



Australian Government

Department of Education, Employment and Workplace Relations

FDFTEC4005A Apply an understanding of food additives

Revision Number: 1

FDFTEC4005A Apply an understanding of food additives

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to recognise the characteristics and functions of food additives, preservatives, colours and flavours used in food products.
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Application of the Unit

Application of the unit	This unit is designed to provide an overview of food additives. It is not designed to meet the competency requirements of the person who specifies additives, preservatives, colours or flavours to be used in food. Analysis of the properties of food additives may also be done by a specialist.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify additives used in food	1.1.Types of food additives and common additives used in food products are identified 1.2.Functions of food additives are identified 1.3.Legal requirements relating to use of food additives are identified 1.4.Legal and quality consequences of incorrect additive addition are identified
2. Manage use of additives in a production process	2.1.Additives used in product range produced in the production process are identified 2.2.Methods of addition are suited to food additive and production requirements 2.3.Procedures for safe handling and addition of food additives are reviewed and/or established 2.4.Handling, use and disposal of additives is conducted in accordance with environmental standards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- identify common food additives and group them by function
- identify common types of additives used in the food industry
- identify the functions of food additives commonly used in food, such as:
 - texture modifying agents
 - organoleptic and nutritional modifying agents, including flavours, colours, flavour enhancers, sugar-free sweeteners, minerals, vitamins and food acids
 - shelf-life enhancing agents, including preservatives, anti-oxidants and food acids
 - technological aids, including humectants, enzymes, propellants, flour treatment, caking agents and bleaching agents
- identify additives, colours and flavours used in product range produced in the workplace, including:
 - coding system used to describe food additives, colours and flavours
 - legal requirements relating to additives used as established by the Food Standards Code
 - function in the food product
 - typical quantities used and related units of measurement
 - preparation requirements, and forming and breaking emulsions, and preparation of solutions where required
 - addition systems and related equipment requirements
 - health and safety issues related to handling of additives
 - process recording requirements
 - consequences of incorrect additive addition, including the Food Standards Code as it relates to food additives used in a given product range
- review and/or establish procedures to describe storage, handling and processing conditions that affect the characteristics of colours and flavours, such as:
 - changes in pH
 - temperature change
 - exposure to light
 - exposure to humidity
 - packaging materials
- review and/or establish procedures to describe the method of preparation and addition of additives to food products produced in the workplace
- provide examples of incorrect addition of food additives that could occur in the

REQUIRED SKILLS AND KNOWLEDGE

production process, determine appropriate corrective action within company policy and level of authority

- use communication skills to interpret and complete work information to support operations of work team or area
- demonstrate and support cooperative work practices within a culturally diverse workforce

Required knowledge***Knowledge of:***

- types of food additives and common additives used in food products
- the functions of food additives commonly used in food
- coding system used to describe food additives, colours and flavours
- legal requirements relating to additives used as established by the Food Standards Code
- typical quantities used and related units of measurement
- preparation requirements, such as forming and breaking emulsions, and preparation of solutions
- addition systems and related equipment requirements
- occupational health and safety (OHS) issues related to handling of additives
- consequences of incorrect additive addition, including Food Standards Code as it relates to food additives used in a given product range
- the quality and food safety hazards of incorrect addition
- handling and processing conditions that affect the characteristics of colours and flavours

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of ability to:

- identify legal, company and quality standards for food additives
- identify main additives and groupings
- describe the function and user requirements for additives
- manage the use of additives to ensure product quality standards are achieved.

Context of and specific resources for assessment

Assessment must occur in a real or simulated workplace where the assessee has access to:

- product specifications, including advice on additives
- food standards code
- product range and related production processes
- workplace information recording systems, requirements and procedures.

Method of assessment

This unit should be assessed together with core units and other units of competency relevant to the function or work role.

Guidance information for assessment

To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Policies and procedures

Handling of food additives, preservatives, colours and flavours and related work processes are consistent with company policies and procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements and takes account of OHS and environmental impact

Groupings

Groupings include but are not limited to:

- preservatives
- anti-oxidants
- acidulants
- organoleptic and nutritional modification agents
- colours and flavours, including synthetic and natural, oil and water soluble and lakes (dispersion in oil - applying to colours only)
- technological aids

Unit Sector(s)

Unit sector

Technical

Competency field

Competency field

Co-requisite units

Co-requisite units		