

<b>Title</b>	<b>Demonstrate knowledge of plant bread bakery systems and products</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>20</b>

<b>Purpose</b>	People credited with this unit standard are able to demonstrate knowledge of: plant bread making systems; dough quality assessment for plant bread making systems; the production of bread products produced in a plant bakery; and quality control procedures used in plant bakeries
----------------	---

<b>Classification</b>	Food and Related Products Processing > Baking - Bread
-----------------------	---

<b>Available grade</b>	Achieved
------------------------	----------

---

## Guidance Information

### 1 Legislation and references

Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

Food Act 2014;

Health and Safety at Work Act 2015;

Resource Management Act 1991;

Food Amendment Regulations 2017;

Australia New Zealand Food Standards Code, available at

<http://www.foodstandards.govt.nz/>.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

### 2 Definitions

*Single serve breads* refer to bread products which may include but are not limited to bread rolls, sweet buns, fruit enriched products, pita, naan, donuts, bagels.

*Specialty breads* refer to bread products which may include but are not limited to – high hydration bread, poached or steamed bread, butter enriched bread, sour dough bread, flat bread, pretzel.

*Workplace procedures* refer to procedures used by the organisation carrying out the work and applicable to the tasks being carried out, such as recipes, production specifications, standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, housekeeping standards, and procedures to comply with legislative and local body requirements.

### 3 Assessment information

Evidence generated during assessment against this standard must meet applicable workplace procedures and must be consistent with industry practice. Such knowledge is available in relevant training manuals and reference texts. No one textbook or other source of information is envisaged, as new approaches to commercial baking and baking products are published regularly.

---

## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of plant bread making systems.

#### Performance criteria

- 1.1 Dough production processes commonly used in plant bakeries are categorised according to mixing times, mixing speeds, work input, and fermentation periods.
- 1.2 Steps in an automated bread baking system are identified and explained for two different dough production processes.
- Range steps – preparation and weighing of ingredients, mixing, fermenting, dividing, intermediate proving, moulding, tinning, final proving, baking, depanning, cooling, slicing, bagging.
- 1.3 Machinery and equipment commonly used in plant bakeries is stated and its purpose and operation described.
- Range automatic water delivery and temperature control system, automatic flour delivery system, automatic tray loading system, weighing machine, computer controlled mixer, dough hoist, divider, rounder, intermediate prover, moulder, final prover, oven, finishing equipment, depanner, cooler, slicer, bagger, conveyor, belts, check weighing systems and equipment, metal detection equipment.
- 1.4 The layout and workflow of a plant bakery are described in terms of meeting production requirements.
- Range production requirements may include but are not limited to – range of products, volume of product, production schedules.

### Outcome 2

Demonstrate knowledge of dough quality assessment for plant bread making systems.

**Performance criteria**

- 2.1 Required properties of a dough are stated, and described in terms of the production process and product specifications.
- Range        extensibility, elasticity, consistency, temperature, production requirements.
- 2.2 Properties of a selected dough sample are assessed in terms of its suitability for further processing and meeting product quality specifications.
- 2.3 Faults in developed dough are identified, and their causes and corrective measures described.

**Outcome 3**

Demonstrate knowledge of the production of bread products produced in a plant bakery.

Range        bread products include – tinned breads, speciality breads, single serve bread.  
single serve bread include – buns, bread rolls, hot cross buns, hamburger buns.

**Performance criteria**

- 3.1 Bread products produced in a plant bakery are identified from product samples or photographs.
- Range        two of each of – tinned breads, speciality breads, single serve bread.
- 3.2 Bread products produced in a plant bakery are described in terms of their origin, ingredients, and product characteristics.
- Range        two of each of – tinned breads, speciality breads, single serve.
- 3.3 Recipes and ingredients for a selection of bread products are listed and evaluated against ingredient availability and cost.
- Range        one of each of – tinned bread, speciality bread, single serve.
- 3.4 Automated production systems for different types of breads and small goods are described and compared in terms of the machinery and equipment used, production line layout, and the relative complexities of each system.
- Range        tinned bread, speciality bread, single serve.

**Outcome 4**

Demonstrate knowledge of quality control procedures used in plant bakeries.

**Performance criteria**

- 4.1 Quality tests for flour and yeast are defined in terms of their purpose, method, and use in plant bakeries.
- 4.2 Factors that determine the external quality of bread are explained.
- Range shape, height, weight, volume, crust colour, crust surface.
- 4.3 Factors that determine the internal quality of bread are explained.
- Range fineness of cells, evenness, presence of streaks, cores, holes, colour, stickiness, softness, moistness, dryness, crumb strength, slicing quality.
- 4.4 Quality requirements for bread products are defined in terms of market demands and industry standards.
- 4.5 Quality assessment procedures used in an automated bakery are described in terms of their use and application for different bread products.
- Range use of standards and specifications, location and number of quality assessment points, frequency and number of samples assessed, assessment methods, recording and reporting of results.
- 4.6 Quality systems to ensure compliance with product labelling claims are described.

<b>Replacement information</b>	This unit standard replaced unit standard 15140.
--------------------------------	--

<b>Planned review date</b>	31 December 2030
----------------------------	------------------

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	17 March 2016	N/A
Review	2	26 June 2025	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council [qualifications@hangaarorau.nz](mailto:qualifications@hangaarorau.nz) if you wish to suggest changes to the content of this unit standard.