FDFFST4003A Apply digital technology in food processing

Release: 2

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Modification History

April 2012: Minor typographical corrections.

Unit Descriptor

This unit covers the skills and knowledge required to develop and manage a HACCP-based Quality Assurance (QA) Program.

Application of the Unit

This unit applies to quality assurance and technical staff who have responsibility for developing and/or implementing a HACCP-based QA system in a food processing environment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

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. Establish the scope of the QA system	1.1 Enterprise needs and expectations in product quality are clearly defined
	1.2 Existing systems and requirements are detailed for incorporation into the QA system
	1.3 Scope of the HACCP-based quality system is defined to encompass production system and product requirements
	1.4 System is directed to prevent and control identified hazards
2. Conduct hazard analysis and assessment	2.1 Every step in the production process is assessed for potential food safety hazards
	2.2 Critical Control Points (CCPs) are established to identify where each significant hazard can be prevented or controlled
	2.3 A measurable or recognisable standard is assigned for each CCP to define the critical limits
	2.4 Critical limits are technically and scientifically validated
3. Ensure all documents, work procedures and processes required for the system are developed, available and in use	3.1 All products and processes covered by the QA system are described in a standardised format defining product characteristics relevant to food safety
	3.2 Work instructions and Standard Operating Procedures (SOPs) are reviewed for accuracy, relevance and sufficiency to prevent hazards
	3.3 Documented procedures for monitoring CCPs are implemented
	3.4 Documented procedures which ensure any CCPs which are outside critical limits are brought back within limits, and affected product is suitably handled, are implemented
	3.5 Documented procedures are implemented to ensure the QA system is regularly verified and audited as working effectively
	3.6 Availability and data storage of all records and documents for the system is maintained
4. Respond to non-conforming product or processes	4.1 Procedures for taking corrective action are identified
	4.2 Corrective and preventative measures are implemented to prevent recurrence
	4.3 Procedures are devised or revised to support control measures
	4.4 Processes or conditions which could result in a breach of procedures are identified and corrective action is taken
	4.5 Process changes are introduced and controlled so that quality assurance requirements are accomplished
5. Review product sampling and test results	5.1 Product sampling procedures are identified
	5.2 Post collection procedures are identified according to SOPs
	5.3 Test results are reviewed and responded to in accordance with

ELEMENT	PERFORMANCE CRITERIA
	workplace requirements
6. Audit, verify and validate the system	6.1 HACCP plans are routinely revised, verified and validated to reassess hazards, CCPs, critical limits, testing methods and all related procedures of the QA system to ensure they are appropriate to the enterprise requirements
	6.2 Internal or external audit findings are followed up and acted upon
	6.3 Reported quality hazards and non conformances are investigated and acted upon
	6.4 The HACCP-based QA system is reviewed to take account of any process changes or product specifications

Required Skills and Knowledge

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

Required skills include:

Ability to:

- define the scope of the quality system and food safety system to ensure requirements are met
- apply the HACCP principles and the process for developing a quality assurance or food safety program
- conduct monitoring of a CCP
- determine and take corrective and preventative action
- apply workplace, regulatory and customer requirements critical to the workplace's operation and success
- identify critical limits for enterprise product or processes
- identify the actual and potential risks associated with uncontrolled changes in procedures
- interpret the resulting trends of product monitoring and testing
- interpret the results and trends of process monitoring
- monitor records and documentation for accuracy and compliance
- monitor the accurate and timely recording of quality data
- outline legal obligations of the enterprise and individuals for maintenance of the Quality Assurance system
- identify and apply relevant OH&S, regulatory and workplace requirements
- identify the documentation required to support a HACCP-based QA system
- record and analyse monitoring and verification data
- validate CCPs and critical limits
- identify and describe implementation of a change in the process
- identify causes of variation and non-conformance and explain appropriate course(s) of action to rectify problems
- outline team requirements and team management processes or strategies
- prepare process and product status reports recommending changes to improve processes and procedures
- prepare reports using primary and summary data, and appropriate language
- review communication systems (spoken and written) to minimise the potential for misreporting and misunderstanding of food safety requirements, procedures and plans
- use relevant communication skills
- Utilise available technology to record, manipulate, analyse and present or report data
- apply appropriate mathematical concepts and measures
- assemble product and process inspection, test and other quality data in prescribed formal.

Required knowledge includes:

Knowledge of:

- the steps in the development of a HACCP-based QA system

- the steps in the systematic introduction of a HACCP-based QA system
- enterprise recall and traceability procedures
- post collection procedures for handling samples
- purpose of the HACCP development and review process
- risks associated with samples and how they may be minimised
- the types of data the enterprise uses to record performance
- the document controls associated with a procedure change
- the purpose of calibrating equipment
- the purpose of SOPs and work instructions
- sampling procedures
- the process of auditing and verifying a HACCP-based QA system
- the objectives of a HACCP-based QA system
- the process for validating critical limits and CCPs
- the role of pre-requisite programs and Good Manufacturing Processes (GMPs) in a HACCP-based program.

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 and manage a HACCP-based Quality Assurance (QA) Program.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Critical aspects of evidence that the candidate can monitor the development and implementation of a food QA system must include the following: • scoping the requirements for a QA system • analysing a production process to identify CCPs and establish critical limits • developing procedures for implementing and monitoring a QA system • maintaining data and documentation for a QA system • contributing to a review of a QA system, including verification and validation.
Context of and specific resources for assessment	Assessment of performance requirements in this unit should be undertaken within the context of food technology. Competency is demonstrated by performance of the processes specified, including the critical aspects and knowledge and skills elaborated in the Evidence Guide, and within the scope as defined by the Range Statements applicable to the workplace environment. Assessment must occur in a real or simulated workplace where the assessee has access to: • production process and related equipment, manufacturers' advice and operating procedures • methods and related software systems as required for collecting data and calculating yields, efficiencies and material variances appropriate to production environment • tests used to report relevant product/process information and recorded results.
Method of assessment	The following assessment methods are suggested: • written and/or oral questioning to assess knowledge and understanding • the development of a HACCP-based quality system for a food product

	· a report on review of a HACCP-based quality production system · workplace evidence and third party verification of participation in the development and implementation of a HACCP-based QA system · Case studies · Field Reports.
Guidance information for assessment	Evidence should be gathered over a period of time in a range of actual or simulated environments.

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.

Occupational health and safety requirements	• Codes of practice • Material Safety Data Sheets • Enterprise OHS policies, procedures and programs.
Regulations	• Australian and international standards including: • Australia New Zealand Food Standards Code • ISO Standards • codex alimentarius • industry guidelines and codes of practice • industry regulations • State food regulations.
Workplace requirements	• Enterprise QA policy, practices and procedures • Enterprise-specific procedures • SOPs Enterprise task requirements and work instructions
Production system and product requirements	• These may include food safety, product quality, regulatory compliance, animal welfare (if required) and preventative maintenance.
Verification of a QA system	• Verification **refers to** methods and procedures used to carry out monitoring, including sampling and testing to provide evidence that the specifications set by relevant legislation and codes of practice continue to be met.
Validation of a QA system	• Validation refers to obtaining evidence to confirm that a HACCP-based QA program is complete and effective and will deliver the expected outcomes.

Unit Sector(s)

Technical.