

Title	Demonstrate knowledge of equipment, gasses, and chemicals used in a commercial wine cellar operation		
Level	3	Credits	8

Purpose	<p>This unit standard covers introductory level knowledge for people working in the cellar operations area of the winemaking industry.</p> <p>People credited with this unit standard are able to: demonstrate knowledge of: tanks, vats, and barrels; piping and hose systems; wine production equipment; steam, gasses, and gas systems and equipment; cleaning equipment, processes and chemicals, used in a commercial wine cellar operation.</p>
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Classification	Food and Related Products Processing > Wine Production - Cellar Operations
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Available grade	Achieved
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Explanatory notes

1 References

Enactments and codes relevant to this unit standard include but are not limited to the: Food Act 1981 and Food Act 2014; Health and Safety in Employment Act 1992, which will be replaced by the Health and Safety at Work Act 2015 when it becomes effective on 4 April 2016; Resource Management Act 1991; Food (Safety) Regulations 2002; Food Hygiene Regulations 1974; Australia New Zealand Food Standards Code, available at <http://www.foodstandards.govt.nz/>.

2 Definitions

Workplace procedures – approved procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, housekeeping standards, and procedures to comply with legislative and local body requirements.

RDVF – rotary drum vacuum filter.

LPG – liquefied petroleum gas.

PPE – personal protective equipment

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of tanks, fermenters, and barrels and bungs used in a commercial wine cellar operation.

Evidence requirements

- 1.1 Tanks are described in terms of their function in wine production, typical capacities, and construction.
- Range construction – materials used in manufacture, body, expansion chamber, doors, seals, drains, racking valve, bottom valve, sample valve, pressure relief valves, sight glasses.
- 1.2 Open top fermenters are described in terms of their function in wine production, typical capacities, and construction.
- Range construction – materials used in manufacture, doors, seals, drains, sample valve, screen valve, racking valve, bottom valve.
- 1.3 Red fermenters are described in terms of their function in wine production, typical capacities, and construction.
- Range construction – materials used in manufacture, expansion chamber, doors, seals, drains, sample valve, screen valve, racking valve, bottom valve, sample valve, pressure release valve.
- 1.4 Barrels and bungs are described in terms of their function in wine production, typical sizes, construction materials, and properties.
- Range construction material properties include oak characteristics by country and region.

Outcome 2

Demonstrate knowledge of fixed lines, cellar hoses, and fittings used in a commercial wine cellar operation.

Evidence requirements

- 2.1 Stainless steel fixed line systems are described in terms of their function, use, construction.
- 2.2 Cellar hoses are described in terms of their function, use, construction, and materials used in manufacture.
- 2.3 Fittings are described in terms of their construction, function, and use.
- Range T-piece fittings, joiners, reducers.

Outcome 3

Demonstrate knowledge of equipment used in a commercial wine cellar operation.

Evidence requirements

- 3.1 Items of production equipment are identified, and described in terms of their purpose, operation, use, and routine maintenance.
- Range crushers, presses, heat exchangers, filters, pumps, valves, manifolds, flow plates, centrifuges, RDVFs, crossflows, flotation units, flowmeters, sight glasses.
- 3.2 Quality control equipment is identified and described in terms of its purpose and use in a winery.
- Range weighbridges, weighing equipment, dissolved oxygen meters, dissolved carbon dioxide meters.
- 3.3 Safety equipment is identified and described in terms of its purpose and use in a winery.
- Range safety barriers, lock out tag out locking equipment, light beam sensors, audible warnings, safety switches, guarding, PPE, gas measuring equipment, tank ventilation fans, tank rescue equipment.

Outcome 4

Demonstrate knowledge of steam, gasses, and gas systems and equipment used in wine production.

Evidence requirements

- 4.1 Steam is described in terms of its properties, hazards, and use in wine production.
- 4.2 Gases, used at the candidate's workplace, are described in terms of their properties, function, hazards, and uses in wine production.
- Range gasses may include but are not limited to – argon, ozone, nitrogen, carbon dioxide, LPG, ammonia.
- 4.3 Gas systems and equipment, used at the candidate's workplace, is identified and described in terms of its function, and use in wine production.
- Range equipment may include but is not limited to – spargers, diffusers, inert systems, lines, connectors, valves, regulators.
- 4.4 Handling procedures for gasses and steam are described in accordance with workplace procedures.

Outcome 5

Demonstrate knowledge of cleaning and sanitising equipment, processes, and chemicals used in a commercial wine cellar operation.

Evidence requirements

- 5.1 The effect of using contaminated equipment in wine production is described.
- 5.2 Cleaning and sanitising equipment is described in terms of its purpose and use.
- Range may include but is not limited to – water blasters, steam generators, ozone machines, spray balls, semi-automatic tank cleaners, pumps, hoses, and fixed lines.
- 5.3 Cleaning and sanitising chemicals are identified and described in terms of their properties, proprietary brand names, and approved uses.
- Range may include but are not limited to – water, citric acid, caustic soda, iodine, sulphur, hydrogen peroxide, sodium bicarbonate, ozone.
- 5.4 Cleaning and sanitising processes are described in terms of the equipment they are used on, standard industry practices, and waste discharge.

Planned review date	31 December 2019
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 November 2015	N/A

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the CMR. The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz at qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.