

Title	Carry out detection testing 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: detection testing performed on food products; environmental tests for micro-organisms; identify bacterial species in food products; carry out sampling and identification of micro-organisms; and interpret and report results of tests, 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 Evidence is required of one common and one special detection test.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of detection testing performed on 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 include but are not limited to – media preparation, sample preparation, test preparation, testing, sub-culturing, reading and data input, confirmation.

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

Range variables include but are not limited to – equipment, apparatus, reagents, sample, technique, contamination, and environment.

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.

Outcome 2

Demonstrate knowledge of environmental tests for micro-organisms in a primary products food processing operation.

Evidence requirements

2.1 The range of micro-organisms found in the air and water are identified and described in terms of their origins and mechanisms of dispersion.

2.2 The methods of sampling for micro-organisms found in the air and water are explained in terms of organisational requirements.

2.3 Variables of the methods are explained in terms of the process of eliminating variables.

Range variables include but are not limited to – equipment, technique, contamination, and environment.

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

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

Outcome 3

Identify bacterial species in 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 conducted in accordance with organisational requirements.
- 3.3 Species of bacteria are identified and recorded in accordance with organisational requirements.
- 3.4 Identification of organisms is confirmed using test appropriate to prediction.
- 3.5 Testing is performed in a safe and aseptic manner.
- 3.6 Test equipment is cleaned and stored and samples and waste disposed of in accordance with organisational requirements.

Outcome 4

Carry out sampling and identification of micro-organisms in food products in a primary products food processing operation.

Evidence requirements

- 4.1 Sampling plan is devised in accordance with organisational requirements.
- 4.2 Representative sample is collected in accordance with the sampling plan.
- 4.3 Identification of bacteria is carried out in accordance with organisational requirements.

Outcome 5

Interpret and report test results in a primary products food processing operation.

Evidence requirements

- 5.1 Results are calculated, interpreted and reported in accordance with organisational requirements.
- 5.3 Any non-conformance is identified and corrective action taken in accordance with organisational requirements.

Replacement information	This unit standard replaced unit standard 21991, unit standard 21993 and unit standard 21998.
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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.