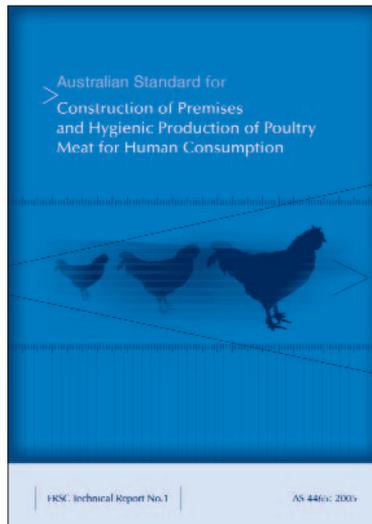


# ***Australian standard for construction of premises and hygienic production of poultry meat for human consumption***

**FRSC Technical Report No. 1**

**AS 4465:2005**



This book is available from **CSIRO PUBLISHING** through our secure online ordering facility at <http://www.publish.csiro.au> or from:

Customer Service  
**CSIRO PUBLISHING**  
PO Box 1139  
Collingwood Victoria 3066  
Australia

Telephone: +61 3 9662 7666  
Local call: 1300 788 000 (Australia only)  
Fax: +61 3 9662 7555  
Email: [publishing.sales@csiro.au](mailto:publishing.sales@csiro.au)

© Commonwealth of Australia and each of its States and Territories 2006

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. All other rights are reserved. Contact **CSIRO PUBLISHING**, acting on behalf of the Food Regulation Standing Committee, for all permission requests.

**AS 4465:2005**

**Australian Standard for  
Construction of Premises  
and Hygienic Production  
of Poultry Meat  
for Human Consumption**

**FRSC Technical Report No. 1**

© Commonwealth of Australia and each of its States and Territories 2006

All rights reserved. Except under the conditions described in the Australian *Copyright Act 1968* and subsequent amendments, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, duplicating or otherwise, without the prior permission of the copyright owner. Contact **CSIRO PUBLISHING** for all permission requests.

**National Library of Australia Cataloguing-in-Publication**

Australia and New Zealand Food Regulation Ministerial Council. Food Regulation Standing Committee.

Australian standard for construction of premises and hygienic production of poultry meat for human consumption: AS 4465:2005.

New ed.

ISBN 0 643 09261 7 (paperback).

ISBN 0 643 09269 2 (eBook).

1. Poultry industry – Standards – Australia. 2.

Slaughtering and slaughter-houses – Standards – Australia.

3. Meat industry and trade – Standards – Australia. 1.

Title. (Series : FRSC technical report series no. 1).

664.9020994

Available from

**CSIRO PUBLISHING**

150 Oxford Street (PO Box 1139)

Collingwood VIC 3066

Australia

Telephone: +61 3 9662 7666

Local call: 1300 788 000 (Australia only)

Fax: +61 3 9662 7555

Email: [publishing.sales@csiro.au](mailto:publishing.sales@csiro.au)

Web site: [www.publish.csiro.au](http://www.publish.csiro.au)

Set in 10/12 Adobe Garamond

Typeset by James Kelly

Cover design by James Kelly

Printed in Australia by Metro Printing

## CONTENTS

<b>Preface</b>	v
1. Scope	1
2. Definitions	2
<b>Part A Minimum standards of construction of poultry processing premises</b>	5
3. Associated risks	5
4. Site and services	6
5. Premises construction – general	7
6. Processing areas	12
7. Transport vehicle wash areas	14
8. Hygiene and sanitation	15
9. Storage facilities	17
10. Chillers and freezers	18
11. Loading areas	19
12. Amenities	20
<b>Part B Minimum processing procedures designed to ensure an acceptable standard of hygiene in poultry processing</b>	21
13. Quality performance standards	21
14. Quality assurance programs	22
15. Operational hygiene requirements	25
16. Ante-mortem inspection	39
17. Diseases and conditions	40
18. References	41
Appendices	
A: Microbiological testing	42
B: Diseases and conditions of poultry and their disposition	43
Preparation of Australian Standards	46



## PREFACE

The Primary Industries Ministerial Council (PIMC) consists of the Australian Commonwealth, state, territory and New Zealand government ministers responsible for agriculture, food, fibre, forestry, fisheries and aquaculture industries/production and rural adjustment policy. This Council resulted from the amalgamation of the previous ministerial councils, the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) and the Ministerial Council on Forestry, Fisheries and Aquaculture (MCFFA) that dealt with elements of these issues.

The agreed objective of the Council is to develop and promote sustainable, innovative and profitable agriculture, fisheries/aquaculture, food and forestry industries.

In March 1995, ARMCANZ 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.

The decision was given effect by the appointment of a steering group comprising chairpersons and chief executives of state and territory meat hygiene authorities, the Australian Quarantine and Inspection Service (AQIS), meat industry organisations, food safety technical advisers and the Australia New Zealand Food Authority (now Food Standards Australia New Zealand). This group was subsequently officially named the Meat Standards Committee (MSC).

After formation, MSC commenced a fundamental review of existing codes of hygienic practice to express mandatory national meat hygiene standards in outcome terms. The resulting Australian Standards provided for the implementation of quality assurance programs consistent with the AS/NZS ISO 9000:2000 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 shall 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 practice, but with quality standards and performance criteria equivalent to those in *Codex Alimentarius Volume 10*.

Where an operator proposes a technique substantially different from that detailed in this Standard, MSC shall assess equivalence. MSC 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 whom will advise MSC. The submission must include a HACCP plan that ensures equivalence is maintained.

MSC now reports to PIMC for all non-food standards issues and to the Food Regulation Ministerial Council (FRMC) on food for human consumption issues. PIMC appoints the chairperson of MSC and administers the existing meat standards formed under the previous

ARMCANZ arrangements. Where MSC cannot reach agreement on the approval of an alternative technique the final decision shall be made by PIMC.

This publication has been approved as an Australian Standard and replaces the previous *Australian Standard for Construction of Premises and Hygienic Production of Poultry Meat for Human Consumption* (AS 4465:2001/Amdt 1–2003). Other standards in the series are:

*Australian Standard for the Hygienic Production of Game Meat for Human Consumption.*  
AS 4464:1997

*Australian Standard for the Hygienic Production of Rabbit Meat for Human Consumption.*  
AS 4466:1997

*Australian Standard for the Hygienic Production of Crocodile Meat for Human Consumption.*  
AS 4467:1998

*Australian Standard for the Hygienic Production of Natural Casings for Human Consumption.*  
AS 5011:2001

*Australian Standard for the Hygienic Production of Ratite (Emu/Ostrich) Meat for Human Consumption.* AS 5010:2001

*Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption.* AS 4696:2002

*Australian Standard for the Hygienic Rendering of Animal Products.* AS 5008:2001/Amdt 1–2003.

## **PRIMARY INDUSTRIES MINISTERIAL COUNCIL**

The Primary Industries Ministerial Council (PIMC) consists of the Australian Commonwealth, state and territory and New Zealand government ministers responsible for agriculture, food, fibre, forestry, fisheries and aquaculture industries/production and rural adjustment policy. This Council resulted from the amalgamation of the previous ministerial councils (ARMCANZ and MCFFA) that dealt with elements of these issues.

PIMC is the peak government forum for consultation, coordination and, where appropriate, integration of action by governments on primary industries issues. The council first met in May 2002.

The agreed objective of the Council is to develop and promote sustainable, innovative and profitable agriculture, fisheries/aquaculture, food and forestry industries.

The Council is supported by a permanent Standing Committee, the Primary Industries Standing Committee (PISC), membership of which comprises departmental heads and chief executive officers of relevant Australian Commonwealth, state, territory and New Zealand government agencies.

The operational arrangements are consistent with the Protocols and General Principles for the Operation of Ministerial Councils agreed by the Council of Australian Governments (COAG) in June 2001.



# 1 SCOPE

Part A of this Standard applies to the construction and equipment of all processing premises where poultry are slaughtered for the production of poultry meat for human consumption. It contains the minimum construction requirements for premises used for the production of wholesome poultry meat.

Part B of this Standard applies to the hygienic production for human consumption of products derived from poultry. However, it does not apply to the retailing of poultry meat and poultry meat products.

This Standard is based on hazard analysis critical control point (HACCP) principles. Operators of poultry processing establishments should seek training in HACCP principles and then develop an establishment-specific quality assurance manual based on HACCP that meets or exceeds the minimum requirements of this Standard.

For the purpose of understanding how HACCP is implemented and audited in the Australian meat industry, poultry meat processors should refer to *A Guide to the Implementation and Auditing of HACCP*.

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

Authorities with regulatory responsibilities for the processing of poultry for human consumption shall enforce compliance with this Standard.

This Standard is structured within a performance-based framework focussing on the need for product wholesomeness.

Whenever the words 'should' and 'shall' appear in this Standard they are to be interpreted as meaning desirable and mandatory, respectively.

The *Australian Standard for the Hygienic Production of Ratite (Emu/Ostrich) Meat for Human Consumption* applies to the slaughter and processing of emus and ostriches.

This Standard applies as the *Australian Standard for Construction of Premises and Hygienic Production of Poultry Meat for Human Consumption*.

Operation under this Standard implies compliance with the relevant *Model Code of Practice for the Welfare of Animals* and the *Model Code of Practice for the Welfare of Animals – Livestock at Slaughtering Establishments*.

## 2 DEFINITIONS

<b>Approved</b>	Approved by the controlling authority.
<b>Approved person</b>	A person appointed by the processing company to carry out the specified function as outlined under a quality assurance arrangement approved by the controlling authority.
<b>Authorised officer</b>	In the context of this Standard is defined as any technically qualified officer of the Commonwealth or of the appropriate state or territory government agency, or local government officer, who is specifically authorised under relevant Commonwealth or state or territory legislation governing the construction and conduct of premises and practices used for the processing of poultry meat for human consumption.
<b>Bleeder</b>	A person responsible for ensuring poultry on automatic bleeding lines are properly bled out.
<b>Boning</b>	Means the: <ul style="list-style-type: none"><li>(a) removal of poultry meat from the bones of a carcase, or portion of a carcase;</li><li>(b) production of bone-in poultry meat cuts; or</li><li>(c) production of boneless poultry meat cuts.</li></ul> Boning does not include the production of mechanically separated poultry meat.
<b>Carcase</b>	The whole dressed body of slaughtered poultry (the skeleton and attached musculature) excluding any part that has been removed from the dressed body (e.g. head, feathers, viscera, blood).
<b>Clean</b>	In relation to: <ul style="list-style-type: none"><li>(a) carcasses or poultry meat means free from all visible contaminants (e.g. ingesta, dust, faecal material and pathological conditions);</li><li>(b) premises means surfaces of floors, walls, ceilings, equipment, appurtenances and utensils free of visible contamination, washed, sanitised, free of objectionable odours; and</li><li>(c) clothing means free of visible contamination.</li></ul>
<b>Condemned</b>	A carcase or carcase part determined to be unfit for use for human or pet food and requiring destruction.
<b>Contamination</b>	The presence of objectionable matter, including substances or microorganisms, that makes poultry meat unwholesome.
<b>Controlling authority</b>	A person or a body that under the law of a state or territory or the Commonwealth has statutory responsibility for poultry meat hygiene.

<b>Disease</b>	<p>In relation to poultry is the presence of an infectious agent or pathological process that:</p> <ul style="list-style-type: none"><li>(a) affects the health of live poultry to an extent that would prevent acceptance of the poultry carcase, the poultry meat or the parts derived from the carcase for human consumption; or</li><li>(b) may not necessarily affect the health of live poultry, but may be transmitted to other live poultry or humans who come into contact with the live poultry or the carcase or who might consume poultry meat from the poultry.</li></ul>
<b>Edible</b>	<p>Suitable for human consumption.</p>
<b>Full-height walls</b>	<p>Floor to ceiling height.</p>
<b>Further process</b>	<p>Any process that alters the physical and/or chemical characteristic of that product.</p>
<b>HACCP</b>	<p>A hazard analysis critical control point approach that uses the seven principles defined by the joint Food and Agriculture Organization (FAO)/World Health Organization (WHO) Food Standards Program of the Codex Alimentarius Commission (Twentieth Session Geneva) and is a structured system of analysis of hazards that identifies methods of hazard monitoring and control measures for each hazard.</p>
<b>Inedible</b>	<p>Unsuitable for human consumption.</p>
<b>Operator</b>	<p>The person, owner or manager who at the time is in attendance and responsible for the operation of the registered premises.</p>
<b>Pet food</b>	<p>Poultry meat fit for animal consumption.</p>
<b>Potable</b>	<p>Means a water quality that is consistent with standards for drinking water in the respective state or territory and is consistent with the standards detailed in the <i>NHMRC/ARMCANZ Australian Drinking Water Guidelines (1996)</i>.</p>
<b>Poultry</b>	<p>Includes fowls, ducks, geese, turkeys, pigeons, pheasants, quails, guinea fowls and other avian species ordinarily consumed as food by man. For the purpose of this Standard, poultry does not include ratites (emu or ostrich).</p>
<b>Poultry meat</b>	<p>The edible part of any poultry that is intended for human consumption, whether in its natural state or prepared by freezing, chilling, preserving, salting or other process.</p>
<b>Prefabricated wall</b>	<p>Manufactured sections of wall produced in a standardised way prior to their assembly on site.</p>
<b>Quality assurance (QA)</b>	<p>All those planned and systematic actions necessary to provide adequate confidence that the product or service will satisfy given requirements for quality.</p>
<b>Quality assurance arrangement</b>	<p>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 poultry 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.</p>

<b>Registered/ licensed</b>	Premises registered in accordance with the requirements of the controlling authority.
<b>Residues</b>	Residues of veterinary drugs, pesticides and contaminants as defined for the purposes of <i>Codex Alimentarius</i> .
<b>Sanitise</b>	Apply approved chemical and/or physical agents or processes to cleaned surfaces to minimise risk of contamination of poultry meat by micro-organisms.
<b>Sterilise</b>	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'.
<b>Wholesome</b>	Means: <ul style="list-style-type: none"><li>(a) will not cause food-borne infection or intoxication when properly handled and prepared for its intended use;</li><li>(b) does not contain chemical residues in excess of established limits;</li><li>(c) free of obvious physical contamination;</li><li>(d) free of defects recognised as unsafe (objectionable) to consumers;</li><li>(e) produced under adequate hygiene control.</li></ul>

## **PART A – MINIMUM STANDARDS OF CONSTRUCTION OF POULTRY PROCESSING PREMISES**

### **3 ASSOCIATED RISKS**

#### **OUTCOMES REQUIRED**

The design and construction of the premises shall facilitate the hygienic production of poultry meat by:

- preventing product contact with contaminating materials;
- enabling effective cleaning programs to operate;
- controlling ingress of contaminating materials and vermin; and
- providing adequate means of protecting product wholesomeness.

- 3.1 This Standard focuses on matters relating to the hygienic production of poultry meat.
- 3.2 Other relevant authorities will determine standards for construction integrity, energy, waste disposal requirements, occupational health and safety and environmental protection and should be consulted during planning.

## 4 SITE AND SERVICES

### OUTCOME REQUIRED

Premises are located and provided with essential services to facilitate the hygienic processing of poultry.

- 4.1 Premises shall be located on a site:
  - (a) large enough for carrying out all the activities at that premises;
  - (b) well drained and not subject to flooding; and
  - (c) not affected by storm water, waste matter, or any noxious matter.
- 4.2 Premises shall be provided with:
  - (a) hot and cold potable water in such quantity and under such pressure as may be necessary to carry out any activity which may be conducted at that premises;
  - (b) reliable power supply adequate for all operations; and
  - (c) waste disposal systems sufficient to handle, and where necessary, treat all liquid and solid waste.
- 4.3 The immediate surroundings of the building shall be treated so that a low dust level is maintained. Access roadways, including vehicle loading and unloading areas, shall be sealed. Vehicle loading and unloading areas, vehicle cleaning areas and inedible material collection areas shall be paved and drained.
- 4.4 Holding areas for live poultry shall be sheltered, paved and drained and provided with adequate ventilation and cooling.

## 5 PREMISES CONSTRUCTION – GENERAL

### OUTCOMES REQUIRED

- Construction facilitates orderly process flow and hygienic processing of poultry and prevents contamination of poultry meat.
- Drainage systems that effectively remove solid and liquid waste in a manner which does not jeopardise the wholesomeness of poultry meat.

- 5.1 Premises shall be adequate for the program of production and shall be provided with:
- (a) holding areas for live poultry which shall be sheltered, paved, drained and provided with adequate ventilation and cooling and shall comply with the *Model Code of Practice for the Welfare of Animals – Livestock at Slaughtering Establishments*;
  - (b) a room for stunning, bleeding and removal of feathers;
  - (c) a room for eviscerating and washing carcasses; the separation of this room from that referred to in (b) shall be by full-height walls except for necessary self-closing doors and approved openings sufficient for passage of product;
  - (d) ceilings in all internal sections of the processing premises;
  - (e) a room or rooms adequately constructed and equipped for keeping under refrigeration all the dressed poultry that is likely to be on the premises at any one time; and
  - (f) in the case of small operations (processing less than 30 000 poultry per month), the controlling authority may allow the construction and use of a premises with two physically separate sections – one for stunning, bleeding and defeathering and the second for the other processes – provided that an approved quality assurance program is in place.
- 5.2 The layout of the premises and its equipment shall facilitate the hygienic production of meat and any inspection or auditing necessary during or after production.
- 5.3 Equipment and materials used in construction shall be:
- (a) durable;
  - (b) non-toxic;
  - (c) smooth-surfaced;
  - (d) corrosion-resistant;
  - (e) impervious to moisture;
  - (f) resistant to or protected from impact;
  - (g) easily cleaned;
  - (h) resistant to chipping or flaking; and
  - (i) of a finish that makes contamination clearly visible.
- 5.4 Construction shall be designed to exclude:
- (a) the entrance of any animals not intended for use in meat processing, including dogs, cats, birds, rodents and insects;

- (b) any harbourage for vermin; and
- (c) environmental contaminants, including dust.

5.5 There shall be physical separation, such as full-height walls, between edible, inedible and pet food areas.

### Roof

5.6 The roof shall be waterproof.

### Walls

5.7 Walls shall be:

- (a) high enough for the operation conducted;
- (b) adequately covered to minimise accumulation of dust, water, litter or waste materials at floor junctions and wall-to-wall junctions; and
- (c) sealed at all joints and fixing devices.

### Floors

5.8 Floors shall be:

- (a) non-slip, free from cracks, crevices and other defects and maintained in a safe condition; and
- (b) evenly graded so that liquids do not accumulate.

### Drains

5.9 Drains shall be:

- (a) evenly graded;
- (b) able to contain the waste water within the drain and prevent contamination of product and storage materials;
- (c) directed to an external save-all or other approved means of removing solids and suspended fats that shall have paved and drained surrounds and be capable of being readily cleaned; and
- (d) vented to the outside and equipped with rodent screens.

5.10 Box drains shall be:

- (a) covered by a removable grating; and
- (b) capable of being effectively cleaned.

### Ceilings

5.11 Ceilings shall be:

- (a) profiled to exclude the accumulation of dust and dirt, and minimise condensation;
- (b) effectively sealed at joints and fixing devices; and
- (c) sufficiently high to enable effective processing and minimise condensation and the accumulation of steam and vapour.

### **Passageways and doors**

- 5.12 Openings to the exterior from an edible product area shall have self-closing, close-fitting doors and be provided with suitable devices to effectively prevent the entry of insects and/or other vermin.
- 5.13 Strip type PVC curtains shall only be used on openings through which packaged products pass and shall not be used instead of doors to the exterior.
- 5.14 Passageways and doorways through which product is transferred by rail or trolley shall be of sufficient width to prevent contact with the product.

### **Stairways and walkways**

- 5.15 Stairs and walkways positioned over conveyor belts or any part of the processing system shall have:
  - (a) solid treads;
  - (b) closed risers; and
  - (c) solid side curbs that will prevent product contamination by splash or fallout.

### **Windows**

- 5.16 Windows that open shall be screened to prevent the entry of insects with screens easily removed for cleaning.
- 5.17 Where windows face an area which produces noxious odours or airborne matter they shall be of non-opening type.
- 5.18 Location of windows shall be such that in the event of glass shattering, risk to product is prevented.

### **Ventilation**

- 5.19 Adequate ventilation shall be provided to prevent accumulation of excessive heat, steam, condensation and the entry of odours, dust, vapour or smoke. The air intake for mechanical ventilation systems shall be located to avoid the intake of contaminated air.
- 5.20
  - (a) The discharge from air conditioners, evaporative coolers and the like shall be controlled to prevent the contamination of poultry meat, product contact surfaces and personnel.
  - (b) Condensate from refrigerant lines and water from drip trays shall be carried to floor level and directed to drains.

### **Lighting**

- 5.21 Lighting at workplaces is adequate for operations conducted.
- 5.22 Shatterproof protective shields shall be provided over exposed lights.
- 5.23 Light fittings shall be of a type that minimise the collection of dust.

### **Electrical fittings**

- 5.24 Electrical conduits and fittings shall be sealed to the wall or be sufficiently clear to permit effective cleaning of the space between the fitting and the wall and shall be approved by the relevant authority.

### **Pneumatics**

- 5.25 Oil from air exhausts shall be adequately trapped to prevent contamination of product.

### **Pipelines**

- 5.26 Plumbing services shall be sealed to the wall or be sufficiently clear to permit effective cleaning of the space between the fitting and the wall and shall be approved by the relevant authority.

### **Tables**

- 5.27 When positioned against walls, tables on which edible product is handled or otherwise treated shall be provided with suitable protection to prevent product contamination or splash contaminating the walls.
- 5.28 Any part of a wall that may come into contact with product shall be clad in the materials specified in 5.3 for equipment.
- 5.29 Benches, trays, tables or chutes receiving poultry carcasses from spin chillers shall be self-draining.

### **Work platforms and stands**

- 5.30 Platforms, stairs and walkways over edible product or product contact surfaces shall be constructed to prevent fallout and splash contaminating the product or product contact surface.
- 5.31 Stands used for preventing edible product containers from contacting the floor shall be of sufficient height from the floor to enable effective cleaning.

### **Edible offal washing equipment**

- 5.32 Where edible offal is manually washed, equipment (e.g. sinks, containers) used in such operations shall be:
- (a) designated solely for that purpose;
  - (b) constructed to ensure waste water shall not accumulate in such equipment;
  - (c) constructed to ensure waste water is drained directly into the drainage system; and
  - (d) provided with potable water at sufficient pressure to effectively clean the product when fitted with an overhead spray system.

### **Plucking machines and spray-washing equipment**

- 5.33 Plucking and spray-washing equipment shall be constructed to confine feathers and wash water to that area and to direct wash water to the drainage system.

### **Closed long chutes**

- 5.34 Chutes and pipes used for transfer of product shall be capable of being cleaned and inspected.

### **Conveyors**

- 5.35 The surface of fabric conveyor belts shall not be damaged and shall be of an acceptable food grade material that is moisture resistant and non-absorbent.
- 5.36 Conveyor belts and associated equipment shall be:
- (a) constructed and maintained so that grease, oil or dirt from such equipment shall not contaminate poultry carcasses and poultry products;
  - (b) where applicable, fitted with protective screens or panels; or
  - (c) installed in a manner to prevent product contact surfaces being contaminated by floor splash, boots or clothing.

### **Spin washers and spin chillers**

- 5.37 The water flow into continuous agitated spin washers and spin chillers shall provide an overflow sufficient to maintain sanitary conditions.
- 5.38 Overflow drain outlets shall flow directly into the drainage system unless overflow water is used for other approved purposes.
- 5.39 In two-tank systems, water shall not flow from the initial tank to the final tank. Water may flow from the final to the initial tank.
- 5.40 Motors and drive gears located directly over spin wash and spin chill tanks shall be installed so as to prevent contamination of the product.
- 5.41 Benches, trays, tables or chutes receiving poultry carcasses from spin chillers shall be self-draining.

### **Drip lines and draining**

- 5.42 Overhead drip lines should be positioned to:
- (a) prevent contamination of dressed poultry carcasses and packaging material by drip or contact;
  - (b) prevent suspended poultry carcasses from contacting plant personnel and other non-product contact surfaces including drip trays; and
  - (c) be provided with drip trays over work stations and passageways, except in the on-line automatic weighing area.
- 5.43 The design of the drip line shall ensure that suspended poultry carcasses are adequately drained.
- 5.44 The number of draining racks or draining facilities shall be commensurate with the daily throughput of the premises.

## 6 PROCESSING AREAS

### OUTCOME REQUIRED

Provision of areas for specific unit operations that facilitate hygienic processing of poultry and prevent contamination of poultry meat.

#### Poultry reception area

- 6.1 The poultry reception area shall be provided with:
- (a) wash-down points equipped with hoses to enable effective cleaning of the area;
  - (b) reels or racks for storage of hoses when not in use; and
  - (c) a hand-wash basin as outlined in Section 8.2 in close proximity to the unloading and shackling areas.

#### Bird shackling area

- 6.2 An efficient and humane method of restraint shall be provided to prevent the escape of poultry during shackling.

#### Stunning area

- 6.3 Where continuous mechanised slaughtering takes place, stunning equipment shall be provided in accordance with the *Model Code of Practice for the Welfare of Animals – Livestock at Slaughtering Establishments*.

#### Bleeding area

- 6.4 The bleeding area shall be separated from the shackling and/or holding area by full-height walls except for necessary self-closing doors for personnel and openings adequate for the passage of poultry carcasses.
- 6.5 Blood shall be collected in a curbed and drained area or in an approved trough. Curb heights shall be sufficient to prevent overflow.
- 6.6 Hand-washing and sanitising facilities shall be available in the immediate vicinity of the bleeding area.

#### Scalding and defeathering area

- 6.7 Adequate facilities shall be provided in the scald and defeathering area for the removal of steam to the outside atmosphere.
- 6.8 Scalding equipment shall be designed and constructed so that the potable water line cannot be contaminated. Agitated scald tanks shall be supplied with a continuous flow of water to ensure adequate water levels and temperatures are maintained.

- 6.9 Water derived from internal processing procedures shall only be used in drains in the scalding and defeathering area to assist the flow of feathers and effluent from the scald tank and defeathering cabinets, or for other approved purposes, after it has been effectively screened. The point of discharge should be directed into the drain.

#### **Evisceration area**

- 6.10 The evisceration area shall be separated from the packaging area by full-height walls except for openings adequate for personnel and for the passage of poultry carcasses. For processors with low throughput refer to Section 5.1(f).

#### **Containers**

- 6.11 Containers used to hold edible product, pet food or inedible product and those used as floor slides shall be clearly distinguishable from each other.

#### **Carton and wrapping materials**

- 6.12 The storage and dispensing facilities provided in the processing room shall be adequate and capable of keeping wrapping materials at a sufficient height from the floor to enable effective cleaning and be designed so as to protect such materials from contamination.
- 6.13 Wrapping materials that directly contact edible product shall be stored in a manner that prevents contamination. Pallets used to store cartons or wraps shall be clean and not liable to contaminate or damage any cartons or wraps.
- 6.14 Rooms for preparation of pet food shall be totally separated from edible and inedible product areas.
- 6.15 Refrigerated storage of pet food shall be totally separated from refrigerated storage of edible products except where approved by the controlling authority under the HACCP program.

#### **Inedible product area**

- 6.16 The inedible product area shall be totally separate from an edible product area.
- 6.17 Edible and inedible tallow storage tanks shall be clearly distinguished.
- 6.18 Facilities for the rendering of inedible material shall be located to ensure that such material is rendered without undue delay.
- 6.19 Where provided, the rendering plant and equipment shall be designed to ensure separation of unprocessed and processed material and constructed in a manner to facilitate the maintenance of hygienic conditions and shall not create a vermin hazard.
- 6.20 Inedible product areas shall be paved and drained, and shall comply with clause 5.8.
- 6.21 The rendering facility shall comply with the *Australian Standard for the Hygienic Rendering of Animal Products*.

## 7 TRANSPORT VEHICLE WASH AREAS

### OUTCOME REQUIRED

Transport wash areas that enable effective cleaning of vehicles and are not a source of contamination.

- 7.1 Wash areas for live poultry transport and poultry meat transport shall:
- (a) be separate from each other;
  - (b) have an impervious surface that shall be graded and drained to the drainage system;
  - (c) be constructed to confine splashing to the area;
  - (d) be illuminated to enable effective cleaning and assessment;
  - (e) be provided with storage racks for hoses; and
  - (f) have an adequate supply of potable water under sufficient pressure for cleaning operations.

## 8 HYGIENE AND SANITATION

### OUTCOME REQUIRED

The provision of hygiene and sanitation facilities that ensure the hygienic processing of poultry.

- 8.1 Facilities shall be provided at poultry meat processing premises that allow for cleaning, sanitising and, where applicable, sterilising of premises, equipment and protective clothing.
- 8.2 Premises shall have hand-washing facilities that are:
- (a) of adequate size;
  - (b) situated at all entrances in a position readily accessible to employees;
  - (c) provided at strategic positions on the processing line;
  - (d) provided with adequate hot and cold potable water from a central outlet;
  - (e) provided with an effective sanitising agent;
  - (f) equipped with taps that are not hand-operated;
  - (g) equipped with hand-drying facilities that do not contaminate washed hands or the surrounding area (hand-drying facilities are not necessary on the processing line);
  - (h) provided with a rubbish receptacle; and
  - (i) connected directly to the drainage system.

### Sterilisers

- 8.3 Sterilisers for knives and other equipment shall be positioned at strategic locations in the processing areas and shall:
- (a) be of sufficient size to allow complete immersion of equipment in potable water heated to a temperature of 82°C or warmer;
  - (b) be capable of maintaining the temperature of the water;
  - (c) run on a continuous flow basis; and
  - (d) have an overflow connected directly to the drainage system; or
  - (e) alternatively, sterilisation may be provided by another approved method.

### Equipment washing area

- 8.4 An area appropriate for the washing of equipment shall be provided with the plant.

### Wash-up troughs

- 8.5 Wash-up troughs shall be:
- (a) of adequate size to allow immersion of containers, trays, utensils and other portable equipment normally used in the premises;

- (b) provided with a permanent and adequate supply of hot and cold running water; and
- (c) provided with adequate racks for air drying of containers, trays, utensils and other equipment.

#### **Boot and apron washing**

- 8.6 A wash-up room or similar facility shall be provided where persons can clean and sanitise their aprons, boots and work equipment during and at the end of each day.
- 8.7 A boot washing/decontamination facility shall be provided at all personnel entrances to the processing area.

#### **Crate washing area**

- 8.8 A concrete-paved, drained and curbed area, together with adequate wash-down points, shall be provided adjacent to the poultry reception facilities for washing crates used for the transportation of live poultry.

## 9 STORAGE FACILITIES

### OUTCOME REQUIRED

Storage facilities constructed to ensure that stored items do not become contaminated and are not a source of contamination.

- 9.1 All storage facilities shall be:
  - (a) of adequate size; and
  - (b) capable of being effectively cleaned.
- 9.2 Separate facilities, lockable where required, shall be provided for the exclusive storage of:
  - (a) cleaning and sanitising products and materials;
  - (b) aprons, boots and gear when employees are not in the processing areas; and
  - (c) chemicals.
- 9.3 Storage of material and ingredients shall be in a manner to prevent any contamination that could jeopardise the wholesomeness of poultry meat and poultry meat products.
- 9.4 Pesticide chemicals shall be held separately from other types of chemicals in an identified locked area or cabinet in accordance with relevant pesticide legislation.

## 10 CHILLERS AND FREEZERS

### OUTCOME REQUIRED

Chillers and freezers constructed to maintain the wholesomeness of all poultry meat and poultry meat products stored on the premises.

- 10.1 Rooms for refrigerated storage shall be constructed of material resistant to impact and be easily cleaned. The total capacity of the rooms shall be sufficient for keeping under refrigeration all poultry meat likely to be on the premises at any one time.
- 10.2 Facilities for chilling and storage of chilled poultry meat shall be constructed to enable product temperature to be maintained at 5°C or colder.
- 10.3 Facilities for storage of frozen poultry meat shall be constructed to operate at, and be capable of maintaining, an air temperature within the facilities of –15°C or colder.
- 10.4 Equipment for the accurate monitoring and display of chiller and freezer temperatures shall be provided and operate at all times while the chillers and freezers are in use.
- 10.5 A chiller used for thawing frozen carcasses or carton product to allow boning or further processing shall be capable of maintaining a maximum air temperature of 10°C during the entire thawing operation.
- 10.6 Chillers and freezers shall be provided with facilities (e.g. racks, shelving) to store cartons and containers of product (e.g. tubs, trays) in such a manner that the cartons and containers and the product stored therein are protected from deterioration and contamination through floor contact, splash and drip from other products. The design of such facilities shall not impede the effective cleaning of the chiller or freezer.
- 10.7 Racks or shelving shall be arranged in such a way that good air circulation can be achieved. Wooden racks or shelving shall not be used.
- 10.8 Refrigeration units shall:
  - (a) where overhead, have insulated drip pans connected directly to the drainage system placed beneath them;
  - (b) have the refrigeration motors located outside the premises except for sealed units that are an integral part of an appliance; and
  - (c) if floor type units, be placed within curbed and separately drained areas unless located adjacent to a floor drain.
- 10.9 Cooling unit discharge shall be contained and directed to the drainage system.
- 10.10 Where freezer tunnels are used for freezing exposed product, the tunnel shall be installed so that its full length is capable of being opened for cleaning.

## 11 LOADING AREAS

### OUTCOME REQUIRED

Loading areas constructed to ensure that the wholesomeness of poultry meat and poultry meat products is not jeopardised.

- 11.1 Load-out/in areas for product shall have facilities to prevent contamination of product or its containers from external sources such as rain, insects and dust. A means of preventing flies entering the processing area while the loading dock is in use shall be provided.
- 11.2 Where unpackaged product is handled over the dock, the dock shall be designed so that the area is enclosed.
- 11.3 Where the product load has to be assembled in advance, the marshalling area shall be protected from the elements.
- 11.4 The load assembly area shall ensure that product temperature is 5°C or colder for fresh product or -15°C for frozen product.

## 12 AMENITIES

### OUTCOME REQUIRED

Amenities constructed and located so that their use does not provide a source of contamination.

- 12.1 Amenities shall comply with relevant state or territory workplace health and safety legislation.
- 12.2 Amenities shall be located so as not to jeopardise the hygienic processing of poultry.
- 12.3 Access to amenities shall be achieved without employees from edible departments passing through inedible departments or vice versa.
- 12.4 Paved walkways shall be provided from the workplace to the amenities.

## **PART B – MINIMUM PROCESSING PROCEDURES DESIGNED TO ENSURE AN ACCEPTABLE STANDARD OF HYGIENE IN POULTRY PROCESSING**

Part B of the Standard only addresses matters relating to the hygienic production of poultry meat.

### **13 QUALITY PERFORMANCE STANDARDS**

#### **OUTCOMES REQUIRED**

Outcomes required from the application of this Standard are based on the following quality criteria:

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

#### **Microbiological safety**

- 13.1 Means carrying a microbiological load consistent with a safe and wholesome product. Refer to Section 15.17 and Appendix A.

#### **Physical contamination**

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

#### **Zoonotic disease**

- 13.3 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 outlined in Section 16 (Ante-mortem inspection) and Section 17 (Diseases and conditions).

#### **Chemical residues**

- 13.4 These are defined periodically by national authorities. International standard definitions and Maximum Residue Limits (MRL) are published in the *Codex Alimentarius*. Procedures for sampling, testing and subsequent action are published in operating instructions issued by federal and state authorities. Mandatory procedures and standards are outlined in Clauses 15.18 and 15.19.

#### **Product acceptability**

- 13.5 Means free from diseases and conditions that, while not necessarily bearing direct risk to human health, affect consumer image of product safety. Procedures for detection and elimination of these conditions are outlined in Section 17 (Diseases and conditions).

## 14 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 AS/NZS ISO 9000:2000 and process control is achieved through the application of HACCP principles. The practical implementation of HACCP will be greatly enhanced if this section is read in conjunction with *A Guide to the Implementation and Auditing of HACCP*.

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

- (a) The quality assurance arrangements shall be consistent with the model for quality assurance in production outlined by Standards Australia AS/NZS ISO 9000:2000. The essential elements of these arrangements shall be AS/NZS ISO 9000 clauses:
- 4.1 Management responsibility (quality, policy, organisation, management review)
  - 4.2 Quality system
  - 4.5 Document and data control (document approval and issue, document changes/modifications)
  - 4.6 Purchasing
  - 4.7 Control of customer supplied product
  - 4.8 Product identification and traceability
  - 4.9 Process control (general, special processes)
  - 4.10 Inspection and testing (receiving inspection and testing, in-process inspection and testing, final inspection and testing, inspection and test records)
  - 4.11 Inspection, measuring and test equipment
  - 4.12 Inspection and test status
  - 4.13 Control of non-conforming product (non-conformity review and disposition)
  - 4.14 Corrective and preventative action
  - 4.15 Handling, storage, packaging and delivery (general, handling, storage, packaging, delivery)
  - 4.16 Control of quality records
  - 4.17 Internal quality audits
  - 4.18 Training
  - 4.20 Statistical techniques.

- (b) Process control (AS/NZS ISO 9002 clause 4.9) shall be achieved through the application of the HACCP approach, using the seven principles defined by the joint FAO/WHO Food Standards Program of the Codex Alimentarius Commission, Twentieth Session, Geneva. The seven principles are:
1. Identify the potential hazard(s) associated with food production at all stages from growth, processing, manufacture and distribution until the point of consumption. Assess the likelihood of occurrence of the hazard(s) and identify the preventative measures for their control.
  2. Determine the points/procedures/operational steps that can be controlled to eliminate the hazard(s) or minimise its likelihood of occurrence – this is termed a Critical Control Point (CCP).  
  
A ‘step’ means, for example, any stage in food production and/or manufacture including raw materials, their receipt and/or production, harvesting, transport, formulation, processing, storage.
  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.
- (c) Animals and carcasses shall be inspected by company employees who are suitably trained or who hold recognised qualifications relevant to such inspection.
- (d) Controlling authorities shall institute:
- (i) a process of QA arrangement and manual approval (including amendments) that ensures a manual accurately describes individual plant operations and provides confidence that regulatory standards are consistently satisfied;
  - (ii) audit policies and procedures that are aligned with Standards Australia AS/NZS ISO 19011 and incorporate performance assessment and a range of audit possibilities, including continuous audit; and
  - (iii) corrective action and a sanctions policy that effectively address non-compliance with standards and fraud.

The control points applying to each of the hazards which must be addressed in a HACCP Program are:

**GENERAL HAZARDS IN POULTRY MEAT PRODUCTION**

- Poultry is unhealthy or diseased.
- Micro-organisms are transferred from equipment to the poultry meat.
- Micro-organisms are transferred from the operator to the poultry meat.
- Micro-organisms are transferred from the intestinal tract to the poultry meat.
- Inadvertent contamination occurs.
- Remaining micro-organisms multiply.
- Non compliant product is indistinguishable from product produced to the Standard.

Hazard	Control point
Poultry is unhealthy or diseased	1. Removal of unhealthy or diseased poultry. 2. Control of medication or of organic or inorganic residues.
Micro-organisms are transferred from equipment to the poultry meat	1. Regular decontamination of equipment. 2. Equipment adjusted correctly to minimise spillage.
Micro-organisms are transferred from operator to the poultry meat	1. Regular disinfection of hands. 2. Minimisation of direct hand/poultry meat contact. 3. Maintenance of clean protective clothing.
Micro-organisms are transferred from the intestinal tract to the poultry meat	1. Poultry to have an empty crop at slaughter. 2. Intestines to be removed without spillage.
Inadvertent contamination occurs	1. Appropriate structural facilities exist and are maintained. 2. Decontamination step is in place.
Remaining micro-organisms multiply	1. Product stored and transported so that micro-organism growth is inhibited.
Substitution of non-compliant product	1. Required packaging and labelling always used.

## 15 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.
- Consistent and routine slaughtering, dressing and further processing procedures that minimise or eliminate risk of physical contamination and contamination of poultry meat by micro-organisms.
- Consistent and routine application of effective disinfection and sanitation procedures to prevent microbiological contamination and adulteration of poultry meat.

### General

- 15.1 Equipment used throughout the processing premises shall be maintained in good condition.
- 15.2 An effective sanitation program shall be implemented in the processing facility on completion of each day's production.
- 15.3 Daily processing shall not commence unless facilities are clean.
- 15.4 During operations, the processing facilities shall be kept as clean as possible. Dry cleaning procedures shall be used when possible. Where water is used during processing, only water under normal pressure (e.g. high volume low pressure) shall be used for general cleaning.
- 15.5 Dressed poultry carcasses and poultry products shall not be taken into or conveyed through rooms or areas that contain live poultry or refuse or inedible product. The flow of product shall be one of progressive processing towards final packaging and not in a reverse direction.
- 15.6 Food shall not be consumed in processing premises other than in designated areas.
- 15.7 Smoking and spitting shall not be permitted in poultry handling and processing areas.
- 15.8 Appropriate signs relative to the removal of protective outer garments and washing of hands should be prominently displayed throughout the premises, and signs prohibiting the entry of dogs, cats and other animals should be displayed.
- 15.9 Approved chemicals only shall be used in a poultry processing premises.
- 15.10 Hoses when not in use shall be stored on reels or racks. Wash-down hoses shall not be immersed in water or contact product.
- 15.11 While poultry are being processed the premises shall not be used for any other purpose. At other times the premises may be used for other purposes with the approval of the controlling authority.

- 15.12 All unused equipment and extraneous material should be removed from processing premises.

### **Water**

- 15.13 Only potable water shall be supplied to the premises. Where water is chlorinated to render it potable it shall have a free residual chlorine level of not less than 0.25 ppm at the point of entry to the premises.
- 15.14 Approved programs must be in place for monitoring the potability of water and approved equipment and procedures used.
- 15.15 Where water is not of a potable standard it shall be treated immediately to render it potable. All processing shall cease until such time as the water is rendered potable.
- 15.16 Hot potable water shall be provided for the effective cleaning of equipment. Hot potable water for hand washing should be between 30°C and 50°C.

### **Microbiological testing**

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

### **Residues**

- 15.18 Residue compliance of poultry meat produced at poultry meat processing premises is based on:
- (a) participation in the National Residue Survey (NRS);
  - (b) participation in any other residue programs as required by the controlling authority;
  - (c) systems of poultry identification and trace-back when violative residues are detected;
  - (d) appropriate management strategies for farms known to produce poultry with violative residues.
- 15.19 Testing and sampling shall be carried out in accordance with the NRS sampling regime or as directed by the controlling authority.

### **Poultry reception area**

- 15.20 A cleaning program shall be operating to ensure that the area is kept free from a build up of cobwebs, feathers, dust and other extraneous material.
- 15.21 Moribund, unhealthy or rejected poultry shall be humanely killed immediately and placed in containers provided with close-fitting lids and clearly identified as containing inedible product.
- 15.22 Crates, coops and cages used to transport live poultry shall be kept in good repair, shall be cleaned and should be sanitised after each use.

- 15.23 Live poultry other than poultry intended for immediate slaughter may be kept in close proximity to the slaughtering facility provided there is no chance of cross-contamination by dust, feathers, effluent discharge or other contaminant that could affect final product hygiene.

### **Stunning and killing**

- 15.24 All poultry shall be humanely killed.
- 15.25 Live poultry that are rejected at pre-slaughter examination shall be humanely killed in such a way to avoid contamination of floors, walls and equipment.
- 15.26 Poultry for processing shall be:
- (a) rendered unconscious by:
    - (i) an electric current;
    - (ii) approved inert gas; or
    - (iii) dislocation of the head, and must not regain consciousness before slaughter;or
  - (b) rendered unconscious or slaughtered by a method that has been approved in writing by the controlling authority.

### **Bleeding**

- 15.27 Poultry shall be suspended for bleeding or placed in bleeding cones and shall not be placed on the floor after stunning.
- 15.28 Blood from the bleeding area shall be removed via a blood drain or by a continuous automatic method or in containers marked for inedible product.
- 15.29 Where a bleeding tunnel is used, the tunnel and containers should be cleaned at regular intervals and shall be cleaned at the end of operations each day.
- 15.30 Where bleeding is carried out with automatic equipment the method shall be humane in operation and a backup bleeder shall be provided.

### **Scalding**

- 15.31 Where a wetting agent is added to scald water it shall be an approved chemical and not exceed an approved concentration.
- 15.32 As a minimum requirement, scald tanks shall be emptied and cleaned at the end of operations each day.
- 15.33 Where manual scalding is performed, the scald water shall be replaced regularly or have a continuous water supply and overflow that minimises contamination.

### Defeathering and feet removal

- 15.34 Continuous collection and removal of feathers from the defeathering and scalding areas shall be carried out without contamination of product or the processing area.
- 15.35 A container, drain or mechanical removal system shall be provided at both the head puller and foot unloader to ensure all heads and feet fall directly into them.
- 15.36 Containers used for condemned, inedible or contaminated materials shall be of a red colour or labelled as inedible and shall not be used for the handling of edible products or pet food.
- 15.37 Unless otherwise approved, heads shall be removed in the defeathering section.
- 15.38 Unless otherwise approved, feet shall be removed before evisceration of the carcase.
- 15.39 Where processing involves total immersion scalding, feet may be removed in the evisceration section.
- 15.40 Where an approved program of production enables the practice of dressing for a market with head and feet on:
- (a) the feet shall be:
    - (i) free of epidermal scale;
    - (ii) free of nails; and
    - (iii) visually clean.
  - (b) the head, including the beak, mouth and nasal passages shall be clean and free of extraneous matter.
- 15.41 Where feet are required for further processing they shall be removed and:
- (a) conveyed to an appliance/facility on the premises for scalding, descaling, washing and chilling to less than 5°C within one hour of removal; or
  - (b) bulked together and chilled to less than 5°C before transport under refrigeration to another facility for further processing by an approved process that includes scalding and the removal of contaminants such as faeces, dirt and feathers that jeopardise the wholesomeness of product.
- 15.42 Such feet shall be stored on the premises and transported to the further processing facility separately from other poultry meat products.
- 15.43 Where wax is used in the removal of feathers:
- (a) carcasses should be handled so that all wax and removed feathers fall into containers;
  - (b) only clean wax of edible grade that has been stored under hygienic conditions shall be used for wax dipping;
  - (c) feather separation sieves included in wax dipping machines shall be removed and cleaned daily;
  - (d) reclaimed wax shall be held at a temperature of:
    - (i) not less than 80°C for a period of not less than 20 minutes; or
    - (ii) for a time and temperature equivalent to ensure adequate pasteurisation; and
  - (e) following heat treatment the wax should be skimmed, washed and filtered or passed through a centrifugal cleaning machine.

- 15.44 Overhead conveyor shackles and droppers used in the stunning, killing, scalding, defeathering and removal of head and feet operations shall be cleaned by means of a jet spray or other approved method before being returned to the shackling area or being used for further processing of the defeathered carcase. Where a single line chain system is used to convey carcasses between shackling and evisceration sections, the shackle washer should be positioned at hock cutting. Where rotary brushes are used to clean shackles, the brushes shall be continually sprayed with water jets to clean the brushes.

### **Evisceration**

- 15.45 The processing of all poultry shall include evisceration.
- 15.46 Poultry killed by decapitation shall be subjected to a pre-evisceration trim to remove neck tissue that has been contaminated during the scalding and defeathering process.
- 15.47 Before evisceration the outer surface of each poultry carcase shall be washed by a spray or constant flow of potable water.
- 15.48 The process shall minimise intestines becoming entangled in evisceration equipment that may result in cross-contamination of poultry carcasses.
- 15.49 Poultry meat that is contaminated during evisceration shall not be used in the preparation of poultry meat for human consumption unless it is:
- (a) in the case of a whole skin-on carcase:
    - (i) washed individually to remove all visible contamination in:
      - (A) a separate tank containing water with an approved sanitiser that is used specifically for this purpose and is not associated with an immersion tank;
      - or
      - (B) running potable water that is not associated with an immersion tank; or
    - (ii) trimmed, in a manner that does not contaminate other poultry meat; or
  - (b) in any other case, trimmed to remove any contamination.
- 15.50 Poultry shall be eviscerated within one hour after being killed.
- 15.51 Body opening cuts shall be made in such a manner that piercing of the intestinal tract is avoided or minimised.
- 15.52 Vent opening machines or guns shall be flushed between each venting operation. Water flushed from a vent gun shall be directed away from suspended poultry carcasses.
- 15.53 A knife or implement used in the venting operation shall not be used to cut into any other part of a poultry carcase unless first sanitised.
- 15.54 Where vent opening is performed manually a facility for the rinsing of hands and implements shall be provided. A facility of such nature shall also be provided where an employee acts in a backup capacity to an automatic vent opening machine.
- 15.55 Evisceration tables and benches, where used in manual processing, shall be:
- (a) self-draining by means of perforations or a permanently angled surface and procedures followed to prevent carcasses being contaminated by faeces or intestinal material during this procedure;

- (b) cleansed before further carcasses are processed if contaminated by intestinal content; and
  - (c) have potable water provided by overhead rosettes which shall be in operation at all times while evisceration is being carried out.
- 15.56 Each set of viscera shall be removed from the bench surface immediately after being drawn.
- 15.57 Containers used for the collection of viscera should be emptied on a continuous basis to avoid overfilling and spillage.
- 15.58 Additional appliances such as scissors, knives, evisceration forks and lung rakes shall be placed on an approved rack or facility at appropriate work stations when not in use.
- 15.59 Hand-operated implements used in the evisceration process shall be maintained in a clean condition by frequent rinsing in a flow or spray of clean potable water. When the implements become visibly soiled they shall be set aside for cleaning and replaced with clean implements.
- 15.60 Water flow in an evisceration trough should be in the opposite direction to that in which poultry carcasses are travelling so that carcasses leave at the point where clean water enters the trough.
- 15.61 Water jets or sprays continuously in operation shall be provided along one or both sides of an evisceration trough or belt for the rinsing of employees' hands and implements during the evisceration process.
- 15.62 Waste water shall be directed so as not to contaminate product.
- 15.63 Where a water supply is limited, a controlled flow would be acceptable. Hands and implements shall be rinsed regularly or when chance contamination occurs.
- 15.64 Poultry carcasses undergoing processing shall not contact structural supports, stays, wall linings or waste collection trays. Contamination of poultry carcasses by the contents of waste collection trays or troughs shall be trimmed off. To prevent cross-contamination, contaminated poultry carcasses shall be handled and stored separately until treated.
- 15.65 A hand hose or other approved device strategically positioned shall be used by employees to rinse their aprons when soiled with faecal or intestinal material.
- 15.66 Automatic machines used in the evisceration section should be regularly checked to ensure that cleaning sprays used for rinsing product contact surfaces operate effectively.
- 15.67 Adequate numbers of suitably trained personnel shall be provided for visual and manual inspection at strategic stations on the processing line. Trained personnel shall ensure satisfactory removal of unhealthy, diseased or otherwise unacceptable poultry and to monitor and document hygienic processing and satisfactory operation of automatic machinery in accordance with the HACCP system at all times that production is being undertaken.
- 15.68 Inspection stations shall be provided with hand rinse facilities and retain containers and facilities for the disposal of inedible material.

### **Edible offal**

- 15.69 Where edible offal is collected for human consumption, the edible offal product contact surfaces and water used in the collection process shall not be contaminated by splash from hand rinse water or other sources.
- 15.70 Gizzards shall be:
- (a) separated from the viscera immediately after removal from the body cavity and then cleaned, trimmed and washed under a continuous flow or spray of water before being placed in the collection container; and
  - (b) subjected to follow-up manual inspection if cleaned by automatic machines.
- 15.71 Edible offal shall be chilled to 5°C or below within one hour of its removal from the viscera and drained to remove free ice and water before packing.
- 15.72 Edible offal shall not be placed within a dressed poultry carcase unless enclosed in an approved sealed bag of polyethylene or securely wrapped in other approved materials.
- 15.73 Where edible offal chiller tanks are used they shall be provided with an overflow sufficient to maintain sanitary conditions.

### **Washing**

- 15.74 The inner and outer surface of each eviscerated poultry carcase shall be washed by a spray or constant flow of potable water before spin washing or placing in a non-agitated immersion tank.
- 15.75 Clean poultry carcases and other products shall be protected from splash or sprays from carcases being washed.
- 15.76 Sprays used for poultry carcase washing shall ensure thorough washing of all classes and sizes of poultry carcases. Water volume shall be regularly monitored to ensure effectiveness.
- 15.77 Where a trough is fitted under a spray cabinet or automatic processing appliance, poultry carcases passing through the cabinet or appliance shall not contact water or contents contained in the trough.
- 15.78 Poultry carcases on overhead conveyor lines shall be washed inside and outside to remove blood, loose cuticle and visible contamination before entering the spin wash tank. Where a manual operation is performed, carcases shall be treated similarly.
- 15.79 Immersion washing of poultry carcases shall not be permitted unless in troughs or containers that are provided with either mechanical or filtered air agitation and/or an efficient overflow system that maintains sanitary conditions.
- 15.80 Where a non-agitated immersion washing system is used, an open mesh corrosion resistant removable rack or frame should be positioned not less than 75 mm from the bottom of the trough or container. Provision shall also be made to ensure birds are processed in an orderly manner, e.g. first-in, first-out.
- 15.81 The temperature of wash water shall not exceed 18°C at any time. Carcasses shall not remain in an immersion tank for longer than 15 minutes unless the temperature of the water in the immersion tank is less than 4°C.

### Spin washing

- 15.82 The temperature of the water in spin washers should not exceed 18°C.
- 15.83 Where spin washing is not followed by immersion and/or air chilling the temperature of the water in the spin wash should not exceed 10°C.
- 15.84 Poultry carcasses should not remain in the spin wash tank for periods longer than 15 minutes unless the temperature of the water is 4°C or below.
- 15.85 The spin washing process should be such that the flow of carcasses moves into clean water as they are conveyed through the process to the discharge end.
- 15.86 Water used in any part of spin washing must be chlorinated or contain another chemical sanitiser approved for food contact. When chlorinated water is used, a free residual chlorine level shall be detectable in the discharge water at all times. If another approved chemical sanitiser is used it shall be used at a concentration approved by the controlling authority.

### Spin chilling

- 15.87 The temperature of water in the spin chiller shall not exceed 4°C.
- 15.88 Water used in any part of spin chilling must be chlorinated or contain a chemical sanitiser approved for food contact in accordance with Section 15.86.
- 15.89 Non-agitated immersion chill tanks with an efficient overflow may be accepted where a water supply is limited provided the maximum temperature of the water in the tank does not exceed 4°C and the tank is maintained in a reasonably clean condition.
- 15.90 Where continuous spin washing and/or spin chilling is practised, water agitation shall be achieved by either mechanical means or filtered air.
- 15.91 Chilled water overflowing from the spin chiller may be reused in the spin washer to assist in lowering the wash water temperature provided the water is clean and chlorinated (or another approved chemical sanitiser is applied).
- 15.92 Belt conveyers that are used for grading, sorting or any other operation in which the belt comes in contact with raw unpackaged poultry meat shall be kept clean and washed regularly to prevent contamination of poultry meat.

### Ice

- 15.93 Ice used in poultry processing, whether manufactured ice or ice made on the premises, shall be made from potable water and shall be stored and handled to ensure it is protected from contamination at all times. Personnel shall not enter a bulk ice storage freezer where ice is augured from the floor unless the ice has been protected from contamination.
- 15.94 Appliances or equipment used in association with the handling of ice in an ice storage freezer shall be stored within such room or in an approved manner.
- 15.95 Bagged ice shall be stored in an approved container or on approved racks. Where dry ice is used it shall be stored in an approved container and shall be protected from contamination.

## **Chilling**

- 15.96 Poultry shall:
- (a) in the case of whole carcasses, be chilled to a surface temperature of not more than 7°C within six hours of stunning;
  - (b) in the case of whole carcasses and/or deboned poultry meat, be further reduced to a core temperature of not more than 5°C within 12 hours of stunning;
  - (c) be stored and transported in conditions that ensure the core temperature does not exceed 5°C.

## **Freezing**

- 15.97 Where product is frozen, the product shall be reduced in core temperature to at least -15°C within 96 hours of stunning unless otherwise approved.
- 15.98 Frozen product shall not be derived from thawed product.

## **Draining**

- 15.99 Where poultry carcass draining racks or other draining facilities are used they shall be positioned in such a manner to avoid drainage from one carcass to another. Poultry that contact drip trays shall be dipped in an approved sanitiser and rewashed.

## **Further processing**

- 15.100 All further processing of poultry meat products shall be effectively controlled by the operator through an approved HACCP program.
- 15.101 Rooms or designated areas for further processing shall comply with the *Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption*.
- 15.102 Where poultry meat is prepared by boning out or cutting up, other than when a continuum from an online process, a separate room should be provided.
- 15.103 Where poultry carcasses or parts are boned and/or cut up online or removed from a chiller for boning, cutting up or other process in the same area and the surface temperature of the carcasses or meat rises above 7°C, such processing shall be performed in a facility constructed to maintain an air temperature of not more than 10°C or the core temperature of the boned product shall be reduced to 5°C within three hours of boning.
- 15.104 Cooking of poultry meat shall be carried out in a room totally separate from any area where raw poultry is handled.
- 15.105 Items such as sachets that are enclosed within bagged or wrapped poultry shall be of approved material and stored and handled in a hygienic manner.
- 15.106 Uncooked vegetables for inclusion shall be washed thoroughly and be derived from commercial sources.
- 15.107 Stuffing mix included with poultry carcasses shall consist of wholesome ingredients, be derived from approved sources and be stored and handled in a hygienic manner.

Personnel handling stuffing mix shall wear approved gloves.

- 15.108 Basting liquid for injection into poultry carcasses shall consist of wholesome ingredients, be derived from approved sources and be handled in a hygienic manner.
- 15.109 Dry and liquid marinades shall consist of wholesome ingredients, be derived from approved sources and be handled in a hygienic manner.

### **Thawing**

- 15.110 Frozen dressed poultry carcasses and poultry products shall not be thawed except under approved conditions and shall not be refrozen.
- 15.111 If thawed in a tank, a continuous flow of potable water sufficient to keep the water clean shall be provided and the temperature of the water after equilibration shall not exceed 10°C.
- 15.112 If thawed in the atmosphere, the temperature of the air in the facility in which thawing takes place shall be capable of being controlled and shall not exceed 10°C.
- 15.113 If thawed by sprays of water the temperature of the water shall not exceed 10°C.

### **Packing areas, packaging and packing material**

- 15.114 Re-useable containers for the storage and transporting of dressed poultry carcasses or products shall be of material capable of being maintained in a clean condition and in a state of good repair.
- 15.115 Packaging materials shall be clean, unused, free from contaminating substances and objectionable odours and of sufficient strength and durability to protect the poultry carcasses and poultry products from contamination.
- 15.116 Where packaging material is used in the processing area adequate racks shall be provided. The racks should be at a sufficient height above the floor to enable effective cleaning and all packaging material should be placed on the racks, not directly onto the floor.
- 15.117 Dressed poultry carcasses and poultry products shall not be taken into or conveyed through rooms or areas that contain live poultry or refuse or inedible product. The flow of product shall be one of progressive processing towards final packaging and not in a reverse direction.
- 15.118 Pallets shall not be used in the processing area unless made of approved impervious material.
- 15.119 Poultry carcasses and poultry products, whether wrapped or unwrapped, shall not be placed on the floor.
- 15.120 Unwrapped poultry carcasses and poultry products shall not contact cold room walls or any surface likely to contaminate the product.
- 15.121 Poultry carcasses and poultry products shall not be placed in a container used for evisceration purposes or a container used for inedible products.

- 15.122 Trays and receptacles containing dressed poultry carcasses or poultry products shall be placed on:
- (a) approved pallets;
  - (b) racks or shelving at a sufficient height above the floor to enable effective cleaning.
- 15.123 Wooden pallets shall only be used in freezers and dispatch areas where only packaged product is handled. Wooden pallets that are used in refrigerated and other storage areas shall be clean and kept in good repair so the pallets do not become a source of contamination to products or their containers.
- 15.124 Where dispatching of bulk-packed, unwrapped product in re-useable containers is carried out, wooden pallets may be used provided product within each crate is totally enclosed with an approved non-absorbent material adequate to protect the stored product.
- 15.125 All packages of poultry shall be labelled in accordance with the *Australian Food Standards Code* and relevant food act for the respective state and in a manner that will facilitate product identification and recall.

### **Transport**

- 15.126 Chilled or frozen poultry products shall be transported in a vehicle:
- (a) registered or accredited with the appropriate authority;
  - (b) constructed in accordance with the *Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption*; and
  - (c) that shall not be used for the transport of other products that may jeopardise the wholesomeness of poultry products.
- 15.127 Proper insulation and operating refrigeration equipment shall be provided to maintain during transport:
- (a) the core temperature of chilled product at not more than 5°C; or
  - (b) the core temperature of frozen product at not more than -15°C.
- 15.128 A program of management of shipping containers shall ensure they are clean before loading and refrigeration units are operational and performing to maintain product wholesomeness.
- 15.129 Product temperatures shall be monitored and recorded to ensure the maximum temperatures specified in this Standard are not exceeded before load-out of product.

### **Returns of product**

- 15.130 Product returned from customers shall be segregated until a determination is made as to its suitability for human consumption.
- 15.131 Frozen product that has thawed shall not be refrozen.

### **Poultry meat from other sources**

- 15.132 Poultry meat entering the premises from another source shall be kept segregated until a determination is made as to its suitability for human consumption.

## Personnel

- 15.133 Persons engaged in handling live poultry shall change their outer protective clothing, wash their boots and wash and sanitise their hands before being permitted to engage in processing operations.
- 15.134 Persons rotating their duties during processing operations shall, where there is a risk of cross-contamination, wash and sanitise their hands, aprons, knives, pouches and wash their boots before moving to another work area.
- 15.135 Persons engaged in poultry processing shall:
- (a) wear clean protective outer garments at the commencement of work each day;
  - (b) not wear protective clothing or equipment to and from work;
  - (c) remove protective aprons, gloves and equipment before entering the toilet and wash their hands after using the same;
  - (d) hang aprons and equipment on racks provided;
  - (e) not take part in processing operations unless their clothing and body (as far as is visible) is clean;
  - (f) wash their hands, boots and aprons before commencing work and upon rejoining processing operations; and
  - (g) thoroughly cleanse and sanitise their personal equipment used during processing operations and leave such equipment to air dry.
- 15.136 Protective clothing provided to employees engaged on outside work, handling live poultry or inedible materials shall be readily identified and used for that purpose only. Aprons must be kept clean and when not in use suspended on a rack in an area apart from other aprons.
- 15.137 A person entering the building where production, storage or dispatch of edible product is carried out shall wear head covering. Persons who have facial hair shall also wear snoods in any area where unwrapped edible product is present. Any head covering shall be of a type that will prevent hair from falling onto the product.
- 15.138 Protective gloves, including woven steel mesh gloves, worn by any person shall be:
- (a) clean at the commencement of work each day;
  - (b) cleaned or replaced when appropriate, after each task or function is completed or a break in work at the work station occurs where a person leaves that station;
  - (c) if outer protective gloves, impervious where contamination is likely to occur; and
  - (d) replaced when deterioration or peeling occurs.
- 15.139 A person suffering from an infectious disease, whether notifiable by law or not, suffering from a skin infection or who has an open wound or an unclean bandage on an exposed part of the anatomy, shall not take part in processing operations.
- 15.140 Maintenance staff servicing machinery during processing operations shall be dressed in a manner that will not contaminate equipment and product and shall be provided with footwear capable of being adequately cleansed and that shall be washed upon entry to the processing area.

- 15.141 Adequate facilities shall be provided for the storage of personnel equipment at the end of operations each day.

#### **Effluent**

- 15.142 Effluent containing solid materials (including feathers) shall be directed through a separator, indirect waste separator or save-all that shall effectively retain the solids before the discharge of the effluent in such a way as not to create a nuisance, and which shall be emptied and cleaned daily. Effluent shall not present a risk to the wholesomeness of poultry meat produced or stored on the premises.

#### **Disposal of inedible material**

- 15.143 If facilities are not provided for the immediate removal of poultry waste from the premises, it shall be placed in leak proof containers with close-fitting lids and stored on a covered, drained and curbed concrete slab located outside the processing area pending disposal at the end of operations for the day. The poultry waste shall not create a vermin hazard.
- 15.144 Waste holding areas shall not be located near doors used for personnel or product entry into production areas or amenities.
- 15.145 Poultry waste containers shall be capable of being effectively cleaned and be clearly identified as being for inedible material.
- 15.146 Poultry waste should be disposed of on a daily basis. Where large quantities of poultry waste are involved, dry rendering or wet rendering should be undertaken.
- 15.147 Poultry waste should not be removed from poultry processing premises other than to premises approved by the appropriate authorities for treatment. When poultry waste is removed for treatment elsewhere than at the poultry slaughterhouse, the poultry waste should be removed within four hours of the completion of operations and be carried in leak proof containers with close-fitting lids under conditions that will not create a risk to public health. Containers, on being returned to the premises, shall be cleaned before re-use.

#### **Pet food**

- 15.148 Where poultry meat is prepared for pet food in poultry processing premises, the preparation, identification, storage and handling of such pet food shall conform to the standards set out in the *Australian Standard for the Hygienic Production of Pet Meat* as endorsed by PIMC on 12 April 2005.
- 15.149 Poultry meat fit for human consumption that is intended for sale as pet food can be stored with meat for human consumption. Pet meat must be labelled as 'pet meat not for human consumption' on packages or storage containers.

## Cleaning

- 15.150 Cleaning and sanitising of premises and equipment should be carried out in accordance with the *Guide to Cleaning and Sanitising of Plant and Equipment in the Food Industry* (AS 4709:2001).
- 15.151 Baskets and containers returned from an outside source shall be:
- (a) washed and sanitised before being used in processing operations; and
  - (b) stored within the premises in a separate area on an impervious floor while awaiting cleaning.
- 15.152 Water used in the cleaning of returned containers should not be used for the cleaning of other equipment.
- 15.153 Product containers cleaned by automatic washing machines shall be subjected to follow-up inspection. Cleaned containers shall be stored off the floor.

## Pest control

- 15.154 All possible precautions shall be taken to ensure pests do not contaminate edible product and materials, equipment and utensils.
- 15.155 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.
- 15.156 Eradication of pests shall be carried out by skilled personnel as detailed in an approved quality assurance arrangement using approved methods and materials or by a program approved by the controlling authority.
- 15.157 Pesticides shall not be used in a manner that risks contamination of product, equipment or utensils.
- 15.158 Before pesticides are applied, all poultry meat and wrapping material shall be removed from an edible product room. All equipment and utensils shall be thoroughly washed before being used again.
- 15.159 After fumigation, rooms shall be well ventilated and tested before processing commences.

## 16 ANTE-MORTEM INSPECTION

### OUTCOME REQUIRED

Only poultry suitable for human consumption are processed.

- 16.1 Animal health surveillance and disease detection systems should be in place on-farm to ensure that only healthy poultry are presented for slaughter.
- 16.2 The operator of a processing premises shall have in place a system that ensures:
  - (a) live poultry are treated humanely;
  - (b) poultry that are dead before the commencement of processing are not processed;
  - (c) moribund, unhealthy or rejected birds are not processed; and
  - (d) the presence of a notifiable (including exotic) disease, when present, could be detected.
- 16.3 If the observations made at ante-mortem inspection suggest that poultry display symptoms of a notifiable disease, the relevant government veterinarian shall be contacted as soon as possible. The affected poultry shall be withheld from slaughter until a course of action has been determined under relevant state or territory legislation for the control of exotic disease in animals.
- 16.4 Moribund, unhealthy or rejected poultry shall be humanely killed immediately and placed in containers provided with close-fitting lids which are clearly identified as inedible product.
- 16.5 Poultry found dead on arrival shall be disposed of as in Clause 16.4.

## 17 DISEASES AND CONDITIONS

### OUTCOME REQUIRED

Only wholesome poultry meat is passed for human consumption.

#### Operator responsibility

- 17.1 Operators of poultry processing establishments shall have in place systems to ensure that carcasses and their parts:
- are wholesome;
  - are not contaminated with foreign material during processing; and
  - if diseased or contaminated, are handled in a manner that ensures other product is not contaminated.

#### Disposition of carcasses

- 17.2 Operators shall ensure that any carcase or part is handled in one of the following ways:
- carcasses and their parts shall be passed for either human consumption, pet meat or be condemned;
  - emphasis should be placed on normal healthy carcasses and parts. Departures from normal shall be dealt with according to dispositions described in Appendix B. Where it suits the purposes of the operator, a more severe disposition may be selected rather than that acceptable for the condition described;
  - a critical risk represents a condition which carries with it a significant risk to human health;
  - a major risk represents a condition that while not carrying a significant risk to human health affects the wholesomeness of product;
  - a minor risk represents a condition which does not carry a human health risk, but affects the wholesomeness of product only in that there may be defects recognised as objectionable to consumers;
  - carcasses and their parts may be retained pending laboratory confirmation or other examination before disposition;
  - carcasses and their parts passed for animal food shall be clearly identified by approved methods; and
  - condemned carcasses and their parts shall be clearly identified or denatured to prevent use for human consumption.

## 18 REFERENCES

Food Standards Australia New Zealand (2005). *Australia New Zealand Food Standards Code*. Anstat, Melbourne.

Standards Australia (2004). *Australian Standard for Food Microbiology – Preparation of Test Samples for Microbiological Examination – Poultry and Poultry Products*. AS 5013.20-2004.

Standards Australia (2001). *Guide to Cleaning and Sanitising of Plant and Equipment in the Food Industry*. AS 4709:2001.

Standards Australia and Standards New Zealand (2000). *Quality Management Systems – Fundamentals and Vocabulary*. AS/NZS 9000:2000.

Standing Committee on Agriculture (2001). *Australian Model Code of Practice for the Welfare of Animals – Livestock at Slaughtering Establishments*. SCARM Report No. 79. CSIRO Publishing, Melbourne.

Standing Committee on Agriculture and Resource Management (In press). *Australian Standard for the Hygienic Production of Pet Meat*.

Standing Committee on Agriculture and Resource Management (2002). *Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption*. SCARM Report No. 80, AS 4696:2002. CSIRO Publishing, Melbourne.

Standing Committee on Agriculture and Resource Management (2003). *Australian Standard for the Hygienic Rendering of Animal Products*. SCARM Report No. 76, AS 5008:2001/Amdt 1-2003. CSIRO Publishing, Melbourne.

Workplace health and safety legislation for each of the states and territories

Building, plumbing and electricity codes for each of the states and territories

## APPENDIX A

### MICROBIOLOGICAL TESTING

Work surfaces and product surfaces must be monitored on a regular basis to verify the HACCP program.

Testing procedures in an individual establishment shall be standardised to enable valid comparisons of results.

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

Total Viable Count (TVC) is currently recommended because it is a relatively inexpensive technique and there are sufficient bacteria present to provide useful data to indicate microbiological trends.

Verification of the presence of specific pathogens such as *Escherichia coli* and *Salmonella* requires more complex testing that may be linked to formal industry baseline testing and assessment programs.

Microbiological testing cannot be safely applied (and must not be used) to confirm freedom or absence of specific micro-organisms.

## APPENDIX B

### DISEASES AND CONDITIONS OF POULTRY AND THEIR DISPOSITION

\* Refer to Section 17 of this Standard

Primary observation	Secondary observation	Tertiary observation	Disease/Condition	Disposition	Significance at observation on (risk category)*
Abnormal colouring	Bluish–reddish brown		– Acute illness	Condemn carcase as unfit for human consumption.	Major
	Greenish–yellow	Slight	– Faecal staining – Bile staining	Trim affected area, condemn trimmings and pass remainder as fit for human consumption.	Major
		Extensive	– Faecal staining – Bile staining	Condemn carcase as unfit for human consumption	Critical
	Red birds		– Improper bleeding – Toxaemia – Septicaemia	Condemn carcase as unfit for human consumption.	Critical
	Yellow–orange		– Liver condition	Condemn carcase as unfit for human consumption.	Major
Abscess	Soft pus	No systemic involvement	– Infection	Trim affected area, condemn trimmings and pass remainder as fit for human consumption.	Critical
	Soft pus	Systemic involvement	– Infection	Condemn carcase as unfit for human consumption.	Critical
	Multiple Abscess	Soft pus	– Infection	Condemn carcase and parts as unfit for human consumption.	Critical
Arthritis	Infection of joint	Pus in joint	– Infection	Condemn limb as unfit for human consumption.	Critical
Ascites	Fluid in the abdominal cavity		– Tumours – Egg peritonitis – Organ malfunction	Condemn carcase as unfit for human consumption.	Critical
Breast blisters	Watery fluid filled	No systemic involvement	– Trauma	Trim affected area, condemn trimmings and pass remainder as fit for human consumption.	Major
	Fibrotic	No systemic involvement	– Trauma	Trim affected area, condemn trimmings and pass remainder as fit for human consumption.	Major

Primary observation	Secondary observation	Tertiary observation	Disease/Condition	Disposition	Significance at observation on (risk category)*
Bruising	Slight >2 cm dia	No systemic involvement	– Trauma	Trim affected area (trimmings may be used for pet food) and pass remainder as fit for human consumption	Major
	Extensive (whole carcase)	No systemic involvement	– Trauma	Condemn carcase as unfit for human consumption.	Major
Cirrhosis of liver			– Past infection – Toxic feed	Condemn organs as unfit for human consumption.	Major
Contamination	Minor	Whole birds	– Dropped birds – Minor intestinal spillage	Clean and sanitise whole birds. Save for human consumption.	Critical
	Minor	Meat pieces	– Dropped meat	Trim affected pieces, condemn trimmings and save remainder for human consumption.	Critical
	Major	Internal surfaces	– Improper evisceration	Clean and sanitise whole birds and save for human consumption.	Critical
Emaciation	Poorly fleshed	Wasted thigh and breast muscles	– Malnutrition – Leucosis	Save only for pet food.	Major
Fibrinous deposits	Jelly like film on heart and/or liver		– <i>E. coli</i> – CRD – Toxaemia – Septicaemia	Condemn organs as unfit for human consumption.	Critical
	Extensive lesions		– Toxaemia – Septicaemia	Condemn carcase as unfit for human consumption.	Critical

Primary observation	Secondary observation	Tertiary observation	Disease/Condition	Disposition	Significance at observation on (risk category)*
Haemorrhages	Blood spots	Localised to visceral organs, body or legs	– Trauma	Condemn affected organs or trim carcass parts and condemn trimmings as unfit for human consumption, and pass remainder as fit for human consumption.	Major
	Extensive		– Toxaemia – Septicaemia	Condemn carcass as unfit for human consumption.	Critical
Parasites	Heart or liver affected		– Roundworms	Condemn organs as unfit for human consumption.	Major
Peritonitis	Pus in abdominal cavity		– Infection	Condemn carcass and organs as unfit human consumption.	Critical
Septicaemia	Systemic involvement		– Infection	Condemn carcass as unfit for human consumption.	Critical
Skin Tear	No systemic involvement		– Processing fault	Pass for human consumption.	Minor
Tumours/nodules	Localised		– Marek's disease – Leucosis – Various	Trim affected part, condemn trimmings and pass remainder for human consumption.	Major
	Multiple		– Marek's disease – Leucosis – Various	Condemn carcass as unfit for human consumption.	Critical
Wounds	Slight abrasions	No systemic involvement	– Trauma	Pass for human consumption.	Minor
	Localised injury	No systemic involvement	– Trauma	Trim affected part, condemn trimmings and pass remainder for human consumption.	Major
	Systemic involvement		– Bacteraemia	Condemn carcass as unfit for human consumption.	Critical

## PREPARATION OF AUSTRALIAN STANDARDS

Australian Standards are prepared by a consensus process involving representatives nominated by organisations drawn from all major interests associated with the subject. Australian Standards may be derived from existing industry standards, from established international standards and practices or may be developed within a Standards Australia technical committee.

During the development process, Australian Standards are made available in draft form at all sales offices and through affiliated overseas bodies in order that all interests concerned with the application of a proposed standard are given the opportunity to submit views on the requirements to be included.

The following interests are represented on the committee responsible for this Australian Standard:

- ACT Health
- Australian Game Meat Producers Association
- Australian Meat Industry Council
- Australian Pork Ltd
- Australian Poultry Industries Association
- Australian Quarantine and Inspection Service
- Australian Renderers' Association
- Department of Agriculture, Forestry and Fisheries
- Department of Business, Industry and Resource Development (Northern Territory)
- Department of Primary Industries, Water and Environment (Tasmania)
- Food Standards Australia New Zealand
- Meat & Livestock Australia
- New South Wales Food Authority
- Primary Industries and Resources South Australia
- Primary Industries Ministerial Council Meat Standards Committee
- Primary Industries Standing Committee
- PrimeSafe (Victoria)
- Safe Food Queensland
- South Australian Meat Hygiene Advisory Council
- West Australian Meat Industry Authority
- Western Australia Department of Health.

