

### Introduction

There have been several laboratory incidents and near misses involving chemicals at The University of Melbourne. A common root cause associated with these incidents has been a lack of appropriate controls. The scope of this bulletin is to ensure staff and students review appropriate resources prior to undertaking a risk assessment.

### Key regulatory requirements

The Occupational Health and Safety Act 2004 (Vic) requires employers, so far as reasonably practicable, to provide a safe workplace. The Australian Standard AS 2243.2 (Safety in laboratories, Part 2: Chemical aspects, Section 3.3.1.2) provides information on hazard identification, risk assessment and control processes. When developing and reviewing a risk assessment, staff and students should review all resources. Detailed guidance can be found in the University [Chemical Management Guidelines](#). For the University's general Risk Management framework, refer to [Risk Management](#). The Dangerous Goods (Storage and Handling) Regulations 2012 (Vic) prescribe the storage arrangements for all dangerous goods. Also refer to [Dangerous Goods](#) for additional information.

### Laboratory inspection

A thorough, concise and routine laboratory inspection (with appropriate documentation) is one of the cornerstones of laboratory safety. These inspections should be undertaken by experienced staff with assistance from the local laboratory staff. The key is to identify gaps in local processes and implement actions to mitigate or resolve the problem. Refer to the [Workplace Inspection Checklist – Laboratory Areas](#).

### Induction

All new staff to a workplace requires a specific local induction as part of their broader University induction. Health & Safety induction helps staffs understand the facilities, organisational arrangements and policies and procedures that are in place to ensure the workplace is as safe and healthy as possible. An [Induction checklist](#) has been published.

### Training

The purpose of information, instruction and training is to ensure that staff and students handling chemicals have the skills and knowledge they need to perform their tasks in a manner that is safe and without risks to health and the environment, so far as it reasonably practicable. It should enable staff and students to follow health and safety procedures and use risk controls that are set in place for their protection.

It should also provide them with an appreciation of the nature of the chemicals used in the workplace and the risks associated with their use, and the reason why risk controls are used. Refer to Section 2.15 of the [Chemical Management Guidelines](#) and <https://safety.unimelb.edu.au/#training>. Managers must ensure that training needs are assessed and implemented. Local induction and training must be provided and documented with competency assessment undertaken.

## Chemical risk assessment

When writing a CRA, staff can obtain information from the following University guidance:

- [Chemical management guidelines](#)
- [Chemical management](#)
- The relevant MSDS/SDS available on [GoldFFX](#) (University login required)
- [Health & safety: Risk assessment methodology](#)

For additional information/guidance

- Bretherick's handbook of reactive chemical hazards, IV Edition
- Sax's Dangerous Properties of Industrial Materials, Eighth Edition; Richard J. Lewis Snr.
- NIOSH Pocket Guide to Chemical Hazards <http://www.cdc.gov/niosh/npg/>
- The Centre for Chemical Process Safety provides a Process Safety Incident database where chemical incidents can be reviewed. <http://www.aiche.org/ccps/resources/psid>

## Chemical storage

Many chemicals have specific storage requirements because of their physical properties. The hazards or risks associated with chemical storage are manifold.

- Further information on the storage and handling of chemicals, can be found in Section 2.11 of the [http://safety.unimelb.edu.au/\\_data/assets/pdf\\_file/0010/1705906/chemical-management-guidelines.pdf](http://safety.unimelb.edu.au/_data/assets/pdf_file/0010/1705906/chemical-management-guidelines.pdf) and [http://safety.unimelb.edu.au/\\_data/assets/pdf\\_file/0009/1715346/chemical-storage-and-handling-for-minor-quantities-in-laboratories.pdf](http://safety.unimelb.edu.au/_data/assets/pdf_file/0009/1715346/chemical-storage-and-handling-for-minor-quantities-in-laboratories.pdf). It is essential that the Dangerous Goods class of a chemical is known (see the MSDS in Chemwatch GoldFFX) and that incompatible chemicals are not stored in the same DG cabinet. Guidance can be found at [http://safety.unimelb.edu.au/\\_data/assets/pdf\\_file/0005/1811174/dangerous-goods-segregation-and-storage-requirements.pdf](http://safety.unimelb.edu.au/_data/assets/pdf_file/0005/1811174/dangerous-goods-segregation-and-storage-requirements.pdf)