



Australian Government

MSL973021 Conduct field-based acceptance tests for construction materials

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 MSL973009 Conduct field-based acceptance tests for construction materials. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to conduct in situ tests to confirm the acceptability of raw or manufactured, construction materials prior to or after their use. Personnel are expected to be able to work independently and liaise with site personnel to ensure that testing is conducted safely and efficiently. They may transport samples and/or equipment to and from the site, as necessary, and prepare test pieces on-site for later laboratory testing.

This unit applies to laboratory personnel working in the geotechnical and construction material testing industry sectors who conduct relatively quick and straightforward control and compliance tests using established test methods. These tests could involve aggregates, concrete, soils, road pavement or other specialised construction materials.

The unit could also be relevant to laboratory technicians working in the water/wastewater and trade waste 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 Prepare for field-based acceptance tests | <ul style="list-style-type: none">1.1 Review job request to identify the test method and equipment involved, samples to be collected and/or test pieces to be prepared1.2 Identify hazards and workplace safe work procedures associated with the site, samples, test methods and equipment used1.3 Confirm site location, access, timing and any special test requirements1.4 Assemble all required equipment/materials and check that they are fit for purpose1.5 Stow equipment/materials to ensure their safe transport, as necessary1.6 Arrange transport to site, as necessary1.7 Liaise with appropriate personnel on arrival at site to ensure safety and minimise disruption to other workers during testing/sampling |
| 2 Perform field tests | <ul style="list-style-type: none">2.1 Identify locations for in situ tests in accordance with test method or client instructions2.2 Set up, check and operate test equipment safely and in accordance with workplace procedures and test method2.3 Perform tests as specified in test method or workplace procedures2.4 Take sufficient test measurements to ensure reliable data2.5 Recognise obvious errors or atypical data and take appropriate corrective actions2.6 Recognise and record details of site conditions that may impact on data quality2.7 Seek advice to deal with any situation beyond own technical competence |

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
3 Collect site samples and prepare test pieces	3.1 Identify locations for sample collection in accordance with test method or client instructions 3.2 Seek advice if samples cannot be collected or if sampling procedures require modification 3.3 Obtain required samples and maintain their integrity in accordance with sampling procedures or test method 3.4 Label all samples to ensure their traceability 3.5 Recognise and record any information about the sample appearance or site conditions that may impact on sample integrity 3.6 Prepare required test pieces and organise their safe curing, storage and/or transport in accordance with test method
4 Finalise field testing	4.1 Re-instate all disturbed surfaces in accordance with workplace procedures 4.2 Clean all equipment (and vehicle as necessary) to avoid environmental damage, including stormwater run-off and/or transfer of pests 4.3 Check that all equipment/materials are present and undamaged prior to re-stowing them for safe transport, as necessary 4.4 Notify appropriate site personnel on completion of tests and prior to leaving site 4.5 Check serviceability of test equipment on return to base, before storage 4.6 Complete site safety plans, equipment logs and test reports in accordance with workplace procedures
5 Maintain a safe work	5.1 Use safe work procedures and personal protective equipment (PPE) to ensure personal safety and that of

Elements describe the essential outcomes.

environment

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

others

- 5.2 Minimise environmental impacts of testing/sampling and generation of waste
- 5.3 Collect and/or dispose of all waste in accordance with environmental/quarantine requirements and workplace procedures

Foundation Skills

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

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Equivalent to MSL973009 Conduct field-based acceptance tests for construction materials, 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>