Health and Safety Procedure - Laboratory (Research) Safety

Section 1 - Key Information

Policy Type and Approval Body	Administrative – Vice-Chancellor
Accountable Executive – Policy	Chief Operating Officer
Responsible Manager – Policy	Senior Manager, Health and Safety
Review Date	22 February 2026

Section 2 - Purpose

(1) This procedure documents how to comply with the Health and Safety Policy to address the hazards and risk associated with laboratory research work. The procedure is aligned to the Australian Standard AS2243.2.2021 utilising a risk management approach to plan and execute laboratory work, ensuring common standards and practices are applied.

Section 3 - Scope

(2) This Procedure applies to:

a. all research laboratories that are managed and operated by La Trobe University.

Section 4 - Key Decisions

Key Decisions	Role
Confirm the acceptance of residual risk for heightened risk activity	Heads of Department

Section 5 - Policy Statement

(3) This procedure forms part of the Health and Safety Policy suite, and the University Research Biosafety and Biosecurity Policy, which governs its application.

Section 6 - Procedures

Part A - Responsibilities

Heads of Department

(4) Heads of Department are responsible for:

a. Providing oversight that laboratory work is planned, risk assessed and safely conducted;
b. Confirming the acceptance of residual risk for heightened risk activity;
c. Seeking assurance for adequate controls that are commensurate to the risk; and
d. Ensuring laboratory inspections for hazard management and continuous improvement are completed.

Principal Investigators (including nominated Associates)

(5) Principal Investigators (including nominated Associates) are responsible for:

a. Ensuring that laboratory work is planned, risk assessed and safely conducted;
b. Providing confirmation of residual risk acceptance from risk assessments;
c. Ensuring risk controls are in place and operational;
d. Ensuring local inductions are completed before activity commences;
e. Ensuring personal protective equipment (PPE) requirements are adhered to; ;and
f. Participating where required in periodic laboratory inspections for hazard control and continuous improvement.

Researchers, Higher Degree by Research (HDR) students

(6) Researchers and HDR students are responsible for:

a. Planning and risk assessing the laboratory work;
b. Completing all necessary safety induction and training that is requisite to the tasks;
c. Following the personal protective equipment (PPE) and general clothing requirements;
d. Follow the safe laboratory practices and processes;
e. Stopping the activity if there is an immediate danger to health and safety and reporting all hazards and incidents; and
f. Participating where required in periodic laboratory inspections for hazard control and continuous improvement.

Facilities and technical services staff

(7) Facilities and Technical Services staff are responsible for:

a. Supporting the work plan, risk assessment, and safe work execution;
b. Ensuring all risk controls are in place and operational;
c. Ensuring access to the safety inductions for all participants; and
d. Leading periodic laboratory inspections for hazard management and continuous improvement.

Health and Safety Team

(8) The Health and Safety Team are responsible for:

a. Providing oversight and monitoring this Procedure;
b. Advising on hazards and risk assessments as required;
c. Advising on risk control measures;
d. Supporting incident response, investigation, and sharing the lessons learnt across the organisation; and
e. Supporting periodic laboratory inspections for hazard management and continuous improvement.

Part B - General

(9) Laboratory work will vary widely, presenting differing levels of hazard and risk with consideration to the type of activity undertaken. The following groupings are indicative categories to assist aligning the level of risk assessment, personal protective equipment (PPE) requirements and supervision that is required.

(10) Each research investigation will be accompanied by risk assessments that are reviewed and confirmed by Principal Investigators (or nominated Associate) to ensure all undertakings are deeply considered and carefully planned for. These risk assessments will also align with requirements set by the Research Office.

Low Risk Activitiy

(11) Observational laboratory work or theoretical modelling for the purpose of research that is of low risk to health and safety. Examples include health monitoring and computer modelling.

General Laboratory Activity

(12) Practical activities that are typically associated with laboratories such as wet experimental work using chemical substances and biological materials or dry facilities where specialised equipment is used.

Complex and Heightened Risk Activity

(13) Activities which include hazardous substances, biological material, and complex equipment, such as high-powered lasers that pose heightened risk due to the inherent risk or because the combination is being utilised for the quest of frontier research.

Part C - Risk Assessment

(14) The function of risk assessments is to raise awareness of the hazards and quantify the risk. This process enables a review of the controls in place relative to the risk and promotes the consideration of additional controls to improve hazard management. The residual risk rating will realistically reflect the remaining risk to ensure that the line of sight to the hazard/s is not lost nor diminished.

(15) Risk assessments for all laboratory operations will be completed and periodically reviewed.

(16) Risk assessments will be updated when new materials and/or methods are introduced, and standard operating procedures modified as required.

(17) Each completed risk assessment will include Principal Investigator (or nominated Associate) sign off. Where the inherent hazard risk is high, the Head of Department will review and sign off on the risk assessment.

(18) Risk assessment documentation will be kept and digitally archived.

Part D - Laboratory Safety Induction

(19) In addition to the general Health & Safety induction that is completed as part of the onboarding process, a laboratory safety induction will be completed and include practical skills induction for specific equipment or techniques that will be utilised.

(20) Each discipline will develop a range of inductions to capture the differing hazards relative to the research being proposed and conducted and to the level of risk.

Part E - Personal Protective Equipment (PPE)

(21) The selection of personal protective equipment (PPE) will be guided by the type of laboratory activity and considering the hazards and risks involved;

(22) As a minimal requirement, researchers and HDR students participating in wet laboratory activity must wear enclosed footwear and a laboratory coat or gown;

(23) Personal clothing worn will be suitable for wet laboratory conditions and will provide adequate skin protection;

(24) Laboratory coats or gowns will be fully fastened or tied and sleeves fully extended;

(25) Activities that use mechanised equipment, heat source or naked flames, must ensure that participants wearing any flowing garments, such as headscarves, are constructed from non-flammable material and will be tucked in;

(26) Long hair must be tied back;

(27) Eye protection must be worn where identified through risk assessments and/or safety data sheets; and

(28) Additional PPE must be used as identified from either a risk assessment, safety data sheet, or the laboratory protocol.

Part F - Laboratory Supervision

(29) Postgraduate and research work is undertaken under the broader supervision of the assigned supervisor. The supervisor will have an overarching understanding of the work conducted and will provide direct supervision as dictated by the experience level of the researcher or HDR student and the inherent risk of the activity.

Part G - Working Alone or Outside Operational Hours

(30) Work commitments and specialised facilities create circumstances when researchers sometimes work alone, or the work occurs outside normal working hours. In these instances, the consequential risk of some hazards may increase due to the reduction of immediate assistance in the event of an incident.

(31) Where a risk assessment identifies the activity to be undertaken as high risk, then that work will not proceed when working alone without a documented communication plan that is signed off and monitored by the Principal Investigator.

(32) The following are examples of activities that must not be undertaken alone without additional communication controls that are agreed and actively managed:

a. Operating equipment or machinery that can inflict serious injury.
b. Using apparatus that could result in the release of high energy or significant levels of toxic or environmentally damaging hazardous material.
c. Working with toxic or corrosive substances where there is a significant risk of exposure.
d. Handling venomous biological specimens.
e. Working with large animals, other than feeding or observation.
f. Working with microorganisms of Risk Group 3 or higher or work that requires the use of a Containment level 3 facility.
g. Working with exposed energised or electrical systems.
h. Operating lasers of Class 3 and above.
i. Working with radionuclides that require adherence to the National Radiation Laboratory code.

j. Working in environments not at atmospheric pressure and where there is a risk of low oxygen or a toxic atmosphere.

Part H - Immunisation

(33) Specific immunisation is essential before commencing laboratory work that involves a heightened risk of infection. The possibility and type of infection should be risk assessed and appropriate controls developed.

(34) It is recommended that all researchers undertaking wet laboratory work have a current immunisation for tetanus. Immunisation can be obtained from General Practitioner (GP) clinics.

(35) Hepatitis B immunisation is required before commencing any activity with unscreened human blood or fluids and cattle or with feral animals.

(36) Rabies and/or Lyssa virus immunisation is required before commencing any activity with bats or flying foxes.

(37) Where the researcher does not complete the required immunisation, this circumstance will be documented and signed by both the researcher and research supervisor to demonstrate knowledge of and the acceptance of the inherent risks.

Part I - Health Surveillance

(38) Health surveillance will be instigated and managed when a risk assessment determines this requirement in association with the use of a hazardous substance/s. Baseline health surveillance will be established before activity commences. Monitoring will be managed by the Principal Investigator or nominated associate with records maintained and digitally archived.

Part J - Disabilities, Medical Restrictions and Pregnancy

(39) Where researchers disclose a disability (temporary included), or a medical restriction such as pregnancy, a risk assessment will be undertaken to identify laboratory activities which may impact the restriction, a plan will be developed to manage the risk with the assistance of the Health and Safety team. The plan may include the exclusion to tasks or activities where the levels of control cannot adequately manage the risk.

Section 7 - Definitions

(40) For the purpose of this procedure:

a. Disability: is any continuing condition that restricts everyday activities.
b. Dry laboratory: is a type of space where large experimental equipment is utilised with minimal use chemicals whilst the scientific models are inert.
c. Hazard: is anything with the potential to cause harm. Potential hazards can be identified based on previous experience or from the anticipation of problems that can be reasonably associated with the activity.
d. Laboratories: are facilities that provide controlled environments in which scientific or technological research, experiments, and measurement may be performed. Examples include chemical, anatomical, engineering and geomorphology laboratories and human movement, heath monitoring, and information systems laboratories.
e. Research: is the creation of new knowledge and/or the use of existing knowledge in a new and creative way to generate new concepts, methodologies, and understandings.
f. Risk control: is the allocation of resources or methods to eliminate or to minimise, as far as is reasonably practicable, the risk to safety or health from a hazard.

g. Wet laboratory: is a type of space where various types of chemicals and biological hazards are handled so the room is designed, constructed and controlled to avoid spillage and contamination.

(41) Refer to and link applicable definitions within the Policy Glossary wherever possible, particularly where key terms such as ‘student’ are used and which should be commonly applied across the University.

Section 8 - Authority and Associated Information

(42) This Policy is made under the La Trobe University Act 2009.

(43) Associated information includes:

a. Health and Safety (intranet)

Status and Details

Status	Current
Effective Date	11th December 2019
Review Date	22nd February 2026
Approval Authority	Senior Executive Group
Approval Date	5th December 2019
Expiry Date	Not Applicable
Responsible Manager - Policy	Spomenka Krizmanic Senior Manager, Health and Safety 61 3 9479 2186
Enquiries Contact	Health and Safety

Glossary Terms and Definitions

"student" - Student is defined in the La Trobe University Act 2009 as: (a) a person enrolled at the University in a course leading to a degree or other award; or (b) a person who is designated as a student or is of a class of persons designated as students by the Council.