

Title	Maintain and calibrate density monitoring equipment		
Level	4	Credits	4

Purpose	People credited with this unit standard are able to: <ul style="list-style-type: none"> – calibrate density measuring devices; and – maintain density measuring devices.
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Classification	Industrial Measurement and Control > Industrial Measurement and Control - Maintenance
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Available grade	Achieved
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Guidance Information

- 1 This unit standard has been developed for learning and assessment in a workplace environment.
- 2 References
 - ANSI/ISA-51.1-1979 (R1993) *Process Instrumentation Terminology*;
 - Electricity Act 1992;
 - Electricity (Safety) Regulations 2010;
 - Health and Safety at Work Act 2015 and associated regulations;
 - ISSN 0114-0663, *New Zealand Electrical Codes of Practice*, available from Worksafe, <https://worksafe.govt.nz/>;
 - CSP19 – ISSN 0110-9316, *Code of Safe Practice for the use of industrial gauges containing sealed radioactive sources 2005* (Ministry of Health, New Zealand); and all subsequent amendments and replacements.
- 3 Definitions
 - Density measurement* – can include nuclear thickness measuring equipment.
 - Industry requirements* – includes all asset owner requirements, manufacturers' specifications; and enterprise requirements which cover the documented workplace policies, procedures, specifications, business requirements; and quality management requirements relevant to the workplace in which the assessment is carried out.
 - Maintain* – planned activity during normal operation, to conserve or keep an item or piece of equipment in a state of repair and to ensure that this is done in a sustainable way.
- 4 Recommended skills and knowledge: Unit 28080, *Demonstrate knowledge of liquid analytical measurement systems*.

Outcomes and performance criteria

Outcome 1

Calibrate density measuring devices.

Performance criteria

1.1 Explain and follow safe work procedures.

Range may include but is not limited to – isolation, process fluid, pressure.

1.2 Select test equipment according to required accuracy and range of devices.

Range may include but is not limited to – pressure calibration equipment, nuclear radiation sources.

1.3 Identify and explain types and causes of typical errors.

Range may include but is not limited to – test equipment accuracy, ambient temperature.

1.4 Calibrate devices to specification.

Range may include but is not limited to – zero, span, suppression, elevation.

1.5 Document test results in accordance with industry requirements.

Outcome 2

Maintain density measuring devices.

Performance criteria

2.1 Locate, interpret, and apply technical information for the device.

2.2 Explain and follow safe work procedures are explained and followed.

Range may include but is not limited to – isolation, process fluid, pressure.

2.3 Maintain device to ensure continued operation.

Range may include but is not limited to – tools, materials, parts, techniques, specifications.

2.4 Reinststate device to operational status in accordance with industry requirements.

2.5 Produce reports and documentation in accordance with industry requirements.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	31 October 1995	31 December 2013
Revision	2	30 October 1997	31 December 2013
Revision	3	3 April 2001	31 December 2013
Review	4	22 June 2001	31 December 2013
Review	5	19 May 2008	31 December 2019
Review	6	21 November 2013	31 December 2027
Rollover and Revision	7	28 June 2018	31 December 2027
Review	8	30 January 2025	31 December 2027

Consent and Moderation Requirements (CMR) reference	0003
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.