

Title	Explain cultivation of microorganisms in bioreactor systems		
Level	6	Credits	4

Purpose	People credited with this unit standard are able to explain cultivation of microorganisms in bioreactor systems.
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Classification	Science > Microbiology
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Available grade	Achieved
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Guidance Information

None.

Outcomes and performance criteria**Outcome 1**

Explain cultivation of microorganisms in bioreactor systems.

Performance criteria

- 1.1 The design features of bioreactor systems are explained in relation to culturing microorganisms.
- Range systems include – open, closed.
- 1.2 The management of bioreactors is explained in terms of the microorganism's nutrient supply in the system.
- Range batch, continuous.
- 1.3 Factors influencing the culturing of microorganisms in bioreactors are explained in relation to management of resources.
- Range temperature, gas exchange, pH, agitation, sterility.
- 1.4 Desired product from substrate in bioreactors is explained in terms of separation techniques.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 May 2010	31 December 2025
Rollover	2	27 January 2015	31 December 2025
Review	3	27 September 2018	31 December 2025
Review	4	30 November 2023	31 December 2025

Consent and Moderation Requirements (CMR) reference

0113

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