






**HAZARD MANAGEMENT – SAFE OPERATING PROCEDURE (SOP)**

Only to be completed where required as a control measure under a Risk Assessment

|   |   |                            |
|---|---|----------------------------|
| <b>NAME OF THE TASK/ACTIVITY</b>  | <b>BIOSAFETY CABINET CLASS 2</b>  | <b>DATE: 21/02/2020</b>    |
| <b>LOCATION</b>   | ADELAIDE MICROSCOPY, HELEN MAYO NORTH, NG38B  | Insert photo<br>(Optional) |
| <b>RISK ASSESSMENT (RA) NAME</b>  | Biosafety Cabinet Class 2   |                            |
| <b>Residual risk rating on the RA</b>   | <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Very High  |                            |
| <b>Hazards identified on the RA</b>   |   |                            |
| <b>PERSONAL PROTECTIVE EQUIPMENT</b>  |   |                            |
|    | Eye protection: <input checked="" type="checkbox"/> Safety glasses <input type="checkbox"/> Eye shields <input type="checkbox"/> Safety goggles<br><input type="checkbox"/> Other:  |                            |
|    | Face protection: <input type="checkbox"/> Dust goggles <input type="checkbox"/> Face shield <input type="checkbox"/> Visor <input checked="" type="checkbox"/> Face mask <input type="checkbox"/> Dust mask<br><input type="checkbox"/> Other:  |                            |
|    | Hand protection: <input type="checkbox"/> Rubber <input type="checkbox"/> Cut resistant <input type="checkbox"/> Leather <input type="checkbox"/> Vinyl <input type="checkbox"/> Neoprene <input checked="" type="checkbox"/> Nitrile <input type="checkbox"/> Barrier creams<br><input type="checkbox"/> Other:              |                            |
|    | <input checked="" type="checkbox"/> Enclosed footwear: <input type="checkbox"/> Footwear that is resistant to spills of hazardous substances <input type="checkbox"/> Boots with steel caps<br><input type="checkbox"/> Other:  |                            |
|    | Protective clothing: <input checked="" type="checkbox"/> Lab coat <input type="checkbox"/> Gown <input type="checkbox"/> Long sleeves <input type="checkbox"/> Long pants <input type="checkbox"/> High visibility <input type="checkbox"/> Helmet <input type="checkbox"/> Sun protection<br><input type="checkbox"/> Other: |                            |
| <b>DESCRIBE, IN SEQUENCE, STEPS TO COMPLETE THE ACTIVITY SAFELY</b>   |   |                            |
| <b>Pre-operational checks</b>   |   |                            |
| <p>YOU MUST NOT USE THIS MACHINE UNTIL YOU HAVE HAD APPROPRIATE TRAINING BY TRAINED ADELAIDE MICROSCOPY STAFF. Unauthorised use may result in damage to the instrument.</p> <p>To assist in ensuring continuing safe and effective operation of a Class II cabinet, the following guidelines should be followed:</p> <p><b>Wait 35 minutes after turning on the biosafety cabinet before using.</b></p> <p><b>Operational checks/steps to complete the activity from start to finish (including transport and waste disposal where relevant)</b></p> <p>Attempt to utilise the middle area of the work tray and, at the very least, avoid using the area of turbulence created by the operators rearms near the barrier grille. Materials which are for use in the operation at hand may be stored in the cabinet, preferably to the sides, but so that there is a space for air movement next to the side walls. Large items should be avoided as they create unacceptable levels of work zone turbulence and increase the potential for cross contamination. Equipment not required for a particular operation should be removed after disinfection.</p> <p>The use of plastic-backed absorbent sheeting or mats is encouraged as they quickly soak up splashed droplets and spillages, assisting containment and making clean ups easier and safer. Avoid unnecessary and rapid hand/arm movements, especially in and out of the cabinet across the air barrier. Movements in this region should be careful and deliberate to reduce the chance of inducing dirty air from outside the cabinet. Also, this will allow the laminar flow to 'shower' the hands in a fashion which will encourage any released particulate matter to be swept away from the work. All movements should, wherever possible, be parallel to the work surface.</p> <p>The glass window must be down and completely closed during use.</p> <p>Laboratory coats must be worn when using the cabinet and should be continuous-fronted and manufactured of low-shedding fabric to reduce the amount of fibrous material released and drawn into the cabinet. Styles which include adjustable or elasticised wrist closures are preferred. The wearing of thin gloves is encouraged as they provide some protection to the operator and help to reduce the likelihood of particle release from the hands.</p> |   |                            |

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Frequent routine cleaning, including areas not immediately accessible (such as below the barrier grille, work tray and in the return air plenum), should be carried out. Apart from the increased likelihood of culture contamination when working in a dirty cabinet, a cabinet which is regularly cleaned is likely to cost less to maintain.

The UV lamp must never be switched on unless the front covers are in place.

Biological Safety cabinets present an enclosed environment with a forced air supply. Flames and flammable material are, therefore, a particular hazard.

- Avoid flames if at all possible.
- Minimize flammable liquids and solids in the hood when a flame is used (nothing more than 50mls).
- Use a spirit burner if possible.
- Gas flames can only be used if they have a safety gas cut-off, if the flame goes out.
- Bottled gas burners are forbidden in biosafety cabinets.

**On completion of work – steps to make safe (including clean up, any waste disposal & service/maintenance requirements)**

The cabinet should be cleaned with 70% ethanol 30% water after use. The UV light should be switched on for 30 minutes after use. The UV light requires the metal plate to be attached below the glass window. The cabinet cannot be used when the UV lamp is on.


**Emergency and Spill Procedures, Transport or storage requirements (where relevant), First aid/Medical**

Any spills will be handled as potentially biohazardous and neutralised with 1% hypochlorite solution. Followed through with F10 and 70% ethanol. A spill response kit is located in the corridor within close vicinity of the PC2 labs.

Emergency shower and eye wash are located in the foyer of both PC2 labs.

A First aid kit is located in the corridor within close vicinity of the PC2 lab and First aid officers contact details are on the front.

**Prepared by**

|   |                |                               |  |
|---|----------------|-------------------------------|--|
| People involved in the drafting of this SOP | Aoife McFadden |                               |  |
| Person authorising the SOP                  | Name:          | Angus Netting                 | Signature<br> |
|   | Position:      | Director, Adelaide Microscopy |  |

**This SOP must be reviewed after any incident/injury associated with this activity or when a Risk assessment is reviewed.**

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