

<b>Title</b>	<b>Demonstrate knowledge of hazardous substances in science laboratories and related legislation</b>		
<b>Level</b>	<b>6</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	<p>This unit standard is for any person working, or planning to work, as a technician in a science laboratory.</p> <p>People credited with this unit standard are able to: demonstrate knowledge of properties and classification of hazardous substances; and describe legislated requirements relating to hazardous substances in science laboratories.</p>
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<b>Classification</b>	Science > Science - Core
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 All work must be carried out in accordance with the quality management system, documented protocol system or Standard Operating Procedures acceptable in a commercial or research laboratory.
- 2 Health and Safety practices must conform to Australian/New Zealand Standard AS/NZS 2243 – *Safety in Laboratories* Parts 1, 2, 3, 7 and 10 available at <http://www.standards.co.nz> and <http://infostore.saiglobal.com/store>.
- 3 Legislation applicable to this unit standard includes:  
Health and Safety at Work Act 2015;  
Hazardous Substances and New Organisms Act 1996;  
Radiation Safety Act 2016.
- 4 Glossary  
*Hazardous substances* refer to substances:
  - a with one or more of the following intrinsic properties: explosiveness, flammability, a capacity to oxidise, corrosiveness, toxicity (including chronic toxicity), ecotoxicity (with or without bioaccumulation), radioactivity; and/or
  - b which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified in paragraph (a) of this definition.

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## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of properties and classification of hazardous substances.

#### Performance criteria

1.1 Properties of hazardous substances are described in terms of safety and risk in the laboratory.

Range flash point, fire point, upper flammable limit, lower flammable limit, upper explosive limit, lower explosive limit, Workplace Exposure Standard, LD<sub>50</sub>, LC<sub>50</sub>, oxidising capability, corrosive capability, radioactive half-life, types of ionising radiation.

1.2 Classification of hazardous substances under the United Nations Hazard Classification system is explained in terms of properties.

1.3 HAZCHEM signage and classification are described in terms of their role.

### Outcome 2

Describe the legislated requirements relating to hazardous substances in science laboratories.

#### Performance criteria

2.1 Employer and employee obligations are described under the Health and Safety at Work Act 2015, and its pursuant codes of practice, as it relates to science laboratories.

Range includes but is not limited to – maintaining safe environments; provision of safety equipment; hazard identification, elimination and management; accident recording and investigation requirements, conforming to the site safety plan.

2.2 Requirements of the Hazardous Substances and New Organisms Act 1996 and the Radiation Safety Act 2016, and their pursuant regulations and codes of practice, are described as they relate to science laboratories.

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<b>Planned review date</b>	31 December 2023
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	22 September 2004	31 December 2014
Review	2	21 May 2010	N/A
Rollover	3	27 January 2015	N/A
Review	4	27 September 2018	N/A

**Consent and Moderation Requirements (CMR) reference**

0113

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

**Comments on this unit standard**

Please contact NZQA National Qualifications Services [nqs@nzqa.govt.nz](mailto:nqs@nzqa.govt.nz) if you wish to suggest changes to the content of this unit standard.