



Australian Government

FBPOPR2052 Operate a chocolate tempering process

Release: 1

FBPOPR2052 Operate a chocolate tempering 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 skills and knowledge required to set up, operate, adjust and shut down a chocolate tempering process.

This unit applies to individuals who work under general supervision and exercise limited autonomy in a food processing environment. It typically applies to the production worker responsible for applying basic operating principles to the operation and monitoring of a chocolate tempering process and associated equipment.

All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food safety regulations, legislation and standards 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

Operational (OPR)

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 for work in processing area	1.1 Confirm chocolate for tempering is available to meet operating requirements 1.2 Identify and confirm cleaning and maintenance requirements and status according to work health and safety and food safety

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 1.3 Wear appropriate personal protective clothing and ensure correct fit
2. Prepare the tempering equipment and process for operation	2.1 Fit machine components and related attachments and adjust to meet operating requirements 2.2 Enter processing and operating parameters to meet safety and production requirements 2.3 Check equipment performance and adjust according to operating procedures 2.4 Carry out pre-start checks according to work health and safety and operating procedures
3. Operate and monitor the tempering process	3.1 Start, operate and monitor the process for variation in operating conditions 3.2 Conduct and interpret temper tests and make required adjustments 3.3 Monitor the process to confirm that specifications are met 3.4 Identify, rectify and report out-of-specification equipment, product or process outcomes according to workplace requirements 3.5 Follow and apply workplace housekeeping and environmental procedures
4. Shut down the tempering process	4.1 Identify the appropriate shutdown procedure 4.2 Shut down the process according to work health and safety and operating procedures 4.3 Identify and report maintenance requirements according to workplace requirements 4.4 Maintain workplace records according to workplace requirements

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
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Skill	Description
Reading	- Interpret workplace and standard operating procedures relevant to job role - Interpret production requirements
Writing	Record operating, routine maintenance and shutdown information on paper-based and electronic media
Numeracy	- Monitor and interpret production and process control indicators and data - Monitor supply and flow of materials to and from the process
Navigate the world of work	- Apply workplace procedures to own role and responsibilities - Identify skills, knowledge and experience required for performing own role in the workplace - Ask questions to clarify understanding or seek further information
Interact with others	- Communicate and report operational and safety information to relevant personnel - Use modes of communication suitable to purpose to confirm understanding when conducting operational start-up and shutdown procedures
Get the work done	- Access and interpret process control panels and system - Maintain a clean and hazard-free work area - Identify out-of-specification standards and maintain quality specifications - Confirm equipment status and condition - Interpret process and equipment information to monitor process and respond to abnormal performance and variations

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR2052 Operate a chocolate tempering process	FDFOP2052A Operate a chocolate tempering 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 FBPOPR2052 Operate a chocolate tempering process

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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 operated a chocolate tempering process on at least one occasion, including:

- accessing workplace information to identify tempering process requirements
- selecting, fitting and using personal protective clothing and/or equipment
- confirming supply of necessary materials and services
- conducting pre-start checks, including:
 - inspecting equipment condition to identify any signs of wear
 - selecting appropriate settings and/or related parameters
 - cancelling isolation or lock-outs
 - confirming that equipment is clean and correctly configured for processing requirements
 - positioning sensors and controls correctly
 - ensuring any scheduled maintenance has been carried out
 - confirming that all safety guards are in place and operational
- starting, operating, monitoring and adjusting tempering process equipment to achieve required outcomes, including monitoring control points and conducting inspections to confirm process remains within specification, including:
 - setting pump speeds
 - checking temperature/zone settings
 - checking chocolate temperatures
- monitoring supply and flow of materials to and from the tempering process and equipment operation to confirm process remains within specification
- conducting temper test, interpreting results and determining adjustments
- taking corrective action in response to out-of-specification results
- responding to and/or reporting equipment failure within level of responsibility
- locating emergency stop functions on equipment

- following isolation and lock-out/tag-out procedures to take tempering process and related equipment off-line in preparation for cleaning and/or maintenance within level of responsibility
- completing workplace records
- maintaining work area to meet housekeeping standards
- using process control systems according to workplace procedures
- conducting routine maintenance according to workplace procedures
- cleaning and sanitising equipment according to workplace procedures
- following relevant work health and safety procedures.

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 tempering process, including:
 - basic understanding of the crystallisation behaviour of cocoa fat
 - relationship between crystal forms and melting points/temperatures
 - process stages, including heating, cooling, agitating, reheating and effect of each of these on outcomes
- basic operating principles of equipment for the tempering process, including:
 - main equipment components
 - temperature zones
 - status and purpose of guards
 - equipment operating capacities and applications
 - purpose and location of sensors and related feedback instrumentation
- services required for the chocolate tempering process and action to take if services are not available
- the flow of the tempering process and the effect of outputs on downstream processes
- quality characteristics required of chocolate for tempering and the effect of variation on tempering 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 and early warning signs of potential problems
- methods used to monitor the tempering process, including temper test procedures and the significance of results for tempering process adjustments
- inspection or test points (control points) in the process and the related procedures and recording requirements
- contamination/food safety risks associated with the tempering process and related control measures
- common causes of variation related to the chocolate tempering process and corrective action required
- work health and safety hazards and controls related to the chocolate tempering process

- requirements of different shutdowns as appropriate to the tempering process and workplace production requirements, including emergency and routine shutdowns, and procedures to follow in the event of a power outage
- isolation, lock-out and tag-out procedures and responsibilities relevant to the chocolate tempering process
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the tempering process, including waste/rework collection and handling procedures related to the process
- basic operating principles of process control, including the relationship between control panels and systems and the physical equipment
- cleaning and sanitation procedures for operating the chocolate tempering process.

Assessment Conditions

Assessment of skills 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
 - process and related equipment and services
 - chocolate to be tempered
 - tempermeter
 - sampling schedules and test procedures and equipment
 - cleaning procedures, materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - information on equipment capacity and operating parameters
 - recipe/batch instructions
 - specifications, control points and processing parameters
 - documentation and recording requirements and procedures.

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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