



Australian Government

MSL976006 Evaluate and select appropriate test methods and/or procedures

Release: 1

MSL976006 Evaluate and select appropriate test methods and/or procedures

Modification History

Release 1. Supersedes and equivalent to MSL976005 Evaluate and select appropriate test methods and/or procedures. Minor changes to Performance Criteria. Some mathematical content moved from Foundation Skills to Knowledge Evidence. Some items removed from Knowledge Evidence requirements around common types of tests and procedures to allow for broader application.

Application

This unit of competency describes the skills and knowledge to evaluate and select test methods and/or procedures that are relevant to the current and evolving scope of the laboratory's operations. Selection of test methods and/or procedures may involve the appraisal of new and emerging technologies and may inform decision-making about possible extension of the laboratory's scope. Alternatively, it may relate to existing both routine and non-routine testing requirements, 'one-off' tests, client's special requirements or new tests required to satisfy new legislative, accreditation, licensing or regulatory requirements. Tests may be quantitative or qualitative.

This unit applies to senior technical officers, technical specialists and laboratory supervisors working in all industry sectors. They are required to demonstrate wide ranging, highly specialised technical skills. They are expected to execute sound judgement in the selection of appropriate methodology under the broad guidance of scientists/medical staff/engineers. All operations must comply with relevant standards, appropriate procedures and/or workplace requirements.

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.

Competency Field

Testing

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Determine sample characteristics and	1.1 Confirm drivers for evaluation and selection of test methods and/or procedures

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testing requirements	1.2 Examine sample documentation and/or consult with sample supplier to determine nature of samples 1.3 Identify sample characteristics which may affect testing requirements 1.4 Determine testing requirements and their compatibility with existing workplace procedures
2. Evaluate possible test methods and/or procedures	2.1 Identify appropriate standards, reference materials, test methods and/or procedures which may be applicable 2.2 Assess suitability of available standards, reference materials, test methods and/or procedures against testing requirements 2.3 Identify environmental and work health and safety (WHS) risks 2.4 Identify the need for specific equipment, instrumentation and/or specialised facilities 2.5 Estimate materials, personnel and possible training requirements
3. Recommend appropriate test methods and/or procedures	3.1 Select appropriate test methodology consistent with testing requirements and resource availability 3.2 Identify any changes to procedures required prior to implementation of selected method and/or procedure 3.3 Recommend selected method and/or procedure to appropriate personnel and seek authorisation to proceed
4. Confirm and document selected methods and/or procedures	4.1 Obtain standards and/or reference materials for the method and/or procedure 4.2 Conduct tests to verify the performance of the method and/or procedure, standards and reference materials 4.3 Analyse the measurements, considering accuracy, precision and estimations of uncertainties 4.4 Determine if legal traceability is required and develop appropriate chain of custody procedures 4.5 Document all safety, sample preparation, testing, data handling and reporting procedures 4.6 Submit all documentation to appropriate personnel for review and approval

Foundation Skills

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

- Learning skills to appraise new and emerging technologies relevant to scope of laboratory operations and/or job role
- Numeracy skills to use method performance measures.

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

Unit Mapping Information

Supersedes and is equivalent to MSL976005 Evaluate and select appropriate test methods and/or procedures.

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>

Assessment Requirements for MSL976006 Evaluate and select appropriate test methods and/or procedures

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- evaluated and selected test methods and/or procedures for at least 2 different items or laboratory processes.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles, concepts and workplace and regulatory requirements related to method selection
- regulatory and licensing requirements related to selected test methods
- scientific and technical principles underpinning test method and their application to selection of testing methods for different materials
- the role and importance of accuracy, precision, uncertainty, linearity, selectivity, range, limit of detection and matrix characteristics in method selection
- calculation steps for data analysis and estimation of uncertainties for selected test methods
- significance of normal, physiological or reference ranges
- common types of tests and procedures relevant to the job role
- drivers for the evaluation and selection of test methods and procedures
- factors that typically influence method evaluation and selection, including:
 - quantity and nature of sample available for testing
 - levels of detection required
 - type of matrix, possible contaminants and resulting interference
 - safety
 - availability of suitable equipment, instruments and availability of trained staff
 - cost
 - selectivity of method, range, accuracy, precision and acceptable uncertainty
 - whether it is appropriate/ethical to perform the test
 - balancing customer, workplace and/or regulatory/licensing requirements

- workplace and/or legal traceability requirements
- awareness of environmental sustainability issues as they relate to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - a standard laboratory equipped with appropriate equipment, analytical instruments and reagents
 - Australian and international regulatory standards relevant to scope of laboratory operations
 - workplace procedures, including test methods.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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