

Title	Test in-process pulp and chemicals as a pulp or paper manufacturing plant operator		
Level	3	Credits	5

Purpose	<p>People credited with this unit standard are able to: explain pulp or paper testing; select, apply pulp or paper tests, and record and report data.</p> <p>This unit standard is for operators working in pulp or paper plants who are required to test in-process product as part of their job requirements. It addresses generic testing skills that can be applied at all stages of these production processes.</p>
----------------	--

Classification	Wood Fibre Manufacturing > Pulp and Paper Manufacturing Skills
-----------------------	--

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

Guidance Information

1 Legislation and references

Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

- Hazardous Substances and New Organisms Act 1996;
- Health and Safety at Work Act 2015;
- Resource Management Act 1991;
- Health and Safety at Work (Major Hazard Facilities) Regulations 2016.

2 Definitions

Contraries refers to any plastic and organic debris that may be present in a furnish.

Furnish refers to the fibrous product constituents of pulp and paper (including recycled papers, pulps, and broke) blended in stock preparation to meet the requirements of various final pulp or paper product grades.

Operating parameters refer to the boundary conditions in which the operations are carried out in pulp and paper testing.

Operating procedures refer to the process(es) that are worked through, e.g. standard operating procedure (SOP) in pulp and paper testing.

Worksite documentation refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace, and are consistent with manufacturer's requirements. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, references, approved codes of practice, housekeeping standards, environmental considerations, sustainability, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the pulp and paper industry.

3 Range

Tests may include but are not limited to – consistency, kappa number, liquor strength, chemical strength, soda content, dirt and shive content, freeness, fibre length, brightness, moisture content, tensile, basis weight determination, thickness and density tests, chemical strengths (of chlorine water, chlorine dioxide solutions, hypochlorite, sodium chlorate, peroxide, caustic, silicate), residual levels of peroxide and silicate in white water, identification tests for incoming chemicals, turbidity, first pass retention, particle charge, residual chlorine test, liquor density tests, availability of sulphur compounds in kraft cooking and spent cooking liquors, availability of hydroxide ions in kraft and spent cooking liquors.

4 Assessment information

Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, worksite documentation and legislative requirements. This includes the knowledge and use of suitable tools and equipment.

Outcomes and performance criteria

Outcome 1

Explain pulp or paper testing.

Performance criteria

- 1.1 Reasons for testing are explained.
- 1.2 The principles that underpin tests on raw materials, and tests for product characteristics that are conducted at the candidate's worksite, are explained.
- 1.3 Operation of testing equipment is explained.

Outcome 2

Select, apply pulp or paper tests, and record and report data.

Range evidence is required for two tests.

Performance criteria

- 2.1 Tests to be applied are identified.

- 2.2 Hazards associated with selected test are identified and actions to be taken to minimise or eliminate the hazards are described.
- 2.3 Test equipment is selected and checked in accordance with manufacturer's specifications.
- 2.4 Samples are selected.
- 2.5 Tests are applied.
- 2.6 Test data is recorded and reported.

Planned review date	31 December 2028
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 February 1995	31 December 2024
Revision	2	27 January 1997	31 December 2024
Review	3	25 February 1999	31 December 2024
Review	4	18 December 2006	31 December 2024
Review	5	24 October 2014	31 December 2025
Review	6	30 November 2023	N/A

Consent and Moderation Requirements (CMR) reference	0173
--	------

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

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.