LEGISLATION OF DAIRY FACTORIES

1430H / 2009G
By the Name of GOD,
the Most Beneficent and Merciful
LEGISLATION OF DAIRY FACTORIES
**INTRODUCTION**

Based on the instructions of Khadem Al Haramein 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 the world, 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 hijri, 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
Met'e'eb Bin Abdel Aziz

**OBJECTIVES OF THE LEGISLATIVE**

Milk and dairy products are considered one of the most important food groups that are essential and irreplaceable, especially to children. In order for these products to reap their utmost benefits and all their nutritional value is benefited from, their safety must be maintained, and they must be protected from contamination and spoilage. These products could be easily exposed to contamination from several sources, starting with their production locations, during the handling stages, and finally while serving to the consumer. This is why the “Legislation of Dairy Factories” has been issued, consisting of a number of health rules and regulations that aim to protect the safety of these products, their protection from contamination and spoilage, and the prevention of diseases that could be caused by milk and dairy products that are contaminated.

This legislation consists of three main parts. The first part includes the general requirements that need to be available in factories, which are considered essential requirements for obtaining the licensing which allows the business and the activities within it 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 health requirements related to employees in these factories, which 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 in these legislation 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

Deputy of Ministry for Municipal Affairs
Mohamed Bin Ali Al-Sheikh
CHAPTER ONE
SCOPE & DEFINITIONS

(Article 1): Scope
Points of this legislation apply to dairy factories.

(Article 2): Definitions
In applying the points of this legislation, the following terms are defined as:

Dairy farm:
A licensed place where milk producing animals are kept and raised, and that is provided with all means of animal raising, is health and veterinary monitored, and is equipped with all means to produce and keep natural raw milk.

Natural Raw Milk:
The natural extractions produced from the milking ducts of milk producing animals after their milking, ensuring thorough mixing, throughout the suckling period and after the milk producing period is over.

Dried milk:
The resulting powder after the evaporation of water from full-cream milk, or partly or fully skimmed milk, using the known mechanical methods.

Dairy products:
A number of products of which milk is the primary component such as pasteurized, sterilized, concentrated and condensed milk, fermented milk, yogurt, labna (sour yogurt), cheese, cream, butter, ice cream, and dairy iced products. All these products are manufactured either from natural raw milk or dried milk.

Reconstituted milk:
The milk prepared by mixing dried milk with water.

Homogenization:
Transforming fat molecules in the milk into small balls with an average circumference of 2-6 micrometers, using mechanical methods.

Milk with juice:
Natural pasteurized or sterilized milk with natural, homogenized juice added to it.

Yogurt:
Fermented milk with a thick form resulting from the adding of one or more breeds of special bacteria that produces lactic acid to the milk.

Fruit yogurt:
Fermented milks with preserved fruit juices added to it.

Iced food products:
Sweetened products that are prepared by freezing during the stirring of a pasteurized mixture of fat emulsifier and protein with other ingredients and materials; or from a mixture of water and sugars with other materials. These products are prepared for storage, selling and consumption in their frozen or semi-frozen state, and they are divided into:

1-Ice Creams
Products prepared by freezing during the stirring of a pasteurized mixture of milk and cream, and one or more sugar products. One or more milk products may also be used (butter, concentrated milk, sweetened or unsweetened condensed milk, dried milk, dried yogurt, etc.). Natural flavor enhancing food products may also be added.

2-Milk Ices:
Products that are similar to ice creams but differ only in the ratios of their ingredients.

3-Semi Milk Ices:
Products similar to milk products in which milk fat or milk protein or both are replaced by fat or protein from another non-milk source.
4-Fruit Ice drink:
A product prepared by freezing during the stirring of a pasteurized mixture consisting of one or more fruit products with milk or a milk product along with one or more sugar products.

5-Water Ices:
Products prepared by freezing during the stirring of a pasteurized mixture consisting of one or more fruit products with one or more sugar products.

Pasteurization:
Subjecting the milk to heat treatment at a certain temperature and a specific fixed time period according to the fixed laid standards.

Pasteurized milk:
Milk that has been homogenized and whose temperature has been raised to totally eliminate non-spore forming micro-organisms, and to reduce the number of spore form micro-organisms so as not to exceed 10 in 1 millimeter, without changing its natural or physical characteristics.

Sterilization:
The milk is heated to a temperature not less than of 137 °C for a period not less than two seconds.

Sterilized milk:
Raw milk that has been homogenized and whose temperature has been raised to totally eliminate non-spore forming micro-organisms, and to eliminate spore form micro-organisms also, without changing its natural or physical characteristics, and filling it in a way that prevents contamination.

Concentrated milk:
The product of evaporating some of the water to concentrate the raw full-cream milk or skimmed milk, without adding sugar, but stabilizers could be added.

Sweetened condensed milk:
The product of condensing full-cream, skimmed milk or reconstituted milk, by removing some of the water after adding some sugar to it in a quantity that prevents any spoilage of the product. Stabilizers could be added to it.

Fermented dairy products:
Products manufactured from raw milk or milk that has been subjected to heat treatment (pasteurized, sterilized) or from reconstituted milk that has been heat treated for a time not less than that approved in the pasteurization process, with pure cultures of bacteria with a special efficiency in producing the typical, special taste.

Fermented milk:
Fermented milk with a liquid form resulting from the adding of one or more breeds of special pure bacteria that produces lactic acid to the milk.

Labna (sour yogurt):
Fermented milk manufactured from the concentration of full-cream yogurt by removing a suitable amount of why.

Cheese:
The food product derived from the cheesing of different kinds of milk that are approved, or some of their products, or a mixture of them. It is to be consumed fresh or repining at a suitable temperature and humidity for a specific period.

Dried cheese:
Cheese in which the rate of humidity does not exceed 40%.

Semi-dried cheese:
Cheese in which the rate of humidity is a minimum of 40% and a maximum of 47%.

Soft cheese:
Fresh or repining cheese in which the rate of humidity exceeds 47%.
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Cream:
A milk product that is relatively high in fat separated from fresh milk by centrifuge or floating, and it takes the shape of a fat emulsifier in the byproduct milk.

Low-fat cream:
Cream that contains at least 10% fat of weight.

Light cream:
Cream that contains at least 18% fat of weight.

Whipped cream or cream that could be whipped:
Cream that contains at least 28% fat of weight.

Heavy cream:
Cream that contains at least 35% fat of weight.

Simple cream:
Cream that contains at least 55% fat of weight.

Dry cream or cream powder:
Cream from which humidity is removed by the spray drying method, and that contains at least 65% fat of weight.

Butter:
The unchangeable product of milk, cream or both combined, made using suitable manufacturing processes that lead to the aggregation of fat molecules together, trapping in between them protein substances (casein) and milk sugar.

Starter:
Pure breeds of microbes that are activated under special circumstances and used in the dairy products.

Raw materials:
The group of primary or middle materials that go alone or combined into making a certain final product through a number of consecutive manufacturing processes.

Package:
Any 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:
Meaning that 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, manufacturing, 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 that 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.

Critical Control Point:
The point at which the hazard source whatever it is, could be controlled.

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.

Health requirements:
A number of rules/regulations that must be abided by in all shopes where there is handling of food.

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

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

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.

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.

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 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.

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.
Disinfecting:
Decreasing the number of micro-organisms in the environment surrounding food to the safe level that does not harm the food 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 suit the nature of its activity, food-related or general health related.

Licensing:
A business document that is issued by the specialized municipality that authorizes the operation and continuation of the activity in the food establishments 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 12 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 in the factory:
1. The establishments must be located in an area that is not 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 establishments must not conflict with any municipal requirements and land use. The location must be authorized for this kind of activity.
6. Water and power sources must be available.
7. The establishments must have a safe drainage system.
8. The size of the factory must be in accordance with the scale of work and size of production.
9. The factory must in no way be connected with any other factory (unless clearly stated in either licenses).
10. Changing in the size of the factory either by increasing or decreasing without a change in the purpose of use, is strictly forbidden, unless the specialized authority has given its agreement.

(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 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 asbestos or 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, and must not transfer any foreign objects into the food.

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 any other efficient method.

9-The internal temperature must be appropriate in compliance with the requirements of Good Manufacture Practices (GMP).

10-The staff 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): Ground & Inner Pathways
The following requirements must be fulfilled:

1-Must be of hard, tough surfaces that are suitable for the bearing of transportation means.

2-Must have all the various suitable drainage systems to ensure smooth running of the cleaning process.

(Article 7): Locations for Handling Raw Materials & Final Products
The following requirements must be met:

(7-1) 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 or tiles that is high in durability against friction and erosion, or from cement and steel covered by one of the highly-durable insulating materials.

(7-2) 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.

(7-3) 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, dirt.
(7-4) 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 window sills 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.

(7-5) Doors
A- Doors must be firm, close automatically, 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 material, that is also water proof.
C- Doors must not open directly onto the outside of the building or outer places that pose a contamination risk, like places where raw materials are kept or toilets. Doors must also be firmly closed and always in good state and suitable 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.
F- Ground basins containing a disinfecting agent are to be installed at the entrances to the doors, so that shoes can be disinfected before entrance.

(7-6) Stairs, Elevators & Assisting Structures (if any)
A- Stairs: Must be made of marble, granite or mosaic that is strong, durable and smooth to enable easy cleaning.
B- Elevators: Must be of non-rusting metal, or steel painted with an anti-rust paint, and must be continuously and regularly cleaned and disinfected.
C- The waste disposal location and design must not lead to the contamination of food, and must be provided with openings for the purpose of cleaning.

(8-1) 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 according to 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 shape 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 galvanized 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.

(8-2) 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 sedimentation 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 these drainage lines must not allow the contamination of the drinkable water source and distribution networks. Preferably, the drainage line direction should be opposite that of the production line.
5. Drainage pipes for waste water must be isolated from the drainage lines of washrooms/toilets and hand washbasins.

(8-3) 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 staff.
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.
9. The existence of an electric generator with a capacity that is in accordance with the electric operating loads of the refrigerators, to be used in case there is a power cut.

(8-4) 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 workplace must not be any lower than the limits shown in the table below:

<table>
<thead>
<tr>
<th>Location</th>
<th>Lighting Intensity (Lux)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices</td>
<td>110 – 185</td>
</tr>
<tr>
<td>Toilets</td>
<td>110</td>
</tr>
<tr>
<td>Laboratories</td>
<td>185 – 220</td>
</tr>
<tr>
<td>Receiving Area</td>
<td>185 – 260</td>
</tr>
<tr>
<td>Entrance</td>
<td>40 – 110</td>
</tr>
<tr>
<td>Packaging &amp; Wrapping</td>
<td>75 – 110</td>
</tr>
<tr>
<td>Selection &amp; Inspection</td>
<td>370</td>
</tr>
<tr>
<td>Store</td>
<td>110 – 150</td>
</tr>
<tr>
<td>Manufacture Hall</td>
<td>185 – 220</td>
</tr>
<tr>
<td>Shipping pavement</td>
<td>75</td>
</tr>
</tbody>
</table>

(8-5) Ventilation
Natural and artificial ventilation must be provided to prevent the raise 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 openings must be equipped with a screen net or any other protective covering that is made of non-rusting material, are easy to dismantle and re-mantle for ease of cleaning.

(8-6) 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
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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

<table>
<thead>
<tr>
<th>Number of Employees in Shift</th>
<th>Number of Toilets</th>
<th>Number of Hand Washbasins</th>
<th>Number of Bathing Areas (Bathrooms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>From 11 to 20</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>From 21 to 40</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>From 41 to 60</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>From 61 to 80</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>From 81 to 100</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>More than 100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 napkins 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.

(8-7) Hand Washbasins in Production Halls
The production halls in the establishment 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, detergents, disinfectants, 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.

(8-8) Waste Disposal Bins/Containers & 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/containers 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 9): Factory Departments
The factory is to be divided into seven departments, in the following fashion:

1-Administrative Section
Consists of a separate building or a separate part of the factory 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)
This section is located at the front area of the factory and it should 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 tables, and similar things based on the needs of the factory. Electric lifters must be made available to load the raw materials from the shipping vehicles into the inside of the store. Vehicles are not to be permitted 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-Manufacturing Department
All points stated in (Article 7) of this legislation are to be applied in this department.

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

5-The Stores
In this section, raw materials and final products are handled and stored. This section 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.

6-Final Products Department
Is located at the back of the factory 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. Electric lifters must be made available to load the final products 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-Laboratory Department
The factory must be provided with a laboratory for quality to analysis the raw materials to determine the degree at which they match the fixed standards being applied, also in order to follow up on all stages of the manufacturing process, and to analysis the final product. The laboratory is to be equipped with all the necessary equipment and tools to take samples and perform analysis. Also, personnel working in this department must be specialized, trained people with experience in the field of laboratory testing.

(Article 10): Preparations

(10-1) 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 metal, with smooth surfaces free from scrapes or cracks.

The following requirements must also be met in the used tools and equipment:
A-They must be designed in a way that eliminates health risks, and allows for easy cleaning and good disinfecting.
B-The installation of fixed equipment must allow easy access to them and easy, thorough cleaning too.
C-They must be easy to dismantle and put together again to allow for cleaning and disinfecting.
D-Vehicles used in transporting boxes must be of the kind that operates using electricity or batteries. Use of diesel operated vehicles is forbidden.

(10-2) Upper Preparations (if any)
A-All upper preparations, such as hanging lifters and forks, in the production halls and food handling locations, must be well installed in a way that prevents the accumulation of different contaminants, reduces the growth of moulds, and allows for easy access and cleaning.
B-Must not be an obstacle to the different production processes.

(Article 11): 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 12): 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 numbers 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 box must be made available, that includes essential medical supplies like medical bandages, cotton, gauze, disinfectants.
5-Following the instructions of industrial safety especially in the establishment departments that pose threats to the employees.
6-Acquiring the necessary licensing from civil defense.

(Article 13): General
Abiding by the different regulations of the manufacturing process, starting with the raw and fresh milk being supplied to the factory, and up to the various final products, is necessary in order to obtain a final product that is of a high level in terms of quality and safety for use.

(Article 14): Fresh Raw Milk
The following requirements must be fulfilled in the fresh raw milk:
1-Must be compliant with the approved, fixed laid standards.
2-Must be produced by a licensed farm.
3-Must be produced by animals that are not sick and are not undergoing treatment by any veterinarian drug whatsoever.
4-Must retain all its physical and chemical characteristics.
5-Must be free from undesirable tastes and smells.
6-Must be free from impurities.
7-Adding any preservative to the milk is strictly forbidden.
8-The milk storage tanks must be made of non-rusting metal, must not have sharp edges, and must be equipped with a mechanical cooling system.
9-The package must clearly state that the product is manufactured from fresh milk.

(Article 15): Transportation of Fresh Raw Milk
The following requirements must be fulfilled in the transportation vehicles:
1-Must be equipped with a tank made of non-rusting metal, that does not have sharp edges, and that is firmly closed.
2-The tank must be equipped with a mechanical cooling system (artificial) that operates throughout the transportation period.
3-The transportation vehicles must be licensed, and all employees in the transportation process must hold valid health certificates.
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(Article 16): Receiving of Fresh Raw Milk
The following requirements must be fulfilled in the receiving of fresh raw milk:
1. The factory is to be equipped with a pump made of non-rusting metal to pump the raw milk from the vehicle of transportation to the inside of the factory.
2. The factory must be equipped with a number of tanks to receive the fresh raw milk.
3. All pipes between the pump and the tanks must be made of non-rusting metal, and all tanks must be connected to each other through a network of pipes that are also made of non-rusting metal.
4. All connections should be as straight as possible and the connection angles of pipes (the elbows) must not be sharp and must be designed in a way that allows easy dismantling for the purpose of cleaning.
5. The raw milk being supplied to the factory is to be strained during its withdrawal from the transportation vehicle and before its storage in the milk tanks inside the factory. This is done by passing it through several strainers in a firmly closed system in order to eliminate any residues or clinging materials.

(Article 17): Use of Reconstituted Dried Milk
When dried milk is used in the manufacturing, the following requirements must be fulfilled:
1. Must be compliant with the approved, fixed laid standards.
2. Must be quick to dissolve.
3. Must retain all its physical and chemical characteristics, must be fit for human consumption, and must not be condensed.
4. Must be valid and not past its expiration date.
5. Special tanks must be provided to reconstitute the dried milk, equipped with stirrers, and these tanks must be completely far away from the raw fresh milk tanks.
6. The entire reconstitution process must be mechanically performed, with no human element involved.
7. The water used in the reconstitution process of the dried milk must be drinkable and totally compliant with the approved, fixed laid standards.
8. In case skimmed dried milk is used in the reconstitution process, and natural butter is added to increase the fat content in the final reconstituted milk, the following requirements must be fulfilled:
   A. The presence of a special tank for the process of mixing butter, so that thereconstituted milk is withdrawn through a special tube to the mixing tank where themolten butter is added to it while stirring.
   B. The department is to be equipped with a homogenization system to ensure the perfect mixing of the butter with the reconstituted milk, so that it does not separate while being stored.
9. The package must clearly state that the product is made out of reconstituted (dried) milk.

(Article 18): Pasteurized Milk
The following requirements must be fulfilled in the pasteurization process:
1. The factory must be equipped with a highly efficient pasteurization system.
2. The pipeline for withdrawing raw milk from the milk tanks to the pasteurization system, must be equipped with strainers to strain the milk and free it from residues.
3. The pasteurization system is to be connected with pipelines to transfer the pasteurized milk to the milk tanks allocated to it.
4. The pipelines for transferring pasteurized milk must be equipped with special appliances to withdraw samples for regular laboratory testing to ensure the efficiency of the pasteurization process.
5. The factory is to be provided with a sufficient number of pasteurized milk tanks.
6. The pipelines must be equipped with several pumps to push and withdraw the milk to and from the tanks.
7. All tanks, pipes connected to them and from which elbows and pumps emerge, must be made of non-rusting metal.
8. Regular samples must be drawn from the production lines and final packaged/filled products for the purpose of regular analysis to ensure the validity of the product and its compliance with the fixed laid standards.
9. All packages used in filling the pasteurized milk must be firmly closed and prevent any outside contamination of the milk inside.
10. The packages must be compliant with all the fixed laid standards, made of non-harmful materials, sterilized, and must not affect the natural or physical characteristics of the filled milk.
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**Article 19): Sterilized Milk**
The following requirements must be fulfilled:
1. The sterilized milk must be compliant with the approved, fixed laid standards pertaining to sterilized milk and their reformations.
2. The presence of a sterilization system (Ultra Heat Treatment «UHT»).
3. The presence of all requirements, installations, equipment and connections previously mentioned in (Article 18): Pasteurized Milk.
4. Regular samples must be drawn from the production lines and final packaged products for the purpose of regular analysis to ensure the validity of the product, its fitness for human consumption, and its compliance with the fixed laid standards.

**Article 20): Packaging of Pasteurized, Sterilized Milk**
The following requirements must be fulfilled:
1. Presence of a closed system for the filling of pasteurized, sterilized milk to prevent its exposure to outside contamination.
2. Automatic filling machines are to be used to fill in the suitable package kinds for each of them.
3. Preferably Tetraback packages are to be used in the filling of sterilized milk, where the filling machine shapes, sterilizes and fills each package with the sterilized milk.
4. The package must be new, clean, sterilized, must protect all the characteristics of the milk and not change any of its physical or chemical characteristics, and it must prevent its contamination and must not be absorbent.
5. All data related to the product must be recorded in a clear way, in Arabic, and using permanent un-removable ink, with the production date and the expiration date in day, month and year, clearly printed.
6. The packages of sterilized milk must be stored before marketing for at least one week in order to inspect and test to ensure the safety of the package, and the efficiency of the heat treatment. Packages must be inspected to eliminate the spoiled ones and those not fit for marketing.

**Article 21): Concentrated, Condensed Milk**
The following requirements must be fulfilled:
1. The presence of all the points previously mentioned pertaining to the manufacturing of pasteurized, sterilized milk, with the presence of appropriate condensing systems.
2. In case of sweetened condensed milk is being manufactured, pure sugar that is compliant with the fixed laid standards pertaining to sugar, must be used.
3. Concentrated, condensed milk is to be filled in tin boxes that are firmly closed in an automatic way, or in any other packages that are healthy and that guarantee no inner or outer contamination will come to the milk, with complete data shown on them.

**Article 22): Fermented Milk**
The following requirements must be fulfilled:
1. Must be manufactured from fresh or reconstituted milk. The label of the final product must clearly state which kind of milk has been used.
2. The factory must be equipped with a sufficient number of mixing tanks.
3. The mixing tanks must have firm covers, and must be equipped with a heating method and made of non-rusting metal. The heating process may be performed separately before mixing.
4. The starter is to be prepared from a pure culture of special efficiency bacteria to produce the required, typical taste. The starter is to be added in an automatic, mechanical way.
5. The milk is to pass through non-rusting metal pipes to the suitable filling system.
6. The fermenting process is done in a special room for fermenting or in incubators, and equipped with a temperature regulator to maintain the fermentation temperature.
7. The package must be new, clean, sterilized, made of non-harmful, non-poisonous materials, must protect all the characteristics of the milk and not change any of its physical or chemical characteristics, and it must be firmly closed to prevent its contamination and must not be absorbent.
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**(Article 23): Labna (Sour Yogurt)**

In producing labna (sour yogurt), the following requirements must be fulfilled:

1. The factory is to be equipped with appropriate equipment and tools, and all manufacturing stages must be performed mechanically.
2. The production line must be provided with special appliances to withdraw test samples before and after manufacturing.
3. The adding of whiteners to the labna is strictly forbidden.
4. The final packages must be kept inside suitable cooling rooms until distribution.

**(Article 24): Cheese**

The following requirements must be fulfilled:

1. Must be manufactured from pasteurized milk.
2. The factory is to be equipped with the appropriate equipment and tools necessary for the manufacturing of the various kinds of cheese according to the kind of product. All stages of the manufacturing process are to be performed mechanically.
3. The cheese manufacturing basins must be made of non-rusting metal, must be equipped with stirrers, and must be double walled to perform the heating processes.
4. All materials used and added during the different manufacturing stages must be clean, healthy, approved for use, and compliant with the fixed laid standards.
5. Dry cheese is ripening for a period not less than sixty days; half-dry cheese for a period not less than thirty days. Strictly prohibited is the selling of soft cheese made from raw milk, displaying it for the purpose of selling, or handling it, before at least sixty days have passed since its manufacturing date.
6. Cheese cases or packages must be firmly closed, and made of materials that do not cause any change in its characteristics, or negatively affect the consumer’s health under the appropriate circumstances for storage and handling.

**(Article 25): Cream & Butter**

The following requirements must be fulfilled:

1. Must be made of milk that has been subjected to heat treatment.
2. The factory is to be equipped with the appropriate equipment and tools necessary for the manufacturing of the various kinds of cream according to the kind of product, and also all the equipment and tools necessary for the manufacturing of butter. All stages of the manufacturing process are to be performed mechanically.
3. In case of the manufacturing of fermented cream, the starter used must be from a pure and clean culture that is free from disease-causing microbes.
4. The water used in manufacturing butter must be from pure sources, drinkable, and compliant with the fixed laid standards.
5. The product is to be mechanically packaged in firmly closed packages that fulfill the health standards, and that protect the product from outer contamination, and inner spoilage.
6. The final packages must be stored under healthy conditions, and far away from any heat source or source of contamination, and at a suitable temperature.

**(Article 26): Ice Cream**

The following requirements must be fulfilled:

1. Must be made of milk that has been subjected to heat treatment.
2. The milk must pass from pasteurized milk tanks to electric mixers through pipes made of non-rusting metal. The mixers must be made of non-rusting metal too.
3. The mixtures are to be transferred to the ice cream making machines mechanically.
4. The packaging and wrapping processes are to be performed mechanically.
5. The packages must be healthy, firmly closed, and made out of plastic or paper that does not let in humidity and that is covered by a wax layer.
6. The packages must be clean, and free from foreign materials/objects or chemical substances that cause and aid interacting and harmful kinds of bacteria.
7. The packages and their covers are to be sterilized before use, and all...
precautions must be taken to avoid contamination during packaging.
8. Covers of packages are to be handled in a way that prevents the contamination of the contents.

(Article 27): Products Transportation
Milk and dairy products are transported from the factory to marketing and selling locations using means of transportation especially equipped for this purpose. The following requirements must be fulfilled:
1. Use of a cooled vehicles for transportation in which the temperature is between 0 - 4 °C to transport these products.
2. Ice cream is to be transported in a method whereby the packages are protected from exposure to sunshine, dust and contamination. It must be transported in a frozen state, and at a low temperature that protects it from spoilage. Special cooling equipment and preparations must be made available to store iced products under frozen circumstances (-18 °C).
3. All health requirements must be available in the transportation vehicle according to the Food Stores Legislation.

(Article 28): 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 factory, so as to be portrayed clearly to all employees (in their own language) who have to abide by the rules stated.
3. The factory is to be equipped with a Clean in Place (CIP) system for mechanical cleaning of equipment, tanks, and packaging and wrapping machines. All tanks, connections, circuits, pumps must be connected to this system in which cold water is pumped followed by hot water mixed with industrial detergents, then re-washing with regular water to eliminate the residues of detergents, then drying with pumped hot air.
4. Eliminating insects and rodents inside the factory and surrounding areas.
5. Using physical methods like electric insect killers to eliminate insects, and ultrasound systems to eliminate rodents.
6. Using pesticides when the previous natural methods prove ineffective, while taking the necessary precautions to protect the foods, tools and equipment from contamination.
7. Thorough cleaning after the use of insect killers to remove its harmful effects. Cleaning is done using hot water, soap, industrial detergents, to get rid of the harmful insect residue before re-using the tools, equipment and utensils.
8. Sticking labels stating type and method of use on the insect repelling containers, detergents, disinfectants, or any other chemical substance that poses a threat to general health.
9. Storing any of these substances in any of the production locations or food stores is strictly forbidden.
10. Collecting waste in plastic disposal bags that are placed in firmly closed containers of the sort that opens automatically by stepping on 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.
11. Daily washing and disinfecting the waste disposal containers using the appropriate detergents and disinfectants.
12. Daily washing and cleaning the floors and walls of the factory.

(Article 29): Licensing
The factory owner or manager must display the business licensing in an obvious location.

(Article 30): Health Inspection Record
The factory 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 factory 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.
(Article 32): 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 33): Infectious Diseases & Injuries

(33-1) 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.

(33-2) 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 waterproof plaster of a bright color. A first-aid box 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 34): 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 section, 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 the 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 35): 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 36): Precautions 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.

(Article 37): Observation of Legislation Implementation

The Ministry of Municipal & Rural Affairs is responsible for observing and supervising the implementation of this legislation, within the framework of its specialization.