

Modification history

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

FBPOPR3XX6	Operate and monitor a retort process
Application	<p>This unit of competency describes the skills and knowledge required to set up, operate, adjust and shut down a retort process.</p> <p>This unit applies to individuals who work under general supervision 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 retort process and associated equipment.</p> <p>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.</p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Operational (OPR)

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 products are available to meet retorting requirements 1.2 Confirm equipment is clean and ready for operation according to work health, safety and food safety requirements 1.3 Identify safety requirements and wear appropriate personal protective clothing and equipment, ensuring correct fit
2. Prepare the retort 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 as required to meet safety and production requirements 2.3 Carry out pre-start checks according to workplace requirements
3. Operate and monitor equipment	3.1 Start up and operate the retort process according to standard operating procedures 3.2 Monitor retort equipment to ensure optimal operations 3.3 Troubleshoot solutions to processing issues where possible 3.4 Identify, adjust and report out-of-specification equipment, product or process outcomes according to workplace requirements 3.5 Follow and apply workplace housekeeping and waste disposal procedures
4. Shut down the retort process	4.1 Identify the appropriate shutdown procedure 4.2 Shut down the process according to safe work procedures 4.3 Identify and report maintenance requirements according to workplace procedures 4.4 Maintain workplace records according to workplace procedures

Foundation Skills	
<i>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.</i>	
Skill	Description
Reading	<ul style="list-style-type: none"> • Interpret standard operating procedures for the retort process • Interpret retort requirements
Writing	<ul style="list-style-type: none"> • Complete processing records using electronic, digital and/or paper-based formats
Numeracy	<ul style="list-style-type: none"> • Monitor and interpret production and process control indicators and data including pH, time/temperature, flow and pressure • Read gauges and scales • Monitor supply and flow of materials to and from the process

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
FBPOPR3XX6 Operate and monitor a retort process	FBPOPR2044 Operate a retort process	Minor changes to Performance Criteria to clarify intent 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
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TITLE	Assessment requirements for FBPOPR3XX6 Operate and monitor a retort process
Performance Evidence	
<p>An individual demonstrating competency in this unit must satisfy all of the elements and performance criteria of this unit.</p> <p>There must be evidence that the individual has operated a retort process to treat at least one batch of product to specification, including:</p> <ul style="list-style-type: none"> • starting, operating, monitoring and adjusting equipment to achieve required outcomes, including monitoring control points and conducting inspections as required to confirm process remains within specification, including: <ul style="list-style-type: none"> • time • temperature • pressure at each stage • taking corrective action in response to out-of-specification results • following safe work procedures. 	

Knowledge Evidence	
<p>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:</p> <ul style="list-style-type: none"> • purpose and basic principles of heat treatment and retort process, including: <ul style="list-style-type: none"> • relationship between time and temperature in the retort process • changes and requirements of each stage, including cooking, cooling and post-treatment container handling • the purpose and requirements of container coding • basic operating principles of equipment required for operating a retort process, including main equipment components, including: <ul style="list-style-type: none"> • thermometers, chart recorder, temperature control system, clock and pressure gauges • status and purpose of guards • equipment operating capacities and applications • purpose and location of sensors and related feedback instrumentation • different types of retort processes and products treated • the flow of the retort process and the effect of product output on downstream processes • quality characteristics required of the retorted product • effect of raw material characteristics on process performance • operating requirements and parameters and corrective action required where operation is outside specified operating parameters • typical equipment faults for a retort process operation and related causes, including: <ul style="list-style-type: none"> • signs and symptoms of faulty equipment • early warning signs of potential problems • techniques used to monitor the retort process, including inspecting, measuring and testing • inspection or test points (control points) in the process and the related procedures and recording requirements • contamination/cross contamination and food safety risks associated with the process and related control measures, including both the risks of contamination related to processing and to post-processing handling of containers • time and temperature required to ensure product becomes sterile • common causes of variation and corrective action required, including the effects of variables, including container size, product particulates, pH, time/temperature and pressure on process outcomes • health and safety hazards and controls relevant to operating a retort process • requirements of different shutdowns as appropriate to the process and workplace production requirements, including emergency and routine shutdowns, and procedures to follow in the event of a power outage • good manufacturing practices (GMP) relevant to work task • isolation, lock-out and tag-out procedures and responsibilities required for operating a retort process • procedures and responsibility for reporting production and performance information 	

Knowledge Evidence	
<ul style="list-style-type: none"> environmental issues and controls relevant to the 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 required for retorting equipment procedures to record traceability of product. 	
Assessment Conditions	
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> physical conditions: <ul style="list-style-type: none"> a workplace or an environment that accurately represents workplace conditions resources, equipment and materials: <ul style="list-style-type: none"> personal protective clothing and equipment retort equipment and related services product to be retorted cleaning materials and equipment specifications: <ul style="list-style-type: none"> work procedures, including advice on safe work practices, food safety, and quality requirements information on equipment capacity and operating parameters production schedule/batch specifications, control points and processing parameters documentation and recording requirements. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
Links	<p>Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4</p>