

# Handling, Using and Disposing of Chemicals

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## 1.0 Purpose

This procedure outlines the requirements for safe and effective management of handling, use and disposal of chemicals at Griffith University. The procedure aims to minimise risks to personnel and property and ensure continuing legislative compliance.

## 2.0 Scope

This procedure applies to all staff, students, contractors and other relevant persons engaged by Griffith University that procure, use, store and dispose of chemicals as part of their work, research or study. It encompasses all aspects of chemicals management, except for managing asbestos, biological or radioactive materials (refer to specific procedures for these hazards).

## 3.0 Procedure

**Note:** The terms Hazardous Chemicals Register, Chemical Register and Manifest are used interchangeably at Griffith and refer to the 'Manifest' recorded in Chemwatch. This document uses Chemical Register unless referencing a specific legislative requirement.

### 3.1 Following Risk Assessment Treatment Plans

*Accountability: Chemical Custodians*

Before commencing any work involving chemicals:

- verify a risk assessment was completed and approved
- verify all controls defined in the risk assessment are implemented
- if controls are not suitable, conduct a formal review of the risk assessment.

### 3.2 Labelling

*Accountability: Chemical Custodians*

Label all chemicals following the Globally Harmonized System (GHS) and Schedule 9 of the Work Health and Safety (WHS) Regulation, including labelling:

- storage containers

- mixtures of chemicals
- decanted chemicals
- enclosed systems.

For further information, refer to the *Labelling of Workplace Hazardous Chemicals Code of Practice 2021* (Qld).

Date all chemicals on the label to assist with monitoring degradation.

Labelling is not required if all chemicals are used immediately and cleaning the container after.

Optionally, print GHS-compliant labels from Chemwatch.

When labelling dilutions, include the hazardous nature of the components where the concentration of an ingredient is:

- greater than or equal to 1%, or
- 0.1% for carcinogenic toxicity, germ cell mutagenicity and reproductive toxicity.

Remove unlabelled chemicals from use and storage and dispose of them as chemical waste.

Accountability: Laboratory Managers, Clinic Managers, Workshop Managers

Label or signpost any pipes and reticulated services containing chemicals or dangerous goods to identify the contents.

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### **3.3 Storing**

*Accountability: Chemical Custodians*

Store all chemicals following:

- legislative requirements for the class and category of chemicals
- SDS guidance
- permit or licence conditions
- as detailed in the risk assessment.

Do not store chemicals in personal lockers, desks or offices.

Dispose of all out-of-date chemicals.

#### **3.3.1 Segregating**

*Accountability: Chemical Custodians*

Incompatible chemicals must be appropriately segregated at all times. Refer to WHSQ Chemical Segregation Chart for segregation of incompatible chemicals.

Display the Dangerous Goods Compatibility Guide from the GHS/ADG Quick Guide published by Workplace Health Safety Queensland.

### 3.3.2 Using Storage Cabinets

*Accountability: Laboratory Managers, Clinic Managers, Workshop Managers*

Where specialised storage facilities such as chemical cabinets are required, ensure they are constructed and labelled for the chemical class per the relevant Australian Standard.

Ensure chemical storage cabinets have the following controls:

- spill collection trays
- appropriate signage
- open or closed ventilation as is recommended for their contents
- self-closing and self-latching doors
- constructed of polypropylene for corrosive storage cabinets.

Only position flammable storage cabinets in a location that:

- doesn't impede the escape of personnel in the event of an emergency
- it is away from any ignition sources, including power points, with at least 3m horizontally and 1 metre above any opening on the cabinet.

*Accountability: Chemical Custodians*

Always store chemicals in appropriate storage cabinets. Do not store chemicals in the storage unit's spill collection tray.

### 3.3.3 Storing Flammable Solvents in Fridge and Freezers

*Accountability: Chemical Custodians*

When storing flammable chemicals in a refrigerator or freezer, verify that it is spark-free and has top-mounted compressors.

### 3.3.4 Storing Temperature Sensitive Chemicals

*Accountability: Chemical Custodians*

Only store temperature-sensitive chemicals in a manner to ensure they remain stable and under relatively stable temperature and humidity regimes for the best shelf life and safety. Verify that the space or equipment is fit for purpose before use.

### 3.3.5 Storing Time Sensitive Chemicals

*Accountability: Chemical Custodians*

Refer to the Storing Time Sensitive Chemicals procedure for instruction on these processes.

### 3.3.6 Storing Regulated Chemicals

*Accountability: Chemical Custodians*

Only store prohibited and restricted carcinogens, scheduled drugs and poisons and chemicals of security concern in secure and lockable locations.

In the areas where regulated chemicals and substances are stored:

- secure the against theft or unauthorised tampering at all times
- directly supervise all service and maintenance personnel at all times

- keep doors closed or locked at all times, and never chock doors open
- do not give access to unauthorised persons under any circumstances. Only authorised staff and students who have gone through the required inductions and training are given access to these areas.

*Accountability: Laboratory Managers, Clinic Managers, Workshop Managers*

Keep a register of all personnel inducted and authorised to access areas where regulated chemicals are stored.

### **3.3.7 Storing Bulk Chemicals**

*Accountability: Laboratory Managers, Clinic Managers, Workshop Managers*

Store bulk chemicals securely and with bunding to prevent any damage to containers or release.

Where dangerous goods or combustible liquids are stored, regularly maintain the tanks and associated pipework. Inspect the tank's integrity at least every ten years or sooner, depending on the tank type and relevant Australian Standards. Maintain records of system inspections, maintenance, and integrity testing.

## **3.4 Working in Hazardous Areas**

*Accountability: Chemical Custodians*

Where a hazardous area assessment has been conducted and the hazardous area classification has been assigned, establish the exclusion zones defined in the assessment.

## **3.5 Disposal of Chemical Waste**

*Accountability: Chemical Custodians*

Maintain the lowest practicable quantity of chemicals and waste stored on campus.

Dispose of chemicals on time as prescribed by labelling and risk assessment.

For chemical waste to be acceptable for disposal to sewer, verify the waste is:

- soluble in water
- not in a solid form
- not a viscous substance in quantity or of size that can obstruct or interfere with the operation of the sewage system
- not toxic or hazardous to aquatic, marine or terrestrial life and environments
- between pH6 and pH9.

Do not dispose of heavy metals, pesticides, herbicides, fungicides or concentrated solutions of acids or alkalis to the sewer.

Dilute acceptable flammable liquids (short-chain alcohol solutions) to ensure there is no accumulation of alcohol in the under-sink traps.

Do not deliver waste to the chemical stores without first getting approval from [crs@griffith.edu.au](mailto:crs@griffith.edu.au). Any high-hazard chemicals may be required to remain in the current workspace until the day of waste collection to minimise risk.

Contact [crs@griffith.edu.au](mailto:crs@griffith.edu.au) for guidance on completing a waste manifest and lodging a request for disposal. Submit manifests at least seven days before collection to guarantee removal.

Seal all chemicals to be disposed of in their original container or a clearly labelled, appropriate and compatible container.

Chemical waste pick-up locations are as follows:

- G24 Loading Dock,
- G40 Loading Dock,
- N01 and N20 Dangerous Goods Store,
- N27 Flammable Liquid Store,
- N75 Bin Store, and
- S03 Loading Dock.

*Accountability: Health and Safety Chemical and Radiation Specialist Team*

Schedule in minimum quarterly contractor collection to dispose of chemical waste.

Maintain records of collections, including the total litres or kilograms disposed of. Where the contents of a container are unknown, label it as 'UNKNOWN substance, for disposal only'.

### **3.6 Demobilising a Research Team**

*Accountability: Chemical Custodians*

When vacating a laboratory, complete the Laboratory Demobilisation Checklist to assist in leaving the space in a safe condition and ensuring the removal of all legacy chemicals.

Notify [crs@griffith.edu.au](mailto:crs@griffith.edu.au) of the change so the audit and inspection schedule can be updated.

## **4.0 Definitions**

**ADG Code** is the Australian Code for the Transport of Dangerous Goods by Road and Rail, in its current form, approved by the Australian Transport Council. The ADG Code is accessible at the National Transport Commission website.

**Chemicals** are any substance that has a defined composition.

**Chemical Custodians** are personnel with operational control over chemicals at Griffith. This includes users of the chemicals, chief investigators and their supervisor.

**Chemical Register** is a 'hazardous chemical register' as defined by the WHS Regulation, and at Griffith is using the 'manifest' function in Chemwatch.

**GHS** refers to the 'Globally Harmonized System of Classification and Labelling of Chemicals', in its current form and published by the United Nations.

**Hazardous Chemical** means a substance, mixture or article that satisfies the criteria for a hazard class in the GHS (including a classification referred to in Schedule 6 of the WHS Regulation).

**SDS** refers to a safety data sheet prepared under Section 330 or 331 of the WHS Regulation.

**WHS Regulation** refers to the Work Health and Safety Regulation 2011 (Qld).

## 5.0 Information

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|---|---|
| Title                                   | Handling, Using and Disposing of Chemicals Procedure  |
| Document number                         | 2023/0001046  |
| Purpose                                 | This procedure outlines the requirements for safe and effective management of a chemical inventory at Griffith University. The procedure aims to minimise risks to personnel and property and ensure continuing legislative compliance. |
| Audience                                | Staff   |
| Category                                | Operational   |
| Subcategory                             | Safety  |
| UN Sustainable Development Goals (SDGs) | This document aligns with Sustainable Development Goal: 3: Good Health and Well-Being   |
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| Effective date                          | 18 December 2023  |
| Review date                             | 18 December 2028  |
| Policy advisor                          | Associate Director, Health and Safety Standards and Assurance   |
| Approving authority                     | Director, Health and Safety   |

## 6.0 Related Policy Documents and Supporting Documents

|                |  |
|----------------|--|
| Legislation    | <p>Work Health and Safety Act 2011 (Qld)</p> <p>Work Health and Safety Regulation 2011 (Qld)</p> <p>Australian Dangerous Goods (ADG) Code</p> <p>Medicines and Poisons Act 2019 (Qld)</p> <p>Medicines &amp; Poisons (Poisons &amp; Prohibited Substances) Regulation 2021 (Qld)</p> <p>Therapeutic Goods (Poisons Standard—July 2023) Instrument 2023 (Cwth)</p> <p>National Code of Practice for Chemicals of Security Concern 2016 (Cwth)</p> |
| Policy         | <p>Health, Safety and Wellbeing Policy</p>   |
| Procedures     | <p>Managing Chemicals Standard</p> <p>Acquiring and Transferring in Chemicals Procedure</p> <p>Risk Assessing Chemicals Procedure</p> <p>Transporting Chemicals Procedure</p> <p>Maintaining a Chemical Inventory Procedure</p> <p>Managing Regulated Chemicals Procedure</p> <p>Special Approvers Guideline</p> <p>Griffith University Substance Management Plan</p>  |
| Local Protocol | <p>N/A</p>   |
| Forms          | <p>N/A</p>   |