

Title	Describe biological wastewater treatment systems in a primary products food processing operation		
Level	4	Credits	10

Purpose	People credited with this unit standard are able to describe: biological mechanisms used for treatment of wastewater; principles of design and operation and operating problems of biological systems used for treatment of wastewater; and biological waste treatment sludge handling and disposal methods, used in a primary products food processing operation.
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Classification	Primary Products Food Processing > Primary Products Food Processing - Operational Skills
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Available grade	Achieved
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Guidance Information

- 1 Legislation and references relevant to this unit standard includes but is not limited to:
 - Hazardous Substances and New Organisms Act 1996;
 - Health and Safety at Work Act 2015;
 - Health and Safety in Employment Regulations 1995;
 - Resource Management Act 1991;
 - and any subsequent amendments.

- 2 Definitions

Organisational requirements – instructions to staff on policies and procedures which are documented in memo, electronic or manual format and are available in the workplace.

Primary products food processing operation – covers a meat, dairy, seafood, fruit and vegetable and honey processing, food and beverage manufacturing, and other related industries.

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

Outcomes and performance criteria

Outcome 1

Describe biological mechanisms used for treatment of wastewater in a primary products food processing operation.

Performance criteria

- 1.1 Describe biological treatment processes in terms of mechanisms and application.
- 1.2 Describe growth requirements for sludge microorganisms in terms of a means to ensure optimal growth of desirable micro-organisms.

Outcome 2

Describe principles of design and operation and operating problems of biological systems used for treatment of wastewater in a primary products food processing operation.

Performance criteria

- 2.1 Describe reasons for selection and configuration of systems in terms of wastewater characteristics, nutrient removal and discharge requirements.
- 2.2 Describe operating variables in terms of their level of influence for optimal operation.
- 2.3 Describe operating problems in terms of causes and remedies.

Outcome 3

Describe biological waste treatment sludge handling and disposal methods used in a primary products food processing operation.

Performance criteria

- 3.1 Describe characteristics of biological waste treatment sludge in terms of handling and disposal methods.
- 3.2 Describe methods used for sludge concentration in terms of their principles of operation and application.
- 3.3 Describe methods used for sludge disposal in terms of their principles of operation and application.

Replacement information	This unit standard replaced unit standard 19327.
Planned review date	31 December 2026

Last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 September 2015	31 December 2024
Review	2	24 March 2022	N/A

Consent and Moderation Requirements (CMR) reference

0033

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact 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.