

USING CHEMICALS STANDARD

SCOPE

This Standard applies to all staff, students, contractors and visitors who are participating in, or are affected by Monash University (Monash) related activities in Australia.

For the purpose of this Standard, references to 'Monash' include activity at Monash University Australia and Monash College Pty Ltd, unless indicated otherwise.

This Standard sets out the requirements for the use of chemicals in teaching and research activities at Monash.

1. Risk Management

HSW risk management must be completed in accordance with the [HSW Risk Management Standard](#):

- Before activities involving chemicals can commence;
- Before procuring new chemicals or equipment that uses chemicals;
- Before the introduction of new procedures, processes or equipment that use chemicals; and
- When procedures, processes or equipment that use chemicals are modified.

Further guidance on what to include in the risk assessment can be found in the [Risk Management Guidelines: Chemical](#).

2. General requirements for using chemicals

2.1 Procurement

- Prior to procuring chemicals for the first time, the person ordering the chemical (purchaser) must ensure that:
 - A Risk Assessment is undertaken in accordance with the [HSW Risk Management Standard](#);
 - The most current Australian Safety Data Sheet (SDS) is obtained in Chemwatch and is reviewed; and
 - The Pre-purchase checklist is completed to determine the appropriate classification.
 - The Chemwatch Gold SDS (Section 15) can also be checked to identify whether the chemical is found on any relevant regulatory lists.
- This information will assist with determining:
 - Subsequent regulatory requirements;
 - Controls required for the safe use, storage and transport;
 - Waste management requirements; and
 - First Aid and Emergency Management requirements.
 - Australian Industrial Chemicals Introduction Scheme (AICIS)
 - When procuring chemicals directly from overseas, the person procuring the product becomes the direct importer and must check the AICIS requirements outlined in the [Pre-purchase checklist](#).
- Importing controlled substances into Australia

To determine if the substance being imported requires a licence and permit under the International Drug Control Convention, refer to the Pre-purchase checklist.

2.2 Facilities

- The requirements for laboratories/studios/workshops when working with chemicals are defined in Australian standards for laboratory design and construction (AS/NZS 2982) and Safety in the laboratory series (AS/NZS 2243).
- If a new laboratory/studio/workshop is built or the facility is upgraded it must be brought into compliance with AS/NZS 2982.1 and the AS/NZS 2243 series. Contact your [HSW Consultant/Advisor](#) for advice.

- The laboratory/studio/workshop must display signage at the entrance(s), stating the hazards or restricted access and those staff/students who are authorised to enter. Areas requiring regulatory or hazard signage are identified in the [Regulatory and Hazard Signage Guidelines](#).

2.3 Amenities

- Facilities for storage, preparation and consumption of food and drink must be provided outside the laboratory.
- Hand washing facilities with hot and cold water must be provided inside each laboratory near the exit.

2.4 Safety Equipment

- Safety shower and Eye wash stations
 - Emergency drench showers and Eye wash stations must be available at a distance of no more than 15 metres or within approximately 10 seconds travel time from any position in the laboratory.
 - In accordance with AS 4775:2007, Safety showers/Eye wash stations must be tested weekly to ensure the correct flow of water and that the water is clear and free from particles. Refer to the [Safety Shower Eyewash Testing Guideline](#) and [Safety Shower Eyewash Testing Poster](#).
 - Testing the safety showers on a less frequent basis can be conducted, provided the area can demonstrate through a risk assessment, that the correct and clean flow of water is maintained.
- Fume Control Equipment
 - Fume cupboards or local exhaust ventilation must be used when working with volatile chemicals in an open process unless the risk assessment indicates it is not necessary.
 - Fume cupboards must have a label to indicate that they have been tested within the last 12 months.
 - The operators must ensure there is a process in place to decontaminate the inside surfaces of the fume cupboard on a regular basis (i.e. at least every 6 months) and prior to scheduled maintenance.
- Air Monitoring

The risk assessment must identify any situation where an environment may pose an unacceptable risk to individuals due to low oxygen levels, presence of toxic gases, or an accumulation of flammable gases or vapours. This applies to both normal operations and any unintended release of the substance.

- All monitors installed for this purpose must be placed below (where the gas density is heavier than air) or above (where the gas density is lighter than air) the expected breathing zone of where any person may be working. The expected breathing zone is defined as 500mm from the nose of any operator whilst conducting normal duties.
- In addition, they must be placed such that they provide an early indication of a potentially harmful environment (e.g. <18% oxygen concentration) for any person in that workplace conducting normal duties. This often results in monitors being located:
 - Between the source of the hazard and any operators whenever practicable.
 - High enough and away from the source such as to avoid false positive alarms.
- Additional requirements

Risk assessments must be used to determine any additional controls, e.g. emergency spill equipment, glove boxes, mobile extraction units, personal protective equipment.

2.5 Chemical Register

All areas that use chemicals must maintain a chemical register in [Chemwatch](#) in accordance with the [Chemwatch](#) Standard.

2.6 Safety Data Sheets (SDS)

- Product SDSs can be looked up in [Chemwatch](#) or obtained directly from the supplier if not available in Chemwatch. Electronic copies of the SDSs obtained directly from the supplier must be forwarded to the [HSW team](#) to be added to Chemwatch.
- The SDS for each chemical must:
 - Be from the manufacturer, supplier or importer of the chemical;
 - Conform to the 16-section format as stipulated in the Code of Practice - Preparation of Safety Data Sheets for Hazardous Chemicals 2023;
 - Be the most current;

- Contain a statement of the hazardous nature of the substance;
- Contain the name, Australian address and business telephone number of the Australian manufacturer, supplier or importer; and
- Include Australian Emergency contact details.
- Chemwatch will ensure that these requirements are met.
- Areas that keep hard copies of SDSs on-site must establish a process to ensure they are regularly reviewed and updated.

2.7 Waste Management

- Chemicals must be correctly disposed of by ensuring:
 - Trade waste agreements are adhered to, e.g. no disposal down the sink;
 - Correct handling by competent staff with knowledge and access to appropriate personal protective equipment;
 - Appropriate secondary containment for transport to the designated waste storage area;
 - Segregation, packaging and labelling in accordance with the [Chemical Waste Disposal Information sheet](#) and [Chemical Waste Management poster](#);
 - Secure, designated storage in accordance with EPA requirements;
 - Collected by a licensed prescribed waste contractor.

2.8 Labelling of decanted chemicals

- The requirements for the labelling of decanted chemicals are outlined in the [Labelling of Decanted Chemicals HSW Information sheet](#).
- Compliant labels can be generated and printed directly from [Chemwatch](#) using the D-Gen Module.
- In addition, unlabelled containers must not be left unattended and re-used containers must have old label removed or totally covered with a new label.
- Food and beverages
 - Food and beverage containers, e.g. yoghurt containers, drink bottles, are not permitted to be re-used for chemical storage.
 - Food and beverages used for research or education activities must be labelled as “not for human consumption - for research or teaching use only”.

3. Dangerous Goods and Hazardous Substances

3.1 Storage

- All Dangerous Goods including compressed gases must be stored in accordance with the:
 - [Dangerous Goods and Combustible Liquids Segregation chart](#)
 - [Dangerous Goods Minor Storage poster](#)
 - [Gas Storage and Segregation Poster](#)
- A Hazardous substance can also be a dangerous good and/or a drug, poison or controlled substance and the SDS/Gold SDS must be reviewed to determine all applicable storage requirements and ensure these are met.
- Laboratory cupboards used for the storage of hazardous chemicals must have:
 - Spill trays; and
 - Be labelled with a GHS pictogram to indicate their contents
- Where necessary, ventilation of the cupboard must be provided in accordance with AS/NZS 2243.2:2021.
- Laboratory shelves used for the storage of hazardous chemicals must have spill trays or spill catchment provisions. The spill containment must be sufficient to hold the entire contents of the largest container or 25% of the total aggregate capacity of all containers.

3.2 Use

- [Safe work practices](#), as determined by the risk assessment, must be adhered to. The following guidance material applies:
 - [Fume cupboard Information sheet](#)
 - [Handling Liquid Nitrogen](#)
- The minimum requirements for Personal Protective Equipment are specified in AS/NZS 2243.2:2021. In summary they are:
 - Long-sleeved lab coat/gown;
 - Safety glasses; and
 - Fully enclosed footwear.

Additionally, the footwear must be impervious to spills. Refer to the [Footwear in Laboratories Poster](#)

- Gloves with the appropriate chemical resistance must be worn if direct contact with chemicals is likely. Information on different glove types can be found in the SDS or by accessing the [Ansell Chemical Hand Protection Tool](#).
- Any additional Personal Protective Equipment (PPE) as identified in the risk assessment e.g. fitted P2 solvent/particulate mask.

4. Scheduled Carcinogens

- A list of scheduled carcinogens can be found on the WorkSafe webpage.
- Before procuring and using a scheduled carcinogen, a licence must be obtained from [WorkSafe](#).
- Record of use: A register of use of the scheduled carcinogen must be maintained and must contain:
 - A list of the product name of the scheduled carcinogenic substance;
 - A copy of the SDS for each of the carcinogenic substances;
 - A running inventory of the amounts used and by whom.
- The register must be readily accessible to any authorised person.
- Records of use for each person required to use a scheduled carcinogen must be maintained as per the ["Scheduled Carcinogens: User Notification Record"](#).
- Upon ceasing work/study at Monash University the user of the scheduled carcinogen must be provided with a written statement of work as described in the ["Scheduled Carcinogens: Exit statement"](#).
- The academic/administrative unit must retain the completed forms in accordance with the [Information Governance and Recordkeeping Procedure](#)
- In addition, records of carcinogen use must be sent to HSW including completed copies of the:
 - Licence application letter;
 - Risk assessment number in SARAH for the scheduled carcinogen to be used;
 - Granted licence from WorkSafe Victoria;
 - Scheduled carcinogens: User Notification Record; and
 - Scheduled Carcinogens: Exit statement.
- HSW will use this information to maintain a central register of carcinogen use. If staff/students wish to seek access to any personal records of carcinogen use they must first contact their supervisor or their [HSW Consultant/Advisor](#)

5. Scheduled Drugs and Poisons

- Management must ensure that the area has a current permit from the [Victorian Department of Health \(DHS\)](#) to possess and store Scheduled Drugs and Poisons.

- **Storage**

Scheduled Drugs and Poisons must be managed and stored in accordance with the [Purchase & Storage of Poisons poster](#).

- **Use**

[Safe work practices](#), as determined by the risk assessment, must be adhered to as outlined in section 4.2 of this Standard.

- **High Risk Drugs and Poisons (S8/S9/S4D) – Drugs of Dependence**

Requirements for the purchase, access, use and destruction of high risk Scheduled Drugs and Poisons are set out in the [High Risk Scheduled Drugs and Poisons Standard](#).

6. Cytotoxic Drugs

- **Storage**

The SDS must be reviewed to determine all applicable storage requirements and ensure these are met.

- **Use**

[Safe work practices](#), as determined by the risk assessment, must be adhered to as referred to in section 4.2 of this Standard.
Refer to the following guidance:

7. Safeguards Material

- Management must ensure that areas obtain the appropriate permit by contacting the [Radiation Protection Officer, HSW](#) and develop an appropriate ledger system as required under the permit.

- **Storage**

Safeguards material must be stored securely in the specific location nominated in the permit and in accordance with the SDS.

- **Use**

- Avoid contamination of bench surfaces by using spill trays (metal or plastic) with disposable coverings such as bench coat and clean the surface after use.
- [Safe work practices](#), as determined by the risk assessment, must be adhered to as referred to in section 4.2 of this Standard.

8. Chemical Stores

8.1 Minor Storage

The use of the storage area must meet the following requirements:

- The store must be a dedicated storage area;
- Chemicals must be stored in closed, labelled containers;
- Storage of items other than chemicals is to be kept to a minimum, especially combustible items;
- Food or drink must not be stored in the area;
- The location must not jeopardise the safety of any other areas in the building and must not impede fire-fighting operations;
- The store must be adequately ventilated to ensure there is no build-up of vapours;
- The storage area must be kept locked and access restricted to authorised personnel;
- There must be spill provisions and means to prevent spilled materials accessing drains;
- Chemicals must be stored in a labelled cupboard or on labelled shelf and not on the floor;
- Separate, non-permeable spill containment for each class of dangerous goods is required, as well for incompatible items of the same Dangerous Goods class; and
- Where flammables are stored, ensure that ignition sources are adequately controlled e.g. by appropriate separation distance.

Refer to the [Chemical Storage Poster](#) for guidance relating to acceptable storage limits.

8.2 Major chemical stores (storage above minor quantities)

There is a range of specific regulatory design requirements for stores holding above minor quantities of chemicals.

- These requirements are dependent upon both the quantity stored as well as the mixtures of chemicals stored, thus must be assessed individually to determine additional requirements.
- For further information about the storage of chemicals in this type of store, contact your local safety officer or your [HSW Consultant/Advisor](#) to ensure legislative compliance.

9. Training

- Management must ensure that there is a process for identifying the training needs of all staff, students and visitors under their supervision based on the [HSW Training Requirements Matrix](#) and in accordance with the [HSW Training and Induction Standard](#)

- **Local Training**

Management must ensure that there is a process for induction and training in the use of chemicals by a suitably qualified and competent person in the areas under their control, e.g. laboratory/studio/workshop spaces. The following should be covered as a minimum:

- Access to SDSs in Chemwatch for chemicals held and used in the area;
- Risk assessments and Safe Work Instructions (SWIs) for the activities, processes and equipment that involve chemicals;
- The use and location of personal protective and emergency equipment for the use of chemicals;
- Local emergency procedures; and
- Chemical waste storage, handling, labelling and disposal procedures.

Training completion must be recorded and retained as a local record.

The person receiving the training must be able to demonstrate competence in the task(s) before their record of training is signed off.

- **Training Courses at a University Level**

Talent Development (TD) manages the provision of [training courses](#), as outlined in the [HSW Training Requirements Matrix](#).

10. Health Surveillance at Monash University

Health Surveillance requirements for using chemicals must be assessed as part of the risk assessment as outlined in the [Health Surveillance Standard](#).

11. Pregnancy and Breastfeeding

Any person who is either pregnant, considering pregnancy or breast-feeding, should refer to the [Protecting Unborn and Breast-Fed Children Standard](#) and seek out further information provided on the [HSW website](#) or by contacting their [HSW Consultant/Advisor](#).

12. Emergencies involving Chemicals

12.1 Incident and Emergency Response

- General emergency procedures for chemical spills are provided on the [Emergency procedures webpage](#).
- Provisions for the local emergency response for chemical spills must be included in the risk assessment.
- Areas must develop local emergency response procedures in the event of a chemical spill or unintended release. The procedure must consider the types of chemicals and volumes (including any gases) used and stored and the physical environment where the emergency might occur.
- All persons must be trained in the local emergency response procedure and the training records must be kept locally.
- All hazards and incidents involving chemicals must be reported in SARA+ in accordance with the Managing HSW Hazards and Incidents Procedure.

12.2 Major Incident Management

- When an incident is unable to be managed locally (e.g., due to the volume of the spill, the toxicity of the chemical, ability to respond in a safe manner);:
 - Follow Emergency response procedures as outlined on the [Emergency procedures webpage](#); and
 - Report the incident to the Emergency Services, Monash Security and HSW as soon as possible.

13. Responsibilities for Implementation

A comprehensive list of HSW responsibilities is provided in the document [HSW Roles and Responsibilities Standard](#). The responsibilities with respect to using chemicals are summarised below.

13.1 HSW Team

The HSW team are responsible for:

- Maintaining and administer Chemwatch chemical management and SDS system; and
- Submitting regulatory compliance reporting, as required.

13.2 Management

Management are responsible for ensuring that procedures and systems are in place to manage chemicals effectively and HSW risks associated with the use of chemicals for the work or study they supervise are controlled. This includes:

- Staff and students undertake the required HSW training in the use of chemicals;
- Resources are made available and appropriately maintained to ensure correct storage and safe use and disposal of chemicals;
- Local procedures and practices comply with legislative requirements for the purchase, storage, use and disposal of chemicals; and
- All hazards and incidents are reported in accordance with the [Managing HSW Hazards and Incidents Standard](#) and opportunities for improvement are identified.

13.3 All persons

All persons using chemicals must:

- Comply with relevant Safe Work Instructions, and procedures for the use of chemicals;
- Not wilfully or recklessly endanger the health and safety of any person at the workplace;
- Use appropriate control measures, as determined in the relevant risk assessment; and
- Immediately report all hazards and incidents in accordance with the [Managing HSW Hazards and Incidents Standard](#).

14. Tools

The following tools are associated with this Standard:

- [Chemwatch](#)
- [Chemical Waste Disposal Information sheet](#)
- [Chemical Waste Management poster](#)
- [Dangerous Goods Minor Storage poster](#)
- [Dangerous Goods and Combustible Liquids Segregation chart](#)
- [Footwear in Laboratories poster](#)
- [Fume cupboard Information sheet](#)
- [Labelling of Decanted Chemicals](#)
- [Pre-purchase Checklist](#)
- [Purchase & Storage of Poisons poster](#)
- [Safety Shower Eyewash Testing Guideline](#)

- [Safety Shower Eyewash Testing Poster](#)
- [Scheduled Carcinogens: User Notification Record](#)
- [Scheduled Carcinogens: Exit Statement](#)

15. Records

For HSW Records document retention please refer to the University's: [Information Governance and Recordkeeping Procedure](#)

16. Abbreviations and definitions

EPA	Environment Protection Authority
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
HSW	Health Safety & Wellbeing Team, Led by the Director Health, Safety & Wellbeing (Australia)

Key word	Definition
All Persons	These include: • Staff - A worker employed under a contract of employment who is actively participating in Monash University related activities (e.g. fixed term, tenured, casual). • Student - A person engaged through a student contract who is actively participating in Monash University related activities (e.g. undergraduate, postgraduate). • Contractor - A person from another organisation engaged through a service contract who is actively participating in Monash University related activities and for whom Monash University is not their sole source of work (e.g. tradesperson, temporary staff, consultant). • Visitors - A person not employed or enrolled with Monash, who is actively participating in Monash University related activities at no cost or on mutually agreed terms.
Chemical	For the purposes of this document, a chemical is defined as any element, chemical compound or mixture of elements and/or compounds where chemical(s) are distributed.
Chemicals of Security Concern	Chemicals that can be used to make homemade explosives or toxic devices as listed in the National Code of Practice for Chemicals of Security Concern 2016.
Cytotoxic Drugs	Cytotoxic drugs are therapeutic agents intended for, but not limited to, the treatment of cancer. These drugs are known to be highly toxic to cells, mainly through their action on cell reproduction. Many have proved to be carcinogens, mutagens or teratogens.
Dangerous Goods	Dangerous goods are substances and articles classified on the basis of immediate physical or chemical effects such as fire, explosion, corrosion, oxidation, spontaneous combustion and poisoning that can harm property, the environment or people. Dangerous goods may be solids, liquids, gas, pure substances or mixtures. Dangerous goods are defined in the Dangerous Goods Act 1985 and listed in the Australian Dangerous Goods Code (ADG Code). A dangerous good can also be a hazardous substance and/or a drug, poison or controlled substance.
Hazardous Substances	Hazardous substances are substances that can harm the health of people using them or anyone who may be exposed to them. The harm caused by hazardous substances depends on the substance and the level of exposure. They are classified in accordance with the Globally Harmonised System of Classification and Labelling of Chemicals (GHS). Further information about hazardous substances can be found in the Hazardous Substances Information System.

	A hazardous substance can also be a dangerous good and/or a drug, poison or controlled substance.
Management	The term Management for the purposes of this Standard includes roles such as: Operational Managers, Supervisors, Senior Leadership Team(s), Extended Leadership Team(s). Management are ultimately accountable for the HSW outcomes within their areas of control.
Precursor Chemicals	Any substance whether natural or synthetic and specified in the Drugs, Poisons and Controlled Substance (Precursor Supply) Regulations 2010.
Precursor Apparatus	Any item or apparatus prescribed in Category 3 of the Drugs, Poisons and Controlled Substance (Precursor Supply) Regulations 2010.
Safeguards Material	Safeguards material includes uranium and thorium in any chemical form, including salts. Possession of these substances is regulated under the (Federal) Nuclear Non-Proliferation (Safeguards) Act 1987.
Scheduled Carcinogens	Carcinogenic chemicals are hazardous substances that may cause cancer. Two schedules of carcinogenic chemicals have been declared under the OHS Regulations 2017 (Vic). These are: • Schedule 10 – Prohibited carcinogenic substances; and • Schedule 11 – Restricted carcinogenic substances.
Scheduled Drugs and Poisons	A poison is a substance that causes injury, illness, or death, especially by chemical means. Drugs, poisons and controlled substances are defined and controlled in the Poisons Standard 2012 under the Drugs, Poisons and Controlled Substances Act 1981. The National Drugs and Poisons Schedule Committee classifies drugs and poisons into schedules, which are published as the Standard for the Uniform Scheduling of Medicines and Poisons No.31 (SUSMP 31). A drug, poison or controlled substance can also be a hazardous substance and/or a dangerous good. In this document, drugs, poisons and controlled substances are referred to as 'poisons'.

GOVERNANCE

Parent policy	HSW Policy
Supporting schedules	N/A
Associated documents	Australian and International Standards ISO 45001:2018 Occupational Health and Safety Management Systems AS/NZS 2243.1: 2005 Safety in Laboratories – Planning and operational aspects AS/NZS 2243.2: 2021 Safety in Laboratories – Chemical aspects AS/NZS 2243.8: 2014 Safety in Laboratories – Fume cupboards AS/NZS 2982.1: 2010 Laboratory Design and Construction – General Requirements AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment AS/NZS 1319:1994 Safety signs for the occupational environment AS ISO 16900: Respiratory Protective Devices (series) AS 4775:2007 Emergency Eyewash and Shower Equipment Monash University HSW Documents Health Surveillance Standard High Risk Drugs and Poisons Standard Managing HSW Hazards and Incidents Standard HSW Risk Management Standard HSW Induction and Training Standard Protecting Unborn and Breast-Fed Children Standard Risk Management Guidelines: Chemical

	Using Ionising Radiation Standard
Related Legislation	Australian Dangerous Goods Code Code of Practice for the Storage and Handling of Dangerous Goods 2019 (Vic) Code of Practice - Preparation of safety data sheets for hazardous chemicals 2023 (Cth) Dangerous Goods Act 1985 (Vic) Dangerous Goods (Storage and Handling) Regulations 2022 (Vic) Drugs, Poisons and Controlled Substances Act 1981 Drugs Poisons and Controlled Substances Regulations 2017 (Vic) Drugs, Poisons and Controlled Substance (Precursor Supply) Regulations 2021 (Vic) Environment Protection Act 2017 (Vic) Environment Protection (Industrial Waste Resource) Regulations 2021 (Vic) EPA Bunding 2015 Publication 347.1 (Federal) Nuclear Non-Proliferation (Safeguards) Act 1987 Hazardous Substances Code of Practice 2022 (Vic) Industrial Chemicals (Notification and Assessment) Act 1989 Industrial Chemicals (Notification and Assessment) Regulations 1990 Model Work Health and Safety Regulations 2016 National Code of Practice for Chemicals of Security Concern 2016 (Cth) Occupational Health and Safety Act 2004 (Vic) Occupational Health and Safety Regulations 2017(Vic) Poisons Standard
Endorsement	Monash University OHS Committee 20 November 2024
Document owner	Director, Health Safety & Wellbeing
Date effective	2025
Status	Current and in effect
Version	1.0
Content enquiries	hsw@monash.edu

DOCUMENT HISTORY

Version	Date Approved	Changes made to document
1.0	2026	Administrative changes due to: • Conversion of Procedure to a HSW Standard • Transition Procedure out of University Policy Bank on to HSW website