

Modification history

Release	Comments
Release 1	This version released with Food, Beverage and Pharmaceutical Training Package Version 4.0.

FBPCEL3019	Prepare and apply complex additions and finings
Application	<p>This unit of competency describes the skills and knowledge required to receive, test, store, prepare, add and follow up the application of complex additions and finings in wine making processes.</p> <p>The unit applies to cellar hands who work under broad direction in a cellar operations environment and are responsible for all of the processes related to the application of complex additions and finings in various stages of wine making, including, vintage, clarification and filtration. They take responsibility for their own work, have limited responsibility for the outcomes of other workers and solve problems related to cellar operations processes.</p> <p>All work must be carried out to comply with workplace procedures, according to state/territory health and safety, and food safety regulations, legislation and standards that apply to the workplace.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Cellar Operations (CEL)

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. Receive and process raw materials	1.1 Check incoming materials against documentation and place in quarantine area 1.2 Select, fit and use required personal protective equipment 1.3 Take material samples for testing according to laboratory procedures 1.4 Transport materials to dry goods store after clearance from quality controller
2. Prepare to make additions and finings	2.1 Read work order and verify calculations for required addition or fining 2.2 Select, fit and use required personal protective equipment 2.3 Select and prepare vessel required to collect and mix raw materials according to product batch specifications 2.4 Confirm weighing equipment is calibrated according to workplace tolerances 2.5 Select, obtain and weigh raw materials according work order requirements
3. Mix materials to create additions and finings	3.1 Determine mixing methodology and equipment for specified addition or fining 3.2 Mix raw materials to create the specified addition or fining according manufacturer instructions and workplace procedures 3.3 Allow mixture to develop to required state
4. Apply additions and finings to juice or wine	4.1 Prepare juice or wine mixing equipment according to predetermined integrating method 4.2 Add addition or fining to juice or wine according to required method 4.3 Agitate juice or wine to fully integrate addition or fining 4.4 Complete addition and fining workplace records, including batch numbers

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
5. Complete additions and finings	5.1 Dismantle, clean and store equipment safely 5.2 Dispose or recycle waste according to workplace and environmental procedures 5.3 Collect samples of wine or juice for analysis by laboratory

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Foundation Skills	
<i>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.</i>	
Skill	Description
Reading	<ul style="list-style-type: none"> Interpret technical text and symbols on raw material information sheets and work orders
Writing	<ul style="list-style-type: none"> Complete workplace records using correct terminology and format
Numeracy	<ul style="list-style-type: none"> Estimate and calculate quantity, weight, volume and ratio Interpret readings of gauges and scales Use fractions, decimals, proportions and percentages to measure materials and record data Use weight (g, kg, T) and volume (ml, L, ML, KL, HL) to describe product quantities

Range Of Conditions	
<i>This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.</i>	
Additions must include five of the following:	<ul style="list-style-type: none"> caramel ascorbic acid diammonium phosphate (DAP) grape concentrate hydrogen peroxide malic acid sulphur dioxide tannin tartaric acid yeast yeast nutrients
Finings must include four of the following:	<ul style="list-style-type: none"> activated carbon bentonite casien copper sulphate enzymes egg white isinglass Polyvinylpolypyrrolidone (PVPP)
Application method must include two of the following:	<ul style="list-style-type: none"> drip feed over the top over the top venturi via pump
Integrating methods must include three of the following:	<ul style="list-style-type: none"> gas rummaging in place mixing manual mixing pumping over submergible mixing valve to valve

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
FBPCEL3019 Prepare and apply	Not applicable	New unit	No equivalent unit

complex additions and finings			
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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
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TITLE	Assessment requirements for FBPCEL3019 Prepare and apply complex additions and finings
Performance Evidence	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has independently prepared, mixed, and applied seven different additions and finings according to addition and fining work orders, including:</p> <ul style="list-style-type: none"> • using one the following additions: <ul style="list-style-type: none"> • yeast • malolactic bacteria • using at least three of the following additions: <ul style="list-style-type: none"> • caramel • ascorbic acid • diammonium phosphate (DAP) • grape concentrate • hydrogen peroxide • malic acid • sulphur dioxide • tannin • tartaric acid • yeast • yeast nutrients • using at least three of the following finings: <ul style="list-style-type: none"> • activated carbon • bentonite • copper sulphate • enzymes • gelatine • Polyvinylpyrrolidone (PVPP) • egg white • isinglass • casien • using at least three of the following media: <ul style="list-style-type: none"> • cold water • warm water • juice • wine • using at least two of the following vessels and devices: <ul style="list-style-type: none"> • scales and other measuring equipment • barrel • bucket • mixing tub • manual agitator • mechanical agitator • using at least three of the following application methods: <ul style="list-style-type: none"> • pour in over the top • pump in over the top • valve to valve • tank to tank transfer • venturi • using at least two of the following integration methods <ul style="list-style-type: none"> • gas rummaging • submergible mixing • in place mixing • manual mixing • valve to valve 	

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Performance Evidence

- Pumping over
- Completing accurate and timely records of additions and finings applied according to workplace requirements, including:
 - juice or wine identification
 - addition or fining identification
 - date, time and operator
 - quantity of material added by weight or volume

After each addition and fining has been applied to a batch of juice or wine, a sample is to be collected, labelled and transferred to a laboratory for analysis or tasting, using at least two of the following methods:

- over the top
- sample tap or valve
- in line sample during transfer.

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:

- the physical properties, functions and benefits of wine additions including:
 - ascorbic acid
 - caramel
 - hydrogen peroxide
 - grape concentrate
 - malic acid
 - malolactic bacteria
 - sulphur dioxide
 - tannin
 - tartaric
 - yeast
- the physical properties, functions and benefits of wine fining agents including:
 - activated carbon
 - bentonite
 - casien
 - cream of tartar
 - copper sulphate
 - egg white
 - enzymes
 - gelatine
 - isinglass
 - polyvinylpolypyrrolidone (PVPP)
- quality process and indicators related to the storage, mixing, and application of additions and finings, including:
 - quarantine and testing of raw materials, including batch codes
 - sampling and testing of juice or wine prior and after the application of additions and finings
 - contamination risks and controls associated with the preparation and application of additions and finings
 - requirements for vegan and allergen control, including label integrity requirements
- weights and measures for additions and finings, including:
 - calibration of scales
 - units of measurement including grams, kilograms, tonnes millilitres, litres, hectolitres and kilolitres
- mixing media used to prepare additions and finings used in wine making
 - cold water
 - warm water
 - juice
 - wine

Knowledge Evidence
<ul style="list-style-type: none"> • mixing vessels and devices used to prepare additions and finings used in wine making: <ul style="list-style-type: none"> • barrel • bucket • mixing tub • manual agitator • mechanical agitator • application methods for applying additions and finings to wine: <ul style="list-style-type: none"> • pour in over the top • pump in over the top • tank to tank transfer • valve to valve • venturi • equipment and methods for integrating additions and finings with wine or juice, including: <ul style="list-style-type: none"> • gas rummaging • in place mixing • manual mixing • submergible mixing • pumping over • valve to valve • Record keeping requirements for additions and finings in wine making, including: <ul style="list-style-type: none"> • Juice or wine identification • Addition or fining identification • Date, time and operator • Quantity of material added by weight or volume • Principles and methods for collection of wine samples for laboratory analysis, including: <ul style="list-style-type: none"> • over the top • sample tap • in line sample during transfer • cross contamination • containers used • labelling • effects of time • work health and safety hazards and controls, including: <ul style="list-style-type: none"> • awareness of the limitations of controls • protective clothing and equipment • entering and working in confined spaces • hazardous substances, including additions and finings, cleaning products, and gases • environmental issues and controls relevant to the storage, mixing and application of additions and finings, including: <ul style="list-style-type: none"> • rework and reuse of products • water use and recycling • waste processing • energy usage • materials and manual handling procedures related to the preparation, mixing and application of additions and finings.

Assessment Conditions
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • a commercial winery or an environment that accurately represents workplace conditions • resources, equipment and materials: <ul style="list-style-type: none"> • the vessels, machinery and equipment stipulated in the performance evidence • the juice or wine stipulated in the performance evidence • the additions and finings stipulated in the performance evidence • specifications:

Assessment Conditions
<ul style="list-style-type: none">• addition and fining work orders as stipulated in the performance evidence• workplace procedures for preparation and application of the additions and finings stipulated in the performance evidence• workplace procedures processing equipment and machinery stipulated in the performance evidence <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>

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