



**Australian Government**

# **FBPCEL2003 Operate the ion exchange process**

**Release: 1**

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# FBPCEL2003 Operate the ion exchange process

## Modification History

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

## 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 in winemaking operations and take responsibility for their own work. Individuals generally work under supervision but have some autonomy and accountability for their own work.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.

No occupational licensing, legislative or certification requirements apply to this unit at the time of publication

## Pre-requisite Unit

Nil

## Unit Sector

Cellar Operations (CEL)

## Elements and Performance Criteria

| Elements                                          | Performance Criteria                                                                                                                                                                                                                                                                  |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>  | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                |
| 1. Prepare the ion exchange process for operation | 1.1 Confirm work instructions and identify potential health and safety hazards and controls according to workplace procedures<br>1.2 Select and fit personal protective equipment according to job requirements<br>1.3 Confirm environmental guidelines and identify potential health |

| Elements                                         | Performance Criteria                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                             |
|                                                  | <p>and safety hazards and controls according to workplace procedures</p> <p>1.4 Confirm availability and prepare product and materials to meet ion exchange operation requirements</p> <p>1.5 Check equipment to confirm readiness for use according to workplace procedures</p> <p>1.6 Set the process to meet ion exchange requirements and job requirements</p> |
| 2. Operate and monitor the ion exchange process  | <p>2.1 Start up the ion exchange process according to workplace procedures</p> <p>2.2 Monitor ion exchange process to confirm that ion exchanged product meets specification</p> <p>2.3 Identify and address non-conformance of product, process and equipment according to workplace procedures</p>                                                               |
| 3. Shut down the ion exchange process            | <p>3.1 Identify and implement appropriate shutdown procedures</p> <p>3.2 Dismantle equipment safely and prepare for cleaning</p> <p>3.3 Collect, treat and dispose of or recycle waste generated by the ion exchange process</p> <p>3.4 Record workplace information according to workplace procedures</p>                                                         |

## 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               | <ul style="list-style-type: none"> <li>Comprehend instructions in workplace documents</li> </ul>                                                                                                      |
| Writing               | <ul style="list-style-type: none"> <li>Complete workplace documents in required format</li> </ul>                                                                                                     |
| Numeracy              | <ul style="list-style-type: none"> <li>Perform calculations required to prepare production materials for the process</li> <li>Monitor supply and flow of materials to and from the process</li> </ul> |
| Navigate the world of | <ul style="list-style-type: none"> <li>Apply workplace procedures and legislative responsibilities to</li> </ul>                                                                                      |

| Skill                | Description                                                                                                                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| work                 | own role                                                                                                                                                                                                    |
| Interact with others | <ul style="list-style-type: none"><li>Use required communication mode to report operational information to relevant personnel</li></ul>                                                                     |
| Get the work done    | <ul style="list-style-type: none"><li>Plan, sequence and implement tasks according to set routines and procedures</li><li>Respond to routine problems using workplace instructions and procedures</li></ul> |

## Unit Mapping Information

| Code and title current version                 | Code and title previous version                 | Comments                                                                                                                                           | Equivalence status |
|------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| FBPCEL2003<br>Operate the ion exchange process | FDFCEL2003A<br>Operate the ion exchange process | Updated to meet Standards for Training Packages<br><br>Minor changes to Elements and Performance Criteria for clarity<br><br>Prerequisites removed | Equivalent unit    |

## Links

Companion Volume Implementation Guides are found in VETNet: -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=78b15323-cd38-483e-aad7-1159b570a5c4>

# 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 operated at least one ion exchange process:

- accessing workplace information to identify ion exchange requirements
- selecting and fitting appropriate personal protective equipment
- conducting work according to environmental and health and safety requirements in the workplace
- 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 to maintain quality specifications
- taking corrective action in response to non-conformance results
- shutting down the process after ion exchange operations are completed.

## 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 ion exchange process and links between ion exchange process and related processes in cellar operations
- stages and changes which occur during ion exchange process and the effect of process stages on the end product quality characteristics and uses of ion exchange product and materials
- manual and computer-controlled ion exchange equipment
- methods used to monitor the process common causes of non-conformance and corrective action required

- health and safety hazards in the workplace and controls
- routine shutdown preparation requirements
- 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 wine operations workplace or an environment that accurately represents workplace conditions
- resources, equipment and materials:
  - personal protective equipment for ion exchange operations
  - equipment and materials for ion exchange process
  - products for ion exchange
  - system for recording and reporting information
- specifications:
  - 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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