

Title	Carry out laboratory processes in a commercial wine cellar operation		
Level	5	Credits	20

Purpose	People credited with this unit standard are able to: explain fundamentals of laboratory analysis; gather samples, select and apply analysis methods; record, analyse and report results; and make up stock chemicals in a commercial wine cellar laboratory.
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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; 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 Definition
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.
- 3 Range
Laboratory analysis includes but is not limited to – Sulphur dioxide checks, pectin checks, turbidity (NTU) checks, spectro enzymatics, percent alcohol, brix, titratable acidity (TA), pH, yeast counts reducing sugars, malic acid, volatile acidity.

Outcomes and evidence requirements

Outcome 1

Explain fundamentals of laboratory analysis in a commercial wine cellar operation.

Evidence requirements

- 1.1 Reasons for laboratory analysis are explained in terms of process control, quality control and continuous improvement.
- 1.2 Scientific principles that underpin the laboratory analyses conducted in the workplace are explained in accordance with workplace procedures.
- 1.3 Operation of the equipment used in the laboratory analyses is explained in accordance with workplace procedures.
- 1.4 Standards or specifications relating to laboratory analysis methods are explained in terms of legislative requirements and their implications.

Range legislative requirements may include but are not limited to – quality, health, safety, hygiene, labelling.

Outcome 2

Gather samples, select and apply analysis methods in a commercial wine cellar operation.

Range Evidence is required of analysis of five samples.

Evidence requirements

- 2.1 Hazards associated with gathering and analysis of samples are identified, and actions to be taken to control them are described and used, in accordance with workplace procedures.

Range controls may include but are not limited to – isolation procedures, lock outs, emergency stops, machine guarding, wearing appropriate safety equipment.
- 2.2 Samples are gathered, selected and prepared for analysis in accordance with workplace procedures.
- 2.3 Equipment is selected, cleaned and sanitised, set up, calibrated, and checked in accordance with workplace procedures.
- 2.4 Analysis methods are applied in accordance with workplace procedures.
- 2.5 Sample, equipment, and chemical checks are completed and confirm the integrity of the result.
- 2.6 Laboratory equipment is calibrated and its accuracy and precision is verified in accordance with workplace procedures.

Outcome 3

Record, analyse, and report results in a commercial wine cellar operation.

Evidence requirements

- 3.1 Analysis data is recorded in accordance with workplace procedures.

- 3.2 Results are analysed against specifications, issues are identified, and potential causes are identified in accordance with oenology principles.
- 3.3 Issues, causes, and potential solutions are reported in accordance with workplace procedures.
- 3.4 Waste material is handled, disposed of or recycled, in accordance with workplace procedures.
- 3.5 Equipment is cleaned and returned to storage in accordance with workplace procedures.
- 3.6 Documentation is completed, and the results are communicated in accordance with workplace procedures.

Outcome 4

Make stock chemicals in a commercial wine cellar operation.

Range stock chemicals may include but are not limited to – hydrochloric acid, sodium hydroxide, orthophosphoric acid, indicator solutions, buffer solutions, ammonium chloride, starch indicator.
Evidence of making three different stock chemicals is required.

Evidence requirements

- 4.1 Equipment and chemicals are gathered and verified as meeting specification requirements.
- 4.2 Stock chemicals are prepared, labelled, and stored in accordance with workplace procedures.
- 4.3 Equipment is cleaned and returned to storage in accordance with workplace procedures.
- 4.4 Documentation is completed and stored in accordance with workplace procedures.

Planned review date	31 December 2020
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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 CMRs. 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.