



Australian Government

Department of Education, Employment and Workplace Relations

FDFST4030A Implement and review the processing of chocolate and sugar-panned products

Release: 2

FDFST4030A Implement and review the processing of chocolate and sugar-panned products

Modification History

April 2012: Minor typographical corrections.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to implement and review the standards and procedures for manufacture of chocolate and sugar-panned products.
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Application of the Unit

Application of the unit	<p>This unit applies to food science and technology personnel who have roles in product design, quality assurance and production management. The unit typically applies to staff who have responsibility for maintaining product safety, quality and efficiency in food production in the confectionery sector.</p> <p>This unit includes using knowledge of food science and processes to determine the required food safety, quality and performance required from food production equipment. Depending on the workplace application, liaison may be required with engineering and maintenance specialists.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Unit sector	Technical
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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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the manufacture of chocolate and sugar-panned products	<ul style="list-style-type: none">1.1 The statutory compositional requirements for the different types of chocolate and sugar-panned products is established1.2 The required formulation of chocolate and sugar-panned products is selected1.3 The appropriate production system and the preferred sequence of activity to prepare the system for operation is selected.1.4 Equipment is prepared and safe operating procedures accessed for its operation
2. Monitor the preparation and manufacture of chocolate and sugar-panned products to ensure quality standards are met	<ul style="list-style-type: none">2.1 A production schedule is implemented to ensure all resources and requirements are available and meet company requirements2.2 Production system is set to operating specifications before and during production2.3 Data requirements and collection points appropriate for food safety, quality and production standards are documented2.4 Procedures to deal with non-conformance in relation to process and the final product are developed2.5 Concentration and drying procedures are implemented and monitored2.6 Process controls for chocolate and sugar-panned products are monitored
3. Diagnose, rectify and/or report problem arising from the manufacture of chocolate and sugar-panned products	<ul style="list-style-type: none">3.1 Sensory evaluation and product testing protocols are established to identify defects and maintain organoleptic quality of product3.2 Identified adjustments to inputs, process and equipment are implemented3.3 Problems are reported to designated person according to company policies and procedures
4. Review production processes	<ul style="list-style-type: none">4.1 The critical control points (CCPs) and critical limits for product safety are reviewed4.2 A sampling plan is developed and implemented4.3 Sensory analysis is conducted and analysed4.4 Food tests are undertaken and data generated for the product label4.5 Operating procedures and the process control system are reviewed for food safety and quality4.6 Safe work systems for processing of chocolate and sugar-panned products are reviewed4.7 Environmental impacts and energy efficiencies are reviewed for processing of chocolate and sugar-panned products

Required Skills and Knowledge

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

Required skills include:

Ability to:

- interpret market specifications for chocolate and sugar-panned products
- plan production processes to manufacture chocolate and sugar-panned products
- monitor the output of each of the processes used in the preparation and manufacture of chocolate and sugar-panned products
- implement production systems for preparation and manufacture of chocolate and sugar-panned products
- recognise the organoleptic properties of different types of chocolate and sugar-panned products
- operate equipment and accessories used in the preparation and manufacture of chocolate and sugar-panned products.

Required knowledge includes:

Knowledge of:

- the types of chocolate and sugar panned products, their formulation, and the type of coating process used in their production
- the relevant properties of the various centres used in panned products, including melting point, moisture content, shape, size, surface finish and preparation
- crystallisation behaviour of fats, sugars and sugar substitute materials
- the effect of air flow, air temperature and air humidity on the drying/setting rates of coatings and the relationship to product characteristics
- polishing materials and methods and their application
- production systems used for the production of panned products including types of coating pans, methods of coating material addition and process air supply requirements
- the production system for the preparation and manufacture of chocolate and sugar-panned products including production instruction, quality assurance requirements and or/specifications, production specification and or/standards, production equipment, production procedures, cleaning procedures and materials and raw materials
- critical factors in the preparation and manufacture of chocolate and sugar-panned products
- resource requirements for the preparation and manufacture of chocolate and sugar-panned products
- potential product defects and their causes, which may arise in the preparation and manufacture of chocolate and sugar-panned products
- stages of production, CCPs and critical limits
- packaging procedures
- quality and continuous improvement processes
- sensory analysis techniques
- safe systems of work.

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	A person who demonstrates competency in this unit must be able to review the preparation and manufacture of chocolate and sugar-panned products based on product testing and sensory analysis
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Critical aspects of assessment must include evidence of the ability to produce chocolate and sugar-panned products to specification including: implementing process control procedures and data collection; diagnosing and reporting problems for manufacturing; carrying out sensory evaluation and product testing; and reviewing the production system for food safety and quality and environmental impact.
Context of and specific resources for assessment	<p>Assessment of performance requirements in this unit should be undertaken within the context of food technology. Competency is demonstrated by performance of all stated criteria, 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.</p> <p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> • 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	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> • Observation of candidate manufacturing samples and conducting a range of tests and procedures • Written and/or oral questioning to assess knowledge and understanding • Completing workplace documentation

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Third party reports from experienced practitioner • 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

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	Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
Legislation	Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labelling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.
OHS requirements	<ul style="list-style-type: none"> • legislation, regulations, Codes of practice • safety data sheets (SDSs) • enterprise and process specific occupational health and safety requirements
Chocolate and sugar-panned products	These include all products produced by a panning process including panned nuts, moulded chocolate balls and discs, gum, jelly beans and nougat balls

Unit Sector(s)

Unit sector	Technical
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