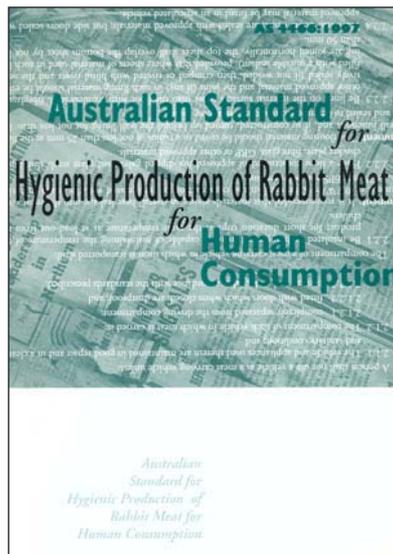


Australian Standard for Hygienic Production of Rabbit Meat for Human Consumption

SCARM Report 59



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for
Australian Standard
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Hygienic Production of Rabbit Meat
of Rabbit Meat for
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Review of Standards

To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that Standards' users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine *The Australian Standard*, which subscribing members receive, and which gives details of new publications, new editions and of withdrawn Standards.

Suggestions for improvements to this Standard, should be addressed to:

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PREFACE

The Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) comprises the Australian Federal, State and Territory, and New Zealand Ministers responsible for agriculture, soil, water and rural adjustment policy issues.

In March 1995 the Ministerial Council determined that aspects of all existing national meat industry codes relevant to human health would be mandated by amendment of legislation in all States and Territories.

This decision was given effect by appointment of a Steering Group comprising Chairmen and Chief Executives of State and Territory meat hygiene authorities, the Australian Quarantine and Inspection Service, meat industry organisations, food safety technical advisers and the Australia New Zealand Food Authority.

The Steering Group commenced a fundamental review of existing Codes of Hygienic Practice to express mandatory national standards in outcome terms. The new Australian Standards provided for the implementation of quality assurance programs consistent with the *AS/NZS ISO 9000 (1994)* series. Process control shall be achieved through the application of Hazard Analysis Critical Control Point (HACCP) methodology as defined by the Codex Alimentarius Commission and will allow flexibility in techniques and facilities provided that standards relating to wholesomeness and safety have been met.

“The responsibility for production of safe and wholesome meat should be shared by industry and the controlling authority. The use of the HACCP approach and quality assurance systems reinforces this joint responsibility. The controlling authority will supervise and audit these arrangements to ensure compliance with requirements.” (Codex Alimentarius Vol. 10 (1994))

This Standard is written in substantial compliance and consistency with *Codex Alimentarius* Volume 10. Minor technical variations reflect accepted Australian terminology or commercial industry practice, but with quality standards and performance criteria equivalent to those in the *Codex*.

Where an operator proposes a technique substantially different from those detailed in this Australian Standard the assessment of equivalence shall be determined by the ARMCANZ Meat Standards Committee. This Committee will establish the methodology for determining the equivalence of benchmarks or standards. The proposer of the alternative technique shall supply sufficient supporting information to validate the procedure to the relevant Controlling Authority who will advise the ARMCANZ Committee on Meat Industry Standards. The submission must include a HACCP plan which ensures that equivalence is maintained. Where the ARMCANZ Meat Standards Committee cannot reach agreement on the approval of an alternative technique the final decision shall be made by the Ministerial Council (ARMCANZ).

This publication has been approved on behalf of the Council of Standards Australia, as an Australian Standard. Other Standards in the series are:

Construction of Premises Processing Meat for Human Consumption;
Construction of Premises Processing Animals for Human Consumption;
Hygienic Production of Meat for Human Consumption;
Hygienic Production of Poultry Meat for Human Consumption;
Hygienic Production of Game Meat for Human Consumption;
Transportation of Meat for Human Consumption.

AGRICULTURE AND RESOURCE MANAGEMENT COUNCIL OF AUSTRALIA AND NEW ZEALAND

The Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) consists of the Australian Federal, State/Territory and New Zealand Ministers responsible for agriculture, soil, water (both rural and urban) and rural adjustment policy issues.

The objective of the Council is to develop integrated and sustainable agricultural and land and water management policies, strategies and practices for the benefit of the community.

The Council is supported by a permanent Standing Committee, the Standing Committee on Agriculture and Resource Management (SCARM). Membership of Standing Committee comprises relevant Departmental Heads/CEOs of Commonwealth/State/Territory and New Zealand agencies as well as representatives of the CSIRO and the Bureau of Meteorology.

1 SCOPE

This Standard applies to production and hygiene quality control of meat from Rabbits processed for human consumption at all registered establishments in Australia.

The overall goal of the standard is that there be no more than a 1-log (10-fold increase) in the count of total viable bacteria on the surface of the meat from the time of dressing until the product is packaged for sale or used as an ingredient for further processing.

Alternate techniques or procedures to those detailed in the standard may be used by operators providing compliance with the overall goal can be verified through the use of HACCP-based programs.

The Standard shall be applied at all Rabbit establishments, whether operating under a full-time meat inspection program (incorporating Hazard Analysis and Critical Control Point (HACCP) principles), or a HACCP-based quality assurance arrangement approved and monitored by the controlling authority.

For the purpose of understanding how HACCP is implemented and audited in the Australian meat industry, ARMCANZ has produced an accompanying document, *A Guide to the Implementation and Auditing of HACCP*.

Hygiene procedures in boning rooms and other further processing plants producing chilled or frozen fresh meat are covered in the *Australian Standard for Production of Meat for Human Consumption*.

This Standard is not intended to be applicable to meat retail premises, however many of the principles are relevant to such premises.

For the purpose of this Standard the word “shall” has been used to clearly indicate that the requirements are mandatory. State and Territory authorities shall enforce compliance with the Standard.

This Standard is to be used in conjunction with the *Australian Standards for Construction of Premises Processing Animals and Meat for Human Consumption* and the *Australian Standard for Transportation of Meat for Human Consumption*.

In relation to further processed meat products, the Standard should be read in conjunction with the Australian standard for hygienic production of smallgoods and other manufactured meat.

Operation under this Standard implies compliance with relevant Model Codes of Practice for the Welfare of Animals

2 QUALITY PERFORMANCE STANDARDS

OUTCOMES REQUIRED

The application of this Standard are based on the following quality criteria:

- microbiological safety
- prevention of physical contamination
- prevention of zoonotic disease associated with meat
- prevention of harmful or unacceptable chemical residues
- conformance with consumer image of product wholesomeness.

2.1 Microbiological Safety

Means carrying a bacteriological load consistent with a safe and wholesome product.

Refer to Appendix A.

Operational procedures are given in Sections 5, 6, 7, 8, 9, 10 and 12

2.2 Physical Contamination

Means contamination with material *presenting a risk to product safety, including material* likely to carry a heavy microbiological load.

Measurement criteria and standards are given in Appendix B.

Operational procedures are given in Sections 5, 6, 7, 8, 9, 10 and 12

2.3 Zoonotic Disease

Means a disease or condition of animals capable of transmission from live or dead animals to humans.

Diseases and conditions of concern, together with required inspection procedures for detection and action are given in Sections 11 (Ante-mortem Inspection) and 13 (Post-mortem Inspection).

2.4 Chemical Residues

These are defined from time to time by national authorities. International standard definitions and Maximum Residue Limits (MRL's) are published in the *Codex Alimentarius*, Australian MRL's are detailed in the Australian Food Standards Code.

Procedures for sampling, testing and subsequent action are published in operating instructions issued by Federal and State authorities. Mandatory procedures and standards are given in Appendix D.

2.5 Product Wholesomeness

Means free from diseases and conditions which, while not necessarily bearing direct risk to human health, affect consumer image of product safety.

3 DEFINITIONS

Abattoir/Animal Processing Premises	A premises processing rabbits for the production of meat for human consumption.
Approved	Approved by the Controlling Authority.
Body	The whole slaughtered animal prior to the completion of dressing.
Boning	means the: (a) Removal of meat from the bones of a carcase, or a portion of a carcase; (b) production of bone-in meat cuts; or (c) production of boneless meat cuts. Boning does not include the production of meat fractions and mechanically separated meat.
Carcase	The whole dressed body of a slaughtered animal (the skeleton and attached musculature) excluding any part that has been severed or removed from the dressed body (e.g. head, hide, viscera, blood).
Carcase Parts	Any tissue or structure removed from a carcase (e.g. offal, head, pelt, blood, etc.).
Clean	In relation to: (a) <i>carcasses or meat</i> means free from all visible contaminants. For example: ingesta, dust, rail grease, hair, faecal material, bile, excretions and pathological conditions; and (b) <i>premises</i> means surfaces of floors, walls, ceilings, equipment, appurtenances and utensils free of visible contamination, washed, sanitised and free of objectionable odours.
Condemned	In relation to a carcase or carcase part means that carcase or carcase part is determined to be unfit for use for human or animal food, and requiring destruction.
Contamination	The presence of objectionable matter, including substances or micro-organisms, that makes meat unwholesome.
Controlling Authority	A person or a body that under a law of a State, Territory or the Commonwealth, has statutory responsibility for meat hygiene.
Disease	In relation to an animal, means the presence of an infectious agent or pathological process that: (a) affects the health of an animal to an extent that would prevent acceptance of the carcasses, the meat or the parts derived from the animal for human consumption; or (b) may not necessarily affect the health of the animal, but may be transmitted to other animals or humans who contact the animal or the carcase or who might consume meat from the animal.
Dressed or Dressing	Means the removal of head, hide or skin, viscera (including or not including the kidneys), genital organs, bladder, feet up to the carpal and tarsal joints, and for lactating female animals, the mammary glands.
Edible	Suitable for human consumption.
Edible Offal	Edible parts from a slaughtered animal other than muscle meat.
Evisceration	The removal from a carcase of the: (a) gastro intestinal tract, its contents and associated organs; (b) internal portions of the urinogenital tract and its contents (except kidneys, the removal of which is optional); and (c) heart, lungs and liver.
Inedible	Unsuitable for human consumption.

Inspector	A person appointed by the controlling authority or appointed by the registered company and approved by the controlling authority for the purpose of auditing quality assurance systems or antemortem and post-mortem inspection and control of hygiene in a processing premises.
Meat	The edible part of any rabbit and edible offal.
Meat Inspector	See Inspector.
Meat Product	A product intended for human consumption containing meat.
Notifiable Disease	A disease determined as notifiable by a relevant authority in the State or Territory in which the registered establishment is located.
Operator	The person, owner or manager who at the time is in attendance and responsible for the operation of the registered establishment.
Potable	In relation to water means a water quality that is consistent with standards for drinking water in the respective State or Territory
Quality Assurance (QA) Arrangement	An arrangement between the controlling authority and the operator of a processing premises with an approved quality system, where company management takes responsibility for ensuring the production of wholesome meat. The controlling authority's role is to monitor the effectiveness of a company's approved QA system through an audit program to ensure compliance with the relevant provisions of this Standard.
Registered/Licensed/Accredited	Premises registered in accordance with the requirements of the controlling authority.
Residues	The National Registration Authority for Agriculture and Veterinary Chemicals registers agriculture and veterinary chemical products. Maximum Residue Limits (MRL's) for agriculture and veterinary chemicals are stipulated in the Australian Food Standards Code. Meat products intended for export are subject to residue limits of the <i>Codex Alimentarius</i> .
Sanitise	Apply approved chemical and/or physical agents or processes to cleaned surfaces to minimise risk of contamination of meat by micro-organisms.
Slaughter	The irreversible loss of consciousness induced in an animal by: (a) fatal damage to the brain; (b) stunning followed by bleeding to death; or (c) bleeding to death (in specified religious slaughter procedures only)
Sterilise	In relation to equipment or utensils used in the hygienic processing of animals, cleaned and immersed until sterilisation is effected, or treated by other effective means. For the purpose of this Standard it means "make commercially sterile".
Sticking	Is the bleeding of a carcass by severing the large blood vessels to induce effective bleeding.
Stunning	The procedure by which an animal is rendered unconscious before being bled to death.
Wholesome	Means: (a) will not cause food borne infection or intoxication when properly handled and prepared for its intended use and (b) does not contain chemical residues in excess of established limits and (c) free of obvious physical contamination and (d) free of defects recognised as unsafe (objectionable) to consumers and (e) produced under adequate hygiene control.

4 QUALITY ASSURANCE PROGRAMS

OUTCOME REQUIRED

Where operations are conducted under a Quality Assurance arrangement it conforms to the essential elements of the Australian Model Standard and process control is achieved through the application of the HACCP approach.

Where the controlling authority approves a quality assurance arrangement for the purpose of production and hygiene quality control of meat, as required under this Standard, the quality assurance arrangement shall conform to the following principles:

- (a) ISO 9002 — the quality assurance arrangements shall be consistent with the quality management and quality assurance standards outlined by Standards Australia (AS/NZS ISO 9002). The essential elements of these arrangements shall reflect ISO9002 Clauses under Section 4 — Quality System Requirements:¹
 - 4.1 Management responsibility (quality policy, organisation, management review)
 - 4.2 Quality system
 - 4.3 Contract review
 - 4.4 Design control — exclusion statement
 - 4.5 Document and data control (document approval and issue, document changes/modification)
 - 4.6 Purchasing
 - 4.7 Control of customer - supplied product
 - 4.8 Product identification and traceability
 - 4.9 Process control
 - 4.10 Inspection and testing (including records)
 - 4.11 Control of inspection, measuring and test equipment
 - 4.12 Inspection and test status
 - 4.13 Control of nonconforming product
 - 4.14 Corrective and preventive action
 - 4.15 Handling, storage, packaging, preservation and delivery
 - 4.16 Control of quality records
 - 4.17 Internal quality audits
 - 4.18 Training
 - 4.19 Servicing
 - 4.20 Statistical techniques

1. Australian/New Zealand Standard - *Quality Systems — Model for Quality Assurance in Production, Installation and Servicing* (AS/NZA ISO 9002: 1994).

- (b) **HACCP** - Process control (ISO 9002 Clause 4.9 above) shall be achieved through the application of the Hazard Analysis Critical Control Point (HACCP) approach, using the seven principles defined by the Food Standards Programme of the Codex Alimentarius Commission.

The seven principles are:

1. Identify the potential hazard(s) associated with all stages of production. Assess the likelihood of occurrence of the hazard(s) at each stage and identify preventative measures.
2. Determine the points/procedures/operational steps that can be controlled to eliminate the hazard(s) or minimise its likelihood of occurrence (Critical Control Point (CCP)). A “step” means any stage in food production and/or manufacture including raw materials, their receipt and/or production, harvesting, transport, formulation, processing, storage, etc.
3. Establish critical limit(s) which must be met to ensure the CCP is under control.
4. Establish a system to monitor control of the CCP by scheduled testing or observations.
5. Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control.
6. Establish procedures for verification which include supplementary tests and procedures to confirm that the HACCP system is working effectively.
7. Establish documentation concerning all procedures and records appropriate to these principles and their application.

Control Points in the Production of Rabbit Meat

Processors will need to address the critical control points in more detail to reflect their individual operations (*see Table on next page*).

- (c) Under a full-time meat inspection arrangement or as specified in the quality assurance program, animals and carcasses shall be inspected in accordance with the Standard by company employees holding recognised meat inspection qualifications or other qualifications approved by the controlling authority.
- (d) Where a quality control program incorporating full-time meat inspection system is applied, the quality control program shall include a company-managed HACCP system of process control (ISO 9002, Clause 4.9) as outlined in (b) above. In addition the quality control program shall include compliance with ISO 9002 Clause 4.8 — “Product Identification and Traceability”.
- (e) Controlling Authorities shall institute:
1. a process of QA program development and approval (including amendments) which ensures that a manual accurately describes individual plant operations and which gives confidence that regulatory standards are consistently satisfied
 2. audit policies and procedures which are aligned with the Standards Association of Australia (AS 3911)
 3. corrective action and a sanctions policy which effectively address noncompliance with standards and fraud.

Critical	Potential Risk	Critical Control Point
Rabbit receipt	Stress	<ul style="list-style-type: none"> * Control measures to be in place: Covered transport (darkness) Adequate ventilation Access to drinking water.
	Rabbit is diseased or contaminated	<ul style="list-style-type: none"> * Removal of diseased or contaminated rabbits. Control of medication or of organic or inorganic residues.
Pelting	Bacteria are transferred from the pelt to the underlying meat	<ul style="list-style-type: none"> * Elimination of direct or indirect external pelt/meat contact. * Removal of pelt & meat from pelting area. * Prevention of contamination via skinning equipment or tables — disinfection of equipment. Type/layout of equipment and tables. Procedures.
	Bacteria are transferred from the operator to the meat	<ul style="list-style-type: none"> Defined tasks/operations for employees to prevent cross contamination. * Regular disinfection of hands and sterilisation of knives. * Minimisation of direct hand/meat contact. * Protective clothing/personal hygiene.
Evisceration	Bacteria are transferred from the intestinal tract to the meat	<ul style="list-style-type: none"> * Rabbit to be empty at slaughter. * Removal of gastro-intestinal tract, without spillage.
	Accidental contamination occurs	<ul style="list-style-type: none"> * Hygienic structural facilities exist and are maintained. * Decontamination step is in place. * Procedures to avoid cross-contamination.
Chilling	Remaining bacteria multiply	<ul style="list-style-type: none"> * Rapid chilling. * Time and temperature control
Storage	Microbial growth	<ul style="list-style-type: none"> * Temperature/time.
	Substitution of non-compliant product	<ul style="list-style-type: none"> * Packaging and labelling requirements adhered to. * Security. * Auditing.

5 OPERATIONAL REQUIREMENTS — CONSTRUCTION

The following additional facilities and equipment shall be provided in abattoirs designed specifically for the slaughter of rabbits or the slaughter of rabbits on a multi-purpose slaughter floor. These premises shall comply with the relevant requirements of the *Australian Standard for the Construction and Equipment of Premises Animals for Human Consumption* and the *Australian Standard for Construction of Premises Processing Meat for Human Consumption*, but in addition the following equipment shall be provided:

- 5.1 Cages containing the rabbits to be slaughtered, shall be delivered into an area that does not form part of the slaughter floor. This area shall be able to be easily cleaned and provided with a drinking water system that gives the rabbits access to water.
- 5.2 Facilities should be provided for the washing of cages and transport vehicles and approved disposal methods for any materials associated with such washing.
- 5.3 An approved humane restraining device.
- 5.4 Facilities shall be provided to ensure separation of carcasses from the start of dressing till after final wash.
- 5.5 A separate area shall be provided for de-heading unskinned heads, de-footing and pelting operations. This area shall be capable of containing all airborne fur and be easily cleaned.
- 5.6 Chillers shall be equipped with apparatus for individual hanging of rabbits. The apparatus is to be easily cleaned and sanitised, and carcasses hung in a manner so that the flesh is not penetrated by a hook.
- 5.7 Fixed equipment and supporting structures shall be situated to avoid contact with carcasses at any time during processing.
- 5.8 Correlation between heads viscera and the carcass shall be maintained until after final inspection.

6 HYGIENE REQUIREMENTS

OUTCOMES REQUIRED

Adequate facilities and equipment are provided at the processing plant to enable procedures which prevent microbiological contamination and adulteration of meat.

General Hygiene on Plant

- 6.1 Only equipment that conforms with the *Australian Standard for Construction of Premises Processing Animals for Human Consumption* shall be used on the processing floor for slaughtering and dressing.
- 6.2 Buildings, surrounds, perimeter fencing, roadways, yards, rooms, equipment and other facilities of the registered premises shall be maintained in good repair and in a clean, orderly condition at all times.
- 6.3 Rooms and areas shall be kept as free of steam, odours, vapours and excess water as possible. Condensation shall not be permitted to accumulate on overhead structures in an amount conducive to drip.
- 6.4 Cleaning compounds or other materials likely to cause contamination of product shall not be stored in edible product areas. Cleaning equipment shall be stored in an orderly manner when not in use.
- 6.5 Rooms used for the storage of cleaning compounds, chemicals, insecticides and the like, shall have stored materials labelled and stacked so as to facilitate audits.
- 6.6 Amenities provided for use of employees and inspection staff, including inspection office area where provided, shall be cleaned after each day of processing or more frequently as necessary.
- 6.7 Food shall not be consumed at processing premises other than in a meals room as provided under this Standard.
- 6.8 Equipment used on the slaughter floor shall be maintained in good condition.
- 6.9 Only potable water shall be used on the slaughter floor. Programs must operate for monitoring the potability of water. Water for sterilisation of equipment shall be 82°C or above.
- 6.10 Recycled water shall not be used on the slaughter floor.
- 6.11 During processing, only water under normal pressure (e.g. high volume and low pressure) shall be used for general cleaning.
- 6.12 Apron and equipment washing and hanging facilities shall be provided in a designated place.

Storage and Disposal of Waste

- 6.13 Waste material shall be handled in such a manner as to prevent contamination of food or potable water. Access to waste materials by pests shall be prevented.
- 6.14 Effluent containing solid materials shall be directed through a separation process to effectively retain solids prior to discharge of the effluent.
- 6.15 Effluent shall be removed from the processing area at least daily, in a manner that complies with requirements of appropriate local government and State and Territory authorities.

General

- 6.16 Dogs, cats, birds and other domestic animals shall be excluded from premises where meat is processed or stored.
- 6.17 The owner of every meat establishment shall ensure that no person smokes or uses or handles tobacco or expectorates in any part of a meat establishment used for processing, packaging, or canning of carcasses or meat or from storing or holding of meat or meat products.
- 6.18 Approved chemicals only shall be used in processing areas.
- 6.19 Hoses when not in use shall be stored on reels or racks. Wash down hoses shall not be immersed in water or contact product in the act of filling containers or the like.
- 6.20 The premises shall not be used for any purpose other than processing meat or meat products, except in special circumstances approved by the controlling authority.

7 OPERATIONAL HYGIENE REQUIREMENTS

OUTCOMES REQUIRED

Hygiene controls of all operations that effectively prevent physical and microbiological contamination of product and risks to health and safety of plant personnel.

Cleaning and Sanitising

- 7.1 A person shall not commence each day's operation using plant, equipment, vehicles or protective clothing unless such plant, equipment, vehicles and protective clothing are clean.
- 7.2 Equipment, implements, tables, utensils including knives, steels and knife scabbards, protective gear and containers shall be cleaned regularly during operations. They shall be immediately and thoroughly cleaned and sanitised whenever they come in contact with diseased or infective material, or become contaminated in any way. They shall also be effectively cleaned and sanitised at the conclusion of work each day. Knives and carcass contacting equipment used for slaughter floor dressing must be sanitised between carcasses.
- 7.3 Cleaning compounds and similar materials (detergents and sanitisers) shall be approved for use in meat processing premises and shall not be allowed to come into contact with carcasses, meat or packaging materials during cleaning and sanitising of rooms, equipment or utensils.
- 7.4 Except when approved for use without a final rinse, any chemical residue shall be removed from surfaces likely to contaminate edible product by thorough rinsing with potable water before the area or the equipment is again used for handling edible product.
- 7.5 Operatives' forearms and hands shall be washed as required to prevent contamination between carcasses.
- 7.6 Adequate supplies of approved handwash agent shall be available at each handbasin.
- 7.7 Where any container used for edible material enters an inedible or condemned material area, it shall be effectively cleaned and sanitised before re-entering any edible product area.
- 7.8 Only chemicals approved for use in food premises may be added to water used in the processing area.
- 7.9 An effective sanitation program shall be implemented in the processing area on completion of each day's production.

Pest Control

- 7.10 All possible precautions shall be taken to ensure that pests do not contaminate edible product and materials, equipment and utensils.
- 7.11 There shall be an effective and continuous program for the control of insects, birds, rodents and other pests. Premises and surrounds shall be regularly examined for evidence of infestation.
- 7.12 Pesticides shall not be used in a manner that risks contamination of product or equipment.
- 7.13 Before pesticides are applied, all meat and wrapping material shall be removed from an edible product room. All equipment and utensils shall be thoroughly washed before being used again.

Animal Control at Processing Premises

- 7.14 No animals, other than animals for processing, or work animals used security purposes, shall be present on the premises, and no animals other than animals for processing shall be permitted inside the processing building.
- 7.15 Animals for processing shall not be removed from the premises without approval from the relevant controlling authority.
- 7.16 Work animals shall be restrained when not working.
- 7.17 All dogs shall be muzzled when not restrained.

Monitoring of Requirements

- 7.18 Hygiene operating requirements shall be monitored daily by:
 - (a) an inspector; or
 - (b) the operator or nominated employee of the registered premises under a quality assurance (QA) arrangement approved by the controlling authority.

8 PERSONNEL HYGIENE REQUIREMENTS

OUTCOMES REQUIRED

Personnel involved in the production of meat for human consumption will conduct themselves in a manner which will ensure that no threat is posed to that product either through their presence or their actions.

- 8.1 A program of continuing training in the hygienic handling of edible product shall be implemented in each processing premises.
- 8.2 Operators shall ensure that no employee while known to be suffering from, or to be a carrier of, a disease capable of being transmitted through meat, or while afflicted with infected wounds, sores or diarrhoea, is permitted to work in any capacity in which it is possible either directly or indirectly to contaminate product with pathogenic microorganisms. Any person so afflicted shall report the illness to the management.
- 8.3. When it is considered appropriate or necessary by the controlling authority and/or the operator, persons who come into contact with meat and meat products shall have a medical examination prior to their employment and at times when clinically or epidemiologically indicated. The medical examination shall pay particular attention to infected wounds and sores, enteric infection (especially with respect to *Salmonella*) and respiratory diseases.
- 8.4 Every person who is cut or injured shall cease work until their wound is suitably dressed. No person working in an edible product area shall wear any bandage unless that bandage is completely protected by a waterproof and conspicuously coloured covering which cannot be easily detached. Adequate first aid facilities shall be provided for this purpose.
- 8.5 Every person engaged in the production of meat and meat products while on duty shall frequently and thoroughly wash their hands using liquid soap and potable water. Hands shall be washed before commencing work, after using toilet facilities or blowing nose, and whenever necessary otherwise;
 - (a) after handling diseased or contaminated material, hands shall be thoroughly washed and any protective gloves washed and sanitised before handling edible material or equipment used on edible material;
 - (b) notices requiring handwashing and sanitisation shall be prominently displayed in appropriate places.
- 8.6 Any behaviour which could result in contamination of meat, such as eating, smoking, spitting and throwing of product is prohibited.

9 CLOTHING REQUIREMENTS

OUTCOMES REQUIRED

Personnel involved in the processing of meat for human consumption are attired in suitable protective clothing which will prevent cross contamination from operator to product, nor will it become a source of contamination.

- 9.1 Every person involved in meat processing for edible products shall maintain a high standard of personal cleanliness. They shall at all times wear suitable clothing that prevents cross contamination from the persons body to the product which is of a colour that allows detection of visible contamination, head covering enclosing hair and enclosed footwear. These articles shall be kept clean consistent with the work in which the person is engaged.
- 9.2 One piece overalls are not acceptable as protective clothing unless worn in conjunction with an outer coat or jacket.
- 9.3 Protective clothing used for meat processing shall be durable, non-toxic, smooth-surfaced, corrosion resistant, easily cleaned, resistant to wear and have a finish that makes surface contamination clearly visible.
- 9.4 Protective clothing such as aprons, protective gloves and implements shall be properly cleaned at the end of the day and when necessary in a facility provided for this purpose. Special attention must be paid to the cleaning and sanitising of steel mesh gloves.
- 9.5 Aprons and personal working gear including protective gloves, knives and scabbards shall not be worn into toilet areas. Hooks shall be provided at designated sites within production areas for the hanging of these articles.
- 9.6 Visitors to areas for edible products ("edible" areas) shall be properly clad in clean protective clothing, including head covering enclosing hair.
- 9.7 Care shall be taken by employees to prevent the contamination of product by cosmetics, chemicals, sweat and such accidental acts as coughing and sneezing. Loose jewellery such as wrist watches, earrings, brooches, badges, or the like shall not be worn where they could accidentally contaminate product.
- 9.8 Persons employed in areas for inedible products ("inedible" areas) or live rabbit holding areas shall not be permitted to engage in the slaughtering, dressing or handling of edible product until they have thoroughly washed and ensured their outer clothing, head covering and footwear is free from contamination originating in inedible areas. In the case of a rendering and pet food preparation areas, outer clothing shall be changed.

10 ANTE-MORTEM INSPECTION

OUTCOMES REQUIRED

Only animals suitable for processing for human consumption are slaughtered.

Specific Aims

- 10.1 The specific aims of antemortem inspection are to:
- (a) prevent the processing of animals showing evidence of disease or any other condition that would make the carcase or parts unfit for human consumption;
 - (b) separate animals suspected of having a disease or any other condition that could make the carcase or part of it unfit for human consumption for segregated slaughter;
 - (c) prevent animals that are grossly contaminated with extraneous matter from entering the slaughter floor;
 - (d) ensure that all animals and, in particular, injured animals are treated humanely;
 - (e) detect the presence of exotic or other notifiable disease.

Requirements

- 10.2 All animals presented for processing shall be:
- (a) handled in a humane manner and adequately rested;
 - (b) held in secure and clean lairages with an adequate supply of drinking water prior to slaughter (in the case of deer, animals may be transported directly to the knocking area in enclosed or partly enclosed containers);
 - (c) examined by:
 - (i) an inspector with the assistance of company employees; or
 - (ii) a company nominee in a QA arrangement approved by the controlling authority.
 - (d) slaughtered within 24 hours of passing ante-mortem inspection or, if not slaughtered within that period, reinspected or condemned;
 - (e) adequately identified up to postmortem inspection.
- 10.3 Animals may not be processed unless approved by an inspector or by other company personnel nominated in a QA arrangement approved by the controlling authority.
- 10.4 Animals shall be examined to the extent necessary to determine their suitability for processing.
- 10.5 Normal procedure shall not preclude the admission of animals known to be affected by certain notifiable diseases or residues for slaughter under special conditions agreed to by the controlling authority

11 PROCESSING PROCEDURES

OUTCOMES REQUIRED
Consistent, routine slaughter and dressing procedures that minimise or eliminate risk of physical contamination and contamination of carcass meat by pathogenic microorganisms.

- 11.1 **Rest** — Rabbits should be rested prior to slaughter.
- 11.2 **Feeding** — Feed shall be withheld from rabbits for 24 hours prior to slaughter.
- 11.3 **Transportation** — Rabbits shall be despatched to the abattoir in clean cages. A clean covered and ventilated vehicle should be used for transportation purposes. Rabbits shall be held in cages that do not form part of the slaughter floor.
- 11.4 **Restraining and Stunning** — Rabbits to be restrained by an approved method and electrically stunned or made unconscious and insensible to pain by other approved humane methods prior to bleeding.
- 11.5 **Bleeding** — Rabbits shall be suspended so that no part of the carcass is in contact with the floor. Bleeding shall be carried out immediately after stunning by cutting the rabbit's throat in a manner that prevents contamination.
- 11.6 **Heads** — Heads may remain attached to the carcass or be removed after bleeding. Where heads remain attached to carcasses they shall be completely skinned and free from all fur and visible contamination. Oral and nasal cavities shall be flushed with potable water to remove any extraneous matter.
- 11.7 **Paws** — Front and rear paws shall be removed at the carpal, tarsal joints to avoid contamination and bone splinters.
- 11.8 **Pelt Removal** — The pelt shall be removed in a manner which would minimise the amount of airborne fur or contamination of carcass. Opening cut lines shall be performed by a spear cut. The carcass will then pass through a small opening into a separate area which is used expressly for the evisceration, washing and inspection of the carcasses.
- 11.9 **Dressing** — and evisceration shall proceed at a rate which allows adequate time:
 - (a) for rabbits to be processed in a hygienic and orderly manner;
 - (b) to avoid congestion in any area;
 - (c) to maintain physical separation of bodies and carcasses where required;
 - (d) for effective inspection.
- 11.10 **Evisceration** — Shall be performed in such a manner that contamination of the carcass does not occur:
 - (a) Viscera other than kidneys shall be removed from the carcass. Uteri, ovaries and urinary bladder shall be removed.
 - (b) Penile tissue, pelvic urethra, testes, spermatic cords and associated accessory glands shall be removed.
 - (c) Mammary tissue shall be removed from lactating does.

- 11.11 Carcases shall be free from fur, blood and visible contamination and trimmed where necessary prior to final inspection.
- 11.12 Carcases passed as fit for human consumption shall be handled, stored and transported in a manner which will protect the meat from contamination and deterioration.
- 11.13 The carcase shall be placed in a chiller on equipment specifically designed to keep carcases separated and clear of the floor.
- 11.14 All condemned carcases, part carcases or offal shall be disposed of in a manner approved by the Controlling Authority.
- 11.15 Meat shall not come into contact with external skin surfaces, or with surfaces which have been in contact with the external skin surfaces. Meat surfaces contaminated by external skin surfaces shall be removed by trimming. Where equipment comes in contact with external skin surfaces, such equipment shall be sterilised.

Final Wash

- 11.16 At completion of dressing and inspection, and after all contamination visible on the carcase is removed by trimming the carcases may be washed with potable water using minimal water pressure

12 POST-MORTEM INSPECTION AND DISPOSITION

OUTCOMES REQUIRED

Only wholesome meat is passed for human consumption.

- 12.1 The examination of the carcase and body parts for disposition shall be carried out by a person with training and qualifications which enable the accurate recognition of the conditions described and their correct disposition.
- 12.2 Emphasis should be placed on normal healthy carcasses and parts. Departures from normal as described in this section shall be dealt according to the dispositions described for each observation or set of observations. Where it suits the purposes of the operator, a more severe disposition may be selected rather than that acceptable for the condition described.
- 12.3 Where a condition carries a human health risk, failure to follow the described disposition or a more severe disposition shall be a critical non-conformity.
- 12.4 Where the condition is considered to be a presentation fault, the failure to follow the described disposition shall be a minor non-conformity for each event.
- 12.5 Inspection points shall be provided at appropriate locations in the establishment to facilitate the examination of the body and organ systems described. Sufficient lighting to enable careful examination. Retention rails and containers shall be provided in continuous systems to allow for a more thorough examination or treatment of suspect carcasses, parts or offal when required.
- 12.6 The carcasses, viscera and where appropriate head shall be correlated at least until the point of carcase inspection. If not saved for human consumption or animal food, the head may be discarded before inspection.
- 12.7 Any carcase, viscera or part which is diseased or suspected of being diseased shall be handled in a manner which ensures that other product is not contaminated, and minimises contamination of plant, equipment and personnel.
- 12.8 One of the following dispositions shall be applied to a carcase, part, head and/or viscera (including kidneys) following post mortem inspection:
 - (a) passed for human consumption;
 - (b) retained pending remedial treatment, laboratory findings or other examination before final disposition;
 - (c) saved as animal food or for pharmaceutical purposes;
 - (d) condemned as unfit for human consumption or animal food.
- 12.9 Any carcase, part or viscera retained for remedial treatment shall be clearly identified and controlled to ensure that the remedial treatment is carried out.
- 12.10 Any condemned carcase, part or viscera shall be clearly identified or denatured to preclude use for human consumption or animal food.

- 12.11 Post mortem inspection shall include continuous monitoring for compliance with the acceptable quality level (AQL) system and as specified in the QA arrangement and standards by company management (Appendix B)

Exotic Disease

- 12.12 If the observations made at post mortem suggest that an animal displays lesions of an Exotic Disease the relevant Government veterinarian shall be contacted as soon as possible. The head, carcase and viscera shall be retained until a course of action has been determined by that veterinarian.
- 12.13 Post-mortem procedures and dispositions are given in Appendix C.
- 13.14 Requirement at Post-Mortem Inspection
- (a) Carcases and viscera shall be presented for inspection in a manner which allows inspection to be performed efficiently.
 - (b) Carcases and viscera shall be correlated until completion of post-mortem inspection.
 - (c) Carcases and viscera shall be inspected by an authorised officer/person using procedures of observation and palpation. Additional procedures may be applied according to the discretion of an authorised officer/person.
 - (d) Any carcase or part which is diseased or suspected of being diseased or contaminated shall be handled by a method which ensure that other product is not contaminated.

13 CHILLING

- 13.1 Carcases, after dressing shall be removed from the slaughter floor as soon as possible in an approved manner to an approved chiller.
- 13.2 Hot carcases should not be loaded into chillers containing chilled carcases if moisture condenses on chilled carcases or if chilled carcases warm up.
- 13.3 When chillers are in use the doors shall be kept closed except during:
 - (a) loading and unloading of carcases or meat;
 - (b) entry or exit of personnel.
- 13.4 During primary chilling, carcases shall not touch each other, doors or walls. Separation should be maintained during further chilling and adequate separation provided between carcases.
- 13.5 Chillers should be capable of reducing the deep muscle temperature of carcases to at least 5°C, within 2 hours of completion of the daily killing operations or run.
- 13.6 Carcases or meat should not be removed from a processing establishment unless all parts of the carcase or meat are reduced to temperatures approved by the controlling authority.

14 REFERENCES

- Codex Alimentarius* Vol. 10 1994 - Recommended International Code of Practice for Fresh Meat
- Codex Alimentarius* Vol. 10 1994 - Recommended International Code of Hygienic Practice for Processed Meat and Poultry Products
- Codex Alimentarius* General Principles of Food Hygiene - ALINORM 95/13 - Codex Alimentarius Committee on Food Hygiene, October 1994
- Codex Alimentarius* Vol. 10 1994 - Recommended International Code for Ante-Mortem and Post-Mortem Inspection of Slaughter Animals and Ante-Mortem and Post-Mortem Judgement of Slaughter Animals and Meat
- Standing Committee on Agriculture and Resource Management (1996) *Australian Standard for Construction of Premises Processing Animals for Human Consumption*. SCARM Report No. 55, CSIRO Publishing, Melbourne.
- Standing Committee on Agriculture and Resource Management (1997) *Australian Standard for Construction of Premises Processing Meat for Human Consumption* (2nd edition). SCARM Report No. 53, CSIRO Publishing, Melbourne.
- Standing Committee on Agriculture and Resource Management (1997) *A Guide to the Implementation and Auditing of HACCP*. SCARM Report No. 60, CSIRO Publishing, Melbourne.
- Standards Australia/Standards New Zealand (1994) *Australian/New Zealand Standard - Quality Systems - Model for Quality Assurance in Production, Installation and Servicing* (AS/NZS ISO9002).

APPENDIX A

MICROBIOLOGICAL STANDARDS

Microbiological testing is required for process verification in any HACCP-based quality assurance program in the meat industry. The primary application of testing is to monitor critical control points in production.

Work surfaces and product surfaces must be monitored on a regular basis to verify the HACCP program. The Schedule of testing used shall be documented with the HACCP program.

HACCP Validation: The initial testing and analysis carried out in order to establish that critical limits of a HACCP program are adequate and sufficient to control the likely hazards and to provide the outcomes for which it is designed. The method used for validation shall be a standard method recommended by the CSIRO so that compatibility between plants is possible.

HACCP Verification: The testing and analysis is required by Principle Seven of the HACCP process in order to verify the ongoing effectiveness of the HACCP program. This ongoing testing is for on plant use and need not be a standard method, but can be any one of the proven techniques which will achieve the desired results. Of particular importance is the consistency of testing so that trendlines of production can be established.

Guideline Count: A microbiological criterion used to monitor a process to signal whether microbiological conditions are within the normal range. Australia has not set specific ranges but regulators will be looking to ensure that continuous improvement is achieved and that action is taken by processors whenever a high level is detected.

One-log Growth: Good hygienic practice is designed to deliver meat to the final consumer with a sufficient margin of safety to ensure that under most conditions even poor handling by the consumer will not render it dangerous to human health. A one-log (ten-fold) increase in the load of bacterial pathogens is considered achievable by hygienic production techniques and strict control of temperatures. *E. coli* Biotype 1 shall be used to indicate pathogen load for the purpose of achieving no more than a 1-log increase.

It is important to note that microbiology is to be used as a tool to ensure that the process is delivering good results on a continuous basis. It is not to be used to judge the wholesomeness of individual pieces of product.

Types of Testing: TVC — Total Visible Count may be used to test the overall hygiene and the slaughter process. It always achieves a result but is limited in applications post-chilling. This measure is ideal for work surfaces.

E. coli Biotype 1 — is a very good indicator of enteric contamination. It also is very useful post-chilling because it is one of the major group of bacteria which stop growing at about 7°C. *E. coli* is best used for meat and meat surfaces.

Coliforms — can be used preferably in addition to *E. coli* as an indicator post-chilling. This measure is useful as an indicator of process hygiene, not just faecal contamination.

Records shall be kept to enable benchmarks to be set and trends over time can be identified.

Because carcase contamination is not uniform and pathogen numbers are normally low, microbiological testing cannot be applied and shall not be used to confirm freedom or absence of specific organisms.

APPENDIX B

PHYSICAL CONTAMINATION STANDARDS

Acceptable Quality Level Monitoring of Physical Contamination of Carcase Meat, Offals and Cartoned Meat

For the purpose of this performance standard, physical contamination means *visible* physical contamination and *includes* such contaminants as faeces, ingesta, hair, abscesses, parasitic lesions and dust.

For the purpose of this performance standard, Acceptable Quality Levels (AQLs) are used to monitor or assess physical contamination of meat (in a final product form) produced at, or introduced into, meat processing premises. Their use is based on a uniform system of inspecting a representative sample of product of a similar type which indicates that the product has obtained a predetermined quality level.

The AQL system is suitable for incorporation into approved programs of production based on quality assurance principles and serves as an adjunct to official auditing procedures for the assessment of compliance with company quality systems.

The AQL system can be used by management as a mechanism for monitoring standards achieved under a company's program of production and can be applied at any point in the production process to provide a mechanism for verification of the Hazard Analysis and Critical Control Point (HACCP) program.

AQLs can assist in determining any necessary remedial action based on an objective assessment process and can be applied by the regulating body or company staff. However, AQLs are not designed for use as regular policing "tools". Their use should complement other monitoring procedures such as process control audits which include the observation of carcasses during routine inspection procedures and observing dressing procedures on the slaughter floor.

Where there is a failure to meet the Acceptable Quality Level the whole group of carcasses or offals from the production run or consignment of cartons is required to be re-trimmed, re-sampled and re-inspected and another determination of its acceptability made. This process is to continue until such time as the product group is acceptable.

Objectives of the AQL System

1. **Wholesomeness** — to encourage the production of wholesome meat.
2. **Uniformity** — to design, implement, and maintain a re-inspection procedure which includes uniform sampling methods, defect standards and product acceptance and rejection criteria.
3. **Control** — to provide inspection personnel with a system of control which will ensure that meat, determined by the re-inspection criteria to be unwholesome, is withheld from trade until it is made acceptable.
4. **Information** — to provide a continuous monitoring system for determining the extent and nature of defects found in meat.
5. **Feedback** — to provide management and inspectors with objective information and to assist in determining the origins of dressing errors and other defects allowing necessary corrective action.

Acceptable Quality Levels

Based on the objective scoring system detailed on the Inspection Report Form, samples are deemed to be unsatisfactory if either:

- (a) Defect score is more than 1.0; or
- (b) Sample score is more than 0.3.

If unsatisfactory, the production run from which the sampling occurs is required to be reworked until quality levels are acceptable.

Procedure for AQL Monitoring

This procedure applies to all species of stock. Persons responsible for AQL monitoring are to:

1. determine a manageable number of carcasses or cartons which make up a consignment, production run etc. to be sampled;
e.g. one days kill of 600 sheep could be sampled by examining three runs (morning to smoko, smoko to lunch, lunch to finish) of 200 sheep each;
2. ensure carcasses are sampled after the final wash and in a manner that all surfaces are viewed under adequate lighting;
3. ensure a representative sample is examined, using that sampling rate outlined on the AQL forms. Note that there are two AQL forms — one is for use with carcasses, the other is for use with offals and cartoned meat;
4. ensure representative samples are selected randomly. Random numbers can be used for selecting an individual sample or a point in time at which a sample at a predetermined point in the processing line is selected;
5. record defects identified during AnthMinimum ten head (where necessary in slaughter houses combine days to make up a minimum of ten head).
6. ensure that those defects identified during examination are trimmed;
7. supply management with a copy of the AQL form/s on completion of the calculation;
8. ensure that the company retains and reworks the whole of the group of carcasses, offals or cartons which has failed an AQL;
9. ensure that those carcasses/offals/cartons reworked as the result of a failed AQL are subjected to actions outlined in 2, 3, 4, 5, 6, 7 and 8;
10. ensure that, for slaughter animals, the frequency of sampling each species is as follows:

Under 100 head per month	Minimum of ten carcasses (where necessary combine days to make up a minimum of carcasses).
Under 100 head per week	One per week.
Under 100 head per day	Three times per week.
Over 100 head per day	At least daily.

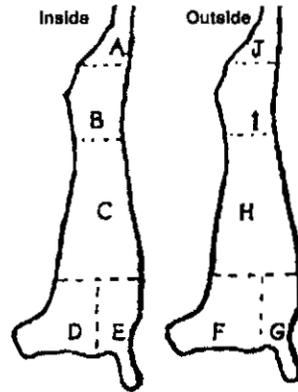
Use of the AQL form

Points to be noted when using the form are as follows:-

- Scoring is done *on a fault basis*. For instance, if one carcass has two CLA abscesses, two abscesses would be recorded in the relevant “box”, and indicating their positions using the code.
- Faecal material/staining and ingesta material/staining are recorded by position and size, as this may give some indication of the sources and severity of the problem. The number of these defects in the sample is then totalled and recorded in the “scoring grid” under **critical**.
- GD is Greater Dimension. If the greater dimension of a condition (e.g. skin) is more than 100 millimetres and the relevant “box” (critical) is blocked out, the score is made in the next available “box” for that condition (**major** in the case of skin).
- Certain conditions are of an aesthetic nature rather than of public health concern. These conditions should be recorded (in the relevant “box” on the extreme right of the scoring grid) and be brought to management’s attention. These “aesthetic faults” are *not* to be used when totalling either defects or weighted defects.
- Provision has been made for recording “other” staining, that is, other than that caused by ingesta or faeces. This is only to be used when the “other cause” is clear (e.g. bile).
- Parasites (non-transmissible to man) are recorded as follows:
major — less than 3 parasites
critical — 3 or more parasites
- Foreign bodies (e.g. glass, splinters, metal fragments, plastic) are recorded as follows:
minor — affects product appearance but not wholesomeness
critical — affects product wholesomeness
- The area under “units with scored faults” is to be used to record the number of carcasses (or quarters or sides etc.) that have faults. This total is then used for obtaining the Sample Score.
- Random numbers can be selected by using random number charts or computers and calculators with this function.

AQL Inspection Report for Game Carcase

Product Origin
 Description
 Quantity
 Sample Size
 Consigned to
 Consigned from



Sampling Rate:

Total No:		Sample:	Total No:	Sample:
0 – 20	}	10 Total (whichever is less)	201 – 300	17
21 – 40			301 – 400	20
41 – 70			401 – 500	22
71 – 100			501 – 650	25
101 – 150		12	651 – 800	28
151 – 200		14	≥801	30

Defect Score = $\frac{\text{Total of Weight Defects}}{\text{Sample No.}}$

Sample Score = $\frac{\text{Total No. of Defective Units}}{\text{Sample No.}}$

=

=

No of Units with scored faults
(Carcases/sides/quarters)

The sample is unsatisfactory if either:
 (a) Defect score is more than 1.0; or
 (b) Sample score is more than 0.3.

Comments/Action Taken

Inspector/Authorised Person: _____

Date: _____

Please indicate, in the appropriate space, the number of defects found during inspection of cartoned meat.

	GD < 25 mm	GD 25 – 100 mm	GD > 100 mm
Faecal material/staining (GD)			
Ingesta material/staining (GD)			
SCORING BEGINS			
	Minor	Major	Critical
Total Faecal material/staining			
Total Ingesta Material/staining			
Off condition (sour)			
Other Staining (GD).....			
Fleece & Hide Fallout (GD)			
Hair/wool clusters < 20 hairs			
>20 hairs or 10–20 hairs x 2 or more			
Skin (GD)			
Abscess/Grass Seed Abscess			
Parasitic lesions -			
transmissible (state.....)			
non-transmissible (state.....)			
Grass seeds (non-suppurative) >10 seeds			
Other pathological conditions (state)			
Rail Fallout (GD)			
Dust Marks (GD)			
Grease Marks (GD)			
Hook Marks (GD)			
Floor Contact (GD)			
Foreign Bodies			
Total			
Weighting Factor	x1	x4	x10
Weighted Defects			
Inspector/Authorised Person		
Date		

APPENDIX C

POST-MORTEM OBSERVATIONS AND DISPOSITION

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Abscess	Soft Pus	Only local involvement	Infection e.g. Pasteurellosis Meliodosis Staphylococcosis	Trim affected parts without spillage and condemn trimmings and associated lymph nodes. Pass remainder for human consumption.	Critical
	Soft Pus	Systemic involvement, (fever, swollen lymph nodes)	Bacteraemia Septicaemia Meliodosis Staphylococcosis Necrobacillosis	Condemn carcase and parts for human consumption or pet food	Critical
Abscesses, Multiple	Soft Pus	Minimal systemic involvement	Pasteurellosis Necrobacillosis Staphylococcus	Condemn carcase and parts for human consumption or pet food	Critical
Abscess -Granuloma	Hard pus	Multiple abscesses	Pseudotuberculosis Tuberculosis	Condemn carcase and parts for human consumption or pet food	Critical
Abscesses in liver	Pinpoint grey and white foci	With or without systemic involvement	Listeriosis	Condemn carcase and parts for human consumption or pet food	Minor
	Small yellowish white nodules		Coccidiosis	Condemn liver. Pass remainder for human consumption.	Major

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Abnormal Odour	Mild	No systemic involvement	Metabolic Plant Sexual	Hold under refrigeration to determine if odour diminishes. If dissipated pass for human consumption or pet food.	Major
	Mild	No systemic involvement	Chemical	If possibly harmful when consumed condemn as unfit for human consumption or pet food. Otherwise hold under refrigeration to determine if odour diminishes. Where due investigation identified a suspect chemical refer to Food Standards Code for acceptability and if acceptable and dissipated pass for human consumption or pet food. May be passed for pet food if odour remains.	Critical
Anaemia	Strong	No systemic involvement	Metabolic Plant Chemical Sexual	If possibly harmful when consumed condemn as unfit for human consumption or pet food. Otherwise hold under refrigeration to determine if odour diminishes. If dissipated pass for human consumption or pet food. May be passed for pet food if odour remains.	Critical
	Putrefaction		Failure of refrigeration	Condemn as unfit for human consumption or pet food	Critical
	Slight change	No systemic involvement	Gastro-intestinal parasites Metabolic disease	Pass for human consumption	Minor
	Pronounced change	No systemic involvement	Gastro-intestinal parasites Metabolic disease	Save for pet food or for pharmaceutical purposes	Major

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Arthritis	Single joint	No systemic involvement	Trauma Previous infection	Trim affected part. Condemn trimmings. Pass remainder for human consumption.	Minor
	Multiple joints	No systemic involvement	Previous infection Metabolic disease Congenital condition	Trim affected part. Condemn trimmings. Pass remainder for human consumption	Major
	Multiple joints	Systemic involvement	Necrobacillosis	Condemn carcase as unfit for human consumption or pet food	Critical
Bruising	Surface only		Trauma	Trim lesion and immediately surrounding tissue. Trimmings may be used for pet food. Pass remainder for human consumption.	Minor
	Deep		Extensive Trauma	Trim lesion and immediately surrounding tissue. Trimmings may be used for pet food or pharmaceutical purposes. Pass remainder for human consumption	Minor
Congested blood vessels	No evidence of fever	Lungs congested	Heat stress	Check harvesting procedures immediately. Pass for human consumption or pet food	Critical
	Systemic involvement	Evidence of fever	Pneumonia Salmonella Calicivirus	Condemn as unfit for human consumption or pet food	Critical
Contamination (refer to AQL's)	Slight		Poor dressing technique	Trim affected part. Condemn trimmings. Pass remainder for human consumption or pet food	Critical
	Gross		Poor dressing technique	Condemn as unfit for human consumption or pet food	Critical
Cysts (fluid filled cavity)			<i>C. pisiformis</i> <i>M. serialis</i>	Trim lesion and immediately surrounding tissue. Condemn trimmings. Pass remainder for human consumption.	Minor

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Dermatitis	No systemic involvement		Fleas Mites Ticks	Skin carcase. Pass remainder for human consumption or pet food.	Major
Developmental abnormalities	No systemic involvement		Congenital deformity	Trim lesion and immediately surrounding tissue. Trimmings may be used for pet food. Pass remainder for human consumption or pet food.	Minor
Ecchymosis	No systemic involvement		Improper killing procedure	Check harvesting procedure. Trim lesion, immediately surrounding tissue. Trimmings may be used for pet food. Pass remainder for human consumption or pet food.	Minor
Emaciation	No systemic involvement		Nutritional Stress	Save as pet food or for pharmaceutical purposes.	Minor
Fatty liver	Systemic involvement		Bacteraemia Disease conditions	Condemn as unfit for human consumption or pet food.	Critical
Fibrotic tracts in liver	No systemic involvement		Metabolic disease	Save as pet food or for pharmaceutical purposes. (not to be used for human consumption)	Minor
Fistula	No systemic involvement	No systemic involvement	<i>T. pisiformis</i> <i>M. serialis</i>	Condemn liver, pass remainder for human consumption	Minor
	Systemic involvement		Staphylococcus Necrobacillosis	Trim affected areas. Condemn trimmings. Pass remainder for human consumption.	Critical
			Staphylococcus Necrobacillosis Bacteraemia	Condemn carcase and parts as unfit for human consumption or pet food	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Flystrike	Minor	No systemic involvement	Flystrike	Trim affected areas. Condemn trimmings. Pass remainder for human consumption	Minor
	Systemic involvement	Only regional lymph nodes involved	Flystrike	Trim lesion and affect part and regional lymph node. Condemn trimmings. Pass remainder as fit for human consumption.	Critical
	Systemic involvement	Fever evident	Flystrike	Condemn as unfit for human consumption or pet food	Critical
Gastro-intestinal tract inflammation	No systemic involvement	No peritonitis	Gastro-intestinal parasitism	Condemn Gastro-intestinal tract. Pass remainder as fit for human consumption or pet food.	Critical
	Necrosis of ileum, large intestine and caecum	With or without peritonitis	<i>Bacillus piliformis</i> (Tyzzer's disease)	Condemn as unfit for human consumption or pet food	Major
Genital tract scabs	Systemic involvement	With or without peritonitis	Salmonellosis Bacteraemia	Condemn carcase and parts as unfit for human consumption or pet food.	Critical
	vagina or prepuce affected		Spirochaetosis	Trim affected part and condemn trimmings. Pass remainder for human consumption	Minor
Grass seed	No systemic involvement		Grass seed	Trim lesion and immediately surrounding tissue. Condemn trimmings. Pass remainder for human consumption.	Minor
	Systemic involvement		Grass seed	Condemn as unfit for human consumption or pet food	Major

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Healed fracture	Localised with no systemic involvement		Old trauma	Trim lesion and immediately surrounding tissue. Condemn trimmings. Pass remainder for human consumption.	Minor
	Extensive with no systemic involvement		Rickets Old trauma	Trim lesions and immediately surrounding tissue. Condemn trimmings. Pass remainder for human consumption.	Major
Impaction	Fluid filled abdomen	Emaciation	Mucoid enteropathy	Condemn as unfit for human consumption	Major
Incomplete bleeding	No systemic involvement		Poor technique	Check bleeding procedure. Save as pet food or for pharmaceutical purposes.	Minor
Jaundice	Slight	No systemic involvement	Metabolic disease	Hold under refrigeration for re-examination. If improved pass for human consumption or pet food	Minor
	Pronounced	No systemic involvement Cartilage and Synovia affected	Metabolic disease	Hold under refrigeration for re-examination. If improved pass for human consumption or pet food if insufficient change save for pet food or pharmaceutical purposes only	Major
Lymphadenitis	Systemic involvement		Salmonellosis Meliodosis Necrobacillosis Bacteraemia	Condemn as unfit for human consumption or pet food	Critical
Mange	Inflammation of the skin		Mange mites	Skin carcase. Pass remainder as fit for human consumption or pet food	Minor
Mastitis	Localised		Bacterial infection	Trim affected area. Condemn trimmings. Pass remainder for human consumption	Major
	Extensive		Bacterial infection	Condemn as unfit for human consumption or pet food	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Myositis	Localised	No systemic involvement	Metabolic disease	Trim affected areas. Condemn trimmings. Pass remainder for human consumption	Major
	Extensive	No systemic involvement	Metabolic disease Exertional rhabdomyolysis	Condemn as unfit for human consumption or pet food.	Critical
	Localised	Regional involvement	Trauma	Trim affected part and associated lymph nodes. Condemn trimmings. Pass remainder as for human consumption	Critical
Nasal and eye discharge	Extensive		Pasteurellosis Myxomatosis Rabbit pox	Condemn as unfit for human consumption or pet food	Critical
	Localised	No systemic involvement	various	Trim affected part and associated lymph nodes. Condemn trimmings. Pass remainder as for human consumption	Minor
Oedema	Extensive	Systemic involvement	various	Condemn as unfit for human consumption or pet food.	Critical
	Slight	No systemic involvement	Gastro-intestinal parasites	Trim affected part. Condemn trimmings. Pass remainder as for human consumption	Minor
	Extensive, no systemic involvement	Loss of condition	Gastro-intestinal parasites Bacteraemia	Save as pet food or for pharmaceutical purposes	Major
Pigmentation	No systemic involvement		Metabolic disease Congenital Unknown	Hold under refrigeration for reinspection. If colour dissipates pass for human consumption. If not, save for pet food or for pharmaceutical purposes.	Minor
	No systemic involvement		Nosematosis	Condemn kidneys. Pass remainder for human consumption	Major

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Pleural and/or Peritoneal adhesions	No systemic involvement		Past infection Old trauma	Trim affected serosal surface and condemn trimmings. Pass remainder for human consumption.	Minor
	Systemic involvement		Salmonellosis <i>E. coli</i> Bacteraemia Pneumonia	Condemn as unfit for human consumption or pet food	Critical
Pneumonia	Systemic involvement		Pasteurellosis Salmonellosis Bacteraemia	Condemn as unfit for human consumption or pet food	Critical
Pox	Discharge from eyes, nostrils, skin rash		Rabbit Pox	Condemn as unfit for human consumption or pet food	Major
Ringworm	No systemic involvement		Mycotic Infection	Skin carcase. Pass remainder as fit for human consumption or pet food	Critical
Ulcer	Localised		Ulcerative pododermatitis	Trim affected part. Condemn trimmings. Pass remainder as for human consumption.	Major
	Systemic change		Ulcerative pododermatitis	Condemn as unfit for human consumption or pet food	
Uneviscerated carcase			Only as part of an approved process. Delays in processing	Disposition will depend upon a range of factors including ambient temperature, length of delay. Action should be taken to minimise deterioration. Where the bacterial safety of the carcase is compromised condemn as unfit for human consumption or pet food.	Critical

Primary Observation	Secondary Observation	Tertiary Observation	Possible Diseases or Conditions	Disposition	Significance of observation on product quality (risk category)*
Wounds	No systemic involvement		Fight wounds Dog bites Trauma	Trim affected part. Condemn trimmings. Pass remainder as for human consumption	Major
	Systemic involvement		Fight wounds Dog bites Trauma	Condemn as unfit for human consumption or pet food	Critical

* refer to Section 1.2 of the Standard

APPENDIX D

RESIDUE STANDARDS

RESIDUE PERFORMANCE STANDARD

The provision of wholesome meat to the consumer requires an assurance that the product does not contain residues of chemicals which may be harmful to human health.

Residues may result from intentional treatment of an animal, or if its feed, with a drug or chemical, such as pesticide for therapeutic or other purposes; or from environmental contamination.

This assurance is provided on the basis of measures designed to ensure that the product contains no residues which exceed the Maximum Residue Limit (MRL), for that chemical as set by the Food Safety Council of Australia through the National Foods Authority. Similarly, maximum permitted concentrations (MPC's) have been established for contaminants, such as heavy metals. These limits are based on scientific evaluation, and toxicology.

The National Residue Survey (NRS) was commenced in 1961 as a monitoring program for chemical residues in agricultural commodities. It provides an unbiased estimate of the frequency of residues of a range of agricultural and veterinary chemicals, and environmental contaminants in the individual commodities for targeted surveys and extension. The NRS provides assurances to Australia's trading partners and domestic consumers of the low residue status of these commodities. Inclusion of chemical and commodity combinations is based on risk profiling.

Residue compliance of meat produced at the domestic abattoirs is based on:

- Participation in the NRS
- Systems of animal identification and trace back when violative residues are detected
- Identification and quarantine, or other appropriate management strategies, of farms known to produce animals with violative residues.

The quality assurance systems of slaughter establishments will contain a provision for consideration of the residue status of animals purchased. The increasing use of quality assurance methods on farms, the establishment of codes of practice for production of animals free from residues, and the greater use of vendor declarations, will play an increasing role in achieving this.