Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Ottawa, Ontario
K1A 0Y9

January 6, 2011

MEAT HYGIENE DIRECTIVE:

2011 - 05

SUBJECT: Chapter 19

Please note the changes to Chapter 19:

- new defect definitions and pass/fail criteria for edible paws (chicken feet);
- deletion of the requirement to palpate the duodenal loop for fowl;
- new instructions for hanging back and sorting carcasses;
- correction to the size of a breast blister for Turkeys under the Carcass Dressing Standards (CDS)
- new requirements for industry issuing condemnation/rejection reports and CFIA issuing a corresponding separate report;
- deletion of the presentation standards for veterinary dispositions;
- amended the section on Microbial Control Interventions; and
- reference corrections in Annex D.

Advance copies (in the form of electronic MS Word files), indicating which specific words have been changed, deleted or added have been previously distributed to the CFIA Area Poultry Inspection Specialists as well as to the national poultry industry associations. Anyone within CFIA desiring such a copy should contact their Area Poultry Inspection Specialist. Similar requests from industry should be referred to their national association.

ENGLISH VERSION

Please replace in your Manual of Procedures pages 7-8, 34-35 and 40-149 of Chapter 19 with the attached pages. Please replace in your Manual of Procedures Annex D with the attached pages.

FRENCH VERSION

Please replace in your Manual of Procedures pages 7-8, 40-41 and 46-165 of Chapter 19 with the attached pages. Please replace in your Manual of Procedures Annex D with the attached pages.

Ottawa (Ontario)
K1A 0Y9

Le 6 janvier, 2011

DIRECTIVE DE L'HYGIÈNE DES VIANDES :

2011 - 05

OBJET : Chapitre 19

Veuillez noter les changements au Chapitre 19 :

- nouvelles définitions de défauts et critère d'acceptabilité pour les pattes comestibles (pattes de poulet);
- suppression de l'exigence de palper l'anse duodénale pour la poule;
- nouvelles instructions pour le retrait et le tri des carcasses;
- modification de la taille d'un kyste de bréchet chez les dindons en vertu des normes habillage des carcasses (NHC);
- nouvelles exigences relativement aux rapports de condamnation/rejet délivrés par l'industrie et aux rapports correspondants de l'ACIA;
- suppression des normes de présentation pour les dispositions vétérinaires;
- la section sur les Mesures antimicrobiennes a été modifiée; et
- corrections sur des références à l'annexe D.

Des copies électroniques préliminaires en format MS Word ont été envoyées aux Spécialistes d'inspection de la volaille des centres opérationnels ainsi qu'aux associations nationales du secteur de l'industrie de la volaille en indiquant spécifiquement ce qui a été changé, supprimé ou ajouté. Le personnel de l'ACIA désirant une copie indiquant les changements doit contacter le spécialiste d'inspection de la volaille du centre opérationnel respectif. Les demandes similaires provenant du secteur de l'industrie doivent passer par leur association nationale.

VERSION FRANÇAISE

Veuillez remplacer les pages 7-8, 40-41 et 46-165 du chapitre 19 de votre Manuel des méthodes par les pages ci-jointes. Veuillez remplacer l'annexe D de votre Manuel des méthodes par les pages ci-jointes.

VERSION ANGLAISE

Veuillez remplacer les pages 7-8, 34-35 et 40-149 du chapitre 19 de votre Manuel des méthodes par les pages ci-jointes. Veuillez remplacer l'annexe D de votre Manuel des méthodes par les pages ci-jointes.

Dr. Richard Arsenault
Director
Meat Programs Division

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Canada

Canadian Food Inspection Agency
Agence canadienne d'inspection des aliments

CHAPTER 19

POULTRY INSPECTION PROGRAMS

Canada

TABLE OF CONTENTS

19.1 INTRODUCTION

19.1.1 Amendment Process

Suggestions and requests for change/improvements to this policy may be made by anyone within the Agency or in Industry. Proposed amendments to this policy shall be forwarded to the applicable Poultry Area Program Specialist.

Proposals must be accompanied by supporting documentation, as applicable.

Upon receipt, all proposals must undergo review by the National Poultry Specialist, and must be subsequently approved by the Director, Meat Programs Division (MPD), Animal Products Directorate (APD) for incorporation into this document.

19.1.2 Glossary of Terms

Ante mortem Examination
Refer to the definition contained in section 2 of the MIR.

Ante mortem Inspection
Refer to the definition contained in section 2 of the MIR.

Carcass Defect Detector
An industry employee accredited to examine the exterior of carcasses and to identify and remove carcasses with specified pathology and/or processing defects. Carcass Defect Detectors may also be referred to as “Preselectors”.

Cavity Defect Detector
An industry employee accredited to examine the internal (abdominal) cavity of carcasses after evisceration and to identify and remove carcasses with specified pathology and/or processing defects.

Compliance Verification System (CVS)
The Compliance Verification System (CVS) is a working tool for verifying industry's compliance to regulations; refer to Chapter 18 of this Manual.

Critical Control Point / Critical Limit
Refer to the definitions in the MIR and in the Food Safety Enhancement Program (FSEP) manual.

Defect Detection
The act of identifying and removing viscera and carcasses with specified pathology and processing defects before and after evisceration.

Deviation Procedure
Refer to the definition contained in the FSEP manual.

Dressing
As per the MIR, following stunning and bleeding, the removal of the head, feet at the ankle joint, feathers, oil glands and the digestive, respiratory, reproductive and urinary systems. The head, feet, kidneys and reproductive system may be left attached to certain categories of poultry.

Edible
As per the MIR: fit for human consumption.

Evisceration Floor Inspector
CFIA inspector, assigned under the Modernized Poultry Inspection Program (MPIP), to provide government monitoring and oversight of operations and processes between evisceration and chilling.

Fowl
Mature chickens including laying hens (which provide table eggs) and breeder flocks (which provide hatching eggs).

HACCP System
Refer to the definition contained in the FSEP manual.

Hazard
Refer to the definition contained in the FSEP manual.

Meat Inspection Act **(MIA)**
http://laws.justice.gc.ca/en/M-3.2

Meat Inspection Regulations **(MIR)**
http://laws.justice.gc.ca/en/showtdm/cr/SOR-90-288//?showtoc=&instrumentnumber=SOR-90-288

Monitoring
The observation or measurement of pre-established parameters of a process.

Obviously Condemnable Carcasses
Carcasses that can be readily identified as being condemnable without the additional evaluation of the viscera and the cavity.

Off-line Reconditioning
The removal of localized pathology (e.g. airsacculitis, salpingitis) from within the abdominal cavity of carcasses by vacuuming, scraping, trimming, or combinations thereof at a designated off-line work station according to the operator's approved written protocol.

Off-line Reprocessing
The removal of contamination (faecal, bile, ingesta, and extraneous material) from within the abdominal cavity of carcasses by washing, vacuuming, trimming or combinations thereof at a designated off-line work station according to the operator's approved written protocol.

On-line Inspector
CFIA inspector(s) assigned to an on-line inspection station to perform post mortem inspection as required by the applicable inspection system.

On-line Reconditioning
The removal on-line of localized pathology (e.g. airsacculitis, salpingitis) from within the abdominal cavity of carcasses according to the applicable policy and an approved operator-specific written protocol.

On-line Reprocessing
The removal on-line of contamination (faecal, bile, ingesta and extraneous material) from within the abdominal cavity of carcasses according to the applicable policy and an approved operator-specific written protocol.

Pathology Defects
Carcasses with diseases or conditions which occurred while the birds were still alive. These defects occur at the farm level or during transport to the slaughtering establishments. Examples include Cellulitis, Ascites, Cyanosis, and Emaciation.

Post mortem Examination
Refer to the definition contained in section 2 of the MIR.

Post mortem Inspection

Refer to the definition contained in section 2 of the MIR.

Preselection
The act of identifying and removing obviously condemnable carcasses before evisceration.

Process Control (PC)
Is a control used at a point or step that will contribute to the effectiveness of the related CCP(s) or post mortem inspection activities.

Processing Defects
Carcasses with conditions (non-pathological) which are attributable to processing operations. Examples include Inadequate Bleeding, Mutilation/Overscald, Faecal or Bile or Ingesta Contamination.

Salvaging
Hot boning of carcasses off-line so as to recover the non defective portions.

Veterinarian in Charge
Government veterinarian responsible for all CFIA staff activities at a slaughter establishment.

Viscera Defect Detector
An industry employee accredited to examine the viscera (heart and liver plus spleen and intestines in mature poultry) to identify and remove viscera, and when applicable, the corresponding carcass with specified pathology and/or processing defects.

19.1.3 Plant Construction and Equipment

For all general requirements concerning plant construction and equipment, please see Chapter 3 of this manual.

19.1.3.1 Requirements for Poultry Slaughter Establishments

While the basic principles, as described in Chapter 3, must be met, the following specific requirements must be adhered to in poultry establishments (when applicable).

19.1.3.2 Separation of Incompatible Operations

As per Chapter 3, adequate physical separation of incompatible activities that could potentially result in the creation of a cross contamination risk for meat product shall be provided. When there is no alternative (in existing registered establishments only), effective operational controls must be implemented. These operational controls shall be thoroughly described in writing and must be strictly followed at all times.

- Areas where animals are kept shall not open directly into areas where food or packaging material are handled or stored.

- Shipping and receiving areas shall be physically separated from other areas of the establishment.

- Separation between incompatible areas (like edible and inedible, raw and ready-to-eat products, etc.) must be maintained throughout the establishment in relation to construction, operations and personnel.

- The following areas of poultry slaughtering facilities must be physically separated from each other:

    - live receiving - holding - stunning shall be separated from bleeding;

- bleeding shall be separated from scalding - defeathering;
- defeathering shall be separated from evisceration;
- evisceration shall be separated from the chilling processes of carcasses.

19.1.3.3 Cleaning and Disinfecting Facilities for Transport Containers and Crates

These facilities are required by subsection 28.(4) of the MIR, and should be located in an area segregated from the live poultry receiving and holding room.

Trucks used for the transport of crates or transport containers may be cleaned and disinfected off-site providing the Operator has written procedures incorporated within the operator-specific HACCP system which ensure that clean crates or transport containers are only loaded onto clean truck surfaces.

19.1.3.4 Ante mortem Inspection Facilities

In order to allow a meaningful veterinary ante mortem inspection of birds from every single lot, a designed safe area must be made available to the veterinarian in the staging area, or in the unloading area, or where birds are suspended on shackles. A minimum of 500 lux or equivalent lighting (blue lights) is required.

19.1.3.5 Stunning and Bleeding Facilities

The bleeding area shall be designed to accommodate a bleeding time of not less than 90 seconds and be so located as to be separated from the scalding tank.

19.1.3.6 Defeathering and Washing

Spray washing of carcasses must occur within 15 seconds after defeathering.

Sprays at washing station shall be so directed as to wash the hock surface and the entire carcass below the hock.

19.1.3.7 Transfer Facilities

Defeathered carcasses shall be transferred to an evisceration line, which is separate from the defeathering line. Transfer facilities must be capable of being cleaned during operation.

Attention must be paid to the synchronization of slaughter and evisceration lines to prevent accumulation of carcasses at the transfer point. The transfer location must be either:

- the last processing step before the wall separating the scalding and defeathering area; or
- the first processing step after, the same wall.

Preferably, the transfer should be located within the defeathering area. The slaughtering line shall not enter the evisceration room beyond the transfer location.

19.1.3.8 Facilities for the Harvest and Processing of Poultry Feet

The scalder for feet or paws may be positioned:

- in a compatible (hygienic) area of the scalding and defeathering room; or
- in a room physically isolated (e.g., floor to ceiling walls) from the surrounding inedible area and from the evisceration floor or any other edible processing area.

The equipment for transferring the feet or paws from the scalder to the packaging area shall comply with Chapter 3 of this manual (e.g. piping shall be stainless steel, easily demountable by means of dairy or sanitary-type fittings, and be of such size and length as to be capable of easy and regular cleaning).

19.1.3.9 Washing and Singeing

Spray washing of carcasses must occur within fifteen (15) seconds after carcass transfer.

Sprays at the washing station shall be so directed as to wash the hock surface and the entire carcass below the hock.

Singeing may be used to remove hair and as a back-up for the defeathering process.

19.1.3.10 Evisceration

The evisceration room shall be designed and constructed to provide for a hygienic environment and meet program requirements. The facilities should provide for the removal of inedible portions, to the appropriate area, in a direction that is opposite to that of the evisceration sequence.

Equipment employed in the preparation of giblets shall be so located as to maintain sanitary conditions for this operation.

Since the harvesting and preparation of giblets must be accomplished without delays, thought must be given to the working capacity of the facilities provided.

19.1.3.11 Carcass Washer

Effective carcass inside and outside washing facilities must be provided. If management wishes to take into account the volume of water used at the wash facility, as a part of the total volume of water required in the chilling system, the washer shall be equipped with a flow meter which provides a continuous indication of the amount of water being used as well as indicating the total amount of water which has been used.

19.1.3.12 Poultry Salvaging and Off-line Reprocessing/Reconditioning Stations

The poultry salvaging and off-line reprocessing/reconditioning stations are to be located in an area to preclude cross contamination and congestion. Salvaging and off-line reprocessing/reconditioning of carcasses must be done within 15 minutes after being held, in order to limit microbial growth and deterioration of carcass condition. Cross contamination by carcasses in contact with each other is to be avoided. Therefore, the transport of contaminated carcasses from the evisceration line to the salvaging and off-line reprocessing/reconditioning stations should be by a shackle rail conveyor or by a mobile rack. A fixed rack at the evisceration line (separate from the held rack for pathology) may also be used for initial placement of carcasses.

The design, construction and installation of salvaging and off-line reprocessing/reconditioning stations shall ensure hygienic environment and rack and shackle spacing and rack capacity must be sufficient to prevent cross contact of carcasses.

The salvaging and off-line reprocessing/reconditioning stations shall be equipped with directly drained carcass washing facilities. The washing cabinet should be equipped with a three-sided splash shield or equivalent and with a non-splash spray nozzle meeting program requirements. To facilitate a thorough outside carcass rinse prior to salvage of parts and for off-line reprocessing/reconditioning, a sufficient water volume and pressure is required. Plants using a shackle rail conveyor may utilize a thorough automatic on line outside carcass wash prior to salvage and for off-line reprocessing/reconditioning (this does not apply to carcasses "held" for further post mortem examination.)

The following facilities must be provided adjacent to the salvage cabinet and off-line reprocessing/reconditioning stations which shall be equipped with:

- A knife rack or stand along with a hot water sanitizer maintained at 82°C.
- Hand wash facilities of remote control or timed type or continuous warm water flow with soap dispenser and paper towels.
- Containers for edible and inedible meat products.
- Washing facilities for shackles, held racks, hooks, cabinet and splash shields the station.

Ergonomic studies have found that a shackle height (bottom of shackle) of 1500 mm is preferable.

19.1.3.13 Chilling

Chilling systems employed shall have the capacity to rapidly lower the temperature of dressed carcasses, portions and giblets. Where water is employed for chilling purposes, the equipment shall be so designed as to permit an adequate overflow of water. The overflow of water from water chilling systems shall be directly drained to prevent discharge of water onto the floor during operations.

Continuous water chilling systems shall be equipped with a flow meter and a recording thermometer at the warmest part of the system. In lieu of a recording thermometer a thermometer without a recording device may be used provided manual temperature recording is carried out at the frequency specified in the HACCP system.

In new facilities or at time of major renovations the chill tank shall be located in a separate room from the evisceration area.

Weighing equipment, used to conduct moisture retention tests, must be provided where required.

19.1.3.14 Specific Facility Requirements for Poultry Slaughter Establishments

19.1.3.14.1 Establishments Operating Under the Traditional Inspection System

Since January 02, 2005, traditional inspection has been restricted to one (1) on-line post mortem inspection station. Operators desiring to operate at line speeds faster than permitted for a single inspection station must switch to the Modernized Poultry Inspection Program (MPIP).

However, operators with two (2) on-line traditional inspection stations as of December 31st, 2004 have been "grandfathered" provided that both inspection stations are in compliance with Chapter 3. In those cases, carcasses are to be selected and presented for inspection, on a suitable shackle guide bar, either manually or with selectors or kickout mechanisms.

For all poultry inspection stations, non-slip, anti-fatigue mats shall be provided and should compensate for floor slope.

19.1.3.14.2 Establishments Operating Under the Modernized Poultry Inspection Program (MPIP)

Establishment workstations and CFIA on-line inspection stations listed below require a minimum 2000 lux, of such a quality as to not distort the normal colour of meat products, measured at the level of the carcass cavity as per Chapter 3 of this manual.

CFIA on-line inspection stations required for export requests shall comply with applicable facility requirements contained in Chapter 3.A helper/trimmer with adequate facilities shall be provided to the company defect detectors to remove signalled carcasses from the evisceration line.

Shackles shall be colour-coded or marked in an equivalent manner to readily indicate which carcass and viscera pack corresponds to which detector if the operator desires feedback from the CFIA as to which detector(s) are missing specified defects. Defect detectors must be able to readily identify which carcasses/viscera they are responsible to examine.

19.1.3.14.3 Preselection

19.1.3.14.3.1 Carcass Defect Detectors

Adequate on-line space is required for each defect detector work station.

19.1.3.14.3.2 Station for Training/Accreditation

On-line space (1 metre) downstream from carcass defect detectors and prior to the venting machine for CFIA staff to train and accredit the establishment trainers as carcass defect detectors must be provided. The space is also provided for the training and the accreditation of the carcass defect detectors by the accredit trainers.

19.1.3.14.4 Post Evisceration

19.1.3.14.4.1 Cavity Defect Detectors

Adequate on-line space is required for each defect detector work station.

19.1.3.14.4.2 Viscera Defect Detector

Adequate on-line space is required for each defect detector work station.

19.1.3.14.4.3 Presentation Tests and Station for Training/Accreditation

On-line space (1 to 1.5 metres), prior to viscera defect detector(s) and to trimming the carcass or harvesting the viscera, is required to perform the presentation tests.

On-line space is also required for CFIA staff to train and accredit the establishment trainers as cavity defect detectors. The space is also provided for the training and the accreditation of the carcass defect detectors by the accredit trainers.
However, provisions for line space for presentation and training/accreditation may be combined.

Longer space is required proportional to line speed and associated sampling procedures.

19.1.3.14.4.4 Helper/Trimmer

On-line space for one company employee to remove signalled defective carcasses by the defect detectors and if time permits, trims localized defects from carcasses.

19.1.3.14.4.5 Defect Detection Standards (DDS) Station

On-line space is required, proportional to the line speed (1 to 2 metres), after viscera detection, but prior to harvesting the viscera.

Carcasses shall be synchronized to their corresponding viscera with both readily accessible to the inspector throughout the length of the inspection station.

These line space requirements may be combined with the CFIA on-line station required to meet Export requirements.

19.1.3.15 CFIA Veterinary Disposition Stations

The following requirements apply to CFIA veterinary disposition stations for all methods of poultry inspection:

- Minimum lighting of 2000 lux as measured at the entrance to the abdominal cavity, free from glare and shadows and which does not alter the colour of the pathological lesions.

- The operator shall provide a plant employee (helper/trimmer) trained by the Veterinarian in Charge (VIC) to assist the veterinarian(s). Alternatively, the operator may provide equipment which automatically presents the carcass and the viscera.

- Adjustable rack(s) and/or carousel(s) and/or a moving veterinary line with sufficient capacity and located so as to minimize the time required by the veterinarian(s) to walk between the various veterinary work station(s) and to facilitate CFIA oversight of off-line salvage or reprocessing operations.

- The platform shall be positioned such that veterinarians do not need to reach forward for the carcasses and the vent of the carcass should be positioned at the inspector's or veterinarian's elbow height. The provision of height adjustability shall permit the veterinarian to alter his/her posture as many times as desired (to achieve a comfortable posture) over the course of each rotation.

- Anti-fatigue rubber matting to provide comfort and, in addition, the matting shall be continuous throughout the work station so as to prevent trip hazards.

- Counter/tally system (e.g. tally sheets, a mechanical or electronic counter system, computer touch screens, etc.) suitable to the VIC. A counter system mounted on a wall shall be at a height so as to reduce shoulder demands. Counter systems mounted on a stand shall have a stand which readily adjusts so that the buttons can be positioned between 910 mm and 1220 mm above the floor or work stand. There shall be no horizontal obstructions (e.g. paper towel dispenser) lying between the veterinarian and the counter. The goal is to position the counter/tally system at the veterinarian's standing elbow height.

- Inedible carcasses shall be unloaded into an inedible container either automatically or discarded by the helper/trimmer. For poultry smaller than turkeys, if the assistance of a helper/trimmer is not required on a routine basis, the veterinary work stations shall be designed such that the carcasses can be discarded by dropping them into a bin, chute, or gutter directly below the rack, carousel or line. The target size shall be as large as feasible such that the veterinarian is not required to throw precisely or reach to position the carcass. Toe space shall be provided under a chute or bin, to allow the veterinarian to stand as close as s/he wishes.

19.1.3.16 Carcass Dressing Standards Station (CDS)

The off-line monitoring station must have safe access to pre-chill lines and be protected from traffic and obstructions. An easily cleanable rack with shackles shall be provided to hold part of or the entire carcass sample and a table for examination. The station shall include a clip board holder. The monitoring station shall be under lighting that meets the minimum 2000 lux requirement.

For CFIA independent verification tests performed on heavy carcasses (e.g. turkey carcasses), the operator shall insure minimal manipulation during the carcass collection by providing assistance or adequate equipment.

19.1.3.17 Specific Requirements for Ratites (Including Ostrich, Rhea, and Emus)

The slaughter and dressing of ratites shall only be conducted in establishments with adequate facilities and equipment to preclude contamination of carcasses and the evisceration area with dander or other contaminates resulting from the dressing procedure.

19.1.4 HACCP Program

The operator must have a HACCP system covering:

- prerequisite programs;
- process controls; and
- HACCP plan(s).

When the HACCP plan is developed by the operator, it is recommended that the HACCP Generic Model for Chicken Slaughter, developed under FSEP, be used. Elements for development and implementation of a HACCP system should be adhered to as detailed in the FSEP manuals of the CFIA. Complete copies of the FSEP manuals are posted on the CFIA Web site at:
http://www.inspection.gc.ca/english/fssa/polstrat/haccp/manue/tablee.shtml

For more details on the HACCP system for the slaughter of poultry, refer to the corresponding generic model.

19.1.4.1 Process Control (PC)

Hazards identified during the hazard analysis may be controlled through the use of Prerequisite Programs, Critical Control Points (CCPs) and/or Process Controls (PCs). Hazards controlled by a PC should be indicated as such on the applicable biological, chemical and physical hazard identification forms within the HACCP plan as shown in the generic model.

The PCs listed below must be utilized by poultry slaughter establishments as described later in this chapter. Any deviation at a CCP will require an evaluation of the supporting PC(s) as part of the deviation procedures associated with that CCP. The following is a list of CCPs and their supporting PCs as contained in the Poultry (Slaughter) Generic Model:

- CCP-1B Step 24 Viscera Defect Detection:
  - PC#1 (Evisceration Standards)
  - PC#2 (Presentation Standards)

- CCP-2B Step 30 Giblet and Neck Harvesting:
  - PC #1 (Evisceration Standards)

- CCP-3B Step 32 Final examination:
  - PC#1 (Evisceration Standards);
  - PC#2 (Presentation Standards);
  - PC#3 (Defect Detection Standards, carcass group)
  - PC#4 (Carcass Dressing Standards)

- CCP-4B Step 34 Salvaging:
  - PC#1 (Evisceration Standards)
  - PC#3 (Defect Detection Standards, carcass group)
  - PC#4 (Carcass Dressing Standards)

Operators require a written program for each PC. The written program for PCs must meet the requirements found in this chapter and shall also contain operator specific information as specified within the FSEP manual such as:

- who will perform the specified activities;
- the exact locations where the required tests will be performed;
- deviation procedures including preventative measures; and
- verification procedures.

19.2 HUMANE TREATMENT

19.2.1 General Requirements

19.2.1.1 Transportation

The persons or firms responsible for the pick up of food animals and their transportation and delivery to a slaughterhouse are fully responsible for the welfare of the animals from the time of loading until the time of unloading at the slaughterhouse.

Animal transport is subject to Part XII of the *Health of Animals Regulations*. The requirements under the above regulations include provisions in regard to:

- watering and feeding;
- loading and unloading;
- overcrowding;
- segregation of animals from different animal species;
- ventilation;
- protection from inclement weather; and
- prevention of undue suffering of animals.

19.2.1.2 Humane Handling

Operators of federally registered establishments and operators of domestic plants receiving CFIA inspection services under a federal / provincial agreement are fully responsible for humane pre-slaughter handling and for the humane stunning and slaughter of food animals on their premises.

19.2.1.3 Stunning Methods

Except for ritual slaughter, all food animals slaughtered in registered establishments and domestic plants shall be rendered insensitive (stunned) prior to slaughter. Stunning must be carried out by a method satisfactory under the *Meat Inspection Act* (MIA) and MIR. All stunning devices require CFIA acceptance. The following methods to render an animal unconscious may be used:

- electrical stunning: In the case of animals which are rendered unconscious by reversible electrical stunning, the stun to stick interval should not exceed 30 seconds;
- stunning by exposure to a gas or a gas mixture;
- rapid decapitation: birds may also be killed (instead of rendered unconscious) in this manner.

Plant management of registered establishments and domestic plants is fully responsible for the training and supervision of personnel carrying out the stunning and slaughter of food animals on their premises.

After the proper stunning of poultry the carotid artery and jugular vein shall be immediately severed such that the bird dies from exsanguination of blood. The presence of mild to brick red carcasses at preselection may be an indication of improper sticking.

19.2.1.4 Bleeding

Whenever there are inadequately bled carcasses (mildly red to brick red), this may indicate that live birds are entering the scald tank. The operator must set a limit on the number of red birds per lot. Whenever the limit set by the operator is found at pre-selection or after the scald tank and prior to the head pulling mechanism to have been exceeded, the operator shall evaluate the stunning and killing procedures. Immediate corrective actions shall be instituted to correct inadequate stunning or bleeding. Operators shall notify the Veterinarian in Charge when excessive numbers of red carcasses are present.

There is no tolerance for birds entering the scald while still alive, e.g., without any neck cut/no cut, as the back-up sticker is the fail-safe for birds missing the automatic neck cutter. Any such occurrence must be immediately reported to the VIC, investigated by the company, corrective actions taken and preventive measures put in place.

19.2.2 Responsibilities of the CFIA

In regards to food animals in registered establishments, it is the responsibility of veterinarians and inspectors under the *Health of Animals Regulations* and the MIR to monitor:

- transportation;
- humane handling; and
- humane stunning and slaughter.

19.2.2.1 Enforcement Actions by the CFIA

19.2.2.1.1 Delivery of Food Animals to Slaughterhouses

Violations of transportation regulations shall be reported to the Regional Veterinary Officer for further investigation. Veterinarians in Charge shall collect and maintain as much evidence as possible in regard to such incidences. Court action may be initiated by CFIA in consultation with CFIA legal advisors.

19.2.2.1.2 Pre-slaughter Accommodation and Handling of Food Animals

Unsatisfactory conditions concerning animal holding facilities shall be brought to the attention of the operator before they become critical. The use of areas in serious violation of the requirements under the MIA and *Regulations* shall be stopped until they are brought up to standard.

Inhumane handling of food animals on the plant premises shall not be tolerated by the CFIA.

In the event of lack of corrective action, enforcement action including halting of stunning and slaughter operations shall be taken.

19.2.2.1.3 Stunning and Slaughter of Food Animals

The inspection staff shall monitor on an ongoing basis the stunning and slaughter of food animals. Whenever an inspector observes inhumane treatment of food animals, the inspector shall immediately halt stunning and slaughter operations until management of the slaughter plant has taken effective corrective action. In cases of non-cooperation, or flagrant violation of provisions of the MIR, legal action may be initiated.

19.3 ANTE MORTEM INSPECTION / EXAMINATION

19.3.1 Generality

19.3.1.1 Introduction

An ante mortem examination within 24 hours preceding slaughter in a registered establishment is a mandatory requirement under the MIR. It is the operator's responsibility to ensure that only those flocks that have received ante mortem examination are permitted to proceed to the slaughter floor.

19.3.1.2 Objectives

Ante mortem inspection/examination serves the following purposes:

- to identify flocks showing clear evidence of being affected with a disease or condition that could render the carcass unfit for human consumption;
- to identify flocks representing a threat to the health of personnel handling the carcasses;
- to identify suspect flocks that require segregation and separate slaughter;
- to identify flocks which are suspected of having been treaded with antibiotics or other chemotherapeutic agents;
- to identify flocks that may result in heavily contaminated carcasses during the evisceration operations;
- to identify flocks suspected of having a reportable or exotic disease;
- to make a disposition regarding the suitability of flocks for slaughter; and
- to identify flocks requiring special handling for humane reasons.

It is essential that there be a good system of communication for relaying information obtained at ante mortem inspection / examination to the inspection staff conducting post mortem inspection and / or to defect detectors conducting post mortem examinations. This information is relayed by means of a properly completed CFIA/ACIA 5476 form.

19.3.1.3 Facilities Requirements

To enable adequate ante mortem inspection to be carried out, certain minimum facility requirements must be provided by the operator (see the MIR, Chapter 3 and section 19.1.3.4 of this chapter). In addition to the facility requirements, adequate assistance must be provided to move and identify flocks as required.

19.3.2 Ante mortem Procedures

All stakeholders involved in the selection process at the farm level, the transport of live poultry and those involved in the slaughter process of birds destined for food consumption including CFIA inspection staff have a role to play in the evaluation of the suitability of those birds sent to slaughter.

The following roles have been defined in consultation with industry stakeholders as well as with CFIA staff representatives. Additional responsibilities related to care and handling of food animal by industry stakeholders are to be found in Chapter 12 of this Manual.

19.3.2.1 Producers' Responsibilities

The producer must:

- ensure that the advanced copy of the flock sheet and the flock sheet accompanying the flock are complete and accurate and submitted on time (MOP 19.3.4.2.1);

- have any required prescriptions (extra label drug usage with a gFARAD reference number, or prescription only medications as required by provincial veterinary licensing body) signed by the prescribing veterinarian and attached to the flock sheet (MOP 19.3.4.4);

- ensure that medications and/or food additives have the appropriate withdrawal time respected;

- comply with the recommended feed/water withdrawal times (MOP 19.3.4.2.4.1);

- refrain from transporting, or allowing to be transported, any compromised (injured) animal if the transportation will cause further injury, stress and/or suffering (*Health of Animals Act* and *Regulations*, Part XII); and

- not entrust their animals to a transport operator whose vehicle and/or shipping crates/cages are in a state of questionable repair and/or not visibly clean.

19.3.2.2 Transport Operators' Responsibilities

The transport operator must:

- refrain from catching and loading any compromised (injured) animal (consultation may occur between the producer, the transport operator, the procurement department of the slaughter facility and private veterinary practitioner as to the fitness of animals for transport);

- respect appropriate stocking densities with respect to animal size, local weather conditions and estimated length of transport time (e.g. fewer birds per crate during warm-hot weather) (Recommended code of practice for the care and handling of farm animals for Chicken, Turkeys, and Breeders from Hatchery to Processing Plant, Canadian Agri-Food Research Council, section 5.2.12);

- document barn conditions (e.g. heat, humidity);

- document weather and road conditions at:
  - start of loading/catching; and
  - during transport;

- back-up transportation plans for delays or break-downs, (i.e., alternate routes, transportation, housing of animals if delay is long, etc.) must be in place prior to any shipment of animals;

- ensure that the transport vehicle and shipping crates/cages are in good working order (no sharp edges, large holes or gaps and are structurally sound) and have been properly cleaned and disinfected prior to leaving a registered establishment; however, the transport vehicles (only) may be washed off-site provided that the Operator has included such operations within their HACCP system; and

- retain transport records as described (MOP 19.3.4.8).

In addition to training provided to employees on the care and maintenance of their equipment, transport operators are to ensure that their handlers/drivers are properly trained in animal handling, catching and crating. Training records are to be maintained for each employee.

Note: Special considerations for the handling and transport of spent laying hens are required due to their different physiology.

19.3.2.3 Plant Operators' Responsibilities

19.3.2.3.1 At Receiving

The plant operator must:

- ensure that all animals are appropriately protected and sheltered against inclement weather or temperature extremes (MIR);

- perform an ante mortem examination within 24 hours preceding slaughter of all loads of live poultry, whether of domestic or foreign origin. Only those flocks that have received ante mortem examination are permitted to proceed to slaughter. (See below for screening procedure). Provision for comprehensive ante mortem screening and examination shall be incorporated into the operator's HACCP Program;

- review the submitted Flock Sheet (MOP 19.3.4.2.4.1) and trucker report/log for each individual lot. A designated employee shall review the flock sheet for completeness and accuracy. Records of each ante mortem examination are to be completed (including time, findings, and appropriate corrective actions if indicated), signed and maintained;

  Note: Should there be any concerns, omissions or inaccuracies on the Flock Sheet or about the health of the flock, medication withdrawal, extra-label usage of medications or food additives, the plant shall confer with the producer and correct the deviations. The VIC shall be contacted for advice, if there are any concerns regarding mortality, disease or drug usage. In the event of extra label drug use, the producer, through the plant operator, shall provide the VIC with documentation certifying that the gFARAD established withdrawal time has been respected (flock sheet, signed prescription, gFARAD reference number) (MOP 19.3.4.4);

- conduct an examination of a sample of crated animals for general flock health. If the shipping crates/cages are still on the vehicle, the outside perimeter crates that can be visualized without climbing must be assessed (must completely walk around the vehicle). If the crates have been unloaded into a staging area, all available crates must be assessed (it will be necessary to bend down and examine the bottommost crates). The monitoring must be done on each truckload of animals arriving at live receiving and recorded on plant live receiving forms. Photographs, testimonials and records may be collected at this time by designated plant personnel to document any deviations, as per operator Standard Operating Procedures (SOP).

  Note: Photographs should preferably have a label within the picture stating the date, time, location and the identity of the particular flock implicated (producer name, barn #, lot #);

- immediately notify the CFIA veterinarian should animals arriving at the plant display any signs of stress, injury, abnormal behaviour, disease symptoms as described below, or elevated levels of Dead on Arrivals (DOAs);

  - coughing, panting, snicking
  - discharges from eyes, nares, mouth or vent
  - reddened, swollen, irritated looking skin
  - swollen extremities, fractures or dislocated wings or legs
  - poor or sparse feathering
  - abnormal stools (watery, bloody, odd colour, large volume, none)
  - presence of blood (note location, and character: colour, dried or fresh)
  - strong odours (describe)
  - abnormal behaviour, such as dull responses, or hyper reactivity to noise or light
  - swollen or oddly coloured (blue, bright red, or black) combs and wattles

- ensure animals are unloaded from transport vehicles in a safe, non-stressful manner;
- remove from operation broken or damaged live animal crates/cages and note any problems with the transport vehicles (e.g. exhaust leaks);
- clean and disinfect all shipping crates/cages and live transport vehicles, once fully unloaded (MOP 19.3.5), prior to leaving the establishment. This should be monitored by a supervisor and appropriate records maintained; however, the transport vehicles (only) may be washed off-site provided that the operator has included such operations within their HACCP system.

19.3.2.3.2 Receiving to Shackling

The plant operator must:

- ensure that crates are not roughly handled, thrown or dropped onto conveyors;
- ensure that live hangers remove birds from the crates in such a manner as to preclude damage to the animals (e.g. fractured limbs, wings, lacerations); abusive actions or mishandling of animals (e.g. kicking, hitting, squeezing) must not be tolerated; this must be clearly stated in the plants' SOP for live receiving;
- remove dead birds from shipping crates and place them in appropriate storage containers for counting/weight estimation and subsequent disposal;
- ensure animals are shackled by two legs; birds shackled by one leg are often not adequately stunned, are often stressed and usually have a wing or other body part cut by the sticking knife; this shall not be tolerated;
- ensure that crates are emptied of all birds before entering the crate washer; it is not acceptable for birds to go through the crate washer; immediate corrective actions and preventative measures must take place should such an incident occur; the VIC shall be informed of any and all such incidents;
- ensure that birds which have escaped their crates shall be captured, handled and shackled in a manner so as not to increase their risk of injury or stress; this should be monitored by the kill floor supervisor on a regular, on-going basis.

19.3.2.3.3 Shackling to Scalding

The plant operator must:

- train and supervise personnel carrying out the stunning and slaughter (sticking) of all food animals; employees are to be regularly assessed and records maintained of their performance; employees are to be made aware of their liabilities and responsibilities with regards to humane issues;
- ensure all animals are properly stunned or rendered insensitive/unconscious prior to slaughter (MOP 19.2.1.3); this is accomplished through one of the approved methods noted in the MIA/MIR. Before the animal is bled, it must be insensible to the wound imposed on it by the sticker; regardless of the stunning method used, animals **must be rendered insensible** before sticking (except for ritual slaughter);
- ensure that the carotid artery and jugular vein of the animals is severed, in a sanitary manner, within 30 seconds after stunning so that the animal dies from exsanguination of blood (MOP 19.2.1.3); sticking can be performed manually or automatically;

- monitor stick wounds to make sure that they are properly placed (below the lower mandible); there is no acceptable number for unstuck animals as these animals may enter the scalding tank alive. (reference www.grandin.com/poultry.audit.html);

- ensure that the animals are bleeding adequately;

- ensure that appropriate bleeding times for the species are respected at all times; this must be not less than 90 seconds;

- the presence of mild to brick red carcasses at pre-selection may be an indication of improper sticking; plant operators must establish a set limit on the number of red birds per lot and monitor on a lot by lot basis; the company shall evaluate the stunning and killing procedures whenever the limit set by the company is found to have been exceeded at pre-selection or after the scald tank and prior to the head pulling mechanism; immediate corrective actions shall be instituted to correct inadequate stunning or bleeding; the VIC shall be notified of incidents of improperly stunned or slaughtered birds and the corrective action taken to resolve the problem; cessation of slaughter to investigate stunning/sticking issues shall be instituted by the plant if corrective actions fail to resolve the problem; preventive corrective measures must be submitted to the VIC for assessment; they are to take immediate corrective action to prevent recurrence; and

- ensure that the stunning/sticking equipment is in good working order and constantly monitored; CFIA shall be notified and records kept of incidents of inadequate stunning/slaughter; lack of response to this issue will result in enforcement action by CFIA, which includes, but is not limited to, immediate suspension of slaughter.

Signs of adequate electrical stunning (lack of sensibility) include, but are not limited to:

- flaccid head hanging down, (in straight line with back);
- tremors, trembling; spasmodic, non rhythmic, weak flapping activity;
- no response to tactile stimuli;
- cessation of movement;
- no vocalizations;
- no blinking (eyes open, normal to dilated pupil);
- lack of rhythmic breathing;
- no return of consciousness/sensibility during bleed out phase.

Animals shall not have to endure more than one stunning procedure.

Signs of return of sensibility include, but are not limited to:

- raised or curved head;
- vocalizations;
- vigorous and/or rhythmic wing flapping;
- blinking;
- swallowing.

19.3.2.4 CFIA Responsibilities

CFIA ante mortem inspection of poultry has three components:

- a review of the advanced copy of the flock sheets for each scheduled lot by a CFIA veterinarian;

- a review by a CFIA veterinarian of the flock sheets accompanying each lot along with the trucker's logs (when available); and

- an inspection by a CFIA veterinarian and/or a designated CFIA inspector of birds in shipping crates either on the transport vehicle or in the staging area, in addition to, birds suspended in shackles on the line moving towards the stunning facilities.

In order to do so, the CFIA must:

- perform ante mortem inspection on each lot of live animals delivered to the establishment. This includes, but is not limited to:
  - a review of the advanced copy of the flock sheets for each scheduled lot by a CFIA veterinarian;
  - a review (before or during the processing of the lot) by a CFIA veterinarian of the flock sheets accompanying each lot along with the trucker's logs;
  - an inspection (before or during the unloading of the lot) of birds in shipping crates on the transport vehicle;
  - an inspection of birds in shipping crates either in the unloading area, or in the staging area or at the station where live birds are suspended on shackles on the line moving towards the stunning facilities.

- complete, sign and maintain ante mortem records of each ante mortem inspection; (see CFIA Ante mortem Records in Annex A). In order to detect a condition with a 1% prevalence and with a 95% confidence level in a lot of about 10,000 birds, it is recommended that approximately 300 birds be inspected by the veterinarian;

  Note: The review by a CFIA veterinarian of the flock sheets accompanying each lot, and the inspection by a CFIA veterinarian and/or a designated CFIA inspector of live birds, are normally performed prior to the hanging of the birds and prior to the processing of a lot during the normal working hours of the CFIA veterinarians. However considering the verification role adopted by CFIA under mandatory HACCP, it must be acknowledged that it could take place after the beginning of the processing of a lot, for example in the case of the first lot in the morning upon the arrival of the CFIA veterinarian. It is also accepted that designated CFIA inspectors could be assigned to perform the review of final flock sheets and/or live ante mortem inspection until the arrival and/or availability of a CFIA veterinarian.

- determine if immediate slaughter is required for humane reasons, or, if a disease is suspected, if the flock should be held and tested or slaughtered. Should the CFIA veterinarian suspect a Foreign Animal Disease (FAD), the operator-specific FAD Contingency Plan will go into effect;

- monitor compliance with all the Acts and Regulations under its jurisdiction and effect appropriate enforcement action when non compliances are encountered;

- perform FSEP audits, Compliance Verification System (CVS) related tasks, and random and frequent spot-checks of the various phases of the ante mortem procedures;

- document all non-compliances. This is accomplished through detailed inspection notes, audits notes, post mortem reports, operator's non-compliance reports (ONCR), photographs, interviews and other evidence. Producers, transport operators and plant operators are to cooperate fully with the CFIA during an inspection, audit and/or inquiry.

19.3.3 Procedures Due to Special Circumstances

19.3.3.1 Suspect, Reactor and Condemned Flocks

Suspect and/or reactor flock crate(s) should be tagged and an ante mortem examination report (CFIA/ACIA 1438) is to be completed giving particulars such as description, identification of flock, details of findings, owner's name, address, etc.

19.3.3.1.1 Suspect Flocks

It is imperative that all suspect flocks be properly identified throughout the slaughter process, i.e., from the live bird receiving room to the final inspection station. Except for immediate slaughter for humane reasons, it is necessary to schedule suspects for separate slaughter, preferably at the end of the regular kill. This minimizes disruption of operations.

19.3.3.1.2 Reactor Flocks

In the case of identified reactors, ante mortem inspection shall be performed while these birds are held in segregation.

All reactors shall be slaughtered separately and apart from the regular kill, and the identity of the flock must be carefully preserved throughout the dressing operation. It is preferable to slaughter reactors at the end of day's kill.

19.3.3.1.3 Flocks Condemned on Ante mortem Inspection

All flocks condemned on ante mortem inspection shall be identified by a tag or other device showing the word “CONDEMNED”. In addition, full details (flock identification, owner's name and address, reason for condemnation), should be entered on the ante mortem examination report (CFIA/ACIA 1438).

Following condemnation, birds are to be stunned, killed and removed to the inedible section of the establishment.

Condemned birds and birds which are found dead are not permitted to pass through the slaughter floor or other edible areas of the establishment.

19.3.3.2 Cleaning and Disinfection

Slaughter floor, equipment, yards, etc., which have been used to hold or move suspect, reactor or condemned flocks, are to be thoroughly cleaned and disinfected, as judged to be necessary by the Veterinarian in Charge.

Trucks and crates used to convey birds for slaughter are to be thoroughly cleaned and disinfected under the supervision of an inspector.

19.3.4 Flock Sheets: Producers / Processors Information Exchange

19.3.4.1 Introduction

The flock sheet provides the processor with the necessary level of confidence that identified potential chemical and biological hazards associated with live domestic poultry have been considered, and to the extent possible, controlled and/or prevented at the farm level and/or during transportation. This section covers both minimal information requirements to be maintained by the processing establishment and those to be provided by the producers. Flock sheet data allows CFIA staff to judge if the operator is taking the necessary preventive measures to evaluate incoming flocks according to the written specifications contained in their HACCP system.

The MIR provide a regulatory basis for the mandatory submission and the enforcement thereof of ante mortem information for all shipments of live poultry (excluding ostriches, rheas and emus) received at a registered establishment. The regulations will facilitate auditing of the information on submitted flock sheets and the implementation of on-farm HACCP-consistent programs as developed by national producer associations.

A standardized flock sheet for chickens, turkeys and fowl has been developed on a national basis by the following organizations:

- Chicken Farmers of Canada
- Canadian Turkey Marketing Agency
- Canadian Egg Marketing Agency
- Canadian Broiler Hatching Egg Marketing Agency

A copy of the current standardized flock sheet could be obtained from the respective provincial chicken and/or turkey marketing boards where as plant is located. This standardized copy also applicable to spent broiler breeder flocks, geese, pheasants, quail etc. For other classes of birds, abattoir operators should develop a customized version by either using the flock sheets designed for chicken and turkey as templates or by developing their own provided they contain all the requisite information.

Confidentiality of Flock Sheets Between Processors and Producers - Suggestion to processors:

Indicate in your HACCP plan, receiving policy that:

“Copies of the flock sheets are not to be made for distribution other than for internal use by the processor.”

Also, a paragraph worded in proper legal terms on the following is warranted:

“The information gathered with the flock sheet is to be used for the intended purposes. Any use other than the intended food safety issues can be considered a breach of the right to confidentiality laws in Canada. Employees that use the information for other purposes can be prosecuted.”

19.3.4.2 Flock Sheets for Chickens and Turkeys

19.3.4.2.1 Information to be Provided by the Producer (or Grower)

Before shipping live birds for the first time to a slaughter establishment, a producer must provide the processor with the name, address and telephone number(s) of the veterinary service(s) servicing their operation. Producers must advise processors of any changes.

(1) Name and address of the producer and/or individual permanent code;
(2) Barn number / farm identification;
(3) Identification of the lot*/ flock number;
* The operator shall include a definition for a “lot” within their HACCP system.

Existing codes issued by the local marketing boards shall be used for the above-mentioned three items.

(4) Types of vaccines administered at the hatchery level;
(5) Number of chicks/poults placed (including extras), date of placement;
(6) Mortality rate (%), e.g., # dead birds during the growth period in the barn or in a specific lot. Formula: [(Item 5 - Item 14) / (Item 5) * 100];
(7) Growing set-up for turkeys (outside or inside);
(8) All vaccines used / all non-feed medications used (including dates) for which a withdrawal time applies;

(9) All feed medications (for which a withdrawal time applies) used in the last two (2) feed rations for turkey, and in the last feed ration for chicken;
(10) Outstanding incidents, disease outbreaks (including those necessitating a medical treatment) during the growth period, e.g., respiratory problems, diarrhea, etc.;
(11) Origin of animal feed stuffs: i.e., whether the feed was mixed “on-farm” or commercial, and in the latter case, specify if pelletized or loose (mashed); and
(12) Time (hour : minute) feeders were lifted. Expected time of slaughter and resulting anticipated length of time of feed withdrawal (based on when feeders were lifted and anticipated time of slaughter) as per processor specifications.

Unless information contained in items (1) to (11) are received in a timely manner, processors shall not schedule the pickup of the birds.

19.3.4.2.2 Information to be Provided by the Lead Catcher and/or Carrier:

(13) Starting and finishing times of bird catching (hour : minutes) on a truck basis;
(14) Number of birds being shipped; and
(15) Number of crates on the load and the floor surface area of each crate (type of crate may be sufficient for operator purposes).

19.3.4.2.3 Information to be Provided by the Processor and/or Collated in the Growers' Profile:

(16) Average bird weight (calculated from the truck weight filled minus the truck weight empty divided by number of birds received);
(17) Beginning of bird unloading (hour : minutes) on a truck basis;
(18) Number of dead on arrival (DOA) (# of DOAs on a truck basis);
(19) Condemnation rate (% for conditions related to the farm level) and benchmarking data to determine lot ranking of total rejections vs. 12 month total rejection average at this establishment (updated every 6 months) for same weight category; and
(20) Condemnation type (% for a minimum of the three most frequent conditions related to the farm level) and rate (%) of condemned portions for the three to five preceding lots (if recorded), e.g., # kg of parts condemned / # kg processed.

19.3.4.2.4 Steps for the Submission of Information to the Processor by the Producer

Flock sheets shall be submitted according to the following sequence.

19.3.4.2.4.1 Advance Copy

A partially filled “advance” copy shall be sent 3-4 days prior to catching. This copy shall contain the information described in items (1) to (11).

Two (2) days prior to processing, the processor (operator) shall contact the producer (farmer) and provide him/her with the planned catching time and the planned processing time in order to maximize the feed withdrawal process and minimize the contamination during evisceration. At that time, **if the advance copy has not been received by the processor, the operator must inform the farmer that the catching crew cannot be scheduled until an advance copy is received by the processor**.

19.3.4.2.4.2 Completed Copy

A fully completed copy, including the signed attestation and the signature at the time of loading by the producer, *shall* accompany the birds at the time of shipment.

When multiple truckloads are transported to the same processor, only one flock sheet is required and it should accompany the first load.

When shipments from one barn are to be sent to different processing plants, each processing plant shall receive an advance copy and a completed version of the flock sheet. This also applies to “trade-in” shipments.

When barns are not emptied all at the same time and various sections/floors are not submitted to the same feed withdrawal protocol, different flock sheets shall be filled for each shipment.

If a flock arrives at the slaughtering establishment without a completed flock sheet, the processor shall immediately contact the producer who will be requested to immediately supply the missing information. The Veterinarian in Charge shall be notified and the flock rescheduled for slaughter pending receipt of the missing information.

If the producer cannot be contacted or if the producer refuses to provide the missing information, the processor shall inform the producer that the birds will be slaughtered subject to the following subsection titled “Enforcement Actions by the CFIA for Missing or Incomplete Flock Sheets”.

19.3.4.3 Flock Sheets for Spent Hens or Culled Breeders

In the case of mature poultry (spent chicken or turkey hens or culled breeders), the following subsection outlines the information that must be provided with each lot prior to slaughter for review by the processor and the Veterinarian in Charge. All applicable information (items 9, 14, 16 and 17) must be entered into the computerized database by the operator.

With respect to live imports from the US, it is required that a similar flock sheet and the ante mortem information contained in items (1) to (17) be made available to the Veterinarian in Charge and the evisceration manager with each incoming flock as well as a declaration from US producers regarding the disease free status for each imported flock.

19.3.4.3.1 Information to be Provided by the Producer of Spent Hens or Culled Breeders

Before shipping live birds for the first time to a slaughter establishment, a producer must provide the processor with the name, address and telephone number(s) of the veterinary service(s) servicing their operation. Producers must advise processors of any changes.

(1) Name and address of the producer and/or individual permanent code;
(2) Barn number / farm identification;
(3) Identification of the lot* / flock number.

* The operator shall include a definition for a “lot” within their HACCP system.

Existing codes issued by the local marketing boards should be used for the three (3) items for domestic fowl listed above.

(4) Age of the birds in weeks;
(5) All vaccines used (including dates) since the pullets were placed within the egg production barns at approximately 20 weeks of age and;
(6) All feed and water medications used in the last 120 days;
(7) Outstanding incidents, disease outbreaks (including those necessitating a medical treatment) during the laying period; and
(8) Suggested catching time by the processor and last feeding time or feed removal (day : hour : minute) prior to loading;

Unless information contained in items (1) to (7) is received in a timely manner, it is recommended that processors not schedule the pickup of the birds.

19.3.4.3.2 Information to be Provided by the Lead Catcher and / or Carrier of Spent Hens or Culled Breeders

(9) Starting and ending times of bird catching (day : hour : minute) on a truck basis;
(10) Number of birds being shipped; and
(11) Number of crates on the load and floor surface area of the crates (type of crate may be sufficient for operator purpose);

19.3.4.3.3 Information to be Provided by the Processor and / or Collated in the Growers' Profile for Spent Hens or Culled Breeders

(12) Birds' conditions on arrival (dry, wet etc.);
(13) Average weight of live birds (calculated from the filled truck weight minus the empty truck weight divided by the number of fowl received for slaughter);
(14) Beginning of bird unloading (day : hour : minute) on a truck basis;
(15) Number of dead on arrivals (DOAs);
(16) Condemnation rate (% for a minimum of the three most frequent conditions related to the farm level) and a rate (%) on a carcass basis for the three to five preceding lots; and
(17) Condemnation type (% for a minimum of the three most frequent conditions related to the farm level) and rate (%) of condemned portions for the three to five preceding lots (if recorded), e.g., # kg of parts condemned / # kg processed.

19.3.4.4 Prevention of Violative Drug Residues

19.3.4.4.1 Drug Type Definitions and Associated Reference Services

- **Active Pharmaceutical Ingredients (APIs):**

APIs are compounds which may be used as ingredients for manufacturing drugs or by individuals for treating livestock. An API is often of unknown composition and purity, has no Maximum Residue Level (MRL), and no Drug Identification Number (DIN). Therefore a withdrawal period cannot be determined for an API. Poultry should not be treated with an API. Flocks treated with an API must be tested prior to shipment for slaughter or be slaughtered under a "hold and test" regime as described later in subsection 19.3.4.4.7.

- **Approved Drugs:**

Approved drugs are veterinary drugs which have been reviewed and approved by the Veterinary Drugs Directorate (VDD) of Health Canada (HC) and where an officially approved label indicates the conditions of use including the:

- species e.g. chicken and/or turkey;
- indications for use e.g. to prevent coccidiosis or to treat respiratory disease;
- route of administration e.g. water, feed or injection;
- range of dosage and frequency or length of treatment; and
- precautions which may include a withdrawal period.

Labels for approved drugs may not indicate a withdrawal period. When no withdrawal period is specifically included in the HC approved label, none is required to assure food safety. (HC has informed the CFIA that for practical purposes, a zero-day withdrawal interval is six (6) hours after the last administration of the drug in poultry).

All HC approved drugs are issued a Drug Identification Number (DIN).

- **Banned Drugs:**

Banned drugs are drugs which are banned by Health Canada (HC) from sale for administration in animals intended for use as human food. Animals treated with banned

drugs are deemed to be adulterated under both the *Food and Drugs Act* and *Regulations* and the MIR even if they contain no detectable residues.

Drugs banned under the *Food and Drug Regulations* from use in poultry intended for slaughter for use as human food include the following:

- Chloramphenicol;
- 5-nitrofuran compounds;
- Clenbuterol;
- Diethylstilbesterol (DES);
- Exogenous oestrogenic substances; and
- Oestrogenic activity

The list of banned drugs can be found on the VDD Web site:
http://www.hc-sc.gc.ca/dhp-mps/vet/banned_drugs_list_interdit_medicaments-eng.php

- **Emergency Drug Release (EDR):**

An authorization under the *Food and Drug Regulations*, to permit the manufacturer of a new drug to sell a limited quantity of the new drug to a veterinary practitioner. The new drug is one which is not marketed in Canada and is requested by the practitioner for the purpose of diagnosing or treating a medical emergency in a patient under his or her care. The permit, issued by the Veterinary Drugs Directorate (VDD), Health Canada (HC), for the EDR, should include a withdrawal period determined by the VDD based on information supplied by the drug manufacturer.

- **Extra Label Use (ELU):**

The use of a drug product in a manner that is not consistent with what is indicated on the label, package insert or product monograph of any drug product approved by HC, e.g. alternate species such as chickens versus cattle (or even chickens versus turkeys) or increased dosage.

Note: For the purposes of this section, ELU drugs will include Off-Label Use of drugs as defined below.

- **Illegal Veterinary Drugs:**

The *Food and Drugs Act* and *Food and Drug Regulations* refer to illegal sale of drugs, but not to "illegal drugs" per se. Hence, illegal sales are sales of drugs that are not approved in Canada.

- **Limit of Detection:**

Maximum sensitivity of laboratory tests for specific residues. It may be referred to as "zero" residues. It is commonly in the range of 1-10 ppb.

- **Maximum Residue Limit (MRL) and Administrative Maximum Residue Limit (AMRL):**

Maximum levels permitted in specified edible tissue sold as food (e.g. chicken fat or muscle) for specific drug residues as determined by Health Canada. The Maximum Residue Limit (MRL) is listed in Table III of Division 15 of the *Food and Drug Regulations*. MRLs, including AMRLs, are posted on the Health Canada Web site at the following URL: http://www.hc-sc.gc.ca/dhp-mps/vet/mrl-lmr/mrl-lmr_versus_new-nouveau-eng.php

- **Off-Label Use:**

Use of an unapproved drug product or drug substance which was never approved by a Canadian regulatory authority. Includes the use of a drug under the EDR program or a vaccine under a single entry permit.

- **Single Entry Permit (vaccines):**

A permit issued under the *Health of Animals Act and Regulations* by the Veterinary Biologics Section (VBS), Terrestrial Animal Health Division, CFIA, for a veterinarian to import unlicensed veterinary biologics from the United States for use under their supervision, in emergency situations. This provision is restricted to products which are licensed by the Center for Veterinary Biologics (CVB), Animal and Plant Health Inspection Service (APHIS), United States Department of Agriculture (USDA) for sale in the United States. Imported products must be shipped directly from the manufacturer, and used under the supervision of the importing veterinarian. The withdrawal period should be included on the product label.

- **Unapproved Drugs:**

This is a drug product which does not have a Drug Identification Number (DIN) and which was never approved by a Canadian regulatory authority.

- **Canadian Global Food Animal Residue Avoidance Databank (cgFARAD):**

The cgFARAD provides expert-mediated decision support to veterinarians for any inquiry related to drug or chemical residues in food animals. However, the cgFARAD will not give a recommendation of a withdrawal time for drugs without a Drug Identification Number (DIN). A drug must have been registered for use in Canada for humans or at least one animal species to have a DIN.

Veterinarians wanting to contact cgFARAD: Veterinarians prescribing extra-label use of drugs may obtain a recommendation for a withdrawal interval based on available information contained in the global Food Animal Residue Avoidance Database (gFARAD) by calling the cgFARAD at 1-866-CGFARAD, by emailing cgfarad@umontreal.ca or through the Web site at cgfarad@usask.ca

Note: The Canadian gFARAD is a non profit academic service independent of the CFIA or VDD and may require up to three weeks to respond to a request. Some more common requests may be processed more rapidly.

The Veterinarian in Charge may contact the cgFARAD at 1-866-CGFARAD (cgfarad@umontreal.ca) to discuss the science basis for the withdrawal interval on the flock sheet with the veterinary experts specializing in pharmacokinetics at the cgFARAD.

- **Canadian Association of Poultry Practitioners (CAPP) Reference table:**

Historical compilation from the Canadian Association of Poultry Practitioners, of cgFARAD recommendations to poultry practitioners, presented in table format. Recommendations for new requests are added to the table as received. The following information is attached to every entry:

- the generic and brand names of the drug,
- the species,
- the disease/condition,
- the range of dosages,
- the route of administration,
- the cgFARAD recommended withdrawal period,
- the date the cgFARAD recommendation was made and

- the CAPP reference number.

Access to the reference table is restricted to licensed veterinarians who are members of the CAPP. All entries are linked to the most recent cgFARAD original document (from which nominative information has been removed). Maintenance of the Web site and updates of drug withdrawal periods (minimum of once every two years) is the responsibility of CAPP.

A CFIA Veterinarian in Charge who is not a member of the CAPP may contact the area program network veterinary program specialist to obtain a copy of the CAPP reference table for their personal use. The table is to be treated as a confidential document. It is never to be shown to anyone who is not a veterinarian employed by the CFIA or a member of the CAPP.

- **CAPP reference #:**

Reference number linked to every entry of the CAPP reference table. For new cases, the cgFARAD is consulted and the cgFARAD reference number is used until it is included in the CAPP reference table.

19.3.4.4.2 Extra Label Use of Drugs

Extra label use (ELU) of drugs may be required by veterinarians to prevent and/or treat various diseases in poultry to ensure food safety and/or animal welfare. The goal of this policy is to assure compliance with Canadian regulatory requirements and to facilitate human food safety and not to restrict veterinarians to prescribe drugs which is the responsibility of the veterinarian and his/her respective provincial veterinary licensing association. Extra label use of veterinary drugs for feeds is restricted to a veterinary prescription under the *Food and Drug Regulations*.

Flocks treated with extra label drugs require a copy of the veterinary prescription and accompanying CAPP reference # to be submitted, at the latest, with the advance copy of the flock sheet. If flocks are treated with extra-label drugs after the advance copy of the flock sheet has been submitted, the producer will forward a copy of the veterinary prescription and accompanying CAPP reference number immediately to the processor, and this must be prior to shipping the flock.

19.3.4.4.3 Prescriptions and Determination of the Withdrawal Period for Extra Label Use of Drugs

When extra label use of drugs is required, veterinarians shall supply the producer with a prescription which includes the withdrawal time and the CAPP or cgFARAD reference number for recording on the advance copy of the flock sheet. Veterinarians prescribing extra label use of drugs may obtain a withdrawal period consistent with Canadian regulatory requirements from the CAPP reference table or by contacting the cgFARAD.

19.3.4.4.4 Declaration of Extra Label Drug Use on the Flock Sheets

In the case of extra label drug use, the flock sheet must be completed as normal. In addition, a copy of the veterinary prescription containing information on the withdrawal period, the name of the veterinarian who prescribed the drug, the date of the prescription, the condition being treated and the CAPP reference number must be submitted with the advance copy of the flock sheet.

19.3.4.4.5 Assessment of Medication Information on the Flock Sheets

Operators shall update their specific HACCP system relating to the receiving of live poultry. It shall address the hazard of drug residues to be controlled as reflected in information contained on the flock sheets.

A printed copy of information on drug products approved by HC and available at the aforementioned Web sites is contained in the "Compendium of Medications for Poultry" Published by North American Compendiums Ltd., P.O. Box 39, Hensall, Ontario, N0M 1X0 (Telephone 1-800-350-0627)

For drugs added to medicated feeds, the "Compendium of Medicated Ingredients Brochure", or MIB, may be consulted at the following Web site: http://www.inspection.gc.ca/english/anima/feebet/mib/cmibe.shtml

Operators shall provide one or more designated employees to be trained by the Veterinarian in Charge for reviewing the information on the advance copy of the flock sheets. All flock sheets indicating that a veterinary drug was used to treat or prevent a disease shall be referred to the Veterinarian in Charge (VIC).

If the advance copy of the flock sheet lists an approved drug, but withdrawal time information is not recorded on the flock sheet, then the operator shall contact the producer for the information. The subject flock shall not be scheduled for pick-up until an amended advance copy of the flock sheet with the missing information is received by the operator.

The processor shall immediately advise the Veterinarian in Charge of the extra label use listing on the flock sheets.

Information recorded on flock sheets related to the use of veterinary drugs should be evaluated during ante mortem examination / inspection at the poultry slaughtering establishment using the decision tree contained in the following section 19.3.4.4.5.2.

19.3.4.4.5.1 Vaccines

Vaccines are also subject to withdrawal times to:

- ensure freedom from tissue damage and/or drug residues at the injection site;
- avoid residues from preservatives in edible tissue; and
- protect humans and/or animals from pathogens in live vaccines.

Withdrawal periods for veterinary vaccines may also be obtained at the aforementioned Web sites (refer to previous sub-section) for veterinary drugs. Withdrawal periods for veterinary vaccines, as contained on the product label approved by the Veterinary Biologics Section, Terrestrial Animal Health Division (TAHD), CFIA, shall also be reported on the flock sheet. Withdrawal times for vaccines are commonly 21 days or longer.

19.3.4.4.5.2 Decision Tree for Assessment of Drugs Listed on a Flock Sheet

Question 1: Banned Drug?

If yes = ADULTERATED. Flocks are to be condemned on ante mortem examination or inspection.
If no = Go to question 2.

Question 2: Approved Drug?

If yes = Go to question 3.
If no = Go to question 4.

Question 3: Was the Drug Used as per the Approved Label?

If yes = Release for slaughter.
If no = Go to question 4.

Question 4: Extra Label Drug - Is there an Attached Copy of a Veterinary Prescription?

If yes, and the veterinary prescription Indicates a withdrawal period obtained from the cgFARAD or the CAPP reference table or an EDR or a vaccine vial for a vaccine listed on a Single Issue Permit;
or Flock tested and attached copy of lab report (see below) indicates compliance with Canadian MRL or AMRL or non-detectable residues;
Then = Release for slaughter
If no = "Hold and Test".

Flocks treated with the Extra - Label Drugs will be slaughtered subject to a "Hold and Test" regime (refer to subsection 19.3.4.4.7 below) if they are received at the establishment without a copy of the corresponding veterinary prescription and the:

- CAPP or cgFARAD reference number; or a
- Copy of the HC issued EDR form indicating a withdrawal period; or a
- Copy of the Single Issue Permit for a vaccine issued by the VBS (Veterinary Biologics Section), CFIA and a copy of the corresponding label indicating a withdrawal period.

The Veterinarian in Charge may at any time, for cause, (e.g. based on past compliance of a producer, pathology visible after evisceration, or other information) require a flock to be tested for specified drug residue(s). In each case, the CFIA area veterinary poultry inspection program specialist shall be contacted to confirm that testing is warranted. All associated costs shall be at the operator's expense.

19.3.4.4.6 Testing Live Birds /Flocks After Extra Label Use of Drugs

Producers in consultation with their veterinarians may test flocks treated with extra label drugs in advance of shipping the flock. Such testing is solely a decision of the producer and cannot be mandated by the CFIA. The laboratory report of such tests should be attached to the advance copy of the flock sheet.

For the CFIA Veterinarian in Charge (VIC) of the federally inspected slaughtering establishment to accept the lab report referred to in the preceding paragraph, the following conditions apply:

- The report must be issued by a laboratory accredited by the Standards Council of Canada (SCC) or a provincial or university laboratory using an internationally accepted method for the specific veterinary drug or its corresponding metabolite;
- Samples from the treated flock submitted to the laboratory must be collected, under the supervision of a provincially licensed veterinary poultry practitioner, from live birds which are representative of the flock; and
- The laboratory report indicates compliance with the applicable Canadian Maximum Residue Limit (MRL) or Administrative Maximum Residue Limit (AMRL) as listed in Table III of Division 15 of the *Food and Drug Regulations* or as listed on the VDD Web site (AMRL) or that there was no detectable residue of the ELU drug or applicable metabolite.

Flocks arriving at a slaughtering establishment without adequate assurance of compliance, (as described above) with Canadian requirements for residues of veterinary drugs will be slaughtered subject to "Hold and Test" procedures as described in subsection 19.3.4.4.7 below.

19.3.4.4.6.1 Assessment of Laboratory Reports

Poultry products are considered to be adulterated if laboratory reports do not indicate compliance with Canadian regulatory requirements for residues of veterinary drugs. All

such laboratory reports shall be referred to the Meat Programs Division (MPD) for a food safety hazard evaluation by HC including whether any condemned product may be rendered for use as animal feed.

Canadian MRLs and AMRLs for veterinary drugs are listed at the following Web site: http://www.hc-sc.gc.ca/dhp-mps/vet/mrl-lmr/mrl-lmr_versus_new-nouveau-eng.php

19.3.4.4.7 Hold and Test

Flocks treated with an extra label drug(s) and which arrive at the slaughtering establishment without a copy of a veterinary prescription and one of the following accompanying the flock sheet shall be subjected to a "Hold and Test" regime:

- CAPP or cgFARAD reference number;
- a laboratory report further to live flock testing (refer to previous subsection);
- a copy of the EDR form issued by the VDD, HC, including the withdrawal period; or
- a copy of the permit for the vaccine issued by the VBS, CFIA and a copy of the label showing a withdrawal period.

The operator shall segregate and hold all edible product (and decide how to store it - fresh or frozen) pending receipt of test results for the applicable drug or its principal metabolites from a laboratory accredited by the Standards Council of Canada (SCC) or equivalent - if the Veterinarian in Charge has any questions, s/he should contact the area program network veterinary poultry inspection specialist.

Testing and all associated costs shall be at the operator's expense. The Veterinarian in Charge may in turn wish to contact his/her Area Program Network Veterinary Poultry Inspection specialist or the office of the National Manager, Program Development and Evaluation, Chemical Residue Programs, at the CFIA HQ, for information on SCC accredited laboratories or other laboratories suitable for testing specific drug products.

The operator shall contact his/her selected laboratory to confirm that it is competent to perform the relevant test and to obtain sampling and shipping instructions. Normally each of the following shall be collected as a representative sample from the subject lot and each of the following shall be packaged separately according to instructions from the laboratory:

- 5 drum sticks;
- 5 livers; and
- 150 g of intact kidney (not mushed).

A copy of the laboratory test results and the corresponding flock sheet shall be supplied to the Area Poultry Inspection Program veterinary specialist who in turn may contact the CFIA HQ for advice.

Product shall be condemned, subject to CFIA HQ confirmation:

- if a banned drug was used;
- any level is detected in an edible product for an unapproved drug;
- for residue levels above the applicable HC determined MRL or AMRLs; and
- for (any) detectable residues in cases where there is no applicable Canadian MRL or AMRL.

Such residues result in adulterated product under the MIA and *Regulations* and are prohibited from sale as human food under the *Food and Drugs Act* and *Regulations*.

19.3.4.5 Corrective Measures by the CFIA for Missing or Incomplete Flock Sheets

Operators may choose one of the following three options for a flock that arrives at their establishment for slaughter without the requisite completed flock sheet:

Option no. 1
Slaughter the flock subject to all harvested meat products being disposed of as inedible material; or

Option no. 2
Reschedule the slaughter time based on approval of the Veterinarian in Charge and assurances that the missing sheet or information will arrive during the intervening time period; or

Option no. 3
Slaughter the flock subject to the following additional measures to assure control over the chemical and biological hazards for which information is incomplete due to the missing flock sheets:

- the Veterinarian in Charge shall reduce the speed of the evisceration line until the operator can demonstrate control over evisceration accidents and the pathological conditions of the subject flock ; and
- segregate and hold by the CFIA all edible meat products harvested from the lot subject to receipt of the original copies of laboratory tests results from an accredited laboratory (performed at the operator's expense) that indicate compliance with the Maximum Residue Limits (MRL) for veterinary drugs as specified by Division 15 of the *Food and Drug Regulations* and as listed in Chapter 5 of this manual.

Furthermore, the operator shall conduct an investigation to determine how and why the flock arrived at the establishment without a fully completed flock sheet. A report must be provided to the Veterinarian in Charge. The report shall include follow-up action taken to avoid any recurrence.

19.3.4.6 Post mortem Database

At the establishment level, all information must be transmitted to the evisceration manager and be made available to the Veterinarian in Charge for random verification prior to live hanging. Items (18) to (20), from section 19.3.4.2.2, for the last lot processed from a particular barn must be incorporated in the operator's computerized database, and must be made available to the evisceration manager and the Veterinarian in Charge three (3) to five (5) days prior to transporting another lot of birds from that one barn to the slaughtering establishment.

19.3.4.7 Condemnation Reports

To provide information necessary for the producer to take corrective actions when necessary and improve husbandry practices, feedback mechanisms from the operator to the producers are to be jointly developed by the CFIA and national poultry industry associations.

19.3.4.8 Record Retention Period

The processor must keep for a minimum of one (1) year the records relating to the flock sheets and the resulting post mortem database for on-site review by the CFIA Staff.

19.3.5 Sanitation for Poultry Crates and Trucks

Salmonella in poultry constitutes an industry-wide problem and therefore particular attention should be given to the cleaning of poultry crates and trucks. They must be visibly clean and free of all faecal material, before disinfectant solution is applied.

19.4 DRESSING PROCEDURES

It is the operator's responsibility to ensure that all dressing procedures are conducted in a sanitary manner and result in non-adulterated meat products fit for human consumption or animal food (the Carcass Dressing Standards described in this chapter must be met). It is the responsibility of the inspection staff to verify the plant employees' procedures.

19.4.1 Poultry Dressing Procedures

19.4.1.1 Bleeding

Bleeding must be conducted in a sanitary manner and the bleeding time shall not be less than 90 seconds.

19.4.1.2 Defeathering and Washing

In the dressing of poultry carcasses, all hair, feathers, dirt, scurf, etc., must be completely removed and the carcass thoroughly washed prior to any further incision being made.

In order to reduce the attachment of *Salmonella* and other bacteria to the skin, spray washing of carcasses must occur within fifteen (15) seconds after defeathering and after carcass transfer. Sprays at both washing stations shall be of sufficient volume and pressure, to completely remove visible foreign material from the surface of the carcass including the hocks and any exposed surfaces as a result of bleeding or decapitation.

19.4.1.3 Removal of Oil Glands, Heads and Feet

Oil glands, heads and feet may be removed from poultry carcasses, either before or after evisceration. Oil glands, heads and feet removed before evisceration may only be removed after carcasses have been defeathered and thoroughly washed. Feet presented with the carcass for post mortem inspection or examination must be free of visible contamination (e.g. manure).

19.4.1.4 Evisceration

Poultry carcasses must be eviscerated with respect to the following:

- carcasses must be hung in a way that will allow for internal cavity, viscera and external carcass examination;
- cross contamination is to be avoided (e.g. heads and necks shall not drag over equipment along the evisceration line);
- accumulated water present in the vent area, must be removed prior to opening the carcass;
- the integrity of the gastro-intestinal tract (GIT) must be maintained throughout venting, opening and evisceration operations for all species of poultry including game birds (the Evisceration Standards described in this chapter must be met);
- the incision made should be no longer than required to permit evisceration;
- before hands or equipment enter the abdominal cavity, they must be visibly clean;
- viscera must be properly exposed to allow for post mortem examination (the applicable Presentation Standards described in this chapter must be met); and
- poultry carcasses shall be eviscerated in such a manner as to preclude faecal contamination.

After post mortem inspection or examination, all viscera including the esophagus, crop, cloaca, lungs, trachea, kidneys and reproductive organs, shall be removed from the carcass before the final wash, and shall be handled as inedible material.

Note: Kidneys and reproductive organs for young chicken under 2.7 kg average live weight or young ducks under 4 kg average live weight may be left in.

Oil glands, crops and tracheas are inedible products and may be used as mink food or for the preparation of other animal food.

Prior to the chilling system, the carcass shall be adequately washed by an approved inside/outside carcass washer. If inside/outside carcass washing is performed manually, the thoracic inlet must be penetrated for adequate washing and drainage.

Carcasses with internal contamination may be salvaged or reprocessed.

19.4.1.5 Application of a Water Film During Evisceration Procedures

Operators with evisceration equipment designed to completely detach the viscera, may spray the cavity and the viscera provided that:

- venting, opening and evisceration operations are controlled as part of a HACCP system;
- consistent and adequate water pressure and volume is supplied to all the spray nozzles applied to the carcass and/or viscera during venting, opening and evisceration operations;
- ongoing testing for generic *E. coli* indicate compliance with the USDA Pathogen Reduction/HACCP requirements as outlined in the US section of Chapter 11 of this manual;
- post mortem examination is not compromised (e.g.: excessive water in the cavity); and
- significant evidence of disease is not being lost.

Note: Operators with equipment which does not fully separate the viscera from the carcass are not permitted to shower carcasses or viscera unless the equipment first passes a test under the GENERIC PROTOCOL (see Annex C of this chapter).

19.4.1.6 Evisceration Standards (ES)

The Food Safety Enhancement Program (FSEP) defines a Process Control (PC) as “a control used at a point or step that will contribute to the effectiveness of the related CCP(s) or post mortem inspection activities”.

The ES are a PC to prevent/control contamination caused by accidents during the venting, opening and evisceration operations. These standards support the following processes:

- viscera Defect Detection;
- cavity Defect Detection &Trimming / Final Examination;
- giblets & Neck Harvesting; and
- reprocessing / Reconditioning / Salvaging.

19.4.1.6.1 Elements of the Evisceration Standards (ES)

The ES monitoring tool has two (2) general components:

- Process Evaluation; and

- Corrective Measure(s) evaluation.

The Process Evaluation monitors the contamination caused by accidents during the venting, opening and evisceration operations as described in the ES. It is performed at a consistent frequency on successive lots. It determines if the process meets the standards on an on-going basis.

The Corrective Measure(s) evaluation is an assessment of the adequacy of corrective measures that have been implemented following a rejected sample. It determines if the required corrections have been put into effect to insure that the process meets the standards.

19.4.1.6.2 Facility Requirements for On-line Monitoring Station

The evaluation may be performed at the same station as for the Presentation Standards. For more details on the facility requirements for the ES, refer to the Presentation Standards station under the “Plant Construction and Equipment” section of this chapter.

19.4.1.6.3 Position for the On-line Monitoring ES Station

The monitoring for the ES shall be performed on-line immediately following the evisceration operations (including a back-up employee if required) and before the viscera and/or cavity defect detectors (including the handling of carcasses and/or viscera by other employees) in a manner to avoid sampling bias. The location for the Presentation Standards evaluation may be used for this purpose.

19.4.1.6.4 Training of the ES Establishment Monitor

The ES establishment monitor shall be trained and accredited as per the Training Protocol described in Annex B of this chapter.

19.4.1.6.5 Sampling Procedure

The on-line testing procedure used for the ES shall be similar to the random sampling selection specified for the Defect Detection Standards (DDS), as described in section 19.6.2.5.2.6, “Sampling Procedure”. However, the carcass examination area is restricted to the cavity opening (as defined below) and the carcass cavity**.**

19.4.1.6.6 Sampling Frequency, Sample Size and Acceptance criteria

The interim accept/reject numbers specified in this section are based on the data collected during a national survey performed by the CFIA and Industry. These interim accept/reject numbers shall be used during an abattoir specific implementation phase of 12 months to facilitate the transition between the current abattoir monitoring tool and these national standards. The interim accept/reject numbers may be reassessed at the end of the implementation phase based on data collected in agreement with the CFIA and the processors.

An accredited plant employee shall conduct scheduled tests on the specified number of carcasses on an hourly basis.

The sample size and the interim accept/reject numbers for use during the implementation period for the Evisceration Standards evaluation are indicated in the following table.

EVISCERATION STANDARDS FOR CHICKEN, FOWL AND TURKEY Sampling Frequency, Sample Size and AC/RE Numbers						
Lot Size	**Process Evaluation**	**Corrective Measure(s) Evaluation**	**Chicken and Fowl**		**Turkey**	
			Ac	**Re**	**Ac**	**Re**
≤ 5,000 cph (max.1 hour/lot)	32 Carcasses (each hour)	32 Carcasses (within 10 minutes*)	3	4	5	6
≥ 5 001 cph (max.1 hour/lot)	50 Carcasses (each hour)	50 Carcasses (within 10 minutes*)	5	6	8	9
cph = carcasses per hour Ac = Accept number; Re = Reject number * Approximate delay required in order to evaluate the effect of the corrective measures at the ES station						

19.4.1.6.7 ES Defects

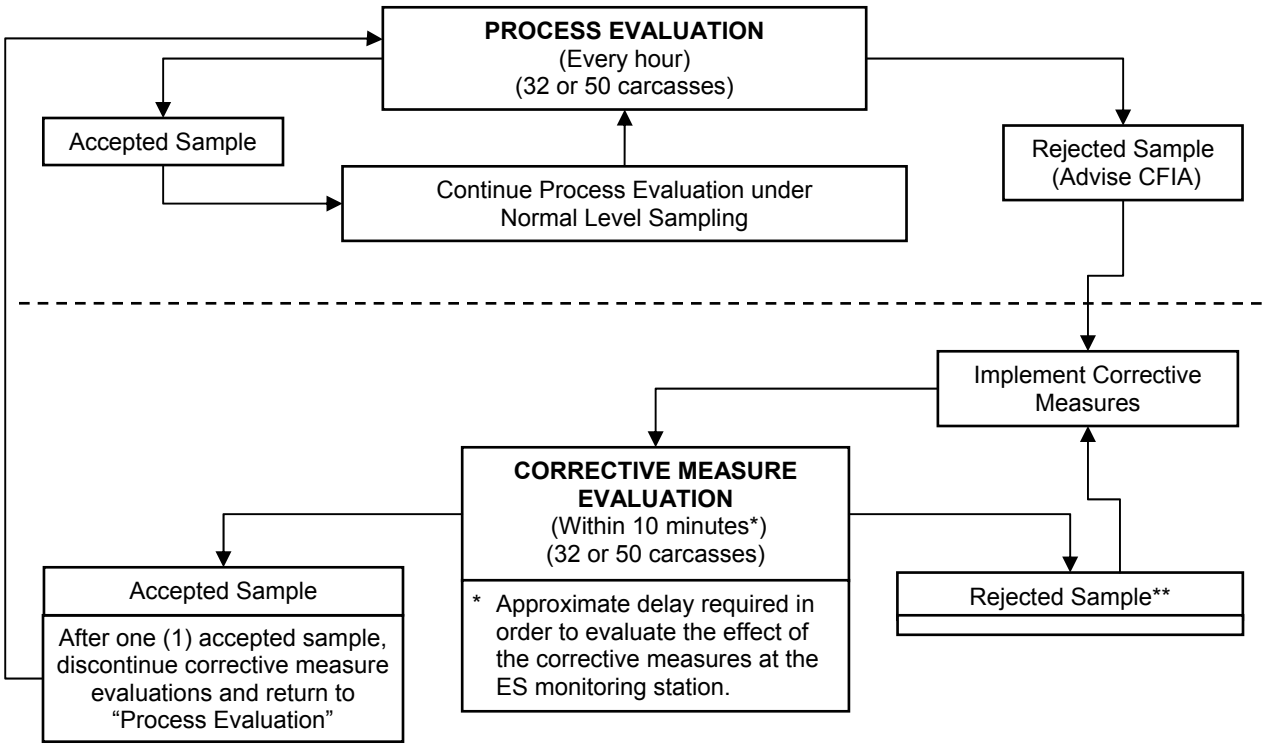
For the purpose of the ES, the cavity opening is defined as the pelvic opening of the carcass including the tissue between the point of the keel, the tip of the tail and the two pelvic bones.

The evaluation of evisceration operations shall include observing for the presence of either the following two (2) defects within the carcass cavity and/or the cavity opening:

Faecal Contamination:
Any identifiable material determined to be from the lower gastrointestinal tract (intestines, caecum, cloaca).

Ingesta Contamination:
Any material determined to be from the upper gastrointestinal tract (crop, gizzard or proventriculus). Dry and localized ingesta covering an area of a dime size or a few isolated grains will not be counted as a defect.

19.4.1.6.8 ES Decision Tree



** N.B.: after three (3) rejected samples at Corrective Measure(s) evaluation:
- Inform plant manager and Veterinarian in Charge.
- Veterinarian in Charge and Operator to decide if operations can continue.
- Assess why previous corrective actions were not effective and develop an action plan.

***The Meat Inspection Regulations* has precedence over this decision tree**

19.4.1.6.9 ES Defects Log

A separate ES Defects Log shall be used for each species.

For abattoirs with more than one shift per day, test results for each shift shall be considered independently because of personnel and supervisor differences and shall be recorded on separate ES Defects Logs.

Carcasses are scored as a defective sample unit for the presence of any distinguishable defect listed in section 19.4.1.6.7, "ES Defects" of this chapter. A carcass showing multiple defects is scored as one defect (e.g. a carcass contaminated with fecal material and with ingesta = one defective carcass).

Defects are scored, a total score is determined and acceptability is determined by comparing the score to the applicable acceptance and rejection numbers.

A copy of the defects log for the ES is included in Annex A of this chapter.

19.4.1.6.10 Process Out of Control – Action to be Taken

Whenever a Process Evaluation is failed the operator shall conduct an investigation to determine the cause and take effective corrective action. The efficiency of the corrective

measures is evaluated by performing a Corrective Measure(s) evaluation. Corrective measures and additional corrective measure(s) evaluations are required until one (1) accepted sample demonstrates conformance to the standard. Effective preventative measures must be designed and implemented to prevent a reoccurrence as specified in the written HACCP system of the operator.

If an Evaluation of the corrective measure(s) is rejected, other corrective action must be initiated and the affected product is verified by performing a CDS test on FS-1 (fecal material) and FS-2 (ingesta) ensuring that contaminated carcasses are not entering the chilling system. The decision tree for the CDS shall be followed based on the results of the aforementioned tests.

The *Meat Inspection Regulations* (MIR) has precedence over the ES decision tree (corrective measures can be mandated at any time by the Veterinarian in Charge.

19.4.1.6.11 CFIA Responsibilities

CFIA staff shall ensure that the ES has been implemented by the operator and is being performed according to this section and the operator's written program. This may be accomplished by performing independent verification tests and/or correlation tests with the industry monitor.

An independent test or a correlation test shall to be performed at a minimum of once per half shift/evisceration line. A minimum of two (2) verification tests (one independent and one verification test) shall be conducted and recorded each week by a veterinarian. The records must show that within one month each veterinarian working at the plant has performed at least one test of each kind.

CFIA staff may perform an additional test at any time as an additional assurance of process control or if they feel that standards are not being met for any reason.

Test results may be recorded on a separate ES Log or on the operator's records such that CFIA tests can be distinguished from tests conducted by the operator's ES monitor.

Also, an indication should be present to differentiate the independent CFIA verification tests from the correlation tests with the industry monitor.

19.4.1.6.11.1 Independent CFIA Verification Tests

The CFIA's independent verification of the operator’s process evaluation tests shall be performed according to the following parameters:

- tests shall be performed on each evisceration line, at randomly selected times and according to the prescribed sampling method as indicated in the preceding sub-section 19.4.1.6.5, “Sampling Procedure”;
- when a correlation test is performed, it replaces the independent test scheduled for that half shift;
- if an independent verification coincides with any of the plant monitor’s tests, the inspector shall conduct a correlation test instead of an independent test;
- the sample size will be the same as that used by the operator;
- if the sample is rejected, the ES monitor shall perform an immediate Process Evaluation test and then initiate any required action as per the decision tree in this section; and
- the result of each test shall be compared to the operator's monitoring record if the CFIA test result is not in agreement with the operator's tests, the Inspector shall discuss the test results with the (industry) ES monitor and inform the Veterinarian in Charge.

The Decision Tree for ES is to be used by the operator's monitor and for reference by the CFIA.

19.4.1.6.11.2 Correlation Tests

Correlation testing consists of the CFIA conducting an evaluation of a test being performed by the operator's ES monitor according to the following parameters:

- The test shall be performed on each evisceration line. This frequency may be increased according to the operator's compliance to the monitoring procedures of the ES. When a correlation test is performed, it replaces the independent CFIA test scheduled for that half shift.
- A member of the inspection staff shall examine the same carcasses at the same time as the industry monitor.
- The monitor will be evaluated for the sampling method used, correct interpretation of defects, completion of forms, and correct application of the decision tree and the implementation of corrective actions if necessary.

If the CFIA's evaluation demonstrates a deficiency in the industry's evisceration process and/or the monitoring thereof, immediate corrective measure(s) shall be initiated by the operator. The Veterinarian in Charge shall decide if the written procedure is to be reassessed and amended accordingly.

19.4.2 Domesticated Rabbit Slaughter and Dressing Procedures

In general, the slaughter and dressing of rabbit carcasses follow the procedures described for poultry in this chapter. However, particular attention must be given to the following:

- the rabbit-specific hazards identified in the operator’s HACCP plan must be adequately controlled from receiving to shipping;
- it is preferable for the rabbits to be stunned before hanging. If the chosen stunning method requires live hanging, the rabbits must be individually supported and be stunned immediately after hanging;
- carcass contamination from dirty hands, knives or pelts must be avoided; and
- contamination by hair during pelt removal must be avoided; the carcass must be rinsed with water afterward to remove fluffy hair (carcasses must be free of all other types of visible contamination before they are subjected to the water rinse).

19.4.2.1 Receiving of Rabbits

Further to section 19.2.1 of this chapter, if the rabbits received at the slaughtering establishment are not in adequate crates, e.g. crates that ensure humane treatment (temperature, ventilation, proper state of repair and cleanliness), the rabbits must be transferred to appropriate crates belonging to the slaughtering establishment.

Each lot received at the slaughtering establishment should be accompanied by a letter of guarantee provided by the producer and containing information on treatments received, withdrawal periods and length of time of feed withdrawal.

19.4.2.2 Stunning

A number of methods can be used to stun rabbits:

- Electrical stunning. Electrical stunning is performed by means of an electric shock delivered to the cranium. The current should not be less than 140 mAmps and 100 V for a period of three seconds. This state of unconsciousness can be achieved in at least two ways, depending on the technique that is chosen:
  - One method consists of applying electrodes to the cranium in a “V” shaped pattern in order to pass the current through the brain, and then hanging the unconscious rabbit on the dressing line.
  - A second method consists of hanging the live animal on a moving line that puts the animal through an electrical water bath, as is done with chickens. With this approach, a qualified employee equipped with the proper protective equipment must support the animal until adequately stunned.

- Penetrating captive bolt pistol: this method is permitted when a captive bolt pistol suitable for small animals is used and when a small number of rabbits are to be slaughtered; and

- Non-penetrating captive bolt pistol: this type of pistol is preferred, because it allows quick and effective stunning to be performed in the transport modules before hanging.

Other methods exist and/or are used to stun and/or slaughter rabbits. For reasons of humane treatment of animals, however, the following methods are prohibited in federal slaughtering establishments:

- stunning by means of atlanto-axial elongation;
- rapid decapitation by means of dorsal incision without prior stunning;
- stunning by means of a blow to the back of the head; and
- stunning by means of an electric knife applied to the muzzle and/or to the forehead.

19.4.2.3 Hanging

As mentioned above, hanging should be performed once the animal has been stunned. Otherwise, the animal must be supported until it has been completely stunned.

Live rabbits can be handled by gripping the neck skin and/or the ears provided that the hind legs are supported to prevent kicking and injury to the animal and the handler.

19.4.2.4 Bleeding

Bleeding time shall not be less than 90 seconds to permit complete bleeding. Bleeding must be performed by means of simultaneous severance of the jugular veins and carotid arteries. Severance can be performed ventrally or dorsally (incision in the atlanto-axial intervertebral space). In both cases, the stick wound and decapitation surface must be removed later.

19.4.2.5 Dressing

- A preliminary spraying before skinning is strongly suggested to reduce the likelihood of contamination by loose hair;
- As with all other animal species, once the primary incision through the skin has been made, the knife must be sanitized before the secondary cuts in the skinning/pelt removal process are made;
- Once bleeding is completed, the three loose paws are cut at the carpal and tarsal joints, with care taken to prevent sharp bones or hairs from flying off. Once the primary cuts have been made through the hair and skin, as with the unskinned paws, the paws must be cut again to eliminate the contaminated area. Note that it is possible to cut the rear paws once skinning is nearly complete by disarticulating them and making a firm incision in the tibio-tarsal space. This method has the advantage of eliminating a second cut and preventing flying bones and contamination;
- Pelt removal must be performed with meticulous care to prevent contamination by hair. As in other animal species, it is suggested that rectum dropping in rabbits be delayed until after skinning: the traction exerted on the rectum during removal of the pelt from the paws results in contamination of the perirectal area (pelvis) if the rectum has been dropped; and
- Rinsing immediately after pelt removal and before transfer to the evisceration line is strongly recommended to reduce the potential presence of hair.

19.4.2.6 Evisceration

- During the evisceration process, the intestines, bladder, stomach and spleen can be removed before inspection (unless the inspector has given other instructions), as they do not contribute anything to the inspection process and entail a potential risk of carcass contamination;
- The kidneys must be decapsulated before they are presented for inspection;
- The liver can be left attached to the carcass after removal of the gall bladder or be presented separately for inspection; and
- With respect to rabbit hearts, if they are harvested for human consumption, an incision must be made to remove the clots inside the ventricles.

19.4.2.7 Chilling

Rabbit carcasses and by-products are subject to the same criteria as poultry carcasses and by-products with respect to both temperature and chilling rate. As well, when water is used, no water absorption is permitted under the MIR.

19.4.3 Ritual Slaughter

In ritual slaughter, properly restrained food animals may be slaughtered (bled) without stunning, provided the slaughter is carried out by experienced persons.

Such slaughter shall be performed by a single cut which shall result in rapid, simultaneous and complete severance of the jugular veins and carotid arteries so as to cause rapid unconsciousness and exsanguination of the animal.

19.4.3.1 Halal Slaughter

To be developed

19.4.3.2 Kosher Slaughter

To be developed

19.5 ADDITIONAL EVISCERATION FLOOR PROCEDURES

19.5.1 Salvaging

Operators may elect to handle carcasses accidentally contaminated with gastrointestinal contents by salvaging the non-contaminated portions at either a salvage and/or reprocessing station.

Salvage procedures may be conducted provided the following requirements are met:

- adequate facilities are provided (see Chapter 3 of this manual);
- salvaging operations are carried out expeditiously and hygienically;
- carcasses are handled according to the disposition criteria;
- station(s) do not become overloaded with a backlog of carcasses; and
- edible product is not contaminated by inedible product or contaminated equipment.

19.5.2 Off-line Reprocessing and Reconditioning

19.5.2.1 Definitions

The definition for Off-line Reprocessing and Off-line Reconditioning can be found in the Glossary of Terms in section 19.1.2 of this chapter.

19.5.2.2 General Requirements

Operators may choose to handle carcasses accidentally contaminated with gastro-intestinal contents and carcasses with localized pathologies within the abdominal cavity at an off-line reprocessing and/or reconditioning station.

The following requirements must be met to ensure that contaminated carcasses are satisfactorily reprocessed, and that carcasses with localized pathology are satisfactorily reconditioned:

- The operator must have a written protocol for off-line reprocessing and/or reconditioning which has been approved by the Veterinarian in Charge and the operator must have received conditional acceptance to initiate a trial period to qualify for a trial off-line reprocessing and/or reconditioning.
- The operator must provide adequate facilities (see Chapter 3 of this manual and refer also to subsection 19.1.3.12 of this chapter - poultry salvaging stations may also be used for off-line reconditioning and/or reprocessing).
- Carcasses are handled according to the disposition criteria in section 19.7 of this chapter.
- Off-line reconditioning and/or reprocessing of poultry carcasses must be done within 15 minutes after removal from the evisceration line in order to limit microbial adhesion/growth and carcass dessication/discolouration.
- Cross contamination by carcasses in contact with each other is to be avoided.
- Evisceration accidents shall be controlled by the “Evisceration Standards”;
- The operator has the option of reprocessing faecal, bile, ingesta and/or extraneous material contamination. The written program shall specify which type(s) will be controlled by the off-line reprocessing procedure. If the original trial period does not

- include all types of contamination, adding a type would be considered a major change that would require re-validation.
- The written procedure shall specify whether or not the crops will be removed prior to reprocessing.
- Crop removal must be done hygienically and without further contamination.
- Carcass rinsing procedures shall ensure that rinse water does not pool and rapidly exits the cavity.
- If carcasses are to be placed directly into the chill system after off-line reprocessing and/or reconditioning, then all defects listed in the Carcass Dressing Standards (CDS) must be removed prior to the carcasses entering the chiller.
- If the number of carcasses requiring salvage exceeds the capacity of facilities and/or personnel to handle the carcasses in a timely manner, affected carcasses shall be discarded by the operator as "plant rejects" which are not to be recorded on the CFIA condemnation report.

19.5.2.3 Acceptance Process

In order to facilitate the CFIA acceptance of the plant-specific off-line reprocessing and/or reconditioning procedures, the following acceptance process shall be followed:

- A request is submitted to the Veterinarian in Charge.
- The Veterinarian in Charge and a poultry program specialist will conduct the pre-operational checklist on-site and analyse the plant's written procedure which shall be accompanied by a process and employee flow diagram.
- Upon successful completion of the checklist, on-site analysis of facilities and written procedures, the 20 shift-trial period may begin.
- After the 20-shift trial period, the results of the post-operational checklist, *E. coli* data and organoleptic monitoring data shall be analysed by the area poultry program team. If the results are acceptable, the area poultry program specialist shall grant CFIA acceptance.

19.5.2.4 Process Validation

The effectiveness of reprocessing and/or reconditioning operations shall be validated according to an operator's written protocol. Operators shall conduct a separate process validation for reprocessing and reconditioning. These separate process validations may be conducted at the same time.

For operators that have two shifts, only one process validation is necessary for both slaughter shifts provided there are no significant operational differences between shifts. All reprocessed and/or reconditioned carcasses must have an equal opportunity of being sampled.

For operators that slaughter multiple classes of poultry, e.g. chicken broilers, spent hens and turkeys, a separate process validation shall be conducted for each class. Different weight ranges of the same class shall be considered as one class and require only one process validation, e.g. one process validation for chicken broilers and roasters or for all weight ranges of turkeys.

19.5.2.4.1 *E. coli* Testing

Procedures shall be validated by using sample collection and laboratory test procedures for generic *E. coli* as outlined in the USDA's Pathogen Reduction Program and HACCP systems. (See Chapter 11, Exports, section on the United States, in this manual.)

19.5.2.4.1.1 Sampling Plan

Collect 50 concurrent samples comprised of:

- one (1) control sample (carcass without defects) collected from the evisceration line just prior to the chilling system; and
- one (1) treatment sample collected from the reprocessed and/or reconditioned carcasses after final washing.

Both carcasses must be approximately selected at the same time.

According to a written procedure accepted by the Veterinarian in Charge, samples shall be:

- randomly selected;
- identified in order to differentiate between treated and untreated carcasses; and
- selected after final washing and prior to the chilling system.

In order to pass the microbiological analysis portion of the process validation, the geometric mean of treated carcasses must be equal to or less than that of line run production or not significantly different as determined by statistical analysis.

The CFIA Program Network Poultry Inspection Team (PNPIT) has developed an Excel-based application ("Micro Data Analysis") including a users' manual for this purpose. The operator may wish to obtain a copy from the CFIA area poultry program specialist.

19.5.2.4.2 Organoleptic Testing

19.5.2.4.2.1 Sampling Plans

Reprocessed and/or reconditioned carcasses shall be retained and sampled a minimum of every 30 minutes by the designated plant monitor over 20 consecutive work shifts subject to verification by the inspection staff and as per the following tables.

Note: The operator must ensure that untreated carcasses (e.g.: false positives) and carcasses to be salvaged are excluded from the sampling of treated carcasses.

Sampling Plan for Off-line Reprocessing and/or Reconditioning		
Volume of reprocessing and/or reconditioning	**Sample Code Letter**	**Sample Size**
Low (25 carcasses and less per sample period)	C	5
Medium (26 to 50 carcasses per sample period)	D	8
High (50 carcasses and more per sample period)	E	13
Based on Sampling Plan 2859-1, Inspection Level II, *Statistical Aspects of Food Quality Assurance* by Subhash C. Puri, Agriculture Canada, Original source: International Organization for Standardization (ISO), Central Secretariat, Geneva.		

19.5.2.4.2.2 Defect Definitions

Refer to the Carcass Dressing Standards (CDS), as contained in section 19.6.2.7 of this Chapter, for definitions for the following defects.

Reprocessing defects:

- faecal contamination;
- bile contamination; and
- ingesta or extraneous material

Reconditioning defects:

- airsacculitis;
- salpingitis, peritonitis; and any other pathology within the carcass cavity.

19.5.2.4.2.3 Unsatisfactory Sampling Results

A sample shall be deemed unsatisfactory if one (1) or more carcasses in the sample has a defect within the cavity as listed in the preceding subsection. The operator shall then implement the following:

- re-examine all carcasses in the retained lot; defective carcass(es) are sent for salvage and acceptable carcasses are allowed to re-enter production;
- notify the Veterinarian in Charge;
- determine the probable cause and implement applicable corrective actions;
- amend the written reprocessing and/or reconditioning procedure as necessary; and
- retrain employee(s) if applicable.

Note: The 20-shift process validation is reset to zero after three (3) unsatisfactory samples have been accumulated.

19.5.2.5 Off-line Procedures After CFIA Approval

19.5.2.5.1 Microbiological Sampling

Reprocessed and/or reconditioned carcasses may either continue to be tested for *E. coli* separately or combined with the regular carcasses for chilling. Corrective action as specified in the USDA Pathogen Reduction/HACCP (see Chapter 11, US section of this manual) regulations must then apply to ALL applicable carcasses (i.e. reprocessed and/or reconditioned carcasses only, or if mixed with regular carcasses, then to all carcasses entering the chilling system).

If reprocessed and/or reconditioned carcasses are tested for *E. coli* separately, then a minimum of one reprocessed and/or reconditioned carcass shall be tested per shift.

19.5.2.5.2 Organoleptic Sampling

Once the 20-shift process validation has been completed, to monitor the off-line procedure on an ongoing basis, the operator shall use the previously described ISO-based sampling plan, or the CDS program. The frequency of sampling shall be a minimum of once per hour.

19.5.2.5.2.1 Procedure Monitoring by the Operator

The Operator shall ensure that samples are representative (random sampling).

The written program shall also include carcass disposition, retest parameters and review of applicable written and practical procedures in the event of sample failure.

19.5.2.5.2.2 Carcass Dressing Standards (CDS) Monitoring

If reprocessed and/or reconditioned carcasses are placed directly into the chill system, they shall receive separate CDS monitoring at a minimum of twice per shift. Carcasses shall be examined at facilities meeting the same requirements as for the CDS test (see Chapter 3 of this manual). If corrective action or process action is required as a result of these separate tests, it would only apply to the reprocessed and/or reconditioned product.

However, if the reprocessed and/or reconditioned carcasses are placed back onto the evisceration line and mixed with line run production, then the CDS test results and any required corrective action would apply to the evisceration line and off-line procedures.

19.5.2.5.2.3 CFIA Verification

At a minimum of once per shift, CFIA personnel should evaluate the operator's process control over the off-line reprocessing and/or reconditioning operations by conducting a correlation test with the plant monitor. During the correlation test, CFIA personnel will ensure that the operator's sampling frequency, random sampling methods, defect evaluation, defect recording, evaluation of results and corrective actions taken are acceptable.

If process control is assessed to be unacceptable, the operator must initiate immediate corrective actions. The Veterinarian in Charge shall decide if the written procedure is to be amended or re-validated.

19.5.2.6 Defects Log: Off-line Reprocessing / Reconditioning for Chicken, Turkey and Fowl

Please see Annex A of this chapter.

19.5.3 On-line Reprocessing and Reconditioning

19.5.3.1 Definitions

The definition of **On-line Reprocessing** and **On-line Reconditioning** can be found in the glossary of terms in section 19.1.2 of this chapter.

19.5.3.2 General Requirements

The following requirements must be met to ensure that contaminated carcasses are satisfactorily reprocessed and that carcasses with localized pathology are satisfactorily reconditioned prior to the carcasses entering the chiller:

- to qualify for on-line reprocessing and reconditioning, the poultry slaughtering establishment must be operating under the Modernized Poultry Inspection Program (MPIP), i.e. must have at least commenced Phase 3, and must have implemented the Defect Detection Standards (DDS) and the Carcass Dressing Standards (CDS);
- microbial hazards associated with feed withdrawal, evisceration accidents and on-line reprocessing are controlled by the operator's HACCP system;
- evisceration accidents shall be controlled as specified by the "Evisceration Standards";
- carcasses are handled according to the disposition criteria contained in section 19.7 of this chapter;
- the operator's written procedures for on-line reprocessing/reconditioning must be approved by the Veterinarian in Charge, and the operator must receive conditional acceptance from the CFIA to initiate a trial; and
- the written procedures shall include the following:
  - a description of the proposed on-line reprocessing/reconditioning procedures including, if applicable, the use of any microbial control agents;
  - a copy of a blueprint of the complete evisceration room (including each piece of equipment and the size and location of every industry employee and CFIA work station) a process flow diagram and an employee flow diagram for the entire evisceration room/area (including, if applicable, off-line reprocessing/reconditioning/salvage operations and giblet harvesting operations); and
  - the sampling location(s) and sample selection, tagging and handling procedures for handling carcasses, for reprocessed/reconditioned carcasses and for "control"

carcasses which will be used during the validation period for the proposed written on-line reprocessing/reconditioning procedures.

The operator may use a microbial control agent listed in this chapter (optional) as part of his/her CFIA approved off-line reprocessing and reconditioning procedures.

19.5.3.3 Location of Cavity Defect Detectors

The cavity of each carcass shall be examined by a cavity defect detector prior to chilling. However, the operator may elect to move the cavity defect detector to any location along the evisceration line (following evisceration and prior to chilling) provided that CDS sampling may be performed on carcasses after defect detection is completed and prior to the chiller.

The operator may elect to install new equipment or modify existing equipment. Installations of new equipment and modifications to existing equipment shall be performed in compliance with Chapter 3 of this manual.

19.5.3.3.1 Cavity Defect Detection Prior to Reprocessing/Reconditioning

To be developed

19.5.3.3.2 Cavity Defect Detection after Reprocessing/Reconditioning

If the operator elects to move the cavity defect detectors downstream, version 2 of the DDS (without the AQL for cavity defects) shall be applied to monitor the performance of the carcass and viscera defect detectors including during the validation of the proposed on-line reprocessing/reconditioning procedures. During the validation of the proposed on-line reprocessing/reconditioning procedures, an additional DDS test for cavity defects (only) may be performed by CFIA staff after cavity defect detection.

19.5.3.4 Acceptance Process

In order to facilitate the CFIA acceptance of the plant-specific on-line reprocessing and reconditioning procedures, the following acceptance process shall be followed:

- a request is submitted to the Veterinarian in Charge;
- the Veterinarian in Charge and a poultry program specialist will conduct the pre-operational checklist on-site and analyse the plant's written procedure which shall be accompanied by a process and employee flow diagram;
- upon successful completion of the checklist, on-site analysis of facilities and written procedures, the 20 shift-trial period may begin; and
- after the 20-shift trial period, the results of the post-operational checklist, *E. coli* data and organoleptic monitoring data shall be analysed by the area poultry program team. If the results are acceptable, the area poultry program specialist shall grant CFIA acceptance.

19.5.3.5 Validation Process

E. coli Testing

The same requirements for the process validation for *E. coli* (testing and sampling), as specified for the off-line reprocessing/, are applicable for the on-line reprocessing. Carcasses with visible cavity defects which are removed by the cavity defect detectors (for salvaging or off-line reprocessing) cannot be used for *E. coli* testing to validate the proposed on-line reprocessing/reconditioning procedures.

However, *E. coli* testing is not required to validate proposed on-line reconditioning. Since the on line procedures include both reprocessing and reconditioning, the general hygiene

for on-line reconditioning operations is validated by performing *E. coli* testing for on-line reprocessing.

Organoleptic Testing

The CDS shall be used to validate the proposed on-line reprocessing/reconditioning procedures.

Furthermore, CFIA staff may perform additional CDS tests and/or DDS tests for cavity defects (only) after cavity defect detection for part of, or throughout, the validation process. If applicable, corrective measures and post-chill product verification shall be performed by the operator as specified for the CDS/DDS.

19.5.3.6 On-line Procedures After CFIA Approval

19.5.3.6.1 Microbiological Sampling

Refer to the Pathogen Reduction Program of the US section of Chapter 11 of this manual. Laboratory tests for *Salmonella* spp. and for *E. coli* shall indicate compliance with the *Salmonella* spp. standards and the *E. coli* guidelines respectively, as contained in the US section of Chapter 11 of this manual.

19.5.3.6.2 Organoleptic Sampling

Refer to the CDS as contained in this chapter, including monitoring procedures by the operator and corrective measures.

19.5.3.6.3 CFIA Verification

Refer to the CDS as contained in this chapter.

In addition, CFIA staff, at any time, may perform additional DDS tests for cavity defects (only) after cavity defect detection to verify the performance of the cavity defect detection. If applicable, corrective measures and post-chill product verification shall be performed by the operator as specified for the DDS.

19.5.3.7 Defects Log for On-line Reprocessing/Reconditioning

Please see Annex A of this chapter.

19.5.4 Preparation of Offal for Edible Purposes or Animal Food

Poultry giblets (heart, liver and gizzard) may be prepared for human food provided they are free of pathological lesions. It is essential that contamination of these organs be prevented during preparation and inspection.

Giblets shall be chilled immediately after they are harvested and prepared. Accumulation of giblets for later preparation shall not be permitted.

19.5.4.1 Hearts

Poultry hearts may be prepared for human food. Hearts shall have the pericardium removed prior to washing and chilling. After washing, hearts shall be drained and refrigerated.

19.5.4.2 Livers

Poultry livers may be prepared for human food. Livers shall be separated from the viscera and the gall bladder shall be removed without release of bile on edible product,

before washing and chilling. Abnormal livers (see subsection 19.7) may be salvaged for animal food.

19.5.4.3 Gizzards

Gizzards shall be separated from viscera, opened and the contents and lining removed, before washing and chilling. Contaminated fat on the outside surface of gizzards shall be removed.

19.5.4.4 Kidneys

Kidneys from poultry shall not be prepared as an edible product.

19.5.4.5 Necks

Poultry necks that are separated from the carcass may be prepared for human food provided they are free of contamination.

19.5.4.6 Ova from Fowl

The salvage of ova from slaughtered laying hens is permitted, provided the following conditions are met:

- Only ova from approved carcasses are collected. Collection shall be done after inspection;
- Ova collection is done under sanitary conditions;
- The product shall be refrigerated immediately after collection to a temperature below 4°C. The product shall be subsequently stored and transported under refrigeration to a registered processing egg station for pasteurization;
- All containers of ova must be identified as such.

19.5.4.7 Poultry Feet or Paws

19.5.4.7.1 Requirements for Edible Poultry Feet or Paws

The salvage of edible poultry feet or paws must be conducted according to the following requirements:

- If feet are removed prior to post mortem inspection /detection, the operator must have a written protocol that has been approved by the Veterinarian in Charge to ensure that feet are not harvested from carcasses rejected or condemned for generalized pathology;
- If feet remain attached to the carcass until after the post mortem inspection /detection, they must not present a contamination hazard. Feet, carcass and equipment surfaces must be maintained visibly clean during operations;
- Epidermis and the toenails are removed;
- Only feet or paws free of faecal contamination are transferred to the edible product processing area;
- All edible feet or paw contact surfaces located in non-refrigerated rooms shall be cleaned as per Chapter 3 of this manual;
- Sorting, trimming and packaging operations shall be performed such that feet or paws ready for packaging are not contaminated by defective feet or paws. There shall be sufficient spatial separation from other processing operations such that the poultry feet or paws do not present a contamination hazard to other processed poultry products;
- Edible poultry feet or paws shall be chilled to 4°C or lower within 4 hours after scalding operations;

- The operator's written protocol for the production of edible poultry feet or paws shall be validated and monitored according to the microbiological and organoleptic requirements included in this section; and
- If the operator has more than one shift, all microbiological and organoleptic sampling described in this section shall be equally distributed amongst the shifts.

Note: If the operator of both the abattoir and the processing establishment has a written protocol signed off by the CFIA officer in charge at both establishments, approved feet or paws may be sent under appropriate controls from one registered slaughter establishment to another registered establishment for scalding, cleaning and further preparation as an edible meat product. The written protocol shall include provisions for validating and monitoring the edible feet or paws according to the following microbiological and organoleptic requirements.

19.5.4.7.2 Organoleptic Defect Definitions

The following accept/reject values apply to post-scald, young chicken feet after they have been sorted by the operator. A sample of 50 randomly selected feet shall be selected from each lot.

Defect Definition	Dimensions	Accept	Reject
1. **Inflammatory Process -** sore, wound or other defect associated with an active inflammatory process including, but not limited to, sanguineous (hemorrhagic), oedema, fibrinous, or cheese-like exudate and/or hyperaemia. **e.g.:** bumblefoot, laceration, infection, or ammonia burn associated with oedema, necrosis, gangrene, or sanguineous fluid.	Any	2	3
2. **Resolving or Healing Wound** - sore, wound, or other tissue condition showing evidence of resolving or healing not associated with an active inflammatory process. **e.g.:** thickening of the skin, callus, scab, ammonia burn, dermatitis, tendonitis, or synovitis (not associated with active inflammation).	Small (< 1.25 cm)	13	14
	Medium (> 1.25 - 2.5 cm)	6	7
	Large (> 2.5 cm)	3	4
3. B**ruise** - tissue damage that resulted from trauma not associated with signs of inflammation. A bruise associated with an inflammatory process is recorded in the "Inflammatory Processes"category. **e.g.:** red to black or greenish discoloration of the skin and/or underlying tissues associated or not associated with visible infiltration of blood or blood clots, and bruising associated with bone fractures.	Small (< 1.25 cm)	6	7
	Medium (> 1.25 - 2.5 cm)	3	4
	Large (> 2.5 cm)	2	3
4. **Compound Fracture -** a bone fracture that has caused an opening in the skin. A compound fracture associated with bruising is not scored in the "Bruise" category. A defect containing a compound fracture and bruising is scored only once in the "Compound Fracture" category.	Any	5	6
5. **Cuticle -** the outer, or epidermal, layer of skin. **e.g.:** any cuticle attached after scalding to remove the cuticle. A cuticle associated with a scab, callus, bruise, or mutilation is not scored/counted twice, e.g., a callus with attached cuticle is scored only once in the callus defect category and not twice (once in the callus category and once in the cuticle category).	Small (< 1.25 cm)	3	4
	Medium (> 1.25 - 2.5 cm)	2	3
	Large (> 2.5 cm)	2	3

6. **Extraneous Material -** organic or inorganic material or carcass tissue observed on the paw that is not attached by natural attachments; also includes attached feathers when present. **e.g.:** ingesta, grease, grease stains, unidentified material, identifiable material, i.e., plant fiber, seeds, dirt, metal, rust, unattached toe nail, unattached cuticle, unattached feathers (down, pinfeathers/hairs, bristle feathers), unattached skin or other carcass tissue, and attached feathers.	Small (< 1.25 cm)	3	4
	Medium (> 1.25 - 2.5 cm)	2	3
	Large (> 2.5 cm)	1	2
7. **Mutilation -** post-mortem processing defect due to dressing and/or processing of the slaughtered bird or processing of the feet. Mutilation associated with bruising is not scored/recorded as mutilation. A defect containing tissue damage and bruising is scored/counted only once in the bruise category. Mutilation defects associated with acute inflammation are scored under the “Resolving or Healing Wound“ category or under the “Inflammatory Process“ category when associated wi th chronic inflammation. **e.g.:** a cut or laceration of the skin and/or underlying tissues, more than two missing digits, broken or crushed bone without an associated opening through the skin, and joint separation.	Any	7	8
8. **Toenail** - the hard keratin dorsal plate of the claw at the end of the digits of the foot. It does not include the softer keratin plate that remains at the end of the digit when the hard dorsal plate of the cuticle that covers softer keratin plate is removed.	Any	4	5

19.5.4.7.3 Validation Procedures

19.5.4.7.3.1 Microbiological Requirements:

E. coli counts from packaged, chilled, edible poultry feet or paws shall be validated using the Pathogen Reduction/HACCP systems final rule for poultry carcasses as contained in Annex T of the United States section of Chapter 11 of this manual.

Sufficient samples (minimum of 10 paws per sample) shall be collected to complete one “moving window” for each class of poultry. If the results indicate compliance with the prescribed criteria (e.g. no samples above 1,000 cfu and a maximum of 3 samples greater than 100 cfu in a moving window of 13) then the microbiological validation is deemed to be acceptable.

19.5.4.7.3.2 Organoleptic Requirements:

The validation period is completed once 10 consecutive shifts (minimum of one lot per half shift, minimum 20 samples in total) are accepted.

19.5.4.7.4 Post-Validation Procedures

19.5.4.7.4.1 Microbiological Requirements:

Once the validation procedure is successfully completed, the sample (as per Annex T, of the United States section of Chapter 11) frequency may be reduced to once per week for 2 months and if the samples still meet the criteria, then the testing frequency may be reduced to one randomly selected sample per month. If at any time the samples do not meet the aforementioned criteria, then an investigation shall be conducted to determine the probable cause and corrective action taken as indicated. The Veterinarian in Charge shall decide if the written procedure is to be amended and whether or not feet or paw operations should be revalidated.

19.5.4.7.4.2 Organoleptic Requirements:

Once the validation of poultry paw collection has been successfully completed, the operator shall continue to sample each lot with a minimum of one lot per half shift.

19.5.4.7.5 Corrective Actions Following a Rejected Sample

If a sample fails a test, the entire lot shall be reworked and another sample shall be selected from the same lot. If the second sample fails from the same lot, the entire lot shall be reworked (again), an investigation shall be conducted to determine the probable cause and corrective action shall be taken as indicated. The Veterinarian in Charge shall decide if the written procedure is to be amended and whether or not feet or paw operations should be revalidated.

19.5.4.7.6 Evaluation of Process Control by CFIA Personnel

Once per week, CFIA personnel should evaluate the operator's process control as per the requirements of this section. An organoleptic evaluation may be conducted in two ways.

- Evaluate the operator's monitoring methods
  (e.g.: sampling frequency, random sampling methods, defect evaluation, defect recording, evaluation of results, corrective actions taken).
  - If monitoring methods are assessed to be unacceptable, the operator must initiate corrective actions.

- Perform a test once per shift
  - If a sample is rejected, the operator must initiate an immediate retest and implement correctives measures as necessary.
  - If faecal material is found, immediate corrective action must be initiated.

In regards to the microbiological evaluation, CFIA personnel should ensure that the operator is in compliance to the Pathogen Reduction/HACCP systems final rule for poultry carcasses (Annex T, of the United States section of Chapter 11) as contained in this manual.

19.5.4.7.7 Defects Log for Poultry Paws or Feet

Defects shall be recorded by the operator and may be recorded on the Defect Log for Poultry Feet and Paws contained in Annex A of this chapter.

19.5.4.8 Chitterlings

To be developed

19.5.5 Specific Quality Control Programs

19.5.5.1 Head and Feet-on Poultry Carcasses

This policy is also applicable to poultry with just head attached or just feet attached.

The uropygial or oil gland may be left on carcasses with the head and feet attached provided that:

- the carcass is labelled so as to indicate the presence of the oil gland; and
- the oil glands are removed from any portions to ensure that the glands are never incorporated into meat products such as mechanically deboned meat (MSM);.

19.5.5.1.1 Requirements for Head and Feet-on Carcasses

Dressing of poultry carcasses with head and feet on may be conducted under the following conditions:

- heads and feet must not present a contamination hazard. All carcass and equipment surfaces must be maintained visibly clean during operations;
- the oral cavity and nostrils must be free of extraneous material prior to chilling;
- epidermis and the toenails are removed prior to chilling;
- the feet must be free of faecal contamination prior to the venting and/or opening of the abdominal cavity;
- the removal of processing and trimming defects of head- and feet-on carcasses shall be done prior to chilling;
- the operator's written protocol for the production of head- and feet-on carcasses shall be validated and monitored according to the microbiological and organoleptic requirements included in this section;
- if the operator has more than one shift, all microbiological and organoleptic sampling described in this section shall be equally distributed amongst the shifts; and
- the written procedure must be accepted by the Veterinarian in Charge.

19.5.5.1.2 Organoleptic Defect Definitions

Head Defects	Definition
Attached Feathers	10 or more feathers < 10 mm is counted as a defect 5 or more feathers ≥10 mm is a defect
Extraneous Material	Any extraneous material, specks, smears, or stains of inedible material in the oral cavity, nares or on the surface of the head. 3 or more specs ≤ 1.5 mm is counted as a defect Each spec > 1.5 mm is a defect *Examples: Ingesta, unattached feathers, grease, bile, unattached epidermis.*
Faecal Material	Any visible material determined to be from the lower gastrointestinal tract.
Sinusitis	A foamy discharge from the nares which may be accompanied by a swelling of the paranasal sinuses. Gross lesions may include exudate in the nasal and respiratory system. Comb and wattle discolouration may range from red to dark blue.
Substandard Condition	Inadequate condition that affects the structure or colouration of the head*. Note: only a bruise ≥ 13 mm is counted as a defect. *Examples: Bruising, mutilation, inadequate bleeding.* * Does not apply to the beak.

Feet Defects	Definition
Attached Epidermis	Failure to completely remove attached epidermis from the foot.
Attached Toenail(s)	Failure to remove the toenail.
Bumblefoot	Swollen foot pads with chronic infection of the sub dermal area including the joints ≥ 6 mm.
Compound Fractures	Any bone fracture of the feet or toes that has caused an opening through the skin.
Dermatitis	Any blisters, ulcers, scabs affecting the skin and/or subcutaneous tissues. Any visible lesion ≥ 3 mm is counted as a defect. A cluster of lesions in close proximity within an area > 13mm is counted as a defect.
Extraneous Material	Any extraneous material, specks, smears, or stains of inedible material on the surface of the feet. 3 or more specs ≤ 1.5 mm is counted as a defect. Each spec > 1.5 mm. is counted as a defect. *Examples: Ingesta, unattached feathers, grease, bile, unattached epidermis.*

Feet Defects	Definition
Faecal Contamination	Any visible material determined to be from the lower gastrointestinal tract.
Substandard Condition	Imperfect condition that affects the structure or colouration of the feet. Ammonia burns less than 6 mm and with no secondary pathology are also not counted as a defect. Each bruise ≥13 mm is counted as a defect. Each black/green bruise ≥ 6 mm is counted as a defect. Each ammonia burn ≥ 6 mm is counted as a defect. *Examples: Bruising, mutilation, inadequate bleeding, ammonia burns* Note: slight skin reddening and minimal bleeding from cut ends are not counted as a defect.

19.5.5.1.3 Validation Procedures

19.5.5.1.3.1 Microbiological Requirements:

The operator's written protocol for the production of head- and feet-on carcasses shall be validated by using sample collections and laboratory test procedures for generic *E. coli* as outlined in the USDA Pathogen Reduction/HACCP regulations, Chapter 11, section on the United States, Annex T, in this manual.

Microbiological validation consists of the collection of 50 concurrent samples. A concurrent sample is comprised of one carcass without head and feet on (control population) and one carcass with the head and feet on (target population) collected from the evisceration line just prior to entering the chilling system.

The written procedure shall specify the sampling location, how carcasses shall be identified and the random sampling procedure.

In order to pass microbiological validation, the geometric mean of the head- and feet-on carcasses must be equal to or less than that of carcasses without head and feet on or not be significantly different as determined by statistical analysis.

The operator shall submit to the CFIA Area Poultry Program specialist the results of all *E. coli* tests for statistical analysis. Results of the analysis shall be supplied to the Veterinarian in Charge and the operator.

19.5.5.1.3.2 Organoleptic Requirements:

During validation, ISO-based sampling shall be conducted by randomly selecting enough cases to perform a 20 carcass sample at a frequency of once per half shift as per the following table:

Sampling Standard for Head- and Feet-on Carcasses Acceptance and Rejection Numbers

Carcass Part	Sample Size Code Letter	Inspection Mode	Sample Size	AQL	Accept Number	Reject Number
Head and Feet	F	Normal	20 Carcasses	6.5%	3	4
Feet Only				4.0%	2	3
Head Only				4.0%	2	3

The validation period is completed once 10 consecutive shifts (20 samples) are accepted.

19.5.5.1.4 Post-Validation Procedures

19.5.5.1.4.1 Microbiological Requirements

The production of head and feet-on carcasses shall be monitored by using sample collections and laboratory test procedures for generic *E. coli* as outlined in the USDA Pathogen Reduction/HACCP regulations, Chapter 11, section on the United States, Annex Q, in this manual.

Once the validation has been successfully completed, the testing frequency may be reduced to once (1) per week for two (2) months and if the samples still meet the criteria, then the testing frequency may be reduced to one (1) randomly selected sample per month. If at any time the samples do not meet the aforementioned criteria, then an investigation shall be conducted to determine the probable cause and corrective action taken as indicated. The Veterinarian in Charge shall decide if the written procedure is to be amended and whether or not feet or paw operations should be revalidated.

19.5.5.1.4.2 Organoleptic Requirements

Once the validation of head- and feet-on production has been successfully completed, the operator has the option of continuing to use the ISO sampling plan begun in the validation step or to write an equivalent plant-specific SPC program. For both options, the frequency of sampling shall be conducted as per the following table as a minimum.

POST-VALIDATION SAMPLING FREQUENCY			
Step	**Frequency**	**Number of Shifts**	**Requirements to shift to next lower frequency of sampling**
Step 1	Once per shift	10 consecutive shifts	All samples are accepted
Step 2	Once per 2 shifts	N/A	N/A

19.5.5.1.5 Corrective Action

If a sample fails a test, the affected case(s) shall be reworked and another sample conducted from the same half shift. If the retest fails, the entire half shift shall be reworked, an investigation conducted to determine the probable cause, corrective action taken as indicated. The Veterinarian in Charge shall decide if the written procedure is to be amended and whether or not head- and feet-on operations should be revalidated.

19.5.5.1.6 Evaluation of Process Control by CFIA Personnel

Once per week, CFIA personnel should evaluate the operator's process control as per the requirements of this section. An evaluation may be conducted in two ways.

- Evaluate the operator's monitoring methods
  (e.g.: sampling frequency, random sampling methods, defect evaluation, defect recording, evaluation of results, corrective actions taken).
  - If monitoring methods are assessed to be unacceptable, the operator must initiate corrective actions.

- Perform a test as per the sampling plan described in the validation period at the start of this section
  - If a sample is rejected, the operator must initiate an immediate retest and implement correctives measures as necessary.
  - If faecal material is found, immediate corrective action must be initiated.

In regards to the microbiological evaluation, CFIA personnel should ensure that the operator is in compliance to the Pathogen Reduction/HACCP systems final rule for poultry carcasses (Annex Q, of the US section of Chapter 11) as contained in this manual.

19.5.5.1.7 Defects Log for Head- and Feet-on Carcasses

A Head- and Feet-on Carcass Defects Log has been provided in Annex A of this chapter to record the sample results.

19.5.5.2 Head-on Rabbit Carcasses

A domesticated rabbit may be dressed with the head on.

The operator's written protocol must include the applicable conditions from the head-on poultry subsection (section 19.5.5.1) and must be approved by the Veterinarian in Charge.

19.5.5.3 Removal of Condemned Poultry Legs

19.5.5.3.1 General Requirements

An approved written quality control program is required to ensure that all condemned legs are removed prior to cut-up, boning, packaging or shipping. For MPIP, identified legs will not be counted as a defect under the CDS.

Legs with pathological conditions that may cause cross contamination (e.g. cellulites) shall be removed prior to water immersion chillers.

A written quality control program must consist of the following parts:

- A flow chart of the operation indicating the position of employees identifying legs for removal, removing the legs and where checks on the effectiveness of the system are made;

- Quality control programs using knife cuts as identification may be approved providing that the cut:
  - is easily seen from all sides of the carcass at normal line speeds; and
  - is distinguishable from any other cuts;

- A description of the following controls:
  - the frequency and method of monitoring;
  - the records that will be kept; and
  - the action that will be taken if condemned or marked legs are missed.

Any proposed program should be discussed with the Veterinarian in Charge for approval by the area poultry inspection specialist.

19.5.6 Microbial Control Interventions for the Treatment of Carcasses and their Parts

Refer to the sub-section with the same preceding title as contained in Chapter 17, "Ante and Post mortem Inspection Procedures, Dispositions, Monitoring and Controls - Red Meat Species, Ostriches, Rheas and Emus", of this manual.

Note: For chlorine, including for handling product potentially exposed to chlorine in excess of the Health Canada limits, refer to Chapter 5, "Sampling and Testing", sub-section "Chlorine", of this manual.

19.6 POST MORTEM INSPECTION / EXAMINATION

Operators of poultry slaughtering establishments may choose to operate under the following methods of post mortem inspection:

- Traditional inspection; and
- Modernized Poultry Inspection Program (MPIP)

The MIR refer to MPIP as a “post mortem examination program”.

It is the responsibility of the operator to ensure that all carcasses and parts are presented for post mortem examination in such a way as to permit proper inspection (i.e. proper presentation of viscera, etc.). Plant management is also responsible for providing adequate facilities (i.e. space, light, stands, etc.).

It is the responsibility of the inspection staff to take immediate action if management does not adhere to its responsibilities. Such action could be to demand that the rate of slaughter be slowed down, to temporarily suspend inspection services until the operator has corrected the situation, etc.

When a carcass or its parts are held, they are to remain under the inspector's supervision until disposed of in the prescribed manner. Diseased material shall be condemned or rejected and handled in such a way as to avoid contamination of meat intended for food. Contamination may occur either directly or indirectly via equipment.

Condemned or rejected meat products shall be handled in accordance with Chapter 3 of this manual. When a carcass is condemned or rejected, no part of that carcass shall be approved for human food, including those previously harvested (e.g. paws).

As agreed by the national poultry industry associations, a “Condemnation / Rejection Report for Poultry” should be issued by the operator for each lot of chickens or turkeys. The CFIA VIC will provide a corresponding CFIA/ACIA 5639, “Rejection Process Control Evaluation Report for Poultry”, or a CFIA/ACIA 5640, “Condemnation Report for Poultry”, as applicable, for each report issued by the operator. Details on the aforementioned industry report and CFIA reports are included at the end of section 19.7, Poultry Dispositions, of this chapter.

When it is obvious that a portion will be condemned or rejected, it is still necessary to conduct the full routine inspection or detection.

No objection is taken to the use of plastic or rubber gloves during the post mortem inspection or examination of poultry, provided that the gloves are of a thickness that will not seriously affect sensitivity of the fingers during palpation.

19.6.1 Traditional Inspection Method for Poultry

All classes of poultry may be inspected under traditional inspection.

In the event that poultry carcasses are improperly presented for inspection, immediate action must be taken by management to ensure proper presentation. If corrective measures are not taken, then operations shall be stopped.

Under traditional inspection, a CFIA inspector inspects the carcass exterior, the abdominal cavity and the corresponding viscera of each carcass. Only one (1) station is permitted for operators of newly registered poultry abattoirs under traditional inspection.

The inspector may grasp the viscera to facilitate the visual inspection of the heart, liver and spleen with minimal manipulation and palpate the viscera only when necessary.

Palpation is required for lots in which the veterinarian suspects lesions which would be otherwise non-detectable.

Viscera, when left attached to the carcass, shall be presented to allow examination of the abdominal cavity for contamination, tumours, abscesses and any other abnormal condition. The exterior of all carcasses shall be visually observed for fractures, bruises, blisters, tumours, skin conditions, etc. The heads and feet of carcasses should also be examined if not removed from carcasses prior to evisceration.

Operators shall provide one (1) or more competent plant employees, referred to as a helper, who shall be positioned next to each inspector. As directed by the inspector, the helper shall:

- for chickens, turkeys, and fowl other than spent laying hens, remove carcasses from the evisceration line showing signs of pathological diseases or conditions which may result in whole carcass condemnation;
- hang these carcasses, e.g. on a rack or carousel for veterinary disposition;
- for other types of poultry, remove from the evisceration line and discard obviously condemnable carcasses and remove "questionable carcasses" from the evisceration line and hang these carcasses, e.g. on a rack or carousel for veterinary disposition;
- cull carcasses affected with extensive processing conditions, e.g. over scalding, mutilation, and inadequate bleeding;
- remove carcasses with processing defects (e.g. faecal, bile or crop contamination within the cavity) for off-line salvaging or reprocessing (refer to section 19.5.2 of this chapter);
- recording the reason for rejecting each carcass as instructed by the CFIA inspector; and
- if time permits, remove by trimming: breast blisters, bruises, fractures, contamination, and other undesirable or abnormal conditions and correct minor dressing errors; carcasses which cannot be fully trimmed shall be removed from the evisceration line.

The operator is responsible for discarding carcasses and their viscera following a veterinary disposition.

Operators wishing to remove condemned poultry legs not under the direct supervision of the post mortem inspectors shall submit a proposal to the Veterinarian in Charge as per section 19.5.5.3 of this chapter.

A specific checklist, the “Traditional Compliance Checklist”, has been developed to evaluate annually the conformance of all the aforementioned elements to this policy. The checklist is to be completed at least once every 2 years by a supervisor with poultry inspection program expertise for each poultry slaughterhouse operating under the traditional method of inspection.

19.6.1.1 Traditional Presentation Standards

19.6.1.1.1 Introduction

These traditional presentation standards are to be used for the presentation of carcasses and viscera under the traditional method of inspection.

Consistent post mortem presentation is a must in order to ensure optimal inspection efficiency for all classes of poultry. Therefore, carcasses presented for post mortem inspection shall be hung in such a way as to facilitate the examination of the external surfaces, the internal cavity, the internal organs and the viscera.

These standards are provided to assist the operator in applying and maintaining reasonable and achievable standards for presentation. They provide an objective means

of monitoring and assessing the acceptability of carcass presentation for inspection. They will also provide a tool to create more uniform presentation nationwide.

While testing of these standards is designed for the inspection team, the standards may also be used by the operator as a guide to develop quality control for presentation.

19.6.1.1.2 General Requirements

It should be understood that the presentation standards do not require a specific number of plant employee presenters. Instead a standard of consistent presentation must be met.

19.6.1.1.2.1 Operator's Responsibilities

The operator is responsible for providing consistently adequate presentation of carcasses for inspection. Therefore the operator must:

- train and assign plant employees in the proper presentation of carcasses for inspection;
- provide a rack on which to place carcasses for examination during presentation check;
- provide adequate lighting as specified in Chapter 3 of this manual; and
- provide adequate space for the presenter and for the performance of presentation testing. Three (3) feet is recommended for presentation testing.

19.6.1.1.2.2 CFIA Responsibilities

The inspection staff monitor presentation compliance by performing presentation tests at each inspection station and on each evisceration line, and take appropriate action when the presentation standards are not met.

The inspection staff must:

- carry out the test required to assess the presentation of carcasses for inspection; and
- communicate test results and any requirements for corrective measures to appropriate plant personnel.

19.6.1.1.3 Defects Associated With Improper Presentation

19.6.1.1.3.1 Defects Monitored by the Presentation Standards

19.6.1.1.3.1.1 Outside Carcass Errors

- **Front or Side** (weight of **11**)
  Carcasses arriving other than with back towards the inspector.

- **Hung By One Leg** (weight of **9**)
  Carcasses arriving with both legs not properly suspended in the shackle.

- **Carcasses Swinging** (weight of **6**)
  Carcasses arriving with sufficient swinging motion to interfere with the inspection process. Excessive swing is defined as movements at 30 degrees or more to the chain and away from the inspector.

- **Viscera Not Uniform** (weight of **6**)
  Carcasses arriving with viscera on the opposite side of normal presentation or in the middle of the abdominal opening.

- **Contaminated Viscera** (weight of **6**)
  Carcasses arriving with contaminated viscera requiring the inspector to wash his/her hands.

- **Viscera Below Wing** (weight of **12**)
  Carcasses arriving with the heart and/or the liver (and/or not the spleen in the case of birds over 8 weeks) below the wing breast joint.

- **Viscera Not Free** (weight of **10**)
  Carcasses arriving with viscera not adequately separated from the abdominal fat pad and suspended alongside the carcass. If only a cross strip of fat is present, it will be considered that the viscera are free.

- **Viscera in Shackle** (weight of **8**)
  Carcasses arriving with visceral organs hung in shackle.

- **Out of Sequence** (weight of **15**)
  Carcasses arriving on guide bar out of sequence for the inspection station due to kick-out malfunction or missing the kick-out.

- **No Viscera** (weight of **20**)
  Carcasses arriving without viscera. Those carcasses arriving with one or two organs, i.e. heart and/or liver (and/or the spleen in the case of birds over 2.7 kg.) missing, will be scored with a weight of 5.

19.6.1.1.3.1.2 Inside Carcass Errors

- **Membrane** (weight of **2**)
  Carcasses arriving with the inside cavity obstructed by the air sac membrane from viscera to cavity.

- **Opening Cut** (weight of **1**)
  Carcasses arriving with inside cavity obstructed by an inadequate opening cut. This includes cross strips of skin, the anus or cloaca still in the carcass or any other obstacle to appropriate inspection located in the area of the opening cut. It has been found that a cut made within 2 cm (3 cm for turkeys) to the point of the keel is an adequate opening.

- **Not Reflected** (weight of **2**)
  Carcasses arriving with the viscera not reflecting the appropriate abdominal flap.

- **Parts Inside** (weight of **1**)
  Carcasses arriving with one or more of the visceral organs* left in the cavity.

  **For Fowl hearts only, three or more occurrences of "Parts Inside" will not be considered an error.*

- **Contamination Inside** (weight of **6**)
  Carcasses arriving with contamination occurring on the inside surfaces of the carcass.

- **Mutilation** (weight of **2**)
  Carcasses arriving with internal mutilation caused by the vent or evisceration equipment.

19.6.1.1.3.1.3 Line Speed

Each carcass per minute exceeding the current maximum equals one error with a weight of 5.

19.6.1.1.3.2 Other Defects Controlled by the HACCP System

The following categories of carcasses will be hung-back by the presenter or the inspector's helper. These other defects shall be controlled by the operator as part of the operator's written HACCP system. No error will be recorded on a presentation check for these defects.

In the case of a recurrence, the operator will be notified and 5 demerit points will be recorded on the "Defects Log: Traditional Presentation Standard" for each subsequent defect. These other defects are as follows:

- **Not Opened -** Carcasses arrives at the inspection station with no opening cut made in the carcass;
- **Not Drawn -** Carcass arrives at the inspection station with opening cut made but with viscera insufficiently drawn to permit inspection; or
- **Two Legs Out of Shackle -** Carcass arrives at inspection station hung by the neck or wing.

Hung-back carcasses shall not be allowed to accumulate on the rack and shall be identified and separated from carcasses hung back on the rack for the salvage of portions. The operator shall assure that hung-back carcasses are handled promptly and hygienically.

19.6.1.1.4 Presentation Monitoring by CFIA Personnel

19.6.1.1.4.1 Sampling Method

Each test (random tests and retests) consists of two separate 10 carcass observations, one for outside errors and the second for inside errors.

The sampling must be done at constant intervals, e.g., every fifth carcass, every third carcass, etc. To avoid sample bias, randomly select a carcass by picking one, then count a predetermined number of carcasses, e.g., third one, and then examine this carcass and corresponding viscera. This carcass shall be the first one of the sample.

Repeat the procedure for each subsequent carcass until the required number is examined.

The outside of 10 carcasses per station will be checked for any of the listed **outside** errors. This test will be conducted off-line with the person conducting the test standing behind and between the presenter and the inspector. Each error observed will be recorded on the "Defect Log: Traditional Presentation Standard" form included in Annex A of this chapter.

Then at the same station, but with the person doing the test standing on line between the presenter and the inspector, 10 additional carcasses will be observed for listed **inside** errors. Each error observed will be recorded on the "Defect Log: Traditional Presentation Standard" included in Annex A of this chapter.

The last part of all checks is the line speed check.

The **outside** and **inside** errors are converted to a weighted score, and added to any line speed error to determine the total non-conformance for each inspection station.

19.6.1.1.4.2 Sampling Frequency

The frequency of presentation checks on each eviscerating line should be based on the operator's ability to control its presentation. Once per half shift is a suggested frequency; this can be reduced with growing confidence in the operational compliance. The frequency can also be increased with loss of confidence. The minimum frequency rate per line should be once per shift.

19.6.1.1.4.3 Aggregate Results and Actions Required

During a random sampling:

- If any weighted non-conformance total is 25 through 39, or 3 or more of the same presentation errors occur, the operator is required to take immediate corrective action within 10 minutes before a retest of the affected station;
- If any test result has a total non-conformance weight of 40 or more, the line speed must be reduced by 10% immediately, corrective actions implemented and a retest conducted within 10 minutes. The increment used for the line speed increase is equivalent to the increment used for line speed reduction.

During a retest:

- If any retest total is 25 or more, or 3 or more of the same presentation errors occur, the line speed must be reduced by 10% immediately, corrective actions implemented, and a retest conducted within minutes;
- Line speed reductions of 10% continue on each retest until a total of 24 or less and 2 or less of any one error is achieved or until the third line speed reduction in a row for presentation has taken place; or
- Line speeds will be increased by allowed increments to the maximum speed permitted only after presentation control is satisfactory (24 or less and 2 or less incidences of the same errors) has been demonstrated. When line speeds are increased, process control must again be demonstrated for this station at the higher line speed as soon as possible and not more than 10 minutes after each increase.

When three consecutive line speed reductions for presentation non-conformance on one line do not result in acceptable presentation on that line, the VIC must:

- evaluate the presentation problem;
- determine the effect the presentation problem is having on post mortem inspection and operational sanitation; and
- determine acceptable presentation at less than 70% of optimum line speed.

Each element of the process control and their interaction are explained below and are presented in the decision tree.

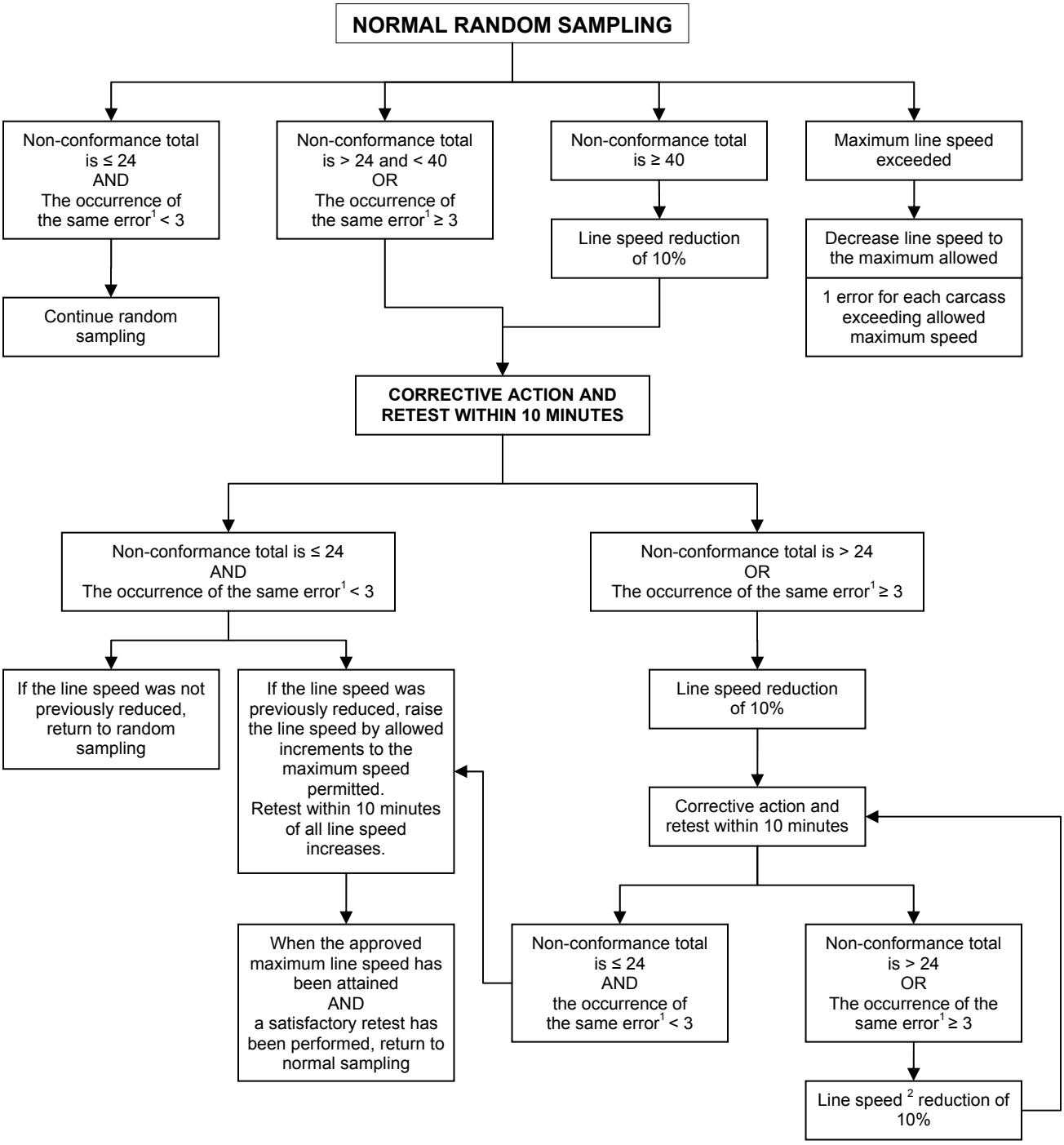
The MIR have precedence over the presentation decision tree (corrective measure(s) can be mandated at any time by the VIC).

19.6.1.1.4.4 Records

Because of shift to shift and day to day differences in plant staffing and supervision, the presentation results of each shift and each production day will be independent of all other presentation results. There will be a new presentation form and a new start for each station, each shift and each production day.

A sample Traditional Presentation Standards monitoring form is available in Annex A of this chapter.

19.6.1.1.5 Traditional Presentation Standard Monitoring Decision Tree



Important Notes:
Note 1: For fowl hearts only, three or more occurrences of "Parts Inside" will not be considered an error.
Note 2: Line speed can only be reduced by 10% three times, after which the VIC shall decide which corrective measures are to be taken.

The *Meat Inspection Regulations, 1990* have precedence over this decision tree.

19.6.1.2 Line Speeds for Traditional Inspection

Line speeds listed in the following table are the maximum line speeds which are permitted only under optimal conditions consistent with good presentation, average incidence of pathology (disease) and effective process control over trimming/dressing defects and evisceration accidents. Failure by the operator to take effective corrective action may result in line speed reductions imposed by the Veterinarian in Charge.

Operators are not permitted to add a second on-line inspection station under traditional inspection and may not switch to the Canadian Poultry Inspection Program (CPIP). If an operator has one (1) inspection station under Traditional inspection, and wishes to increase their line speed above that permitted for one (1) station in the fallowing table, the operator may wish to discuss with the Veterinarian in Charge switching to the Modernized Poultry Inspection Program as described in this Chapter.

Operators with two (2) operational post mortem inspection stations under traditional inspection on the same evisceration line before January 2nd, 2005, may continue to operate both stations provided that both stations remain in full compliance with applicable facility requirements contained in Chapter 3 of this manual.

19.6.1.2.1 Maximum Line Speeds for Poultry Under Traditional Inspection

CLASS	TYPE and WEIGHT RANGE	Max. LINE SPEED		On-line CFIA Inspection Station(s)	Veterinary Disposition station
		cpm	cph		
Chickens, Cornish Hens, Chilean Tinamu, Guinea Fowl, Partridge, Pheasants, Quail, Squab (Pigeon), Silkies, etc.	Broilers/Roasters ≤ 3.0 kg. *	27	1620	1	1
		50	3000	2**	1
	Roasters > 3.0 kg. *	24	1440	1	1
		44	2640	2**	1
Turkeys	Light Turkeys ≤ 8.0 kg. * J-Cut	25	1500	1	1
		42	2520	2**	1
	Heavy Turkeys > 8.0 kg. * J-Cut	23	1320	1	1
		36	2160	2**	1
	Light Turkeys ≤ 8.0 kg. * Bar-Cut	20	1200	1	1
		33	1980	2**	1
	Heavy Turkeys > 8.0 kg. * Bar Cut	18	900	1	1
		27	1620	2**	1
Fowl	Light Fowl (spent laying hens) ≤ 2.0 kg. *	23	1380	1	1
		42	2520	2**	1
	Heavy Fowl (breeders) > 2.0 kg *	20	1200	1	1
		36	2160	2**	1
Ducks & Geese	all sizes	22	1320	1	1
		40	2400	2**	1

cpm: carcasses per minute; cph: carcasses per hour
* All weights refer to average live weight for the lot of poultry.
** For operators with two (2) operational post mortem inspection stations on the same evisceration line before January 2nd, 2005

These speeds represent the maximum number of carcasses that may pass by the inspection station every hour on the assumption that the line moves at a constant speed without stopping and that each shackle is full.

19.6.2 Modernized Poultry Inspection Program (MPIP)

19.6.2.1 Introduction

The Modernized Poultry Inspection Program or MPIP is a post mortem examination program as defined in section 2 of the *Meat Inspection Regulations* (MIR). The following subsections of this chapter contain the requirements for the MPIP, as referred to in section 29.1 (3) of the MIR.

A CFIA veterinarian shall be present throughout evisceration operations at the establishment.

19.6.2.1.1 Definition of MPIP

MPIP is a HACCP and science-based inspection system that focuses on the slaughter process within the gate to plate food safety continuum. MPIP represents the latest Canadian advance in the evolution of poultry inspection methodology.

19.6.2.1.2 Objectives:

- to provide the CFIA and industry personnel with the policies and procedures that contribute to the uniformity of interpretation and consistency in the implementation of the MPIP;
- control of hazards associated with food-borne pathogens during the slaughter and processing of poultry;
- promote the proactive control (prevent, eliminate or reduce) of hazards through the implementation of a CFIA-recognized HACCP system in poultry slaughtering establishments;
- facilitate the change from prescriptive regulatory requirements to objective performance standards in poultry inspection;
- facilitate the transition of CFIA staff from hands-on inspection to audit-based verification activities;
- facilitate the assumption by industry of the responsibility for the detection and handling of defective carcasses under continuous government oversight; and
- respond to changing international trade requirements, e.g., Pathogen Reduction and HACCP Program Rule in the US.

19.6.2.1.3 CFIA MPIP Training and Certification

As per the “Modernized Poultry Inspection Program (MPIP) Certification Program”, all employees of the CFIA assigned on a regular basis or providing relief in poultry slaughtering establishments operating under MPIP must be certified.

19.6.2.2 MPIP Implementation

19.6.2.2.1 Introduction

An operator in a registered establishment, or an operator sending an application to be registered, may request to implement a post mortem examination program or MPIP.

The implementation of MPIP consists of three phases:

- Phase 1 - Preparatory Period
- Phase 2 - Trial Period
- Phase 3 - Implementation Period

The steps for implementing MPIP under each phase are described below. All checklists (i.e., assessment, implementation or others) pertinent to MPIP referred to in the following sub-sections may be obtained from the Area Poultry Inspection Program Specialist.

Slaughter operations shall initially comply with a post mortem inspection system performed by CFIA inspectors, as described under the "Traditional inspection method" section in this Chapter. The inspectors assigned to the plant shall be trained under the Traditional Inspection System and the Traditional Presentation Standards.

The operator is expected to take traditional line speed caps into consideration when calculating expected daily kill goals.

19.6.2.2.2 Preliminary Assessment

Step 1

An operator interested in implementing MPIP shall submit a letter of request to the Regional Director with a copy to the Area Poultry Inspection Program Specialist as per article 29.1 of the MIR, "Post mortem Examination Program".

The request shall include blueprints and a project description showing the positions/locations of the inspectors and company employees at the different phases of the implementation and must be presented to the CFIA Area Program Specialist before the beginning of the next phase. The number and location of inspectors and plant employees may vary from one phase to the next.

Upon receipt of an acceptable request, a two (2) station traditional inspection environment, and corresponding line speed, may be allowed at the discretion of the Regional Director and Area Poultry Program Specialist.

Step 2

The Regional Director shall forward the operator's request to the Area Poultry Inspection Program Specialist who then assembles an assessment team with the following suggested composition:

- Area Poultry Inspection Program Specialist;
- The Veterinarian in Charge; and
- The Inspection Manager and/or the local Regional Veterinary Officer covering the establishment.

Step 3

The assessment team assesses the suitability of the blue print and the project description submission prior to acceptance based on compliance with the following criteria:

- facility requirements and line configuration;
- training program and work plan for defect detectors, Evisceration Standards, Presentation Standards, DDS and CDS monitors as per Annex B of this chapter; and
- a HACCP written program and Pathogen Reduction Program.

Note: For an existing registered establishment, the assessment will also include the compliance history of the operator.

A specific checklist entitled "Pre - MPIP Initial MPIP Assessment Checklist – Prior to Phase 1 (Preparatory Phase)" shall be completed by the assessment team for this purpose.

Minor deficiencies may be addressed through acceptable action plans.

Step 4

The assessment team shall state, on the preceding checklist, the terms and conditions required to be completed prior to initiating operations in an MPIP environment. A copy of this assessment is forwarded to the Regional Director and the operator.

- If the request is accepted, the CFIA personnel from the establishment and the operator are informed that the request to implement MPIP has been approved; the operator may then schedule a Phase 1 start date;

- If the request is refused, the Area MPIP Assessment Team shall explain the decision and rationale to the Regional Director and the operator.

Step 5

Certified MPIP trainers shall organize training workshop(s) to certify CFIA staff.

- The Veterinarian in Charge and one or more inspectors shall receive several days of practical training in one or more MPIP plants;

19.6.2.2.3 Preparatory Period (1st Phase)

Step 6

The operator may switch to a Pre-MPIP environment (carcass/cavity detection, Evisceration Standards, Presentation Standards, DDS and CDS) when the CFIA operational requirement can be met and when plant employees' level of training and expertise with Pre-MPIP can facilitate a functional Pre-MPIP environment as determined by the Area Poultry Inspection Program Specialist and VIC. If the operator desires to remain eligible to export to the United States, a written request must be submit to the VIC for the CFIA to continue staffing this station as an "export" station (refer to Chapter 11, Exports, of this manual).

CFIA staffing and maximum line speeds during the "MPIP Preparatory Period" (Phase 1) shall be determined by the Area Assessment Team depending on the ergonomic facilities and the presentation of the carcasses and corresponding viscera. An onsite review of the establishment is required to ensure MPIP facility requirements have been met. Line speeds may be increased during the MPIP Preparatory Period (Phase 1), once the operator has implemented carcass/cavity detection, Evisceration Standards, Presentation Standards, DDS and CDS by accredited employees. In this case, the maximum line speed shall be approved by the Area Poultry Inspection Program Specialist and the Veterinarian in Charge as per the following:

- 7200 cph for chicken
- 6360 cph for light fowl under 2 kg (live weight)
- 5760 cph for heavy fowl over 2 kg (live weight)
- 3600 cph for light turkey at or under 8 kg
- 3300 cph for heavy turkey over 8 kg

Step 7

The implementation team along with the Veterinarian in Charge shall:

- review the operator's correction of any non-conformities identified during the initial assessment including requisite amendments to the operator's HACCP system; and
- review the evisceration line area with the operator with respect to work and inspection station requirements for Phase 2, as detailed in this chapter.

Step 8

CFIA personnel from the establishment and CFIA replacements receive MPIP training and certification as per the CFIA "National Meat Hygiene Training Program Volume 1: Implementation Guide".

Step 9

Training for Presentation Standards, Defect Detection Standards (DDS) and the Carcass Dressing Standards (CDS) shall be implemented prior to commencing Phase 2. A complete description of DDS and CDS is contained in this chapter.

Step 10

MPIP industry training material is provided to the Veterinarian in Charge or the delegated MPIP-certified inspector in order to train and accredit establishment trainers. As required, the local Regional Director shall arrange for additional veterinary support to permit the Veterinarian in Charge to perform training and accreditation duties at the establishment.

Step 11

Once they are accredited, establishment trainers are to then train and accredit all other establishment employees as per the "Training and Accreditation Protocol", in Annex B of this chapter.

Step 12

The Area Implementation Team shall use the checklist entitled "Pre - MPIP Implementation Assessment Checklist – Phase 1 (Preparatory Phase) to Phase 2 (Trial Phase)" to evaluate the following requirements in order to commence Phase 2, Trial Period:

- the operator's Pathogen Reduction Program is operational and included in the HACCP system;
- establishment QC are accredited to administer the DDS, CDS and Presentation Standards;
- establishment trainers are accredited and a sufficient number of defect detectors have passed the prerequisite tests; and
- the evisceration line has been modified as per work and inspection station requirements for the Trial Period (Phase 2).

Based on the result of this checklist, the implementation team shall recommend the commencement of Phase 2 or that Phase 1 be continued pending the completion of all requirements. A copy of this assessment is forwarded to the Regional Director.

19.6.2.2.4 Trial Period (2nd Phase)

It is strongly recommended that the CFIA and establishment staff hold weekly meetings throughout Phase 2 to discuss any issues related to the ongoing implementation of MPIP.

Step 13

The same number of on-line CFIA inspectors is required during Phase 2, Trial Period, as inspection stations staffed under the operator's previous post mortem inspection system.

Note: A complete description of DDS testing procedures during Phase 2 of MPIP implementation is contained in this subsection.

Step 14

Defect detectors must pass four (4) additional on-line tests during the trial period as per the “Training and Accreditation Protocol”, Annex B of this chapter.

Step 15

The inspection staff shall provide feedback to the establishment trainer on the performance of their defect detectors.

At the end of Phase 2:

- When the Veterinarian in Charge is satisfied that defect detectors are performing adequately, he or she may locate the CFIA viscera Inspector downstream; and
- When switching from Traditional inspection to MPIP, if the operator desires to remain eligible to export to the United States and has not submitted a request as described in Step 6, a written request must be submit to the VIC for CFIA to continue staffing this station as an “export” station (refer to Chapter 11, Exports, of this manual)

Step 16

The Veterinarian in Charge shall notify the Regional Director when the operator is ready to proceed to Phase 3 so that an MPIP system and compliance verification review can be conducted.

The MPIP implementation team shall conduct this review to assess compliance to all of the elements of the MPIP policy.

- If performance is acceptable, the operator may enter Phase 3.
- If the operator does not exhibit optimum performance, then the trial period shall continue until performance is acceptable or the operator formally withdraws its MPIP application.

The result of the evaluation and recommendations to proceed or not to proceed to Phase 3 shall be communicated to the operator and the local Regional Director.

A specific checklist entitled “Checklist For MPIP System Compliance And Verification – Phase 2 (Trial Phase) to Phase 3 (Implementation Phase)” shall be completed for this step. A copy of the corrective action(s) required by the operator shall be attached to this checklist. Follow-up activities to be performed by specific CFIA personnel shall be specified in the comments section of the checklist completed by the implementation team.

19.6.2.2.5 Implementation Period (3rd Phase)

There are no maximum line speeds for MPIP. Rather, line speeds are determined by the performance of industry defect detectors and by compliance with MPIP requirements.

Step 17

The following operational modifications shall be made according to the roles and responsibilities of CFIA staff under Phase 3:

- CFIA staffing levels may be reduced; and
- cost recovery fees shall be recalculated based on remaining CFIA inspection stations and inspection staff tasks.

Step 18

Phase 3 shall last a minimum of 3 months. MPIP establishments operating in Phase 3 shall undergo regulatory verification of their MPIP system at the end of the 3 months probationary period. This verification will be conducted by a team comprised of certified area MPIP reviewers. After successful completion of the MPIP Compliance Review, the review shall be conducted on an annual basis. In each case, a specific checklist entitled "Checklist For MPIP System Compliance And Verification – Phase 2 (Trial Phase) to Phase 3 (Implementation Phase)" shall be completed.

DDS Testing for Missed Pathology and Processing Defects Before, During and After the Three Phases of MPIP Implementation	
PHASE	**DDS TESTING MODE**
During Phase 1	• No ongoing tests for operations under the traditional method of inspection. • Perform the DDS test for carcass and/or cavity defect group when the operator assumes the responsibility for carcass and/or cavity defect detection.
During Phase 2	• Conduct the DDS tests - for the viscera defect group prior to inspection to provide feedback on the efficacy of viscera defect detection training. - for the carcass and cavity defect groups, follow the DDS decision tree since the operator has assumed responsibility for carcass and cavity defect detection.
During and After Phase 3	• Implement the DDS test for carcass, cavity and viscera defect groups.

19.6.2.2.6 MPIP Requirements for CFIA Inspection Stations

Veterinary Disposition Station (refer to section 19.7.5)
A fully equipped and staffed veterinary disposition station shall be provided by the operator as a prerequisite to receiving a condemnation report from CFIA. Under the framework of the Poultry Rejection Project, the rejection process and the performance of industry rejecters shall be assessed by a CFIA veterinarian.

Evisceration Floor Inspector Station
The entire evisceration, dressing and chilling areas shall comprise the "station" for the evisceration floor inspector. The operator shall provide on-line and/or off-line inspection stations for CFIA inspection staff performing independent or correlation sampling and testing under the Evisceration, Presentation, Defect Detection and Carcass Dressing Standards programs for use by the designated industry personnel and/or CFIA inspection staff. The evisceration floor inspector must also have full access to salvaging and on/off-line reprocessing / reconditioning operations and shall perform all tasks assigned by the Compliance Verification System (CVS) program applicable to poultry dressing, evisceration and chilling operations.

CFIA personnel must maintain a permanent presence within the carcass dressing and evisceration area throughout processing operations.

Note: Additional inspection tasks related to the plant specific upstream and downstream processes from the evisceration floor such as ante mortem verifications and post-chilling process verifications must be delivered as per program requirements.

19.6.2.3 Presentation Standards for the MPIP Inspection System

19.6.2.3.1 Introduction

Presentation standards are used as a Process Control (PC) to contribute to the effectiveness of the related CCP(s) and post mortem examination activities.

Presentation standards aid accredited cavity and viscera defect detectors to carry out their responsibilities in compliance with defect detection standards by ensuring that carcasses and corresponding viscera are presented in a uniform and consistent manner. These standards are designed to ensure that evidence of disease is not lost (e.g. missing viscera) nor hidden (e.g. inadequate abdominal opening) during visual examination by the defect detectors.

Effective control by the operator over the presentation of carcasses and viscera reduces the verification frequency and corrective actions by inspection personnel. Additionally, industry employees must be empowered to take immediate action whenever they notice a potential loss of control. This includes loss of presentation control e.g. excessive missing viscera.

19.6.2.3.2 General Requirements

Presentation standards are applicable to all types of evisceration procedures regardless of the technology used, i.e. whether manual evisceration or automated evisceration equipment leaves the viscera either attached or physically separated from the corresponding carcass.

Presentation monitoring tests are performed on each evisceration line at a presentation test station located after evisceration and prior to viscera detection. Carcasses correctly identified by the cavity defect detectors for removal by the helper/trimmer shall not be included in the sampling for the presentation tests.

All industry employees performing presentation tests shall be trained and accredited as per the “Training and Accreditation Protocol” as per Annex B of this chapter.

19.6.2.3.3 Defects Related to Improper Presentation

19.6.2.3.3.1 Defects to be Monitored by the Presentation Standard

During presentation monitoring, the following three (3) defects shall be counted as presentation errors. These defects are described in the following sub-section and included within the AQL for presentation tests:

(1) no viscera;
(2) viscera parts missing; and
(3) inadequate abdominal opening.

19.6.2.3.3.2 Description of Presentation Errors

The following is a description of presentation errors:

No Viscera:

- For chicken, turkey and quail - carcasses are presented without the viscera or the viscera are presented with the heart and liver missing.
- For fowl - the duodenum must be missing in addition to the liver and the heart.

Viscera Parts Missing:

- For chicken, turkey and quail - presentation of the viscera with over ½ of the heart or over ½ of the liver missing. There must be at least one intact lobe of the liver present for defect detection purposes.

- For fowl - presentation of the viscera with over ½ of the heart or over ½ of the liver missing or the duodenum missing, with a maximum of one defect per carcass. Multiply the total number of hearts missing by 0.1.

- For mature poultry (including chicken roasters) - missing spleens count as an error if a significant percentage are missing as determined by the VIC.

If a missing heart is combined with a missing liver or a missing duodenum, a maximum of one defect is counted.

Inadequate Abdominal Opening:

Presentation of carcasses with an inadequate abdominal opening makes it impossible to examine the abdominal cavity properly. This may result from pieces of skin or flesh obstructing the opening, the anus or cloaca that have remained attached, or any obstacle located in the incision hampering the presentation and view inside. The abdominal opening must be large enough to allow presentation and examination of the inside of the carcass.

For chicken and light fowl, a cut made within 2 cm of the point of the keel is adequate.

For turkey, heavy fowl and roasters, a cut made within 3 cm of the point of the keel is adequate.

For quail, a cut made within 1.5 cm of the point of the keel having a minimum opening diameter of 2.8 cm is adequate.

Mutilated carcasses having obstructions which interfere with examination of the cavity shall also be scored as an “Inadequate Abdominal Opening”.

Unless specified otherwise, each of the above listed errors will receive a score of one (1) with a maximum of one (1) error allowed per carcass.

19.6.2.3.3.3 Other Defects to be Controlled by the HACCP System

The following six defects (1 to 6) shall not be included as errors as part of the presentation tests and are not included in the AQL for the presentation tests. Rather, they shall be controlled as part of the operator’s HACCP system:

1. **unopened carcass**
   carcass without any abdominal incision;

2. **viscera not removed from cavity**
   carcass with an abdominal incision but viscera are not sufficiently drawn from the abdominal cavity to permit detection or inspection;

3. **carcass not hung by legs**
   carcass hung by the neck or a wing;

4. **water pooled within the cavity**
   accumulated water may mask evidence of pathological and/or processing defects (e.g. Airsacculitis and faecal contamination);

5. **contaminated viscera**
   severe contamination to the extent that evidence of pathology is obscured (e.g., generalized Airsacculitis); and

6. **hearts and livers not visible**
   viscera portions to be examined are present, but hidden behind the gizzard on a consistent basis.

Carcasses with presentation defects (1) to (3) shall be removed from the line (before or by the helper/trimmer) for verification of cavity and viscera defects. They shall be identified and kept separate from carcasses for salvaging and not be allowed to unduly accumulate on racks. Errors shall be corrected as quickly as possible, and the carcasses rehung on the line in order not to compromise product safety due to bacterial multiplication. If not, they shall be condemned as "plant rejects". Refer to section 19.7.4.22 of this chapter for more information on "plant rejects".

19.6.2.3.4 Presentation Standards Monitoring

Random sampling for presentation testing is performed by the operator using an "Acceptance Sampling Plan", ISO 2859-1, Special Inspection S-4.

The Presentation Standards monitoring tool has two (2) general components:

- Process evaluation; and
- Corrective measure(s) evaluation.

The process evaluation monitors the presentation defects described in this standard to insure that they do not exceed the established Acceptance Quality Limit. It is performed at a consistent frequency on successive lots. It determines if the process meets the standards on an on-going basis.

The corrective measure(s) evaluation is an assessment of the adequacy of corrective measures that have been implemented following a rejected sample. It determines when the process is back under control.

19.6.2.3.4.1 Testing Frequencies

The frequency of industry monitoring and CFIA verification tests on each eviscerating line shall be based on the operator's ability to maintain uniform carcass presentation. This frequency may be reduced when there is confidence in the operator's presentation control, or it shall be increased when this confidence has been lost, according to the following table.

MONITORING AND VERIFICATION FREQUENCIES INDUSTRY / CFIA

Test Type	Process Evaluation		Corrective Measures Evaluation
	Normal (Low Frequency)	Normal (Regular Frequency)	
Monitoring by the Industry Presentation Standard Monitor	Once per ½ shift	Once per hour	Within 10 minutes
Verification by CFIA Staff	Once per shift	Once per ½ shift	N/A

19.6.2.3.4.2 Sampling Procedure

The sampling must be done at constant intervals, e.g., every fifth carcass, every third carcass, etc. To avoid sample bias, randomly select a carcass by picking one, then count a predetermined number of carcasses, e.g., third one, and then examine this carcass and corresponding viscera. This carcass shall be the first one of the sample. Repeat the procedure for each subsequent carcass until the required number is examined.

The last step consists of checking the line speed.

The total of error incidences is the score for that inspection station and eviscerating line.

19.6.2.3.4.3 Sample Size and Acceptance / Rejection Criteria

The sample size and the applicable accept and reject numbers shall be governed by the line speed range as shown in the following table.

PRESENTATION STANDARDS FOR CHICKEN, FOWL, TURKEYS AND QUAILS ACCEPT AND REJECT NUMBERS, AQL = 4%

Line Speed Ranges (cpm)	Process Evaluation			Corrective Measure Evaluation		
	Sample Size	Ac	Re	Sample Size	Ac	Re
53 and less	32	3	4*	32	3	4*
54 plus	50	5	6*	50	5	6*

cpm: carcasses per minute
* If the total of missing viscera reaches half of the rejection number, and/or if the total of missing heart, for turkey and quail, reaches the rejection number, see the following section below.

19.6.2.3.4.4 Process Out of Control – Action to be Taken

Management has the responsibility to implement timely and effective corrective actions immediately following each presentation test indicating that the number of presentation defects has reached or exceeded the reject number. In each case, they must inform CFIA personnel and must conduct an investigation to determine the probable cause to help decide on the best course of corrective action.

If the total of missing viscera, for all species, reaches half of the rejection number, or, if the total of missing heart, for turkey and quail, reaches the rejection number, the VIC shall determine if the defects are significant considering the pathology associated with the specific flock. In these instances, corrective actions are required to ensure proper detection of pathology.

Corrective actions implemented by the operator commonly include one or more of the following:

- equipment adjustment and/or maintenance;
- adding employees;
- reducing the line speed (if extra time is required by the defect detectors to examine the carcass and/or viscera due to excessive presentation defects);
- changing the flock (e.g. if extra time is required for the birds to empty their intestines); and
- temporarily suspending the hanging of live birds.

A corrective measure(s) evaluation shall be conducted within 10 minutes of the failed test in order to evaluate the corrective action(s) implemented.

If a line speed reduction is chosen as the corrective action by the operator or is enforced by CFIA staff, then retests must be done 10 minutes after a line speed decrease or increase.

Immediately following a failed corrective measure(s) evaluation, the presentation standards monitor shall notify the designated representative of the operator and CFIA personnel. An automatic line speed reduction of 10% shall be implemented if a line speed reduction was not included as a corrective action following the previous failed sample. If the corrective action taken by the operator fails to reduce the following evaluations to an acceptable level, then the operator shall re-assess the presentation status, implement additional corrective actions and apply another 10% line speed reduction.

After one (1) accepted corrective measure(s) evaluation, not exceeding the acceptance number (Ac), the process is back to normal process evaluation since the evaluation determined that implemented corrective measures have been adequate.

If three (3) consecutive corrective measure(s) evaluation tests are rejected, the operator and /or the VIC shall:

- determine to what extent the deviations from the presentation standards affect the detection of defective carcasses and viscera;
- evaluate and approve further corrective action(s);
- determine if live hanging operations may continue;
- the operator shall evaluate and assure the safety and wholesomeness of affected product (evaluation results shall be confirmed by the VIC);
- a written action plan, endorsed by the operator and designed to resolve and prevent a recurrence and including amendments to the HACCP system, shall be submitted to the VIC.

In the case of recurring non-compliance, unusually high condemnation rates or consistently ineffective corrective action, the VIC shall be kept aware of all test results for analysis and possible further action.

Each element of the process control and their interaction are explained below and are presented in the decision tree.

The MIR have precedence over the presentation decision tree (corrective measure(s) can be mandated at any time by the VIC).

19.6.2.3.4.5 Records

A separate Presentation Log form (see Annex A of this chapter) shall be used for each class of poultry or shift. If more than one species are slaughtered, the log must clearly indicate which tests correspond to which species slaughtered, e.g., with inserted blue or red vertical lines.

Because of differences of personnel and supervisors between shifts, test results for each shift shall be considered independently.

19.6.2.3.4.6 Line Speed

The line speed must be recorded for all tests. There is no maximum line speed for MPIP provided operations remain in compliance with MPIP requirements. However, if the line speed is reduced as a corrective action, then exceeding the decreased line speed is counted as a defect. Furthermore, management must immediately correct the line speed.

19.6.2.3.5 CFIA Responsibilities

CFIA staff shall ensure that the presentation standards have been implemented and are being performed according to the operator's written program. Time(s) for the presentation test(s) shall be randomly selected prior to the start of the shift. This may be accomplished by performing independent verification tests and/or correlation tests with the industry monitor.

An independent test or a correlation test shall to be performed at a minimum of once per half shift/evisceration line. A minimum of two verification tests (one (1) independent and one (1) verification test) shall be performed and recorded each week by a veterinarian. The records must show that within one month each veterinarian working at the plant has performed at least one test of each kind.

The Presentation Standard Decision Tree is to be used by the presentation standards monitor and for reference by the CFIA.

The CFIA may perform an additional presentation test at any time as an additional assurance of process control or if they feel that standards are not being met for any reason.

19.6.2.3.5.1 Independent Verification Tests

The CFIA's independent verification tests shall be performed according to the following parameters:

- tests shall be performed on each evisceration line at the frequency indicated and according to the procedure previously described and an independent test shall be performed on each evisceration line;
- if the CFIA test result is equal to or exceeds the rejection number, the operator shall perform an immediate process evaluation test and, if required, initiate any action according to the presentation decision tree;
- the result of each test shall be compared to the operator's monitoring record; if the CFIA test result is not in agreement with the operator's tests, the Inspector shall discuss the test results with the (industry) presentation standards monitor and inform the VIC; and
- CFIA test results may be recorded on a separate Presentation Log (see Annex A of this chapter) or on the operator's records such that CFIA tests can be distinguished from tests conducted by the operator's presentation standards monitor.

19.6.2.3.5.2 Correlation Tests

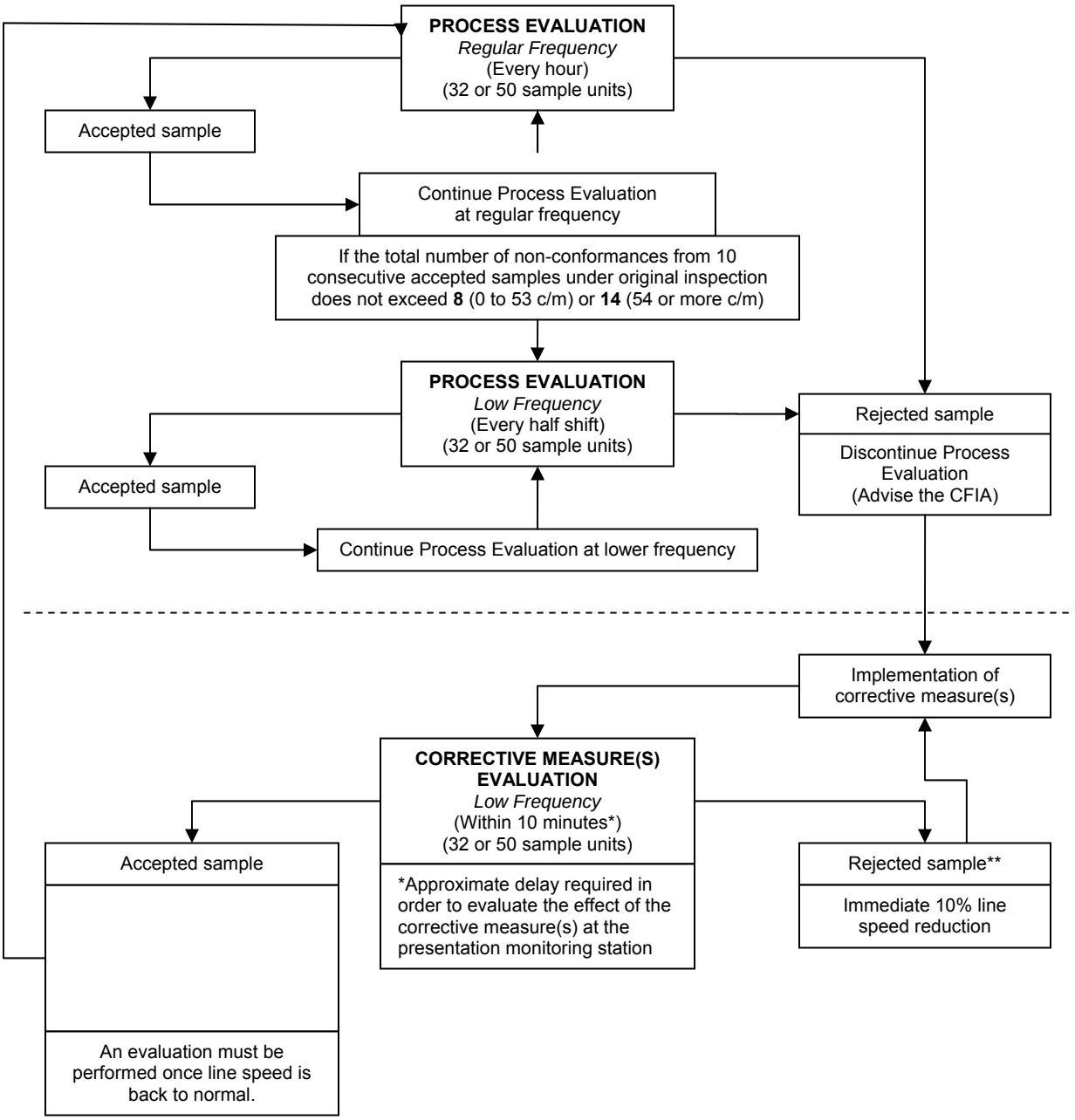
Correlation testing consists of the CFIA conducting an evaluation of a test being performed by the operator's presentation standards monitor according to the following parameters:

- tests shall be performed on each evisceration line at the frequency indicated and according to the procedure previously described and a correlation test shall be performed on each evisceration line; this frequency may be increased according to the operator's compliance to the monitoring procedures and when a correlation test is performed, it replaces the independent CFIA test scheduled for that half shift;
- a member of the CFIA inspection staff shall examine the same carcasses at the same time as the industry monitor; and
- the monitor will be evaluated for the correct interpretation of defects, completion of forms, correct application of the decision tree and the implementation of corrective actions if necessary.

If the CFIA's evaluation demonstrates a lack of compliance to the presentation standard and/or the monitoring thereof, immediate corrective measures shall be initiated by the

operator. The VIC shall decide if the written procedure is to be reassessed and amended accordingly.

19.6.2.3.6 Decision Tree for MPIP Presentation Standard Monitoring



**N.B.: after three (3) non accepted samples at Corrective Measures Evaluation:

- Inform plant manager and Veterinarian in Charge
- Veterinarian in Charge and Operator decide if operations can continue
- Assess why previous corrective actions were not effective and develop an action plan
- Veterinarian in Charge assesses which carcasses with presentation errors warrant condemnation as per section 19.7 of this chapter.

The *Meat Inspection Regulations, 1990* have precedence over this decision tree

19.6.2.4 Defect Detection

Under the MPIP, designated defect detection employees shall be responsible for the detection of carcass, cavity and viscera defects on a carcass-by-carcass basis, so that defective carcasses are removed from the evisceration line.

Each carcass, cavity and viscera set must be visually examined.

The defect detection process shall be monitored as per the Defect Detection Standards (DDS) as part of the operator's HACCP System.

19.6.2.4.1 Training and Accreditation of Defect Detectors

Refer to Annex B of this chapter (Training and Accreditation Protocol)

19.6.2.4.2 Carcass Defect Detection Before Evisceration

Carcass defect detectors shall identify and remove obviously condemnable carcasses before evisceration. Preselection procedures must be performed at the transfer point from the slaughter line to the evisceration line, or at any other point selected by the operator prior to the eviscerator(s).

It is generally accepted that there are few occasions in turkey processing for which preselection is required on an ongoing basis - especially where removal of obviously condemnable birds is performed at the farm level. MPIP therefore leaves to the discretion of the operator of the turkey slaughter establishment the option of implementing preselection based on the flock sheet information. Obviously condemnable turkey carcasses preselected by the carcass defect detector(s) need not be removed provided that such carcasses:

- are identified or marked;
- are not eviscerated;
- do not contact subsequent on-line employees and equipment; and
- are removed by the helper/trimmer after the defect detectors.

Note: The CFIA may require turkey flock preselection if turkey flocks show evidence of poor health, or of other defects or have not been properly handled. Lighting and facilities for holding preselected turkey carcasses must be readily available on site.

19.6.2.4.2.1 List of Carcass Defects

Carcasses affected with the following conditions are to be removed before evisceration. See the following section for a detailed explanation of each defect.

Carcass Defects	Chicken	Fowl	Turkey	Quail
Ascites	X	X	X	X
Cellulitis (NTOL) and Peri-Cloacal Cellulitis*	X	X	X	X
Dark Coloured Carcasses	X	X	X	X
Emaciation (extreme thinness)	X	X	X	X
Inadequate Bleeding (bright red carcass)	X	X	X	X
Pendulous Crop (with emaciation)	X		X	X
Septicaemia / Toxaemia	X	X	X	X
Sternal Bursitis / Infected Breast Blister (NT)		X	X	X

Carcass Defects	Chicken	Fowl	Turkey	Quail
Xanthomatosis		X		
Others: Arthritis, Synovitis and Valgus Varus Deformity with Emaciation	X	X	X	X

NT: Not Trimmable (too extensive for trimming)
NTOL: Not Trimmable On-line (too extensive for trimming at normal line speed)

*__Note:__: Peri-Cloacal Cellulitis in considered to be a defect only for **chicken** under version 1 of the DDS (see section 19.6.2.5)

The following conditions may be too extensive to be trimmed (they will be condemned as "obviously condemnable") before evisceration or may be less extensive so as to be trimmable off-line in a hygienic and expeditious fashion before chilling. See the following section for a detailed explanation of each defect.

Carcass Defects	Chicken	Fowl	Turkey	Quail
Avian Keratoacanthoma (NTOL)	X		X	X
Extensive Bruising (NTOL)	X	X	X	X
Extensive Dermatitis (NTOL)	X	X	X	X
Extensive Mutilation/Overscalding (NTOL)	X	X	X	X
Marek's Disease (cutaneous form, NTOL)	X			X
Sternal Bursitis / Infected Breast Blister (NTOL)		X	X	X

NTOL: Not Trimmable On-line (too extensive for trimming at normal line speed)

19.6.2.4.2.2 Definitions of Carcass Defects

Arthritis/Synovitis/Tenosynovitis:
Carcasses affected with ruptured gastrocnemius tendon and/or presence of liquid and solid material within the joint are to be removed from the evisceration line if they are also emaciated.

Ascites (water belly)**:**
Carcasses showing distended or ballooned abdomen (fluid wave) are to be removed from the evisceration.

For chicken, carcasses showing distended or ballooned abdomen (fluid wave) are to be removed from the evisceration **only if** they show evidence of associated conditions (e.g. emaciation and/or dark color and/or subcutaneous œdema).

Note: If the evaluation for the associated conditions for chicken carcases cannot be performed on-line, all carcasses showing distended or ballooned abdomen (fluid wave) must be removed from the evisceration line for further assessment by a company detector or rejecter. If the operator has adequate facilities to segregate carcasses to prevent cross contamination, then affected carcasses without associated conditions may be put back on the line. Such carcasses must be returned to the evisceration line within 10 minutes of having been removed from the line.

Affected carcasses without secondary assessment performed by the operator (not showing associated conditions) presented to the CFIA veterinarian will be disposed of by the operator and will not be included on the condemnation / rejection reports.

Avian Keratoacanthoma:
This skin condition is a formation of deep crater-shaped ulcers mainly on the back. Remove the carcass if the affected skin area is too large to trim on-line.

Cellulitis:
Thickened, yellow coloured skin (may be with a honeycombed appearance). Remove chicken carcases with Peri-Cloacal Cellulitis. Chicken carcasses with skin lesions smaller than 2 cm x 2 cm, including lesions on the legs and the wings of any dimension, may be passed if included within the operator's HACCP system. Remove turkey and fowl carcasses with extensive Cellulitis lesions. The Veterinarian in Charge will determine the criteria for the size of lesions which may be trimmed on-line for turkeys. Carcasses with scratches with only slight thickening and yellowing of the skin, not affecting underlying tissue, can be trimmed on-line.

Dark Coloured Carcasses (Cyanosis)**:**
Carcasses with a dark blue-purple colour are to be removed from the line. Mild to moderately blue carcasses should be passed if the darker discolouration is the only significant finding, e.g., not emaciated. Carcasses with extremity petechiation ("blood spots"), but are otherwise normal, should be passed.

Emaciation:
Carcasses with extreme thinness and that are dark coloured must be removed from the line. Carcasses which are small (but with good finish or fleshing) may also be culled by the establishment detectors but are to be considered as a plant reject.

Extensive Bruising:
Carcasses must be removed if the affected area is too large to be trimmed on-line.

Inadequate Bleeding:
Carcasses with deep to brick red colour (head may still be attached or incomplete or no neck cut). For carcasses which are mildly red/blue, refer to the definition of Dark Coloured Carcasses (Cyanosis).

Marek's Disease (Cutaneous Marek's)**:**
Enlarged feather follicles often with yellowish coloured surrounding skin. Remove the carcass if the affected skin area is too large to trim on-line.

Mutilation:
Extensive crushing and/or deformation too large to be trimmed on-line.

Over scald:
Damaged skin/muscle too large to be trimmed on-line caused by an over scalding.

Pendulous Crop:
Carcasses are to be removed from the line only if affected with extensive pendulous crops (representing a risk of contamination), or if associated with poor carcass condition (emaciated), or if the carcass has a bad odour.

Sternal Bursitis / Infected Breast Blister:
Usually found in the breast or the keel area, sternal bursitis may be the result of a skin infection or a pectoral cyst. Remove the carcass if the affected area is too large to trim on-line.

Xanthomatosis:
Thick yellowish swellings may be present in the wattles, breast, abdomen and legs. The swelling may become a pendulous mass filled with a honey coloured liquid. Remove the carcass if the affected area is too large to trim on-line.

19.6.2.4.3 Cavity and Viscera Defect Detection After Evisceration

Depending on the speed of the evisceration lines, cavity and viscera defect detection may be performed:

- on a unit-by-unit basis where each defect detector examines the cavity and the viscera of the carcasses presented for examination; or
- on a sequential basis, where all the cavities are examined by specific cavity detectors and all the viscera are examined by a separate viscera defect detector.

The operator may position the viscera defect detector(s) either before or after the cavity defect detectors. However, viscera sets must be presented with their corresponding carcasses throughout the viscera defect detection and the Defect Detection Standards (DDS) testing zones.

The cavity defect detectors shall be positioned before cavities are vacuumed and prior to the internal/external carcass washer unless the operator uses an approved on-line reprocessing and reconditioning process, as explained in this chapter.

Detailed procedures for defect detection, i.e., body position and eye movement sequence, must be established by the operator of each establishment based on the type of equipment used and the layout of the defect detection stations.

All identified carcasses must be either immediately removed or be signalled for removal from the line by a helper/trimmer. The defective carcasses shall be removed with the corresponding viscera in order to maintain their corresponding identity for disposition.

The operator may evaluate the need for an optional detector's helper that removes carcasses signalled by the detectors. The use of a detector's helper should be based on the following:

- ante mortem information;
- the grower's profile; and
- the quality of the incoming lot.

Industry cavity and viscera defect detectors must be empowered to take immediate action whenever they notice a potential loss of control.

19.6.2.4.3.1 Viscera Defect Detection

In descending order, the viscera detector's priorities are to:

- examine each viscera for defects*;
- signal carcasses for removal according to agreed codes (if applicable);
- signal the presence of obviously condemnable carcasses that should have been removed from the line prior to evisceration; and
- in some cases, and under the Veterinarian in Charge's discretion, remove defective carcasses and/or viscera from the line if there is no helper/trimmer.

* **Note:** For fowl, palpate the duodenum and/or perform other procedures which are effective for detecting all carcasses with Adenocarcinoma.

Contamination on the viscera and pathological conditions only affecting the viscera (not affecting the carcass) are not to be counted as a defect if the operator is either not harvesting edible viscera or if an effective program is included within a HACCP system which ensures that affected viscera are not harvested as edible. The Veterinarian in Charge or Evisceration Floor Inspector shall ensure that viscera harvesting operations are appropriately conducted in accordance with the operator's HACCP system.

19.6.2.4.3.1.1 List of Viscera Defects

Viscera Defects	Chicken	Fowl	Turkey	Quail
Adenocarcinoma		X		
Airsacculitis	X	X	X	X
Contamination: (faecal, bile, ingesta, extraneous material)	X	X	X	X
Emaciation (heart, gizzard)	X	X	X	X
Hepatitis	X	X	X	X
Lymphoid Leukosis		X		
Visceral Marek's Disease	X	X		
Peritonitis	X	X	X	X
Septicaemia/Toxaemia	X	X	X	X
Other conditions, e.g., Osteomyelitis, Tumors	X	X	X	X

19.6.2.4.3.1.2 Definitions of Viscera Defects

Adenocarcinoma:
Whitish to yellow malignant nodules/tumours usually 3 mm to 5 mm and frequently present in the duodenal loop of the small intestine. Size varies and distribution can extend throughout the mesentery and peritoneum sometimes invading the ovary. All carcasses exhibiting such lesions must be removed from the evisceration line.

Airsacculitis:
Remove the carcass and corresponding viscera if there is evidence of caseous material covering the pericardial sac (the surface of the heart has white or yellow material) or if the pericardial liquid contains caseous material. Do not remove the carcass or viscera if there are minor white spots on the heart or minor adhesions on the envelope of the heart.

For turkey, the carcass and corresponding viscera are removed if there is evidence of caseous material covering the pericardial sac and in the airsacs. Only the affected viscera are removed if no material is found in the airsacs.

Contamination:
Contamination of the edible portion of the viscera may come from different sources:

- Faecal contamination – Any visible material determined to be from the lower gastrointestinal tract.
- Ingesta – The undigested contents of the crop, gizzard or proventriculus. Remove viscera with liquid or dry ingesta content. Dry and localized ingesta covering an area of a dime or less or a few isolated grains will not be considered as a defect.
- Extraneous material – Grease stains or other foreign material on the viscera.

Emaciation:
Extremely thin carcasses in poor conditions. The remaining fat, on the heart and gizzard, is in a moist, pinkish, sticky and jelly-like consistency.

Hepatitis:
Carcass and viscera are to be removed if the liver exhibits multiple visible white/yellow or green-black spots of any size or shape. In turkey, only the liver is to be removed.

The liver only is to be removed if it is green and enlarged and firm (hard), or if the liver displays multiple pinpoint red spots, or if the liver displays evident signs of ascites (bosselated, cobblestone) with or without pinpoint red spots (petechial haemorrhages).

Note: Carcass and viscera are to be passed if the liver has a normal size, sharp edges, (regardless of the colour of the liver), or if the liver exhibits signs of a fatty liver (light brown, yellowish) even though they are enlarged.

Marek's Disease (Visceral Marek's):
If visceral tumours (white nodules) are present, the carcass is to be removed from the line.

Peritonitis:
Inflammation of the lining of the abdominal viscera often seen with red tags, as a whitish to yellow, opaque, cheesy exudates, and with an off odour.

Septicaemia or Toxaemia:
These are the acute conditions which may present various signs, i.e. haemorrhages on single or multiples organs and in the cavity, congestion of various organs. In those cases, the CFIA VIC should be consulted to identify the cause of the identified lesions.

Note: In Canada, Septicaemia or Toxaemia can only be confirmed through lab analysis.

Tumors (Leiomyoma and Hemangioma):
The benign growth found in the meso-salpinx (membrane enveloping the oviduct) is very common and is not considered malignant. Carcasses with tumours such as Leiomyoma and Hemangioma must be left on the evisceration line. However, the viscera must be removed and discarded.

19.6.2.4.3.2 Cavity Defect Detection

The cavity defect detector is not required to remove carcasses signalled for removal. If they are properly identified, these carcasses may be removed later by the helper/trimmer or by other on-line employees.

In descending order, the cavity detector's priorities are to:

- examine each cavity and abdominal opening for defects (e.g., Faecal Contamination, Peri-Cloacal Cellulitis);
- signal carcasses with specified defects for removal or trimming according to agreed codes (if applicable);
- if applicable, function as presenters (if the operator elects to combine presentation and cavity detection duties) to permit examination of the entire cavity in establishments with eviscerator(s) which do not separate the viscera from the carcass (if applicable); and
- signal the presence of obviously condemnable carcasses that should have been removed from the line prior to evisceration.

Internal Cavity Defects	Chicken	Fowl	Turkey	Quail
Airsacculitis	X	X	X	X
Contamination (Faecal, Bile, Ingesta, Extraneous Material, Intestine/Cloaca)	X	X	X	X
Peri-Cloacal Cellulitis	X		X	X
Salpingitis	X	X	X	X
Other Conditions (e.g., Odour, Tumours, Granuloma in Quail)	X	X	X	X

19.6.2.4.3.2.1 Definition of Cavity Defects

Airsacculitis:
All carcasses with liquid or solid material in the air sacs or in the lungs, left inside the cavity, measuring greater than 3 mm (5 mm for turkey) are to be removed. Carcasses with lesions that are very well capsulated by a very thick membrane of the air sacs must also be identified.

Cellulitis (Peri-Cloacal):
Thickened, yellow coloured skin. Remove carcasses with cellulitis lesions on the peri-cloacal area.

Contamination:
Contamination of the carcass cavity and/or viscera may come from different sources:

- Faecal contamination: Any visible material determined to be from the lower gastrointestinal tract within the abdominal cavity.
- Ingesta: The undigested contents of the crop, gizzard or proventriculus (liquid or solid) which have contaminated the carcass cavity. Dry and localized ingesta covering an area of a dime or less or a few isolated grains will not be considered as a defect if the operator is not performing on-line reprocessing.
- Bile Contamination: Bile stains causing a discolouration of affected tissue.
- Extraneous material: Grease stains or other foreign material within the abdominal cavity.
- Intestine/Cloaca: Refers to a length of intestine/cloaca attached to the carcass or inside the cavity and is associated with evisceration lines equipped with a new technology system. The cause is improperly adjusted equipment; the length of intestine/cloaca still attached to the carcass or inside the cavity will contaminate the internal cavity with faeces or, if it enters the giblet harvesting process, it will spread faecal contamination onto both equipment and product.

Salpingitis:
This is an infection of the oviduct or salpinx, the reproductive organ of pullets. It is characterized by the presence of liquid or solid material, which is usually yellowish in colour. Very often the tissues surrounding the salpinx become viscous. All viscera exhibiting such lesions must be removed from the evisceration line. Any presence of solid or liquid material within the salpinx observed during examination must be recorded as a defect.

Tumours:
Any enlarged abnormal irregular mass of tissue in the internal cavity.

In Quails, yellowish granules of various sizes (1 mm to 15 mm) located in the air sacs or attached to abdominal cavity (Granuloma).

19.6.2.4.4 Hanging Back and Sorting Carcasses

Carcasses removed from any point along the evisceration line must be submitted to a post mortem examination (defect detection) unless they are rejected by the operator.

Such carcasses shall be examined off-line and sorted into four categories by an accredited defect detector, and are to be handled as follows:

- normal carcasses - returned to the evisceration line;
- carcasses with localized pathology - send for off-line salvaging, trimming or reconditioning or for on-line reconditioning;
- carcasses with processing defects - send for off-line reprocessing or salvage or for on-line reprocessing; and

- carcasses suspected of having generalized pathology diseases or conditions - send for detailed veterinary inspection or examination by a rejecter under the rejection process.

Note: Carcasses removed from the evisceration line for suspected generalized pathology shall be sent to the rejecter or veterinarian.

For product eligible for export to the United States, refer to the procedure concerning carcasses removed from the evisceration line outlined in Chapter 11, “Exports”.

19.6.2.4.5 Monitoring Activities by the Operator

The carcass, cavity and viscera defect detection and removal process shall be monitored by the operator on a regular basis by using the Defect Detection Standards (DDS) as described under section 19.6.2.5 of this chapter. If defective carcasses are missed at preselection or at post-evisceration, corrective measures shall be initiated as per the DDS.

Monitoring test results should be periodically, or upon request, be correlated with CFIA.

19.6.2.5 Defect Detection Standards (DDS)

DDS are used as a Process Control (PC) to contribute to the effectiveness of the related CCP(s) and post mortem examination activities.

DDS are designed to encompass defects affecting the carcass exterior, cavity and viscera. A separate AQL is assigned to carcass defects, to cavity defects and to viscera defects. All three (3) AQLs, including a zero tolerance for septicaemia / toxaemia apply to abattoirs operating under the MPIP. However, for operators phasing out CPIP, the viscera defects and the corresponding AQL for viscera defects do not apply until the operator commences Phase 3 of implementing the MPIP.

19.6.2.5.1 Sampling for Carcasses Using Sampling Plans Indexed by AQL

The defect detection process monitoring is performed using an acceptance sampling plan, the ISO 2859-1 sampling plan.

- The acceptance quality level (AQL) is the maximum percent defective (or the maximum number of defects per 100 units) that, for the purposes of sampling inspection, can be considered satisfactory as a process average (ISO 2859-1:1999);
- The acceptance number (Ac) is the largest number of defects permitted in a sample in order that the lot be accepted for a specific acceptance quality limit.
- A lot is the equivalent of one hour of production volume per evisceration line per shift.
- Sampling time to be randomly selected for each hour of production.
- A nonconformity is a poultry carcass with one or more processing or pathological defects as defined in this section. A defective carcass is a carcass with a defect that cannot be corrected on the evisceration line, i.e. a carcass requiring disposition and with extensive processing defects.
- Other carcasses with defects that are not considered as nonconforming items under the present system are referred to as carcasses with on-line trimmable defects.
- Once the MPIP Phase 3 commences, the switching rules shall be utilized as per the “DDS Decision Tree”.

19.6.2.5.2 Elements of Defect Detection Standards (DDS)

The DDS monitoring tool has three general components:

- Process evaluation;
- Corrective measure(s) evaluation; and

- Post chill production verification.

The process evaluation monitors the removal of defective carcasses as described in this standard. It is performed at a consistent frequency on successive lots. It determines if the process meets the standards on an on-going basis.

The corrective measure(s) evaluation is an assessment of the adequacy of corrective measures that have been implemented following a rejected sample. It determines when the process meets the standards on an on-going basis.

The post chill product verification is to be used to insure that potentially defective product of rejected lots meet the standard or should be held for rework.

DDS have been established in two (2) versions. The difference between the versions is the addition or exclusion of the internal cavity defects evaluation.

- "Version 1" applies to an operator that does not use an approved on-line reprocessing and reconditioning process (or during validation). The monitoring defects have been divided into three (3) groups: carcass defect group, viscera defect group and cavity defect group (including Septicaemia /Toxaemia).

- "Version 2" applies to an operator that does use an approved on-line reprocessing and reconditioning process (or during validation). Under this version, the cavity defects are removed such that two (2) defect groups are to be evaluated: carcass defect group and viscera defect group (including Septicaemia /Toxaemia).

19.6.2.5.2.1 Position for the On-line Monitoring DDS Station

- downstream from the team of establishment carcass/viscera/cavity detectors (under version 2, cavity detectors may be positioned after the DDS station); and
- before or after the helper/trimmer; and
- before viscera is harvested (or discarded) or the carcass is trimmed (other than by the helper/trimmer) and before the internal cavity is vacuumed.

19.6.2.5.2.2 Facility Requirements for On-line Monitoring Station

Refer to the "Plant Construction and Equipment" section of this chapter.

19.6.2.5.2.3 Testing Frequency and Sample Size

The DDS monitoring tests are based on a lot-by-lot evaluation determined to be an hour's production. Therefore, accredited plant employees shall conduct scheduled randomized tests, once every hour of production, on a specified number of carcasses and corresponding viscera at the on-line station. Times for the tests shall be randomly selected prior to the start of the shift. The process evaluation shall always remain on a production lot of an hour.

DDS TESTING FREQUENCY AND SAMPLE SIZE			
Lot Size	**Process Evaluation**	**Corrective Measure(s) Evaluation**	**Post-chill Product Verification**
(1 hour/lot) < 5,000 cph*	32 Carcasses (every hour)	32 Carcasses (within 10 minutes)**	32 Carcasses (every 15 minutes)
(1 hour/lot) ≥ 5,001 cph*	125 Carcasses (every hour)	125 Carcasses (within 10 minutes)**	

* cph = carcasses per hour ** Approximate delay required in order to evaluate the effect of the corrective measures at the DDS station.

19.6.2.5.2.4 National Survey: Prevalence of Missed Defects in Passed Carcasses

Data collected during a national survey of chicken, turkey, fowl and quail abattoirs was updated based on data collected from abattoirs operating under MPIP.

19.6.2.5.2.5 National AQLs and Monitoring Defects Lists

The National AQLs were determined based on prevalence data resulting from national surveys in slaughtering establishments.

AQL – Process Evaluation Under DDS				
Defect Groups	**Chicken**	**Fowl**	**Turkey**	**Quail**
Carcass Defects Group	0.4%	0.4%	0.4%	0.4%
Viscera Defects Group	0.4%	0.4%	0.4%	0.4%
Cavity Defects Group	1.5%	1.5%	1.5%	1.5%
Note: There is a “zero” tolerance for the Septicaemia / Toxaemia defect in the Carcass and Viscera Defect Groups.				

The following defects shall be counted during defect detection monitoring. A carcass showing multiple defects shall be scored as one defective carcass. These defects are described previously in this section.

Carcass Defect Group (Versions 1 and 2)	Chicken	Fowl	Turkey	Quail
Ascites	X		X	X
Cellulitis NTOL and Peri-Cloacal*	X	X	X	X
Dark Coloured Carcass	X	X	X	X
Emaciation	X	X	X	X
Inadequate Bleeding	X	X	X	X
Pendulous Crop (with emaciation)	X		X	X
Septicaemia / Toxaemia	X	X	X	X
Sternal Bursitis / Infected Breast Blister (NTOL)		X	X	X
Xanthomatosis		X		
Others: Arthritis / Synovitis / VVD (with emaciation)	X	X	X	X
* **Note:**: Peri-Cloacal Cellulitis in **chicken** is considered to be a defect under version 1 only				

Viscera Defect Group (Versions 1 and 2)	Chicken	Fowl	Turkey	Quail
Adenocarcinoma		X		
Airsacculitis	X	X	X	X
Contamination (faecal, ingesta, extraneous material)	X	X	X	X
Emaciation (heart and gizzard)	X	X	X	X
Hepatitis	X	X	X	X
Lymphoid Leucosis		X		
Peritonitis	X	X	X	X

Septicaemia / Toxaemia	X	X	X	X
Visceral Marek's Disease	X	X		
Other conditions e.g., Osteomyelitis, tumours	X	X	X	X

Cavity Defect Group (Version 1 only)	Chicken	Fowl	Turkey	Quail
Airsacculitis	X	X	X	X
Contamination (faecal, bile, ingesta, extraneous material, intestine/cloaca)	X	X	X	X
Peri-Cloacal Cellulitis	X		X	X
Salpingitis	X	X	X	X
Other: Odour; Tumours; Granuloma for Quails	X	X	X	X

19.6.2.5.2.6 Sampling Procedure

Tests shall be conducted to reflect the performance of the defect detectors without being influenced by the on-line CFIA inspector(s).

All defect groups are to be evaluated using the same carcass sample.

Each sampled carcass must be fully examined (i.e. the carcass exterior, the corresponding viscera and the carcass cavity for version 1). The following step-by-step sampling procedure has been developed to facilitate national uniformity and is designed to ensure that each carcass has an equal chance of being selected. Carcasses must be selected as described below to prevent sampling bias.

Step 1. Randomly select a time for the test (minimum once/hr). At the selected time, begin the test by randomly identifying a carcass and picking the third subsequent carcass to be the first carcass in the sample. If the carcass lacks corresponding viscera, then pick the next complete set of carcass and viscera.

Step 2. Visually examine the carcass exterior, the viscera (heart and liver for young chickens and turkeys plus intestines and spleen for mature poultry) and the carcass cavity (under version 2, the cavity examination is not required). The order of the examination is at the discretion of the monitor to permit the most efficient inspection possible consistent with the presentation of the carcass and corresponding viscera.

Step 3. If a missed defect is suspected, immediately remove the carcass and if applicable, the corresponding viscera, and hang it/them back on the rack provided.

Step 4. Mentally count (add) the carcass, or use a mechanical counter for larger sample sizes (e.g., 125 carcasses).

Step 5. Repeat steps 1 to 4 until the sample size has been reached. (refer to the following table)

Step 6. After completing the on-line examination of the carcasses comprising the sample, carefully examine each hung-back carcass (and its viscera) and determine if it is defective. Record all defects on the form provided in Annex A.

Step 7. Determine if the sample indicates that the lot passed or failed. Take appropriate control action, if warranted, including those indicated by the switching rules for the Decision Tree below.

Step 8. Release removed carcasses for disposition or correction by a designated establishment employee or for the return of normal carcasses to the evisceration line.

19.6.2.5.2.7 Acceptance and Rejection Numbers

Acceptance and Rejection Numbers For Defect Detection Monitoring									
Line Speed Range	**Sampling Mode**	**Process and Corrective Measure(s) Evaluations**				**Postchill Product Verification** (32 carcasses only)			
		AQL 0.4% (carcass and viscera groups)		AQL 1.5% (cavity group)		AQL 0.4% (carcass and viscera groups)		AQL 1.5% (cavity group)	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re
≤ 5,000 cph*	Normal (32 carcasses)	0	1	1	2	0	1	1	2
≥ 5,001 cph*	Normal (125 carcasses)	1	2	5	6				
AQL: Acceptance Quality Limit Ac: accept Re: reject *cph: carcasses per hour Note: Septicaemia / toxaemia has a “zero” tolerance									

19.6.2.5.2.8 Process Out of Control - Action to be Taken

During the process evaluation, each defect group is to be monitored independently of the other defect groups, using the same sample.

When the test result reaches the rejection number for a specific defect group, it indicates that the process is under questionable control. Therefore, corrective measures must be implemented for this specific defect group and additional on-line testing is required.

Note: Scheduled randomized hourly pre-chill process evaluation tests shall continue independent of corrective measure(s) evaluation tests and post chill product verification tests.

Once corrective measures have been implemented, the efficacy of these measures shall be evaluated and the evaluation shall only apply to the defect group under questionable control. Corrective measures and additional corrective measure(s) evaluations are required until two (2) accepted samples demonstrate conformance to the standard.

When a corrective measure(s) evaluation is rejected, the operator shall immediately reduce the line speed by 10% and implement corrective measure(s). The efficacy of those corrective measures will be evaluated within 10 minutes.

Immediate post-chill product verification and potential product rework is required when one (1) corrective measure(s) evaluation has been rejected. The verification is required only for the specific defect group(s). The end of additional sampling at post-chill verification station occurs once corrective measures have been accepted (two accepted corrective measure(s) evaluations), by marking identified carcasses entering the chilling process.

The post-chill verification shall cover the entire amount of production or lot that was determined to be out of compliance at the pre-chill station (corrective measure(s) evaluation). If a post-chill product verification sample is rejected, the Establishment's monitor shall then identify the affected product so that it may be segregated and accumulated for rework.

The operator must develop a written program that will clearly indicate how plant personnel will identify lots of carcasses requiring rework, isolate these lots, rework the carcasses, and verify that the rework is satisfactory.

Once a specified lot has been reworked for the appropriate defects, a rework verification test shall be performed using the appropriate pass and fail criteria for that specific defect group. An accepted sample will result in releasing the retained lot.

A carcass and corresponding viscera exhibiting signs of potential Septicaemia / toxaemia, as defined under the “Definitions of Carcass Defects” or “Definitions of Viscera Defects” sections is to be removed for a CFIA veterinary inspection. If the veterinarian suspects a Septicaemia / toxaemia condition, the following procedures shall be initiated:

- The operator shall immediately notify all defect detectors that potential Septicaemia / toxaemia is found during a DDS evaluation;
- The “Corrective Measure(s) Evaluation” procedures and the ”Post-Chill Product Verification” for both the viscera and the carcass groups are performed as per the DDS Decision Tree;
- The carcass and viscera are sent for a laboratory analysis confirmation; and
- If the laboratory analysis confirms the Septicaemia / toxaemia condition, the operator shall initiate corrective measure(s) satisfactory to the Veterinarian in Charge.

If the first shift ends in corrective measure(s) mode and/or post-chill product verification mode, the second shift shall continue with only the post-chill product verification mode until the end of affected carcasses.

If the last shift of the day (single or multiple shift establishments) ends in corrective measure(s) mode and/or post-chill product verification mode, the post-chill product verification mode shall continue until the chilling system is emptied.

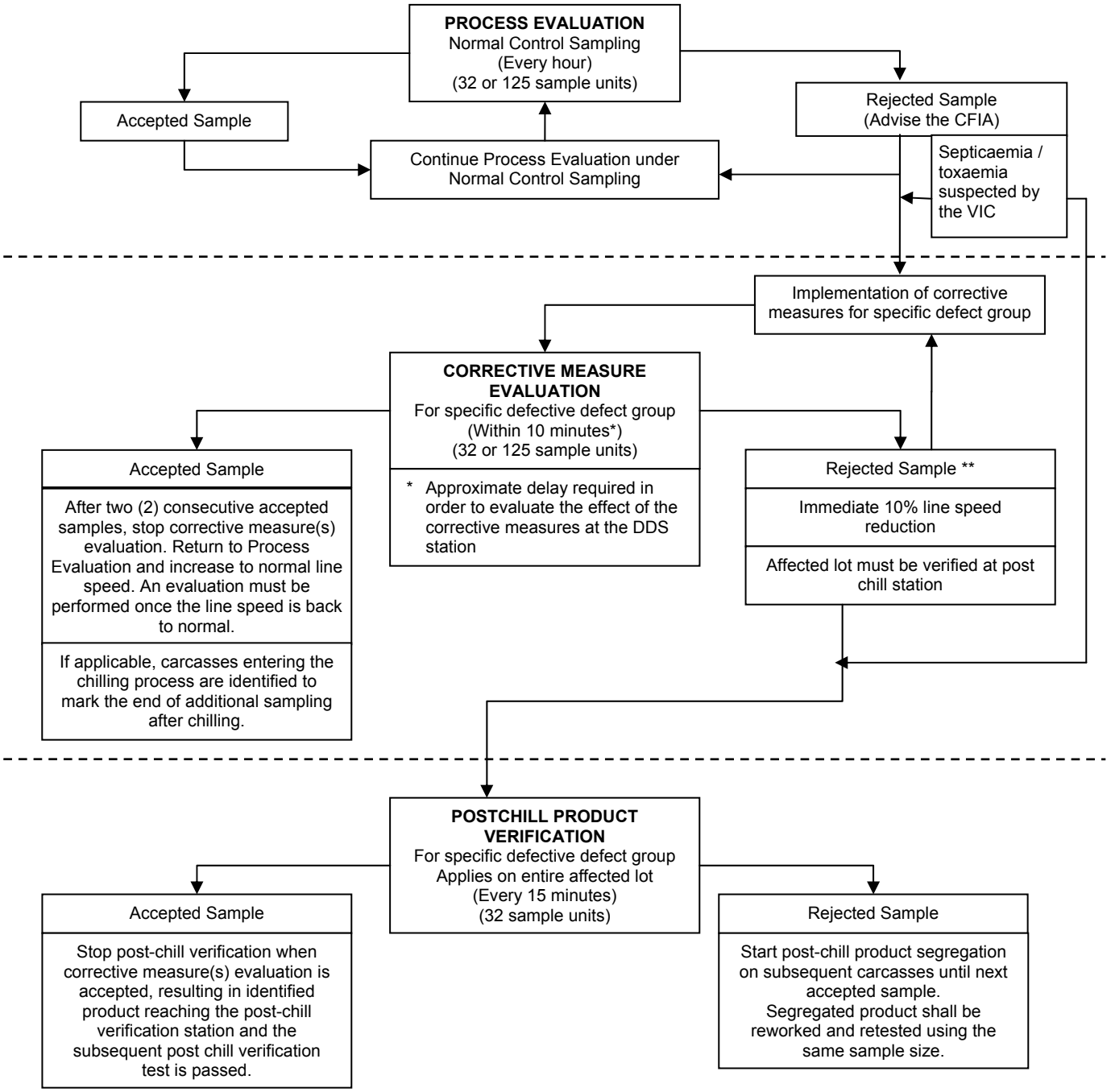
Each element of the process control and their interaction are explained below and are presented in the decision tree.

The MIR have precedence over the DDS decision tree (corrective measures can be mandate at any time by the VIC).

19.6.2.5.2.9 Relationship Between the DDS and the Presentation Verification Tests

The two monitoring procedures must be carried out separately since they have different objectives. The presentation standards ensure adequate evisceration, so that on-line inspectors can perform a proper inspection and detectors can perform proper detection. The defect detection standards establish the criteria for verifying the operator's performance.

19.6.2.5.2.10 Defect Detection Standards (DDS) Decision Tree



**N.B: If five (5) consecutive samples are not accepted at Corrective Measure Evaluation:

- Inform management that 5 groups have not been accepted;
- Discontinue hanging of live birds;
- Assess why previous corrective actions were not effective and develop an action plan;
- Resume operations upon Veterinarian in Charge's approval of corrective actions and action plan;
- Veterinarian in Charge to contact Area Program Specialist to determine if an FSEP audit is warranted

Note: If Septicaemia / Toxaemia is found, see section 19.6.2.6.2.8.

The *Meat Inspection Regulations, 1990* have precedence over this decision

19.6.2.5.3 DDS Defects Log

A separate DDS Defects Log shall be used for each species.

For operators with more than one shift per day, test results for each shift shall be considered independently because of personnel and supervisor differences and shall be recorded on separate DDS Defects Logs.

Carcasses or viscera are scored as a defective sample unit for the presence of any distinguishable defect listed in section 19.6.2.5.2.5, “National AQLs and Monitoring Defects Lists” of this chapter. A carcass or viscera showing multiple defects under the same defect group is scored as one defect (e.g. a carcass with inadequate bleeding and emaciation = one defective carcass).

A carcass with defects under different defect groups is scored as one defective carcass for each group (e.g. a carcass with ascites and hepatitis would = one defect in the Carcass Defect Group and one defect in the Viscera Defect Group).

Defects are scored in their respective defect group, a total score for each group is determined and acceptability is determined by comparing the score to the applicable acceptance and rejection numbers for that group.

19.6.2.5.3.1 Defects Log for Chicken, Fowl, Turkey and Quail

Refer to Annex A of this chapter.

19.6.2.5.4 CFIA Responsibilities

CFIA staff shall ensure that the DDS has been implemented by the operator and is being performed according to this section and the operator's written program. This may be accomplished by performing independent verification tests and/or correlation tests with the industry monitor.

An independent test or a correlation test shall be performed at a minimum of once per half shift/evisceration line. A minimum of two verification tests (one independent and one verification test) shall be conducted and recorded each week by a veterinarian. The records must show that within one month each veterinarian working at the plant has performed at least one test of each kind.

CFIA staff may perform an additional test at any time as an additional assurance of process control or if they feel that standards are not being met for any reason.

Test results may be recorded on a separate DDS Log or on the operator's records such that CFIA tests can be distinguished from tests conducted by the operator's DDS monitor.

Also, an indication should be present to differentiate the independent CFIA verification tests from the correlation tests with the industry monitor.

19.6.2.5.4.1 Independent CFIA Verification Tests

The CFIA's independent verification of the operator’s process evaluation tests shall be performed according to the following parameters:

- Tests shall be performed on each evisceration line, at select random times and according to the sampling method described previously. When a correlation test is performed, it replaces the independent test scheduled for that half shift;
- If an independent verification coincides with any of the plant monitor’s tests, the inspector shall conduct a correlation test instead of an independent test;
- The sample size will be the same as that used by the operator;

- If the sample is rejected, the DDS monitor shall perform an immediate "Process Evaluation" test and then initiate any required action as per the decision tree in this section; and
- The result of each test shall be compared to the operator's monitoring record. If the CFIA test result is not in agreement with the operator's tests, the Inspector shall discuss the test results with the (industry) DDS monitor and inform the VIC.

The Decision Tree for DDS is to be used by the operator's monitor and for reference by the CFIA.

19.6.2.5.4.2 Correlation Tests

Correlation testing consists of the CFIA conducting an evaluation of a test being performed by the operator's DDS monitor according to the following parameters:

- The test shall be performed on each evisceration line. This frequency may be increased according to the operator's compliance to the monitoring procedures of the Defect Detection Standards. When a correlation test is performed, it replaces the independent CFIA test scheduled for that half shift;
- A member of the inspection staff shall examine the same carcasses at the same time as the industry monitor; and
- The monitor will be evaluated for the sampling method used, correct interpretation of defects, completion of forms, correct application of the decision tree and the implementation of corrective actions if necessary.

If the CFIA's evaluation demonstrates deficiency in the industry's defect detection process and/or the monitoring thereof, immediate corrective measure shall be initiated by the operator. The VIC shall decide if the written procedure is to be reassessed and amended accordingly.

19.6.2.6 Poultry Rejection Process

To be developed

19.6.2.7 Carcass Dressing Standards (CDS)

19.6.2.7.1 Introduction

CDS is an objective tool designed to ensure that the procedures used in preparing and approving a dressed food animal carcass are in control and that the product is produced in conformance with Canadian regulatory standards. These standards specify the operational requirements for dressing, trimming and processing of dressed approved carcasses. CDS tests are performed on sample sets of dressed carcasses randomly selected throughout the production shift to validate the operator's performance in meeting prescribed product standards.

Each operator that switches from the Finished Product Standards (FPS) to the CDS may utilize an implementation phase of 12 months to facilitate the transition between standards. The VIC should contact the area poultry inspection program specialist for additional information.

19.6.2.7.2 Responsibilities of the Operator

The operator is responsible to process chill carcasses that have been dressed, trimmed and processed, under the minimum requirements specified under the CDS. Therefore, the operator shall:

- provide adequate facilities to hold and to examine sampled carcasses off-line prior to chilling;

- supply accredited CDS trainers and accredited plant personnel for performing CDS tests monitoring;
- perform CDS testing as established by the standard; and
- determine and take the appropriate action in response to the CDS test results.

19.6.2.7.3 Responsibilities of the CFIA

Certified CFIA inspectors will be responsible for verifying the operator's monitoring tests, corrective actions and records. Therefore, inspectors will be performing correlation tests and periodic independent tests (as deemed necessary by the VIC) to verify the company's compliance and performance, (see section "Verification by CFIA" later in this document).

19.6.2.7.4 Facility Requirements for Off-line Monitoring Station

All defects shall be monitored after dressing, trimming or processing and immediately prior to chilling.

Refer to section 19.1.3 for facility requirements for the CDS station.

19.6.2.7.5 Training of the CDS Establishment's Monitor

The CDS establishment monitor shall be trained and accredited as per the Training Protocol described in Annex B of this chapter.

19.6.2.7.6 CDS Process Control - ISO Based Test

Random sampling for CDS testing is performed by the operator using an "Acceptance Sampling Plan", the ISO 2859-1, Special Inspection Level S-3. For more detailed information on the ISO sampling plan under the CDS, see the CFIA Training Module I-2.

The CDS monitoring tool has 3 general components:

- Process evaluation;
- Corrective measure(s) evaluation; and
- Post-chill product verification.

The process evaluation monitors the removal of all dressing defects comprised in this standard. It is performed at a consistent frequency on successive lots. It determines if the process is under control and meets the present standards on an on-going basis.

The corrective measure(s) evaluation is an assessment of the adequacy of the corrective measures that have been implemented following a rejected sample. It determines when the process is back under control.

The post-chill product verification is to be used to insure that potential defective chilled product or parts of rejected lots meets the standards or should be held for rework.

19.6.2.7.6.1 Sample Size

The sample size for the Process Evaluation (PE), Corrective Measure(s) Evaluation (CME) and Post-chill Product Verification (PPV) using the ISO 2859-1 sampling plan is based on the volume of production and the Special Inspection Level S-3.

CDS SAMPLE SIZE				
Lot Size (PE & CME)	**Process Evaluation**	**Corrective Measure(s) Verification**	**Lot Size (PPV)**	**Post-chill Product Verification**
(1 hour/lot) ≤ 3,200 cph	13 carcasses (every hour)	13 carcasses (within 10 minutes)	(15 min/lot) ≤ 3,200 cph	8 carcasses (every 15 minutes)
(1 hour/lot) ≥ 3,201 cph	20 carcasses (every hour)	20 carcasses (within 10 minutes)	(15 min/lot) ≥ 3,201 cph	13 carcasses (every 15 minutes)
cph = carcasses per hour				

19.6.2.7.6.2 Testing Frequency

The CDS monitoring tests are based on a lot by lot evaluation determined to be an hour's production. Therefore, an accredited plant employee shall conduct scheduled randomized tests, once every hour of production, on a specified number of carcasses at the off-line station. Times for the tests shall be randomly selected prior to the start of the shift.

The process evaluation shall always remain on a production lot of an (1) hour.

TESTING FREQUENCY – CDS		
PROCESS EVALUATION	**CORRECTIVE MEASURE(S) EVALUATION**	**POST-CHILL PRODUCT VERIFICATIONS**
Every hour	Within 10 minutes*	Every 15 minutes
* Approximate delay required in order to evaluate the effectiveness of the corrective measures at the CDS station.		

19.6.2.7.6.3 Sampling Method

All carcass samples shall be randomly selected from the evisceration line using a standard random selection technique to prevent sampling bias and shall be included in the operator's written program. In order to correctly evaluate the defects in a consistent basis, it has been determined that the sampling, the examination and the recording of a twenty (20) carcasses sample should be completed in 7 to 10 minutes. The sampling procedure shall be fully described in the company's written program and must be approved by the VIC.

To facilitate the application of a random sampling, the following method is recommended:

Step 1. Randomly select a time for the test.

Step 2. At the selected time, begin the accumulation of the sample by identifying a carcass on the line, removing the third subsequent carcass from the line. This will be the first carcass in the sample. Hang the carcass on the provided shackle/rack.

Step 3. Repeat step 2 until the sample size has been reached.

Step 4. Visually examine all carcasses (exterior, cavity and inside neck area). Remove the defect(s) from the carcass and hold the accumulated defect(s) for further recording.

Step 5. After completing the examination of all the carcasses comprising the sample, record the defects on the form provided in Annex A of this chapter.

Step 6. Determine if the sample indicates that the lot passed or failed considering each defect or group of defects individually. If applicable, take appropriate corrective measures as per the "DDS Decision Tree" below.

For more details on random sampling, see the CFIA Training Module.

19.6.2.7.6.4 CDS Defect Categories and Defect Definitions

The defects to be monitored under the CDS have been divided into two separate categories.

- the food safety (FS) category is designed to monitor the output of the dressing and evisceration procedures that may become a food safety risk; and
- the other, the dressing condition (DC) category, monitors the establishment's ability to remove unsuitable dressing conditions.

Each category has been divided into several defect groups that are to be monitored independently of the other defect groups. Therefore, the food safety category has 3 different defect groups (FS-1, FS-2 and FS-3) and the dressing condition category has 4 different defect groups (DC-1, DC-2, DC-3 and DC-4). Each of the seven defect groups is evaluated using the same 8, 13 or 20 carcass sample.

Each defect is defined as per the following tables:

FOOD SAFETY (FS) DEFECTS		
DEFECT GROUP	**DEFECT**	**DEFINITION**
FS-1	Faecal material	Any identifiable stain and/or material determined to be from the lower gastrointestinal tract.
FS-2	Ingesta (aggregate)	Identifiable stain and/or dry particles and/or liquid (aggregate) covering a minimum area > 5 mm (internal and external).
FS-3	Gastro-intestinal Tract - lower GIT	Any combination of the following parts > 5 mm: intestine, caecum, cloaca (with mucosa tissue).
	Gastro-intestinal Tract - upper GIT	Any combination of the following organs > 5 mm: oesophagus, crop, proventriculus and gizzard.

DRESSING CONDITION (DC) DEFECTS		
DEFECT GROUP	**DEFECT**	**DEFINITION**
DC-1	Pathology – Airsacculitis	Identifiable lesions defined to be caseum or exudates or fibrin within the airsacs or in the thoracic and/or abdominal cavities measuring > 3 mm for chicken, fowl and quail and > 5 mm for turkeys.
	Pathology – Granuloma (Quail only)	Yellowish granules of various sizes (1 mm to 15 mm) located in the air sacs or attached to abdominal organs.
	Pathology – Salpingitis	Inflammation, presence of liquid or solid material within the salpinx.
	Pathology – Cellulitis	Identifiable cellulitis lesions affecting underlying tissue of any size (normally yellow coloured skin).

DRESSING CONDITION (DC) DEFECTS		
DEFECT GROUP	**DEFECT**	**DEFINITION**
	Pathology – Cutaneous Marek's Disease (Chicken only)	Enlarged feather follicles often with yellowish coloured surrounding skin covering an area of any size.
	Pathology – Keratoacanthoma (Chicken only)	Identifiable number of deep crater-shaped ulcers.
	Pathology – Synovitis/Tenosynovitis/Arthritis	Inflamed leg joint or tendon (yellow and green coloured skin with or without subcutaneous œdema). Presence of liquid and solid material within the joint (Arthritis in Turkey and Quail).
DC-2	Lungs	Any lung portion measuring: ▪ For Chicken: more than 8 mm; ▪ For Fowl: more than 8 mm; ▪ For Turkey: more than 13 mm; ▪ For Quail: more than 6 mm.
	Oil gland	Whole gland or fragment of an oil gland > 5 mm.
	Bruise	Blood clumps or clots in the superficial subcutaneous tissue that cannot be washed out after slitting and the bruise extends into the deeper layers covering a minimum area: ▪ For Chicken ≥ 13 mm; ▪ For Fowl ≥ 13 mm; ▪ For Turkey ≥ 26 mm; ▪ For Quail ≥ 13 mm. Do not count as a bruise if also associated with a compound fracture.
DC-3	Long Shank	The complete tibio-tarsal joint (both condyles) is covered to the point where the cartilaginous tissue becomes the bone. As a guideline: ▪ For Chicken : maximum of 5 mm; ▪ For Fowl : maximum of 8 mm; ▪ For Turkey < 10 kg (eviscerated): maximum of 8 mm; ▪ For Turkey ≥ 10 kg (eviscerated): maximum of 15 mm; ▪ For Quail: maximum of 5 mm. **Note:** The cartilaginous portion may vary depending on the size of the carcass.
	Trachea	Identifiable trachea portion > 5 mm.
	Breast Blister (Fowl, Turkey and Quail only)	Untrimmed or partially trimmed nodule on the keel bone (yellow/red/green material) in an area measuring: ▪ For Fowl ≥ 8 mm; ▪ For Turkey:(Dressed weight < 7.0 kg)≥ 13 mm (Dressed weight ≥ 7.0 kg) ≥ 26 mm ▪ For Quail ≥ 8 mm. Portion of the blister capsule > 5 mm.
	Mutilation and compound fracture	Lacerated muscle and skin caused by equipment/procedures occurring in areas prior to the evisceration room covering a minimum area measuring: ▪ For Chicken ≥ 13 mm; ▪ For Fowl ≥ 13 mm; ▪ For Turkey ≥ 26 mm; ▪ For Quail ≥ 13 mm. Skinned elbows (bucked wings) without dislocation and trimmed portions (smooth cut) do not require trimming. Bone fracture (e.g. leg or wing, but not wing tip) that has caused an opening through the skin.

DRESSING CONDITION (DC) DEFECTS		
DEFECT GROUP	**DEFECT**	**DEFINITION**
	Scabs or inflammatory tissue	Aggregate scabs covering an area measuring a minimum of: ▪ For Chicken ≥ 13 mm; ▪ For Fowl ≥ 13 mm; ▪ For Turkey ≥ 26 mm; ▪ For Quail ≥ 13 mm. or inflamed tissue including Dorsal Myopathy measuring: ▪ For Chicken ≥ 5 mm; ▪ For Fowl ≥ 5 mm; ▪ For Turkey ≥ 13 mm; ▪ For Quail ≥ 5 mm. Do not consider scars or healed tissue.
	Foreign material	Identifiable material such as grease and dust > 5 mm or any other foreign material > 2 mm (internal and external).
	Bile or ruptured yolk	Identifiable stain of bile or ruptured yolk sac > 5 mm (internal and external).
DC-4	Feathers and pinfeathers	A minimum of: ▪ For Chicken: 3 feathers ≥ 6 mm and < 25 mm; ▪ For Fowl: 3 feathers ≥ 6 mm and < 25 mm; ▪ For Turkey: 5 feathers ≥ 6 mm and < 25 mm; ▪ For Quail: 3 feathers ≥ 6 mm and < 25 mm. **For all poultry:** a minimum of 1 feather ≥ 25 mm.

19.6.2.7.6.5 CDS Defect Group - Ac and Re Numbers

National Ac and Re numbers have been selected using the expected percent of defective carcasses per defect group determined from a national survey for both Chicken and Turkey. The Ac and Re numbers were determined calculating an overall sampling rejection rate of a maximum 5%. The process is considered to be under control when the test result does not exceed the acceptance number as shown in the following table.

19.6.2.7.6.5.1 Ac and Re Numbers for Process Evaluation and Corrective Measure(s) Evaluation

The following table contains the values to be used for Process Evaluation testing and Corrective Measure(s) Evaluation testing.

PROCESS EVALUATION and CORRECTIVE MEASURE(S) EVALUATION Carcass Dressing Standards (CDS)													
Groups of CDS Defects	**Conditions**	**≤ 3,200 cph (13 carcasses)**						**≥ 3,201 cph (20 carcasses)**					
		Chicken/ Quail		**Turkey**		**Fowl**		**Chicken/ Quail**		**Turkey**		**Fowl**	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
FS-1	Fecal material	0	1	0	1	0	1	0	1	*	*	0	1
FS-2	Ingesta	2	3	2	3	1	2	3	4	*	*	2	3
FS-3	Gastro-intestinal Tract	2	3	2	3	3	4	2	3	*	*	5	6
DC-1	Localized Pathology	0	1	1	2	0	1	1	2	*	*	1	2
DC-2	Lungs; Oil gland; Bruises	6	7	7	8	7	8	9	10	*	*	10	11
DC-3	Long Shank; Trachea; Breast Blister; Mutilation; Compound Fracture;	3	4	5	6	3	4	5	6	*	*	5	6

PROCESS EVALUATION and CORRECTIVE MEASURE(S) EVALUATION Carcass Dressing Standards (CDS)													
Groups of CDS Defects	Conditions	≤ 3,200 cph (13 carcasses)						≥ 3,201 cph (20 carcasses)					
		Chicken/ Quail		Turkey		Fowl		Chicken/ Quail		Turkey		Fowl	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
	Scabs; Inflamed tissue; Foreign material; Bile; Ruptured egg yolk												
DC-4	Feathers	5	6	6	7	6	7	8	9	*	*	9	10
FS = Food Safety; DC = Dressing Condition; * = To be determine													

19.6.2.7.6.5.2 Ac and Re Numbers for Post-chill Product Ac and Re Numbers for Post-chill Product Verification

This table contains the values to be used for post-chill product verification.

POST-CHILL PRODUCT VERIFICATION Carcass Dressing Standards (CDS)													
Groups of CDS Defects	Conditions	≤ 3,200 cph (8 carcasses)						≥ 3,201 cph (13 carcasses)					
		Chicken /Quail		Turkey		Fowl		Chicken/ Quail		Turkey		Fowl	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
FS-1	Fecal material	0	1	0	1	0	1	0	1	0	1	0	1
FS-2	Ingesta	1	2	1	2	1	2	2	3	2	3	1	2
FS-3	Gastro-intestinal Tract	1	2	1	2	2	3	2	3	2	3	3	4
DC-1	Localized Pathology	0	1	1	2	0	1	0	1	1	2	0	1
FS = Food Safety; DC = Dressing Condition													

19.6.2.7.6.6 Process Control

The CDS are designed to provide feedback on a lot acceptance basis. They give the operator the information needed to respond to and to correct the process. When required, implementing effective corrective measures should prevent the need for post-chill product verification and off-line rework.

CFIA staff shall be informed by the operator after each rejected sample.

Each element of the process control and their interaction are explained below and are presented in the decision tree.

The MIR have precedence over this decision tree (corrective measures can be mandated at any time by the VIC).

19.6.2.7.6.6.1 Process Evaluation

During the process evaluation, each defect group is to be monitored independently of the other defect groups, using the same sample.

When a zero tolerance defect (FS-1, Faecal material) is detected, immediate corrective measure(s) and immediate post-chill product verification shall be initiated as per the following sections.

Note: Scheduled randomized hourly pre-chill process evaluation tests shall continue independent of corrective measure(s) evaluation tests and post chill product verification tests.

19.6.2.7.6.6.2 Corrective Measure(s) Evaluation

When the test result indicates that the process is under questionable control for a specific defect group, corrective measures must be implemented for this specific defect group and additional on-line testing is required.

Once corrective measures have been implemented, the efficacy of these measures shall be evaluated and the evaluation shall only apply to the defect group(s) under questionable control. Corrective measures and additional corrective measure(s) evaluations are required until one (1) accepted sample demonstrates conformance to the standard. Line speed reductions would only be applicable as part of corrective measures.

If corrective measures have been accepted while post-chill product verification is been performed, carcasses entering the chilling process are identified to mark the end of additional sampling at the post-chill verification station.

Note: Maximum of five (5) failed tests during phase-in period and three (3) failed tests after phase-in period after which the corrective measures by the operator must be determined by the VIC on a case-by-case basis:

- Replace staffing
- Additional staffing
- Line speed reduction

19.6.2.7.6.6.3 Post-chill Product Verification

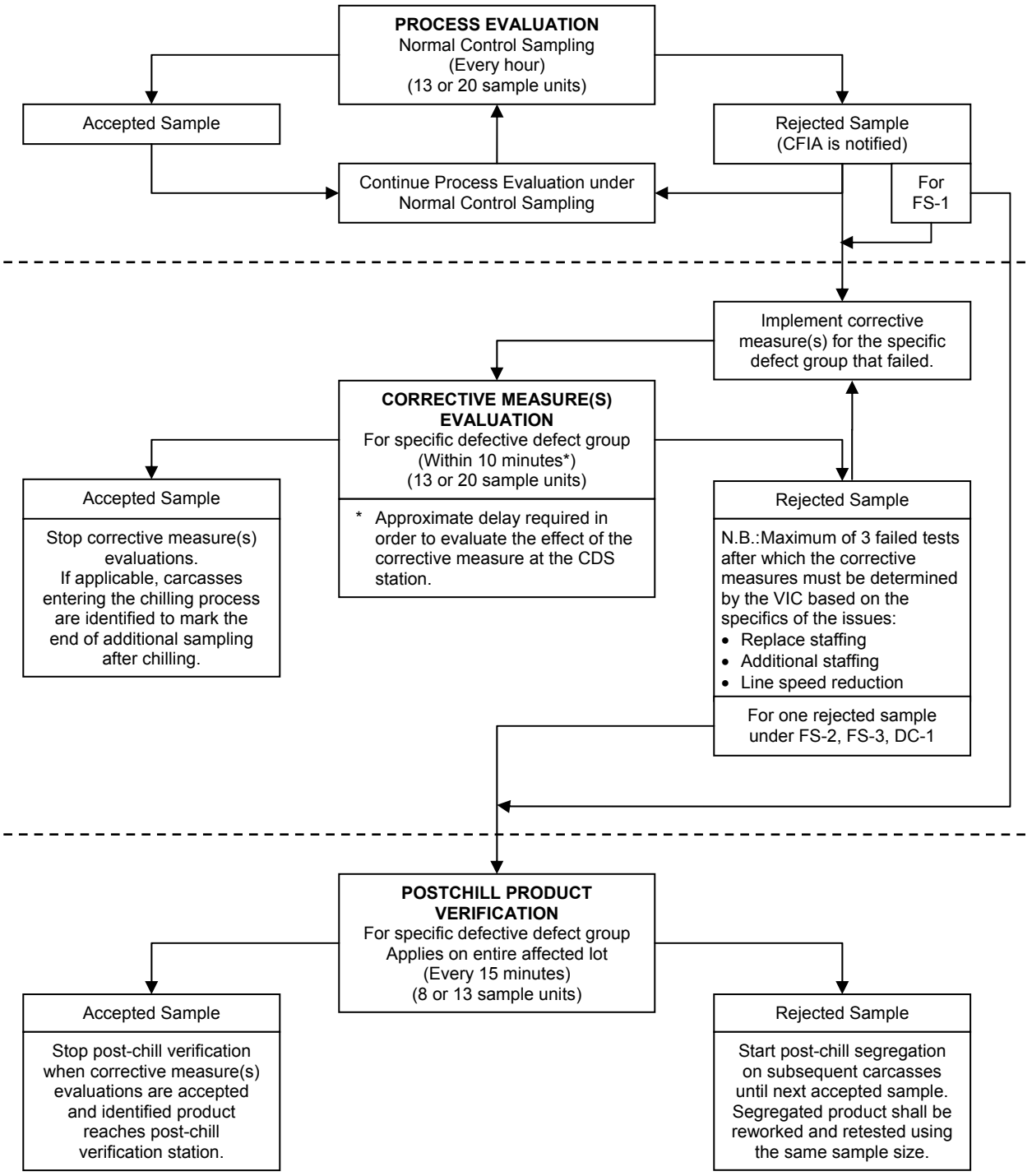
Immediate post-chill product verification and potential product rework is required when one (1) corrective measure(s) evaluation has been rejected in the case of food safety defects and localized pathology defects (FS-1, FS-2, FS-3 and DC-1). The verification is required only for the specific defect group(s) which causes the initial sample to be rejected.

The post-chill verification shall cover the entire amount of production or lot that was determined to be out of compliance at the pre-chill station (corrective measure(s) evaluation). If a post-chill product verification sample is rejected, the Establishment's monitor will then identify the affected product so that it may be segregated and accumulated for rework (see reference on the following "CDS Defect Decision Tree").

The operator must have a written method that will clearly indicate how plant personnel will identify lots of carcasses requiring rework, isolate these lots, rework the carcasses, and verify that the rework is satisfactory.

Once a specified lot has been reworked for the appropriate defects, a rework verification test shall be performed using the appropriate pass and fail criteria for that specific defect group. An accepted sample will result in releasing the retained lot.

19.6.2.7.6.7 CDS Defect Decision Tree



The *Meat Inspection Regulations, 1990* have precedence over this decision

19.6.2.7.6.8 CDS Test Result Scoring

A separate CDS Defects Log shall be used for each species and for each shift.

Carcasses are only scored as "defective carcass" for the presence of any distinguishable defect listed in the previous table "CDS Defects". Therefore a carcass showing evidence of the same defect at multiple locations should be recorded as one defective carcass for that specific defect.

Furthermore, a carcass showing multiple defects under the same defect group is only scored as one defective carcass, therefore one carcass having a lung and a bruise = one defective carcass. Also, a carcass with defects under different defect groups is scored as one defective carcass for each of the corresponding groups, therefore a carcass with salpingitis and a 20 mm bruise = one (1) DC-1 defect and one (1) DC-2 defect.

Defective carcasses are grouped by defect into different specified categories. The sample shall give the total number of defective carcasses according to each group of defects.

For operators with more than one shift per day, test results for each shift shall be considered independently because of personnel and supervisor differences and shall be recorded on separate CDS Defects Logs. Process control is shift specific.

19.6.2.7.6.9 CDS Test Defects Log for Chicken, Fowl, Turkey and Quail

Refer to Annex A of this chapter.

19.6.2.7.7 Verification by the CFIA

CFIA staff shall ensure that the CDS has been implemented and are being performed according to this section and the operator's written program. This may be accomplished by performing independent verification tests and/or correlation tests with the industry monitor.

An independent test or a correlation test shall be performed at a minimum of once per half shift/evisceration line. A minimum of two verification tests (one independent and one verification test) shall be conducted and recorded by a veterinarian each week. The records must show that within one month each veterinarian working at the plant has performed at least one test of each kind.

CFIA staff may perform an additional test at any time as an additional assurance of process control or if they feel that standards are not being met for any reason.

Test results may be recorded on a separate CDS Log or on the operator's records such that CFIA tests can be distinguished from tests conducted by the operator's CDS monitor. Also, an indication should be present to differentiate the independent verification tests and the correlation tests with the industry monitor.

19.6.2.7.7.1 Independent CFIA Verification Tests

The CFIA's independent verification of the operator's process evaluation tests shall be performed according to the following parameters:

- Tests shall be performed on each evisceration line, at select random times and according to the sampling method described previously. When a correlation test is performed, it replaces the independent test scheduled for that half shift;
- If an independent verification test coincides with any of the plant's monitor test, the inspector shall conduct a correlation test instead of an independent test;
- The sample size will be the same as that used by the operator;

- If the sample is rejected, the CDS monitor shall perform an immediate "Process Evaluation" test and then initiate any required action as per the Decision Tree in this section;
- If the test result is rejected for faecal material, immediate corrective measure(s) and immediate post-chill product verification shall be initiated by the CDS monitor; and
- The result of each test shall be compared to the operator's monitoring record. If the CFIA test result is not in agreement with the operator's tests, the inspector shall discuss the test results with the (industry) CDS monitor and inform the VIC.

The Decision Tree for CDS is to be used by the operator's monitor and for reference by the CFIA.

19.6.2.7.7.2 Correlation Tests

Correlation testing consists of the CFIA conducting an evaluation of a test being performed by the operator's CDS monitor according to the following parameters:

- Tests shall be performed on each evisceration line. This frequency may be increased according to the operator's compliance to the monitoring procedures of the Carcass Dressing Standard. When a correlation test is performed, it replaces the independent CFIA test scheduled for that half shift;
- A member of the CFIA staff shall examine the same carcasses at the same time as the industry monitor; and
- The monitor will be evaluated for the sampling method used, correct interpretation of defects, completion of forms, correct application of the Decision Tree and the implementation of corrective actions if necessary.

If the CFIA's evaluation demonstrates deficiency in the industry's dressing process and/or the monitoring thereof, immediate corrective measures shall be initiated by the operator. The VIC shall decide if the written procedure is to be reassessed and amended accordingly.

19.6.2.8 Pathogen Reduction Effort

19.6.2.8.1 Establishing Microbiological Criteria for Chicken and Turkey Carcasses Under MPIP

A national baseline survey of federally inspected chicken broiler and young turkey slaughter establishments was conducted in June, 1997 - May, 1998 to determine the prevalence of *E. coli* (*Escherichia coli*, biotype I, non-specific as to species, hereinafter referred to simply as *E. coli*) and *Salmonella* spp.

Test results for *E. coli and Salmonella* spp*.* were similar to those reported in the corresponding US baseline survey. Therefore the CFIA adopted the US *Salmonella* standard and *E. coli* guidelines on an interim basis for MPIP.

Full details on the referenced US requirements are contained in Chapter 11, Exports, United States Section.

19.6.3 Post mortem Inspection for Rabbits

The dressed carcass and viscera shall be visually examined. Visual examination should be followed by palpation and incision as deemed necessary.

19.6.3.1 Line Speed for Traditional Post mortem Inspection of Rabbits

Line Speed		
Traditional	On-line CFIA Inspection Station	Veterinary Disposition Station
1 - 1320 carcasses/hour	1	1

19.7 POULTRY DISPOSITIONS

Disposition of animals, blood, dressed carcasses and parts is dealt with in various sections of the MIR. More detailed information regarding recognition of specific diseases is provided in the appropriate training modules relating to post mortem examination/inspection and poultry dispositions as follows:

Module B-3: Poultry Post mortem Pathology
Module G-1: Veterinarian's Guide: Poultry Conditions & Carcass Utilization

The most recent edition of "Diseases of Poultry" is the primary reference used by the poultry condemnation National Correlation Team (NCT). The descriptions of poultry diseases and conditions in the disposition policies below are adapted from:

Diseases of poultry
Y. M. Saif, H. J. Barnes, John R. Glisson, Aly M. Fadly, Larry R. McDougald, David Swayne
Edition: 11, illustrated
Published by Wiley-Blackwell, 2003
ISBN 081380423X, 9780813804231

This technical reference should also be available in every poultry veterinarian's office and should be consulted whenever additional information is required.

As part of the operator specific HACCP system, the operator is responsible to take appropriate actions when processing a flock with higher than normal level of a specific condition. Producers should be encouraged to be present during evisceration operations of flocks known or suspected of having high levels of pathology.

A list of diseases and conditions requiring specific dispositions is provided below, together with the appropriate disposition in a coded and summarized form for reference purposes. This list is divided into the following three subsections:

- diseases and conditions that can be diagnosed in slaughterhouses, based on the organoleptic examination (visual, tactile and olfactory) of carcasses;
- diagnoses that are made by veterinarians at slaughter based on laboratory results. It is understood that in some cases, because of past experiences with a similar condition, a veterinarian can pose such diagnoses without a lab report; and
- reportable diseases that can be seen at slaughter. In some instances where disposition does not lend itself easily to summarization, or when more specific procedures are required, more detailed information is provided following the tables. Please forward to the Director, MPD, Canadian Food Inspection Agency, any concerns or suggestions with regard to this list of diseases and conditions.

For data collection for the revised database of Agriculture & Agri-Food Canada, a list of grouped conditions and their codes are provided in the Informed Desktop eForm titled “Ante mortem and Inspection Report (CFIA/ACIA 5179)”.

Details for the disposal and use of condemned meat products are provided in Chapter 6. The MIR define animal food as a product for use as food for fish or for an animal that is a pet, is kept in a zoo or is raised for fur.

19.7.1 Diseases and Conditions Diagnosed by Organoleptic Examination of Carcasses and Portions Thereof and/or Reported to the Meat Programs Division

Name and Code of Condition*	Comments	Judgement	Utilization of Condemned Material
Airsacculitis 426 (901)	Generalized or evidence of systemic involvement	Total condemnation	Rendering
	Otherwise See section 19.7.4.19	Approval	Not applicable
		Approval, subject to reconditioning or salvaging	Rendering for lesions or condition on affected parts and animal food for remaining parts
Anaemia 910 (909)	Try to determine underlying cause.	Total condemnation	Rendering, if associated with septicaemia
			Otherwise, animal food
Arthritis/ Peri-arthritis 512 (903)	Depending on extent of lesions	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	
	Condemn if evidence of systemic involvement, e.g. wasting.	Total condemnation	Rendering
Ascites 320 (905)	Disposition depends on extent	Approval	Not applicable
	Condemn if evidence of systemic involvement, see section 19.7.4.14	Partial condemnation	Rendering or animal food
		Total condemnation	
Avian Kerato-acanthoma 611 (904)	Depending on extent of lesions	Partial condemnation	Animal food
		Total condemnation	
Bruising 051	Depending upon extent of bruising	Partial condemnation	Animal food
		Total condemnation	
Cannibalism 007 (909)	Depending upon extent of lesions	Partial condemnation	Animal food
		Total condemnation	
Cellulitis 800 (902)	Depending upon extent of lesions	Partial condemnation	Animal food
		Total condemnation	
Coligranuloma 008 (909)	Differentiate from tuberculosis lesions	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Contamination 010	Disposition depends on extent.	Partial condemnation	Animal food
		Total condemnation	
Cyst Mites (909)	Entire flock passed or condemned based on laboratory histopathology results. See section 19.7.4.23	Total condemnation	Animal Food

Name and Code of Condition*	Comments	Judgement	Utilization of Condemned Material
Dark coloured carcass (Cyanosis/ Asphyxia) 090 (908)	Differentiate from a septicaemia See section 19.7.4.18	Total condemnation at "ante mortem"	Animal food
			Rendering
		Total condemnation	Animal food
			Rendering
Dermatitis 810 (904)	Depending upon extent and involvement of underlying tissue	Partial condemnation	Animal food
		Total condemnation	
Emaciation 220 (907)	Differentiate from lean or small carcasses. Try to determine underlying cause for reporting purposes, otherwise report as emaciation.	Total condemnation	Animal food
Emphysema (Subcutaneous) 082 (909)	Depending on extent and concurrent conditions.	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts, if associated with an infection
			Animal food, if not associated with an infection
		Total condemnation	Rendering, if association with an infection
			Animal food, if not association with an infection
Epidermal Cysts (909)	see section 19.7.4.24	Partial condemnation	Animal food
		Total condemnation	
Found dead 099	All species	Total condemnation at "ante mortem"	Rendering
Fractures 047	see section 19.7.4.3	Partial condemnation	Animal food
		Total condemnation	
Frostbite 049	All species	Total condemnation at "ante mortem" then partial condemnation	Animal food
			Rendering
		Total condemnation	Animal food
			Rendering
Gout 967 (909)	Depends upon the extent of the lesions	Partial condemnation	Rendering
		Total condemnation	
Hepatitis/ Cholangiohepatitis / Hepatosis/ Necrotic hepatitis/etc. 545 (906)	Depending on extent of lesions and evidence of systemic effects Necrotic Hepatitis see section 19.7.4.21	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Icterus/Jaundice 920 (906)	Depending on extent. If liver is the main viscera involved, report as hepatitis	Total condemnation	Rendering
			Animal food (carcass)
			Rendering (liver)

Name and Code of Condition*	Comments	Judgement	Utilization of Condemned Material
Inadequate bleeding 096	Verify improper bleeding procedure See section 19.7.4.16	Partial condemnation	Animal food
		Total condemnation	
Leucosis sarcoma group 640 (909)	All species	Total condemnation	Animal food
Loss of identity 097	See section 19.7.4.5	Approval	Not applicable
		Total condemnation	Animal food
Marek's disease (cutaneous form) 642 (909)	All species	Partial condemnation	Animal food
Marek's disease (visceral or nervous form) 641 (909)	All species	Total condemnation	Animal food
Odour 061 (909)	May be associated with residue problems.	Retain under refrigeration and, if appropriate, test on site then approve;	Animal food, if residues see 6.2.1.2 (d)
		Approval, subject to reconditioning or salvaging;	
		Total condemnation	
Osteomyelitis 150 (903)	Dependent on extent and secondary effects	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Overscald 046	Depending on extent of overscald	Partial condemnation	Animal food
		Total condemnation	
Pectoral myopathy (green muscle) Myositis 550 (909)	Inflammation, degeneration or muscular infiltration: depends on extent of lesions and the possibility of trimming lesions.	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Pendulous crop 009 (909)	Depending on systemic involvement.	Partial condemnation	Animal food
		Total condemnation	
Pericarditis 571 (909)	See section 19.7.4.19	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Peritonitis 573 (909)	See section 19.7.4.17	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Plant rejects	See section 19.7.4.22	Partial condemnation	Animal food

Name and Code of Condition*	Comments	Judgement	Utilization of Condemned Material
111		Total condemnation	
Salpingitis 583 (909)	See section 19.7.4.17	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering by authorized establishments
Septicaemia 930 (909)	Try to determine underlying cause for reporting purposes. See section 19.7.4.15	Total condemnation then sample for laboratory analyses	Rendering by authorized establishments
Sternal bursitis 003 (902)	Depending upon involvement of underlying tissue.	Partial condemnation	If infected, rendering for lesions or condition on affected parts and animal food for remaining parts
			If not infected, animal food
		Total condemnation	If infected, rendering
			If not infected, animal food
Synovitis (Infectious)/ Tenosynovitis (Ruptured gastrocnemius tendon) 102/460 (903)	See section 19.7.4.6	Partial condemnation	Animal food
	If systemic involvement	Total condemnation	
Urolithiasis (909)	See section 19.7.4.26	Partial condemnation	Animal food
	If systemic involvement	Total condemnation	
Toxaemia 960 (909)	Try to determine underlying cause for reporting purposes. See section 19.7.4.15	Total condemnation	Rendering
Valgus/Varus deformity 160 (903)	When the deformity is the only visible lesion	Approval	Not applicable
	When there is inflammation, bruising or haemorrhage	Partial condemnation	Animal food
	Only if systemic involvement	Total condemnation	Animal food
Xanthomatosis 865 (909)	See section 19.7.4.25	Partial condemnation	Animal food
		Total condemnation	

* Code numbers found after the name of the farm related conditions refer to codes used for the Agency database up until January 2nd, 2008 and were replaced by the 9 category groupings as it appears on the new Condemnation Report (in Annex A). The codes for the new grouping appear (when applicable) within brackets following the code number.
Rendering: Rendering by authorized establishments
Partial condemnation: condemn affected parts and approve remainder

19.7.2 Diseases or Conditions Generally Diagnosed and Reported Based on Laboratory Analysis (Histopathology, Culture, Serology, Residues Testing, Etc.)

Name and code of condition*	Comments	Judgement	Utilization of condemned material
Adenocarcinoma 660 (909)	Report as "Neoplasm"	Total condemnation	Animal food
Aspergillosis 405 (909)	All species	Total condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
Botulism (909)	Diagnosed at ante mortem inspection.	Total condemnation at “ante mortem”	Rendering
Chlamydiosis (ornithosis, psittacosis) 102 (909)	**Risk to human contacts**.	Treat as suspect at “ante mortem”, then take samples for laboratory analyses	Rendering
	If suspected, take all reasonable precautions including delaying slaughter of other birds from same source.	Total condemnation, then take samples for laboratory analyses	
	Laboratory confirmation essential	Total condemnation at “ante mortem”	Rendering
		Retain “at ante mortem” for rest and treatment when confirmed	
Coccidiosis 720 (909)	Depending upon extent and systemic involvement.	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Cyst Mites (909)	Entire flock passed or condemned based on laboratory histopathology results. See section 19.7.4.23	Total condemnation	Animal Food
Enteritis (ulcerative or necrotic) 530 (909)	Depends on systemic effects.	Partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Total condemnation	Rendering
Enterohepatitis (blackhead) 430 (909)	Depends upon the extent of the lesions	Treat as suspect at “ante mortem”, then partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Treat as suspect at “ante mortem”, then total condemnation	Rendering

Name and code of condition*	Comments	Judgement	Utilization of condemned material
Erysipelas 435 (909)	All species	Total condemnation	Rendering
Fowl cholera 102 (909)	Difficult to diagnose on ante mortem. May be suspected on a flock basis. At post mortem may appear as septicaemia, airsacculitis, arthritis, etc. Disposition will be on this basis.	Treat as suspect at “ante mortem”, then partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Treat as suspect at “ante mortem”, then total condemnation	Rendering
Fowl pox 965 (909)	Disposition depends on extent of lesions and whether or not there is systemic involvement.	Treat as suspect at “ante mortem”, then partial condemnation	Rendering for lesions or condition on affected parts and animal food for remaining parts
		Treat as suspect at “ante mortem”, then total condemnation	Rendering
Gangrenous dermatitis (dermatomyositis) 810 (909)	Depends upon severity.	Partial condemnation	Rendering
		Total condemnation	
Inclusion body hepatitis 545 (909)	The liver is primarily affected in this case. Depends if they are systemic effects.	Partial condemnation	Animal Food
		Total condemnation	
Infectious bursal disease (Gumboro disease) 102 (909)	Depends on the extent of the lesions	Partial condemnation	Rendering
		Total condemnation	
Infectious bronchitis 102 (909)	Depends on the extent of the lesions	Treat as suspect at “ante mortem”, then partial condemnation	Rendering
		Treat as suspect at “ante mortem”, then total condemnation	
Infectious coryza 102 (909)	Depends upon extent of lesions and ability to remove them.	Treat as suspect at “ante mortem”, then partial condemnation	Rendering
		Treat as suspect at “ante mortem”, then total condemnation	
Infectious sinusitis 102 (909)	Depends on the extent of the lesions	Treat as suspect at “ante mortem”, then partial condemnation	Rendering
		Treat as suspect at “ante mortem”, then total condemnation	

Name and code of condition*	Comments	Judgement	Utilization of condemned material
Leiomyoma 660 (909)	All species	Partial condemnation	Animal food
Leiomyosarcoma 660 (909)	Malignant form of above; rare. Report as "Neoplasm"	Total condemnation	Animal food
Listeriosis 102 (909)	All species	Total condemnation	Rendering
Neoplasm () 660 (909)	Neoplasms not otherwise specified	Partial condemnation Total condemnation	Rendering
Residues 065: Antibiotics 102: Others (909)	Suspicion may stem from abnormal odour or liver lesions. Deal with on a lot or flock basis.	Retain under refrigeration and, if appropriate, test on site and take samples for laboratory analyses If confirmed, total condemnation	See Chapter 6
Rickets / Osteomalacia 141 (909)	Depends upon severity.	Approval Total condemnation	Animal food
Tuberculosis 490 (909)	All species	Total condemnation	Rendering
Viral arthritis (reovirus infection) (909)	All species	Partial condemnation Total condemnation	Rendering
* Code numbers found after the name of the farm related conditions refer to codes used for the Agency database up until January 2nd, 2008 and were replaced by the 9 category groupings as it appears on the new Condemnation Report (in Annex A). The codes for the new grouping appear (when applicable) within brackets following the code number. Rendering: Rendering by authorized establishments Partial condemnation: condemn affected parts and approve remainder			

19.7.3 Reportable Diseases

The following diseases are designated as reportable by the *Health of Animals Act*:

Name and code of condition*	Comments	Judgement	Utilization of condemned material
Anthrax 102 (909)	This disease rarely affects birds. Chickens are highly resistant; ostriches are moderately susceptible. See Chapter 9	Total condemnation at “ante mortem” Total condemnation	See Chapter 9
Highly virulent form of avian influenza 102 (909)	See Chapter 9	Total condemnation at “ante mortem” Total condemnation	Rendering

Name and code of condition*	Comments	Judgement	Utilization of condemned material
Fowl typhoid 102 (909)	See Chapter 9 Disposition depends on extent of lesions and whether or not there is systemic involvement.	Total condemnation at "ante mortem"	Rendering
		Partial condemnation	
		Total condemnation	
Newcastle disease (Pneumoence-phalitis) 863 (909)	See Chapter 9	Total condemnation at "ante mortem"	Rendering
		Total condemnation	
Pullorum disease 102 (909)	See Chapter 9	Total condemnation	Rendering
* Code numbers found after the name of the farm related conditions refer to codes used for the Agency database up until January 2nd, 2008 and were replaced by the 9 category groupings as it appears on the new Condemnation Report (in Annex A). The codes for the new grouping appear (when applicable) within brackets following the code number. Rendering: Rendering by authorized establishments Partial condemnation: condemn affected parts and approve remainder			

In addition to the reportable diseases, any suspected case of exotic disease must be reported to the Animal Health District Veterinarian. Any animal or carcass suspected of having either a reportable or an exotic disease, should be held pending the arrival of an Animal Health veterinarian. (See Chapter 9)

19.7.4 Specific Ante mortem/Post mortem Conditions for Poultry

Throughout this section if a carcass is discarded by a veterinarian it is referred to as a condemnation. If a plant defect detector or inspector discards a carcass it will be referred to as a rejection.

19.7.4.1 Abnormal Odour

Any carcass which exhibits an abnormal odour at the time of post mortem inspection shall be held for veterinary inspection. If, in the opinion of the veterinarian, the odour is excessively pronounced, the carcass shall be condemned. Where odour is not considered excessive and not indicative of exposure to toxic materials, affected carcasses may be chilled in an attempt to dissipate the odour. In cases of abnormal odours where the veterinarian cannot identify the source, it would be appropriate to make arrangements with the Animal Pathology Laboratory in Saskatoon to determine the source of the odour.

If at the end of the chilling period, the odour has dissipated, the carcass may be approved without restriction. In many cases, residual odour can still be detected following chilling by incision into deeper tissues. In cases where there is residual but not excessive odour following chilling, it will be acceptable to approve the carcass with the restriction that meat from the carcass may only be permitted for inclusion into spiced meat products. The amount of this meat permitted in the mixture will depend on the severity of the condition, however in no case the odour shall be detectable in the finished product.

When carcasses and/or meat affected by abnormal odour are processed in an establishment, controls must be in place which prevent their accidental release. Carcasses and/or meat being shipped to another registered establishment must be identified as having abnormal odour. Since affected carcasses have been held on post

mortem, meat and meat products derived from these carcasses are not permitted to enter the export market.

19.7.4.2 Contamination

Carcasses and parts and/or viscera contaminated with grease, gall, faecal contamination, or other noxious material are adulterated and unfit for human food. Contamination shall be removed and condemned and the remainder may be approved, provided the remainder does not retain odours or unsound characteristics. Where the contamination is so generalized as to make removal impractical, total condemnation is required.

If total condemnation is not warranted, the carcass may either be salvaged or reprocessed as per the requirements for those processes.

Carcasses or portions and/or viscera contaminated with volatile oils, poisons, obnoxious gases, kerosene, or any substance which may permeate the tissues rendering them adulterated, shall be condemned.

Birds placed in the scald tank before they are dead become contaminated due to inhalation of scald water. Whenever scald water is observed in air sacs, the affected carcasses shall be condemned.

19.7.4.3 Fractures

Where bone fractures in poultry carcasses are detected at post mortem inspection, disposition shall be in accordance with the following:

- Where the fracture is associated with a bruise, the fracture site and bruised tissue shall be trimmed off and condemned. With fractures that involve the bones of the wings and legs, the affected tissue shall be removed by incision through the first joint (or joints) outside the affected area. In the case of a dislocated hip, without bruising, trimming is not required.
- Where the fracture is compound, i.e. the skin is penetrated, the fracture site and the surrounding tissue are to be trimmed off and condemned in a similar manner to that outlined above.
- Where the fracture is simple, without bruise or skin perforation, the affected portion may be approved for boning by either manual or mechanical means. In some cases, salvage may be possible by removing the affected area of fractured portions, e.g. a simple fracture of the distal end of the tibia may be removed by cutting proximal to the fracture. In such a case, the affected part must be removed to the satisfaction of CFIA personnel prior to approval of the remainder of the portion.

Note: If the trimmed portion no longer conforms to the definition accepted for the label product description, the product description must be altered, e.g. a drumstick with the distal end removed can no longer be called a "drumstick", but may be called a "drumstick portion" (see Chapter 7).

- In those instances where trimming is impracticable, in other words where the carcass is extensively mutilated, then the carcass shall be condemned.

Where the legs are short cut during feet removal, i.e. the cut is made through the tibia above the hock joint, no action is required unless there is visible contamination of the area.

19.7.4.4 Handling of Meat Products Which Have Fallen on the Floor

There remains an obvious need for professional judgement regarding the disposition of carcasses (or portions) falling into grossly contaminated areas or areas where abnormal types of contaminants exist, e.g. oils, greases, etc. The disposition of these carcasses (or

portions) must be left to the discretion of the Veterinarian in Charge. If salvage of the carcass or portion is not considered practicable, then condemnation may be considered.

Hygienic handling of carcasses or portions which have fallen on the floor shall be conducted according to a procedure that has been validated as part of the operator's HACCP system based on the following parameters:

- The carcass or portion shall be immediately removed from contact with the floor to reduce the possibility of further contamination.
- All visible contamination shall be removed by e.g. washing and/or trimming in an efficient yet sanitary fashion.
- After satisfactory removal of visible contamination, the carcass or portion shall be thoroughly rinsed with water.
- The site of the fall, the frequency of falls, and the reasons for the falls should be noted. Corrective action to prevent a recurrence, if required should be incorporated as quickly as possible.

19.7.4.5 Loss of Identity

It is the responsibility of the operator to ensure that all carcasses and viscera be presented for post mortem examination in such a way as to permit proper inspection. It is the responsibility of the inspection staff to take immediate action if management does not adhere to this responsibility.

The presentation of a carcass with incomplete viscera affects the ability of the inspector or the viscera defect detector to judge the suitability of the carcass for human consumption. In the case where only a portion of the viscera is missing, the veterinarian or inspector may take into consideration the organ(s) which is (are) missing, the condition of the carcass and the rest of the viscera as presented, and the disease prevalence in the flock to determine if there is sufficient need to condemn the whole carcass.

Where no viscera are present, disposition should be determined on a flock basis, considering the following conditions:

- Such carcasses may be approved provided the carcass condemnation rate for the lot does not exceed average condemnation rates for a healthy flock. Prevalent conditions resulting in condemnation in the flock should also be considered. For example, if carcass condemnation rates exceed normal levels with pathological lesions predominately located in the viscera, then condemnation of "Loss of Identity" carcasses would be warranted. If, however, the condemnation rate for the flock does not exceed normal levels or the prevalent lesions are not located in the viscera, then otherwise healthy carcasses with missing viscera may be approved.

At the discretion of the Veterinarian in Charge, Inspectors and defect detectors may make an on-line assessment for disposition of carcasses with no viscera present.

- The Presentation Standard for MPIP (refer to section 19.6.2.4 of this chapter) or the Traditional Presentation Standard (refer to section 19.6.1.1 of this chapter) must be fully implemented by the operator and the results of presentation checks must be within the prescribed tolerance. If at any time there is a question of excessive loss of viscera, or other presentation defects, a presentation check may be conducted. Such checks would be in addition to the routine checks per shift.

Where the above conditions are not met for chicken, automatic condemnation may be justified when carcasses are presented with no viscera. While each case must be judged on an individual basis, the severity of the defect must be brought to the attention of management and steps should be taken to immediately rectify the cause of the defect.

Note: Carcasses must be synchronized with their corresponding viscera whenever the viscera are separated form the carcass by automatic evisceration equipment. Lack of synchronization shall be treated as “loss of identity”. Lack of synchronization by more than half a shackle or viscera pan is to be treated as a deficiency.

19.7.4.6 Synovitis, Tenosynovitis, Ruptured Gastrocnemius Tendon, Viral Arthritis

A condition attributed to various aetiologies (mycoplasma, virus and/or bacteria) is often seen at slaughter in chickens. This condition is an inflammation of the synovial lining of the tendon sheaths. A clear serous exudate may be present in the tendon sheaths and hock joints, and joint surfaces have a bleached appearance with erosion of the cartilage. The femoral-tibial articulation and foot pads may also be affected. In cases where the gastrocnemius tendon is ruptured above the hock, there will be a bluish green discolouration of the skin above the hock. When the skin is reflected, there may be a slight or extensive haemorrhage into the subcutaneous tissues. The lesions are most frequently caused by normal or excessive physical stress on the intertarsal joint.

However they may also be caused by a reovirus (viral arthritis). The above described condition has been reported at slaughter using different terms such as arthritis, viral arthritis, tenosynovitis, ruptured gastrocnemius tendon or synovitis. Without extensive viral diagnostic capability, it is impossible to differentiate between these causes.

Rejection of carcasses due to the above described conditions should be based on poly-systemic effects of the carcass such as emaciation or dark colouration; otherwise trimming of the affected portion is required.

Therefore it is recommended that this condition be reported as synovitis (unless it is clearly a ruptured gastrocnemius tendon), until a more precise aetiology is established. For carcasses condemned for articular problems other than the ones described above, please report under arthritis.

19.7.4.7 Emaciation/Leanness/Smallness

By definition, emaciation (pathological leanness) is characterized by abnormal retrogression of bodily condition and diminution in the size of the organs, particularly the liver, spleen and muscular tissue. The outstanding features are a prominent keel, the loss of muscle mass and body fat and an alteration of the consistency of the remaining fat. Locations carrying fat are shrunken, and remaining fat may have a jelly-like appearance, a viscous feel and a yellow colour. Carcasses showing evidence of the above mentioned lesions, without any other sign of disease, shall be condemned and reported as emaciated. (See difference from serous atrophy of fat in the training manual)

For poultry it is important to differentiate emaciated carcasses from leaner or smaller carcasses in the lot. Since physiological leanness or smallness do not represent a health hazard nor a meat quality defect, affected carcasses should be approved.

19.7.4.8 Dermatitis

Dermatitis of the hip and contact dermatitis are the most common causes of superficial dermatitis in poultry processing plants. Regardless of the precise aetiology, any cutaneous lesion in the active inflammation stage (that is, with redness and/or swelling in the case of scabs and crusts, and swelling in the case of scratches) and with an aggregate size of more than 5 mm for all species, except for turkeys which is 13 mm, in any dimension must be trimmed. Similarly, in the case of scabs and crusts without inflammation, lesions with an aggregate size of 13 mm for all species, except for turkeys, which is 26 mm. Wholesomeness does not appear to be affected by non-active chronic superficial dermatitis lesions. The operator is responsible for eliminating these lesions. Any cutaneous lesion also affecting underlying subcutaneous and/or muscular tissues must be eliminated.

Generally, no carcass should be condemned for **superficial** dermatitis. Carcasses with dermatitis lesions may be trimmed and/or salvaged, regardless of the size of the lesion. Carcasses with lesions affecting the underlying muscle fascia such that trimming is impractical should be condemned as cellulitis.

19.7.4.9 Marek's Disease - Cutaneous Form

When the lesions caused by Marek's Disease are restricted to the skin and limited in extent, when no viscera and nerves are affected and no systemic effects are present, affected carcasses are approved following trimming.

19.7.4.10 Osteomyelitis in Turkeys

This condition exists in Canada with variable frequency from one region to the other. The presence of green livers in a number of turkey carcasses has been frequently associated with the presence of this condition in the flocks. However, poultry subjected to prolonged fasting may also show green livers as a result of biliary imbibition, and green livers have been associated with localized *Clostridia* bile duct infections, where there was no evidence of Osteomyelitis. Similarly, *Staphylococcus, Arcanobacterium pyogenes, E. coli* and *Salmonella* have been recovered from the bone lesions of affected carcasses, but in the same reports, no mention is made of what bacteria, if any, were recovered from the liver. Therefore, the significance of the green liver, the relationship between liver and bone lesions, and a given aetiology is not known. Green liver cannot be considered a sign of current septicaemia, and the presence of it is only an indication to examine the carcass further. **Green liver alone is not an indication to condemn any carcass**.

In order to determine whether or not Osteomyelitis is present, a more detailed post mortem examination may be performed on a subset of carcasses from the flock. The following confirmation protocol has been developed for this purpose. **The protocol is optional and is to be used at the discretion of the veterinarian.**

A sample of turkeys (please refer to “Determination of the number of carcasses to examine for in-depth inspection of suspect poultry carcasses” for the sample size) is selected from the suspected carcasses, that is, those showing green livers or articular hypertrophy. Since Osteomyelitis lesions occur primarily at the proximal extremity of the tibia, these bones are split lengthwise to determine whether or not they are affected. The lesions are characterized by the presence of a cheesy yellow exudate. There may also be zones of lysis, resulting in bone fragility. (If necessary, the articulations may be inspected as well.) If such lesions are observed, all carcasses from the flock showing green livers and articular hypertrophy should be inspected for Osteomyelitis.

Post mortem disposition depends on the presence of systemic effects, e.g. the infection involves clavicular air sacs, or several long bones and/or joints and /or tendon sheaths are affected, or there are breast muscle abscesses. The entire carcass will be condemned if the infection is generalized. The condemned material must be sent to a rendering plant authorized to process inedible products.

19.7.4.11 Cellulitis

19.7.4.11.1 Chickens Including Roasters and Fowl

Under the traditional method of poultry inspection, carcasses affected with cellulitis shall be trimmed by the helper/trimmer stationed next to the inspector or, if the operator has an effective Quality Assurance (QA) program, then downstream on the evisceration line.

Under the Modernized Poultry Inspection Program (MPIP), carcasses may be trimmed on-line, downstream from the inspection/detection zone.

Trimming of lesions is subject to the following:

- In the case of peri-cloacal cellulitis:

Broiler chicken carcasses with peri-cloacal cellulitis shall be removed during preselection to prevent contamination of evisceration equipment and cross contamination of subsequent eviscerated carcasses.

For roasters (> 2.6 kg live weight), localized and circumscribed peri-cloacal lesions may be trimmed after being withdrawn from the evisceration line at preselection provided there are adequate, sanitary trimming facilities.

- In the case of non-peri-cloacal cellulitis:

Broiler chicken carcasses, with cellulitis lesions larger than 2 cm X 2 cm, located elsewhere than on the wings and the legs, shall be removed during preselection (**note:** research has shown that such lesions are commonly associated with extensive subcutaneous spreading of cellulitis, that includes muscle fascia, such that trimming is impractical). Wings and/or legs with cellulitis lesions may be removed from the carcass and condemned. Carcasses with localized skin scratches longer than 2 cm (e.g. minor longitudinal lesions located at the base of the tail) may be trimmed on-line provided that all cellulitis lesions are removed upon trimming.

Heavy/breeder fowl carcasses with cellulitis lesions may be trimmed and/or salvaged, regardless of the size of the lesion, provided such lesions are not associated with extensive subcutaneous spreading of cellulitis, nor affecting underlying muscle fascia.

19.7.4.11.2 Turkeys

Cellulitis on the carcass may be categorized into two groups; cellulitis with unopened skin lesions and cellulitis with opened skin lesions which may be associated with primary contact dermatitis and skin abrasions, respectively.

Cellulitis with unopened skin lesions is associated with dermal necrosis with underlying fibrin and inflammatory exudate. Cellulitis with open skin lesions has chronic granulomatous/granulation tissue-type reaction associated with foreign material. If gas producing bacteria are present, white or yellow froth may be present (emphysema). No lesions are found in other organs.

No aerobic, microaerophilic, or anaerobic bacteria can be isolated from some lesions while other lesions yield *E. coli* in low numbers in mixed cultures with *Proteus mirabilis, Lactobacillus spp., Klebsiella spp*., and *Staphylococcus spp*.

Turkey carcasses with cellulitis lesions may be trimmed and/or salvaged, provided such lesions are not associated with extensive subcutaneous spreading of cellulitis, nor affecting underlying muscle fascia. In such cases, carcasses shall be condemned for cellulitis. Carcasses which are impractical to trim due to extensive emphysema with cellulitis shall be reported as cellulitis. All carcasses which cannot be fully trimmed on-line must be removed from the evisceration line for off-line trimming. Any amount of cellulitis coupled with associated evidence of generalized disease shall be condemned for the underlying cause.

19.7.4.12 Sternal Bursitis With/Without Cellulitis

The sternal bursa is a sac located between the keel bone and the skin that normally contains a small amount of sterile fluid and functions to protect the keel bone. The bursa can fill with fluid and its walls may become thickened when it gets irritated by either infection or trauma. A slightly enlarged sternal bursa, containing clear fluid is referred to as a “breast blister”. In severe cases, the bursa may be filled with caseous material and

the lesion may be extensive, involving surrounding tissues. Lesions are rare before 10 weeks of age in turkeys and are more common in male birds.

A thickened portion of skin on the unfeathered skin over the keel bone is referred to as a "breast button". This 'breast button' may ulcerate, referred to as Focal Ulcerative Dermatitis (FUD), and may ulcerate directly into the bursa. "Breast buttons" (≥ 13 mm in turkey and ≥ 8 mm in quails and fowl) and "breast blisters" are to be removed. Carcasses with more extensive sternal bursitis, without evidence of associated extensive cellulitis shall have the bursa trimmed or removed. Carcasses with sternal bursitis, with associated extensive cellulitis, shall be condemned for the underlying cause i.e. sternal bursitis. Carcasses with sternal bursitis accompanied with a generalized disease or condition shall be condemned for the underlying disease or condition.

19.7.4.13 Emphysema

Subcutaneous emphysema may appear as ballooned skin ("puffer birds") or becomes visible within the subcutaneous tissue in the vent area when the carcass is vented and opened. The origin of subcutaneous foam could be caused by air escaping from a ruptured air sac. In a normal bird this will present as a clear air-filled bulla or sac. In a bird with airsacculitis this could present as yellowish-coloured foam. In addition, emphysema may be caused by gas producing bacteria (e.g. *Clostridium spp*.) associated with cellulitis.

Subcutaneous bulla may be penetrated to permit the escape of the entrapped air. For carcasses with emphysema associated with cellulitis or airsacculitis, refer to the policy for cellulitis or airsacculitis respectively.

19.7.4.14 Ascites

Ascites in chicken is generally the result of right ventricular failure. The modern day broiler has been genetically selected for rapid growth. This growth has outstripped the growth rate of the lungs causing pulmonary hypertension and secondary right heart failure. If a carcass exhibits emaciation, subcutaneous œdema, anasarca or congestion it is to be condemned. The presence of a cobblestone liver should signal one to look more closely at the carcass for subcutaneous œdema. The presence of a cobblestone liver alone is not a reason to condemn the carcass. Similarly the presence of ascites without systemic involvement should result in acceptance of the carcass.

In turkeys, ascites is not common, but when it occurs, is usually caused by cardiomyopathy (a dilated fibrotic heart).

The following chart has thus been developed as a reference tool to assist veterinarians help to evaluate this condition in chickens and turkeys.

Presence of systemic effects (dark coloured carcasses, emaciation, subcutaneous œdema, congestion, anasarca)	→	Carcass and viscera condemned
No systemic effects - carcass in good condition (may have pericardial transudate or ascites or bosselated/cobblestone liver ± hypertrophy, œdema, fibrin)	→	Carcass approved and affected liver condemned

Ascites is also rare in fowl and is secondary to severe liver damage, neoplasm, various respiratory pathologies (poor ventilation), anaemia, diets high in rapeseed, and poisoning

due to e.g. pentachlorophenol (PCP). Fowl carcasses with an obviously distended abdomen shall be condemned at preselection.

19.7.4.15 Septicaemia/Toxaemia/Congestion Syndrome

Although very rare, this condition is possible in poultry. It serves to designate carcasses condemned for an infection (septicaemia), poisoning (toxaemia) or a generalized congestion in which the systemic effects observed cannot be related to a specific primary condition.

Of the various lesions found in the cases of septicaemia or toxaemia, the following are those most often encountered (in decreasing order of importance):

- multi focal sub serous haemorrhages, which often affect several organs (mostly the endocardium and epicardium); sub mucosal haemorrhages of the trachea;
- congestion and œdema of various organs,
- presence of sites of infection of embolic origin in various organs;
- peripheral vasodilatation; and
- petechial and/or ecchymotic haemorrhage of the sub serosal fat, e.g. fat around the ovaries or testes.

Only rarely are all of these lesions present on the same carcass.

A septicaemia infected carcass must be sent to an authorized inedible rendering plant. A congested carcass may be used for animal food. The two conditions can occur concomitantly. The carcass will always be sent for rendering in such cases.

19.7.4.16 Inadequate Bleeding

Carcasses that are inadequately bled are to be rejected or condemned. Inadequately bled carcasses will exhibit redness of the feather tracks on either side of the breast and on the dorsal surface of the body. The neck will show extreme redness with or without the head attached. Frequently the vent area and the feather tracks of the upper thighs are red. Affected carcasses may also show congestion of the blood vessels in the wings.

Carcasses that are mildly red or that show redness only at the extremities are likely in the initial stages of cardio-vascular shock, or in the winter, may be due to frostbite of the extremities. These carcasses can remain on the line and\or be subjected to further trimming.

Whenever there are inadequately bled carcasses (mildly red to brick red) present at the pre-selection the company shall evaluate the stunning and killing procedures. For additional information on slaughter procedures, please refer to section 19.2.1.3 of this manual. Immediate corrective actions shall be instituted to correct inadequate stunning or bleeding. Industry management shall immediately notify the Veterinarian in Charge when inadequately bled carcasses are present.

19.7.4.17 Salpingitis/Peritonitis in Poultry

Condemnation for the salpingitis category shall not be used in chickens. Dry caseous material and/or caseous exudate limited to the salpinx or the immediate surrounding tissue can be removed by trimming, aspiration, vacuuming or by salvaging, and are more likely to be seen in slaughter broiler chickens than acute inflammation. All poultry with localized salpingitis/peritonitis should be candidates for aspiration or cut-up. An otherwise normal carcass with a ruptured salpinx with localized inflammation or no sign of inflammation in the area should be reconditioned or salvaged.

Salpingitis (inflammation of the oviduct) is one of the most common causes of mortality in laying hens. Heavy egg production and associated estrogenic activity predispose to

salpingitis by relaxing the sphincter between the vagina and the cloaca. Infection occurs when *E. coli* ascends the oviduct from the cloaca. Mucosal infections with viruses (e.g. infectious bronchitis virus) or mycoplasms also predispose to salpingitis. The infected oviduct is markedly distended and thin-walled with single or multiple masses of caseous exudate. The oviduct may be occluded by masses of yolk, coagulated albumin, shell membranes and sometimes fully formed eggs. The mass of exudates may expand to the point that it fills much of the body cavity. Exudate is laminated and often contains a central egg, shells, and/or membranes. It is malodorous. Extension into the body cavity through the compromised oviduct leads to concurrent peritonitis.

The term egg-bound is a condition in which an egg is lodged in the cloaca but cannot be laid. It may result from inflammation of the oviduct, partial paralysis of the oviduct muscles, or production of an egg so large that it is physically impossible for it to be laid. The resulting dystocia may cause a prolapsed oviduct usually with the cloaca.

Peritonitis in laying hens and breeders may be primarily due to salpingitis. Peritonitis may be severe if *E. coli* is present because of an ascending infection within the salpinx. Peritonitis in the absence of salpingitis can also occur due to reverse peristalsis in the salpinx resulting in partially formed eggs (free yolk) in the body cavity. Abdominal laying (internal layer) and misovulated ova may accompany salpingitis and contribute to peritonitis.

Peritonitis in poultry may be primarily due to trauma, or as a result of salpingitis, airsacculitis, hepatitis or omphalophlebitis. Salpingitis in young birds may be due to spread from airsacculitis as a part of systemic infection. Peritonitis usually consists of malodorous, caseous or other exudate, adhesions, red fibrinous tags along the abdominal wall or the exterior of viscera. The term peritonitis is not to be used for the filmy transudate (œdema of the liver capsule) that is part of the hepatosis that develops secondary to cyanosis / ascites syndrome, as the latter terms are more diagnostic of what is actually occurring.

Carcasses with retained egg yolks may be reconditioned or salvaged.

19.7.4.18 Dark Coloured Carcasses/ Cyanosis

In poultry, it is not feasible to detect or condemn all moribund birds on ante mortem. Carcasses from birds slaughtered in a moribund state will be condemned on post mortem for Dark Coloured Carcasses/ Cyanosis. The term “moribund” should not be used for poultry dispositions related to post mortem examination/inspection.

In poultry, a moribund state is often the result from either transportation-related stress or inclement weather, rather than from disease. It is recognized that the screening of individual birds prior to slaughter is not feasible. It is presently the responsibility of plant employees to separate live from dead birds. It is not feasible to further request that they differentiate between truly moribund birds as to whether they have an infectious disease or whether they are simply stunned or lethargic as a result of environmental or transportation stress.

While cyanosis may result from conditions other than stress, e.g. respiratory disease, it is assumed that the primary cause of the cyanosis may be identified in many cases and reported under that condition. With moribund birds, cyanosis tends to be the primary lesion and therefore Dark Coloured Carcass is an acceptable term to describe the condition. The most typical post mortem lesion in such a case consists of a breast muscle that is significantly darker than that of other birds in the flock (i.e. different from normal).

Dark Coloured Carcass is a metabolic condition related, as mentioned above, to transport stress and shock. It is often, but not always associated with cardio-vascular problems in poultry. Appearance of carcasses may vary from a state of congestion, to a mild blue, to dark blue-purple in the musculature. **Mild to moderately blue carcasses should be approved (provided the dark colouration is the only significant finding)** as these

carcasses have been shown to return to normal colour in the chill tank. Severely dark carcasses should be condemned.

19.7.4.19 Airsacculitis

Airsacculitis occurs in poultry including chickens, fowl, turkeys, ducks and quail. Dust particles, ammonia, viruses, fungi, bacteria, mycoplasma, etc. can act as irritants and stimulate an inflammatory response within the air sacs. Any of the airsacs may be affected along with the possible involvement of other organs. The carcass may ultimately show systemic signs e.g. emaciation, dark coloured carcasses.

Air sac lesions are defined as the presence of caseous material and/or exudate within the sacs or air sac membranes. Air sac membranes, without adhesions but potentially thickened, do not represent a lesion per se: this thickening is the result of a normal defence mechanism against either environmental irritation and/or causative agent(s). Lesions in affected air sacs shall be removed from the carcass, either on-line or off-line (reconditioned) by assorted processes. The remnants of the membranes, without caseum and/or exudate, will not be considered as a lesion nor as a defect for the Defect Detection Standards and the Carcass Dressing Standards, as described elsewhere in this chapter.

19.7.4.19.1 Disposition of Carcasses and Viscera with Airsacculitis Lesions

Carcasses with systemic effects (such as polyserositis, emaciated or dark coloured carcasses) or with rarely seen acute lesions shall be condemned. Otherwise, carcasses and/or viscera with lesions consistent with airsacculitis shall be handled as follows:

19.7.4.19.1.1 Chickens

- when the pericardial fluid is clear or slightly amber (hydropericardium) but without signs of infection, i.e. without the presence of adhesions on the exterior of the pericardial sac and/or the presence of solid material in the liquid within the sac, the viscera and the carcass are approved.

- when there are small whitish areas on the epicardium and/or small adhesions on the pericardial sac without signs of infection, the carcass and the viscera are approved.

- when there is evidence of caseous material in or on the pericardial sac, the viscera and the carcass are to be condemned. Guidance from the CFIA veterinarian shall be sought when the incidence of affected heart and/or pericardial sac reaches higher levels than those normally experienced at the establishment (e.g., in the case of roasters).

- when fibrino-caseous or caseous material is observed on the liver capsule (indicating direct extension from the air sacs to the liver capsule, i.e. not due to systemic spread), then the carcass is approved, subject to reconditioning or salvaging, and the liver is condemned.

- when the heart and the liver are covered with fibrino-caseous or caseous material, i.e. polyserositis, the viscera and the carcass are to be condemned.

- when the lungs and/or air sacs are affected, i.e. adhesions, presence of fibrino-caseous or caseous material, 3 mm or greater in size, the viscera is approved and the carcass is approved subject to reconditioning or salvaging.

- when very chronic lesions (very well encapsulated by thickened membranes are found in the caudal air sacs and when such lesions contain yellowish and/or reddish caseous material, the carcass is approved provided that the lesions are completely removed, (including the membranes of the capsule), without creating additional contamination. **This type of lesions is not frequently seen.**

Viscera / Carcass Defect Detection Station or Viscera Inspection Station		
Affected Viscera (enlargement, exudate, fibrino-caseous material)	**Viscera**	**Carcass**
Heart: when there is evidence of caseous material in or on the pericardial sac (with variable accumulation of fluid) without the involvement of other viscera.	Total condemnation	
Heart + Liver: covered with caseous or fibrino-caseous material (polyserositis)	Total condemnation	
Cranial air sac: presence of liquid or of whitish or yellowish fibrino-caseous material without other lesions in the cavity or on the viscera.	Approval	
Lungs and/or Airsacs (adhesions, smaller/reddish lungs, presence of fibrino-caseous material in the sacs) without implication of the heart or liver	Partial condemnation	
Heart: when only the pericardial sac shows the presence of clear or slightly amber liquid but without signs of infection.	Approval	
Heart: when there is either a small amount of whitish area on the epicardium or small adhesions to the pericardial sac without signs of infection.	Approval	

Viscera / Carcass Defect Detection Station or Viscera Inspection Station		
Internal Cavity Defect Detection Station or Inspection Station	**Viscera**	**Carcass**
Airsacs: Presence of opacity in the sacs without exudate or particles	N/A	Approval
Airsacs: Presence of particles or caseum (fibrino-caseous) ≤3 mm	N/A	Approval
Airsacs: Presence of particles/caseum/fibrino-caseous exudate >3 mm	N/A	Partial Condemnation
Cranial airsacs: presence of liquid or of whitish or yellowish fibrino-caseous material without other lesions in the cavity or on the viscera.	Approval	
Lungs and/or Airsacs (adhesions, smaller/reddish lungs, presence of fibrino-caseous material in the sacs) without implication of the heart or liver	Partial condemnation	
Airsacs: presence of very chronic lesions with thickened membranes	N/A	Partial condemnation

19.7.4.19.1.2 Turkeys and Fowl

- when the heart is enlarged (cardiomyopathy with/without constrictive pericarditis), with no evidence of caseous material in or on the pericardial sac, with/without a cobblestone liver, the heart and liver may be rejected and the carcass is passed - refer also to the ascites policy.

- when there is evidence of caseous material in or on the pericardial sac (with variable accumulation of fluid) without the involvement of other viscera, the carcass is to be

subjected to cavity examination for assessment of the air sacs and presence of any other significant cavity lesions. Carcasses and viscera are to be condemned if there is evidence of significant air sac involvement or other evidence of systemic disease. Regardless, the heart is to be condemned.

- pericarditis is very rare in fowl and when present, is commonly associated with ascites (not airsacculitis). The viscera is to be condemned and the carcass is passed after removal of any affected airsacs (if applicable). For disposition of fowl affected with ascites refer to the section 19.7.4.14 on “Ascites”.

- when fibrino-caseous or caseous material is observed on the liver capsule (indicating direct extension from the air sac to the liver capsule i.e. not due to systemic spread), then the carcass is passed and the liver is condemned.

- when the lungs and/or air sacs are affected i.e., adhesions, presence of fibrino-caseous or caseous material, 5 mm or greater in size, the viscera is approved and the carcass is approved subject to reconditioning or salvaging.

- when very chronic lesions (encapsulated by thickened membranes) are found in the air sacs with no other significant lesions on the carcass, and when such lesions which may contain yellowish and/or reddish caseous material are detected, the viscera is approved and the carcass is approved subject to reconditioning or salvaging (lesions must be removed, including the membranes of the capsule), without creating additional contamination.

Chickens and Turkeys

Note: CFIA veterinary advice should be sought when there is more than the normal incidence of a specific lesion.

Note: When airsacculitis affected carcasses are referred to the CFIA veterinarian, the in-depth carcass examinations to detect lesions in the diverticulum of the inter-clavicular sac are no longer required to be performed.

19.7.4.19.2 Duck Carcasses with Airsacculitis Lesions *(Under Revision)*

19.7.4.20 Varus/Valgus Deformity

It is the official department policy that Valgus/Varus deformity (V/V), in its pure form, i.e. without any other signs or systemic complications, is purely a processing problem.

There is no health risk associated with this condition. It is not to be condemned, unless the carcass has other systemic signs secondary to the V/V, e.g. emaciation. Therefore the majority of these carcasses may be sent to cut-up if severely deformed.

19.7.4.21 Liver Conditions Including Hepatitis

Hepatitis has numerous causal agents including viral, bacterial infections, acute mycotoxicosis, toxic agents or obstruction of the biliary system in the liver. Avian adenoviruses cause inclusion body hepatitis (IBH) which is widely distributed in healthy birds under all systems of management.

Chicken

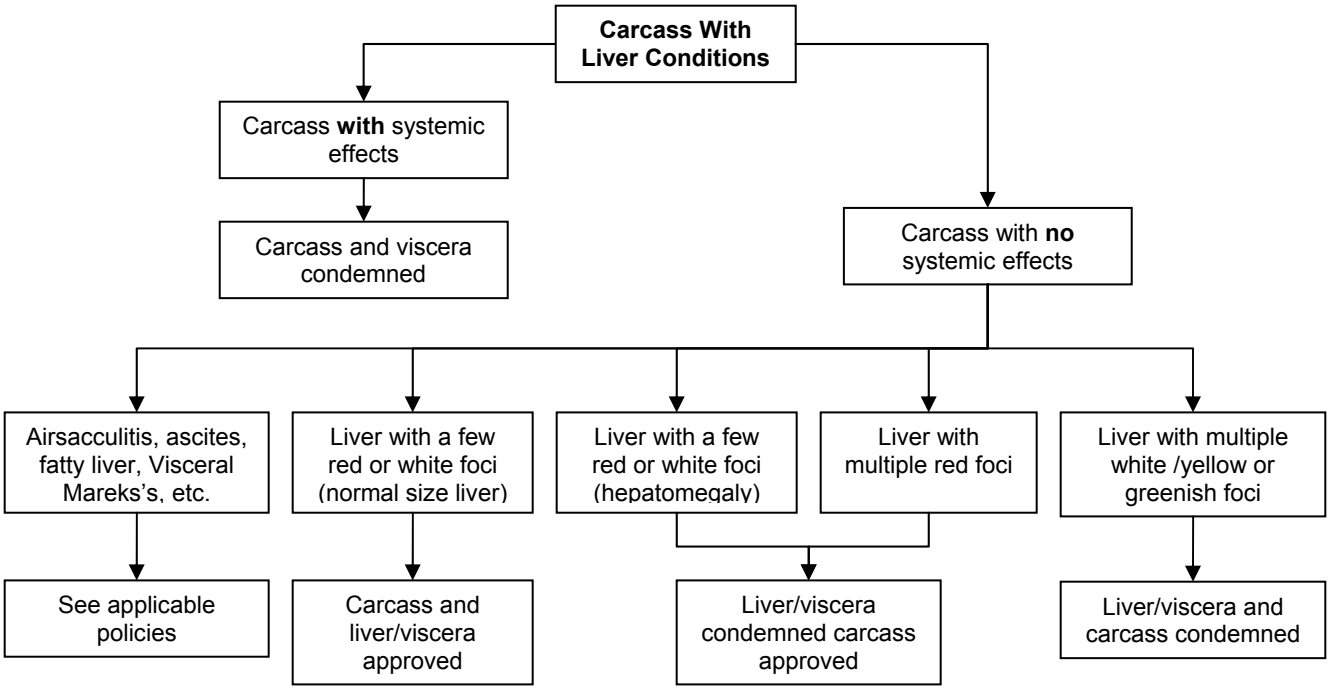
Chicken anaemia agent (CAA) will increase the likelihood of adenoviruses causing liver inflammation and mortality in birds.

Infectious necrotic hepatitis may be caused by viruses, *E. coli, Campylobacter, Helicobacter pullurom, Klebsiella, Listeria, Moraxella, Pseudomonas, Salmonellosis* and

Clostridia. Infectious necrotic hepatitis may present as local to diffusely spread multifocal small white/yellow or green-black distinct to coalescing foci of necrosis, depending on the cause and the state of progression of the disease. The necrotic foci can be raised or multifocal throughout the liver parenchyma. The liver can be enlarged in size and have a firmer consistency. For livers with a few white foci, see cholangiohepatitis as described below.

Cholangiohepatitis may be caused by *Clostridium perfringens* which ascends up the bile duct from the intestinal tract (related to necrotic enteritis and reduced use of antibiotics). Greenish-coloured livers with hepatomegaly and /or ascites may be present. Livers may also have local to diffusely spread small white granulomas (with macrophages and giant cells) and/or red distinct to coalescing foci (comprised of red blood cells, heterophils, lymphocytes and plasma cells) in the portal areas depending on the state of progression of the disease. The liver has a firmer consistency as a result of light to severe fibrosis and biliary ductal hyperplasia. Clostridium perfringens may be associated with a rupture of the gall bladder with peritonitis. Carcasses with extensive peritonitis secondary to a ruptured gall bladder are to be condemned as hepatitis. Enlarged, firm, greenish-coloured livers without red or white foci are to be condemned and the carcass is approved.

Carcasses and their livers exhibiting these lesions as described above are to be approved or condemned (based on the possible presence of a septicaemia) under the category hepatitis as follows:



Fatty Liver has a yellowish appearance with/without red foci (due to ruptured blood vessels) – the liver (that may be very friable) and the carcass are to be approved.

Chicken and Turkey

Bile Stasis may be caused by excessive feed or water withdrawal or cholangiohepatitis. Excessive feed withdrawal is associated with greenish-coloured livers which are otherwise normal in appearance and consistency. Such livers may be discarded by the operator (as a quality defect) and the carcass is approved. For chicken livers which are greenish in colour but also have red and/or white foci, refer to the preceding paragraph

for cholangiohepatitis. For turkeys with green livers, refer also to sub section 19.7.4.10, “Osteomyelitis in turkeys”.

Turkey

Chronic granulomatous hepatitis is the most common liver condition in turkeys. Livers have multiple white fibrotic foci scattered over the surface and throughout the parenchyma. Infectious necrotic hepatitis may be caused by the same agents as listed above for chickens but is rarely observed as the lesions progress to the chronic aforementioned appearance. Carcasses with no evidence of systemic effects are approved and the liver is condemned.

Histomoniasis (Blackhead Disease) in turkeys is caused by *Histomonas meleagridis* (a flagellated protozoa). The liver may display multiple white circular depressed areas of necrosis in various sizes up to 1 cm in diameter with raised edges or multiple scattered pin point to coalescing white foci. The liver parenchyma may also have scattered green-black discoloration. The internal caecal walls display marked inflammation and ulceration. Occasionally these ulcers erode the caecal wall leading to peritonitis. The caeca contain a dark green caseous exudate. Splenomegaly may or may not be present. Carcasses with no evidence of systemic effects are approved and the liver and caeca is condemned.

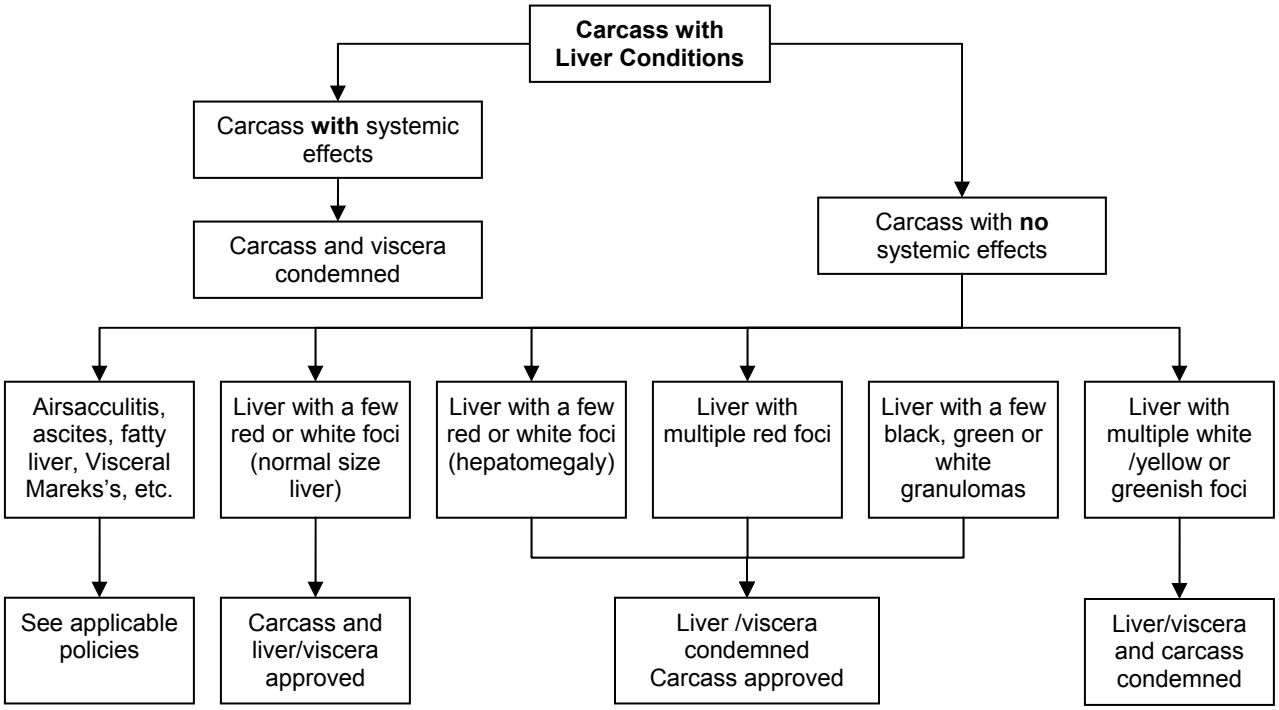
Fowl

Hepatic Lipidosis is characterized by focal to multi focal, flat (non raised), pale yellow areas (fat deposits) scattered over the surface and throughout the liver parenchyma. The liver may be enlarged and/or friable. Carcass and viscera shall be approved.

Lymphoid Leucosis (LL) is extremely rare. LL, part of the Avian Leucosis Complex, is also known as big liver disease, lymphatic leucosis, visceral lymphoma, lymphocytoma, lymphomatosis and visceral lymphomatosis. LL is rare, is caused by a RNA virus and is most obvious in the liver. The milliary form of LL consists of numerous small nodules uniformly distributed throughout the parenchyma. In the diffuse form, the liver is uniformly enlarged, slightly greyish in colour, and usually friable. Occasionally the liver is firm, fibrous, and usually gritty. Grossly visible tumours almost invariably involve the liver, spleen and Bursa of Fabricius. Other organs often grossly involved include the kidney, lung, gonad, heart, bone marrow, and mesentery.

Carcass and viscera shall be condemned.

Differential diagnosis between Lymphoid Leucosis (LL) and hepatic lipidosis in the liver can be difficult. Metastatic tumours occur in the viscera with LL. The spleen and other organs are normal (not affected) with lipidosis.



19.7.4.22 Carcasses Rejected by the Processing Plant Operator

For carcasses with minor lesions of certain conditions that do not warrant whole carcass condemnation, unaffected portions may be salvaged or reconditioned.

If an operator does not wish to market certain carcasses or derived portions otherwise considered fit for human consumption under the MIA (e.g.: small carcasses, no salvaging facilities, high incidence of a condition in a flock), disposition will not be performed by the CFIA, and these carcasses **shall not** be recorded on the ante mortem and post mortem inspection reports.

19.7.4.23 Cyst Mites

The fowl cyst mite (*Laminosioptes cysticola*, family *Laminosioptidae*) has been reported mainly from fowl and also may infest chickens, turkeys, peasants, geese, and pigeons. The female mite can only be viewed with a microscope as it measures 0.25 x 0.11 mm. The life cycle is unknown except that the female lays embryonated eggs. Mites pass through all stages of their development under the skin or even in the deeper tissues of the host.

Initial infestation is on the skin. In older birds, lesions containing mites occur inside yellowish nodules up to several millimetres in diameter in the subcutaneous tissue. These areas may be mistaken for tuberculous lesions. The nodules appear to be caseocalcareous deposits formed by the bird to enclose the mite after they die in the tissues. Lesions are common in the loose subcutaneous connective tissue but also occur in muscles, abdominal viscera, lungs and on the peritoneum. Large numbers of nodules may be found in aged emaciated birds.

Lesions may be detected on the underside of the skin during trimming. All carcasses from the affected lot shall be segregated and may either be discarded by the operator as plant rejects or be frozen by the operator, under a CFIA notice of detention, pending laboratory confirmation. Disposition (released or condemned) of all the carcasses from the detained lot shall be based on laboratory results of the submitted samples.

All carcasses from the affected flock are passed or condemned based on laboratory results.

19.7.4.24 Epidermal Cysts

Epidermal cysts, of unknown aetiology, appear as yellowish nodules of varying size located anywhere on the skin of a fowl carcass. Numbers range from a few to many nodules scattered over the entire surface of the carcass. There may be improper defeathering and removal of the cuticle around the larger nodules. Some nodules may be ulcerated and surrounded by hyperplastic feather follicles. On cut surfaces, granular and caseous material may be found within the cysts. Carcasses may be approved after removal of localized lessons. Carcasses with extensive lesions or where trimming is impractical are to be condemned.

19.7.4.25 Xanthomatosis

Xanthomatosis is a rare skin condition affecting chickens including fowl. A massive accumulation of macrophages with fibrous tissues causes thickened yellowish areas of skin mainly on the thigh, breast and abdominal areas. Initially, lesions are soft and contain a honey-coloured liquid. The lesions may progress to form soft nodular masses which become firm with chalky white areas of cholesterol in the affected subcutaneous tissues. In severe cases, affected areas may form pendulous masses. Localized lesions are to be trimmed. Carcasses with extensive lesions or where trimming is impractical are to be condemned. As this is a rare condition, samples should be collected and sent to a laboratory to confirm the diagnosis if a large number of carcasses is affected.

19.7.4.26 Urolithiasis

The aetiology of urolithiasis in fowl includes a variety of factors such as excess dietary protein and calcium, sodium bicarbonate toxicity, mycotoxins, nephrotoxic strains of Infectious Bronchitis, dehydration, excess vitamin A, dietary electrolyte imbalance, high dietary mineral content, and forced molting. The carcass may have asymmetrical renal atrophy. Ureters contain white to yellow urate deposits (uroliths). The affected kidney/ureter is dilated and filled with clear mucus and white irregular uroliths. The uroliths (concretions) are usually composed of sodium urate but may contain calcium urate. Carcasses are approved after the removal of the affected kidney/ureter. Carcasses and viscera with systemic effects, e.g. emaciation, are condemned.

19.7.4.27 Inspection of Suspect Turkeys for Pectoral Myopathy

19.7.4.27.1 Background

Pectoral myopathy is a degenerative muscular condition of the pectoral muscles mostly seen in mature hen turkeys. The condition is of no health significance to humans but for aesthetic reasons the affected muscular tissue shall be removed and condemned.

19.7.4.27.2 Requirements for the Deboning of Suspect Carcasses

This policy permits the inspection of suspect turkeys for pectoral myopathy in the deboning area of the plant under the following circumstances:

- Effective controls must be demonstrated according to a program approved by the CFIA and implemented by the operator;
- Suspect lots of turkeys will be identified prior to or at the post mortem inspection point. This identity must be maintained through to the point of deboning;
- Plant employees conducting deboning must receive adequate training to recognize carcasses affected with pectoral myopathy and to adequately remove all affected tissue. The deboning area must be equipped with an adequate number of knife sterilizers;

- All affected tissue must be retained and placed in containers for condemned material. Records must be kept of turkeys affected and weight of product condemned; and
- A system to notify inspection staff when affected carcasses are found must be instituted. Inspection staff will monitor the effectiveness of the inspection and trimming of affected tissue by employees.

CFIA inspection staff will additionally monitor finished product and the deboning operation for evidence of non-compliance or missed affected tissue. Should this occur, effective corrective action must be taken or the inspector in charge may insist that all suspect carcasses be inspected for pectoral myopathy at the time of evisceration.

19.7.4.27.3 Interplant Shipping of Suspect Lots

Turkeys that are suspected of being affected with pectoral myopathy may be shipped to a processing plant for deboning. The requirements for deboning listed above shall be followed with the additional requirement that identity must be maintained from reception to deboning.

19.7.4.27.4 Approval Process

Control programs must be submitted by the operator to the Veterinarian in Charge for approval. Approved programs shall be copied to the Area Poultry Inspection Program Specialist. The operator is required to demonstrate to the satisfaction of the CFIA that plant employees have been adequately trained to recognize carcasses affected with pectoral myopathy during deboning and to remove all affected tissue. A statement to this effect signed by the operator and the VIC for the establishment is to be included with the copy to the area office.

19.7.4.28 Determination of the Number of Carcasses to Examine for In-depth Inspection of Suspect Poultry Carcasses

Organoleptic examination of carcasses is not always sufficient to detect all lesions. Sometimes a more in-depth, invasive, examination is necessary e.g. turkey carcasses with “green liver”, and carcasses with deep pectoral myopathy. It is recommended that only a representative sub-set of “suspect” carcasses be examined. If no other lesions are found, then all other “suspect” carcasses can be released without further in-depth inspection. The following table illustrates the number of carcasses that need in-depth examination.

Total number of “suspect” carcasses	Number of carcasses for in-depth inspection
0 - 15	All
16 - 40	20 (1 out of 5 above 15)
41 - 100	25 (1 out of 12 above 40)
101 and more	30 (stop looking after 30)

The confidence level of detecting other lesions is 95% if lesions are present at a prevalence between 0 and 10%.

19.7.5 Veterinary Dispositions and Associated Reports

19.7.5.1 Veterinary Dispositions

Veterinary dispositions will not be performed by the CFIA unless the carcasses and viscera are presented by the operator so as to facilitate “hands-off” dispositions and the operator provides veterinary disposition work stations that comply with the applicable facility requirements described in Chapter 3 and 19 of this manual.

The racks, carousels, etc. used by the operator to present carcasses and their viscera for veterinary disposition shall be of sufficient size to correctly present:

- several “questionable” carcasses; and
- for a lot of poultry for which the operator has requested that the CFIA veterinarian provide a condemnation report, all the carcases and their viscera suspected of having a generalized disease or condition from 20 minutes of evisceration operations.

Alternatively, in the latter case, the operator may elect to manually present the carcases with their viscera to the veterinarian for a disposition. Common contact is permitted between carcasses on the racks, carousels, etc. provided that the pathology on the carcases and/or viscera is readily visible so as to permit hands-off veterinary dispositions and the operator discards any carcasses not condemned by the veterinarian as plant rejects (i.e. they may not be reprocessed, reconditioned or salvaged as edible product and will not be recorded on the operator’s “Condemnation / Rejection Report for Poultry”).

The industry helper, working next to the Inspector, is responsible for removing defective carcasses from the evisceration line and for recording the reason for rejecting each carcass as instructed by the CFIA inspector. The operator is responsible for discarding carcasses and their viscera following a veterinary disposition.

19.7.5.2 CFIA Condemnation and Rejection Reports

Effective April 1st, 2011, the CFIA will switch from issuing or signing condemnation or rejection certificates for poultry to a CFIA/ACIA 5640, “Poultry Condemnation Report” or a CFIA/ACIA 5639, “Poultry Rejection Process Control Evaluation Report”, as applicable, for each lot of poultry for which the operator issues a Condemnation/Rejection report.

The comments section of the preceding reports may be used by the CFIA veterinarian for reporting on abnormal levels of condemnations or rejections, special lot conditions and/or new carcass deviations, or whenever a CFIA official performs carcass-by-carcass detailed veterinary inspections. Such carcasses entered on the CFIA report should be included in the related operator’s condemnation/rejection report and must be included in the monthly report (CFIA/ACIA 5179, “Antemortem and Postmortem Inspection Report”).

19.7.5.3 Operator’s Condemnation / Rejection Reports

For the purposes of this sub-section, a lot of poultry refers to a truckload of live poultry or all of the poultry sourced from one producer/grower for a production shift or one floor of a barn, or whatever was agreed upon by the operator and the producer/grower.

The CFIA has no legal mandate to enforce that the operator issue such a report. However, the national poultry industry associations (Chicken Farmers of Canada (CFC), Turkey Farmers of Canada (TFC) and the Canadian Poultry and Egg Processors Council (CPEPC)) have agreed that a report should be issued for each lot of chickens and turkeys and have requested that the CFIA issue a corresponding condemnation or rejection report.

The format of the industry condemnation/rejection report is left to the discretion of the operator. However, all of the information contained in the template for the disposition report (available from the VIC) should be contained in the document issued by the operator with one exception. The line “Total parts rejected (weight calculated in kg) (Optional):” may be omitted by the operator if the operator does not wish to include such information on the disposition report. Additional information may be added and the format modified to suit individual operator’s needs.

The terminology used for reporting carcasses on the report was adopted to meet provincial legislation governing veterinary licensing associations restricting the diagnosis

of veterinary disease to licensed veterinary practitioners. Carcasses rejected by accredited industry employees that are not licensed veterinarians cannot be reported with terms implying a diagnosis of a disease.

The total percentage of carcasses rejected/condemned should be calculated ((number rejected or condemned/number slaughtered) x 100) for all the carcasses reported within the nine (9) categories listed on the report. This total percentage should be "benchmarked" or ranked against the percent rejected from all other lots of similar poultry slaughtered at the abattoir over a 12 month period and should be reported on the report.

The report contains the following attestation which should be signed and dated by an authorized plant official:
"The operator states that the information, weights and quantities were provided from the condemned/rejected carcasses."

An electronic version of the aforementioned template for the operator's report may be obtained by contacting one of the aforementioned industry associations or the local CFIA VIC.

19.7.5.3.1 Conditions to be Excluded from Operator's Condemnation/Rejection Reports

Carcasses with conditions listed in the following table:

- are to be handled by a designated industry employee;
- are not to be presented to the CFIA (unless requested by the VIC on a case-by-case basis);
- are not to be reported on the operator's "Condemnation / Rejection Report for Poultry"; and
- only "Extensive Bruising", "Found Dead" and "Inadequate Bleeding" are to be reported to the VIC for the monthly roll-up of all condemned carcasses

Processing Defects to be Handled by the Operator		
Number	**Name of Condition**	**Disposition Policy**
1	Extensive Bruising	19.7.1
2	Extensive Contamination (faecal, bile, ingesta)	19.7.4.2
3	Extensive Fractures	19.7.4.3
4	Extensive Mutilation	19.7.1
5	Extensive Overscald	19.7.1
6	Found Dead (Dead On Arrival)	19.7.1
7	Inadequate Bleeding	19.7.4.16
8	Loss of Identity	19.7.4.5

19.8 POULTRY CHILLING AND FREEZING PROCEDURES

19.8.1 Introduction

Methods similar to those used for poultry carcasses may be employed to chill rabbit carcasses in water provided control measures are in place to ensure that, at the time of packaging there is no increase of the hot weight of the carcass as a result of water chilling. Rabbit carcasses may also be hung on racks or chilled in coolers.

19.8.1.1 Regulatory Requirements

There is no provision in the MIR for raw, single-ingredient meat products (e.g. giblets) to retain water as the result of post-evisceration processing in excess of naturally occurring moisture except as provided for dressed poultry carcasses (and therefore by extension, parts from dressed carcasses).

The United States Department of Agriculture / Food Safety and Inspection Service (USDA / FSIS) regulations implemented on January 9, 2003, have two objectives:

- limit water retained by raw single-ingredient meat products from post-evisceration processing, such as carcass washing and chilling, to the amount that is unavoidable in meeting applicable food safety requirements; and
- require labelling for the amount of water retained.

Raw single-ingredient meat products, including carcasses, carcass parts, giblets, etc. will not be permitted by FSIS to retain water resulting from post-evisceration processing unless the operator preparing those products, demonstrates with data collected in accordance with a written protocol, that:

- any water retained in the products is an inevitable consequence of the process used to meet applicable food safety requirements; and
- the operator will be required to disclose on the label the maximum percentage of retained water in the raw single-ingredient meat product.

The CFIA intends to amend the MIR to harmonize them with the US Final Rule: Retained Water in Raw, Single-Ingredient Meat and Poultry Products (copied into Annex Y-1, US section, Chapter 11, of the MOP).

As an interim measure, pending amendments to the MIR, giblets, salvaged portions and detached necks may absorb and retain up to 8% added water as a result of post-evisceration contact with water on the condition that the operator develops and implements a written and validated retained water control program as per this section.

19.8.1.2 Definitions

Definitions applicable to refrigeration of poultry products:

Carcass Parts
Refers to parts from dressed carcasses as listed in Chapter 7, “Cutting and labelling requirements of poultry parts”.

Salvaged Portions
Refers to edible poultry harvested as part of salvaging operations, e.g. wings, wing drumettes, skinless breast fillets, legs, drumsticks and thighs.

Raw Single Ingredient Meat Product
Includes dressed carcasses, parts of dressed carcasses, salvaged portions, giblets (livers, hearts, and gizzards), ground poultry, finely textured poultry and mechanically separated poultry, either fresh or frozen.

19.8.1.3 Measures That Prevent Excess Water Retention

- control the pressure and amount of buffeting applied to carcasses by feather removal machinery so as to minimize its effect on loosening the skin;
- minimize the exposure of flesh (small cuts, prevention of cutting or tearing of skin between thighs and abdominal wall, complete trussing);
- separate the neck skin from necks or remove necks prior to washing and chilling of carcasses to promote drainage;

- operate the water immersion chillers at the coldest temperature possible without freezing the carcasses or the equipment;
- replace the rocker arm or paddle type chillers with screw auger or drag type chillers to prevent the unintentional extended exposure of some carcasses to water;
- drain the chill tank or vats at least ½ hour before unloading;
- drain carcasses on the drip line and manually drain subcutaneous accumulations, as required; and
- use automated equipment, e.g. tumblers, shaker, tables, etc.

19.8.2 Water Chilling

19.8.2.1 Salt Addition to Water or Ice

In chilling, no objection will be made to the addition of common salt to the ice or chill water, provided this is declared on the label of the finished product. The immediate container or package for carcasses, parts or portions so chilled must bear the statement: "Turkeys (chicken, etc.) chilled in ice with salt added" or words of similar meaning.

19.8.2.2 Chilling in Tanks

Where conventional tank chilling is used, care must be taken to ensure that:

- sufficient overflow of water is provided to ensure the removal of extraneous matter prior to final icing; and
- poultry products are not kept in the chilling water for more than 24 hours (if kept in tanks for more than 24 hours, continuous drainage is required).

19.8.2.3 Make-up Water Required for Water Immersion Chillers

A sufficient overflow of water shall be provided in water immersion chilling systems to ensure the removal of extraneous materials. Such continuous chilling systems are to be provided with a flow-meter, to measure total water used. The volume of the initial potable water and ice in the chilling system, plus subsequent amounts added, shall equate to not less than:

- 2L per carcass weighing ≤ 2.5 kg;
- 2.75L per carcass weighing > 2.5 kg and ≤ 6.5 kg; and
- 3.5L per carcass weighing > 6.5 kg.

Water used in the inside/outside carcass washer may be credited as part of the preceding water volumes provided that:

- a flow-meter, to measure total, and a pressure gauge, is installed on the inside/outside carcass washer; and
- the inside/outside carcass washer is operated so as to effectively remove extraneous material from the outside and the inside of the carcass.

19.8.2.4 Chilling Time / Temperature Requirements for Water Immersion Chillers

The MIR define refrigerate as "… to lower the temperature of a meat product to, and to maintain the temperature at, 4°C or lower, but does not include to freeze;"

All edible poultry products from live birds which are slaughtered and eviscerated in a registered establishment using water tanks in combination or not with air chilling shall be chilled as part of a continuous chilling process immediately after evisceration. Specific chilling requirements for strictly air chilled product are to found in section 19.8.4.1.

As part of the operator's HACCP system, chilling protocols for the various classes of birds and for the various weight classes processed within the establishment must be

initially validated according to protocols accepted by the Veterinarian in Charge in consultation with the Area Poultry Inspection Program Specialist. However, if an operator decides to modify a validated and approved chilling protocol while ultimately continuing to respect the following time/temp tables, e.g., interrupting temporarily the continuous chilling process to either individually or bulk pack and/or tie carcasses before they have reached 4°C but still reach an internal temperature within the prescribed timeframe found in the following table, no additional testing or validations are necessary for chilling time/temperature. However, the corresponding protocol for retained water may need to be revalidated (refer to the next section on retained water).

19.8.2.4.1 Dressed Poultry Carcasses and Parts

Immediately following evisceration and washing, all dressed poultry carcasses shall be chilled to an internal temperature of 14°C or lower within 2 hours of the beginning of the evisceration process and then all dressed poultry carcasses shall be chilled according to the following table:

Weight of Dressed Poultry Carcasses	Initial Time (hours) to Reach ≤ 14°C*	Additional Time (hours) to Reach ≤ 6°C*	Additional Time (hours) to Reach ≤ 4°C*
Under 1.8 kg	2	2	4
1.8 kg to 3.6 kg	2	4	4
3.6 kg to 5 kg	2	6	4
5 kg to 7 kg	2	8	4
7 kg to 12 kg	2	10	4
Over 12 kg	2**	10	6
* internal temperature ** in this weight category, the temperature to reach within the first 2 hours is ≤ 16°C.			

In the case of deviations to the preceding chilling time/temperature table and/or established chilling protocols, it is recognized by Health Canada that cooking should, at the establishment level or at the end-user level, adequately mitigate the risk of excess pathogen growth resulting from any cooling deviations.

If a deviation occurs, the product shall continue the chilling process and either be cooked or kept fresh. If product will be kept fresh, the shelf life/best before date must be re-evaluated and labelled accordingly. If the violation results in spoilage of the product then it must be disposed of as inedible product.

“Best before” dates must be established and validated for all poultry and poultry products sold as fresh for every chilling protocol used by the operator.

An exception is made in the case of dressed poultry carcasses and parts from dressed carcasses which are intended for immediate cooking within the registered establishment.

As part of a CFIA recognized HACCP system, the following may be implemented provided the process is initially validated according to a protocol accepted by the Veterinarian in Charge in consultation with the Area Poultry Inspection Specialist if required:

- Alternative times for chilling poultry carcasses and portions thereof to 4°C or lower; and/or,
- Packaging of poultry carcasses and portions before an internal temperature of 4°C is reached.

Dressed poultry carcasses, prior to being chilled to an internal temperature of 4°C, may be shipped from a registered establishment to another registered establishment for completion of chilling provided that:

- Both establishments operate under a HACCP system which includes the chilling of such product;
- The chilling process is continuous, including during transport, and achieves a deep muscle internal temperature of 4°C within the time indicated above;
- Product is not shipped prior to achieving a surface temperature of 7°C or lower; and
- The chilling process results in chilled product which complies with the pathogen reduction requirements as contained within the section on the United States in Chapter 11, Exports, of the MOP.

19.8.2.4.2 Giblets, Detached Necks and Salvaged Portions

Giblets, parts of dressed carcasses harvested during the dressing procedures including detached necks and salvaged portions shall be chilled to 4°C or lower within two hours after evisceration. However, salvaged turkey breasts, breast fillets, legs, drumsticks and thighs shall be chilled to 4°C or lower within four hours after evisceration.

19.8.3 Retained Water Control Programs

19.8.3.1 General Requirements

Operators are to write and validate a retained water control protocol for water which is absorbed and retained as a result of post-evisceration contact with water, for all raw single-ingredient poultry products including dressed carcasses, parts of dressed carcasses including detached necks, salvaged portions and giblets.

The method chosen in calculating water absorption and retention shall be reproducible and verifiable. For example, an operator may use:

- **physical water pick-up tests**, weighing carcasses post-evisceration, before the inside/outside carcass washer, and again just prior to final packaging and labelling.
- **oven drying laboratory test method** for naturally occurring and total water content of carcasses before and after the application of water for food safety purposes.

Note: Further details on laboratory testing is contained at the end of Annex Y-1, US section, Chapter 11 of the MOP. Please note that the same testing method used for validating the proposed retained water control protocols shall be used for ongoing testing of the resulting retained water control programs.

Operators may submit a proposed alternative Statistical Process Control (SPC) program, developed by a professional statistician, to the Veterinarian in Charge to be forwarded to the area poultry inspection program specialist and then to the Chief, Poultry Inspection Programs, CFIA, Ottawa, for an equivalency determination. At least several months will be required by the CFIA to assess such a submission. If judged to be equivalent by a CFIA statistician and the Chief, Poultry Inspection Programs, then the proposed alternate SPC program may be implemented by the operator.

19.8.3.1.1 Retained Water Declarations

Prepackaged giblets, shipping containers for bulk packed giblets and giblets contained within carcasses must be labeled with a retained water declaration as part of the product name. For carcasses containing giblets, the declaration must clearly refer to the giblets or must be truthful for both the carcass and the giblets. Further information on the labelling of retained water declarations is contained in Chapter 7 and in the US section, Chapter 11, of the MOP.

However, the labelling of dressed carcasses and parts, including detached necks and salvaged portions is voluntary until a date fixed by amendments to the MIR.

A statement may be included on the label to indicate that no water has been absorbed and retained when product has not been exposed to a post-evisceration process that adds water, or the operator has data or information that establishes that the post-evisceration processes do not add water to the product. However, the test data and a copy of the corresponding carcass washing and chilling procedures shall be maintained on file and be copied to the Veterinarian in Charge.

19.8.3.1.2 Exempted Products and Processes

Multi-ingredient poultry products such as basted turkey carcasses, with/without giblets, are exempted. The giblets within a basted turkey carcass also do not require a retained water declaration.

Raw Kosher products (treated with salt and water in accordance with Judaic law) are exempt from the labelling requirement for a retained water declaration (refer to Chapter 7 of the MOP) but shall comply with the maximum amount of absorbed and retained water permitted by the MIR. Compliance shall be demonstrated by adhering to a retained water control program as described in this chapter for raw single-ingredient poultry products.

An operator does not have to write and validate a retained water control program provided that documentation proving that products do not retain water as a result of post-evisceration contact with water are filed on-site and copied to the Veterinarian or Inspector in Charge.

The following are examples of post evisceration processes involving the use of water that would not require subject products to be processed under a retained water control program:

- flushing gizzards and chitterlings to remove digestive tract contents;
- removing the lining from gizzards, the gall bladder from livers, and the pericardial sac from hearts;
- scalding of paws or feet;
- washing with water to remove excess blood, e.g. washing hearts, livers, gizzards, paws and feet; and
- washing with water to remove the contents within oral cavities and nasal passages in heads for head- and feet-on poultry.

However, if the flushed, washed or scalded products are then chilled by contact with water and /or ice, then the chilling procedures (only) require a written and validated retained water control protocol.

19.8.3.1.3 Non Exempted Products and Processes

Crust frozen or ice-glazed poultry carcasses are subject to the requirement for a retained water declaration unless they are basted.

The following are examples of post evisceration processes involving the use of water with or without a microbial control agent that would require the subject poultry products to be processed under a retained water control program:

- post-evisceration washing, including on-line reprocessing systems;
- transportation in water within stainless steel pipes;
- water or ice chilling;
- postchill spraying;
- thawing; and

- iced necks and backs processed through an advanced meat recovery or mechanical deboning equipment.

Note: On a case-by-case basis, the Veterinarian or Inspector in Charge, in consultation with his or her Regional Veterinary Officer and the Area Poultry Inspection Program Network Team Specialist will evaluate other post evisceration processes involving the use of water to determine whether the resulting products require a retained water control program.

19.8.3.1.4 Food Safety Requirements

Food safety requirements that must be met and included in a retained water protocol shall include chilling time/temperature requirements as previously listed in this section.

Food safety requirements which should be met and which should be included in a retained water protocol include the applicable salmonella performance standards as described in Chapter 11, US section, Annex U, “USDA Performance Standards for *Salmonella*”.

19.8.3.1.5 Programs Required Per Species, Class and Age of Poultry

These requirements are applicable to all raw single-ingredient poultry products. In this section, the word "carcass" is interchangeable with other raw-single ingredient poultry products such as livers, hearts, gizzards, detached necks, and salvaged portions such as breasts, breast fillets, wings, legs, thighs and drum sticks.

A retained water control program is required for:

- carcasses from each species and class of poultry listed in the regulations and age category; (e.g. young and mature poultry)
- each component of edible giblets (livers, hearts and gizzards);
- for detached necks; and
- for each type of salvaged portion such as breasts, breast fillets, wings, legs, thighs and drum sticks.

The same retained water control program may be used for giblets, salvaged portions and detached necks from all three classes of turkeys listed in the regulations provided that:

- the same processes and equipment are used;
- the program scope includes product from all three classes; and
- product from the three classes is included during the validation testing.

However, a separate validation test must be performed for each poultry product from each of the three classes of turkeys, e.g. separate validation tests for livers, another set of tests for hearts, a third set of tests for detached necks, a fourth set for salvaged breast filets, etc.

The same retained water control program may be used for giblets, salvaged portions and detached necks from both chicken broilers and chicken roasters (but requires two separate validation tests, e.g. for livers from chicken broilers and for livers from chicken roasters, etc.).

19.8.3.1.6 Carcasses With Low Water Retention

No further ongoing testing is required by the operator to monitor retained water for dressed carcasses, as shipped or when packaged as portions, if the initial validation data (50 carcass test as described later in this subsection) indicates that:

- the average percentage weight increase for the group of 50 sampled carcasses is less than half that permitted by the regulations; and
- none of the individual carcass weight increases exceeds that permitted by the regulations.

However, the initial 50 carcass validation test for retained water must be repeated at least once each year to verify that the above two listed conditions are still being met. Records of this annual verification must be kept on file and be copied to the Veterinarian in Charge.

Moreover, for carcasses which are labeled with the claim “air chilled” or a similar phrase, refer to the information on air chilling near the end of this section.

19.8.3.2 Writing a Water Retention Control Program

These requirements are applicable to all raw single-ingredient poultry products. In this section, the word "carcass" is interchangeable with other raw single-ingredient poultry products such as livers, hearts, gizzards, detached necks, and salvaged portions such as breasts, breast fillets, wings, legs, thighs and drum sticks.

19.8.3.2.1 Elements of a Written Retained Water Control Program

The proposed retained water control protocol is to be comprised of the following nine elements and include information for each element as follows:

1. Purpose statement

State the primary purpose of the protocol. The primary purpose should be to determine the amount or percentage of retained water that is unavoidable while achieving compliance with the time/temperature chilling requirements as contained within this chapter. Additional purposes could be to evaluate product quality and to determine chilling system efficiency.

Indicate which species or classes of poultry, and list all products, which are covered by the protocol.

2. Type of washing and chilling system used by the operator

Describe any post-evisceration washing or chilling/cooling processes that affect the water retention levels by, and microbial loads, on raw products. Describe the chiller types, e.g. the drag-through, the screw type, the paddle type and the rocker-arm type, identified by the mechanism used to transport the carcasses through the chiller or to agitate the water in the chiller.

3. Configuration and any modifications of the chiller/cooling system components

Describe the chiller/cooling system configurations and any modifications of the chiller system components including the number and type of chillers/coolers in a series, arrangements of the chilling/cooling system components, and the number of evisceration lines feeding into a chiller/cooling system. Accurately describe the purpose and type of equipment used if there is a pre-chilling/cooling step in the process. Describe any mechanical or design changes to the chilling/cooling equipment.

4. Special features in the chilling/cooling process

Describe any special features in the chilling/cooling process, including microbial control agents, length and velocity of the dripping line, and total time allowed for dripping. Explain any special apparatus, such as a mechanism for removing excessive water from chilled carcasses.

5. Description of variable factors in the chilling /cooling system

Describe the variable factors that affect water absorption and retention. Such factors include:

- scalding temperature;
- pressure and amount of buffeting applied to the carcasses by the feather removal machinery and its effect on loosening the skin;
- method used for opening the carcass for evisceration;
- temperature of the pre-chiller;
- temperature of the chiller;
- agitation including air agitation if used; and
- time in the chiller water.

Identify the settings of all the key points. Key points refer to those operational settings which affect added and retained water and which could be modified during a work shift, e.g. water pressure within the inside/outside carcass washer, transit time and temperature for water chillers, chain speed and exposure time to water sprays within the air chiller, time on the drip line, whether cut-up and pre-packaged as parts.

6. Standards to be met by the chilling system

For establishments eligible to export to the US, specify the applicable *Salmonella* performance standard as contained in Annex U, US section, Chapter 11, MOP. Although the US has not published an applicable Salmonella standard for turkey carcasses, a guidance standard has been published by the US for turkey carcasses as follows:

- Performance Standard (percent positive for *Salmonella*) 49.9%
- Number of samples tested (n)[a] 56
- Maximum number of positives to achieve Standard (c)[a] 13

[a] *The values for Salmonella n and c are the criteria for evaluating sample results to determine whether an operator is meeting the standard. The number of samples n was selected by the US to be greater than 50 so as to measure operator performance over a minimum period of time. The value for n and c are selected so that an operator has an 80% chance of passing when operating at the standard level. Because (n, c) must be integers, exact probabilities of 80% cannot be expected.*

Note: The chilling/cooling system must be designed and operated so as to comply with the applicable time/temperature requirements listed in this Chapter for reducing the deep internal muscle temperature down to 4°C.

7. Testing methods to be employed

Describe testing methods used, both for measuring water absorption and retention and for sampling and testing product for pathogen reductions at various chilling equipment settings and chilling time-and-temperature combinations. The method for calculating water absorption and retention must be reproducible and statistically verifiable. The sample collection locations, number of samples, type of samples, sampling time period, whether carcasses will be chilled with/without necks, type of testing or measurement e.g. weighing procedures, and test results are to be included.

The trials shall represent processing procedures that can be maintained in the establishment. It is understood that very small plants or those operators producing a very small volume of the product may experience a greater variation in measurements than in plants producing a large volume of the products.

Initially, the operator would perform several trials to determine the amount of unavoidable retained water, if any, in achieving the food safety standards listed under element number 6 (above).The operator would have to determine the variables in the process that would affect the amount of retained water. For example, water temperature in the chiller/cooler may be a variable to consider. Similarly, agitation, e.g. paddle rotation speed, may be a variable to consider. If a microbial control agent was added, the amount of time in the chiller/cooler may be reduced. In each trial of the various water temperature and agitation settings the water retention data would be plotted.

The trials are to be conducted using the existing chilling/cooling equipment and facilities in the establishment. If the water or air temperature cannot be lowered without causing equipment problems due to ice formation, and considering that warmer water or air interferes with rapid carcass chilling, then only the current water or air temperature should be used for the trials. Similarly, if water and carcass agitation cannot be adjusted due to the design of the equipment, then various agitation settings cannot be tested. If such is the case, indicate why the water temperature and agitation settings cannot be changed.

Note: Water absorbed and retained by carcasses as a result of post evisceration contact with water must not exceed the maximum percentage of weight increase permitted by section 25, MIR. Operational procedures and/or chilling equipment may require changes to achieve compliance with regulatory requirements.

If the chilling/cooling variables do not require changes so as to reduce the amount of absorbed and retained water, then the latest series of salmonella test results are to be included with the submitted data. However, if as a result of the trials the chilling/cooling processing operations are modified or changed, then a new series of salmonella tests must be conducted to reflect the new chilling/cooling process operations.

8. Reporting of data and evaluation of results

Explain how data obtained are to be reported and summarized. Examples of reported information include, but are not limited to, the number of sample replicates, reporting of *Salmonella*, and the calculation or formula used to determine the level of water retention.

9. Conclusions

Explain what the data demonstrate, the conclusions reached, and how the conclusions were reached. Include the amount of retained water which is to be declared on the labels of the packaged products. Indicate how the operator will maintain compliance with regulatory requirements and describe examples of corrective action.

Further information on writing and validating retained water protocols is contained in Annex Y, US section, Chapter 11, of the MOP.

19.8.3.3 Validation of the Program

19.8.3.3.1 Sampling Procedure for Validating a Retained Water Protocol

Physical water pick-up test

A minimum of 50 whole untrimmed (Grade A) poultry carcasses are to be randomly selected, identified and weighed **individually**. Each carcass shall be weighed twice and the weights recorded. The initial weight of each carcass is determined by weighing it prior to the first inside-outside carcass washer after inspection. The final weight is determined by weighing the same carcass after the normal chilling and drainage time prior to packaging as a whole carcass (or as parts if the operator never packages any whole carcasses).

A data collection sheet shall contain the following:

- The percentage weight increase or decease for each carcass corresponding to the initial and final weights;
- The average weight increase or decrease for the entire group of 50 carcasses shall be calculated and entered; and
- The number of carcasses shall be indicated which have retained water above the maximum permitted by the regulations plus a 20% tolerance to account for inherent biological, processing and measurement variability.

The completed data collection sheet shall then be attached to the proposed retained water control program to serve as part of the validation data.

Giblets, detached necks and salvaged portions

A minimum of 50 e.g. hearts, livers, or skinless breasts, etc. may be weighed as a bulk sample to obtain both the initial weight and the final weight. The post-chilling bulk sample shall contain the same number of units as the initial sample and be collected from the same lot as used for the initial weight.

Oven drying laboratory method

Initially the operator needs to determine what is the natural level of water as contained within the carcass parts or giblets or salvaged portions and to determine the amount of water which must be declared. To accomplish this, the operator collects a sample comprised of five:

- livers, hearts or gizzards (after removal of the pericardial sac or the gall bladder or the gizzard contents and mucosa, as applicable); or
- carcass parts (e.g. detached necks, skin less breast fillets, bone-in skin-on or skinless leg quarters or thighs, etc.); or
- salvaged portions (e.g. wings, breast fillets or legs, etc.)

The products listed above shall be from the same lot and collected prior to contact with water or ice as used to transport or chill the sampled product.

A similar group of five products is collected after chilling and drainage, (including drainage which occurs during cut-up and boning), immediately prior to packaging from the same lot. Samples must be packaged so as to prevent moisture loss during storage and transport to the lab.

Note: In the case of gizzards, gizzard pieces approximating the weight of five whole ready-to-chill gizzards may be used rather than whole gizzards.

At the lab, pre-chill samples are dry oven tested for water content. A similar test is performed on the post-chill sample from the same lot. The two samples are recorded and the corresponding net difference is reported as the amount of water which was absorbed and retained by the lot based on paired sampling.

The results from 50 paired samples collected from 50 consecutive lots of poultry are used to determine the:

- percentage of retained water to be declared on the packaged product; and
- natural amount of water contained by the e.g. hearts, livers, giblets, skinless breasts or bone-in leg quarters, etc.

Paired sampling is not required thereafter since the amount of absorbed and retained water in packaged product can be based on the natural moisture level as was determined using the 50 paired samples as described above.

19.8.3.3.2 Assessing the Results of Validation Tests

Operations for the washing, chilling and drainage of carcasses are to be deemed to be in compliance with the MIR if:

Physical water pick-up tests

For water chilling:

- the average weight increase (or decrease) of the group of 50 carcasses (or parts from the 50 carcasses) does not exceed the stipulated regulatory maximum in section 25 of the MIR; and
- no more than six* carcasses exceed the aforementioned regulatory maximum plus 20% (e.g. for chicken carcasses which are prepackaged and are permitted to retain a maximum of 8% absorbed and retained water, no more than six* carcasses from the group of 50 sampled carcasses may exceed 9.6%.)

  ***Note:** Validation pass/fail criteria: (ISO sampling plan 2859-1)
  - Single sampling plans for normal inspection
  - Sample size of 50

For air chilling:

- the average weight increase for the 50 carcasses shall not exceed 0.0%;
- a maximum of 25 individual carcasses from the group of 50 sampled carcasses may have an increase exceeding 0.0% (to account for scale variability); and
- no individual carcass shall exceed 2.0% absorbed and retained water.

For the oven drying laboratory method

A maximum of 6 out of the 50 paired samples may exceed the amount of water declared plus 20%, e.g. to declare "Up to 8% water added", no more than 6 of the 50 samples may exceed (8 plus 20% of 8 which is 1.6%) or 9.6% similar to the pass/fail criteria for validating proposed chilling protocols for poultry carcasses.

The results of the validation tests along with a completed proposed retained water control program are to be submitted to the Veterinarian in Charge for evaluation. If judged to be satisfactory by the CFIA, the proposed program is accepted and becomes an approved retained water control program. **No deviations** are permitted except that the chill-media temperature may be lower than that **recorded on the validated program**; the drip line or drain times may be extended; and/or the chilling system may be speeded up at the end of the day to empty the chiller provided carcasses are chilled to an internal temperature of 4°C.

19.8.3.4 On-going Testing Under an Approved Retained Water Control Program

Whichever method was used for validation testing (physical water pick-up tests or dry oven laboratory test method) shall be used for ongoing testing.

Procedures shall be monitored on an on-going basis and the settings of the key points shall be recorded at minimum on an **hourly basis** by a designated plant employee as part of the HACCP system. Key points refer to those settings which could be modified during a work shift and affect the % of water absorbed and retained in the chilled carcasses. Other settings may only be checked once at the beginning of each shift.

19.8.3.4.1 Giblets, Detached Necks and Salvaged Portions

Validation test results for poultry giblets, detached necks and salvaged portions (from all the classes listed in the MIR) shall be assessed to determine which giblet, detached neck or salvaged portion absorbed and retained the maximum percentage of water. Ongoing testing is limited to the giblet or detached neck or salvaged portion with the highest % of absorbed and retained water.

19.8.3.4.1.1 Sampling

Physical water pick-up tests

A minimum of 50 e.g. livers should be used for ongoing testing. If a test is failed, a larger sample size is recommended for subsequent tests.

Oven drying laboratory test method

Paired sampling is no longer required for ongoing testing since the natural level of moisture content for the particular raw single-ingredient poultry product was determined during validation of the applicable retained water control program.

A single group of five e.g. livers, wings or detached necks is required for each post-validation test for retained water (rather than the sample size specified in the subsequent table).

However, one skin-on or skinless breast is a sufficient sample size for poultry breasts due to their extremely low level of retained water and their high value. Generally, poultry breasts should qualify for the low volume of retained water rate of testing which is a once per year verification testing after the initial series of validation tests (refer to the preceding subsection).

19.8.3.4.1.2 Switching Rules

Initially, for the giblet, salvaged portion or detached neck with the highest amount of absorbed and retained water, one test is required per production shift (“1/shift”). Results shall be assessed based on the average % of absorbed and retained water and may not exceed 8%.

- If 10 consecutive “once/shift” tests pass, the testing frequency may be reduced to once per 5 consecutive production shifts.
- If 10 consecutive “once/5 shifts” tests are passed, then the testing frequency may be further reduced to once per 20 consecutive production shifts.
- If 10 consecutive “once/20 shifts” tests are passed, testing frequency may be decreased to once per 3 months (quarterly testing).

19.8.3.4.1.3 Corrective Actions

If a test indicates greater than 8% absorbed and retained water, then the next available lot shall be tested. If results again exceed 8%, then:

- the affected product, and all subsequent product shall be segregated and be either drained until below 8%; or
- be used in processed product which permits water as an added ingredient; or
- be discarded as inedible material, and;
- the operator must then conduct an investigation to determine the probable cause and take effective corrective action. The written retained water control program(s) shall be amended if operational parameters have changed. All written retained water control programs for giblets, detached necks, and salvaged portions, which indicated greater than 4% absorbed and retained water shall then be (re)validated.

19.8.3.4.2 Whole Carcasses

In the definition of the chilling procedure as contained within the validated program, **if the transit time includes periods when the carcasses are not emptied from the chillers during either the breaks or meal periods, then the chilling system may be halted during these periods**. But if the chilling procedures do not take into consideration the breaks and/or meal periods, then the chilling system shall be kept operating allowing the tanks to be normally emptied during these periods.

Note: The operator may choose to use the oven drying laboratory test method as described at the end of Annex Y-1, US section, Chapter 11 of the MOP.

19.8.3.4.2.1 Sampling Plan:

The sampling plan used is based on the ISO sampling plan, ISO sampling plan 2859-1, Special Inspection level S-4.

19.8.3.4.2.2 Lot Selection and Size

The size of each lot is set at a maximum of 10,000 carcasses. A separate lot is required for each species and class of poultry listed in the MIR.

Prior to the beginning of operations, the operator shall:

- divide a single day's production into lots;
- determine the number of lots to be tested during a day's production using the table below;
- randomly determine which lots will be tested so that each lot has an equal chance of being tested; and
- weigh a sample of carcasses selected from each lot.

Example: (140 chicken (< 3.0 kg) carcasses/minute for 8 hours equals 67, 200 carcasses. Therefore production would be divided into 6 lots of 10,000 carcasses plus a seventh lot of 7,200 carcasses.

19.8.3.4.2.3 Number of Lots to be Sampled

Number of lots of 10,000 carcasses each to be sampled by production volume				
Number of carcasses slaughtered per shift	Number of lots of 10,000 carcasses	Number of lots to be sampled per shift by type of Inspection		
		Reduced	Normal	Tightened
1 - 40,000	1 - 4	Once per 1, 5 or 20 consecutive production shifts as per decision tree in this subsection	1	Immediate retest, i.e. test next available lot after completion of a retained water control test
40,001 - 80,000	5 - 8		2	
80,001 - 120,000	9 - 12		3	
120,001 - 160,000	13 - 16		4	
160,001 - 200,000	17 - 20		5	
200,001 - 240,000	21 - 24		6	
240,001 - 280,000	25 - 28		7	

19.8.3.4.2.4 Sample Size

A group of carcasses shall be randomly selected from each lot which has been selected for sampling according to the preceding table. The carcasses selected for sampling are referred to as the “sampling group”. The size of the sampling group is determined by the inspection level as follows:

Sample Size for a sample of carcasses from a lot of chilled poultry carcasses	
Inspection Level	Sample Size (number of carcasses)
Reduced	13
Normal	32
Tightened	32

19.8.3.4.2.5 Selection and Weighing of Carcasses

Within each lot selected, the operator shall perform pre and post-chill weighing of a sample of carcasses as per the preceding table.

Additional carcasses may be weighed, so as to ensure the minimum number required in the event that any carcasses are lost, provided that weighing procedures stop once the required number of carcasses are obtained at the post-chilling location.

If sufficient carcasses cannot be obtained from a sample group to determine the final weight, then the data for that lot shall be discarded and be replaced by sampling the next available lot.

The first weight prior to chilling is referred to as the initial weight, and the post-chill weight as the final weight. The carcasses, making up the sample for each lot, must be representative for the lot.

Carcasses to be weighed shall be selected prior to the first inside-outside carcass washer after inspection or detection, referred to as the initial weight, and be identified. Carcasses shall be weighed individually. Each initial carcass weight shall be recorded. The initial carcass weights shall be totalled.

At a predetermined point, as identified by the operator, after the normal chilling and drainage time, the identified carcasses shall be weighed a second time to determine their final weight. Each final weight shall be recorded such that the final weight corresponds to the initial weight on the operator’s report. The final carcass weights from a sample shall be totalled and recorded.

Whenever the final carcass weight exceeds the corresponding initial weight, the difference shall be calculated as a percentage of the initial weight and be recorded adjacent to the corresponding final weight.

19.8.3.4.2.6 Calculating the Percentage Weight Gain or Loss

Percentages shall be calculated based on the initial weight for all the carcasses.

Example:
Calculating the maximum percentage weight gain permitted for six (6) of the 50 sampled carcasses during the validation step of the retained water protocol.

For broiler chicken, the specified regulatory maximum is 8%.

Adding 20% = 9.6% (20% of 8 = 1.6%). Therefore, no more than six (6) out of the 50 weighed carcasses may exceed 9.6%.

Example:
Calculating the percentage weight gain or loss for a group of sample carcasses after the validation step (during ongoing testing).

Broiler Chicken on Reduced Inspection
total initial weight of 13 individual carcasses = 1,500 g
total final weight of 13 individual carcasses = 1,600 g
(individual weights recorded on the chart specified in the retained water control program)

Total weight gain (or loss) for the group of 13 carcasses

$$\frac{(1{,}600-1{,}500) \times 100}{1{,}500} = 6{,}7\%$$

19.8.3.4.2.7 Lot Acceptance/Rejection

Physical water pick-up tests

Accept and Reject Numbers, AQL of 10, Single Sampling Plans			
Inspection Level	**Sample Size**	**Accept Number**	**Reject Number**
Reduced	13	5	6
Normal	32	7	8
Tightened	32	5	6

For carcasses chilled in water

- The average weight increase (or decrease) of the group of sampled carcasses does not exceed the stipulated regulatory maximum in the regulations
- The number of weighed carcasses with a net weight increase at or above the regulatory maximum plus 20% is equal to or less than the accept number for the corresponding inspection level (normal, reduced or tightened) in the preceding table, the lot is accepted.
- If the number of carcasses with a net water absorption and retention at or above the maximum specified in the regulations plus 20% (for inherent biological, processing and measurement variability) is greater than the accept number but less than the reject number, accept the lot but switch to normal inspection for the next test.

For carcasses labelled as “air chilled”:

- A lot is assessed to be in or out of compliance with the retained water control requirements for air chilled carcases based on the total number of (individual) carcasses with a net water absorption and retention at or above 0.5%. This allowance of 0.5% is intended to compensate for scale variability. This allowance is not to be used as a tolerance; and
- If the number of weighed carcasses with a net water absorption and retention at or above 0.5% is equal to or less than the accept number for the corresponding inspection level (normal, reduced or tightened) in the preceding table, the lot is accepted.
- For reduced sampling, if the number of carcasses with a net water absorption and retention at or above 0.5% is greater than the accept number but less than the reject number, accept the lot but switch to normal inspection for the next test.

Oven drying laboratory test method

The water content for the poultry product (collected immediately prior to packaging) indicated on the lab report is compared to the amount of naturally occurring moisture in the applicable raw single-ingredient poultry product as determined during the initial series of validation tests.

After subtracting the natural moisture content from the water level on the lab report, the remaining water, which is the amount of absorbed and retained water, must not exceed that which is declared on the product label plus an additional 20% (to compensate for inherent biological, processing and measurement variability).

19.8.3.4.2.8 Switching Rules

Sampling begins at the normal rate. Once 10 consecutive sample groups (or lots) are shown to be in compliance, the operator qualifies for Reduced Inspection with a minimum of one test per production shift.

If an additional 10 consecutive lots are accepted under Reduced Inspection, the sampling frequency may be reduced even further, based on good compliance, to one lot per 5 consecutive production shifts.

If an additional 10 consecutive lots are accepted under Reduced Inspection, the sampling frequency may be reduced even further, based on continuing good compliance, to one lot per 20 consecutive production shifts.

Thereafter, the operator may group all classes of poultry carcasses that qualify for testing at the reduced frequency of once per 20 consecutive production shifts. Only the class of poultry with the highest relative level of absorbed and retained water (closest to the maximum % permitted) needs to be tested. However, each retained water control protocol needs to be revalidated each year.

If the reject number is reached or exceeded, the lot is rejected. If a lot is rejected, the chilling process may be out of control. The Veterinarian in Charge or an inspector is to be notified, the operator shall determine the probable cause, and then take immediate corrective action as indicated within the operator's retained water control program.

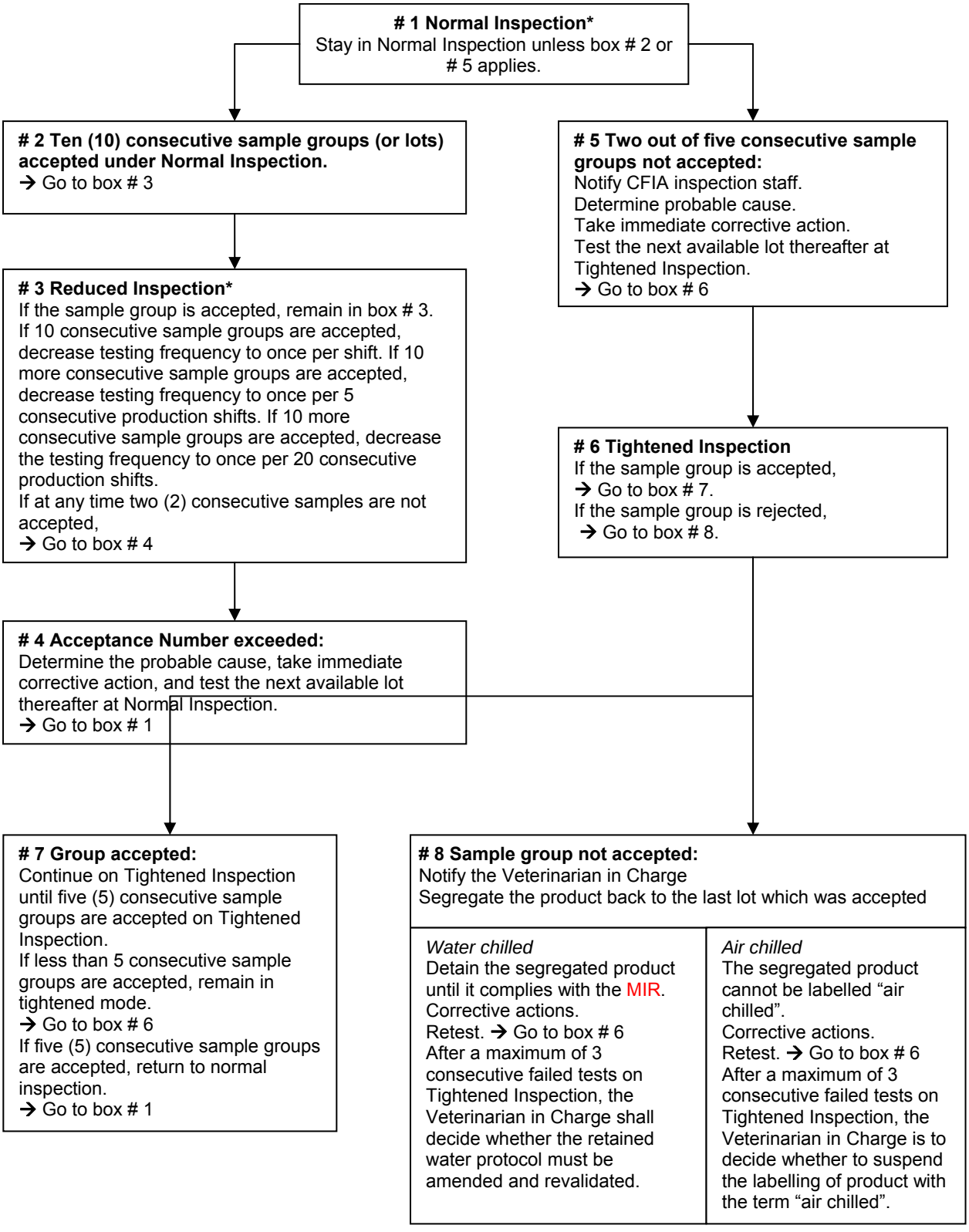
Non compliant product

Raw single-ingredient meat products containing absorbed and retained water above that permitted by the MIR may be:

- handled as inedible material (e.g. giblets for animal food); or
- drained until in compliance;
- cut up and/or skinned and/or boned out (provided the packaged product is in compliance); or
- used in processed meat products (e.g. basted turkey carcasses).

The latter option is restricted to operators who have implemented a control program acceptable to the CFIA, (at both the slaughtering and the processing establishment), and which assures that all non complaint product is used only in processed product which may contain water as an added ingredient.

19.8.3.4.2.9 Decision Tree for Retained Water Control Program



★ A test at normal inspection may be performed at any time as an additional assurance of process control and may be requested by the operator or the inspection staff.

The *Meat Inspection Regulations, 1990* have precedence over this decision tree

19.8.3.5 Amending Approved Retained Water Control Programs

The operator may establish or change a plant specific retained water control program at any time provided it results in the production of a product in compliance with the MIR, 1990, the written procedure is amended and validated, and the new proposed protocol is approved by the Veterinarian in Charge.

19.8.4 Air-Chilled Poultry Products

Poultry abattoirs have begun to use alternatives to conventional water tank or water immersion (bath) chilling of poultry. “Air Chilled” is commonly used to describe poultry and poultry cuts which, after the inside/outside carcass washer step, have been chilled with cold air. Water sprays or misting devices are generally used during air chilling processes to prevent skin dehydration.

19.8.4.1 Air Chilling Temperature Requirements

All edible poultry products from live birds which are slaughtered and eviscerated in a registered establishment using air chilling shall be chilled as part of a continuous chilling process immediately after evisceration until an internal temperature of 4°C or lower is reached. Unlike water chilling, there are no time requirements to meet the internal temperature of 4°C or lower as long as the chilling process is continuous and air chill room temperature is maintained at 4°C or lower.

However, the CFIA would not object if the chilling process is momentarily interrupted to either individually or bulk pack and/or tie carcasses as long as:

- the product must have reached 10°C or less
- the interruption must not result in temperature increase of the carcasses
- the chilling protocol be validated to the satisfaction of the Veterinarian in Charge

Note:: “Best before” dates must be established and validated for all poultry and poultry products sold as fresh for every chilling protocols used by the operator.

19.8.4.2 Labelling and Advertising Claims

Refer to Chapter 7 of the MOP for the use of phrases or claims such as “air chilled” and “no water added”.

19.8.4.2.1 Requirements Regarding the Voluntary Use of the Term “Air Chilled” in the Labelling and Advertising of Poultry

Operators of slaughtering establishments wishing to label poultry products with the term “air chilled” shall have a written procedure, signed off by the Veterinarian in Charge, which assures that only eligible product (refer to the next subsection) is labelled with the claim “air chilled” or similar phrases. For example, operators handling both water and air chilled poultry must specify that only air chilled poultry be labelled with the phrase “air chilled”.

Operators of processing establishments wishing to label poultry carcasses and/or portions with the term “air chilled” shall have a written procedure, signed off by the Inspector in Charge, which assures that only eligible product (refer to the next subsection) is labelled with the claim “air chilled” or similar phrases. For example, the specifications for received poultry products may be amended by the operator to require all eligible products to be labelled on the main panel of the bulk shipping container with the phrase “air chilled”.

Note: The operator may at any time elect not to label air chilled product as “air chilled”, or with a similar phrase, in which case the operator shall comply with water absorption and retention requirements.

Use of the term “air chilled” or similar phrases shall be restricted to carcasses or portions which are chilled;

- without the immersion of carcasses or portions in a water bath*;
- by means of cold air with/without water sprays or mists which apply the minimum water necessary so as to prevent excessive dehydration of the skin ; and /or
- are individually frozen or crust frozen by means of nitrogen or carbon dioxide gas; and
- the operator demonstrates through a written quality control program and validation data that there is no net increase in the weight of the carcasses as a result of post evisceration washing, chilling and drainage.

***Note:** carcasses may be dipped briefly in a microbial control solution provided that any water absorbed and retained is controlled as part of the retained water control procedure as recorded on the applicable Established Chilling Procedure (CFIA/ACIA 4673), and that the dip is not used to chill the treated carcasses.

19.8.5 Roles and Responsibilities

19.8.5.1 Operator

The operator must:

- provide scales, weights, identification devices, measuring or monitoring devices, and other supplies necessary to monitor the program;

  Note: The scale increment should not exceed 10 grams. For example, for a carcass weighing 1 kg, the maximum error should not exceed 0.5%.

- apply approved procedures of washing, chilling, draining, and freezing (if applicable) that consistently result in no weight gain beyond the regulatory limits;
- change approved retained water control procedures only after
  - notifying the Veterinarian in Charge in writing of his intention,
  - conducting a 50 carcass (or equivalent) retained water test and providing the results to the Veterinarian in Charge;
- follow the newly approved procedure through all its steps and by monitoring the procedure on an on-going basis and recording the settings of the key points on at minimum an hourly basis by a designated plant employee or by automatic recording devices;
- perform on-going testing at the specified frequency (normal, reduced or tightened);
- keep records indicating the date of slaughter, sample carcass identity and pre-chill and corresponding post-chill carcass weight(s) for the carcasses or product sampled - corrective action shall also be recorded; and
- maintain all records on-site for 12 months.

19.8.5.2 CFIA Personnel

CFIA personnel are responsible for:

- verifying the washing, chilling and testing procedures to ensure that the operator carries out his responsibilities;
- conducting or closely supervising a retained water test as specified by the Multi Commodities Program (MCAP) and the compliance of the operator;
- assessing amended procedures and approving acceptable procedure changes;
- monitoring management's 50-carcass retained water validation tests;

- ensure adequate corrective actions and/or initiation of a 50 carcass test when:
  - a test shows non-compliance, or
  - unapproved change in procedures is detected
- monitoring the net weight statement on consumer pre-packaged poultry products and retained water declarations to assure compliance with the MIR and Chapter 7 of the MOP; and
- maintaining a complete file for a 12-month period:
  - Results of the inspector's tests,
  - Changes in chilling procedures, and
  - Current approved chilling procedures.

19.8.6 Freezing

19.8.6.1 Crust Freezing

Rapid chilling methods, for poultry carcasses or parts, which temporarily freeze a thin outer layer of skin and muscle (usually 3 to 4 mm thick) may be allowed under the following conditions:

- the operator must submit to the Veterinarian in Charge a written documented protocol for each class of poultry processed outlining how the product will be identified and segregated into lots, the packaging method, type and temperature of the coolant, the duration of exposure to sub-freezing temperatures and the time period and location for the equilibrium of internal and external product temperatures such that an internal temperature is achieved at or below 4°C (but above -2°C);
- the surface crusting must disappear within 2.5 hours (150 minutes) of completing the crust freezing process;
- the process shall be monitored, by a designated plant employee, a minimum of every two (2) hours for crust disappearance and internal product temperature;
- the product shall be labelled as either “previously frozen” or “frozen” whenever crust disappearance takes more than 150 minutes; and
- records demonstrating compliance with all the above listed requirements shall be stored at the establishment for at least one year for each lot of product which is crust frozen.

19.8.6.2 Blast Freezing

Poultry carcasses and portions thereof are to be frozen to an internal temperature of -18°C or lower, and this shall be accomplished within 24 hours from the time freezing commences. Freezing should commence as soon as possible after packaging. Whenever outside freezing facilities are utilized, packaged poultry shall be kept at a storage temperature of 2°C or lower until freezing commences. The length of time from the commencement of chilling until placement in a freezer should normally not exceed 72 hours. Poultry shall be adequately protected to prevent freezer burn during freezing and freezer storage.

19.8.6.3 Liquid Freezing

Where liquid immersion or spray freezing is employed, poultry shall be packaged to prevent contact with the refrigerant. Poultry carcasses or portions contaminated with refrigerant are considered adulterated and shall be condemned, except where the contamination with refrigerant is slight and limited to the surface areas. In such cases, the protective bag or wrap shall be immediately removed and the carcass or portions decontaminated in the following manner:

The contaminated carcass or portions are placed in a tank of changing water and soaked to dilute the refrigerant. The carcass or portions are then removed, drained briefly and placed in a second tank of changing water for further dilution, then rinsed in a third tank of changing water. The carcass or portions may now be passed as fit for food, provided

that the inspector is satisfied that the refrigerant has been removed. Inspectors in Charge should submit decontaminated carcasses and portions, from time to time, for laboratory examination to determine the effectiveness of the removal procedures.

An accepted colouring agent shall be used in immersion refrigerants to make the detection of leakers easier. A list of meat marking inks and colouring agents accepted for food contact is posted on the Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products.

Operators may also use one of the colouring agents listed in Table III under section B.16.100 of the *Food and Drug Regulations*, page 211, for example beta-carotene, paprika extract, beet red or caramel. Colouring agents other than those listed in the approved reference listing of materials and agents should be submitted by the manufacturer to: Program Officer, Hygienic Environment Program, Canadian Food Inspection Agency.

The following liquid immersion refrigerants have been approved:

- Brine (common salt)
- Calcium chloride
- Propylene glycol

Note: Neither Sodium Chromate nor Di-chromate are permitted in immersion freezers.

Poultry carcasses may be packaged in either clear or opaque bags for immersion in liquid refrigerant freezers. Operators are to monitor such freezing operations according to the following protocol:

- All packaged carcasses should be verified by a designated plant employee after the shrink tunnel and before the immersion freezer for bag and clip integrity.
- Process action, for the purposes of this protocol, is defined as tagging and segregating all products back to the time of the last satisfactory lot test, re-inspection of each tagged carcass for evidence of adulteration and/or loss of package integrity, releasing satisfactory packages and the removal of refrigerant and repackaging of satisfactory carcasses.
- Operators commence testing at the Normal Inspection Level. Thereafter, subsequent testing for the next shift continues at the same level as occurred at the end of the previous shift except that for shifts ending under process action, operators may elect to test at the Normal Inspection Level for the subsequent shift.
- A unit refers to a bagged poultry carcass.
- Subgroup tests require sample sizes which vary dependant on the production volume and the compliance or inspection level as per ISO Table 2859-1.
- Before the start of each shift, regardless of the applicable inspection level, operators must randomly select hourly subgroup test times for each production hour and record these times before product reaches the sampling location.
- Samples are to be randomly selected at the exit chute of the immersion freezer.
- Each sample should be visually and manually examined. The visual verification will verify the bag integrity, and for opaque bags, a mandatory palpation shall be made to detect soft spots indicative of the presence of coolant liquid.
- Inspection staff is to verify the implementation and ongoing application of this protocol (minimum one verification per half shift or at the same frequency as per finished products standards). The inspection verification will consist of reviewing plant records and once per day, observing one test as performed by the designated plant employee.
- The protocol consists of three (3) inspection levels and is based on ISO table # 2859-1, for an Acceptance Quality Limit of 1% at special inspection level # S-3.

At the following inspection levels, the operator's responsibilities are:

Normal Inspection Level
Conduct 13 unit subgroup tests at preselected random times for line speeds up to 3,200 carcasses per hour. For production ranging from 3,201 to 10,000 carcasses per hour, 20 units per hour should be selected (see Normal Inspection, Code E and F respectively, ISO Table 2589-1).

- if defect(s) are found, see below and the flow chart; if no defects are found, the lot shall be considered acceptable.
- if 10 consecutive lots are found acceptable, than the operator can elect to adopt a reduced inspection level.

Reduced Inspection Level
Conduct five (5) unit subgroup tests at preselected random time for line speeds up to 3,200 carcasses per hour (see Reduced Inspection, Code E, ISO Table 2859-1). For production ranging from 3,201 to 10,000 units per hour, eight (8) units per hour should be selected (Reduced Inspection, Code F, ISO Table 2859-1).

- if defect(s) are found, see below and the flow chart; if no defects are found, the lot shall be considered acceptable.

Defects for Normal or Reduced Inspection Levels
If the number of defects found is equal to or greater than one, the operator should initiate an immediate retest to eliminate the possibility of a statistical aberration and/or confirm that the lot is not acceptable.

The retest shall be made at the retest inspection level, and Code # G or H (corresponding to the production volume), i.e., require an increased subgroup test sample size as per ISO Table 2589-1.

- if the number of defects found is equal to or less than one, the lot shall be considered acceptable and sampling should return to the previous sampling level, i.e., normal or reduced.
- if the number of defects found on the retest is greater than one, the lot shall be considered not acceptable, i.e., rejected. **Adequate corrective measures should be taken on the production line, process action must be initiated immediately and the sample size adjusted to the Tightened Inspection Level** (see below and flow chart).

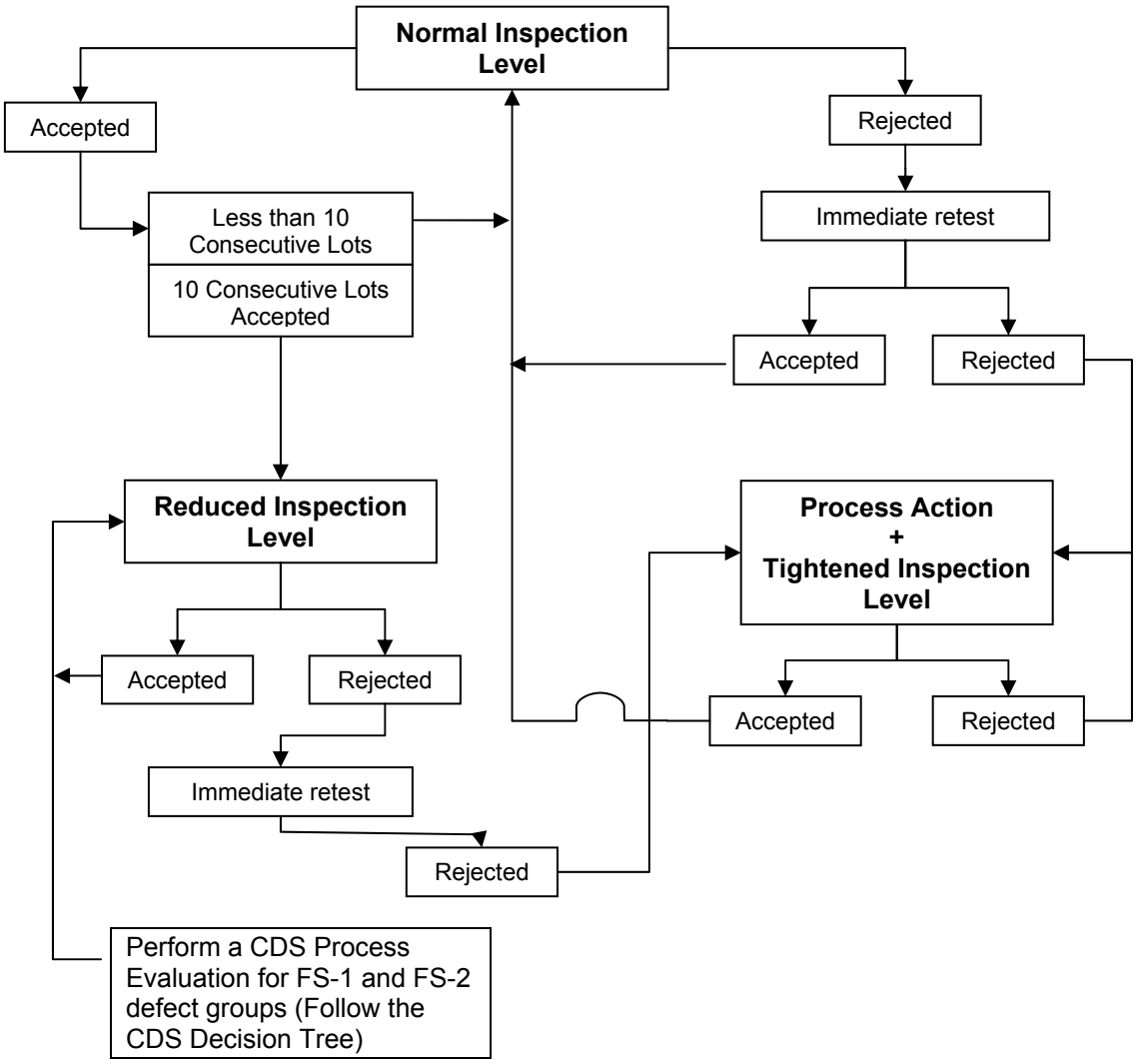
Tightened Inspection Level
The sample size is increased to 20 units for line speeds up to 3,200 (see Code F, Tightened Inspection, ISO table 2589-1) and to 32 carcasses for production rates between 3,201 and 10,000 carcasses per hour (Tightened Inspection, Code G, ISO Table 2589-1).

- if no defects are found then the lot is accepted: individual verifications can be stopped and the monitoring may be adjusted to the normal level.
- if defect(s) are found, the lot shall be rejected, i.e., additional corrective measures should be taken and the individual carcass verifications continued until process action is completed. Sampling shall continue at the tightened inspection level until a sample is accepted whereafter monitoring of new production may be adjusted to the normal inspection level.

Further information for this statistical process control is included in ISO Table 2589-1 and the associated flow chart.

Table for sample, sizes and acceptance/rejection levels for poultry carcasses packaged in plastic bags and crust frozen by immersion within liquid refrigerant ISO/2859-1 Single Sampling Plans					
Inspection Type	Line Speed[1]	Code Letter	Sample Size[2]	Acceptance Quality Limits[3]	
				Accepted	Rejected
Normal Inspection	0-3,200	E	13	0	1
	3,201-10,000	F	20	0	1
Retest Inspection	0-3,200	G	32	1	2
	3,201-10,000	H	50	1	2
Reduced Inspection	0-3,200	E	5	0	1
	3,201-10,000	F	8	0	1
Tightened Inspection	0-3,200	F	20	0	1
	3,201-10,000	G	32	0	1
Note 1: Carcasses/hour Note 2: Numbers of carcasses or units to be selected Note 3: Number of defective packages (i.e., containing refrigerant)					

19.8.6.3.1 Flow Chart for Inspection Levels for Bagged Poultry Carcasses Crust Frozen by Immersion in Liquid Refrigerant



The *Meat Inspection Regulations, 1990* have precedence over this decision tree.

19.8.7 Thawing Poultry in Water

When ready-to-cook poultry is thawed in water, the thawing practices and procedures shall be such as will prevent the product from becoming adulterated by the absorption of moisture. Such poultry shall be thawed by one of the following methods:

- in continuous running tap water of sufficient volume and for such limited time as is necessary for thawing. The thawing medium shall not exceed a temperature of 21°C;
- in re-circulated water, maintained at a temperature not in excess of 10°C, for such limited time as is necessary for thawing;
- the placing of frozen ready-to-cook poultry into cooking kettles, without prior thawing, is permitted only when a representative sample of the entire lot has been thawed and found to be sound and unadulterated. Thawing practices and procedures shall result in no net gain in weight over the frozen weight, when whole carcasses or parts thereof are thawed for repackaging. Thawed poultry may be held in tanks of crushed ice with continuous drainage, pending further processing or packaging.

19.8.7.1 Water Immersion of Poultry Carcasses for Rehydration

The plant chilling system may be used for immersing previously chilled poultry carcasses, e.g. to rehydrate or restore bloom or to "soften-up" ice packed carcasses prior to automatic cut-up machines, provided that:

- the water temperature does not exceed 4°C;
- the average moisture pick up does not exceed 2% and this is confirmed by tests conducted by plant personnel for each lot. The testing will be monitored by inspection staff;
- the tank is drained and cleaned prior to use for re-hydration; and
- carcasses are not immersed with or after current production.

Where tanks or vats in which poultry carcasses remain in non-agitated water are employed for this purpose, the above conditions also apply.

The above conditions are intended to prevent carcass adulteration with excess moisture as well as preventing cross contamination by food poisoning bacteria, e.g. *Salmonella* and by relatively higher counts of spoilage bacteria between lots of fresh and previously chilled poultry carcasses.

19.8.8 Refrigeration of Rabbit Meat Products

Methods similar to those used for poultry carcasses may be employed to chill rabbit carcasses in water, provided control measures are in place to ensure that, at the time of packaging there is no increase of the hot weight of the carcass as a result of water chilling.

Rabbit carcasses may also be hung on racks or chilled in coolers.

19.9 POST-CHILL PROCEDURES

19.9.1 Cut Up and Boning

For a description of poultry parts generally prepared in registered establishments, please refer to Chapter 7 of the MOP.

19.9.2 Turkey Basting

This section is to be developed.

19.9.3 Mechanically Separated Meats (MSM)

For a description of mechanically separated meat and finely textured meat prepared in registered establishments, please refer to Chapter 4 of the MOP.

19.10 PACKAGING AND LABELLING

Please refer to Chapter 7 of the MOP.

19.11 SHIPPING AND RECEIVING

Please refer to Chapter 3 of the MOP.

19.12 PRODUCT REINSPECTION

19.12.1 Poultry Reinspection Program

See Annex D of this chapter.

19.12.2 Returned Turkey Carcasses in the Event of an Actual or Perceived Malicious Product Tampering

The following protocol was developed by industry and assessed by the CFIA and Health Canada personnel. It is intended to be used, under CFIA supervision, to recover whole turkey carcasses when the product is withdrawn from distribution and retail as a result of claimed or threatened product tampering. Before the protocol is used, the likelihood of tampering having occurred will be carefully assessed by representatives of industry and the CFIA. In the event of a suspected or actual tampering incident, the Chief, Poultry Inspection Programs should be the primary point of contact regarding application and interpretation of the conditions pertaining to the protocol, with the Director, MPD, serving as an alternate.

For fresh turkey:

1) *Pump air into the bag using a needle.*
   - While carrying out this step, hold the bag tightly around the needle.
2) Withdraw the needle and stick a piece of tape on the injection point.
3) Dip the inflated bag into water to detect any holes.
4) If the bag is intact, repack the product in a new bag and ship again to market.
5) If the bag leaks, the product must be discarded.

For frozen turkey:

1) Let the bag reach room temperature to allow the bag to be inflated.
2) *Pump air into the bag using a needle*
   - While carrying out this step, hold the bag tightly around the needle.
3) Withdraw needle and stick a piece of tape on the injection point.
4) Dip the inflated bag into water to detect any holes.
5) If the bag is intact, repack the product in a new bag and ship again to market.
6) If the bag leaks, the product must be discarded.

Under this protocol, industry or its representatives will be responsible for conducting any testing and interpretation of results. Returned products will be kept segregated according to where they have been, to enable differentiation according to probability of exposure to tampering or adulteration. All testing and subsequent repackaging and/or destruction of the product will be conducted in a federally registered establishment, under the supervision of inspection staff from the CFIA in a verification role. Precautions will be taken to prevent cross contamination of product during testing and further manipulations.

The exterior of packaging material surrounding the products being tested will be examined visually for physical evidence of resealing of a puncture, e.g. blob of glue or tape, prior to immersion in water. Packages that fail either the visual examination or the test itself, as well as their contents, will be examined thoroughly for evidence of tampering or adulteration, for investigational purposes, after which they will be destroyed.

Products that have been in consumer hands should be tested for evidence of tampering for investigational purposes but will not be eligible for salvage if temperature control cannot be assured.

Applicability of the protocol, criteria for interpretation of results and disposition decisions may have to be adjusted by mutual agreement depending on the specific circumstances of an incident.

Annex D: Poultry Reinspection Program

D.1. Introduction

The purpose of the Canadian Poultry Reinspection Program is to provide standards and methods to be used when determining the acceptability of poultry carcasses and parts. This standard may be used for the reinspection of both imported and domestic shipments; and for the monitoring of an establishment's quality control program. This standard for fresh and frozen poultry carcasses and parts derives its authority from the *Meat Inspection Act* and *Regulations*.

D.2. Scope

This standard applies to fresh or frozen poultry carcasses and parts including young and mature chicken, turkey, duck and goose.

D.3. Nomenclature

The name of the product shall be that required in common usage in Canada and in accordance with the *Meat Inspection Act* and *Regulations*. Nomenclature for poultry parts may be found in the Meat Hygiene Manual of Procedures Chapter 7 "Cutting and labelling of poultry parts". For the purposes of this standard, only product which conforms to this nomenclature shall be inspected.

D.4. Definition of Defects

The poultry carcass defects shall be considered as either minor, major or critical depending on the associated safety risk. The specific defect definitions and their defect classification are defined in the attached "Defect Criteria for Poultry Carcasses and Parts".

D.5. Description of Defects

The defects found in poultry carcasses or parts shall be classified as decomposition, unwholesomeness or workmanship related. The severity of the associated defect is explained in this section, as well as in the more specific "Defect Criteria for Poultry Carcasses and Parts" section. Carcasses and parts shall be considered defective when one or more of these conditions are encountered:

D.5.1. Decomposition

A poultry carcass or part shall be classified as decomposed when any part of the carcass is affected by an off-condition identified by:

- **Odours**

Persistent and distinct off-odours in a poultry carcass such as: fruity, vegetable, musty, sour, sour milk-like, faecal, ammonia or putrid smelling.

- **Colour**

Distinct green colour in a poultry carcass.

- **Slime**

Moist and sticky gelatinous-like carcass.

Note: Some slaughter methods (slack scald and ritual slaughter) may leave wholesome carcasses that are slightly sticky to the touch. This should not be characterized as slime for the purpose of these standards.

Any evidence of the above is considered as a critical defect, and shall result in rejection of the lot.

D.5.2. Unwholesomeness

- **Pathology**

  A carcass or part shall be considered defective if there is any evidence that it is affected by any pathology as defined in the Meat Hygiene Manual of Procedures.

- **Critical Extraneous Material**

  A sample unit shall be classified as critical and rejected when any of the following conditions are found:

  - The presence of any material which has not been derived from poultry and which poses a threat to human health (such as glass, etc.); or
  - Distinct and persistent odour of any material which has not been derived from poultry and which poses a threat to human health (such as solvents, fuel oil, etc.).

- **Contamination**

  A carcass or part shall be considered defective if any bile, ingesta or non-critical extraneous material is present. Faecal material shall result in rejection of the lot.

- **Other Defects**

  A sample unit shall be considered defective when any of the following conditions are found:

  - Dehydration (freezer burn) where more than 10% of the surface area is affected;
  - Overscalded, dark coloured carcass and inadequate bleeding;

Any evidence of the above will be considered critical, major or minor as defined in the attached “Defect Criteria for Poultry Carcasses and Parts”.

D.5.3. Workmanship

Those defects which are present as a result of poor workmanship and should have been previously removed:

- Dressing/processing defects such as the presence of parts of the viscera or feathers;
- Trimming defects such as trimmable pathology, bruises and scabs;
- Bones in boneless poultry parts.

Any evidence of the above will be considered as a major or minor defect as defined in the attached “Defect Criteria for Poultry Carcasses and Parts”.

D.6. Examination Methods

D.6.1. Definitions

- **Acceptance Number (Ac)**

  The maximum number of defective units in the sample permitting the lot to be accepted because the requirements of this standard have been met.

- **Cull**

  The removal of individual product pieces affected with defects. (Only permitted for domestic product. It is not permitted to cull or rework unsatisfactory imported product.)

- **Defective Unit**

  A defective unit is a sample unit whose subsample exceeds the allowable number of defects as stated in the defect criteria.

- **Inspection**

  The visual examination of a subsample of poultry carcasses or parts for the presence of defects.

- **Lot Size (N)**

  The number of containers (boxes/totes or combos) similar in size, type and style which have been processed under identical conditions. Specifically, the lot size may be the number of containers (boxes/totes or combos) from a specified production period, or from an incoming or outgoing shipment.

- **Sample Size (n)**

  The number of sample units comprising the total sample drawn from the lot.

- **Sample unit**

  The individual container (boxes/totes or combos) that is examined as a separate unit.

- **Subsample**

  A representative portion of the contents of the sample unit withdrawn for the purpose of inspection.

D.6.2. Scope

The methodology described in this section outlines a procedure for the examination of poultry carcasses and parts. The examination shall be made of products of a defined lot (N), in the fresh or tempered state for decomposition, wholesomeness and workmanship related defects.

D.6.3. Presentation/staging of the Lot

The establishment is required to present the lot so that:

- its placement ensures the safety of the inspector;
- each unit in the lot has an equal chance of being selected for the sample;

- the lot is distributed uniformly to facilitate the verification of the lot size;
- the main panel of each shipping container is plainly visible to the inspector; and
- its placement allows adequate space for the inspector to select samples and visually examine the lot for transportation damage.

The inspector shall conduct an overall inspection of the lot which includes general condition, label and count verification, and accuracy of any related documentation.

D.6.4. Inspection Procedure

The inspector shall thoroughly examine all carcasses and parts as specified under section D.6.5.2, “Poultry carcasses packaged in boxes or totes”, or D.6.5.3 “Poultry carcasses or parts packaged in bulk combos”, and:

- All defects from the lot shall be recorded, removed, and identified with the carcass, part and sample unit, from which they were found;
- If the lot is rejected, all defects found, their respective carcasses or parts, and the sample unit from which they where found, shall be saved should an examination of the defects be requested;
- If the lot is accepted, all defects found in inspected product shall be discarded; and
- Poultry carcasses or parts found free of defects upon inspection shall be returned to the lot.

D.6.5. Sampling

D.6.5.1. Sampling of lots for Sensory Examination

The sampling of lots for the sensory examination of the product shall be in accordance with the FAO/WHO Codex Alimentarius “Sampling Plan for Prepackaged Foods” as follows.

D.6.5.2. Poultry Carcasses or Parts Packaged in Boxes or Totes

- The sample unit shall consist of a box or tote;
- Calculate the number of boxes or totes in the lot (N);
- Using the label weight to determine the net weight of a box or tote, pick out the number of boxes / totes required under the sampling plan selected from tables D.8.1 or D.8.2 according to the average net weight of the boxes or totes;
- The sampling plans dictate the minimum sample size (n) to be taken. The inspector chooses the samples at random as explained in the random sampling procedure. If necessary, in the opinion of the inspector, more than the minimum sample size specified may be taken, provided that it corresponds to a sampling level from table D.8.1 or D.8.2. In the case of an import shipment, the boxes shall be pre-selected by the import tracking system;
- The sample unit must be sufficiently tempered to permit a thorough inspection;
- From each sample unit, choose a representative subsample consisting of at least 10% of the product;
- In each subsample, examine the carcasses or parts for defects and, if present, assign them as Critical, Major or Minor, as defined in Section D.7, “Defect Criteria for Poultry Carcasses and Parts”. *Any critical defect found will result in the rejection of the lot. The presence of at least a major defect or any two minor defects in a subsample will result in that corresponding sample unit being considered defective*;
- Using the Acceptance (Ac) number corresponding to the level of the sampling plan selected, determine the acceptability of the lot based on the number of defective sample units. If this number is less than or equal to the acceptance number, the lot is accepted; otherwise, the lot is deemed to fail;
- In the case of domestic product, if a lot fails using the appropriate sample plan due to workmanship related conditions, the lot may be culled and re-inspected using the

same sampling plan previously used. However, under reinspection each subsample to be examined shall comprise 20% of the product from the corresponding sample unit.

D.6.5.3. Poultry Carcasses or Parts Packaged in Bulk Combos

- As per table D.8.3, a maximum of 13 combos are to be randomly sampled from the lot (a full combo is approximately 1000 kg). If the lot consists of less than 13 combos, then each combo shall be inspected;
- The bulk combo must be tempered sufficiently to permit an inspection of a representative sample;
- Take a representative 50 kg subsample* from each selected combo;
- In each combo, examine the carcasses or parts for defects and if present assign them as Critical, Major or Minor as defined in Section D.7 "Defect Criteria for Poultry Carcasses and Parts". *Any critical defect found will result in the rejection of the lot. The presence of at least five Major defects, any ten Minor defects, or any combination of Minor and Major defects totalling ten in any subsample, will result in that corresponding combo being considered defective*;
- Using the Acceptance (Ac) number corresponding to the number of combos in the lot, determine the acceptability of the lot based on the number of defective sample units. If this number is less than or equal to the acceptance number, the lot is accepted; otherwise, the lot is deemed to fail;
- In the case of domestic product, if a lot fails under this inspection procedure due to workmanship related conditions, the lot may be culled and re-inspected by repeating the above steps. However, for the purpose of re-inspection, the subsample selected from each combo is now to be twice the original weight and the criteria for the acceptance of the lot is to be adjusted proportionally;

* If less than a full combo is selected, take a representative subsample for inspection corresponding to 5% of the combo's weight. *Any critical defect found will result in the rejection of the lot. The presence of at least d Major defects, any 2d Minor defects or any combination of 2d (Major and Minor) defects in the subsample will result in that combo being considered defective*.

Where d = Combo unit weight (kg) / 200

Note: d and 2d are rounded up to the next whole number.

D.7. Defect Criteria for Poultry Carcasses and Parts

TYPE	DESCRIPTION	CLASSIFICATION
Decomposition Off-Conditions		
• Odours	Persistent and distinct off-odours in a poultry carcass.	Critical
• Colour	Distinct green colour in a poultry carcass.	Critical
• Slime	Moist and sticky gelatinous-like carcass surface. **Note:** Some slaughter methods (slack scald and ritual slaughter) may leave wholesome carcasses that are slightly sticky to the touch. This should not be characterized as slime for the purpose of this program.	Critical
Unwholesomeness		
• Extraneous Material	Extraneous material > 3 mm will result in rejection of the lot. For example: Glass, wood, metal, etc.	Critical

TYPE	DESCRIPTION	CLASSIFICATION
	Extraneous material covering an area > 25 mm in the largest dimension. For example: – Grease, unattached feathers, bile contamination, yolk, crop contents, ingesta, stains or specks too numerous to count; – Whole spleen and/or gall bladder.	Major
	Extraneous material covering an area ≤ 25 mm in the largest dimension. For example: – Grease, unattached feathers, bile remnants, yolk, crop contents, ingesta, stains or specks too numerous to count; – Part of a spleen and/or gall bladder.	Minor
• Hair	Each incidence of 26 hairs ≥ 6 mm per sub-sample counts as one defect.	Minor
• Faeces	Any material (solid, liquid or stain), determined to be from the lower gastrointestinal tract.	Critical
• Pathology	Any evidence of pathological lesions such as cellulitis, salpingitis, tumours, airsacculitis or peritonitis.	5 Major defects
• Others	Sores, scabs, or inflamed wounds >13 mm in the largest dimension or a cluster of smaller lesions in close proximity covering a surface > 13 mm.	Major
	Sores, scabs, or inflamed wounds measuring in their largest dimension 3 to 13 mm.	Minor
Workmanship		
• Bruises	A black, blue, or green bruise > 25 mm in the greatest dimension.	Major
	A black, blue, or green bruise, 6 to 25 mm in the greatest dimension.	Minor
	Bruises other than black and/or green > 13 mm * Very small bruises other than black and/or green less than 13 mm (dime size) and areas showing only slight reddening shall not be counted as defects.	Minor
• Lungs	Portion ≥ 6 mm.	Minor
• Trachea	Any identifiable portion	Minor
• Oil gland	Recognizable fragment(s) up to and including both lobes	Minor
• Breast Blister	Inflamed tissue, fluid or pus filled	Minor
• Compound fracture	Any compound fracture (not including the rib cage)	Minor
• Mutilation	Extensive mutilation	Minor
• Bursa of Fabricius	Bursa of Fabricius or any identifiable portion.	Minor
• Crop	Any complete crop	Major
	Any portion of the crop that includes the mucosal lining	Minor

TYPE	DESCRIPTION	CLASSIFICATION
• Intestine/ cloaca	Any identifiable portion of intestine or cloaca	= 5 Major defects
	Any identifiable portion of œsophagus, proventriculus or gizzard.	Minor
• Long shank	Complete coverage of the tibial-tarsal articulation ≥ 3 mm (both condyles covered).	Minor
• Kidneys or testes/ovaries	Kidneys or testes/ovaries in chickens weighing greater than 2 kg or ducks greater than 3 kg.	Minor
• Reproductive organs	Reproductive organs in spent fowl.	Minor
• Bones	In the case of boneless poultry parts: Any bone > 1 cm.	Major
	Any identified bone 3 mm to 1 cm.	Minor
• Feathers or pinfeathers	25 mm or less: Score each multiple of 8 as one defect.	Minor
	Greater than 25 mm: Score each multiple of 2 as one defect.	Minor
• Heads	Heads on dressed carcasses not designated as “head and feet attached”.	Major

D.8. Sampling Plans for Poultry Carcasses and Parts

D.8.1. For Sample Units Under 4.5 kg

LEVEL	LOT SIZE (N)	SAMPLE SIZE (n)	Ac
1	2400 or less	13	2
2	2,401 to 15,000	21	3
3	15,001 to 24,000	29	4
4	24,001 to 42,000	48	6
5	42,001 to 72,000	84	9

D.8.2. For Sample Units 4.5 kg or Greater

LEVEL	LOT SIZE (N)	SAMPLE SIZE (n)	Ac
1	600 or less	13	2
2	601 to 2,000	21	3
3	2,001 to 7,200	29	4
4	7,201 to 15,000	48	6
5	15,001 to 24,000	84	9

D.8.3. If the Sample Unit is a Combo

LEVEL	LOT SIZE (N)	SAMPLE SIZE (n)	Ac
1	2 or less	all	0
2	3 to 8	all	1
3	9 to 12	all	2
4	13 or Greater	13	2

D.9. Records

An example of the Poultry Reinspection Worksheet is available in Annex A of this chapter.

D.10. Examples

D.10.1. Poultry Carcasses or Parts Packaged in Boxes or Totes

Example 1)

17,990 kg of whole chicken carcasses packed in 18 kg boxes.

- The number of boxes in the lot is 1000;
- Net weight of a box is 18 kg; therefore, use the level 2 sampling plan found in D.8.2;
- This sampling plan states that for a lot of 1000 boxes, the sample size is to be 21 boxes;
- Choose the 21 boxes randomly from the lot;
- The 21 boxes must be thawed sufficiently to permit inspection;
- Choose a representative 10% subsample from each box; that is 1.8 kg of the product or the smallest number of carcasses aggregately weighing 1.8 kg;
- In each subsample, examine the carcass(es) for defects and assign them as Critical, Major or Minor as defined in the “Defect Criteria for Poultry Carcasses and Parts” section of this document;

Suppose the inspection reveals the following defects:

Box #3 - 1 Major
Box #8 - 1 Minor
Box #12 - 1 Minor
Box # 15 - 1 Major and 2 Minor
Box # 20 - 2 Minor

- In this case, boxes # 3, 15 and 20 are considered defective, since they contained at least either a major defect, two minor defects or both in their subsamples;
  - Based on the accept (Ac) number of 3, this lot would be accepted since 3 defective sample units are permissible in the randomly selected sample of 21 boxes.

If in the opinion of the inspector, a larger sample size should be selected from this lot, then a random sample of 29 boxes could be selected for inspection and rated for defects as above and a decision taken on the acceptability of the lot based on the corresponding Acceptance number of 4.

D.10.2. Poultry Carcasses or Parts Packaged in Bulk Combos

Example 1)

Five bulk combos of poultry carcasses containing approximately 1000 kg per combo.

- The combos must be thawed sufficiently to permit inspection;
- Take a representative 50 kg sample from each combo;
- Examine the carcasses for defects and assign them as Critical, Major or Minor as defined in the “Defect Criteria for Graded and Ungraded Poultry Carcasses and Parts” section of this document;

The findings are as follows:

Combo #1 - 1 Critical Defect, 1 Major and 4 Minors
Combo #2 - 3 Majors and 3 Minors
Combo #3 - 5 Majors and 8 Minors
Combo #4 - 2 Majors and 12 Minors
Combo #5 - 4 Majors and 9 Minors

- Based on the accept and reject values, combo numbers 1, 3, 4 and 5 would be rejected, since they exceed the acceptance numbers of zero Critical defects, four Major defects, nine Minor defects or a combination of any nine Major or Minor defects;
- As per table D.8.3., the maximum number of defective combos permitted is 1. In this example, the lot would be rejected since 4 defective combos were found. The lot would also be immediately rejected since a Critical defect was found.

Example 2)

One bulk combo containing 500 kg of poultry parts.

- The combo must be thawed sufficiently to permit inspection;
- Since in this case the sample unit is less than 1000 kg, take a representative sample consisting of 5% of the total weight of the combo;
- Sample size is 500 kg x .05 = 25 kg;
- Examine the poultry parts for defects and assign them as Critical, Major or Minor as defined in the “Defect Criteria for Poultry Carcasses and Parts” section of this document;

The findings are as follows: 1 Major and 4 Minor defects

- Calculate the accept and reject criteria using the formula from section D.6.5.3. The number of major defects accepted is 500kg/200 = 2.5, rounded up to 3. The number of minor defects accepted is 5 (2 X 2.5);
- For this example, the sample will pass, since the defects found fall within the accept criteria which was calculated at 3 Major, 5 Minor defects or any combination of 5 Major and Minor defects.