

<b>Title</b>	<b>Perform soil classification tests in a civil engineering laboratory</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>10</b>

<b>Purpose</b>	People credited with this unit standard are able to perform soil classification tests in a civil engineering laboratory.
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<b>Classification</b>	Infrastructure Civil Engineering > Infrastructure Laboratory
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable organisational and legislative requirements.
- 2 Applicable legislation, regulations, rules, standards and codes include but are not limited to the: Health and Safety at Work Act 2015, Hazardous Substances and New Organisms Act 1996, and their associated regulations and subsequent amendments; ISO/IEC 17025:2018 *General requirements for the competence of testing and calibration laboratories*, available from <https://www.iso.org/store.html>; NZS 4402:1986 *Methods of testing soils for civil engineering purposes - Preliminary and general*, available at <https://www.standards.govt.nz/>.
- 3 Evidence is required for four soil classification tests used in a civil engineering laboratory, which may include but are not limited to – wet sieve (particle size), dry sieve (particle size), liquid limit cone, liquid limit casagrande, plastic limit, linear shrinkage, moisture content, pinhole dispersion, Allophane, pH, Emerson crumb test, hydrometer (particle size), pipette (particle size), shrink/swell, jar slake.
- 4 Definitions  
*Organisational requirements* refer to instructions to staff on policy and procedures which are formally documented or generally accepted at the worksite. This may include legislation; industry standards and methods; national and international standards and methods; standard operating procedures; specifications; manuals; and manufacturer's information.  
*Perform* refers to completing the individual components of the test sequentially in terms of the relevant test method and organisational requirements. Components will vary between tests and include but are not limited to – the completion of tasks, from sample and equipment preparation to the calculation and reporting of results. Perform does not include the evaluation or the troubleshooting of tests.  
*Samples* may include but are not limited to – prepared materials and test materials such as standards and reagents.

- 5 It is recommended people achieve Unit 26643, *Describe soil classification tests in a civil engineering laboratory*, or demonstrate equivalent knowledge and skills, before being assessed against this unit standard.

## Outcomes and performance criteria

### Outcome 1

Perform soil classification tests in a civil engineering laboratory.

### Performance criteria

1.1 Samples and equipment are prepared.

1.2 Tests are performed.

1.3 Test results are checked.

1.4 Test equipment is maintained and stored.

1.5 Results are recorded, and calculations are performed.

Range may include but is not limited to – sample site, sample description.

1.6 Results are reported.

Range may include but is not limited to – non-conformance, corrective action taken.

<b>Planned review date</b>	31 December 2025
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### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 January 2011	31 December 2021
Review	2	23 January 2020	N/A
Rollover and Revision	3	24 October 2024	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

### Comments on this unit standard

Please contact Waihangara Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@waihangaraarau.nz](mailto:qualifications@waihangaraarau.nz) if you wish to suggest changes to the content of this unit standard.