



Australian Government

FBPOPR2028 Operate a mixing or blending process

Release: 1

FBPOPR2028 Operate a mixing or blending 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 combine ingredients and additives in the correct quantities and sequence, and to operate and shut down mixing and blending equipment to achieve the required mix characteristics.

This unit applies to individuals who work under general supervision and exercise limited autonomy in the food processing industry. Mixes may include concentrated pre-mixes or bulk blends. The output of this process may be a product requiring further processing or for external use.

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

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 materials are available to meet production requirements 1.2 Wear appropriate personal protective clothing and ensure correct fit according to work health and safety requirements

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 Prepare pre-mixes according to food safety and job requirements 1.4 Identify and confirm cleaning and maintenance requirements and status
2. Prepare the mixing or blending equipment and process for operation	2.1 Fit machine components and related attachments and adjust to meet operating requirements 2.2 Enter processing or operating parameters to meet production requirements 2.3 Check equipment performance and adjust according to operating requirements 2.4 Perform pre-start checks according to operator instructions
3. Operate and monitor the mixing or blending process	3.1 Deliver ingredients and additives to the mixer in the required quantities and sequence to meet recipe specifications 3.2 Start, operate and monitor the process for variation in operating conditions according to work health and safety and operating procedures 3.3 Monitor the mixing 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 Transfer mix to required production or storage location according to food safety and workplace procedures 3.6 Follow and apply workplace cleaning and environmental procedures
4. Shut down the mixing or blending process	4.1 Identify the appropriate shutdown procedure 4.2 Shut down the process safely according to operating procedures 4.3 Identify and report maintenance requirements according to workplace procedures 4.4 Maintain workplace records in required format

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 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
FBPOPR2028 Operate a mixing or blending process	FDFOP2028A Operate a mixing or blending 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 FBPOPR2028 Operate a mixing or blending 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 mixing or blending process on at least one occasion, including:

- accessing workplace information to identify mixing/blending 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 as required
 - 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
- adding/loading materials in correct quantities and sequence, including monitoring automatic ingredient addition and/or manual addition
- starting, monitoring and adjusting mixing or blending process equipment to achieve required outcomes, including monitoring flow rates/quantity, time or temperature and mix/blending settings
- monitoring control points and conducting inspections to confirm process remains within specification
- monitoring supply and flow of ingredients and additives to and from the mixing or blending process
- pacing mixing/blending to meet production requirements
- 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 or tag-out procedures to take 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
- labelling and storing pre-mixes and/or mixes 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 preparing mixes and blends, including the characteristics and basic function of ingredients and additives used, method and sequence of ingredient addition required to achieve required blend characteristics and, where relevant, the purpose of conditioning, maturation or holding stages required prior to further processing of the mix
- specific gravity and bulk density as appropriate for ingredients used
- basic operating principles of mixing/blending 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
 - awareness of calibration schedules for scales and related weighing/measuring equipment
- services required and action to take if services are not available
- the flow of the mixing process and the effect of mix preparation on downstream processes
- procedures for requisitioning, receiving and returning ingredients from stores
- ingredient-handling requirements and shelf-life or coding
- quality characteristics required of ingredients and additives and their effect on mixing process performance, including methods used to condition or prepare ingredients prior to addition
- methods used to monitor the blending or mixing process, including inspecting, measuring and testing, by the process
- inspection or test points (control points) in the process and the related procedures and recording requirements, including:
 - flow rates
 - ingredient/additive addition sequence
 - times/temperatures and agitator speeds
 - required characteristics of blend, including viscosity, appearance and temperature

- required attributes of the mixed or blended output, including chemical, texture and flavour profiles as required
- the effect of the mixing or blending parameters, including temperature and length of mix time on mixing outcome
- contamination and food safety risks associated with the process and related control measures, including product compatibility and cross-contamination risks and associated cleaning requirements, as well as common allergens used in mixes prepared
- operating requirements and parameters, and corrective action required when 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
- common causes of variation and corrective action required
- work health and safety hazards and controls relevant to the mixing and blending process
- requirements of different shutdowns as appropriate to the blending or mixing 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 mixing and blending process
- procedures and responsibility for reporting production and performance information
- environmental issues and controls relevant to the mixing or blending process, including waste or 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
- characteristics of solutions, suspensions and emulsions for the mixing and blending process
- product labelling and storage requirements for the mixing and blending process
- cleaning and sanitation procedures for mixing or blending equipment.

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/blending process equipment, services and related storage facilities as required
 - ingredients and additives required for the mixing/blending process
 - sampling schedules and test procedures and equipment as required
 - cleaning procedures, materials and equipment
- specifications:
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements, stock flow systems, production schedules, batch/recipe instructions

- information on equipment capacity and operating parameters
- production schedule/batch/recipe instructions
- specifications, control points and processing parameters.

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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