

Title	Use and maintain winery plant		
Level	4	Credits	8

Purpose	This unit standard is for people working in viticulture. People credited with this unit standard are able to: crush grapes; separate the juice from the skins; clarify the juice; ferment the juice; stabilise and clarify the wine; and bottle the wine.
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Classification	Horticulture > Viticulture
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Available grade	Achieved
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Guidance Information

None.

Outcomes and performance criteria

Outcome 1

Crush grapes.

Performance criteria

- 1.1 Equipment is described in terms of mechanism and process for removing stems before crushing and for removing stems after crushing.
- 1.2 A crusher-destemmer is operated so that there is an even flow of grapes, ensuring that only minimal chance of oxidation occurs.
- 1.3 Any materials required are measured and added to the must as the winemaker directs.
- 1.4 A crusher-destemmer is cleaned to industry hygiene standards.
- 1.5 A crusher-destemmer is maintained to manufacturer's specifications so that it is ready to operate when next required.

Outcome 2

Separate the juice from the skins.

Performance criteria

- 2.1 Different kinds of draining and separating equipment are described in terms of their methods of action.
- Range two of – gas pressure drainer, slat conveyor drainer, auger de-juicer, Bucher type drainer.
- 2.2 Methods of separating the juice from the skins are described for red and for white wines.
- 2.3 Equipment to separate juice from the skins is used under the winemaker's directions.
- 2.4 Equipment to separate juice from the skins is maintained and cleaned to industry hygiene standards.
- 2.5 Different types of presses are described in terms of their working principles.
- Range air bag, continuous screw.
- 2.6 A press is used, maintained, and cleaned under the winemaker's directions.

Outcome 3

Clarify the juice.

Performance criteria

- 3.1 Methods of clarifying juice are described in terms of the advantages and disadvantages of each method.
- Range filtering, fining, pasteurising, centrifuging, settling.
- 3.2 Equipment for one method of clarifying juice is used, maintained, and cleaned under the winemaker's directions.

Outcome 4

Ferment the juice.

Performance criteria

- 4.1 Hydrometers used measure sugar levels and fermentation rates.
- 4.2 Temperatures in fermentation vats are checked to ensure that they remain within the range set by the winemaker.
- 4.3 Fermentation vats are filled and emptied so that the lees does not cause contamination.
- 4.4 Fermentation vats are cleaned under the winemaker's directions.

4.5 Pumps are used, maintained, and cleaned under the winemaker's directions.

Outcome 5

Stabilise and clarify the wine.

Performance criteria

5.1 Cold stabilisation, depth filtration, and membrane filtration are described in terms of their effects on wine.

5.2 Filters are used, maintained, and cleaned under the direction of the winemaker.

Outcome 6

Bottle the wine.

Performance criteria

6.1 Bottles are inspected so that no contaminated or sub-standard bottles are filled.

6.2 The bottling machine is used so that all bottles are filled to the specified level, maintained, and cleaned under the direction of the winemaker.

6.3 The corker is adjusted so that the corks are inserted undamaged and to the specified depth, and maintained and cleaned under the direction of the winemaker.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	1 February 1994	31 December 2022
Review	2	28 November 1997	31 December 2022
Revision	3	19 July 2001	31 December 2022
Revision	4	20 May 2003	31 December 2022
Revision	5	24 February 2006	31 December 2022
Review	6	29 July 2021	31 December 2022

Consent and Moderation Requirements (CMR) reference	0032
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.