



Australian Government

FBPCEL3019 Prepare and apply complex additions and finings

Release: 1

FBPCEL3019 Prepare and apply complex additions and finings

Modification History

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

Application

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.

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.

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.

No 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. Receive and process raw materials	1.1 Check incoming materials against documentation and place in storage area

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

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 technical text and symbols on raw material information sheets and work orders
Writing	Complete workplace records using correct terminology and format
Numeracy	- 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

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 individual, accessibility of the item, and local industry and regional contexts) are included.

Additions must include five of the following:	- ammonium bisulfite - caramel - ascorbic acid/erythorbic acid - diammonium phosphate (DAP) - grape concentrate - hydrogen peroxide - malic acid - malolactic bacteria - potassium sorbate - sulphur dioxide products - tannin - tartaric acid - yeast - yeast nutrients
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Finings must include three of the following:	• activated carbon • bentonite • casien • copper sulphate • enzymes • egg white • gelatine • isinglass • polypvinylpolyppyrrolidone (PVPP)
Application method must include three of the following:	• pour in or drip over the top • pump in over the top • pump in through tank valve • venturi via pump • via doorway
Integrating methods must include three of the following:	• gas rummaging • in place agitation • 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 complex additions and finings	Not applicable	The unit has been created to address an industry requirement	Newly created

Links

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

Assessment Requirements for FBPCEL3019 Prepare and apply complex additions and finings

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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 independently prepared, mixed and applied eight different additions and finings to juice or wine according to addition and fining work orders, including:

- used one of the following additions:
 - yeast
 - malolactic bacteria
- used at least four of the following additions:
 - ammonium bisulfite
 - caramel
 - ascorbic acid/erythorbic acid
 - diammonium phosphate (DAP)
 - grape concentrate
 - hydrogen peroxide
 - malic acid
 - malolactic bacteria
 - potassium sorbate
 - sulphur dioxide products
 - tannin
 - tartaric acid
 - yeast
 - yeast nutrients
- used at least three of the following finings:
 - activated carbon
 - bentonite
 - copper sulphate

- enzymes
- gelatine
- polyvinylpolypyrrolidone (PVPP)
- egg white
- isinglass
- casien.

In doing so, the individual must have:

- used at least three of the following media:
 - cold water
 - warm water
 - juice
 - wine
- used at least two of the following vessels and devices:
 - scales and other measuring equipment
 - barrel
 - bucket
 - mixing tub
 - manual agitator
 - mechanical agitator
 - wine tank
- used at least three of the following application methods:
 - pour or drip in over the top
 - pump in over the top
 - pump in through tank valve
 - via doorway
 - venturi via pump
- used at least two of the following integration methods:
 - gas rummaging
 - in place agitation
 - manual mixing
 - pumping over
 - submergible mixing
 - valve to valve
- completed 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, the individual must have:

- collected, labelled and transferred a sample 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:
 - ammonium bisulfite
 - ascorbic acid/erythorbic acid
 - caramel
 - hydrogen peroxide
 - grape concentrate
 - malic acid
 - malolactic bacteria
 - potassium sorbate
 - sulphur dioxide products
 - tannin
 - tartaric acid
 - yeast
 - yeast nutrients
- 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 to 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, including:
 - cold water
 - warm water
 - juice
 - wine
- mixing vessels and devices used to prepare additions and finings used in wine making, including:
 - barrel
 - bucket
 - mixing tub
 - manual agitator
 - mechanical agitator
- application methods for applying additions and finings to wine, including:
 - 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:
 - 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:
 - 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:

- over the top
- sample tap
- in line sample during transfer
- cross-contamination
- containers used
- labelling
- effects of time
- workplace health and safety hazards and controls, including:
 - awareness of the limitations of controls
 - personal protective 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:
 - 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

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a commercial winery
- resources, equipment and materials:
 - 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:
 - addition and fining work orders stipulated in the performance evidence
 - workplace procedures for preparation and application of the additions, finings, equipment and machinery stipulated in the performance evidence.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards

Links

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