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Sanitary Requirements of Meat and Poultry Establishments

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SP2 - Prevent or Resolve Barriers to Trade that Hinder

U.S. Food and Agricultural Exports

Poultry and Products

Livestock and Products

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Report Highlights:

This report contains an unofficial translation of the Ministry of Agriculture's Order on the sanitary requirements of its meat and poultry establishments. In the previous five years, Tunisia's imports of meat and poultry products ranged annually from \$5 to \$30 million. Meanwhile, the United States does not yet have an agreed health certificate to facilitate U.S. exports of such products.

Order of the Minister of Agriculture dated January 4, 2013, fixing the sanitary conditions for the creation of meat and offal processing and stocking establishments
OGRT #24 of March 22, 2013

The Minister of Agriculture,

Having regard to the Constitutive [Law 2011-6](#) of December 16, 2011 on the provisional organization of public authorities,

Having regard to the [Law No. 2005-95](#) of October 18, 2005, relative to the breeding and the animal products, as modified by the [Law No. 2007-54](#) of August 8, 2007, relative to the fight against the doping in the sport and in particular Article 37.

Having regard to [Decree No. 2001-419](#) of February 13, 2001 laying down the powers of the Ministry of Agriculture,

Having regard to [Decree No. 2001-420](#) of February 13, 2001, on the organization of the Ministry of Agriculture, together the texts that have modified or completed it, the most recent being [Decree No. 2011-1560](#) of September 5, 2011,

Having regard to [Decree No.2003-1718](#) of August 11, 2003 on the establishment of general criteria for the manufacture, use and marketing of materials and articles intended to come into contact with foodstuffs,

Having regard to the [Decree No. 2005-1991](#) of July 11, 2005, relative to the study of environmental impact and fixing the categories of facilities subjected to the study of impact on the environment and the categories of units subject to the specifications,

Having regard to [Decree No. 2011-4796](#) of December 29, 2011, appointing members of the Government,

Having regard to the [Order](#) of the Ministers for Trade and Handicrafts, Agriculture and Water Resources, Public Health and Industry, Energy and Small and Medium-sized Enterprises of September 15, 2005 on plastic materials and articles intended to come into contact with foodstuffs,

Having regard to the [Order](#) of the Minister of Agriculture and Water Resources of May 26, 2006, setting the terms of veterinary health control, the conditions and procedures for granting sanitary approval of production, processing and packaging establishments animal products,

Having regard to the [Order](#) of the Ministers for Trade and Handicrafts, Public Health, Industry, Energy and Small and Medium Enterprises of 3 September 2008 on the labeling and presentation of foodstuffs Prepackaged

Having regard to the [Order](#) of the Minister of Agriculture and Water Resources, the Minister of the Interior and Local Development and the Minister of Public Health of November 29, 2008, approving the terms of reference fixing the equipment and sanitary conditions which must be provided in the means of transport of meat and offal,

Having regard to the [Order](#) of the Minister of Agriculture, Water Resources and Fisheries of October 7, 2010, laying down the technical and sanitary conditions for the transport of poultry, small animals and their products.

ORDER:

Article 1 - This Order lays down the sanitary conditions for the establishment of establishments for the processing, processing and storage of meat and offal from slaughtered animals, poultry and rabbits.

Art. 2 - For the purposes of this Order, the following terms mean:

- Poultry: all domestic birds of the species of hens, turkeys, ducks, geese and birds reared according to modern and industrial methods,
- Meat: all parts of slaughtered animals and poultry which fit for human consumption,
- Fresh meat: meat which has not undergone any preservative treatment other than refrigeration, freezing or quick freezing, including meat packaged under vacuum or controlled atmosphere.
- Carcass of meat:
 - * The whole body of a slaughtered animal after the bleeding, skinning, evisceration and removal of limb extremities at the carpus and tarsus, section of the head, from the tail to the udder.
 - *The whole body of a fowl after the bleeding, plucking, evisceration, section of the head and legs at the level of the tarsus, however, the removal of the kidneys is optional,
- Offal of slaughtered animals: all organs not belonging to the carcass, including the intestines and the stomach,
- Offal of poultry: the heart, the liver and the gizzard,
- Mechanically separated meat (poultry): the product obtained by the removal of meat from flesh-covered bones after boning or poultry carcasses, using means that destroy or modify the fibrous structure of muscles,
- Minced meat: boneless meat which has been chopped into fragments and contains less than 1% of salt,
- Meat preparation: fresh meat, including meat which has been reduced to fragments, to which foodstuffs, condiments or additives have been added, or which have undergone insufficient processing to modify the core of the fibrous structure of the muscles and to remove the characteristics of fresh meat,
- Pre-packaging: the operation intended to guarantee the protection of meat and offal by the use of a first envelope or a first container in direct contact with the food, and by extension this envelope or container,
- Packaging: the operation of placing the pre-packaged products in a second container and by extension this second container,
- Treatment: any chemical or physical process such as heating, smoking, salting, salting, marinating or desiccating, used for the purpose of extending the shelf life of meat or products of animal origin, whether associated or not with other foodstuffs, or a combination of these different processes,
- Microorganisms: bacteria, viruses, molds, protozoa, parasites, parasitic helminths and their toxins and metabolites,
- Microbiological criterion: a criterion defining the acceptability of a product, a lot of foodstuffs or a process, on the basis of the absence, presence or number of micro-organisms, or the quantity of their toxins and metabolites, per unit or units of mass, volume, area or lot,
- Safety criterion for meat and meat products: a criterion defining the acceptability of a product, a

consignment of meat and meat products applicable to products placed on the market,

- Hygiene criterion of the treatment process: a criterion defining the acceptability of the operation of the production process. Such a criterion is not applicable to products placed on the market. It lays down an indicative value for contamination, the excess of which requires corrective measures to maintain the hygiene of the process in accordance with the law relating to foodstuffs,

- Lot: a group or series of identifiable products obtained by a given process under virtually identical conditions and produced in a given location and during a given production period,

- Compliance with microbiological criteria: obtaining the satisfactory or acceptable results provided for in Annexes 1 and 2 to this Order in tests based on the values fixed for these criteria by taking samples, carrying out analyzes and placing implementation of corrective measures in accordance with the food regulations and instructions issued by the Veterinary Services under the Ministry of Agriculture.

First chapter

General provisions for establishment's layout and equipment

Section 1 - Lay out of Premises

Art. 3 - The premises of the meat processing and processing establishments must be arranged in such a way as to ensure forward movement without the possibility of going backwards from the various operations, and without crossing or overlapping of the circuits. They must also include a sufficient separation between the clean sector and the contaminated sector as well as protection by an airlock with respect to the external environment.

Art. 4 - The floors must be waterproof and resistant materials, easy to clean and disinfect. With the exception of premises where a temperature incompatible with a normal flow of water prevails, they are arranged in such a way as to allow easy drainage of the wastewater and the washing water with a view to their rapid and hygienic evacuation.

Art. 5 - The premises must allow by their design, their arrangement, their construction and their dimensions:

- The implementation of good hygiene practices, including the maintenance of the prescribed temperatures for food, between and during storage operations,

- A separation between foodstuffs and other stored non-food products,

- To prevent contact with toxic substances, the dumping of contaminating substances on conditioned or non-conditioned foodstuffs, especially from ceilings and false ceilings and other equipment located at height,

Section 2 - Characteristics of Premises

Art. 6 – Processing and storage facilities for meat and offal shall be located in non-floodable areas, away from sources of pollution, free from undesirable odors, smoke, dust or other contaminants.

Art. 7 - These establishments must include:

1) Workplaces of sufficient size so that professional activities can be carried out under hygienic conditions. These workplaces are designed and arranged to prevent contamination of meat and offal.

2) Places where the handling, preparation and processing of raw materials and manufacture of products

are to be carried out where:

- A floor of impermeable and resistant materials, easy to clean and disinfect, arranged so as to allow easy drainage of water, and provided with a device for the hygienic disposal of liquid waste,
- Smooth walls, easy to clean and disinfect, waterproof and coated with a washable and clear coating to a height of at least two meters, or at least the storage height in the refrigeration and storage areas,
- Bright-colored ceilings, which are easy to clean and disinfect, designed and constructed to prevent the accumulation of dirt and condensation,
- Windows made of unalterable materials, fully glazed and screened easy to clean and equipped with mosquito nets,
- Doors made of unalterable and stainless materials, easy to clean and disinfect,
- Sufficient ventilation and, where appropriate, a system allowing evacuation of the vapors,
- Natural or artificial lighting, not modifying the colors.
- A sufficient number of devices for cleaning and disinfecting the hands located as close as possible to workstations, provided with hot and cold running water if the activity requires it. These devices must not be hand-operated and must be provided with cleaning and disinfecting products, as well as hygienic hand-drying and nail-cleaning equipment.

The use of wood is prohibited.

3) - Storage rooms for raw materials and products whose same conditions apply as mentioned in point (2) except:

- In refrigerated storage rooms, in which arrangement must be made for soil that is easy to clean and disinfect and arranged so as to allow easy drainage of the water,
- In freezing or deep-freezing rooms, in which it is necessary to provide a floor made of impermeable and rot-proof materials, easy to clean, as well as installations of sufficient cooling capacity to ensure the maintenance of raw materials and intermediate products in thermal conditions provided for in this order.

The capacity of the storage rooms must be sufficient to ensure the separate storage of raw materials and finished products. Raw materials, meat products or other unpackaged animal products must be stored separately from raw materials and packaged products,

4) - Facilities for the hygienic handling and protection of raw materials and finished products unpackaged or packed during loading and unloading operations,

5) - Working devices and tools, such as cutting tables, containers, conveyor belts, saws and knives, intended to come into direct contact with raw materials and products, made of corrosion-resistant materials, must be easy to clean and disinfect,

6) - An equipped, lockable room, assigned to the veterinary inspection service,

7) - A room or a device for storing detergents, disinfectants or similar substances,

8) - A room or cabinet for storing cleaning and maintenance equipment,

9) A sheltered place equipped with equipment for cleaning and disinfecting means of transport.

Art. 8 - Establishments engaged in the manufacture, handling, processing and packaging of meat

products must include:

- Adequate and large premises for the separate storage of cold raw materials on the one hand and meat products at ambient temperature or, where appropriate, depending on their nature, under cold conditions, on the other hand.
- One or more appropriate and large premises for the manufacture and packaging of meat products.

Provided that these operations constitute a single production cycle ensuring compliance with the requirements of this Order and the safety of raw materials and finished products, and provided that the design and dimensions of the manufacturing premises permit, they may be carried out in the same room,

- A room or a device for the storage of certain ingredients such as food additives,
- A room for packing and shipping,
- A room for the storage of pre-packaging and packaging materials,
- A room for the cleaning of equipment and materials, such as hooks and containers,

Art. 9 - Depending on the type of product concerned, the establishment must include:

- A room or, if there is no danger of contamination, a place for the removal of the packaging of the raw materials,
- A refrigerated room for thawing raw materials,
- A room for cutting operations,
- A room with an air conditioner for slicing or cutting and packaging meat products intended to marketed in pre-packaged form,

Art. 10 - All equipment and instruments used on raw materials and products, floors, walls, ceilings and partitions, must be kept clean and maintained, so as not to constitute a source contamination for these raw materials or products.

Workplaces, tools and equipment should only be used for the preparation of products for which approval has been granted.

Section 3 - Sanitary Premises

Art. 11 - Processing, handling and storage facilities for meat and offal must include the following:

- A sufficient number of changing rooms with the separation between street clothes and work clothes,
- An appropriate number of non-manual hand washbasins available to staff, which must have hot and cold running water.

Toilets must have smooth, waterproof and washable walls. Cleaning and disinfecting products as well as hygienic means of hand drying must be available.

Toilets must not communicate directly with the storage or work areas.

Section 4 - Water Supply and Water Circuits

Art. 12 - Processing, handling and storage establishments for meat and offal must be equipped with equipment providing exclusively potable water. However, the use of non-potable water is possible exceptionally for the production of steam, firefighting or refrigeration, provided that the pipes installed

for this purpose prevent the use of this water for other purposes and do not present any direct or indirect risk of product contamination.

The color of non-potable water pipes must be clearly differentiated from those used for potable water.

A sewage disposal system that meets hygiene requirements must be available.

Chapter 2 **Common Provisions on Good Hygiene Practices**

Section 1 - Staff Hygiene

Art. 13 - Cleanliness is required from the staff. In particular:

- He/She must wear appropriate and clean work clothes and a clean cap completely wrapping the hair. This includes persons handling unpackaged raw materials and products subject to contamination,
- The assigned staff to the handling and preparation of raw materials and products is required to wash their hands at least every time they return to work and in case of contamination, hand injuries must be covered by a waterproof bandage.
- It is forbidden to smoke, spit, drink and eat in the working and storage areas of raw materials and products.

Employers must take all necessary measures to avoid the handling of raw materials and products by persons who may contaminate them.

Anyone assigned to work in the field of meat slaughtering and handling is required to conduct medical examinations once a year and biological tests required once every six months and whenever necessary. This person is also required to submit a medical certificate proving his/her good health and authorizing him/her to handle foodstuffs.

Art. 14 - The head of the establishment or his/her delegate must ensure that, in the course of their activity and the responsibility attached to it, the persons who handle or manipulate the food follow precise instructions allowing them to apply the provisions of this decree and have ongoing training in food hygiene adapted to their professional activity.

Section 2 - Cleaning and Disinfection

Art. 15 - These establishments must include appropriate devices for the cleaning, disinfection and sterilization of tools, equipment and installations, supplied with hot water at a temperature of at least +82°C. Any other equivalent method of sterilization is allowed.

Detergents, disinfectants and similar substances must be approved by the competent authority and used in a manner to not affect equipment, materials, raw materials, and products.

Their use should be followed by a thorough rinsing with potable water of these equipment and tools of work.

The cleaning and disinfection programs must be formalized and made available to the competent veterinary services and the inspection services of the relevant ministries in accordance with the legislation in force.

The storage rooms for meat and meat offal are ventilated to allow control of condensation phenomena and to avoid the persistence of odors. The ventilation system must not promote food contamination and

must be removable for cleaning or regular maintenance.

The storage rooms are cleaned and deodorized whenever necessary.

Section 3 - Pest Control

Art. 16 - No animal shall enter these establishments.

In addition, they must have appropriate protection devices against pests, such as insects, rodents, birds, etc.

Formalized pest control procedures must be established by the establishment or subcontracted to a specialized company. Only approved products can be used.

Section 4 - Waste Management

Art. 17 - Establishments must have special, leak-proof containers made of unalterable materials with lids for the reception of meat waste or products not intended for human consumption. Waste disposal should be daily and on a routine basis after each work cycle. A refrigerated lockable room for storing waste if it is needed in abundance or if it is not removed or destroyed at the end of each phase of work.

These wastes or products are removed by ducts, when they are unfit for human consumption, they must be constructed and installed in such a way as to avoid any risk of contamination of other raw materials or products.

Section 5 - Water Quality Control

Art. 18 - The water coming from the potable water network must comply with the following microbiological and physicochemical parameters:

- Microbiological Parameters

Parameters	Maximum Limits
Escherichia Coli	0/100 ml
Enterococci	0/100 ml

In addition, the water must not contain pathogenic microorganisms and parasites that may constitute a danger to human health.

- Physicochemical Parameters:

Parameters	Maximum Limits
Ammonium	0.50 mg / liter
Nitrates	0.50 mg / liter
Smell	Acceptable
Taste	Acceptable
Turbidity	25 turbidity units
Color	50 units (platinum-cobalt scale)
pH	8

Art. 19 - Non-potable water (well, etc.) must comply with the following microbiological and physicochemical parameters:

- Microbiological Parameters:

Parameters	Maximum Limits
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Escherichia Coli	0/100 ml
Enterococci	0/100 ml
Colony contents at 22 ° C	100/ml
Colony contents at 37 ° C	20/ml
Clostridium sulphito-reducer	0/ml

- Physicochemical parameters: same standards as water from the potable water system.

Chapter 3 Specific Provisions

Section 1 - Cold Stores of Meat and Offal

Art. 20 - Chilled meat carcasses of animals and their non-packaged cuts are received on platforms designed and equipped for hygienic handling of meat. Receipt of other packaged or non-packaged foods cannot be done simultaneously.

Where carcasses, parts of carcasses or edible offal are placed in storage rooms, the following conditions must be met:

- A method must exist for monitoring the operational control program,
- The carcasses must be suspended to allow a satisfactory circulation of the air around them,
- Parts of carcasses must be suspended or placed in corrosion-resistant containers to allow a satisfactory circulation of air around the meat,
- Temperature, hygrometry, and air circulation must be maintained at levels consistent with the operational control program,
- Avoid dripping water, including condensation.

Art. 21 - Where carcasses, parts of carcasses or edible offal are placed in a cold storage warehouse, the following provisions shall be observed:

- These products must not be placed in the cold store until the temperature of the meat has been reduced to an acceptable level,
- Meat, in the form of a carcass or in cartons, must not be stacked directly on the ground but must be arranged in such a way to allow a good air circulation,
- The cold storage area must be kept at a temperature, which ensures satisfactory protection of the meat.

Art. 22 - Where carcasses, parts of carcasses or edible offal are placed in a freezing chamber, the following provisions shall be complied with:

- Unpacked meat in cartons must be suspended or placed in suitable corrosion-resistant containers so that air can circulate freely around the meat,
- Cartons containing meat must be stacked in such a way to permit the circulation of air between them,
- Unpacked meat in cartons must be arranged in such a way to prevent dripping from one room to another,

- When the meat is placed in containers, care must be taken to avoid any contact between the bottom of the vat and the meat stored underneath.

Art. 23 - Where carcasses, parts of carcasses or edible offal are placed in freezer rooms or cold stores, the following conditions shall be met:

- Access to these rooms should be limited to the personnel responsible for the execution of the operations,
- The doors must not remain open for prolonged periods and they must be closed immediately after use,

Art. 24 - Each storage room for frozen products greater than 10 cubic meters must be equipped with one or more automatic temperature recorders to measure frequently and at regular intervals the temperature of the ambient air. The device further comprises an easily accessible direct display thermometer.

The thermosensitive parts of the recorder must be properly placed to measure the air temperature most representative of the cold room, especially near the air reheating of the exchangers. The records are dated and filed in chronological order and kept by the operators, in computerized form or on paper, for at least one year, at the disposal of the veterinary service agents in charge of control.

Art. 25 - The food is introduced inside the storage rooms to avoid any risk of contamination. They are kept there under hygienic conditions to ensure their protection and conservation.

The person in charge of the establishment takes appropriate measures to avoid the contamination, in particular when packages are soiled or deteriorated, he/she sorts the foodstuffs in order to reorient them, if necessary, towards another circuit.

Where labels that are affixed to foodstuffs are made obligatory by the regulations in force are missing or illegible, the person responsible for the storage establishment may not put those foodstuffs into circulation with a view of consumption, which he/she has in his custody.

In all the aforementioned cases, the head of the storage establishment has a food registration system, which can be consulted by the veterinary service agents in charge of control.

Art. 26 - Packaged foodstuffs may not be stored in the same premises as animal products without any protection.

Where a room has been used for the storage of packaged foodstuffs, it must be cleaned and disinfected before the introduction of animal or animal products without any protection, and vice versa.

Packaged or unpackaged goods should not be placed on the floor.

Art. 27 - In order to ensure the traceability of stored meat and offal, the head of the establishment shall enter, in a register or an equivalent system, all the information necessary to trace back to their origin, as well as that relating to their immediate destination.

The register or equivalent system shall be available to veterinary control officers in charge of control.

When the original packaging or packaging is modified in the establishment while complying with the provisions of the first paragraph of this Article, the manager shall put in place a system to ensure the relationship between the incoming products and the products coming from its establishment.

Art. 28 - The head of the establishment or its delegate shall, in the course of its business and the responsibility attached to it, carry out regular checks to verify the conformity of the storage conditions for meat and meat offal with the provisions of this decree, particularly as regards temperature.

Art. 29 - Establishments covered by this Order may store other foodstuffs intended for human consumption in a separate room, subject to compliance with hygiene and temperature regulations specific to these foods.

In case of storage of products intended for pet food, it is necessary to provide a place reserved for this purpose to prevent any risk of confusion on their destination.

Art. 30 - Meat and offal storage establishments complying with the provisions of this Order shall be registered in a list determined by the competent veterinary services.

Section 2 - Meat Cutting and Packing Establishments

Art. 31 - Meat cutting establishments must include at least:

- One or more large cold rooms for the separate preservation of raw or packaged meat in the case where the cutting establishment is not annexed to a slaughterhouse.
- A room for meat cutting and packaging operations.
- A room for packing and shipping operations.
- A room for the storage of packaging.
- A refrigerated room for the storage of meat waste from cutting and not intended for human consumption.

Art. 32 – Only the use of previously refrigerated, eviscerated carcasses that come directly from approved slaughterhouses are allowed for the preparation of cut poultry meat.

For the preparation of frozen cuts, freezing must be carried out immediately after cutting.

Art. 33: - Fresh meat from slaughtered animals must be maintained, during all cutting, deboning, packaging and handling operations, at an internal temperature equal to or lower than +7°C, with regard to meat and not more than +3°C for offal.

- During work, the room temperature must be equal to or lower than +10°C.
- Cuts of meat, including offal, is kept during storage at a core temperature of not more than:
 - o +7°C for refrigerated meat.
 - o +3°C for chilled offal.
 - o -18°C for frozen meat.

Art. 34: - Fresh poultry meat must be maintained, during all cutting, deboning, packaging and handling operations, at an internal temperature of not more than +4°C, as regards the meat itself, and less than or equal to +2°C for offal.

- During work, the room temperature must be equal to or lower than +10°C
- Cuts of meat, including offal, are kept during storage at a core temperature of not more than:
 - o +4°C for chilled meats
 - o +2°C for chilled offal
 - o -18°C for frozen meat.

Art. 35 - The use or addition, during the preparation of cut meat or meat products, of any substance other than those expressly authorized by the regulations in force shall be prohibited.

Art. 36 - Rabbit meat from an approved slaughterhouse may be cut in a slaughterhouse for livestock or poultry provided that it is separated in space or time.

Art. 37 - When the meat is packed:

- The materials intended for meat packaging must comply with the regulations in force and be stored and used in an appropriate and hygienic manner,
- The packaging must be sufficient to protect the meat against contamination under conditions where it will be handled, transported or stored,
- The packaging material must not be toxic and must not leave any harmful deposit on the meat or contaminate it,
- The boxes or cartons used to package the meat must be provided with an appropriate internal lining or other means to protect the meat. However, the liner or other protection is not essential when meat pieces such as cut pieces or boneless pieces are individually wrapped prior to packaging.

Section 3 - Establishments Producing Minced Meat Products and Processed Products

Art. 38 - Operators of establishments producing minced meat, minced meat products, meat preparations and mechanically separated meat must ensure that such establishments:

- 1) Are constructed in such a way as to avoid contamination of meat and products, in particular by permitting a continuous process of operations, or take care to separate the different production lots,
- 2) Have spaces for storing meat and packaged products away from meat and non-packaged products, unless they are stored at different times or in such a way that the packaging and the method of storage cannot be a source of contamination for meat or products,
- 3) Are equipped with rooms equipped to ensure compliance with the temperature conditions set by this decree.

The establishment of processing and handling of meat for slaughtered animals must also include, according to the type of product:

- A room or facility for drying and ripening
- A room for desalting, soaking and any other treatment, including natural casings, if these operations have not been carried out on the raw materials in the establishment of origin
- A room for salting, including, if necessary, an air conditioning system.
- A room or an installation for smoking products

Insofar as the conditions laid down in Article 8 are fulfilled, some of these operations may be carried out in a common premises separated in time.

Insofar as these conditions are not fulfilled, operations, which may constitute a health hazard, products manufactured simultaneously and operations associated with excessive heat production shall be carried out in a separate room.

Art. 39 - Premises in which foodstuffs other than meat or meat products and which may be used in the composition of meat products are stored or prepared must be subject to the general rules of hygiene laid down in this Order.

Raw materials and ingredients for meat products and by-products, products of animal origin, and their containers, must not come into direct contact with the soil and must be handled in conditions that are unlikely to contaminate them. It must be ensured that there is no contact between the raw materials and the finished products.

The temperatures of the premises or part of the premises in which work is carried out on meat, minced meat used as raw materials, meat products and meat preparations must ensure hygienic production and, if necessary, these premises or parts of premises must be equipped with an air-conditioning device.

When cutting and salting operations are carried out, the cutting and salting premises must be kept at a temperature not exceeding 10°C.

However, for other establishments, the veterinary services under the Ministry of Agriculture have the possibility of derogating from this temperature requirement when it considers such a derogation justified to take account of the technology for the preparation of the meat product.

All meat, including minced meat and meat preparations, used for meat products must meet the requirements for fresh meat. However, minced meat and meat preparations used for meat products are not subject to the other specific requirements mentioned in this chapter.

Art. 40 - In order to be used for the manufacture of meat products, meat must fulfill the following conditions:

- Come from an approved slaughter establishment and have been transported under sanitary conditions in accordance with the regulations in force.
- Be kept in good hygienic conditions on arrival at the processing establishment and until the moment of their use.

Minced meat and meat preparations, if they are not produced in the place of manufacture referred to in Article 8, must satisfy the following conditions:

- Come from an approved establishment and have been transported under satisfactory sanitary conditions.
- Be kept in good hygienic conditions as soon as they arrive at the processing establishment and until the moment of their use.

Art. 41 - Operators of establishments producing minced meat, meat preparations and mechanically separated meat must ensure that the raw materials used meet the following conditions:

- 1) Concerning the raw materials used for the preparation of minced meat:
 - They must satisfy the conditions applicable to fresh meat,
 - They must have been prepared from skeletal muscle, including adjacent fatty tissues,
 - They cannot be obtained from cuts or trimmings (other than trimmings of whole muscles), mechanically separated meat, meat containing fragments of bone or skin and meat from the head, and exclusion of masseters, carpal and tarsal area, scraped meat cuts on the bones and muscles of the diaphragm except after removal of the serous membranes,
- 2) Concerning raw materials used for meat preparations:

- The meat used must be fresh,
 - The meat used must satisfy the conditions referred to in point 1,
 - When these meat preparations are not intended to be consumed before having undergone a heat treatment, one must use:
 - * Meat resulting from the mincing or cutting of meat (but may not be obtained from cutting or trimmings other than trimmings of whole muscles), satisfying the conditions referred to in point 1,
 - * Mechanically separated meat when carrying out analyzes demonstrating that they comply with the microbiological criteria for minced meat.
- 3) Concerning raw materials used for the production of mechanically separated meat:
- They must comply with the conditions applicable to fresh meat,
 - The use of the legs, the skin of the neck as well as the head of the poultry is not authorized for the production of mechanically separated meat.

Art. 42 - The official veterinarian is authorized to impose industrial heat treatment or any other treatment aimed at the elimination of salmonella from poultry meat.

Art. 43 - Operators of establishments producing minced meat, meat preparations and mechanically separated meat must comply with the following conditions:

- 1) Meat processing must be organized in such a way to avoid or reduce contamination. Establishment operators must ensure that the meat used is kept at a temperature not exceeding 4°C for poultry, 3°C for offal and introduced into the preparation premises as required,
- 2) The following conditions apply to the production of minced meat and meat preparations:
 - The minced meat must be prepared:
 - * For poultry, within a maximum of three days after the slaughter of the animals,
 - * For animals other than poultry, within a maximum of six days after slaughter,
 - * Within a maximum of 15 days after the slaughter of the animals for boneless and vacuum-packed meat
 - Immediately after production, the minced meat and meat preparations must be packed or packaged and cooled to a core temperature not exceeding 2°C for minced meat and 4°C for meat or frozen preparations at a core temperature not exceeding -18°C.

These temperature conditions must be maintained during storage and transport,
- 3) The following conditions apply to the production and use of mechanically separated meat produced using techniques which do not affect the bone structure used in the production of mechanically separated meat and the calcium content of which is not much higher than that of minced meat:
 - Poultry carcasses may not be more than three days old,
 - The mechanical separation must take place immediately after deboning,
 - If they are not used immediately after they are obtained, the mechanically separated meat must

be packed and then refrigerated at a temperature not exceeding 2°C or frozen at a core temperature not exceeding -18°C. These temperatures must be maintained during storage and transportation,

- If the operator of the establishment has carried out analyzes which demonstrate that the mechanically separated meat meets the microbiological criteria for minced meat, it may be used in meat preparations which are not intended to be consumed before having heat-treated and in meat products,
 - Mechanically separated meat which does not meet the criteria set out above may only be used to produce heat-treated meat products in approved establishments,
- 4) The following conditions apply to the production and use of mechanically separated meat produced using techniques other than those referred to in point 3:
- Poultry carcasses may not be more than three days old,
 - If they are not used within one hour of being obtained, the meat separated mechanically must be immediately chilled to a temperature not exceeding 2°C,
 - If, after refrigeration, mechanically separated meat is not processed within twenty-four hours, it must be frozen within twelve hours of production and reach a core temperature not exceeding -18°C within six hours,
 - Mechanically frozen meat must be packed before being stored or transported, but must not be stored for more than three months and must be kept at a temperature not exceeding -18°C during storage or transport,
 - Mechanically separated meat may only be used for the production of meat products which are heat-treated in establishments approved by the competent veterinary services.
- 5) Minced meat, meat preparations and mechanically separated meat may not be refrozen after thawing.

Chapter 4

Self-Control and Guide to Good Hygiene Practices

Section 1 - HACCP System

Art. 44:

- 1) Processing, handling and storage establishments for meat and offal are subject to the control of the competent veterinary services and the inspection services of the relevant ministries in accordance with the legislation in force that must:
- For all establishments except cold stores, check the effectiveness of the controls carried out by the establishments, in accordance with the system of analysis of the risks and the critical points for their control, in particular by the examination of the results of the recordings and the taking of samples for laboratory analysis,
 - Check the appropriate health marking of the meat products and the identification of the products declared unfit for human consumption and the destination which is reserved for them,
 - Carry out any other checks they deem necessary to ensure compliance with the requirements of this Order,

- Ascertain whether a meat product has been made from meat to which other food products, food additives or condiments have been incorporated, subject to a check to ensure that it meets the production criteria established by the producer and in particular if the composition of the product corresponds to the particulars on the label.
- 2) The veterinary services must have free access at all times to cold stores and all work premises to check compliance with these measures.

Section 2 - Guide to Good Hygiene Practices

Art. 45 - Operators of processing and storage plants for meat and offal and transport operators must comply with the national guides to good hygiene practices drawn up by the interbranch organizations concerned.

Veterinary services under the Ministry of Agriculture evaluate and validate these national guides.

Chapter 5 Microbiological Criteria

Art. 46 - Meat and meat products must not contain micro-organisms or their toxins or metabolites in amounts that pose an unacceptable risk to human health.

The safety of meat and meat products is ensured by a preventive approach that includes the implementation of good hygiene and manufacturing practices and the application of HACCP principles (Hazard Analysis and Critical Control Point System).

The microbiological criteria, referred to in Annexes 1 and 2, may be used for the validation and verification of HACCP-based procedures and other hygiene control measures.

Microbiological criteria contribute to the definition of the acceptability of these processes. They set a limit beyond which meat and meat products must be considered unacceptably contaminated by the micro-organisms for which the criteria are established.

Microbiological criteria also provide guidance on the acceptability of meat and meat products and their manufacturing, handling and distribution processes. The use of these criteria should be an integral part of the implementation of procedures based on HACCP principles and other hygiene control measures.

Art. 47 - The methods of analysis and the sampling plans and methods defined in Annexes 1 and 2 attached to this Order are applied as a reference method.

Other methods of analysis are applied when they are certified in accordance with the protocol defined in EN / ISO 16140 or other similar internationally recognized protocols and validated against the reference method defined in Annexes 1 and 2 attached to this Order.

Chapter 6 Miscellaneous

Art. 48 - Notwithstanding the penalties provided for by the legislation in force, and in the event that the provisions of this Order have not been complied with, the veterinary sanitary approval of meat processing and processing establishments shall be withdrawn or suspended, and after audit of compliance by these establishments with veterinary health conditions in accordance with the [Order](#) of the Minister of Agriculture and Water Resources of May 26, 2006.

In case of compliance by the owner of the establishment, the latter proceeds to the notification of the veterinary services under the Ministry of Agriculture who carry out the audit of the establishment within a period not exceeding 3 weeks of the information date.

In case of compliance, the sanitary approval is granted again.

Art. 49 - Establishments for the storage of meat and offal complying with the provisions of this Order and not subject to veterinary sanitary approval shall be entered on a list drawn up by the Veterinary Services under the Ministry of Agriculture.

In case of non-compliance with the sanitary conditions provided for in this order, the establishment concerned will be removed from the list. The list of meat and offal storage facilities is updated whenever necessary.

Art. 50 - All processing, handling and storage establishments for meat and offal must comply with the provisions of this Order within a period not exceeding two years from the date of its publication in the Official Gazette of the Republic of Tunisia.

Art. 51 - This Order will be published in the Official Gazette of the Republic of Tunisia.

Tunis, January 4, 2013.

Minister of Agriculture Mohamed Ben Salem

Viewed

The Head of Government Hamadi Jebali

Annex 1: Safety criteria for meat and meat products

Categories	Microorganisms / toxins, metabolites	Sampling plan (1)		Limits (2)	Reference analysis method (3)	Application stage of the criterion
		n	c	m / M		
Meat and meat-based products intended to be consumed raw	Listeria monocytogenes	5	0	100 cfu / g (4)	EN / ISO 11290-2 (5)	Products placed on the market during their shelf life
		5	0	Absence in 25 g (6)	EN / ISO 11290-1	Before the food left the immediate control of the operator
	Salmonella	5	0	Absence in 25 g (6)	EN / ISO 6579	Products placed on the market during their shelf life
Poultry and lagomorph meat and meat based products intended to be consumed raw	Listeria monocytogenes	5	0	100 cfu / g (4)	EN / ISO 11290-2 (5)	Products placed on the market during their shelf life
		5	0	Absence in 25 g (6)	EN / ISO 11290-1	Before the food left the immediate control of the operator
	Salmonella	5	0	Absence	EN / ISO	Products placed

				in 25 g (6)	6579	on the market during their shelf life
Meat and meat-based products intended to be consumed cooked	Salmonella	5	0	Absence in 25 g (6)	EN / ISO 6579	Products placed on the market during their shelf life
Poultry and lagomorph meat and meat based products intended to be consumed cooked	Salmonella	5	0	Absence in 25 g (6)	EN / ISO 6579	Products placed on the market during their shelf life

(1) n = Number of units constituting the sample, c = maximum number of results that may have values between m and M for the number of samples n made

(2) m = M

(3) The most recent edition of the standard should be used

(4) This criterion is applicable when the manufacturer can demonstrate, to the satisfaction of the competent authority, that the product will meet the limit of 100 cfu/g for the entire shelf life. The operator may set low intermediate values during the process to ensure that the limit of 100 cfu/g will not be exceeded at the end of the shelf life.

(5) 1 ml of inoculum is placed on a petri dish with a diameter of 140 mm or on three petri dishes with a diameter of 90 mm

(6) This criterion is applicable to products before they are beyond the immediate control of the meat and meat products operator, where the meat and meat products operator cannot demonstrate satisfaction of the competent authority, that the product will respect the limit of 100 cfu/g for the entire shelf life.

Interpretation of the Results of the Analysis

The indicated limits apply to each sample unit analyzed.

The results of the analyzes reveal the microbiological quality of the tested lot. The results of the analyzes can also be used to demonstrate the effectiveness of the application of the HACCP system or good hygienic practices in the process.

Listeria monocytogenes in ready-to-eat foods that may promote the development of *L. monocytogenes* before the operator producing those foodstuffs loses immediate control of it when the operator is unable to demonstrate that these products do not exceed the limit value of 100 cfu/g for the whole of their shelf life:

- Satisfactory quality when all the values observed indicate the absence of the bacterium,
- Unsatisfactory quality when the presence of the bacteria is detected in a unit of the sample.

Listeria monocytogenes in other ready-to-eat foods:

- Satisfactory quality when all observed values are \leq the limit
- Unsatisfactory quality when one of the values is $>$ the limit

Salmonella

- Satisfactory quality when all the values observed indicate the absence of the bacterium,
- Unsatisfactory quality when the presence of the bacteria is detected in a unit of the sample.

Appendix 2: Hygiene Process Criteria: Meat and Meat Products

Categories	Micro-organisms	Sampling plans (1)		Limits (2)		Baseline method of analysis (3)	Stage of application of the criterion	Action in case of unsatisfactory results
		n	c	m	M			
Carcasses of cattle, sheep, goats and camelids (4)	Number of aerobic colonies			3.5 log cfu/cm ² average daily log	5.0 log cfu/cm ² average daily log	ISO 4833	Carcasses before chilling	Improvements in slaughter hygiene and review of process controls
	Enterobacteriaceae			1.5 log cfu/cm ² average daily log	2.5 log cfu/cm ² average daily log	EN / ISO 21528-2	Carcasses before chilling	Improvements in slaughter hygiene and review of process controls
Carcasses of cattle, sheep, goats and camelids	Salmonella	50 (5)	2 (6)	Absence in the examined part of the carcass		EN / ISO 6579	Carcasses before chilling	Improvements in slaughter hygiene and review of process controls
Poultry carcasses: chickens and turkeys	Salmonella	50 (5)	5 (6)	Absence in 25g of a pooled sample of neck skin		EN / ISO 6579	Carcasses before chilling	Improvements in slaughter hygiene and review of process controls, animal origin and farm biosecurity measures
Minced meat	Number of aerobic colonies (7)	5	2	5 x 10 ⁵ cfu/g	5 x 10 ⁶ cfu/g	ISO 4833	End of the process	Improvements in production hygiene and in the selection and/or origin of raw materials
	E. Coli (8)	5	2				End of the process	Improvements in production hygiene and in the selection and/or origin of raw materials
Mechanically separated meat (poultry)	Number of aerobic colonies	5	2	5 x 10 ⁵ cfu/g	5 x 10 ⁶ cfu/g	ISO 4833	End of the process	Improvements in production hygiene and in the selection and/or origin of raw materials
	E. Coli (8)	5	2	50 cfu/g	500 cfu/g	ISO 16649-1 or 2	End of the process	Improvements in production hygiene and in the selection and/or origin of raw materials
Meat Preparation	E. Coli (8)	5	2	500 cfu/g or cm ²	5000 cfu/g or cm ²	ISO 16649-1 or 2	End of the process	Improvements in production hygiene and in

								the selection and/or origin of raw materials
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1) n = number of units constituting the sample; c = maximum number of results that may have values between m and M for the number of samples n made

(2) $m = M$

(3) The most recent edition of the standard should be used.

(4) These limits (m and M) only apply to samples taken by the destructive method. The average daily log is calculated by taking a log of each of the different analysis results and then calculating the average of these logs.

(5) The 50 samples are taken in ten consecutive samplings.

(6) Number of samples where the presence of salmonella is detected.

(7) This criterion does not apply to minced meat produced at retail when the shelf life is less than 24 hours.

(8) *E. coli* is used here as an indicator of fecal contamination.

Interpretation of the results of the analyzes

The limits shown apply to each sample unit analyzed, with the exception of carcasses for which limits apply to pooled samples.

The results of the analyzes reveal the microbiological quality of the controlled process

Number of enterobacteriaceae and aerobic colonies in carcasses of cattle, sheep, goats and camels:

- Satisfactory quality when the daily average is $\leq m$
- Acceptable quality when the daily average is between m and M
- Unsatisfactory quality when the daily average is $> M$

Salmonella in carcasses:

- Satisfactory quality when the presence of Salmonella is detected in a maximum number of c / n samples
- Unsatisfactory quality when the presence of Salmonella is detected in a number of samples greater than c / n

After each sampling, the results of the last 10 samplings are analyzed to obtain the number of samples.

Number of *E. coli* and aerobic colonies in ground meat and meat preparations:

- Satisfactory quality when all observed values are $\leq m$,
- Acceptable quality when a maximum of c / n values is between m and M and the rest of the observed values is $\leq m$,
- Unsatisfactory quality when one or more observed values are $> M$

