

# Managing Regulated Chemicals

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## 1.0 Purpose

This procedure outlines the requirements for safe and effective management of regulated 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 Substance Management Plan (SMP)

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

Review the Griffith University Substance Management Plan annually or where there is a trigger for change (e.g. change of risk profile, legislation, Griffith organisational structure or campus modifications).

Keep a register of all High-Risk Poisons defined in Restricted Schedule 7 and Schedules 8 - 10 of the Therapeutic Goods (Poisons Standard—July 2023) Instrument 2023 (Cwlth).

### 3.2 Managing Regulated and High-Risk Chemicals and Substances

*Accountability: Chemical Custodians*

Maintain an accurate inventory of all regulated and high-risk chemicals continuously. Update the Hazardous Chemical Register in Chemwatch if the stock changes.

### 3.2.1 Chemicals of Security Concern

*Accountability: Chemical Custodians*

An accurate stock inventory of chemicals of security concern must be maintained including:

- products containing high-risk chemicals of security concern in relevant concentrations and forms
- the physical location of each product container at any time
- the number of containers or the total weight of the product at the start of a particular time period
- the number of containers and/or the total weight of the product at the end of a particular time frame.

Any unexplained losses of the chemicals must be reported to the Health Safety and Wellbeing team as soon as possible.

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

Maintain oversight over the total inventory of chemicals of security concern for Griffith.

### 3.2.2 Prohibited and Restricted Carcinogens

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

Maintain accurate records of use for scheduled carcinogens. Record the following information:

- the product name
- a copy of the SDS
- a running inventory of the amounts used and by whom
- records of medical surveillance for personnel in contact with scheduled carcinogens.

### 3.2.3 Cryogenics and Cryogenic Liquid

*Accountability: Chemical Custodians*

When using cryogenics or cryogenic liquids, refer to the **Handling Cryogenics or Cryogenic Liquids** procedure.

A cryogenic liquid includes:

- liquid nitrogen (LN<sub>2</sub>)
- liquid argon (L<sub>ar</sub>)
- liquid helium (LHe)
- liquid hydrogen (LH<sub>2</sub>)
- liquid oxygen (LO<sub>2</sub>)

Whilst not strictly a cryogen, dry ice (solid carbon dioxide) is included in this procedure as it is also routinely used as a cooling agent.

### 3.2.4 Cryogenics and Cryogenic Liquid

*Accountability: Chemical Custodians*

Consider all nanomaterials as hazardous chemicals, even if a SDS is unavailable. Given the size of the particles, consider all nanomaterials to have the potential for creating explosive atmospheres through dust clouds.

Follow the Acquisition of Hazardous Chemicals Procedures for acquiring and generating nanomaterials.

Verify that the work group understands the process they will undertake during the work with nanomaterials, including:

- weighing, mixing and sieving operations
- tapping and cleaning operations
- dissolving operations and spray-drying operations
- handling particulate nanomaterials
- manufacturing nanoparticles (especially the production of nanoparticles in a gas phase) and associated maintenance of equipment
- machining materials containing nanoparticles (e.g. sawing, polishing, grinding)
- spraying liquids containing nanomaterials
- processing nanoparticles in a liquid where a high energy output is involved
- plant and equipment maintenance.

For the handling of flammable nanoparticles, consider the following:

- for reactive or catalytically active nanoparticles, prevent contact with incompatible substances
- use intrinsically safe electrical equipment to prevent fires
- verifying the correct extinguishing agent is available in the laboratory considering the compatibility or incompatibility of the material with water (some metallic dust reacts with water to form hydrogen)
- use anti-static shoes and mats when handling nanomaterials to reduce static charge build-up.

## 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).

**Label** means written, printed or graphical information elements concerning a chemical that is affixed to, printed on, or attached to the container of a chemical.

**Nanomaterials** refer to industrial materials intentionally produced, manufactured or engineered to have unique properties or specific composition at the nanoscale, that is a size range typically between 1 nm and 100 nm, and is either a nano-object (ie. that is confined in one, two, or three dimensions at the nanoscale) or is nanostructured (ie. having an internal or surface structure at the nanoscale).

**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

Title	Managing Regulated Chemicals Procedure
Document number	2023/0001048
Purpose	This procedure outlines the requirements acquiring chemicals 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 Goals: 3: Good Health and Well-Being 12: Responsible Consumption and Production
Approval date	18 December 2023
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	Work Health and Safety Act 2011 (Qld) Work Health and Safety Regulation 2011 (Qld) Australian Dangerous Goods (ADG) Code Medicines and Poisons Act 2019 (Qld) Medicines & Poisons (Poisons & Prohibited Substances) Regulation 2021 (Qld) Therapeutic Goods (Poisons Standard—July 2023) Instrument 2023 (Cwth) National Code of Practice for Chemicals of Security Concern 2016 (Cwth)
Policy	Health, Safety and Wellbeing Policy
Standard	Managing Chemicals Standard
Procedures	Acquiring and Transferring in Chemicals Procedure Risk Assessing Chemicals Procedure Maintaining a Chemical Inventory Procedure Handling, Using and Disposing of Chemicals Procedure Transporting Chemicals Procedure Special Approvers Guideline Griffith University Substance Management Plan
Local Protocol	Managing Chemical Incidents and Emergencies Protocols
Forms	Laboratory Demobilisation Checklist