

Title	Use infrared technology for analysis in a laboratory in a primary products food processing operation		
Level	4	Credits	5

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: explain the principles of operation for an infrared instrument; use an infrared instrument; and report infrared analysis results, in a laboratory 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 *Instruments* include but are not limited to – near-infrared, mid-infrared; evidence is required of one instrument type.

Outcomes and evidence requirements

Outcome 1

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

Evidence requirements

- 1.1 The underlying principles and theory of operation for an infrared instrument are explained in terms of the technology and the chemical reactions and/or processes that take place.
- 1.2 Maintenance procedures are explained in terms of organisational requirements.
- 1.3 Calibration procedure is explained in terms of organisational requirements.
- 1.4 Quality control checks are explained in terms of the type and cause of typical errors.

Range quality control checks include but are not limited to – blanks, repeatability, reproducibility.

Outcome 2

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

Evidence requirements

- 2.1 Instrument is set up in accordance with organisational requirements.
- 2.2 Tests are conducted in accordance with agreed processes and procedures.
- 2.3 Any non-conforming results are actioned in accordance with organisational requirements.
- 2.4 Instrument is used in a manner that causes no danger to persons, or damage to instrument or equipment.
- 2.5 Instrument is maintained in accordance with organisational requirements.

Outcome 3

Report infrared analysis results in a laboratory in a primary products food processing operation.

Evidence requirements

- 3.1 Results from tests are documented in accordance with organisational requirements.
- 3.2 Results are reviewed in accordance with organisational requirements.
- 3.3 Abnormal test situations are analysed to identify the nature of the problem and reach a valid solution.

- 3.4 Abnormal test results are analysed to identify the nature of the problem and reach a valid solution.

Replacement information	This unit standard replaced unit standard 22004.
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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.