



Australian Government

FBPCON3007 Operate and monitor a chocolate refining process

Release: 1

FBPCON3007 Operate and monitor a chocolate refining process

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 set up, operate, monitor, adjust and shut down a chocolate mixing and refining process to produce 'flake', which will be conched.

This unit applies to individuals who work as production workers and are responsible for the operation and monitoring of mixing and refining equipment used in the manufacture of chocolate.

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 apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Confectionery (CON)

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 mix ingredients	1.1 Confirm materials are available for product specification 1.2 Identify safety requirements and wear appropriate personal protective equipment, ensuring correct fit

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 requirements for the task and product 1.4 Enter processing or operating parameters according to equipment operating instructions 1.5 Conduct pre-start checks according to operating parameters
2. Mix ingredients ready for refining process	2.1 Deliver ingredients and additives to the mixer in the required quantities and sequence to meet recipe specifications 2.2 Start and operate the mixing process safely according to operating instructions and safety procedures 2.3 Monitor equipment to identify variation in operating conditions 2.4 Adjust equipment operations to meet product specification 2.5 Take samples and confirm that specifications are met at each stage according to workplace procedures 2.6 Identify, adjust or report out-of-specification product or process outcomes according to workplace procedures
3. Prepare the refining equipment and process for operation	3.1 Confirm materials are available for product specification 3.2 Identify and confirm cleaning and maintenance requirements 3.3 Fit and adjust machine components and related attachments according to equipment operating instructions 3.4 Enter processing or operating parameters according to equipment operating instructions 3.5 Check and adjust equipment performance according to operating parameters 3.6 Carry out pre-start checks according to operating procedures
4. Operate and monitor equipment	4.1 Start and operate the refining process safely according to operating instructions and safety procedures 4.2 Monitor equipment and services to identify variation in operating conditions, including temperature of chilled water 4.3 Adjust equipment operations to meet product specification 4.4 Take samples and confirm that specifications are met at each stage 4.5 Identify, adjust or report out-of-specification product or process outcomes according to workplace procedures 4.6 Maintain the work area according to workplace 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>
	4.7 Maintain workplace records according to workplace procedures
5. Shut down the refining process	5.1 Identify the appropriate shutdown procedure according to operating instructions 5.2 Shut down the process safely according to shutdown procedures 5.3 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	Interpret information in recipes, equipment operational instructions and workplace procedures
Writing	Accurately enter operational data into production equipment
Numeracy	- Read and interpret equipment gauges and scales - Apply basic calculations to quantities in recipes for production volume and equipment - Measure distance between rollers

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPCON3007 Operate and monitor a chocolate refining process	FBPCON2008 Operate a chocolate refining process	Unit code and title updated to better match complexity of task Minor changes to Performance Criteria for clarity	Equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
		Foundation Skills refined Performance Evidence clarified Minor changes to Knowledge Evidence and Assessment Conditions	

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 FBPCON3007 Operate and monitor a chocolate refining process

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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 operated a chocolate refining process to produce at least one batch of chocolate flake to meet specifications, including:

- applying food safety procedures to work practices
- following safe work procedures
- taking corrective action in response to typical faults and inconsistencies.

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 mixing and refining chocolate, including:
 - processing stages in chocolate making and the role of mixing, refining and pre-refining as appropriate
 - ingredients used in chocolate and those introduced during refining, including ingredients in different types of chocolate, as appropriate to production requirements and an understanding of the quality requirements and role of each main ingredient
 - changes that occur in ingredients during mixing and refining
 - significance of particle size for product characteristics
- basic operating principles of equipment, including main equipment components, status and purpose of guards, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation
- services required, including water for cooling
- the flow of the mixing and refining process, and the effect of outputs on downstream processes
- quality requirements of ingredients used, and effect of variation on process performance and outputs
- quality characteristics required of the refined mass

- 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 mixing and refining process, including inspecting, measuring and testing as required by the process
- good manufacturing practices (GMP) relevant to work task
- inspection or test points (control points) in the process and the related procedures and recording requirements
- contamination and food safety risks and related control measures
- health and safety hazards and controls relevant to chocolate refining process
- requirements of different shutdowns as appropriate to the mixing and refining 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
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the mixing and refining process, including waste and 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 sanitisation procedures for chocolate refining equipment
- 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 workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - personal protective equipment
 - chocolate refining equipment
 - ingredients used in the preparation of chocolate products
 - sampling schedules and test procedures and equipment
 - cleaning materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements
 - information on chocolate refining equipment capacity and operating parameters
 - recipe/batch 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.

Links

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