



Petfood Processing

Chapter 5 Further Processing and Manufacturing of Petfood

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TITLE

Operational Code: OC Petfood Processing

COMMENCEMENT

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Introduction

- (1) Chapter 5 of the Petfood Operational Code (the Code) has been developed by the Ministry for Primary Industries (MPI), in consultation with the New Zealand Petfood Manufacturers Association (NZPFMA).
- (2) The Code discusses the requirements for secondary processing of petfood under the Animal Products Act 1999 (APA) and its subordinate legislation, particularly the Animal Products Notice: Specifications for Products Intended for Animal Consumption 2017.
- (3) This introduction is not part of the Operational Code but is intended to indicate its general effect.

Purpose

- (1) This chapter has been developed to assist petfood manufacturers:
 - a) comply with the requirements of the APA and relevant subordinate legislation of the Act;
 - b) produce petfood that is safe and suitable for animal consumption; and
 - c) prevent petfood from entering the human food chain.
- (2) It has been developed mainly for petfood manufacturers operating a risk management programme (RMP). MPI recommends that “further (petfood) processors” (as defined in the Animal Products Notice: Specifications for Products Intended for Animal Consumption 2017) follow relevant procedures given in this Code, although they are not required to document and implement an RMP.

Background

- (1) This chapter forms part of the Operational Code for Petfood Processing. It should be read together with other chapters of the Code, particularly [Chapter 2: Good Operating Practice](#).
- (2) Information from the following publications were considered during the development of this chapter:
 - a) GAPFA Global Pet Food Safety Guidance (Draft March 2017);
 - b) Australian Standard. Manufacturing and Marketing of Pet Food (Draft March 2017);
 - c) [FEDIAF Guide to Good Practice for the Manufacture of Safe Pet Foods](#) (Revision 12 March 2010);
 - d) [FEDIAF Nutritional Guidelines for Complete and Complementary Pet Food for Cats and Dogs](#) (July 2016); and
 - e) [AFFCO Official Publication](#).

Who should read this Operational Code?

- (1) This chapter should be read by:
 - a) petfood manufacturers;
 - b) regulators; and
 - c) verifiers of petfood RMPs.

Why is this important?

- (1) This Code is a guidance document on how to meet APA requirements. However, if an RMP operator incorporates the whole or part(s) of the Code into their RMP, then the incorporated part(s) of the Code becomes mandatory (i.e. is no longer a guide) and legally enforceable.

Layout of this chapter

- (1) Regulatory requirements, recommended procedures and guidance information are distinctly differentiated in this document.

- (2) A regulatory requirement is identified by having a citation, at the end of the relevant sentence or clause, of the specific legislation from which the particular requirement is derived from. The word “**must**” is also used indicating its mandatory status. For example:

“All inputs, including raw materials, ingredients, additives and packaging must be handled, processed, and stored in a manner that minimises any potential contamination or deterioration [AP Reg 9]”.

In many cases, the mandatory requirements have been paraphrased. Operators should refer to the cited legislation for the actual wording of the legal requirement. However some generic mandatory requirements will not have a citation quoted, for example “The RMP operator must comply with all relevant requirements given in [Chapter 2: Good Operating Practice of the Code.](#)”

The abbreviations used for legislation cited are:

APA - the Animal Products Act 1999

AP Reg - the Animal Products Regulations 2000

AC Spec - the Animal Products Notice: Specifications for Products Intended for Animal Consumption signed on the 27th April 2017

RMP Spec - the Animal Products (Risk Management Programme Specifications) Notice 2008

- (3) Recommended procedures are industry agreed or accepted means of complying with regulatory requirements. To differentiate them from regulatory requirements, the word “**should**” is used rather than “**must**”.

MPI expects RMP operators to comply with the recommended procedures (“**should**”) that are applicable to their product and process unless they have proposed an alternative process, procedure or parameter that will achieve the same outcome. The operator should be able to demonstrate the validity and effectiveness of any proposed alternative. Any alternative process, procedure or parameter should be documented in their RMP.

- (4) Guidance or supplementary information

Guidance

Guidance material is presented in a box. They elaborate on relevant requirements (“**must**”) or recommended procedures (“**should**”) and provide options or examples for achieving a particular outcome or requirement.

Part 1: Definitions

(1) In this Code, unless context otherwise requires:

AAFCO means the Association of American Feed Control Officials

complete and balanced petfood means a food that is nutritionally complete and balanced and meets the minimum recommended nutritional requirements for cats or dogs as defined by AAFCO, FEDIAF or other internationally recognised standards or guidelines

control measure means any action and activity that can be used to prevent or eliminate a hazard or reduce it to an acceptable level

corrective action means any action to be taken when the results of monitoring a process step or control measure indicate a loss of control

Critical Control Point (CCP) means a step at which control can be applied and is essential to prevent or eliminate a hazard or reduce it to an acceptable level

critical limit means a criterion which separates acceptability from unacceptability at a CCP

FEDIAF means the European Pet Food Industry Federation

further (petfood) processing – means the processing (other than transport or storage) of petfood that is raw meat or other animal material or animal product that results from the death of the source animal (for example red meat, offal, poultry or fish) but does not apply to processing of petfood:

- a) where the raw meat or animal material or product;
 - i) has been rendered; or
 - ii) is acquired in a ready-for-sale state and has been subject to primary processing in accordance with a registered risk management programme by an earlier processor
- b) where processing is undertaken under a risk management programme [AC Spec]

HACCP (Hazard Analysis and Critical Control Point) means a system that identifies, evaluates and controls hazards that are significant for food safety

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

ingredient means any substance, including a feed additive, added to petfood during processing

lethality means a measure of the ability of a process to destroy a particular pathogen

low-acid product means:

- a) any petfood, where any component has a pH value greater than 4.6 after heat processing, and a water activity (a_w) greater than 0.85; but
- b) does not include petfood that is required to be stored under refrigeration

manufactured petfood means a petfood, where meat either singly or in combination with other ingredients, has undergone a method of processing other than boning, slicing, dicing, mincing, mixing, forming, chilling or freezing

minimise means to have taken all practical steps to substantially reduce the potential hazard of concern, consistent with what is technologically feasible

monitor means the act of conducting a planned sequence of observations or measurements of control parameters to assess whether a process step or control measure is under control

operator-defined limit means a measurable limit or criterion established by an operator that defines a petfood's safety and suitability, considering its intended purpose and use

pasteurisation means the application of heat, or any treatment or combination of treatments, to petfood to reduce the most resistant microorganism(s) of animal or human health concern to a level that is not likely to present a risk to the health of pets (by direct consumption of petfood) or their human handlers, under normal conditions of distribution and storage of the petfood

pathogen means a biological agent, such as bacteria, virus, protozoa or fungus, that causes disease or illness to its host

pet means cat or dog

petfood means animal product intended for consumption by pets. 'Food' in the context of this chapter, has the same meaning

petfood manufacturer means a business operator involved in the production of processed petfood

process control means all conditions and measures applied during the production process that are necessary to produce a safe and suitable petfood

processing areas/rooms means all areas where petfood is prepared, processed and packed

raw petfood means a petfood, where animal material (meat, offal, bone) either singly or in combination with other ingredients has not undergone a processing step or treatment beyond boning, slicing, dicing, mincing, mixed, forming, chilling or freezing

regulatory limit means a measurable limit or criterion set in legislation that defines a petfood's safety or suitability, considering its intended purpose and use

rework (noun) means a product which has been partially or fully processed and is incorporated and reprocessed into another batch of product

rework (verb) means to incorporate rework into another batch of product

shelf-life means the period of time, established under intended conditions of distribution, storage, retail and use, that the petfood will remain safe and suitable

shelf-stable means the condition achieved at which petfood in its manufactured state can be stored and handled under non-refrigerated conditions without microbial deterioration

spoilage microorganisms means microorganisms that cause deterioration of petfood resulting in a loss in its quality

suitably skilled person means a person who is skilled in a particular activity or task through training, experience, or qualifications

tempering means, in the case of frozen product, the elevation of the temperature to any point that is lower than the freezing point of the product (meat begins to freeze at about -2°C)

thawing means the elevation of the temperature of frozen product to temperatures that are higher than the freezing point of the product

validation means obtaining evidence that a process, control measure or combination of control measures, if properly implemented, is capable of consistently achieving a specified outcome, such as a regulatory limit, operator-defined limit, or other process or GMP criteria

verification means the application of methods, procedures, tests and other checks to confirm compliance to the documented risk management programme and relevant regulatory requirements

water activity (a_w) means a measure of the water in the food which is available for microbial growth. It is the ratio of the water vapour pressure of the food (p) to that of pure water (p_o) at the same temperature, $a_w = p/p_o$

- (2) References in this Code to subclauses, clauses, appendices and parts are references to subclauses, clauses, appendices and parts of this Code unless otherwise stated.
- (3) Any term or expression used in this Code that is defined in the APA, Regulations or Notices made under the APA and used, but not defined, in this Code has the same meaning as in the APA, Regulations or Notices.

Part 2: Purpose and scope of this chapter

2.1 Application

- (1) This chapter applies to all petfood manufacturers operating under an RMP. Although 'further petfood processors' are not required to document and implement an RMP, MPI recommends that they also follow relevant procedures given in this chapter.
- (2) Petfood, as defined in the APA and used in the Code, means food that is made of animal material or animal product and intended to be fed to domesticated cats and dogs (including companion dogs, farm dogs and other working dogs). The requirements in this chapter only apply to petfood that is intended to be sold or traded.
- (3) Petfood manufacturers must also comply with relevant requirements and procedures discussed in [Chapter 2: Good Operating Practice of this Code](#).
- (4) This chapter has been developed based on New Zealand standards and requirements only. Exporters of petfood should refer to MPI's [Exporting web pages](#) for more details about export requirements.

2.2 Petfood safety risks and hazards

- (1) This chapter focuses on managing the following risks to animal and human health from petfood:
 - a) risk to animal health from consumption of petfood by pets;
 - b) risk to human health through direct or indirect infection of humans from handling and preparation of petfood; and
 - c) risk to animal health due to nutrient imbalances (i.e. inadequate or excessive levels that may be harmful).
- (2) The following are outside the scope of this chapter:
 - a) risk to human health from human consumption of petfood; and
 - b) risk to human health through direct or indirect exposure of humans to infected pets and anything in the environment contaminated by infected pets.
- (3) This chapter addresses the control of petfood safety hazards, including biological, chemical and physical hazards.

2.3 Types of petfood

- (1) This chapter covers the processing of raw petfood and the manufacture of complete and balanced petfood (wet, semi-moist and dry petfood), pet chews and pet treats.
- (2) Examples of the different types of processed or manufactured petfood covered by this chapter are summarised in Table 1: Types of Petfood.

Table 1: Types of petfood

Type	Description	Example
Raw petfood	<ul style="list-style-type: none"> • petfood that has not undergone any heat or preservation treatment (refer to definition) • prepared with or without added ingredients • stored chilled or frozen 	<ul style="list-style-type: none"> • raw meat mince or chunks • raw offal • raw chicken neck • pelletised raw meat • raw meat patties
Canned petfood	<ul style="list-style-type: none"> • retorted or aseptically processed (low-acid) • packed in cans or pouches • shelf-stable at ambient conditions • typically has a moisture content of 60 to 75% or $a_w \geq 0.85$ 	<ul style="list-style-type: none"> • canned dog food • cat food in pouches
Heat treated refrigerated (wet) petfood	<ul style="list-style-type: none"> • pasteurised • stored chilled or frozen • typically has a moisture content of 60 to 75% or $a_w \geq 0.85$ 	<ul style="list-style-type: none"> • chilled dog rolls
Semi-moist petfood and treats	<ul style="list-style-type: none"> • heat treated • additional hurdle(s) is usually applied (e.g. a_w control, pH control, use of preservative) • may be shelf-stable at ambient conditions if mould growth is inhibited (e.g. by vacuum packaging and/or use of anti-fungal agent) • typically has a moisture content 25 to 35% or a_w of 0.60 to 0.80 	<ul style="list-style-type: none"> • shelf-stable dog rolls • shelf-stable semi-moist meat and vegetable chunks • soft jerky
Dry petfood (kibbles) and treats	<ul style="list-style-type: none"> • extruded, dried and baked • shelf-stable at ambient conditions • typically has a moisture content of <10% or a_w of 0.25 to 0.50 	<ul style="list-style-type: none"> • dog biscuits • kibble
Freeze-dried petfood and treats	<ul style="list-style-type: none"> • may or may not be heat treated prior to freeze-drying • shelf-stable at ambient conditions • typically has a moisture content of $\leq 10\%$ or $a_w \geq$ of 0.25 to 0.50 	<ul style="list-style-type: none"> • freeze-dried meat chunks
Dried pet chews and treats	<ul style="list-style-type: none"> • heat treated and then dried (e.g. air-dried) • shelf-stable at ambient conditions • typically has a moisture content of <10% or a_w of 0.25 to 0.50 	<ul style="list-style-type: none"> • hard jerky • dried bones, ears, hooves, liver • pet chews produced from processed hides

- (3) The following operations are excluded from the scope of this Code:
- a) processing of petfood that is principally of dairy origin;
 - b) rendering of animal material (this is covered by the MPI Rendering Code of Practice); and
 - c) activities solely covered by the ACVM Act (refer to Part 3 Table 2: Regulatory Scenarios for Secondary Processing of Petfood and Their Applications).

Part 3: Regulatory requirements

3.1 Legislation applicable to petfood

- (1) Product safety and suitability aspects of petfood production in New Zealand are primarily legislated under the [Animal Products Act 1999](#) and the [Agricultural Compounds and Veterinary Medicines Act 1997](#) (ACVM).
- (2) The main pieces of legislation under the APA that apply to petfood manufacturers are the:
 - a) [Animal Product Regulations 2000](#);
 - b) [Animal Products Notice: Specifications for Products Intended for Animal Consumption 2017](#); and
 - c) [Animal Products \(Risk Management Programme Specifications\) Notice 2008](#).
- (3) The main legislation under the ACVM Act that covers the requirements for the importation, manufacture and sale of petfood in New Zealand is the [Agricultural Compounds and Veterinary Medicines \(Exemptions and Prohibited Substances\) Regulations 2011](#).
- (4) The ACVM Regulations 2011 requires the registration of manufactured petfood that has a therapeutic claim. Manufactured petfood that is marketed purely to provide nourishment to an animal does not require registration, however, it still needs to meet particular regulations related to the product's fitness for purpose, documented system for manufacturing, labelling and record keeping.
- (5) For further information on the ACVM requirements, refer to the MPI website or contact the MPI ACVM Programmes & Appraisals Team at ACVM-info@mpi.govt.nz.
- (6) The APA and ACVM Act provide for several scenarios under which petfood operators may operate, depending on the nature of their operation and the type of petfood they produce. These scenarios and their corresponding regulatory requirements are summarised in Table 2: Regulatory Scenarios for Secondary Processing of Petfood and Their Applications.

Table 2: Regulatory scenarios for secondary processing of petfood and their applications

	Regulatory scenarios	Application	Legal requirements
1	Petfood manufacturers that must operate under an RMP	Manufacturers of any type of petfood for export that requires an official assurance (i.e. export certification).	<p>These manufacturers must develop, register and implement an RMP according to the RMP Spec and AC Spec.</p> <p>In addition to meeting New Zealand standards, exporters must also meet relevant export requirements and overseas market access requirements (OMARs). Refer to MPI's Exporting web pages for more details.</p>
2	Petfood manufactureres involved in "further petfood processing", as defined in the AC Spec, that must implement a documented tracking system	<p>Processors or manufacturers involved in the processing of petfood that is:</p> <ul style="list-style-type: none"> made from or contains any raw animal material (e.g. raw meat, offal, poultry or fish); <p>and</p> <ul style="list-style-type: none"> is for domestic sale, or is for export but an official assurance (i.e. export certification) is not required. <p>Examples:</p> <ul style="list-style-type: none"> A manufacturer that produces raw petfood (e.g. diced meat and offal) or processed petfood (e.g. cooked dog rolls) for domestic sale only. A manufacturer of processed petfood for export to a country that does not require an official assurance (i.e. export certification) from MPI for petfood consignments. 	<p>These further petfood processors must:</p> <ul style="list-style-type: none"> be listed with MPI, and implement a documented tracking system that shows that all animal material used in petfood processing are procured from regulated sources. <p>Refer to the Further (Petfood) Processors Documented Tracking System for more details.</p> <p>Note that further petfood processors are exempt from having a documented tracking system if they voluntarily choose to operate under an RMP, since procedures for the procurement of raw materials and product traceability are required parts of an RMP.</p>
3	Petfood manufacturers that are not covered by scenario (1) or (2), i.e. they are not required to implement an RMP or tracking system.	<p>Manufacturers involved in the processing of petfood that is:</p> <ul style="list-style-type: none"> made of or contains rendered or processed animal product, or 	<p>These manufacturers must comply with the requirements of the ACVM Regulations 2011.</p> <p>They are not required to implement a tracking system under the APA. The businesses they procure</p>

	Regulatory scenarios	Application	Legal requirements
		<ul style="list-style-type: none"> • made of raw meat, poultry or fish bought in a ready-for-sale form from a regulated source (e.g. meat bought from a retail butcher or supermarket); and <ul style="list-style-type: none"> • is for domestic sale only, or • is for export but an official assurance (i.e. export certification) is not required. Examples: <ul style="list-style-type: none"> • A manufacturer of dog biscuits that are for domestic sale. 	their materials from are required to source animal material from regulated sources (e.g. RMP or food control plan) they operate under.
4	Petfood manufacturers that fall under scenario (2) or (3) and are not required to operate under an RMP, but voluntarily choose to do so.	Further petfood processor that chooses to operate under an RMP for commercial reasons (e.g. customer requirement). A manufacturer of petfood solely for domestic sale that chooses to operate under an RMP.	These manufacturers must develop, register and implement an RMP according to the RMP Spec.

3.2 RMP requirements

- (1) Petfood manufacturers that require an RMP must develop and document an RMP that is specific to their own products, processes and premises. The MPI [RMP Manual](#) provides comprehensive information on the development, registration and implementation of an RMP.
- (2) Petfood RMPs are expected to be developed and implemented in accordance with the Code.
- (3) The whole or parts of the Code may be incorporated in a manufacturer's RMP (e.g. by copying or referencing the relevant part). Since the RMP is a legally binding document, any part of the Code incorporated in an RMP becomes mandatory for the operator.
- (4) The processes covered by the RMP must be developed based on the application of the HACCP principles set out by the Codex Alimentarius.
- (5) The following must be documented in a petfood RMP:
 - a) any regulatory limit and/or operator-defined limit applicable to the product or process covered by the RMP;
 - b) processing procedures, including product and process parameters for all key steps of the process;
 - c) procedures for monitoring and verifying compliance to established processing procedures and parameters, particularly critical limits at identified critical control points; and
 - d) corrective actions for any non-compliances to or deviation from any regulatory limit or operator-defined limit, procedures, and product and process parameters [RMP Spec 7, 8 and 11].
- (6) The RMP operator must document and implement a tracking system that:
 - a) allows for the identification of all raw materials, ingredients, products, and packaging (when appropriate); and
 - b) enables the movement of raw materials and ingredients to be traced from the supplier; and to the next person or company that any product is transferred to for further processing, packing, storage, distribution or sale [AP Reg 18(1)(b)(i)].

Part 4: Animal materials and products for use in petfood

4.1 Sourcing of animal materials

- (1) Materials derived from mammals, birds and seafood that are used in petfood must be sourced only from regulated sources [AC Spec 9.4 (1)].
- (2) Regulated sources are registered or listed businesses that operate under the regulatory control of MPI, such as:
 - a) abattoirs, slaughter plants, and meat, poultry or seafood processing premises that operate an RMP under the APA; and
 - b) retail butchers, seafood businesses and other food businesses registered under the [Food Act 2014](#).

Guidance

Petfood manufacturers that use imported animal material (e.g. fish for petfood processing) can meet this requirement by ensuring that the imported animal material meets applicable biosecurity Import Health Standards.

4.2 Animal materials suitable for use in raw petfood

- (1) Only the following minimal risk materials may be directly used in raw petfood:
 - a) materials derived from farmed mammals and birds slaughtered for animal consumption under an RMP and passed as suitable for petfood use, refer to [Chapter 3 of this Code](#);
 - b) materials derived from farmed animals slaughtered for human consumption under an RMP and passed as fit for human consumption, but is not going to be used in this way for commercial reasons (e.g. edible offal deemed fit for human consumption but sold for petfood use);
 - c) materials derived from farmed animals slaughtered for human consumption under an RMP that passed ante-mortem examination but deemed unfit for human consumption at post-mortem examination, but deemed suitable for petfood;
 - d) materials derived from wild animals and passed as suitable for petfood use, in accordance with [Chapter 4 Harvesting and Processing of Wild Animals of this Code](#);
 - e) materials derived from seafood that is fit for human consumption; and
 - f) processed non-meat animal products, such as processed egg, processed dairy and honey.

4.3 Animal materials suitable for use in manufactured petfood

- (1) The following materials may be directly used in the production of manufactured petfood:
 - a) minimal risk materials listed in 4.2 (1);
 - b) rendered animal products (e.g. meat and bone meal) produced under a registered RMP;
 - c) processing food scraps and by-products, such as skins, boning room scraps, fish heads, gut or frames from products intended for human consumption which are derived from premises registered under the [Food Act 2014](#); and
 - d) medium risk materials (listed in 4.3 (2)) that have been rendered [AC Spec 10.3 (1)].
- (2) In relation to 4.3 (1) (d), the following animal materials are considered as medium risk materials and must not be used directly in petfood. They must be rendered or treated using a method that delivers a similar outcome to rendering in terms of hazard reduction, before being used in petfood:
 - a) materials derived from slaughtered or killed animals that are suspected to be diseased;
 - b) materials derived from animals slaughtered and killed for specific disease eradication purposes;

- c) materials derived from mammals and birds that have died in the field;
 - d) materials derived from homekill or recreational catch;
 - e) materials derived from any animal containing residues of agriculture compounds or veterinary medicines, toxic substances or natural substances (including shellfish affected by marine biotoxins) that may result in harm to pets, only if the rendering process or the treatment can reduce the particular residue or toxic substance to a level that is unlikely to result in harm to the pet;
 - f) materials from tuberculous animals;
 - g) any minimal risk material that has come into contact with any medium risk raw material; and
 - h) any other animal material that is not fit for animal consumption without further processing or treatment [AC Spec 2.2. and 10.3].
- (3) In relation to 4.3 (2) (f), materials from farmed tuberculous animals (including reactor animals), including offal and blood, may only be used directly in petfood that will be thermally treated at not less than 62.5 °C for not less than 30 minutes or equivalent treatment to ensure destruction of the tuberculosis organism [AC Spec 11.6].

4.4 Animal materials prohibited for use in petfood

- (1) The following materials must not be used in any type of petfood:
- a) materials derived from animals that have been used in experiments, trials, or research, except where approval is granted by MPI (refer to [Chapter 3 of this Code](#));
 - b) materials derived from pets, zoo animals, guinea pigs, rats and mice; and
 - c) any “high risk material”, except where permitted by MPI in writing, including:
 - i) any material that MPI requires, by direction made under section 81 (2) of the Act, to be treated as high risk raw material;
 - ii) medium risk raw material or minimal risk raw material that has come into contact with any high risk raw material; or
 - iii) animal material or product that is derived from ruminants imported live into New Zealand [AC Spec 2.1 (1) and 6.2].

4.5 Animal materials eligible for use in petfood for export

- (1) Petfood manufacturers must ensure that animal materials for use in petfood for export meet the eligibility requirements of the particular overseas market. Refer to MPI’s website for guidance on [exporting petfood](#) and overseas market access requirements.

Part 5: General product and processing requirements

5.1 Scope

- (1) This Part discusses the general requirements applicable to all petfood processing and manufacturing operations.

5.2 Petfood safety and suitability outcomes

- (1) Petfood manufacturers must ensure that petfood they produce does not contain:
 - a) hazards at levels that may directly or indirectly be harmful to pets and their human handlers; and
 - b) unwholesome or extraneous material that may make the petfood unsuitable for its intended purpose [AP Reg 6].
- (2) Manufacturers must identify and document in their RMP any regulatory or operator-defined limits or other criteria relevant to the safety or suitability of petfood they produce.

Guidance

Regulatory and operator-defined limits define the safety and/or suitability outcomes for a particular petfood, considering its intended purpose and use. Generally, they are measurable process or product criteria that must be achieved during processing.

Regulatory limits are specified in legislation. When no regulatory limit is specified and when necessary to define the acceptability of the petfood, the operator is expected to establish their own limits for the types of petfood they produce.

When establishing operator-defined limits, the manufacturer should consider:

- the type and nature of the petfood (e.g. limits for raw petfood will be different from those for manufactured petfood);
- the hazard(s) reasonably likely to occur in the petfood;
- the potential risks to the pet through direct consumption of the petfood; and
- the risk to the pet owner or handler through direct or indirect contamination from handling, preparing or storing of petfood.

The manufacturer should also ensure that the defined limits are scientifically justifiable and appropriate to the petfood, considering:

- its intended use;
- the intended consumer and expected handling after leaving the RMP; and
- that they are consistently achievable under normal operating conditions.

Examples of operator-defined limits are:

- physico-chemical properties of a petfood (e.g. pH, moisture content or a_w);
- maximum level of a hazard in a petfood (e.g. microbiological criteria, maximum levels of a physical or chemical hazard);
- process parameters (e.g. pasteurisation time and temperature, thermal process schedule for 12D reduction of *C. botulinum* in canned petfood); and
- maximum level of an additive in a petfood.

These regulatory and operator defined-limits may be achieved by applying control measures at a specific process step (e.g. at a CCP) or combination of steps, or by Good Manufacturing Practice. The effectiveness of a process or RMP can be validated against these criteria. Refer to the RMP Manual for further discussion on regulatory and operator-defined limits.

5.3 Good manufacturing practice

5.3.1 Hygiene and sanitation

- (1) Petfood manufacturers must establish and carry out procedures to:
 - a) ensure appropriate and adequate maintenance, cleaning, and sanitation of premises, facilities, essential services and equipment;
 - b) manage waste;
 - c) control pests; and
 - d) implement effective personnel hygiene practices [AP Reg 11, AC Spec Part 3].
- (2) Petfood manufacturers must comply with the requirements covering hygiene and sanitation of the premises, facilities and equipment given in [Chapter 2 of this Code](#).
- (3) Cleaning of food contact surfaces and equipment should be undertaken between processing of different types of product (e.g. dog food and cat food, “organic” petfood and normal petfood, products made of different species of meat) where necessary to maintain product safety and suitability, and truth of labelling. Refer to Part 8 Cleaning and Sanitation [Chapter 2: Good Operating Practice of this Code](#) for cleaning and sanitation procedures.

5.3.2 Control of contamination and deterioration

- (1) All inputs, including raw materials, ingredients, additives and packaging must be handled, processed, and stored in a manner that minimises their potential contamination or deterioration [AP Reg 9].
- (2) All process steps should be performed without unnecessary delay.
- (3) Animal materials and products requiring refrigeration should be maintained at temperatures that will minimise microbiological growth in the product.
- (4) There should be effective separation to prevent cross-contamination between different types of products (e.g. raw and heat treated products, dog and cat food, “organic” petfood and conventional petfood) where necessary to maintain product safety and suitability and truth in labelling.
- (5) Procedures should be in-place to protect ingredients and product from contamination by physical hazards such as glass, metal or wood. Unprotected glass and glass implements should be excluded from processing and storage areas. Wooden implements should not be used where they may affect product safety.
- (6) Where metal detectors are installed to control an identified hazard, procedures for the operation of metal detectors must be documented. The procedures must include the following:
 - a) testing or calibration of the metal detector sensitivity;
 - b) procedures for handling product rejected by the metal detector; and
 - c) procedures for re-checking product in the event that routine monitoring of a metal detector indicates the equipment has failed or is out of calibration [AC Spec 3.18 (1)].
- (7) Petfood manufacturers must comply with relevant requirements given in Part 12: Calibration of Measuring Equipment [Chapter 2 of this Code](#).

5.3.3 Purchase, receipt and storage of raw materials, ingredients and packaging

- (1) Petfood manufacturers must source animal material for use in petfood in accordance with the eligibility requirements given in [Part 4: Animal Materials and Products for Use in Petfood](#) of this chapter.
- (2) Petfood manufacturers must comply with relevant requirements given in Part 13: Purchase, Handling and Storage of Raw Materials, Ingredients and Packaging [Chapter 2: Good Operating Practice of this Code](#).

5.3.4 Rework

- (1) Materials for rework should be:
 - a) clearly identified;
 - b) kept separate from other products during storage; and
 - c) be handled and stored in a manner and under conditions that minimise contamination and growth of microorganisms.
- (2) Product that cannot be identified by its original production lot or batch or is deemed unsafe should not be reworked or used in production of petfood and be disposed of as waste.
- (3) Formulations should be properly adjusted to account for the addition of any rework. Consider any potential effect of using rework on the safety, nutritional content, labelling, and shelf-life of the product.
- (4) Procedures for tracing the batches of reworked materials and the batches of products they have been used in must be established and documented [RMP Spec 11].

Guidance

Manufacturers should establish a cut-off period for reworking products from one batch to the next to facilitate traceability and recall procedures and prevent selection of resistant strains of microorganisms in the product.

The manufacturer should periodically clear out all rework. For example, some manufacturers have a weekly cut-off for re-work, with material produced in a previous week not being reworked into the current week's production.

5.4 Product design and formulation

- (1) All petfood products must be designed and formulated to produce petfood that is safe and meets the nutritional requirements of the intended pet consumer, considering its intended purpose and use [APA s5].
- (2) Product formulations or recipes should be developed by a suitably skilled person who:
 - a) has technical knowledge and experience in developing petfood formulations;
 - b) is familiar with regulatory standards and requirements, including permitted levels of ingredients and additives;
 - c) a good understanding of nutritional requirements of pets, particularly when developing complete and balanced petfood; and
 - d) a good understanding of the effect of any change in the formulation on product characteristics, nutritional content, process parameters, labelling, shelf-life etc.
- (3) The following should be taken into consideration when developing petfood:
 - a) the type and, if applicable, the lifestage of the pet the petfood is intended for;
 - b) the intended purpose and use of the petfood (i.e. whether it is intended to be a complete and balanced food or a treat);
 - c) the nutritional requirements of the pet;
 - d) how the petfood will be distributed through the supply chain, and handled, stored and used by the retailer and pet owner or handler;
 - e) the source and suitability of raw materials, ingredients and packaging;
 - f) the hazards associated with the raw materials and ingredients;
 - g) the manufacturing process;
 - h) any applicable regulatory or operator-defined limits, product or process criteria;
 - i) the shelf-stability and shelf-life of the petfood; and
 - j) for petfood for export, the eligibility of the animal material and petfood for the intended overseas market.

Guidance

MPI maintains a list of substances Generally Recognised As Safe (GRAS) for use as animal feed or petfood additives. Petfood manufacturers should confirm that additives used in their petfood are GRAS to ensure their products are exempt from registration under the [Agricultural Compounds and Veterinary Medicines \(Exemptions and Prohibited Substances\) Regulations 2011](#).

- (4) The manufacturer should have a system for managing activities and incidents that may impact on formulations and recipes, such as recipe changes, changes in suppliers of ingredients, use of different brands or alternative ingredients and use of rework materials.
- (5) Records of petfood formulations should be kept.
- (6) Shelf-life should be established, taking into account the petfood formulation, process, packaging and subsequent storage conditions. The manufacturer should be able to explain the basis for the established shelf-life and provide supporting records, if necessary.

Guidance

Shelf-life can be determined based on:

- scientific literature;
- industry guidelines;
- company's experience and historical records; and/or
- shelf-life trials.

5.4.1 Complete and balanced petfood

- (1) A petfood that is intended to be a "whole diet" or "complete and balanced" food should meet the recommended nutritional requirements for cats or dogs as defined by the [AAFCO Official Publication](#), the [FEDIAF Nutritional Guidelines \(July 2016\)](#) or other internationally accepted standard or guidelines. The operator should be able to provide evidence demonstrating compliance with the requirements.
- (2) The petfood manufacturer should, where appropriate, undertake trials and carry out testing to verify if product formulation and manufacturing processes are capable of producing a nutritionally well balanced and safe petfood.

5.5 Process development and validation

- (1) Manufacturing processes for each product or product group should be:
 - a) developed based on the application of HACCP and designed to consistently achieve any applicable regulatory and/or operator-defined limits;
 - b) documented in the RMP, including the procedures at key process steps and product and process parameters and criteria; and
 - c) validated by a suitably skilled person; and revalidated whenever there is a change to the process or product that could impact on the product's safety and stability.

Guidance

The following references give useful information on petfood safety hazards and HACCP:

- Annex II of the [FEDIAF Guide to Good Practice for the Manufacture of Safe Pet Foods](#) provides information on HACCP and its implementation and examples of CCPs for different types of petfood processes.
- [Part 4 of the Processed Meats Code of Practice](#) provides guidance on the HACCP approach and examples of HACCP plans for manufactured meat products.
- The [Reference list of Contaminants and Residues in Petfood and Ingredients with Safety Risks](#) published by the Pet Food Industry Association of Australia Inc. (PFIAA) provides information

on contaminants and hazards that manufacturer's should take into consideration when developing their products and HACCP plans.

- (2) Validation should cover the aspects of the process summarised in Table 3: Scope of Process Validation.

Table 3: Scope of process validation

The manufacturer should be able to demonstrate that:	Examples of evidence
Operator defined limits, including process parameters at CCPs and product criteria, are appropriate to the product and its intended use and scientifically valid	<ul style="list-style-type: none"> • published scientific literature; • New Zealand or internationally recognised code of practice; • industry agreed criteria; • expert's opinion; or • reports of validation studies.
Process equipment, such as pasteurisers cookers or driers: <ul style="list-style-type: none"> • have the correct capability; • are correctly installed and set up; and • are fitted with calibrated measuring devices at the correct location (e.g. the slowest heating point of a cooler). 	<ul style="list-style-type: none"> • commissioning reports; or • evidence of compliance to equipment manufacturer's instructions regarding installation and setup, such as an installation checklist. For simple equipment, such as small water cookers, actual demonstration of the equipment's operation by the petfood manufacturer may suffice.
Established process parameters, including critical limits at CCPs (e.g. heating parameters, drying parameters), and product criteria (e.g. a_w , microbiological criteria) are consistently met.	For existing businesses and processes - process monitoring data, historical records. For new businesses or new processes – results of validation trials (refer to RMP Manual).
Personnel responsible for control and monitoring at key operational steps (particularly CCPs) are adequately trained or have the correct competencies.	Training records.

Note: Refer to the [RMP Manual](#) and the [Processed Meats Code of Practice](#) for further discussions on validation.

- (3) Records of all aspects of the validation work must be kept [AP Reg 20 (2)].

5.6 Process control and monitoring

5.6.1 Monitoring

- (1) The process must be operated in accordance with documented procedures.
- (2) The process must be monitored and verified at a frequency necessary to ensure that the established process and product parameters are consistently met.
- (3) Process control and monitoring of critical control points must be carried out and/or supervised by appropriately trained personnel.
- (4) Calibrated instruments must be used for measuring critical process parameters. Refer to Part 12 Calibration of Measuring Equipment in [Chapter 2: Good Operating Practice of this Code](#).
- (5) Records of the process, including records of raw materials and ingredients, must be maintained for each production lot or batch. Refer to Part 3 Document Control and Record Keeping in [Chapter 2: Good Operating Practice of this Code](#).

5.6.2 Non-compliance to processing procedures and parameters

- (1) The manufacturer must take immediate action when any non-compliance occurs that results in the product or process not meeting the established process or product parameters, including any regulatory or operator-defined limits.
- (2) Non-compliant products must be identified and segregated until their safety and disposition has been determined by a suitably skilled person (refer to [Part 16: Handling and Disposition of Non-complying Products and Recall in Chapter 2: Good Operating Practice of this Code](#) for procedures).
- (3) A suitably skilled person must investigate any incidence of non-compliance or process failure, determine the cause of the failure and take appropriate corrective action.
- (4) The corrective actions must address the:
 - a) restoration of control (e.g. stop processing until the assessment is completed and any necessary changes have been made to the product or process);
 - b) identification and disposition of affected product (including initiating a recall, if necessary); and
 - c) prevention of the recurrence of the problem.
- (5) A record of the assessment and corrective actions taken must be kept [AP Reg 20 (2)].

5.7 Verification of compliance to specifications

- (1) When appropriate and considered necessary, a programme should be in-place for verifying compliance of raw materials, ingredients and finished products to specifications, such as microbiological and chemical limits, nutritional specifications and shelf-life.
- (2) Inspection or testing protocols must be documented in the RMP, including:
 - a) sampling frequencies and methods;
 - b) procedures for handling of samples;
 - c) analytical tests or inspection methods; and
 - d) procedures for recording and reporting of results.
- (3) Where the manufacturer undertakes (or sub-contracts) analyses critical to petfood safety, the testing laboratory must have, as a minimum, accreditation to the international standard ISO/IEC 17025 (by IANZ).
- (4) Any in-house testing should be done using standard methods and by a person who has appropriate training and/or experience in the particular test.

Part 6: Preparation steps

6.1 Scope

- (1) This Part discusses the steps typically undertaken during the production of raw petfood and the preparation of petfood material for processing.

6.2 Tempering and thawing

- (1) Appropriate temperature control should be applied during the tempering or thawing of frozen meat to minimise the growth of pathogenic and spoilage microorganisms in the product.
- (2) Procedures and time/temperature parameters for the tempering or thawing of frozen meat should be documented in the operator's RMP.
- (3) Plastic liners that may be entrapped in meat blocks should be removed properly.

Guidance

The occurrence of entrapped plastic in the meat may be reduced by using thicker gauge liners which are less likely to tear and using blue liners which are easier to see.

6.3 Cutting, boning and trimming

- (1) Carcasses, sides and quarters should be checked for gross visible defects before they are cut and boned and any defects found should be removed in a hygienic manner. Visible defects include rail dust, grease, bruises, lesions, blood clots, clusters of hair, dirt or other extraneous material.
- (2) Defective material and contaminated or deteriorated meat unsuitable for petfood processing should be immediately disposed of into identified waste bins or containers. Dropped meat may be used for processing provided contaminated areas are adequately trimmed prior to use.
- (3) The operation should be managed so carcasses and cuts are maintained at a temperature that prevents microbial growth during cutting, boning, or trimming.
- (4) Cuts and trimmings should not be allowed to accumulate without proper temperature control.
- (5) Equipment used, such as knives, sharpening steels and mesh gloves, should be cleaned and sanitised, as necessary, to prevent contamination of products.

6.4 Size reduction (e.g. mincing, flaking, dicing)

- (1) Procedures for preventing metal contamination from grinders and flakers, and corrective actions when metal contamination occurs should be established and documented.

Guidance

Grinders and flakers should be checked and maintained regularly to prevent metal contamination from equipment. Some companies also have procedures for preventing metal contamination from newly installed blades. For example, when a new or re-sharpened blade is installed, the first few kilograms of mince produced after installation is dumped to waste.

- (2) Grinders, flakers and other equipment should be maintained in a hygienic condition during the production period.

6.5 Weighing

- (1) Correct recipes or batch weighing instructions should be available to, and used by, the person responsible for weighing ingredients.
- (2) The weighing and assembly of ingredients and additives should be carried out only by designated and trained personnel.
- (3) Accurate scales and metering equipment with appropriate capability must be used for weighing ingredients. They should be calibrated or certified, as applicable, considering their use and the criticality of the measurement being taken. Refer to Part 10: Calibration of Measuring Equipment [Chapter 2 of this Code](#) [AP Reg 14(1), AC Spec 3.18 (1)].
- (4) Weighing procedures should facilitate the identification and traceability of all raw materials and ingredients used in batches of products. Batch records must be kept.
- (5) Containers and utensils used for weighing should be dedicated for the purpose. They should be clean and not be a source of contamination.
- (6) Pre-weighing and assembly of dry ingredients should be performed in a dry ingredient room, or in an area specifically designated for dry ingredient preparation and/or storage.

6.6 Mixing

- (1) Mixing procedures should ensure a homogenous mixture, which is essential for nutritional balance and petfood safety.
- (2) Packaging or containers of pre-weighed ingredients or premixes should be handled and disposed of properly so that they do not become a source of physical hazard or foreign matter (e.g. plastic bag, pieces of paper, string).
- (3) When necessary for product safety, the temperature of the mixture should be controlled.

Guidance

Temperature control can be maintained by e.g. small batch sizes, water baths, temperature controlled rooms etc.

- (4) The mixture should be used (e.g. filled into casings) without unnecessary delay, or it should be held under refrigeration while waiting to be further processed.
- (5) The incorporation of rework into any product should be in accordance with the procedures given in clause [5.3.4 Rework](#) of this Chapter.
- (6) Procedures for preventing metal contamination from bowl choppers and mixers, and corrective actions when metal contamination occurs should be established and documented.

6.7 Filling

- (1) The petfood preparation or mixture should be hygienically filled into containers (e.g. retail-ready containers, food grade casings or molds).
- (2) If a filling machine is used, it should be adjusted properly to achieve portioning accuracy and evacuation of air pockets from the product. Casings should be filled to the correct diameter.

Guidance

Under-filling and over-filling can affect the quality of the end product. Diameter size influences the rate of heating and drying.

- (3) Procedures for preventing the mixing of products from one batch to the next should be established and documented.
- (4) If metal clips are used for sealing casings or bags, procedures for preventing contamination from metal clips should be established and documented.

Part 7: Processing treatments

7.1 Scope

- (1) This Part discusses the processing requirements for specific types of manufactured petfood.
- (2) The contents of this Part have largely been based on the Australian Standard: Manufacturing and Marketing of Pet Food (Draft March 2017) and the [FEDIAF Guide to Good Practice for the Manufacture of Safe Pet Foods \(Revision 12 March 2010\)](#).

7.2 Canned petfood

- (1) Manufacturers producing thermally processed low-acid canned product must comply with the requirements of clause 14.10 of the [Animal Products Notice: Specifications for Products Intended for Human Consumption 2016](#) (reproduced below):

14.10 Thermal processing of low-acid canned products

(1) Operators who thermally process low-acid canned products (including aseptic processing and packaging operations) must do so in accordance with the principles of the code or codes in either of:

a) the current edition:

i) of the Code of Hygienic Practice for Low Acid and Acidified Low-Acid Canned Foods, as published by the Codex Alimentarius Commission: (CAC/RCP 23-1979); and

ii) for aseptic processing and packaging operations, of the Code of Hygienic Practice for Aseptically Processed and Packaged Low-Acid Foods, as published by the Codex Alimentarius Commission: (CAC/RCP 40-1993); or

b) the current edition of the United States Food and Drug Administration requirements for Thermally Processed Low-acid Foods Packaged in Hermetically Sealed Containers, as contained in 21 CFR Part 113, and Acidified Foods as contained in 21 CFR, Part 114, as appropriate.

- (2) Canned petfood should be subjected to a minimum heat treatment that delivers a lethality of $F_0 3$.

7.3 Heat treated refrigerated petfood

- (1) Heat treated refrigerated petfood, such as dog rolls, should be pasteurised (i.e. cooked) followed by quick cooling to 5°C or less.
- (2) Cooking facilities, such as steam or water cookers and ovens should be properly installed and set up so they provide uniform temperature distribution throughout the unit and equipped with a calibrated measuring device located at the 'cold spot' of the cooker.
- (3) Process control applied to heat treated petfood intended for refrigerated storage should include:
 - a) control of the size and weight of product dispensed into casings or primary packaging to ensure uniform cooking of products in each batch;
 - b) control and monitoring of heating conditions (e.g. time and temperature, loading configuration) to ensure that all products are exposed to the required pasteurisation temperature and time;
 - c) control of product transfer from filling to the heat treatment or from heat treatment to filling and cooling without delay and within a specified time; and
 - d) storage at 5°C or less.

7.4 Shelf-stable semi-moist petfood and treats

- (1) Semi-moist petfood, such as shelf-stable dog rolls and some types of soft jerky and treats, should be heated treated to a specified time-temperature, which in combination with the adjustment of pH or a_w by drying or addition of additives (e.g. preservatives, humectants), makes the product microbiologically safe and shelf-stable.
- (2) The a_w should be specified taking into account the heat treatment, use of mould inhibitors, pH adjustment and type of packaging. The a_w in combination with mould inhibitors, packaging and storage temperature should be low enough to prevent the growth of microorganisms during storage.

Guidance

Water activity (a_w) can be determined using a calibrated a_w meter. Manufacturers who do not have access to such equipment can measure moisture content, but it is necessary to establish its correlation to a_w for each product.

Selection of samples for testing is important in drying operations as there may be large variation throughout a batch or run. The manufacturer should have good knowledge of their process to ensure that the wettest samples are selected for testing.

- (3) Process control applied to semi-moist petfood and treats, should include:
 - a) control of the size and weight of product dispensed into casings or primary packaging to ensure uniform cooking of products in each batch;
 - b) control and monitoring of heating conditions (e.g. time and temperature, loading configuration) to ensure that all products are exposed to the required heating temperature and time and
 - c) control and monitoring of the use of additives, adjustment of pH, adjustment of a_w or other microbial control processes that are necessary to achieve the stated shelf-life.

7.5 Dried petfood (freeze-dried petfood, dried pet chews and treats)

- (1) The drying process and any additional controls (where used) should make the dried petfood microbiologically safe and shelf-stable.

Guidance

Dried meat products are preserved primarily by the reduction of a_w , however, additional controls are normally applied during their commercial production, which contribute to the effectiveness of the process to inactivate or inhibit micro-organisms. Examples of these additional controls are:

- the use of salt and/or anti-microbial agents;
- application of smoke; and
- heating of the meat before drying.

- (2) Dried pet chews and treats should be subjected to a heat treatment during processing sufficient to destroy pathogenic microorganisms including *Salmonella*. After treatment, every precaution should be taken to ensure that the product is not exposed to contamination.
- (3) Dried petfood should be dried to a moisture content or a_w that will inhibit the growth of microorganisms during storage.

Guidance

At $a_w \leq 0.85$, the growth of all bacterial pathogens of concern is controlled. The growth of moulds and yeast can be prevented during storage by drying to $a_w < 0.80$ and vacuum packing, or by drying and maintaining a_w at ≤ 0.65 .

- (4) Process control applied to dried petfood should include:

- a) control of product size and weight to ensure uniform drying;
- b) if heating is applied, control and monitoring of heating conditions (e.g. time and temperature, loading configuration) to ensure that all products are exposed to the required heating temperature and time;
- c) control of drying conditions (e.g. drying time and temperature, relative humidity, vacuum) to ensure that products are dried to a specified a_w and/or equivalent moisture content to produce a shelf-stable product; and
- d) product cooling before packing.

7.6 Dry petfood (extruded or baked)

- (1) Dry petfood, such as kibbles, for which the method of preservation is heating through an extrusion or baking process followed by drying should be heated for a specified time and internal temperature which in combination with drying, is sufficient to make the product microbiologically safe and shelf-stable.
- (2) Following extrusion or baking, products should be dried to an a_w low enough to inhibit the growth of microorganisms, including moulds. Dry petfood typically has a moisture content of < 10% or a_w of 0.25 to 0.50.
- (3) Process control applied to dry petfood should include:
 - a) control of product size and weight;
 - b) control of drying conditions (e.g. drying time and temperature, relative humidity, vacuum), to ensure that products are dried to a specified a_w and/or equivalent moisture content to produce a shelf-stable product; and
 - c) product cooling before packing.

Part 8: Packing and storage

8.1 Scope

- (1) This Part discusses the requirements and procedures for post-process handling, packing and storage of petfood.

8.2 Packing and labelling

- (1) The specifications, handling and storage of packaging materials must meet the requirements given in Part 13: Purchase, Handling and Storage of Raw Materials, Ingredients and Packing of [Chapter 2 Good Operating Practice of this Code](#).
- (2) Identification and labelling must meet the requirements given in Part 14: Identification and Labelling of Products of [Chapter 2 Good Operating Practice of this Code](#).

Guidance

The [NZPFMA](#) Labelling Guide gives the detailed information on how to meet the relevant labelling requirements, as well as providing best practice examples. Manufacturers should contact the Association directly for a copy of the guide.

- (3) Raw petfood should be packed in new packaging with effective seals to prevent leakage.
- (4) Packaging materials should be dispensed in a manner that protects the materials and the product from contamination.
- (5) Packaging machines should be set up correctly so that they produce effective seals where this is necessary for product safety. Packaging seal or closure integrity should be checked regularly. This may include visual or physical testing (e.g. complete seal, no cracking or wrinkling, maintenance of vacuum).
- (6) Transport outers of petfood must be labelled with the following information:
 - a) the contents are not intended for human consumption;
 - b) the name or description of the product;
 - c) storage directions where necessary to maintain the safety and suitability of the product
 - d) lot identification, where applicable; and
 - e) the name and address of the petfood manufacturer [AC Spec 4.5].
- (7) Refrigerated products must be transferred without delay to the chiller or freezer after packing.

8.3 Repacking

- (1) Finished products that do not meet packaging specifications (e.g. coding, labels) may be repacked without receiving any additional treatment provided that the products:
 - a) have not been dispatched;
 - b) are not past their shelf-life; and
 - c) are of acceptable quality and have been handled properly.
- (2) Repacking of product due to damaged packaging must be done in a manner that minimises contamination. Any product detrimentally affected as a result of the packaging damage must be considered as non-complying product.
- (3) The label of repacked products must indicate the original production code and the shelf-life given must be based on the original date of production of the product.

8.4 Storage

- (1) Chilled products should be maintained at $\leq 5^{\circ}\text{C}$ and frozen products at -12°C or cooler.
- (2) The chiller and freezer temperatures should be monitored regularly.
- (3) Chillers should not be loaded beyond their capacity.
- (4) Procedures should be in place for identifying and holding finished product awaiting test results for release.
- (5) A first-in-first-out or plant specific rotation inventory control system should be maintained for finished products.
- (6) Products with damaged packaging should be handled in a manner that will minimise:
 - a) the exposure or spillage of the product (e.g. products can be wrapped and sealed);
 - b) contamination or deterioration of the product; and
 - c) contamination of other products and the storage area.

8.5 Dispatch

- (1) Products should be released in accordance with the procedures discussed in Part 17: Dispatch of Petfood Materials and Products of [Chapter 2: Good Operating Practice of this Code](#).