

Title	Perform laboratory analyses 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: the principles of laboratory analyses performed on food products; the principles of operation for an infrared instrument; use an infrared instrument to carry out an analysis on food products; perform laboratory analyses on food products; and calculate and report results of laboratory analyses, 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 15189:2007 *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 two analyses.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of the principles of laboratory analyses performed on food products in a primary products food processing operation.

Evidence requirements

- 1.1 The principles of the analyses are explained in terms of the technology, reactions and processes involved.
- 1.2 Critical factors and variables of the analyses are identified and described in terms of minimising variability.
- Range variables include but are not limited to – equipment, apparatus, reagents, sample, technique, calibration, environment.
- 1.3 Quality assurance of the analyses is explained in terms of organisational requirements.
- Range quality assurance includes but is not limited to – blanks, standards, repeatability, reproducibility.

Outcome 2

Demonstrate knowledge of the principles of operation for an infrared instrument used in a laboratory in a primary products food processing operation.

Evidence requirements

- 2.1 The underlying principles and theory are explained in terms of the technology and the chemical reactions and/or processes that take place.
- 2.2 Maintenance procedures are described in terms of manufacturer's specifications and organisational requirements.
- 2.3 Calibration procedure is described in terms of manufacturer's specifications and organisational requirements.
- 2.4 Quality control checks are identified and described in terms of the type and cause of typical errors.
- Range checks include but are not limited to – blanks, repeatability, reproducibility.

Outcome 3

Use an infrared instrument to carry out an analysis on food products in a primary products food processing operation.

Evidence requirements

- 3.1 Instrument is set up in accordance with manufacturer's specifications and organisational requirements.
- 3.2 Tests are conducted in accordance with calibration procedures and organisational requirements.
- 3.3 Any non-conforming results are actioned in accordance with organisational requirements.
- 3.4 Instrument is used in a manner that causes no danger to persons or damage to instrument or equipment.
- 3.5 Instrument is maintained in accordance with organisational requirements.

Outcome 4

Perform laboratory analyses on food products in a primary products food processing operation.

Evidence requirements

- 4.1 Samples and equipment are prepared in accordance with organisational requirements.
- 4.2 Analyses are performed on food products in accordance with organisational requirements.
- 4.3 Analyses are performed in a safe and aseptic manner.
- 4.4 Results of analyses are within required limits of accuracy.
- 4.5 Test equipment is cleaned and stored in accordance with organisational requirements.

Outcome 5

Calculate and report results of laboratory analyses in a primary products food processing operation.

Evidence requirements

- 5.1 Results are recorded and calculations performed in accordance with organisational requirements.
- 5.2 Calculations are reported and interpreted in terms of conformance.
- 5.3 Any non-conformance is identified and corrective action taken in accordance with organisational requirements.

Replacement information	This unit standard replaced unit standard 22005, unit standard 22006 and unit standard 22007.
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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	18 June 2015	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>.

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.