

Title	Perform concrete sampling in civil engineering		
Level	4	Credits	4

Purpose	People credited with this unit standards are able to perform concrete sampling in civil engineering.
----------------	--

Classification	Infrastructure Civil Engineering > Infrastructure Laboratory
-----------------------	--

Available grade	Achieved
------------------------	----------

Guidance Information

- 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.
- Applicable legislation, regulations, rules, standards and codes include but are not limited to:
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>;
For fresh concrete:
NZS 3112: Part 1: 1986 *Methods of test for concrete – Tests relating to fresh concrete*, available from <https://www.standards.govt.nz/>;
CCANZ publications IB 48, IB 49, IB 50, IB 51, IB 53, IB 72 available from: <https://www.ccanz.org/documents.aspx>.
For hardened concrete:
ASTM C42/C42M-13 *Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete*, and ASTM C823/C823M-12 *Standard Practice for Examination and Sampling of Hardened Concrete in Constructions*, available from <https://www.astm.org/>;
ISO1920-6:2019 *Testing of Concrete - Part 6: Sampling, preparing and testing of concrete cores* available from <https://www.iso.org/store.html>.
- Evidence is required for either fresh or hardened concrete.
Samples include – Fresh concrete: snatch or representative samples taken randomly or selected from the following scenarios; placed concrete, agitator, paving mixer, open top container, pump outlet; *Hardened concrete:* cylindrical drilled cores, sawed beams, sawed cubes.
- 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.

- 5 It is recommended people achieve Unit 28718, *Describe fresh and hardened concrete sampling methods in civil engineering*, or demonstrate equivalent knowledge and skills, before being assessed against this unit standard.

Outcomes and performance criteria

Outcome 1

Perform concrete sampling in civil engineering.

Performance criteria

1.1 Sampling is planned.

Range may include but is not limited to – curing transport, access to sample site, customer communication.

1.2 Samples are taken.

1.3 Samples are labelled, and observations are documented.

1.4 Samples are transported to testing location.

Planned review date	31 December 2024
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 February 2015	31 December 2021
Review	2	23 January 2020	N/A

Consent and Moderation Requirements (CMR) reference	0101
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.