



Australian Government

Department of Education, Employment and Workplace Relations

FDFFS5001A Develop a HACCP-based food safety plan

Release: 2

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Modification History

April 2012: Minor typographical corrections.

Unit Descriptor

This unit of competency covers the skills and knowledge required to develop a hazard analysis critical control point (HACCP)-based food safety plan and to oversee its implementation and monitoring. This unit has regulatory coverage under the Australian New Zealand Food Standards Code Standard 3.2.1 Food Safety Programs.

Application of the Unit

This unit is appropriate where the operator takes a lead role in facilitating the development of the food safety program. It requires application of the steps and techniques used to develop and review a HACCP-based food safety plan

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

FDFFS4001A Supervise and maintain a food safety plan

Employability Skills Information

This unit contains employability skills.

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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Describe the product, and scope the food safety plan	1.1 Appropriate product-specific knowledge and expertise is available or obtained 1.2 The segment of the food chain and processes involved are specified 1.3 The scope of the HACCP plan is identified and class of hazards specified 1.4 A full description of the product is drawn up 1.5 The intended use and client group for the product is identified
2. Construct a flow diagram of production and confirm its applicability	2.1 All steps in the operation are included from primary production, processing, manufacture and distribution to the consumer 2.2 Standard symbols and nomenclature are used to describe the processes and steps in the operation as a flow diagram 2.3 The steps preceding and following a new operation are specified 2.4 The flow diagram is validated against the operation at all stages of production
3. Analyse all potential hazards for each step and consider control measures	3.1 Hazards are identified that can reasonably be expected to occur at each step 3.2 A hazard analysis is conducted to identify hazards that can impact on the production of safe food covering 3.3 Control measures are considered for each hazard
4. Determine critical control points and the critical limits for each	4.1 A process of decision making is followed to determine critical control points 4.2 Hazards at each critical control point are checked to ensure a control measure can be put in place 4.3 Where control measures aren't available the product or process is modified to allow a control measure at another stage 4.4 Critical limits are specified for each critical control point that are either measured or sensory
5. Establish a monitoring system for each critical control point	5.1 Appropriate monitoring methods are established for each critical control point 5.2 Monitoring methods are designed to indicate the critical limit has been reached or is trending towards it 5.3 Monitoring frequency ensures that the critical control point is in control 5.4 Adjustments are made on the basis of the monitoring of critical limits to prevent deviation and hazards occurring

ELEMENT	PERFORMANCE CRITERIA
6. Establish and record corrective actions and verification procedures	6.1 Specific corrective actions are designed to deal with deviations in the critical control point as they occur 6.2 Procedures for treating or disposing of product are documented for when critical limits are exceeded 6.3 Verification procedures are developed 6.4 Verification is carried out to ensure the HACCP system is working effectively
7. Establish documentation and record keeping requirements	7.1 All HACCP procedures are documented 7.2 Records are maintained including the collection of continuous monitoring data if required 7.3 Records are accessed to determine that procedures in place are maintaining critical limits at each critical control point 7.4 HACCP procedures are accessed and reviewed as part of continuous improvement 7.5 Food safety systems and documentation are designed to meet the requirements of auditing standards

Required Skills and Knowledge

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

Required skills include:

Ability to:

- specify personal roles and responsibilities for the development or review of a food safety program
- develop a full description of a product
- document the intended end use of a product
- document processes and steps to be covered in production
- develop a flow chart for a food processing operation
- establish critical control points for a process
- identify food safety hazards at all stages of production
- apply decision making tools
- establish critical limits for critical control points and methods of monitoring and recording
- establish procedures for implementing preventative action
- develop monitoring plans for person responsible for each critical control point, and the information to be recorded
- communicate corrective action requirements in the event that acceptable limits or requirements of support programs are not met
- develop or review documentation relating to the design and maintenance of the food safety program, including process flow diagrams, hazard analysis charts and tables, support program requirements, data analysis reports, corrective action reports and verification reports
- develop or review documentation to communicate food safety responsibilities, such as standard operating procedures (SOPs), processing parameters and recording devices (e.g. log sheets)
- communicate food safety responsibilities within level of responsibility using techniques and presentation styles appropriate to the audience.

Required knowledge includes:

Knowledge of:

- the purpose and intent of food safety legislation
- purpose and responsibilities for maintaining records as required by legislation and workplace procedures
- roles and responsibilities for development and maintenance of the food safety program, including internal and external auditors, and authorised officers
- HACCP-based principles and their application to food safety, including techniques for identifying hazards, assessing the likelihood of occurrence, determining acceptable methods of control, monitoring and recording requirements for each control point, identifying corrective action if controls are not met, and developing system review

procedures

- procedures for establishing the critical limits and monitoring data or processes
- techniques used to map operations and analyse food safety requirements, such as the preparation of flow charts, hazard analysis charts and tables, and data analysis reports
- raw materials, ingredients and finished product composition and characteristics, and related handling and storage requirements
- food processing methods used in the workplace or work area and their effect on food safety
- sources of technical expertise on food safety requirements
- the role of consultation in the development, implementation and ongoing maintenance of the food safety program
- documentation and recording requirements to support communication and monitoring of the food safety program, including procedures for maintaining and updating relevant documents, such as operating procedures
- main types of food safety hazards/contamination likely to occur given the type of product and processing methods used
- conditions required for bacterial food poisoning to occur, such as aw (water activity), pH, composition, time and temperature, as relevant to food handled
- acceptable control methods for the hazards identified and required corrective action when control requirements are not met
- typical support programs, such as cleaning schedules, pest control, stock rotation, product traceability and personal hygiene, and how they can be used as part of a food safety program
- acceptable control methods for the hazards identified and required corrective action when control requirements are not met
- validation and verification processes and techniques and responsibilities.

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	A person who demonstrates competency in this unit must be able to develop a HACCP-based food safety program, and develop procedures for its implementation and monitoring.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	All elements, performance criteria, and required skills and knowledge should be captured in a holistic assessment plan. Critical aspects of assessment must include the following: • conduct a hazard analysis • determine the critical control points • establish critical limits • develop a system to monitor control of the critical control points • nominate the corrective action to be taken when monitoring indicates a critical control point is not under control • develop verification procedures to confirm the HACCP system is working effectively • maintain documentation concerning all procedures and records.
Context of and specific resources for assessment	Assessment must occur in a real or simulated workplace where the candidate has access to: • workplace food safety program documentation • organisational policies on food safety and risk management • procedures for developing or modifying specifications and other advice on food safety requirements • a food processing operation with a defined product and consumer • resources and equipment to set and monitor critical limits • procedures for developing or modifying documentation, such as work instructions and procedures, log sheets and other recording requirements • communication systems • training system

	• reporting/recording system.
Method of assessment	Assessment methods must satisfy the endorsed Assessment Guidelines of FDF10 Food Processing Industry Training Package. The following assessment methods should be considered to gather sufficient and valid evidence of competency: • records-based evidence and supporting statements for developing a HACCP-based food safety plan • questioning to ensure a detailed understanding of the steps and techniques used to develop and review a HACCP-based food safety program. 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

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.

Food safety programs	A food safety program is a written document that specifies ‘...<i>the systematic identification of hazard points, in the production, processing and sale of food and the implementation of risk avoidance, risk minimisation and risk management strategies in respect of these identified hazards.</i>’ (National Food Authority 1994, p17). The food safety program must provide for the systematic monitoring of the controls as well as appropriate corrective action if a hazard is found not to be under control. Records must be kept to demonstrate action in relation to, or in compliance with, the food safety program. A food safety program may be developed as a stand-alone program or may be integrated with the quality program in a workplace
Hazard analysis	Hazard analysis may cover • the likelihood of occurrence and severity of consequence • the qualitative and/or quantitative evaluation of the presence of hazards • the survival or multiplication of microorganisms of concern • the production or persistence of toxins, chemical residues or physical agents in food
Methods used to control hazards	Methods used to control hazards include both support programs and specific hazard control limits or requirements. Typical examples of support programs include: • product recall • cleaning schedules • pest control programs • personal hygiene practices • calibration procedures • related operating procedures
Description of the product	A full description of the product may include:

	• relevant safety information, such as composition, physical/ chemical structure, microcidal/ static treatments (e.g. heat-treatment, freezing, brining or smoking) • packaging durability • storage conditions • methods of distribution
Operating principles for a HACCP system	A HACCP system should be operated on a food chain where the Codex General Principles of Food Hygiene have been applied, and the appropriate Codex Codes of Practice and legislation is in place
Food safety hazards	Food safety hazards include: • microbiological • chemical • physical
Critical limits	Critical limits may include measured data such as: • temperature • time • moisture level • pH • a_w • available chlorine • sensory parameters, such as visual appearance and texture
Validation	Validation refers to: • the use of objective evidence in order to prove that materials, processes, procedures or equipment used are capable of delivering the intended result
Verification	Verification refers to: • reviewing all aspects of the food safety program and related records to determine compliance with and adequacy of the food safety program. At a minimum, food safety programs must be verified annually
Scope of the HACCP based plans	The scope of the HACCP-based plan depends on workplace requirements and may extend outside the direct area of responsibility of the team participants
Auditing standards	Auditing standards may include any of the recognised standards applying to the food industry, including:

	• BRC Global Food Standard • Codex Alimentarius • ISO 22000:2005 Food safety management systems - Requirements for any organization in the food chain
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Unit Sector(s)

Food safety