

STANDARD 4.2.4

PRIMARY PRODUCTION AND PROCESSING STANDARD FOR DAIRY PRODUCTS

(Australia only)

Purpose and commentary

This Standard sets out a number of food safety requirements, including the implementation of documented food safety programs for dairy primary production, collection, transportation and processing. However, this Standard does not apply to retail sale activities. Chapter 3 of this Code covers retail sale activities.

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Clauses

Division 1 – Preliminary

1 Interpretation

(1) Unless the contrary intention appears, the definitions in Chapters 2 and 3 of this Code apply to this Standard.

(2) In this Standard –

Authority means the State, Territory or Commonwealth government agency or agencies having the legal authority to implement and enforce this Standard.

control measure means a measure that prevents, eliminates or reduces to an acceptable level, a food safety hazard.

dairy primary production means the production of milk or colostrum for further processing for human consumption and includes the keeping, grazing, feeding and milking of animals and the storage of milk on the premises at which the animals were milked.

dairy primary production business means a business, enterprise or activity that involves dairy primary production.

dairy processing includes the manufacture of dairy products.

dairy processing business means a business, enterprise or activity that involves dairy processing.

dairy products include –

- (a) milk; and
- (b) colostrum; and
- (c) liquid milk products; and
- (d) cream and thickened cream; and
- (e) butter, butter concentrate, buttermilk, concentrated buttermilk, dairy blend, ghee, and anhydrous milk fat (butter oil); and
- (f) casein, caseinate, and cheese; and
- (g) whey, whey cream and concentrated whey cream; and
- (h) cultured milk and yoghurt; and
- (i) ice-cream and ice-cream mix; and
- (j) buttermilk powder, lactose powder, milk sugar, powdered milk, skim milk powder, whey powder, milk protein powder and other milk concentrates.

dairy transport business means a business, enterprise or activity involving the collection and transport of milk from the dairy primary production business to the processing business or the transport of bulk milk or dairy products between dairy processors.

diseased animal means an animal that has signs of an infection.

documented alternative means a method that –

- (a) minimises the growth of pathogenic microorganisms in the milk to the same or greater extent as the method prescribed by this Standard; and
- (b) does not adversely affect the microbiological safety of any raw milk cheese produced from that milk; and
- (c) is documented in a food safety program required by this Standard; and
- (d) has been recognised or approved by the relevant authority.

infection means the entry, development or multiplication of a pathological microorganism that is capable of being transferred to humans through raw milk.

inputs includes any feed, water and chemicals, including agricultural and veterinary chemicals, used in connection with the primary production of milk or colostrum.

milk for raw milk cheese means raw milk that is used or is to be used to make a raw milk cheese.

raw milk means milk that has not been processed in accordance with subclause 16(1), subclause 16(2) or paragraph 16(3)(a) of this Standard.

raw milk herd means any group of animals from which milk for raw milk cheese is or will be sourced.

raw milk cheese means a cheese or cheese product made with raw milk.

2 Application

- (1) Deleted
- (2) This Standard does not apply in New Zealand.
- (3) This Standard does not apply to retail sale activities.

Division 2 – General dairy primary production requirements

3 Controlling food safety hazards

A dairy primary production business must control its potential food safety hazards by implementing a documented food safety program.

4 Specific requirements

- (1) For clause 3, the control measures must manage the hazards arising from –
 - (a) inputs; and
 - (b) the design, construction, maintenance and operation of premises and equipment; and
 - (c) milking animals; and
 - (d) persons involved in milking; and
 - (e) milking practices.
- (2) For clause 3, the control measures must also –
 - (a) include support programs that ensure that premises and equipment are clean and sanitary and that pests are controlled; and
 - (b) ensure that milk is cooled and stored at a temperature that prevents or reduces the growth of microbiological hazards in the milk; and
 - (c) ensure that milk for human consumption is only sourced from healthy animals.

5 Tracing

As part of the documented food safety program in clause 3, a dairy primary production business must have a system that enables the tracing of –

- (a) inputs; and
- (b) animals to be milked; and
- (c) the milk produced.

6 Skills and knowledge

A dairy primary production business must ensure that persons undertaking primary production activities have skills and knowledge of food safety and hygiene matters commensurate with their work activities.

Division 3 – General dairy collection and transportation

7 Controlling food safety hazards

A dairy transport business must control its potential food safety hazards by implementing a documented food safety program.

8 Specific requirements

For clause 7, the control measures must manage hazards arising from –

- (a) transport vehicles, equipment and containers used in the collection and transport of the milk or dairy product; and
- (b) persons engaged in the dairy transport business;

and must include a support program that ensures that the food contact surfaces of transport vehicles, and equipment and containers used in collecting and transporting of the dairy products are clean and sanitary.

9 Product tracing

As part of the documented food safety program in clause 7, a dairy transport business must have a system to identify the immediate supplier and immediate recipient of the dairy product.

10 Time and temperature controls

A dairy transport business must transport dairy products using time and temperature controls that prevent or reduce the growth of microbiological hazards in the product.

11 Skills and knowledge

A dairy transport business must ensure that persons undertaking milk or dairy product collection and transport activities have skills and knowledge of food safety and hygiene matters commensurate with their work activities.

Division 4 – General dairy processing

12 Application

- (1) To avoid doubt, Standards 3.2.2 and 3.2.3 apply to the processing of dairy products.
- (2) Clauses 15 and 16 of this Standard do not apply to milk for raw milk cheese.

13 Controlling food safety hazards

A dairy processing business must control its potential food safety hazards by implementing a documented food safety program.

14 Product tracing

As part of the documented food safety program in clause 13, a dairy processing business must have a system to identify the immediate supplier of dairy products and ingredients and the immediate recipient of the dairy products.

15 Processing of milk and dairy products

- (1) Milk must be pasteurised by –
- (a) heating to a temperature of no less than 72°C and retaining at such temperature for no less than 15 seconds; or
 - (b) heating, using any other time and temperature combination of equivalent or greater lethal effect on any pathogenic microorganisms in the milk; or
 - (c) using any other process that provides an equivalent or greater lethal effect on any pathogenic microorganisms;

unless an applicable law of a State or Territory otherwise expressly provides.

Editorial note:

For paragraph 15(1)(c), any other process used would need to be validated by the business and verified by the Authority.

- (2) Milk processed under paragraph 15(1)(a) must be cooled immediately in a way that ensures that the growth of microbiological hazards in the milk is prevented or reduced.
- (3) Dairy products, other than cheese and cheese products, must be processed using –
- (a) a heat treatment that uses a combination of time and temperature of equal or greater lethal effect on any pathogenic microorganisms in the milk product achieved by paragraphs 15(1)(a) or 15(1)(b); or
 - (b) using any other process that provides an equivalent or greater lethal effect on any pathogenic microorganisms.

Editorial note:

For paragraph 15(3)(b), any other process used would need to be validated by the business and verified by the Authority.

- (4) Dairy products processed under paragraph 15(3)(a) must be cooled immediately in a way that ensures that the growth of microbiological hazards in the product is prevented or reduced.
- (5) To avoid doubt, subclause 15(3) does not apply to the processing of dairy products that have been made using milk already processed in accordance with subclause 15(1).

Editorial note:

Dairy products may have a greater fat or solids content compared to milk and therefore require a greater time and temperature treatment to achieve an equivalent level of bacterial reduction. Information on equivalent heat treatments to pasteurisation for these products is provided in the 'Interpretive Guide' to this Standard.

16 Processing of dairy products to make cheese and cheese products

- (1) Milk used to make cheese or cheese products must be processed –
- (a) in accordance with subclause 15(1); or
 - (b) by being held at a temperature of no less than 64.5°C for a period of no less than 16 seconds, and the cheese or cheese product stored at a temperature of no less than 7°C for a period of no less than 90 days from the date of processing.
- (2) Dairy products used to make cheese or cheese products must be processed –
- (a) in accordance with subclause 15(3); or
 - (b) using a heat treatment that uses a combination of time and temperature of equal or greater lethal effect on any pathogenic micro-organisms in the dairy product achieved by paragraph 16(1)(b).
- (3) However, milk or dairy products used to make cheese or cheese products do not need to be processed in accordance with subclauses 16(1) and 16(2) –
- (a) if the cheese or cheese product is processed such that –
 - (i) the curd is heated to a temperature of no less than 48°C; and
 - (ii) the cheese or cheese product has a moisture content of less than 39%, after being stored at a temperature of no less than 10°C for a period of no less than 120 days from the date of processing; or
 - (b) the milk is produced, transported and processed in accordance with Division 5 if used to make raw milk cheese.

Division 5 – Additional requirements for raw milk cheese

Subdivision 1 – General

17 Application of Divisions 1 to 4

To avoid doubt, unless the contrary intention appears, the requirements imposed by Divisions 1 to 4 of this Standard apply to the production, transport and processing of milk for raw milk cheese and to raw milk cheese.

Subdivision 2 – Primary production of milk for raw milk cheese

18 Application

A dairy primary production business that produces milk for raw milk cheese must ensure that each requirement of this subdivision is met.

19 Requirement for additional and specific control measures

The documented food safety program required by clause 3 must include control measures that ensure that the requirements of this subdivision are met.

20 Animal health requirements

- (1) Milk for raw milk cheese must not be obtained from a diseased animal.
- (2) A diseased animal must not be introduced into a raw milk herd.
- (3) A diseased animal in a raw milk herd must be –
- (a) separated immediately from the herd; and

- (b) kept separate from any other animal that will be milked for milk for raw milk cheese.

21 Requirements for animal identification and tracing

Each animal that will be or has been milked for milk for raw milk cheese must be subject to a stock identification system that ensures that the animal is uniquely identifiable and traceable.

22 Requirement to control specific inputs

- (1) Silage must not be fed to animals milked for milk for raw milk cheese.
- (2) Subclause (1) does not apply if the dairy primary production business uses a documented alternative to feed animals milked for raw milk.
- (3) Only potable water must be used –
 - (a) on equipment that comes into contact with milk for raw milk cheese;
 - (b) to clean the teats of animals; and
 - (c) for washing by persons milking animals.

23 Health and hygiene requirements

The production of milk for raw milk cheese must comply with the requirements of Division 4 of Standard 3.2.2.

24 Requirement for milking practices

The teats of an animal milked for milk for raw milk cheese must be clean and dry before the animal is milked.

25 Requirements for cooling and storage

- (1) Milk for raw milk cheese must be cooled to a maximum temperature of 6°C within two hours of milking.
- (2) Subclause (1) does not apply if the dairy primary production business uses a documented alternative to the method prescribed by that subclause.
- (3) Milk for raw milk cheese that is stored must be kept at a temperature not exceeding 5°C while in storage.
- (4) Milk for raw milk cheese must be kept separate from milk used or intended to be used for dairy products that are not a raw milk cheese.

26 Requirements relating to non-conforming milk

Milk must not be supplied for raw milk cheese if the milk was produced other than in accordance with this Division or is otherwise unacceptable.

Subdivision 3 – Transport of milk for raw milk cheese

27 Application

A dairy transport business that collects and transports milk for raw milk cheese must ensure that each requirement of this subdivision is met.

28 Requirement for additional and specific control measures

The documented food safety program required by clause 7 must include control measures that ensure the requirements of this subdivision are met.

29 Requirements for temperature control

(1) The temperature of milk for raw milk cheese must not exceed 8°C at any point between the collection of that raw milk from the dairy primary production business that produced it and the delivery of that raw milk to a dairy processing business for processing.

(2) Subclause (1) does not apply if the dairy transport business uses a documented alternative to the method prescribed by that subclause.

30 Handling requirements

Milk for raw milk cheese must be kept separate from milk used or intended to be used for dairy products that are not a raw milk cheese.

Subdivision 4 – Processing of milk for raw milk cheese

31 Application

A dairy processing business that processes milk for raw milk cheese must ensure that each requirement of this subdivision is met.

32 Requirement for additional and specific control measures

The documented food safety program required by clause 13 must include control measures that –

- (a) ensure that the requirements of this subdivision are met; and
- (b) address each of the following in relation to processing –
 - (i) starter culture activity;
 - (ii) pH reduction;
 - (iii) salt concentration and moisture content;
 - (iv) storage time; and
 - (v) storage temperature.

33 Requirements relating to milk receipt and storage

(1) The temperature of milk for raw milk cheese must not exceed 8°C at any point between its collection by a dairy processing business and the commencement of processing of that milk.

(2) Subclause (1) does not apply if the dairy processing business uses a documented alternative to the method prescribed by that subclause.

(3) Raw milk cheese must not be made from milk that was milked more than 24 hours before processing of that milk commenced.

(4) Subclause (3) does not apply if the dairy processing business uses a documented alternative to the method prescribed by that subclause.

(5) Milk for raw milk cheese must be kept separate from milk used or intended to be used for dairy products that are not a raw milk cheese.

34 Requirements to control specific food safety hazards

(1) Prior to the commencement of its processing, milk for raw milk cheese must be monitored to ensure its suitability.

(2) The level of pathogenic microorganisms in a raw milk cheese must not exceed the level of pathogenic microorganisms in the milk from which the product was made as at the commencement of the processing of that milk.

(3) A raw milk cheese must not support the growth of pathogenic microorganisms.

35 Requirements relating to non-conforming milk

A dairy processing business must only use milk for raw milk cheese that has been produced and transported in accordance with this Division to make a raw milk cheese.

Amendment History

The Amendment History provides information about each amendment to the Standard. The information includes commencement or cessation information for relevant amendments.

These amendments are made under section 92 of the *Food Standards Australia New Zealand Act 1991* unless otherwise indicated. Amendments do not have a specific date for cessation unless indicated as such.

About this compilation

This is compilation No. 7 of Standard 4.2.4 as in force on **3 June 2021** (up to Amendment No. 200). It includes any commenced amendment affecting the compilation to that date.

Prepared by Food Standards Australia New Zealand on **3 June 2021**.

Uncommenced amendments or provisions ceasing to have effect

To assist stakeholders, the effect of any uncommenced amendments or provisions which will cease to have effect, may be reflected in the Standard as shaded boxed text with the relevant commencement or cessation date. These amendments will be reflected in a compilation registered on the Federal Register of Legislative Instruments including or omitting those amendments and provided in the Amendment History once the date is passed.

The following abbreviations may be used in the table below:

ad = added or inserted	am = amended
exp = expired or ceased to have effect	rep = repealed
rs = repealed and substituted	

Standard 4.2.4 was published in the Food Standards Gazette No. FSC30 on 5 October 2006 (F2012L00294) and has been amended as follows:

Clause affected	A'ment No.	FRLI registration Gazette	Commencement (Cessation)	How affected	Description of amendment
Standard	124	F2011L01450 8 July 2011 FSC66 11 July 2011	11 July 2011	am	Spelling of 'micro-organism' to 'microorganism' wherever occurring.
Table of Provs	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	am	To reflect amendments to existing division headings and addition of new divisions, subdivisions and clauses.
1(2)	103	F2008L03741 9 Oct 2008 FSC45 9 Oct 2008	9 Oct 2008	am	Correction of typographical error in paragraph (e).
1(2)	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	Definitions of 'diseased animal', 'documented alternative', 'infection', 'milk for raw milk cheese', 'raw milk', 'raw milk herd' and 'raw milk cheese'.
2(1)	103	F2008L03741 9 Oct 2008 FSC45 9 Oct 2008	9 Oct 2008	rep	Subclause.

Clause affected	A'ment No.	FRLI registration Gazette	Commencement (Cessation)	How affected	Description of amendment
Div 2	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	rs	Division heading.
Div 3	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	rs	Division heading.
Div 4	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	rs	Division heading.
12	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	rs	Repeal of clause and insertion of two new subclauses.
15(3)	101	F2008L03058 14 Aug 2008 FSC43 14 Aug 2008	14 Aug 2008	am	Editorial note after the subclause.
15(5)	124	F2011L01450 8 July 2011 FSC66 11 July 2011	11 July 2011	am	References to 'and/or' in Editorial note after the subclause.
16	132	F2012L01339 26 June 2012 FSC74 28 June 2012	28 June 2012	rs	Clause.
16(3)	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	am	Consequential amendment to paragraph (b) to reflect repeal of Standard 4.2.4A.
16(3)	168	F2017L00414 11 April 2017 FSC110 13 April 2017	13 April 2017	rs	Subclause to clarify provision.
Div 5	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New division heading and four subdivisions relating to raw milk cheese.
17	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
18	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
19	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
20	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.

Clause affected	A'ment No.	FRLI registration Gazette	Commencement (Cessation)	How affected	Description of amendment
21	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
21	168	F2017L00414 11 April 2017 FSC110 13 April 2017	13 April 2017	am	Correction of typographical error.
22	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
23	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
24	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
25	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
26	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
27	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
28	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
29	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
30	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
31	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
32	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.

Clause affected	A'ment No.	FRLI registration Gazette	Commencement (Cessation)	How affected	Description of amendment
33	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
34	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
35	153	F2015L00198 24 Feb 2015 FSC95 26 Feb 2015	26 Feb 2015	ad	New clause relating to raw milk cheese.
15(1)	200	F2021L00684 2 June 2021 FSC141 3 June 2021	3 June 2021	am	Edited Editorial note