Title	**Demonstrate knowledge of plant bread bakery systems and products**		
Level	**4**	**Credits**	**20**

Purpose	This unit standard is for people working in or intending to work in a plant bakery as a baking tradesperson. 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

Classification	Food and Related Products Processing > Baking - Bread

Available grade	Achieved

Explanatory notes

1 References
Enactments and codes relevant to this unit standard include but are not limited to the: Food Act 1981 and the Food Act; Health and Safety in Employment Act 1992; Health and Safety at Work Act 2015; 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/.

2 Definition
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 evidence requirements

Outcome 1

Demonstrate knowledge of plant bread making systems.

Evidence requirements

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.

Evidence requirements

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, bread small goods.
bread small goods include – buns, bread rolls, hot cross buns, hamburger buns.

Evidence requirements

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, bread small goods.

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, small goods.

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, small goods.

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, small goods.

Outcome 4

Demonstrate knowledge of quality control procedures used in plant bakeries.

Evidence requirements

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, corners, 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, cutting 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.

Replacement information	This unit standard replaced unit standard 15140.

Planned review date	31 December 2021

Status information and last date for assessment for superseded versions

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

Consent and Moderation Requirements (CMR) reference	0013

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.