GUIDELINES FOR
PERSONAL STAFF HYGIENE CLEANING AND DISINFECTION AND WATER QUALITY CONTROLS

Funded by
the European Union

EU FOOD SAFETY
AB GIDA GÜVENLİĞİ

Turkish Cypriot Community Food Safety Project

Funded under the EU Aid Program for the Turkish Cypriot community, the "TCc Food Safety Project" carried out under the contract 2021/423-933 "Technical assistance to improve the implementation of food safety standards and preparedness for disease crises", strives to support faster social and institutional development of the Turkish Cypriot community (TCc) and higher economic growth of its agri-food chain sector. The aim is to achieve improved food safety, public health, animal health, and protection of the environment, and to mitigate the impact of potential exotic animal diseases, in particular those posing imminent threats. The project started in May 2021 and will be completed in April 2024.

For more information about the project, you can visit the project's website, and follow its social media account and contact the project team through the following communication channels:

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CONTENTS

1. BACKGROUND

The "TCc Food Safety Project" executed under Contract 2021/423-933 - "Technical assistance to improve implementation of food safety standards and disease crisis preparedness" strives to support a faster social and institutional development of the Turkish Cypriot community (TCc) and a higher economic growth of its agri-food chain sector.

The project aims to achieve improved food safety, public health, animal health and protection of the environment, and to mitigate the impact of an imminent threat of potential exotic animal diseases.

This document was produced within the following project activity:

Prepare guidelines for stakeholders to complement the input delivered in specific trainings, workshops and other capacity building activities.

2. INTENDED AUDIENCE

The intended audience of these guidelines are food handlers in the food industry, the catering sector and other food businesses operators.

Everyone who handles food in your food business needs to know how to handle it safely. Before any person starts working as a food handler, he/she should have the right skills and knowledge of food safety and food hygiene. This is a legal requirement and is part of the Food Safety Program for the business.

These guidelines are designed to give food handlers a basic understanding of why hygiene in handling food is so important, how and why food poisoning occurs and what people working with food can do to prevent it.

Once you have worked your way through the guidelines, pass it on to another staff member or put it somewhere handy. It is a practical reference tool that you can use when doing your job!

3. AIM OF THE GUIDELINES

These guidelines aim to assist the food business operators to achieve the legal requirements for establishing, implementing and maintaining procedures based on the HACCP principles and to ensure a high level of customer protection in terms of food safety.

The goal of the food safety system based on the HACCP principles is to keep under control certain factors that can lead to potential food poisoning.

Food business operators and relevant control bodies should cooperate in order to prevent foodborne illness.

The guidelines are also available to the public on the project's Online Food Safety Platform www.tccfoodsafetyproject.eu. All parties involved in the food and catering sector should find them a valuable tool in their day-to-day operations.

4. FOOD SAFETY

4.1. What Is Food Safety?

Food safety is just common sense!

It means keeping things clean and serving hot foods hot and cold foods cold.

Food safety involves food storage, temperature control, cleaning and sanitising, personal hygiene, and pest control.

If you work with food, you have the important responsibility to handle it safely.

A Food Safety Management Program is the operating manual of the food business that you work in and a requirement under the EU Food Law. You may be required to maintain records that are part of the Food Safety Management Program. Your Food Safety Supervisor shall be able to show you the relevant records and how to fill them.

4.2. Your Responsibilities As A Food Handler

A food handler is anyone in the business who has anything to do with food or a surface that will come into contact with food. You could be a food process worker, kitchen hand, a canteen worker, a waiting or serving staff member, a bakery assistant, a sandwich hand, or involved in clearing and cleaning tables.

The Food Safety Supervisor in your workplace should be able to help you with anything that you are unsure of.

Remember, as a food handler you need to handle and serve food safely. This is one of your key responsibilities.

4.3. Food Safety Hazards

A food safety hazard is something found in food that shouldn't be there. Hazards can be harmful once in the food. This is called contamination.

There are three types of hazards that can contaminate food:

- Microbiological hazards - bacteria, fungi, yeasts, and moulds.
- Chemical hazards - food contaminated by cleaning chemicals or pesticides.
- Physical hazards - things found in food that are not meant to be there.

Imagine finding some of these things in your food:

- Hair, fingernails, or band aids,
- Bolts, wire, nails, or screws from machinery,
- Glass, wood chips or razor blades,
- Maggots, moths, or flies.

4.4. Food Poisoning

Most of us have experienced food poisoning or know someone who has. While symptoms are similar to many stomach 'bugs' – vomiting, diarrhoea, stomach pains, aching joints and generally feeling unwell – some food poisonings can cause death, especially in children, elderly or very ill people.

Food poisoning is serious and also costly due to the following possibilities:

- Customers getting sick,
- Death in severe cases,
- Closure of the food premises,
- Loss of jobs,
- Bad publicity/loss of reputation via media/word of mouth,
- Legal actions taken by the affected customers.

4.5. Food Spoilage and Food Poisoning

Food spoilage is when food goes 'off'. Some examples include sour milk, mouldy bread, and vegetables that have gone green and slimy. The smell, taste and look of the food make it unfit to eat and should be thrown away, however this is not a food poisoning.

Food poisoning is different to food spoilage because you can't see or smell any difference in the food.

The food looks, smells, and tastes normal even though there are many food poisoning bacteria on the food.

A chain of events take place before food poisoning occurs:

Source of food poisoning

Transfer of bacteria

Growth of bacteria (in the right conditions)

Food is eaten

FOOD POISONING

5. FOOD HYGIENE- KEEPING FOOD SAFE

Food hygiene is not only about cleanliness. It is also about taking the correct steps to make sure that the food you handle and serve is safe.

Good food hygiene practices mean that you will have satisfied customers, a safe and clean workplace, and that you will meet your legal requirements.

As a food handler you are responsible for serving safe food.

Bad food hygiene practices can lead to food contamination and outbreaks of food poisoning.

5.1. What To Do To Prevent Food Poisoning?

There are three steps that can be taken to prevent food poisoning:

Step 1 - protecting food from bacterial contamination by handling and storing it correctly.

Step 2 - preventing the growth of bacteria in food through time and temperature monitoring.

Step 3 - destroying or reducing bacteria present in food by cooking food thoroughly - this can be checked using a thermometer.

The right conditions for bacteria growth refer to: time, moisture and temperature

Time

Under the right conditions, bacteria can multiply every 20 minutes. This means that in 3.5 hours, one bacterium can become one million bacteria.

Moisture

Bacteria need moisture to grow. If there is no moisture, the growth may slow down or stop. This is why drying food is a safe way to preserve it.

Temperature

Bacteria grow at temperatures between 5°C and 60°C. This temperature range is called the "Danger Zone".

At 5°C bacteria start growing. They grow faster as the temperature rises up to approximately 45°C, when their growth slows. Bacteria stop growing at around 60°C.

Food must be cooked to reach a core temperature above 75°C to kill bacteria.

Bacteria are not active when food is frozen solid (-18°C and below) (Food in the freezer).

Temperatures 0-4°C prevent most food poisoning bacteria from growing. (Food in the refrigerator)

Food at room temperature is in the Danger Zone (5-60°C) which is ideal for bacteria growth and reproduction.

ATTENTION: Foods must not stay in the Danger Zone (between 5°C and 60°C) longer than necessary.

5.2. Temperature Monitoring

The temperature of food is taken using a probe thermometer. To take the temperature you should:

1. Wash the thermometer. Rinse the thermometer under hot running water before each use.
2. Sanitise. Wash in sanitising solution or use sanitising wipes before each use.
3. Insert. Put the probe thermometer into food.
4. Read and record. Write down the temperature on the Food Safety Management Program record form.

Remember always:

- Take the core (internal) temperature by putting the probe thermometer into the thickest part of the food.
- Stir liquids (such as soups and sauces) before taking temperature.
- Wash and sanitise the probe thermometer between every record.

5.3. Cross-Contamination

Food poisoning bacteria are all around us every day. They can be found in the soil, on animals, on our skin and on our things. In fact, on everything that we touch and use!

Cross-contamination happens when bacteria contaminate food or a food contact surface. Food is usually cross contaminated by food handlers handling food incorrectly.

Here are some dos and don'ts for handling food:

Do:

- Keep raw meat and vegetables away from cooked food.
- Keep cooked meat above raw meat in the refrigerator.
- Keep food covered to protect from dust, flies, and dirt.
- Thoroughly rinse/wash all fruit and vegetables in clean water to remove soil, insects, and chemicals.
- Clean and sanitise all equipment and benches.
- Keep food stored in food-grade containers.
- Wear clean protective clothing.
- Wash hands before handling food.

Don't:

- Chop raw and cooked meat on one and the same chopping board.
- Handle cooked food after raw food without washing your hands.
- Use food handling gloves for handling money.
- Store food uncovered in the fridge or cool room.

Remember:

- Make hand washing, good personal and food hygiene habits a way of life.
- Cross-contaminating food through food handlers' poor hygiene habits, or through your suppliers, or through storing foods incorrectly, is really easy.

5.4. Food Storage

Storing food correctly is important in any kitchen. There are three main food storage areas:

- The dry store for the storage of dry ingredients.
- The refrigerator or cool room for the storage of fresh perishable food.
- The freezer for the storage of frozen foods.

1. Dry food storage in the dry store (pantry/larder)

Dry foods like flour, tea, coffee, dried pasta, sugar, breadcrumbs, herbs, and spices can be kept in the dry store or pantry. These foods have a long shelf life because they are dry. They can be kept at room temperature.

2. Cold food storage in the refrigerator

High risk foods must be kept in the refrigerator at 5°C or cooler.

3. Frozen food storage in the freezer

Frozen food should be kept in a freezer that is cold enough to keep the food rock solid frozen (-18°C and below).

Remember:

- Frozen food can still contain bacteria, and once thawed, the bacteria will start again growing.
- Keep freezers at -18 to -20°C and in a good working order.
- Frozen food must be rock solid frozen. When receiving food from suppliers check that it is frozen solid.
- Don't overload freezers.
- Cover, label, and date foods.
- Rotate stock – first in, first out rule.

5.5. Thawing

It is important that food is completely thawed before cooking. If the food is still partly frozen it may not reach the right temperature inside to kill food poisoning bacteria.

Always

- Thaw food in a refrigerator or microwave (defrost).
- Allow plenty of time to thaw thoroughly.
- Cook food within 24 hours of thawing.
- Check the temperature of the food with a probe thermometer.
- Cover, label, and date foods.

Remember:

- Don't re-freeze food once it has thawed.

5.6. Cooking, Cooling, and Reheating

Cooking food thoroughly is an important aspect of food hygiene and a way to prevent food poisoning. Make sure that all foods, especially high-risk food, is cooked to an internal core temperature of 75°C or higher. This will kill most bacteria.

Cooking

- Cook food to 75°C or higher.
- Stir liquids to heat evenly.
- Re-cook meat that is cut from gyros on a hotplate.

Cooling

Sometimes you may want to cook food and then cool it and re-heat it for service on the next day.

Special rules apply when doing this:

- Cooling food quickly.
- Decanting food into shallow containers.
- Portioning food into small amounts to cool faster.
- Putting foods into the cool room or the fridge - don't leave it on the bench or stove to cool.

ATTENTION: Foods shall not stay in the Danger Zone (between 5°C and 60°C) longer than necessary.

Reheating

- Reheat food using the quickest method, making sure the core temperature reaches 75°C.
- Food should only be reheated once and then thrown out if not eaten or sold.
- If heating food in the microwave, make sure that it is reheated all the way through.

6. PERSONAL HYGIENE

6.1. Why Personal Hygiene Is Important?

Everyone has bacteria on and inside their body. You have bacteria on your, skin, hands, underneath fingernails, in your hair, ears, nose and throat, and other parts of your body.

As a food handler you must be careful not to contaminate food with these bacteria.

People working in your business can contaminate food or spread contamination from raw to ready-to-eat food. These risks can be controlled by good personal hygiene practices – especially by making sure that hands and protective clothing are clean.

This topic details personal hygiene 'dos' and 'don'ts'.

Personal hygiene is about making sure that the food handler is clean and knows what to do to keep food clean and safe.

6.2. Washing Hands

Food hygiene requires that food handlers wash their hands properly to prevent contamination of food. Dirty hands can contaminate food and make food unsafe for eating. For example, people who have not washed their hands after they used the toilet can spread illnesses such as Hepatitis A or Norovirus. The faecal matter on his or her hands can end up in the customer's food. When the customer eats the food, he or she could become ill. This is referred to as faecal-oral transmission of a food-borne illness.

The approved method of hand washing is as follows:

- Use the designated hand sink only.
- Thoroughly lather hands with soap and warm water for 10 to 15 seconds.
- Wash all surfaces of hands, including backs of hands, wrists, between fingers, and under fingernails.
- Rinse hands well with warm water.
- Dry hands off with a paper towel.
- Turn off hand sink with the paper towel.

Food handlers must wash their hands:

- before any type of food handling / preparation,
- before handling ready-to-eat food,
- after handling raw meat,
- after handling dirty food containers, dishes, or utensils,
- after removing food debris, waste, or contamination on food preparation surfaces during food preparation,
- after eating, drinking, smoking, or other uses of tobacco,
- after going to the toilet,
- after any activity that could contaminate hands.

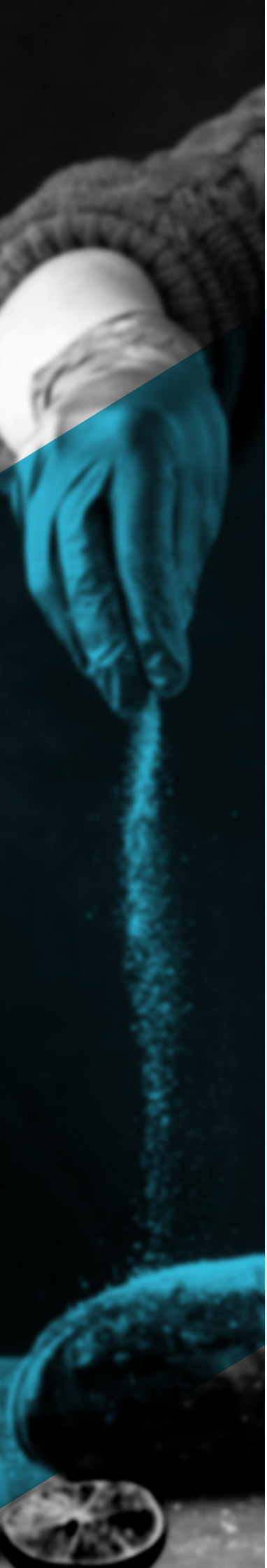
Apply soap | Wash | Rinse | Dry

6.3. Do Not Handle Food When Sick!

When food handlers are sick, a contagious illness could be transferred from them to the customers. Legal texts require that restaurant employees must inform their boss of their illness and symptoms before beginning work. Sick employees must stay out of the kitchen and must not handle food, nor clean equipment or dishes.

The following symptoms must be reported to the person in charge:

- Vomiting
- Diarrhoea
- Fever (with or without a sore throat)
- Jaundice
- If diagnosed with one of the following:
  - *Hepatitis A*
  - *E. Coli*
  - *Shigella*
  - *Salmonella Typhi*
  - *Norovirus*
- Also report cuts, burns, boils or infected wounds.



A sick employee may perform duties outside the kitchen such as cleaning the restrooms, cleaning the windows, taking out the garbage, or cleaning the dumpster. The employee must wash his or her hands frequently.

Hand sanitizers and single-use disposable gloves may be used after proper hand washing but are never to be used as a substitute of proper hand washing.

6.4. Food-Handling Gloves

Disposable food-handling gloves are great tool to help you handle food safely.

Dirty food-handling gloves can be worse than dirty hands and can contaminate food.

Do change your gloves frequently (e.g.every half an hour) and:

- after handling garbage,
- after every break,
- between handling raw and cooked food.

Don't use food-handling gloves for:

- anything else than for handling food,
- for handling money,
- for cleaning, handling packaging or picking things up off the floor,
- when moving from one task to the next.

6.5. Eating, Drinking, or Using Tobacco Products

Food handlers are not allowed to eat, drink, or smoke in the kitchen. Eating, drinking, and smoking represent a risk of contaminating hands by hand-to-mouth contact. Employees must take breaks outside the kitchen in a designated break area and properly wash their hands before returning to work.

The only exception is that employees are allowed to drink from a cup that has a lid. This is provided that, in order to avoid contamination, the personal drink with a lid is stored below and away from all food preparation and storage areas.

6.6. Hygiene

The first source of contamination of food in a commercial restaurant is the food handler. This is why food handlers must bathe daily, wear clean clothing and practice overall good hygiene.

Employees should not wipe their hands on their aprons or their clothing. They should wash properly their hands at the designated kitchen hand sink.

6.7. Clothing

The uniform that you wear in the food industry is designed to protect food from your body and will depend on the kind of food that you handle. Your clothing should not contaminate food or a food contact surface.

Protective clothing includes: overalls; aprons; uniforms; protective coats; hair nets/hats; beard snoods and disposable food handling gloves.

Do:

- Store personal belongings and clothing in a locker or changing room.
- Wear a clean, well-fitted uniform and shoes to protect food.
- Take off your apron when you go to the toilet or outside the food preparation area.

Don't:

- Store personal belongings and clothing in food preparation or food storage areas.
- Change in the toilet.
- Wear clothes unsuitable for food handling such as shorts and thongs.

6.8. Hair, Nails, And Jewellery

Hair Restraints

To prevent hair from falling into a customer's food, hair must be effectively restrained. If hair is long enough to touch the top of the shirt collar, it must be restrained by the use of hairnets, caps, hair bands or barrettes.

- Keep hair clean and tied back when handling food.
- Don't touch or comb your hair when preparing food.

Nails

- Keep them short and clean.

Don't:

- Wear artificial nails as they can fall off and into food.
- Wear nail polish as it can chip off into food. You also won't be able to see if your nails are clean underneath.

Jewellery

Remember that jewellery can:

- Be an occupational health and safety hazard. It can heat up near cooking appliances and burn your skin. It can also get caught in machinery.
- Prevent you from washing your hands thoroughly.

Don't:

- Wear watches and rings as bacteria live on watchstraps and jewellery.
- Wear rings or body piercings with stones as they can fall into food.
- Touch your face and body piercings.

7. CLEANING

7.1. Clean As You Go

In any business surfaces and equipment become unclean because of food scraps, grease, or other mess. This can be hazardous!

Cleaning is the process of removing dust, grease, odours, dirt and stains from all surfaces, fixtures (such as lights, cupboards, and shelving), utensils and equipment – not only inside a building, but also outside, in the backyard and in rubbish areas.

There are many reasons why cleaning is important in food handling areas:

- Customer satisfaction.
- Prevents food poisoning.
- Prevents disease spreading.
- Creates safe working conditions.
- Helps keep equipment well maintained.

Manual cleaning

This involves cleaning dirt, grease and food scraps off surfaces using cleaning equipment such as brooms, mops and scrubbing machines and/or hot soapy water.

Microbiological cleaning

This involves killing bacteria on the surface being cleaned by using either very hot water or a sanitiser.

7.2. Cleaning Equipment

It is important to have good cleaning equipment such as mops, brushes, protective clothing, gloves, and chemicals.

All cleaning equipment should be kept in a good and clean condition to avoid spreading bacteria.

Remember to always store cleaning equipment away from food areas.

Cleaning should always be seen as a preventative measure, not as an afterthought, so you should 'clean as you go'.

If left until the end of the day, cleaning tasks accumulate and you may be too tired to start on a big cleaning job.

7.3. Detergents

Detergents are used to remove grease, dirt, and grime from surfaces.

Detergent is like soap – it only removes surface bacteria – it does not kill bacteria.

7.4. Food Grade Sanitisers

A sanitiser is used after the detergent and kills bacteria. Sanitisers can be chemicals or a very hot water (80°C to 85°C). Methylated spirits and water (75/25 per cent ratio), chlorine bleach, or a commercial chemical sanitiser can be used.

There is no option to use either a detergent or a sanitiser – both MUST be used.

7.5. Disinfectants

Disinfectants are chemicals which often have a strong smell. They are used in toilet and dressing room areas and should never be used instead of sanitisers.

7.6. How Do I Clean?

There are four steps that need to be taken to clean and sanitise effectively. The steps apply to all food businesses and to all equipment, surfaces, floors, and walls.

Step 1: Scraping

Loosen and remove food scraps, dirt, and grease by soaking, scraping, and rinsing.

Step 2: Main cleaning

Remove surface dirt, grime, food debris or grease by washing and scrubbing using a detergent.

Step 3: Sanitising

Use a chemical sanitiser or a very hot water.

Step 4: Air drying

Allow cleaned items to air dry naturally on a clean, sanitised surface. Air drying is an important step in the cleaning process.

Tea towels should be avoided as they are excellent breeding places for food poisoning bacteria.

Remember to air dry plates. Don't be tempted to pick up a damp tea towel and wipe them as you won't be drying them but contaminating them instead!

7.7. Cleaning Schedule

Your Food Safety Supervisor will use a 'cleaning schedule' to keep track of vital cleaning tasks. Food preparation areas and equipment should be cleaned:

- before use each day,
- during the day,
- at the end of the day.

As a food handler you are responsible for certain cleaning tasks, and for signing the cleaning schedule. Your Food Safety Supervisor will check the cleaned item and the schedule to see if it is filled in daily.

The schedule should be put on a wall or a noticeboard where everyone can see it. The schedule shall include details about:

- Who is responsible for cleaning,
- What has to be cleaned,
- How it should be cleaned,
- When it should be cleaned,
- What chemicals, materials and equipment are required.

Example of a cleaning schedule

ITEM	WHO	WHEN	HOW	WHAT WITH	SIGNATURE
1. Kitchen floors	L.J	After spilages	1. Sweep entire area, especially where the floors meet the walls and coving. 2. Mop with a hot water and a detergent. 3. Mop with a sanitiser. 4. Allow to air dry.	Broom, dustpan, vacuum, mop, wringer bucket, detergent, sanitiser	
2. Preparation benches	L.J	1. Start of the day 2. After spillages 3. End of the day	1. Remove loose debris with a clean cloth. 2. Wash with a hot water and detergent. 3. Apply a sanitiser. 4. Allow to air dry.	Hand scraper, clean cloth, detergent, double sided bucket.	
....					

8. PEST CONTROL

Common pests and what they can do

Pests spread disease through bacteria and droppings. They can cause food poisoning and damage equipment and premises. It is vital that pests are kept out of food preparation and handling areas.

The most common pests that pose a threat to food areas are flies, cockroaches, ants, rats, mice, and weevils.

Pest control

- Keep doors and windows closed and screened.
- Make sure all small openings and holes are sealed.
- Don't eat food in the food handling area.
- Cover all foods and keep them properly.
- Keep all areas and equipment clean.
- Eradicate pests by physical and chemical means.
- Effective pest control needs rapid identification, knowledge of the life cycle and the best way of elimination. Pests need food, shelter, warmth, and security. How to influence these factors?
- Use a professional pest control.

Reasons for pest control

- to prevent the spread of diseases.
- to prevent waste of food.
- to prevent damage.
- to comply with the legal requirements (food safety, pesticides, etc.).

9. WATER QUALITY CONTROL

The food processing establishment should have and implement documented water safety procedures to ensure that water and ice meet the drinking water quality requirements.

The water safety procedures shall include but are not limited to:

- Name or title of personnel responsible for the implementation of the water safety procedures,
- Identification of the source of water supply ('municipality', private well, storage tank, etc),
- Water sampling and testing schedule,
- Identification of the sampling site,
- Water and ice sampling procedures,
- Quality of drinking water criteria,
- Documentation requirements - analytical results, analyst and date of sample,
- Deviation procedures to be applied when water testing results indicate drinking water quality criteria have not been met,
- Deviation procedures to be applied at the establishment in instances when and where the 'municipality' identifies a failure in the water system,
- Records to be kept.

Where applicable, the establishment should also have and implement documented water treatment procedures.

The water treatment procedures shall include but are not limited to:

- Name or title of personnel responsible for the implementation of the water treatment procedures,
- Identification of the water treatment activities to be performed,
- Water treatment method/frequency,
- Chemicals used,
- Proper handling and application of water treatment chemicals,
- Acceptable chemical concentrations,
- Documentation requirements (records should include method of treatment, sample site, analytical result, analyst and date).

Water and ice storage facilities/tanks should be cleanable, should prevent contamination, prohibit deterioration and be free from any noxious constituents.

Water and ice storage facilities/tanks shall be properly maintained.

10. WASTE MANAGEMENT

Handling and disposing off waste correctly in any food premises are vital for minimising the risk of cross-contamination, odour, and pests. Like most cleaning tasks, managing the garbage is just common sense.

Bins in food preparation/service areas:

- Empty bins regularly – after each meal service or when full,
- Wash out the bin with hot soapy water and line with plastic bin liners.

'Municipal' garbage bins:

- Hose down the area where bins are stored.
- Close the bin lid and make sure that it is not too full.
- Do not compress garbage.
- Wash out the bin with hot, soapy water.

Remember the instructions of the Food Safety Supervisor:

- Clean up after yourself and put things away after you have finished with them.
- Pick things up off the floor and put things back into storage areas where they should be.
- Wipe up spills on the floor before someone falls over.
- Make sure that food ingredients are stored correctly.
- Check to see that chemicals are labelled properly.
- Empty bins when they are full.
- Replace hand washing supplies like paper towels if you see the dispenser is empty.
- Ask what else you can do to help and report any mishaps to me.
- Remember to 'clean as you go'.

11. HYGIENE REQUIREMENTS IN DAIRY AND MEAT PROCESSING INDUSTRY

11.1. Practicing the Basic Hygiene Standards

As the food production chain becomes increasingly complex today, unhygienic work conditions and risks of contamination continue to plague the industry. Milk, dairy products, meat, and meat products have a short shelf life and are most susceptible to adulteration and growth of microbes if proper hygiene practices are not maintained. Dairy products, meat and meat products intended for human consumption must be free from harmful pathogens such as *Salmonella, Campylobacter jejuni, Listeria monocytogenes, Yersinia enterocolitica,* etc. These bacteria can cause serious illnesses, particularly in elderly people, pregnant women, children and immuno-compromised individuals.

The contamination of dairy products, meat and meat products can occur via various sources such as unhygienic production & storage processes, handlers, equipment, environment, and packaging materials. To avert the risks associated with poor standards of food safety prevalent in the dairy and meat processing industry, it has become imperative for dairy farms and production units to stay compliant with GMP, GHP and HACCP guidelines.

11.2. Importance of Maintaining Good Hygiene in Dairy and Meat Processing Industry

Milk, dairy products, meat, and meat products are perishable food products and easily fall victim to increased pH levels and microbial contamination. This can cause products to diminish in quality and taste if proper hygiene measures are not taken during manufacturing and storage.

Maintaining good hygiene is crucial for the dairy and meat processing industry in order to:

- Minimise or prevent contamination due to entry of pathogens and bacteria from unhygienic milking procedures, equipment, milk contact surfaces, handlers, storage, or packaging conditions.
- Ensure the highest standards of food safety and improved compliance with the regulatory practices defined for the dairy industry.
- Provide only the highest quality and safe dairy products to end consumers.
- Minimise or prevent contamination of carcases due to entry of pathogens and bacteria during slathering.
- Ensure the highest standards of food safety and improved compliance with regulatory practices defined for the slather houses and meat processing industry.
- Provide only the highest quality and safe meat products to end consumers.

Personnel hygiene is important and the same for all kind of food production and processing plants, including in dairy and meat processing industry.

Human beings are the biggest source of dirt, dust, and contamination in the plant, affecting quality and safety of the final product. Keeping this in mind, modern farms, production and processing plants should implement stringent personnel hygiene guidelines as mentioned herewith:

- Thoroughly wash hands using a high-quality disinfectant or hand-care product before and after leaving the milk processing or production unit.
- Every time hands become soiled; they should be cleaned properly before getting back to the work area. Fingernails should be cut short and clean.
- Do not use perfumed hand soaps or lotions. For critical production areas hands must be properly sanitised.
- Any cut or open wound must be reported to the medical centre and covered by a band-aid type coloured dressing.
- Use hygienic and sterilised clothing in dairy and meat processing plant to prevent product contamination.
- The workwear should not be worn away from the production facility or into the toilet, the smoking room, or the canteen.
- Proper design of hygiene clothing is essential to prevent the skin entering into contact with the products.
- Wearing hand gloves is mandatory when handling or packaging dairy and meat products.
- Feet should be properly covered with high-quality disposable shoe covers.
- Dairy and meat processing plants should also give utmost importance to effective workwear laundry. State-of-the-art laundry facility and compliance with the highest hygiene standards are vital for safe, sanitised, and suitable for reuse clothing.

Hygiene is one of the key parameters for ensuring quality and credibility of any dairy farm or production, and of any slaughterhouse or meat processing facility. In order to comply with the food industry best practices and ensure the highest levels of food safety to end consumers, it is imperative to maintain key hygiene standards and monitor performance.

12. CONCLUSION

Food hygiene is not only about cleanliness and personal hygiene. It is also about taking the correct steps to make sure that the food you handle and serve is safe.

Following good food hygiene practices means that you will have satisfied customers, a safe and clean workplace, and you will complete with your legal requirements.

13. REFERENCES

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