

Title	Carry out an ethanol process in a dairy processing operation		
Level	4	Credits	5

Purpose	People credited with unit standard can: prepare ethanol processing equipment for operation; and operate and monitor an ethanol process, 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

- 1 Legislation and regulations relevant to this unit standard include but are not limited to:
 - Health and Safety at Work Act 2015;
 - Animal Products Act 1999;
 - 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 Reference
 Land Transport Rule: Dangerous Goods 2005 available at www.nzta.govt.nz.
 NZS 5433:1:2020, *Transport of dangerous goods on land* available at www.standards.co.nz.
- 4 Definitions
Control points – 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.
Ethanol processing equipment – refers to silos, pipe work, pumps, heating and cooling plant, monitoring and control equipment.
Materials – refers to crude dairy products such as whey.
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, manufacturer’s specifications and legislative requirements.
Processes – refers to a batch or continuous process and applies to single or multiple product specifications or types.
- 5 This unit standard must be assessed in a realistic workplace environment. The candidate must be under realistic time pressures and use relevant commercial equipment.

Outcomes and performance criteria

Outcome 1

Prepare ethanol processing equipment for operation in a dairy processing operation.

Performance criteria

- 1.1 Identify production requirements for operating the ethanol process.
- 1.2 Confirm materials and services necessary to the ethanol process are available to meet production requirements.
- 1.3 Check ethanol processing equipment to confirm status, condition and readiness for use.

Outcome 2

Operate and monitor an ethanol process in a dairy processing operation.

Performance criteria

- 2.1 Start up an ethanol process.
- 2.2 Monitor ethanol processing 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, dispatching samples, conducting tests;
evidence of three monitoring examples is required.

- 2.3 Identify, rectify and/or report any out-of-specification product and/or process outcomes to maintain the process within specification.
- 2.4 Clean and sanitise ethanol processing equipment.
- 2.5 Monitor and dispose of waste.
- 2.6 Record workplace information related to ethanol processing.
- 2.7 Shut down an ethanol process.

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

Replacement information	This unit standard replaced unit standard 17618 and unit standard 23830.
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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	18 June 2015	31 December 2024
Review	2	27 May 2021	N/A
Revision	3	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.