

PHILIPPINE NATIONAL STANDARD

PNS/BAFS 168:2015
ICS

Code of Hygienic Practice for Meat



BUREAU OF AGRICULTURE AND FISHERIES STANDARDS

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Foreword

This Philippine National Standard (PNS) for Code of Hygienic Practice for Meat adopts the Codex Alimentarius Commission *Code of Hygienic Practice for Meat (CAC/RCP 58-2005)* with some modifications to suit the local production practices in the Philippines and was developed by the Technical Working Group (TWG) organized by the Bureau of Agriculture and Fisheries Standards (BAFS) through a Department of Agriculture (DA) Special Order No. 177, Series of 2015.

The TWG is composed of experts coming from the National Meat Inspection Service (NMIS), Animal Products Development Center of the Bureau of Animal Industry (BAI-APDC), University of the Philippines, Los Baños, and representatives from various private sector groups, i.e. San Miguel Foods, Inc. and Elanco, with BAFS as Secretariat.

The proposed standard was presented and reviewed during the consultative meetings with concerned stakeholders in Quezon City, Pampanga, Cebu, and Davao. Comments gathered during the consultations were carefully evaluated by the TWG and included accordingly in the final version of this standard.

1 SCOPE

This document provides standard for hygiene measures for fresh meat and meat preparations from the farm of origin up to the point of distribution, including the pre-slaughter, slaughter, and post-slaughter handling of meat.

2 REFERENCES

The titles of the standard publications and other references of this Code are listed on the inside back cover.

3 OBJECTIVES

The purpose of this Code is to ensure that hygienic practices are observed during animal production up to slaughter and distribution of meat while ensuring animal welfare compliance as well as environmental management practices in meat establishments. This Code also presents specific hygienic measures that apply to different species of food animals.

4 DEFINITIONS

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

4.1 Ante-mortem inspection

any procedure or test conducted by an official inspector on live animals for the purpose of judgment of safety and suitability and disposition

4.2 Carcass

the body of an animal after bleeding and dressing

4.3 Competent authority

the official agency charged by the government with the control of meat hygiene, including setting and enforcing regulatory meat hygiene requirements

4.4 Condemned

inspected and judged by a competent person, or otherwise determined by the competent authority, as being unsafe or unsuitable for human consumption and requiring appropriate disposal

4.5 Contaminant

any physical, biological or chemical substance not intentionally added to food that may compromise food safety or suitability

4.6 Comminuted/Ground/Minced Meat

boneless meat that has been reduced or cut into smaller pieces

4.7 Disease or defect

any abnormality affecting safety and/or suitability

4.8 Dressing

the progressive separation of the body of an animal into a carcass and other edible and inedible parts

4.9 Dressing area

area in the slaughterhouse where evisceration up to the final washing of carcass is performed

4.10 Fabrication area

considered the cleanest area in the slaughterhouse where cutting, deboning, and packing of meat are performed

4.11 Fresh meat

means meat that has not yet been treated in any way other than by modified atmosphere, packaging or vacuum packaging to ensure its preservation except that if it has been subjected only to refrigeration

4.12 Food animal

Includes all domestic animals slaughtered for human consumption such as, but not limited to cattle, carabao, hogs, sheep, goats and poultry (chicken, ducks, geese, turkeys and pigeons) and game animals as approved by the competent authority

4.13 Good Animal Husbandry Practices (GAHP)

general principles of good practice and minimum requirements in the commercial and backyard rearing/ farming of animals for food use

4.14 Good Hygienic Practice (GHP)/ Good Manufacturing Practice (GMP)

all practices regarding the conditions and measures necessary to ensure the safety and suitability of food at all stages of the food chain

4.15 Hazard

a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect

4.16 Inedible

inspected and judged by a competent person, or otherwise determined by the competent authority, to be unsuitable for human consumption

4.17 Kill floor

part of the slaughterhouse for stunning, bleeding, scalding, dehairing/ defeathering/dehiding, scraping and singeing

4.18 Lairage/ holding pen

an area within the premises of the slaughterhouse where animals are temporarily held for purposes of resting and where conduct of ante-mortem inspection is done prior to slaughter

4.19 Meat

edible part of the carcass including edible offal derived from food animals

4.20 Meat business operator

the person in control of a meat establishment who is responsible for ensuring that the regulatory meat hygiene requirements are met

4.21 Meat Establishment

a building or area used for performing meat hygiene activities that is approved, registered and/or listed by the competent authority for such purposes

4.22 Meat preparations

any physical procedures applied to fresh meat such as but not limited to cutting, deboning, mincing and mechanical separation

4.23 Meat hygiene

branch of food hygiene wherein all conditions and measures necessary to ensure the safety and suitability of meat at all stages of the food chain are applied

4.24 Offal

the edible by-products, organs, glands and tissue other than the carcass meat of food animal

4.25 Official inspector

a competent person (inspector or meat control officer) who is appointed, trained, registered or otherwise recognized and supervised by the competent authority to perform official meat inspection and control of hygiene

4.26 Organoleptic inspection

a method of inspection using the senses of sight, touch, taste and smell for identification of abnormal conditions and defects

4.27 Post-mortem inspection

any procedure or test conducted by an official inspector on all relevant parts of slaughtered animals for the purpose of judgment of safety and suitability for human consumption to make the appropriate disposition

4.28 Primary production

refers to the production, rearing or growing, transport and slaughter of food animals

4.29 Process control

all conditions and measures applied during the production process that are necessary to achieve safety and suitability of meat

4.30 Sanitation Standard Operating Procedures (SSOPs)

a documented system for assuring that personnel, facilities, equipment and utensils are clean, and where necessary sanitized, to specified levels prior to and during operations

4.31 Slaughter animal

food animal that has been subjected to various procedures for the purpose of producing meat

4.32 Slaughterhouse/Poultry dressing plant

any 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

5 MINIMUM REQUIREMENTS

5.1 PRE-SLAUGHTER

5.1.1 Farm Production

5.1.1.1 Principles of Meat Hygiene Applying to Primary Production

- a. Animals should be raised according to Good Animal Husbandry Practices to reduce the likelihood of introduction of food safety hazards.
- b. Good animal husbandry practice (GAHP) should involve the health and hygiene of animals, records of treatment, feed and feed ingredients, and relevant environmental factors, and should include application of HACCP principles to the greatest extent practicable.
- c. There should be a system to identify animals that would allow traceability, to allow regulatory investigation where necessary.

5.1.1.2 Hygiene of Slaughter Animals

- a. The primary producers should have records for the general health status of slaughter animals and implement practices that maintain or improve that status.
- b. The primary producers should have programs for control of zoonotic agents, chemical hazards and contaminants. This should be coordinated with the competent authorities that have responsibilities in public and animal health.
- c. Programs for chemical hazards and contaminants should include measures to control the registration and use of veterinary drugs and biologicals, approved by the competent authority for use in slaughter animals, so that residues do not occur in meat at levels that make the product unsafe for human consumption.

5.1.1.3 Hygiene of Feed Ingredients, Feed, and Drinking Water

- a. Animals should not be given feed and feed ingredients that are likely to introduce zoonotic agents to the slaughter population; or contain chemical substances or contaminants that could result in residues in meat at levels that make the product unsafe for human consumption.
- b. Any processed feed and feed ingredients should be subjected to appropriate microbiological and other criteria.
- c. Drinking water should be potable in accordance with existing relevant guidelines.

5.1.1.4 Hygiene of the Primary Production Environment

- a. Animals should be raised in an environment free of hazards that could compromise the safety of meat.

- b. Facilities and procedures should be in place to ensure compliance with animal health and welfare requirements.

5.1.2 Transport of food animals for slaughter

- a. Transportation of slaughter animals should be in accordance with existing relevant regulations.
- b. Transport of slaughter animals should be in a manner that does not have an adverse impact on the safety and wholesomeness of meat.

5.2 SLAUGHTER

5.2.1 Responsibilities of the Meat business operator

5.2.1.1 Receiving of Animals for Slaughter

- a. Animals should be accompanied by documents as required by competent authorities.
- b. Animals presented for slaughter should be apparently healthy and clean. Screening for abnormalities in behavior and appearance should be performed upon arrival of animals at the establishment.
- c. Animals should have proper identification.
- d. Animals that are not qualified for slaughter must be identified and given proper handling.

5.2.1.2 Design and Construction of Establishment, Facilities, and Equipment

- a. Establishments, facilities and equipment should be designed, constructed and maintained so that contamination of meat is minimized while allowing personnel to carry out their activities in a hygienic manner.
- b. Facilities and equipment that are in direct contact with edible parts of animals and meat should be designed and constructed so that they can be effectively cleaned and monitored for their hygiene status.
- c. Suitable equipment should be available for control of temperature, humidity and other factors as appropriate to the particular processing system for meat.
- d. Water should be potable except where water of a different standard can be used without leading to contamination of meat.

5.2.1.2.1 Design and construction of animal holding area

- a. The meat business operator should ensure that the animal holding area minimizes

soiling and contamination of animals.

- b. The meat business operator should ensure that the animal holding area is compliant with animal welfare concerns.
- c. There must be appropriate separation of different species and ages of slaughter animals.
- d. The meat business operator should ensure that the method of animal identification conveys relevant information until the time of slaughter.
- e. The meat business operator should ensure that the animal holding area is designed and operated in a way that facilitates the conduct of ante-mortem inspection.
- f. There should be facilities in place for the handling and slaughter of animals with special conditions (e.g. injured animals, heat-stressed animals, etc) and these facilities should be easily accessible from their holding pens.

5.2.1.2.2 Design and construction of slaughter areas

- a. Kill floor areas should be designed and constructed so that stunning, bleeding, scalding, dehairing/defeathering/dehiding, scraping, singeing, and whole-carcass washing areas have a physical separation (or barrier) from dressing areas to prevent cross-contamination.
- b. Slaughter line should be designed so that the direction of the operation is always towards the cleaner area, i.e. kill floor area to dressing area.
- c. The meat business operator should provide a means to present edible parts of bodies of animals for post-mortem inspection.
- d. There must be a separate area for condemned parts and provisions for its quick removal.
- e. Entry of personnel should be separated between clean (dressing and fabrication) and dirty (kill floor) areas. Unauthorized persons should not be allowed to enter slaughter areas.
- f. Areas and facilities where carcasses and meat are handled should be designed and constructed so that hygienic practices are facilitated and contamination is minimized to the greatest extent practicable.
- g. Areas where carcasses and meat are handled should be designed and constructed so that:
 - (1) Cross-contamination during operations is minimized;
 - (2) Effective cleaning, sanitation and maintenance can be carried out during and between periods of operation;
 - (3) Floors in areas where water is present slope sufficiently to ensure continual drainage;

- (4) Exterior doors do not open directly into the area;
 - (5) Separate rooms are used for emptying and cleaning of alimentary tracts; handling of meat and inedible parts of animals; and storage of inedible animal parts;
 - (6) There is adequate lighting for hygienic process control;
 - (7) Pests are effectively controlled; and
 - (8) There are adequate facilities for secure storage of chemicals and other hazardous substances to prevent accidental contamination of meat.
- h. Insulated rooms should be available for cooling, chilling and freezing of meat, where applicable.
 - i. Establishments that have fabrication facilities should have temperature-controlled room or rooms and should ensure separation of cutting, boning, and primary wrapping area from the packing area.
 - j. Establishments should have proper and functional drainage and waste disposal system.
 - k. Adequate hand washing and sanitizing facilities for personnel and implements should be available.
 - l. Equipment and implements used for edible and inedible parts of animals should be properly identified to avoid cross-contamination.
 - m. Establishments should have adequate ventilation to prevent excessive heat, humidity and condensation.
 - n. Airflow from contaminated areas to clean areas should be controlled.

5.2.1.2.3 Water supply

- a. Water used in the slaughterhouse/poultry dressing plant should be potable in accordance with existing relevant guidelines except for steam production, fire control and other similar purposes not connected with meat production.
- b. There should be sufficient and accessible supply of hot and potable water where needed.
- c. Non potable water should be properly identified and used for other purposes except for meat production.

5.2.1.2.4 Temperature control

- a. There should be facilities and equipment for the cooling, chilling and/or freezing of meat, if applicable, and systems for monitoring temperature, humidity, airflow and other environmental factors to assure that process control regimes are achieved.
- b. Steam should be vented out to minimize potential for condensation and to prevent

permeation into adjoining rooms.

5.2.1.2.5 Perimeter fencing

A secure perimeter fencing should be built to prevent the entry of unauthorized persons and stray animals in the establishment premises.

5.2.1.2.6 Facilities and equipment for personal hygiene

- a. Establishments should have appropriate personal hygiene facilities to minimize cross-contamination of meat by meat handlers.
- b. Facilities for personal hygiene include gender-specific changing rooms, showers, and flush toilets.
- c. Hand washing and hand drying facilities should be:
 - a) located convenient to work stations;
 - b) have faucets not operable by hand;
 - c) supply water at an appropriate temperature, fitted with dispensers for liquid soap or other hand-cleansing agents;
 - d) include hand drying equipment and/or paper towels and receptacles for discarded paper towels; and
 - e) have waste water routed to drains.
- d. Appropriate protective clothing that can be effectively cleaned should be required.
- e. There should be a separate canteen or mess area from the working area; and separate areas for personnel working in clean and dirty areas, where applicable.

5.2.1.3 Process Control Systems Under the Responsibility of the Meat Business Operator

- a. The meat business operator has the primary responsibility for implementing systems for process control.
- b. Effective process control is necessary to produce meat that is safe and suitable for human consumption.
- c. Process control systems should limit microbial cross-contamination and other chemical and physical contaminants and reflect its proportional contribution in reducing meat-borne risks to human health.
- d. HACCP should be applied as the system of choice for process control, and should be supported by GHP/GMP that includes sanitation standard operating procedures (SSOPs).

5.2.1.3.1 Sanitation Standard Operating Procedures (SSOPs)

- a. A properly implemented SSOP system should ensure that facilities and equipment are clean and sanitized before the operations and that hygiene is maintained

throughout the operation.

- b. Attributes of sanitation standard operating procedures (SSOPs) are:
 - a) a written SSOP program developed by the establishment describing the procedures involved and the frequency of application;
 - b) recognition of establishment personnel with the responsibility of implementing and monitoring SSOPs;
 - c) records of monitoring and any corrective and/or preventative action taken;
 - d) corrective actions that include appropriate disposition of product; and
 - e) regular evaluation of the effectiveness of the system by the meat business operator.

5.2.1.3.2. Hazard Analysis Critical Control Points (HACCP)

HACCP program or equivalent international accepted guidelines should be developed and applied as a proactive means of process control for food safety purposes.

5.2.1.3.3 Outcome-based parameters for process control

- a. Establishment of performance criteria for the outcome of specified activities strengthens the verification of process control.
- b. The establishment should have a documented process control system for implementing corrective actions to consistently meet performance criteria.
- c. Organoleptic parameters may also be established.

5.2.1.3.4 Quality Assurance (QA) systems

The meat business operator should establish and implement quality assurance (QA) systems.

5.2.1.4 Maintenance and Sanitation: Establishment, Facilities, and Equipment

- a. Establishments, facilities and equipment should be maintained and sanitized to minimize contamination of meat.
- b. The guidelines for the maintenance and sanitation of establishments should be in accordance with existing relevant guidelines.
- c. A basic component of meat hygiene programs should be the monitoring and documentation of the effectiveness of maintenance and sanitation.
- d. Slaughter and dressing of animals with special conditions should have special sanitation requirements.
- e. Establishments, facilities and equipment should be in good condition to facilitate all sanitation procedures and prevent contamination of meat.

- f. The scope of the cleaning program, cleaning specifications, persons responsible and monitoring and record keeping requirements should be specified in sanitation standard operating procedures (SSOPs).
- g. Cleaning chemicals and lubricants should be properly used, handled, labeled and stored.
- h. Specific cleaning programs are required for equipment and tools that come in contact with meat intended for food.
- i. Containers and equipment should be cleaned and sanitized before passing from a “dirty” area to a “clean” area.
- j. Pest control programs should be implemented and in accordance with Good Hygienic Practices/Good Manufacturing Practices described in existing relevant guidelines. In particular the meat business operator:
 - a) Should properly document and verify the program;
 - b) Follow conditions for the usage of the approved pesticide; and
 - c) Keep pest control chemicals in secure storage and limit access to authorized persons.

5.2.2 Responsibilities of the Meat Control Officer/Competent Authority

The competent authority should encourage development and adoption of innovative technologies and procedures that reduce cross-contamination, improve food safety and animal welfare.

5.2.2.1 Ante-mortem Inspection

- a. All slaughter animals should be subjected to ante-mortem inspection by an official inspector.
- b. The competent authority, based on risk-based approach or current scientific knowledge and practice, should perform ante-mortem inspection, establish official procedures and conduct necessary laboratory tests, if needed.
- c. Ante-mortem inspection of food animals should be made as soon as practicable and should be conducted in the holding pens within the premises of the slaughterhouse after the prescribed rest period of the animals. Food animals should be inspected not later than 24 hours from the time of arrival or at least two hours before animals are slaughtered.
- d. Animals with presentations described below should be subjected to special procedures imposed by the competent authority:
 - a) Excessively dirty animals
 - b) Dead on arrival animals
 - c) Apparently sick or injured animals
 - d) Apparently pregnant animals

- e) Lack of required documentation accompanying the slaughter animals
- e. Additional measures to routine ante-mortem inspection may be required when indicated by public health concerns.
- f. The official inspector performing the ante-mortem should instruct the meat business operator to remove the animals that have died in the lairage/holding pen and dispose of them accordingly.
- g. Ante-mortem judgement categories include:
 - a) passed for slaughter;
 - b) passed for slaughter subject to second ante-mortem inspection after an additional holding period;
 - c) passed for slaughter under special considerations/as 'suspect';
 - d) passed for emergency slaughter;
 - e) condemned for public health reasons;
 - f) condemned for meat suitability reasons; and
 - g) condemned for animal health reasons

5.2.2.2 Post-mortem Inspection

- a. The competent authority is responsible for the establishment of inspection procedures, tests, and judgment criteria as well as verification of the post-mortem inspection system. All aspects of the post-mortem inspection should be science-based and tailored to relevant risks.
- b. The competent authority should determine: how to implement post-mortem inspection, the required training, knowledge, skills and ability of personnel involved and the frequency of verification activities.
- c. All carcasses and other relevant parts intended for human consumption should be subjected to post-mortem inspection. Post-mortem inspection should be performed as soon as the animals are slaughtered. All relevant information from the primary production and ante-mortem inspection should be considered during the inspection.
- d. Condemned carcasses and parts should be properly identified and handled to avoid cross-contamination of meat from approved/ 'passed' carcasses and parts. The reason for condemnation should be recorded and laboratory tests may be taken if necessary.
- e. Tests other than organoleptic inspection may be required when indicated by public health concerns.
- f. The competent authority should notify the owner in cases of condemnation and non-compliance to residues or contaminants regulatory limits.
- g. Post-mortem judgment categories include:
 - a) safe and suitable for human consumption;

- b) safe and suitable for human consumption, subject to application of a prescribed process;
- c) held on suspicion of being unsafe or unsuitable, pending the outcome of further procedures and tests;
- d) unsafe and unsuitable for human consumption but able to be used for some other purpose, providing there are adequate hygiene controls to prevent any transmission of hazards, or illegal re-entry to the human food chain;
- e) unsafe and unsuitable for human consumption, and requiring condemnation and destruction; and
- f) unsafe for animal health reasons, and disposed accordingly.

5.2.2.3 Proper Marking of Carcasses

- a. Carcasses and other relevant parts found fit for human consumption should be marked, stamped, tagged or labeled by the meat inspector as “Inspected and Passed”. Carcasses and other relevant parts found to be unfit for human consumption should be marked, stamped, tagged or labeled by the meat inspector as “Inspected and Condemned”.
- b. Characteristics of marking ink to be used:
 - a) should be certified food grade ink and safe for human consumption;
 - b) should be strongly identifiable and will not wash off under ordinary conditions; and
 - c) should not interfere with monitoring equipment used to detect contamination on meat.

5.2.2.4 Process Control Systems under the Responsibility of the Competent Authority

5.2.1.4.1 Regulatory systems

- a. The competent authority should have the legal power to establish and enforce regulatory meat hygiene requirements and has the final responsibility for ensuring that all regulatory requirements are met.
- b. The competent authority should:
 - (1) Establish regulatory systems and requirements;
 - (2) Undertake specified meat hygiene controls that are designated activities of the competent authority;
 - (3) Verify that process control systems implemented by the meat business operator meet regulatory requirements;
 - (4) Verify that accredited bodies are carrying out functions as required; and
 - (5) Carry out enforcement actions as necessary.
- c. Where the meat business operator does not comply with regulatory requirements, the competent authority should carry out enforcement actions that may include:
 - a) slowing of production while the operator regains process control;
 - b) stopping production, and withdrawing certification for meat deemed to be

- unsafe or unsuitable for its intended use;
- c) withdrawing official supervision, or meat inspection service of official inspectors;
- d) ordering specified treatment, recall or destruction of meat as necessary; and
- e) withdrawing or suspending all or part of the approval/registration of the establishment if process control systems are invalid or repeatedly non-compliant.

5.2.3 General Hygiene Requirements for Process Control

- a. Process control should meet the general hygiene requirements of existing relevant regulations.
- b. The competent authority should use the services of accredited/recognized laboratories when carrying out meat hygiene activities. Laboratory testing may be required for: verification of process control; monitoring achievement of performance criteria; residue monitoring; diagnosis of disease conditions affecting individual animals; and monitoring of zoonoses.

5.2.3.1 Hygiene Requirements for Slaughter and Dressing

- a. Only live animals intended for slaughter and animals that have undergone emergency slaughter outside the slaughterhouse with complete veterinary documents may be allowed to be brought into a slaughterhouse or poultry dressing plant, in accordance to existing meat inspection regulations.
- b. No animal other than those intended for slaughter should enter a slaughterhouse/poultry dressing plant, with the exception of sentinel animals used for disease surveillance and animals used for researches and similar purposes.
- c. An animal should only be slaughtered in a slaughterhouse/poultry dressing plant if an official inspector is available to undertake inspection process. In cases of emergency slaughter where an official inspector is not available, special measures provided by the competent authority will apply to ensure that the meat is safe and suitable for human consumption.
- d. All animals brought to the kill floor should be slaughtered without delay, with proper observance of stunning, sticking, and bleeding intervals and procedures, and in consideration of animal welfare concerns.
- e. During initial slaughter operations, and with due consideration to minimizing contamination:
 - (1) Slaughtered animals that are scalded, flamed or similarly treated should be scoured of all bristles, hair, scurf, feathers, cuticles and dirt;
 - (2) The trachea and esophagus should remain intact during bleeding, except in the case of ritual slaughter ;
 - (3) Bleeding should be as complete as possible; if blood is intended for food, it

- should be collected and handled in a hygienic manner;
- (4) Tonsils should not be cut when exposing the tongue;
 - (5) Skinning of the head may not be required for some classes of animals e.g. goats, calves, sheep, or as required by the competent authority, provided that heads are handled in such a way as to avoid undue contamination of meat;
 - (6) Before the removal from the head of any parts intended for human consumption, the head should be cleaned to facilitate inspection and the hygienic removal of specified parts;
 - (7) Lactating or obviously-diseased udders should be removed from animal bodies at the earliest opportunity;
 - (8) Removal of udders should be done in a way that the contents do not contaminate the animal bodies; and
 - (9) Hides/fleeces should not be washed, de-fleshed or left to accumulate in any part of a slaughterhouse.
- f. Poultry, after de-feathering, can only be effectively cleaned of dust, feathers and other contaminants by washing with potable water.
- g. Once the hide/fleece or hair has been removed, animal bodies should be separated from each other to avoid contact, and this should be maintained until each carcass has been inspected and judged by an official inspector undertaking post-mortem inspection.
- h. During slaughter, and with due consideration to minimizing contamination:
- (1) Skinning, if performed, should be completed before evisceration;
 - (2) Water in scalding tanks should be managed and changed regularly, as needed, so that it is not excessively contaminated;
 - (3) Evisceration should be carried out without delay;
 - (4) Discharge or spillage of any material from the esophagus, crop, stomach, intestines, cloaca or rectum, or from the gall bladder, urinary bladder, uterus or udder, should be prevented;
 - (5) Intestines should not be severed from the stomach during evisceration and no other opening should be made into an intestine, unless the intestines are first effectively tied to prevent spillage, except in the case of poultry;
 - (6) Stomachs and intestines and all inedible material derived from the slaughtering and/or dressing of bodies of animals or poultry should be removed as soon as possible from the dressing area, and processed in a manner that does not cause cross-contamination of meat;

- (7) Methods used to remove visible and microbial contamination should be demonstrated to be effective and meet other requirements as specified by the competent authority; and
- (8) Fecal and other material should be removed from carcasses in a manner that does not result in further contamination.
- i. The official inspector, undertaking post-mortem inspection, should enforce necessary measures if the manner of slaughtering/ handling of meat will adversely affect the safety and suitability of meat.
- j. The offal should remain identifiable as belonging to a single carcass when required for postmortem judgement.

5.2.3.2 Hygiene Requirements for Parts of Animal Deemed Unsafe or Unsuitable for Human Consumption

- a. There should be special hygiene measures in operations involving animal parts deemed unsafe or unsuitable for human consumption. These measures should ensure that cross-contamination and substitution is prevented.
- b. Carcass or carcasses deemed unsafe or unsuitable for human consumption should be disposed properly in accordance with existing rules.
- c. Animal parts deemed unsafe or unsuitable for human consumption should be:
 - a) placed immediately into specifically identified containers that is secured and only the official inspector is able to open;
 - b) identified according to the type and end use of the tissue; and
 - c) in case of condemned materials approved for rendering, handle in rooms for that purpose and transfer in a secure manner to a recognized place of disposal.

5.3 POST-SLAUGHTER

5.3.1 Hygiene Requirements for Process Control after Post-Mortem Inspection

- a. Meat passed as safe and suitable for human consumption should be:
 - (1) Removed immediately from the dressing area and transferred to the holding area;
 - (2) Handled, stored and transported properly to prevent contamination and deterioration;
 - (3) Held under conditions that reduce its temperature and/or water activity, unless cut up or de-boned pre-rigor; and
 - (4) Held at temperatures that achieve safety and suitability objectives.
- b. In the case of poultry undergoing immersion chilling:
 - (1) The immersion chilling process should meet hygiene criteria specified by the

- competent authority;
- (2) Rapid reduction in carcass temperature;
 - (3) Sanitation requirements should include complete emptying, cleaning and sanitation of tanks as appropriate.
- c. Where carcasses, parts of carcasses or other meat is placed in a holding room:
- (1) All requirements for hygienic control of operations must be followed;
 - (2) Carcasses and parts of carcasses should be held in a manner permitting adequate circulation of air;
 - (3) Prevention of potential cross-contamination from dripping fluids; and
 - (4) Control of condensation and water dripping from overhead facilities.
- d. When fresh meat is cut or deboned:
- (1) It should be transported directly from the dressing area to the chilling room and then to the fabrication area;
 - (2) Temperature should be controlled in the fabrication area;
 - (3) Cutting up, deboning and packing should be done in the fabrication area and should meet all requirements for hygienic process control.
- e. When raw meat is comminuted/ground/minced:
- (1) It should be obtained only from parts of animals as approved by the competent authority;
 - (2) It should not contain bone fragments or skin;
 - (3) It should not contain any grossly abnormal tissues and/or post-dressing contamination; and
 - (4) The competent authority may specify compositional criteria.
- f. When raw meat is mechanically separated, the competent authority should:
- (1) Regulate the parts and species of animal that can be used;
 - (2) Set compositional standards for maximum calcium content; and
 - (3) Require specific labeling of the final product.
- g. When raw meat is minced, mechanically separated or used in meat preparations:
- (1) The competent authority can specify maximum time/temperature schedules for process control at each step of production;
 - (2) It should be immediately wrapped and/or packaged followed by refrigeration when not used as an ingredient for meat preparations and manufactured meat;
 - (3) The competent authority may specify microbiological criteria for raw materials and final product;
 - (4) Establishments should have means of detecting contamination with metal fragments as appropriate; and

- (5) Thawed meat should not be re-frozen.

- h. Where meat is packed or wrapped:
 - (1) Use suitable packaging material and store in a hygienic manner; and
 - (2) Cases or cartons should have a suitable inner liner or other means of protecting the meat if pieces of meat are not individually wrapped before packing.

- i. Where meat is placed in a room for freezing:
 - (1) Meat that are hung or in racks or trays should be in a manner that does not obstruct air circulation;
 - (2) Meat that is not in cartons should be stored properly to prevent cross-contamination via dripping of liquids;
 - (3) Cartons with meat should be stacked to permit adequate circulation of air; and
 - (4) Meat stored on trays should be placed properly to avoid contact with the base of an upper tray.

- j. Where meat is held in a freezer facility:
 - (1) The temperature of meat should be reduced to acceptable level before placement;
 - (2) Exposed meat must be stored properly so that its hygiene is not compromised by the presence of packaged meat and packaging material;
 - (3) Meat should not be stacked directly on the floor and should be placed so that there is adequate air circulation;
 - (4) The freezer storage should be operated and maintained appropriately to maintaining the safety and suitability of meat; and
 - (5) Temperatures should be constantly recorded and monitored.

- k. Thawing of raw meat for further fabrication should not result in growth of microorganisms or the formation of toxins that may be a risk to human health.

- l. A procedure for determining and validating the shelf life of warm, chilled and frozen meat should be established and implemented by the meat business operator.

- m. Establishments approved for slaughter and processing of different animal species should ensure that operations are controlled in terms of space or time so that there is no possibility of accidental mixing of meat from different animal species and no mis-identification at the time of packaging.

5.3.2 Transportation of Meat

- a. The guidelines for the transportation of meat should be in accordance with existing relevant guidelines.

- b. Vehicles for transportation of meat should:
 - a) should be accredited/registered by the competent authority

- b) be designed that the meat does not contact the floor;
 - c) have door seals for the prevention of entry of sources of contamination; and
 - d) be equipped to maintain and monitor temperature.
- c. Meat should be transported at recommended temperatures that do not promote growth of harmful bacteria. Temperature should be constantly monitored and recorded. Additionally, there should be adequate protection from external contamination and damage.
- d. If meat is exposed to adverse temperature or sources of contamination that may affect safety and suitability, a re-inspection may be done by an official inspector before distribution is allowed.

5.3.3 Systems for Removing Products that are in Circulation

- a. Meat business operators should have adequate systems for the removal of products that are in circulation. The competent authority, consumer and other interested parties should be notified when an meat business operator removes product for public health reasons.
- b. Product removal systems designed by the meat business operator should:
- (1) Include identification, management and operational procedures that facilitate the rapid and complete removal of affected products;
 - (2) Provide records for the traceability to the origin of the problem;
 - (3) Provide records that facilitate investigation of implicated processing inputs;
 - (4) Be reviewed and tested periodically; and
 - (5) Include provision for communication to the competent authority, consumers and other interested parties when public health issues are involved.
- c. The systems for the removal of products in circulation should be capable of:
- (1) Withdrawal, where measures are applied by the establishment operator/meat business operator to prevent the distribution, display or offer of a product that is not safe or suitable for human consumption;
 - (2) Recall, where measures are applied to return unsafe or unsuitable product that has already been supplied or made available to consumers;
 - (3) Detention, where measures are applied by the competent authority to ensure that the product is not moved or tampered with pending a decision on its disposition.
- d. Systems that are enacted in relation to withdrawal of products removal will depend on the specific situation and the likely risks to human health.

5.4 Personal Hygiene

Movement of persons from dirty areas, e.g. kill floor, to clean area, e.g. dressing and fabrication areas, should not be allowed. If movement is needed, movement should be from cleanest area to less sanitized areas. If movement is reversed, complete change of clothing and sanitation protocols should be complied with.

5.4.1 Personal cleanliness

- a. Persons who come into contact with meat for human consumption should:
 - (1) maintain personal cleanliness and behavior;
 - (2) wear prescribed protective clothing and ensure that non-disposable protective clothing is cleaned before and during work;
 - (3) if gloves are worn during the slaughter and dressing of animals and handling of meat, ensure that they are the approved type for the activity and they are used according to specifications;
 - (4) immediately wash and sanitize hands and protective clothing when there has been contact with abnormal animal parts;
 - (5) cover cuts and wounds with waterproof dressings; and
 - (6) store protective clothing and personal effects in locations separate from areas where meat is stored.
- b. Persons working in the fabrication area should have a complete set of uniform allowing least exposure of skin, i.e. head cover, face mask, and proper footwear.
- c. Uniforms and boots should not be allowed to be taken out of the working areas, or changing/sanitation rooms.

5.4.2 Personal Health Status

- a. The establishment should have a record of relevant personal health records of personnel.
- b. Persons who come into direct or indirect contact with edible parts of animals or meat should have a medical examination prior to and during employment and not work while clinically affected by, or suspected to be carrying, communicable agents likely to be transmitted through meat.

5.5 Product Information and Consumer Awareness

- a. Packed meat should be labeled with clear instructions to enable the next person in the food chain to handle, display, store and use the product safely.
- b. Handling and storage instructions should be in the label of packed meat for consumers' guidance.
- c. Meat business operators should conduct information dissemination on proper handling, storage, and use of their products.

5.6 Training

- a. Persons engaged in meat hygiene activities should be trained and/or instructed to a required level of training, knowledge, skills and ability.
- b. Training programs should:

- i. provide personnel with the training, knowledge, skills and ability to carry out specified meat hygiene tasks;
- ii. provide practical training to the extent required;
- iii. ensure that personnel involved in supervisory roles have appropriate skills;
- iv. recognize and build on professional qualifications; and
- v. provide for the continuing education of persons involved with meat hygiene.

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Philippine National Standard (PNS) Code of Hygienic Practice for Meat**

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