particularly well or which can be used very quickly without being microbiologically very perishable.



<https://securite-alimentaire.public.lu/fr/faq/indication-date.html>

## 4.2 FOOD AND NON-FOOD STORAGE

As soon as the delivered or purchased goods arrive in the business for storage, they must be properly stored. The premises must be clearly structured and food must be stored at appropriate temperatures.

### PRECAUTIONARY MEASURES:

- Keep storage facilities in good condition and clean (cleaning plan).
- Do not store food products in direct contact with the floor.
- Packaged food that does not need to be kept cool should be stored in a dry, well-ventilated area.
- Visually check the condition of the product.
- Ensure intact packaging.
- Ensure proper labelling. If possible, keep opened products in their original packaging in order to keep the producer's label = traceability.
- Protect open food (e.g. in a closed container or covered with cling film).
- Respect the "first in - first out" FIFO principle. Newly arrived foods are stored towards the back so that the closest expiry dates (Use-By and Best Before Dates) are at the front and used first.
- Keep an eye on the use-by dates (UBD) and best before dates (BBD).
- Avoid storing too many products.
- Order packaging that is suitable for the purpose.
- Respect the storage temperatures recommended by the producer.
- Check the temperature of refrigerators and freezers at least once a day (preferably upon staff arrival) using a reliable thermometer.
- Encourage cold circulation. Ventilation grids in refrigerated chambers should not be blocked by a pile of products.
- Where products cannot be separated in refrigerated enclosures place:
  - The least contaminated at the top, the most contaminated at the bottom.
  - The most sensitive at the top, the least sensitive at the bottom.
  - They should be divided into sectors: raw products (unwashed fruit and vegetables, products still in their over-wrapping, etc.) should be placed on the bottom shelves, while preparations should be placed on the top.
- Raw materials are separated from finished products.
- Separate visibly the different categories of products:
  - Products of animal and plant origin.
  - Food and non-food products.
- Goods for professional use are clearly separated from goods for private use.

### Store away from foodstuffs:

- Chemical and toxic products (e.g. cleaning products, detergents, etc.).
- DIY and painting tools.
- Waste and returnable packaging.

## 4.3 DE-STOCKING AND DECONDITIONING

When unpacking food and products, appropriate measures must be taken.

### PRECAUTIONARY MEASURES:

- Protect clean work clothes.
- Remove dirty packaging and transport packaging used by suppliers.
- Clean and disinfect the work surface after unpacking.
- Wash hands after handling cartons or other transport packaging.
- Ensure that food packaging is clean when transfilling.

### UNBOXING PROCEDURE

- Clean dusty cans before opening them. Make sure that no metal residues get into the food when opening a can.
- Rinse food residues directly from the can opener with hot water. Clean the can opener with detergent and disinfect it.
- Use kitchen containers (with lids if stored) as soon as possible to replace the original packaging material which is disposed of directly.
- The information concerning this product (name, origin, possibly the batch number) must however be copied onto the new packaging if it is not used immediately and the new use-by date must be mentioned.



## 4.4 PEELING AND WASHING VEGETABLES

Respecting the forward march of goods and the use of a clean sink requires special attention in order to avoid cross-contamination.

### PRECAUTIONARY MEASURES:

- Avoid any crossing between clean and dirty products.
- Remove products from the refrigerator only at the last moment, process them immediately and preferably at a cool room temperature.
- Limit handling time and monitor the cold chain.
- Always follow a logical order: first clean, wash, peel and then cut.
- Separate waste (packaging, peelings, etc.) and dispose of it directly in a covered bin.
- If a so-called "table bin" is used, it must be emptied into a kitchen bin with a lid immediately after the relevant operations.
- Wash food preferably in a dedicated sink. If only one sink is available, use a container for rinsing foodstuffs only or clean the sink thoroughly.
- Wash high-risk foods such as fruit, salads, vegetables, herbs, etc. properly in cold drinking water.
- Check the cleanliness of the spinner when using it for salad, vegetables etc.  
Even fourth range salads and vegetables (prepared and packaged) require washing.

### NOTE:

- There are techniques to reduce germs when cleaning vegetables. Acidification of the water with vinegar or the use of suitable chlorine or disinfection products, but beware of concentrations and the risk of formation of disinfection by-products. A thorough rinse is always necessary after such an operation.

### CUTTING BOARDS

- Equipment and cutting boards are in good condition and easy to clean and disinfect.
- Separate the cutting of raw and cooked foods.
- Colour-coding of boards can facilitate the work. Otherwise, the order of cutting, from the least contaminated to the most contaminated, must be followed.
- Respect the frequency of cleaning (and possibly disinfection) of equipment and cutting boards between each handling and after each use.



## 4.5 SLICING AND PORTIONING

Because of the direct contact of the equipment with the food to be sliced and portioned, it is absolutely necessary to observe perfect hygiene during processing and to use impeccable equipment and work surfaces.

### PRECAUTIONARY MEASURES:

- Use clean equipment and appropriate food packaging. If necessary, clean or even disinfect work surfaces, cutting boards, knives, slicers, etc. between two operations.
- Food that has been handled is covered and put back in the refrigerator immediately.
- Close opened packages and use as soon as possible.
- Ensure traceability and monitor compliance with labelling. Especially when unpacking and repackaging in smaller portions.  
See labelling in chapter 5.1

## 4.6 SPECIFIC PREPARATION TECHNIQUES

Take adequate measures during preparation to avoid contamination and maintain safe temperatures.

### 4.6.1 Dressing with a pastry bag

- Use suitable and clean tips ("douilles").
- Reusable pastry bags should be kept clean, thoroughly cleaned, disinfected, dried and stored properly.
- The use of disposable pastry bags is recommended.
- Never suck on the tip of a filled piping bag!

### 4.6.2 Whipping and mixing

- Cleanliness of the equipment used and hand hygiene are crucial.
- Limit handling time and monitor the cold chain.
- Pay attention to the heating temperature when preparing high-risk foods (minced food, hollandaise sauce, sabayon, etc.).
- Never taste food with your fingers!

### 4.6.3 Breading

- Breading a food should be planned at the last moment if possible.
- Breadcrumbs should be stored in a dry, clean place.
- Keep the food preparation as long as possible in the refrigerator.
- Limit handling time and monitor the cold chain.
- No leftover breading containing eggs may be stored.



## 4.7 CONSERVATION OF FOODSTUFFS

The aim is to preserve the taste, nutritional, textural and colour characteristics of the food, as well as its edibility, and to avoid possible food poisoning.

Depending on the foodstuff and the means available, different techniques are used in the catering industry to preserve food. Common methods of food preservation include refrigeration, freezing, vacuum packing, etc.

Other methods not only help to maintain the food but also add flavour, such as salting, sweetening (e.g. jam), adding an acid (e.g. vinegar), adding oil or smoking.

Less common in the catering industry are methods such as drying, pasteurisation, appertisation (canning), addition of preservatives, etc.

When using preservatives or food additives in general (preservatives, sweeteners, colourings etc.):

- Compliance with the relevant regulations: (EC Regulation No. 1333/2008).
- Buy these improvers from suppliers who can provide the products in food quality.
- Respect the producer's instructions for use because for some improvers maximum limits must be respected in the finished product.



More information is available under:

<https://securite-alimentaire.public.lu/fr/professionnel/Denrees-alimentaires/Additifs.html>

### 4.7.1 Vacuum packaging

Vacuum packing = removing air and sealing the package hermetically.

The principle of vacuum packaging is to remove the air between the food and the packaging. The process does not sanitise the food.

There are two types of bacteria:

1. Aerobic bacteria that need oxygen to live.
2. Anaerobic bacteria that cannot live in the presence of oxygen.

Vacuum packing reduces the amount of air and therefore the action of oxygen. Aerobic bacteria will be hindered. But anaerobic bacteria remain a risk. By removing the ambient air from the packaging, the risk of spoilage can be reduced.

Good practices must be ensured for vacuum storage. Correct and tight vacuum packing avoids moisture loss in products such as meat and cheese, so that products do not lose weight during storage before consumption. Also, dry products receive optimal protection against moisture penetration.

What is less used in catering is the creation of modified or protective atmospheres.

**REMINDER:**

Oxygen causes the breakdown of proteins, lipids (fats) and carbohydrates by bacteria and/or enzymes naturally present in food.

**PRECAUTIONARY MEASURES:**

- Ensure that the vacuum packing machine is clean and that the right location is chosen. It is not necessary to have a specific room, but strict hygiene conditions must be observed.
- The packaging must be food-grade and designed for vacuum storage. Use bags adapted to the volume and nature of the products ( products with bones...) to be vacuum packed. Only specific bags for vacuum cooking should be used.
- Vacuum bags should be stored in a clean, dry place away from contamination.
- This practice should be reserved for products of impeccable microbiological quality.
- The bags should not be overfilled and food residues and folds at the top of the bag should be removed to ensure a perfect seal.
- The risk is all the greater if the vacuum packaging is poorly done and the vacuum-packed products are not stored cold (temperature between 0 and +4°C). After opening the package, it is preferable to use the products as soon as possible.
- It is strongly recommended that staff undergo specialised training in the practice of vacuum packaging.



### 4.7.2 Marinating/Pickling

By definition, a marinade consists of immersing meat, fish and condiments in an aromatic solution based on vinegar, wine, lemon or oil.

In addition to flavouring the preparation, the purpose of the marinade, when correctly carried out, is to reduce bacterial activity, which is responsible for the deterioration of the product, and thus to allow its consumption with or without cooking by acidification and/or air deprivation. Acidification only stabilises the product and does not sanitise it. The covering marination (oil-based) results in the formation of a deaerated medium.

#### PRECAUTIONARY MEASURES:

- Only marinate food of good quality and freshness.
- It is not advisable to marinate defrosted food.
- Ensure that the marinade is sufficiently acidic to prolong conservation.
- Cover, label and store products to be marinated properly.
- Limit the storage time of a hot marinade.
- Keep marinated foods cool.
- Do not reuse marinades.

### 4.7.3 Salting

Salting is defined as the action of imbuing a perishable foodstuff (fish, meat, etc.) with salt to promote its preservation. Indeed, the presence of salt leads to a reduction in the quantities of water and oxygen available and, when the salting process is properly carried out, results in a slowing down of most bacteria. However, salting does not sanitise the food and it is therefore advisable to reserve quality and freshness of the products for this operation. As the level of salt incorporated has decreased over time, it is therefore necessary to keep salted products cold.

### 4.7.4 Smoking

Besides salting and drying, smoking belongs to the group of the three oldest preservation processes. The main roles of smoking are: flavouring, colouring and preservation of the food.

Hot smoking has an anti-microbial effect, due to its high temperature of up to 100°C. It is recommended to use a stainless-steel smoker. Other metals (galvanised steel, zinc-plated steel or aluminium) release heavy metals during hot smoking and can contaminate the smoked products. If the smoker is heated, there must be a grease trap to prevent grease or cooking juices from dripping into the sawdust, which causes carcinogenic smoke. Sawdust, wood shavings, etc. must always come from a safe and 100% natural source. Damp, mouldy, treated wood etc. can lead to the transfer of harmful substances into the smoked products.

Like salting, today's smoking is less heavy and therefore only very partially fulfils its sanitising function.

The aim of smoking is no longer so much to ensure long preservation as to give the product particular organoleptic characteristics (taste, smell and colour). It is therefore necessary to smoke food of satisfactory sanitary quality. This action must be combined with the conservation action of cold.

#### 4.7.5 Lacto-fermentation

Lacto-fermentation of fruit and vegetables, a natural preservation process, is making a comeback in the kitchen.

Lacto-fermentation is the conversion of carbohydrates into lactic acid by lactic ferments (specific naturally occurring micro-organisms). This fermentation has been used for centuries to preserve milk (e.g. yoghurt), vegetables (e.g. sauerkraut) and meat (e.g. sausage).

There are no precise regulations (yet) concerning the fermentation of vegetables. In order to check that the fermentation process is effective, the pH-value (acid content) of the fermented preparations should be checked before storing them. This must be less than or equal to 4 to ensure that pathogenic bacteria cannot multiply.

Only fresh foods can be used. Fruits and vegetables from the 1<sup>st</sup> or 4<sup>th</sup> range or vacuum packed cannot be used for this process. The natural flora must be preserved.

#### 4.7.6 Cooking

Cooking is a decisive step for the future safety of the product.

The degree of effectiveness in terms of sanitation depends on the core temperature and the cooking time. The higher the pasteurisation value of the cooking process (time/temperature combination), the higher the proportion of germs destroyed (e.g. pasteurisation - heat treatment between 62°C and 88°C).

The cook must base his decision to cook at different temperatures on a risk analysis.

Cooking techniques see chapter 4.9



## 4.8 COLD CHAIN

### Compliance with temperatures

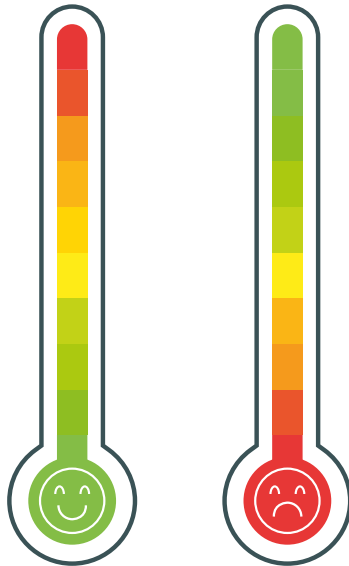
The development of micro-organisms is largely dependent on temperature. At cold (positive) temperatures, bacteria multiply slowly. Very cold temperatures (negative cold) prevent their growth but do not kill them.

To prevent the growth of pathogenic micro-organisms or the formation of toxins, it is necessary to ensure that temperatures are appropriate:

- On receipt of goods.
- During storage.
- During production.
- When food is kept at temperature.
- During distribution or even delivery.

### Danger zone

In general, the critical temperatures of foodstuffs are between 10°C and 65°C throughout the entire process from production to distribution! The safe temperature may vary depending on the nature of the food.



### Probe or infrared thermometer?

- A probe thermometer measures the core temperature (meat, sauce, etc.), which is more accurate. When the consistency of the product does not allow the probe to penetrate the product, which can be the case with frozen products, the probe will be stuck between the foodstuffs.
- An infrared thermometer (also known as a laser thermometer) measures the temperature at a distance and does not come into contact with the food. The temperature measured is therefore that of the surface, which allows for faster control. When measuring, the distance to be kept between the device and the product is prescribed by the thermometer manufacturer. The measurement is carried out directly on the product and should never be carried out on the surface of a refrigerated container or on the cooling plate of a refrigerated display case (reflection of the IR ray). Reflective surfaces should also be avoided (see manufacturer's instructions).

### How to measure the temperature?

- Get a reliable thermometer that is suitable for the purpose.
- Choose a thermometer with a probe that is suitable for measuring both solid as well as liquid products.
- Clean and disinfect (e.g. with alcohol wipes) the probe thoroughly after each use or after measuring the temperature of different products (raw, prepared).
- Document and keep the results of the measurements, mentioning the date, the product and the name/tag of the person who took the measurements.

The temperature of refrigerators and freezers is monitored and recorded daily. During the defrost cycle of the freezer or during intensive use of the refrigerator the surface temperature may be much higher than the core temperature of the products.

#### CONTROL POSSIBILITIES:

- Either by continuous automated recording.
- Or by a daily manual recording of the temperature displayed inside the refrigerated unit.
- Or by measuring the temperature of the products in the cold rooms, refrigerators, freezers, etc.



#### 4.8.1 Recommended temperatures for the storage of foodstuffs

COLD PRODUCT TEMPERATURES - <u>Maximum limits</u>					
Nature of the foodstuff		Storage / Warehousing (h)	Occasional maximum tolerance (e)	SECUALIM criteria	
				NC limit (f)	Removal (g)
Frozen or deep-frozen products					
Frozen / <b>deep-frozen</b> products		- 18°C	+ 3°C	- 15°C	> - 5°C
Ice cream	Stored and packed	- 15°C	+ 3°C	- 12°C	> - 5°C
	Direct consumption	- 12°C	+ 3°C	- 9°C	> - 5°C
	Soft Ice	+ 3°C	+ 3°C	+ 6°C	> + 7°C
Fishery products					
<u>Living bivalve molluscs</u> (oysters, mussels, snails, and other shellfish) (b)		+ 10°C	/	+ 10°C	> + 15°C
<u>Fresh</u> or defrosted <u>fish</u> and chilled cooked <u>crustacean and mollusc products</u> (a)		Melting ice or its temperature 0°C à + 2°C	+/- 2°C	+ 4°C	> + 8°C
<u>Fishery products</u> (smoked / marinated)		+ 7°C	+/- 2°C	+ 9°C	> + 12°C
Entire and/or uncut and or non-boneless animals					
<u>Meat</u>	Poultry / rabbit	+ 4°C	+/- 2°C	+ 6°C	> + 8°C
	Small game	+ 4°C	+/- 2°C	+ 6°C	> + 8°C
	Big game	+ 7°C	+/- 2°C	+ 9°C	> + 10°C
	Domestic ungulates	7°C	+/- 2°C	+ 9°C	> + 10°C
Meat and meat products					
<u>Meat</u>	Minced meat and preparations (a)	+ 2°C	+/- 2°C	+ 4°C	> + 5°C
	Offal and preparations	+ 3°C	+/- 2°C	+ 5°C	> + 6°C
	Cut meat	+ 4°C	+/- 2°C	+ 6°C	> + 8°C
	Meat preparations	+ 4°C	+/- 2°C	+ 6°C	> + 8°C
Eggs and egg products					
<u>Eggs</u>	Fresh (recommended)	between + 5°C + 8°C		Room temperature (i)	
	Ovo-products except UHT products	+ 4°C	+/- 2°C	+ 6°C	> + 8°C
Catering or pastry products					
<u>Pastries</u> (with unbaked toppings)		+ 4°C	+/- 2°C	+ 6°C	> + 10°C
<u>Catering products</u> (mixed salads, sandwiches (j), etc.)		+ 4°C	+/- 3°C	+ 7°C	> + 10°C
Dairy products					
<u>Dairy products</u>	Raw milk	+ 4°C	+/- 2°C	+ 6°C	> + 8°C
	Pasteurised milk	+ 8°C	+/- 2°C	+ 10°C	> + 12°C
	Fresh cream	+ 4°C	+/- 2°C	+ 6°C	> + 10°C
	Dairy products	+ 7°C	+/- 2°C	+ 9°C	> + 12°C
Daily sales showcases (d)					
Products in the <u>sales showcases</u>		6°C	+/- 2°C	+ 8°C	> + 10°C
Other products					
<u>Bulk fruit and vegetables</u>		According to supplier recommendations		Room temperature (i)	
<u>Chocolates / pralines</u>		According to supplier recommendations		Room temperature (i)	

### TEMPERATURE OF HOT PRODUCTS - Minimum limits

Nature of the foodstuff	Storage / Warehousing (d)	Occasional maximum tolerance (e)	SECUALIM criteria	
			NC limit (f)	Removal (g)
Products stored / delivered hot	+ 65°C	- 2°C	+ 63°C	< + 55°C
Hot products in vending machines (c)	+ 70°C	- 2°C	+ 68°C	< + 60°C

### FRYING TEMPERATURE

Nature of the foodstuff	Frying	Maximum tolerance	NC limit (f)
Deep fryer oil	< 175°C	max. 180°C	> + 180°C

- Same day use, without preservatives; for minced meat prepared and consumed on the spot after preparation, a tolerance of +5°C may be applied.
- Cannot be opened.
- The sale is interrupted as soon as the temperature drops below 68°C.
- Products in the sales showcase must be transferred to cold storage overnight, unless the showcase is capable of ensuring a maximum temperature of 4°C.
- Tolerances do not apply to chilled and pre-packaged products with a storage temperature (as the use-by date has been defined on the basis of this temperature to be respected). These tolerances must be limited in time (t=time during which the storage/warehousing temperature limit can be exceeded).
- The temperature non-conformity limit at which corrective action is required to resolve the problem when the time 't' is exceeded.
- Limit at which the control authorities proceed to the withdrawal of the products concerned.
- The legislative references can be found in the table on the next page.
- The storage time must be adapted according to the storage temperature (if the eggs are stored for more than 14 days, they must be stored in the refrigerator).
- Sandwiches based on "filet américain" shall be considered as "Minced and prepared". The tolerance of +5°C described in (a) does not apply to pre-made sandwiches.
- Caution: Room temperature means normal room temperature (+/-20°C).

#### PRECAUTIONARY MEASURES:

- Avoid installing a refrigerator or freezer in a room with too high a temperature.
- Limit the time that fridges/freezers are open.
- Promote easy circulation of cold air between foods.
- Provide for regular defrosting of refrigerators and freezers.
- Check the calibration of thermometers.
- Check the temperature daily, setting target and limit temperatures.

## LEGISLATIVE REFERENCES

Frozen products	(7)+(9)+(10) +(11)+(12)
Ice cream	(9)
Fresh or defrosted fishery products and chilled cooked crustacean and mollusc products (except live fishery and shellfish products)	(1)+(9)
Bivalve molluscs (oysters, mussels, snails, and other shellfish)	(11)
Fishery products (smoked / marinated)	(9)
Poultry and lagomorph meat	(6)+(12)
Game meat	(4)+(12)
Meat of domestic ungulates	(3)+(12)
Minced meat and minced meat preparations	(2)+(12)
Offal and preparations containing meat Offal	(2)+(3)+(9)+(12)
Fresh meat and fresh meat preparations	(2)+(3)+(5) +(9)+(12)
Fresh eggs	(9)+(12)
Ovo-products except UHT products	(7)+(9)+(12)
Pastry products	(9)
Catering products	(9)
Milk, dairy products	(8)+(9)+(12)
Products in the sales showcases	(9)
Products kept or delivered hot	(9)
Hot products in vending machines	(11)

- (1) Ministerial Regulation of 7 October 1997 on the health rules governing the production and placing on the market of fishery products.
- (2) Grand-Ducal Regulation of 8 July 1996 laying down the requirements applicable to the production and placing on the market of minced meat and meat preparations.
- (3) Grand-Ducal Regulation of 7 June 1996 on health conditions for the production and placing on the market of fresh meat.
- (4) Grand-Ducal Regulation of 4 February 1994 on health and animal health problems relating to the placing on the market of wild game meat.
- (5) Grand-Ducal Regulation of 10 November 1993 on health problems relating to the production and placing on the market of meat products and certain other products of animal origin.
- (6) Grand-Ducal Regulation of 19 April 1994 on health problems relating to the production and placing on the market of fresh poultry meat.
- (7) Grand-Ducal Regulation of 19 October 1994 on hygiene and health problems relating to the production and placing on the market of egg products.
- (8) Ministerial Regulation of 10 August 1995 on the production and placing on the market of raw milk, heat-treated milk and milk-based products.
- (9) Guide to good hygiene practices and the application of HACCP principles, published by the Chamber of Trades and validated by the Minister of Health, 2021
- (10) Grand-Ducal Regulation of 8 April 1991 on deep-frozen foodstuffs intended for human consumption.
- (11) Grand Ducal Regulation of 4 July 1988 on hygiene in the trade of foodstuffs.
- (12) Regulation (EC) No 853/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin.

## 4.8.2 Preparation

### Cold production at risk

Eggs, desserts, fish, salads, carpaccio, filet américain... A final product temperature of maximum 4°C is recommended.

#### PRECAUTIONARY MEASURES:

- Reduce room temperature as much as possible.
- Keep food at a maximum of 4°C for as long as possible until it is used in production or until it is ready to be sent.
- Reduce handling time and chill prepared food immediately.
- Wash dirty food (including pre-washed bagged salad) thoroughly.
- During preparation, avoid cross-contamination and keep raw and cooked foods separate.
- Use cold plates, bowls, etc. for sensitive foods.

**Raw fish** is in great demand by consumers and can be prepared in various forms: sushi, tartar, carpaccio, marinades without cooking. The fish used are either wild or farmed.

#### PRECAUTIONARY MEASURES:

- Choose reliable suppliers and top-quality fish.
- Control the cold chain and monitor temperatures daily during preparation, storage, distribution or display of products. Raw fish should be kept at a maximum of +2°C or under ice.
- Chop or slice at the last moment in a temperature-controlled environment.

A visual check is necessary.

Parasites may be present in wild fish and can cause serious digestive problems if ingested. These parasites are destroyed by cooking or freezing.

Sushi rice, prepared in advance, is often processed at room temperature to facilitate shaping. This presents a risk (*Bacillus cereus*) and is therefore not correct.

### Good practices for handling minced meat :

- Clean hands are imperative before starting operations.
- Ideally, the mincer used should be refrigerated.
- The equipment (including the work surface) must be perfectly clean and disinfected (before and after each use).
- The meat used should be of good quality and fresh.
- Only the necessary amount of meat should be minced. Minced meat intended for raw consumption must be minced at the last moment.

Minced meat intended for cooking can be stored in the refrigerator at 0 and 2°C throughout the day. Cooking should be sufficient to ensure the destruction of pathogenic bacteria (e.g. *E. coli*).

### 4.8.3 Defrosting

#### Cold production at risk

Defrosting is a delicate operation that can make the product fragile. A defrosted product can be re-contaminated when exposed to an unprotected environment.

#### PRECAUTIONARY MEASURES:

- Freeze foods in small volumes or in individual portions to facilitate defrosting.
- Defrosting cannot be done at room temperature (except for breads) or in a hot water bath.
- Avoid contact of the product with the defrosting water. Place the food on a rack and collect the defrosting water in a tray.
- Defrosted food cannot be refrozen. Except for products that have undergone intensive heat treatment (min. 65°C), they can be refrozen.

#### Defrosting should preferably be done :

- at a refrigerated temperature of 4°C
- in the microwave oven
- direct cooking without defrosting

Also prevent defrosting juices from contaminating other products.

### 4.8.4 Regeneration and Reheating

Regenerating means reheating the food to a minimum core temperature of 65°C. This can be done directly in a pan, in the oven, in the microwave, in a steam oven or in boiling water when the product is packaged in a sealed container.

#### PRECAUTIONARY MEASURES:

- Technical equipment, such as combi ovens or steamers, for reheating food should be clean and in good condition.
- Food and dishes should be reheated if possible, just before being served.
- Only reheat as much as is necessary. Leftovers should not be kept.
- Reheating should be done within one hour at a temperature of 65°C. Regeneration in a water bath should be avoided.

### 4.8.5 Cooling of food products

Cooling products after cooking consists of rapidly lowering the core temperature of the product, particularly for sensitive products such as dishes in sauce (Bouchée à la Reine, Blanquette or stew, Bolognese sauce, etc.).

**Rapid chilling** is the application of positive chilling to the preservation of foodstuffs. Rapid cooling below 10°C in less than 2 hours is important to limit the risk of contamination and multiplication of bacteria.

#### PRECAUTIONARY MEASURES:

- Avoid cooling large volumes. Spread hot food in a thin layer or divide food into small portions to facilitate cooling.
- Cover food properly.
- Keep fans clean (mould, etc.) as well as the refrigerator itself.

**Rapid freezing** is the application of negative cold to the preservation of foodstuffs. Freezing does not kill the germs. It is only the multiplication of bacteria that is interrupted. Provided that the products are frozen correctly, they can be kept for several months (depending on the nature of the product).

#### PRECAUTIONARY MEASURES:

- Never freeze foods with an expired or even a limited use-by date.
- Avoid freezing risky foods (e.g. raw minced meat...).
- Foods should be properly packaged and labelled (product name and freezing date) before freezing (e.g. vacuum bag). To facilitate quick freezing, the mass to be frozen should be divided into smaller unit volumes.
- Slow freezing does not result in good product quality and promotes the multiplication of germs.

### RECOMMENDED MAXIMUM STORAGE TIMES FOR FREEZING



Cooked meat with or without sauce	3 to 6 months
Raw beef meat	9 to 12 months
Raw pork meat	3 to 6 months
Raw poultry meat	9 to 12 months
Raw fish	3 to 6 months
Bread	1 to 2 months
Sauces	3 to 6 months

The data in this table is not exhaustive and is provided for information purposes only.

#### 4.8.6 Maintaining warmth

The temperature and time factors play an important role.

Meals can be kept warm at a minimum of 65°C and for no longer than 3 hours. Keeping warm is usually done in an oven, a bain-marie, on the cooker, in a warming cabinet....

Meals are to be distributed quickly, as it is necessary to ask oneself whether the result and the organoleptic quality of the product are acceptable when food is kept warm for 3 hours at a temperature of 65°C. Having to ensure a high core temperature does not always give the result that the cook and the consumer want.

Proper chilling of the product followed by regeneration if necessary, may be a better solution.

#### 4.8.7 Transport - Purchases and deliveries

During transport, it is important to maintain the storage temperature of the products in order to avoid the multiplication of germs. The transport equipment must be adapted to :

the desired temperature,  
the duration of transport and  
the outside temperature.

##### PRECAUTIONARY MEASURES:

- The containers (if necessary insulated) for transporting food and meals must always be clean, properly cleaned and, if necessary, disinfected. They are used exclusively for the transport of food.
- The means of transport (e.g. car) must be clean and cleaned regularly. The delivery vehicle must comply with good hygiene practices (smoking, transport of animals, transport of waste, transport of toxic products are not allowed). Care must be taken to ensure that there is no cross-contamination.
- Food must be kept at an appropriate temperature. Systematic temperature taking allows control and provides evidence of good practice.

##### HOME FOOD DELIVERIES

- Food preparations must be transported exclusively in closed containers.
- A separation between hot and cold and raw and cooked products/dishes must be ensured during transport.
- Limit to an appropriate distance to allow fast delivery and good temperature conditions.
- Customers are informed about the presence of the 14 notifiable allergens before the purchase is concluded. This information is provided with the products in written form. The presence of this information on the website, in case of internet orders, is also possible.

## 4.9 HEAT TREATMENTS

Cooking changes the taste, texture and appearance of food. The aim of cooking food is also to eliminate certain germs depending on the temperature reached and the cooking method.

When cooking, two important factors must be respected:

**TIME, duration of cooking**  
**TEMPERATURE at the core**

Some preparations and cooking methods (blue meat, rare or medium rare, emulsified sauces, etc.) do not allow this core temperature to be reached. This is why it is very important to respect good hygiene practices.

Particular attention must be paid to poultry meat and its preparations.

### 4.9.1 Cooking at too high a temperature - acrylamides

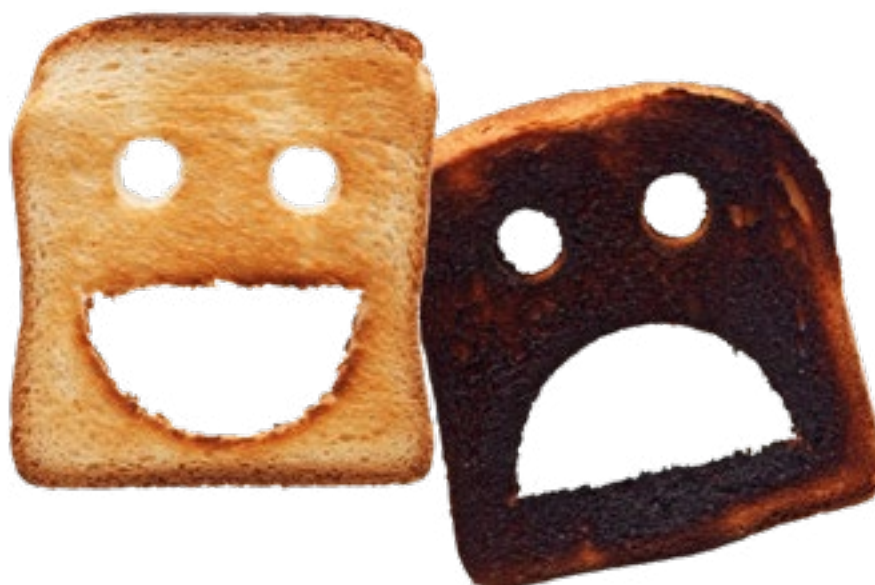
Never cause food to spoil due to too high temperatures. For example: burnt food during grilling.

**"Brown" and not "burn".**

**Acrylamide** is a chemical contaminant that is usually formed in food products rich in carbohydrates (starch, sugar) and asparagine, such as French fries, crisps, bread, biscuits and coffee, during high temperature cooking processes such as frying, baking and roasting. Little or no acrylamide is found in foods cooked in water. Acrylamide can cause cancer and damage DNA (deoxyribonucleic acid), the genetic material of cells.

**The foodstuffs affected by EU Regulation 2017/2158 are:**

- French fries, other products fried by immersion in oil.
- Crisps, snacks, crackers and other potato products.
- Bread and fine bakery products.
- Breakfast cereals.
- Coffee and coffee substitutes.



## 4.9.2 Deep frying

### Maximum temperature of 175°C

Frying oil degrades according to the time of use and the products fried. The rate of degradation can depend on the cleaning of the fryer, the cooking temperature, the oil used and the products fried. It is necessary to control the quality of the frying baths (polar compounds). In order to be able to carry out a precise control, there are measuring systems (testers).

#### PRECAUTIONARY MEASURES:

- The best measurements of oil quality are taken at room temperature when the oil has settled. This improves reliability and handling safety (risk of burns, etc.).
- Regular filtration of the oil can extend its life and quality.
- Check the oil regularly. A brownish colour, foaming or cloudy oil may indicate an oil change.
- Plan a cleaning procedure for the fryer.
- Never mix old oil with new oil.
- Oil that foams strongly is oil that contains water.

### Some measures for the reduction of acrylamides in the preparation and cooking of French fries:

- Choose a potato variety with a low sugar content,
- Store potatoes at a temperature above 6°C,
- Reduce the sugar content of the potatoes using the method of your choice:
  - a. Wash and soak the cut potatoes preferably for one hour in cold water. Rinse the fries in clean water before frying.
  - b. Soak for a few minutes in hot water. Rinse the fries in clean water before frying.
  - c. Blanch (blanchir) the potatoes where possible.



<https://goodfries.eu/en/>



[https://securite-alimentaire.public.lu/content/dam/securite\\_alimentaire/fr/publications/link-liste/consommateur/F-163-ext-fiche-Conseil-de-preparation-acrylamide-rev01.pdf](https://securite-alimentaire.public.lu/content/dam/securite_alimentaire/fr/publications/link-liste/consommateur/F-163-ext-fiche-Conseil-de-preparation-acrylamide-rev01.pdf)



### 4.9.3 Barbecue

The use of barbecues is not prohibited by food legislation. However, in order to avoid open flames which lead to the formation of harmful substances in grilling, it is important to prevent drops of fat from falling onto the embers.

Cooking food at high temperatures, especially in direct contact with flames, leads to the formation of chemical compounds, some of which have carcinogenic properties.

The cooking height should be adjusted, at least 10cm above the embers in the case of a horizontal cooking barbecue, or better still, opt for a vertical cooking model.

#### PRECAUTIONARY MEASURES:

- Ensure that grease trays and grates are cleaned beforehand for electric/ gas barbecues.
  - Ensure the cold chain of foodstuffs before grilling.
  - Wash hands after dirty operations and before handling food.
- For grilling operations, where there is no direct contact with foodstuffs due to the use of utensils (e.g. tongs), synthetic gloves are not recommended due to the danger of burns.

### 4.9.4 Low temperature cooking

This is an economical cooking technique which, among others, limits weight loss and produces a tender, quality product.

Cooking can be done in a steam oven, immersion heater, pressure cooker etc.

The common risks of this method are the core temperatures and the cooking time.

#### PRECAUTIONARY MEASURES:

- Maintain critical temperatures during cooking (minimum 60°C), cooling, regeneration and keeping warm.
  - Maintain maximum cleanliness during handling.
  - After cooking, cool rapidly in an ice water bath that ensures immediate cessation of cooking, or in a cooling cell.
- Sporulated forms of *Bacillus cereus*, *Clostridium botulinum* and *Clostridium perfringens* are not destroyed by a low-temperature cooking process, but rapid cooling immediately after cooking will prevent their germination.

**Note:** Cooking chicken, for example, at 36°C, even if it is for twelve hours, is risky. Indeed, pathogens are not eliminated and at these temperatures bacterial growth is favoured. In addition, chicken is a favourable substrate for bacterial growth.

#### 4.9.5 Vacuum cooking

Vacuum cooking brings flexibility to the process. It is a technique that allows food to be partially or completely cooked, preserving most of its flavour and limiting the loss of water and fat and therefore drying out.

Vacuum cooking of food can also extend the food's lifespan by reducing the amount of oxygen and sanitising or even pasteurising the food during cooking. The vacuum-packed cooked product is protected from recontamination.

Cooking is carried out at a temperature below 100°C for a prolonged period in a humid environment (e.g. immersion heater, steamer). Cooking must be followed by rapid cooling, i.e. a drop in temperature of <10°C within a maximum of 2 hours, if the food is intended for preservation.

However, the risks inherent to the practice of vacuum cooking remain, if the conditions of realization are not perfectly controlled.

### 4.10 SERVICE

Service staff have an impact on the quality and safety of the food that is served. The Covid-19 period showed us the impact of direct contact with customers.

It is important to remember that waiters and other staff who handle foodstuffs must follow good hygiene practices, as must cooks.

Service" covers the distribution of meals in the dining room and at the counter, as well as the setting and clearing of tables.

Service is a stage with risks of contamination that should not be underestimated. There are many points of contact.

Between clearing and setting up, waiters have to wash their hands frequently. Plates, glasses, bread, cutlery and carafes must be handled with clean hands.

Also the handling of crates and bottles, returnable packaging or lost glass are "dirty" tasks and must be handled in an appropriate manner. For this purpose, it is essential that a hand-washing facility is easily accessible to the waiters. Otherwise, hydro-alcoholic gel can be provided.

Concerning the declaration of allergens, the service staff, who are the first point of contact with the consumer, must know where to find the written information on the presence of allergens in order to provide it to interested consumers.

## 4.11 PRESENTATION OF A BUFFET

Many restaurants offer self-service hot and/or cold buffets (brunch, daily menu, hors d'oeuvres, cheese, breakfast).

Main sources of contamination of dishes exposed in buffets:

Staff - equipment - dishes - infrastructure - ambient air - consumers

### PRECAUTIONARY MEASURES:

- Check that trimmings and decorations do not pose a contamination hazard. Natural plants should be removed from the buffet area. Preferably use trimmings and decorations that can be cleaned.
- Pets are not acceptable at the buffet.
- Ensure that the facilities (buffet tables and tablecloths, showcase, display case, etc.) are clean.
- Respect the distribution temperatures, i.e. 7°C or less for cold dishes (4°C or less for minced meat and raw fish) and 65°C or more for hot dishes. If these requirements cannot be met, limit the time of presentation. For cold dishes, use cooling elements or ice, for example. Set up the buffet as late as possible.
- Avoid overloading the buffet, restock regularly to better manage the prescribed temperatures.
- It is advisable to separate products of different kinds. Especially high-risk foods, raw and cooked products, etc.
- Cover dishes as long as possible.
- Use appropriate, clean serving utensils (tongs, spoons, ladles, etc.) that are suitable for the dish to be served. Avoid using serving utensils for different dishes in order to limit the risk of contamination (e.g. allergens).
- Observe hand hygiene. This applies to both staff and consumers.
- The reuse of leftovers from the presented buffet is strongly discouraged.

## 4.12 TAKEAWAY

### Good practices in general:

- Favour cooked dishes. Sensitive dishes such as sushi, tartare, filet américain, etc. should be eaten as soon as possible. The cold and hot chain must be maintained at all times.
- Takeaway food should be wrapped or protected with plastic/aluminium foil, a lid, cardboard or a bag. The packaging must be food safe. [See chapter 2.3.](#)
- Provide measures to avoid contamination risks from containers brought in by consumers.
- Encourage the use of containers that are suitable for food contact.
- Inform the consumer of his or her responsibilities in case of dishes to be imported.
- Inform the customer about the declaration of allergens [see chapter 5.2.](#)
- Inform the customer about storage temperatures and consumption times.

## 4.13 VENDING MACHINE SALES

In addition to take-away sales, connected vending machines are becoming more and more common. These devices provide access to a real food offer at any time.

### Specific rules apply to sales in vending machines:

- The identification of the operator (name, address and contact) must be clearly visible on the equipment.
- Sites and vending machines must be installed, designed, constructed, cleaned and maintained in such a way as to avoid contamination as far as possible, in particular by animals and pests.
- They should not be exposed to direct sunlight.
- Food contact surfaces must be well maintained, easy to clean and, where necessary, disinfected. For this purpose, the use of smooth, washable, corrosion-resistant and non-toxic materials is required.
- Adequate means must be provided for cleaning and, where necessary, disinfecting tools, work equipment and hands.
- Indoor light sources which produce even slight heating must be isolated from compartments containing foodstuffs.
- The sale of foodstuffs which deteriorate easily is prohibited, unless the machines are constructed in such a way as to provide a temperature appropriate for their preservation. These machines must be equipped with an automatic device which interrupts the operation of the distribution when the required temperature is no longer guaranteed.
- In the case of beverage vending machines, the parts of the machine in which the raw materials intended for the preparation of beverages are stored, as well as the pipes of the machine, shall be made of an unalterable material with smooth walls and designed in such a way that the food and beverages dispensed are effectively protected against microbial or other contamination.
- The appliance is easily dismantled and should be cleaned regularly.
- Only water of drinking quality is used for the preparation of drinks. If a water tank is incorporated in the appliance, it must be designed in such a way that the growth of micro-organisms in the water is excluded.
- The appliance shall be provided with individual cups, placed in such a way that they are protected from soiling.
- Foodstuffs that are dispensed hot are kept at a minimum temperature of 70°C at all times. Distribution is automatically interrupted when the temperature falls below 68°C.
- Adequate facilities and/or devices must be provided to maintain the foodstuffs under adequate temperature conditions and to control them (e.g. cold preparations at 4°C, tolerance 2°C).
- Foodstuffs must be placed in such a way and under such conditions as to avoid, as far as possible, the risk of contamination.

You can find more details in the Grand Ducal Regulation of 4 July 1988 on hygiene in the food trade and in the regulation 852/2004 annex II chapter 3. Art.10. Automatic sale or distribution.



## 4.14 OVERPRODUCTION AND LEFTOVERS

### Use or disposal of foodstuffs?

Overproduction food that has been properly cooled can be used without concern. See chapter 4.8.5

#### PRECAUTIONARY MEASURES:

- Minimise the amount of leftovers and waste. Food waste created by overproduction is often caused by buffets.
- Leftovers that are suitable for reuse should be stored at the correct temperature and in appropriate containers.
- When using leftovers, their impeccable quality and traceability must be guaranteed.
- Leftovers should not be mixed with fresh products.
- The declaration of allergens must also be ensured after the use of leftovers.
- Leftovers from tables and buffets should be disposed of.

### As a result of the waste legislation

"Waste is any substance or object which the holder discards or intends or is required to discard". A foodstuff that falls under the definition of waste can implicitly no longer be redistributed for human consumption and thereafter waste legislation will apply. This definition and the application of the relevant legislation is particularly important in the context of disposal or recovery of these products.

### Redistribute food (kitchen waste or overproduction/leftovers) for animal feed purposes

It is important to differentiate:

- Foodstuffs/kitchen waste containing ingredients of animal origin (meat, milk, fish, eggs) are prohibited as such in animal feed and may not be redistributed for this purpose. Only after treatment and under certain conditions defined in EC regulations 1069/2009, 999/2001 and 183/2005, they can be used in this context. For more information [www.asta.etat.lu](http://www.asta.etat.lu)
- Foodstuffs based on plant ingredients can be used in animal feed under the respect of the EC Regulation 183/2005 on feed hygiene.



<https://securite-alimentaire.public.lu/fr/professionnel/Denrees-alimentaires/DonationAliment.html>



## 4.15 LEFTOVERS FOR TAKEAWAY

Firstly, it is important to apply the principle of forward march, i.e. the producer/restaurateur should ensure that the leftovers of the dish are not returned to the kitchen/production to avoid any risk of cross-contamination.

The customer can fill a container/packaging provided by the operator that complies with the legislation concerning packaging and materials in contact with the leftovers that he wishes to take away, but it is preferable that the producer/restaurateur takes care of the packaging to avoid any danger of cross-contamination.

Afterwards, the customer will be responsible for the leftovers taken away.

## 4.16 DONATIONS

Only foodstuffs fit for human consumption within the meaning of the regulations may be donated to charitable establishments. These establishments are considered to be food establishments in the sense of the regulations and must therefore comply with the relevant obligations of the food legislation. All requirements concerning food safety, labelling, traceability and food hygiene are therefore applicable and must be complied with.

In order to clarify these requirements, the organisations representing the food sector in Luxembourg have drawn up a sheet in the context of the guides to good hygiene practices provided for in the hygiene regulations.



<https://securite-alimentaire.public.lu/fr/professionnel/Denrees-alimentaires/DonationAliment.html>

It has been validated by the Minister of Health in the framework of the EC regulation N° 852/2004.



## Ice maker

The ice maker should be included in the cleaning plan to ensure thorough maintenance. Neither cold nor strong alcoholic beverages can destroy the concentration of germs resulting from insufficient maintenance. Mould can develop on the inside walls and bottom of the machine.

### PRECAUTIONARY MEASURES:

- Keep the ice machine in good condition (descaling, checking and replacing water filters, cleaning the condenser, etc.).
- Regularly clean and disinfect the machine, the scoop and the storage container with products approved for food contact.
- Keep the lid of the machine closed to protect the ice cubes and to avoid the formation of condensation which favours the development of moulds.
- Do not handle the ice cubes with your hands and keep the scoop/clamp outside the machine in a clean place.
- The storage of beverage bottles in ice machines is not tolerated as they multiply the sources of contamination.

## The grease trap and how it works

The role of a grease trap is to discharge wastewater before it enters the sewerage system. The dirty water arrives through the wastewater pipe into the tank. The grease, which is lighter than water, separates from the water and rises to the surface where it solidifies and clumps. The drain pipe is located below the inlet pipe and allows the pre-treated water (without the grease) to be drained into the public sewerage system.

### PRECAUTIONARY MEASURES:

- The grease trap should be located between the wastewater discharge and the point of discharge to the public sewerage system.
- Choose the location of the grease trap carefully. Make it easy for a company to access it when it is emptied. It can be installed inside or outside the business, on the ground or underground, preferably in a ventilated area.
- The size of the tank should be adapted to the maximum number of people served, the volume of water consumed and the frequency of maintenance and emptying.

The grease residue in the tank is waste that must be collected and treated by a specialised company. If the bin is not emptied and cleaned regularly, the surface layer of grease will thicken and, after a few weeks, it will start to ferment and give off bad smells. In addition, the layer of waste at the bottom of the tank will increase and rise. The water circulation will be accelerated and the grease will not have time to settle.

Used edible oils should not be poured into the grease trap but should be treated in a special way.



**5.1 LABELLING**

**5.2 LEGAL OBLIGATION TO DECLARE ALLERGENS**

**5.3 TRACEABILITY OF FOODSTUFFS**

**5.4 MEANS OF VERIFICATION REGARDING THE CORRECT  
APPLICATION OF HYGIENE MEASURES**

**5.5 FOOD ADDITIVES**

**5.6 SUPPLIER COMPLIANCE**

## **5. MANAGEMENT OF GOOD PRACTICES**



## 5.1 LABELLING

Food labelling is the primary means of communication between the producer and seller of food on the one hand, and the buyer and consumer on the other.

The three main functions are:

- Identification of the products.
- Consumer information.
- Marking of the product.



The labelling of food products delivered must be correct. The same applies to establishments that wish to sell packaged catering products. The legislation in force defines the necessary information, which can be found at <http://www.securite-alimentaire.public.lu>

There is also a guide to food labelling. Further training on this topic is offered by the House of Training at the Chamber of Commerce.

**In kitchen production**, any foodstuff that is to be stored for more than 24 hours and is not labelled does not ensure good traceability and does not allow staff to ensure FIFO! A labelling system is especially recommended for frozen products. For products kept in a cool place, a production date is required. In a large community kitchen, detailed labelling is necessary.

### ADVICE:

You can find pre-printed labels that make it easier to mark products in shops.

## 5.2 LEGAL OBLIGATION TO DECLARE ALLERGENS

The European Regulation on the provision of food information to consumers obliges food business operators to declare the presence of fourteen groups of ingredients.

All food business operators are therefore obliged to inform the consumer about allergenic ingredients in their products.

The allergic or intolerant consumer must always be able to choose foods that are suitable for his or her diet. Allergen information is therefore compulsory for all food products, whether pre-packaged products, products packaged on request, unlabelled products or even dishes sold in bulk (e.g.: aperitif menu, drinks, desserts, dish of the day, etc.).

In Luxembourg, the information on allergens:

- Must be provided in written form, in at least one of the three official languages (LU / FR / DE).
- Must be easily visible and clearly readable.
- Is reliable and kept up to date.



### The declaration of the following substances or products is mandatory:

- **Cereals** that contain gluten: Wheat (spelt, kamut), rye, barley, oats or their hybrid strains.  
While the cereals have been grouped together in the list, they are to be considered separately when declaring allergens (e.g. "wheat" and not "gluten").
- **Crustaceans**
- **Eggs**
- **Fish**
- **Peanuts**
- **Soy**
- **Milk**
- **Nuts:** Almonds, hazelnuts, walnuts, cashew nuts, pecans, Brazil nuts, pistachios, Macadamia nuts (Queensland nuts).  
While nuts have been grouped together in the list, they should be considered separately when declaring allergens (e.g. "almond" not "nut").
- **Celery**
- **Mustard**
- **Sesame seeds**
- **Sulphites** and sulphur dioxide (if >10mg/kg or 10ml/L in the finished product)
- **Lupin**
- **Molluscs**



#### PRECAUTIONARY MEASURES:

- Check the labelling of ingredients in food products delivered by suppliers. Ask for full information on allergens in these products from suppliers.
- Store products properly packaged or sealed to avoid contamination.
- Keep equipment, work surfaces and hands clean.
- Have procedures for preparing food to limit risks. When handling or preparing non-allergenic foods, it is essential to ensure that there is no cross-contamination with foods that contain allergens. In other words, avoid mixing allergenic and non-allergenic foods.
- Ensure that the list of allergenic ingredients takes into account recipe changes.
- Monitor decorations (e.g. chopped nuts) when declaring allergens.
- Raise awareness among kitchen staff and also in the dining room.

### Precautionary labelling "May contain traces of ..."

Traces are defined as substances that are unintentionally present in very small quantities in a product, e.g. as a result of cross-contamination during the production process. A distinction is made with an ingredient, which is by definition a "product that enters into the composition of a mixture". An ingredient is therefore a compound voluntarily introduced into a product.

Unlike ingredients, precautionary labelling is not currently regulated at EU level and there is therefore no obligation to indicate "traces" on the label. However, business operators are obliged to put measures in place to manage the risk of cross-contamination and to reduce it as much as possible.

### Distance selling of non-pre-packaged products

In the case of distance selling (e.g. take-away lunches booked by telephone or ordered via a website) of bulk foodstuffs, a limited amount of information must be provided before delivery. Thus, it is important to make a sales description and allergen information available to the consumer before the purchase is concluded. Allergen information must also be made available to the consumer upon delivery.



Data sheets are available for download at [horesca.lu](http://horesca.lu)

## 5.3 TRACEABILITY OF FOODSTUFFS



Traceability must be established upon receipt, at all stages of production, processing and distribution. The current regulation defines the obligations, which are available at <http://www.securite-alimentaire.public.lu>



<https://securite-alimentaire.public.lu/fr/professionnel/Denrees-alimentaires/Tracabilite.html>

#### PRECAUTIONARY MEASURES:

- Collaborate with suppliers.
- Keep delivery notes/invoices.
- Ensure correct labelling of food.



## 5.4 MEANS OF VERIFICATION REGARDING THE CORRECT APPLICATION OF HYGIENE MEASURES

The verification allows you to detect whether the good hygiene practices in your establishment are effective and allows you to react on a possible risk.

**Control dishes** are representative samples of each foodstuff distributed to consumers, clearly identified, taken in sufficient quantity (preferably 150g) to allow their microbiological and, where appropriate, chemical analysis under the best possible conditions. They must be kept for at least five days after the last presentation to the consumer, under conditions not likely to alter their microbiological quality. Therefore, positive cold storage, between 0 and 4°C, is desirable. Control dishes are not a legal obligation. However, in the event of suspected food poisoning, control dishes enable the competent authorities to determine the safety of the foodstuffs concerned or to identify the contaminated food. In addition, control dishes can provide evidence that your establishment did not cause a foodborne illness. You can find a fact sheet at: <http://www.securite-alimentaire.public.lu>



[https://securite-alimentaire.public.lu/content/dam/securite\\_alimentaire/fr/professionnel/Denrees-alimentaires/Hygiene-alimentaire/fiches\\_info/F-064-04.pdf](https://securite-alimentaire.public.lu/content/dam/securite_alimentaire/fr/professionnel/Denrees-alimentaires/Hygiene-alimentaire/fiches_info/F-064-04.pdf)

Periodic **verification analyses** should preferably be carried out by an external ISO 17025 accredited laboratory. These results make it possible to verify the safety of the food. The analyses are a means of verification, but do not constitute a legal obligation. Horesca collaborates with an accredited laboratory.

### Taking temperatures

A reliable thermometer is essential for taking temperatures of foodstuffs. The thermometer probe must be adapted to measure each type of product (firm, liquid, frozen, vacuum, etc.) and each temperature range. After each use, clean and disinfect the probe to avoid contamination. Record or write down the temperatures in a control sheet for this purpose. Check the accuracy of the thermometer regularly (e.g. ice water has a temperature of 0°C and boiling water has a temperature of 100°C).

Measurement uncertainties! The accuracy of a thermometer varies according to the manufacturer and the type (probe, infrared). Sometimes a metal surface or a frozen product can irritate the infrared measurement and give false temperatures.

See chapter 4.8

**Checklists** are a system of periodic self-checking to verify the control of good hygiene practices. These assessments can serve as evidence and limit oversights when documented in writing.

#### SOME EXAMPLES:

- Control of the condition of the infrastructure (inventory of fixtures).
- Control of deliveries (delivery notes, non-conformity notes, thermometer calibration, etc.).
- Control of storage (temperatures, humidity, labelling, Fifo, cleanliness, separation of goods, etc.).
- Control of general cleanliness and the cleaning plan.
- Control of production, handling and distribution temperatures, possibly transport.
- Control of the forward march (food, personnel, waste, etc.).
- Validation of the pest control plan.
- Control of the medical follow-up of the personnel.
- Follow-up on the knowledge and training of staff.
- Control of the hygienic behaviour of the staff - Etc.

Horesca provides a complete self-checking system with the SAFE TO SERVE tool.

#### Complaints management

A complaint is usually a customer's dissatisfaction with the quality of a dish. Complaint management can clarify poor performance and initiate corrections in risk management.



Please inform the Government Commissioner for Quality, Fraud and Food Safety in case of food poisoning or illness. The notification of a problem in the food chain, a product withdrawal, a product recall is done on the [guichet.public.lu](https://guichet.public.lu) website



<https://guichet.public.lu/en/entreprises/commerce/securite-alimentaire/securite-alimentaire/notification.html>

## 5.5 FOOD ADDITIVES

Additives (also known as E-numbers) are substances that are not usually consumed as food in themselves. They are intentionally added to a foodstuff for a technological purpose (e.g. to preserve, colour, skim, gel, etc.).

The most commonly used food additives in the catering industry are :

- flavour enhancers such as E 620 - E 625 glutamates
- colourings such as E 100 curcumin,
- gelling agents such as E 406 agar,
- raising agents such as E 500 sodium carbonates (also known as sodium bicarbonate),
- propellants such as E 942 nitrous oxide (also known as laughing gas) and
- sweeteners such as E 955 sucralose, E 954 saccharins or E 952 cyclamates, E 960 steviol glycosides (also known as stevia).

Food additives and their use are regulated at European level. Therefore, it is important to follow the manufacturer's instructions for use so that the finished dish complies with the food additive regulation.

Caution! Food additives could also be present in premixes containing several different ingredients (e.g. concentrated broth or a flour premix).

## 5.6 SUPPLIER COMPLIANCE

Businesses handling products of animal origin and supplying them to other food businesses (including establishments in the Horeca sector) may only operate if the business is approved by the competent authority.

According to Article 4 of Regulation (EC) No 853/2004, businesses handling products of animal origin subject to requirements in accordance with Annex III may only operate if the competent authority has approved them, with the exception of businesses that only provide :

- a) primary production activities;
- b) transport operations; or
- c) storage of products which do not require temperature control; or
- d) retail activities other than those to which Regulation 853/2004 applies (Horeca businesses are included in this category).

As required by the law of 28 July 2018, the Administration of Veterinary Services manages and updates the Luxembourg list of approved establishments and defines the procedures that feed and food business operators must follow when applying for approval of their businesses.

For its part, the European Commission maintains a list of all approved European businesses.



For more information, visit <https://securite-alimentaire.public.lu/>



<https://securite-alimentaire.public.lu/fr/professionnel/Denrees-alimentaires/Etablissements-agrees.html>

Condition to be respected: To procure products of animal origin such as:

- meat,
- fishery products,
- milk,
- eggs,
- frog legs and molluscs,
- game,
- and their processed products
- etc.

from approved businesses. These businesses can be easily recognised by the veterinary mark on the packaging.

Example for Luxembourg approvals:



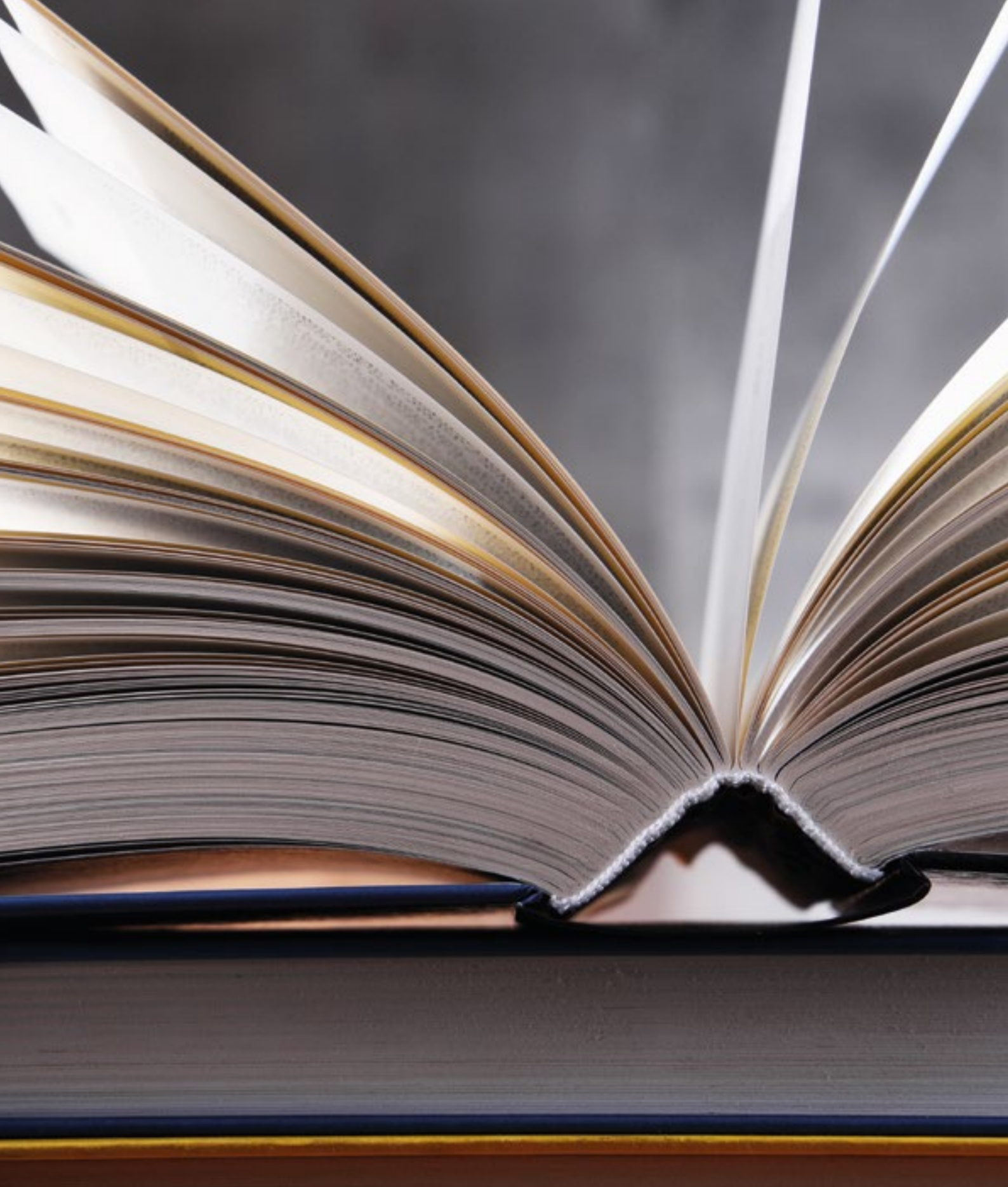


6.1 FOOD HYGIENE DOCUMENTATION

6.2 LEGISLATION AND USEFUL LINKS

6.3 GLOSSARY

## 6. GENERAL INFORMATION



## **6.1 FOOD HYGIENE DOCUMENTATION**

It is necessary to document the food hygiene measures taken in the catering environment with appropriate, carefully filed, understandable and easily accessible documentation.

### **6.1.1 Plan of the business**

It shows the way forward, clean and contaminated areas and clean and dirty flows.

Separate one copy of a plan, separate areas with colours and define paths with arrows. The details are described in the guide. [Chapter 2.1.1](#)

### **6.1.2 Infrastructure and machinery cleaning plan**

The details are described in the guide. [Chapter 2.4.1](#)

Your supplier of cleaning products can usually support you in this matter.

### **6.1.3 Pest control plan**

Details are described in the guide. [Chapter 2.4.4](#)

The plan can be carried out in-house if there are staff available to do so. It is preferable to ask a specialised firm.

### **6.1.4 Annual certificate of the municipal administration on drinking water quality**

Since the municipalities are now responsible for the water quality up to the business, the operator must also prove that the water in the business meets the standard by means of regular water analyses, according to Regulation (EU) 852/2004.

### **6.1.5 Personnel health certificate, suitable for employment in the food sector**

Ask a doctor to certify that the person employed in your business is fit for work.

### **6.1.6 Control and management sheets**

The following sheets used to establish exemplary documentation are listed in a separate folder in the guide and can also be downloaded from [horesca.lu](http://horesca.lu)

Maintenance plan for equipment...



## 6.2 LEGISLATION AND USEFUL LINKS

Achieving a high level of protection of human life and health is one of the fundamental objectives of food law.



### **Mandatory registration of food businesses**

<http://www.securite-alimentaire.public.lu>



### **European legislation**

<http://www.securite-alimentaire.public.lu>



### **Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs**

<http://eur-lex.europa.eu>

**Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 (15)** HACCP requirements should take into account the principles set out in the Codex Alimentarius. They should allow sufficient flexibility to be applied in all situations, including in small businesses. In particular, it should be recognised that in some food businesses it is not possible to identify critical control points and that in some cases good hygienic practice may replace monitoring of critical control points.

Similarly, the requirement to establish "critical limits" does not imply that a numerical limit needs to be set in every case. In addition, the requirement to retain documents should be flexible so as not to place undue burdens on very small businesses.



<http://eur-lex.europa.eu>



### **Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002**

<http://eur-lex.europa.eu>



### **Mandatory notification**

[https://securite-alimentaire.public.lu/fr/professionnel/notification\\_probleme.html](https://securite-alimentaire.public.lu/fr/professionnel/notification_probleme.html)

### **Consumer information on foodstuffs**

(e.g. declaration of allergens...)

Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011



<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:304:0018:0063:FR:PDF>

### **Codex Alimentarius for the HACCP principle**

CAC/RCP 1-1969, rév.4(2003)

### **Informational documents**

Food labelling

Food hygiene

Control dishes



Traceability

Microbiological criteria

<http://www.securite-alimentaire.public.lu>



<https://www.horesca.lu/en>

## 6.3 GLOSSARY

### 6.2.1 Cold chain

Maintain adequate food temperature for all stages from handling to serving.

### 6.2.2 Cross-contamination

A microorganism that is transferred from one food to another, either by direct contact or by food handlers, contact surfaces or air. Cross-contamination is not only limited to micro-organisms... it can also be caused by chemicals (leftover cleaning products, etc.). The risk of contamination is particularly present during the handling, storage and distribution of food.

Contamination occurs :

- when a foodstuff comes into direct contact with an infected food,
- when food comes into contact with contaminated equipment, work surfaces or hands.

#### SOME EXAMPLES:

- A raw fish at risk comes into contact with a cooked product ready to eat.
- A crate that was on the floor is placed on a work table in production.
- A customer with contaminated hands comes into contact with food from a buffet.
- An external person enters the production room.

### 6.2.3 Hazard

A biological (micro-organism), chemical, physical or allergic agent that can cause contamination that will have an adverse effect on health.

### 6.2.4 FIFO

First In, First Out is a reliable technique for managing/arranging a stock of goods.

### 6.2.5 HACCP

"Hazard Analysis Critical Control Point" is a hazard analysis system that defines the critical control points. This method defines, evaluates and controls the hazards that threaten food safety. Application of the HACCP system. The implementation of a HACCP system is to be applied by large companies and for businesses that do not follow a good hygiene practice guide. It is permitted to replace the implementation of the HACCP system in small food businesses by applying the good food hygiene practices of a guide of good hygiene practices, which must be validated by the minister in charge of official control.

### THE 7 PRINCIPLES OF A HACCP PLAN:

1. Carry out a risk analysis.
2. Determine the critical points (CCP), i.e. the points to be controlled (PM).
3. Define critical limits.
4. Establish a critical control point monitoring system.
5. Establish corrective actions to be taken if the critical limit is exceeded.
6. Establish procedures for verifying the proper functioning of the HACCP system.
7. Verify that the system is effective. Establish a documentation system. Documentation of the previous 6 points guarantees monitoring, self-checking and proof of correct application of HACCP.



In order to achieve the 7 principles of HACCP, a dedicated person or team is required. A summary of the HACCP approach is available at: <http://www.securite-alimentaire.public.lu>

### 6.2.6 Ingredient

A cooking ingredient is a substance, including food additives, used in the manufacture or preparation of a food and present in the finished product, although sometimes in a modified form.

### 6.2.7 Mastering

The situation in which the methods followed are correct and the criteria are met.

### 6.2.8 Micro-organisms

Micro-organisms are living organisms that are invisible to the naked eye. This group includes viruses (Latin for "poison"), bacteria, yeasts, moulds (spores) and parasites.

Their growth is influenced by several factors such as:

- water,
- nutrients (proteins, lipids, sugars, vitamins and minerals)
- acidity,
- oxygen,
- preservation agents as well as
- temperature and time of exposure.

Some micro-organisms have beneficial effects for food processing (making yoghurt, cheese...), others cause spoilage (slimy substance or bad smell) and some are harmful to health and can cause food poisoning, e.g. toxins, which are toxic substances produced by bacteria or viruses that can contaminate foodstuffs through air, surfaces, insects etc.

Possible manifestations of a foodborne illness are vomiting, abdominal pain, diarrhoea and fever...

### Viruses

A virus is characterised by its ability to multiply by division. To do this, it needs to infect a host cell to use its machinery. Viruses can only replicate within living cells. However, once the virus has entered the cell, the steps may differ depending on the nature of the virus. Any living thing can be infected by a virus. There are bacterial viruses, algal viruses, plant viruses, animal viruses, etc. The Coronavirus has shown us the effectiveness and consequences of a virus infection.

### Bacteria

Aerobic bacteria: bacteria that can only survive in the presence of oxygen.

Anaerobic bacteria: bacteria that can only survive in the absence of oxygen.

#### EXAMPLES OF DANGEROUS BACTERIA FOUND IN FOOD:

- *Bacillus cereus*
- *Clostridium perfringens*
- *Staphylococcus*
- *Salmonella*
- Legionellosis
- *E.coli*
- *Listeria monocytogenes*
- *Campylobacter*
- *Clostridium* etc.
- Common after-effects of an infection: abdominal pain, diarrhoea, vomiting, fever, etc.



### Parasites

Human infection with cat and dog digestive parasites occurs through ingestion of microscopic eggs that are present in the immediate environment. Fish, like all animal species, are frequently parasitised.

These may be parasites attached to the gills, fins or skin (known as ectoparasites) or parasites infesting the viscera (liver, stomach, intestine), gonads or even muscles (known as endoparasites). It is very common for fishery fish to be parasitised by larvae. The areas affected are mainly the temperate and cold seas of the northern hemisphere. All wild species can be parasitized by larvae of these nematodes, but some are parasitized more frequently and extensively. This is the case for herring, mackerel, monkfish, halibut and gadids (pollack, cod, haddock, whiting, hake, etc.). When ingested alive, these larvae can cause a gastrointestinal disease called anisakiasis in humans.

The sheer complexity of epidemiological phenomena and the variety of hosts make it difficult to control the presence of parasites in fish. Therefore, the prevention of anisakidosis requires simple measures before consumption of the products.

Indeed, freezing or cooking is enough to kill these larvae and make them non-offensive. The fish must then either be cooked to at least 60°C (the flesh must not be pink at the bone), or frozen for at least 24 hours at -20°C in the heart of the product before being eaten raw or lightly cooked. There are also parasites carried by pork (hence the need for thorough cooking).

### Moulds

Moulds are primarily known for their spoilage effect on food, e.g. bread and fruit... In the food chain, moulds are natural decomposers.

#### Mould growth depends on the following conditions:

- the presence of mould spores (which are always present inside a building and outside)
- an appropriate temperature, ranging from 2 to 40°C (or more),
- a food source, i.e. anything organic: fruit and vegetables, other foods, books, carpets, clothing, wood, plaster, etc.
- a source of moisture. The "toxicity" of some moulds depends on the species, but also on the environment in which they grow and on the handling control. Moulds can be a source of indoor air pollution and food contamination.

The toxins produced by moulds are very resistant (e.g. to pasteurisation). They are often undetectable by taste and appearance in the food consumed.

## 6.2.9 Core temperature

Temperature measured in the centre of a product, liquid or preparation.

## 6.2.10 Food poisoning

In common parlance, food poisoning is an illness, often infectious and accidental, contracted as a result of ingesting food or drink contaminated by micro-organisms (bacteria, viruses, parasites, etc.).

#### Impressum

The guide to good hygiene practices is a publication edited under the responsibility of the national federation HORESCA a.s.b.l. and officially validated by the Ministry of Health. The guide is distributed to all Horesca members. The guide can be downloaded at [www.horesca.lu](http://www.horesca.lu)

#### Editorial

HORESCA a.s.b.l. • BP 2524 • L-1025 Luxembourg  
T +352 42 13 55-1 • Fax +352 42 13 55-299  
[horesca@pt.lu](mailto:horesca@pt.lu) • [www.horesca.lu](http://www.horesca.lu)

#### Realization

Claude Ries

#### Layout

brain&more - communication agency, Luxembourg

#### Publishing director

François Koepf

#### Printing

Imprimerie Heintz

#### Print run

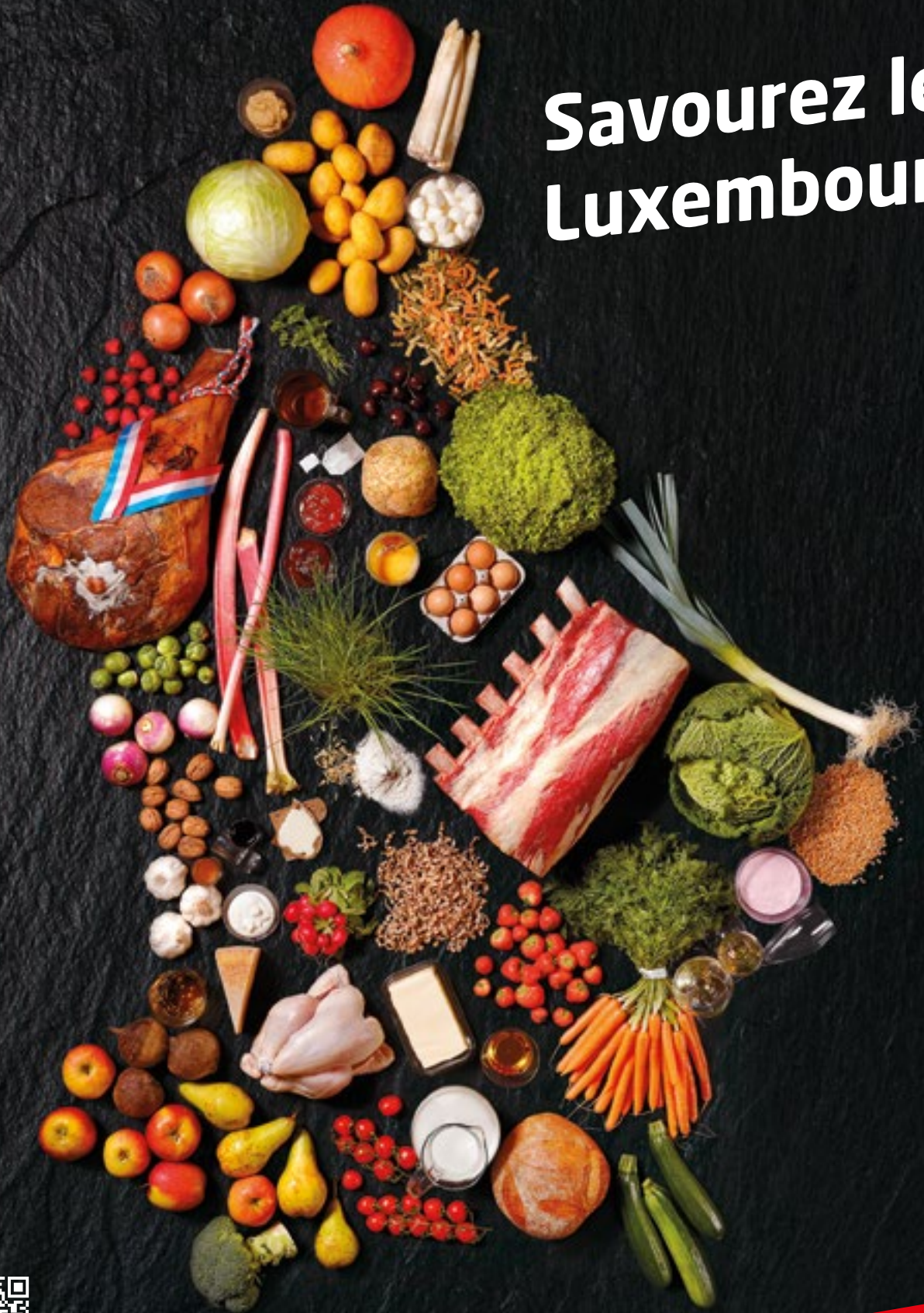
5,000 copies







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