



Australian Government

FBPTEC3005 Work with bakery ingredients, their functions and interactions

Release: 1

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Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to work with a range of ingredients used to produce bakery products, including fat, butter, shortenings, sugar, eggs and egg replacements, nuts, dried fruit, herbs and spices.

Users should note that flour and leavening agents are included in FBPTEC3006 Work with flours and baking additives.

This unit applies to individuals who work in commercial or high volume bakeries. It typically applies to the production worker responsible for producing baked products, where a knowledge of ingredients and how they react during processing is essential for maintaining product quality and consistency, and will assist with identifying common processing faults and the corrective actions to be applied.

All work must be carried out to comply with workplace procedures according to state/territory health and safety and food safety regulations, legislation and standards that apply to the workplace.

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

Pre-requisite Unit

Nil

Unit Sector

Technical (TEC)

Elements and Performance Criteria

Elements	Performance Criteria
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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify different fats, butter and oils, their properties and uses	1.1 Identify the main types of fats, butter and oils used to produce baked products 1.2 Recognise the differences between fats, butter and oils 1.3 Recognise the differences between animal and vegetable fats and oils 1.4 Identify the effect of baking on fats, butter and oils 1.5 Identify storage requirements of fats, butter and oils to maintain freshness and quality 1.6 Recognise common faults that can occur in baked products that are related to fats, butter and oils 1.7 Identify common food safety hazards related to fats, butter and oils 1.8 Determine the hazards related to working with fats, butter and oils, and how the associated risks can be managed
2. Identify sugars and sweeteners and their uses	2.1 Identify the main types of sugars used in baked products 2.2 Recognise the differences between different sugars and sweeteners 2.3 Recognise the effects that sugars have on baked products 2.4 Identify storage requirements of sugar 2.5 Recognise common faults that can occur in baked products that are related to sugar 2.6 Determine the hazards related to working with sugar, and how the associated risks can be managed
3. Work with eggs and their properties	3.1 Recognise the function of eggs in producing baked products 3.2 Identify the characteristics of different types of eggs 3.3 Identify the nutritional make-up of egg yolks and whites 3.4 Identify storage conditions to ensure eggs are kept fresh 3.5 Recognise common faults that can occur in baked products that are related to eggs 3.6 Identify common food safety hazards related to eggs 3.7 Determine the hazards related to working with eggs, and how the associated risks can be managed
4. Work with nuts and dried fruits	4.1 Recognise the function of nuts and dried fruits in producing baked products 4.2 Identify the characteristics of different nuts and fruit dried in

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	different ways 4.3 Determine the different ways that nuts and dried fruits are prepared for baking processes 4.4 Identify storage conditions to ensure nuts and dried fruits are kept fresh 4.5 Recognise common faults that can occur in baked products that are related to nuts and/or dried fruits 4.6 Identify common food safety hazards and allergies related to nuts and dried fruit 4.7 Determine the hazards related to working with nuts and dried fruits, and how the associated risks can be managed
5. Work with herbs and spices	5.1 Recognise the function of herbs and spices in baked products 5.2 Identify the characteristics of different herbs and spices 5.3 Identify storage conditions to ensure herbs and spices are kept fresh 5.4 Identify common food safety hazards and allergies related to herbs and spices 5.5 Recognise common faults that can occur in baked products that are related to herbs and spices
6. Work with flavourings and colourings	6.1 Recognise the function of flavourings and colourings in baked products 6.2 Identify the characteristics of different flavourings and colourings used 6.3 Identify storage conditions to ensure flavourings and colourings are kept fresh 6.4 Recognise common faults that can occur in baked products that are related to flavourings and colourings 6.5 Identify common food safety hazards and allergies related to flavourings and colourings 6.6 Determine the hazards related to working with flavourings and colourings, and how the associated risks can be managed

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
Learning	• Problem-solve issues with baking process and ingredients to ensure quality outcomes
Reading	• Interpret key information from Product Information Forms (PIFs), labels, Certificates of Analyses and workplace documents
Oral communication	• Use industry terminology when referring to ingredients and their properties • Describe product faults using industry terminology

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPTEC3005 Work with bakery ingredients, their functions and interactions	Not applicable	The unit has been created to address a skill or task required by industry that is not covered by an existing unit	Newly created

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 FBPTEC3005 Work with bakery ingredients, their functions and interactions

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Performance Evidence

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

There must be evidence that the individual has identified functions and properties of bakery ingredients, including at least one item from each of the following groups:

- fats, butter and oils
- sugar
- eggs
- nuts and dried fruits
- herbs and spices
- flavourings and colourings.

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:

- general physical-chemical properties of fat, butter and oils, including:
 - saturated/unsaturated
 - animal/vegetable
 - melting points
- the effects that shortenings have on flour and gluten
- general physical-chemical properties of sugar and sweeteners commonly used in baked products
- grades and types of sugar
- purpose of adding sugar to baked products
- general properties of eggs, egg substitutes and coagulation
- purpose of eggs in baked products, including leavening, tenderising, emulsifying, thickening, to add moisture, colour and nutrition and to provide structure, texture and flavour

- egg parts and typical defects
- properties of nuts and typical uses in baked products
- nut allergies, including anaphylaxis
- properties of dried fruit and typical uses in baked products
- properties of herbs and spices and typical uses in baked products
- properties of colourings and flavourings and typical uses in baked products
- storage requirements to ensure quality of raw material is maintained, including the effects of temperature, moisture, contamination from other materials, allergen management, pest control
- typical analytical tests and checks to determine quality of raw materials, including observation, smell and rapid tests
- typical faults that occur in baked products as a result of ingredient treatment or integrity
- the purpose and intent of food safety legislation and control measures for physical, chemical, microbiological and allergenic risks
- Food Standards Code in relation to bakery products produced at worksite
- Common microbiological, physical, chemical and allergenic hazards that can occur when processing baked products, including the types of hazards likely to occur, the conditions under which they occur, and possible consequences
- contamination/cross-contamination and cross-contact food safety risks associated with the main ingredients used in a commercial bakery, and how each can be controlled
- cleaning and sanitisation procedures for ingredients containing allergens.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a bakery setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment
 - bakery ingredients, including fats and oils, sugars, eggs, nuts and dried fruits, herbs and spices, colourings and flavourings
- specifications:
 - information on food safety
 - access to Food Standards Code
 - ingredient information.

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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