

**HYGIENE AND FOOD
SAFETY IN THE HANDLING AND
PRESERVATION OF
PROCESSED FOODS**

COVID-19



| INDEX |

1 FOOD SAFETY AND COVID-19

2 PROCESSED PRODUCTS: DEFINITION

3 HYGIENE MEASURES FOR THE RECEPTION OF FOOD PRODUCTS

3.1 SPECIFIC MEASURES FOR THE RECEPTION OF PROCESSED FOODS

4 HYGIENE MEASURES IN THE STORAGE AND PRESERVATION OF PROCESSED FOODS

5 HYGIENE MEASURES IN THE PREPARATION AND HANDLING OF PROCESSED PRODUCTS

5.1 GUIDELINES AND RECOMMENDATIONS IN FOOD PREPARATION AREAS TO REDUCE THE RISK OF CONTRACTING THE SARS-COV-2 CORONAVIRUS

5.2 GENERAL CONSIDERATIONS IN THE PREPARATION AND HANDLING OF PROCESSED PRODUCTS

5.3 SPECIFIC HYGIENE MEASURES IN THE PREPARATION AND HANDLING OF COLD PROCESSED FOODS

5.4 SPECIFIC HYGIENE MEASURES IN THE PREPARATION AND HANDLING OF HOT PROCESSED FOODS

6 HYGIENE MEASURES IN THE PRESERVATION OF PROCESSED FOODS

6.1 HEATED STORAGE

6.2 REFRIGERATED STORAGE

7 HYGIENE MEASURES FOR REHEATING PROCESSED FOODS

8 HYGIENE MEASURES IN THE STORAGE OF PROCESSED PRODUCTS

| PROLOGUE |

To support hotel and restaurant professionals with their hygiene and safety practices in the COVID-19 situation, ARAVEN has prepared five guides that focus on the importance of hygiene and food safety in this sector.

- Cleaning and disinfection of food containers and utensils.
- Hygiene and food safety in the handling and preservation of vegetables.
- Hygiene and food safety in the handling and preservation of meat and fish (animal proteins).
- Hygiene and food safety in the handling and preservation of dry foods.
- Hygiene and food safety in the preservation of prepared foods.

Professionals from BCC Innovation, the technology center of the Basque Culinary Center have taken part in preparing the contents of these guides. Additionally ARAVEN has also sponsored the “Food hygiene and safety guidelines” published by the Basque Culinary Center and Euro-Toques.

This initiative clearly highlights the commitment of both institutions to help catering businesses improve their health and safety measures, by proposing general and specific hygiene and food safety measures applicable in restaurants that will help them regain the confidence and trust of their customers.



1

FOOD SAFETY AND COVID-19

To prevent infections and food poisoning in the current situation of maximum hygiene requirements due to COVID-19, it is necessary to reassess the risks in order to identify and incorporate preventive measures and additional control points to increase food safety.

Throughout the food chain foodstuffs undergo different preparation processes and situations where there is a risk of contamination. To avoid food contamination, it is absolutely essential to control the risks affecting food safety and to manage food correctly to minimize the majority of these risks.

Food safety must be guaranteed throughout the entire food chain. In the HORECA sector the following phases in managing and treating foods in the kitchen are identified:



Reception of goods



Food storage and preservation



Food handling and preparation



Food presentation or serving



Hygiene measures must be stepped up in all food handling phases.



Prior to these four phases, food service establishments must apply the necessary measures to prevent workers becoming infected with COVID-19, to avoid exposure and the spread of the virus, by reinforcing, in particular, food handling hygiene practices. ⁽¹⁾

The following guide focuses on food hygiene and safety measures in relation to the handling and preservation processed foods.

Hygiene measures are the best defence to keep the coronavirus from spreading.

2

PROCESSED PRODUCTS: DEFINITION

A processed product or prepared food is a culinary preparation resulting from the raw or cooked or pre-cooked preparation of one or more food products of animal or vegetable origin, with or without the addition of other authorised substances and, where appropriate, seasoned. It can be presented packaged or unpackaged and ready for consumption, either directly, or after additional heating or culinary preparation. ⁽²⁾

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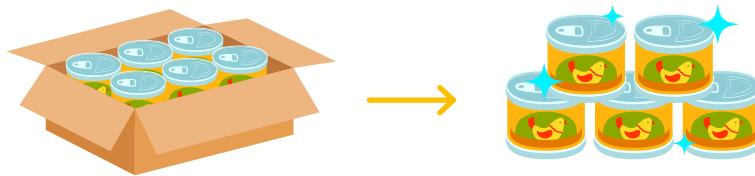
HYGIENE MEASURES FOR THE RECEPTION OF FOOD PRODUCTS

It is important to ensure that all raw materials received comply with the health and quality requirements laid down to prevent foodstuffs endangering consumers' health. For this purpose, the provisions set out in the Hazard Analysis and Critical Control Points (HACCP) system must be followed.



When receiving a delivery of raw materials at restaurant facilities, the following is recommended ⁽²⁾:

- » **Designate a specific zone for exchanging goods.** There should be an area set aside for receiving/returning goods (specific zone, table, marked floor area...) located near to the goods entrance door, separated physically or provisionally from the rest of the establishment.
- » **Remove the packaging** of the raw materials received (cardboard box, plastic bag) whether or not the food is packed inside. This packaging is the outermost wrapping, used during distribution and transport.



- » If there is no double packaging, **disinfect the container before incorporating it into the storage area** and disinfect those containers that have been in contact with the outside during the supply process.
- » Delivery notes should be left on the table to avoid contact with the supplier and should always remain in this reception zone.
- » All devices that are used (thermometers, pens, etc.) should always be used preferably by the same person. If they are shared, they should be disinfected after each use.



OTHER CONSIDERATIONS:

- » The establishment must have a **supplier control plan** to guarantee product quality.
- » All foods received must be checked to ensure that the containers and packaging are intact, the food temperature is correct, food labeling and shelf-life is correct, it has been transported in adequate hygiene conditions and that the delivery notes are correct.
- » Before the products received are placed in the establishment's own **containers**, check that they are **clean and have been disinfected**.
- » **Mark** the containers used for preserving and storing foods with the necessary information to enable all the products to be **traceable**.
- » **Keep records** showing the checks conducted on the reception of products. ⁽³⁾
- » **Do not take packaging** from the transportation of raw materials **into the processing areas**. ⁽³⁾
- » Once the delivery has been received and all procedures have been completed, the worker must wash their hands with soap and water following the instructions provided by official organizations such as the WHO or with hydroalcoholic gels. ⁽⁴⁾

3.1

SPECIFIC MEASURES FOR THE RECEPTION OF PROCESSED FOODS

- ✓ Processed foods must be kept cold until they are cooked or reheated, removing them from the cold only when needed. ⁽⁴⁾
- ✓ When receiving processed products, it must be ensured that the cold chain is not broken between the reception and storage phases (in refrigeration or frozen).
- ✓ Check the labelling of products (best before/best by/expiry dates) and discard or return products that do not meet the required specifications demanded of the supplier.

When processed products are transferred to the establishment's own storage systems, they must be identified, with the information on the original label (product brand, batch number, opening date and expiry date or best by date), on the new container, ensuring the **traceability** of the raw material.



" The traceability of all foods used in food service industry must be guaranteed. "

4

HYGIENE MEASURES IN THE STORAGE AND PRESERVATION OF PROCESSED FOODS

Keep **processed foods** in the optimum moisture and temperature conditions indicated by the product manufacturer.

All processed products must be able to be **perfectly identified** in storage areas.

A proper **management of allergens** is required in order to avoid allergies and/or intolerances.

Products for allergy sufferers (gluten-free, egg-free, dairy-free, etc.) must be stored **separately from all others**, in **closed containers**, both in the pantry and in the fridge (different shelves, boxes, cupboards, etc.).

Always keep the suppliers' **technical sheets** for any subsequent queries, and the original product labels.



5

HYGIENE MEASURES IN THE PREPARATION AND HANDLING OF PROCESSED PRODUCTS

A HACCP system updated to the context of COVID-19 must be implemented.



5.1

GUIDELINES AND RECOMMENDATIONS IN FOOD PREPARATION AREAS TO REDUCE THE RISK OF CONTRACTING THE SARS-COV-2 CORONAVIRUS ⁽⁵⁾

- ✓ **Separate the areas** for different **workers** by using marks on the floor or other similar measures.
- ✓ Perform a **general disinfection** of the **work surfaces** before starting each service.
- ✓ Have **disinfectant soap dispensers** next to the sink.
- ✓ Use paper for drying hands and dispose of this in rubbish bins with a non-manually operated lid.
- ✓ **Clean work tools and equipment** with the recommended products at the end of the working day.
- ✓ In preparation areas, hygiene must be maximised when handling packaging in order to avoid cross-contamination.

5.2

GENERAL CONSIDERATIONS IN THE PREPARATION AND HANDLING OF PROCESSED PRODUCTS

Processed products that must be kept for their subsequent service and consumption are subject to some basic recommendations regarding hygiene and food safety.

Separate, in time or place, the handling and preparation of raw materials from **different types of food** (mainly vegetables, meat and fish) to avoid potential cross-contamination. ⁽⁶⁾

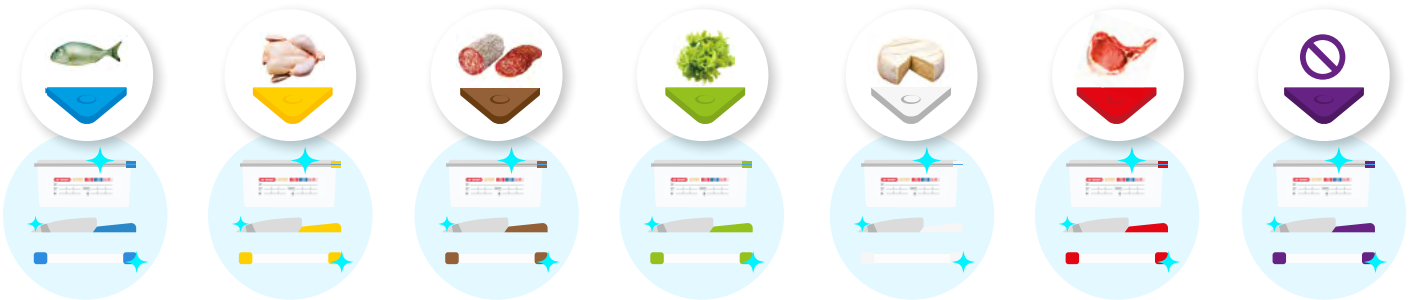


Separate, in time or place, the **cold preparation area** from the **hot preparation area**. ⁽⁶⁾



Raw foods and semi-processed or processed foods must never be handled at the same time.

Identify chopping boards and utensils to avoid cross-contamination between the different families of raw materials.



Prepare foods that are not going to be frozen or refrigerated **as close as possible** to their moment of consumption.

Keep excess prepared foods in appropriate, closed, and labelled containers. ⁽⁶⁾

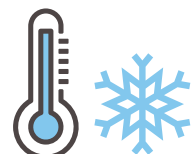
5.3 SPECIFIC HYGIENE MEASURES IN THE PREPARATION AND HANDLING OF COLD PROCESSED FOODS

Use a mask in cases in which there is no thermal treatment during preparation. ⁽⁶⁾

The use of latex gloves is not recommended due to the potential allergic reactions it may cause to people with sensitive skin: use disposable vinyl or nitrile gloves.

If the **cold processed** foods contain products subject to thermal treatment, such as rice or pasta for salads, seafood, boiled vegetables, etc., these pre-processed foods must be cooled as fast as possible prior to assembly. ⁽⁶⁾

Once prepared, the **cold processed foods must be stored** in containers with a lid and must be **kept refrigerated** at a maximum of 3 °C until service. ⁽⁶⁾



Max. 3 °C

The preparation of foods whose ingredients contain **egg** and that are not going to be later subject to a thermal treatment that reaches a **minimum of 75 °C** (for example: mayonnaise, cocktail sauce, mousse, meringue, tiramisu and other similar products) must be carried out with liquid or dried, pasteurised or sterilised industrial egg products, and must not be preserved for more than 24 hours after preparation, not even in refrigeration. ⁽⁴⁾

It is recommended that the **specific area for handling** these types of products is a cold store in order to minimise the handling of foods in cooking areas. When the kitchen is small, temporary separation may be used: **do not perform operations with raw and processed foods at the same time**, and clean and disinfect the area after each task.



5.4

SPECIFIC HYGIENE MEASURES IN THE PREPARATION AND HANDLING OF HOT PROCESSED FOODS

During the cooking and/or thermal treatment for preservation, the **centre of the food must reach a temperature of at least 65 °C** (and for a time no less than **2 minutes**); although this temperature is recommended to be 75 °C or even 80 °C in order to have a wider safety margin. ⁽⁶⁾

Once the hot processed food has been cooked, it must be **kept hot**, or **cooled**, that is, its temperature must be lowered:



- ✓ **Minimise the time that it is kept at room temperature**, establishing the limit at 30 minutes, or ensuring that it does not fall below 65 °C. ⁽⁶⁾
- ✓ **Cool quickly**. Guarantee a decrease in the temperature in the centre of the food from 65°C or higher temperatures to 8 °C in less than two hours. ⁽⁴⁾

6

HYGIENE MEASURES IN THE PRESERVATION OF PROCESSED FOODS

Protect all processed foods **from environmental exposure** until the time of their consumption. The application of a thermal treatment to a food does not guarantee that there will be no subsequent contamination.

6.1

HEATED STORAGE

The preservation of hot processed products can be carried out using different techniques: ⁽⁷⁾



SIMPLE BAIN-MARIE OR THERMOSTATIC BAIN-MARIE:

The container of food is placed into boiling water or steam. This method keeps an even temperature and is suitable for **soups and broths**. The bain-maries must be filled frequently, and their temperature checked regularly.



WARMING TABLES:

The trays that are placed on the tables (e.g. **buffet services or school canteens**) are heated from the bottom. It is recommended to put out the processed foods in **small quantities** and increase the **replacement frequency**. In this way, the heat loss that occurs in the upper part of large portions is avoided, as this facilitates growth of bacteria.



INFRARED LAMPS:

Lamps are used for **foods**, which **require frequent replenishment** as they can dry out and shrink.



WARMING CABINETS:

These are used for **pies, fish, and chips**, and sometimes for **plated meats**. The temperatures of foods should be checked regularly because air currents cool them down.

GUIDELINES FOR CORRECTLY KEEPING FOOD HOT

- » Select the most appropriate technique depending on the type of preparation.
- » Keep the processed foods at a temperature **equal to or higher than 65 °C**. Check the temperature regularly.
- » The time spent in heated storage **must not exceed 3 hours**.
- » The heated storage equipment must reach a temperature of 65 °C before food is placed in them.
- » In the bain-maries, the water temperature must exceed 80 °C and the contact surface between the water and the container of processed foods must be maximised.
- » If the temperature of the heated storage system is less than 65 °C, the processed foods must be reheated at a temperature higher than 75 °C and the equipment must be reviewed.
- » It is recommended to use lids or items that avoid spillages of the processed foods into the isothermal storage equipment/containers, which may cause a subsequent contamination.
- » Perform a daily control of the temperatures of the spaces where the processed products are stored, including bain-maries, trolleys and warming tables, display cases, etc.

6.2

REFRIGERATED STORAGE

The time that the processed products that are going to be consumed cold and are stored at **room temperature** must be minimised (**maximum of 30 minutes**).

Maintain the cold chain of processed foods until they are cooked, reheated, or served.

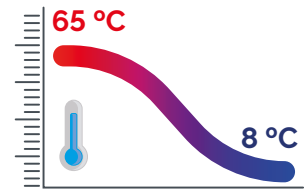
GUIDELINES FOR REFRIGERATING PROCESSED FOODS

Cooked foods must be quickly cooled to avoid the proliferation of micro-organisms using techniques and/or equipment that guarantee a decrease in the temperature of the centre of the food from **65 °C to less than 8 °C in less than two hours**.



In order to quickly decrease the temperature of a food, different techniques can be used:

- » Ice bath
- » Liquid nitrogen
- » Blast chiller



CORRECT USE OF BLAST CHILLERS

- » Dividing the cooked food into small portions speeds up the cooling process.
- » Hot foods should not be placed into refrigerators that are not prepared for this purpose.
- » The maximum capacity of a blast chiller must not be exceeded to ensure its proper operation.
- » Prepared foods must not be placed into blast chillers at temperatures exceeding 55 °C. Cooked foods should be transferred to smaller containers and cooled to 55 °C before being placed in a blast chiller.
- » Placing foods inside at temperatures exceeding 55 °C may have negative consequences:

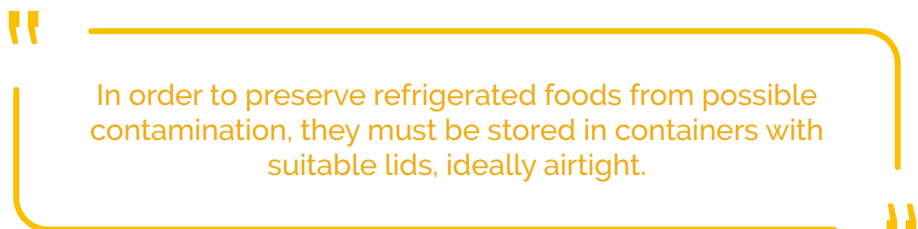
Igloo effect: Formation of frost on the surface of the food, preventing the cold air from passing inside. This process facilitates bacterial growth and fermentation.

The mechanics of the blast chiller may become damaged and lead to increased electricity costs.

- » Hot foods must not be placed inside refrigerators or chambers next to other foods as they will increase the ambient temperature of the chamber and thus the temperature of all other foods.
- » At the end of the working day, ensure that the blast chiller is switched off with the door open and no food is left inside.



After the quick cooling, the processed products **must be stored at a temperature between 1 °C and 4 °C** until their subsequent reheating or final consumption.



7

HYGIENE MEASURES FOR REHEATING PROCESSED FOODS

Reheating is the process through which a prepared food kept refrigerated or frozen is subject to a thermal treatment that increases its temperature until it can be served (at least 65 °C) in hygienic and gastronomic conditions. ^(4, 6)

It is very important to achieve the temperature increase in the shortest possible time to avoid the proliferation of micro-organisms.

GUIDELINES FOR THE REHEATING PROCESS

- » Food should only be reheated once (avoid reheating multiple times).
- » Processes should be used that can achieve temperatures exceeding 75 °C inside the product in the quickest possible time (ideally in less than 1 hour).
- » Do not use heated storage systems (heated trolleys, bain-maries, etc.) to reheat foods as they do not have the required power.
- » Liquid foods (sauces, soups...) should be brought to the boil.
- » Reheated foods must be maintained at a temperature of at least 70 °C inside the product until their consumption.

8

HYGIENE MEASURES IN THE STORAGE OF PROCESSED PRODUCTS

Measures that must be taken into account in storage rooms:

- ✓ The interior of the storage rooms must be clean and dry.
- ✓ The capacity of the storage should not be exceeded.
- ✓ Properly separate the foods to facilitate the circulation of air.
- ✓ Record the temperature of the storage rooms to ensure their proper operation.
- ✓ Identify the products with labels that indicate their name, origin, entry date into the storage, weight, etc.
- ✓ Do not leave food containers resting directly on the ground.



Putting food into **airtight containers** allows the optimisation of space and allows an efficient management in catering services.



A correctly organised storage facilities reduce hygiene-sanitary risks and improve productivity in the kitchen

Properly storing processed foods **reduces the risk of cross-contamination**, as well as the transmission of aroma from one product to another.

It is recommended to store raw materials, processed products, products of animal origin and those of plant origin in different rooms. When separation into **different rooms** according to the food type is not possible, maintain a physical distance between the different food types.



Place processed foods at the top shelves to avoid possible cross-contamination due to spillages of other foods.

Processed foods and those not for immediate consumption must be **identified with their preparation date, and their shelf life must be respected.**



The shelves are perforated to facilitate the circulation of cold air and are devoid of sharp angles, corners, or protrusions to avoid the accumulation of food debris and water condensation.

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