

Title	Demonstrate knowledge of and monitor instrumentation in a dairy processing operation		
Level	3	Credits	10

Purpose	People credited with this unit standard are able to: identify metric units of measurement and convert to units of measurement; describe the purpose of instrumentation and calibration procedures used; and, monitor instrumentation to determine the operational effectiveness, in a dairy processing system.
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Classification	Dairy Processing > Dairy Processing - Core Skills
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Available grade	Achieved
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Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015.
- 2 Definitions

Metric units of measurement refers to the metre-kilogram-second (mks) branch of the International System of Units (SI).

Organisational requirements refer to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – site specific requirements, manufacturer’s specifications, product quality specifications, and legislative requirements.
- 3 For the purposes of assessment:
 - evidence for the practical components of this unit standard must be supplied from the workplace.
 - evidence for all outcomes must be presented in accordance with organisational requirements.

Outcomes and performance criteria

Outcome 1

Identify metric units of measurement and convert to units of measurement used in a dairy processing operation.

Performance criteria

1.1 Identify metric prefixes in terms of prefix, symbol, and decimal or scientific notation.

Range metric prefixes include but are not limited to – nano, micro, milli, centi, kilo, mega, giga.

1.2 Identify units of measurement in terms of the International System of Units (SI) and relationships between base and derived units.

Range units include but are not limited to – time, length, mass, area, volume, density, force, pressure.

1.3 Convert units of measurement in terms of a dairy processing operation.

Range units include but are not limited to – cubic metres, litres, kilograms.

Outcome 2

Describe the purpose of instrumentation and calibration procedures used in a dairy processing operation.

Performance criteria

2.1 Describe the purpose of instrumentation types used to monitor control limits in relation to operating parameters.

Range instrumentation may include but are not limited to – flow meter, pH probes, thermometer, level instruments, pressure gauge, scales; evidence of four types of instrumentation is required.

2.2 Describe calibration procedures for dairy processing instrumentation in terms of complying to operating parameters.

Range evidence of four types of calibration requirements is required.

Outcome 3

Monitor instrumentation to determine the operational effectiveness in a dairy processing operation.

Performance criteria

3.1 Identify upper and lower control limits for instrumentation in relation to operating parameters.

Range control limits may include but are not limited to pressure, flow, temperature, mass, level, pH; evidence of four control limits is required.

3.2 Monitor instrumentation trends to ensure a dairy processing operation functions within its control limits.

Range instrumentation may include but are not limited to flow meter, pH probes, thermometer, level instruments, pressure gauge, scales; evidence of four types of instrumentation is required.

3.3 Apply safe work practices when monitoring a dairy processing operation in accordance with organisational requirements.

3.4 Report and record data in accordance with organisational requirements.

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	10 December 2020	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 Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.