

<b>Title</b>	<b>Demonstrate knowledge of bread baking science and technology for the production of bread products using manual methods</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>14</b>

<b>Purpose</b>	<p>This unit standard is for people working or intending to work as a baking tradesperson in a commercial bakery.</p> <p>People credited with this unit standard are able to; demonstrate knowledge of bread baking science, demonstrate knowledge of manual bread baking processes, the production of specialty breads using manual production methods, and produce a layout plan for a bakery that uses manual production methods.</p>
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<b>Classification</b>	Food and Related Products Processing > Baking - Bread
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<b>Available grade</b>	Achieved
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### Explanatory notes

#### 1 Definitions

*Bread small goods* refers to single serve bread products which may include but are not limited to bread rolls, sweet buns, fruit enriched products, pita, naan, donuts, bagels.

*Characteristics* refer to appearance, texture, colour, and shape.

*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.

#### 2 Assessment information

This unit standard must be assessed against in a commercial bakery or in a simulated environment that demands performance equal to that required in a commercial bakery.

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.

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### Outcomes and evidence requirements

**Outcome 1**

Demonstrate knowledge of bread baking science.

**Evidence requirements**

- 1.1 The source and role of gluten within bread is explained.
- 1.2 The gluten development process in relation to bread making is explained.
- 1.3 The role of starch within bread making is explained.
- Range gelatinisation and retrogradation.
- 1.4 The fermentation of yeast within bread doughs is explained in terms of the fermentation process, and resulting aeration of breads.
- 1.5 Specialist ingredients are explained in terms of their function and reasons for use in bread products.
- Range oxidising agents, reducing agents, emulsifiers.

**Outcome 2**

Demonstrate knowledge of manual bread baking processes.

**Evidence requirements**

- 2.1 The required properties of bread dough are described in accordance with process and product specifications.
- Range extensibility, elasticity, temperature, production requirements.
- 2.2 Mixing times and fermentation periods used in manual bread baking are explained.
- Range no-time dough, bulk fermentation, sponge and dough, sour dough.
- 2.3 The effect of temperature variations on bread dough is explained.
- 2.4 Steps in manual bread baking are identified and explained.
- Range preparation and weighing of ingredients, mixing, dividing, moulding, tinning, proving, baking, depanning, cooling.
- 2.5 The required temperature of water to achieve specified dough temperature is calculated.
- Range three different calculations.

**Outcome 3**

Describe the production of specialty breads using manual production methods.

Range speciality breads may include but are not limited to – pita, focaccia, French, Italian, Turkish, German, Swiss.

### **Evidence requirements**

3.1 Specialty breads produced using manual production methods are identified from product samples or photographs.

3.2 Speciality breads are described in terms of their origin and unique characteristics.

Range four different speciality breads.

3.3 Production processes for different specialty breads are explained in terms of equipment used and processing steps.

Range four speciality breads.

### **Outcome 4**

Describe the production of bread small goods using manual production methods.

### **Evidence requirements**

4.1 Bread small goods commonly produced using manual methods are identified from product samples or photographs.

4.2 Bread small goods are described in terms of their unique characteristics.

Range four products.

4.3 Production processes for different bread small goods are explained in terms of equipment used and processing steps.

Range four products.

### **Outcome 5**

Produce a layout plan for a bakery that uses manual production methods.

### **Evidence requirements**

5.1 Equipment is identified and described in terms of its use in the range of products produced.

5.2 Services and facilities are identified and their location in terms of equipment requirements and workflow patterns are explained.

Range water, drainage, electricity, gas, doorways, ventilation, storage.

- 5.3 Optimum workflow patterns for each of the production processes to be used are developed.
- 5.4 A layout plan is produced that makes best use of available space and services, and maximises production efficiency and safety.

<b>Planned review date</b>	31 December 2021
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 March 2016	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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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 (CMR). 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 Competenz at [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.