

<b>Title</b>	<b>Maintain a pH measuring system for chemical analysis</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	<p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> <li>– calibrate a pH measuring system in accordance with industry requirements; and</li> <li>– verify operation of pH measuring system is correct and service in accordance with industry requirements.</li> </ul>
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<b>Classification</b>	Industrial Measurement and Control > Industrial Measurement and Control - Maintenance
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<b>Available grade</b>	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 (Safety) Regulations 2010;  
Health and Safety at Work Act 2015;  
ISSN 0114-0663, *New Zealand Electrical Codes of Practice*, available from Worksafe, <https://worksafe.govt.nz/>;  
and all subsequent amendments and replacements.
- 3 Definitions  
*Industry requirements* – include all asset owner requirements; manufacturers' specifications; and enterprise requirements which cover the documented workplace policies, procedures, specifications, business and quality management requirements relevant to the workplace in which assessment is carried out.  
*PPE* – Personal Protection Equipment – that is appropriate to any job being undertaken and can include overalls, safety glasses, gloves, face masks, safety boots, ear muffs etc.  
*Service* – planned activity during normal operation that involves inspection, cleaning, testing, adjusting or making minor repairs to a piece of equipment to ensure that it works properly.
- 4 Recommended skills and knowledge: Unit 28080, *Demonstrate knowledge of liquid analytical measurement systems*.

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## Outcomes and performance criteria

### Outcome 1

Calibrate a pH measuring system in accordance with industry requirements.

#### Performance criteria

- 1.1 Select test equipment according to required accuracy and range of devices.
- Range may include but is not limited to – buffer solutions, probe simulator.
- 1.2 Follow safe work procedures.
- Range may include but is not limited to – isolation, process fluid, pressure, PPE.
- 1.3 Calibrate equipment by making appropriate adjustments, to specified accuracy.
- Range may include but is not limited to – zero, span, backing off.
- 1.4 Identify and explain type and cause of typical errors.
- Range may include but is not limited to – probe failure, connector corrosion, insulation resistance.
- 1.5 Produce calibration reports in accordance with industry requirements.

### Outcome 2

Verify operation of pH measuring system is correct and service in accordance with industry requirements.

#### Performance criteria

- 2.1 Service a pH measuring system and verify performance to ensure correct and continued operation.
- Range may include but is not limited to – tools, materials, parts, techniques (including testing), specifications.
- 2.2 Follow safe work procedures.
- Range may include but is not limited to – isolation, process fluid, pressure, PPE.
- 2.3 Produce service reports.
- 2.4 Locate, interpret, and apply technical information for servicing equipment.

**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

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