



Australian Government

FBPDPR2004 Operate a cooling and hardening process

Release: 1

FBPDPR2004 Operate a cooling and hardening process

Modification History

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 1.0.

Application

This unit of competency describes the knowledge and skills required to set up, operate, adjust and shut down a process to cool and harden dairy products to specification.

This unit applies to individuals who apply basic operating principles to the operation and monitoring of equipment and processes used to cool and harden dairy products in a dairy products production environment.

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

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

Pre-requisite Unit

Nil

Unit Sector

Dairy processing (DPR)

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 the cooling and hardening process for operation	1.1 Confirm materials and personal protective equipment are available for operating requirements 1.2 Identify and confirm cleaning and maintenance requirements according to food safety requirements 1.3 Fit personal protective equipment and adjust machine components

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	and attachments needed for operating requirements 1.4 Enter parameters required to meet safety and operating requirements 1.5 Check and adjust equipment performance as required 1.6 Conduct pre-start checks according to workplace requirements
2. Operate and monitor the cooling and hardening process	2.1 Start up the cooling and hardening process according to workplace procedures 2.2 Monitor equipment to identify variation in operating conditions 2.3 Identify variation in equipment operation and report maintenance requirements 2.4 Confirm that specifications are met at each stage 2.5 Identify, rectify or report out-of-specification product or process outcomes 2.6 Maintain the work area according to workplace guidelines, work health and safety and food safety requirements 2.7 Enter information in workplace records in required format
3. Shut down the cooling and hardening process	3.1 Identify the appropriate shutdown procedure 3.2 Shut down the process safely according to workplace procedures 3.3 Identify and report maintenance requirements according to workplace procedures

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	Read and interpret standard operating procedures for the cooling and hardening process
Writing	Complete records according to workplace guidelines using paper-based and/or electronic media

Skill	Description
Numeracy	• Confirm process remains within specification for time, temperature, flow rates and pressure • Interpret recording devices and gauges
Navigate the world of work	• Apply workplace procedures to own role and responsibilities • Understand main tasks, responsibilities and boundaries of own role, including use of personal protective clothing and equipment, housekeeping standards and environmental care requirements • Maintain a clean and hazard-free work area • Maintain hygiene standards
Interact with others	• Report operational and safety information to relevant personnel using required communication method
Get the work done	• Solve routine problems according to workplace guidelines and using experience of past solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPDPR2004 Operate a cooling and hardening process	FDFDP2004A Operate a cooling and hardening process	Updated to meet Standards for Training Packages	Equivalent unit

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 FBPDPR2004 Operate a cooling and hardening process

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Performance Evidence

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

There must be evidence that, on at least one occasion, the individual has set up, operated and monitored, and shut down a cooling and hardening process, including:

- conducted pre-start checks on machinery used for cooling and hardening dairy products
- started, operated, monitored and adjusted the cooling and hardening process equipment to achieve required quality outcomes
- taken corrective action in response to typical faults and inconsistencies
- completed workplace records in required format
- applied safe work practices and identified work health and safety hazards and controls
- safely shut down equipment
- applied food safety procedures to work practices.

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 and basic principles of the cooling and hardening process, including:
 - the principles of heat transfer
 - the difference between latent heat energy transfer and sensible heat energy transfer
- basic operating principles of equipment, including:
 - main equipment components
 - status and purpose of guards
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
- the flow of the cooling and hardening process and the effect of product output on downstream processes
- stages and changes which occur during cooling and hardening

- quality characteristics to be achieved by cooling and hardening process
- effect of in-feed characteristics on cooling and hardening process performance
- operating requirements and parameters, and corrective action required where operation is outside specified operating parameters
- typical equipment faults and related causes, including:
 - signs and symptoms of faulty equipment
 - early warning signs of potential problems
- techniques used to monitor the cooling and hardening process, such as inspecting, measuring and testing as required by the process
- inspection or test points (control points) in the process, and the related procedures and recording requirements
- common causes of variation and corrective action required
- contamination and food safety risks associated with the process and related control measures
- work health and safety hazards and controls
- requirements of different shutdowns as appropriate to the process and workplace production requirements, including:
 - emergency and routine shutdowns
 - procedures to follow in the event of a power outage
- isolation, lock out and tag out procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the cooling and hardening process, including waste collection and handling procedures
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- routine maintenance procedures
- cleaning and sanitation procedures for cooling and hardening equipment.

Assessment Conditions

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

- physical conditions:
 - a workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective clothing and equipment
 - cooling and hardening process and related equipment and services
 - cleaning materials equipment and procedures
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - stock flow systems, production schedules and batch or recipe instructions
 - information on equipment capacity and operating parameters

- specifications, control points and processing parameters
- sampling schedules and test procedures and equipment
- documentation and recording requirements and procedures
- relationships:
 - interactions with team members and supervisors or realistic scenarios or roleplays.

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

Links

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