HS322 - Hazardous Chemicals Procedure

Purpose

This procedure outlines the framework for managing hazardous chemicals at UNSW. It aims to minimise the risk of adverse health and safety effects to individuals, property, and the environment. This document details the steps to be followed in implementing a safe system of work for hazardous chemicals.

Scope

This procedure applies to staff and students at UNSW who use or store chemicals, and those who supervise these activities. It applies both on and off UNSW campus sites.

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1. Procurement

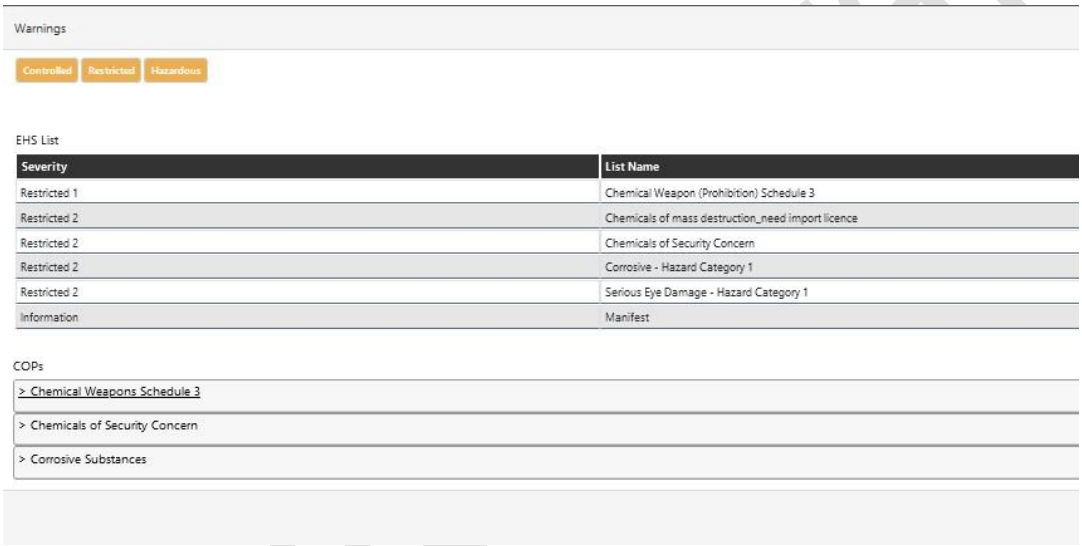
1.1. Purchasing

All hazardous chemicals at UNSW must be purchased using the Jaggaer Chemical Inventory Management (CIM) software. The system manages chemicals from purchase to disposal and serves as a chemical inventory system.

The following steps must be completed before requesting a chemical purchase.

Table 1: Steps to Complete Prior to Purchasing Chemicals

Step	Procedure
1	Consult the Safety Data Sheet (SDS) before purchasing the material for all new chemicals. Check that the recommended safety precautions listed on the SDS (PPE, storage conditions, specific handling controls etc.) are available in the area where the substance is to be used or stored.
2	Check that the SDS is compliant with Australian regulations, ensuring that it: • is less than 5 years old • includes Australian contact information. For hazardous chemicals with a non-Australian SDS, contact Central Safety at mailto:safetysystems@unsw.edu.au for assistance to convert the document into a compliant SDS. Refer Section 2.2: Safety Data Sheet.

3	Check if the substances have restrictions or special requirements, such as being a restricted carcinogen, drug or chemical of security concern. These can be seen in Jaggaer after adding the chemical to the shopping cart.  **Figure 1. Warning of Chemical Hazards and/or Restrictions** To find restrictions and category 1 chemical hazards, click on the yellow warning button in the shopping cart.  **Figure 2. Window Displaying Chemical Hazards and/or Restrictions**
4	Ensure that the: • minimum quantity required for the activity is what is being procured. Some chemicals can degrade and should not be stored for long periods • appropriate packaging sizes are purchased to minimise decanting **local area** can store the chemicals safely and appropriately.

Prior to approval being granted, restricted chemicals may require:
- specific documents such as licenses or SafeWork authorisation
- safety controls
- training to be in place.

If further clarification is needed on how to proceed with the requirements in place, contact Central Safety for guidance on obtaining purchasing approval.

Instructions on the UNSW Research Ethic Compliance Support (RECS) SharePoint must be followed if purchasing:
- Schedule 4D
- Schedule 8
- Schedule 9 drugs.

This information is found at the top of the SharePoint page, underneath the “Restricted & Controlled Substances” heading.

The following procedure must be completed as soon as stock is received.

Table 2: Stock Received Procedure

Step	Procedure
1	Add the stock to Jaggaer.
2	Match the substances to the corresponding entry in the material library. Note: This ensures that the lifespan of any potentially unstable substances is tracked appropriately.
3	Add the date of receipt to the label of all substances. Refer: Jaggaer Quick reference guides on the UNSW Safety page.

Substances should be disposed of:

- before the expiry date is reached
- when the integrity of a container has degraded to a point in which loss of containment becomes a possibility.

Refer to HS622 - Organic Peroxide Forming Chemicals for:

- examples of unstable substances
- testing requirements
- tracking requirements.

1.2 Purchasing Requirements for Chemicals of Security Concern:

The Australian Government has listed 96 chemicals as '*chemicals of security concern.*' This includes ammonium perchlorate, nitric acid and potassium nitrate. These chemicals range from regular everyday material through to highly dangerous chemicals. Some chemicals have the potential to be misused for harmful purposes. For example. the creation of explosive or toxic substances. Businesses are responsible for keeping these chemicals safe and in the right hands.

These chemicals require heightened oversight by staff to:

- ensure controlled purchasing and to confirm that they are used strictly in line with approved purposes
- monitor their security during transport and storage to prevent theft of any quantity
- conduct rigorous stocktaking to ensure that they are not removed from site for unauthorised activities
- conduct thorough investigations if any discrepancies are found.

Refer to the List of chemicals of security concern.

Refer to the National Code of Practice For Chemicals of Security Concern for further information.

End User Declarations (EUDs) are required to purchase some chemicals. For example, those listed in schedule 4, 7 and 10 of the Therapeutic Goods Administration (TGA) Poisons Standard. EUD's must be signed according to the relevant section in the HS330 Scheduled Drugs and Poisons Guideline.

1.3 Risk Management Documents

The following must be completed for all tasks involving the use of hazardous chemicals prior to ordering chemicals:

- Obtain approval to purchase chemicals
- Submit a Risk Management Form (RMF). Refer: HS329 Risk Management Procedure.
- Complete a Safe Work Procedure (SWP). Refer: Writing Safe Work Procedures Guideline (HS027)
- Consult the people performing the work to ensure all hazards are identified and appropriate controls are selected.
- Assess the risks and ensure appropriate controls are implemented for:
  - the physical properties of the chemicals
  - any incompatibilities between chemicals
  - the nature of the work involving the chemicals
  - any structure, plant or system of work that is used, or could interact, with the chemicals

— separating chemicals into appropriate waste streams

These must be completed for all projects and activities, including locations used to store hazardous chemicals. These must regularly be reviewed, according to the RMF review date, to ensure information is current and accurate.

1.4 Risk Control Measures – Selecting and Implementing

Risks must be controlled in accordance with the hierarchy of controls principle. Elimination of a risk must be considered first, as this is the most effective control. If this is not reasonably practicable, you must minimise the risk by working through the other alternatives in the hierarchy. This may involve a single control measure or a combination of different controls that together provide the highest level of protection that is reasonably practicable.

Figure 3. Hierarchy of Controls

Engineering controls must be regularly inspected and maintained. For example, annual inspections must be completed on fume cupboards. If a fume cupboard fails a test, must be tagged out of service. The fume cupboard must not be used again until it has been maintained and successfully retested.
Personal Protective Equipment (PPE) requirements must be identified, communicated and enforced. Refer: HS659 Personal Protective Equipment (PPE) Guideline.

Table 3: Examples of Risk Management Controls

Hierarchy of Control	Examples
Elimination Remove the hazard. Hazards must be eliminated when possible. Note: When the hazard cannot be removed, the risk must be minimised as far as is reasonably practicable.	• Disposing of unwanted chemicals • Ensuring that ignition sources are excluded from hazardous zones • Removing chemical residues from chemical handling systems prior to decommissioning.
Substitution Substitute the hazard with a safer alternative.	• Replacing a corrosive chemical with a non-hazardous alternative.
Isolation Isolate the hazard from people.	• Storing chemicals in a chemical cabinet.
Engineering Controls Use engineering controls to reduce the risks.	• Using a fume hood when working with hazardous chemicals.

Administrative Controls Put measurements in place to reduce exposure to the hazard, to facilitate and assure safety of the operational system.	• Training courses • Signage • Safe Work Procedures (SWP) • Supervision.
Personal Protective Equipment (PPE) Use PPE. Note: if a worker is directed to carry out work using PPE, they must be provided with information, training and instruction in the proper use and wearing of PPE, and the storage and maintenance of PPE.	• Laboratory coat • Gloves • Safety goggles.

1.5 Review of Risk Management Procedures

Risk management procedures must be reviewed as per HS329 Risk Management Procedure.

1.6 Training and Competency

For tasks requiring an established level of competence, the following must be completed:

- Document the competency requirements, including:
  - what training is required to access, work with and/or purchase the hazardous chemicals.
  - how often the competencies must be reviewed.
  - list of people authorised to conduct, assess and approve the training.
  - any relevant first aid or additional training (e.g. online training) that must be completed.
- Conduct practical examinations
- Create a list of people authorised to complete tasks (e.g. create a list of people authorised to decant cryogens). These individuals must have completed and passed the required examinations.
- Document and keep competencies in a way that can be easily accessed upon request.
- Implement control access procedures to ensure only authorised individuals can access the equipment/ substances.

In situations with shared resources (e.g. staff/ students from one school accessing equipment from another school):

- establish and communicate lines of responsibility.
- establish who is responsible for providing equipment training and assessing competency.
- ensure all visiting staff/students adhere to the local area requirements and demonstrate competency equipment operation.

2. Storage Management

2.1 Hazardous Chemicals Register - Jaggaer

UNSW uses Jaggaer Chemical Inventory Management (CIM) software to manage hazardous chemicals. All areas at UNSW, such as laboratories, workshops and stores, must maintain a list in Jaggaer of each chemical being used or stored in that area.

In Jaggaer chemicals and laboratory consumables can be sourced from:

- preferred suppliers
- specialty suppliers
- available inventory from UNSW Stores.

Jaggaer:

- is a Globally Harmonised System (GHS)-compliant data model
- identifies Hazards
- proactively flags hazards.

This enables flagging and reporting of banned, restricted and highly hazardous chemicals. These chemicals are managed and approved through custom health and safety lists (referred to as EHS lists in the software).

The table below shows EHS levels in Jaggaer. The main difference lies in the level of restriction and the approval pathway required for their use.

Table 4: EHS Levels

Level	Description	Examples
EHS1 Chemicals	Extremely high-risk substances. Require strict approvals. For example, via RECS or Chemical Safety Advisor, depending on the chemical.	Highly restricted chemicals require approval from the Chemical Safety Advisor. This includes: • ozone depleting substances • restricted carcinogens • chemical weapons precursors. Radioactive chemicals require approval from the Radiation Safety Specialist. S4D/S8/S9 scheduled drugs require approval from RECS.
EHS2 Chemicals	High-risk. Approvals are managed at the school level.	• GHS category 1 hazardous substances (e.g. hydrochloric acid and sodium hydroxide) • certain drug precursors • unstable chemicals (e.g. picric acid).

A chemical register and SDS do not need to be available for hazardous chemicals if they are a consumer product in its original packaging and are only used:
- in household quantities
- in a way that is consistent with consumer household use
- in a way that is incidental to the work.

The product labels provide sufficient details in such cases. For example:
- A 750 mL bottle of a toilet cleaner intended for consumer household use does not need to comply with WHS labelling requirements. It should comply with The Poisons Standard (the SUSMP) instead.
- Due to the packaging size, a 20 L container of the same toilet cleaner would be intended for use in a workplace and not household setting. This will need to comply with WHS labelling requirements.

Containers are the term used for entries in Jaggaer. Whenever a requisition for chemicals is raised in Jaggaer, containers are automatically generated for each chemical. Containers must be manually created by users for chemicals not ordered through Jaggaer, such as old legacy chemicals. Refer Jaggaer (QRG) Quick Reference Guide for container operations.

For any Jaggaer queries, email JaggaerCIM@unsw.edu.au.

Jaggaer must be updated accordingly to accurately track the lifespan of containers. This includes updating:
- the storage area if moved
- any material that has been dispensed out
- the expiry date of an unstable chemical. The expiry date of unstable chemicals is set to the required testing period to remind users to check their chemicals stability (e.g. with a peroxide test).

The following chemical information can be listed in a chemicals database entry:
- Chemical properties (corrosive, flammable, melting point, density etc.)
- Australian Dangerous Goods (ADG) Class
- Globally Harmonised System (GHS) class.

Contractors who are using hazardous chemicals must also keep a copy of their chemicals register and associated SDS in the area where the substances are used/stored.

2.2 Safety Data Sheet (SDS)

Table 5: SDS Information

Title	Details
Description	A SDS is a document that gives detailed information about a chemical, including its: • chemical identity • physical properties • health hazards. A compliant SDS is organised into 16 sections to make it easy to find important information. A SDS is a key resource to help people safely manage the risks associated with chemicals.
Requirements	The Safety Data Sheet (SDS) for each hazardous chemical must: • be from the supplier or importer • contain Australian contact details • be readily accessible • be available near the work area. An electronic system can be used provided this can be met. An alternative plan must be available if there is a computer or server failure. SDS' supplied by manufacturers and chemical suppliers must conform GHS classifications and any relevant state or territory WHS laws. If a hazardous chemical is used for research chemical, is a waste product or is a sample for analysis, and it is not reasonable for the SDS to comply with clause 1, then it must comply with clause 2 of schedule 7.
Location	To locate a SDS, access ChemAlert on the UNSW Safety site.
Review Dates	SDSs must be reviewed and updated every five years (manufacturers or importers obligation). The issue date written on the SDS must be used, not the date it was printed. If paper copies are used, a system must be implemented to ensure an updated version is obtained once the current version is older than 5 years.
Conditions Where an SDS Is Not Required	SDSs are not required for consumer products if the hazardous chemical is used in the workplace: • in quantities consistent with household use (e.g. dish washing detergent) • in a manner consistent with household use • in a way that is incidental to the nature of the work.

2.2.1 Schedule 7 – Safety Data Sheets

The below information is as per:

- NSW: *Work Health and Safety Regulation 2025 (Section 2.2.3, Schedule 7)*
- ACT: *Work Health and Safety Regulation 2011 (Sections 7.1 & 7.2, Schedule 7)*

If a hazardous chemical is a research chemical, waste product or sample for analysis and it is not reasonable for the SDS to comply with clause 1 then it should comply with clause 2.

Table 6: Clause 1 and Clause 2

Clause 1: Content of a Safety Data Sheet - General
(1) A Safety Data Sheet for a hazardous chemical must: (a) contain unit measures expressed in Australian legal units of measurement under the National Measurement Act 1960 of the Commonwealth, and (b) state the date it was last reviewed or, if it has not been reviewed, the date it was prepared, and (c) state the name, and the Australian address and business telephone number of:

(i) the manufacturer, or
(ii) the importer, and

(d) state an Australian business telephone number from which information about the chemical can be obtained in an emergency

(e) be in English.

(2) A safety data sheet for a hazardous chemical must state the following information about the chemical:

(a) Section 1: Identification: Product identifier and chemical identity,
(b) Section 2: Hazard(s) identification,
(c) Section 3: Composition and information on ingredients,
(d) Section 4: First aid measures,
(e) Section 5: Firefighting measures,
(f) Section 6: Accidental release measures,
(g) Section 7: Handling and storage, including how to be safely used,
(h) Section 8: Exposure controls and personal protection,
(i) Section 9: Physical and chemical properties,
(j) Section 10: Stability and reactivity,
(k) Section 11: Toxicological information,
(l) Section 12: Ecological information,
(m) Section 13: Disposal considerations,
(n) Section 14: Transport information,
(o) Section 15: Regulatory information,
(p) Section 16: Any other relevant information.

Clause 2: Safety data sheets—research chemical, waste product or sample for analysis

For the purposes of clause 331, a safety data sheet for a hazardous chemical that is a research chemical, waste product or sample for analysis must:

(a) be in English, and
(b) state the name, Australian address and business telephone number of —
(i) the manufacturer, or
(ii) the importer, and
(c) state that full identification or hazard information is not available for the chemical, and in the absence of full identification or hazard information, a precautionary approach must be taken by a person using, handling or storing the chemical, and
(d) state the chemical identity or structure of the chemical or chemical composition, as far as is reasonably practicable, and
(e) state any known or suspected hazards, and
(f) state any precautions that a person using, handling or storing the chemical must take to the extent that the precautions have been identified.

2.2.2 Importing a chemical

If chemicals are being imported it is the duty of the importer (e.g. researcher) to ensure that a current SDS is provided to any person who might be affected by the hazardous chemical. The SDS must comply with the requirements of clause 1 of schedule 7 in the *Work Health and Safety Regulation 2025* (NSW)/ *Work Health and Safety Regulation 2011* (ACT) unless the chemical is:

- a research chemical
- a waste product or
- a sample for analysis.

In this case, the SDS must comply with the requirements of clause 2.

To request assistance in authoring a compliant SDS, follow the steps in the table below.

Table 7: Procedure for Compliant SDS Authoring

Step	Procedure
1	Complete HS011-SDS Authoring Form.
2	Email safetysystems@unsw.edu.au requesting assistance in authoring a compliant SDS. Attach to the email: • Original SDS (the one to be converted) • HS011 – SDS Authoring Form.
3	Central Safety will raise a request with third party contractor.
4	Third party contractor will provide an invoice with a link for payment via credit card.
5	Local areas must pay via credit card. Note: Central Safety does not have a credit card for this. The local areas are responsible for this and reconciliation.
6	Once payment has been received, the third-party contractor will provide a draft of the authored SDS.
7	Users can provide their feedback as required.
8	Once any changes have been agreed upon, the SDS is then finalised and shared with the requestor.

2.3 Labelling

The below table details the differences between domestic and international labelling requirements for hazardous chemicals.

Table 8: Domestic and International Labelling Requirements

Domestic/ International	Requirements
Domestic labels	• Manufacturers, suppliers and importers are responsible for ensuring hazardous chemicals on containers are legally compliant. • Those using a chemical must: — check that it has a GHS label — understand the critical safety information noted on the GHS label. Refer: • HS429 Labelling of Hazardous Chemicals Guideline for further information • Schedule 9 of WHS Regulation: Part 3: Correct Labelling.
International labels	• These must be replaced with compliant labels reflecting the converted SDS. • Requirements for converted international chemicals are identical to those purchased domestically.

As per HS429 Labelling of Hazardous Chemicals Guideline, laboratory users must correctly label:
- decanted chemicals
- working solutions
- research samples
- chemical waste.

Special labelling requirements for these materials are outlined in the same guideline.

The following must be followed:
- All new chemicals purchased must have a GHS compliant label.
- Any legacy chemicals (those procured 7 years ago or older) which were already labelled in accordance with previous requirements/legislation are not required to be re-labelled.
- Any chemicals which do not have a compliant label must either be:

- disposed of appropriately, or
- stored in a separate, locked storage facility until they are correctly re-labelled. Re-labelling must be completed within one week.

Special labelling requirements for small containers, research chemicals, decanted materials and waste products are outlined in HS429 – Labelling of Hazardous Chemicals Guideline.

2.4 Storage

Storage facilities must:

- be provided for all chemicals
- allow for separation and segregation of all incompatible substances according to
  - GHS class
  - information listed in their SDS
- have dedicated Australian Standard approved cabinets for each type of dangerous goods. (depending on the quantity stored).

Dangerous Goods (DGs) of different classes have different physical hazards. DGs:

- must not be stored with different classes of DGs.
- must have sufficient distance between them to eliminate the risk of:
  - fire
  - explosion
  - accumulation of toxic gases
  - vapours from a leak or spillage.

  The risk increases with the quantity of dangerous goods being stored.
- storage quantities should be kept to a minimum to cater for demand
- must not be stored in excessive amounts for long periods.

Refer: HS404 Dangerous Goods Storage Guideline.

2.5 Unstable Chemicals

A process must be followed to monitor the storage of unstable chemicals, including:

- potentially unstable chemicals
- highly reactive substances
- chemicals that can spontaneously ignite or detonate if their storage conditions are not maintained. Such substances may require:
  - storage in specific temperatures ranges
  - the addition of stabilisers
  - water added to substances to keep them wetted. For example, picric acid. Refer: HS716 Management of Picric Acid Protocol.

Prior to purchasing a chemical, risks must be assessed, and appropriate controls must be implemented to ensure safe storage.

Substances that may become unstable past their expiry date or chemically degrade over time in storage must be disposed of within the specified time limits. For example, substances that can form organic peroxides over time. Refer: HS622 Organic Peroxide Forming Chemicals.

If flammable chemicals require cold storage, they must be stored in an intrinsically safe/spark proof fridge/freezer. Domestic fridges/freezers are not suitable for this because their internal compartments are not spark proof and can ignite flammable vapours. Storage of flammable liquids in fridges is permitted provided the fridge has been modified by a competent person to eliminate ignition sources. Refer: Australian Standard AS2243.2:2021 Safety in Laboratories Part 2: Chemical Aspects.

Checklists for managing storage of chemicals and dangerous goods are available on the UNSW Safety website. These are to assist local areas managing their chemicals. These forms are not mandatory.

2.6 Manifest for Schedule 11 Hazardous Chemicals

UNSW is legally required to prepare and maintain a hazardous chemicals manifest. This is because UNSW stores more hazardous chemicals than the limits set in Schedule 11 of the *Work Health and Safety Regulation 2025* (NSW)/ *Work Health and Safety Regulation 2011* (ACT).

The UNSW manifest lists each area on campus where Schedule 11 chemicals (dangerous goods) are stored in amounts above the set limits.

Each local area must maintain an accurate chemical register on Jaggaer to provide information on dangerous goods.

The following must also be implemented:

- A building manifest must be available
- The building manifest must list each location in that building containing a placard quantity of a Schedule 11 hazardous chemical
- Each location storing a placard quantity of Schedule 11 hazardous chemicals is required to have placard signage on the entrance to the location
- Dangerous goods placarding is also required for:
  - bulk storage facilities (e.g. Liquid Nitrogen tanks)
  - packaged stores where placard quantities are exceeded.

Refer: HS333 Placard, Manifest and Notification Procedure for Schedule 11 Chemicals.

2 Safe Handling

2.1 Safety Data Sheet (SDS)

The Safety Data Sheet (SDS) is an important resource for workers and businesses to manage the risks of hazardous chemicals in the workplace. Workers should read and understand the SDS before handling a chemical to ensure safe storage, use, and handling. Labels may not include all hazard details or safety instructions, however the SDS provides more complete information.

Section 7 of an SDS details specific information regarding"

- precautions for safe handling
- conditions for safe storage
- any specific end uses of the chemical/material.

This section will contain details on how to handle and store the chemical safely in order to minimise any risks it may pose to people, property or the environment.

Refer to Section 2.2 Safety Data Sheet (SDS) for further information.

2.2 Air Monitoring and Health Surveillance

Air monitoring involves measuring the air quality in a specific area using equipment to detect airborne contaminants. This equipment can include personal detectors worn by workers or area monitors placed in workplaces like laboratories.

Health surveillance involves medical professionals monitoring individuals for health changes due to exposure to certain substances.

UNSW is committed to minimising exposure to hazardous chemicals as far as reasonably practicable.

Air monitoring and health monitoring must be completed according to the below table.

Table 9: Monitoring Type and Requirements

Monitoring Type	Required Completion Details
Air Monitoring	Air monitoring must be completed when: • it is not reasonably certain that the exposure standard is not being exceeded • monitoring is required to determine whether there is a risk to health.

	Results of air monitoring must be: • made available to the workers who may be exposed to the substance or mixture • kept for 30 years after the date the record is made.
Health Monitoring	Health monitoring must be provided to a worker if: a) the worker is: • doing ongoing work where they use, handle, create, or store hazardous chemicals, and • there is a significant risk to their health from exposure to a hazardous chemical listed in Schedule 14, Table 14.1, Column 2, or b) there is a significant risk of exposure to a chemical not listed in schedule 14, and either: • valid techniques are available to detect the effect on the worker's health, or • a valid way of determining biological exposure to the hazardous chemical is available, and it is unclear if the exposure has exceeded the biological exposure standard. Refer: HS091 Health Monitoring Guideline.

The need to conduct either air monitoring or health surveillance should be identified by the local area supervisor or in consultation with the Central Safety Team.

Contact the Central Safety Team for further information or guidance if required.

2.3 Dealing with Chemical Spills

Refer: HS421 Chemical Spills Guideline.

2.4 Controls

Refer: Section 1.4. Risk Control Measures – Selecting and Implementing.

2.5 Training and Supervision

Safety training must be conducted for all staff or students who work with hazardous chemicals.

For details on minimum competency requirements, consult HS320 HS Training and Induction Procedure for further information - Appendix 2. The local area must use this information to develop an individual training plan for their staff or students.

Local areas must develop their own specific task-based training required for an individual. This can be:
- the SWP in the form of a list to be examined on
- knowledge tests
- a practical demonstration.

The supervisor of the area must provide sufficient information and supervision for the staff or students to work competently and safely in a multi-functional area. These areas may have a combination of chemical, biological, radiological and/or equipment risks.

UNSW uses Moodle for some online training modules, such as those for chemical safety training.

3 Disposal and Review

3.1 Safe Disposal

The following should be done to minimise waste:
- Purchase the minimum quantities required for work (not stockpiling)
- Use only the quantities required
- Share chemical resources where practicable.

Disposal of hazardous chemicals down sinks is prohibited without documented approval from Estate Management and review by UNSW Central Safety. Refer: HS321 Laboratory Hazardous Waste Disposal Guideline.

UNSW uses a waste contractor (licensed by the EPA) to collect and dispose of all hazardous waste from UNSW premises on a weekly basis. Hazardous waste must be documented on HS014 Chemical Waste Inventory Form. Email the form to:

- Estate Management (EM) at emgeneralservices@unsw.edu.au, and
- Central Safety team at safetysystems@unsw.edu.au.

The waste can then be moved to a designated waste collection area.

RMFs and SWPs involving chemical waste must include detailed chemical waste disposal procedures. Any possible incompatibilities or issues that may arise during the collection, transport and storage of waste must be addressed.

3.2 Inspection, Audit, and Stocktake Requirements

Inspections, audits and stocktakes must be completed as per the below table.

Table 10: Inspection, Audit and Stocktake Requirements

Type	Description
Inspections	Local areas must regularly conduct inspections to ensure: • that procedures are being followed • a high standard of safety is being maintained.
Chemical Safety Audits	Chemical safety audits must be regularly conducted to check that systems and procedures are being followed. These audits should: • include spot checks of registers • review RMFs and SWPs • check for the adequacy of emergency facilities. Refer: HS614 Hazardous Chemicals Audit Checklist.
Chemical Stocktake	Each area must implement and manage a chemical stocktake process that meets the following requirements: • Occurs at minimum on an annual basis. • The chemical register (Jaggaer) must be checked against each container physically present to ensure the database contains the most up to date information. • Discrepancies, such as missing containers, must be investigated as soon as possible. • That the integrity of chemical containers haven't degraded over time and aren't posing a loss of containment hazard. Refer section 2.5 Unstable Substances for details on checking unstable or highly reactive chemicals.

3.3 Recordkeeping

The following records must be maintained for work with hazardous chemicals:

- Risk Management Forms (RMF's)
- Safe Work Procedures (SWP's)
- Training records
- Chemicals register
- Safety Data Sheets
- Air monitoring records
- Health surveillance records
- Inspection and testing/maintenance records for engineering controls
- Dangerous Goods manifests.

Contact the Central Safety Team for assistance or for more information on any of the above.

Effective: XX XXXX 2025 **Responsible:** Director, Health and Safety **Lead:** Deputy Director, Health and Safety

Appendix 1

Authority for procedures and instructions

The following UNSW officers are authorised to maintain and change the procedure sections of this policy in accordance with the *Policy Framework Policy*:

1. Director, Health and Safety
2. Deputy Director, Health and Safety

Responsibilities

xxxxx

Legislative Compliance

This procedure is intended to ensure that UNSW complies with relevant legislation. State based legislation is signified with the relevant acronym in brackets, with all others being federal legislation.

1. *Work Health and Safety Regulation 2025* (NSW)
2. *Work Health and Safety Regulation 2011* (ACT)
3. Therapeutic Goods (Poisons Standard)
4. Chemical Weapons Convention
5. Poisons and Therapeutic Goods Act 1966 (NSW)
6. Poisons and Therapeutic Goods Regulation 2008 (NSW)

Supporting documents

- HS027 - Writing Safe Work Procedures Guideline
- HS011 - SDS Authoring Form
- HS014 - Chemical Waste Inventory Form
- HS091 - Health Monitoring Guideline
- HS320 - HS Training and Induction Procedure
- HS321 - Laboratory Hazardous Waste Disposal
- HS333 - Placard, Manifest and Notification Procedure for Schedule 11 Chemicals
- HS404 - Dangerous Goods Storage Guideline
- HS429 - Labelling of Hazardous Chemicals Guideline
- HS614 - Hazardous Chemicals Audit Checklist
- HS659 - Personal Protective Equipment (PPE)
- HS716 - Management of Picric Acid Protocol

Definitions and acronyms	
ADG Classification	Australian Dangerous Goods (ADG) classification is a system used to identify physical chemical hazards and is used for transport & storage signage. The current 9 classes of dangerous goods, with their associated dangerous goods diamonds, are used for outer packaging on containers, on vehicles which are transporting chemicals by road, rail and air as well as on chemical storage cabinets. In addition, ADG diamonds are used to signify storage of placard quantities of dangerous goods.
Globally Harmonised System (GHS)	A United Nations developed system which has established standardised and uniform methodology for the classification and labelling of hazardous chemicals. It classifies chemicals according to physical, health and environmental hazards. The physical hazards are largely based on those of the United Nations Dangerous Goods System. This more holistic approach means that the previously used terms such as 'hazardous substances' (substance where the focus of the risk was on health) and 'dangerous goods' (substances where the focus of the risk was on physical hazards, such as fires and explosions) are replaced by the more encompassing term of 'hazardous chemicals'.
Hazardous Chemical	According to SafeWork Australia, hazardous chemicals are any substance, mixture or article classified under a hazard category in the *"Globally Harmonized System (GHS) of Classification and Labelling of Chemicals"*.
Legacy Chemical	Broadly defined as expired chemicals or those no longer needed/usable for research but remain stored in laboratories (often for years). The chemical and/or physical stability of these chemicals may become compromised over time, leading to the formation of shock sensitive degradation products.
Safety Data Sheet (SDS)	A document containing all the information required to enable safe use, storage, transport and disposal of a chemical including: product identification; hazard information; composition and information on ingredients; how to deal with emergencies involving the chemical; safe handling and storage; risk control measures and personal protective clothing and equipment required; physical and chemical properties of the chemical; stability and reactivity information; toxicological and health effects information; as well as transport and disposal requirements.

Revision History				
Version	**Approved by**	**Approval date**	**Effective date**	**Sections modified**
1.0	Director, Human Resources	1 November 2006	1 November 2006	This procedure replaces both the Hazardous Substances Policy and the Hazardous Substances Program. Responsibilities (s4 of Policy), are now outlined in the HS Responsibility, Authority and Accountability Procedure. New guidelines replace Section 1.4 (Health Surveillance), Section 1.1.3 (Labelling). Section 1.1 on risk assessment moved to the Risk Assessment Procedure.
2.0	Director, Human Resources	1 April 2007	1 April 2007	Minor changes from consultation
2.1	Director, Human Resources	8 January 2008	8 January 2008	New subsection 14 added in Section 4 – linking this document with the Chemical Spill guideline and referencing the UNSW Emergency Procedures
2.2	Director, Human Resources	1 April 2010	1 April 2010	Expand the storage information and reference the DG Checklists.
2.3	Director, Human Resources	1 December 2010	1 December 2010	Update links
2.4	Director, Human Resources	16 December 2010	16 December 2010	Update the format of the procedure in accordance with the UNSW procedures template.
3.0	Director, Human Resources	22 July 2013	22 July 2013	Updated in accordance with WHS Regulation 2011 Sections changed include: Definitions – define GHS Section 3.1 restricted substances 3.1 chemicals of security concern 3.4.2 new COP for labelling 3.14 updated requirements related to air monitoring and health surveillance 3.20 Annual notification for schedule 11 chemicals Updated Branding Logo in accordance with UNSW Branding Guidelines. Modified the document identifier from OHS to HS in accordance with WHS legislation review
3.1	Director, UNSW Safety and Sustainability	30 April 2014	30 April 2014	Reviewed for administrative updates

4.0	Director, UNSW Safety and Sustainability	21 March 2016	21 March 2016	*Section 3.1 Purchasing: introduce the SciQuest ERM system for raising requisitions* *Section 3.2 Chemical register section updated to accommodate SciQuest ERM* *Section 3.13 Waste: introduce the new online waste request form being developed by FM* Section 3.19 Placarding and Manifest. Update the procedure name i.e. HS333 Preparing manifest and placard of Schedule 11 Hazardous Chemicals procedure (i.e. replacing the term Dangerous Goods)
4.1	Director, UNSW Safety and Wellbeing	28 May 2019	28 May 2019	Template refresh (section 3.13.19 re-numbered as section 119); amended 1(g); additional section 20 inserted
5	Director, Health and Safety	**	**	Removed references to SciQuest. Added information on Jaggaer procedures. Updated regulation references, including GHS requirements. Updated weblinks and internal UNSW document links. Updated Risk Management and Safe Work Procedure processed in line with Salus. Administrative updates including layout and formatting changes.