

Managing Regulated and High-Hazard Chemicals

1.0 Purpose

2.0 Scope

3.0 Procedure

3.1 Substance Management Plan (SMP) | 3.2 Managing Regulated Chemicals and Substances | 3.3 Managing High-Hazard Chemicals and Substances

4.0 Definitions

5.0 Information

6.0 Related policy documents and supporting documents

1.0 Purpose

This procedure outlines the requirements for safe and effective management of regulated and high-hazard 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 ([Table 1](#) indicates the basic requirements. For more details refer to specific procedures for these hazards).

3.0 Procedure

Note: The terms Hazardous Chemical 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.

[Table 1](#) provides a reference for the security, tracking, stocktake, and authority to use regulated chemicals. Regulated chemicals have been identified in ChemWatch via a series of tags.

3.1 Substance Management Plan (SMP)

The scheduled substances at Griffith University are primarily considered as poisons, any scheduled substance is treated as a poison if the substance is not used, or is not intended to be used, for a therapeutic use. Poisons are organised into Schedules that indicate the requirements for purchase, use, storage, and disposal. To work with scheduled substances, you will require an approved Activity Dealing.

Health and Safety Chemical and Radiation Specialist Team must 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, campus modifications, or new or changed use of substance).

Chemical Custodians must keep a high-hazard poison register for all substances defined in Medicines and Poisons (Poisons and Prohibited Substances) Regulation 2021 (Qld) Schedule 1 Restricted S7 poisons, The Poisons Standard (Cwlth) Schedules 8 - 10, and medicines controlled under Medicines and Poisons (Medicines) Regulation 2021 Part 5 Categories of medicines (Qld).

3.2 Managing Regulated Chemicals and Substances

Regulated chemicals and substances refer to specific chemicals or groups of chemicals that are mentioned in regulations, codes, or standards. According to the Work Health and Safety Regulations 2011, all regulated chemicals and substances are classified as hazardous and require additional controls, security measures, and reporting protocols. The sections below will outline the additional requirements that apply specifically to these regulated chemicals beyond those for all hazardous substances.

Chemical Custodians must maintain an accurate inventory of all regulated and high-hazard chemicals. Update the Chemical Register in ChemWatch if the stock changes.

3.2.1 Chemicals of Security Concern

Some chemicals can be used for illegal activities, these chemicals are covered by the voluntary National Code of Practice for Chemicals of Security Concern ('The Code'). The Code identifies 15 high-hazard chemicals and an additional 81 chemicals that are recommended to be treated with the same level of security. Griffith University applies security measures to the full 96 chemicals.

Chemical Custodians must maintain an accurate stock inventory of chemicals of security concern must be maintained including:

- Products containing chemicals of security concern in relevant concentrations and forms.
- The physical location of each product container at any time.
- The number of containers of the product at the start and end of a particular time period.
- Some, chemicals of security concern must have a usage that indicates the total remaining weight.

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

Health and Safety Chemical and Radiation Specialist Team must maintain oversight over the total inventory of chemicals of security concern for Griffith University.

3.2.2 Prohibited and Restricted Carcinogens

Prohibited and restricted carcinogens are chemicals that may cause cancer. Some carcinogens require authorisation to purchase, handle, and store; these are referred to as prohibited or restricted carcinogens. Prohibited carcinogens are listed in Schedule 10, table 10.1 and restricted carcinogens are listed in Schedule 10, table 10.2 of the Work Health and Safety Regulation 2011 (QLD). Work involving prohibited or restricted carcinogens requires approval from WorkSafe Queensland and an approved Activity Dealing.

Chemical custodians must maintain accurate records of use for scheduled carcinogens. Record the following information:

- The product name,

- A copy of the Safety Data Sheet (SDS),
- A running inventory of the amounts used and by whom, and
- Records of medical surveillance for personnel in contact with scheduled carcinogens

3.2.3 Nanomaterials

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).

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

Follow the Acquiring and Transferring in Chemicals Procedure 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 operation,
- 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; and
- 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 suitably rated electrical equipment (as per AS 60079 series),
- Verify 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), and
- Use anti-static shoes and mats when handling nanomaterials to reduce static charge build-up.

3.2.4 Controlled substances and Illicit drug precursors

These substances are used in the production of or use as an illicit drug and targeted for theft or diversion.

Controlled substances are regulated by the Drugs Misuse Regulation 1987 (QLD). The Regulations apply the substances specified in the Drugs Misuse Regulation 1987 (QLD), Schedule 6 and to any salts, derivatives, or stereo-isomers of a substance. Any lost or missing controlled substance must be reported to Queensland police within two days.

Illicit drug precursors are substances listed in the Code of Practice for Supply Diversion into Illicit Drug Manufacture and Criminal Code Regulations 2019 (Cth).

Chemical Custodians must maintain an accurate inventory of all chemicals listed in Drugs Misuse Regulation 1987 (QLD) Schedule 6, Code of Practice for Supply Diversion into Illicit Drug Manufacture, and Criminal Code Regulations 2019 (Cth) must be maintained, and any loss or theft reported to Chemical and Radiation Safety (CRS) and a statutory declaration completed for submission to Queensland Police Service.

3.2.5 Security sensitive ammonium nitrate (SSAN)

SSAN is any substance that contains more than 45% ammonium nitrate. The only exceptions are: when it is already categorised as an explosive or it is in a water based mixture containing two or more components and the components do not form separate layers when the product is left standing."

Chemical Custodians must maintain an accurate inventory of all items defined as SSANs: ammonium nitrate, ammonium nitrate emulsions, and ammonium nitrate mixtures containing greater than 45% ammonium nitrate (by mass), excluding solutions and ammonium nitrate products that are classified as class 1 explosives.

Total holdings of SSAN across Griffith University is not to exceed 3kg.

3.2.6 Defence and Strategic Goods List 2021 (DSGL) Part 2: Chemicals

DSGL is a legislative instrument specifying goods, technology, and software regulated under Australian export control laws.

DSGL Part 2 – Dual-use List specifies items generally used for commercial purposes, but with potential military and weapons of mass destruction (WMD) application. DSGL Part 2 – Dual-use List: Category 1 – Materials, chemicals, microorganisms and toxins, includes a list of chemicals that are controlled under Australian export control laws. Any person or entity wishing to export, supply, publish or broker DSGL chemicals may need to lodge a permit application with Defence depending on if exemptions apply.

Chemical Custodians must maintain an accurate inventory of all items defined as DSGL Part 2: Chemicals must be maintained. Please see the Secure Engagement with International Parties Hub or contact the Export Control and Security Manager (exportcontrol@griffith.edu.au) for further information.

3.2.7 Industrial Chemicals Environmental Management Standard (IChEMS)

IChEMS is a national framework aimed at reducing environmental pollution from industrial chemicals used in Australia. It establishes consistent standards for the import, manufacture, use, export, and disposal of these substances to minimise their environmental impact.

Chemical Custodians must maintain an up-to-date inventory of all chemicals listed on the IChEMS Register. They must ensure appropriate controls are in place to manage environmental risks, including safe storage to prevent harm, effective spill response measures, and disposal in accordance with the Handling, Using and Disposing of Chemicals Procedure. The custodian needs to identify the prescribed requirements that may apply through the IChEMS Schedules and comply with those requirements and the Minimum Standards. For more information see **IChEMS**.

3.3 Managing High-Hazard Chemicals and Substances

A high-hazard chemical refers to a chemical that poses a significant hazard to human health, safety, or the environment due to its inherent properties. These chemicals are typically classified based on their potential to cause harm during exposure, incorrect storage, or accidental release.

3.3.1 Cryogenics or Cryogenic Liquid

Chemical Custodians must establish and comply with your local Handling of Cryogenics or Cryogenic Liquids processes and procedures.

A cryogenic liquid includes:

- Liquid nitrogen (LN₂),
- Liquid argon (LAr),
- Liquid helium (LHe),
- Liquid hydrogen (LH₂), and
- Liquid oxygen (LOX).

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.

3.3.2 Time sensitive chemicals

Some chemicals develop additional hazards that were not present in their original formulation during prolonged or incorrect storage, these chemicals are known as 'time sensitive' chemicals. These chemicals are divided into 4 lists based on the conditions and hazards that may develop. Due to potential changes in the rating of time sensitive chemicals a static list is of limited value, therefore the ChemWatch/CIMS tagging system identifies chemicals within this group.

List A - chemicals are those that form explosive levels of peroxides after prolonged storage without concentration. Discard 3 months after opening or 12 months after receiving.

List B - chemicals form peroxides that are hazardous only on concentration by distillation or evaporation. Discard 12 months after opening or 18 months after receiving.

List C - chemicals consist of monomers that form peroxides that can initiate explosive polymerization. Discard 12 months after opening or 18 months after receiving.

List D – other time sensitive chemicals. Refer to manufacturer's instruction on expiry and storage conditions. Includes time sensitive gases, the supplier's recommendation on life of cylinder must be followed or return cylinder after 24 months.

Accountability: Chemical Custodians

Label all time sensitive chemicals containers with an expiry date based on the above and dispose of containers as required.

3.3.3 Pyrophoric

Pyrophoric materials have the potential to spontaneously ignite upon exposure to the oxygen in air, and in many cases are also water reactive. Exposure to air or moisture can cause them to generate heat and/or fire, as well as flammable and/or corrosive byproducts, by violent decompositions. Pyrophoric materials can take the form of solids, liquids, or gasses.

Chemical Custodians must maintain an accurate inventory of all pyrophoric chemicals in ChemWatch. Ensure that there is a documented risk assessment covering the chemicals, that controls are implemented and maintained, and that the risk assessment is kept up to date.

3.3.3 GU High-Hazard

A High-Hazard chemical refers to a chemical that poses a significant hazard to human health, safety, or the environment due to its inherent properties. These chemicals are typically classified based on their potential to cause harm during exposure, incorrect storage, or accidental release.

Chemical Custodians must maintain an accurate inventory of all GU High-Hazard chemicals in ChemWatch. Ensure that there is a documented risk assessment covering the chemicals, that controls are implemented and maintained, and that the risk assessment is kept up to date.

3.3.3 Dangerous when Dry

The term "dangerous when dry" refers to a substance that is stable and non-reactive under normal conditions but becomes highly sensitive and capable of detonating or reacting violently when it loses its moisture content or dries out. In its dry form, the substance becomes much more prone to combustion, detonation, or other dangerous reactions.

Chemical Custodians must maintain an accurate inventory of all pyrophoric chemicals in ChemWatch. Ensure that there is a documented risk assessment covering the chemicals, that controls are implemented and maintained, and that the risk assessment is kept up to date.

Table 1. Quick guide

Tag	Type of substance	Authority/Permit/Licence/EUD required	Chemical Inventory Management System (CIMS) and secure storage requirements	Tracking and Stock count requirements
S7R	Restricted Schedule 7 – restricted dangerous poisons Secondary Approval	Activity Dealing	CIMS barcode Within a secure cabinet within secure access laboratory.	Container tracked in CIMS. Record aliquot use. Annual stock count.
S8-9	Scheduled poisons S8 - A high-risk poison or a prohibited substance, S9 – Prohibited substance. Secondary Approval	Activity Dealing	CIMS barcode Within a suitable safe inside a secure access laboratory.	Container tracked in CIMS. Record aliquot use. Stock count monthly and recorded in logbook.
HRMed	High-Risk, Restricted, Monitored, and Diversion Risk Medicines Secondary Approval	Activity Dealing	CIMS barcode Within a suitable safe inside a secure access laboratory.	Container tracked in CIMS. Annual stock count.
PYRO	Pyrophoric H250	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
PaRC	Prohibited and restricted carcinogens Secondary Approval	Authority to use and store from Work Health and safety Queensland. activity	CIMS barcode Within a locked container/cupboard accessed by authorized people only inside a secure access laboratory.	Container tracked in CIMS. Annual stock count.
CTRL	Controlled substances and Illicit drug precursors Secondary Approval	Complete and submit an end-user declaration to the supplier	CIMS barcode Within a locked container/cupboard accessed by authorized people only inside a secure access laboratory.	Container tracked in CIMS. Annual stock count.
RAD	Radiation Secondary Approval	Licence activity	CIMS barcode Within a locked container/cupboard accessed by authorized people only inside a secure access laboratory.	Container tracked in CIMS. Record aliquot use. Annual stock count.
SSAN	Security sensitive ammonium nitrate (SSAN) Secondary Approval	Complete and submit an End user declaration to the supplier - Qty limited	CIMS barcode Within a locked container/cupboard accessed by authorized people only inside a secure access laboratory.	Container tracked in CIMS. Record aliquot use. Annual stock count.

Tag	Type of substance	Authority/Permit/Licence/EUD required	CIMS and secure storage requirements	Tracking and Stock count requirements
CoSC	Chemicals of security concern	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
GUHR	GU defined high-hazard chemicals Secondary Approval	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
TSC-A	Time sensitive chemicals that may form explosive levels of peroxides without concentration	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
TSC-B	Time sensitive chemicals that form explosive levels of peroxides on concentration	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
TSC-C	Time sensitive chemicals that may auto polymerize	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
TSC-D	Time sensitive chemicals other peroxidizable chemicals	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
DWD	Dangerous when dry	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count.
HLTHMon	Chemicals requiring health monitoring under Work Health and Safety Regulation schedule 14	None	CIMS barcode Within a secure access laboratory	Container tracked in CIMS, annual stock count
DSGL	Defence and Strategic Goods List 2021	None	CIMS barcode Within a secure access laboratory.	Container tracked in CIMS, annual stock count

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.

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).

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

Chemical Register is a 'hazardous chemical register' as defined by the WHS Regulation, and Griffith University 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.

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).

CIMS refers to Chemical Inventory Management System

EUD refers to an End User Declaration which are legislative requirements as outlined in the Queensland Drugs Misuse Act 1986 and the Queensland Drugs Misuse Regulation 1987.

S8 safe refer to a safe for the storage of medicines and poisons. as per Queensland Health Departmental Standard Secure storage of S8 medicines.

Schedule is the classification of a medicine and/or poison as per The Poisons Standard (the SUSMP)

Radioactive materials refer to substances considered to be radioactive as per Queensland Radiation Safety Regulations 2021 (Qld)

Secure access laboratory – access restricted through use of electronic access or security key.

5.0 Information

Title	Managing Regulated and High-Hazard Chemicals Procedure
Document number	2025/0001069
Purpose	This procedure outlines the requirements to work with regulated or high-hazard chemicals at Griffith University. The procedure aims to minimise risks to personnel and property and ensure continuing legislative compliance.
Audience	Staff and Students
Category	Operational
Subcategory	Safety
UN Sustainable Development Goals (SDGs)	This document aligns with Sustainable Development Goal: 3: Good Health and Well-Being
Approval date	30 June 2025
Effective date	30 June 2025
Review date	30 June 2030
Policy advisor	Senior Manager, Chemical Safety
Approving authority	Director, Health Safety and Wellbeing

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 (Cwlth)
	Medicines and Poisons Act 2019 (Qld)
	Medicines & Poisons (Poisons & Prohibited Substances) Regulation 2021 (Qld)
	Medicines and Poisons (Medicines) Regulation 2021 (Qld)
	The Poisons Standard (Cwlth)
	National Code of Practice for Chemicals of Security Concern 2016 (Cwlth)
	Drugs Misuse Act 1986 (Qld)
	Code of Practice for Supply Diversion into Illicit Drug Manufacture
	Criminal Code Regulations 2019 (Cwlth)
	Explosives Act 1999 (Qld)
	Explosives Regulation 2017 (Qld)
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 Approver Procedure
Local Protocol	Griffith University Substances Management Plan
	Managing Chemical Incidents and Emergencies Protocols
Forms	Laboratory Demobilisation Checklist