Modification history

|  |  |
| --- | --- |
| Release | Comments |
| Release 1 | This version released with FBP Food, Beverage and Pharmaceutical Training Package Version 3.0. |

| FBPTEC4XXX16 | Manage and propagate yeast |
| --- | --- |
| Application | This unit of competency describes the skills and knowledge required to select, propagate and store yeast for the production of fermented products.  This unit applies to those workers who have responsibility for overseeing the production of fermented food and beverages and the quality assurance requirements associated with those products. It may include supervising the work of others.  Legislative requirements relating to producing alcohol apply to this unit. Users are advised to check current requirements with the Australian Tax Office and state / territory liquor licensing and health agencies. |
| Prerequisite Unit | Nil |
| Unit Sector | Technical (TEC) |

| Elements | Performance Criteria |
| --- | --- |
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Select yeast variety | 1.1 Identify key properties of yeast and different strains  1.2 Compare dry yeast to liquid yeast  1.3 Identify nutritional needs of yeast to establish yeast health and viability  1.4 Identify storage requirements of yeast |
| 2. Propagate yeast | 2.1 Identify food safety requirements for the propagation of yeast  2.2 Identify and confirm propagation requirements  2.3 Select, clean and sterilise equipment according to health and safety, and food safety procedures  2.4 Prepare yeast culture and incubate in specified conditions, ensuring availability of nutrients  2.5 Carry out yeast count to check viability |
| 3. Maintain and monitor the propagation process | 3.1 Conduct transfer operations to meet propagation requirements  3.2 Add yeast to product at ratio for viable propagation  3.3 Make scale-up additions to ensure optimum performance  3.4 Monitor time, temperature and nutrients to ensure propagation  3.5 Conduct standard tests to monitor quality and flavour of product  3.6 Identify and rectify out-of-specification product, process and equipment performance |
| 4. Harvest yeast | 4.1 Evaluate yeast slurry for harvesting  4.2 Harvest yeast  4.3 Complete processing records with details of yeast harvested  4.4 Store yeast for re-pitching |

| 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 production and process information from a variety of workplace documents |
| Numeracy | * Perform counts on samples using grids * Interpret and apply dilution ratios * Log and track yeast counts * Calculations to determine concentrations of extract as a percentage by weight (Degrees Plato) |

|  |  |  |  |
| --- | --- | --- | --- |
| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FBPTEC4XXX16 Manage and propagate yeast |  | New unit | No equivalent unit |

|  |  |
| --- | --- |
| 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 FBPTEC4XXX16 Manage and propagate yeast |
| --- | --- |
| 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 managed and propagated yeast for the production of at least one fermented food or beverage product, including:   * handling yeast to maintain its health and viability * carrying out a yeast count to check viability * monitoring the yeast propagation process * storing yeast to maintain its health and viability. | |

| 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:   * different types and strains of yeast used to make fermented beverages, including wild yeast * technical sheets for yeast products * yeast culture propagation requirements, including time, temperature and nutrition * how yeast grows * good practice for yeast handling * methods for carrying out a yeast count * purpose and principles of propagating yeast cultures * relationship of propagation to alcoholic fermentation * stages and changes that occur during culture propagation * effect of process stages on end product * quality characteristics and uses of yeast cultures * the fermentation reaction for yeast cultures * techniques that may be used to manipulate the propagation process and end product characteristics, including: * temperature * yeast strain * additions (nutrients) * oxygen * equipment and instrumentation components, purpose and operation required for yeast propagation processes * services used in yeast propagation processes * significance and method of monitoring control points within the process * common causes of variation with equipment and corrective action required * Food Standards Code in relation to the propagation of yeast * recording requirements of yeast processing. |

| Assessment Conditions |
| --- |
| Assessment of skills must take place under the following conditions:   * physical conditions: * a beverage production workplace or an environment that accurately represents workplace conditions * resources, equipment and materials: * different varieties of yeast * propagation and fermentation equipment.   Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. |

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