Modification history

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

| FBPCEL2011 | Perform heat exchange operations |
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| Application | This unit of competency describes the skills and knowledge required to prepare and operate heat exchange equipment.The unit applies to individuals who work in winemaking operations 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. |
| Prerequisite Unit | FBPCEL2019A Carry out transfer operations |
| 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 heat exchange process for operation | 1.1 Confirm and clarify work instructions1.2 Select, fit and use appropriate personal protective clothing and equipment1.3 Confirm availability and prepare product and materials to meet production requirements1.4 Confirm that services are available and ready for operation1.5 Check equipment to confirm readiness for use according to operator instructions1.6 Set the process to meet production requirements according to work instructions |
| 2. Operate and monitor the heat exchange process | 2.1 Start up the heat exchange process using safe work practices2.2 Monitor control points to confirm performance is maintained within specification2.3 Confirm that heat exchanged product meets specification2.4 Monitor equipment to confirm operating condition2.5 Identify, rectify and report out-of-specification product, process and equipment performance |
| 3. Shut down the heat exchange process | 3.1 Shut the process down following workplace procedures3.2 Dismantle equipment safely and prepare for cleaning3.3 Collect, treat and dispose of or recycle waste generated by both the process and cleaning procedures3.4 Conduct work according to workplace environmental guidelines3.5 Record workplace information according to workplace procedures and format |

| Foundation SkillsThis 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 textual information to identify key information in workplace procedures, work specifications and operator instructions
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| Writing | * Complete workplace records relating to heat exchange process accurately
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| Numeracy | * Interpret symbols and numbers to calibrate heat exchange equipment, set parameters and monitor control points
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| Oral communication  | * Ask questions to clarify work instructions and use accurate terminology to report issues
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| Navigate the world of work | * Recognise and follow workplace requirements associated with own role and area of responsibility
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| Interact with others | * Follow accepted workplace practices and protocols for communicating information
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| Get the work done | * Follow clearly defined instructions to identify and assemble resources and sequence tasks to perform heat exchange operations
* Monitor processes and control points, identify routine problems related to heat exchange equipment and 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
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| Unit Mapping Information |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FBPCEL2011 Perform heat exchange operations | FDFCEL2011A Perform heat exchange operations | Updated to meet Standards for Training PackagesMinor changes to elements and performance criteria for clarity | 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 FBPCEL2011 Perform heat exchange operations |
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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 heat exchange process at least once, including:* accessing workplace information to identify heat exchange processing requirements
* selecting, fitting and using personal protective clothing and equipment
* confirming supply and status of product before commencing heat exchange operation
* preparing and confirming status of equipment including lines, vessels, hoses, valves and fittings before commencing heat exchange process
* setting up and starting up heat exchange process
* monitoring the process and heat exchange equipment operation to identify out-of-specification results or non-compliance as required
* taking and reporting 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
* following workplace procedures for:
* maintaining records
* reporting and recording corrective action
* sorting, collecting, treating, recycling or disposing of waste
* maintaining housekeeping standards.
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| 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 heat exchange operations
* links between heat exchange operations and related processes in winemaking operations
* stages and changes which occur during heat exchange
* effect of process stages on end product
* quality characteristics and uses of heat exchanged product
* product and materials preparation requirements and effect of variation on the process
* main methods used to heat exchange product
* process specifications, procedures and operating parameters in heat exchange process
* heat exchange equipment and instrumentation components, purpose and operation
* basic operating principles of process control systems
* significance and method of monitoring control points within the 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
* workplace procedures and responsibility for:
* reporting problems
* environmental issues and controls
* waste handling requirements
* recording requirements.
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| 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 heat exchange operations
* equipment and materials for heat exchange process
* cleaning materials, equipment and procedures
* documentation or technology for recording and reporting information
* specifications:
* work instructions and workplace procedures for heat 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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