

<b>Title</b>	<b>Perform High Performance Liquid Chromatography (HPLC) analyses in a primary products food processing operation</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<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 HPLC analyses performed; perform HPLC analyses; and calculate and report results of HPLC analyses, on food products in a primary products food processing operation.</p>
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<b>Classification</b>	Primary Products Food Processing > Primary Products Food Processing - Operational Skills
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<b>Available grade</b>	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 *HPLC tests* may include but are not limited to testing for – preservative, Immunoglobulin G, Immunoglobulin A, vitamins, sucrose, lactose, growth factors, whey protein, contaminants; evidence is required of one test.
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## Outcomes and evidence requirements

### Outcome 1

Explain the principles of HPLC analyses performed on food products in a primary products food processing operation.

#### Evidence requirements

1.1 HPLC is explained in terms of the critical factors which affect it.

Range critical factors include but are not limited to – preparation of sample, concentration of solutions, chemical reactions that take place, separation, internal standards.

1.2 Variables of the test are explained in terms of the process of eliminating variables.

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

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

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

### Outcome 2

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

#### Evidence requirements

2.1 Samples and equipment are prepared in accordance with organisational requirements.

2.2 HPLC analyses are performed in accordance with agreed processes and procedures.

2.3 HPLC analyses are performed using personal protective equipment and safety procedures in accordance with organisational requirements.

2.4 Results are within precision requirements in accordance with organisational requirements.

2.5 Equipment is cleaned and stored in accordance with organisational requirements.

### Outcome 3

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

**Evidence requirements**

- 3.1 Results are recorded and calculations performed in accordance with organisational requirements.
- 3.2 Calculations are reported and interpreted in terms of conformance.
- 3.3 Any non-conformance is identified and corrective action taken in accordance with organisational requirements.
- 3.4 Abnormal test situations are analysed to identify the nature of the problem and reach a valid solution.
- 3.5 Abnormal test results are analysed to identify the nature of the problem and reach a valid solution.

<b>Replacement information</b>	This unit standard replaced unit standard 22003.
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<b>Planned review date</b>	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

<b>Consent and Moderation Requirements (CMR) reference</b>	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.

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**Comments on this unit standard**

Please contact the Primary Industry Training Organisation [standards@primaryito.ac.nz](mailto:standards@primaryito.ac.nz) if you wish to suggest changes to the content of this unit standard.