

## Standards for

1. **Ritual Slaughtering**
2. **Ante Mortem / Post Mortem Inspection procedure at Slaughter houses**

### To be inserted at appropriate place in the Regulations under Standards of Meat

#### I. **Ritual Slaughter:**

Ritual slaughter is slaughter done according to the religious requirements of either the Jewish (sachet) or Muslim (Halal) and Hindu (Jhatka) religious faith. The animal is slaughtered, with/without being stunned, with a razor sharp knife. When the cut is done correctly, the animal appears not to feel it. From an animal welfare standpoint, the major concerns during ritual slaughter are the stressful and cruel methods of restraint (holding) that are used in some plants. Progressive slaughter plants use devices to hold the animal in a comfortable, upright position. For both humane and safety reasons, plants which conduct ritual slaughter should install modern upright restraining equipment.

#### **1 Performance and operation requirements for upright restraining equipment for Kosher or Halal slaughter to provide acceptable level of animal welfare and Meat Quality.**

1. The restraint equipment must hold the animal in a comfortable upright position before and during religious slaughter.
2. Operation of the equipment must be able to comply with the following minimum performance standards which are determined by observing 50 to 100 animals:
  - **Falling Score** - 0 to 1% of the animals fall while entering the restraint equipment and while they are held in the equipment before slaughter. A fall is recorded if the animal's body touches the floor. This applies to all animal species.
  - **Electric Prod (Goad) Score** - For a minimum acceptable score, 75% or more of the cattle must enter the restraint equipment easily with no electric prod. For an excellent score, 95% or more of the cattle must be moved with no electric prod. Electric prods must never be used with sheep.
  - **Vocalization (Mooring and Bellowing) Score (Cattle/buffalo only)** - When cattle are distressed during handling and restraint, they will vocalize. Some of the stressful events that can cause vocalization are slipping on the floor, excessive pressure from the restraining equipment, sharp edges, electric prod use, or abuse by people such as hitting or tail twisting. For an acceptable score, 95% of the cattle must be silent. Vocalization scoring is on a per animal basis. Each animal is either a vocalizer or silent. Cattle vocalization is scored in the restrainer equipment and during entry into the equipment.
3. If the animal's feet are lifted off the floor, the animal's body must be fully supported. Applies to all animal species.
4. Devices that clamp the feet or hoisting or dragging the sensible animal by the head, feet, or legs must never be used. Applies to all animal species.
5. On restraint devices that operate with either hydraulics or pneumatics, the controls must be designed so that the operator can incrementally control the amount of pressure applied to the animal by the head holder and other parts of the apparatus. Midstroke position control of cylinders is strongly recommended.

6. Using the concept of optimum pressure, the device must apply sufficient pressure to provide the animal with the sensation of being held, but excessive pressure that would cause pain must be avoided.
7. Moving parts of the restraint device should move with steady smooth motion. Sudden jerky motion causes animals to become agitated.
8. Races (chutes) and restraint devices must have non-slip flooring.
9. After the animal is completely restrained in the head holder, religious slaughter must be performed within 10 seconds. Animals fight restraint if held too long.
10. Head holding devices should be designed to avoid excessive bending of the neck.
11. Engineer restrainers to reduce noise such as metal clanging and banging and air hissing.
12. A solid barrier must be built around the head holder to prevent the animal from seeing people and moving equipment while it is entering the equipment.
13. The restrainer must be illuminated in such a manner to encourage animal entry.

## **2 Handling Recommendations to Reduce Electric Prod use and maintain efficient handling:**

1. Remove Distractions That Cause balking
2. Provide Adequate Lighting
3. Reduce Noise
4. Move Small Groups

Using Other Driving Aids - Electric prods should be replaced as much as possible with other driving aids such as a plastic paddle, a stick with a flag on the end or large flags for pigs. An electric prod should never be a person's primary driving tool. The electric prod should only be picked up when an animal refuses to move. In most plants the only place an electric prod is needed is at the entrance to the stun box or restrainer. The animals should move easily and handlers should not hit them. Cattle and pigs can often be moved along a chute when the handler walks back by them in the opposite direction of desired movement, taking advantage of the point of balance at the

## **3 Halal Slaughter:**

Halal is a Quranic term which means 'permitted, allowed, authorised, approved, sanctioned or lawful'. These guidelines for the slaughtering of animals and the preparation and handling of Halal food will have to be observed at all establishments involved in the processing of Halal food.

- a. Halal food and drinks are considered najis if they are contaminated or have direct contact with things that are not permitted by Islam. Under no circumstances najis (Unclean) such as pigs or dogs and their products are allowed inside the plant. Pigs and their products must never enter the plant's boundaries.
- b. All animals must be rendered unconscious prior to slaughter.
- c. The act of Halal slaughter should begin with an incision on the neck at some point just before the glottis (Adam's Apple) for animals with normal necks but after the

glottis for animals with long necks such as chicken, geese, turkeys, ostriches, camels etc.

- d.** The Islamic slaughter man must be satisfied that unconscious animals being provided to him for Halal slaughter have been stunned in accordance with the requirements i.e. stunned by percussive bolt pistol. The animal must be fully alive or deemed to be alive at the time of slaughter.
- e.** The phrase “Bismillah Allahu-Akbar.” (In the Name of Allah) is highly encouraged to be immediately invoked before the slaughter of each animal. In certain mazhab (school of thought), this invoking of the phrase “bismillah...” is compulsory.
- f.** The slaughtering must sever the trachea and oesophagus and jugular vein. The spinal cord should not be cut and the head is not to be severed completely. This is to bring about immediate and massive haemorrhage and satisfactory / adequate bleeding.
- g.** Slaughtering must be done only once. The 'sawing action' of the slaughtering is permitted as long as the slaughtering implement is not lifted off the animal during the slaughtering. Any lifting of the knife is considered as the end of one act of slaughter. Multiple acts of slaughter on one animal are not allowed.
- h.** Bleeding must be spontaneous and adequate/satisfactory. Indications of death at the time of ritual slaughter include the absence of blood pulsing from the cut ends of the carotid arteries, absence of capillary refill and bleed out within the normal time.
- i.** Dressing of carcasses should only commence after ascertaining that the animal is dead.
- j.** Slaughtering implements, tools and utensils must be utilised only for the slaughter of Halal animals.
- k.** If an animal is not considered to be stunned correctly and found dead then the Halal slaughter man must identify the carcass as non-Halal and the company must ensure that the carcass and its offal is kept separate from eligible carcasses and offal.
- l.** If an animal shows signs of regaining consciousness after the initial stun, the animal must be immediately killed by the use of a captive bolt gun. In this case, the carcass and its offal will be identified as non-Halal and kept separate from eligible carcasses and offal.
- m.** The Halal slaughter man must:
  - i. Be a Muslim;
  - ii. Be authorised and be under the supervision of a certified Islamic organisation;
  - iii. Slaughter the animal according to Islamic rite;
  - iv. Verify that the animal hasn't been killed by the stun; and
  - v. Identify animals that have been killed by the stun as non-Halal.
  - vi. Ensure that animal is well-fed and watered.
  - vii. Ensure that knife is sharp and clean.

#### 4. Jewish Slaughter:

**A. Shechita:** (Hebrew) is the ritual slaughter of mammals and birds according to Jewish dietary laws. The act is performed by cutting the animal's throat by drawing a very sharp knife horizontally across it and allowing the blood to drain out. The animal must be killed with respect and compassion by a *shochet* (ritual slaughterer).

**B. Preparation:** The animal must be **kosher** (i.e. mammals that chew their cud and have cloven hooves, or birds that are not birds of prey and for which there is an established tradition that the bird is kosher or similar to one that is).

Before slaughtering, the animal must be healthy and corresponds to the standards prescribed for kosher. The animal cannot be stunned, as is common practice in modern animal slaughter, for this would render the Shechita invalid.

Process: In order to fulfill the basic law of Shechita, the majority of both the esophagus and trachea (wind pipe and food pipe) of a mammal, or the majority of either one of these in the case of birds, must be sliced through with a back and forth sawing motion without violating one of the five major prohibited techniques, or various more detailed rules. The five major forbidden techniques include: Pressing, Pausing, Tearing, Piercing, or Covering. A shochet must have studied these laws and demonstrate a thorough understanding of them, as well as have been carefully trained, before he is allowed to 'shekht' meat unaided.

**C. Minor rules:** The animal's blood may not be collected in a bowl, a pit, or a body of water. It is forbidden to slaughter an animal in front of others, or to slaughter an animal and its young on the same day, even separately. This is forbidden no matter how far away the animals are from each other.

**D. The knife:** The knife used for Shechita is called a hallaf by Ashkenazim or a sakin by all Jews. By biblical law the knife may be made from anything not attached directly or indirectly to the ground and capable of being sharpened and polished to the necessary level of sharpness and smoothness required for Shechita. The knife must be minimally 1.5 or 2 times as long as the animal's neck is wide, depending on the species of animal and the number of strokes needed to slaughter the animal, but not so long that the weight of the knife exceeds the weight of the animal's head. If the knife is too large, it is assumed to cause Pressing. The knife must not have a point. It is feared a point may slip into the wound during slaughter and cause piercing. The blade may also not be serrated, as serrations cause tearing. The blade may not have imperfections in it. The knife must be checked before each session.

Today the Hasidische Hallaf is the only commercially available knife for Shechita and is universally accepted.

#### Carcass preparation

**I. Bedikah:** An animal must be checked again after it has been shekhted to see if there were any internal injuries that would have rendered the animal unhealthy before the slaughter, but were simply not visible because they were internal. The inspector must check certain organs, such as the lungs, for any scarring which would render the animal treif (not-kosher)

**II. Purging:** After the animal has been thoroughly inspected, there are still steps that have to be taken before the animal can be sold as kosher. The Torah prohibits the eating of certain fats and organs, such as the kidneys and intestines, so they must be removed from the animal. These fats are typically known as “Chelev”. Chelev prohibition only applies to domesticated animals, such as cows and sheep. For wild animals, such as deer, this prohibition is not applicable. There is also a biblical prohibition against eating the sciatic nerve (*Gid Hanasheh*) so that too, must be removed.

**III. Blood:** The blood must also be removed from the meat, as there is a biblical prohibition against the eating of blood as well.

## 5. Jhatka Slaughter

**A. Jhatka or Chatka** meat is meat from an animal which has been killed by a single stroke of a sword or axe to sever the head, as opposed to Jewish kosher or Islamic Halal in which the animal is killed by ritually slicing the throat. This kills the animal immediately because the spinal cord is severed, and the blood flow to the brain is stopped almost instantly, causing brain death within seconds.

**B. Hindus and Jhatka:** This is the common method of slaughter if animal sacrifices are made to some Hindu deities.

## **II. Ante-mortem / Post Mortem Inspection**

### **Definitions**

1. "Abattoir" means premises approved and registered by the licensing authority used for the slaughter of animals for human consumption.
2. "Stamp" means any mark or stamp approved by the licensing authority, and also includes any tag or label bearing such mark or stamp.
3. "Carcass" means the body of any slaughtered animal/bird after bleeding and dressing.
5. "Contamination" means the direct or indirect transmission of objectionable matters.
7. "Disinfection" means the application of hygienically satisfactory chemical and/or physical agents and processes to cleaned surfaces with the intention of eliminating micro-organisms.
8. "Dressed" or "Dressing"
  - (a) in relation to slaughtered animals except for pigs, sheep and lambs, goats and kids, means the removal of head, hide or skin, viscera (including or not including kidneys), genital organs, urinary bladder, and feet up to the carpal and tarsal joints, and udders of lactating animals, animals that have calved or are in advanced pregnancy;
  - (b) in relation to slaughtered pigs, means the removal of hair and bristles or skin, claws, eyelids, viscera (including or not including kidneys), genital organs, urinary bladder, udders in the case of lactating animals, animals that have farrowed or are in advanced pregnancy, and the external acoustic duct unless in respect of that part as an alternative an effective form of cleaning is carried out;
  - (c) in relation to sheep and lambs, goats and kids, means the removal of the head (except in the case of young lambs and young kids), the pelt or skin (including that of the head), viscera (including or not including the kidneys), genital organs, urinary bladder and feet up to the carpal and tarsal joints, and udders of lactating animals, animals that have given birth or are in advanced pregnancy;
  - (d) in relation to cattle, pigs and solipeds, includes where necessary splitting of the carcass. To split means dividing the carcass lengthwise on the medial line.
9. "Emergency slaughter" means slaughter by necessity of any animal which has recently suffered accident or injury.
10. "Fit for human consumption" in relation to meat means an article which has been passed and appropriately branded by an inspector and in which no changes due to disease, decomposition, or contamination, have subsequently been found.

### **A. General requirements**

Every slaughter animal should:

- (a) be appropriately identified 'or accompanied by an appropriate document which would ensure that the place of origin from which the animal has come can be traced;
- (b) be adequately rested prior to slaughter in clean, well ventilated lairages and yards having drinking troughs supplied with potable water;
- (c) undergo an ante- and post-mortem inspection unless delay in carrying out ante-mortem inspection would cause undue suffering to animals requiring emergency slaughter.

## **B. Ante Mortem Inspection**

### **i. Purpose of ante-mortem inspection**

The purpose of ante-mortem inspection is:

- (a) to select animals which are adequately rested and which will provide meat which is fit for human consumption;
- (b) to select for isolation and detailed clinical examination, diseased, suspected diseased or suspected abnormal animals;
- (c) to prevent contamination of the dressing areas by animals in an excessively dirty condition;
- (d) to prevent contamination of premises, equipment and personnel by animals suffering from a disease which is communicable;
- (e) to obtain information which may be necessary for the post-mortem inspection, diagnosis, and judgment of carcass and offal.

### **ii. Prerequisites for ante-mortem inspection**

- (a) No animal should proceed for slaughter until the inspector has carried out an ante-mortem inspection and has passed the animal for slaughter. Exceptions may be made in cases of emergency slaughter.
- (b) All animals should be inspected within 24 hours of delivery to the abattoir. If the animal is kept for more than 24 hours after the initial ante-mortem inspection
- (c) at the abattoir the ante-mortem examination should be repeated on the day of slaughter.
- (d) The method of identification of inspected animals should be approved by the licensing authority.
- (e) It is the duty of the management of the abattoir to present the animals in such a way that an adequate ante-mortem inspection can be carried out.

### **iii. Ante-mortem inspection procedure**

- (a) Animals should be inspected in a standing position and in motion, and while they are not excited. The following should be observed:
  - (i) abnormalities and signs of disease;
  - (ii) species and behaviour of animals; in sick or suspected diseased animals, notice should be taken of age, colour and specific markings;
  - (iii) cleanliness of slaughter animals.
- (b) Particular attention should be paid to the following details:
  - (i) manner of standing and movement;
  - (ii) state of nutrition;
  - (iii) reaction to environment;
  - (iv) condition of hide, skin, hair and wool;
  - (v) digestive system (salivation, rumination, consistency and colour of faeces);
  - (vi) appearance of the urinogenital system, including vulva, mammary glands, prepuce and scrotum;
  - (vii) respiratory system (nostrils, including mucous membranes, nasal discharge, blood tinged froth, quality of respiration);

- (viii) injuries, swelling or oedema;
- (ix) body temperature (in suspected or obviously diseased animals);
- (x) blood smear (in cases in which a disease is suspected which could be diagnosed by examining the blood);
- (xi) as certain diseases or disease symptoms have sites of predilection in different species, it is essential that attention should be paid to these sites.
- (xii) The method of identification of inspected animals should be approved by the licensing authority.
- (xiii) It is the duty of the management of the abattoir to present the animals in such a way that an adequate ante-mortem inspection can be carried out.

- (c) All animals shall be adequately rested before slaughter and shall be subjected to ante-mortem examination and inspection well in advance of the time of slaughter.
- (d) No animal which has been received into a slaughter hall for the purpose of being slaughtered shall be removed from the slaughter hall before being slaughtered except with the written consent of the Qualified Veterinary Doctor. An animal which, on inspection is found to be not fit for slaughter shall be marked as “suspect” and kept separately. Each such animal shall be marked as “suspect” only by or under the personal supervision of the Qualified Veterinary Doctor and the marking shall not be removed or obliterated except by the Qualified Veterinary Doctor himself.
- (e) An animal showing signs of any disease at the time of ante-mortem inspection that would cause its carcass being ultimately condemned on post-mortem shall be marked as “condemned” and rejected.
- (f) An animal declared as “suspect” on ante-mortem inspection but which does not plainly show any disease or condition that would cause its entire carcass to be condemned shall maintain its identity as “suspect” until its carcass and all organs are finally inspected by the Qualified Veterinary Doctor.
- (g) No animal in a febrile condition shall be permitted for slaughter. No suspect animal shall be slaughtered until all other animals intended for slaughter on the same day have been slaughtered. All animals which, on ante-mortem inspection, show symptoms of railroad sickness, parturient paresis, rabies, tetanus or any other communicable diseases shall be marked as “condemned” and disposed of in accordance with the provisions contained in sub paragraph (m) below.
- (h) Animals presented for slaughter and found in a dying condition on the premises of a factory due to recent disease shall be marked as “condemned” and disposed of as provided for “condemned” animals.
- (i) Every animal which, upon examination, is found to show symptoms of or is suspected of being diseased or animals declared as “suspect” shall at once be removed for treatment to such special pen and kept there for observation for such period as may be considered necessary to ascertain whether the animal is diseased or not.
- (j) Where signs indicate a systemic involvement, a communicable disease, or toxicity from chemical or biological agents which do or may render the meat unsound, the animal so affected should be withheld from slaughter and condemned forthwith as unfit for human consumption or, where appropriate, set aside and remain under veterinary control until a further decision regarding disposition is taken.

- (k) Animals' exhibiting normal behaviour but known to have been treated or given drugs and to be carrying consequent residues or which are carrying residues from other sources, should be either condemned or withheld from slaughter until the residues are excreted or metabolized by the body to harmless end products. In case of doubt the animal should be identified and slaughtered and the carcass and viscera should be subjected to all necessary laboratory examinations.
- (l) During the inspection, the following points should be noted and a record kept.
- (a) Evidence of cruelty to animals by over-trucking, over-driving or by other act;
  - (b) Disease symptoms which may affect the general health of the animal or depreciate the meat;
  - (c) presence of any contagious or infectious disease or disease communicable to human beings through the consumption of meat or such animals or symptoms which may suggest that such disease is developing; and
  - (d) species, sex, colour, age and body temperature. In particular, attention shall be paid to the following:-
    - i. conditions of nutrition especially emaciation;
    - ii. manner of standing and walking; reaction to environment;
    - iii. condition of hide, skin and hair and fur;
    - iv. Digestive system (lips, mouth, anus, rumination, quality of faeces and appetite);
    - v. Vulva, vagina and mammary glands; and
    - vi. Respiratory system (nasal openings and respiration)
- (m) **Disposition of animal after ante-mortem inspection**
- i. The post-mortem inspector should be notified of the result of the ante-mortem inspection. The method of carrying out this notification is left to the licensing authority.
  - ii. Any animal which as a result of ante-mortem inspection is not passed for slaughter should be examined for a final decision on its disposition by the veterinary inspector.
  - iii. Animals which have died, and those which have been rejected at ante-mortem inspection and slaughtered, should be removed, immediately and rendered into inedible products.
  - iv. All animals declared as "condemned" on ante-mortem inspection shall be marked as "condemned" and killed if not already dead. Such carcasses shall not be taken into the factory to be slaughtered or dressed, nor shall they be conveyed into any department of the factory used for edible products, but shall be disposed off in the manner as indicated in sub-paragraphs 12 to 15 of paragraph 24 for condemned carcasses.

## **C. Post-mortem inspection-**

### **1. Purpose of post-mortem inspection**

The purpose of post-mortem inspection is to ensure the detection of abnormalities and pass for human food only meat which is fit for human consumption.

### **2. Methods of slaughter**

The inspector should carry out routine checks *on* the manner and methods of handling animals, stunning, shackling and bleeding.

1. A careful and detailed post-mortem examination and inspection of the carcasses and parts thereof of all animals slaughtered shall be made soon after slaughter. All organs and parts of the carcasses and blood to be used in the preparation of meat food products shall be held in such a manner as to preserve their identity till the completion of the post-mortem inspection so that they can be identified in the event of the carcasses being condemned.
2. Every carcass including all detached parts and organs thereof which show evidence of any condition which will render the meat or any part or organ unfit for human consumption and which for that reasons may require subsequent inspection, shall be retained by the Qualified Veterinary Doctor. The identity of such carcass including the detached parts and organs thereof shall be maintained until the final inspection is completed. Retained carcasses, detached parts and organs thereof shall be maintained until the final inspection is completed. Retained carcasses, detached parts and organs thereof shall in no case be washed, trimmed or mutilated in any manner unless otherwise authorized by the Qualified Veterinary Doctor.
3. No air shall be blown by mouth into the tissues of any carcass or part of a carcass.
4. Every carcass or part thereof which has been found to be unfit for human consumption shall be marked by the Qualified Veterinary Doctor as “Inspected and condemned”.
5. All such condemned carcasses, parts and organs thereof shall remain in the custody of the Qualified Veterinary Doctor pending disposal at or before the close of the day on which they are marked “Inspected and condemned” in accordance with sub-paragraphs (11),(12) and (13) below.
6. Carcasses, parts and the organs thereof found to be sound, wholesome, healthful and fit for human consumption shall be marked as “Inspected and passed”.
7. Carcasses found affected with anthrax before evisceration shall not be eviscerated but condemned and disposed of immediately in accordance with sub-paragraph (12) below. Any part of a carcass contaminated with anthrax infected material through contact with soiled instruments or otherwise shall be immediately condemned and disposed of as provided in sub-paragraph (12) below.
8. The portion of the slaughtering department including equipment, employees’ boots and aprons, etc., contaminated by contact with anthrax material shall be cleaned and thoroughly disinfected immediately.
9. When on inspection only a portion of a carcass on account of slight bruises is decided to be condemned, either the bruised portion shall be removed immediately and

disposed of in accordance with sub-paragraph (13) below or the carcass shall be retained and kept till such time it is chilled and the bruised portion removed and disposed of as provided above.

10. Post-mortem inspection shall be a detailed one and shall cover all parts of the carcass, the viscera, lymph glands and all organs and glands.
11. The post-mortem inspection shall be in accordance with the general rules laid down for such inspection in public slaughter houses under the control of local bodies besides special instructions that may be issued from time to time by the licensing authority.
12. All condemned carcasses, organs or parts thereof shall be completely destroyed in the presence of the Qualified Veterinary Doctor by incineration or denatured, after being slashed freely with a knife, with crude carbolic acid, cresylic- disinfectant or any other prescribed agent unless such carcasses, organs or parts thereof are sterilized for the preparation of bone-cum-meat meal before leaving the slaughter house premises, subject to sub-paragraph (13) below.
13. Carcasses, organs or parts thereof condemned on account of anthrax shall be disposed of either by (i) complete incineration or (ii) thorough denaturing with prescribed denaturant in the manner prescribed in the foregoing paragraphs and also in accordance with the rules and regulations prescribed by the local authority.
14. Destruction of condemned carcasses, organs or parts thereof shall be carried out under the direct supervision of the Qualified Veterinary Doctor.
15. If in the opinion of the Qualified Veterinary Doctor a carcass, organ or part thereof is to be held back for further detailed examination the carcass, organ or part concerned shall not be released till the examination in detail is completed by the Qualified Veterinary Doctor and it is declared thereafter by him as fit. When it is to be detained for detailed examination, the carcass, organ or part thereof shall be marked as "Held". If on subsequent inspection, the carcass, organ or part thereof is found to be unwholesome and unfit for human food, the Qualified Veterinary Doctor shall mark such a carcass, organ or part thereof as "condemned" and shall dispose it as described in the foregoing paragraphs.

### **3. Prerequisites for post-mortem inspection**

29. Before the post-mortem inspection of slaughter animals is commenced it is the duty of the inspector to satisfy himself that the condition of the premises, equipment and facilities are conducive to the efficient and hygienic performance of this examination. It is the duty of the management of the abattoir to present the carcasses and viscera in a hygienic manner and in such a way that an adequate inspection can be carried out.

30. So as to prevent the contamination of carcasses, heads and viscera it is essential that the basic requirements of hygiene, are strictly enforced and that the labour force slaughtering and dressing carcasses is fully aware of its important role in maintaining a satisfactory level of meat hygiene.

31. In operating an abattoir the following points should be observed:

(a) **Separation** - Carcasses should be separated from each other to avoid contact and contamination once the removal of the hide, skin or pelt has commenced. Separation of carcasses, heads and viscera should be maintained until they have been examined and passed by the inspector. Meat should come in contact only with surfaces or equipment essential to handling, dressing and inspection.

(b) **Evisceration** - Evisceration should be effected without delay.

(c) **Identification of carcasses and their parts** - Prior to the final examination, all parts required for inspection of the slaughtered animal should remain identifiable with the carcase.

(d) **Washing of hands** - Every person engaged in an abattoir should wash his hands frequently and thoroughly with soap or detergents under running warm potable water while on duty. Hands should be washed before commencing work, immediately after using the lavatory, after handling contaminated material, and whenever else necessary. After handling diseased or suspect material hands must be washed and disinfected immediately. Notices requiring hand-washing should be displayed.

(e) **Cleaning and disinfection of tools and equipment** - All equipment, implements, tables, utensils including knives, cleavers, knife pouches, saws and containers should be cleaned at frequent intervals during the day, and immediately and thoroughly cleaned and disinfected whenever they come in contact with diseased material, infective material or become contaminated. They shall also be cleaned and disinfected at the conclusion of each working day.

(f) **Washing of carcasses** - Skinned carcasses should not be washed in a manner which will allow water to enter either the abdominal or thoracic cavities prior to evisceration.

#### **4. Post-mortem inspection procedure**

- a. Routine post-mortem inspection should include viewing, palpation and, where necessary, incision. This inspection should be carried out in a hygienic and systematic manner.
- b. Where a lymph node, organ or any carcass tissue is being incised by the inspector, the cut surface should be cleanly sliced in order to present a picture which is not distorted. Where an incision is required to be made, the inspector should as far as possible prevent any risk of contamination.
- c. The head, organs, viscera and any other part of a carcass required for post-mortem inspection should be identifiable with the carcass from which they were removed until inspection has been completed. Blood of slaughtered animals intended for human consumption should, until inspection has been completed, be so retained as to permit identification with the carcass or carcasses from which the blood was derived.
- d. Except with the permission of the inspector no person should, prior to the inspection of any carcass being completed:
  - (i) remove any serous membrane or any other part from the carcass; or
  - (ii) remove, modify, or obliterate any evidence of disease in the carcass or organ by washing, scraping, trimming, stripping or otherwise treating the carcass or organ;
  - (iii) remove any mark or identification from the carcass, head or viscera until the inspector has completed his inspection and given his decision.
- e. 36. No person should remove from the inspection area of an abattoir any part of any carcass, organ, or any viscera, until the inspector has completed his examination and a decision has been given.
- f. Viscera should be examined:
  - (i) as they are removed from the carcass; and/or
  - (ii) after their removal from the carcass, in which case they should be clearly identifiable with the carcass until inspection has been completed.

## **5. Retention of carcass and viscera**

- a. Any carcass or viscera found to be diseased, suspected of disease or any abnormality which requires a more detailed examination, should be suitably branded and retained under the supervision of the inspector and kept separate from carcasses, viscera and heads which have been inspected. The relevant parts of that animal should be assembled for veterinary examination. The veterinarian may perform or require any further examination and any laboratory test he deems necessary for reaching a final decision.
- b. The method of identification which denotes that a carcass and viscera have been retained for further inspection should be laid down by the licensing authority.
- c. Where in the opinion of the inspector
  - (i) a more detailed post-mortem examination; or
  - (ii) a microbiological, parasitological, chemical or histopathological examination; or
  - (iii) any other examination necessary to render a judgement on a carcass or viscera, is required, he should take all the necessary specimens from such carcass or viscera.
- d. The final responsibility as to the decision on fitness for human consumption rests with the veterinary inspector.

## **5. POST-MORTEM INSPECTION BY SPECIES**

### **A. Adult Bovines and Bovine Calves over Six Weeks of Age**

#### **Inspection of heads**

- (a) A head which has been skinned and washed clean is ready for inspection after the base of the tongue has been detached so as to give access to the masticatory muscles and lymph nodes. Where head loops are used the lymph nodes may be incised and examined before the tongue is dropped.
- (b) The head including the oral and nasal cavities should be viewed. The sub-maxillary (lymphonodi mandibulares), parotid (lymphonodi parotidei) and retropharyngeal lymph nodes (lymphonodi retropharyngei) should then be examined by viewing and multiple incisions. The tonsils should be removed after inspection. The muscles of mastication should be viewed and incised. One or more linear incisions should be made parallel to the lower jaw into the external and internal muscles of mastication. The tongue should be viewed and palpated and, if necessary, an incision should be made into the root of the tongue without mutilation of the blade. The lips and gums should be viewed.

#### **Inspection of viscera**

The following viscera should be examined:

- (a) Gastro-intestinal tract: viewing of stomachs and intestines and if necessary palpation. Viewing and if necessary palpation and incision \*) of the mesenteric lymph nodes (lymphonodi mesenterici), provided they are not obviously diseased. The oesophagus should be separated from its attachment to the trachea and viewed.
- (b) Spleen: viewing of organ, palpation, and if necessary,, incision. Whenever required a smear of the spleen pulp should be taken.
- (c) Liver: Viewing and palpation of entire organ. The portal lymph nodes (lymphonodi hepatici (portales)) should be incised provided they are not obviously diseased. The large bile duct should be opened up by an incision of at least 3 cm in length. Where necessary for reaching a 'diagnosis one or more incisions should be made deep enough to open up bile ducts and liver substance. The gall bladder should be viewed and, if necessary, palpated.
- (d) Lungs: viewing and palpation of the entire organ, viewing and incision of bronchial and mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales), provided they are not

obviously diseased. If necessary an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi,

(e) Heart: viewing of the heart after the pericardium has been opened. One or more incisions should be made from base to apex or alternatively the heart may be everted and shallow incisions made so that the cardiac valves and muscle tissue can be inspected.

(f) Uterus: viewing, palpation and, if necessary, incision.\*)

(g) Udder: viewing of the udder, palpation and, if necessary, incision. \*) When the udder has been or is in lactating state, incision ) of the supra-mammary lymph nodes (lymphonodi inguinales superficiales) should be a routine procedure. If the udder is destined for human consumption, incision\*) of the organ itself should be a routine procedure.

(h) Kidneys: enucleation, viewing and, if necessary, palpation and incision.

(i) Testicles (where they are saved for human consumption): viewing and palpation.

\*) If incisions are made, every precaution should be taken to prevent contamination of the premises, equipment and personnel.

### **Inspection of carcasses**

(a) The carcass should be examined to ascertain:

- (i) condition;
- (ii) efficiency of bleeding;
- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum);
- (v) abnormalities;
- (vi) cleanliness;
- (vii) odours.

(b) The skeletal muscles, including the attached fat and connective tissues, the bones, especially those which have been cut and exposed during the splitting of the carcass, the joints, the tendon sheaths, the diaphragm and the pleura and the peritoneum, should be viewed and, if necessary, palpated and incised. If necessary the triceps brachii muscle may be incised.

(c) The following lymph nodes should be viewed, palpated and, if necessary, incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) external and internal iliac (lymphonodi iliaci);
- (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
- (iv) renal (lymphonodi renales).

(d) In all animals reacting to the tuberculin test and in those carcasses and viscera in which tubercular lesions are found, the main carcass lymph nodes should be examined. A similar procedure should be carried out in all cases in which a systemic or generalized disease is suspected to exist.

### **B. Calves up to Six Weeks of Age**

#### **Inspection of heads of calves up to six weeks of age**

(a) For inspection heads should be skinned, or scalded and dehaired, and then washed clean.

(b) The head, and particularly oral and nasal cavities, lips and gums, sub-maxillary (lymphonodi mandibulares), parotid (lymphonodi parotidei) and retropharyngeal (lymphonodi retropharyngei) lymph nodes should be examined. If necessary, lymph nodes and masseter muscles should be incised and the tonsils examined and then removed.

### **Inspection of viscera of calves up to six weeks of age**

The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomachs and intestines, and if necessary palpation<sup>^</sup> Viewing and, if necessary, palpation and incision \*) of the mesenteric lymph nodes (lymphonodi mesenterici), provided they are not obviously diseased.

(b) Spleen: viewing of organ, palpation and if necessary incision. Whenever required a smear of the spleen pulp should be taken.

(c) Liver: viewing, palpation and, if necessary, incision of organ and portal lymph nodes (lymphonodi hepatici (portales)). The gall bladder should be viewed and if necessary palpated.

\*) If incisions are made, every precaution should be taken to prevent contamination of the premises, equipment and personnel.

(d) Lungs: viewing and palpation of the entire organ. Viewing, palpation and, if necessary, incision of bronchial and mediastinal lymph nodes (lymphonodi tracheo- bronchiales et mediastinales) provided they are not obviously diseased. If necessary, an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing and palpation of the heart after the pericardium has been opened., Where cysticercosis bovis is endemic, the heart should be opened.

(f) Kidneys: enucleation, viewing and if necessary palpation and incision.

### **Inspection of carcasses of calves up to six weeks of age**

(a) The carcass should be examined to ascertain:

- (i) condition;
- (ii) efficiency of bleeding;
- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum);
- (v) abnormalities;
- (vi) cleanliness;
- (vii) odours.

(b) The skeletal muscles, the fat, particularly the kidney capsule, the bones which have been exposed or split, the joints, the tendon sheaths, the diaphragm, the pleura, the peritoneum and the umbilical region should be viewed, and if necessary, incised.

(c) The following lymph nodes should be viewed,, palpated and if necessary incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) external and internal iliac (lymphonodi iliaci);
- (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
- (iv) renal (lymphonodi renales).

(d) In all animals reacting to the tuberculin test and in those carcasses and viscera in which tubercular lesions are found, the main carcass lymph nodes should be examined. A similar procedure should be carried out in all cases in which a systemic or generalized disease is suspected to exist.

48. In the inspection of young calves particular attention should be paid to:

- (a) intestines;
- (b) serous membranes;
- (c) texture and development of muscles;
- (d) colour of carcass;
- (e) appearance and consistency of renal fat;
- (f) navel region;
- (g) joints.

## **C. Equines**

### **Inspection of heads of equines**

49. (a) A head which has been skinned and washed clean is ready for inspection. If necessary the base of the tongue should be detached so as- to give access to the lymph nodes.

(b) The head should, if necessary, be split lengthwise in the medial line and the nasal septum should then be removed for careful viewing.

(c) The head, including the oral and nasal cavities, should be viewed. The sub-maxillary (lymphonodi mandibulares), parotid (lymphonodi parotidei), and retropharyngeal lymph nodes (lymphonodi retropharyngei) should then be examined, by viewing and multiple incisions. The tonsils should be removed after inspection. The tongue should be viewed and palpated. The lips and gums should be viewed.

\*) If incisions are made, every precaution should be taken to prevent contamination of the premises, equipment and personnel.

### **Inspection of viscera of equines**

50. The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomach and intestines, and if necessary, palpation"! Viewing and, if necessary, palpation and incision \*). of the mesenteric lymph nodes (lymphonodi mesenterici), provided they are not obviously diseased.

(b) Spleen: viewing of organ, palpation and, if necessary, incision. Whenever required a smear of the spleen pulp should be taken.

(c) Liver: viewing and palpation of entire organ and the portal lymph nodes (lymphonodi hepatici (portales)), and if necessary incision of organ and lymph nodes.

(d) Lungs: viewing, palpation of the entire organ. Viewing and incision of bronchial and mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales) provided they are not obviously diseased. The larynx, trachea and bronchi should be incised. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing of the heart after the pericardium has been opened, and incision if necessary.

(f) Uterus: In adults - viewing, palpation and if necessary incision. \*)

(g) Udder: viewing, palpation and if necessary incision. \*)

(h) Kidneys: enucleation, viewing and if necessary, palpation and incision.

(i) Testicles: (where they are saved for human consumption) viewing and palpation.

### **Inspection of carcasses of equines**

51. (a) The carcass should be examined to ascertain

- (i) condition;
- (ii) efficiency of bleeding;
- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum)
- (v) abnormalities;
- (vi) cleanliness;
- (vii) odours.

(b) The skeletal muscles, including the attached fat and connective tissues, the bones, especially those which have been cut and exposed during the splitting of the car case, the joints, the tendon sheaths, the pleura, and the peritoneum, should be viewed, and if necessary palpated and incised.

(c) The following lymph nodes should be viewed, palpated and, if necessary, incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) external and internal iliac (lymphonodi iliaci);
- (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
- (iv) renal (lymphonodi renales).

(d) In all animals reacting to the mallein test and in those carcasses and viscera in which lesions of tuberculosis are found, the main carcass lymph nodes should be examined. A similar procedure should be carried out in all cases in which a systemic or generalized disease is suspected to exist.

#### **Inspection for melanosis in equines**

All greyish or white horses should be examined as regards the muscles and lymph nodes (lymphonodi sub-rhomboidei) of the shoulders beneath the scapular cartilage by loosening the attachment of one shoulder. The kidneys should be exposed and inspected by incision through the entire kidney.

#### **D. Ovines and Caprines**

##### **Inspection of heads of ovines and caprines**

(a) A head which has been skinned and washed clean is ready for inspection. If necessary, the base of the tongue should be detached so as to give access to the masticatory muscles and the regional lymph nodes.

(b) The surfaces of the head as well as the nasal and oral cavities should be viewed. If necessary, the tongue should be viewed, palpated and incised. Lymph nodes should be incised only when required.

##### **Inspection of viscera of ovines and caprines**

The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomach and intestines, and if necessary, palpation, viewing, and if necessary, palpation and incision \*) of associated lymph nodes.

(b) Spleen: viewing, and if necessary, palpation and incision.

(c) Liver: viewing and palpation of organ and hepatic lymph nodes (lymphonodi hepatici (portales)), and if necessary, incision of organ and lymph nodes. Viewing of gall bladder and if necessary, palpation.

(d) Lungs: viewing and palpation and if necessary incision of lungs, bronchial and mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales). If necessary, an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing after removal of pericardium and incision if necessary.

(f) Uterus: in adult animals, viewing and if necessary palpation.

(g) Udder: in adult animals, viewing and if necessary palpation.

(h) Kidneys: enucleation, viewing and if necessary palpation and incision.

(i) Testicles: (where they are saved for human consumption) viewing and palpation.

##### **Inspection of carcasses of ovines and caprines**

(a) The carcass should be examined to ascertain:

- (i) condition;
- (ii) efficiency of bleeding;
- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum);
- (v) abnormalities;
- (vi) cleanliness;
- (vii) odours.

(b) The skeletal muscles, including the attached fat and connective tissues, the bones, the joints, the tendon sheaths, the diaphragm and the pleura and the peritoneum, should be viewed and if necessary palpated and incised.

(c) The following lymph nodes should be viewed, palpated, and if necessary incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) external and internal iliac (lymphonodi iliaci);
- (iii) pre-pectoral (lymphonodi cervicales profundi caudales);
- (iv) renal (lymphonodi renales).

(d) When a systemic or generalized disease is suspected to exist, the main car case lymph nodes should be examined.

## **E. Porcines**

### **Inspection of heads of porcines**

(a) The surface of the head as well as the oral and nasal cavities should be viewed.

(b) The sub-maxillary lymph nodes (lymphonodi mandibulares) should be incised and the cut surfaces examined. The parotid (lymphonodi parotidei), and retropharyngeal lymph nodes (lymphonodi retropharyngei), should be incised if necessary.

(c) Where *C. cellulosa* is prevalent, the outer muscle of mastication and the root of the tongue should be incised, and the blade of the tongue viewed and palpated.

(d) The tonsils should be removed if necessary.

(e) The head should be split lengthwise if necessary.

### **Inspection of viscera of porcines**

The following viscera should be examined:

(a) Gastro-intestinal tract: viewing of stomach and intestines and if necessary palpation. Viewing, palpation and "if necessary incision\*" of associated lymph nodes. These lymph nodes should be incised \*) if any lesions have been observed in the sub- maxillary lymph nodes.

(b) Spleen: viewing, and if necessary, palpation and incision.

(c) Liver and lymph nodes: viewing and palpation and if necessary incision.

(d) Lungs: viewing and palpation of entire organ. Viewing and incision of bronchial mediastinal lymph nodes (lymphonodi tracheobronchiales et mediastinales), provided they are not obviously diseased. If necessary, an incision should open up the larynx, trachea and bronchi. A transverse incision across the lower part of the diaphragmatic lobe should open up the bronchi.

(e) Heart: viewing of the heart after the pericardium has been opened, and incision to expose the cardiac valves if necessary. Where *C. cellulosa* is prevalent, the opening up of the heart and a deep incision into the septum should be an inspection procedure.

(f) Uterus: viewing and, particularly where sows are concerned, palpation and if necessary incision.\*)

(g) Kidneys: enucleation, viewing, and if necessary, palpation and incision.

### **Inspection of carcasses of porcines**

(a) The carcass should be examined to ascertain:

- (i) condition;
- (ii) efficiency of bleeding;

- (iii) colour;
- (iv) condition of serous membranes (pleura and peritoneum);
- (v) abnormalities;
- (vi) cleanliness, where applicable proper scalding and dehairing;
- (vii) odours.

(b) The skeletal muscles, including the attached fat and connective tissue, the bones, especially those which have been cut and exposed during the splitting of the carcass, the joints, the tendon sheaths, the diaphragm and the pleura and the peritoneum, should be viewed and if necessary palpated and incised.

(c) The site of castration should be palpated and if necessary incised.

(d) The following lymph nodes should be viewed, palpated and if necessary incised:

- (i) superficial inguinal (supra-mammary) (lymphonodi inguinales superficiales);
- (ii) iliac (lymphonodi iliaci);
- (iii) renal (lymphonodi renales).

(e) When a systemic or generalized disease is suspected to exist, the main carcass lymph nodes should be examined.

(f) Countries should have measures in force in their meat inspection system to protect the public adequately from trichinosis.

\*) If incisions are made, every precaution should be taken to prevent contamination of the premises, equipment and personnel.

## **6. DISPOSITION AND BRANDING**

(a) Carcasses, heads, organs and viscera which as a result of ante- and post-mortem inspection are passed as fit for human consumption without further restrictions should be appropriately branded.

(b) Any meat, heads, organs and viscera which require treatment by heat or by freezing to render them fit for human consumption should be suitably branded and kept under supervision of an inspector until the necessary treatment has been concluded and the carcass can be passed as fit for human consumption.

(c) All carcasses, parts of carcasses, organs and viscera which as a result of ante- and post-mortem inspection are found to be unfit for human consumption, and foetuses, should be held securely to the satisfaction of the inspector until they are branded, stained, rendered, denatured or otherwise destroyed, so excluding them from human food purposes.

(d) The size, shape, and wording of any brand, as well as the colour and composition of marking ink used for the branding of carcasses and organs, should be laid down by the licensing authority and should be uniform throughout the country.

## **7. LABORATORY EXAMINATION**

(a) Laboratory facilities should be readily available to provide the veterinary inspector with the information necessary to judge whether the meat is fit for human consumption.

(b) Samples should be properly identified and accompanied by fully explanatory information.

(c) Care should be taken to ensure that samples arrive at the laboratory in good condition.

(d) Laboratory methods to be used should be such procedures as are scientifically recognized.