Modification history

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| Release | Comments |
| Release 1 | This version released with FBP Food, Beverage and Pharmaceutical Training Package version 6.0 |

| FBPGRA3XX9 | Monitor a purification system |
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| 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 stockfeed 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. |
| Prerequisite Unit | Nil |
| Unit Sector | Grain processing (GRA) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Prepare the purification equipment and process for operation | 1.1 Confirm materials are available according to operating requirements  1.2 Identify and confirm cleaning and maintenance requirements have been met according to food safety requirements  1.3 Select, fit and use personal protective equipment and clothing  1.4 Set up and adjust machine components and related attachments according to operating requirements  1.5 Check processing or operating parameters to meet safety and production requirements  1.6 Carry out pre-start checks according to operator instructions |
| 2. Operate and monitor equipment | 2.1 Start and operate the process according to safe work procedures  2.2 Monitor equipment and services to ensure optimal operations  2.3 Identify any variation in equipment operation and troubleshoot to identify solution  2.4 Take and check samples to confirm that grain is separated in line with specifications  2.5 Remove fine bran from the semolina and return the bran product with endosperm attached to the purification process or scratch rolls for further processing  2.6 Identify, rectify or report out-of-specification product and process outcomes according to workplace procedures  2.7 Maintain the work area according to safe work and food safety procedures  2.8 Maintain workplace records including traceability and biosecurity records, according to workplace procedures |
| 3. Shut down the purification process | 3.1 Identify the appropriate shutdown procedure  3.2 Shut 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. | |
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| Skill | Description |
| Reading | * Interpret directions for the safe operation of equipment |
| 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 |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FBPGRA3XX9 Monitor a purification system | FDFGRA2005 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 unit |

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| Links | Companion Volumes, including Implementation Guides, are available at VETNet:  https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4 |

| TITLE | Assessment requirements for FBPGRA3XX9 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 into clean semolina (endosperm), composite stock (endosperm with bran adhering) and branny stocks * taking corrective action in response to typical faults and inconsistencies. | |

| Knowledge Evidence |
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| 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 effect of outputs on downstream flour milling processes * quality characteristics to be achieved by the purification process * product to be purified: semolina, not flour * quality requirements of materials and effect of variation on purification process performance * 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 * early warning signs of potential problems * methods used to monitor purification including: * removing and inspecting (and cleaning) sieves * checking tension of screens * checking air flow * typical 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 * 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 |
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| Assessment of 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.   Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. |

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