

English Translation

TECHNICAL REGULATION ON PRODUCTION AND TRADE OF MEAT AND MEAT PRODUCTS

CHAPTER 1. GENERAL PROVISIONS

Article 1. Purpose

- 1.1.** This regulation aims to ensure the safety of production and trade of meat and meat products as well as to protect the environment, and the public interest.

Article 2. Scope

- 2.1.** This regulation shall apply to persons, legal entities, competent authorities, and officials involved in slaughtering and dressing of live animals as well as production, transport, storage, domestic and foreign sale of meat and meat products intended for human consumption.
- 2.2.** This regulation shall apply to the production and sale of meat and meat products in the free trade zone.
- 2.3.** This regulation shall apply to production and sale of cattle, horses, sheep, goats, farmed pigs, and poultry intended for human consumption.
- 2.4.** This regulation shall apply to meat of other animals not mentioned in sub-article 2.5. of Article 2 that require specific hygienic control by the competent entity.
- 2.5.** This regulation shall apply to the assurance of imported meat and meat products into Mongolia from foreign countries meet the general veterinary, sanitary and hygienic requirements.
- 2.6.** This regulation shall not apply to slaughtering and dressing of animals by citizens for non-commercial purposes.

Article 3. Terms and definitions

For the purposes of this Regulation, the following definitions apply:

- 3.1.** “Animals” means cattle, horses, sheep, goats, farmed pigs, and poultry intended for human consumption (hereinafter referred to as “Animals”);
- 3.2.** “Slaughter animals” mean Animals specifically intended for slaughter at an abattoir within a short time, under the control of the relevant Veterinary Authority;

- 3.3.** “Weakened animal” means an Animal that is weakened or underweight due to a disease or malnutrition;
- 3.4.** “Animal with a positive reaction” means an Animal that tested positive for an infectious disease;
- 3.5.** “Injured animal” means an Animal with a bone or supporting organ injuries or wounds, or visible injuries due to external factors;
- 3.6.** “Abattoir” means an establishment where specified animals are slaughtered and dressed for human consumption and that is approved, registered and/or listed by the competent authority for such purposes. Such establishments must meet the requirements set forth in Articles 10, 11, 12.1 and 12.2 of this regulation.
- 3.7.** “Meat processing establishment” means a building or area used for performing meat hygiene activities including break-down, de-boning, classifying, semi and final processing as well as packing that is approved, registered and/or listed by the competent authority for such purposes.
- 3.8.** “Sanitary/ hygienic protection zone” means the boundaries established to prevent health risks to public, animals, and the environment;
- 3.9.** “Meat” means all parts (including blood) of an animal that are intended for, or have been judged as safe and suitable for human consumption.
- 3.10.** “Chilled meat” means the meat is stored in a cold storage and the core temperature has reached (0-4)⁰C;
Note: When preparing meat for exports, the chilled meat shall be in accordance with the importer’s requirements.
- 3.11.** “Frozen meat” means meat is stored in a cold storage and the core temperature has reached -8 ° C or below;
- 3.12.** “By-product(s)” means all the edible and inedible parts of the carcass other than meat such as head, hide, blood, intestines, offal, fat, diaphragm, stomach, and glands etc. resulting from animal slaughtering and dressing operations;
- 3.13.** “Edible offal” means the parts of the carcass that have been passed as fit for human consumption such as red offal and other edible by-products.
- 3.14.** “Meat product” means irreversibly modifying the organoleptic and physicochemical characteristics of raw meat by heating, smoking, curing, maturing, drying, seasoning or flavoring, extraction, or a combination of those processes. Meat products include ready-to-eat (RTE) and semi-processed meat products and may contain ingredients of plant, mineral and microbiological origins that are necessary for their specific production process;
- 3.15.** “Ready-to-eat meat products” mean meat products that are intended to be consumed without any further processing;

- 3.16** “Semi-processed meat products” mean meat products that require further heat-treatment (e.g. heating, frying etc.) before consumption;
- 3.17** “Meat preparation” means raw meat which has had foodstuffs, seasonings or additives added to it;
- 3.18.** “Animal intestine” means small intestines of cattle, horses, sheep, goats and pigs;
- 3.19.** “Raw intestine” means unsalted animal intestines;
- 3.20.** “Cleaning operation” means scraping, salting, or drying of raw intestines;
- 3.21.** “Sorting operation” means selecting, grading, classifying, salting, or drying of cleaned casings;
- 3.22.** “Casing processing establishment” means a legal entity registered with and accredited by the competent authority to engage in the production and trade of casings;
- 3.23.** “Product batch” means a batch of products processed in one production process;
- 3.24.** “Passed for human consumption” means meat, offal, and by-products that have been inspected, judged, and marked by a veterinary authority to be suitable for human consumption;
- 3.25.** “Inedible raw materials and products” means the inedible by-products from animal slaughtering operations, all types of animal waste from abattoirs and meat processing establishments, carcasses, by-products, and offal declared unsuitable for human consumption by the post-mortem inspection, withdrawn and recalled meat and meat products;
- 3.26.** “Processing of inedible raw materials and products” means converting the “Inedible raw materials and products” as defined in article 3.25 of this regulation into other valuable end-products by collecting, heat-treating, sterilizing, or by converting its basic composition;
- 3.27.** “Identification mark” means special mark used by state inspectors for detention and disposal of animals, meat, meat products and other items;
- 3.28.** “Maximum tolerable amount” means the maximum allowed level of hygiene safety indicator that will not negatively affect human health;
- 3.29.** “Animal slaughtering” means the following:
- 3.29.1.** Slaughtering (*stunning, sticking, and bleeding*) and dressing operations (*progressive separation of the body of an animal into a carcass and other edible and inedible parts by de-hiding or de-pelting or hair removal operations, and evisceration*) of cattle, horse, sheep and goat;
- 3.29.2.** Slaughtering (*stunning, sticking, and bleeding*) and dressing operations (*progressive separation of the body of an animal into a carcass and other edible and inedible parts by de-hiding or de-pelting or hair removal operations, and evisceration*) of pig;

- 3.29.3.** Slaughtering (*stunning, sticking, and bleeding*) and dressing operations (*progressive separation of the body of an animal into a carcass and other edible and inedible parts by de-hiding or de-pelting or hair removal operations, and evisceration*) of poultry;
- 3.30.** “Emergency killing” means the killing of animals which are weakened or injured;
- 3.31.** “Pasteurization” means the meat and meat products are heat-processed with a temperature up to 100°C, to eliminate most micro-organisms;
- 3.32.** “Sterilization” means the meat and meat products are heat-processed to a temperature above 100°C to eliminate all micro-organisms;
- 3.33.** “Disinfection” means destroying or substantially reducing food contamination and bacterial counts to tolerable levels by using chemical and physical methods without adversely affecting the quality of the food.
- 3.34.** “Accreditation” means activities performed by the competent authority and/or competent body to determine meat, meat products, and casings comply with regulatory requirements of health, hygiene, and safety.
- 3.35.** For all other definitions not mentioned in Article 3.1, refer to definitions laid down in MNS CAC RCP 58/2013, Meat hygiene rule MNS 5889, HACCP standards, and other relevant laws and regulations.

CHAPTER 2. REQUIREMENTS FOR ANIMAL HEALTH

Article 4. Health requirements for slaughter animals

- 4.1.** Slaughter animals shall originate from territories free from diseases specified in articles 6.1-6.3, 7.1-7.2, and in annexes A1, A2, and A3 of this regulation.
- 4.2.** It is prohibited to trek, transport, and slaughter animals for human consumption with the following types or symptoms:
Injury, abnormal gait or movement, severe lameness, burns, deep and large open wounds, broken bones, diarrhea, weakened, weights below than average, stressed, mother animals in the second half of their pregnancies, lactating, newly born and young offspring.
- 4.3.** Slaughter animals supplied to abattoirs can be sourced from herder’s lot, feedlot, and from the compartment free from highly contagious and infectious diseases.
- 4.4.** The abattoir may have its own feedlot or a contract with an independent feedlot.
- 4.5.** The Government member in charge of animal health issues shall approve the requirements for live weight, and age limit, general health and veterinary, sanitary, and quarantine requirements for slaughter animals, animals to be received at compartment free from highly contagious and infectious animal diseases, feedlot, and lairage.
- 4.6.** Farmers, herders, and entities who are raising animals for human consumption must ensure that their animals are healthy and included in control measures, prevention and eradication program for infectious and zoonotic diseases.

Article 5. Control of veterinary drug use/ application

- 5.1. Information on drugs prescribed for slaughter animals must registered in the electronic registration system.
- 5.2. Slaughter animals shall not be exposed to natural and artificial hormones, thyroid drugs and medicines.
- 5.3. Animals under an unexpired withdrawal or elimination period after the prescription of antimicrobial, anthelmintic, and hormonal drugs or animals of an entity that violated article 24.4.3 of the Law on Animal Health, shall not be used for human consumption.
- 5.4. In determining the maximum tolerable amount of veterinary drug residues in meat and meat products, the International Food Law Commission's standard "Maximum residue limits (MRLs) and risk management recommendations (RMRs) for residues of veterinary drugs in foods CX / MRL 2-2018" shall be followed.
The type of residue, testing method, maximum permissible amount and the certification shall be in accordance with the requirements of the importer.

Remarks:

1. *Annex A.1:
A list of highly contagious and infectious diseases prohibiting international trade of animals and products of animal origin.*
2. *Annex A.2:
A list of infectious diseases prohibiting domestic trade of animals and products of animal origin.*
3. *Annex A.3:
A list of zoonotic diseases that can be transmitted directly from animals to humans and cause food borne illnesses.*
4. *Annex A.4:
A list of animal diseases detectable during ante-mortem inspection, which requires disposal measures of the condemned animals.*
5. *Annex A.5:
A list of animal diseases detectable during post-mortem inspections, which requires disposal measures of the condemned carcasses, offal, and by-products.*
6. *Annex A.6:
The special requirements for animal casing processing establishment.*

Article 6. Control for infectious and parasitic diseases

- 6.1. **Slaughter animals must be procured from healthy herds and territories free from the following diseases:**
 - 6.1.1. No cases of highly contagious animal diseases have been diagnosed during the past 6-12 months;

- 6.1.2. No cases of african equine plague, African swine fever and all types of infectious encephalomyelitis have been detected during the past 3 years;
- 6.1.3. No cases of equine infectious anemia, dourine, epizootic lymphangitis and contagious equine metritis have been detected at the lot during the past 12 months;
- 6.1.4. No case of foot and mouth disease during the past 12 months;
- 6.1.5. No cases of rinderpest, contagious bovine pleuropneumonia, vesicular stomatitis and peste des petits ruminants during the past 12 months;
- 6.1.6. Free from sheep and goat pox;
- 6.1.7. Free from avian influenza.
- 6.2. Animals included in the veterinary preventive measurement and determined as a healthy by examination and tests are allowed for transport and electronic veterinary certificates will be issued.
- 6.3. Animals that are infected and suspected with infectious disease must not be slaughtered for human consumption.

Article 7. Control of zoonotic diseases

- 7.1. **Slaughter animals for human consumption shall originate from healthy herds free from the following zoonotic diseases:**
 - 7.1.1. No cases of infectious and zoonotic diseases have been detected or diagnosed during past 6-12 months;
 - 7.1.2. No cases of anthrax and blackleg have been detected for during past 20 days;
 - 7.1.3. Up to 30 days prior to slaughter, no positive case of Brucellosis has been detected by survey test, which included at least 15 percentage of total animals being slaughtered;
 - 7.1.4. No positive case of listeriosis has been detected by survey test, which included at least 3 percentage of total cattle;
 - 7.1.5. Up to 30 days prior to slaughter, no positive case of anthrax has been detected by survey test which included at least 10 percentage of total animals being slaughtered;
 - 7.1.6. Up to 30 days prior to slaughter, no positive case of salmonellosis has been detected by survey test which included at least 10 percentage of total pigs being slaughtered;
 - 7.1.7. Up to 30 days prior to slaughter, no positive case of tuberculosis has been detected by survey test, which included at least 3 percentage of total animals being slaughtered;

- 7.1.8. Up to 30 days prior to slaughter, no positive case of ganders has been detected by survey test, which included at least 20 percentage of total horse being slaughtered;
- 7.1.9. Up to 30 days prior to slaughter, no positive case of camphylobacteriosis has been detected by survey test of which included at least 3 percentage of total cattle and 1 percentage of total chicken being slaughtered;
- 7.2. Animals that have been infected and suspected with zoonotic and foodborne diseases must not be slaughtered for food consumption.

Article 8. Quarantine control

- 8.1. Slaughter animals shall be kept in quarantine for at least 21 days in the territory of the animal origin, lairage, and/or in the compartment free from highly contagious and infectious diseases.
- 8.2. The records shall be kept on clinical signs, isolation, treatment, destruction, cleaning and disinfection measures of animal infectious diseases.
- 8.3. A record of the origin and health status of each slaughter animal received the abattoir and/or the compartment free from highly contagious and infectious diseases should be kept.

Article 9. Slaughter animal handling

9.1. Requirements for transportation of slaughter animals:

- 9.1.1. The government member in charge of animal health issues shall approve the veterinary and sanitary quarantine and welfare requirements during trekking and transporting of animals.
- 9.1.2. Procured slaughter animals must be watered in the same place at least 24 hours prior to transportation.

9.2. The following requirements shall be applied to the transport of slaughter animals by vehicle:

- 9.2.1. Depending on the age of animals, the space for per animals on vehicle should be 1.7-2.0 m² for large animals, 0.7-0.9 m² area for small animals and 0.6-0.8 m² for swine, respectively and sufficient floor space should be provided for standing and lying down. There should be sufficient headroom to allow adequate airflow over the animals on hoof. Poultry, however, should be transported in a well ventilated container.
- 9.2.2. Animals must be transported in separate compartments to avoid overcrowding. There must be no more than 10 large animals and no more than 30 small animals in one compartment. Double-deck truck or trailer could be used for large animals and triple-deck truck or trailer for small animals. When double or triple decks are used, the height of the compartments should be at least 1.9 meters for large animals and 1.3 meters for small animals.
- 9.2.3. Vehicle speed must not exceed 50 km per hour on the paved roads outside of urban area and not over 40 km per hour on the off-roads.

- 9.2.4.** Every 8-10 hours during journey, the animals must rest for at least 1 hour for watering and feeding, if necessary. The time for continuous journey of livestock must not exceed 10 hours.
- 9.2.5.** Animals must be transported separately by species to prevent injuries to each other and to ensure well-being. Do not transport by tying, leaning, and packing, strangling or lying down.
- 9.2.6.** During hot weathers, animals must be transported in morning, evening, and in night times to avoid day time transport under strong sunlight. During cold weathers, prevent animals from freezing.
- 9.2.7.** Transport vehicles, and crates must be cleaned and if necessary disinfected as soon as possible after each unloading of animals at the abattoir.

9.3. Requirements for animal transport vehicles:

- 9.3.1.** Design and construction of the transport vehicle must enable easy loading, unloading, and must prevent animals from jumping, falling, bruising, and injuring during the transportation.
- 9.3.2.** Vehicles must be designed to protect from overheating, cooling, wind and rain during transportation.
- 9.3.3.** Ventilation system must be designed to protect from respiratory failure and exposure to exhaust fumes during the transportation.
- 9.3.4.** There should be adequate air flow on the floor level of the vehicle to remove the odor from the liquid waste.
- 9.3.5.** Use of non-slip, grooved floor gratings, crates or similar devices that prevent soiling and cross-contamination with faecal material.
- 9.3.6.** If the vehicle has more than one platform, there must be partition walls, railings and doors to prevent overcrowding and cross-contamination of animals.
- 9.3.7.** Transport vehicle must have unloading doors and railings in case of emergency situation.

9.4. Requirements for animal transport by railway:

- 9.4.1.** On a four-axle wagon;
- 16-24 adult cattle
 - 24-28 young cattle
 - 80-110 sheep and goats
 - depending on pig weight, 50-60 heads up to 80 kg, 44-50 heads up to 81-100 kg, 28-44 heads up to 101-150 kg, and 20-28 heads more than 150 kg.
 - no more than 14 horses
- 9.4.2.** The number of pigs to be loaded during the warm season shall be reduced by 10-15 percent, and overweight or fattened pigs will not be transported on four-axle trains.

- 9.4.3.** Wagon window must be opened in warm season and closed in cold season.
- 9.4.4.** Different species of livestock must not be loaded on the same wagon and must be transported separately by their age, sex, and body weight.
- 9.4.5.** Animals must be loaded and unloaded using a special ramp without physically forcing or distressing them with loud noise.
- 9.4.6.** Manure and sludge must be removed regularly during transport.
- 9.4.7.** If animals get sick during transportation, the veterinarian must isolate and care for the sick animals, and the sick animals must not be unloaded or left on the road without veterinarian permission.
- 9.5. Feed requirements when transporting animals by railway:**
- 9.5.1.** Animals transported by railway must be fed twice a day and before feeding, the animals must be watered twice a day in cool seasons and three times a day in warm seasons.
- 9.5.2.** Feed grass volume is 4.5 kg for cattle, 3.5 kg for sheep and goats and 2.5 kg for pigs.
- 9.5.3.** Wagon for transporting animals must be equipped with folding tubs for forage and water.
- 9.6. Requirements for transporting animals on hoof (Trekking):**
- 9.6.1.** Prior to departure, if necessary, animals should be vaccinated against sheep and goat pox, enterotoxemia, and anthrax, and tested for brucellosis, tuberculosis, and glanders.
- 9.6.2.** One lot of sheep and goat must consist of 500-1000 heads of animal while cattle lot should consist of 150-200 heads of animal. Male and female animals should not be mixed in the same lot.
- 9.6.3.** Trekking animal lot must not be merged or mixed with local or other lot of animals.
- 9.6.4.** Trekking must be temporarily suspended during heavy rain, dust storm or snowstorms.
- 9.6.5.** During the first 2-3 days of journey, cattle will be moved to adapt at a distance of 10 km while sheep and goats no more than 6-8 km, and continued at a distance of 10-15 km for cattle and 8-12 km for sheep and goats, per day.
- 9.6.6.** After 5–7 days of journey, animals must be rested for 1–2 days in a suitable area with grass, water and saltlick.

- 9.6.7.** Horses must be moved to a distance of 15-20 km per day and rested 1 or 2 times in a place with water and saltlick.
- 9.6.8.** Saltlick points must be established every 20-25 km along the movement road of animals and makes a reserve of baking soda of 10-15 g per day for small animals and 30-40 g per large animals.
- 9.6.9.** In the territory of the soum in transit, the animals must be moved according to the herding route and spent the night in the place where they are allowed to stay.

9.7. Holding and resting of slaughter animals

- 9.7.1.** An abattoir must have procedures or guidelines for animal slaughtering, dressing, livestock protection and welfare.
- 9.7.2.** The transported animals must be rested for 2-3 days and adequately fed and watered. During the holding period, animals must be kept under calm conditions and measures must be taken to avoid shocks and stress.
- 9.7.3.** If animals need to be held for more than 24 hours, conditions for feeding must be provided with fodder sources.
- 9.7.4.** Floor space of the lairage should be 6-7m² per large animal, and 0.8-1.0 m² per small animals and 1.8-2.0 m² per pig.
- 9.7.5.** The holding period should be 24-48 hours for large animals and 24 hours for small animals or pigs. Animals should not be a thirsty during the holding period. Watering should be 4 times per day during summer time and twice a day during winter time. Watering should be withdrawn 4 hours prior to slaughter. The records on animal holding should be kept.
- 9.7.6.** Ante-mortem inspections must be carried out in accordance with standard operating procedures, approved by competent authority.

CHAPTER THREE. DESIGN, CONSTRUCTION, AND EQUIPMENT REQUIREMENTS FOR ABATTOIRS AND MEAT PROCESSING ESTABLISHMENTS

Article 10. Location and environment of abattoir and Exterior facilities

- 10.1.** The establishment must according to the prevailing wind direction of the region be located where the establishment's products and industrial technology would direct air flow from the clean area to the

polluted area and in a clean environment which is not exposed to floods, water, swamps, permafrost, landfills, treatment facilities, smoke and dust.

- 10.2.** According to “MNS 5105, Occupational safety. Industrial Hygiene, Hygiene protection areas norm, and General Requirements” standard and in consideration of the location and features of the territory, a sanitary zone must be established at a distance of not less than 500 m from the abattoir and not less than 100 m from the meat processing establishment.
- 10.3.** A brief description of the location of the establishment and perspectives of the surrounding facilities must be displayed in a visible manner.

Article 11. Animal handling facilities

11.1. Lairage

- 11.1.1.** Animals for slaughter must be received at a lairage next to the establishment in which veterinary control, inspection, analysis, classification, sorting, isolating and quarantining measures would be implemented.
- 11.1.2.** The lairage consists of pens, passageways and races should be arranged in such a way as to permit inspection of animals at any time, and to permit the removal of sick or injured animals when considered to be appropriate, for which separate appropriate accommodation should be provided.
- 11.1.3.** A disinfection channel filled with a disinfectant solution for transport trucks at arrival must be at least 9 m long and deep enough to disinfect turning wheels.
- 11.1.4.** Animal unloading ramp should be non-slip and built on 20 degrees or less angle to prevent animals from escaping or falling.
- 11.1.5.** The lairage should be designed and constructed to prevent animals from slipping, falling or being cut, bruised, wounded or injured, and to ensure the safety of animal handlers.
- 11.1.6.** The lairage should be designed to allow a one-way flow of animals from unloading to the point of slaughter.
- 11.1.7.** Suspect animal pens must be held apart from other healthy animals. If the pens are alongside each other (closer than 1 m), the animals must be separated from direct contact.
- 11.1.8.** The total size of the suspect animal pen must be equivalent to 10 percent of the total animal holding capacity. Animal handler must be capable of regularly cleaning and disinfecting the pens.

11.2. Holding pen

- 11.2.1.** Space allowance for large animal holding pens is 3 m² per horse or cattle and for small animal holding pens is 1.5 m² per sheep or goat. Drinking water and feed troughs should be available in holding pens to ensure sufficient accommodation for the number of animals intended to be held.

- 11.2.2.** The height of the holding pen fences for large animals must not be less than 1.5 m, and not less than 1 m for small animals. The holding pen fences must have horizontal steel pipes and the distance between the pipes must not exceed 20 cm.
- 11.2.3.** The animal holding pens must be well-lit with a roof or shed, and have non-slip concrete slats or paved floors with good drainage, where gut content and feces can be held under secure containment as well as constructed and equipped so as to facilitate effective cleaning and sanitation.
- 11.2.4.** The animal holding pens must be designed so as not to cause injury or distress to the animal being held.
- 11.2.5.** The holding facility must have a space allocated for specialized functions such as weighing, sorting, washing, or checking animal identification.

11.3. Crowding pen

- 11.3.1.** Animals are moved out of the holding pens into a (pre-slaughter) shower pen then moved into a crowding pen which funnels into a single file lead-up chute before going into the stunning area.
- 11.3.2.** The angle of the curved race between the holding pen and the shower pen should either be 60° or diagonal, which allows the animals' movement to be in the direction of the unloading pens. The diagonal turn angle should not be 45°.
- 11.3.3.** Floors of the passageways and races from the holding pen to the stunning area should be well drained and not slippery; they should not cause injury to the feet of the animals. Heights of the fences of the passageways and races should be 80 cm for large animals and 60 cm for small animals.
- 11.3.4.** Animals are moved into the shower pen through the curved races. If necessary, at the request of a competent official, the veterinary inspector will wash the animal hide contamination using a walk-through wash basin or a spray equipment.
- 11.3.5.** Washed animals are moved to a round crowding pen with a diameter of 3.5-4.7 m. The crowding pen must not have sharp corners and must have 2 gates on both sides of the entrance and exit.
- 11.3.6.** From the crowding pen, animals enter the stunning area via a single file lead-up chute. The lead-up chute fence for large animals is 150 cm high, 80 cm wide at the top and 50 cm wide at the bottom. The lead-up chute fence for small animals is 90 cm high, 55-60 cm wide at the top and 28-30 cm wide at the bottom. The race leading up to the stunning area should be curved with 60° angle and the animal movement direction should be towards the unloading pen.
- 11.3.7.** The single file lead-up chute should have solid sides.
- 11.3.8.** The crowding pen must be directly connected to the stunning area via the lead-up chute. The transition between the single file lead-up chute and the restrainer entrance should be smooth and gradual to prevent bruising and jamming. The sides of the single file chute should gradually slope to

conform to the "V" shape of the conveyor restrainer or mechanical and restraining box for either electrical or captive bolt stunning.

- 11.3.9.** When moving animals from the crowding pen to the stunning area, the passageways must be evenly lit with natural and artificial lightings. The passageways must not be shaded, dark, or unevenly lit.

Article 12. Design and construction of animal slaughtering, processing, chilling and freezing establishments

12.1. General requirements for animal slaughtering, processing, chilling and freezing establishments:

- 12.1.1.** A conclusion must be obtained from the relevant inspection authority when determining the location of the establishment's building and facility construction site, or when constructing, opening, expanding or changing the purpose of buildings.
- 12.1.2.** The flow of the technological stages of production must be designed to be in one direction with no intersections beginning from the receipt of animals or raw materials to the transfer of the final product for transportation.
- 12.1.3.** The internal design, location, and organization of the establishment premises and facilities must be suitable for production stages by preventing contamination and ensuring meat and meat products' hygiene and safety.
- 12.1.4.** The floor must be waterproof, non-absorbent, suitable for washing and disinfection, resistant to acid, alkali, hot water at 82°C, made of materials which would not crack, is slip-resistant, has no gaps and is compact. Water must be able to flow freely and enter the sewer, has a 0.6 cm per meter slope, has wastewater traps and filters per 371.6 cm² floor area, and installed with grease catcher in accordance with "MNS 5975, Grease catcher equipment in wastewater General requirements" standard.
- 12.1.5.** Walls and pillars must be made of materials which are waterproof, non-absorbent, do not crack, is easy to clean and disinfect, resistant to acid, alkali and hot water, light white in color, and protected against insect and rodent infestation.
- 12.1.6.** Internal wall height of abattoirs must be at least 6 m for large animals and 4 m for small animals while meat processing establishments' must be in accordance with the relevant construction and technical standards and norms.
- 12.1.7.** The corners between the walls and floors must be solid, sealed, and semi-circular with a radius of 2.5 cm or sloped 45⁰-60⁰ to ease cleaning operations.
- 12.1.8.** The design and construction of ceilings must prevent the forming of dust, condensation, mold and mildew and ensure the paint or lime do not fall off, and is easy to clean.
- 12.1.9.** The design and construction of windows must prevent the entry of dusts, insects, and rodents, and the sills must have slopes to not be used as shelves.

- 12.1.10.** Auxiliary facilities such as stairs, elevators, temporary loading and unloading platforms of the processed meat and conveyor belts must be easy to clean and must not contaminate meat, meat products and casings.
- 12.1.11.** An establishment must have loading and unloading platforms or ramps with shelters for meat, raw materials, and processed products. The height of the platform must be suitable for loading and unloading on and off the transport trucks, while the height of the ramps must be automatically adjustable.
- 12.1.12.** Doors must be made of waterproof material, have a flat and smooth surface. Where required, doors can either be swing or censored.

12.2. Abattoir:

- 12.2.1.** The establishment premises and facilities must be designed and constructed according to its production type and capacity from animal receiving to shipment of its final products.
- 12.2.2.** The abattoir premises must have the following rooms / areas:
- Crowding pen
 - Animal stunning and bleeding room/ area;
 - De-hiding, pelting, and scalding room;
 - Room for pre-treatment and temporary storage of skins and hides;
 - Evisceration, inspection (post-mortem inspection on offal), and processing room;
 - Carcass inspection area (post-mortem inspection on carcass);
 - Chilling, freezing and storage rooms;
 - Loading area;
 - Temporary storage for inedible raw materials and products;
 - Temporary suspension and storage room for suspect carcasses and edible offal;
 - Temporary storage for animal waste;
 - A room or area for washing and disinfecting crates, work portable equipment and tools;
 - Internal laboratory;
 - Changing and laundry rooms, and facilities for workers.
- 12.2.3.** Sick or suspect animals must be slaughtered in a segregated slaughter room, or slaughtered at the end of the shift under the supervision of a state inspector, followed by a special procedure for cleaning and disinfection.
- 12.2.4.** By-products, casings, skin and hides must either be transferred to pre-treatment facilities or be supplied under contract to other raw material processing establishments.
- 12.2.5.** Processing of inedible raw materials and products should be an offsite operation completely separate from the abattoir.
- 12.2.6.** An establishment must have at least 5 doors for animal restraining area, workers, administrative staff, visitors, product loading and unloading as well as waste and non-food stuff disposals.

- 12.2.7.** Entrances and exits of the abattoir must be designed to prevent workers from entering clean areas from dirty areas (stunning, bleeding, pelting, evisceration, and offal cleaning).
- 12.2.8.** There must be a schematic drawing of the external and internal organizations (design and layout of all workshops, operating rooms and sections), and hygienic zones.
- 12.2.9.** The operation flow of animal receiving, product transferring and transporting must not intersect with each other.
- 12.2.10.** An establishment with two or more processing lines must ensure that there are no cross contaminations between the different processing lines.
- 12.2.11.** The slaughter line must be equipped with an emergency stop button as well a separate line, and a cold room to temporarily segregate suspect carcasses, offal, and by-products identified during post mortem inspection.
- 12.2.12.** Animal bleeding, pelting, evisceration as well as offal, carcass, and head cleaning and processing areas must be equipped with disinfection devices which use hot water at a temperature of +82°C and censored hand wash basins with hot and cold water supplies.
- 12.2.13.** The layout of the establishment premises must be designed in a way to prevent cross contamination between technological stages.

12.3. Meat processing establishment:

- 12.3.1.** The establishment premises shall have the following rooms:
- Raw material receiving room, storage room/ cold storage,
 - Storage rooms for packaging materials, seasonings and other auxiliary materials,
 - Carcass break-down, de-boning, and classifying room,
 - Chilling and storage room for de-boned meat,
 - Recipe preparation room,
 - Meat preparation room, /meat cutting, sorting, mincing, mixing, cutting, packing/
 - Storage room for temporarily keeping meat preparations/ cold storage
 - Heat-processing room,
 - Chilling and storage room/ cold storage for finished products,
 - Packaging and labeling room,
 - Locker and utility rooms for workers,
 - Internal control laboratory,
 - Storage room or cupboards for cleaning and disinfecting chemicals.
- 12.3.2.** The technological flow, stages and organization of the meat processing establishment must meet the requirements set forth in Articles 12.1.2 and 12.1.3 of this regulation.

- 12.3.3.** Temperatures of technological rooms (carcass receiving, break-down, de-boning, classifying and grading, packing, meat products' preparation, ready-to-eat products' packaging, and labeling) of an establishment must not exceed 12°C.
- 12.3.4.** Temperatures of the chilling, deep freezing, and storage rooms shall be in accordance with the requirements set forth in articles 15.2, 15.5, 15.6, and 15.7 of this regulation.
- 12.3.5.** Depending on the technological features, safety, hygiene requirements, equipment, packaging procedures, packaging features, and shelf life, the meat processing establishment must, if necessary, keep the technological room and environment temperature below the required level specified in Article 12.3.3 of this regulation.
- 12.3.6.** The meat processing establishment must be equipped with a refrigeration system capable of making necessary adjustments to cold temperatures specified in Article 12.3.4 of this regulation on chilling, freezing, and storage of meat and meat products in accordance with the safety, suitability, storage procedure and period of the product.
- 12.4. Refrigeration system:**
- 12.4.1.** The refrigeration system must have facilities that meet the technology and standard requirements for meat chilling, deep freezing, and storage.
- 12.4.2.** Storage walls, ceilings and floors must be made of materials that are protected from water, moisture and frost, easy to clean and disinfect, and have a thermostat that can maintain the target cold temperature of the technology stable.
- 12.4.3.** The production facility must be installed with equipment suitable for cold production.
- 12.4.4.** Refrigeration system pipes must be installed with air coolers, insulated walls, floors, ceilings, doors, rails, shelves, plastic pallets, thermometers, humidity meters and lighting.
- 12.4.5.** The capacity of the chilling room must be designed to be at least 3:1 in comparison to the capacity of slaughtering.
- 12.4.6.** Chilling and deep-freezing rooms must be equipped with de-frosting system.
- 12.4.7.** Wastewater pipes must not be placed in freezing and storage rooms.
- 12.4.8.** The storage must meet the general requirements of MNS 5364 standard.
- 12.4.9.** There must be a separate cold room for temporarily storing suspended and condemned meat and by-products.
- 12.4.10.** Carcasses, packaged meat, pork, poultry, processed meat products, offal, by-products, and casings must be chilled, frozen and stored separately.

- 12.4.11.** Meat chilling, freezing, and storage rooms shall be equipped with automatic temperature, and humidity measuring tools that meet the requirements set forth in articles 15.2, 15.5, 15.6, and 15.7 of this regulation.
- 12.5. Utility facility:**
- 12.5.1.** Locker and laundry rooms where workers, change, wash, and iron their uniforms must have a correct flow in design and have ventilation, lighting and humidity levels must meet hygienic conditions and requirements.
- 12.5.2.** Depending on the technology and operation of the establishment, locker rooms, bathrooms, and laundry rooms must be designed and labelled separately in the clean and dirty areas.
- 12.5.3.** Locker rooms must have lockers, shoe racks, chairs, and laundry baskets.
- 12.5.4.** Locker rooms must have separate restrooms for men and women. The changing room, shower room and bathroom must be separate for men and women. Bathrooms must be equipped with showers stalls based on conditions and number of employees of the establishment.
- 12.5.5.** The walls, floors, ceilings, doors, windows, cupboards, chairs and other equipment of locker rooms, showers and restrooms must be made of materials that do not rust, are easy to clean and disinfect, and have a surface free of mold and mildew.
- 12.5.6.** The shower room must have a shower, soap tray, towel rack, anti-slip stand which meets hygiene requirements, rubber mat, trash can and valves for mixing hot and cold water and adjusting the temperature, which must all be in normal operation.
- 12.5.7.** The entrance and exit of the workplace must be installed with hot and cold hand washing devices with touch or wrist, elbow, knee and foot activation, placed with reminders to use disinfectant solution, liquid soap, hand wiping and drying equipment, and the doors of which must open and close automatically. Also, a device for disinfecting the shoe soles of workers must be placed which must be regularly disinfected.
- 12.5.8.** Bathrooms must be designed so that direct access to rooms for cooling, freezing, preparing, packaging, storing and other rooms for processing of meat and meat products is not available and is separate from such rooms. Bathrooms must also have walls with no gaps and have high doors that are easy to open and close.
- 12.5.9.** Depending on the number of employees in the workshop or section of the establishment, bathrooms must be designed where each man and woman is planned one toilet available for every 25 people.
- 12.5.10.** Bathrooms must be equipped with special toilets, urinals, sinks, hand dryers, trash cans with lids, disinfectants, liquid soap and disposable paper towels, and must have signs and markings for the employees of the workshop or section.
- 12.5.11.** Bathroom sewage pipes and industrial wastewater drainage pipes must be separately installed and separated by special colors.

- 12.5.12.** All areas of meat processing must be installed with hand washing equipment and placed with labels and markings to wash and sanitize hands in the following sequence, hot and cold water, disinfectant solution, liquid soap, hand wipes and dryers.
- 12.5.13.** Ventilation and lighting in the rest rooms of the employees must meet hygiene conditions and requirements and provide conditions for temporary resting.
- 12.5.14.** There must be a place to wash and clean labor protection clothes and equipment. The laundry room must have sections for receiving, washing, drying, ironing, disinfecting and storing clean clothes, and the flow should be well organized.

12.6. Common requirements for Establishment equipment:

- 12.6.1.** The abattoir, in accordance with the technological process, must have equipment for spraying and washing animals; stunning equipment; stunning devices (electrical or mechanical); bleeding equipment and collection containers; skinning tools and stripping equipment; head hook or table; casing and inner meat cutting out and veterinary examination tables and conveyors; benches and tables for washing and processing of casings and internal organs; splitting saws and carcass splitting devices; carcass inspection equipment; carcass cleaning and washing tools; and special channels and sealed containers for segregating suspect and defective products.
- 12.6.2.** Animal stunning equipment must be suitable for use, comply with international rules, regulations and standards, and have a certificate from a competent manufacturer. Voltage, amperage, air pressure, and carbon dioxide must be used in stunning activities in accordance with the manufacturer's instructions and methods in which regular inspections, repairs, maintenance and cleaning must be done.
- 12.6.3.** The abattoir and meat processing establishment must be fully equipped with equipment and tools intended for food and made of materials that are non-rusting, easy for cleaning and disinfection, which meets the technological features and requirements of the establishment.
- 12.6.4.** All types of equipment being used in the establishment must have a guarantee from the manufacturer as to having satisfied the establishment's technological, hygiene, sanitation and safety requirements, use and work safety guidelines, certificate of origin, and being registered as to having the necessary repairs, maintenance and adjustments.
- 12.6.5.** Each time equipment is repaired, upgraded or the operating mode is changed, the quality and safety of the products to be processed must be re-verified.
- 12.6.6.** Equipment and work platforms must be installed in a manner suitable for maintenance, cleaning and disinfection.
- 12.6.7.** Non-food utensils and bins must be made of materials with lids, seals, be suitable for cleaning and disinfection, and must have special markings or be distinguished by color. They may not be used for any other purpose and disposable containers or bags may also be used.

- 12.6.8.** Equipment use and safety instructions must be prepared and posted in a visible manner.
- 12.6.9.** Meat sorting and packaging, meat processing, cooling, freezing and thawing rooms, and cold storage must be equipped with instruments and devices for monitoring temperature and relative humidity.
- 12.6.10.** Devices for heat processing of meat products must be designed to be able to adjust and measure the temperature and humidity of the processing environment and to measure the depth temperature of the product.
- 12.6.11.** Equipment and instruments for the removal of fumes and vapors generated during heat processing must be placed and cleaned regularly.
- 12.6.12.** Transportation vehicles intended for loading and distribution of animals must have special premises and equipment for washing and disinfection.

Article 13. Abattoir and meat processing establishment infrastructure supply

13.1. Energy supply and heating requirements:

- 13.1.1.** When the abattoir and meat processing establishment are connected to the central electricity and heating network, they must be fully responsible for the integrity, safety, maintenance and certification of its own networks and equipment in accordance with the technical use and safety rules.
- 13.1.2.** The establishment must have its own backup electrical power source to prevent potential risks in the event of a power outage.
- 13.1.3.** If there is a local heating system, an electricity or other sources may be used, but the hot water fireplace must be separate.
- 13.1.4.** In the case of using its own hot water fireplace based heating system, the construction must be carried out by a professional organization in accordance with the approved design, opened for permanent use, and the furnace and pressure vessel must be registered with the specialized inspection agency and permitted for use.
- 13.1.5.** The operation of the hot water fireplace must be carried out in accordance with the technological procedures at a high level technicality and in a safe manner with no accidents, and the use and work safety rules must be followed.

13.2. Water supply:

- 13.2.1.** Abattoirs and meat processing establishments must have sufficient sources of centralized or decentralized fresh water supply, and water storage tanks and transmission equipment must be fully protected from contamination.

- 13.2.2.** If there is a de-centralized well water supply, a sanitary protection zone must be established at a distance of at least 50 meters from the drinking water supply source. A normal protection zone must be established at a distance of at least 200 meters, which must be fenced and marked, and the soil integrity must not be affected, not cracked and the well facilities must satisfy hygiene requirements and have a technical certificate.
- 13.2.3.** Potable water reservation tanks must be made of appropriate non-corrosive materials resistant to acid and alkali chemicals as well as substance migration. The reservation tanks should be equipped with taps for drains and must be cleaned and disinfected on a quarterly basis and records must be kept.
- 13.2.4.** Potable water used for production and processing purposes must be in accordance with the requirements of “MNS 0900, Environment. Health Protection. Safety. Drinking water. Hygiene Requirements, Quality and Safety Assessment” standard. The potable water must be tested at an accredited laboratory. The testing frequency is twice a year for centralized water supply and every quarter for de-centralized well water supply.
- 13.2.5.** Hot water temperature for cleaning the production area and equipment should be at +65°C and disinfection should be at least +82°C. There should be a specific heating device or equipment for disinfection water.
- 13.2.6.** Steam for technological use must not contain any substances that can contaminate food products or pose a threat to human health.
- 13.2.7.** If there is a water recycling system, it must meet the requirements of the relevant standards, and the treated and recycled water distribution pipe must have a separate line separated by color.
- 13.3. Road and landscape:**
- 13.3.1** Roads and landscapes of the establishment premises must be paved, clean, easy to clean without generating dirt and dust, and at least 30% of the fields except for roads must be a green area.
- 13.3.2** Outside the establishment, there must be no shrubs where weeds can grow and rodents can breed, and the height of the planted grass must not exceed 15 cm.
- 13.4. Lighting:**
- 13.4.1.** The establishment must have natural and artificial lighting and which must at least 540 lux at all control points, 220 lux at the technological lines and 110 lux at other places.
- 13.4.2.** Lighting fixtures must be provided with a protective cover, which must be safe. In the event the light bulb breaks, the covers must be secured to prevent contamination from meat and meat products.
- 13.5. Ventilation:**
- 13.5.1.** The ventilation system of the establishment must meet the requirements of “MNS 5078, General Requirements for Establishment Ventilation System” standard and be equipped to direct the air flow

from the clean area to the unclean area. The outlet and inlet air must not intersect and ventilation pipes must be made of non-corrosive materials and with a net to prevent insects.

- 13.5.2.** Ventilation systems must be of appropriate capacity based on the establishment's volume, capacity and ventilation required for the production process, and ventilation equipment must be placed where required.
- 13.6. Liquid waste disposal:**
- 13.6.1.** The maximum permissible level of wastewater pollutants to be directly transported and supplied from the abattoir and meat processing establishment to the central sewerage network must satisfy the requirements of MNS 6561 standard.
- 13.6.2.** The maximum permissible levels of wastewater pollutants to be supplied to the environment from abattoirs and meat processing establishments must satisfy the requirements of MNS 4943.
- 13.6.3.** The abattoir and meat processing establishment must have oil traps, filters and valves at the end of the establishment wastewater line which satisfy "MNS 5975, Wastewater Fat and Oil Trap Device. General Technical Requirements" standard.
- 13.6.4.** The abattoir must install centrifuges and sludge dewatering centrifuges appropriate to their capacity in order to capture grease, oil, sand, dirt, sludge and other mechanical wastes directly or in other words transported to the central sewerage network and to reduce the amount of pollution.
- 13.6.5.** The abattoir must install a stationary broom in the discharge well after the settling tank and must use a glass barrier on the wastewater discharge line for the cleaning and maintenance of the pipeline.
- 13.6.6.** If there is a wastewater well or collection tank for collecting wastewater in the abattoir and meat processing establishment, an agreement must be established with the relevant service organization in which the wastewater must be disposed under a schedule and then the surrounding area to be cleaned and disinfected.
- 13.6.7.** The abattoir must ensure that the accumulated sludge does not contaminate the soil and the environment, and must carry out regular cleaning, disinfection and keep records.
- 13.6.8.** Wastewater collection and transmission lines, pipes and filters of abattoirs and meat processing establishments must be designed to be odorless, and the wastewater collection valves inside the establishment must be detachable for cleaning purposes, non-corrosive and durable.
- 13.6.9.** To prevent from exceeding the maximum permissible levels of wastewater pollutants supplied to the environment specified in article 13.6.2 of this regulation, there must be a pre-treatment plant that has introduced the technology of mechanical, chemical and biological treatment to separate organic and other mechanical contaminants from wastewater, adjusts the pH, adds nitrate, and separates sludge.
- 13.7. Solid waste disposal:**

- 13.7.1.** Temporary collection points for industrial and domestic solid waste must be separately located in the direction of the establishment waste site, separated by the appropriate containers and fences.
- 13.7.2.** Solid waste disposal must be designed to avoid causing environmental pollution. Outdoor bins must be made of fire-resistant materials, and the spread of waste by wind, accumulation of rainwater and leakage must be prevented.
- 13.7.3.** In accordance with sanitary conditions and requirements, waste collection points and manholes must be located at least 200 meters from the water source and at the bottom of the prevalent wind flow, which is at least 30 meters from the establishment building. The area must be paved and secluded with appropriate barricades and fences, and waste must be disposed and the necessary disinfecting must be done.
- 13.7.4.** Measures must be taken to prevent the waste from falling, spilling or being blown away during cleaning, collection and transportation.
- 13.7.5.** The establishment must have a temporary storage room and special disposal equipment (incinerator to burn at 800°C) for condemned products and waste.
- 13.7.6.** If the establishment transports the waste using its own transportation vehicles, the transport vehicles must be appropriate, the waste must be sealed, and meet the safety requirements for disinfection.
- 13.7.7.** The surrounding environment up to 50 m from the establishment must be regularly cleaned.
- 13.7.8.** Waste must be sorted, collected, stored and disposed in a fixed period of time at a “point” where there is one direction that would not be violated and which meets hygiene requirements, and waste bins must be categorized and marked.
- 13.7.9.** Depending on the production technology, product features and types, each workshop and section must be capable of being opened and closed by foot, with special identification marks, easy to wash, durable, high capacity tires, sealed lids, reusable plastic, waste bins, and cleaned and disinfected.
- 13.7.10.** An agreement must be established with the relevant service organization to load and dispose of waste and evaluate the performance on a monthly and quarterly basis.
- 13.8.** Processing and disposal of inedible raw materials and products
- 13.8.1.** Measures shall be taken to ensure the safety of inedible raw materials and products by using biosafety methods and techniques such as heat treatment, conversion of basic composition, sterilization, landfilling, and incineration while reducing the negative effects of the carcasses on people and the environment.
- 13.8.2.** The decision to implement any one of the measures specified in article 13.8.1 of this regulation shall be made by the state veterinary inspector. The decision of the state veterinary inspector applies to animals specified in articles 3.3, 3.4, 3.5 and 3.28 of this technical regulation.
- 13.8.3.**

The following measures shall be taken if the state veterinary inspector decides to process the inedible raw materials and products.

- 13.8.3.1.** Inedible raw materials and products can be processed and converted into pathogen-free animal protein, technical and feed tallow, meat and bone meal, feed for furred game and pet food, soil fertilizers, biofuels, and energy sources.
- 13.8.3.2.** When chemically converting the basic composition of the inedible raw materials and products, only chemicals approved by the competent authority shall be used.
- 13.8.3.3.** The state veterinary inspector shall certify the conformity of the safety, nutritional quality criteria and microbiological standards of the processed products.
- 13.8.3.4.** Permit to process inedible raw materials and products shall be obtained from the state administrative body in charge of animal health and plant protection.
- 13.8.3.5.** Processors of inedible raw materials and products shall not produce animal feed from inedible raw materials and products of ruminant origin, and shall not import animal feed and additives containing ingredients of ruminant origin for animal feed production.
- 13.8.3.6.** Animal feed and soil fertilizers processed from inedible raw materials and products shall be subject to laboratory analysis and shall be used after the conclusion has been made.
- 13.8.4.** Meat products sent for laboratory analysis by the state veterinary inspector as "Condemned" must be transferred to the non-food storage area.
- 13.8.5.** The following measures shall be taken if the state veterinary inspector decides to dispose the inedible raw materials and products.
 - 13.8.5.1.** When landfilling and incinerating inedible raw materials and products, standard operating instructions approved by the state administrative organization in charge of animal health shall be followed.
 - 13.8.5.2.** Inedible raw materials and products should undergo a pre-heat treatment for at least 30 min at a temperature of more than 76.6⁰C under the supervision of the state veterinary inspector before the disposal measures.
- 13.8.6.** Condemned products must be placed in a sterilizing device under the supervision of a state veterinary inspector, sealed and processed at a temperature above 76.6⁰C for at least 30 minutes.
- 13.8.7.** When sterilizing inedible raw materials and products, the inputs shall be crushed until the size is less than 5cm, and shall be held for at least 20 min once the core temperature is reaches 133⁰C and the minimum negative air pressure is 3 kg/ cm².

- 13.8.8.** It is prohibited to dump or stockpile unfit meat, by-products, condemned materials and waste in the open near the establishment.
- 13.8.9.** Meat and meat products must be immediately removed from the rooms for freezing, storage, processing, packaging and other operations, and be placed in special containers.
- 13.8.10.** The establishment must have the following responsibilities for the recycling and disposal of raw materials and products of animal origin:
- To establish a system to monitor meat unfit for food use and meat products;
 - To develop and implement appropriate methods to identify non-food products;
 - To have equipment, tools, and personnel to collect, disinfect, store, and dispose of unfit meat and meat products;
 - To prevent contamination and deterioration of meat and meat products.

CHAPTER FOUR. REQUIREMENTS FOR ANIMAL SLAUGHTERING AND MEAT PROCESSING OPERATIONS

Article 14. Technological control

14.1. Animal slaughtering technology:

- 14.1.1.** Animals should be slaughtered only in establishments which created conditions for examinations and inspections before and after slaughtering.
- 14.1.2.** An animal slaughter operations include stages of driving animals into the establishment, stunning them, suspending, draining their blood, removal of the horns and hooves, severing the heads, skinning, extracting the offal, cleaning the carcasses, decontamination, weighing, stamping and primary processing of the offal, hides and other by-products.
- 14.1.3.** The producer should develop, approve and implement slaughter technology guidelines by each kind of animals. The following requirements should be mentioned in the technological guidelines and their implementation should be monitored.
- 14.1.4.** Stunning:
- 14.1.4.1.** The establishment should treat animals humanely and should possess effective and suitable methods, equipment and technology which exclude tortures of animals. Animals should be stunned and drained of blood only by specialised and experienced workers. The working hours of workers at the stunning and draining stages should not exceed 30 man/hour per week and these workers should not be kept working longer than 2 months continuously.
- 14.1.4.2.** A mechanic or electric stunning equipment appropriate to the type, age and weight of the animal should be used while carbon dioxide gas can be used for stunning pigs and poultry. The stunning operation should be performed when motions of the animal have been fully ceased.

- 14.1.4.3.** An authorized officer should monitor the animal stunning operations.
- 14.1.4.4.** In case of a setback or delays in the butchering operations, the stunning should be discontinued, the animals whose motions have been ceased should be examined personally and proper actions should be undertaken.
- 14.1.4.5.** In case of setbacks in the operations of the animal stunning equipment, an immediate action should be undertaken to replace it with a reserve equipment while poultry can be butchered with a mechanical method.
- 14.2.** Bleeding:
 - 14.2.1.** Bleeding should start no later than 3 minutes after stunning the animal. The esophagus should not be damaged during bleeding. This provision might vary due to certain religious practices.
 - 14.2.2.** No any subsequent operation should be commenced before the blood draining is completed. Stunned animals should be hung on suspension rails at 60-100 cm between the animals for 4-5 minutes in case of bovines and 2-3 minutes in case of small ruminants. The blood should be collected in a special container and should be removed.
 - 14.2.3.** In between each bleeding procedure, use 2 sterilized knives (knife sterilization is in hot water at 82⁰C or higher) in rotation.
 - 14.2.4.** The blood draining channel should be assembled separate from the waste removal channel. Crowding an excessive number of animals and spillage of blood on the floor are forbidden.
 - 14.2.5.** Blood to be processed for foodstuff should be collected from healthy animals and in conditions fully conforming to the hygiene requirements.
- 14.3.** Scalding and clearing of hair, fleece and feather:
 - 14.3.1.** Equipment, technologies and processing regimes fully appropriate to the characteristics of the products, safety criteria, food hygiene and environmental requirements should be used for scalding and singeing operations.
 - 14.3.2.** The temperature of water for scalding and the duration should be observed with high precision with continuous monitoring.
 - 14.3.3.** The speed and operations of the hair, fleece and feather shearing equipment should be monitored closely so that the skin is not damaged.
 - 14.3.4.** Dust, dirt, fleece, feather and other contamination should be thoroughly cleaned only with potable water.
 - 14.3.5.** The flow should be arranged in a way to prevent spread of contamination with fleece, hair and feather, the air conditioning and filtering equipment and the scalding work places should be separate

and the hygiene and sanitary requirements for the workers should be established different from the other processes and should be enforced.

14.4. Skinning and removal of the head, feet, horns and udder:

14.4.1. During pelting and/or de-hiding, prevent the carcass, equipment, and tools from cross-contamination.

14.4.2. An udder which is lactating or which is visibly diseased should be removed first of all. Contamination of the carcass with milk, colostrum and other secretions of the womb should be prevented.

14.4.3. There should be a technical solution in place to easily identify and trace the relationship between the carcass and edible offal during the post-mortem inspection.

14.4.4. The head should be prepared to enable examination by skinning till the node lymphatic nodes under the chin and the lymphatic nodes of the mandible are exposed.

14.4.5. Removal of the head should be performed meeting the hygiene requirements to minimize contamination of the next stages food production.

14.4.6. Washing, cleaning and processing hairy organs such as the head and feet in the butchering room are forbidden.

14.4.7. Raw material for food production should be accurately separated from the animal head only after it is thoroughly skinned and after completion of the examination that follows the butchering. Removing the tongue, the lymphatic node should not be cut through.

14.5. Skinning animals:

14.5.1. Opening the skin and skinning an animal manually, caution should be observed to prevent cutting and damaging the hide, leaving meat or fat on the skin and tearing the surface of the carcass.

14.5.2. Air under pressure can be used to skin an animal if it is appropriate to the operations and capacities of the enterprise and meets the criteria set by the technological control.

14.5.3. Hides and wool should not be washed in the plant and hides and leather should not be collected and stored in the animal butchering room.

14.5.4. After skinning or scalding poultry dawn, the carcasses should not touch or contact one another until an authorized officer should implement veterinary examinations of every carcass and issues conclusions.

14.6. Evisceration and preparation for a veterinary inspection:

14.6.1. Evisceration must be no later than 45 minutes for large animals including pigs and no later than 30 minutes for small animals.

- 14.6.2.** During evisceration, prevent the carcass from cross-contamination with contents of the rumen, stomach and intestines. The esophagus and the rectal end should be tied.
- 14.6.3.** During evisceration, use an appropriate evisceration knife or tool to avoid rupturing the digestive tract and do not separate the small intestine at this stage.
This article does not apply to poultry.
- 14.6.4.** After evisceration, the edible offal and by-products should be immediately removed from the dressing area using an automatic conveyor or a chute or a trolley for post-mortem inspections. During this transfer, precautions should be taken to prevent contamination of the carcass.
- 14.6.5.** Within 15 minutes after evisceration, the edible offal should be transferred to cleaning and processing operations. Within 2 hours after evisceration, the cleaning and processing operations should be finished and the edible offal must be refrigerated.
- 14.7.** Operations on the carcass:
- 14.7.1.** The workers should have been taught skills to extract the spinal cord intact when the carcass is split. The carcass should not contact with the surfaces of the equipment and other tools. Hygiene requirements pertaining to the equipment and tools that should inevitably contact with the carcass should be fulfilled.
- 14.7.2.** The following hygienic practices should be implemented for animal carcass cleaning and decontamination before transferring them to the chilling room.
- 14.7.2.1.** Any visual contamination, blood, and hair should be removed and scraped off of the carcasses before the post-mortem inspection.
- 14.7.2.2.** Carcasses that are passed for human consumption based on the post-mortem inspection conducted by the state veterinary inspector, should be washed only with potable water to remove any contaminants left on the surface of the meat. The abattoir operator shall determine the water temperature, pressure, and washing duration, as well as the methodology, equipment and tools for carcass washing based on international standards, guidelines, recommendations and technological instructions. At the request of the importer, antimicrobial decontamination measures can be taken.
- 14.7.2.3.** The safety criteria for carcasses to be transferred to the chilling room shall be in accordance with MNS 6308, "Permissible level of microbial safety and hygiene indicators in food products" specified in article 19.5 of this technical regulation. Depending on the importer's requirements, the microbial safety and hygiene criteria for the carcass may vary.
- 14.7.3.** During animal slaughtering, the knives, saws, cutters, and other handheld instruments should be sanitized with water at 82C⁰ or higher at regular intervals after each stage of operation.
- 14.7.4.** After each stage of animal slaughtering operation, workers should clean their hands, change their gloves, and based on their level of contamination, the aprons, sleevelettes, boots, platforms, and the surrounding floors should be cleaned, and if necessary, disinfected with hot water.
- 14.7.5.** In case of detection of any sign of a contagious disease in the process of animal butchering, the veterinarian or veterinary inspector must immediately cease the operations of the stage in the plant and take appropriate actions. Records should be taken on such occasions for documentation.

Article 15. Requirements to meat refrigeration and freezing technologies

- 15.1.** A refrigerant permitted by an authorised institution should be used in the refrigeration equipment.
- 15.2.** Carcasses and edible offal passed for human consumption shall be chilled for 24-48 hours until the core temperature is between $(0-4)^{\circ}\text{C}$ for carcasses, and less than $+3^{\circ}\text{C}$ for edible offal, and the pH level is between 5.4-6.0.
- 15.3.** When storing full, half, and quarter carcasses inside the chilling room, there should be spaces between the carcasses to avoid contact with each other and to prevent any liquid drip from one carcass to another.
- 15.4.** Temperatures, relative humidities, and airflows of the chilling, freezing, and storage rooms shall be regularly monitored and recorded and these rooms shall be equipped with automatic temperature and humidity measuring tools.
- 15.5.** Chilled carcasses shall be stored hanging by rails in a room with a temperature of $(0-4)^{\circ}\text{C}$ and a relative humidity of 85-90%.
When using a double-rail system, make sure there is no liquid drip from the top level onto the bottom level meat surface.
The safety criteria for chilled meat shall comply with the MNS 6308 standard "Permissible level of microbial safety and hygiene indicators in food products" specified in article 19.5 of this technical regulation. Depending on the importer's requirements, the microbial safety and hygiene criteria for the carcasses may vary.
- 15.6.** In accordance with the requirements set forth in article 15.2 of this technical regulation, chilled meat shall be frozen as carcasses or de-boned, and classified meat cuts, or as packed meat and shall be transferred to a cold storage when the core temperature reaches -8°C .
The temperature of the freezing room shall either be -25°C or -35°C and the air speed shall be 60m/min. At the customer's request, the core temperature of can be below -8°C .
- 15.7.** Frozen carcasses may be stored hanging by rails in a room with a temperature of not more than -18°C and a relative humidity of 90-95% or stored on hygienic pallets at least 20 cm above the floor. The top of the rack should be at least 30 cm from the walls and ceiling and the meat should not touch the shelf on top. Packed frozen meat should be stored in such a way to ensure adequate airflow.
- 15.8.** Carcasses, meat cuts, classified meat, and packed meat shall not be stored in the same room with edible offal.

Article 16. Technological requirements to a meat processing plant

- 16.1.** Meat cutting, de-boning, classifying and packing room temperature should not be higher than $+12^{\circ}\text{C}$.
- 16.2.** Meat and edible offal that meet the requirements set forth in articles 15.2, 15.5, 15.6 and 15.7 of this regulation shall be accepted for de-boning, and classifying for the production of semi-finished and finished products.

- 16.3.** De-boned, and classified meat cuts and packed meats for supply to the cold chain shall meet the requirements set forth in articles 15.2 and 15.5 of this technical regulation and shall be transferred to the chilling or freezing room within 30 minutes after packing. The safety criteria for classified and packaged meat shall be in accordance with MNS 6308, “Permissible level of microbial safety and hygiene indicators in food products” specified in article 19.5 of this technical regulation. Depending on the requirements of the importer, the safety and hygiene criteria for the microorganisms in the packaged meat may vary.
- 16.4.** In case different types of meat are sorted and packed or different items are produced, time separation or spatial separation of these processes should be ensured.
- 16.5.** The temperature of the mince for cooked and smoked sausages should not exceed 12 °C during stuffing.
- 16.6.** In heat-processing cooked products, the core temperature should be maintained and monitored at 68-72 °C.
- 16.7.** Time and temperature of heat-processed meat products shall be in accordance with Mongolian and international standards, guidelines, rules, and regulations. The hygiene and safety criteria of such products shall meet the requirements of the MNS 6308 standard “Permissible level of microbial safety and hygiene criteria in food products” specified in article 19.5 of this technical regulation. Depending on the importer's requirements, the safety and hygiene criteria may vary.
- 16.8.** The following requirements should be observed in production of canned products:
- 16.8.1.** The packagings of heat-processed and shelf stable meat products should be regularly checked and records kept.
- 16.8.2.** Meat preparations to be heat-processed to achieve shelf stability should be pasteurized within 1 hour and sterilized within 2 hours after preparation.
- 16.8.3.** If pre-heat treated meat preparations are processed according to article 16.9.2 of this technical regulation, the temperature of the meat preparation at the time of filling shall not be less than +40°C.
- 16.8.4.** The processing procedures (temperature, time, pressure, F value) set forth in article 16.9.2 of this technical regulation shall be clearly specified in the technological instructions and shall be regularly monitored and recorded.

Article 17. Requirements to packing, labeling and storing meat and meat products

- 17.1.** Primary packaging materials that come into direct contact with meat and meat products should be stored in a room and environment where they do not lose their intended purpose and properties, and should only be used in production after their outer packaging has been disinfected.
- 17.2.** The containers and packing materials to be used for meat and meat products should meet the standard requirements stipulated in “MNS 5684 tolerable levels of chemicals in the materials of containers and packing items that may be transferred to the food products packed in them”. The materials and forms of containers and the materials for packing can vary depending on the requirements of the importing countries.

- 17.3.** Meat packed in pieces and in bulk should have labels meeting the standard requirements of “MNS 6648 Requirements to the labels of food containers and packs”.
- 17.4.** Codes specified in “MNS 2456, Limbed and sorted meat. Technical requirements”, “MNS 2457, Limbed and sorted mutton and goat meat. Technical requirements”, “MNS 0167, Limbed and sorted pork. Technical requirements” and “MNS 0703, Limbed and sorted chicken. General technical requirements” should be in the labels of carcasses and sorted and packed meat.
- 17.5.** Sound practice and the cold chain principle should be observed at the stage of storage of meat and meat products.
- 17.6.** At the stage of storing meat and meat products, the room temperature and relative air humidity should be regularly measured and recorded.
- 17.7.** Refrigerated carcasses should be stored hanging at a temperature $+(0-2)^{\circ}\text{C}$ and relative humidity 85-90%, frozen carcasses should rest on a shelf or deck at height at least 20 cm in conditions with temperature of -18°C and relative humidity of 90-95% at 30 cm from the wall and ceiling as a minimum.

Article 18. Technological requirements for distribution and transportation of meat and meat products

- 18.1.** At stage of distribution of meat and meat products, sound distribution practice and the cold chain principle should be observed.
- 18.2.** Meat and meat products should be transported in vehicles with refrigerators designed for food transportation with all surfaces inside the refrigerated container made of smooth, robust, rust free and easy-to-clean material. The doors should be tight ensuring excellent sealing to prevent intrusion of small rodents, pests and contaminants.
- 18.3.** The containers and circulation boxes for transportation of meat and meat products should be cleaned before every use and the refrigerated container should be cleaned before every lading, disinfection should be performed as necessary and records should be kept.
- 18.4.** The air temperature inside the refrigerated container should be adjusted to the required level and should be recorded before loading.
- 18.5.** Refrigerated carcasses should be hung at temperature $(0-2)^{\circ}\text{C}$, packed meat, finished and semi-finished meat products should be put in appropriate baskets and stacked at temperature $(0-2)^{\circ}\text{C}$ and frozen carcasses should be piled at temperature -18°C , and the transportation should be performed in a vehicle designed for food transportation.

- 18.6.** Raw meat and finished meat products should be transported separately.
- 18.7.** During lading refrigerated and frozen meat products, they should not be placed in ordinary places or rooms without refrigeration.
- 18.8.** The temperature in the truck refrigerator should be monitored, free circulation of air should be ensured and, in case of transportation for longer than 2 hours, measurements with special equipment should taken and recorded.
- 18.9.** The meat and meat product loading and unloading areas should ensure conditions preventing contamination of the food products from the surrounding environment.
- 18.10.** The refrigerated container should be cleaned and disinfected after unloading the meat and meat products.
- 18.11.** MNS 5343 standard should be observed in transportation of meat and meat products.
- 18.12.** Thawing is forbidden during transportation of meat and meat products.
- 18.13.** A transportation company can be contracted.

Article 19. Requirements to other raw m and supplementary materials utilized in the meat processing industry

- 19.1.** Raw materials to be used in meat processing establishment (meat, offals and fat) and supplementary raw materials (protein flour, dehydrated milk, eggs, starch, salt, nitrite and other additives) should meet the respective material standard requirements by their quality and safety indicators.
- 19.2.** Only food additives specified in “MNS CAC 192, Food additives” standard and included in the register of Mongolia can be used.
- 19.3.** In case a nitrite salt is used in the production, sodium nitrite (NaNO_2) should make up only 0,005-0,006 % while, 99,4-99,5 % should be sodium chloride. In case nitrite solution is used, it should be utilised according to the internal guideline of the establishment and the maximum level of nitrite residues in meat products shall be 50 mg/kg.
- 19.4.** Natural, collagen or artificial casings, containers, cans and glass bottles should be used for packaging meat products.
- 19.5.** The hygiene and safety indicators of animal meat and meat products should meet the standard requirements specified in “MNS 6308, Acceptable microbiological safety and hygiene levels of indicators in food products”, “MNS 5868, acceptable maximum levels of pesticide residues in food products”, “MNS 4504, Acceptable levels of heavy metals in food products”, “MNS CAC 193, General standards of toxic substances and contaminants in food products”, “MNS CAC MRL 2, Acceptable maximum levels of residues of veterinary drugs in food products” and “MNS 6359,

Acceptable maximum levels of benzopirene in food products”.

Article 20. Requirements for cleaning and disinfecting of the meat processing establishment premises and equipment

- 20.1.** The establishment premises should have a separate room or area for cleaning and disinfection of the containers, trolleys, tools, vehicles and refrigerated container.
- 20.2.** Cleaning and disinfections of the establishment premises should be performed in a direction from the clean to the dirty areas and from up to down. The cleaning frequency should be divided into complete, daily, and partial cleanings and records should be kept.
- 20.3.** Every technological process area and all rooms should have cleaning and disinfection utilities providing conducive conditions for these operations, the surfaces in these areas should be made of rust-free and easy-to-clean materials and there should be hot water supply.
- 20.4.** Cleaned and disinfected tools and instruments should be stored in a dedicated room or area and on dedicated pegs and shelves to prevent their contamination.
- 20.5.** The labels of cleaning solutions should be distinguishable and should be stored in a non-food drawer, container, or shelf.
- 20.6.** Disinfectants, solutions and disinfection methods should be selected depending on the characteristics of the materials of the walls, floors and ceilings and the surfaces of the equipment contacting the food and the characteristics of the products and taking into account their capacity of elimination or hindering the multiplication of microbes and viruses as well as the microbial tolerance to these substances.
- 20.7.** There should be disinfection areas at the meat processing establishment entrance, exit and points of transfer from dirty to clean areas.
- 20.8.** Disinfecting chemicals and substances must be state registered and accompanied with certificate of conformities. Approved disinfectants should have user instructions, intact packaging, valid expiration date, and clear labelling.
- 20.9.** Disinfection chemicals and solutions should be clearly labelled and should be stored separately in a dedicated room, storage or special container or drawer.
- 20.10.** The officer in charge of cleaning and disinfections of the meat processing establishment should adjust the concentration and temperature of the washing and disinfection substances and keep records.
- 20.11.** The worker performing the cleaning and disinfection operations should be trained and gained practical experience in the technical procedures.
- 20.12.** The implementation and effectiveness of the cleaning and disinfection program should be regularly monitored and records should be kept.

- 20.13. The results of cleaning and disinfections should be assured by internal and external monitoring laboratory tests and the results of the tests should be saved.
- 20.14. The quality of disinfection should be examined by taking “smears” from the food contact surfaces of the equipment and other items for microbial monitoring. If no E. coli and other pathogens are detected, the disinfection is qualified as performed according to the appropriate procedures and it is concluded that there is no infection risk.
- 20.15. The concentration of the disinfectants and solutions and their residues after disinfection are checked and assessed by chemical tests.

Article 21. Rodent and pest control in and around establishment premises

- 21.1. The producer should approve a special programme of prevention and control of pests and rodents, contract a relevant organisation and maintain quarterly performance records.
- 21.2. On every occasion any trace of pests or rodents have been found in the factory premise, it should be reported to the contracted company to take necessary actions.
- 21.3. Electric pest traps should be setup at the entrance of the establishment and other critical areas of the premise.
- 21.4. The exterior of the establishment, the buildings and facilities, the engineering lines and canalisations (pits, water pipes), ventilation and window nets should be repaired mending any cracks and holes and take actions to limit multiplication and spread of pests and rodents.
- 21.5. There should be no weeds and bushes supporting breeding of rodents in the exterior and other areas of the plant and the height of the lawn grass should not exceed 15 cm.
- 21.6. The establishment facilities should be fully isolated from the surrounding environment with fences preventing penetration of dogs and cats.
- 21.7. At the entrance and exit of the factory yard fencing, there should be disinfection points or special equipment for this purpose.

Article 22. Veterinary, sanitary and quarantine control for abattoir

- 22.1. The abattoir should have the veterinary unit or veterinary staff, in accordance with the requirements set by the organization specified in Article 28.2 of the Animal Health Law to implement the ante-mortem inspection, collect and investigate the samples from slaughter animals and their products, and veterinary, sanitary and quarantine measures.

- 22.2.** Veterinary unit or veterinary staff of the abattoir should have the guidelines for the implementation of veterinary and quarantine measures.
- 22.3.** Veterinary unit or veterinary staff have to operate in the following areas:
- 22.3.1.** Implement the quarantine measures during collection and transportation of slaughter animals from local herders and producers;
- 22.3.2.** Receive slaughter animals at the lairage, conduct inspections, and implement quarantine measures;
- 22.3.3.** Conduct ante and post mortem veterinary and sanitary inspections when slaughtering animals at an abattoir to provide conclusions for the carcasses, offal and by-products.
- 22.4.** If the abattoir is not be able to employ alarge numbers of full-time veterinary staff, it may contract veterinarians in veterinary service units of soum and district. In this case, the contracted veterinarian should be authorized to use the veterinary integrated electronic system on behalf of the establishment.
- 22.5.** Excluding the veterinarians at the lairages, 3 veterinarians for large animals and 2 veterinarians for small animals should regularly work at the post-mortem inspection point of the processing line.
- 22.6.** Veterinarians must have a certificate that involved to the special training of how inspection to be implemented of origin, health, quarantine control, health examination and tests, ante- and post-mortem inspection of animals intended for human consumption.
- 22.7.** The veterinary unit should have an access to the veterinary integrated electronic system and provide the necessary records and information to the relevant authorities within the specified period, and establish an archival unit.
- 22.8.** The competent authority specified in Article 28.2 of the Animal Health Law, should approve the standard operating procedures for the introduction of animals into abattoirs or slaughterhouses and to do post-mortem inspection for carcasses and organs.
- 22.9.** A veterinarian should follow the standard operating procedures.

Article 23. Internal control laboratory of the meat processing establishment

- 23.1.** The meat processing establishment should maintain a laboratory to perform veterinary and sanitary inspections of the meat, meat products and casings and microbial and chemical residue assessments. The laboratory should satisfy the requirements of the MNS ISO /IEC 17025 standard “General requirements to the capacity of testing and adjustment laboratories”.
- 23.2.** If the meat processing establishment is unable to establish an internal laboratory, it should contract with an authorized accredited laboratory.

- 23.3.** The laboratory should be capable of performing microbiological, serum and helminthologic tests, trichinelloscopy and chemical and biochemical tests in animals and animal products as well as sanitary inspections of meat and meat products and of the surrounding environment of these items.
- 23.4.** Handbook on foodborne diseases and the methods of identification of the factors of infections and poisoning, preparation of samples for tests from the raw materials, production processes and other media (water, air, equipment surfaces) and undertaking tests as well as the objects to be involved and indicators.
- 23.5.** The results of drug residue detection and confirmation tests should be entered into the general online veterinary system on every occasion.
- 23.6.** Product safety and residue tests should be confirmed by an independent accredited laboratory at least once per quarter.

Article 24. Requirements for health, sanitation, and hygiene of animal and meat processing establishments

24.1. Health of the workers:

- 24.1.1.** Applicants to the meat processing establishment jobs should undergo tuberculosis and communicable skin diseases tests, chest x-ray test, test of nostrils and gullet smears, microbiological and helminthological tests before getting employed and should be recruited only if the results of all these tests are negative. The employees should undergo preventive medical checks and tests every 6 months.
- 24.1.2.** In case a worker has been sick with a communicable disease or has cared for a patient with such a disease, the employee should be admitted to return to the job only after the health checks.
- 24.1.3.** The employees should be covered in mandatory industry, job and service related preventive and regular health checks in accordance to the procedures set forth by the central governmental administrative authority in charge of health issues. The employer should be responsible for the costs of the health checks of the employees.
- 24.1.4.** The meat processing establishment hygiene officer should check the health and hygiene of the workers daily before commencement of the work, and take records before letting them into the working premises.
- 24.1.5.** If a worker has an open wound or infection on a hand, she or he should be allowed to enter the work place only after treatment and healing.
- 24.1.6.** In case a worker is infected with a communicable disease, she or he should immediately report to the management who should then make the necessary arrangements and take actions to ensure treatment of the worker.

24.1.7. Medicines and first aid kits should be available in every workshop of the meat processing establishment.

24.2. Requirements for personal hygiene and sanitation of the workers:

24.2.1. The workers should follow the meat processing establishment rules on personal hygiene and sanitation.

24.2.2. The workers are required to wash their hands before starting the work, after visiting the toilet, and after contacting dirty items and materials. Hand wash memo should be displayed at a visible place.

24.2.3. During production, processing, packing and sales of meat, meat products and casings, wearing or using contaminating items such as rings, earrings, bracelets, watches, mobile phones and long nails should be excluded and chewing gums, spitting, eating and smoking are forbidden.

24.2.4. The internal control unit and officer should daily monitor the observance of the sound hygiene practice by workers and should maintain records.

24.3. Requirements for hygiene utilities and facilities for the workers:

24.3.1. Hygiene utilities and facilities of the workers should include changing rooms, laundry, shower rooms, lounge, toilet, handwash tub, hand dryer, dining room, occupational safety clothing and tools and the flow direction should be arranged appropriately.

24.3.2. The meat processing establishment should operate a canteen for the workers. The canteen should be in line with “MNS 4946, Requirements to food production and catering facilities” standard requirements.

24.3.3. The canteen should estimate the daily calories required basing on the working conditions and characteristics of the jobs of the workers to develop and approve the recipes and menus.

24.3.4. The catering service should be handled by specialized professional persons.

24.3.5. Good hygiene and production practices should be implemented in the catering service.

24.3.6. The catering service should be implemented with food products and raw materials with clear origin and meet the quality and safety requirements.

24.3.7. At least 150 g samples should be taken from each series of the meals and food products catered for the workers, sealed in a sterile container and stored at (4-8) °C for at least 72 hours and disposal records should be constantly maintained.

24.4. Occupational safety requirements:

24.4.1. The workers should be supplied with at least 2 sets of work clothes (coats, shirts, boots, aprons, gloves, headwear fully covering the hair, warm jackets, cotton stuffed gloves, etc.) and protection

equipment in accordance to the characteristics of their working conditions and job tasks.

- 24.4.2. The special protection clothes (helmets, metal wire aprons, gloves, etc.) used in animal slaughtering, dressing, and meat de-boning operations should be designed uniquely to the respective process stages and should be used according to the manuals.
- 24.4.3. The employer is responsible for the costs of testing, procurement, storage, washing and cleaning, repairing and sterilisation of the work clothes and protective tools. A list of the items, types and duration of use of working clothes and protective equipment should be approved and followed.
- 24.4.4. Visitors to the meat processing establishment premises should be provided with protective clothing (coat, slippers, headwear, masks, gloves, etc.) and given hygiene and safety instructions.

CHAPTER FIVE. REQUIREMENTS FOR MEAT AND MEAT PRODUCTS' TRADE

Article 25. Veterinary, sanitary, and hygiene requirements for imported meat and meat products

- 25.1. The SPS Agreement on Sanitary and Phytosanitary Measures of the World Trade Organization shall be followed in the imports of meat and meat products into Mongolia.
- 25.2. In order to prevent the spread of zoonotic diseases transmitted from animals to humans and infectious diseases prohibited by international trade when importing meat and meat products to Mongolia, the requirements set forth by the World Organization for Animal Health's "Terrestrial Animal Health Code", as well as the veterinary, sanitary and quarantine agreements and conditions concluded with foreign veterinary and quarantine authorities on cooperation in the veterinary sector.
- 25.3. Foreign establishments exporting meat and meat products to Mongolia shall meet the requirements of the International Food Law Commission's "Meat Hygiene Practices-CAC / RCP 58-2005", ISO, HACCP and Halal standards.
- 25.4. For imports of beef, the relevant authorities shall jointly conduct a risk assessment of BSE, which is prohibited by international trade.
- 25.5. For imports of pork and poultry, the relevant authorities shall jointly conduct risk assessments for diseases such as high-toxic influenza, which is prohibited by international trade.
- 25.6. In the event of an outbreak of Covid-19 and similar pandemics, meat and meat products shall be imported to Mongolia in accordance with the guidelines and recommendations issued by the World Organization for Animal Health and the World Health Organization.

Article 26. Conformity and trade of meat and meat products:

- 26.1. Meat and meat products are subject to mandatory compliance assessments for the purpose of Provision 13.2 of the Law on Standardization, Technical Regulations and Conformity Assessments.

- 26.1.1.** The conformity assessment is to be implemented in accordance to the algorithm of analysis of the conditions of the production as well as accredited laboratory tests of samples taken from the producer and market.
- 26.1.2.** Only the products of producers and suppliers complying food product safety requirements at all stages of the food chain and having introduced the appropriate practices for the purpose of Provisions 4.1.19-4.1.21 of the Law on Food Safety can be accepted by a trade facility, supplied to the market and sold to the public for consumption.
- 26.1.3.** Trade facilities selling meat and meat products should implement good trading practices.
- 26.1.4.** Trade facilities should sell for public consumption meat and meat products with valid expiration date, passed organoleptic tests and accompanied by certificate of conformity attesting their compliances with trading standards, technical regulations and other relevant requirements, certificate of origin, and conclusions of tests and examinations by competent authority.
- 26.1.5.** Prior to sales of meat and meat products, quality checks, removal of packing, wrapping and tying materials, cleaning and wiping technological procedures should be performed.
- 26.1.6.** The refrigerating storage rooms together with sales and technological equipment of trade facilities should be in compliance with the general requirements and should have undergone repairs and maintenance in accordance to the producers' manuals and technological safety requirements.
- 26.1.7.** The equipment should be made of materials safe at contacting with food products and the due procedures of their cleaning, washing and disinfections should be observed.
- 26.1.8.** Thermometers and hygrometers for relative humidity should be placed at visible locations at distances from doors and vaporizers and measurements should be taken daily and recorded.
- 26.1.9.** Trade facilities of meat and meat products should possess refrigerators/freezers with glass doors preventing contamination or refrigeration rooms designed to store chilled meat and internal organs at 0+4°C and frozen meat at -18°C. These equipment or facilities should be regularly cleaned and disinfected following the due hygiene and sanitation rules.
- 26.1.10.** Meat and meat products should be categorised, grouped and placed in refrigerating counters for sales in accordance to the relevant technology and stored in them following the regimes and conditions specified in the standards and technical documentations.
- 26.1.11.** Only meat and meat products with veterinary and laboratory test certificates or in producers' packages/containers with proper labelling and serial numbers can be sold.
- 26.1.12.** Fresh meat from an approved meat processing establishment with an accompanying electronic certificate of laboratory analysis issued through the integrated electronic veterinary system shall be supplied to trade places for sale to consumers.
- 26.1.13.** Fresh meat prepared at an approved abattoir shall be accepted at a trade center based on the

laboratory certificate issued by the integrated electronic veterinary system.

- 26.2.** The following requirements shall be met for sorting, packing, and sales of meat at retail facilities:
- 26.2.1.** The meat sorting and packing room or area should be suitable for cleaning and disinfections and should have a hand washer and equipment for disinfections of knives.
 - 26.2.2.** The equipment and utensils for meat sorting and packing should comply with the hygiene requirements and be suitable for washing in water with temperature of +82°C or for decontamination with a method with similar effects.
 - 26.2.3.** Ready to eat meat products should be placed separate from semi-finished products and raw meat.
 - 26.2.4.** Raw meat cutting boards, shelves and utensils should be separate from those used for finished meat products and should be washed and disinfected every time they have been used.
 - 26.2.5.** Meat markets and trade centers should only sell raw meat based on the test results and veterinary certificates provided by the producer. Detection of residues of antibiotics as well as chemical and microbiological tests of meat should only be performed by accredited independent laboratories.
 - 26.2.6.** Sales of meat of unidentified origin, without a veterinary certificate and/or without tests by accredited independent laboratories to the public are forbidden.
 - 26.2.7.** The labels of the meat products being sold at trade facilities should contain the information required by Article 12.4 of the Law on Food Product Safety.

CHAPTER SIX. REQUIREMENTS FOR HUMAN RESOURCES AND CAPACITY

Article 27. Recruitment and staffing

- 27.1. Recruitment and staffing:**
- 27.1.1.** A principle of recruitment of only persons who have completed occupational safety, food safety and hygiene training or selection of persons by examinations should be adhered to in all sections of meat and meat product processing and sales networks.
 - 27.1.2.** The workers of the main production stages, services and maintenance should be specialised and certified.
 - 27.1.3.** Refer to the Mongolian Meat Association’s “manual for workers of abattoirs and meat processing establishments” when creating the job criteria and grade level of the workers of abattoirs and meat processing establishments.
 - 27.1.4.** Technologists, refrigeration engineers, veterinarians, and hygiene professionals to work at abattoirs

and meat processing establishments should be university graduates in the relevant specialties with a Bachelor degree as a minimum.

27.2. Human resource development training:

- 27.2.1.** Production and trade facilities should develop a curriculum for hygiene and sanitary training for their employees who are directly involved in processing and production of meat and meat products, or who handle items and materials used in the food production and sales chains, plan implementation the curriculum, organize trainings and maintain records and reports of the training activities.
- 27.2.2.** Establishment and trade facility operators should cooperate with health institutions and relevant professional non-governmental actors in organization of training providing technological, sanitary, hygiene and legal knowledge and support costs of training premises and other expenses required for the training.
- 27.2.3.** Establishments and trade facilities should involve their employees in short-term trainings for specialization and new recruits in special training programs. Records including the following data should be maintained in each case training is organized:
1. Training topics,
 2. Dates,
 3. Duration,
 4. List of participants,
 5. Signatures

CHAPTER SEVEN. POLICY PAPERS TO IMPLEMENTED AT ABATTOIRS AND MEAT PROCESSING ESTABLISHMENTS

Article 28. Plans and programs to be adopted and implemented by operators

- 28.1.** Technological monitoring program;
- 28.2.** Good hygienic (GHPs) and manufacturing (GMPs) practices plan;
- 28.3.** Hygiene and sanitary program;
- 28.4.** Hazard Analysis Critical Control Point (HACCP) plan;
- 28.5.** Plan for immediate withdrawal of products in situations that impose threats to the health of the population;
- 28.6.** Emergency preparedness plan for maintaining routine operations of production in disasters and public health risk situations;
- 28.7.** Other.

CHAPTER EIGHT. STAKEHOLDER DUTIES, COOPERATION, AND MONITORING

Article 29. Central governmental administrative body in charge of food issues

- 29.1.** Establish the legal basis for an integrated system of meat hygiene, safety and suitability requirements,

and monitoring, evaluation and certification of its performance.

- 29.2.** The Government member in charge of food issues shall approve the criteria for technological, veterinary and sanitary inspections (hereinafter referred to as “Accreditation”) in abattoirs and establishments.
- 29.3.** Hygiene, sanitation, and technological accreditation of abattoirs and establishments shall be carried out by a joint working committee consisting of members from competent authorities, non-governmental organizations representing the sector, and accredited organizations specializing in international standards of food safety management system, its training, evaluation and certification.
- 29.4.** Accreditation shall be conducted by a working committee approved by the Government member in charge of food issues.
- 29.5.** Accreditation criteria for abattoirs and establishments approved by the Government member in charge of food issues shall be available for public.
- 29.6.** Abattoirs and establishments meeting the following criteria shall be included in the risk assessment of the importer at their own request.
1. Successfully passed the accreditation inspection and received an ACCREDITATION for export category,
 2. Met the technological, veterinary and sanitary requirements of the importer.
- 29.7.** The central governmental administrative body in charge of food safety issues receives the importing party’s request to conduct a risk assessment, and compiles relevant materials and submits them to the importer.
- 29.8.** The risk assessment activities of the importing party are to be organized within the WHO’s SPS Agreement.
- 29.9.** Establish a system at the government level to control, test, conduct surveillance, and collect information on conditions and hazards that may adversely affect the safety and suitability of meat from the primary production sector.

Article 30. Governmental body in charge of animal health

- 30.1.** Ensure fulfilment of requirements of good hygienic practices for cleaning and disinfection of equipment and tools used in the processes of procurement of animals for slaughter, their transportation, trekking, and reception at lairage.
- 30.2.** Establish all requirements of regulations in relations to the examinations and due diligence procedures ante and post mortem inspections of animals.
- 30.3.** Monitor and ensure implementation of the objectives of the microbiological tests reflected in the requirements of the technical regulations or the performance and operational indicators.
- 30.4.** Examine and confirm to ensure the levels of chemical residues and contaminations do not exceed the tolerance levels stipulated in the relevant legal acts, surveillance and monitoring plans.
- 30.5.** Monitor and conclude the implementation of officially acknowledged programmes of combating and eradication of zoonotic infections including surveys and tests of brucellosis, glanders and tuberculosis and microbiological tests for E.coli O157:H7, salmonellosis, campylobacteriosis and listeriosis.
- 30.6.** Implement additional risk management measures as required by relevant authorities.

- 30.7.** Supervise the implementation of relevant legislations, monitor and restrict the use of animal feed of ruminant origin by taking risk management measures to prevent the transmission of diseases that may infect humans and animals.
- 30.8. Plan and implement monitoring and surveillance programs tailored for the following situations**
- 30.8.1.** Prevent all animal and plant related risks and hazards in order to ensure production of meat fit for human consumption;
- 30.8.2.** Control pollution of the environment that is likely to adversely affect the safety of meat rendering it unfit for food;
- 30.8.3.** Perform monitoring and evaluation to prevent hazardous conditions in the consumption water and transportation vehicles.
- 30.9. Evaluate the equipment and operations of abattoir facilities checking for the following conditions:**
- 30.9.1.** Whether there is risk of presence and possibility of accumulation of pathogens of infections threatening both humans and animals and other hazards;
- 30.9.2.** Whether the fences, shades and watering troughs are easy-to-clean and meet the hygiene requirements;
- 30.9.3.** Possibility for the methods, means and systems of removal and disposal of the remains of dead animals and other wastes to adversely affect the health of both humans and animals and serve as a source of risks;
- 30.10.** Ensure storage of chemicals used for the technological processes in conditions preventing contamination of the environment and animal fodder leading to threats to human health.

Article 31. Agencies Implementing State Control

- 31.1.** Controls the implementation of the food safety related laws, legislations, legal acts for common observance, relevant rules, procedures, technical regulations and standards.
- 31.2.** Implement risk assessments for all stages and processes of the animal slaughtering, meat and meat production and food chains and plan and implement control.
- 31.3.** Establish a system of regular monitoring and surveillance on collection of the findings of the tests performed at accredited laboratories, creation of databases, and their analyses and regular surveillance and control of the activities.
- 31.4.** Implement technological and veterinary controls in the operations of animal slaughtering and meat processing establishments, check the quality and safety requirements of the raw materials and products and issue conclusions basing on laboratory tests.

- 31.5. Carry out controls in the activities of technological workers in charge of meat and meat product hygiene, veterinarians, state veterinary inspectors and internal control officers.
- 31.6. Implement actions of establishing the origins of meat and meat products failing to meet the requirements for food, trace them back and ensure their withdrawal.
- 31.7. Take the following actions in case entities engaged in animal slaughtering, meat production and meat processing operate in settings that do not meet the technological, veterinary, sanitary and hygiene requirements:
 - 31.7.1. Entirely or partially halt the production operations until the technological, veterinary and hygiene requirements are satisfied;
 - 31.7.2. Confiscate or relocate the approvals of establishments with operations, technological flows or systems which are incorrect or do not satisfy the due requirements, which fail to rectify the issues or which have repeated these violations.
 - 31.7.3. Take actions to have meat and meat products which do not meet the standard requirement withdrawn and eliminated.

Article 32. Operators of animal slaughtering and meat processing establishments

- 32.1. The management of the establishment should be trained in all necessary stages of food technology and safety.
- 32.2. The management of establishments are primarily responsible for creation and implementation of the technological control system. A technological control system is established in order to assure meat safety and compliance and this system serves as an integral part of good manufacturing practice (GMP) adapted to the given situations and of the HACCP plan.
- 32.3. In order to fulfil technological control, the operator should officially appoint one or more employees who meet the requirements stipulated by a central governmental administrative body in charge of food issues as technological control officers.
- 32.4. The HACCP principles should be implemented at all stages of the food chain.
- 32.5. In order to implement corrective actions and maintenance operations in conformance with the performance objectives or criteria, an establishment should maintain a documented operations monitoring system.
- 32.6. An establishment should thoroughly document the results that do not meet the performance objectives or criteria and use them for analysis, corrections and preventive actions as rationales and

evidence.

- 32.7.** An establishment should provide authorized employees (technological control officer, state veterinary inspector, or an authorized veterinarian) conditions for performance of their duties sufficiently well and necessary equipment.
- 32.8.** In order to improve meat hygiene, a producer is to voluntarily or mandatorily introduce a quality assurance system which is to be approved by an authorized institution.
- 32.9.** In connection with implementation of the control following a slaughter of animals, the establishment operator should fulfil the following duties:
 - 32.9.1.** Create conditions for authorized veterinarians and state veterinary inspectors to conduct inspections at the post-mortem inspection point;
 - 32.9.2.** Provide conditions for the carcasses and other parts of the slaughter animal pertaining (together with the blood if it is feasible) to them to be distinguishable till the end of the inspection and monitoring;
 - 32.9.3.** Make all carcasses and other parts of the slaughter animal are available at the inspection point until the inspection is and conducted and conclusion is made;
 - 32.9.4.** Provide conditions, equipment and facilities allowing to place carcasses and pertaining parts available for differential identifications and to store them in positions preventing their cross-contamination until the results of further inspections for their safety are issued in case further inspections are deemed necessary;
 - 32.9.5.** If there's a contamination on the carcass due to sticking operation, the contaminated part must be cut off and disposed;
 - 32.9.6.** Provided that an authorized agency has detected the accumulation of heavy metal residues in the kidneys and livers of animals are higher than the tolerable level, deem these organs as regular rejects.

Article 33. Operators of primary production

- 33.1.** An operator of primary production should work to minimize risk of hazards and support endeavors of maintaining safety and compliance of meat for human consumption.
- 33.2.** Should routinely involve their herds in surveillance, monitoring and evaluation of the situations concerning diseases transmitted to humans and animals, participate in animal health improvement programs and, in case of occurrence of communicable animal diseases, should timely report in accordance to the due procedures.

- 33.3.** Introduction of good animal handling practice at the primary production level is of utmost importance for implementation of the HACCP system and it includes reports of animal health, hygiene, treatment and prevention of animals and information of the animal feed, their composition, and relevant environmental factors.
- 33.4.** Animal registration and marks should be designed to enable back-tracing the origin and these should allow tracing and inspections by administrative bodies.
- 33.5.** Producers should maintain maximally detailed records of their animal health in relevance with safety and compliance of meat for food. This information should be made available to meat processing establishments and should be included in the general digital database of animal health nominated by a governmental administrative body in charge of animal health.
- 33.6.** Have the microbiological and other indicators of the animal fodder tested, and the test records, sampling and minimum and maximum permitted levels of mycotoxin content defined.
- 33.7.** The primary production of animal products (livestock husbandry) should be conducted in an environment protected from all hazards to meat.

Article 34. Wholesalers and retailers

- 34.1.** Wholesalers and retailers are expected to observe the requirements described in Chapters 5 and 6 of this Regulation.
- 34.2.** Meat and meat product retailers should only accept and sell meat and meat product accompanied by veterinary and inspection certificates or with factory packing, labels and serial numbers.
- 34.3.** Employees performing classifying, packing and sales must meet the requirements described in Article 24 of this Regulation.
- 34.4.** Repacking of products which are vacuum sealed or packed in modified atmosphere packaging (MAP) is forbidden for wholesalers and retailers.
- 34.5.** Eateries and caterers should only accept meat and meat products produced at approved abattoirs and establishments to use in the food productions.
- 34.6.** Food producers and caterers must meet the requirements of meat and meat product transportation and storage described in articles 17 and 18 of the Technical Regulation.

Article 35. Officers authorized for technological controls to assure the health, safety and compliance of meat

- 35.1. Officers authorized to perform technological controls should be accredited and appointed or admitted by the central governmental administrative body in charge of food issues and they should monitor meat hygiene on behalf of the line ministry or under its supervision.
- 35.2. The central governmental body in charge of food issues should not necessarily appoint an officer authorized to perform technological controls to every enterprise and it can appoint one officer.
- 35.3. The officer authorized to perform technological controls should fulfil the duties of enforcement of meat hygiene requirements issued by relevant authorities in the production processes, inspect the observance and timely report the outcomes to the Ministry.
- 35.4. In order to ensure meat safety and compliance, the producer is expected to provide professional and methodological support to the technological control officer in instituting a technological control system as well as in planning and implementation of a meat hygiene program, good manufacturing practices, and HACCP.
- 35.5. The control officer has to analyze the records and evidences of the results that fail to meet the performance objectives or criteria, identify the causes and take actions for rectification and prevention in collaboration with the management of the enterprise.

Article 36. Requirements for state veterinary inspectors

- 36.1. Governmental administrative bodies in charge of animal health issues officially appoint persons with the profession of veterinarians who attended special training, have been accredited and possess the necessary skills and practice as veterinary control inspectors for the purpose of assuring hygiene, safety and compliance of production of meat and meat products.
- 36.2. Veterinary inspectors implement independent control of the activities of the factory veterinarians and officers who implement technological control and ensure that the standard operational instructions approved by relevant authorities are observed.
- 36.3. The comprehensive duties of veterinary inspectors are elaborated by governmental administrative bodies in charge of animal health issues and approved by the central governmental administrative body in charge of food issues.
- 36.4. To improve the animal health conditions in herders lot and in animal farms, the meat processing establishment should report the cases adversely affecting meat safety and compliance detected during animal slaughtering back to the primary industry operators.

Article 37. State veterinary control and technological control inspectors of specialized control agencies

- 37.1. State veterinary inspector implements controls on the operations of abattoirs and meat processing

establishment, monitor the implementation of laws, legislations, rules, procedures, standards and technical regulations issued by relevant authorities in the areas of animal health and the animal raw materials and products and issue evaluations and conclusions.

- 37.2. Issues conclusions whether the operations of abattoirs and meat processing establishments meet the veterinary and hygiene requirements.
- 37.3. Takes samples from products at technological processes of abattoirs and meat processing establishments as well as from their stored meat and meat products, and submits the samples for laboratory tests and make conclusions on their safeties.
- 37.4. Implements control on the programs of disinfections of the premises, facilities, equipment, storages, and transport vehicles of abattoirs and meat processing establishments as well as their good hygienic practices and HACCP plans and the implementations of these programs and plans.
- 37.5. State technological control inspectors implement technological controls in animal slaughtering, meat and meat product production and services and whether their raw materials and products meet the safety and quality requirements, take samples for tests, issue conclusions, and provide controls, examinations and assessments of observance of relevant laws, rules, procedures, standards and technical regulations.
- 37.6. Control the implementation of internal controls in food chains.
- 37.7. Implement preliminary control and issue conclusions on conformance with the due requirements for the buildings, factory facilities, equipment and supplies of meat and meat product establishments.

Article 38. Authorized veterinarians working at abattoirs or veterinarians working under contracts

- 38.1. If an establishment is unable to employ a full-time veterinarian, it can contract and cooperate with a veterinarian of a veterinary service unit in the local soum or district. In this case, the veterinarian contracting with the animal butchering enterprise should register the contract at the veterinary division of the local soum/district and receive an official letter of attorney.
- 38.2. Governmental administrative bodies in charge of animal health issues approve and ensure observance of the 'standard operation guidelines' for veterinarians.
- 38.3. The veterinarians should have attended special trainings for knowledge and practice of veterinary and hygiene examinations and inspections, and evaluation of organs and carcasses and should have been authorized.
- 38.4. Veterinarians involve animals, meat and raw materials in special control in the following cases:
 - 38.4.1. Extensive contamination of animals;
 - 38.4.2. Animals perished during transportation;

- 38.4.3. Detection of suspicion of any disease transmissible to humans and animals;
- 38.4.4. Detection or suspicion of any disease requiring animal quarantine;
- 38.4.5. Detection of an animal without any marking and with unknown origin;
- 38.4.6. The primary operator fails to submit information (including information concerning use of animal drugs and on veterinary and hygiene sanitary regimes) demanded by an authorized agency or such information is inadequate.
- 38.5. Have the microbiological and other indicators of the animal feed tested, and the test records, sampling and minimum and maximum permitted levels of mycotoxin content defined.

CHAPTER 9. MEAT AND MEAT PRODUCTS' TRACEABILITY SYSTEM

Article 39. Tracing and product withdrawal

- 39.1. **Tracing the origin of animals, meat and meat products:**
 - 39.1.1. Food business operators should maintain registry of food raw materials and products for their traceability at the pertaining section of the food chain and provide conditions for authorized professional institutions to trace back the products and uphold safety at all stages of the food chain basing on those registries.
 - 39.1.2. Abattoirs should be connected to a general online veterinary system and introduce the tracing system implemented by a governmental administrative body in charge of animal health issues.
 - 39.1.3. Technologist of the establishment should create conditions so that the information of raw materials and products is entered into the general online registry database every time they are supplied to all stages of the food chain.
 - 39.1.4. Passing on to a participant in the next section of the food chain, entry into the tracing registry book should be consistently maintained both in paper and digitally.
 - 39.1.5. The following documents for tracing should accompany animals, animal raw materials and products supplied for food consumption.
 - 39.1.6. Live animals should be accompanied by animal registration and health certificates while animal raw materials and products should be accompanied by veterinary and hygiene certificates.
 - 39.1.7. The raw materials and products of meat processing establishments should be accompanied by the results of internal hygiene and safety control or tests by an accredited laboratory.
 - 39.1.8. For tracing of imported food raw materials and products, the import statement, customs declaration number and laboratory test results should accompany them.

- 39.1.9.** Operators should introduce a tracing system of the products at every stage of the technological process beginning from animal receiving, utilize codes at the production stages from raw material to final product and develop a tracing database for retrieval of information of products and their components at the stages of raw material reception, processing, supplying and distribution.
- 39.1.10.** Food wholesalers and retailers should provide payment receipts at sales of raw materials and products to the final purchaser.
- 39.2. Recall and withdrawal of meat and meat products:**
- 39.2.1.** If a meat product is deemed to be potentially present adverse health effects, the supplier is expected to initiate a withdrawal.
- 39.2.2.** The withdrawal is to be communicated to a relevant control agency, recipients and the participants in the next stage of the food chain.
- 39.2.3.** Food raw materials or products should be withdrawn if an authorized institution identifies a food product as the source of an incident of food poisoning or infections, if a food product dissatisfies the food safety requirements or has been contaminated, if inspections reveal a food product is fake with misleading labelling or if a raw material or product has been warned to be a food safety concern by an international network.
- 39.2.4.** The meat or meat products which have been withdrawn should be stored, isolated, and sealed recording the year, month and date of withdrawal until a control agency decrees a decision.
- 39.2.5.** A registry of decisions concerning withdrawals of meat and meat products should be maintained.
- 39.2.6.** A procedure and guidelines of withdrawal of meat or meat product from the food chain should be adopted, an officer in charge of the withdrawal process should be appointed and the officer in charge of the withdrawal should manage the process with accounts of the quantity of the raw material or product supplied, quantity of the sales and quantity in the inventory in accordance to “Records of distribution of food raw materials and products in the food chain”.
- 39.2.7.** Food raw materials and products failing to meet the due requirements should be withdrawn from the next stage of the chain within 24-72 hours basing on a decision of an authorized agency and the “Food raw material and product withdrawal recording and reporting” form should be filled.
- 39.2.8.** The officer in charge of the withdrawal process should record the withdrawal product according to the relevant procedures with the withdrawal date and time and store it labelled, marked, sealed and isolated from other food products until a decision is issued by an authorized institution.
- 39.2.9.** The results of the completion of a meat and meat product withdrawal should be reported to the control agency, consumers and the entrepreneurs in the next stage of the food chain in accordance to relevant procedures.

- 39.2.10.** The reasons of withdrawal of the meat and meat products, the actions taken, the progress of the action, warnings and further actions are to be described in the reports.
- 39.2.11.** On an occasion a state inspector makes a decision to eliminate meat and meat products that present hazards to human life and health, which are of unclear origin, which have perished with degraded quality, and which cannot be used for any other purpose, the entrepreneur in the food industry should take part in eliminating the products at a dedicated site.
- 39.2.12.** Meat and meat products with expired shelf life be could be withdrawn and their reentry into production is forbidden.

Article 40. Re-processing of meat and meat products

- 40.1.** Withdrawn or recalled products shall be handled in accordance with one of the measures specified in articles 13.8.1 and 13.8.2 of this regulation.

Article 41. Disposal of recalled and withdrawn meat and meat products

- 41.1.** Establishment operators should dispose the industrial waste adhering to a proper technology with no adverse effect on human health and environment.
- 41.2.** A commission should be appointed concerning the elimination of expired meat and meat products to make necessary decisions and monitor their implementation.
- 41.3.** Food business operators should implement elimination of meat and meat products at a dedicated site which meets the due requirements in presence of a state inspector and, if it is necessary, of two independent evidences. The participating parties should jointly produce a report on this operation.
- 41.4.** In case of occurrence of the situations described in 15.1 of the Law on Quarantine Control and Inspections at Passing of Animals, Plants and their Raw Materials through the State Border, the elimination of food raw materials and products should be performed under the supervision of a state inspector by a working group appointed under a decree of the governor of the soum/district where the frontier port or inland customs is located. A report on elimination of meat, meat product or casings is produced and attached to the case file.

CHAPTER TEN. DOCUMENTATIONS

Article 42. Establishment operators should complete the following documentation

- 42.1.** Should issue a list of technological guidelines observed at the enterprise, check the presence of all required technological guidelines, complete the set of the guidelines and should have train the workers and employees.
- 42.2.** Issue a master registry list, check it for completeness, make the list complete, and officially appoint employees to be in charge of it.

- 42.3.** Issue a master list of mandatory standard operations guidelines, check whether all required guidelines are in place, make it complete and should have trained the employees to follow the guidelines.
- 42.4.** Should have issued a master list of MNS and ISO standards, rules and procedures in use, and have checked whether all required rules and procedures are in place.
- 42.5.** Should have issued a list of a handbook of quality, relevant laws and legislations, official assignments and programs and should have introduced to all employees.
- 42.6.** Should have a guideline on maintenance of registration documents, completion, storage and utilization of archive items and should consistently monitor their implementation.

ANNEX A.1
 OF THE TECHNICAL REGULATION OF
 PRODUCTION AND TRADE OF MEAT AND MEAT PRODUCTS

**LIST OF HIGHLY CONTAGIOUS AND INFECTIOUS DISEASES PROHIBITING
 INTERNATIONAL TRADE OF ANIMALS AND PRODUCTS OF ANIMAL ORIGINS**

№	Key word	Disease name in Mongolian	Disease name in English	Disease name in Russian
1	PPR	Бог малын мялзан	Peste des petitsruminants	Чума мелких жвачных
2	FMD	Шүлхий	Foot and mouth disease	Ящур
3	SP/GP	Хонь, ямааны цэцэг	Sheep pox and goat pox	Оспа овец и коз
4	CSF	Гахайн сонгомол мялзан	Classical swine fever	Классическая чума свиней
5	ASF	Гахайн африк мялзан	African swine fever	Африканская чума свиней
6	HPAI	Өндөр хоруу чанартай шувууны томуу	Highly pathogenic avian influenza	Высокопатогенный грипп птиц
7	CCPP	Ямааны годрон	Contagious caprine pleuropneumonia	Чума коз
8	Rp	Үхрийн мялзан	Rinderpest	Чума рогатого скота
9	CBPP	Үхрийн цээж	Contagious bovine pleuropneumonia	Контагиозная плевропневмония крупного рогатого скота
10	MCF	Хорт салст халуурал	Malignant catarrhal fever	Злокачественная катаральная горячка
11	NCD	Шувууны тахал	Newcastle disease	Болезнь ньюкасл
12	Bt	Хэл хөхрөх өвчин	Bluetongue	Катаральная лихорадка овец /Бёюдáíáà/
13	Lis	Листериоз	Listeriosis	Листериоз
14	LSd	Үхрийн арьс товруутах өвчин	Lumpy skin disease	Заразный узелковый дерматит крупного рогатого скота
15	AHS	Адууны африкийн мялзан	African horse sickness	Африканская чума лошадей

ANNEX A.2
OF THE TECHNICAL REGULATION OF
PRODUCTION AND TRADE OF MEAT AND MEAT PRODUCTS

**LIST OF CONTAGIOUS DISEASES PROHIBITING DOMESTIC TRADE OF
ANIMALS AND PRODUCTS OF ANIMAL ORIGINS**

№	Key word	Disease name in Mongolian	Disease name in English	Disease name in Russian
1	HS	Цусан халдвар	Haemorrhagic septicaemia	Пастереллез
3	SI	Гахайн томуу	Swine influenza	Свиной грипп
4	EP	Адууны цэцэг	Equine pox	Оспа лошадей
5	CP	Тэмээний цэцэг	Camel pox	Оспа верблюдов
6	EE	Адууны тархины халдварт үрэвсэл	Equine encephalomyelitis	Энцефаломиелиты лошадей
8	PRRS	Гахайн үржил, амьсгалын хам шинж	Porcine reproductive and respiratory syndrome	Репродуктивно-респираторный синдром свиней
9	BRT	Үхрийн ринотрахеит	Bovine rinotracheitis	Инфекционный ринотрахеит
10	BVD	Үхрийн диарей	Bovine viral diarrhoea	Вирусная диарея
11	EBL	Үхрийн лейкоз	Enzootic Bovine leucosis	Лейкоз крупного рогатого скота
12	JD	Иж сүрьеэ	Johne's Disease (Paratuberculosis)	Паратуберкулез
13	EVA	Адууны вирусын артерит	Equine viral arteritis	Вирусный артериит лошадей
14	EIA	Адууны цус багасах халдварт өвчин	Equine infectious anaemia	Инфекционная анемия лошадей
15	Dour	Нийлүүлгийн өвчин	Dourine	Случная болезнь лошадей
16	CEC	Тэмээний амруу	Contagious ecthyma of camel	Заразная эктима верблюда
17	MV	Маеди висна	Maedi-Visna	Меди-висна
18	LPAI	Сул хоруу чанартай шувууны томуу	Low Pathogenic Avian Influenza	Птичий грипп
19	OPA	Аденоматоз	Ovine pulmonary adenocarcinoma (Adenomatosis)	Аденоматоз

22	TBE	Хачигт энцефалит	Tick borne encephalitis	Клещевой энцефалит
23	EAE	Хонины энзоот зулбах	Enzootic abortion of ewes	Энзоотический аборт овец
24	HC	Үнхэлцэг усжих өвчин	Heartwater-Cowdriosis	Инфекционный гидроперикардит
25	SVd	Гахайн цэврүүт өвчин	Swine vesicular disease	Везикулярная болезнь свиней
26	Theil	Тейлериоз	Theileriosis	Тейлериоз
27	VEE	Венесуэлийн адууны энцефалит	Venezuelan equine encephalitis	Венесуэльский лошадиный энцефалит
29	CA	Сохор догол	Contagious agalactia	Инфекционная агалактия
30	Str	Сахуу	Strangles	Удушающие
31	CE	Шөвөг яр	Contagious ecthyma	Контагиозная эктима
32	EB	Адууны бабезиоз	Equine Babesiosis (Babesia caballi)	Конский Бабезиоз
33	GD	Шувууны гамбора	Gumbora disease	Болезнь Гумбора
34	MD	Марекийн өвчин	Marek's disease	Болезнь Марека
35	ERP	Адууны ринопневмони	Equine rhinopneumonitis	Ринопневмонии лошадей
36	Nec	Некро бактериоз	Necrobacteriosis	Некробактериоз
37	Mam	Дэлэнгийн өмрөө	Mammilits	Мамиллит крупного рогатого скота
38	MPP	Гахайн микоплазмоз	Mycoplasma (Enzootic) Pneumoniae Pigs	Микоплазмоз свиней
39	MG/MS	Шувууны миксоплазмоз	Avian mycoplasmosis	Микоплазмоз птиц
40	PD	Шувууны пуллороз	Pullorum disease	Пуллороз
42	ALT	Шувууны ларинготрахеит	Avian infectious laryngotracheitis	Ларинготрахеит птиц
43	Bb	Үхрийн бабезиоз	Bovine babesiosis	Бабезиоз крупного рогатого скота
44	EP	Адууны пироплазмоз	Equine piroplasmosis	Пироплазмоз лошадей
45	SchVI	Шмалленбергийн вирус ирүсын халдвар	Schmallenberg Virus Infection	Вирусная инфекция Шмалленберга

ANNEX A.3
OF THE TECHNICAL REGULATION OF
PRODUCTION AND TRADE OF MEAT AND MEAT PRODUCTS

**LIST OF DISEASES THAT TRANSMIT FROM ANIMALS TO HUMANS AND CAUSE
FOOD-BORNE ILLNESSES**

№	Key word	Disease name in Mongolian	Disease name in English	Disease name in Russian
1	Anth	Боом	Anthrax	Сибирская язва
2	Bruc	Бруцеллэз	Brucellosis	Бруцеллэз
3	Rab	Галзуу	Rabies	Бешенство
4	Gl	Ям	Glanders	Сап
5	BSE	Үхрийн тархины эд сархиагдах эмгэгшил	Bovine spongiform encephalopathy	Губкообразной энцефалопатии крупного рогатого скота
6	Tub(BT)	Сүрьеэ	Tuberculosis (Bovine tuberculosis)	Туберкулез
7	Lis	Листерииоз	Listeriosis	Листерииоз
8	AHS	Адууны африкийн мялзан	African horse sickness	Африканская чума лошадей
9	RVF	Рифт хөндийн халуурал	Rift valley fever	Лихорадка Рифт-Валли
10	Black	Дуут хавдар	Blackleg	Эмфизематозный карбункул
11	Entox	Дотрын халдварт хордлого	Enterotoxemia	Энтеротоксемия
12	Sal	Иж балнад	Salmonellosis	Сальмонеллез
13	Bot	Ботулизм	Botulism	Ботулизм
14	WNF	Баруун Нилийн халдвар	West Nile fever	Лихорадка Западного Нила
15	Tet	Зогсоо	Tetanus	Столбняк
16	Lep	Лептоспироз	Leptospirosis	Лептоспироз
17	Enbac	Энтеро бактериоз	Enterobacteriosis	Энтеро бактериоз
18	Tul	Туляреми	Tularemia	Туляреми
19	QF	Кучичрэг	Q fever	Лихорадка Ку
20	BGC	Кампило бактериоз	Bovine genital campylobacteriosis	Кампило бактериоз
21	SE	Гахайн ёлом	Swine erysipelas	Рожа свиней
22	VS	Амны цэврүүт үрэвсэл	Vesicular stomatitis	Везикулярный стоматит

23	CbL	Коли бактериоз	Colibacteriosis	Коли бактериоз
24	ESal	Гүүний иж балнад	Equine Salmonellosis	Сальмонеллезный аборт кобыл
25	EL	Хулгана яр	Epizootic lymphangitis	Эпизоотический лимфангит
26	SSal	Гахайн сальмонеллэз	Swine Salmonellosis	Сальмонеллез свиней
27	AT	Шувууны сүрьеэ	Avian tuberculosis	Птичий туберкулез
28	JE	Япон энцефалит	Japanese encephalitis	Японский энцефалит
29	Sc	Скрепи	Scrapie	Скрепи
30	Ech	Бэтэг	Echinococcus	Эхинококкоз
31	Tri	Трихинелл	Infection with Trichinella	Трихинеллез
32	Chl	Хламидоз	Chlamydia Infection	Хламидиоз

ANNEX A.4
OF THE TECHNICAL REGULATION OF
PRODUCTION AND TRADE OF MEAT AND MEAT PRODUCTS

**LIST OF ANIMAL DISEASES DETECTABLE DURING THE ANTE-MORTEM
INSPECTION**

№	Key word	Disease name in Mongolian	Disease name in English	Disease name in Russian
1	FMD	Шүлхий	Foot and mouth disease	Ящур
2	Rab	Галзуу	Rabies	Бешенство
4	BVD	Үхрийн диарей	Bovine viral diarrhoea	Вирусная диарея
5	EBL	Үхрийн лейкоз	Enzootic Bovine leucosis	Лейкоз крупного рогатого скота
6	BSE	Үхрийн тархины эд сархиагдах эмгэгшил	Bovine spongiform encephalopathy	Губкообразной энцефалопатии крупного рогатого скота
7	QF	Ку чичрэг	Q fever	Лихорадка Ку
8	Black	Дуут хавдар	Blackleg	Эмфизематозный карбункул
9	Bot	Ботулизм	Botulism	Ботулизм
10	Lep	Лептоспироз	Leptospirosis	Лептоспироз
11	Anth	Боом	Anthrax	Сибирская язва
12	Sal	Иж балнад	Salmonellosis	Сальмонеллез
13	HS	Цусан халдвар	Haemorrhagic septicaemia	Пастереллез
14	ESal	Гүүний иж балнад	Equine Salmonellosis	Сальмонеллезный аборт кобыл
15	SSal	Гахайн сальмонеллэз	Swine Salmonellosis	Сальмонеллез свиней
16	CSF	Гахайн сонгомол мялзан	Classical swine fever	Классическая чума свиней
17	ASF	Гахайн африк мялзан	African swine fever	Африканская чума свиней
18	SE	Гахайн ёлом	Swine erysipelas	Рожа свиней
19	BGC	Кампило бактериоз	Bovine genital campylobacteriosis	Кампило бактериоз

ANNEX A.5
OF THE TECHNICAL REGULATION OF
PRODUCTION AND TRADE OF MEAT AND MEAT PRODUCTS

LIST OF DISEASES DETECTABLE DURING THE POST-MORTEM INSPECTIONS

№	Key word	Disease name in Mongolian	Disease name in English	Disease name in Russian
1	Dour	Нийлүүлгийн өвчин	Dourine	Случная болезнь лошадей
2	CEC	Тэмээний амруу	Contagious ecthyma of camel	Заразная эктима верблюда
3	MV	Маеди висна	Maedi-Visna	Меди-висна
4	LPAI	Сул хоруу чанартай шувууны томуу	Low Pathogenic Avian Influenza	Птичий грипп
5	EAE	Хонины энзоот зулбах	Enzootic abortion of ewes	Энзоотический аборт овец
6	VS	Амны цэврүүт үрэвсэл	Vesicular stomatitis	Везикулярный стоматит
7	Theil	Тейлериоз	Theileriosis	Тейлериоз
8	CE	Шөвөг яр	Contagious ecthyma	Контагиозная эктима
9	EB	Адууны бабезиоз	Equine Babesiosis (Babesia caballi)	Конский Бабезиоз
10	ERP	Адууны ринопневмони	Equine rhinopneumonitis	Ринопневмонии лошадей
11	Nec	Некро бактериоз	Necrobacteriosis	Некробактериоз
12	Bruc	Бруцеллэз	Brucellosis	Бруцеллэз
13	Tub(BT)	Сүрьеэ	Tuberculosis (Bovine tuberculosis)	Туберкулез
14	Ech	Бэтэг	Echinococcus	Эхинококкоз
15	Tri	Трихинелл	Infection with Trichinella	Трихинеллез
16	JD	Иж сүрьеэ	Johne's Disease (Paratuberculosis)	Паратуберкулез
17		Цусны үжил	Septicemia	сепсис
18		Цус хордол	Toxaemia	токсикоз
19		Тархмал буглаа	Disseminated abscess	Распространенный абсцесс
20		Тархмал хаван	Disseminated edema	Распространенный водянка
21		Хорт хаван	Malignant edema	Злокачественный отек

ANNEX A.6 OF THE TECHNICAL REGULATION OF PRODUCTION AND TRADE OF MEAT AND MEAT PRODUCTS

SPECIFIC REQUIREMENTS FOR ANIMAL CASING PROCESSING ESTABLISHMENTS

Article 1. Requirements for processing, storing and transporting raw intestines

- 1.1. The animal intestines intended for casing processing establishments must originate from an approved establishment in accordance with Articles 3.6 of this technical regulation and must derive from animals that meet the animal health requirements set forth in Chapter 2 of this regulation.
- 1.2. After slaughtering, the intestines are pre-treated by pulling, washing, and salting. The pre-treated casings are put in bundles or nets and stored inside a cold storage in closed casks or baskets.
- 1.3. The pre-treated casings processed in accordance with article 1.2 of annex A.6 of this regulation must be stored in a temperature controlled and monitored cold storage. Temperature is $(0-4)^{\circ}\text{C}$ for storage of up to 30 days and less than -18°C for storage over 30 days.
- 1.4. The pre-treated casings processed and stored in accordance with articles 1.2 and 1.3 of annex A.6 of this regulation must be transported by temperature controlled reefer trucks or containers.
- 1.5. Pursuant to article 20.1.4 of the Animal Health Law, it is prohibited to source or sell animal casings from a territory under quarantine or restriction measures set by a competent authority.

Article 2. General requirements for the design and facilities of animal casing processing establishments:

- 2.1. The location, environment, and hygienic zones of the casing processing establishment must meet the requirements set forth in articles 10.1.1-10.1.3 of this regulation.
- 2.2. The facilities of the casing processing establishment must meet the requirements set forth in articles 12.1.1-12.1.5 and 12.1.7-12.1.12 of this regulation.
- 2.3. The establishment must have separate entry and exit doors for establishment workers, administrative personnel, visitors, raw material receiving, loading, and waste disposal.
- 2.4. The establishment for “cleaning operations” must have the following premises and rooms.
 - 2.4.1. Pre-treated casing receiving and quality control room.
 - 2.4.2. Washing, cleaning, scraping, salting or drying and packing room.
 - 2.4.3. Cleaned casing storage or storing space.
 - 2.4.4. Salt storage.
 - 2.4.5. Packing material and label storage.
 - 2.4.6. Waste collection, processing, and disposal room.

- 2.5. The establishment for “sorting operations” must have the following premises and rooms.
 - 2.5.1. Cleaned casing receiving and quality control room.
 - 2.5.2. Cleaned casing storage.
 - 2.5.3. Selecting (Calibration), grading, classifying, salting, bundling, and packing room.
 - 2.5.4. Salt storage.
 - 2.5.5. Packing material and label storage.
 - 2.5.6. Sorted casing storage.
- 2.6. Establishments for cleaning and sorting operations must have the following premises and rooms.
 - 2.6.1. Workers’ social area.
 - 2.6.2. Storage for cleaning and disinfecting products, tools, and equipment.
 - 2.6.3. Technical room.
 - 2.6.4. Cafeteria and leisure room.
- 2.7. Design and layout of workers’ social area of the casing processing establishment must meet the requirements set forth in articles 12.5.1-12.5.11 and 12.5.13-12.5.14 of this technical regulation.

Article 3. Infrastructure of the casing processing establishment

- 3.1. **Energy supply, heating, ventilation and lighting requirements.**
 - 3.1.1. The energy supply and heating of the casing processing establishment must meet the requirements set forth in articles 13.1.1-13.1.5 of this technical regulation.
- 3.2. **Ventilation**
 - 3.2.1. The ventilation of the casing processing establishment must meet the requirements set forth in articles 13.5.1-13.5.2 of this technical regulation as well as the following.
 - 3.2.2. Ventilation systems should be designed and constructed so that air does not flow from contaminated areas to clean areas, cause unpleasant odors and contaminate exterior environment, and allow for adequate maintenance and cleaning.
 - 3.2.3. If the ventilation systems work in conjunction with the heating systems, the technological room must be equipped with a thermostat and the temperature should be controlled and set at +12⁰C.
- 3.3. **Lighting**
 - 3.3.1. The lighting of the casing processing establishment must meet the requirements set forth in articles 13.4.1-13.4.2 of this technical regulation as well as the following depending on the technological features:
 - 3.3.1.1. Raw material receiving and processing rooms: 500 lux.
 - 3.3.1.2. Packaging and quality control room: 550-650 lux.
 - 3.3.1.3. All other areas of the establishment: No less than 220 lux.
- 3.4. **Water Supply**
 - 3.4.1. The water supply, quality, and safety of the casing processing establishment must meet the requirements set forth in articles 13.2.1, 13.2.5 and 13.2.7 of this technical regulation.
 - 3.4.2. Water pipes must be made out of materials appropriate for food processing establishments.

3.4.3. Water hygiene and safety must be analyzed by a competent laboratory twice per year.

3.5. Waste disposal requirements

3.5.1. Effluent standards of casing processing establishments and wastewater disposal equipment must meet the requirements set forth in articles 13.6.1-13.6.9 of this technical regulation.

3.5.2. Solid waste management of the casing processing establishment must meet the requirements set forth in articles 13.7.1, 13.7.2, 13.7.4 and 13.7.6-13.7.10 of this technical regulation.

3.6. Road and area requirements

3.6.1. The exterior roads, areas, and environment possessed by the casing processing establishment must meet the requirements set forth in articles 13.3.1-13.3.2 of this technical regulation.

Article 4. Requirements for the casing processing establishment operations

4.1. Technological requirements

4.1.1. The casing processing establishment must have technological guidelines and flow charts for cleaning and sorting operations.

4.1.2. Cleaning operations are based on First In, First Out principle.

4.1.3. Inspection checklist for receiving raw material includes contamination, color, odor, length, mechanical damage, diameter, pre-treatment method, packaging hygiene and documentation.

4.1.4. Approved establishments intended to export natural casing derived from small animals to EU member states must separate and dispose the “Ileum” of sheep and goat intestines after slaughtering or at the quality control line of the cleaning operations.

4.1.5. Raw intestines must not be left out in the open or stored overnight inside the establishment without any pre-treatment method.

4.1.6. During the cleaning process of sheep and goat intestines, the intestinal mucosa, Peyer’s Patches and the outer layers (tunica muscularis and tunica serosa) are removed completely. After the cleaning process, natural casings consist of the tunica submucosa, which is transferred to salting process.

4.1.7. Pig and cattle intestines must be cleaned by an appropriate cleaning equipment before the salting or drying process.

4.1.8. Horse intestines must be de-fatted and cleaned before salting, drying, or final processes.

4.1.9. Scraped, and cleaned intestines must be treated with dry salt (> 97% NaCl) or directly packed in a container with salt-water brine (0.8% Aw) and stored according to Annex 4.2.2 of this Regulation.

4.1.10. All packaging material (casks, liners etc.) and other products (rings, nets, tubes, etc.) that come directly into contact with the natural casings need to be clean, sanitized, and suitable for use in contact with foodstuffs.

4.1.11. After the cleaning process, at selection, the caliber, length per strand and quality (e.g. holes) of the natural casing are determined by filling the casings with potable water and applying a pressure of 0.3 kg/cm².

4.1.12. Sorted beef, sheep, goat, and hog casings must either be salted with sodium chloride (NaCl), either dry or as saturated brine ($a_w < 0,80$), for a continuous period of 30 days or longer, at temperature of 20°C or above
Or
salted with phosphate supplemented salt containing 86,5% NaCl, 10,7% Na_2HPO_4 and 2,8% Na_3PO_4 (weight/weight/weight), either dry or as saturated brine ($a_w < 0,80$), for a continuous period of 30 days or longer, at a temperature of 20°C or above.
Sorted casing of other species must be salted with sodium chloride (NaCl) for 30 days or dried.

4.1.13. Establishments of cleaned and sorted casings must have salt meters available for daily measurements and registrations.

4.1.14. When the casings are treated with drying technology, relative humidity and water activity levels must be monitored and recorded to ensure the levels are in accordance with international and importing country requirements.

4.1.15. The use of antimicrobials are strictly prohibited in all stages of casing pre-treatment, cleaning, and sorting operations and in distribution chains.

4.2. Requirements for cooling and freezing technology

4.2.1. Raw intestines' cold storage temperature setting is between -18°C and -4°C. The temperature must be regularly monitored and recorded.

4.2.2. Cleaned casings must meet the salting and storing requirements set forth in Annex 4.1.11 of this Regulation and the storage temperature must be regularly monitored and recorded.

4.2.3. Dried natural casings' storage conditions must meet international and importing standards.

4.2.4. Natural casings' storage temperature could be set in accordance with requirements set forth in the veterinary agreement with the importing country.

4.2.5. Raw intestines and natural casings storages must have adequate lighting, floating or portable shelves as well as equipped with thermostats and humidity meters.

4.3. Production records, packaging, and transportation

4.3.1. Records of processing, production and distribution starting with the reception from a slaughterhouse up until shipment to a specific export market should be kept and retained for a period that exceeds the shelf-life of the product of at least one year.

4.3.2. Raw intestines intended for casing processing establishments must derive from an approved abattoir or small abattoir and be accompanied by post-mortem veterinary certificates.

4.3.3. When an establishment approved by the importing country's competent authority intends to export combined casings supplied from different domestic establishments, such domestic establishments must also be approved by the importing country's competent authority.

4.3.4. Types and quantities of intestines received at the casing processing establishment must match the types and quantities of natural casings supplied in domestic and export markets by the same establishment. (production waste shall be considered).

- 4.3.5.** The casing processing establishment must keep a regular record of edible salt along with its origin documents and lab analysis provided by the competent authority.
- 4.3.6.** The casing processing establishment must obtain a veterinary inspector's conclusion and a veterinary certificate prior to supplying processed casings in the domestic market. The veterinary certificate must indicate the place of origin, type, and quantity of the processed casings as well as the manufacturer's name.
- 4.3.7.** Cleaned and sorted casings intended for domestic market must have labels and origin documents in accordance with the requirements set forth in article 12.4 of the "Food Safety Law".
- 4.3.8.** Labels of the natural casings intended for export may be in accordance with relevant laws of the importing country and requirements set forth in the agreement with the receiving party.
- 4.3.9.** Raw intestines and cleaned casings must be transported in food-grade plastic casks or sealed polyethylene bags.
- 4.3.10.** Sorted casings may be packaged in food-grade plastic casks with lids, containers, or vacuum bags.
- 4.3.11.** Transportation of cleaned and sorted casings must be temperature controlled and monitored.
- 4.3.12.** Packaging and storage of dried casings must be in accordance with international standards and guidelines or meet the requirements of the importing country and records must be kept.
- 4.3.13.** Prior to export, the casings must be analyzed for microbiological and chemical residues by a competent third-party laboratory to ensure safety and records of the analysis must be kept for 3 years.
- 4.3.14.** The hygiene and safety indicators of the casings to be exported must meet the following requirements:

No	Test name	Maximum permissible level
1	Number of aerobic bacteria (1 g-d)	$5 \cdot 10^6$
2	Intestinal bacteria (1 g-d)	$1 \cdot 10^4$
3	Staphylococcus (1 g-d)	$1 \cdot 10^3$
4	Sulphite reducing chlostridia-spores (1 g-d)	$1 \cdot 10^3$
5	Chloramphenicol residue (1 kg-d)	0.00µg/kg
6	Nitrofurantoin residue (1 kg-d)	0.00µg/kg

- 4.3.15** Veterinary and sanitary certificates shall be issued by the competent authority based on the test results specified in articles 4.3.13 and 4.3.14 of annex A.6 of this regulation.
- 4.4. Hygiene requirements for equipment and tools**

- 4.4.1. The equipment and tools of the casing processing establishment must meet the requirements set forth in articles 12.6.4-12.6.6 and 12.6.9-12.6.10 of this technical regulation.
- 4.4.2. The establishment premises must be equipped with thermostats and relative humidity meters.
- 4.4.3. The entry ways of raw materials receiving, quality control, packaging, and processing rooms of the establishment must have hot and cold potable water supply and must be equipped with censored sinks, liquid soaps, hand disinfectants, paper towels, and trash cans.
- 4.4.4. Equipment and tools used in all stages of casing processing operations must be non-corrosive and should be designed and constructed to ensure that, they can be adequately cleaned, disinfected and maintained to avoid the contamination of foodstuffs.
- 4.4.5. Tables, benches, shelves, portable trolleys, containers, baskets, shelves, scrapers, casks, gauges, table tops and legs used in the production process may be made of food-grade plastic material.
- 4.4.6. Sufficient amounts of appropriate equipment and tools must be placed all around the establishment premises for cleaning and disinfecting workplaces, equipment, and tools.
- 4.5. **Cleaning and disinfection requirements for the establishment premises and equipment**
- 4.5.1. Cleaning and disinfection of the premises and equipment should be done according to an implemented cleaning and disinfection program that meets the requirements set forth in articles 20.1-20.15 of this technical regulation. The maintenance plan and cleaning and disinfection program should prevent contamination (physical, chemical, biological) of the natural casings.
- 4.5.2. Based on the degree of contamination of the workplace, equipment and tools, and the risk of contamination, the cleaning and disinfection program should ensure that all parts of the establishment are appropriately clean, including cleaning equipment. To monitor the suitability and effectiveness of the cleaning activities periodical verification should be done via hygiene inspections (e.g. daily) and microbiological sampling (e.g. weekly).
- 4.5.3. For cleaning the premises use hot water between 55 and 65°C. For disinfection and sterilization, use hot water at or above 82°C.
- 4.5.4. Exterior and interior sterilization of the premises must be carried out by an approved veterinary service unit in accordance with article 27.1.1 of the “Animal Health Law”. The signed acts by the service provider containing the name and purpose of the substances used for sterilization must be kept.
- 4.5.5. Records of cleaning and disinfection must be kept electronically or as hard-copies for 3 years.
- 4.6. **Pest and rodent control in the establishment premises**
- 4.6.1. Casing processing operators must implement measures to prevent, detect and control pests, insects and rodents in and around the premises of the establishment in

accordance with the requirements set forth in articles 21.1-21.7 of this technical regulation.

- 4.6.2.** Non-food waste generated during the cleaning operations of sheep, goat, and pig intestines must be packed in tightly closed containers and removed from the establishment at the end of each shift to be disposed at a designated disposal point. Alternatively, the waste may be sent to a contracted waste processing plant and records must be kept. Containers used for transportation of waste must be washed and cleaned with hot water before re-entering the establishment.

Article 5. Health, sanitary, and hygiene requirements for the establishment workers

5.1. Health and hygiene requirements for workers

- 5.1.1.** Health requirements for workers must meet the requirements set forth in articles 24.1.1-24.1.7 of this technical regulation.
- 5.1.2.** Sanitary and hygiene requirements for workers must meet the requirements set forth in articles 24.2.1-24.2.4 of this technical regulation.
- 5.1.3.** Workers' occupational safety and health requirements must be in accordance with articles 24.3 and 24.4 of this technical regulation.
- 5.1.4.** Workers must use disposable gloves, cuffs, and aprons in processes with high risks of contamination.
- 5.1.5.** All workers engaged in foodstuff operations who come directly or indirectly into contact with foodstuffs should be trained, and/or instructed in food hygiene principles and practices to a level appropriate to the operations they are to perform. Training records must be kept.

Article 6. Requirements for cleaning and sorting operators

- 6.1.** Cleaning and sorting operations of casings must be carried out by a legal entity inspected and approved by a competent authority.
- 6.2.** The daily operations of semi-finished and finished products' establishments must be managed by a sanitation manager appointed by the director of the legal entity.
- 6.3.** The manager must possess a university degree in food technology and veterinary medicine, or have specialized training in food safety and quality control.
- 6.4.** The casing processing establishment must implement the following programs and plans.
- 6.4.1.** Technological control program.
- 6.4.2.** Hazard Analysis Critical Control Point (HACCP).
- 6.4.3.** Sanitary program.
- 6.4.4.** An emergency response plan to product recalls due to emergency situations which may pose a risk to public health.

Article 7. Veterinary and sanitary conditions for imported casings

- 7.1.** Origin animals for imported casings must be born and raised in a country free from highly infectious animal diseases and the processing establishment must be a foreign legal entity approved by a Mongolian competent authority.
- 7.2.** Imported casings must derive from slaughter animals on which ante and post mortem inspections were conducted under the supervision of a competent veterinary inspector of the exporting country.
- 7.3.** Imported casings are not allowed to be processed if

- the imported casing derived from countries with infectious animal diseases, - have not been inspected by a border veterinary inspector at entry,
- or have not been confirmed to be free from infectious animal diseases on the veterinary certificate issued by the competent authority of the exporting country.

- 7.4.** Mongolian competent authority may inspect approved foreign casing processing establishments to verify the implementation of imported casing requirements.
- 7.5.** Entry of imported casings may immediately be denied if the approved foreign establishment does not meet the documentation requirements.
- 7.6.** The veterinary certificate of the imported casings must include the following in English:
 - 7.6.1.** The casing's type, quantity (in bundles)¹, net weight and description of its packaging.
 - 7.6.2.** The animal and country of origin from (include the type and birthplace of the animal of origin).
 - 7.6.3.** Name, address, and registration number of the approved foreign casing processing establishment.
 - 7.6.4.** Proof that the veterinary authority of the exporting country is not contaminated with infectious animal pathogens and the casings have been appropriately received and stored in a hygienic manner at an approved establishment.
 - 7.6.5.** If the casings originate from a country other than the exporting country, the competent authority of the exporting country must conduct inspections and confirm that the veterinary certificate issued by the competent authority of the third country proves that the imported casings are free from infectious animal diseases.
- 7.7.** Imported casings shall meet the veterinary, sanitary, and hygiene requirements for imported meat and meat products set forth in article 25 of chapter 5 of this regulation.

¹ A bundle means the casings bundled at 100 yards or 91.4 m in length.