



Australian Government

FBPFST4011 Apply the principles of nutrition to food processing

Release: 1

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Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to provide nutritional information on processed food and to determine procedures that optimise the nutritional value of a product.

This unit applies to individuals who work as production and technical supervisors, quality managers and members of product development teams, who are responsible for monitoring the nutritional value of processed foods, interpreting label information and assisting in development and testing of products.

No occupational licensing or certification requirements apply to this unit at the time of publication. However, legislative and regulatory requirements for food processing exist, so local requirements must be checked. All work must comply with Australian food safety standards and relevant codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Food science and technology (FST)

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. Interpret labelling requirements to provide nutritional information	1.1 Review food storage and preparation information on food labels 1.2 Compare the nutritional values of similar processed food products based on information supplied on the label 1.3 Interpret nutritional information on product labels to determine

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	suitability for customers with specific requirements
2. Evaluate the impact of processing methods on the nutritive value of processed compared to fresh food	2.1 Determine the effect of processing on the stability and availability of macro- and micronutrients in a range of food products 2.2 Investigate processes for modification of processed foods to enhance nutritional value 2.3 Compare food storage methods for the retention of nutritive value and food chemicals, including preservatives 2.4 Investigate the nutritional impact of a range of additives for flavour or colouring enhancement 2.5 Establish permissible levels of artificial additives and write health warnings for food products
3. Contribute to the development of a food product to meet a specified dietary requirement	3.1 Identify appropriate foods for customers with specific requirements or health challenges 3.2 Identify common nutritional deficiencies and related diseases 3.3 Match the nutritional properties of foods to specified requirements 3.4 Contribute to development of a food product using nutritional knowledge

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
Writing	Document nutritional information
Numeracy	Analyse and calculate nutritional values of food products
Interact with others	- Clarify the purpose and possible actions to be taken as a result of work-related communications - Provide information about innovative practices, processes and products

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPFST4011 Apply the principles of nutrition to food processing	FDFST4011A Apply the principles of nutrition to food processing	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPFST4011 Apply the principles of nutrition to food processing

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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 applied the principles of nutrition to a minimum of three different foods in a food processing environment, including:

- determining the nutritive value of processed food products based on nutritional information
- assessing the impact of food processing and preservation techniques on nutrient retention in the food product
- applying knowledge of food properties and nutrition to contribute to product development or planning.

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:

- roles of proteins, carbohydrates, vitamins and minerals, dietary fibre, lipids and water in nutrition
- the processes of digestion, absorption and energy metabolism in the human body
- the effects of processing and storage on nutrients, and the methods for overcoming these
- nutritional needs of typical customers to the business
- typical human energy requirements
- impacts of processing on nutritive properties of food
- nutritional information on food labels
- product development processes
- processing methods that reduce negative nutritional effects or cater for nutritional deficiencies
- use of additives as nutritional enhancers
- key macro- and micronutrients for a healthy diet
- dietary guidelines and legislative requirements related to processed foods

- nutrition-related risk factors and diseases
- common food intolerances and allergies
- common diseases caused by nutritional deficiencies
- modified and functional foods and nutraceuticals
- public health and environmental hazards, in relation to nutrition.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace
- resources, equipment and materials:
 - production process and related equipment, food testing data and operating procedures
 - methods and related software systems for collecting data and calculating yields, efficiencies and material variances appropriate to production environment
- specifications:
 - test methods used to report relevant product/process information and recorded results
 - nutritional information on ingredients and food products.

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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