

<b>Title</b>	<b>Maintain and control a manufacturing process to ensure product quality</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>8</b>

<b>Purpose</b>	People credited with this unit standard are able to: perform manufacturing process control procedures; demonstrate and apply knowledge of the analysis of results of manufacturing process tests, and record results; and adjust manufacturing process parameters as required to ensure product quality.
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<b>Classification</b>	Manufacturing Skills > Manufacturing Processes
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to the:
  - Health and Safety at Work Act 2015.
  - Resource Management Act 1991.
  - Hazardous Substances and New Organisms Act 1996 and any subsequent amendments.
- 2 Definitions
  - SPC* refers to statistical process control procedures or indicators.
  - Workplace procedures* refer to procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, and procedures to comply with legislative and local body requirements.
- 3 Assessment information
  - a All activities and evidence must be in accordance with workplace procedures.
  - b People seeking credit for this unit standard will be able to perform simple chemical, visual or physical tests required to monitor and control continuous manufacturing processes. Tests may include but are not limited to – chemical titrations, surface coating thickness tests, visual checks for powder-coating defects (over or under spray), chromate testing and effluent pH testing. The tests involve checking parameters, which affect the process and are at a higher level of performance to simple product checks such as personal quality checks, or quality bench checks.
- 4 Recommended skills and knowledge
  - Unit 19506, *Demonstrate knowledge of and carry out company quality procedures in a manufacturing environment*, or demonstrate equivalent knowledge and skills.

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## Outcomes and performance criteria

### Outcome 1

Perform manufacturing process control procedures.

#### Performance criteria

- 1.1 Equipment required for performing process control procedures are identified, and correct operation is demonstrated.
- 1.2 Knowledge of worksite quality indicators is demonstrated.
- Range may include but is not limited to – conforming and non-conforming process or product boards, run charts, SPC indicators.
- 1.3 Process control procedures are integrated into the process operation within a timeframe and in a manner that optimises productivity and minimises the need for rework.
- 1.4 Equipment used for monitoring, and the control of a manufacturing process is checked as operational for next user.

### Outcome 2

Demonstrate and apply knowledge of the analysis of results of manufacturing process tests, and record results.

#### Performance criteria

- 2.1 Knowledge of quality control policy is demonstrated.
- Range may include but is not limited to – variations, bands, parameters, statistical process control procedures.
- 2.2 Analysis of process control data is performed.
- 2.3 Process control results are checked as accurate and complete, and the need to retest is identified, if required.
- 2.4 Knowledge of factors affecting test results is demonstrated.
- Range includes but is not limited to – wear on test equipment, non-standard solutions, contamination, temperature effects, supplied materials.
- 2.5 Test results are documented.

### Outcome 3

Adjust manufacturing process parameters as required to ensure product quality.

**Performance criteria**

- 3.1 Manufacturing process inputs and outputs are checked to meet specification requirements.
- 3.2 Process control factors affecting manufacturing process operation are identified, and if required, adjusted or reported within a timeframe that optimises quality.

<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	18 December 2002	31 December 2012
Revision	2	12 January 2006	31 December 2012
Rollover and Revision	3	24 August 2007	31 December 2014
Review	4	18 March 2011	31 December 2023
Review	5	26 August 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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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 Competenz [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.