



Australian Government

MSL20109 Certificate II in Sampling and Measurement

Release 2

MSL20109 Certificate II in Sampling and Measurement

Modification History

Release 2 - ISC upgrade

- Minor formatting changes
- Prerequisite unit now marked with an asterisk

Description

This qualification covers the skills and knowledge required to perform a range of sampling and measurement as part of laboratory, production or field operations in the construction, manufacturing, resources and environmental industry sectors.

Job roles/employment outcomes

The Certificate II in Sampling and Measurement offers entry level training for sampling and measurement skills applied across a range of industries. Employment outcomes targeted by this qualification include samplers and testers, production personnel, plant operators, production operators, field assistants, drivers, sample couriers, and many others.

Samplers and testers conduct limited sampling and testing as part of their duties in their particular industry. In some industry sectors (for example, mineral assay) this work forms a whole job role. They apply a restricted range of skills and operational knowledge to perform these tasks and do not generally work inside a laboratory. They:

- follow set procedures to sample raw materials and products
- may package, label, store and transport samples
- use simple equipment (hydrometers, thermometers and pH meters) to make measurements and perform basic tests that take a short time and involve a narrow range of variables and easily recognised control limits
- may make visual inspection of products and packaging.

Examples of the work of sampler/testers are given below.

- A milk tanker driver conducts aseptic sampling of milk before loading and then conveys the samples to the laboratory.
- An operator in a quarry may take samples from stockpiles and conveyors and conduct simple tests on different grades of aggregates.
- A field officer working in environmental monitoring may visit a catchment area to collect water samples
- Sampler/testers take air samples for testing for microbial monitoring of air conditioning or cooling towers.

Application

This qualification is typically used to prepare new employees or develop the skills of existing workers within the construction, manufacturing, resources and environmental industry sectors.

Training programs for this qualification are suitable to be undertaken as part of a formal training contract with an employer under an Australian Traineeship or Apprenticeship arrangement.

Pathways Information

Pathways into the qualification

This qualification may be accessed by direct entry. Credit for this qualification may include units contained within relevant skill sets.

Pathways from the qualification

Further training pathways from this qualification include the MSL30109 Certificate III in Laboratory Skills or MSA30208 Certificate III in Manufacturing Technology (Laboratory Operations Stream).

Licensing/Regulatory Information

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Receive and pass on written and oral messages, provide relevant information in response to requests and demonstrate effective interpersonal skills including conflict resolution techniques • Record and store data, perform basic calculations of scientific quantities and present information in tables and graphs • Report using verbal responses, data entry into laboratory information management system (LIMS) or enterprise databases and brief written reports using enterprise proformas • Communicate with team members, supervisors and customers effectively and courteously • Interpret work instructions • Complete workplace documentation such as reports
Teamwork	<ul style="list-style-type: none"> • Liaise with relevant personnel to arrange site access and permits • Seek advice and clarify instructions with supervisors
Problem solving	<ul style="list-style-type: none"> • Deal with inquiries in accordance with enterprise customer service requirements • Rectify obvious errors and atypical data using enterprise procedures • Identify site hazards and review enterprise safety procedures • Report problems accidents or incidents
Initiative and enterprise	<ul style="list-style-type: none"> • Identify and report opportunities for improvements in procedures, processes and equipment • Identify hazards associated with samples, preparation methods, reagents and equipment and implement enterprise control measures
Planning and organising	<ul style="list-style-type: none"> • Plan and organise daily work activities to ensure the timely completion of tasks • Modify work plans to suit changing conditions and priorities • Assemble and organise specified sampling equipment and materials and maintain own work area
Self-management	<ul style="list-style-type: none"> • Follow work instructions to perform scientific/technical tasks safely and efficiently • Follow enterprise procedures which reflect occupational health and safety (OHS), equal opportunity, anti-discrimination and non-harassment legislative requirements • Maintain confidentiality of all client/enterprise data and information

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> Use appropriate protective equipment to ensure personal safety when sampling, processing, transferring or disposing of samples
Learning	<ul style="list-style-type: none"> Clarify instructions with supervisors to ensure a complete understanding of the task Identify training opportunities and career options Seek advice if the required samples cannot be collected or if procedures require modification
Technology	<ul style="list-style-type: none"> Use communication, emergency, data recording, sampling measuring and laboratory equipment Use computers and software to collect and report information

Packaging Rules**Packaging Rules**

To be awarded a Certificate II in Sampling and Measurement competency must be achieved in a total of eight (8) units of competency, consisting of:

- four (4)** core units of competency
- four (4)** elective units of competency.

Units listed under **core** are considered essential for all people who perform sampling and measurement. The units listed as **electives** may only apply to some personnel according to the size and scope of the organisation.

Note: Units marked with an asterisk have one or more prerequisite requirements and must be included in the total number of units chosen. Please refer to individual units for details.

Core units of competency

Select all **four (4)** units of competency from this group.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSL912001A	Work within a laboratory/field workplace (induction)	
MSL922001A	Record and present data	
MSL943002A	Participate in laboratory/field workplace safety	

Elective units of competency

Select **four (4)** elective units from Groups A and B as specified below:

- a minimum of **two (2)** units must be chosen from Group A
- the remainder may be chosen from Groups A and B to bring the total number of electives to **four (4)**.

Note that **two (2)** of the elective units may be chosen from this Training Package, other endorsed Training Packages and accredited courses, where those units are available at Certificate II.

Group A

Unit code	Unit title	Prerequisites
MSL952001A	Collect routine site samples	
MSL952002A	Handle and transport samples or equipment	
MSL972001A	Conduct routine site measurements	

Group B

Unit code	Unit title	Prerequisites
MSL913001A	Communicate with other people	
MSL913002A	Plan and conduct laboratory/field work	
MSL933001A	Maintain the laboratory/field workplace fit for purpose	
MSL933002A	Contribute to the achievement of quality objectives	
MSL933003A	Apply critical control point requirements	
MSL933004A	Perform calibration checks on equipment and assist with its maintenance	
MSL943001A	Work safely with instruments that emit ionising radiation	

Unit code	Unit title	Prerequisites
MSL953001A	Receive and prepare samples for testing	
MSL953002A	Operate a robotic sample preparation system	
MSL963001A	Operate basic handblowing equipment	
MSL963002A	Repair glass apparatus using simple glassblowing equipment	*
MSL973001A	Perform basic tests	
MSL973002A	Prepare working solutions	
MSL973003A	Prepare culture media	
MSL973004A	Perform aseptic techniques	
MSL973005A	Assist with fieldwork	
MSL973006A	Prepare trial batches for evaluation	
MSL973007A	Perform microscopic examination	
MSL973008A	Perform histological procedures	
MSL973009A	Conduct field-based acceptance tests for construction materials	
MSL973010A	Conduct laboratory-based acceptance tests for construction materials	
MSL973011A	Perform fire pouring techniques	
MSL973012A	Assist with geotechnical site investigations	