Modification history

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

| FBPCEL2003 | Operate the ion exchange process |
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| Application | This unit of competency describes the skills and knowledge required to operate ion exchange equipment used in winemaking operations.  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) - Cellaring |

| 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 ion exchange process for operation | 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 ion exchange operation requirements  1.4 Confirm that 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 ion exchange requirements and work instructions |
| 2. Operate and monitor the ion exchange process | 2.1 Start up the ion exchange process according to operator instructions  2.2 Monitor control points to confirm performance is maintained within specification  2.3 Confirm that ion exchanged product meets specification  2.4 Monitor equipment to confirm operating condition  2.5 Identify, rectify and report out-of-specification product, process and equipment performance |
| 3. Shut down the ion exchange process | 3.1 Shut the process down according to workplace procedures  3.2 Dismantle equipment and prepare for cleaning  3.3 Collect, treat and dispose of or recycle waste generated by both the ion exchange process and cleaning procedures  3.4 Conduct work in accordance with workplace environmental guidelines  3.5 Record workplace information according to workplace procedures and format |

| FOUNDATION SKILLS | |
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| This section describes those core and employment skills that are essential to performance and 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 ion exchange process accurately |
| Numeracy | * Interpret symbols and numbers to calibrate ion exchange 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 ion exchange operations * Monitor processes and control points, identify routine problems related to ion exchange process tasks 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 |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FBPCEL2003 Operate the ion exchange process | FDFCEL2003A Operate the ion exchange process | Updated to meet Standards for Training Packages  Minor changes to elements and performance criteria for clarity  Removal of prerequisite no longer required by industry | 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 FBPCEL2003 Operate the ion exchange process |
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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 demonstrated the ion exchange process at least once, including:   * accessing workplace information to identify ion exchange requirements * selecting, fitting and using personal protective clothing and equipment * checking supply and status of product and ion exchange agents before commencing ion exchange process * preparing and confirming status of equipment and services before commencing ion exchange process * setting up and starting up the ion exchange process * monitoring ion exchange process control points and equipment * 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 |
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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 principles of ion exchange * links between ion exchange and related processes in cellar operations * stages and changes which occur during ion exchange * effect of process stages on end product * quality characteristics and uses of ion exchange product and materials * product and materials preparation requirements and effect of variation on the ion exchange process * manual and computer controlled ion exchange equipment * main methods used in ion exchange * process specifications, procedures and operating parameters for ion exchange * ion exchange equipment and instrumentation components, purpose and operation * basic operating principles of process control systems * significance and method of monitoring control points within the ion exchange process * common causes of variation and corrective action required * work health and safety hazards and controls * shutdown and cleaning requirements associated with changeovers and types of shutdowns * workplace procedures and responsibility for: * reporting problems * environmental issues and controls * waste handling requirements * recording requirements. |

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