

<b>Title</b>	<b>Carry out a buttermaking process in a dairy processing operation</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to: describe the buttermaking process; prepare buttermaking equipment for operation; and operate and monitor buttermaking equipment, in a dairy processing operation.
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<b>Classification</b>	Dairy Processing > Milk Products
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 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.
  
- 2 All evidence presented in this unit standard must be in accordance with:
  - organisational requirements.
  
- 3 Definitions
 

*Control points* – those key points in a work process which must be monitored and controlled. This includes food safety (critical) quality and regulatory control points as well as inspection points.

*Buttermaking* – refers to a Fritz continuous or Ammix buttermaking process.

*Buttermaking equipment* – refers to butter churn, augers, separator, salter, and vacuum systems, tanks, plate heat exchangers, scraped surface heat exchangers, pinworkers, high pressure pumps, presses, cream treatment units.

*Materials* – refer to pasteurised cream and salt, fresh milkfat, milkfat fractions.

*Organisational requirements* – instructions to staff on policies and procedures which are documented in memo, electronic or manual format and are available in the workplace. These requirements include but are not limited to – site specific requirements, and company quality management requirements.
  
- 4 This unit standard must be assessed in a workplace environment. The candidate must be under realistic time pressures and use relevant commercial equipment.

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## Outcomes and performance criteria

### Outcome 1

Describe the buttermaking process in a dairy processing operation.

#### Performance criteria

- 1.1 Describe the buttermaking process in terms of basic principles.
- 1.2 Describe cleaning and sanitation requirements and procedures for a buttermaking process.
- 1.3 Describe the functions and basic operating principles of components of buttermaking equipment.  
  
Range evidence of three components is required.
- 1.4 Describe how the quality, composition and physical characteristics of raw materials affect the buttermaking process in terms of process outcomes.
- 1.5 Describe the main buttermaking controls and quality control points in terms of their effect on the quality of the product.  
  
Range controls and quality control points may include but are not limited to – procedures, operating parameters, equipment and instrumentation components, materials and services; evidence of three controls is required.  
effects may include but are not limited to – physical quality, functional quality, microbiological quality, consistency of quality; evidence of three effects is required.
- 1.6 Describe a critical control point in terms of key operating parameters, monitoring and operational checks.

### Outcome 2

Prepare buttermaking equipment for operation in a dairy processing operation.

#### Performance criteria

- 2.1 Identify production requirements for buttermaking.
- 2.2 Confirm materials and services necessary to the buttermaking process are available to meet production requirements.
- 2.3 Check buttermaking equipment in terms of status, condition and readiness for use.

**Outcome 3**

Operate and monitor buttermaking equipment in a dairy processing operation.

**Performance criteria**

3.1 Start up buttermaking equipment.

3.2 Monitor buttermaking equipment, product and control points to confirm that they meet production requirements.

Range monitoring may include but is not limited to – monitoring control points and parameters, adjusting operating parameters, plant checks, identifying sampling and testing requirements, taking samples, handling samples, dispatch of samples, conducting tests; evidence of three monitoring examples is required.

3.3 Identify, rectify and/or report any out-of-specification product, process and equipment performance.

3.4 Clean and sanitise buttermaking equipment.

3.5 Collect, treat and dispose of or store waste for recycling.

3.6 Record workplace information related to operating and monitoring buttermaking equipment.

3.7 Shut down buttermaking equipment.

Range shutdown includes but is not limited to – putting plant on standby, routine, emergency situation.

<b>Planned review date</b>	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	30 June 2003	31 December 2013
Rollover and Revision	2	25 September 2006	31 December 2014
Rollover	3	17 July 2009	31 December 2016
Review	4	18 June 2015	31 December 2024
Review	5	16 March 2017	31 December 2024
Review	6	27 May 2021	N/A
Revision	7	26 January 2023	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0033
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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### Comments on this unit standard

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