

Carcinogen Use, Handling and Storage Procedure

Section 1 - Purpose and Scope

- (1) This Procedure outlines the requirements for working with carcinogens, including the requirements for the authorisation to use, handle and store prohibited and restricted carcinogens at The University of Queensland (UQ). This Procedure applies to all UQ workers.
- (2) For the purposes of this Procedure, the definition of UQ workers is broad – including staff, students, visitors, volunteers and contractors – and is intended to support UQ to meet its responsibilities under the [Work Health and Safety Act 2011](#). The definition of UQ workers is provided in the appendix.
- (3) Additional guidance for UQ workers that use carcinogens is provided in the accompanying [Working Safely with Carcinogens Guideline](#).
- (4) The Queensland Government regulates the use of prohibited and restricted carcinogens under the [Work Health and Safety Regulation 2011](#) (the WHS Regulation). Schedule 10 of the [Work Health and Safety Regulation 2011](#) prescribes a list of prohibited and restricted carcinogens that may only be used with authorisation from the Queensland Government regulator, Workplace Health and Safety Queensland (the Regulator). The list is also available in section 7 ('Restricted and Prohibited Carcinogens List') of this Procedure.

Section 2 - Process and Key Controls

- (5) The requirements outlined below apply to UQ workers when using any carcinogen at UQ:
- a. Prior to commencing work with the carcinogen, UQ workers must:
 - i. plan activities, including waste disposal, storage, and decontamination procedures for the carcinogen;
 - ii. conduct a risk assessment in UQSafe; and
 - iii. attend required health and safety training;
 - b. UQ workers are responsible for:
 - i. participating in medical surveillance when required;
 - ii. using personal protective equipment (PPE) when the risk assessment requires; and
 - iii. reporting any incidents or near misses to a Supervisor and in UQSafe.
- (6) The following requirements apply to the use of prohibited and restricted carcinogens at UQ:
- a. Chief Investigators must obtain authorisation from the Regulator to use a prohibited or restricted carcinogen for all UQ workers in their area of control prior to commencing the work.
 - b. Unless authorised by the Regulator, UQ workers must not use, handle or store a prohibited or restricted carcinogen.
 - c. UQ workers must complete all required induction and training prior to any work with prohibited and restricted carcinogens at UQ and comply with the local standard operating procedures and safe work instructions of the Organisational Unit.

- d. UQ workers' use of, or exposure to prohibited and restricted carcinogens at UQ must be recorded and tracked in UQ databases outlined in the 'Recording and Tracking Carcinogen Use and Exposure' provisions of this Procedure.
- e. Clear signage must be displayed within the work area when a restricted or prohibited carcinogen is in use. (Refer to Restricted Carcinogen in Use - Form).
- f. Organisational Units have a nominated Controlled Substances Officer (CSO) as commodity approver for prohibited and restricted carcinogens purchases.

Section 3 - Key Requirements

Planning to use a Carcinogen

(7) Where it has been determined that a carcinogen will be used and, prior to work commencing, UQ workers must have a clear plan to determine the work to be undertaken, who will undertake the work and where and how the carcinogen will be used and stored. Further, it must be determined if health surveillance is required, how the carcinogen will be disposed of and the decontamination process that will be undertaken.

Risk Assessment

(8) The [Work Health and Safety Regulation 2011](#) requires that prior to a hazardous substance being used, a risk assessment must be conducted. Once the proposed use, storage and disposal of a carcinogen has been identified, a risk assessment of the overall work task must be performed to determine the appropriate safety requirements. Refer to the [Health and Safety Risk Management Procedure](#) and [Working Safely with Carcinogens Guideline](#).

Induction and Training

(9) Organisational Units that use carcinogens are responsible for ensuring that UQ workers are provided with suitable induction, information and training (including refresher training). As a minimum the induction and training must include the nature of the hazards and properties of the carcinogen to which UQ workers may be exposed, including routes of entry into the body and potential health risks, safe operating procedures for use, storage and handling, safety data sheets, and emergency management. Refer to the [Working Safely with Carcinogens Guideline](#) for more information.

Applying to use Prohibited or Restricted Carcinogens

(10) Some carcinogens have been identified as presenting unacceptable risk to workers and are prohibited or have restricted uses under Schedule 10 of the [Work Health and Safety Regulation 2011](#). Prohibited carcinogens can only be used where the Regulator has authorised their use for genuine research or analysis. Restricted carcinogens can only be used for a restricted use where authorisation has been granted by the Regulator. Section 7 ('Restricted and Prohibited Carcinogens List') includes a list of these carcinogens.

(11) Chief Investigators must apply to the Regulator, always in consultation with the local Health, Safety and Wellness Manager (HSW Manager) or Work Health and Safety Coordinator (WHSC), to obtain authorisation to use a prohibited or restricted carcinogen at UQ prior commencing work with the carcinogen.

(12) The application process requires submission of the following to the Regulator:

- a. Form 74 (new application for authorisation OR amendment to existing authorisation) from [WorkSafe Queensland - Carcinogens](#).
- b. Carcinogen Risk Assessment in [UQSafe](#) (refer to [Form A - Prohibited and Restricted Carcinogen Risk Assessment Checklist](#)).

- c. [Form B - Prohibited and Restricted Carcinogens](#).
- d. Information regarding the method of tracking usage ([Form E - Prohibited and Restricted Carcinogen Usage Log](#)) and any incident of potential exposure (e.g., UQSafe).
- e. Signage to be displayed within the work area when a restricted or prohibited carcinogen is in use ([Form D - Restricted Carcinogen in Use Signage](#)).

(13) Copies of the above documentation must be provided, prior to submission to the Regulator, to the HSW Manager, WHSC or the Health, Safety and Wellness Division (HSW Division) for review. When authorisation from the Regulator is obtained, the Chief Investigator must complete the [Form C - Prohibited and Restricted Carcinogens](#) and provide this along with a copy of the Regulator's authorisation to the HSW Division (hsw@uq.edu.au), the Faculty/Institute HSW Manager (or WHSC) and the local Controlled Substance Officer (CSO) by email.

Recording and Tracking Carcinogen Use and Exposure

(14) Organisational Units using prohibited and restricted carcinogens must implement a documented process (e.g., [Form E - Prohibited and Restricted Carcinogen Usage Log](#)) to track the carcinogens use and any potential exposure to UQ workers. Other carcinogens' use should also be documented. Copies of the documentation must be submitted to the Health, Safety and Wellness Division (HSW Division) (hsw@uq.edu.au) regularly and upon completion of the project.

(15) Carcinogen use and exposure records must record the following information:

- a. Name, concentration and quantity of the carcinogen.
- b. Carcinogen authorisation number (from the Regulator).
- c. Date of use / possible exposure to the carcinogen (or start and end dates of project or engagement).
- d. Full name, date of birth and address of UQ workers using or possibly exposed to the carcinogen.
- e. Any incident involving possible exposure to the carcinogen. This must be recorded in [UQSafe](#).

(16) The HSW Division will ensure Organisational Units' carcinogen use and exposure records are maintained in the following confidential UQ databases:

- a. Human Capital Management System – when a UQ worker who has worked with a carcinogen and leaves UQ, their cessation is identified, and a letter of exposure is provided (see 'Finalising Carcinogen Work' provisions below); and
- b. [Health Monitoring](#) – to record all carcinogen usage details and work history of the UQ worker with carcinogens, including any potential exposure.

Finalising Carcinogen Work

(17) At the end of a UQ worker's tenure with UQ or cessation of the work with the prohibited and/or restricted carcinogen (e.g. at the end of engagement or project, or transfer to another area within UQ), the HSW Division will provide the UQ worker with a letter of exposure.

(18) To ensure that a letter of exposure is provided to the UQ worker, Chief Investigators must:

- a. Notify the HSW Division of any UQ worker that leaves the work group who worked with carcinogens; and
- b. provide the HSW Division with the following information:
 - i. a copy of the authorisation to use, handle or store a prohibited or restricted carcinogen;
 - ii. start and end date of the UQ worker's possible exposure to the carcinogen;
 - iii. how and where the UQ worker may obtain records of the possible exposure; and

- iv. whether the UQ worker should undertake regular health assessments (and the relevant tests to undertake) on advice from the Occupational Health Nurse Advisor (OHNA).

Signage, Labelling and Storage

(19) All carcinogenic or suspected carcinogenic chemicals must be stored in designated areas, toxic dangerous goods cabinets, or refrigerators within the primary work or storage area, with consideration given to incompatibilities with other substances. The Safety Data Sheet (SDS) provides information on incompatibilities of classes of chemicals. If temperature permits, it is preferable to store the chemicals in a compliant, lockable toxic dangerous goods cabinet.

(20) The chemicals must be labelled clearly, indicating the chemical composition, date of preparation and the nature of the hazard (e.g. Carcinogen – Handle with care; Danger – Carcinogen).

(21) Restricted and prohibited carcinogens must be locked to prevent unauthorised access with signage displayed within the work and/or storage area (refer to [Form D - Restricted Carcinogen in Use Signage](#)).

Work with Animals and Animal Facilities

(22) Working with animals that have been administered with carcinogenic chemicals may present a high risk to the person handling the animal or the animal's excreta. All experiments involving animals must be carried out in accordance with the National Health and Medical Research Council (NHMRC) publication, [Australian Code for the Care and Use of Animals for Scientific Purposes](#) and may require prior approval from UQ's [Animal Ethics Committee \(AEC\)](#). In addition, Chief Investigators must ensure that:

- a. work is compliant with relevant state and federal legislation regarding the use of experimental animals; and
- b. UQ workers responsible for the daily management of the animal facility, or likely to work near or in the area holding the animal(s) used in the experiments using carcinogens are:
 - i. informed of the experiment, potential hazards and safety precautions to be implemented in the handling of the animals and disposal of waste;
 - ii. aware of action to be taken in the event of an accidental spill of carcinogen or exposure to the substance;
 - iii. advised of the experimental substance so appropriate precautions can be implemented; and
 - iv. if appropriate, informed of the different hazards associated with the substance (e.g. atmospheric contaminant such as formaldehyde or an anti-neoplastic agent such as procarbazine).

(23) Additional information about the work practices that should be followed when using carcinogens in animal experiments is provided in the [Working Safely with Carcinogens Guideline](#).

Section 4 - Roles, Responsibilities and Accountabilities

Heads of Organisational Units

(24) Heads of Organisational Units are responsible for all work with carcinogens that occurs in facilities under their control. They must work with Chief Investigators to ensure:

- a. correct and current authorisations from the Regulator are in place for the use of prohibited and restricted carcinogens in their area of responsibility;
- b. facilities appropriate for the type of work are available and maintained in compliance with relevant legislative requirements;

- c. there is a nominated CSO as commodity approver for requisitions; and
- d. work with carcinogens, including prohibited and restricted, is conducted safely and in compliance with any relevant legislative and/or UQ requirements.

Chief Investigators

(25) Chief Investigators that undertake work using prohibited and restricted carcinogens at UQ are responsible for:

- a. assessing whether it is possible or reasonable to use alternative, lower risk substances in the place of prohibited or restricted carcinogens;
- b. applying for authorisation from the Regulator to use a prohibited or restricted carcinogen, as outlined in the 'Applying to use Prohibited or Restricted Carcinogens' provisions of this Procedure;
- c. completing a Prohibited and Restricted Carcinogen Risk Assessment (part of the application for authorisation) and implementing any control measures identified in the risk assessment;
- d. ensuring that prohibited and restricted carcinogens in use in their research and/or under their supervision have been authorised by the Regulator;
- e. ensuring that induction, training and information is Provided to UQ workers who may be exposed to prohibited and restricted carcinogens (refer to the 'Induction and Training' provisions of this Procedure and to the [Working Safely with Carcinogens Guideline](#));
- f. preventing unauthorised access to prohibited and restricted carcinogens;
- g. ensuring that any incident involving carcinogens is recorded in UQSafe and control measures are reviewed and updated;
- h. managing the record-keeping of the work group and ensuring that the carcinogen use and tracking record requirements are met; and
- i. reporting any changes to granted authorisations, as required by s385 of the [Work Health and Safety Regulation 2011](#) (e.g. the location where the use, handling or storage is occurring; the number of workers exposed; the nature of the controls being employed), to the UQ HSW Division who will in turn notify the Regulator.

Supervisors

(26) Supervisors are responsible for overseeing the health and safety of people in the workplace using carcinogens by ensuring that health and safety information is conveyed and that procedures for safe usage of carcinogens are in place.

(27) Specific responsibilities in relation to carcinogens include:

- a. ensuring UQ workers in their area of responsibility are familiar with and follow safe working procedures when using carcinogens, including the appropriate use, labelling and storage of carcinogenic chemicals;
- b. ensuring required PPE is available, fit for purpose and functional, in use and used correctly;
- c. identifying carcinogens that will need a commodity approval on purchase requisitions;
- d. providing the required signage indicating PPE requirements and access restrictions;
- e. maintaining an inventory of all carcinogens in the work area and ensuring SDSs are available;
- f. reviewing risk assessments to determine whether UQ workers are following procedures and recommended work practices; and
- g. ensuring information on carcinogen usage is provided to all users through information, training and supervision.

UQ Workers

(28) UQ workers that use carcinogens are required to comply with health and safety legislation and ensure that their own health and safety and others is not placed at risk by their actions or omissions. The following responsibilities are

inherent requirements of working with carcinogenic materials:

- a. prior to commencing work with the carcinogens, plan activities, including waste disposal, storage, and decontamination;
- b. conduct a risk assessment in [UQSafe](#);
- c. attend required health and safety induction and training;
- d. participate in medical surveillance when required;
- e. use PPE where risk assessment requires; and
- f. report any incidents or near misses to the Supervisor and in [UQSafe](#).

(29) UQ workers that use or may be exposed to prohibited and restricted carcinogens at UQ are responsible for:

- a. complying with the requirements of this Procedure and any safe working instructions or local standard operating procedures issued by the Organisational Unit or Chief Investigator; and
- b. completing all required training and induction required by the Organisational Unit prior to using prohibited and restricted carcinogens.

Health, Safety and Wellness Division

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

- a. ensuring that all usage and exposure documentation provided by Organisational Units is correctly recorded in the relevant databases outlined in the 'Recording and Tracking Carcinogen Use and Exposure' provisions of this Procedure and maintained as per the [General Retention and Disposal Schedule](#) issued by the Queensland State Archives;
- b. preparing and providing letters of exposure to UQ workers at the end of their engagement with UQ;
- c. providing UQ workers with education, advice and support regarding carcinogen safety and compliance obligations at UQ; and
- d. assessing whether Organisational Units and UQ workers are able to demonstrate compliance with this Procedure and that any compliance issues that are identified are rectified in a timely manner through periodic auditing.

Section 5 - Monitoring, Review and Assurance

(31) The Head of Organisational Unit will ensure the following activities are undertaken:

- a. monitoring of Chief Investigators' compliance with this Procedure; and
- b. annual workplace inspections, including chemical management of prohibited and restricted carcinogens.

(32) Purchase approvals of prohibited and restricted carcinogens are vetted by the Organisational Unit's CSO in consultation with the HSW Manager or WHSC.

(33) The HSW Division is responsible for UQ's annual HSW internal audit program to ensure UQ meets its obligations to its workers for health and safety, and complies with relevant legislation. HSW Division will periodically audit carcinogen safety.

(34) The HSW Division is responsible for reviewing this Procedure to ensure that it remains accurate and relevant to the needs of UQ.

Section 6 - Recording and Reporting

(35) Copies of the Regulator's authorisation must be recorded in UQSafe and retained by the Chief Investigator.

(36) Records in relation to the types of prohibited and restricted carcinogens are to be kept for the period as outlined in the [Work Health and Safety Regulation 2011](#).

(37) Chief Investigators are responsible for reporting any changes to granted authorisations, as required by the [Work Health and Safety Regulation 2011](#), to the HSW Division.

(38) Incidents of exposure must be recorded in UQSafe and communicated to the Director, Health Safety and Wellness. The Director, Health Safety and Wellness will review the incident and notify key stakeholders and the Regulator if required.

Section 7 - Appendix

Definitions

Term	Definition
Carcinogen	A substance or mixture that causes cancer: malignant growth or tumour resulting from an uncontrolled division of cells in any part of the body in humans or animals. Most carcinogens are chronic toxins with long latency periods that can cause damage after repeated or long duration exposures and often do not have immediate apparent harmful effects. A carcinogen is considered to be "occupational" if there is significant human exposure to the agent in the workplace, in terms of either prevalence or level of exposure.
Chief Investigator	UQ worker that directs and/or supervises a group, or holds research funding or a combination of both (e.g. Group Leaders, Research Leaders, Professors and all academic appointments, and any relevant Senior Managers).
Exposure	Situation or condition that makes someone likely to be harmed, especially because the person has not been protected from something dangerous.
Prohibited and Restricted Carcinogens	As prescribed in Schedule 10 of the Work Health and Safety Regulation 2011 (Qld).
UQSafe	UQ online system for recording risk assessments, injuries/illness, near miss and hazard reporting and certifications.
Safety Data Sheet (SDS)	Document containing information on the health, safety and environmental aspects of a material or chemical for the purposes of storing, using and disposing of the substance in a safe way.
UQ Workers	For the purposes of this Procedure includes: 1. staff - continuing, fixed-term, research (contingent funded) and casual staff; 2. contractors, subcontractors and consultants; 3. visiting academics and researchers; 4. affiliates - academic title-holders, visiting academics, emeritus professors, adjunct and honorary title-holders, industry fellows and conjoint appointments; 5. higher degree by research students; and 6. volunteers and students undertaking work experience

Restricted and Prohibited Carcinogens List

Carcinogen Restricted	Carcinogen Prohibited
Acrylonitrile	2-Acetylaminofluorene
Benzene	Aflotoxins

Carcinogen Restricted	Carcinogen Prohibited
Cyclophosphamide	4-Aminodiphenyl
3,3'-Dichlorobenzidine	Benzidine and its salts, (including Benzidine Dihydrochloride)
3,3'-Dichlorobenzidine dihydrochloride	bis(Chloromethyl) ether
Diethyl sulfate	Chloromethyl methyl ether
Dimethyl sulfate	4-Dimethylaminoazobenzene
Ethylene dibromide	2-Naphthylamine
4,4'-Methylene bis(2-chloroaniline)	4-Nitrodiphenyl
3-Propiolactone	
o-Toluidine	
o-Toluidine hydrochloride	
Vinyl chloride monomer	

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