



Australian Government

MSL974019 Perform chemical tests and procedures

Release: 1

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Modification History

Release	Comments
Release 1	This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>. Supersedes and equivalent to MSL974003 Perform chemical tests and procedures. Changes to performance criteria. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to interpret chemical test requirements, prepare samples, conduct pre-use and calibration checks on equipment and perform routine chemical tests. These tests will involve several measurement steps. The unit includes basic data processing and interpretation of results.

This unit applies to laboratory or technical assistants and instrument operators in all industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|---|-----|--|
| 1 | Interpret and schedule test requirements | 1.1 | Review test request to identify samples to be tested, test method and equipment and instruments involved |
| | | 1.2 | Identify hazards and workplace control measures associated with the sample, preparation and test |

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element. methods, reagents and/or equipment	
		1.3	Plan work sequences to optimise throughput of multiple samples
2	Receive and prepare samples	2.1	Log samples using standard operating procedures (SOPs)
		2.2	Record sample description, compare with specification and note and report discrepancies
		2.3	Prepare samples and standards in accordance with chemical testing requirements
3	Check equipment before use	3.1	Set up equipment and instruments in accordance with test method requirements
		3.2	Perform pre-use and safety checks in accordance with relevant workplace and operating procedures
		3.3	Check equipment calibration using specified standards and procedures
		3.4	Inspect reagents required for quality issues including visual checks and expiry
		3.5	Maintain equipment log in accordance with workplace procedures
4	Test samples to determine chemical species or properties	4.1	Operate equipment and instruments in accordance with test method requirements
		4.2	Perform tests or procedures on all samples and standards in accordance with specified methods
		4.3	Shut down equipment and instruments in accordance with operating procedures
5	Process and	5.1	Record test data noting atypical observations and

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	interpret data		anomalies
		5.2	Construct calibration graphs and compute results for all samples from these graphs
		5.3	Check calculated values for consistency with expectations
		5.4	Record and report results in accordance with workplace procedures
		5.5	Determine if obvious procedure or equipment problems have led to atypical data or results
6	Maintain a safe work environment	6.1	Use established safe work practices and personal protective equipment (PPE) to ensure personal safety and that of other laboratory personnel
		6.2	Minimise the generation of wastes and environmental impacts
		6.3	Safely collect and dispose of laboratory and hazardous waste
		6.4	Care for and store equipment and reagents as required
7	Maintain laboratory records	7.1	Record entries on report forms or into a laboratory information management system accurately calculating, recording or transcribing data as required
		7.2	Ensure traceability of sample from receipt to reporting of results

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Problem-solving skills to trace and source obvious causes of artefacts, track obvious test malfunctions for standardised procedures, and troubleshoot basic equipment and methods.
- Calculate the concentration of solutions.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Equivalent to MSL974003 Perform chemical tests and procedures, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>