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| **HAZARD MANAGEMENT – RISK ASSESSMENT** |

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| **SINGLE TASK**  (This template or equivalent template can be used)  (If you have not completed a risk assessment before refer to the [Handbook Chapter Appendix A](#AppendixA) for guidance) | | **Date:** | 3 / 8 / 2020 |
| **RECORD THE HIGHEST**  **RESIDUAL RISK RATING**  Ensure the appropriate level of authority to complete the activity can be evidenced.  (e.g. a signature or formal approval attached) | Low  Medium  High  Very high |
| **Title of the task**  **(e.g. use of ………)** | Operation of Impedance Spectroscopy Equipment | | |
| **Physical location(s) or operational unit** | G28, Mawson Building | | |
| **Names of workers involved in completing the risk assessment** | Author: Sam Jennings | | |
| Other workers  (if applicable) Derrick Hasterok | | |

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| ***Supervisors/person in control of the area/activity***   * *Ensure that the control measures address the hazards identified for each step in the process for this task.* * *Ensure that there is a system for retaining this Risk assessment. (See section 5.1 of the Handbook chapter)* * *Ensure that workers who undertake this task have access to this Risk assessment, are provided with the relevant, information, instruction and training required before they undertake the task. (This includes any other guidance material (e.g. Safe operating procedures) where required by this Risk assessment.)* * *Ensure that if there is a requirement for instruction (Level 2 proficiency) and/or training (Level 3 competency/qualification) the information is added to the Training Plan.* |

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| **Hazard identification: Stop and think.**  **What could cause harm from start to finish?** | **Assess the harm** | **What needs to be in place**  **before you start?** | **Re-assess**  **the level of risk** |

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| Identify and list each hazard that is part of this work process | Record how/when  the worker is exposed to the hazard  (e.g. what is the route of exposure when completing the task) | Calculate the risk rating without controls in place  (See descriptor table overleaf) | The measures you select must address the hazard, be selected in accordance with the Hierarchy of Control and be clear to the worker.  (Refer to the [Hierarchy of Control](#hierarchyofcontrol)  Appendix A page 6 for guidance.) | i.e. the residual  risk rating  after controls  are in place |

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| **High Temperature Furnace** | **A high-T furnace is located on the bench in the laboratory.** | Low  Medium  High  Very high | **Heat shields must be put in place around the sample capsule.**  **“High Temperature Experiment in progress” warning sign must be displayed while operating.** | Low  Medium  High  Very high |
| **Gases (CO, CO2, H2)** | **Gas lines exists inside the laboratory. Potential leaks may affect lab users.** | Low  Medium  High  Very high | **Gas lines must be checked for leaks before every experiment. CO detector inside the laboratory needs to be periodically tested in accordance with university guidelines.** | Low  Medium  High  Very high |
| **Electrical cabling** | **Electrical cabling is routed behind the computer and under desk.** | Low  Medium  High  Very high | **Keep electrical equipment off floor.** | Low  Medium  High  Very high |

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| **Authorisation for staff and student related tasks** |

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| **Residual risk rating** | **Authorisation** | **Name and signature (or attach evidence of authorisation)** | |
| **Low & medium risk** | Supervisor/Person in control of the area/activity | Derrick Hasterok |  |
| **High risk** | Head of School/Branch |  |  |
| **Very high risk** | Executive Dean/Divisional Head |  |  |

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| **Proof of hazard identification and risk assessment is required for this task**   * File your completed Risk assessment as instructed by the Supervisor/Person in control of the area/activity * Ensure there is a system for retaining formal Risk assessments in accordance with the State Records of SA, General disposal [Schedule No 30](https://archives.sa.gov.au/sites/default/files/public/documents/20160317%20General%20Disposal%20Schedule%20No.%2030%20Final%20V1.1.pdf) issued under the State Records Act 1997. (Contact the University’s [Records Management Office](https://www.adelaide.edu.au/records/records-services) for further assistance/information if required.) |

**DESCRIPTORS FOR ASSESSING THE LEVEL OF RISK**

**Likelihood Table**

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| **CATEGORY** | **DESCRIPTION** |
| Almost certain | There is an expectation that an event/incident will occur. |
| Likely | There is an expectation that an event/incident **could occur** but not certain to occur. |
| Possible | This expectation lies somewhere in the midpoint between “could” and “improbable”. May happen occasionally. |
| Unlikely | There is an expectation that an event/incident is doubtful or **improbable** to occur. |
| Rare | There is no expectation that the event/incident will occur. |

**Consequences Table**

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| **CATEGORY** | **DESCRIPTION** |
| Severe | Injury resulting in death, permanent incapacity. |
| Major | Injury requiring extensive medical treatment (e.g. hospitalisation), or activities could result in a Notifiable occurrence. |
| Moderate | Injury requires formal medical treatment (e.g. hospital outpatient/doctors visit)  Activities could result in an Improvement/Prohibition Notice. |
| Minor | Injury requires first aid treatment. |
| Negligible | Injury requires minor first aid (e.g. bandaid), or result in short term discomfort (e.g. bruise, headache, muscular aches), no medical treatment. |

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| **The level of risk will increase as the likelihood of harm and its severity increases** | | | | | | | | | | |
| **Likelihood** | **Consequences – level of seriousness of the injury following exposure to the hazard(s) -** | | | | | | | | | |
| **of exposure** | **Negligible** | | **Minor** | | **Moderate** | | **Major** | | **Severe** | |
| **Almost certain** |  | **Medium** |  | **High** |  | **Very High** |  | **Very High** |  | **Very High** |
| **Likely** |  | **Medium** |  | **Medium** |  | **High** |  | **Very High** |  | **Very High** |
| **Possible** |  | **Low** |  | **Medium** |  | **High** |  | **High** |  | **Very High** |
| **Unlikely** |  | **Low** |  | **Low** |  | **Medium** |  | **Medium** |  | **High** |
| **Rare** |  | **Low** |  | **Low** |  | **Low** |  | **Medium** |  | **Medium** |