*Persons completing this assessment should refer to the* [*UCD Biosafety Manual*](https://intranet.ucd.ie/sirc/safetydocumentsandguides/index.html)

**1. General Information**

|  |  |
| --- | --- |
| **Name of Person(s) carrying out risk assessment and their Position**  |  |
| **Principal Investigator / Supervisor*****(Person responsible for ensuring safety)*** |  |
| **Date of Assessment** |  |
| **Location of work** |  |

**2. Detail the Process Involving the Use or Risk of Exposure to Biological Agents** – *indicate the frequency and duration of the process, the materials to be handled and who will be carrying it out - if necessary, attach a written procedure for the process.*

|  |
| --- |
| **Title of Process:** |
| **Details:** |

**3. Does the Work Involve the Deliberate Use of a** [**Named Biological Agent**](https://www.hsa.ie/eng/Publications_and_Forms/Publications/Codes_of_Practice/biological_agents_code_of_practice_2020.93153.shortcut.html)

**Yes**  [ ]  *if yes proceed to section 4*

**No** [ ] *if no proceed to section 5*

**4. Deliberate Use of a Named Biological Agent**

|  |  |
| --- | --- |
| **Name of Agent** |  |
| **Type of Agent**(bacteria, virus, etc.) |  |
| **Classification of Agent** (1-4)If Class 1 proceed to Section 6 |  |

**Containment Required -** *Ticking a containment measure indicates its implementation.*

*Please see Appendix 1 for mandatory statutory containment measures.*

|  |  |
| --- | --- |
| **Containment Measures** | **Implemented** |
| 1. The workplace is to be separated from any other activities in the same building
 |  |
| 1. Input air and extract air to the workplace are to be filtered using HEPA or likewise
 |  |
| 1. Access is to be restricted to nominated workers only
 |  |
| 1. The workplace is to be sealable to permit disinfection
 |  |
| 1. Specified disinfection procedures
 |  |
| 1. The workplace is to be maintained at an air pressure negative to atmosphere
 |  |
| 1. Effective vector control e.g. rodents and insects
 |  |
| 1. Surfaces impervious to water and easy to clean
 |  |
| 1. Surfaces resistant to acids, alkalis, solvents, disinfectants
 |  |
| 1. Safe storage of a biological agent
 |  |
| 1. An observation window, or alternative, is to be present, so that occupants can be seen
 |  |
| 1. A laboratory is to contain own equipment
 |  |
| 1. Infected material including any animal is to be handled in a safety cabinet or isolator or other suitable containment
 |  |
| 1. Incinerator for disposal of animal carcases
 |  |

*Proceed to Section 6*

**5. Non-Deliberate Use of a Biological Agent**

**Detail potential infectious agents that persons may be exposed to:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*In work settings which are laboratories, diagnostic laboratories or within which potentially infectious material is being handled, Containment Level 2 measures must be implemented. See Appendix 1 for details.*

*Have these measures been implemented where necessary:* **Yes**  [ ]  **No**  [ ]

**6. What training is required before this process commences? (note the person named in Part 1 as being responsible for ensuring safety must ensure that this training is provided).**

|  |
| --- |
| **Details:** |

**7. Potential Exposure**

|  |  |
| --- | --- |
| 1. **Who (and how many) could potentially be exposed to these biological agents?**
 |  |
| 1. **What are the potential routes of exposure? (e.g. Ingestion, Inhalation, via mucosal membranes, needle stick, direct skin / clothing contamination)**
 |  |
| **c) What are the potential health effects of**  **these biological agent(s)** |  |

**8. Controls in Place**

|  |  |
| --- | --- |
| 1. **PPE in use**
 | Lab Coat: [ ]  Safety Glasses: [ ] Safety Goggles: [ ]  Face Shield: [ ]  Gloves: [ ]  (indicate type)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Other: [ ]  (give details) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. **Engineering controls**
 | Biological Safety Cabinet: [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(Give details) |
| 1. **Storage arrangements**
 |  |
| 1. **Waste disposal procedure**
 |  |
| 1. **Mandatory Good Hygiene Practices**
 | * No eating or drinking in work area
* Hand washing Facilities Available
* Mandatory washing of exposed skin after work completed
* Covering of cuts and abrasions
* No insertion of objects into mouth

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(Give details) |
| 1. **Vaccination Required**
 | Yes: [ ]  No: [ ] (give details) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**9. Further Risk Control Measures -** *Consider further risk control measures required to eliminate / minimise identified routes of exposure and allow the safe use of agents.*

|  |
| --- |
| **Where deemed necessary provide details of the following additional control measures:** |
| 1. **Design of work practices to minimise potential for contact with biological agents**
 |  |
| 1. **Ongoing health screening for affected persons**
 |  |
| 1. **Codes of practice for the safety of personnel, especially for the taking, handling and processing of samples of human or animal origin**
 |  |
| 1. **The display of warning signage in the work area**
 |  |
| 1. **The keeping of adequate records of persons potentially exposed to infectious agents**
 |  |
| 1. **Plans to deal with accidents involving a biological agent**
 |  |
| 1. **Testing for the presence of a biological agent outside of the primary physical confinement**
 |  |
| 1. **Means for the safe collection, storage and disposal of waste by employees, including the use of secure and identifiable containers**
 |  |
| 1. **Safe storage, handling and transport arrangements**
 |  |
| 1. **Handling and removal of sharps from the workplace**
 |  |
| 1. **Universal Precautions for handling blood products**
 |  |
| 1. **Restriction of access to the work area**
 |  |
| 1. **Additional hygiene control measures**
 |  |
| 1. **Further training for personnel required**
 |  |
| 1. **Has a pregnant employee risk been completed (contact** **UCD SIRC Office****)**
 |  |
| 1. **Any additional / specific equipment required**
 |  |

**10. Covid 19 Person to Person Risks and Controls**

|  |
| --- |
| This section only relates to risks from other persons and the environment.The risks from handling Covid 19 material are assessed through the previous sections of this risk assessment |
| 1. **Risk Level of work (as per UCD High Level Covid 19 Risk Assessment)**
 | [ ]  Acceptable Risk (Complete parts b - j below)[ ]  Requires Task Specific Covid 19 Risk Assessment and attach with this document(Contact with High Risk Persons[[1]](#footnote-1) or Higher Risk Contact[[2]](#footnote-2)) |
| 1. **Controls in place**
 | [ ]  Only attending work when well [ ]  Physical distancing maintained at all times[ ]  Good hand, respiratory and general hygiene measures[ ]  Adherence to HSE guidance on self-isolation in specified circumstances[ ]  Use of Work Pod model as appropriate[ ]  UCD Covid 19 Induction Training completed |
| 1. **Physical distancing measures in place**

(Outline how physical distancing will be maintained at all times) |  |
| 1. **Details of work pod in place**
 |  |
| 1. **PPE in use**
 | Lab Coat: [ ]  Safety Glasses: [ ] Safety Goggles: [ ]  Face Shield: [ ]  Mask: [ ]  (indicate type[[3]](#footnote-3)) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Gloves: [ ]  (indicate type) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Apron / Gown / Coverall [ ]  (indicate type) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Other: [ ]  (give details) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. **Waste disposal procedures**
 |  |
| 1. **Hygiene Practices**
 | [ ]  No eating or drinking in work area [ ]  Hand washing Facilities Available[ ]  Hand sanitiser Available[ ]  No insertion of objects into mouth [ ]  Do not touch your face with gloved hands or if hands not clean [ ]  Avoid shared equipmentOther: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(Give details) |
| 1. **Cleaning and disinfection Protocols in place (give details)**
 |  |

**11. Emergency Responses**

|  |  |  |
| --- | --- | --- |
|  | **Response Measures** | **Location of kits / specialist or response equipment** |
| 1. **First Aid**
 |  |  |
| 1. **Accidental Release / Spill Response**
 |  |  |
| 1. **Suitable Disinfectant**
 |  |  |

**12. Statutory Compliance –** *Has notification been given to the following:*

*Contact* *UCD SIRC Office* *for advice regarding notification requirements.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Yes** | **No** | **N/A** |
| 1. **Health and Safety Authority**

 *Further details available on* [*HSA Website*](https://www.hsa.ie/eng/topics/biological_agents/biological_agents_introduction/biological_agents_frequently_asked_questions/) |  |  |  |
| 1. **Department of Agriculture, Food and Marine**

*Required for the importation of animal by-products and pathogens. Further details available on* [*Department website*](http://www.agriculture.gov.ie/agri-foodindustry/animalbyproducts/importofanimalsandanimalproducts/informationnotesonimportofanimalby-products/) |  |  |  |
| 1. **UCD Office of Research Ethics**

*All research involving animals requires ethical approval from* [*UCD Research Ethics Committee*](https://www.ucd.ie/researchethics/about/animalresearchethicscommitte/) |  |  |  |
| 1. **Biosafety Committee /** **SIRC Office**

*Work with Class 3 pathogens*  |  |  |  |
| 1. **Environmental Protection Agency**

*License for working with GMO’s and GMM’s. Further details on* [*EPA website*](https://www.epa.ie/our-services/licensing/gmo/) |  |  |  |

# **12. Risk Rating**

**Risk Rating = Likelihood of risk occurring x Severity of outcome**

|  |  |
| --- | --- |
|  |  **Severity** |
| **Likelihood** |  | **Low** | **Medium** | **High** |
| **Low** | Trivial | Acceptable | Moderate |
| **Medium** | Acceptable | Moderate | Substantial |
| **High** | Moderate | Substantial | Intolerable |

**Assessment of Likelihood and Severity**

|  |  |  |
| --- | --- | --- |
|  | **Severity of Outcome** | **Likelihood of Exposure** |
| **Low** | Slightly Harmful | Unlikely |
| **Medium** | Harmful | Likely |
| **High** | Very Harmful | Very Likely |

|  |  |  |
| --- | --- | --- |
| **Severity** | **Likelihood** | **Risk Rating** |
|  |  |  |

1. **Trivial Risk:** No further action needed
2. **Acceptable Risk:** No additional risk control measures required
3. **Moderate Risk:** Implement further risk control measures if possible
4. **Substantial Risk:** Further control measures must be implemented. If this is not possible then work must be strictly managed to ensure safety.
5. **Intolerable:** Work must be prohibited until further control measures are implemented.

**Is the risk rating acceptable:**  Yes: [ ]  No: [ ]

*If yes sign and date below and ensure all risk control measures have been implemented.*

*If no identify further control measures and reassess risk. If the risk cannot be reduced to an acceptable level then the process cannot be carried out.*

**Is this work suitable for lone working:** Yes: [ ]  No: [ ]

*If yes, then a* [*lone worker risk assessment*](https://intranet.ucd.ie/sirc/riskassessmenttemplates/loneworking/) *must be completed and attached to this document.*

**Signed: Date: Position:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Signed: Date: Position:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

*This document must be signed by the person carrying out the assessment and their academic supervisor / manager (person responsible for ensuring safety).* The assessment should be reviewed at regular intervals to ensure that it remains up to date

***Appendix 1. Extract From the Seventh Schedule of*** [***The Safety, Health and Welfare at Work (Biological Agents) Regulations 2013 and 2020***](https://www.hsa.ie/eng/topics/biological_agents/legislation_and_code_of_practice/relevant_legislation/)

|  |
| --- |
| ***Containment Measures at Different Containment Levels For Health And Veterinary Care Facilities, Laboratories, Diagnostic Laboratories And Rooms In Which Deliberately Infected Animals Or Animals Suspected Of Being Infected Are Being Kept.*** |
| **Containment Measures** | **Containment Level 2** | **Containment Level 3** | **Containment Level 4** |
| 1. The workplace is to be separated from any other activities in the same building
 | No | Recommended | Yes |
| 1. Input air and extract air to the workplace are to be filtered using HEPA or likewise
 | No | Yes, on extract air | Yes, on input and extract air |
| 1. Access is to be restricted to nominated workers only
 | Recommended | Yes | Yes, via airlock |
| 1. The workplace is to be sealable to permit disinfection
 | No | Recommended | Yes |
| 1. Specified disinfection procedures
 | Yes | Yes | Yes |
| 1. The workplace is to be maintained at an air pressure negative to atmosphere
 | No | Recommended | Yes |
| 1. Effective vector control e.g. rodents and insects
 | Recommended | Yes | Yes |
| 1. Surfaces impervious to water and easy to clean
 | Yes, for bench | Yes, for bench and floor | Yes, for bench, walls, floor and ceiling |
| 1. Surfaces resistant to acids, alkalis, solvents, disinfectants
 | Recommended | Yes | Yes |
| 1. Safe storage of a biological agent
 | Yes | Yes | Yes, secure storage |
| 1. An observation window, or alternative, is to be present, so that occupants can be seen
 | Recommended | Recommended | Yes |
| 1. A laboratory is to contain own equipment
 | No | Recommended | Yes |
| 1. Infected material including any animal is to be handled in a safety cabinet or isolator or other suitable containment
 | Where appropriate | Yes, where infection is by airborne route | Yes |
| 1. Incinerator for disposal of animal carcases
 | Recommended | Yes (available) | Yes, on site |

1. Contact with persons known or suspected of carrying the virus [↑](#footnote-ref-1)
2. Spending more than 15 minutes in the same space as another person not known or suspected of having the virus, but without applying physical distancing / repeated contact at less than 1m irrespective of the PPE being worn stay. [↑](#footnote-ref-2)
3. HSE Guidance on the [Safe Use of Masks](https://www2.hse.ie/conditions/coronavirus/face-masks-disposable-gloves.html) [↑](#footnote-ref-3)