

Procedure: Chemical management

Purpose

This procedure describes how the Australian National University (the University) manages chemical hazards, including chemical waste to ensure safety and compliance with the requirements of the *Work Health and Safety Act 2011* (Cth) and the *Work Health and Safety Regulations 2011* (Cth). The implementation of this procedure is supported by the [Chemical Management Handbook](#) and the [Chemical Management System](#).

Definitions

ADG Code is the Australian Code for the Transport of Dangerous Goods by Road or Rail ('Australian Dangerous Goods Code') Edition 7.5.

Archived chemical A research chemical that is stored for longer than 1 week in an amount greater than 1mg or 1ml. Where appropriate, it should also apply to amounts less than 1mg or 1ml.

Bulk in relation to a hazardous chemical is:

- in a container with a capacity exceeding 500 litres or net mass of more than 500 kilograms; or
- if the hazardous chemical is a solid- an undivided quantity exceeding 500 kilograms

Chemical Management System (CMS) is the University's System intended for the safe management of chemicals within the University including, but not limited to, hazardous substances/chemicals, dangerous goods and otherwise controlled substances. The CMS supports the University to meet its chemical regulatory requirements, including by providing immediate access to chemical information via Safety Data Sheets (SDS). Chemwatch is the current University CMS.

Chemwatch authorised user is a University staff member who has been provided with permissions level access to the Chemwatch system by the Chemwatch administrator.

Chemicals are substances that are used in a chemical process or made by a chemical process. A term used to define chemical substances, including Dangerous Goods, Hazardous Substances as well as substances that do not fall into either classification. They may be solids, liquids or gases; and may be pure substances or mixtures.

Chemical mixture is the combination of two or more differing substances but not combined chemically. A mixture is the physical combination of two or more substances where the identities are retained and are combined to form suspensions, solutions, emulsion or gel.

Chemical process is a method of changing one or more chemicals or compounds, which could include formulating, blending, mixing, making, remaking and synthesizing of the chemical. The process can occur by itself or be caused by an outside force, and involve some sort of chemical reaction

Class - Dangerous goods are assigned in the ADG Code to one of nine classes dependent on the main danger presented

Container is any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like, that contains a chemical hazard.

Controlled Substances are generally a drug or chemical whose manufacture, possession, or use is regulated by a government department. It is also a category of drug substances listed requiring permission to import and/or export this list may be updated from time to time to reflect changes in regulations or determinations that additional substances should be controlled within existing regulations.

Controlled Waste is waste subject to legislative control, in either handling, disposal or both.

Dangerous Goods are solids, liquids or gases, which have been classified as dangerous under the Australian Code for the Transport of Dangerous Goods by Road or Rail, 7th Edition (ADG Code 7). Due to their physical properties that have the immediate potential to harm people, property or the environment.

Emergency procedures are basic plans, established in advance, and rehearsed. Stating what action to take in the event of an emergency. Used in order to minimise the consequences of an incident, such as injuries, or damage to property or the environment

Exposure is an event that occurs when a person, property or the environment comes into contact with a hazard. The four routes of exposure for people are: Inhalation, skin absorption, ingestion, inoculation.

Exposure standards are legal concentration limits that must not be exceeded. The exposure standard represents the airborne concentration of a particular substance or mixture that must not be exceeded. The exposure standard can be of three forms:

- • 8-hour time-weighted average
- • peak limitation
- • short-term exposure limit.

Exposure standards have been established in Australia for approximately 700 substances and mixtures.

GHS is the 'Globally Harmonized System of Classification and Labelling of Chemicals'. The GHS defines and classifies the hazards of chemical products, and communicates health and safety information on labels and safety data sheets.

Hazardous substance are substances that have the potential to harm human health. They may be solids, liquids or gases; they may be pure substances or mixtures. Hazardous substances may enter the human body in a number of ways, depending on the substance and how it is used (the nature of the work).

Hazardous chemicals means a substance, mixture or articles that satisfies the criteria for a hazard class in the GHS of Classification and Labelling of Chemicals.

Hazard is a situation or thing that has the potential to harm people, property or the environment. The GHS covers physicochemical, health and environmental hazards for hazardous chemicals.

Hazard category is a division of criteria within a hazard class in the GHS.

Hazard class is two major groups of hazards: physical, and health. Each hazard group includes hazard classes that have specific hazardous properties. Physical hazards group: based on the physical or chemical properties of the product – such as flammability, reactivity, or corrosivity to metals.

Hazard pictogram forms part of the international Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Two sets of pictograms are included within the GHS: one for the labelling of containers and for workplace hazard warnings, and a second for use during the transport of dangerous goods.

Hazard statement forms part of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS). They are intended to form a set of standardized phrases about the hazards of chemical substances and mixtures that can be translated into different languages. As such, they serve the same purpose as the well-known R-phrases, which they are intended to replace.

Hazchem code (also called Emergency Action Code) provides vital information to fire brigade and other emergency services on the action to be taken to combat spillage, leakage or fire in an emergency involving a hazardous substance. The HAZCHEM code consists of a number from 1 to 4 and any one of the letters, P, R, S, T, W, X, Y, Z followed at times by the letter E.

Health hazard is anything that can cause illness or disease. Exposure may occur over a short or long.

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

Laboratory is a facility that provides controlled conditions in which scientific or technological research, experiments, and measurement may be performed.

Manufacture is the activities of packing, repacking, formulating, blending, mixing, making, remaking and synthesizing of the chemical.

Personal Protective Equipment (PPE) is anything used or worn by a person to minimise risk to the person's health and safety

Placard is a notice or sign displayed or intended for display in a prominent place e.g. to segregate stored chemicals, the labelling used to warn of dangerous goods in areas containing hazardous chemicals in the workplace. It contains information about the hazardous properties of the chemical stored in container/s or specific storage area.

Placard quantity is a specified amount of hazardous chemical as referred to in Schedule 11 of the WHS Regulations, table 11.1, column 4 specifies the quantity limits for particular descriptions of hazardous chemicals:

- including any additive necessary to preserve the stability of the element or compound and any impurities deriving from the process, but
- excluding any solvent that may be separated without affecting the stability of the element or compound, or changing its composition.

Product identifier is the name or number used to identify a product on a label or in a safety data sheet.

Research chemical is a substance or mixture that is manufactured in a laboratory for genuine research; and is not for use or supply for a purpose other than genuine research or analysis.

Recognised research institution as listed in ACT Medicines, Poisons and Therapeutic Goods Act, the Australian National University is one.

Risk is the likelihood and consequence of injury or harm occurring and in relation to chemicals likelihood that a substance will cause harm in the circumstances of its use.

Safety Data Sheet (SDS) are documents that are designed to provide the information necessary to store and handle hazardous chemicals safely. The manufacturer or importer of each hazardous chemical produces these documents. They describe the safe handling information and the emergency information.

Scientifically Qualified Person as referenced in ACT Medicines, Poisons and Therapeutic Goods legislation means:

- a dentist, doctor, pharmacist, or veterinary surgeon; or
- a person who has been awarded a doctorate for scientific studies by the person.

Note: Dentist, doctor, pharmacist and veterinary surgeon does not include an intern or trainee (see def. of these terms).

Substance is a chemical element or compound in its natural state, obtained, or generated by a process.

SUSMP Is the acronym for Standard for the Uniform Scheduling of Medicines and Poisons, published by the National Drugs and Poisons Schedule Committee as amended from time to time.

Supply is selling or transferring ownership or responsibility for a chemical.

Spillage is an uncontrolled release of a substance outside its container.

Transfer Includes the pumping, dispensing or decanting from one container into another or from one place to another.

Worker is defined as anyone who carries out work for the University. A worker includes staff, volunteers, contractor, students and visitors at the University.

Procedure

Scope

1. This procedure is the University WHS Management System document relating to chemical management at the University and applies to the University staff, students and contractors who are required to use chemicals and/or controlled substances as part of their work, which is associated with, research, teaching and operational tasks undertaken within their duties at the University.
2. This procedure is supported by the University [Chemical Management Handbook](#), administered by the Chemical and Hazardous Waste Safety Advisory Group and through the [Chemical Management System](#).

Chemical Management Handbook

3. The [Chemical Management Handbook](#) provides specific information and supporting tools to assist with the implementation of this procedure within the University. In managing chemicals, the University advocates a risk management approach to minimise the risks to staff, students, contractors and visitors in relation to the purchase, storage, handling and disposal of chemical materials associated within the range of research, teaching and operational tasks undertaken within the University.

4. The [Chemical Management Handbook](#) includes information, instructions, procedures and tools associated with the following topics:

- Legislation and licensing;
- Laboratory design and equipment;
- Purchase and acquisition;
- Storage;
- Preparation for work;
- Chemical Management System (CMS);
- Safety Data Sheets;
- Risk assessment of tasks involving chemicals;
- Signage and Placarding;
- Labelling;
- Transportation of chemicals;
- Chemical waste and disposal;
- Laboratory spill management;
- Emergency procedures;
- First aid;
- Incident reporting;
- Records;
- Nanomaterials;
- Security sensitive substances;
- Chemicals of security concern;
- Scheduled poisons, medicines and drugs;
- Concessional spirits;
- Health monitoring;
- Scheduled carcinogens;
- Agricultural and veterinary chemicals;
- Illicit drug precursors;
- Peroxide forming chemicals;
- Radioactive chemicals;

- Health and Safety documents and forms; and
- Safe use of a fume cupboard.

Training

5. There are several Chemical safety training courses supporting the control of chemical safety and management. Refer to the [WHS training procedure](#).

Sources

Legal and other requirements
<u>Work Health And Safety Act 2011 (Cth)</u>
<u>Work Health And Safety Regulations 2011 (Cth)</u>
<u>Australian Radiation Protection and Nuclear Safety Act 1998 (Cth)</u>
<u>Australian Radiation Protection and Nuclear Safety Regulations 2018 (Cth)</u>
<u>Therapeutic Goods Act (1989) Therapeutic Goods Administration (TGA)</u>
<u>Labelling of Workplace Hazardous Chemicals Code of Practice (Cth)</u>
<u>Preparation of Safety Data Sheets For Hazardous Chemicals Code of Practice (Cth)</u>
<u>National Code of Practice for the Control of Scheduled Carcinogenic Substances [NOHSC 2014(1995)] (Cth)</u>
<u>National Code of Practice for Chemicals of Security Concern (Cth)</u>
<u>Chemical Weapons (Prohibition) Act (1994) (Cth)</u>
<u>Chemical Weapons (Prohibition) Regulations (1997) (Cth)</u>
<u>Agricultural and Veterinary Chemicals Code Act (1994) (Cth)</u>

<u><i>Agricultural and Veterinary Chemicals Code Regulations (1995) (Cth)</i></u>
<u><i>Customs Act (1901) (Cth)</i></u>
<u><i>Defence Trade Controls Act (2012) (Cth)</i></u>
<u><i>Excise Act (1901) (Cth)</i></u>
<u><i>Excise Regulations (1925) (Cth)</i></u>
<u><i>Dangerous Goods Safety (General) Regulations (2004)</i></u>
<i>Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations (2007)</i>
<u><i>Dangerous Goods Safety (Security Risk Substances) Regulations (2007)</i></u>
<i>Poisons Act (1964)</i>
<i>Poisons Regulations (1965)</i>
<i>Agricultural and Veterinary Chemicals Act (1995)</i>
<i>Environmental Protection Act (1986)</i>
<i>Environmental Protection (Controlled Waste) Regulations (2004)</i>
<i>Health (Drugs and Allied Substances) Regulations (1961)</i>
<i>Misuse of Drugs Act (1981)</i>
<i>Misuse of Drugs Regulations (1982)</i>
<i>Radiation Safety Act (1975) (for disposal only)</i>

Radiation Safety (General) Regulations (1983) (for disposal only)

Document information

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