



Australian Government

FBPCHE3003 Conduct cheese making operations

Release: 1

FBPCHE3003 Conduct cheese making operations

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to carry out cheese making in a bulk production and packaging operation using an integrated industrial process, under the direction of the cheese manufacturing manager. The unit covers a number of cheese types.

This unit applies to individuals working as advanced operators in industrial cheese enterprises who take responsibility for their own work. It does not include milk preparation processes or cheese curing, portioning or retail packaging processes.

All work must be carried out to comply with workplace procedures, in accordance with state/territory health and safety and food safety regulations, legislation and standards that apply to the workplace.

No licensing, legislative or certification requirements are known to apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Cheese (CHE)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to work	1.1 Organise the work tasks to be completed 1.2 Identify workplace health and safety hazards, assess risks and implement control measures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.3 Identify food safety and quality non-compliance issues, and report to supervisor 1.4 Select and use appropriate personal protective equipment
2. Monitor milk supply and quality	2.1 Ensure the availability of milk supply for batch according to product specifications 2.2 Check the sample data on milk for composition, homogeneity, somatic cell count and disk assay according to specification 2.3 Maintain milk at temperature required for inoculation with the culture according to recipe and specifications
3. Prepare cheese making equipment and add ingredients	3.1 Ensure ingredients are available to meet product requirements 3.2 Measure ingredients to meet recipe requirements 3.3 Handle ingredients safely and according to procedures to maintain purity and viability 3.4 Ensure equipment is ready for use according to operating procedures and safety requirements 3.5 Set and operate cheese making equipment to meet specified requirements 3.6 Load ingredients into the plant at the required stage 3.7 Check the final mix against specifications
4. Carry out process control and make adjustments according to operating procedures	4.1 Implement equipment start-up and shutdown according to safety requirements and operating procedures 4.2 Identify and report equipment faults 4.3 Monitor cheese making processes, taking required samples according to workplace procedures 4.4 Carry out routine tests and record results according to workplace procedures 4.5 Adjust processing parameters as a result of test results, to ensure product meets specification 4.6 Package cheese for curing and distribution with correct batch number attached for traceability 4.7 Clean equipment to meet production and hygiene requirements after each batch
5. Meet workplace	5.1 Monitor cheese yield and compare to specification

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
requirements for yield, food safety, quality and environmental management	5.2 Maintain workplace records according to workplace procedures 5.3 Ensure waste is disposed of according to environmental guidelines

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Interpret recipes, operating procedures and specifications
Writing	Accurately complete production documentation to ensure traceability
Numeracy	- Accurately interpret volumes, weights and measures - Read gauges and scales and interpret results to determine actions - Calculate yield using established formula

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPCHE3003 Conduct cheese making operations	FBPCHE3001 Conduct cheese making operations	Foundation Skills refined Minor changes to Performance Criteria for clarity Assessment requirements updated	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

Assessment Requirements for FBPCHE3003 Conduct cheese making operations

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has conducted cheese making operations to produce at least one batch of cheese, including:

- applying food safety policies and procedures to work practices
- recording process parameters for traceability.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- purpose, basic principles and processes of cheese making, including:
 - the main components of milk and cheese (both curds and whey)
 - milk characteristics and components important in cheese making
 - milk preparation for cheese making (fat and protein standardisation, and pasteurisation)
 - types of starters used and their role in the fermentation process
 - effect of milk characteristics on cheese processing performance
 - use of coagulating enzymes and cutting aids in syneresis
 - use of adjunct cultures
 - moisture control in cheese making
 - organoleptic properties of cheese, and their relationship to processes and ingredients in cheese making
 - effects of pH and temperature on cheese processing performance and product quality
 - types and impact of inhibitory substances in milk
- cheese making equipment and operations, including:
 - equipment start-up, shutdown and emergency procedures
 - quality characteristics to be achieved by a cheese making process

- operation and routine maintenance requirements of cheese making and packing plant and equipment
- operational procedures for operating the cheese making process, including adding ingredients, testing, measuring and recording, and making limited adjustments to ingredient recipes or the operation of equipment according to procedures
- health and safety hazards and controls
- good manufacturing practices (GMP) relevant to work task
- sensory analysis techniques to identify product faults
- common causes of variation, and corrective action required for each stage of the cheese making operation, including:
 - microbial contaminants of cheese (lipolytic bacteria, yeasts, moulds, bacillus, listeria, E. coli, salmonella, coliforms and staphylococci), and their impact on cheese quality
 - impact of bacteriophage on the fermentation process
 - sampling and testing procedures for contaminant microbes
 - contamination risk of inoculants and contaminants
 - food safety risks associated with the process, and related control measures
 - sampling and testing procedures for cheese quality
- packaging procedures
- product/batch changeover procedures
- line responsibility for reporting production and performance information
- cleaning and hygiene management of cheese making, including:
 - food safety and quality assurance standards and procedures
 - hygiene, cleaning and sanitisation procedures in line with best manufacturing practice
 - Food Standards Code relevant to cheese making
 - routine maintenance procedures
- environmental issues and controls relevant to the process, including waste collection and handling procedures related to the process
- procedures to record traceability of product and ingredients.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a cheese production workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - cheese making production process and related equipment
 - equipment operating procedures, including control points and process settings
 - sampling and testing equipment
 - recording systems to meet food safety and quality assurance requirements
 - cheese making consumables

- personal protective equipment and safety data sheets (SDS)
- cleaning procedures, materials and equipment
- specifications:
 - workplace procedures, including safe work practices, food safety, quality and environmental requirements
 - sampling and testing procedures
 - product specifications and recipes.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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