



Australian Government

Department of Education, Employment and Workplace Relations

FDFTEC3003A Apply raw materials, ingredient and process knowledge to production problems

Release: 1

FDFTEC3003A Apply raw materials, ingredient and process knowledge to production problems

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers skills and knowledge required to apply knowledge of ingredients and processes to troubleshoot typical problems that occur in preparing, processing and/or packaging product.
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Application of the Unit

Application of the unit	This unit applies where problem solving occurs over one or more processes and requires an understanding of the characteristics of raw materials and ingredients and processing methods used. It typically applies to the production operator where responsibility for solving problems relating to non-conforming raw materials, ingredients and processes.
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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
<p>1. Identify and respond to non-conforming ingredients/raw materials</p>	<p>1.1. Non-conformance in raw materials/ingredients is identified and reported according to workplace reporting requirements</p> <p>1.2. Causes of non-conformance are investigated and reported according to workplace reporting requirements</p> <p>1.3. Corrective action is determined and implemented within level of responsibility and workplace procedures</p> <p>1.4. Action is taken to prevent recurrence of non-conformance</p> <p>1.5. Action is reported according to workplace reporting requirements</p>
<p>2. Identify and respond to non-conforming product and processes</p>	<p>2.1. Processing parameters, stages and changes which occur during processing are monitored</p> <p>2.2. Non-conformance in processing, handling and/or storage is identified and corrective action taken according to workplace requirements</p> <p>2.3. Causes of non-conformance relating to processing, handling and/or storage are investigated and reported according to workplace reporting requirements</p> <p>2.4. Corrective action is determined and implemented within level of responsibility and workplace procedures</p> <p>2.5. Action is taken to prevent recurrence of non-conformance</p> <p>2.6. Action is reported according to workplace reporting requirements</p> <p>2.7. Work is conducted in accordance with workplace environmental guidelines</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Ability to:

- identify requirements of ingredient/raw material characteristics within level of responsibility
- follow procedures to identify, remove/isolate and report non-conforming ingredients/materials and/or product according to workplace reporting requirements
- determine likely causes of non-conformance of ingredients/raw materials
- recognise indicators of unacceptable or non-conforming processing, handling and/or storage outcomes
- act promptly to identify, remove/isolate and report non-conforming product and/or processes
- access and apply workplace information relating to process troubleshooting
- investigate non-conformance to determine likely causes and report findings to appropriate personnel
- identify action required to correct non-conformance and implement within level of responsibility
- identify action required to prevent or minimise and control recurrence of non-conformance and implement within level of responsibility
- complete workplace records, including reporting non-conformance and documenting corrective actions according to workplace recording procedures
- conduct tests to confirm raw material/ingredient and/or final product quality characteristics according to enterprise procedures
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor
- work cooperatively within a culturally diverse workforce

Required knowledge

Knowledge of:

- basic composition and function of each main raw material/ingredient used, such as awareness of ingredient grades or types
- common causes of contamination/unacceptable quality of raw materials/ingredients
- methods used to confirm quality standard, such as accessing information (e.g. certificates of analysis and/or laboratory clearance information)
- the effect of variation in raw materials/ingredients on processing stages and final product outcome, including factors likely to cause variation, and scope to adjust or

REQUIRED SKILLS AND KNOWLEDGE

- correct for variation at each processing stage
- appropriate handling and storage requirements for raw materials/ingredients and final product, and the effect of failing to meet required storage conditions
- the changes and reactions that occur through processing stages, including the signs and symptoms of poor/unacceptable processing or equipment operation
- factors that affect the shelf-life of product
- the inter-relationships between processing stages and the effect of variation in processing parameters on process outcome and on final product, including factors likely to cause variation, and scope to adjust or correct for variation at subsequent process stages
- procedures for identifying and isolating non-conforming product
- troubleshooting information and techniques
- procedures and related documentation required to amend or introduce a new method or procedure, such as short term procedures for amending or updating specifications and processing parameters
- reporting requirements and responsibilities
- test methods to confirm raw material/ingredient and/or final product quality characteristics where relevant

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
<p>Overview of assessment</p>	<p>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.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> • describe required quality characteristics for raw materials and ingredients • describe required processes to achieve production specifications • identify common non-conforming materials and ingredients and causes • identify common non-conforming processes and causes • determine and undertake corrective action for non-conformances • complete workplace documentation and report non-conformances • apply food safety procedures.
<p>Context of and specific resources for assessment</p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> • ingredient/raw materials specifications and related advice, such as certificates of analysis • ingredients/raw materials and final product and related processing equipment and stores areas • troubleshooting information relevant to workplace processes • sampling and test equipment and procedures as required • system for managing and updating workplace documents, such as Standard Operating Procedures (SOPs) and log sheets/processing parameters • reporting and recording system and procedures.
<p>Method of assessment</p>	<p>This unit should be assessed together with core units and other units of competency relevant to the function or</p>

EVIDENCE GUIDE	
	<p>work role. Examples could be:</p> <ul style="list-style-type: none">• FDFOP2013A Apply sampling procedures• FDFPPL3002A Report on workplace performance• MSL973001A Perform basic tests• PMBQUAL390A Solve problems using quality tools.
Guidance information for assessment	<p>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.</p>

Range Statement

RANGE STATEMENT	
<p>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.</p>	
Policies and procedures	<p>Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.</p>
Legislative requirements	<p>Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes:</p> <ul style="list-style-type: none"> • the Food Standards Code, including labelling, weights and measures legislation • legislation covering food safety, environmental management, occupational health and safety (OHS), anti-discrimination and equal opportunity <p>When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply in place of the Food Standards Code and reference to food safety is replaced by GMP</p>
Ingredients/raw materials	<p>Ingredients/raw materials are those used to manufacture product</p>
Typical processing and related techniques	<p>Typical processing and related techniques include but are not limited to:</p> <ul style="list-style-type: none"> • raw materials/ingredient dispensing • preparation • mixing and blending • conditioning • primary and further processing • wrapping • packing and storage
Typical process parameters	<p>Typical process parameters include but are not limited to:</p> <ul style="list-style-type: none"> • temperature

RANGE STATEMENT	
	<ul style="list-style-type: none"> • time • pressure • flow rate
Typical reactions	Typical reactions depend on processing method. Examples include but are not limited to: <ul style="list-style-type: none"> • gelatinisation and hydration
Problem minimisation	Where recurrence of a problem cannot be prevented, procedures should be established to minimise the likelihood of recurrence and to identify any further incidents

Unit Sector(s)

Unit sector	Technical
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		