

**Kingdom of Saudi  
Arabia  
Saudi Food and Drug  
Authority**

**Food Hygiene Requirements**

## **Food Hygiene Requirements**

### **Chapter I** Introduction, Scope and Definitions

**Article I** Purpose and Scope

**Article II** Definitions

### **Chapter II** Duties of food business operators

**Article III** General Obligations

**Article IV** General and Specific Requirements

**Article V** Registration and Licencing

**Article VI** Principles of Hazard Analysis and Critical Control Points (HACCP)

**Article VII** Traceability System

**Article VIII** Production Withdrawal / Recall

**Article IX** Placing food products on the market

### **Annex I** Primary production

**Section I** Public health requirements for primary production and associated operations

**Section II** Raw milk – primary production

### **Annex II** Part I

#### **General Hygiene Requirements for all food business operators**

**Chapter I** General requirements for food premises

**Chapter II** Specific hygiene requirements concerning rooms where foodstuffs are prepared, treated or processed

**Chapter III** Requirements concerning mobile and/or temporary food premises

**Chapter IV** Transport requirements

**Chapter V** Requirements concerning equipment

**Chapter VI** Requirements concerning food wastes

**Chapter VII** Requirements concerning water supply

**Chapter VIII** Requirements for personal hygiene

**Chapter IX** Requirements concerning foodstuffs

**Chapter X** Requirements applicable to food wrapping and packaging

**Chapter XI** Requirements concerning heat treatment

**Chapter XII** Requirements concerning training

### **Annex II** Part II

**Chapter XIII** Manufacturing of minced meat and processed meat

**Chapter XIV** Manufacturing and processing of meat products

**Chapter XV** Manufacturing and processing of dairy products

**Chapter XVI** Processing of fish and fishery products

**Chapter XVII** Eggs and egg products

**Chapter XVIII** Honey

**Chapter XIX** Water

## **Introduction**

In accordance with Articles II, IV, VIII, XXVII and XXVIII of the regulation implementing the Food Law, these requirements lay down the general rules and principles; particularly with respect to the responsibilities of manufacturers, competent authorities, the structural, operational and hygiene requirements of premises, the procedures for licensing and approving the premises, and the requirements for the storage and transport of foodstuffs.

These requirements are the general basis for production under appropriate and safe conditions for all foodstuffs, including products of animal origin and water.

Further to the provisions and rules stipulated in these regulations, all adopted legislation relating to food safety and food security shall be taken account of.

## **Chapter I: Introduction, Scope and Definitions**

### **Article I: Purpose and Scope**

- 1- The main purpose of these requirements is to achieve a high level of protection for human, animal and environmental health and to develop the rules and public and private responsibilities of food business operators regarding foodstuff hygiene and the requirements for food premises and establishments. In addition to the requirements contained herein, the following shall be observed:
  - Primary responsibility for food safety rests with food business operators.
  - It is necessary to ensure food safety throughout the food chain, starting with primary production.
  - Commitment to comply with procedures based on the principles of Hazard Analysis and Critical Control Points (HACCP).
- 2- These requirements apply to food businesses, whether local or foreign, wishing to export their products to Saudi Arabia, taking into account the conditions and requirements of imports into the Kingdom, and the mechanism of accreditation by regulatory authorities and establishments for products of animal origin in the exporting countries.

### **Article II: Definitions:**

Without prejudice to the definitions laid down in the Food Law and the regulations implementing it, the following expressions have the meanings stated:

- 1) "**Authority**" means the Saudi Food and Drug Authority (SFDA).
- 2) "**Food Law**" means the approved Saudi Food Law.
- 3) "**Food premises**" means any statutory premises that operate business related to food handling throughout the food chain, except for household kitchens for domestic use.
- 4) "**Hygiene measures for food safety**" means any measures applied to protect human health from the risks resulting from food additives, contaminants, toxins and pathogens in food, or to prevent human health diseases transmitted by plants and foods of animal or plant origin. Measures include any regulations, requirements, policies, decisions or actions directly related to food safety.
- 5) "**Food Premises Administrator (FPA)**" means the person licensed or authorised by an authorised person and who is responsible for complying with the provisions of the Law and the decisions issued pursuant thereto in the premises under his or her responsibility.
- 6) "**Mobile and/or temporary food premises**" means premises with non-permanent structures or not used exclusively permanently as food facility. This includes tents, stalls, food vending vehicles, vending machines and facilities that are mainly used as private accommodation but used to prepare food to be placed on the markets.
- 7) "**Equipment**" means appliances, furniture or utensils used for the preparation, storage, and distribution of food and beverages.
- 8) "**Food hygiene**", hereinafter referred to as "**hygiene**", means the measures and conditions necessary to control hazards and ensure, with consideration of its intended use, the suitability of foodstuffs for human consumption.
- 9) "**Risks**" means the degree of probability of an adverse health effect and the severity of that effect on human health consequential to a hazard(s) in food.
- 10) "**Contaminants**" means any substance that is accidentally and not intentionally added to the food during the stages of the food chain and adversely affects its safety and validity.
- 11) "**Food traceability**" means procedures and measures that enable traceability of food, its method or any of its sources or any substance added thereto at any stage of the food chain.
- 12) "**Packing**" means the process of placing one or more wrapped foodstuffs in another container.

- 13) "**Packaging**" means the process of placing a food product in a package or container so that it is in a direct contact between the product and that package or container, provided that the material used is suitable for contact with food.
- 14) "**Tightly sealed package**" means a container designed and secured against risk entry.
- 15) "**Processing or manufacturing**" means any action that substantially changes the primary product, including heating, smoking, processing, ripening, seasoning, drying, purification, extraction, extrusion or a combination of these processes.
- 16) "**Manufactured products**" means the food products resulting from the processing or manufacturing of an unprocessed product; such products may contain ingredients necessary for processing and preparation or for adding certain properties to the products.
- 17) "**Unmanufactured products**" means foodstuffs that have not been processed or manufactured, including products that have not undergone partitioning, shredding, cutting, separation, bone removal, grinding, skin removal, cleaning, trimming, crushing, grinding, cooling, freezing or deep-freezing or melting.
- 18) "**Primary products**" means the products that are initially produced and have not been processed, including soil, livestock, land-based and sea fishing.
- 19) "**Products of animal origin**" means:
  - a) Food of animal origin including honey
  - b) Bivalves, echinoderms and tunicates (sea squirts) and molluscs intended for human consumption.
  - c) Other animals to be processed intended to be provided alive to the end-consumer.
- 20) "**Minced meat**" means a product processed by chopping beef, buffalo, lamb, goat, and camel, and fresh, chilled or frozen poultry meat after defrosting. One or more permitted substances may be added thereto and may be preserved by refrigeration or freezing.
- 21) "**Processed meat**" means fresh meat, including minced meat, containing nutrients, spices, food additives or those that have undergone insufficient processes to change the internal fibre structure of the muscles and retain the properties of fresh meat.
- 22) "**Meat products**" means processed products resulting from the processing or manufacturing of meat or further processing of processed meat so that the surface of the steak of the meat loses the properties of fresh meat.
- 23) "**Mechanically deboned meat**" means meat in the form of paste obtained after separating and removing the bones and conjunctiva cartilage from the skeletal muscle tissue of the carcass by a mechanical method (using high pressure)
- 24) "**Dairy products**" means products resulting from fresh milk processing or subsequent processing to which they are subjected.
- 25) "**Fish products**" means all seawater or freshwater animals (except bivalves, echinoderms, tunicates (sea squirts) and molluscs), whether captured or farmed, including all forms, parts and products of the animals fit to be used.
- 26) "**Fresh fish products**" means unprocessed or processed fish products that have not undergone any processing to ensure their preservation except refrigeration, including vacuum packaged products and products packaged in modified atmospheres;
- 27) "**Pre-processed fish products**", means unprocessed fish products that have undergone a process that affects their anatomical structure, such as the removal of guts, head, slicing or chopping.
- 28) "**Processed fish products**", means fish products resulting from the manufacture of fresh fish products or the further processing of a pre-processed fish product.
- 29) "**Potable water**" means any water that complies with the minimum quality standard of water intended for human consumption as prescribed in the legislation of the Kingdom of Saudi Arabia.

- 30) "**Pure seawater**" means the natural, artificial or purified seawater or brackish water that does not contain micro-organisms, harmful substances or toxic marine plankton in quantities capable of directly or indirectly affecting food quality and safety.
- 31) "**Clean water**" means clean seawater or fresh water of a similar quality.
- 32) "**Food hygiene practices**" means measures and conditions necessary to control hazards to ensure fitness of food for human consumption at all stages of the food chain, taking into account its intended use.
- 33) "**Environmental and health requirements**" means the mandatory environmental and health instructions, controls or guidelines that must be followed in food handling, in accordance with the conditions and procedures prescribed by the Technical Regulations.
- 34) "**Inspection**" means the examination and control of food while handling during the stages of the food chain to verify compliance with regulatory requirements.
- 35) "**Inspector**" means the person who is appropriately qualified according to the nature of the task they have been assigned within the control work on food.

## **Chapter II: Duties of Food Business Operators**

### **Article III: General Obligations**

- 1- Food business operators shall ensure that all stages of the food chain under their control, such as reception, production, processing, distribution, preservation, storage and placing on the market, comply with the relevant health requirements stipulated herein.

### **Article IV: General and Specific Requirements**

- 1) Food business operators and their employees carrying out primary production and associated processes set out in Annex I shall comply with the hygiene requirements of Annex I and any relevant additional requirements of the relevant national legislation.
- 2) Food business operators and their employees operating at any stage of production, processing, distribution and placing on the market beyond the stages to which paragraph 1) applies shall comply with the general health requirements set out in Annex I, Section I, Chapter I to XII and any requirements related to food regulations in Saudi Arabia.
- 3) In addition to the general requirements set out in paragraph 2, the specific requirements set out in Annex II, Section II, Chapters 13 to 19 shall apply to facilities working on the delivery of products to other food facilities.
- 4) Some of the chapters in Section II may apply to food operators that supply food products to other food businesses or to the end consumer.
- 5) Food business operators may import only foodstuffs that comply with the relevant legislation, regulations and requirements.

### **Article V: Registration and Licensing**

- 1) Without prejudice to Articles IX, X and XI of the Food Law and the conditions and requirements for importing into the Kingdom, and the mechanism for accrediting regulatory authorities and establishments for products of animal origin in the exporting countries, food businesses shall deal with, or export, food only after:
  - a) registering with the SFDA or the concerned authority in the country of production
  - b) obtaining a licence to carry out such activities.
- 2) Food business operators can use the approved application form to register the premises with the official authority, and if there is more than one branch or location of the food facility, each branch or site shall be registered separately.
- 3) On receipt of the application form for registration for a food facility, a designated inspector from the Authority shall conduct a field visit. If the food premises prove to be compliant with the relevant requirements of the food regulations, it shall be granted the appropriate licence by the SFDA.
- 4) Food business operator shall not have the right to operate premises or place its products on the market before having the appropriate licence or approvals from the competent authorities.
- 5) Upon the initial approval, the food business operators shall notify the competent authority of any changes, including the transfer of ownership or any fundamental change in the activities of that premises.
- 6) The licence to practice a food activity shall be valid for one year as of the date of its issuance; however, the licence may be suspended or withdrawn at any time by the SFDA if a designated official determines that there are violations of food regulations.



- 7) The licence of a local business shall be displayed in an obvious and visible place in the food premises. It shall be deemed a violation should the licence be removed, damaged, concealed or not maintained and the authorised person or his or her agent shall be considered in breach.
- 8) The competent authority in the Authority shall determine the fees payable in respect of registration and licensing requirements. Such fees must be public while a record of payments is maintained and available to the public.
- 9) Any person carrying out a food business without a licence shall be deemed in violation and shall be subject to the penalties stipulated in the food regulations.

## **Article VI: Principles of Hazard Analysis and Critical Control Points (HACCP)**

- 1- Food business operators are obliged to implement and maintain a permanent procedure or procedures based on the Hazard Analysis and Critical Control Points/HACCP principles in accordance with the principles set out in Annex GSO 1694.
- 2- The HACCP principles referred to in paragraph 1 above shall include:
  - a) Identifying any hazards that must be prevented, eliminated or reduced to acceptable levels.
  - b) Identifying the critical control points at the step or steps at which control is essential to prevent or eliminate a hazard or to reduce it to acceptable levels.
  - c) Establishing clear limits at critical control points, which separate acceptability from unacceptability for the prevention, elimination or reduction of identified hazards.
  - d) Developing and implementing effective monitoring procedures at critical control points.
  - e) Developing corrective actions when monitoring indicates that a critical control point is not under control.
  - f) Practical and effective training of employees in the food premises to ensure the fulfilment of the requirements of this regulation.
  - g) Developing procedures, which shall be carried out regularly, to verify that the measures outlined in subparagraphs a), b), c), d) and e) are working effectively.
  - h) Establishing documents and records commensurate with the nature and size of the food business to demonstrate the effective application of the measures outlined in subparagraphs a), b), c), d), e) and
- 3- When any modification is made to the product, process or any step, food premises shall review the procedure and make the necessary changes thereto.
- 4- Food business operators shall:
  - a) Provide the competent authority with evidence of their compliance with paragraph 1 above.
  - b) Ensure that any documents or records describing the procedures developed are accurate and up-to-date at all times.
  - c) Retain any documents and records for an appropriate period as agreed with the competent authority for a minimum of two years.

## **Article VII: Traceability system**

- 1-Food business operators shall:
  - a) be able to identify any person or company that has provided them with food, food-producing animals, or any substance intended for or expected to be incorporated into the food product.
  - b) Be able to identify any other companies to which their products have been supplied.
  - c) Have regulations and procedures in place that permit the provision of such information to the competent authorities.
  - d) make this information available to the competent authority upon request.

## **Article VIII: Production Withdrawal/Recall**

1. Without prejudice to Articles 20 and 33 of the Food Law and Article 73 of the implementing regulation and the related legislation, should the food business operator consider or have a reason to believe that a food product which it has imported, produced, processed, distributed, or placed on the market does not comply with food safety requirements, it shall:
  - A. If food is outside the control of the food business engaged in primary production,

- 1) Immediately initiate procedures to withdraw the concerned food product from the market
- 2) Notify the competent authorities.
- B. If the product reaches the consumer, the food business operator shall:
  - 1) Notify consumers effectively and accurately because of their withdrawal from the market.
  - 2) Where necessary, withdraw the food products that have already reached consumers when other measures are insufficient to achieve a high level of health protection.
  - 3) Notify the competent authorities accordingly.
- 2. The food business shall**
  - a) Immediately inform the competent authorities if he considers or has a reason to believe that food products placed on the market may pose a risk to human health.
  - b) Notify the competent authorities of the measures taken to reduce the risks to which the end-consumer is exposed.
  - c) Not hinder or prevent any person from cooperating with the competent authorities as the cooperation may prevent, reduce or limit the hazard caused by food as per the requirements set out in food regulations.
3. Food business operators shall cooperate and coordinate with the competent authority on the measures to be taken to avoid or minimise the risks posed by the food they already provide or serve.

#### **Article IX: Placing food products on the market**

1. Without prejudice to the provisions of the Food Law, labelling, advertising and publicity of food, including its form, appearance and packing, packaging of the materials used, the manner in which they are formatted, their presentation status and the information provided thereby through any advertising medium shall not mislead consumers.
2. With regard to the applicable requirements for labelling, food contact materials and expiration dates, the following specifications shall take into account: 2-150 and 1-GSO 9, 2231, 1863, 150 as long as they are relevant and complementary to the requirements of this Article.

## ANNEX I

### PRIMARY PRODUCTION

#### 1- Scope

- A. This Annex shall apply to primary production and associated operations, as follows:
- a) Transport, storage and handling of primary products at the production site, so as not to alter the nature thereof.
  - b) Transport of live animals, in accordance with article 3.2, Department I stated below.
  - c) In the case of products of plant origin, fishery products and wild game, transport operations to deliver primary products, the nature of which has not been substantially altered, from the place of production to an establishment.

#### **Section I: Public health requirements for primary production and associated operations**

#### 2- Food hygiene requirements:

1. As far as possible, food business operators shall ensure that primary products are protected against contamination, having regard to any processing that primary products will subsequently undergo.
2. Food business operators shall comply with any relevant approved national legislation relating to the control of hazards in primary production and associated operations, including:
  - a) Taking measures to prevent pollution arising from air, soil, water, feed, fertilisers, veterinary medicinal products, plant protection products and biocides and the storage, handling and wastes.
  - b) Taking measures relating to animal health and care in accordance with the provisions of the legislation issued by the World Organisation for Animal Health and the Convention for Plant Health that have implications for human health, including programmes to monitor and combat zoonotic diseases.
3. Food business operators, raising, harvesting or hunting animals or producing primary products of animal origin shall take adequate measures with regard to the following:
  - a) Keeping any facilities used in connection with primary production and associated operations, including facilities used to store and handle feed, clean and, after cleaning, where necessary, to disinfect them in an appropriate manner.
  - b) Keeping clean and, after cleaning, where necessary to disinfect, in an appropriate manner, equipment, containers, crates, vehicles and vessels.
  - c) Ensuring, as far as possible, the cleanliness of animals going to slaughter and, where necessary, animals used for production of animal food
  - d) Using potable water, or clean water, whenever necessary to prevent contamination.
  - e) Ensuring that staff handling foodstuffs are in good health and undergo training on health hazards.
  - f) Preventing, as far as possible, animals and pests causing contamination.
  - g) Storing and handling waste and hazardous substances so as to prevent contamination.
  - h) Preventing the introduction and spread of contagious diseases transmissible to humans through food, including by taking precautionary measures when introducing new animals and reporting suspected outbreaks of such diseases to the competent authority;
  - i) Taking account of the results of any relevant analyses carried out on samples taken from animals or other samples that have importance to human health.

- j) Using feed additives and veterinary medicinal products in the manner specified by the relevant legislation.
- 4. Food business operators who produce or harvest plant products shall take adequate measures for the following:
  - a) Keeping clean and after cleaning, where necessary, disinfect, in an appropriate manner, facilities, equipment, containers, vehicles and vessels.
  - b) Ensuring, where necessary, hygienic production, transport and storage conditions for, and the cleanliness of, plant products.
  - c) Using potable water, or clean water, whenever necessary to prevent contamination.
  - d) Ensuring that staff handling foodstuffs are in good health and undergo training on health hazards.
  - e) Preventing, as far as possible, animals and pests causing contamination.
  - f) Storing and handling wastes and hazardous substances so as to prevent contamination.
  - g) Taking account of the results of any relevant analyses carried out on samples taken from plants or other samples that have importance to human health.
  - h) Using plant protection products and biocides in the manner specified by the relevant legislation.
- 5. Food business operators shall take appropriate corrective action when they are notified of a violation during official inspection visits.

### **3- Record keeping:**

- 1- Food business operators shall keep and maintain records relating to measures put in place to control hazards in an appropriate manner and for a period of not less than two years, commensurate with the nature and size of the food business and to submit such records to the competent authority and to the receivers upon request.
- 2- Food business operators rearing animals or producing primary products of animal origin must, in particular, keep records on the following:
  - a) The nature and origin of the feed fed to the animals.
  - b) Veterinary medicinal products and antibiotics administered to the animals, dates of administration and withdrawal periods.
  - c) Any disease that has been diagnosed in animals
  - d) The results of any analyse carried out on samples taken from animals or other samples taken for diagnostic purposes that have importance for human health.
- 3- Food business operators who produce or harvest plant products must keep records of:
  - a) Any use of plant protection products or pesticides in compliance with public health?
  - b) Any spread of pests or diseases that may affect the safety of products of plant origin; and
  - c) Results of any relevant analyses for human health performed on samples taken from plants or other important samples to human health

## **Section II: Raw Milk – Primary Production**

Food business operators producing or collecting raw milk shall ensure compliance with the requirements stated herein in addition to any general requirement set out in Section I.

### **Chapter I: Health Requirements for Raw Milk Production**

1. Raw milk shall come from animals:
  - a) that do not show any symptoms of infectious diseases communicable to humans through milk.
  - b) that are in a good general state of health and present no sign of disease which may result in the contamination of milk, and in particular, are not suffering from any infection of the genital tract with discharge, enteritis with diarrhoea and fever, or recognisable inflammation of the udder.
  - c) that do not have any udder wound likely to affect milk.
  - d) to which no unauthorised substances or products that have not been officially approved in accordance with approved legislation have been administered.
  - e) If the animals have been given authorised materials or products, the withdrawal periods specified for these products or materials must be observed in accordance with the approved legislation.
2. In particular, as regards brucellosis, raw milk shall come from:
  - a) Cows and buffalos belonging to herds or animals officially free from tuberculosis.
  - b) Sheep and goats belonging to a holding officially free from brucellosis.
  - c) Females of other species belonging, for species susceptible to brucellosis, to herds regularly checked for that disease under a control plan approved by the competent authority.
3. As regards tuberculosis, raw milk shall come from:
  - a) Cows and buffalos belonging to herds or animals officially free from tuberculosis.
  - b) Females of other species belonging, for species susceptible to tuberculosis, to herds regularly checked for this disease under a control plan approved by the competent authority. If goats are kept together with cows, such goats must be inspected and tested for tuberculosis.
4. Raw milk from animals that do not meet the requirements of paragraphs 2 and 3 may be used with the authorisation of the competent authority:
  - a) In the case of cows or buffalos that do not show a positive reaction to tests for tuberculosis or brucellosis nor any symptoms of these diseases after having undergone a heat treatment such as to show a negative reaction to the phosphatase test.
  - b) In the case of sheep or goats that do not show a positive reaction to tests for brucellosis or which have been vaccinated against brucellosis as part of an eradication programme and which do not show any symptom of that disease, either:
    - 1- For the manufacture of cheese which a maturation period of at least two-month or,
    - 2- After having undergone heat treatment such as to show a negative reaction to the phosphatase test.
  - c) In the case of females of other species that do not show a positive reaction to tests for tuberculosis or brucellosis, nor any symptoms of these diseases, but belong to a herd where brucellosis or tuberculosis has been detected after the checks referred to in points 2 c) or 3 b), if treated to ensure its safety.
5. Raw milk from any animal not complying with the requirements of points 1 to 4, in particular, any animal showing individually a positive reaction to the prophylactic tests vis-à-vis tuberculosis or brucellosis shall not be used for human consumption.

6. The isolation of animals that are infected or suspected of being infected with any of the diseases referred to in point 2 or 3 must be effective to avoid any adverse effect on other animals' milk.

## **Chapter II: Hygiene on Milk Production Holdings:**

### **a) Requirements for premises and equipment:**

1. All milking equipment and premises where milk is stored, handled or cooled shall be located and constructed so as to limit the risk of contamination of milk.
2. Premises for the storage of raw milk shall be protected against vermin and parasitic insects, have adequate separation from premises where animals are housed and, where necessary, meet the requirements laid down in Chapter 2- b), have suitable refrigeration equipment.
3. Surfaces of equipment that are intended to come in contact with milk and its products (utensils, containers, churns, tanks etc. intended for milking, collection or transport) shall be easy to clean and, where necessary, disinfect and be maintained in a sound condition. This requires the use of smooth, washable and non-toxic materials.
4. After use, surfaces must be cleaned and, where necessary, disinfected. After each journey of each series of journeys when the period of time between unloading and the following loading is very short, but in all cases at least once a day, containers and tanks used for the transport of raw milk shall be cleaned and disinfected in an appropriate manner before re-use.

### **b) Hygiene during milking, collection and transport:**

1. Milking shall be carried out hygienically, ensuring in particular:
  - a) That teats, udders and adjacent parts are cleaned before milking starts.
  - b) That milk from each animal is checked for organoleptic or physico-chemical abnormalities by the milker or a method achieving similar results and that milk presenting such abnormalities is not used for human consumption.
  - c) That milk from animals showing clinical signs of udder disease is not used for human consumption otherwise than in accordance with the instruction of a veterinarian.
  - d) That animals undergoing medical treatment likely to transfer residues to the milk are identified, and that milk obtained from such animals before the end of the prescribed withdrawal period is not used for human consumption; and
  - e) That teat dips or sprays are used only after the competent authorities has approved them and in a manner that does not produce unacceptable residue levels in the milk.
2. Immediately after milking, milk shall be held in a clean place designed and equipped to avoid contamination. It shall be cooled immediately after milking, to no more than 8 °C in the case of daily collection or no more than 6 °C if collection is not daily.
3. During transport, the cold chain must be maintained and, on arrival at the establishment of destination, the temperature of the milk shall not be more than 10°C.
4. Food business operators need not conform to the temperature requirements set forth in points 2 and 3 if the milk meets the criteria provided for in Chapter III (Requirements for raw milk) and either:
  - a) The milk is processed within two hours of milking, or

- b) A higher temperature is necessary for technological reasons related to the manufacture of certain dairy products and the competent authority so authorises.

**c) Staff hygiene:**

1. Persons performing milking and/or handling raw milk shall wear suitable clean clothes.
2. Persons performing milking and/or handling raw milk shall keep their hands clean during the processes and maintain a high degree of personal hygiene, including nail clipping, hand washing, hand sterilisation.
3. Suitable facilities are to be available near the place of milking to enable persons performing milking and handling raw milk to wash their hands and arms.

**Chapter III: Criteria for Raw Milk:**

1. A representative number of samples of raw milk collected from milk production holdings taken by random sampling must be checked for compliance with points 2 and 3. The checks may be carried out by:
  - a) the food business operator producing the milk;
  - b) the food business operator collecting and/or processing milk;
  - c) A group of the food business operator; or
  - d) In the context of a national or regional control scheme.
2. A) Food business operators must initiate procedures to ensure that raw milk meets the following criteria:
  1. For cows' raw milk:

Plate count at 30 °C (per ml)  $\leq$  100 000 (\*)

Somatic cell count (per ml)  $\leq$  400 000 (\*\*)
  2. For raw milk from other species:

Plate count at 30 °C (per ml)  $\leq$  1 500 000 (\*)
- a) If raw milk from species other than cows is intended for the manufacture of products made with raw milk by a process that does not involve any heat treatment, food business operators must take steps to ensure that the raw milk used meets the following criterion:

Plate count at 30 °C (per ml)  $\leq$  500 000 (\*)
3. Without prejudice to any other legislation applicable in the Kingdom of Saudi Arabia, food business operators shall not sell any raw milk that contains antibiotic residues in quantities that exceed the levels mentioned below; or
4. When raw milk fails to comply with point 2 or 3, food business operators must inform the competent authority and take appropriate measures to correct the situation.

In addition to the provisions of this Section, GSO Standard 2214 applies as long as it is relevant and complementary to the requirements of this Section.

(\*) Rolling geometric average over a two-month period, with at least two samples per month.

(\*\*) Rolling geometric average over a three-month period, with at least one sample per month, unless the competent authority specifies another methodology to take account of seasonal variations in production levels.



## **ANNEX II**

### **PART I: GENERAL HYGIENE REQUIREMENTS FOR ALL FOOD BUSINESS OPERATORS**

**(EXCEPT WHEN ANNEX I APPLIES)**

#### **Introduction**

**In addition to the provisions set forth herein, the relevant approved regulations shall apply.**

Type of Food Premises	Applicable Chapters laid down in Annex II
All food premises	Chapter I Chapter III
All rooms where food products are processed, prepared or manufactured	Chapter II Chapter III
Mobile and/or temporary food premises	Chapter III
All stages of food production, processing and distribution	Chapters V to XII
Transport	Chapters (I and II) – Chapter IV
Processing and manufacturing of processed meat	Chapters I and II Chapters V to XII Chapter XIII
Processing and manufacturing of meat products	Chapters I and II Chapters V to XII Chapter XIV
Processing and manufacturing of milk products	Chapters I and II Chapters V to XII Chapter XV
Processing and manufacturing of fish products	Chapters I and II Chapters V to XII Chapter XVI
Egg products	Chapters I and II Chapters V to XII Chapter XVII
Honey	Chapters I and II Chapters V to XII Standard GSO 47

Water	Chapters I and II Chapters V to XII Standard GSO 987, 1928, 1025, 149, 2232
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## **Chapter I: General Requirements for Food Premises (other than those specified in Chapter III)**

1. Food premises and any part thereof are to be kept and maintained at all times in a good, clean and tidy condition.
2. The layout, design, construction, siting and size of food premises are to:
  - a) Make possible adequate maintenance, cleaning and/or disinfection, avoid or minimise air-borne contamination, and provide adequate working space to allow for the hygienic performance of all operations;
  - b) Be such as to protect against the accumulation of dirt, contact with toxic materials, the shedding of particles into food and the formation of condensation or undesirable mould on surfaces;
  - c) Make possible good food hygiene practices, including protection against contamination and, in particular, pest control; and
  - d) Where necessary, in order to maintain foodstuffs at appropriate temperatures, provide suitable temperature-controlled handling and storage facilities of sufficient capacity designed to allow the temperatures to be monitored and, where necessary, recorded.
3. Food premises shall have adequate natural and / or artificial lighting.
4. There shall be sufficient and adequate means of ventilation, natural or mechanical, so that:
  - a) Mechanical airflow from a contaminated area to a clean area is avoided.
  - b) Ventilation systems must be designed so as to enable cleaning or replacement of filters and other parts thereof.
  - c) These parts must be cleaned regularly to suit their intended use and the nature of the buildings.
5. The food premises must have a sufficient number of toilets available with the following requirements:
  - a) They must be connected to an effective drainage system
  - b) They must be kept clean.
  - c) They must not have doors opening directly to areas where food is handled.
  - d) Sanitary facilities are to have adequate natural or mechanical ventilation.
  - e) Every sanitary facility shall have clear reminders that hands must be washed with antiseptic and sterile materials after use of the facility.
6. An adequate number of wash basins shall be available, suitably located and designated for cleaning hands, according to the following requirements:
  - a) They must have hot and cold running water at an appropriate temperature;
  - b) They must have materials for cleaning hands and for hygienic drying,
  - c) The wash basins must be clean to wash hands and their taps must be clean and in good operating condition.
  - d) The facilities for washing food must be separate from hand-washing facilities.
  - e) They must be made of stainless steel.
7. Sewage facilities must be adequate for their intended purpose, in accordance with the following requirements:
  - a) They are to be designed and constructed to avoid the risk of contamination
  - b) The drainage gutter must be fully or partially open.
  - c) They must be designed not to allow waste to flow from a contaminated area to a clean area, in particular in areas where processed food is likely to present a high risk to the final consumer.
8. Where necessary, an adequate dressing facility for staff including lockers and/or drawers shall be provided.
9. Cleaning agents and disinfectants are not to be stored in areas where food is handled.

## **Chapter II: Specific Hygiene Requirements concerning Rooms where Foodstuffs are Prepared, Treated or Processed (excluding Dining Areas and Premises Specified in Chapter III)**

- 1) In rooms where food is prepared, treated or processed (excluding dining areas and premises specified in Chapter III, but including rooms related to transport) the design and layout are to permit good hygienic food practices, including protection against contamination between and during operations. In particular:
  - a) Floor surfaces are to be maintained in a sound condition and be easy to clean and, where necessary, disinfected. This will require the use of impermeable, non-absorbent, washable and non-toxic materials unless food business operators can satisfy the competent authority that the use of other materials is appropriate. Where appropriate, floors shall make possible adequate surface drainage;
  - b) Wall surfaces are to be maintained in a sound condition and be easy to clean and, where necessary, disinfected. This will require the use of impermeable, non-absorbent, washable and non-toxic materials and of a smooth surface up to a height appropriate for the operations unless food business operators can satisfy the competent authority that the use of other materials is appropriate;
  - c) Ceilings (or, where there are no ceilings, the inner surface of the roof) and overhead fixtures are to be constructed and finished so as to prevent the accumulation of dirt and to reduce condensation, the growth of undesirable mould and the shedding of particles;
  - d) Windows and other openings shall be constructed to prevent the accumulation of dirt. Those which can be opened to the outside environment are, where necessary, to be fitted with insect-proof screens which can be easily removed for cleaning. Where open windows would result in contamination, windows are to remain closed and locked during production;
  - e) Doors are to be easy to clean and, where necessary, to disinfect. This will require the use of smooth and non-absorbent surfaces unless food business operators can satisfy the competent authority that the use of other materials is appropriate; and.
  - f) Surfaces (including surfaces of equipment) in areas where food is handled and in particular surfaces in contact with food are to be maintained in a sound condition and be easy to clean and, where necessary, to disinfect. This will require the use of smooth, washable corrosion-resistant and non-toxic materials, unless food business operators can satisfy the competent authority that the use of other materials is appropriate.
2. Adequate facilities are to be provided, where necessary, for the cleaning, disinfecting and storing of work utensils and equipment, in accordance with the following requirements:
  - a) The facilities are to be constructed with corrosion-resistant materials, be easy to clean and have an adequate supply of hot and cold water.
  - b) The facilities shall have an adequate supply of cold and/or hot potable water at an appropriate and manageable temperature.
3. Adequate provision is to be made, where necessary, for washing food. Every sink or other such equipment provided for the washing of food is to have an adequate supply of hot and/or cold potable water consistent with the requirements of Chapter VII and shall be kept clean and, where necessary, disinfected.

### **Chapter III: Requirements concerning Mobile and/or Temporary Food Premises (such as Marquees, Market Stalls, Mobile Sales Vehicles)**

1. Premises and vending machines must be as far away as is reasonably practicable, situated, designed, constructed, kept clean and maintained in good repair condition so as to avoid the risk of contamination, in particular by animals and pests.
2. In particular, where necessary:
  - a) Appropriate facilities are to be available to maintain adequate personal hygiene (including facilities for the hygienic washing and drying of hands, hygienic toilet arrangements and changing of clothes);
  - b) Surfaces in contact with food are to be in a good condition and be easy to clean and, where necessary, to disinfect. This requires the use of smooth, washable, corrosion-resistant and non-toxic materials, unless food business operators can satisfy the competent authority that the use of other materials is appropriate;
  - c) Adequate provision is to be made for the cleaning and, where necessary, disinfecting of work utensils and equipment;
  - d) Adequate provision is to be made to hygienically clean foodstuffs if it is part of the food premises' operations;
  - e) An adequate supply of hot and/or cold potable water is to be available;
  - f) Adequate arrangements and/or facilities for the hygienic storage and disposal of hazardous and/or inedible substances and wastes (whether liquid or solid) are to be available.
  - g) Adequate arrangements and/or facilities for maintaining and monitoring suitable food temperature conditions are to be available;
  - h) Foodstuffs are to be so placed so as to avoid the risk of contamination as far as is reasonably practicable.
  - i) Persons working in these premises shall comply with food handling requirements such as:
    - i.1 Having a health certificate from the competent authority.
    - i.2 Putting on a headgear and wearing gloves.

### **Chapter IV: Requirements concerning Transport**

1. Means of transport and/or containers used for transporting foodstuffs are to be kept clean and maintained in good conditions to protect foodstuffs from contamination and, where necessary, must be designed and constructed so as to make possible adequate cleaning and/or disinfection.
2. Receptacles in vehicles and/or containers shall not be used for transporting anything other than foodstuffs where this may result in contamination.
3. Where means of transport and/or containers are used for transporting anything in addition to foodstuffs or for transporting different foodstuffs at the same time, there must be, if necessary, an effective separation of products.
4. Bulk foodstuffs in liquid, granulate or powder form are to be transported in receptacles and/or containers/tankers reserved for the transport of foodstuffs. Such containers shall

- be marked in a clearly visible and indelible fashion, to show that they are used for the transport of foodstuffs, or shall be marked "for foodstuffs only".
5. Where means of transport and/or containers have been used for transporting anything other than foodstuffs or for transporting different foodstuffs, an effective cleaning operation must be carried out between loads to avoid the risk of contamination.
  6. Foodstuffs in means of transport and/or containers are to be so placed and protected so as to minimise the risk of contamination.
  7. Where necessary, means of transport and/or containers used for transporting foodstuffs should maintain foodstuffs at appropriate temperatures and allow the monitoring of those temperatures.

## **Chapter V: Requirements concerning Equipment**

1. All materials, fittings and equipment with which food comes into contact must:
  - a) Be effectively cleaned and, where necessary, disinfected. The cleaning and disinfection procedure must be repeated sufficiently to avoid any contamination with the exception of non-reusable packages and containers.
  - b) Be so constructed, be made of such materials and be kept in such good order, repair and conditions as to minimise any risk of contamination;
  - c) With the exception of non-returnable containers and packaging, be so constructed, be made of such materials and be kept in such good order, repair and conditions as to enable them to be kept clean and, where necessary, disinfected; and
2. When chemical additives have to be used to prevent corrosion of equipment and containers, they are to be used in accordance with good practices.

## **Chapter VI: Requirements concerning Food Wastes**

1. Food wastes, non-edible by-products and other refuse are to be removed from rooms where food is present as quickly as possible, so as to avoid their accumulation at the end of each work day or each staff shift.
2. Food wastes, non-edible by-products and other refuse are to be deposited in closable containers, unless food business operators can demonstrate to the competent authority that the use of other types of containers or evacuation systems is appropriate. The containers are to be of an appropriate construction, kept in sound condition, be easy to clean and, where necessary, to disinfect.
3. Adequate provision is to be made for the facilities used for storage and disposal of food wastes, non-edible by-products and other refuse. Refuse stores are to be designed and managed in such a way as to enable them to be kept clean and, where necessary, free of animals and pests.
4. All wastes shall be eliminated in a hygienic and environmentally friendly way in accordance with the relevant legislation applicable in Saudi Arabia and shall not constitute a direct or indirect source of contamination.

## **Chapter VII: Requirements concerning Water Supply**

1. Adequate supply shall be provided for potable water, which is to be used whenever necessary to ensure that foodstuffs are not contaminated;
  - a) Clean water may be used with all fishery products.
  - b) Clean seawater may be used with live bivalve molluscs, echinoderms, tunicates (sea squirts) and marine gastropods; clean water may also be used for external washing. When such water is used, adequate facilities shall be available for its supply.
2. Where non-potable water is used, for example for fire control, steam production, refrigeration and other similar purposes, it must flow in a separate and duly identified system. Non-potable water must not be connected into, or allow reflux into, potable water systems.
3. Ice which comes into contact with food or which may contaminate food shall come from potable water or from clean water, when used to chill all fishery products. Ice shall be made, handled and stored under conditions that protect it from contamination.
4. Steam used directly in contact with food shall not contain any substance that presents a hazard to health or is likely to contaminate the food.
5. Where heat treatment is applied to foodstuffs, water used to cool the containers after heat treatment or foodstuffs must be safe of any source of contamination for the foodstuff.

## **Chapter VIII: Requirements for Personal Hygiene**

1. Any person working in a food-handling area shall maintain a high degree of personal cleanliness and wear suitable, clean and, where necessary, protective clothing.
2. Any person working in food handling areas or dealing with exposed food is prohibited from using any kind of tobacco products including chewed tobacco products, for example, but not limited to sucking and snuffing.
3. Food production and processing personnel shall refrain from eating, drinking and/or spitting while working in the food handling area or when handling unprotected food.
4. A waterproof bandage shall be applied to any wound or scratch in exposed parts of the body.
5. No one shall trade food unless they possess a certificate of good health.
  - a) This certificate is valid for twelve months from the date of issuance provided that it is kept at the main work station and is available for inspection by the Food Authority.
6. No one suffering from or being a carrier of a disease likely to be transmitted through food or, for example, having infected wounds, skin infections, sores or diarrhoea is to be permitted to handle food or enter any food-handling area whatever their duty if there is any likelihood of direct or indirect contamination.
  - a) Any person so affected and employed in a food business and who is likely to come into contact with food is to report immediately the illness or symptoms, and if possible, their causes, to the food business operator.
  - b) The food premises shall notify the Authority of the measures taken to prevent transmission of the disease.
7. If the competent authority has a reason to believe that a food production and processing worker suffers from or is a carrier of a disease likely to be transmitted through food or, for example, has contaminated wounds, skin infections, sores or diarrhoea, an authorised official may request that the worker be subjected to a medical examination by a medical officer.

- a) The medical officer shall issue a certificate stating whether the person is fit or unfit to work in contact with food.
- b) A food production and processing worker shall cease handling food during the medical examination process, including within the period required to process any samples taken from him or her
- c) If the certificate states that the person is unfit to deal with food, the person shall stop working until they receive a certificate from a medical officer stating that they are fit for work.

## **Chapter IX: Requirements concerning Foodstuffs**

1. The food premises shall not accept raw materials or ingredients, other than live animals, or any other material used in processing products, if they are known to be, or might reasonably be suspected to be contaminated with parasites, pathogenic microorganisms or toxic, decomposed or foreign substances to such an extent that, even after the food business operator has hygienically applied normal sorting and/or preparatory or processing procedures, the final product would be unfit for human consumption.
2. Raw materials and all ingredients stored in the food sector are to be kept in appropriate conditions designed to prevent harmful degradation and to protect them from contamination.
3. Raw materials and all ingredients stored in the food sector are to be labelled to prevent harmful degradation and to protect them against contamination.
4. Food shall be protected at all stages of production, processing and distribution from any contamination that may make it unsuitable for human consumption, harmful to health, or so contaminated as to make the site unsuitable for consumption in this case.
5. Adequate procedures are to be in place to control pests. Adequate procedures shall be adopted to prevent domestic animals from having access to areas where food is prepared, handled or stored (or should the competent authority authorise it in special cases, to prevent such access from resulting in contamination).
6. Raw materials, ingredients, intermediate products and finished products likely to be a support for the reproduction of pathogenic microorganisms or the formation of toxins shall not be kept at temperatures that might result in a risk to health.
  - a) Cold storage requirements
    1. Any food that is likely to support the growth of pathogenic microorganisms or the formation of toxins in food facilities shall be kept at not more than 50 °C but where food is prepared for sale or offered for sale, it may be kept above 50 °C for a period not exceeding four hours.
    2. The cold chain must not be interrupted. However, limited periods outside temperature control are permitted, to accommodate the practical aspects of handling during preparation, transport, storage, display and service of food, provided that it does not result in a risk to health.
  - b) Hot storage requirements
    1. Cooked or reheated food intended for service or for sale in food facilities shall be stored at or above 63 °C if it is likely to support the growth of pathogenic micro-organisms or the formation of toxins. Where food is prepared for service or for sale, it may be kept above 63 °C for a period not exceeding two hours.



7. Food businesses manufacturing, handling and wrapping processed foodstuffs shall have suitable rooms, large enough for the separate storage of raw materials from processed material and sufficient separate refrigerated storage.
8. Where foodstuffs are to be held or served at chilled temperatures, they are to be cooled as quickly as possible after the heat-processing stage or the final preparation stage if there is no heat process, to a temperature which does not result in a risk to health.
9. The thawing of foodstuffs shall be undertaken in such a way as to minimise the risk of growth of pathogenic micro-organisms or the formation of toxins in the food. During thawing, food shall be subjected to temperatures that would not result in a health hazard. Where run-off liquid from the thawing process may present a risk to health, it shall be adequately drained. After thawing, food is to be handled in such a manner as to minimise the risk of growth of pathogenic microorganisms or the formation of toxins.
10. Hazardous and/or non-edible by-substances, including animal feed, are to be adequately labelled and stored in separate and secure containers.

## **Chapter X: Requirements applicable to Food Wrapping and Packaging**

In addition to the relevant national legislation, the following shall be observed:

1. Material used for wrapping and packaging shall not be a source of contamination.
2. Wrapping materials shall be stored in such a manner that they are not exposed to a risk of contamination.
3. Wrapping and packaging operations shall be carried out so as to avoid contamination of the products. Where appropriate and in particular, if metal containers and glass jars are used, the integrity of the container's structure and its cleanliness shall be assured.
4. Wrapping and packaging material re-used for foodstuffs must be easy to clean and, where necessary, to disinfect.

## **Chapter XI: Requirements concerning Heat Treatment**

The following requirements apply only to food placed on the market in hermetically sealed containers:

- a) Any thermal process used to treat an unprocessed product or for further treatment of a processed product should achieve the following goals:
  1. Raise all parts of the product to a certain temperature for a given period of time; and
  2. Prevent the product from becoming contaminated during the process;
- b) Ensure that the heating process achieves the desired objectives, food business operators must check regularly the main relevant parameters (in particular the temperature, pressure, sealing and microbiologic conditions), including by using automatic devices;
- c) The process used shall be conform to an internationally recognised standard (for example, pasteurising, ultra-high temperature or sterilising).

## **Chapter XII: Requirements concerning Training**

1. All Food business operators shall ensure:
  - a) That staff handling food are supervised and instructed and/or trained in food hygiene matters in relation with their work activity;
  - b) That workers in the field of food waste, inedible by-products and other waste have been adequately trained in the application of HACCP principles.
  - c) Compliance with any provisions of adopted national legislation relevant to the training of personnel working in food sectors.

## **PART II: SPECIFIC REQUIREMENTS FOR PRODUCTION FACILITIES (FOOD OF ANIMAL ORIGIN AND FISHERY BRODUCTS)**

**(These rules complement those laid down in Chapters I and II and Chapters IV to XII)**

In addition to the provisions of this Chapter, the relevant legislation applicable to meat, milk, fish, eggs, honey and water products shall apply.

### **Chapter XIII: Manufacturing of Minced Meat and Processed Meat**

These requirements apply to enterprises that supply meat and processed meat to other companies. They shall not apply to establishments selling only to end consumers.

1. All food business operators producing minced meat and/or processed meat shall ensure that they are equipped so as to avoid contamination of products, and to allow constant progress of the operation.
2. Can ensure separation between the different production batches;
3. Have rooms for the separate storage of packaged and unpackaged meat and products, unless they are stored at different times or in such a way that the packaging material and the manner of storage cannot be a source of contamination for the meat or products;
4. Production halls and storage warehouses must be equipped to ensure compliance with the temperature requirements stipulated in the food hygiene requirements during and after the production mentioned below.
5. Establishments shall Be equipped with facilities for washing hands, automatic ones to avoid employees who handle uncovered meat and products to touch them with their hand.
6. Have facilities for disinfecting tools with hot water supplied at not less than 82 °C, or an alternative system with an equivalent effect.

### **Requirements for Raw Materials**

Food business operators producing minced meat and/or meat preparations shall ensure that the raw materials used satisfy the following requirements.

1. The raw materials used to prepare minced meat must meet the following requirements:
  - a) Comply with the requirements for fresh meat;
  - b) Come from skeletal muscles, including adherent fatty tissues;
  - c) Should not be left over from cutting and trimming meat (other than whole muscle cuts), including meat separated mechanically.
2. The following raw materials may be used for meat preparations:
  - a) Fresh meat;
  - b) Meat complying with the requirements of point 1; and
  - c) If the meat being processed is clearly not for consumption after it undergoes heat treatment, then minced or shredded meat can be used and shall meet the requirements of the point 1 c) above.

3. Food business operators shall ensure that the following are not used in the preparation of meat products:
  - a. Male and female reproductive organs, except testicles.
  - b. Urinary organs, except kidneys and bladder.
  - c. Cartilage of larynx and trachea, bronchi, and laryngeal trachea.
  - d. Eyes and eyelids.
  - e. External hearing areas.
  - f. Keratinocyte.
  - g) In poultry, the head, extra skins, and fleshy protrusions - oesophagus, vesicle, intestine, and genitals.

## **Hygiene Requirements during and after Production**

Food business operators producing minced meat and/or meat preparations shall ensure compliance with the following requirements:

1. The work on meat must be organised so as to prevent or minimise contamination.
2. Food business operators shall ensure that the meat used is:
  - a) At a temperature of not more than 4 °C for poultry, 3 °C for offal and 7 °C for other meat; and
  - b) Brought into the preparation room progressively as needed.
3. Frozen or deep-frozen meat shall be boned and used in preparing ground meat or prepared meats before freezing. They may be stored for a limited period only, unless the competent authority permits other appropriate methods.
4. When prepared from chilled meat, minced meat must be prepared:
  - a) In the case of poultry, within no more than three days of their slaughter;
  - b) In the case of animals other than poultry, within no more than six days of their slaughter; or within no more than 15 days from the slaughter of the animals in the case of boned, vacuum-packed beef and veal.

C- Immediately after production, minced meat and meat preparations must be wrapped or packaged and be:

  - 1- Chilled to an internal temperature of not more than 2 °C for minced meat
  - 2- Of not more than 4 °C for processed meat; or
  - 3- Frozen to an internal temperature of at least -18 °C.

D- These temperatures must be maintained during storage and transport.
5. Meat and minced meat shall not be re-frozen after thawing.

## **Chapter XIV: Heat Treatment**

Processed meat products that are usually eaten without further cooking shall undergo a process sufficient to eliminate pathogenic bacteria, parasites and cystic parasite forms.

## **Chapter XV: Processing and Manufacturing of Dairy Products**

### **PART I: REQUIREMENTS CONCERNING DAIRY PRODUCTS**

#### **1) Temperature Requirements**

- a) Food business operators shall ensure that, upon acceptance at a processing establishment, milk is quickly cooled to no more than 6 °C and kept at that temperature until processed.
- b) However, food business operators may keep milk at a higher temperature if:
  - Processing begins immediately after milking, or within four hours of acceptance at the processing establishment; or

- The competent authority authorises a higher temperature for technological reasons concerning the manufacture of specific dairy products.

## 2) Specific Requirements for Heat Treatment

Should raw milk or dairy products undergo heat treatment, food business operators shall ensure that the requirements laid down in Chapter XI of Annex II above are met. In particular, they shall ensure that, when using the following processes, they comply with the specifications stated below:

- A. 1. Pasteurisation is achieved by a treatment involving:
  - A high temperature for a short time (at least 72 °C for 15 seconds);
  - A lower temperature for a longer time (at least 63 °C for 30 minutes)
  - Sudden cooling to a temperature not exceeding 4 °C
  - Any other combination of time-temperature conditions to obtain an equivalent effect, such that the products show, where applicable, a negative reaction to an alkaline phosphatase test immediately after the treatment.
- A. 2. Ultra-high temperature (UHT) treatment is achieved by a process:
  - Involving a continuous flow of heat at a high temperature for a short time (not less than 135 °C in combination with a suitable holding time) such that there are no viable microorganisms or spores capable of growing in the treated product when kept in an aseptic closed container at ambient temperature, and
  - Sufficient to ensure that the products remain microbiologically stable after incubating in closed containers for 15 days at 30 °C or for seven days at 55 °C or any other method proving that the appropriate heat treatment has been applied.
- B. When considering whether to subject raw milk to heat treatment, food business operators shall:
  - Abide by the procedures developed in accordance with the HACCP principles pursuant to Regulation no (6) above; and
  - Comply with any requirements that the competent authority may impose in this regard.
- C. Food business operators manufacturing dairy products shall, immediately before the treatment, initiate procedures to ensure that:
  - (1) Raw milk taken from cows used to prepare dairy products has a plate count at 30 °C of less than 300 000 per ml; and
  - (2) Heat-treated milk taken from cows used to prepare dairy products has a plate count at 30 °C of less than 100 000 per ml.
- D. Should milk fail to meet the criteria laid down in paragraph 1, food business operators shall inform the competent authority and take all due measures to remedy the situation.

**Section II: Additional Requirements for Premises Processing or Manufacturing Dairy Products and Supplementing the General Requirements Set Out in Chapters I to XII of this Annex.**

1. The premises shall have equipment for mechanical filling and automatic sealing of containers (excluding churns, tanks and bulk packaging of more than 4 litres) which are to be used for packaging heat-treated drinking milk and liquid milk-based products, if these operations are carried out on the premises.
2. The premises shall possess equipment for cooling and cold storing of heat-treated milk and liquid milk-based products. Where raw milk is stored, purified or standardised in the premises, those premises shall also possess equipment for cooling and cold storing raw milk. Cold stores shall be equipped with correctly calibrated temperature measuring apparatus.
3. The premises shall have:
  - a) For dairy products wrapped in disposable containers, areas for storing the containers and for storing raw materials used for their manufacture; and
  - b) For dairy products wrapped in reusable containers, a special area for storing such containers and equipment designed to clean and disinfect them mechanically.
4. The premises shall have containers for storing raw milk, and where necessary, have calibration equipment and containers to store skimmed milk.
5. The premises shall have centrifuges or any other suitable means to physically purify milk, if appropriate.
6. 1) Subject to sub-paragraph 2) below, a treatment establishment shall possess heat-treatment equipment, approved or authorised by the approving authority for the treatment of dairy products, equipped with:
  - a) An automatic temperature control system;
  - b) A recording thermometer;
  - c) An automatic safety device preventing insufficient heating;
  - d) An adequate safety system preventing the mixture of heat-treated drinking milk with milk which has not been fully heat-treated; and
  - e) An automatic recording device to monitor the functioning of the safety system referred to in sub-paragraph d) above or a procedure for monitoring the system's effectiveness;

A treatment establishment may have equipment different to those specified above provided that an equivalent performance may be achieved with equal assurances with regard to hygiene and the approving authority has authorised the use of such equipment.

7. A processing establishment shall have equipment for heating, thermisation or heat-treatment meeting hygiene requirements if such operations are carried out in that establishment.
8. The establishment shall possess equipment for the cooling, wrapping and storage of frozen milk-based products, if such operations are carried out at that establishment.
9. The establishment shall possess equipment for drying and wrapping powdered milk products, if such operations are carried out at that establishment.
10. Where appropriate, rooms intended for production processes shall be divided into wet and dry areas, each having its own operating conditions.
11. Utilities for sterilising tools with hot water at a temperature of at least 82 °C, or an alternative system of similar effect.

### **Section III: Wrapping, Packaging and Labelling**

**Without prejudice to the requirements of approved legislation,**

1. Sealing of consumer packages shall be carried out immediately after filling in the establishment where the last heat treatment of liquid dairy products has taken place by means of sealing devices to prevent contamination.
2. Labelling on any milk or dairy products to be placed on the market shall clearly show:
  - a) The words 'raw milk' for raw milk
  - b) The words 'made with raw milk' for products made from raw milk whose manufacturing process does not include any heat treatment or any physical or chemical treatment;
3. The requirements of paragraph 2 apply to products intended for retail trade. The term 'labelling' includes any packaging, document, notice, label, ring or collar accompanying or referring to such products.

### **Chapter XVI: Processing of Fish and Fishery Products**

**With regard to fishery products:**

- a. Primary production covers the farming, fishing and collection of live fishery products for selling;
- b. Associated operations cover any of the following operations, if carried out on board fishing vessels: heading, gutting, removing fins, cooling and wrapping; they also include:
  1. The transport and storage of fish products the nature of which has not been substantially altered, including live fish products, within fish farms on land;
  2. The transport of fish products the nature of which has not been substantially altered, including live fish products from the place of production to the first establishment of destination.

### **Section I: Requirements During and After Landing**

1. Food business operators responsible for the unloading and landing of fishery products shall:
  - a) Ensure that unloading and landing equipment coming into contact with fish products is made of easy to clean and disinfect materials and kept in a good state of repair and cleanliness; and
  - b) Avoid contamination of fish products during unloading and landing, in particular by:
    1. Carrying out unloading and landing operations rapidly;
    2. Placing fish products without delay in a protected environment at the temperature specified in Chapter VII;
    3. Not using equipment and practices that may cause unnecessary damage to the edible parts of the fish products.



2. Food business operators responsible for auction and wholesale markets or parts thereof where fish products are displayed for sale shall ensure compliance with the following requirements:
  - a) There shall be lockable facilities for the refrigerated storage of detained fish products and separate lockable facilities for the storage of fish products declared unfit for human consumption.
  - b) There shall be lockable facilities appropriately equipped, and where the competent authority so requires, there shall be an adequately equipped lockable facility or, where needed, room for the exclusive use of the competent authority.
3. At the time of display or storage of fishery products:
  - a) The premises shall not be used for other purposes;
  - b) Vehicles emitting exhaust fumes likely to impair the quality of fishery products shall not have access to the premises;
  - c) Persons having access to the premises shall not introduce other animals; and
  - d) The premises shall be well lit to facilitate official controls.
4. When chilling was not possible on board the vessel, fresh fishery products, other than those kept alive, shall undergo chilling as soon as possible after landing and be stored at a temperature approaching that of melting ice.

## **Section II: Requirements for Premises Handling Fishery Products**

Food business operators handling fishery products shall ensure that the following requirements are met:

### **a) Requirements for Fresh Fishery Products:**

1. Where chilled, unpackaged products are not distributed, dispatched, prepared or processed immediately after reaching an establishment on land, they shall be stored under ice in appropriate facilities. Re-icing shall be carried out as often as necessary. Packaged fresh fishery products shall be chilled to a temperature approaching that of melting ice.
2. Operations such as heading and gutting shall be carried out hygienically and ensure the safety of products. Where gutting is possible from a technical and commercial viewpoint, it shall be carried out as quickly as possible after the products have been caught or landed. The products shall be washed thoroughly with potable water or, on board vessels, clean water immediately after these operations.
3. Operations such as filleting and cutting shall be carried out so as to avoid contamination or spoilage of fillets and slices, packaged and chilled as quickly as possible after their preparation.
4. Containers used for the dispatch or storage of unpackaged prepared fresh fishery products stored under ice shall ensure that melt water does not remain in contact with the products.
5. Whole and gutted fresh fishery products may be transported and stored in cooled water on board vessels. They may also continue to be transported in cooled water after landing, and be transported from aquaculture establishments, until they arrive at the first establishment on land carrying out any activity other than transport or sorting.

### **b) Requirements for Frozen Fishery Products:**

Establishments on land that freeze fishery products shall have:

1. Freezing equipment with sufficient capacity to lower the temperature rapidly so as to achieve a core temperature of -18 °C or below;
2. Trays shall be made of stainless materials.
3. Refrigeration equipment with sufficient capacity to maintain fishery products in the storage holds at -18 °C or below.
4. Storage holds shall be:
  - a. Equipped with a temperature-recording device in a place where it can be easily read. The temperature sensor of the reader shall be situated in the area where the temperature in the hold is the highest; and
  - b. Designed and equipped to preserve fishery products against contamination.
5. The areas and containers used to store fishery products shall be maintained in satisfactory hygienic conditions while ensuring that the water used in melting does not remain in contact with the products.

**c) Requirements concerning parasites**

1. Food business operators shall ensure that fishery products that have undergone a visual examination for the purpose of detecting visible parasites before being placed on the market. They shall not place fishery products that are obviously contaminated with parasites on the market for human consumption.
2. The following fishery products shall be frozen at a temperature of -20 °C or below in all parts of the product for not less than 24 hours; this treatment shall be applied to the raw product or the finished product:
  - a) Fishery products to be consumed raw or almost raw;
  - b) Fishery products from the following species, if they are to undergo a cold smoking process in which the internal temperature of the fishery product is not more than 60 °C:
    1. Herring,
    2. Mackerel
    3. Sprat
    4. Salmon (not farmed) from the Atlantic and Pacific Oceans; and
    5. Marinated and/or salted fishery products, if the processing is insufficient to destroy nematode larvae.
3. Food business operators do not need to carry out the treatment required under point 1 if:
  - a) Epidemiological data are available indicating that the fishing grounds of origin do not present a health hazard with regard to the presence of parasites; and
  - b) The competent authority so authorises.
4. A document from the manufacturer, stating the type of process they have undergone, shall accompany fishery products referred to in point 1 if they are placed on the market, except when supplied to the final consumer.

**Section III: Requirements for processed fishery products**

Food business operators cooking crustaceans and molluscs shall ensure compliance with the following requirements:

1. Rapid cooling shall follow cooking. Water used for this purpose shall be potable water or, on board vessels, clean water. If no other method of preservation is used, cooling shall continue until a temperature approaching that of melting ice is reached.
2. Shelling or shucking shall be carried out hygienically, avoiding contamination of the product. Where such operations are conducted by hand, workers shall pay particular attention to washing their hands.
3. After shelling or shucking, cooked products shall be frozen immediately, or be chilled as soon as possible to the melting temperature of the ice.

#### **Section IV: Hygienic requirements for fishery products**

Food business operators shall ensure, depending on the nature of the product or the species, which fishery products placed on the market for human consumption meet the standards laid down in this Chapter.

##### **a) Organoleptic properties of fishery products**

Food business operators shall carry out an organoleptic examination of fishery products. In particular, this examination shall ensure that fishery products comply with any freshness criteria.

##### **b) Histamine**

1. Food business operators shall ensure that histamine limits are not exceeded.
2. Histamine levels shall not exceed 200 mg/kg in any fishery product at any time during its shelf life.

##### **c) Total volatile nitrogen**

Unprocessed fishery products shall not be placed on the market if chemical tests reveal that the limits with regard to TVB-N or TMA-N have been exceeded.

##### **d) Toxins harmful to human health**

1. Fishery products derived from poisonous fish of the following families shall not be placed on the market: Tetraodontidae, Molidae, Diodontidae and Canthigasteridae.
2. Fishery products containing biotoxins such as ciguatoxin or muscle-paralysing toxins shall not be placed on the market. However, fishery products derived

from bivalve molluscs, echinoderms, tunicates and marine gastropods may be placed on the market.

3. Fishery products derived from bivalve molluscs, skin thorns, boilers (sea spray) and live marine molluscs may be placed on the market if they meet the following criteria:
  - a. They shall have organoleptic characteristics associated with freshness, vitality and adequate response to percussion and normal amounts of intravalvular fluids, including dirt-free psoriasis.
  - b. They shall not contain marine biotoxins in total quantities (measured in the body as a whole or any other edible part separately) exceeding the following limits:
    1. For paralytic shellfish poison (PSP), 800 micrograms per kilogram;
    2. For amnesic shellfish poison (ASP), 20 milligrams of domoic acid per kg.
    3. For okadaic acid, for dinophysistoxins and pectenotoxins together, 160 micrograms of equivalents okadaic acid per kg.
    4. For yessotoxin, 1 mg of yessotoxin equivalent per kg.
    5. For azaspiracids, 160 microgrammes of equivalents azaspiracid per kg.

## **Section VI: Packaging of Fish Products**

1. Receptacles in which fresh fishery products are kept under ice shall be water-resistant and ensure that melt-water does not remain in contact with the products.
2. Frozen blocks prepared on board vessels shall be adequately wrapped before landing.
3. When fishery products are wrapped on board fishing vessels, food business operators shall ensure that wrapping material:
  - a. Is not a source of contamination;
  - b. Is stored in such a manner that it is not exposed to a risk of contamination;
  - c. Intended for re-use is easy to clean and, where necessary, to disinfect.

## **Section VII: Storage of Fish Products**

Food business operators specialised in storing fishery products shall ensure compliance with the following requirements.:

1. Fresh fishery products, thawed unprocessed fishery products, and cooked and chilled products from crustaceans and molluscs, shall be maintained at a temperature approaching that of melting ice.
2. Frozen fishery products shall be kept at a temperature of  $-18^{\circ}\text{C}$  or below in all parts of the product; however, whole frozen fish in brine intended for the manufacture of canned food may be kept at a temperature of  $-9^{\circ}\text{C}$  or below;
3. Fishery products kept alive shall be kept at a temperature and in a manner that does not adversely affect food safety or their viability.

## **Section VIII: Transport of Fishery Products**

Food business operators transporting fishery products shall ensure compliance with the following requirements:

1. During transport, fishery products shall be maintained at the required temperature. In particular:
  - a. Fresh fishery products, thawed unprocessed fishery products, and cooked and chilled products from crustaceans and molluscs, shall be maintained at a temperature approaching that of melting ice.
  - b. Frozen fishery products, with the exception of frozen fish in brine intended for the manufacture of canned food, shall be maintained during transport at an even temperature of  $-18^{\circ}\text{C}$  or below in all parts of the product, possibly with short upward fluctuations of not more than  $3^{\circ}\text{C}$ .
2. If fishery products are kept under ice, melt water shall not remain in contact with the products.
3. Fishery products to be placed on the market alive shall be transported in such a way as to not adversely affect food safety or viability.

## **Chapter XVII: Eggs and Egg Products**

### **Section I: Eggs**

1. At the producer's premises, and until sale to the consumer, eggs shall be kept clean, dry, free of extraneous odour, effectively protected from shocks and out of direct sunshine.
2. Eggs shall be stored and transported at a temperature ( $25^{\circ}\text{C}$ ), preferably constant, that is best suited to assure optimal conservation of their hygiene properties.
3. Eggs shall be delivered to the consumer within a maximum time limit of 21 days of laying.

### **Section II: Egg Products**

#### **A) Requirements for Establishments**

Food business operators shall ensure that establishments for the manufacture of egg products are constructed, laid out and equipped so as to ensure separation of the following operations:

1. Washing, drying and disinfecting dirty eggs, where carried out;
2. Breaking eggs, collecting their contents and removing parts of shells and membranes; and
3. Operations other than those referred to in points 1 and 2.

#### **B) Raw Materials for the Manufacture of Egg Products**

Food business operators shall ensure that raw materials used to manufacture egg products comply with the following requirements.

1. The shells of eggs used in the manufacture of egg products shall be fully developed and contain no breaks. However, cracked eggs (shells with minor fractures) may be used for the manufacture of egg products if the production facility or packing centre

delivers them directly to a processing facility where they should be broken as soon as possible.

2. Liquid egg obtained in an establishment approved for that purpose may be used as raw material. Liquid egg shall be obtained in accordance with the requirements of points 1, 2, 3, 4 and 7 of Section III.

### **C) Special Hygiene Requirements for the Manufacture of Egg Products**

Food business operators shall ensure that all operations are carried out in such a way as to avoid any contamination during production, handling and storage of egg products, in particular by ensuring compliance with the following requirements.

1. Eggs shall not be broken unless they are clean and dry.
2. Eggs shall be broken in a manner that minimises contamination, in particular by ensuring adequate separation from other operations. Cracked eggs shall be processed as soon as possible.
3. Eggs other than those of hens, turkeys or guinea fowl shall be handled and processed separately. All equipment shall be cleaned and disinfected before processing of hens', turkeys' and guinea fowls' eggs is resumed.
4. Egg contents may not be obtained by the centrifuging or crushing of eggs, nor may centrifuging be used to obtain the remains of egg whites from empty shells for human consumption.
5. After breaking, each particle of the egg product shall undergo processing as quickly as possible to eliminate microbiological hazards or to reduce them to an acceptable level.
  - a. A batch that has been insufficiently processed may immediately undergo processing again in the same establishment if this processing makes it fit for human consumption.
  - b. When a batch is found to be unfit for human consumption, it shall be denatured to ensure that it is not used for human consumption.
6. Processing is not required for egg white intended for the manufacture of dried or crystallised albumin destined subsequently to undergo heat treatment.
7. If processing is not carried out immediately after breaking, liquid egg shall be stored either frozen or at a temperature of not more than 4 °C. The storage period before processing at 4 °C shall not exceed 48 hours. However, these requirements do not apply to products to be de-sugared, if de-sugaring process is performed as soon as possible.
8. Products that have not been stabilised so as to be kept at room temperature shall be cooled to not more than 4 °C. Products for freezing shall be frozen immediately after processing.

### **D) Analytical Specifications**

1. The concentration of 3-OH-butyric acid shall not exceed 10 mg/kg in the dry matter of the unmodified egg product.

2. The lactic acid content of raw material used to manufacture egg products shall not exceed 1 g/kg of dry matter. However, for fermented products, this value shall be the one recorded before the fermentation process.
3. The quantity of eggshell remains, egg membranes and any other particles in the processed egg product shall not exceed 100 mg/kg of egg product.

#### **E) Labelling and Identification Marking**

In addition to the general requirements for identification marking laid down in Annex II, Section I, consignments of egg products, intended not for retail but for use as an ingredient in the manufacture of another product shall have a label giving the temperature at which the egg products shall be maintained and the period during which conservation may thus be assured.

1. In the case of liquid eggs, the label referred to in point 1 shall also bear the words: 'non-pasteurised egg products, to be treated at place of destination' and indicate the date and hour of breaking.

#### **Chapter XVIII: Honey**

In addition to the general requirements of Chapters I and II, and Chapters V to XII, Standard GSO 147 Technical Regulations shall apply to honey products.

#### **Chapter XIX: Water**

In addition to the general requirements of Chapters I and II, and Chapters V to XII, Saudi Gulf Technical Regulations, number 987, 1928, 1025, 149, 2232 shall apply to water used for food handling.

## REFERENCES

- REGULATION (EC) No 853/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 on the hygiene of foodstuffs.