

Title	Carry out microbiological tests in a laboratory in a primary products food processing operation		
Level	4	Credits	10

Purpose	<p>This unit standard is for experienced people who work in a laboratory, in a primary products food processing operation.</p> <p>People credited with this unit standard are able to demonstrate knowledge of: microbiological testing of food products; prepare samples for microbiological testing of food products; perform microbiological tests on food products; and interpret and report results of microbiological tests on food products, in a primary products food processing operation.</p>
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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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Explanatory notes

- 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 in Employment Act 1992, Health and Safety in Employment Regulations 1995, Resource Management Act 1991, ISO/IEC 17025:2005/Cor1:2006 *General requirements for the competence of testing and calibration laboratories*, NZS/ISO 15189:2003 *Medical Laboratories – Particular requirements for quality and competence*, available at <http://www.standards.co.nz>.
 - 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 processing, dairy processing, seafood or baking yeasts manufacturing operation.
 - 3 *Microbiological tests* may include but are not limited to – starter cultures, culture maintenance, microbiological counts, special microbiological counts, validation of materials, preparing samples; evidence is required of four different microbiological tests.
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Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of microbiological testing of food products in a primary products food processing operation.

Evidence requirements

1.1 The principle of the test is explained in terms of technology, reactions and processes involved.

1.2 Critical stages of the test are described in terms of their function.

Range critical stages may include but are not limited to – media preparation, sample preparation, test preparation, testing, incubation, sub-culturing, reading and data input, confirmation; evidence is required of four critical stages.

1.3 Variables of the test are described in terms of the process of eliminating variables.

Range evidence is required of three different variables.

1.4 Quality assurance of the test is explained in terms of organisational requirements.

Range quality assurance includes but is not limited to – controls, blanks, repeatability, reproducibility, duplicates, decimal dilutions.

Outcome 2

Prepare samples for microbiological testing of food products in a primary products food processing operation.

Evidence requirements

2.1 Procedure for sample preparation is selected in accordance with organisational requirements.

2.2 Quantities of product are calculated and measured in accordance with organisational requirements.

2.3 Sample is taken in accordance with organisational requirements.

2.4 Sample is prepared in a safe and aseptic manner.

2.5 Equipment is cleaned and stored and samples and waste disposed of in accordance with organisational requirements.

Outcome 3

Perform microbiological tests on food products in a primary products food processing operation.

Evidence requirements

- 3.1 Samples and equipment are prepared in accordance with manufacturer's specifications and organisational requirements.
- 3.2 Tests are performed in accordance with organisational requirements.
- 3.3 Tests are performed in a safe and aseptic manner.
- 3.4 Test results are confirmed in accordance with organisational requirements.
- 3.5 Test equipment is cleaned and stored and samples and waste disposed of in accordance with organisational requirements.

Outcome 4

Interpret and report results of microbiological tests on food products in a primary products food processing operation.

Evidence requirements

- 4.1 Results are interpreted and reported in accordance organisational requirements.
- 4.2 Any non-conformance is identified and corrective action taken in accordance with organisational requirements.

Replacement information	This unit standard replaced unit standard 21995, unit standard 21996 and unit standard 21997.
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Planned review date	31 December 2020
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Last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 September 2015	N/A

Consent and Moderation Requirements (CMR) reference	0033
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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.