This guide provides an overview on how to complete a Microbiological risk assessment. The sections of the risk assessment are outlined, and brief instructions on the information required is provided. Please consult the Risk assessment procedure for further detail.

Details

This section should include information about the person completing the risk assessments and the campus where the microorganism is to be used.

Project details

Include a description of the project or task. Details of how the microorganism will be used should be included to allow the assessor to determine if the safety controls are applicable.

Microorganism Information

This should include the name of the microorganism, the risk group as per AS/NZS 2243.3 and details about infectiousness of organism.

MICRO-ORGANISM INFORMATION		
Name of micro-organism	Click or tap here to enter text.	
Risk group of micro-organisms (as per Australian Standard AS/NZS 2243.3)	Click or tap here to enter text.	
Produces infection in humans.		☐
Requires precautions to be implemented for at-risk persons and / or women.		☐
Has a potential for unknown infections?		☐
Requires immunisation when working with.		☐

The following sections of the risk assessments are to be used as prompts to help populate the risk assessment with the required information.

Use the hazard prompts listed in the Micro-Organism properties, Environment / PPE, Administrative / legislative, Procedures, Media and storage / disposal sections below, marking the ones relevant to the micro-organism. Transfer the marked items to the risk assessment form and complete the risk assessment. Please refer to the Australian Standard AS/NZS 2243.3 for additional information.

Microorganism properties

Using the check boxes, provide details about the microorganism

MICRO-ORGANISM PROPERTIES			
Indicate which of the following properties are relevant to the use of the micro-organism.			
Bacteria	☐	Fungi	☐
Mycoplasma	☐	Parasites	☐
Prions	☐	Rickettsia	☐
Soil	☐	Viruses	☐
Zoonotic	☐	Other: (please list)	☐

Environmental / PPE Requirements

Use the check boxes and identify all the appropriate controls

ENVIRONMENTAL / PPE REQUIREMENTS			
Indicate which of the following properties are relevant to the use of the micro-organism.			
Autoclave	☐	Biological safety cabinet – Class II	☐
Disinfectants	☐	Face Shield	☐
Gloves (detail type on risk assessment)	☐	Gown	☐
Respirator (detail type on risk assessment)	☐	Safety Glasses	☐
Specific safety equipment required (please detail on risk assessment)	☐	Documented spill procedures and equipment available	☐
Other: (please list)	☐	Other: (please list)	☐

- Biological safety cabinet – if required, details of the hazard should be identified in risk assessment.
- Disinfectant – type and method of disinfection should be outlined, or standard risk controls included in risk assessment.
- Gloves – the risk assessment should specify the type of gloves requires.
- Respirator – if a respirator is required specific details of the respiratory type and usage instructions should be outlined in the hazards section of the risk assessment.
- Specific safety equipment – details should be provided, including how the equipment should be used.

Administrative/legislative requirements

Select all the administrative or legislative requirements that apply to the microorganism being assessed. If any of these are selected, more specific details should be outlined in the risk assessment section. Any permits or approvals required should be attached to the risk assessment to be reviewed as part of the approval process.

ADMINISTRATIVE / LEGISLATIVE REQUIREMENTS			
Indicate which of the following properties are relevant to the use of the micro-organism.			
AQIS product	☐	Australian Quarantine Inspections Service Approval required and attached	☐
Import permit required	☐	Institutional Biosafety Committee (IBC) Approval required and attached	☐
Office of the Gene Technology Regulator (OGTR) Approval required and attached	☐	Security Sensitive Biological Agent (SSBA)	☐
Training required	☐	Other: (please list)	☐

Procedures and medium

Select all that apply. This information helps the approver to understand the processes involved to assist in determining the risks of the project or activity.

Storage/Disposal requirements

Use the checklist prompts to evaluate the storage and disposal requirements for the microorganism. When a box is checked in this section of the risk assessment, specific detail **must** be included in the risk assessment under 'Hazards' section.

For example:

- Risk assessment must indicate that suitable storage has been identified (included building, room, fridge/freezer/incubator, bench etc).

STORAGE / DISPOSAL REQUIREMENTS	
Indicate which of the following storage / disposal requirements are relevant to the micro-organism.	
Suitable storage has been identified (provide details below including room location e.g. fridge, freezer, incubator, bench) **Campus** Click or tap here to enter text. **Building** Click or tap here to enter text. **Room** Click or tap here to enter text. **Location** Click or tap here to enter text.	☐
Micro-organism has a restricted access or specific storage requirement	☐
Specific spill containment procedures apply.	☐
Micro-organism is being relocated from another facility.	☐
Micro-organism containers must be sealed during storage.	☐
Specific labelling requirements apply.	☐
Disposal of Sharps	☐
Other: (please list)	☐
Other: (please list)	☐
Other: (please list)	☐

Risk Assessment: Hazards

In this section, ALL hazards associated with the microorganism as should be addressed in detail.

RISK ASSESSMENT			
Hazard	**Proposed controls** (What will be done to eliminate or reduce the risk?)	**Risk rating**	**Control type**

Hazards

- For any of the marked/checked items in the previous sections of the form, please include specific details in the risk assessment section (e.g infectiousness, PPE requirements, storage/disposal, permit requirements).

Proposed controls

- Consider what controls are already in place to reduce the risk associated with the hazard. Consult Standard risk controls, however **specific details of the infectiousness, PPE, labelling, storage, handling requirements MUST be addressed in the microorganism risk assessment.**

Risk rating

Use the Risk Rating Matrix to identify the risk rating. You will need to identify the likelihood of the consequence occurring with the proposed controls in place and the possible consequence if the hazard occurs. Consult the Risk Management Guidelines for Charles Sturt Risk Management guideline.

Consequence →

Likelihood ↓

Risk Ratings Matrix					
Risk Matrix	1. Insignificant	2. Minor	3. Moderate	4. Major	5. Catastrophic
5. Almost Certain	Medium	High	High	Very High	Very High
4. Likely	Medium	Medium	High	High	Very High
3. Possible	Low	Medium	Medium	High	High
2. Unlikely	Low	Low	Medium	Medium	High
1. Rare	Low	Low	Low	Low	Medium

Control Type

List all appropriate controls that should be implemented for this hazard.

Hierarchy of control		
Level	Control	Abbreviation
1	**Elimination**- e.g eliminate the chemical or hazard by use of alternative means.	ELI
2	**Substitution**- e.g. substitute with a safe chemical.	SUB
3	**Isolation**- isolate or separate the person from the hazard.	ISO
4	**Engineering**- engineering solution e.g. fume cabinet.	ENG
5	**Administration**- use of procedure, safe working procedures and / or training.	ADM
6	**PPE** - use of personal protective equipment.	PPE

Consultation and Authorisation

The risk assessment is not authorised until it has been approved as per the Risk Assessment procedure. No work should be commenced until the risk assessment has been approved.

The risk assessment form should be signed by the assessor (the person completing the risk assessment form). Approvals required are dependent of the type of activity, please refer to the approval flow chart in appendix 2. Not all sections need to be completed

Step 9: Approvals and acknowledgments

As per approval flow chart in Appendix 2

Assessor		**Signature**		**Date**	Click here to enter a date.
Supervisor (Research) **Subject Coordinator/Convenor (Teaching)**		**Signature**		**Date**	Click here to enter a date.
Technical Manager		**Signature**		**Date**	Click here to enter a date.
Associate Head of School, Research (or delegate)		**Signature**		**Date**	Click here to enter a date.
Director, Research Institute (or delegate)		**Signature**		**Date**	Click here to enter a date.

If a risk assessment has been prepared and additional persons will be added to a project or activity, this section should be used to provide acknowledgement that the risk controls will be implemented.

I have read, understood and will follow this risk assessment.		
Name	**Signature**	**Date**
		Click here to enter a date.
		Click here to enter a date.
		Click here to enter a date.
		Click here to enter a date.

Now that your risk assessment is complete, please ensure the risk assessment is distributed as per the risk assessment procedure and that the risk controls are appropriately implemented and reviewed. See Risk Assessment Procedure Summary.

For all risk assessments with a **high-risk rating**, please send to the Technical Support unit for archiving in UniRecords as per university requirements.

Risk Assessment Procedure Summary

Complete the Generic FoSH WHS risk assessment form

Identify task/s

Include sufficient level of detail so risks can be assessed, managed, and approved.

Identify Hazards

A hazard is defined as something that has potential to harm the health, safety and welfare of people at CSU, or damage property, equipment or the environment

Complete Specialised Risk Assessment form/s

If risk assessment identifies special hazards, **additional risk assessments** should be completed accordingly (see list below)

- *Hazardous substances*
- *Microorganisms*

Identify and assess the risks

- Determine the consequences.
- Determine the likelihood.
- Use risk matrix to determine risk rating
- Identify control measures to manage risk.

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- Determine the likelihood.
- Use risk matrix to determine risk rating
- Identify control measures to manage risk.
- Attach relevant documentation (e.g SDS)

Submit for approval

- Risk assessment should be approved by appropriate authority (Table 4 of Risk assessment procedure)

RA Not Approved

RA Approved

Re-assess risks.

- If risk is not deemed appropriate additional control measures may be required
- RA should be amended and resubmitted.

Implement control measures.

- Follow control measures identified in risk assessment as per (Table 5 of Risk assessment procedure)

Measure and evaluate risk.

- Facility manager to maintain risk register.
- Monitoring carried out to ensure effective risk controls (e.g inspections, observation by managers or technical services or audits).

WHS Documentation and record keeping.

- Printed RAs to be kept in the work area.
- For further details see risk assessment procedure.
- High risk RAs to be archived in UniRecords.