



Australian Government

FBPRBK3017 Operate plant baking processes

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package version 1.0

Application

This unit of competency describes the skills and knowledge required to operate interrelated bread plant baking processes in a commercial baking environment.

This unit applies to individuals who apply a broad range of knowledge and skills with responsibility for their own work. This includes applying and communicating known solutions to predictable problems.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory food safety, and work health and safety, regulations and legislation that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

FBPRBK3005 Produce basic bread products.

Unit Sector

Retail baking (RBK)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Confirm product types and volumes to schedule production 1.2 Calculate yield and adjust recipe to meet required production volumes 1.3 Confirm work area and work practices meet food safety and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	workplace health and safety requirements 1.4 Select and wear personal protective equipment according to safety requirements 1.5 Select plant baking equipment, and load and position materials, ingredients and products to meet production requirements
2. Mix bread plant dough	2.1 Measure ingredient quantities to meet recipe specification 2.2 Load ingredients into mixer in required placement 2.3 Operate and monitor mixer to achieve bread plant dough development for product type 2.4 Monitor bread plant dough mixing process to identify faults and rectify
3. Operate bread plant divider	3.1 Check condition and operation of dividing plates to prepare for operation 3.2 Check bread plant hopper and divider plates are oiled for use 3.3 Adjust bread plant divider settings for dough weight 3.4 Load dough into hopper and operate bread plant divider to divide dough 3.5 Measure dough weights to confirm divided dough meets weight specifications 3.6 Monitor bread plant dividing process to identify faults and rectify
4. Operate bread plant rounder moulder	4.1 Check condition and operation of bread plant rounder moulder to prepare for operation 4.2 Adjust bread plant rounder moulder settings for dough weight 4.3 Use bread plant rounder moulder to mould dough 4.4 Check dough tightness and smoothness of dough to identify faults and rectify 4.5 Check dough positioning for depositing into intermediate prover pockets to identify faults and rectify 4.6 Monitor bread plant moulding process to identify faults and rectify
5. Operate bread plant intermediate prover	5.1 Check condition, rotation and operation of bread plant intermediate prover to prepare for operation 5.2 Adjust bread plant intermediate prover settings to match speed of

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	production 5.3 Check dough pockets to identify faults and rectify 5.4 Dust as required for product type 5.5 Monitor bread plant intermediate proving process to identify faults and rectify
6. Operate bread plant final moulder	6.1 Check condition and operation of bread plant final moulder to prepare for operation 6.2 Adjust bread plant final moulder settings for dough volume 6.3 Adjust bread plant final moulder plates and blades for dough type 6.4 Monitor 4-piecing unit and adjust to achieve optimum formation in tins 6.5 Monitor bread plant final moulding process to identify faults and rectify
7. Complete bread plant dough final prove	7.1 Locate and position bread pans and oiling equipment for final moulded dough 7.2 Place final moulded dough in oiled pans to prepare for final prove 7.3 Complete final prove of bread plant bread according to product type 7.4 Monitor bread plant final proving process to identify faults and rectify
8. Bake bread plant dough	8.1 Set baking temperatures and times to prepare for baking 8.2 Visually check dough size to confirm readiness for baking 8.3 Load oven and steam as required for product type 8.4 Monitor baking to achieve baked colour and stability required for bread plant product type 8.5 Unload and de-pan bread plant products to cool 8.6 Monitor bread plant baking process to identify faults and rectify 8.7 Check bread plant products bake to identify faults and rectify
9. Complete work	9.1 Clean equipment and work area to meet housekeeping standards 9.2 Dispose of waste according to workplace requirements 9.3 Complete workplace records according to workplace requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Interprets key information from recipes, ingredient labels, baking equipment operating instructions and end-product specifications
Writing	Prepares production schedules and completes production records using required format, language and structure
Numeracy	- Identifies and comprehends ingredient quantities in recipes, dates on ingredient labels, and temperature, humidity and timer settings - Estimates approximate quantities, and uses equipment to measure ingredient weights and volumes, and water and dough temperatures - Divides dough into equal portions by estimated weight - Performs calculations to adjust recipes using baking formulas, and allows for wastage - Uses understanding of three-dimensional shapes to set and check end-product shapes - Interprets measurement information to set, monitor and adjust process parameters - Completes production records using mathematical symbols and conventions
Navigate the world of work	- Complies with workplace health and safety and food safety regulatory requirements relevant to a commercial baking operation - Follows organisational policies and procedures relevant to own work role
Get the work done	- Plans, organises and implements tasks required to achieve production outcomes - Uses problem-solving skills to analyse product and process faults and decide on appropriate action

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Plant baking equipment must include:	• equipment, including: • industrial oven • industrial mixer and attachments • bread plant dough divider • bread plant dough rounder moulder • bread plant intermediate prover • bread plant final moulder • mechanical bread slicer • equipment accessories, including: • divider blades • intermediate prover pockets • moulder plates • ancillary equipment, including: • dry ingredients storage containers • strapped baking tins • strapped baking tin lids • ingredient storage bins • tools and utensils, including: • thermometer • timer • dough knives • dough scrapers.
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPRBK3017 Operate plant baking processes	Not applicable	New unit	Not equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPRBK3017 Operate plant baking processes

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Performance Evidence

An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.

There must be evidence that the individual has operated plant baking processes to produce bread plant products, including:

- producing the following four bread plant dough types:
 - white bread
 - brown or wholemeal bread
 - grain bread
 - enriched sweet yeast bread
- producing the following five bread products:
 - crusty/lean loaf – plaited, Vienna, cob or stick
 - enriched sweet yeast bread loaf as high top or condensed loaves
 - enriched bread loaves as condensed or high top
 - brown or wholemeal bread loaves as high tops, condensed, cobs or Viennas
 - grain bread loaves as high tops, condensed, cobs or Viennas
- using the following two mixing processes:
 - mixing instant/no time doughs
 - mixing ferment
- using the following four bread plant processes:
 - bread plant dough divider
 - bread plant dough rounder moulder
 - bread plant intermediate prover
 - bread plant final moulder
- using the following three finishing techniques:
 - seeding
 - steaming
 - scoring

- using lids to condense loaves
- adjusting bread plant equipment settings to meet process output requirements
- inspecting equipment condition to identify and confirm that equipment is clean and configured for processing requirements
- positioning sensors or controls
- ensuring safety guards are in place and operational
- loading and positioning materials in bread plant equipment
- monitoring material flow and work-in-progress through the system
- selecting tins, bread boards, baskets or trays appropriate for dough piece scale weight, volume and size
- selecting, using and cleaning the baking equipment listed in the range of conditions, including controlling electrical hazards applicable to cleaning
- documenting the production schedule, including the following nine considerations:
 - timings
 - volume requirements
 - product processing requirements
 - recipe reformulation to minimise waste
 - bread plant dough divider setting for product requirement
 - bread plant dough rounder moulder setting for product requirement
 - bread plant intermediate prover setting for product requirement
 - bread plant final moulder setting for product requirement
 - bake parameters for required products.

Wastage that cannot be reused in production must be less than 5% of the weight of the original production schedule.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety requirements, including personal protective equipment (PPE), applicable to operating plant baking processes
- safe use and cleaning of baking equipment listed in the range of conditions, including electrical hazards
- food safety requirements applicable to operating plant baking processes
- considerations for production scheduling of plant baking processes, including:
 - timings
 - volume requirements
 - product processing requirements
 - recipe reformulation to minimise waste
 - bread plant dough divider setting for product requirement
 - bread plant dough rounder moulder setting for product requirement

- bread plant intermediate prover setting for product requirement
- bread plant final moulder setting for product requirement
- bake parameters for required products
- functions and characteristics of ingredients used in bread plant production, including food grade equipment oils in plant bread baking
- purpose and basic principles of the production system, including the flow of product from plant divider to plant rounder moulder to plant intermediate prover to plant final moulder
- basic operating principles of equipment and related accessories, including:
 - equipment adjustment points
 - purpose and status of guards
 - range, location and alignment requirements of sensors and related feedback instruments
 - single and multi-pocket dividers
 - spray panning units
 - de-panner units
 - conveyors
- operating capacities of equipment used in the system, including:
 - output capacity of mixer
 - output capacity of divider
 - total time through bread plant process from mixer to final plant moulder
 - principles of the bread plant baking production processes, including:
 - mixing
 - bread plant divider
 - bread plant rounder moulder
 - bread plant intermediate prover
 - bread plant final moulder
- techniques for calculating yields, adjusting recipes and measuring ingredients
- causes and corrective action for predictable and sometimes unpredictable bread plant problems, including:
 - machinery failure
 - environmental factors, including heat, humidity and cold
 - poor quality ingredients
- techniques for disposing of waste after bread plant production
- bread plant production terminology.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a commercial bakery or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - personal protective equipment
 - equipment specified in the range of conditions, and related accessories and services
 - ingredients that meet the bread plant products types required in the performance evidence
- specifications:
 - recipes that meet the bread plant product types required in the performance evidence
 - end-product quality specifications that meet the bread plant product types required in the performance evidence
- timeframes:
 - according to the production schedule.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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