DRAFT

Biological Safety Inspection Checklist

Area inspected: MSI Floor 2

Date of Inspection: 10/6/2009

Inspection Team: Lisa Grayson, Irene Blair, Ian Scragg, Jackie Heilbronn, Nicola Stanley-Wall

1. Room 2.39
   - Microbiological safety cabinets are predominantly used as laminar flow hoods to preserve sterility of plates.
   - LG queried where the work with E. coli K-1 and S. typhimurium is carried out. Both required CL2 and there is no evidence of CL2 procedures being in effect in this suite. **[Lab Manager to consult relevant PI and confirm]**
   - It was noted that plastic pipette tips can be disposed of into the cardboard waste bins providing the waste is double bagged.
   - A log for the eyewash shower is required. **[LG to supply]**

2. Rooms 2.36 & 2.37
   - Fungal growth suite used by the Gadd group where environmental samples are characterised.
   - Several sharps discarded on bench. Sharps to be reused should be safely stored. Sharps for disposal should be deposited in a Sharpsafe immediately. **[end users]**
   - Ethanol is stored in laminar flow hood next to a Bunsen burner – fire hazard. **End users** should be familiar with SOP 136, Bunsen Burners, Safe Use of, and SOP 95, Flame sterilisation (or flaming) of glass spreaders etc, and take all reasonably practicable steps to minimise the fire risk.
   - Area was quite cluttered and untidy. Samples stacked on floor. Would benefit from a thorough clear out. **[Lab Manager & end users]**

3. Room 2.35
   - Algal culture room.
   - Shelves are very full and there was concern about overloading. Storage of so much glass at height is also a cause for concern. Any opportunity to review use of shelves/storage in future should be taken. **[end users& PI]**
   - **Lab Manager** advised to get a more robust set of steps.
   - Manual handling of large culture vessels has been previously assessed – see Appendix A. **PI** must ensure agreed controls are still being adhered to.

4. Room 2.30
   - General equipment room.
   - Hydrogen gas cylinder is in use. After a substantial H2 gas leak on JBC Floor 1 risk assessment 329 was drafted. **End users** should be familiar with this risk assessment and associated SOPs (159 and 133) and, ideally, produce their own assessment/SOP specific to their activity. A key control is to use as small a cylinder as possible. **PI/end** users to consider.
   - Acetylene cylinder is also in use. SOP 124 details the necessary controls. All **end users** must be familiar with this SOP. One additional safety measure would be to keep the cylinder in the main gas cylinder store if it is not to be used for a prolonged period of time (e.g. > 1 month). **End users** to consider. **LG/IB** to ensure Fire Brigade is aware that we have an acetylene cylinder on site.
   - **Lab Manager** to check that the LEV set up in use in this area is on Martin Rollo's list for annual testing.
   - The tubing on the vacuum pump for the rotary evaporator should be renewed. **[end users]**
   - A SOP for the safe operation of the French Press should be drafted and a robust step provided for users to stand on if required. **[Lab Manager]**

Appendix A

Lifting of 10 litre culture flasks (approx 12kg in weight)

The main concern here is the lifting of the flasks from bench height onto the inverted plastic tub next to the centrifuge. It is clear that this exceeds the current HSE manual handling guidance, for women in particular. The ideal would be to reduce the weight by about half by using smaller flasks or, if this is not reasonably practicable, partially filling the current flasks. However, if reducing the culture volumes is going to be detrimental to the research, given the low frequency of the operation and the substantial 'rest breaks' in between lifts, we agree that a person of adequate stature and strength, e.g. James or Geoff, could perform the task with the current volumes/weights and without significant risk of injury. If adopted, it must be made clear to all staff involved that this is the agreed procedure.