

Title	Prepare, mix, and bake bread products using sponge and dough process, and liquid ferment process		
Level	3	Credits	6

Purpose	<p>This unit standard is for people working or intending to work in a bakery.</p> <p>People credited with this unit standard are able to: use safe working practices; prepare and weigh and/or measure ingredients for sponge and dough process, and liquid ferment process; mix and ferment sponges; prepare and mix liquid ferments; divide, mould and prove bread doughs produced by sponge and dough process, and liquid ferment process; and bake doughs produced by sponge and dough process, and liquid ferment process.</p>
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Classification	Food and Related Products Processing > Baking - Bread
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Available grade	Achieved
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Entry information	
Recommended skills and knowledge	<p>Unit 14710, <i>Weigh ingredients for bulk bread doughs in a plant bakery</i>; Unit 29069, <i>Demonstrate knowledge of and comply with health and safety, and food safety practices in a commercial bakery</i>; Unit 29070, <i>Demonstrate knowledge of legislation, codes, and rules for the production of bakery products</i>; and Unit 29078, <i>Make basic bread products in a commercial baking environment under supervision</i>; or demonstrate equivalent knowledge and skills.</p>

Explanatory notes

- References**

Enactments and codes relevant to this unit standard include but are not limited to the: Food Act 1981 and the Food Act 2014; Health and Safety in Employment Act 1992, which will be replaced by the Health and Safety at Work Act 2015 when it becomes effective on 4 April 2016; Resource Management Act 1991; Food (Safety) Regulations 2002; Food Hygiene Regulations 1974; and the Australia New Zealand Food Standards Code, available at <http://www.foodstandards.govt.nz/>.
- Range**

Competence is to be demonstrated on three occasions of preparing, mixing, and baking bread products using sponge and dough process, and liquid ferment process.

Equipment may include but is not limited to – mixers, balance or digital scales, dough hooks, water meter, thermometer, timer, containers, soaking containers, moulders, dividers, provers, rounders, ovens (electric, gas, conventional, radiant, deck, rack, fan-forced, direct or indirect), knives, scrapers, plastic covers, proving boards, proving cloths, bread tins, baking trays, bakery racks, measuring jugs, table brush, knife.

Products may include but are not limited to – high-sugar enriched doughs, mixed grain breads, variety breads.

Ingredients may include but are not limited to – flour, salt, water, yeast, eggs, fats, oils, sugar, emulsifiers, enzymes, improvers, conditioners, gluten, grains.

3 Definitions

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.

PPE refers to personal protective equipment such as protective clothing; gloves; safety glasses, headwear, and footwear; hearing protection; and safety devices.

Sponge refers to the preliminary dough produced after the first mixing in a sponge and dough process.

Brew refers to the fermenting ingredients in a liquid fermentation process.

Outcomes and evidence requirements

Outcome 1

Use safe working practices.

Evidence requirements

- 1.1 PPE is used in accordance with workplace procedures.
- 1.2 Work environment is kept clean and free from hazards in accordance with workplace procedures.

Range hazards to – personnel, product, plant.
- 1.3 Documentation is referred to and/or completed in accordance with workplace procedures.

Outcome 2

Prepare and weigh and/or measure ingredients for sponge and dough process, and liquid ferment process.

Evidence requirements

- 2.1 Ingredients are checked for shelf life and signs of contamination in accordance with workplace procedures.

- 2.2 Ingredients are prepared in accordance with recipe specifications and workplace procedures.
- Range may include but is not limited to – temperature, pre-soaking, sieving of dry ingredients.
- 2.3 Reactive ingredients are kept separate during preparation.
- Range may include but is not limited to – yeast, salt, sugar.
- 2.4 Ingredients are accurately weighed and/or measured in accordance with recipe specifications.
- 2.5 Preparation and weighing and/or measuring of ingredients is performed in accordance with workplace procedures.

Outcome 3

Mix and ferment sponges.

Evidence requirements

- 3.1 Mixing equipment is selected to suit dough type and scheduled production in accordance with workplace procedures.
- 3.2 Mixing equipment is clean, free from contamination, and operational in accordance with workplace procedures.
- 3.3 Primary ingredients are mixed to a sponge in accordance with process specifications.
- Range may include but is not limited to – flour, yeast, yeast food, enzymes, moisture, shortening or oil, dough conditioners, monoglycerides, gluten.
- 3.4 Condition of sponge after first mixing is in accordance with process specifications.
- Range may include but is not limited to – temperature, blend of ingredients, dough strength.
- 3.5 Sponge is fermented under controlled conditions in accordance with workplace procedures.
- Range temperature, humidity, time.
- 3.6 Condition of fermented sponge is in accordance with process specifications.
- Range temperature, feel, moisture content, structure.

- 3.7 Faults in sponge condition due to fermentation errors are identified.
- Range may include but is not limited to – wet, sticky, strong aroma, maturity.
- 3.8 Balance of dough ingredients are added to fermented sponge.
- 3.9 Second mixing action is applied and dough is developed in accordance with recipe and process specifications.
- Range may include but is not limited to – speed, time.
- 3.10 Fermentation errors are corrected during second mixing stage.
- 3.11 Mixed dough conforms to dough specifications.
- Range temperature, uniform dispersion of ingredients, gluten network development.
- 3.12 The mixing equipment is operated in accordance with workplace procedures.

Outcome 4

Prepare and mix liquid ferments.

Evidence requirements

- 4.1 Primary ingredients are combined into a brew in accordance with workplace procedures.
- Range may include but is not limited to – flour, water, buffer salts, yeast, sugar, salt, ammonium salt.
- 4.2 Fermentation tank is set in accordance with process specifications and flour content of the brew.
- Range temperature, agitation.
- 4.3 Brew is fermented for required length of time in accordance with process specifications and flour content of the brew.
- 4.4 Brews are cooled in accordance with process specifications.
- 4.5 Balance of dough ingredients are added to cooled brew.
- 4.6 Dough is mixed and developed in accordance with brew composition.
- Range may include but is not limited to – speed, time.
- 4.7 Mixed dough conforms to dough specifications.

Range temperature, uniform dispersion of ingredients, gluten network development.

4.8 The mixing equipment is operated in accordance with workplace procedures.

Outcome 5

Divide, mould, and prove bread doughs produced by sponge and dough process, and liquid ferment process.

Evidence requirements

5.1 Dough is available in the required condition and sufficient quantity for scheduled and anticipated production in accordance with workplace procedures.

5.2 Dough is divided into required weight for product specifications and production requirements in accordance with workplace procedures.

5.3 Dough is divided in a manner that minimises waste and optimises production in accordance with workplace procedures.

5.4 Dough is moulded to specifications and is tear free.

Range size, shape.

5.5 Moulded dough pieces are tinned or trayed in accordance with product specifications.

5.6 Dough pieces are proved in accordance with recipe specifications.

Range temperature, humidity, time.

5.7 Proved dough pieces conform to recipe specifications.

Range may include but is not limited to – volume, size, skinning, resilience.

5.8 The dividing, moulding, and proving equipment is operated in accordance with workplace procedures.

Outcome 6

Bake doughs produced by sponge and dough process, and liquid ferment process.

Evidence requirements

6.1 Oven is clean and free from contamination and available for baking in accordance with workplace procedures.

6.2 Oven is operational and set according to recipe specifications.

Range may include but is not limited to – temperature top and bottom, damper controls, time, alarms, fans, gas valves.

6.3 Products are baked in accordance with recipe specifications and production schedule.

6.4 Products are depanned and cooled according to product requirements.

6.5 Baked products conform to product specifications.

Range may include but is not limited to – crust and/or crumb colour, uniformity of baking, weight, height, overall appearance.

6.6 The oven is operated in accordance with workplace procedures.

Planned review date	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	27 November 1998	31 December 2018
Review	2	20 April 2006	31 December 2018
Review	3	17 March 2016	N/A

Consent and Moderation Requirements (CMR) reference	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 if you wish to suggest changes to the content of this unit standard.