



KINGDOM OF SAUDI ARABIA
MINISTRY OF MUNICIPAL
AND RURAL AFFAIRS
MINISTRY DEPUTSHIP FOR
MUNICIPAL AFFAIRS
GENERAL DEPARTMENT
OF ENVIRONMENTAL HEALTH

LEGISLATION OF **AUTOMATIC & HALF-AUTOMATIC BAKERIES**



1430H / 2009G

*By the Name of G.D.,
the Most Beneficent and Merciful*



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INTRODUCTION

Based on the instructions of Khadem Al Haremein Al Sharifein Cabinet Minister, and his honored heir to the throne Vice Cabinet Minister & Chief of the National Guard, that state the necessity of seriously and diligently working towards raising the performance levels, including the modernization of legislations and systems so that they can be in tune with the ongoing overall development in Saudi Arabia, and in accordance with the latest in science, while benefiting from the experiences of developed countries. And due to the responsibility carried by the Ministry of Municipal & Rural Affairs toward the health and safety of consumers (within its framework of tasks and obligations), and according to the system identified by the Municipal & Rural system issued in the Cabinet Ministry decision no. (5/m) on 21/2/1397 higrira, in Article (48) of Chapter 5 of this legislation stated: (The Minister of Municipal & Rural Affairs issues legislations, and implementation instructions for this system...).

The Ministry performs a thorough revision of all the legislations and systems in general, and focuses in particular on the systems and instructions of the environmental health and general health, aiming to revise and to work on their modernization and development. These have been rephrased and new items have been added keeping in mind what is applied in developed countries.

These legislations aim in the first place to protect consumer health and safety, and are to be implemented by investors in the field related to general health, and supervising of the implementation is done by concerned institutions of this Ministry and its branches. Therefore these three factors are totally responsible for the implementation and application, and must cooperate in order to attain the goal of its existence in the first place.

We pray to God that these efforts will reap their rewards, and the aims will be realized.

**Minister of Municipal & Rural Affairs
Mete'eb Bin Abdel Aziz**

OBJECTIVES OF THE LEGISLATIVE

Bread with all its kinds is considered one of the most important foods that are consumed, in that it is part of every meal. In addition, other bakery products also constitute essential food products, consumed by citizens between meals, during work, and especially children in schools.

Therefore, the protection of the safety of primary food products is of essential importance in manufacturing, as well as abiding by all the health rules and regulations during the handling stages of these products inside the bakeries, aiming to achieve the final aim of producing bread that is fit for human consumption, is compliant with the laid fixed international health standards. This is the objective of issuing the "Legislation of Automatic & Half-Automatic Bakeries, " according to the Ministry.

The legislation consists of three main parts. The first part includes the general requirements that need to be available in bakeries, which are considered essential requirements for obtaining the licensing which allows the business and the activities to proceed. The second part includes the special requirements that are considered essential rules that must be applied very thoroughly and accurately during operation. The third part portrays the requirements related to staff working in the field of bakeries, that must be followed in order to protect human health and safety.

While the Ministry of Municipal & Rural Affairs requires the workers in this field to abide by the rules for the sake of human health and safety, it looks forward to interacting with them through sharing ideas and suggestions through the Ministry's website: www.momra.gov.sa

May God bless our efforts.

**Deputy of Ministry for Municipal Affairs
Mohamed Bin Ali Al-Sheikh**

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CHAPTER ONE SCOPE & DEFINITIONS

(ARTICLE 1): SCOPE

Points of this legislation apply to automatic and half-automatic bakeries.

(ARTICLE 2): DEFINITIONS

In applying the points of this legislation, the following terms are defined as:

Automatic bakeries:

Establishments which make bread, bakery products and some confectionery (sweets) in an automatic manner, without relying at all on the human element.

Half-automatic bakeries:

Establishments which make bread, bakery products and some confectionery, where some employees perform several manufacturing operations such as kneading, transferring the dough and shaping it, etc., while the rest of the manufacturing process are performed automatically, like the baking and cooking processes.

Flour:

The result of the complete grinding of cereals and separating of impurities.

Dough:

The result of mixing flour with water, salt and yeast manually or mechanically. Additional ingredients may be added to the dough to enhance the quality of the resulting bread.

Bread:

The final product after thermal treatment of the yeasted prepared dough.

Bakery products:

The group of products in which flour is the main ingredient, in addition to other

ingredients for the purpose of giving the resulting product a certain taste, smell and shape. These products are baked and cooked in bakeries.

Raw materials:

The group of primary or middle materials that go alone or with each other into making a certain final product through a number of consecutive manufacturing processes.

Package:

A cover that protects and contains the food product that is ready to be sold as one separate unit. The appearance and manufacturing material of this package depends on the nature of the food product that it contains.

Packaging & wrapping:

Placing the food product in a suitable container that allows it to be displayed to the consumer according to its nature, and must hold the necessary data according to the requirements of the food label.

Food label:

Any patch or pictured or descriptive element whether written, printed or marked with protruding lettering, attached to the food container or tied to it.

Food:

All foods or beverages those are edible or drinkable, except for medications.

Food handling:

Transporting, receiving, processing, preparing, serving, storing, or displaying food products for the purpose of selling.

Food handler:

Any person who comes into contact directly or indirectly with packaged or non-packaged foods or with tools or equipment, or food products, or surfaces those come into contact with food. Therefore, this person is liable to apply the rules and requirements for food safety.

**Safe Food:**

Food that is free from duties and characterized by not contaminated with pathogenic micro-organisms or their toxins which secreted by it, and free from insects or their parts, and reserved all sensory attributes with complete nutritional value.

Food safety:

Food that is guaranteed not to cause any harm to the consumer on preparation or consumption for the purpose it is intended for.

Food validity:

Food guaranteed to be accepted for human consumption for the purpose it is intended for.

Food chain:

The group of operations through which the primary food materials must pass since its receiving and until its final consumption, including receiving, storing, preparing, cooking, service, or waste management.

Food poisoning:

Acute sickness that results from the consumption of a food that could be contaminated with toxigenic microorganisms or their toxins or toxic heavy metals or chemical contaminants.

HACCP "Hazard Analysis and Critical Control Points":

System aimed to analysis of different hazard sources (biological-chemical-physical) and determined Critical Control Points to assurance the safety of food from the identification of the hazard sources which affect on food safety which assessed and controlled from the beginning of food chain to final consume of any food product.

Hazard source:

The existence of an unacceptable polluting source of biological nature (like

the spreading of micro-organisms) or chemical nature (organic compounds or pesticides) or physical nature (foreign objects, insects or dust), that affect the food safety or cause its damage or spoilage, or lead to toxins production in food or forming of other undesirable products.

Critical Control Point:

The point at which the hazard source whatever it is, could be controlled.

Health requirements:

A number of rules/regulations that must be abided by in all establishments where there is handling/production of food or water.

Good Manufacture Practices (GMP):

Taking care to apply all quality requirements and ensure them, such as temperature, humidity, and cleanliness, throughout all stages of the manufacturing process.

Food Industries:

The number of steps that follow each other in order to transform a primary material whatever it is into a more suitable product for human consumption, no matter what the final purpose of producing this product is.

Cleanliness:

Removal of unwanted waste or objects such as dust, food remains, dirt, grease or any other foul thing.

Contamination:

The subjecting of food products or water or their surrounding environment to the various contaminants.

Contaminants:

Any foreign objects not added to the food intentionally (biological, chemical or physical), but is transferred to it through the surrounding environment, therefore negatively affected its safety or validity.



Disinfecting:

Decreasing the number of micro-organisms in the environment surrounding food and water to the safe level that does not harm its safety or validity, using approved chemical or physical products.

Sterilizing:

Treating the object to rid it of all tiny living organisms contaminating it (microbes). Sterilization is done by heat/thermal treatment or any other sterilization method.

Preparations:

All the needs necessary for the establishment that fit the nature of its activity, even it is a food-related or general health related establishment.

Licensing:

A business document that is issued by the specialized municipality that authorizes the operation and continuation of the activity in the food establishments or any other, after fulfilling all the needed requirements. The license is valid only for a certain time period and must be renewed regularly.

**CHAPTER TWO
GENERAL REQUIREMENTS**

(ARTICLE 3): GENERAL

Articles 4 to 11 are considered general requirements that must be fulfilled in order for the licensing to take place and the business to operate and proceed.

(ARTICLE 4): LOCATION & AREA

The following requirements must be fulfilled:

- 1-The establishments must be located in an area that is no exposed directly or indirectly to any source of contamination.
- 2-The establishments must be far away from any other non-food related industrial organization that has a negative effect on the environment.
- 3-The establishments must not have a negative effect on the neighboring environment.
- 4- The establishments must cause no disturbance or direct harm to its neighbors.
- 5-The location must be authorized for this kind of activity.
- 6-The location must be near to water and power sources.
- 7-The place must have a safe drainage system.
- 8-The size of the establishment must be in accordance with the scale of work and size of production (not less than 200 m² for automatic bakeries, 150 m² for half-automatic bakeries).

(ARTICLE 5): BUILDING

The following requirements must be fulfilled:

- 1-The inner design of the building must allow for the smooth running of all stages of the business operation and production process, beginning with the receiving of primary materials to the stage of final production. The running must be in one direction to guarantee product safety
- 2-The building must be made of bricks and cement and steel, or their equivalent of the same quality or appearance, properly built according to the technical laws abided by and the system abided by.



- 3-The use of the material Asbestos is strictly forbidden, or any other material that contains any harmful element.
- 4-The building design must enable ease in the cleaning and disinfecting processes, and also the supervision processes necessary to maintain product quality.
- 5-Materials used inside the place (paints, ceramics, etc.) must be easy to clean and disinfect.
- 6-Forbidden is the entrance and existence of insects, rodents, pets, harmful animals, and environment pollutants like smoke, dusts, and other such elements inside the workplace.
- 7-Fixed equipment must be installed at suitable distances from the walls to allow constant cleaning around them.
- 8-Existence of a clear separation between the production processes that could lead to mixed and mutual contamination, using screens, or by changing locations, or by any other efficient method.
- 9-The internal temperature must be appropriate in compliance with the requirements of Good Manufacturing Practices (GMP).
- 10-The employees restroom and toilets must be completely isolated from the food handling areas and must not open onto them directly.
- 11-The design of the place must allow for control over entrance and exit processes.

(ARTICLE 6): LOCATIONS FOR HANDLING RAW MATERIALS & FINAL PRODUCTS

The following requirements must be met in locations of receiving raw materials, production, packaging, and final products:

(6-1) Floors

The floors must be made of non-absorbent, water-proof materials that are also easy to clean and wash, and of materials that are not affected by manufactured cleaning products.

The floors must be even, free from cracks or holes, and with a slight inclination towards the drainage exits.

The floors must be made of rough ceramic tiles that is high in durability against friction and erosion, or from steel covered by one of the highly-durable insulating materials.

(6-2) Walls

A-Walls must be smooth, free from cracks and poisonous materials, water-proof, non-absorbent, and easy to clean and disinfect. The paint colors of the walls must be light as much as possible, and the walls are to be covered by tiles or white, firmly secured ceramic.

B-Walls must be of a suitable height for the production processes, and be suited to the design of the equipment.

C-Walls must have a suitable number of openings, representing 1/6 of the floor area, for purposes of natural ventilation and lighting.

D-Corners between walls, and also floors and ceilings must not be sharp, and preferably have a round edge or a 45 degree angle for ease in cleaning and disinfecting and to avoid the accumulation of contaminants and dusts.

(6-3) Ceilings

The ceilings are to be painted with a light-colored oil smooth paint that is easy to clean, that doesn't allow for the accumulation of contaminants and dirt

(6-4) Windows

A-Windows are to be designed so as not to allow the accumulation of dusts and contaminants. Preferably they are to be open-able to provide natural ventilation.

B-Windows are to be made of aluminum and glass or any other non-rusting metal, and must be easy to clean.

C-Windows must be fitted with a screen with tiny holes made of non-rusting material, and that is strong and durable, to prevent the entrance of insects and rodents.

D-Windows that are not open-able must be easy to dismantle and re-mantle for cleaning and maintenance purposes.

E-Inner windowsills must have an inclination to prevent their use as shelves.

F-Window height from floor level must be appropriate, neither too near nor too far, preferably within the last third of wall height.



(6-5) Doors

A-Doors must be firm, close automatically by themselves, of a suitable shape and size, and have smooth surfaces that allow for easy cleaning.

B-Doors are to be made of aluminum and glass, or any other non-rusting and water proof materials.

C-Doors must not open directly onto the outside of the building or outer places that pose a contamination risk, like places where raw primary materials are kept or toilets. Doors must also be firmly closed and always in good shape for use.

D-The building is to be equipped with emergency doors that open directly onto the outside and are firmly closed, to be used only in an emergency/when absolutely needed.

E-Doors are to be equipped with air curtains to prevent the entrance of flying insects.

(ARTICLE 7): UTILITIES & SERVICES

(7-1) The Water Source

The water source must be safe and fulfill the following requirements:

1-Water must be provided in sufficient quantities and with suitable pressure and temperature. It must also come from a source that is far from any source of contamination and from drainage water, and is proven to be appropriate for human consumption through certified laboratory tests.

2-Providing the appropriate means for storing and distributing water such as upper or underground tanks, that must be far away from contamination sources. The upper tanks should be cylindrical for ease in cleaning, and manufactured either from fiberglass or non-rusting materials that comply with all health requirements. The water is to be taken from it through a network of pipes made out of steel, non-rusting metal or plastic, any of which must comply with and fulfill the health requirements.

3-In case there is a non-drinkable water network for use in washing and cleaning purposes, this must be separate and completely isolated from the drinkable water network, and be painted on the outside in a specific color. Also, it must be ensured that there are no common connections between the two

networks; and it is forbidden to make any supply connections for drinkable water from the non-drinkable water network where the flow of water must be one-way.

(7-2) Drainage

The following requirements must be met on getting rid of liquid waste or drainage water:

- 1-The existence of an interior drainage system to get rid of waste water.
- 2-Drainage lines must be equipped with precipitation tanks to get rid of solid wastes before water is directed to the main drainage network.
- 3-Drainage lines must be large enough to get rid of the maximum loads of the establishment.
- 4-The design and structure of drainage lines must not allow the contamination of the drinkable water source and distribution networks. Preferably, the drainage line direction would be opposite that of the production line.
- 5-Drainage pipes for waste water must be isolated from the drainage lines of toilets and hand washbasins.

(7-3) Electric Networking

The following requirements must be met:

- 1-The type of electric cables, wires and pipes must be in compliance with the fixed measurement standards.
- 2-The electric cables must be in accordance with the electric load.
- 3-The electric cables should occupy a maximum area of half the area of the pipes, not exceeding.
- 4-The lighting circuits are to be disconnected from the regular electric circuits (for loads up to 15 amperes), and power circuits (for loads higher than 15 amperes), given the power circuits are separate.
- 5- All electrical networking and connections are to be accomplished according to the fixed technical standards agreed upon, to ensure the safety and protection of both visitors and employees.
- 6-The lighting units used must not allow the escape of dust or steam, and be against explosion.



7-The electric distribution panel must comply with the fixed laid technical standards in terms of manufacture material, the types of automatic switches, and all other components.

8-The electric network must be provided with an Earthing system to eliminate the risk of electrocution.

(7-4) Lighting

Both natural and artificial lighting must be provided in all areas of the establishment, given that the use of artificial lighting does not alter the nature of colors. The lighting intensity in the establishment must not be any lower than the limits shown in the table below:

Lighting intensity necessary in various locations of the establishment

Location	Lighting Intensity (Lux)
Offices	110 - 185
Toilets	110
Receiving Area	185 - 260
Entrance	40 - 110
Packaging	75 – 110
Selection & Examination	370
Store	110 – 150
Manufacture Hall	185 – 220
Shipping pavement	75

(7-5) Ventilation

Natural and artificial ventilation must be provided to prevent the rise in temperature, the condensation of smoke and steams, the accumulation of dust, and to get rid of the contaminated air. Air flow must be from clean areas to contaminated areas, and not vice versa. Ventilation opening must be equipped with a screen net or any other protective covering that is made of non-rusting material, is easy to dismantle and re-mantle for ease of cleaning.

(7-6) Toilets, Hand Washbasins, Bathing and Changing Rooms

A suitable number of toilets, bathing areas (bathrooms), and hand washbasins must be provided in accordance with the size of the employees in the establishment, based on the following table. Also, sufficient and appropriate rooms for changing clothes must be provided for the employees, and in appropriate locations that are far away from the production halls, do not open directly onto them, and are equipped with a sufficient number of closed lockers.

Number of Toilets, Hand Washbasins & Bathing Rooms as Related to Number of Employees

Number of Employees in Shift	Number of Toilets	Number of Hand Washbasins	Number of Bathing Areas (Bathrooms)
Less than 10	2	2	2
From 11 to 20	4	4	4
From 21 to 40	6	6	6
From 41 to 60	8	8	8
From 61 to 80	10	10	10
From 81 to 100	12	12	12
More than 100 toilet, hand washbasin & bathroom for every 10 employees			

The following requirements must also be met:

- 1-The toilets must be separated from the hand washbasins and bathrooms with firm doors that close automatically, made out of aluminum or any other non-rusting metal.
- 2-All these places are to be well-ventilated and well-lit.
- 3-Each toilet must be equipped with an absorbing fan, in addition to a siphon and a bidet.
- 4-The hand washbasins are to be provided with hot water, liquid soap or any other suitable disinfecting agent, paper towels and hot air drying machines, and a dustbin.
- 5-The water taps are to be of the kind that works automatically, or by stepping on by the foot, to avoid hand contamination.



(7-7) Hand Washbasins in Production Halls

The production halls in the workplace must be provided with a sufficient number of hand washbasins in suitable locations according to the needs and circumstances of the production process, in order for employees to disinfect their hands. The hand washbasins are to be provided with both hot and cold water, cleaning and disinfecting agents, and a hot air drying machine. Paper napkins could be used for the purpose of drying and a sufficient amount of these must be provided, in addition to a dustbin where used paper napkins are thrown. Drainage lines for the washbasins are to be connected to waste water disposal lines of the establishment.

(7-8) Waste Disposal Bins & Materials Not Fit for Use

- 1-A sufficient number of waste disposal bins are to be provided for materials that are not fit for use. These bins must be firmly covered and automatically closable to prevent the entrance of insects, rodents into their waste contents in order to avoid the contamination of food, drinkable water and buildings.
- 2-Waste disposal bins/containers are to be made of non-absorbent, anti-leakage materials, or be of the one-use disposable kind.

(ARTICLE 8): BAKERY SECTIONS

The establishment is to be divided into seven sections, in the following fashion:

1-Administrative Section (in Automatic Bakeries)

Consists of a separate building or a separate part of the bakery that includes administrative offices for the various occupations that ensure the smooth running of administrative processes, given this building is not connected directly to the production hall.

2-Receiving Section of Raw Materials (Primary) (in Automatic Bakeries)

This department is located at the front area of the bakery, and preferably it would have a separate door. This area of the workplace is to be provided with a number of tools and equipment such as a receiving scale, inspection/

selection tables, and similar things based on the needs of the bakery. Preferably electric lifters should be available to load the raw materials from onto the shipping vehicles into the inside of the store. Vehicles are not allowed into the inside of the stores under any circumstances. Also, care should be given to the importance of not subjecting raw materials to weather factors such as direct sunlight, rain, or various environmental pollutants like smoke, dust, insects or rodents.

3-Production Section

All factors stated in (Article 6) of this legislation are to be applied in this department. The Production Department is divided into:

A-Washing Room

A separate room that is allocated to the washing of tools, equipment, utensils.

It must be equipped with:

- 1-Sinks for washing made of non-rusting material.
- 2-A source for both cold and hot water.
- 3-Cleaning and disinfecting agents.
- 4-Closed cabinets to store clean tools and utensils for when they are needed.

B-Kneading Room

This room must fulfill the following requirements and be provided with:

- 1-The full height of this room's walls is to covered from floor to ceiling with tiles or white ceramic.
- 2-This room is to be provide with a number of automatic kneaders, whose number, size and productive capacity are in accordance with the size of the bakery and its productive capacity.
- 3-A flour sieve in a separate area of the room.
- 4-A pressure filter that contains a number of filter candles, placed directly above the kneader(s).
- 5-The kneading room must a have a door equipped with springs so that it will constantly be closed.
- 6-Preferably the room is to be equipped with ultraviolet ray bulbs with a power



of 2000 to 2950 angstrom to disinfect and clean the place.

7-The room is to be provided with electric insect killers to eliminate insects and flies.

C-Preparation Room

This room must fulfill the following requirements and be provided with:

- 1-A sufficient number of tables made of aluminum, or metal supporters painted with an anti-rust material with a one-slab surface made of smooth, thick marble, or a non-rusting one-slab steel surface.
- 2-A sink made of non-rusting material and several taps for cold and hot water.
- 3-Closed cabinets to keep and store the raw materials necessary for the production process.
- 4-A cooling refrigerator to store and keep the sensitive raw materials that spoil quickly.
- 5-Closed cabinets to store and keep the clean tools and utensils.
- 6-A cooling refrigerator to keep the fragile final products that spoil quickly, and that are ready to be marketed and sold.
- 7-Preferably systems of mechanical ventilation are to be used. The use of desert air conditioning units is strictly forbidden.

D-Baking & Cooking Room

This room must fulfill the following requirements and be provided with:

- 1-A number of automatic ovens that operate using electricity, natural gas or solar.
- 2-The ovens are to be equipped with a chimney that is at least 2 m high above the highest neighboring building.
- 3-A number of electric absorbing fans to renew the surrounding air and prevent the accumulation of smoke.
- 4-A number of conveyor belts to cool and air the products after baking and cooking.
- 5-The full height of all this room's walls is to be covered from floor to ceiling with tiles or white ceramic.

4-Packaging Section

This department must have a specific temperature and humidity level, and have constant air renewal, based on the requirements of Good Manufacture Practices (GMP).

5-The Store

In this section, raw materials and final products are handled and stored. This department must have appropriate temperature and humidity levels, good ventilation, general cleanliness, and apply and abide by all the general and special requirements that are stated in the Food Stores Legislation. The rules are the following:

- A-Separating packaging materials and storing them in a separate store.
- B-The existence of any source of humidity inside the store is strictly forbidden.
- C-The size of the store must be in accordance with the volume of work, and the amount of materials stored in it.
- D-Storing poisonous and dangerous substances such as cleaning agents, disinfectants, insect repellents, inside the food storage area is strictly prohibited. These substances should be allocated a special separate place, provided with firmly closed cabinets, inside the store.

6-Final Products Section (in Automatic Bakeries)

Is located at the back of the bakery and is allocated for the storing of the final products that are ready for distribution. It is to be equipped with shelves for storage, and be well-lit and well-ventilated. Preferably electric lifters should be available to load the products from the inside of the store on to the shipping vehicles. Vehicles are not allowed into the inside of the stores under any circumstances. Also, care should be given to the importance of not subjecting products to weather factors such as direct sunlight, rain, or various environmental pollutants like smoke, dust, insects or rodents.

7-Display & Selling Hall (if any)

The following requirements must be fulfilled:



- 1-To be provided is a display refrigerator with a glass front and sliding doors in pathways made of metal or aluminum, to display the sensitive, quick-to-spoil products. It is necessary to ensure that the doors of the display refrigerator are always closed.
- 2-The display hall is to have a door equipped with springs so that it will constantly be closed firmly.
- 3-The display hall is to have an aluminum and glass front and be facing the main street.
- 4-The display area is to be provided with electric insect killers to eliminate insects and flies.
- 5-Must include a firmly closed waste disposal bin lined with a plastic bag to get rid of waste.

(ARTICLE 9): PREPARATIONS

Tools, Equipment & Utensils

All tools, equipment and utensils being used and that come into direct contact with food must be made of non-rusting materials, do not interact with the product or cause a change in taste or smell. They must also be anti-erosion and durable enough to bear the continuous cleaning and disinfecting in good shape. They must also be easy to clean, and preferably made of non-rusting steel, with smooth surfaces free from scrapes or cracks. The use of copper utensils in the production process is strictly forbidden. The utensils must also be designed in a way that eliminates health risks, allows for easy cleaning and disinfecting, and be easy to dismantle and put together again.

Vehicles used in transporting boxes (in automatic bakeries) must be of the kind that operates using electricity or batteries. Use of diesel or petrol operated vehicles is forbidden.

(ARTICLE 10): OPERATION & MAINTENANCE

There must be regular maintenance of the building, tools, equipment and all that is being used in the establishment, including the drainage network which must constantly be in very good shape.

(ARTICLE 11): SAFETY & SECURITY

The following requirements must be fulfilled:

- 1-Instruction signs must be placed explaining how to deal and what to do in case of a fire.
- 2-Instruction signs must be placed explaining the steps to be taken to evacuate the place in case of an emergency.
- 3-Fire extinguishers must be provided in appropriate quantities and sizes in accordance with the instructions of the civil defense. A card stating the expiration date and the dates of performing the routine checks on them are to be fixed on the surface of the extinguishers installed throughout the whole building's utilities and preparations. Safety and security regulations must also be fulfilled according to the instructions of civil defense.
- 4-A first-aid kit must be made available, that includes essential medical supplies like medical bandages, cotton, gauze, disinfectants and supplies to treat wounds.
- 5-Following the instructions of industrial safety especially in the departments that pose threats to the employees.
- 6-Acquiring the necessary licensing from civil defense.



CHAPTER THREE SPECIAL REQUIREMENTS

(ARTICLE 12): GENERAL

Abiding by the technical standards for production is necessary in order to obtain a final product that is of a high level in terms of quality and safety, and to ensure it is free from flaws and in compliance with the fixed laid standards.

(ARTICLE 13): RAW MATERIALS

The following requirements must be fulfilled:

- 1-Raw materials used must be fit for human consumption, and must not display any signs of spoilage or be past their expiration date. All raw materials must meet the fixed standards laid for each food type.
- 2- Raw materials must be stored in an appropriate method, either by cooling (4 °C) or freezing (-18 °C) or at room temperature (25 °C).
- 3-One or more of the following materials/products could be added, based on the nature and quality of the product, and in compliance with the laid required standards:
 - Fresh, dried, preserved or frozen fruit.
 - Milk or dairy products.
 - Chocolate or cocoa powder.
 - Nuts.
 - Dried, grated, powdered Coconut.
 - Bee honey.
 - Spices.
 - Table salt.
 - Starch.
 - Fat-free soya bean flour.
 - Vitamins.
 - Fresh or dried eggs.
 - Baking powder.
 - Approved natural and artificial colorings.

- Approved flavor & aroma enhancers, natural or artificial.
- Wheat flour.
- Water (drinkable and compliant with the fixed laid standards applicable to bottled and non-bottled drinkable water).

4-Table salt must be compliant with the fixed laid standards applicable to it.

5-The wheat flour used must be compliant with the fixed laid standards, and free from impurities, insects or different stages of growth or insect parts.

6-Bags of flour must be in good shape and firmly closed, and labeled with all the data most important of which is the extraction percentage and the name of the producing grinding house.

7-Use of wheat flour to which potassium promate has been added or treated with in making bakery products is strictly forbidden.

8-Artificial sweeteners used must be of the kinds that have been approved, and this must be clearly shown in the information label.

9-All colorings used must not be harmful to health, be of the kind that is approved for use and addition to foods.

(ARTICLE 14): STORAGE

1-The following requirements must be met when storing flour:

A-The storage area must be completely clean and free from insects, rodents, dusts, and dirt.

B-Natural methods should be followed in eliminating insects, such as electric insect killers, and ultrasonic systems for rodents.

C-The use of insect repellent sprays to kill insects and rodents, is strictly forbidden in the flour stores.

D-Flour must be stored in firmly closed bags that do not let in humidity and that are new and have not previously been used.

E- Preferably ultraviolet ray bulbs are to be used to disinfect and sterilize the flour store.

F-The store temperature not exceeding 25 °C.

2-All health requirements must be met and abided by inside the stores of the bakery (whether regular, refrigerated or frozen), and that is stated in the Food Stores Legislation.



3-Preferably stuffed bakery products are to be stored frozen at a -18 °C temperature.

(ARTICLE 15): FINAL PRODUCTS

The following requirements must be met:

- 1-Must retain all its physical characteristics and not display any sign of spoilage or foulness.
- 2-Must be free from any strange smell.
- 3-Must be free from any strange taste.
- 4-Bakery products and confectionery must be free from poisonous microbes, mycotoxins and bacterial toxins.
- 5-Must be free from micro-organisms that cause food poisoning.
- 6-Re-use of already used flour bags is strictly forbidden, and the used bags must be regularly disposed of.
- 7-In case of any product is added during baking to any bakery product, the kind and quantity of this added component must be mentioned on the labels of the final products, and this component must be compliant with the fixed laid standards.

(ARTICLE 16): PACKAGING

The following requirements must be fulfilled in packaging materials:

- 1-Must be completely compliant/in accordance with the fixed laid standards.
- 2-Must be made of materials that do not harm the health or do not include any such harmful material in its composition.
- 3-Must not interact with the packaged products, and not alter their physical or chemical characteristics.
- 4-Must not permeable for humidity or air.
- 5-Must not contaminate the product contained in it.
- 6-Must be new, not previously used, and must be firmly closed.
- 7-In case printed packages are used, the ink used in printing must be permanent, non-removable, non-harmful to health, and of the type authorized to be used in printing food packages.
- 8-All data must be recorded on the packages according to the fixed laid standards of the food label.

(ARTICLE 17): TRANSPORTATION

The following requirements must be fulfilled in the vehicles of transportation:

- 1-The transportation vehicles must be for the transporting of bakery products only.
- 2-Must be equipped with a refrigerating unit where the internal temperature must not exceed 4 °C.
- 3-Must protect the characteristics of the product, not cause any kind of contamination to the product, and must not be used for any purpose other than transporting and distributing bread and bakery products.
- 4-Must be equipped with metal shelves for loading products.
- 5-Must be loaded and emptied quickly in order for it to retain its temperature.
- 6-Must be equipped with a thermometer to measure temperature, and a control system for controlling the temperature inside to suit the kinds of products being transported.
- 7-Employees working on the transportation vehicle must have valid health certificates.
- 8-Must be washed and disinfected daily to maintain its cleanliness.
- 9-Must be marked clearly by the statement: "For the transporting of bakery products & confectionery" along with the name of the bakery, its address, telephone number and logo if any.

(ARTICLE 18): GENERAL CLEANLINESS

The following requirements must be fulfilled:

- 1-Providing the means, equipment and tools necessary for the cleaning and disinfecting of equipment, utensils and tools.
- 2- Posting instructional stickers on following rules of general cleanliness in all places of the bakery, so as to be portrayed clearly to all employees (in their own language) who have to abide by the rules stated.
- 3-Eliminating insects and rodents inside the bakery and surrounding areas.
- 4-Using natural methods like electric insect killers/repellents to eliminate insects, and ultrasound systems to eliminate rodents.
- 5-Using insect killers when the previous natural methods prove ineffective, while taking the necessary precautions to protect the foods, tools and equipment from contamination.



- 6-Thorough cleaning after the use of pesticides to remove its harmful effects. Cleaning is done using hot water, soap, industrial cleaning agents, to get rid of the pesticide residues before re-using the tools, equipment and utensils.
- 7-Sticking labels stating type and method of use on the insect repelling containers, cleaning agents, disinfectants, or any other chemical substance that poses a threat to general health.
- 8-Storing any of these substances in any of the production locations or food stores is strictly forbidden.
- 9- Collecting waste in plastic disposal bags that are placed in firmly-closed containers of the sort that opens automatically by stepping by foot. The bags must also be tied firmly in preparation for regular disposal in the appropriate, allocated places or through the garbage collector if any.
- 10- Washing and disinfecting the waste disposal containers daily using appropriate cleaning agents and disinfectants.
- 11-Washing and cleaning the floors and walls of the bakery daily.
- 12-Keeping any tools, equipment or utensils not used in the bakery is strictly forbidden.

(ARTICLE 19): LICENSING

The bakery owner or manager must display the business licensing in an obvious location.

(ARTICLE 20): HEALTH INSPECTION RECORD

The bakery owner or manager in charge must constantly keep on the premises the health inspection record that is issued to him with the license, and must present it to the inspector on each visit. The bakery owner or manager in charge must not for any reason whatsoever make any change in any of the data or comments inside the record, by scraping, erasing, removing or in any other way.

CHAPTER FOUR EMPLOYEES

(ARTICLE 21): ISSUING HEALTH CERTIFICATES

Only persons holding health certificates from the specialized medical office may be permitted to work in the field of food handling. This health certificate must prove their safety from infectious diseases that are transferred through food, and prove that they don't carry the microorganisms for these diseases. Health certificates are issued after performing the necessary medical tests on the employee, and he is immunized against some diseases.

Firstly: Medical Examinations

- 1-Clinical examination on the employee: (a-Chest, b-Abdomen, c-Skin diseases)
- 2-Necessary Laboratory tests include:
 - A-Stool test for Parasites.
 - B-Blood test for each of Typhoid and Paratyphoid.
 - C-Stool test for Salmonella, Shigella and Vibrio Cholera.
 - D-A swab from the nose and throat for Diphtheria.
 - E-Chest X-ray.

The medical examinations and lab tests against diseases are to be performed at the medical units and centers, hospitals affiliated with the Ministry of Health, private clinics, or private hospitals authorized to perform these tests by the Ministry of Health.

Secondly: Immunizations

- Taken at the medical centers or hospitals affiliated to the Ministry of Health only, and they include:
- A-Immunization against Meningitis, bi-annually or every tow years.
 - B-Immunization against Typhoid, two dosages separated by at least one week bi-annually (every tow years).



(ARTICLE 22): HEALTH CERTIFICATE VALIDITY

The health certificate is valid for one year and is to be renewed as soon as its validity ends. The same previous steps are to be taken in order to obtain a new certificate.

(ARTICLE 23): INFECTIOUS DISEASES & INJURIES

(23-1) Infectious Diseases

To be removed immediately from the work environment is any employee who displays signs of a contagious disease that is transferred through food, or he displays signs of sickness, diarrhea, inflamed wounds, skin pores/rashes, or there is proof that he is mixing with a person with an infectious disease. This person is not to work in any area where there is food handling. If he is an employee at the restaurant, he must go to the nearest hospital or medical unit to get treated from the disease or the wound. If he is not cured, he is to be totally eliminated from work.

(23-2) Injuries

Any employee who receives a wound at work must be removed from the work environment until the wound is fully and securely covered with a medical water-proof plaster of a bright color. A first-aid kit is to be made available for this purpose. Also, the wounded employee must not get back to work except after wearing gloves that cover the wound, or it has healed.

(ARTICLE 24): PERSONAL APPEARANCE & BEHAVIOR

All employees are to respect and abide by the following rules:

- 1-All employees in food handling locations must following the rule of "Clean wherever you are" and re-wash their hands immediately in the correct way at the start of the shift, after leaving the toilet, after touching any contaminants or anything that is suspected to be a source of transmitting disease, after eating or touching any body part like hair, mouth, nose, after sneezing or spitting, or after going back to the workplace in case of going out for any reason. The correct instructions for washing hands must be applied.
- 2-Employees must have a good appearance with absolute care for cleanliness

of body, personal hygiene by wearing a clean protective clothing during work, including clean hair covering, and special shoes whenever needed at the workplace. All clothes worn must be easy to clean if not disposable one-use garments. Also, care of nail cleanliness and neatness is a must.

- 3-Strictly forbidden is performing any activity that could lead to contamination of food, like eating, drinking, spitting or smoking in the workplace.
- 4-Sterilized, disposable gloves must be worn, especially in the packaging department, while being aware that wearing gloves does not replace thorough washing of hands. Gloves must be made of non-absorbent material.
- 5-All employees in he manufacturing and packaging departments must wear masks to cover the nose and mouth during work.
- 6-Employees in the manufacturing and packaging departments are forbidden to wear personal belongings like jewelry, rings, watches and pins during work.
- 7-Sleeping in the workplace or stores is completely forbidden.

(ARTICLE 25): TRAINING ON HEALTH MATTERS

All employees in the bakery must be trained on the health rules and requirements for handling food to prevent contamination.

(ARTICLE 26): MEASURES RELATED TO VISITORS

Precautions must be taken to prevent food contamination by visitors of the food handling locations. Such precautions include wearing protective clothing, and passing their shoes in the basins at the doors.

**CHAPTER FIVE
OBSERVATION OF LEGISLATION
IMPLEMENTATION**

(ARTICLE 27): OBSERVATION OF LEGISLATION IMPLEMENTATION

The Ministry of Municipal & Rural Affairs is responsible for observing and supervising the implementation of this legislation.

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