SAFETY IN RESEARCH
RISK ASSESSMENT

Personal Details

Name | Position
-----|---------
Division | Supervisor
Phone | Email

Project Details

The project is for the following purposes:

☐ Teaching  ☐ Research  ☐ Clinical  ☐ Consultancy

Project Title / Unit of Study

Brief Project Description

Location(s):

Commencement date | Completion Date

Procedure

The primary aim of this process is to clearly identify and control the risks associated with the proposed work to be undertaken. You are required to follow the process detailed within in identifying those risks, making an assessment of them and then determining how (controls) you will reduce and manage the risks.

Step One: Does the project involve:

☐ General safety and health risks  (Complete Sections A and E)
☐ Biological agents  (Complete Sections B and E)
☐ Hazardous chemicals  (Complete Sections C and E)
☐ Ionising or non-ionising radiation  (Complete Sections D and E)

Complete all relevant sections detailed above. Sections A and E must be completed for all projects. Section E should be completed in accordance with the risk assessment process detailed below. Advice and assistance can be sought from Health and Safety or the Chairperson of the relevant committee, details of which can be found on the Health and Safety website.

Step Two: Sign, submit and discuss your completed risk assessment with your supervisor. Have your supervisor countersign the assessment.

Step Three: Forward a copy of your completed risk assessment to the Chairperson of the relevant committee, details of which can be found on the Health and Safety website and obtain all required approvals as detailed in the corresponding Sections.

Step Four: Append the completed risk assessment to your project proposal or grant application for submission to the relevant approval authority.

Step Five: Keep a copy for your records.

All completed forms to be sent to Curtin’s Health and Safety, Building 599 for processing and forwarding to IBC, Radiation or Hazardous Substances Committee.
## Risk Assessment

### Risk Identification

In identifying the workplace health and safety risks associated with your project you will need to consider the project in its entirety. That is, not only what is being done, but also how it is being done. You will need to identify the risks associated with the equipment and materials being purchased and used; the environment in which you will be operating; your handling of equipment and materials; transportation and storage provisions; waste disposal; other people working in the area including visitors and contractors; fieldwork and so on. Some, or all of these may be relevant to your project and must be considered fully. Further assistance with identifying the risks is contained in each Section of the risk assessment and can also be obtained from the ‘Making the Workplace Safe’ document on the Health and Safety website.

### Assessing the Risk

Make a judgement regarding the probability of the hazard causing an incident (likelihood) and the potential consequences of that incident. This will help you determine the controls required to reduce the probability of an incident occurring to an acceptable level. In identifying the consequences you will need to consider the potential for damage to personnel, property, the environment and the University’s reputation. Clearly identifying how things can go wrong, the likelihood and the consequences of it, will permit you determine the need for, and type of action required to adequately control the risk.

### Controlling the Risk:

Use the hierarchy of control below to determine how you can prevent the incident (reduce likelihood) from occurring as this is the most effective means of risk control. Subsequent to this, consider also how you might limit the potential damage (consequences) of that incident.

#### Hierarchy of controls

<table>
<thead>
<tr>
<th>Elimination</th>
<th>Can you eliminate the hazard altogether?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substitution</td>
<td>Can you substitute a less hazardous process or material?</td>
</tr>
<tr>
<td>Engineering</td>
<td>Would the hazard be reduced by automating the process, providing mechanical ventilation, barriers or isolating the hazard?</td>
</tr>
<tr>
<td>Administrative</td>
<td>Are training, policy or safe working procedures required?</td>
</tr>
<tr>
<td>Personal Protective Equipment</td>
<td>What personal protective equipment would be appropriate?</td>
</tr>
</tbody>
</table>

### Monitor and Review:

It is crucial to ensure that the controls you determine and implement are effective for the duration of the project. It will therefore be necessary to develop a system for monitoring and reviewing the implemented controls over time.
SECTION A: General Safety and Health Risks

Does the work involve:

- **Manual handling**
  - Overexertion, lifting, pulling or pushing loads, repetitive actions

- **Falls, slips, trips (potential for)**
  - Working from height, on uneven surfaces, cluttered conditions, on wet or potentially slippery surfaces

- **Computer use**
  - Have workstations been ergonomically assessed and set up?

- **Exposure to excessive environmental conditions**
  - Sun exposure, excessive noise, heat, wind, weather

- **Machinery, plant or equipment**
  - Rotating or moving parts; vehicles; pressure; temperature

- **Fire and electricity**
  - Is there a potential for fire or other emergency? Does the project involve the use of electricity?

- **Working off-campus/Fieldwork**
  - Projects involving work off-campus or fieldwork must undertake a specific risk assessment as detailed in the University’s Procedure for “Safety and Health in Work-Related Activities Off-Campus (Fieldwork)”

Use the above as a basic guide to identifying general safety risks in your project, however, do not limit your assessment to these alone as there may be other risks of a general nature that require consideration. Include your findings in your Risk Assessment in Section E.

You can gain assistance in completing this Section through contacting your local Safety and Health Representative [http://healthandsafety.curtin.edu.au/safety_and_health_reps/representatives.cfm](http://healthandsafety.curtin.edu.au/safety_and_health_reps/representatives.cfm) or through contacting Health and Safety on ext. 4900.
### SECTION B: Biological Agents

#### Material of animal or human origin

1. **Material of animal or human origin:**
   - Blood [ ]
   - Sputum [ ]
   - Urine [ ]
   - Tissue [ ]
   - Faeces [ ]
   - Other [ ]

   *Please specify species of origin:__________*

   *Is the material derived from individuals known to be infected?*  
   - Yes/No/Don’t know

   *Please indicate amount of material to be handled (e.g., sample size & no):__________*

2. **Micro-organisms**

   **Infectious Micro-organisms**
   - Bacteria [ ]
   - Virus [ ]
   - Fungi [ ]
   - Parasites [ ]

   *Please specify genus and species:__________*

   **Other Micro-organisms**

   *Please specify genus and species:__________*

   **Specify the risk group of the micro-organism**

   *(See American Biological Safety Association (http://www.absa.org/riskgroups/) for risk categories)*

   *Include any risks associated with handling these micro-organisms in Section E*

3. **Other potentially infectious material eg compost, rubbish**

   Sewerage/sludge: Primary/Raw [ ]  Secondary/Activated [ ]  Anaerobic Digestor [ ]

   Other (please specify): [ ]

   *Please indicate the amount of material handled:__________*

4. **Animals and plants**

   **Handling of animals:** (specify genus and species):

   *Specify numbers of animals to be handled (if possible)*

   *Are these animals likely to be infected or known to transmit zoonoses*  
   - Yes/No/Don’t Know

   *Include any risks associated with handling these animals in Section E*

   **Handling of plants:** (specify genus and species)

   *Include any risks associated with handling these micro-organisms in Section E*

5. **Standard operating procedures**

   **Have you read the Standard Operating Procedures for your laboratory**  
   - Yes/No

   *(These are available from the IBC)*

6. **Genetic Manipulation**

   Do any of the organisms involved in this project contain recombinant DNA or does the project involve the construction of recombinant DNA?  
   - Yes/No/Don’t Know

   *(If you answered yes then it is a legislative requirement that you notify the IBC, see the IBC website for details).*

   Researchers are required to review procedures, training, and the environment in which the research is being undertaken prior to the commencement of work to ensure that control strategies are in place to eliminate the risk of infection or release of the agent/organism.

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*If you have completed this Section you must send the complete documentation to Curtin’s Health and Safety (Building 59) who will then forward it on to the Chair of the Institutional BioSafety Committee. You may also be required to obtain formal approval from the Committee as required under the Gene Technology Act 2000. Full details available on the [Health and Safety website](#).*

The IBC reserves the right to check the implementation of biosafety and stop further work until safety procedures are implemented.
SECTION C: Hazardous Chemicals

1. Have you established a chemical register of the chemicals being used in the project?
2. Do you have current Material Safety Data Sheets for each chemical?
3. What process do you intend to use to ensure all containers are labelled adequately and correctly?
4. Are you using any: Carcinogens □ Mutagens □ Sched. Poisons □ Teratogens □ Scheduled Prohibited Substances □
5. Are any on-going Health Assessments required for the use of any of the substances?
6. Have you undertaken a risk assessment of each substance to be used?
7. How do you intend to safely store bulk and decanted substances prior to use?
8. How do you intend to dispose of unwanted/unused chemicals and waste/biop-products?
9. Have you established plans to deal with spills or other potential emergencies?

You can gain further assistance in completing this Section through contacting the Chair, Hazardous Chemicals Committee or Curtin’s Health and Safety on ext. 4900.

SECTION D: Ionising or Non-ionising Radiation

Do you have an LX or LS license? Yes License Number: Exp. Date:
No (Provide name and license number of supervisor)

1. Ionising Radiation
   1.1 Unsealed Isotopes
       Isotope One: Activity:
       Isotope Two: Activity:
       Method of Disposal:
   1.2 Irradiating Equipment
       XRD □ XRF □ SAXS □ DEXA □ Neutrons □
       Radiography □ Synchrotron Radiation □ Other □
       Instrument: Max energy:
       Make and Model: Service Provider:

2. Non-ionising Radiation
   2.1 Lasers □ Make and Model:
       Class: Wavelength(s):
   2.2 Microwaves □ Make and Model:
       Power (Intensity):
   2.3 Ultraviolet □ Make and Model:
       Wavelength(s):

Have you received any relevant training: Y/N Details:

Number of years experience in dealing with radiation:

If you have completed this Section you must send the complete documentation to Curtin’s Health and Safety (Building 599) who will then forward it to the Radiation Safety Officer. You may also be required to obtain formal approval from the Committee as required under the Radiation Safety Act. Full details available on the Health and Safety website.
## SECTION E: RISK ASSESSMENT

<table>
<thead>
<tr>
<th><strong>Hazards</strong></th>
<th><strong>Ranking</strong></th>
<th><strong>Controls</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>What can cause harm or ill-health to staff/students or others?</td>
<td>Make a judgement regarding likelihood of hazard causing an incident and consequence of an incident <em>(refer to Making the Workplace Safe doc p10)</em></td>
<td>How can you reduce the likelihood of exposure or consequences thereof? You should use the hierarchy of controls in determining how best to control the hazard identified</td>
</tr>
<tr>
<td>E – Extreme Risk</td>
<td>H – High Risk</td>
<td>M – Medium Risk</td>
</tr>
</tbody>
</table>

### HAZARDS

<table>
<thead>
<tr>
<th>What could harm staff/students/visitors?</th>
<th>RANKING</th>
<th>CONTROLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>E, H, M, L</td>
<td>What are you going to do to reduce the risk?</td>
<td></td>
</tr>
</tbody>
</table>

Continue on additional sheet is necessary

### Signatures

<table>
<thead>
<tr>
<th>Student / Researcher</th>
<th>Date</th>
<th>Supervisor</th>
<th>Date</th>
</tr>
</thead>
</table>

### Conditions of Approval *(attach further information if necessary)*