



Australian Government

FBPCHE5004 Produce acid and heat coagulated cheese

Release: 1

FBPCHE5004 Produce acid and heat coagulated 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 a range of acid and heat coagulated 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 acid and heat coagulated 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 making acid and heat coagulated cheese	1.1 Ensure all surfaces are clean and sanitised except for curing boards 1.2 Supervise stringent hygiene and quarantine procedures 1.3 Apply multi-phase cleaning systems to ensure sanitised surfaces and equipment 1.4 Record food safety related information, including milk counts and

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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	cheese bacterial counts
2. Implement procedures to prepare whey, milk/whey blends or cream for artisan acid and heat coagulated cheese making	2.1 Measure and analyse composition and counts in raw milk samples 2.2 Implement standard procedures for preparing raw milk 2.3 Ensure the whey is heated to prevent further acidification according to recipe 2.4 Maintain raw milk in an area separate from pasteurised milk operations
3. Promote coagulation of both curds and whey	3.1 Raise the temperature of dairy liquid to temperature specified in recipe 3.2 Acidify the hot liquid to coagulate both casein and whey proteins according to recipe 3.3 Hold the curd in the curd and whey mixture after coagulation 3.4 Maintain a log of pH and temperature to monitor yield 3.5 Carry out draining
4. Manage cooking and packaging procedures for acid and heat coagulated cheeses	4.1 Plan the cooking schedule to ensure optimal coagulation of proteins 4.2 Implement draining procedures to ensure cheese is at required consistency 4.3 Apply salting treatments to ensure salt profile effects are minimised in the finished product 4.4 Cool cheeses before packing according to cooking and packaging procedures 4.5 Maintain aseptic conditions during cooling to minimise contamination with microbial contaminants 4.6 Apply packaging appropriate for acid and heat coagulated cooked cheeses 4.7 Label the product with complete and accurate information as specified by legislation
5. Monitor and adjust process control to produce cheese with consistent taste and quality	5.1 Establish the process objectives of acid and heat coagulated cooked cheese making 5.2 Control the texture of the cheese by regulating pH and fat 5.3 Control cheese flavour through choice of ingredients, such as whey, milk, cream, acidulant and salt

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	5.4 Establish process control parameters to optimise yield
6. Carry out sensory analysis and grading of acid and heat coagulated cheeses	6.1 Assess cheeses for evenness of texture, colour, finish and flavour 6.2 Grade cheeses according to texture, colour, finish and flavour 6.3 Analyse organoleptic properties of acid and heat coagulated cooked cheese to identify possible changes to process controls
7. Meet workplace requirements for food safety, quality and environmental management	7.1 Record food safety related information 7.2 Maintain records of cheese manufacture 7.3 Implement workplace health and safety and environmental protection procedures through a risk management approach 7.4 Implement food safety standards 7.5 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	- Weigh and measure ingredients for cheese making - Test cheese to analyse pH, moisture and salts - Accurately weigh and measure ingredients for cheese making
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
FBPCHE5004 Produce acid and heat coagulated cheese	FDFCH4004A Produce acid - heat coagulated cheese	Updated to meet Standards for Training Packages Unit code updated to reflect AQF level Minor changes to Performance Criteria to clarify the intent Minor change to title	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 FBPCHE5004 Produce acid and heat coagulated 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 effectively overseen the production of two different types of acid and heat coagulated cheese, including:

- acidifying a heated milk mixture to promote coagulation
- carrying out drainage operations
- carrying out the cooking process
- recovering curd in the cheese
- monitoring storage and ripening (where applicable) conditions for acid and heat coagulated cheese
- conducting tests for pH, moisture, fat and salt levels in cheese
- maintaining records for cheese making
- developing operating procedures for cheese making.

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 components of milk, whey and cream for making acid and heat coagulated cheese
- specifications of product at each stage of cheese making
- standardisation of dairy liquids for acid and heat coagulated cheese
- types of acid used for coagulation
- microbial contaminants of cheese (lipolytic bacteria, yeasts, moulds, bacillus, listeria, Escherichia coli, salmonella, coliforms and staphylococci) and their impact on cheese quality
- sampling and testing procedures for microbes
- yeasts and moulds and other microorganisms of significance in cheese making

- contamination and food safety risks associated with the process, and related control measures
- 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 procedures
- aseptic conditions and techniques for cheese making
- contamination risk of inoculants and contaminants
- food safety and quality assurance standards and procedures
- cleaning and sanitation procedures and Australian Standards
- routine maintenance procedures
- product/batch changeover procedures
- work health and safety hazards and controls
- hygiene procedures, including washing and decontamination
- procedures for recording production and performance information
- environmental issues and controls relevant to the process, including waste collection and handling procedures related to the process
- 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 workplace
- resources, equipment and materials:
 - ingredients, production process and related equipment for acid and heat coagulated cheese
 - 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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