



Australian Government

Department of Education, Employment and Workplace Relations

FDFST5023A Implement and review the production of milk fat products

Release: 2

FDFST5023A Implement and review the production of milk fat products

Modification History

April 2012: Minor typographical corrections.

Unit Descriptor

This unit covers the skills and knowledge required to implement and review the standards and procedures for manufacture of milk fat products.

Application of the Unit

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 dairy processing sector. 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.

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. Manufacture milk fat products	1.1 The specifications for the end product are interpreted 1.2 Data requirements and collection points appropriate for food safety, quality and production standards are interpreted from procedures 1.3 Procedures to deal with non-conformance in relation to process and the final product are interpreted or developed 1.4 A safe working environment is provided for the manufacture of product samples 1.5 A range of sample milk fat products are manufactured
2. Monitor the manufacture of milk fat products to meet quality standards	2.1 Appropriate production system is selected, and the preferred sequence of activity to prepare the system for operation is determined 2.2 Resource requirements for the preparation and manufacture of milk fat products are verified and sourced 2.3 A production schedule is implemented to ensure all resources and requirements are available and meet company requirements 2.4 Production system is set to operating specifications before and during production 2.5 Process controls for the preparation and manufacture of milk fat products are implemented and supervised
3. Diagnose, rectify and/or report problem arising from the preparation and manufacture of manufactured milk products	3.1 Sensory evaluation and product testing used to identify defects is carried out 3.2 System used to identify defects in the preparation and manufacture of milk fat products is applied 3.3 Adjustments to process/equipment as identified are implemented 3.4 Problems are reported to designated person according to company policies and procedures
4. Review production processes	4.1 The critical control points (CCPs) and critical limits for product safety are reviewed 4.2 Operating procedures are reviewed for food safety and quality 4.3 The OHS plan is reviewed for processing of manufactured milk products 4.4 Environmental impacts and associated costs are reviewed for processing of manufactured milk products

Required Skills and Knowledge

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

Required skills include:

Ability to:

- document the steps in production for a range of manufactured milk fat products
- establish CCPs and critical limits for each step in production
- determine a production schedule for manufactured milk fat products
- carry out sensory evaluation and product testing
- overview the implementation of the HACCP plan
- carry out product sampling and testing according to the HACCP plan and operational procedures
- provide relevant information to work colleagues to facilitate understanding of, and compliance with, the Australian Standards and associated regulations
- take action to improve own work practice as a result of self-evaluation, feedback from others, or changed work practices, regulations or technology
- use technology to access information, prepare reports, and to access and prepare relevant data
- implement workplace OH&S procedures.

Required knowledge includes:

Knowledge of:

- the impact of processing on milk
- compositional requirements for a range of milk fat products
- manufacturing processes, including materials and equipment, involved in producing cream, butter, condensed milk, milk powder and milk with amendments or additives
- purpose of each process, and relationship between the processes, used in the preparation and manufacture of milk fat products
- principles of operation of equipment and accessories used in the preparation and manufacture of milk fat products
- output of each of the processes used in the preparation and manufacture of milk fat products
- critical factors in the preparation and manufacture of milk fat products
- potential product defects and their causes which may arise in the preparation and manufacture of milk fat products
- the various components of milk
- the hazards associated with raw milk
- the various spoilage organisms associated with milk
- composition of milk based products
- chemical and physical hazards which may affect milk
- procedures for milk storage, handling and preparation
- safe work procedures

- sanitation and hygiene procedures
- HACCP principles and critical limits in a HACCP program
- identification of CCPs and critical limits
- water and energy use and recycling in processing
- regulatory requirements associated with the preparation of milk fat products
- environmental impacts of the food processing operation.
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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 implement and review the standards and procedures for manufacture of milk fat products.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Critical aspects of assessment must include evidence of the ability to implement and review the production of milk fat products including implementing process control procedures and data collection for milk fat products, carrying out sensory evaluation and product testing, diagnosing and reporting problems for manufacturing of milk fat product, and reviewing the production system for food safety and quality and environmental impact.
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 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. 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 • Observation of candidate conducting a range of processes and tests • A report on a review of the production system.
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

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.

Legislation	Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes the Food Standards Code including labeling, weights and measures legislation; and legislation covering food safety, environmental management, occupational health and safety, anti-discrimination and equal opportunity.
Policies and procedures	Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
OHS requirements	• Legislation, regulations and Codes of practice • safety data sheets (SDSs) • enterprise and process specific occupational health and safety requirements.
Milk fat products	These may include cream, butter, anhydrous milk fat, dairy blends, reconstituted butter, aerated butters, ghi, cultured butter and butter milk.
Dairy products equipment	Dairy products processing equipment may include fermenting vessels, butter and cream centrifuge, heat exchangers, homogenisers, aseptic fillers, mix tanks, autoclaves, vacuum evaporation and spray drying equipment.

Unit Sector(s)

Technical.