

<b>Title</b>	<b>Describe the risks, testing and control of microorganisms in a dairy processing operation</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are able to describe: the risks posed by the main types of microorganisms; types and routine sampling of microorganisms; and the microbiological controls used for the prevention of product contamination, in a dairy processing operation.
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<b>Classification</b>	Dairy Processing > Milk Processing
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<b>Available grade</b>	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.

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### Outcomes and performance criteria

#### Outcome 1

Describe the risks posed by the main types of microorganisms to a dairy processing operation.

#### Performance criteria

- 1.1 Describe bacteria in terms of the risks they pose to a dairy processing operation.
- 1.2 Describe yeasts in terms of the risks they pose to a dairy processing operation.
- 1.3 Describe moulds in terms of the risks they pose to a dairy processing operation.

#### Outcome 2

Describe types and routine sampling of microorganisms in a dairy processing operation.

**Performance criteria**

2.1 Describe microorganisms in terms of impact on a dairy processing operation.

Range microorganisms may include but are not limited to – coliforms, staphylococcus, listeria, bacteriophage, yeast, mould, cronobacter sakazakii, escherichia coli, salmonella; evidence of three microorganisms is required.

2.2 Describe routine sampling techniques for microorganisms in terms of their general purposes.

Range routine sampling techniques may include but are not limited to – swabs, exposure plates, in-process samples, final product samples; evidence of two sampling techniques is required.

**Outcome 3**

Describe the microbiological controls used for the prevention of product contamination in a dairy processing operation.

**Performance criteria**

3.1 Describe microbiological control in terms of pre-requisites for hygiene and product safety.

Range pre-requisites may include but are not limited to – personal hygiene, factory and plant hygiene, raw material control, building and plant design, environmental control, water quality, pasteurisation; evidence for five pre-requisites is required.

3.2 Describe microbiological control in terms of sampling points for monitoring and controlling the micro flora of a dairy product.

3.3 Describe consequences of failure to follow microbiological controls and procedures in terms of organisational requirements.

<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	18 June 2015	31 December 2024
Review	2	25 March 2021	N/A
Revision	3	26 January 2023	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0022
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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.