Modification history

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| Release | Comments |
| Release 1 | This version released with FBP Food, Beverage and Pharmaceutical Training Package version 2.0. |

| FBPFST5XXX | Implement and review manufacturing, packaging and testing of beverage products |
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| Application | This unit of competency describes the skills and knowledge required to implement and review processes for manufacturing, packaging and testing of beverage products.  This unit applies to individuals who use knowledge of food science and processes to assess product safety, quality and efficiency of production processes in the beverage sector.  No occupational licensing or certification requirements apply to this unit at the time of publication. However, legislative and regulatory requirements for food processing exist so local requirements must be checked. All work must comply with Australian food safety standards and relevant codes of practice. |
| Prerequisite Unit | Nil |
| Unit Sector | Food science and technology (FST) |

| 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. Produce a range of beverage product samples | 1.1 Source raw materials for production of beverage  1.2 Select and prepare equipment for beverage production  1.3 Implement pre-treatments for beverage production  1.4 Identify and use permissible additives and preservatives  1.5 Identify data requirements for food safety, quality and production standards  1.6 Establish data collection points consistent with equipment capabilities and data requirements  1.7 Use appropriate processing techniques and technologies to produce a range of beverage product samples  1.8 Identify or develop procedures to deal with non-conformance in relation to process and the final product  1.9 Produce sample products using appropriate hygiene and sanitation techniques |
| 2. Review packaging of beverage products | 2.1 Identify packaging requirements for beverage products and confirm they are consistent with regulatory, client and company requirements  2.2 Implement or supervise test packaging of the product and check for safety and conformance to client and company requirements |
| 3. Assess the quality, safety and shelf life of a range of beverage products | 3.1 Carry out testing techniques including sensory analysis to assess the safety, quality and shelf life of the product  3.2 Identify and assess all common hazards and critical control points (CCPs) for the production of products |
| 4. Review production processes | 4.1 Review the CCPs and critical limits for product safety  4.2 Review operating procedures for food safety and quality  4.3 Review the work health and safety plan for processing of food products  4.4 Review the environmental impacts and associated costs for processing of food products |

| 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 | * Interprets food safety guidelines and regulations * Interprets product specifications, quality and workplace procedures |
| Numeracy | * Maintains and analyses data resulting from testing of products * Determines calibration procedures and schedule for test equipment |
| Navigate the world of work | * Monitors adherence to legal and regulatory standards and responsibilities for self and others |
| Interact with others | * Clarifies the purpose and possible actions to be taken as a result of work related communications |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FBPFST5XXX Implement and review manufacturing, packaging and testing of beverage products | FDFFST4053A Implement and review manufacturing, packaging and testing of beverage products | Updated to meet Standards for Training Packages  Minor changes to Performance Criteria to clarify intent  Unit code updated to reflect AQF level | 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 FBPFST5XXX Implement and review manufacturing, packaging and testing of beverage products |
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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 the individual has implemented and reviewed manufacturing, packaging and testing of at least two beverage products, including:   * selecting and sourcing raw materials for processing beverages * preparing a detailed production flow chart for beverage production * determining data collection requirements for safety and quality monitoring * conducting product sampling * applying and interpreting a range of quality tests used in the manufacture of beverages, including brix, acidity, alcohol content determination, sulphur dioxide determination, carbonisation level, sensory evaluation and packaging integrity * documenting and analysed test results * monitoring compliance of processing procedures with food safety and quality requirements * interpreting CCPs and critical limits * reviewing quality procedures based on product testing. | |

| 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:   * the range of beverage products, including beers, spirits, fruit juice products, carbonated beverages, fortified non-alcoholic beverages, tea and coffee * the different styles of beers generally manufactured * the different types of fruit juices products generally manufactured * manufacturing process for the production of various types of fruit juices * additives and preservatives used in different types of beverages * manufacturing processes for a variety of carbonated and non-carbonated beverages * the variety of styles of teas and coffees generally available * manufacturing processes for the production of various styles of tea and coffee * common spoilage and food poisoning organisms associated with beverage production * brewing processes used in the production of various styles of beverages * fermentation processes in various styles of beverage production * quality tests used in the manufacture of beverages, including brix, acidity, alcohol content determination, sulphur dioxide determination, carbonisation level, sensory evaluation and packaging integrity * stages of production, CCPs and critical limits for production processes * packaging procedures * regulatory requirements associated with processing beverages * environmental impacts of the processing operation * work health and safety (WHS) hazards and controls relating to work processes. |

| Assessment Conditions |
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| Assessment of skills must take place under the following conditions:   * physical conditions: * skills must be demonstrated in a workplace setting or an environment that accurately represents a real workplace * resources, equipment and materials: * production process and related equipment, manufacturers’ advice and operating procedures * specifications: * tests used to report relevant product/process information and recorded results.   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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