



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FDFST5024A Implement and review the production of fermented dairy products and dairy desserts**

Release: 2

## **FDFST5024A Implement and review the production of fermented dairy products and dairy desserts**

### **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 fermented dairy products and dairy desserts.

### **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

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
1. Monitor the production of fermented dairy products and dairy desserts to meet quality standards	<ul style="list-style-type: none"><li>1.1 Appropriate production system is selected and the preferred sequence of activity, to prepare the system for operation, is implemented</li><li>1.2 Resource requirements for the preparation and manufacture of fermented dairy products and dairy desserts are documented and sourced</li><li>1.3 A production schedule is implemented to ensure all resources and requirements are available and meet company requirements</li><li>1.4 Data requirements appropriate for food safety, quality and production standards are interpreted</li><li>1.5 Data collection points consistent with equipment capabilities and data requirements are established</li><li>1.6 Procedures to deal with non-conformance in relation to process and the final product are developed</li><li>1.7 Production system is set to operating specifications before and during production</li><li>1.8 Process controls for the manufacture of fermented dairy products and dairy desserts are monitored</li></ul>
2. Diagnose, rectify and/or report problem arising from the preparation and manufacture of fermented milk products and dairy desserts	<ul style="list-style-type: none"><li>2.1 Sensory evaluation and product testing protocols used to identify defects and non compliant product are determined</li><li>2.2 A system to identify defects in the preparation and manufacture of fermented dairy products and dairy desserts is implemented</li><li>2.3 A sampling plan is developed and implemented</li><li>2.4 Sensory analysis is conducted and analysed</li><li>2.5 Food tests are undertaken</li><li>2.6 Adjustments to process/equipment as identified are implemented in response to analysed results</li><li>2.7 Problems are reported to designated person according to company policies and procedures</li></ul>
3. Review production processes for fermented milk products and dairy desserts	<ul style="list-style-type: none"><li>3.1 The CCPs and critical limits for product safety are reviewed</li><li>3.2 Operating procedures are reviewed for food safety and quality</li><li>3.3 Safe work systems for processing of fermented dairy products and dairy desserts are reviewed</li><li>3.4 Environmental impacts and energy efficiencies are reviewed for processing of fermented dairy products and dairy desserts</li></ul>

## Required Skills and Knowledge

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

### Required skills include:

---

#### Ability to:

- select the formulation of fermented dairy products and dairy desserts
- interpret a production schedule to ensure all resources and requirements are available and meet company requirements
- set the production system to operating specifications before and during production
- implement and supervise the production system for the preparation and manufacture of fermented dairy products and dairy desserts
- identify the potential product defects and their causes which may arise in the preparation and manufacture of fermented dairy products and dairy desserts
- determine and implement a system used to identify defects in the preparation and manufacture of fermented dairy products
- implement adjustments to process/equipment in response to system review
- report problems to designated person according to company policies and procedures
- 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:

- types of fermented dairy products and dairy desserts
- statutory compositional requirements for the different types of fermented dairy and dairy desserts
- the role of major ingredients in fermented dairy milk products and dairy desserts
- the interrelationships between suppliers of products and internal/external customers
- domestic and export markets for fermented dairy products and dairy desserts
- processes used in the preparation and manufacture of fermented dairy products and dairy desserts
- sequence of processes used in the preparation and manufacture of fermented dairy products and dairy desserts
- the output of each of the processes used in the preparation and manufacture of fermented

dairy products and dairy desserts

- the production systems used for the preparation and manufacture of each fermented dairy and dairy dessert product, and the preferred sequence of activity to prepare the system for operation
- the critical factors in the preparation and manufacture of fermented dairy products and dairy desserts
- the resource requirements for the preparation and manufacture of fermented dairy products
- principles of operation of equipment and accessories used in the preparation and manufacture of fermented dairy products and dairy desserts
- potential product defects and their causes which may arise in the preparation and manufacture of fermented dairy products and dairy desserts
- the fermentation process as applied to dairy products
- formulation of fermented dairy products
- the potential product defects in fermented dairy products and dairy desserts and their causes
- testing procedures for raw materials through to manufactured product
- packaging procedures
- quality and continuous improvement processes
- sensory analysis techniques
- chemical and physical hazards which may affect milk based products
- procedures for milk product storage, handling and preparation
- safe work procedures
- sanitation and hygiene procedures
- HACCP principles and critical limits in a HACCP program
- identification of Critical Control Points (CCPs) and critical limits
- water and energy use and recycling in processing
- regulatory requirements associated with fermented dairy products and dairy desserts
- environmental impacts of the food processing operation safe systems of work.

## 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>A person who demonstrates competency in this unit must be able to implement and review the standards and procedures for manufacture of fermented dairy products and dairy desserts.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Critical aspects of assessment must include evidence of the ability to implement production of fermented dairy products and dairy desserts including: monitoring process controls; diagnosing and reporting problems in manufacturing; carrying out sensory evaluation and product testing; and reviewing the production system for food safety and quality and environmental impact.</p>
<p>Context of and specific resources for assessment</p>	<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"> <li>• Production process and related equipment, manufacturers' advice and operating procedures</li> <li>• Methods and related software systems as required for collecting data and calculating yields, efficiencies and material variances appropriate to production environment</li> <li>• Tests used to report relevant product/process information and recorded results.</li> </ul>
<p>Method of assessment</p>	<p>The following assessment methods are suggested:</p> <ul style="list-style-type: none"> <li>• Observation of candidate conducting a range of processes and tests</li> <li>• Written and/or oral questioning to assess knowledge and understanding</li> <li>• Analysis of samples produced by the candidate</li> <li>• A report on a review of the production system.</li> </ul>
<p>Guidance information for assessment</p>	<p>Evidence should be gathered over a period of time in a</p>

	range of actual or simulated environments.
--	--

## 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>	
<b>Legislation</b>	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.
<b>Policies and procedures</b>	Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements.
<b>OHS requirements</b>	<ul style="list-style-type: none"> <li>• legislation, regulations, Codes of practice</li> <li>• safety data sheets (SDSs)</li> <li>• enterprise and process specific occupational health and safety requirements.</li> </ul>
<b>Materials and equipment</b>	<p>Fermentation equipment may include water baths, cabinets, tunnels, multipurpose tanks, fermentation tanks. Materials used in fermentation may include raw materials/pre-processed materials to be fermented, starters such as single strain starters, multiple strain cultures, mixed strains.</p> <p>Market of products includes internal and external customers and suppliers.</p>
<b>Fermented dairy products</b>	Include crème fraiche, kefir, cultured buttermilk and yoghurt and quark.

## Unit Sector(s)

Technical.