



## Appendix B WHS Hazard and Risk Assessment Template

- This form is used when a documented risk assessment is required in accordance with Appendix A of WHSMS Handbook Chapter 3.1.
- Original risk assessments must be located in a convenient location in the local area accessible by all people affected by the risk assessment.
- Risk assessment for static hazards/tasks/activities must be forwarded to local WHS Officer/Manager for inclusion in the School/Service Division Static Risk Assessment Template.

Static Risk Assessment No.		Assessment Date		Reviewed by Date		Version	
SMP_012		29/11/2022		29/11/2024		1.2	
Name of the Task/Activity/Area/Hazards assessed	Medical Science Laboratories Teaching & Research					Top Residual Risk (L, M, H, E)	
						Medium (12)	
Description of the activity/task & location	All Medical Science related Teaching and Research activities performed in the MS Laboratories, Building 54, Mills Rd, Acton. Including but not limited to medical science practical teaching, Undergraduate anatomy teaching (non wet lab activities), and Health Science teaching activities.						
School/Service Division	School of Medicine and Psychology						
Location and Supervisor	Location		Supervisor	Pru Roff	Ph	6125 6725	
Risk Assessment Team	Name	Francisco Sanchez – Medical Science & Anatomy Coordinator			Ph	02) 6125 51017	
Have you completed ANU WHS Risk Management Training? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <b>IF NO, DO NOT PROCEED</b>	Name	Tarryn Colley – WHS Officer			Ph	02) 6125 5752	
Who are affected by this RA?	<input checked="" type="checkbox"/> All people in the location <input type="checkbox"/> A group/s of people (list below) <input type="checkbox"/> A single person (list below)						
Who are consulted on this RA? (All persons affected or their representatives needs to be consulted)	<i>List the names of people who are consulted – <u>Mandatory</u> unless there is only 1 person affected</i> Francisco Sanchez Tarryn Colley Krisztina Valter Breanna Bass Yunis Moukbil						
WHS Legal and Other Requirements	Work Health and Safety Act 2011 (Cth) Work Health and Safety Regulations 2011 (Cth) <i>For other legal requirements, choose from University WHS Legal and Other Requirements Matrix for specific Risk Profile and corresponding requirements and list them here. Alternatively, you can refer to a WHSMS Handbook Chapter in this section.</i>						
Type of RA	<input checked="" type="checkbox"/> <b>Static RA (long term and &gt; 6 months)</b> - Send a copy (electronic) to WHS Officer/Manager and keep original locally near the activity/location, accessible to all people affected. <input type="checkbox"/> <b>Dynamic RA (short term and &lt; 6 months or once off)</b> – Keep the original locally (electronically or physically) near the activity/location, accessible to all people affected.						



## Risk Assessment Instruction

1. Select hazards from **Table 1** below and transfer them into the 'Hazards' column of the RA Form.
2. Enter where and when this hazard exists. This may include specification of during which step, this hazard exists.
3. Estimate inherent risk of the hazard (without any controls in place) by using Likelihood against Consequences (defined in **Table 2**) and the ANU WHS Risk Matrix (**Table 3**). List them in 'Inherent Risk' column of the RA Form.
4. Develop control measures in accordance with the Hierarchy of Control Principle (**Table 4**) and list them in 'Control' column of the RA Form.
5. Estimate the residual risk of the hazard after implementing all controls. Remember that administrative control can only reduce the likelihood of an event occurring, not the consequences.
6. Identify any controls that are not in place as corrective actions and implement them before undertaking the activity.
7. Obtain approval from relevant people as identified.
8. Identify if this is a static risk assessment (> 6 months) or dynamic risk assessment (< 6 months).
9. Send a copy of the static risk assessments to WHS Officers/Managers/Equivalent – Keep on file for 7 years.
10. Keep originals of risk assessments in close vicinity of the activities. Dynamic risk assessments can be destroyed 1 year after the activity ceases.
11. Review the static risk assessments and associated safe work procedures in accordance with **3.1.2.6 Step 4: Review Control Measures** requirements

**Table 1. Hazard Selection Table for Hazard Profiles**

<b>Electrical</b> <input checked="" type="checkbox"/> Electrical Shock (both minor and major) <input checked="" type="checkbox"/> Electrical Burns (both minor and major) <input checked="" type="checkbox"/> Overheating and fire <input checked="" type="checkbox"/> Electrocutation <input type="checkbox"/> Other ( <i>not listed above</i> )		<b>Chemical</b> <input type="checkbox"/> Exposure to Hazardous Materials (e.g. Asbestos, Lead or Mercury). <input type="checkbox"/> Other ( <i>not listed above, e.g. hazard interactions</i> )		<b>Noise</b> <input type="checkbox"/> Exposure to 85dB(A) LAeq, 8h <input type="checkbox"/> Exposure to peak noise level of 130 dB(C) any time during the work activity <input type="checkbox"/> Exposure to ototoxic chemicals: <input type="checkbox"/> At any noise level <input type="checkbox"/> > 50% of the OEL of the chemical at any noise level <input type="checkbox"/> At over 100 dB noise level but any level of exposure to ototoxic chemicals <input type="checkbox"/> Exposure to vibration & ototoxic chemicals <input type="checkbox"/> Nuisance level of noise causing discomfort <input type="checkbox"/> Other ( <i>not listed above</i> )		<b>Duress and Security Stress</b> <input checked="" type="checkbox"/> Personal life threat e.g. violence behaviour, attacking with knives, guns, clubs, or any type of weapon <input checked="" type="checkbox"/> Personal threat e.g. aggressive behaviour, physical abuse, assault (includes home visits, public interview) <input checked="" type="checkbox"/> Verbal abuse, threat <input type="checkbox"/> Sexual assault/Raping <input type="checkbox"/> Bomb threat or unidentified package <input checked="" type="checkbox"/> Throwing objects, pushing, shoving, tripping, grabbing, kicking, hitting <input checked="" type="checkbox"/> Contact with body fluid (e.g. biting, spitting, scratching) <input type="checkbox"/> Kidnaping in a public location while conducting interviews <input checked="" type="checkbox"/> Unauthorised persons gained access to a building <input type="checkbox"/> Other ( <i>not listed above</i> )		<b>Public Safety</b> <input type="checkbox"/> Other ( <i>not listed above</i> )	
<b>Chemical</b> <input type="checkbox"/> Airborne contaminants that poses a health hazard <input checked="" type="checkbox"/> Flammable <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Airborne contaminants <input type="checkbox"/> Explosive substances <input type="checkbox"/> Self-reactive or self-heating chemicals <input type="checkbox"/> Organic peroxide or peroxide-forming chemicals <input type="checkbox"/> Oxidising substances <input type="checkbox"/> Hydrofluoric acid (HF) <input checked="" type="checkbox"/> Corrosive <input checked="" type="checkbox"/> Substances <input type="checkbox"/> Gas <input type="checkbox"/> Airborne contaminants <input type="checkbox"/> Asphyxiate gas (e.g. CO <sub>2</sub> including dry ice, liquid N <sub>2</sub> ) <input checked="" type="checkbox"/> Toxic and health hazard substances <input type="checkbox"/> Toxic gas (e.g. Hydrogen cyanide, cyanogen) <input type="checkbox"/> Respiratory irritants (e.g. engineered nanomaterials, dust, asbestos) <input type="checkbox"/> Chemical spraying (e.g. agricultural, pesticides) <input type="checkbox"/> Chemicals requiring health monitoring (e.g. Schedule 14 Chemicals). <input type="checkbox"/> Prohibited and restricted carcinogens <input checked="" type="checkbox"/> Mutagens or reproductive system hazards <input type="checkbox"/> Hazards during storage (e.g. mixed hazards storage, dangerous when wet, temperature sensitive, heat & friction sensitive etc) <input checked="" type="checkbox"/> Mix two chemicals to form a new chemical <input checked="" type="checkbox"/> Chemical spill – Controlled or uncontrolled		<b>Biological</b> <input type="checkbox"/> Live animal handling (e.g. bites, allergies) <input checked="" type="checkbox"/> Potential of uncontrolled outbreak of an infectious disease <input checked="" type="checkbox"/> Pathogen or body fluid contamination <input checked="" type="checkbox"/> Exposure to viruses including blood borne viruses <input checked="" type="checkbox"/> Infective microorganism exposure <input type="checkbox"/> Exposure to communicable or infectious disease as a research object <input type="checkbox"/> GMO exposure and security <input checked="" type="checkbox"/> Sharps and contaminated sharps <input checked="" type="checkbox"/> Biological material spillage <input type="checkbox"/> Other ( <i>not listed above</i> )		<b>Radiation</b> <input type="checkbox"/> Sealed or Unsealed sources (alpha, beta or gamma) <input type="checkbox"/> Exposure to EM Radiations (e.g. X-ray, UV, infrared) <input type="checkbox"/> Exposure to artificial radiation (e.g. laser) <input type="checkbox"/> Security of sealed and unsealed sources <input type="checkbox"/> Other ( <i>not listed above</i> )		<b>Physical/Environmental</b> <input checked="" type="checkbox"/> Animals (e.g. hazardous wild animals, bees, snakes) <input type="checkbox"/> Confined space entry (e.g. pit, tank, silo, entry through a hatch) <input checked="" type="checkbox"/> Fall from a height (e.g. ladder, elevated platform, cliff, scaffolding) <input checked="" type="checkbox"/> Fire (potential for uncontrolled fire due to ignition sources) <input checked="" type="checkbox"/> Flying or moving items/plant/vehicles, falling object(s) <input checked="" type="checkbox"/> Hazardous terrain or environment including wet/slippery surfaces <input type="checkbox"/> Lighting/visibility is compromised and hazardous <input type="checkbox"/> Exceedingly strong lighting both natural and artificial <input type="checkbox"/> Glare and reflections <input type="checkbox"/> Temperature or weather extremes (e.g. hypothermia, major burns) <input type="checkbox"/> Difficult to access work site, or a rescue effort would be difficult in the event of an emergency <input type="checkbox"/> Poor air quality or ventilation at work <input type="checkbox"/> Insufficient/poor amenities (e.g. toilets, lunch area, breakout area, air-conditioner) <input checked="" type="checkbox"/> Fall on same level (e.g. slip, trip, wet or unstable surface) <input type="checkbox"/> Other ( <i>not listed above</i> )			
		<b>Plant and Equipment</b> <input type="checkbox"/> Entanglement and trapping parts <input type="checkbox"/> Crushing, rotating and cutting parts <input checked="" type="checkbox"/> Serious burn/cold <input type="checkbox"/> Ejection of piece/s; shattering or fragmentation; Explosion; Implosion <input type="checkbox"/> Stabbing, puncturing, shearing, friction, abrasion <input type="checkbox"/> Lifts or suspends a load (e.g. falling objects) <input type="checkbox"/> Rollover or striking against the plant <input checked="" type="checkbox"/> Pressurised vessels (e.g. autoclave, boilers, steam generator) <input type="checkbox"/> Mobile lifting equipment and Elevated Work Platform (e.g. heavy load fall from height) <input checked="" type="checkbox"/> Hazardous levels of heat or vibration (generated by plant to whole or part body) <input type="checkbox"/> Potential exposure to fluids under high pressure <input type="checkbox"/> Other ( <i>not listed above</i> )		<b>Ergonomics and Manual Tasks</b> <input checked="" type="checkbox"/> Repetitive or sustained forces <input type="checkbox"/> Sustained awkward static postures <input checked="" type="checkbox"/> Repetitive movements <input checked="" type="checkbox"/> Long duration <input type="checkbox"/> High Forces <input type="checkbox"/> Long duration of the same posture (e.g. standing, sitting) <input type="checkbox"/> Animal handling or handling unbalanced/unpredictable load <input type="checkbox"/> Transfer of item(s) up or down stairs, using both hands or requiring the use of lifting equipment from one level to another <input type="checkbox"/> Repetitive, monotonous work, at a high pace		<b>Public Safety</b> <input type="checkbox"/> Uncontrolled spread of hazardous materials to public <input type="checkbox"/> Uncontrolled spread of GMO, communicable or infectious disease to public <input checked="" type="checkbox"/> Natural disaster e.g. earthquake, flood, bushfire <input type="checkbox"/> Explosion of liquid nitrogen tanks or other tanks that would injure public <input type="checkbox"/> Loss of radioactive sources that are potentially hazards to students and public <input checked="" type="checkbox"/> Hazardous wastes going into drinking water/public river/public sewage <input type="checkbox"/> Use of industrial robots or University designed robots <input checked="" type="checkbox"/> Use of VR, AI or emerging technology on experiment participants <input checked="" type="checkbox"/> Provide experiment participants with confronting materials that would cause traumatic events <input checked="" type="checkbox"/> Supply/inject/apply substances (e.g. alcohol, chemical, S4-S9 drugs) to experiment participants		<b>Traffic Safety</b> <input type="checkbox"/> Lack of separation of vehicles, delivery drivers and pedestrians <input type="checkbox"/> Lack of physical barriers to prevent interaction between vehicles, delivery drivers and pedestrians <input type="checkbox"/> Vehicles queue in a way that could create risks to pedestrians, for example crossing walkways or obstructing people's view of vehicles	

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Traffic Safety	
<input type="checkbox"/>	Routes are not wide enough to separate vehicles and pedestrians
<input type="checkbox"/>	Vehicles and pedestrians frequently interact
<input type="checkbox"/>	Activities done close to public areas (e.g. students coming out from a School building)
<input type="checkbox"/>	Unsuitable road conditions, uneven terrains, unregulated road routes
<input type="checkbox"/>	Certain times of higher traffic volumes or interactions between vehicles, delivery drivers and pedestrians
<input type="checkbox"/>	Poor lighting, visibility, shade or glare
<input type="checkbox"/>	Potential contact with stationary objects e.g. overhead structures, stationary plant or stored or discarded items.
<input type="checkbox"/>	Blind spots at the workplace caused by stationary equipment and vehicles and other areas of poor visibility or low lighting levels
<input type="checkbox"/>	Other hazards e.g. noise, emissions or falling objects surrounding the building
<input type="checkbox"/>	Pedestrian routes are not designed so pedestrians will not take short cuts
<input type="checkbox"/>	Intersections and bottleneck areas around driveways and entrances
<input type="checkbox"/>	'Blind' or convex corners
<input type="checkbox"/>	Lack of disabled access to and within a workplace
<input type="checkbox"/>	Workers are not aware of insurance policy or emergency procedure on road
<input type="checkbox"/>	Lack of maintenance of bikes and cars provided to workers
<input type="checkbox"/>	Use of personal vehicle or bikes for work activities
<input type="checkbox"/>	Other ( <i>not listed above</i> )

Event Specific	
<input type="checkbox"/>	Access to the event is restricted/controlled
<input type="checkbox"/>	Amenities, including disabled amenities inadequate/insufficient
<input type="checkbox"/>	Amusement structures/rides/inflatable structures
<input type="checkbox"/>	Animals and wildlife
<input type="checkbox"/>	BBQ using gas bottles
<input type="checkbox"/>	Children under the age of 18 are part of the event or attending
<input type="checkbox"/>	Hit by a vehicle (e.g. moving cars in proximity to pedestrians)
<input type="checkbox"/>	Held in a remote area, difficult to access site)

Event Specific	
<input type="checkbox"/>	Crowding
<input type="checkbox"/>	Communication problems/co-ordination of information/alerts
<input type="checkbox"/>	Fatigue e.g. duration of the event, extreme heat
<input type="checkbox"/>	Liquor license
<input type="checkbox"/>	Medical emergency, difficult to administer or obtain first aid gain assistance e.g. access to medical facilities
<input type="checkbox"/>	Scaffolding more than 4m in height
<input type="checkbox"/>	Food services and preparation
<input type="checkbox"/>	High risk work licence required in accordance with WHS Regs

High Risk Travel	
<input type="checkbox"/>	Risk of kidnapping in this city/region
<input type="checkbox"/>	Current civil unrest/political tension
<input type="checkbox"/>	Violent crime
<input type="checkbox"/>	Threat of attack from bordering nations
<input type="checkbox"/>	Region affected by natural disaster
<input type="checkbox"/>	Threat of regional disputes spreading
<input type="checkbox"/>	Heightened risk terrorist attacks can occur
<input type="checkbox"/>	Health risks from insect borne disease
<input type="checkbox"/>	Health risks from water borne disease
<input type="checkbox"/>	Health risks from other infectious disease in the destination countries
<input type="checkbox"/>	Threat of assault and sexual assault in foreign countries
<input type="checkbox"/>	Travel by some roads restricted due to risks
<input type="checkbox"/>	Risk of violence or discrimination based on gender or LGBTI identity
<input type="checkbox"/>	Unpredictable and potentially volatile security situation
<input type="checkbox"/>	Other ( <i>not listed above</i> )

Working Away from Campus	
<input type="checkbox"/>	Lack of appropriate communication tools/aid
<input type="checkbox"/>	Lack of tracking to know where the person is
<input type="checkbox"/>	Remote or isolated work locations

Working Away from Campus	
<input type="checkbox"/>	Use of poorly maintained vehicles or use of personal vehicles
<input type="checkbox"/>	Wildlife or animals
<input type="checkbox"/>	Traffic accidents while going to or from Campus
<input type="checkbox"/>	Duress situations including being threatened by the public
<input type="checkbox"/>	Poorly set-up/resourced offsite workspace
<input type="checkbox"/>	Social isolation and lack of day to day support
<input type="checkbox"/>	Loss of usual health/self-care routines such as exercise and sleep
<input type="checkbox"/>	Other ( <i>not listed above</i> )

Psychosocial	
<input checked="" type="checkbox"/>	<b>Environmental</b> – Workplace not compliant with WHS requirements
<input type="checkbox"/>	<b>Environmental</b> – Poor air quality, high levels of noise, extreme temperatures
<input type="checkbox"/>	<b>Environmental</b> – Lack of WHS consideration for unsafe plant
<input type="checkbox"/>	<b>Environmental</b> – Other: please list
<input type="checkbox"/>	<b>Organisational</b> – High job demand, long working hours
<input type="checkbox"/>	<b>Organisational</b> – High workloads, time pressure, fast work pace
<input type="checkbox"/>	<b>Organisational</b> – High emotional effort responding to distressing situations and to aggressive colleagues or students
<input type="checkbox"/>	<b>Organisational</b> – Direct exposure to traumatic events at work
<input type="checkbox"/>	<b>Organisational</b> – Indirect exposure to traumatic events at work
<input type="checkbox"/>	<b>Organisational</b> – Shift work, casual employment, afterhours work, fatigue management
<input type="checkbox"/>	<b>Organisational</b> – Frequently working in unpleasant conditions
<input type="checkbox"/>	<b>Organisational</b> – Low job demands, too little to do, monotonous tasks
<input type="checkbox"/>	<b>Organisational</b> – Low job control

Psychosocial	
<input checked="" type="checkbox"/>	<b>Organisational</b> – Poor support, including emotional support, from employer, colleagues and managers
<input checked="" type="checkbox"/>	<b>Organisational</b> – Workplace bullying, aggression, harassment and sexual harassment, discrimination etc
<input type="checkbox"/>	<b>Organisational</b> – Poor relationship between supervisors/line managers and staff or HDR students or other workers
<input checked="" type="checkbox"/>	<b>Organisational</b> – Poor relationship between supervisors/line managers and staff or HDR students or other workers
<input type="checkbox"/>	<b>Organisational</b> – workplace conflicts
<input type="checkbox"/>	<b>Organisational</b> – Perceived or actual lack of fairness, equity and diversity; discrimination against community groups or members (e.g. LGBTIQI)
<input type="checkbox"/>	<b>Organisational</b> – Low role clarity; uncertainty about changes or frequent changes to tasks and work standards; conflicting job roles
<input type="checkbox"/>	<b>Organisational</b> – Poor organisational change management; poor consultation in change management
<input type="checkbox"/>	<b>Organisational</b> – Low recognition and reward; low recognition in high WHS performance
<input type="checkbox"/>	<b>Organisational</b> – Poor organisational justice; inconsistent application of policy and procedures; bias on resource allocation
<input type="checkbox"/>	<b>Organisational</b> – No standardised WHS management practices across the University
<input type="checkbox"/>	<b>Organisational</b> – Frequent remote and/or isolated work
<input checked="" type="checkbox"/>	<b>Organisational</b> – Violent events such as robbery, assault, being threatened by managers, colleagues or managers
<input type="checkbox"/>	<b>Individual</b> – innate susceptibility to stress; disabled worker; pre-existing mental and/or physical conditions; age and experience of worker, external stressors eg carer responsibilities, financial situation, relationship status.
<input type="checkbox"/>	<b>Teaching</b> – SELT Aggression or abuse towards teaching staff from students
<input type="checkbox"/>	Other ( <i>not listed above</i> )

Other Hazard Profiles not listed above	
<input type="checkbox"/>	Please identify in the Hazard Profile here and hazards in the form below

<input type="checkbox"/>	<b>No hazards are identified. No Risk Assessment is required.</b>
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Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Chemical</b>  <b>Task:</b>  <b>Hazard:</b> <ul style="list-style-type: none"> <li>- Potential of Chemical spill</li> <li>- Incorrect Storage/ventilation</li> <li>- Flammable Chemicals</li> <li>- Corrosive Chemicals</li> <li>- Inhalation/Ingestion of potentially hazardous chemicals</li> <li>- Chemical Waste disposal</li> </ul> <b>Risk:</b> <ul style="list-style-type: none"> <li>- Fire</li> <li>- Burns</li> <li>- Potential Illness or injury</li> </ul>	Likely	Major	Extreme (20)	<b>Elimination N/A</b> <b>Substitution</b> <ul style="list-style-type: none"> <li>• Limit use of toxic chemicals</li> </ul> <b>Isolation N/A</b> <b>Engineering</b> <ul style="list-style-type: none"> <li>• Corrosives Cabinet</li> <li>• Flammables Cabinet/Keep away</li> <li>• Use of Fume Cupboard for volatile/hazardous chemicals</li> <li>• Chemical Spill Kit / protective Benchcote</li> <li>• Correct Disposal/neutralisation of unused or waste Chemicals</li> </ul> <b>Administration</b> <ul style="list-style-type: none"> <li>• Correct CMS/MSDS database management</li> <li>• Chemical safety Course</li> <li>• Manual Handling course</li> </ul> <b>PPE</b> <ul style="list-style-type: none"> <li>• Gloves,</li> <li>• face mask or shield, safety goggles,</li> <li>• laboratory coat/smock, Covered Footwear</li> <li>• Protective Benchcote</li> </ul>	unlikely	Moderate	Medium (8)



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Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Biological</b>  <b>Hazard:</b> <ul style="list-style-type: none"> <li>- Exposure to Bacterial material</li> <li>- Exposure to unknown pathogens Bacterial or Viral from experimental participants</li> <li>- Potential of uncontrolled outbreak of an infectious disease;</li> <li>- Sharps and contaminated sharps</li> <li>- Biological Waste Spill.</li> </ul> <b>Risk:</b> <ul style="list-style-type: none"> <li>- Illness;</li> <li>- Infection</li> </ul>	Likely	Major	Extreme (20)	<b>Elimination N/ Substitution</b> <ul style="list-style-type: none"> <li>• Limit use of known pathological specimens</li> </ul> <b>Isolation</b> <ul style="list-style-type: none"> <li>• Limit participation of individuals with compromised immune status</li> </ul> <b>Engineering</b> <ul style="list-style-type: none"> <li>• Use of Aseptic Technique</li> <li>• Use of Autoclave for waste sterilisation</li> <li>• Equipment to contain biohazardous material for transfer</li> <li>• Double bagging to prevent leakage</li> <li>• Correct Biological Waste disposal</li> </ul> <b>Administration</b> <ul style="list-style-type: none"> <li>• Biological safety Course</li> <li>• Follow biological material Safe Work Procedure for transfer of biological material</li> <li>• Manual Handling</li> </ul> <b>PPE</b> <ul style="list-style-type: none"> <li>• Gloves,</li> <li>• face mask or shield, safety goggles,</li> <li>• laboratory coat/smock, Covered Footwear</li> <li>• Protective Benchcote</li> </ul>	unlikely	Moderate	Medium (8)



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Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Electrical</b>  <b>Hazard:</b> <ul style="list-style-type: none"> <li>- Faulty Electrical equipment</li> <li>- Incorrect use of Equipment</li> </ul> <b>Risk:</b> <ul style="list-style-type: none"> <li>- Electric Shock</li> <li>- Electrocutation</li> </ul>	Possible	Major	High (18)	<b>Elimination N/A</b> <b>Substitution N/A</b> <b>Isolation N/A</b> <b>Engineering N/A</b>  <b>Administration</b> <ul style="list-style-type: none"> <li>• Visual Inspection</li> <li>• Annual Electrical Appliance Tag and Testing</li> <li>• Correct use of equipment- Following SOP</li> <li>• Electrical Safety Course</li> </ul> <b>PPE (as required)</b> <ul style="list-style-type: none"> <li>• Gloves,</li> <li>• face mask or shield, safety goggles,</li> <li>• laboratory coat/smock, Covered Footwear</li> </ul>	unlikely	Moderate	Medium (8)



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Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Plant and Equipment (Autoclave)</b>  <b>Hazard:</b> <ul style="list-style-type: none"> <li>- Autoclave -Faulty</li> <li>- Autoclave -Incorrect use of Equipment</li> <li>- Biological contamination (non- sterilisation)</li> </ul> <b>Risk:</b> <ul style="list-style-type: none"> <li>- Electric Shock</li> <li>- Electrocutation</li> <li>- Burns</li> <li>- Pressure build up</li> <li>- Biological contamination/infection</li> </ul>	Possible	Major	High (18)	<b>Elimination N/A</b> <b>Substitution N/A</b> <b>Isolation N/A</b> <b>Engineering N/A</b>  <b>Administration</b> <ul style="list-style-type: none"> <li>• Visual Inspection</li> <li>• Annual Electrical Appliance Tag and Testing</li> <li>• Correct use of equipment- Following SOP</li> <li>• Electrical Safety Course</li> </ul> <b>PPE (as required)</b> <ul style="list-style-type: none"> <li>• Heat Proof Gloves,</li> <li>• face mask or shield, safety goggles,</li> <li>• laboratory coat/smock, Covered Footwear</li> </ul>	unlikely	Moderate	Medium (8)





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Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Ergonomics and Manual Tasks</b>  <b>Hazard:</b> <ul style="list-style-type: none"> <li>- Repetitive forces and movements</li> <li>-</li> </ul> <b>Risk:</b> <ul style="list-style-type: none"> <li>- Fatigue</li> <li>- Injury</li> </ul>	Likely	Minor	High (13)	<b>Elimination N/A</b> <b>Substitution N/A</b> <b>Isolation N/A</b>  <b>Engineering</b> <ul style="list-style-type: none"> <li>• Use Lifting Aids where possible with training and supervision.</li> </ul> <b>Administration</b> <ul style="list-style-type: none"> <li>• Follow Site Specific Safe Work Procedures and Instructions;</li> <li>• Complete Placement Training / Induction;</li> <li>• Complete Manual Task Training and follow manual handling advice for lifting; and</li> <li>• Take breaks at regular intervals or when able.</li> </ul> <b>PPE N/A</b>	Possible	Minor	Medium (9)



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Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Public Safety</b>  <b>Hazard</b> <ul style="list-style-type: none"> <li>- Natural Disaster (e.g. Bushfire, flood, severe storm).</li> <li>- Supply substances (e.g. alcohol part of Pharmacokinetics session)</li> </ul> <b>Risk</b> <ul style="list-style-type: none"> <li>- Disconnection/Isolation;</li> <li>- Serious Psychological Duress;</li> <li>- Serious Injury; and/or Death</li> </ul>	Unlikely	Catastrophic	High (19)	<b>Elimination N/A</b> <b>Substitution N/A</b>  <b>Isolation</b> <ul style="list-style-type: none"> <li>• If a Natural Disaster event is occurring, do not travel into that area.</li> </ul> <b>Engineering</b> <ul style="list-style-type: none"> <li>• Not Applicable</li> </ul> <b>Administration</b> <ul style="list-style-type: none"> <li>• Follow Site Specific Safe Work Procedures and Instructions;</li> <li>• Complete Induction;</li> <li>• Follow Site Specific Emergency and Contingency Plan; and/or</li> <li>• Contact Security or Local Authorities if required.</li> </ul> <b>PPE N/A</b>	Rare	Catastrophic	Medium (12)



# Work Health and Safety Management System (WHSMS) Handbook

Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Physical / Environment</b>  <b>Hazard:</b> <ul style="list-style-type: none"> <li>- Fall from a height;</li> <li>- Hazardous terrain or environment including wet/slippery surfaces; and/or</li> </ul> Fall on the same level (e.g. fall, trip, wet or unstable surface).	Possible	Major	High (18)	<b>Elimination N/A</b> <b>Substitution N/A</b>  <b>Isolation</b> <ul style="list-style-type: none"> <li>• Isolate any spills and follow instructions to clean using local area spill kits.</li> </ul> <b>Engineering</b> <ul style="list-style-type: none"> <li>• Use slippery floor signage and barricading for spills; and/or</li> <li>• Clear signage for slippery or wet areas.</li> </ul> <b>Administration</b> <ul style="list-style-type: none"> <li>• Follow Site Specific Safe Work Procedures and Instructions;</li> <li>• Complete Induction; and/or</li> <li>• Complete training for working at heights if using ladders or steps.</li> </ul> <b>PPE</b> Wear appropriate, laboratory space footwear with grip on the soles.	Rare	Major	Medium(11)



# Work Health and Safety Management System (WHSMS) Handbook

Risk Assessment							
Hazards Also list where and when can the hazards present?	Inherent Risk			Control Measures When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page.	Residual Risk		
	Likelihood	Consequence	Risk rating		Likelihood	Consequence	Risk rating
<b>Psychosocial</b>  <b>Hazard</b> <ul style="list-style-type: none"> <li>- long working hours;</li> <li>- emotional distress</li> <li>- distressing situations</li> <li>- aggressive persons;</li> <li>- Direct exposure to traumatic events;</li> <li>- Indirect exposure to traumatic events;</li> <li>- Poor support,</li> <li>- Individual susceptibility to stress</li> <li>- Workplace bullying;</li> <li>- Harassment; and/or</li> <li>- sexual harassment.</li> <li>-</li> </ul> <b>Risk</b> <ul style="list-style-type: none"> <li>- Fatigue;</li> <li>- Burn Out;</li> <li>- Serious Injury;</li> <li>- Psychological Duress</li> <li>- Major Injury;</li> </ul>	Possible	Major	High (18)	<b>Elimination N/A</b> <b>Substitution N/A</b> <b>Isolation N/A</b> <b>Engineering N/A</b>  <b>Administration</b> <ul style="list-style-type: none"> <li>• Follow Site Specific Safe Work Procedures and Instructions;</li> <li>• Complete specific Training / Induction;</li> <li>• Follow Site Specific Emergency and Contingency Plan;</li> <li>• Take breaks at regular intervals or when able;</li> <li>• Speak with someone if feeling uncomfortable or afraid;</li> <li>• Report any assault or harassment;</li> <li>• Utilise the ANU Student Support Services; and/or</li> </ul> <b>PPE N/A</b>	Rare	Major	Medium(11)





## Work Health and Safety Management System (WHSMS) Handbook

If the level of residual risk is assessed as high or extreme,

1. Stop the activity immediately; AND
2. Tag out the plant/equipment; and/or
3. Secure any chemical; and
4. Implement, or seek advice from WHS Officer or Subject Matter Experts to implement, additional controls to reduce the residual risk further to medium [Supervisor signature required];
5. If the above is absolutely not possible, seek approval from relevant authority (High – School/Division Director/College Dean; Extreme – COO).

**NOTE: Approval will only be granted in exceptional circumstances after consultation with Associate Director, WEG and/or a Subject Matter Expert.** See Chapter 3.1 for details.

Approval required					
Worker conducted RA			Student conducted RA		
Residual Risk Level	Authority required	Signature and date	Residual Risk Level	Authority required	Signature and date
Low	Author of RA		Low	Supervisor	
Medium	Supervisor		Medium	Supervisor	
High	School/Service Division Director		High	School/Service Division Director	
	College Dean			College Dean	
Extreme	COO		Extreme	COO	

**Table 2.1 Likelihood Table**

Ranking	Description	Probability or frequency of event happening
Almost certain	The hazard is expected to lead to an event in most circumstances at the University	A daily to monthly occurrence
Likely	The hazard could lead to an event in most circumstances at the University	Between monthly to yearly occurrence
Possible	The hazard has led to an event at some time at the University	Occurs once between 1 to 5 years
Unlikely	The hazard could lead to an event at some time	Occurs once between 5 to 20 years
Rare	The hazard may lead to an event in exceptional circumstances	Occurs once between 20+ years

**Table 2.2 Consequences Table**

Ranking	Injury, Illness or Disease	Plant, Equipment and materials	Environment
Catastrophic	Fatality / fatalities or permanent disability. Permanently unable to work	Destroyed or cannot be reused	Long term permanent effect to ecosystems. Significant intervention required to remediate
Major	Requiring extensive medical treatment such as hospitalisation as in patient and possibly a Notifiable Incident LTI >1 week	Damage requiring repairs/rebuild and possible recertification prior to reuse, lost use for one or more days	Notification to environmental agency, ecosystem will need time to recover, intervention required to remediate
Moderate	Minor medical treatment injury, such as treated by a health professional, hospital outpatient, no potential to be a Notifiable Incident LTI < 1 week and can return to normal duties	Damage requiring a repair/service by a trade/technician within the day	Contamination event that does not impact on ecosystem. Short impact does not need intervention
Minor	Injury needing significant first aid treatment and can return to work within shift	Equipment able to be reset or gotten back into operation by the operator	Minor contained contamination ceasing when the short event is over, can remediate (e.g. spill kit)
Insignificant	Report only, no injury OR minor first aid (e.g. bandaid); short-term discomfort	Report only, no damage	Report only, no contamination



**Table 3 ANU WHS Risk Matrix**

	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	Medium (10)	High (14)	Extreme (21)	Extreme (22)	Extreme (25)
Likely	Medium (7)	High (13)	High (16)	Extreme (20)	Extreme (24)
Possible	Low (4)	Medium (9)	High (15)	High (18)	Extreme (23)
Unlikely	Low (2)	Medium (6)	Medium (8)	High (17)	High (19)
Rare	Low (1)	Low (3)	Low (5)	Medium(11)	Medium (12)

**Table 4. Hierarchy of Control**

Level	Examples	Effectiveness
Elimination	<ul style="list-style-type: none"> <li>Remove the hazards completely</li> <li>Cease the activity</li> <li>Dispose of unwanted hazardous chemicals or plant etc</li> </ul>	<p style="text-align: center;"><b>Most Effective</b></p> <p style="text-align: center;"><b>Least Effective</b></p>
Substitution	<ul style="list-style-type: none"> <li>Use less hazardous chemicals</li> <li>Use safer plant equipment</li> <li>Use handset instead of telephone</li> <li>Move smaller weight loads instead of large weight</li> </ul>	
Isolation	<ul style="list-style-type: none"> <li>Physical separation from the hazard by distance or complete shielding</li> <li>Install guard rails around edges and holes to floors</li> <li>Move workers to a new room away from hazardous noise</li> </ul>	
Engineering Control	<ul style="list-style-type: none"> <li>Use ventilation system</li> <li>Use fume cupboard when working with hazardous chemicals</li> <li>Install guarding around rotating and crushing parts</li> <li>Use trolley or hoist to lift heavy loads</li> <li>Use duress alarm system while doing home interview or offsite field work</li> </ul>	
Administrative Control	<ul style="list-style-type: none"> <li>Use Safe Work Procedures <b>[See section 3.1.3.1]</b> or instructions</li> <li>Induction and WHS information</li> <li>Training <b>[See Handbook Chapter 3.2]</b></li> <li>Contingency Planning and Testing <b>[See section 3.1.3.2]</b></li> <li>Permit to Work system <b>[See section 3.1.3.3]</b></li> <li>Signage</li> </ul>	
Personal Protective Equipment (PPE)	<ul style="list-style-type: none"> <li>Lab coat</li> <li>Safety glasses/face shield</li> <li>Gloves/cryogenic gloves</li> <li>Respirators/Masks</li> <li>Personal hearing protectors</li> </ul>	





**Table 5 Risk Assessment and SWP review timeframe**

Use this Table to determine risk assessment and safe work procedure review timeframe and frequency and put in the front of the risk assessment.

Residual Risk	Review Frequency		What to do during the review.
Extreme	6 monthly	And/or	Stop work. Review the control measures and introduce additional control measures to reduce the residual risk to Medium as a maximum.
High	Annually	After an incident where deficiencies in identifying or controlling hazards have been observed	
Medium	Two yearly	When changes to the activity need to occur	Stop work. Review the control measures and introduce additional control measures to reduce the residual risk to Medium as a maximum.
Low	Three yearly	When significant changes (e.g. renovation) to the workplace need to occur	Review the control measures.
		When HSRs request a review	Review the control measures.