



Australian Government

FBPCHE5002 Produce acid-coagulated soft cheese

Release: 1

FBPCHE5002 Produce acid-coagulated soft cheese

Modification History

Release	Comments
Release 1	This version released with the FBP Food, Beverage and Pharmaceutical Training Package Version 2.0.

Application

This unit of competency describes the skills and knowledge required to produce acid-coagulated soft cheeses to a commercial standard.

This unit applies to individuals employed as managers with responsibility for overseeing and developing operational procedures complying with workplace health and safety, food safety, recordkeeping and quality assurance requirements for the soft cheese making process.

No occupational licensing or certification requirements apply to this unit at the time of publication. However, legislative and regulatory requirements for food processing exist, so local requirements must be checked. All work must comply with Australian food safety standards and relevant codes of practice.

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. Maintain sanitation in acid-coagulated soft cheese making	1.1 Sanitise or pre-ripen a container of starter culture under aseptic conditions before tipping the contents into the vat to reduce the risk of infection or contamination 1.2 Ensure all surfaces, except curing boards, meet cleanliness and sanitisation requirements 1.3 Manage stringent hygiene and quarantine procedures

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Manage multi-phase cleaning systems to ensure sanitised surfaces and equipment 1.5 Record food safety related information according to workplace procedures
2. Implement procedures to prepare milk for acid-coagulated soft cheese making	2.1 Sample raw milk and measure and analyse composition and counts 2.2 Ensure clarification and standardisation procedures for raw milk are carried out 2.3 Ensure pasteurisation procedures for milk are performed 2.4 Maintain raw milk area separation from pasteurised milk operations
3. Inoculate the milk to promote coagulation	3.1 Add lactic culture to the milk and mix evenly according to cheese type and recipe 3.2 Add coagulating enzymes to the milk according to recipe 3.3 Maintain temperature throughout the tank or vat according to recipe 3.4 Maintain a log of pH and temperature to control ripening and yield
4. Develop procedures to process curds	4.1 Manage curd breaking or cutting according to recipe and workplace procedures 4.2 Measure and record whey fat content to assess curd breaking or cutting efficiency according to recipe and cheese type 4.3 Plan the processing schedule to ensure optimal syneresis 4.4 Develop and implement draining procedures to ensure curd is at required moisture, pH level and consistency
5. Manage packaging procedures for acid-coagulated soft cheeses	5.1 Manage ripening agents to acid-coagulated soft cheeses if required 5.2 Optimise curing by planning for and adjusting the key composition ratios of acid-coagulated soft cheeses 5.3 Use surface treatments according to cheese type and recipe 5.4 Manage packaging as appropriate for cheese type 5.5 Label the product with complete and accurate information as specified by legislation
6. Monitor and adjust process control to produce cheese with	6.1 Establish the process objectives of acid-coagulated soft cheese making

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
consistent taste and quality	6.2 Control the amount of moisture in acid-coagulated soft cheese by regulating syneresis 6.3 Adjust calcium phosphate levels to influence basic cheese structure if required 6.4 Control texture of the cheese by regulating pH, ripening agents, salt, moisture and fat 6.5 Control cheese flavour through choice of ingredients, such as milks, cultures, coagulating agents and salt, and pH levels 6.6 Optimise yield by establishing process control parameters
7. Carry out sensory analysis and grading of soft cheeses	7.1 Assess cheeses for evenness of texture, colour, finish and flavour 7.2 Analyse organoleptic properties of acid-coagulated soft cheese to identify possible changes to process control
8. Meet workplace requirements for food safety, quality and environmental management	8.1 Record food safety related information 8.2 Maintain records of cheese manufacture 8.3 Develop and implement work health and safety and environmental protection procedures through a risk management approach 8.4 Dispose of waste and review environmental impacts of the cheese making operation

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 and specifications from a variety of sources to consolidate information for cheese production
Numeracy	- Accurately weigh and measure ingredients for cheese making - Sample cheese to analyse pH, fat, moisture and salts - Calculate cheese yields
Navigate the world of work	Follow policies, procedures and legislative requirements for cheese making process

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPCHE5002 Produce acid-coagulated soft cheese	FDFCH4002A Produce acid-coagulated soft cheese	Updated to meet Standards for Training Packages Unit code updated to reflect AQF level Changes to Performance Criteria to clarify the intent of the unit	Equivalent unit

Links

Companion Volume Implementation Guides are found in VETNet: -

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

Assessment Requirements for FBPCHE5002 Produce acid-coagulated soft cheese

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Performance Evidence

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

There must be evidence that the individual has safely and effectively overseen the production of at least two different types of acid-coagulated soft cheese, including:

- measuring and mixing acid coagulants and additives
- inoculating milk and controlling ripening in the vat
- promoting syneresis to the required firmness and composition of curd
- separating whey from curd and press, where applicable, and salt curd
- monitoring storage and ripening (where applicable) conditions for acid-coagulated soft cheese
- adding ripening agents (lipases) and surface treatments to acid-coagulated soft cheeses
- maintaining records for cheese making
- maintaining hygiene and sanitation procedures in line with best manufacturing practice
- using multi-phase cleaning systems
- maintaining the viability and integrity of coagulating agents
- developing operating procedures for the cheese making process.

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:

- the main cheese types and the common processes for making different types of cheeses
- the main components of milk and cheese (both curds and whey)
- types and impact of inhibitory substances in milk, including bacteriophage
- purpose and basic principles of cheese making
- specifications of product at each stage of cheese making
- milk characteristics and components important in cheese making

- milk preparation for cheese making (standardisation, pasteurisation and homogenisation, if required)
- types of starters and adjuncts used and their role in the fermentation process
- effect of milk characteristics on cheese processing performance
- moisture control in cheese making
- processes of coagulation and syneresis and their role in cheese making
- curd size and its impact on moisture
- effects of pH and temperature on cheese processing performance and product quality
- microbial contaminants of cheese (lipolytic bacteria, yeasts, moulds, bacillus, listeria, Escherichia coli, salmonella, coliforms and staphylococci) and their impact on cheese quality
- contamination risk of inoculants and contaminants
- yeasts and moulds and other microorganisms of significance in cheese making
- temperature and humidity of curing
- ripening agents for different cheese types
- techniques used to monitor the cheese making process, such as inspecting, measuring and testing, as required by the process
- common causes of variation and corrective action required for each cheese making process
- organoleptic properties and their relationship to processes and ingredients in cheese making
- sampling and testing procedures for microbes
- sampling procedures for cheese making
- food safety and quality assurance standards and procedures
- cleaning and sanitation procedures in line with Australian Standards for cleaning in the dairy industry
- product/batch changeover procedures
- work health and safety hazards and controls
- procedures for recording production and performance information
- environmental issues and controls relevant to the process, including waste collection and handling procedures
- Food Standards Code
- state/territory, Commonwealth and industry requirements relevant to food processing.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a workplace setting or an environment that accurately represents a real food processing workplace
- resources, equipment and materials:
 - cheese making ingredients and production process equipment
 - sampling and testing equipment and procedures

- specifications:
 - manufacturers' advice and product specifications.

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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