



## ACCREDITATION CRITERIA FOR OVERSEAS ESTABLISHMENTS

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Disclaimer: where necessary, additional relevant requirements may be imposed.

**A. DEFINITION**

<b><i>Ante-mortem inspection</i></b>	Any procedure or test conducted by a competent person on live animals for the purpose of judgement of safety and suitability and disposition.
<b><i>Carcass</i></b>	The body of an animal after dressing.
<b><i>Contaminant</i></b>	Any biological or chemical agent, foreign matter, or other substances not intentionally added to food which may compromise food safety or suitability.
<b><i>Contamination</i></b>	The introduction or occurrence of a contaminant in food or food environment.
<b><i>Dressing area</i></b>	Location for progressive separation of the body of an animal into a carcass and other edible and inedible parts.
<b><i>Egg product</i></b>	All, or a portion of, the contents found inside eggs separated from the shell, with or without added ingredients, intended for human consumption.
<b><i>Establishment</i></b>	Premises approved and registered by the controlling authority in which meat products are prepared, processed, handled packaged or stored.
<b><i>HACCP</i></b>	A system which identifies, evaluates, and controls hazards which are significant for food safety.
<b><i>Headspace</i></b>	The volume in a product container not occupied by the food.
<b><i>Meat</i></b>	Any edible part of the carcass of any animal or bird, healthy at the time of slaughter, which is ordinarily used as food by man, whether fresh, or prepared by freezing, chilling, preserving, salting or by any other process.
<b><i>Red offal</i></b>	Refers to diaphragm, heart, kidneys, liver, tongue, spleen, trachea and larynx.
<b><i>Green offal</i></b>	Refers to intestines/chitterings (includes rectum/bung), oesophagus/weasand and stomach/maw.
<b><i>Potable water</i></b>	Water fit for human consumption. Standards of potability should be equivalent or above World Health Organization standards.
<b><i>Post-mortem inspection</i></b>	Any procedure or test conducted by a competent person on all relevant parts of slaughtered/killed animals for the purpose of judgement of safety and suitability and disposition.
<b><i>Processing area</i></b>	Location in the premise where food is handled, prepared and produced.
<b><i>Product container</i></b>	Metal, glass, flexible pouch object designed to be filled with food and hermetically sealed.
<b><i>Retort</i></b>	A pressure vessel designed for thermal processing of food packed in hermetically sealed product containers.

## **B. ESTABLISHMENT: DESIGN AND FACILITIES**

### **1. Design**

1.1 The building and facilities shall be:

- designed and maintained to prevent entry of pests, wild animals and environmental contaminants such as smoke, dust, mould, etc.
- not located near pollutive industries that could cause contamination
- constructed of materials suitable for intended use and not transfer any undesirable substances to the food.

### **2. Layout**

2.1 Building and facilities shall be designed to provide separation by partition, location or other effective means, between those operations that may cause contamination. Low risk and high risk areas shall be effectively separated.

2.2 Food processing and storage shall be in separate areas/rooms.

2.3 The workflow shall be unidirectional (i.e. low risk to high risk area).

2.4 Adequate measures for transfer of raw materials, finished products and waste materials (e.g. time-separation with end of shift removal and sealed completely) shall be in place.

2.5 The processing area shall not be directly accessible to outdoor areas, with the exception of emergency doors.

### **3. Structure**

#### **Floor**

3.1 Floors shall be constructed of durable, impervious, appropriately coloured (for the activity of the establishment and type of product produced), non-toxic, crack-resistant and easy to clean materials.

3.2 Measures shall be in place to prevent stagnation of water (e.g. floors shall be even and sloped towards the floor traps or internal drains).

3.3 The junction between the floors and walls shall be impervious to water and covered.

#### **Pipes and drains**

3.4 Pipes conduit and mechanisms shall be avoided directly above exposed products.

3.5 Drains shall be designed and maintained to prevent water retention in or around the drain and to carry the maximum anticipated load to prevent any problem of flooding or contamination of clean area.

#### **Walls**

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- 3.6 Walls shall be appropriately coloured (for the activity of the establishment and type of product produced) and made of smooth, impervious, crack-resistant materials that can be cleaned easily.
- 3.7 All sheeting joints shall be welded or sealed with compounds which are resistant to heat and mould growth.

### **Ceiling**

- 3.8 Ceiling shall be made of crack and moisture resistant materials.
- 3.9 Ceilings and overheads shall be maintained clean and prevent harbourage of pests.
- 3.10 If false ceiling is used, it shall be made of moisture resistant material without any perforations, and plenum (space) shall be well maintained.

### **Windows and doors**

- 3.11 Window sills, doors and frames shall be made of smooth, waterproof materials.
- 3.12 Windows should be kept closed at all times. If windows have to be left opened, meshed screens shall be used to minimise dust and pest entry. The windows and meshed screens shall be cleaned and maintained regularly to prevent accumulation of dust and dirt.
- 3.13 External doors and dock levellers shall be close fitting or adequately pest-proof.

### **Lighting**

- 3.14 Adequate lighting shall be provided at the premises.
- 3.15 The establishment shall use shatterproof lighting or the light fittings shall be enclosed with shatterproof cover.

### **Ventilation**

- 3.16 Proper vents or air circulation system shall be installed to prevent excessive heat, condensation and contamination with odours, dusts, vapour or smoke.
- 3.17 Ventilation openings shall be screened and equipped with proper air filters. The screens shall be easily removable for cleaning.

## **4. Sanitary and washing facilities**

- 4.1 Toilet facilities shall be adequately segregated and not open directly to food processing area.
- 4.2 Sufficient, designated changing facilities shall be provided for all personnel before entry into food processing area.
- 4.3 Suitable and sufficient sanitary facilities such as footwear-sanitising and hand-washing facilities shall be provided at entry, and at other appropriate points within processing area.

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The hand washing facilities shall be equipped with a supply of hot and cold (suitably temperature controlled) potable water, hands-free operated taps and covered waste bin, liquid/foam soap, suitable hand drying facilities (\*disposable paper towels preferred, hand dryers if used must be regularly cleaned and maintained).

- 4.4 An area or room shall be provided for cleaning and disinfection of equipment and utensils.

### 5. Staff amenities

- 5.1 Staff welfare room, if provided, shall be properly separated from the processing areas.
- 5.2 Workers shall be provided with lockers which are maintained to prevent accumulation of dust and debris.

### 6. Storage Facilities

- 6.1 Poisonous or harmful materials including cleaning compounds, disinfectants and insecticides shall be stored in separate rooms designed and marked specially for this purpose. The room shall only be accessible by authorised personnel.
- 6.2 There shall be separate storage facilities/areas for the raw materials, final products, chilled products, frozen products, packaging materials, cleaning equipment, etc. The First-In-First-Out (FIFO) system shall be practised.
- 6.3 Raw meat shall not be stored in the same chillers or freezers for other food products unless properly demarcated and segregated, with primary and secondary packaging intact, to prevent cross contamination.
- 6.4 Where shelving racks are required, they shall be made of impervious, durable and corrosion-resistant materials. For trolleys and racks, the lowest shelf shall be off the ground.
- 6.5 Food products shall be placed adequately off the ground and away from the wall.
- 6.6 The temperature of chillers shall be maintained at 4°C or below and that of freezers shall be -18 °C or below and monitored. They shall be equipped with temperature gauge and/or automated temperature data loggers. If not possible, manual recording of temperature shall be implemented. Chillers and freezers shall not be over loaded beyond their designated capacity.
- 6.7 There shall be continuous cold chain at loading and unloading bay.
- 6.8 Inflow of outdoor air into the cold store shall be minimized. Where the door of cold store has to be opened frequently, measures shall be implemented to minimize air flowing into the store.
- 6.9 Chillers and freezers shall be maintained in a sanitary condition at all times.

**C. ESTABLISHMENT: PEST CONTROL**

- 1 The establishment shall have in place an effective pest management programme, or engage a competent pest control company, to prevent the harbouring and breeding of pests, in the establishment and delivery vehicles.
- 2 Baits and pest control devices shall be appropriately sited (e.g. not in processing areas) maintained and operational. Alternative systems and equipment shall be used if the device might cause contamination of the product.
- 3 Pets shall not be kept within the premises.

**D. ESTABLISHMENT: HYGIENIC PRACTICES**

- 1 All food contact surfaces shall be inert, non-toxic, smooth and non-porous and equipment shall be suitable for intended use.
- 2 Ice, if used in food processing, shall be manufactured from potable or clean water.
- 3 All chilled/frozen food products delivered to, or collected from the establishment shall be transported in refrigerated vehicles, equipped with temperature gauge and/or automated data loggers, to maintain and monitor cold chain system.
  - For chilled products, the temperature shall be maintained at 0 to 4°C and with a core temperature not exceeding 7°C during transportation.
  - For frozen products, the temperature shall be maintained at -18°C or below and with a core temperature not exceeding -12°C during transportation.
- 4 Vehicles used for the delivery of finished products shall be maintained in a sanitary and hygienic condition at all times.
- 5 No food products shall be kept outside the establishment except at the time of loading/unloading into vehicles for delivery.
- 6 All food products shall not be placed directly on the floor. Measures shall be implemented to prevent food products from coming into contact with the floor.
- 7 Expired/non-conforming food products shall be clearly identified and stored in a designated area.
- 8 Separate equipment and utensils shall be provided for raw food products, ready-to-eat/cooked food products and waste.
- 9 Good housekeeping shall be observed at all times.
- 10 Food processing areas including equipment, tables, utensils and protective clothing shall be washed and cleaned daily and disinfected whenever necessary.
- 11 All persons working in contact with food products, food-contact surfaces and product packaging materials shall adhere to hygienic practices while on duty to prevent adulteration of product.

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- 12 Personnel handling food products shall clean and wash their hands at the hand washing facilities ([Section B, 4.3](#)) before commencing work, immediately after using the toilet and after handling materials that may result in contamination of food items.
- 13 Uniform, aprons, and other outer clothing worn by personnel who handle food products shall be of material that is disposable or readily cleaned. Clean garments, head covers, face masks, beard/moustache net, and suitable foot wear shall be worn at the start of each working day and changed as often as necessary. If gloves are worn, appropriate measures shall be applied to ensure that the gloves do not become a source of contamination (\*disposable gloves shall be worn when handling ready-to-eat and cooked food products).
- 14 Any person who has or appears to have an infectious disease, visibly infected skin lesions or wounds or any other source of microbial contamination shall be excluded from any operations which could result in product adulteration.
- 15 All personnel in food processing area shall not wear jewellery and accessories (\*except plain wedding band).
- 16 All personnel in food processing area shall keep their fingernails short, clean and free of any form of nail varnish.

### E. SLAUGHTERHOUSE AND CUTTING/DEBONING OPERATIONS

#### 1. Pre-slaughter

- 1.1 Only healthy visibly clean animals shall be used for slaughter.
- 1.2 Lairage shall be kept clean and stress to animals shall be minimized.
- 1.3 Proper protocols for ante-mortem inspection and condemnation of unsuitable animals shall be in place.

#### 2. Slaughtering, Evisceration and Post Mortem Inspection

##### General

- 2.1 Stunning and bleeding areas shall be separated from dressing areas (physically or by distance).
- 2.2 Method of slaughter and stunning shall be humane.
- 2.3 Proper facilities for slaughter and condemnation of unsuitable animals shall be provided.
- 2.4 A room/area for evisceration shall be provided next to slaughtering room and railing or chute system shall be used to transport carcasses.
- 2.5 Railing for transport of carcasses shall be maintained clean.
- 2.6 Rooms/area for edible and inedible products shall be separate and distinct.

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- 2.7 Knife sterilisers maintained at 82°C shall be provided and knives sterilised regularly.
- 2.8 Carcass shall be eviscerated in a manner that will not contaminate the carcass.
- 2.9 Inspection point equipped with adequate mirror/s and knife sterilisers shall be provided on-line after evisceration.
- 2.10 Adequate number of official/authorised veterinary inspectors shall be present to carry out post-mortem examination of carcasses.
- 2.11 There shall not be spillage or discharge of any material from oesophagus, crop, stomach, intestines, cloaca, rectum, gall bladder, urinary bladder, uterus or udder that may contaminate the carcass.
- 2.12 There shall be a method of identification to distinguish condemned carcasses/organs from fit-for-consumption carcasses/organs (e.g. marking with a dye).
- 2.13 Pathogen Reduction Treatments (PRTs) used as antimicrobial substances in the form of wash/spray/rinse/dips on raw meat shall be those that have been approved by SFA and are used below their maximum use levels. PRTs shall be used in addition to proper hygiene practices. PRTs shall not be used to salvage meat that has dropped on the ground, contaminated, spoiled, or has failed microbiological tests for pathogens.

Establishments using PRTs are required to maintain proper records of PRT usage; the information to be recorded should include the type(s) of PRTs used, the usage levels and date used.

### **Poultry**

- 2.14 Bleeding and de-feathering area shall be physically separated from live bird area.
- 2.15 Hygienic system for de-feathering shall be provided (e.g. feathers shall be removed on a regular basis).
- 2.16 The components of the wax products must meet their respective specifications and purity criteria established by the Joint Food and Agriculture Organisations of the United Nations and World Health Organisation (FAO/WHO) Expert Committee on Food Additives (“JECFA”) or other national or international bodies.
- 2.17 Cloacae of poultry shall be removed completely.
- 2.18 Poultry carcass (including head and feet if not removed) should be properly cleaned and free of contaminant.
- 2.19 Poultry head and feet (if detached from carcass) shall be cleaned at low risk area and chilled to 4°C or below, within an appropriate time period.
- 2.20 Separate rooms/areas shall be provided for processing of poultry giblets, handling and storage of inedible parts.
- 2.21 Dressed poultry shall be chilled to 4°C or below, within an appropriate time period.



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2.22 Clean water shall be used in spin chilling tank.

### **Ruminants (e.g. cattle, sheep) and pigs**

2.23 All carcasses shall be tagged individually with name of slaughterhouse and date of slaughter.

2.24 Scalding, de-hairing and singeing areas shall be appropriately separated from dressing areas.

2.25 Hide removal shall be carried out before evisceration, and the external surface of the hide should not come into contact with the carcass meat during removal.

2.26 Separate rooms shall be provided for emptying and processing of green and red offal, handling of meat and inedible parts of animal as well as storage of inedible animal parts.

2.27 Rails shall be high enough such that the lowest part of the carcass or side is not in contact with the floor/platform.

### **3. Cutting and deboning room**

3.1 The temperature of processing rooms shall be maintained at 12-15°C.

3.2 Knife steriliser with 82°C water, or other equivalent sterilisation method, shall be provided in cutting room.

3.3 For establishments that process meat from multiple species (e.g. beef, chicken) in the same production area, appropriate measures (e.g. time-separation with adequate sanitation, or physical separation) shall be taken to prevent cross-contamination.

3.4 Meat that has passed post-mortem inspections shall be removed without delay from dressing area and handled, stored and transported in a manner to protect it from contamination and deterioration.

3.5 Cases or cartons shall have a suitable inner lining, unless meat is individually wrapped before packing.

3.6 Meat in chiller/freezers that is not in cartons shall be hung or placed on racks to ensure adequate circulation of air and any drippings do not come into contact with other meat.

## **F. MEAT PROCESSING OPERATIONS**

1 Food products held on trays shall be placed such that there is no direct contact with the base of upper trays.

2 Food products shall be thawed in a designated area, in a manner that does not allow microbial proliferation, e.g.

- in a chiller (0 to 4°C) or
- temperature controlled room (12 to 15°C) in carton boxes or placed on stainless steel racks or tables or

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- under running water with leak-proof packaging intact or
  - using a machine for controlled thawing of meat
- 3 The use of fuel or charcoal in cooking or other forms of heat treatment shall not cause any contamination to the food products.
  - 4 For establishments that process meat from multiple species (e.g. beef, chicken) in the same production area, appropriate measures (e.g. time-separation with adequate sanitation, or physical separation) shall be taken to prevent cross-contamination.
  - 5 Cooked products shall achieve time / internal temperatures that are validated as achieving appropriate pathogen reduction, including meeting specified performance objectives, performance criteria and microbiological criteria.
  - 6 Cooked meat products shall be cooled rapidly immediately after processing and maintained chilled/frozen, where applicable.

### G. EGG PROCESSING OPERATIONS

- 1 Shell eggs used for processing shall be intact and free from physical contaminants such as dirt, blood and faecal material prior to breaking and separating or washed using an automated egg washing machine.
- 2 Egg products shall be subjected to validated microbiocidal treatment to ensure the products are safe and suitable.
- 3 Egg products shall be cooled rapidly immediately after processing and maintained chilled/frozen, where applicable.

### H. RETORT OPERATIONS

- 1 All steps in the production process, including filling, closing/sealing, heat processing and cooling shall be performed as rapidly as possible to prevent contamination and deterioration.
- 2 Conveying systems and equipment shall be designed to minimize abuse of the product containers.
- 3 Product containers shall be handled in a manner that protects container and closures from damage at all times.
- 4 Product containers intended for use on aseptic filling lines shall be in good condition (e.g. free from dents, punctures, scratches, etc), clean and dry, prior to filling sterilization.
- 5 The filling of product containers, either mechanically or by hand, shall be controlled so as to meet the filling and headspace requirements for effective thermal processing.
- 6 Contamination of seal/seam areas with product shall be avoided. Seam/seal areas shall be kept as clean and dry as necessary.

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- 7 Regular observations shall be made for external product container defects and evaluation of seal/seam. Product container closures shall be visually examined and teardown inspections conducted at intervals of sufficient frequency to ensure proper closure and seam integrity.
- 8 Each retort and/or product sterilizer shall be equipped with at least one temperature/time recording device. There shall be a validated  $F_0$  evaluation report for each product.
- 9 Potable water shall be used for cooling of any hermetically sealed product container. Where re-circulated water is used it should be filtered and if necessary treated by the addition of chlorine or approved sanitizer. Residual free chlorine in the cooling water may be between 0.5 and 2 ppm. Chlorine levels in excess of this may accelerate corrosion of certain metallic containers.
- 10 Product containers shall be dried as soon as possible after processing and shall not be manually handled while still wet. The product containers shall remain in the crates until dry before manual unloading.

### I. PRODUCT TRACEABILITY

- 1 All raw materials or ingredients received by the establishment shall be traceable to the source of origin.
- 2 Establishments shall have a system to ensure traceability at all stages of production. (e.g. from raw material through intermediate products to final product).
- 3 Final products shall be clearly marked and date labelled to ensure traceability of producer and the lot/production number.
- 4 A proper recall system or programme shall be in place to manage incidents effectively and enable the prompt notification to relevant parties, withdrawal and recall of implicated products.

### J. FOOD SAFETY MANAGEMENT SYSTEM (FSMS)

- 1 All establishments shall implement Hazard Analysis and Critical Control Point (HACCP) or similar food safety management system to control the food hazards in the manufacturing processes to ensure the production of safe and wholesome food for human consumption.
- 2 The establishment shall have an effective document control system and maintain genuine records to demonstrate the effective control of product safety.

#### Required documents:

- Up-to-date labelled layout plan with product, worker and waste removal flow, designated high/low risk processing areas
- Product process flowchart
- Hazard analysis and critical control point (HACCP) summary table
- Monitoring records of the critical control points
- Corrective action records

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- Ante-mortem and condemnation records
- Heat penetration data, circular chart or records of the thermal processing and sterilization graph for retort products
- Temperature controls of chillers/freezers
- Laboratory reports on water, food contact surfaces and finished products
- Cleaning and hygiene sanitation records
- Personal hygiene records
- Staff medical records
- Staff training records
- Pest control plan, layout and records
- Food recall records
- Competent Authority's inspection report
- Any overseas competent authority reports

All other principles as stated under Codex guidelines mentioned below will apply:

1. Codex Code of Hygienic Practice for Meat
2. Codex Code of Hygienic Practice for Low and Acidified Low Acid Canned Foods
3. Codex Code of Hygienic Practice for Eggs and Egg Products