**RISK ASSESSMENT FORM - SCIENCE**

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| **Student / researcher name:** |  |
| **Faculty/Directorate** |  |
| **Title of risk assessment/work activity being assessed** |  |
| **Location of assessed activity (campus/building/room)** |  |
| **Date of initial assessment** |  |

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| B**rief description of work activity being assessed** |
| Please include the following headings (text in red is a reminder / example of what should be included under that heading, and should be overwritten / deleted as required):**Brief protocol:** include main chemicals, equipment and processes to be used (NB: A more detailed protocol can be attached at the end of the assessment)**Scale:** give an indication of the quantities of chemicals involved, eg mL/g or L/kg**People involved:** give names of student(s) and supervisor(s) including any PhD students/Post Docs**Duration and timing of work**: indicate when work is to take place, eg Mon–Fri, 9 am – 5 pm, from October 2025 until April 2026 |
| **Things to consider within the assessment – this list may not be exhaustive (Please delete any items that are not applicable)**  |
| **Key lab hazards to consider are:** Chemical 🞏 Biological 🞏 Laser 🞏 Nanomaterials 🞏 Radiological 🞏 Gas cylinders 🞏 Electrical 🞏 Cryogen 🞏 Glassware 🞏 Manual handling 🞏 Slips/trips 🞏 Lone working 🞏 Out of Hours working 🞏 (NB This list is not exhaustive so please also refer to list below.)* **Personal safety** e.g. Escape from fire; physical/verbal attack; disability or health problems; delayed access to personal or medical assistance; failure of routine or emergency communications; security of accommodation and support; getting lost or stranded by transport; terrorism/kidnapping/civil unrest; cultural or legal differences. - List aspects of the work with significant hazards and give brief details of how foreseeable harm/injuries could occur.
* **Equipment hazards** **- Storage, handling and use of equipment and materials** e.g. Tools; machinery; vehicles; manual handling; noise; work at height; electricity; fire; vacuum; high pressure; high temperature; ultraviolet; laser; vibration - List equipment and materials with significant hazards, and give brief details of how foreseeable harm/injuries could occur.
* **Biological hazards - Storage, handling, use, and disposal of biological agents, intermediates, products and waste, "any micro-organism, cell culture or human endoparasite including any which have been genetically modified, which may cause infection, allergy, toxicity and other hazards to human health". This includes bacteria, viruses, fungi and parasites. Include routes of exposure** e.g. Blood borne infection; skin contact, skin sensitisation; sensitisation by inhalation; toxic by ingestion or inhalation including e.g. legionella, radiation; safety of local drinking water; food hygiene. List biological agents with significant hazards and give brief details of hazard classification and foreseeable harm/injuries.
* **Natural physical hazards - Effects of the natural environment, climate, landscape, plants, animals** e.g. Extreme weather, heat/humidity/sun/cold; earthquakes and volcanoes; mountains, cliffs and rock falls; glaciers, snow, crevasses and icefalls; caves, mines and quarries; forests including fire; marshes and quicksand; fresh or seawater floods, tidal surges.
* **Environmental impact** e.g. Pollution and waste, deposition of rubbish, disturbance of eco-systems, trampling, harm to animals or plants.
* **Chemical hazards - Storage, handling, use, and disposal of chemical reagents, intermediates, products and waste** e.g.Toxic by inhalation or ingestion; irritant; corrosive, flammable; explosive; oxidising; radioactive. Include routes of exposure e.g. skin contact; skin sensitisation; sensitisation by inhalation; toxic by ingestion or inhalation. ***If the chemical is a group 3 or 4 chemical (see RA guidance sheet) then a separate COSHH assessment MUST by carried out.***
* **Infectious illness –** E.G COVID, Flu, Chicken Pox, Monkey Pox, Meningitis, or TB; List activities where close contact / possible infection may occur.
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**Risk Assessment:**

| **Description of Hazard** (only include significant hazards inherent within the task or the activity) | **Person(s) at risk**e.g. staff, students, visitors, new & expectant mothers, unexpected persons, etc. | **Current control measures in place** | **Current risk rating** |
| --- | --- | --- | --- |
| **Likelihood** | **Severity / impact** | **Risk Rating** |
| **CHEMICALS: (new row required for each chemical)****Please include the following headings** (red text = reminder / example of what to include and should be overwritten / deleted)**Name of chemical/biological substance**Form: solid/liquid/gas (delete as applicable)Concentration: if relevant, e.g. for acidsQuantity: if possible, state max amount likely to be usedKey hazards: (identified from safety data sheet) e.g.:* Flammable
* Toxic by inhalation
* Corrosive
* Infectious

COSHH group 🞏 (state number from 1–4)If group 3 or 4, then additional COSHH assessment is required and must be added attached to end.Don’t forget to include reagents, intermediates, mixtures and products.  | Use a phrase such as “Researcher and other lab users/visitors” | 1. **Precautions**

Must adequately eliminate/reduce the risk of each of the key hazards specified1. **First aid steps**
* Eye contact
* Skin contact
* Inhalation
* Ingestion
1. **Storage**

Where the chemical/biological substance should be stored, eg fridge, flammable storage cabinet1. **Spillage**

What to do in the event of a small (few drops) or larger spill1. **Disposal**

Where should waste material be disposed of, eg non-halogenated waste bottle of dispose via autoclave |  |  |  |
| **EQUIPMENT: (new row for each item)****Please include the following headings** (red text = reminder or example of what to include so the red text itself does not need to remain in the risk assessment)**Name of equipment**For heating/cooling equipment, indicate temperature range, eg 40 °C or 400 °C?Key hazards: (identified from equipment manuals) eg:* Burns

Eye skin damage from laser | Use a phrase such as “Researcher and other lab users/visitors” | 1. **Precautions**

Must adequately eliminate/reduce the risk of each of the key hazards specified |  |  |  |
| **OTHER HAZARDS**: **(new row for each item)** |  |  |  |  |  |

**Sources of information**

| **Source of information****eg material safety data sheet, instrument manual** |
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| **Person(s) completing this assessment:**(Person carrying out or managing/supervising the activity day-to-day) |
| Name |  | Title |  | Signature |  | Date |  |
| **Other person(s) commenting on this assessment (where required under Faculty/Directorate arrangements)**(Line Manager or Supervisor responsible for the activity, others involved in the decision-making process, others advising on the activity e.g. Health & Safety Manager, Health & Safety Local Officer) |
| Name |  | Title |  | Signature |  | Date |  |
| **Person approving this assessment:**(Person with overall responsibility for the activity e.g. PVC/Faculty Operating Officer/Director of Professional Service, Head of Dept./Senior Academic or Manager/Supervisor) |
| Name |  | Title |  | Signature |  | Date |  |

**Review of assessment, and revision if necessary**

(For continuing work: the assessment must be reviewed for each visit in a series; when there are significant changes to work materials, equipment, methods, location or people involved; and if there are accidents, near misses or complaints associated with the work. If none of these apply, the assessment must be reviewed at least annually)

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| REVIEW DATE | --/--/---- | --/--/---- | --/--/---- | --/--/---- |
| Name of reviewer |  |  |  |  |
| Signature |  |  |  |  |
| No revisions made |  |  |  |  |
| Changes to activity, hazards, precautions or risks noted in text. |  |  |  |  |

**Appendix 1 – Risk Matrix**

The hazards identified within the risk assessment should be assigned a risk rating – this should be assigned for any control measures which are currently in place and any further control measures which will be required.
You should assign a value for the likelihood of an incident occurring based on the hazard from 1 to 5 and a value for the severity / impact of the hazard from 1 to 5. These should then be multiplied together to give a final risk rating e.g. 3 x 2 = 6.

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|  | **SEVERITY or IMPACT** | **5****CATASTROPHIC** | **5** | **10** | **15** | **20** | **25** |  | **The Risk Score**for a hazard causing harm is calculated as follows:**Likelihood x Severity or Impact** |
| **4****MAJOR** | **4** | **8** | **12** | **16** | **20** |  |
| **3****SERIOUS** | **3** | **6** | **9** | **12** | **15** |  | **High (RED) - Rating 15 or more**Immediate action is required to control and/or lower the level of risk. Exposure to the identified hazard is prohibited or severely restricted |
| **2****MODERATE** | **2** | **4** | **6** | **8** | **10** |  |
| **1****MINOR** | **1** | **2** | **3** | **4** | **5** |  | **Medium (AMBER) - Rating 5 - 12**Continue to review the equipment, activities and systems of work, with the aim of lowering the risk to the lowest possible level. Scores below 9 are considered tolerable, as per current University Risk appetite. |
|  |  | **1****RARE** | **2****UNLIKELY** | **3****POSSIBLE** | **4****LIKELY** | **5****ALMOST CERTAIN** |  |
|  |  |  | **LIKELIHOOD** |  | **Low (GREEN) - Rating 1 – 4**Usually, no further action will be required except for monitoring to ensure the risk does not change and controls remain in place.However, if it is possible to reduce the risk levels still further, by using controls that are “reasonably practicable”, then this should be done. |
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**Scoring Criteria**

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| **Likelihood** | **Criteria** |
| 5 Almost Certain  | >90% likely (e.g. regularly, in the next 12 months) |
| 4 Likely  | 51-90% likely (e.g. at least twice within the next 2 years)  |
| 3 Possible | 21-50% likely (e.g. once in the next 2 to 5 years) |
| 2 Unlikely | 6-20% likely (e.g. once in the next 20 years) |
| 1 Rare | 0-5% likely (e.g. once in the next 100 years) |

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| **Severity or Impact** | **Criteria** |
| 5 Catastrophic  | Irreversible multiple injury or multiple deaths  |
| 4 Major  | Irreversible injury or death  |
| 3 Serious | Major reversible injury |
| 2 Moderate | Minor reversible injury |
| 1 Minor | Discomfort or minor illness |