Modification history

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

| FBPCEL2002 | Perform fermentation operations |
| --- | --- |
| Application | This unit of competency describes the skills and knowledge required to prepare and operate the wine fermentation process to achieve pre-set specifications and may involve work in confined spaces.  The unit applies to individuals who work under general supervision, with limited autonomy and accountability for their own work.  No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.  All work must be carried out to comply with workplace procedures, in accordance with State/Territory work health and safety, and food safety regulations, legislation and standards that apply to the workplace. |
| Prerequisite Unit | Nil |
| Unit Sector | Cellar Operations (CEL) - Fermentation |

| Elements | Performance Criteria |
| --- | --- |
| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Prepare for fermentation operations | 1.1 Confirm work instructions and identify potential WHS hazards and controls in accordance with workplace procedures  1.2 Select and use personal protective clothing and equipment relevant to the job role  1.3 Confirm availability and prepare product and materials to meet production requirements  1.4 Confirm services are available and ready for operation  1.5 Check equipment to confirm readiness for use according to workplace procedures  1.6 Set the process to meet production requirements and work instructions |
| 2. Operate and monitor fermentation operations | 2.1 Start up the fermentation process according to operator instructions  2.2 Monitor control points to confirm performance is maintained within specification  2.3 Confirm ferment meets specification  2.4 Monitor equipment to confirm operating condition  2.5 Identify, rectify and report out-of-specification product, process and equipment performance  2.6 Carry out all work to comply with workplace environmental guidelines  2.7 Maintain work area to meet housekeeping standards at all times |
| 3. Complete fermentation operations | 3.1 Complete the fermentation process according to workplace procedures  3.2 Follow workplace procedures for routine shut down of equipment  3.3 Prepare equipment for cleaning  3.4 Collect, treat and dispose of or recycle waste generated by both the fermentation process and cleaning procedures  3.5 Record workplace information according to workplace procedures and 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 textual information to identify key information in workplace procedures, work specifications and operator instructions |
| Writing | * Complete workplace records relating to fermentation process accurately |
| Numeracy | * Interpret symbols and numbers to calibrate fermentation equipment and set process parameters and monitor control points |
| Oral communication | * Ask questions to clarify work instructions and use accurate terminology to report issues |
| Navigate the world of work | * Recognise and follow workplace requirements associated with own role and area of responsibility |
| Interact with others | * Follow accepted workplace practices and protocols for communicating information |
| Get the work done | * Follow clearly defined instructions to identify and assemble resources and sequence tasks to perform fermentation operations * Monitor processes and control points, identify routine problems related to fermentation activities and initiate standard procedures to resolve or report * Use key features and functions and follow routine procedures for using digital technology or systems to record and/or report workplace information * Recognise and act on opportunities for continuous improvement in accordance with workplace practices |

|  |  |  |  |
| --- | --- | --- | --- |
| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FBPCEL2002 Perform fermentation operations | FDFCEL2002A Perform fermentation operations | Updated to meet Standards for Training Packages  Minor changes to elements and performance criteria for clarity  Removal of prerequisite due to no longer required by industry | 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 FBPCEL2002 Perform fermentation operations |
| --- | --- |
| 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 prepared and operated a wine fermentation process on at least two separate occasions, including:   * accessing workplace information to identify fermentation processing requirements * selecting, fitting and using personal protective clothing and equipment * confirming supply of necessary product, materials and services * preparing products including checks for temperature and alcoholic strength * preparing and confirming status of equipment before commencing fermentation process * setting up and starting up the fermentation process * monitoring fermentation process control points and equipment, including taking samples and conducting tests * taking corrective action in response to out-of-specification results or non-compliance * shutting down equipment in routine and emergency situations * conducting work safely following 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 principles of fermentation * links between fermentation and related processes in cellar operations * stages and changes which occur during fermentation * effect of process stages on end product * quality characteristics and uses of fermentation product and materials * product and materials preparation requirements and effect of variation on the fermentation process * main methods used in fermentation operations * techniques that may be used to manipulate the fermentation process and wine characteristics: * pressure * temperature * yeast variety or strain * CO2 * skin contact * type of fermentation vessel * additions * process specifications, procedures and operating parameters * fermentation equipment and instrumentation components, purpose and operation * basic operating principles of process control systems * manual and computer controlled fermentation processes * significance and method of monitoring control points within the fermentation process * common causes of variation and corrective action required * shutdown and cleaning requirements associated with changeovers and types of shutdowns * work health and safety hazards and controls, specifically confined space entry * workplace procedures and responsibility for: * reporting problems * environmental issues and controls * waste handling requirements * recording requirements. |

| 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 for fermentation operations * equipment and materials for fermentation process * products for fermentation * cleaning materials, equipment and procedures * documentation or technology for recording and reporting information * specifications: * work instructions and workplace procedures for fermentation operations.   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> |