



Australian Government

FBPGRA3027 Monitor a purification system

Release: 1

FBPGRA3027 Monitor a purification system

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 safety knowledge required to set up, operate, monitor and shut down a separation and grading system to effectively separate break or sizing stocks into clean semolina (endosperm), composite stock (endosperm with bran adhering) and branny stocks.

This unit applies to individuals who work in a grain processing environment, under the direction of the miller or head miller. It typically targets the production worker responsible for applying basic operating principles to the operation and monitoring of purification equipment and processes.

All work must be carried out to comply with workplace procedures according to 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

Grain Processing (GRA)

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 the purification equipment	1.1 Confirm materials are available according to operating 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>
and process for operation	1.2 Carry out pre-start checks according to workplace instructions 1.3 Identify and confirm work area is clean according to food safety standards, and equipment is not locked out 1.4 Select, fit and use personal protective equipment and clothing as required of workplace policies 1.5 Check processing or operating parameters to meet safety requirements
2. Operate and monitor equipment	2.1 Start and monitor the process according to safe work procedures 2.2 Identify any variation in equipment operation, and report to miller 2.3 Take and check product samples to confirm that grain is separated in line with specifications, and report any variation 2.4 Identify and report out-of-specification product and process outcomes according to workplace procedures 2.5 Maintain the work area according to safe work and food safety procedures 2.6 Maintain workplace records according to workplace procedures
3. Shut down the purification process	3.1 Identify the appropriate shutdown procedure 3.2 Assist with shutting down the process safely according to operating procedures 3.3 Identify and report maintenance requirements according to workplace procedures 3.4 Ensure waste is disposed of in line with environmental 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
Reading	Interpret directions for the safe operation of equipment

Skill	Description
Writing	Record product and processing information using digital and/or paper-based formats
Numeracy	- Measure product and ingredients using weight (kg, T) and volume (L, hL), to two decimal points - Use percentages (%) as they apply to mixes of grain - Monitor supply and flow of materials to and from the break roll process - Accurately interpret readings on scales and gauges

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
FBPGRA3027 Monitor a purification system	FBPGRA2005 Operate a purification process	Unit title and code updated to better match work task Minor changes to Performance Criteria to clarify intent Foundation Skills refined Performance Evidence clarified Minor changes to Knowledge Evidence and Assessment Conditions	Equivalent

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 FBPGRA3027 Monitor a purification system

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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 individual has monitored a purification system on at least one occasion, including:

- applying safe work practices
- applying food safety procedures to work practices
- effectively separating break or sizing stocks, following the head miller's instructions
- reporting inconsistencies or variations.

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 purification system
- how flour is graded
- basic operating principles of equipment, including:
 - main equipment components, including air flow, movement of machine, size of sieves, layers of sieves
 - status and purpose of guards
 - equipment operating capacities and applications
 - the purpose and location of sensors and related feedback instrumentation
- services required and action to take if services are not available
- good manufacturing practices (GMP) relevant to work task
- the flow of the purification process and the basic effect of outputs on downstream flour milling processes
- basic quality characteristics to be achieved by the purification process
- product to be purified: semolina, not flour
- basic equipment faults and related causes, including:

- signs and symptoms of faulty equipment
- early warning signs of potential problems
- methods used to monitor purification, including removing and inspecting (and cleaning) sieves
- basic problems with purification:
 - inconsistent agitation/movement of the machine
 - blinded sieves
 - sieves incorrectly positioned
 - drawers incorrectly positioned
 - poor air flow/air adjustment
 - valves incorrectly set
 - inconsistent flow of product
 - inconsistent distribution of feed in
 - drop in yield/quality
 - inconsistent flow of product into purification passage
 - excessively wide granulation range
- basic contamination/cross-contamination and food safety risks associated with the purification, and related control measures
- health and safety hazards and controls
- requirements of different shutdowns as appropriate to the purification process and workplace production requirements, including:
 - routine cleaning shutdown
 - unexpected production stop
 - emergency and routine shutdowns
 - 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
- basic operating principles of process control, where relevant, including the relationship between control panels and systems and the physical equipment
- environmental issues and controls, including waste/rework collection and handling procedures related to the process
- routine maintenance procedures for workspace and equipment
- procedures to track traceability of product
- procedures to ensure biosecurity requirements are met.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a grain processing workplace or an environment that accurately represents workplace conditions

- resources, equipment and materials:
 - product to be purified
 - personal protective equipment
 - purification process equipment and related services
 - cleaning materials and equipment
- specifications:
 - production schedule
 - work procedures, including advice on safe work practices, food safety, quality and environmental requirements.
- relationships:
 - supervisor/head miller.

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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