PROCEDURES AND GUIDELINES FOR THE INSPECTION OF ABATTOIRS’ AND MEAT PROCESSING PLANTS’ COMPLIANCE WITH THE UNIFORM VETERINARY (VETERINARY AND SANITARY) REQUIREMENTS OF THE CUSTOMS UNION MEMBER STATES

I. General Provisions

1. These Procedures and Guidelines for the Inspection of Abattoirs’ and Meat Processing Plants’ Compliance with the Uniform Veterinary (Veterinary and Sanitary) Requirements of the Customs Union Member States (hereinafter “the PG”) have been developed within the framework of implementation of the Provision for Uniform Procedures for Joint Inspections of Facilities and the Sampling of Goods (Products) Subject to Veterinary Control (Supervision), approved by Resolution of the Commission of the Customs Union No. 317 of 18 June 2010, as well as in compliance with the requirements of applicable veterinary laws and regulations in the sphere of the quality and safety of raw materials for food application and foods.

2. The PG establish the procedures for joint inspections for the compliance of abattoirs and meat processing plants, including foreign facilities, which slaughter livestock; process, store, and sell meat, its by-products, and other meat products; and supply such products or have plans to export them to the Customs Union member states (hereinafter “the facilities”), with the veterinary (veterinary and sanitary) requirements of the Customs Union member states regarding livestock slaughtering, and the processing, storage, and sales of meat, its by-products, and other meat products.

3. Inspections should be held at companies which engage in livestock slaughtering, or in the processing, storage, and sales of meat, its by-products, and other meat products (hereinafter “the products”).

The facility must operate and be maintained in a sanitary condition in order to ensure that the products are fit for use as food.

The territory and production premises should be kept clean and should meet the requirements of all veterinary and sanitary rules, standards, and other regulatory documents.

4. Inspections should be conducted by the authorised officers of the agencies and organisations which constitute the system of government veterinary services of the Customs Union member states (hereinafter “the officers”).

5. Upon arrival at the facility, the officers should learn about its activity, production and sales volumes, and product safety policies.

6. When inspecting the facility, officers should take note of the following:

- Observance of those requirements concerning the veterinary laws of the Customs Union member states, as well as those regulations in the sphere of the safety of raw materials to be used for food applications and for foods of animal origin;
- Availability of the production scheme (determine whether a technological counterflow of raw materials and products exists in the production processes);
- Epizootic characteristics of the facility’s raw materials zone, the radius for the supply of animals and raw materials, and the stock (obtain information about the administrative territories from which animals and raw materials are derived, imports included; make an assessment based upon available reports, and if the assessment is unfavourable, note the relevant diseases);
- Observance of the antiepizootic activity plans undertaken by those farms in the raw materials zone (vaccination and diagnoses of infectious and parasitic diseases, according to supporting documents, veterinary reports, and laboratory tests; note the relevant diseases);
- The facility’s sanitary protection zone;
- Condition of the territory and production premises (layout, the continuity of technological processes in place to avoid product contact with animals and raw materials; the integrity of fencing, and the asphalt and concrete surfacing of access roads to shops and production premises, including pre-slaughter handling facilities);
- Hot and cold water supplies, and the availability of steam and freezing processes at the facility (laboratory control over the quality of drinking water);
- Performance of wastewater treatment facilities (chlorination plants), internal and storm sewerage systems (check the results of wastewater laboratory tests in the log);
- Availability and operating condition of veterinary and sanitary facilities:
  a) The drive-through disinfection bath (and whether a stationary heated disinfection bath is available in winter) at the entrance to and exit from the territory of the facility;
  b) The disinfection and cleaning facility or the disinfection and cleaning area for vehicles used to deliver livestock to abattoirs;
  c) Races used for cattle examination;
  d) A sanitary slaughterhouse or a sanitary room for the isolated treatment of sick or weak cattle;
  e) Quarantine and isolation premises;
  f) Areas for the biothermal disinfection of droppings (dung yards);
  g) An isolated sanitary cooler for the temporary storage of meat from emergency-slaughtered animals before processing;
  h) A sterilization room with a Freibank system or another sterilizer;
  - The technical condition of disinfection plants and steam-formaldehyde sterilizers;
  - The availability of duly executed, official veterinary documents (veterinary certificates) for animals and raw materials;
- Observance of the veterinary and sanitary requirements for pre-slaughter examinations and for handling conditions;
- The cleaning and disinfection of vehicles used to deliver livestock to abattoirs; the disinfection of production premises, technological equipment, accessories, containers, floor transporters, hatchways;
  - The supply of cleaning and disinfection substances;
  - The centralized preparation and supply of workplaces with cleaning and disinfection solutions in shops;
- Automated cleaning and disinfection systems;
- Equipment of veterinarians’ workplaces (illumination, availability of sterilizers, sinks with hot and cold water, soap, containers with disinfectant solutions for hand washing and towels, containers for confiscated products, conveyor stop devices);

- Procedures for after-slaughter veterinary sanitary examinations of carcasses and internal organs, the organisation and proper conduct of veterinary sanitary examinations of carcasses and internal organs, as well as their marking at the primary processing shop;

- The proper execution of veterinary documents;

- Observance of veterinary and sanitary requirements in the inedible by-products shop (correct planning and the continuity of technological processes, including the isolation of the raw materials processing shop from other premises used for the production of dry foods; the condition of the technological equipment and horizontal vacuum boilers; control over the thermal processing regimes; the operating condition of the temperature and steam pressure control instruments; the storage of products; the organisation of microbiological, physical and chemical controls over the quality of bone meal; the efficiency of cleaning, washing, and preventive disinfection);

- Control over meat and meat products stored in the cooler (storage, temperature regimes, certification, priority of raw material processing for sausage production);

- Procedures for the acceptance, storage, laboratory examination, disinfection and processing of partially fit meat, including meat which comes from emergency slaughterhouses;

- Observance of veterinary and sanitary requirements, as well as the temperature and humidity conditions at production premises and in coolers. The inspecting officer must also check the availability at the facility of a uniform technological process chain involving the slaughter, processing, cooling, freezing, and storage of meat and meat products, and that the facility operates under the supervision of the veterinary control authority and the veterinary authority of the constituent entity of the Russian Federation;

- The safety control of meat products during their production, including laboratory test control (against every safety criterion);

- Procedures for the execution of veterinary supporting documents for products to be sold;

- Control over the quality of sanitary treatment and disinfection (organisation of cleaning, washing, and the disinfection of surfaces, coolers, technological equipment, tools and vehicles), as well as the results of laboratory tests which assess the efficiency of such measures;

- Control over the observance of personal hygiene rules by staff;

- Control over the organisation and implementation of pest-fighting programmes;

- Control over personal hygiene procedures and their observance by staff;

- Availability of the internal quality and safety control system for meat and meat products.

A report (for Customs Union facilities) or a statement (for the facilities of other countries) should be executed by the officer after the inspection.

II. Standards Set for Sanitary Protection Zones

1. The sanitary protection zones of facilities, including pre-slaughter handling facilities storing up to a three-day supply of raw materials, should be located at least 1,000 meters from residential areas.
2. Abattoirs for small animals and poultry, as well as slaughterhouses with a capacity of 50-500 tonnes per day should be located at least 300 meters from residential areas.

3. Meat processing plants and works should be located at least 300 meters from residential areas.

4. Sausage making plants should be located at least 50 meters from residential areas.

5. Small facilities and low-capacity shops which process up to five tonnes of meat per day should be located at least 50 meters from residential areas.

6. New facilities used for the processing and storage of products of animal origin should not be constructed on environmentally unfavourable territories where hygienic norms are violated.

III. Requirements for Facility Territory

1. The territory of the facility should be surrounded by a solid fence at least two meters high and should be divided into three main areas:
   - Production area with main production premises;
   - Pre-slaughter handling facilities with a quarantine room (a pen), isolation premises, and a sanitary slaughterhouse (sanitary room);
   - Administrative area with auxiliary premises and storehouses for fuel, construction materials, and handling tools.

2. Drive-through disinfection baths (special basins) filled with a disinfection solution should be located near the gateway for the disinfection of the wheels of vehicles entering into and exiting from the territory of the facility.

3. Stationary disinfection and cleaning facilities and areas should be provided for the cleaning and disinfection of vehicles used to deliver livestock to abattoirs.

4. The asphalt and concrete surfaces of roads, loading areas, passages, railway and automobile platforms, open pens, territories surrounding pre-slaughter handling facilities (veterinary and sanitary premises), races, production premises and warehouses should be even and waterproof to enable easy access for cleaning and disinfection.

5. The arrangement of buildings, constructions, and equipment on the territory of the facility should ensure transportation without the need to cross the following passways:
   • The passways of vehicles which transport raw materials and products;
   • Healthy cattle shipped to pre-slaughter handling facilities after veterinary examination should not cross the passways of vehicles delivering animals which are sick or suspected of diseases to quarantine and isolation premises or sanitary slaughterhouses;
   • The passways of vehicles which transport foods should not cross the passways of vehicles which ship cattle, droppings or wastes.

6. The vertical planning of the territory should envision drainage systems for rainwater, meltwater and sewage. Wastewater from pre-slaughter handling facilities, sanitary premises, and fuel-handling facilities should not contaminate the rest of the territory.

7. Trees, bushes, and grass should be planted on open areas, which should also have recreation areas for staff. Trees or bushes with furry seeds should not be planted to avoid the contamination of products and equipment.
8. The territory (including the territory of pre-slaughter handling facilities) and production premises should be maintained in a sanitary condition (cleaning should be provided on a daily basis). During the warm season, before cleaning, the territory and any greenery should be watered, when necessary. In winter, snow and ice should be removed from roadways and walkways.

9. Metal garbage bins with covers or metal containers should be used for the collection of garbage. The garbage bins and containers should be installed over asphalt, the area of which must exceed the bottom area of the bin or container by three times and be surrounded by a fence along three sides. The grounds should be located at least 25 meters from production and auxiliary premises.

10. Waste and garbage should be removed from the containers when 2/3 of the available space has been occupied, but at least once every day. Empty containers must be washed and disinfected.

11. The arrangement of buildings, constructions, and premises on the territory of the facility should ensure cargo transportation without the need to cross the passways of vehicles which carry animals, raw materials, products or wastes.

12. The layout of production shops, floors, sections, auxiliary premises and warehouses should ensure the continuity and consistency of technological processes, and enable the veterinary and sanitary control over the safety of raw materials and products, as well as the quality of cleaning, washing, and disinfection. The technological equipment at production premises should be arranged in such a way so as to avoid cross contamination.

13. The following veterinary and sanitary facilities should be maintained in an operating condition:
   - A disinfection barrier at the entrance to and exit from the territory;
   - A disinfection and cleaning facility or a disinfection and cleaning area for vehicles used to deliver livestock to abattoirs;
   - A room for veterinarians from government agencies undertaking veterinary supervision involving the pre-slaughter examination of cattle;
   - Races for cattle examination;
   - A sanitary slaughterhouse or a sanitary room for the isolated treatment of sick or weak cattle;
   - Quarantine and isolation premises;
   - Areas for the biothermal disinfection of droppings;
   - An isolated cooler for the temporary storage of meat and its by-products (or for meat from emergency-slaughtered animals to be kept until processing);
   - A sterilization room with a Freibank system or another sterilizer.

14. The facility must have a sufficient supply of cleaning and disinfection substances and changes of sanitary and special clothing and boots.

15. The cleaning and disinfection of vehicles used to deliver livestock to abattoirs, as well as the disinfection of production premises, rooms, technological equipment, accessories, containers and floor transporters should be performed in compliance with applicable regulations (veterinary and sanitary rules, instructions).
IV. Requirements for Pre-Slaughter Handling Facilities

1. Quarantine rooms, isolation premises, and sanitary slaughterhouses should be arranged on the territory of pre-slaughter handling facilities on a separate plot of land surrounded by a solid fence two meters high, as well as by hedges. The sanitary slaughterhouse should have a separate entrance for incoming sick animals, as well as a floor area for their acceptance, veterinary examination, and thermometry. The isolation premises must have a separate room for the autopsy of animal bodies and special floor transporters (carts) for their transportation.

2. Facilities with a capacity of up to 20 tonnes of meat per shift can be equipped with a sanitary room which can be located at the abattoir building, isolated from production premises. In the absence of a sanitary slaughterhouse or a sanitary room, sick animals can be slaughtered at the primary processing shop on special days or at the end of the shift after healthy animals have been slaughtered and all carcasses and other products of animal origin have been removed. After processing, the premises, equipment, accessories, containers and transporters should be subjected to veterinary and sanitary treatment and disinfection.

3. Pre-slaughter handling facilities should include railway and automobile platforms with pens with roofs and races for the acceptance, veterinary examination, and thermometry of cattle; buildings (roofs) for the pre-slaughter keeping of animals; an office with premises for the guides and herdsmen of cattle, with a disinfection chamber for the sanitary treatment of their clothing, and some household premises; an area for the temporary storage of droppings and manure; a station for the sanitary treatment of vehicles and accessories used to transport slaughter animals.

4. When the quarantine room and the isolation premises occupy the same block, they should be separated with a lobby equipped with lockers for slaughtering clothes, sinks, containers with disinfectant solutions, and disinfection pans or baths for boots.

5. The floors, walls, feeders, slurry tanks, and other equipment of the quarantine room and the isolation premises should be made of easily disinfectable materials. Disinfection is performed after animals have been removed from the premises. Wooden feeders, drinking tanks and other accessories should not be used in the quarantine room or the isolation premises. The quarantine room and the isolation premises should be cleaned after droppings are made and washed on a daily basis. Before release into the main sewerage system, wastewater from the quarantine room, the isolation premises, the sanitary slaughterhouse, and the station for the sanitary treatment of vehicles should run through the dropping collection device and the dirt collection bowl, and should be disinfected at the disinfection installation (the chlorination plant).

6. The premises and equipment of the sanitary slaughterhouse or the sanitary room should be washed when necessary during the working day; disinfection should be performed at the end of the working day.

7. The capacity of pens for slaughter animals should be adequate for the number of animals delivered in one vehicle or one railway carriage. Road receiving pens should hold animals of one herd of an average size.

8. Depending upon the climatic conditions, cattle should be kept in rooms or open-air pens under a roof. Each pen should have a hard floor, and water tanks with inflow pipes. Some pens should be equipped with feeders and restraint devices. The metal fences, gates and fasteners of pens should not pose a risk of cattle injury. Pens should be equipped with signs indicating the number and type of animals.
9. The rooms and open-air pens should be cleaned after droppings are made on a daily basis. The droppings should be taken to dung yards or other such places as specified by government agencies for veterinary supervision. Special reservoirs with feed openings should be installed for the removal of droppings on every floor of multi-storey pre-slaughter handling facilities. The dropping area under the reservoir should be waterproof. The drains, the reservoir, and the ground are subject to thorough cleaning, washing, and disinfection on a daily basis. The removal and disinfection of droppings from animals infected with contagious diseases should be performed in compliance with applicable regulations.

10. Special reservoirs with waterproof flooring and walls and tight covers should be used for manure collection. Areas around the reservoirs should be covered with concrete. Manure from the reservoirs should be carried to special places by specially equipped vehicles.

11. Vehicles used to transport droppings and manure should be thoroughly cleaned, washed, and disinfected on a daily basis.

12. Biothermal disinfection of droppings should be performed on special grounds, the location of which should be approved by the government veterinary service.

13. After unloading and dropping removal, vehicles used to deliver slaughter animals should be subjected to compulsory washing and disinfection at the disinfection and cleaning facilities or in a specially equipped disinfection and cleaning area.

V. Requirements for Water Supply and Sewerage Systems

1. The facility should have a sufficient hot and cold water supply. The water should meet drinking water quality standards and should be subjected to safety tests at the laboratory at least once every quarter if the water is taken from a municipal water supply, and at least once every month if taken from an independent water source (an artesian well). Water sources (artesian wells) should have a sanitary protection zone and fencing and should be permanently supervised and guarded.

2. The service pipe should be located in an isolated room with a lock and should be maintained in the proper technical and sanitary condition. The service pipe should be equipped with pressure gauges, water sample taps, drains, and backflow valves allowing the water to flow in only one direction.

Water supply and sewerage system plans should be available at the facility and should be produced upon the request of controlling agencies.

3. Processing water can be used for the compressor unit, as well as for the watering of the territory or the washing of vehicles. The process water supply should be separated from the drinking water system. Both systems should have no interconnection, and the pipes should be of different colours. The water distribution points should be marked as “Drinking” and “Technical”.

4. There should be at least two tanks for water used for drinking and household uses and for fire-fighting uses. Water exchange in the tanks should be performed at least every 48 hours. Hatchways, step irons, and stairs should ensure access to the tanks for their inspection and cleaning.

5. Water in the accumulator tanks should be disinfected; the quality and safety control of water in compliance with applicable regulations is compulsory.
6. Disinfection of accumulator tanks and water systems should be performed in the event of accidents or repair work.

7. The production premises should be equipped with flush taps – one flush tap for each 150 m$^2$ of area, but at least one flush tap for the entire premises – as well as wall-mount hose holders.

Sinks with mixer taps for hot and cold water supply, as well as soap (liquid), brushes, containers with disinfectant solutions, single-use towels or electric hand dryers should be installed in the shops.

Sinks should be installed at each shop entrance, as well as any other convenient place at least 18 meters away from workplaces.

Drinking fountains or saturators should be installed at least 75 meters from workplaces; the temperature of the drinking water should be maintained between 8 and 20 °C.

8. The production premises should be provided with drains 10 cm in diameter – one drain for each 150 m$^2$ of floor area.

9. The waste pipelines of processing units and plants should be connected to the sewerage system through interceptors or air breaks.

The removal of industrial wastewater or faeces should be ensured through a sewerage system connected to the main sewerage system or by an independent system of treatment facilities. Sewage disposal should comply with applicable regulations.

The sanitary sewerage system should be separated from the industrial system and should have an independent outlet from the collector.

10. Laboratory tests of wastewater should be performed in accordance with applicable regulations by a specialized industrial laboratory at the facility or by a certified laboratory.

VI. Requirements for Illumination, Ventilation and Heating

1. The illumination of the production premises should comply with applicable regulatory documents (sanitary rules and standards).

2. Lamps with fluorescent bulbs should be equipped with protective screens or special holders which prevent the bulbs from dropping out. Lamps with incandescent bulbs should be enclosed with solid protective glass.

3. Production shops where staff members are always present should have natural illumination. The absence or insufficient level of natural illumination is acceptable for premises in which the staff spends no more than 50% of its working time, or in the event that this is required by the technological conditions.

4. Window openings should not be obstructed by containers or equipment, either from the inside or from the outside. Window glass should not be replaced with non-transparent materials.

5. Shops using open processes should be equipped with mechanical vacuum ventilation for receiving outside air. The outside air intake should be undertaken in the least contaminated area.

6. Premises from which steam or significant heat is discharged should be equipped with a combined extraction and input ventilation system. Captor hoods should be installed where necessary. In addition, each room should have natural ventilation, as long as this is acceptable according to the technological process.
7. Air chutes and air ducts from technological equipment should be cleaned on a regular basis (at least once every year).

8. Heating should be provided for the production and auxiliary premises. The air temperature and relative humidity should comply with applicable regulatory documents.

9. The design of heating devices should enable their easy cleaning and repair.

10. State (national) occupational safety standards should be observed during technological processes and veterinary and sanitary procedures.

VII. Requirements for Production and Auxiliary Premises

1. The production premises of the facility should be provided with technological equipment in compliance with applicable regulatory documents. The layout of such equipment should ensure that the flows of raw materials and products do not cross. Premises used for the production of foods and their by-products should be isolated from one another.

   Disinfection pans should be placed near the entrances to production premises.

2. The wall panels and columns of food manufacturing shops and the sanitary facilities (washing rooms) should be faced with glazed tiles or painted with an oil paint of a light colour to a height of at least two meters.

3. The internal pipelines should be painted different colours (according to their purpose) and should be maintained in a sanitary condition.

4. In places where floor transporters are run, the column corners should be protected with stainless steel plates to a height of one meter; where overhead devices move, the column corners should be protected to a height of two meters. The lower portion of doors should be covered with metal plates to a height of 0.5 meters.

5. The flooring in all premises should have no cracks or holes and should be covered with waterproof materials sloping towards the drains, which should be located away from workplaces and passages.

6. Maintenance repairs of the premises should be performed when necessary, but at least once every six months. The whitewashing and painting of the walls and ceilings of production, administrative, and auxiliary facilities can be performed along with their disinfection.

7. The walls and ceilings of tankhouses and those meat processing shops which may be covered with fat during production processes should be washed with a hot soap solution or another disinfection substance at least two times a day.

8. All production, administrative and auxiliary facilities should be maintained in proper sanitary condition. Contaminations from technological equipment, accessories, raw materials and products should be eliminated when washing the floors of production premises.

   The cleaning of production premises and the sanitary treatment of technological equipment, accessories and floor transporters should be performed within the terms and using the procedures specified in the applicable regulatory documents.

9. The internal surfaces of window frames and window glass should be washed and wiped at least once every 15 days; external surfaces should be cleaned each time they become dirty.
Dust and cobwebs should be thoroughly removed from spaces between window frames. The window frames should be painted at least once per year. In summer, windows which may be opened should be equipped with mosquito nets.

10. All places from which tiles or plaster have fallen off are subject to emergency repairs. Plastered areas should subsequently be painted. In those production shops in which repairs are performed without suspending the production process, the repaired areas should be compulsorily fenced or screened to eliminate the risk of contaminating the operating equipment or products or to avoid the introduction of foreign objects.

11. All inner doors should be washed and wiped dry on a daily basis (special care should be given to places around door handles, as well as to door handles and the lower portions of the doors). The external surfaces of the doors should be washed, repaired and painted when necessary.

12. Drains and washing fluid chutes should be cleaned, washed and disinfected on a daily basis. Transporters, conveyors, escapes and elevators should be cleaned at the end of each shift on a daily basis.

13. The facility should be fully supplied with cleaning utensils marked in accordance with their purpose, as well as with cleaning and disinfection substances (which should be stored in special places, isolated premises or lockers). The cleaning utensils for toilets should be kept separately.

14. A cleaning day should be organized at the facility on a monthly basis.

**VIII. Requirements for Equipment and Accessories**

1. Equipment, accessories, and containers should be made of materials suitable for use in food-contact applications, and which are chemically stable and not subject to corrosion.

2. The equipment of the production premises should be arranged in such a way so as not to hinder the maintenance of their due sanitary condition, excluding the technological counterflows. The equipment design should ensure efficient sanitary treatment.

3. Tubs, baths, metal utensils, chutes and ducts should have an easily cleanable, smooth surface, without any cracks, gaps, prominent screws, rivets or any other elements which might impede sanitary treatment.

4. Table surfaces should be smooth, without cracks or any other defects. Trays used to receive raw materials delivered through chutes and hatchways should have side walls to prevent raw materials from falling onto the floor. Special, easily sanitisable boards should be used for meat deboning and trimming. After each shift, these should be thoroughly cleaned, washed, and disinfected or steamed.

5. All food production premises should be equipped with sterilizers for small accessories (knives, sharpeners, etc.). Washing machines or washing rooms connected to baths with both a cold and hot water supply should be used for the cleaning and disinfection of larger accessories.

6. The sanitary treatment of technological equipment and accessories should form an integral part of the technological process. A sanitation schedule should be provided for each shop.
IX. Requirements for the Acceptance and Antemortem Inspection of Cattle

1. All animals presented for slaughter should be healthy and should be subjected to antemortem examination (inspection).

2. The slaughter of animals which are sick, suspected of being infected with contagious diseases, or threatened with death (heavy injuries, fractures, burns, etc.) is authorized only in those instances specified by the veterinary laws of the Russian Federation and the Republic of Belarus (veterinary rules, the rules of veterinary and sanitary expertise, instructions) and technical regulations.

3. Slaughter animals should be delivered from farms (areas) exhibiting a favourable contagious disease situation.

4. Each herd of slaughter animals should be accompanied by an official veterinary supporting document issued by the government veterinary service confirming that the animals have been subject to veterinary inspection, are healthy, and that the farm (area, territory) is safe from contagious diseases, and containing information about scheduled diagnostic studies, the most recent use of antibiotics, hormonal agents, and doping medications.

5. Slaughter animals should be delivered by special vehicles.

6. An antemortem examination (inspection) should be performed in compliance with regulatory documents in the veterinary sphere. The top management of the facility should create all of the necessary conditions for veterinarians performing the inspection.

7. On the day when the herd of animals arrives at the facility, during acceptance the veterinarians should check whether the official veterinary supporting document has been issued correctly and ensure that the number of animals as indicated in the document equals their actual number. The veterinarians should instruct the handlers on the order for cattle unloading into special pens. They should perform the antemortem inspection and ensure subsequent control over the condition of the animals. Animals should also be inspected immediately before slaughtering if they have been kept in the pen for more than 24 hours.

8. Any herd of cattle in which animals are found to be contaminated with contagious diseases or in a state of agony, or in which casualty animals or animal bodies have been found, or in which the actual number of animals does not equal the number indicated in the official veterinary supporting document, should be immediately sent into quarantine to ascertain the causes of cattle death or disease.

9. It is forbidden to keep domestically bred cattle for more than 48 hours or imported cattle for more than 24 hours at a pre-slaughter handling facility. Intact bulls should be kept in separate pens, together with animals from the same herd.

10. It is forbidden to return sick animals, animals suspected of being infected with contagious diseases, or injured animals, as well as animal bodies found during acceptance.

11. The driving or transportation of slaughter animals from the territory of the abattoir is forbidden.

12. Laboratory tests of samples from sick animals, as well as those taken from the bodies of animals which died either on their way to or at the abattoir, should be performed exclusively in a state veterinary laboratory.

13. Veterinarians should immediately report all cases of contagious diseases diagnosed during the acceptance of cattle to the facility, the chief state veterinary inspector of the area, and the relevant farm (the supplier or the owner of animals).
14. When slaughtering cattle infected or suspected of being infected with anthroponosis, the staff should observe the veterinary and sanitary procedures developed in accordance with veterinary and sanitary rules and instructions. The general manager of the facility shall be held liable for the observance of veterinary and sanitary requirements.

15. Only healthy animals, including horses which have tested negative for glanders, should be presented for slaughter after the antemortem inspection.

16. Animals sent to the killing room of the abattoir should be slaughtered immediately.

X. Requirements for Technological Processes and the Organization of Veterinary and Sanitary Examinations

1. Animals sent for slaughter should be removed from other livestock to the pre-slaughter pen of the primary processing shop. Consistency, priority, and periodicity should be observed to ensure the smooth operation of the processing lines for bovine animals, swine, small cattle, and other animals (horses, reindeer, etc.). Small cattle should be moved to the pre-slaughter pen one to two hours before slaughtering.

Portable electric and electronic prods should be used to avoid animal injuries or skin damage when moving animals to pre-slaughter pens or from pre-slaughter pens for stunning.

2. At the pre-slaughter pen, the legs of cattle should be washed with water at a temperature of 20-25 °C or with tap water from sprayers or hoses. Swine should be washed for 10 minutes with water at a temperature of 20-25 °C from sprayers (the sprayer nozzles should be arranged in such a way so as to ensure that the swine are thoroughly washed) or from hoses.

3. Stunning should not lead to the immediate death of the animal. Dead animals should not proceed to further technological processing. Stunning should be performed in such a way so as not to stop the cardiac action of the animal, which should remain stunned during the entire period of the line’s movement in the bleeding process. The correctness and efficacy of stunning should be periodically controlled (one to two times per shift).

4. A ligature (forceps) should be placed on the alimentary canal of bovine animals to prevent lung aspiration from the contents of the forestomach (manure) and blood.

5. Bleeding should be performed within 1.5 to three minutes after stunning. The minimum period of bleeding is six to eight minutes.

6. Blood for medical and food purposes should be taken from animals that are not infected with contagious diseases. The aseptic bleeding technique should be used. The sterility of the equipment, accessories, and containers should be ensured during blood recovery. Blood collected into numbered, sterile containers should be sent to the defibrination room. The defibrinated blood should be kept in special premises of the killing room for 30-40 minutes, until the results of the veterinary and sanitary examination of the body from which the blood has been taken are obtained.

7. The same number should be used at the killing room for numbering animal carcasses, heads, internal organs, intestines and skins.

8. Any mechanical or surface impurities, along with any microbial contamination of the meat, should be eliminated during skinning.

9. Evisceration (gutting) should be performed within 30 minutes after bleeding. Damages to the gastrointestinal tract, the presence of impurities, or the bacterial contamination of carcasses or equipment should not be allowed.
10. Posts for veterinary and sanitary examinations should be provided during the installation of the technological equipment (processing lines) at abattoirs for use by veterinarians (veterinary and sanitary experts) of the government agency for veterinary supervision that is responsible for the postmortem and veterinary and sanitary examinations (inspection) of carcasses and other products.

11. Posts for veterinary and sanitary examinations should be provided with additional lamps, a hot and cold water supply, containers with disinfection solution, sterilizers for instruments, and conveyor stopping devices, as well as containers for confiscated products and other equipment required for the registration of diseases.

12. A side rail or a separate room for the further examination of the carcasses of animals suspected of being infected with contagious diseases, as well as a cooler for the temporary storage of meat until the results of laboratory tests are obtained, should be equipped for the final stage of dressing in a butchering room with continuous processing lines. The cooler should be lockable and should only be used by veterinarians (state veterinary inspectors).

13. It is not allowed (forbidden) to process animal carcasses on continuous processing lines if the posts of veterinary and sanitary expertise are not equipped or if there is a lack of veterinarians (state veterinary inspectors).

14. At abattoirs which do not run continuous processing lines, the inspection and postmortem examination of carcasses and other products is performed on special rails. Other products (heads and internal organs) are examined on tables or installations (stainless steel frames with hooks) where they are hung.

15. The heads and internal organs of animals should be prepared for postmortem and veterinary and sanitary examinations by specially qualified workers. The order of preparation is as follows:

15.1. The heads of bovine animals should be separated from their bodies, hung on the hooks of a moving line or on special installations by the mandibular angle or the cricoid and first tracheal rings, or affixed to a table. The tongue should be cut on the tip and the sides in such a way so as to avoid any damage, and to ensure that it easily comes out of the intermaxillary space and that all of the lymph nodes subject to examination are retained.

15.2. The heads of horses are separated from their bodies. After the tongue is removed, the nasal septum should be sawn out (cut out) to be tested for glanders.

15.3. The heads of swine are cut and left unseparated from their bodies until the end of the postmortem examination. After skinning or singeing, the heads are cut at the back and on the left cheek. The Atlanto-occipital joint should be separated, and the tongue and throat should be cut out from the intermaxillary space.

15.4. The heads of calves, sheep and goats should be separated at the Atlanto-occipital joint and left near the carcass until the end of the examination of all of the products.

15.5. The heart, the lungs with the trachea and the alimentary canal, and the liver extracted from the carcass should stay in natural connection. They should be hung on a special installation with hooks or placed on the line or on a table. The spleen of bovine animals, sheep and goats can either stay in natural connection with the first stomach or separated from it, and presented for examination together with the haslet. The spleen of swine and horses should be presented in natural connection with the gastrointestinal tract. The kidneys are examined in situ.

15.6. The gastrointestinal tract, the genitalia and the udder are placed for examination on the line or on a special table made of stainless steel.
15.7. Carcasses and half carcasses should be examined while hanging by the Achille’s tendons.

15.8. Skins are examined after separation from the carcass.

16. A special room for tests for trichinosis, equipped with trichinoscopes, projectors, apparatuses for the detection of Trichinella larvae (AVT), compressoriums, scissors, and other equipment and tools, should be located at the killing room or close to it. All swine carcasses (100%) should be examined for trichinosis. Carcasses and other products which have tested negative are sent for sale or for dressing.

17. All products, excluding the gastrointestinal tract, the skins of all types of animals, the legs and ears of bovine animals, and the heads and legs of sheep and goats, should not be removed from the killing room until the veterinary and sanitary examination of carcasses and organs (including the trichinoscopy of swine carcasses) has been completed.

18. Confiscated products should be properly removed from the killing room after special permission has been received from the veterinarian of the government agency for veterinary supervision. Such products should be sent to the inedible by-products shop or placed into special containers marked as “Waste” or “Liquidation”.

19. After the veterinary and sanitary examination and evaluation by the veterinarian of the government agency for veterinary supervision, meat and other products can be used without limitation; with limitations (the manufacturing of some kinds of meat products at a meat processing plant); after decontamination; or recycled or liquidated.

20. The final stage of the veterinary and sanitary examination is the veterinary and sanitary evaluation and the veterinary marking of the meat, which should be performed at a special section of the line where the veterinarian of the government agency for veterinary supervision should apply a veterinary mark or stamp to the half carcasses.

21. The results of the veterinary and sanitary examination of the meat and other products, including tests for trichinosis, should be duly recorded in special logs (the inspecting officer should check whether the logs are kept correctly).

22. Carcasses or half carcasses should be sent for cleaning, trimming, grade marking and weighing, or to the cooler, only after the veterinary and sanitary examination, evaluation, and veterinary marking have been performed.

23. Each half carcass should be subjected to a thorough examination for abscesses, bruises and impurities, as well as to sanitary treatment (the instruction and control of the veterinarian are required in the event of abscesses).

24. Fat trimmings obtained during the processing of half carcasses should be sent to the tankhouse. Meat trimmings should be sent to the by-product shop. Residues should be sent to the inedible by-products shop (the inedible offal shop).

25. Grading marks and stamps should be applied to carcasses. After such marking, the carcasses are sent for weighing.

27. The weight of carcasses is registered in the weight notes. The meat grade, age group, and other commercial characteristics are recorded in accordance with the grading marks.

XI. Requirements for Meat Cutting and Meat Product Manufacturing

1. Raw materials intended for industrial processing should be accompanied with official veterinary supporting documents issued by the veterinarians of the agencies and organisations
which constitute the system of government veterinary services. Control over the processing of raw materials should be exercised by state veterinarians.

2. Veterinary and sanitary and technological requirements, the conditions of industrial sanitation, and personal hygiene rules should be observed during meat cutting procedures. The management of the facility should ensure the consistency of technological processes, the separation of low- and high-risk operations to reduce to a minimum the threat of cross contamination of raw materials and meat products, and the further sanitary treatment of raw materials used in sausage-making (thawing, trimming, and the removal of seals or packaging).

3. The cutting of carcasses (half carcasses) should be performed in a separate room (separated from the killing room by a solid wall) at an air temperature of less than 12 °C. Special equipment assembled as a continuous processing line should be used for meat cutting operations. Carcasses, half carcasses, and quarter carcasses intended for cutting should be cooled, surface-frozen, or frozen.

4. Temperature and humidity conditions compliant with the applicable regulatory documents should be observed at the production premises of meat processing plants during the manufacturing and storage of frozen blocks, semi-finished products, and precooked sausages. Foreign objects should be prevented from entering raw materials and products.

   Regular laboratory control over raw materials, auxiliary materials, and finished products should be established at the facility. The procedures and periodicity of laboratory tests should comply with the applicable regulatory documents.

   The processing of meat that is partially fit, including meat supplied by emergency slaughterhouses, and which has been sent for decontamination, should be performed under the control of the government veterinary service.

   It is forbidden to sell or use for food any raw materials (carcasses, half carcasses, quarter carcasses and other products, as well as frozen blocks) or meat products which have not been subjected to a veterinary and sanitary examination, that lack veterinary or grading seals, or which are not accompanied with official veterinary supporting documents (veterinary licenses, veterinary certificates, veterinary statements and reports) or quality and safety certificates.

   The cleaning, washing and disinfection of the surfaces of production premises, coolers, technological equipment, tools and vehicles, as well as laboratory tests to assess the efficiency of the veterinary and sanitary procedures, should be performed at meat processing plants on a regular basis.

XII. Requirements for Endocrine and Enzymatic and Special Raw Materials for Pharmaceutical Purposes

   1. Endocrine and enzymatic and special raw materials intended for pharmaceutical purposes should originate from healthy animals and should be conserved, collected, and treated after postmortem examination.

   2. Such endocrine and enzymatic and special raw materials include:

      - Endocrine and enzymatic raw materials, including the pituitary gland, the hypothalamus, other glands (parathyroid, thyroid, the pancreas, and the thymus glands of calves and young cattle), the corpora lutea of the ovaries, the adrenal glands, the placenta, the testicles of mature male animals, the mucous coat of swine stomachs and the fourth stomachs of bovine animals, sheep and goats; the fourth stomachs of lambs, suckling goat kids and calves; the
fourth stomachs of sheep and goats; swine stomachs; the intestinal mucosa of bovine animals and swine, the epiphysis, and the ovaries of mature female animals.

3. The key veterinary and sanitary requirements for the collection of endocrine and enzymatic and special raw materials are as follows:
   - Raw materials should be collected immediately after slaughtering;
   - Raw materials intended for cleaning should be accumulated for no longer than 15 minutes after collection;
   - Raw materials should be cleaned promptly, in order that their conservation would start no later than within one hour following collection, on average (for the pancreas, conservation should begin no later than within 0.5 hours);
   - The storage and transportation of raw materials should comply strictly with regulated temperature conditions.

4. Workplaces for the collectors of endocrine and enzymatic materials and special raw materials should be provided at the primary processing shop, upstream from the production line. The endocrine room used for the treatment and conservation of raw materials should be located close to the primary processing shop.

5. The requirements for the endocrine room are as follows:
   - The area of the endocrine room should be adequate for the volume of raw materials subject to processing and the number of staff;
   - The endocrine room should be provided with artificial illumination (according to sanitary standards), preventing direct sunlight from contacting the raw materials. The temperature in the room should not exceed 18 °C;
   - The meat cutting tables should be made from stainless steel or any other material capable of withstanding aggressive environments and approved for use in food processing by the authorized governmental agencies;
   - The walls of the room should be faced with tiles, covered with plastic panels, or painted with an oil-based paint;
   - The room should have hot and cold water supplies, flushwater drains, an electrical power supply, a ventilation system, and a device for washing tools and equipment;
   - The room should be equipped with fast-freeze cabinets, cabinets for tools and chemical reagents, and a laboratory sterilizer for tools.

6. The endocrine and enzymatic materials and special raw materials are used for manufacturing medicinal preparations. Therefore, the following rules should be observed:
   - Personal hygiene rules, as well as those veterinary and sanitary standards ensuring the safety of raw materials and the required sanitary condition of the room, utensils, and tools, should be observed during collection, treatment, and conservation;
   - All types of raw materials should originate from animals which have tested negative for contagious diseases during the veterinary and sanitary examination;
   - It is forbidden to collect raw materials from animals suffering from leukaemia or malignant growths;
- It is forbidden to use raw materials exhibiting pathological changes (abscesses, haemorrhages, calcinosis), as well as signs of putrefaction or foreign smells;

- The collection of endocrine and enzymatic materials and special raw materials should always be performed only after a veterinary and sanitary examination, and upon the approval of the authorized veterinarian;

- The production premises, equipment, containers and tools used for the collection and treatment of raw materials should be washed and disinfected.

XIII. Requirements for Some Technological Processes

1. The technological processes at the facility should be organized in such a way so as to ensure that the flows of raw materials and products do not cross or come into contact with each other, as well as to enable the manufacturing of high-quality meat products.

2. The raw and auxiliary materials received for processing should be subjected to an incoming inspection.

3. Packages should be removed from the raw and auxiliary materials received for processing at shops. The raw and auxiliary materials should be stored and prepared for processing under conditions which would prevent their contamination. The packages should be immediately removed from the production premises.

4. Rails should prevent carcasses from contacting the floor, walls, and technological equipment.

Chutes (metal, concrete, tiled) sloping towards the drains should be provided for the bleeding, cleaning and washing operations.

5. Chutes, carts, air-blow tanks, and other transport units which transfer raw materials (raw fat, intestines, alimentary blood, by-products, etc.) should be used separately for each type of raw material and should enable easy access for sanitary treatment.

6. Devices equipped with hoses for the washing and disinfection of tubular knives, flasks, and other equipment and tools used for the collection and primary processing of blood should be provided for the alimentary blood collection operation.

7. Inedible wastes should be collected into special containers or air-blow tanks that have been painted a colour that is different from the colour of other equipment, and should be appropriately marked.

Separate chutes or special mobile containers with covers painted a distinctive colour (black stripes against a white background, etc.) should be provided for the collection of confiscated products (carcasses and internal organs rejected during the veterinary and sanitary examination) and should be marked as “Confiscated Products – Industrial Processing, Waste or Liquidation”.

8. The emptying of the stomachs and the forestomachs of slaughter animals and fleshing should be performed in special rooms or areas of the primary processing shop, separated by a three-meter-high wall and located at least three meters from the carcass movement areas.

9. The workplaces of veterinarians (state veterinary inspectors) responsible for the veterinary and sanitary examination of meat and other products should be equipped with an emergency stop button to stop the conveyor when special, dangerous diseases are suspected or detected.
10. Carcasses, by-products and other products which have undergone a veterinary and sanitary examination, veterinary marking, and technological processing in compliance with applicable regulatory documents should be sent to the cooler.

11. The equipment and workplaces, as well as the drains of the intestine processing shop, should be arranged in such a way so as to eliminate the contamination of the premises by the bowel contents or flushwater.

The bowel contents should be removed through hatchways connected to the sewerage system.

The workplaces of the intestine processing shop should be provided with hot and cold water supplies. Compressed air should be supplied for intestine sorting (blowing).

The workplaces should also be provided with bar screens placed under the operators’ feet to avoid sliding.

12. The fragmentation and filing of bones used for rendering fat should be performed in a separate room of the tankhouse.

13. Foods made from by-products and blood should be manufactured in an isolated room. The thawing, sorting and washing of by-products used for making sausages should be performed in the defrosting room of the cooler or, in the absence thereof, in a separate room in the sausage-making shop.

14. The decontamination of partially fit meat and by-products by means of boiling on the premises of the sausage-making, culinary, or canning shops is forbidden.

A room equipped with electric and gas ovens should be used for the production of canned meat loaf. The possibility of any contact of raw, partially fit meat with finished products should be eliminated from the room.

15. It is forbidden to feed fuel (sawdust, firewood) to the cooking room through the production premises.

Packages for products manufactured at the sausage-making, culinary and canning shops should be delivered through the corridor or the dispatch room exiting the production premises. It is forbidden to store such containers in food manufacturing shops.

16. Dry raw materials (flour, dry milk, starch, sodium caseinate, salt, spices, etc.) should be stored away from production premises. Salt should be passed through a magnetic detector.

Separate premises equipped with mechanical ventilation should be used for spice packing.

17. If the abattoir (meat processing plant) has no sanitary slaughterhouse, the brine salination shop should have an area allocated for the disinfection and salination of the skins of sick animals slaughtered in the general killing room.

18. The manufacturing of fodder and inedible by-products should be isolated from food manufacturing shops. A separate reception room for raw materials, with independent amenity areas similar to decontamination centres with exits to the reception room, should be allocated for the fodder and inedible by-products shops. Staff involved in the manufacturing operations in the reception room of the dry animal feed shop should not perform any other operations within the shop. The reception room should have a washing area for the washing and disinfection of the containers, accessories and vehicles used to deliver inedible by-products and veterinary confiscates. Accessories and vehicles should be returned to other shops only after a thorough
wash and disinfection. The delivery of fodder products and inedible by-products should be performed through an independent dispatch room separated from the food product dispatch room. It is forbidden to store feed flour in bulk on the floor.

At plants which have no dry animal feed shops, preserved, inedible protein materials should be stored in closed containers until they are sent for processing to other plants (dry animal feed plants).

XIV. Requirements for Warehousing Facilities

1. Plants should have warehousing facilities sufficient to accommodate the raw materials and auxiliary packing materials used for food manufacturing. Auxiliary materials should not be admitted to storage together with edible raw materials, and should be stored at separate warehousing facilities.

2. Racks and shelves manufactured from easy-to-clean materials should be used to store edible raw materials and auxiliary materials. It is forbidden to store these materials on the floor.

3. The warehousing facilities should be maintained in a sanitary condition and should be cleaned on a regular basis. The floors, walls, ceilings and racks should be washed and disinfected when necessary. Disinfection should be performed at the warehousing facilities on a regular basis.

4. Salt supplied for industrial purposes should be stored in covered warehouses with waterproof flooring.

5. Fuel, containers, and construction materials should be kept at warehouses under sheds or on specially covered ground.

6. Bones should be stored on waterproof flooring in sheds surrounded by welded wire screens on all sides.

XV. Requirements for Coolers

1. The technological operations performed in coolers should comply with applicable regulatory documents (veterinary and sanitary rules and regulations; standards and technological guidelines).

2. Chilled and refrigerated meat (carcasses, half carcasses, quarter carcasses) should be stored in a hanging position.

3. All products, both packed and without packages, should be stacked on racks or pallets at least 8-10 cm above the floor. Such stacks should be located at least 30 cm from the walls and cooling elements. The stacks should be separated by passages.

4. Partially fit meat should be stored in a separate chamber or in an isolated area of a general chamber separated by a wall. The meat should be accompanied with an information passport.

5. It is forbidden to use accessories and pallets which have not been cleaned or disinfected after use.

6. Frost deposits should be removed from cooling elements by thawing, which should be performed after the chambers have been emptied. The mechanical removal of frost deposits is admissible provided that the stored products have been covered with clean canvas or sail cloths. Snow should be removed from the chambers immediately after cleaning.
7. The contaminated floors and doors of chambers registering an above-zero temperature, as well as corridors and landings, should be washed with a hot alkaline soap solution on a regular basis.

8. The industrial laboratory should perform regular microbiological control tests to duly detect any mould formations in the cooling chambers.

9. The cooling chambers should be repaired, washed, and disinfected after the products’ removal, when the cooler is prepared for the mass arrival of products, when mould formations have been detected on the walls, ceilings, or equipment of the chamber, or when the stored products become mouldy. The chambers should be aired after such sanitary treatment.

A washing room with waterproof flooring, a direct steam supply, hot and cold water supplies, and sewerage drains should be provided in the cooler for the washing and disinfection of accessories, vehicles and containers.

XVI. Requirements for Cold Treatment and Storage of Meat and Meat Products

1. Special, closed cooling chambers (sanitary chambers) for the temporary storage of meat and meat products retained by veterinarians of the government veterinary service should be allocated and equipped in the plant’s cooler.

2. The cooling chambers should be equipped with thermometers and automatic control devices. The cooling chambers and their equipment should be maintained in a proper technical and sanitary condition to ensure the required cold treatment and storage of meat.

3. The air in the cooling chambers should be without foreign smells. The meat stored in the cooling chamber should be kept separately from other meat products, fish, etc.

4. When chilling meat:
   - Carcasses and half carcasses should be chilled while hanging on the rails of chambers or tunnels equipped with artificial refrigeration and air circulation systems;
   - The air temperature of cooling chambers operating cyclically should be 3-5 °C lower than the temperature indicated in the cooler’s specifications. An increase of no more than 5 °C above the temperature indicated in the cooler’s specifications is acceptable after the loading of fresh meat. At the end of the chilling process, the temperature should equal the temperature indicated in the cooler’s specifications. The average chilling temperature should be close to the temperature indicated in the cooler’s specifications. The deviations should not exceed ±1 °C;
   - If the cooling chambers are running continuously, the air temperature during meat chilling should be close to the temperature indicated in the cooler’s specifications. The deviations should not exceed ±1 °C;
   - Fresh meat should be hung on the rails of the cooling chambers, either with the help of conveyors or manually, whether cyclically or continuously;
   - Carcasses and half carcasses should be hung on non-conveyor rails at a distance of 30-50 mm.

It is forbidden to keep chilled meat in cooling chambers running in the chilling mode.
The temperature of meat subjected to accelerated or quick chilling (in the thigh muscle) should equal to 0-4 °C:

<table>
<thead>
<tr>
<th>Chilling process</th>
<th>Specification temperature, °C</th>
<th>Minimum air velocity, m·s</th>
<th>Meat temperature, °C</th>
<th>Maximum chilling period, hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated (all types of meat) Quick</td>
<td>0</td>
<td>0.5</td>
<td>35</td>
<td>0-4</td>
</tr>
<tr>
<td>- beef</td>
<td>-3</td>
<td>0.8</td>
<td>35</td>
<td>0-4</td>
</tr>
<tr>
<td>- pork</td>
<td>-3</td>
<td>0.8</td>
<td>35</td>
<td>0-4</td>
</tr>
<tr>
<td>- lamb</td>
<td>-3</td>
<td>0.8</td>
<td>35</td>
<td>0-4</td>
</tr>
</tbody>
</table>

Note: The indicated air velocity has been measured at the level of the thighs of half carcasses.

5. When frostig meat:

Fresh meat should be frosted to a temperature of -3 to -5 °C at a depth of 1 cm from the surface, and -2 to 0 °C in the thigh muscle at a depth of 6 cm, respectively. The thickness of the frosted layer should not exceed 4 cm.

The temperature of swine half carcasses is measured on the inside.

<table>
<thead>
<tr>
<th>Specification air temperature in the freezing chamber, °C</th>
<th>Maximum frosting period for fresh meat, hours (the air velocity has been measured at the level of the thighs of half carcasses)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 m·s</td>
</tr>
<tr>
<td></td>
<td>beef</td>
</tr>
<tr>
<td>-23</td>
<td>16-18</td>
</tr>
<tr>
<td>-25</td>
<td>13-15</td>
</tr>
<tr>
<td>-28</td>
<td>12-14</td>
</tr>
<tr>
<td>-30</td>
<td>10-12</td>
</tr>
</tbody>
</table>

Frosted carcasses and half carcasses should be elastic and should not bend when lifted.

After frosting, the meat should be sent to the freezer room of the meat processing plant or loaded for frozen food transport. Frosted meat should be transported and stored in the cargo room at an air temperature of -2 °C, which may deviate by ±1 °C.

6. When freezing meat:

Carcasses and half carcasses should be frozen while hanging on the rails of chambers or tunnels using a single-phase process, or in chambers using a double-phase process. The faster the meat is frozen, the higher its quality and storage property, and the less it will shrink.

The temperature in the freezing chambers should be even throughout the stacking space. Air movement should be most intensive in the area where the thighs of the carcasses and half carcasses are located.

Meat freezing is considered to be completed when the temperature of the meat in the thigh muscle reaches -8 °C.
Note: A volume-average temperature of meat freezing which equals -18 °C should be taken to calculate the thermal load when designing refrigerators.

The air temperature in cyclic and continuous freezing chambers at different stages of freezing are as follows:

<table>
<thead>
<tr>
<th>Stages of measuring the temperature in the freezing chamber</th>
<th>Air temperature in the freezing chamber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclic operation</td>
<td>Continuous operation</td>
</tr>
<tr>
<td>Before loading meat</td>
<td>At least 3 °C lower than the specification temperature</td>
</tr>
<tr>
<td>After loading</td>
<td>At least 2 °C lower than the specification temperature</td>
</tr>
<tr>
<td>Not more than 12 °C higher than the specification temperature</td>
<td>-</td>
</tr>
<tr>
<td>At the end of freezing or before unloading</td>
<td>At least 3 °C lower than the specification temperature</td>
</tr>
<tr>
<td>The average freezing temperature</td>
<td>The specification temperature ±2 °C</td>
</tr>
<tr>
<td>- The specification temperature ±1 °C</td>
<td></td>
</tr>
</tbody>
</table>

The cooling elements of freezing chambers should run continuously at their ultimate capacity, both while freezing and when the chambers are being loaded, so as to start the freezing of the meat immediately after it has been received.

The freezing of meat starts with its loading and ends when unloading begins.

7. When storing meat carcasses, half carcasses, quarter carcasses and cuts:
   - During storage, meat should be grouped according to types (beef, pork, lamb), condition category, use (sale or industrial processing), and thermal condition (chilled, frosted, frozen, defrosted);
   - The air temperature in chambers during storage should be registered remotely (by automatic control devices) or by using thermometers. The air temperature should be measured twice a day. Temperature and relative humidity parameters should be registered in a special log;
   - The quality of meat stored in the chambers should be controlled.
   Meat rejected as unfit for further storage according to the conclusion of the government agency for veterinary supervision should be immediately sold or sent for industrial processing.

8. When storing chilled meat:
   - Chilled meat with a thigh muscle temperature of 0 to 4 °C should be stored hanging in cooling chambers, at an air velocity not exceeding 0.2 m·s;
   - Carcasses and half carcasses should be hung on the rails of storage chambers at a clearance of 20-30 mm. Beef quarters and cuts and pork halves can also be stored hanging in multipurpose containers arranged in 2-3 tiers, depending upon the height of the chamber.

9. When storing frosted meat:
   - Frosted meat is intended for industrial processing. It should be stored in refrigerator chambers either hanging (on rails or in multipurpose containers) or in multi-tier cage systems as follows: beef halves in five to six tiers, and pork and lamb halves in seven to eight tiers, with a total height of up to 1.7 m without rail inserts. The cages are placed on flat pallets.
The recommended air parameters of the storage chamber and the maximum (from the time of slaughter) storage life of chilled and frosted meat is indicated below:

<table>
<thead>
<tr>
<th>Type of meat</th>
<th>Air parameters of the storage chamber</th>
<th>Maximum admissible storage life (including transportation period), days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Specification temperature, °С</td>
<td>Minimum relative humidity, %</td>
</tr>
<tr>
<td>1. Chilled (by hanging)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beef halves and quarters</td>
<td>-1</td>
<td>85</td>
</tr>
<tr>
<td>Veal halves</td>
<td>0</td>
<td>85</td>
</tr>
<tr>
<td>Pork halves</td>
<td>-1</td>
<td>85</td>
</tr>
<tr>
<td>Lamb carcasses</td>
<td>-1</td>
<td>85</td>
</tr>
<tr>
<td>2. Frosted, all types (in tiers or by hanging)</td>
<td>from -2 to -3</td>
<td>90</td>
</tr>
</tbody>
</table>

Note: The storage life of frosted meat should not exceed 20 days, including storage after frosting at the meat processing plant (up to 3 days) and transportation in a railway carriage or a refrigerator truck (up to 7 days in summer and 10 days in winter).

The fluctuations in air temperature during storage should not exceed ±1 °C.

10. When storing frozen meat:
- Meat frozen to a temperature of -8 °C in the thigh muscle should be stored in refrigerator chambers in compact tiers. Beef quarters and cuts, as well as pork halves, should be stored in multipurpose containers arranged in two to three tiers, depending upon the height of the chamber;
- Frozen meat should be stored in chambers at a temperature not exceeding -18 °C and 95-98% relative humidity (the air circulation should be natural). In some cases, when old-style refrigerators technically unable to maintain a temperature of -18 °C are used, meat can be stored at a temperature of (or below) -12 °C.

The maximum storage life of different types of unpacked frozen meat, depending upon the air temperature in the chamber, is indicated below:

<table>
<thead>
<tr>
<th>Type of meat</th>
<th>Specification temperature, °C</th>
<th>Maximum storage life, months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef halves and quarters</td>
<td>-8, -18, -20, -25</td>
<td>8, 12, 14, 18</td>
</tr>
<tr>
<td>Lamb carcasses</td>
<td>-8, -18, -20, -25</td>
<td>6, 10, 11, 12</td>
</tr>
<tr>
<td>Pork halves</td>
<td>-8, -18, -20, -25</td>
<td>3, 6, 7, 12</td>
</tr>
</tbody>
</table>
Meat of different types and condition should not be put in one and the same tier or container.

When meat is stored in tiers, the lower layer of quarters or halves should be put on bar screens. The height of the tier depends upon the height of the chamber, the presence of devices to ensure its strength, and the mechanical means of material handling which are employed.

A special label indicating the type of meat and condition, as well as the date of freezing (or placing in a tier), should be attached to each tier on the side of the cargo passage.

The loading capacity per 1 m³ of the stacking space for unpacked frozen meat conventionally equals 0.35 tonnes.

The load density per 1 m³ of the stacking space for different types of meat equals (in tonnes):
- frozen beef (quarters) – 0.40;
- frozen beef (halves) – 0.30;
- lamb carcasses – 0.28;
- lamb halves – 0.45.

The air temperature in storage chambers during loading or unloading may increase by no more than 4 °C; the fluctuations in air temperature during storage should not exceed ±2 °C.

11. When chilling, freezing, and storing by-products:
- The treated by-products, sorted by their type and by the type of cattle, should be sent to the cooler after washing and water drainage;
- Depending upon their subsequent use, by-products should be subjected to the following types of cold treatment:
  - Chilling to between 0 and 4 °C;
  - Freezing to -8 °C after chilling;
  - Freezing to -8 °C immediately after treatment, washing, and water drainage.

12. By-product chilling requirements:
- By-products sent to the cooler should be put in a cooling chamber or a refrigerated tunnel;
- The cooling chambers should be equipped with rails, racks, hooks, stands, conveyor tunnels, and rack stands on wheels;
- By-products should be chilled using forced air circulation (in tunnels, at a temperature of -1 °C, and in chambers from 0 to -1 °C);
- Fleshy and slimy by-products sent to the cooling chamber should be put on trays in layers, at a height not exceeding 10 cm, according to their name and type. Tongues should be put in one line without contacting each other; first and third stomachs should be hung on hooks. Hairy and bony by-products should be chilled on racks, without using trays;
- The chilling period for all types of by-products treated in chambers should not exceed 24 hours, and in tunnels no more than four hours. By-products are considered to be chilled when their depth temperature reaches -4 °C to 0 °C.

13. By-product freezing requirements:
- By-products should be frozen in freezing chambers immediately after their treatment, washing and water drainage, or after chilling in layers, at a height not exceeding
10 cm, on trays installed on racks or stands, or on stands without trays, as well as in tunnels and fast-freeze machines;
- Tongues should be frozen in blocks or individually. When frozen individually, they should be put on trays in one line without contacting each other;
- Hairy by-products should be frozen in bulk on stands and in tunnels;
- First and third stomachs can also be frozen in rolls, with the serous membrane outside.
- Freezing is considered to be completed when the temperature in the middle of the layer reaches -8 °C.

The freezing period for chilled by-products, as well as for by-products immediately after treatment, washing and water drainage, should not exceed 24 hours when frozen in freezing chambers with a specification temperature at or below 18 °C, or 8-10 hours when frozen in fast-freeze machines and tunnels with an air temperature of -30 °C and intensive air movement.

14. Requirements for packing, marking and storage of chilled and frozen by-products:
- The packing and marking of by-products should be performed in compliance with the applicable specifications for meat by-products, as well as the operational procedures for their treatment;
- Chilled by-products should be stored in cooling chambers at a relative humidity of at least 80%, and an air temperature of 0 to 1 °C, for not more than two days, including while at the manufacturing plant for not more than 16 hours; at an air temperature of 0 to 4 °C for not more than one day, including while at the manufacturing plant for not more than eight hours;
- Frozen by-products should be stored in cold storage chambers for by-products. When there is an operational need, by-products can be stored in cold storage chambers for meat.

The storage life of frozen by-products:

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification air temperature, °C</th>
<th>Maximum storage life, including transportation period, months</th>
</tr>
</thead>
<tbody>
<tr>
<td>By-products</td>
<td>-12</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>-18</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>-20</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>-25</td>
<td>10</td>
</tr>
</tbody>
</table>

15. When storing meat blocks:
- Packed meat blocks should be stored in separate tiers according to meat types, categories, and grades. Meat blocks should be placed compactly in lines on flat trays and bar screens. Fifty-mm-thick rails should be installed every 80-100 cm of the tier’s height;
- The stacking density should equal to:
  - 0.8 t/m³ for packed blocks (without containers) frozen in rotary and membrane fast-freeze machines;
  - 0.65 t/m³ for blocks frozen in tins;
- 0.6 t/m³ for blocks packed and placed in corrugated cardboard boxes and bags of combined materials;
- The maximum safe load of the ceilings of multi-storey cold-storage plants should be taken into account when the blocks are put in tiers;
- Frozen meat blocks should be stored at an air temperature at or below 12 °C, in chambers cooled by cooling elements or air cooling units.

The storage life of frozen meat blocks:

<table>
<thead>
<tr>
<th>Frozen meat blocks</th>
<th>Specification air temperature, °C</th>
<th>Maximum storage life, months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>meat</td>
<td>by-products</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>beef</td>
<td>-12</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>-18</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>-20</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>-25</td>
<td>18</td>
</tr>
<tr>
<td>pork</td>
<td>-12</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>-18</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>-20</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>-25</td>
<td>12</td>
</tr>
<tr>
<td>lamb</td>
<td>-12</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>-18</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>-20</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>-25</td>
<td>12</td>
</tr>
<tr>
<td>sausage, back, and mid-back fat</td>
<td>-12</td>
<td>3</td>
</tr>
<tr>
<td>sausage, back, and mid-back fat</td>
<td>-18</td>
<td>6</td>
</tr>
<tr>
<td>spare ribs</td>
<td>-20</td>
<td>8</td>
</tr>
<tr>
<td>spare ribs</td>
<td>-25</td>
<td>12</td>
</tr>
<tr>
<td>head meat of bovine animals and swine</td>
<td>-12</td>
<td>-</td>
</tr>
<tr>
<td>beef, pork, and lamb trimmings</td>
<td>-18</td>
<td>-</td>
</tr>
<tr>
<td>by-products</td>
<td>-20</td>
<td>-</td>
</tr>
<tr>
<td>cheek trimmings</td>
<td>-25</td>
<td>-</td>
</tr>
<tr>
<td>pork skin, connective tissue and cartilages from meat trimmings</td>
<td>-12</td>
<td>-</td>
</tr>
<tr>
<td>pork skin, connective tissue and cartilages from meat trimmings</td>
<td>-18</td>
<td>-</td>
</tr>
<tr>
<td>pork skin, connective tissue and cartilages from meat trimmings</td>
<td>-20</td>
<td>-</td>
</tr>
<tr>
<td>pork skin, connective tissue and cartilages from meat trimmings</td>
<td>-25</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: It is forbidden to store frozen blocks in non-refrigerated warehouses.
XVII. Requirements for Vehicles and Conditions for Meat and Meat Products’ Transportation

1. Meat and meat products should be transported in refrigerator vans and by refrigerated railway and water transport. The vehicles should be clean and should be equipped with cooling units. Meat and meat products should be transported in vehicles and containers which have undergone disinfection treatment.

2. It is forbidden to transport meat and meat products together with other products in one and the same vehicle or container.

3. Vehicles used for the transportation of meat and meat products should be in good technical condition, undergo disinfection treatment (should be clean), and have hygiene certificates.

Before loading the products, an inspector specially authorized by the plant’s management should examine the vehicle, and if the vehicle meets the veterinary and sanitary requirements, the inspector should issue a permit for its use for the transportation of meat products by making a respective mark on the waybill. The transportation of products without a permit should not be allowed. It is forbidden to transport raw meat and by-products together with finished meat products. Meat products should be transported in clean containers. The transportation of finished products in bulk, without containers, is forbidden. It is permissible to transport meat and by-products in vehicles used to transport ready-to-eat meat products on the same day without washing the vehicles. The vehicles should be subjected to sanitary treatment on a daily basis after the shipments have been performed, in compliance with the applicable regulatory documents.

Persons involved in the transportation of meat products (cargo handlers, forwarders) should have personal medical history sheets with a sanitary education record and a proper health examination record. These employees should be provided with sanitary and special clothing and gloves, as well as canvass overboots to be used while loading the products. Returnable containers should be received from customers in a clean condition only. They should subsequently be subjected to disinfection treatment at the facility.

The air temperature in the cargo room of refrigerated transport, before loading and while en route, should be maintained within the following ranges:

<table>
<thead>
<tr>
<th>The thermal state of meat and meat products</th>
<th>Product temperature before loading, °C</th>
<th>Air temperature in the cargo room of refrigerated transport, °C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>before loading</td>
<td>en route</td>
</tr>
<tr>
<td>Cold meat (by hanging)</td>
<td>above 4, up to 12</td>
<td>0 to -1</td>
</tr>
<tr>
<td>Chilled meat (by hanging)</td>
<td>0 to -4</td>
<td>0 to -1</td>
</tr>
<tr>
<td>Frosted meat (in tiers)</td>
<td>-2 to -3</td>
<td>-1 to -3</td>
</tr>
<tr>
<td>Frozen meat and by-products, meat, by-products, and fat blocks (in tiers)</td>
<td>-8 to -18</td>
<td>-8 and below</td>
</tr>
</tbody>
</table>

Note: The temperature of frosted meat before loading into refrigerator vans or cars should be -2 to -3 °C if the meat is loaded from the storage chamber of the meat processing plant, or 0 to -2 °C in the thigh muscle and -3 to -5 °C at a depth of 1 cm from the surface if the meat is loaded directly from the freezing chamber.
The temperature of meat should be measured at the moment of its loading into the refrigerated transport.

Chilled and cold meat should be loaded into carriages and refrigerator vans (including meat in containers) by hanging on hooks. Carcasses, half carcasses, and quarter carcasses should not come into contact with each other, the floor, or the walls of the carriage or van.

Half carcasses should be hung on the inside of the back walls of the carriage or the body of the refrigerator van. Beef half carcasses or quarter carcasses with an increased weight should be hung on hooks in a checkerboard order.

The transportation of frozen meat products together with chilled meat products is inadmissible.

Together with the waybill, the consignor should produce at the station a quality and safety certificate for the food products (perishable cargo) to be transported. The certificate should be issued as of the date of cargo loading into the carriages. The quality and safety certificate (issued by the manufacturer) should contain the name, quality, and transportability of the cargo (in days), and its temperature when loaded into the carriage. The quality and safety certificate should bear the consignor’s seal.

The storage of chilled, frosted and frozen meat in non-refrigerated rooms before its loading into railway carriages or refrigerator vans is inadmissible.

The quality and the temperature of products, as well as the air temperature in the cargo room, should be checked when unloading perishable cargoes at the destination station.

XVIII. Requirements for Inedible By-Product Shops

1. The continuity of technological processes, the isolation of the reception room from all other premises used for the production of dry animal feed, and the operating condition of the technological equipment, horizontal vacuum boilers, thermometers, and steam pressure control devices should be ensured at the inedible by-product shop.

2. Day-to-day control over the heat treatment regimes (boiling, raw material sterilization, the drying of meat and bone tankage), the warehousing of finished products, the quality of the bone meal (according to microbiological and physical and chemical parameters), and the washing and preventive disinfection of rooms and technological equipment should be ensured when manufacturing inedible by-products.

XIX. Requirements for Disinfestation and Deratization

The facility should have an official preventive pest control programme (for fighting insects, rodents, etc.). The veterinary and sanitary measures for fighting pests should comply with applicable regulatory documents.

1. Facilities should take measures to fight insects (flies, cockroaches, etc.).

   During the warm season, the window openings, window leaves, and doorways should be covered with screens to prevent the penetration of flies. Automated and chemical controls should be used to fight flies during off-work hours. The products should be removed from the shop, the equipment should be covered with protective film, and the room should be aired for six hours following treatment.
2. Chemicals approved by competent authorities, namely sodium borate with potato starch flour or pea meal mixed in a ratio of 1:1, a water solution of boric acid with sugar or bread, and other baits should be used for fighting cockroaches.

3. The following measures should be used to protect raw materials and finished meat products from pest-borne contamination and damage by pests:
   - The doorsteps and doors of rooms should be covered with iron or wire mesh (to a height of 40-50 cm);
   - Basement windows and air vents should be covered with protective screens;
   - Holes in the walls, floors, or near radiator lines should be patched with cement and metal chips;
   - Food waste should be duly removed from the rooms; raw materials and finished products should be thoroughly covered (after work);

4. Mechanical (traps, etc.) and chemical methods should be used for rodent control. Chemical methods should be applied only by qualified exterminators. It is forbidden to use bacterial methods for rodent control.

XX. Requirements for Amenities

1. The amenities used by staff at the production shops of meat processing plants should be equipped similarly to those of decontamination centres.

2. The amenities should include locker rooms for overclothes, street clothes, overalls and sanitary clothes; a linen room for clean sanitary clothes; a laundry room; a room for dirty sanitary clothes; showers; a manicure room; a bathroom; wash sinks; a health unit or a medical examination room; women’s personal hygiene rooms; and drying rooms for clothes and boots (in compliance with the applicable regulatory documents).

3. The locker rooms and showers for the staff of the cooler room can be located in the common amenities rooms.

4. The amenities rooms for the staff of the sanitary premises (sanitary slaughterhouses, sanitary chambers and stock yards) and the inedible by-product shop should be arranged separately from the amenities rooms for the staff of the food manufacturing shops.

5. It is forbidden to locate bathrooms, showers, or laundry rooms above food manufacturing shops, production premises, or the storerooms of canteens.

6. The locker rooms for working and sanitary clothes should be isolated from the locker rooms for overclothes and street clothes.

7. The clothes of primary production staff should be kept openly. For this purpose, the locker rooms should be equipped with hangers or open cabinets and benches (chairs).

8. The anterooms of bathrooms should be equipped with hangers for sanitary clothes, wash sinks with mixer taps for the hot and cold water supplies, soap, brushes, hand disinfection devices, and an electric hand dryer or single-use towels.

9. Toilets installed in the bathrooms should be equipped with pedal flush systems or photocells. Bathroom doors should close automatically.

10. The walls of showers should be faced with glazed tiles to their full height. The walls of the locker rooms for sanitary clothes, the linen room for clean sanitary clothes, the bathrooms and the women’s personal hygiene room should be faced to a height of 2.1 m, while the remaining portions of the walls should be painted with emulsion paints or other approved paints.
up to the load-bearing elements. The walls of other premises may be painted or whitewashed. The ceilings in the shower rooms should be painted with an oil-based paint; in all other premises they may be covered with lime wash. The floors should be covered with ceramic tiles.

11. The amenities rooms should be thoroughly cleaned after work on a daily basis. Dust should be cleaned. The walls, floors, and accessories should be washed with a hot soap solution and hot water. Cabinets in the locker rooms should be subjected to wet cleaning and disinfected at least once a week by watering or wiping with a cloth moistened with a disinfectant. The bathrooms and their equipment, as well as the women’s personal hygiene rooms, should be thoroughly cleaned, washed, and subsequently disinfected when necessary, but at least once per shift.

XXI. Requirements for Personal Hygiene

1. Every employee is responsible for the observance of personal hygiene rules, as well as the technological, veterinary, and sanitary requirements at his or her workshop section (the condition of the workplace).

2. Every new employee, as well as all employees already working at the facility, should undergo a medical examination.

3. Every employee should have a personal medical history sheet containing all health examination records and laboratory test results.

4. All new employees should undergo training in the minimum sanitary programme and pass a relevant examination with the examination grade marked in both a special log and in their personal medical history sheet. Later, all employees, including management and technical staff, irrespective of length of service, should undergo training and pass a minimum sanitary examination once every two years. Persons who fail to pass the minimum sanitary examination should not be allowed to work.

5. At the onset of gastrointestinal diseases, or in the event of an increase in body temperature, festering, or the symptoms of other diseases, the employees of production shops should report their health condition to management and seek medical assistance at the health unit of the facility or any other healthcare institution.

5. Before work, the employees of production shops should take a shower, put on clean sanitary clothes, cover their head with a kerchief or cap, and thoroughly wash their hands twice with hot water and soap.

6. All employees should disinfect their hands after each break from their work.

The staff of the pre-slaughter handling facility, the sanitary slaughterhouse, the killing room, and the inedible by-product shop should disinfect their hands and tools (knives, sharpeners, etc.).

8. Sanitary clothes should be changed on a daily basis and as they become dirty during work.

9. To prevent foreign objects from getting into raw materials and products, it is forbidden:

- To bring or keep small glass or metal objects (except metal tools and accessories) in food manufacturing shops;
To fasten sanitary clothes with pins or needles, or to keep personal items (mirrors, hairbrushes, rings, badges, cigarettes, lighters, matches, etc.) in the pockets of overalls.

10. The registration of broken items should be performed in each shop or cooling room.

11. It is forbidden to enter production shops without sanitary clothes and special boots or to go outside dressed in such clothes or boots.

12. Mechanics, electricians and other workers who perform repairs at production and warehousing facilities should observe personal hygiene rules, work in overalls, carry tools in special boxes with handles, and prevent foreign objects from getting into products.

13. Sanitary clothes should be taken off when leaving the building and visiting non-industrial premises (bathrooms, the canteen, the first-aid post, etc.). It is forbidden to put any overclothes over sanitary clothes.

14. Employees should be especially particular about the cleanliness of their hands. Fingernails should be cut short and should not be covered with nail polish. Hands should be washed before work and after each break from work, when switching from one operation to another, or after contacting contaminated objects.

15. Hands should be washed twice after each visit to the bathroom: at the anteroom after visiting the bathroom and before putting on overalls, and at the workplace immediately before getting ready to work. Boots should be disinfected after leaving the bathroom.

16. Meals should be taken only at canteens, bars, specially equipped rooms, or other public catering facilities located on the territory or close to the facility.

17. It is forbidden to keep food in individual cabinets in the locker room.

XXII. Requirements for the Laboratory Control of Meat, By-Products, and Meat Products

An industrial laboratory exercising control over the quality and safety of meat, by-products, and meat products should be organized at the facility. Otherwise, laboratory control should be performed by another certified laboratory (by contract).

The industrial laboratory of the facility should meet the veterinary and sanitary requirements and should be equipped with the necessary laboratory tools and staffed with qualified specialists.

The order and periodicity of research (tests) should meet the applicable veterinary and sanitary rules, as well as other regulatory documents.

Meat and meat products should meet the hygiene norms and requirements in reference to their content of chemical, radiological, and biological substances and their compounds, of microorganisms, and of other biological organisms dangerous to human health.

The following quality and safety characteristics of meat and meat products should be examined:

- Organoleptic properties (determined by the colour, scent, consistency, and taste characteristic of meat and the type of meat products, and which satisfy the traditional demand and taste of consumers; the organoleptic properties of meat products should not change during their storage, transportation, or sale);
  - Physical and chemical properties;
  - Toxic elements such as lead, arsenic, cadmium, mercury, etc.;
  - Pesticides such as hexachlorocyclohexane (alpha, beta, gamma isomers), and alpha, beta, gamma dichlorodiphenyltrichloroethane and its metabolites;
- Antibiotics such as chloramphenicol, the tetracyclines, grizine, bacitracin, etc.;
- Radionuclides such as caesium-137 and strontium-90;
- Microbiological elements, including the following groups of microorganisms: mesophilic, aerobic, optional anaerobic microorganisms, coliform bacteria, enterobacteriaceae, enterococcus;
- Opportunistic pathogens, which include E.coli, S.aureus, Proteus bacteria, B.cereus and sulphite-reducing clostridia, Vibrio parahaemolyticus;
- Pathogenic organisms, including salmonellae and Listeria monocytogenes, Yersinia bacteria;
- Food spoilage microorganisms such as yeast, mould fungi, lactic acid bacteria;
- Purity from parasites (there should be no agents of parasitic diseases, namely measles (cysticercus), trichina and echinococcus larvae, the cysts of sarcocysts and toxoplasms, etc.).

Note: The rating of the microbiological safety indicators for food products for most groups of microorganisms is based upon the alternative principle (i.e., the product weight is rated excluding coliform bacteria, most opportunistic pathogens, and pathogenic organisms, including salmonellae and Listeria monocytogenes). In other instances, the standard reflects the number of colony-forming units per 1 mg (ml) of product (CFU/g, ml).

Duly-approved procedures which meet the requirements for the uniformity of measurements and measurement error characteristics, the usage of meat and meat product samples during tests, and the methods of control over their parameters should be used when performing laboratory tests, as well as an examination of the quality and safety of food products. If the test results prove to be unsatisfactory according to at least one safety parameter, repeated tests of the double output taken from the same batch of meat products prepared for sale should be performed. The repeated test results are applicable to the entire batch of meat products.

The quality and safety of meat products should be confirmed by the manufacturer by issuing a quality and safety certificate for the food products, based upon the results of laboratory tests.

Meat products containing prohibited growth factors (including hormonal agents), as well as drugs, pesticides, or agrochemicals in quantities exceeding the admissible concentration levels are not subject to import, manufacturing, or turnover on the territory of the Russian Federation. These should be subjected to recycling or liquidation according to the established procedure.

Any residual quantities of growth factors (including hormonal agents) or drugs (including antibiotics) used in cattle breeding for the purpose of feeding, treatment, or the prevention of animal diseases should be kept under control in animal products, including meat and meat products.

Control over the content of growth factors (including hormonal agents) or drugs (including antibiotics) used in cattle breeding for the purpose of feeding, treatment, or the prevention of cattle diseases, as well as preparations not included in the veterinary and sanitary rules, is based upon the information about such growth factors and drugs provided by the manufacturer (supplier) of the products, as well as upon the results of government laboratory control over the residual quantities of prohibited and harmful substances in animal organisms and meat products.
The oxidative spoilage indicators (the acid value and the peroxide value) should be kept under control in animal fat products.

Control over the testing of products for bovine spongiform encephalopathy (BSE) should be performed according to the recommendations of the International Office of Epizootics.

XXIII. Requirements for Product Quality and Safety

1. The facility should exercise industrial veterinary control and introduce the Hazard Analysis and Critical Control Points (HACCP) system, which is among the key models of product quality and safety management at food processing plants.

2. The introduction of the HACCP complex quality and safety management system for food products should:
   - Ensure the continuous monitoring of production processes, the quality of the raw materials used, and the attraction of competent specialists, both in the sphere of food manufacturing technologies and in quality management;
   - Maintain the high level of the manufacturing culture;
   - Ensure the manufactured products’ safety for consumer health;
   - Ensure the stable quality of the products;
   - Enhance the company’s image;
   - Enable the exporting of the products.

3. Control should be exercised according to the key seven HACCP principles articulated by the National Advisory Committee on Microbiological Criteria for Foods (NACMCF):
   - Conduct a hazard analysis (the analysis of hazards related to the manufacturing of food products, starting with raw materials (their breeding or growing) up to final consumption, including all stages of the product life cycle (treatment, processing, storage, and sale) to identify the conditions for potential hazards and establish the necessary control measures;
   - Identify critical control points to eliminate (minimize) the hazard or its risk. The food manufacturing operations may include the supply of raw materials, the selection of ingredients, processing, storage, transportation, warehousing, and sale;
     - Establish critical control limits for each critical control point in the HACCP documents or in the operational procedures;
     - Establish critical control point monitoring requirements;
     - Establish corrective actions to be taken when monitoring indicates a deviation;
     - Establish procedures for verifying the HACCP system is working as intended (the yearly plans of inspections for parasite contamination or microbiological inspections);
   - Establish record keeping procedures to document all procedures of the HACCP system, and the forms and methods of HACCP data recording.