Modification history

Release	Comments
Release 1	This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 5.0

FBPCON3XX2	Operate and monitor a boiled confectionery process
Application	This unit of competency describes the skills and knowledge required to set up, operate, monitor, adjust and shut down a high boil and low boil confectionery process. This unit applies to individuals who work as production workers and are responsible for the operation and monitoring of confectionery boiling equipment in a confectionery production environment. 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.
Prerequisite Unit	Nil
Unit Sector	Confectionery (CON)

Elements	Performance Criteria
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Prepare the high and low boil equipment and process for operation	1.1 Confirm materials are available according to specification 1.2 Identify safety requirements and wear appropriate personal protective equipment ensuring correct fit 1.3 Identify food safety requirements for the task and product 1.4 Select and combine ingredients for syrup in the sequence specified by batch or recipe instructions 1.5 Identify and confirm cleaning and maintenance requirements and status of high and low boil process equipment 1.6 Enter processing and operating parameters according to equipment operating instructions 1.7 Check and adjust equipment performance according to batch requirements and operating parameters 1.8 Carry out pre-start checks according to operating procedures
2. Operate and monitor the high and low boil process	2.1 Deliver ingredients and additives in the required quantities and sequence to meet recipe specifications 2.2 Start and operate the process safely according to operating instructions and safety procedures 2.3 Monitor equipment to identify variations in operating conditions 2.4 Adjust operations to meet product specification 2.5 Heat, cook and cool product according to specification 2.6 Take samples and test product to ensure it meets specifications 2.7 Identify, rectify or report out-of-specification product or process outcomes according to workplace procedures 2.8 Maintain the work area according to workplace procedures 2.9 Maintain workplace records according to workplace procedures
3. Shut down the high and low boil process	3.1 Identify the appropriate shutdown procedure according to operating instructions 3.2 Shut down the process safely according to shutdown 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	• Interpret information in recipes, equipment operational instructions and workplace procedures
Writing	• Accurately enter operational data into production equipment • Complete processing records using electronic, digital and/or paper-based formats
Numeracy	• Read and interpret equipment gauges and scales • Scale recipes up and down

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPCON3XX2 Operate and monitor a boiled confectionery process	FBPCON2002 Operate a boiled confectionery process	Unit code and title updated to better match complexity of task Minor changes to Performance Criteria to clarity task Foundation Skills refined Performance Evidence clarified Minor changes to Knowledge Evidence and Assessment Conditions	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

TITLE	Assessment requirements for FBPCON3XX2 Operate and monitor a boiled confectionery process

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 at least one high and/or low boiled confectionery process to produce a batch of confectionary 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 the high/low boil process relating to the range of products to be produced, including:
    - ingredients used and their purpose
    - syrup making (super saturated solutions)
    - relationship between temperature and moisture content
    - the effect of vacuum on processing
    - reactions including crystallisation
    - process stages
- basic operating principles of equipment, including main equipment components, status and purpose of guards, the effect of vacuum on the cooking process and further processing, equipment operating capacities and applications, and the purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available
- the flow of the high/low boil process and the effect of outputs on downstream processes
- quality requirements of materials used in low and high boil manufacture and effect of variation on process performance and outputs
- quality characteristics required of process outputs
- good manufacturing practices (GMP) relevant to work task
- methods used to further process high and low boils, including basic forming or extruding and stamping, cooling, pulling and aerating as required by product range
- 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 high/low boil process, including 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
- contamination and food safety risks associated with the high and low boil process and related control measures
- health and safety hazards and controls
- requirements of different shutdowns as appropriate to the high and low boil 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
- product and process changeover procedures and responsibilities
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the high and low boil process, including waste and rework collection and handling procedures related to the process
- basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment

Knowledge Evidence
• cleaning and sanitation procedures • procedures to record traceability of product.

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
    • mixing equipment, cookers and coolers
    • ingredients used in the preparation of high/low boil product
    • sampling schedules and test procedures and equipment
    • cleaning materials, equipment and procedures
• specifications:
    • work procedures, including advice on safe work practices, food safety, quality and environmental requirements
    • information on 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	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4