RISK REGISTER EXAMPLE

Number	Activity	Res Risk	Page	Author	Legislation	Review
1	Western Blotting using Gel Electrophoresis	Low	2	AHS	Occupational Health and Safety Act 2004 Part 4.1 Hazardous Substances and Materials, Occupational Health and Safety Regulations 2007 Gene Technology Act 2001 Dangerous Goods Act 1985 Dangerous Goods (Storage and Handling) Regulations 2000	Sep 2012
2	Students practicing emergency scenarios on dummies	Low	6	AHS	Occupational Health and Safety Act 2004	Sep 2012
3	Fieldwork to rural and remote areas in Northern Australia	Low	7	AHS	Occupational Health and Safety Act 2004	Sep 2012

When you have completed the Risk Register, you should rank the risk assessments in priority order so that you can address the activities with the most significant risk first.

You should also discuss the types of control measures that are still required to be implemented, and how these are prioritised.

RISK ASSESSMENT EXAMPLES:

Activity description: ***Western Blotting using Gel Electrophoresis***

Step 1 Task	Step 2 Hazard	Step 3A C	L	Step 3B Risk Score	Step 4 Controls	Step 5 Residual Risk Score
Make up solutions such as TBS, Western Transfer, PBS, Casein Blocking, etc	Weighing out chemicals that are not known hazardous substances or dangerous goods	1	E	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection	LOW
Make up Transfer buffer	Use of chemical that is flammable and toxic – in small quantities	2	D	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection. Keep away from sources of ignition	LOW
Make up solutions such as TBS, Western Transfer, PBS, Casein Blocking, etc	Adjusting pH using hydrochloric Acid which is corrosive (causes burns to skin)	2	D	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection	LOW
Use of kits such as BCA	Use of chemicals that are not known hazardous substances or dangerous goods	1	E	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection	LOW
handling human tissue & cells	Exposure to biological materials capable of causing illness or disease through transmission of an infectious agent (bacteria or virus)	3	D	**Medium**	Wear lab coat and fully enclosed footwear. Latex gloves must be worn. Eye protection not required – no splash potential identified. Tissue only to be handled in a biological safety cabinet	LOW
handling human plasma	Exposure to biological materials	3	D	**Medium**	Wear lab coat and fully enclosed	LOW

	capable of causing illness or disease through transmission of an infectious agent (bacteria or virus)				footwear. Latex gloves must be worn. Eye protection not required – no splash potential identified. plasma only to be handled in a biological safety cabinet	
Handling animal tissue & cells	Exposure to biological materials unlikely to cause illness or disease	2	E	Low	As for handling human tissue to ensure protocol is easily followed. Can perform outside of biological safety cabinet	LOW
Homogenising tissue	Exposure to biological materials during sonication (aerosol production and inhalation hazard). Capable of causing illness or disease through transmission of an infectious agent.	3	D	**Medium**	Wear lab coat and fully enclosed footwear. Latex gloves must be worn. Eye protection not required – no splash potential identified. Sonicator is in the fume hood to reduce aerosol generation	LOW
Perform protein estimation assay using diluted BCA stock	Use of chemicals that are not known hazardous substances or dangerous goods	1	E	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection	LOW
Perform protein estimation assay using diluted BCA stock	Exposure to biological materials capable of causing illness or disease through transmission of an infectious agent. (if human only) through skin contact	3	D	**Medium**	Wear lab coat and fully enclosed footwear. Latex gloves must be worn. Eye protection not required – no splash potential identified.	LOW
Reading plates on the WALLAC	Electrical hazard – potential for electric shock	1	E	Low	Item is tested and tagged in accordance with university requirements. Item is repaired by appropriately qualified technicians only.	LOW
Prepare protein for electrophoresis (needle	Needlestick stab to hand/finger – with a clean needle	2	D	Low	Ensure tube is on the rack. Take care when uncapping needle. Keep fingers	LOW

through lid)					out of the way	
Prepare protein for electrophoresis (heating)	Heatblock at 95 – 100 C can cause burns on contact with skin	2	D	Low	Handling of specimen by plastic container only, no requirement to touch the heat block. Latex gloves worn are deemed adequate	LOW
Prepare protein for electrophoresis (microfuging)	Electrical hazard – potential for electric shock	1	E	Low	Item is tested and tagged in accordance with university requirements. Item is repaired by appropriately qualified technicians only.	LOW
Prepare protein for electrophoresis (microfuging)	Entanglement hazard with moving parts of the equipment	1	E	Low	Item is very small and the lid is closed and locked during operation.	LOW
Set up the gel tank by loading buffers and samples	Use of chemicals that are not known hazardous substances or dangerous goods	1	E	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection	LOW
Running the gel	Electrical hazard – potential for electric shock	1	E	Low	Item is tested and tagged in accordance with university requirements. Item is repaired by appropriately qualified technicians only.	LOW
Protein transfer to nitrocellulose	Use of chemicals that are not known hazardous substances or dangerous goods	1	E	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection	LOW
Protein transfer to nitrocellulose – using 20% Methanol	Use of chemical that is flammable and toxic – in very small concentration and quantities	1	E	Low	Wear lab coat and fully enclosed footwear. Latex gloves can be worn as extra protection. Keep away from sources of ignition	LOW
Western blotting (microwaving)	Electrical hazard – potential for electric shock	1	E	Low	Item is tested and tagged in accordance with university requirements. Item is repaired by appropriately qualified	LOW

					technicians only.	
Western blotting (microwaving)	Heat generated by microwaving process causing burns to skin when handling samples	2	D	Low	Use of secondary container and use forceps to handle membrane	LOW
Western Blotting (incubating on a rocker)	Electrical hazard – potential for electric shock	1	E	Low	Item is tested and tagged in accordance with university requirements. Item is repaired by appropriately qualified technicians only.	
Developing samples with chemiluminescence reagents	Weighing out chemicals that are not significant hazardous substances or dangerous goods	1	E	LOW	Wear lab coat and fully enclosed footwear. Latex gloves must be worn	

Activity Description: ***Students practicing emergency scenarios on dummies***

Step 1 Task	Step 2 Hazard	Step 3A C	L	Step 3B Risk Score	Step 4 Controls	Step 5 Residual Risk Score
Cannulation of dummies during practicals	Exposure to sharps that are not contaminated with any biological materials	C	1	Low	Student training in safe cannulation practices. Written training protocols in place Supervision at all times Assistance with techniques provided	low
Venepuncture of dummies during practicals	Exposure to sharps that are not contaminated with any biological materials which may puncture skin of hand/finger	C	1	Low	Student training in safe venepuncture practices. Written training protocols in place Supervision at all times Assistance with techniques provided Universal / Standard precautions used	low
Moving patients (dummies) and beds during emergency scenarios	Manual handling hazard – heavy lifting that may cause back injury	C	2	**Medium**	Investigation of replacement bed that is lighter and automated Ensure bed can be moved freely without obstacles	Low
Handling emergency scenarios which have time constraints	Situations that may cause stress / anxiety reactions	D	2	Low	Part of the training program to provide students with the skills to handle real situations. Well controlled and supervised environment	Low
Disposal of sharps items after activities	Exposure to sharps that are not contaminated with any biological materials which may puncture skin of hand/finger	E	3	**Medium**	Portable sharps bins provided in all rooms Collect sharps in the sharps container Retain for separate disposal when full	Low

Activity description: ***Fieldwork to rural and remote areas in Northern Australia***

Step 1	Step 2	Step 3A		Step 3B	Step 4	Step 5
Task	**Hazard**	**C**	**L**	**Risk Score**	**Controls**	**Residual Risk**
Travel to and from northern Australia	Air travel hazard	2	E	Low	Observe air safety rules	Low
As above	Not being able to be contacted when on leave	2	D	Low	Ensure itinerary is lodged with the School of Behavioural Science (HR 18)	Low
Accessing communities in rural and remote areas of northern Australia	Lack of knowledge of local requirements	2	C	**Medium**	Experienced personnel only Look at re-establishing the information provided by the Land Council	Low
As above	Not being accepted by the community	2	D	Low	Experienced personnel who know local customs and traditions	Low
As above	Exposure to mosquitoes which carry dengue fever and the Ross River virus	2	C	**Medium**	Appropriate prophylaxis and treatment is available at local hospitals	Low
As above	Potential for inappropriate behaviour if local customs are not observed – offensive	2	D	Low	Experienced personnel who know local customs and traditions	Low
Accessing community facilities such as beaches	Exposure to potentially hazardous animals such as crocodiles	2	E	Low	Ensure there is an awareness of your travel plans at all times Do not go into unfamiliar areas without escort	Low
Contacting the University and family on a regular basis	Not being able to contact for emergency information	2	D	Low	Areas all have access to hospitals, hotels or the flying doctor service	Low

Instructions:

Step 1: *write down the tasks that make up the activity*
Step 2: *write down any hazards you identify for the activities, these may be chemical, biological, manual handling, sharps etc*
Step 3A: *estimate the consequence and likelihood of an incident or injury for each hazard using the 2 variable assessment methodology (PART A)*
Step 3B: *assess the level of RAW risk for each of the hazards using the 2 variable assessment risk score matrix (PART B)*
Step 4: *list the control measures to ensure that the task is undertaken safely, such as eliminate, substitute, engineer, provide training, wear protective equipment*
Step 5: *perform a residual risk assessment that shows that the controls are appropriate to reduce the level of risk to an acceptable level*

2 Variable Methodology

PART A

Select a Consequence that is a foreseeable outcome if the hazard were to cause an injury:		
Consequence Type	*Score*	*Definitions*
Insignificant	*1*	***Insignificant – no injuries***
Minor	*2*	***Minor first aid treatment, immediate containment***
Moderate	*3*	***Medical treatment required, assisted containment***
Major	*4*	***Major injuries, Area shut down for investigation***
Catastrophic	*5*	***Death(s , Detrimental effect to community***

Select a Likelihood that is foreseeable for the hazard to actually cause an injury:		
Likelihood Type	*Score*	*Definitions*
Very Likely	*A*	***Expected to occur in most circumstances***
Likely	*B*	***Will probably occur in most circumstances***
Possible	*C*	***Might occur at some time***
Unlikely	*D*	***Could occur but is unlikely at some time***
Rare	*E*	***May occur only in exceptional circumstances***

PART B

Calculate a Risk Score by matching up the selected Consequence and Likelihood below:					
	1	***2***	***3***	***4***	***5***
A	*M*	*H*	*H*	*VH*	*VH*
B	*M*	*M*	*H*	*H*	*VH*
C	*L*	*M*	*H*	*H*	*H*
D	*L*	*L*	*M*	*M*	*H*
E	*L*	*L*	*M*	*M*	*H*