Chemical Labelling Guideline

Section 1 - Purpose and Scope

(1) This Guideline provides information and guidance to University of Queensland (UQ) workers on how to label hazardous chemicals acquired, used, stored and disposed of at UQ. All chemical packages, containers, tanks, or bulk stores must be marked to clearly show the identity and the hazardous nature of the goods stored. The requirements for the labelling of packages are detailed in the following codes of practice and regulations:

a. the Work Health and Safety Regulation 2011 (the Regulation) Chapter 7, s335, 338, 341, 342 and Schedule 9;
b. the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code);
c. the Queensland Labelling of Workplace Hazardous Chemicals Code of Practice 2021;
d. the Labelling of Workplace Hazardous Chemicals Code of Practice July 2020;
e. the Agricultural and Veterinary Chemicals (Queensland) Act 1994 (Qld) and Australian Pesticides and Veterinary Medicines Authority (the APVMA); and
f. the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

(2) Where a chemical is regulated under more than one set of laws it will need to meet the labelling requirements placed upon it by all sets of laws. For example, workplace hazardous chemicals that are also agricultural and veterinary chemicals as defined in the Commonwealth's Agricultural and Veterinary Chemicals Act 1994 (Cth) must meet the requirements of both sets of laws.

(3) This Guideline should be read in conjunction with relevant procedures and guidelines related to occupational hygiene and chemical safety.

Section 2 - Key Requirements

(4) Manufacturers, importers, suppliers, and persons conducting a business or undertaking (PCBUs - e.g., UQ) that use, handle or store hazardous chemicals have specific labelling duties in relation to the correct labelling of workplace hazardous chemicals.

(5) A label is required for any substance, mixture or article classified as a hazardous chemical under the Regulation, unless it is:

a. a food and beverage products that are packaged in a form intended for consumption;
b. a cosmetic and toiletry packaged for consumer use;
c. a therapeutic good labelled in accordance with Therapeutic Goods Administration (TGA) requirements and in a form:
    i. intended for human consumption,
    ii. for intake or administration to or by a patient or consumer, or
    iii. intended for use for therapeutic purposes;
d. an agricultural and veterinary (AgVet) chemical labelled in accordance with APVMA codes (also see clauses 27-43);

e. a chemical in transit, packaged and labelled in accordance with dangerous goods transport requirements; or
f. was manufactured or imported before 1 January 2017 and labelled in accordance with the 1994 National Code of Practice in place at that time and retains that label.

(6) UQ workers must ensure that:

a. A hazardous chemical is correctly labelled if the chemical is manufactured at the workplace; or transferred or decanted from the chemical's original container at the workplace.
b. Containers are correctly labelled in accordance with the Regulation, while holding a hazardous chemical.
c. Containers that are labelled for holding a hazardous chemical are used only for the use, handling or storage of the hazardous chemical.

(7) These do not apply if the hazardous chemical is used immediately after being put into the container and the container is thoroughly cleaned immediately after the chemical has been used, handled or stored so it is in a condition it would be in if the container had never contained the chemical.

(8) The Labelling of Workplace Hazardous Chemicals Code of Practice 2021 supports these requirements and provides practical guidance to assist workers meet their compliance obligations.

Information Required on a Label

(9) A hazardous chemical is correctly labelled if the chemical is packed in a container with a label that:

a. is written in English;
b. has the product identifier;
c. has the name, Australian address and business telephone number of either the manufacturer or importer;
d. has the identity and proportion disclosed, in accordance with Schedule 8 of the Regulation, for each chemical ingredient;
e. has any hazard pictogram(s) consistent with the correct classification(s) of the chemical;
f. has any hazard statement(s), signal word and precautionary statement(s) that is consistent with the correct classification(s) of the chemical;
g. has any information about the hazards, first aid and emergency procedures relevant to the chemical, which are not otherwise included in the hazard statement or precautionary statement; and
h. has the expiry date of the chemical, if applicable.

(10) The following additional information should also be included on the label, where available:

a. an emergency phone number for specific poisons or treatment advice;
b. the overseas name, address and telephone number of the manufacturer or supplier;
c. a valid website or internet address; and
d. reference to the safety data sheet (SDS), for example, a statement on the label that says: 'Additional information is listed in the safety data sheet'.

(11) See clauses 27-43 regarding situations in which reduced labelling is acceptable.

Product Identifier

(12) A product identifier is a unique name or number by which the chemical is to be known, and which allows the product users to identify the hazardous chemical (e.g., CAS number). The product identifier must be the same as that listed in the SDS and may be identical to the trade name. The product identifier and details of ingredients should be

grouped together and located at the most prominent position on the label, for example, at the top or centre of the label, or on a front panel.

Disclosure of Ingredients

(13) The chemical identity of an ingredient must be disclosed on the label if the classification of the chemical is reflected in Table 8.1, in Schedule 8 of the Regulation.

(14) In some cases, a generic name may be used, if:

a. the ingredient causes the correct classification of the hazardous chemical to include a hazard class and hazard category mentioned in Table 8.2; and
b. the ingredient does not cause the correct classification of the hazardous chemical to include any other hazard class and hazard category in Table 8.1; and
c. the identity of the ingredient is commercially confidential; and
d. an exposure standard for the ingredient has not been established.

(15) For multiple ingredients, proportions should be listed in descending order by mass or volume. Ingredients not contributing to the hazard classification should also be listed, and where included, should be listed after the ingredients contributing to the hazard classification.

(16) When the exact concentration of an ingredient is commercially confidential, the concentration of the ingredient can be disclosed using ranges:

a. <10 per cent;
b. 10 – <30 per cent;
c. 30 – 60 per cent;
d. >60 per cent.

(17) Where possible, the percentage composition should add up to or indicate a total of 100 per cent, even if an estimate of non-hazardous ingredients needs to be provided. Where the chemical identity or generic name of an ingredient that makes up a hazardous chemical is disclosed, the proportions of the ingredients must also be disclosed in an SDS.

Label Elements

(18) The combination of label elements required on the label of a hazardous chemical is directly linked to its hazard classification. Label elements apply to hazard categories and must be determined as specified in the GHS.

(19) Appendix D of the Labelling of Workplace Hazardous Chemicals Code of Practice 2021 includes tables listing all the elements that apply to each hazard class and category or division.

(20) The signal word, hazard pictograms and hazard statements should be grouped together in a prominent position on the label and located either immediately following or adjacent to the product identifier and chemical ingredients.

(21) Some non-hazardous chemicals may still pose a risk to people or the environment, for example, dry ice (solid carbon dioxide). These chemicals will not have hazard pictograms, hazard statements, signal words or precautionary statements; however, their labels should include information on their hazards and safety precautions. For example, the label for dry ice should include information on the asphyxiation hazard and precautions for handling to avoid cryogenic burns.

(22) Labels should be suitably durable to remain clear and legible throughout the expected life of the product, and to

minimise the risk of labels being eroded by the contents of the container.

Manufacturer / Importer Information

(23) The label must include the Australian contact details of the manufacturer or importer. This applies when UQ workers acquire hazardous chemicals directly from overseas suppliers or collaborators. In such cases, the label should include the contact details for the organisational unit and/or chief investigator who imported the chemical.

(24) The required contact details include the manufacturer or importer's name, Australian address and business telephone number. Additional information, including details of an overseas manufacturer or supplier — for example, a website or internet address — may be included on the label. The manufacturer or importer identification may be provided in a less prominent position on the label, for example, the back portion of the label. It should be grouped with the expiry date, where applicable.

Labels for Systems or Equipment Containing Chemicals

(25) Where a chemical is contained in an enclosed system such as a process vessel or pipe it must be clearly identified by a system appropriate to the circumstances. Australian standard AS 1345:1995 Identification of the Contents of Pipes, Conduits and Ducts (access via Standards Databases through UQ Library) is appropriate for pipe work.

(26) In the laboratory, chemical solutions in bottles, containers or columns, and batches of samples for test in equipment such as protein analysers, mass spectrometry, gas chromatography or high performance liquid chromatography (HPLC) should be labelled so that any hazard is identified – individual tubes or vials do not need to be marked (refer to clauses 30–35).

Special Labelling Situations

(27) UQ workers should always aim to provide as much information on the hazards and safe use of the chemical on the label as possible.

(28) Under the WHS Regulation, reduced labelling is permitted for hazardous chemicals that are:

a. supplied in small containers (e.g., PCR or Eppendorf tubes);
b. research chemicals or samples for analysis;
c. decanted or transferred;
d. not supplied to another workplace, and where the hazards are known to the workers using the chemical;
e. hazardous wastes;
f. classified into the explosives hazard class and are not explosive articles; or
g. agricultural and veterinary chemicals.

(29) Note that for chemicals that are regulated under more than one set of laws (for example, workplace hazardous chemicals that are also agricultural and veterinary chemicals as defined in the Agricultural and Veterinary Chemicals Code Act 1994 (Cth)), labels must meet the requirements of both sets of laws. Refer to the Information Sheet for Businesses Using, Handling or Storing Agricultural and Veterinary (AgVet) Chemicals.

Research Chemicals or Samples for Analysis

(30) A research chemical is a substance or mixture that is manufactured in a laboratory for the purposes of genuine research and not for use or supply to others for a purpose other than genuine analysis or research. A chemical that is supplied commercially to another workplace is not included under the meaning of 'research chemical or samples for analysis 'under any circumstances.

(31) For a hazardous research chemical or sample for analysis, the label must, at a minimum, be:

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a. written in English;
b. include the product identifier; and
c. include a hazard pictogram/s or hazard statement/s that is/are consistent with the correct classification of the chemical.

(32) A research chemical or sample for analysis must be correctly classified and the identity of the substance or mixture must be determined.

(33) The product identifier of a research chemical or sample for analysis may be:

a. the actual name of the chemical; or
b. a recognised abbreviation or acronym; or
c. a chemical formula, structure or reaction components.

> See linked image: Product Identifier Example for a Research Chemical or Sample for Analysis

(34) When the identity of a research chemical or sample for analysis is not known this should be indicated clearly on the label. Labels for research chemicals or samples for analysis should include as much hazard information as possible, based on the identity and the known or suspected hazards.

> See linked image: Label Example for an Unknown Identity of a Research Chemical or Sample for Analysis

(35) Where labelling the actual laboratory container is impractical due to its size or the conditions under which it is used, other methods of providing the information can be used, for example, a secure swing tag, a sign attached to supporting apparatus or labelling an outer container. For example, for a rack of test tubes, rather than label each individual test tube containing the same hazardous chemical, you may attach a label to the rack using a swing tag.

Hazardous Waste Products

(36) Hazardous waste products must be identified and correctly classified so far as is reasonably practicable. Where it is not reasonably practicable to classify waste material, the hazard classification should be estimated using a precautionary approach based on the known or likely constituents of the waste.

(37) The minimum labelling requirements are those reflected in clauses 30–35.

(38) At UQ, chemical waste is disposed according to the University Waste Management Procedures (Respond to Chemical Spills and Dispose of Chemical Waste) through the UQ Science Store which provides correctly labelled containers, or labels for existing chemically compatible waste containers.

Decanted or Transferred Hazardous Chemicals

(39) Where chemicals are decanted or transferred into other containers these new containers must also be fully labelled unless the chemicals are immediately used, and/or under the direct control of the worker.

(40) A decanted hazardous chemical can only be considered to be used immediately if:

a. it is not left unattended by the person who decanted it (unattended experimental labels with relevant and correct chemical information and contact information are acceptable but unattended unlabelled chemicals are not);
b. it is used only by a person present at the decanting process;

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c. the container is subsequently rendered free from any hazardous chemical immediately after use, so the container is in the condition it would be in if it had never contained the chemical.

(41) Labels for decanted packages are the same as for the original container, as a minimum requirement: the chemical name and hazard pictograms (GHS class symbols) or hazard statements consistent with the correct classification of the chemical, written in English. Labels for decanted chemicals can be printed from Chemwatch on paper or other material if required. You might consider chemical resistant stickers.

> See linked image: Example Label for Decanted Chemicals

> See linked image: Example label with the minimum information for a small container

Unlabelled Containers / Unknown Substances

(42) You should not use a hazardous chemical that is not correctly labelled. Store it in isolation until it is appropriately labelled. If the container is not labelled and the contents of the container are not known, the container should be marked:
"Caution—Do Not Use—Unknown Substance".

(43) A container of an unknown substance should be stored away from other substances where it cannot be used until its contents can be identified and the container appropriately labelled. If the contents cannot be identified, they should be disposed of following the University Waste Management Procedures (Respond to Chemical Spills and Dispose of Chemical Waste). It should be noted that there is a significant cost associated with disposal of unknown substances.

Labelling of Products which Pose a Hazard but Do Not Meet 'Hazardous Chemical' Definition

(44) Some products have hazards consistent with GHS hazard classes and categories, but do not meet the definition of a hazardous chemical because they are not substances, mixtures or articles. For example, products where the active ingredient is a live bacterium.

(45) Other products may have hazards that are not classified under the GHS, such as radioactive materials. The requirements for labelling hazardous chemicals do not apply to such products, however you must still identify, communicate and manage risks as far as reasonably practicable, in accordance with the Work Health and Safety Act 2011. GHS label elements should not be used if the product is not classifiable under the GHS.

Labelling Non-hazardous Chemicals

(46) Although the Code and this Guideline are designed to help with the labelling of hazardous chemicals, it is best practice to label all chemicals at the workplace, hazardous or not, to ensure their identity is clear to all, especially to first responders and emergency crews. The same label elements apply except for the hazard pictograms and hazard statements.

Training and Guidance

(47) The University provides UQ workers with online training on Chemical Safety (via learn.UQ) that includes information on chemical labelling. Further guidance is offered by:

a. WorkSafe Queensland, with the Labelling of Workplace Hazardous Chemicals Code of Practice 2021, and
b. Safe Work Australia, with the online documents:
    i. Labelling of Workplace Hazardous Chemicals Code of Practice July 2020,

ii. Information Sheet for Businesses Using, Handling or Storing Agricultural and Veterinary (AgVet) Chemicals, and
iii. Classification and Labelling for Workplace Hazardous Chemicals poster.

(48) Training in the use of Chemwatch to create compliant labels for mixtures of hazardous chemicals using the CREDO function is provided to designated workers (e.g., WHSCs or laboratory managers) by UQ Chemwatch administrator upon request.

Section 3 - Roles, Responsibilities and Accountabilities

Heads of Organisational Units

(49) Heads of Organisational Units need to ensure managers and supervisors, academic or professional, under their responsibility have their hazardous chemicals correctly labelled and/or supervise UQ workers appropriately for the task.

Managers and Supervisors

(50) Supervisors are responsible for overseeing the health and safety of people in their area of responsibility using hazardous chemicals, specifically:

a. ensuring all hazardous chemicals are correctly labelled;
b. ensuring UQ workers are aware of how to correctly label hazardous chemicals they use; and
c. provide training if required.

UQ Workers

(51) UQ workers that use hazardous chemicals must:

a. ensure all hazardous chemicals are correctly labelled; and
b. ensure all manufactured hazardous chemicals for research, as a waste product, or for analysis are correctly labelled.

Health, Safety and Wellness Managers

(52) Health, Safety and Wellness Managers are responsible for providing Organisational Units and/or local areas with education, advice and support regarding chemical labelling.

Health, Safety and Wellness Division

(53) Health, Safety and Wellness Division (HSW Division) is responsible for:

a. updating online training material;
b. ensuring Chemwatch remains functional and accessible to UQ workers, and
c. assessing whether Organisational Units and UQ workers demonstrate compliance with this Guideline and that any compliance issues regarding chemical labelling that are identified are rectified in a timely manner through periodic auditing.

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Section 4 - Monitoring, Review and Assurance

(54) The hazard classification of a hazardous chemical may change, and when that happens the label must be reviewed and, if necessary, revised to reflect any required changes.

(55) It is good practice to review the label information of a hazardous chemical at the same time as the SDS is updated. Labels should be reviewed at least once every five years.

(56) If you have a duty to label a workplace hazardous chemical, then you must ensure that the label contains correct information at the time it is affixed to the container of the hazardous chemical.

Section 5 - Appendix

Definitions

Term	Definition
CAS Number	CAS Registry Number, also referred to as CASRN or CAS Number, is a unique numerical identifier assigned by the Chemical Abstracts Service (CAS) to every chemical substance described in the open scientific literature. It provides unambiguous identification. The SciFinder online database substance identifier can be used to match substance names with the correct CAS number and is available through the UQ Library.
Global Harmonisation System of Classification and Labelling of Chemicals (GHS)	Developed by the United Nations to create a single, global methodology for chemical classification and hazard communication using labelling and SDS.
Import	To bring (goods or services) into a country from abroad, e.g., purchasing a chemical directly from a supplier based outside Australia, rather than via an Australian distributor.
Manufacture	To make/produce a chemical, e.g., synthesis of a novel chemical in a laboratory.
Person in Control of a Business or Undertaking (PCBU)	A PCBU is a 'person conducting a business or undertaking'. The business or undertaking can be conducted alone or with others, and can be not-for-profit or for gain. UQ is a PCBU, but individual organisational units are not themselves PCBUs.
Supply	Provide a substance to a person outside of the work group, whether or not on a commercial basis. For example, providing a novel compound to scientific collaborators for further experimentation.
UQ Workers	For the purposes of this Guideline includes: - staff - continuing, fixed-term, research (contingent funded) and casual staff; - contractors, subcontractors and consultants working under UQ systems and control (e.g., contingent workers); - visiting academics and researchers; - affiliates - academic title holders, visiting academics, emeritus professors, adjunct and honorary title-holders, industry fellows and conjoint appointments; - higher degree by research students; and - volunteers and students undertaking work experience.

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