

Title	Describe cream products processing in a dairy processing operation		
Level	3	Credits	5

Purpose	People credited with this unit standard are able to describe: the characteristics of milk fat and the basic principles of cream handling practices; the basic principles and major stages of the buttermaking process and product testing of butter; the major stages of the direct from cream anhydrous milkfat manufacturing process and product testing; and sensory evaluation of cream products, in a dairy processing operation.
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Classification	Dairy Processing > Milk Products
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Available grade	Achieved
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Guidance Information

Legislation and regulations relevant to this unit standard include but are not limited to:

- Animal Products Act 1999;
- Health and Safety at Work Act 2015;
- Animal Products (Dairy) Regulations 2005; and any subsequent amendments.

Outcomes and performance criteria

Outcome 1

Describe the characteristics of milk fat and the basic principles of cream handling practices in a dairy processing operation.

Performance criteria

1.1 Describe characteristics of milk fat in terms of the structure and properties of the major components.

Range characteristics include but are not limited to – triglycerides, saturated and unsaturated fatty acids, melting points, phospholipids.

1.2 Describe basic principles of cream handling practices in terms of the prevention of damage to cream components.

Range damage includes but is not limited to – flavour, lipolysis, gelling, fat losses during cream processing.

Outcome 2

Describe the basic principles and major stages of the buttermaking process and product testing of butter in a dairy processing operation.

Performance criteria

2.1 Describe the basic principles of whole milk separation and cream treatment in terms of their role and importance in ensuring high quality cream for buttermaking.

Range principles include but are not limited to – whole milk holding, whole milk separation, cream treatment, crystallisation.

2.2 Describe major stages of the buttermaking process in terms of their role and importance in achieving high quality butter.

Range stages may include but are not limited to – churning, buttermilk separation, working, butter pumping, blending, scraped surface cooling, holding, packing; evidence of five stages is required.

2.3 Describe product tests conducted on butter in terms of their purpose and typical specification limits.

Range product tests include but are not limited to – moisture, salt, curd, sediment, fat, microbiological.

Outcome 3

Describe the major stages of the direct from cream anhydrous milkfat manufacturing process and product testing in a dairy processing operation.

Performance criteria

3.1 Describe the major stages of the anhydrous milkfat manufacturing process in terms of their role and importance in achieving high quality anhydrous milkfat.

Range stages may include but are not limited to – concentration, phase inversion, oil separation, neutralisation, vacreation, dehydration, pumping, storage, packing; evidence of five stages is required.

3.2 Describe product tests conducted on anhydrous milkfat in terms of their purpose and typical specification limits.

Range product tests may include but are not limited to – moisture, fat, free fatty acid, peroxide value, alkalinity, dissolved oxygen, headspace oxygen, flavour, clarity; evidence of five product tests is required.

Outcome 4

Describe sensory evaluation of cream products in a dairy processing operation.

Performance criteria

4.1 Describe sensory evaluation of cream products in terms of the senses involved in sensory evaluation and the sensory characteristics of butter and anhydrous milkfat.

Range characteristics include but are not limited to – flavour, body, texture, colour.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 June 1995	31 December 2014
Review	2	5 July 1999	31 December 2014
Review	3	26 August 2002	31 December 2014
Revision	4	13 June 2003	31 December 2014
Rollover	5	17 July 2009	31 December 2016
Review	6	18 June 2015	31 December 2024
Review	7	25 March 2021	N/A
Revision	8	26 January 2023	N/A

Consent and Moderation Requirements (CMR) reference	0022
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.